ISSN 0020-8671

ACKNOWLEDGEMENTS

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

MEMBERS

The National Science Foundation of the United States. (Grant No. EAR-1417970), U.S.A.
The Royal Society of London, United Kingdom
Russian Academy of Sciences, Russia
The Japan Meteorological Agency (JMA), Japan
China Earthquake Administration, China
National Centre for Seismology of the Ministry of Earth Sciences of India, India
Institute National des Sciences de l'Univers, France
Bundesanstalt fur Geowissenschaften und Rohstoffe, Germany
The Geological Survey of Canada, Canada
Istituto Nazionale di Geofisica e Vulcanologia, Italy
Institute of Geological and Nuclear Sciences, New Zealand
Geoscience Australia, Australia
Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan
Earthquake Research Institute, University of Tokyo, Japan
The University of Bergen, Norway
Stiftelsen NORSAR, Norway
The Royal Netherlands Meteorological Institute, Netherlands
Bundesministerium fur Wissenschaft und Forschung, Austria
Instituto Portugues do Mar e da Atmosfera, Portugal
The Swiss Academy of Sciences, Switzerland
GeoForschungsZentrum Potsdam, Germany
Geological Survey of Denmark and Greenland - GEUS, Denmark
Academy of Sciences of the Czech Republic, Czech Republic
The University of Helsinki, Finland
British Geological Survey, United Kingdom
Laboratoire de Detection et de Geophysique/CEA, France
Uppsala Universitet, Sweden
AFAD Disaster and Emergency Management Authority, Turkey
National Earthquake Information Center, U.S. Geological Survey, U.S.A.
National Defence Research Establishment, Sweden
The Seismological Institute, National Observatory of Athens, Greece
The Geophysical Institute of Israel, Israel
National Institute for Earth Physics, Romania
Kandilli Observatory and Earthquake Research Institute, Turkey
Seismology Research Centre, Australia
National Research Institute for Astronomy and Geophysics (NRIAG), Cairo, Egypt
Institute of Geophysics, National University of Mexico, Mexico
The Hungarian Academy of Sciences, Hungary
Council for Geoscience, South Africa
The Icelandic Meteorological Office, Iceland
Dublin Institute for Advanced Studies, Ireland
Instituto Nacional de Prevencion Sismica (INPRES), Argentina
Belgian Science Policy Office (BELSPO), Belgium
Natural Resources Authority, Amman, Jordan
Environmental Agency of Slovenia, Slovenia
Incorporated Research Institutions for Seismology, U.S.A.
Geological Survey Department, Cyprus
University of Texas at Austin, U.S.A.
Iraqi Seismic Network, Iraq
Korean Meterological Administration, Republic of Korea
Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Italy
Institute of Earth Sciences, Academia Sinica, Chinese Taipei
Institute of Geophysics, Polish Academy of Sciences, Poland
University of the West Indies, Jamaica
AWE Blacknest, United Kingdom
University of the West Indies, Trinidad and Tobago
Red Sismica de Puerto Rico, Puerto Rico
Soreq Nuclear Research Centre (SNRC), Israel
Centre de Recherche en Astronomie, Astrophysique et Geophysique (CRAAG), Algeria
The University of Melbourne, Australia
Centre of Geophysical Monitoring (CGM) of the National Academy of Sciences of Belarus, Belarus
National Institute of Polar Research (NIPR), Japan
Department of Geophysics, University of Chile, Chile
Institut Cartogrfic i Geolgic de Catalunya (ICGC), Spain
Universidade de So Paulo, Centro de Sismologia, Brazil
Earth Observatory of Singapore (EOS), an autonomous Institute of Nanyang Technological University, Si

SPONSORS

REF TEK, a division of Trimble, U.S.A.
GeoSIG, Switzerland

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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
n22,σ1°.15/21,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

From data month January 2009 the ISC hypocentres are computed using the new ISC location algorithm and all reported IASPEI seismic phases, for which ak135 predictions are available. This algorithm is described in: *Bondár, I. and D.A. Storchak (2011), Improved location procedures at the International Seismological Centre, Geophys. J. Int., 186, 1220-1244, doi:10.1111/j.1365-246X.2011.05107.x*

The alternative locations based on JB-tables are still produced with the original location algorithm for consistency with the past data. It is still the plan that by the middle of calendar year 2014 all ISC locations (1960-2008) are going to be re-computed with the new locatin algorithm and ak135 as part of the ISC Bulletin Re-Build project, sponsored by the US NSF and several agencies from Japan, China and India.

*KRNET **01** 00:11:48.6±0.1, 42°.83N×71°.24E, h12km, mb2.2*
*NNC **01** 00:11:49.4±0.4, 42°.83N×71°.17E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=6.1km s-min=2.2km az=20.0*
*SOME **01** 00:11:51.3, 42°.73N×71°.40E, h15km*

ISC 01 00:11:49.1±1.2, 42°.79N±0°.03×71°.18E±0°.03, h2km±12km, n37, σ1§06/65, 38C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK06	**Karatay Array**	**0.57**	**302**	⇑P	**Pg**	**00 12 00.0**	**-0.1**
KK06				⇑S	**Sg**	**00 12 07.8**	**+0.4**
KK07	**Karatay Array**	**0.58**	**301**	⇑P	**Pg**	**00 12 00.2**	**-0.1**
KK07				⇓S	**Sg**	**00 12 08.4**	**+0.5**
KK02	**Karatay Array**	**0.58**	**303**	⇑P	**Pg**	**00 12 00.1**	**-0.2**
KK02				⇑S	**Sg**	**00 12 08.4**	**+0.5**
KK05	**Karatay Array**	**0.58**	**304**	⇑P	**Pg**	**00 12 00.4**	**+0.1**
KK05				⇑S	**Sg**	**00 12 07.7**	**-0.2**
KK31	**Karatay Array**	**0.58**	**303**	⇓P	**Pg**	**00 12 00.6**	**+0.3**
	0.3nm,0.2s						
KK31				⇑S	**Sg**	**00 12 08.3**	**+0.4**
	2.1nm,0.2s						
KK01	**Karatay Array**	**0.59**	**303**	⇑P	**Pg**	**00 12 00.2**	**-0.2**
KK01				⇑S	**Sg**	**00 12 08.3**	**+0.3**
KK03	**Karatay Array**	**0.59**	**302**	⇑P	**Pg**	**00 12 00.4**	**-0.1**
KK03				⇑S	**Sg**	**00 12 07.7**	**-0.4**
KK04	**Karatay Array**	**0.59**	**303**	⇑P	**Pg**	**00 12 00.4**	**-0.1**
KK04				⇑S	**Sg**	**00 12 07.9**	**-0.2**
KK08	**Karatay Array**	**0.60**	**302**	⇑P	**Pg**	**00 12 00.5**	**-0.1**
KK08				⇑S	**Sg**	**00 12 08.8**	**+0.4**
KK09	**Karatay Array**	**0.60**	**304**	⇑P	**Pg**	**00 12 00.7**	**+0.1**
KK09				⇑S	**Sb**	**00 12 09.1**	**-2.3**
IUG	**Iuzhnay**	**1.07**	**233**	P	**Pg**	**00 12 10.1**	**+0.6**
	8.8nm,0.2s						
IUG				S	**Sb**	**00 12 24.8**	**-0.1**
	33nm,0.2s						
IUG	**Iuzhnay**	**1.07**	**233**	*e*P	**Pg**	**00 12 10.1**	**+0.6**
	baz=33						
IUG				*e*S	**Sb**	**00 12 24.8**	**-0.1**
	baz=33						
IUG	**Iuzhnay**	**1.07**	**233**	*e*P	**Pb**	**00 12 10.4**	**0.0**
	2.2nm,0.1s						
IUG				*e*S	**Sg**	**00 12 24.5**	**+1.1**
	33nm,0.2s						
ARK	**Arkit**	**1.15**	**149**	⇑*i*P	**Pb**	**00 12 10.9**	**-0.9**
	baz=52						
ARK				⇑*i*S	**Sb**	**00 12 27.1**	**-0.1**
	baz=52						
MRKS	**Merke**	**1.50**	**91**	P	**Pn**	**00 12 17.0**	**-0.3**
	3.7nm,0.1s						
MRKS				S	**Sn**	**00 12 36.6**	**-0.9**
	12nm,0.3s						
MRKS	**Merke**	**1.50**	**91**	*e*P	**Pn**	**00 12 17.0**	**-0.3**
	1.5nm,0.1s						
MRKS				*e*S	**Sn**	**00 12 36.6**	**-0.9**
	12nm,0.3s						
EKS2	**Erkin-Say**	**1.92**	**93**	⇑*i*P	**Pn**	**00 12 23.2**	**+0.3**
	baz=94						
EKS2				⇑*i*S	**Sb**	**00 12 48.3**	**-1.0**
	baz=94						
AML	**Almayashu**	**1.97**	**109**	⇑*i*P	**Pb**	**00 12 25.2**	**-0.8**
	baz=10.0						
AML				⇑*i*S	**Sb**	**00 12 51.4**	**+0.2**
	baz=10.0						
ARSB	**Arslanbob**	**1.98**	**137**	⇑*i*P	**Pb**	**00 12 25.0**	**-1.1**
	baz=39						
ARSB				⇑*i*S	**Sb**	**00 12 51.8**	**+0.5**
	baz=39						
AAK	**Ala-Archa**	**2.44**	**92**	⇑Pn	**Pb**	**00 12 33.5**	**-0.4**
	1.1nm,0.3s						
AAK				⇑Sn	**Sn**	**00 13 01.9**	**+1.0**
	3.4nm,0.5s						
AAK	**Ala-Archa**	**2.44**	**92**	⇑*i*P	**Pn**	**00 12 31.3**	**+1.1**
	baz=93						
AAK				⇑*i*S	**Sn**	**00 13 01.8**	**+1.0**
	baz=93						
ARLS	**Aral**	**2.51**	**111**	⇑*i*P	**Pn**	**00 12 32.6**	**+1.5**
	baz=12						
ARLS				⇑*i*S	**Sb**	**00 13 03.9**	**-2.4**
	baz=12						
UCH	**Uchtor**	**2.53**	**102**	⇑*e*P	**Pn**	**00 12 32.9**	**+1.3**
	baz=3.0						
UCH				⇑*i*S	**Sb**	**00 13 04.8**	**-2.4**
	baz=3.0						
CHMS	**Chumysh**	**2.63**	**84**	⇑*i*P	**Pn**	**00 12 33.5**	**+0.8**
	baz=85						
CHMS				⇑*i*S	**Sn**	**00 13 05.8**	**+0.6**
	baz=85						
BTK	**Batken**	**2.74**	**186**	⇑*i*P	**Pb**	**00 12 37.0**	**-2.0**
	baz=87						
BTK				⇑*i*S	**Sb**	**00 13 12.0**	**-1.1**
	baz=87						
BTLS	**Baital**	**3.06**	**42**	Pg	**Pb**	**00 12 43.2**	**-1.0**
	1.5nm,0.4s						
BTLS				Lg	Lg	00 13 21.5	
	1.5nm,0.3s						
BTLS	**Baital**	**3.06**	**42**	*e*P	**Pg**	**00 12 46.7**	**-1.0**
	1.5nm,0.3s						
BTLS				*e*S	**Sg**	**00 13 27.5**	**+0.3**
	4.1nm,0.3s						
TKM2	**Tokmak 2**	**3.25**	**86**	⇓Pn	**Pb**	**00 12 44.6**	**-3.0**
	0.4nm,0.5s						
TKM2				⇓Sn	**Sb**	**00 13 26.8**	**-0.9**
	1.7nm,0.6s						
DGS	**Degeres**	**3.40**	**81**	Lg	Lg	00 13 31.6	
	2.9nm,0.4s						
DGS	**Degeres**	**3.40**	**81**	*e*P	**Pb**	**00 12 49.2**	**-0.9**
	1.1nm,0.3s						
DGS				*e*S	**Sb**	**00 13 31.6**	**-0.3**
	2.9nm,0.4s						
KST	**Kastek**	**3.52**	**84**	Lg	Lg	00 13 35.4	
	2.5nm,0.3s						
KST	**Kastek**	**3.52**	**84**	*e*P	**Pb**	**00 12 51.2**	**-1.0**
	1.9nm,0.2s						
KST				*e*S	**Sb**	**00 13 35.4**	**-0.1**
	2.5nm,0.3s						
KUU	**Kurty**	**3.92**	**72**	Pg	**Pb**	**00 12 59.2**	**+0.2**
	1.0nm,0.1s						
KUU				Lg	Lg	00 13 49.1	
	4.3nm,0.4s						
KUU	**Kurty**	**3.92**	**72**	*e*P	**Pb**	**00 12 59.2**	**+0.2**
	1.0nm,0.1s						
KUU				*e*S	**Sb**	**00 13 49.1**	**+2.3**
	4.3nm,0.4s						
KTBS	**Karatobe**	**4.12**	**75**	Lg	Lg	00 13 55.1	
	2.2nm,0.4s						
KTBS	**Karatobe**	**4.12**	**75**	*e*P	**Pb**	**00 13 02.7**	**+0.2**
	1.1nm,0.2s						
KTBS				*e*S	**Sb**	**00 13 55.1**	**+2.4**
	2.2nm,0.4s						
ARXS	**Arharly**	**5.04**	**71**	Pg	**Pb**	**00 13 20.1**	**+2.0**
	0.8nm,0.3s						

*KRSC **01** 00:33:38.4±1.3, 51°.91N×160°.58E, h62km±22km, ML4.1*
*ISCJB **01** 00:33:40.2±0.8, 51°.92N±0°.04×160°.59E±0°.07, h38km±7km, mb3.8/9, MS3.0/3, Error ellipse: s-maj=8.3km s-min=5.0km az=137.3*
*IDC **01** 00:33:48.0±1.6, 52°.47N×159°.36E, h40km±8km, mb3.6/9, mb1 3.7/9, mb1mx3.4/43, mbtmp3.8/9, MS3.0/4, Ms1 3.0/4, ms1mx2.7/31, Error ellipse: s-maj=35.8km s-min=21.6km az=121.0*

ISC 01 00:33:41.1±0.8, 51°.95N±0°.05×160°.55E±0°.05, h30km±4km, n45, σ1§01/59, mb4.0/9, MS3.1/3, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.19**	**345**	*e*P	**Pn**	**00 34 00.7**	**-1.1**
SPN				*e*S	**Sn**	**00 34 15.9**	**-1.1**
RUS	**Russkaya**	**1.34**	**292**	*e*P	**Pn**	**00 34 02.7**	**-1.1**
RUS				*e*S	**Sn**	**00 34 19.6**	**-1.0**
NLC	**Nalytchevo**	**1.43**	**330**	*e*P	**Pn**	**00 34 04.9**	**0.0**
NLC				*e*S	**Sb**	**00 34 23.5**	**-1.3**
KDTR	**Khodutka, Kamc**	**1.54**	**266**	*e*P	**Pn**	**00 34 05.3**	**-1.1**
KDTR				*e*S	**Sn**	**00 34 23.9**	**-1.5**
DALK	**Dalny**	**1.54**	**315**	*e*P	**Pn**	**00 34 06.1**	**-0.4**
DALK				*e*S	**Sn**	**00 34 25.4**	**-0.1**
MTVR	**Mutnovka**	**1.55**	**291**	*e*P	**Pn**	**00 34 06.3**	**-0.5**
MTVR				*e*S	**Sn**	**00 34 25.8**	**-0.1**
UGLR	**Uglovaya**	**1.64**	**321**	*e*P	**Pn**	**00 34 08.2**	**+0.2**
UGLR				*e*S	**Sn**	**00 34 28.9**	**+0.7**
SDLR	**Sedlovina**	**1.67**	**323**	*e*P	**Pn**	**00 34 08.4**	**-0.1**
ASAK	**Asacha**	**1.69**	**286**	*e*P	**Pn**	**00 34 08.4**	**-0.2**
SMAR	**Somma**	**1.69**	**322**	*e*P	**Pn**	**00 34 08.9**	**+0.1**
AVH	**Avacha**	**1.72**	**321**	*e*P	**Pn**	**00 34 09.1**	**+0.1**
AVH				*e*S	**Sn**	**00 34 30.3**	**+0.3**
KRMR	**Karymshinskiy**	**1.72**	**302**	*i*P	**Pn**	**00 34 08.7**	**-0.3**
KRMR				*e*S	**Sn**	**00 34 29.5**	**-0.5**
KRER	**Koryakskii**	**1.74**	**322**	*e*P	**Pn**	**00 34 09.7**	**+0.2**
KOK	**Koryaka**	**1.78**	**320**	*e*P	**Pn**	**00 34 10.3**	**+0.4**
KRX	**Arik**	**1.82**	**321**	*e*P	**Pn**	**00 34 10.1**	**-0.5**
PETK	**Petropavlovsk-**	**2.09**	**305**	P	**Pn**	**00 34 14.1**	**0.0**
	9.4nm,0.3s,baz=111,slow=18,SNR=117						
PETK				S	**Sb**	**00 34 42.4**	**-1.5**
	12nm,0.3s,baz=109,slow=20,SNR=8.0						
PETK				LR	LR	00 34 46.5	
	comp=Z,106nm,19.5s,baz=165,slow=49						
APC	**Apacha**	**2.29**	**297**	*e*P	**Pn**	**00 34 17.6**	**+0.8**
APC				*e*S	**Sn**	**00 34 45.2**	**+1.2**
GNL	**Ganaly**	**2.36**	**319**	*e*P	**Pn**	**00 34 18.9**	**+1.1**
PAU	**Pauzhetka**	**2.37**	**260**	*e*P	**Pn**	**00 34 18.0**	**+0.1**
MKZ	**Mys Kozlova**	**2.71**	**15**	*e*S	**Sn**	**00 34 53.5**	**-0.7**
SKR	**Severo-Kuril's**	**3.05**	**247**	*e*P	**Pn**	**00 34 27.0**	**-0.3**
SKR				*e*S	**Sn**	**00 35 01.8**	**-1.0**
KZV	**Kizimen**	**3.17**	**357**	*e*P	**Pn**	**00 34 29.8**	**+0.7**
TUMD	**Tumrok D**	**3.26**	**359**	*e*P	**Pn**	**00 34 30.7**	**+0.5**
TUMD				*e*S	**Sn**	**00 35 07.8**	**-0.2**
ALID	**Alaid**	**3.31**	**253**	*e*P	**Pn**	**00 34 31.0**	**0.0**
TUMR	**Tumrok**	**3.35**	**356**	*e*P	**Pn**	**00 34 32.6**	**+1.1**
ESO	**Esso**	**4.13**	**345**	*e*P	**Pn**	**00 34 43.3**	**+1.2**
KBTR	**Krutoberegovo**	**4.47**	**17**	*e*P	**Pn**	**00 34 47.6**	**+0.8**
BKI	**Bering**	**4.59**	**43**	*e*P	**Pn**	**00 34 48.9**	**+0.5**
BKI				*e*S	**Sn**	**00 35 37.0**	**-3.7**
BDR	**Baidarnaya**	**4.64**	**5**	*e*P	**Pn**	**00 34 50.4**	**+1.2**
SMKR	**Semkarok**	**4.67**	**6**	*e*P	**Pn**	**00 34 50.6**	**+1.0**
SRKR	**Sorokina**	**4.73**	**4**	*e*P	**Pn**	**00 34 50.7**	**+0.3**
KLR	**Kul'dur**	**18.43**	**273**	P	**P**	**00 37 53.8**	**-0.1**
	0.1nm,0.3s,baz=39,slow=4.7,SNR=4.4						
KLR				LR	LR	00 44 40.1	
	comp=Z,42nm,18.6s,baz=48,slow=37						
MJAR	**Matsushiro Arr**	**22.08**	**235**	P	**P**	**00 38 35.4**	**+1.9**
	1.2nm,0.3s,baz=36,slow=7.8,SNR=4.3						
MJAR				pP	**pwP**	**00 38 47.0**	**+1.2**
	1.3nm,0.3s,baz=16,slow=8.9,SNR=1.7						
TIXI	**Tiksi**	**24.24**	**336**	P	**P**	**00 38 53.2**	**-1.7**
	1.7nm,0.3s,baz=117,slow=5.2,SNR=5.8						
TIXI				pP	**sP**	**00 39 05.7**	**+0.5**
	2.2nm,0.5s,baz=130,slow=9.3,SNR=4.1						
KSRS	**Korea Array**	**27.07**	**251**	LR	LR	00 51 04.9	
	comp=Z,21nm,19.5s,baz=115,slow=39						
NRIK	**Noril'sk**	**37.01**	**326**	LR	LR	00 57 02.4	
	comp=Z,43nm,19.3s,baz=30,slow=39						
MKAR	**Makanchi Array**	**48.91**	**297**	P	**P**	**00 42 22.2**	**-1.8**
	0.3nm,0.5s,baz=56,slow=5.8,SNR=6.2						
CMAR	**Chiang Mai Arr**	**58.23**	**259**	P	**P**	**00 43 34.6**	**+2.0**
	0.9nm,0.7s,baz=34,slow=6.6,SNR=4.2						
FINES	**FINESS Array B**	**61.28**	**337**	P	**P**	**00 43 53.7**	**+0.7**
	1.2nm,0.7s,baz=63,slow=8.8,SNR=7.1						
FINES				pP	**pwP**	**00 44 05.1**	**-1.2**
	0.9nm,0.6s,baz=45,slow=8.6,SNR=3.0						
NB2	**NORSAR Subarra**	**64.72**	**344**	P	**P**	**00 44 16.3**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=22,slow=6.9						
NOA	**NORSAR Array B**	**64.72**	**344**	P	**P**	**00 44 15.8**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=24,slow=6.6,SNR=4.2						
GEYT	**Alibeck**	**67.95**	**304**	P	**P**	**00 44 37.6**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=45,slow=4.3,SNR=3.8						
AKASG	**Malin Array Be**	**69.74**	**329**	P	**P**	**00 44 47.7**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=29,slow=6.7,SNR=5.5						
AKASG				pP	**sP**	**00 44 59.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=30,slow=6.7,SNR=2.4						
TXAR	**Lajitas Array**	**70.83**	**67**	P	P	00 45 03.8	+8.8
	comp=Z,0.2nm,0.6s,baz=284,slow=3.6,SNR=3.0						
GERES	**GERESS Array B**	**75.68**	**338**	LR	LR	01 20 57.3	
	comp=Z,10nm,21.1s,baz=42,slow=38						

*ISCJB **01** 00:42:11.3±0.8, 6°.33S±0°.05×145°.86E±0°.08, h137km±8km, mb4.2/25, Error ellipse: s-maj=13.5km s-min=8.0km az=0.4*
*IDC **01** 00:42:11.9±0.7, 6°.35S×145°.81E, h125km±7km, mb4.0/14, mb1 4.0/18, mb1mx3.9/29, mbtmp4.3/18, MS3.0/1, Ms1 3.0/1, ms1mx2.5/18, Error ellipse: s-maj=16.1km s-min=8.2km az=85.0*
*NEIC **01** 00:42:13.0±1.6, 6°.32S×145°.83E, h137km±7km, mb4.3/14, Error ellipse: s-maj=23.2km s-min=13.7km az=88.0*

ISC 01 00:42:11.8±0.6, 6°.32S±0°.06×145°.84E±0°.09, h124km±6km, h125km:pP-P, n62, σ0§95/73, mb4.4/25, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.33**	**157**	P	**Pn**	**00 43 03.4**	**+0.8**
	47nm,0.3s,baz=5.2,slow=3.6,SNR=57						
PMG				S	**Sn**	**00 43 41.7**	**-0.1**
	64nm,0.3s,baz=280,slow=23,SNR=20						
PMG				LR	LR	00 44 22.0	
	comp=Z,239nm,19.7s,baz=123,slow=39						
PMG	**Port Moresby**	**3.33**	**157**	*e*Pn	**Pn**	**00 43 03.7**	**+1.1**
PMG				*e*Sn	**Sn**	**00 43 41.7**	**-0.1**
PMG				*e*		00 44 22.0	
MANU	**Manus Island**	**4.51**	**20**	*e*Pn	**Pn**	**00 43 19.5**	**+1.2**
JAY	**Jayapura**	**6.36**	**306**	P	**Pn**	**00 43 44.5**	**+1.2**
	0.9nm,0.3s,baz=145,slow=22,SNR=1.2						
COEN	**Coen**	**8.03**	**199**	*e*Pn	**Pn**	**00 44 07.5**	**+1.8**
CTA	**Charters Tower**	**13.69**	**178**	P	**Pn**	**00 45 22.4**	**+1.5**
	0.1nm,0.3s,baz=56,slow=20,SNR=1.8						
WR1	**Warramunga Arr**	**17.55**	**218**	*e*P	**P**	**00 46 07.1**	**-1.0**
WRA	**Warramunga Arr**	**17.55**	**218**	P	**P**	**00 46 07.1**	**-1.0**
	0.3nm,0.3s,baz=44,slow=11,SNR=15						
AS31	**Alice Springs**	**20.71**	**212**	*e*S	**S**	**00 50 24.8**	**-2.4**
AS31				*e*PcP	**PcP**	**00 50 48.5**	**+1.0**
ASAR	**Alice Springs**	**20.72**	**212**	P	**P**	**00 46 42.1**	**-0.4**
	2.3nm,0.8s,baz=50,slow=11,SNR=16						
ASAR				pP	**pP**	**00 47 06.5**	**+1.2**
	5.5nm,0.8s,baz=38,slow=11,SNR=8.4						
ASAR				S	**S**	**00 50 24.8**	**-2.5**
	1.8nm,0.8s,baz=26,slow=22,SNR=4.1						
ASAR				PcP	**PcP**	**00 50 48.5**	**+1.0**
	1.1nm,0.8s,baz=70,slow=3.3,SNR=5.4						
FITZ	**Fitzroy Crossi**	**22.92**	**237**	P	**P**	**00 47 04.4**	**-0.9**
	3.6nm,0.6s,baz=74,slow=7.4,SNR=12						
STKA	**Stephens Creek**	**25.73**	**188**	P	**P**	**00 47 30.3**	**-0.5**
	8.7nm,0.7s,baz=356,slow=9.8,SNR=14						
MJAR	**Matsushiro Arr**	**43.23**	**351**	P	**P**	**00 50 00.1**	**-0.7**
	1.1nm,0.3s,baz=183,slow=10,SNR=4.0						
MAJO	**Matsushiro**	**43.23**	**351**	*e*P	**P**	**00 50 00.1**	**-0.7**
KSRS	**Korea Array**	**46.65**	**340**	P	**P**	**00 50 27.2**	**-0.6**
	3.0nm,0.6s,baz=160,slow=8.8,SNR=19						
WHN	**Wuhan**	**47.47**	**322**	P	**P**	**00 50 35.6**	**+1.3**
CHAI	**Chaiyaphum**	**48.71**	**297**	P	**P**	**00 50 43.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**51.82**	**347**	P	**P**	**00 51 06.9**	**-0.1**
	4.3nm,0.6s,baz=173,slow=6.5,SNR=9.8						
CMAR	**Chiang Mai Arr**	**52.39**	**299**	P	**P**	**00 51 12.5**	**+0.8**
	6.4nm,0.6s,baz=119,slow=5.9,SNR=17						
CMMT	**Chiang Mai**	**52.53**	**299**	P	**P**	**00 51 13.8**	**+1.0**
XAN	**Xi'an**	**53.20**	**321**	P	**P**	**00 51 16.7**	**-0.9**
XAN				pP	pP	00 51 39.4	-7.4
XAN				sP	sP	00 51 47.6	-13
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN				pmax	pmax		
	comp=Z,65nm,4.5s						
XAN	**Xi'an**	**53.20**	**321**	*e*P	**P**	**00 51 16.6**	**-0.9**
	comp=Z,14nm,0.9s						
PETK	**Petropavlovsk-**	**60.05**	**8**	P	**P**	**00 52 05.7**	**+0.2**
	comp=Z,2.9nm,0.5s,baz=159,slow=6.5,SNR=8.3						
PEA1	**Petropavlovsk-**	**60.06**	**8**	*e*P	**P**	**00 52 05.7**	**+0.2**
GTA	**Gaotai**	**62.26**	**321**	*e*P	**P**	**00 52 21.7**	**+0.8**
GTA				pP	pP	00 52 24.8	-27
GTA				sP	PcP	00 52 27.9	-32
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SONA0	**Songino Array**	**64.13**	**332**	*e*P	**P**	**00 52 33.5**	**+0.4**
SONA0				*e*pP	**PcP**	**00 53 06.8**	**-0.3**
SONM	**Songino Array**	**64.13**	**332**	P	**P**	**00 52 33.5**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=157,slow=5.8,SNR=11						
SONM				PcP	**PcP**	**00 53 06.8**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=170,slow=8.8,SNR=3.6						
KOLN	**Koldanda**	**68.93**	**303**	*e*P	**P**	**00 53 04.0**	**-0.1**
	comp=Z,22nm,0.8s						
DANN	**Dangsing**	**68.99**	**303**	*e*P	**P**	**00 53 04.3**	**-0.2**
	comp=Z,12nm,0.5s						
PYUN	**Piuthan**	**69.55**	**303**	*e*P	**P**	**00 53 07.6**	**-0.3**
	comp=Z,26nm,0.8s						
VNDA	**Vanda**	**71.66**	**176**	P	**P**	**00 53 20.5**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=325,slow=6.5,SNR=6.6						
VNDA				pP	**pP**	**00 53 50.8**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=328,slow=5.2,SNR=3.7						
VNDA	**Vanda**	**71.66**	**176**	*e*P	**P**	**00 53 20.0**	**+0.4**
MK32	**Makanchi Array**	**77.01**	**321**	*e*P	**P**	**00 53 51.2**	**+0.1**
MKAR	**Makanchi Array**	**77.01**	**321**	P	**P**	**00 53 51.2**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=99,slow=7.5,SNR=31						
MAKZ	**Makanchi**	**77.22**	**321**	*e*P	**P**	**00 53 51.5**	**-0.7**
	comp=Z,9.6nm,1.1s						
TARG	**Taragay, Kyrgy**	**78.12**	**315**	*e*P	**P**	**00 53 57.9**	**0.0**
	comp=Z,2.2nm,0.7s						
ZALV	**Zalesovo Beam**	**78.67**	**328**	P	**P**	**00 53 59.2**	**-0.8**
	comp=Z,2.8nm,0.5s,baz=115,slow=4.5,SNR=13						
ZAA1	**Zalesovo Array**	**78.67**	**328**	*e*P	**P**	**00 53 59.2**	**-0.9**
KDJ	**Kajisay**	**78.70**	**315**	*e*P	**P**	**00 54 00.9**	**+0.1**
	comp=Z,4.4nm,0.8s						
KSH	**Kashi**	**78.73**	**312**	P	**P**	**00 54 02.5**	**+1.6**
KSH				pmax	pmax		
	comp=Z,14nm,1.2s						
KSH				pmax	pmax		
	comp=Z,190nm,4.4s						
NIL	**Nilore**	**79.18**	**306**	*e*P	**P**	**00 54 03.4**	**+0.1**
	comp=Z,19nm,0.7s						
KURK	**Kurchatov**	**80.78**	**324**	*e*P	**P**	**00 54 11.5**	**0.0**
	comp=Z,7.2nm,0.8s						
KKAR	**Karatay Array**	**83.69**	**315**	*e*P	**P**	**00 54 27.1**	**+0.1**
	comp=Z,2.2nm,0.8s						
NRIK	**Noril'sk**	**85.23**	**342**	P	**P**	**00 54 33.6**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=142,slow=5.0,SNR=3.7						
CCB	**Clear Creek Bu**	**85.82**	**23**	*e*P	**P**	**00 54 35.8**	**-1.3**
	comp=Z,4.3nm,0.7s						
ILAR	**Eielson Array**	**86.23**	**23**	P	**P**	**00 54 37.7**	**-1.4**
	comp=Z,3.1nm,0.6s,baz=251,slow=5.1,SNR=34						
ILAR				pP	**pP**	**00 55 10.7**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=260,slow=5.2,SNR=2.1						
ILB	**Eielson Array**	**86.23**	**23**	*e*P	**P**	**00 54 37.8**	**-1.4**
	comp=Z,3.8nm,0.6s						
BRVK	**Borovoye**	**86.42**	**324**	*e*P	**P**	**00 54 40.0**	**-0.3**
	comp=Z,3.7nm,1.0s						
DOT	**Dot Lake**	**86.95**	**25**	*e*P	**P**	**00 54 42.2**	**-0.5**
	comp=Z,3.3nm,0.8s						
AKASG	**Malin Array Be**	**111.57**	**322**	PKKPbc	PKKPbc	01 11 29.8	+1.8
	comp=Z,2.3nm,0.5s,baz=235,slow=3.4,SNR=15						
GERES	**GERESS Array B**	**121.51**	**325**	PKP	**PKPdf**	**01 00 50.4**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=64,slow=3.1,SNR=5.0						
PLCA	**Paso Flores**	**122.48**	**148**	PKP	**PKiKP**	**01 00 53.7**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=304,slow=7.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**144.05**	**284**	PKP	**PKPab**	**01 01 31.9**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=58,slow=4.6,SNR=20						
TORD				pPKP	**pPKPdf**	**01 02 05.4**	**-2.5**
	comp=Z,0.6nm,0.7s,baz=107,slow=2.7,SNR=2.5						
TOA1	**Torodi Ar. Sit**	**144.05**	**284**	*e*PKPdf	**PKPab**	**01 01 31.9**	**+0.3**
TOA1				*e*pPKPdf	**pPKPdf**	**01 02 05.4**	**-2.5**
DBIC	**Dimbokro**	**150.88**	**272**	PKPbc	**PKPbc**	**01 01 51.4**	**+0.4**
	comp=Z,4.3nm,0.6s,baz=68,slow=3.9,SNR=6.8						
BDFB	**Brasilia**	**154.22**	**148**	PKPbc	**PKPbc**	**01 01 58.4**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=259,slow=5.2,SNR=2.8						

NNC 01 01:16:26.2±22.0, 38°.00N×71°.75E, h0km, mb3.6, mpv3.4, 2C-2D, Error ellipse: s-maj=176.2km s-min=125.6km az=172.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.35**	**343**	Pg	Pn	01 17 37.7	+4.1
	3.1nm,0.1s						
IUG				Lg	Lg	01 18 32.7	
	46nm,0.8s						
AAK	**Ala-Archa**	**5.08**	**23**	⇓P	Pn	01 17 42.4	-1.4
	2.0nm,0.6s						
AAK				⇑S	Sn	01 18 42.2	-1.1
	3.2nm,0.7s						
KK31	**Karatay Array**	**5.18**	**350**	⇑P	Pn	01 17 47.7	+2.7
	0.3nm,0.3s,baz=172,slow=14						
KK31				⇓S	Sn	01 18 48.0	+2.5
	4.0nm,0.4s,baz=177,slow=26						
KST	**Kastek**	**5.97**	**31**	Pg	Pn	01 17 51.3	-4.7
	8.3nm,0.6s						
KST				Lg	Lg	01 18 55.8	
	3.0nm,0.4s						

IDC 01 01:33:51.6±2.1, 6°.99S×129°.12E, h0km, mb3.5/1, mb1 3.6/2, mb1mx3.3/29, mbtmp3.5/2, ML5.5/1, Error ellipse: s-maj=141.7km s-min=31.4km az=67.0, Banda Sea

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

DZM	Mont Dzumac	15.21 270	*e*Pn	P	01 37 42.0	+1.2
	231nm,0.8s					
WMGZ	Waiomatatini S	15.22 194	P	Pn	01 37 36.6	-3.3
WMGZ			S	Sn	01 40 13.0	-17
HAZ	Te Kaha	15.30 195	P	Pn	01 37 37.3	-3.5
PKGZ	Pakihiroa	15.36 194	P	Pn	01 37 36.6	-5.1
PKGZ			S	S	01 40 16.0	-17
PUZ	Puketiti	15.49 194	P	Pn	01 37 39.6	-3.6
RUGZ	Raukumara Rang	15.53 196	P	Pn	01 37 42.3	-1.4
RUGZ	Raukumara Rang	15.53 196	P	Pn	01 37 41.3	-2.4
RUGZ			S	S	01 40 17.5	-19
WHRZ	Whale Island	15.61 198	P	P	01 37 46.3	+1.4
WHRZ	Whale Island	15.61 198	P	Pn	01 37 43.2	-1.4
WHRZ			S	S	01 40 26.3	-12
TWGZ	Tauwhareparae	15.65 194	P	Pn	01 37 44.4	-0.8
OPRZ	Ohinepanea	15.72 199	P	P	01 37 47.5	+1.4
EDRZ	Edgecumbe	15.91 198	P	P	01 37 46.3	-2.0
MWZ	Matawai	15.91 195	P	P	01 37 46.6	-1.7
MWZ	Matawai	15.91 195	P	P	01 37 46.1	-2.2
MWZ			S	S	01 40 27.1	-18
TKGZ	Te Karaka	15.94 195	S	S	01 40 27.4	-18
URZ	Urewera	15.95 197	P	P	01 37 43.9	-4.7
	7.8nm,0.3s,baz=285,slow=3.5,SNR=41					
URZ			S	S	01 40 29.6	-16
	6.3nm,0.3s,baz=275,slow=21,SNR=3.0					
URZ	Urewera	15.95 197	*e*P	P	01 37 45.5	-3.1
	85nm,1.1s					
URZ	Urewera	15.95 197	P	P	01 37 45.2	-3.5
URZ	Urewera	15.95 197	P	P	01 37 45.1	-3.5
URZ			S	S	01 40 27.4	-18
TOZ	Tahuroa Road	15.95 202	P	Pn	01 37 50.2	+1.5
KARZ	Kaharoa	15.97 199	P	Pn	01 37 52.2	+3.2
OMRZ	Omania	16.01 199	P	Pn	01 37 52.0	+2.4
RAR	Rarotonga	16.18 87	P	P	01 37 49.4	-2.0
	5.0nm,0.3s,baz=236,slow=8.8,SNR=11					
RAR			S	S	01 40 37.6	-13
	4.7nm,0.3s,baz=67,slow=18,SNR=2.2					
RAR	Rarotonga	16.18 87	*e*P	P	01 37 49.4	-2.0
	1µm,1.5s					
RAR	Rarotonga	16.18 87	P	P	01 37 50.5	-0.9
RIGZ	Rimuhau	16.21 194	P	P	01 37 51.7	+0.1
RIGZ	Rimuhau	16.21 194	P	P	01 37 50.9	-0.7
RIGZ			S	S	01 40 31.7	-20
HSRZ	Hossack Road	16.24 199	P	Pn	01 37 54.8	+2.5
MUGZ	Murupara	16.25 197	P	P	01 37 48.9	-3.0
MUGZ	Murupara	16.25 197	P	P	01 37 47.8	-4.1
HRRZ	Handcock Road	16.30 199	P	Pn	01 37 53.2	+0.2
RTZ	Ruatahuna	16.32 197	P	P	01 37 52.1	-0.7
SNGZ	Shannon Statio	16.38 195	P	Pn	01 38 00.1	+6.1
SNGZ	Shannon Statio	16.38 195	P	P	01 37 50.5	-3.0
PRGZ	Paritu Road	16.39 194	P	Pn	01 37 54.1	0.0
PRGZ	Paritu Road	16.39 194	P	P	01 37 52.8	-0.7
TLZ	Tolley Road	16.48 201	P	Pn	01 37 55.3	+0.1
RAHZ	Arahi	16.57 196	P	P	01 37 53.9	-1.6
RAHZ	Arahi	16.57 196	P	P	01 37 53.2	-2.4
MHGZ	Mahia Peninsul	16.61 194	P	P	01 37 54.5	-1.4
MHGZ	Mahia Peninsul	16.61 194	P	P	01 37 53.2	-2.7
MRHZ	Matea Rd	16.68 198	P	P	01 37 55.1	-1.6
NMHZ	Naumai	16.82 197	P	P	01 37 55.5	-2.8
HIZ	Hauiti	16.87 202	P	Pn	01 38 00.1	+0.2
BKZ	Black Stump Fm	16.96 197	*e*P	P	01 37 56.3	-3.6
	34nm,0.9s					
BKZ	Black Stump Fm	16.96 197	P	P	01 37 56.1	-3.8
WTVZ	West Tongariro	17.18 200	P	P	01 38 00.2	-2.1
TWVZ	Taurewa	17.19 200	P	P	01 38 01.2	-1.2
NGZ	Ngauruhoe	17.23 199	P	P	01 38 01.1	-1.8
TUVZ	Tukino	17.30 199	P	Pn	01 38 04.5	-0.5
FWVZ	Far West T-bar	17.32 199	P	P	01 38 01.7	-2.2
WHVZ	Whangaehu Hut	17.33 199	P	P	01 38 02.3	-1.8
TRVZ	Turoa	17.36 199	P	Pn	01 38 07.4	+1.6
BHHZ	Black Hill Sta	17.39 198	P	P	01 38 00.7	-3.8
MOVZ	Moawhango	17.40 199	P	P	01 38 02.6	-2.1
PKVZ	Pokaka	17.41 200	P	P	01 38 02.5	-2.3
KRHZ	Kereru	17.45 197	P	P	01 38 02.3	-2.8
KAHZ	Kahuranaki	17.46 196	P	P	01 38 02.5	-2.8
VRZ	Vera Road	17.46 201	P	P	01 38 05.7	+0.5
MTVZ	Mangateitei	17.46 199	P	P	01 38 04.9	-0.5
PXZ	Pawanui	17.68 195	P	P	01 38 04.3	-3.4
PNHZ	Pukenui	17.74 197	P	P	01 38 05.6	-2.8
LREZ	Lake Rotokare	17.88 202	P	Pn	01 38 11.9	+0.2
TSZ	Takapari Road	17.94 197	P	P	01 38 11.0	+0.5
WAZ	Wanganui	17.95 200	P	P	01 38 11.6	+0.9
DVHZ	Dannevirke	18.11 197	P	P	01 38 02.8	-10
ANWZ	Angora Road	18.18 196	P	Pn	01 38 14.4	-0.8
THZ	Tophouse	20.45 202	*e*P	P	01 38 35.6	-1.9
	66nm,0.4s					
KNTN	Kanton	20.82 15	*e*P	P	01 38 40.4	-1.3
	144nm,0.8s					
LTZ	Lake Taylor	21.57 202	*e*P	P	01 38 48.9	-0.5
	99nm,0.5s					
MQZ	McQueen's Vall	22.27 200	*e*P	P	01 38 54.6	-1.6
	84nm,1.6s					
LHI	Lord Howe Isla	22.75 243	*e*P	P	01 39 00.0	-0.8
	554nm,1.4s					
LHI	Lord Howe Isla	22.75 243	P	P	01 39 03.0	+2.2
	baz=23,SNR=7.6					
RPZ	Rata Peaks	22.81 203	P	P	01 38 57.8	-3.4
	34nm,0.4s,baz=38,slow=2.4,SNR=29					
RPZ			S	S	01 42 57.2	+1.0
	21nm,0.7s,baz=57,slow=24,SNR=3.5					
DCZ	Deep Cove	25.77 206	*e*P	P	01 39 27.6	-0.4
	47nm,0.7s					
HNR	Honiara	25.79 298	*e*P	P	01 39 30.0	+1.5
HNR	Honiara	25.79 298	P	P	01 39 28.0	-0.5
	537nm,0.7s,baz=84,slow=1.2,SNR=17					
HNR	Honiara	25.79 298	*e*P	P	01 39 26.9	-1.6
	581nm,0.7s					
HNR	Honiara	25.79 298	*e*P	P	01 39 26.9	-1.6
HNR			pmax	pmax		
	comp=Z,581nm,0.7s					
TARA	Tarawa	26.12 337	*e*P	P	01 39 30.8	-0.6
	comp=Z,392nm,1.0s					
PPT	Papeete	26.38 83	P	P	01 39 34.1	+0.2
	comp=Z,64nm,0.6s,baz=250,slow=12,SNR=3.8					
ARMA	Armidale	28.79 248	*e*P	P	01 39 56.7	+1.5
	comp=Z,241nm,1.5s					
ARMA	Armidale	28.79 248	P	P	01 39 56.8	+1.5
	baz=29,SNR=22					
EIDS	Eidsvold	29.05 259	*e*P	P	01 39 57.6	+0.1
	comp=Z,86nm,0.9s					
EIDS	Eidsvold	29.05 259	P	P	01 39 58.5	+1.0
	baz=29,SNR=20					
MGCD	Mangrove Creek	29.69 243	P	P	01 40 05.1	+2.1
	baz=30,SNR=18					
RMQ	Roma	31.11 257	P	P	01 40 17.4	+1.7
	baz=31,SNR=20					
CNB	Canberra Magne	31.56 240	P	P	01 40 20.7	+1.2
	baz=32,SNR=16					
CAN	Canberra	31.85 240	*e*P	P	01 40 21.5	-0.6
	comp=Z,89nm,1.1s					
CAN	Canberra	31.85 240	*e*P	P	01 40 21.5	-0.6
CAN			pmax	pmax		
	comp=Z,89nm,1.1s					
YNG	Young	32.12 242	P	P	01 40 25.4	+1.0
	baz=32,SNR=23					
MILA	Mila	32.17 237	P	P	01 40 26.0	+1.2
	baz=32,SNR=8.9					
CMSA	Cobar Meteorol	33.98 247	P	P	01 40 40.5	0.0
	baz=34,SNR=107					
CTAO	Charters Tower	34.13 268	*e*P	P	01 40 43.0	+1.0
	comp=Z,320nm,0.7s					
CTAO	Charters Tower	34.13 268	*e*P	P	01 40 43.0	+1.0
CTAO			pmax	pmax		
	comp=Z,320nm,0.7s					
TOO	Toolangi	35.12 237	*e*P	P	01 40 49.9	-0.4
	comp=Z,53nm,1.0s					
TOO	Toolangi	35.12 237	P	P	01 40 50.6	+0.3
	baz=35,SNR=20					
TOO	Toolangi	35.12 237	*e*P	P	01 40 49.9	-0.4
TOO			pmax	pmax		
	comp=Z,53nm,1.0s					
MOO	Moorlands	35.36 228	P	P	01 40 52.2	0.0
	baz=36,SNR=8.4					
PMG	Port Moresby	36.76 286	*e*P	P	01 41 05.1	+0.7
	comp=Z,1µm,1.1s					
PMG	Port Moresby	36.76 286	*d iP*	P	01 41 04.9	+0.5
STKA	Stephens Creek	37.49 247	P	P	01 41 10.5	+0.1
	comp=Z,42nm,0.6s,baz=93,slow=10.0,SNR=83					
STKA			PcP	PcP	01 43 26.2	+1.5
	comp=Z,15nm,0.7s,baz=97,slow=5.9,SNR=4.6					
STKA			PKiKP	PKiKP	01 50 40.4	-0.5
	comp=Z,2.2nm,0.7s,baz=139,slow=7.3,SNR=4.0					
STKA	Stephens Creek	37.49 247	*e*P	P	01 41 10.3	-0.1
	comp=Z,37nm,1.4s					
STKA			*e*PcP	PcP	01 43 25.2	+0.5
STKA	Stephens Creek	37.49 247	P	P	01 41 10.6	+0.2
	baz=38,SNR=57					
STKA	Stephens Creek	37.49 247	*e*P	P	01 41 10.3	-0.1
STKA			*e*		01 43 25.2	
STKA			pmax	pmax		
	comp=Z,37nm,1.4s					
ARPS	Mount Arapiles	37.82 239	P	P	01 41 13.0	-0.1
	baz=38,SNR=19					
PATS	Pohnpei	38.20 318	*e*P	P	01 41 16.3	-0.1
	comp=Z,208nm,0.9s					
COEN	Coen	38.61 276	*e*P	P	01 41 20.9	+1.0
	comp=Z,284nm,1.3s					
COEN	Coen	38.61 276	P	P	01 41 21.0	+1.0
	baz=39,SNR=18					
HTT	Hallett	39.83 245	P	P	01 41 29.4	-0.5
	baz=40,SNR=43					
QIS	Mount Isa	40.15 265	P	P	01 41 32.7	0.0
	baz=40,SNR=20					
BBOO	Buckleboo	42.20 246	*e*P	P	01 41 48.4	-0.8
	comp=Z,63nm,0.8s					
BBOO	Buckleboo	42.20 246	P	P	01 41 48.1	-1.1
	baz=42,SNR=61					
AS31	Alice Springs	44.78 259	*e*P	P	01 42 09.9	0.0
	comp=Z,91nm,1.3s					
AS31			*e*PcP	PcP	01 43 49.8	+1.0
AS31			*e*ScP	ScP	01 47 26.0	+2.4
ASAR	Alice Springs	44.78 259	P	P	01 42 09.8	-0.1
	comp=Z,151nm,0.9s,baz=94,slow=8.1,SNR=160					
ASAR			PcP	PcP	01 43 49.8	+1.0
	comp=Z,30nm,0.6s,baz=113,slow=3.9,SNR=9.2					
ASAR			ScP	ScP	01 47 26.0	+2.4
	comp=Z,3.1nm,0.8s,baz=101,slow=4.8,SNR=4.0					
ASAR			S	S	01 48 29.1	-4.1
	comp=Z,1.2nm,0.9s,baz=100,slow=14,SNR=3.3					
ASAR			PKiKP	PKiKP	01 50 46.6	-1.0
	comp=Z,1.1nm,0.6s,baz=94,slow=1.4,SNR=7.3					
ASAR			LR	LR	01 59 08.8	
	comp=Z,297nm,18.5s,baz=102,slow=33					
WAKE	Wake Island	44.95 338	*e*P	P	01 42 10.8	-0.4
	comp=Z,219nm,0.8s					
WRAB	Tennant Creek	45.10 264	*e*P	P	01 42 12.0	-0.5
	comp=Z,264nm,0.8s					
WRAB	Tennant Creek	45.10 264	*e*P	P	01 42 12.0	-0.5
WRAB			pmax	pmax		
	comp=Z,264nm,0.8s					
WRA	Warramunga Arr	45.11 264	P	P	01 42 12.3	-0.3
	comp=Z,188nm,0.3s,baz=90,slow=9.5,SNR=13					
JAY	Jayapura	45.65 290	P	P	01 42 16.9	0.0
GENI	Genyem	46.08 290	P	P	01 42 20.0	-0.2
KHLU	Kahalu`u	47.17 28	*e*P	P	01 42 28.4	-0.2
	comp=Z,277nm,0.9s					
HUH	Hualalai	47.28 28	*e*P	P	01 42 30.9	+1.2
	comp=Z,165nm,0.9s					
POHA	Pohakuloa	47.48 28	*e*P	P	01 42 31.8	+0.7
	comp=Z,158nm,1.0s					
KIP	Kipapa	47.96 24	*e*P	P	01 42 35.5	+0.9
	comp=Z,306nm,1.0s					
KIP	Kipapa	47.96 24	*e*P	P	01 42 35.5	+0.9
KIP			pmax	pmax		
	comp=Z,306nm,1.0s					
OPA	Opana	48.20 24	*e*P	P	01 42 36.4	0.0
	comp=Z,118nm,1.1s					
OPA	Opana	48.20 24	*e*P	P	01 42 36.4	0.0
OPA			pmax	pmax		
	comp=Z,118nm,1.1s					
KDU	Kakadu	48.86 273	P	P	01 42 41.0	-0.6
	baz=49,SNR=92					
FORT	Forrest	49.08 249	P	P	01 42 42.3	-0.9
	baz=49,SNR=9.4					
WRKA	Warakurna	49.60 256	P	P	01 42 46.6	-0.6
	baz=50,SNR=92					
MTN	Manton Dam	50.04 272	P	P	01 42 49.5	-1.0
	baz=50,SNR=23					
KNRA	Kununurra	51.34 268	P	P	01 43 00.2	-0.1
	baz=52,SNR=50					
GUMO	Guam	52.06 311	*e*P	P	01 43 06.2	+0.7
	comp=Z,489nm,1.1s					
GUMO	Guam	52.06 311	*e*P	P	01 43 06.2	+0.7
GUMO			pmax	pmax		
	comp=Z,489nm,1.1s					
FAKI	Fak Fak	52.89 285	*e*P	P	01 43 10.9	-0.9
	comp=Z,146nm,1.1s					
FAKI	Fak Fak	52.89 285	P	P	01 43 11.3	-0.5
KMBL	Kambalda	54.29 247	P	P	01 43 21.1	-0.6
	baz=54,SNR=12					
SWI	Sorong	54.71 286	P	P	01 43 25.0	+0.1
SBA	Scott Base	55.40 184	*e*P	P	01 43 31.5	+2.6
	comp=Z,48nm,0.9s					
VNDA	Vanda	55.46 185	P	P	01 43 31.6	+2.3
	comp=Z,9.3nm,0.9s,baz=5.3,slow=7.6,SNR=46					
VNDA			PcP	PcP	01 44 28.9	+1.8
	comp=Z,7.6nm,1.0s,baz=306,slow=3.8,SNR=4.3					
VNDA			LR	LR	02 02 53.8	
	comp=Z,54nm,21.5s,baz=333,slow=31					
VNDA	Vanda	55.46 185	*e*P	P	01 43 30.1	+0.8
	comp=Z,24nm,1.1s					
VNDA			*e*PcP	PcP	01 44 28.9	+1.8
VNDA	Vanda	55.46 185	*e*P	P	01 43 30.1	+0.8
VNDA			*e*		01 44 28.9	
VNDA			pmax	pmax		
	comp=Z,24nm,1.1s					
PALU	Palau	56.14 297	P	P	01 43 35.2	+0.1
	baz=56,SNR=14					
SOEI	Soe	57.42 273	*e*P	P	01 43 44.3	0.0
	comp=Z,572nm,0.9s					
SOEI	Soe	57.42 273	P	P	01 43 45.7	+1.4
KLBR	Kellerberrin	57.75 246	P	P	01 43 45.3	-1.0
	baz=58,SNR=28					
BATI	Baumata	57.81 272	P	P	01 43 48.1	+1.2
RKGY	Rocky Gully	57.97 243	P	P	01 43 47.5	-0.2
	baz=58,SNR=16					
NWAO	Narrogin (SRO)	57.99 245	P	P	01 43 47.4	-0.5
	baz=58,SNR=14					
MBWA	Marble Bar	58.12 259	P	P	01 43 48.8	-0.2
	SNR=5.4					
BLDU	Ballidu	58.79 247	P	P	01 43 52.3	-1.2
	baz=59,SNR=60					
TNTI	Ternate	58.91 286	*e*P	P	01 43 54.5	0.0
	comp=Z,248nm,1.1s					
TNTI	Ternate	58.91 286	P	P	01 43 54.6	+0.1
MUN	Mundaring	58.99 246	P	P	01 43 54.3	-0.5
	baz=59,SNR=15					
MORW	Morawa	59.64 249	P	P	01 43 58.5	-0.8
	baz=60,SNR=63					
MMRI	Maumere	59.69 273	P	P	01 43 59.4	-0.4
EDFI	Ende, Flores	60.15 273	P	P	01 44 02.5	-0.6
BBSI	Bau Bau	60.58 277	P	P	01 44 06.5	+0.6
BASI	Baing, Sumba	60.65 271	P	P	01 44 06.9	+0.5
WSI	Waingapu	61.10 272	P	P	01 44 09.9	+0.5
	comp=Z,1µm,1.2s					
KDI	Kendari	61.14 279	P	P	01 44 09.3	-0.4
	comp=Z,84nm,1.1s,comp=Z,1µm					
KMSI	Cibinong	61.84 284	P	P	01 44 14.6	+0.3
SGSI	Sangihe	61.89 288	P	P	01 44 14.6	-0.1
WBSI	Waikabubak, Su	61.95 271	P	P	01 44 15.2	+0.1
CASY	Casey	62.03 206	*e*P	P	01 44 15.6	+0.9
	comp=Z,86nm,0.8s					
LUWI	Luwuk	62.22 282	*e*P	P	01 44 16.6	-0.3
	comp=Z,222nm,1.0s					
LUWI	Luwuk	62.22 282	P	P	01 44 17.4	+0.5
BSSI	Bau Bau, Buton	62.23 275	P	P	01 44 16.1	-0.9
GIRL	Giralia	62.68 256	P	P	01 44 21.1	+1.3
	baz=63,SNR=9.7					
MATI	Mati	62.84 291	*e*P	P	01 44 15.0	-6.0
BKSI	Bulukumba	62.88 276	P	P	01 44 20.7	-0.6
DDMP	Don Marcelino,	62.90 290	*e*P	P	01 44 19.1	-2.2
BNSI	Bone	63.26 277	P	P	01 44 23.8	0.0
KAPI	Kappang	63.34 276	P	P	01 44 24.1	-0.2
KAPI			pmax	pmax		
	comp=Z,247nm,2.0s					
KAPI	Kappang	63.34 276	P	P	01 44 24.1	-0.2
	SNR=8.9					
MRSI	Mawisa	63.62 283	P	P	01 44 25.2	-0.9
PLAI	Plampang	63.73 271	P	P	01 44 26.6	-0.2
SPSI	Sidrap Palu	63.74 277	P	P	01 44 25.6	-1.3
TTSI	Tana Toraja	64.06 278	P	P	01 44 28.3	-0.7
SKMP	Bagumbayan, Su	64.11 290	*e*P	P	01 44 28.0	-1.3
BUKP	Musuan	64.33 292	*e*P	P	01 44 31.2	+0.4
CTBH	Cotabato--PC H	64.71 290	⇑*iP*	P	01 44 33.1	0.0
MPSI	Mapaga	65.40 282	P	P	01 44 37.3	-0.4
MSLP	Maasin	65.65 294	*e*P	P	01 44 38.8	-0.4
PAGZ	Pagadian	65.76 291	*e*P	P	01 44 38.4	-1.6
BESP	Borongan	65.92 295	*e*P	P	01 44 41.0	0.0
OCLP	Ormoc	66.33 294	*e*P	P	01 44 41.2	-2.4
SRBI	Singaraja	66.36 271	P	P	01 44 43.7	-0.1
	comp=Z,116nm,0.9s,comp=Z,1µm					
QSPA	South Pole Qui	67.04 180	*e*P	P	01 44 49.0	+1.6
	comp=Z,64nm,1.0s					
JAGI	Jajag, Banyuwa	67.19 270	*e*P	P	01 44 47.7	-1.4
	comp=Z,100nm,1.0s					
JAGI	Jajag, Banyuwa	67.19 270	P	P	01 44 48.5	-0.6
KMMI	Kalianget	67.88 272	P	P	01 44 53.9	+0.5
PVCP	Virac	68.03 296	*e*P	P	01 44 54.0	-0.2
AUQP	San Andres	69.11 295	*e*P	P	01 45 01.8	+0.9
OTRP	Odiongan	69.17 294	*e*P	P	01 44 58.4	-2.9
CUYO	Cuyo Island	69.27 292	*e*P	P	01 45 00.7	-1.2
GRJI	Gresik	69.30 271	P	P	01 45 02.3	+0.1
PWJI	Pagerwojo	69.52 270	P	P	01 45 03.3	-0.2
BOAC	Boac	69.88 295	*e*P	P	01 45 04.9	-0.7
SJMP	San Jose	69.98 294	*e*P	P	01 45 03.3	-2.9
WOJI	Wonogiri, Jawa	70.40 270	P	P	01 45 09.7	+0.8
BUSP	Coron	70.53 293	*e*P	P	01 45 08.3	-1.2
UGM	Wanagama	70.74 269	P	P	01 45 12.1	+1.1
ENPP	El Nido	70.80 292	*e*P	P	01 45 09.9	-1.3
TGY	Tagaytay City	70.96 295	P	P	01 45 12.1	-0.1
	comp=Z,156nm,0.4s,baz=169,slow=5.2,SNR=3.1					
BATP	Bataraza	71.06 289	*e*P	P	01 45 12.2	-0.7
BALP	Baler	71.27 297	*e*P	P	01 45 12.8	-1.2
CAUP	Cauayan	71.70 298	*e*P	P	01 45 16.6	+0.1
SGCP	Mt. Cagua	72.20 299	*e*P	P	01 45 17.3	-2.2
SMPP	San Manuel, Pa	72.22 297	*e*P	P	01 45 19.3	-0.4
APYP	Conner	72.65 299	*e*P	P	01 45 21.1	-1.1
SCZP	Santa Cruz	72.66 296	*e*P	P	01 45 18.2	-4.1
MJAR	Matsushiro Arr	72.73 324	P	P	01 45 21.5	-0.8
	comp=Z,19nm,0.8s,baz=163,slow=5.7,SNR=40					
MJAR			LR	LR	02 11 15.3	
	comp=Z,46nm,21.1s,baz=85,slow=31					
MAJO	Matsushiro	72.73 324	*e*P	P	01 45 22.0	-0.3
	comp=Z,22nm,0.8s					
MAJO	Matsushiro	72.73 324	*e*P	P	01 45 22.0	-0.3
MAJO			pmax	pmax		
	comp=Z,22nm,0.8s					
MAT	Matsushiro	72.73 324	P	P	01 45 21.6	-0.7
MJB9	Matsu-Tunnel	72.74 324	*e*P	P	01 45 22.1	-0.3
	comp=Z,23nm,0.8s					
ABRA	Dolores	72.97 298	*e*P	P	01 45 23.6	-0.5
SBUM	Sibu	73.24 280	P	P	01 45 27.0	+1.2
JCJI	Jatiwangi	73.34 270	P	P	01 45 27.4	+1.0
CISI	Cisompet, Garu	73.36 269	P	P	01 45 27.2	+0.6
LEM	Lembang	73.81 269	P	P	01 45 29.6	+0.2
KSM	Kuching	74.58 278	P	P	01 45 34.0	+0.4
ADK	Adak	74.60 0	*e*P	P	01 45 32.3	-0.5
	comp=Z,143nm,1.4s					
ADK	Adak	74.60 0	*e*P	P	01 45 32.3	-0.5
ADK			pmax	pmax		
	comp=Z,143nm,1.4s					
JNU	Nakatsue	74.68 317	*e*P	P	01 45 33.3	-0.4
	comp=Z,67nm,1.1s					
YULB	Yu-li	75.57 303	*e*P	P	01 45 37.8	-1.2
	comp=Z,17nm,0.8s					
ASAJ	Asahikawa	76.34 331	P	P	01 45 43.2	+0.3
	comp=Z,47nm,0.9s,baz=228,slow=9.4,SNR=34					
BLSI	Bandar Lampung	76.55 270	P	P	01 45 42.2	-2.6
KASI	Kota Agung	77.18 269	P	P	01 45 48.1	-0.2
SNCC	San Nicolas Is	78.39 46	P	P	01 45 55.9	+1.4
	baz=232					
YSS	Yuzh-Sakhalins	78.52 333	*e*P	P	01 45 55.6	+0.7
	comp=Z,63nm,0.9s					
YSS	Yuzh-Sakhalins	78.52 333	⇓*iP*	P	01 45 55.4	+0.5
YSS			*e*		01 48 55.7	
YSS			pmax	pmax		
	comp=Z,60nm,1.0s					
YSS			pmax	pmax		
	comp=Z,200nm,6.7s					
PET	Petropavlovsk	78.62 345	*e*P	P	01 45 53.3	-2.0
PET			*e*PP	pP	01 46 37.5	-1.8
PET			*e*S	S	01 55 35.1	-1.3
PET			pmax	pmax		
	comp=Z,27nm,1.2s					
SCZ2	Santa Cruz Isl	78.78 46	P	P	01 45 58.0	+1.4
	baz=232					
SCI2	San Clemente I	78.89 47	P	P	01 45 58.3	+1.1
	baz=233					
PETK	Petropavlovsk-	78.93 345	P	P	01 45 56.5	-0.5
	comp=Z,34nm,0.8s,baz=121,slow=8.2,SNR=34					
PETK			pP	pwP	01 46 44.8	+0.1
	comp=Z,13nm,1.0s,baz=128,slow=7.9,SNR=1.9					
PETK			sP	sP	01 47 03.4	+3.1
	comp=Z,8.1nm,0.8s,baz=152,slow=6.5,SNR=1.9					
PETK			PKiKP	PKiKP	01 51 29.8	0.0
	comp=Z,2.4nm,0.5s,baz=109,slow=4.6,SNR=8.4					
PEA1	Petropavlovsk-	78.93 345	*e*P	P	01 45 56.5	-0.6
PEA1			*ep*P	pwP	01 46 44.8	+0.1
PEA1			*es*P	sP	01 47 03.4	+3.1
TJN	Taejon	78.98 317	⇑*eP*	P	01 45 57.4	-0.3
SBC	Santa Barbara	79.00 45	P	P	01 45 59.5	+1.7
	baz=232					
PKM	Mcpherson Peak	79.20 45	P	P	01 46 00.8	+1.7
	baz=232					
CIS	Catalina Islan	79.23 47	P	P	01 45 59.9	+0.7
	baz=233					
KSRS	Korea Array	79.32 318	P	P	01 45 59.7	+0.2
	comp=Z,17nm,1.0s,baz=133,slow=6.0,SNR=42					
KSRS			PP	PP	01 48 57.1	-5.2
	comp=Z,1.6nm,0.8s,baz=142,slow=9.1,SNR=4.4					
KSRS			LR	LR	02 18 10.0	
	comp=Z,78nm,20.8s,baz=144,slow=33					
SMMC	Simmler	79.35 44	P	P	01 46 01.5	+1.7
	baz=232					
MAW	Mawson	79.45 200	P	P	01 46 01.4	+1.6
	comp=Z,97nm,0.8s,baz=127,slow=6.8,SNR=187					
MAW			LR	LR	02 21 19.4	
	comp=Z,66nm,18.1s,baz=160,slow=36					
MAW	Mawson	79.45 200	*e*P	P	01 46 00.6	+0.8
	comp=Z,25nm,0.8s					
MAW	Mawson	79.45 200	P	P	01 46 01.4	+1.6
	baz=79,SNR=192					
MAW	Mawson	79.45 200	*e*P	P	01 46 00.6	+0.8
MAW			pmax	pmax		
	comp=Z,25nm,0.8s					
FMP	Fort Macarthur	79.49 47	P	P	01 46 02.0	+1.5
	baz=233					
OSI	Osito Audit: C	79.75 46	P	P	01 46 03.6	+1.6
	baz=233					
DECC	Green Verdugo	79.79 46

baz=234
CMB Columbia Colle 80.79 42 eP P 01 46 07.9 +0.5
comp=Z,103nm,1.9s
CMB Columbia Colle 80.79 42 eP P 01 46 07.9 +0.5
CMB pmax pmax
comp=Z,103nm,1.9s
MSHR Mys Shultsa 80.84 324 deP P 01 46 08.1 +0.6
LRMC Laurel Mtn Rad 80.95 45 P P 01 46 09.8 +1.3
baz=233,SNR=15
RRX Edison Barstow 81.05 46 P P 01 46 09.8 +1.0
baz=234
BELC Belle Mtn. Jos 81.21 47 P P 01 46 11.3 +1.5
baz=235,SNR=20
CWC Cottonwood Cre 81.27 44 P P 01 46 11.4 +1.3
baz=233
N02D Trinity Center 81.28 39 P P 01 46 11.9 +1.9
baz=229,SNR=10
O03E Paynes Creek 81.37 40 P P 01 46 11.5 +1.0
baz=230,SNR=20
BC3 Big Chuckawall 81.38 48 P P 01 46 12.3 +1.5
baz=235,SNR=15
MPMC Manual Prospec 81.42 45 P P 01 46 12.4 +1.4
baz=233,SNR=21
GSC Goldstone, Bar 81.42 46 P P 01 46 12.2 +1.3
baz=234,SNR=16
HEC Hector,Ludlow 81.46 47 P P 01 46 12.4 +1.3
baz=234,SNR=31
GLA Glamis 81.47 49 P P 01 46 12.8 +1.7
baz=235,SNR=6.2
M02C Callahan 81.47 38 P P 01 46 13.0 +2.0
baz=229,SNR=14
DAC Darwin (Calif) 81.48 45 eP P 01 46 13.4 +2.1
comp=Z,81nm,1.9s
DAC Darwin (Calif) 81.48 45 eP P 01 46 13.4 +2.1
DAC pmax pmax
comp=Z,81nm,1.9s
MLAC Mammoth, Mammo 81.50 43 P P 01 46 12.6 +1.2
baz=232
USRK Ussuriysk Ar. 81.51 326 P P 01 46 11.2 +0.2
comp=Z,57nm,0.9s,baz=124,slow=3.2,SNR=78
TIN Tinemaha, Big 81.54 44 P P 01 46 12.8 +1.3
baz=233
L02E Cave Junction 81.55 37 P P 01 46 13.1 +1.8
baz=228
KEBM Edson Butte 81.63 36 eP P 01 46 12.6 +0.8
comp=Z,148nm,1.3s
SII Sitkinak Islan 81.63 13 eP P 01 46 11.4 0.0
comp=Z,269nm,0.9s
WAKR Walker 81.66 42 eP P 01 46 12.6 +0.3
comp=Z,109nm,1.6s
TYV Tymovskoe 81.68 336 eP P 01 46 12.0 +0.3
TYV pmax pmax
comp=Z,61nm,1.3s
K02D Willamette Mer 81.88 37 P P 01 46 14.8 +1.7
baz=228,SNR=8.1
IRM Iron Mountain 81.88 48 P P 01 46 15.0 +1.7
baz=235,SNR=31
GMRC Granite Mounta 81.89 47 P P 01 46 14.7 +1.3
baz=235,SNR=16
J01E Myrtle Point 82.04 36 P P 01 46 15.3 +1.5
baz=228,SNR=5.9
GRAC Grapevine Rang 82.06 44 P P 01 46 16.0 +1.8
baz=233,SNR=10
FURC Furnace Creek, 82.07 45 P P 01 46 15.3 +1.2
baz=234,SNR=14
Y12C Blythe 82.07 48 P P 01 46 15.9 +1.7
baz=236,SNR=15
TUQ Turquoise Moun 82.09 46 P P 01 46 15.7 +1.3
baz=234,SNR=6.9
NJ2 Nanjing 82.12 310 eP P 01 46 15.1 +0.6
NJ2 pmax pmax
comp=Z,30nm,0.9s
SHOC Shoshone, Teco 82.12 46 P P 01 46 15.7 +1.2
baz=234,SNR=12
214A Organ Pipe Nat 82.28 51 P P 01 46 16.9 +1.6
baz=237
M04C Macdoel 82.30 38 P P 01 46 16.9 +1.5
baz=230,SNR=14
L04D Klamath Falls 82.32 38 P P 01 46 16.9 +1.4
baz=229,SNR=12
NV01 Mina Array Sit 82.32 43 eP P 01 46 16.6 +0.9
NV01 epP pwP 01 47 02.7 -0.7
NVAR Mina Array Bea 82.32 43 P P 01 46 16.6 +0.9
comp=Z,8.0nm,0.6s,baz=223,slow=8.0,SNR=46
NVAR pP pwP 01 47 02.7 -0.7
comp=Z,5.8nm,0.7s,baz=223,slow=9.1,SNR=3.3
NVAR PKKPbc PKKPbc 02 04 44.2 +0.9
comp=Z,1.3nm,0.7s,baz=66,slow=3.6,SNR=7.7
NVAR PKPPKP P'P'df 02 12 42.8 -3.3
comp=Z,1.3nm,0.8s,baz=83,slow=4.1,SNR=4.2
LDFC Landfair 82.43 47 eP P 01 46 16.9 +0.8
comp=Z,64nm,0.8s
NEE2 Needles Airpor 82.58 47 P P 01 46 18.4 +1.5
baz=235,SNR=7.7
BKNI Bangkinang 82.61 273 P P 01 46 17.5 0.0
PDMCI Parker Dam,Lak 82.65 48 P P 01 46 18.7 +1.6
baz=236,SNR=10
PDSI Padang 82.66 272 P P 01 46 15.9 -1.9
I03D Drain, OR 82.71 36 P P 01 46 19.0 +1.7
baz=228,SNR=9.7
I02D Swisshome 82.72 36 P P 01 46 19.2 +2.0
baz=228
TPNV Topopah Spring 82.75 45 P P 01 46 19.3 +1.4
baz=234,SNR=20
K04D Chiloquin, OR 82.89 38 P P 01 46 19.7 +1.2
baz=230
MDJ Mudanjiang 83.06 325 P P 01 46 20.1 +1.1
MDJ pmax pmax
comp=Z,76nm,1.0s
MDJ pmax pmax
comp=Z,300nm,6.1s
J04D Umpqua Nationa 83.09 37 P P 01 46 21.2 +1.6
baz=229,SNR=9.7
KDAK Kodiak Island 83.10 13 eP P 01 46 19.5 +0.6
comp=Z,301nm,1.7s
KDAK Kodiak Island 83.10 13 eP P 01 46 19.5 +0.6
KDAK pmax pmax
comp=Z,301nm,1.7s
I04A Tendick Farm, 83.29 37 P P 01 46 21.4 +1.1
baz=229,SNR=15
COR Corvallis 83.33 36 eP P 01 46 20.8 +0.4
comp=Z,188nm,1.7s
COR Corvallis 83.33 36 eP P 01 46 20.8 +0.4
COR pmax pmax
comp=Z,188nm,1.7s
K05A Summer Lake 83.45 38 eP P 01 46 21.9 +0.6
comp=Z,100nm,1.2s
H04D Lebanon 83.59 36 P P 01 46 23.5 +1.7
baz=229,SNR=13
J05D Fort Rock, OR 83.61 37 P P 01 46 23.8 +1.7
baz=230,SNR=39
G03D McMinnville, O 83.76 35 P P 01 46 24.3 +1.7
baz=228,SNR=8.4
TUC Tucson 83.92 51 eP P 01 46 24.9 +1.0
comp=Z,47nm,0.8s
TUC Tucson 83.92 51 eP P 01 46 24.9 +1.0
TUC pmax pmax
comp=Z,47nm,0.8s
R11A Troy Canyon, C 83.99 44 P P 01 46 25.1 +0.9
baz=234,SNR=14
F03A Seaside 84.08 34 eP P 01 46 24.8 +0.6
comp=Z,114nm,1.0s
GRNR Gornyy 84.13 332 eP P 01 46 27.2 +2.9
GRNR pmax pmax
comp=Z,42nm,1.0s
DL2 Dalian 84.13 317 P P 01 46 24.3 -0.3
DL2 sP sP 01 47 29.4 +1.0
DL2 eS S 01 56 33.4 -0.3
DL2 pmax pmax
comp=Z,41nm,0.8s
DL2 pmax pmax
comp=Z,190nm,4.8s
MNSI Mandailing Nat 84.14 273 P P 01 46 23.8 -1.5
I05D Terrebonne, OR 84.23 37 P P 01 46 26.4 +1.3
baz=230
SYO Syowa Base 84.43 193 ⇑iP P 01 46 24.4 -1.3
SYO Syowa Base 84.43 193 ⇓iPcP PcP 01 46 27.8 -1.2
F04D Rainier, OR 84.47 35 P P 01 46 28.3 +2.1
baz=228,SNR=5.2
WHN Wuhan 84.60 306 P P 01 46 27.5 +0.3
G05D Wamic, OR 84.82 36 P P 01 46 29.3 +1.3
baz=230
CNPM China Poot 84.98 13 eP P 01 46 29.1 +0.7
comp=Z,132nm,1.2s
CNPM epP pwP 01 47 16.4 +0.2
E04D Cinebar 85.02 34 P P 01 46 30.7 +1.9
baz=229

KLR Kul'dur 85.12 329 P P 01 46 29.9 +0.5
comp=Z,21nm,0.9s,baz=109,slow=4.3,SNR=61
KLR PP PP 01 49 48.1 -1.6
comp=Z,0.6nm,0.3s,baz=113,slow=10,SNR=2.9
KLR PKiKP PKiKP 01 51 39.6 -0.1
comp=Z,1.6nm,0.8s,baz=185,slow=2.4,SNR=4.2
KLR Kul'dur 85.12 329 dⅈP P 01 46 29.5 +0.2
KLR pmax pmax
comp=Z,28nm,0.9s
F05D White Salmon 85.16 35 P P 01 46 31.1 +1.4
baz=230
WUAZ Wupatki 85.21 48 P P 01 46 31.9 +1.6
baz=237
D04E Lakebay 85.32 34 P P 01 46 32.7 +2.3
baz=229,SNR=6.7
D03D Eldon 85.39 33 P P 01 46 32.5 +1.8
baz=228,SNR=16
SNAA Sanae 85.45 178 P P 01 46 31.1 +0.1
SNAA Sanae 85.45 178 eP P 01 46 31.0 +0.1
comp=Z,17nm,0.8s
SNAA Sanae 85.45 178 eP P 01 46 31.0 +0.1
SNAA pmax pmax
comp=Z,17nm,0.8s
PSI Prapat 85.52 275 P P 01 46 31.4 -1.0
comp=Z,50nm,0.9s,baz=69,slow=1.6,SNR=25
VNA3 Neumayer Olymp 85.56 176 P P 01 46 31.9 +0.5
TIA Tai'an 85.58 312 P P 01 46 32.2 +0.2
TIA pmax pmax
comp=Z,31nm,0.9s
ELK Elko 85.60 42 P P 01 46 32.9 +0.7
comp=Z,4.2nm,0.7s,baz=228,slow=4.5,SNR=20
ELK pP pP 01 47 18.2 +1.1
comp=Z,8.6nm,0.9s,baz=260,slow=5.3,SNR=6.6
PKCU Pink Cliffs 85.62 46 eP P 01 46 34.1 +1.5
comp=Z,82nm,1.3s
SKLT Songkhla 85.70 280 P P 01 46 36.4 +3.4
VNA2 Neumayer--Watz 86.01 177 P P 01 46 34.1 +0.6
baz=180,slow=2.9
W18A Petrified Fore 86.14 49 P P 01 46 36.3 +1.3
baz=238
GSI Gunungsitoli 86.18 273 eP P 01 46 35.1 -0.4
comp=Z,129nm,0.8s
121A Cookes Peak, D 86.20 52 P P 01 46 37.3 +2.0
baz=240,SNR=16
VNA1 Neumayer--Stat 86.23 176 P P 01 46 35.2 +0.6
BBB Bella Bella 86.26 28 P P 01 46 36.4 +1.6
comp=Z,53nm,0.8s,baz=270,slow=4.2,SNR=24
PANO Nakornpanom 86.27 290 P P 01 46 36.5 +0.8
A04D Lummi Island 86.37 33 P P 01 46 37.2 +1.8
baz=229,SNR=43
B05A Bryant 86.38 33 P P 01 46 37.1 +1.6
baz=229,SNR=28
MA2 Magadan 86.44 344 P P 01 46 34.7 -0.9
comp=Z,25nm,0.9s,baz=134,slow=4.9,SNR=10
MA2 Magadan 86.44 344 eP P 01 46 35.0 -0.6
comp=Z,43nm,1.1s
MA2 Magadan 86.44 344 deP P 01 46 34.9 -0.7
MA2 pmax pmax
comp=Z,35nm,0.9s
RC01 Rabbit Creek A 86.72 13 eP P 01 46 37.3 +0.4
comp=Z,148nm,1.3s
RC01 epP pwP 01 47 25.0 0.0
SKNT Sakolnakorn 86.74 290 P P 01 46 38.7 +0.7
C06D Leavenworth 86.77 34 P P 01 46 38.4 +0.9
baz=230
TRTT Trang 86.81 280 P P 01 46 40.1 +1.6
DUG Dugway, Tooele 86.81 44 P P 01 46 38.8 +0.7
baz=236
PLCA Paso Flores 86.94 133 P P 01 46 40.1 +1.3
comp=Z,8.5nm,1.0s,baz=249,slow=6.0,SNR=6.1
PLCA pP pP 01 47 24.0 +0.1
comp=Z,8.1nm,1.1s,baz=260,slow=7.3,SNR=3.5
PLCA PKKPbc PKKPbc 02 04 31.9 +0.7
comp=Z,4.4nm,1.0s,baz=146,slow=1.6,SNR=4.3
PLCA Paso Flores 86.94 133 eP P 01 46 40.1 +1.3
comp=Z,38nm,1.4s
PLCA epP pP 01 47 24.1 +0.1
KRAB Krabi 87.41 280 P P 01 46 43.0 +1.7
MNTX Cornudas Mount 87.57 54 P P 01 46 43.1 +1.4
baz=241,SNR=46
Y22D IRIS PASSCAL I 87.60 51 P P 01 46 43.6 +1.6
baz=240
HLID Hailey 87.72 40 P P 01 46 43.6 +1.2
baz=235
LTX Lajitas 87.75 57 eP P 01 46 44.0 +1.3
LTX epP pP 01 47 28.6 +0.7
LTX Lajitas 87.75 57 eP P 01 46 44.0 +1.3
LTX e*PP pP 01 47 28.6 +0.7
TXAR Lajitas Array 87.75 57 P P 01 46 44.0 +1.2
comp=Z,14nm,0.8s,baz=214,slow=7.4,SNR=145
TXAR pP pP 01 47 28.6 +0.7
comp=Z,12nm,0.9s,baz=201,slow=6.7,SNR=6.7
TXAR PKKP PKKPdf 02 04 24.8 +0.5
comp=Z,0.4nm,0.7s,baz=91,slow=6.4,SNR=3.5
TXAR PKKPbc PKKPbc 02 04 30.8 +1.1
comp=Z,2.0nm,0.9s,baz=81,slow=3.3,SNR=13
TXAR PKPPKP P'P'df 02 12 30.3 -6.6
comp=Z,0.6nm,1.0s,baz=141,slow=4.4,SNR=3.7
CHAI Chaiyaphum 88.03 288 P P 01 46 45.3 +1.1
MVCO Mesa Verde 88.07 48 P P 01 46 45.0 +0.8
baz=239
BJI Beijing 88.26 315 ⇓iP P 01 46 45.0 +0.3
BJI sP sP 01 47 48.5 -0.4
BJI S S 01 57 16.9 +3.2
BJI pmax pmax
comp=Z,9.0nm,0.9s
BJI pmax pmax
comp=Z,83nm,3.8s
TASM ASL Pad, Albuq 88.36 51 P P 01 46 46.8 +1.2
baz=240,SNR=24
TASM ASL Pad, Albuq 88.36 51 P P 01 46 46.8 +1.2
baz=240,SNR=19
ANMO Albuquerque 88.36 51 eP P 01 46 46.8 +1.2
comp=Z,22nm,1.0s
ANMO Albuquerque 88.36 51 eP P 01 46 46.8 +1.2
ANMO pmax pmax
comp=Z,22nm,1.0s
ANMO Albuquerque 88.36 51 P P 01 46 46.8 +1.2
baz=240
PHET Kaeng Krachan 88.90 284 P P 01 46 50.3 +2.0
NEW Newport 88.96 35 P P 01 46 48.4 +0.4
comp=Z,15nm,1.0s,baz=237,slow=4.2,SNR=22
NEW pP pwP 01 47 34.9 -1.5
comp=Z,2.6nm,0.6s,baz=148,slow=3.2,SNR=2.1
NEW Newport 88.96 35 P P 01 46 48.6 +0.6
baz=233,SNR=15
SEY Seymchan 89.03 347 P P 01 46 47.7 0.0
comp=Z,48nm,0.8s,baz=153,slow=4.8,SNR=113
SKAG Skagway 89.08 20 eP P 01 46 49.4 +1.3
comp=Z,198nm,1.6s
PBKT Sadao Pong 89.19 288 P P 01 46 51.3 +1.7
S22A 4UR Ranch, Cre 89.49 48 P P 01 46 52.2 +1.2
baz=240,SNR=13
BWN Browne 89.57 12 eP P 01 46 50.8 +0.5
comp=Z,275nm,1.4s
TIY Taiyuan 89.57 312 eP P 01 46 52.2 +1.1
TIY pP pwP 01 47 39.7 +0.4
TIY sP sP 01 47 56.5 +1.2
TIY S S 01 57 25.6 -0.6
TIY sS sS 01 58 43.2 -2.3
TIY pmax pmax
comp=Z,45nm,1.0s
TIY pmax pmax
comp=Z,220nm,4.6s
O20A White River Ci 89.74 46 P P 01 46 52.6 +0.7
baz=239,SNR=9.0
MSO Missoula 89.87 38 P P 01 46 52.5 +0.3
baz=235,SNR=5.8
SRDT SRDT 89.93 286 P P 01 46 56.8 +3.7
UTTA Uttaradit 90.03 289 P P 01 46 55.5 +2.0
DLBC Dease Lake 90.07 23 P P 01 46 54.0 +1.1
comp=Z,50nm,0.9s,baz=216,slow=5.4,SNR=54
ZEA Zeya 90.24 331 eP P 01 46 53.8 +0.2
ZEA pmax pmax
comp=Z,52nm,1.0s
BW06 Boulder Array 90.26 43 P P 01 46 54.5 +0.1
baz=238,SNR=7.9
PD31 Pinedale Array 90.26 43 eP P 01 46 54.9 +0.5
comp=Z,20nm,1.0s
PD31 epP pwP 01 47 41.4 -1.3
PDAR Pinedale Array 90.26 43 P P 01 46 54.4 0.0
comp=Z,12nm,0.9s,baz=204,slow=3.3,SNR=76
PDAR pP pwP 01 47 41.4 -1.3
comp=Z,4.4nm,0.9s,baz=210,slow=4.3,SNR=2.8
PDAR PKiKP PKiKP 01 51 54.0 +5.2
comp=Z,0.2nm,0.5s,baz=245,slow=3.9,SNR=2.5

PDAR PKKPbc PKKPbc 02 04 23.4 -0.9
comp=Z,1.0nm,0.7s,baz=82,slow=3.3,SNR=9.7
PDAR PKPPKP P'P'df 02 12 29.8 -1.6
comp=Z,0.5nm,0.8s,baz=119,slow=5.6,SNR=4.5
YPP Pitchstone Pla 90.29 41 eP P 01 46 55.4 +0.8
comp=Z,35nm,1.7s
XAN Xi'an 90.31 307 P P 01 46 55.0 +0.4
XAN pP pP 01 47 40.4 +0.7
XAN sP sP 01 47 57.7 -1.0
XAN S S 01 57 36.6 +3.5
XAN pmax pmax
comp=Z,41nm,0.8s
XAN pmax pmax
comp=Z,170nm,6.1s
XAN LR LR
comp=Z,94nm,17.3s
XAN LR LR
comp=Z,110nm,24.9s
YHB Horse Butte 90.31 41 eP P 01 46 55.5 +0.9
comp=Z,34nm,1.1s
NANT Nan 90.33 290 P P 01 46 56.3 +1.4
SDCO Great Sand Dun 90.41 49 P P 01 46 55.9 +0.7
baz=241,SNR=12
H17A Grant Village 90.49 41 P P 01 46 57.5 +2.1
baz=238
TCOL CIGO, UAF Yank 90.51 12 P P 01 46 54.6 -0.1
baz=207
COLA College 90.51 12 eP P 01 46 54.6 0.0
comp=Z,164nm,1.3s
COLA College 90.51 12 eP P 01 46 54.6 0.0
COLA pmax pmax
comp=Z,164nm,1.3s
BOZ Bozeman (W) 90.51 40 P P 01 46 56.6 +1.2
baz=237,SNR=76
MSTX Muleshoe 90.57 53 P P 01 46 56.7 +0.8
baz=242
ILAR Eielson Array 90.61 12 P P 01 46 55.0 -0.2
comp=Z,20nm,0.8s,baz=220,slow=5.3,SNR=132
ILAR pP pP 01 47 40.1 -0.3
comp=Z,14nm,1.1s,baz=214,slow=6.2,SNR=3.3
ILAR PP PP 01 50 20.0 -13
comp=Z,1.7nm,0.9s,baz=206,slow=6.0,SNR=3.9
ILAR PKiKP PKiKP 01 51 48.2 -0.1
comp=Z,1.5nm,0.8s,baz=266,slow=2.8,SNR=6.7
ILAR PKPPKP P'P'df 02 12 30.2 +1.5
comp=Z,0.2nm,0.6s,baz=320,slow=2.6,SNR=5.0
ILB Eielson Array 90.61 12 eP P 01 46 55.1 -0.1
comp=Z,98nm,1.4s
ILB epP pP 01 47 40.1 -0.3
ILB ePP PP 01 50 20.0 -13
ILB ePKiKP PKiKP 01 51 48.2 -0.1
PHRA Phrae 90.62 290 P P 01 46 57.8 +1.5
833A Chaparral WMA, 90.64 59 P P 01 46 57.0 +0.8
baz=244
POKR Poker Plat Res 90.81 12 P P 01 46 55.9 -0.2
baz=207
T25A Trinidad 90.88 50 P P 01 46 57.8 +0.4
baz=242,SNR=9.4
UMPA Umpang Tak 90.90 287 P P 01 47 01.8 +4.2
LAMP Lampang 91.15 290 P P 01 47 00.4 +1.7
KMI Kunming 91.22 297 P P 01 47 00.9 +1.7
KMI pP pP 01 47 43.4 -1.0
KMI sP sP 01 48 02.5 -0.9
KMI S S 01 57 40.4 -1.7
KMI pmax pmax
comp=Z,29nm,0.9s
KMI pmax pmax
comp=Z,190nm,3.8s
HIA Hailar 91.23 324 dⅈP P 01 46 57.9 -0.5
HIA pmax pmax
comp=Z,77nm,0.9s
Q24A Divide 91.24 48 P P 01 46 59.7 +0.6
baz=241
JCT Junction City 91.26 57 P P 01 46 58.9 -0.1
baz=244
PAYA Payao 91.28 290 P P 01 47 00.7 +1.4
comp=Z,73μm,1.0s
ISCO Idaho Springs 91.33 47 P P 01 47 00.2 +0.7
baz=241,SNR=9.0
N23A Red Feather La 91.64 46 P P 01 47 01.4 +0.6
baz=241
BILL Bilibino 91.64 354 eP P 01 47 00.2 +0.4
comp=Z,70nm,0.9s
BILL Bilibino 91.64 354 dⅈP P 01 46 59.9 +0.1
BILL pmax pmax
comp=Z,80nm,0.9s
BILL MLR MLR
comp=Z,121nm,21.0s
RLMT Red Lodge 91.67 41 P P 01 47 02.1 +1.3
baz=239,SNR=12
HHC Hu-ho-hao-te 91.70 314 eP P 01 47 02.0 +1.1
HHC S S 01 57 38.2 -7.3
HHC pmax pmax
comp=Z,32nm,1.3s
HHC pmax pmax
comp=Z,170nm,5.7s
CM31 Chiang Mai Arr 91.72 289 eP P 01 47 03.4 +2.0
comp=Z,76nm,1.1s
CM31 epP pP 01 47 46.9 +0.3
CMAR Chiang Mai Arr 91.72 289 P P 01 47 03.0 +1.6
comp=Z,40nm,1.0s,baz=139,slow=3.2,SNR=77
CMAR pP pP 01 47 46.9 +0.4
comp=Z,4.0nm,0.9s,baz=133,slow=2.5,SNR=1.1
CMAR PP PP 01 50 39.3 -3.6
comp=Z,1.0nm,0.3s,baz=120,slow=6.4,SNR=3.7
AMTX Amarillo 91.79 53 P P 01 47 01.8 +0.3
baz=243
CMMT Chiang Mai 91.86 290 P P 01 47 03.2 +1.2
CHTO Chiang Mai 91.86 290 eP P 01 47 03.1 +1.1
comp=Z,72nm,1.2s
CHTO Chiang Mai 91.86 290 eP P 01 47 03.1 +1.1
CHTO pmax pmax
comp=Z,72nm,1.2s
CHTO Chiang Mai 91.86 290 PcP PcP 01 47 03.9 +1.1
SNR=18
K22A Casper 92.12 44 P P 01 47 03.5 +0.6
baz=240,SNR=5.9
ABTX Abilene, Hawle 92.31 56 P P 01 47 04.3 +0.5
baz=244
CD2 Chengdu 92.83 302 P P 01 47 06.6 +0.3
CD2 pmax pmax
comp=Z,20nm,0.5s
EGMT Eagleton 92.90 38 P P 01 47 06.9 +0.7
baz=238
KSCO Kaye Shedlock' 92.99 49 P P 01 47 07.4 +0.5
baz=243
435B Jarrell 93.11 58 P P 01 47 08.0 +0.5
baz=245
TOLK Toolik Lake Re 93.61 10 P P 01 47 09.7 +0.7
baz=205
WHTX Lake Whitney, 93.72 57 P P 01 47 10.3 0.0
baz=245
WMOK Wichita Mounta 93.87 54 P P 01 47 10.8 -0.2
baz=245
EPYK Eagle Plains 94.21 15 P P 01 47 12.1 +0.4
baz=217
OGNE Ogallala 94.28 47 P P 01 47 13.2 +0.4
baz=243
LAO LASA Array 94.29 41 P P 01 47 14.0 +1.4
baz=241
RSSD Black Hills 94.42 44 eP P 01 47 13.9 +0.4
comp=Z,40nm,0.9s
RSSD epP pP 01 47 59.2 +0.4
RSSD Black Hills 94.42 44 P P 01 47 14.0 +0.4
baz=242
YAK Yakutsk 94.77 338 eP P 01 47 13.9 -0.4
comp=Z,205nm,0.7s
YAK Yakutsk 94.77 338 eP P 01 47 13.9 -0.4
LZH Lanzhou 94.95 307 ⇓iP P 01 47 16.9 +0.8
LZH pP pwP 01 48 05.0 +0.4
LZH sP sP 01 48 23.1 +2.8
LZH pmax pmax
comp=Z,38nm,1.3s
LZH pmax pmax
comp=Z,93nm,5.4s
LZH LR LR
comp=Z,340nm,16.7s
LZH LR LR
comp=Z,340nm,17.2s
LZH LR LR
comp=Z,460nm,19.3s
DGMT Dagmar 96.35 40 P P 01 47 23.0 +1.0
baz=242
INK Inuvik 96.51 15 P P 01 47 21.9 -0.2
comp=Z,7.5nm,0.8s,baz=233,slow=4.2,SNR=10
INK pP pwP 01 48 09.6 -0.8
comp=Z,9.7nm,1.1s,baz=229,slow=5.3,SNR=3.1

INK	**Inuvik**	96.51	15	*e*P	**P**		01 47 22.4	+0.3
INK				*e*pP	**pwP**		01 48 09.6	-0.8
INK	**Inuvik**	96.51	15	*e*P	**P**		01 47 22.4	+0.3
ULN	**Ulaanbaatar**	97.81	319	*e*P	**P**		01 47 28.3	-0.4
	comp=Z,27nm,1.8s							
ULN	**Ulaanbaatar**	97.81	319	*e*P	**P**		01 47 28.3	-0.4
ULN				pmax	pmax			
	comp=Z,27nm,1.8s							
ULN	**Ulaanbaatar**	97.81	319	Pdiff	**P**		01 47 28.7	0.0
	SNR=6.2							
SONM	**Songino Array**	98.19	319	P	**P**		01 47 29.6	-0.8
	comp=Z,1.9nm,0.8s,baz=110,slow=3.4,SNR=7.2							
SONM				PP	**PP**		01 51 26.8	-5.9
	comp=Z,4.5nm,1.2s,baz=122,slow=6.4,SNR=6.0							
SONM				PKKPbc	**PKKPbc**		02 04 02.7	-0.6
	comp=Z,0.7nm,0.7s,baz=269,slow=3.2,SNR=3.7							
SONM				LR	LR		02 25 58.1	
	comp=Z,45nm,22.0s,baz=106,slow=32							
YKA	**Yellowknife Ar**	98.48	25	P	Pdif		01 47 31.2	+0.1
	comp=Z,7.7nm,0.8s,baz=237,slow=4.2,SNR=84							
YKA				pP	pwP		01 48 18.8	-1.1
	comp=Z,1.5nm,0.8s,baz=237,slow=3.9,SNR=2.6							
YKA				PP	**PP**		01 51 29.6	-4.6
	comp=Z,0.3nm,0.3s,baz=234,slow=7.9,SNR=5.8							
YKA				PKiKP	**PKiKP**		01 52 00.9	-1.1
	comp=Z,1.2nm,0.6s,baz=255,slow=1.2,SNR=10							
YKA				PKKPbc	**PKKPbc**		02 04 00.7	-2.2
	comp=Z,2.7nm,0.7s,baz=46,slow=2.6,SNR=23							
YKA				PKKPab	PKKPdf		02 04 28.7	+23
	comp=Z,1.1nm,0.8s,baz=49,slow=4.9,SNR=7.9							
YKA				PKPPKP	**P'P'df**		02 12 17.2	+2.9
	comp=Z,0.5nm,0.8s,baz=55,slow=2.7,SNR=5.2							
YKB5	**Yellowknife Ar**	98.48	25	*e*P	Pdif		01 47 31.2	+0.1
YKB5				*e*pP	pwP		01 48 18.8	-1.1
BOD	**Bodaibo**	98.69	330	*e*P	**P**		01 47 30.8	-1.4
BOD				pmax	pmax			
	comp=Z,6.0nm,2.0s							
ECSD	**EROS Data Cent**	99.09	46	*e*Pdif	**Pdif**		01 47 35.6	+1.2
	comp=Z,18nm,1.2s							
ECSD	**EROS Data Cent**	99.09	46	P	**Pdif**		01 47 34.4	0.0
	baz=247							
GTA	**Gaotai**	99.20	309	P	**Pdif**		01 47 35.6	+0.5
GTA				pP	pwP		01 48 23.9	+0.2
GTA				sP	sP		01 48 42.1	+2.6
GTA				pmax	pmax			
	comp=Z,6.0nm,1.7s							
GTA				pmax	pmax			
	comp=Z,77nm,4.7s							
GTA				LR	LR			
	comp=Z,53nm,18.6s							
GTA				LR	LR			
	comp=Z,48nm,20.6s							
GTA				LR	LR			
	comp=Z,79nm,20.3s							
LPAZ	**La Paz**	100.34	113	P	**Pdif**		01 47 44.3	+3.0
	comp=Z,1.3nm,0.7s,baz=301,slow=1.4,SNR=5.3							
LPAZ				PP	**PP**		01 51 43.2	-6.5
	comp=Z,1.3nm,1.0s,baz=254,slow=9.9,SNR=3.0							
LPAZ				PKKPbc	**PKKPbc**		02 03 56.9	+0.4
	comp=Z,2.3nm,0.8s,baz=1.1,slow=1.7,SNR=8.8							
TIXI	**Tiksi**	101.40	345	P	**Pdif**		01 47 43.0	-0.9
	comp=Z,1.8nm,0.7s,baz=105,slow=4.0,SNR=5.5							
TIXI				PKiKP	**PKiKP**		01 52 06.6	-0.4
	comp=Z,2.7nm,0.4s,baz=64,slow=1.4,SNR=2.8							
TIXI	**Tiksi**	101.40	345	*e*Pdif	**Pdif**		01 47 43.3	-0.6
TIXI	**Tiksi**	101.40	345	*e*P	**Pdif**		01 47 43.3	-0.6
S44A	**Carbondale**	102.11	54	P	**Pdif**		01 47 47.9	0.0
	baz=250							
X47A	**Russelville**	102.11	58	P	**Pdif**		01 47 47.8	-0.2
	baz=250							
W47A	**Westpoint**	102.56	57	P	**Pdif**		01 47 51.1	+1.1
	baz=251							
ODAN	**Odare**	104.69	293	*e*P	**PKiKP**		01 52 14.6	-0.1
	comp=Z,25nm,0.7s							
RAMN	**Ramite**	105.39	293	*e*P	**PKiKP**		01 52 14.6	-1.4
JIRN	**Jiri**	105.95	294	*e*P	**PKiKP**		01 52 16.7	-0.5
P49A	**Miami Univ. Ec**	106.06	54	P	**PKiKP**		01 52 16.9	+0.3
	baz=253							
U52A	**Thorn Hill**	106.18	57	P	**PKiKP**		01 52 17.2	+0.3
	baz=253							
GUN	**Gumba**	106.29	294	*e*P	**PKiKP**		01 52 16.7	-1.1
	comp=Z,29nm,0.8s							
Q50A	**Georgetown**	106.42	54	P	**PKiKP**		01 52 17.6	+0.3
	baz=254							
X54A	**Belton**	106.42	59	P	**PKiKP**		01 52 17.6	+0.2
	baz=253							
PKI	**Pulchoki**	106.58	293	*e*P	**PKiKP**		01 52 17.2	-1.1
PKIN	**Phulchoki**	106.60	293	*e*P	**PKiKP**		01 52 16.8	-1.5
KKN	**Kakani**	106.76	293	*e*P	**PKiKP**		01 52 18.0	-0.5
	comp=Z,24nm,0.7s							
U53A	**Fall Branch**	106.78	57	P	**PKiKP**		01 52 18.1	+0.1
	baz=254							
N49A	**Columbus Grove**	106.85	52	P	**PKiKP**		01 52 18.1	+0.2
	baz=254							
DMN	**Daman**	106.85	293	*e*P	**PKiKP**		01 52 18.1	-0.6
KMSC	**Kings Mountain**	107.41	59	P	**PKiKP**		01 52 18.8	-0.4
	baz=254							
DANN	**Dangsing**	108.21	294	*e*P	**PKiKP**		01 52 20.5	-0.8
	comp=Z,33nm,0.6s							
PYUN	**Piuthan**	108.79	293	*e*P	**PKiKP**		01 52 21.3	-1.0
RES	**Resolute Bay**	110.01	16	PKiKP	**PKiKP**		01 52 22.6	-0.3
	comp=Z,6.5nm,0.8s,baz=274,slow=2.3,SNR=12							
M55A	**Ridgway**	110.94	53	P	**PKiKP**		01 52 25.8	+0.1
	baz=257							
P57A	**Homestead Farm**	111.06	55	P	**PKiKP**		01 52 26.0	+0.1
	baz=257							
V61A	**Roper**	111.33	59	P	**PKiKP**		01 52 25.7	-0.8
	baz=256							
L55A	**Hinsdale**	111.34	52	P	**PKiKP**		01 52 26.1	-0.3
	baz=258							
M56A	**Emporium**	111.37	53	P	**PKiKP**		01 52 26.1	-0.3
	baz=258							
S60A	**Water View**	111.71	57	P	**PKiKP**		01 52 26.8	-0.4
	baz=257							
G53A	**Haliburton**	111.80	49	P	**PKiKP**		01 52 26.7	-0.5
	baz=259							
E52A	**Mattawa**	111.99	48	P	**PKiKP**		01 52 27.0	-0.5
	baz=259							
BANO	**Bancroft**	112.26	49	P	**PKiKP**		01 52 27.3	-0.7
	baz=259							
D52A	**ZEK Kipawa Sen**	112.29	47	P	**PKiKP**		01 52 27.5	-0.5
	baz=260							
ALGO	**Algonquin Park**	112.35	48	P	**PKiKP**		01 52 27.2	-0.9
	baz=260							
DELO	**Deloro Mine**	112.39	50	P	**PKiKP**		01 52 27.6	-0.6
	baz=259							
D53A	**Lac Vacive, Po**	112.78	47	P	**PKiKP**		01 52 28.4	-0.6
	baz=260							
PEMO	**Pembroke**	112.85	49	P	**PKiKP**		01 52 28.6	-0.5
	baz=260							
PLVO	**Plevna**	112.86	49	P	**PKiKP**		01 52 28.0	-1.2
	baz=260							
ZALV	**Zalesovo Beam**	112.97	321	PKiKP	**PKiKP**		01 52 28.3	-0.8
	comp=Z,6.4nm,0.6s,baz=167,slow=0.9,SNR=25							
E54A	**Lac Daplat, Po**	113.02	48	P	**PKiKP**		01 52 28.5	-1.0
	baz=260							
N59A	**State Game Lan**	113.04	54	P	**PKiKP**		01 52 28.9	-0.8
	baz=259							
G55A	**Calabogie**	113.14	49	P	**PKiKP**		01 52 28.7	-1.0
	baz=260							
NRIK	**Noril'sk**	113.22	337	PKiKP	**PKiKP**		01 52 28.9	-0.2
	comp=Z,5.5nm,0.7s,baz=100,slow=2.8,SNR=6.5							
D54A	**Lac Fusel, La**	113.50	47	P	**PKiKP**		01 52 29.4	-1.0
	baz=261							
MK31	**Makanchi Array**	113.52	313	*i* PKIKP	**PKiKP**		01 52 29.1	-1.3
MK31				pmax	pmax			
	comp=Z,17nm,1.0s							
MKAR	**Makanchi Array**	113.52	313	Pdiff	**Pdif**		01 48 40.2	+1.7
	comp=Z,0.6nm,0.8s,baz=98,slow=7.5,SNR=3.9							
MKAR				PKiKP	**PKiKP**		01 52 29.9	-0.4
	comp=Z,9.7nm,0.8s,baz=72,slow=4.0,SNR=47							
MKAR				PKKPbc	**PKKPbc**		02 03 15.8	-0.2
	comp=Z,1.7nm,0.8s,baz=278,slow=3.7,SNR=10							
MKAR	**Makanchi Array**	113.52	313	*i* PKIKP	**PKiKP**		01 52 30.0	-0.4
LSQQ	**Lebel-sur-Quev**	113.57	45	P	**PKiKP**		01 52 29.9	-0.5
	baz=262							
MAKZ	**Makanchi**	113.73	313	PKIKP	**PKiKP**		01 52 29.4	-1.4
MAKZ				pmax	pmax			
	comp=Z,19nm,1.0s							
NVS	**Novosibirsk**	114.00	321	⇑*i* PKIKP	**PKiKP**		01 52 30.6	-0.4
NVS				pmax	pmax			
	comp=Z,22nm,1.2s							
NVS				pmax	pmax			
	comp=N,8.0nm,1.4s							
NVS				pmax	pmax			
	comp=E,8.0nm,1.4s							
PAL	**Palisades**	114.44	54	P	PKPdf		01 52 31.7	-0.6
	baz=260							
LONY	**Lake Ozonia**	114.54	50	P	PKPdf		01 52 31.9	-0.5
	baz=261							
CHGQ	**Chibougamau**	115.37	44	P	**PKPdf**		01 52 33.2	-0.7
	baz=264							
LATQ	**La Tuque**	116.14	47	P	**PKPdf**		01 52 34.4	-0.9
	baz=264							
LBNH	**Lisbon**	116.37	51	P	**PKPdf**		01 52 35.6	-0.3
	baz=263							
KURK	**Kurchatov**	116.40	317	*e*PKPdf	**PKPdf**		01 52 35.1	-0.7
KURK	**Kurchatov**	116.40	317	*d* PKIKP	**PKPdf**		01 52 34.7	-1.0
KURK				pmax	pmax			
	comp=Z,33nm,1.3s							
KURK	**Kurchatov**	116.40	317	PKPdf	**PKPdf**		01 52 35.4	-0.4
	SNR=10							
KURBB	**Kurchatov Arra**	116.45	316	PKP	**PKPdf**		01 52 34.9	-0.9
	comp=Z,13nm,0.9s,baz=100,slow=1.9,SNR=78							
KURBB				PP	PP		01 53 36.6	-9.0
	comp=Z,4.9nm,1.1s,baz=100,slow=4.7,SNR=5.2							
KSH	**Kashi**	116.99	304	PKP	**PKiKP**		01 52 38.4	+0.9
KSH				PP	**PP**		01 53 57.2	+7.3
KSH				SKKS			02 00 32.1	
KSH				AMB	AMB			
	comp=Z,140nm,4.3s							
BDFB	**Brasilia**	117.10	123	PKKPbc	PKKPbc		02 03 04.0	+1.0
	comp=Z,2.6nm,0.8s,baz=104,slow=4.2,SNR=2.9							
ULHL	**Ulahol**	117.16	307	P	**PKiKP**		01 52 38.0	+0.2
	SNR=21							
TKM2	**Tokmak 2**	117.71	308	P	**PKPdf**		01 52 38.3	-0.5
	SNR=22							
TKM2	**Tokmak 2**	117.71	308	PKIKP	**PKPdf**		01 52 37.1	-1.8
TKM2				pmax	pmax			
	comp=Z,26nm,1.3s							
KZA	**Kyzart**	117.87	307	P	**PKiKP**		01 52 40.1	+0.6
	SNR=18							
KBK	**Karagaybulak**	118.16	307	P	**PKPdf**		01 52 39.6	-0.1
	SNR=12							
NIL	**Nilore**	118.21	297	*e*PKPdf	**PKPdf**		01 52 39.6	-0.3
NIL	**Nilore**	118.21	297	*e*PKIKP	**PKPdf**		01 52 39.6	-0.3
CHMS	**Chumysh**	118.34	308	P	**PKPdf**		01 52 39.0	-0.9
	SNR=10							
PKME	**Peaks-Kenny Pk**	118.35	50	*e*PKPdf	**PKPdf**		01 52 39.5	-0.2
PKME	**Peaks-Kenny Pk**	118.35	50	P	**PKPdf**		01 52 39.5	-0.2
	baz=265							
UCH	**Uchtor**	118.43	307	P	**PKiKP**		01 52 40.8	+0.2
	SNR=26							
AAK	**Ala-Archa**	118.49	307	P	**PKiKP**		01 52 40.6	+0.2
	SNR=8.4							
AAK	**Ala-Archa**	118.49	307	*e*PKPdf	**PKPdf**		01 52 40.0	-0.4
AAK	**Ala-Archa**	118.49	307	*i* PKPdf	**PKiKP**		01 52 40.4	+0.1
	SNR=9.4							
AAK	**Ala-Archa**	118.49	307	*d* PKIKP	**PKPdf**		01 52 39.9	-0.4
AAK				pmax	pmax			
	comp=Z,18nm,1.3s							
AAK	**Ala-Archa**	118.49	307	PKiKP	**PKiKP**		01 52 40.5	+0.2
	SNR=7.0							
USP	**Ospenovka**	118.55	308	P	**PKPdf**		01 52 39.8	-0.4
	SNR=11							
EKS2	**Erkin-Say**	119.02	307	P	**PKiKP**		01 52 41.4	+0.1
	SNR=10							
AML	**Almayashu**	119.03	307	P	**PKiKP**		01 52 41.8	+0.1
	SNR=23							
PQI	**Presque Isle**	119.33	48	*e*PKPdf	**PKPdf**		01 52 41.2	-0.3
ABPO	**Ambohimpanom**	119.81	230	*e*PKPdf	**PKiKP**		01 52 43.7	0.0
ABPO	**Ambohimpanom**	119.81	230	*e*PKIKP	**PKiKP**		01 52 43.7	0.0
KULLO	**Kullorsuaq**	119.86	16 ⇓*i* PKIKP	**PKPdf**			01 52 41.1	-0.7
KULLO				pmax	pmax			
	comp=Z,22nm,0.7s							
KULLO	**Kullorsuaq**	119.86	16 ⇓*i* P	**PKPdf**			01 52 41.1	-0.7
	comp=Z,22nm,0.7s							
OPO	**Ambohidratompo**	120.13	230	PKP	**PKiKP**		01 52 44.9	+0.6
	comp=Z,18nm,0.8s,baz=135,slow=1.1,SNR=26							
SCHQ	**Schefferville**	120.15	39	PKP	**PKPdf**		01 52 41.8	-1.1
	comp=Z,8.3nm,0.6s,baz=304,slow=3.6,SNR=3.6							
OTUK	**Ortayu**	120.36	313	PKIKP	**PKPdf**		01 52 42.1	-1.4
OTUK				pmax	pmax			
	comp=Z,46nm,1.3s							
KK31	**Karatay Array**	121.45	307	*i* PKIKP	**PKPdf**		01 52 44.5	-1.3
KK31				pmax	pmax			
	comp=Z,27nm,0.9s							
BVAR	**Borovoye Array**	121.53	319	PKP	**PKPdf**		01 52 45.3	-0.3
	comp=Z,13nm,0.5s,baz=125,slow=1.8,SNR=74							
BRVK	**Borovoye**	121.59	319	*e*PKPdf	**PKPdf**		01 52 45.1	-0.6
BRVK	**Borovoye**	121.59	319	PKIKP	**PKPdf**		01 52 43.9	-1.8
BRVK				pmax	pmax			
	comp=Z,43nm,1.3s							
BRVK	**Borovoye**	121.59	319	PKPdf	**PKPdf**		01 52 45.6	-0.1
	SNR=18							
KBL	**Kabul**	121.80	297	*e*PKPdf	**PKPdf**		01 52 46.7	-0.3
KBL	**Kabul**	121.80	297	*e*PKIKP	**PKPdf**		01 52 46.7	-0.3
SUR	**Sutherland**	122.28	198	*e*PKPdf	**PKiKP**		01 52 48.5	+0.2
GBN	**Guysborough**	123.83	50	*e*PKPdf	**PKiKP**		01 52 50.4	-0.1
ILULI	**Ilulissat**	123.85	20 ⇓*i* PKIKP	**PKPdf**			01 52 49.1	-0.4
ILULI				pmax	pmax			
	comp=Z,56nm,0.7s							
ILULI	**Ilulissat**	123.85	20 ⇓*i* P	**PKPdf**			01 52 49.1	-0.4
	comp=Z,56nm,0.7s							
KBS	**Kingsbay**	123.90	358	*e*PKPdf	**PKPdf**		01 52 49.5	+0.1
KBS	**Kingsbay**	123.90	358	*d* PKIKP	**PKPdf**		01 52 49.6	+0.1
KBS				pmax	pmax			
	comp=Z,207nm,1.0s							
KBS	**Kingsbay**	123.90	358	*e*PKPdf	**PKiKP**		01 52 50.2	+0.4
BOSA	**Boshof**	124.29	204	PKP	**PKiKP**		01 52 52.8	+0.6
	comp=Z,25nm,0.9s,baz=135,slow=2.4,SNR=24							
BOSA				PKKPbc	**PKKPbc**		02 02 35.9	-0.9
	comp=Z,3.2nm,0.8s,baz=30,slow=1.1,SNR=5.3							
BOSA	**Boshof**	124.29	204	*e*PKPdf	**PKPdf**		01 52 51.9	-0.1
SPA0	**Spitsbergen Ar**	124.44	357	*e*PKPdf	**PKPdf**		01 52 50.4	-0.2
SPA0	**Spitsbergen Ar**	124.44	357	*e*PKPdf	**PKPdf**		01 52 50.5	0.0
SPITS	**Spitsbergen Ar**	124.44	357	PKP	**PKPdf**		01 52 50.6	0.0
	comp=Z,64nm,0.7s,baz=64,slow=4.8,SNR=111							
SPITS				pPKP	**pPKPdf**		01 53 36.9	-0.9
	comp=Z,13nm,0.8s,baz=90,slow=11,SNR=1.9							
SFJD	**Kangerlussuaq**	124.98	23	PKP	**PKPdf**		01 52 51.2	-0.5
	comp=Z,19nm,0.8s,baz=356,slow=0.9,SNR=13							
SFJD	**Kangerlussuaq**	124.98	23	*i* PKIKP	**PKPdf**		01 52 50.8	-0.9
SFJD				pmax	pmax			
	comp=Z,23nm,0.9s							
SFJD	**Kangerlussuaq**	124.98	23	*i* P	**PKPdf**		01 52 50.8	-0.9
	comp=Z,23nm,0.9s							
DAG	**Danmarks Havn**	125.18	6	*i* PKIKP	**PKPdf**		01 52 51.2	-0.7
DAG				pmax	pmax			
	comp=Z,16nm,0.6s							
DAG	**Danmarks Havn**	125.18	6	*i* P	**PKPdf**		01 52 51.2	-0.7
	comp=Z,24nm,0.6s							
SUMG	**Summit**	125.42	14	*e*PKPdf	**PKPdf**		01 52 52.9	-0.1
SUMG	**Summit**	125.42	14	*i* PKIKP	**PKiKP**		01 52 53.5	+0.1
SUMG				pmax	pmax			
	comp=Z,130nm,1.0s							
SUMG	**Summit**	125.42	14	*i* P	**PKiKP**		01 52 53.5	+0.1
	comp=Z,133nm,1.0s							
HSPB	**Hornsund (broa**	125.63	357	*e*PKPdf	**PKiKP**		01 52 53.0	-0.2
SVE	**Sverdlovsk**	126.53	325	*e*PKIKP	**PKPdf**		01 52 55.0	0.0
SVE				pmax	pmax			
	comp=Z,54nm,1.2s							
ARU	**Arti**	127.74	325	PKP	**PKPdf**		01 52 57.6	+0.2
	comp=Z,9.1nm,0.6s,baz=80,slow=1.6,SNR=52							
ARU	**Arti**	127.74	325	*e*PKPdf	**PKPdf**		01 52 56.7	-0.6
ARU	**Arti**	127.74	325	*i* PKIKP	**PKPdf**		01 52 57.5	+0.2
ARU							01 55 03.6	
ARU							01 59 51.0	
ARU				SS	SS		02 11 55.2	-3.3
AB31	**Akbulak array**	128.47	315	PKIKP	**PKPdf**		01 52 58.4	-0.6
AB31				pmax	pmax			
	comp=Z,17nm,1.0s							
WSAR	**Wadi Sarin**	129.01	282	PKP	**PKPdf**		01 53 00.8	0.0
	comp=Z,20nm,1.2s,baz=246,slow=3.9,SNR=4.6							
MHTO	**MHTO**	129.13	279	PKiKP	**PKiKP**		01 53 02.0	+0.2
	SNR=6.1							
AKTO	**Aktyubinsk**	129.49	317	PKP	**PKiKP**		01 53 01.6	0.0
	comp=Z,14nm,0.8s,baz=88,slow=2.9,SNR=40							
AKTO	**Aktyubinsk**	129.49	317	PKIKP	**PKPdf**		01 52 59.4	-1.5
AKTO				pmax	pmax			
	comp=Z,30nm,1.0s							
NRS	**Narsarsuaq**	129.61	28	*i* PKIKP	**PKPdf**		01 53 00.2	-0.5
NRS	**Narsarsuaq**	129.61	28	*i* P	**PKPdf**		01 53 00.2	-0.5
MATP	**Matopo**	130.08	212	SKPbc	**SKPbc**		01 56 10.7	+2.0
	comp=Z,16nm,0.9s,baz=149,slow=4.0,SNR=14							
SCO	**Scoresbysund**	130.36	11	*e*PKPdf	**PKPdf**		01 53 02.3	+0.3
SCO	**Scoresbysund**	130.36	11	*i* PKIKP	**PKiKP**		01 53 02.7	-0.1
SCO				pmax	pmax			
	comp=Z,26nm,0.9s							
SCO	**Scoresbysund**	130.36	11	*i* P	**PKiKP**		01 53 02.7	-0.1
	comp=Z,26nm,0.9s							
GEYT	**Alibeck**	130.81	301	PKP	**PKPdf**		01 53 04.1	+0.3
	comp=Z,19nm,0.9s,baz=90,slow=0.3,SNR=32							
GEYT				SKPbc	**SKPab**		01 56 12.6	+1.6
	comp=Z,8.1nm,0.8s,baz=142,slow=7.3,SNR=8.5							
HAMF	**Hammerfest**	130.85	351	*e*PKPdf	**PKPdf**		01 53 02.3	-0.6
LVZ	**Lovozero**	131.04	345	*e*PKPdf	**PKPdf**		01 53 02.5	-0.9
LVZ	**Lovozero**	131.04	345 ⇑*i* PKIKP	**PKPdf**			01 53 03.2	-0.2
LVZ				pmax	pmax			
	comp=Z,13nm,1.0s							
SOHO	**SOHO**	131.07	283	PKiKP	**PKiKP**		01 53 06.0	+0.4
	SNR=14							
KEV	**Kevo**	131.11	349	*e*PKPdf	**PKPdf**		01 53 03.1	-0.3
KEV	**Kevo**	131.11	349	*e*PKIKP	**PKPdf**		01 53 03.1	-0.3
UOSS	**Minazif**	131.50	284	*e*PKPdf	**PKPdf**		01 53 04.9	-0.6
UOSS	**Minazif**	131.50	284	*i* PKPdf	**PKPdf**		01 53 05.0	-0.6
	SNR=8.5							
HATD	**Hatta, Dubai**	131.55	283	*i* PKiKP	**PKPdf**		01 53 05.8	+0.2
	SNR=14							
HATD	**Hatta, Dubai**	131.55	283	PKiKP	**PKiKP**		01 53 07.0	+0.4
	SNR=5.7							
ARCES	**ARCESS Array B**	131.56	350	PKP	**PKPdf**		01 53 04.5	+0.2
	comp=Z,27nm,0.6s,baz=27,slow=0.9,SNR=67							
ARCES				pPKP	**pPKPdf**		01 53 53.1	+1.5
	comp=Z,7.6nm,0.8s,baz=45,slow=1.5,SNR=1.8							
ARCES				SKPbc	**SKPab**		01 56 15.0	+1.9
	comp=Z,14nm,0.8s,baz=25,slow=4.0,SNR=12							
ARE0	**ARCESS Array S**	131.56	350	*e*PKPdf	**PKPdf**		01 53 04.7	+0.4
ASHO	**Ashiyiah**	131.59	283	*i* PKPdf	**PKPdf**		01 53 05.7	0.0
	SNR=13							
ASHO	**Ashiyiah**	131.59	283	PKiKP	**PKiKP**		01 53 07.7	+1.0
	SNR=6.7							
MSFE	**Esma-Masafi**	131.61	284	*i* PKiKP	**PKPdf**		01 53 06.2	+0.5
	SNR=9.0							
PRGR	**Permogore**	131.68	334 ⇑*i* PKIKP	**PKPdf**			01 53 05.1	+0.4
PRGR				pmax	pmax			
	comp=Z,27nm,0.7s							
ALNE	**Al Ain**	131.76	282	*i* PKPdf	**PKPdf**		01 53 06.0	0.0
	SNR=10							
NAZ	**Nazwa, Dubai**	131.99	283	*i* PKiKP	**PKPdf**		01 53 06.6	+0.2
	SNR=9.4							
ASUD	**Al Ashush, Dub**	132.23	283	*i* PKiKP	**PKiKP**		01 53 07.5	-0.5
	SNR=6.0							
KTK1	**Kautokeino**	132.39	350	*e*PKPdf	**PKPdf**		01 53 05.5	-0.3
TRO	**Tromso**	132.42	352	*e*PKPdf	**PKPdf**		01 53 05.7	-0.1
TMCR	**Tamitsa**	132.83	340	*e*PKIKP	**PKPdf**		01 53 06.3	-0.4
TMCR				pmax	pmax			
	comp=Z,17nm,0.8s							
STEI	**Steigen**	134.46	353	*e*PKPdf	PKPpre		01 52 59.1	
KLMR	**Klimovskoe**	134.52	336	*e*PKIKP	PKPpre		01 53 03.7	
KLMR				pmax	pmax			
	comp=Z,27nm,1.2s							
LSZ	**Lusaka**	134.56	215	PKP	**PKiKP**		01 53 12.7	-0.4
	comp=Z,19nm,0.8s,baz=152,slow=3.7,SNR=7.2							
LSZ	**Lusaka**	134.56	215	*e*PKPpre	PKPpre		01 53 04.2	
LSZ				*e*PKPdf	**PKPdf**		01 53 12.1	+0.4
TSUM	**Tsumeb**	135.62	200	PKP	**PKPdf**		01 53 13.9	+0.3
	comp=Z,11nm,0.9s,baz=152,slow=2.4,SNR=14							
TSUM				PP	**PP**		01 55 52.4	+0.8
	comp=Z,3.8nm,0.8s,baz=149,slow=4.5,SNR=3.8							
TSUM	**Tsumeb**	135.62	200	*e*PKPdf	**PKPdf**		01 53 13.7	0.0
NSS	**Namsos**	138.09	354	*e*PKPdf	PKPpre		01 53 08.0	
AKT	**Akhty**	138.37	307	*i* PKIKP	**PKPdf**		01

MLAZ	Malazgirt-MUS	142.75	305	eP	PKPpre	01 53 23.3	
BCA	Borcka	142.82	309	eP	PKPpre	01 53 22.7	
BCA	Borcka	142.82	309	⇓iP	PKPpre	01 53 21.8	
FURI	Furi	142.94	254	ePKPdf	PKPdf	01 53 27.2	-0.1
IZAR	Zarasai	143.05	338	eP	PKPbc	01 53 23.5	+0.3
IZAR				IAmb	IAmb	01 53 28.0	
	comp=Z,25nm,0.7s						
KOPR	Koprukoy-ERZUR	143.06	306	eP	PKPbc	01 53 24.2	+0.2
KONO	Kongsberg	143.12	354	ePKPdf	PKPbc	01 53 22.7	-0.5
SIRT	Sirnak	143.20	302	eP	PKPbc	01 53 23.9	-0.4
IDID	Didziasalis	143.22	337	eP	PKPab	01 53 22.6	+0.4
IDID				IAmb	IAmb	01 53 25.5	
	comp=Z,12nm,0.7s						
ISAL	Salakas	143.23	338	eP	PKPab	01 53 22.8	+0.6
ISAL				IAmb	IAmb	01 53 27.4	
	comp=Z,18nm,0.8s						
IIGN	Ignalina	143.37	338	eP	PKPbc	01 53 23.6	-0.4
IIGN				IAmb	IAmb	01 53 27.9	
	comp=Z,16nm,0.7s						
MICGM	Minsk	143.42	336	⇑eP	PKPbc	01 53 24.0	-0.2
MICGM				PM		01 53 25.0	
	comp=Z,0.3nm,1.0s						
MNK	Minsk	143.42	336	ePKIKP	PKPbc	01 53 24.0	-0.2
MNK				pmax	pmax		
	comp=Z,290nm,1.0s						
NACGM	Naroch	143.52	337	eP	PKPbc	01 53 24.0	-0.5
NACGM				PM		01 53 26.0	
	comp=Z,0.4nm,1.0s						
BLS5	Blasjo	143.56	357	ePKPdf	PKPbc	01 53 25.1	+0.6
VRTB	Varto-Mus	143.57	305	eP	PKPdf	01 53 27.5	0.0
SVAN	Silvan-Diyarba	144.01	304	eP	PKPbc	01 53 26.8	+0.2
STAV	Stavanger	144.09	357	ePKPdf	PKPab	01 53 25.5	+0.1
MBAR	Mbarara	144.12	233	PKP	PKPdf	01 53 28.8	-0.4
	comp=Z,107nm,0.8s,baz=135,slow=3.7,SNR=162						
MBAR	Mbarara	144.12	233	ePKPdf	PKPdf	01 53 28.7	-0.5
YEDI	Yedisu-Bingol	144.18	306	eP	PKPbc	01 53 27.3	+0.1
BNGB	Bingl	144.20	305	eP	PKPab	01 53 26.8	0.0
BIGH	Upper Bighouse	144.25	6	eP	PKPab	01 53 24.3	-1.9
RSC	Scourie	144.26	7	eP	PKPab	01 53 26.2	0.0
KTUT	Trabzon	144.29	309	eP	PKPbc	01 53 27.4	+0.2
KTUT	Trabzon	144.29	309	⇑iP	PKPab	01 53 26.3	-0.6
ANN	Anapa	144.43	316	i PKIKP	PKPab	01 53 26.8	-0.5
ANN				pmax	pmax		
	comp=Z,178nm,1.5s						
RRH	Rhenigidale	144.48	9	eP	PKPab	01 53 26.9	-0.1
MLA1	Latheron	144.49	6	eP	PKPab	01 53 26.8	-0.3
HANI	Diyarbakir_Han	144.56	304	i P	PKPdf	01 53 28.8	-0.3
HANI				IAML_P			
	comp=Z,2μm,0.7s						
HOMB	Homborsund	144.58	355	ePKPdf	PKPbc	01 53 27.9	+0.4
SNART	Snartemo	144.60	356	ePKPab	PKPbc	01 53 27.8	+0.2
RRR	Rubha Reidh	144.66	8	eP	PKPab	01 53 27.6	-0.1
MAZI	Mazidag	144.75	303	eP	PKPab	01 53 28.9	0.0
TNCL	Tunceli-Merkez	145.02	306	i P	PKPdf	01 53 31.4	+1.5
TNCL				IAML_P			
	comp=Z,537nm,0.8s						
KPL	Plockton	145.19	8	eP	PKPdf	01 53 28.5	-0.9
MCD	Coleburn Disti	145.21	6	eP	PKPdf	01 53 28.7	-0.8
MDO	Dochfour	145.24	7	eP	PKPdf	01 53 29.5	-0.1
SVRC	Sivrice-ELAZID	145.40	305	eP	PKPab	01 53 32.1	+0.7
SUW	Suwalki	145.49	339	ePKP	PKPbc	01 53 30.7	+0.2
SUW				epPKP	pPKPdf	01 54 20.9	+3.4
SUW	Suwalki	145.49	339	ePKPdf	PKPdf	01 53 30.2	+0.2
SUW	Suwalki	145.49	339	ePKP2	PKPbc	01 53 30.7	+0.2
REFA	Refahiye_ERZN	145.51	307	i P	PKPab	01 53 31.8	0.0
REFA				IAML_P			
	comp=Z,4μm,0.3s						
ELZG	Elazig	145.61	305	i P	PKPab	01 53 33.0	+0.8
ELZG				IAML_P			
	comp=Z,8μm,0.8s						
AKASG	Malin Array Be	145.62	330	PKPbc	PKPdf	01 53 29.9	-0.4
	comp=Z,221nm,0.9s,baz=43,slow=4.5,SNR=427						
AKASG				pPKPbc	pPKPbc	01 54 17.4	-0.1
	comp=Z,4.9nm,0.5s,baz=34,slow=3.8,SNR=0.8						
AKASG				PP	PP	01 56 54.5	+1.7
	comp=Z,4.6nm,0.9s,baz=44,slow=3.0,SNR=4.5						
AKBB	Malin Array Si	145.62	330	ePKPdf	PKPdf	01 53 30.3	-0.1
AKBB	Malin Array Si	145.62	330	ePKIKP	PKPdf	01 53 30.3	-0.1
KIEV	Kiev	145.63	330	⇓iP	PKPdf	01 53 30.4	0.0
KIEV	Kiev	145.63	330	i PKPbc	PKPbc	01 53 30.7	-0.3
	SNR=6.2						
KIEV	Kiev	145.63	330	⇓PKIKP	PKPdf	01 53 30.4	0.0
KEMA	Kemaliye	145.75	307	i P	PKPab	01 53 33.0	+0.4
KEMA				IAML_P			
	comp=Z,5μm,0.8s						
DRUM	Mains of Drumt	145.94	5	eP	PKPbc	01 53 31.3	-0.5
URFA	Urfa	146.01	303	eP	PKPab	01 53 33.5	-0.2
CUZAR	Zara_SIVAS	146.09	308	i P	PKPab	01 53 34.2	+0.2
RSDY	Resadiye-TOKAT	146.24	309	eP	PKPbc	01 53 33.6	+0.3
EDU	Dundee	146.26	6	eP	PKPdf	01 53 31.2	-0.1
HEKM	Malatya_Hekimh	146.27	306	i P	PKPab	01 53 35.3	+0.6
HEKM				IAML_P			
	comp=Z,4μm,0.8s						
LAWE	Loch Awe, Argy	146.27	8	eP	PKPdf	01 53 31.2	-0.1
MUD	Monsted U'grnd	146.31	354	i PKP2	PKPbc	01 53 33.2	+0.4
MUD				pmax	pmax		
	comp=Z,140nm,0.7s						
MUD	Monsted U'grnd	146.31	354	i P	PKPbc	01 53 33.2	+0.4
	comp=Z,139nm,0.7s						
SURC	SANLIURFA_SURC	146.31	302	i P	PKPbc	01 53 33.2	-0.4
SURC				IAML_P			
	comp=Z,1μm,0.8s						
ATAB	Bozova	146.41	304	i P	PKPab	01 53 35.3	+0.2
ATAB				IAML_P			
	comp=Z,8μm,0.8s						
AKCD	Akcadag	146.47	305	i P	PKPab	01 53 35.1	-0.4
AKCD				IAML_P			
	comp=Z,146nm,0.5s						
EAB	Aberfoyle	146.47	7	eP	PKPdf	01 53 31.6	-0.1
CUKAN	kangal_SIVAS	146.50	307	i P	PKPab	01 53 35.8	+0.2
EBH	Black Hill	146.50	6	eP	PKPdf	01 53 31.9	+0.2
COP	Copenhagen	146.64	350	⇓iPKP2	PKPbc	01 53 34.1	+0.3
COP				pmax	pmax		
	comp=Z,150nm,0.8s						
COP	Copenhagen	146.64	350	⇓iP	PKPbc	01 53 34.1	+0.3
	comp=Z,151nm,0.8s						
SVSK	Karacayir	146.64	308	eP	PKPbc	01 53 33.5	-0.8
DARE	Darende-Malaty	146.72	306	eP	PKPbc	01 53 35.2	+0.4
BSD	Bornholm Skovb	146.74	347	⇓iPKP2	PKPbc	01 53 34.2	+0.1
BSD				pmax	pmax		
	comp=Z,300nm,0.8s						
BSD	Bornholm Skovb	146.74	347	⇓iP	PKPbc	01 53 34.2	+0.1
	comp=Z,298nm,0.8s						
TOKT	Tokat	146.82	309	eP	PKPbc	01 53 35.5	+0.5
CUGUR	Gurin_SVAS	146.83	306	i P	PKPab	01 53 37.1	+0.2
EDI	Edinburgh	146.86	6	eP	PKPdf	01 53 32.1	-0.2
KVT	Kavak	146.89	311	eP	PKPab	01 53 36.2	-0.7
ESY	Stoneypath	146.92	6	eP	PKPdf	01 53 30.9	-1.6
SEVA	Sevastopol	146.92	318	⇑iP	PKPdf	01 53 33.8	+1.0
GZT	Gaziantep	147.00	304	i P	PKPbc	01 53 36.6	+0.9
GZT				IAML_P			
	comp=Z,5μm,0.8s						
EBL	Broad Law	147.02	6	eP	PKPdf	01 53 32.7	+0.1
CUALT	Altinyayla-SIV	147.03	307	i P	PKPab	01 53 37.6	-0.1
ELBS	KAHRAMANMARAS	147.05	306	i P	PKPab	01 53 37.6	-0.1
ELBS				IAML_P			
	comp=Z,3μm,0.8s						
SNOP	Sinop	147.09	313	eP	PKPbc	01 53 35.6	0.0
SNOP	Sinop	147.09	313	ePKPbc	PKPbc	01 53 35.8	+0.2
DIKM	Dikmen	147.21	312	eP	PKPbc	01 53 36.4	+0.5
DIKM	Dikmen	147.21	312	⇑iP	PKPbc	01 53 35.1	-0.8
CLGH	Cloghs, Cushen	147.31	10	eP	PKPdf	01 53 34.2	+1.1
GAZ	Gaziantep	147.32	303	eP	PKPbc	01 53 36.4	-0.1
CUSAR	Sarkisla-SIVAS	147.36	308	i P	PKPbc	01 53 35.4	-1.2
ESK	Eskdalemuir	147.45	6	ePKPbc	PKPbc	01 53 36.1	0.0
ESK	Eskdalemuir	147.45	6	eP	PKPdf	01 53 33.0	-0.4
ESK	Eskdalemuir	147.45	6	i PKP2	PKPbc	01 53 36.4	+0.3
KMRS	Kahramanmaras	147.47	304	eP	PKPbc	01 53 37.1	+0.3
HCB	Kahramanmara	147.51	304	i P	PKiKP	01 53 37.9	-1.0
HCB				IAML_P			
	comp=Z,3μm,0.9s						
KUZU	Kuzuini	147.53	303	i P	PKPbc	01 53 37.7	+0.7
KUZU				IAML_P			
	comp=Z,8μm,0.9s						
AYKD	Aykdinkavak	147.57	304	i P	PKiKP	01 53 38.2	-0.8
AYKD				IAML_P			
	comp=Z,4μm,0.8s						
RGN	Rugen	147.58	349	ePKPbc	PKPbc	01 53 36.6	+0.2
GAL1	Galloway	147.72	8	eP	PKPdf	01 53 35.0	+1.2
KAMA	Osmaniye	147.74	304	i P	PKPbc	01 53 38.1	+0.5
KAMA				IAML_P			
	comp=Z,5μm,0.8s						
BNN	Bunyan	147.84	307	eP	PKPbc	01 53 37.4	-0.5
ANDN	Andirin	147.87	305	i P	PKPdf	01 53 35.6	+0.8
ANDN				IAML_P			
	comp=Z,360nm,0.7s						
GKP	Gorka Klasztor	147.91	344	ePKP	PKPbc	01 53 38.2	+0.8
GKP	Gorka Klasztor	147.91	344	ePKP2	PKPbc	01 53 38.2	+0.8
SAIM	ADANA	147.95	305	i P	PKiKP	01 53 39.4	-0.4
SAIM				IAML_P			
	comp=Z,3μm,1.0s						
YOZ	Yozgat	147.95	309	eP	PKPbc	01 53 38.6	+0.4
EDMD	Edmundbyers	148.05	5	eP	PKPdf	01 53 34.2	-0.1
BEL	Belsk	148.11	339	ePKP	PKiKP	01 53 39.0	-0.6
BEL	Belsk	148.11	339	ePKP2	PKiKP	01 53 39.0	-0.6
GMM	Mts of Mourne	148.15	10	eP	PKPdf	01 53 34.5	0.0
CORM	Corum	148.24	310	eP	PKPbc	01 53 39.3	+0.4
KIS	Kishinev	148.29	325	⇓iPKP	PKPbc	01 53 38.0	-0.6
	comp=Z,540nm,1.4s						
KIS	Kishinev	148.29	325	⇓iPKP2	PKPbc	01 53 38.0	-0.6
KIS				pmax	pmax		
	comp=Z,540nm,1.4s						
KOZT	Kozan	148.29	305	eP	PKPbc	01 53 37.8	-1.2
TAHT	Tahtakopru-Hat	148.33	302	eP	PKPbc	01 53 39.7	+0.6
WIM	Isle of Man	148.43	8	eP	PKPdf	01 53 35.3	+0.3
YAHY	KAYSERI_Yahyal	148.45	306	i P	PKPbc	01 53 39.2	-0.2
YAHY				IAML_P			
	comp=Z,4μm,0.8s						
CEYT	Ceyhan	148.49	304	eP	PKiKP	01 53 40.5	-0.4
ILGA	Ilgaz	148.51	312	ePKPdf	PKPdf	01 53 35.6	-0.3
ILGA				ePKPbc	PKPbc	01 53 40.3	+0.6
LVV	L'vov	148.54	333	ePKP2	PKPbc	01 53 39.5	+0.4
GDLE	Glaisdale, N Y	148.54	4	eP	PKPdf	01 53 35.6	+0.5
YURE	YUREGIR	148.63	303	eP	PKiKP	01 53 41.0	-0.2
CANT	Cankiri	148.77	311	eP	PKPdf	01 53 37.6	+1.5
IAS	Iasi	148.81	327	⇓iP	PKPdf	01 53 39.2	-0.7
IAS	Iasi	148.81	327	⇓PKIKP	PKPbc	01 53 39.2	-0.7
TOTH	TOTAH	148.81	297	eP	PKiKP	01 53 41.9	+0.1
KURC	Kurucasile-Bar	148.82	314	eP	PKPbc	01 53 40.4	+0.3
KRTS	Karatas	148.90	303	eP	PKiKP	01 53 41.7	0.0
QASN	Qassioun	148.91	297	eP	PKPdf	01 53 31.4	-5.2
PCED	Cedros	148.94	53	ePKP	PKPbc	01 53 40.9	+0.4
KARA	Karaisali	148.94	305	eP	PKPbc	01 53 40.7	+0.1
DSB	Dublin	149.03	11	ePKPdf	PKPdf	01 53 36.3	+0.3
DSB				ePKPbc	PKPbc	01 53 40.6	+0.3
BR101	Keskin Array S	149.12	310	ePKPdf	PKPdf	01 53 35.4	-1.4
BR101				ePKPbc	PKPbc	01 53 41.1	0.0
BR131	Keskin Array S	149.12	310	ePKPdf	PKPdf	01 53 36.5	-0.3
BR131				ePKPbc	PKPbc	01 53 40.9	-0.2
BRTR	Keskin Array B	149.12	310	PKP	PKPdf	01 53 35.4	-1.4
	comp=Z,2.3nm,0.8s,baz=119,slow=1.8,SNR=13						
BRTR				PKPbc	PKPbc	01 53 41.1	0.0
	comp=Z,64nm,0.8s,baz=117,slow=1.2,SNR=139						
BRTR				pPKPbc	pPKPbc	01 54 29.2	+1.1
	comp=Z,11nm,0.9s,baz=39,slow=6.3,SNR=2.0						
BRTR				PP	PP	01 57 11.5	-2.6
	comp=Z,2.1nm,1.0s,baz=54,slow=2.5,SNR=3.6						
PCAN	Candelaria	149.16	53	ePKP	PKPbc	01 53 41.4	+0.3
WPS	Cemaes, Angles	149.18	9	eP	PKPdf	01 53 36.0	-0.2
BRBR	Barbar	149.20	297	eP	PKiKP	01 53 42.4	-0.4
WME	Myndd Eilian	149.21	8	eP	PKPdf	01 53 36.5	+0.2
KWP	Kalwaria Pacla	149.22	334	ePKP	PKiKP	01 53 41.6	-0.3
KWP	Kalwaria Pacla	149.22	334	ePKPbc	PKiKP	01 53 41.8	-0.1
KWP	Kalwaria Pacla	149.22	334	ePKP2	PKiKP	01 53 41.7	-0.3
ROSA	Rosais	149.25	52	ePKP	PKPbc	01 53 41.3	0.0
ROSA	Rosais	149.25	52	ePKPbc	PKiKP	01 53 42.0	-0.4
RCY	Rachaya	149.28	297	eP	PKiKP	01 53 42.5	-0.3
YAYX	Yaylak	149.29	308	eP	PKPbc	01 53 41.3	-0.3
WLF1	Llynfaes	149.30	9	eP	PKPdf	01 53 36.3	-0.1
YRC	Rhoscolyn	149.31	9	eP	PKPdf	01 53 36.3	0.0
PGRA	Graciosa	149.32	52	ePKP	PKiKP	01 53 42.3	-0.2
PSB	RASCA	149.36	328	⇓iP	PKPdf	01 53 39.1	-2.2
SHBL	Chebaa	149.38	297	eP	PKiKP	01 53 43.0	0.0
BIR	Birlad	149.39	325	⇑iP	PKPbc	01 53 40.5	-0.9
PMAN	Manadas	149.39	52	ePKP	PKiKP	01 53 42.2	-0.5
QRWL	Qaraoun	149.39	297	eP	PKiKP	01 53 42.9	-0.1
TLCR		149.43	323	⇑iP	PKPbc	01 53 40.0	-1.5
SERE	Sereflikochisa	149.47	308	eP	PKPbc	01 53 42.0	0.0
MERS	Mersin	149.47	304	eP	PKPbc	01 53 42.4	+0.4
YLL	Llanberis	149.48	8	eP	PKPdf	01 53 36.6	0.0
LBWR	Ladybower, Pea	149.49	5	eP	PKPdf	01 53 37.0	+0.3
GIUM	Giurgiulesti	149.58	324	⇓iP	PKPbc	01 53 40.7	-1.1
AFSR	Afar-Bala (An	149.63	310	eP	PKPbc	01 53 42.6	+0.3
BUR08	Bucovina Ar. S	149.65	329	ePKPbc	PKiKP	01 53 43.5	+0.4
ANTO	Ankara	149.65	311	eP	PKiKP	01 53 43.1	-0.2
ANTO	Ankara	149.65	311	ePKPdf	PKPdf	01 53 37.9	+0.3
ANTO				ePKPbc	PKiKP	01 53 42.9	-0.4
ANTO	Ankara	149.65	311	⇑iP	PKPdf	01 53 38.2	+0.7
ANTO	Ankara	149.65	311	PKPdf	PKPdf	01 53 38.3	+0.7
	SNR=46						
LOD	Lodumlu	149.66	311	eP	PKPbc	01 53 42.7	+0.3
BIZ	Bicaz	149.71	328	⇑iP	PKPdf	01 53 39.3	+2.0
TESR	Tescani	149.73	326	⇑iP	PKPdf	01 53 38.4	+1.1
STNC	Stoke	149.75	6	eP	PKPdf	01 53 38.0	+0.9
SULT	Sultanhani-AKS	149.78	307	eP	PKPbc	01 53 42.5	-0.2
TUDR		149.80	324	⇑iP	PKPdf	01 53 39.7	+2.3
CFR	Carcaliu	149.81	323	⇑iP	PKPdf	01 53 38.1	+0.6
MMLI	Mount Malkishu	149.81	295	eP	PKiKP	01 53 43.6	-0.2
OJC	Ojcow	149.81	338	ePKP	PKiKP	01 53 43.0	-0.2
OJC				epPKP	pPKPab	01 54 32.4	-1.6
OJC	Ojcow	149.81	338	ePKPbc	PKiKP	01 53 43.1	-0.1
OJC	Ojcow	149.81	338	ePKP2	PKiKP	01 53 43.0	-0.2
LLW	Llanuwychllyn	149.83	8	eP	PKPdf	01 53 37.3	0.0
KULU	Kulu	149.84	309	eP	PKiKP	01 53 43.6	-0.1
FOEL	Foel Wylfa	149.84	7	eP	PKPdf	01 53 37.6	+0.3
KIZK	Mersin	149.88	304	eP	PKPbc	01 53 43.3	+0.4
KOLS	Kolonicke sedl	149.95	334	ePKP	PKPdf	01 53 38.5	+0.9
KOLS				e		01 53 44.1	
PETR	Petresti	149.95	325	⇑iP	PKPbc	01 53 40.9	-1.8
STHS	Stebnicka Huta	149.96	336	ePKP2	PKiKP	01 53 43.2	-0.3
STHS	Stebnicka Huta	149.96	336	ePKP	PKiKP	01 53 43.2	-0.3
ADH	Angra Heroismo	150.00	52	ePKP	PKiKP	01 53 43.7	-0.2
ODBI	Odobesti	150.02	325	⇑iP	PKPbc	01 53 42.1	-0.8
PSCM	Serra do Cume	150.07	52	ePKP	PKPbc	01 53 43.4	+0.1
SILI	Silifke-Mersin	150.08	303	eP	PKiKP	01 53 43.9	-0.3
CHBY	Cihanbeyli	150.10	308	eP	PKPbc	01 53 43.7	+0.2
VRI	Vrincioaia	150.12	325	eP	PKPbc	01 53 43.3	+0.1
VRI	Vrincioaia	150.12	325	⇑iP	PKPdf	01 53 38.6	+0.6
TSCT	Constanta Port	150.13	321	⇑iP	PKPdf	01 53 40.6	+2.6
PLOR	Plostina	150.17	325	⇓iP	PKPbc	01 53 42.0	-1.4
CWF	Charnwood Fore	150.18	5	eP	PKPdf	01 53 37.9	+0.1
EFOR	EFORIE	150.20	321	⇑iP	PKPbc	01 53 43.5	+0.1
KEBE	Keben-Mersin	150.22	304	eP	PKiKP	01 53 44.4	-0.2
HARR	Harsova	150.23	323	⇑iP	PKPbc	01 53 42.3	-1.1
TLB	Topalu	150.23	322	⇓iP	PKPbc	01 53 41.5	-1.9
MFTR	Murfatlar	150.26	321	⇑iP	PKPbc	01 53 42.5	-1.0
IKL	Isikli	150.31	303	eP	PKPbc	01 53 44.2	+0.3
NIE	Niedzica	150.31	337	ePKP	PKiKP	01 53 44.8	+0.5
NIE				epPKP		02 11 52.6	
NIE	Niedzica	150.31	337	ePKIKP	PKiKP	01 53 44.8	+0.5
GRER		150.31	324	⇑iP	PKPdf	01 53 40.9	+2.6
WACR	West Acre	150.32	3	eP	PKPdf	01 53 38.8	+0.8
KSP	Ksiaz	150.35	343	ePKP	PKiKP	01 53 44.8	+0.5
KSP	Ksiaz	150.35	343	ePKIKP	PKiKP	01 53 44.8	+0.5
TSMN	Mangalia Port-	150.38	321	⇑iP	PKPbc	01 53 43.2	-0.6
PHNC	Paralimni	150.38	301	P	PKiKP	01 53 44.8	0.0
CVDA	Cernavoda	150.38	322	⇓iP	PKPbc	01 53 42.5	-1.3
BMR	Baia Mare	150.40	331	⇑iP	PKPdf	01 53 40.7	+2.4
BMR	Baia Mare	150.40	331	⇑PKIKP	PKPdf	01 53 40.7	+2.4
TEVE	Tevekalti-Mers	150.43	304	eP	PKiKP	01 53 44.8	-0.2
AKKU	Akkuyu-Mersin	150.43	303	eP	PKPbc	01 53 44.3	+0.1
ARCR	ARCALIA	150.45	330	⇓iP	PKPbc	01 53 41.8	-2.1
OZUR		150.45	327	⇓iP	PKPbc	01 53 43.0	-1.0
HRFI	Mount Harif	150.46	291	eP	PKiKP	01 53 45.1	-0.1
TRPA	Tarpa	150.47	333	⇑iP	PKPdf	01 53 38.9	+0.5
TRPA	Tarpa	150.47	333	⇓EP	PKPbc	01 53 44.0	+0.1
RSBS	Rosebush, Pemb	150.55	10	eP	PKPdf	01 53 38.4	0.0
AUMIH	MIHALICIK	150.56	311	eP	PKPbc	01 53 44.9	+0.3
EIL	Elat	150.57	290	eP	PKPbc	01 53 44.9	+0.1
AMRR	Amara	150.61	323	⇓iP	PKPdf	01 53 41.5	+2.8
AMRR	Amara	150.61	323	⇓PKIKP	PKPdf	01 53 41.5	+2.8
PGOR	Pogoanele	150.61	324	⇑iP	PKPbc	01 53 44.0	-0.3
LADK	Ladik-KONYA	150.62	308	eP	PKPbc	01 53 43.8	-1.0
BERE	Bereket-Mersin	150.63	304	eP	PKPbc	01 53 44.9	0.0
OSTC	Ostas	150.63	343	ePKPDF	PKPdf	01 53 39.6	+1.0
OSTC				⇑ePKP	PKiKP	01 53 45.8	+0.9
OSTC				ePKPAB	PKPab	01 53 53.6	+1.9
CHVC	Chvalec	150.65	343	ePKPDF	PKPdf	01 53 39.5	+0.8
CHVC				⇑ePKP	PKiKP	01 53 45.5	+0.6
CHVC				ePKPAB	PKPab	01 53 52.5	+0.7
ICOR	Ion Corvin	150.65	322	⇑iP	PKPbc	01 53 43.2	-1.3
OKC	Ostrava-Krasne	150.69	340	ePKIKP	PKiKP	01 53 45.3	+0.3
OKC	Ostrava-Krasne	150.69	340	⇑ePKP	PKiKP	01 53 45.3	+0.3
KIZT	Kizilcal	150.70	309	eP	PKiKP	01 53 45.3	-0.2
AUSIV	SIVRIHISAR	150.71	311	eP	PKPbc	01 53 45.1	+0.2
CLL	Collm	150.71	347	ePKPbc	PKiKP	01 53 45.0	0.0
CLL				ePKPab	PKPab	01 53 52.0	0.0
CLL	Collm	150.71	347	ePKPdf	PKPdf	01 53 39.0	+0.3
CLL	comp=Z,18nm,1.1s						
CLL				⇓iPKPbc	PKiKP	01 53 45.2	+0.2
CLL	comp=Z,330nm,0.9s						
CLL				⇑iPKPab	PKPab	01 53 52.2	+0.2
CLL	comp=Z,166nm,0.8s						
CLL				epPKPbc	pPKPbc	01 54 34.0	+2.6
CLL				e		01 54 48.0	
CLL	Collm	150.71	347	⇓ePKIKP	PKPdf	01 53 39.0	+0.3
CLL				e		01 54 34.0	
CLL				pmax	pmax		
CLL	comp=Z,18nm,1.1s						
ISR	Istrita	150.71	324	⇑iP	PKPbc	01 53 42.0	-2.7
ISR	Istrita	150.71	324	⇑PKIKP	PKPbc	01 53 42.0	-2.7
SVRH	Sivrihisar-ESK	150.72	311	eP	PKPbc	01 53 44.6	-0.3
KONT	Konya--Tatoy	150.72	307	eP	PKPbc	01 53 44.9	0.0
UPC	Upice	150.73	343	ePKIKP	PKPdf	01 53 39.6	+0.8
UPC	Upice	150.73	343	ePKPDF	PKPdf	01 53 39.6	+0.8
UPC				⇑ePKP	PKiKP	01 53 45.5	+0.4
UPC				ePKPAB	PKPab	01 53 53.3	+1.2
MCH1	Michaelchurch	150.74	7	eP	PKPdf	01 53 38.8	+0.1
TEKE	Tekeli-Mersin	150.77	303	eP	PKPbc	01 53 44.3	-0.7
MLR	Muntele Rosu	150.78	326	ePKPbc	PKiKP	01 53 45.4	-0.1
MLR	Muntele Rosu	150.78	326	⇑iP	PKPbc	01 53 43.5	-1.4
MLR	Muntele Rosu	150.78	326	⇑PKIKP	PKPbc	01 53 43.5	-1.4
DPC	Dobruska-Polom	150.79	342	ePKIKP	PKPdf	01 53 39.9	+1.0
DPC	Dobruska-Polom	150.79	342	ePKPDF	PKPdf	01 53 39.9	+1.0
DPC				⇑ePKP	PKiKP	01 53 45.9	+0.7
LANS	Liptovska Anna	150.83	337	ePKIKP	PKPdf	01 53 40.9	+1.9
LANS	Liptovska Anna	150.83	337	ePKP	PKPdf	01 53 40.8	+1.8
LANS				e		01 53 46.8	
CEI	Carei	150.85	332	⇓iP	PKPbc	01 53 44.1	-0.7
CEI	Carei	150.85	332	⇓PKIKP	PKPbc	01 53 44.1	-0.7
KRLC	Kraliky	150.90	341	ePKIKP	PKPdf	01 53 39.9	+0.8
KRLC	Kraliky	150.90	341	ePKPDF	PKPdf	01 53 39.9	+0.8
KRLC				⇑ePKP	PKiKP	01 53 46.0	+0.5
KZIT	Kziot	150.91	292	eP	PKPbc	01

BOPT			PKPab	PKPab	01 53 57.3	+0.4
LOT	Lotru	151.91 328	⇑iP	PKPbc	01 53 44.4	-3.1
KRUC	Moravsky	151.92 341	ePKP	PKPdf	01 53 41.1	+0.5
KRUC			e		01 53 47.4	
HUMR	Humele	151.94 325	⇑iP	PKPdf	01 53 42.2	+1.4
BZEV	Zevekote	151.96 360	PKPbc	PKiKP	01 53 47.8	+0.2
BZEV			PKPab	PKPab	01 53 57.5	+0.4
TREC	Trest	151.97 342	ePKIKP	PKPdf	01 53 41.3	+0.6
TREC	Trest	151.97 342	ePKPDF	PKPdf	01 53 41.3	+0.6
TREC			⇑ePKP	PKiKP	01 53 48.0	+0.3
ARMT	Armutlu	152.00 315	eP	PKiKP	01 53 47.9	-0.1
DEV	Deva	152.01 329	⇑iP	PKPbc	01 53 44.7	-2.9
DEV	Deva	152.01 329	⇑PKIKP	PKPbc	01 53 44.7	-2.9
SLVT	Siliviri	152.07 316	eP	PKiKP	01 53 48.1	0.0
MDNY	Mudanya-Bursa	152.08 314	eP	PKPbc	01 53 47.3	-0.6
ISP	Isparta	152.11 308	eP	PKPbc	01 53 47.9	-0.3
ISP	Isparta	152.11 308	ePKPbc	PKPbc	01 53 47.4	-0.8
ISP	Isparta	152.11 308	P	PKPbc	01 53 47.3	-0.9
ISP	Isparta	152.11 308	⇑iP	PKPbc	01 53 45.1	-3.1
ISP	Isparta	152.11 308	⇑PKIKP	PKPbc	01 53 45.1	-3.1
TVSB	Tavsanli	152.14 312	eP	PKiKP	01 53 48.8	+0.3
BEBN	Eben Emael	152.21 356	PKPbc	PKiKP	01 53 48.1	+0.1
BEBN			PKPab	PKPab	01 53 58.1	-0.1
HGN	Heimansgroeve	152.23 356	ePKPdf	PKPdf	01 53 41.4	+0.4
HGN			ePKPbc	PKiKP	01 53 48.2	+0.1
	comp=Z,89nm,0.8s					
HGN			ePKPab	PKPab	01 53 58.4	+0.1
	comp=Z,210nm,0.8s					
MODS	Modra-Piesok	152.25 339	ePKIKP	PKiKP	01 53 48.5	+0.2
MODS	Modra-Piesok	152.25 339	ePKP	PKiKP	01 53 48.5	+0.2
UCC	Uccle	152.27 358	ePKPbc	PKPbc	01 53 48.0	0.0
UCC			ePKPab	PKPab	01 53 58.0	-0.5
UCC	Uccle	152.27 358	PKPbc	PKiKP	01 53 48.5	+0.3
UCC			PKPab	PKPab	01 53 58.7	+0.3
PHSR	Pinarhisar	152.28 318	eP	PKPbc	01 53 47.9	-0.4
PHSR	Pinarhisar	152.28 318	⇑iP	PKPdf	01 53 44.0	+2.6
SIRR	Siria	152.29 331	⇑iP	PKPdf	01 53 42.6	+1.3
ZIMR		152.31 323	⇑iP	PKPdf	01 53 42.8	+1.5
ZIMR		152.31 323	⇑PKIKP	PKPdf	01 53 42.8	+1.5
GEDZ	Gediz	152.37 311	eP	PKPbc	01 53 48.8	+0.1
BLCH	La Chartreuse	152.37 356	PKPbc	PKiKP	01 53 48.9	+0.5
BLCH			PKPab	PKPab	01 54 00.1	+1.2
SRO	Srobarova	152.37 337	ePKIKP	PKiKP	01 53 49.1	+0.5
SRO			e		01 53 59.4	
SRO	Srobarova	152.37 337	ePKP	PKiKP	01 53 49.0	+0.5
SRO			e		01 53 59.4	
MEM	Membach	152.38 356	PKPdf	PKPdf	01 53 41.4	+0.1
MEM			PKPbc	PKPbc	01 53 47.7	-0.5
MEM			PKPab	PKPab	01 53 58.7	-0.2
MEM	Membach	152.38 356	PKPdf	PKPdf	01 53 41.7	+0.5
MEM			PKPbc	PKiKP	01 53 48.6	+0.1
MEM			PKPab	PKPab	01 53 59.3	+0.3
SRO2	Moca	152.39 337	ePKIKP	PKPbc	01 53 48.2	-0.1
SRO2			e		01 53 59.0	
SRO2	Moca	152.39 337	ePKP	PKPbc	01 53 48.2	-0.1
SRO2			e		01 53 59.0	
CRLT	Corlu	152.42 317	eP	PKiKP	01 53 48.9	0.0
BSKQ	Steenkerk	152.43 358	PKPbc	PKiKP	01 53 48.9	+0.4
BSKQ			PKPab	PKPab	01 53 59.2	+0.1
BSTI	Sart Tilman	152.43 356	PKPbc	PKiKP	01 53 49.1	+0.5
BSTI			PKPab	PKPab	01 53 59.3	+0.1
GZR	Gura Zlata	152.43 329	⇑iP	PKPdf	01 53 42.2	+0.6
GZR	Gura Zlata	152.43 329	⇑PKIKP	PKPdf	01 53 42.2	+0.6
ZST	Bratislava	152.46 339	ePKIKP	PKPbc	01 53 48.4	-0.1
ZST			e		01 53 59.9	
ZST	Bratislava	152.46 339	ePKP	PKPbc	01 53 48.4	-0.1
ZST			e		01 53 59.9	
BRQR	Ronquire	152.47 358	PKPdf	PKPdf	01 53 41.5	+0.1
BRQR			PKPbc	PKiKP	01 53 49.0	+0.4
BRQR			PKPab	PKPab	01 53 59.1	-0.2
KCTX	Karacabey (Bur	152.48 315	eP	PKPbc	01 53 48.9	+0.1
KORT	Korkueli	152.56 307	eP	PKPbc	01 53 49.1	-0.2
SNF	Seneffe	152.56 358	PKPbc	PKiKP	01 53 49.3	+0.5
SNF			PKPab	PKPab	01 53 59.7	0.0
VLAD	Vladila	152.60 325	⇑iP	PKPbc	01 53 46.1	-2.8
GRA1	Grafenberg Arr	152.60 348	ePKPbc	PKiKP	01 53 49.2	+0.2
GRA1			ePKPab	PKPab	01 54 00.3	+0.3
GRFO	Grafenberg	152.61 348	ePKPdf	PKPdf	01 53 42.5	+0.9
GRFO			ePKPbc	PKiKP	01 53 49.5	+0.6
GRFO			ePKPab	PKPab	01 54 00.6	+0.6
GRFO	Grafenberg	152.61 348	ePKIKP	PKPdf	01 53 42.5	+0.9
GRFO			e		01 54 00.6	
BCLA	Clavier	152.61 357	PKPbc	PKiKP	01 53 49.0	+0.1
BCLA			PKPab	PKPab	01 53 60.0	+0.1
KHC	Kasperske Hory	152.62 345	ePKPbc	PKiKP	01 53 49.6	+0.5
KHC			ePKPab	PKPab	01 54 00.5	+0.4
KHC	Kasperske Hory	152.62 345	ePKIKP	PKPdf	01 53 41.9	+0.2
KHC			e		01 54 00.7	
KHC	Kasperske Hory	152.62 345	ePKPDF	PKPdf	01 53 41.9	+0.2
KHC			⇑ePKP	PKiKP	01 53 49.7	+0.6
KHC			ePKPAB	PKPab	01 54 00.7	+0.6
EDRB	Edirne	152.63 319	eP	PKiKP	01 53 49.2	-0.1
EDRB	Edirne	152.63 319	P	PKPbc	01 53 48.7	-0.4
BHOU	Houvegnez	152.63 356	PKPdf	PKPdf	01 53 41.7	+0.1
BHOU			PKPbc	PKiKP	01 53 49.3	+0.3
BHOU			PKPab	PKPab	01 54 00.2	+0.1
BGES	Gesves	152.66 357	PKPdf	PKPdf	01 53 41.7	0.0
BGES			PKPbc	PKPbc	01 53 48.9	0.0
BGES			PKPab	PKPab	01 54 00.1	-0.1
CRAR	CRAIOVA	152.69 326	⇑iP	PKPdf	01 53 45.2	+3.3
CRAR	CRAIOVA	152.69 326	⇑PKIKP	PKPdf	01 53 45.2	+3.3
BBOU	Bougnies	152.69 359	PKPbc	PKiKP	01 53 50.0	+1.0
BBOU			PKPab	PKPab	01 54 00.7	+0.5
BMRD	Maredsous	152.75 357	PKPdf	PKPdf	01 53 42.3	+0.5
BMRD			PKPbc	PKiKP	01 53 49.6	+0.4
BMRD			PKPab	PKPab	01 54 00.3	-0.2
EDC	Edincik	152.76 315	eP	PKiKP	01 53 49.7	+0.1
CSKK	Cskako	152.77 337	EP	PKPbc	01 53 49.0	-0.2
BZS	Buzias	152.81 330	⇑iP	PKPdf	01 53 41.8	-0.2
BZS	Buzias	152.81 330	⇑PKIKP	PKPdf	01 53 41.8	-0.2
GEC2	GERESS Array S	152.86 344	ePKPbc	PKiKP	01 53 50.4	+0.7
GEC2			ePKPab	PKPab	01 54 00.5	-0.7
GERES	GERESS Array B	152.86 344	PKP	PKPdf	01 53 41.9	-0.3
	comp=Z,6.8nm,0.9s,baz=70,slow=1.6,SNR=48					
GERES			PKPbc	PKiKP	01 53 49.6	0.0
	comp=Z,22nm,0.8s,baz=43,slow=1.7,SNR=61					
GERES			PKPab	PKPab	01 54 01.2	0.0
	comp=Z,18nm,0.8s,baz=25,slow=3.5,SNR=12					
LKLB	Kalborn	152.88 355	PKPdf	PKPdf	01 53 42.6	+0.6
LKLB			PKPbc	PKiKP	01 53 50.3	+0.8
LKLB			PKPab	PKPab	01 54 01.6	+0.5
RCHB	Rochefort	152.88 357	PKPbc	PKPbc	01 53 47.2	-2.1
RCHB			PKPab	PKPab	01 53 58.4	-2.7
TIM	Timisoara	152.89 331	⇑iP	PKPbc	01 53 47.8	-1.7
TIM	Timisoara	152.89 331	⇑PKIKP	PKPbc	01 53 47.8	-1.7
DOU	Dourbes	152.97 358	PKPbc	PKiKP	01 53 50.2	+0.5
DOU			PKPab	PKPab	01 54 01.5	0.0
ELL	Elmali	152.98 307	eP	PKiKP	01 53 50.5	+0.2
HERR	Herculane	152.98 328	⇑iP	PKPbc	01 53 46.5	-3.2
RKY	Sarkoy-Tekirda	153.02 316	eP	PKPbc	01 53 50.2	-0.8
LVIA	Vianden	153.03 355	PKPbc	PKiKP	01 53 50.7	+0.8
LVIA			PKPab	PKPab	01 54 02.3	+0.5
SOP	Sopron	153.09 339	⇓EP	PKiKP	01 53 50.0	0.0
CONA	Conrad Observa	153.09 340	i PKPdf	PKPdf	01 53 43.0	+0.5
	comp=Z,25nm,1.8s,SNR=6.3					
CONA			i PKiKP	PKiKP	01 53 50.7	+0.6
	comp=Z,42nm,0.8s					
BALB	Balikesir	153.12 314	eP	PKiKP	01 53 50.4	+0.1
BALB	Balikesir	153.12 314	ePKPbc	PKPbc	01 53 49.8	-0.4
PUNG	Punghina	153.17 327	⇑iP	PKPbc	01 53 47.1	-3.0
BANR	Banloc	153.21 331	⇑iP	PKPbc	01 53 47.1	-3.1
MANT	Manisa	153.21 311	ePKPbc	PKPbc	01 53 50.6	-0.2
TIH	Tihany	153.30 337	⇓EP	PKPbc	01 53 50.0	-0.3
WLF	Walferdange	153.31 355	ePKPbc	PKiKP	01 53 50.2	+0.8
WLF			ePKPab	PKPab	01 54 02.6	-0.3
WLF	Walferdange	153.31 355	PKPdf	PKPdf	01 53 43.7	+1.1
WLF			PKPbc	PKiKP	01 53 51.3	+0.9
WLF			PKPab	PKPab	01 54 03.1	+0.2
MPEP	Malo Peshtene	153.39 325	P	PKiKP	01 53 51.4	+0.6
MDVR	Moldovita	153.39 329	⇑iP	PKPdf	01 53 43.1	+0.1
LPK	Lapseki	153.46 316	eP	PKiKP	01 53 51.3	+0.3
KDZ	Kurdzhali	153.54 320	eP	PKiKP	01 53 55.4	+4.2
KDZ	Kurdzhali	153.54 320	i P	PKiKP	01 53 54.9	+3.7
ALN	Alexandroupoli	153.61 318	eP	PKPbc	01 53 49.2	-2.0
MOA	Molln	153.62 343	i PKPdf	PKPdf	01 53 43.0	-0.1
	comp=Z,8.2nm,0.8s					
MOA			i PKPab	PKPab	01 54 05.0	+0.6
	comp=Z,48nm,0.9s					
GELI	Tayfur-Gelibol	153.63 317	eP	PKPbc	01 53 50.2	-1.1
FETY	Fethiye	153.64 307	eP	PKiKP	01 53 51.9	+0.3
FETY	Fethiye	153.64 307	P	PKPbc	01 53 51.4	-0.1
PLD	Plovdiv	153.68 321	eP	PKPbc	01 53 49.9	-1.4
PGB	Panagyurishte	153.70 323	i P	PKPbc	01 53 51.5	0.0
RDO	Rodhopi	153.78 319	eP	PKPbc	01 53 51.6	0.0
RDO	Rodhopi	153.78 319	P	PKPbc	01 53 51.0	-0.6
ARSA	Arzberg	153.80 340	i PKPdf	PKPdf	01 53 43.7	+0.2
	comp=Z,19nm,1.6s					
ARSA			i PKiKP	PKiKP	01 53 51.9	+0.4
	comp=Z,17nm,0.9s					
TURN	Turunc	153.89 308	eP	PKiKP	01 53 53.8	+1.8
AYDB	Zeytinkoy-Aydi	153.93 310	i P	PKiKP	01 53 52.8	+0.5
RZN	Rozhen	153.94 321	i P	PKPbc	01 53 51.8	-0.4
EZN	Ezine	154.04 316	eP	PKiKP	01 53 52.3	+0.1
EZN	Ezine	154.04 316	P	PKPbc	01 53 51.9	-0.3
EZN	Ezine	154.04 316	⇑iP	PKPbc	01 53 48.2	-4.0
EZN	Ezine	154.04 316	⇑PKIKP	PKPbc	01 53 48.2	-4.0
BEHE	Becsehely	154.07 338	EP	PKPdf	01 53 47.1	+3.3
VTS	Vitosha	154.16 324	ePKPbc	PKiKP	01 53 53.2	+0.6
VTS			ePKPab	PKPab	01 54 05.8	-1.2
VTS	Vitosha	154.16 324	P	PKiKP	01 53 52.7	+0.1
VTS	Vitosha	154.16 324	⇑iP	PKPdf	01 53 44.9	+0.6
VTS	Vitosha	154.16 324	⇑PKIKP	PKPdf	01 53 44.9	+0.6
VTS	Vitosha	154.16 324	i P	PKPbc	01 53 52.3	-0.3
PRK	Paraskevi	154.38 314	P	PKiKP	01 53 53.5	+0.6
BFO	Black Forest	154.40 352	ePKPdf	PKPdf	01 53 44.1	-0.2
BFO			ePKPbc	PKiKP	01 53 52.8	+0.1
BFO			ePKPab	PKPab	01 54 07.4	-0.2
BFO	Black Forest	154.40 352	ePKIKP	PKPdf	01 53 44.1	-0.2
BFO			e		01 54 07.4	
SOKA	Soboth	154.46 340	i PKPdf	PKPdf	01 53 44.4	-0.1
	comp=Z,32nm,1.5s,SNR=8.2					
SOKA			i PKPab	PKPab	01 54 08.4	+0.4
	comp=Z,42nm,1.3s					
GROS	Grobnik	154.50 339	ePKPdf	PKPdf	01 53 43.9	-0.6
GROS			ePKPbc	PKPbc	01 53 52.6	-0.5
GROS			i PKPab	PKPab	01 54 07.8	-0.4
GCAM	G?zelcaml?	154.51 311	eP	PKPbc	01 53 52.7	-0.5
MMB	Musomiste	154.57 322	i P	PKPbc	01 53 53.0	-0.3
KBA	Koelnbreinsper	154.58 343	i PKPdf	PKPdf	01 53 44.4	-0.4
	comp=Z,23nm,1.4s,SNR=7.3					
KBA			i PKPab	PKPab	01 54 09.7	+1.1
	comp=Z,41nm,0.7s					
URLA	Izmir	154.63 312	eP	PKPbc	01 53 52.4	-1.1
NVR	Nevrokopi	154.65 321	P	PKPbc	01 53 53.1	-0.4
BODT	Bodrum	154.74 309	eP	PKPbc	01 53 53.3	-0.5
BODT	Bodrum	154.74 309	P	PKPbc	01 53 53.3	-0.5
KKB	Krupnik	154.75 323	i P	PKPbc	01 53 53.0	-0.7
OBKA	Obir	154.76 341	i PKPdf	PKPdf	01 53 45.2	+0.3
	comp=Z,27nm,1.9s					
OBKA			i PKPab	PKPab	01 54 09.1	-0.3
	comp=Z,37nm,1.2s					
WATA	Walderalm	154.78 346	i PKPdf	PKPdf	01 53 44.9	-0.1
	comp=Z,10nm,0.7s,SNR=7.6					
WATA			i PKPab	PKPab	01 54 09.5	+0.1
	comp=Z,98nm,1.1s					
RETA	Reutte	154.80 347	i PKPdf	PKPdf	01 53 44.7	-0.2
	comp=Z,14nm,1.3s					
RETA			i PKPab	PKPab	01 54 10.0	+0.5
	comp=Z,85nm,1.0s,SNR=9.1					
WTTA	Wattenberg	154.83 346	i PKPdf	PKPdf	01 53 45.1	0.0
	comp=Z,32nm,1.1s,SNR=8.7					
WTTA			i PKPab	PKPab	01 54 10.0	+0.3
	comp=Z,86nm,0.7s					
MOTA	Moosalm	154.87 347	i PKPdf	PKPdf	01 53 45.0	-0.1
	comp=Z,29nm,1.1s,SNR=16					
MOTA			i PKPab	PKPab	01 54 10.3	+0.5
	comp=Z,70nm,0.8s,SNR=6.1					
MYKA	Terra Mystica	154.91 342	ePKPdf	PKPdf	01 53 44.5	-0.6
	comp=Z,25nm,1.6s					
MYKA			i PKPab	PKPab	01 54 09.5	-0.4
	comp=Z,26nm,0.7s					
SQTA	Sankt Quirin	154.96 346	i PKPdf	PKPdf	01 53 45.1	0.0
	comp=Z,34nm,1.1s,SNR=9.3					
SQTA			i PKPab	PKPab	01 54 10.8	+0.6
	comp=Z,56nm,0.9s					
CLF	Chambon-Foret	155.07 1	ePKPab	PKPab	01 54 10.8	+0.4
ABTA	Abfaltersbach	155.10 344	i PKPdf	PKPdf	01 53 45.0	-0.4
	comp=Z,56nm,0.9s,SNR=15					
ABTA			i PKPab	PKPab	01 54 10.8	0.0
	comp=Z,50nm,0.8s					
DAVA	Damuels	155.16 349	i PKPdf	PKPdf	01 53 46.0	+0.5
	comp=Z,17nm,1.2s					
DAVA			i PKPab	PKPab	01 54 10.9	-0.3
	comp=Z,56nm,0.8s					
FETA	Feichten	155.25 347	i PKPdf	PKPdf	01 53 45.7	0.0
	comp=Z,51nm,1.0s,SNR=15					
FETA			i PKPab	PKPab	01 54 12.0	+0.5
	comp=Z,52nm,1.0s					
KNT	Kendrikon	155.32 322	P	PKPdf	01 53 58.7	+13
BLY	Banja Luka	155.38 335	ePKPdif	PKPdf	01 53 55.0	+9.4
BLY	Banja Luka	155.38 335	⇑iP	PKPdf	01 53 55.9	+10
JAVS	Javornik	155.46 341	i PKPdf	PKPdf	01 53 45.4	-0.5
CEY	Cerknica	155.49 340	i PKPdf	PKPdf	01 53 45.6	-0.2
CEY			ePKPbc	PKPbc	01 53 55.3	
SKO	Skopje	155.57 325	i P	PKPdf	01 53 46.0	0.0
FUORN	Ofenpass-Fuorn	155.73 348	ePKPab	PKPab	01 54 13.7	0.0
TUE	Stuetta	156.05 349	ePKPab	PKPab	01 54 14.8	-0.2
KRUS	Krusevo	156.10 324	i P	PKPdf	01 53 46.5	-0.3
SENIN	Lac Senin/Sane	156.46 352	ePKPab	PKPab	01 54 16.4	-0.3
LKR	Lokris	156.83 317	P	PKPdf	01 53 56.9	+9.1
AGG	Agios Georgios	157.02 318	ePKPdf	PKPdf	01 53 48.0	-0.1
AGG	Agios Georgios	157.02 318	ePKIKP	PKPdf	01 53 48.0	-0.1
ANX	Ano Chora	157.53 318	P	PKPdf	01 53 52.7	+3.9
BNI	Bardonecchia	157.83 353	ePKPab	PKPab	01 54 23.3	+0.7
AQU	L'Aquila	158.84 338	ePKPab	PKPab	01 54 27.2	+0.2
PGAV	Gavieira, Arco	158.96 24	ePKPdf	PKPdf	01 53 51.8	+1.4
PGAV	Gavieira, Arco	158.96 24	ePKPab	PKPab	01 54 27.9	+0.3
PCAB	Cabril	159.27 24	ePKPdf	PKPdf	01 53 52.3	+1.6
PCAB	Cabril	159.27 24	ePKPab	PKPab	01 54 29.7	+0.8
PTO	Porto	159.54 25	ePKPdf	PKPdf	01 53 52.1	+1.2
PTO	Porto	159.54 25	ePKPab	PKPab	01 54 30.7	+0.7
PBRG	Braganca	159.63 21	ePKPdf	PKPdf	01 53 51.7	+0.6
PBRG	Braganca	159.63 21	ePKPab	PKPab	01 54 31.1	+0.6
POLO	Lamas de Olo	159.65 24	ePKPdf	PKPdf	01 53 52.5	+1.3
POLO	Lamas de Olo	159.65 24	ePKPab	PKPab	01 54 31.5	+0.9
PVRL	Vila Real	159.76 24	ePKPdf	PKPdf	01 53 52.9	+1.6
PVRL	Vila Real	159.76 24	ePKPab	PKPab	01 54 31.7	+0.7
MVO	Moncorvo	160.11 22	ePKPdf	PKPdf	01 53 52.9	+1.2
MVO	Moncorvo	160.11 22	ePKPab	PKPab	01 54 33.4	+0.8
PVIS	Viseu	160.18 25	ePKPdf	PKPdf	01 53 52.6	+0.8
PVIS	Viseu	160.18 25	ePKPab	PKPab	01 54 33.5	+0.6
COI	Coimbra	160.41 27	ePKPdf	PKPdf	01 53 52.7	+0.8
COI	Coimbra	160.41 27	ePKPab	PKPab	01 54 35.1	+1.3
PCAS	Casmilo, Conde	160.50 27	ePKPdf	PKPdf	01 53 53.2	+1.1
PCAS	Casmilo, Conde	160.50 27	ePKPab	PKPab	01 54 35.0	+0.8
MTE	Manteigas	160.59 25	ePKPdf	PKPdf	01 53 53.4	+1.1
MTE	Manteigas	160.59 25	ePKPab	PKPab	01 54 35.2	+0.5
MTE	Manteigas	160.59 25	ePKPdf	PKPdf	01 53 52.8	+0.6
PTOM	Tomar	160.90 28	ePKPdf	PKPdf	01 53 53.8	+1.3
PTOM	Tomar	160.90 28	ePKPab	PKPab	01 54 36.6	+0.6
PMAFR	Mafra	161.05 30	ePKPdf	PKPdf	01 53 54.5	+1.8
PCBR	Castelo Branco	161.09 25	ePKPdf	PKPdf	01 53 54.0	+1.3
PCBR	Castelo Branco	161.09 25	ePKPab	PKPab	01 54 37.4	+0.6
PMTG	Montargil	161.44 28	ePKPab	PKPab	01 54 38.6	+0.3
PMRV	Marv??o	161.48 26	ePKPdf	PKPdf	01 53 54.3	+1.1
PMRV	Marv??o	161.48 26	ePKPab	PKPab	01 54 39.1	+0.5
LIC	Lamto	161.62 154	ePKIKP	PKPdf	01 53 53.2	-0.8
	comp=Z,118nm,1.7s					
LIC	Lamto	161.62 154	eP	PKPab	01 54 40.5	+0.8
	comp=Z,44nm,0.9s					
KIC	Kosan Boka	161.86 155	ePKIKP	PKPdf	01 53 53.4	-0.9
	comp=Z,90nm,1.3s					
KIC	Kosan Boka	161.86 155	eP	PKPab	01 54 41.7	+0.9
	comp=Z,31nm,0.8s					
TIC	Toumodi	162.01 154	ePKIKP	PKPdf	01 53 53.7	-0.8
TIC	Toumodi	162.01 154	eP	PKPab	01 54 42.2	+0.8
PNCL	Nicolau / Gran	162.08 30	ePKPdf	PKPdf	01 53 55.0	+1.2
PNCL	Nicolau / Gran	162.08 30	ePKPab	PKPab	01 54 41.8	+0.6
DBIC	Dimbokro	162.10 154	PKP	PKPdf	01 53 54.4	-0.1
	comp=Z,9.7nm,0.8s,baz=150,slow=3.3,SNR=8.9					
DBIC			PKPab	pPKPdf	01 54 43.0	+1.0
	comp=Z,11nm,0.8s,baz=153,slow=4.9,SNR=5.3					
ESDC	Sonseca Array	162.44 18	PKP	PKPdf	01 53 55.0	+0.8
	comp=Z,5.6nm,0.9s,baz=345,slow=2.9,SNR=24					
ESDC			PKPab	PKPab	01 54 43.5	+0.8
	comp=Z,11nm,0.8s,baz=326,slow=4.0,SNR=21					
ESDC			pPKPab	pPKPab	01 55 27.7	-0.4
	comp=Z,3.4nm,1.0s,baz=306,slow=2.1,SNR=1.6					
ESDC			PP	PP	01 58 24.1	-2.6
	comp=Z,2.9nm,1.2s,baz=350,slow=4.3,SNR=4.6					
ESDC			SKKPbc		02 03 53.0	
	comp=Z,2.7nm,1.0s,baz=161,slow=3.2,SNR=6.6					
PTEO	Sao Teotonio	162.44 32	ePKPdf	PKPdf	01 53 56.2	+2.0
PTEO	Sao Teotonio	162.44 32	ePKPab	PKPab	01 54 43.4	+0.6
PAB	San Pablo	162.44 19	ePKPdf	PKPdf	01 53 54.8	+0.5
PAB			ePKPab	PKPab	01 54 42.6	-0.2
PAB	San Pablo	162.44 19	ePKIKP	PKPdf	01 53 54.8	+0.5
PAB			e		01 54 42.7	
MESJ	Messejana	162.45 30	ePKPdf	PKPdf	01 53 54.5	+0.3
MESJ	Messejana	162.45 30	ePKPdf	PKPdf	01 53 56.0	+1.8
MESJ	Messejana	162.45 30	ePKPab	PKPab	01 54 43.4	+0.6
PBEJ	Beja	162.46 29	ePKPdf	PKPdf	01 53 56.8	+2.6
PBEJ	Beja	162.46 29	ePKPab	PKPab	01 54 44.6	+1.7
MORF	Marmelete	162.66 32	ePKPdf	PKPdf	01 53 54.5	0.0
MORF	Marmelete	162.66 32	ePKPdf	PKPdf	01 53 56.3	+1.8
PCVE	Castro Verde	162.70 30	ePKPdf	PKPdf	01 53 55.9	+1.5
PCVE	Castro Verde	162.70 30	ePKPab	PKPab	01 54 44.6	+0.7
PFVI	Vila Bisbo	162.71 33	ePKPdf	PKPdf	01 53 56.5	+2.1
PVAQ	Vaqueiros	163.03 30	ePKPab	PKPab	01 54 46.5	+1.1
PBDV	Barranco-do-Ve	163.06 31	ePKPdf	PKPdf	01 53 56.9	+2.1
PBDV	Barranco-do-Ve	163.06 31	ePKPab	PKPab	01 54 46.9	+1.3
KEST	Kesra	166.16 337	PKP	PKPdf	01 53 58.3	+0.6
	comp=Z,9.0nm,0.9s,baz=53,slow=5.1,SNR=7.6					
KEST			PKPab	PKPab	01 54 59.2	-0.1
	comp=Z,18nm,0.8s,baz=3.1,slow=2.5,SNR=12					
KEST			SKKPbc		02 03 25.0	
	comp=Z,4.4nm,1.0s,baz=12,slow=5.0,SNR=3.9					
KEST	Kesra	166.16 337	ePKPdf	PKPdf	01 53 57.8	+0.1
KEST			ePKPab	PKPab	01 54 58.9	-0.4
TOA0	Torodi Ar. Sit	170.09 173	ePKPdf	PKPdf	01 54 00.3	-0.5
TOA0			ePKPab	PKPab	01 55 17.9	+0.9
TORD	Torodi Ar. Bea	170.09 173	PKP	PKPdf	01 53 58.8	-2.0
	comp=Z,17nm,0.8s,baz=225,slow=1.4,SNR=70					
TORD			PKPab	PKPab	01 55 16.0	-0.9
	comp=Z,12nm,0.9s,baz=203,slow=2.4,SNR=14					
TORD			pPKPab	pPKPab	01 56 03.6	+1.4
	comp=Z,5.3nm,0.9s,baz=193,slow=1.8,SNR=2.7					
TORD			PP	PP	01 59 08.5	+2.7
	comp=Z,2.4nm,0.9s,baz=134,slow=6.4,SNR=6.3					
TORD			SKKPbc		02 03 19.7	
	comp=Z,1.8nm,0.9s,baz=18,slow=3.6,SNR=4.7					
TOA1	Torodi Ar. Sit	170.10 173	ePKPdf	PKPdf	01 53 58.8	-2.0
TOA1			ePKPab	PKPab	01 55 16.0	-0.9
TOA1			epPKPab	pPKPab	01 56 03.6	+1.4
TOA1			ePP	PP	01 59 08.5	+2.7
TAM	Tamanrasset	177.54 265	ePKPdf	PKPdf	01 54 04.0	+0.6
TAM			ePKPab	PKPab	01 55 51.7	+1.2
TAM	Tamanrasset	177.54 265	ePKIKP	PKPdf	01 54 04.0	+0.6

BJI 01 01:37:38.0±0.0, 30°.15N×102°.87E, h19km, ML3.5/13, Ms3.1/5, Ms7 2.9/5, 2C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.08	45	⇑iPg	Pb	01 37 57.5	-0.6
CD2				Sg	Sb	01 38 11.6	-0.2
CD2				smax	smax		
	comp=N,2μm,0.5s						
CD2				smax	smax		
	comp=E,2μm,0.6s						
GY

JEW	**Eniwo**	**1.26 302**	P	**Pn**	**02 39 12.2**	**+0.6**
JEW			*e*S	**Sn**	**02 39 28.7**	**+1.0**
JAR	**Ashorobuto**	**1.29 29**	P	**Pn**	**02 39 11.8**	**-0.2**
JAR			*e*S	**Sn**	**02 39 27.7**	**-0.7**
JNB	**Noboribetsu**	**1.41 282**	P	**Pn**	**02 39 13.4**	**-0.2**
JNB			*e*S	**Sn**	**02 39 30.9**	**-0.4**
JAB	**Ashibetsu**	**1.42 340**	P	**Pn**	**02 39 14.5**	**+0.8**
JKB	**Kayabe**	**1.42 259**	P	**Pn**	**02 39 14.0**	**+0.2**
JKB			*e*S	**Sn**	**02 39 31.8**	**+0.3**
SONM	**Songino Array**	**26.25 295**	P	**P**	**02 44 19.8**	**+0.2**
	0.4nm,0.4s,baz=82,slow=10,SNR=2.7					
MKAR	**Makanchi Array**	**42.55 298**	P	**P**	**02 46 39.7**	**-0.1**
	0.2nm,0.5s,baz=80,slow=9.4,SNR=3.1					
KURBB	**Kurchatov Arra**	**43.91 304**	P	**P**	**02 46 50.6**	**0.0**
	0.7nm,0.5s,baz=76,slow=8.6,SNR=6.4					
FINES	**FINESS Array B**	**64.82 332**	P	**P**	**02 49 21.7**	**-0.5**
	0.5nm,0.5s,baz=60,slow=8.2,SNR=11					

NNC 01 02:39:58.3±8.0, 37°.91N×71°.86E, h265km±107km, mb2.5, mpv3.9, 2C-2D, Error ellipse: s-maj=84.5km s-min=50.7km az=15.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.46**	**342**	Pg	Pn	02 41 07.1	-1.0
	6.1nm,0.1s						
IUG				Lg	Lg	02 42 03.3	
	28nm,0.3s						
MRKS	**Merke**	**4.95**	**12**	Pg	Pn	02 41 14.0	+0.1
	15nm,0.3s						
MRKS				Lg	Lg	02 42 15.1	
	6.8nm,0.5s						
AAK	**Ala-Archa**	**5.14**	**22**	⇑P	Pn	02 41 15.2	-1.1
	2.9nm,0.3s						
AAK				⇓S	S	02 42 20.0	+1.4
	5.0nm,0.6s						
KK31	**Karatay Array**	**5.29**	**349**	P	Pn	02 41 18.7	+0.7
	2.6nm,0.3s,baz=164,slow=11,SNR=83						
KK31				⇓S	S	02 42 21.3	-0.5
	12nm,0.7s,baz=168,slow=20						
AB31	**Akbulak array**	**14.23**	**327**	P	P	02 43 15.1	+6.5
	0.3nm,0.3s,baz=161,slow=10,SNR=27						
AB31				⇑S	S	02 45 46.5	+1.0
	0.6nm,0.5s,baz=164,slow=20						

NIED ***01*** *03:03:00, 43°.30N×144°.00E, h5km, Mw3.8 Best double couple: M0=5.88000×10^14 NP1:φ=228.00000°, δ=44.00000°, λ=131.00000°. NP2:φ=358.00000°, δ=58.00000°, λ=58.00000°.*
SKHL ***01*** *03:03:43.3±0.4, 43°.11N×143°.94E, h40km±3km, mb4.2/6*
JMA ***01*** *03:03:43.1, 43°.33N×143°.97E, h9km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φ=28.00000°, δ=64.00000°, λ=78.00000°. NP2:φ=233.00000°, δ=28.00000°, λ=112.00000°. Principal axes: T Plg69.0000°, Azm275.0000°; N Plg10.0000°, Azm34.0000°; P Plg18.0000°, Azm127.0000°;*
JMA Felt II J1.
ISCJB ***01*** *03:03:43.1±0.4, 43°.30N±0°.03×143°.99E±0°.03, h20km±3km, mb3.8/20 Error ellipse: s-maj=5.0km s-min=3.8km az=157.9*
MOS ***01*** *03:03:44.7±1.5, 43°.24N×144°.11E, h40km, mb4.4/6, Error ellipse: s-maj=10.9km s-min=8.0km az=66.6*
IDC ***01*** *03:03:48.2±1.8, 43°.38N×143°.96E, h45km±15km, mb3.6/16, mb1 3.8/18, mb1mx3.7/36, mbtmp3.8/18, ML3.0/2, MS2.7/2, Ms1 2.7/2, ms1mx2.4/32, Error ellipse: s-maj=15.6km s-min=14.3km az=8.0*

ISC 01 03:03:42.5±1.0, 43°.41N±0°.04×144°.00E±0°.02, h7km±7km, n61, σ1°=15/68, mb3.9/20, 9C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.20**	**237**	⇓P	**Pg**	**03 03 46.3**	**-0.3**
JAR				*e*S	**Sg**	**03 03 49.2**	**-0.1**
JOB	**Onbets**	**0.52**	**194**	⇓P	**Pg**	**03 03 51.7**	**-0.8**
JOB				*e*S	**Sg**	**03 03 58.8**	**-0.4**
JNK	**Nakash**	**0.55**	**71**	⇓P	**Pb**	**03 03 54.4**	**-0.1**
JTKR	**Abashiri--Toko**	**0.57**	**353**	P	**Pn**	**03 03 56.8**	**-0.3**
JTKR				*e*S	**Sn**	**03 04 04.6**	**-2.1**
JAK	**Akkeshi**	**0.65**	**129**	⇓P	**Pg**	**03 03 54.7**	**-0.4**
JMP	**Maruseppu**	**0.76**	**322**	⇓P	**Pb**	**03 03 58.4**	**+0.3**
JMP				*e*S	**Sn**	**03 04 09.7**	**-1.8**
JKHN	**Kushirohamanak**	**0.91**	**111**	P	**Pg**	**03 03 59.4**	**-0.5**
JCH	**Churui**	**0.92**	**211**	⇑P	**Pg**	**03 03 58.5**	**-1.7**
JFR	**Furan**	**1.06**	**257**	P	**Pg**	**03 04 02.2**	**-0.6**
JFR				*e*S	**Sg**	**03 04 16.4**	**-0.1**
GLVR	**Golovnino**	**1.15**	**73**	*i* PN	**Pg**	**03 04 02.6**	**-2.0**
GLVR				*i* S	**Sb**	**03 04 20.3**	**+0.4**
GLVR				pmax	pmax		
	comp=Z,137nm,0.2s						
GLVR				smax	smax		
	comp=N,4μm,0.3s						
GLVR				smax	smax		
	comp=E,6μm,0.4s						
GLVR	**Golovnino**	**1.15**	**73**	*i* P	**Pg**	**03 04 03.0**	**-1.6**
GLVR				AMB	AMB	03 04 03.4	
	comp=E,137nm,0.2s						
GLVR				*i* S	**Sb**	**03 04 20.3**	**+0.4**
GLVR				A	A	03 04 21.0	
	comp=E,380nm,0.3s						
GLVR				A	A	03 04 21.0	
	comp=E,590nm,0.3s						
ASAJ	**Asahikawa**	**1.24**	**305**	P	**Pn**	**03 04 07.3**	**+1.0**
	comp=E,194nm,0.3s,baz=152,slow=13,SNR=82						
ASAJ				S	**Sn**	**03 04 25.2**	**+1.8**
	comp=E,216nm,0.3s,baz=347,slow=34,SNR=54						
GRPR	**Tuman**	**1.41**	**65**	*i* PN	**Pn**	**03 04 07.9**	**-0.7**
GRPR				*i* S	**Sg**	**03 04 28.1**	**+0.2**
GRPR				pmax	pmax		
	comp=N,76nm,0.2s						
GRPR				pmax	pmax		
	comp=E,51nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,59nm,0.2s						
GRPR				smax	smax		
	comp=E,599nm,0.4s						
GRPR				smax	smax		
	comp=N,1μm,0.5s						
GRPR	**Tuman**	**1.41**	**65**	*i* P	**Pn**	**03 04 08.0**	**-0.7**
GRPR				AMB	AMB	03 04 08.0	
	comp=N,51nm,0.2s						
GRPR				AMB	AMB	03 04 08.0	
	comp=N,59nm,0.2s						
GRPR				*i* S	**Sg**	**03 04 28.0**	**+0.2**
GRPR				A	A	03 04 33.0	
	comp=N,105nm,0.3s						
GRPR				A	A	03 04 33.0	
	comp=N,600nm,0.3s						
LAGR	**Lagunnoye**	**1.45**	**63**	⇑*i* PN	**Pb**	**03 04 09.7**	**-0.1**
LAGR				*i* S	**Sg**	**03 04 30.4**	**+1.4**
LAGR				pmax	pmax		
	comp=Z,375nm,0.4s						
LAGR				smax	smax		
	comp=E,2μm,0.4s						
LAGR				smax	smax		
	comp=N,2μm,0.3s						
LAGR	**Lagunnoye**	**1.45**	**63**	*i* P	**Pn**	**03 04 09.5**	**+0.4**
LAGR				AMB	AMB	03 04 14.0	
	comp=N,37nm,0.4s						
LAGR				*i* S	**Sg**	**03 04 30.0**	**+1.0**
LAGR				A	A	03 04 30.0	
	comp=N,185nm,0.2s						
LAGR				A	A	03 04 30.0	
	comp=N,212nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.49**	**64**	*i* PN	**Pn**	**03 04 09.5**	**-0.2**
YUK				*e*S	**Sg**	**03 04 30.6**	**+0.3**
YUK				pmax	pmax		
	comp=Z,468nm,0.2s						
YUK				smax	smax		
	comp=N,658nm,0.5s						
YUK				smax	smax		
	comp=E,501nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.49**	**64**	*i* P	**Pn**	**03 04 09.0**	**-0.7**
YUK				AMB	AMB	03 04 11.0	
	comp=E,47nm,0.3s						
YUK				*e*S	**Sn**	**03 04 28.6**	**-0.8**
YUK				A	A	03 04 34.9	
	comp=E,658nm,0.5s						
YUK				A	A	03 04 34.9	
	comp=E,501nm,0.5s						
ERM	**Erimo**	**1.52**	**204**	⇑*i* PN	**Pn**	**03 04 08.1**	**-2.1**
KUR	**Kuril'sk**	**3.32**	**55**	⇑*e*PN	**Pn**	**03 04 35.6**	**+0.7**
YSS	**Yuzh-Sakhalins**	**3.66**	**346**	*e*PN	**Pb**	**03 04 47.0**	**-0.4**
YSS	**Yuzh-Sakhalins**	**3.66**	**346**	*e*P	**Pb**	**03 04 43.0**	**-4.4**
YSS				AMB	AMB	03 04 44.1	
	comp=E,14nm,0.2s						
MJAR	**Matsushiro Arr**	**8.17**	**215**	P	**Pn**	**03 05 43.5**	**+2.0**
	comp=E,0.1nm,0.3s,baz=30,slow=12,SNR=11						
MJAR				LR	LR	03 08 39.2	
	comp=E,30nm,18.5s,baz=65,slow=36						
KLR	**Kul'dur**	**10.28**	**309**	P	Pn	03 06 18.2	+7.8
	comp=E,0.0nm,0.3s,baz=120,slow=12,SNR=5.6						
KLR				LR	LR	03 10 34.5	
	comp=E,66nm,18.2s,baz=83,slow=40						
KLR	**Kul'dur**	**10.28**	**309**	⇑*e*PN	Pn	03 06 16.7	+6.3
KSRS	**Korea Array**	**13.61**	**250**	P	**Pn**	**03 06 57.4**	**+1.5**
	comp=E,0.2nm,0.3s,baz=57,slow=13,SNR=4.1						
SEY	**Seymchan**	**20.16**	**11**	P	Pn	03 08 21.6	+2.6
	comp=E,1.3nm,0.2s,baz=172,slow=8.6,SNR=6.0						
SONM	**Songino Array**	**26.49**	**293**	P	**P**	**03 09 20.4**	**-0.1**
	comp=E,1.4nm,0.6s,baz=79,slow=8.8,SNR=9.5						
H11N2	**WAKE ISLAND Hy**	**30.43**	**134**	T	T	03 41 14.2	
	baz=326,slow=75,SNR=134						
H11N1	**WAKE ISLAND Hy**	**30.44**	**134**	T	T	03 41 18.2	
	baz=326,slow=75,SNR=102						
H11N3	**WAKE ISLAND Hy**	**30.45**	**134**	T	T	03 41 18.7	
	baz=326,slow=75,SNR=84						
H11S1	**WAKE ISLAND Hy**	**31.34**	**135**	T	T	03 42 25.0	
	baz=327,slow=76,SNR=64						
H11S3	**WAKE ISLAND Hy**	**31.35**	**135**	T	T	03 42 22.8	
	baz=327,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**31.36**	**135**	T	T	03 42 22.5	
	baz=327,slow=76,SNR=19						
ZALV	**Zalesovo Beam**	**39.38**	**307**	P	**P**	**03 11 12.8**	**+0.3**
	comp=E,1.3nm,0.4s,baz=72,slow=9.3,SNR=2.2						
COLA	**College**	**42.69**	**36**	⇑*e*P	**P**	**03 11 40.3**	**+0.7**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	**Makanchi Array**	**42.71**	**297**	P	**P**	**03 11 40.1**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=84,slow=8.9,SNR=13						
MKAR				PcP	**PcP**	**03 13 31.3**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=73,slow=3.9,SNR=3.3						
MKAR				ScP	**ScP**	**03 17 19.3**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=79,slow=2.2,SNR=2.4						
MKAR	**Makanchi Array**	**42.71**	**297**	*i* P	**P**	**03 11 40.0**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**42.71**	**297**	*e*P	**P**	**03 11 40.0**	**-0.1**
ILAR	**Eielson Array**	**43.11**	**36**	P	**P**	**03 11 43.6**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=270,slow=6.4,SNR=23						
KURK	**Kurchatov**	**43.82**	**303**	*c i* P	**P**	**03 11 48.4**	**-0.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	**Kurchatov**	**43.82**	**303**	*e*P	**P**	**03 11 48.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**45.24**	**251**	P	**P**	**03 12 01.5**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=32,slow=5.3,SNR=4.4						
INK	**Inuvik**	**47.85**	**30**	P	**P**	**03 12 22.1**	**+1.7**
	comp=Z,0.8nm,0.4s,baz=59,slow=5.9,SNR=3.8						
BRVK	**Borovoye**	**47.99**	**309**	⇑*i* P	**P**	**03 12 21.3**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRVK	**Borovoye**	**47.99**	**309**	*e*P	**P**	**03 12 21.3**	**-0.5**
KKAR	**Karatay Array**	**51.84**	**297**	*e*P	**P**	**03 12 51.2**	**0.0**
YKA	**Yellowknife Ar**	**57.34**	**33**	P	**P**	**03 13 31.6**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=304,slow=6.8,SNR=11						
FINES	**FINESS Array B**	**64.12**	**332**	P	**P**	**03 14 16.3**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=47,slow=8.4,SNR=10.0						
FINES	**FINESS Array B**	**64.12**	**332**	*i* P	**P**	**03 14 16.2**	**-0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**67.38**	**190**	P	**P**	**03 14 38.8**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=11,slow=5.7,SNR=4.1						
KBZ	**Khabaz**	**68.29**	**310**	P	**P**	**03 14 44.5**	**+0.4**
	comp=Z,2.4nm,0.9s,baz=62,slow=17,SNR=4.3						
NB2	**NORSAR Subarra**	**69.07**	**338**	P	**P**	**03 14 48.2**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=34,slow=6.5						
NOA	**NORSAR Array B**	**69.07**	**338**	P	**P**	**03 14 48.3**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=34,slow=6.2,SNR=7.5						
NVAR	**Mina Array Bea**	**69.68**	**56**	P	**P**	**03 14 54.1**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=297,slow=4.0,SNR=2.7						
AKASG	**Malin Array Be**	**70.48**	**322**	P	**P**	**03 14 56.6**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=51,slow=7.1,SNR=4.1						
AKASG	**Malin Array Be**	**70.48**	**322**	*i* P	**P**	**03 14 57.0**	**-0.5**
KIEV	**Kiev**	**70.49**	**322**	*ce*P	**P**	**03 14 58.6**	**+1.1**
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.3s						
PDAR	**Pinedale Array**	**71.86**	**48**	P	**P**	**03 15 06.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=297,slow=1.3,SNR=4.0						
TXAR	**Lajitas Array**	**84.72**	**54**	P	**P**	**03 16 18.0**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=305,slow=4.4,SNR=5.3						
ESDC	**Sonseca Array**	**92.37**	**336**	P	**P**	**03 16 53.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=42,slow=2.5,SNR=3.1						

WEL 01 03:12:41.6±1.2, 31°.S±7°.×17°.9E±2°.9, h33km, M4.3/13, mB4.9/13, ML4.7/8, MLv4.6/6, Mw(mB)4.2/13, Error ellipse: s-maj=0.0km s-min=0.0km az=89.9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**6.63**	**182**	P	Pn	03 14 19.0	+2.4
MXZ				S	Sn	03 15 32.4	+1.4
WIZ	**White Island**	**6.69**	**190**	P	Pn	03 14 11.8	-5.7
WIZ				S	Sn	03 15 25.5	-7.0
HAZ	**Te Kaha**	**6.85**	**185**	P	Pn	03 14 20.9	+1.2
HAZ				S	Sn	03 15 39.4	+2.9
WMGZ	**Waiomatatini S**	**6.88**	**181**	P	Pn	03 14 20.5	+0.3
WMGZ				S	Sn	03 15 38.7	+1.4
RUGZ	**Raukumara Rang**	**7.07**	**186**	P	Pn	03 14 24.3	+1.5
RUGZ				S	Sn	03 15 43.6	+1.6
TWGZ	**Tauwhareparae**	**7.25**	**184**	P	Pn	03 14 26.1	+0.8
TWGZ				S	Sn	03 15 48.2	+1.6
URZ	**Urewera**	**7.42**	**189**	P	Pn	03 14 28.5	+1.0
URZ				S	Sn	03 15 54.4	+3.8
MWZ	**Matawai**	**7.44**	**186**	P	Pn	03 14 28.3	+0.3
MWZ				S	Sn	03 15 52.7	+1.5
MUGZ	**Murupara**	**7.68**	**191**	P	Pn	03 14 32.3	+1.1
SNGZ	**Shannon Statio**	**7.91**	**187**	P	Pn	03 14 34.8	+0.5
RAHZ	**Arahi**	**8.07**	**188**	P	Pn	03 14 36.4	-0.1
MRHZ	**Matea Rd**	**8.09**	**192**	P	Pn	03 14 38.1	+1.3
HIZ	**Hauiti**	**8.17**	**201**	P	Pn	03 14 43.4	+5.5
MHGZ	**Mahia Peninsul**	**8.23**	**184**	P	Pn	03 14 38.3	-0.4
NMHZ	**Naumai**	**8.29**	**190**	P	Pn	03 14 38.7	-0.8
BKZ	**Black Stump Fm**	**8.40**	**191**	P	Pn	03 14 41.6	+0.5
ARHZ	**Aropaoanui**	**8.42**	**188**	P	Pn	03 14 40.8	-0.5
MCHZ	**McNeill Hill**	**8.64**	**190**	P	Pn	03 14 41.5	-2.8
TUVZ	**Tukino**	**8.66**	**195**	P	Pn	03 14 45.3	+0.5
FWVZ	**Far West T-bar**	**8.68**	**196**	P	Pn	03 14 46.7	+1.7
BHHZ	**Black Hill Sta**	**8.79**	**193**	P	Pn	03 14 46.2	-0.3
MTVZ	**Mangateitei**	**8.82**	**196**	P	Pn	03 14 47.7	+0.9
KRHZ	**Kereru**	**8.89**	**191**	P	Pn	03 14 46.0	-1.7
KAHZ	**Kahuranaki**	**8.96**	**188**	P	Pn	03 14 47.1	-1.6
PNHZ	**Pukenui**	**9.18**	**192**	P	Pn	03 14 49.1	-2.6
PXZ	**Pawanui**	**9.20**	**188**	P	Pn	03 14 48.9	-3.0

IDC ***01*** *03:12:40.5±0.7, 12°.41N×143°.94E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.8/46, mbtmp3.9/12, MS2.9/2, Ms1 2.9/2, ms1mx2.5/30, Error ellipse: s-maj=26.7km s-min=15.1km az=109.0*
ISCJB ***01*** *03:12:43.0±0.5, 12°.34N±0°.07×143°.9E±0°.1, h27km, mb3.9/13, MS2.9/2, Error ellipse: s-maj=16.2km s-min=7.9km az=28.5*
NEIC ***01*** *03:12:44.3±5.2, 12°.37N×143°.96E, h26km±37km, mb4.2/4, Error ellipse: s-maj=20.3km s-min=10.5km az=103.0*

ISC 01 03:12:44.8±0.7, 12°.4N±0°.1×143°.9E±0°.1, h27km, n25, σ1°=18/26, mb4.0/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.46**	**38**	Pn	**Pn**	**03 13 09.6**	**+0.2**
	84nm,0.3s,baz=196,slow=7.4,SNR=14						
GUMO				Sn	**Sb**	**03 13 29.3**	**-0.3**
	109nm,0.3s,baz=13,slow=22,SNR=11						
MJAR	**Matsushiro Arr**	**24.55**	**349**	LR	LR	03 26 42.3	
	comp=Z,28nm,18.8s,baz=85,slow=34						
WR1	**Warramunga Arr**	**33.53**	**197**	*e*P	**P**	**03 19 21.2**	**-1.2**
WRA	**Warramunga Arr**	**33.53**	**197**	P	**P**	**03 19 21.2**	**-1.2**
	2.6nm,0.9s,baz=7.4,slow=7.8,SNR=6.4						
AS31	**Alice Springs**	**37.20**	**195**	*e*P	**P**	**03 19 52.4**	**-1.6**
	3.4nm,1.5s						
AS31				*e*PcP	**PcP**	**03 22 14.6**	**+0.9**
ASAR	**Alice Springs**	**37.20**	**195**	P	**P**	**03 19 52.4**	**-1.6**
	0.8nm,0.8s,baz=16,slow=10,SNR=6.9						
ASAR				PcP	**PcP**	**03 22 14.6**	**+0.9**
	0.4nm,0.8s,baz=20,slow=3.0,SNR=2.8						
PETK	**Petropavlovsk-**	**42.04**	**12**	LR	LR	03 35 59.2	
	comp=Z,18nm,20.6s,baz=185,slow=33						
STKA	**Stephens Creek**	**44.11**	**183**	P	**P**	**03 20 52.1**	**+1.2**
	1.6nm,0.7s,baz=355,slow=12,SNR=2.8						
STKA	**Stephens Creek**	**44.11**	**183**	*e*P	**P**	**03 20 52.1**	**+1.2**
	4.0nm,1.5s						
SONA0	**Songino Array**	**47.16**	**326**	*e*P	**P**	**03 21 15.8**	**+0.7**
SONM	**Songino Array**	**47.16**	**326**	P	**P**	**03 21 15.8**	**+0.7**
	0.3nm,0.3s,baz=111,slow=3.2,SNR=2.5						
MK32	**Makanchi Array**	**61.70**	**317**	*e*P	**P**	**03 23 01.9**	**+1.2**
MKAR	**Makanchi Array**	**61.70**	**317**	P	**P**	**03 23 01.9**	**+1.2**
	0.2nm,0.5s,baz=96,slow=8.7,SNR=3.6						
KURBB	**Kurchatov Arra**	**64.92**	**320**	P	**P**	**03 23 21.9**	**0.0**
	0.4nm,0.5s,baz=103,slow=6.8,SNR=4.8						
ILAR	**Eielson Array**	**69.99**	**25**	P	**P**	**03 23 52.2**	**-1.5**
	0.5nm,0.5s,baz=250,slow=5.5,SNR=8.5						
ILB	**Eielson Array**	**69.99**	**25**	*e*P	**P**	**03 23 52.2**	**-1.5**
	1.9nm,0.6s						
BVAR	**Borovoye Array**	**70.27**	**322**	P	**P**	**03 23 55.9**	**+0.3**
	1.1nm,0.5s,baz=114,slow=7.2,SNR=7.0						
YKA	**Yellowknife Ar**	**84.30**	**27**	P	**P**	**03 25 13.8**	**-0.2**
	0.3nm,0.4s,baz=287,slow=5.4,SNR=9.0						
YKB5	**Yellowknife Ar**	**84.30**	**27**	*e*P	**P**	**03 25 13.8**	**-0.2**
RES	**Resolute Bay**	**85.88**	**13**	P	**P**	**03 25 22.1**	**+0.4**
	1.6nm,0.8s,baz=316,slow=2.8,SNR=5.7						
RES	**Resolute Bay**	**85.88**	**13**	*e*P	**P**	**03 25 22.1**	**+0.4**
	9.6nm,1.4s						
NV01	**Mina Array Sit**	**88.34**	**51**	*e*P	**P**	**03 25 36.2**	**+1.5**
NVAR	**Mina Array Bea**	**88.34**	**51**	P	**P**	**03 25 36.2**	**+1.5**
	0.7nm,0.6s,baz=268,slow=5.5,SNR=7.6						
FIA0	**FINESS Array S**	**91.82**	**335**	*e*P	**P**	**03 25 48.4**	**-1.8**
FINES	**FINESS Array B**	**91.82**	**335**	P	**P**	**03 25 48.4**	**-1.8**
	0.5nm,0.6s,baz=68,slow=5.1,SNR=4.1						

IDC ***01*** *04:02:04.4±1.1, 58°.96S×16°.02W, h0km, mb4.0/3, mb1 4.3/4, mb1mx3.9/31, mbtmp4.2/4, ML4.8/1, MS3.4/4, Ms1 3.3/4, ms1mx3.1/21, Error ellipse: s-maj=47.8km s-min=32.5km az=58.0*

ISC 01 04:02:06.0±0.9, 59°.4S±0°.1×16°.6W±0°.2, h10km, n19, σ3°=80/15, mb4.0/3, MS3.3/4, 1D, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**11.84**	**166**	P	Pn	04 04 59.6	+4.9
VNA2	**Neumayer--Watz**	**12.21**	**166**	P	**Pn**	**04 05 03.3**	**+3.6**
	baz=336,slow=14						
VNA2				S	**Sn**	**04 07 12.4**	**-3.2**
	baz=333,slow=23						
VNA3	**Neumayer Olymp**	**12.26**	**169**	P	**Pn**	**04 05 04.7**	**+4.4**
VNA3				S	**Sn**	**04 07 10.8**	**-6.0**
SNAA	**Sanae**	**13.54**	**161**	P	**Pn**	**04 05 22.5**	**+4.6**
SNAA				S	**Sn**	**04 07 44.1**	**-4.1**
SNAA	**Sanae**	**13.54**	**161**	Pn	**Pn**	**04 05 22.5**	**+4.6**
	4.9nm,0.3s,baz=316,slow=13,SNR=207						
SNAA				Sn	**Sn**	**04 07 44.5**	**-3.7**
	0.3nm,0.3s,baz=0.0,slow=20,SNR=3.8						
SYO	**Syowa Base**	**25.31**	**136**	⇓*e*P	**P**	**04 07 35.4**	**+3.2**
MAW	**Mawson**	**33.97**	**138**	LR	LR	04 20 33.5	
	comp=Z,69nm,20.4s,baz=233,slow=32						
PLCA	**Paso Flores**	**38.08**	**275**	LR	LR	04 24 25.7	
	comp=Z,37nm,18.8s,baz=148,slow=35						
CPUP	**Villa Florida**	**43.36**	**301**	LR	LR	04 29 12.7	
	comp=Z,29nm,18.6s,baz=180,slow=38						
BDFB	**Brasilia**	**49.38**	**319**	LR	LR	04 27 29.4	
	comp=Z,76nm,22.0s,baz=173,slow=31						
LPAZ	**La Paz**	**56.97**	**296**	P	**P**	**04 11 52.5**	**+0.3**
	1.6nm,0.9s,baz=142,slow=9.3,SNR=4.3						
TORD	**Torodi Ar. Bea**	**73.77**	**19**	P	**P**	**04 13 36.9**	**-3.3**
	2.0nm,0.9s,baz=201,slow=3.9,SNR=7.5						
H08N3	**Diego Garcia H**	**83.34**	**91**	T	T	05 47 57.7	
	baz=218,slow=75,SNR=6.5						
H08N1	**Diego Carcia H**	**83.35**	**91**	T	T	05 47 57.0	
	baz=218,slow=75,SNR=6.3						
H08N2	**Diego Garcia H**	**83.36**	**91**	T	T	05 47 57.6	
	baz=218,slow=75,SNR=6.6						
ASAR	**Alice Springs**	**93.77**	**153**	P	**P**	**04 15 22.8**	**-0.3**
	0.3nm,0.6s,baz=190,slow=4.7,SNR=3.4						
YKA	**Yellowknife Ar**	**142.56**	**311**	PKP	**PKPdf**	**04 21 36.9**	**-0.6**
	0.3nm,0.6s,baz=117,slow=2.4,SNR=4.9						
SONM	**Songino Array**	**145.33**	**84**	PKPbc	**PKPbc**	**04 21 42.6**	**-0.3**
	1.0nm,0.8s,baz=225,slow=3.4,SNR=4.9						
ILAR	**Eielson Array**	**156.64**	**304**	PKPab	**PKPab**	**04 22 29.2**	**+0.2**
	0.8nm,0.9s,baz=96,slow=4.4,SNR=6.5						

ISCJB ***01*** *04:16:19.3±0.3, 44°.29N±0°.01×6°.17E±0°.02, h5km±2km, Error ellipse: s-maj=2.4km s-min=2.0km az=28.3*
GEN ***01*** *04:16:21.1, 44°.26N×6°.23E, h7km±3km, Ml2.1*
ROM ***01*** *04:16:21.5±0.2, 44°.291N±0°.010×6°.26E±0°.01, h10km, ML2.3/17, Error ellipse: s-maj=1.4km s-min=0.6km az=42

	comp=N,256μm,0.4s							
DOI					AML	AML		
	comp=E,268μm,0.8s							
RRL	**Rocca Remolon**	**0.76**	**30**	P	**Pb**	**04 16 35.6**	**-0.2**	
RRL				S	**Sg**	**04 16 45.3**	**-0.1**	
RRL	**Rocca Remolon**	**0.76**	**30**	P	**Pb**	**04 16 35.6**	**-0.2**	
RRL				AML	AML			
	comp=E,154μm,1.3s							
RRL				AML	AML			
	comp=N,117μm,1.4s							
RRL				AML	AML			
	comp=E,154μm,1.3s							
RRL				AML	AML			
	comp=N,117μm,1.4s							
RRL				AML	AML			
	comp=N,117μm,1.4s							
RRL				AML	AML			
	comp=E,154μm,1.3s							
FRF	**La Foret Royal**	**0.76**	**158**	*e*Pg	**Pg**	**04 16 35.3**	**-0.1**	
FRF	**La Foret Royal**	**0.76**	**158**	*e*Pn	**Pn**	**04 16 37.8**	**+0.7**	
FRF				*e*Sg	**Sg**	**04 16 45.3**	**-0.1**	
	comp=E,41nm,0.3s							
FRF				*e*Sn	**Sn**	**04 16 48.8**	**+0.4**	
	comp=E,39nm,0.2s							
FRF	**La Foret Royal**	**0.76**	**158**	Pg	**Pg**	**04 16 35.3**	**-0.1**	
FRF				Pn	**Pn**	**04 16 37.8**	**+0.7**	
FRF				Lg	Lg	04 16 45.3		
	comp=E,20nm,0.3s							
FRF				Sn	**Sn**	**04 16 48.8**	**+0.4**	
	comp=E,20nm,0.2s							
STV	**Sant Anna di V**	**0.77**	**91**	P	**Pb**	**04 16 35.7**	**-0.2**	
STV				S	**Sb**	**04 16 45.9**	**-0.5**	
STV	**Sant Anna di V**	**0.77**	**91**	P	**Pb**	**04 16 35.8**	**-0.2**	
STV				S	**Sb**	**04 16 46.7**	**+0.4**	
STV				AML	AML			
	comp=E,119μm,1.3s							
STV				AML	AML			
	comp=N,135μm,0.3s							
STV				AML	AML			
	comp=E,119μm,1.3s							
STV				AML	AML			
	comp=N,134μm,0.3s							
STV				AML	AML			
	comp=N,134μm,0.3s							
STV				AML	AML			
	comp=E,119μm,1.3s							
ENR	**Entracque**	**0.84**	**92**	P	**Pb**	**04 16 37.0**	**-0.1**	
ENR	**Entracque**	**0.84**	**92**	P	**Pg**	**04 16 36.9**	**0.0**	
ENR				AML	AML			
	comp=E,209μm,0.6s							
ENR				AML	AML			
	comp=N,202μm,0.6s							
ENR				AML	AML			
	comp=E,209μm,0.6s							
ENR				AML	AML			
	comp=N,202μm,0.6s							
ENR				AML	AML			
	comp=E,209μm,0.6s							
ENR				AML	AML			
	comp=N,202μm,0.6s							
BNI	**Bardonecchia**	**0.84**	**21**	P	**Pb**	**04 16 37.2**	**0.0**	
BNI				AML	AML			
	comp=E,56μm,1.2s							
BNI				AML	AML			
	comp=N,46μm,0.8s							
BNI				AML	AML			
	comp=E,56μm,1.2s							
BNI				AML	AML			
	comp=N,46μm,0.8s							
BNI				AML	AML			
	comp=E,56μm,1.2s							
BNI				AML	AML			
	comp=N,46μm,0.8s							
BHB	**Bricherasio**	**0.92**	**51**	P	**Pg**	**04 16 38.4**	**-0.1**	
BHB				S	**Sb**	**04 16 50.6**	**-0.1**	
BHB	**Bricherasio**	**0.92**	**51**	AML	AML			
	comp=E,93μm,0.5s							
BHB				AML	AML			
	comp=N,76μm,1.4s							
SBF	**Sospel**	**0.94**	**115**	*e*Pg	**Pb**	**04 16 38.7**	**-0.1**	
SBF	**Sospel**	**0.94**	**115**	*e*Pn	**Pn**	**04 16 40.6**	**+1.0**	
SBF				*e*Sg	**Sb**	**04 16 51.0**	**-0.3**	
SBF				*e*Sn	**Sn**	**04 16 53.2**	**+0.2**	
	comp=N,51nm,0.2s							
SBF	**Sospel**	**0.94**	**115**	Pg	**Pb**	**04 16 38.7**	**-0.1**	
SBF				Pn	**Pn**	**04 16 40.6**	**+1.0**	
SBF				Lg	Lg	04 16 51.0		
SBF				Sn	**Sn**	**04 16 53.2**	**+0.2**	
	comp=N,26nm,0.2s							
LMR	**La Mourre**	**0.95**	**169**	*e*Pg	**Pb**	**04 16 38.2**	**-0.7**	
LMR	**La Mourre**	**0.95**	**169**	*e*Pn	**Pn**	**04 16 40.1**	**+0.5**	
LMR				*e*Sg	**Sb**	**04 16 51.2**	**-0.2**	
LMR				*e*Sn	**Sn**	**04 16 53.3**	**+0.2**	
	comp=N,24nm,0.2s							
LMR	**La Mourre**	**0.95**	**169**	Pg	**Pb**	**04 16 38.2**	**-0.7**	
LMR				Pn	**Pn**	**04 16 40.1**	**+0.5**	
LMR				Lg	Lg	04 16 51.2		
LMR				Sn	**Sn**	**04 16 53.3**	**+0.2**	
	comp=N,12nm,0.2s							
SAOF	**Saorge**	**0.98**	**106**	P	**Pb**	**04 16 39.5**	**0.0**	
SAOF				S	**Sn**	**04 16 53.0**	**-0.8**	
SAOF				AML	AML			
	comp=E,146μm,0.5s							
SAOF				AML	AML			
	comp=N,161μm,0.3s							
SAOF				AML	AML			
	comp=E,146μm,0.5s							
SAOF				AML	AML			
	comp=N,162μm,0.3s							
SAOF				AML	AML			
	comp=N,162μm,0.3s							
SAOF				AML	AML			
	comp=E,146μm,0.5s							
NEGI	**Seborga**	**1.13**	**111**	P	**Pg**	**04 16 42.5**	**+0.2**	
NEGI				AML	AML			
	comp=E,259μm,0.4s							
NEGI				AML	AML			
	comp=N,290μm,0.5s							
NEGI				AML	AML			
	comp=N,290μm,0.5s							
NEGI				AML	AML			
	comp=E,259μm,0.4s							
RSP	**Reno Superiore**	**1.14**	**39**	P	**Pg**	**04 16 42.5**	**0.0**	
RSP				AML	AML			
	comp=E,98μm,0.7s							
RSP				AML	AML			
	comp=N,89μm,0.9s							
RSP				AML	AML			
	comp=N,89μm,0.9s							
RSP				AML	AML			
	comp=E,98μm,0.7s							
GBOS	**Grotte di Boss**	**1.14**	**91**	P	**Pg**	**04 16 42.4**	**-0.1**	
GBOS				AML	AML			
	comp=E,138μm,1.5s							
GBOS				AML	AML			
	comp=N,174μm,0.5s							
GBOS				AML	AML			
	comp=N,174μm,0.5s							
GBOS				AML	AML			
	comp=E,138μm,1.5s							
IMI	**Imperia**	**1.23**	**106**	P	**Pg**	**04 16 44.6**	**+0.2**	
IMI				AML	AML			
	comp=E,196μm,1.4s							
IMI				AML	AML			
	comp=N,306μm,0.5s							
IMI				AML	AML			
	comp=N,306μm,0.5s							
IMI				AML	AML			
	comp=E,196μm,1.4s							
VIVF	**Saint-Julien-I**	**1.27**	**298**	*e*Pn	**Pn**	**04 16 44.0**	**-0.1**	
VIVF				*e*Sg	**Sg**	**04 17 01.8**	**+0.1**	
	comp=E,8.7nm,0.2s							
VIVF	**Saint-Julien-I**	**1.27**	**298**	Pn	**Pn**	**04 16 44.0**	**-0.1**	
VIVF				Lg	Lg	04 17 01.8		
	comp=E,4.3nm,0.2s							
LPG	**La Plagne**	**1.28**	**16**	*e*Pg	**Pb**	**04 16 44.7**	**0.0**	
LPG				*e*Sg	**Sg**	**04 17 02.7**	**+0.8**	
	comp=E,37nm,0.4s							
LPG	**La Plagne**	**1.28**	**16**	Pg	**Pb**	**04 16 44.7**	**0.0**	
LPG				Lg	Lg	04 17 02.7		
	comp=E,18nm,0.4s							
LPL	**La Plagne**	**1.29**	**15**	*e*Pg	**Pg**	**04 16 45.2**	**-0.3**	
LPL				*e*Sg	**Sg**	**04 17 03.0**	**+0.6**	
	comp=E,28nm,0.4s							
LPL	**La Plagne**	**1.29**	**15**	Pg	**Pg**	**04 16 45.2**	**-0.3**	
LPL				Lg	Lg	04 17 03.0		
	comp=E,14nm,0.4s							
RORO	**Rocca Rossa**	**1.31**	**96**	P	**Pg**	**04 16 45.5**	**-0.3**	
RORO				AML	AML			
	comp=E,144μm,0.6s							
RORO				AML	AML			
	comp=N,197μm,0.4s							
RORO				AML	AML			
	comp=N,197μm,0.4s							
RORO				AML	AML			
	comp=E,144μm,0.6s							
MONC	**Moncucco Torin**	**1.44**	**55**	P	**Pg**	**04 16 48.0**	**-0.3**	
MONC				AML	AML			
	comp=E,171μm,1.0s							
MONC				AML	AML			
	comp=N,178μm,1.6s							
MONC				AML	AML			
	comp=E,171μm,1.0s							
MONC				AML	AML			
	comp=N,178μm,1.6s							
FINB	**Finale Ligure**	**1.49**	**93**	P	**Pg**	**04 16 48.7**	**-0.6**	
FINB				AML	AML			
	comp=E,164μm,0.7s							
FINB				AML	AML			
	comp=N,215μm,0.4s							
FINB				AML	AML			
	comp=N,215μm,0.4s							
FINB				AML	AML			
	comp=E,164μm,0.7s							
TRAV	**Traversella**	**1.64**	**40**	AML	AML			
	comp=E,57μm,0.4s							
TRAV				AML	AML			
	comp=E,57μm,0.4s							
TRAV				AML	AML			
	comp=N,40μm,1.5s							
TRAV				AML	AML			
	comp=N,40μm,1.5s							
PCP	**Piancastagn**	**1.67**	**80**	P	**Pb**	**04 16 51.5**	**+0.4**	
PCP				AML	AML			
	comp=E,81μm,1.3s							
PCP				AML	AML			
	comp=N,77μm,1.6s							
PCP				AML	AML			
	comp=E,81μm,1.3s							
PCP				AML	AML			
	comp=N,77μm,1.6s							
LASF	**Ste Croix**	**1.73**	**264**	*e*Pn	**Pn**	**04 16 50.0**	**-0.4**	
LASF				*e*Sn	**Sn**	**04 17 11.9**	**-0.5**	
	comp=N,5.2nm,0.3s							
LASF	**Ste Croix**	**1.73**	**264**	Pn	**Pn**	**04 16 50.0**	**-0.4**	
LASF				Sn	**Sn**	**04 17 11.9**	**-0.5**	
	comp=N,2.6nm,0.3s							
CABF	**La Chapelle**	**2.35**	**357**	*e*Pg	**Pg**	**04 17 06.1**	**+0.5**	
CABF				*e*Sg	**Sg**	**04 17 36.2**	**+0.2**	
	comp=N,9.2nm,0.4s							
CABF	**La Chapelle**	**2.35**	**357**	Pg	**Pg**	**04 17 06.1**	**+0.5**	
CABF				Lg	Lg	04 17 36.2		
	comp=N,4.6nm,0.4s							
PGF	**Pioggiola**	**2.64**	**130**	*e*Pn	**Pn**	**04 17 03.3**	**+0.4**	
PGF				*e*Sn	**Sn**	**04 17 33.1**	**-1.7**	
	comp=N,4.5nm,0.2s							
PGF	**Pioggiola**	**2.64**	**130**	Pn	**Pn**	**04 17 03.3**	**+0.4**	
PGF				Sn	**Sn**	**04 17 33.1**	**-1.7**	
	comp=N,2.2nm,0.2s							
SMF	**Signal de Mont**	**2.92**	**325**	*e*Pn	**Pn**	**04 17 07.2**	**+0.5**	
SMF	**Signal de Mont**	**2.92**	**325**	*e*Pg	**Pg**	**04 17 16.1**	**-0.5**	
SMF				*e*Sn	**Sn**	**04 17 41.2**	**-0.5**	
	comp=N,3.2nm,0.2s							
SMF				*e*Sg	**Sg**	**04 17 53.5**	**-0.9**	
	comp=N,5.5nm,0.3s							
SMF	**Signal de Mont**	**2.92**	**325**	Pn	**Pn**	**04 17 07.2**	**+0.5**	
SMF				Pg	**Pg**	**04 17 16.1**	**-0.5**	
SMF				Sn	**Sn**	**04 17 41.2**	**-0.5**	
	comp=N,1.6nm,0.2s							
SMF				Lg	Lg	04 17 53.5		
	comp=N,2.8nm,0.3s							
SJAF	**Saint Jean de**	**3.04**	**235**	Sn	**Sn**	**04 17 42.4**	**-2.1**	
	SNR=7.9							
CAF	**Calviac**	**3.06**	**284**	*e*Pn	**Pn**	**04 17 09.1**	**+0.4**	
CAF				*e*Sn	**Sn**	**04 17 45.8**	**+0.6**	
	comp=N,1.3nm,0.2s							
CAF				*e*Sg	**Sg**	**04 17 57.9**	**-1.1**	
CAF	**Calviac**	**3.06**	**284**	Pn	**Pn**	**04 17 09.1**	**+0.4**	
CAF				Sn	**Sn**	**04 17 45.8**	**+0.6**	
	comp=N,0.6nm,0.2s							
CAF				Lg	Lg	04 17 57.9		
MTLF	**Montolieu**	**3.06**	**254**	*e*Pn	**Pn**	**04 17 09.0**	**+0.3**	
MTLF				*e*Sn	**Sn**	**04 17 44.2**	**-1.0**	
	comp=N,4.1nm,0.3s							
MTLF	**Montolieu**	**3.06**	**254**	Pn	**Pn**	**04 17 09.0**	**+0.3**	
MTLF				Sn	**Sn**	**04 17 44.2**	**-1.0**	
	comp=N,2.0nm,0.3s							
AVF	**Avril sur Loir**	**3.24**	**322**	*e*Pn	**Pn**	**04 17 11.9**	**+0.8**	
AVF	**Avril sur Loir**	**3.24**	**322**	*e*Pg	**Pg**	**04 17 21.7**	**-1.0**	
AVF				*e*Sg	**Sb**	**04 18 00.0**	**+2.6**	
	comp=N,4.4nm,0.5s							
AVF	**Avril sur Loir**	**3.24**	**322**	Pn	**Pn**	**04 17 11.9**	**+0.8**	
AVF				Pg	**Pg**	**04 17 21.7**	**-1.0**	
AVF				Lg	Lg	04 18 00.0		
	comp=N,2.2nm,0.5s							
BGF	**Bois d'Agland**	**3.32**	**315**	*e*Pn	**Pn**	**04 17 13.1**	**+0.9**	
BGF	**Bois d'Agland**	**3.32**	**315**	*e*Pg	**Pg**	**04 17 23.5**	**-0.6**	
BGF				*e*Sn	**Sn**	**04 17 51.9**	**+0.5**	
	comp=N,5.8nm,0.4s							
BGF				*e*Sg	**Sg**	**04 18 07.5**	**+0.4**	
	comp=N,13nm,0.4s							
BGF	**Bois d'Agland**	**3.32**	**315**	Pn	**Pn**	**04 17 13.1**	**+0.9**	
BGF				Pg	**Pg**	**04 17 23.5**	**-0.6**	
BGF				Sn	**Sn**	**04 17 51.9**	**+0.5**	
	comp=N,2.9nm,0.4s							
BGF				Lg	Lg	04 18 07.5		
	comp=N,6.3nm,0.4s							
SSF	**Saint Saulge**	**3.39**	**326**	*e*Pn	**Pn**	**04 17 14.0**	**+0.8**	
SSF	**Saint Saulge**	**3.39**	**326**	*e*Pg	**Pg**	**04 17 24.8**	**-0.8**	
SSF				*e*Sn	**Sn**	**04 17 53.1**	**-0.2**	
SSF				*e*Sg	**Sg**	**04 18 09.5**	**0.0**	
	comp=N,3.2nm,0.3s							
SSF	**Saint Saulge**	**3.39**	**326**	Pn	**Pn**	**04 17 14.0**	**+0.8**	
SSF				Pg	**Pg**	**04 17 24.8**	**-0.8**	
SSF				Sn	**Sn**	**04 17 53.1**	**-0.2**	
SSF				Lg	Lg	04 18 09.5		
	comp=N,1.6nm,0.3s							
LOR	**Lormes**	**3.44**	**332**	*e*Pn	**Pn**	**04 17 14.7**	**+0.9**	
LOR	**Lormes**	**3.44**	**332**	*e*Pg	**Pg**	**04 17 25.5**	**-0.9**	
LOR				*e*Sn	**Sn**	**04 17 53.4**	**-1.0**	
	comp=N,3.4nm,0.3s							
LOR				*e*Sg	**Sg**	**04 18 09.6**	**-1.3**	
	comp=N,4.3nm,0.4s							
LOR	**Lormes**	**3.44**	**332**	Pn	**Pn**	**04 17 14.7**	**+0.9**	
LOR				Pg	**Pg**	**04 17 25.5**	**-0.9**	
LOR				Sn	**Sn**	**04 17 53.4**	**-1.0**	
	comp=N,1.7nm,0.3s							
LOR				Lg	Lg	04 18 09.6		
	comp=N,2.2nm,0.4s							
TCF	**Toulx Ste Croi**	**3.50**	**307**	*e*Pn	**Pn**	**04 17 14.9**	**+0.2**	
TCF				*e*Sn	**Sn**	**04 17 56.1**	**+0.2**	
	comp=N,0.8nm,0.2s							
TCF	**Toulx Ste Croi**	**3.50**	**307**	Pn	**Pn**	**04 17 14.9**	**+0.2**	
TCF				Sn	**Sn**	**04 17 56.1**	**+0.2**	
	comp=N,0.4nm,0.2s							
RJF	**Les Rejaudoux**	**3.53**	**289**	*e*Pn	**Pn**	**04 17 16.1**	**+1.0**	
RJF	**Les Rejaudoux**	**3.53**	**289**	*e*Pg	**Pg**	**04 17 28.3**	**+0.1**	
RJF				*e*Sn	**Sn**	**04 17 56.9**	**+0.3**	
	comp=N,0.9nm,0.2s							
RJF				*e*Sg	**Sg**	**04 18 13.6**	**-0.3**	
RJF	**Les Rejaudoux**	**3.53**	**289**	Pn	**Pn**	**04 17 16.1**	**+1.0**	
RJF				Pg	**Pg**	**04 17 28.3**	**+0.1**	
RJF				Sn	**Sn**	**04 17 56.9**	**+0.3**	
	comp=N,0.4nm,0.2s							
RJF				Lg	Lg	04 18 13.6		
HINF	**Hinteralfeld**	**3.57**	**7**	*e*Pn	**Pn**	**04 17 16.8**	**+1.1**	
HINF	**Hinteralfeld**	**3.57**	**7**	*e*Pg	**Pg**	**04 17 28.4**	**-0.7**	
HINF				*e*Sn	**Sn**	**04 17 57.2**	**-0.6**	
	comp=N,2.4nm,0.4s							
HINF				*e*Sg	**Sg**	**04 18 13.9**	**-1.4**	
	comp=N,4.0nm,0.4s							
HINF	**Hinteralfeld**	**3.57**	**7**	Pn	**Pn**	**04 17 16.8**	**+1.1**	
HINF				Pg	**Pg**	**04 17 28.4**	**-0.7**	
HINF				Sn	**Sn**	**04 17 57.2**	**-0.6**	
	comp=N,1.2nm,0.4s							
HINF				Lg	Lg	04 18 13.9		
	comp=N,2.0nm,0.4s							
CLLI	**Llivia**	**3.60**	**242**	Pn	**Pn**	**04 17 17.2**	**+1.0**	
	comp=N,7.3nm,1.0s,SNR=6.6							
CLLI				Sn	**Sn**	**04 17 57.9**	**-0.6**	
	comp=N,0.4nm,0.2s,SNR=7.9							
HAU	**Haudompre**	**3.74**	**1**	*e*Sn	**Sn**	**04 18 00.2**	**-1.7**	
	comp=N,2.9nm,0.3s							
HAU				*e*Sg	**Sg**	**04 18 19.4**	**-1.2**	
	comp=N,4.1nm,0.3s							
HAU	**Haudompre**	**3.74**	**1**	Sn	**Sn**	**04 18 00.2**	**-1.7**	
	comp=N,1.4nm,0.3s							
HAU				Lg	Lg	04 18 19.4		
	comp=N,2.0nm,0.3s							
CFON	**Fontmartina**	**3.76**	**229**	Pn	**Pn**	**04 17 19.5**	**+1.3**	
	comp=N,3.6nm,0.2s,SNR=9.8							
CFON				Sn	**Sn**	**04 18 01.1**	**-1.3**	
	comp=N,9.5nm,0.3s,SNR=7.9							
LFF	**La Frestale**	**3.99**	**282**	*e*Pn	**Pn**	**04 17 22.2**	**+0.7**	
LFF	**La Frestale**	**3.99**	**282**	Pn	**Pn**	**04 17 22.2**	**+0.7**	
FETA	**Feichten**	**4.17**	**47**	*i* Pn	**Pn**	**04 17 26.3**	**+2.2**	
	comp=N,1.1nm,0.5s							
CSOR	**Sort**	**4.19**	**245**	Pn	**Pn**	**04 17 26.1**	**+1.8**	
	comp=N,1.0nm,0.2s,SNR=7.2							
CSOR				Sn	**Sn**	**04 18 15.3**	**+2.3**	
	comp=N,0.6nm,0.2s,SNR=7.9							
CDF	**Champ du Feu**	**4.21**	**9**	*e*Pn	**Pn**	**04 17 25.3**	**+0.8**	
CDF	**Champ du Feu**	**4.21**	**9**	Pn	**Pn**	**04 17 25.3**	**+0.8**	
CDF				Pg	**Pg**	**04 17 39.5**	**-1.6**	
CDF				Sn	**Sn**	**04 18 12.8**	**-0.7**	
	comp=N,0.4nm,0.2s							
PAGF	**Fort de Pagny**	**4.30**	**355**	*e*Sn	**Sn**	**04 18 13.9**	**-1.8**	
	comp=N,1.5nm,0.2s							
SQTA	**Sankt Quirin**	**4.55**	**48**	*e*Pn	Pb	04 17 35.0	-5.5	
	comp=N,1.2nm,0.2s							
MOTA	**Moosalm**	**4.58**	**46**	*i* Pn	**Pn**	**04 17 33.3**	**+3.7**	
	comp=N,0.3nm,0.2s							
WTTA	**Wattenberg**	**4.81**	**50**	*e*Pn	Pn	04 17 38.1	+5.2	
	comp=N,1.0nm,0.3s							
WATA	**Walderalm**	**4.82**	**49**	*e*Pn	**Pn**	**04 17 33.3**	**+0.3**	
	comp=N,1.7nm,0.4s							
ABTA	**Abfaltersbach**	**5.05**	**58**	*e*Pn	Pn	04 17 40.9	+4.9	
	comp=N,0.5nm,0.3s							
BAIF	**Baives**	**5.96**	**347**	*e*Pn	**Pn**	**04 17 49.3**	**+0.9**	
BAIF	**Baives**	**5.96**	**347**	Pn	**Pn**	**04 17 49.3**	**+0.9**	
LDF	**La Druitiere**	**6.17**	**317**	*e*Pn	**Pn**	**04 17 52.4**	**+1.0**	
GRR	**Gorron**	**6.42**	**312**	*e*Pn	**Pn**	**04 17 55.6**	**+0.8**	
GRR	**Gorron**	**6.42**	**312**	Pn	**Pn**	**04 17 55.6**	**+0.8**	

*NEIC **01** 04:20:01.0±0.0, 17°.97N×68°.28W, h101km, MD3.3(RSPR), After RSPR.*

RSPR 01 04:20:01.0, 17°.97N×68°.28W, h101km±1km, MD3.3/13, 18C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**1.11**	**88⇑**	*e*P	Pn	04 20 22.5	-0.3
CRPR	**Cabo Rojo, PR**	**1.11**	**88**	*e*S	Sn	04 20 38.8	-0.4
CRPR	**Cabo Rojo, PR**	**1.11**	**88⇓**	*e*P	Pn	04 20 22.5	-0.3
CRPR				*e*S	Sn	04 20 38.8	-0.4
AGPR	**Aguadilla, PR**	**1.22**	**66⇓**	*e*P	Pn	04 20 23.4	-0.5
AGPR	**Aguadilla, PR**	**1.22**	**66**	*e*S	Sn	04 20 41.4	+0.1
AGPR	**Aguadilla, PR**	**1.22**	**66⇓**	*e*P	Pn	04 20 23.4	-0.5
AGPR				*e*S	Sn	04 20 41.4	+0.1
AOPR	**Arecibo Observ**	**1.50**	**75⇑**	*e*P	Pn	04 20 26.6	-0.8
AOPR	**Arecibo Observ**	**1.50**	**75**	*e*S	Sn	04 20 47.0	-0.4
AOPR	**Arecibo Observ**	**1.50**	**75⇑**	*e*P	Pn	04 20 26.6	-0.8
AOPR				*e*S	Sn	04 20 47.0	-0.4
OBIP	**Obispado Ponce**	**1.60**	**87⇑**	*e*P	Pn	04 20 28.2	-0.3
OBIP	**Obispado Ponce**	**1.60**	**87**	*e*S	Sn	04 20 49.2	-0.2
OBIP	**Obispado Ponce**	**1.60**	**87⇓**	*e*P	Pn	04 20 28.2	-0.3
OBIP				*e*S	Sn	04 20 49.2	-0.2
CELP	**Cerrillos**	**1.62**	**86⇑**	*e*P	Pn	04 20 28.6	-0.3
CELP				*e*S	Sn	04 20 49.7	-0.3
CELP	**Cerrillos**	**1.62**	**86⇑**	*e*P	Pn	04 20 28.6	-0.3
CELP				*e*S	Sn	04 20 49.7	-0.3
EMPR	**Esperanza - Ma**	**1.74**	**73⇑**	*e*P	Pn	04 20 30.0	-0.3
EMPR	**Esperanza - Ma**	**1.74**	**73**	*e*S	Sn	04 20 52.4	-0.2
EMPR	**Esperanza - Ma**	**1.74**	**73⇑**	*e*P	Pn	04 20 30.0	-0.3
EMPR				*e*S	Sn	04 20 52.4	-0.2
SJG	**San Juan**	**2.03**	**86⇑**	*e*P	Pn	04 20 33.8	-0.3
SJG	**San Juan**	**2.03**	**86**	*e*S	Sn	04 20 59.2	-0.1
SJG	**San Juan**	**2.03**	**86⇑**	*e*P	Pn	04 20 33.8	-0.3
SJG				*e*S	Sn	04 20 59.2	-0.1
MTP	**Monte Pirata**	**2.60**	**87⇑**	*e*P	Pn	04 20 41.4	-0.1
MTP	**Monte Pirata**	**2.60**	**87**	*e*S	Sn	04 21 12.8	+0.3
MTP	**Monte Pirata**	**2.60**	**87⇑**	*e*P	Pn	04 20 41.4	-0.1
MTP				*e*S	Sn	04 21 12.8	+0.3
CUPR	**Culebra, Puert**	**2.87**	**83⇑**	*e*P	Pn	04 20 44.6	-0.5
CUPR	**Culebra, Puert**	**2.87**	**83**	*e*S	Sn	04 21 19.1	+0.1
CUPR	**Culebra, Puert**	**2.87**	**83⇑**	*e*P	Pn	04 20 44.6	-0.5
CUPR				*e*S	Sn	04 21 19.1	+0.1
SDDR	**Presa de Saban**	**3.03**	**290**	*e*Pn	Pn	04 20 46.0	-1.2
STVI	**Saint Thomas**	**3.19**	**83⇑**	*e*P	Pn	04 20 49.2	-0.1
STVI	**Saint Thomas**	**3.19**	**83**	*e*S	Sn	04 21 27.0	+0.4
STVI	**Saint Thomas**	**3.19**	**83⇑**	*e*P	Pn	04 20 49.2	-0.1
STVI				*e*S	Sn	04 21 27.0	+0.4

*ATH **01** 04:34:21.8, 41°.23N×20°.18E, h16km±1km, ML2.3/2, Error ellipse: s-maj=3.8km s-min=1.1km az=24.0*
*SKO **01** 04:34:22.8, 41°.19N×20°.12E, h0km, M1.8, ML2.2*
*THE **01** 04:34:22.2, 41°.16N×20°.14E, h14km±18km, ML2.1/2, Error ellipse: s-maj=19.8km s-min=0.6km az=320.0*
*BEO **01** 04:34:22.5±0.7, 41°.08N×20°.15E, h0km±2km, ML2.1/6*
*PDG **01** 04:34:22.8±0.3, 41°.18N×20°.19E, h8km, ML2.5/5, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

ISC 01 04:34:22.3±1.0, 41°.15N±0°.02×20°.18E±0°.02, h10km±9km, n44, σ1.07/72, 4C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**310**	*e*Pg	**Pg**	**04 34 28.2**	**-0.3**
TIR				*e*Sg	**Sb**	**04 34 33.7**	**-1.4**
TIR	**Tirane**	**0.31**	**310**	P	**Pg**	**04 34 27.5**	**-0.9**
TIR				S	**Sg**	**04 34 32.8**	**+0.2**
TIR	**Tirane**	**0.31**	**310**	*i* PG	**Pg**	**04 34 28.1**	**-0.4**
TIR				*i* SG	**Sb**	**04 34 34.2**	**-0.9**
TIR	**Tirane**	**0.31**	**310**	P	**Pg**	**04 34 27.6**	**-0.9**
TIR				S	**Sg**	**04 34 32.4**	**-0.2**
TIR				AML	AML	04 34 35.4	
	comp=E,1610μm,0.2s						
TIR				AML	AML	04 34 36.0	
	comp=N,2527μm,0.2s						
OHR	**Ohrid**	**0.47**	**95**	*i* Pg	**Pg**	**04 34 31.8**	**+0.3**
OHR				*i* Sg	**Sb**	**04 34 39.2**	**-0.6**
OHR				*e*Lg	Lg	04 34 39.6	
	comp=N,85nm,0.3s						
OHR				*e*Lg	Lg	04 34 40.5	
	comp=E,73nm,0.3s						
PHP	**Peshkopia**

PDG				*e*Sg	Sg	04 35 10.0	+1.0
PDG	**Podgorica**	**1.45**	**332**	*i* Pn	Pb	04 34 49.3	-0.2
TTG	**Podgorica**	**1.45**	**332**	⇓*i*Pg	Pb	04 34 49.4	-0.1
TTG				*e*Sg	Sg	04 35 12.4	+3.4
KEK	**Kerkira**	**1.47**	**192**	P	Pg	04 34 50.9	+0.5
BUM	**Brajici-Budva**	**1.50**	**320**	⇑*i*Pg	Pb	04 34 50.2	-0.1
BUM				*e*Sg	Sg	04 35 13.7	+3.2
KPRO	**Kipourio**	**1.50**	**143**	P	Pg	04 34 51.2	+0.1
STIP	**Stip**	**1.60**	**70**	*i* Pn	Pg	04 34 55.3	+2.2
IGT	**Igoumenitsa**	**1.62**	**176**	*i* Pn	Pg	04 34 53.4	0.0
IGT	**Igoumenitsa**	**1.62**	**176**	P	Pg	04 34 53.0	-0.4
CEME	**Cevo**	**1.68**	**326**	⇓*i*Pn	Pb	04 34 53.2	-0.2
CEME				*e*Sn	Sg	04 35 17.4	+1.0
SCTE	**Santa Cesarea**	**1.69**	**231**	P	Pb	04 34 53.0	-0.5
GRG	**Griva**	**1.69**	**96**	P	Pb	04 34 53.2	-0.4
IVA	**Berane**	**1.73**	**353**	⇑*i*Pn	Pb	04 34 54.3	0.0
IVA				*e*Sn	Sg	04 35 18.4	+0.4
KOME	**Kolasin**	**1.77**	**344**	⇓*i*Pn	Pb	04 34 54.3	-0.6
KOME				*e*Sn	Sg	04 35 19.8	+0.6
KNT	**Kendrikon**	**2.05**	**89**	*i* Pn	Pb	04 34 59.4	-0.4
BARS	**Barje**	**2.06**	**36**	*e*Pn	Pb	04 34 58.6	-1.3
TREB	**Trebinje**	**2.08**	**320**	*e*Pn	Pb	04 34 59.7	-0.4
TREB				*e*Sn	Sb	04 35 25.6	-0.4
SJES	**Sjenica**	**2.11**	**356**	*e*Pn	Pb	04 35 00.2	-0.6
SJES				*e*Sg	Sg	04 35 32.2	+1.9
SELS	**Selova**	**2.18**	**18**	*e*Pn	Pb	04 35 01.7	-0.2
BOSS	**Bosilegrad**	**2.18**	**51**	*e*Pn	Pb	04 35 01.2	-0.7
BOSS				*e*Sn	Sb	04 35 28.7	-0.4
IVAS	**Ivanjica**	**2.42**	**360**	*e*Pn	Pb	04 35 04.4	-1.7
STON	**Ston**	**2.52**	**314**	*e*Pn	Pn	04 35 03.8	+0.4
BOVS	**Bovan**	**2.73**	**24**	*e*Pn	Pb	04 35 09.7	-1.5
ZAPS	**Zavoj**	**2.80**	**40**	*e*Pn	Pb	04 35 09.6	-2.8

ISCJB ***01*** *04:34:43.2±0.5, 26°.41S±0°.04×27°.57E±0°.04, h12km±3km, Error ellipse: s-maj=8.3km s-min=4.4km az=137.5*
PRE ***01*** *04:34:43.6±1.5, 26°.45S×27°.61E, h2km, ML2.8*
IDC ***01*** *04:34:43.1±2.0, 26°.43S×27°.63E, h0km, mb4.1/7, mb1mx3.7/33, mbtmp4.0/7, ML3.9/4, Error ellipse: s-maj=36.4km s-min=20.2km az=113.0*
EAF ***01*** *04:34:44.7±1.7, 26°.46S×27°.46E, h0km±30km, MD3.7*
BUL ***01*** *04:34:46.0±2.2, 26°.48S×27°.47E, h0km±30km, MD3.9*
ISC 01 04:34:43.7±0.9,**26°.43S**±0°.03×**27°.58E**±0°.04,**h7**km±6km, **n24**,σ2**s06/44**,**South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.08**	**21**	*e*P	**Pg**	**04 34 45.8**	**-0.1**
KLOF				*e*S	**Sg**	**04 34 47.8**	**+0.5**
KLOF				AML	AML	04 34 50.0	
	comp=Z,5μm,0.2s						
WDLM	**Western Deep L**	**0.14**	**272**	*e*P	**Pg**	**04 34 46.3**	**-0.4**
WDLM				*e*S	**Sg**	**04 34 48.8**	**0.0**
WDLM				AML	AML	04 34 49.4	
	comp=Z,4μm,0.1s						
PRYS	**Parys**	**0.53**	**201**	*e*P	**Pg**	**04 34 53.6**	**-0.4**
PRYS				*e*S	**Sg**	**04 35 01.7**	**+0.7**
PRYS				AML	AML	04 35 06.1	
	comp=Z,510nm,0.6s						
ERPM	**east rand prop**	**0.60**	**82**	*e*P	**Pg**	**04 34 55.2**	**-0.1**
ERPM				*e*S	**Sg**	**04 35 03.1**	**-0.1**
ERPM				AML	AML	04 35 09.3	
	comp=Z,179nm,0.6s						
SWZ	**Schweizer**	**2.14**	**249**	*e*P	**Pn**	**04 35 21.4**	**+1.4**
SWZ				*e*S	**Sb**	**04 35 48.8**	**-1.0**
SWZ				AML	AML	04 35 50.5	
	comp=Z,218nm,0.3s						
LBTB	**Lobatse**	**2.27**	**308**	Pn	**Pn**	**04 35 23.2**	**+1.4**
	comp=Z,45nm,0.3s,baz=126,slow=16,SNR=500						
LBTB				Sn	**Sb**	**04 35 53.9**	**+0.4**
	comp=Z,74nm,0.3s,baz=24,slow=9.6,SNR=52						
BOSA	**Boshof**	**3.00**	**223**	*i* P	**Pn**	**04 35 32.0**	**+0.2**
BOSA	**Boshof**	**3.00**	**223**	Pn	**Pn**	**04 35 31.7**	**0.0**
	comp=Z,4.7nm,0.3s,baz=38,slow=12,SNR=123						
BOSA				Pg	**Pb**	**04 35 38.4**	**+0.9**
	comp=Z,8.6nm,0.3s,baz=42,slow=14,SNR=37						
BOSA				Sn	**Sb**	**04 36 13.9**	**-0.4**
	comp=Z,16nm,0.3s,baz=36,slow=17,SNR=13						
BOSA	**Boshof**	**3.00**	**223**	*i* P	**Pn**	**04 35 32.0**	**+0.2**
MSNA	**Messina**	**4.64**	**29**	*i* P	**Pn**	**04 35 57.0**	**+2.7**
MSNA				*i* S	**Sn**	**04 36 48.8**	**+0.4**
MSNA	**Messina**	**4.64**	**29**	*i* P	**Pn**	**04 35 57.0**	**+2.7**
MSNA				*i* S	**Sn**	**04 36 48.8**	**+0.4**
MSNA	**Messina**	**4.64**	**29**	*e*P	**Pn**	**04 35 55.2**	**+1.0**
MSNA				*e*S	**Sn**	**04 36 45.1**	**-3.3**
MSNA				AML	AML	04 37 13.1	
	comp=Z,20nm,0.4s						
PKA	**Prieska**	**5.34**	**232**	*e*P	**Pn**	**04 36 04.5**	**+0.5**
PKA				*e*S	**Sn**	**04 37 05.8**	**-0.1**
PKA				AML	AML	04 37 33.8	
	comp=Z,8.9nm,0.5s						
UPI	**Upington**	**5.94**	**250**	*e*P	**Pn**	**04 36 12.7**	**+0.5**
UPI				*e*S	**Sn**	**04 37 19.1**	**-1.5**
UPI				AML	AML	04 37 50.1	
	comp=Z,18nm,0.4s						
MATP	**Matopo**	**6.04**	**8**	*i* P	**Pn**	**04 36 14.2**	**+0.6**
MATP				*i* S	**Sn**	**04 37 22.6**	**-0.4**
MATP	**Matopo**	**6.04**	**8**	Pn	**Pn**	**04 36 13.8**	**+0.3**
	comp=Z,2.7nm,0.3s,baz=188,slow=13,SNR=49						
MATP				Sn	**Sn**	**04 37 19.9**	**-3.1**
	comp=Z,1.9nm,0.3s,baz=116,slow=17,SNR=8.4						
MATP				Lg	Lg	04 37 49.0	
	comp=Z,2.8nm,0.3s,baz=278,slow=23,SNR=16						
MATP	**Matopo**	**6.04**	**8**	*i* P	**Pn**	**04 36 14.2**	**+0.6**
MATP				*i* S	**Sn**	**04 37 22.6**	**-0.4**
BLWY	**Bulawayo**	**6.33**	**9**	*i* P	**Pn**	**04 36 18.3**	**+0.6**
BLWY				*i* S	**Sn**	**04 37 27.0**	**-3.3**
BLWY	**Bulawayo**	**6.33**	**9**	*i* P	**Pn**	**04 36 18.3**	**+0.6**
BLWY				*i* S	**Sn**	**04 37 27.0**	**-3.3**
LSZ	**Lusaka**	**11.11**	**3**	Pn	**Pn**	**04 37 22.5**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=186,slow=12,SNR=5.9						
LSZ				Sn	**Sn**	**04 39 22.1**	**-5.7**
	comp=Z,0.4nm,0.3s,baz=88,slow=21,SNR=3.4						
LSZ				Lg	Lg	04 40 30.2	
	comp=Z,0.1nm,0.3s,baz=64,slow=11,SNR=3.8						
TSUM	**Tsumeb**	**11.69**	**306**	Pn	**Pn**	**04 37 27.6**	**-3.4**
	comp=Z,0.6nm,0.3s,baz=141,slow=12,SNR=3.8						
TSUM				Sn	**Sn**	**04 39 49.1**	**+7.2**
	comp=Z,0.2nm,0.3s,baz=71,slow=20,SNR=3.1						
TSUM				Lg	Lg	04 40 44.6	
	comp=Z,0.4nm,0.3s,baz=39,slow=7.5,SNR=3.2						
DBIC	**Dimbokro**	**45.52**	**312**	P	**P**	**04 43 04.8**	**+0.7**
	comp=Z,20nm,1.3s,baz=135,slow=8.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**46.70**	**324**	P	**P**	**04 43 13.7**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=139,slow=6.9,SNR=9.3						
FINES	**FINESS Array B**	**87.57**	**359**	P	**P**	**04 47 32.9**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=170,slow=8.5,SNR=4.0						

GCG ***01*** *04:36:19.5±0.8, 13°.34N×91°.60W, h26km±74km, MD4.4*
SNET ***01*** *04:36:21.2±2.4, 13°.87N×91°.60W, h20km, ML4.6*
UCR ***01*** *04:36:22.3±2.8, 13°.63N×91°.57W, h25km±34km, MD4.0, ML4.3, mb4.3(NEIC)*
MEX ***01*** *04:36:24.1±0.5, 13°.70N×91°.54W, h10km, MD4.2*
NEIC ***01*** *04:36:24.6±1.9, 13°.63N×91°.34W, h32km±13km, mb4.3/81, MD4.2(MEX), Error ellipse: s-maj=10.0km s-min=5.1km az=212.0*
IDC ***01*** *04:36:24.1±3.2, 13°.87N×91°.02W, h27km±21km, mb3.9/13, mb1 4.1/15, mb1mx3.9/36, mbtmp4.1/15, ML3.6/2, MS3.7/21, Ms1 3.7/21, ms1mx3.6/32, Error ellipse: s-maj=31.9km s-min=13.0km az=48.0*
ISC 01 04:36:23.1±2.0,**13°.66N**±0°.06×**91°.57W**±0°.04,**h26**km±13km, **n309**,σ1**s74/325**,**mb4.3**/85,**MS3.8**/20,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.78**	**0**	*e*P	**Pn**	**04 36 39.2**	**+0.7**
FUG	**Fuego 3**	**1.06**	**42**	*e*P	**Pn**	**04 36 42.4**	**0.0**
FUG	**Fuego 3**	**1.06**	**42**	*e*P	**Pn**	**04 36 42.5**	**0.0**
PCG	**Pacaya**	**1.19**	**52**	*e*P	**Pn**	**04 36 43.9**	**-0.4**
PCG	**Pacaya**	**1.19**	**52**	*e*P	**Pn**	**04 36 43.9**	**-0.4**
THIG		**1.41**	**332**	*e*P	**Pn**	**04 36 46.3**	**-0.8**
THIG				*e*S	**Sn**	**04 37 02.5**	**-2.4**
THIG		**1.41**	**332**	*e*P	**Pn**	**04 36 46.3**	**-0.8**
THIG				*e*S	**Sn**	**04 37 02.5**	**-2.4**
MOYG	**Moyuta, Jutiap**	**1.50**	**75**	*e*P	**Pn**	**04 36 47.2**	**-1.3**
NBG	**Las Nubes**	**1.51**	**52**	*e*P	**Pn**	**04 36 49.3**	**+0.6**
NBG	**Las Nubes**	**1.51**	**52**	*e*P	**Pn**	**04 36 49.5**	**+0.8**
NBG				*e*S	**Sb**	**04 37 11.9**	**+2.5**
RTR	**El Retiro**	**1.89**	**82**	*e*P	**Pn**	**04 36 52.6**	**-1.2**
RTR	**El Retiro**	**1.89**	**82**	*e*P	**Pn**	**04 36 52.6**	**-1.2**
CEVE	**Cerro Verde**	**1.90**	**85**	*e*P	**Pn**	**04 36 52.4**	**-1.7**
CEVE				*e*S	**Sn**	**04 37 18.4**	**+1.0**
CEVE				IAML		04 37 29.9	
	comp=Z,9μm,0.4s						
CEVE	**Cerro Verde**	**1.90**	**85**	*e*P	**Pn**	**04 36 52.4**	**-1.7**
CEVE				*e*S	**Sn**	**04 37 18.4**	**+1.0**
CEVE				IAML		04 37 29.9	
	comp=Z,9μm,0.4s						
SBLS	**San Blas**	**1.90**	**84**	*e*P	**Pn**	**04 36 52.4**	**-1.7**
SBLS	**San Blas**	**1.90**	**84**	*e*P	**Pn**	**04 36 52.4**	**-1.7**
SNJE	**San Jose**	**1.92**	**83**	*e*P	**Pn**	**04 36 52.9**	**-1.5**
SNJE	**San Jose**	**1.92**	**83**	*e*P	**Pn**	**04 36 52.9**	**-1.5**
BOQS	**Boqueron**	**2.23**	**88**	*e*P	**Pn**	**04 36 57.3**	**-1.3**
UEES	**San Salvador**	**2.27**	**88**	*e*P	**Pn**	**04 36 58.2**	**-0.7**
UEES				*e*S	**Sn**	**04 37 25.8**	**-0.3**
UEES				IAML		04 37 30.9	
	comp=Z,3μm,0.4s						
UEES	**San Salvador**	**2.27**	**88**	*e*P	**Pn**	**04 36 58.2**	**-0.7**
UEES				*e*S	**Sn**	**04 37 25.8**	**-0.3**
UEES				IAML		04 37 30.9	
	comp=Z,3μm,0.4s						
MTO3	**Montecristo**	**2.27**	**71**	*e*P	**Pn**	**04 36 58.1**	**-1.0**
MTO3				*e*S	**Sn**	**04 37 28.2**	**+1.8**
MTO3	**Montecristo**	**2.27**	**71**	*e*P	**Pn**	**04 36 58.1**	**-1.0**
MTO3				*e*S	**Sn**	**04 37 28.2**	**+1.8**
SNET	**Serv Nac Est T**	**2.28**	**89**	*e*P	**Pn**	**04 36 58.1**	**-1.0**
SNET				*e*S	**Sn**	**04 37 26.8**	**+0.4**
SNET				IAML		04 37 31.4	
	comp=Z,2μm,0.4s						
SNET	**Serv Nac Est T**	**2.28**	**89**	*e*P	**Pn**	**04 36 58.1**	**-1.0**
SNET				*e*S	**Sn**	**04 37 26.8**	**+0.4**
SNET				IAML		04 37 31.4	
	comp=Z,2μm,0.4s						
OPAM	**San Salvador**	**2.31**	**88**	*e*P	**Pn**	**04 36 58.9**	**-0.6**
OPAM				*e*S	**Sn**	**04 37 28.1**	**+1.0**
OPAM	**San Salvador**	**2.31**	**88**	*e*P	**Pn**	**04 36 58.9**	**-0.6**
OPAM				*e*S	**Sn**	**04 37 28.1**	**+1.0**
MRL	**Marmol**	**2.31**	**52**	*e*P	**Pn**	**04 37 01.0**	**+1.2**
MRL	**Marmol**	**2.31**	**52**	*e*P	**Pn**	**04 37 01.0**	**+1.2**
MRL				*e*S	**Sb**	**04 37 31.1**	**-1.5**
LFU	**La Fuente**	**2.39**	**88**	*e*P	**Pn**	**04 37 00.3**	**-0.3**
LFU	**La Fuente**	**2.39**	**88**	*e*P	**Pn**	**04 37 00.3**	**-0.3**
LFRS	**El Faro**	**2.44**	**90**	*e*P	**Pn**	**04 37 00.6**	**-0.8**
LBRS	**Las Brisas**	**2.46**	**88**	*e*P	**Pn**	**04 37 01.1**	**-0.5**
PAVA	**Las Pavas**	**2.56**	**88**	*e*P	**Pn**	**04 37 02.5**	**-0.5**
PAVA				*e*S	**Sn**	**04 37 35.4**	**+1.9**
PAVA				IAML		04 37 43.0	
	comp=Z,1μm,0.5s						
PAVA	**Las Pavas**	**2.56**	**88**	*e*P	**Pn**	**04 37 02.5**	**-0.5**
PAVA				*e*S	**Sn**	**04 37 35.4**	**+1.9**
PAVA				IAML		04 37 43.0	
	comp=Z,1μm,0.5s						
PCIG		**2.58**	**322**	*e*P	**Pn**	**04 37 03.0**	**-0.2**
PCIG				*e*S	**Sn**	**04 37 33.5**	**-0.3**
PCIG		**2.58**	**322**	*e*P	**Pn**	**04 37 03.0**	**-0.2**
PCIG				*e*S	**Sn**	**04 37 33.5**	**-0.3**
CCIG	**Comitan**	**2.67**	**348**	*e*Pn	**Pn**	**04 37 06.7**	**+2.2**
CCIG				*i* S	**Sb**	**04 37 40.3**	**-2.4**
CCIG	**Comitan**	**2.67**	**348**	*e*P	**Pn**	**04 37 06.8**	**+2.2**
CCIG				*i* S	**Sb**	**04 37 40.3**	**-2.4**
TGIG		**3.44**	**334**	*e*P	**Pn**	**04 37 16.8**	**+1.6**
TGIG				*e*S	**Sn**	**04 37 53.9**	**-1.3**
TGIG		**3.44**	**334**	*i* P	**Pn**	**04 37 15.3**	**+0.2**
TGIG				*e*S	**Sn**	**04 37 53.9**	**-1.3**
LCND	**La Caada**	**3.60**	**95**	*e*P	**Pn**	**04 37 17.1**	**-0.1**
LCND				*e*S	**Sn**	**04 38 02.3**	**+3.3**
LCND				IAML		04 38 15.7	
	comp=Z,757nm,0.5s						
LCND	**La Caada**	**3.60**	**95**	*e*P	**Pn**	**04 37 17.1**	**-0.1**
LCND				*e*S	**Sn**	**04 38 02.3**	**+3.3**
LCND				IAML		04 38 15.7	
	comp=Z,757nm,0.5s						
CNCH	**Conchagua**	**3.66**	**95**	*e*P	**Pn**	**04 37 19.5**	**+1.3**
CNCH				*e*S	**Sn**	**04 38 02.4**	**+1.9**
CNCH				IAML		04 38 12.2	
	comp=Z,7μm,0.5s						
CNCH	**Conchagua**	**3.66**	**95**	*e*P	**Pn**	**04 37 19.5**	**+1.3**
CNCH				*e*S	**Sn**	**04 38 02.4**	**+1.9**
CNCH				IAML		04 38 12.2	
	comp=Z,7μm,0.5s						
CSGN	**Cosiguina Volc**	**3.97**	**99**	*e*Pn	**Pn**	**04 37 21.5**	**-0.8**
CSGN	**Cosiguina Volc**	**3.97**	**99**	*e*P	**Pn**	**04 37 23.5**	**+1.2**
CSGN	**Cosiguina Volc**	**3.97**	**99**	*e*P	**Pn**	**04 37 23.5**	**+1.2**
TGUH	**Tegucigalpa,Un**	**4.20**	**84**	*e*Pn	**Pn**	**04 37 24.3**	**-1.1**
CMIG	**Matias Romero**	**4.67**	**317**	Pn	**Pn**	**04 37 32.0**	**+0.1**
	comp=Z,5.3nm,0.3s,baz=134,slow=11,SNR=32						
CMIG				Pg	Pb	04 37 53.8	+9.3
	comp=Z,11nm,0.3s,baz=131,slow=15,SNR=8.4						
CMIG				Sn	**Sn**	**04 38 28.0**	**+2.6**
	comp=Z,16nm,0.3s,baz=12,slow=23,SNR=3.8						
CMIG				Lg	Lg	04 38 36.0	
	comp=Z,18nm,0.3s,baz=157,slow=15,SNR=4.8						
CMIG	**Matias Romero**	**4.67**	**317**	*e*P	**Pn**	**04 37 32.1**	**+0.1**
CMIG				*e*S	**Sn**	**04 38 26.2**	**+0.7**
HUIG	**Huatulco**	**4.86**	**296**	*e*P	**Pn**	**04 37 33.9**	**-0.7**
HUIG	**Huatulco**	**4.86**	**296**	*e*P	**Pn**	**04 37 34.9**	**+0.3**
ESTN	**Estel**	**5.09**	**96**	*e*Pn	**Pn**	**04 37 37.0**	**-0.9**
ESPN	**Las Esperanzas**	**7.24**	**101**	*e*Pn	**Pn**	**04 38 05.5**	**-1.8**
TEIG	**Tepich**	**7.25**	**25**	*e*Pn	**Pn**	**04 38 08.3**	**+0.8**
JTS	**Las Juntas de**	**7.29**	**117**	Pn	**Pn**	**04 38 09.1**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=324,slow=17,SNR=8.9						
JTS				Sn	**Sn**	**04 39 25.3**	**-4.7**
	baz=289,slow=9.7,SNR=2.3						
JTS				Lg	Lg	04 39 55.2	
	comp=Z,1.7nm,0.3s,baz=159,slow=17,SNR=4.4						
JTS				LR	LR	04 40 42.2	
	comp=Z,277nm,21.2s,baz=10.0,slow=37						
TLIG	**Tlapa**	**7.78**	**301**	*e*Pn	**Pn**	**04 38 19.5**	**+4.8**
453A	**Whigham**	**18.38**	**20**	P	**Pn**	**04 40 37.7**	**+1.6**
	baz=202						
JCT	**Junction City**	**18.38**	**337**	P	**Pn**	**04 40 39.8**	**+3.5**
	baz=153						
249A	**Camden**	**18.68**	**12**	P	**Pn**	**04 40 41.2**	**+1.4**
	baz=193						
ROSC	**El Rosal**	**19.14**	**116**	P	**P**	**04 40 42.3**	**-2.6**
	comp=Z,0.9nm,0.3s,baz=250,slow=18,SNR=1.7						
ROSC	**El Rosal**	**19.14**	**116**	*e*P	**P**	**04 40 42.3**	**-2.6**
	comp=Z,5.9nm,0.9s						
TIGA	**Tifton**	**19.16**	**21**	P	**Pn**	**04 40 45.8**	**+0.2**
	baz=204						
251A	**Midway**	**19.20**	**16**	P	**Pn**	**04 40 46.6**	**+0.5**
	baz=198						
LTX	**Lajitas**	**19.21**	**326**	*e*P	**Pn**	**04 40 48.6**	**+2.2**
TXAR	**Lajitas Array**	**19.21**	**326**	P	**Pn**	**04 40 48.6**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=153,slow=12,SNR=48						
TXAR				LR	LR	04 49 34.5	
	comp=Z,113nm,18.3s,baz=0.0,slow=41						
148A	**Greensboro**	**19.25**	**10**	P	**Pn**	**04 40 47.2**	**+0.5**
	baz=191						
H06E1	**SOCORRO T-PHAS**	**19.26**	**288**	T	T	05 00 33.4	
	SNR=34						
149A	**Jones**	**19.36**	**12**	P	**Pn**	**04 40 48.1**	**+0.2**
	baz=193						
150A	**Eclectic**	**19.54**	**14**	P	**Pn**	**04 40 50.2**	**+0.1**
	baz=196						
Z41A	**Richland Creek**	**19.55**	**357**	P	**Pn**	**04 40 50.2**	**+0.1**
	baz=176						
151A	**Opelika**	**19.63**	**16**	P	**Pn**	**04 40 50.9**	**-0.4**
	baz=198,SNR=5.5						
LRAL	**Lakeview Retre**	**19.74**	**11**	*e*P	**Pn**	**04 40 52.8**	**+0.4**
	comp=Z,8.6nm,0.9s						
LRAL	**Lakeview Retre**	**19.74**	**11**	P	**Pn**	**04 40 52.9**	**+0.4**
	baz=192						
Z49A	**Columbiana**	**19.99**	**12**	P	**Pn**	**04 40 55.8**	**+0.4**
	baz=194						
Z50A	**Ashland**	**20.18**	**14**	*e*P	**P**	**04 40 56.6**	**+0.9**
	comp=Z,9.4nm,1.0s						
Z50A	**Ashland**	**20.18**	**14**	P	Pn	04 40 57.0	-0.7
	baz=195						
153A	**Fort Valley**	**20.19**	**19**	P	Pn	04 40 57.1	-0.8
	baz=202						
ABTX	**Abilene, Hawle**	**20.27**	**340**	*e*P	Pn	04 40 59.4	+0.6
	comp=Z,15nm,0.9s						
Z51A	**Franklin**	**20.42**	**16**	P	Pn	04 40 59.6	-1.0
	baz=197,SNR=5.5						
LPIG	**La Paz**	**20.52**	**303**	LR	LR	04 47 57.4	
	comp=Z,190nm,21.6s,baz=192,slow=33						
Y49A	**Blount Mountai**	**20.65**	**12**	*e*P	Pn	04 41 02.1	-1.1
	comp=Z,10nm,0.9s						
Y49A	**Blount Mountai**	**20.65**	**12**	P	**P**	**04 41 02.0**	**+1.2**
	baz=194						
Y50A	**Piedmont**	**20.83**	**14**	P	**P**	**04 41 03.8**	**+1.0**
	baz=195						
Z53A	**Monticello**	**20.85**	**19**	P	**P**	**04 41 03.7**	**+0.7**
	baz=202						
MIAR	**Mount Ida**	**20.88**	**355**	*e*P	Pn	04 41 05.7	-0.1
	comp=Z,5.8nm,0.8s						
MIAR	**Mount Ida**	**20.88**	**355**	P	Pn	04 41 05.1	-0.7
	baz=174						
Y51A	**Rockmart**	**21.00**	**15**	P	**P**	**04 41 05.1**	**+0.4**
	baz=197						
GOGA	**Godfrey**	**21.01**	**19**	*e*P	**P**	**04 41 06.0**	**+1.3**
	comp=Z,8.9nm,0.9s						
GOGA	**Godfrey**	**21.01**	**19**	P	**P**	**04 41 05.0**	**+0.4**
	baz=202						
UALR	**University of**	**21.04**	**358**	*e*P	**P**	**04 41 07.4**	**+2.4**
	comp=Z,15nm,0.8s						
X47A	**Russelville**	**21.04**	**9**	P	**P**	**04 41 05.7**	**+0.7**
	baz=189						
Z54A	**Sparta**	**21.05**	**21**	P	**P**	**04 41 05.4**	**+0.3**
	baz=204						
SDV	**Santo Domingo**	**21.07**	**101**	P	**P**	**04 41 03.2**	**-2.6**
	comp=Z,4.3nm,0.7s,baz=296,slow=9.1,SNR=6.6						
SDV	**Santo Domingo**	**21.07**	**101**	*e*P	**P**	**04 41 03.9**	**-1.8**
	comp=Z,6.5nm,1.0s						
X48A	**Hartselle**	**21.11**	**10**	*e*P	**P**	**04 41 08.4**	**+2.6**
	comp=Z,9.7nm,1.1s						
X48A	**Hartselle**	**21.11**	**10**	P	**P**	**04 41 06.0**	**+0.3**
	baz=192						
Y52A	**Lilburn**	**21.24**	**17**	*e*P	**P**	**04 41 07.3**	**+0.1**
	comp=Z,27nm,1.4s						
Y52A	**Lilburn**	**21.24**	**17**	P	**P**	**04 41 07.9**	**+0.7**
	baz=200						
X49A	**Woodville**	**21.30**	**12**	P	**P**	**04 41 09.2**	**+1.3**
	baz=194						
Y53A	**Monroe**	**21.38**	**18**	P	**P**	**04 41 09.3**	**+0.6**
	baz=201,SNR=5.5						
X50B	**Fort Payne**	**21.40**	**14**	P	**P**	**04 41 09.0**	**+0.1**
	baz=195						
W41B	**Gary Mavity, V**	**21.43**	**358**	*e*P	**P**	**04 41 11.3**	**+2.1**
	comp=Z,9.3nm,1.2s						
W41B	**Gary Mavity, V**	**21.43**	**358**	P	**P**	**04 41 09.7**	**+0.5**
	baz=178						
WHAR	**Wooly Hollow**	**21.55**	**358**	*e*P	**P**	**04 41 12.3**	**+1.8**
	comp=Z,6.1nm,0.8s						
W48A	**Pulaski**	**21.80**	**10**	P	**P**	**04 41 13.3**	**+0.2**
	baz=192						
MNTX	**Cornudas Mount**	**21.98**	**327**	*e*P	**P**	**04 41 17.7**	**+2.5**
	comp=Z,14nm,0.8s						
MNTX	**Cornudas Mount**	**21.98**	**327**	P	**P**	**04 41 16.7**	**+1.5**
	baz=141,SNR=25						
WMOK	**Wichita Mounta**	**21.98**	**344**	P	**P**	**04 41 16.1**	**+0.9**
	baz=160						
X52A	**Dahlonega**	**21.98**	**17**	P	**P**	**04 41 15.2**	**0.0**
	baz=200,SNR=6.1						
SWET	**Sewanee**	**22.06**	**12**	*e*P	**P**	**04 41 16.4**	**+0.4**
	comp=Z,7.2nm,0.8s						
X53A	**Estanollee**	**22.07**	**18**	P	**P**	**04 41 15.8**	**-0.3**
	baz=201						
HODGE	**Hodges**	**22.16**	**21**	*e*P	**P**	**04 41 17.5**	**+0.5**
	comp=Z,17nm,1.4s						
W50A	**Signal Mountai**	**22.18**	**14**	*e*P	**P**	**04 41 18.2**	**+0.9**
	comp=Z,10nm,1.0s						
V46A	**Holladay**	**22.27**	**7**	P	**P**	**04 41 16.8**	**-1.4**
	baz=188						
W51A	**Cleveland**	**22.28**	**15**	P	**P**	**04 41 17.4**	**-0.9**
	baz=197						
X54A	**Belton**	**22.41**	**20**	P	**P**	**04 41 18.5**	**-1.2**
	baz=203						
V49A	**McMinnville**	**22.60**	**12**	P	**P**	**04 41 21.0**	**-0.8**
	baz=194						
U40A	**Yellville**	**22.63**	**357**	P	**P**	**04 41 21.9**	**-0.2**
	baz=176						
MSTX	**Muleshoe**	**22.64**	**335**	*e*P	**P**	**04 41 24.2**	**+1.9**
	comp=Z,8.5nm,0.8s						
MSTX	**Muleshoe**	**22.64**	**335**	P	**P**	**04 41 23.3**	**+1.0**
	baz=150,SNR=6.4						
V50A	**Pikevile**	**22.68**	**14**	P	**P**	**04 41 21.5**	**-1.1**
	baz=196						
X56A	**White O

baz=144
TASM ASL Pad, Albuq 25.10 330 P **P 04 41 48.1 +2.1**
baz=144
TASM ASL Pad, Albuq 25.10 330 P **P 04 41 48.2 +2.1**
baz=144
U57A Blanch 25.20 24 P **P 04 41 45.4 -1.2**
baz=208
TUC Tucson 25.56 320 *eP* **P 04 41 53.5 +3.4**
comp=Z,3.6nm,0.8s
TUC Tucson 25.56 320 P **P 04 41 52.8 +2.7**
baz=132
T25A Trinidad 26.05 336 P **P 04 41 56.3 +1.7**
baz=150
P48A Milroy 26.27 11 P **P 04 41 55.3 -1.0**
baz=193
Q51A Peebles 26.30 15 *eP* **P 04 41 56.4 -0.2**
comp=Z,13nm,0.9s
Q51A Peebles 26.30 15 P **P 04 41 56.7 +0.2**
baz=198
U61A Possum Corner 26.34 28 P **P 04 41 58.1 +1.1**
baz=214
SDCO Great Sand Dun 27.01 335 *eP* **P 04 42 06.8 +3.5**
comp=Z,1.7nm,1.0s
SDCO Great Sand Dun 27.01 335 P **P 04 42 06.0 +2.6**
baz=149
P53A Whipple 27.25 17 P **P 04 42 04.5 -0.7**
baz=202
S22A 4UR Ranch, Cre 27.57 333 *eP* **P 04 42 11.1 +2.7**
comp=Z,1.5nm,0.8s
S22A 4UR Ranch, Cre 27.57 333 P **P 04 42 10.3 +1.9**
baz=146
P54A Burton 27.63 19 P **P 04 42 07.3 -1.3**
baz=203
O52A Adamsville 27.71 16 *eP* **P 04 42 09.2 -0.1**
comp=Z,7.7nm,0.7s
O52A Adamsville 27.71 16 P **P 04 42 08.5 -0.7**
baz=200
WUAZ Wupatki 28.14 324 *eP* **P 04 42 16.8 +3.5**
comp=Z,3.6nm,0.9s
WUAZ Wupatki 28.14 324 P **P 04 42 15.2 +1.8**
baz=136
PV13 Radium Mtn., P 28.81 331 *eP* **P 04 42 23.5 +4.1**
comp=Z,7.7nm,1.3s
PV03 Paradox Valley 28.90 331 *eP* **P 04 42 23.2 +3.0**
comp=Z,5.5nm,1.2s
PV12 Saucer Basin, 28.93 331 *eP* **P 04 42 23.3 +2.9**
comp=Z,4.3nm,0.8s
PV04 Paradox Valley 29.04 331 *eP* **P 04 42 24.0 +2.7**
comp=Z,4.2nm,0.9s
NNA Nana 29.37 150 LR LR 04 51 53.7
comp=Z,128nm,20.1s,baz=316,slow=32
N56A West Decatur 29.54 21 P **P 04 42 25.1 -0.4**
baz=206
KNB Kanab 30.02 325 *eP* **P 04 42 33.9 +3.8**
comp=Z,4.6nm,1.1s
O20A White River Ci 30.17 334 P **P 04 42 32.5 +1.1**
baz=146
LCMT Little Creek M 30.26 324 *eP* **P 04 42 36.0 +3.8**
comp=Z,3.0nm,0.9s
O61A Allentown 30.28 26 P **P 04 42 32.5 +0.4**
baz=214
MTPU Mount Pierson 30.42 327 *eP* **P 04 42 37.0 +3.3**
comp=Z,6.9nm,1.0s
Q16A Castle Valley 30.55 329 *eP* **P 04 42 37.8 +3.0**
comp=Z,4.0nm,1.1s
SZCU Shurtz Canyon 30.59 325 *eP* **P 04 42 38.8 +3.6**
comp=Z,2.9nm,0.8s
CCUT Cedar City 30.71 325 *eP* **P 04 42 39.4 +3.2**
comp=Z,3.7nm,1.0s
MSU Marysvale 30.76 327 *eP* **P 04 42 39.7 +3.1**
P17A Butcher Ranch, 30.77 330 *eP* **P 04 42 39.4 +2.7**
comp=Z,3.6nm,0.8s
TMUT Trail Mountain 30.86 329 *eP* **P 04 42 41.1 +3.5**
comp=Z,2.3nm,0.8s
PSUT Pine Spring 31.68 326 *eP* **P 04 42 48.6 +3.9**
comp=Z,3.7nm,0.9s
DUG Dugway, Tooele 32.34 329 P **P 04 42 53.6 +3.1**
baz=139
SADO Sadowa 32.77 16 P **P 04 42 51.9 -2.0**
comp=Z,6.4nm,0.8s,baz=261,slow=5.2,SNR=7.1
SADO Sadowa 32.77 16 *eP* **P 04 42 52.3 -1.6**
comp=Z,6.7nm,0.8s
PD31 Pinedale Array 32.90 335 *eP* **P 04 42 56.2 +0.8**
PD31 *e*PcP **PcP 04 45 41.2 +1.5**
PD31 *e*ScP **ScP 04 49 23.5 +1.4**
PDAR Pinedale Array 32.90 335 P **P 04 42 56.2 +0.8**
comp=Z,0.3nm,0.5s,baz=134,slow=11,SNR=4.2
PDAR PcP **PcP 04 45 41.2 +1.5**
comp=Z,0.2nm,0.5s,baz=123,slow=4.4,SNR=3.7
PDAR ScP **ScP 04 49 23.5 +1.4**
comp=Z,0.1nm,0.4s,baz=149,slow=4.2,SNR=2.9
PDAR LR LR 05 00 31.1
comp=Z,73nm,18.6s,baz=156,slow=44
DELO Deloro Mine 32.98 18 P **P 04 42 53.8 -2.0**
baz=205
BGU Big Grassy Mou 33.00 329 *eP* **P 04 42 59.0 +2.8**
comp=Z,3.9nm,1.0s
G53A Haliburton 33.24 17 P **P 04 42 56.1 -1.9**
baz=203
BANO Bancroft 33.35 18 P **P 04 42 57.7 -1.3**
baz=204
HVU Hansel Valley 33.53 331 *eP* **P 04 43 03.5 +2.7**
comp=Z,3.9nm,1.1s
AHID Auburn Hatcher 33.55 334 *eP* **P 04 43 02.8 +1.8**
comp=Z,3.3nm,0.7s
PLVO Plevna 33.62 19 P **P 04 42 59.5 -1.9**
baz=206
REDW Red Top Meadow 33.93 334 *eP* **P 04 43 05.8 +1.4**
comp=Z,6.1nm,1.0s
SNOW Snow King Moun 33.97 335 *eP* **P 04 43 06.3 +1.5**
comp=Z,6.3nm,0.6s
ELK Elko 34.00 327 *eP* **P 04 43 08.4 +3.3**
comp=Z,3.1nm,0.8s
LOHW Long Hollow 34.03 335 *eP* **P 04 43 06.5 +1.2**
comp=Z,2.6nm,1.1s
TPAW Teton Pass 34.08 334 *eP* **P 04 43 08.5 +2.8**
comp=Z,8.6nm,1.4s
LONY Lake Ozonia 34.09 22 P **P 04 43 03.6 -1.9**
baz=210
NV01 Mina Array Sit 34.20 321 *eP* **P 04 43 09.7 +2.9**
NV01 *e*PcP **PcP 04 45 45.6 +2.3**
NVAR Mina Array Bea 34.20 321 P **P 04 43 09.7 +2.9**
comp=Z,2.8nm,0.7s,baz=138,slow=8.9,SNR=14
NVAR PcP **PcP 04 45 45.6 +2.3**
comp=Z,0.6nm,0.6s,baz=108,slow=4.8,SNR=3.4
NVAR LR LR 04 58 50.3
comp=Z,213nm,18.9s,baz=94,slow=39
E51A G1948 Merrick 34.31 15 P **P 04 43 05.4 -2.0**
baz=201
E54A Lac Daplat, Po 34.85 18 P **P 04 43 10.6 -1.4**
baz=204
D52A ZEK Kipawa Sen 35.00 16 P **P 04 43 12.0 -1.3**
baz=202
D53A Lac Vacive, Po 35.29 16 P **P 04 43 14.5 -1.3**
baz=203
D54A Lac Fusel, La 35.65 18 P **P 04 43 17.5 -1.4**
baz=205
HLID Hailey 35.67 331 *eP* **P 04 43 22.1 +2.7**
comp=Z,4.9nm,1.1s
HLID Hailey 35.67 331 P **P 04 43 21.5 +2.2**
baz=140,SNR=6.3
MCMT McKenzie Canyo 35.96 334 *eP* **P 04 43 24.2 +2.3**
BOZ Bozeman (W) 36.08 336 P **P 04 43 25.0 +2.1**
baz=145
DLMT Dillon 36.28 335 *eP* **P 04 43 27.7 +3.1**
comp=Z,3.0nm,1.0s
ULM Lac du Bonnet 36.66 355 LR LR 05 02 15.2
comp=Z,123nm,18.1s,baz=239,slow=42
PKME Peaks-Kenny Pk 36.74 27 P **P 04 43 26.6 -1.7**
baz=218
WVOR Wild Horse Val 37.01 326 *eP* **P 04 43 34.6 +3.9**
comp=Z,8.9nm,1.0s
LATQ La Tuque 37.11 21 P **P 04 43 30.3 -1.1**
baz=211
LSQQ Lebel-sur-Quev 37.30 16 P **P 04 43 30.4 -2.5**
baz=203
J08A Circle Bar Ran 37.55 327 *eP* **P 04 43 37.8 +2.4**
comp=Z,1.5nm,0.8s
PLID Pearl Lake 37.57 331 *eP* **P 04 43 37.2 +1.6**
comp=Z,6.3nm,0.9s
MOD Modoc Plateau 37.59 324 *eP* **P 04 43 38.7 +3.0**
comp=Z,7.0nm,1.4s
LPAZ La Paz 37.71 141 P **P 04 43 35.9 -1.5**
comp=Z,1.1nm,1.0s,baz=309,slow=7.5,SNR=3.2
LPAZ LR LR 04 58 54.6
comp=Z,109nm,19.6s,baz=314,slow=36
MATQ Matagami 37.77 15 P **P 04 43 34.5 -2.5**
baz=202

MSO Missoula 38.02 335 P **P 04 43 41.1 +1.9**
baz=143
BMO Blue Mountains 38.02 330 *eP* **P 04 43 40.6 +1.4**
comp=Z,3.5nm,1.0s
I07A Izee 38.59 327 *eP* **P 04 43 46.2 +2.2**
comp=Z,5.8nm,1.0s
F10A Beach Ranch, E 38.81 331 *eP* **P 04 43 47.1 +1.3**
comp=Z,17nm,0.9s
J05D Fort Rock, OR 39.00 325 P **P 04 43 49.8 +2.3**
baz=130
PINE Pine Mountain 39.17 326 *eP* **P 04 43 51.6 +2.6**
comp=Z,6.9nm,0.8s
J04D Umpqua Nationa 39.47 324 P **P 04 43 53.3 +1.8**
baz=129
I05D Terrebonne, OR 39.74 326 P **P 04 43 55.3 +1.6**
baz=131
I04A Tendick Farm, 39.98 325 P **P 04 43 57.6 +2.0**
baz=129
G05D Wamic, OR 40.33 327 P **P 04 44 01.2 +2.8**
baz=132
H04A Detroit Lake 40.43 326 *eP* **P 04 44 01.5 +2.2**
comp=Z,8.4nm,0.8s
I03D Drain, OR 40.46 324 P **P 04 44 01.0 +1.6**
baz=128
J01E Myrtle Point 40.47 323 P **P 04 44 01.3 +1.7**
baz=127
H04D Lebanon 40.63 325 P **P 04 44 02.8 +1.9**
baz=129
C09A Chrisman Ranch 40.65 332 *eP* **P 04 44 03.2 +2.2**
comp=Z,6.6nm,0.6s
F05D White Salmon 40.84 328 P **P 04 44 05.1 +2.5**
baz=132
G03D McMinnville, O 41.35 326 P **P 04 44 09.6 +2.8**
baz=129
LON Longmire 41.60 329 *eP* **P 04 44 11.5 +2.6**
comp=Z,6.6nm,0.9s
SIV San Ignacio 42.16 133 P **P 04 44 12.8 -0.9**
comp=Z,1.1nm,0.5s,baz=309,slow=6.0,SNR=10
B05A Bryant 42.77 330 P **P 04 44 19.9 +1.5**
baz=133
D03D Eldon 42.77 329 P **P 04 44 20.0 +1.6**
baz=131
A04D Lummi Island 43.38 330 P **P 04 44 24.7 +1.5**
baz=133,SNR=5.2
LLLB Lillooet 44.31 333 *eP* **P 04 44 32.9 +2.0**
comp=Z,4.4nm,0.9s
SCHQ Schefferville 45.40 20 P **P 04 44 37.9 -1.5**
comp=Z,7.4nm,0.8s,baz=228,slow=9.7,SNR=3.7
SCHQ LR LR 05 04 25.1
comp=Z,265nm,19.6s,baz=106,slow=37
YKA Yellowknife Ar 51.45 347 P **P 04 45 24.9 -1.0**
comp=Z,2.0nm,0.7s,baz=147,slow=7.6,SNR=25
YKA PcP **PcP 04 46 39.7 -0.2**
comp=Z,0.7nm,0.6s,baz=152,slow=3.5,SNR=7.6
YKB5 Yellowknife Ar 51.45 347 *eP* **P 04 45 24.9 -1.0**
YKB5 *e*PcP **PcP 04 46 39.7 -0.2**
YKW3 Yellowknife Ar 51.52 347 *eP* **P 04 45 26.2 -0.1**
comp=Z,2.9nm,0.8s
CPUP Villa Florida 51.85 140 LR LR 05 08 58.5
comp=Z,108nm,18.5s,baz=328,slow=38
DLBC Dease Lake 53.13 336 *eP* **P 04 45 40.2 +1.7**
comp=Z,6.8nm,0.9s
RKT Rikitea 56.04 230 *e*T T 05 46 14.2
comp=Z,4.0nm,0.3s
EYAK Cordova Ski Ar 60.98 333 *eP* **P 04 46 35.3 +1.4**
comp=Z,5.4nm,0.8s
DOT Dot Lake 61.70 336 *eP* **P 04 46 39.4 +0.6**
comp=Z,2.9nm,0.8s
PAX Paxson 61.94 335 *eP* **P 04 46 41.6 +1.1**
comp=Z,4.1nm,0.8s
RIDG Independent Ri 62.05 336 *eP* **P 04 46 42.4 +1.3**
comp=Z,5.2nm,1.1s
KNK Knik Glacier 62.54 333 *eP* **P 04 46 45.8 +1.3**
comp=Z,9.4nm,0.9s
GHO Glory Hole Cre 62.89 333 *eP* **P 04 46 47.6 +0.8**
comp=Z,14nm,0.8s
ILAR Eielson Array 63.32 337 P **P 04 46 49.7 +0.1**
comp=Z,3.1nm,0.9s,baz=135,slow=4.3,SNR=22
ILAR LR LR 05 16 58.6
comp=Z,69nm,18.8s,baz=120,slow=38
ILB Eielson Array 63.32 337 *eP* **P 04 46 49.7 +0.1**
WRH Wood River Hil 63.65 336 *eP* **P 04 46 52.2 +0.5**
comp=Z,2.9nm,0.9s
SII Sitkinak Islan 63.71 327 *eP* **P 04 46 54.7 +2.5**
comp=Z,13nm,1.2s
SPU Mount Spurr 64.07 332 *eP* **P 04 46 56.2 +1.6**
MLY Manley 64.92 336 *eP* **P 04 47 00.2 +0.1**
comp=Z,9.2nm,0.8s
PPT2 Papeete2 65.11 243 *e*LR LR 05 05 56.0
comp=Z,120nm,24.2s
NB200 NORSAR Array S 84.25 28 *eP* **P 04 48 50.5 -1.8**
NOA NORSAR Array B 84.25 28 P **P 04 48 50.5 -1.8**
comp=Z,0.6nm,0.8s,baz=290,slow=5.1,SNR=3.1
NOA LR LR 05 24 28.6
comp=Z,26nm,21.7s,baz=265,slow=34
DBIC Dimbokro 85.28 84 LR LR 05 25 24.2
comp=Z,34nm,19.7s,baz=266,slow=35
ARCES ARCESS Array B 86.33 18 LR LR 05 28 30.4
comp=Z,61nm,19.3s,baz=272,slow=36
TOA1 Torodi Ar. Sit 90.05 77 *eP* **P 04 49 18.3 -3.0**
TORD Torodi Ar. Bea 90.06 77 P **P 04 49 18.3 -3.0**
comp=Z,0.4nm,0.7s,baz=274,slow=3.8,SNR=3.1
TORD LR LR 05 27 02.7
comp=Z,40nm,20.4s,baz=340,slow=34
FINES FINESS Array B 90.63 25 LR LR 05 30 25.5
comp=Z,41nm,18.0s,baz=344,slow=36
NRIK Noril'sk 97.22 0 LR LR 05 37 17.9
comp=Z,88nm,19.9s,baz=36,slow=38
AKASG Malin Array Be 97.78 33 P **P 04 49 53.0 -3.1**
comp=Z,0.2nm,0.3s,baz=302,slow=5.3,SNR=5.6
AKBB Malin Array Si 97.78 33 *eP* **P 04 49 53.0 -3.1**
OBN Obninsk 98.80 27 LR LR 05 33 10.1
comp=Z,10nm,21.9s,baz=345,slow=35
MK32 Makanchi Array 119.58 5 *e*PKPdf **PKPdf 04 55 10.2 -0.6**
MKAR Makanchi Array 119.58 5 PKP **PKPdf 04 55 10.2 -0.6**
comp=Z,0.2nm,0.5s,baz=336,slow=3.2,SNR=2.2
LZH Lanzhou 128.43 344 *e*PKP **PKiKP 04 55 30.7 +1.8**
LZH pPKP sPKPdf 04 55 40.6 +0.6
LZH sPKP 04 55 44.9
WR1 Warramunga Arr 135.71 255 *e*PKPdf **PKPdf 04 55 42.2 0.0**
WRA Warramunga Arr 135.71 255 PKP **PKPdf 04 55 42.2 0.0**
comp=Z,2.0nm,1.1s,baz=103,slow=1.9,SNR=3.1
CM31 Chiang Mai Arr 146.45 342 *e*PKPdf **PKPab 04 56 03.5 -0.1**
CMAR Chiang Mai Arr 146.45 342 PKPbc **PKPab 04 56 03.5 -0.1**
comp=Z,5.6nm,0.9s,baz=336,slow=3.6,SNR=20

GCG 01 04:40:08.5±0.5, 13°.39N×91°.69W, h20km±231km, MD4.1, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.33**	**38**	*e*P	Pn	04 40 32.5	+0.2
PCG	**Pacaya**	**1.45**	**47**	*e*P	Pn	04 40 34.1	+0.3
MOYG	**Moyuta, Jutiap**	**1.70**	**67**	*e*P	Pn	04 40 37.4	+0.2
MOYG				*e*S	Sb	04 40 60.0	-0.2
NBG	**Las Nubes**	**1.76**	**48**	*e*P	Pb	04 40 39.7	-0.7
NBG				*e*S	Sb	04 41 02.3	+0.1

IDC 01 04:55:01.9±2.4, 6°.68S×129°.81E, h0km, mb3.6/1, mb1 3.9/4, mb1mx3.6/27, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=97.2km s-min=29.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.05**	**199**	Pn	Pn	04 57 56.2	+1.2
	0.2nm,0.3s,baz=22,slow=10,SNR=24						
FITZ				Sn	Sn	04 59 59.7	-11
	0.2nm,0.3s,baz=3.6,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**13.90**	**162**	Pn	Pn	04 58 19.5	-0.8
	0.4nm,0.3s,baz=333,slow=14,SNR=28						
WRA				Sn	Sn	05 00 42.1	-13
	0.5nm,0.3s,baz=329,slow=20,SNR=7.7						
ASAR	**Alice Springs**	**17.34**	**167**	P	Pn	04 59 05.1	-0.5
	0.2nm,0.3s,baz=340,slow=9.1,SNR=14						
ASAR				S	Sn	05 02 08.3	-11
	0.1nm,0.3s,baz=356,slow=27,SNR=4.9						
MKAR	**Makanchi Array**	**67.86**	**327**	P	P	05 06 02.1	0.0
	0.4nm,0.5s,baz=120,slow=8.1,SNR=4.3						

MAN ***01*** *05:17:21.3, 12°.34N×126°.02E, h18km, MS4.9*
DJA ***01*** *05:17:24.8±0.3, 12°.N±3°.×12°.6E±°, h13km±1km, M4.8/40, mb5.1/40, mB5.3/18, Mw(mB)4.8/18*
MOS ***01*** *05:17:25.4±1.0, 12°.22N×125°.76E, h41km, mb5.4/55, Error ellipse: s-maj=8.3km s-min=4.6km az=114.9*
ISCJB ***01*** *05:17:25.6±0.5, 12°.21N±0°.02×125°.79E±0°.03, h44km±4km, mb5.0/204, MS4.2/41, Error ellipse: s-maj=4.5km s-min=2.9km az=165.6*
IDC ***01*** *05:17:25.2±3.5, 12°.22N×125°.85E, h27km±23km, mb4.5/43, mb1 4.6/45, mb1mx4.6/54, mbtmp4.7/45, ML4.7/2, MS4.0/24, Ms1 4.0/24, ms1mx3.9/40, Error ellipse: s-maj=13.9km s-min=8.6km az=72.0*
BJI ***01*** *05:17:27.6±0.0, 12°.22N×125°.74E, h63km, mb4.8/69, mB4.9/57, Ms4.7/63, Ms7 4.4/58*
NEIC ***01*** *05:17:28.9±1.7, 12°.18N×125°.73E, h58km±5km, mb4.9/127, Error ellipse: s-maj=13.3km s-min=1.4km az=52.0*
NEIC Felt [III PIVS] at San Policarpo; [II PIVS] at Can-Avid, Dolores, Oras, Sulat and Taft; [I PIVS] at San Julian.
KLM ***01*** *05:17:36.0, 12°.29N×125°.57E, h113km, mb5.2*
ISC 01 05:17:25.5±0.6, 12°.19N±0°.03×125°.82E±0°.04, h31km±3km, h31km:pP-P, n451, σ1º51/482, mb5.0/208, MS4.2/41, 19C-25D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.69**	**212**	*e*P	Pb	**05 17 38.3**	**-0.9**
CNP	**Cataman**	**1.17**	**286**	*e*P	Pn	**05 17 44.5**	**-1.3**
CNP				*e*S	Sb	**05 18 03.6**	**+1.6**
PLP	**Palo**	**1.31**	**219**	⇑*i*P	Pn	**05 17 46.9**	**-0.8**
PLP				*i* S	Sn	**05 18 04.3**	**+0.2**
OCLP	**Ormoc**	**1.64**	**226**	*e*P	Pn	**05 17 50.6**	**-1.6**
OCLP				*e*S	Sb	**05 18 19.3**	**+3.9**
PVCP	**Virac**	**2.14**	**311**	*e*P	Pn	**05 17 57.5**	**-1.7**
PVCP				*e*S	Sb	05 18 38.5	+8.8
MMPH	**Masbate**	**2.15**	**275**	⇑*i*P	Pn	**05 18 00.6**	**+1.4**
MMPH				*i* S	Sb	**05 18 32.0**	**+1.9**
MSLP	**Maasin**	**2.25**	**205**	*e*P	Pn	**05 18 01.8**	**+1.1**
MSLP				*e*S	Sb	**05 18 35.1**	**+2.2**
LLP	**Lapu-Lapu**	**2.60**	**224**	⇑*i*P	Pn	**05 18 05.9**	**+0.5**
LLP				*e*S	Sn	**05 18 37.7**	**+1.6**
TBP	**Tagbilaran**	**3.14**	**218**	*e*P	Pn	**05 18 13.3**	**+0.4**
BUTP	**Butuan**	**3.21**	**183**	*e*P	Pn	**05 18 15.2**	**+1.4**
BUTP				*e*S	Sn	**05 18 53.6**	**+2.5**
AUQP	**San Andres**	**3.27**	**290**	*e*P	Pn	**05 18 16.2**	**+1.6**
OTRP	**Odiongan**	**3.71**	**273**	*e*P	Pn	**05 18 20.6**	**-0.2**
SNPH	**Sibulan**	**3.80**	**222**	*e*P	Pn	**05 18 23.6**	**+1.6**
CGP	**Cagayan de Oro**	**3.87**	**197**	⇓*i*P	Pn	**05 18 23.8**	**+0.8**
CGP				*i* S	Sn	**05 19 09.2**	**+1.7**
JAP	**San Jose, Anti**	**4.06**	**250**	⇓*e*P	Pn	05 18 30.1	+4.6
BOAC	**Boac**	**4.08**	**288**	*e*P	Pn	**05 18 26.4**	**+0.6**
DCPH	**Dipolog City**	**4.33**	**214**	⇑*e*P	Pn	05 18 34.0	+4.7
DCPH				*e*S	Sn	**05 19 19.3**	**+0.6**
BUKP	**Musuan**	**4.35**	**190**	*e*P	Pn	**05 18 30.3**	**+0.7**
BUKP				*e*S	Sn	**05 19 18.0**	**-1.2**
POLP	**Polilio Island**	**4.54**	**304**	*e*P	Pn	**05 18 35.3**	**+3.1**
SJMP	**San Jose**	**4.60**	**274**	*e*P	Pn	**05 18 34.0**	**+1.0**
DAV	**Davao City (W)**	**5.09**	**183**	Pn	Pb	**05 18 49.7**	**-4.3**
	40nm,0.3s,baz=173,slow=5.0,SNR=3.0						
DAV				Sn	Sb	**05 19 47.9**	**-6.8**
	baz=106,slow=22,SNR=2.7						
DAV	**Davao City (W)**	**5.09**	**183**	*e*Pn	Pn	**05 18 43.3**	**+3.5**
DAV				*e*Sn	Sn	**05 19 42.3**	**+4.7**
TGY	**Tagaytay City**	**5.12**	**292**	Pn	Pn	05 18 44.5	+4.3
	56nm,0.3s,baz=108,slow=3.4,SNR=9.3						
TGY				Sn	Sn	**05 19 40.2**	**+1.9**
	148nm,0.3s,baz=28,slow=7.6,SNR=3.5						
TGY				LR	LR	05 20 58.1	
	comp=Z,3μm,20.1s,baz=84,slow=41						
CTBH	**Cotabato--PC H**	**5.18**	**198**	⇑*i*P	Pn	**05 18 36.7**	**-4.2**
MATI	**Mati**	**5.23**	**175**	*e*P	Pn	05 18 47.3	+5.7
BUSP	**Coron**	**5.50**	**269**	*e*P	Pn	**05 18 46.9**	**+1.5**
SKMP	**Bagumbayan, Su**	**5.77**	**193**	*e*P	Pn	05 18 56.8	+7.7
SKMP				*e*S	Sb	05 20 28.0	+14
DDMP	**Don Marcelino,**	**6.05**	**181**	*e*P	Pn	05 18 57.9	+5.0
CAUP	**Cauayan**	**6.11**	**321**	*e*P	Pn	**05 18 52.3**	**-1.4**
SMPP	**San Manuel, Pa**	**6.35**	**309**	*e*P	Pn	**05 18 57.3**	**+0.3**
SCZP	**Santa Cruz**	**6.75**	**303**	*e*P	Pn	**05 19 03.9**	**+1.4**
SGCP	**Mt. Cagua**	**7.03**	**329**	*e*P	Pn	**05 19 04.8**	**-1.6**
BOLP	**Bolinao**	**7.08**	**307**	*e*P	Pn	**05 19 07.7**	**+0.7**
APYP	**Conner**	**7.16**	**322**	*e*P	Pn	**05 19 07.7**	**-0.5**
BATP	**Bataraza**	**8.57**	**248**	*e*P	Pn	**05 19 30.3**	**+2.7**
YULB	**Yu-li**	**11.94**	**340**	*e*Pn	Pn	**05 20 16.7**	**+3.0**
TPUB	**Ta-pu**	**12.10**	**337**	*e*Pn	Pn	**05 20 17.4**	**+1.5**
MRSI	**Marisa**	**12.26**	**199**	P	Pn	**05 20 20.5**	**+2.4**
	27nm,1.4s						
NACB	**Ninganchiao**	**12.57**	**342**	*e*Pn	P	**05 20 32.1**	**-1.4**
YHNB	**Yeheng**	**13.11**	**342**	*e*Pn	P	**05 20 35.8**	**-3.7**
MPSI	**Mapaga**	**13.16**	**207**	P	P	**05 20 39.1**	**-1.0**
LUWI	**Luwuk**	**13.49**	**193**	*e*Pn	P	05 20 48.2	+4.4
LUWI	**Luwuk**	**13.49**	**193**	P	P	05 20 56.8	+13
KNMB	**Chin-men Tao**	**14.09**	**331**	*e*Pn	P	**05 20 47.3**	**-3.1**
QZH	**Quanzhou**	**14.41**	**333**	P	P	**05 20 51.2**	**-2.7**
QZH				S	Sn	**05 23 33.1**	**+6.9**
QZH				LR	LR		
	comp=N,720nm,13.4s						
QZH				LR	LR		
	comp=E,280nm,9.0s						
QZH				LR	LR		
	comp=Z,860nm,19.1s						
JOW	**Kunigami**	**14.75**	**9**	Pn	P	**05 20 54.1**	**-3.6**
	0.2nm,0.3s,baz=204,slow=19,SNR=3.9						
JOW	**Kunigami**	**14.75**	**9**	*e*Pn	P	**05 20 54.9**	**-2.8**
HKPS	**Hong Kong Po S**	**14.99**	**314**	*e*Pn	P	**05 21 01.6**	**+1.2**
TTSI	**Tana Toraja**	**16.27**	**202**	P	P	**05 21 14.3**	**-0.3**
	223nm,1.3s,3μm						
SBUM	**Sibu**	**16.59**	**235**	*e*Pn	P	**05 21 18.0**	**-0.2**
	18nm,1.0s						
SBUM	**Sibu**	**16.59**	**235**	P	P	**05 21 19.0**	**+0.8**
QIZ	**Qiongzhong**	**16.81**	**296**	P	Pn	**05 21 18.6**	**-0.2**
QIZ				S	Sn	**05 24 23.9**	**-0.9**
QIZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,220nm,7.2s						
QIZ				LR	LR		
	comp=N,440nm,12.4s						
QIZ				LR	LR		
	comp=E,740nm,17.0s						
QIZ				LR	LR		
	comp=Z,850nm,15.0s						
QIZ	**Qiongzhong**	**16.81**	**296**	*e*P	P	**05 21 21.3**	**+0.6**
	32nm,1.4s						
DLV	**T Lat**	**16.95**	**271**	*e*P	P	**05 21 23.9**	**+1.4**
	105nm,1.5s						
SPSI	**Sidrap Palu**	**17.14**	**201**	P	P	**05 21 24.7**	**+0.4**
BNSI	**Bone**	**17.43**	**199**	P	P	**05 21 28.4**	**+0.9**
KAPI	**Kappang**	**18.12**	**200**	P	P	**05 21 36.9**	**+1.7**
	2.5nm,0.3s,baz=32,slow=4.7,SNR=22						
KAPI				LR	LR	05 30 31.8	
	comp=Z,415nm,19.0s,baz=28,slow=43						
KAPI	**Kappang**	**18.12**	**200**	*e*P	P	**05 21 36.4**	**+1.2**
	98nm,1.0s						
KAPI	**Kappang**	**18.12**	**200**	P	P	**05 21 37.3**	**+2.1**
	SNR=19						
BKSI	**Bulukumba**	**18.30**	**198**	P	Pn	**05 21 39.1**	**+2.0**
GUMO	**Guam**	**18.62**	**84**	P	Pn	**05 21 40.6**	**-0.6**
	2.6nm,0.3s,baz=258,slow=4.9,SNR=4.7						
GUMO				LR	LR	05 28 15.6	
	comp=Z,294nm,18.8s,baz=272,slow=35						
GUMO	**Guam**	**18.62**	**84**	*e*P	Pn	**05 21 43.8**	**+2.6**
	141nm,1.2s						
GUMO	**Guam**	**18.62**	**84**	*e*P	Pn	**05 21 43.8**	**+2.6**
GUMO				pmax	pmax		
	comp=Z,141nm,1.2s						
KSM	**Kuching**	**18.70**	**236**	*e*P	P	**05 21 42.2**	**+0.6**
	comp=Z,55nm,0.8s						
KSM	**Kuching**	**18.70**	**236**	P	Pn	**05 21 43.0**	**+0.9**
SSE	**Sheshan**	**19.30**	**348**	P	Pn	**05 21 50.2**	**+1.1**
SSE				S	Sn	**05 25 24.4**	**-0.2**
SSE				pmax	pmax		
	comp=Z,30nm,0.8s						
SSE				pmax	pmax		
	comp=Z,65nm,8.2s						
SSE				LR	LR		
	comp=Z,210nm,15.9s						
SSE				LR	LR		
	comp=Z,440nm,14.9s						
SSE	**Sheshan**	**19.30**	**348**	*e*P	Pn	**05 21 49.0**	**0.0**
	comp=Z,48nm,0.8s						
GENI	**Genyem**	**20.47**	**135**	P	Pn	05 22 04.8	+1.6
NJ2	**Nanjing**	**20.78**	**343**	*e*P	Pn	05 22 05.9	-0.7
NJ2				pmax	pmax		
	comp=Z,16nm,0.8s						
NJ2				LR	LR		
	comp=Z,470nm,11.9s						

NJ2 LR LR
comp=Z,860nm,10.8s
NJ2 LR LR
comp=Z,480nm,10.8s
JAY Jayapura 20.79 134 P **P 05 22 04.9 +0.5**
comp=Z,41nm,0.9s,baz=350,slow=7.4,SNR=7.0
JAY LR LR 05 32 05.9
comp=Z,348nm,18.0s,baz=5.0,slow=42
JAY Jayapura 20.79 134 P **P 05 22 04.8 +0.4**
comp=Z,361nm,1.1s,comp=Z,4μm
MMRI Maumere 20.99 190 *e*P **P 05 22 06.8 +0.3**
comp=Z,240nm,1.4s
MMRI Maumere 20.99 190 P **P 05 22 07.1 +0.6**
comp=Z,133nm,0.7s,comp=Z,5μm
PANO Nakornpanom 21.09 286 P **P 05 22 07.6 0.0**
comp=Z,0.5nm,1.1s
WHN Wuhan 21.13 332 P **P 05 22 09.2 +1.4**
WHN pmax pmax
comp=Z,250nm,1.9s
WHN pmax pmax
comp=Z,470nm,9.7s
WHN LR LR
comp=Z,910nm,12.9s
WHN LR LR
comp=Z,1μm,12.0s
WHN LR LR
comp=Z,2μm,14.2s
EDFI Ende, Flores 21.20 191 P **P 05 22 09.6 +0.7**
comp=Z,48nm,0.7s
JNU Nakatsue 21.34 12 P **P 05 22 11.3 +1.1**
comp=Z,15nm,0.8s,baz=86,slow=4.9,SNR=10.0
JNU LR LR 05 31 16.4
comp=Z,269nm,18.5s,baz=178,slow=39
JNU Nakatsue 21.34 12 *e*P **P 05 22 10.8 +0.6**
comp=Z,22nm,0.9s
SKNT Sakolnakorn 21.66 285 P **P 05 22 12.8 -0.9**
comp=Z,38nm,1.1s
SOEI Soe 21.86 184 *e*P **P 05 22 16.9 +1.0**
comp=Z,112nm,0.8s
SOEI Soe 21.86 184 P **P 05 22 17.6 +1.7**
comp=Z,137nm,0.7s
BATI Baumata 22.35 186 P **P 05 22 21.8 +0.6**
comp=Z,283nm,0.7s,baz=289,slow=1.2,SNR=26
BATI LR LR 05 31 44.0
comp=Z,331nm,19.4s,baz=348,slow=38
BATI Baumata 22.35 186 P **P 05 22 21.7 +0.6**
comp=Z,183nm,0.8s,comp=Z,1μm
PLAI Plampang 22.36 201 P **P 05 22 18.3 -2.9**
comp=Z,93nm,1.7s,comp=Z,1μm
KMMI Kalianget 22.45 212 P **P 05 22 23.7 +1.5**
comp=Z,92nm,0.6s,comp=Z,3μm
KHON Khomkaen 22.66 283 P **P 05 22 24.7 +0.3**
comp=Z,161μm,0.9s
SLVN Son La 22.84 296 *e*P **P 05 22 24.7 -1.7**
comp=Z,61nm,1.5s
GYA Guiyang 22.93 311 ⇓*i*P **P 05 22 26.4 -1.0**
GYA pP pwP 05 22 39.8 -0.1
GYA sP sP 05 22 47.4 +9.5
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,120nm,7.3s
GYA LR LR
comp=Z,980nm,17.1s
GYA LR LR
comp=Z,630nm,16.7s
GYA LR LR
comp=Z,940nm,15.7s
GRJI Gresik 23.16 216 P **P 05 22 30.5 +1.0**
comp=Z,145nm,1.0s,comp=Z,1μm
CHAI Chaiyaphum 23.41 282 P **P 05 22 29.7 -2.4**
comp=Z,87μm,0.8s,comp=Z,719μm
ENH Enshi 23.51 322 *e*P **P 05 22 33.1 +0.1**
comp=Z,73nm,1.3s
JAGI Jajag, Banyuwa 23.57 210 *e*P **P 05 22 34.6 +0.9**
comp=Z,158nm,1.1s
JAGI Jajag, Banyuwa 23.57 210 P **P 05 22 34.7 +1.0**
comp=Z,152nm,1.6s
JAGI pP **pP 05 22 38.8 -3.0**
comp=Z,152nm,1.6s
MYKOM Kota Tinggi 24.10 246 *e*P **P 05 22 38.2 -0.4**
comp=Z,66nm,0.9s
MYKOM Kota Tinggi 24.10 246 P **P 05 22 39.0 +0.3**
NGJI Ngawi 24.11 217 P **P 05 22 41.4 +2.7**
comp=Z,293nm,1.0s
NGJI pP **pP 05 22 44.8 -2.3**
comp=Z,293nm,1.0s
TJN Taejon 24.12 3⇓*e*P **P 05 22 38.6 0.0**
PPBI Pangkal Pinang 24.20 235 P **P 05 22 38.4 -1.2**
PPBI pP **pP 05 22 43.0 -4.6**
SMRI Semarang 24.48 219 *e*P **P 05 22 43.5 +1.4**
comp=Z,129nm,0.7s
SMRI Semarang 24.48 219 P **P 05 22 44.0 +1.9**
comp=Z,185nm,1.1s
SMRI pP **pP 05 22 47.6 -2.9**
comp=Z,185nm,1.1s
WOJI Wonogiri, Jawa 24.80 217 P **P 05 22 47.2 +2.2**
comp=Z,102nm,1.0s
UTTA Uttaradit 25.01 286 P **P 05 22 46.6 -0.3**
comp=Z,34μm,1.0s,comp=Z,292μm
NANT Nan 25.06 288 P **P 05 22 45.7 -1.7**
comp=Z,64μm,1.0s,comp=Z,674μm
UGM Wanagama 25.10 218 *e*P **P 05 22 50.8 +3.0**
comp=Z,322nm,1.4s
TIA Tai'an 25.17 343 P **P 05 22 47.3 -0.9**
TIA S **S 05 27 11.9 +0.5**
TIA pmax pmax
comp=Z,29nm,1.1s
TIA LR LR
comp=Z,350nm,15.0s
TIA LR LR
comp=Z,540nm,12.1s
TIA LR LR
comp=Z,320nm,14.2s
KS15 Wonju Array Si 25.21 4 *e*P **P 05 22 48.9 +0.4**
comp=Z,11nm,0.8s
KSRS Korea Array 25.23 4 P **P 05 22 48.8 +0.1**
comp=Z,6.6nm,0.8s,baz=180,slow=10,SNR=20
KSRS LR LR 05 33 20.6
comp=Z,262nm,18.7s,baz=190,slow=38
KMI Kunming 25.32 304 P **P 05 22 50.3 +0.4**
KMI sS sS 05 27 33.9 +6.3
KMI pmax pmax
comp=Z,29nm,1.3s
KMI pmax pmax
comp=Z,170nm,6.0s
KMI LR LR
comp=Z,640nm,18.4s
KMI LR LR
comp=Z,390nm,15.9s
KMI LR LR
comp=Z,810nm,15.1s
KMI Kunming 25.32 304 *e*P **P 05 22 50.2 +0.4**
comp=Z,62nm,1.4s
KMI Kunming 25.32 304 *e*P **P 05 22 50.3 +0.4**
KMI pmax pmax
comp=Z,62nm,1.4s
MTN Manton Dam 25.43 168 *e*P **P 05 22 49.7 -1.0**
comp=Z,65nm,1.4s
PHRA Phrae 25.44 287 P **P 05 22 50.3 -0.5**
comp=Z,8.0nm,1.0s
IPM Ipoh 25.68 255 *e*P **P 05 22 52.9 -0.2**
comp=Z,19nm,0.8s
KULM Kulim 25.79 257 *e*P **P 05 22 53.0 -1.0**
comp=Z,16nm,0.9s
PAYA Payao 25.95 289 P **P 05 22 55.3 -0.1**
comp=Z,102μm,1.3s,comp=Z,989μm
LAMP Lampang 26.00 287 P **P 05 22 55.8 -0.2**
comp=Z,43μm,0.9s,comp=Z,382μm
TRTT Trang 26.08 263 P **P 05 22 58.6 +1.9**
comp=Z,26nm,1.0s
LEM Lembang 26.16 225 P **P 05 22 59.7 +2.2**
comp=Z,32nm,0.5s,baz=137,slow=19,SNR=5.8
UMPA Umpang Tak 26.43 282 P **P 05 23 00.7 +0.9**
comp=Z,43μm,0.9s
CM31 Chiang Mai Arr 26.64 287 *e*P **P 05 23 01.0 -0.7**
comp=Z,28nm,0.9s
CM31 Chiang Mai Arr 26.64 287 P **P 05 23 02.5 +0.8**
SNR=9.1
CMAR Chiang Mai Arr 26.64 287 P **P 05 23 01.4 -0.2**
comp=Z,13nm,0.8s,baz=96,slow=7.9,SNR=57
CMAR PcP **PcP 05 26 25.8 +0.4**
comp=Z,1.8nm,0.4s,baz=101,slow=2.3,SNR=6.4
CMAR LR LR 05 34 40.4
comp=Z,388nm,18.6s,baz=116,slow=39
XAN Xi'an 26.65 327 P **P 05 23 01.0 -0.7**
XAN S **S 05 27 33.2 -1.8**
XAN pmax pmax
comp=Z,25nm,1.3s
XAN pmax pmax
comp=Z,200nm,6.1s
XAN LR LR
comp=Z,780nm,14.9s
XAN LR LR
comp=Z,310nm,13.7s
XAN LR LR
comp=Z,680nm,14.5s
XAN Xi'an 26.65 327 *e*P **P 05 23 00.7 -1.0**
comp=Z,32nm,0.8s
MAJO Matsushiro 26.69 23 *e*P **P 05 23 00.6 -1.3**
MAJO Matsushiro 26.69 23⇓*e*P **P 05 23 03.5 +1.5**
MAJO pmax pmax
comp=Z,5.0nm,0.9s
MJAR Matsushiro Arr 26.69 23 P **P 05 23 00.6 -1.3**
comp=Z,1.7nm,0.8s,baz=189,slow=9.3,SNR=3.6
MJAR LR LR 05 33 47.8
comp=Z,591nm,18.4s,baz=215,slow=37
CMMT Chiang Mai 26.70 288 P **P 05 23 01.5 -0.7**
comp=Z,6.3nm,0.9s
CHTO Chiang Mai 26.70 288 *e*P **P 05 23 01.1 -1.2**
comp=Z,13nm,0.9s
CHTO Chiang Mai 26.70 288 P **P 05 23 03.7 +1.5**
SNR=5.7
DL2 Dalian 26.87 353 P **P 05 23 01.2 -2.3**
DL2 pP **pwP 05 23 17.9 -0.3**
DL2 S **S 05 27 34.6 -3.5**
DL2 pmax pmax
comp=Z,25nm,1.0s
DL2 pmax pmax
comp=Z,90nm,4.3s
DL2 LR LR
comp=Z,310nm,17.9s
DL2 LR LR
comp=Z,360nm,14.0s
DL2 LR LR
comp=Z,490nm,12.6s
MDSI Maura Dua 27.15 234 P **P 05 23 06.6 +0.3**
comp=Z,19nm,1.2s
MDSI pP **pP 05 23 10.8 -3.5**
comp=Z,19nm,1.2s
BKNI Bangkinang 27.27 246 *e*P **P 05 23 06.5 -0.8**
comp=Z,144nm,1.5s
LHSI Lahat 27.28 236 P **P 05 23 10.0 +2.5**
comp=Z,63nm,1.0s,comp=Z,2μm
CD2 Chengdu 27.61 316⇑*i*P **P 05 23 10.0 -0.4**
CD2 pP pwP 05 23 30.5 +7.3
CD2 sP sP 05 23 35.7 +14
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 pmax pmax
comp=Z,260nm,8.2s
CD2 LR LR
comp=Z,3μm,18.4s
CD2 LR LR
comp=Z,3μm,14.9s
CD2 LR LR
comp=Z,2μm,15.3s
PSI Prapat 28.22 253 P **P 05 23 16.0 0.0**
comp=Z,4.1nm,0.4s,baz=96,slow=12,SNR=3.6
PSI LR LR 05 35 27.8
comp=Z,514nm,18.5s,baz=95,slow=38
PSI Prapat 28.22 253 *e*P **P 05 23 15.5 -0.5**
comp=Z,7.1nm,0.7s
PSI Prapat 28.22 253 *e*P **P 05 23 15.5 -0.5**
PSI pmax pmax
comp=Z,7.0nm,0.7s
MNSI Mandailing Nat 28.38 248 P **P 05 23 17.2 -0.1**
comp=Z,21nm,0.8s
BJI Beijing 29.02 345 *e*P **P 05 23 23.0 +0.3**
BJI S **S 05 28 10.5 -1.5**
BJI LR LR
comp=Z,150nm,11.2s
BJI LR LR
comp=Z,120nm,13.1s
KCSI Kotacane, Aceh 29.06 255 P **P 05 23 21.9 -1.5**
GSI Gunungsitoli 30.02 251 *e*P **P 05 23 30.5 -1.3**
comp=Z,20nm,0.8s
GSI Gunungsitoli 30.02 251 P **P 05 23 31.0 -0.9**
FITZ Fitzroy Crossi 30.10 180 *e*P **P 05 23 31.9 -0.6**
comp=Z,33nm,1.2s
XMIS Christmas Isla 30.14 222 *e*P **P 05 23 32.7 -0.2**
comp=Z,181nm,1.2s
LZH Lanzhou 30.96 324 ⇓P **P 05 23 41.1 +0.9**
LZH pP pwP 05 23 55.6 +2.8
LZH sP sP 05 24 07.4 +16
LZH S **S 05 28 46.0 +3.0**
LZH pmax pmax
comp=Z,27nm,1.7s
LZH pmax pmax
comp=Z,120nm,4.9s
LZH LR LR
comp=Z,1μm,13.0s
LZH LR LR
comp=Z,740nm,14.6s
LZH LR LR
comp=Z,1μm,15.7s
COEN Coen 31.16 146 *e*P **P 05 23 43.7 +1.8**
comp=Z,60nm,1.5s
HHC Hu-ho-hao-te 31.18 339 *e*P **P 05 23 42.2 +0.3**
HHC S **S 05 28 47.6 +1.5**
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,160nm,4.3s
HHC LR LR
comp=Z,380nm,10.5s
HHC LR LR
comp=Z,450nm,12.1s
HHC LR LR
comp=Z,540nm,12.5s
VLA Vladivostok 31.26 9⇓*e*P **P 05 23 41.7 -0.8**
VLA pmax pmax
comp=Z,39nm,0.7s
CN2 Changchun 31.50 359 *e*P **P 05 23 47.4 +2.8**
CN2 *e*S **S 05 28 48.6 -2.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,500nm,12.0s
CN2 LR LR
comp=Z,300nm,12.0s
CN2 LR LR
comp=Z,300nm,13.0s
USRK Ussuriysk Ar. 32.34 8 P **P 05 23 51.8 -0.2**
comp=Z,1.9nm,0.7s,baz=204,slow=9.1,SNR=4.5
USRK LR LR 05 37 56.7
comp=Z,134nm,18.3s,baz=175,slow=38
WRAB Tennant Creek 33.01 165 *e*P **P 05 23 58.4 +0.3**
comp=Z,18nm,1.1s
WRAB Tennant Creek 33.01 165⇓*e*P **P 05 23 59.9 +1.8**
WRAB pmax pmax
comp=Z,16nm,1.3s
WR1 Warramunga Arr 33.02 165 *e*P **P 05 23 56.6 -1.6**
WRA Warramunga Arr 33.02 165 P **P 05 23 56.6 -1.6**
comp=Z,5.6nm,0.8s,baz=346,slow=10,SNR=17
WB2 Warramunga Arr 33.02 165 *e*P **P 05 23 58.0 -0.2**
BRDH Bariadhala 34.15 292 LR LR 05 39 27.0
comp=Z,251nm,19.7s,baz=162,slow=39
SHL Shillong 34.64 297 *e*P **P 05 24 11.2 -1.3**
comp=Z,28nm,0.8s
SHL Shillong 34.64 297 *e*P **P 05 24 11.2 -1.3**
SHL pmax pmax
comp=Z,28nm,0.8s
SHL Shillong 34.64 297 *i*P **P 05 24 11.0 -1.5**
ASAJ Asahikawa 34.94 21 P **P 05 24 14.4 -0.2**
comp=Z,2.0nm,0.4s,baz=46,slow=22,SNR=2.0
GTA Gaotai 35.57 324 P **P 05 24 20.6 +0.4**
GTA PcP **PcP 05 26 49.7 +0.8**
GTA S **S 05 29 52.8 -1.5**
GTA pmax pmax
comp=Z,9.0nm,1.3s
GTA pmax pmax
comp=Z,96nm,6.9s
GTA LR LR
comp=Z,380nm,14.4s
GTA LR LR
comp=Z,390nm,15.5s
GTA LR LR
comp=Z,700nm,14.4s
AS31 Alice Springs 36.50 167 *e*P **P 05 24 27.9 -0.4**
comp=Z,4.6nm,0.8s
ASAR Alice Springs 36.50 167 P **P 05 24 28.1 -0.1**
comp=Z,7.0nm,0.7s,baz=347,slow=7.7,SNR=56
ASAR PP **PP 05 25 56.5 +4.7**
comp=Z,3.5nm,0.9s,baz=350,slow=10,SNR=3.1
ASAR PcP **PcP 05 26 51.8 +0.1**
comp=Z,2.6nm,0.7s,baz=354,slow=3.8,SNR=3.9
ASAR ScP **ScP 05 30 36.8 +0.5**
comp=Z,6.0nm,1.2s,baz=335,slow=4.1,SNR=10
ASAR LR LR 05 41 58.9
comp=Z,120nm,19.2s,baz=345,slow=40
LSA Lhasa 36.57 304 P **P 05 24 30.1 +0.7**
LSA pmax pmax
comp=Z,110nm,0.8s
LSA Lhasa 36.57 304 *e*P **P 05 24 30.1 +0.7**
comp=Z,33nm,1.0s
LSA Lhasa 36.57 304 *e*P **P 05 24 30.1 +0.7**
LSA pmax pmax
comp=Z,33nm,1.0s
KLR Kul'dur 37.25 6 LR LR 05 40 20.9
comp=Z,145nm,19.2s,baz=207,slow=37
KLR Kul'dur 37.25 6⇑*e*P **P 05 24 34.0 -0.3**
KLR pmax pmax
comp=Z,5.0nm,1.5s
YSS Yuzh-Sakhalins 37.48 19 *e*P **P 05 24 38.5 +2.3**
YSS *e* 05 26 02.9
YSS *e*S **S 05 30 24.1 +1.1**
YSS MLR MLR
comp=Z,300nm,17.0s
YSS MLR MLR
comp=E,200nm,16.0s
ODAN Odare 38.87 298 *e*P **P 05 24 48.5 -0.1**
comp=E,224nm,0.8s
ULN Ulaanbaatar 38.88 340 *e*P **P 05 24 48.3 +0.1**
comp=E,7.8nm,0.7s
ULN Ulaanbaatar 38.88 340 *e*P **P 05 24 48.3 +0.1**
ULN pmax pmax
comp=Z,8.0nm,0.7s
ULN Ulaanbaatar 38.88 340 P **P 05 24 49.0 +0.7**
SNR=11
SONA0 Songino Array 39.08 339 *e*P **P 05 24 50.1 +0.2**
SONM Songino Array 39.08 339 P **P 05 24 50.1 +0.2**
comp=Z,5.9nm,0.9s,baz=155,slow=7.9,SNR=22
GRNR Gornyy 39.44 11 *e*P **P 05 24 55.0 +2.3**
RAMN Ramite 39.58 298 *e*P **P 05 24 54.6 +0.1**
comp=Z,212nm,0.9s
H11S3 WAKE ISLAND Hy 39.84 76 T T 06 07 57.4
baz=275,slow=74,SNR=15
H11S1 WAKE ISLAND Hy 39.85 76 T T 06 07 57.4
baz=275,slow=74,SNR=6.9
H11S2 WAKE ISLAND Hy 39.86 76 T T 06 07 57.4
baz=275,slow=74,SNR=9.3
JIRN Jiri 40.11 299 *e*P **P 05 24 59.1 0.0**
comp=Z,226nm,0.8s
H11N1 WAKE ISLAND Hy 40.11 74 T T 06 08 11.6
baz=266,slow=74,SNR=37
H11N2 WAKE ISLAND Hy 40.12 74 T T 06 08 12.7
baz=266,slow=74,SNR=29
H11N3 WAKE ISLAND Hy 40.13 74 T T 06 08 14.3
baz=266,slow=74,SNR=36
GUN Gumba 40.44 299 *e*P **P 05 25 01.6 -0.2**
comp=Z,285nm,1.0s
PKI Pulchoki 40.76 298 *e*P **P 05 25 03.7 -0.7**
comp=Z,138nm,1.0s
PKIN Phulchoki 40.77 298 *e*P **P 05 25 03.7 -0.7**
comp=Z,80nm,0.9s
KKN Kakani 40.92 298 *e*P **P 05 25 05.1 -0.5**
comp=Z,178nm,1.0s
DMN Daman 41.03 298 *e*P **P 05 25 05.9 -0.6**
comp=Z,164nm,1.0s
ZAK Zakamensk 42.33 339 *e*P **P 05 25 12.6 -4.0**
DANN Dangsing 42.36 299 *e*P **P 05 25 17.0 -0.5**
comp=Z,234nm,0.9s
KOLN Koldanda 42.36 298 *e*P **P 05 25 17.2 -0.2**
comp=Z,142nm,0.8s
FORT Forrest 42.78 177 *e*P **P 05 25 19.6 -0.7**
comp=Z,48nm,0.8s
PYUN Piuthan 42.96 298 *e*P **P 05 25 22.2 -0.1**
comp=Z,358nm,1.0s
TLY Talaya 43.29 340⇓*e*P **P 05 25 25.2 +0.9**
MOY Mondy 44.21 338 *e*P **P 05 25 32.2 +0.4**
MOY pmax pmax
comp=Z,22nm,2.6s
PALK Pallekele 44.69 268 LR LR 05 45 01.4
comp=Z,142nm,19.4s,baz=117,slow=37
EIDS Eidsvold 44.72 147 *e*P **P 05 25 36.2 +0.1**
comp=Z,16nm,1.1s
WMQ Urumqi 45.45 321 P **P 05 25 41.8 0.0**
WMQ pP pwP 05 25 53.1 -1.6
WMQ sP sP 05 26 06.1 +13
WMQ pmax pmax
comp=Z,27nm,1.5s
WMQ pmax pmax
comp=Z,210nm,3.7s
WMQ LR LR
comp=Z,960nm,12.7s
WMQ LR LR
comp=Z,860nm,13.3s
WMQ LR LR
comp=Z,870nm,15.5s
WMQ Urumqi 45.45 321 *e*P **P 05 25 43.0 +1.2**
comp=Z,46nm,1.4s
NWAO Narrogin (SRO) 45.61 190 *e*P **P 05 25 42.0 -1.0**
comp=Z,25nm,0.6s
NWAO Narrogin (SRO) 45.61 190 *e*P **P 05 25 42.0 -1.0**
NWAO pmax pmax
comp=Z,25nm,0.6s
BBOO Buckleboo 45.80 168 *e*P **P 05 25 44.2 -0.4**
comp=Z,20nm,0.8s
STKA Stephens Creek 46.35 161 P **P 05 25 48.9 0.0**
comp=Z,20nm,0.9s,baz=337,slow=7.5,SNR=22
STKA Stephens Creek 46.35 161 *e*P **P 05 25 48.5 -0.3**
comp=Z,5.9nm,0.9s
STKA Stephens Creek 46.35 161 *e*P **P 05 25 48.6 -0.3**
STKA pmax pmax
comp=Z,6.0nm,0.9s
BOD Bodaibo 46.42 351 *e*P **P 05 25 49.2 +0.1**
BOD pmax pmax
comp=Z,12nm,1.8s
PETK Petropavlovsk- 48.09 25 P **P 05 26 02.0 -0.2**
comp=Z,7.2nm,0.8s,baz=192,slow=4.3,SNR=7.3
PETK LR LR 05 46 31.0
comp=Z,148nm,18.3s,baz=228,slow=36
PEA1 Petropavlovsk- 48.09 25 *e*P **P 05 26 02.0 -0.2**
PET Petropavlovsk 48.44 26 *e*P P 05 26 10.2 +5.4
PET *e*S **S 05 33 06.8 +3.2**
PET MLR MLR
comp=Z,200nm,15.0s
ARMA Armidale 49.11 150 *e*P **P 05 26 12.4 +2.0**
comp=Z,31nm,1.0s
MK31 Makanchi Array 50.24 322 *e*P **P 05 26 19.1 +0.3**
comp=Z,21nm,0.9s
MK31 Makanchi Array 50.24 322 *i*P **P 05 26 19.2 +0.3**
MK31 pmax pmax
comp=Z,21nm,0.8s
MK32 Makanchi Array 50.24 322 *e*P **P 05 26 19.6 +0.7**
MK32 *e*PcP **PcP 05 27 37.9 +0.3**
MKAR Makanchi Array 50.24 322 P **P 05 26 19.6 +0.7**
comp=Z,15nm,0.7s,baz=117,slow=8.5,SNR=149
MKAR PcP **PcP 05 27 37.9 +0.3**
comp=Z,3.1nm,0.8s,baz=110,slow=2.3,SNR=1.9
MKAR LR LR 05 49 28.2
comp=Z,247nm,18.1s,baz=108,slow=38
MAKZ Makanchi 50.44 322 *e*P **P 05 26 20.5 +0.2**
comp=Z,45nm,1.4s
MAKZ Makanchi 50.44 322 *e*P **P 05 26 20.5 +0.2**
MAKZ pmax pmax
comp=Z,45nm,1.4s
PDGK Podgornoye 50.49 317 P **P 05 26 21.0 +0.1**
PDGK pmax pmax
comp=Z,28nm,1.0s
MA2 Magadan 50.82 16 LR LR 05 47 23.5
comp=Z,57nm,19.4s,baz=161,slow=35
TARG Taragay, Kyrgy 51.05 314 *e*P **P 05 26 26.2 +0.7**
comp=Z,24nm,1.3s
KDJ Kajisay 51.62 315 *e*P **P 05 26 30.2 +0.7**
comp=Z,15nm,1.0s
KDJ Kajisay 51.62 315 *e*P **P 05 26 30.2 +0.7**
KDJ pmax pmax
comp=Z,15nm,1.0s
KSH Kashi 51.63 311 P **P 05 26 32.2 +2.6**
KSH sP pwP 05 26 58.7 +16
KSH PP **PP 05 28 31.4 +4.2**
KSH PcS **PcS 05 31 41.7 +0.6**
KSH S **S 05 33 45.3 -3.6**
KSH pmax pmax
comp=Z,81nm,1.3s
KSH pmax pmax
comp=Z,260nm,5.8s
KSH LR LR

comp=Z,420nm,12.2s
KSH LR LR
comp=Z,600nm,11.7s
KSH LR LR
comp=Z,920nm,16.4s
CAN Canberra 52.10 156 *eP* **P 05 26 34.4 +1.5**
comp=Z,27nm,1.2s
NRN Naryn 52.22 313 *eP* **P 05 26 34.2 +0.1**
comp=Z,28nm,1.1s
NRN Naryn 52.22 313 *eP* **P 05 26 34.2 +0.1**
NRN pmax pmax
comp=Z,28nm,1.1s
NIL Nilore 52.30 303 *eP* **P 05 26 34.5 -0.1**
comp=Z,105nm,1.2s
NIL Nilore 52.30 303 *eP* **P 05 26 34.5 -0.1**
NIL pmax pmax
comp=Z,105nm,1.2s
ULHL Ulahol 52.32 314 P **P 05 26 36.1 +1.4**
SNR=17
DZM Mont Dzumac 52.41 130 P **P 05 26 35.3 -0.2**
comp=Z,11nm,0.8s,baz=275,slow=9.7,SNR=5.3
DZM Mont Dzumac 52.41 130 *eP* **P 05 26 36.0 +0.5**
comp=Z,40nm,1.5s
ZAA0 Zalesovo Array 52.74 331 *eP* **P 05 26 36.8 -0.6**
comp=Z,12nm,1.1s
ZALV Zalesovo Beam 52.74 331 P **P 05 26 37.7 +0.4**
comp=Z,2.9nm,0.6s,baz=121,slow=7.2,SNR=8.0
TOO Toolangi 52.83 160 *eP* **P 05 26 39.1 +0.8**
comp=Z,25nm,0.9s
TOO Toolangi 52.83 160 *eP* **P 05 26 39.1 +0.8**
TOO pmax pmax
comp=Z,25nm,0.9s
KZA Kyzart 52.96 314 P **P 05 26 41.0 +1.3**
SNR=31
TKM2 Tokmak 2 52.99 315 P **P 05 26 40.3 +0.6**
SNR=10
TKM2 Tokmak 2 52.99 315 P **P 05 26 39.8 +0.1**
TKM2 pmax pmax
comp=Z,16nm,1.2s
KBK Karagaybulak 53.36 315 P **P 05 26 43.9 +1.5**
SNR=6.9
UCH Uchtor 53.52 314 P **P 05 26 45.2 +1.3**
SNR=50
CHMS Chumysh 53.60 315 P **P 05 26 44.9 +0.9**
SNR=5.6
AAK Ala-Archa 53.67 314 *eP* **P 05 26 44.7 +0.1**
comp=Z,17nm,1.4s
AAK Ala-Archa 53.67 314*c i P* **P 05 26 45.1 +0.5**
AAK pmax pmax
comp=Z,17nm,1.7s
AAK Ala-Archa 53.67 314 P **P 05 26 45.7 +1.1**
SNR=9.5
USP Ospenovka 53.87 315 P **P 05 26 46.5 +0.6**
SNR=8.4
NVS Novosibirsk 54.02 331⇑*i P* **P 05 26 47.1 +0.4**
NVS pmax pmax
comp=N,12nm,1.5s
NVS pmax pmax
comp=Z,25nm,1.5s
NVS pmax pmax
comp=E,16nm,1.4s
AML Almayashu 54.07 314 P **P 05 26 49.3 +1.4**
SNR=15
EKS2 Erkin-Say 54.18 314 P **P 05 26 49.7 +1.4**
SNR=17
KURK Kurchatov 54.25 325 *eP* **P 05 26 48.6 +0.2**
comp=E,45nm,0.8s
KURK Kurchatov 54.25 325*c i P* **P 05 26 48.7 +0.2**
KURK *i* *PP **pwP 05 27 05.2 +3.8**
KURK pmax pmax
comp=Z,61nm,1.0s
KURK Kurchatov 54.25 325 P **P 05 26 49.2 +0.7**
SNR=36
BTK Batken 55.60 310 *eP* **P 05 26 58.9 +0.3**
comp=Z,52nm,1.4s
BTK Batken 55.60 310 *eP* **P 05 26 58.9 +0.3**
BTK pmax pmax
comp=Z,53nm,1.4s
GAR Garm 55.73 309 *eP* **P 05 27 00.2 +0.6**
comp=Z,125nm,1.1s
KBL Kabul 55.90 303 *eP* **P 05 27 00.2 -0.8**
comp=Z,66nm,1.5s
KBL Kabul 55.90 303 *eP* **P 05 27 00.2 -0.8**
KBL pmax pmax
comp=Z,66nm,1.5s
KK31 Karatay Array 56.60 314 *eP* **P 05 27 05.4 -0.2**
comp=Z,27nm,1.0s
KK31 Karatay Array 56.60 314 *i P* **P 05 27 05.6 0.0**
KK31 pmax pmax
comp=Z,21nm,1.0s
KKAR Karatay Array 56.60 314 *eP* **P 05 27 05.6 0.0**
comp=Z,27nm,1.0s
KKAR Karatay Array 56.60 314 *eP* **P 05 27 05.6 0.0**
KKAR pmax pmax
comp=Z,27nm,1.0s
OTUK Ortayu 56.98 320 P **P 05 27 07.7 -0.5**
OTUK pmax pmax
comp=Z,26nm,1.2s
TIXI Tiksi 59.45 1 *eP* **P 05 27 23.7 -1.3**
comp=Z,9.2nm,0.8s
TIXI Tiksi 59.45 1⇓*eP* **P 05 27 24.5 -0.5**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
BRVK Borovoye 59.92 325 *eP* **P 05 27 28.4 -0.2**
comp=Z,34nm,0.9s
BRVK Borovoye 59.92 325 *eP* **P 05 27 28.4 -0.2**
BRVK pmax pmax
comp=Z,35nm,0.9s
BRVK Borovoye 59.92 325 P **P 05 27 29.1 +0.6**
SNR=24
BILL Bilibino 61.69 16 *eP* **P 05 27 40.9 +0.5**
comp=Z,7.1nm,1.1s
BILL Bilibino 61.69 16*ceP* **P 05 27 42.2 +1.9**
BILL *i* 05 27 49.5
BILL *e* 05 29 58.6
BILL *eS* **S 05 35 58.7 -2.0**
BILL *eSS* **SS 05 40 02.9 +0.6**
BILL pmax pmax
comp=Z,11nm,1.7s
NRIK Noril'sk 62.05 346 P **P 05 27 42.9 +0.1**
comp=Z,6.7nm,0.9s,baz=127,slow=7.7,SNR=10
NRIK LR LR 05 57 57.1
comp=Z,232nm,18.4s,baz=112,slow=39
GEYT Alibeck 65.05 306 P **P 05 28 03.5 +0.3**
comp=Z,15nm,0.9s,baz=114,slow=3.6,SNR=20
GEYT LR LR 06 00 21.3
comp=Z,174nm,18.3s,baz=90,slow=40
GYA0B ALIBECK ARRAY 65.05 306 *eP* **P 05 28 03.6 +0.4**
comp=Z,31nm,1.0s
AB31 Akbulak array 65.14 319 *i P* **P 05 28 02.9 -0.6**
AB31 pmax pmax
comp=Z,10.0nm,0.7s
ABKAR Akbulak array 65.14 319 *eP* **P 05 28 03.1 -0.4**
comp=Z,13nm,0.8s
SVE Sverdlovsk 66.37 327⇓*eP* **P 05 28 10.7 -0.6**
SVE pmax pmax
comp=Z,32nm,1.5s
AKTO Aktyubinsk 66.58 320 P **P 05 28 12.6 -0.2**
comp=Z,6.5nm,0.8s,baz=98,slow=5.4,SNR=16
AKTO Aktyubinsk 66.58 320 P **P 05 28 11.9 -0.9**
AKTO pmax pmax
comp=Z,18nm,1.2s
ARU Arti 67.39 326 P **P 05 28 17.7 -0.1**
comp=Z,3.4nm,0.7s,baz=97,slow=3.7,SNR=6.5
ARU Arti 67.39 326 *eP* **P 05 28 17.6 -0.2**
comp=Z,18nm,0.7s
ARU Arti 67.39 326*c i P* **P 05 28 17.3 -0.5**
ARU 05 28 43.3
ARU 05 30 43.3
ARU S **S 05 37 10.1 -1.3**
ARU pmax pmax
comp=Z,14nm,0.8s
ARU MLR MLR
comp=Z,158nm,14.0s
RPZ Rata Peaks 69.22 147 P **P 05 28 29.4 0.0**
comp=Z,5.5nm,0.5s,baz=145,slow=3.2,SNR=3.6
URZ Urewera 69.39 139 P **P 05 28 31.8 +1.3**
comp=Z,3.6nm,0.3s,baz=215,slow=0.3,SNR=3.1
BKZ Black Stump Fm 69.53 140 *eP* **P 05 28 31.9 +0.4**
comp=Z,22nm,0.9s
RDOG Red Dog Mine 71.80 22 *eP* **P 05 28 49.0 +4.3**
comp=Z,13nm,1.2s
KIRV Kirov 72.59 328 P **P 05 28 50.0 +0.3**
comp=Z,10nm,0.4s,baz=156,slow=4.1,SNR=13
KIRV Kirov 72.59 328 P **P 05 28 50.0 +0.3**
AKT Akhty 73.14 310 *eP* **P 05 28 53.4 0.0**
AKT *e* 05 29 10.6
AKT pmax pmax
comp=Z,30nm,1.0s
MAK Makhachkala 73.27 311 *eP* **P 05 28 55.1 +1.1**
MAK *eS* **S 05 38 21.1 +0.5**
MAK pmax pmax
comp=Z,28nm,0.4s
SII Sitkinak Islan 74.41 34 *eP* **P 05 29 01.1 +0.6**
comp=Z,20nm,1.0s
GROC Groznyy 74.51 312 *eP* **P 05 28 58.1 -3.2**
GROC *e* 05 29 10.8
GROC *e**PP **PcP 05 29 15.6 -0.1**
GROC pmax pmax
comp=Z,24nm,0.6s
PRGR Permogore 74.70 331 *eP* **P 05 29 00.4 -1.6**
PRGR pmax pmax
comp=Z,16nm,0.4s
OHAK Old Harbor 74.92 34 *eP* **P 05 29 03.4 +0.1**
comp=Z,9.1nm,0.8s
KDAK Kodiak Island 75.30 33 *eP* **P 05 29 05.8 +0.2**
comp=Z,9.6nm,0.8s
KDAK Kodiak Island 75.30 33 *eP* **P 05 29 05.8 +0.2**
KDAK pmax pmax
comp=Z,10.0nm,0.8s
TBLG Delisi 75.37 310 *eP* **P 05 29 07.3 +1.0**
comp=Z,13nm,0.8s
GNI Garni 75.46 309 P **P 05 29 08.5 +1.5**
comp=Z,5.0nm,0.5s,baz=185,slow=3.9,SNR=7.0
GNI Garni 75.46 309 *eP* **P 05 29 08.6 +1.5**
comp=Z,27nm,1.3s
GNI Garni 75.46 309*deP* **P 05 29 08.2 +1.1**
GNI pmax pmax
comp=Z,106nm,1.6s
CAST Castle Rocks 75.65 27 *eP* **P 05 29 07.8 +0.3**
comp=Z,6.5nm,0.8s
ZEI Tsey 75.92 311 *eP* **P 05 29 06.9 -2.8**
ZEI pmax pmax
comp=Z,15nm,0.9s
CNPM China Poot 76.01 31 *eP* **P 05 29 08.9 -0.8**
comp=Z,10.0nm,0.8s
BPAW Bear Paw Mtn. 76.15 27 *eP* **P 05 29 10.7 +0.3**
comp=Z,19nm,1.0s
BRLK Bradley Lake 76.19 31 *eP* **P 05 29 10.3 -0.4**
comp=Z,11nm,0.8s
MLY Manley 76.27 26 *eP* **P 05 29 11.5 +0.5**
comp=Z,12nm,0.8s
AKH Akhalkalaki 76.32 310 P **P 05 29 13.4 +1.4**
COLD Coldfoot 76.52 23 *eP* **P 05 29 13.3 +0.9**
comp=Z,3.7nm,0.8s
KBZ Khabaz 76.59 312 P **P 05 29 13.8 +0.6**
comp=Z,5.8nm,1.0s,baz=106,slow=6.7,SNR=9.5
KBZ LR LR 06 05 29.1
comp=Z,124nm,18.4s,baz=66,slow=38
KIV Kislovodsk 76.73 313 *eP* **P 05 29 14.3 +0.2**
comp=Z,26nm,1.3s
KIV Kislovodsk 76.73 313 *eP* **P 05 29 14.2 +0.1**
KIV pmax pmax
comp=Z,47nm,1.1s
KIV MLR MLR
comp=Z,318nm,18.0s
TOLK Toolik Lake Re 76.77 22 *eP* **P 05 29 14.5 +0.7**
comp=Z,5.4nm,0.8s
VRH Novokhopyorsk 76.92 320 *eP* **P 05 29 13.9 -1.0**
VRH pmax pmax
comp=Z,20nm,0.8s
PMR Palmer 77.02 29 *eP* **P 05 29 15.0 -0.2**
comp=Z,4.6nm,0.8s
PMR Palmer 77.02 29 *eP* **P 05 29 15.0 -0.2**
PMR pmax pmax
comp=Z,5.0nm,0.8s
MDM Murphy Dome 77.34 26 *eP* **P 05 29 19.1 +2.1**
comp=Z,6.0nm,1.1s
WRH Wood River Hil 77.41 26 *eP* **P 05 29 17.6 +0.2**
comp=Z,4.5nm,1.0s
SIRT Sirnak 77.48 306 *eP* **P 05 29 19.2 +0.8**
comp=Z,74nm,0.8s
COLA College 77.50 26⇓*eP* **P 05 29 18.3 +0.4**
COLA pmax pmax
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 77.65 330 *eP* **P 05 29 17.1 -1.7**
KLMR pmax pmax
comp=Z,37nm,1.1s
DHY Denali Highway 77.78 28 *eP* **P 05 29 19.5 -0.2**
comp=Z,4.1nm,0.8s
ILAR Eielson Array 77.92 26 P **P 05 29 19.9 -0.3**
comp=Z,1.7nm,0.7s,baz=238,slow=6.2,SNR=17
ILAR Eielson Array 77.92 26 P **P 05 29 20.0 -0.3**
TMCR Tamitsa 78.16 333 *eP* **P 05 29 21.3 -0.2**
TMCR pmax pmax
comp=Z,12nm,0.6s
VORD Divnogorie 78.46 320 *eP* **P 05 29 22.5 -1.0**
VORD pmax pmax
comp=Z,20nm,1.1s
FYU Fort Yukon 78.49 24 *eP* **P 05 29 24.3 +0.9**
comp=Z,16nm,1.2s
VSR Storozhevoye 78.52 320 *eP* **P 05 29 22.3 -1.5**
VSR pmax pmax
comp=Z,20nm,0.7s
LPSR Galich'ya Gora 78.54 322 *eP* **P 05 29 22.7 -1.2**
LPSR pmax pmax
comp=Z,30nm,0.9s
PAX Paxson 78.66 28 *eP* **P 05 29 25.2 +0.8**
comp=Z,5.8nm,0.9s
PAX Paxson 78.66 28 *eP* **P 05 29 25.3 +0.8**
PAX pmax pmax
comp=Z,6.0nm,0.9s
DIV Divide 78.66 30 *eP* **P 05 29 25.0 +0.5**
comp=Z,15nm,0.8s
EYAK Cordova Ski Ar 78.72 30 *eP* **P 05 29 25.6 +0.9**
comp=Z,4.7nm,0.9s
DAMY Dhamar 78.84 283 *eP* **P 05 29 26.4 -0.2**
comp=Z,22nm,1.2s
MOS Moscow 79.02 325 *eP* **P 05 29 25.3 -1.2**
MOS *e* 05 29 40.6
MOS *e* 05 32 22.9
MOS pmax pmax
comp=Z,30nm,0.9s
SCRK Sand Creek 79.23 27 *eP* **P 05 29 28.1 +0.4**
comp=Z,5.7nm,1.0s
LVZ Lovozero 79.24 337 *eP* **P 05 29 27.1 -0.4**
comp=Z,34nm,1.3s
LVZ Lovozero 79.24 337*deP* **P 05 29 27.8 +0.3**
LVZ pmax pmax
comp=Z,25nm,1.3s
HMT Hamilton 79.47 30 *eP* **P 05 29 30.0 +1.1**
comp=Z,11nm,1.1s
OBN Obninsk 79.68 324 *eP* **P 05 29 29.8 -0.3**
comp=Z,59nm,1.3s
OBN Obninsk 79.68 324*ceP* **P 05 29 30.2 +0.1**
OBN *e* 05 29 38.1
OBN *e* 05 32 31.1
OBN pmax pmax
comp=Z,36nm,1.3s
CRQM Cirque 79.98 30 *eP* **P 05 29 32.6 +0.7**
comp=Z,14nm,0.9s
EGAK Eagle 80.36 26 *eP* **P 05 29 34.0 +0.4**
comp=Z,4.8nm,0.9s
ANN Anapa 80.39 314 *eP* **P 05 29 32.8 -1.3**
ANN *e**PP **pwP 05 29 48.9 -0.6**
ANN *eS* **S 05 39 33.7 -4.5**
ANN pmax pmax
comp=Z,39nm,1.2s
KEV Kevo 81.69 340 *eP* **P 05 29 41.3 +0.8**
comp=Z,32nm,1.3s
KEV Kevo 81.69 340 *eP* **P 05 29 41.3 +0.8**
KEV pmax pmax
comp=Z,32nm,1.3s
MSF Maaselka 81.72 336 P **P 05 29 41.9 +1.1**
MSF pmax pmax
comp=Z,26nm,1.3s
SPA0 Spitsbergen Ar 82.06 349 *eP* **P 05 29 42.4 0.0**
comp=Z,50nm,1.5s
SPA0 Spitsbergen Ar 82.06 349 *eP* **P 05 29 42.7 +0.3**
ARCES ARCESS Array B 82.25 340 P **P 05 29 43.9 +0.4**
comp=Z,21nm,1.0s,baz=75,slow=5.1,SNR=23
ARE0 ARCESS Array S 82.25 340 *eP* **P 05 29 43.6 +0.1**
comp=Z,1.8nm,1.0s
ARE0 ARCESS Array S 82.25 340 *eP* **P 05 29 43.8 +0.2**
KBS Kingsbay 82.57 350 *eP* **P 05 29 45.0 0.0**
comp=Z,9.4nm,0.8s
KBS Kingsbay 82.57 350*deP* **P 05 29 44.5 -0.5**
KBS pmax pmax
comp=Z,60nm,1.3s
KBS Kingsbay 82.57 350 *eP* **P 05 29 44.9 -0.2**
HSPB Hornsund (broa 82.67 348 *eP* **P 05 29 45.2 -0.3**
INK Inuvik 82.67 22 *eP* **P 05 29 45.6 -0.1**
comp=Z,9.9nm,1.0s
INK Inuvik 82.67 22 *eP* **P 05 29 45.6 -0.1**
INK pmax pmax
comp=Z,10.0nm,1.0s
ASF Jabal al Asfar 82.72 301 P **P 05 29 47.8 +1.0**
comp=Z,8.7nm,0.9s,baz=280,slow=2.5,SNR=15
KTK1 Kautokeino 83.17 339 *eP* **P 05 29 48.1 -0.2**
HEF Hetta 83.18 339 *eP* **P 05 29 48.4 0.0**
ABPO Ambohimpanom 83.39 249 *eP* **P 05 29 49.5 -1.1**
comp=Z,6.5nm,0.9s
ABPO Ambohimpanom 83.39 249 *eP* **P 05 29 49.5 -1.1**
ABPO pmax pmax
comp=Z,7.0nm,0.9s
SUF Sumiainen 83.65 333 P **P 05 29 51.3 +0.4**
SUF pmax pmax
comp=Z,43nm,1.1s
MMAI Mount Meron Ar 83.81 302 P **P 05 29 53.2 +0.8**
comp=Z,14nm,1.0s,baz=72,slow=6.5,SNR=21
BRTR Keskin Array B 83.98 309 P **P 05 29 52.6 -0.7**
comp=Z,1.9nm,0.8s,baz=127,slow=5.2,SNR=7.9
BRTR LR LR 06 13 09.1
comp=Z,67nm,18.3s,baz=91,slow=40
BRTR Keskin Array B 83.98 309 *i P* **P 05 29 52.4 -0.9**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
FIA1 FINESS Array S 84.00 332 *eP* **P 05 29 52.1 -0.5**
comp=Z,46nm,1.0s
FINES FINESS Array B 84.00 332 P **P 05 29 52.8 +0.1**
comp=Z,28nm,1.0s,baz=90,slow=5.7,SNR=43
KIF Kilpisjarvi 84.01 340 *eP* **P 05 29 52.5 -0.1**
SKAG Skagway 84.06 30 *eP* **P 05 29 55.7 +2.7**
comp=Z,8.9nm,0.9s
VSU Vasula 84.41 329*c i P* **P 05 29 54.5 -0.3**
VSU pmax pmax
comp=Z,200nm,1.3s
MICGM Minsk 84.74 325⇑*eP* **P 05 29 57.0 +0.4**
MICGM PM 05 29 58.0
comp=Z,0.2nm,1.0s
MNK Minsk 84.74 325 *eP* **P 05 29 57.0 +0.4**
AKASG Malin Array Be 84.81 321 P **P 05 29 56.4 -0.6**
comp=Z,15nm,0.9s,baz=63,slow=5.6,SNR=54
AKASG PP **PP 05 33 08.5 -4.7**
comp=Z,0.3nm,0.3s,baz=83,slow=7.8,SNR=4.5
AKBB Malin Array Si 84.81 321 *eP* **P 05 29 55.8 -1.2**
comp=Z,44nm,1.2s
AKBB Malin Array Si 84.81 321 *eP* **P 05 29 55.8 -1.2**
AKBB pmax pmax
comp=Z,44nm,1.2s
EIL Elat 84.81 299 P **P 05 29 57.8 +0.3**
comp=Z,13nm,1.0s,baz=94,slow=1.4,SNR=12
KIEV Kiev 84.82 321 *eP* **P 05 29 56.1 -0.9**
comp=Z,35nm,1.1s
KIEV Kiev 84.82 321⇓*i P* **P 05 29 55.5 -1.6**
KIEV Kiev 84.82 321 *eP* **P 05 29 56.1 -0.9**
KIEV pmax pmax
comp=Z,35nm,1.1s
CSS Mathiatis 85.13 305 *eP* **P 05 29 58.8 -0.2**
comp=Z,44nm,1.2s
IDID Didziasalis 85.18 325 *eP* **P 05 29 58.7 -0.1**
IDID IAmb IAmb 05 30 00.4
comp=Z,12nm,1.0s
IZAR Zarasai 85.35 326 *eP* **P 05 29 59.5 -0.1**
IZAR IAmb IAmb 05 30 00.9
comp=Z,15nm,0.7s
IIGN Ignalina 85.46 326 *eP* **P 05 30 00.0 -0.2**
IIGN IAmb IAmb 05 30 01.6
comp=Z,4.6nm,0.6s
KIS Kishinev 85.91 317 *eP* **P 05 30 04.0 +1.4**
KIS Kishinev 85.91 317 *eP* **P 05 30 04.0 +1.4**
KIS *e* 05 30 18.0
TLCR 86.33 315⇓*i P* **P 05 30 04.8 +0.1**
TLCR 86.33 315 ⇓*P* **P 05 30 04.8 +0.1**
CFR Carcaliu 86.80 315⇓*i P* **P 05 30 06.9 -0.1**
CFR Carcaliu 86.80 315 ⇓*P* **P 05 30 06.9 -0.1**
TLB Topalu 87.00 315⇑*i P* **P 05 30 07.6 -0.4**
TLB Topalu 87.00 315 ⇑*P* **P 05 30 07.6 -0.4**
TESR Tescani 87.47 317⇓*i P* **P 05 30 10.1 -0.2**
VRI Vrincioaia 87.58 316⇓*i P* **P 05 30 10.5 -0.4**
VRI Vrincioaia 87.58 316 ⇓*P* **P 05 30 10.5 -0.4**
PHSR Pinarhisar 88.10 312⇑*i P* **P 05 30 13.0 -0.4**
BURAR Bucovina Array 88.12 318⇓*i P* **P 05 30 13.5 0.0**
BURAR Bucovina Array 88.12 318 ⇓*P* **P 05 30 13.5 0.0**
BUR08 Bucovina Ar. S 88.12 318 *eP* **P 05 30 13.0 -0.5**
comp=Z,5.7nm,0.9s
MLR Muntele Rosu 88.21 316 P **P 05 30 14.6 +0.6**
comp=Z,1.6nm,0.5s,baz=199,slow=3.4,SNR=5.4
MLR Muntele Rosu 88.21 316⇑*i P* **P 05 30 13.2 -0.8**
KMBO Kilima Mbogo 88.83 269 LR LR 06 08 46.5
comp=Z,54nm,19.1s,baz=98,slow=35
UZH Uzhgorod 89.70 320 *eP* **P 05 30 20.2 -0.5**
HFS Hagfors 90.15 332 P **P 05 30 22.0 -0.6**
comp=Z,5.8nm,0.9s,baz=116,slow=6.8,SNR=13
OJC Ojcow 90.72 322 *eP* **P 05 30 24.6 -0.9**
comp=Z,11nm,1.0s
OJC Ojcow 90.72 322 *eP* **P 05 30 24.6 -0.9**
OJC pmax pmax
comp=Z,11nm,1.0s
NB2 NORSAR Subarra 90.85 334 P **P 05 30 24.0 -1.9**
comp=Z,6.7nm,1.0s,baz=68,slow=5.1
NB2 NORSAR Subarra 90.85 334 P **P 05 30 24.0 -1.9**
baz=68,slow=5.1
NB200 NORSAR Array S 90.85 334 *eP* **P 05 30 24.6 -1.3**
NOA NORSAR Array B 90.85 334 P **P 05 30 24.6 -1.3**
comp=Z,1.3nm,0.7s,baz=66,slow=4.7,SNR=8.6
NOA LR LR 06 15 58.2
comp=Z,126nm,18.3s,baz=35,slow=39
MAW Mawson 91.34 200 P **P 05 30 26.9 -0.8**
comp=Z,1.0nm,0.6s,baz=96,slow=9.2,SNR=3.3
VNDA Vanda 91.88 173 P **P 05 30 30.4 +0.3**
comp=Z,5.2nm,1.0s,baz=314,slow=5.8,SNR=17
VNDA Vanda 91.88 173 *eP* **P 05 30 29.9 -0.2**
comp=Z,6.8nm,1.0s
VNDA Vanda 91.88 173 *eP* **P 05 30 29.9 -0.2**
VNDA pmax pmax
comp=Z,7.0nm,1.0s
VYHS Vyhne 91.91 320 *eP* **P 05 30 31.7 +0.6**
VYHS Vyhne 91.91 320 *eP* **P 05 30 31.7 +0.6**
YKA Yellowknife Ar 92.19 24 P **P 05 30 32.3 +0.3**
comp=Z,1.0nm,0.9s,baz=297,slow=4.4,SNR=8.6
MORC Moravsky Berou 92.24 322 *eP* **P 05 30 35.0 +2.4**
JAVC Velka Javorina 92.50 321 *eP* **P 05 30 34.1 +0.3**
VRAC Vranov 92.98 322 P **P 05 30 36.4 +0.4**
comp=Z,2.1nm,0.7s,baz=65,slow=7.9,SNR=3.9
VRAC Vranov 92.98 322 *eP* **P 05 30 36.1 +0.1**
KRUC Moravsky 93.20 322 *eP* **P 05 30 36.7 -0.3**
BRG Berggiesshubel 93.93 324 *eP* **P 05 30 40.3 0.0**
comp=Z,7.5nm,1.3s
BRG *i* 05 30 49.8
comp=Z,10.0nm,1.3s
comp=N,93nm,13.8s
comp=E,101nm,16.2s
comp=Z,135nm,18.2s
BRG Berggiesshubel 93.93 324 *eP* **P 05 30 40.3 0.0**
BRG *i* 05 30 49.8
BRG pmax pmax
comp=Z,8.0nm,1.3s
BRG MLR MLR
comp=N,93nm,13.8s
BRG MLR MLR
comp=E,101nm,16.2s
BRG MLR MLR
comp=Z,135nm,18.2s
CONA Conrad Observa 93.97 321 *eP* **P 05 30 38.7 -1.9**
comp=Z,5.7nm,1.3s
CLL Collm 94.28 325 *i P* **P 05 30 41.1 -0.8**
comp=Z,10.0nm,1.4s
CLL *e* 05 30 53.0
CLL *eS* **S 05 41 45.0 -6.4**
CLL Collm 94.28 325 *i P* **P 05 30 40.2 -1.7**
CLL *i* 05 30 53.0
CLL *eS* **S 05 41 45.0 -6.4**
CLL pmax pmax
comp=Z,10.0nm,1.4s
ARSA Arzberg 94.44 320 *eP* **P 05 30 41.7 -1.1**
comp=Z,6.2nm,1.6s
GERES GERESS Array B 94.91 322 P **P 05 30 45.1 +0.1**
comp=Z,1.0nm,0.9s,baz=32,slow=3.8,SNR=6.3
MOA Molln 94.98 321 *ePcP* **P 05 30 45.4 +0.2**
comp=Z,8.2nm,1.3s
SQTA Sankt Quirin 97.12 321 *ePcP* **P 05 30 54.6 -0.6**
comp=Z,5.2nm,1.0s
MOTA Moosalm 97.13 321 *PcP* **P 05 30 54.3 -0.9**
comp=Z,2.0nm,0.7s
FETA Feichten 97.51 321 P **P 05 30 55.0 -1.9**
comp=Z,3.2nm,1.0s
DAVA Damuels 97.90 322 P **P 05 30 54.4 -4.3**
comp=Z,4.0nm,0.9s

DAVOX **Davos/Dischmat 98.13 321** P Pdif 05 30 60.0 +0.2
comp=Z,3.0nm,0.9s,baz=182,slow=6.0,SNR=3.8
DAVOX **Davos/Dischmat 98.13 321** P Pdif 05 31 00.0 +0.2
NVAR **Mina Array Bea 101.85 46** Pdiff **Pdif** **05 31 20.0 +3.5**
comp=Z,0.3nm,0.7s,baz=287,slow=3.7,SNR=1.9
ESDC **Sonseca Array 110.45 321** PP **PP** **05 36 30.6 +0.4**
comp=Z,0.9nm,0.9s,baz=62,slow=7.6,SNR=4.4
TXAR **Lajitas Array 116.90 48** PKP **PKiKP** **05 36 08.1 +0.1**
comp=Z,0.3nm,0.8s,baz=225,slow=1.6,SNR=3.8
TXAR PKKPab **PKKPab** **05 46 43.2 +4.2**
comp=Z,0.4nm,0.9s,baz=146,slow=5.0,SNR=3.9
JCT **Junction City 118.98 45** *e*PKPdf **PKiKP** **05 36 13.3 +1.4**
JCT **Junction City 118.98 45** *e*PKIKP **PKiKP** **05 36 13.3 +1.4**
TORD **Torodi Ar. Bea 119.14 293** PKP **PKPdf** **05 36 12.5 +0.1**
comp=Z,0.4nm,0.6s,baz=43,slow=1.8,SNR=4.1
TOA1 **Torodi Ar. Sit 119.14 293** *e*PKPdf **PKPdf** **05 36 12.5 +0.1**
WVT **Waverly 122.39 32** *e*PKPdf **PKiKP** **05 36 18.7 +0.3**
WVT **Waverly 122.39 32** *e*PKIKP **PKiKP** **05 36 18.7 +0.3**
DBIC **Dimbokro 127.50 288** PKP **PKPdf** **05 36 28.8 +0.3**
comp=Z,2.7nm,0.8s,baz=220,slow=12,SNR=2.5
PLCA **Paso Flores 148.13 156** PKPbc **PKPbc** **05 37 09.3 +0.6**
comp=Z,3.6nm,0.8s,baz=269,slow=3.8,SNR=7.8
PLCA **Paso Flores 148.13 156** *e*PKPbc **PKPbc** **05 37 09.0 +0.3**
CPUP **Villa Florida 165.62 169** PKPab **PKPab** **05 38 27.1 +0.7**
comp=Z,3.7nm,1.0s,baz=188,slow=7.2,SNR=4.5
CPUP **Villa Florida 165.62 169** *e*PKPab **PKPab** **05 38 26.7 +0.3**
LPAZ **La Paz 165.88 108** PKPab **PKPab** **05 38 29.9 +1.0**
comp=Z,1.0nm,0.8s,baz=315,slow=1.4,SNR=2.9
LPAZ **La Paz 165.88 108** *e*PKPdf **PKPdf** **05 37 27.0 -2.1**
LPAZ *e*PKPab **PKPab** **05 38 29.4 +0.6**
LPAZ **La Paz 165.88 108** *e*PKIKP **PKPdf** **05 37 27.0 -2.1**

IDC 01 05:21:01.9±2.8, 16°.96S×178°.07W, h0km, mb4.1/4, mb1 4.4/4, mb1mx3.9/32, mbtmp4.1/4, Error ellipse: s-maj=276.1km s-min=26.9km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.13**	**259**	P	P	05 29 20.6	+0.1
	1.1nm,0.2s,baz=92,slow=8.3,SNR=38						
ASAR	**Alice Springs**	**45.37**	**253**	P	P	05 29 22.1	-0.3
	7.0nm,0.6s,baz=88,slow=8.5,SNR=44						
TXAR	**Lajitas Array**	**85.22**	**58**	P	P	05 33 41.4	+0.6
	0.4nm,0.7s,baz=196,slow=5.3,SNR=4.5						
PDAR	**Pinedale Array**	**86.44**	**43**	P	P	05 33 46.1	-0.7
	0.2nm,0.5s,baz=186,slow=2.4,SNR=3.8						

MEX 01 05:47:58.1±0.5, 16°.04N×98°.37W, h4km±3km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.42**	**34**	*e*P	Pg	05 48 05.8	-0.3
PNIG				*i* S	Sg	05 48 11.8	+0.2
TLIG	**Tlapa**	**1.52**	**353**	*e*P	Pn	05 48 21.8	-4.4
PLIG	**Platanillo**	**2.57**	**335**	*e*P	Pb	05 48 43.0	-1.9

*MOS **01** 05:48:40.3±0.9, 19°.11N×68°.03W, h13km, mb4.8/23, Error ellipse: s-maj=8.5km s-min=7.1km az=111.1*
*ISCJB **01** 05:48:41.5±0.5, 19°.18N±0°.02×68°.07W±0°.02, h16km±4km, mb4.5/95, MS3.7/12, Error ellipse: s-maj=3.1km s-min=1.7km az=40.1*
*IDC **01** 05:48:41.0±3.0, 18°.98N×68°.11W, h11km±18km, mb4.2/29, mb1 4.4/30, mb1mx4.4/42, mbtmp4.3/30, ML4.8/1, MS3.7/15, Ms1 3.7/15, ms1mx3.5/39, Error ellipse: s-maj=12.4km s-min=9.2km az=73.0*
*NEIC **01** 05:48:42.7±0.0, 19°.34N×68°.17W, h23km, mb4.6/98, MD4.4(RSPR), After RSPR.*
NEIC Felt [II] at Santo Domingo. Felt at Barranquitas and San Sebastian, Puerto Rico.
*RSPR **01** 05:48:42.7, 19°.34N×68°.17W, h23km±24km, MD4.4/20*
ISC 01 05:48:42.9±0.4, 19°.10N±0°.04×68°.04W±0°.03, h22km±4km, n730, σ1§16/750, mb4.7/96, MS3.7/12, 24C-12D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.67**	**210**	‖*e*P	**Pb**	**05 48 56.7**	**+0.8**
PCDR				*e*S	**Sn**	**05 49 07.7**	**+0.9**
PCDR	**Punta Cana, DR**	**0.67**	**210**	‖*i*P	**Pb**	**05 48 56.7**	**+0.8**
PCDR	**Punta Cana, DR**	**0.67**	**210**	*e*Pg	**Pb**	**05 48 56.6**	**+0.8**
PCDR				*e*Sn	**Sn**	**05 49 06.7**	**-0.1**
AGPR	**Aguadilla, PR**	**1.08**	**125**	*e*S	**Sn**	**05 49 19.7**	**+2.7**
AGPR	**Aguadilla, PR**	**1.08**	**125**	‖*e*P	**Pb**	**05 49 03.2**	**+0.3**
AGP	**Aguadilla**	**1.09**	**129**	*e*Pn	**Pn**	**05 49 01.8**	**-1.1**
AGP				*e*Sn	**Sn**	**05 49 19.8**	**+2.4**
MPR	**Mayaguez**	**1.22**	**136**	‖*e*P	**Pb**	**05 49 06.3**	**+0.9**
MPR				*e*S	**Sn**	**05 49 24.2**	**+3.6**
MPR	**Mayaguez**	**1.22**	**136**	‖*e*P	**Pb**	**05 49 06.1**	**+0.8**
MPR	**Mayaguez**	**1.22**	**136**	*e*Pn	**Pn**	**05 49 03.8**	**-0.9**
MPR				*e*Sn	**Sn**	**05 49 23.8**	**+3.2**
LSP	**Las Mesas**	**1.28**	**135**	‖*e*P	**Pn**	**05 49 06.0**	**+0.4**
LSP	**Las Mesas**	**1.28**	**135**	*e*Pn	**Pn**	**05 49 06.0**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.40**	**141**	*e*S	**Sb**	**05 49 28.3**	**+2.6**
CRPR	**Cabo Rojo, PR**	**1.40**	**141**	‖*e*P	**Pb**	**05 49 08.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.40**	**141**	*e*Pn	**Pn**	**05 49 06.5**	**-0.6**
AOPR	**Arecibo Observ**	**1.43**	**121**	‖*e*P	**Pb**	**05 49 08.7**	**-0.2**
AOPR				*e*S	**Sb**	**05 49 28.1**	**+1.5**
AOPR	**Arecibo Observ**	**1.43**	**121**	‖*e*P	**Pb**	**05 49 08.5**	**-0.3**
AOPR	**Arecibo Observ**	**1.43**	**121**	*e*Pn	**Pn**	**05 49 07.2**	**-0.4**
AOPR				*e*Sn	**Sb**	**05 49 29.8**	**+3.2**
EMPR	**Esperanza - Ma**	**1.55**	**113**	‖*e*P	**Pn**	**05 49 10.0**	**+0.7**
EMPR	**Esperanza - Ma**	**1.55**	**113**	*e*S	**Sb**	**05 49 30.5**	**+0.3**
EMPR	**Esperanza - Ma**	**1.55**	**113**	*e*Pn	**Pn**	**05 49 10.0**	**+0.7**
EMPR				*e*Pn	**Pb**	**05 49 10.2**	**-0.8**
EMPR				*e*Sn	**Sb**	**05 49 30.5**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.56**	**135**	‖*e*P	**Pb**	**05 49 10.5**	**-0.7**
GBPR	**Guanica, Bosqu**	**1.56**	**135**	*e*Pn	**Pb**	**05 49 10.5**	**-0.7**
OBIP	**Obispado Ponce**	**1.71**	**127**	‖*e*P	**Pb**	**05 49 13.3**	**-0.4**
OBIP	**Obispado Ponce**	**1.71**	**127**	*e*S	**Sb**	**05 49 36.1**	**+1.3**
OBIP	**Obispado Ponce**	**1.71**	**127**	*e*Pn	**Pb**	**05 49 12.9**	**-0.9**
OBIP				*e*Sn	**Sb**	**05 49 35.8**	**+0.9**
CELP	**Cerrillos**	**1.71**	**126**	‖*e*P	**Pn**	**05 49 12.2**	**+0.7**
CELP	**Cerrillos**	**1.71**	**126**	*e*Pn	**Pn**	**05 49 12.2**	**+0.7**
ICMP	**Isla Caja de M**	**1.87**	**130**	‖*e*P	**Pb**	**05 49 15.2**	**-1.2**
ICMP	**Isla Caja de M**	**1.87**	**130**	*e*S	**Sb**	**05 49 39.7**	**+0.4**
ICMP	**Isla Caja de M**	**1.87**	**130**	*e*Pn	**Pb**	**05 49 15.4**	**-1.0**
ICMP				*e*Sn	**Sb**	**05 49 43.8**	**+4.4**
SDD	**Santo Domingo**	**1.89**	**251**	*e*Pn	**Pn**	**05 49 14.7**	**+0.8**
SJG	**San Juan**	**2.04**	**118**	‖*e*P	**Pn**	**05 49 17.1**	**+1.1**
SJG	**San Juan**	**2.04**	**118**	*e*S	**Sb**	**05 49 43.7**	**-0.6**
SJG	**San Juan**	**2.04**	**118**	Pn	**Pn**	**05 49 16.7**	**+0.7**
	343nm,0.3s,baz=304,slow=9.9,SNR=486						
SJG				Sn	**Sb**	**05 49 42.4**	**-1.8**
	1μm,0.3s,baz=312,slow=23,SNR=11						
SJG	**San Juan**	**2.04**	**118**	*e*Pn	**Pn**	**05 49 16.4**	**+0.5**
SJG				*e*Sn	**Sb**	**05 49 44.3**	**+0.1**
CBYP	**Canovanas**	**2.22**	**111**	‖*e*P	**Pn**	**05 49 18.8**	**+0.3**
CBYP	**Canovanas**	**2.22**	**111**	‖*e*P	**Pn**	**05 49 18.9**	**+0.4**
CBYP				*e*S	**Sn**	**05 49 47.2**	**+1.8**
CBYP	**Canovanas**	**2.22**	**111**	*e*Pn	**Pn**	**05 49 18.5**	**-0.1**
CBYP				*e*Sn	**Sn**	**05 49 47.4**	**+2.0**
HUMP	**Col San Antoni**	**2.28**	**114**	‖*e*P	**Pn**	**05 49 20.1**	**+0.8**
HUMP	**Col San Antoni**	**2.28**	**114**	*e*S	**Sn**	**05 49 48.0**	**+1.3**
HUMP	**Col San Antoni**	**2.28**	**114**	‖*e*P	**Pn**	**05 49 20.4**	**+1.1**
HUMP				*e*S	**Sn**	**05 49 48.6**	**+1.9**
HUMP	**Col San Antoni**	**2.28**	**114**	*e*Pn	**Pn**	**05 49 19.7**	**+0.4**
HUMP				*e*Sn	**Sn**	**05 49 47.1**	**+0.4**
BANI	**BANI**	**2.31**	**253**	*e*Pn	**Pn**	**05 49 15.9**	**-3.9**
MTP	**Monte Pirata**	**2.56**	**112**	‖*e*P	**Pn**	**05 49 23.5**	**+0.4**
MTP	**Monte Pirata**	**2.56**	**112**	*e*S	**Sb**	**05 49 56.4**	**-2.7**
MTP	**Monte Pirata**	**2.56**	**112**	*e*Pn	**Pn**	**05 49 23.0**	**-0.1**
CUPR	**Culebra, Puert**	**2.73**	**106**	‖*e*P	**Pn**	**05 49 24.9**	**-0.4**
CUPR	**Culebra, Puert**	**2.73**	**106**	*e*Pn	**Pn**	**05 49 25.2**	**-0.2**
STVI	**Saint Thomas**	**3.01**	**104**	‖*e*P	**Pn**	**05 49 29.4**	**0.0**
STVI	**Saint Thomas**	**3.01**	**104**	‖*e*P	**Pn**	**05 49 29.6**	**+0.2**
STVI				*e*S	**Sn**	**05 50 05.4**	**+0.6**
STVI	**Saint Thomas**	**3.01**	**104**	*e*S	**Sn**	**05 50 06.1**	**+1.3**
STVI	**Saint Thomas**	**3.01**	**104**	*e*Pn	**Pn**	**05 49 28.8**	**-0.6**
CDVI	**St. Croix**	**3.38**	**113**	‖*e*P	**Pn**	**05 49 35.9**	**+1.5**
CDVI	**St. Croix**	**3.38**	**113**	‖*e*P	**Pn**	**05 49 37.2**	**+2.8**
CDVI				*e*S	**Sn**	**05 50 16.8**	**+3.0**
CDVI	**St. Croix**	**3.38**	**113**	*e*Pn	**Pn**	**05 49 35.4**	**+1.0**
CDVI				*e*Pn	Pb	05 49 37.2	-4.9
CDVI				*e*Sn	**Sn**	**05 50 16.8**	**+3.0**
GRTK	**Grand Turk**	**3.77**	**310**	*e*Pn	**Pn**	**05 49 38.2**	**-1.6**
SMRT	**St. Maarten**	**4.82**	**102**	*e*Pn	**Pn**	**05 49 53.5**	**-0.8**
SMRT	**St. Maarten**	**4.82**	**102**	*e*P	**Pn**	**05 49 53.6**	**-0.6**
SMRT	**St. Maarten**	**4.82**	**102**	*e*S	**Sn**	**05 50 46.2**	**-3.2**
SEUS	**St. Eustatius**	**5.06**	**108**	*e*P	**Pn**	**05 50 02.1**	**+4.6**
SEUS	**St. Eustatius**	**5.06**	**108**	*e*S	**Sb**	**05 51 05.6**	**-5.6**
BSK	**Brimstone Hill**	**5.24**	**109**	*e*P	**Pn**	**05 50 00.7**	**+0.8**
SKI	**Saint Kitts**	**5.33**	**108**	*e*Pn	**Pn**	**05 50 02.3**	**+1.0**
SKI	**Saint Kitts**	**5.33**	**108**	*e*P	**Pn**	**05 50 02.8**	**+1.5**
SKI	**Saint Kitts**	**5.33**	**108**	*e*S	**Sn**	**05 51 04.2**	**+2.1**
SKI	**Saint Kitts**	**5.33**	**108**	*e*P	**Pn**	**05 50 02.3**	**+1.0**
NVBH	**Bath Hotel, Ne**	**5.52**	**110**	*e*P	**Pn**	**05 50 04.2**	**+0.3**
MLYT	**Lee's Yard**	**6.04**	**112**	*e*P	**Pn**	**05 50 13.2**	**+2.1**
MLYT	**Lee's Yard**	**6.04**	**112**	*e*S	**Sn**	**05 51 22.6**	**+2.9**
ANWB	**Willy Bob**	**6.10**	**102**	*e*P	**Pn**	**05 50 09.9**	**-2.0**
ANWB	**Willy Bob**	**6.10**	**102**	*e*S	**Sn**	**05 51 18.2**	**-2.8**
BPA	**Boggy Peak**	**6.22**	**108**	*e*P	Pn	05 50 18.9	+5.4
BPA	**Boggy Peak**	**6.22**	**108**	*e*		05 51 34.6	
GTBY	**Guantanamo Bay**	**6.72**	**278**	*e*Pn	**Pn**	**05 50 17.8**	**-2.6**
ABD	**La Joyeuse, An**	**6.76**	**112**	*e*P	**Pn**	**05 50 24.5**	**+3.6**
CBE	**Ff, Capester**	**6.83**	**115**	*e*P	**Pn**	**05 50 25.3**	**+3.4**
TBG	**Guadaloupe-3**	**6.90**	**117**	*e*P	**Pn**	**05 50 25.8**	**+3.0**
MAGL	**Barre de l'ile**	**7.16**	**115**	*e*P	**Pn**	**05 50 29.8**	**+3.4**
BBL	**Barber's Block**	**7.21**	**119**	*e*P	**Pn**	**05 50 28.8**	**+1.7**
DBCT	**Belle View Cho**	**7.44**	**120**	*e*P	**Pn**	**05 50 30.2**	**-0.1**
PCM	**Pelee Case Pet**	**7.79**	**122**	*e*P	**Pn**	**05 50 38.2**	**+3.0**
PML	**Morne Lenard**	**7.83**	**122**	*e*P	Pn	05 50 43.0	+7.3
BAMF	**Morne Balai**	**7.84**	**122**	*e*P	**Pn**	**05 50 40.2**	**+4.3**
FDF	**Fort de France**	**7.89**	**122**	*e*P	**Pn**	**05 50 38.4**	**+1.9**
BIM	**Bigot**	**8.07**	**123**	*e*P	**Pn**	**05 50 40.3**	**+1.3**
ZAM	**Aeronautique**	**8.08**	**123**	*e*P	**Pn**	**05 50 40.5**	**+1.5**
TRMF	**Trois Ilets**	**8.08**	**123**	*e*P	**Pn**	**05 50 40.3**	**+1.3**
LPMF	**Morne Lapointe**	**8.12**	**123**	*e*P	**Pn**	**05 50 43.3**	**+3.7**
URIC	**Uribia, Colomb**	**8.28**	**208**	*e*P	**Sn**	**05 52 12.9**	**-1.8**
MPOM	**Morne Pois Mar**	**8.28**	**123**	*e*P	**Pn**	**05 50 45.5**	**+3.6**
SLBI	**Saint Lucia, B**	**8.44**	**126**	*e*P	**Pn**	**05 50 46.3**	**+2.3**
SLBI	**Saint Lucia, B**	**8.44**	**126**	*e*S	**Sn**	**05 52 19.9**	**+1.3**
SLB	**Belfond**	**8.51**	**127**	*e*P	Pn	05 50 50.5	+5.4
SVV	**Soufriere Volc**	**8.71**	**130**	*e*P	Pn	05 50 55.9	+8.1
SVB	**Belmont**	**8.72**	**131**	*e*Pn	**Pn**	**05 50 49.4**	**+1.6**
SVB	**Belmont**	**8.72**	**131**	*e*P	Pn	05 50 55.2	+7.4
SSV	**Crater Summit**	**8.72**	**130**	*e*P	**Pn**	**05 50 43.6**	**-4.3**
SVCV	**St. Vincent, C**	**8.79**	**130**	*e*P	Pn	05 51 02.5	+14
SDV	**Santo Domingo**	**10.46**	**194**	Pn	**Pn**	**05 51 13.6**	**+1.8**
	4.6nm,0.3s,baz=8.3,slow=10,SNR=28						
SDV				Sn	**Sn**	**05 53 06.0**	**-2.5**
	1.8nm,0.3s,baz=304,slow=20,SNR=2.5						
SDV				LR	LR	05 55 42.0	
	comp=Z,194nm,19.2s,baz=16,slow=41						
SDV	**Santo Domingo**	**10.46**	**194**	*e*P	**Pn**	**05 51 15.8**	**+3.9**
TRN	**Trinidad (W)**	**10.56**	**142**	*e*P	Pn	05 51 18.7	+5.6
TRN	**Trinidad (W)**	**10.56**	**142**	*e*S	**Sn**	**05 53 07.2**	**-3.6**
TOSP	**Speyside**	**10.60**	**136**	*e*P	Pn	05 51 19.9	+6.3
TOSP	**Speyside**	**10.60**	**136**	*e*S	**Sn**	**05 53 10.2**	**-1.6**
PAMC	**Pamplona, Colo**	**12.54**	**202**	*e*P	**Pn**	**05 51 41.7**	**+1.1**
GIRC	**Giron, Santand**	**12.96**	**203**	*e*P	**Pn**	**05 51 47.0**	**+1.0**
BRRC	**Barranca, Sant**	**13.13**	**206**	*e*P	**Pn**	**05 51 49.6**	**+1.4**
ZARC	**Zaragoza, Cauc**	**13.30**	**211**	*e*P	**Pn**	**05 51 50.3**	**-0.3**
BARC	**Barichara**	**13.40**	**203**	*e*P	**Pn**	**05 51 53.6**	**+1.5**
UREC	**San Jos de Ur**	**13.42**	**214**	*e*P	**Pn**	**05 51 53.0**	**+0.7**
BBSR	**BB Station**	**13.56**	**12**	*e*Pn	**Pn**	**05 51 51.8**	**-2.2**
PTBC	**PUERTO BERRIO,**	**13.96**	**207**	*e*P	**P**	**05 52 04.3**	**-3.2**
RUSC	**La Rusia**	**14.02**	**201**	*e*P	**Pn**	**05 52 00.9**	**+0.2**
YOPC	**Yopal, Colombi**	**14.31**	**198**	*e*P	**Pn**	**05 52 06.3**	**+1.8**
959A	**Okeechobee**	**14.47**	**308**	P	**Pn**	**05 52 04.4**	**-2.0**
	baz=122						
HELC	**Santa Helena**	**14.76**	**211**	*e*P	**Pn**	**05 52 12.2**	**+1.4**
859A	**Kempfer Cattle**	**14.78**	**310**	P	**Pn**	**05 52 09.1**	**-1.6**
	baz=124						
NORC	**Norcasia**	**15.01**	**207**	*e*P	**Pn**	**05 52 16.2**	**+2.3**
BCIP	**Isla Barro Col**	**15.10**	**231**	*e*Pn	**Pn**	**05 52 15.9**	**+0.8**
	38nm,0.7s						
BCIP	**Isla Barro Col**	**15.10**	**231**	*e*P	**Pn**	**05 52 15.9**	**+0.8**
BCIP				pmax	pmax		
	comp=Z,38nm,0.7s						
DWPF	**Disney Wildern**	**15.20**	**309**	P	**Pn**	**05 52 15.0**	**-1.3**
	baz=123						
CHIC	**Chingaza**	**15.42**	**202**	*e*P	**Pn**	**05 52 20.2**	**+0.6**
ROSC	**El Rosal**	**15.44**	**204**	Pn	**P**	**05 52 23.0**	**-1.3**
	comp=Z,3.3nm,0.3s,baz=44,slow=11,SNR=22						
ROSC				Sn	**Sn**	**05 55 08.5**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=157,slow=23,SNR=2.1						
ROSC				LR	LR	05 58 48.1	
	comp=Z,292nm,19.7s,baz=2.5,slow=40						
ROSC	**El Rosal**	**15.44**	**204**	*e*Pn	**Pn**	**05 52 22.3**	**+2.4**
	comp=Z,54nm,0.7s						
ROSC				*e*Sn	**Sn**	**05 55 14.5**	**+3.9**
GUY2C	**Guyana, Caldas**	**15.53**	**208**	*e*P	**P**	**05 52 24.9**	**-0.5**
SOLC	**Bahia Solano**	**15.71**	**217**	*e*P	**Pn**	**05 52 24.9**	**+1.8**
RREF	**El Recreo**	**15.81**	**208**	*e*P	**P**	**05 52 30.2**	**+1.5**
658A	**Bunnell**	**15.83**	**313**	P	**Pn**	**05 52 23.6**	**-0.9**
	baz=127						
857A	**Zephyrhills**	**15.87**	**308**	P	**Pn**	**05 52 24.1**	**-1.0**
	baz=122,SNR=5.3						
VILC	**Villavicencio,**	**15.88**	**201**	*e*P	**Pn**	**05 52 26.2**	**+0.8**
757A	**Oxford**	**16.12**	**310**	P	**Pn**	**05 52 26.6**	**-1.7**
	baz=124						
657A	**Interlachen**	**16.35**	**312**	P	**Pn**	**05 52 29.7**	**-1.4**
	baz=126,SNR=6.0						
557A	**Orange Park**	**16.52**	**314**	P	**Pn**	**05 52 32.2**	**-1.1**
	baz=128,SNR=7.2						
PRAC	**Prado**	**16.69**	**204**	*e*P	**Pn**	**05 52 36.2**	**+0.6**
656A	**Willston**	**16.70**	**310**	P	**Pn**	**05 52 34.6**	**-1.0**
	baz=124						
556A	**Lake Butler**	**16.98**	**312**	P	**Pn**	**05 52 38.4**	**-0.6**
	baz=126,SNR=11						
GUVC	**San Jose del G**	**17.05**	**196**	*e*P	**Pn**	**05 52 39.5**	**-0.7**
YOTC	**Yotoco, Valle**	**17.07**	**209**	*e*P	**P**	**05 52 42.1**	**0.0**
357A	**Townsend**	**17.26**	**318**	P	**Pn**	**05 52 41.6**	**-1.1**
	baz=132						
555A	**McAlpin**	**17.44**	**312**	P	**Pn**	**05 52 43.9**	**-1.0**
	baz=125						
Z58A	**St. Stephen**	**17.66**	**326**	P	**Pn**	**05 52 47.1**	**-0.5**
	baz=140						
NHSC	**New Hope**	**17.69**	**324**	P	**Pn**	**05 52 47.9**	**0.0**
	baz=139						
X60A	**Albert Glenn T**	**17.77**	**332**	P	**Pn**	**05 52 48.8**	**-0.1**
	baz=148						
MACC	**Macarena, Meta**	**17.78**	**199**	*e*P	**Pn**	**05 52 49.5**	**+0.2**
V62A	**Hyde County Ai**	**17.83**	**338**	P	**Pn**	**05 52 49.0**	**-0.7**
	baz=155						
455A	**Stateville**	**17.85**	**313**	P	**Pn**	**05 52 49.1**	**-0.8**
	baz=127						
W61A	**Ground Anchor**	**17.88**	**335**	P	**Pn**	**05 52 49.6**	**-0.6**
	baz=152						
Y58A	**Scranton**	**18.03**	**327**	P	**Pn**	**05 52 51.9**	**-0.2**
	baz=142,SNR=5.3						
X59A	**McDuffie Farm,**	**18.05**	**331**	P	**Pn**	**05 52 51.5**	**-0.8**
	baz=146						
W60A	**Pink Hill**	**18.06**	**334**	P	**Pn**	**05 52 52.1**	**-0.4**
	baz=149,SNR=11						
355A	**Pearson**	**18.10**	**315**	P	**Pn**	**05 52 53.1**	**+0.1**
	baz=129						
156A	**Sylvania**	**18.11**	**321**	P	**Pn**	**05 52 53.1**	**0.0**
	baz=135						
Z57A	**Bowman**	**18.12**	**324**	P	**Pn**	**05 52 53.2**	**0.0**
	baz=138						
255A	**Hazlehurst**	**18.23**	**317**	P	**P**	**05 52 54.7**	**+0.1**
	baz=131						
454A	**Quitman**	**18.25**	**312**	P	**P**	**05 52 55.3**	**+0.4**
	baz=126						
V61A	**Roper**	**18.26**	**337**	P	**Pn**	**05 52 54.8**	**-0.1**
	baz=154						
CNNC	**Cliffs of the**	**18.30**	**333**	P	**Pn**	**05 52 54.9**	**-0.5**
	baz=149						
X58A	**Rowland**	**18.38**	**329**	P	**P**	**05 52 55.9**	**-0.5**
	baz=144						
W59A	**Clinton**	**18.47**	**332**	P	**P**	**05 52 57.2**	**-0.1**
	baz=148						
Y57A	**Sumter**	**18.49**	**326**	*e*Pn	**P**	**05 52 57.7**	**+0.2**
	comp=Z,33nm,1.1s						
V60A	**Jim Taylor Roa**	**18.50**	**336**	P	**P**	**05 52 57.1**	**-0.5**
	baz=152,SNR=6.6						
POPC	**Popayan, Colom**	**18.50**	**208**	*e*P	**P**	**05 52 58.1**	**+0.1**
JTS	**Las Juntas de**	**18.54**	**244**	P	**Pn**	**05 53 00.0**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=136,slow=8.4,SNR=7.3						
JTS				LR	LR	06 00 47.3	
	comp=Z,185nm,19.7s,baz=124,slow=39						
JTS	**Las Juntas de**	**18.54**	**244**	*e*P	**Pn**	**05 53 00.1**	**+1.5**
	comp=Z,18nm,0.9s						
JTS	**Las Juntas de**	**18.54**	**244**	*e*P	**Pn**	**05 53 00.1**	**+1.5**
JTS				pmax	pmax		
	comp=Z,18nm,0.9s						
ESTN	**Estel**	**18.59**	**254**	*e*P	**Pn**	**05 53 00.7**	**+1.5**
	comp=Z,18nm,1.0s						
TIGA	**Tifton**	**18.65**	**314**	*e*P	**Pn**	**05 52 59.8**	**+0.1**
	comp=Z,43nm,0.8s						
TIGA	**Tifton**	**18.65**	**314**	P	**P**	**05 52 59.0**	**-0.4**
	baz=127,SNR=8.1						
155A	**Kite**	**18.68**	**319**	P	**Pn**	**05 53 00.1**	**0.0**
	baz=133,SNR=13						
X57A	**Johnson Farm,**	**18.69**	**327**	P	**P**	**05 52 59.7**	**0.0**
	baz=142,SNR=11						
U61A	**Possum Corner**	**18.70**	**338**	P	**P**	**05 52 59.4**	**-0.5**
	baz=155						
W58A	**Raeford**	**18.71**	**330**	P	**P**	**05 52 59.8**	**-0.2**
	baz=145						
254A	**Abbeville**	**18.77**	**316**	P	**Pn**	**05 53 01.3**	**+0.1**
	baz=129,SNR=8.0						
453A	**Whigham**	**18.81**	**312**	P	**P**	**05 53 01.1**	**0.0**
	baz=124,SNR=9.7						
Y56A	**Pelion**	**18.82**	**324**	P	**P**	**05 53 01.4**	**+0.2**
	baz=138						
V59A	**Middlesex**	**18.89**	**334**	P	**P**	**05 53 02.3**	**+0.4**
	baz=149						
Z55A	**Blythe**	**18.89**	**321**	P	**P**	**05 53 02.1**	**+0.1**
	baz=135						
FLOC	**Florencia**	**18.94**	**204**	*e*P	**Pn**	**05 53 04.8**	**+1.4**
353A	**Camilla**	**19.03**	**313**	P	**Pn**	**05 53 04.4**	**+0.1**
	baz=126,SNR=6.2						
154A	**Montrose**	**19.08**	**318**	P	**P**	**05 53 04.1**	**+0.1**
	baz=131,SNR=12						
U60A	**Pendleton**	**19.08**	**337**	P	**P**	**05 53 04.1**	**+0.1**
	baz=153						
TGUH	**Tegucigalpa,Un**	**19.10**	**258**	*e*P	**Pn**	**05 53 05.5**	**+0.2**
	comp=Z,24nm,0.8s						
W57A	**Gilead**	**19.18**	**329**	P	**P**	**05 53 05.5**	**+0.4**
	baz=144						
X56A	**White Oak**	**19.20**	**326**	P	**P**	**05 53 05.4**	**+0.1**
	baz=140,SNR=8.4						
U59A	**Littleton**	**19.22**	**335**	P	**P**	**05 53 06.0**	**+0.5**
	baz=151,SNR=15						
BBAC	**Balboa, Cauca**	**19.22**	**209**	*e*P	**P**	**05 53 06.1**	**+0.2**
Y55A	**Saluda**	**19.24**	**323**	P	**P**	**05 53 06.3**	**+0.5**
	baz=137,SNR=8.4						
V58A	**Windy Hill, Pi**	**19.30**	**332**	P	**P**	**05 53 06.7**	**+0.4**
	baz=147						
Z54A	**Sparta**	**19.33**	**320**	P	**Pn**	**05 53 07.6**	**-0.4**
	baz=133,SNR=12						
253A	**Americus**	**19.39**	**315**	P	**Pn**	**05 53 08.4**	**-0.3**
	baz=128						
452A	**Marianna**	**19.43**	**310**	P	**P**	**05 53 08.1**	**+0.2**
	baz=123						
W56A	**Indian Trail**	**19.46**	**328**	P	**P**	**05 53 08.3**	**+0.1**
	baz=142						
CRUC	**La Cru

baz=146
S56A Natural Bridge 21.08 334 P P 05 53 26.3 +0.6
baz=148,SNR=11
T55A Pulaski 21.15 331 P P 05 53 26.9 +0.3
baz=145
349A Repton 21.16 309 P P 05 53 26.8 +0.2
baz=120
Y51A Rockmart 21.16 318 P P 05 53 27.7 +1.0
baz=130,SNR=21
U54A Nelsons Funny 21.17 328 P P 05 53 27.7 +0.8
baz=142
R57A Stanardsville 21.20 337 P P 05 53 27.6 +0.6
baz=152,SNR=5.1
PTGA Pitinga 21.24 157 P P 05 53 27.5 -0.1
comp=Z,7.7nm,0.6s,baz=359,slow=9.7,SNR=12
PTGA LR LR 06 01 38.7
comp=Z,131nm,20.1s,baz=338,slow=37
PTGA Pitinga 21.24 157 eP P 05 53 29.0 +1.4
comp=Z,15nm,0.7s
W52A Murphy 21.26 322 P P 05 53 28.7 +0.9
baz=134,SNR=6.4
Z50A Ashland 21.32 315 P P 05 53 29.3 +0.9
baz=127,SNR=36
OTAV Otavalo 21.35 210 eP P 05 53 30.6 +1.3
comp=Z,29nm,0.9s
OTAV Otavalo 21.35 210 eP P 05 53 30.6 +1.3
OTAV pmax pmax
comp=Z,29nm,0.9s
OTAV Otavalo 21.35 210 eP P 05 53 30.0 +0.7
249A Camden 21.43 310 P P 05 53 30.7 +1.1
baz=122,SNR=18
U53A Fall Branch 21.44 326 P P 05 53 30.4 +0.7
baz=140,SNR=12
X51A Calhoun 21.46 319 P P 05 53 29.8 -0.1
baz=132,SNR=6.6
T54A Tazewell 21.48 329 P P 05 53 29.2 -1.0
baz=143
149A Jones 21.53 312 P P 05 53 30.6 -0.1
baz=124,SNR=14
S55A Lewisburg 21.56 332 P P 05 53 31.6 +0.7
baz=146
Y50A Piedmont 21.59 317 P P 05 53 32.3 +1.0
baz=128,SNR=28
V52A Sevierville 21.60 324 P P 05 53 32.1 +0.7
baz=136,SNR=8.2
P60A Greenville 21.66 344 P P 05 53 31.9 -0.1
baz=160
O61A Allentown 21.67 346 P P 05 53 32.4 +0.4
baz=163
P59A Jarrettsville 21.69 342 P P 05 53 32.6 +0.3
baz=158
Z49A Columbiana 21.70 314 P P 05 53 33.7 +1.2
baz=126,SNR=27
W51A Cleveland 21.80 321 P P 05 53 34.6 +1.1
baz=133,SNR=29
Q57A Strasburg 21.81 338 P P 05 53 34.4 +0.8
baz=153
U52A Thorn Hill 21.88 325 P P 05 53 35.2 +0.7
baz=138,SNR=11
T53A Wise 21.89 327 P P 05 53 35.3 +0.7
baz=141,SNR=7.8
X50B Fort Payne 21.89 318 P P 05 53 35.3 +0.8
baz=130,SNR=32
LRAL Lakeview Retre 21.92 313 P P 05 53 36.0 +1.1
baz=124,SNR=21
S54A Dingess, Beckl 21.94 331 P P 05 53 35.0 -0.1
baz=145
V51A Loudon 22.00 322 P P 05 53 36.5 +0.7
baz=135,SNR=18
Y49A Blount Mountai 22.01 316 P P 05 53 36.4 +0.6
baz=127,SNR=18
P57A Homestead Farm 22.07 339 P P 05 53 36.9 +0.5
baz=154
O60A Telford 22.08 345 P P 05 53 36.8 +0.4
baz=161
TZTN Tazewell 22.09 325 P P 05 53 37.0 +0.3
baz=138,SNR=10
148A Greensboro 22.11 311 P P 05 53 37.6 +0.7
baz=123,SNR=8.7
W50A Signal Mountai 22.16 320 P P 05 53 38.2 +0.7
baz=132,SNR=26
T52A Hallie 22.22 327 P P 05 53 38.6 +0.6
baz=140,SNR=6.0
U51A La Follette 22.23 324 P P 05 53 38.6 +0.4
baz=136,SNR=9.2
S53A Williamson 22.23 329 P P 05 53 38.3 +0.1
baz=143
O59A Robesonia 22.28 343 P P 05 53 39.7 +1.1
baz=160
V50A Pikevile 22.35 321 P P 05 53 40.1 +0.6
baz=133,SNR=21
X49A Woodville 22.35 317 P P 05 53 40.0 +0.5
baz=129,SNR=12
P56A Dayton Farm, R 22.38 338 P P 05 53 40.4 +0.7
baz=152
PAL Palisades 22.41 348 P P 05 53 40.1 +0.1
baz=166
Y48A Jasper 22.55 315 P P 05 53 41.7 +0.1
baz=126,SNR=9.4
O57A Amberson 22.61 341 P P 05 53 41.8 -0.4
baz=156
T51A Gray 22.62 325 P P 05 53 42.4 +0.1
baz=138,SNR=9.0
147A Livingston 22.62 311 P P 05 53 42.2 -0.2
baz=122,SNR=9.3
R53A Hurricane 22.67 331 P P 05 53 41.9 -0.9
baz=144
W49A Belvidere 22.70 318 P P 05 53 42.8 -0.4
baz=130,SNR=15
S52A Salyersville 22.70 328 P P 05 53 42.7 -0.5
baz=141
Q54A Coxs Mills 22.71 333 P P 05 53 43.2 -0.1
baz=147,SNR=6.0
U50A Jamestown 22.72 323 P P 05 53 43.8 +0.4
baz=135,SNR=26
N59A State Game Lan 22.74 345 P P 05 53 43.5 0.0
baz=161
P55A Reedsville 22.75 336 P P 05 53 43.3 -0.4
baz=150
X48A Hartselle 22.79 316 P P 05 53 44.1 0.0
baz=127,SNR=14
MCWV Mont Chateau 22.89 336 P P 05 53 45.0 -0.1
baz=150
V49A McMinnville 22.90 320 P P 05 53 45.3 0.0
baz=132,SNR=9.2
Q53A Leroy 22.91 332 P P 05 53 45.0 -0.3
baz=146
S51A Beattyville 22.93 327 P P 05 53 45.5 -0.1
baz=139,SNR=8.5
O56A Blue Knob Stat 22.96 339 P P 05 53 46.4 +0.4
baz=154
R52A Catlettsburg 23.00 329 P P 05 53 46.3 0.0
baz=142
SSPA Standing Stone 23.07 341 P P 05 53 46.4 -0.6
baz=156
N57A Milroy 23.08 341 P P 05 53 46.6 -0.5
baz=157
P54A Burton 23.09 335 P P 05 53 47.5 +0.4
baz=149
W48A Pulaski 23.14 317 P P 05 53 48.2 +0.5
baz=129,SNR=8.4
T50A Nancy 23.15 324 P P 05 53 48.2 +0.4
baz=136,SNR=19
O55A Ligonier 23.17 338 P P 05 53 48.2 +0.2
baz=152
Q52A Bidwell 23.32 331 P P 05 53 49.3 -0.2
baz=144,SNR=5.6
U49A Red Boiling Sp 23.33 322 P P 05 53 49.3 -0.3
baz=133,SNR=14
X47A Russelville 23.36 315 P P 05 53 49.4 -0.5
baz=126,SNR=36
P53A Whipple 23.37 333 P P 05 53 50.2 +0.2
baz=147
S50A Richmond 23.39 326 P P 05 53 49.6 -0.6
baz=138
R51A Hillsboro 23.43 328 P P 05 53 50.9 +0.2
baz=140,SNR=9.3
V48A Smith Brothers 23.45 319 P P 05 53 51.0 +0.2
baz=130,SNR=15
N56A West Decatur 23.46 340 P P 05 53 51.4 +0.5
baz=155
HRV Adam Dziewonsk 23.53 353 P P 05 53 51.0 -0.5
baz=172
O54A Avella 23.55 336 P P 05 53 52.1 +0.3
baz=150
N55A Marion Center 23.56 339 P P 05 53 52.6 +0.6
baz=154
T49A Edmonton 23.60 323 P P 05 53 53.0 +0.7
baz=135,SNR=7.0
W47A Westpoint 23.63 317 P P 05 53 53.1 +0.5
baz=128,SNR=13
U48A Cassie Pea, Po 23.78 321 P P 05 53 54.4 +0.4
baz=132,SNR=9.1
R50A Paris 23.80 327 P P 05 53 55.4 +1.2
baz=139,SNR=12
P52A Corning 23.81 332 P P 05 53 54.4 +0.1
baz=145
X46A Booneville 23.87 314 P P 05 53 55.2 +0.2
baz=125
Q51A Peebles 23.88 329 P P 05 53 55.6 +0.6
baz=142
O53A New Philadelph 23.93 335 P P 05 53 55.7 +0.3
baz=148
M56A Emporium 23.94 341 P P 05 53 55.9 +0.4
baz=156
V47A Nunnelly 23.94 318 P P 05 53 56.1 +0.5
baz=129,SNR=9.2
S49A Springfield 23.94 325 P P 05 53 56.0 +0.5
baz=136,SNR=9.7
BINY Binghamton 24.00 345 P P 05 53 56.5 +0.5
baz=162
Q50A Georgetown 24.05 328 P P 05 53 56.6 0.0
baz=140
VBMS Vicksburg 24.05 307 P P 05 53 56.8 +0.2
baz=117
W46A Michie 24.07 316 P P 05 53 56.9 +0.1
baz=126,SNR=12
N54A Moraine State 24.08 337 P P 05 53 57.0 +0.2
baz=152
O52A Adamsville 24.08 333 P P 05 53 57.3 +0.5
baz=147,SNR=7.7
T48A Bowling Green 24.10 322 P P 05 53 57.5 +0.5
baz=133,SNR=7.7
M55A Ridgway 24.11 340 P P 05 53 57.5 +0.4
baz=155
P51A Williamsport 24.11 331 P P 05 53 57.4 +0.4
baz=143
U47A Clarksville 24.19 320 P P 05 53 57.9 +0.1
baz=130,SNR=8.0
R49A Shelbyville 24.25 326 P P 05 53 59.3 +0.9
baz=137
N53A Lisbon 24.26 336 P P 05 53 59.1 +0.6
baz=150,SNR=7.2
S48A Wiedeman Farm, 24.28 323 P P 05 53 59.0 +0.3
baz=135,SNR=13
V46A Holladay 24.30 317 P P 05 53 59.0 0.0
baz=128,SNR=6.1
WVT Waverly 24.32 318 P P 05 53 59.3 +0.2
baz=129
OXF Oxford 24.41 313 P P 05 54 00.5 +0.6
baz=123,SNR=8.3
T47A Sharon Grove 24.43 321 P P 05 54 00.6 +0.5
baz=132
P50A Jamestown 24.56 330 P P 05 54 01.6 +0.5
baz=142,SNR=7.4
Q49A Aurora 24.64 327 P P 05 54 02.1 +0.2
baz=139
L55A Hinsdale 24.65 341 P P 05 54 02.0 0.0
baz=156
ACSO Alum Creek Sta 24.68 332 P P 05 54 02.8 +0.5
baz=144,SNR=7.3
U46A Springville 24.69 318 P P 05 54 02.6 +0.2
baz=129
R48A Northridge Ran 24.71 325 P P 05 54 03.3 +0.8
baz=136
S47A Hartford 24.71 322 P P 05 54 03.2 +0.7
baz=133
M53A WI Miller and 24.75 337 P P 05 54 03.2 +0.4
baz=150
WCI Wyandotte Cave 24.82 324 P P 05 54 04.0 +0.5
baz=135
O50A Cable 24.90 331 P P 05 54 04.5 +0.2
baz=143
T46A Princeton 24.95 320 P P 05 54 04.8 +0.1
baz=130,SNR=16
P49A Miami Univ. Ec 24.95 328 P P 05 54 05.1 +0.4
baz=140,SNR=8.7
L54A Sinclairville 24.98 340 P P 05 54 05.0 0.0
baz=154
N51A Ashland 24.98 334 P P 05 54 05.1 +0.2
baz=146
R47A Wooly Knot Far 24.99 324 P P 05 54 05.5 +0.4
baz=135
Q48A North Vernon 25.02 326 P P 05 54 05.9 +0.6
baz=137,SNR=14
K55A Perry 25.04 342 P P 05 54 05.5 -0.1
baz=157
L53A Girard 25.05 338 P P 05 54 06.1 +0.5
baz=152
ERPA Erie 25.10 339 P P 05 54 06.2 +0.2
baz=153
K54A Basiliko Farm, 25.12 341 P P 05 54 05.8 -0.4
baz=156
N50A Nevada 25.19 332 P P 05 54 07.0 +0.2
baz=145
M51A Elyria 25.24 334 P P 05 54 07.7 +0.3
baz=147
P48A Milroy 25.25 327 P P 05 54 07.8 +0.4
baz=139
S46A Don Dixon Farm 25.26 321 P P 05 54 08.0 +0.5
baz=132,SNR=15
O49A Covington 25.27 330 P P 05 54 08.4 +0.8
baz=142
Q47A Bedord North L 25.39 325 P P 05 54 09.3 +0.6
baz=136,SNR=9.2
T45A Paducah 25.39 319 P P 05 54 09.1 +0.4
baz=129
X43A Marvell 25.44 312 P P 05 54 09.7 +0.4
baz=121
R46A Gibon Southern 25.50 322 P P 05 54 09.9 +0.3
baz=133
CMIG Matias Romero 25.59 270 P P 05 54 09.0 -1.8
comp=Z,4.8nm,0.8s,baz=46,slow=8.9,SNR=7.2
P47A Martinsville 25.71 326 P P 05 54 11.9 +0.3
baz=137
O48A Farmland 25.72 329 P P 05 54 12.2 +0.5
baz=140
N49A Columbus Grove 25.77 331 P P 05 54 12.8 +0.6
baz=143
R45A Skylar, Fairfi 26.00 322 P P 05 54 15.1 +0.9
baz=132,SNR=21
N48A Decatur 26.12 330 P P 05 54 16.2 +0.8
baz=141
K51A Iona Station 26.17 337 P P 05 54 16.4 +0.6
baz=150
S44A Carbondale 26.20 319 P P 05 54 16.5 +0.5
baz=129,SNR=7.3
O47A Sheridan 26.21 327 P P 05 54 16.4 +0.3
baz=138
Z41A Richland Creek 26.24 307 P P 05 54 16.8 +0.4
baz=116
J52A Paris 26.26 339 P P 05 54 16.8 +0.3
baz=153
P46A Rosedale 26.30 325 P P 05 54 17.4 +0.4
baz=136
Q45A Warren Harvey, 26.33 323 P P 05 54 17.8 +0.5
baz=133,SNR=6.9
ACTO Acton 26.45 340 P P 05 54 18.9 +0.6
baz=154
N47A Urbana 26.46 329 P P 05 54 18.8 +0.4
baz=140,SNR=12
PKRO Pickering 26.47 342 P P 05 54 18.8 +0.4
baz=156
P45A Graceland, Par 26.53 324 P P 05 54 19.9 +0.8
baz=134,SNR=11
DELO Deloro Mine 26.58 345 P P 05 54 20.0 +0.5
baz=160
L48A N Adams 26.70 332 P P 05 54 21.2 +0.6
baz=144,SNR=5.7
W41B Gary Mavity, V 26.74 312 P P 05 54 22.0 +1.0
baz=120,SNR=20
LVIG Laguna Verde 26.77 276 eP P 05 54 21.7 +0.3
comp=Z,52nm,1.0s
M47A Cromwell 26.79 330 P P 05 54 22.1 +0.7
baz=141
SFIN Lafayette 26.79 326 P P 05 54 21.8 +0.4
baz=137
X40A Basin Creek Fa 26.82 310 P P 05 54 22.6 +0.9
baz=118,SNR=8.6
I51A Listowel 26.94 339 P P 05 54 23.1 +0.4
baz=152
N46A Monticello 26.99 328 P P 05 54 24.0 +0.9
baz=138,SNR=5.7
NATX Nacogdoches 27.07 303 P P 05 54 25.1 +1.1
baz=111,SNR=5.3
L47A Sherwood 27.08 331 P P 05 54 24.7 +0.7
baz=142
SADO Sadowa 27.23 343 P P 05 54 25.7 +0.5
comp=Z,0.9nm,0.4s,baz=268,slow=20,SNR=2.4
SADO LR LR 06 06 37.2
comp=Z,115nm,18.2s,baz=173,slow=39
BWLO Walkerton 27.26 339 P P 05 54 26.1 +0.5
baz=152
K48A Perry 27.27 334 P P 05 54 26.4 +0.7
baz=145
J49A Marlette 27.33 336 P P 05 54 27.1 +0.9
baz=148
N45A Kentland 27.35 327 P P 05 54 27.3 +0.9
baz=137,SNR=6.4
O44A Mansfield 27.37 324 P P 05 54 27.5 +0.9
baz=134
MIAR Mount Ida 27.39 309 P P 05 54 27.7 +0.8
baz=118
HKT Hockley 27.43 299 eP P 05 54 28.6 +1.4
comp=Z,14nm,1.1s
HKT Hockley 27.43 299 eP P 05 54 28.6 +1.4
HKT pmax pmax
comp=Z,14nm,1.1s
K47A Vermontville 27.54 332 P P 05 54 28.9 +0.9
baz=144
M45A Boilermakers S 27.61 328 P P 05 54 29.1 +0.4
baz=138
P43A Skaggs, Pawnee 27.61 322 P P 05 54 29.7 +0.9
baz=132,SNR=13
N44A Piper City 27.64 326 P P 05 54 29.6 +0.6
baz=136
CCM Cathedral Cave 27.66 318 eP P 05 54 28.8 -0.4
comp=Z,23nm,1.0s
CCM Cathedral Cave 27.66 318 eP P 05 54 28.8 -0.4
CCM pmax pmax
comp=Z,23nm,1.0s
CCM Cathedral Cave 27.66 318 P P 05 54 29.7 +0.4
baz=127
I49A Point Hope 27.70 337 P P 05 54 29.6 +0.1
baz=149
BMRO Meriville Lake 27.71 339 P P 05 54 29.5 0.0
baz=152
U40A Yellville 27.77 313 P P 05 54 30.5 +0.3
baz=122,SNR=6.3
W39A Magazine 27.85 310 P P 05 54 32.4 +1.4
baz=118,SNR=9.1
K46A Dorr 27.90 331 P P 05 54 31.8 +0.5
baz=142
J47A Sumner 27.92 333 P P 05 54 32.3 +0.9
baz=144
ATAH Atahualpa 27.99 202 P P 05 54 30.3 -2.6
comp=Z,3.3nm,0.7s,baz=42,slow=16,SNR=2.3
M44A Midewin, Midew 28.02 327 P P 05 54 33.0 +0.6
baz=136
HDIL Hopedale 28.10 324 P P 05 54 34.1 +0.9
baz=133
I48A Sherman Twp 28.25 336 P P 05 54 34.9 +0.5
baz=148
N43A Stutzman Famil 28.30 325 P P 05 54 35.7 +0.8
baz=134
J46A Howard City 28.36 332 P P 05 54 36.1 +0.6
baz=143
L44A Lake County Fo 28.53 328 P P 05 54 37.0 +0.1
baz=138
M43A Waltham Townsh 28.53 326 P P 05 54 37.2 +0.3
baz=135,SNR=14
D54A Lac Fusel, La 28.86 348 P P 05 54 40.5 +0.6
baz=163
L43A Garden Prairie 28.95 327 P P 05 54 40.5 -0.2
baz=136,SNR=6.9
TLIG Tlapa 29.01 272 eP P 05 54 42.6 +1.1
comp=Z,22nm,0.8s
N41A Harden Midland 29.09 323 P P 05 54 42.1 +0.2
baz=131
435B Jarrell 29.12 299 P P 05 54 42.5 +0.2
baz=106
K43A Burlington 29.13 328 P P 05 54 42.6 +0.4
baz=138
L42A Oliver, Polo 29.31 326 P P 05 54 44.3 +0.4
baz=135
M41A Milan 29.35 324 P P 05 54 44.3 +0.1
baz=132
N40A Mertquake, Sal 29.62 322 P P 05 54 46.8 +0.2
baz=130,SNR=5.5
TUL1 Leonard 29.63 310 P P 05 54 47.0 +0.2
baz=117,SNR=6.1
J43A Natural Harves 29.67 329 P P 05 54 47.6 +0.5
baz=138,SNR=5.3
K42A Prairie Point, 29.69 327 P P 05 54 47.9 +0.6
baz=136,SNR=12
I43A Langenfeld Bro 29.92 330 P P 05 54 49.9 +0.6
baz=139,SNR=8.0
J42A Columbus 29.97 328 P P 05 54 50.6 +0.8
baz=137
F46A Macinaw City C 29.99 336 P P 05 54 50.6 +0.8
baz=147
E47A Iron Bridge 30.03 339 P P 05 54 51.1 +0.9
baz=150
833A Chaparral WMA, 30.07 294 P P 05 54 51.3 +0.5
baz=101
L40A Anamosa 30.19 324 P P 05 54 51.8 +0.2
baz=132,SNR=5.7
H43A Windswept, Lux 30.20 331 P P 05 54 52.6 +0.9
baz=141
JFWS Jewell Farm 30.25 327 P P 05 54 53.0 +0.8
baz=135,SNR=22
I42A Draeger Farm, 30.29 329 P P 05 54 53.4 +0.9
baz=138,SNR=8.5
E46A Sault Ste Mari 30.32 337 P P 05 54 53.5 +0.8
baz=148
J41A Loganville 30.45 327 P P 05 54 54.6 +0.6
baz=136,SNR=10
H42A Shiocton 30.57 330 P P 05 54 56.0 +1.0
baz=140
K40A Colesburg 30.58 325 P P 05 54 55.1 0.0
baz=133,SNR=13
L39A Vinton 30.66 324 P P 05 54 55.9 0.0
baz=131,SNR=15
J40A Soldiers Grove 30.85 327 P P 05 54 57.9 +0.4
baz=135,SNR=21
I41A Arkdale 30.88 329 P P 05 54 58.5 +0.7
baz=137
JCT Junction City 30.88 298 P P 05 54 58.6 +0.6
baz=104,SNR=8.7
K39A Oelwein 30.99 325 P P 05 54 58.7 0.0
baz=132,SNR=11
F43A Flat Rock, Esc 31.00 334 P P 05 54 59.6 +0.8
baz=143
G42A Mountain 31.09 332 P P 05 55 00.5 +0.9
baz=140
I40A Norwalk 31.14 328 P P 05 55 00.6 +0.6
baz=135,SNR=14
H41A Junction City 31.19 329 P P 05 55 01.1 +0.6
baz=138
SCIA State Center 31.22 322 P P 05 55 01.3 +0.6
baz=129
J39A Decorah 31.32 326 P P 05 55 01.9 +0.3
baz=133
ABTX Abilene, Hawle 31.34 302 P P 05 55 02.7 +0.7
baz=108,SNR=8.3
F42A Maple Grove Fa 31.36 332 P P 05 55 02.8 +0.8
baz=141
WMOK Wichita Mounta 31.37 306 P P 05 55 02.6 +0.4
baz=112,SNR=26
MATQ Matagami 31.55 348 P P 05 55 04.8 +1.3
baz=163
H40A Chili 31.55 329 P P 05 55 04.3 +0.7
baz=137,SNR=9.3
I39A Houston 31.58 327 P P 05 55 04.4 +0.5
baz=134
KSU1 Kansas State U 31.74 315 P P 05 55 05.0 -0.4
baz=121,SNR=5.7
F41A Three Lakes 31.77 331 P P 05 55 06.5 +0.9
baz=140,SNR=5.6
G40A Rib Lake 31.93 330 P P 05 55 07.9 +0.9
baz=138,SNR=5.8
H39A Augusta 32.03 328 P P 05 55 08.8 +0.8
baz=135,SNR=14
NNA Nana 32.08 196 P P 05 55 05.8 -2.8
comp=Z,3.5nm,0.3s,baz=296,slow=18,SNR=2.4
E41A Kenton 32.27 332 P P 05 55 11.0 +1.0
baz=141
F40A Park Falls 32.38 331 P P 05 55 11.9 +1.0
baz=138
G39A Holcombe 32.41 329 P P 05 55 12.1 +0.9
baz=136,SNR=14
H38A Maiden Rock 32.54 327 P P 05 55 12.8 +0.5
baz=134
E40A Wakefield 32.67 332 P P 05 55 14.7 +1.2
baz=139,SNR=10

F39A	Loretta	32.75	330	P		P	05 55 15.3 +1.1
	baz=137						
E39A	Mellen	32.92	331	P		P	05 55 17.0 +1.3
	baz=138,SNR=20						
SPMN	Marine on St.	33.19	327	P		P	05 55 18.4 +0.4
	baz=134						
F38A	Pierce - Schro	33.24	329	P		P	05 55 19.4 +1.0
	baz=136,SNR=17						
F37A	Hinrichs Farm,	33.44	328	P		P	05 55 20.7 +0.5
	baz=134,SNR=6.6						
E38A	The Farm, Brul	33.55	330	P		P	05 55 21.7 +0.5
	baz=137,SNR=5.1						
AMTX	Amarillo	33.66	305	eP		P	05 55 16.9 -5.4
	comp=Z,24nm,0.8s						
CBKS	Cedar Bluff	33.74	312	P		P	05 55 23.7 +0.7
	baz=116,SNR=5.6						
LTX	Lajitas	33.94	294	eP		P	05 55 25.8 +0.9
LTX				ePcP		PcP	05 58 04.0 +0.9
LTX				eScP		ScP	06 01 48.0 +1.2
LTX	Lajitas	33.94	294	eP		P	05 55 25.8 +0.9
LTX				e			05 58 04.0
TXAR	Lajitas Array	33.94	294	P		P	05 55 25.8 +0.9
	comp=Z,10nm,0.7s,baz=113,slow=9.0,SNR=133						
TXAR				PcP		PcP	05 58 04.0 +0.9
	comp=Z,1.2nm,0.8s,baz=131,slow=5.2,SNR=4.6						
TXAR				ScP		ScP	06 01 48.0 +1.2
	comp=Z,0.4nm,0.7s,baz=120,slow=5.3,SNR=3.9						
TX31	Lajitas Ar. Si	33.94	294	eP		P	05 55 24.9 +0.1
	comp=Z,14nm,0.7s						
BGNE	Belgrade	33.94	317	P		P	05 55 24.6 0.0
	baz=122						
MSTX	Muleshoe	34.24	303	P		P	05 55 27.6 +0.2
	baz=107,SNR=11						
ECSD	EROS Data Cent	34.31	322	eP		P	05 55 28.1 +0.3
	comp=Z,46nm,0.9s						
ECSD	EROS Data Cent	34.31	322	P		P	05 55 28.4 +0.5
	baz=127,SNR=55						
EYMN	Ely	34.52	332	P		P	05 55 30.1 +0.5
	baz=138,SNR=5.8						
LPAZ	La Paz	35.16	180	P		P	05 55 36.6 +0.6
	comp=Z,3.3nm,0.9s,baz=352,slow=13,SNR=2.7						
SIV	San Ignacio	35.53	168	P		P	05 55 36.8 -1.7
	comp=Z,0.7nm,0.6s,baz=25,slow=5.6,SNR=6.2						
SCHQ	Schefferville	35.69	1	P		P	05 55 39.9 +0.4
	comp=Z,5.2nm,0.6s,baz=209,slow=10,SNR=2.5						
MNTX	Cornudas Mount	35.82	298	P		P	05 55 41.7 +0.7
	baz=101,SNR=33						
KSCO	Kaye Shedlock'	35.87	311	P		P	05 55 41.9 +0.5
	baz=114						
SUSD	Miller	36.10	321	P		P	05 55 43.5 +0.3
	baz=124						
OGNE	Ogallala	36.27	314	P		P	05 55 45.2 +0.3
	baz=117						
T25A	Trinidad	36.49	307	P		P	05 55 48.0 +1.1
	baz=109,SNR=15						
AGMN	Agassiz Nation	36.82	329	P		P	05 55 49.3 0.0
	baz=133,SNR=7.9						
ANMO	Albuquerque	37.43	303	eP		P	05 55 55.6 +0.6
	comp=Z,6.8nm,1.0s						
ANMO	Albuquerque	37.43	303	ceP		P	05 55 55.9 +1.0
ANMO				pmax		pmax	
	comp=Z,8.0nm,1.0s						
TASM	ASL Pad, Albuq	37.44	303	P		P	05 55 56.0 +1.0
	baz=105,SNR=11						
TASM	ASL Pad, Albuq	37.44	303	P		P	05 55 56.0 +1.0
	baz=105,SNR=11						
SDCO	Great Sand Dun	37.51	308	P		P	05 55 56.8 +1.1
	baz=109,SNR=68						
H07S1	FLORES T-PHASE	37.61	50	T		T	06 35 56.9
	SNR=13						
Q24A	Divide	37.67	310	P		P	05 55 57.7 +0.7
	baz=111						
H07N1	FLORES T-PHASE	37.79	49	T		T	06 36 04.5
	SNR=12						
121A	Cookes Peak, D	37.98	299	P		P	05 56 01.1 +1.5
	baz=100						
ULM	Lac du Bonnet	38.17	331	P		P	05 56 00.6 -0.1
	comp=Z,9.7nm,0.7s,baz=124,slow=8.2,SNR=8.4						
ISCO	Idaho Springs	38.31	311	P		P	05 56 03.5 +1.1
	baz=111,SNR=16						
MDND	Maddock	38.46	325	P		P	05 56 04.0 +0.8
	baz=127						
S22A	4UR Ranch, Cre	38.51	307	eP		P	05 56 04.9 +0.8
	comp=Z,14nm,1.0s						
S22A	4UR Ranch, Cre	38.51	307	P		P	05 56 05.0 +0.8
	baz=108,SNR=22						
N23A	Red Feather La	38.95	312	P		P	05 56 08.3 +0.6
	baz=112						
RSSD	Black Hills	39.05	318	eP		P	05 56 08.6 +0.1
	comp=Z,3.5nm,0.8s						
RSSD	Black Hills	39.05	318	eP		P	05 56 08.6 +0.1
RSSD				pmax		pmax	
	comp=Z,4.0nm,0.8s						
RSSD	Black Hills	39.05	318	P		P	05 56 08.7 +0.3
	baz=118						
MVCO	Mesa Verde	39.63	306	P		P	05 56 14.2 +0.8
	baz=106						
BDFB	Brasilia	39.75	149	P		P	05 56 14.3 -0.1
	comp=Z,5.6nm,1.2s,baz=197,slow=9.1,SNR=3.5						
K22A	Casper	40.04	314	P		P	05 56 17.2 +0.5
	baz=114						
PV07	Paradox Valley	40.09	307	eP		P	05 56 18.2 +1.0
	comp=Z,27nm,0.8s						
PV02	Paradox Valley	40.09	307	eP		P	05 56 18.9 +1.8
	comp=Z,30nm,1.0s						
O20A	White River Ci	40.32	310	P		P	05 56 20.1 +1.1
	baz=109,SNR=7.8						
TUC	Tucson	40.45	298	eP		P	05 56 21.3 +1.3
	comp=Z,5.6nm,1.1s						
TUC	Tucson	40.45	298	eP		P	05 56 21.3 +1.3
TUC				pmax		pmax	
	comp=Z,6.0nm,1.1s						
TUC	Tucson	40.45	298	P		P	05 56 21.4 +1.3
	baz=98						
DGMT	Dagmar	41.34	324	eP		P	05 56 27.9 +0.8
	comp=Z,20nm,0.8s						
DGMT	Dagmar	41.34	324	P		P	05 56 28.0 +0.8
	baz=122						
LVC	Limon Verde	41.46	181	P		P	05 56 26.5 -2.2
	comp=Z,2.4nm,0.7s,baz=275,slow=11,SNR=2.2						
WUAZ	Wupatki	41.48	302	P		P	05 56 30.1 +1.4
	baz=101,SNR=10						
LAO	LASA Array	41.62	320	eP		P	05 56 29.7 +0.2
	comp=Z,14nm,0.9s						
LAO	LASA Array	41.62	320	P		P	05 56 30.2 +0.7
	baz=118,SNR=6.9						
214A	Organ Pipe Nat	42.11	297	P		P	05 56 34.5 +0.8
	baz=96						
BW06	Boulder Array	42.15	313	P		P	05 56 34.6 +0.4
	baz=111,SNR=7.6						
PD31	Pinedale Array	42.15	313	ePcP		PcP	05 58 28.4 +0.1
PD31				eScP		ScP	06 02 18.8 +1.1
PDAR	Pinedale Array	42.15	313	P		P	05 56 34.0 -0.1
	comp=Z,2.5nm,0.8s,baz=119,slow=8.6,SNR=21						
PDAR				PcP		PcP	05 58 28.4 +0.1
	comp=Z,1.8nm,0.6s,baz=119,slow=5.8,SNR=7.0						
PDAR				ScP		ScP	06 02 18.8 +1.1
	comp=Z,0.5nm,0.8s,baz=101,slow=4.7,SNR=3.6						
PDAR				LR		LR	06 12 56.1
	comp=Z,144nm,21.1s,baz=331,slow=34						
TMUT	Trail Mountain	42.24	308	eP		P	05 56 35.1 +0.1
	comp=Z,13nm,0.9s						
U15A	North Rim	42.40	303	eP		P	05 56 37.4 +1.1
	comp=Z,4.7nm,0.9s						
RLMT	Red Lodge	42.85	317	P		P	05 56 40.3 +0.6
	baz=114,SNR=19						
REDW	Red Top Meadow	43.25	314	eP		P	05 56 43.5 +0.4
	comp=Z,14nm,1.0s						
MOOW	Moose Ponds	43.31	314	eP		P	05 56 44.5 +1.0
	comp=Z,8.8nm,1.1s						
PDMCI	Parker Dam,Lak	43.52	300	P		P	05 56 46.1 +1.1
	baz=98						
DUG	Dugway, Tooele	43.68	309	eP		P	05 56 46.8 +0.4
	comp=Z,4.5nm,0.8s						
DUG	Dugway, Tooele	43.68	309	eP		P	05 56 46.8 +0.4
DUG				pmax		pmax	
	comp=Z,4.0nm,0.8s						
DUG	Dugway, Tooele	43.68	309	P		P	05 56 47.3 +0.9
	baz=105,SNR=5.9						
SPUT	South Promonto	43.72	310	eP		P	05 56 46.8 0.0
	comp=Z,7.1nm,1.0s						
Y12C	Blythe	43.76	299	eP		P	05 56 48.3 +1.4
	comp=Z,6.9nm,0.9s						
Y12C	Blythe	43.76	299	P		P	05 56 48.4 +1.4
	baz=97						
FCC	Fort Churchill	43.92	341	eP		P	05 56 48.2 +0.4
	comp=Z,6.6nm,0.8s						
FCC	Fort Churchill	43.92	341	eP		P	05 56 48.3 +0.4
FCC				pmax		pmax	
	comp=Z,7.0nm,0.8s						
GLA	Glamis	43.92	298	P		P	05 56 49.9 +1.6
	baz=96						
IRM	Iron Mountain	44.32	300	P		P	05 56 53.4 +1.9
	baz=97,SNR=26						
EGMT	Eagleton	44.37	320	eP		P	05 56 52.5 +0.7
	comp=Z,15nm,1.1s						
EGMT	Eagleton	44.37	320	P		P	05 56 52.8 +1.0
	baz=116,SNR=8.3						
BC3	Big Chuckawall	44.51	299	P		P	05 56 54.6 +1.4
	baz=96,SNR=9.3						
BOZ	Bozeman (W)	44.57	316	P		P	05 56 54.3 +0.8
	baz=112,SNR=12						
SWSC	Sam W. Stewart	44.72	298	P		P	05 56 55.7 +1.0
	baz=96						
GMRC	Granite Mounta	44.82	300	P		P	05 56 57.3 +1.6
	baz=98,SNR=18						
BELC	Belle Mtn. Jos	45.00	299	P		P	05 56 58.3 +1.1
	baz=96						
MCMT	McKenzie Canyo	45.10	315	eP		P	05 56 59.0 +1.2
DLMT	Dillon	45.12	316	eP		P	05 56 58.7 +0.8
	comp=Z,8.6nm,0.9s						
TUQ	Turquoise Moun	45.13	301	P		P	05 56 59.5 +1.4
	baz=98,SNR=7.1						
LRM	Limekiln Ridge	45.19	316	eP		P	05 56 59.0 +0.4
MONP2	Monument Peak	45.24	298	P		P	05 57 00.8 +1.7
	baz=95,SNR=24						
PFO	Pinyon Flats O	45.34	299	P		P	05 57 01.1 +1.2
	baz=96						
R11A	Troy Canyon, C	45.35	305	P		P	05 57 01.1 +1.2
	baz=101,SNR=10						
HEC	Hector,Ludlow	45.38	300	P		P	05 57 01.9 +1.9
	baz=97,SNR=6.0						
SHOC	Shoshone, Teco	45.48	302	P		P	05 57 02.5 +1.8
	baz=98,SNR=9.2						
TPNV	Topopah Spring	45.62	303	P		P	05 57 04.1 +2.1
	baz=99,SNR=8.3						
HLID	Hailey	45.77	313	P		P	05 57 04.1 +1.0
	baz=107,SNR=10						
BBRC	Big Bear Solar	45.79	299	P		P	05 57 05.5 +2.0
	baz=96						
109C	Camp Elliot, M	45.81	298	P		P	05 57 04.8 +1.4
	baz=95						
GSC	Goldstone, Bar	45.82	301	P		P	05 57 05.5 +2.0
	baz=97,SNR=9.6						
MURC	Murrieta	45.95	299	P		P	05 57 06.4 +1.9
	baz=95,SNR=6.5						
FURC	Furnace Creek,	46.03	303	P		P	05 57 06.6 +1.6
	baz=98,SNR=9.1						
CPUP	Villa Florida	46.34	167	P		P	05 57 07.0 -0.4
	comp=Z,1.6nm,0.9s,baz=261,slow=2.4,SNR=2.8						
CPUP				PcP		PcP	05 58 42.3 -0.1
	comp=Z,2.1nm,0.9s,baz=351,slow=5.3,SNR=2.5						
BFSC	Mount Baldy Ra	46.40	299	P		P	05 57 09.7 +1.6
	baz=96,SNR=8.8						
MPMC	Manual Prospec	46.47	302	P		P	05 57 10.4 +1.7
	baz=98,SNR=7.1						
GRAC	Grapevine Rang	46.51	303	P		P	05 57 10.8 +1.9
	baz=98,SNR=8.0						
MSO	Missoula	46.51	317	P		P	05 57 09.3 +0.5
	baz=110						
LRMC	Laurel Mtn Rad	46.56	301	P		P	05 57 10.9 +1.6
	baz=97,SNR=9.7						
EDW2	Edwards Air Fo	46.74	300	P		P	05 57 12.5 +1.7
	baz=96,SNR=14						
DECC	Green Verdugo	46.96	299	P		P	05 57 13.8 +1.4
	baz=95						
CWC	Cottonwood Cre	47.00	302	P		P	05 57 14.4 +1.5
	baz=98						
ARVC	Arvin	47.45	300	P		P	05 57 17.9 +1.8
	baz=96						
NVAR	Mina Array Bea	47.47	305	P		P	05 57 17.3 +0.8
	comp=Z,10nm,0.9s,baz=100,slow=6.7,SNR=44						
VES	Vestal, Richgr	47.73	301	P		P	05 57 19.8 +1.4
	baz=96						
J08A	Circle Bar Ran	48.57	311	eP		P	05 57 25.4 +0.5
	comp=Z,11nm,0.8s						
NEW	Newport	49.02	318	P		P	05 57 28.4 +0.2
	baz=109,SNR=7.7						
SFJD	Kangerlussuaq	49.18	9	P		P	05 57 30.2 +1.2
	comp=Z,6.5nm,0.6s,baz=261,slow=4.2,SNR=5.8						
SFJD	Kangerlussuaq	49.18	9	iP		P	05 57 28.8 -0.2
G08A	Pilot Rock	49.37	314	eP		P	05 57 30.6 -0.4
	comp=Z,3.4nm,0.9s						
CFA	Coronel Fontan	50.41	180	P		P	05 57 37.6 -1.3
	comp=Z,1.4nm,0.4s,baz=352,slow=8.3,SNR=5.6						
O03E	Paynes Creek	50.43	307	P		P	05 57 39.4 +0.3
	baz=98						
J05D	Fort Rock, OR	50.52	311	P		P	05 57 40.2 +0.4
	baz=101						
M04C	Macdoel	50.69	309	P		P	05 57 42.0 +0.9
	baz=99						
K04D	Chiloquin, OR	50.77	310	P		P	05 57 42.3 +0.6
	baz=100						
I05D	Terrebonne, OR	50.80	312	P		P	05 57 42.8 +1.0
	baz=102						
L04D	Klamath Falls	51.10	309	P		P	05 57 44.8 +0.6
	baz=99,SNR=6.6						
J04D	Umpqua Nationa	51.14	311	P		P	05 57 45.1 +0.6
	baz=100,SNR=8.8						
F05D	White Salmon	51.22	314	P		P	05 57 46.0 +1.1
	baz=103						
M02C	Callahan	51.38	308	P		P	05 57 46.5 +0.3
	baz=98						
I04A	Tendick Farm,	51.45	311	P		P	05 57 47.4 +0.7
	baz=100						
H04D	Lebanon	51.82	312	P		P	05 57 49.1 -0.3
	baz=101						
L02E	Cave Junction	52.05	309	P		P	05 57 51.2 +0.1
	baz=98						
I03D	Drain, OR	52.11	311	P		P	05 57 51.9 +0.4
	baz=100						
K02D	Willamette Mer	52.17	310	P		P	05 57 52.0 -0.1
	baz=99						
G03D	McMinnville, O	52.32	313	P		P	05 57 53.7 +0.7
	baz=101						
J01E	Myrtle Point	52.44	310	P		P	05 57 54.4 +0.5
	baz=99						
YKA	Yellowknife Ar	53.85	335	P		P	05 58 04.0 -0.1
	comp=Z,3.7nm,0.8s,baz=114,slow=7.3,SNR=37						
YKA	Yellowknife Ar	53.85	335	P		P	05 58 04.0 -0.1
YKB5	Yellowknife Ar	53.85	335	eP		P	05 58 04.0 -0.1
SUMG	Summit	56.09	10	eP		P	05 58 21.5 +0.9
	comp=Z,14nm,0.8s						
SUMG	Summit	56.09	10	iP		P	05 58 21.9 +1.3
SUMG				pmax		pmax	
	comp=Z,31nm,0.7s						
SUMG	Summit	56.09	10	iP		P	05 58 21.9 +1.3
	comp=Z,31nm,0.7s						
ESDC	Sonseca Array	58.27	55	P		P	05 58 37.2 +1.0
	comp=Z,6.4nm,0.7s,baz=272,slow=7.1,SNR=43						
ESDC				LR		LR	06 17 26.7
	comp=Z,71nm,22.0s,baz=55,slow=30						
ESLA	Sonseca Array	58.27	55	eP		P	05 58 36.8 +0.7
	comp=Z,11nm,0.8s						
DLBC	Dease Lake	59.33	327	eP		P	05 58 44.2 +1.0
	comp=Z,6.8nm,0.7s						
PLCA	Paso Flores	59.57	182	P		P	05 58 42.6 -2.4
	comp=Z,2.9nm,1.0s,baz=27,slow=6.8,SNR=2.3						
MFF	Saint Martin d	61.25	47	eP		P	05 58 57.5 +1.0
TIC	Toumodi	62.38	92	eP		P	05 59 07.6 +3.0
LIC	Lamto	62.50	93	eP		P	05 59 05.2 -0.2
	comp=Z,64nm,1.3s						
DBIC	Dimbokro	62.53	92	P		P	05 59 05.6 +0.1
	comp=Z,3.5nm,0.5s,baz=275,slow=6.4,SNR=13						
DBIC				LR		LR	06 21 56.3
	comp=Z,69nm,21.6s,baz=268,slow=32						
DBIC	Dimbokro	62.53	92	eP		P	05 59 05.3 -0.1
	comp=Z,4.7nm,0.6s						
DBIC	Dimbokro	62.53	92	eP		P	05 59 05.4 -0.1
DBIC				pmax		pmax	
	comp=Z,5.0nm,0.6s						
DAG	Danmarks Havn	62.73	11	iP		P	05 59 06.2 +0.4
DAG				pmax		pmax	
	comp=Z,5.0nm,0.9s						
DAG	Danmarks Havn	62.73	11	iP		P	05 59 06.2 +0.4
	comp=Z,5.7nm,0.9s						
KIC	Kosan Boka	62.73	93	eP		P	05 59 06.9 0.0
	comp=Z,50nm,1.3s						
INK	Inuvik	63.40	338	eP		P	05 59 09.4 -1.0
	comp=Z,4.4nm,1.0s						
INK	Inuvik	63.40	338	eP		P	05 59 09.4 -1.0
INK				pmax		pmax	
	comp=Z,4.0nm,1.0s						
SSF	Saint Saulge	63.77	46	eP		P	05 59 13.7 +0.4
SSF				pmax		pmax	
	comp=Z,7.0nm,1.0s						
DAWY	Dawson	64.85	333	eP		P	05 59 19.9 -0.2
	comp=Z,2.7nm,0.6s						
EGAK	Eagle	65.70	333	eP		P	05 59 25.3 -0.3
	comp=Z,4.8nm,0.9s						
LPL	La Plagne	66.05	48	eP		P	05 59 29.6 +1.2
LPL				pmax		pmax	
	comp=Z,7.0nm,0.9s						
ECH	Echery	66.21	45	eP		P	05 59 29.2 0.0
	comp=Z,6.1nm,1.0s						
ECH	Echery	66.21	45	eP		P	05 59 29.2 0.0
ECH				pmax		pmax	
	comp=Z,6.0nm,1.0s						
SCRK	Sand Creek	66.85	332	eP		P	05 59 33.1 0.0
	comp=Z,9.4nm,1.0s						
TOA0	Torodi Ar. Sit	66.88	84	eP		P	05 59 33.7 -0.2
	comp=Z,6.0nm,0.9s						
TORD	Torodi Ar. Bea	66.88	84	P		P	05 59 33.0 -1.0
	comp=Z,1.9nm,0.6s,baz=293,slow=6.4,SNR=9.2						
TORD				LR		LR	06 24 46.1
	comp=Z,152nm,21.8s,baz=325,slow=32						
RIDG	Independent Ri	67.22	332	eP		P	05 59 36.2 +0.8
	comp=Z,8.4nm,1.0s						
KONO	Kongsberg	67.48	32	eP		P	05 59 38.5 +1.5
KONO				pmax		pmax	
	comp=Z,14nm,2.5s						
PRP	Porcupine Dome	67.61	334	eP		P	05 59 37.5 -0.4
	comp=Z,7.9nm,1.0s						
DAVA	Damuels	68.10	46	iP		P	05 59 41.9 +0.6
	comp=Z,7.5nm,1.1s						
ILAR	Eielson Array	68.15	333	P		P	05 59 41.1 0.0
	comp=Z,2.4nm,0.8s,baz=103,slow=4.9,SNR=20						
ILB	Eielson Array	68.15	333	eP		P	05 59 40.8 -0.4
	comp=Z,6.3nm,1.1s						
NB2	NORSAR Subarra	68.29	31	P		P	05 59 43.1 +1.0
	comp=Z,2.6nm,0.8s,baz=272,slow=6.5						
NOA	NORSAR Array B	68.29	31	P		P	05 59 41.6 -0.5
	comp=Z,1.7nm,0.8s,baz=271,slow=6.4,SNR=7.3						
POKR	Poker Plat Res	68.39	333	P		P	05 59 43.1 +0.4
	baz=91						
FUORN	Ofenpass-Fuorn	68.42	47	eP		P	05 59 44.5 +1.0
	comp=Z,13nm,1.0s						
CCB	Clear Creek Bu	68.54	333	eP		P	05 59 43.0 -0.5
	comp=Z,1.6nm,0.8s						
COLA	College	68.56	333	eP		P	05 59 44.0 +0.3
COLA				pmax		pmax	
	comp=Z,5.0nm,0.9s						
TCOL	CIGO, UAF Yank	68.57	333	P		P	05 59 44.1 +0.4
	baz=91						
RETA	Reutte	68.68	46	iP		P	05 59 45.8 +0.9
	comp=Z,4.3nm,0.8s						
FETA	Feichten	68.70	46	eP		P	05 59 46.1 +1.0
	comp=Z,4.8nm,0.6s						
MDM	Murphy Dome	68.73	333	eP		P	05 59 44.7 -0.1
	comp=Z,7.4nm,1.0s						
KEST	Kesra	69.08	58	LR		LR	06 28 28.6
	comp=Z,40nm,18.9s,baz=190,slow=34						
BPAW	Bear Paw Mtn.	69.93	332	eP		P	05 59 52.1 -0.1
	comp=Z,5.7nm,0.9s						
ABTA	Abfaltersbach	69.95	46	eP		P	05 59 53.5 +0.7
	comp=Z,2.6nm,0.8s						
SUA	Susitna One	69.95	330	eP		P	05 59 50.3 -2.2
	comp=Z,11nm,0.7s						
KHC	Kasperske Hory	70.38	44	eP		P	05 59 55.5 +0.2
KHC	Kasperske Hory	70.38	44	eP		P	05 59 55.5 +0.2
KBA	Koelnbreinsper	70.47	46	eP		P	05 59 57.1 +1.0
	comp=Z,1.2nm,0.5s						
GERES	GERESS Array B	70.49	44	P		P	05 59 56.5 +0.4
	comp=Z,0.7nm,0.7s,baz=205,slow=2.8,SNR=4.7						
GERES				LR		LR	06 25 38.4
	comp=Z,47nm,20.7s,baz=304,slow=31						
KDAK	Kodiak Island	71.17	326	eP		P	06 00 00.1 +0.2
	comp=Z,6.6nm,0.9s						
KDAK	Kodiak Island	71.17	326	eP		P	06 00 00.1 +0.2
KDAK				pmax		pmax	
	comp=Z,7.0nm,0.9s						
OBKA	Obir	71.37	46	eP		P	06 00 01.8 +0.4
	comp=Z,1.1nm,0.3s						
SVW2	Sparrevohn	72.31	329	eP		P	06 00 06.4 -0.3
	comp=Z,4.1nm,0.8s						
ARCES	ARCESS Array B	73.51	21	P		P	06 00 14.6 +0.9
	comp=Z,2.9nm,0.8s,baz=283,slow=4.6,SNR=13						
VYHS	Vyhne	73.91	44	eP		P	06 00 17.7 +1.3
VYHS				e			06 00 30.0
VYHS	Vyhne	73.91	44	eP		P	06 00 17.7 +1.3
VYHS				ePCP		PcP	06 00 30.0 -1.8
FINES	FINESS Array B	75.37	30	P		P	06 00 25.5 +1.0
	comp=Z,2.1nm,0.7s,baz=290,slow=5.5,SNR=8.1						
FINES				LR		LR	06 29 03.5
	comp=Z,38nm,21.7s,baz=254,slow=32						
BURAR	Bucovina Array	78.28	44	iP		P	06 00 42.9 +1.5
BIZ	Bicaz	79.04	44	iP		P	06 00 47.5 +2.0
MLR	Muntele Rosu	79.34	46	eP		P	06 00 48.2 +0.9
	comp=Z,6.9nm,1.0s						
MLR	Muntele Rosu	79.34	46	iP		P	06 00 49.1 +1.8
MLR	Muntele Rosu	79.34	46	eP		P	06 00 48.2 +0.9
MLR				pmax		pmax	
	comp=Z,7.0nm,1.0s						
AKASG	Malin Array Be	79.92	40	P		P	06 00 51.0 +0.8
	comp=Z,0.9nm,0.6s,baz=285,slow=4.8,SNR=5.5						
AKBB	Malin Array Si	79.92	40	eP		P	06 00 51.0 +0.8
	comp=Z,1.2nm,0.8s						
AKBB	Malin Array Si	79.92	40	eP		P	06 00 51.0 +0.8
AKBB				pmax		pmax	
	comp=Z,1.0nm,0.8s						
KLMR	Klimovskoe	81.72	28	eP		P	06 00 59.4 -0.2
KLMR				pmax		pmax	
	comp=Z,8.0nm,1.4s						
OBN	Obninsk	82.58	34	eP		P	06 01 05.5 +1.3
OBN				e			06 04 14.7
OBN				eS		S	06 11 20.8 +0.9
OBN				pmax		pmax	
	comp=Z,10.0nm,0.5s						
PRGR	Permogore	84.00	26	eP		P	06 01 11.1 -0.3
PRGR				pmax		pmax	
	comp=Z,13nm,0.7s						
BILL	Bilibino	84.62	342	iP		P	06 01 16.1 +1.7
BILL				i			06 01 26.2
BILL				e			06 04 28.2
BILL				pmax		pmax	
	comp=Z,5.0nm,1.3s						
PPT	Papeete	87.99	251	LR		LR	06 33 14.5
	comp=Z,88nm,20.4s,baz=112,slow=30						
TIXI	Tiksi	88.75	355	eP		P	06 01 34.7 +0.2
TIXI				pmax		pmax	
	comp=Z,1.0nm,0.8s						
NRIK	Noril'sk	90.09	8	LR		LR	06 41 01.7
	comp=Z,39nm,21.8s,baz=39,slow=35						
NCK	Nalchik	91.76	43	eP		P	06 01 48.7 -0.5
BRVK	Borovoye	99.61	24	eP		Pdif	06 02 25.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**1.13**	**20**	S	Sg	05 59 13.0	+0.2
WOJI	**Wonogiri, Jawa**	**1.45**	**44**	P	Pn	05 59 01.8	-0.8
WOJI				S	Sn	05 59 20.6	-1.1
SMRI	**Semarang**	**1.90**	**16**	P	Pn	05 59 09.9	+1.0
PWJI	**Pagerwojo**	**2.06**	**65**	P	Pn	05 59 09.9	-1.1
NGJI	**Ngawi**	**2.16**	**46**	P	Pn	05 59 13.0	+0.7
CISI	**Cisompet, Garu**	**2.46**	**302**	P	Pn	05 59 15.2	-1.4
PPBI	**Pangkal Pinang**	**7.67**	**330**	P	Pb	06 00 44.6	-4.8

MEX 01 06:03:54.1±0.6, 18°.32N×102°.63W, h67km±18km, MD3.7, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.68**	**267**	*e*P	Pn	06 04 07.0	-1.6
MMIG				*e*S	Sn	06 04 17.5	-1.6
ZIIG	**Zihuatanejo**	**1.32**	**122**	*e*P	Pn	06 04 15.4	-1.2
EZ5V		**1.47**	**322**	*e*P	Pn	06 04 18.2	-0.7
EZ5V				*e*S	Sn	06 04 35.7	-1.8
ARIG	**Puente Sto Nin**	**2.17**	**91**	*e*P	Pn	06 04 27.1	-1.0

ISCJB ***01*** *06:06:50.9±0.5, 38°.29N±0°.03×27°.18E±0°.04, h2km±7km, Error ellipse: s-maj=5.2km s-min=4.4km az=148.5*
DDA ***01*** *06:06:50.4, 38°.30N×27°.15E, h7km±2km, ML2.8*
ISK ***01*** *06:06:50.7, 38°.29N×27°.17E, h7km, ML2.7/10*
ISC 01 06:06:50.7±1.4, 38°.30N±0°.03×27°.16E±0°.03, h9km±13km, n19, σ0°.50/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.45**	**278**	PG	**Pg**	**06 07 00.0**	**+0.5**
URLA				SG	**Sb**	**06 07 06.8**	**-0.9**
URLA	**Izmir**	**0.45**	**278**	*i* P	**Pg**	**06 06 59.0**	**-0.5**
URLA				*i* S	**Sb**	**06 07 08.2**	**+0.5**
ZEY	**zmir**	**0.52**	**264**	*i* P	**Pb**	**06 07 01.3**	**-0.8**
ZEY				*i* S	**Sb**	**06 07 09.6**	**-0.2**
ZEY				IAML_P			
	comp=Z,3μm,0.1s						
FOCM	**Foa**	**0.54**	**321**	PG	**Pg**	**06 07 01.5**	**+0.4**
KRBN	**Karaburun**	**0.56**	**302**	PG	**Pb**	**06 07 02.9**	**+0.1**
GCAM	**G?zelcaml?**	**0.60**	**175**	PG	**Pg**	**06 07 02.5**	**+0.2**
GCAM				SG	**Sb**	**06 07 11.0**	**-0.9**
GCAM	**G?zelcaml?**	**0.60**	**175**	*i* P	**Pb**	**06 07 03.3**	**-0.1**
GCAM				*i* S	**Sb**	**06 07 11.3**	**-0.6**
GCAM				IAML_P			
	comp=Z,3μm,0.2s						
ZEDA	**zmir-Bergama**	**0.67**	**354**	*i* S	**Sb**	**06 07 13.8**	**-0.3**
AKS	**Akhisar**	**0.77**	**41**	PG	**Pg**	**06 07 05.4**	**-0.2**
AKHS	**Akhisar**	**0.77**	**41**	*i* P	**Pb**	**06 07 06.1**	**-0.3**
AYDN	**Tasoluk**	**0.85**	**138**	*i* P	**Pb**	**06 07 07.3**	**-0.4**
AYDN				*i* S	**Sb**	**06 07 19.5**	**+0.3**
AYDN				IAML_P			
	comp=Z,961nm,0.2s						
CHOS	**Chios island**	**0.88**	**276**	PG	**Pb**	**06 07 07.8**	**-0.4**
MANT	**Manisa**	**1.11**	**80**	*i* P	**Pg**	**06 07 12.1**	**0.0**
STEP	**BALIKESIR_Sava**	**1.16**	**22**	*i* P	**Pn**	**06 07 13.8**	**+0.5**
STEP				*i* S	**Sn**	**06 07 29.2**	**0.0**
STEP				IAML_P			
	comp=Z,1μm,0.2s						
BODT	**Bodrum**	**1.24**	**175**	PN	**Pn**	**06 07 14.9**	**+0.6**
SIGR	**SIGRI**	**1.37**	**312**	PN	**Pg**	**06 07 17.0**	**0.0**
BALY	**Balya**	**1.48**	**14**	*i* P	**Pg**	**06 07 19.2**	**0.0**
BALY				IAML_P			
	comp=Z,390nm,0.2s						
BOZC	**Bozcaada**	**1.77**	**331**	PN	**Pb**	**06 07 23.0**	**-0.3**
APE	**Apeiranthos**	**1.78**	**227**	PN	**Pn**	**06 07 22.4**	**+0.6**

MEX 01 06:08:29.6±0.7, 14°.80N×93°.36W, h55km±22km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.91**	**8**	*i* P	Pn	06 08 44.6	-1.7
PCIG				*i* S	Sn	06 08 57.0	-1.6
THIG		**1.06**	**84**	*i* P	Pn	06 08 46.2	-2.1
THIG				*e*S	Sn	06 08 59.9	-2.2
CCIG	**Comitan**	**1.89**	**38**	*e*P	Pn	06 09 00.8	+1.2
CCIG				*e*S	Sn	06 09 20.5	-1.8
TGIG		**1.98**	**6**	*e*P	Pn	06 09 00.4	-0.5
TGIG				*e*S	Sn	06 09 22.6	-1.9
CMIG	**Matias Romero**	**2.71**	**327**	*e*P	Pn	06 09 09.1	-1.7
CMIG				*i* S	Sn	06 09 40.0	-2.4

NNC 01 06:17:13.1±16.0, 37°.44N×73°.43E, h0km, mb4.5, mpv4.1, 1C, Error ellipse: s-maj=126.7km s-min=90.0km az=177.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.38**	**332**	Pg	Pn	06 18 35.0	+0.4
	36nm,0.2s						
IUG				Lg	Lg	06 19 39.2	
	11nm,0.3s						
KK31	**Karatay Array**	**6.08**	**339**	P	Pn	06 18 45.5	+1.3
	2.6nm,0.5s,baz=159,slow=11,SNR=19						
KK31				⇑S	Sn	06 19 55.6	+1.1
	1.1nm,0.3s,baz=163,slow=17						
TNSS	**Tian-Shan**	**6.20**	**25**	Pg	Pb	06 19 03.3	+1.1
	2.1nm,0.2s						
TNSS				Lg	Lg	06 20 29.8	
	2.8nm,0.2s						

MDD ***01*** *06:34:00.5±1.3, 36°.67N×9°.59W, h43km±26km, mb3.9/3, Error ellipse: s-maj=11.5km s-min=9.5km az=57.0, PRXIMO*
IGIL ***01*** *06:34:00.9, 36°.69N×9°.53W, h21km, ML2.0*
INMG ***01*** *06:34:01.1±1.5, 36°.68N×9°.53W, h25km±8km, ML2.0, Error ellipse: s-maj=6.6km s-min=5.9km az=37.0*
ISC 01 06:33:59.3±2.8, 36°.73N±0°.10×9°.59W±0°.09, h33km±7km, n49, σ1°.12/86, 1C-7D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.73**	**56**	⇓*i*P	**Pn**	**06 34 14.3**	**+1.0**
PFVI				*e*S	**Sn**	**06 34 24.3**	**+1.0**
PFVI				A	A	06 34 25.5	
	12nm,0.5s						
PFVI	**Vila Bisbo**	**0.73**	**56**	⇓P	**Pn**	**06 34 14.3**	**+1.0**
	13nm,0.2s,SNR=18						
PFVI				S	**Sn**	**06 34 23.6**	**+0.3**
	8.0nm,0.1s,SNR=7.9						
MORF	**Marmelete**	**0.94**	**52**	*e*P	**Pb**	**06 34 17.3**	**+0.1**
MORF				*e*S	**Sb**	**06 34 29.2**	**-0.2**
MORF				AML	AML	06 34 29.7	
	comp=N,28nm,0.2s						
MORF	**Marmelete**	**0.94**	**52**	⇓*i*P	**Pb**	**06 34 17.3**	**+0.1**
MORF				*e*S	**Sb**	**06 34 29.3**	**-0.2**
MORF				A	A	06 34 32.0	
	comp=N,17nm,0.2s						
MORF	**Marmelete**	**0.94**	**52**	P	**Pb**	**06 34 17.3**	**+0.1**
MORF				S	**Sb**	**06 34 29.2**	**-0.2**
	comp=N,28nm,0.2s						
PTEO	**Sao Teotonio**	**1.07**	**40**	⇓*e*P	**Pb**	**06 34 19.1**	**-0.1**
PTEO				*e*S	**Sb**	**06 34 32.8**	**-0.1**
PTEO				A	A	06 34 33.0	
	comp=N,10.0nm,0.3s						
PTEO	**Sao Teotonio**	**1.07**	**40**	P	**Pb**	**06 34 19.1**	**-0.1**
PTEO				S	**Sb**	**06 34 32.8**	**-0.1**
	comp=N,5.0nm,0.3s						
PBDV	**Barranco-do-Ve**	**1.42**	**68**	⇓*i*P	**Pn**	**06 34 23.7**	**+0.9**
PBDV				*e*S	**Sn**	**06 34 40.7**	**+0.3**
PBDV				A	A	06 34 44.1	
	comp=N,6.4nm,0.5s						
PBDV	**Barranco-do-Ve**	**1.42**	**68**	P	**Pn**	**06 34 23.7**	**+0.9**
PBDV				S	**Sn**	**06 34 40.7**	**+0.3**
	comp=N,6.4nm,0.5s						
PCVE	**Castro Verde**	**1.53**	**54**	*e*P	**Pn**	**06 34 25.6**	**+1.3**
PCVE				*e*S	**Sn**	**06 34 43.7**	**+0.7**
PCVE				A	A	06 34 45.8	
	comp=N,6.6nm,0.2s						
PCVE	**Castro Verde**	**1.53**	**54**	P	**Pn**	**06 34 25.6**	**+1.3**
PCVE				S	**Sn**	**06 34 43.7**	**+0.7**
	comp=N,6.6nm,0.2s						
MESJ	**Messejana**	**1.55**	**44**	*e*P	**Pn**	**06 34 25.8**	**+1.2**
MESJ				*e*S	**Sn**	**06 34 44.0**	**+0.4**
MESJ				AML	AML	06 34 46.1	
	comp=N,15nm,0.1s						
MESJ	**Messejana**	**1.55**	**44**	⇑*i*P	**Pn**	**06 34 25.8**	**+1.2**
MESJ				*e*S	**Sn**	**06 34 44.1**	**+0.4**
MESJ				A	A	06 34 45.3	
	comp=N,5.4nm,0.1s						
MESJ	**Messejana**	**1.55**	**44**	P	**Pn**	**06 34 25.8**	**+1.2**
MESJ				S	**Sn**	**06 34 44.0**	**+0.4**
	comp=N,15nm,0.1s						
PNCL	**Nicolau / Gran**	**1.62**	**31**	⇓*e*P	**Pn**	**06 34 26.5**	**+1.0**
PNCL				*e*S	**Sn**	**06 34 45.5**	**+0.3**
PNCL				A	A	06 34 47.3	
	comp=N,11nm,0.1s						
PNCL	**Nicolau / Gran**	**1.62**	**31**	P	**Pn**	**06 34 26.5**	**+1.0**
PNCL				S	**Sn**	**06 34 45.5**	**+0.3**
	comp=N,11nm,0.1s						
PVAQ	**Vaqueiros**	**1.64**	**65**	⇓*i*P	**Pn**	**06 34 26.7**	**+0.9**
PVAQ				*e*S	**Sn**	**06 34 45.5**	**-0.3**
PVAQ				A	A	06 34 48.9	
	comp=N,7.0nm,0.1s						
PVAQ	**Vaqueiros**	**1.64**	**65**	P	**Pn**	**06 34 26.7**	**+0.9**
PVAQ				S	**Sn**	**06 34 45.5**	**-0.3**
	comp=N,7.0nm,0.1s						
EGRO	**El Granado**	**1.86**	**64**	P	**Pn**	**06 34 29.6**	**+0.7**
	comp=N,0.2nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**06 34 50.2**	**-1.1**
	comp=N,6.1nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**1.89**	**46**	*e*Pn	**Pn**	**06 34 31.0**	**+1.8**
PBEJ				*e*Sn	**Sn**	**06 34 53.1**	**+1.3**
PBEJ				A	A	06 34 55.7	
	comp=N,6.3nm,0.2s						
PBEJ	**Beja**	**1.89**	**46**	Pn	**Pn**	**06 34 31.0**	**+1.8**
PBEJ				S	**Sn**	**06 34 53.1**	**+1.3**
	comp=N,3.2nm,0.2s						
PMAFR	**Mafra**	**2.23**	**6**	*e*Pn	**Pn**	**06 34 35.4**	**+1.4**
PMAFR				*e*Sn	**Sn**	**06 35 01.8**	**+1.4**
PMAFR				A	A	06 35 03.9	
	comp=N,14nm,0.1s						
PMAFR	**Mafra**	**2.23**	**6**	P	**Pn**	**06 34 34.5**	**+0.5**
	comp=N,1.0nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**06 35 00.0**	**-0.4**
	comp=N,15nm,0.2s,SNR=7.9						
PBAR	**Barrancos**	**2.49**	**54**	*e*Sn	**Sn**	**06 35 06.6**	**-0.1**
PBAR	**Barrancos**	**2.49**	**54**	S	**Sn**	**06 35 06.6**	**-0.1**
EMIN	**Mina Concepcio**	**2.55**	**65**	P	**Pn**	**06 34 38.5**	**+0.3**
	comp=N,0.3nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**06 35 06.3**	**-1.8**
	comp=N,0.8nm,0.1s,SNR=7.9						
PMTG	**Montargil**	**2.57**	**24**	*e*Pn	**Pn**	**06 34 39.9**	**+1.3**
PMTG				*e*Sn	**Sn**	**06 35 08.6**	**-0.1**
PMTG				A	A	06 35 10.1	
	comp=N,7.6nm,0.3s						
PMTG	**Montargil**	**2.57**	**24**	P	**Pn**	**06 34 39.9**	**+1.3**
PMTG				S	**Sn**	**06 35 08.6**	**-0.1**
	comp=N,7.6nm,0.3s						
EBAD	**Badajoz**	**2.87**	**45**	P	**Pn**	**06 34 43.2**	**+0.4**
	comp=N,0.1nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**06 35 15.6**	**-0.6**
	comp=N,3.2nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.00**	**86**	P	**Pn**	**06 34 44.9**	**+0.5**
	comp=N,6.4nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**06 35 17.8**	**-1.5**
	comp=N,13nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**3.20**	**32**	*e*Pn	**Pn**	**06 34 48.2**	**+0.9**
PMRV				*e*Sn	**Sn**	**06 35 22.8**	**-1.5**
PMRV				A	A	06 35 25.8	
	comp=N,4.1nm,0.1s						
PMRV	**Marv??o**	**3.20**	**32**	P	**Pn**	**06 34 48.2**	**+0.9**
PMRV				S	**Sn**	**06 35 22.8**	**-1.5**
	comp=N,4.1nm,0.1s						
PCAS	**Casmilo, Conde**	**3.42**	**14**	*e*Sn	**Sn**	**06 35 29.5**	**-0.3**
PCAS	**Casmilo, Conde**	**3.42**	**14**	S	**Sn**	**06 35 29.5**	**-0.3**
PCBR	**Castelo Branco**	**3.52**	**28**	*e*Sn	**Sn**	**06 35 32.3**	**+0.2**
PCBR				A	A	06 35 33.1	
	comp=N,1.7nm,0.1s						
PCBR	**Castelo Branco**	**3.52**	**28**	S	**Sn**	**06 35 32.3**	**+0.2**
	comp=N,0.9nm,0.1s						
ECAB	**El Cabril**	**3.58**	**67**	P	**Pn**	**06 34 53.2**	**+0.7**
	comp=N,0.2nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**06 35 31.8**	**-1.9**
	comp=N,1.0nm,0.1s,SNR=7.9						
MTE	**Manteigas**	**4.00**	**23**	*e*Sn	**Sn**	**06 35 42.9**	**-1.1**
MTE				A	A	06 35 46.3	
	comp=N,6.1nm,0.5s						
MTE	**Manteigas**	**4.00**	**23**	S	**Sn**	**06 35 42.9**	**-1.1**
	comp=N,3.1nm,0.5s						
EPLA	**Plasencia**	**4.32**	**39**	P	**Pn**	**06 35 02.6**	**-0.1**
	comp=N,0.5nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**06 35 50.9**	**-1.1**
	comp=N,2.9nm,0.1s,SNR=7.9						
POLO	**Lamas de Olo**	**4.84**	**16**	*e*Pn	**Pn**	**06 35 11.1**	**+1.2**
POLO				*e*Sn	**Sn**	**06 36 03.3**	**-1.6**
POLO				A	A	06 36 09.5	
	comp=N,1.0nm,0.8s						
POLO	**Lamas de Olo**	**4.84**	**16**	P	**Pn**	**06 35 11.1**	**+1.2**
POLO				S	**Sn**	**06 36 03.3**	**-1.6**
	comp=N,1.0nm,0.8s						
MVO	**Moncorvo**	**4.86**	**23**	*e*Sn	**Sn**	**06 36 03.9**	**-1.2**
MVO				A	A	06 36 05.7	
	comp=N,2.7nm,0.5s						
MVO	**Moncorvo**	**4.86**	**23**	P	**Pn**	**06 35 11.0**	**+0.9**
	comp=N,0.1nm,0.0s,SNR=7.9						
MVO				S	**Sn**	**06 36 04.0**	**-1.2**
	comp=N,1.1nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**5.00**	**54**	P	**Pn**	**06 35 12.7**	**+0.7**
	comp=N,0.1nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**06 36 06.4**	**-2.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.26**	**13**	S	**Sn**	**06 36 12.3**	**-3.0**
	comp=N,0.4nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.33**	**11**	*e*Sn	**Sn**	**06 36 14.4**	**-2.4**
PGAV	**Gavieira, Arco**	**5.33**	**11**	S	**Sn**	**06 36 14.4**	**-2.4**
ECAL	**Calabor**	**5.65**	**22**	P	**Pn**	**06 35 21.2**	**+0.2**
	comp=N,0.5nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**06 36 22.4**	**-2.5**
	comp=N,0.5nm,0.2s,SNR=7.9						

GCG 01 06:34:38.1±0.6, 13°.57N×91°.62W, h16km±5km, MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.14**	**2**	*e*P	Pb	06 34 58.9	-0.7
FUG	**Fuego 3**	**1.16**	**41**	*e*P	Pn	06 34 59.2	-0.6
FUG				*e*S	Sg	06 35 15.6	0.0
PCG	**Pacaya**	**1.28**	**50**	*e*P	Pn	06 35 00.6	-1.0
MOYG	**Moyuta, Jutiap**	**1.57**	**72**	*e*P	Pn	06 35 05.6	+0.1
NBG	**Las Nubes**	**1.60**	**50**	*e*P	Pn	06 35 06.5	+0.5
NBG				*e*S	Sb	06 35 28.2	+0.7

ISCJB ***01*** *06:44:25.2±0.2, 4°.00N±0°.02×76°.27W±0°.02, h116km±2km, mb3.8/20, Error ellipse: s-maj=4.2km s-min=2.9km az=35.5*
RSNC ***01*** *06:44:26.7±1.0, 3°.96N×76°.24W, h107km±4km, ML3.7, Mw3.9*
NEIC ***01*** *06:44:26.8±1.7, 3°.96N×76°.25W, h111km±12km, mb4.0/24, MW4.0(RSNC), Error ellipse: s-maj=16.3km s-min=14.3km az=133.0*
NEIC Felt at Armenia, Cali and Roldanillo.
UCR ***01*** *06:44:27.8±1.7, 4°.11N×76°.35W, h36km±999km, mb4.0(NEIC)*
IDC ***01*** *06:44:29.1±1.6, 4°.09N×75°.99W, h149km±14km, mb3.2/8, mb1 3.5/10, mb1mx3.3/33, mbtmp3.7/10, Error ellipse: s-maj=22.2km s-min=15.2km az=44.0*
ISC 01 06:44:25.9±0.6, 3°.98N±0°.03×76°.24W±0°.03, h111km±6km, n70, σ1°.37/101, mb3.8/20, 6C-11D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	**Yotoco, Valle**	**0.10**	**273**	⇑*i*P	**Pn**	**06 44 41.3**	**-0.1**
YOTC				*e*S	**Sn**	**06 44 52.5**	**-0.5**
YOTC				*i*		06 44 55.0	
	comp=Z,2μm,0.7s						
PLMC	**San Jos del P**	**0.92**	**357**	⇑*i*P	**Pn**	**06 44 46.6**	**+0.1**
PLMC				*e*S	**Sn**	**06 45 02.7**	**+0.6**
PLMC				*i*		06 45 05.2	
	comp=Z,14μm,0.1s						
MALC	**Bahia Malaga**	**1.09**	**272**	⇓*i*P	**Pn**	**06 44 49.1**	**+1.0**
MALC				*e*S	**Sn**	**06 45 04.4**	**-0.6**
MALC				*i*		06 45 13.4	
	comp=Z,2μm,0.3s						
RREF	**El Recreo**	**1.28**	**44**	⇓*i*P	**Pn**	**06 44 50.7**	**-0.1**
RREF				*e*S	**Sn**	**06 45 10.2**	**+0.5**
RREF				*i*		06 45 12.2	
	comp=Z,518nm,0.2s						
PRAC	**Prado**	**1.38**	**101**	⇓*i*P	**Pn**	**06 44 51.9**	**+0.5**
PRAC				*e*S	**Sn**	**06 45 10.8**	**+0.1**
PRAC				*i*		06 45 13.5	
	comp=Z,1μm,0.3s						
POPC	**Popayan, Colom**	**1.49**	**197**	⇑*i*P	**Pn**	**06 44 52.7**	**-0.3**
POPC				*e*S	**Sn**	**06 45 12.7**	**-0.8**
POPC				*i*		06 45 14.8	
	comp=Z,1μm,0.3s						
GUY2C	**Guyana, Caldas**	**1.51**	**35**	⇓*i*P	**Pn**	**06 44 53.2**	**-0.2**
GUY2C				*e*S	**Sn**	**06 45 13.6**	**-0.7**
GUY2C				*i*		06 45 16.7	
	comp=Z,1μm,0.6s						
NORC	**Norcasia**	**2.08**	**41**	⇓*i*P	**Pn**	**06 45 00.1**	**0.0**
NORC				*e*S	**Sn**	**06 45 25.6**	**-0.6**
NORC				*i*		06 45 29.9	
	comp=Z,113nm,0.4s						
ROSC	**El Rosal**	**2.10**	**66**	P	**Pn**	**06 45 02.4**	**+1.9**
	comp=Z,154nm,0.3s,baz=219,slow=17,SNR=598						
ROSC				S	**Sn**	**06 45 28.4**	**+1.4**
	comp=Z,65nm,0.3s,baz=215,slow=22,SNR=18						
ROSC	**El Rosal**	**2.10**	**66**	*e*Pn	**Pn**	**06 45 02.1**	**+1.6**
ROSC				*e*Sn	**Sn**	**06 45 29.5**	**+2.5**
BBAC	**Balboa, Cauca**	**2.19**	**207**	⇑*i*P	**Pn**	**06 45 01.7**	**+0.1**
BBAC				*e*S	**Sn**	**06 45 28.7**	**-0.2**
BBAC				*i*		06 45 33.3	
	comp=Z,758nm,0.3s						
HELC	**Santa Helena**	**2.31**	**18**	⇓*i*P	**Pn**	**06 45 03.2**	**0.0**
HELC				*e*S	**Sn**	**06 45 32.0**	**+0.2**
HELC				*i*		06 45 34.7	
	comp=Z,324nm,0.6s						
FLOC	**Florencia**	**2.45**	**166**	⇓*i*P	**Pn**	**06 45 05.3**	**+0.5**
FLOC				*e*S	**Sn**	**06 45 31.7**	**-3.0**
FLOC				*i*		06 45 57.9	
	comp=Z,101nm,0.5s						
CRUC	**La Cruz**	**2.50**	**197**	⇓*i*P	**Pn**	**06 45 06.4**	**+0.7**
CRUC				*e*S	**Sn**	**06 45 36.3**	**+0.1**
CRUC				*i*		06 45 47.0	
	comp=Z,339nm,0.6s						
VILC	**Villavicencio,**	**2.54**	**87**	*e*P	**Pn**	**06 45 06.9**	**+0.9**
VILC				*e*S	**Sn**	**06 45 38.9**	**+2.0**
VILC				*i*		06 45 41.6	
	comp=Z,402nm,0.5s						
CHIC	**Chingaza**	**2.58**	**75**	⇓*i*P	**Pn**	**06 45 08.0**	**+1.1**
CHIC				*e*S	**Sn**	**06 45 38.1**	**-0.2**
CHIC				*i*		06 45 45.1	
	comp=Z,209nm,0.5s						
CPAS2	**Pasto**	**2.92**	**200**	*e*P	**Pn**	**06 45 13.1**	**+1.8**
CPAS2				*e*S	**Sn**	**06 45 47.0**	**+0.9**
CPAS2				*i*		06 45 51.8	
	comp=Z,664nm,0.4s						
GCUF	**Volcan Galeras**	**2.95**	**202**	⇑*e*P	**Pn**	**06 45 11.7**	**-0.1**
GCUF				*e*S	**Sn**	**06 45 46.2**	**-0.8**
GCUF				*i*		06 45 48.3	
	comp=Z,284nm,0.3s						
MACC	**Macarena, Meta**	**3.00**	**127**	⇓*i*P	**Pn**	**06 45 11.9**	**-0.1**
MACC				*e*S	Sn	06 46 04.3	+17
MACC				*i*		06 46 20.3	
	comp=Z,149nm,0.6s						
PTBC	**PUERTO BERRIO,**	**3.10**	**35**	⇓*i*P	**Pn**	**06 45 13.2**	**-0.1**
PTBC				*e*S	**Sn**	**06 45 47.1**	**-2.8**
PTBC				*i*		06 45 50.4	
	comp=Z,150nm,0.4s						
RUSC	**La Rusia**	**3.68**	**59**	*e*P	**Pn**	**06 45 22.0**	**+0.6**
RUSC				*e*S	**Sn**	**06 46 06.4**	**+2.2**
RUSC				*i*		06 46 10.2	
	comp=Z,32nm,0.5s						
UREC	**San Jos de Ur**	**3.81**	**11**	*e*P	**Pn**	**06 45 22.9**	**0.0**
UREC				*e*S	**Sn**	**06 46 05.9**	**-1.0**
UREC				*i*		06 46 10.9	
	comp=Z,47nm,0.5s						
GUVC	**San Jose del G**	**3.88**	**111**	*e*P	**Pn**	**06 45 23.8**	**+0.1**
GUVC				*e*S	**Sn**	**06 46 02.2**	**-6.2**
GUVC				*i*		06 46 09.9	
	comp=Z,100nm,0.3s						
BRRC	**Barranca, Sant**	**4.00**	**39**	⇑*i*P	**Pn**	**06 45 24.9**	**-0.4**
BRRC				*e*S	**Sn**	**06 46 08.9**	**-2.4**
BRRC				*i*		06 46 13.2	
	comp=Z,43nm,0.5s						
BARC	**Barichara**	**4.00**	**49**	*e*P	**Pn**	**06 45 26.5**	**+0.9**
BARC				*e*S	**Sn**	**06 46 12.3**	**+0.6**
BARC				*i*		06 46 16.4	
	comp=Z,52nm,0.7s						
YOPC	**Yopal, Colombi**	**4.05**	**70**	*e*P	**Pn**	**06 45 26.7**	**+0.7**
YOPC				*e*S	**Sn**	**06 46 13.2**	**+0.6**
YOPC				*i*		06 46 17.7	
	comp=Z,103nm,0.6s						
OTAV	**Otavalo**	**4.32**	**211**	*e*Pn	**Pn**	**06 45 30.2**	**+0.1**
OTAV				*e*Sn	**Sn**	**06 46 20.2**	**+0.4**
SMLC	**San Martn de**	**5.25**	**24**	*e*P	**Pn**	**06 45 41.1**	**-1.1**
SMLC				*e*S	**Sn**	**06 46 37.0**	**-4.6**
SMLC				*i*		06 46 42.1	
	comp=Z,23nm,0.4s						
AZU	**Azuero**	**5.52**	**314**	*e*P	**Pn**	**06 45 45.5**	**-0.3**
AZU				*e*S	**Sn**	**06 46 46.7**	**-1.3**
FRIJ	**El Hiral**	**6.25**	**327**	*e*P	**Pn**	**06 45 55.9**	**+0.2**
BCIP	**Isla Barro Col**	**6.27**	**325**	*e*Pn	**Pn**	**06 45 55.8**	**-0.2**
BCIP				*e*Sn	**Sn**	**06 47 06.9**	**+0.6**
BCIP	**Isla Barro Col**	**6.27**	**325**	*e*P	**Pn**	**06 45 57.0**	**+1.0**
BCIP				*e*S	**Sn**	**06 47 05.4**	**-0.9**
BCIP				*i*		06 47 10.6	
	comp=Z,13nm,0.4s						
BCIP	**Isla Barro Col**	**6.27**	**325**	*e*P	**Pn**	**06 45 56.9**	**+1.0**
BCIP				*e*S	**Sn**	**06 47 06.8**	**+0.6**
SDV	**Santo Domingo**	**7.40**	**49**	P	**Pn**	**06 46 11.2**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=238,slow=7,9,SNR=12						
SDV				S	**Sn**	**06 47 31.6**	**-2.4**
	comp=Z,3.0nm,0.3s,baz=238,slow=21,SNR=3.7						
SDV	**Santo Domingo**	**7.40**	**49**	*e*Pn	**Pn**	**06 46 10.8**	**-0.7**
PAYG	**Puerto Ayora**	**14.78**	**252**	*e*P	**P**	**06 47 53.6**	**+1

YKA	Yellowknife Ar	64.90	341	P	P	06 54 51.7	-1.3
	comp=Z,0.3nm,0.4s,baz=132,slow=6.5,SNR=5.3						
TOA0	Torodi Ar. St	77.37	77	eP	P	06 56 07.4	-1.8
	comp=Z,2.5nm,1.1s						
TORD	Torodi Ar. Bea	77.37	77	P	P	06 56 06.6	-2.6
	comp=Z,0.7nm,0.4s,baz=292,slow=7.0,SNR=11						
ILAR	Eielson Array	78.23	336	P	P	06 56 12.0	-1.0
	comp=Z,0.3nm,0.6s,baz=113,slow=4.1,SNR=4.5						
BPAW	Bear Paw Mtn.	79.79	334	eP	P	06 56 20.9	-0.7
	comp=Z,1.2nm,1.1s						
ASAR	Alice Springs	144.94	233	PKPbc	PKPbc	07 03 48.6	-1.7
	comp=Z,0.8nm,0.4s,baz=121,slow=3.7,SNR=26						
WRA	Warramunga Arr	146.24	239	PKPbc	PKPdf	07 03 53.0	-0.1
	comp=Z,1.3nm,0.9s,baz=122,slow=3.0,SNR=6.1						

IDC 01 06:50:55.5±1.1, 62°34S×161°21W, h0km, mb4.3/4, mb1 4.4/5, mb1mx4.1/23, mbtmp4.2/5, ML4.1/1, MS3.9/10, Ms1 3.9/10, ms1mx3.8/16, Error ellipse: s-maj=46.8km s-min=26.3km az=3.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	19.20	203	P	P	06 55 20.3	-0.1
	0.5nm,0.3s,baz=59,slow=16,SNR=68						
VNDA				LR	LR	07 00 51.3	
	comp=Z,840nm,18.4s,baz=14,slow=31						
RPZ	Rata Peaks	24.69	306	LR	LR	07 03 37.6	
	comp=Z,196nm,20.7s,baz=193,slow=31						
URZ	Urewera	27.53	321	LR	LR	07 05 00.2	
	comp=Z,150nm,22.0s,baz=172,slow=31						
TBI	Tubuai	39.78	17	eLR	LR	07 09 22.6	
	comp=Z,636nm,27.5s,baz=190						
TVO	Taravao	45.29	16	eT	T	07 47 48.8	
	3.2nm,0.3s						
PPT2	Papeete2	45.44	16	eLR	LR	07 12 08.0	
	comp=Z,585nm,25.0s,baz=195						
PPT2	Papeete2	45.44	16	eT	T	07 48 00.4	
	9.6nm,0.3s						
PPT	Papeete	45.46	16	LR	LR	07 13 01.2	
	comp=Z,229nm,20.5s,baz=158,slow=29						
MAW	Mawson	46.50	202	LR	LR	07 17 25.9	
	comp=Z,123nm,18.3s,baz=170,slow=34						
STKA	Stephens Creek	47.16	283	LR	LR	07 15 11.1	
	comp=Z,126nm,21.5s,baz=193,slow=31						
ASAR	Alice Springs	57.68	281	P	P	07 00 47.9	+0.3
	1.9nm,1.0s,baz=155,slow=8.9,SNR=6.4						
ASAR				LR	LR	07 22 12.8	
	comp=Z,100nm,20.7s,baz=160,slow=32						
CFA	Coronel Fontan	63.86	108	P	P	07 01 29.2	-0.4
	4.4nm,0.9s,baz=203,slow=7.7,SNR=6.1						
LVC	Limon Verde	71.29	103	P	P	07 02 17.1	0.0
	3.9nm,0.9s,baz=214,slow=2.8,SNR=4.1						
NNA	Nana	76.86	91	LR	LR	07 29 22.7	
	comp=Z,48nm,18.8s,baz=188,slow=30						
LPAZ	La Paz	77.15	100	P	P	07 02 52.1	+0.5
	1.6nm,0.8s,baz=192,slow=4.9,SNR=7.2						
ATAH	Atahualpa	80.38	87	LR	LR	07 30 38.6	
	comp=Z,73nm,18.0s,baz=240,slow=30						
BOSA	Boshof	89.22	186	LR	LR	07 40 01.2	
	comp=Z,148nm,20.0s,baz=207,slow=33						
ILAR	Eielson Array	127.25	8	PKP	PKPdf	07 09 59.0	-1.1
	0.7nm,1.1s,baz=204,slow=2.0,SNR=4.2						

*IDC **01** 06:51:15.6±1.6, 10°95S×165°11E, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.8/30, mbtmp4.1/6, ML3.9/1, Error ellipse: s-maj=50.0km s-min=27.5km az=129.0*
*ISCJB **01** 06:51:18.3±1.5, 11°1S±0°2×165°2E±0°2, h31km, mb3.9/4, Error ellipse: s-maj=27.9km s-min=23.3km az=0.6*

ISC 01 06:51:20.2±1.5, 11°1S±0°2×165°2E±0°2, h31km, n6, σ0s54/6, mb4.0/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.02	174	Pn	Pn	06 53 55.8	-0.1
	0.9nm,0.3s,baz=37,slow=15,SNR=10						
CTA	Charters Tower	20.30	241	P	P	06 55 54.2	+0.5
	5.8nm,0.8s,baz=63,slow=16,SNR=4.8						
STKA	Stephens Creek	30.05	223	P	P	06 57 27.1	+0.4
	2.4nm,0.7s,baz=32,slow=11,SNR=2.9						
WRA	Warramunga Arr	30.95	250	P	P	06 57 34.3	-0.5
	2.1nm,0.9s,baz=79,slow=9.4,SNR=3.6						
ASAR	Alice Springs	32.29	243	P	P	06 57 46.0	-0.5
	2.6nm,0.8s,baz=69,slow=9.4,SNR=14						
ILAR	Eielson Array	83.70	19	P	P	07 03 45.7	+0.1
	0.3nm,0.8s,baz=236,slow=6.4,SNR=3.9						

*TAP **01** 06:59:29.9, 24°43N×122°33E, h17km, ML2.6, C*
*ISCJB **01** 06:59:30.1±0.5, 24°42N±0°03×122°34E±0°02, h5km±4km, Error ellipse: s-maj=5.6km s-min=3.4km az=14.7*
*JMA **01** 06:59:30.2±0.1, 24°45N×122°34E, h7km±3km, M2.2*

ISC 01 06:59:30.4±1.0, 24°45N±0°04×122°33E±0°02, h15km±8km, n32, σ0s44/45, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.21	299	P	Pg	06 59 35.4	+0.1
	baz=303						
EOS1				S	Sb	06 59 39.6	0.0
	baz=303						
TWC	Suao	0.47	290	P	Pg	06 59 39.0	-0.7
	baz=292						
TWC				S	Sg	06 59 46.4	+0.2
	baz=292						
ENA	Nanau	0.54	268	eP	Pg	06 59 40.5	-0.6
	baz=270						
JYNG	Yonaguni jima	0.56	89	P	Pg	06 59 41.0	-0.4
JYNG				eS	Sg	06 59 48.6	-0.2
YOJ	Yonaguni jima	0.62	88	eP	Pg	06 59 42.1	-0.4
	baz=88						
YOJ	Yonaguni jima	0.62	88	P	Pg	06 59 42.1	-0.4
TWB1	Santiao Chiao	0.64	331	eP	Pg	06 59 42.5	-0.5
	baz=332						
TWE	Neicheng	0.67	294	eP	Pg	06 59 42.8	-0.6
	baz=296						
TWE				eS	Sb	06 59 52.6	-0.1
	baz=296						
TIPB	Shuangxi	0.70	319	P	Pg	06 59 44.0	-0.1
	baz=311						
TIPB				eS	Sb	06 59 53.6	-0.1
	baz=311						
NACB	Ninganchiao	0.73	248	P	Pg	06 59 44.2	-0.4
	baz=256						
NACB				S	Sb	06 59 54.4	0.0
	baz=256						
NDT	Datong Townshi	0.76	282	P	Pg	06 59 45.0	-0.2
	baz=283						
NDT				eS	Sb	06 59 55.9	+0.4
	baz=283						
TWD	Chiawan	0.77	242	eP	Pn	06 59 46.5	-0.1
	baz=250						
NWF	Wu-fen Shan	0.80	321	eP	Pn	06 59 47.1	-0.1
	baz=314						
NWF				eS	Sn	06 59 58.2	-0.6
	baz=314						
WFSB	Wu-fen Shan	0.80	321	eP	Pn	06 59 47.0	-0.1
	baz=322						
WFSB				eS	Sn	06 59 58.4	-0.3
	baz=322						
ETLH	Xiulin Townshi	0.81	253	eP	Pg	06 59 46.0	-0.2
	baz=264						
NWLT	Wulai	0.82	294	eP	Pg	06 59 46.5	+0.1
	baz=295						
NNSB	Datong	0.87	269	P	Pb	06 59 46.8	-0.3
	baz=270						
NNS	Nan Shan	0.88	270	eP	Pb	06 59 46.9	-0.5
	baz=271						
YHNB	Yeheng	0.90	285	eP	Pb	06 59 47.4	-0.3
	baz=285						
YHNB				eS	Sg	07 00 00.5	+0.8
	baz=285						
NSK	Sanguang	0.92	285	P	Pb	06 59 47.7	-0.3
	baz=286						
NSK				eS	Sg	07 00 01.0	+0.7
	baz=286						
YM07	YM07	0.97	318	P	Pg	06 59 49.3	+0.1
	baz=319						
YM07				eS	Sg	07 00 01.9	-0.1
	baz=319						
YM01	YM01	0.98	315	eP	Pn	06 59 49.9	+0.3
	baz=316						
YM10	YM10	1.00	315	eP	Pb	06 59 49.3	0.0
	baz=316						
YM04	YM04	1.01	314	eP	Pn	06 59 51.4	+1.4
	baz=315						
YM04				eS	Sg	07 00 03.2	0.0
	baz=315						
WHF	Hehuan Shan	1.02	253	eP	Pb	06 59 49.5	-0.5
	baz=263						
CHGB	Renai	1.13	250	eP	Pb	06 59 51.6	0.0
	baz=251						
LIOB	Emei	1.22	280	eP	Pg	06 59 54.1	+0.3
	baz=281						
NSTT	Nanjuang	1.23	279	eP	Pg	06 59 53.7	-0.3
	baz=280						
IRIF	Iriomote-Funau	1.28	95	P	Pb	06 59 54.3	+0.2
SSLB	Suanglung	1.42	243	eP	Pb	06 59 56.8	+0.2
	baz=228						
SMLT	Sun Moon Lake	1.42	247	eP	Pg	06 59 57.9	+0.1
	baz=233						
JKRS	Kuro-shima	1.54	97	eS	Sb	07 00 18.8	+0.9

IDC 01 07:00:55.0±5.1, 4°42S×131°84E, h0km, mb3.9/1, mb1 4.0/3, mb1mx3.6/22, mbtmp3.8/3, ML3.7/2, Error ellipse: s-maj=355.4km s-min=29.6km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.62	171	Pn	Pn	07 04 35.7	-1.0
	0.3nm,0.3s,baz=350,slow=13,SNR=11						
WRA				Sn	Sn	07 07 16.1	-14
	0.4nm,0.3s,baz=349,slow=22,SNR=5.8						
ASAR	Alice Springs	19.24	174	P	P	07 05 21.4	+0.4
	0.3nm,0.3s,baz=352,slow=9.9,SNR=17						
ASAR				S	Sn	07 08 42.0	-16
	0.1nm,0.3s,baz=356,slow=29,SNR=3.7						
MKAR	Makanchi Array	67.12	325	P	P	07 11 50.6	0.0
	0.5nm,0.4s,baz=115,slow=7.4,SNR=7.6						

*EAF **01** 07:19:00.6±0.7, 21°08S×33°05E, h10km, MD3.7*
*BUL **01** 07:19:02.3±1.3, 21°05S×33°05E, h10km, MD4.1*

ISC 01 07:19:02.4±4.0, 21°1S±0°1×32°9E±0°2, h15km, n10, σ1s14/12, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	Messina	2.89	245	iP	Pn	07 19 49.1	+1.2
MSNA	Messina	2.89	245	iP	Pn	07 19 49.1	+1.2
BLWY	Bulawayo	4.09	283	iP	Pn	07 20 04.6	0.0
BLWY				iS	Sn	07 20 52.6	+0.2
BLWY	Bulawayo	4.09	283	iP	Pn	07 20 04.6	0.0
BLWY				iS	Sn	07 20 52.6	+0.2
MATP	Matopo	4.13	279	iP	Pn	07 20 05.5	+0.4
MATP				iS	Sg	07 20 53.4	-22
MATP	Matopo	4.13	279	iP	Pn	07 20 05.5	+0.4
MATP				iS	Sg	07 20 53.4	-22
LSZ	Lusaka	7.32	322	iP	Pn	07 20 48.1	-0.9
LSZ	Lusaka	7.32	322	iP	Pn	07 20 48.1	-0.9
BOSA	Boshof	10.14	221	iP	Pn	07 21 25.8	-1.9
BOSA				iS	Sn	07 23 12.7	-8.6
BOSA	Boshof	10.14	221	iP	Pn	07 21 25.8	-1.9
BOSA				iS	Sn	07 23 12.7	-8.6

*IDC **01** 07:21:28.2±0.7, 44°64S×78°92W, h0km, mb4.1/11, mb1 4.3/13, mb1mx4.1/32, mbtmp4.1/13, ML3.8/2, MS3.9/12, Ms1 3.8/12, ms1mx3.7/20, Error ellipse: s-maj=26.5km s-min=19.7km az=106.0*
*BJI **01** 07:21:32.7±0.0, 44°00S×79°10W, h10km, Ms5.1/1, Ms7 5.0/1*
*NEIC **01** 07:21:34.0±2.9, 43°98S×78°98W, h10km±3km, mb4.7/44, Error ellipse: s-maj=21.4km s-min=15.7km az=92.0*
*ISCJB **01** 07:21:35.6±0.4, 43°99S±0°06×78°90W±0°07, h33km, mb4.6/33, MS3.8/9, Error ellipse: s-maj=8.5km s-min=7.1km az=144.5*

ISC 01 07:21:37.1±0.4, 44°05S±0°08×78°87W±0°09, h35km, n87, σ1s86/84, mb4.7/33, MS3.8/9, 1C, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	3.90	78	ePn	Pn	07 22 35.9	+1.5
GO07				eSn	Sn	07 23 19.5	+0.6
PLCA	Paso Flores	7.00	65	Pn	Pn	07 23 15.4	-1.6
	0.4nm,0.3s,baz=265,slow=6.2,SNR=9.5						
PLCA				LR	LR	07 25 55.3	
	comp=Z,776nm,19.1s,baz=258,slow=37						
PLCA	Paso Flores	7.00	65	ePn	Pn	07 23 15.0	-2.0
GO06	Curarrehue	7.10	54	ePn	Pn	07 23 18.6	0.0
GO05	Huala	10.50	33	ePn	Pn	07 24 05.2	+0.2
PEL	Peldehue	12.62	33	ePn	Pn	07 24 34.5	+0.4
ROC1	El Roble	12.65	32	ePn	Pn	07 24 34.7	+0.1
USHA	Ushuaia	12.73	152	LR	LR	07 28 59.9	
	comp=Z,639nm,20.2s,baz=238,slow=37						
CFA	Coronel Fontan	14.98	38	Pn	Pn	07 25 08.0	+1.8
	0.4nm,0.3s,baz=204,slow=10,SNR=2.6						
CFA				LR	LR	07 30 47.7	
	comp=Z,251nm,18.1s,baz=254,slow=36						
GO04	Tololo Observa	15.26	28	ePn	Pn	07 25 10.0	-0.1
	14nm,0.9s						
LCO	Las Campanas	16.37	26	ePn	P	07 25 27.3	+0.3
	24nm,1.5s						
GO02	Mina Guanaco	20.31	25	eP	Pn	07 26 12.6	+0.2
	25nm,0.9s						
PMSA	Palmer Station	22.37	163	LR	LR	07 32 17.7	
	comp=Z,389nm,19.7s,baz=334,slow=30						
LVC	Limon Verde	22.91	24	P	P	07 26 40.5	+2.3
	3.5nm,0.9s,baz=218,slow=15,SNR=2.9						
LVC				LR	LR	07 33 40.9	
	comp=Z,269nm,21.8s,baz=222,slow=31						
PB01	IPOC Station P	24.23	22	eP	P	07 26 52.5	+1.8
	25nm,1.1s						
CPUP	Villa Florida	24.83	52	P	P	07 26 56.1	+0.1
	7.4nm,1.0s,baz=238,slow=8.6,SNR=9.2						
CPUP				LR	LR	07 37 13.2	
	comp=Z,195nm,20.8s,baz=223,slow=38						
CPUP	Villa Florida	24.83	52	eP	P	07 26 56.9	+0.9
	24nm,0.9s						
MNMC	Minye Minye	26.04	20	eP	P	07 27 09.7	+2.4
	32nm,1.2s						
LPAZ	La Paz	29.14	22	P	P	07 27 36.2	+0.8
	1.8nm,0.9s,baz=172,slow=9.9,SNR=6.0						
LPAZ	La Paz	29.14	22	eP	P	07 27 35.7	+0.3
	5.2nm,1.0s						
RPN	Rapa Nui	29.75	294	LR	LR	07 35 09.7	
	comp=Z,56nm,18.1s,baz=86,slow=27						
SIV	San Ignacio	31.79	34	P	P	07 27 58.6	+0.4
	2.5nm,1.1s,baz=224,slow=11,SNR=6.5						
VNA3	Neumayer Olymp	42.40	153	P	P	07 29 29.0	+1.4
VNA1	Neumayer--Stat	42.86	152	P	P	07 29 32.3	+1.0
VNA2	Neumayer--Watz	43.14	153	P	P	07 29 35.2	+1.6
	baz=273,slow=8.0						
SNAA	Sanae	44.57	154	P	P	07 29 45.6	+0.4
SNAA	Sanae	44.57	154	P	P	07 29 38.1	-7.0
	2.8nm,1.0s,baz=328,slow=5.9,SNR=4.8						
SNAA	Sanae	44.57	154	eP	P	07 29 45.6	+0.4
	20nm,1.2s						
QSPA	South Pole Qui	46.19	180	eP	P	07 29 58.4	+0.2
	15nm,1.4s						
PTGA	Pitinga	46.30	27	P	P	07 29 59.4	+0.1
	6.9nm,0.8s,baz=203,slow=10,SNR=4.2						
ROSC	El Rosal	48.84	6	LR	LR	07 49 14.9	
	comp=Z,256nm,18.5s,baz=218,slow=34						
VNDA	Vanda	53.16	194	LR	LR	07 50 46.1	
	comp=Z,78nm,18.9s,baz=93,slow=33						
VNDA	Vanda	53.16	194	eP	P	07 30 52.8	+2.0
	3.9nm,1.4s						
SDV	Santo Domingo	53.21	10	P	P	07 30 53.3	+1.2
	4.4nm,0.8s,baz=258,slow=6.5,SNR=4.4						
SYO	Syowa Base	58.50	158	eP	P	07 31 26.4	-2.7
LGNH	Logne	62.52	7	eP	P	07 31 57.7	+0.7
	120nm,1.2s						
CMIG	Matias Romero	62.58	343	P	P	07 31 57.2	-0.3
	4.0nm,0.9s,baz=149,slow=5.6,SNR=4.4						
MAW	Mawson	64.97	165	LR	LR	07 59 31.4	
	comp=Z,163nm,19.1s,baz=225,slow=35						
HPIG		74.79	335	eP	P	07 33 14.0	+0.3
	4.7nm,0.9s						
TXAR	Lajitas Array	76.47	338	P	P	07 33 23.0	-0.1
	2.3nm,1.0s,baz=157,slow=6.6,SNR=18						
JCT	Junction City	76.60	342	eP	P	07 33 23.8	0.0
	15nm,1.4s						
SWET	Sewanee	79.16	354	eP	P	07 33 37.2	-0.6
	24nm,1.3s						
BOSA	Boshof	79.90	120	LR	LR	08 03 51.2	
	comp=Z,39nm,20.0s,baz=34,slow=32						
WHAR	Wooly Hollow	79.91	349	eP	P	07 33 40.8	-1.1
	13nm,1.2s						
WVT	Waverly	80.22	353	eP	P	07 33 42.5	-1.0
	14nm,1.4s						
WMOK	Wichita Mounta	80.48	343	eP	P	07 33 43.5	-1.5
	9.2nm,1.4s						
SIUC	Southern Illin	81.93	352	eP	P	07 33 51.2	-1.4
	13nm,1.0s						
CCM	Cathedral Cave	82.49	350	eP	P	07 33 54.6	-1.0
	22nm,1.0s						
ANMO	Albuquerque	82.53	337	eP	P	07 33 55.8	-0.3
	3.4nm,0.9s						
KNB	Kanab	86.37	333	eP	P	07 34 16.4	+0.9
	8.0nm,1.3s						
SMCO	Snowmass	86.65	338	eP	P	07 34 17.4	+0.3
	7.2nm,1.2s						
SZCU	Shurtz Canyon	86.98	333	eP	P	07 34 18.9	+0.5
	14nm,1.5s						
CCUT	Cedar City	87.03	333	eP	P	07 34 19.8	+1.0
	13nm,1.5s						
JFWS	Jewell Farm	87.18	352	eP	P	07 34 18.1	-0.9
	13nm,0.9s						
MSU	Marysvale	87.53	334	eP	P	07 34 21.0	-0.2
N23A	Red Feather La	88.00	340	eP	P	07 34 23.0	-0.4
	6.9nm,1.0s						
R11A	Troy Canyon, C	88.49	332	eP	P	07 34 25.9	+0.3
	2.5nm,1.4s						
ECSD	EROS Data Cent	88.83	347	eP	P	07 34 25.3	-1.6
	5.5nm,1.0s						
NVAR	Mina Array Bea	89.51	330	P	P	07 34 30.9	+0.5
	0.5nm,0.8s,baz=154,slow=5.8,SNR=4.8						
PDAR	Pinedale Array	90.69	338	P	P	07 34 34.9	-1.0
	0.4nm,0.8s,baz=148,slow=6.9,SNR=3.5						
PDAR				LR	LR	08 10 44.1	
	comp=Z,69nm,18.6s,baz=211,slow=32						
ILAR	Eielson Array	120.69	332	PKP	PKPdf	07 40 20.5	-3.4
	0.8nm,0.8s,baz=159,slow=1.1,SNR=6.9						
ILB	Eielson Array	120.69	332	ePKPdf	PKiKP	07 40 26.7	+2.6
GERES	GERESS Array B	122.79	52	PKP	PKPdf	07 40 25.4	-3.2
	0.9nm,0.8s,baz=220,slow=1.0,SNR=7.1						
TOLK	Toolik Lake Re	123.88	335	ePKPpre	PKPpre	07 40 27.7	
VYHS	Vyhne	125.57	54	ePKP	PKPdf	07 40 31.4	-2.4
AKASG	Malin Array Be	132.62	55	PKP	PKPdf	07 40 43.0	-4.1
	0.2nm,0.3s,baz=256,slow=2.0,SNR=4.4						
GEYT	Alibeck	147.25	86	PKPbc	PKPdf	07 41 13.1	-1.0
	4.0nm,0.7s,baz=243,slow=4.7,SNR=10						
GYA0B	ALIBECK ARRAY	147.25	86	ePKPdf	PKPdf	07 41 13.0	-1.0
GYA0B				ePKPbc	PKiKP	07 41 20.2	+1.5
TIXI	Tiksi	149.24	343	ePKPdf	PKPdf	07 41 17.3	+1.2
TIXI				ePKPbc	PKPab	07 41 23.9	-1.3
ARU	Arti	150.59	50	ePKPdf	PKPdf	07 41 21.0	+2.3
ARU				ePKPbc	pPKPdf	07 41 29.1	0.0
MJAR	Matsushiro Arr	150.93	268	PKPbc	PKPdf	07 41 22.0	+2.0
	1.8nm,0.8s,baz=128,slow=3.7,SNR=4.1						
MAJO	Matsushiro	150.93	268	ePKPdf	PKPdf	07 41 22.0	+2.0
ABKAR	Akbulak array	151.52	65	ePKPdf	PKPdf	07 41 23.5	+3.1
ABKAR				ePKPbc	pPKPdf	07 41 30.9	+0.2
CM31	Chiang Mai Arr	154.42	175	ePKPdf	PKPdf	07 41 29.2	+3.6
CMAR	Chiang Mai Arr	154.42	175	PKPbc	PKPdf	07 41 29.2	+3.6
	0.8nm,0.3s,baz=209,slow=4.5,SNR=5.4						
KSH	Kashi	160.73	95	ePKP	PKPdf	07 41 32.7	-0.3
NJ2	Nanjing	161.65	235	ePKP	PKPdf	07 41 34.0	0.0
WHN	Wuhan	162.93	222	PKP	PKPdf	07 41 38.6	+3.3
KURBB	Kurchatov Arra	163.37	59	PKP	PKPdf	07 41 31.7	-3.4
	0.7nm,0.7s,baz=272,slow=1.1,SNR=6.7						
ZAA1	Zalesovo Array	165.45	41	ePKPdf	PKPdf	07 41 33.1	-3.8
ZALV	Zalesovo Beam	165.45	41	PKP	PKPdf	07 41 33.1	-3.8
	1.0nm,0.7s,baz=273,slow=2.6,SNR=4.4						
MK32	Makanchi Array	166.49	72	ePKPdf	PKPdf	07 41 35.0	-3.0
MK32				ePKPab	PKPab	07 42 37.2	-3.0
MKAR	Makanchi Array	166.49	72	PKP	PKPdf	07 41 35.0	-3.0
	0.3nm,0.7s,baz=338,slow=1.6,SNR=3.2						
MKAR				PKPab	PKPab	07 42 37.2	-3.0
	0.5nm,0.8s,baz=262,slow=3.7,SNR=3.6						
CD2	Chengdu	166.72	190	PKP	PKPdf	07 41 38.1	-0.6
WMQ	Urumqi	170.30	87	ePKP	PKPdf	07 41 40.9	+0.2
HHC	Hu-ho-hao-te	171.65	251	ePKP	PKPdf	07 41 42.2	+0.7
LZH	Lanzhou	171.78	196	ePKP	PKPdf	07 41 37.4	-4.4
LZH				pPKP	pPKPdf	07 41 49.0	-3.2
LZH				LR	LR		
	comp=N,150nm,18.5s						
LZH				LR	LR		
	comp=E,170nm,18.3s						
LZH				LR	LR		
	comp=Z,230nm,20.2s						

*ISCJB **01** 07:22:38.4±0.8, 67°73N±0°04×34°0E±0°1, h0km, Error ellipse: s-maj=7.2km s-min=4.9km az=15.6*
*HEL **01** 07:22:40.9±0.4, 67°70N×34°01E, h0km, ML3.0, Explosion*
*NAO **01** 07:22:42.5±1.1, 67°69N×33°73E, ML3.2*
*KOLA **01** 07:22:42.0, 67°64N×33°89E, h0km*
*IDC **01** 07:22:43.1±1.6, 67°70N×33°68E, h0km, mb1 3.4/5, mb1mx3.1/48, mbtmp3.4/5, ML3.1/5, Error ellipse: s-maj=18.2km s-min=8.6km az=86.0*
*UPP **01** 07:22:43.5±3.1, 67°59N×33°44E, h0km, ML2.5, Suspected explosion*

ISC 01 07:22:38.4±1.4, 67°72N±0°03×34°22E±0°07, h0km, n51, σ1s89/79, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.34	245	P	Pg	07 22 45.6	+0.6
APA				S	Sg	07 22 48.2	-1.2
APZ9	Apatity	0.34	245	Pg	Pg	07 22 45.6	+0.7
APZ9				Lg	Lg	07 22 48.3	
APZ9	Apatity	0.34	245	Pg	Pg	07 22 45.6	+0.7
APZ9				Sg	Sg	07 22 48.3	-1.1
APA0	Apatity Array	0.48	257	Pg	Pg	07 22 48.2	+0.6
APA0				Lg	Lg	07 22 52.6	
APA0				Rg	Rg	07 22 54.6	
APA0	Apatity Array	0.48	257	P	Pg	07 22 48.2	+0.6
APA0				S	Sg	07 22 52.7	-1.1
APA0	Apatity Array	0.48	257	Pg	Pg	07 22 48.2	+0.6
APA0				Sg	Sg	07 22 52.6	-1.1
APA0				Rg	Rg	07 22 54.6	
VRF	Varrio	1.76	273	eP	Pb	07 23 11.1	-0.4
VRF				eS	Sn	07 23 32.1	-1.0
VRF				MSG		07 23 34.9	
	comp=Z,180nm,0.2s						
KU6	Riekki	2.41	227	eP	Pn	07 23 20.4	+1.4
KU6				eSB	Sn	07 23 51.0	+1.9
KU6				MSG		07 23 52.8	
	comp=Z,66nm,0.3s						
MSF	Maaselka	2.73	231	eP	Pn	07 23 25.6	+2.1
SGF	Sodankyl	2.96	268	eP	Pn	07 23 27.6	+1.0
SGF				eSB	Sb	07 24 07.6	-1.0
KEV	Kevo	3.33	311	Pn

HEF	**Hetta**	**4.02 285**	*e*P	**Pn**	**07 23 42.5**	**+1.4**
HEF			*e*S	**Sn**	**07 24 28.0**	**-0.9**
HEF			MSG		07 24 44.4	
	comp=Z,41nm,0.2s					
TOF	**Tornio**	**4.23 252**	*e*P	**Pn**	**07 23 44.4**	**+0.4**
OUL	**Oulu**	**4.26 236**	*e*P	**Pn**	**07 23 46.4**	**+2.0**
PAJU	**Pajala**	**4.35 266**	P	**Pn**	**07 23 45.9**	**+0.3**
PAJU			S	**Sn**	**07 24 35.2**	**-1.8**
LANU	**Lannavaara**	**4.64 280**	P	**Pn**	**07 23 50.0**	**+0.4**
MASU	**Masugnsbyn**	**4.69 272**	P	**Pn**	**07 23 50.4**	**+0.1**
ERTU	**Ertsjaerv**	**4.83 262**	P	**Pn**	**07 23 52.6**	**+0.3**
KIF	**Kilpisjarvi**	**5.13 291**	Pn	**Pn**	**07 23 58.0**	**+1.6**
KIF			Sn	**Sn**	**07 24 53.5**	**-2.6**
KIF			Lg	Lg	07 25 15.1	
KIF	**Kilpisjarvi**	**5.13 291**	Pn	**Pn**	**07 23 58.0**	**+1.6**
KIF			Sn	**Sn**	**07 24 53.5**	**-2.6**
KIF			Sg	**Sb**	**07 25 15.1**	**+4.2**
KUA	**Kurravaara**	**5.26 279**	P	**Pn**	**07 23 58.9**	**+0.7**
DUNU	**Dundret**	**5.29 270**	P	**Pn**	**07 23 58.7**	**0.0**
HARU	**Harads**	**5.43 260**	P	**Pn**	**07 23 59.6**	**-0.9**
SJUU	**Sjulsmark**	**5.49 252**	P	**Pn**	**07 24 00.8**	**-0.4**
RATU	**Laukkuluspa**	**5.55 278**	P	**Pn**	**07 24 02.6**	**+0.4**
NIKU	**Nikkaluokta**	**5.76 279**	P	**Pn**	**07 24 06.2**	**+1.2**
SALU	**Saltoluokta**	**6.03 274**	P	**Pn**	**07 24 09.3**	**+0.6**
BURU	**Burvik**	**6.08 245**	P	**Pn**	**07 24 09.6**	**+0.3**
FIA0	**FINESS Array S**	**7.20 213**	Pn	**Pn**	**07 24 25.4**	**+0.7**
	baz=23,slow=14					
FIA0			Sn	**Sn**	**07 25 43.1**	**-3.9**
	baz=25,slow=28					
FIA0			Lg	Lg	07 26 16.5	
	baz=21,slow=28					
FIA0	**FINESS Array S**	**7.20 213**	Pn	**Pn**	**07 24 25.4**	**+0.7**
	baz=23,slow=14					
FIA0			Sn	**Sn**	**07 25 43.1**	**-3.9**
	baz=25,slow=28					
FIA0			Sg	**Sb**	**07 26 16.5**	**+6.1**
	baz=21,slow=28					
FINES	**FINESS Array B**	**7.20 213**	Pn	**Pn**	**07 24 25.6**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=27,slow=14,SNR=13					
FINES			Sn	**Sn**	**07 25 43.4**	**-3.6**
	comp=Z,0.6nm,0.3s,baz=27,slow=23,SNR=7.0					
FINES			Lg	Lg	07 26 16.6	
	comp=Z,2.4nm,0.3s,baz=24,slow=29,SNR=14					
SPA0	**Spitsbergen Ar**	**11.65 342**	Pn	**Pn**	**07 25 26.3**	**+0.7**
	baz=140,slow=16					
SPA0	**Spitsbergen Ar**	**11.65 342**	Pn	**Pn**	**07 25 26.3**	**+0.7**
	baz=140,slow=16					
SPITS	**Spitsbergen Ar**	**11.65 342**	Pn	**Pn**	**07 25 25.9**	**+0.3**
	baz=144,slow=16,SNR=18					
SPITS			Sn	**Sn**	**07 27 31.3**	**-4.8**
	baz=134,slow=26,SNR=2.4					
HFS	**Hagfors**	**11.74 240**	Pn	**Pn**	**07 25 25.0**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=35,slow=13,SNR=6.9					
HFS	**Hagfors**	**11.74 240**	Pn	**Pn**	**07 25 26.0**	**-0.9**
	baz=29,slow=12					
HFS			Sn	Sn	07 27 29.4	-9.1
	baz=39,slow=28					
HFS	**Hagfors**	**11.74 240**	Pn	**Pn**	**07 25 26.0**	**-0.9**
	baz=29,slow=12					
HFS			Sn	Sn	07 27 29.4	-9.1
	baz=39,slow=28					
NB2	**NORSAR Subarra**	**11.93 247**	Pn	**Pn**	**07 25 28.2**	**-1.3**
	baz=43,slow=14					
NB2	**NORSAR Subarra**	**11.93 247**	Pn	**Pn**	**07 25 28.2**	**-1.3**
	baz=43,slow=14					
NOA	**NORSAR Array B**	**11.93 247**	Pn	**Pn**	**07 25 27.6**	**-2.0**
	comp=Z,0.0nm,0.3s,baz=42,slow=11,SNR=7.6					
NOA			Lg	Lg	07 28 52.5	
	comp=Z,0.0nm,0.3s,baz=48,slow=25,SNR=3.8					
NRA0	**NORESS Array S**	**12.03 245**	Pn	**Pn**	**07 25 29.4**	**-1.4**
	baz=42,slow=16					
NRA0	**NORESS Array S**	**12.03 245**	Pn	**Pn**	**07 25 29.4**	**-1.4**
	baz=42,slow=16					

BJI ***01*** *07:32:29.5±0.0, 10°.37S×166°.29E, h8km, mb5.0/20, mB4.9/15, Ms4.7/6, Ms7 4.7/3*
NEIC ***01*** *07:32:31.8±1.7, 10°.73S×165°.74E, h11km±3km, mb4.8/34, Error ellipse: s-maj=15.6km s-min=8.0km az=125.0*
ISCJB ***01*** *07:32:33.5±0.3, 10°.85S±0°.04×165°.70E±0°.06, h35km, mb4.6/54, MS3.9/22, Error ellipse: s-maj=7.9km s-min=5.1km az=172.9*
IDC ***01*** *07:32:36.3±3.0, 10°.79S×165°.70E, h46km±27km, mb4.1/22, mb1 4.2/23, mb1mx4.2/30, mbtmp4.3/23, ML5.0/2, MS3.8/19, Ms1 3.8/19, ms1mx3.6/33, Error ellipse: s-maj=19.6km s-min=13.9km az=85.0*

ISC 01 07:32:35.0±0.4, 10°.80S±0°.06×165°.87E±0°.07, h35km, n108, σ1§22/98, mb4.7/55, MS3.9/22, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.98**	**283**	*i* P		**Pn**	**07 33 59.5**	**-1.6**
HNR				*e*S		**Sn**	**07 35 12.0**	**+3.5**
HNR	**Honiara**	**5.98**	**283**	P		**Pn**	**07 34 00.4**	**-0.7**
	94nm,0.3s,baz=159,slow=9.0,SNR=17							
HNR				S		**Sn**	**07 35 10.9**	**+2.4**
	10nm,0.3s,baz=173,slow=18,SNR=1.5							
HNR				LR		LR	07 36 22.9	
	comp=Z,2μm,19.3s,baz=134,slow=39							
HNR	**Honiara**	**5.98**	**283**	*e*Pn		**Pn**	**07 34 00.0**	**-1.1**
MARNC	**Mare, Loyalty**	**10.82**	**169**	*e*Pn		**Pn**	**07 35 08.2**	**+0.7**
DZM	**Mont Dzumac**	**11.22**	**177**	P		**Pn**	**07 35 13.5**	**+0.4**
	4.6nm,0.3s,baz=318,slow=6.8,SNR=69							
DZM				S		**Sn**	**07 37 15.7**	**-1.6**
	2.1nm,0.3s,baz=307,slow=20,SNR=8.2							
DZM				LR		LR	07 39 02.3	
	comp=Z,667nm,20.7s,baz=26,slow=34							
DZM	**Mont Dzumac**	**11.22**	**177**	*e*Pn		**Pn**	**07 35 13.3**	**+0.3**
DZM				*e*Sn		**Sn**	**07 37 16.1**	**-1.2**
ONTNC	**Ouen Toro**	**11.46**	**177**	*e*Pn		**Pn**	**07 35 17.0**	**+0.8**
PINNC	**Pines Island,**	**11.84**	**173**	*e*Pn		**Pn**	**07 35 22.6**	**+1.1**
EIDS	**Eidsvold**	**20.15**	**222**	*e*P		Pn	07 37 07.1	-1.3
	11nm,0.9s							
MANU	**Manus Island**	**20.32**	**294**	*e*P		**P**	**07 37 08.1**	**-0.2**
	70nm,0.8s							
CTA	**Charters Tower**	**21.02**	**242**	P		**P**	**07 37 15.3**	**-0.4**
	18nm,0.7s,baz=71,slow=12,SNR=19							
CTAO	**Charters Tower**	**21.02**	**242**	*e*P		**P**	**07 37 15.6**	**-0.2**
	81nm,1.5s							
COEN	**Coen**	**22.38**	**260**	*e*P		**P**	**07 37 28.8**	**-1.6**
	24nm,1.4s							
ARMA	**Armidale**	**23.59**	**212**	*e*P		**P**	**07 37 44.1**	**+1.3**
	15nm,1.1s							
H11S2	**WAKE ISLAND Hy**	**29.12**		**2**	T	T	08 08 56.8	
	baz=181,slow=76,SNR=275							
H11S3	**WAKE ISLAND Hy**	**29.12**		**2**	T	T	08 08 57.2	
	baz=181,slow=76,SNR=240							
H11S1	**WAKE ISLAND Hy**	**29.14**		**2**	T	T	08 08 58.1	
	baz=181,slow=76,SNR=189							
URZ	**Urewera**	**29.14**	**162**	P		**P**	**07 38 33.4**	**+0.7**
	1.9nm,0.4s,baz=306,slow=3.5,SNR=5.4							
URZ	**Urewera**	**29.14**	**162**	*e*P		**P**	**07 38 33.6**	**+0.9**
	24nm,1.5s							
BKZ	**Black Stump Fm**	**29.79**	**163**	*e*P		**P**	**07 38 38.1**	**-0.5**
	14nm,0.4s							
H11N1	**WAKE ISLAND Hy**	**30.34**		**2**	T	T	08 10 28.3	
	baz=182,slow=76,SNR=273							
H11N3	**WAKE ISLAND Hy**	**30.34**		**2**	T	T	08 10 28.7	
	baz=182,slow=76,SNR=164							
H11N2	**WAKE ISLAND Hy**	**30.36**		**2**	T	T	08 10 29.7	
	baz=182,slow=76,SNR=158							
STKA	**Stephens Creek**	**30.70**	**223**	P		**P**	**07 38 46.4**	**-0.3**
	2.4nm,0.5s,baz=31,slow=11,SNR=7.1							
STKA				LR		LR	07 50 36.7	
	comp=Z,417nm,18.7s,baz=36,slow=35							
STKA	**Stephens Creek**	**30.70**	**223**	*e*P		**P**	**07 38 46.6**	**-0.1**
	2.5nm,1.3s							
THZ	**Tophouse**	**31.45**	**170**	*e*P		**P**	**07 38 55.3**	**+2.0**
	16nm,0.8s							
WRAB	**Tennant Creek**	**31.66**	**250**	*e*P		**P**	**07 38 53.6**	**-1.8**
	9.5nm,1.1s							
WB2	**Warramunga Arr**	**31.67**	**250**	*e*P		**P**	**07 38 53.6**	**-1.7**
	14nm,1.1s							
WR1	**Warramunga Arr**	**31.68**	**250**	*e*P		**P**	**07 38 53.3**	**-2.1**
WR1				*e*PcP		**PcP**	**07 41 47.1**	**+0.1**
WRA	**Warramunga Arr**	**31.68**	**250**	P		**P**	**07 38 53.3**	**-2.1**
	4.6nm,0.6s,baz=81,slow=9.9,SNR=32							
WRA				PcP		**PcP**	**07 41 47.1**	**+0.1**
	1.6nm,0.7s,baz=79,slow=4.3,SNR=3.4							
KHZ	**Kahutara**	**32.20**	**169**	*e*P		**P**	**07 39 00.7**	**+1.0**
	36nm,1.5s							
TOO	**Toolangi**	**32.34**	**211**	*e*P		**P**	**07 39 01.4**	**+0.3**
	14nm,1.3s							
LTZ	**Lake Taylor**	**32.35**	**171**	*e*P		**P**	**07 39 02.7**	**+1.6**
	29nm,1.3s							
OXZ	**Oxford**	**32.84**	**172**	*e*P		**P**	**07 39 06.2**	**+0.9**
	27nm,1.3s							
AS31	**Alice Springs**	**33.00**	**243**	*e*P		**P**	**07 39 04.7**	**-2.4**
	2.7nm,0.8s							
ASAR	**Alice Springs**	**33.01**	**243**	P		**P**	**07 39 04.7**	**-2.4**
	7.4nm,0.7s,baz=67,slow=10,SNR=78							
ASAR				PcP		**PcP**	**07 41 49.9**	**-0.7**
	1.0nm,0.8s,baz=113,slow=3.3,SNR=4.6							
ASAR				LR		LR	07 51 28.1	
	comp=Z,180nm,20.1s,baz=72,slow=34							
RPZ	**Rata Peaks**	**33.10**	**173**	P		**P**	**07 39 08.3**	**+0.8**
	15nm,0.9s,baz=240,slow=6.5,SNR=4.0							
RPZ				LR		LR	07 50 30.1	
	comp=Z,252nm,21.0s,baz=10.0,slow=32							
BBOO	**Buckleboo**	**35.08**	**227**	*e*P		**P**	**07 39 24.1**	**-0.9**
	31nm,1.3s							
FITZ	**Fitzroy Crossi**	**39.56**	**255**	P		**P**	**07 40 02.4**	**-0.6**
	6.4nm,0.7s,baz=116,slow=7.6,SNR=5.8							
FITZ	**Fitzroy Crossi**	**39.56**	**255**	*e*P		**P**	**07 40 02.9**	**-0.1**
	34nm,1.5s							
TBI	**Tubuai**	**44.31**	**112**	*e*T		T	07 40 56.2	
	34nm,0.4s							
PSA00	**Pilbara Seismi**	**45.32**	**250**	*e*P		**P**	**07 40 49.3**	**-0.7**
	23nm,1.1s							
NWAO	**Narrogin (SRO)**	**49.70**	**236**	P		**P**	**07 41 22.7**	**-1.1**
	11nm,0.8s,baz=88,slow=8.0,SNR=5.2							
NWAO	**Narrogin (SRO)**	**49.70**	**236**	*e*P		**P**	**07 41 24.0**	**+0.2**
	16nm,0.9s							
MORW	**Morawa**	**49.84**	**241**	*e*P		**P**	**07 41 24.4**	**-0.6**
	20nm,0.8s							
MJAR	**Matsushiro Arr**	**53.81**	**332**	P		**P**	**07 41 53.3**	**-1.1**
	4.0nm,0.7s,baz=170,slow=8.6,SNR=9.0							
MJAR				LR		LR	08 05 03.5	
	comp=Z,28nm,18.7s,baz=130,slow=36							
MAJO	**Matsushiro**	**53.81**	**332**	*e*P		**P**	**07 41 53.3**	**-1.1**
JNU	**Nakatsue**	**54.95**	**324**	LR		LR	08 02 48.0	
	comp=Z,52nm,19.2s,baz=164,slow=33							
JNU	**Nakatsue**	**54.95**	**324**	*e*P		**P**	**07 42 02.4**	**-0.4**
	12nm,0.8s							
ASAJ	**Asahikawa**	**58.60**	**341**	P		**P**	**07 42 28.4**	**0.0**
	14nm,0.9s,baz=196,slow=12,SNR=8.5							
XMIS	**Christmas Isla**	**59.09**	**264**	*e*P		**P**	**07 42 32.1**	**-0.3**
	148nm,1.3s							
KSRS	**Korea Array**	**59.74**	**325**	P		**P**	**07 42 36.2**	**-0.2**
	1.1nm,0.7s,baz=141,slow=6.5,SNR=8.1							
NJ2	**Nanjing**	**61.93**	**315**	*e*P		**P**	**07 42 52.0**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,16nm,0.6s							
USA0B	**Ussuriysk Arra**	**62.78**	**333**	*e*P		**P**	**07 42 58.3**	**+1.4**
	8.1nm,1.1s							
USRK	**Ussuriysk Ar.**	**62.78**	**333**	P		**P**	**07 42 57.3**	**+0.5**
	3.7nm,0.8s,baz=161,slow=8.1,SNR=11							
PETK	**Petropavlovsk-**	**64.04**	**355**	LR		LR	08 05 24.6	
	comp=Z,65nm,20.1s,baz=161,slow=31							
WHN	**Wuhan**	**64.32**	**311**	P		**P**	**07 43 09.3**	**+2.0**
CN2	**Changchun**	**65.59**	**329**	*e*P		**P**	**07 43 16.2**	**+0.9**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
VNDA	**Vanda**	**66.74**	**181**	P		**P**	**07 43 24.0**	**+1.8**
	0.4nm,0.9s,baz=17,slow=5.5,SNR=3.8							
VNDA	**Vanda**	**66.74**	**181**	*e*P		**P**	**07 43 25.3**	**+3.1**
KMI	**Kunming**	**71.10**	**301**	P		**P**	**07 43 52.5**	**+2.0**
KMI				pP		pP	07 43 57.7	-3.6
KMI				pmax		pmax		
	comp=Z,17nm,0.6s							
KMI				pmax		pmax		
	comp=Z,46nm,5.5s							
KMI				LR		LR		
	comp=N,83nm,20.2s							
KMI				LR		LR		
	comp=E,94nm,20.8s							
MA2	**Magadan**	**71.19**	**352**	LR		LR	08 09 50.6	
	comp=Z,63nm,21.5s,baz=172,slow=31							
HHC	**Hu-ho-hao-te**	**71.72**	**320**	*e*P		**P**	**07 43 55.7**	**+1.9**
HHC				pmax		pmax		
	comp=Z,25nm,1.2s							
HHC				pmax		pmax		
	comp=Z,53nm,8.1s							
HHC				LR		LR		
	comp=N,140nm,13.8s							
HHC				LR		LR		
	comp=E,110nm,13.0s							
HHC				LR		LR		
	comp=Z,450nm,15.3s							
CMAR	**Chiang Mai Arr**	**72.12**	**293**	P		**P**	**07 43 56.3**	**-0.2**
	0.8nm,0.3s,baz=119,slow=4.2,SNR=5.9							
CMAR				LR		LR	08 16 54.5	
	comp=Z,22nm,18.9s,baz=175,slow=37							
CD2	**Chengdu**	**72.55**	**307**	P		**P**	**07 43 59.3**	**+0.4**
CD2				pmax		pmax		
	comp=Z,30nm,0.5s							
LZH	**Lanzhou**	**74.68**	**312**	*e*P		**P**	**07 44 12.4**	**+1.0**
LZH				pP		pP	07 44 19.0	-3.4
LZH				sP		PcP	07 44 21.2	-4.4
LZH				pmax		pmax		
	comp=Z,21nm,1.3s							
LZH				pmax		pmax		
	comp=Z,83nm,4.8s							
LZH				LR		LR		
	comp=N,230nm,16.7s							
LZH				LR		LR		
	comp=E,240nm,16.2s							
LZH				LR		LR		
	comp=Z,360nm,17.3s							
SONA0	**Songino Array**	**78.54**	**324**	*e*P		**P**	**07 44 32.4**	**-0.6**
SONM	**Songino Array**	**78.54**	**324**	P		**P**	**07 44 32.4**	**-0.6**
	1.2nm,0.6s,baz=119,slow=4.5,SNR=7.7							
GTA	**Gaotai**	**78.97**	**314**	P		**P**	**07 44 36.0**	**+0.5**
GTA				pP		PcP	07 44 40.8	-3.2
GTA				sP		pP	07 44 43.1	-3.4
GTA				pmax		pmax		
	comp=Z,5.0nm,1.2s							
GTA				pmax		pmax		
	comp=Z,35nm,5.2s							
GTA				LR		LR		
	comp=N,140nm,21.3s							
GTA				LR		LR		
	comp=E,190nm,23.4s							
QSPA	**South Pole Qui**	**79.20**	**180**	*e*P		**P**	**07 44 37.2**	**+0.9**
	5.5nm,1.0s							
CAST	**Castle Rocks**	**80.68**	**18**	*e*P		**P**	**07 44 45.0**	**+0.9**
	1.9nm,0.8s							
EYAK	**Cordova Ski Ar**	**80.76**	**22**	*e*P		**P**	**07 44 45.1**	**+0.6**
	6.0nm,1.2s							
HDA	**Harding Lake**	**82.98**	**19**	*e*P		**P**	**07 44 56.8**	**+0.7**
	5.8nm,0.8s							
ILAR	**Eielson Array**	**83.25**	**18**	P		**P**	**07 44 57.9**	**+0.4**
	1.9nm,0.8s,baz=227,slow=6.3,SNR=18							
ILB	**Eielson Array**	**83.25**	**18**	*e*P		**P**	**07 44 57.7**	**+0.1**
	6.6nm,1.4s							
SCRK	**Sand Creek**	**83.65**	**20**	*e*P		**P**	**07 44 59.1**	**-0.7**
	8.5nm,1.4s							
BBB	**Bella Bella**	**84.31**	**34**	LR		LR	08 16 35.3	
	comp=Z,86nm,19.2s,baz=185,slow=31							
MAW	**Mawson**	**84.99**	**202**	P		**P**	**07 45 06.4**	**0.0**
	2.0nm,0.9s,baz=131,slow=5.5,SNR=3.5							
MAW	**Mawson**	**84.99**	**202**	*e*P		**P**	**07 45 07.4**	**+1.0**
	2.2nm,1.4s							
EGAK	**Eagle**	**85.11**	**20**	*e*P		**P**	**07 45 07.8**	**+0.8**
	6.0nm,0.9s							
DAWY	**Dawson**	**85.29**	**21**	*e*P		**P**	**07 45 09.5**	**+1.6**
	2.9nm,1.0s							
NV01	**Mina Array Sit**	**85.78**	**50**	*e*P		**P**	**07 45 12.0**	**+0.7**
NVAR	**Mina Array Bea**	**85.78**	**50**	P		**P**	**07 45 12.0**	**+0.7**
	0.2nm,0.5s,baz=262,slow=6.9,SNR=3.5							
NVAR				LR		LR	08 17 12.0	
	comp=Z,87nm,18.1s,baz=224,slow=31							
TIXI	**Tiksi**	**85.88**	**349**	LR		LR	08 20 17.4	
	comp=Z,37nm,20.2s,baz=190,slow=33							
DLBC	**Dease Lake**	**86.14**	**28**	LR		LR	08 15 43.1	
	comp=Z,52nm,19.5s,baz=322,slow=30							
WMQ	**Urumqi**	**89.01**	**315**	*e*P		**P**	**07 45 27.9**	**+1.4**
WMQ				sP		pP	07 45 35.5	-2.1
WMQ				pmax		pmax		
	comp=Z,18nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,110nm,3.9s							
WMQ				LR		LR		
	comp=Z,100nm,25.3s							
NEW	**Newport**	**89.48**	**41**	LR		LR	08 21 13.4	
	comp=Z,46nm,18.1s,baz=260,slow=33							
PDAR	**Pinedale Array**	**93.30**	**47**	P		**P**	**07 45 46.8**	**+0.2**
	0.1nm,0.4s,baz=205,slow=1.9,SNR=2.4							
MK31	**Makanchi Array**	**93.42**	**317**	*e*P		**P**	**07 45 46.0**	**-0.9**
	2.4nm,0.9s							
MK32	**Makanchi Array**	**93.42**	**317**	*e*P		**P**	**07 45 45.9**	**-1.0**
MKAR	**Makanchi Array**	**93.42**	**317**	P		**P**	**07 45 45.9**	**-1.0**
	2.2nm,0.7s,baz=90,slow=6.3,SNR=22							
ZALV	**Zalesovo Beam**	**93.43**	**324**	P		**P**	**07 45 45.3**	**-1.3**
	0.9nm,0.5s,baz=93,slow=3.0,SNR=4.3							
ZALV				LR		LR	08 27 15.3	
	comp=Z,24nm,19.8s,baz=72,slow=35							
ZAA1	**Zalesovo Array**	**93.43**	**324**	*e*P		**P**	**07 45 45.3**	**-1.4**
YKA	**Yellowknife Ar**	**94.70**	**27**	P		**P**	**07 45 51.0**	**-1.4**
	0.1nm,0.3s,baz=259,slow=4.5,SNR=2.7							
YKA				LR		LR	08 22 55.3	
	comp=Z,5.6nm,19.3s,baz=181,slow=32							
YKB5	**Yellowknife Ar**	**94.70**	**27**	*e*P		**P**	**07 45 51.0**	**-1.4**
TXAR	**Lajitas Array**	**95.61**	**61**	LR		LR	08 25 28.1	
	comp=Z,57nm,18.0s,baz=0.0,slow=33							
NRIK	**Noril'sk**	**95.94**	**340**	LR		LR	08 28 41.8	
	comp=Z,38nm,20.0s,baz=47,slow=35							
KSH	**Kashi**	**96.69**	**309**	*e*P		**P**	**07 46 04.4**	**+2.3**
ARCES	**ARCESS Array B**	**116.13**	**346**	PKP		**PKiKP**	**07 51 12.7**	**-1.3**
	1.2nm,0.7s,baz=40,slow=2.1,SNR=8.2							
FIA0	**FINESS Array S**	**121.59**	**339**	*e*PKPdf		**PKPdf**	**07 51 23.4**	**-1.2**
FINES	**FINESS Array B**	**121.59**	**339**	PKP		**PKPdf**	**07 51 23.4**	**-1.2**
	0.5nm,0.6s,baz=333,slow=2.1,SNR=4.9							
PSZ	**Piszkesteto**	**133.28**	**329**	*e*PKPdf		**PKiKP**	**07 51 48.9**	**+0.2**
ESK	**Eskdalemuir**	**134.77**	**351**	*e*PKPdf		**PKiKP**	**07 51 51.2**	**-0.2**
FNA	**Florina**	**136.76**	**320**	*e*PKPdf		**PKiKP**	**07 51 55.1**	**-0.8**
KEST	**Kesra**	**147.29**	**323**	*e*PKPbc		**PKPbc**	**07 52 15.1**	**-0.3**
ESDC	**Sonseca Array**	**149.86**	**344**	PKPbc		**PKPbc**	**07 52 21.2**	**-0.7**
	0.1nm,0.3s,baz=51,slow=3.6,SNR=4.6							
PAB	**San Pablo**	**150.08**	**345**	*e*PKPbc		**PKiKP**	**07 52 22.8**	**-0.6**
PFVI	**Vila Bisbo**	**153.35**	**351**	*e*PKPdf		**PKPdf**	**07 52 21.2**	**-1.1**

JMA 01 07:49:41.4±0.1, 40°.32N×142°.33E, h37km±1km, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.49**	**257**	P		Pn	07 49 51.6	-0.2
JKEN				S		Sn	07 49 58.9	-0.2
JTH	**Tanohata**	**0.52**	**223**	P		Pn	07 49 52.4	0.0
JTH				S		Sn	07 50 00.2	+0.2
JANG	**Nango**	**0.62**	**275**	P		Pn	07 49 53.7	-0.2
JANG				*e*S		Sn	07 50 02.3	-0.3
JKZ	**Kuzumaki**	**0.84**	**247**	P		Pn	07 49 57.0	+0.3
JKZ				S		Sn	07 50 07.5	-0.3
JARK	**Aomorirokkasho**	**1.00**	**313**	P		Pn	07 49 58.9	0.0
JARK				S		Sn	07 50 11.7	-0.1
JTM	**Tenmabayashi**	**1.07**	**296**	P		Pn	07 49 59.9	+0.1
JTM				S		Sn	07 50 13.5	+0.1
JOM	**Ohasama**	**1.16**	**224**	P		Pn	07 50 01.8	+0.7
JOM				S		Sn	07 50 16.1	+0.4
JAH	**Hinai**	**1.30**	**265**	P		Pn	07 50 03.8	+0.8
JAH				S		Sn	07 50 19.8	+0.6
JOT	**Ohata**	**1.44**	**318**	P		Pn	07 50 04.9	0.0
JRG	**Rokugo**	**1.60**	**235**	P		Pn	07 50 08.1	+1.0

NIED ***01*** *07:54:00, 43°.30N×144°.00E, h5km, Mw4.0 Best double couple: M0 1.11000×10^15 NP1:φs217.00000°, δ34.00000°, λ123.00000°. NP2:φs359.00000°, δ62.00000°, λ70.00000°.*
SKHL ***01*** *07:54:04.8±0.8, 43°.07N×143°.97E, h40km±10km, mb4.4/10*
ISCJB ***01*** *07:54:05.2±0.4, 43°.34N±0°.03×143°.95E±0°.03, h21km±3km, mb4.2/60, MS3.9/2, Error ellipse: s-maj=4.6km s-min=3.3km az=157.0*
JMA ***01*** *07:54:05.3, 43°.33N×143°.96E, h8km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs17.00000°, δ65.00000°, λ76.00000°. NP2:φs227.00000°, δ28.00000°, λ117.00000°. Principal axes: T Plg67.0000°, Azm262.0000°; N Plg12.0000°, Azm23.0000°; P Plg19.0000°, Azm117.0000°;*
JMA Felt III J1.
MOS ***01*** *07:54:07.2±1.0, 43°.36N×143°.97E, h39km, mb4.5/23 Error ellipse: s-maj=8.3km s-min=6.1km az=81.1*
NEIC ***01*** *07:54:07.0±2.1, 43°.29N×143°.93E, h22km±5km, mb4.3/37, Error ellipse: s-maj=13.0km s-min=8.1km az=91.0*
NEIC Recorded [3 JMA] in southeastern Hokkaido.
IDC ***01*** *07:54:10.9±1.7, 43°.44N×143°.84E, h50km±14km, mb3.8/18, mb1 4.0/20, mb1mx3.8/33, mbtmp4.0/20, ML3.1/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/37, Error ellipse: s-maj=15.3km s-min=13.5km az=121.0*

ISC 01 07:54:05.5±0.8, 43°.32N±0°.03×144°.00E±0°.02, h15km±5km, n157, σ1§65/170, mb4.2/61, 7C-14D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.17**	**262**	⇓P		**Pg**	**07 54 08.5**	**-1.2**
JAR				*e*S		**Sg**	**07 54 11.3**	**-1.1**
JOB	**Onbets**	**0.43**	**196**	⇓P		**Pg**	**07 54 13.8**	**-0.4**
JOB				*e*S		**Sb**	**07 54 21.0**	**-0.2**
JNK	**Nakash**	**0.59**	**63**

LAGR				*i* S	**Sn**	**07 54 51.6**	**+0.6**
LAGR				A	A	07 54 52.0	
	comp=E,3μm,0.4s						
LAGR				A	A	07 54 52.0	
	comp=E,3μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.53**	**62**	*d i* PN	**Pn**	**07 54 32.1**	**-0.2**
YUK				*i* S	**Sn**	**07 54 53.2**	**+1.2**
YUK				pmax	pmax		
	comp=N,65nm,0.2s						
YUK				pmax	pmax		
	comp=Z,292nm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.6s						
YUK				smax	smax		
	comp=E,738nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.53**	**62**	*i* P	**Pn**	**07 54 31.4**	**-0.9**
YUK				AMB	AMB	07 54 33.0	
	comp=E,65nm,0.3s						
YUK				AMB	AMB	07 54 33.0	
	comp=E,292nm,0.3s						
YUK				*i* S	**Sn**	**07 54 51.2**	**-0.8**
YUK				A	A	07 54 57.0	
	comp=E,2μm,0.7s						
YUK				A	A	07 54 57.0	
	comp=E,3μm,0.7s						
KUR	**Kuril'sk**	**3.38**	**54**	*e*PN	**Pn**	**07 55 01.4**	**+3.7**
KUR				S	**Sb**	**07 55 45.5**	**-0.4**
KUR				pmax	pmax		
	comp=Z,93nm,0.4s						
KUR				smax	smax		
	comp=N,114nm,0.5s						
KUR				smax	smax		
	comp=E,64nm,0.6s						
KUR	**Kuril'sk**	**3.38**	**54**	*i* P	**Pn**	**07 54 58.6**	**+0.9**
KUR				AMB	AMB	07 55 02.3	
	comp=E,51nm,0.4s						
KUR				*i* S	**Sn**	**07 55 37.5**	**+0.1**
KUR				A	A	07 55 49.0	
	comp=E,158nm,0.4s						
KUR				A	A	07 55 49.0	
	comp=E,139nm,0.4s						
YSS	**Yuzh-Sakhalins**	**3.74**	**347**	*e*Pn	**Pn**	**07 55 03.4**	**+0.8**
YSS	**Yuzh-Sakhalins**	**3.74**	**347⇓**	*e*PN	**Pn**	**07 55 03.4**	**+0.8**
YSS				*e*S	**Sn**	**07 55 47.5**	**+1.1**
YSS				pmax	pmax		
	comp=Z,16nm,0.4s						
YSS	**Yuzh-Sakhalins**	**3.74**	**347**	*e*P	**Pn**	**07 55 03.4**	**+0.8**
YSS				AMB	AMB	07 55 04.4	
	comp=Z,20nm,0.4s						
YSS				*e*S	**Sn**	**07 55 47.7**	**+1.3**
YSS				A	A	07 55 53.5	
	comp=Z,70nm,0.5s						
MJB9	**Matsu-Tunnel**	**8.10**	**215**	*e*Pn	**Pn**	**07 56 06.3**	**+3.7**
MAJO	**Matsushiro**	**8.10**	**215**	*e*Pn	**Pn**	**07 56 05.8**	**+3.2**
MAJO	**Matsushiro**	**8.10**	**215**	*e*PN	**Pn**	**07 56 05.8**	**+3.2**
MJAR	**Matsushiro Arr**	**8.10**	**215**	P	**Pn**	**07 56 06.3**	**+3.7**
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=16						
USRK	**Ussuriysk Ar.**	**8.73**	**280**	LR	LR	07 59 37.4	
	comp=Z,104nm,18.7s,baz=130,slow=38						
KLR	**Kul'dur**	**10.33**	**309**	P	**Pn**	**07 56 36.5**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=117,slow=16,SNR=6.4						
KLR				LR	LR	08 00 56.3	
	comp=Z,73nm,19.1s,baz=126,slow=40						
KLR	**Kul'dur**	**10.33**	**309⇑**	*e*PN	**Pn**	**07 56 37.0**	**+3.9**
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLR	**Kul'dur**	**10.33**	**309**	*e*P	**Pn**	**07 56 37.0**	**+3.9**
MDJ	**Mudanjiang**	**10.47**	**282**	*e*Pn	**Pn**	**07 56 39.6**	**+4.6**
EKMR	**Ekimchan**	**12.21**	**327**	*e*P	**Pn**	**07 57 00.5**	**+1.7**
EKMR				AMB	AMB	07 57 09.9	
	comp=Z,4.0nm,0.7s						
CN2	**Changchun**	**13.46**	**278**	*e*P	**Pn**	**07 57 20.6**	**+4.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**13.57**	**250**	P	**Pn**	**07 57 18.6**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=60,slow=12,SNR=7.6						
BMKR	**Bomnak**	**15.08**	**324**	*e*P	**Pn**	**07 57 38.0**	**0.0**
BMKR				AMB	AMB	07 57 43.0	
	comp=Z,4.0nm,0.8s						
ZEA	**Zeya**	**15.18**	**319**	*e*P	**P**	**07 57 43.2**	**-1.0**
ZEA	**Zeya**	**15.18**	**319**	*e*rx	rx	07 57 43.2	
KROS	**Kirovskiy**	**15.73**	**321**	*e*P	**Pn**	**07 57 46.0**	**-0.5**
KROS				AMB	AMB	07 57 57.8	
	comp=Z,3.0nm,0.5s						
MA2	**Magadan**	**16.80**	**12⇓**	*e*P	**Pn**	**07 58 00.5**	**+0.5**
MA2				pmax	pmax		
	comp=Z,27nm,2.4s						
MA2	**Magadan**	**16.80**	**12**	*e*P	**Pn**	**07 58 00.5**	**+0.5**
SEY	**Seymchan**	**20.25**	**11**	P	**P**	**07 58 40.8**	**+0.8**
	comp=Z,1.6nm,0.3s,baz=194,slow=7.4,SNR=7.3						
YAK	**Yakutsk**	**20.56**	**341**	*e*P	**P**	**07 58 44.6**	**+1.2**
	comp=Z,28nm,0.6s						
YAK	**Yakutsk**	**20.56**	**341**	*e*P	**P**	**07 58 44.6**	**+1.2**
YAK				pmax	pmax		
	comp=Z,28nm,0.6s						
YAK	**Yakutsk**	**20.56**	**341**	*e*P	**P**	**07 58 44.6**	**+1.2**
BJI	**Beijing**	**21.00**	**271**	P	Pn	07 58 50.4	-0.5
BJT	**Baijiatuau**	**21.01**	**271**	*e*P	**P**	**07 58 50.1**	**+1.7**
	comp=Z,13nm,1.4s						
BJT	**Baijiatuau**	**21.01**	**271**	*e*P	**P**	**07 58 50.1**	**+1.7**
BJT				pmax	pmax		
	comp=Z,13nm,1.4s						
HHC	**Hu-ho-hao-te**	**24.11**	**275**	*e*P	**P**	**07 59 17.9**	**-2.9**
HHC				S	**S**	**08 03 29.4**	**-8.5**
HHC				pmax	pmax		
	comp=Z,25nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
HHC				LR	LR		
	comp=N,89nm,8.8s						
HHC				LR	LR		
	comp=E,110nm,13.6s						
HHC				LR	LR		
	comp=Z,670nm,12.6s						
ULN	**Ulaanbaatar**	**26.08**	**293**	*e*P	**P**	**07 59 37.3**	**-1.3**
	comp=Z,5.8nm,1.3s						
ULN	**Ulaanbaatar**	**26.08**	**293**	*de*P	**P**	**07 59 38.7**	**+0.1**
ULN				pmax	pmax		
	comp=Z,10.0nm,2.5s						
ULN	**Ulaanbaatar**	**26.08**	**293**	*e*P	**P**	**07 59 38.7**	**+0.1**
SONA0	**Songino Array**	**26.52**	**293**	*e*P	**P**	**07 59 42.6**	**0.0**
SONM	**Songino Array**	**26.52**	**293**	P	**P**	**07 59 42.6**	**0.0**
	comp=Z,2.7nm,0.7s,baz=81,slow=8.6,SNR=12						
WHN	**Wuhan**	**26.76**	**251**	⇓P	**P**	**07 59 45.1**	**+0.5**
ANA2	**Anatahan**	**26.93**	**176**	*e*P	**P**	**07 59 43.6**	**-2.6**
	comp=Z,62nm,0.9s						
BILL	**Bilibino**	**27.44**	**18**	*e*P	**P**	**07 59 50.1**	**-0.4**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BILL	**Bilibino**	**27.44**	**18**	*e*P	**P**	**07 59 50.1**	**-0.4**
TIK	**Tiksi**	**29.34**	**350**	*e*P	**P**	**08 00 08.0**	**+0.7**
TIXI	**Tiksi**	**29.36**	**350⇓**	*e*P	**P**	**08 00 08.0**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,2.4s						
H11N2	**WAKE ISLAND Hy 30.38**	**134**		T	T	08 31 35.8	
	baz=326,slow=75,SNR=386						
H11N1	**WAKE ISLAND Hy 30.39**	**134**		T	T	08 31 38.1	
	baz=326,slow=75,SNR=411						
H11N3	**WAKE ISLAND Hy 30.39**	**134**		T	T	08 31 31.9	
	baz=326,slow=75,SNR=353						
H11S1	**WAKE ISLAND Hy 31.29**	**135**		T	T	08 32 45.0	
	baz=327,slow=76,SNR=401						
H11S3	**WAKE ISLAND Hy 31.29**	**135**		T	T	08 32 39.3	
	baz=327,slow=76,SNR=256						
H11S2	**WAKE ISLAND Hy 31.30**	**135**		T	T	08 32 44.1	
	baz=327,slow=76,SNR=251						
LZH	**Lanzhou**	**31.49**	**271**	*e*P	**P**	**08 00 24.1**	**-2.8**
LZH				pP	sP	08 00 48.6	+15
LZH				sP	pP	08 00 54.4	+23
LZH				PP	**PP**	**08 01 35.4**	**-2.5**
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
LZH				pmax	pmax		
	comp=Z,93nm,4.9s						
CD2	**Chengdu**	**34.08**	**262**	*e*P	P	08 00 44.5	-4.9
KMI	**Kunming**	**38.19**	**255**	P	**P**	**08 01 21.6**	**-3.2**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZAA1	**Zalesovo Array**	**39.42**	**307**	*e*P	**P**	**08 01 33.8**	**-0.8**
ZAA1				*e*PcP	**PcP**	**08 03 42.3**	**-0.1**
ZAA0	**Zalesovo Array**	**39.42**	**307**	*e*P	**P**	**08 01 34.2**	**-0.4**
	comp=Z,3.3nm,0.6s						
ZALV	**Zalesovo Beam**	**39.42**	**307**	P	**P**	**08 01 33.8**	**-0.8**
	comp=Z,2.5nm,0.5s,baz=79,slow=10,SNR=6.3						
ZALV				PcP	**PcP**	**08 03 42.3**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=64,slow=3.4,SNR=5.0						
WMQ	**Urumqi**	**40.11**	**291**	*e*P	**P**	**08 01 40.4**	**-0.2**
OHAK	**Old Harbor**	**40.92**	**48**	*e*P	**P**	**08 01 48.1**	**+1.2**
	comp=Z,4.1nm,0.9s						
CAST	**Castle Rocks**	**40.98**	**38**	*e*P	**P**	**08 01 49.3**	**+1.8**
	comp=Z,3.3nm,0.7s						
KDAK	**Kodiak Island**	**41.22**	**47**	*e*P	**P**	**08 01 50.4**	**+1.0**
	comp=Z,2.7nm,0.8s						
KDAK	**Kodiak Island**	**41.22**	**47**	*e*P	**P**	**08 01 50.4**	**+1.0**
KDAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BPAW	**Bear Paw Mtn.**	**41.45**	**37**	*e*P	**P**	**08 01 54.0**	**+2.7**
	comp=Z,2.9nm,0.8s						
MLY	**Manley**	**41.53**	**36**	*e*P	**P**	**08 01 54.2**	**+2.2**
	comp=Z,2.2nm,1.1s						
TOLK	**Toolik Lake Re**	**42.01**	**30**	*e*P	**P**	**08 01 59.9**	**+4.0**
	comp=Z,2.2nm,1.1s						
MK31	**Makanchi Array**	**42.74**	**297**	*e*P	**P**	**08 02 02.3**	**+0.2**
	comp=Z,3.5nm,0.9s						
MK31	**Makanchi Array**	**42.74**	**297**	*e*P	**P**	**08 02 02.3**	**+0.2**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK32	**Makanchi Array**	**42.74**	**297**	*e*PcP	**PcP**	**08 03 53.1**	**-0.3**
MKAR	**Makanchi Array**	**42.74**	**297**	P	**P**	**08 02 01.9**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=82,slow=9.3,SNR=23						
MKAR				PcP	**PcP**	**08 03 53.1**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=62,slow=3.1,SNR=3.6						
MKAR	**Makanchi Array**	**42.74**	**297**	*i* P	**P**	**08 02 02.0**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**42.74**	**297**	*e*P	**P**	**08 02 02.0**	**-0.1**
COLA	**College**	**42.77**	**36⇑**	*e*P	**P**	**08 02 03.1**	**+1.2**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	**Makanchi**	**42.94**	**297**	*e*P	**P**	**08 02 03.4**	**-0.3**
	comp=Z,5.3nm,1.0s						
MAKZ	**Makanchi**	**42.94**	**297**	*e*P	**P**	**08 02 03.4**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DHY	**Denali Highway**	**43.13**	**38**	*e*P	**P**	**08 02 06.2**	**+1.1**
	comp=Z,4.7nm,0.9s						
ILAR	**Eielson Array**	**43.18**	**36**	P	**P**	**08 02 06.0**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=263,slow=6.7,SNR=30						
ILB	**Eielson Array**	**43.18**	**36**	*e*P	**P**	**08 02 06.1**	**+0.8**
	comp=Z,4.3nm,0.8s						
PRP	**Porcupine Dome**	**43.69**	**35**	*e*P	**P**	**08 02 11.3**	**+1.6**
	comp=Z,3.3nm,0.9s						
KURK	**Kurchatov**	**43.86**	**303**	*e*P	**P**	**08 02 10.9**	**-0.1**
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	**43.86**	**303**	*e*P	**P**	**08 02 10.9**	**-0.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	**43.86**	**303**	*e*P	**P**	**08 02 10.7**	**-0.3**
SCRK	**Sand Creek**	**44.53**	**37**	*e*P	**P**	**08 02 16.6**	**+0.2**
	comp=Z,4.6nm,0.8s						
DOT	**Dot Lake**	**44.54**	**37**	*e*P	**P**	**08 02 16.9**	**+0.6**
	comp=Z,2.9nm,1.0s						
CM31	**Chiang Mai Arr**	**45.21**	**251**	*e*P	**P**	**08 02 23.2**	**+1.0**
	comp=Z,8.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**45.21**	**251**	P	**P**	**08 02 23.2**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=57,slow=6.6,SNR=4.0						
EGAK	**Eagle**	**45.62**	**35**	*e*P	**P**	**08 02 26.4**	**+1.6**
	comp=Z,2.6nm,0.8s						
PDGK	**Podgornoye**	**45.84**	**293**	P	**P**	**08 02 25.5**	**-1.5**
PDGK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**47.92**	**30**	P	**P**	**08 02 43.8**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=307,slow=1.9,SNR=5.5						
INK	**Inuvik**	**47.92**	**30**	*e*P	**P**	**08 02 44.9**	**+2.1**
	comp=Z,3.1nm,0.8s						
BRVK	**Borovoye**	**48.04**	**309**	*e*P	**P**	**08 02 43.9**	**0.0**
	comp=Z,3.7nm,0.9s						
BRVK	**Borovoye**	**48.04**	**309**	*e*P	**P**	**08 02 43.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	**Borovoye**	**48.04**	**309**	*e*P	**P**	**08 02 43.9**	**0.0**
HYT	**Haines Junctio**	**48.15**	**40**	*e*P	**P**	**08 02 46.9**	**+2.1**
	comp=Z,11nm,0.8s						
OTUK	**Ortayu**	**48.55**	**302**	P	**P**	**08 02 48.0**	**0.0**
OTUK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KK31	**Karatay Array**	**51.87**	**297**	*e*P	**P**	**08 03 12.4**	**-0.8**
	comp=Z,3.3nm,0.7s						
KK31	**Karatay Array**	**51.87**	**297**	*e*P	**P**	**08 03 12.4**	**-0.8**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	**Karatay Array**	**51.87**	**297**	*e*P	**P**	**08 03 12.8**	**-0.4**
	comp=Z,3.3nm,0.7s						
KKAR	**Karatay Array**	**51.87**	**297**	*e*P	**P**	**08 03 12.8**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARU	**Arti**	**53.08**	**316**	*c i* P	**P**	**08 03 21.1**	**-0.8**
ARU				S	**S**	**08 10 52.3**	**+1.1**
ARU				SS	**SS**	**08 14 24.5**	**-5.4**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARU	**Arti**	**53.08**	**316**	*e*P	**P**	**08 03 21.4**	**-0.5**
ABKAR	**Akbulak array**	**55.53**	**308**	*e*P	**P**	**08 03 39.4**	**-0.4**
	comp=Z,4.5nm,1.0s						
RES	**Resolute Bay**	**56.02**	**16**	LR	LR	08 28 49.7	
	comp=Z,46nm,20.3s,baz=134,slow=37						
RES	**Resolute Bay**	**56.02**	**16**	*e*P	**P**	**08 03 42.8**	**-0.2**
	comp=Z,7.1nm,1.5s						
RES	**Resolute Bay**	**56.02**	**16**	*e*P	**P**	**08 03 42.8**	**-0.2**
RES				pmax	pmax		
	comp=Z,7.0nm,1.5s						
YKA	**Yellowknife Ar**	**57.42**	**33**	P	**P**	**08 03 53.9**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=303,slow=6.7,SNR=18						
YKB5	**Yellowknife Ar**	**57.42**	**33**	*e*P	**P**	**08 03 53.9**	**+0.9**
JOF	**Joensuu**	**61.38**	**331**	P	**P**	**08 04 19.1**	**-1.3**
JOF				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GEYT	**Alibeck**	**62.62**	**297**	P	**P**	**08 04 28.9**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=27,slow=9.7,SNR=5.2						
SUF	**Sumiainen**	**63.28**	**333**	P	**P**	**08 04 32.1**	**-1.0**
SUF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WR1	**Warramunga Arr**	**63.57**	**190**	*e*P	**P**	**08 04 36.5**	**+1.0**
WRA	**Warramunga Arr**	**63.57**	**190**	P	**P**	**08 04 36.5**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=8.9,slow=5.9,SNR=3.4						
FIA1	**FINESS Array S**	**64.19**	**332**	*e*P	**P**	**08 04 38.7**	**-0.4**
	comp=Z,4.6nm,1.0s						
FINES	**FINESS Array B**	**64.19**	**332**	P	**P**	**08 04 38.5**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=46,slow=8.2,SNR=10						
ASAR	**Alice Springs**	**67.30**	**190**	P	**P**	**08 05 01.6**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=3.4,slow=6.0,SNR=5.7						
KIV	**Kislovodsk**	**68.31**	**310**	*e*P	**P**	**08 05 07.3**	**+1.3**
	comp=Z,9.4nm,0.7s						
KIV	**Kislovodsk**	**68.31**	**310**	*e*P	**P**	**08 05 07.1**	**+1.0**
KIV				pmax	pmax		
	comp=Z,34nm,1.0s						
KIV	**Kislovodsk**	**68.31**	**310**	*e*P	**P**	**08 05 07.1**	**+1.0**
KBZ	**Khabaz**	**68.34**	**310**	P	**P**	**08 05 06.3**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=69,slow=3.9,SNR=5.5						
BOZ	**Bozeman (W)**	**68.92**	**47**	*e*P	**P**	**08 05 11.2**	**+1.3**
	comp=Z,1.6nm,0.9s						
BOZ	**Bozeman (W)**	**68.92**	**47**	*e*P	**P**	**08 05 11.2**	**+1.3**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NC405	**NORSAR Array S**	**68.95**	**337**	*e*P	**P**	**08 05 09.3**	**-0.3**
	comp=Z,24nm,1.5s						
NC204	**NORSAR Array S**	**69.08**	**338**	*e*P	**P**	**08 05 11.4**	**+0.9**
	comp=Z,6.8nm,0.8s						
NB201	**NORSAR Array S**	**69.12**	**337**	*e*P	**P**	**08 05 10.8**	**+0.2**
	comp=Z,7.1nm,0.8s						
NB2	**NORSAR Subarra**	**69.15**	**338**	P	**P**	**08 05 10.0**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=35,slow=6.2						
NB200	**NORSAR Array S**	**69.15**	**338**	*e*P	**P**	**08 05 10.4**	**-0.4**
NOA	**NORSAR Array B**	**69.15**	**338**	P	**P**	**08 05 10.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=35,slow=6.1,SNR=10						
NV01	**Mina Array Sit**	**69.74**	**56**	*e*P	**P**	**08 05 16.1**	**+0.9**
NVAR	**Mina Array Bea**	**69.74**	**56**	P	**P**	**08 05 16.1**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=296,slow=6.9,SNR=3.0						
AKASG	**Malin Array Be**	**70.54**	**322**	P	**P**	**08 05 19.0**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=43,slow=6.8,SNR=4.5						
AKASG	**Malin Array Be**	**70.54**	**322**	*i* P	**P**	**08 05 18.6**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	**Malin Array Si**	**70.54**	**322**	*e*P	**P**	**08 05 17.9**	**-1.6**
	comp=Z,3.9nm,1.1s						
AKBB	**Malin Array Si**	**70.54**	**322**	*e*P	**P**	**08 05 17.9**	**-1.6**
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIEV	**Kiev**	**70.55**	**322**	*e*P	**P**	**08 05 19.4**	**-0.2**
	comp=Z,3.8nm,1.1s						
KIEV	**Kiev**	**70.55**	**322⇑**	*e*P	**P**	**08 05 18.7**	**-0.9**
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PDAR	**Pinedale Array**	**71.92**	**48**	P	**P**	**08 05 29.6**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=318,slow=2.0,SNR=5.1						
CLL	**Collm**	**76.60**	**331**	*e*P	**P**	**08 05 55.0**	**-0.2**
CLL	**Collm**	**76.60**	**331**	*e*P	**P**	**08 05 55.0**	**-0.2**
ANMO	**Albuquerque**	**79.09**	**52⇓**	*e*P	**P**	**08 06 06.8**	**-2.8**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.5s						
LTX	**Lajitas**	**84.78**	**54**	*e*P	**P**	**08 06 39.8**	**+0.3**
LTX	**Lajitas**	**84.78**	**54**	*e*P	**P**	**08 06 39.8**	**+0.3**
TXAR	**Lajitas Array**	**84.78**	**54**	P	**P**	**08 06 39.8**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=310,slow=3.6,SNR=6.1						

ISCJB ***01*** *07:57:56.0±1.1, 40°.34N±0°.05×142°.3E±0°.1, h51km±9km, mb3.7/6, Error ellipse: s-maj=16.1km s-min=7.7km az=168.6*
JMA ***01*** *07:57:56.9±0.1, 40°.33N×142°.33E, h37km±1km, M3.9*
JMA Felt II J1.
IDC ***01*** *07:58:00.5±2.4, 40°.24N×142°.25E, h81km±19km, mb3.4/6, mb1 3.5/9, mb1mx3.3/34, mbtmp3.7/9, Error ellipse: s-maj=30.6km s-min=15.9km az=110.0*

ISC 01 07:57:58.0±1.1, 40°.28N±0°.05×142°.15E±0°.08, h48km±9km, n25, σ1°.55/26, mb3.5/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.34**	**258**	P	**Pn**	**07 58 07.0**	**-0.3**
JKEN				S	**Sn**	**07 58 14.0**	**0.0**
JTH	**Tanohata**	**0.40**	**213**	P	**Pn**	**07 58 07.8**	**-0.2**
JTH				S	**Sn**	**07 58 15.7**	**+0.6**
JANG	**Nango**	**0.49**	**282**	P	**Pn**	**07 58 09.2**	**+0.2**
JANG				S	**Sn**	**07 58 17.6**	**+0.7**
JKZ	**Kuzumaki**	**0.69**	**245**	P	**Pn**	**07 58 12.4**	**+0.8**
JKZ				S	**Sn**	**07 58 23.6**	**+2.2**
JARK	**Aomorirokkasho**	**0.94**	**321**	P	**Pn**	**07 58 14.3**	**-0.5**
JARK				S	**Sn**	**07 58 27.0**	**-0.2**
JTM	**Tenmabayashi**	**0.97**	**302**	P	**Pn**	**07 58 15.3**	**+0.1**
JTM				S	**Sn**	**07 58 28.7**	**+0.8**
JOM	**Ohasama**	**1.04**	**220**	P	**Pn**	**07 58 17.3**	**+1.1**
JAH	**Hinai**	**1.16**	**266**	P	**Pn**	**07 58 19.3**	**+1.5**
JAH				S	**Sn**	**07 58 35.6**	**+3.1**
JOT	**Ohata**	**1.38**	**323**	P	**Pn**	**07 58 20.3**	**-0.5**
JOT				*e*S	**Sn**	**07 58 37.7**	**-0.3**
JRG	**Rokugo**	**1.46**	**233**	P	**Pn**	**07 58 23.5**	**+1.6**
ASAJ	**Asahikawa**	**3.85**	**5**	P	**Pn**	**07 58 57.3**	**+2.6**
	5.7nm,0.3s,baz=204,slow=10.0,SNR=12						
ASAJ				S	**Sn**	**07 59 42.6**	**+4.0**
	2.7nm,0.3s,baz=131,slow=20,SNR=3.1						
MJAR	**Matsushiro Arr**	**4.84**	**221**	P	Pn	07 59 11.6	+3.2
	0.2nm,0.3s,baz=33,slow=13,SNR=9.7						
USRK	**Ussuriysk Ar.**	**8.49**	**301**	P	Pn	08 00 02.3	+4.0
	0.4nm,0.3s,baz=102,slow=16,SNR=5.5						
H11N2	**WAKE ISLAND Hy 29.47**	**127**		T	T	08 34 51.3	
	baz=318,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy 29.48**	**127**		T	T	08 34 52.1	
	baz=318,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy 29.49**	**127**		T	T	08 34 52.8	
	baz=318,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy 30.29**	**129**		T	T	08 36 22.0	
	baz=322,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy 30.29**	**129**		T	T	08 36 18.0	
	baz=322,slow=76,SNR=7.8						
H11S2	**WAKE ISLAND Hy 30.30**	**129**		T	T	08 36 06.0	
	baz=322,slow=76,SNR=5.6						
MKAR	**Makanchi Array**	**42.96**	**299**	P	**P**	**08 05 52.0**	**-0.1**
	0.6nm,0.7s,baz=87,slow=11,SNR=6.6						
YKA	**Yellowknife Ar**	**60.73**	**31**	P	**P**	**08 08 03.8**	**-0.4**
	0.1nm,0.3s,baz=298,slow=6.7,SNR=2.6						
GEYT	**Alibeck**	**62.80**	**298**	P	**P**	**08 08 18.6**	**0.0**
	1.5nm,0.4s,baz=66,slow=7.0,SNR=7.5						
ASAR	**Alice Springs**	**64.08**	**188**	P	**P**	**08 08 25.2**	**-1.7**
	0.6nm,1.0s,baz=17,slow=13,SNR=4.1						
FINES	**FINESS Array B**	**66.22**	**332**	P	**P**	**08 08 39.1**	**-1.3**
	0.8nm,0.7s,baz=66,slow=11,SNR=4.5						
NOA	**NORSAR Array B**	**71.42**	**337**	P	**P**	**08 09 11.5**	**-1.3**
	0.3nm,0.5s,baz=37,slow=6.1,SNR=3.2						

ROM 01 08:03:47.0±0.1, 43°.004N±0°.004×12°.614E±0°.006, h9km, ML1.6/7, Error ellipse: s-maj=0.5km s-min=0.1km az=119.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASSB	**Assisi San Ben**	**0.05**	**41**	P	Pg	08 03 49.1	+0.2
ASSB				S	Sg	08 03 50.2	-0.1
ASSB				AML	AML		
	comp=E,1440μm,0.2s						
ASSB				AML	AML		

MURB				AML	AML			
	comp=N,672μm,0.3s							
MURB				AML	AML			
	comp=E,694μm,1.0s							
MURB				AML	AML			
	comp=E,722μm,0.3s							
MURB				AML	AML			
	comp=N,713μm,1.0s							
MURB				AML	AML			
	comp=N,672μm,0.3s							
SNTG	**Esanatoglia**	**0.35**	**44**	P	Pg	08 03 54.3	+0.5	
SNTG				S	Sb	08 04 00.1	-1.0	
SNTG				AML	AML			
	comp=E,53μm,0.8s							
SNTG				AML	AML			
	comp=N,49μm,0.1s							
SNTG				AML	AML			
	comp=E,53μm,0.8s							
SNTG				AML	AML			
	comp=N,49μm,0.1s							
SNTG				AML	AML			
	comp=E,53μm,0.8s							
SNTG				AML	AML			
	comp=N,49μm,0.1s							
FDMO	**Fiordimonte**	**0.35**	**85**	P	Pg	08 03 54.4	+0.5	
FDMO				S	Sb	08 04 00.2	-0.9	
FDMO				AML	AML			
	comp=E,74μm,1.0s							
FDMO				AML	AML			
	comp=N,68μm,1.0s							
FDMO				AML	AML			
	comp=E,74μm,1.0s							
FDMO				AML	AML			
	comp=N,68μm,1.0s							
FDMO				AML	AML			
	comp=N,68μm,1.0s							
FDMO				AML	AML			
	comp=E,74μm,1.0s							
MGAB	**Montegabbione**	**0.38**	**256**	P	Pg	08 03 55.0	+0.5	
MGAB				S	Sb	08 04 01.4	-0.6	
ATVO	**AVT- Monte Val**	**0.41**	**338**	P	Pg	08 03 55.4	+0.4	
EL6	**Elcito**	**0.48**	**48**	P	Pg	08 03 56.8	+0.4	
EL6				S	Sb	08 04 05.1	+0.1	

JMA 01 08:07:55.6±0.1, 40°.33N×142°.33E, h37km±1km, M3.5,
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.49**	**256**	P	Pn	08 08 05.8	-0.2
JKEN				S	Sn	08 08 13.1	-0.2
JTH	**Tanohata**	**0.53**	**223**	P	Pn	08 08 06.6	-0.1
JTH				S	Sn	08 08 14.5	+0.1
JANG	**Nango**	**0.62**	**274**	P	Pn	08 08 07.9	-0.2
JANG				S	Sn	08 08 16.7	-0.1
JKZ	**Kuzumaki**	**0.84**	**246**	P	Pn	08 08 11.2	+0.3
JKZ				S	Sn	08 08 22.4	+0.3
JARK	**Aomorirokkasho**	**1.00**	**313**	P	Pn	08 08 13.1	+0.1
JARK				S	Sn	08 08 25.6	-0.2
JTM	**Tenmabayashi**	**1.06**	**296**	P	Pn	08 08 14.0	+0.1
JTM				S	Sn	08 08 27.6	+0.1
JOM	**Ohasama**	**1.17**	**223**	P	Pn	08 08 16.0	+0.6
JOM				S	Sn	08 08 30.8	+0.7
JAH	**Hinai**	**1.30**	**264**	P	Pn	08 08 17.9	+0.7
JAH				S	Sn	08 08 34.3	+0.9
JOT	**Ohata**	**1.43**	**318**	P	Pn	08 08 19.1	+0.1
JOT				eS	Sn	08 08 36.5	0.0
JRG	**Rokugo**	**1.60**	**235**	P	Pn	08 08 22.3	+0.9

*TIF **01** 08:18:50.7, 43°.21N×41°.54E, h9km±1km*
*DDA **01** 08:18:52.2, 42°.98N×41°.31E, h7km±3km, ML3.3*
*NORS **01** 08:18:53.9±0.0, 43°.18N×41°.84E, h8km, MPVA3.5*
ISC 01 08:18:52.9±0.9, 43°.20N±0°.03×41°.69E±0°.02, h8km±8km,
n26, σ0s86/48, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOMR	**Dombai**	**0.11**	**332**	*i* Pg	**Pg**	**08 18 55.5**	**-0.2**
DOMR				*e*Sg	**Sg**	**08 18 58.2**	**+0.7**
ARXR	**Arkhyz**	**0.48**	**320**	*e*Pg	**Pg**	**08 19 02.4**	**+0.1**
ARXR				*i* Sg	**Sb**	**08 19 10.0**	**-1.0**
NEY	**Neytrino**	**0.75**	**86**	*e*Pg	**Pg**	**08 19 06.4**	**-1.1**
NEY				*e*Sg	**Sg**	**08 19 15.6**	**-1.7**
SHA1	**Shidzhatmaz**	**0.89**	**52**	*e*Pg	**Pg**	**08 19 09.7**	**-0.3**
SHA1				*e*Sg	**Sg**	**08 19 21.2**	**-0.4**
KIV0	**Kislovodsk Arr**	**1.05**	**43**	*i* Pg	**Pg**	**08 19 12.8**	**-0.4**
KIV0				*e*Sg	**Sg**	**08 19 26.3**	**-0.5**
RPOR	**Krasnaya Polya**	**1.16**	**296**	*e*Pg	**Pn**	**08 19 15.5**	**+0.1**
RPOR				*e*Sg	**Sn**	**08 19 33.0**	**+1.5**
TKB	**Tkibuli**	**1.28**	**131**	P	**Pb**	**08 19 17.3**	**+0.1**
TKB				S	**Sn**	**08 19 36.6**	**+2.2**
PYA1	**Pyatigorsk**	**1.34**	**49**	*e*Pg	**Pn**	**08 19 17.2**	**-0.7**
PYA1				*e*Sg	**Sb**	**08 19 35.2**	**-0.3**
KBTC	**Kuba-Taba**	**1.39**	**63**	*e*Pg	**Pb**	**08 19 19.4**	**+0.1**
KBTC				*e*Sg	**Sg**	**08 19 38.6**	**+0.9**
DIGR	**Digorskoe uzhe**	**1.41**	**101**	*e*Pg	**Pg**	**08 19 21.4**	**+1.3**
NCK	**Nalchik**	**1.42**	**77**	*e*Pg	**Pb**	**08 19 19.7**	**0.0**
ONI	**Oni**	**1.43**	**114**	*e*Pg	**Pb**	**08 19 19.8**	**0.0**
ONI				*e*Sg	**Sg**	**08 19 40.8**	**+2.0**
SOC	**Sochi**	**1.49**	**286**	*e*Pg	**Pb**	**08 19 20.6**	**-0.3**
SOC				*e*Sg	**Sg**	**08 19 41.9**	**+1.0**
LSNR	**Lesken**	**1.56**	**86**	*e*Pg	**Pb**	**08 19 22.4**	**+0.4**
LSNR				*e*Sg	**Sn**	**08 19 41.1**	**-0.3**
BATM	**Batumi**	**1.59**	**180**	P	**Pn**	**08 19 21.2**	**-0.2**
BATM				S	**Sb**	**08 19 43.0**	**+0.2**
ZEI	**Tsey**	**1.67**	**103**	*e*Pg	**Pb**	**08 19 23.6**	**-0.5**
ZEI				*e*Sg	**Sn**	**08 19 44.9**	**+0.5**
LZRR	**Lazarevskoye**	**1.84**	**295**	*e*Pg	**Pb**	**08 19 26.4**	**-0.4**
LZRR				*e*Sg	**Sg**	**08 19 52.0**	**+0.1**
DBOC	**Borcka**	**1.85**	**181**	*i* P	**Pn**	**08 19 25.4**	**+0.4**
DBOC				*i* S	**Sn**	**08 19 47.6**	**-0.9**
DBOC				IAML_P			
	comp=Z,1μm,0.1s						
EPOS	**Posof**	**1.86**	**155**	*i* P	**Pb**	**08 19 26.4**	**-0.8**
EPOS				*i* S	**Sg**	**08 19 52.7**	**+0.1**
LACR	**Lac**	**1.94**	**100**	*e*Pg	**Pb**	**08 19 29.3**	**+0.6**
LACR				*e*Sg	**Sb**	**08 19 54.8**	**+1.6**
ARTV	**Artvin**	**2.02**	**175**	*i* P	**Pn**	**08 19 26.6**	**-0.9**
ARTV				IAML_P			
	comp=Z,2μm,0.1s						
DAGI	**Agillar**	**2.12**	**176**	*i* P	**Pn**	**08 19 29.4**	**+0.6**
DAGI				*i* S	**Sn**	**08 19 53.9**	**-1.5**
DAGI				IAML_P			
	comp=Z,417nm,0.2s						
DBAD	**Bademkaya**	**2.17**	**180**	*i* P	**Pn**	**08 19 29.5**	**-0.1**
DBAD				IAML_P			
	comp=Z,820nm,0.2s						
AKH	**Akhalkalaki**	**2.23**	**143**	P	**Pb**	**08 19 33.6**	**0.0**
AKH				S	**Sg**	**08 20 03.6**	**-0.9**
AKH	**Akhalkalaki**	**2.23**	**143**	*e*Pg	**Pb**	**08 19 33.6**	**0.0**
AKH				*e*Sg	**Sg**	**08 20 03.6**	**-0.9**
BGD	**Bogdanovka**	**2.39**	**143**	P	**Pb**	**08 19 36.0**	**-0.3**
BGD				S	**Sb**	**08 20 05.7**	**-0.4**

MEX 01 08:34:46.9±0.7, 18°.21N×103°.48W, h8km±8km, MD3.6,
Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.14**	**59**	*i* P	Pg	08 34 49.1	-0.9
MMIG				*i* S	Sg	08 34 52.1	+0.1
EZ5V		**1.27**	**355**	*e*P	Pn	08 35 07.3	-3.9
EZ5V				*e*S	Sg	08 35 23.4	-4.3
ARIG	**Puente Sto Nin**	**2.97**	**88**	*e*P	Pn	08 35 31.7	-2.8

*DDA **01** 08:40:20.4, 39°.00N×25°.96E, h7km±4km, ML2.7*
*ISCJB **01** 08:40:22.0±0.6, 38°.97N±0°.02×26°.04E±0°.04, h6km±6km,*
Error ellipse: s-maj=5.8km s-min=4.0km az=172.6
*ATH **01** 08:40:21.6, 38°.98N×26°.10E, h18km±3km, ML2.1/4, Error*
ellipse: s-maj=3.2km s-min=1.4km az=47.0
*THE **01** 08:40:22.0, 38°.96N×26°.06E, h2km±2km, ML2.1/2, Error*
ellipse: s-maj=2.5km s-min=0.7km az=318.0
ISC 01 08:40:21.9±1.0, 38°.99N±0°.02×26°.05E±0°.03, h13km±9km,
n21, σ0s57/30, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.27**	**326**	P	**Pg**	**08 40 27.7**	**+0.2**
SIGR				S	**Sb**	**08 40 32.4**	**-0.7**
SIGR	**SIGRI**	**0.27**	**326**	P	**Pg**	**08 40 27.7**	**+0.2**
SIGR				S	**Sb**	**08 40 32.5**	**-0.6**
SIGR				AML	AML	08 40 32.8	
	comp=E,2238μm,0.4s						
SIGR				AML	AML	08 40 34.6	
	comp=N,839μm,0.5s						
PRK	**Paraskevi**	**0.31**	**34**	P	**Pb**	**08 40 28.9**	**-0.4**
PRK				S	**Sb**	**08 40 33.4**	**-1.0**
PRK	**Paraskevi**	**0.31**	**34**	P	**Pg**	**08 40 28.0**	**-0.2**
PRK				S	**Sg**	**08 40 32.8**	**+0.2**
PRK				AML	AML	08 40 34.4	
	comp=E,943μm,0.4s						
PRK				AML	AML	08 40 34.5	
	comp=N,910μm,0.3s						
PSRA	**Psara**	**0.58**	**221**	P	**Pb**	**08 40 33.7**	**-0.3**
AYVA	**Ayvalik**	**0.59**	**57**	*i* P	**Pb**	**08 40 33.8**	**-0.3**
AYVA				*i* S	**Sg**	**08 40 41.3**	**0.0**
AYVA				IAML_P			
	comp=Z,667nm,0.1s						
CHOS	**Chios island**	**0.60**	**179**	P	**Pg**	**08 40 32.9**	**-0.7**
CHOS	**Chios island**	**0.60**	**179**	P	**Pg**	**08 40 33.4**	**-0.2**
CHOS				AML	AML	08 40 45.4	
	comp=N,324μm,0.5s						
CHOS				AML	AML	08 40 47.8	
	comp=E,440μm,0.3s						
URLA	**Izmir**	**0.76**	**145**	*i* P	**Pg**	**08 40 36.4**	**-0.1**
URLA				IAML_P			
	comp=Z,1μm,0.2s						
ZEDA	**zmir-Bergama**	**0.80**	**91**	*i* P	**Pb**	**08 40 38.2**	**+0.5**
ZEDA				*i* S	**Sn**	**08 40 50.1**	**-0.6**
ZEDA				IAML_P			
	comp=Z,2μm,0.2s						
ZEY	**zmir**	**0.83**	**154**	*i* P	**Pg**	**08 40 37.0**	**-0.8**
ZEY				*i* S	**Sb**	**08 40 50.5**	**+1.4**
ZEY				IAML_P			
	comp=Z,868nm,0.1s						
BAYC	**CANAKKALE_Bayr**	**0.85**	**27**	*i* P	**Pb**	**08 40 38.9**	**+0.4**
BAYC				*i* S	**Sn**	**08 40 52.5**	**+0.6**
BAYC				IAML_P			
	comp=Z,613nm,0.2s						
EZN	**Ezine**	**0.87**	**14**	P	**Pg**	**08 40 38.3**	**-0.3**
LIA	**Limnos Island**	**1.13**	**324**	P	**Pn**	**08 40 43.9**	**+0.5**
LIA				AML	AML	08 41 00.6	
	comp=N,158μm,0.6s						
LIA				AML	AML	08 41 01.0	
	comp=E,192μm,0.5s						
DGB	**zmir**	**1.14**	**145**	*i* P	**Pb**	**08 40 43.6**	**+0.2**
DGB				IAML_P			
	comp=Z,316nm,0.2s						
STEP	**BALIKESIR_Sava**	**1.36**	**73**	*i* P	**Pg**	**08 40 48.0**	**+0.1**
STEP				IAML_P			
	comp=Z,715nm,0.2s						
SMG	**Samos**	**1.42**	**154**	P	**Pn**	**08 40 47.8**	**+0.4**
SMG				S	**Sn**	**08 41 06.7**	**+0.8**
SMG	**Samos**	**1.42**	**154**	P	**Pn**	**08 40 46.7**	**-0.7**
BALY	**Balya**	**1.43**	**58**	*i* P	**Pb**	**08 40 48.6**	**+0.1**
BALY				IAML_P			
	comp=Z,258nm,0.2s						
SMTH	**Samothraki Isl**	**1.54**	**345**	P	**Pb**	**08 40 50.3**	**+0.1**
SMTH	**Samothraki Isl**	**1.54**	**345**	P	**Pb**	**08 40 50.1**	**-0.1**

*HLW **01** 08:43:35.5, 31°.76N×36°.04E, h10km±19km, Md3.3, Ml3.7*
*ISCJB **01** 08:43:46.3±0.5, 31°.04N±0°.02×35°.48E±0°.05, h8km±3km,*
Error ellipse: s-maj=7.9km s-min=2.5km az=7.2
*JSO **01** 08:43:46.8±0.3, 31°.N±.2"×3°.6E±°.1, h0km, M2.9/2, Mjma2.8/2,*
MLv3.0/2
*GII **01** 08:43:46.5±0.2, 31°.05N×35°.43E, h11km, MD3.1/5*
*NSSC **01** 08:44:01.7±0.5, 31°.83N×36°.99E, h6km±9km, ML2.1*
ISC 01 08:43:46.9±1.0, 31°.06N±0°.02×35°.46E±0°.04, h16km±7km,
n37, σ1s13/53, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LISJ	**El Lisan**	**0.18**	**6**	P	**Pg**	**08 43 51.0**	**-0.4**
MZDA	**Masada**	**0.27**	**342**	Pg	**Pg**	**08 43 52.5**	**-0.2**
MZDA				Sg	**Sb**	**08 43 57.5**	**-0.1**
MDBI	**Mazsada**	**0.27**	**342**	Pn	**Pg**	**08 43 52.3**	**-0.5**
JDRJ	**Daraweish**	**0.37**	**151**	P	**Pg**	**08 43 54.2**	**-0.4**
YTIR	**Yattir**	**0.42**	**316**	Pg	**Pg**	**08 43 55.3**	**-0.2**
YTIR				Sg	**Sg**	**08 44 01.8**	**+0.4**
DSI	**Dead Sea**	**0.52**	**353**	Pg	**Pb**	**08 43 57.3**	**-0.3**
DSI				Sg	**Sb**	**08 44 05.8**	**+0.9**
SWQJ	**Swaqa**	**0.55**	**70**	P	Pn	08 44 07.4	+7.3
ZFRI	**Zfri**	**0.56**	**206**	Pg	**Pg**	**08 43 57.6**	**-0.3**
ZFRI				Sg	**Sb**	**08 44 06.1**	**+0.2**
WALJ	**Wala**	**0.59**	**31**	P	**Pg**	**08 43 57.8**	**-0.7**
AMAZ	**Amatzia**	**0.67**	**316**	Pg	**Pg**	**08 43 59.6**	**-0.4**
AMAZ	**Amatzia**	**0.67**	**316**	P	**Pg**	**08 43 59.8**	**-0.2**
PRNI	**Paran**	**0.80**	**209**	Pg	**Pg**	**08 44 02.2**	**-0.3**
PRNI				Sg	**Sb**	**08 44 13.7**	**+0.6**
HSNJ	**Maan**	**0.82**	**166**	P	**Pg**	**08 44 01.8**	**-1.1**
UJAP	**Al Uja**	**0.89**	**0**	Pn	**Pg**	**08 44 03.7**	**-0.6**
KZIT	**Kziot**	**0.92**	**261**	Pg	**Pg**	**08 44 04.1**	**-0.7**
HRFI	**Mount Harif**	**1.08**	**200**	Pg	**Pb**	**08 44 06.8**	**-0.4**
HRFI				Sg	**Sn**	**08 44 22.5**	**+0.5**
KRMI	**Paran Flat**	**1.13**	**214**	Pg	**Pb**	**08 44 07.5**	**-0.5**
KRMI				Sg	**Sn**	**08 44 24.1**	**+0.9**
HMDT	**Nahal Hemdat**	**1.20**	**3**	Pg	**Pb**	**08 44 09.0**	**-0.2**
HMDT				Sg	**Sn**	**08 44 26.5**	**+1.7**
SLTI	**Sal'it**	**1.23**	**343**	Pg	**Pn**	**08 44 09.4**	**-0.1**
SLTI				Sg	**Sg**	**08 44 27.4**	**+0.6**
MBRI	**Mt Berech**	**1.34**	**201**	Pn	**Pn**	**08 44 11.1**	**+0.1**
MBRI				Sn	**Sg**	**08 44 30.3**	**0.0**
AQBJ	**Aqaba**	**1.37**	**195**	P	**Pb**	**08 44 12.0**	**-0.1**
MMLI	**Mount Malkishu**	**1.38**	**359**	Pn	**Pb**	**08 44 12.5**	**+0.2**
MMLI				Sn	**Sg**	**08 44 31.7**	**+0.2**
EIL	**Elat**	**1.45**	**198**	Pn	**Pn**	**08 44 12.6**	**+0.2**
EIL				Sn	**Sb**	**08 44 32.3**	**+0.6**
EIL	**Elat**	**1.45**	**198**	P	**Pg**	**08 44 14.2**	**-0.6**
RSH		**1.49**	**267**	P	**Pn**	**08 44 10.3**	**-2.7**
	baz=249						
OFRI	**`Ofer**	**1.61**	**346**	Pn	**Pn**	**08 44 15.4**	**+0.7**
OFRI				Sn	**Sg**	**08 44 37.9**	**-1.0**
SHMJ	**Saham**	**1.69**	**9**	P	**Pb**	**08 44 18.0**	**+0.4**
HBST	**Basata**	**1.94**	**199**	P	**Pn**	**08 44 19.3**	**+0.2**
	baz=205						
HBST				AMP		08 44 00.0	
	baz=205						
MMA0B	**Mount Meron ar**	**1.96**	**359**	Pn	**Pn**	**08 44 20.5**	**+1.0**
HNTI	**Hanita**	**2.04**	**353**	Pn	**Pn**	**08 44 21.3**	**+0.8**
GEM	**Giv'at Ha'Em**	**2.16**	**5**	Pn	**Pn**	**08 44 23.1**	**+0.9**
BRBR	**Barbar**	**2.39**	**10**	*e*P	**Pg**	**08 44 33.1**	**+0.4**
BRBR				*e*S	**Sn**	**08 44 56.7**	**+2.1**
BRBR				AML	AML	08 45 05.6	
	comp=E,19nm,0.3s						
BRBR				AML	AML	08 45 09.3	
	comp=N,47nm,0.5s						
HDHB	**Dhahab**	**2.44**	**198**	P	**Pn**	**08 44 26.6**	**+0.6**
	baz=203						
TOTH	**TOTAH**	**2.44**	**19**	*e*P	**Pb**	**08 44 31.3**	**+0.9**
TOTH				*e*S	**Sn**	**08 44 51.2**	**-4.5**
TOTH				AML	AML	08 45 07.7	
	comp=N,25nm,0.4s						
TOTH				AML	AML	08 45 07.8	
	comp=E,19nm,0.7s						
QASN	**Qassioun**	**2.57**	**15**	*e*P	**Pg**	**08 44 33.9**	**-2.2**
QASN				*e*S	**Sn**	**08 44 56.3**	**-2.5**
QASN				AML	AML	08 45 10.4	
	comp=E,41nm,0.4s						
QASN				AML	AML	08 45 11.2	
	comp=N,61nm,0.5s						
SUZ	**Suez**	**2.57**	**243**	P	**Pn**	**08 44 28.1**	**+0.2**
	baz=237						
HKAT	**Jabal Katrina**	**2.83**	**207**	P	**Pn**	**08 44 31.8**	**+0.2**
	baz=210						
HKAT				AMP		08 45 00.0	
	baz=210						
HKAT				S	**Sb**	**08 45 13.3**	**+1.8**
	baz=210						

*DDA **01** 08:53:01.5, 41°.41N×43°.98E, h7km±2km, ML3.1*
*TIF **01** 08:53:01.4, 41°.42N×43°.99E, h10km±1km*
ISC 01 08:53:02.0±1.0, 41°.41N±0°.04×44°.00E±0°.02, h13km±8km,
n18, σ0s52/31, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZRT	**Kazreti**	**0.30**	**94**	P	**Pg**	**08 53 08.3**	**0.0**
KZRT				S	**Sg**	**08 53 12.8**	**+0.2**
BGD	**Bogdanovka**	**0.33**	**244**	P	**Pb**	**08 53 08.9**	**-1.0**
BGD				S	**Sb**	**08 53 13.7**	**-1.4**
AKH	**Akhalkalaki**	**0.38**	**270**	P	**Pg**	**08 53 09.5**	**-0.2**
AKH				S	**Sg**	**08 53 14.8**	**-0.1**
TBLG	**Delisi**	**0.64**	**60**	P	**Pb**	**08 53 14.5**	**-0.6**
TBLG				S	**Sb**	**08 53 23.8**	**-0.2**
TBLG	**Delisi**	**0.64**	**60**	*i* P	**Pb**	**08 53 14.8**	**-0.2**
TBLG				*i* S	**Sb**	**08 53 24.3**	**+0.3**
BTNK	**Botanikuri**	**0.66**	**65**	P	**Pg**	**08 53 14.8**	**-0.2**
BTNK				S	**Sb**	**08 53 24.0**	**-0.5**
BTNK	**Botanikuri**	**0.66**	**65**	*i* P	**Pb**	**08 53 15.2**	**-0.2**
SEAG	**Tbilisi Sea**	**0.70**	**59**	P	Pn	08 53 23.1	+5.5
EAK	**Akyaka**	**0.78**	**202**	*i* P	**Pb**	**08 53 17.6**	**+0.1**
EAK				*i* S	**Sb**	**08 53 28.5**	**+0.5**
EAK				IAML_P			
	comp=Z,4μm,0.2s						
DIGO	**Kars**	**1.10**	**206**	*i* P	**Pn**	**08 53 23.8**	**+0.5**
DIGO				*i* S	**Sn**	**08 53 38.4**	**0.0**
GUDG	**Gudauri**	**1.11**	**19**	P	**Pn**	**08 53 23.6**	**+0.2**
TKB	**Tkibuli**	**1.20**	**322**	P	**Pn**	**08 53 24.7**	**+0.2**
TKB				S	**Sn**	**08 53 41.1**	**+0.4**
ONI	**Oni**	**1.25**	**341**	P	**Pn**	**08 53 25.1**	**-0.1**
ONI				S	**Sn**	**08 53 42.2**	**+0.3**
DDFL	**Dedoflistskaro**	**1.60**	**88**	P	**Pn**	**08 53 28.9**	**-1.0**
DDFL				S	**Sg**	**08 53 54.0**	**+0.7**
DAGI	**Agillar**	**1.60**	**259**	*i* P	**Pg**	**08 53 32.7**	**-0.1**
DAGI				*i* S	**Sg**	**08 53 54.4**	**+0.8**
DAGI				IAML_P			
	comp=Z,1μm,0.3s						
LGD	**Lagodekhi**	**1.74**	**75**	P	**Pb**	**08 53 34.0**	**+0.3**
LGD				S	**Sg**	**08 53 58.2**	**+0.3**
BATM	**Batumi**	**1.74**	**277**	P	**Pb**	**08 53 33.4**	**-0.4**
BATM				S	**Sb**	**08 53 56.1**	**+0.6**
DBOC	**Borcka**	**1.75**	**269**	*i* P	**Pb**	**08 53 34.2**	**+0.2**
DBOC				IAML_P			
	comp=Z,3μm,0.4s						

*MOS **01** 09:06:45.7±0.8, 54°.17N×167°.49E, h21km, mb4.2/1, Error*
ellipse: s-maj=10.9km s-min=6.8km az=15.6
*IDC **01** 09:06:45.0±2.0, 54°.67N×167°.43E, h0km, mb3.5/6,*
mb1 3.8/7, mb1mx3.5/41, mbtmp3.5/7, ML2.6/1, MS4.0/1,
Ms1 4.0/1, ms1mx2.6/33, Error ellipse: s-maj=64.3km
s-min=20.1km az=170.0
*ISCJB **01** 09:06:47.0±0.4, 54°.23N±0°.05×167°.36E±0°.05, h33km,*
mb3.9/11, MS4.0/1, Error ellipse: s-maj=7.0km
s-min=3.8km az=168.8
*KRSC **01** 09:06:48.7±1.6, 54°.15N×166°.73E, h15km±27km, ML4.3*
*NEIC **01** 09:06:48.7±1.6, 54°.60N×167°.38E, h27km±3km, mb4.1/6,*
Error ellipse: s-maj=30.0km s-min=12.8km az=174.0
ISC 01 09:06:48.2±0.7, 54°.22N±0°.06×167°.40E±0°.06, h35km, n93,
σ1s77/100, mb3.8/11, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.29**	**321**	*i* P	**Pn**	**09 07 07.9**	**-1.7**
BKI				*i* S	**Sn**	**09 07 24.3**	**-1.3**
BKI	**Bering**	**1.29**	**321**	PN	**Pn**	**09 07 07.9**	**-1.7**
BKI				S	**Sn**	**09 07 24.3**	**-1.3**
MKZ	**Mys Kozlova**	**3.33**	**278**	*e*P	**Pn**	**09 07 38.0**	**+0.3**
MKZ				*e*S	**Sn**	**09 08 13.5**	**-2.5**
MKZ	**Mys Kozlova**	**3.33**	**278**	PN	**Pn**	**09 07 38.0**	**+0.3**
KBG	**Krutoberegovo**	**3.37**	**309**	*e*P	**Pn**	**09 07 40.2**	**+1.9**
KBG				*e*S	**Sn**	**09 08 19.4**	**+2.4**
KBG	**Krutoberegovo**	**3.37**	**309**	PN	**Pn**	**09 07 40.2**	**+1.9**
KBG				S	**Sn**	**09 08 19.4**	**+2.4**
SMKR	**Semkarok**	**4.13**	**307**	*e*P	**Pn**	**09 07 49.9**	**+1.2**
SMKR	**Semkarok**	**4.13**	**307**	PN	**Pn**	**09 07 49.9**	**+1.2**
TUMD	**Tumrok D**	**4.18**	**287**	*e*P	**Pn**	**09 07 49.9**	**+0.5**
TUMD				*e*S	**Sn**	**09 08 34.2**	**-2.7**
KZV	**Kizimen**	**4.22**	**285**	*e*P	**Pn**	**09 07 51.2**	**+1.1**
KZV	**Kizimen**	**4.22**	**285**	PN	**Pn**	**09 07 51.2**	**+1.1**
BDR	**Baidarnaya**	**4.24**	**306**	*e*P	**Pn**	**09 07 54.1**	**+3.8**
BDR	**Baidarnaya**	**4.24**	**306**	PN	**Pn**	**09 07 54.1**	**+3.8**
CIRR	**Tsirk**	**4.26**	**299**	*e*P	**Pn**	**09 07 53.1**	**+2.5**
CIRR	**Tsirk**	**4.26**	**299**	PN	**Pn**	**09 07 53.1**	**+2.5**
SMY	**Shemya**	**4.27**	**108**	*e*Pn	**Pn**	**09 07 52.8**	**+2.2**
SMY	**Shemya**	**4.27**	**108**	*e*PN	**Pn**	**09 07 52.8**	**+2.2**
LGNR	**Loginova**	**4.28**	**299**	*e*P	**Pn**	**09 07 52.7**	**+1.7**
LGNR	**Loginova**	**4.28**	**299**	PN	**Pn**	**09 07 52.7**	**+1.7**
SRKR	**Sorokina**	**4.31**	**307**	*e*P	**Pn**	**09 07 53.6**	**+2.4**
SRKR	**Sorokina**	**4.31**	**307**	PN	**Pn**	**09 07 53.6**	**+2.4**
TUMR	**Tumrok**	**4.33**	**287**	*e*P	**Pn**	**09 07 53.3**	**+1.7**
TUMR	**Tumrok**	**4.33**	**287**	PN	**Pn**	**09 07 49.9**	**-1.7**
KLY	**Klyuchi**	**4.39**	**301**	*e*P	**Pn**	**09 07 53.6**	**+1.3**
KLY				*e*S	**Sn**	**09 08 40.7**	**-1.4**
KLY	**Klyuchi**	**4.39**	**301**	PN	**Pn**	**09 07 53.6**	**+1.3**
SPN	**Mys Shipunski**	**4.53**	**259**	*e*P	**Pn**	**09 07 55.0**	**+0.9**
SPN				*e*S	**Sn**	**09 08 42.8**	**-2.7**
SPN	**Mys Shipunski**	**4.53**	**259**	PN	**Pn**	**09 07 55.0**	**+0.9**
SRDR	**Sredinnyy**	**4.87**	**299**	*e*P	Pn	09 08 03.9	+5.0
SRDR	**Sredinnyy**	**4.87**	**299**	PN	Pn	09 08 03.9	+5.0
NLC	**Nalytchevo**	**4.90**	**261**	*e*P	**Pn**	**09 08 00.4**	**+1.2**
NLC				*e*S	**Sn**	**09 08 53.4**	**-1.2**
NLC	**Nalytchevo**	**4.90**	**261**	PN	**Pn**	**09 08 00.4**	**+1.2**
SMAR	**Somma**	**5.19**	**263**	*e*P	**Pn**	**09 08 05.3**	**+1.8**
SMAR	**Somma**	**5.19**	**263**	PN	**Pn**	**09 08 05.3**	**+1.8**
UGLR	**Uglovaya**	**5.19**	**262**	*e*P	**Pn**	**09 08 04.4**	**+1.0**
UGLR	**Uglovaya**	**5.19**	**262**	PN	**Pn**	**09 08 04.4**	**+1.0**
KRER	**Koryakskii**	**5.21**	**263**	*e*P	**Pn**	**09 08 04.5**	**+0.8**
KRER	**Koryakskii**	**5.21**	**263**	PN	**Pn**	**

H11S3	WAKE ISLAND Hy 35.66 181			T	T	09 52 04.8	
	baz=0.6,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy 35.66 181			T	T	09 52 02.8	
	baz=0.6,slow=76,SNR=85						
SONA0	Songino Array	37.82	286	*e*P	**P**	**09 14 02.9**	**+1.8**
SONM	Songino Array	37.82	286	P	**P**	**09 14 02.9**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=56,slow=8.9,SNR=4.3						
YKA	Yellowknife Ar	39.33	46	P	**P**	**09 14 13.0**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=295,slow=8.2,SNR=3.7						
YKB5	Yellowknife Ar	39.33	46	*e*P	**P**	**09 14 13.1**	**-0.3**
MK32	Makanchi Array	51.50	299	*e*P	**P**	**09 15 49.6**	**-0.4**
MKAR	Makanchi Array	51.50	299	P	**P**	**09 15 49.6**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=52,slow=5.3,SNR=2.7						
TGY	Tagaytay City	53.95	240	LR	LR	09 37 46.4	
	comp=Z,152nm,21.8s,baz=4.5,slow=34						
PHWY	Pilot Hill	56.34	65	*e*P	**P**	**09 16 25.9**	**+0.2**
	comp=Z,9.2nm,1.1s						
NB200	NORSAR Array S	63.54	347	*e*P	**P**	**09 17 13.7**	**-0.8**
NOA	NORSAR Array B	63.54	347	P	**P**	**09 17 13.7**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=18,slow=6.9,SNR=3.0						
LTX	Lajitas	66.17	73	*e*P	**P**	**09 17 33.1**	**+0.9**
LTX	Lajitas	66.17	73	*e*P	**P**	**09 17 33.1**	**+0.9**
TXAR	Lajitas Array	66.17	73	P	**P**	**09 17 33.1**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=285,slow=4.2,SNR=5.6						
N53A	Lisbon	68.80	49	*e*P	**P**	**09 17 50.0**	**+1.5**
	comp=Z,12nm,0.8s						

*IDC **01** 09:14:52.6±7.0, 37.°14N×143.°99E, h0km, mb3.4/2, mb1 3.4/5, mb1mx3.3/35, mbtmp3.5/5, ML2.8/3, Error ellipse: s-maj=105.8km s-min=40.8km az=136.0*
*NIED **01** 09:15:00, 37.°90N×142.°40E, h14km, Mw3.5 Best double couple: M0 1.77000×10^14 NP1:φs 157.00000°, δ12.00000°, λ-137.00000°. NP2:φs 24.00000°, δ82.00000°, λ-81.00000°.*
*ISCJB **01** 09:15:06.6±1.4, 37.°93N±0.°04×142.°41E±0.°07, h19km±7km, mb3.2/2, Error ellipse: s-maj=10.6km s-min=6.6km az=26.9*
*JMA **01** 09:15:07.3±0.2, 37.°92N×142.°40E, h39km±2km, M3.7*
ISC 01 09:15:11.1±2.1, 37.°98N±0.°07×142.°3E±0.°1, h37km±3km, n18, σ1s 64/28, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.71**	**298**	P	**Pn**	**09 15 22.7**	**-1.9**
JIKH				S	**Sn**	**09 15 33.5**	**-0.7**
JIO	**Ouri**	**0.86**	**304**	P	**Pn**	**09 15 25.1**	**-1.5**
JIO				S	**Sn**	**09 15 37.4**	**-0.6**
JKMT	**Kesennumamotoy**	**1.03**	**323**	P	**Pn**	**09 15 27.4**	**-1.6**
JKMT				S	**Sn**	**09 15 41.6**	**-0.6**
JMM	**Marumori**	**1.17**	**265**	P	**Pn**	**09 15 29.2**	**-1.6**
JMM				*e*S	**Sn**	**09 15 44.7**	**-0.8**
JFK	**Kawauchi**	**1.26**	**241**	P	**Pn**	**09 15 29.7**	**-2.5**
JMK	**Ichinoseki**	**1.27**	**320**	P	**Pn**	**09 15 30.9**	**-1.3**
JOU	**Okura**	**1.31**	**287**	P	**Pn**	**09 15 32.2**	**-0.7**
JFT	**Otama**	**1.59**	**254**	P	**Pn**	**09 15 34.6**	**-2.1**
JFT				*e*S	**Sn**	**09 15 55.3**	**-0.8**
JOM	**Ohasama**	**1.67**	**333**	P	**Pn**	**09 15 36.7**	**-1.1**
JOM				*e*S	**Sn**	**09 15 58.2**	**+0.3**
JYS	**Shiratake**	**1.75**	**279**	P	**Pn**	**09 15 38.8**	**-0.1**
JYS				*e*S	**Sn**	**09 16 01.1**	**+1.2**
JYK	**Kaneyama**	**1.76**	**303**	P	**Pn**	**09 15 38.9**	**-0.1**
JYK				*e*S	**Sn**	**09 16 02.0**	**+1.8**
JRG	**Rokugo**	**1.90**	**318**	P	**Pn**	**09 15 41.2**	**+0.2**
JRG				*e*S	**Sn**	**09 16 06.5**	**+2.9**
MJAR	**Matsushiro Arr**	**3.54**	**247**	Pn	**Pn**	**09 16 05.0**	**+1.5**
	0.1nm,0.3s,baz=62,slow=11,SNR=8.2						
MJAR				Sn	Sn	09 16 59.2	+15
	0.1nm,0.3s,baz=331,slow=18,SNR=5.3						
MAT	**Matsushiro**	**3.54**	**247**	P	**Pn**	**09 16 05.6**	**+2.1**
MAT				*e*S	**Sn**	**09 16 46.6**	**+2.5**
ASAJ	**Asahikawa**	**6.13**	**2**	Pn	**Pn**	**09 16 37.7**	**-1.4**
	0.5nm,0.3s,baz=202,slow=19,SNR=2.7						
ASAJ				Sn	**Sn**	**09 17 50.8**	**+2.9**
	0.3nm,0.3s,baz=26,slow=14,SNR=3.1						
USRK	**Ussuriysk Ar.**	**9.93**	**312**	Pn	Pn	09 17 38.2	+7.0
	0.3nm,0.3s,baz=123,slow=14,SNR=4.9						
SONM	**Songino Array**	**27.83**	**302**	P	**P**	**09 20 57.4**	**+0.4**
	0.3nm,0.5s,baz=111,slow=7.9,SNR=2.8						
MKAR	**Makanchi Array**	**44.19**	**301**	P	**P**	**09 23 15.9**	**-0.3**
	0.4nm,0.6s,baz=85,slow=8.8,SNR=4.3						

IDC 01 09:18:21.9±2.3, 6.°59S×128.°96E, h0km, mb3.6/1, mb1 3.5/2, mb1mx3.2/30, mbtmp3.4/2, ML5.0/1, Error ellipse: s-maj=162.9km s-min=31.9km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.26**	**159**	Pn	Pn	09 21 45.3	0.0
	7.9nm,0.3s,baz=341,slow=13,SNR=1.2						
WRA				Sn	Sn	09 24 09.9	-14
	20nm,0.3s,baz=334,slow=20,SNR=1.8						
ASAR	**Alice Springs**	**17.63**	**165**	P	Pn	09 22 29.2	0.0
	0.1nm,0.3s,baz=343,slow=8.9,SNR=6.9						
ASAR				S	Sn	09 25 36.3	-10
	0.1nm,0.3s,baz=329,slow=14,SNR=3.6						
MKAR	**Makanchi Array**	**67.32**	**327**	P	P	09 29 18.8	0.0
	0.3nm,0.5s,baz=124,slow=8.1,SNR=5.3						

MEX 01 09:34:09.8±0.6, 15.°35N×93.°71W, h64km±13km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.59**	**53**	*e*P	Pn	09 34 21.9	-1.1
PCIG				*e*S	Sn	09 34 30.6	-2.1
TGIG		**1.53**	**22**	*e*P	Pn	09 34 33.9	-1.2
TGIG				*i* S	Sn	09 34 51.9	-2.1
CCIG	**Comitan**	**1.77**	**58**	*e*P	Pn	09 34 38.6	+0.2
CCIG				*e*S	Sn	09 34 58.1	-2.1
CMIG	**Matias Romero**	**2.06**	**327**	*e*P	Pn	09 34 40.4	-1.8
CMIG				*i* S	Sn	09 35 05.3	-1.6

IDC 01 09:48:22.4±1.3, 23.°35S×177.°04W, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.8/23, mbtmp3.9/6, ML3.8/1, Error ellipse: s-maj=65.9km s-min=23.6km az=152.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.68**	**197**	Pn	Pn	09 52 03.6	-1.1
	0.4nm,0.3s,baz=349,slow=5.2,SNR=6.0						
URZ				Sn	Sn	09 54 41.9	-17
	0.2nm,0.3s,baz=309,slow=23,SNR=5.7						
STKA	**Stephens Creek**	**37.44**	**248**	P	P	09 55 38.4	+0.8
	1.1nm,0.5s,baz=110,slow=12,SNR=3.5						
ASAR	**Alice Springs**	**44.80**	**259**	P	P	09 56 38.1	-0.2
	0.7nm,0.8s,baz=96,slow=7.0,SNR=8.0						
WRA	**Warramunga Arr**	**45.15**	**265**	P	P	09 56 40.7	-0.4
	1.1nm,0.4s,baz=95,slow=8.6,SNR=13						
NVAR	**Mina Array Bea**	**82.50**	**43**	P	P	10 00 47.3	+0.1
	0.4nm,0.6s,baz=217,slow=7.4,SNR=3.6						
TXAR	**Lajitas Array**	**87.85**	**57**	P	P	10 01 14.3	+0.2
	0.3nm,0.7s,baz=213,slow=6.0,SNR=6.1						
AKASG	**Malin Array Be**	**145.92**	**330**	PKPbc	PKPdf	10 08 02.3	-0.7
	0.8nm,0.5s,baz=44,slow=3.5,SNR=3.2						

JMA 01 09:53:03.7±0.2, 37.°98N×144.°24E, h44km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.21**	**279**	P	Pn	09 53 39.0	+1.1
JIKH				*e*S	Sn	09 54 05.1	+1.1
OFUJ	**Ofunato**	**2.30**	**299**	P	Pn	09 53 40.3	+1.2
OFUJ				*e*S	Sn	09 54 07.5	+1.4
JIO	**Ouri**	**2.33**	**283**	P	Pn	09 53 40.8	+1.4
JIO				S	Sn	09 54 08.1	+1.3
JKMT	**Kesennumamotoy**	**2.33**	**292**	P	Pn	09 53 40.7	+1.2
JKMT				*e*S	Sn	09 54 08.2	+1.4
JMK	**Ichinoseki**	**2.56**	**293**	P	Pn	09 53 44.4	+1.7
JMK				*e*S	Sn	09 54 14.8	+2.2
JOM	**Ohasama**	**2.75**	**304**	P	Pn	09 53 46.9	+1.7
JFT	**Otama**	**3.13**	**263**	P	Pn	09 53 52.6	+2.1
JFT				S	Sn	09 54 28.8	+2.2
JYK	**Kaneyama**	**3.19**	**288**	P	Pn	09 53 53.5	+2.2
JYK				S	Sn	09 54 31.5	+3.4
JANG	**Nango**	**3.19**	**319**	*e*S	Sn	09 54 29.3	+1.1
JOT	**Ohata**	**4.20**	**325**	P	Pn	09 54 07.6	+2.5
BSO1	**Boso 1**	**4.24**	**219**	P	Pn	09 54 05.1	-0.1
BSO1				*e*S	Sn	09 54 53.7	+0.5
JKB	**Kayabe**	**4.62**	**329**	P	Pn	09 54 12.2	+1.3
JKB				*e*S	Sn	09 55 02.3	-0.9
JCH	**Churui**	**4.68**	**352**	P	Pn	09 54 11.8	+0.1
JCH				*e*S	Sn	09 55 02.2	-2.5
JRY	**Ryogami san**	**4.70**	**247**	P	Pn	09 54 13.3	+1.2
JRY				S	Sn	09 55 04.8	-0.6
JOD2	**Odawara 2**	**4.95**	**238**	P	Pn	09 54 17.0	+1.4
JOD2				*e*S	Sn	09 55 09.2	-2.4
NEM2	**Nemuro 2**	**5.50**	**12**	P	Pn	09 54 19.8	-3.2
NEM2				*e*S	Sn	09 55 18.6	-6.3
JTKR	**Abashiri--Toko**	**5.99**	**358**	P	Pn	09 54 29.6	-0.1
JTKR				*e*S	Sn	09 55 33.6	-3.4

*SOME **01** 09:58:27.7, 43.°38N×70.°18E, h0km*
NNC 01 09:58:27.2±0.8, 43.°41N×70.°22E, h0km, mb3.6, mpv2.9, 14C-7D, Error ellipse: s-maj=9.2km s-min=4.1km az=53.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**0.35**	**145**	⇑P	Pg	09 58 34.2	+0.3
KK09				⇓S	Sg	09 58 39.2	+0.7
KK08	**Karatay Array**	**0.36**	**147**	⇑P	Pg	09 58 34.5	+0.4
KK08				⇓S	Sg	09 58 39.7	+0.9
KK04	**Karatay Array**	**0.36**	**145**	⇑P	Pg	09 58 34.3	+0.1
KK04				⇑S	Sg	09 58 39.4	+0.5
KK05	**Karatay Array**	**0.37**	**143**	⇓P	Pg	09 58 34.5	+0.3
KK05				⇓S	Sg	09 58 39.5	+0.6
KK01	**Karatay Array**	**0.37**	**146**	⇑P	Pg	09 58 34.6	+0.4
KK01				⇑S	Sg	09 58 39.4	+0.4
KK03	**Karatay Array**	**0.37**	**146**	⇑P	Pg	09 58 34.6	+0.4
KK03				⇓S	Sg	09 58 39.8	+0.8
KK02	**Karatay Array**	**0.37**	**145**	⇓P	Pg	09 58 34.6	+0.3
KK02				⇑S	Sg	09 58 39.5	+0.3
KK31	**Karatay Array**	**0.37**	**145**	⇓P	Pg	09 58 34.5	+0.1
	0.7nm,0.1s,baz=322,slow=20,SNR=424						
KK31				⇑S	Sg	09 58 39.4	+0.3
	15nm,0.3s						
KK31				⇑Rg	Rg	09 58 42.5	
	50nm,0.3s						
KK07	**Karatay Array**	**0.38**	**147**	⇑P	Pg	09 58 34.8	+0.3
KK07				⇓S	Sg	09 58 39.9	+0.5
KK06	**Karatay Array**	**0.39**	**145**	⇑P	Pg	09 58 34.9	+0.3
KK06				⇑S	Sg	09 58 39.9	+0.3
IUG	**Iuzhnay**	**1.27**	**186**	P	Pb	09 58 51.9	-0.2
	3.8nm,0.1s						
IUG				S	Sb	09 59 09.2	+0.2
	17nm,0.4s						
IUG	**Iuzhnay**	**1.27**	**186**	*e*P	Pb	09 58 51.9	-0.2
	3.8nm,0.1s						
IUG				*e*S	Sb	09 59 09.2	+0.2
	17nm,0.4s						
MRKS	**Merke**	**2.30**	**106**	Pg	Pb	09 59 10.4	+0.7
	3.3nm,0.2s						
MRKS				Lg	Lg	09 59 41.3	
	5.5nm,0.3s						
MRKS	**Merke**	**2.30**	**106**	*e*P	Pb	09 59 10.4	+0.7
	3.3nm,0.2s						
MRKS				*e*S	Sg	09 59 41.3	+0.2
	5.5nm,0.3s						
DGS	**Degeres**	**4.05**	**90**	Pg	Pg	09 59 43.1	-1.8
	2.1nm,0.4s						
DGS				Lg	Lg	10 00 37.2	
	5.6nm,0.4s						
DGS	**Degeres**	**4.05**	**90**	*e*P	Pg	09 59 43.1	-1.8
	2.1nm,0.4s						
DGS				*e*S	Sg	10 00 37.2	-0.3
	5.6nm,0.4s						

NNC 01 10:05:46.7±7.2, 36.°80N×71.°04E, h105km±166km, mb3.3, mpv4.0, 3C-2D, Error ellipse: s-maj=59.2km s-min=52.6km az=171.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.40**	**352**	Pg	Pn	10 07 05.2	+0.2
	4.2nm,0.1s						
IUG				Lg	Lg	10 08 08.3	
	14nm,0.2s						
MRKS	**Merke**	**6.17**	**15**	Pg	Pn	10 07 15.4	-0.1
	7.3nm,0.5s						
MRKS				Lg	Lg	10 08 25.9	
	5.4nm,0.3s						
KK31	**Karatay Array**	**6.31**	**356**	⇓P	Pn	10 07 17.1	-0.1
	6.2nm,0.3s,baz=178,slow=12,SNR=91						
KK31				⇑S	Sn	10 08 28.0	+0.1
	1.3nm,0.3s,baz=173,slow=20						
AAK	**Ala-Archa**	**6.41**	**23**	⇓P	Pn	10 07 18.6	-0.1
	2.0nm,0.4s						
AAK				⇑S	Sn	10 08 31.8	+1.3
	6.8nm,0.8s						
KST	**Kastek**	**7.29**	**30**	Pg	Pn	10 07 34.7	+4.1
	3.8nm,0.3s						
KST				Lg	Lg	10 08 58.9	
	6.3nm,0.2s						
DGS	**Degeres**	**7.39**	**28**	Pg	Pn	10 07 36.6	+4.7
	2.4nm,0.2s						
DGS				Lg	Lg	10 09 02.6	
	3.2nm,0.3s						
AB31	**Akbulak array**	**14.84**	**330**	P	Pn	10 09 11.0	0.0
	0.2nm,0.4s,baz=161,slow=11,SNR=9.4						
AB31				⇑S	Sn	10 11 46.6	-8.1
	1.3nm,0.8s						

*NORS **01** 10:19:26.1±0.0, 43.°34N×44.°87E, h9km, MPVA3.5*
ISC 01 10:19:26.7±1.0, 43.°36N±0.°03×44.°96E±0.°02, h13km±8km, n22, σ0s 71/44, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTKR	**Batakoyurt**	**0.30**	**272**	*i* Pg	**Pg**	**10 19 32.5**	**-0.5**
BTKR				*e*Sg	**Sg**	**10 19 37.1**	**-0.1**
KMGR	**Komgaron**	**0.31**	**193**	*i* Pg	**Pb**	**10 19 33.9**	**-0.3**
KMGR				*e*Sg	**Sb**	**10 19 39.4**	**+0.2**
VLKR	**Vladikavkaz**	**0.38**	**213**	*e*Pg	**Pb**	**10 19 34.6**	**-0.6**
VLKR				*e*Sg	**Sb**	**10 19 40.1**	**-1.0**
TRKR	**Terskaya**	**0.40**	**335**	*e*Pg	**Pg**	**10 19 34.6**	**0.0**
TRKR				*e*Sg	**Sg**	**10 19 40.1**	**+0.2**
ARNR	**Ardon**	**0.53**	**250**	*e*Pg	**Pb**	**10 19 37.3**	**-0.5**
ARNR				*e*Sg	**Sb**	**10 19 45.6**	**+0.4**
PRTR	**Priterechnaya**	**0.63**	**308**	*e*Pg	**Pg**	**10 19 39.0**	**0.0**
PRTR				*e*Sg	**Sg**	**10 19 47.9**	**+0.7**
GROC	**Groznyy**	**0.63**	**104**	*e*Pg	**Pb**	**10 19 38.6**	**-1.0**
GROC				*e*Sg	**Sb**	**10 19 47.4**	**-0.9**
STDR	**Stavd-Durt**	**0.65**	**271**	*e*Pg	**Pb**	**10 19 40.2**	**+0.2**
STDR				*e*Sg	**Sb**	**10 19 49.6**	**+0.7**
KORR	**Kora**	**0.71**	**247**	*e*Pg	**Pg**	**10 19 40.3**	**-0.2**
KORR				*e*Sg	**Sb**	**10 19 50.5**	**0.0**
LACR	**Lac**	**0.72**	**222**	*e*Pg	**Pb**	**10 19 40.5**	**-0.7**
LACR				*e*Sg	**Sb**	**10 19 51.3**	**+0.3**
LSNR	**Lesken**	**0.83**	**264**	*e*Pg	**Pn**	**10 19 43.8**	**-0.4**
LSNR				*e*Sg	**Sn**	**10 19 55.7**	**-0.6**
DVE	**Vedeno**	**0.95**	**115**	*e*Pg	**Pn**	**10 19 44.6**	**-1.1**
DVE				*e*Sg	**Sn**	**10 19 58.2**	**-0.9**
ZEI	**Tsey**	**0.96**	**234**	*e*Pg	**Pn**	**10 19 45.5**	**-0.7**
ZEI				*e*Sg	**Sn**	**10 19 59.5**	**-0.3**
DIGR	**Digorskoe uzhe**	**1.11**	**246**	*i* Pg	**Pb**	**10 19 47.4**	**-0.5**
DIGR				*e*Sg	**Sn**	**10 20 03.3**	**-0.1**
BTLR	**Botlikh**	**1.16**	**127**	*e*Pg	**Pg**	**10 19 50.7**	**+1.7**
BTLR				*e*Sg	**Sn**	**10 20 06.8**	**+2.4**
KBTC	**Kuba-Taba**	**1.21**	**292**	*e*Pg	**Pn**	**10 19 49.2**	**-0.2**
KBTC				*e*Sg	**Sb**	**10 20 05.9**	**+0.7**
ONI	**Oni**	**1.35**	**236**	P	**Pb**	**10 19 51.5**	**-0.3**
ONI				S	**Sg**	**10 20 11.1**	**+0.9**
ONI	**Oni**	**1.35**	**236**	*e*Pg	**Pb**	**10 19 51.5**	**-0.3**
ONI				*e*Sg	**Sg**	**10 20 11.1**	**+0.9**
PYA1	**Pyatigorsk**	**1.52**	**298**	*e*Pg	**Pn**	**10 19 53.8**	**+0.1**
PYA1				*e*Sg	**Sb**	**10 20 14.3**	**+0.4**
NEY	**Neytrino**	**1.64**	**267**	*e*Pg	**Pn**	**10 19 55.6**	**+0.2**
NEY				*e*Sg	**Sb**	**10 20 17.2**	**-0.3**
SHA1	**Shidzhatmaz**	**1.71**	**283**	*e*Pg	**Pn**	**10 19 56.5**	**+0.1**
SHA1				*e*Sg	**Sb**	**10 20 19.6**	**-0.1**
KIV0	**Kislovodsk Arr**	**1.75**	**291**	*e*Pg	**Pn**	**10 19 56.9**	**+0.2**
KIV0				*e*Sg	**Sb**	**10 20 20.4**	**-0.1**

IDC 01 10:30:37.7±3.3, 6.°52S×151.°90E, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.5/34, mbtmp4.0/3, ML1.3/1, Error ellipse: s-maj=120.8km s-min=47.6km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.50**	**238**	Pn	Pn	10 32 00.8	-0.2
	0.6nm,0.3s,baz=347,slow=18,SNR=2.5						
PMG				Sn	Sn	10 33 00.6	-4.5
	1.0nm,0.3s,baz=330,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**21.65**	**230**	P	P	10 35 29.4	-0.7
	3.3nm,0.9s,baz=58,slow=10,SNR=8.4						
ASAR	**Alice Springs**	**24.29**	**224**	P	P	10 35 57.9	+0.8
	3.9nm,0.8s,baz=56,slow=9.1,SNR=33						
TORD	**Torodi Ar. Bea**	**149.93**	**285**	PKPbc	PKPbc	10 50 30.4	-0.8
	1.1nm,1.1s,baz=90,slow=4.3,SNR=2.6						

*ISCJB **01** 10:56:03.7±0.6, 21.°65S±0.°02×68.°56W±0.°04, h141km±7km, Error ellipse: s-maj=6.6km s-min=3.9km az=168.0*
*SJA **01** 10:56:03.3±0.9, 21.°68S×68.°49W, h136km±5km, ML2.5, MW2.8*
*GUC **01** 10:56:04.5±0.7, 21.°65S×68.°49W, h135km±4km, ML3.8*
ISC 01 10:56:04.0±1.4, 21.°66S±0.°03×68.°55W±0.°04, h140km±10km, n39, σ0s 78/72, 11C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.66**	**258**	*i* P	**Pn**	**10 56 25.5**	**+0.1**
PB09				*i* S	**Sn**	**10 56 41.6**	**0.0**
PB09	**IPOC Station P**	**0.66**	**258**	⇑*i* P	**Pn**	**10 56 25.5**	**+0.1**
PB09				*e*S	**Sn**	**10 56 41.2**	**-0.5**
PB09				IAML		10 56 43.3	
	comp=E,1μm,0.2s						
LVC	**Limon Verde**	**1.00**	**200**	*i* P	**Pn**	**10 56 28.1**	**-0.3**
LVC				*i* S	**Sn**	**10 56 45.6**	**-1.2**
LVC	**Limon Verde**	**1.00**	**200**	*e*P	**Pn**	**10 56 28.0**	**-0.3**
LVC				*i* S	**Sn**	**10 56 46.2**	**-0.6**
PB01	**IPOC Station P**	**1.07**	**305**	*i* P	**Pn**	**10 56 28.5**	**-0.1**
PB01				*i* S	**Sn**	**10 56 47.2**	**-0.1**
PB01	**IPOC Station P**	**1.07**	**305**	⇑*i* P	**Pn**	**10 56 28.5**	**-0.1**
PB01				*i* S	**Sn**	**10 56 47.0**	**-0.3**
PB01				IAML		10 56 48.3	
	comp=E,2μm,0.2s						
PB03	**IPOC Station P**	**1.19**	**251**	*i* P	**Pn**	**10 56 30.0**	**+0.3**
PB03				*i* S	**Sn**	**10 56 49.3**	**-0.1**
PB03	**IPOC Station P**	**1.19**	**251**	⇑*i* P	**Pn**	**10 56 30.1**	**+0.3**
PB03				*i* S	**Sn**	**10 56 49.5**	**+0.1**
PB03				IAML		10 56 50.6	
	comp=E,2μm,0.2s						
PB07	**IPOC Station P**	**1.25**	**267**	*i* P	**Pn**	**10 56 30.7**	**+0.3**
PB07				*i* S	**Sn**	**10 56 50.2**	**-0.3**
PB07	**IPOC Station P**	**1.25**	**267**	⇑*i* P	**Pn**	**10 56 30.7**	**+0.3**
PB07				*i* S	**Sn**	**10 56 50.9**	**+0.4**
PB07				IAML		10 56 51.7	
	comp=E,3μm,0.2s						
PB02	**IPOC Station P**	**1.30**	**285**	*i* P	**Pn**	**10 56 31.2**	**+0.3**
PB02				*i* S	**Sn**	**10 56 51.6**	**+0.2**
PB02	**IPOC Station P**	**1.30**	**285**	⇑*i* P	**Pn**	**10 56 31.2**	**+0.3**
PB02				*i* S	**Sn**	**10 56 51.2**	**-0.1**
PB02				IAML		10 56 53.9	
	comp=E,3μm,0.1s						
PB06	**IPOC Station P**	**1.41**	**222**	*i* P	**Pn**	**10 56 32.5**	**+0.5**
PB06				*i* S	**Sn**	**10 56 53.5**	**+0.1**
PB06	**IPOC Station P**	**1.41**	**222**	⇑*i* P	**Pn**	**10 56 32.5**	**+0.5**
PB06				*i* S	**Sn**	**10 56 53.7**	**+0.3**
PB06				IAML		10 56 55.2	
	comp=E,1μm,0.3s						
PB08	**IPOC Station P**	**1.62**	**339**	*i* P	**Pn**	**10 56 35.0**	**+0.5**
PB08				*i* S	**Sn**	**10 56 58.2**	**+0.3**
PB08	**IPOC Station P**	**1.62**	**339**	⇓*i* P	**Pn**	**10 56 34.9**	**+0.3**
PB08				*i* S	**Sn**	**10 56 57.9**	**+0.1**
PB08				IAML		10 57 00.9	
	comp=E,544nm,0.2s						
PB04	**IPOC Station P**	**1.63**	**246**	*i* P	**Pn**	**10 56 34.9**	**+0.4**
PB04				*i* S	**Sn**	**10 56 57.9**	**+0.1**
PB04	**IPOC Station P**	**1.63**	**246**	⇑*i* P	**Pn**	**10 56 34.9**	**+0.4**
PB04				*i* S	**Sn**	**10 56 57.8**	**+0.1**
PB04				IAML		10 57 01.9	
	comp=E,960nm,0.2s						
PB15	**IPOC Station P**	**1.76**	**209**	*i* P	**Pn**	**10 56 36.7**	**+0.7**
PB15				*i* S	**Sn**	**10 57 01.5**	**+1.0**
PB15	**IPOC Station P**	**1.76**	**209**	⇓*i* P	**Pn**	**10 56 36.7**	**+0.7**
PB15				*i* S	**Sn**	**10 57 01.5**	**+1.0**
PB05	**IPOC Station P**	**1.94**	**232**	*i* P	**Pn**	**10 56 38.3**	**+0.3**
PB05				*i* S	**Sn**	**10 57 04.4**	**+0.4**
PB05	**IPOC Station P**	**1.94**	**232**	⇑*i* P	**Pn**	**10 56 38.3**	**+0.3**
PB05				*i* S	**Sn**	**10 57 03.9**	**-0.1**
PB05				IAML		10 57 05.8	
	comp=N,256nm,0.5s						
GO01	**Chusmiza**	**2.07**	**343**	⇑*i* P	**Pn**	**10 56 40.1**	**+0.2**
GO01				*i* S	**Sn**	**10 57 07.3**	**-0.2**
GO01				IAML		10 57 11.2	
	comp=N,610nm,0.2s						
PB11	**IPOC Station P**	**2.16**	**331**	*i* P	**Pn**	**10 56 40.6**	**-0.1**
PB11				*i* S	**Sn**	**10 57 08.8**	**0.0**
PB11	**IPOC Station P**	**2.16**	**331**	⇑*i* P	**Pn**	**10 56 40.4**	**-0.2**
PB11				*i* S	**Sn**	**10 57 08.2**	**-0.5**
PB11				IAML		10 57 10.8	
	comp=E,1μm,0.6s						
PSGCX	**Pisagua**	**2

CAPV			*e*S	Sn	11 02 14.0	-0.7
PTBC	**PUERTO BERRIO,**	**1.35 257**	⇑*i*P	Pn	11 01 52.4	-1.3
PTBC			*i*		11 02 19.9	
	comp=E,488nm,0.6s					
TAMC	**Tame, Arauca**	**1.39 107**	⇓*i*P	Pn	11 01 54.0	0.0
TAMC			*i*		11 01 54.2	
	comp=Z,259nm,0.3s					
TAMC			*e*S	Sn	11 02 15.7	-0.2
OCAC	**Ocana**	**1.40 352**	*e*P	Pn	11 01 54.1	-0.2
OCAC			*e*S	Sn	11 02 15.8	-0.6
OCAC			*i*		11 02 20.1	
	comp=N,624nm,0.2s					
YOPC	**Yopal, Colombi**	**1.64 155**	⇓*i*P	Pn	11 01 56.3	-0.4
YOPC			*e*S	Sn	11 02 20.9	+0.1
YOPC			*i*		11 02 24.6	
	comp=E,144nm,0.4s					
ZARC	**Zaragoza, Cauc**	**1.83 291**	*e*P	Pn	11 01 58.3	-0.4
ZARC			*e*S	Sn	11 02 23.3	-1.0
ZARC			*i*		11 02 29.6	
	comp=E,407nm,0.3s					
CTAU	**Tausa, Cundina**	**1.87 209**	*e*P	Pn	11 02 00.7	+1.0
CTAU			*e*S	Sn	11 02 25.7	-0.2
CTAB	**Cerro Tablazo,**	**2.11 211**	*e*P	Pn	11 02 03.1	+0.7
CTAB			*e*S	Sn	11 02 31.6	+0.7
NORC	**Norcasia**	**2.15 234**	*e*P	Pn	11 02 01.6	-0.8
NORC			*e*S	Sn	11 02 29.5	-1.5
NORC			*i*		11 02 36.3	
	comp=E,238nm,0.2s					
SMLC	**San Martn de**	**2.16 334**	⇑*i*P	Pn	11 02 02.3	-0.2
SMLC			*e*S	Sn	11 02 31.8	+0.6
SMLC			*i*		11 02 38.2	
	comp=E,240nm,0.3s					
CHIC	**Chingaza**	**2.28 195**	*e*P	Pn	11 02 03.9	-0.5
CHIC			*e*S	Sn	11 02 33.6	-0.9
CHIC			*i*		11 02 37.5	
	comp=N,160nm,0.3s					
CROSA	**EL ROSAL, CUND**	**2.31 211**	*e*P	Pn	11 02 04.6	-0.1
CROSA			*e*S	Sn	11 02 35.6	+0.6
CROSA			*i*		11 02 41.5	
	comp=N,336nm,0.5s					
HELC	**Santa Helena**	**2.47 255**	*e*P	Pn	11 02 06.5	-0.2
HELC			*e*S	Sn	11 02 36.8	-1.6
HELC			*i*		11 02 48.5	
	comp=N,74nm,0.7s					
UREC	**San Jos de Ur**	**2.55 291**	*e*P	Pn	11 02 05.8	-1.5
SOCV	**Socops**	**2.67 57**	⇑*i*P	Pn	11 02 07.9	-0.8
SOCV			*e*S	Sn	11 02 40.1	-2.1
GUY2C	**Guyana, Caldas**	**2.75 234**	*e*P	Pn	11 02 09.7	-0.5
GUY2C			*e*S	Sn	11 02 45.4	+0.8
GUY2C			*i*		11 02 55.3	
	comp=N,126nm,0.7s					
VILC	**Villavicencio,**	**2.77 192**	*e*P	Pn	11 02 09.3	-0.9
VILC			*e*S	Sn	11 02 43.7	-1.1
VILC			*i*		11 02 50.5	
	comp=N,171nm,0.4s					
RREF	**El Recreo**	**2.93 229**	*e*P	Pn	11 02 12.1	-0.6
RREF			*e*S	Sn	11 02 49.0	0.0
RREF			*i*		11 02 55.6	
	comp=Z,81nm,0.3s					
CODC	**Agustn Codazz**	**3.09 354**	*e*P	Pn	11 02 13.6	-0.4
CODC			*e*S	Sn	11 02 50.3	-1.3
CODC			*i*		11 02 54.8	
	comp=N,43nm,0.3s					
ARGC	**Ariguani, Magd**	**3.19 340**	*e*P	Pn	11 02 15.6	+0.3
ARGC			*e*S	Sn	11 02 52.9	-1.2
ARGC			*i*		11 03 02.4	
	comp=E,46nm,0.5s					
SDV	**Santo Domingo**	**3.20 50**	*e*P	Pn	11 02 15.0	-0.6
SDV			*e*S	Sn	11 02 53.1	-1.3
PRAC	**Prado**	**3.57 209**	*e*P	Pn	11 02 19.3	-0.9
PRAC			*e*S	Sn	11 03 01.8	-1.0
PRAC			*i*		11 03 04.9	
	comp=E,67nm,0.3s					
ELOV	**Elorza**	**3.62 87**	*e*P	Pn	11 02 19.7	-1.1
PLMC	**San Jos del P**	**3.68 239**	*e*P	Pn	11 02 21.6	-0.1
PLMC			*e*S	Sn	11 03 05.6	+0.2
YOTC	**Yotoco, Valle**	**4.28 229**	*e*P	Pn	11 02 29.1	-0.5
SMRC	**Santa Marta, M**	**4.43 346**	*e*P	Pn	11 02 30.8	-0.5
SMRC			*e*S	Sn	11 03 19.1	-3.6
URIC	**Uribia, Colomb**	**4.96 13**	*e*P	Pn	11 02 35.7	-2.5
PCON	**Cinco Dias**	**5.54 216**	*e*P	Pn	11 02 47.0	+0.3

*ISK **01** 11:14:49.5, 40.°71N×41.°25E, h15km, ML2.1/4*
*DDA **01** 11:14:50.5, 40.°74N×41.°25E, h7km±1km, ML2.6*
ISC 01 11:14:49.8±1.6, **40.°72N**±0.°05×**41.°24E**±0.°04, **h8**km±19km, **n9**, σ0§**32**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAGI	**Agillar**	**0.63**	**54**	*i* P	**Pb**	**11 15 02.9**	**-0.2**
DAGI				*i* S	**Sb**	**11 15 11.8**	**-0.4**
DAGI				IAML_P			
	comp=Z,998nm,0.2s						
ARTV	**Artvin**	**0.70**	**48**	*i* P	**Pb**	**11 15 04.8**	**+0.3**
ARTV				*i* S	**Sb**	**11 15 14.5**	**+0.1**
ARTV				IAML_P			
	comp=Z,3μm,0.2s						
DBOC	**Borcka**	**0.71**	**27**	*i* P	**Pb**	**11 15 04.7**	**+0.2**
DBOC				*i* S	**Sb**	**11 15 14.9**	**+0.5**
BCA	**Borcka**	**0.79**	**22**	PG	**Pb**	**11 15 05.3**	**-0.5**
BCA				SG	**Sb**	**11 15 16.6**	**0.0**
KOPR	**Koprukoy-ERZUR**	**0.86**	**147**	PG	**Pg**	**11 15 06.4**	**0.0**
BAYT	**Aydıntepe-Bayb**	**0.90**	**249**	PG	**Pg**	**11 15 07.2**	**+0.1**
BAYT				SG	**Sb**	**11 15 20.3**	**+0.4**
BATM	**Batumi**	**0.95**	**21**	PG	**Pg**	**11 15 08.2**	**+0.1**
BATM	**Batumi**	**0.95**	**21**	P	**Pb**	**11 15 08.5**	**-0.2**
BATM				S	**Sb**	**11 15 21.6**	**+0.2**
KTUT	**Trabzon**	**1.15**	**284**	PN	**Pb**	**11 15 11.6**	**-0.4**

*IDC **01** 11:14:50.9±0.9, 6.°62N×72.°84W, h170km±9km, mb3.1/4, mb1 3.7/6, mb1mx3.2/32, mbtmp3.8/6, MS2.9/1, Ms1 3.0/1, ms1mx2.2/15, Error ellipse: s-maj=30.7km s-min=8.6km az=131.0*
*ISCJB **01** 11:14:51.1±0.3, 6.°85N±0.°02×73.°13W±0.°03, h158km±3km, mb3.4/4, Error ellipse: s-maj=5.0km s-min=3.1km az=22.9*
*RSNC **01** 11:14:52.5±1.3, 6.°83N×73.°15W, h151km±4km, ML4.0, Mw4.2*
ISC 01 11:14:51.7±0.8, **6.°84N**±0.°03×**73.°13W**±0.°04, **h157**km±5km, **n52**, σ1§**10**/81, **mb3.4**/4, **7C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**193**	⇑*i*P	**Pn**	**11 15 12.9**	**-0.3**
BARC				*e*S	**Sn**	**11 15 28.1**	**-1.5**
BARC				*i*		11 15 29.3	
	comp=Z,1μm,0.8s						
GIRC	**Giron, Santand**	**0.25**	**345**	*i* P	**Pn**	**11 15 13.0**	**-0.1**
GIRC				*e*S	**Sn**	**11 15 28.3**	**-1.2**
BRRC	**Barranca, Sant**	**0.64**	**295**	⇓*i*P	**Pn**	**11 15 14.8**	**+0.2**
BRRC				*e*S	**Sn**	**11 15 31.5**	**-0.5**
BRRC				*i*		11 15 32.4	
	comp=E,2μm,0.3s						
PAMC	**Pamplona, Colo**	**0.66**	**40**	⇑*i*P	**Pn**	**11 15 15.8**	**+0.5**
PAMC				*e*S	**Sn**	**11 15 33.1**	**-0.1**
PAMC				*i*		11 15 35.2	
	comp=N,2μm,0.5s						
GRMC	**Gramalote, San**	**0.93**	**20**	*i* P	**Pn**	**11 15 18.8**	**+2.0**
GRMC				*e*S	**Sn**	**11 15 38.5**	**+2.4**
RUSC	**La Rusia**	**0.94**	**177**	⇓*i*P	**Pn**	**11 15 16.8**	**-0.4**
RUSC				*e*S	**Sn**	**11 15 35.5**	**-1.2**
RUSC				*i*		11 15 36.7	
	comp=E,819nm,0.4s						
CAPV	**Capacho**	**1.30**	**38**	⇑*i*P	**Pn**	**11 15 20.9**	**+0.8**
CAPV				*e*S	**Sn**	**11 15 41.1**	**-0.7**
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	*e*P	**Pn**	**11 15 19.3**	**-1.0**
PTBC				*e*S	**Sn**	**11 15 40.5**	**-1.7**
PTBC				*i*		11 15 46.6	
	comp=E,902nm,0.4s						
TAMC	**Tame, Arauca**	**1.39**	**107**	⇑*i*P	**Pn**	**11 15 21.4**	**+0.7**
TAMC				*e*S	**Sn**	**11 15 43.1**	**+0.2**
TAMC				*i*		11 15 44.4	
	comp=E,1μm,0.6s						
OCAC	**Ocana**	**1.41**	**352**	*e*P	**Pn**	**11 15 21.0**	**0.0**
OCAC				*e*S	**Sn**	**11 15 42.5**	**-1.1**
OCAC				*i*		11 15 49.4	
	comp=E,2μm,0.5s						
YOPC	**Yopal, Colombi**	**1.63**	**154**	⇓*i*P	**Pn**	**11 15 23.7**	**+0.4**
YOPC				*e*S	**Sn**	**11 15 47.3**	**-0.3**
YOPC				*i*		11 15 50.3	
	comp=E,575nm,0.5s						

ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P	**Pn**	**11 15 25.3**	**-0.1**
ZARC				*e*S	**Sn**	**11 15 50.9**	**-0.4**
ZARC				*i*		11 15 57.5	
	comp=N,830nm,0.6s						
CTAU	**Tausa, Cundina**	**1.86**	**209**	*e*P	**Pn**	**11 15 30.7**	**+4.5**
CTAU				*e*S	**Sn**	**11 15 55.6**	**+2.9**
CTAB	**Cerro Tablazo,**	**2.10**	**211**	*e*P	**Pn**	**11 15 30.2**	**+1.3**
CTAB				*e*S	**Sn**	**11 15 56.6**	**-1.0**
NORC	**Norcasia**	**2.14**	**234**	*e*P	**Pn**	**11 15 28.5**	**-0.5**
NORC				*e*S	**Sn**	**11 15 56.8**	**-0.9**
NORC				*i*		11 16 05.7	
	comp=N,633nm,0.1s						
SMLC	**San Martn de**	**2.17**	**334**	*e*P	**Pn**	**11 15 28.9**	**-0.2**
SMLC				*e*S	**Sn**	**11 15 57.1**	**-1.0**
SMLC				*i*		11 16 02.6	
	comp=E,1μm,0.1s						
CHIC	**Chingaza**	**2.27**	**195**	*e*P	**Pn**	**11 15 30.8**	**-0.1**
CHIC				*e*S	**Sn**	**11 16 00.5**	**-0.5**
CHIC				*i*		11 16 02.6	
	comp=E,699nm,0.4s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**11 15 32.8**	**+1.5**
	comp=E,46nm,0.3s,baz=122,slow=20,SNR=122						
ROSC				S	**Sn**	**11 16 02.2**	**+0.4**
	comp=E,67nm,0.3s,baz=57,slow=19,SNR=7.2						
HELC	**Santa Helena**	**2.47**	**255**	*e*P	**Pn**	**11 15 32.8**	**-0.4**
HELC				*e*S	**Sn**	**11 16 05.3**	**+0.2**
HELC				*i*		11 16 11.5	
	comp=N,302nm,0.3s						
UREC	**San Jos de Ur**	**2.55**	**291**	*e*P	**Pn**	**11 15 32.7**	**-1.1**
SOCV	**Socops**	**2.67**	**57**	*e*P	**Pn**	**11 15 35.1**	**-0.2**
GUY2C	**Guyana, Caldas**	**2.74**	**234**	*e*P	**Pn**	**11 15 36.9**	**+0.3**
GUY2C				*e*S	**Sn**	**11 16 13.2**	**+1.9**
GUY2C				*i*		11 16 22.1	
	comp=N,514nm,0.5s						
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	**Pn**	**11 15 36.1**	**-0.5**
VILC				*e*S	**Sn**	**11 16 10.0**	**-1.3**
VILC				*i*		11 16 16.7	
	comp=N,1μm,0.6s						
RREF	**El Recreo**	**2.93**	**229**	*e*P	**Pn**	**11 15 39.3**	**+0.2**
RREF				*e*S	**Sn**	**11 16 15.9**	**+0.3**
RREF				*i*		11 16 24.8	
	comp=Z,380nm,0.4s						
CODC	**Agustn Codazz**	**3.10**	**354**	⇑*i*P	**Pn**	**11 15 40.3**	**-0.3**
CODC				*e*S	**Sn**	**11 16 17.8**	**-0.7**
CODC				*i*		11 16 24.1	
	comp=N,197nm,0.5s						
ARGC	**Ariguani, Magd**	**3.20**	**340**	*e*P	**Pn**	**11 15 43.0**	**+1.1**
ARGC				*e*S	**Sn**	**11 16 21.8**	**+1.0**
ARGC				*i*		11 16 28.9	
	comp=E,214nm,0.4s						
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**11 15 42.4**	**+0.4**
	comp=E,76nm,0.3s,baz=205,slow=3.9,SNR=66						
SDV				S	**Sn**	**11 16 19.5**	**-1.6**
	comp=E,22nm,0.3s,baz=263,slow=20,SNR=5.9						
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**11 15 42.2**	**+0.2**
SDV				*e*S	**Sn**	**11 16 20.3**	**-0.8**
PRAC	**Prado**	**3.56**	**210**	*e*P	**Pn**	**11 15 46.1**	**-0.4**
PRAC				*e*S	**Sn**	**11 16 28.8**	**-0.4**
PRAC				*i*		11 16 34.5	
	comp=E,821nm,0.4s						
ELOV	**Elorza**	**3.62**	**87**	⇑*i*P	**Pn**	**11 15 47.2**	**-0.1**
YOTC	**Yotoco, Valle**	**4.28**	**229**	⇓*i*P	**Pn**	**11 15 55.5**	**-0.4**
YOTC				*e*S	**Sn**	**11 16 45.5**	**-0.4**
GUVC	**San Jose del G**	**4.29**	**173**	*e*P	**Pn**	**11 15 55.4**	**-0.6**
GUVC				*i*		11 16 48.8	
	comp=N,557nm,0.3s						
SOLC	**Bahia Solano**	**4.30**	**262**	*e*P	**Pn**	**11 15 56.0**	**0.0**
SMRC	**Santa Marta, M**	**4.43**	**346**	*e*P	**Pn**	**11 15 57.6**	**-0.2**
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**11 16 00.0**	**-1.5**
BETC	**Betania**	**4.73**	**209**	*e*P	**Pn**	**11 16 01.0**	**-0.7**
MARP	**Paez Belalcaza**	**4.87**	**216**	*e*P	**Pn**	**11 16 03.9**	**+0.1**
URIC	**Uribia, Colomb**	**4.96**	**13**	*e*P	**Pn**	**11 16 03.4**	**-1.4**
MALC	**Bahia Malaga**	**5.04**	**236**	*e*P	**Pn**	**11 16 07.0**	**+1.2**
PCON	**Cinco Dias**	**5.54**	**216**	*e*P	**Pn**	**11 16 14.2**	**+1.3**
POPC	**Popayan, Colom**	**5.54**	**220**	*e*P	**Pn**	**11 16 12.3**	**-0.3**
POPC				*e*S	**Sn**	**11 17 16.3**	**+0.4**
FLOC	**Florencia**	**5.79**	**206**	⇑*i*P	**Pn**	**11 16 15.4**	**-0.4**
FLOC				*e*S	**Sn**	**11 17 20.3**	**-1.4**
SOTA	**Rioblanco**	**5.82**	**217**	*e*P	**Pn**	**11 16 17.6**	**+1.0**
BBAC	**Balboa, Cauca**	**6.30**	**221**	*e*P	**Pn**	**11 16 24.0**	**+1.3**
CRUC	**La Cruz**	**6.47**	**216**	*e*P	**Pn**	**11 16 27.0**	**+1.8**
LPAZ	**La Paz**	**23.50**	**168**	LR	LR	11 28 24.1	
	comp=N,29nm,20.6s,baz=142,slow=35						
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**11 21 42.4**	**+0.7**
	comp=N,0.3nm,0.4s,baz=128,slow=8.7,SNR=8.3						
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**11 23 16.3**	**+0.7**
	comp=N,0.4nm,0.5s,baz=121,slow=9.4,SNR=4.8						
NVAR	**Mina Array Bea**	**51.47**	**315**	P	**P**	**11 23 41.1**	**-0.3**
	comp=N,0.3nm,0.6s,baz=117,slow=9.3,SNR=2.6						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**11 25 03.4**	**+0.2**
	comp=N,1.2nm,0.5s,baz=131,slow=6.7,SNR=19						
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc	**PKPdf**	**11 34 18.2**	**+0.1**
	comp=N,0.3nm,0.6s,baz=120,slow=3.3,SNR=2.9						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKPbc**	**11 34 24.1**	**-1.3**
	comp=N,0.7nm,0.7s,baz=87,slow=3.6,SNR=3.3						

*SOME **01** 11:47:59.6, 39.°60N×75.°40E, h0km*
*KRNET **01** 11:48:08.9±0.1, 39.°62N×75.°43E, mb2.7*
*NNC **01** 11:48:14.7±1.0, 39.°92N×75.°10E, h8km±5km, mb3.5, mpv3.2, Error ellipse: s-maj=7.2km s-min=5.7km az=154.0*
ISC 01 11:48:15.9±3.4, **39.°9N**±0.°1×**75.°05E**±0.°06, **h10**km±21km, **n19**, σ1§**43**/29, **12C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.66**	**25**	⇓*i*P	**Pn**	**11 48 43.3**	**-2.2**
NRN				⇓*i*S	**Sg**	**11 49 08.4**	**-1.0**
	baz=13						
ARLS	**Aral**	**2.00**	**344**	⇑*i*P	**Pb**	**11 48 51.0**	**-1.6**
	baz=40						
ARLS				⇑*i*S	**Sg**	**11 49 22.2**	**+1.9**
	baz=40						
KZA	**Kyzart**	**2.15**	**4**	⇑*e*P	**Pn**	**11 48 52.2**	**0.0**
	baz=57						
KZA				⇑*i*S	**Sg**	**11 49 24.6**	**-0.4**
	baz=57						
UCH	**Uchtor**	**2.33**	**350**	⇑*i*P	**Pn**	**11 48 55.6**	**+0.9**
	baz=45						
UCH				⇑*i*S	**Sg**	**11 49 30.4**	**-0.4**
	baz=45						
AML	**Almayashu**	**2.43**	**335**	⇑*i*P	**Pb**	**11 48 58.0**	**-1.9**
	baz=33						
AML				⇑*i*S	**Sg**	**11 49 33.1**	**-0.8**
	baz=33						
BOOM	**Boomskoye usch**	**2.64**	**14**	⇑*i*P	**Pn**	**11 48 58.3**	**-0.5**
	baz=7.0						
BOOM				⇑*i*S	**Sb**	**11 49 34.2**	**-1.8**
	baz=7.0						
ARK	**Arkit**	**3.00**	**309**	⇓*i*P	**Pn**	**11 49 05.6**	**+2.0**
	baz=11						
ARK				⇓*i*S	**Sb**	**11 49 46.2**	**+0.1**
	baz=11						
TKM2	**Tokmak 2**	**3.01**	**8**	⇓Pn	**Pn**	**11 49 03.1**	**-0.8**
	2.0nm,0.4s						
TKM2				⇓Lg	Lg	11 49 48.1	
	7.7nm,0.5s						
MRKS	**Merke**	**3.13**	**334**	Pg	**Pb**	**11 49 12.5**	**+0.9**
	4.0nm,0.4s						
MRKS				Lg	Lg	11 49 55.7	
MRKS	**Merke**	**3.13**	**334**	*e*P	**Pn**	**11 49 06.9**	**+1.5**
	3.2nm,0.6s						
MRKS				*e*S	**Sg**	**11 49 55.9**	**-0.5**
	3.8nm,1.0s						
KST	**Kastek**	**3.18**	**12**	Pg	**Pb**	**11 49 12.5**	**-0.2**
	4.0nm,0.3s						
KST				Lg	Lg	11 49 55.8	
	9.2nm,0.7s						
KST	**Kastek**	**3.18**	**12**	*e*P	**Pn**	**11 49 05.5**	**-0.6**
	2.7nm,0.8s						
KST				*e*S	**Sb**	**11 49 53.4**	**+1.9**
	5.7nm,0.7s						
BTK	**Batken**	**3.26**	**274**	⇑*i*P	**Pn**	**11 49 08.1**	**+1.0**
	baz=79						
BTK				⇑*i*S	**Sb**	**11 49 50.8**	**-2.8**
	baz=79						
DGS	**Degeres**	**3.35**	**9**	Pg	**Pb**	**11 49 16.1**	**+0.7**
	6.6nm,0.5s						
DGS				Lg	Lg	11 50 01.9	
	9.1nm,0.5s						
MDOK	**Medeo**	**3.56**	**24**	Pg	**Pb**	**11 49 19.6**	**+0.6**
	1.1nm,0.2s						
MDOK				Lg	Lg	11 50 08.0	
	4.4nm,0.7s						

KOTS	**Kotyrbulak**	**3.64**	**24**	Pg	**Pb**	**11 49 21.7**	**+1.2**
	1.8nm,0.2s						
KOTS				Lg	Lg	11 50 11.5	
	22nm,0.4s						
KTBS	**Karatobe**	**3.97**	**17**	Pg	**Pb**	**11 49 27.1**	**+1.2**
	2.2nm,0.5s						
KTBS				Lg	Lg	11 50 21.1	
	7.0nm,0.6s						
KUU	**Kurty**	**4.07**	**13**	Pg	**Pb**	**11 49 28.6**	**+0.9**
	1.7nm,0.3s						
KUU				Lg	Lg	11 50 23.4	
	6.8nm,0.6s						
ARXS	**Arharly**	**4.75**	**25**	Pg	**Pb**	**11 49 41.6**	**+2.3**
	1.2nm,0.3s						
ARXS				Lg	Lg	11 50 45.6	
	3.1nm,0.5s						

*NSSC **01** 11:49:22.5±0.5, 27.°75N×34.°19E, h0km±999km, ML4.6*
*IDC **01** 11:49:25.7±0.5, 28.°39N×33.°23E, h0km, mb4.2/35, mb1 4.3/44, mb1mx4.2/58, mbtmp4.2/44, ML4.1/7, MS3.5/19, Ms1 3.6/19, ms1mx3.3/51, Error ellipse: s-maj=11.4km s-min=9.8km az=117.0*
*MOS **01** 11:49:25.7±1.1, 28.°32N×33.°24E, h15km, mb4.8/54, Error ellipse: s-maj=6.7km s-min=3.5km az=89.4*
*BJI **01** 11:49:25.7±0.0, 28.°40N×33.°30E, h10km, mb4.9/29, mB4.9/22, Ms4.5/13, Ms7 4.2/13*
*ISCJB **01** 11:49:28.0±0.6, 28.°45N±0.°02×33.°19E±0.°02, h25km±4km, mb4.7/138, MS3.7/21, Error ellipse: s-maj=3.4km s-min=2.4km az=34.8*
*NEIC **01** 11:49:28.4±1.5, 28.°41N×33.°22E, h22km±4km, mb4.7/68, ML5.0(GII), Error ellipse: s-maj=9.9km s-min=7.7km az=56.0*
NEIC Felt [III] at Cairo. Also felt at Kafr Sa`d al Balad. Felt at Eilat, Israel.
*GII **01** 11:49:29.9±0.0, 28.°44N×33.°04E, h32km±2km, mb4.9/3, MD5.0/3*
*SGS **01** 11:49:30, 28.°40N×33.°03E, h27km, Ml5.2*
ISC 01 11:49:29.2±0.6, **28.°39N**±0.°03×**33.°16E**±0.°03, **h23**km±3km, **h23**km:**pP-P, n447**, σ1§**72**/463, **mb4.6**/143, **MS3.7**/21, **11C-16D, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRDS	**Abu Rudays**	**0.35**	**21**	*e*Pb	**Pb**	**11 49 36.3**	**-0.5**
HKAT	**Jabal Katrina**	**0.75**	**79**	*e*Pn	**Pb**	**11 49 43.6**	**-0.1**
HKAT				*e*Sn	**Sb**	**11 49 54.4**	**+0.9**
ZNM	**Zenema**	**1.01**	**346**	*e*Pb	**Pn**	**11 49 46.5**	**-1.5**
ZNM				*e*Sn	**Sb**	**11 50 00.8**	**-0.2**
ZAF	**Zafarana**	**1.04**	**329**	*e*Pn	**Pn**	**11 49 46.8**	**-1.5**
RSHS		**1.45**	**93**	P	**Pn**	**11 49 53.4**	**-0.5**
RSHS				S	**Sb**	**11 50 15.3**	**+1.9**
HAQS	**Haql**	**1.68**	**66**	P	**Pn**	**11 49 56.7**	**-0.5**
HAQS				S	**Sn**	**11 50 18.0**	**0.0**
BDAS	**Al Bad`**	**1.71**	**88**	P	**Pn**	**11 49 56.8**	**-0.9**
BDAS				S	**Sb**	**11 50 23.4**	**+2.3**
KRABS	**KRABS**	**1.87**	**98**	P	**Pn**	**11 49 59.1**	**-0.6**
KRABS				S	**Sn**	**11 50 20.5**	**-2.2**
HQLS		**1.90**	**61**	P	**Pn**	**11 49 59.8**	**-0.5**
HQLS				S	**Sb**	**11 50 29.0**	**+2.5**
EIL	**Elat**	**2.02**	**50**	Pn	**Pn**	**11 50 01.2**	**-0.7**
	114nm,0.3s,baz=198,slow=4.5,SNR=622						
EIL				Lg	Lg	11 50 32.7	
	4μm,0.3s,baz=40,slow=20,SNR=11						
EIL	**Elat**	**2.02**	**50**	*e*Pn	**Pn**	**11 50 00.6**	**-1.3**
EIL	**Elat**	**2.02**	**50**	Pn	**Pn**	**11 50 00.8**	**-1.1**
EIL				Sn	**Sn**	**11 50 25.4**	**-1.1**
EIL	**Elat**	**2.02**	**50**	P	**Pb**	**11 50 05.3**	**0.0**
MBRI	**Mt Berech**	**2.08**	**47**	Pn	**Pn**	**11 50 02.0**	**-0.7**
AQBJ	**Aqaba**	**2.13**	**51**	P	**Pn**	**11 50 03.0**	**-0.3**
KRMI	**Paran Flat**	**2.20**	**38**	*e*Pn	**Pn**	**11 50 03.0**	**-1.3**
KRMI				*e*Sn	**Sn**	**11 50 27.9**	**-3.0**
KRMI	**Paran Flat**	**2.20**	**38**	Pn	**Pn**	**11 50 03.0**	**-1.3**
KRMI				Sn	**Sn**	**11 50 28.5**	**-2.4**
HRFI	**Mount Harif**	**2.32**	**45**	*e*P	**Pb**	**11 50 11.1**	**+0.7**
HRFI	**Mount Harif**	**2.32**	**45**	*e*Pn	**Pn**	**11 50 04.7**	**-1.3**
HRFI	**Mount Harif**	**2.32**	**45**	Pn	**Pn**	**11 50 04.8**	**-1.3**
WTBKS	**WTBKS**	**2.45**	**96**	P	**Pn**	**11 50 08.1**	**+0.3**
WTBKS				S	**Sn**	**11 50 36.4**	**-0.7**
PRNI	**Paran**	**2.54**	**39**	*e*Pn	**Pn**	**11 50 07.7**	**-1.2**
PRNI				*e*Sn	**Sn**	**11 50 37.8**	**-1.3**
PRNI	**Paran**	**2.54**	**39**	*e*P	**Pn**	**11 50 07.7**	**-1.2**
PRNI				*e*		11 50 37.8	
PRNI	**Paran**	**2.54**	**39**	Pn	**Pn**	**11 50 07.7**	**-1.2**
PRNI				Sn	**Sn**	**11 50 38.0**	**-1.1**
SHQRE	**Shigry**	**2.71**	**100**	P	**Pn**	**11 50 12.0**	**+0.7**
KZIT	**Kziot**	**2.73**	**23**	*e*P	**Pn**	**11 50 10.9**	**-0.7**
KZIT	**Kziot**	**2.73**	**23**	*e*Pn	**Pn**	**11 50 10.2**	**-1.4**
KZIT	**Kziot**	**2.73**	**23**	Pn	**Pn**	**11 50 10.2**	**-1.4**
ZFRI	**Zfri**	**2.79**	**39**	*e*Pn	**Pn**	**11 50 11.0**	**-1.3**
ZFRI				*e*Sn	**Sn**	**11 50 44.1**	**-1.1**
ZFRI	**Zfri**	**2.79**	**39**	Pn	**Pn**	**11 50 10.8**	**-1.5**
ZFRI				Sn	**Sn**	**11 50 43.9**	**-1.3**
HSNJ	**Maan**	**2.89**	**49**	P	**Pn**	**11 50 14.0**	**+0.1**
TBKS	**Tabuk**	**2.99**	**92**	P	**Pn**	**11 50 16.0**	**+0.9**
TBKS				S	**Sn**

TOTH AML AML 11 52 46.6
comp=E,1µm,0.6s
QASN Qassioun 5.79 27 *eP* **Pn 11 50 54.2 +0.6**
QASN *eS* **Sn 11 51 59.9 +0.5**
QASN AML AML 11 52 53.1
comp=E,941nm,0.6s
QASN AML AML 11 52 53.5
comp=N,2µm,0.5s
TRAS Al Qrash 5.86 123 P **Pn 11 50 56.5 +1.8**
BHL Bhannes 5.90 21 *eP* **Pn 11 50 54.4 -0.8**
HWQ Hawqa 6.34 21 *eP* **Pn 11 51 00.7 -0.5**
SZAC Souni 6.35 358 P **Pn 11 51 03.0 +1.6**
CSS Mathiatis 6.56 1 *eP* **Pn 11 51 02.9 -1.3**
CSS Mathiatis 6.56 1 *ePn* **Pn 11 51 03.0 -1.3**
CSS *eSn* **Sn 11 52 18.4 +0.2**
CSS Mathiatis 6.56 1 P **Pn 11 51 04.1 -0.1**
CSS Mathiatis 6.56 1 P **Pn 11 51 02.9 -1.3**
PHNC Paralimni 6.64 6 P **Pn 11 51 05.5 +0.2**
LEF Lefka 6.71 358 *eP* **Pn 11 51 05.2 -1.1**
AKDN Akdeniz- Kıbrı 6.89 359 *eP* **Pn 11 51 07.9 -0.8**
EREN Erenkoy 7.17 7 *eP* **Pn 11 51 10.9 -1.7**
TEKE Tekeli-Mersin 7.73 360 *eP* **Pn 11 51 18.8 -1.5**
AKKU Akkuyu-Mersin 7.76 2 *eP* **Pn 11 51 20.2 -0.4**
IKL Isikli 7.84 3 *eP* **Pn 11 51 20.6 -1.2**
BERE Bereket-Mersin 7.94 0 *eP* **Pn 11 51 22.1 -1.1**
TEVE Tevekalti-Mers 8.03 2 *eP* **Pn 11 51 23.3 -1.1**
KEBE Keben-Mersin 8.05 3 *eP* **Pn 11 51 24.3 -0.4**
KIZK Mersin 8.11 6 *eP* **Pn 11 51 24.3 -1.2**
KARP Karpathos 8.77 326 *ePn* **Pn 11 51 33.6 -0.9**
KARP *eSn* **Sn 11 53 14.2 +1.5**
KARP Karpathos 8.77 326 P **Pn 11 51 31.2 -3.3**
KOZT Kozan 9.34 13 *eP* **Pn 11 51 41.4 -1.0**
IDI Anoyia 9.83 316 Pn **Pn 11 51 47.6 -1.6**
comp=N,1.7nm,0.3s,baz=128,slow=11,SNR=8.5
IDI Sn **Sn 11 53 37.4 -1.5**
comp=N,2.6nm,0.3s,baz=356,slow=20,SNR=3.3
BODT Bodrum 9.95 332 P **Pn 11 51 47.6 -3.1**
ANAF Anafi Island 10.10 324 P **Pn 11 51 49.4 -3.4**
APE Apeiranthos 10.77 325 ‖ *iP* **Pn 11 52 03.1 +1.1**
APE Apeiranthos 10.77 325 P **Pn 11 52 03.2 +1.2**
MANT Manisa 10.78 340 *ePn* **Pn 11 51 59.8 -2.5**
BR131 Keskin Array S 11.32 2 *ePn* **Pn 11 52 07.3 -2.2**
BRTR Keskin Array B 11.32 2 Pn **Pn 11 52 08.7 -0.9**
comp=N,0.2nm,0.3s,baz=178,slow=16,SNR=17
BRTR LR LR 11 56 46.8
comp=N,89nm,21.7s,baz=176,slow=39
VLI Veliai 11.96 317 P **Pn 11 52 15.9 -2.4**
SIRT Sirnak 11.97 38 *ePn* **Pn 11 52 16.7 -1.7**
BALB Balikesir 12.04 340 *ePn* **Pn 11 52 18.4 -0.9**
DID Didima 12.32 320 P **Pn 11 52 18.7 -4.5**
ATHU Athens Univers 12.36 323 P **Pn 11 52 21.4 -2.2**
DION Dionisos Attik 12.36 324 P **Pn 11 52 21.1 -2.6**
ILGA Ilgaz 12.64 2 *ePn* **Pn 11 52 25.1 -2.7**
EZN Ezine 12.73 335 ‖ *iP* **Pn 11 52 31.7 +3.0**
ITM Ithomi 12.88 316 *ePn* **Pn 11 52 29.7 -1.1**
ALN Alexandroupoli 13.78 337 *ePn* **Pn 11 52 41.9 -1.1**
ALN Alexandroupoli 13.78 337 *eP* **Pn 11 52 41.9 -1.1**
AGG Agios Georgios 13.90 322 *ePn* **Pn 11 52 44.8 0.0**
AGG Agios Georgios 13.90 322 *eP* **Pn 11 52 44.8 0.0**
GNI Garni 15.13 36 Pn **Pn 11 53 00.6 -1.0**
comp=N,1.7nm,0.3s,baz=180,slow=12,SNR=1.8
GNI LR LR 11 59 25.2
comp=N,165nm,19.9s,baz=222,slow=40
GNI Garni 15.13 36 *ePn* **Pn 11 53 00.5 -1.1**
comp=N,83nm,1.6s
FNA Florina 15.70 325 *ePn* **Pn 11 53 08.8 -0.1**
comp=N,23nm,0.6s
FNA Florina 15.70 325 *eP* **Pn 11 53 08.8 -0.1**
FNA pmax pmax
comp=Z,23nm,0.6s
SOC Sochi 16.06 17 *eP* **Pn 11 53 13.1 -0.3**
SOC *e* 11 56 10.5
SOC pmax pmax
comp=Z,193nm,1.2s
SOC MLR MLR
comp=Z,715nm,12.0s
VTS Vitosha 16.32 333 *ePn* **Pn 11 53 17.5 +0.6**
comp=Z,15nm,0.9s
VTS Vitosha 16.32 333 ‖ *iP* **P 11 53 20.3 +0.6**
VTS Vitosha 16.32 333 *eP* **Pn 11 53 17.5 +0.6**
VTS pmax pmax
comp=Z,15nm,0.9s
TBLG Delisi 16.32 32 *ePn* **Pn 11 53 14.9 -1.9**
comp=Z,22nm,1.3s
TBLG Delisi 16.32 32 *eP* **Pn 11 53 14.9 -1.9**
TBLG pmax pmax
comp=Z,23nm,1.3s
SIM Simferopol' 16.55 2 P **P 11 53 28.3 +6.2**
SIM pmax pmax
comp=Z,12nm,0.5s
NEY Neytrino 16.72 25 ‖ *eP* **Pn 11 53 21.5 -0.5**
ZEI Tsey 16.80 28 *eP* **P 11 53 27.9 +2.8**
ZEI pmax pmax
comp=Z,9.0nm,1.2s
KBZ Khabaz 17.19 25 Pn **P 11 53 28.6 -0.5**
comp=Z,0.2nm,0.3s,baz=206,slow=9.3,SNR=13
KBZ LR LR 12 00 50.6
comp=Z,178nm,19.1s,baz=201,slow=40
NCK Nalchik 17.26 26 ⇑ *eP* **P 11 53 30.4 +0.4**
NCK pmax pmax
comp=Z,10.0nm,0.4s
KIV Kislovodsk 17.32 24 *ePn* **Pn 11 53 27.0 -2.4**
comp=Z,61nm,1.6s
KIV Kislovodsk 17.32 24 *eP* **P 11 53 31.1 +0.4**
KIV pmax pmax
comp=Z,54nm,1.0s
KIV MLR MLR
comp=Z,285nm,14.0s
KVAR Kislovodsk Arr 17.32 24 P **Pn 11 53 29.6 +0.2**
baz=241,slow=10,SNR=3.4
TIP Timpagrande 17.34 313 ⇑ *iP* **P 11 53 30.7 -0.3**
CEL Celeste 17.44 309 *ePn* **P 11 53 31.9 -0.1**
comp=Z,49nm,1.0s
AKT Akhty 17.67 39 *eP* P 11 53 42.9 +8.3
AKT pmax pmax
comp=Z,8.0nm,0.8s
GROC Groznyy 17.96 31 *eP* **Pn 11 53 35.4 -1.8**
GROC pmax pmax
comp=Z,28nm,0.7s
MLR Muntele Rosu 18.00 343 P **P 11 53 39.2 +0.9**
comp=Z,0.1nm,0.3s,baz=255,slow=16,SNR=2.3
MLR Muntele Rosu 18.00 343 *ePn* **P 11 53 38.1 -0.2**
comp=Z,39nm,1.4s
VAE Valguarnera 18.14 305 P **P 11 53 41.4 +1.6**
baz=90,slow=20,SNR=1.9
VOIR 18.19 341 ‖ *iP* **P 11 53 45.8 +5.5**
HERR Herculane 18.55 335 ⇑ *iP* **Pn 11 53 48.6 +4.1**
MAK Makhachkala 18.60 35 *eP* **P 11 53 40.6 -4.1**
MAK *eS* **Sn 11 57 08.6 -3.6**
MAK pmax pmax
comp=Z,22nm,0.4s
MAK MLR MLR
comp=Z,157nm,12.0s
GZR Gura Zlata 18.87 337 ‖ *iP* **Pn 11 53 52.9 +4.5**
ATD Arta Tunnel 19.07 150 LR LR 11 59 45.8
comp=Z,139nm,21.1s,baz=24,slow=33
ATD Arta Tunnel 19.07 150 *eP* **P 11 53 48.3 -1.8**
comp=Z,22nm,1.0s
MZR Muzera 19.07 102 P **Pn 11 53 52.6 +1.6**
BZS Buzias 19.47 335 ⇑ *iP* **Pn 11 54 00.7 +5.1**
CJR Cluj-Napoca 19.77 340 ⇑ *iP* **Pn 11 54 06.0 +6.8**
AJN Ajban 19.90 96 P **Pn 11 54 01.7 +0.9**
AJN Ajban 19.90 96 P **Pn 11 54 01.8 +0.9**
DRGR 20.12 339 ‖ *iP* Pn 11 54 08.5 +5.2
DRGR 20.12 339 P Pn 11 54 05.1 +1.8
DRGR pmax pmax
comp=Z,27nm,1.1s
ASUD Al Ashush, Dub 20.19 96 *i P* Pn 11 54 04.2 0.0
SNR=17
ASUD Al Ashush, Dub 20.19 96 P Pn 11 54 04.4 +0.2
SNR=7.1
BUR08 Bucovina Ar. S 20.20 344 *eP* **P 11 54 02.7 +0.3**
comp=Z,32nm,0.9s
NAZ Nazwa, Dubai 20.39 94 *i P* Pn 11 54 06.2 -0.4
SNR=9.2
NAZ Nazwa, Dubai 20.39 94 P Pn 11 54 07.0 +0.4
SNR=8.9
FAQ Al Faqa, Dubai 20.39 95 *i P* Pn 11 54 06.0 -0.6
SNR=16
FAQ Al Faqa, Dubai 20.39 95 P Pn 11 54 06.1 -0.4
SNR=8.3
SHME Shamm 20.57 91 *i P* **P 11 54 06.6 +0.2**
SNR=7.6
ALNE Al Ain 20.71 97 *i P* Pn 11 54 09.7 -0.8
SNR=9.8
BANOM Banah 20.73 91 *i P* **P 11 54 09.3 +1.1**
SNR=15
BANOM Banah 20.73 91 P Pn 11 54 09.8 -0.9
SNR=8.0
ASHO Ashiyiah 20.81 95 *i P* **P 11 54 10.0 +0.9**
SNR=22
ASHO Ashiyiah 20.81 95 P **P 11 54 10.4 +1.3**
SNR=7.8
HATD Hatta, Dubai 20.84 94 *i P* **P 11 54 10.4 +1.0**
SNR=9.4
HATD Hatta, Dubai 20.84 94 P Pn 11 54 11.0 -0.9
SNR=8.3
MDH Madha 20.87 93 P **P 11 54 11.0 +1.4**
UOSS Minazif 20.87 94 *eP* **P 11 54 08.4 -1.3**
comp=Z,36nm,0.8s
UOSS Minazif 20.87 94 *i P* **P 11 54 10.5 +0.8**
SNR=10.0
UOSS Minazif 20.87 94 P **P 11 54 10.4 +0.8**
UOSS P Pn 11 54 10.5 -1.8
AQU L'Aquila 21.23 316 *eP* **P 11 54 13.2 -0.3**
comp=Z,38nm,1.0s
AQU L'Aquila 21.23 316 *eP* **P 11 54 13.2 -0.3**
AQU pmax pmax
comp=Z,38nm,1.0s
UDBI Udbina 21.26 324 P **P 11 54 14.7 +0.9**
TRPA Tarpa 21.36 340 ‖ *iP* P 11 54 21.8 +7.1
SOHO SOHO 21.38 96 P **P 11 54 16.0 +0.8**
SNR=5.7
KEST Kesra 21.44 296 P **P 11 54 17.1 +1.4**
comp=Z,10nm,0.8s,baz=143,slow=5.1,SNR=4.6
KEST LR LR 12 03 45.3
comp=Z,227nm,20.4s,baz=348,slow=40
KEST Kesra 21.44 296 *eP* **P 11 54 17.1 +1.4**
comp=Z,74nm,0.9s
WHFO Wadi Hawf 21.60 114 P **P 11 54 18.7 +1.2**
UZH Uzhgorod 21.88 340 *eP* **P 11 54 20.9 +0.6**
UZH *e* 11 54 26.3
UZH *e* 11 54 39.3
PSZ Piszkesteto 22.05 336 *eP* **P 11 54 22.4 +0.1**
comp=Z,39nm,1.0s
PSZ Piszkesteto 22.05 336 ⇑ *iP* P 11 54 29.4 +7.1
PSZ Piszkesteto 22.05 336 *eP* **P 11 54 22.4 +0.1**
PSZ pmax pmax
comp=Z,39nm,1.0s
KOLS Kolonicke sedl 22.16 341 *eP* P 11 54 31.7 +8.4
KOLS Kolonicke sedl 22.16 341 *ep*P pP 11 54 31.7 +1.9
HOQ Hoqain 22.22 97 P **P 11 54 25.8 +1.6**
SNR=10
GCIS Gornji Cirnik 22.27 326 *i P* P 11 54 37.4 +13
KECS Kecovo 22.33 337 *eP* **P 11 54 31.8 +6.7**
KECS Kecovo 22.33 337 *ep*P **P 11 54 31.8 +6.7**
BSY Bisya 22.39 99 P **P 11 54 27.7 +1.6**
SNR=7.7
KIEV Kiev 22.48 353 *eP* **P 11 54 25.9 -0.8**
comp=Z,44nm,0.8s
KIEV Kiev 22.48 353 *i P* **P 11 54 33.0 +6.3**
SNR=6.7
KIEV Kiev 22.48 353 *eP* **P 11 54 25.9 -0.8**
KIEV pmax pmax
comp=Z,44nm,0.8s
AKASG Malin Array Be 22.48 353 P **P 11 54 27.2 +0.5**
comp=Z,6.2nm,0.8s,baz=168,slow=11,SNR=20
AKASG Malin Array Be 22.48 353 *i P* **P 11 54 26.3 -0.4**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 22.48 353 *eP* **P 11 54 25.9 -0.9**
comp=Z,47nm,0.8s
AKBB Malin Array Si 22.48 353 *eP* **P 11 54 25.9 -0.9**
AKBB pmax pmax
comp=Z,47nm,0.8s
LVV L'vov 22.51 344 *eP* P 11 54 36.0 +9.0
KWP Kalwaria Pacla 22.67 342 *eP* P 11 54 36.8 +8.1
KWP Kalwaria Pacla 22.67 342 *eP* **P 11 54 28.9 +0.1**
comp=Z,741nm,1.1s
KWP Kalwaria Pacla 22.67 342 *eP* **P 11 54 28.9 +0.1**
GROS Grobnik 22.76 327 *i P* P 11 54 38.0 +8.2
GEYT Alibeck 22.90 59 P **P 11 54 31.5 +0.2**
comp=Z,4.1nm,0.8s,baz=262,slow=10,SNR=7.3
GEYT LR LR 12 05 12.7
comp=Z,352nm,18.4s,baz=245,slow=42
GYA0B ALIBECK ARRAY 22.90 59 *eP* **P 11 54 30.2 -1.2**
VYHS Vyhne 22.92 335 *eP* **P 11 54 33.1 +1.7**
VYHS *e* 11 54 40.2
VYHS Vyhne 22.92 335 *eP* **P 11 54 33.1 +1.7**
VYHS *es*P **sP 11 54 40.2 -0.7**
VORD Divnogorie 23.02 10 *eP* **P 11 54 32.7 +0.3**
VORD *e**SP **pP 11 54 39.3 +0.4**
VORD pmax pmax
comp=Z,20nm,1.3s
SOKA Soboth 23.14 327 *i P* **P 11 54 36.3 +2.6**
comp=Z,15nm,1.4s
KOLL Kolacno 23.16 335 *es*P sP 11 54 42.3 -1.0
NIE Niedzica 23.20 338 *eP* **P 11 54 40.7 +6.5**
NIE Niedzica 23.20 338 *eP* **P 11 54 40.7 +6.5**
VSR Storozhevoye 23.25 10 *eP* **P 11 54 34.5 -0.2**
VSR *e**SP **pP 11 54 41.0 -0.3**
VSR pmax pmax
comp=Z,20nm,1.3s
LANS Liptovska Anna 23.25 337 *eP* P 11 54 43.8 +9.0
LANS Liptovska Anna 23.25 337 *e*PN P 11 54 43.8 +9.0
OBKA Obir 23.25 326 *i* pP pP 11 54 38.8 -2.8
comp=Z,9.7nm,1.0s
JMDO Jabal Madar 23.30 99 P **P 11 54 36.3 +0.8**
SNR=7.5
ARSA Arzberg 23.33 329 P **P 11 54 37.9 +2.3**
comp=Z,24nm,1.2s,SNR=7.4
MODS Modra-Piesok 23.43 333 *eP* **P 11 54 41.1 +4.5**
MODS *e* 11 54 44.1
MODS Modra-Piesok 23.43 333 *eP* **P 11 54 41.1 +4.5**
MODS *es*P **pP 11 54 44.1 +0.8**
WSAR Wadi Sarin 23.48 97 P **P 11 54 37.5 +0.2**
comp=Z,9.6nm,0.8s,baz=283,slow=9.9,SNR=8.0
JAVC Velka Javorina 23.67 334 *eP* **P 11 54 40.1 +1.2**
JAVC *e* 11 54 47.9
CONA Conrad Observa 23.68 330 P **P 11 54 42.0 +2.9**
comp=Z,17nm,1.3s,SNR=8.1
VRH Novokhopyorsk 23.68 13 *eP* **P 11 54 38.8 -0.1**
VRH *e**SP **pP 11 54 45.2 -0.5**
VRH pmax pmax
comp=Z,10.0nm,0.6s
MHTO MHTO 23.69 103 P **P 11 54 40.8 +1.5**
SNR=5.0
MYKA Terra Mystica 23.79 325 *i P* **P 11 54 41.8 +1.7**
comp=Z,16nm,0.9s
OJC Ojcow 24.06 339 *eP* **P 11 54 48.8 +6.3**
OJC Ojcow 24.06 339 *eP* **P 11 54 42.5 0.0**
comp=Z,36nm,1.0s
OJC Ojcow 24.06 339 *eP* **P 11 54 42.5 0.0**
OJC pmax pmax
comp=Z,36nm,1.0s
KBA Koelnbreinsper 24.25 326 *i P* **P 11 54 46.0 +1.5**
comp=Z,29nm,0.7s,SNR=9.4
OKC Ostrava-Krasne 24.29 336 *eP* **P 11 54 46.0 +1.3**
OKC *e* 11 54 52.6
OKC Ostrava-Krasne 24.29 336 *eP* **P 11 54 46.0 +1.3**
OKC *ex* x 11 54 52.6
KRUC Moravsky 24.33 333 *eP* **P 11 54 46.0 +0.9**
KRUC *e* 11 54 52.1
MOA Molln 24.35 328 *eP* **P 11 54 46.5 +1.3**
comp=Z,9.8nm,1.1s
ABTA Abfaltersbach 24.45 324 *i P* **P 11 54 47.9 +1.7**
comp=Z,27nm,0.8s,SNR=11
VRAC Vranov 24.45 333 P **P 11 54 46.1 0.0**
comp=Z,0.9nm,0.5s,baz=143,slow=11,SNR=3.1
VRAC LR LR 12 07 35.6
comp=Z,51nm,18.5s,baz=152,slow=44
VRAC Vranov 24.45 333 ⇑ *iP* P 11 54 54.0 +7.9
VRAC Vranov 24.45 333 *eP* **P 11 54 47.1 +1.0**
VRAC *e* 11 54 53.9
MORC Moravsky Berou 24.46 335 *eP* **P 11 54 46.9 +0.6**
comp=Z,24nm,1.1s
MORC Moravsky Berou 24.46 335 *eP* **P 11 54 46.9 +0.6**
MORC pmax pmax
comp=Z,24nm,1.1s
MORC Moravsky Berou 24.46 335 *eP* **P 11 54 47.6 +1.3**
MORC *e* 11 54 54.1
LPSR Galich'ya Gora 24.57 8 *eP* **P 11 54 46.9 -0.2**
LPSR *e**SP **pP 11 54 54.0 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
WTTA Wattenberg 25.24 324 *i P* **P 11 54 56.7 +3.2**
comp=Z,13nm,1.2s,SNR=11
WATA Walderalm 25.31 324 *i P* **P 11 54 56.5 +2.4**
comp=Z,9.2nm,0.5s
GEC2 GERESS Array S 25.33 329 *eP* **P 11 54 52.6 -1.6**
GEC2 GERESS Array S 25.33 329 *eP* **P 11 54 52.6 -1.6**
GERES GERESS Array B 25.33 329 P **P 11 54 55.1 +0.9**
comp=Z,1.1nm,0.6s,baz=134,slow=9.4,SNR=9.1
DPC Dobruska-Polom 25.39 334 *eP* **P 11 54 56.9 +2.2**
DPC *e* 11 55 02.2
DPC Dobruska-Polom 25.39 334 *eP* **P 11 54 56.9 +2.2**
DPC *ex* x 11 55 02.2
SQTA Sankt Quirin 25.43 324 *i P* **P 11 54 58.4 +3.2**
comp=Z,5.9nm,0.9s
TAM Tamanrasset 25.51 264 *eP* **P 11 54 56.1 0.0**
TAM Tamanrasset 25.51 264 *eP* **P 11 54 56.1 0.0**
FETA Feichten 25.56 323 *i P* **P 11 54 58.1 +1.7**
comp=Z,6.2nm,0.9s
FUORN Ofenpass-Fuorn 25.56 322 *eP* **P 11 54 55.9 -0.7**
comp=Z,12nm,0.9s
MOTA Moosalm 25.57 324 *i P* **P 11 54 58.9 +2.4**
comp=Z,5.0nm,0.8s,SNR=8.9
KHC Kasperske Hory 25.59 329 *eP* **P 11 54 56.3 -0.2**
comp=Z,4.9nm,1.0s
KHC Kasperske Hory 25.59 329 *eP* **P 11 54 56.3 -0.2**
KHC pmax pmax
comp=Z,5.0nm,1.0s
KHC Kasperske Hory 25.59 329 *eP* **P 11 54 57.8 +1.3**
KHC *ex* x 11 55 03.8
OSTC Ostas 25.59 335 *eP* **P 11 54 58.3 +1.8**
OSTC *ex* x 11 55 03.9
PRU Pruhonice 25.82 332 *eP* **P 11 55 00.5 +2.0**
PRU *e* 11 55 05.2
PRU Pruhonice 25.82 332 *eP* **P 11 55 00.5 +2.0**
PRU *ex* x 11 55 05.2
RETA Reutte 25.83 324 *i P* **P 11 55 01.4 +2.6**
comp=Z,9.5nm,1.0s,SNR=11
DAVOX Davos/Dischmat 25.87 322 P **P 11 55 00.8 +1.6**
comp=Z,1.9nm,0.6s,baz=201,slow=16,SNR=5.2
DAVOX LR LR 12 07 19.2
comp=Z,70nm,21.3s,baz=91,slow=41
TUE Stuetta 25.98 320 *eP* **P 11 55 00.7 +0.4**
comp=Z,9.5nm,0.7s
DAVA Damuels 26.18 322 *i P* **P 11 55 03.3 +1.3**
comp=Z,8.0nm,0.9s
SUW Suwalki 26.63 347 *eP* P 11 55 13.6 +7.9
SUW Suwalki 26.63 347 *eP* **P 11 55 05.6 -0.2**
comp=Z,69nm,1.0s
SUW Suwalki 26.63 347 *eP* **P 11 55 05.6 -0.2**
SUW pmax pmax
comp=Z,69nm,1.0s
BRG Berggiesshubel 26.74 332 *eP* **P 11 55 13.7 +6.9**
comp=Z,13nm,1.1s
BRG Berggiesshubel 26.74 332 *eP* **P 11 55 13.7 +6.9**
BRG pmax pmax
comp=Z,13nm,1.1s
BNI Bardonecchia 26.79 315 *eP* **P 11 55 07.1 -0.4**
comp=Z,12nm,0.8s
BNI Bardonecchia 26.79 315 *eP* **P 11 55 07.1 -0.4**
BNI pmax pmax
comp=Z,12nm,0.8s
OBN Obninsk 26.82 4 *eP* **P 11 55 06.2 -1.3**
comp=Z,54nm,0.8s
OBN Obninsk 26.82 4 ‖ *eP* **P 11 55 07.5 0.0**
OBN *i* 11 55 14.3
OBN *e* 11 55 49.9
OBN pmax pmax
comp=Z,12nm,1.0s
OBN MLR MLR
comp=Z,54nm,14.0s
NACGM Naroch 26.90 352 *e* P 11 55 16.0 +7.8
GRA1 Grafenberg Arr 27.07 328 *eP* **P 11 55 10.2 +0.3**
comp=Z,13nm,0.8s
GRF Grafenberg Arr 27.07 328 *eP* **P 11 55 10.2 +0.3**
GRF pmax pmax
comp=Z,13nm,0.8s
GRFO Grafenberg 27.07 328 *eP* **P 11 55 09.5 -0.3**
comp=Z,14nm,0.9s
GRFO Grafenberg 27.07 328 *eP* **P 11 55 09.5 -0.3**
GRFO pmax pmax
comp=Z,14nm,0.9s
SENIN Lac Senin/Sane 27.09 318 *eP* **P 11 55 09.8 -0.6**
comp=Z,32nm,0.8s
IDID Didziasalis 27.30 352 *eP* **P 11 55 12.7 +0.9**
IDID IAmb IAmb 11 55 24.5
comp=Z,9.0nm,0.7s
IIGN Ignalina 27.41 351 *eP* **P 11 55 13.6 +0.9**
IIGN IAmb IAmb 11 55 24.7
comp=Z,14nm,1.1s
CLL Collm 27.46 332 *eP* **P 11 55 12.2 -1.1**
comp=Z,52nm,1.5s
CLL Collm 27.46 332 *eP* **P 11 55 15.0 +1.8**
CLL *i* pP **pP 11 55 19.9 -0.3**
CLL *i* sP **sP 11 55 22.6 -0.5**
comp=Z,42nm,1.4s
CLL *i* 11 55 31.6
CLL *i* PPP PPP 11 56 07.2
CLL *e*PcP **PcP 11 58 32.0 +0.7**
CLL *e*ScS ScS 12 06 06.0 +4.1
CLL Collm 27.46 332 *eP* **P 11 55 12.2 -1.1**
CLL pmax pmax
comp=Z,52nm,1.5s
STU Stuttgart 27.46 324 *eP* **P 11 55 12.7 -0.7**
comp=Z,32nm,0.8s
STU Stuttgart 27.46 324 *eP* **P 11 55 12.7 -0.7**
STU pmax pmax
comp=Z,32nm,0.8s
MOS Moscow 27.52 5 *eP* **P 11 55 20.3 +6.5**
MOS *e* 11 56 11.1
MOS pmax pmax
comp=Z,47nm,0.7s
MOX Moxa 27.56 330 P **P 11 55 17.1 +2.8**
MOX pmax pmax
comp=Z,23nm,1.4s
ISAL Salakas 27.63 351 *eP* **P 11 55 15.6 +0.8**
ISAL IAmb IAmb 11 55 28.0
comp=Z,19nm,1.2s
BFO Black Forest 27.64 323 *eP* **P 11 55 14.8 -0.2**
comp=Z,14nm,0.9s
BFO Black Forest 27.64 323 *eP* **P 11 55 14.8 -0.2**
BFO pmax pmax
comp=Z,14nm,0.9s
IZAR Zarasai 27.79 352 *eP* **P 11 55 17.0 +0.8**
IZAR IAmb IAmb 11 55 28.3
comp=Z,11nm,0.7s
ECH Echery 28.20 322 *eP* **P 11 55 20.2 +0.2**
ECH Echery 28.20 322 *eP* **P 11 55 20.2 +0.2**
SSB Saint Sauveur 28.23 314 *eP* **P 11 55 20.4 0.0**
comp=Z,9.1nm,0.8s
SSB Saint Sauveur 28.23 314 *eP* **P 11 55 20.4 0.0**
SSB pmax pmax
comp=Z,9.0nm,0.8s
ABKAR Akbulak array 29.23 37 *eP* **P 11 55 27.4 -1.7**
comp=Z,1.9nm,0.8s
SSF Saint Saulge 29.70 317 *eP* P 11 55 39.4 +6.1
SSF pmax pmax
comp=Z,4.0nm,0.6s
KBL Kabul 31.11 69 *eP* **P 11 55 43.9 -2.3**
comp=Z,10nm,1.3s
KBL Kabul 31.11 69 *eP* **P 11 55 43.9 -2.3**
KBL pmax pmax
comp=Z,10.0nm,1.3s
MFF Saint Martin d 31.76 314 *eP* P 11 55 58.0 +6.6
MFF pmax pmax
comp=Z,11nm,1.0s
KIRV Kirov 32.23 16 P **P 11 55 54.4 -1.0**
comp=Z,11nm,0.7s,baz=139,slow=4.1,SNR=4.6
ESDC Sonseca Array 32.55 300 P **P 11 55 58.3 -0.3**
comp=Z,0.7nm,0.7s,baz=92,slow=8.5,SNR=2.7
ESLA Sonseca Array 32.55 300 *eP* **P 11 55 57.8 -0.8**
comp=Z,4.1nm,0.9s
KLMR Klimovskoe 32.74 6 *eP* **P 11 55 58.1 -1.8**
KLMR pmax pmax
comp=Z,44nm,0.9s
TOA1 Torodi Ar. Sit 32.97 249 *eP* **P 11 56 03.2 +0.8**
TOA0 Torodi Ar. Sit 32.97 249 *eP* **P 11 56 03.2 +0.9**
comp=Z,3.8nm,0.9s
TORD Torodi Ar. Bea 32.97 249 P **P 11 56 03.2 +0.8**
comp=Z,1.2nm,0.9s,baz=75,slow=7.5,SNR=4.1
TORD LR LR 12 09 59.3
comp=Z,138nm,19.7s,baz=10.0,slow=37
BTK Batken 33.02 59 *eP* **P 11 56 00.5 -2.2**
comp=Z,6.0nm,1.0s
BTK Batken 33.02 59 *eP* **P 11 56 00.5 -2.2**
BTK pmax pmax
comp=Z,6.0nm,1.0s
ARU Arti 33.34 26 P **P 11 56 04.9 -0.3**
comp=Z,0.7nm,0.2s,baz=218,slow=6.1,SNR=7.7
ARU Arti 33.34 26 *eP* **P 11 56 03.8 -1.4**

comp=Z,17nm,1.1s
ARU Arti 33.34 26*d iP* **P 11 56 05.5 +0.3**
ARU 11 57 11.2
ARU S **S 12 01 27.1 +2.6**
ARU SS **SnSn 12 03 23.1 -2.9**
ARU pmax pmax
comp=Z,11nm,1.2s
KK31 Karatay Array 33.39 54 *eP* **P 11 56 04.5 -1.3**
KK31 Karatay Array 33.39 54 *eP* **P 11 56 04.5 -1.3**
KKAR Karatay Array 33.39 54 P **P 11 56 05.5 -0.3**
KKAR pmax pmax
comp=Z,9.0nm,0.9s
FINES FINESS Array B 33.39 354 P **P 11 56 04.9 -0.7**
comp=Z,4.6nm,0.8s,baz=131,slow=8.1,SNR=14
FIA1 FINESS Array S 33.39 354 *eP* **P 11 56 04.9 -0.7**
comp=Z,15nm,0.8s
HFS Hagfors 34.39 343 P **P 11 56 14.3 +0.1**
comp=Z,4.2nm,0.6s,baz=146,slow=9.0,SNR=24
SVE Sverdlovsk 34.43 27 *eP* **P 11 56 15.4 +0.7**
SVE pmax pmax
comp=Z,17nm,1.4s
JOF Joensuu 34.56 359 P **P 11 56 14.6 -1.0**
JOF pmax pmax
comp=Z,15nm,0.8s
SUF Sumiainen 34.64 354 P **P 11 56 16.3 -0.1**
SUF pmax pmax
comp=Z,13nm,0.9s
ARSB Arslanbob 34.84 58 *eP* **P 11 56 16.9 -1.7**
KONO Kongsberg 35.16 339 *eP* **P 11 56 19.9 -1.0**
comp=Z,19nm,1.1s
KONO Kongsberg 35.16 339 *eP* **P 11 56 19.9 -1.0**
KONO pmax pmax
comp=Z,19nm,1.1s
NC405 NORSAR Array S 35.74 342 *eP* **P 11 56 24.9 -1.1**
comp=Z,24nm,1.0s
NAO01 NORSAR Array S 35.74 341 *eP* **P 11 56 25.1 -0.9**
NB2 NORSAR Subarra 35.81 342 P **P 11 56 26.0 -0.6**
comp=Z,16nm,1.0s,baz=146,slow=8.6
NOA NORSAR Array B 35.81 342 P **P 11 56 26.1 -0.4**
comp=Z,24nm,0.8s,baz=141,slow=9.1,SNR=9.3
NOA LR LR 12 13 45.2
comp=Z,34nm,19.5s,baz=140,slow=41
NC204 NORSAR Array S 36.13 342 *eP* **P 11 56 28.6 -0.8**
comp=Z,42nm,1.0s
AAK Ala-Archa 36.16 56 P **P 11 56 29.9 -0.1**
comp=Z,1.2nm,0.3s,baz=247,slow=10,SNR=6.5
AAK PcP **PcP 11 58 56.2 +0.9**
comp=Z,1.3nm,0.4s,baz=252,slow=5.4,SNR=4.9
AAK Ala-Archa 36.16 56 *eP* **P 11 56 28.6 -1.3**
comp=Z,3.8nm,0.8s
AAK Ala-Archa 36.16 56*deP* **P 11 56 31.3 +1.4**
AAK pmax pmax
comp=Z,6.0nm,1.2s
BRVK Borovoye 36.76 37 *eP* **P 11 56 33.5 -1.3**
comp=Z,3.8nm,0.9s
BRVK Borovoye 36.76 37⇑*eP* **P 11 56 34.8 +0.1**
BRVK pmax pmax
comp=Z,7.0nm,1.5s
BVAR Borovoye Array 36.80 38 P **P 11 56 33.9 -1.2**
comp=Z,1.2nm,0.8s,baz=233,slow=9.1,SNR=8.0
BVAR PcP **PcP 11 58 57.6 +0.8**
comp=Z,2.2nm,0.9s,baz=276,slow=4.2,SNR=3.8
NRN Naryn 37.10 58 *eP* **P 11 56 36.5 -1.7**
comp=Z,10nm,0.9s
NRN Naryn 37.10 58 *eP* **P 11 56 36.5 -1.7**
NRN pmax pmax
comp=Z,10.0nm,0.9s
EKA Eskdalemuir Ar 37.46 326 P **P 11 56 40.9 +0.3**
comp=Z,0.2nm,0.4s,baz=114,slow=11,SNR=2.7
EKA PcP **PcP 11 58 58.6 -0.2**
comp=Z,2.8nm,1.0s,baz=117,slow=16,SNR=5.0
TARG Taragay, Kyrgy 38.48 58 *eP* **P 11 56 48.0 -1.9**
comp=Z,9.5nm,1.1s
LVZ Lovozero 39.55 1⇓*eP* **P 11 57 00.2 +2.2**
LVZ pmax pmax
comp=Z,9.0nm,1.2s
PDGK Podgornoye 39.89 55 P **P 11 57 02.0 +0.7**
PDGK pmax pmax
comp=Z,8.0nm,0.9s
KURBB Kurchatov Arra 40.64 44 P **P 11 57 07.3 +0.1**
comp=Z,3.8nm,0.6s,baz=264,slow=8.5,SNR=35
KURBB PcP **PcP 11 59 09.5 +0.7**
comp=Z,4.0nm,0.7s,baz=252,slow=4.1,SNR=17
KURK Kurchatov 40.72 44 *eP* **P 11 57 06.0 -1.9**
comp=Z,6.3nm,1.0s
KURK Kurchatov 40.72 44 *eP* **P 11 57 06.0 -1.9**
KURK pmax pmax
comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 41.42 356 P **P 11 57 12.9 -0.6**
comp=Z,2.3nm,0.5s,baz=170,slow=8.6,SNR=18
ARE0 ARCESS Array S 41.42 356 *eP* **P 11 57 12.5 -0.9**
comp=Z,0.5nm,1.1s
DBIC Dimbokro 41.92 246 LR LR 12 15 25.0
comp=Z,151nm,19.9s,baz=32,slow=37
MAKZ Makanchi 42.08 50 *eP* **P 11 57 17.8 -1.4**
comp=Z,3.0nm,0.9s
MAKZ Makanchi 42.08 50 *eP* **P 11 57 17.8 -1.4**
MAKZ pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 42.29 51 *eP* **P 11 57 19.3 -1.6**
MK31 Makanchi Array 42.29 51 *eP* **P 11 57 19.3 -1.6**
MK32 Makanchi Array 42.29 51 *eP* **P 11 57 21.3 +0.3**
MK32 *e*PcP **PcP 11 59 14.8 +0.3**
MKAR Makanchi Array 42.29 51 P **P 11 57 21.3 +0.3**
comp=Z,1.2nm,0.6s,baz=247,slow=6.3,SNR=12
MKAR PcP **PcP 11 59 14.8 +0.3**
comp=Z,2.7nm,0.8s,baz=264,slow=3.7,SNR=4.5
MKAR LR LR 12 18 00.9
comp=Z,46nm,18.1s,baz=243,slow=41
MKAR Makanchi Array 42.29 51 *i P* **P 11 57 21.7 +0.8**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
LSZ Lusaka 43.67 187 P **P 11 57 32.4 0.0**
comp=Z,1.4nm,0.2s,baz=350,slow=6.6,SNR=3.7
LSZ Lusaka 43.67 187 *eP* **P 11 57 31.9 -0.5**
comp=Z,6.9nm,1.2s
LSZ Lusaka 43.67 187 *eP* **P 11 57 32.0 -0.5**
LSZ pmax pmax
comp=Z,7.0nm,1.2s
KOLN Koldanda 44.24 78 *eP* **P 11 57 37.4 +0.2**
comp=Z,17nm,0.8s
DANN Dangsing 44.25 77 *eP* **P 11 57 38.3 +1.0**
comp=Z,102nm,0.8s
ZAA0 Zalesovo Array 45.21 41 *eP* **P 11 57 43.4 -0.8**
comp=Z,2.6nm,0.9s
ZALV Zalesovo Beam 45.21 41 P **P 11 57 44.0 -0.2**
comp=Z,1.4nm,0.5s,baz=248,slow=10,SNR=4.6
ZALV LR LR 12 19 18.9
comp=Z,37nm,18.6s,baz=250,slow=40
DMN Daman 45.58 78 *eP* **P 11 57 48.2 +0.3**
KKN Kakani 45.68 78 *eP* **P 11 57 48.7 0.0**
comp=Z,38nm,0.7s
PKIN Phulchoki 45.84 78 *eP* **P 11 57 49.8 -0.1**
comp=Z,17nm,0.9s
PKI Pulchoki 45.85 78 *eP* **P 11 57 50.1 0.0**
comp=Z,29nm,0.9s
WMQ Urumqi 45.87 55 *eP* **P 11 57 48.0 -1.7**
WMQ sP pP 11 57 56.5 -0.4
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ pmax pmax
comp=Z,120nm,4.1s
WMQ LR LR
comp=Z,670nm,36.1s
WMQ LR LR
comp=Z,450nm,37.9s
WMQ LR LR
comp=Z,180nm,32.5s
WMQ Urumqi 45.87 55 *eP* **P 11 57 48.0 -1.7**
comp=Z,10nm,0.7s
WMQ Urumqi 45.87 55 *eP* **P 11 57 48.0 -1.7**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
GUN Gumba 46.17 77 *eP* **P 11 57 52.8 +0.1**
comp=Z,30nm,0.9s
JIRN Jiri 46.50 78 *eP* **P 11 57 54.7 -0.6**
OPO Ambohidratompo 48.62 162 LR LR 12 17 03.1
comp=Z,122nm,19.6s,baz=172,slow=34
MATP Matopo 48.74 186 P **P 11 58 12.6 +0.3**
comp=Z,2.3nm,0.6s,baz=8.3,slow=11,SNR=8.1
TSUM Tsumeb 49.65 199 P **P 11 58 20.2 +1.0**
comp=Z,2.4nm,0.8s,baz=24,slow=10.0,SNR=3.0
SPA0 Spitsbergen Ar 50.45 356 *eP* **P 11 58 24.0 -0.5**
comp=Z,13nm,0.8s
SPITS Spitsbergen Ar 50.45 356 P **P 11 58 25.0 +0.4**
comp=Z,8.0nm,0.7s,baz=142,slow=10.0,SNR=23
SPITS Spitsbergen Ar 50.45 356 P **P 11 58 25.0 +0.4**

NRIK Noril'sk 51.38 22 P **P 11 58 31.9 +0.4**
comp=Z,5.1nm,0.9s,baz=237,slow=7.0,SNR=6.8
NRIK LR LR 12 21 28.9
comp=Z,36nm,20.1s,baz=164,slow=38
NRIK Noril'sk 51.38 22 P **P 11 58 32.0 +0.4**
KBS Kingsbay 51.48 355 *eP* **P 11 58 32.3 +0.1**
comp=Z,9.6nm,0.7s
KBS Kingsbay 51.48 355 *eP* **P 11 58 32.3 +0.1**
KBS pmax pmax
comp=Z,10.0nm,0.7s
SHL Shillong 51.97 79 *eP* **P 11 58 35.2 -1.7**
comp=Z,12nm,0.9s
SHL Shillong 51.97 79 *eP* **P 11 58 35.2 -1.7**
SHL pmax pmax
comp=Z,12nm,0.9s
BRDH Bariadhala 52.65 82 LR LR 12 24 27.8
comp=Z,113nm,18.4s,baz=285,slow=40
LBTB Lobatse 53.59 189 *eP* **P 11 58 48.6 0.0**
comp=Z,14nm,1.3s
LBTB Lobatse 53.59 189 *eP* **P 11 58 48.6 0.0**
LBTB pmax pmax
comp=Z,15nm,1.3s
GTA Gaotai 55.28 60 ⇑P **P 11 59 02.1 +1.1**
GTA pP pP 11 59 06.9 -1.3
GTA sP sP 11 59 09.2 -1.8
GTA pmax pmax
comp=Z,12nm,0.9s
GTA pmax pmax
comp=Z,54nm,4.5s
GTA LR LR
comp=Z,65nm,16.8s
GTA LR LR
comp=Z,71nm,16.1s
GTA LR LR
comp=Z,110nm,15.5s
ZAK Zakamensk 56.28 46 *eP* **P 11 59 04.3 -3.6**
ZAK pmax pmax
comp=Z,2.0nm,1.0s
BOSA Boshof 57.18 188 P **P 11 59 14.9 +0.5**
comp=Z,2.3nm,0.9s,baz=304,slow=15,SNR=2.6
BOSA Boshof 57.18 188 *eP* **P 11 59 14.1 -0.3**
comp=Z,31nm,1.6s
BOSA Boshof 57.18 188 *eP* **P 11 59 14.1 -0.3**
BOSA pmax pmax
comp=Z,31nm,1.6s
SONA0 Songino Array 58.62 49 *eP* **P 11 59 23.2 -1.3**
SONM Songino Array 58.62 49 P **P 11 59 23.2 -1.3**
comp=Z,1.4nm,0.7s,baz=273,slow=8.3,SNR=5.7
ULN Ulaanbaatar 59.05 49⇑*eP* **P 11 59 27.8 +0.3**
ULN pmax pmax
comp=Z,2.0nm,0.6s
LZH Lanzhou 59.11 63 *eP* **P 11 59 29.1 +1.0**
LZH pP pP 11 59 33.8 -1.6
LZH sP sP 11 59 37.4 -0.8
LZH PP **PP 12 01 45.3 +6.6**
LZH pmax pmax
comp=Z,21nm,1.4s
LZH pmax pmax
comp=Z,120nm,5.0s
LZH LR LR
comp=Z,490nm,15.7s
LZH LR LR
comp=Z,440nm,16.2s
LZH LR LR
comp=Z,560nm,17.3s
CD2 Chengdu 60.44 69 *eP* **P 11 59 35.0 -2.2**
CD2 pmax pmax
comp=Z,20nm,0.6s
CM31 Chiang Mai Arr 60.54 84 *eP* **P 11 59 36.6 -1.4**
comp=Z,11nm,1.5s
CMAR Chiang Mai Arr 60.54 84 P **P 11 59 37.2 -0.8**
comp=Z,2.8nm,0.9s,baz=295,slow=8.1,SNR=15
CMAR LR LR 12 31 31.4
comp=Z,40nm,19.8s,baz=328,slow=42
CMAR Chiang Mai Arr 60.54 84 *i P* **P 11 59 38.0 0.0**
CMAR pmax pmax
comp=Z,3.0nm,0.9s
PAYA Payao 61.01 83 P **P 11 59 42.1 +0.9**
comp=Z,18μm,0.8s
LAMP Lampang 61.12 84 P **P 11 59 42.6 +0.7**
comp=Z,20μm,0.9s
UMPA Umpang Tak 61.35 86 P **P 11 59 46.2 +2.7**
comp=Z,22μm,0.9s
BOD Bodaibo 61.67 37 *eP* **P 11 59 44.6 -0.4**
BOD pmax pmax
comp=Z,8.0nm,1.1s
NANT Nan 61.94 83 P **P 11 59 48.4 +0.9**
comp=Z,21μm,0.8s
UTTA Uttaradit 62.23 84 P **P 11 59 50.0 +0.6**
comp=Z,16μm,1.2s
PBKT Sadao Pong 63.05 85 P **P 11 59 55.1 +0.2**
comp=Z,9.6nm,1.1s
XAN Xi'an 63.68 64 P **P 11 59 58.8 -0.1**
XAN pP pP 12 00 06.9 +0.6
XAN pmax pmax
comp=Z,9.0nm,1.1s
XAN LR LR
comp=Z,110nm,18.4s
XAN LR LR
comp=Z,100nm,19.5s
XAN LR LR
comp=Z,99nm,21.7s
XAN Xi'an 63.68 64 *eP* **P 11 59 57.9 -1.0**
comp=Z,11nm,1.1s
XAN Xi'an 63.68 64 *eP* **P 11 59 57.9 -1.0**
XAN pmax pmax
comp=Z,11nm,1.1s
HHC Hu-ho-hao-te 63.74 56 *eP* **P 12 00 00.7 +1.4**
HHC pmax pmax
comp=Z,30nm,1.0s
HHC pmax pmax
comp=Z,100nm,7.5s
HHC LR LR
comp=Z,110nm,15.2s
HHC LR LR
comp=Z,110nm,13.0s
HHC LR LR
comp=Z,350nm,13.0s
SLVN Son La 63.77 79 *eP* **P 11 59 58.5 -1.2**
comp=Z,7.3nm,1.2s
TIXI Tiksi 65.11 20 *eP* **P 12 00 06.8 -0.8**
comp=Z,4.8nm,0.8s
TIXI Tiksi 65.11 20 *eP* **P 12 00 06.8 -0.8**
TIXI pmax pmax
comp=Z,5.0nm,0.8s
ENH Enshi 65.33 68 *eP* **P 12 00 08.9 -0.8**
comp=Z,12nm,1.3s
SKNT Sakolnakorn 65.53 83 P **P 12 00 11.4 +0.2**
comp=Z,19nm,1.1s
TRTT Trang 65.69 94 P **P 12 00 12.4 +0.2**
comp=Z,31nm,0.8s
PANO Nakornpanom 66.01 83 P **P 12 00 14.5 +0.2**
PSI Prapat 67.41 99 *eP* **P 12 00 22.4 -1.0**
comp=Z,12nm,0.8s
PSI Prapat 67.41 99 *eP* **P 12 00 22.4 -1.0**
PSI pmax pmax
comp=Z,12nm,0.8s
KULM Kulim 67.72 96 *eP* **P 12 00 24.0 -1.2**
comp=Z,18nm,1.1s
YAK Yakutsk 68.29 30 *eP* **P 12 00 28.3 +0.3**
YAK pmax pmax
comp=Z,23nm,0.6s
WHN Wuhan 69.17 66 *eP* **P 12 00 35.5 +1.5**
NJ2 Nanjing 72.19 63 *eP* **P 12 00 51.4 -1.0**
NJ2 pmax pmax
comp=Z,15nm,0.6s
KLR Kul'dur 74.28 42*deP* **P 12 01 04.6 +0.1**
KLR pmax pmax
comp=Z,8.0nm,1.2s
USRK Ussuriysk Ar. 76.63 47 P **P 12 01 17.5 -0.5**
comp=Z,3.5nm,0.8s,baz=267,slow=3.1,SNR=6.7
KSRS Korea Array 76.81 55 P **P 12 01 18.5 -0.6**
comp=Z,2.4nm,0.8s,baz=294,slow=5.5,SNR=17
KSRS LR LR 12 40 40.0
comp=Z,33nm,18.3s,baz=140,slow=40
BILL Bilibino 77.78 16 *eP* **P 12 01 23.6 -0.4**
comp=Z,12nm,1.5s
BILL Bilibino 77.78 16⇓*eP* **P 12 01 24.5 +0.5**
BILL *i* 12 01 30.7
BILL pmax pmax
comp=Z,13nm,2.5s
MA2 Magadan 78.50 27⇓*iP* **P 12 01 29.7 +1.5**
MA2 pmax pmax
comp=Z,24nm,2.5s
YSS Yuzh-Sakhalins 81.83 41 *eP* **P 12 01 47.1 +0.7**
YSS pmax pmax
comp=Z,13nm,1.3s

INK Inuvik 83.09 355 P **P 12 01 52.8 +0.3**
comp=Z,0.8nm,0.5s,baz=124,slow=3.6,SNR=5.0
INK Inuvik 83.09 355 *eP* **P 12 01 52.3 -0.2**
comp=Z,4.5nm,1.1s
INK Inuvik 83.09 355 *eP* **P 12 01 52.3 -0.2**
INK pmax pmax
comp=Z,5.0nm,1.1s
TOLK Toolik Lake Re 83.24 1 *eP* **P 12 01 53.7 +0.3**
comp=Z,6.9nm,0.8s
MAJO Matsushiro 84.48 51 *eP* **P 12 02 00.4 0.0**
MAJO Matsushiro 84.48 51⇑*eP* **P 12 02 00.5 +0.2**
MAJO pmax pmax
comp=Z,10.0nm,1.8s
MJAR Matsushiro Arr 84.48 51 P **P 12 02 00.4 0.0**
comp=Z,5.1nm,0.8s,baz=295,slow=5.4,SNR=11
EPYK Eagle Plains 85.23 356 *eP* **P 12 02 02.8 -0.8**
comp=Z,4.3nm,0.8s
PEA1 Petropavlovsk- 85.63 30 *eP* **P 12 02 04.8 -0.9**
PETK Petropavlovsk- 85.63 30 P **P 12 02 04.8 -1.0**
comp=Z,7.6nm,1.0s,baz=336,slow=3.3,SNR=5.4
PETK LR LR 12 46 34.4
comp=Z,40nm,20.2s,baz=194,slow=40
YKW3 Yellowknife Ar 85.76 346 *eP* **P 12 02 05.9 -0.3**
comp=Z,4.5nm,0.8s
YKA Yellowknife Ar 85.82 346 P **P 12 02 06.8 +0.4**
comp=Z,2.0nm,0.7s,baz=28,slow=5.2,SNR=21
YKB5 Yellowknife Ar 85.82 346 *eP* **P 12 02 06.8 +0.4**
COLA College 87.04 0*d iP* **P 12 02 12.3 -0.1**
COLA pmax pmax
comp=Z,8.0nm,0.5s
ASAR Alice Springs 109.84 107 PKiKP **PKiKP 12 07 58.7 -0.2**
comp=Z,0.4nm,0.6s,baz=274,slow=1.1,SNR=6.1
URZ Urewera 148.48 118 PKPbc **PKPbc 12 09 13.1 -0.9**
comp=Z,14nm,1.1s,baz=239,slow=5.9,SNR=3.1

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*JMA **01** 12:01:03.6±0.1,22.°89N×122.°88E,h86km,M2.2*
TAP 01 12:01:04.7,22.°70N×122.°67E,h112km,ML2.9,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu** baz=242	**1.23**	**238**	*eP*	Pn	12 01 28.3	-0.3
CHKT	**Chengkung** baz=288	**1.27**	**288**	P	Pn	12 01 27.6	-1.3
CHKT	baz=288			S	Sn	12 01 45.9	-1.4
HGSD	**Ruisui** baz=304	**1.39**	**305**	*eP*	Pn	12 01 29.0	-1.4
TTN	**Taitung** baz=272	**1.41**	**272**	*eP*	Pn	12 01 31.2	+0.6
TTN	baz=272			*e*S	Sn	12 01 50.6	+0.4
TWF1	**Yuli** baz=299	**1.42**	**297**	P	Pn	12 01 30.0	-0.7
TWF1	baz=299			S	Sn	12 01 49.6	-0.9
YULB	**Yu-li** baz=299	**1.44**	**299**	*eP*	Pn	12 01 30.4	-0.6
YULB	baz=299			*e*S	Sn	12 01 50.1	-0.8
TWGBT	**Beinan** baz=275	**1.47**	**275**	*eP*	Pn	12 01 31.7	+0.3
TWGBT	baz=275			*e*S	Sn	12 01 51.9	+0.3
EHY	**Hungye** baz=303	**1.48**	**303**	*eP*	Pn	12 01 30.7	-0.7
EHY	baz=303			S	Sn	12 01 51.4	-0.3
TWG	**Pinlang** baz=275	**1.48**	**275**	*i* P	Pn	12 01 31.8	+0.4
TWG	baz=275			*i* S	Sn	12 01 51.9	+0.1
EGFH	**Guangfu** baz=310	**1.50**	**310**	*eP*	Pn	12 01 31.9	+0.3
EGFH	baz=310			*e*S	Sn	12 01 52.1	0.0
ESL	**Shilin** baz=316	**1.59**	**314**	*e*S	Sn	12 01 53.7	-0.3
ECL	**Taimali** baz=266	**1.59**	**267**	P	Pn	12 01 33.0	+0.2
ECL	baz=266			S	Sn	12 01 53.6	-0.4
ELDTW	**Lidau** baz=294	**1.60**	**288**	P	Pn	12 01 32.8	-0.2
ELDTW	baz=294			S	Sn	12 01 54.3	-0.2
HWA	**Hwalien** baz=325	**1.60**	**323**	*eP*	Pn	12 01 32.9	0.0
HWA	baz=325			*e*S	Sn	12 01 53.6	-0.8
TAW	**Tawu** baz=251	**1.68**	**259**	*eP*	Pn	12 01 34.6	+0.9
TAW	baz=251			*e*S	Sn	12 01 56.9	+1.0
TWD	**Chiawan** baz=329	**1.69**	**324**	*eP*	Pn	12 01 34.6	+0.7
TWD	baz=329			S	Sn	12 01 54.4	-1.8
HATJ	**Hateruma jima**	**1.70**	**37**	P	Pn	12 01 28.9	-5.2
HATJ				S	Sn	12 01 46.9	-10
EAST	**Anshuo** baz=259	**1.71**	**260**	P	Pn	12 01 34.0	-0.3
EAST	baz=259			S	Sn	12 01 57.9	+1.0
VWDT	**VWDT** baz=307	**1.75**	**307**	*eP*	Pn	12 01 35.1	+0.4
VWDT	baz=307			*e*S	Sn	12 01 56.9	-0.7
JYNG	**Yonagunijimaku**	**1.76**	**8**	P	Pn	12 01 30.2	-4.6
JYNG				S	Sn	12 01 50.3	-7.4
NACB	**Ninganchiao** baz=328	**1.77**	**326**	*eP*	Pn	12 01 33.7	-1.2
NACB	baz=328			*e*S	Sn	12 01 55.1	-2.9
YOJ	**Yonaguni jima**	**1.78**	**10**	P	Pn	12 01 30.3	-4.7
YOJ				S	Sn	12 01 51.1	-7.1
ETLH	**Xiulin Townshi** baz=330	**1.85**	**324**	*eP*	Pn	12 01 36.6	+0.5
ETLH	baz=330			*e*S	Sn	12 01 59.0	-1.0
OWD	**Renai** baz=318	**1.86**	**313**	*eP*	Pn	12 01 36.1	-0.1
OWD	baz=318			*e*S	Sn	12 01 60.0	-0.1
TWKBT	**Hengchun** baz=251	**1.88**	**247**	*eP*	Pn	12 01 37.0	+0.7
TWKBT	baz=251			*e*S	Sn	12 02 01.6	+1.2
MASBT	**Mashibuluo** baz=263	**1.89**	**268**	*eP*	Pn	12 01 37.9	+1.6
SLGT	**Liugui** baz=286	**1.89**	**279**	*eP*	Pn	12 01 38.0	+1.6
SLGT	baz=286			S	Sn	12 02 02.2	+1.6
IRIF	**Iriomote-Funau**	**1.89**	**31**	P	Pn	12 01 31.9	-4.6
IRIF				S	Sn	12 01 52.4	-8.3
EOS1	**EOS1** baz=345	**1.91**	**345**	*eP*	Pn	12 01 35.9	-0.7
EOS1	baz=345			*e*S	Sn	12 01 59.5	-1.4
SSLB	**Suanglung** baz=308	**1.91**	**305**	*eP*	Pn	12 01 37.5	+0.8
SSLB	baz=308			*e*S	Sn	12 02 01.0	-0.2
HEN	**Hengchun** baz=249	**1.92**	**249**	*e*S	Sn	12 02 02.4	+1.2
SCZT	**Fangliau** baz=260	**1.92**	**261**	P	Pn	12 01 37.5	+0.7
SCZT	baz=260			S	Sn	12 02 02.6	+1.2
CHGB	**Renai** baz=321	**1.93**	**315**	*eP*	Pn	12 01 37.5	+0.4
CHGB	baz=321			*e*S	Sn	12 02 01.2	-0.6
WHF	**Hehuan Shan** baz=325	**1.93**	**318**	*eP*	Pn	12 01 37.5	+0.2
WHF	baz=325			S	Sn	12 02 01.7	-0.5
WHYT	**Xinyi Township** baz=301	**1.94**	**301**	*eP*	Pn	12 01 38.3	+1.2
WHYT	baz=301			*e*S	Sn	12 02 03.3	+1.4
JKRS	**Kuro-shima**	**1.96**	**39**	P	Pn	12 01 32.4	-4.9
JKRS				*e*S	Sn	12 01 53.0	-9.2
WTP	**Ta-pu** baz=286	**1.97**	**286**	*eP*	Pn	12 01 39.2	+1.7

WTP				*e*S		Sn	12 02 04.2	+1.6
	baz=286							
SMLT	**Sun Moon Lake**	**2.01 306**	*e*S			Sn	12 02 04.3	+0.9
	baz=310							
CHN4	**Tsaushan**	**2.02 289**	P			Pn	12 01 39.8	+1.8
	baz=289							
CHN4			S			Sn	12 02 04.7	+1.2
	baz=289							
CHN1	**Nanshi**	**2.03 284**	*e*P			Pn	12 01 38.6	+0.4
	baz=284							
CHN1			*e*S			Sn	12 02 05.9	+2.0
	baz=284							
TWC	**Suao**	**2.04 339**	*e*P			Pn	12 01 39.5	+1.2
	baz=343							
TWC			S			Sn	12 02 03.2	-0.9
	baz=343							
TYC	**Yuchr**	**2.05 306**	*e*P			Pn	12 01 39.6	+1.1
	baz=310							
TYC			*e*S			Sn	12 02 06.3	+2.1
	baz=310							
TWT	**Tachien**	**2.07 319**	*e*S			Sn	12 02 06.1	+1.2
	baz=324							
DPDB	**Guoxing**	**2.08 310**	*e*P			Pn	12 01 39.3	+0.4
	baz=316							
DPDB			*e*S			Sn	12 02 06.2	+1.1
	baz=316							
NNSB	**Datong**	**2.09 326**	*e*P			Pn	12 01 39.5	+0.4
	baz=325							
NNSB			*e*S			Sn	12 02 04.9	-0.4
	baz=325							
NNS	**Nan Shan**	**2.10 326**	*e*P			Pn	12 01 39.2	0.0
	baz=325							
NNS			*e*S			Sn	12 02 05.1	-0.5
	baz=325							
JIJ	**Ishigaki jima**	**2.13 39**	P			Pn	12 01 34.4	-5.1
JIJ			S			Sn	12 01 56.4	-10
NDT	**Datong Townshi**	**2.17 331**	P			Pn	12 01 40.5	+0.5
	baz=325							
NDT			*e*S			Sn	12 02 05.8	-1.1
	baz=325							
WHP	**Taichung City**	**2.23 315**	*e*S			Sn	12 02 09.4	+1.0
	baz=322							
EGS		**2.24 343**	*e*S			Sn	12 02 07.8	-0.7
	baz=342							
YHNB	**Yeheng**	**2.29 329**	*e*P			Pn	12 01 42.4	+0.8
	baz=329							
YHNB			*e*S			Sn	12 02 08.8	-1.1
	baz=329							
NSK	**Sanguang**	**2.30 329**	*e*P			Pn	12 01 41.0	-0.8
	baz=329							
NSK			*e*S			Sn	12 02 10.0	-0.2
	baz=329							
NWLT	**Wulai**	**2.33 333**	*e*P			Pn	12 01 41.7	-0.3
	baz=332							
NWLT			*e*S			Sn	12 02 10.5	-0.1
	baz=332							
TIPB	**Shuangxi**	**2.39 341**	*e*P			Pn	12 01 43.4	+0.6
	baz=341							
TIPB			*e*S			Sn	12 02 11.0	-1.1
	baz=341							
JISG	**Ishigakijimahi**	**2.40 38**	P			Pn	12 01 38.0	-5.0
JISG			*e*S			Sn	12 02 03.3	-9.0
NSTT	**Nanjuang**	**2.46 322**	*e*P			Pn	12 01 43.8	+0.2
	baz=321							
NSTT			*e*S			Sn	12 02 14.3	+0.8
	baz=321							
JTJ	**Tarama**	**2.68 44**	P			Pn	12 01 41.8	-4.8
JTJ			S			Sn	12 02 10.4	-8.4
JIRB	**Irabujima**	**3.12 47**	P			Pn	12 01 47.2	-5.1
JIRB			S			Sn	12 02 19.7	-9.4
JMJ2	**Miyako jima3**	**3.17 50**	P			Pn	12 01 47.9	-5.1
JMJ2			S			Sn	12 02 21.5	-8.8
JIKM	**Ikemajima**	**3.23 46**	S			Sn	12 02 23.8	-8.0
JOGS	**Gusukube**	**3.24 50**	P			Pn	12 01 48.5	-5.4
JOGS			S			Sn	12 02 23.9	-8.0

MOS ***01*** *12:06:29.6±1.3,27.°08N×53.°90E,h19km,mb4.2/16,Error ellipse: s-maj=9.4km s-min=6.6km az=75.9*
TEH ***01*** *12:06:30.0,27.°06N×53.°95E,h10km,ML4.2*
ISCJB ***01*** *12:06:30.2±0.2,27.°11N±0.°03×53.°87E±0.°03,h19km, mb4.0/43,MS3.3/5,Error ellipse: s-maj=4.8km s-min=3.1km az=142.2*
NEIC ***01*** *12:06:30.0±0.0,27.°06N×53.°95E,h10km,mb4.0/15, ML4.1(THR),MN4.2(TEH),After TEH.*
DSN ***01*** *12:06:32.9±1.5,27.°08N×54.°14E,h10km,ML4.3/9,Error ellipse: s-maj=22.5km s-min=13.3km az=64.0*
IDC ***01*** *12:06:34.1±2.8,26.°99N×53.°87E,h44km±28km,mb3.7/22, mb1 3.8/26,mb1mx3.7/48,mbtmp4.0/26,ML3.9/4,MS3.3/8, Ms1 3.3/8,ms1mx2.9/43,Error ellipse: s-maj=17.3km s-min=12.4km az=6.0*

ISC 01 12:06:30.6±0.4,26.°91N±0.°04×53.°86E±0.°04,h19km,n151, σ1°52/146,mb4.1/46,MS3.4/5,4C-3D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.75**	**305**	*e*Pg	**Pg**	**12 06 45.1**	**-0.2**
GHIR	**Ghir-Karzin**	**1.57**	**331**	*e*Pn	**Pb**	**12 06 59.2**	**+0.1**
GHIR	**Ghir-Karzin**	**1.57**	**331**	*e*Pg	**Pb**	**12 06 59.2**	**+0.1**
JHRM	**Jahrom**	**1.61**	**351**	*e*Pg	**Pn**	**12 06 58.4**	**+0.4**
JHRM				IAMB	IAmb	12 07 23.5	
	comp=E,0.0nm,0.5s						
BNDS	**Bandar-Abbas**	**2.12**	**76**	*e*Pg	**Pn**	**12 07 02.2**	**-3.0**
GENO	**Geno**	**2.12**	**76**	*e*Pn	**Pn**	**12 07 05.5**	**+0.4**
GENO	**Geno**	**2.12**	**76**	*e*Pn	**Pn**	**12 07 05.6**	**+0.4**
GENO				IAMB	IAmb	12 07 55.7	
	comp=N,0.0nm,0.5s						
UMQ	**Umm Al-Quwin**	**2.13**	**130**	P	Pg	12 07 17.4	+5.9
	SNR=9.4						
UMQ	**Umm Al-Quwin**	**2.13**	**130**	*e*Pn	**Pg**	**12 07 11.6**	**+0.1**
SHME	**Shamm**	**2.22**	**112**	*e*P	**Pb**	**12 07 08.9**	**-1.2**
	SNR=29						
SHME	**Shamm**	**2.22**	**112**	*e*Pn	**Pb**	**12 07 09.0**	**-1.2**
BANOM	**Banah**	**2.40**	**114**	*e*P	**Pn**	**12 07 10.3**	**+1.4**
	SNR=18						
BANOM	**Banah**	**2.40**	**114**	P	**Pg**	**12 07 19.8**	**+3.1**
	SNR=19						
NAZ	**Nazwa, Dubai**	**2.51**	**139**	*e*P	**Pb**	**12 07 15.0**	**-0.1**
	SNR=10						
NAZ	**Nazwa, Dubai**	**2.51**	**139**	P	**Pb**	**12 07 15.0**	**-0.1**
	SNR=10						
NAZ				P	**Pb**	**12 07 15.0**	**-0.1**
	SNR=19						
NAZ	**Nazwa, Dubai**	**2.51**	**139**	*e*Pn	**Pb**	**12 07 15.0**	**-0.1**
ISRV	**Sarvestan**	**2.55**	**345**	*e*Pn	**Pn**	**12 07 13.1**	**+1.9**
ISRV				IAMB	IAmb	12 08 05.0	
	comp=Z,9μm,0.8s						
AJN	**Ajban**	**2.55**	**156**	P	Pg	12 07 24.8	+5.3
	SNR=13						
AJN	**Ajban**	**2.55**	**156**	*e*Pn	**Pb**	**12 07 16.2**	**+0.4**
MSFE	**Esma-Masafi**	**2.58**	**126**	*e*P	**Pb**	**12 07 13.7**	**-2.7**
	SNR=9.4						
MSFE	**Esma-Masafi**	**2.58**	**126**	*e*Pn	**Pb**	**12 07 14.4**	**-1.9**
ASUD	**Al Ashush, Dub**	**2.64**	**149**	*e*P	**Pb**	**12 07 17.0**	**-0.2**
	SNR=11						
ASUD	**Al Ashush, Dub**	**2.64**	**149**	P	**Pb**	**12 07 17.0**	**-0.2**
	SNR=11						
ASUD	**Al Ashush, Dub**	**2.64**	**149**	*e*Pn	**Pb**	**12 07 16.8**	**-0.4**
FAQ	**Al Faqa, Dubai**	**2.67**	**144**	*e*P	**Pb**	**12 07 16.7**	**-0.9**
	SNR=9.8						
FAQ	**Al Faqa, Dubai**	**2.67**	**144**	P	**Pb**	**12 07 17.0**	**-0.7**
	SNR=10.0						
FAQ	**Al Faqa, Dubai**	**2.67**	**144**	*e*Pn	**Pb**	**12 07 16.8**	**-0.9**
NIAN	**Nian**	**2.73**	**76**	*e*Pn	**Pn**	**12 07 13.9**	**+0.5**
NIAN				IAMB	IAmb	12 08 14.2	
	comp=Z,0.0nm,0.8s						
UOSS	**Minazif**	**2.88**	**132**	*e*Pn	**Pn**	**12 07 17.5**	**+2.0**
UOSS	**Minazif**	**2.88**	**132**	P	**Pn**	**12 07 17.3**	**+1.8**
UOSS	**Minazif**	**2.88**	**132**	P	**Pb**	**12 07 18.8**	**-2.6**
	SNR=7.6						
UOSS	**Minazif**	**2.88**	**132**	*e*Pn	**Pb**	**12 07 18.4**	**-3.0**
HATD	**Hatta, Dubai**	**2.92**	**135**	*e*P	**Pn**	**12 07 17.9**	**+1.9**
	SNR=13						
HATD	**Hatta, Dubai**	**2.92**	**135**	P	**Pb**	**12 07 21.0**	**-1.1**
	SNR=5.3						
HATD	**Hatta, Dubai**	**2.92**	**135**	*e*Pn	**Pb**	**12 07 19.6**	**-2.4**
ASHO	**Ashiyiah**	**2.98**	**138**	*e*P	**Pn**	**12 07 18.9**	**+2.1**
	SNR=74						
ASHO				S	**Sb**	**12 07 56.5**	**-2.6**
ASHO	**Ashiyiah**	**2.98**	**138**	P	**Pb**	**12 07 20.2**	**-2.9**
	SNR=74						
ASHO				P	**Pn**	**12 07 20.7**	**+3.9**
	SNR=15						
ASHO	**Ashiyiah**	**2.98**	**138**	*e*Pn	**Pb**	**12 07 20.5**	**-2.5**
IPAR	**Pars**	**3.00**	**347**	*e*Pn	**Pn**	**12 07 18.5**	**+1.0**
ALNE	**Al Ain**	**3.32**	**149**	*i* P	**Pb**	**12 07 25.0**	**-3.8**
	SNR=13						
ALNE	**Al Ain**	**3.32**	**149**	*e*Pn	**Pb**	**12 07 25.5**	**-3.4**
IKAZ	**Kazeroun**	**3.36**	**329**	*e*Pn	**Pn**	**12 07 22.4**	**0.0**
IKAZ				IAMB	IAmb	12 08 29.7	
	comp=Z,4μm,0.5s						
SOHO	**SOHO**	**3.67**	**138**	P	Pb	12 07 30.0	-4.9
	SNR=13						
NGRK	**Negar Kerman**	**3.72**	**42**	*e*Pn	**Pn**	**12 07 27.0**	**-0.4**
NGRK				IAMB	IAmb	12 08 31.1	
	comp=Z,0.0nm,0.4s						
MZR	**Muzera**	**3.91**	**185**	*e*Pn	**Pb**	**12 07 34.5**	**-4.4**
TVBK	**TV Kerman**	**3.99**	**39**	*e*Pn	**Pn**	**12 07 31.6**	**+0.5**
TVBK				IAMB	IAmb	12 08 22.7	
	comp=Z,0.0nm,0.5s						
KHGB	**Koh Gabri**	**4.15**	**33**	IAMB	IAmb	12 05 00.3	
KHGB	comp=Z,0.0nm,1.0s						
				*e*Pn	**Pn**	**12 07 33.3**	**+0.2**
ARQ	**Araqi**	**4.30**	**145**	P	**Pb**	**12 07 45.0**	**-0.6**
	SNR=6.4						
CHMN	**Cheshme madani**	**4.38**	**47**	*e*Pn	**Pn**	**12 07 38.3**	**+1.9**
CHMN				IAMB	IAmb	12 08 33.5	
	comp=N,0.0nm,0.7s						
IMEH	**Mehriz**	**4.51**	**8**	*e*Pn	**Pn**	**12 07 38.9**	**+0.8**
IMEH				IAMB	IAmb	12 08 32.2	
	comp=Z,744nm,0.4s						
KLNJ	**Kolanjah**	**4.54**	**335**	*e*Pn	**Pn**	**12 07 38.7**	**+0.1**
HOQ	**Hoqain**	**4.56**	**136**	*e*Pn	Pn	12 07 42.7	+4.1
IBAF	**Bafgh**	**4.90**	**17**	*e*Pn	**Pn**	**12 07 42.6**	**-0.7**
ISAD	**Sadrabad**	**4.99**	**358**	*e*Pn	**Pn**	**12 07 45.4**	**+0.7**
IRAM	**Ramesheh**	**5.05**	**346**	*e*Pn	**Pn**	**12 07 46.1**	**+0.6**
BIDO	**Bidbid**	**5.13**	**130**	*e*Pn	**Pn**	**12 07 48.9**	**+2.4**
BSY	**Bisya**	**5.14**	**143**	P	**Pn**	**12 07 50.1**	**+3.5**
	SNR=15						
BSY				P	Pn	12 07 53.0	+6.4
	SNR=12						
WSAR	**Wadi Sarin**	**5.67**	**129**	P	**Pn**	**12 07 55.5**	**+1.7**
	comp=Z,2.4nm,0.3s,baz=315,slow=9.6,SNR=30						
WSAR				S	**Sn**	**12 08 58.2**	**-0.2**
	comp=Z,7.4nm,0.3s,baz=70,slow=23,SNR=10						
IZEF	**Zefreh**	**6.11**	**348**	*e*Pn	**Pn**	**12 07 58.9**	**-1.2**
TPRV	**Parvadeh(Tabas**	**6.57**	**21**	*e*Pn	**Pn**	**12 08 06.2**	**-0.1**
IKLH	**Kolahrood**	**6.68**	**343**	*e*Pn	**Pn**	**12 08 07.6**	**-0.4**
BSRN	**Basiran**	**6.82**	**41**	*e*Pn	**Pn**	**12 08 07.4**	**-2.3**
MHTO	**MHTO**	**7.00**	**147**	P	Pn	12 08 16.0	+4.0
	SNR=9.4						
TKDS	**Koohdasht(Taba**	**7.25**	**22**	*e*Pn	**Pn**	**12 08 14.7**	**-0.9**
GEYT	**Alibeck**	**11.56**	**17**	LR	LR	12 14 33.3	
	comp=Z,142nm,19.5s,baz=15,slow=42						
KBL	**Kabul**	**15.10**	**56**	*e*Pn	**Pn**	**12 10 01.3**	**-1.8**
KBL	**Kabul**	**15.10**	**56**	*e*P	**Pn**	**12 10 01.3**	**-1.8**
GNI	**Garni**	**15.22**	**332**	LR	LR	12 17 10.0	
	comp=Z,40nm,21.5s,baz=129,slow=42						
ASF	**Jabal al Asfar**	**15.66**	**294**	P	**Pn**	**12 10 11.5**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=96,slow=6.6,SNR=2.7						
MMAI	**Mount Meron Ar**	**17.10**	**295**	P	**P**	**12 10 29.6**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=92,slow=13,SNR=5.1						
CHGR	**Chuyangaron**	**17.37**	**44**	*e*Pn	**Pn**	**12 10 27.9**	**-4.1**
	comp=Z,29nm,1.1s						
ZEI	**Tsey**	**17.80**	**335**	*e*P	**Pn**	**12 10 34.3**	**-3.1**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NIL	**Nilore**	**18.04**	**63**	*e*Pn	**Pn**	**12 10 38.2**	**-2.0**
	comp=Z,24nm,1.3s						
NIL	**Nilore**	**18.04**	**63**	*e*P	**Pn**	**12 10 38.2**	**-2.0**
NIL				pmax	pmax		
	comp=Z,24nm,1.3s						
GAR	**Garm**	**18.30**	**45**	*e*Pn	**P**	**12 10 40.5**	**-3.0**
	comp=Z,12nm,1.1s						
GAR	**Garm**	**18.30**	**45**	*e*P	**P**	**12 10 40.5**	**-3.0**
GAR				pmax	pmax		
	comp=Z,12nm,1.1s						
ATD	**Arta Tunnel**	**18.48**	**216**	LR	LR	12 19 07.8	
	comp=Z,139nm,18.2s,baz=332,slow=41						
KBZ	**Khabaz**	**18.98**	**335**	P	**Pn**	**12 10 52.0**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=82,slow=3.8,SNR=3.7						
KBZ	**Khabaz**	**18.98**	**335**	P	**Pn**	**12 10 52.0**	**+0.4**
BTK	**Batken**	**19.25**	**43**	*e*P	**P**	**12 10 52.1**	**-1.8**
	comp=Z,7.4nm,1.0s						
BTK	**Batken**	**19.25**	**43**	*e*P	**P**	**12 10 52.1**	**-1.8**
BTK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	**Kislovodsk**	**19.25**	**335**	*e*P	**P**	**12 10 53.1**	**-0.9**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KK31	**Karatay Array**	**21.08**	**36**	*e*P	**P**	**12 11 12.3**	**-1.4**
	comp=Z,3.8nm,0.8s						
KK31	**Karatay Array**	**21.08**	**36**	*e*P	**P**	**12 11 12.3**	**-1.4**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	**Karatay Array**	**21.08**	**36**	*e*P	**P**	**12 11 12.4**	**-1.4**
	comp=Z,3.8nm,0.8s						
KKAR	**Karatay Array**	**21.08**	**36**	*e*P	**P**	**12 11 12.4**	**-1.4**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	**Keskin Array B**	**21.12**	**312**	P	**P**	**12 11 14.9**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=137,slow=13,SNR=8.4						
BR101	**Keskin Array S**	**21.12**	**312**	*e*P	**P**	**12 11 14.9**	**+0.5**
BR131	**Keskin Array S**	**21.12**	**312**	*e*P	**P**	**12 11 14.7**	**+0.3**
	comp=Z,3.1nm,1.0s						
ABKAR	**Akbulak array**	**22.80**	**10**	*e*P	**P**	**12 11 31.3**	**-0.7**
	comp=Z,14nm,1.3s						
AAK	**Ala-Archa**	**23.01**	**42**	P	**P**	**12 11 34.7**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=230,slow=9.4,SNR=5.3						
AAK	**Ala-Archa**	**23.01**	**42**	*e*P	**P**	**12 11 33.7**	**-0.8**
	comp=Z,9.5nm,1.0s						
AAK	**Ala-Archa**	**23.01**	**42**	*e*P	**P**	**12 11 35.1**	**+0.6**
AAK				pmax	pmax		
	comp=Z,13nm,1.5s						
AKTO	**Aktyubinsk**	**23.70**	**7**	P	**P**	**12 11 41.7**	**+0.6**
	comp=Z,1.7nm,0.4s,baz=193,slow=8.3,SNR=9.8						
AKTO				LR	LR	12 22 32.9	
	comp=Z,82nm,18.1s,baz=174,slow=41						
IDI	**Anoyia**	**26.10**	**296**	P	**P**	**12 12 03.8**	**+0.5**
	comp=Z,5.5nm,0.4s,baz=87,slow=8.8,SNR=12						
ITM	**Ithomi**	**28.82**	**299**	*e*P	**P**	**12 12 27.8**	**+0.2**
	comp=Z,21nm,1.4s						
BRVK	**Borovoye**	**28.85**	**21**	*e*P	**P**	**12 12 26.3**	**-1.3**
	comp=Z,1.8nm,0.6s						
BRVK	**Borovoye**	**28.85**	**21**	*e*P	**P**	**12 12 27.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,11nm,2.9s						
BVAR	**Borovoye Array**	**28.85**	**21**	P	**P**	**12 12 27.6**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=208,slow=6.0,SNR=12						
MLR	**Muntele Rosu**	**28.95**	**317**	P	**P**	**12 12 29.4**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=214,slow=11,SNR=3.0						
MLR	**Muntele Rosu**	**28.95**	**317**	*e*P	**P**	**12 12 28.8**	**0.0**
	comp=Z,2.6nm,0.8s						
MLR	**Muntele Rosu**	**28.95**	**317**	*e*P	**P**	**12 12 28.8**	**0.0**
MLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	**Arti**	**29.69**	**5**	P	**P**	**12 12 35.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=100,slow=19,SNR=3.2						
ARU				LR	LR	12 26 24.3	
	comp=Z,119nm,20.0s,baz=132,slow=40						
MAKZ	**Makanchi**	**29.76**	**41**	*e*P	**P**	**12 12 35.7**	**-0.2**
	comp=Z,2.5nm,0.8s						
MAKZ	**Makanchi**	**29.76**	**41**	*e*P	**P**	**12 12 35.7**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**29.93**	**41**	*e*P	**P**	**12 12 36.6**	**-0.8**
	comp=Z,1.2nm,0.9s						
MK31	**Makanchi Array**	**29.93**	**41**	*e*P	**P**	**12 12 36.6**	**-0.8**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK32	**Makanchi Array**	**29.93**	**41**	*e*P	**P**	**12 12 37.3**	**-0.1**
MKAR	**Makanchi Array**	**29.93**	**41**	P	**P**	**12 12 37.3**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=219,slow=9.4,SNR=5.9						
MKAR	**Makanchi Array**	**29.93**	**41**	*e*P	**P**	**12 12 38.3**	**+0.9**
KURBB	**Kurchatov Array**	**30.24**	**32**	P	**P**	**12 12 40.3**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=230,slow=9.1,SNR=6.0						
AKASG	**Malin Array Be**	**30.28**	**328**	P	**P**	**12 12 39.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=134,slow=8.1,SNR=3.1						
KIEV	**Kiev**	**30.28**	**328⇓**	*e*P	**P**	**12 12 40.5**	**+0.2**
KIEV				pmax	pmax		
	comp=Z,5.0nm,2.5s						
KURK	**Kurchatov**	**30.35**	**32⇑**	*e*P	**P**	**12 12 41.6**	**+0.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KMBO	**Kilima Mbogo**	**32.14**	**212**	LR	LR	12 27 11.1	
	comp=Z,75nm,19.5s,baz=93,slow=38						
KOLS	**Kolonicke sedl**	**32.85**	**320**	*e*P	**P**	**12 13 04.7**	**+1.7**
KOLS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KOLS	**Kolonicke sedl**	**32.85**	**320**	*e*P	**P**	**12 13 04.7**	**+1.7**
ZAA0	**Zalesovo Array**	**35.34**	**32**	*e*P	**P**	**12 13 23.6**	**-0.9**
	comp=Z,3.3nm,0.9s						
ZALV	**Zalesovo Beam**	**35.34**	**32**	P	**P**	**12 13 23.7**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=250,slow=7.7,SNR=6.0						
ZALV				LR	LR	12 30 18.3	
	comp=Z,55nm,18.4s,baz=250,slow=40						
ZALV	**Zalesovo Beam**	**35.34**	**32**	*e*P	**P**	**12 13 24.6**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KBA	**Koelnbreinsper**	**37.57**	**313**	*i* P	**P**	**12 13 44.6**	**+0.7**
	comp=Z,4.3nm,1.2s						
WTTA	**Wattenberg**	**38.74**	**313**	*i* P	**P**	**12 13 53.4**	**-0.3**
	comp=Z,7.7nm,1.1s						
WATA	**Walderalm**	**38.80**	**313**	*i* P	**P**	**12 13 53.5**	**-0.7**
	comp=Z,2.2nm,0.5s						
SQTA	**Sankt Quirin**	**39.00**	**313**	*i* P	**P**	**12 13 55.3**	**-0.6**
	comp=Z,2.3nm,0.4s						
MOTA	**Moosalm**	**39.11**	**313**	*i* P	**P**	**12 13 56.5**	**-0.3**
	comp=Z,1.6nm,0.5s						
FIA0	**FINESS Array S**	**39.25**	**339**	*e*P	**P**	**12 13 56.6**	**-0.9**
FIA0	**FINESS Array S**	**39.25**	**339**	*e*P	**P**	**12 13 56.6**	**-0.9**
FINES	**FINESS Array B**	**39.25**	**339**	P	**P**	**12 13 56.6**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=143,slow=9.7,SNR=12						
FETA	**Feichten**	**39.27**	**312**	*i* P	**P**	**12 13 57.8**	**-0.3**
	comp=Z,5.0nm,1.2s						
RETA	**Reutte**	**39.37**	**313**	*i* P	**P**	**12 13 57.7**	**-1.2**
	comp=Z,2.7nm,0.6s						
DAVA	**Damuels**	**39.89**	**313**	*i* P	**P**	**12 14 03.0**	**-0.4**
	comp=Z,6.9nm,0.5s						
GTA	**Gaotai**	**40.04**	**60**	*e*P	**P**	**12 14 07.6**	**+2.9**
GTA				pP	sP	12 14 16.9	+3.9
GTA				sP	pP	12 14 20.9	+10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
CMAR	**Chiang Mai Arr**	**42.26**	**92**	P	**P**	**12 14 24.1**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=284,slow=10,SNR=3.2						
NB200	**NORSAR Array S**	**44.52**	**332**	*e*P	**P**	**12 14 38.8**	**-2.0**
NOA	**NORSAR Array B**	**44.52**	**332**	P	**P**	**12 14 38.8**	**-2.0**
	comp=Z,0.5nm,0.7s,baz=121,slow=7.7,SNR=2.8						
NOA				LR	LR	12 35 01.1	
	comp=Z,15nm,20.2s,baz=175,slow=38						
ARCES	**ARCESS Array B**	**45.75**	**347**	P	**P**	**12 14 50.1**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=145,slow=8.4,SNR=14						
ARCES	**ARCESS Array B**	**45.75**	**347**	*e*P	**P**	**12 14 50.5**	**+0.2**
ULN	**Ulaanbaatar**	**46.13**	**48⇑**	*e*P	**P**	**12 14 55.8**	**+2.0**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ESDC	**Sonseca Array**	**49.21**	**300**	P	**P**	**12 15 17.7**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=75,slow=7.2,SNR=8.6						
TORD	**Torodi Ar. Bea**	**50.55**	**265**	P	**P**	**12 15 28.7**	**+0.5**
	comp=Z,1.5nm,0.4s,baz=62,slow=8.5,SNR=15						
TOA1	**Torodi Ar. Sit**	**50.55**	**265**	*e*P	**P**	**12 15 28.7**	**+0.5**
BOD	**Bodaibo**	**51.82**	**36**	*e*P	**P**	**12 15 36.3**	**-0.8**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.6s						
WHN	**Wuhan**	**52.62**	**71**	P	**P**	**12 15 45.2**	**+1.7**
DBIC	**Dimbokro**	**59.16**	**261**	P	**P**	**12 16 31.4**	**+0.8**
	comp=Z,3.6nm,0.4s,baz=38,slow=6.6,SNR=8.6						
TIXI	**Tiksi**	**59.99**	**21⇓**	*e*P	**P**	**12 16 37.9**	**+2.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KSRS	**Korea Array**	**62.12**	**60**	P	**P**	**12 16 49.5**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=275,slow=6.1,SNR=4.2						
KSRS	**Korea Array**	**62.12**	**60**	*e*P	**P**	**12 16 50.9**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KLR	**Kul'dur**	**62.44**	**46⇑**	*e*P	**P**	**12 16 53.3**	**+0.9**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.8s						
YKA	**Yellowknife Ar**	**90.43**	**355**	P	**P**	**12 19 30.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=8,8,slow=4.3,SNR=5.6						
WRA	**Warramunga Arr**	**90.79**	**112**	P	**P**	**12 19 32.6**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=299,slow=4.5,SNR=8.8						
ASAR	**Alice Springs**	**92.19**	**115**	P	**P**	**12 19 39.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=300,slow=4.8,SNR=8.6						

GUC 01 12:11:15.5±0.7,30.°73S×71.°41W,h54km±5km,ML3.8, 2C-3D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**0.76**	**44⇑**	*i* P	Pn	12 11 32.0	+1.5

comp=Z,240nm,7.0s
GYA **Guiyang** 5.85 165 *e*Pn Pn 12 14 09.8 -0.9
GYA Sn Sn 12 15 14.1 -3.5
GYA smax smax
comp=N,80nm,0.6s
GYA smax smax
comp=E,70nm,0.7s
GYA LR LR
comp=N,100nm,5.9s
GYA LR LR
comp=E,100nm,4.6s
GYA LR LR
comp=Z,110nm,5.2s
SONM Songino Array 15.71 3 Pn Pn 12 16 24.9 -0.3
0.2nm,0.3s,baz=181,slow=14,SNR=2.5
WMQ Urumqi 17.90 316 *e*P Pn 12 16 52.0 -0.8
WMQ sP sP 12 17 00.3 +0.5
KSRS Korea Array 19.55 68 P P 12 17 12.1 +0.6
0.1nm,0.3s,baz=255,slow=8.7,SNR=6.2
MKAR Makanchi Array 22.72 317 P P 12 17 46.6 +1.0
0.9nm,0.9s,baz=111,slow=12,SNR=6.7
KURBB Kurchatov Arra 26.89 321 P P 12 18 23.6 -0.9
0.4nm,0.6s,baz=131,slow=9.5,SNR=4.9
ASAJ Asahikawa 31.64 57 LR LR 12 32 42.0
comp=Z,34nm,18.4s,baz=352,slow=38
BVAR Borovoye Array 32.46 320 P P 12 19 14.9 +0.9
0.6nm,0.5s,baz=132,slow=2.2,SNR=7.1
FINES FINESS Array B 57.13 326 P P 12 22 29.2 -0.9
0.6nm,0.5s,baz=85,slow=4.4,SNR=4.1
WRA Warramunga Arr 58.93 147 P P 12 22 43.4 +0.3
1.3nm,0.5s,baz=337,slow=8.3,SNR=12
ASAR Alice Springs 62.00 150 P P 12 23 04.3 +0.2
0.7nm,0.8s,baz=332,slow=6.3,SNR=13
NOA NORSAR Array B 64.19 327 P P 12 23 17.0 -1.2
0.3nm,0.6s,baz=48,slow=4.9,SNR=3.4
YKA Yellowknife Ar 80.48 17 P P 12 24 54.8 -0.6
0.3nm,0.5s,baz=328,slow=5.6,SNR=3.3

*JMA **01** 12:28:43.6±0.4, 32°.64N×137°.83E, h384km±4km, M3.3*
*ISCJB **01** 12:28:44.6±0.4, 32°.65N±0°.06×137°.79E±0°.05, h376km, mb3.6/15, Error ellipse: s-maj=8.0km s-min=6.1km az=171.6*
*IDC **01** 12:28:45.1±0.6, 32°.55N×137°.72E, h362km±6km, mb3.4/15, mb1 3.6/19, mb1mx3.4/42, mbtmp4.1/19, Error ellipse: s-maj=13.3km s-min=11.3km az=57.0*
ISC 01 12:28:46.2±0.7, 32°.68N±0°.08×137°.81E±0°.06, h376km, n55, σ1°57/64, mb3.7/15, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK01	**Tokai 1**	**1.10**	**350**	P	**Pn**	**12 29 33.6**	**-1.0**
TTO3	**TONANKAI O.B.S**	**1.23**	**344**	P	**Pn**	**12 29 34.7**	**-0.6**
TTO2	**TONANKAI O.B.S**	**1.24**	**328**	P	**Pn**	**12 29 34.5**	**-0.7**
TK02	**Tokai 2**	**1.26**	**358**	P	**Pn**	**12 29 34.5**	**-0.9**
TTO1	**TONANKAI O.B.S**	**1.27**	**318**	P	**Pn**	**12 29 34.3**	**-1.1**
TTO4	**TONANKAI O.B.S**	**1.34**	**350**	P	**Pn**	**12 29 35.0**	**-0.7**
JAOM	**Aogashimamukai**	**1.66**	**97**	P	**Pn**	**12 29 36.0**	**-1.8**
JHJ	**Hachijo jima 2**	**1.72**	**75**	P	**Pn**	**12 29 36.6**	**-1.5**
	29nm,0.3s,baz=327,slow=18,SNR=7.1						
JHJ				S	**S**	**12 30 18.2**	**-1.7**
	29nm,0.3s,baz=52,slow=23,SNR=9.1						
JHJ2	**Mitsune**	**1.74**	**75**	P	**Pn**	**12 29 36.8**	**-1.4**
JIE	**Ise**	**1.94**	**332**	P	**Pn**	**12 29 38.2**	**-1.2**
JIE				*e*S	**S**	**12 30 19.7**	**-2.7**
JTNC	**Tanabenakahech**	**2.17**	**302**	P	**Pn**	**12 29 39.0**	**-2.0**
JWY	**Kouya**	**2.41**	**310**	P	**Pn**	**12 29 41.5**	**-1.3**
JOD2	**Odawara 2**	**2.79**	**22**	P	**Pn**	**12 29 44.5**	**-1.1**
JOD2				*e*S	**S**	**12 30 32.1**	**-1.6**
JYN	**Shimob**	**2.88**	**12**	P	**Pn**	**12 29 45.9**	**-0.5**
JAI	**Aioi**	**3.03**	**292**	P	**Pn**	**12 29 45.9**	**-1.8**
JYTA	**Yamagatataniai**	**3.04**	**343**	P	**Pn**	**12 29 46.9**	**-0.8**
JWT	**Wachi**	**3.28**	**323**	P	**Pn**	**12 29 48.8**	**-1.0**
JWT				*e*S	**S**	**12 30 39.0**	**-2.3**
BSO1	**Boso 1**	**3.29**	**52**	P	**Pn**	**12 29 46.1**	**-3.3**
BSO1				*e*S	**S**	**12 30 35.3**	**-5.3**
JRY	**Ryogami san**	**3.45**	**15**	P	**Pn**	**12 29 50.6**	**-0.8**
JMN	**Monobe**	**3.46**	**289**	P	**Pn**	**12 29 50.1**	**-1.5**
JMN				*e*S	**S**	**12 30 41.5**	**-3.0**
MJAR	**Matsushiro Arr**	**3.87**	**5**	P	**Pn**	**12 29 54.3**	**-1.0**
	0.4nm,0.3s,baz=188,slow=10,SNR=94						
MAT	**Matsushiro**	**3.87**	**5**	P	**Pn**	**12 29 54.3**	**-1.1**
MAT				S	**S**	**12 30 48.1**	**-3.3**
MAT	**Matsushiro**	**3.87**	**5**	P	**Pn**	**12 29 54.2**	**-1.1**
MAT				*e*S	**S**	**12 30 48.0**	**-3.3**
JTO	**Tosashimizu**	**4.22**	**274**	P	**Pn**	**12 29 57.4**	**-1.5**
JHS	**Saijyo**	**4.54**	**302**	P	**Pn**	**12 30 01.3**	**-0.8**
JHS				*e*S	**S**	**12 31 02.0**	**-1.7**
JOI	**OKI**	**5.21**	**315**	P	**Pn**	**12 30 08.2**	**-1.0**
JNU	**Nakatsue**	**5.85**	**276**	P	**Pn**	**12 30 15.3**	**-0.9**
	0.6nm,0.3s,baz=90,slow=3.7,SNR=11						
KSRS	**Korea Array**	**9.40**	**303**	P	**Pn**	**12 30 57.3**	**+0.4**
	0.5nm,0.3s,baz=116,slow=13,SNR=42						
USRK	**Ussuriysk Ar.**	**12.37**	**340**	P	**P**	**12 31 30.9**	**+0.3**
	0.3nm,0.3s,baz=143,slow=9.5,SNR=9.7						
KLR	**Kul'dur**	**17.14**	**346**	P	**P**	**12 32 22.3**	**-0.1**
	0.4nm,0.3s,baz=169,slow=9.3,SNR=14						
SONM	**Songino Array**	**28.11**	**312**	P	**P**	**12 34 06.0**	**+1.0**
	2.7nm,0.7s,baz=111,slow=8.3,SNR=8.9						
ZALV	**Zalesovo Beam**	**42.82**	**316**	P	**P**	**12 36 07.8**	**-0.6**
	1.1nm,0.3s,baz=121,slow=9.8,SNR=4.6						
ODAN	**Odare**	**43.82**	**276**	*e*P	**P**	**12 36 15.6**	**-1.4**
	12nm,0.5s						
MKAR	**Makanchi Array**	**44.07**	**305**	P	**P**	**12 36 18.5**	**0.0**
	2.9nm,0.5s,baz=88,slow=9.8,SNR=34						
RAMN	**Ramite**	**44.45**	**277**	*e*P	**P**	**12 36 21.2**	**-0.8**
	32nm,0.7s						
JIRN	**Jiri**	**44.55**	**278**	*e*P	**P**	**12 36 22.7**	**-0.2**
	72nm,0.6s						
GUN	**Gumba**	**44.73**	**278**	*e*P	**P**	**12 36 24.0**	**-0.3**
	37nm,0.7s						
PKI	**Pulchoki**	**45.24**	**278**	*e*P	**P**	**12 36 27.3**	**-0.9**
	14nm,0.6s						
PKIN	**Phulchoki**	**45.25**	**278**	*e*P	**P**	**12 36 27.3**	**-0.9**
	13nm,0.6s						
KKN	**Kakani**	**45.27**	**278**	*e*P	**P**	**12 36 27.7**	**-0.6**
	34nm,0.9s						
DMN	**Daman**	**45.48**	**278**	*e*P	**P**	**12 36 29.4**	**-0.6**
	11nm,0.6s						
DANN	**Dangsing**	**46.35**	**280**	*e*P	**P**	**12 36 36.6**	**-0.1**
	41nm,0.7s						
PYUN	**Piuthan**	**47.08**	**280**	*e*P	**P**	**12 36 42.0**	**-0.2**
	46nm,0.5s						
WRA	**Warramunga Arr**	**52.43**	**184**	P	**P**	**12 37 20.4**	**-1.4**
	1.4nm,0.3s,baz=354,slow=6.4,SNR=67						
ILAR	**Eielson Array**	**54.74**	**31**	P	**P**	**12 37 38.9**	**+1.1**
	1.1nm,0.7s,baz=276,slow=5.6,SNR=13						
ASAR	**Alice Springs**	**56.16**	**184**	P	**P**	**12 37 47.3**	**-1.0**
	1.3nm,0.7s,baz=14,slow=9.5,SNR=33						
YKA	**Yellowknife Ar**	**69.04**	**28**	P	**P**	**12 39 13.1**	**+1.2**
	0.6nm,0.8s,baz=295,slow=6.1,SNR=6.1						
FINES	**FINESS Array B**	**71.26**	**332**	P	**P**	**12 39 25.7**	**+0.4**
	0.7nm,0.4s,baz=73,slow=6.9,SNR=13						
KBZ	**Khabaz**	**71.47**	**310**	P	**P**	**12 39 27.6**	**+0.7**
	2.6nm,0.6s,baz=99,slow=5.7,SNR=5.7						
AKASG	**Malin Array Be**	**75.89**	**322**	P	**P**	**12 39 52.2**	**0.0**
	0.9nm,0.5s,baz=48,slow=7.7,SNR=5.2						
NOA	**NORSAR Array B**	**77.01**	**336**	P	**P**	**12 39 58.4**	**+0.2**
	0.3nm,0.5s,baz=90,slow=6.6,SNR=2.6						
BRTR	**Keskin Array B**	**79.46**	**310**	P	**P**	**12 40 13.0**	**+0.9**
	1.4nm,0.7s,baz=80,slow=3.4,SNR=7.5						
NVAR	**Mina Array Bea**	**80.00**	**51**	P	**P**	**12 40 16.8**	**+1.7**
	0.7nm,0.7s,baz=293,slow=4.3,SNR=6.9						
PDAR	**Pinedale Array**	**82.84**	**43**	P	**P**	**12 40 31.4**	**+1.6**
	0.7nm,0.8s,baz=309,slow=0.9,SNR=6.5						
TXAR	**Lajitas Array**	**95.15**	**50**	P	**P**	**12 41 30.0**	**+2.0**
	0.5nm,0.7s,baz=280,slow=2.6,SNR=8.6						

IDC 01 12:34:09.4±43.0, 18°.15S×173°.98E, h0km, mb4.3/4, mb1 4.5/4, mb1mx3.8/29, mbtmp4.3/4, Error ellipse: s-maj=741.7km s-min=131.8km az=70.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**26.26**	**261**	P	P	12 39 46.9	+0.3
	3.2nm,0.7s,baz=68,slow=11,SNR=5.3						
STKA	**Stephens Creek**	**32.24**	**239**	P	P	12 40 39.2	-0.5
	2.2nm,0.6s,baz=56,slow=7.3,SNR=4.6						
WRA	**Warramunga Arr**	**37.46**	**261**	P	P	12 41 25.2	+0.3
	1.3nm,0.5s,baz=84,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**37.75**	**255**	P	P	12 41 27.1	-0.3
	6.0nm,0.8s,baz=80,slow=9.1,SNR=26						

TRN 01 12:35:51.0, 14°.38N×60°.45W, h52km, MD3.5, 11C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPOM	**Morne Pois Mar**	**0.40**	**279⇑**	*e*P	Pn	12 36 02.8	+1.4
LPMF	**Morne Lapointe**	**0.54**	**291⇑**	*e*P	Pn	12 36 04.0	+1.1
ILAM	**Ilet Lapin Mar**	**0.57**	**314⇑**	*e*P	Pn	12 36 04.7	+1.4
SLW	**Petit Monier**	**0.59**	**233⇑**	*i*P	Pn	12 36 05.3	+1.7
ZAM	**Aeronautique**	**0.59**	**289⇑**	*e*P	Pn	12 36 04.7	+1.1
TRMF	**Trois Ilets**	**0.60**	**285⇑**	*e*P	Pn	12 36 05.0	+1.3
BIM	**Bigot**	**0.62**	**283⇑**	*e*P	Pn	12 36 05.1	+1.2
SLBI	**Saint Lucia, B**	**0.62**	**235**	*e*P	Pn	12 36 04.4	+0.6
SLBI				*e*S	Sn	12 36 14.7	+1.5
SLPA	**Patience**	**0.69**	**221**	*e*P	Pn	12 36 06.1	+1.3
SLPA				*e*S	Sn	12 36 16.6	+1.8
FDF	**Fort de France**	**0.77**	**298⇑**	*e*P	Pn	12 36 06.8	+1.0
SLB	**Belfond**	**0.79**	**226⇑**	*i*P	Pn	12 36 08.3	+2.2
SLB				*e*S	Sn	12 36 19.5	+2.3
BAMF	**Morne Balai**	**0.80**	**303⇑**	*e*P	Pn	12 36 07.4	+1.1
GBMF	**Grand Be**	**0.81**	**301⇑**	*e*P	Pn	12 36 07.4	+1.0
PML	**Morne Lenard**	**0.82**	**299**	*e*P	Pn	12 36 07.5	+1.1
CXM	**Morne La Croix**	**0.82**	**302**	*e*P	Pn	12 36 07.7	+1.1
MCLT	**Moule a Chique**	**0.82**	**216**	*e*	Pn	12 35 59.6	-6.9
MCLT	**Moule a Chique**	**0.82**	**216**	*e*P	Pn	12 36 06.9	+0.5
MCLT				*e*S	Sn	12 36 19.8	+2.1
SLDE	**Delcer**	**0.82**	**226**	*e*P	Pn	12 36 07.9	+1.4
SLDE				*e*S	Sn	12 36 20.0	+2.2
PCM	**Pelee Case Pet**	**0.85**	**301**	*e*P	Pn	12 36 08.0	+1.1
SFAN	**Fancy Village**	**1.21**	**215**	*e*P	Pn	12 36 13.4	+1.7
DLPL	**La Plaine**	**1.22**	**321**	*e*P	Pn	12 36 12.8	+0.9
DLPL				*e*S	Sn	12 36 29.5	+2.2
DBCT	**Belle View Cho**	**1.24**	**316**	*e*P	Pn	12 36 13.1	+1.0
DBCT				*e*S	Sn	12 36 30.0	+2.2
SSV	**Crater Summit**	**1.27**	**215**	*e*P	Pn	12 36 14.2	+1.6
SVCV	**St. Vincent, C**	**1.29**	**212**	*e*P	Pn	12 36 13.5	+0.7
SVCV				*e*S	Sn	12 36 30.9	+1.8
SVV	**Soufriere Volc**	**1.29**	**215**	*e*P	Pn	12 36 14.6	+1.8
MDN	**Morne-Daniel**	**1.31**	**316**	*e*P	Pn	12 36 14.3	+1.4
MDN				*e*S	Sn	12 36 31.4	+2.0
SVB	**Belmont**	**1.35**	**215**	*e*P	Pn	12 36 14.3	+0.8
SVB				*e*S	Sn	12 36 31.7	+1.3
FCV	**Fort Charlotte**	**1.44**	**213**	*e*P	Pn	12 36 15.5	+0.7
DWS	**Wesley**	**1.45**	**325**	*e*P	Pn	12 36 16.0	+1.2
DWS				*e*S	Sn	12 36 34.4	+1.7
MAGL	**Barre de l'ile**	**1.76**	**333**	*e*P	Pn	12 36 19.6	+0.5
TDBA	**Terre de Bas,**	**1.86**	**322**	*e*P	Pn	12 36 22.1	+1.6
TBG	**Guadaloupe-3**	**1.87**	**322**	*e*P	Pn	12 36 22.0	+1.4
TBG				*e*S	Sn	12 36 44.4	+1.4
CBE	**Ff, Capester**	**2.02**	**327**	*e*P	Pn	12 36 23.9	+1.2
ABD	**La Joyeuse, An**	**2.31**	**334**	*e*P	Pn	12 36 27.6	+0.9
GRHS	**Sauteurs**	**2.44**	**209**	*e*P	Pn	12 36 30.1	+1.7
MBBY		**2.86**	**324**	*e*P	Pn	12 36 36.4	+2.2
MBBY				*e*S	Sn	12 37 08.9	+1.5
MLYT	**Lee's Yard**	**2.87**	**324**	*e*S	Sn	12 37 08.8	+1.1
MBGB		**2.90**	**324**	*e*P	Pn	12 36 36.7	+1.9
MBGB				*e*S	Sn	12 37 09.4	+0.9
BPA	**Boggy Peak**	**2.98**	**333**	*e*P	Pn	12 36 38.4	+2.5
BPA	**Boggy Peak**	**2.98**	**333**	*e*S	Sn	12 37 11.4	+1.1

*ISCJB **01** 12:49:41.3±0.8, 21°.1S±0°.2×178°.8W±0°.2, h550km, mb3.5/8, Error ellipse: s-maj=24.0km s-min=14.9km az=143.3*
*IDC **01** 12:49:41.8±3.9, 21°.16S×178°.72W, h547km±44km, mb3.1/8, mb1 3.4/10, mb1mx3.1/25, mbtmp4.1/10, Error ellipse: s-maj=27.4km s-min=22.3km az=153.0*
ISC 01 12:49:42.1±0.9, 21°.2S±0°.2×178°.7W±0°.2, h550km, n13, σ0°20/13, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.81**	**263**	P	**P**	**12 52 39.4**	**-0.1**
	0.2nm,0.3s,baz=117,slow=9.0,SNR=3.1						
URZ	**Urewera**	**17.42**	**191**	P	**P**	**12 53 14.3**	**-0.1**
	0.6nm,0.3s,baz=5.7,slow=10,SNR=5.3						
STKA	**Stephens Creek**	**36.88**	**245**	P	**P**	**12 56 04.8**	**+0.3**
	2.7nm,0.8s,baz=97,slow=8.6,SNR=3.2						
ASAR	**Alice Springs**	**43.70**	**257**	P	**P**	**12 56 59.0**	**0.0**
	2.6nm,0.5s,baz=92,slow=8.2,SNR=78						
ASAR				PcP	**PcP**	**12 58 33.9**	**+0.1**
	0.7nm,0.6s,baz=104,slow=4.0,SNR=9.1						
WRA	**Warramunga Arr**	**43.83**	**263**	P	**P**	**12 56 59.6**	**-0.4**
	1.0nm,0.3s,baz=94,slow=7.3,SNR=39						
MJAR	**Matsushiro Arr**	**70.33**	**324**	P	**P**	**13 00 00.7**	**+0.1**
	0.9nm,0.6s,baz=162,slow=5.8,SNR=2.9						
PETK	**Petropavlovsk-**	**76.72**	**346**	P	**P**	**13 00 36.7**	**+0.1**
	0.9nm,0.7s,baz=134,slow=6.2,SNR=3.4						
NVAR	**Mina Array Bea**	**81.97**	**44**	P	**P**	**13 01 04.8**	**-0.2**
	0.5nm,0.6s,baz=234,slow=7.7,SNR=4.5						
TXAR	**Lajitas Array**	**87.99**	**58**	P	**P**	**13 01 34.4**	**+0.2**
	0.4nm,0.9s,baz=207,slow=5.2,SNR=4.8						
PDAR	**Pinedale Array**	**89.91**	**43**	P	**P**	**13 01 42.9**	**-0.1**
	0.4nm,0.7s,baz=222,slow=2.0,SNR=4.7						
AKASG	**Malin Array Be**	**143.24**	**330**	PKP	PKPab	13 08 11.1	-0.6
	1.3nm,0.5s,baz=41,slow=4.4,SNR=14						
BRTR	**Keskin Array B**	**146.75**	**311**	PKPbc	**PKPbc**	**13 08 22.9**	**0.0**
	1.2nm,0.6s,baz=125,slow=4.8,SNR=7.6						
GERES	**GERESS Array B**	**150.63**	**343**	PKPbc	**PKPbc**	**13 08 32.1**	**-0.1**
	0.7nm,0.8s,baz=46,slow=5.8,SNR=3.9						

*ISCJB **01** 13:28:52.5±0.4, 22°.04N±0°.03×88°.59E±0°.03, h10km, mb4.0/21, MS3.3/3, Error ellipse: s-maj=5.0km s-min=3.9km az=16.0*
*NEIC **01** 13:28:53.9±2.0, 22°.02N×88°.57E, h10km, mb4.1/16, Error ellipse: s-maj=24.6km s-min=11.7km az=230.0*
NEIC Felt [III] at Kolkata and [II] at Baruipur.
*NDI **01** 13:28:55.1±2.6, 22°.02N×88°.54E, h16km±14km, ML4.0*
*IDC **01** 13:28:56.4±1.2, 21°.60N×89°.02E, h0km, mb3.9/6, mb1 4.0/8, mb1mx3.6/42, mbtmp3.9/8, ML4.1/2, MS3.4/3, Ms1 3.4/3, ms1mx2.6/46, Error ellipse: s-maj=39.2km s-min=18.7km az=47.0*
*BJI **01** 13:28:57.5±0.0, 22°.50N×88°.40E, h10km, mb4.2/6, mB4.2/3*
ISC 01 13:28:55.0±0.6, 22°.10N±0°.06×88°.60E±0°.04, h10km, n64, σ2°27/70, mb4.0/21, MS3.2/3, 1C, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BELO	**BELONIA**	**2.87**	**66**	*e*P	**Pn**	**13 29 42.6**	**+1.8**
BELO				*e*S	**Sn**	**13 30 16.1**	**+0.7**
BRDH	**Bariadhala**	**2.88**	**78**	Pn	**Pn**	**13 29 39.1**	**-1.8**
	44nm,0.3s,baz=270,slow=20,SNR=2.0						
BRDH				Lg	Lg	13 30 15.5	
	92nm,0.3s,baz=336,slow=20,SNR=14						
BOK	**Bokaro**	**3.01**	**305**	*e*P	**Pn**	**13 29 41.9**	**-0.9**
BOK				*e*S	**Sn**	**13 30 18.0**	**-1.0**
SAIH	**SAIHA**	**4.08**	**84**	*e*P	**Pn**	**13 29 58.0**	**+0.4**
SAIH				*e*S	**Sn**	**13 30 43.6**	**-2.0**
DHUB	**DHUBRI**	**4.11**	**18**	*e*P	**Pn**	**13 29 58.1**	**+0.3**
DHUB				*e*S	**Sn**	**13 30 46.0**	**+0.1**
DHUB				IAML		13 31 08.0	
	comp=E,393nm,0.0s						
DHUB				IAML		13 31 08.9	
	comp=N,302nm,0.5s						
SHL	**Shillong**	**4.58**	**40**	*e*Pn	**Pn**	**13 30 03.8**	**-0.7**
SHL	**Shillong**	**4.58**	**40**	*e*P	**Pn**	**13 30 04.2**	**-0.3**
SHL				*e*S	**Sn**	**13 30 55.4**	**-2.5**
ODAN	**Odare**	**4.86**	**347**	*e*Pn	**Pn**	**13 30 10.1**	**+1.7**
GUWA	**GUWAHATI**	**4.96**	**34**	*e*P	**Pn**	**13 30 08.8**	**-0.7**
GUWA				*e*S	**Sn**	**13 31 01.9**	**-5.0**
GUWA				IAML		13 32 03.6	
	comp=N,536nm,1.0s						
RAMN	**Ramite**	**5.16**	**340**	*e*Pn	**Pn**	**13 30 14.1**	**+1.6**
GTK	**Tadong**	**5.20**	**0**	*e*x	Pn	13 30 07.6	-5.3
GTK				*i* S	**Sn**	**13 31 10.8**	**-2.2**
GTK				*e*S	**Sn**	**13 31 11.5**	**-1.5**
GTK				IAML		13 31 52.5	
	comp=N,276nm,0.5s						
GTK				IAML		13 31 58.4	
	comp=E,292nm,0.4s						
TEZP	**TEZPUR**	**5.91**	**40**	*e*P	**Pn**	**13 30 23.4**	**+0.9**
TEZP				*e*S	**Sn**	**13 31 26.6**	**-3.8**
TEZP				*e*S	**Sn**	**13 31 26.8**	**-3.5**
JIRN	**Jiri**	**5.95**	**339**	*e*Pn	**Pn**	**13 30 25.5**	**+2.0**
JIRN				*e*Sn	**Sn**	**13 31 30.4**	**-1.5**
	comp=E,740nm,0.6s						
PKI	**Pulchoki**	**6.17**	**333**	*e*Pn	**Pn**	**13 30 27.9**	**+1.4**
PKI				*e*Sn	**Sn**	**13 31 35.6**	**-1.6**
PKIN	**Phulchoki**	**6.18**	**333**	*e*Pn	**Pn**	**13 30 28.2**	**+1.7**
KOHI	**KOHIMA**	**6.20**	**53**	*e*P	**Pn**	**13 30 30.6**	**+3.9**
TAWA	**Tawang**	**6.22**	**28**	IAML		13 32 39.1	
	comp=N,244nm,0.5s						
GUN	**Gumba**	**6.29**	**337**	*e*Pn	**Pn**	**13 30 29.8**	**+1.7**
DMN	**Daman**	**6.33**	**331**	*e*Pn	**Pn**	**13 30 29.6**	**+0.9**
KKN	**Kakani**	**6.41**	**333**	*e*Pn	**Pn**	**13 30 31.1**	**+1.4**
KKN				*e*Sn	**Sn**	**13 31 41.1**	**-2.1**
	comp=N,77nm,0.4s						
MOKO	**MOKOCHONG**	**6.84**	**51**	*e*P	**Pn**	**13 30 36.8**	**+1.2**
MOKO				*e*S	**Sn**	**13 31 48.9**	**-4.8**
MOKO				IAML		13 31 56.8	
	comp=N,100nm,1.0s						
MOKO				IAML		13 32 06.4	
	comp=E,124nm,0.6s						
GKN	**Gorkha**	**6.89**	**329**	*e*Pn	**Pn**	**13 30 36.9**	**+0.7**
KOLN	**Koldanda**	**7.24**	**322**	*e*Pn	**Pn**	**13 30 41.1**	**0.0**
DANN	**Dangsing**	**7.61**	**326**	*e*Pn	**Pn**	**13 30 46.1**	**-0.1**
DANN				*e*Sn	**Sn**	**13 32 07.9**	**-4.8**
	comp=E,124nm,0.6s						
PYUN	**Piuthan**	**7.84**	**321**	*e*Pn	**Pn**	**13 30 48.5**	**-0.8**
PYUN				*e*Sn	**Sn**	**13 32 12.6**	**-5.7**
	comp=E,97nm,0.5s						
LSA	**Lhasa**	**7.91**	**16**	*e*Pn	Pn	13 30 48.4	-2.1
LSA				*e*Sn	**Sn**	**13 32 21.1**	**+0.8**
JBP	**Jabalpur**	**8.03**	**279**	*i* x	**Sn**	**13 32 17.8**	**-4.8**
JBP				*e*x	x	13 32 33.6	
NGP	**Nagpur**	**8.93**	**266⇑**	*e*P	**Pn**	**13 31 01.6**	**-2.5**
NGP				*e*S	Sn	13 32 33.7	-11
CHTO	**Chiang Mai**	**10.24**	**107**	*e*Pn	**Pn**	**13 31 22.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**10.36**	**109**	Pn	Pn	13 31 21.2	-2.6
	comp=E,0.4nm,0.3s,baz=286,slow=13,SNR=14						
HYB	**Hyderabad**	**10.54**	**246**	*i* P	Pn	13 31 32.0	+5.8
HYB				*e*S	**Sn**	**13 33 25.0**	**+0.5**
PALK	**Pallekele**	**16.59**	**208**	*e*Pn	**Pn**	**13 32 43.8**	**-4.1**
	comp=E,28nm,1.1s						
NIL	**Nilore**	**17.76**	**314**	*e*Pn	**Pn**	**13 32 58.6**	**-3.8**
	comp=E,13nm,1.0s						
KBL	**Kabul**	**21.16**	**310**	*e*P	**P**	**13 33 40.8**	**+0.2**
	comp=E,5.7nm,0.9s						
XAN	**Xi'an**	**21.47**	**52**	P	**P**	**13 33 44.8**	**+1.0**
XAN				pP	sP	13 33 53.3	+5.4
XAN				pmax	pmax		
	comp=E,5.0nm,1.4s						
XAN	**Xi'an**	**21.47**	**52**	*e*P	**P**	**13 33 42.0**	**-1.8**
	comp=E,3.3nm,0.6s						
TARG	**Taragay, Kyrgy**	**21.57**	**338**	*e*P	**P**	**13 33 45.4**	**+0.2**
	comp=E,4.7nm,0.8s						
WMQ	**Urumqi**	**21.68**	**358**	*e*P	**P**	**13 33 49.1**	**+3.2**
NRN	**Naryn**	**22.00**	**334**	*e*P	**P**	**13 33 49.7**	**0.0**
	comp=E,2.2nm,0.8s						
KDJ	**Kajisay**	**22.15**	**337**	*e*P	**P**	**13 33 50.7**	**-0.4**
	comp=E,11nm,0.8s						
GAR	**Garm**	**22.98**	**321**	*e*P	**P**	**13 34 02.3**	**+2.3**
	comp=E,15nm,0.8s						
BTK	**Batken**	**23.42**	**324**	*e*P	**P**	**13 34 04.1**	**-0.3**
	comp=E,14nm,0.9s						
AAR	**Ala-Archa**	**23.63**	**333**	P	P	13 34 14.4	+8.0
	comp=E,2.3nm,0.7s,baz=214,slow=5.0,SNR=1.8						
AAK	**Ala-Archa**	**23.63**	**333**	*e*P	**P**	**13 34 07.2**	**+0.8**
	comp=E,2.6nm,0.6s						
MK31	**Makanchi Array**	**25.16**	**350**	*e*P	**P**	**13 34 21.9**	**+1.5**
MK32	**Makanchi Array**	**25.16**	**350**	*e*P	**P**	**13 34 22.6**	**+2.2**
MKAR	**Makanchi Array**	**25.16**	**350**	P	**P**	**13 34 22.6**	**+2.2**
	comp=E,0.6nm,0.6s,baz=167,slow=11,SNR=8.5						
MAKZ	**Makanchi**	**25.23**	**349**	*e*P	**P**	**13 34 20.4**	**-0.6**
	comp=E,2.7nm,1.1s						
HHC	**Hu-ho-hao-te**	**26.94**	**41**	*e*P	**P**	**13 34 40.5**	**+3.8**
HHC				pmax	pmax		
	comp=E,15nm,1.1s						
SONM	**Songino Array**	**29.38**	**25**	LR	LR	13 49 27.5	
	comp=E,50nm,18.5s,baz=84,slow=42						
KURBB	**Kurchatov Arra**	**29.54**	**347**	P	P	13 35 08.8	+9.2
	comp=E,0.9nm,0.2s,baz=165,slow=8.6,SNR=6.0						
KURK	**Kurchatov**	**29.61**	**347**	*e*P	**P**	**13 34 59.7**	**-0.5**
	comp=E,2.8nm,1.0s						
GEYT	**Alibeck**	**30.57**	**308**	LR	LR	13 49 51.2	
	comp=E,26nm,20.2s,baz=175,slow=40			

JMIC	Jan Mayen	11.28	183	Pn	Pn	14 09 34.1 +1.9
JMIC	Jan Mayen	11.28	183	eP	Pn	14 09 33.8 +1.6
SUMG	Summit	11.57	232	ePn	Pn	14 09 33.5 -3.1
SUMG	Summit	11.57	232	eP	Pn	14 09 33.5 -3.1
SUMG	Summit	11.57	232	i P	Pn	14 09 33.4 -3.1
TULEG	Thule	12.02	277	ePn	Pn	14 09 37.1 -5.1
KULLO	Kullorsuaq	12.09	260	i P	Pn	14 09 40.0 -3.2
KULLO	Kullorsuaq	12.09	260	i P	Pn	14 09 40.0 -3.2
SCO	Scoresbysund	12.22	204	ePn	Pn	14 09 48.5 +3.6
SCO	Scoresbysund	12.22	204	eP	Pn	14 09 48.6 +3.6
HAMF	Hammerfest	13.30	133	eP	Pn	14 09 54.2 -5.5
KEV	Kevo	14.49	129	ePn	Pn	14 10 14.3 -1.7
KEV	Kevo	14.49	129	P	Pn	14 10 14.6 -1.4
KEV	Kevo	14.49	129	eP	Pn	14 10 14.3 -1.7
KEV	Kevo	14.49	129	P	Pn	14 10 14.6 -1.4
ARA0	ARCESS Array S	14.55	131	P	Pn	14 10 16.6 -0.2
	baz=355,slow=11					
ARA0	ARCESS Array S	14.55	131	P	Pn	14 10 16.6 -0.2
	baz=355,slow=11					
ARCES	ARCESS Array B	14.55	131	Pn	Pn	14 10 14.8 -2.0
	comp=Z,1.6nm,0.3s,baz=348,slow=9.8,SNR=32					
ARCES				Sn	Sn	14 12 47.1 -11
	comp=Z,0.2nm,0.3s,baz=344,slow=20,SNR=2.5					
ARCES				LR	LR	14 15 55.5
	comp=Z,171nm,19.1s,baz=300,slow=37					
ARE0	ARCESS Array S	14.55	131	ePn	Pn	14 10 16.7 -0.1
KIF	Kilpisjarvi	14.61	138	P	Pn	14 10 17.9 +0.4
KIF	Kilpisjarvi	14.61	138	P	Pn	14 10 17.9 +0.4
KTK1	Kautokeino	14.83	135	eP	Pn	14 10 18.2 -2.4
LOF	Lofoten	14.88	149	eP	Pn	14 10 23.2 +2.0
ILULI	Ilulissat	16.20	243	ePn	Pn	14 10 34.7 -3.8
	comp=Z,25nm,1.0s					
ILULI	Ilulissat	16.20	243	eP	Pn	14 10 34.7 -3.8
ILULI				pmax	pmax	
	comp=Z,25nm,1.0s					
RES	Resolute Bay	17.01	295	Pn	Pn	14 10 44.3 -4.5
	comp=Z,2.5nm,0.3s,baz=19,slow=12,SNR=84					
RES				LR	LR	14 17 11.4
	comp=Z,374nm,19.9s,baz=54,slow=37					
RES	Resolute Bay	17.01	295	ePn	Pn	14 10 44.1 -4.7
	comp=Z,14nm,0.6s					
RES	Resolute Bay	17.01	295	eP	Pn	14 10 44.1 -4.7
RES				pmax	pmax	
	comp=Z,14nm,0.6s					
LVZ	Lovozero	17.12	122	ePn	Pn	14 10 48.1 -2.1
	comp=Z,9.4nm,0.9s					
LVZ	Lovozero	17.12	122	ceP	Pn	14 10 49.2 -1.0
LVZ				pmax	pmax	
	comp=Z,8.0nm,0.8s					
BORG	Borgarnes	17.89	200	LR	LR	14 17 16.5
	comp=Z,43nm,19.6s,baz=342,slow=35					
SFJD	Kangerlussuaq	18.25	240	P	Pn	14 10 58.9 -5.2
	comp=Z,3.2nm,0.3s,baz=15,slow=11,SNR=22					
SFJD				S	Sn	14 14 07.1 -20
	comp=Z,3.3nm,0.3s,baz=94,slow=22,SNR=6.8					
SFJD				LR	LR	14 18 34.8
	comp=Z,230nm,19.9s,baz=16,slow=39					
SFJD	Kangerlussuaq	18.25	240	ePn	Pn	14 10 58.9 -5.2
	comp=Z,49nm,0.9s					
SFJD	Kangerlussuaq	18.25	240	eP	Pn	14 10 58.9 -5.2
SFJD				pmax	pmax	
	comp=Z,49nm,0.9s					
MSF	Maaselka	18.42	130	P	P	14 11 06.0 -0.2
AMDE	Amderma	18.90	90	eP	P	14 11 09.6 -1.7
	comp=Z,4.6nm,0.9s					
AMDE				eS	Sn	14 14 20.6 -22
AKN	Aaknes	20.43	161	P	Pn	14 11 31.9 +1.6
AKN	Aaknes	20.43	161	P	Pn	14 11 31.9 +1.6
TMCR	Tamitsa	21.11	121	eP	P	14 11 31.2 -4.3
TMCR	Tamitsa	21.11	121	eP	P	14 11 31.1 -4.3
	comp=Z,15nm,0.5s					
LSH	Leshukonskoye	21.37	111	eP	P	14 11 38.2 0.0
	comp=Z,8.1nm,0.9s					
NC204	NORSAR Array S	21.52	157	eP	P	14 11 42.0 +2.1
	comp=Z,18nm,0.9s					
JOF	Joensuu	21.57	130	P	P	14 11 43.3 +2.9
JOF				pmax	pmax	
	comp=Z,15nm,0.9s					
NC303	NORSAR Array S	21.60	156	eP	P	14 11 43.7 +2.9
	comp=Z,18nm,0.8s					
NBO00	NORSAR Array S	21.76	157	eP	P	14 11 45.3 +2.8
	comp=Z,20nm,1.0s					
NB201	NORSAR Array S	21.77	156	eP	P	14 11 44.6 +2.0
	comp=Z,23nm,1.0s					
NB2	NORSAR Subarra	21.78	156	P	P	14 11 46.8 +4.1
	comp=Z,8.2nm,1.2s,baz=354,slow=11					
NB2	NORSAR Subarra	21.78	156	P	P	14 11 46.5 +3.7
NB2	NORSAR Subarra	21.78	156	P	P	14 11 46.5 +3.7
NOA	NORSAR Array B	21.78	156	P	P	14 11 43.1 +0.4
	comp=Z,4.6nm,1.0s,baz=351,slow=11,SNR=5.0					
NOA				LR	LR	14 18 35.3
	comp=Z,34nm,21.6s,baz=5.0,slow=32					
NC602	NORSAR Array S	22.10	156	eP	P	14 11 47.7 +1.6
	comp=Z,36nm,1.4s					
NRA0	NORESS Array S	22.10	156	P	P	14 11 48.0 +1.9
	baz=345,slow=11					
NRA0	NORESS Array S	22.10	156	P	P	14 11 48.0 +1.9
	baz=345,slow=11					
FIA1	FINESS Array S	22.50	137	eP	P	14 11 51.0 +0.7
	comp=Z,9.6nm,1.0s					
FIA0	FINESS Array S	22.50	137	P	P	14 11 52.1 +1.8
	baz=345,slow=14					
FIA0	FINESS Array S	22.50	137	P	P	14 11 52.1 +1.8
	baz=345,slow=14					
FINES	FINESS Array B	22.50	137	P	P	14 11 51.9 +1.5
	comp=Z,3.3nm,0.7s,baz=353,slow=9.4,SNR=14					
FINES				PcP	PcP	14 15 43.5 0.0
	comp=Z,0.7nm,0.5s,baz=29,slow=4.4,SNR=5.3					
NRIK	Noril'sk	22.72	66	P	P	14 11 52.7 0.0
	comp=Z,12nm,0.8s,baz=344,slow=4.1,SNR=15					
NRIK				LR	LR	14 21 00.7
	comp=Z,212nm,19.5s,baz=24,slow=37					
HFS	Hagfors	22.83	153	P	P	14 11 55.0 +1.1
	comp=Z,6.9nm,1.0s,baz=355,slow=7.4,SNR=9.0					
HFS				LR	LR	14 19 09.7
	comp=Z,78nm,21.1s,baz=1.5,slow=32					
HFS	Hagfors	22.83	153	P	P	14 11 56.0 +2.2
	slow=5.9					
HFS	Hagfors	22.83	153	P	P	14 11 56.0 +2.2
	slow=5.9					
KONO	Kongsberg	23.08	158⇓	eP	P	14 11 57.8 +1.3
KONO				pmax	pmax	
	comp=Z,11nm,1.1s					
FRB	Frobisher Bay	23.64	258	P	P	14 12 02.0 0.0
	comp=Z,12nm,0.9s,baz=9.2,slow=8.9,SNR=9.3					
FRB				LR	LR	14 21 22.3
	comp=Z,139nm,20.1s,baz=42,slow=37					
FRB	Frobisher Bay	23.64	258	P	P	14 12 02.0 0.0
PRGR	Permogore	24.48	114	eP	P	14 12 08.8 -1.1
PRGR				pmax	pmax	
	comp=Z,6.0nm,0.6s					
KLMR	Klimovskoe	24.50	121	eP	P	14 12 09.5 -0.6
KLMR				pmax	pmax	
	comp=Z,22nm,1.3s					
KLMR	Klimovskoe	24.50	121	eP	P	14 12 10.9 +0.8
	comp=Z,22nm,1.3s					
TIXI	Tiksi	24.69	32	P	P	14 12 11.7 0.0
	comp=Z,1.9nm,0.6s,baz=340,slow=9.3,SNR=5.1					
TIXI				LR	LR	14 21 44.4
	comp=Z,116nm,18.6s,baz=352,slow=36					
TIXI	Tiksi	24.69	32⇑	eP	P	14 12 12.0 +0.3
TIXI				pmax	pmax	
	comp=Z,5.0nm,1.2s					
INK	Inuvik	27.22	319	P	P	14 12 34.3 -0.3
	comp=Z,0.7nm,0.5s,baz=356,slow=6.4,SNR=4.4					
INK	Inuvik	27.22	319	eP	P	14 12 34.3 -0.3
	comp=Z,2.6nm,0.7s					
OBN	Obninsk	29.79	127	LR	LR	14 25 17.0
	comp=Z,30nm,18.0s,baz=22,slow=37					
BILL	Bilibino	29.91	5	eP	P	14 12 56.0 -2.6
	comp=Z,12nm,1.5s					
BILL	Bilibino	29.91	5⇑	iP	P	14 12 58.3 -0.2
BILL				e		14 13 51.6
BILL				eS	S	14 18 03.1 +8.0
BILL				eSS	SnSn	14 19 25.6 +0.1
BILL				pmax	pmax	
	comp=Z,8.0nm,1.5s					
BILL				MLR	MLR	
	comp=Z,181nm,19.0s					
YKA	Yellowknife Ar	30.91	301	P	P	14 13 08.1 +0.8
	comp=Z,0.6nm,0.6s,baz=11,slow=8.9,SNR=9.5					
YKA				PcP	PcP	14 16 04.0 +0.7
	comp=Z,0.9nm,0.7s,baz=6.0,slow=2.7,SNR=8.9					
YKA				LR	LR	14 25 06.2
	comp=Z,17nm,20.3s,baz=14,slow=36					
YKB5	Yellowknife Ar	30.91	301	eP	P	14 13 08.1 +0.8
YKB5				ePcP	PcP	14 16 04.0 +0.7
ARU	Arti	31.21	103	P	P	14 13 11.0 +0.9
ARU				S	S	14 18 19.9 +4.3
ARU				SS	SnSn	14 20 03.0 +5.6
EGAK	Eagle	31.33	324	eP	P	14 13 11.2 +0.1
	comp=Z,3.4nm,0.9s					
CLL	Collm	31.59	156	eP	P	14 13 15.0 +1.6
CLL				e(PP)		14 14 24.0
CLL				ePPP	PPP	14 14 27.0
CLL	Collm	31.59	156	eP	P	14 13 15.0 +1.6
COLA	College	31.74	329⇑	eP	P	14 13 15.0 +0.4
COLA				pmax	pmax	
	comp=Z,2.0nm,0.8s					
ILAR	Eielson Array	31.77	328	P	P	14 13 15.6 +0.6
	comp=Z,1.4nm,0.8s,baz=5.8,slow=7.7,SNR=19					
ILAR				PcP	PcP	14 16 05.8 +0.2
	comp=Z,1.1nm,0.7s,baz=333,slow=3.0,SNR=7.6					
ILB	Eielson Array	31.77	328	eP	P	14 13 14.5 -0.5
	comp=Z,2.1nm,0.8s					
ILB				ePcP	PcP	14 16 05.8 +0.2
SCHQ	Schefferville	32.05	251	LR	LR	14 26 38.0
	comp=Z,166nm,18.6s,baz=333,slow=37					
BRG	Berggiesshubel	32.07	155	eP	P	14 13 19.6 +1.8
	comp=Z,4.8nm,1.2s					
	comp=N,2μm,21.2s					
	comp=E,969nm,19.1s					
	comp=Z,2μm,18.9s					
BRG	Berggiesshubel	32.07	155	eP	P	14 13 19.5 +1.8
BRG				pmax	pmax	
	comp=Z,5.0nm,1.2s					
WRH	Wood River Hil	32.16	329	eP	P	14 13 18.5 +0.2
	comp=Z,3.6nm,0.9s					
NKC	Novy Kostel	32.63	157	P	P	14 13 25.5 +2.9
NKC				pmax	pmax	
	comp=Z,6.0nm,0.8s					
OJC	Ojcow	33.10	148	eP	P	14 13 27.2 +0.4
	comp=Z,6.8nm,0.7s					
OJC	Ojcow	33.10	148	eP	P	14 13 27.2 +0.4
OJC				pmax	pmax	
	comp=Z,7.0nm,0.7s					
MORC	Moravsky Berou	33.39	151	eP	P	14 13 30.9 +1.6
	comp=Z,4.9nm,0.9s					
MORC	Moravsky Berou	33.39	151	eP	P	14 13 30.9 +1.6
MORC				pmax	pmax	
	comp=Z,5.0nm,0.9s					
MORC	Moravsky Berou	33.39	151	eP	P	14 13 31.1 +1.8
MORC				e		14 13 38.6
AKASG	Malin Array Be	33.41	137	P	P	14 13 29.3 -0.1
	comp=Z,0.9nm,0.5s,baz=351,slow=8.9,SNR=5.0					
AKASG	Malin Array Be	33.41	137	i P	P	14 13 30.0 +0.6
AKASG				pmax	pmax	
	comp=Z,1.0nm,0.5s					
KIEV	Kiev	33.41	137⇑	eP	P	14 13 30.0 +0.6
KIEV				pmax	pmax	
	comp=Z,6.0nm,1.7s					
VRAC	Vranov	33.79	152	P	P	14 13 34.5 +1.7
	comp=Z,4.5nm,0.9s,baz=351,slow=10.0,SNR=5.4					
VRAC	Vranov	33.79	152	eP	P	14 13 34.7 +1.9
VRAC				e		14 13 42.5
NIE	Niedzica	33.94	148	P	P	14 13 36.8 +2.7
NIE				pmax	pmax	
	comp=Z,3.0nm,1.0s					
KRUC	Moravsky	34.03	152	eP	P	14 13 36.4 +1.6
KRUC				e		14 13 44.2
GERES	GERESS Array B	34.08	156	P	P	14 13 37.8 +2.4
	comp=Z,1.8nm,0.7s,baz=12,slow=7.0,SNR=11					
LANS	Liptovska Anna	34.15	149	eP	P	14 13 38.3 +2.4
LANS				e		14 13 46.1
LANS	Liptovska Anna	34.15	149	eP	P	14 13 38.3 +2.4
LANS				esP	pwP	14 13 46.1 +3.3
YAK	Yakutsk	34.23	35	eP	P	14 13 34.9 -1.5
	comp=Z,25nm,0.8s					
YAK	Yakutsk	34.23	35	i P	P	14 13 35.5 -0.8
YAK				pmax	pmax	
	comp=Z,29nm,0.8s					
KOLS	Kolonicke sedl	34.57	146	eP	P	14 13 41.5 +2.0
KOLS				pmax	pmax	
	comp=Z,3.0nm,0.8s					
KOLS	Kolonicke sedl	34.57	146	eP	P	14 13 41.5 +2.0
VYHS	Vyhne	34.76	150	eP	P	14 13 43.1 +2.0
VYHS				e		14 13 50.4
VYHS				pmax	pmax	
	comp=Z,2.0nm,0.9s					
VYHS	Vyhne	34.76	150	eP	P	14 13 43.1 +2.0
VYHS				esP	pwP	14 13 50.3 +2.3
MODS	Modra-Piesok	34.77	151	eP	P	14 13 42.6 +1.3
MODS	Modra-Piesok	34.77	151	eP	P	14 13 42.6 +1.3
KECS	Kecovo	34.88	148	eP	P	14 13 43.8 +1.6
KECS	Kecovo	34.88	148	eP	P	14 13 43.8 +1.6
HYT	Haines Junctio	34.92	320	eP	P	14 13 44.0 +1.4
	comp=Z,4.7nm,0.8s					
MOA	Molln	35.11	155	epP	P	14 13 46.4 +2.2
	comp=Z,7.8nm,1.7s					
CONA	Conrad Observa	35.12	153	epP	P	14 13 46.7 +2.3
	comp=Z,3.7nm,0.9s					
BRVK	Borovoye	36.08	92⇑	eP	P	14 13 54.1 +1.7
BRVK				pmax	pmax	
	comp=Z,9.0nm,2.5s					
BVAR	Borovoye Array	36.13	92	P	P	14 13 54.5 +1.6
	comp=Z,0.6nm,0.6s,baz=338,slow=3.5,SNR=5.6					
SOKA	Soboth	36.32	154	epP	pP	14 13 56.6 -0.5
	comp=Z,2.0nm,0.7s					
OBKA	Obir	36.46	155	epP	P	14 13 58.3 +2.5
	comp=Z,6.0nm,0.9s					
BOD	Bodaibo	36.94	50	eP	P	14 13 58.0 -1.7
BOD				pmax	pmax	
	comp=Z,5.0nm,1.4s					
AKTO	Aktyubinsk	36.99	106	P	P	14 14 01.6 +1.3
	comp=Z,1.7nm,0.7s,baz=346,slow=7.4,SNR=7.8					
ZAA1	Zalesovo Array	37.18	78	eP	P	14 14 03.0 +1.2
ZALV	Zalesovo Beam	37.19	78	P	P	14 14 03.1 +1.2
	comp=Z,1.9nm,0.7s,baz=354,slow=8.4,SNR=7.0					
MA2	Magadan	37.97	18⇑	eP	P	14 14 07.4 -1.0
MA2				pmax	pmax	
	comp=Z,14nm,1.3s					
KDAK	Kodiak Island	39.11	331	eP	P	14 14 18.2 +0.3
	comp=Z,8.8nm,0.9s					
KDAK	Kodiak Island	39.11	331	eP	P	14 14 18.2 +0.3
KDAK				pmax	pmax	
	comp=Z,9.0nm,0.9s					
KURK	Kurchatov	39.51	85⇓	eP	P	14 14 22.0 +0.6
KURK				pmax	pmax	
	comp=Z,7.0nm,1.1s					
KURBB	Kurchatov Arra	39.59	85	P	P	14 14 23.2 +1.2
	comp=Z,3.6nm,0.9s,baz=348,slow=7.8,SNR=24					
ULM	Lac du Bonnet	40.45	278	LR	LR	14 31 04.2
	comp=Z,170nm,19.2s,baz=28,slow=36					
D53A	Lac Vacive, Po	41.08	259	eP	P	14 14 36.7 +2.2
	comp=Z,5.0nm,0.9s					
KIV	Kislovodsk	41.48	124	eP	P	14 14 37.4 -0.4
KIV				pmax	pmax	
	comp=Z,15nm,1.0s					
KBZ	Khabaz	41.72	124	P	P	14 14 40.0 +0.3
	comp=Z,1.8nm,0.8s,baz=57,slow=2.6,SNR=5.1					
KBZ	Khabaz	41.72	124	P	P	14 14 40.0 +0.3
TLY	Talaya	41.81	61	d iP	P	14 14 40.0 -0.4
ESDC	Sonseca Array	42.67	177	P	P	14 14 49.0 +1.4
	comp=Z,1.3nm,0.7s,baz=0.9,slow=8.8,SNR=9.0					
ZAK	Zakamensk	43.04	62	eP	P	14 14 45.4 -5.1
ZAK				pmax	pmax	
	comp=Z,3.0nm,1.2s					
MAKZ	Makanchi	43.79	83	eP	P	14 14 57.3 +0.7
	comp=Z,12nm,1.0s					
MAKZ	Makanchi	43.79	83	eP	P	14 14 57.3 +0.7
MAKZ				pmax	pmax	
	comp=Z,12nm,1.0s					
MKAR	Makanchi Array	43.85	83	P	P	14 14 57.8 +0.8
	comp=Z,2.5nm,0.7s,baz=348,slow=7.4,SNR=32					
BR101	Keskin Array S	44.70	135	eP	P	14 15 05.8 +1.8
BRTR	Keskin Array B	44.70	135	P	P	14 15 05.8 +1.7
	comp=Z,3.1nm,0.7s,baz=353,slow=5.7,SNR=15					
KK31	Karatay Array	45.86	95	eP	P	14 15 14.8 +1.7
	comp=Z,5.6nm,0.9s					
KK31	Karatay Array	45.86	95	eP	P	14 15 14.8 +1.7
KK31				pmax	pmax	
	comp=Z,6.0nm,0.9s					
KKAR	Karatay Array	45.86	95	eP	P	14 15 14.8 +1.7
	comp=Z,5.6nm,0.9s					
KKAR	Karatay Array	45.86	95	eP	P	14 15 14.8 +1.7
KKAR				pmax	pmax	
	comp=Z,6.0nm,0.9s					
SONA0	Songino Array	45.92	60	eP	P	14 15 14.2 +0.6
SONA0				ePcP	PcP	14 16 51.1 +0.8
SONM	Songino Array	45.92	60	P	P	14 15 14.2 +0.6
	comp=Z,3.3nm,0.9s,baz=340,slow=7.7,SNR=18					
SONM				PcP	PcP	14 16 51.1 +0.8
	comp=Z,0.6nm,0.7s,baz=344,slow=4.7,SNR=2.4					
ULN	Ulaanbaatar	45.97	59	eP	P	14 15 15.0 +1.0
	comp=Z,22nm,1.1s					
ULN	Ulaanbaatar	45.97	59	eP	P	14 15 15.0 +1.0
ULN				pmax	pmax	
	comp=Z,22nm,1.1s					
AAK	Ala-Archa	46.87	91	deP	P	14 15 23.1 +2.0
AAK				pmax	pmax	
	comp=Z,15nm,1.7s					
PDGK	Podgornoye	46.87	86	P	P	14 15 22.6 +1.5
PDGK				pmax	pmax	
	comp=Z,14nm,0.9s					
KLR	Kul'dur	47.09	36⇑	eP	P	14 15 21.6 -1.0
KLR				pmax	pmax	
	comp=Z,4.0nm,1.1s					
WMQ	Urumqi	47.49	78	eP	P	14 15 27.9 +2.0
WMQ				sP	pwP	14 15 35.1 +2.2
WMQ				pmax	pmax	
	comp=Z,25nm,1.1s					
WMQ				pmax	pmax	
	comp=Z,43nm,4.1s					
WMQ				LR	LR	
	comp=N,18μm,14.3s					
WMQ				LR	LR	
	comp=E,10μm,14.3s					
WMQ				LR	LR	
	comp=Z,10μm,21.9s					
GEYT	Alibeck	49.30	109	P	P	14 15 39.4 -0.4
	comp=Z,1.7nm,0.8s,baz=304,slow=10,SNR=4.3					
PDAR	Pinedale Array	49.60	289	P	P	14 15 42.8 +0.5
	comp=Z,0.1nm,0.3s,baz=77,slow=4.1,SNR=2.9					
KSH	Kashi	50.13	91	eP	P	14 15 50.4 +4.1
KSH				pmax	pmax	
	comp=Z,17nm,1.0s					
KSH				pmax	pmax	
	comp=Z,260nm,5.8s					
SMCO	Snowmass	52.80	286	eP	P	14 16 08.1 +1.6
	comp=Z,4.4nm,1.0s					
HHC	Hu-ho-hao-te	53.41	56	eP	P	14 16 10.0 -0.7
HHC				pmax	pmax	
	comp=Z,25nm,0.9s					
HHC				pmax	pmax	
	comp=Z,61nm,5.8s					
GTA	Gaotai	53.42	68	P	P	14 16 10.8 0.0
GTA				pP	pwP	14 16 16.4 -1.4
GTA				sP	sP	14 16 18.9 +4.6
GTA				pmax	pmax	
	comp=Z,3.0nm,1.2s					
NV01	Mina Array Sit	54.98	297	eP	P	14 16 23.2 +0.9
NVAR	Mina Array Bea	54.98	297	P	P	14 16 23.2 +0.9
	comp=Z,0.3nm,0.6s,baz=7,slow=8.2,SNR=3.2					
LZH	Lanzhou	57.20	64	eP	P	14 16 38.9 +0.8
LZH				pP	sP	14 16 42.0 +0.3
LZH				sP	pwP	14 16 44.9 -0.2
LZH				PP	PP	14 18 43.7 -0.9
LZH				pmax	pmax	
	comp=Z,18nm,1.3s					
LZH				pmax	pmax	
	comp=Z,100nm,4.3s					
LTX	Lajitas	62.05	281	eP	P	14 17 11.9 +0.4
LTX	Lajitas	62.05	281	eP	P	14 17 11.9 +0.4
TX31	Lajitas Ar. Si	62.05	281	eP	P	14 17 12.1 +0.6
	comp=Z,1.8nm,0.9s					
TXAR	Lajitas Array	62.05	281	P	P	14 17 11.9 +0.4
	comp=Z,0.7nm,0.7s,baz=38,slow=4.3,SNR=9.7					
CD2	Chengdu	62.29	65	eP	P	14 17 11.8 -1.2
CD2				pmax	pmax	
	comp=Z,10.0nm,0.5s					
NJ2	Nanjing	62.91	51	eP	P	14 17 15.9 -1.2
NJ2				pmax	pmax	
	comp=Z,19nm,0.5s					
KMI	Kunming	67.87	67	P	P	14 17 52.1 +2.5
KMI				pmax	pmax	
	comp=Z,13nm,0.7s					
TOA1	Torodi Ar. Sit	69.17	171	eP	P	14 17 57.3 -0.1
TORD	Torodi Ar. Bea	69.17	171	P	P	14 17 57.3 -0.2
	comp=Z,1.2nm,0.5s,baz=352,slow=7.2,SNR=20					
CM31	Chiang Mai Arr	73.95	72	eP	P	14 18 25.2 -1.1
	comp=Z,13nm,1.2s					
CMAR	Chiang Mai Arr	73.95	72	P	P	14 18 25.2 -1.1
	comp=Z,2.7nm,0.8s,baz=338,slow=7.8,SNR=4.1					
CMAR	Chiang Mai Arr	73.95	72	i P	P	14 18 25.0 -1.3
CMAR				pmax	pmax	
	comp=Z,3.0nm,0.8s					
AS31	Alice Springs	119.50	42	ePKPdf	PKPdf	14 25 39.0 -1.3
ASAR	Alice Springs	119.50	42	PKP	PKPdf	14 25 39.0 -1.2
	comp=Z,0.4nm,0.8s,baz=19,slow=1.9,SNR=4.9					
ASAR	Alice Springs	119.50	42	PKIKP	PKPdf	14 25 39.0 -1.2

BJI ***01*** *14:10:01.8±0.0,6°.88N×124°.93E,h10km,mb5.4/89, mB5.6/75,Ms5.7/97,Ms7 5.4/90*

MAN ***01*** *14:10:05.0,7°.29N×124°.79E,h1km,MS5.7*

MAN INTENSITY VII- CARMEN NORTH COTABATO; INTENSITY VI- KABACAN NORTH COTABATO; INTENSITY V - MATALAM NORTH COTABATO; INTENSITY IV- PRES. ROXAS MIDSAYAP AND ARAKAN NORTH COTABATO; INTENSITY III- KIDAPAWAN CITY MAKILALA AND MAGPET NORTH COTABATO; MARAWI CITY LANAO DEL SUR; OZAMIS CITY MISAMIS ORIENTAL; CAGAYAN DE ORO CITY.

IDC ***01*** *14:10:04.4±0.3,7°.32N×124°.79E,h0km,mb4.9/44, mb1 4.9/47,mb1mx4.9/51,mbtmp4.9/47,ML4.0/3,MS5.1/34, Ms1 5.1/34,ms1mx5.0/45,Error ellipse: s-maj=10.5km s-min=6.9km az=39.0*

GCMT ***01*** *14:10:06.7±0.1,7°.34N×124°.83E,H12km,MW5.7/127, Moment Tensor Solution. s108,c183; s127,c352; Duration: 1s7 Moment tensor: Scale 10¹⁷Nm; Mrr-0.60±.03; Mθθ3.80±.03; Mφφ-3.19±.03; Mrθ0.27±.08; Mθφ1.10±.03; Mφr-1.35±.09; Best double couple: M0 3.94900×10¹⁷ NP1:φs304.00000°,δ75.00000°, λ-17.00000°. NP2:φs39.00000°,δ74.00000°, λ-164.00000°. Principal axes: T 3.9700, Plg1.0000°, Azm351.0000°; N -0.0370, Plg68.0000°, Azm83.0000°; P -3.9280, Plg22.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISCJB ***01*** *14:10:06.8±0.4,7°.27N±0°.01×124°.91E±0°.02,h21km±3km, mb5.5/192,MS5.3/558 Error ellipse: s-maj=3.3km s-min=2.2km az=175.5*

NEIC ***01*** *14:10:06.7±0.2,7°.28N×124°.90E,h10km,mb5.7/73, MS5.3/297,MW5.6,MW5.6,Error ellipse: s-maj=5.6km s-min=3.5km az=79.0,Moment Tensor Solution. s28 Moment tensor: Scale 10¹⁷Nm; Mrr0.57; Mθθ2.21; Mφφ-2.78; Mrθ0.06; Mθφ1.30; Mφr-0.11; Best double couple: M0 2.90000×10¹⁷ NP1:φs31.00000°,δ88.00000°, λ-179.00000°. NP2:φs301.00000°,δ89.00000°, λ-2.00000°. Principal axes: T 2.5200, Plg1.0000°, Azm346.0000°; N 0.5800, Plg88.0000°, Azm100.0000°; P -3.1000, Plg2.0000°, Azm256.0000°;*

NEIC Ten people injured and 164 buildings and two bridges damaged in Cotabato. Felt [VII PIVS] at Carmen, [VI PIVS] at Kabacan and [V PIVS] at Matalam. Felt [IV] at Cagayan de Oro and Davao. Felt in much of central and western Mindanao.

NEIC ***01*** *14:10

DMPH				*e*S	**Sn**	**14 10 36.3**	**+4.2**
BUKP	**Musuan**	**0.65**	**16**	*e*P	**Pb**	**14 10 17.9**	**-4.0**
BUKP				*e*S	**Sb**	**14 10 28.0**	**-2.6**
DAV	**Davao City (W)**	**0.71**	**104**	Pg	**Pb**	**14 10 22.0**	**-0.9**
	10μm,0.3s,baz=294,slow=4.2,SNR=620						
DAV				Lg	Lg	14 10 34.5	
	10μm,0.3s,baz=257,slow=16,SNR=58						
DAV	**Davao City (W)**	**0.71**	**104**	*e*Pn	**Pb**	**14 10 22.4**	**-0.6**
DAV	**Davao City (W)**	**0.71**	**104**	P	**Pb**	**14 10 21.4**	**-1.6**
DAV	**Davao City (W)**	**0.71**	**104**	P	**Pb**	**14 10 22.2**	**-0.7**
	SNR=2771						
SKMP	**Bagumbayan, Su**	**0.80**	**205**	*e*P	**Pb**	**14 10 21.1**	**-3.2**
SKMP				*e*S	**Sb**	**14 10 35.3**	**+0.6**
CGP	**Cagayan de Oro**	**1.21**	**351⇑**	*i*P	**Pn**	**14 10 27.2**	**-3.3**
CGP				*i*S	**Sn**	**14 10 41.7**	**-4.4**
MATI	**Mati**	**1.40**	**102**	*e*P	**Pn**	**14 10 32.7**	**-0.4**
MATI				*e*S	**Sb**	**14 10 59.5**	**+7.5**
DDMP	**Don Marcelino,**	**1.41**	**144**	*e*P	**Pn**	**14 10 33.0**	**-0.2**
DDMP				*e*S	**Sb**	**14 10 59.0**	**+6.8**
PAGZ	**Pagadian**	**1.60**	**292**	*e*P	**Pn**	**14 10 32.3**	**-3.5**
PAGZ				*e*S	**Sn**	**14 10 54.3**	**-1.4**
BIPH	**Bislig**	**1.74**	**58⇑**	*e*P	**Pn**	**14 10 37.0**	**-0.7**
BIPH				*e*S	**Sb**	**14 11 01.9**	**+0.1**
BUTP	**Butuan**	**1.86**	**23**	*e*P	**Pn**	**14 10 39.0**	**-0.4**
BUTP				*e*S	**Sb**	**14 11 09.2**	**+3.9**
DCPH	**Dipolog City**	**2.01**	**311⇓**	*e*P	**Pb**	**14 10 45.4**	**+0.3**
DCPH				*e*S	**Sb**	**14 11 12.4**	**+2.7**
IPIL	**Ipil**	**2.35**	**283**	*e*P	**Pn**	**14 10 44.3**	**-1.9**
IPIL				*e*S	**Sn**	**14 11 14.7**	**+0.4**
TBP	**Tagbilaran**	**2.63**	**338**	*e*P	**Pn**	**14 10 49.2**	**-0.8**
SNPH	**Sibulan**	**2.64**	**322⇑**	*i*P	**Pn**	**14 10 50.5**	**+0.3**
SNPH				*i*S	**Sb**	**14 11 25.5**	**-2.4**
ZCP	**Zamboanga City**	**2.80**	**264⇓**	*i*P	**Pn**	**14 10 50.7**	**-1.7**
ZCP				*i*S	**Sn**	**14 11 26.0**	**+0.5**
MSLP	**Maasin**	**2.87**	**360**	*e*P	**Pn**	**14 10 51.2**	**-2.1**
LLP	**Lapu-Lapu**	**3.18**	**344⇑**	*e*P	**Pn**	**14 10 56.4**	**-1.2**
LLP				*e*S	**Sn**	**14 11 37.3**	**+2.5**
SGSI	**Sangihe**	**3.60**	**170**	P	**Pn**	**14 11 03.8**	**+0.5**
OCLP	**Ormoc**	**3.79**	**356**	*e*P	**Pn**	**14 11 04.3**	**-1.6**
OCLP				*e*S	**Sn**	**14 11 54.9**	**+5.1**
PLP	**Palo**	**3.89**	**1⇑**	*i*P	**Pn**	**14 11 05.7**	**-1.7**
GUIM	**Jordan**	**4.05**	**326**	*e*P	**Pn**	**14 11 09.5**	**-0.1**
GUIM				*e*S	**Sn**	**14 12 02.0**	**+5.8**
BESP	**Borongan**	**4.36**	**7**	*e*P	**Pn**	**14 11 13.5**	**-0.3**
JAP	**San Jose, Anti**	**4.53**	**320⇓**	*e*P	**Pn**	**14 11 18.0**	**+1.9**
JAP				*e*S	**Sb**	**14 12 22.4**	**+0.3**
CUYO	**Cuyo Island**	**5.23**	**313**	*e*P	**Pn**	**14 11 23.6**	**-2.2**
CUYO				*e*S	**Sn**	**14 12 30.1**	**+4.8**
CNP	**Cataman**	**5.23**	**358**	*e*P	**Pn**	**14 11 24.5**	**-1.3**
CNP				*e*S	**Sb**	**14 12 40.6**	**-1.7**
OTRP	**Odiongan**	**5.81**	**331**	*e*P	**Pn**	**14 11 32.7**	**-1.1**
PVCP	**Virac**	**6.35**	**354**	*e*P	**Pn**	**14 11 42.8**	**+1.7**
SJMP	**San Jose**	**6.37**	**325**	*e*P	**Pn**	**14 11 42.3**	**+0.9**
AUQP	**San Andres**	**6.41**	**340**	*e*P	**Pn**	**14 11 43.5**	**+1.5**
BUSP	**Coron**	**6.61**	**316**	*e*P	**Pn**	**14 11 43.0**	**-1.7**
ENPP	**El Nido**	**6.67**	**307**	*e*P	**Pn**	**14 11 43.1**	**-2.5**
ENPP				*e*S	**Sn**	**14 13 07.5**	**+6.7**
KMSI	**Cibinong**	**6.69**	**188**	P	**Pn**	**14 11 46.5**	**+0.6**
	1μm,0.6s,18μm7.6nm						
BOAC	**Boac**	**6.86**	**334**	*e*P	**Pn**	**14 11 49.3**	**+1.2**
TNTI	**Ternate**	**6.89**	**159**	*e*Pn	**Pn**	**14 11 49.3**	**+0.7**
TNTI	**Ternate**	**6.89**	**159**	P	**Pn**	**14 11 49.2**	**+0.5**
	928nm,1.3s,10μm17μm3.3nm						
BATP	**Bataraza**	**7.18**	**283**	*e*P	**Pn**	**14 11 48.1**	**-4.5**
MRSI	**Marisa**	**7.34**	**204**	P	**Pn**	**14 11 53.3**	**-1.5**
TGY	**Tagaytay City**	**7.84**	**331**	Pn	Pn	14 12 06.6	+4.9
	64nm,0.3s,baz=203,slow=8.0,SNR=5.7						
LUBP	**Lubang**	**7.89**	**325**	*e*P	**Pn**	**14 12 04.0**	**+1.6**
POLP	**Polilio Island**	**7.97**	**339**	*e*P	Pn	14 12 08.7	+5.2
MPSI	**Mapaga**	**8.47**	**216**	P	**Pn**	**14 12 09.6**	**-0.8**
LUWI	**Luwuk**	**8.50**	**194**	*e*Pn	**Pn**	**14 12 11.8**	**+1.1**
LUWI				*e*Sn	**Sn**	**14 13 50.8**	**+4.8**
LUWI	**Luwuk**	**8.50**	**194**	P	**Pn**	**14 12 11.8**	**+1.1**
	4μm,1.0s,27μm14nm						
BALP	**Baler**	**9.04**	**339**	*e*P	**Pn**	**14 12 19.9**	**+1.8**
SMPP	**San Manuel, Pa**	**9.76**	**335**	*e*P	**Pn**	**14 12 28.5**	**+0.5**
SCZP	**Santa Cruz**	**9.77**	**331**	*e*P	**Pn**	**14 12 31.4**	**+3.2**
PALP	**Palanan**	**10.04**	**346**	*e*P	**Pn**	**14 12 34.6**	**+2.7**
CAUP	**Cauayan**	**10.09**	**343**	*e*P	**Pn**	**14 12 34.4**	**+1.9**
SWI	**Sorong**	**10.27**	**141**	P	Pn	14 12 44.2	+9.2
BOLP	**Bolinao**	**10.29**	**332**	*e*P	**Pn**	**14 12 37.5**	**+2.2**
ABRA	**Dolores**	**11.11**	**339**	*e*P	**Pn**	**14 12 48.9**	**+2.5**
APYP	**Conner**	**11.13**	**342**	*e*P	**Pn**	**14 12 50.9**	**+4.2**
KDI	**Kendari**	**11.36**	**192**	P	**Pn**	**14 12 51.8**	**+1.9**
	517nm,0.9s,5μm						
TTSI	**Tana Toraja**	**11.40**	**206**	P	**Pn**	**14 12 52.0**	**+1.4**
	522nm,1.2s,6μm						
BKB	**Balikpapan**	**11.62**	**224**	P	Pn	14 13 02.6	+9.2
SPSI	**Sidrap Palu**	**12.25**	**205**	P	**Pn**	**14 13 05.4**	**+3.3**
	96nm,1.0s,2μm5μm						
FAKI	**Fak Fak**	**12.49**	**144**	*e*Pn	**Pn**	**14 13 06.5**	**+1.0**
BNSI	**Bone**	**12.52**	**203**	P	**Pn**	**14 13 08.9**	**+3.2**
	217nm,1.4s,7μm10μm						
BNDI	**Bandanaira**	**12.72**	**157**	P	P	14 13 25.0	+5.5
MTKI	**Muara Teweh, K**	**12.86**	**231**	P	**P**	**14 13 19.7**	**-1.4**
KAPI	**Kappang**	**13.21**	**203**	Pn	**Pn**	**14 13 15.2**	**-0.1**
	1.7nm,0.3s,baz=26,slow=11,SNR=25						
KAPI				LR	LR	14 18 18.9	
	comp=Z,17μm,21.7s,baz=27,slow=37						
KAPI	**Kappang**	**13.21**	**203**	P	**Pn**	**14 13 18.4**	**+3.1**
	SNR=27						
BKSI	**Bulukumba**	**13.36**	**201**	P	**Pn**	**14 13 20.6**	**+3.3**
	93nm,1.6s,2μm						
BBP	**Basco**	**13.42**	**348**	*e*P	**Pn**	**14 13 13.9**	**-4.1**
SBUM	**Sibu**	**13.48**	**250**	*e*Pn	**Pn**	**14 13 20.3**	**+1.3**
SBUM	**Sibu**	**13.48**	**250**	P	**Pn**	**14 13 22.0**	**+3.0**
KMPI	**Kaimana, Papua**	**13.96**	**141**	P	**P**	**14 13 34.7**	**+1.4**
BSSI	**Bau Bau, Buton**	**14.01**	**198**	P	**Pn**	**14 13 29.5**	**+3.4**
	188nm,1.5s,5μm						
SRPI	**Serui, Papua**	**14.51**	**128**	P	**P**	**14 13 39.4**	**0.0**
KSM	**Kuching**	**15.62**	**249**	*e*Pn	**Pn**	**14 13 48.0**	**+0.2**
	488nm,1.5s						
KSM	**Kuching**	**15.62**	**249**	P	**P**	**14 13 50.0**	**-1.7**
TWG	**Pinlang**	**15.91**	**347**	*e*Pn	**Pn**	**14 13 51.9**	**+0.4**
	378nm,0.8s						
MMRI	**Maumere**	**16.00**	**190**	*e*Pn	**Pn**	**14 13 52.7**	**0.0**
	3μm,1.9s						
MMRI	**Maumere**	**16.00**	**190**	P	**P**	**14 13 54.6**	**-1.4**
	697nm,1.8s,14μm						
EDFI	**Ende, Flores**	**16.21**	**191**	P	**Pn**	**14 13 56.2**	**+0.8**
	192nm,1.7s,4μm						
YULB	**Yu-li**	**16.42**	**348**	*e*Pn	**Pn**	**14 13 57.6**	**-0.4**
	70nm,1.0s						
TPUB	**Ta-pu**	**16.48**	**346**	*e*Pn	**Pn**	**14 13 58.6**	**-0.1**
	222nm,1.0s						
PBKI	**Pangkalan Bun**	**16.48**	**234**	P	P	14 14 17.8	+16
DLV	**T Lat**	**16.82**	**287**	*e*Pn	**P**	**14 14 06.4**	**+1.0**
	374nm,1.7s						
DLV				*e*Sn	Sn	14 16 51.6	-18
SSLB	**Suanglung**	**16.87**	**348**	*e*Pn	**Pn**	**14 14 03.9**	**+0.1**
	82nm,0.9s						
SSLB				*e*Sn	Sn	14 16 59.1	-11
SOEI	**Soe**	**16.90**	**182**	*e*Pn	**Pn**	**14 14 05.0**	**+0.7**
	1μm,1.3s						
SOEI	**Soe**	**16.90**	**182**	P	**P**	**14 14 05.6**	**-0.5**
	758nm,1.5s,17μm						
NACB	**Ninganchiao**	**17.12**	**350**	*e*Pn	**P**	**14 14 07.8**	**-0.5**
	114nm,1.2s						
NACB				*e*Sn	Sn	14 17 02.7	-14
BATI	**Baumata**	**17.38**	**184**	Pn	**P**	**14 14 10.8**	**-0.5**
	19nm,0.3s,baz=36,slow=4.2,SNR=21						
BATI				LR	LR	14 21 33.3	
	comp=Z,13μm,21.8s,baz=9.0,slow=40						
BATI	**Baumata**	**17.38**	**184**	P	**P**	**14 14 11.3**	**0.0**
	281nm,1.3s,4μm						
WSI	**Waingapu**	**17.41**	**195**	P	**P**	**14 14 16.3**	**+4.6**
PLAI	**Plampang**	**17.47**	**204**	P	**P**	**14 14 14.6**	**+2.3**
	360nm,0.9s,8μm						
YHNB	**Yeheng**	**17.64**	**349**	*e*P	**P**	**14 14 14.4**	**+0.2**
	186nm,1.1s						
WBSI	**Waikabubak, Su**	**17.65**	**198**	P	**P**	**14 14 15.3**	**+1.0**
	350nm,1.9s,7μm						
BASI	**Baing, Sumba**	**17.87**	**194**	P	**P**	**14 14 22.0**	**+5.3**
KMMI	**Kalianget**	**17.90**	**218**	P	**P**	**14 14 20.0**	**+3.0**
	331nm,0.9s,3μm						
SRBI	**Singaraja**	**18.03**	**213**	P	**P**	**14 14 25.0**	**+6.6**
GENI	**Genyem**	**18.12**	**122**	P	**P**	**14 14 23.2**	**+3.7**
KNMB	**Chin-men Tao**	**18.21**	**341**	*e*Pn	**P**	**14 14 23.1**	**+2.7**
	1μm,1.9s						
DNP	**Denpasar**	**18.53**	**212**	P	Pn	14 14 36.6	+12
JAY	**Jayapura**	**18.53**	**121**	P	**P**	**14 14 23.9**	**-0.2**
	0.7nm,0.3s,baz=357,slow=18,SNR=3.3						
JAY				LR	LR	14 20 15.6	
	comp=Z,7μm,19.6s,baz=302,slow=33						
JAY	**Jayapura**	**18.53**	**121**	P	Pn	14 14 32.2	+7.8
QZH	**Quanzhou**	**18.59**	**342⇑**	*i*P	**P**	**14 14 23.5**	**-1.1**
QZH				S	**Sn**	**14 17 52.7**	**+0.4**
QZH				pmax	pmax		
	comp=Z,6μm,6.0s						
QZH				LR	LR		
	comp=N,12μm,21.7s						
QZH				LR	LR		
	comp=E,8μm,22.6s						
QZH				LR	LR		
	comp=Z,14μm,27.6s						
IGBI	**Denpasar**	**18.68**	**211**	P	**Pn**	**14 14 29.5**	**+3.4**
QIZ	**Qiongzhong**	**18.73**	**310**	P	**P**	**14 14 25.7**	**-0.5**
QIZ				S	**S**	**14 18 00.6**	**+2.5**
QIZ				pmax	pmax		
	comp=Z,100nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,4μm,5.4s						
QIZ				LR	LR		
	comp=N,12μm,12.1s						
QIZ				LR	LR		
	comp=E,11μm,14.5s						
QIZ				LR	LR		
	comp=Z,10μm,13.4s						
QIZ	**Qiongzhong**	**18.73**	**310**	*e*P	**Pn**	**14 14 26.4**	**-0.2**
	527nm,1.5s						
GRJI	**Gresik**	**18.73**	**222**	P	**Pn**	**14 14 30.7**	**+4.0**
JAGI	**Jajag, Banyuwa**	**18.93**	**215**	P	**Pn**	**14 14 33.7**	**+4.6**
GZH	**Guangzhou**	**19.26**	**326**	P	**Pn**	**14 14 36.7**	**+3.6**
GZH				S	**S**	**14 18 11.6**	**+2.9**
GZH				pmax	pmax		
	comp=Z,4μm,6.9s						
GZH				LR	LR		
	comp=N,11μm,17.3s						
GZH				LR	LR		
	comp=E,16μm,16.7s						
JOW	**Kunigami**	**19.74**	**9**	P	**P**	**14 14 36.1**	**-1.0**
	0.4nm,0.3s,baz=177,slow=14,SNR=11						
JOW	**Kunigami**	**19.74**	**9**	*e*P	**P**	**14 14 36.8**	**-0.4**
	174nm,1.1s						
NGJI	**Ngawi**	**19.75**	**223**	P	**Pn**	**14 14 40.6**	**+1.7**
	406nm,1.2s,11μm						
TPI	**Tanjungpandan**	**19.86**	**241**	P	**Pn**	**14 14 41.0**	**+0.7**
	136nm,1.2s,2μm						
SMRI	**Semarang**	**20.23**	**226**	PFAKE		14 15 00.0	+15
SMRI				LR	LR		
	comp=Z,11μm,22.0s						
WOJI	**Wonogiri, Jawa**	**20.45**	**223**	P	Pn	14 14 47.1	-0.1
	comp=Z,196nm,1.0s,comp=Z,4μm						
GUMO	**Guam**	**20.63**	**71**	P	**P**	**14 14 44.8**	**-2.2**
	comp=Z,29nm,0.9s,baz=195,slow=20,SNR=2.6						
GUMO				LR	LR	14 23 56.3	
	comp=Z,2μm,18.3s,baz=252,slow=40						
GUMO	**Guam**	**20.63**	**71**	*e*P	Pn	14 14 48.7	-0.6
	comp=Z,592nm,1.3s						
GUMO				LR	LR		
	comp=Z,6μm,21.0s						
GUMO	**Guam**	**20.63**	**71**	*e*P	Pn	14 14 48.7	-0.7
GUMO				pmax	pmax		
	comp=Z,593nm,1.3s						
GUMO				MLR	MLR		
	comp=Z,6μm,21.0s						
UGM	**Wanagama**	**20.78**	**224**	*e*P	Pn	14 14 50.2	-0.9
	comp=Z,1μm,1.4s						
UGM				LR	LR		
	comp=Z,4μm,19.0s						
MTN	**Manton Dam**	**20.91**	**163**	PFAKE		14 15 00.0	+7.5
MTN				LR	LR		
	comp=Z,6μm,21.0s						
MTN	**Manton Dam**	**20.91**	**163**	P	**P**	**14 14 49.0**	**-0.9**
	baz=21,SNR=46						
PPBI	**Pangkal Pinang**	**20.91**	**244**	P	Pn	14 14 53.6	+1.0
	comp=Z,102nm,1.1s,comp=Z,4μm						
KDU	**Kakadu**	**21.19**	**159**	P	**P**	**14 14 51.8**	**-1.2**
	baz=21,SNR=123						
TPRI	**Tanjung Pinang**	**21.25**	**254**	P	**P**	**14 14 54.7**	**+1.1**
	comp=Z,124nm,1.4s						
JCJI	**Jatiwangi**	**21.47**	**231**	P	P	14 15 03.5	+7.5
MYKOM	**Kota Tinggi**	**21.65**	**256**	PFAKE		14 15 10.0	+12
MYKOM				LR	LR		
	comp=Z,7μm,21.0s						
MYKOM	**Kota Tinggi**	**21.65**	**256**	P	**P**	**14 15 04.0**	**+6.1**
DSRI	**Dabo**	**21.66**	**250**	P	**P**	**14 14 59.3**	**+1.2**
	comp=Z,559nm,1.0s,comp=Z,11μmcomp=Z,139μm						
PANO	**Nakornpanom**	**22.10**	**298**	P	**P**	**14 15 01.6**	**-1.1**
	comp=Z,2.7nm,1.0s						
LEM	**Lembang**	**22.18**	**231**	P	**P**	**14 15 02.7**	**-1.1**
	comp=Z,53nm,0.9s,baz=0.8,slow=8.1,SNR=13						
ANA2	**Anatahan**	**22.28**	**64**	PFAKE		14 15 20.0	+15
ANA2				LR	LR		
	comp=Z,3μm,20.0s						
CISI	**Cisompet, Garu**	**22.49**	**230**	*e*P	**P**	**14 15 08.0**	**+1.0**
	comp=Z,638nm,1.2s						
CISI	**Cisompet, Garu**	**22.49**	**230**	P	**P**	**14 15 08.7**	**+1.6**
	comp=Z,442nm,0.9s,comp=Z,7μm						
CBJI	**Citeko**	**22.54**	**233**	P	**P**	**14 15 12.2**	**+4.7**
	comp=Z,591nm,1.5s,comp=Z,11μm						
SKNT	**Sakonnakorn**	**22.58**	**297**	P	**P**	**14 15 05.9**	**-2.0**
	comp=Z,161nm,0.9s						
SBJI	**Serang**	**22.94**	**235**	P	**P**	**14 15 16.6**	**+4.9**
KNRA	**Kununurra**	**23.10**	**170**	P	**P**	**14 15 11.6**	**-1.7**
	baz=23,SNR=60						
SKJI	**Sukabumi**	**23.12**	**233**	P	**P**	**14 15 20.5**	**+6.9**
BLSI	**Bandar Lampung**	**23.26**	**238**	P	**P**	**14 15 20.8**	**+5.8**
KLI	**Kotabumi**	**23.32**	**240**	P	**P**	**14 15 18.6**	**+3.0**
	comp=Z,435nm,1.1s,comp=Z,7μm						
KHON	**Khomkaen**	**23.38**	**295**	P	**P**	**14 15 14.2**	**-2.0**
	comp=Z,241μm,0.8s						
CGJI	**Cibinong**	**23.58**	**235**	P	**P**	**14 15 19.2**	**+1.1**
	comp=Z,500nm,1.3s,comp=Z,7μm						
MDSI	**Maura Dua**	**23.72**	**241**	P	**P**	**14 15 20.7**	**+1.2**
	comp=Z,90nm,1.1s,comp=Z,2μm						
IPM	**Ipoh**	**23.89**	**265**	*e*P	**P**	**14 15 20.1**	**-1.1**
	comp=Z,358nm,1.5s						
IPM	**Ipoh**	**23.89**	**265**	P	**P**	**14 15 21.0**	**-0.1**
KASI	**Kota Agung**	**23.97**	**239**	P	**P**	**14 15 24.3**	**+2.4**
	comp=Z,226nm,1.5s,comp=Z,3μm						
SSE	**Sheshan**	**23.98**	**352**	P	**P**	**14 15 22.7**	**+1.0**
SSE				pP	**pP**	**14 15 25.6**	**-3.4**
SSE				S	**S**	**14 19 42.0**	**+4.9**
SSE				pmax	pmax		
	comp=Z,20nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1μm,4.6s						
SSE				LR	LR		
	comp=Z,1μm,16.2s						
LHSI	**Lahat**	**23.99**	**243**	P	**P**	**14 15 26.0**	**+4.0**
	comp=Z,129nm,1.4s,comp=Z,4μm						
CHAI	**Chiayaphum**	**24.00**	**293**	P	**P**	**14 15 20.1**	**-2.0**
	comp=Z,141μm,0.9s						
SKLT	**Songkhla**	**24.07**	**271**	P	**P**	**14 15 22.2**	**-0.6**
	comp=Z,98nm,1.8s,comp=Z,2μm						
LWLI	**Liwa**	**24.09**	**240**	P	**P**	**14 15 24.8**	**+1.7**
	comp=Z,201nm,1.0s,comp=Z,7μm						
KULM	**Kulim**	**24.16**	**267**	*e*P	**P**	**14 15 22.8**	**-0.9**
	comp=Z,347nm,1.3s						
KULM	**Kulim**	**24.16**	**267**	P	**P**	**14 15 24.0**	**+0.3**
MANU	**Manus Island**	**24.26**	**112**	PFAKE		14 15 40.0	+15
MANU				LR	LR		
	comp=Z,6μm,19.0s						
SLVN	**Son La**	**24.63**	**307**	PFAKE		14 15 40.0	+12
SLVN				LR	LR		
	comp=Z,7μm,19.0s						
MNAI	**Manna**	**24.73**	**243**	P	**P**	**14 15 34.9**	**+6.0**
BKNI	**Bangkinang**	**24.75**	**255**	PFAKE		14 15 40.0	+11
BKNI				LR	LR		
	comp=Z,6μm,21.0s						
BKNI	**Bangkinang**	**24.75**	**255**	P	**P**	**14 15 29.6**	**+0.6**
	comp=Z,294nm,1.1s,comp=Z,4μm						
SDSI	**Sungai Dareh**	**24.77**	**252**	P	**P**	**14 15 36.3**	**+7.1**
TRTT	**Trang**	**24.98**	**273**	P	**P**	**14 15 31.0**	**-0.1**
	comp=Z,108nm,1.9s,comp=Z,3μm						
PBKT	**Sadao Pong**	**25.14**	**294**	P	**P**	**14 15 31.5**	**-0.9**
	comp=Z,36nm,1.5s,comp=Z,1μm						
KRJI	**Kerinci**	**25.14**	**249**	P	**P**	**14 15 34.9**	**+2.2**
	comp=Z,635nm,1.3s,comp=Z,10μm						
WHN	**Wuhan**	**25.19**	**338⇓**	*i*P	**P**	**14 15 35.6**	**+2.8**
WHN				S	**S**	**14 20 05.3**	**+8.6**
WHN				pmax	pmax		
	comp=Z,1μm,1.7s						
WHN				LR	LR		
	comp=Z,10μm,13.0s						
WHN				LR	LR		
	comp=Z,10μm,13.6s						
WHN				LR	LR		
	comp=Z,25μm,19.5s						
FITZ	**Fitzroy Crossi**	**25.20**	**178**	P	**P**	**14 15 31.8**	**-1.2**
	comp=Z,99nm,0.8s,baz=11,slow=7.8,SNR=65						
FITZ				LR	LR	14 27 45.1	
	comp=Z,1μm,20.5s,baz=9.5,slow=42						
FITZ	**Fitzroy Crossi**	**25.20**	**178**	P	**P**	**14 15 31.6**	**-1.3**
	baz=25,SNR=93						
NJ2	**Nanjing**	**25.31**	**348⇑**	*i*P	**P**	**14 15 36.7**	**+2.9**
NJ2				sP	**sP**	**14 15 44.3**	**0.0**
NJ2				S	**S**	**14 20 03.4**	**+4.9**
NJ2				sS	**sS**	**14 20 12.1**	**+1.2**
NJ2				SS	**SnSn**	**14 21 05.7**	**+15**
NJ2				pmax	pmax		
	comp=Z,150nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,2μm,6.9s						
NJ2				LR	LR		
	comp=Z,5μm,16.3s						
NJ2				LR	LR		
	comp=Z,5μm,11.9s						
NJ2				LR	LR		
	comp=Z,7μm,18.4s						
PHET	**Kaeng Krachan**	**25.48**	**285**	P	**P**	**14 15 35.4**	**-0.2**
	comp=Z,207μm,0.8s						
PDSI	**Padang**	**25.68**	**253**	P	**P**	**14 15 37.4**	**0.0**
GYA	**Guiyang**	**25.80**	**320⇑**	*i*P	**P**	**14 15 39.1**	**+0.6**
GYA				pP	pP	14 15 44.0	-1.9
GYA				PcP	**PcP**	**14 19 09.4**	**+1.4**
GYA				S	**S**	**14 20 09.5**	**+2.8**
GYA				ScP	**ScP**	**14 22 46.8**	**+0.7**
GYA				ScS	**ScS**	**14 26 34.9**	**-0.8**
GYA				pmax	pmax		
	comp=Z,30nm,1.3s						
GYA				pmax	pmax		
	comp=Z,1μm,6.5s						
GYA				LR	LR		
	comp=Z,15μm,17.1s						
GYA				LR	LR		
	comp=Z,11μm,19.0s						
GYA				LR	LR		
	comp=Z,13μm,15.9s						
UTTA	**Uttaradit**	**25.91**	**296**	P	**P**	**14 15 38.6**	**-0.8**
	comp=Z,43μm,0.9s,comp=Z,540μm						
XMIS	**Christmas Isla**	**26.02**	**228**	*e*P	**P**	**14 15 40.6**	**+0.1**
	comp=Z,757nm,1.0s						
MNSI	**Mandailing Nat**	**26.03**	**257**	P	**P**	**14 15 42.1**	**+1.5**
	comp=Z,166nm,1.3s,comp=Z,2μm						
NANT	**Nan**	**26.17**	**298**	P	**P**	**14 15 41.1**	**-0.7**
	comp=Z,70μm,0.7s,comp=Z,944μm						
PSI	**Prapat**	**26.23**	**262**	P	**P**	**14 15 42.0**	**-0.5**
	comp=Z,75nm,1.1s,baz=76,slow=6.7,SNR=24						
PSI				PcP	**PcP**	**14 19 10.0**	**+0.8**
	comp=Z,17nm,0.9s,baz=83,slow=14,SNR=3.8						
PSI	**Prapat**	**26.23**	**262**	*e*P	**P**	**14 15 41.1**	**-1.4**
	comp=Z,156nm,1.3s						
PSI	**Prapat**	**26.23**	**262**	*e*P	**P**	**14 15 41.1**	**-1.4**
PSI				pmax	pmax		
	comp=Z,156nm,1.3s						
SRDT	**SRDT**	**26.25**	**288**	P	**P**	**14 15 42.7**	**+0.1**
	comp=Z,52nm,1.3s						
PKDT	**Phuket**	**26.32**	**273**	P	**P**	**14 15 45.8**	**+2.5**
	comp=Z,106nm,1.6s,comp=Z,2μm						
JNU	**Nakatsue**	**26.34**	**11**	P	**P**	**14 15 40.7**	**-2.5**
	comp=Z,31nm,1.0s,baz=199,slow=11,SNR=5.3						
JNU				LR	LR	14 26 19.1	
	comp=Z,3μm,21.1s,baz=198,slow=37						
JNU	**Nakatsue**	**26.34**	**11**	*e*P	**P**	**14 15 42.1**	**-1.1**
	comp=Z,64nm,1.1s						
TSI	**Tuntungan**	**26.46**	**263**	P	**P**	**14 15 46.7**	**+2.2**
	comp=Z,186nm,1.2s						
PHRA	**Phrae**	**26.46**	**297**	P	**P**	**14 15 43.7**	**-0.8**
	comp=Z,15nm,1.2s,comp=Z,315nm						
PPSI	**Pulau Pagai**	**26.74**	**249**	P	P	14 15 56.6	+10
UMPA	**Umpang Tak**	**26.96**	**292**	P	**P**	**14 15 48.7**	**-0.3**
	comp=Z,217μm,1.0s						
LAMP	**Lampang**	**27.00**	**297**	P	**P**	**14 15 49.1**	**-0.2**
	comp=Z,112μm,1.1s,comp=Z,854μm						
ENH	**Enshi**	**27.08**	**330**	*e*P	**P**	**14 15 48.6**	**-1.4**
	comp=Z,282nm,1.5s						
ENH				LR	LR		
	comp=Z,10μm,21.0s						
PAYA	**Payao**	**27.11**	**299**	P	**P**	**14 15 49.5**	**-0.8**
	comp=Z,100μm,1.1s						
SISI	**Saibi**	**27.11**	**253**	P	**P**	**14 15 50.6**	**+0.3**
KCSI	**Kotacane, Aceh**	**27.24**	**264**	P	**P**	**14 15 50.2**	**-1.3**
CM31	**Chiang Mai Arr**	**27.59**	**296

JHJ2			LR	LR		
	comp=Z,8μm,18.0s					
RABL	**Rabaul**	**29.50 112**	PFAKE			14 16 20.0 +8.2
RABL			LR	LR		
	comp=Z,4μm,19.0s					
TIA	**Tai'an**	**29.69 347**	P	**P**		**14 16 11.8 -1.3**
TIA			S	**S**		**14 21 08.9 +1.3**
TIA			pmax	pmax		
	comp=Z,8.0nm,0.8s					
TIA			LR	LR		
	comp=Z,3μm,15.0s					
TIA			LR	LR		
	comp=Z,7μm,17.1s					
TIA			LR	LR		
	comp=Z,4μm,22.1s					
INU	**Inuyama**	**30.11 20**	PFAKE			14 16 30.0 +13
INU			LR	LR		
	comp=Z,5μm,19.0s					
KSRS	**Korea Array**	**30.19 5**	P	**P**		**14 16 14.8 -2.7**
	comp=Z,3.4nm,1.0s,baz=182,slow=9.8,SNR=15					
XAN	**Xi'an**	**30.47 333**	P	**P**		**14 16 18.5 -1.6**
XAN			pP	pP		14 16 26.4 -1.1
XAN			sP	sP		14 16 30.1 -0.5
XAN			PP	**PnPn**		**14 17 15.7 -3.5**
XAN			ScP	**ScP**		**14 23 01.0 +0.7**
XAN			pmax	pmax		
	comp=Z,85nm,1.4s					
XAN			pmax	pmax		
	comp=Z,790nm,5.1s					
XAN			LR	LR		
	comp=Z,3μm,14.7s					
XAN			LR	LR		
	comp=Z,9μm,19.2s					
XAN			LR	LR		
	comp=Z,7μm,20.6s					
XAN	**Xi'an**	**30.47 333**	*e*P	**P**		**14 16 18.9 -1.2**
	comp=Z,151nm,1.3s					
XAN			LR	LR		
	comp=Z,8μm,20.0s					
XAN	**Xi'an**	**30.47 333**	*e*P	**P**		**14 16 18.9 -1.2**
XAN			pmax	pmax		
	comp=Z,151nm,1.3s					
XAN			MLR	MLR		
	comp=Z,8μm,20.0s					
CMBY	**CAMPBELL BAY**	**30.71 272**	*e*P	**P**		**14 16 24.0 +1.5**
CMBY			IAmb	IAmb		14 16 28.1
	comp=Z,136nm,1.2s					
CD2	**Chengdu**	**30.74 323**⇑	*i*P	**P**		**14 16 24.9 +2.4**
CD2			pP	pP		14 16 27.9 -2.1
CD2			S	**S**		**14 21 24.0 -0.3**
CD2			sS	pS		14 21 32.2 -0.6
CD2			PcS	**PcS**		**14 23 05.0 +1.0**
CD2			pmax	pmax		
	comp=Z,200nm,1.8s					
CD2			pmax	pmax		
	comp=Z,1μm,5.2s					
CD2			LR	LR		
	comp=Z,29μm,21.3s					
CD2			LR	LR		
	comp=Z,31μm,17.8s					
CD2			LR	LR		
	comp=Z,15μm,17.1s					
QIS	**Mount Isa**	**31.20 153**	P	**P**		**14 16 24.2 -2.4**
	baz=31,SNR=20					
MJAR	**Matsushiro Arr**	**31.59 21**	P	**P**		**14 16 26.7 -3.2**
	comp=Z,3.6nm,0.8s,baz=199,slow=9.8,SNR=12					
MJAR			PcP	**PcP**		**14 19 23.4 +1.3**
	comp=Z,3.3nm,0.8s,baz=182,slow=3.5,SNR=4.1					
MJAR			LR	LR		14 28 46.9
	comp=Z,5μm,19.6s,baz=205,slow=36					
MAJO	**Matsushiro**	**31.60 21**	*e*P	**P**		**14 16 29.5 -0.4**
	comp=Z,60nm,1.5s					
MAJO			LR	LR		
	comp=Z,6μm,19.0s					
MAJO	**Matsushiro**	**31.60 21***c*	*i*P	**P**		**14 16 29.6 -0.4**
MAJO			pmax	pmax		
	comp=Z,60nm,2.2s					
MAJO			MLR	MLR		
	comp=Z,4μm,18.0s					
MAT	**Matsushiro**	**31.60 21**	P	**P**		**14 16 29.6 -0.4**
MAT			S	S		14 21 27.4 -10
MJB9	**Matsu-Tunnel**	**31.60 21**	*e*P	**P**		**14 16 29.8 -0.2**
	comp=Z,61nm,1.5s					
DL2	**Dalian**	**31.65 355**	P	**P**		**14 16 29.0 -1.4**
DL2			S	**S**		**14 21 40.3 +2.1**
DL2			pmax	pmax		
	comp=Z,78nm,0.7s					
DL2			pmax	pmax		
	comp=Z,460nm,6.6s					
DL2			LR	LR		
	comp=Z,4μm,18.2s					
DL2			LR	LR		
	comp=Z,6μm,14.2s					
DL2			LR	LR		
	comp=Z,5μm,14.7s					
ASAR	**Alice Springs**	**31.97 164**	P	**P**		**14 16 31.9 -1.5**
	comp=Z,19nm,0.6s,baz=340,slow=7.2,SNR=122					
WRKA	**Warakurna**	**32.26 174**	P	**P**		**14 16 34.8 -1.1**
	baz=32,SNR=40					
TIY	**Taiyuan**	**32.36 341**	*e*P	**P**		**14 16 40.1 +3.3**
TIY			PP	**PnPn**		**14 17 46.2 +2.4**
TIY			S	**S**		**14 21 51.0 +1.4**
TIY			pmax	pmax		
	comp=Z,170nm,1.4s					
TIY			pmax	pmax		
	comp=Z,730nm,6.3s					
TIY			LR	LR		
	comp=Z,7μm,20.8s					
TIY			LR	LR		
	comp=Z,4μm,14.2s					
TIY			LR	LR		
	comp=Z,8μm,20.2s					
PATS	**Pohnpei**	**33.18 89**	PFAKE			14 17 00.0 +16
PATS			LR	LR		
	comp=Z,6μm,19.0s					
BJT	**Baijiatuau**	**33.55 348**	*e*P	**P**		**14 16 46.0 -1.0**
	comp=Z,125nm,0.9s					
BJT			LR	LR		
	comp=Z,4μm,20.0s					
BJT	**Baijiatuau**	**33.55 348**	*e*P	**P**		**14 16 46.0 -1.0**
BJT			pmax	pmax		
	comp=Z,125nm,0.9s					
BJT			MLR	MLR		
	comp=Z,4μm,20.0s					
BJI	**Beijing**	**33.57 348**⇑	*i*P	**P**		**14 16 45.9 -1.3**
BJI			sP	**pP**		**14 16 54.5 -0.1**
BJI			S	**S**		**14 22 08.9 +0.8**
BJI			pmax	pmax		
	comp=Z,19nm,0.8s					
BJI			pmax	pmax		
	comp=Z,540nm,3.7s					
BJI			LR	LR		
	comp=Z,1μm,22.5s					
SAIH	**SAIHA**	**34.24 300**	*e*P	**P**		**14 16 52.1 -1.3**
CTAO	**Charters Tower**	**34.35 143**	*e*P	**P**		**14 16 52.5 -1.7**
	comp=Z,53nm,1.0s					
CTAO			LR	LR		
	comp=Z,5μm,21.0s					
CTAO	**Charters Tower**	**34.35 143**	*e*P	**P**		**14 16 52.5 -1.7**
CTAO			pmax	pmax		
	comp=Z,53nm,1.0s					
CTAO			MLR	MLR		
	comp=Z,5μm,21.0s					
SNY	**Shenyang**	**34.45 358**	⇑P	**P**		**14 16 53.0 -1.8**
SNY			S	**S**		**14 22 20.5 -1.2**
SNY			pmax	pmax		
	comp=Z,19nm,1.2s					
SNY			LR	LR		
	comp=Z,4μm,16.4s					
SNY			LR	LR		
	comp=Z,4μm,17.8s					
SNY			LR	LR		
	comp=Z,6μm,17.7s					
LZH	**Lanzhou**	**34.56 329**	⇑P	**P**		**14 16 56.5 +0.5**
LZH			pP	pP		14 17 01.4 -2.1
LZH			sP	sP		14 17 05.7 -0.9
LZH			PP	**PP**		**14 18 13.2 -1.4**
LZH			S	**S**		**14 22 24.7 +0.9**
LZH			sS	pS		14 22 32.0 -0.4
LZH			SS	**SnSn**		**14 24 39.0 +2.7**
LZH			pmax	pmax		
	comp=Z,46nm,1.3s					
LZH			pmax	pmax		
	comp=Z,220nm,4.9s					
LZH			LR	LR		
	comp=Z,7μm,16.3s					
LZH			LR	LR		
	comp=Z,8μm,15.2s					
LZH			LR	LR		
	comp=Z,11μm,14.6s					
MOKO	**MOKOCHONG**	**34.56 307**	*e*P	**P**		**14 16 55.3 -0.9**
KOHI	**KOHIMA**	**34.61 306**	*e*P	**P**		**14 16 53.5 -3.1**
DIBR	**DIBRUGARH**	**34.80 309**	*e*P	**P**		**14 16 58.5 +0.5**
JORH	**JORHAT**	**34.96 307**	*e*P	**P**		**14 16 58.4 -1.1**
JORH			IAmb	IAmb		14 16 58.7
	comp=Z,243nm,0.7s					
HHC	**Hu-ho-hao-te**	**35.51 342**	*e*P	**P**		**14 17 06.6 +2.5**
HHC			sP	sP		14 17 16.7 +2.1
HHC			PP	**PP**		**14 18 29.4 +4.4**
HHC			S	**S**		**14 22 38.3 +0.1**
HHC			SS	**SnSn**		**14 25 03.8 +4.7**
HHC			ScS	**ScS**		**14 27 17.4 -4.9**
HHC			pmax	pmax		
	comp=Z,160nm,1.6s					
HHC			pmax	pmax		
	comp=Z,2μm,4.6s					
HHC			LR	LR		
	comp=Z,4μm,17.1s					
HHC			LR	LR		
	comp=Z,6μm,15.1s					
HHC			LR	LR		
	comp=Z,5μm,15.6s					
MSHR	**Mys Shultsa**	**35.62 8**⇓	*e*P	**P**		**14 17 05.9 +1.0**
ZIRO	**ZIRO**	**35.65 308**	*e*P	**P**		**14 17 04.5 -1.1**
BTO	**Baotou**	**35.77 340**	*e*P	**P**		**14 17 10.0 +3.7**
BELO	**BELONIA**	**35.84 300**	*e*P	**P**		**14 17 08.1 +1.1**
TEZP	**TEZPUR**	**36.06 306**	*e*P	**P**		**14 17 08.5 -0.4**
AGT	**Agartala**	**36.23 301**	*e*P	**P**		**14 17 08.1 -2.3**
VLA	**Vladivostok**	**36.26 9***de*P		**P**		**14 17 12.2 +1.9**
VLA			pmax	pmax		
	comp=Z,133nm,2.0s					
VLA			MLR	MLR		
	comp=Z,3μm,18.0s					
SHL	**Shillong**	**36.36 304**	*e*P	**P**		**14 17 10.4 -1.3**
	comp=Z,159nm,0.9s					
SHL			LR	LR		
	comp=Z,7μm,21.0s					
SHL	**Shillong**	**36.36 304**	*e*P	**P**		**14 17 10.4 -1.3**
SHL			pmax	pmax		
	comp=Z,159nm,0.9s					
SHL			MLR	MLR		
	comp=Z,7μm,21.0s					
SHL	**Shillong**	**36.36 304**	*e*P	**P**		**14 17 10.6 -1.1**
SHL			*i*P	**P**		**14 17 11.0 -0.7**
SHL			*e*S	**S**		**14 22 54.0 +2.2**
CN2	**Changchun**	**36.41 1**	*e*P	**P**		**14 17 12.1 +0.5**
CN2			*es*P	sP		14 17 24.5 +2.3
CN2			*e*S	**S**		**14 22 51.4 -0.3**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.7s					
CN2			pmax	pmax		
	comp=Z,500nm,5.0s					
CN2			LR	LR		
	comp=Z,2μm,17.0s					
CN2			LR	LR		
	comp=Z,4μm,17.0s					
CN2			LR	LR		
	comp=Z,3μm,16.0s					
GUWA	**GUWAHATI**	**36.77 305**	*e*P	**P**		**14 17 13.9 -1.1**
MORW	**Morawa**	**37.10 193**	*e*P	**P**		**14 17 16.4 -1.2**
	comp=Z,54nm,0.9s					
MORW			LR	LR		
	comp=Z,3μm,22.0s					
MORW	**Morawa**	**37.10 193**	P	**P**		**14 17 16.2 -1.5**
	baz=37,SNR=7.6					
TAWA	**Tawang**	**37.24 307**	*e*P	**P**		**14 17 18.3 -1.1**
TAWA			IAmb	IAmb		14 17 32.3
	comp=Z,352nm,1.2s					
USA0B	**Ussuriysk Arra**	**37.33 8**	*e*P	**P**		**14 17 18.5 -1.0**
	comp=Z,76nm,1.2s					
USA0B			LR	LR		
	comp=Z,3μm,20.0s					
USRK	**Ussuriysk Ar.**	**37.33 8**	P	**P**		**14 17 16.4 -3.0**
	comp=Z,9.1nm,0.8s,baz=205,slow=6.4,SNR=19					
USRK			LR	LR		14 31 52.9
	comp=Z,3μm,21.6s,baz=179,slow=35					
MDJ	**Mudanjiang**	**37.45 6**	P	**P**		**14 17 22.7 +2.2**
MDJ			pP	pP		14 17 27.8 -0.2
MDJ			sP	sP		14 17 29.9 -1.1
MDJ			S	**S**		**14 23 14.7 +7.2**
MDJ			sS	ScP		14 23 23.2 -1.4
MDJ			pmax	pmax		
	comp=Z,48nm,1.8s					
MDJ			pmax	pmax		
	comp=Z,930nm,3.7s					
MDJ			LR	LR		
	comp=Z,5μm,17.9s					
MDJ			LR	LR		
	comp=Z,4μm,16.1s					
MDJ			LR	LR		
	comp=Z,8μm,17.9s					
MDJ	**Mudanjiang**	**37.45 6**	*e*P	**P**		**14 17 20.1 -0.4**
	comp=Z,72nm,1.3s					
MDJ			LR	LR		
	comp=Z,4μm,19.0s					
FORT	**Forrest**	**37.93 176**	*e*P	**P**		**14 17 23.9 -0.8**
	comp=Z,269nm,0.8s					
FORT			LR	LR		
	comp=Z,3μm,22.0s					
FORT	**Forrest**	**37.93 176**	P	**P**		**14 17 23.8 -0.8**
	baz=38,SNR=24					
DHUB	**DHUBRI**	**38.10 303**	*e*P	**P**		**14 17 24.2 -2.0**
DHUB			IAmb	IAmb		14 17 25.6
	comp=Z,197nm,1.7s					
ERM	**Erimo**	**38.22 22**	PFAKE			14 17 40.0 +13
ERM			LR	LR		
	comp=Z,5μm,20.0s					
ERM	**Erimo**	**38.22 22**⇑	*e*P	**P**		**14 17 29.5 +2.5**
ERM			pmax	pmax		
	comp=Z,68nm,1.5s					
ERM			MLR	MLR		
	comp=Z,4μm,19.0s					
BLDU	**Ballidu**	**38.45 191**	P	**P**		**14 17 27.7 -1.4**
	baz=39,SNR=7.8					
KMBL	**Kambalda**	**38.50 184**	P	**P**		**14 17 28.3 -1.2**
	baz=39,SNR=13					
HNR	**Honiara**	**38.67 115**	PFAKE			14 17 40.0 +8.9
HNR			LR	LR		
	comp=Z,2μm,22.0s					
LSA	**Lhasa**	**38.77 310**	P	**P**		**14 17 32.4 0.0**
LSA			S	**S**		**14 23 27.4 -1.5**
LSA			pmax	pmax		
	comp=Z,170nm,0.9s					
LSA			LR	LR		
	comp=Z,12μm,17.1s					
LSA			LR	LR		
	comp=Z,12μm,17.8s					
LSA			LR	LR		
	comp=Z,9μm,18.5s					
LSA	**Lhasa**	**38.77 310**	PFAKE			14 17 40.0 +7.6
LSA			LR	LR		
	comp=Z,3μm,20.0s					
LSA	**Lhasa**	**38.77 310**	*i*P	**P**		**14 17 32.3 0.0**
	SNR=33					
TEY	**Ternei**	**39.00 13**⇓	*e*P	**P**		**14 17 32.5 -1.0**
TEY			*e*			14 17 41.7
TEY			*e*			14 19 07.0
TEY			*e*S	**S**		**14 23 29.1 -1.8**
TEY			pmax	pmax		
	comp=E,10.0nm,0.9s					
TEY			pmax	pmax		
	comp=N,20nm,0.8s					
TEY			pmax	pmax		
	comp=Z,30nm,0.7s					
TEY			pmax	pmax		
	comp=Z,900nm,5.6s					
TEY			MLR	MLR		
	comp=N,2μm,21.0s					
GTA	**Gaotai**	**39.15 329**	⇓P	**P**		**14 17 35.0 -0.1**
GTA			pP	pP		14 17 39.1 -3.5
GTA			sP	sP		14 17 42.3 -3.4
GTA			PP	**PP**		**14 19 08.9 +3.8**
GTA			S	**S**		**14 23 34.8 +1.0**
GTA			sS	pS		14 23 43.6 +1.0
GTA			pmax	pmax		
	comp=N,26nm,1.4s					
GTA			pmax	pmax		
	comp=N,1μm,5.1s					
GTA			LR	LR		
	comp=N,7μm,20.6s					
GTA			LR	LR		
	comp=N,5μm,18.2s					
GTA			LR	LR		
	comp=N,8μm,15.5s					
KLBR	**Kellerberrin**	**39.22 190**	P	**P**		**14 17 34.8 -0.7**
	baz=39,SNR=9.8					
GTK	**Tadong**	**39.75 305**	*e*P	**P**		**14 17 38.6 -1.6**
GTK			IAmb	IAmb		14 17 42.0
	comp=Z,104nm,1.1s					
MUN	**Mundaring**	**39.88 192**	P	**P**		**14 17 40.7 -0.3**
	baz=40,SNR=7.0					
BWNR	**Bhubaneshwar**	**39.99 293**	*ex*	P		14 17 34.2 -7.9
ODAN	**Odare**	**40.58 303**	*e*P	**P**		**14 17 46.1 -1.1**
	comp=Z,384nm,1.4s					
NWAO	**Narrogin (SRO)**	**40.61 190**	*e*P	**P**		**14 17 46.6 -0.4**
	comp=Z,154nm,1.3s					
NWAO			LR	LR		
	comp=Z,3μm,18.0s					
NWAO	**Narrogin (SRO)**	**40.61 190**	*e*P	**P**		**14 17 46.6 -0.4**
NWAO			pmax	pmax		
	comp=Z,154nm,1.3s					
NWAO			MLR	MLR		
	comp=Z,3μm,18.0s					
NWAO	**Narrogin (SRO)**	**40.61 190**	P	**P**		**14 17 47.2 +0.2**
	SNR=6.1					
NWAO			P	**P**		**14 17 47.2 +0.2**
	SNR=6.1					
RMQ	**Roma**	**40.76 146**	P	**P**		**14 17 46.5 -1.9**
	baz=41,SNR=6.5					
BOK	**Bokaro**	**40.84 298**	*e*P	**P**		**14 17 48.0 -1.2**
BOK			IAmb	IAmb		14 17 50.2
	comp=Z,136nm,2.1s					
YUK	**Yuzh-Kuril'sk**	**40.98 23***d*	*i*P	**P**		**14 17 51.6 +1.7**
YUK			*i*			14 19 51.3
YUK			*e*S	**S**		**14 23 53.1 -7.5**
YUK			*e*SS	**ScS**		**14 27 46.9 -6.4**
YUK			pmax	pmax		
	comp=Z,243nm,1.1s					
YUK			pmax	pmax		
	comp=E,96nm,1.4s					
YUK			pmax	pmax		
	comp=N,47nm,0.6s					
YUK			MLR	MLR		
	comp=Z,661nm,16.0s					
YUK			MLR	MLR		
	comp=N,2μm,20.0s					
YUK			MLR	MLR		
	comp=E,2μm,15.0s					
BBOO	**Buckleboo**	**41.23 166**	*e*P	**P**		**14 17 51.6 -0.6**
	comp=E,217nm,0.8s					
BBOO			LR	LR		
	comp=Z,2μm,21.0s					
BBOO	**Buckleboo**	**41.23 166**	P	**P**		**14 17 51.8 -0.4**
	baz=41,SNR=33					
EIDS	**Eidsvold**	**41.24 143**	PFAKE			14 18 00.0 +7.6
EIDS			LR	LR		
	comp=Z,4μm,20.0s					
EIDS	**Eidsvold**	**41.24 143**	P	**P**		**14 17 50.6 -1.7**
	baz=41,SNR=10					
RAMN	**Ramite**	**41.26 303**	*e*P	**P**		**14 17 52.1 -0.8**
	comp=Z,318nm,1.3s					
JIRN	**Jiri**	**41.86 304**	*e*P	**P**		**14 17 57.1 -0.8**
	comp=Z,605nm,1.2s					
STKA	**Stephens Creek**	**42.05 159**	P	**P**		**14 17 58.2 -0.7**
	comp=Z,122nm,0.8s,baz=332,slow=8.1,SNR=41					
STKA			LR	LR		14 36 47.9
	comp=Z,2μm,21.4s,baz=334,slow=38					
STKA	**Stephens Creek**	**42.05 159**	*e*P	**P**		**14 17 58.4 -0.5**
	comp=Z,26nm,0.8s					
STKA			LR	LR		
	comp=Z,400nm,20.0s					
STKA	**Stephens Creek**	**42.05 159**	P	**P**		**14 17 58.3 -0.7**
	baz=42,SNR=32					
STKA	**Stephens Creek**	**42.05 159**	*e*P	**P**		**14 17 58.4 -0.5**
STKA			pmax	pmax		
	comp=Z,26nm,0.8s					
STKA			MLR	MLR		
	comp=Z,400nm,20.0s					
HIA	**Hailar**	**42.10 355**	PFAKE			14 18 10.0 +11
HIA			LR	LR		
	comp=Z,4μm,20.0s					
HIA	**Hailar**	**42.10 355**⇓	*e*P	**P**		**14 17 58.9 -0.2**
HIA			MLR	MLR		
	comp=Z,22μm,17.0s					
H11S3	**WAKE ISLAND Hy**	**42.16 70**	T	T		15 01 13.8
	baz=262,slow=74,SNR=10					
H11S1	**WAKE ISLAND Hy**	**42.17 70**	T	T		15 01 13.2
	baz=262,slow=74,SNR=4.7					
H11S2	**WAKE ISLAND Hy**	**42.17 70**	T	T		15 01 17.9
	baz=262,slow=74,SNR=8.6					
GUN	**Gumba**	**42.21 304**	*e*P	**P**		**14 18 00.1 -0.7**
	comp=Z,689nm,1.3s					
KLR	**Kul'dur**	**42.24 7**⇓	*e*P	**P**		**14 17 58.7 -1.5**
KLR			pmax	pmax		
	comp=Z,62nm,1.9s					
KLR			MLR	MLR		
	comp=Z,4μm,18.0s					
WAKE	**Wake Island**	**42.26 69**	PFAKE			14 18 10.0 +9.1
WAKE			LR	LR		
	comp=Z,2μm,22.0s					
RKGY	**Rocky Gully**	**42.30 190**	P	**P**		**14 18 01.6 +0.8**
	baz=42,SNR=9.7					
KWAJ	**Kwajalein Atol**	**42.33 85**	PFAKE			14 18 10.0 +8.6
KWAJ			LR	LR		
	comp=Z,3μm,22.0s					
YSS	**Yuzh-Sakhalins**	**42.43 18**⇑	*e*P	**P**		**14 18 03.5 +1.7**
YSS			*e*			14 18 11.7
YSS			*e*			14 19 38.9
YSS			*e*S	**S**		**14 24 22.2 +0.2**
YSS			pmax	pmax		
	comp=Z,30nm,1.8s					
YSS			pmax	pmax		
	comp=Z,500nm,6.3s					
YSS			smax	smax		
	comp=N,600nm,14.8s					
YSS			smax	smax		
	comp=E,1μm,17.9s					
YSS			MLR	MLR		
	comp=N,1μm,16.0s					
YSS			MLR	MLR		
	comp=Z,2μm,16.0s					
PKI	**Pulchoki**	**42.48 303**	*e*P	**P**		**14 18 01.6 -1.3**
	comp=Z,146nm,1.2s					
PKIN	**Phulchoki**	**42.49 303**	*e*P	**P**		**14 18 01.4 -1.5**
	comp=Z,47nm,0.8s					
H11N1	**WAKE ISLAND Hy**	**42.56 69**	T	T		15 01 54.7
	baz=265,slow=74,SNR=9.1					
H11N2	**WAKE ISLAND Hy**	**42.57 69**	T	T		15 01 51.1
	baz=265,slow=74,SNR=5.6					
H11N3	**WAKE ISLAND Hy**	**42.58 69**	T	T		15 01 50.5
	baz=265,slow=74,SNR=7.8					
HTT	**Hallett**	**42.60 163**	P	**P**		**14 18 03.4 0.0**
	baz=43,SNR=21					
KKN	**Kakani**	**42.66 304**	*e*P	**P**		**14 18 03.2 -1.1**
	comp=Z,404nm,1.4s					
DMN	**Daman**	**42.74 303**	*e*P	**P**		**14 18 03.8 -1.2**
	comp=Z,224nm,1.2s					
KUR	**Kuril'sk**	**42.77 24***d*	*i*P	**P**		**14 18 05.3 +0.7**
KUR			*e*			14 19 43.2
KUR			*i*S	**S**		**14 24 33.2 +6.1**
KUR			SS	**SS**		**14 27 36.1 -2.4**
KUR			pmax	pmax		
	comp=Z,952nm,4.1s					
KUR			pmax	pmax		
	comp=Z,185nm,2.0s					
KUR			MLR	MLR		
	comp=E,668nm,17.0s					
KUR			MLR	MLR		
	comp=Z,1μm,17.0s					
KUR			MLR	MLR		
	comp=N,1μm,18.0s					
ULN	**Ulaanbaatar**	**43.23 342**	*e*P	**P**		**14 18 08.4 -0.1**
	comp=N,270nm,1.3s					
ULN			LR	LR		
	comp=Z,8μm,21.0s					
ULN	**Ulaanbaatar**	**43.23 342***c*	*i*P	**P**		**14 18 07.6 -0.9**
ULN			pmax	pmax		
	comp=Z,279nm,1.4s					
ULN			MLR	MLR		
	comp=Z,3μm,17.0s					
ULN	**Ulaanbaatar**	**43.23 342**	P	**P**		**14 18 08.6 +0.2**
	SNR=159					
ULN			P	**P**		**14 18 08.6 +0.2**
	SNR=159					
GKN	**Gorkha**	**43.27 304**	*e*P	**P**		**14 18 07.9 -1.2**
	comp=Z,192nm,1.3s					
CMSA	**Cobar Meteorol**	**43.40 154**	P	**P**		**14 18 09.4 -0.4**
	baz=44,SNR=24					
SONM	**Songino Array**	**43.40 342**	P	**P**		**14 18 09.1 -0.7**

comp=Z,14nm,0.9s,baz=155,slow=10.0,SNR=42
SONM LR LR 14 37 16.3
comp=Z,9μm,21.3s,baz=158,slow=38
PALK Pallekele 43.81 273 PFAKE 14 18 30.0 +16
PALK LR LR
comp=Z,2μm,19.0s
KOLN Koldanda 44.05 303 *e*P **P 14 18 14.7 -0.8**
comp=Z,78nm,0.7s
DANN Dangsing 44.12 304 *e*P **P 14 18 14.9 -1.2**
comp=Z,209nm,0.9s
MDRS Chennai 44.27 281 *e*P **P 14 18 16.5 -0.6**
MDRS IAmb IAmb 14 18 18.6
comp=Z,71nm,1.0s
GRNR Gornyy 44.43 10 *e*P **P 14 18 19.2 +1.3**
GRNR pmax pmax
comp=Z,20nm,1.1s
PYUN Piuthan 44.67 303 *e*P **P 14 18 19.3 -1.1**
comp=Z,360nm,1.2s
ARMA Armidale 45.40 147 P **P 14 18 25.6 -0.4**
baz=45,SNR=19
CIT Chita 45.60 350 *e*P **P 14 18 29.8 +2.6**
CIT *e* 14 18 40.0
CIT pmax pmax
comp=Z,318nm,2.0s
TYV Tymovskoe 45.92 16 *e*P **P 14 18 31.5 +1.8**
TYV *e*S **S 14 25 20.2 +7.5**
TYV pmax pmax
comp=Z,32nm,1.8s
TYV pmax pmax
comp=Z,1μm,5.9s
TYV smax smax
comp=E,2μm,9.6s
HYB Hyderabad 46.26 287 *i* P **P 14 18 32.5 -0.5**
HYB *e*S **S 14 25 20.0 +1.3**
NGP Nagpur 46.35 292 *e*P **P 14 18 32.9 -0.7**
NGP IAmb IAmb 14 18 33.8
comp=Z,54nm,1.0s
NGP *e*x x 14 23 10.0
ZEA Zeya 46.39 2 *e*P **P 14 18 33.0 -0.4**
ZEA *e* 14 20 26.5
ZEA *e*PPP PPP 14 21 10.0
ZEA *e*S **S 14 25 22.0 +2.5**
ZEA *e*SS **ScS 14 28 29.0 +2.1**
ZEA pmax pmax
comp=N,64nm,1.8s
ZEA pmax pmax
comp=Z,110nm,1.8s
ZEA pmax pmax
comp=N,200nm,4.0s
ZEA pmax pmax
comp=Z,400nm,4.0s
ZEA pmax pmax
comp=Z,800nm,9.0s
ZEA pmax pmax
comp=N,400nm,8.0s
ZEA smax smax
comp=N,800nm,12.0s
ARPS Mount Arapiles 46.58 161 P **P 14 18 35.3 +0.2**
baz=47,SNR=27
ZAK Zakamensk 46.62 341 *e*P **P 14 18 31.2 -4.2**
ZAK pmax pmax
comp=Z,49nm,1.7s
YNG Young 46.94 153 P **P 14 18 38.5 +0.6**
baz=47,SNR=15
TRD Trivandrum 47.46 275 *e*P **P 14 18 41.5 -0.9**
TRD IAmb IAmb 14 18 48.5
comp=Z,232nm,1.8s
TLY Talaya 47.64 342 *e*P **P 14 18 43.8 +0.6**
comp=Z,134nm,1.1s
TLY LR LR
comp=Z,5μm,20.0s
TLY Talaya 47.64 342 *e*P **P 14 18 42.5 -0.7**
TLY *e* 14 20 33.2
TLY *e*S **S 14 25 29.1 -8.3**
TLY pmax pmax
comp=Z,457nm,1.5s
TLY MLR MLR
comp=Z,19μm,27.0s
TLY Talaya 47.64 342 P **P 14 18 43.6 +0.4**
SNR=105
TLY P **P 14 18 43.6 +0.4**
SNR=105
IRK Irkutsk 47.95 343 *e*P **P 14 18 46.7 +1.2**
IRK pmax pmax
comp=Z,391nm,2.8s
CAN Canberra 48.06 153 *e*P **P 14 18 47.1 +0.4**
comp=Z,150nm,1.0s
CAN Canberra 48.06 153 *e*P **P 14 18 47.1 +0.4**
CAN pmax pmax
comp=Z,150nm,1.0s
CNB Canberra Magne 48.22 153 P **P 14 18 48.7 +0.8**
baz=48,SNR=6.3
BHPL Bhopal 48.23 295 *e*P **P 14 18 47.5 -0.7**
BHPL IAmb IAmb 14 18 48.2
comp=Z,48nm,0.9s
TARA Tarawa 48.23 95 PFAKE 14 19 00.0 +12
TARA LR LR
comp=Z,2μm,20.0s
MOY Mondy 48.47 340 *e*P **P 14 18 49.8 +0.1**
MOY pmax pmax
comp=Z,455nm,2.7s
TOO Toolangi 48.57 158 *e*P **P 14 18 51.4 +0.9**
comp=Z,88nm,0.9s
TOO Toolangi 48.57 158 P **P 14 18 51.2 +0.6**
baz=49,SNR=26
TOO Toolangi 48.57 158 *e*P **P 14 18 51.4 +0.9**
TOO pmax pmax
comp=Z,88nm,0.9s
WMQ Urumqi 48.81 324 P **P 14 18 53.0 +0.6**
WMQ pP pP 14 18 56.5 -3.6
WMQ S **S 14 25 54.9 +0.6**
WMQ sS pS 14 26 03.0 -0.4
WMQ SS **SS 14 29 19.4 -5.6**
WMQ pmax pmax
comp=Z,190nm,1.5s
WMQ pmax pmax
comp=Z,2μm,3.8s
WMQ LR LR
comp=Z,12μm,19.7s
WMQ LR LR
comp=Z,7μm,13.7s
WMQ LR LR
comp=Z,11μm,23.5s
WMQ Urumqi 48.81 324 *e*P **P 14 18 52.8 +0.4**
comp=Z,303nm,1.4s
WMQ LR LR
comp=Z,5μm,19.0s
WMQ Urumqi 48.81 324 *e*P **P 14 18 52.8 +0.4**
WMQ pmax pmax
comp=Z,303nm,1.4s
WMQ MLR MLR
comp=Z,5μm,19.0s
DDI Dehra Dun 49.46 304 *e*P **P 14 18 57.1 -0.6**
MILA Mila 49.59 154 P **P 14 18 57.7 -0.7**
baz=50,SNR=4.1
DZM Mont Dzumac 50.08 127 *e*P **P 14 19 01.3 -1.1**
comp=Z,139nm,1.4s
DZM *e*S **S 14 26 06.2 -6.5**
comp=Z,1μm,25.6s
DZM *e*LR LR 14 33 10.7
comp=Z,4μm,25.4s
SMLA Simla 50.44 305 *e*P **P 14 19 04.2 -0.8**
SKR Severo-Kuril's 50.48 25 *e*P **P 14 19 07.0 +2.1**
SKR *e* 14 21 02.2
SKR *e*S **S 14 26 23.3 +6.1**
SKR *e*SS SKiKP 14 31 15.1 +37
SKR pmax pmax
comp=Z,600nm,2.8s
SKR MLR MLR
comp=Z,2μm,19.0s
GOA Goa 50.62 284 *e*P **P 14 19 05.9 -0.6**
GOA IAmb IAmb 14 19 06.8
comp=Z,56nm,1.2s
POO Poona 50.83 288 *e*P **P 14 19 07.0 -1.2**
POO IAmb IAmb 14 19 14.6
comp=Z,57nm,0.3s
BOD Bodaibo 51.15 353 *e*P **P 14 19 09.4 -0.5**
BOD pmax pmax
comp=Z,192nm,1.9s
MNCY Minicoy 51.35 275 *e*P **P 14 19 11.5 -0.6**
DHRM DHARAMSHALA 51.49 306 *e*P **P 14 19 11.6 -1.5**
DHRM IAmb IAmb 14 19 18.1
comp=Z,147nm,0.8s
PEA0B Petropavlovsk- 52.94 24 PFAKE 14 19 40.0 +17
PEA0B LR LR
comp=Z,3μm,20.0s
PETK Petropavlovsk- 52.94 24 P **P 14 19 22.4 -0.9**
comp=Z,14nm,0.7s,baz=195,slow=3.3,SNR=18
PETK LR LR 14 42 00.9
comp=Z,3μm,19.9s,baz=222,slow=36
PEA1 Petropavlovsk- 52.94 24 *e*P **P 14 19 22.4 -1.0**
PET Petropavlovsk 53.27 25 PFAKE 14 19 40.0 +14
PET LR LR
comp=Z,2μm,20.0s
PET Petropavlovsk 53.27 25 *e*P **P 14 19 26.7 +1.0**
PET *e* 14 21 28.4
PET *e*S **S 14 26 55.1 -0.4**
PET pmax pmax
comp=Z,200nm,2.8s
PET pmax pmax
comp=Z,600nm,5.5s
PET pmax pmax
comp=Z,98nm,1.3s
PDGK Podgornoye 53.55 320 P **P 14 19 26.6 -1.5**
PDGK pmax pmax
comp=Z,261nm,1.4s
MK31 Makanchi Array 53.64 325 *e*P **P 14 19 28.8 +0.2**
comp=Z,145nm,1.2s
MK31 Makanchi Array 53.64 325 *i* P **P 14 19 28.2 -0.4**
MK31 pmax pmax
comp=Z,165nm,1.2s
MKAR Makanchi Array 53.64 325 P **P 14 19 28.4 -0.2**
comp=Z,60nm,0.9s,baz=123,slow=7.7,SNR=56
MKAR LR LR 14 43 13.9
comp=Z,3μm,20.8s,baz=108,slow=37
MAKZ Makanchi 53.82 325 *e*P **P 14 19 30.1 +0.2**
comp=Z,212nm,1.3s
MAKZ LR LR
comp=Z,3μm,21.0s
MAKZ Makanchi 53.82 325 *e*P **P 14 19 30.1 +0.2**
MAKZ pmax pmax
comp=Z,212nm,1.3s
MAKZ MLR MLR
comp=Z,3μm,21.0s
TARG Taragay, Kyrgy 53.92 317 PFAKE 14 19 40.0 +8.8
TARG LR LR
comp=Z,4μm,21.0s
DGAR Diego Garcia 54.27 256 PFAKE 14 19 50.0 +16
DGAR LR LR
comp=Z,3μm,22.0s
KSH Kashi 54.28 314 P **P 14 19 34.8 +1.3**
KSH pP pP 14 19 37.8 -3.5
KSH PP **PP 14 21 37.7 +2.2**
KSH S **S 14 27 09.1 -0.9**
KSH ScS **ScS 14 29 17.4 -4.3**
KSH SS **SS 14 30 51.1 -1.1**
KSH pmax pmax
comp=Z,340nm,1.4s
KSH pmax pmax
comp=Z,2μm,4.1s
KSH LR LR
comp=Z,8μm,16.5s
KSH LR LR
comp=Z,8μm,15.2s
KSH LR LR
comp=Z,10μm,19.6s
NIL Nilore 54.35 306 *e*P **P 14 19 34.0 0.0**
comp=Z,374nm,1.2s
NIL Nilore 54.35 306 *e*P **P 14 19 34.0 0.0**
NIL pmax pmax
comp=Z,374nm,1.2s
KDJ Kajisay 54.52 317 *e*P **P 14 19 35.9 +0.6**
comp=Z,76nm,1.1s
KDJ LR LR
comp=Z,3μm,20.0s
YAK Yakutsk 54.79 3 *e*P **P 14 19 35.5 -1.1**
comp=Z,865nm,1.1s
YAK LR LR
comp=Z,1μm,20.0s
YAK Yakutsk 54.79 3 *e*P **P 14 19 35.0 -1.6**
YAK *e**PP **pP 14 19 44.8 +0.5**
YAK *e*S **S 14 27 12.7 -3.0**
YAK *e*SSS SSS 14 30 59.0
NRN Naryn 55.02 316 PFAKE 14 19 50.0 +11
NRN LR LR
comp=Z,4μm,21.0s
AAA Alma-Ata 55.16 319 *e*P **P 14 19 41.9 +2.1**
AAA *e*S **S 14 27 26.3 +4.6**
AAA pmax pmax
comp=Z,600nm,4.7s
AAA smax smax
comp=N,800nm,7.8s
AAA MLR MLR
comp=Z,2μm,18.0s
ULHL Ulahol 55.20 317 P **P 14 19 40.7 +0.5**
SNR=21
BHJ Bhuj 55.28 293 *e*P **P 14 19 39.5 -1.4**
MA2 Magadan 55.80 16 *e*P **P 14 19 44.6 +0.7**
comp=Z,225nm,2.0s
MA2 LR LR
comp=Z,2μm,18.0s
MA2 Magadan 55.80 16⇓ *e*P **P 14 19 44.5 +0.6**
MA2 pmax pmax
comp=Z,92nm,1.9s
MA2 MLR MLR
comp=Z,2μm,18.0s
KZA Kyzart 55.80 317 P **P 14 19 45.7 +0.8**
SNR=29
TKM2 Tokmak 2 55.91 318 P **P 14 19 45.3 -0.1**
SNR=17
TKM2 Tokmak 2 55.91 318 P **P 14 19 43.5 -1.9**
TKM2 pmax pmax
comp=Z,47nm,1.2s
KBK Karagaybulak 56.24 317 P **P 14 19 51.3 +3.6**
SNR=15
UCH Uchtor 56.36 317 P **P 14 19 49.3 +0.4**
SNR=41
CHMS Chumysh 56.51 318 P **P 14 19 49.4 -0.1**
SNR=13
AAK Ala-Archa 56.54 317 P **P 14 19 50.1 +0.3**
SNR=14
AAK Ala-Archa 56.54 317 PFAKE 14 20 00.0 +10
AAK LR LR
comp=Z,5μm,22.0s
AAK Ala-Archa 56.54 317 *i* P **P 14 19 49.5 -0.3**
SNR=62
AAK Ala-Archa 56.54 317 *d i* P **P 14 19 49.3 -0.5**
AAK pmax pmax
comp=Z,10.0nm,1.0s
AAK MLR MLR
comp=Z,5μm,22.0s
AAK Ala-Archa 56.54 317 P **P 14 19 50.5 +0.7**
SNR=81
AAK P **P 14 19 50.5 +0.7**
SNR=81
ZAA0 Zalesovo Array 56.64 333 PFAKE 14 20 00.0 +10
ZAA0 LR LR
comp=Z,4μm,21.0s
ZALV Zalesovo Beam 56.64 333 P **P 14 19 48.9 -1.2**
comp=Z,24nm,1.1s,baz=120,slow=6.7,SNR=29
ZALV LR LR 14 45 14.6
comp=Z,4μm,20.9s,baz=132,slow=37
ZALV PKP2bc 14 49 55.9
comp=Z,1.5nm,0.7s,baz=289,slow=4.5,SNR=5.2
USP Ospenovka 56.79 318 P **P 14 19 51.5 +0.1**
SNR=29
AML Almayashu 56.88 316 P **P 14 19 53.1 +0.6**
SNR=17
EKS2 Erkin-Say 57.03 317 P **P 14 19 53.9 +0.6**
SNR=16
KURBB Kurchatov Arra 57.80 327 P **P 14 19 57.7 -0.7**
comp=Z,34nm,0.8s,baz=127,slow=6.2,SNR=45
KURK Kurchatov 57.80 327 *e*P **P 14 19 57.9 -0.5**
comp=Z,507nm,1.6s
KURK LR LR
comp=Z,2μm,18.0s
KURK Kurchatov 57.80 327 *e*P **P 14 19 57.9 -0.5**
KURK pmax pmax
comp=Z,507nm,1.6s
KURK MLR MLR
comp=Z,2μm,18.0s
KURK Kurchatov 57.80 327 P **P 14 19 58.1 -0.3**
SNR=188
KURK P **P 14 19 58.1 -0.3**
SNR=188
NVS Novosibirsk 57.92 333⇓ *i* P **P 14 19 58.3 -0.8**
NVS *e*S S 14 28 07.4 +10
NVS pmax pmax
comp=Z,240nm,2.2s
NVS pmax pmax
comp=N,124nm,2.1s
NVS pmax pmax
comp=E,146nm,2.3s
NVS smax smax
comp=N,11nm,1.9s
NVS smax smax
comp=E,26nm,2.1s
KBL Kabul 57.95 306 PFAKE 14 20 10.0 +10
KBL LR LR
comp=Z,1μm,19.0s
BTK Batken 58.18 313 *e*P **P 14 20 01.7 +0.4**
comp=Z,268nm,1.4s
GAR Garm 58.21 312 *e*P **P 14 20 01.6 -0.1**
comp=Z,468nm,1.2s
GAR LR LR
comp=Z,7μm,21.0s
GAR Garm 58.21 312 *e*P **P 14 20 01.6 -0.1**
GAR pmax pmax
comp=Z,468nm,1.2s
GAR MLR MLR
comp=Z,7μm,21.0s
CHGR Chuyangaron 58.97 311 PFAKE 14 20 20.0 +13
CHGR LR LR
comp=Z,4μm,21.0s
KK31 Karatay Array 59.43 316 *e*P **P 14 20 09.5 -0.3**
comp=Z,180nm,1.4s
KK31 Karatay Array 59.43 316 *i* P **P 14 20 08.8 -1.1**
KK31 pmax pmax
comp=Z,105nm,1.3s
KKAR Karatay Array 59.43 316 *e*P **P 14 20 09.5 -0.3**
comp=Z,180nm,1.4s
KKAR Karatay Array 59.43 316 *e*P **P 14 20 09.5 -0.3**
KKAR pmax pmax
comp=Z,180nm,1.4s
OTUK Ortayu 60.23 322 P **P 14 20 14.0 -1.3**
OTUK pmax pmax
comp=Z,107nm,1.3s
OUZ Omahuta 62.35 136 PFAKE 14 20 40.0 +10
OUZ LR LR
comp=Z,2μm,22.0s
BVAR Borovoye Array 63.39 327 P **P 14 20 36.0 -0.4**
comp=Z,18nm,0.9s,baz=118,slow=8.6,SNR=28
BRVK Borovoye 63.46 327 *e*P **P 14 20 36.1 -0.8**
comp=Z,109nm,1.1s
BRVK LR LR
comp=Z,2μm,20.0s
BRVK Borovoye 63.46 327 *e*P **P 14 20 36.1 -0.8**
BRVK pmax pmax
comp=Z,109nm,1.1s
BRVK MLR MLR
comp=Z,2μm,20.0s
BRVK Borovoye 63.46 327 P **P 14 20 36.5 -0.4**
SNR=66
BRVK P **P 14 20 36.5 -0.4**
SNR=66
TIXI Tiksi 64.38 1 P **P 14 20 41.9 -0.7**
comp=Z,2.3nm,0.8s,baz=158,slow=6.2,SNR=20
TIXI Tiksi 64.38 1 PFAKE 14 20 50.0 +7.4
TIXI LR LR
comp=Z,3μm,22.0s
TIXI Tiksi 64.38 1⇑ *i* P **P 14 20 43.5 +0.9**
TIXI pmax pmax
comp=Z,37nm,1.8s
TIXI MLR MLR
comp=Z,3μm,23.0s
HIZ Hauiti 64.99 138 PFAKE 14 21 00.0 +13
HIZ LR LR
comp=Z,2μm,22.0s
ADK Adak 65.15 36 PFAKE 14 21 00.0 +12
ADK LR LR
comp=Z,2μm,19.0s
THZ Tophouse 65.59 142 *e*P **P 14 20 51.7 +0.6**
comp=Z,42nm,0.7s
THZ LR LR
comp=Z,3μm,20.0s
LBZ Lake Benmore 65.61 146 *e*P **P 14 20 52.1 +1.0**
comp=Z,81nm,1.1s
RPZ Rata Peaks 65.68 145 *e*P **P 14 20 50.6 -0.9**
comp=Z,61nm,1.1s
BIDO Bidbid 65.85 292 P **P 14 20 54.2 +1.1**
SNR=8.9
BIDO P **P 14 20 54.2 +1.1**
SNR=8.9
MHTO MHTO 65.91 290 P **P 14 20 52.3 -1.1**
SNR=7.3
MHTO P **P 14 20 52.3 -1.1**
SNR=7.3
DQM DQM 66.29 289 P **P 14 20 54.7 -1.2**
SNR=5.8
DQM P **P 14 20 54.7 -1.2**
SNR=5.8
URZ Urewera 66.35 137 PFAKE 14 21 10.0 +14
URZ LR LR
comp=Z,2μm,20.0s
BKZ Black Stump Fm 66.42 138 PFAKE 14 21 10.0 +14
BKZ LR LR
comp=Z,2μm,19.0s
SNZO South Karori 66.44 141 PFAKE 14 21 10.0 +14
SNZO LR LR
comp=Z,2μm,20.0s
NRIK Noril'sk 66.60 346 P **P 14 20 54.6 -2.4**
comp=Z,4.8nm,0.8s,baz=161,slow=18,SNR=5.4
NRIK LR LR 14 51 54.1
comp=Z,3μm,18.3s,baz=153,slow=38
BILL Bilibino 66.67 16 *e*P **P 14 20 56.1 -1.4**
comp=Z,79nm,1.2s
BILL LR LR
comp=Z,2μm,20.0s
BILL Bilibino 66.67 16 *c e*P **P 14 20 55.8 -1.6**
BILL *e* 14 21 27.0
BILL *i* S **S 14 29 51.2 +3.9**
BILL pmax pmax
comp=Z,12nm,1.5s
BILL MLR MLR
comp=Z,2μm,21.0s
MXZ Matakaoa Point 66.82 136 PFAKE 14 21 10.0 +11
MXZ LR LR
comp=Z,2μm,22.0s
BFZ Birch Farm 67.06 140 PFAKE 14 21 10.0 +10
BFZ LR LR
comp=Z,3μm,22.0s
GEYT Alibeck 67.28 308 P **P 14 21 02.2 +0.2**
comp=Z,25nm,0.8s,baz=145,slow=5.4,SNR=18
GEYT LR LR 14 53 38.3
comp=Z,2μm,19.9s,baz=90,slow=39
GYA0B ALIBECK ARRAY 67.28 308 *e*P **P 14 21 02.5 +0.4**
comp=Z,144nm,1.3s
GYA0B LR LR
comp=Z,2μm,21.0s
SOHO SOHO 67.33 293 P **P 14 21 03.0 +0.4**
SNR=8.6
SOHO P **P 14 21 03.0 +0.4**
SNR=8.6
BANOM Banah 67.62 295 *i* P **P 14 21 01.5 -2.9**
SNR=5.9
UOSS Minazif 67.66 294 P **P 14 21 04.7 +0.1**
MSFE Esma-Masafi 67.72 294 *i* P **P 14 21 05.6 +0.6**
SNR=5.9
HATD Hatta, Dubai 67.72 294 *i* P **P 14 21 04.8 -0.2**
SNR=8.2
HATD Hatta, Dubai 67.72 294 P **P 14 21 05.1 +0.1**
SNR=9.8
HATD P **P 14 21 05.1 +0.1**
SNR=9.8
SHME Shamm 67.77 295 *i* P **P 14 21 05.7 +0.4**
SNR=6.4
ASHO Ashiyiah 67.78 294 P **P 14 21 05.7 +0.3**
ASHO Ashiyiah 67.78 294 P **P 14 21 06.5 +1.1**
SNR=9.2
ASHO P **P 14 21 06.5 +1.1**
SNR=9.2
ALNE Al Ain 68.04 293 *i* P **P 14 21 07.1 0.0**
SNR=6.6
AB31 Akbulak array 68.28 320 *i* P **P 14 21 06.5 -1.5**
AB31 pmax pmax
comp=Z,63nm,1.1s
AKTO Aktyubinsk 69.78 321 P **P 14 21 16.4 -0.9**
comp=Z,9.6nm,0.9s,baz=100,slow=6.2,SNR=26
AKTO Aktyubinsk 69.78 321 P **P 14 21 14.3 -3.0**
AKTO pmax pmax
comp=Z,55nm,1.2s
SVE Sverdlovsk 70.02 328 *e*P **P 14 21 17.4 -1.2**
SVE *e*PPP PPP 14 25 29.6
SVE *e*S **S 14 30 28.1 +0.5**
SVE *e*SS **SS 14 35 03.5 +6.3**
SVE *e*SSS SSS 14 38 00.3
SVE pmax pmax
comp=Z,77nm,1.4s
SVE MLR MLR
comp=Z,3μm,20.0s

MZR Muzera 70.11 292 *i* P **P** 14 21 20.0 +0.2
SNR=8.5
MZR Muzera 70.11 292 P **P** 14 21 20.1 +0.2
SNR=9.3
MZR P **P** 14 21 20.1 +0.2
SNR=9.3
MSEY Mahe Island 70.26 262 PFAKE 14 21 30.0 +9.0
MSEY LR LR
comp=Z,1μm,20.0s
ARU Arti 71.00 327 P **P** 14 21 22.6 -2.0
comp=Z,4.3nm,0.7s,baz=102,slow=4.1,SNR=14
ARU Arti 71.00 327 *e*P **P** 14 21 24.9 +0.3
comp=Z,102nm,1.5s
ARU LR LR
comp=Z,2μm,20.0s
ARU Arti 71.00 327 *c i*P **P** 14 21 24.0 -0.6
ARU 14 21 45.5
ARU 14 24 00.7
ARU S **S** 14 30 42.7 +3.6
ARU pmax pmax
comp=Z,58nm,1.5s
ARU MLR MLR
comp=Z,2μm,17.0s
UNV Unalaska Valle 71.62 36 PFAKE 14 21 40.0 +12
UNV LR LR
comp=Z,2μm,22.0s
AKUT Akutan 72.11 35 PFAKE 14 21 40.0 +8.7
AKUT LR LR
comp=Z,2μm,22.0s
FALS False Pass 73.60 35 PFAKE 14 21 50.0 +10
FALS LR LR
comp=Z,2μm,22.0s
CASY Casey 74.08 186 PFAKE 14 21 50.0 +7.3
CASY LR LR
comp=Z,1μm,21.0s
ANM Nome 74.85 25 PFAKE 14 22 00.0 +13
ANM LR LR
comp=Z,1μm,22.0s
SDPT Sand Point 75.35 35 PFAKE 14 22 00.0 +10
SDPT LR LR
comp=Z,1μm,21.0s
AKT Akhty 75.61 311 *e*P **P** 14 21 51.9 -0.4
AKT *e* 14 22 02.1
AKT pmax pmax
comp=Z,45nm,0.8s
MAK Makhachkala 75.86 312 *e*P P 14 21 47.9 -5.6
MAK *e*S **S** 14 31 27.9 -6.7
MAK pmax pmax
comp=Z,37nm,0.4s
KIRV Kirov 76.28 329 P **P** 14 21 54.7 -0.8
comp=Z,20nm,0.8s,baz=99,slow=3.9,SNR=10
GROC Groznyy 77.12 313 *e*P **P** 14 21 59.4 -1.3
GROC *e* 14 24 50.4
GROC *e*S **S** 14 31 46.7 -1.8
GROC pmax pmax
comp=Z,230nm,1.8s
KHLU Kahalu`u 77.49 72 PFAKE 14 22 10.0 +6.7
KHLU LR LR
comp=Z,2μm,22.0s
GNI Garni 77.83 309 P **P** 14 22 04.9 -0.1
comp=Z,6.9nm,0.4s,baz=150,slow=2.6,SNR=27
GNI Garni 77.83 309 PFAKE 14 22 20.0 +15
GNI LR LR
comp=Z,1μm,20.0s
GNI Garni 77.83 309 *d i*P **P** 14 22 07.8 +2.8
GNI pmax pmax
comp=Z,728nm,1.8s
GNI MLR MLR
comp=Z,3μm,20.0s
GNI Garni 77.83 309 P **P** 14 22 07.6 +2.6
SNR=26
GNI P **P** 14 22 07.6 +2.6
SNR=26
TBLG Delisi 77.86 311 *e*P **P** 14 22 05.1 +0.2
comp=Z,71nm,0.8s
TBLG Delisi 77.86 311 *e*P **P** 14 22 05.1 +0.2
TBLG pmax pmax
comp=Z,71nm,0.8s
SBLHI Steaming Bluff 78.09 72 PFAKE 14 22 20.0 +13
SBLHI LR LR
comp=Z,1μm,20.0s
NPOC North of Pu'u 78.24 72 PFAKE 14 22 20.0 +13
NPOC LR LR
comp=Z,2μm,20.0s
JCUZ Jacuzzi 78.25 72 PFAKE 14 22 20.0 +12
JCUZ LR LR
comp=Z,900nm,21.0s
ZEI Tsey 78.50 312 *e*P **P** 14 22 07.3 -1.4
ZEI pmax pmax
comp=Z,66nm,1.0s
PRGR Permogore 78.55 331 *e*P **P** 14 22 06.4 -1.8
PRGR pmax pmax
comp=Z,31nm,1.3s
SVW2 Sparrevohn 78.63 29 PFAKE 14 22 20.0 +11
SVW2 LR LR
comp=Z,500nm,20.0s
NCK Nalchik 78.73 313⇓ *e*P **P** 14 22 09.7 0.0
NCK pmax pmax
comp=Z,110nm,1.7s
NCK MLR MLR
comp=Z,1μm,20.0s
AKH Akhalkalaki 78.79 311 PFAKE 14 22 20.0 +10
AKH LR LR
comp=Z,2μm,21.0s
AKH Akhalkalaki 78.79 311⇑ *i*P **P** 14 22 11.4 +1.1
SII Sitkinak Islan 78.99 34 PFAKE 14 22 20.0 +9.2
SII LR LR
comp=Z,1μm,20.0s
KBZ Khabaz 79.24 313 P **P** 14 22 11.9 -0.5
comp=Z,16nm,0.9s,baz=94,slow=7.2,SNR=36
KBZ LR LR 15 01 20.4
comp=Z,1μm,18.8s,baz=82,slow=39
NEY Neytrino 79.37 313⇓ *e*P **P** 14 22 14.2 +0.8
NEY pmax pmax
comp=Z,47nm,2.1s
KIV Kislovodsk 79.40 313 *e*P **P** 14 22 11.7 -1.7
comp=Z,65nm,1.1s
KIV LR LR
comp=Z,1μm,18.0s
KIV Kislovodsk 79.40 313 *i* P **P** 14 22 13.4 0.0
SNR=32
KIV Kislovodsk 79.40 313 *e*P **P** 14 22 12.2 -1.2
KIV pmax pmax
comp=Z,148nm,1.1s
KIV MLR MLR
comp=Z,3μm,19.0s
KIV Kislovodsk 79.40 313 P **P** 14 22 16.1 +2.7
SNR=27
KIV P **P** 14 22 16.1 +2.7
SNR=27
OHAK Old Harbor 79.52 33 PFAKE 14 22 20.0 +6.4
OHAK LR LR
comp=Z,1μm,21.0s
SIRT Sirnak 79.64 307 PFAKE 14 22 30.0 +15
SIRT LR LR
comp=Z,2μm,22.0s
KDAK Kodiak Island 79.93 33 *e*P **P** 14 22 15.6 -0.3
comp=Z,105nm,1.5s
KDAK LR LR
comp=Z,2μm,21.0s
KDAK Kodiak Island 79.93 33 *e*P **P** 14 22 15.6 -0.3
KDAK pmax pmax
comp=Z,105nm,1.5s
KDAK MLR MLR
comp=Z,2μm,21.0s
VRH Novokhopyorsk 80.11 321 *e*P **P** 14 22 17.3 +0.3
VRH pmax pmax
comp=Z,70nm,1.7s
BATM Batumi 80.14 311⇑ *i*P **P** 14 22 19.2 +1.8
BCA Borcka 80.20 311⇓ *i*P **P** 14 22 19.3 +1.6
CAST Castle Rocks 80.44 27 PFAKE 14 22 30.0 +11
CAST LR LR
comp=Z,1μm,20.0s
ATD Arta Tunnel 80.81 281 PFAKE 14 22 30.0 +8.4
ATD LR LR
comp=Z,500nm,18.0s
BPAW Bear Paw Mtn. 80.96 26 *e*P **P** 14 22 20.9 -0.5
comp=Z,179nm,1.2s
KLMR Klimovskoe 81.46 330 *e*P **P** 14 22 24.3 +0.3
KLMR pmax pmax
comp=Z,63nm,1.3s
SOC Sochi 81.55 313 *e*P **P** 14 22 25.1 +0.2
SOC *e*S **S** 14 32 31.7 -3.8
SOC pmax pmax
comp=Z,414nm,1.5s
SOC MLR MLR
comp=Z,8μm,22.0s
BWN Browne 81.63 26 PFAKE 14 22 40.0 +15
BWN LR LR
comp=Z,900nm,18.0s
VORD Divnogorie 81.64 320 *e*P **P** 14 22 25.8 +0.6
VORD pmax pmax
comp=Z,50nm,1.9s
TOLK Toolik Lake Re 81.67 22 P **P** 14 22 24.5 -0.6
baz=268
VSR Storozhevoye 81.72 321 *e*P **P** 14 22 25.6 0.0
VSR pmax pmax
comp=Z,20nm,1.5s
VSR MLR MLR
comp=Z,850nm,15.0s
LPSR Galich'ya Gora 81.83 322 *e*P **P** 14 22 26.4 +0.3
LPSR pmax pmax
comp=Z,30nm,1.5s
LPSR MLR MLR
comp=Z,1μm,17.0s
MCK McKinley 81.86 27 PFAKE 14 22 40.0 +14
MCK LR LR
comp=Z,1μm,20.0s
GHO Glory Hole Cre 81.86 29 PFAKE 14 22 40.0 +14
GHO LR LR
comp=Z,900nm,20.0s
TMCR Tamitsa 82.15 334 *e*P **P** 14 22 27.1 -0.4
TCOL CIGO, UAF Yank 82.32 25 P **P** 14 22 28.1 -0.3
baz=271
COLA College 82.33 25⇓ *e*P **P** 14 22 27.2 -1.3
COLA pmax pmax
comp=Z,17nm,1.7s
COLA MLR MLR
comp=Z,486nm,18.0s
CCB Clear Creek Bu 82.35 26 PFAKE 14 22 40.0 +11
CCB LR LR
comp=Z,1μm,20.0s
POKR Poker Plat Res 82.50 25 P **P** 14 22 29.3 -0.1
baz=271
MOS Moscow 82.52 325 *e*P **P** 14 22 28.7 -0.9
MOS *e* 14 25 43.4
MOS *e*S **S** 14 32 46.9 +2.0
MOS pmax pmax
comp=Z,42nm,1.0s
DHY Denali Highway 82.57 27 PFAKE 14 22 40.0 +10
DHY LR LR
comp=Z,800nm,20.0s
HDA Harding Lake 82.72 26 PFAKE 14 22 40.0 +9.4
HDA LR LR
comp=Z,900nm,20.0s
HDA Harding Lake 82.72 26 P **P** 14 22 30.3 -0.3
baz=272
ILAR Eielson Array 82.74 26 P **P** 14 22 28.8 -1.9
comp=Z,4.5nm,0.6s,baz=239,slow=4.9,SNR=25
ILAR LR LR 15 01 18.0
comp=Z,506nm,19.3s,baz=273,slow=37
ANN Anapa 83.14 314 *e*P **P** 14 22 33.5 +0.4
ANN *e*S **S** 14 32 56.8 +5.1
ANN pmax pmax
comp=Z,140nm,1.5s
OBN Obninsk 83.14 325 P **P** 14 22 32.4 -0.5
comp=Z,2.6nm,0.4s,baz=114,slow=2.7,SNR=9.5
OBN LR LR 15 02 25.0
comp=Z,376nm,20.3s,baz=88,slow=38
OBN Obninsk 83.14 325 PFAKE 14 22 40.0 +7.1
OBN LR LR
comp=Z,2μm,22.0s
OBN Obninsk 83.14 325⇑ *i*P P 14 22 41.8 +8.9
OBN Obninsk 83.14 325 *de*P **P** 14 22 33.8 +0.9
OBN *i* 14 22 42.8
OBN *e* 14 25 48.0
OBN *i* S **S** 14 32 52.2 +0.9
OBN *i* SS **SS** 14 38 18.0 +2.6
OBN pmax pmax
comp=Z,80nm,2.2s
OBN MLR MLR
comp=Z,2μm,22.0s
PRP Porcupine Dome 83.29 25 PFAKE 14 22 40.0 +6.3
PRP LR LR
comp=Z,900nm,20.0s
FYU Fort Yukon 83.36 24 PFAKE 14 22 40.0 +6.2
FYU LR LR
comp=Z,700nm,22.0s
LVZ Lovozero 83.42 338 *e*P **P** 14 22 33.5 -0.7
comp=Z,26nm,0.9s
LVZ LR LR
comp=Z,3μm,19.0s
LVZ Lovozero 83.42 338⇓ *e*P **P** 14 22 34.5 +0.3
LVZ pmax pmax
comp=Z,37nm,1.7s
LVZ MLR MLR
comp=Z,4μm,21.0s
EYAK Cordova Ski Ar 83.43 30 PFAKE 14 22 50.0 +16
EYAK LR LR
comp=Z,2μm,22.0s
PAX Paxson 83.44 27 PFAKE 14 22 50.0 +16
PAX LR LR
comp=Z,800nm,22.0s
HARP HAARP 83.61 28 PFAKE 14 22 50.0 +15
HARP LR LR
comp=Z,900nm,19.0s
RIDG Independent Ri 83.67 27 PFAKE 14 22 50.0 +14
RIDG LR LR
comp=Z,700nm,20.0s
APA Apatity 83.92 337⇓ *i*P **P** 14 22 36.9 +0.2
APA MLR MLR
comp=Z,2μm,19.0s
DOT Dot Lake 84.03 27 PFAKE 14 22 50.0 +13
DOT LR LR
comp=Z,900nm,22.0s
SCRK Sand Creek 84.04 26 *e*P **P** 14 22 37.0 -0.5
comp=Z,182nm,1.6s
SCRK LR LR
comp=Z,800nm,19.0s
HMT Hamilton 84.18 30 PFAKE 14 22 50.0 +12
HMT LR LR
comp=Z,1μm,20.0s
MENT Mentasta 84.24 27 PFAKE 14 22 50.0 +12
MENT LR LR
comp=Z,900nm,18.0s
TGL Tana Glacier 84.85 30 PFAKE 14 22 50.0 +8.3
TGL LR LR
comp=Z,800nm,21.0s
DIKM Dikmen 84.96 311⇑ *i*P **P** 14 22 42.7 +0.2
SNOP Sinop 84.96 312 PFAKE 14 22 50.0 +7.5
SNOP LR LR
comp=Z,700nm,20.0s
BALM Baldy 85.06 29 PFAKE 14 22 50.0 +7.3
BALM LR LR
comp=Z,700nm,20.0s
FURI Furi 85.17 278 PFAKE 14 23 00.0 +16
FURI LR LR
comp=Z,2μm,19.0s
EGAK Eagle 85.19 25 PFAKE 14 22 50.0 +6.9
EGAK LR LR
comp=Z,602nm,20.0s
SHBL Chebaa 85.35 303 *e*P **P** 14 22 48.0 +3.2
BHL Bhannes 85.37 303 *e*P **P** 14 22 47.7 +2.8
SIM Simferopol' 85.48 315 *ce*P **P** 14 22 46.9 +1.9
SIM *e* 14 25 59.0
SIM *e*S **S** 14 33 16.0 +0.9
SIM pmax pmax
comp=Z,26nm,0.9s
SIM pmax pmax
comp=Z,120nm,7.7s
CTGM Chitina Glacie 85.56 29 PFAKE 14 23 00.0 +15
CTGM LR LR
comp=Z,800nm,22.0s
MMAI Mount Meron Ar 85.67 303 LR LR 15 06 21.3
comp=Z,873nm,19.8s,baz=65,slow=40
GHAJ Ghor Haditha 85.70 301 P **P** 14 22 47.9 +1.5
comp=Z,67nm,2.0s
SEVA Sevastopol 85.83 314⇑ *i*P **P** 14 22 48.9 +2.1
KEV Kevo 85.97 340 PFAKE 14 23 00.0 +13
KEV LR LR
comp=Z,2μm,21.0s
DAWY Dawson 86.04 26 PFAKE 14 23 00.0 +13
DAWY LR LR
comp=Z,1μm,20.0s
ILGA Ilgaz 86.17 311 PFAKE 14 23 00.0 +11
ILGA LR LR
comp=Z,800nm,21.0s
BR131 Keskin Array S 86.38 309 P **P** 14 22 49.5 -0.2
SNR=23
BRTR Keskin Array B 86.38 309 P **P** 14 22 47.0 -2.7
comp=Z,2.4nm,0.8s,baz=113,slow=5.9,SNR=15
BRTR LR LR 15 06 40.7
comp=Z,490nm,20.3s,baz=70,slow=39
BRTR Keskin Array B 86.38 309 *i* P **P** 14 22 48.7 -1.1
BRTR pmax pmax
comp=Z,3.0nm,0.8s
EIL Elat 86.40 299 LR LR 15 07 13.6
comp=Z,931nm,20.2s,baz=74,slow=40
EIL Elat 86.40 299 P P 14 22 56.5 +6.6
comp=Z,70nm,2.4s
MAW Mawson 86.41 200 P **P** 14 22 47.7 -1.3
comp=Z,13nm,1.1s,baz=48,slow=18,SNR=3.8
MAW LR LR 14 58 26.2
comp=Z,730nm,20.2s,baz=52,slow=34
MAW Mawson 86.41 200 PFAKE 14 23 00.0 +11
MAW LR LR
comp=Z,200nm,20.0s
BCPM Bancas Point 86.53 30 PFAKE 14 23 00.0 +10
BCPM LR LR
comp=Z,1μm,21.0s
ARCES ARCESS Array B 86.53 340 P **P** 14 22 47.8 -2.0
comp=Z,3.8nm,1.0s,baz=84,slow=8.3,SNR=3.5
ARCES LR LR 15 05 44.6
comp=Z,2μm,18.3s,baz=87,slow=39
ARE0 ARCESS Array S 86.53 340 *e*P **P** 14 22 48.6 -1.1
comp=Z,0.9nm,1.1s
ARE0 LR LR
comp=Z,100nm,20.0s
SPITS Spitsbergen Ar 86.69 349 P **P** 14 22 49.6 -0.8
comp=Z,6.6nm,1.0s,baz=101,slow=15,SNR=3.7
EPYK Eagle Plains 86.77 24 P **P** 14 22 51.1 +0.1
baz=281
ANTO Ankara 87.01 310 P **P** 14 22 53.8 +1.0
SNR=9.6
ANTO P **P** 14 22 53.8 +1.0
SNR=9.6
VNDA Vanda 87.13 172 P **P** 14 22 50.9 -1.4
comp=Z,5.0nm,0.9s,baz=305,slow=6.4,SNR=19
VNDA PP **PP** 14 26 16.6 +0.4
comp=Z,3.8nm,0.9s,baz=335,slow=9.8,SNR=3.6
VNDA LR LR 15 01 54.3
comp=Z,419nm,20.7s,baz=339,slow=36
VNDA Vanda 87.13 172 *e*P **P** 14 22 51.0 -1.4
CSS Mathiatis 87.17 305 PFAKE 14 23 00.0 +6.4
CSS LR LR
comp=Z,700nm,21.0s
KBS Kingsbay 87.24 350 PFAKE 14 23 00.0 +7.0
KBS LR LR
comp=Z,2μm,19.0s
HYT Haines Junctio 87.43 29 PFAKE 14 23 10.0 +16
HYT LR LR
comp=Z,800nm,20.0s
INK Inuvik 87.58 21 P **P** 14 22 53.0 -1.7
comp=Z,9.5nm,0.7s,baz=293,slow=3.9,SNR=20
INK Inuvik 87.58 21 PFAKE 14 23 10.0 +15
INK LR LR
comp=Z,1μm,20.0s
KMBO Kilima Mbogo 87.79 269 P **P** 14 22 57.6 +0.3
comp=Z,2.8nm,0.7s,baz=81,slow=5.0,SNR=13
KMBO Kilima Mbogo 87.79 269 PFAKE 14 23 10.0 +13
KMBO LR LR
comp=Z,700nm,19.0s
KMBO Kilima Mbogo 87.79 269 *i* P **P** 14 22 59.4 +2.1
SNR=6.7
KMBO Kilima Mbogo 87.79 269 P **P** 14 22 59.5 +2.2
SNR=10.0
KMBO P **P** 14 22 59.5 +2.2
SNR=10.0
FINES FINESS Array B 87.88 332 P **P** 14 22 53.4 -3.0
comp=Z,5.8nm,1.0s,baz=86,slow=4.0,SNR=9.6
FINES LR LR 15 06 06.9
comp=Z,3μm,19.9s,baz=82,slow=38
FINES FINESS Array B 87.88 332 *i* P **P** 14 22 56.2 -0.2
FINES pmax pmax
comp=Z,9.0nm,0.9s
PPT2 Papeete2 87.94 108 *e*LQ LQ 14 47 05.6
comp=Z,3μm,35.2s
PPT2 *e*LR LR 14 50 49.2
comp=Z,2μm,24.8s
AKASG Malin Array Be 88.02 321 P **P** 14 22 56.0 -1.2
comp=Z,3.8nm,0.6s,baz=65,slow=5.2,SNR=17
AKASG PP **PP** 14 26 27.2 +3.5
comp=Z,0.9nm,0.4s,baz=65,slow=8.8,SNR=4.2
AKASG LR LR 15 05 10.1
comp=Z,2μm,20.9s,baz=75,slow=38
AKBB Malin Array Si 88.02 321 *e*P **P** 14 22 57.1 -0.1
comp=Z,35nm,1.5s
AKBB LR LR
comp=Z,2μm,21.0s
KIEV Kiev 88.03 321 *e*P **P** 14 22 57.1 -0.2
comp=Z,34nm,1.5s
KIEV LR LR
comp=Z,2μm,21.0s
KIEV Kiev 88.03 321 *i* P **P** 14 22 58.6 +1.3
SNR=13
KIEV Kiev 88.03 321 *c i*P **P** 14 22 58.5 +1.2
KIEV pmax pmax
comp=Z,25nm,1.9s
KIEV MLR MLR
comp=Z,2μm,20.0s
SBA Scott Base 88.05 172 *e*P **P** 14 22 56.9 +0.1
comp=Z,159nm,1.9s
SBA Scott Base 88.05 172 *e*P **P** 14 22 56.9 +0.1
SBA pmax pmax
comp=Z,159nm,1.9s
VSU Vasula 88.12 329 *d i*P **P** 14 22 57.7 +0.1
VSU pmax pmax
comp=Z,84nm,1.5s
VSU MLR MLR
comp=Z,8μm,19.0s
MICGM Minsk 88.20 325 *e*P P 14 23 03.0 +4.9
MICGM *e*SKS **SKSac** 14 33 28.0 +2.8
MICGM *e*S S 14 33 55.0 +14
MICGM *e*LR LR 15 00 25.0
MNK Minsk 88.20 325 *e*P P 14 23 03.0 +4.9
MNK *e* 14 33 28.0
NAI Nairobi 88.25 269 PFAKE 14 23 10.0 +11
NAI LR LR
comp=Z,900nm,21.0s
IDID Didziasalis 88.71 326 *e*P **P** 14 23 02.3 +1.8
IDID Didziasalis 88.71 326 *e*P **PP** 14 26 30.8 +1.8
KIS Kishinev 88.87 317 *e*P **P** 14 23 02.0 +0.6
KIS Kishinev 88.87 317 *e*PP PP 14 26 35.0 +4.3
KIS *e*SKS **SKSac** 14 33 32.0 +2.5
KIS *e*S **S** 14 33 44.0 -3.7
KIS Kishinev 88.87 317 *e*PS PS 14 34 57.0 +2.3
KIS *e*L L 14 56 16.0
KIS LQM 15 02 38.0
comp=Z,2μm,23.0s
KIS LRM MLR 15 05 53.0
comp=Z,2μm,26.0s
KIS Kishinev 88.87 317 *e*P **P** 14 23 02.0 +0.6
KIS *e* 14 26 35.0
KIS *e* 14 33 32.0
KIS *e*S **S** 14 33 44.0 -3.7
KIS *e*PS **PS** 14 34 57.0 +2.3
TBI Tubuai 88.88 114 *e*LQ LQ 14 47 23.4
comp=Z,3μm,36.0s
TBI *e*LR LR 14 51 11.5
comp=Z,2μm,26.5s
IZAR Zarasai 88.90 326 *e*P **P** 14 23 02.0 +0.7
IZAR Zarasai 88.90 326 *e*P **PP** 14 26 31.9 +1.3
IIGN Ignalina 88.99 326 *e*P **P** 14 23 03.3 +1.5
IIGN Ignalina 88.99 326 *e*P **PP** 14 26 33.4 +2.1
ISAL Salakas 89.00 326 *e*P **P** 14 23 06.3 +4.5
ISAL Salakas 89.00 326 *e*P **PP** 14 26 32.7 +1.3
TIRR Tirgusor 89.57 315⇑ *i*P **P** 14 23 05.7 +1.0
TIRR Tirgusor 89.57 315 ⇑P **P** 14 23 05.7 +1.0
CFR Carcaliu 89.64 315⇓ *i*P **P** 14 23 06.3 +1.3
CFR Carcaliu 89.64 315 ⇓P **P** 14 23 06.4 +1.4
TLB Topalu 89.81 315⇑ *i*P **P** 14 23 07.1 +1.3
TLB Topalu 89.81 315 ⇑P **P** 14 23 07.1 +1.3
TESR Tescani 90.43 317⇓ *i*P **P** 14 23 10.7 +2.0
VRI Vrincioaia 90.50 316⇑ *i*P **P** 14 23 10.6 +1.5
VRI Vrincioaia 90.50 316 ⇑P **P** 14 23 10.6 +1.5
PRD Provadia 90.51 314 P **P** 14 23 10.6 +1.5
PLOR Plostina 90.55 316⇓ *i*P **P** 14 23 11.1 +1.7
PLOR Plostina 90.55 316 ⇓P **P** 14 23 11.1 +1.7
BIZ Bicaz 90.71 317⇑ *i*P **P** 14 23 12.5 +2.5
SUW Suwalki 91.01 325 PFAKE 14 23 20.0 +8.8
SUW LR LR
comp=Z,2μm,21.0s
MLR Muntele Rosu 91.11 316 P **P** 14 23 11.4 -0.6
comp=Z,3.0nm,0.7s,baz=44,slow=1.3,SNR=15
MLR LR LR 15 08 50.3
comp=Z,1μm,21.2s,baz=68,slow=39
MLR Muntele Rosu 91.11 316 PFAKE 14 23 20.0 +7.9

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MLR                                  LR      LR
      comp=Z,2µm,20.0s
BURAR Bucovina Array   91.17 318 ⇓iP        P       14 23 14.9 +2.6
BURAR Bucovina Array   91.17 318 ⇓P         P       14 23 14.9 +2.6
LVV   L'vov            91.46 320 eP         P       14 23 15.5 +2.1
LVV                              e                   14 26 52.6
LVV                              ePPP        PPP     14 28 54.3
LVV                              e                   14 33 46.2
LVV                              eS          S       14 34 09.0 -2.5
LVV                              eSSS        SSS     14 43 48.3
SZH   Strazhica        91.55 314 P          P       14 23 15.0 +1.0
VOIR                   91.73 316 ⇑iP        P       14 23 16.5 +1.6
VOIR                   91.73 316 ⇑P         P       14 23 16.5 +1.6
KARP  Karpathos        92.07 306 PFAKE              14 23 30.0 +13
KARP                             LR      LR
      comp=Z,600nm,21.0s
KDZ   Kurdzhali        92.25 312 P          P       14 23 21.6 +4.3
KWP   Kalwaria Pacla   92.34 320 PFAKE              14 23 30.0 +12
KWP                              LR      LR
      comp=Z,16µm,20.0s
RZN   Rozhen           92.76 312 P          P       14 23 20.5 +0.6
UZH   Uzhgorod         92.85 320 eP         P       14 23 21.5 +1.7
UZH                              e                   14 23 38.1
UZH                              eS          S       14 34 23.9 -0.1
UZH                              ePS         PS      14 35 44.9 +6.3
PGB   Panagyurishte    92.97 313 P          P       14 23 21.3 +0.6
DRGR                   93.02 318 ⇑iP        P       14 23 22.6 +1.8
DRGR                   93.02 318 ⇑P         P       14 23 22.6 +1.8
MPEP  Malo Peshtene    93.10 314 P          P       14 23 22.3 +1.1
GZR   Gura Zlata       93.31 316 ⇑iP        P       14 23 23.8 +1.7
GZR   Gura Zlata       93.31 316 ⇑P         P       14 23 23.8 +1.7
MMB   Musomiste        93.50 312 P          P       14 23 23.1  0.0
VTS   Vitosha          93.63 314 PFAKE              14 23 40.0 +16
VTS                              LR      LR
      comp=Z,1µm,21.0s
VTS   Vitosha          93.63 314 ⇑iP        P       14 23 23.4 -0.4
VTS   Vitosha          93.63 314 ⇑P         P       14 23 23.4 -0.4
VTS   Vitosha          93.63 314 P          P       14 23 23.9 +0.1
SIRR  Siria            93.85 317 ⇑iP        P       14 23 26.4 +1.8
KKB   Krupnik          93.91 313 P          P       14 23 25.1 +0.2
IDI   Anoyia           93.94 306 LR         LR      15 10 24.0
      comp=Z,426nm,21.2s,baz=86,slow=39
HFS   Hagfors          94.07 332 P          P       14 23 22.6 -2.6
      comp=Z,2.0nm,0.9s,baz=138,slow=8.9,SNR=4.2
MBAR  Mbarara          94.19 270 PFAKE              14 23 40.0 +13
MBAR                             LR      LR
      comp=Z,600nm,18.0s
PSZ   Piszkesteto      94.58 319 PFAKE              14 23 40.0 +12
PSZ                              LR      LR
      comp=Z,2µm,20.0s
RES   Resolute Bay     94.69  10 PFAKE              14 23 40.0 +12
RES                              LR      LR
      comp=Z,700nm,20.0s
NB2   NORSAR Subarra   94.84 333 P          P       14 23 27.3 -1.5
      comp=Z,21nm,1.7s,baz=64,slow=4.6
NB2   NORSAR Subarra   94.84 333 P          P       14 23 27.3 -1.5
      baz=64,slow=4.6
NOA   NORSAR Array B   94.84 333 P          P       14 23 25.9 -2.9
      comp=Z,1.5nm,0.8s,baz=66,slow=4.5,SNR=5.1
NOA                              PP          PP      14 27 13.4 -3.8
      comp=Z,1.2nm,0.9s,baz=68,slow=7.2,SNR=3.3
NOA                              PKKPbc      PKKPdf  14 40 24.3 -2.3
      comp=Z,0.9nm,0.8s,baz=69,slow=2.9,SNR=3.6
NOA                              LR      LR      15 09 16.0
      comp=Z,2µm,19.7s,baz=70,slow=38
SYO   Syowa Base       95.02 201 ⇑iP        P       14 23 31.0 +1.7
SYO   Syowa Base       95.02 201 ⇑ePP       PP      14 27 18.8 +0.1
VYHS  Vyhne            95.09 320 eP         P       14 23 28.9 -1.3
VYHS  Vyhne            95.09 320 eP         P       14 23 28.9 -1.3
OKC   Ostrava-Krasne   95.13 321 AMS        AMS     15 10 40.0
      comp=Z,1µm,18.0s
FNA   Florina          95.42 312 PFAKE              14 23 40.0 +8.1
FNA                              LR      LR
      comp=Z,900nm,20.0s
MORC  Moravsky Berou   95.52 322 PFAKE              14 23 40.0 +7.8
MORC                             LR      LR
      comp=Z,1µm,18.0s
MORC  Moravsky Berou   95.52 322 ⇓iP        P       14 23 36.4 +4.2
MORC  Moravsky Berou   95.52 322 ⇓P         P       14 23 36.4 +4.2
MORC  Moravsky Berou   95.52 322 eP         P       14 23 33.5 +1.3
MORC                             ePP         PP      14 27 25.8 +2.8
JAVC  Velka Javorina   95.72 321 eP         P       14 23 35.5 +2.3
ITM   Ithomi           95.87 309 PFAKE              14 23 50.0 +16
ITM                              LR      LR
      comp=Z,600nm,21.0s
TULEG Thule            95.97   3 PFAKE              14 23 40.0 +6.4
TULEG                            LR      LR
      comp=Z,1µm,20.0s
OSTC  Ostas            96.08 323 AMS        AMS     15 10 50.0
      comp=Z,2µm,19.0s
DPC   Dobruska-Polom   96.09 322 eP         P       14 23 40.3 +5.5
DPC                              e                   14 27 27.9
DPC                              MLR     MLR
      comp=Z,2µm,18.0s
DPC   Dobruska-Polom   96.09 322 eP         P       14 23 40.3 +5.5
DPC                              ex          x       14 23 44.6
DPC                              ePP         PP      14 27 27.9 +0.6
DPC                              AMS     AMS     15 10 50.0
      comp=Z,2µm,18.0s
KONO  Kongsberg        96.15 332 PFAKE              14 23 50.0 +15
KONO                             LR      LR
      comp=Z,3µm,20.0s
CHVC  Chvalec          96.17 323 eP         P       14 23 36.6 +1.5
CHVC                             ex          x       14 23 45.1
CHVC                             AMS     AMS     15 11 00.0
      comp=Z,2µm,19.9s
UPC   Upice            96.22 323 AMS        AMS     15 11 00.0
      comp=Z,2µm,19.5s
VRAC  Vranov           96.26 321 P          P       14 23 34.5 -1.0
      comp=Z,0.7nm,0.4s,baz=79,slow=9.0,SNR=3.4
VRAC  Vranov           96.26 321 ⇑iP        P       14 23 39.3 +3.8
VRAC  Vranov           96.26 321 ⇑P         P       14 23 39.3 +3.8
VRAC  Vranov           96.26 321 eP         P       14 23 37.9 +2.4
VRAC                             ePP         PP      14 27 29.0 +0.4
RGN   Rugen            96.35 327 PFAKE              14 23 50.0 +14
RGN                              LR      LR
      comp=Z,3µm,20.0s
TIR   Tirane           96.38 313 PFAKE              14 23 50.0 +14
TIR                              LR      LR
      comp=Z,1µm,21.0s
KRUC  Moravsky         96.46 321 eP         P       14 23 37.8 +1.4
TTG   Podgorica        96.52 314 PFAKE              14 23 50.0 +13
TTG                              LR      LR
      comp=Z,1µm,22.0s
TREC  Trest            96.95 322 AMS        AMS     15 10 00.0
      comp=Z,2µm,18.2s
YKA   Yellowknife Ar   97.06  24 P          P       14 23 37.5 -1.2
      comp=Z,5.7nm,0.9s,baz=300,slow=4.7,SNR=27
YKA                              PKKPbc      PKKPbc  14 40 18.1 -3.3
      comp=Z,0.4nm,0.8s,baz=120,slow=2.1,SNR=3.8
PVCC  Panska Ves       97.08 323 AMS        AMS     15 12 10.0
      comp=Z,2µm,19.5s
QSPA  South Pole Qui   97.13 180 eP         P       14 23 38.0 -1.2
      comp=Z,18nm,1.2s
QSPA                             LR      LR
      comp=Z,1µm,22.0s
CONA  Conrad Observa   97.16 320 i pP        Pdif    14 23 41.8 +2.0
      comp=Z,2.9nm,1.0s
CONA                             PP          PP      14 27 39.6 +3.9
      comp=Z,19nm,1.6s
GOPC  GO Pecny, Ondr   97.16 322 eP         Pdif    14 23 45.0 +5.3
GOPC                             MLR     MLR
      comp=Z,2µm,17.9s
GOPC  GO Pecny, Ondr   97.16 322 eP         Pdif    14 23 45.0 +5.3
GOPC                             ex          x       14 23 49.3
GOPC                             AMS     AMS     15 11 30.0
      comp=Z,2µm,17.9s
PRU   Pruhonice        97.29 322 eP         Pdif    14 23 42.3 +2.1
PRU                              e                   14 23 49.6
PRU                              MLR     MLR
      comp=Z,2µm,18.1s
PRU   Pruhonice        97.29 322 eP         Pdif    14 23 42.3 +2.1
PRU                              ex          x       14 23 49.6
PRU                              AMS     AMS     15 11 40.0
      comp=Z,2µm,18.1s
BLY   Banja Luka       97.29 317 PFAKE              14 23 50.0 +10
BLY                              LR      LR
      comp=Z,1µm,20.0s
BRG   Berggiesshubel   97.33 323 eP         Pdif    14 23 41.9 +1.5
BRG                              e                   14 27 39.0
BRG                              S           S       14 35 05.0 +2.0
BRG                              pmax        pmax
      comp=Z,25nm,1.9s
BRG                              MLR     MLR
      comp=N,2µm,21.2s
BRG                              MLR     MLR
      comp=E,969nm,19.1s
BRG                              MLR     MLR
      comp=Z,2µm,18.9s
BRG   Berggiesshubel   97.33 323 ePDIFF     Pdif    14 23 41.9 +1.5
      comp=Z,25nm,1.9s
BRG                              PP          PP      14 27 39.0 +2.2
BRG                              SDIFF       S       14 35 05.0 +2.0
ARSA  Arzberg          97.60 320 eP         P       14 23 39.1 -2.5
      comp=Z,4.4nm,1.1s
ARSA                             PP          PP      14 27 39.6 +0.6
      comp=Z,1.2nm,0.8s
CLL   Collm            97.73 324 PFAKE              14 23 50.0 +7.9
CLL                              LR      LR
      comp=Z,2µm,20.0s
PERS  Pernice          98.07 319 eP         PP      14 27 47.5 +4.8
SOKA  Soboth           98.11 319 ePP        PP      14 27 47.5 +4.5
      comp=Z,15nm,1.6s
KHC   Kasperske Hory   98.18 322 PFAKE              14 24 00.0 +16
KHC                              LR      LR
      comp=Z,500nm,20.0s
KHC   Kasperske Hory   98.18 322 eP         Pdif    14 23 47.5 +3.2
KHC                              e                   14 23 53.6
KHC                              e                   14 34 20.4
KHC                              MLR     MLR
      comp=Z,2µm,16.1s
KHC   Kasperske Hory   98.18 322 eP         Pdif    14 23 47.5 +3.2
KHC                              ex          x       14 23 53.6
KHC                              eSKS        SKSac   14 34 20.4 -0.3
KHC                              AMS     AMS     15 12 10.0
      comp=Z,2µm,16.1s
MOA   Molln            98.20 320 PP         PP      14 27 47.5 +3.9
      comp=Z,10nm,1.4s
GEC2  GERESS Array S   98.20 322 PFAKE              14 24 00.0 +16
GEC2                             LR      LR
      comp=Z,1µm,19.0s
GERES GERESS Array B   98.20 322 P          P       14 23 43.5 -0.9
      comp=Z,0.5nm,0.7s,baz=66,slow=4.5,SNR=4.4
GERES                            LR      LR      15 10 27.0
      comp=Z,1µm,20.4s,baz=75,slow=37
LSZ   Lusaka           98.30 256 LR         LR      15 07 20.3
      comp=Z,774nm,20.1s,baz=88,slow=35
LSZ   Lusaka           98.30 256 eP         Pdif    14 23 47.0 +1.5
      comp=Z,17nm,1.5s
LSZ                              LR      LR
      comp=Z,2µm,22.0s
LSZ   Lusaka           98.30 256 eP         Pdif    14 23 47.0 +1.4
LSZ                              pmax        pmax
      comp=Z,17nm,1.5s
LSZ                              MLR     MLR
      comp=Z,2µm,22.0s
MATP  Matopo           98.45 250 LR         LR      15 06 32.8
      comp=Z,495nm,19.1s,baz=82,slow=34
NKC   Novy Kostel      98.46 323 AMS        AMS     15 12 00.0
      comp=Z,2µm,18.2s
OBKA  Obir             98.48 319 PP         PP      14 27 46.5 +0.6
      comp=Z,6.7nm,1.1s
VISS  Visnje           98.53 318 eP         PP      14 27 51.1 +4.9
NLWA  Neilton Lookou   98.76  40 PFAKE              14 24 00.0 +13
NLWA                             LR      LR
      comp=Z,1µm,21.0s
MYKA  Terra Mystica    99.02 319 epPdiff    Pdif    14 24 00.2 +12
      comp=Z,0.1nm,0.2s
KBA   Koelnbreinsper   99.06 320 ePP        PP      14 27 51.9 +1.6
      comp=Z,8.8nm,1.4s
D03D  Eldon            99.20  40 P          Pdif    14 23 50.3 +1.5
      baz=291
TIP   Timpagrande      99.27 312 PFAKE              14 24 00.0 +11
TIP                              LR      LR
      comp=Z,1µm,22.0s
SCO   Scoresbysund     99.27 349 PFAKE              14 24 00.0 +11
SCO                              LR      LR
      comp=Z,1µm,19.0s
GRA1  Grafenberg Arr   99.39 323 PFAKE              14 24 00.0 +10
GRA1                             LR      LR
      comp=Z,1µm,20.0s
GRFO  Grafenberg       99.40 323 PFAKE              14 24 00.0 +10
GRFO                             LR      LR
      comp=Z,1µm,20.0s
SUMG  Summit           99.60 355 PFAKE              14 24 00.0 +9.5
SUMG                             LR      LR
      comp=Z,1µm,20.0s
ABTA  Abfaltersbach    99.71 320 ePP        PP      14 27 52.1 -3.1
      comp=Z,8.0nm,1.4s
D05A  Enumclaw         100.03  40 PFAKE             14 24 00.0 +7.5
D05A                             LR      LR
      comp=Z,900nm,22.0s
WTTA  Wattenberg       100.07 321 Pdiff     Pdif    14 23 51.5 -1.4
      comp=Z,9.2nm,1.6s
WTTA                             PP          PP      14 28 01.4 +3.3
      comp=Z,25nm,1.4s
WATA  Walderalm        100.08 321 PP        PP      14 28 03.8 +5.7
      comp=Z,7.3nm,1.0s
COR   Corvallis        100.12  42 PFAKE             14 24 00.0 +7.1
COR                              LR      LR
      comp=Z,1µm,21.0s
CEL   Celeste          100.18 311 PFAKE             14 24 00.0 +6.6
CEL                              LR      LR
      comp=Z,700nm,21.0s
LON   Longmire         100.31  40 PFAKE             14 24 00.0 +6.2
LON                              LR      LR
      comp=Z,900nm,22.0s
SQTA  Sankt Quirin     100.36 321 pPdiff    Pdif    14 24 03.2 +9.1
      comp=Z,5.9nm,1.0s
SQTA                             PP          PP      14 28 00.5 +0.3
      comp=Z,15nm,1.2s
MOTA  Moosalm          100.38 321 epPdiff   Pdif    14 24 02.6 +8.4
      comp=Z,0.2nm,0.5s
MOTA                             PP          PP      14 27 59.8 -0.5
      comp=Z,12nm,1.4s
RETA  Reutte           100.53 321 PP        PP      14 28 00.3 -1.1
      comp=Z,26nm,1.7s
AQU   L'Aquila         100.67 315 PFAKE             14 24 10.0 +14
AQU                              LR      LR
      comp=Z,2µm,21.0s
FETA  Feichten         100.74 321 epPdiff   Pdif    14 24 07.8 +12
      comp=Z,4.3nm,1.3s
FETA                             PP          PP      14 28 07.2 +4.1
      comp=Z,15nm,1.3s
H04A  Detroit Lake     100.83  42 PFAKE             14 24 10.0 +14
H04A                             LR      LR
      comp=Z,700nm,20.0s
STU   Stuttgart        100.98 323 PFAKE             14 24 10.0 +13
STU                              LR      LR
      comp=Z,2µm,20.0s
HUMO  Hull Mountain    101.06  44 PFAKE             14 24 10.0 +13
HUMO                             LR      LR
      comp=Z,1µm,22.0s
FUORN Ofenpass-Fuorn   101.19 320 PFAKE             14 24 10.0 +12
FUORN                            LR      LR
      comp=Z,3µm,22.0s
KMRM  Mail Ridge       101.34  47 PFAKE             14 24 10.0 +11
KMRM                             LR      LR
      comp=Z,1µm,20.0s
YBH   Yreka Blue Hor   101.53  45 PFAKE             14 24 10.0 +11
YBH                              LR      LR
      comp=Z,1µm,22.0s
BFO   Black Forest     101.69 322 PFAKE             14 24 10.0 +10
BFO                              LR      LR
      comp=Z,2µm,20.0s
TUE   Stuetta          101.83 320 PFAKE             14 24 10.0 +9.2
TUE                              LR      LR
      comp=Z,2µm,20.0s
F07A  Phinny Hill Vi   101.84  40 PFAKE             14 24 10.0 +9.4
F07A                             LR      LR
      comp=Z,900nm,20.0s
HAWA  Hanford          101.89  40 PFAKE             14 24 10.0 +9.2
HAWA                             LR      LR
      comp=Z,902nm,22.0s
WDD   Wied Dalam       101.97 309 PFAKE             14 24 10.0 +8.7
WDD                              LR      LR
      comp=Z,600nm,22.0s
PINE  Pine Mountain    102.00  42 PFAKE             14 24 10.0 +8.4
PINE                             LR      LR
      comp=Z,1µm,22.0s
WDC   Whiskeytown Da   102.06  46 PFAKE             14 24 10.0 +8.3
WDC                              LR      LR
      comp=Z,800nm,22.0s
VLC   Villacollemand   102.07 318 PFAKE             14 24 10.0 +8.3
VLC                              LR      LR
      comp=Z,1µm,20.0s
E08A  Dider Farm, El   102.15  39 PFAKE             14 24 10.0 +8.1
E08A                             LR      LR
      comp=Z,1µm,21.0s
HOPS  Hopland Field    102.22  48 PFAKE             14 24 10.0 +7.6
HOPS                             LR      LR
      comp=Z,2µm,20.0s
WLF   Walferdange      102.39 324 PFAKE             14 24 10.0 +7.1
WLF                              LR      LR
      comp=Z,10µm,19.0s
CLTB  Caltabellotta    102.41 311 PFAKE             14 24 10.0 +6.6
CLTB                             LR      LR
      comp=Z,1µm,18.0s
ECH   Echery           102.44 323 PFAKE             14 24 10.0 +6.8
ECH                              LR      LR
      comp=Z,1µm,18.0s
GDXM  Geysers          102.49  48 PFAKE             14 24 10.0 +6.3
GDXM                             LR      LR
      comp=Z,2µm,20.0s
E09A  Wood Farm, Sta   102.72  39 PFAKE             14 24 20.0 +16
E09A                             LR      LR
      comp=Z,1µm,20.0s
UCC   Uccle            102.88 326 PFAKE             14 24 20.0 +15
UCC                              LR      LR
      comp=Z,3µm,20.0s
MOD   Modoc Plateau    103.15  44 PFAKE             14 24 20.0 +13
MOD                              LR      LR
      comp=Z,700nm,22.0s
SENIN Lac Senin/Sane   103.16 321 PFAKE             14 24 20.0 +13
SENIN                            LR      LR
      comp=Z,2µm,19.0s
ORV   Oroville         103.17  47 PFAKE             14 24 20.0 +13
ORV                              LR      LR
      comp=Z,700nm,20.0s
F10A  Beach Ranch, E   103.52  39 PFAKE             14 24 20.0 +12
F10A                             LR      LR
      comp=Z,1µm,22.0s
AFDM  Forest Hills D   103.77  47 PFAKE             14 24 20.0 +11
AFDM                             LR      LR
      comp=Z,800nm,22.0s
J08A  Circle Bar Ran   103.81  42 PFAKE             14 24 20.0 +10
J08A                             LR      LR
      comp=Z,800nm,22.0s
BMO   Blue Mountains   103.95  40 PFAKE             14 24 20.0 +10
BMO                              LR      LR
      comp=Z,602nm,20.0s
WVOR  Wild Horse Val   104.08  43 PFAKE             14 24 20.0 +9.2
WVOR                             LR      LR
      comp=Z,602nm,20.0s
BNI   Bardonecchia     104.12 320 PFAKE             14 24 20.0 +9.1
BNI                              LR      LR
      comp=Z,3µm,22.0s
ESK   Eskdalemuir      104.30 332 PFAKE             14 24 20.0 +8.7
ESK                              LR      LR
      comp=Z,2µm,18.0s
CMB   Columbia Colle   104.53  48 PFAKE             14 24 20.0 +7.2
CMB                              LR      LR
      comp=Z,1µm,21.0s
SSB   Saint Sauveur    105.37 321 PFAKE             14 28 40.0 +10
SSB                              LR      LR
      comp=Z,2µm,20.0s
MDPB  Devils Postpil   105.64  48 PFAKE             14 28 40.0 +8.8
MDPB                             LR      LR
      comp=Z,1µm,22.0s
BMN   Battle Mountai   105.86  45 PFAKE             14 28 40.0 +8.6
BMN                              LR      LR
      comp=Z,600nm,20.0s
SFJD  Kangerlussuaq    105.87 358 PFAKE             14 28 40.0 +10
SFJD                             LR      LR
      comp=Z,700nm,19.0s
NVAR  Mina Array Bea   105.90  47 Pdiff     Pdif    14 24 19.6 +0.5
      comp=Z,0.1nm,0.4s,baz=291,slow=3.8,SNR=2.2
NVAR                             PP          PKiKP   14 28 31.4 -0.2
      comp=Z,1.6nm,1.1s,baz=269,slow=7.2,SNR=3.4
NVAR                             PKKPbc      PKKPbc  14 39 55.7 +0.3
      comp=Z,1.1nm,0.8s,baz=132,slow=2.2,SNR=5.4
NVAR                             PKKPab      PKKPab  14 40 10.1 -2.0
      comp=Z,0.5nm,0.7s,baz=109,slow=5.7,SNR=4.2
KEST  Kesra            105.97 310 PFAKE             14 28 40.0 +8.4
KEST                             LR      LR
      comp=Z,900nm,22.0s
ANGG  Ammassalik, Gr   106.19 353 PFAKE             14 28 40.0 +9.0
ANGG                             LR      LR
      comp=Z,1µm,21.0s
ISA   Isabella, Lake   106.83  50 PFAKE             14 28 40.0 +6.8
ISA                              LR      LR
      comp=Z,1µm,22.0s
OSI   Osito Audit: C   107.03  51 PFAKE             14 28 50.0 +16
OSI                              LR      LR
      comp=Z,1µm,21.0s
DSB   Dublin           107.04 332 PFAKE             14 28 40.0 +7.1
DSB                              LR      LR
      comp=Z,2µm,20.0s
ELK   Elko             107.10  44 PFAKE             14 28 50.0 +16
ELK                              LR      LR
      comp=Z,700nm,21.0s
DAC   Darwin (Calif)   107.26  49 PFAKE             14 28 50.0 +16
DAC                              LR      LR
      comp=Z,1µm,20.0s
PASC  Pasadena Art C   107.61  51 PFAKE             14 28 50.0 +15
PASC                             LR      LR
      comp=Z,1µm,19.0s
MWC   Mount Wilson     107.69  51 PFAKE             14 28 50.0 +15
MWC                              LR      LR
      comp=Z,1µm,20.0s
R11A  Troy Canyon, C   107.88  46 PFAKE             14 28 50.0 +15
R11A                             LR      LR
      comp=Z,800nm,20.0s
TPNV  Topopah Spring   107.98  48 PFAKE             14 28 50.0 +15
TPNV                             LR      LR
      comp=Z,1µm,20.0s
SNAA  Sanae            108.12 195 PFAKE             14 28 50.0 +16
SNAA                             LR      LR
      comp=Z,2µm,22.0s
GSC   Goldstone, Bar   108.23  49 PFAKE             14 28 50.0 +14
GSC                              LR      LR
      comp=Z,700nm,20.0s
IMW   Indian Meadow    108.44  39 PFAKE             14 28 50.0 +14
IMW                              LR      LR
      comp=Z,1µm,22.0s
FLWY  Flagg Ranch      108.50  39 PFAKE             14 28 50.0 +14
FLWY                             LR      LR
      comp=Z,800nm,22.0s
MOOW  Moose Ponds      108.64  39 PFAKE             14 28 50.0 +13
MOOW                             LR      LR
      comp=Z,1µm,22.0s
TPAW  Teton Pass       108.64  39 PFAKE             14 28 50.0 +13
TPAW                             LR      LR
      comp=Z,1µm,21.0s
REDW  Red Top Meadow   108.76  40 PFAKE             14 28 50.0 +13
REDW                             LR      LR
      comp=Z,1µm,21.0s
SNOW  Snow King Moun   108.77  39 PFAKE             14 28 50.0 +13
SNOW                             LR      LR
      comp=Z,1µm,22.0s
LDFC  Landfair         109.59  49 PFAKE             14 28 50.0 +12
LDFC                             LR      LR
      comp=Z,900nm,20.0s
LAO   LASA Array       109.75  35 PFAKE             14 28 50.0 +12
LAO                              LR      LR
      comp=Z,800nm,20.0s
DGMT  Dagmar           109.81  32 PFAKE             14 28 50.0 +12
DGMT                             LR      LR
      comp=Z,698nm,20.0s
PDAR  Pinedale Array   109.88  40 PKiKP     PKiKP   14 28 39.9 +1.0
      comp=Z,0.3nm,0.7s,baz=352,slow=4.6,SNR=3.6
PDAR                             PKKPab      PKKPab  14 39 50.9 -3.6
      comp=Z,1.6nm,0.9s,baz=120,slow=5.8,SNR=9.9
W13A  Hualapai Mount   110.49  48 PFAKE             14 28 50.0 +10
W13A                             LR      LR
      comp=Z,800nm,21.0s
Y12C  Blythe           110.57  50 PFAKE             14 28 50.0 +10
Y12C                             LR      LR
      comp=Z,800nm,20.0s
GLA   Glamis           110.62  51 PFAKE             14 28 50.0 +10
GLA                              LR      LR
      comp=Z,700nm,19.0s
U15A  North Rim        111.08  47 PFAKE             14 28 50.0 +8.6
U15A                             LR      LR
      comp=Z,1µm,22.0s
NRS   Narsarsuaq       111.38 355 PFAKE             14 28 50.0 +9.2
NRS                              LR      LR
      comp=Z,2µm,22.0s
113A  Mohawk Valley,   111.55  51 PFAKE             14 28 50.0 +8.0
113A                             LR      LR
      comp=Z,700nm,22.0s
Y14A  Wickenburg       111.64  49 PFAKE             14 28 50.0 +7.7
Y14A                             LR      LR
      comp=Z,900nm,19.0s
RWWY  Rawlins          111.93  40 PFAKE             14 28 50.0 +7.1
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RWWY LR LR
comp=Z,900nm,20.0s
O20A White River Ci 112.08 41 PFAKE 14 28 50.0 +6.9
O20A LR LR
comp=Z,900nm,21.0s
WUAZ Wupatki 112.15 47 PFAKE 14 28 50.0 +6.7
WUAZ LR LR
comp=Z,802nm,22.0s
RSSD Black Hills 112.49 36 PFAKE 14 29 00.0 +16
RSSD LR LR
comp=Z,600nm,20.0s
PV11 David Mesa, Pa 112.59 43 PFAKE 14 29 00.0 +16
PV11 LR LR
comp=Z,600nm,18.0s
PV18 Skein Mesa, Pa 112.59 43 PFAKE 14 29 00.0 +16
PV18 LR LR
comp=Z,700nm,20.0s
X16A Lo Mia Camp, P 112.60 48 PFAKE 14 29 00.0 +16
X16A LR LR
comp=Z,800nm,21.0s
PV03 Paradox Valley 112.63 43 PFAKE 14 29 00.0 +16
PV03 LR LR
comp=Z,800nm,20.0s
PV12 Saucer Basin, 112.63 43 PFAKE 14 29 00.0 +16
PV12 LR LR
comp=Z,800nm,18.0s
PV07 Paradox Valley 112.68 43 PFAKE 14 29 00.0 +16
PV07 LR LR
comp=Z,700nm,20.0s
CART Cartagena 112.69 316 PFAKE 14 29 00.0 +16
CART LR LR
comp=Z,600nm,22.0s
N23A Red Feather La 113.16 40 PFAKE 14 29 00.0 +15
N23A LR LR
comp=Z,700nm,20.0s
PHWY Pilot Hill 113.25 39 PFAKE 14 29 00.0 +15
PHWY LR LR
comp=Z,700nm,20.0s
MVCO Mesa Verde 113.39 44 PFAKE 14 29 00.0 +14
MVCO LR LR
comp=Z,1μm,21.0s
W18A Petrified Fore 113.53 47 PFAKE 14 29 00.0 +14
W18A LR LR
comp=Z,900nm,22.0s
ESLA Sonseca Array 113.61 319 PFAKE 14 29 00.0 +14
ESLA LR LR
comp=Z,700nm,20.0s
TAM Tamanrasset 113.61 299 PFAKE 14 29 00.0 +14
TAM LR LR
comp=Z,600nm,20.0s
X18A Snowflake 113.64 47 PFAKE 14 29 00.0 +14
X18A LR LR
comp=Z,800nm,22.0s
PAB San Pablo 113.93 319 PFAKE 14 29 00.0 +14
PAB LR LR
comp=Z,1μm,19.0s
ISCO Idaho Springs 113.97 41 PFAKE 14 29 00.0 +13
ISCO LR LR
comp=Z,1μm,22.0s
TUC Tucson 114.03 50 PFAKE 14 29 00.0 +13
TUC LR LR
comp=Z,900nm,20.0s
Q24A Divide 114.73 41 PFAKE 14 29 00.0 +12
Q24A LR LR
comp=Z,600nm,21.0s
HSIG 115.31 53 PFAKE 14 29 00.0 +11
HSIG LR LR
comp=Z,900nm,22.0s
MTE Manteigas 115.48 321 PFAKE 14 29 00.0 +11
MTE LR LR
comp=Z,2μm,22.0s
OGNE Ogallala 115.56 38 PFAKE 14 29 00.0 +10
OGNE LR LR
comp=Z,601nm,22.0s
319A Douglas 115.59 50 PFAKE 14 29 00.0 +10
319A LR LR
comp=Z,800nm,21.0s
ANMO Albuquerque 115.96 46 PFAKE 14 29 00.0 +9.3
ANMO LR LR
comp=Z,700nm,22.0s
Y22D IRIS PASSCAL I 116.06 47 PFAKE 14 29 00.0 +9.2
Y22D LR LR
comp=Z,800nm,21.0s
COI Coimbra 116.13 322 PFAKE 14 29 00.0 +9.4
COI LR LR
comp=Z,2μm,21.0s
T25A Trinidad 116.21 42 PFAKE 14 29 00.0 +8.9
T25A LR LR
comp=Z,1μm,21.0s
EYMN Ely 116.38 26 PFAKE 14 29 00.0 +9.2
EYMN LR LR
comp=Z,799nm,20.0s
SFS San Fernando 116.83 317 PFAKE 14 29 00.0 +8.0
SFS LR LR
comp=Z,1μm,21.0s
ECSD EROS Data Cent 116.89 33 PFAKE 14 29 00.0 +8.0
ECSD LR LR
comp=Z,800nm,20.0s
PVAQ Vaqueiros 117.32 319 PFAKE 14 29 00.0 +7.0
PVAQ LR LR
comp=Z,800nm,18.0s
E38A The Farm, Brul 117.36 27 PFAKE 14 29 00.0 +7.2
E38A LR LR
comp=Z,1μm,22.0s
MESJ Messejana 117.39 319 *e*PP PP 14 30 04.1 +0.2
MESJ AMS AMS 15 17 07.2
comp=N,1μm,20.8s
C40A Isle Royale Na 117.41 25 PFAKE 14 29 00.0 +7.2
C40A LR LR
comp=Z,900nm,20.0s
EPT El Paso 117.49 49 PFAKE 14 29 10.0 +16
EPT LR LR
comp=Z,500nm,20.0s
SPMN Marine on St. 117.79 29 PFAKE 14 29 10.0 +16
SPMN LR LR
comp=Z,700nm,20.0s
MORF Marmelete 117.98 319 *e*PP PP 14 30 08.1 0.0
MORF *e*SS SS 14 46 23.4 +2.7
MORF AMS AMS 15 17 25.9
comp=E,1μm,18.0s
PFVI Vila Bisbo 118.20 319 PFAKE 14 29 10.0 +15
PFVI LR LR
comp=Z,900nm,20.0s
CBKS Cedar Bluff 118.26 39 PFAKE 14 29 10.0 +15
CBKS LR LR
comp=Z,500nm,20.0s
SLBS Sierra La Lagu 118.29 58 PFAKE 14 29 10.0 +15
SLBS LR LR
comp=Z,1μm,21.0s
D41A Chassel 118.33 25 PFAKE 14 29 10.0 +15
D41A LR LR
comp=Z,900nm,21.0s
MNTX Cornudas Mount 118.36 48 PFAKE 14 29 10.0 +15
MNTX LR LR
comp=Z,601nm,22.0s
COWI Conover 118.83 26 PFAKE 14 29 10.0 +14
COWI LR LR
comp=Z,999nm,21.0s
G40A Rib Lake 118.98 28 PFAKE 14 29 10.0 +14
G40A LR LR
comp=Z,900nm,22.0s
MSTX Muleshoe 119.06 45 PFAKE 14 29 10.0 +13
MSTX LR LR
comp=Z,800nm,19.0s
F41A Three Lakes 119.12 27 PFAKE 14 29 10.0 +14
F41A LR LR
comp=Z,700nm,20.0s
AMTX Amarillo 119.30 43 PFAKE 14 29 10.0 +13
AMTX LR LR
comp=Z,800nm,20.0s
I39A Houston 119.41 30 PFAKE 14 29 10.0 +13
I39A LR LR
comp=Z,800nm,21.0s
E43A Lone Tree Farm 119.53 25 PFAKE 14 29 10.0 +13
E43A LR LR
comp=Z,900nm,21.0s
H41A Junction City 119.73 28 PFAKE 14 29 10.0 +13
H41A LR LR
comp=Z,1μm,22.0s
E44A Grand Marais A 119.77 24 PFAKE 14 29 10.0 +13
E44A LR LR
comp=Z,800nm,22.0s
G42A Mountain 119.81 27 PFAKE 14 29 10.0 +12
G42A LR LR
comp=Z,900nm,21.0s
SCIA State Center 119.96 32 PFAKE 14 29 10.0 +12
SCIA LR LR
comp=Z,600nm,21.0s
KSU1 Kansas State U 119.97 37 PFAKE 14 29 10.0 +12
KSU1 LR LR
comp=Z,700nm,20.0s
TORD Torodi Ar. Bea 120.04 290 PKhKP PKPpre 14 28 49.6
comp=Z,0.4nm,0.7s,baz=110,slow=8.3,SNR=4.5
TORD PKP **PKPdf 14 28 55.6 -3.2**
comp=Z,1.4nm,0.8s,baz=36,slow=4.0,SNR=6.8
TOA1 Torodi Ar. Sit 120.05 290 PFAKE 14 29 10.0 +11
TOA1 LR LR
comp=Z,500nm,20.0s
TOC4 Torodi Ar. Sit 120.05 290 PFAKE 14 29 10.0 +11
TOC4 LR LR
comp=Z,500nm,20.0s
TOC7 Torodi Ar. Sit 120.05 290 PFAKE 14 29 10.0 +11
TOC7 LR LR
comp=Z,500nm,20.0s
I41A Arkdale 120.06 28 PFAKE 14 29 10.0 +12
I41A LR LR
comp=Z,800nm,20.0s
TOB4 Torodi Ar. Sit 120.06 290 PFAKE 14 29 10.0 +11
TOB4 LR LR
comp=Z,500nm,21.0s
TOC5 Torodi Ar. Sit 120.07 290 PFAKE 14 29 10.0 +11
TOC5 LR LR
comp=Z,700nm,21.0s
G43A Wallace 120.12 26 PFAKE 14 29 10.0 +12
G43A LR LR
comp=Z,800nm,20.0s
H42A Shiocton 120.33 27 PFAKE 14 29 10.0 +11
H42A LR LR
comp=Z,800nm,21.0s
E46A Sault Ste Mari 120.62 23 PFAKE 14 29 10.0 +11
E46A LR LR
comp=Z,800nm,19.0s
I42A Draeger Farm, 120.63 28 PFAKE 14 29 10.0 +11
I42A LR LR
comp=Z,700nm,21.0s
JFWS Jewell Farm 120.73 29 PFAKE 14 29 10.0 +11
JFWS LR LR
comp=Z,902nm,22.0s
LTX Lajitas 120.82 50 *e*PKPdf **PKPdf 14 28 59.2 -0.9**
LTX Lajitas 120.82 50 *e*PKIKP **PKPdf 14 28 59.2 -0.9**
TXAR Lajitas Array 120.82 50 PKP **PKPdf 14 28 59.2 -0.9**
comp=Z,0.9nm,0.8s,baz=217,slow=1.6,SNR=10
TXAR PKKPbc **PKKPbc 14 39 03.8 -0.8**
comp=Z,2.9nm,1.2s,baz=131,slow=5.1,SNR=6.9
L40A Anamosa 120.88 31 PFAKE 14 29 10.0 +10
L40A LR LR
comp=Z,800nm,21.0s
G45A Suttons Bay 121.16 25 PFAKE 14 29 10.0 +10
G45A LR LR
comp=Z,1μm,21.0s
WMOK Wichita Mounta 121.33 42 PFAKE 14 29 10.0 +9.1
WMOK LR LR
comp=Z,802nm,21.0s
VLDQ Val d'Or 121.46 17 PFAKE 14 29 10.0 +9.3
VLDQ LR LR
comp=Z,1μm,21.0s
L42A Oliver, Polo 121.70 30 PFAKE 14 29 10.0 +8.6
L42A LR LR
comp=Z,700nm,21.0s
I45A Fountain 121.72 26 PFAKE 14 29 10.0 +8.6
I45A LR LR
comp=Z,1μm,20.0s
GLMI Grayling 121.77 24 PFAKE 14 29 10.0 +8.5
GLMI LR LR
comp=Z,900nm,21.0s
K43A Burlington 121.81 28 PFAKE 14 29 10.0 +8.4
K43A LR LR
comp=Z,800nm,20.0s
ABTX Abilene, Hawle 121.98 44 PFAKE 14 29 10.0 +7.7
ABTX LR LR
comp=Z,800nm,22.0s
N41A Harden Midland 122.06 32 PFAKE 14 29 10.0 +7.9
N41A LR LR
comp=Z,600nm,20.0s
D53A Lac Vacive, Po 122.31 18 PFAKE 14 29 10.0 +7.5
D53A LR LR
comp=Z,1μm,21.0s
H48A Harrisville 122.39 24 PFAKE 14 29 10.0 +7.3
H48A LR LR
comp=Z,900nm,20.0s
I47A Gladwin 122.47 25 PFAKE 14 29 10.0 +7.2
I47A LR LR
comp=Z,1μm,22.0s
TUL1 Leonard 122.52 39 PFAKE 14 29 10.0 +6.8
TUL1 LR LR
comp=Z,900nm,22.0s
M44A Midewin, Midew 122.96 29 PFAKE 14 29 20.0 +16
M44A LR LR
comp=Z,800nm,20.0s
JCT Junction City 123.07 46 PFAKE 14 29 20.0 +16
JCT LR LR
comp=Z,500nm,19.0s
L46A Eue Claire 123.30 27 PFAKE 14 29 20.0 +15
L46A LR LR
comp=Z,800nm,21.0s
J48A Bridge Port 123.36 25 PFAKE 14 29 20.0 +15
J48A LR LR
comp=Z,1μm,21.0s
HHAR Hobbs 123.42 37 PFAKE 14 29 20.0 +15
HHAR LR LR
comp=Z,800nm,22.0s
M46A Old House Fiel 123.75 28 PFAKE 14 29 20.0 +15
M46A LR LR
comp=Z,700nm,20.0s
CCM Cathedral Cave 123.76 34 PFAKE 14 29 20.0 +14
CCM LR LR
comp=Z,700nm,21.0s
WHTX Lake Whitney, 123.85 44 PFAKE 14 29 20.0 +14
WHTX LR LR
comp=Z,600nm,18.0s
SADO Sadowa 123.88 20 PFAKE 14 29 20.0 +14
SADO LR LR
comp=Z,900nm,19.0s
SFIN Lafayette 124.19 29 PFAKE 14 29 20.0 +14
SFIN LR LR
comp=Z,900nm,20.0s
W39A Magazine 124.23 38 PFAKE 14 29 20.0 +13
W39A LR LR
comp=Z,1μm,22.0s
FVM French Village 124.26 34 PFAKE 14 29 20.0 +13
FVM LR LR
comp=Z,600nm,19.0s
K50A Casco 124.27 24 PFAKE 14 29 20.0 +14
K50A LR LR
comp=Z,800nm,20.0s
PLVO Plevna 124.33 19 PFAKE 14 29 20.0 +14
PLVO LR LR
comp=Z,1μm,21.0s
M48A Edgerton 124.43 27 PFAKE 14 29 20.0 +13
M48A LR LR
comp=Z,1μm,19.0s
435B Jarrell 124.47 45 PFAKE 14 29 20.0 +13
435B LR LR
comp=Z,700nm,22.0s
P45A Graceland, Par 124.53 30 PFAKE 14 29 20.0 +13
P45A LR LR
comp=Z,1μm,20.0s
833A Chaparral WMA, 124.55 48 PFAKE 14 29 20.0 +13
833A LR LR
comp=Z,800nm,21.0s
MIAR Mount Ida 124.79 39 PFAKE 14 29 20.0 +12
MIAR LR LR
comp=Z,1μm,21.0s
ZAIG Zacatecas 124.82 56 PFAKE 14 29 20.0 +12
ZAIG LR LR
comp=Z,900nm,20.0s
WHAR Wooly Hollow 125.07 37 PFAKE 14 29 20.0 +12
WHAR LR LR
comp=Z,700nm,22.0s
PQI Presque Isle 125.10 11 PFAKE 14 29 20.0 +12
PQI LR LR
comp=Z,800nm,20.0s
N49A Columbus Grove 125.12 27 PFAKE 14 29 20.0 +12
N49A LR LR
comp=Z,1μm,21.0s
W41B Gary Mavity, V 125.18 37 PFAKE 14 29 20.0 +12
W41B LR LR
comp=Z,700nm,20.0s
M50A Fremont 125.23 26 PFAKE 14 29 20.0 +12
M50A LR LR
comp=Z,1μm,20.0s
X40A Basin Creek Fa 125.28 38 PFAKE 14 29 20.0 +11
X40A LR LR
comp=Z,1μm,20.0s
J54A Appleton 125.37 21 PFAKE 14 29 20.0 +11
J54A LR LR
comp=Z,1μm,22.0s
UALR University of 125.39 38 PFAKE 14 29 20.0 +11
UALR LR LR
comp=Z,900nm,21.0s
LONY Lake Ozonia 125.47 17 PFAKE 14 29 20.0 +11
LONY LR LR
comp=Z,701nm,22.0s
MEDO Medina 125.53 21 PFAKE 14 29 20.0 +11
MEDO LR LR
comp=Z,1μm,21.0s
FRNY Flat Rock 125.55 16 PFAKE 14 29 20.0 +11
FRNY LR LR
comp=Z,700nm,22.0s
PARMO Parma 125.58 34 PFAKE 14 29 20.0 +11
PARMO LR LR
comp=Z,800nm,18.0s
O49A Covington 125.64 27 PFAKE 14 29 20.0 +11
O49A LR LR
comp=Z,900nm,20.0s
J55A Hilton 125.66 20 PFAKE 14 29 20.0 +11
J55A LR LR
comp=Z,1μm,20.0s
USIN University of 125.75 32 PFAKE 14 29 20.0 +10
USIN LR LR
comp=Z,1μm,20.0s
M52A Chesterland 125.82 24 PFAKE 14 29 20.0 +10
M52A LR LR
comp=Z,800nm,20.0s
HBAR Harrisburg 125.85 36 PFAKE 14 29 20.0 +10
HBAR LR LR
comp=Z,2μm,21.0s
ERPA Erie 125.87 23 PFAKE 14 29 20.0 +10
ERPA LR LR
comp=Z,1μm,20.0s
N51A Ashland 125.92 25 PFAKE 14 29 20.0 +10
N51A LR LR
comp=Z,1μm,22.0s
T45A Paducah 125.93 33 PFAKE 14 29 20.0 +10
T45A LR LR
comp=Z,700nm,20.0s
MMNY Mt. Morris Dam 126.10 21 PFAKE 14 29 20.0 +10
MMNY LR LR
comp=Z,1μm,20.0s
Z41A Richland Creek 126.12 39 PFAKE 14 29 20.0 +10
Z41A LR LR
comp=Z,700nm,20.0s
NCB Newcomb 126.17 17 PFAKE 14 29 20.0 +10
NCB LR LR
comp=Z,700nm,21.0s
HKT Hockley 126.19 45 PFAKE 14 29 20.0 +9.5
HKT LR LR
comp=Z,700nm,20.0s
PKME Peaks-Kenny Pk 126.20 12 PFAKE 14 29 20.0 +10
PKME LR LR
comp=Z,1μm,21.0s
ACSO Alum Creek Sta 126.22 26 PFAKE 14 29 20.0 +10
ACSO LR LR
comp=Z,1μm,20.0s
VT1 Waterbury 126.25 16 PFAKE 14 29 20.0 +10
VT1 LR LR
comp=Z,1μm,22.0s
WCI Wyandotte Cave 126.25 30 PFAKE 14 29 20.0 +9.5
WCI LR LR
comp=Z,1μm,22.0s
LNIG Linares 126.29 52 PFAKE 14 29 20.0 +9.0
LNIG LR LR
comp=Z,700nm,21.0s
CCAR Cane Creek 126.32 38 PFAKE 14 29 20.0 +9.2
CCAR LR LR
comp=Z,1μm,20.0s
HALT Halls 126.35 35 PFAKE 14 29 20.0 +9.2
HALT LR LR
comp=Z,800nm,22.0s
LMN Caledonia Moun 126.43 8 PFAKE 14 29 20.0 +9.3
LMN LR LR
comp=Z,900nm,21.0s
X43A Marvell 126.44 37 PFAKE 14 29 20.0 +9.0
X43A LR LR
comp=Z,800nm,21.0s
M54A Oil Creek Stat 126.52 23 PFAKE 14 29 20.0 +9.0
M54A LR LR
comp=Z,800nm,20.0s
LBNH Lisbon 126.55 15 PFAKE 14 29 20.0 +9.1
LBNH LR LR
comp=Z,900nm,21.0s
N53A Lisbon 126.65 24 PFAKE 14 29 20.0 +8.7
N53A LR LR
comp=Z,900nm,22.0s
T47A Sharon Grove 126.78 32 PFAKE 14 29 20.0 +8.4
T47A LR LR
comp=Z,800nm,21.0s
WVL Waterville 126.78 13 PFAKE 14 29 20.0 +8.6
WVL LR LR
comp=Z,1μm,22.0s
P51A Williamsport 126.79 27 PFAKE 14 29 20.0 +8.4
P51A LR LR
comp=Z,800nm,22.0s
O52A Adamsville 126.81 26 PFAKE 14 29 20.0 +8.4
O52A LR LR
comp=Z,800nm,19.0s
N54A Moraine State 126.86 23 PFAKE 14 29 20.0 +8.3
N54A LR LR
comp=Z,1μm,21.0s
HNH Hanover 126.95 16 PFAKE 14 29 20.0 +8.3
HNH LR LR
comp=Z,900nm,22.0s
WVT Waverly 127.03 33 PFAKE 14 29 20.0 +7.9
WVT LR LR
comp=Z,700nm,22.0s
Q51A Peebles 127.03 27 PFAKE 14 29 20.0 +7.9
Q51A LR LR
comp=Z,900nm,22.0s
EMMW East Machias 127.10 11 PFAKE 14 29 20.0 +8.0
EMMW LR LR
comp=Z,1μm,22.0s
BINY Binghamton 127.22 19 PFAKE 14 29 20.0 +7.6
BINY LR LR
comp=Z,1μm,21.0s
GBN Guysborough 127.27 6 PFAKE 14 29 20.0 +7.7
GBN LR LR
comp=Z,1μm,20.0s
OXF Oxford 127.31 36 PFAKE 14 29 20.0 +7.3
OXF LR LR
comp=Z,700nm,21.0s
FFD Franklin Falls 127.34 15 PFAKE 14 29 20.0 +7.5
FFD LR LR
comp=Z,1μm,21.0s
MOIG Morelia 127.35 59 PFAKE 14 29 20.0 +6.5
MOIG LR LR
comp=Z,1μm,22.0s
N55A Marion Center 127.40 23 PFAKE 14 29 20.0 +7.2
N55A LR LR
comp=Z,1μm,20.0s
T49A Edmonton 127.50 31 PFAKE 14 29 20.0 +6.9
T49A LR LR
comp=Z,600nm,19.0s
P53A Whipple 127.52 26 PFAKE 14 29 20.0 +7.0
P53A LR LR
comp=Z,900nm,22.0s
PLAL Pickwick Lake 127.74 34 PFAKE 14 29 20.0 +6.4
PLAL LR LR
comp=Z,700nm,20.0s
CLTN Cedars of Leba 127.86 32 PFAKE 14 29 20.0 +6.2
CLTN LR LR
comp=Z,500nm,21.0s
V48A Smith Brothers 127.86 33 PFAKE 14 29 20.0 +6.2
V48A LR LR
comp=Z,800nm,20.0s
KSPA Keystone Colle 127.87 20 PFAKE 14 29 20.0 +6.3
KSPA LR LR
comp=Z,1μm,21.0s
ROSA Rosais 127.89 333 PFAKE 14 29 20.0 +6.2
ROSA LR LR
comp=Z,1μm,21.0s
SSPA Standing Stone 127.94 22 PFAKE 14 29 20.0 +6.2
SSPA LR LR
comp=Z,1μm,21.0s
O56A Blue Knob Stat 128.01 23 PFAKE 14 29 20.0 +6.0
O56A LR LR

comp=Z,800nm,21.0s
MCWV Mont Chateau 128.02 24 PFAKE 14 29 20.0 +6.0
MCWV LR LR
comp=Z,400nm,20.0s
S51A Beattyville 128.03 29 PFAKE 14 29 30.0 +16
S51A LR LR
comp=Z,700nm,19.0s
Q54A Coxs Mills 128.18 25 PFAKE 14 29 30.0 +16
Q54A LR LR
comp=Z,1μm,20.0s
R53A Hurricane 128.23 27 PFAKE 14 29 30.0 +16
R53A LR LR
comp=Z,800nm,20.0s
VBMS Vicksburg 128.24 39 PFAKE 14 29 30.0 +15
VBMS LR LR
comp=Z,500nm,20.0s
QUA2 Belchertown 128.26 16 PFAKE 14 29 30.0 +16
QUA2 LR LR
comp=Z,800nm,21.0s
HRV Adam Dziewonsk 128.26 15 PFAKE 14 29 30.0 +16
HRV LR LR
comp=Z,900nm,21.0s
WES Weston 128.44 15 PFAKE 14 29 30.0 +15
WES LR LR
comp=Z,900nm,22.0s
N59A State Game Lan 128.44 20 PFAKE 14 29 30.0 +15
N59A LR LR
comp=Z,800nm,19.0s
ODNJ Ogdensburg 128.68 19 PFAKE 14 29 30.0 +15
ODNJ LR LR
comp=Z,700nm,20.0s
X48A Hartselle 128.70 34 PFAKE 14 29 30.0 +14
X48A LR LR
comp=Z,700nm,21.0s
PAGS Pennsylvania G 128.72 21 PFAKE 14 29 30.0 +15
PAGS LR LR
comp=Z,1μm,20.0s
SWET Sewanee 128.74 33 PFAKE 14 29 30.0 +14
SWET LR LR
comp=Z,700nm,20.0s
T52A Hallie 128.75 29 PFAKE 14 29 30.0 +14
T52A LR LR
comp=Z,1μm,22.0s
BRYW Bryant College 128.82 16 PFAKE 14 29 30.0 +14
BRYW LR LR
comp=Z,800nm,22.0s
LUPA Lehigh Univers 128.86 20 PFAKE 14 29 30.0 +14
LUPA LR LR
comp=Z,100nm,20.0s
TZTN Tazewell 128.92 30 PFAKE 14 29 30.0 +14
TZTN LR LR
comp=Z,700nm,20.0s
PAL Palisades 128.97 18 PFAKE 14 29 30.0 +14
PAL LR LR
comp=Z,900nm,20.0s
YLE Yale 128.98 17 PFAKE 14 29 30.0 +14
YLE LR LR
comp=Z,1μm,22.0s
BRNJ Basking Ridge 129.05 19 PFAKE 14 29 30.0 +14
BRNJ LR LR
comp=Z,1μm,20.0s
W50A Signal Mountai 129.07 32 PFAKE 14 29 30.0 +14
W50A LR LR
comp=Z,600nm,20.0s
V51A Loudon 129.11 31 PFAKE 14 29 30.0 +14
V51A LR LR
comp=Z,1μm,22.0s
147A Livingston 129.29 37 PFAKE 14 29 30.0 +13
147A LR LR
comp=Z,1μm,21.0s
CPCT Cooper Cave 129.29 31 PFAKE 14 29 30.0 +13
CPCT LR LR
comp=Z,900nm,21.0s
SDMD Soldier's Deli 129.40 22 PFAKE 14 29 30.0 +13
SDMD LR LR
comp=Z,600nm,21.0s
PSUB Penn St. - Bra 129.44 20 PFAKE 14 29 30.0 +13
PSUB LR LR
comp=Z,800nm,21.0s
V52A Sevierville 129.46 30 PFAKE 14 29 30.0 +13
V52A LR LR
comp=Z,900nm,22.0s
Y49A Blount Mountai 129.49 34 PFAKE 14 29 30.0 +13
Y49A LR LR
comp=Z,800nm,20.0s
LRAL Lakeview Retre 129.77 35 PFAKE 14 29 30.0 +12
LRAL LR LR
comp=Z,800nm,21.0s
U54A Nelsons Funny 129.77 28 PFAKE 14 29 30.0 +12
U54A LR LR
comp=Z,800nm,22.0s
BLA Blacksburg 129.84 26 PFAKE 14 29 30.0 +12
BLA LR LR
comp=Z,602nm,20.0s
W52A Murphy 129.88 31 PFAKE 14 29 30.0 +12
W52A LR LR
comp=Z,700nm,22.0s
V53A Saluda 129.98 30 PFAKE 14 29 30.0 +12
V53A LR LR
comp=Z,800nm,20.0s
S57A Dark Hollow, R 130.00 25 PFAKE 14 29 30.0 +12
S57A LR LR
comp=Z,900nm,21.0s
Z50A Ashland 130.21 34 PFAKE 14 29 30.0 +11
Z50A LR LR
comp=Z,1μm,21.0s
CBN Corbin Frederi 130.25 23 PFAKE 14 29 30.0 +11
CBN LR LR
comp=Z,800nm,20.0s
R58B Mineral 130.26 24 PFAKE 14 29 30.0 +11
R58B LR LR
comp=Z,1μm,22.0s
S58A Poland Farm, P 130.50 24 PFAKE 14 29 30.0 +11
S58A LR LR
comp=Z,1μm,21.0s
TLIG Tlapa 130.51 60 PFAKE 14 29 30.0 +10
TLIG LR LR
comp=Z,700nm,20.0s
T57A Hurt 130.52 26 PFAKE 14 29 30.0 +11
T57A LR LR
comp=Z,1μm,21.0s
Y52A Lilburn 130.76 32 PFAKE 14 29 30.0 +10
Y52A LR LR
comp=Z,600nm,20.0s
250A Grady 130.96 36 PFAKE 14 29 30.0 +10
250A LR LR
comp=Z,1μm,21.0s
V56A Mocksville 130.96 27 PFAKE 14 29 30.0 +10
V56A LR LR
comp=Z,800nm,21.0s
BRAL Brewton 131.09 37 PFAKE 14 29 30.0 +10
BRAL LR LR
comp=Z,999nm,21.0s
KMSC Kings Mountain 131.12 29 PFAKE 14 29 30.0 +10
KMSC LR LR
comp=Z,1μm,20.0s
T59A Double "B" Far 131.25 24 PFAKE 14 29 30.0 +9.4
T59A LR LR
comp=Z,1μm,21.0s
LVIG Laguna Verde 131.31 56 PFAKE 14 29 30.0 +8.9
LVIG LR LR
comp=Z,700nm,21.0s
152A Waverly Hall 131.32 34 PFAKE 14 29 30.0 +9.2
152A LR LR
comp=Z,900nm,22.0s
S61A Accomac 131.36 22 PFAKE 14 29 30.0 +9.3
S61A LR LR
comp=Z,900nm,22.0s
GOGA Godfrey 131.42 32 PFAKE 14 29 30.0 +9.0
GOGA LR LR
comp=Z,900nm,21.0s
T60A Surry 131.43 23 PFAKE 14 29 30.0 +9.1
T60A LR LR
comp=Z,1μm,21.0s
U59A Littleton 131.69 25 PFAKE 14 29 30.0 +8.5
U59A LR LR
comp=Z,900nm,21.0s
W57A Gilead 131.74 28 PFAKE 14 29 30.0 +8.4
W57A LR LR
comp=Z,900nm,20.0s
JSC Jenkinsville 131.85 29 PFAKE 14 29 30.0 +8.1
JSC LR LR
comp=Z,1μm,21.0s
BIRD Birdtown, Kers 131.94 28 PFAKE 14 29 30.0 +8.0
BIRD LR LR
comp=Z,900nm,21.0s
352A Blakely 132.09 35 PFAKE 14 29 30.0 +7.6
352A LR LR
comp=Z,1μm,21.0s
253A Americus 132.10 34 PFAKE 14 29 30.0 +7.6
253A LR LR
comp=Z,900nm,21.0s
154A Montrose 132.23 32 PFAKE 14 29 30.0 +7.3
154A LR LR
comp=Z,800nm,21.0s
U61A Possum Corner 132.25 23 PFAKE 14 29 30.0 +7.4
U61A LR LR
comp=Z,1μm,21.0s
451A Vernon 132.26 36 PFAKE 14 29 30.0 +7.2
451A LR LR
comp=Z,1μm,22.0s
V60A Jim Taylor Roa 132.41 25 PFAKE 14 29 30.0 +7.1
V60A LR LR
comp=Z,900nm,21.0s
Y57A Sumter 132.48 29 PFAKE 14 29 30.0 +6.9
Y57A LR LR
comp=Z,1μm,20.0s
X58A Rowland 132.53 27 PFAKE 14 29 30.0 +6.8
X58A LR LR
comp=Z,900nm,20.0s
Z56A Williston 132.57 30 PFAKE 14 29 30.0 +6.7
Z56A LR LR
comp=Z,7μm,22.0s
CNNC Cliffs of the 132.59 25 PFAKE 14 29 30.0 +6.7
CNNC LR LR
comp=Z,999nm,21.0s
V61A Roper 132.66 24 PFAKE 14 29 30.0 +6.6
V61A LR LR
comp=Z,1μm,21.0s
TIGA Tifton 132.87 34 PFAKE 14 29 30.0 +6.0
TIGA LR LR
comp=Z,1μm,21.0s
453A Whigham 132.91 35 PFAKE 14 29 30.0 +5.9
453A LR LR
comp=Z,1μm,21.0s
Y58A Scranton 132.92 28 PFAKE 14 29 30.0 +6.0
Y58A LR LR
comp=Z,1μm,20.0s
255A Hazlehurst 133.10 32 PFAKE 14 29 30.0 +5.6
255A LR LR
comp=Z,900nm,19.0s
V62A Hyde County Ai 133.11 23 PFAKE 14 29 30.0 +5.7
V62A LR LR
comp=Z,1μm,20.0s
NHSC New Hope 133.33 29 PFAKE 14 29 40.0 +15
NHSC LR LR
comp=Z,898nm,21.0s
Y60A Bolivia 133.50 27 PFAKE 14 29 40.0 +15
Y60A LR LR
comp=Z,700nm,20.0s
257A Skidaway Islan 133.82 31 PFAKE 14 29 40.0 +14
257A LR LR
comp=Z,1μm,21.0s
555A McAlpin 134.22 34 PFAKE 14 29 40.0 +13
555A LR LR
comp=Z,1μm,21.0s
656A Willston 135.04 35 PFAKE 14 29 40.0 +12
656A LR LR
comp=Z,1μm,21.0s
658A Bunnell 135.71 33 PFAKE 14 29 40.0 +10
658A LR LR
comp=Z,1μm,22.0s
MYIG Mrida 135.93 50 PFAKE 14 29 40.0 +10
MYIG LR LR
comp=Z,700nm,22.0s
957A Wimauma 136.49 36 PFAKE 14 29 40.0 +8.6
957A LR LR
comp=Z,800nm,20.0s
CCIG Comitan 136.54 57 PFAKE 14 29 40.0 +8.0
CCIG LR LR
comp=Z,1μm,21.0s
DWPF Disney Wildern 136.62 35 PFAKE 14 29 40.0 +8.3
DWPF LR LR
comp=Z,1μm,21.0s
TEIG Tepich 137.47 49 PFAKE 14 29 40.0 +6.4
TEIG LR LR
comp=Z,500nm,20.0s
059A Moore Haven 137.66 36 PFAKE 14 29 40.0 +6.2
059A LR LR
comp=Z,700nm,20.0s
060A Indiantown 138.05 35 PFAKE 14 29 40.0 +5.4
060A LR LR
comp=Z,800nm,20.0s
061Z Ochoppi 138.63 36 PFAKE 14 29 50.0 +14
061Z LR LR
comp=Z,800nm,22.0s
TGUH Tegucigalpa,Un 141.71 56 PFAKE 14 29 50.0 +7.4
TGUH LR LR
comp=Z,500nm,20.0s
ESTN Estel 142.95 57 PFAKE 14 29 50.0 +4.9
ESTN LR LR
comp=Z,300nm,19.0s
PLCA Paso Flores 143.92 160 PKP **PKPdf 14 29 42.6 -0.2**
comp=Z,7.9nm,0.8s,baz=283,slow=3.9,SNR=11
MTDJ Mount Denham 146.38 41 PFAKE 14 30 00.0 +7.9
MTDJ LR LR
comp=Z,700nm,22.0s
PRVC Isla de Provid 146.84 52 *eP* **PKPab 14 29 51.3 -0.3**
SDDR Presa de Saban 149.45 31 PFAKE 14 30 00.0 +1.7
SDDR LR LR
comp=Z,799nm,20.0s
BCIP Isla Barro Col 150.46 57 PFAKE 14 30 10.0 +3.8
BCIP LR LR
comp=Z,600nm,21.0s
BCIP Isla Barro Col 150.46 57 *eP* **PKiKP 14 30 01.4 +0.9**
SDD Santo Domingo 150.58 30 PFAKE 14 30 10.0 +3.6
SDD LR LR
comp=Z,800nm,21.0s
MPR Mayaguez 152.06 25 PFAKE 14 30 10.0 -2.5
MPR LR LR
comp=Z,900nm,22.0s
EMPR Esperanza - Ma 152.07 24 PFAKE 14 30 10.0 -2.6
EMPR LR LR
comp=Z,1μm,20.0s
SJG San Juan 152.55 23 PFAKE 14 30 10.0 -4.6
SJG LR LR
comp=Z,600nm,22.0s
ICMP Isla Caja de M 152.60 24 PFAKE 14 30 10.0 -4.8
ICMP LR LR
comp=Z,800nm,22.0s
CUPR Culebra, Puert 152.70 21 PFAKE 14 30 10.0 +5.1
CUPR LR LR
comp=Z,500nm,22.0s
STVI Saint Thomas 152.77 21 PFAKE 14 30 10.0 +4.9
STVI LR LR
comp=Z,500nm,20.0s
MTP Monte Pirata 152.79 22 PFAKE 14 30 10.0 +4.9
MTP LR LR
comp=Z,600nm,20.0s
CFA Coronel Fontan 152.85 155 PKP **PKPdf 14 29 57.7 +0.1**
comp=Z,3.5nm,0.7s,baz=282,slow=9.3,SNR=3.0
CFA PKPbc **PKPbc 14 30 03.9 -0.9**
comp=Z,4.2nm,0.7s,baz=250,slow=1.6,SNR=4.4
ANWB Willy Bob 154.38 15 PFAKE 14 30 10.0 +1.6
ANWB LR LR
comp=Z,900nm,22.0s
URIC Uribia, Colomb 154.78 42 *eP* **PKPab 14 30 19.1 -5.1**
OTAV Otavalo 155.57 73 PFAKE 14 30 10.0 +7.5
OTAV LR LR
comp=Z,600nm,21.0s
OTAV Otavalo 155.57 73 *eP* **PKPab 14 30 30.8 +2.5**
BBAC Balboa, Cauca 156.08 68 *eP* **PKPab 14 30 35.9 +5.6**
GUY2C Guyana, Caldas 156.30 59 *eP* **PKPab 14 30 26.5 -5.0**
POPC Popayan, Colom 156.39 66 *eP* **PKPab 14 30 36.7 +5.1**
NORC Norcasia 156.54 58 *eP* **PKPab 14 30 33.4 +1.4**
SOTA Rioblanco 156.62 67 *eP* **PKPab 14 30 34.2 +1.3**
SDV Santo Domingo 157.73 44 PFAKE 14 30 20.0 +15
SDV LR LR
comp=Z,700nm,22.0s
CPUP Villa Florida 160.91 174 PKP **PKPdf 14 30 06.5 -1.4**
comp=Z,3.3nm,0.9s,baz=44,slow=3.1,SNR=4.5
CPUP PKPab **PKPab 14 30 48.9 -1.4**
comp=Z,4.0nm,1.0s,baz=170,slow=1.7,SNR=3.5
LPAZ La Paz 164.42 126 PKP **PKPdf 14 30 10.9 -1.6**
comp=Z,2.6nm,0.9s,baz=167,slow=14,SNR=2.1
LPAZ PKPab **PKPab 14 31 06.7 -0.2**
comp=Z,18nm,1.3s,baz=157,slow=7.7,SNR=1.9
SIV San Ignacio 169.54 147 PKP **PKPdf 14 30 14.0 -1.6**
comp=Z,1.5nm,0.9s,baz=259,slow=16,SNR=3.3
SIV PKPab **PKPab 14 31 26.1 -2.5**
comp=Z,2.2nm,0.9s,baz=292,slow=17,SNR=1.8
PTGA Pitinga 171.92 37 PKPab **PKPab 14 31 37.7 -1.5**
comp=Z,6.6nm,0.8s,baz=307,slow=20,SNR=2.3

IDC ***01*** *14:40:16.4±0.5, 7°.18N×124°.69E, h0km, mb4.2/18, mb1 4.4/18, mb1mx4.2/47, mbtmp4.2/18, MS4.0/10, Ms1 4.1/10, ms1mx3.8/38, Error ellipse: s-maj=14.1km s-min=8.7km az=22.0*
MAN ***01*** *14:40:16.5, 7°.30N×124°.77E, h1km, MS4.3*
MAN INTENSITY II - MATALAM NORTH COTABATO.
GCMT ***01*** *14:40:17.8±0.3, 7°.39N±0°.02×124°.91E±0°.03, h15km, MW4.9/68, Moment Tensor Solution. s9,c10; s68,c97; Duration: 0 Moment tensor: Scale 1016Nm; Mrr0.17±.12; Mθθ 1.84±.08; Mφφ-2.01±.10; Mrθ0.61±.31; Mrφ0.46±.08; Mθφ-1.47±.35; Best double couple: M=2.44600×1016 NP1:φs309.00000°, δ84.00000°, λ-33.00000°. NP2: φs43.00000°, δ57.00000°, λ-173.00000°. Principal axes: T 2.0400, Plg18.0000°, Azm0.0000°; N 0.8110, Plg56.0000°, Azm120.0000°; P -2.8520, Plg27.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***01*** *14:40:18.8±0.4, 7°.37N×125°.01E, h10km, mb4.6/29 Error ellipse: s-maj=10.6km s-min=7.0km az=79.0*
NEIC Felt [III PIVS] at Matalam.
ISCJB ***01*** *14:40:19.6±1.0, 7°.29N±0°.02×124°.88E±0°.03, h15km±7km, mb4.5/75, MS4.1/8, Error ellipse: s-maj=5.3km s-min=3.5km az=7.4*
MOS ***01*** *14:40:19.4±1.7, 7°.15N×125°.14E, h28km, mb4.8/26, Error ellipse: s-maj=13.2km s-min=6.9km az=109.1*
DJA ***01*** *14:40:23.5±0.8, 7°N±4°×12°5E±°, h25km±7km, M5.0/20, mb4.7/20, mB5.5/5, MLv5.2/6, Mw(mB)5.0/5*
BJI ***01*** *14:40:28.5±0.0, 7°.87N×124°.91E, h50km, mb4.6/42, mB5.3/10, Ms4.7/10, Ms7 4.5/10*
ISC 01 14:40:18.6±1.0, 7°29N±0°02×124°81E±0°03, h9km±6km, n174, σ2s57/165, mb4.6/75, MS4.1/8, 15C-13D, Mindanao

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.64**	**23**	*eP*		**Pb**	**14 40 30.1**	**-1.9**
BUKP				*eS*		**Sb**	**14 40 39.7**	**-1.4**
DMPH	**Davao City--Mi**	**0.72**	**106↑**	*eP*		**Pn**	**14 40 36.9**	**+1.9**
DMPH				*eS*		**Sn**	**14 40 49.1**	**+2.9**
DAV	**Davao City (W)**	**0.79**	**106**	Pg		**Pn**	**14 40 34.7**	**-1.2**
	1μm,0.3s,baz=315,slow=2.4,SNR=50							
DAV				Lg		Lg	14 40 47.1	
	2μm,0.3s,baz=192,slow=20,SNR=98							
SKMP	**Bagumbayan, Su**	**0.81**	**199**	*eP*		**Pg**	**14 40 32.0**	**-2.2**
SKMP				*eS*		**Sb**	**14 40 44.9**	**-1.0**
CGP	**Cagayan de Oro**	**1.17**	**354↑**	*iP*		**Pg**	**14 40 38.9**	**-2.2**
CGP				*i* S		**Sg**	**14 40 53.6**	**-2.6**
MATI	**Mati**	**1.48**	**103**	*eP*		**Pn**	**14 40 43.8**	**-1.6**
MATI				*eS*		**Sg**	**14 41 08.0**	**+1.8**
DDMP	**Don Marcelino,**	**1.48**	**143**	*eP*		**Pn**	**14 40 44.0**	**-1.4**
DDMP				*eS*		**Sg**	**14 41 10.9**	**+4.7**
PAGZ	**Pagadian**	**1.52**	**292**	*eP*		**Pn**	**14 40 43.0**	**-3.0**
PAGZ				*eS*		**Sn**	**14 41 04.4**	**-1.6**
BIPH	**Bislig**	**1.78**	**60↑**	*eP*		**Pb**	**14 40 50.2**	**-1.2**
BIPH				*eS*		**Sg**	**14 41 14.4**	**-1.4**
BUTP	**Butuan**	**1.85**	**26**	*eP*		**Pg**	**14 40 52.1**	**-2.1**
BUTP				*eS*		**Sg**	**14 41 20.5**	**+2.2**
DCPH	**Dipolog City**	**1.94**	**312↑**	*eP*		**Pg**	**14 40 56.9**	**+1.1**
DCPH				*eS*		**Sg**	**14 41 23.7**	**+2.9**
IPIL	**Ipil**	**2.27**	**283**	*eP*		**Pn**	**14 40 56.1**	**-0.3**
IPIL				*eS*		**Sb**	**14 41 26.8**	**-1.4**
TBP	**Tagbilaran**	**2.57**	**339**	*eP*		**Pb**	**14 41 01.3**	**-3.5**
SNPH	**Sibulan**	**2.57**	**323↓**	*iP*		**Pb**	**14 41 02.9**	**-2.1**
ZCP	**Zamboanga City**	**2.74**	**263↓**	*iP*		**Pn**	**14 41 02.8**	**0.0**
ZCP				*i* S		**Sb**	**14 41 37.1**	**-4.4**
MSLP	**Maasin**	**2.83**	**1**	*eP*		**Pn**	**14 41 04.0**	**-0.1**
LLP	**Lapu-Lapu**	**3.12**	**345**	*eP*		**Pn**	**14 41 09.0**	**+0.9**
LLP				*eS*		**Sb**	**14 41 49.5**	**-3.1**
SGSI	**Sangihe**	**3.65**	**169**	P		**Pb**	**14 41 19.1**	**-4.2**
OCLP	**Ormoc**	**3.75**	**357**	*eP*		**Pn**	**14 41 17.0**	**+0.4**
PLP	**Palo**	**3.86**	**2↑**	*eP*		**Pn**	**14 41 17.7**	**-0.4**
GUIM	**Jordan**	**3.98**	**327**	*eP*		**Pn**	**14 41 20.9**	**+1.1**
JAP	**San Jose, Anti**	**4.45**	**321↓**	*eP*		**Pb**	**14 41 37.0**	**0.0**
CUYO	**Cuyo Island**	**5.15**	**314**	*eP*		**Pn**	**14 41 37.2**	**+1.2**
CNP	**Cataraman**	**5.19**	**358**	*eP*		**Pn**	**14 41 39.8**	**+3.2**
CNP				*eS*		**Sb**	**14 42 54.8**	**+2.7**
SJMP	**San Jose**	**6.30**	**325**	*eP*		**Pn**	**14 41 53.6**	**+1.9**
PVCP	**Virac**	**6.30**	**354**	*eP*		**Pn**	**14 41 54.5**	**+2.7**
BUSP	**Coron**	**6.53**	**316**	*eP*		Pn	14 41 59.8	+4.9
ENPP	**El Nido**	**6.59**	**307**	*eP*		**Pn**	**14 41 54.6**	**-1.2**
KMSI	**Cibinong**	**6.72**	**187**	P		**Pn**	**14 42 01.2**	**+3.7**
	318nm,0.8s,3μm0.9nm							
TNTI	**Ternate**	**6.96**	**158**	*e*Pn		**Pn**	**14 42 01.6**	**+0.8**
TNTI	**Ternate**	**6.96**	**158**	P		**Pn**	**14 42 02.8**	**+2.0**
	63nm,0.9s,0.4nm							
MRSI	**Marisa**	**7.34**	**203**	P		**Pn**	**14 42 05.8**	**-0.3**
TGY	**Tagaytay City**	**7.77**	**331**	LR		LR	14 45 42.1	
	comp=Z,2μm,21.5s,baz=109,slow=42							
LUBP	**Lubang**	**7.82**	**325**	*e*P		**Pn**	**14 42 14.6**	**+1.9**
MPSI	**Mapaga**	**8.46**	**216**	P		**Pb**	**14 42 41.0**	**-4.4**
LUWI	**Luwuk**	**8.52**	**194**	*e*Pn		**Pn**	**14 42 25.7**	**+3.5**
LUWI	**Luwuk**	**8.52**	**194**	P		**Pn**	**14 42 25.9**	**+3.6**
	358nm,0.9s,2.0nm							
SMPP	**San Manuel, Pa**	**9.69**	**336**	*e*P		Pn	14 42 43.0	+4.6
KDI	**Kendari**	**11.38**	**191**	P		Pn	14 43 12.4	+11
TTSI	**Tana Toraja**	**11.41**	**206**	P		Pn	14 43 07.2	+5.3
	56nm,0.9s							
SPSI	**Sidrap Palu**	**12.26**	**204**	P		Pn	14 43 22.8	+9.3
BNSI	**Bone**	**12.52**	**202**	P		Pn	14 43 23.9	+6.8
	27nm,1.2s							
KAPI	**Kappang**	**13.22**	**203**	Pn		**Pn**	**14 43 29.0**	**+2.3**
	0.4nm,0.3s,baz=51,slow=11,SNR=4.1							
KAPI				LR		LR	14 48 39.9	
	comp=Z,599nm,18.4s,baz=12,slow=38							
KAPI	**Kappang**	**13.22**	**203**	*e*Pn		**Pn**	**14 43 29.8**	**+3.1**
KAPI	**Kappang**	**13.22**	**203**	*e*P		**Pn**	**14 43 29.8**	**+3.1**
SBUM	**Sibu**	**13.43**	**250**	*e*Pn		**P**	**14 43 34.4**	**-4.7**
KSM	**Kuching**	**15.56**	**249**	*e*Pn		**P**	**14 44 02.6**	**-0.2**
	16nm,1.1s							
MMRI	**Maumere**	**16.02**	**189**	*e*Pn		**P**	**14 44 05.2**	**-2.6**
	43nm,1.0s							
MMRI	**Maumere**	**16.02**	**189**	P		P	14 44 14.5	+6.6
EDFI	**Ende, Flores**	**16.23**	**191**	P		**P**	**14 44 13.5**	**+3.2**
SOEI	**Soe**	**16.94**	**182**	*e*Pn		**P**	**14 44 17.2**	**-0.9**
	36nm,1.0s							
SOEI	**Soe**	**16.94**	**182**	P		**P**	**14 44 19.3**	**+1.2**
	91nm,1.4s,2μm							
YOJ	**Yonaguni jima**	**17.16**	**354**	*e*Pn		**Pn**	**14 44 15.7**	**-3.1**
	82nm,1.1s							
YOJ	**Yonaguni jima**	**17.16**	**354**	*e*P		**Pn**	**14 44 15.7**	**-3.1**
YOJ				pmax		pmax		
	comp=Z,82nm,1.1s							
BATI	**Baumata**	**17.42**	**184**	P		**P**	**14 44 23.4**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=86,slow=19,SNR=6.4							
BATI				LR		LR	14 51 45.3	
	comp=Z,962nm,21.3s,baz=347,slow=40							
BATI	**Baumata**	**17.42**	**184**	P		**P**	**14 44 25.6**	**+2.3**
	comp=Z,43nm,0.8s							
PLAI	**Plampang**	**17.48**	**204**	P		**P**	**14 44 30.0**	**+6.1**
JAY	**Jayapura**	**18.61**	**121**	LR		LR	14 51 18.4	
	comp=Z,166nm,21.5s,baz=314,slow=36							
QIZ	**Qiongzhong**	**18.65**	**310**	P		Pn	14 44 48.6	+11
QIZ				S		S	14 48 27.2	+18
NGJI	**Ngawi**	**19.73**	**223**	P		Pn	14 45 05.8	+16
TPI	**Tanjungpandan**	**19.82**	**240**	P		**Pn**	**14 44 55.9**	**+4.6**
	comp=Z,18nm,1.1s							
PPBI	**Pangkal Pinang**	**20.86**	**244**	P		Pn	14 45 08.4	+4.8
	comp=Z,14nm,1.3s,comp=Z,2μm							
MTN	**Manton Dam**	**20.96**	**163**	*e*P		**P**	**14 45 01.4**	**-0.7**
	comp=Z,56nm,1.1s							
PANO	**Nakornpanom**	**22.02**	**298**	P		P	14 45 28.1	+15
CISI	**Cisompet, Garu**	**22.46**	**229**	*e*P		**P**	**14 45 18.5**	**+0.1**
	comp=Z,54nm,1.0s							
SKNT	**Sakolnakorn**	**22.50**	**297**	P		**P**	**14 45 24.1**	**+5.4**
	comp=Z,15nm,1.7s							
CGJI	**Cibinong**	**23.54**	**235**	P		**P**	**14 45 34.2**	**+4.7**
	comp=Z,45nm,1.1s							
MDSI	**Maura Dua**	**23.68**	**241**	P		**P**	**14 45 35.5**	**+4.7**
	comp=Z,17nm,1.1s							
IPM	**Ipoh**	**23.82**	**265**	*e*P		**P**	**14 45 32.4**	**+0.1**
	comp=Z,8.6nm,1.0s							
CHAI	**Chaiyaphum**	**23.92**	**293**	P		P	14 45 41.1	+8.0
	comp=Z,13μm,1.0s							
SKLT	**Songkhla**	**24.00**	**271**	P		P	14 45 39.9	+6.0
	comp=Z,10nm,1.4s							

LWLI	Liwa	24.05	240	P	P	14 45 36.6 +2.1
KULM	Kulim	24.09	267	*e*P	P	14 45 39.2 +4.4
PBKT	Sadao Pong	25.06	294	P	P	14 45 49.0 +5.5
	comp=Z,3.9nm,1.8s					
KRJI	Kerinci	25.09	249	P	P	14 45 49.7 +5.7
	comp=Z,101nm,1.4s,comp=Z,2μm					
WHN	Wuhan	25.13	338⇑	*i*P	P	14 45 47.4 +3.4
WHN				pmax	pmax	
	comp=Z,30nm,1.0s					
FITZ	Fitzroy Crossi	25.24	178	P	P	14 45 43.2 -1.9
	comp=Z,10nm,0.8s,baz=3.8,slow=5.3,SNR=15					
FITZ				LR	LR	14 55 41.9
	comp=Z,168nm,21.8s,baz=320,slow=37					
FITZ	Fitzroy Crossi	25.24	178	*e*P	P	14 45 44.3 -0.7
	comp=Z,31nm,1.0s					
NJ2	Nanjing	25.26	348	*e*P	P	14 45 48.1 +2.9
NJ2				pmax	pmax	
	comp=Z,11nm,1.2s					
PDSI	Padang	25.62	252	P	P	14 45 56.3 +7.6
MNSI	Mandailing Nat	25.97	257	P	P	14 45 58.2 +6.4
PSI	Prapat	26.16	262	P	P	14 45 53.4 -0.3
	comp=Z,6.5nm,1.0s,baz=127,slow=20,SNR=2.2					
JNU	Nakatsue	26.32	12	*e*P	P	14 45 53.4 -1.4
	comp=Z,8.1nm,1.0s					
PHRA	Phrae	26.39	297	P	P	14 46 01.4 +5.8
	comp=Z,1.5nm,1.4s,comp=Z,116nm					
LAMP	Lampang	26.92	297	P	P	14 46 14.8 +14
CMAR	Chiang Mai Arr	27.51	296	P	P	14 46 05.8 +0.1
	comp=Z,0.2nm,0.3s,baz=111,slow=8.2,SNR=3.4					
CMAR				LR	LR	14 56 34.5
	comp=Z,305nm,21.1s,baz=70,slow=36					
CMAR	Chiang Mai Arr	27.51	296	*c*e*P*	P	14 46 12.3 +6.6
CMAR				pmax	pmax	
	comp=Z,1.0nm,0.9s					
KMI	Kunming	27.55	313	P	P	14 46 11.4 +5.1
KMI				pmax	pmax	
	comp=Z,14nm,1.1s					
GSI	Gunungsitoli	27.79	259	*e*P	P	14 46 10.5 +2.3
	comp=Z,28nm,0.9s					
GSI	Gunungsitoli	27.79	259	P	P	14 46 15.4 +7.1
	comp=Z,35nm,1.0s					
WRAB	Tennant Creek	28.63	161	*e*P	P	14 46 11.8 -3.8
	comp=Z,13nm,0.9s					
WRAB	Tennant Creek	28.63	161⇓	*i*P	P	14 46 13.7 -2.0
WRAB				pmax	pmax	
	comp=Z,31nm,1.7s					
WRA	Warramunga Arr	28.64	161	P	P	14 46 13.7 -2.1
	comp=Z,10nm,1.0s,baz=323,slow=9.6,SNR=12					
WB2	Warramunga Arr	28.64	161	*e*P	P	14 46 14.2 -1.5
	comp=Z,18nm,1.0s					
KS15	Wonju Array Si	30.15	5	*e*P	P	14 46 30.6 +1.6
	comp=Z,1.5nm,0.8s					
KSRS	Korea Array	30.16	5	P	P	14 46 30.6 +1.5
	comp=Z,0.3nm,0.6s,baz=177,slow=10,SNR=2.5					
KSRS				LR	LR	14 58 50.7
	comp=Z,244nm,19.3s,baz=180,slow=37					
XAN	Xi'an	30.40	333	P	P	14 46 31.6 +0.3
XAN				pP	sP	14 46 42.6 +7.3
XAN				pmax	pmax	
	comp=Z,7.0nm,1.4s					
CD2	Chengdu	30.67	323	*e*P	P	14 46 35.7 +2.0
CD2				pmax	pmax	
	comp=Z,30nm,0.5s					
ASAR	Alice Springs	32.02	164	P	P	14 46 44.1 -1.5
	comp=Z,3.2nm,0.9s,baz=344,slow=7.3,SNR=19					
ASAR				PcP	PcP	14 49 34.0 -1.6
	comp=Z,1.0nm,0.8s,baz=3.4,slow=4.6,SNR=3.1					
ASAR				LR	LR	15 01 34.6
	comp=Z,331nm,18.5s,baz=348,slow=40					
BJI	Beijing	33.52	348	*e*P	P	14 47 01.2 +2.7
BJI				pmax	pmax	
	comp=Z,6.0nm,1.3s					
LZH	Lanzhou	34.49	329	*e*P	P	14 47 12.4 +5.1
LZH				pP	sP	14 47 23.2 +12
LZH				sP	pP	14 47 30.9 +21
LZH				PP	PP	14 48 26.7 +1.3
LZH				pmax	pmax	
	comp=Z,15nm,1.1s					
LZH				pmax	pmax	
	comp=Z,81nm,4.4s					
HHC	Hu-ho-hao-te	35.45	343	*e*P	P	14 47 18.7 +3.3
HHC				S	S	14 52 46.6 -4.0
HHC				pmax	pmax	
	comp=Z,22nm,1.0s					
HHC				LR	LR	
	comp=Z,560nm,12.5s					
HHC				LR	LR	
	comp=Z,460nm,14.4s					
HHC				LR	LR	
	comp=Z,860nm,12.3s					
CN2	Changchun	36.38	1	*e*P	P	14 47 27.5 +4.3
CN2				pmax	pmax	
	comp=Z,10.0nm,0.6s					
FORT	Forrest	37.98	175	*e*P	P	14 47 33.3 -3.6
	comp=Z,48nm,0.9s					
GTA	Gaotai	39.08	329	P	P	14 47 50.4 +4.1
GTA				pP	sP	14 48 00.7 +10
GTA				sP	pP	14 48 04.6 +15
GTA				pmax	pmax	
	comp=Z,7.0nm,1.6s					
NWAO	Narrogin (SRO)	40.63	190	*e*P	P	14 47 54.9 -4.2
	comp=Z,7.0nm,0.8s					
NWAO	Narrogin (SRO)	40.63	190	*e*P	P	14 47 54.9 -4.2
NWAO				pmax	pmax	
	comp=Z,7.0nm,0.8s					
BBOO	Buckleboo	41.29	166	*e*P	P	14 48 03.7 -0.8
	comp=Z,35nm,1.0s					
HIA	Hailar	42.05	355⇓	*i*P	P	14 48 13.6 +3.0
HIA				pmax	pmax	
	comp=Z,86nm,1.8s					
STKA	Stephens Creek	42.11	159	P	P	14 48 10.4 -0.9
	comp=Z,12nm,0.7s,baz=342,slow=8.6,SNR=11					
STKA				LR	LR	15 08 17.3
	comp=Z,250nm,18.2s,baz=341,slow=40					
STKA	Stephens Creek	42.11	159	*e*P	P	14 48 10.8 -0.4
	comp=Z,3.3nm,0.8s					
STKA	Stephens Creek	42.11	159	*e*P	P	14 48 10.9 -0.4
STKA				pmax	pmax	
	comp=Z,3.0nm,0.8s					
KLR	Kul'dur	42.21	7	P	P	14 48 10.5 -1.4
	comp=Z,0.7nm,0.4s,baz=208,slow=2.3,SNR=4.0					
KLR	Kul'dur	42.21	7⇓	*e*P	P	14 48 13.2 +1.4
KLR				pmax	pmax	
	comp=Z,8.0nm,1.6s					
ULN	Ulaanbaatar	43.17	343	*e*P	P	14 48 20.0 +0.1
	comp=Z,2.4nm,0.8s					
ULN	Ulaanbaatar	43.17	343⇑	*e*P	P	14 48 20.6 +0.7
ULN				pmax	pmax	
	comp=Z,38nm,1.7s					
SONM	Songino Array	43.34	342	P	P	14 48 21.1 -0.1
	comp=Z,11nm,1.2s,baz=167,slow=8.3,SNR=26					
SONM				LR	LR	15 06 41.6
	comp=Z,701nm,19.7s,baz=153,slow=36					
ZAK	Zakamensk	46.56	341	*e*P	P	14 48 42.4 -4.4
ZAK				pmax	pmax	
	comp=Z,6.0nm,1.6s					
TLY	Talaya	47.58	342	*e*P	P	14 48 55.5 +0.9
	comp=Z,6.8nm,1.1s					
TLY	Talaya	47.58	342	*e*P	P	14 48 55.5 +0.9
TLY				pmax	pmax	
	comp=Z,7.0nm,1.1s					
MOY	Mondy	48.41	340	*e*P	P	14 49 04.2 +3.0
MOY				pmax	pmax	
	comp=Z,46nm,2.5s					
WMQ	Urumqi	48.73	324	*e*P	P	14 49 08.1 +4.3
WMQ				pP	sP	14 49 17.6 +10
WMQ				pmax	pmax	
	comp=Z,11nm,1.1s					
WMQ				LR	LR	
	comp=Z,580nm,15.5s					
WMQ				LR	LR	
	comp=Z,320nm,22.3s					
WMQ				LR	LR	
	comp=Z,300nm,18.9s					
BOD	Bodaibo	51.10	353	*e*P	P	14 49 21.4 0.0
BOD				pmax	pmax	
	comp=Z,23nm,1.7s					
PETK	Petropavlovsk-	52.93	24	P	P	14 49 33.5 -1.7
	comp=Z,3.0nm,0.9s,baz=204,slow=3.2,SNR=3.2					
PEA1	Petropavlovsk-	52.94	24	*e*P	P	14 49 33.5 -1.7
PET	Petropavlovsk	53.26	25	*e*P	P	14 49 38.1 +0.6
PET				pmax	pmax	
	comp=Z,22nm,1.5s					
PDGK	Podgornoye	53.48	320	P	P	14 49 44.0 +4.5
PDGK				pmax	pmax	
	comp=Z,9.0nm,1.9s					
MK31	Makanchi Array	53.56	325	*e*P	P	14 49 40.6 +0.6
	comp=Z,3.2nm,0.9s					
MK31	Makanchi Array	53.56	325	*e*P	P	14 49 40.6 +0.6
MK31				pmax	pmax	
	comp=Z,3.0nm,0.9s					
MKAR	Makanchi Array	53.56	325	P	P	14 49 40.7 +0.7
	comp=Z,2.1nm,0.8s,baz=120,slow=7.3,SNR=15					
MKAR	Makanchi Array	53.56	325	*c*e*P*	P	14 49 43.0 +3.0
MKAR				pmax	pmax	
	comp=Z,2.0nm,0.8s					
MAKZ	Makanchi	53.75	325	*e*P	P	14 49 41.4 +0.1
	comp=Z,4.7nm,1.1s					
MAKZ	Makanchi	53.75	325	*e*P	P	14 49 41.4 +0.1
MAKZ				pmax	pmax	
	comp=Z,5.0nm,1.1s					
KSH	Kashi	54.20	314	*e*P	P	14 49 52.2 +7.3
NIL	Nilore	54.27	306	*e*P	P	14 49 47.0 +1.6
	comp=Z,34nm,1.1s					
NIL	Nilore	54.27	306	*e*P	P	14 49 47.0 +1.6
NIL				pmax	pmax	
	comp=Z,34nm,1.1s					
YAK	Yakutsk	54.75	3	*e*P	P	14 49 45.0 -3.3
YAK				*e*PPP	PPP	14 53 03.7
YAK				*e*S	S	14 57 24.0 -4.7
MA2	Magadan	55.78	16⇓	*i*P	P	14 49 57.3 +1.6
MA2				pmax	pmax	
	comp=Z,15nm,1.4s					
AAK	Ala-Archa	56.46	317⇑	*e*P	P	14 50 03.4 +2.2
AAK				pmax	pmax	
	comp=Z,18nm,1.8s					
ZAA0	Zalesovo Array	56.57	333	*e*P	P	14 50 02.7 +1.2
	comp=Z,3.3nm,1.0s					
KURK	Kurchatov	57.73	327	*e*P	P	14 50 11.4 +1.6
	comp=Z,8.8nm,1.1s					
KURK	Kurchatov	57.73	327⇓	*e*P	P	14 50 13.0 +3.2
KURK				pmax	pmax	
	comp=Z,44nm,1.6s					
KBL	Kabul	57.87	306	*e*P	P	14 50 11.8 +0.5
	comp=Z,4.3nm,0.6s					
KBL	Kabul	57.87	306	*e*P	P	14 50 11.9 +0.5
KBL				pmax	pmax	
	comp=Z,4.0nm,0.6s					
KK31	Karatay Array	59.35	316	*e*P	P	14 50 24.8 +3.5
	comp=Z,5.2nm,1.0s					
KK31	Karatay Array	59.35	316	*e*P	P	14 50 24.8 +3.5
KK31				pmax	pmax	
	comp=Z,5.0nm,1.0s					
KKAR	Karatay Array	59.35	316	*e*P	P	14 50 24.8 +3.5
	comp=Z,5.2nm,1.0s					
KKAR	Karatay Array	59.35	316	*e*P	P	14 50 24.8 +3.5
KKAR				pmax	pmax	
	comp=Z,5.0nm,1.0s					
BRVK	Borovoye	63.39	327	*e*P	P	14 50 50.8 +2.4
	comp=Z,11nm,1.1s					
BRVK	Borovoye	63.39	327	*d*e*P*	P	14 50 49.8 +1.4
BRVK				pmax	pmax	
	comp=Z,14nm,1.3s					
TIXI	Tiksi	64.34	1⇑	*e*P	P	14 50 55.2 +0.9
TIXI				pmax	pmax	
	comp=Z,8.0nm,2.5s					
BKZ	Black Stump Fm	66.49	138	*e*P	P	14 51 06.8 -2.0
	comp=Z,22nm,1.1s					
BILL	Bilibino	66.65	16⇑	*i*P	P	14 51 11.1 +1.8
BILL				pmax	pmax	
	comp=Z,11nm,1.6s					
GEYT	Alibeck	67.20	308	P	P	14 51 12.9 -0.5
	comp=Z,3.4nm,1.0s,baz=164,slow=5.7,SNR=4.5					
ARU	Arti	70.93	327	*d*i*P*	P	14 51 42.2 +6.0
ARU						14 54 16.7
ARU				SS	SS	15 05 31.1 +6.6
ARU				pmax	pmax	
	comp=Z,5.0nm,1.0s					
GNI	Garni	77.76	309⇓	*e*P	P	14 52 20.3 +3.7
GNI				pmax	pmax	
	comp=Z,120nm,1.6s					
ZEI	Tsey	78.42	312	*e*P	P	14 52 19.3 -1.0
ZEI				pmax	pmax	
	comp=Z,22nm,1.1s					
KBZ	Khabaz	79.17	313	P	P	14 52 23.2 -0.8
	comp=Z,3.2nm,0.9s,baz=74,slow=5.4,SNR=9.4					
NEY	Neytrino	79.29	313⇓	*e*P	P	14 52 24.8 -0.2
NEY				pmax	pmax	
	comp=Z,2.0nm,1.2s					
KIV	Kislovodsk	79.32	313	*e*P	P	14 52 27.5 +2.5
KIV				pmax	pmax	
	comp=Z,29nm,1.1s					
KLMR	Klimovskoe	81.39	330	*e*P	P	14 52 32.6 -3.0
KLMR				pmax	pmax	
	comp=Z,7.0nm,1.1s					
ILAR	Eielson Array	82.74	26	P	P	14 52 41.0 -1.6
	comp=Z,0.9nm,0.8s,baz=244,slow=5.2,SNR=7.8					
OBN	Obninsk	83.07	325⇓	*e*P	P	14 52 47.5 +3.0
OBN				pmax	pmax	
	comp=Z,7.0nm,0.5s					
LVZ	Lovozero	83.36	338⇑	*e*P	P	14 52 46.1 +0.2
LVZ				pmax	pmax	
	comp=Z,10.0nm,1.4s					
ASF	Jabal al Asfar	84.41	302	P	P	14 52 51.5 -0.5
	comp=Z,1.0nm,0.4s,baz=27,slow=0.8,SNR=8.8					
BR101	Keskin Array S	86.30	309	*e*P	P	14 53 01.1 -0.3
BRTR	Keskin Array B	86.30	309	P	P	14 53 01.1 -0.3
	comp=Z,1.1nm,0.9s,baz=92,slow=8.7,SNR=6.6					
BRTR	Keskin Array B	86.30	309	*c*e*P*	P	14 53 03.4 +2.0
BRTR				pmax	pmax	
	comp=Z,1.0nm,0.9s					
VNDA	Vanda	87.18	172	P	P	14 53 01.6 -3.1
	comp=Z,1.3nm,0.9s,baz=317,slow=6.0,SNR=6.4					
KMBO	Kilima Mbogo	87.72	269	*c*e*P*	P	14 53 12.3 +3.3
KMBO				pmax	pmax	
	comp=Z,2.0nm,0.3s					
KOLS	Kolonicke sedl	92.71	320	*e*P	P	14 53 33.5 +2.2
KOLS	Kolonicke sedl	92.71	320	*e*P	P	14 53 33.5 +2.2
YKA	Yellowknife Ar	97.05	24	P	P	14 53 48.9 -1.9
	comp=Z,0.4nm,0.6s,baz=295,slow=4.7,SNR=2.4					
YKB5	Yellowknife Ar	97.05	24	*e*P	P	14 53 48.9 -1.9

SJA ***01*** *14:53:35.6±0.8, 29°.68S×69°.02W, h139km±8km, ML3.4, MW3.3*
ISCJB ***01*** *14:53:37.1±0.6, 29°.67S±0°.05×68°.94W±0°.06, h110km, mb3.4/2, Error ellipse: s-maj=7.5km s-min=7.1km az=141.4*
IDC ***01*** *14:53:39.2±2.1, 29°.84S×68°.92W, h125km±19km, mb3.0/2, mb1 3.3/3, mb1mx3.1/32, mbtmp3.4/3, MS3.5/1, Ms1 3.5/1, ms1mx3.1/7, Error ellipse: s-maj=37.4km s-min=24.8km az=81.0*

ISC 01 14:53:37.4±0.8, 29°.67S±0°.05×69°.00W±0°.06, h110km, n14, σ1.9 89/21, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	Vinchina	1.16	37	*e*P	Pn	14 54 02.3	+1.8
VCA				*e*S	Sn	14 54 21.4	+3.5
LCO	Las Campanas	1.63	293	*e*P	Pn	14 54 07.0	+1.0
LCO				*e*S	Sn	14 54 29.4	+1.7
CFA	Coronel Fontan	2.04	161	P	Pn	14 54 11.2	+0.2
	6.8nm,0.3s,baz=342,slow=13,SNR=120						
CFA				S	Sn	14 54 36.0	-0.5
	45nm,0.3s,baz=41,slow=15,SNR=43						
ACAN	Cantantal	3.03	150	*e*P	Pn	14 54 24.0	+0.2
CYA	Choya	3.05	67	*e*P	Pn	14 54 24.4	+0.2
CYA				IAML		14 54 35.8	
	comp=Z,82nm,0.5s						
CYA				*e*S	Sn	14 55 00.3	+0.1
AHML	Horco Molle	4.32	49	*e*P	Pn	14 54 40.9	-0.3
FSA	Cafayete	4.44	38	*e*P	Pn	14 54 43.5	+0.6
LVC	Limon Verde	7.03	1	P	Pn	14 55 16.6	-1.5
	comp=Z,0.4nm,0.3s,baz=125,slow=9.7,SNR=7.9						
LVC				S	Sn	14 56 31.0	-5.7
	comp=Z,0.5nm,0.3s,baz=116,slow=17,SNR=3.5						
CPUP	Villa Florida	10.83	75	P	Pn	14 56 08.8	-0.5
	comp=Z,0.3nm,0.3s,baz=230,slow=6.0,SNR=4.6						
ATAH	Atahualpa	24.10	337	LR	LR	15 06 54.1	
	comp=Z,126nm,21.1s,baz=48,slow=33						
SNAA	Sanae	54.66	159	P	P	15 02 52.4	-2.1
	comp=Z,0.8nm,0.6s,baz=288,slow=20,SNR=2.6						
TXAR	Lajitas Array	67.36	327	P	P	15 04 21.6	+0.7
	comp=Z,0.1nm,0.7s,baz=151,slow=8.2,SNR=2.3						
ZALV	Zalesovo Beam	149.19	31	PKPbc	PKPbc	15 13 13.1	+0.5
	comp=Z,1.5nm,0.4s,baz=316,slow=2.2,SNR=7.8						
ZALV				pPKPbc	pPKPbc	15 13 44.4	+1.2
	comp=Z,1.2nm,0.5s,baz=300,slow=4.1,SNR=3.6						
MKAR	Makanchi Array	151.92	45	PKPbc	PKiKP	15 13 19.6	-0.1
	comp=Z,0.5nm,0.6s,baz=294,slow=2.5,SNR=7.0						
MKAR				PKPab	PKPab	15 13 29.6	+0.7
	comp=Z,0.3nm,0.4s,baz=313,slow=3.7,SNR=5.7						
MKAR				pPKPbc	pPKPbc	15 13 51.5	+1.4
	comp=Z,0.7nm,0.6s,baz=291,slow=2.1,SNR=5.7						

IDC 01 14:54:10.8±2.4, 6°.02S×131°.20E, h0km, mb3.5/1, mb1 3.8/4, mb1mx3.4/45, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=92.8km s-min=29.6km az=79.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.17	204	Pn	Pn	14 57 20.2	+1.0
	0.1nm,0.3s,baz=20,slow=12,SNR=3.1						
FITZ				Sn	Sn	14 59 39.9	-6.7
	0.1nm,0.3s,baz=25,slow=17,SNR=2.2						
WRA	Warramunga Arr	14.17	168	Pn	Pn	14 57 30.9	-2.1
	0.3nm,0.3s,baz=350,slow=13,SNR=11						
WRA				Sn	Sn	15 00 01.5	-10
	0.1nm,0.3s,baz=355,slow=24,SNR=2.5						
ASAR	Alice Springs	17.73	172	P	P	14 58 20.1	-0.2
	0.1nm,0.3s,baz=351,slow=9.3,SNR=16						
MKAR	Makanchi Array	68.07	326	P	P	15 05 12.4	0.0
	0.2nm,0.4s,baz=117,slow=8.0,SNR=4.4						

MAN 01 14:56:06.3, 7°.20N×124°.98E, h32km, mb4.6, ML3.5, MS3.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.68	7	*e*P	Pb	14 56 20.3	+0.4
BUKP				*e*S	Sn	14 56 29.8	+0.4
SKMP	Bagumbayan, Su	0.80	213	*e*P	Pb	14 56 21.7	-0.1
SKMP				*e*S	Sn	14 56 32.3	+0.1
CGP	Cagayan de Oro	1.28	347	*e*P	Pb	14 56 29.6	-0.3
CGP				*e*S	Sn	14 56 44.6	+0.5
DDMP	Don Marcelino,	1.30	146	*e*P	Pb	14 56 33.5	+3.2
DDMP				*e*S	Sb	14 56 57.7	+11
PAGZ	Pagadian	1.71	292	*e*P	Pn	14 56 33.8	-0.1
PAGZ				*e*S	Sn	14 56 55.0	+0.2
BUTP	Butuan	1.87	20	*e*P	Pb	14 56 44.6	+4.7
BUTP				*e*S	Sb	14 57 10.7	+7.7
IPIL	Ipil	2.46	284	*e*P	Pn	14 56 46.6	+2.3
IPIL				*e*S	Sb	14 57 16.8	-3.0
MSLP	Maasin	2.92	358	*e*P	Pb	14 56 57.0	-0.8

IDC ***01*** *15:01:25.0±1.8, 0°.27N×121°.93E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/30, mbtmp3.4/3, Error ellipse: s-maj=580.3km s-min=26.7km az=61.0*
ISCJB ***01*** *15:01:38.1±0.9, 0°.5N±0°.1×122°.20E±0°.06, h148km, mb3.3/3, Error ellipse: s-maj=15.6km s-min=8.3km az=13.0.*
DJA ***01*** *15:01:40.8±0.5, 1°.N±4°×12°.2E±°, h104km±5km, M3.1/7, MLv3.1/7*

ISC 01 15:01:39.1±1.1, 0°.5N±0°.1×122°.20E±0°.08, h148km, n7, σ3.9 00/10, mb3.3/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.26	265	P	Pn	15 01 56.2	-3.1
MRSI				S	Sn	15 02 08.6	-6.0
LUWI	Luwuk	1.64	160	P	Pn	15 02 10.1	+0.1
LUWI				S	Sn	15 02 32.3	-1.4
KMSI	Cibinong	1.78	88	P	Pn	15 02 02.7	-8.9
KMSI				S	Sn	15 02 35.3	-1.2
MPSI	Mapaga	2.31	266	P	Pn	15 02 18.2	+0.4
MPSI				S	Sn	15 02 46.3	-1.2
WRA	Warramunga Arr	23.55	150	P	P	15 06 36.6	+0.5
	0.5nm,0.4s,baz=303,slow=13,SNR=4.3						
ASAR	Alice Springs	26.58	155	P	P	15 07 04.1	+0.5
	0.3nm,0.7s,baz=333,slow=9.3,SNR=4.4						
MKAR	Makanchi Array	57.77	329	P	P	15 11 18.3	+3.6
	0.3nm,0.5s,baz=120,slow=8.5,SNR=5.0						

GUC 01 15:04:31.4±0.6, 30°.70S×71°.49W, h47km±6km, ML3.5, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.79	49	*e*P	Pn	15 04 48.0	+1.5
GO04				*e*S	Sn	15 05 00.4	+3.0
GO04				IAML		15 05 05.2	
	comp=N,11μm,0.4s						
LSCH	La Serena	0.81	15	*e*P	Pn	15 04 47.5	+1.0
LSCH				*i* S	Sn	15 04 59.2	+1.6
LCO	Las Campanas	1.81	22⇓	*e*P	Pn	15 05 03.2	+2.7
LCO				*e*S	Sn	15 05 26.5	+4.2
LCO				IAML		15 05 29.5	
	comp=E,255nm,0.3s						
ROCH	El Roble	2.30	170	*e*P	Pn	15 05 09.5	+2.3
ROCH				*e*S	Sn	15 05 38.8	+4.5
ROCH				IAML		15 05 45.8	
	comp=E,359nm,0.5s						
FCH	Farellones	2.81	159	*e*P	Pn	15 05 17.3	+3.1
FCH				IAML		15 06 01.2	
	comp=N,155nm,0.6s						

MAN 01 15:18:29.4, 7°.29N×124°.73E, h1km, mb4.7, ML3.5, MS3.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.67	30	*e*P	Pg	15 18 42.3	+0.1
BUKP				*e*S	Sb	15 18 52.8	-0.9
SKMP	Bagumbayan, Su	0.79	194	*e*P	Pg	15 18 44.7	+0.2
DMPH	Davao City--Mi	0.80	105⇑	*e*P	Pn	15 18 51.4	+3.6
DMPH				*e*S	Sn	15 19 03.0	+2.6
PAGZ	Pagadian	1.45	292	*e*P	Pn	15 18 55.9	-0.8
PAGZ				*e*S	Sn	15 19 16.9	+0.6
DDMP	Don Marcelino,	1.53	140	*e*P	Pg	15 18 58.9	+0.1
MATI	Mati	1.55	103	*e*P	Pn	15 18 58.0	-0.2
MATI				*e*S	Sg	15 19 22.0	+2.7
IPIL	Ipil	2.20	283	*e*P	Pb	15 19 09.2	-0.7
IPIL				*e*S	Sg	15 19 39.0	-0.9

MAN 01 15:21:59.3, 7°.35N×124°.76E, h1km, mb3.7, ML2.4, MS1.9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.60	30	*e*P	Pg	15 22 10.9	0.0
BUKP				*e*S	Sn	15 22 25.6	0.0
SKMP	Bagumbayan, Su	0.85	194	*e*P	Pg	15 22 16.0	+0.3
PAGZ	Pagadian	1.45	290	*e*P	Pn	15 22 25.5	-1.1
PAGZ				*e*S	Sn	15 22 47.3	+1.0
MATI	Mati	1.54	105	*e*P	Pg	15 22 35.2	+6.2
MATI				*e*S	Sb	15 22 48.8	0.0
DDMP	Don Marcelino,	1.56	143	*e*P	Pn	15 22 27.2	-1.0
DDMP				*e*S	Sg	15 22 50.5	+0.9

MAN 01 15:27:50.9, 7°.15N×124°.67E, h28km, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	0.64	191	*e*P	Pn	15 28 04.1	0.0
BUKP	Musuan	0.82	28	*e*P	Pb	15 28 06.5	-0.2
BUKP				*e*S	Sb	15 28 13.9	-3.6
DMPH	Davao City--Mi	0.83	94⇑	*e*P	Pb	15 28 12.5	+5.6
DMPH				*e*S	Sn	15 28 19.4	+1.2
PAGZ	Pagadian	1.45	299	*e*P	Pn	15 28 14.7	-0.7
PAGZ				*e*S	Sn	15 28 34.0	+0.5
DDMP	Don Marcelino,	1.47	135	*e*P	Pn	15 28 15.4	-0.1

PAGZ	**Pagadian**	**1.40 290**	*e*P	Pn	15 29 42.7	-0.3
PAGZ			*e*S	Sn	15 30 02.7	+0.6
DDMP	**Don Marcelino,**	**1.60 142**	*e*P	Pn	15 29 44.8	-0.9
DDMP			*e*S	Sg	15 30 08.8	+1.0
IPIL	**Ipil**	**2.16 281**	*e*P	Pb	15 29 56.7	+0.5
IPIL			*e*S	Sb	15 30 24.0	+0.5

MAN 01 15:30:54.4, 7°.30N×124°.76E, h1km, mb4.1, ML2.9, MS2.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.65**	**27**	*e*P	Pg	15 31 06.8	-0.1
BUKP				*e*S	Sg	15 31 16.5	+1.3
SKMP	**Bagumbayan, Su**	**0.81**	**196**	*e*P	Pg	15 31 09.8	-0.1
SKMP				*e*S	Sb	15 31 22.0	-0.6
PAGZ	**Pagadian**	**1.48**	**292**	*e*P	Pn	15 31 21.2	-0.9
PAGZ				*e*S	Sn	15 31 43.2	+1.1
DDMP	**Don Marcelino,**	**1.51**	**142**	*e*P	Pn	15 31 22.7	0.0
DDMP				*e*S	Sg	15 31 44.0	+0.8

JMA 01 15:33:47.3, 26°.55N×129°.94E, h47km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMZ	**Minamidaito 2**	**1.36**	**122**	P	Pn	15 34 10.4	+0.5
JMZ				S	Sn	15 34 26.4	-0.4
JYRO	**Yoronjima**	**1.41**	**290**	P	Pn	15 34 11.1	+0.5
JYRO				S	Sn	15 34 28.4	+0.4
JOKE	**Okinoerabujima**	**1.47**	**304**	P	Pn	15 34 12.3	+1.0
JTK	**Tokunoshima**	**1.51**	**325**	P	Pn	15 34 12.8	+0.8
JTK				*e*S	Sn	15 34 30.6	+0.1
JOW	**Kunigami**	**1.52**	**281**	P	Pn	15 34 12.8	+0.8
JOW				*e*S	Sn	15 34 30.8	+0.2
JNTH	**Nagotoyohara**	**1.72**	**269**	P	Pn	15 34 15.3	+0.6
JNTH				*e*S	Sn	15 34 35.8	+0.3
JAMN	**Amaminishikomi**	**1.82**	**338**	P	Pn	15 34 16.9	+0.8
JAMN				S	Sn	15 34 37.4	-0.6
JIH	**Iheya**	**1.83**	**286**	P	Pn	15 34 17.3	+1.0
JIH				*e*S	Sn	15 34 39.4	+1.2
JAM	**Amami Oshima**	**1.88**	**351**	P	Pn	15 34 17.9	+1.0
JAM				*e*S	Sn	15 34 39.0	-0.4
JJT3	**Tamagusuku3**	**1.98**	**259**	P	Pn	15 34 19.5	+1.2
JJT3				S	Sn	15 34 42.9	+1.0
JAGN	**Aguni-jima**	**2.42**	**272**	P	Pn	15 34 25.3	+1.0
JAGN				*e*S	Sn	15 34 53.4	+0.7
JTAJ	**Takarajima**	**2.67**	**346**	*e*S	Sn	15 34 57.4	-1.6
JKE	**Kume jima 2**	**2.84**	**266**	P	Pn	15 34 30.4	+0.3

MAN 01 15:36:22.8, 7°.29N×124°.73E, h1km, mb4.0, ML2.8, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.67**	**30**	*e*P	Pg	15 36 35.4	-0.3
BUKP				*e*S	Sg	15 36 44.8	+0.3
SKMP	**Bagumbayan, Su**	**0.79**	**193**	*e*P	Pg	15 36 37.6	-0.3
SKMP				*e*S	Sb	15 36 50.0	-0.5
DMPH	**Davao City--Mi**	**0.80**	**105**	*e*P	Pg	15 36 38.1	0.0
DMPH				*e*S	Sb	15 36 50.1	-0.8
PAGZ	**Pagadian**	**1.44**	**293**	*e*P	Pb	15 36 50.4	-0.1
PAGZ				*e*S	Sn	15 37 10.1	+0.4
DDMP	**Don Marcelino,**	**1.53**	**140**	*e*P	Pn	15 36 51.2	0.0
DDMP				*e*S	Sg	15 37 12.8	+0.8

MAN 01 15:41:19.9, 10°.30N×125°.86E, h20km, mb4.8, ML3.7, MS3.6, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.00**	**261**	*e*P	Pb	15 41 37.9	-0.6
MSLP				*e*S	Sn	15 41 53.2	+0.9
PLP	**Palo**	**1.22**	**315**	*e*P	Pn	15 41 41.4	-0.5
PLP				*e*S	Sb	15 41 57.6	-0.1
BUTP	**Butuan**	**1.34**	**190**	*e*P	Pn	15 41 42.6	-0.9
BUTP				*e*S	Sb	15 42 04.9	+3.8
BESP	**Borongan**	**1.36**	**342**	*e*P	Pn	15 41 43.2	-0.6
BESP				*e*S	Sb	15 42 02.4	+0.7
OCLP	**Ormoc**	**1.44**	**301**	*e*P	Pn	15 41 45.0	+0.1
OCLP				*e*S	Sb	15 42 05.7	+1.7
LLP	**Lapu-Lapu**	**1.86**	**271**	*e*P	Pn	15 41 50.4	-0.3
LLP				*e*S	Sn	15 42 14.7	+1.0
TBP	**Tagbilaran**	**2.06**	**253**	*e*P	Pn	15 41 53.6	+0.2
CNP	**Catarman**	**2.49**	**332**	*e*P	Pn	15 41 59.6	+0.3

*NEIC **01** 15:45:41.4±2.8, 7°.37N×124°.56E, h10km, mb4.3/9, Error ellipse: s-maj=25.9km s-min=22.8km az=313.0*
*MAN **01** 15:45:45.1, 7°.23N×124°.76E, h3km, mb5.5, ML4.4, MS4.7*
*ISCJB **01** 15:45:46.6±0.9, 7°.14N±0°.04×124°.79E±0°.04, h23km±8km, mb4.0/12, Error ellipse: s-maj=8.0km s-min=5.1km az=148.1*
*IDC **01** 15:45:46.1±1.0, 7°.03N×124°.72E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.6/43, mbtmp3.8/6, Error ellipse: s-maj=20.3km s-min=10.7km az=177.0*
ISC 01 15:45:45.2±1.2, 7°.21N±0°.03×124°.72E±0°.03, h5km±9km, n37, σ2°.24/45, mb4.0/12, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.71**	**195**	*e*P	**Pb**	**15 46 00.4**	**+0.3**
SKMP				*e*S	**Sn**	**15 46 13.0**	**-0.4**
BUKP	**Musuan**	**0.74**	**27**	*e*P	**Pg**	**15 45 58.7**	**-0.8**
BUKP				*e*S	**Sg**	**15 46 08.5**	**-0.6**
DMPH	**Davao City--Mi**	**0.79**	**99**	*e*P	**Pg**	**15 46 00.9**	**+0.5**
DMPH				*e*S	**Sb**	**15 46 13.0**	**+0.5**
DAV	**Davao City (W)**	**0.86**	**99**	Pg	**Pg**	**15 46 02.1**	**+0.3**
	370nm,0.3s,baz=276,slow=9.3,SNR=19						
DAV				Lg	Lg	15 46 15.2	
	328nm,0.3s,baz=323,slow=20,SNR=45						
DAV	**Davao City (W)**	**0.86**	**99**	*e*Pn	**Pb**	**15 46 03.1**	**+0.4**
CGP	**Cagayan de Oro**	**1.23**	**359**	*i*P	**Pg**	**15 46 07.0**	**-1.9**
CGP				*i*S	**Sg**	**15 46 22.1**	**-2.8**
PAGZ	**Pagadian**	**1.47**	**295**	*e*P	**Pn**	**15 46 11.9**	**-0.5**
PAGZ				*e*S	**Sg**	**15 46 33.5**	**+0.9**
DDMP	**Don Marcelino,**	**1.48**	**138**	*e*P	**Pn**	**15 46 12.1**	**-0.4**
DDMP				*e*S	**Sg**	**15 46 37.5**	**+4.8**
MAT	**Mati**	**1.55**	**100**	*e*P	**Pn**	**15 46 12.9**	**-0.6**
MATI				*e*S	**Sg**	**15 46 36.0**	**+1.0**
DCPH	**Dipolog City**	**1.92**	**315**	*e*P	Pg	15 46 26.5	+4.4
DCPH				*e*S	**Sg**	**15 46 52.6**	**+5.6**
BUTP	**Butuan**	**1.96**	**27**	*e*P	**Pb**	**15 46 20.6**	**-0.8**
BUTP				*e*S	**Sg**	**15 46 49.0**	**+0.8**
IPIL	**Ipil**	**2.21**	**285**	*e*P	**Pb**	**15 46 24.6**	**-1.1**
IPIL				*e*S	**Sg**	**15 46 55.2**	**-1.0**
SNPH	**Sibulan**	**2.58**	**325**	*i*P	**Pb**	**15 46 31.8**	**-0.2**
SNPH				*i*S	**Sb**	**15 47 05.2**	**+1.1**
TBP	**Tagbilaran**	**2.60**	**341**	*e*P	**Pn**	**15 46 28.3**	**+0.3**
MSLP	**Maasin**	**2.91**	**3**	*e*P	**Pb**	**15 46 34.9**	**-2.7**
MSLP				*e*S	**Sb**	**15 47 15.4**	**+2.0**
LLP	**Lapu-Lapu**	**3.17**	**346**	*e*P	**Pn**	**15 46 37.6**	**+1.8**
LLP				*e*S	**Sn**	**15 47 16.9**	**+2.8**
GUIM	**Jordan**	**3.99**	**328**	*e*P	**Pn**	**15 46 50.2**	**+3.1**
CUYO	**Cuyo Island**	**5.14**	**315**	*e*P	Pn	15 47 07.9	+4.9
PVCP	**Virac**	**6.37**	**355**	*e*P	**Pn**	**15 47 22.8**	**+3.0**
ENCP	**El Nido**	**6.56**	**308**	*e*P	**Pn**	**15 47 23.5**	**+1.0**
SAUI	**Saumlaki**	**16.46**	**156**	*e*Pn	**Pn**	**15 49 32.5**	**-4.6**
	208nm,0.8s						
MTN	**Manton Dam**	**20.92**	**162**	*e*P	**P**	**15 50 28.6**	**-0.3**
	7.3nm,0.9s						
CISI	**Cisompet, Garu**	**22.35**	**229**	*e*P	**P**	**15 50 42.5**	**-1.9**
	42nm,1.1s						
FITZ	**Fitzroy Crossi**	**25.17**	**178**	P	**P**	**15 51 11.6**	**-0.1**
	3.1nm,1.0s,baz=357,slow=9.1,SNR=2.4						
WRAB	**Tennant Creek**	**28.59**	**161**	*e*P	**P**	**15 51 38.5**	**-4.1**
	13nm,0.4s						
WR1	**Warramunga Arr**	**28.60**	**161**	*e*P	**P**	**15 51 41.3**	**-1.4**
WRA	**Warramunga Arr**	**28.60**	**161**	P	**P**	**15 51 41.3**	**-1.4**
	1.7nm,0.8s,baz=348,slow=11,SNR=2.6						
WB2	**Warramunga Arr**	**28.60**	**161**	*e*P	**P**	**15 51 39.8**	**-2.9**
	4.1nm,1.1s						
MAJO	**Matsushiro**	**31.68**	**21**	*e*P	P	15 52 03.9	-5.9
	2.2nm,0.9s						
MJB9	**Matsu-Tunnel**	**31.69**	**21**	*e*P	P	15 52 03.9	-5.9
	2.3nm,0.9s						
ASAR	**Alice Springs**	**31.98**	**164**	P	**P**	**15 52 12.9**	**+0.4**
	0.6nm,0.7s,baz=340,slow=6.9,SNR=15						
BBOO	**Buckleboo**	**41.24**	**165**	*e*P	**P**	**15 53 28.4**	**-2.9**
	13nm,1.1s						
STKA	**Stephens Creek**	**42.08**	**158**	P	**P**	**15 53 39.2**	**+0.9**
	2.5nm,0.7s,baz=327,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**42.08**	**158**	*e*P	**P**	**15 53 35.0**	**-3.2**
	0.1nm,0.8s						
CAN	**Canberra**	**48.10**	**153**	*e*P	P	15 54 21.6	-4.5
MKAR	**Makanchi Array**	**53.57**	**325**	P	**P**	**15 55 09.3**	**+2.0**
	0.5nm,0.8s,baz=115,slow=8.3,SNR=4.4						
KURBB	**Kurchatov Arra**	**57.75**	**327**	P	**P**	**15 55 40.5**	**+3.3**
	0.6nm,0.7s,baz=129,slow=6.0,SNR=4.5						

MAN 01 15:52:13.5, 7°.49N×124°.94E, h15km, mb4.5, ML3.4, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.40**	**18**	*e*P	Pb	15 52 23.1	+0.7
BUKP				*e*S	Sn	15 52 32.4	+0.2
DMPH	**Davao City--Mi**	**0.70**	**126**	*e*P	Pg	15 52 26.3	-0.9
DMPH				*e*S	Sn	15 52 38.2	-1.2
CGP	**Cagayan de Oro**	**0.98**	**346**	*e*P	Pb	15 52 31.8	-0.4
CGP				*e*S	Sn	15 52 46.6	+0.1
SKMP	**Bagumbayan, Su**	**1.04**	**202**	*e*P	Pb	15 52 24.9	-8.4
SKMP				*e*S	Sb	15 52 37.0	-10
MATI	**Mati**	**1.42**	**112**	*e*P	Pn	15 52 37.3	-1.5
MATI				*e*S	Sg	15 52 58.6	-0.8
PAGZ	**Pagadian**	**1.58**	**283**	*e*P	Pn	15 52 36.1	-4.8
PAGZ				*e*S	Sn	15 52 57.9	-3.2
DDMP	**Don Marcelino,**	**1.58**	**151**	*e*P	Pn	15 52 36.9	-4.1
DDMP				*e*S	Sg	15 53 03.6	-0.8
BUTP	**Butuan**	**1.62**	**25**	*e*P	Pg	15 52 45.4	+0.8
BUTP				*e*S	Sg	15 53 13.6	+7.9
MSLP	**Maasin**	**2.62**	**358**	*e*P	Pb	15 52 59.1	-1.2

*ISCJB **01** 15:54:41.4±0.4, 24°.26N±0°.05×97°.87E±0°.07, h10km, mb4.0/17, MS3.2/1, Error ellipse: s-maj=9.3km s-min=6.3km az=152.0*
*IDC **01** 15:54:41.5±1.0, 24°.26N×97°.95E, h0km, mb3.7/6, mb1 3.7/7, mb1mx3.4/50, mbtmp3.6/7, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/66, Error ellipse: s-maj=59.6km s-min=15.0km az=73.0*
*BJI **01** 15:54:45.6±0.0, 24°.33N×98°.09E, h10km, ML3.7/6*
*NEIC **01** 15:54:48.9±1.6, 24°.11N×97°.94E, h65km±19km, mb4.2/11, Error ellipse: s-maj=21.7km s-min=10.0km az=63.0*
ISC 01 15:54:43.7±0.6, 24°.26N±0°.04×97°.94E±0°.06, h10km, n41, σ1°.68/39, mb3.9/17, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.45**	**78**	Pg	**Pb**	**15 56 04.7**	**+2.5**
KMI				Sg	**Sb**	**15 56 57.2**	**+1.1**
KMI				smax	smax		
	comp=N,170nm,0.9s						
KMI				smax	smax		
	comp=E,81nm,0.9s						
PAYA	**Payao**	**5.20**	**159**	P	**Pg**	**15 56 22.3**	**-1.0**
PAYA	**Payao**	**5.20**	**159**	P	**Pg**	**15 56 22.3**	**-1.0**
	60μm,0.5s,899μm898nm						
CHTO	**Chiang Mai**	**5.50**	**170**	*e*Pn	**Pn**	**15 56 05.6**	**-0.1**
CMMT	**Chiang Mai**	**5.50**	**170**	P	**Pn**	**15 56 07.6**	**+1.8**
	9.5nm,0.5s,174nm						
CMMT	**Chiang Mai**	**5.50**	**170**	P	**Sg**	**15 57 35.9**	**-4.6**
CM31	**Chiang Mai Arr**	**5.85**	**171**	*e*Pn	**Pn**	**15 56 11.8**	**+1.2**
CMAR	**Chiang Mai Arr**	**5.85**	**171**	Pn	**Pn**	**15 56 10.7**	**+0.1**
	0.6nm,0.3s,baz=347,slow=13,SNR=16						
CMAR				Pg	**Pb**	**15 56 30.0**	**+4.1**
	2.0nm,0.3s,baz=344,slow=18,SNR=18						
CMAR				Lg	Lg	15 57 45.9	
	3.9nm,0.3s,baz=349,slow=28,SNR=13						
LAMP	**Lampang**	**5.92**	**164**	P	**Pg**	**15 56 35.1**	**-2.1**
	33μm,0.8s,337μm515nm						
LAMP	**Lampang**	**5.92**	**164**	P	**Sg**	**15 57 52.0**	**-2.0**
PHRA	**Phrae**	**6.12**	**159**	P	**Pg**	**15 56 41.0**	**0.0**
	2.5nm,0.8s,61nm0.0nm						
PHRA	**Phrae**	**6.12**	**159**	P	**Sg**	**15 57 58.4**	**-1.8**
UMPA	**Umpang Tak**	**8.06**	**174**	P	**Pg**	**15 57 22.1**	**+4.0**
ODAN	**Odare**	**9.87**	**287**	*e*P	**Pn**	**15 57 06.0**	**+0.1**
	6.7nm,0.4s						
RAMN	**Ramite**	**10.57**	**287**	*e*P	**Pn**	**15 57 15.9**	**+0.3**
	7.5nm,0.4s						
PKI	**Pulchoki**	**11.75**	**289**	*e*P	**Pn**	**15 57 30.5**	**-1.2**
	4.5nm,0.4s						
PKIN	**Phulchoki**	**11.76**	**289**	*e*P	**Pn**	**15 57 30.8**	**-1.0**
	5.2nm,0.5s						
KKN	**Kakani**	**11.91**	**290**	*e*P	**Pn**	**15 57 32.8**	**-1.1**
	6.9nm,0.5s						
WMQ	**Urumqi**	**21.24**	**339**	*e*P	**P**	**15 59 30.6**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
SONA0	**Songino Array**	**24.47**	**14**	*e*P	**P**	**16 00 03.2**	**+0.2**
SONM	**Songino Array**	**24.47**	**14**	P	**P**	**16 00 03.2**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=188,slow=6.0,SNR=3.5						
MK31	**Makanchi Array**	**25.74**	**335**	*e*P	**P**	**16 00 15.2**	**+0.7**
	comp=Z,1.6nm,0.8s						
MK32	**Makanchi Array**	**25.74**	**335**	*e*P	**P**	**16 00 14.8**	**+0.4**
MKAR	**Makanchi Array**	**25.74**	**335**	P	**P**	**16 00 14.8**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=144,slow=9.7,SNR=18						
KURBB	**Kurchatov Arra**	**30.31**	**335**	P	**P**	**16 00 54.0**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=142,slow=8.5,SNR=5.0						
KURK	**Kurchatov**	**30.35**	**335**	*e*P	**P**	**16 00 56.1**	**+0.6**
	comp=Z,1.2nm,1.0s						
ZAA0	**Zalesovo Array**	**31.24**	**345**	*e*P	P	16 01 01.5	-1.8
	comp=Z,1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**31.24**	**345**	P	**P**	**16 01 01.7**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=163,slow=11,SNR=4.4						
ZAA1	**Zalesovo Array**	**31.24**	**345**	*e*P	**P**	**16 01 01.7**	**-1.7**
DAV	**Davao City (W)**	**31.52**	**118**	LR	LR	16 13 41.9	
	comp=Z,52nm,18.2s,baz=348,slow=36						
MDJ	**Mudanjiang**	**32.77**	**44**	*e*P	**P**	**16 01 17.6**	**+0.7**
	comp=Z,5.4nm,0.3s						
MJB9	**Matsu-Tunnel**	**36.58**	**61**	*e*P	**P**	**16 01 48.5**	**-1.5**
	comp=Z,7.1nm,1.1s						
MAJO	**Matsushiro**	**36.58**	**61**	*e*P	**P**	**16 01 48.5**	**-1.5**
	comp=Z,7.4nm,1.1s						
YAK	**Yakutsk**	**43.43**	**21**	*e*P	**P**	**16 02 46.8**	**+0.4**
	comp=Z,5.2nm,0.9s						
MTN	**Manton Dam**	**49.11**	**135**	*e*P	P	16 03 28.0	-3.7
TIXI	**Tiksi**	**50.54**	**12**	*e*P	**P**	**16 03 42.8**	**+1.0**
	comp=Z,1.0nm,0.8s						
WRAB	**Tennant Creek**	**56.46**	**138**	*e*P	P	16 04 22.8	-3.2
	comp=Z,15nm,1.0s						
AS31	**Alice Springs**	**59.06**	**141**	*e*P	**P**	**16 04 43.2**	**-1.1**
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**59.06**	**141**	P	**P**	**16 04 43.2**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=311,slow=5.6,SNR=2.7						
FIA0	**FINESS Array S**	**60.34**	**328**	*e*P	**P**	**16 04 51.7**	**-0.8**
FINES	**FINESS Array B**	**60.34**	**328**	P	**P**	**16 04 51.7**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=98,slow=9.8,SNR=6.2						

*NIED **01** 15:57:00, 40°.00N×143°.70E, h14km, Mw4.1 Best double couple: M0:1.37000×10^15 NP1:φs195.00000°, δ35.00000°, λ83.00000°. NP2:φs24.00000°, δ56.00000°, λ95.00000°.*
*IDC **01** 15:57:04.5±0.7, 39°.81N×143°.71E, h0km, mb3.7/14, mb1 3.9/19, mb1mx3.8/49, mbtmp3.7/19, ML3.0/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/58, Error ellipse: s-maj=17.5km s-min=15.2km az=126.0*
*JMA **01** 15:57:04.1±0.2, 39°.95N×143°.70E, h0km, M4.0*
*ISCJB **01** 15:57:05.7±1.2, 39°.85N±0°.03×143°.77E±0°.05, h18km±9km, mb3.9/20, Error ellipse: s-maj=6.8km s-min=3.9km az=33.1*
*MOS **01** 15:57:05.5±1.1, 39°.83N×143°.72E, h17km, mb4.2/7, Error ellipse: s-maj=10.8km s-min=7.4km az=90.6*
ISC 01 15:57:07.6±2.7, 39°.86N±0°.06×143°.74E±0°.06, h19km±11km, n66, σ1°.57/74, mb4.0/20, 5C-5D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.45**	**274**	P	**Pn**	**15 57 30.8**	**-1.9**
MIYJ	**Miyakonagasawa**	**1.51**	**260**	P	**Pn**	**15 57 32.3**	**-1.2**
MIYJ				*e*S	**Sn**	**15 57 52.4**	**-0.2**
JKEN	**Kujiedanarisaw**	**1.59**	**283**	P	**Pn**	**15 57 32.7**	**-2.0**
JANG	**Nango**	**1.78**	**287**	P	**Pn**	**15 57 35.7**	**-1.6**
JANG				*e*S	**Sn**	**15 57 58.0**	**-1.4**
JOM	**Ohasama**	**1.93**	**259**	P	**Pn**	**15 57 38.8**	**-0.5**
JOM				S	**Sn**	**15 58 02.7**	**-0.3**
JMK	**Ichinoseki**	**2.15**	**246**	P	**Pn**	**15 57 41.5**	**-0.9**
ERM	**Erimo**	**2.20**	**349**	*e*P	**Pn**	**15 57 43.6**	**+0.6**
JNBK	**Urakawa-nobuka**	**2.53**	**343**	P	**Pn**	**15 57 48.5**	**+0.9**
JNBK				S	**Sn**	**15 58 19.6**	**+1.8**
JOT	**Ohata**	**2.55**	**307**	P	**Pn**	**15 57 47.2**	**-0.7**
JCH	**Churui**	**2.77**	**354**	P	**Pn**	**15 57 50.5**	**-0.3**
JCH				S	**Sn**	**15 58 22.6**	**-1.1**
JYK	**Kaneyama**	**2.78**	**251**	P	**Pn**	**15 57 50.8**	**-0.3**
JKB	**Kayabe**	**2.88**	**315**	P	**Pn**	**15 57 52.2**	**-0.2**
JKB				*e*S	**Sn**	**15 58 25.8**	**-0.7**
JAK	**Akkeshi**	**3.21**	**13**	P	**Pn**	**15 57 57.0**	**0.0**
JAK				*e*S	**Sn**	**15 58 33.5**	**-1.2**
JFR	**Furan**	**3.41**	**346**	P	**Pn**	**15 58 01.4**	**+1.7**
JAR	**Ashorobuto**	**3.43**	**0**	P	**Pn**	**15 57 59.5**	**-0.5**
JAR				*e*S	**Sn**	**15 58 37.9**	**-2.2**
JEW	**Eniwo**	**3.44**	**331**	P	**Pn**	**15 58 01.8**	**+1.7**
JEW				*e*S	**Sn**	**15 58 42.0**	**+1.7**
JFT	**Otama**	**3.54**	**230**	P	**Pn**	**15 58 00.8**	**-0.8**
NEM2	**Nemuro 2**	**3.81**	**23**	P	**Pn**	**15 58 04.6**	**-0.6**
NEM2				S	**Sn**	**15 58 48.0**	**-1.4**
ASAJ	**Asahikawa**	**4.34**	**349**	Pn	**Pn**	**15 58 12.9**	**+0.5**
	1.8nm,0.3s,baz=216,slow=10,SNR=18						
ASAJ				Sn	**Sn**	**15 59 04.1**	**+1.7**
	2.5nm,0.3s,baz=150,slow=20,SNR=6.5						
YUK	**Yuzh-Kuril'sk**	**4.46**	**20**	*e*P	**Pn**	**15 58 14.0**	**-0.1**
YUK				*e*S	**Sn**	**15 58 59.4**	**-6.0**
YUK				pmax	pmax		
	comp=Z,73nm,0.2s						
YUK				pmax	pmax		
	comp=E,36nm,0.1s						
YUK				smax	smax		
	comp=E,335nm,0.7s						
YUK				smax	smax		
	comp=N,232nm,0.6s						
MJA0	**Matsu Arr-Jizo**	**5.45**	**234**	*e*P	**Pn**	**15 58 28.4**	**+0.6**
MJAR	**Matsushiro Arr**	**5.47**	**234**	Pn	**Pn**	**15 58 28.4**	**+0.4**
	comp=N,0.3nm,0.3s,baz=44,slow=11,SNR=46						
MAJO	**Matsushiro**	**5.47**	**234**	*i*P	**Pn**	**15 58 28.6**	**+0.5**
MAT	**Matsushiro**	**5.47**	**234**	P	**Pn**	**15 58 28.5**	**+0.4**
MAT				*e*S	**Sn**	**15 59 34.4**	**+3.9**
KUR	**Kuril'sk**	**6.17**	**28**	*e*P	**Pn**	**15 58 39.1**	**+1.5**
KUR				*e*S	**Sn**	**15 59 45.6**	**-2.0**
KUR				pmax	pmax		
	comp=Z,27nm,0.5s						
KUR				pmax	pmax		
	comp=E,7.0nm,0.3s						
KUR				pmax	pmax		
	comp=N,8.0nm,0.2s						
KUR				smax	smax		
	comp=E,66nm,0.7s						
KUR				smax	smax		
	comp=N,36nm,0.6s						
TEY	**Ternei**	**7.39**	**317**	*e*P	Pn	15 58 40.3	-14
JHJ	**Hachijo jima 2**	**7.44**	**207**	Sn	Sn	16 00 07.7	-11
	comp=N,3.9nm,0.3s,baz=80,slow=19,SNR=1.8						
USRK	**Ussuriysk Ar.**	**9.76**	**300**	Pn	**Pn**	**15 59 28.2**	**+1.5**
	comp=N,0.2nm,0.3s,baz=108,slow=13,SNR=14						
KSRS	**Korea Array**	**12.60**	**264**	Pn	**Pn**	**16 00 05.2**	**-0.4**
	comp=N,0.1nm,0.3s,baz=83,slow=13,SNR=6.1						
KSRS				LR	LR	16 04 53.0	
	comp=N,166nm,18.0s,baz=76,slow=37						
KLR	**Kul'dur**	**12.67**	**322**	Pn	**Pn**	**16 00 06.7**	**+0.1**
	comp=N,0.1nm,0.3s,baz=136,slow=13,SNR=4.8						
KLR	**Kul'dur**	**12.67**	**322**	*e*P	**Pn**	**16 00 06.3**	**-0.3**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZEA	**Zeya**	**17.83**	**327**	*e*P	**Pn**	**16 01 11.2**	**-3.2**
ZEA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MA2	**Magadan**	**20.23**	**10**	P	**P**	**16 01 41.0**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=228,slow=6.1,SNR=3.8						
SEY	**Seymchan**	**23.68**	**10**	P	**P**	**16 02 17.8**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=179,slow=6.8,SNR=9.9						
YAK	**Yakutsk**	**23.79**	**344**	*i*P	**P**	**16 02 18.8**	**+0.1**
YAK				pmax	pmax		
	comp=Z,34nm,0.7s						
BOD	**Bodaibo**	**26.24**	**323**	*e*P	**P**	**16 02 36.5**	**-4.6**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**27.43**	**299**	*e*P	**P**	**16 02 52.6**	**+0.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**27.87**	**299**	P	**P**	**16 02 54.3**	**-1.7**
	comp=Z,1.3nm,0.8s,baz=96,slow=8.9,SNR=9.3						
SONM	**Songino Array**	**27.87**	**299**	*e*P	**P**	**16 02 55.9**	**-0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.25**	**128**	T	T	16 33 56.2	
	baz=318,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**28.26**	**129**	T	T	16 33 57.9	
	baz=318,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**28.27**	**128**	T	T	16 33 55.6	
	baz=318,slow=75,SNR=24						
H11S1

PAGZ			eS	Sg	15 58 47.4	+2.1
DDMP	**Don Marcelino,**	**1.51 141**	eP	Pn	15 58 24.3	-0.6
DDMP			eS	Sg	15 58 50.7	+4.6
DDMP	**Don Marcelino,**	**1.51 141**	eP	Pn	15 58 24.3	-0.6
DDMP			eS	Sg	15 58 48.1	+2.0

*DDA **01** 16:08:51.0, 40.˚42N×34.˚90E, h7km±1km, ML2.6*
*ISK **01** 16:08:51.8, 40.˚36N×34.˚99E, h6km, ML2.0/7*
*ISCJB **01** 16:08:52.0±0.8, 40.˚42N±0.˚04×34.˚94E±0.˚07, h5km±7km, Error ellipse: s-maj=9.8km s-min=4.5km az=27.3*
ISC 01 16:08:52.2±1.1, **40.˚38N**±0.˚03×**34.˚95E**±0.˚05, **h14**km±7km, **n11**, σ0**82**/16, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COAL	**Corum-Alaca**	**0.13**	**167**	i P	**Pg**	**16 08 55.9**	**+0.1**
COAL				i S	**Sg**	**16 08 58.8**	**+0.5**
COAL				IAML_P			
	comp=Z,3μm,0.1s						
CORM	**Corum**	**0.32**	**230**	PG	**Pg**	**16 08 58.3**	**-0.5**
CORM				SG	**Sb**	**16 09 03.9**	**-0.9**
YOZ	**Yozgat**	**0.79**	**159**	PG	**Pg**	**16 09 06.9**	**-0.7**
CDAG	**Cicekdag**	**0.88**	**210**	i P	**Pg**	**16 09 08.6**	**-0.6**
CDAG				i S	**Sb**	**16 09 21.9**	**+1.0**
CDAG				IAML_P			
	comp=Z,421nm,0.1s						
HAVZ	**Havza**	**0.91**	**40**	i P	**Pg**	**16 09 08.7**	**-1.1**
HAVZ				i S	**Sb**	**16 09 22.3**	**+0.5**
HAVZ				IAML_P			
	comp=Z,880nm,0.1s						
SIRC	**Yozgat**	**1.05**	**171**	i P	**Pb**	**16 09 12.2**	**-0.1**
SIRC				i S	**Sn**	**16 09 28.7**	**+1.4**
SIRC				IAML_P			
	comp=Z,302nm,0.2s						
KVT	**Kavak**	**1.09**	**50**	PG	**Pb**	**16 09 12.6**	**-0.3**
DIKM	**Dikmen**	**1.29**	**10**	PN	**Pg**	**16 09 17.5**	**+0.4**
SVSK	**Karacayir**	**1.64**	**106**	PN	**Pb**	**16 09 21.5**	**-0.7**
SNOP	**Sinop**	**1.65**	**7**	PN	**Pb**	**16 09 22.1**	**-0.3**
YAYX	**Yaylak**	**1.69**	**212**	PN	**Pb**	**16 09 22.6**	**-0.5**

*NEIC **01** 16:25:28.5±0.2, 10.˚80S×166.˚11E, h10km, mb5.0/44, Error ellipse: s-maj=7.9km s-min=5.6km az=79.0*
*MOS **01** 16:25:32.1±1.1, 10.˚83S×166.˚02E, h40km, mb5.1/22, Error ellipse: s-maj=10.4km s-min=8.6km az=112.4*
*ISCJB **01** 16:25:33.9±0.2, 10.˚91S±0.˚03×166.˚00E±0.˚05, h61km, mb4.8/82, Error ellipse: s-maj=6.6km s-min=4.4km az=162.0*
*GCMT **01** 16:25:35.5±0.2, 11.˚01S±0.˚01×165.˚75E±0.˚01, h45km, MW5.3/99, Moment Tensor Solution. s97,c143; s99,c155; Duration: 1s1 Moment tensor: Scale 10^17^Nm; M_{rr}1.09±.02; $M_{\theta\theta}$-0.25±.02; $M_{\phi\phi}$-0.84±.02; $M_{r\theta}$-0.22±.01; $M_{\theta\phi}$0.37±.01; $M_{\phi r}$0.00±.01; Best double couple: $M_0$1.07400×10^17^ NP1:ϕ_s325.00000°, δ48.00000°, λ78.00000°. NP2:ϕ_s164.00000°, δ43.00000°, λ103.00000°. Principal axes: T 1.1260, Plg80.0000°, Azm170.0000°; N -0.1050, Plg9.0000°, Azm334.0000°; P -1.0220, Plg3.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **01** 16:25:35.3±2.8, 10.˚84S×166.˚01E, h60km±24km, mb4.3/27, mb1 4.5/29, mb1mx4.4/39, mbtmp4.7/29, ML5.3/2, MS4.4/23, Ms1 4.4/23, ms1mx4.3/34 Error ellipse: s-maj=16.4km s-min=11.4km az=68.0*
*BJI **01** 16:25:36.1±0.0, 10.˚47S×165.˚73E, h55km, mb4.7/44, mB5.0/31, Ms4.9/14, Ms7 4.7/15*
ISC 01 16:25:35.4±0.3, **10.˚94S**±0.˚05×**166.˚01E**±0.˚06, **h61**km, **n184**, σ1§**46**/175, **mb4.9**/82, **6C-11D**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.15**	**284**	i P	**Pn**	**16 27 02.5**	**-1.2**
HNR				eS	**Sn**	**16 28 13.0**	**+0.2**
HNR	**Honiara**	**6.15**	**284**	P	**Pn**	**16 27 03.0**	**-0.7**
	160nm,0.3s,baz=139,slow=2.7,SNR=90						
HNR				S	**Sn**	**16 28 13.0**	**+0.2**
	baz=198,slow=20,SNR=1.8						
HNR				LR	LR	16 29 36.8	
	comp=Z,10μm,20.5s,baz=120,slow=39						
MARNC	**Mare, Loyalty**	**10.66**	**170**	ePn	**Pn**	**16 28 06.9**	**+1.5**
DZM	**Mont Dzumac**	**11.08**	**178**	ePn	**Pn**	**16 28 12.4**	**+1.2**
	29nm,0.2s						
DZM				eSn	**Sn**	**16 30 07.8**	**-5.8**
	11nm,0.3s						
DZM				eLR	LR	16 30 46.0	
	comp=Z,5μm,24.4s						
DZM	**Mont Dzumac**	**11.08**	**178**	P	**Pn**	**16 28 11.7**	**+0.5**
	8.4nm,0.3s,baz=184,slow=16,SNR=28						
DZM				S	**Sn**	**16 30 10.8**	**-2.8**
	1.7nm,0.3s,baz=345,slow=20,SNR=5.3						
DZM	**Mont Dzumac**	**11.08**	**178**	ePn	**Pn**	**16 28 12.5**	**+1.3**
DZM				eSn	**Sn**	**16 30 10.8**	**-2.8**
ONTNC	**Ouen Toro**	**11.31**	**178**	ePn	**Pn**	**16 28 17.2**	**+2.9**
PINNC	**Pines Island,**	**11.69**	**173**	ePn	**Pn**	**16 28 21.5**	**+2.0**
RABL	**Rabaul**	**15.27**	**295**	ePn	**Pn**	**16 29 09.3**	**+1.8**
	38nm,0.6s						
PMG	**Port Moresby**	**18.61**	**273**	LR	LR	16 37 03.0	
	comp=Z,3μm,19.3s,baz=110,slow=37						
EIDS	**Eidsvold**	**20.15**	**223**	eP	Pn	16 30 07.4	+0.3
	46nm,1.4s						
MANU	**Manus Island**	**20.51**	**294**	eP	Pn	16 30 11.1	-0.3
	228nm,1.4s						
CTA	**Charters Tower**	**21.08**	**242**	P	**P**	**16 30 16.2**	**+1.3**
	6.1nm,0.5s,baz=70,slow=11,SNR=13						
CTA				LR	LR	16 37 32.7	
	comp=Z,2μm,19.7s,baz=82,slow=34						
CTAO	**Charters Tower**	**21.08**	**242**	eP	**P**	**16 30 18.2**	**+3.4**
	97nm,1.4s						
CTAO	**Charters Tower**	**21.08**	**242**	eP	**P**	**16 30 18.2**	**+3.4**
CTAO				pmax	pmax		
	comp=Z,97nm,1.4s						
ARMA	**Armidale**	**23.54**	**212**	eP	**P**	**16 30 40.9**	**+0.3**
	comp=Z,43nm,1.1s						
OUZ	**Omahuta**	**25.14**	**165**	eP	**P**	**16 30 56.2**	**+1.4**
	comp=Z,21nm,1.1s						
MXZ	**Matakaoa Point**	**28.72**	**159**	eP	**P**	**16 31 27.7**	**+0.7**
	comp=Z,22nm,0.8s						
CAN	**Canberra**	**28.78**	**210**	eP	**P**	**16 31 28.6**	**+1.0**
	comp=Z,47nm,1.5s						
CAN	**Canberra**	**28.78**	**210**	eP	**P**	**16 31 28.6**	**+1.0**
CAN				pmax	pmax		
	comp=Z,47nm,1.5s						
URZ	**Urewera**	**28.97**	**162**	P	**P**	**16 31 29.4**	**+0.2**
	comp=Z,5.4nm,0.4s,baz=280,slow=4.3,SNR=13						
URZ				LR	LR	16 41 21.0	
	comp=Z,1μm,21.8s,baz=328,slow=33						
URZ	**Urewera**	**28.97**	**162**	eP	**P**	**16 31 29.2**	**0.0**
	comp=Z,26nm,1.3s						
H11S2	**WAKE ISLAND Hy**	**29.25**	**1**	T	T	17 01 56.7	
	baz=181,slow=76,SNR=462						
H11S3	**WAKE ISLAND Hy**	**29.25**	**1**	T	T	17 01 57.0	
	baz=181,slow=76,SNR=248						
H11S1	**WAKE ISLAND Hy**	**29.27**	**1**	T	T	17 01 58.4	
	baz=181,slow=76,SNR=487						
BKZ	**Black Stump Fm**	**29.62**	**163**	eP	**P**	**16 31 35.0**	**0.0**
	comp=Z,37nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	17 03 28.4	
	baz=182,slow=76,SNR=367						
H11N3	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	17 03 27.8	
	baz=182,slow=76,SNR=383						
H11N2	**WAKE ISLAND Hy**	**30.49**	**2**	T	T	17 03 29.8	
	baz=182,slow=76,SNR=275						
STKA	**Stephens Creek**	**30.70**	**224**	P	**P**	**16 31 45.1**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=358,slow=11,SNR=4.2						
STKA				LR	LR	16 43 48.0	
	comp=Z,2μm,18.8s,baz=40,slow=36						
STKA	**Stephens Creek**	**30.70**	**224**	eP	**P**	**16 31 45.9**	**+1.3**
	comp=Z,2.9nm,0.8s						
STKA	**Stephens Creek**	**30.70**	**224**	eP	**P**	**16 31 45.9**	**+1.3**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BFZ	**Birch Farm**	**30.97**	**165**	eP	**P**	**16 31 46.3**	**-0.7**
	comp=Z,76nm,1.3s						
SNZO	**South Karori**	**31.21**	**167**	eP	**P**	**16 31 47.6**	**-1.3**
	comp=Z,62nm,1.1s						
THZ	**Tophouse**	**31.30**	**170**	eP	**P**	**16 31 50.7**	**+0.9**
	comp=Z,120nm,1.1s						
WB2	**Warramunga Arr**	**31.75**	**250**	eP	**P**	**16 31 52.6**	**-1.4**
	comp=Z,16nm,0.6s						
KHZ	**Kahutara**	**32.04**	**169**	eP	**P**	**16 31 55.8**	**-0.4**
	comp=Z,54nm,1.0s						
LTZ	**Lake Taylor**	**32.19**	**171**	eP	**P**	**16 31 57.4**	**-0.2**
	comp=Z,37nm,0.8s						
TOO	**Toolangi**	**32.30**	**211**	eP	**P**	**16 31 59.4**	**+0.7**
	comp=Z,24nm,1.1s						
TOO	**Toolangi**	**32.30**	**211**	eP	**P**	**16 31 59.4**	**+0.7**
TOO				pmax	pmax		
	comp=Z,24nm,1.1s						
FOZ	**Fox Glacier**	**32.64**	**175**	eP	**P**	**16 32 02.0**	**+0.5**
	comp=Z,118nm,1.2s						
OXZ	**Oxford**	**32.69**	**172**	eP	**P**	**16 32 01.4**	**-0.5**
	comp=Z,71nm,1.1s						
RPZ	**Rata Peaks**	**32.95**	**173**	P	**P**	**16 32 05.1**	**+0.9**
	comp=Z,51nm,0.8s,baz=44,slow=3.4,SNR=8.4						
ASAR	**Alice Springs**	**33.07**	**243**	P	**P**	**16 32 04.7**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=64,slow=10,SNR=16						
ASAR				PcP	**PcP**	**16 34 48.0**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=59,slow=2.4,SNR=4.3						
ASAR				LR	LR	16 44 29.7	
	comp=Z,1μm,20.4s,baz=78,slow=34						
MQZ	**McQueen's Vall**	**33.15**	**171**	eP	**P**	**16 32 06.2**	**+0.3**
	comp=Z,72nm,0.9s						
MTN	**Manton Dam**	**34.16**	**263**	eP	**P**	**16 32 15.5**	**+0.4**
	comp=Z,8.4nm,0.8s						
RAR	**Rarotonga**	**34.36**	**112**	LR	LR	16 43 41.0	
	comp=Z,391nm,19.5s,baz=278,slow=32						
BBOO	**Buckleboo**	**35.09**	**227**	eP	**P**	**16 32 22.9**	**0.0**
	comp=Z,26nm,1.3s						
FITZ	**Fitzroy Crossi**	**39.66**	**255**	LR	LR	16 48 34.7	
	comp=Z,983nm,20.6s,baz=78,slow=35						
FITZ	**Fitzroy Crossi**	**39.66**	**255**	eP	**P**	**16 33 02.0**	**+0.3**
	comp=Z,17nm,1.0s						
BATI	**Baumata**	**41.61**	**267**	P	**P**	**16 33 19.0**	**+1.1**
	comp=Z,18nm,0.5s,baz=155,slow=4.8						
BATI				LR	LR	16 50 25.2	
	comp=Z,573nm,21.8s,baz=136,slow=36						
MMRI	**Maumere**	**43.17**	**269**	eP	**P**	**16 33 29.8**	**-0.8**
	comp=Z,24nm,1.1s						
PPT2	**Papeete2**	**43.47**	**104**	eS	**S**	**16 40 01.0**	**+3.3**
	comp=Z,387nm,25.5s						
PPT2				eLR	LR	16 45 44.5	
	comp=Z,1μm,24.2s,baz=249						
TBI	**Tubuai**	**44.13**	**112**	eLR	LR	16 46 06.1	
	comp=Z,2μm,27.8s						
KAPI	**Kappang**	**46.14**	**274**	P	**P**	**16 33 53.8**	**-0.5**
	comp=Z,4.1nm,0.4s,baz=175,slow=8.5,SNR=5.1						
KAPI	**Kappang**	**46.14**	**274**	ceP	**P**	**16 33 57.4**	**+3.1**
KAPI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JHJ	**Hachijo jima 2**	**50.45**	**331**	LR	LR	16 53 38.7	
	comp=Z,136nm,20.0s,baz=183,slow=33						
TAOE	**Nuku Hiva Isla**	**53.03**	**93**	eLR	LR	16 50 15.0	
	comp=Z,797nm,27.1s						
MJAR	**Matsushiro Arr**	**54.00**	**332**	P	**P**	**16 34 52.4**	**-1.0**
	comp=Z,4.0nm,0.9s,baz=170,slow=8.4,SNR=13						
MJAR				LR	LR	16 57 59.6	
	comp=Z,119nm,19.1s,baz=175,slow=36						
MAJO	**Matsushiro**	**54.00**	**332**	eP	**P**	**16 34 51.6**	**-1.9**
	comp=Z,19nm,1.3s						
MAJO	**Matsushiro**	**54.00**	**332**	⇑iP	**P**	**16 34 53.3**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
MAT	**Matsushiro**	**54.00**	**332**	P	**P**	**16 34 52.7**	**-0.7**
MAT				S	**S**	**16 42 30.6**	**+5.6**
MJB9	**Matsu-Tunnel**	**54.00**	**332**	eP	**P**	**16 34 51.3**	**-2.2**
	comp=Z,20nm,1.3s						
JNU	**Nakatsue**	**55.15**	**324**	P	**P**	**16 35 01.3**	**-0.6**
	comp=Z,9.4nm,0.8s,baz=149,slow=5.9						
JNU	**Nakatsue**	**55.15**	**324**	eP	**P**	**16 34 59.9**	**-2.0**
	comp=Z,21nm,1.0s						
LEM	**Lembang**	**57.77**	**269**	P	**P**	**16 35 21.3**	**+0.3**
	comp=Z,37nm,0.8s,baz=45,slow=3.8,SNR=10						
LEM				LR	LR	17 00 36.3	
	comp=Z,150nm,19.1s,baz=71,slow=36						
TJN	**Taejon**	**59.49**	**324**	↓eP	**P**	**16 35 32.0**	**-0.3**
KSRS	**Korea Array**	**59.94**	**325**	P	**P**	**16 35 35.6**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=132,slow=6.7,SNR=7.2						
YSS	**Yuzh-Sakhalins**	**61.27**	**342**	eP	**P**	**16 35 44.7**	**+0.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
MSHR	**Mys Shultsa**	**62.09**	**331**	↓eP	**P**	**16 35 50.5**	**+0.7**
NJ2	**Nanjing**	**62.13**	**315**	eP	**P**	**16 35 50.6**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
USRK	**Ussuriysk Ar.**	**62.97**	**333**	P	**P**	**16 35 55.0**	**-0.7**
	comp=Z,7.5nm,0.8s,baz=106,slow=12,SNR=11						
USRK	**Ussuriysk Ar.**	**62.97**	**333**	P	**P**	**16 35 55.0**	**-0.7**
PET	**Petropavlovsk**	**64.02**	**355**	eP	**P**	**16 36 04.3**	**+1.9**
PET				eS	**S**	**16 44 36.8**	**+2.8**
PETK	**Petropavlovsk-**	**64.19**	**354**	P	**P**	**16 36 03.5**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=133,slow=8.3,SNR=4.4						
PETK				LR	LR	16 58 52.5	
	comp=Z,276nm,21.5s,baz=168,slow=31						
WHN	**Wuhan**	**64.52**	**311**	P	**P**	**16 36 06.0**	**-0.2**
DL2	**Dalian**	**64.55**	**323**	P	**P**	**16 36 01.8**	**-4.4**
DL2				S	**S**	**16 44 37.0**	**-4.1**
DL2				pmax	pmax		
	comp=Z,13nm,0.9s						
DL2				pmax	pmax		
	comp=Z,120nm,7.4s						
DL2				LR	LR		
	comp=N,190nm,26.4s						
DL2				LR	LR		
	comp=E,230nm,22.4s						
DL2				LR	LR		
	comp=Z,310nm,22.4s						
CN2	**Changchun**	**65.78**	**329**	eP	**P**	**16 36 16.5**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
IPM	**Ipoh**	**66.46**	**280**	eP	**P**	**16 36 19.5**	**+0.3**
	comp=Z,43nm,1.5s						
CASY	**Casey**	**66.57**	**201**	eP	**P**	**16 36 19.1**	**+0.3**
	comp=Z,46nm,1.4s						
VNDA	**Vanda**	**66.60**	**181**	P	**P**	**16 36 19.7**	**+0.8**
	comp=Z,13nm,1.3s,baz=354,slow=6.5,SNR=17						
VNDA				LR	LR	17 02 06.1	
	comp=Z,217nm,19.6s,baz=354,slow=33						
GRNR	**Gornyy**	**66.63**	**340**	eP	**P**	**16 36 22.2**	**+2.8**
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
SBA	**Scott Base**	**66.90**	**180**	eP	**P**	**16 36 22.1**	**+1.3**
	comp=Z,23nm,1.2s						
SBA	**Scott Base**	**66.90**	**180**	eP	**P**	**16 36 22.1**	**+1.3**
SBA				pmax	pmax		
	comp=Z,23nm,1.2s						
KLR	**Kul'dur**	**67.06**	**336**	⇑eP	**P**	**16 36 22.6**	**+0.4**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PSI	**Prapat**	**68.11**	**277**	P	**P**	**16 36 28.1**	**-1.7**
	comp=Z,3.8nm,0.6s,baz=302,slow=15,SNR=4.7						
BJI	**Beijing**	**68.56**	**321**	eP	**P**	**16 36 32.1**	**+0.3**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN	**Xi'an**	**70.24**	**312**	P	**P**	**16 36 42.3**	**-0.1**
XAN				pP	pP	16 36 56.4	-2.6
XAN				sP	PcP	16 37 03.3	-0.6
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN				LR	LR		
	comp=Z,290nm,22.8s						
XAN				LR	LR		
	comp=Z,440nm,21.6s						
KMI	**Kunming**	**71.29**	**301**	P	**P**	**16 36 50.6**	**+1.4**
KMI				pP	pP	16 37 03.2	-2.7
KMI				sP	sP	16 37 13.0	+0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
HHC	**Hu-ho-hao-te**	**71.92**	**320**	eP	**P**	**16 36 54.0**	**+1.5**
HHC				S	**S**	**16 46 05.2**	**-3.9**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=Z,200nm,14.2s						
HHC				LR	LR		
	comp=Z,300nm,18.0s						
HHC				LR	LR		
	comp=Z,780nm,17.4s						
CMAR	**Chiang Mai Arr**	**72.31**	**293**	P	**P**	**16 36 54.4**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=117,slow=4.5,SNR=28						
CMAR				LR	LR	17 10 28.7	
	comp=Z,101nm,18.7s,baz=118,slow=37						
CMAR	**Chiang Mai Arr**	**72.31**	**293**	i P	**P**	**16 36 56.2**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZEA	**Zeya**	**72.35**	**337**	eP	**P**	**16 36 55.8**	**+1.2**
ZEA				pmax	pmax		
	comp=Z,80nm,1.8s						
HIA	**Hailar**	**72.41**	**330**	↓eP	**P**	**16 36 55.6**	**+0.5**
HIA				pmax	pmax		
	comp=Z,45nm,1.1s						
CD2	**Chengdu**	**72.74**	**307**	eP	**P**	**16 36 57.6**	**0.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
LZH	**Lanzhou**	**74.88**	**312**	eP	**P**	**16 37 11.4**	**+1.3**
LZH				pP	PcP	16 37 25.2	+1.4
LZH				sP	sP	16 37 35.0	+1.4
LZH				PP	**PP**	**16 39 59.9**	**+1.4**
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
LZH				pmax	pmax		
	comp=Z,76nm,4.3s						
SII	**Sitkinak Islan**	**74.89**	**22**	eP	**P**	**16 37 08.6**	**-0.9**
	comp=Z,7.1nm,1.0s						
YAK	**Yakutsk**	**78.07**	**343**	eP	**P**	**16 37 27.2**	**-0.1**
	comp=Z,20nm,0.7s						
YAK	**Yakutsk**	**78.07**	**343**	i P	**P**	**16 37 27.0**	**-0.3**
YAK				pmax	pmax		
	comp=Z,81nm,0.7s						
CNPM	**China Poot**	**78.15**	**21**	eP	**P**	**16 37 27.6**	**-0.3**
	comp=Z,5.5nm,0.9s						
ULN	**Ulaanbaatar**	**78.37**	**324**	eP	**P**	**16 37 28.1**	**-1.4**
	comp=Z,10nm,1.1s						
ULN	**Ulaanbaatar**	**78.37**	**324**	i P	**P**	**16 37 29.9**	**+0.4**
ULN				pmax	pmax		
	comp=Z,12nm,1.2s						
SONM	**Songino Array**	**78.73**	**324**	P	**P**	**16 37 31.3**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=138,slow=5.8,SNR=14						
BILL	**Bilibino**	**78.77**	**0**	eP	**P**	**16 37 31.1**	**0.0**
	comp=Z,17nm,1.0s						
BILL	**Bilibino**	**78.77**	**0**	deP	**P**	**16 37 31.7**	**+0.6**
BILL				pmax	pmax		
	comp=Z,18nm,1.0s						
QSPA	**South Pole Qui**	**79.06**	**180**	eP	**P**	**16 37 33.2**	**+0.2**
	comp=Z,15nm,1.0s						
GTA	**Gaotai**	**79.17**	**314**	⇓P	**P**	**16 37 35.2**	**+1.1**
GTA				pP	pP	16 37 47.5	-3.5
GTA				sP	sP	16 37 54.4	-3.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,7.0s						
GTA				LR	LR		
	comp=Z,130nm,22.3s						
GTA				LR	LR		
	comp=Z,170nm,21.3s						
GTA				LR	LR		
	comp=Z,320nm,23.0s						
BOD	**Bodaibo**	**80.55**	**335**	eP	**P**	**16 37 39.7**	**-1.2**
BOD				pmax	pmax		
	comp=Z,6.0nm,2.1s						
ZAK	**Zakamensk**	**81.76**	**325**	eP	P	16 37 42.7	-5.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DHY	**Denali Highway**	**82.00**	**20**	eP	**P**	**16 37 49.5**	**+0.7**
	comp=Z,6.9nm,1.2s						
TLY	**Talaya**	**82.18**	**326**	⇑eP	**P**	**16 37 50.3**	**+0.6**
WRH	**Wood River Hil**	**82.75**	**18**	eP	**P**	**16 37 52.6**	**+0.2**
	comp=Z,8.1nm,1.0s						
COLA	**College**	**83.11**	**18**	d iP	**P**	**16 37 53.9**	**-0.3**
COLA				pmax	pmax		
	comp=Z,13nm,1.0s						
ILAR	**Eielson Array**	**83.33**	**18**	P	**P**	**16 37 55.0**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=235,slow=5.0,SNR=36						
ILAR				LR	LR	17 09 43.0	
	comp=Z,118nm,21.5s,baz=261,slow=32						
MAW	**Mawson**	**84.92**	**202**	P	**P**	**16 38 04.5**	**+1.0**
	comp=Z,24nm,1.1s,baz=100,slow=6.5,SNR=24						
MAW				LR	LR	17 09 55.1	
	comp=Z,113nm,21.7s,baz=104,slow=31						
MAW	**Mawson**	**84.92**	**202**	eP	**P**	**16 38 04.3**	**+0.8**
	comp=Z,7.1nm,1.1s						
NV01	**Mina Array Sit**	**85.76**	**50**	eP	**P**	**16 38 09.0**	**+0.4**
NVAR	**Mina Array Bea**	**85.76**	**50**	P	**P**	**16 38 09.0**	**+0.4**
	comp=Z,4.4nm,1.0s,baz=231,slow=7.6,SNR=17						
NVAR				LR	LR	17 09 26.1	
	comp=Z,450nm,20.1s,baz=224,slow=31						
TIXI	**Tiksi**	**86.04**	**349**	P	**P**	**16 38 08.8**	**-0.1**
	comp=Z,6.7nm,1.0s,baz=158,slow=2.9,SNR=10.0						
TIXI	**Tiksi**	**86.04**	**349**	eP	**P**	**16 38 08.8**	**-0.1**
	comp=Z,9.3nm,1.1s						
TIXI	**Tiksi**	**86.04**	**349**	↓eP	**P**	**16 38 08.7**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
I07A	**Izee**	**86.64**	**44**	eP	**P**	**16 38 12.4**	**-0.3**
	comp=Z,6.7nm,1.2s						
WMQ	**Urumqi**	**89.20**	**315**	eP	**P**	**16 38 24.2**	**-0.6**
WMQ				pP	pP	16 38 41.6	-0.4
WMQ				SKS	**SKSac**	**16 48 45.6**	**-4.1**
WMQ				S	**S**	**16 49 05.9**	**-3.5**
WMQ				SS	**SS**	**16 55 03.8**	**-1.1**
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.9s						
WMQ				LR	LR		
	comp=Z,1μm,15.1s						
WMQ				LR	LR		
	comp=Z,1μm,15.1s						
WMQ				LR	LR		
	comp=Z,2μm,15.7s						
SYO	**Syowa Base**	**91.96**	**197**	⇑eX	P	16 38 49.0	+12
PDAR	**Pinedale Array**	**93.29**	**47**	P	**P**	**16 38 43.7**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=241,slow=1.5,SNR=6.3						
PDAR				LR	LR	17 13 33.5	
	comp=Z,100nm,21.7s,baz=270,slow=31						
MK31	**Makanchi Array**	**93.62**	**317**	eP	**P**	**16 38 44.5**	**-0.7**
	comp=Z,4.7nm,0.9s						
MK31	**Makanchi Array**	**93.62**	**317**	eP	**P**	**16 38 44.5**	**-0.7**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK32	**Makanchi Array**	**93.62**	**317**	eP	**P**	**16 38 44.5**	**-0.7**
MKAR	**Makanchi Array**	**93.62**	**317**	P	**P**	**16 38 44.5**	**-0.7**
	comp=Z,4.7nm,0.9s,baz=101,slow=6.3,SNR=35						
MKAR				PKKPbc	**PKKPdf**	**16 55 48.9**	**-1.9**
	comp=Z,0.8nm,0.9s,baz=288,slow=2.9,SNR=5.7						
MKAR	**Makan

KIV	**Kislovodsk**	**121.33**	**315**	*e*PKIKP	**PKiKP**	**16 44 22.9**	**+0.7**
KIV				pmax	pmax		
comp=Z,11nm,1.0s							
NEY	**Neytrino**	**121.50**	**314**	‖*i*PKIKP	**PKiKP**	**16 44 23.9**	**+1.2**
FIA0	**FINESS Array S**	**121.77**	**339**	*e*PKPdf	**PKPdf**	**16 44 20.9**	**-1.2**
FIA0	**FINESS Array S**	**121.77**	**339**	*e*PKIKP	**PKPdf**	**16 44 21.0**	**-1.2**
FINES	**FINESS Array B**	**121.77**	**339**	PKP	**PKPdf**	**16 44 21.0**	**-1.2**
comp=Z,1.0nm,0.6s,baz=20,slow=6.1,SNR=7.6							
FINES	**FINESS Array B**	**121.77**	**339**	PKIKP	**PKPdf**	**16 44 21.0**	**-1.2**
CPUP	**Villa Florida**	**123.91**	**132**	PKP	**PKPdf**	**16 44 27.5**	**+0.1**
comp=Z,2.6nm,0.9s,baz=111,slow=4.6,SNR=4.6							
BOSA	**Boshof**	**125.37**	**223**	PKP	**PKPdf**	**16 44 30.6**	**+0.2**
comp=Z,7.1nm,1.1s,baz=170,slow=3.1,SNR=3.6							
NB2	**NORSAR Subarra**	**126.67**	**345**	PKPdf	**PKPdf**	**16 44 31.0**	**-0.7**
comp=Z,0.6nm,0.6s,baz=34,slow=1.9							
NB200	**NORSAR Array S**	**126.67**	**345**	*e*PKPdf	**PKPdf**	**16 44 31.4**	**-0.3**
NOA	**NORSAR Array B**	**126.67**	**345**	PKP	**PKPdf**	**16 44 31.4**	**-0.3**
comp=Z,0.8nm,0.6s,baz=30,slow=2.0,SNR=4.8							
AKASG	**Malin Array Be**	**126.92**	**327**	PKP	**PKPdf**	**16 44 32.1**	**-0.3**
comp=Z,0.8nm,0.5s,baz=42,slow=3.8,SNR=5.1							
KIEV	**Kiev**	**126.93**	**327**‖	*e*PKIKP	**PKPdf**	**16 44 32.5**	**+0.1**
BR101	**Keskin Array S**	**129.08**	**313**	*e*PKPdf	**PKPdf**	**16 44 36.8**	**-0.3**
BRTR	**Keskin Array B**	**129.08**	**313**	PKP	**PKPdf**	**16 44 36.8**	**-0.3**
comp=Z,1.2nm,0.9s,baz=49,slow=2.3,SNR=6.0							
KOLS	**Kolonicke sedl**	**131.60**	**329**	*e*PKIKP	**PKiKP**	**16 44 43.4**	**+1.0**
KOLS	**Kolonicke sedl**	**131.60**	**329**	*e*PKP	**PKiKP**	**16 44 43.4**	**+1.0**
OKC	**Ostrava-Krasne**	**133.01**	**332**	AMS	AMS	17 39 20.0	
comp=Z,300nm,23.5s							
OSTC	**Ostas**	**133.36**	**334**	*e*PKP	**PKiKP**	**16 44 46.1**	**+0.2**
OSTC				AMS	AMS	17 42 10.0	
comp=Z,300nm,20.6s							
CHVC	**Chvalec**	**133.41**	**334**	AMS	AMS	17 43 10.0	
comp=Z,200nm,18.3s							
DPC	**Dobruska-Polom**	**133.46**	**334**	*e*PKIKP	**PKiKP**	**16 44 46.0**	**-0.2**
DPC				MLR	MLR		
comp=Z,300nm,19.1s							
DPC	**Dobruska-Polom**	**133.46**	**334**	*e*PKP	**PKiKP**	**16 44 46.0**	**-0.2**
DPC				AMS	AMS	17 42 40.0	
comp=Z,300nm,19.1s							
UPC	**Upice**	**133.48**	**334**	AMS	AMS	17 41 50.0	
comp=Z,200nm,20.2s							
VYHS	**Vyhne**	**133.61**	**330**	*e*PKIKP	**PKPdf**	**16 44 45.0**	**-0.2**
VYHS	**Vyhne**	**133.61**	**330**	*e*PKP	**PKPdf**	**16 44 45.0**	**-0.2**
PVCC	**Panska Ves**	**134.08**	**335**	AMS	AMS	17 41 20.0	
comp=Z,200nm,20.4s							
CLL	**Collm**	**134.11**	**337**	*e*PKPdf	**PKiKP**	**16 44 47.0**	**-0.4**
CLL				LmV		17 42 00.0	
comp=Z,200nm,22.0s							
CLL	**Collm**	**134.11**	**337**	*e*PKIKP	**PKiKP**	**16 44 47.0**	**-0.4**
GOPC	**GO Pecny, Ondr**	**134.45**	**334**	AMS	AMS	17 39 20.0	
comp=Z,200nm,18.8s							
PRU	**Pruhonice**	**134.50**	**334**	AMS	AMS	17 48 30.0	
comp=Z,200nm,19.4s							
TREC	**Trest**	**134.60**	**333**	AMS	AMS	17 43 40.0	
comp=Z,300nm,19.5s							
NKC	**Novy Kostel**	**135.17**	**336**	AMS	AMS	17 48 20.0	
comp=Z,300nm,16.5s							
KHC	**Kasperske Hory**	**135.56**	**334**	*e*PKIKP	**PKPdf**	**16 44 49.1**	**+0.2**
KHC				MLR	MLR		
comp=Z,300nm,19.0s							
KHC	**Kasperske Hory**	**135.56**	**334**	*e*PKP	**PKPdf**	**16 44 49.1**	**+0.2**
KHC				AMS	AMS	17 43 10.0	
comp=Z,300nm,19.0s							
GERES	**GERESS Array B**	**135.72**	**334**	PKP	**PKPdf**	**16 44 46.9**	**-2.4**
comp=Z,1.1nm,0.9s,baz=70,slow=1.6,SNR=7.2							
KEST	**Kesra**	**147.49**	**323**	PKPbc	**PKPbc**	**16 45 12.5**	**-0.7**
comp=Z,14nm,0.9s,baz=340,slow=4.1,SNR=8.7							
ESDC	**Sonseca Array**	**150.03**	**344**	PKPbc	**PKPbc**	**16 45 18.4**	**-1.2**
comp=Z,2.5nm,0.7s,baz=17,slow=2.4,SNR=16							
TORD	**Torodi Ar. Bea**	**164.50**	**280**	PKP	**PKPdf**	**16 45 33.0**	**-0.3**
comp=Z,1.5nm,0.9s,baz=113,slow=1.6,SNR=6.5							
TOA1	**Torodi Ar. Sit**	**164.50**	**280**	*e*PKPdf	**PKPdf**	**16 45 33.0**	**-0.3**

PRU ***01*** *16:31:55.0±0.0, 44°.41N×5°.67E, h0km*
ISCJB ***01*** *16:31:56.6±0.2, 44°.326N±0°.010×6°.18E±0°.01, h8km±1km, Error ellipse: s-maj=1.7km s-min=1.5km az=26.6*
IDC ***01*** *16:31:57.0±2.0, 44°.37N×6°.04E, h0km, mb3.2/2, mb1 3.7/7, mb1mx3.4/53, mbtmp3.6/7, ML4.1/5, Error ellipse: s-maj=37.4km s-min=19.6km az=147.0*
GEN ***01*** *16:31:57.8, 44°.29N×6°.25E, h1km±4km, MI3.2*
LDG ***01*** *16:31:58.3±0.1, 44°.25N×6°.27E, h2km, Md3.5/9, MI3.6/45, Error ellipse: s-maj=1.2km s-min=1.1km az=38.0*
STR ***01*** *16:31:58.0±0.2, 44°N±1°×±°, h13km±2km, M3.6/6, MLv3.6/6*
ROM ***01*** *16:31:58.5±0.2, 44°.29N±0°.01×6°.27E±0°.02, h10km, ML3.3/35, Error ellipse: s-maj=1.8km s-min=1.0km az=229.0*
BGR ***01*** *16:31:58.3±0.7, 44°.15N×6°.54E, h10km, ML3.9/5, Error ellipse: s-maj=17.8km s-min=8.9km az=103.0*

ISC 01 16:31:57.6±0.9, 44°.28N±0°.01×6°.21E±0°.01, h10km±7km, n167, σ1§51/264, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGDI	**Digne**	**0.18**	**159**	Pg	**Pg**	**16 32 01.4**	**0.0**
OGDI				Sg	**Sg**	**16 32 04.4**	**+0.3**
OGAG	**Argentiere**	**0.30**	**53**	Pg	**Pn**	**16 32 08.7**	**+0.5**
OGAG				Sg	**Sb**	**16 32 17.3**	**+7.1**
MLYF	**Mely**	**0.43**	**228**	Pg	**Pg**	**16 32 06.7**	**+0.7**
MLYF				Sg	**Sb**	**16 32 13.3**	**-0.6**
SURF	**Saint Ours**	**0.48**	**64**	Pg	**Pg**	**16 32 07.3**	**+0.2**
SURF				Sg	**Sg**	**16 32 13.7**	**+0.3**
SMRF	**Simiane la Rot**	**0.55**	**237**	*e*Pg	**Pg**	**16 32 08.6**	**+0.3**
SMRF				*e*Sg	**Sg**	**16 32 16.2**	**+0.7**
1μm,0.5s							
SMRF				*e*Sn	**Sn**	**16 32 21.6**	**+0.9**
916nm,0.3s							
BSTF	**la Bastide-des**	**0.57**	**226**	Pg	**Pb**	**16 32 10.5**	**+0.8**
BSTF				Sg	**Sb**	**16 32 19.2**	**+1.4**
MBDF	**Montbardon**	**0.60**	**41**	*e*Pg	**Pg**	**16 32 09.1**	**-0.3**
MBDF				*e*Sg	**Sg**	**16 32 16.7**	**-0.7**
2μm,0.5s							
ISO	**Isola**	**0.61**	**98**	Pg	**Pg**	**16 32 09.2**	**-0.3**
ISO				Sg	**Sg**	**16 32 17.6**	**+0.1**
RUSF	**Rustrel**	**0.62**	**238**	Pg	**Pb**	**16 32 10.4**	**-0.2**
ORIF	**Oris-en-Rattie**	**0.69**	**340**	*e*Pg	**Pg**	**16 32 10.7**	**-0.2**
ORIF				*e*Sg	**Sb**	**16 32 21.1**	**-0.2**
288nm,0.3s							
ORIF				*e*Sn	**Sn**	**16 32 24.7**	**+0.4**
840nm,0.3s							
ORIF	**Oris-en-Rattie**	**0.69**	**340**	Pg	**Pg**	**16 32 10.6**	**-0.2**
ORIF	**Oris-en-Rattie**	**0.69**	**340**	P	**Pg**	**16 32 10.8**	**-0.2**
ORIF				AML	AML		
comp=E,2115μm,0.5s							
ORIF				AML	AML		
comp=N,1320μm,0.6s							
ORIF				AML	AML		
comp=E,2115μm,0.5s							
ORIF				AML	AML		
comp=N,1315μm,0.6s							
ORIF				AML	AML		
comp=E,2115μm,0.5s							
ORIF				AML	AML		
comp=N,1315μm,0.6s							
PZZ	**Stroppo**	**0.69**	**70**	P	**Pg**	**16 32 10.8**	**-0.2**
PZZ				S	**Sg**	**16 32 18.9**	**-1.1**
PZZ	**Stroppo**	**0.69**	**70**	P	**Pg**	**16 32 10.9**	**-0.2**
PZZ				S	**Sg**	**16 32 19.7**	**-0.3**
PZZ				AML	AML		
comp=E,3135μm,0.5s							
PZZ				AML	AML		
comp=N,4050μm,0.6s							
PZZ				AML	AML		
comp=E,3135μm,0.5s							
PZZ				AML	AML		
comp=N,4050μm,0.6s							
PZZ				AML	AML		
comp=E,3135μm,0.5s							
PZZ				AML	AML		
comp=N,4050μm,0.6s							
PZZ				AML	AML		
comp=N,4050μm,0.6s							
PZZ				AML	AML		
comp=E,3135μm,0.5s							
CALF	**Calern**	**0.73**	**135**	Pg	**Pg**	**16 32 11.7**	**0.0**
ARTF	**Artigues**	**0.75**	**203**	Pg	**Pg**	**16 32 12.5**	**+0.4**
RRL	**Rocca Remolon**	**0.77**	**32**	P	**Pg**	**16 32 12.2**	**-0.3**
RRL				S	**Sg**	**16 32 22.3**	**-0.3**
RRL	**Rocca Remolon**	**0.77**	**32**	P	**Pg**	**16 32 12.4**	**-0.1**
RRL				AML	AML		
comp=E,2165μm,1.3s							
RRL				AML	AML		
comp=N,1475μm,0.6s							
RRL				AML	AML		
comp=E,2165μm,1.3s							
RRL				AML	AML		
comp=N,1475μm,0.6s							
DOI	**San Damiano**	**0.78**	**72**	P	**Pg**	**16 32 12.4**	**-0.3**
DOI				S	**Sg**	**16 32 22.8**	**0.0**
DOI				AML	AML		
comp=E,2540μm,1.0s							
DOI				AML	AML		
comp=N,2495μm,1.3s							
DOI				AML	AML		
comp=E,2540μm,1.0s							
DOI				AML	AML		
comp=N,2495μm,1.3s							
DOI				AML	AML		
comp=E,2540μm,1.0s							
DOI				AML	AML		
comp=N,2495μm,1.3s							
MVIF	**Mont Vial**	**0.78**	**119**	Pg	**Pg**	**16 32 12.6**	**-0.1**
FRF	**La Foret Royal**	**0.78**	**156**	*e*Pg	**Pg**	**16 32 12.2**	**-0.5**
FRF				*e*Sg	**Sg**	**16 32 22.0**	**-0.8**
comp=N,918nm,0.6s							
FRF				*e*Sn	**Sn**	**16 32 26.1**	**-0.3**
comp=N,470nm,0.2s							
STV	**Sant Anna di V**	**0.80**	**92**	P	**Pg**	**16 32 12.6**	**-0.5**
STV				S	**Sg**	**16 32 22.8**	**-0.8**
STV	**Sant Anna di V**	**0.80**	**92**	P	**Pg**	**16 32 12.6**	**-0.5**
STV				S	**Sg**	**16 32 23.0**	**-0.6**
STV				AML	AML		
comp=E,1345μm,0.7s							
STV				AML	AML		
comp=N,1335μm,0.4s							
STV				AML	AML		
comp=E,1345μm,0.7s							
STV				AML	AML		
comp=N,1335μm,0.4s							
STV				AML	AML		
comp=E,1345μm,0.7s							
STV				AML	AML		
comp=N,1335μm,0.4s							
STV				AML	AML		
comp=N,1335μm,0.4s							
STV				AML	AML		
comp=E,1345μm,0.7s							
BNI	**Bardonecchia**	**0.85**	**23**	P	**Pg**	**16 32 13.7**	**-0.3**
BNI				AML	AML		
comp=E,481μm,0.8s							
BNI				AML	AML		
comp=N,596μm,0.8s							
BNI				AML	AML		
comp=E,676μm,0.7s							
BNI				AML	AML		
comp=N,681μm,0.8s							
BNI				AML	AML		
comp=E,482μm,0.8s							
BNI				AML	AML		
comp=N,596μm,0.8s							
BNI				AML	AML		
comp=E,676μm,0.7s							
BNI				AML	AML		
comp=N,681μm,0.8s							
BNI				AML	AML		
comp=E,481μm,0.8s							
BNI				AML	AML		
comp=N,595μm,0.8s							
BNI				AML	AML		
comp=E,676μm,0.7s							
BNI				AML	AML		
comp=N,681μm,0.8s							
BNI				AML	AML		
comp=N,681μm,0.8s							
BNI				AML	AML		
comp=N,595μm,0.8s							
BNI				AML	AML		
comp=E,481μm,0.8s							
BNI				AML	AML		
comp=E,676μm,0.7s							
ENR	**Entracque**	**0.87**	**93**	P	**Pg**	**16 32 13.9**	**-0.5**
ENR				S	**Sg**	**16 32 24.8**	**-0.9**
ENR	**Entracque**	**0.87**	**93**	P	**Pg**	**16 32 13.9**	**-0.5**
ENR				AML	AML		
comp=E,1920μm,0.4s							
ENR				AML	AML		
comp=N,2305μm,0.6s							
ENR				AML	AML		
comp=E,1920μm,0.4s							
ENR				AML	AML		
comp=N,2305μm,0.6s							
ENR				AML	AML		
comp=E,1920μm,0.4s							
ENR				AML	AML		
comp=N,2305μm,0.6s							
ENR				AML	AML		
comp=N,2305μm,0.6s							
ENR				AML	AML		
comp=E,1920μm,0.4s							
GDM	**Grand'Maison**	**0.93**	**356**	Pg	**Pg**	**16 32 15.5**	**-0.1**
GDM				Sg	**Sn**	**16 32 29.2**	**-1.2**
BHB	**Bricherasio**	**0.94**	**53**	P	**Pg**	**16 32 15.2**	**-0.5**
BHB				S	**Sg**	**16 32 27.3**	**-0.7**
BHB	**Bricherasio**	**0.94**	**53**	P	**Pg**	**16 32 15.3**	**-0.5**
BHB				AML	AML		
comp=E,1075μm,1.3s							
BHB				AML	AML		
comp=N,904μm,0.6s							
BHB				AML	AML		
comp=E,1075μm,1.3s							
BHB				AML	AML		
comp=N,904μm,0.6s							
BHB				AML	AML		
comp=E,1075μm,1.3s							
BHB				AML	AML		
comp=N,904μm,0.6s							
BHB				AML	AML		
comp=E,1075μm,1.3s							
BHB				AML	AML		
comp=N,904μm,0.6s							
ESCA	**l'Escarene**	**0.95**	**117**	Pg	**Pb**	**16 32 15.9**	**-0.3**
ESCA				Sg	**Sb**	**16 32 29.0**	**+0.2**
LMR	**La Mourre**	**0.96**	**167**	*e*Pg	**Pg**	**16 32 15.1**	**-1.1**
LMR	**La Mourre**	**0.96**	**167**	*e*Pn	**Pb**	**16 32 16.7**	**+0.3**
LMR				*e*Sg	**Sg**	**16 32 27.5**	**-1.2**
LMR				*e*Sn	**Sn**	**16 32 30.2**	**-0.8**
comp=N,651nm,0.4s							
SBF	**Sospel**	**0.97**	**115**	*e*Pg	**Pg**	**16 32 15.8**	**-0.6**
SBF				*e*Sg	**Sg**	**16 32 27.9**	**-1.1**
SBF				*e*Sn	**Sn**	**16 32 30.2**	**-1.1**
comp=N,1μm,0.4s							
REVF	**Revere**	**0.99**	**122**	Pg	**Pn**	**16 32 17.3**	**-0.4**
ARBF	**Arbois**	**1.01**	**219**	Pg	**Pn**	**16 32 17.7**	**-0.1**
SAOF	**Saorge**	**1.01**	**106**	Pg	**Pg**	**16 32 16.6**	**-0.5**
SAOF	**Saorge**	**1.01**	**106**	P	**Pg**	**16 32 16.5**	**-0.6**
SAOF				AML	AML		
comp=E,1710μm,1.4s							
SAOF				AML	AML		
comp=N,1850μm,1.1s							
SAOF				AML	AML		
comp=E,1710μm,1.4s							
SAOF				AML	AML		
comp=N,1850μm,1.1s							
SAOF				AML	AML		
comp=E,1710μm,1.4s							
SAOF				AML	AML		
comp=N,1850μm,1.1s							
SAOF				AML	AML		
comp=E,1710μm,1.4s							
SAOF				AML	AML		
comp=N,1850μm,1.1s							
MON	**Monaco**	**1.03**	**121**	Pg	**Pn**	**16 32 17.8**	**-0.3**
RSP	**Reno Superiore**	**1.15**	**40**	P	**Pb**	**16 32 19.5**	**-0.2**
RSP	**Reno Superiore**	**1.15**	**40**	P	**Pb**	**16 32 19.5**	**-0.2**
RSP				AML	AML		
comp=E,1535μm,0.9s							
RSP				AML	AML		
comp=N,1345μm,0.7s							
RSP				AML	AML		
comp=E,1535μm,0.9s							
RSP				AML	AML		
comp=N,1345μm,0.7s							
RSP				AML	AML		
comp=N,1345μm,0.7s							
RSP				AML	AML		
comp=E,1535μm,0.9s							
NEGI	**Seborga**	**1.16**	**111**	P	**Pb**	**16 32 19.4**	**-0.3**
NEGI				AML	AML		
comp=E,3220μm,0.4s							
NEGI				AML	AML		
comp=N,2750μm,1.6s							
NEGI				AML	AML		
comp=E,3220μm,0.4s							
NEGI				AML	AML		
comp=N,2750μm,1.6s							
NEGI				AML	AML		
comp=E,3220μm,0.4s							
NEGI				AML	AML		
comp=N,2750μm,1.6s							
GBOS	**Grotte di Boss**	**1.17**	**91**	P	**Pb**	**16 32 19.3**	**-0.7**
GBOS				AML	AML		
comp=E,1475μm,0.6s							
GBOS				AML	AML		
comp=N,1835μm,0.5s							
GBOS				AML	AML		
comp=E,1475μm,0.6s							
GBOS				AML	AML		
comp=N,1835μm,0.5s							
GBOS				AML	AML		
comp=N,1835μm,0.5s							
GBOS				AML	AML		
comp=E,1475μm,0.6s							
MGRO	**Montegrosso**	**1.17**	**101**	P	**Pb**	**16 32 19.5**	**-0.6**
MGRO				AML	AML		
comp=E,4505μm,0.5s							
MGRO				AML	AML		
comp=N,2320μm,0.4s							
MGRO				AML	AML		
comp=E,4505μm,0.5s							
MGRO				AML	AML		
comp=N,2315μm,0.4s							
MGRO				AML	AML		
comp=N,2315μm,0.4s							
MGRO				AML	AML		
comp=E,4505μm,0.5s							
VIVF	**Saint-Julien-l**	**1.24**	**298**	*e*Pg	**Pn**	**16 32 21.0**	**-0.1**
VIVF				*e*Sg	**Sn**	**16 32 38.4**	**+0.4**
comp=E,165nm,0.4s							
IMI	**Imperia**	**1.27**	**106**	P	**Pn**	**16 32 21.2**	**-0.2**
LPG	**La Plagne**	**1.28**	**17**	*e*Pg	**Pg**	**16 32 22.1**	**-0.2**
LPG				*e*Sg	**Sn**	**16 32 39.6**	**+0.3**
comp=E,695nm,0.6s							
LPL	**La Plagne**	**1.30**	**16**	*e*Pg	**Pb**	**16 32 22.1**	**-0.1**
LPL				*e*Sg	**Sn**	**16 32 39.9**	**+0.4**
comp=E,230nm,0.4s							
RORO	**Rocca Rossa**	**1.34**	**96**	P	**Pb**	**16 32 22.5**	**-0.4**
RORO				AML	AML		
comp=E,1645μm,0.4s							
RORO				AML	AML		
comp=N,2835μm,0.6s							
RORO				AML	AML		
comp=E,1645μm,0.4s							
RORO				AML	AML		
comp=N,2835μm,0.6s							
RORO				AML	AML		
comp=N,2835μm,0.6s							
RORO				AML	AML		
comp=E,1645μm,0.4s							
LSD	**Lago del Serru**	**1.35**	**29**	P	**Pb**	**16 32 22.8**	**-0.4**
LSD				AML	AML		
comp=E,861μm,0.6s							
LSD				AML	AML		
comp=N,804μm,1.2s							
LSD				AML	AML		
comp=E,860μm,0.6s							
LSD				AML	AML		
comp=N,805μm,1.2s							
LSD				AML	AML		
comp=N,805μm,1.2s							
LSD				AML	AML		
comp=E,860μm,0.6s							
OGSM	**Saint Maurice**	**1.38**	**345**	Pg	**Pg**	**16 32 24.1**	**-0.1**
RSL	**Roselend**	**1.44**	**12**	Pg	**Pg**	**16 32 25.3**	**-0.1**
MONC	**Moncucco Torin**	**1.46**	**56**	P	**Pg**	**16 32 25.6**	**-0.1**
MONC				AML	AML		
comp=E,2255μm,0.5s							
MONC				AML	AML		
comp=N,1995μm,1.3s							
MONC				AML	AML		
comp=E,2255μm,0.5s							
MONC				AML	AML		
comp=N,1995μm,1.3s							
MONC				AML	AML		
comp=N,1995μm,1.3s							
MONC				AML	AML		
comp=E,2255μm,0.5s							
ASEAF	**Site Antares,**	**1.48**	**181**	Pg	**Pb**	**16 32 25.4**	**+0.4**
FINB	**Finale Ligure**	**1.52**	**93**	P	**Pb**	**16 32 25.5**	**-0.5**
FINB				AML	AML		
comp=E,2065μm,0.5s							
FINB				AML	AML		
comp=N,2615μm,0.4s							
FINB				AML	AML		
comp=E,2065μm,0.5s							
FINB				AML	AML		
comp=N,2615μm,0.4s							
FINB				AML	AML		
comp=N,2615μm,0.4s							
FINB				AML	AML		
comp=E,2065μm,0.5s							
QLNO	**Quiliano**	**1.53**	**87**	P	**Pb**	**16 32 25.5**	**-0.6**
QLNO				AML	AML		
comp=E,1280μm,1.1s							
QLNO				AML	AML		
comp=N,1233μm,0.8s							
QLNO				AML	AML		
comp=E,1280μm,1.1s							
QLNO				AML	AML		
comp=N,1233μm,0.8s							
QLNO				AML	AML		
comp=N,1233μm,0.8s							
QLNO				AML	AML		
comp=E,1280μm,1.1s							
SSB	**Saint Sauveur**	**1.56**	**311**	Pn	**Pn**	**16 32 25.4**	**0.0**
SSB				Sn	**Sn**	**16 32 45.9**	**+0.2**
MRGE	**Morge**	**1.61**	**22**	P	**Pb**	**16 32 27.5**	**-0.1**
MRGE				AML	AML		
comp=E,1060μm,1.0s							
MRGE				AML	AML		
comp=N,966μm,0.7s							
MRGE				AML	AML		
comp=E,1060μm,1.0s							
MRGE				AML	AML		
comp=N,966μm,0.7s							
CIRO	**Champorcher**	**1.64**	**36**	P	**Pb**	**16 32 27.9**	**-0.2**
TRAV	**Traversella**	**1.65**	**41**	P	**Pb**	**16 32 27.2**	**-0.9**
TRAV				AML	AML		
comp=E,597μm,1.5s							
TRAV				AML	AML		
comp=N,392μm,0.6s							
TRAV				AML	AML		
comp=E,597μm,1.5s							
TRAV				AML	AML		
comp=N,392μm,0.6s							
PCP	**Piancastagn**	**1.69**	**80**	P	**Pb**	**16 32 28.2**	**-0.7**
PCP				AML	AML		
comp=E,1250μm,0.6s							
PCP				AML	AML		
comp=N,964μm,0.5s							
PCP				AML	AML		
comp=E,1250μm,0.6s							
PCP				AML	AML		
comp=N,964μm,0.5s							
REMY	**Saint-Rhmy-en**	**1.70**	**23**	P	**Pb**	**16 32 29.4**	**+0.3**
REMY				AML	AML		
comp=E,1550μm,0.6s							
REMY				AML	AML		
comp=N,1395μm,0.7s							
REMY				AML	AML		
comp=N,1395μm,0.7s							
REMY				AML	AML		
comp=E,1550μm,0.6s							
LASF	**Ste Croix**	**1.71**	**264**	*e*Pn	**Pn**	**16 32 26.8**	**-0.6**
LASF				*e*Sg	**Sg**	**16 32 52.8**	**+0.4**
comp=E,230nm,0.6s							
OG35	**Corcelles**	**1.83**	**346**	Pn	**Pn**	**16 32 29.9**	**+0.8**
OG35				Sg	**Sg**	**16 32 55.6**	**-0.7**
SATI	**Passo dei Sala**	**1.98**	**36**	AML	AML		
comp=E,474μm,0.7s							
SATI				AML	AML		
comp=E,474μm,0.7s							
SATI				AML	AML		
comp=N,379μm,0.6s							
SATI				AML	AML		
comp=N,379μm,0.6s							
DIX	**Grande Dixence**	**1.99**	**25**	AML	AML		

comp=E,302μm,1.4s
DIX AML AML
comp=N,289μm,0.6s
DIX AML AML
comp=N,289μm,0.6s
DIX AML AML
comp=E,302μm,1.4s
MMK Mattmark 2.17 34 AML AML
comp=N,324μm,0.7s
MMK AML AML
comp=E,266μm,0.6s
MMK AML AML
comp=N,324μm,0.7s
MMK AML AML
comp=E,266μm,0.6s
GIMEL St. Georges / 2.26 1 AML AML
comp=E,280μm,1.4s
GIMEL AML AML
comp=N,272μm,1.1s
GIMEL AML AML
comp=E,280μm,1.4s
GIMEL AML AML
comp=N,272μm,1.1s
LBL Lubilhac 2.32 295 Pn **Pn 16 32 36.0 +0.1**
CABF La Chapelle 2.34 358 *e*Pn **Pn 16 32 37.1 +0.9**
CABF La Chapelle 2.34 358 *e*Pg **Pg 16 32 42.1 -0.3**
CABF *e*Sn **Sn 16 33 03.8 -1.2**
CABF *e*Sg **Sg 16 33 12.7 -0.1**
comp=N,273nm,0.7s
BOB Bobbio (Coli) 2.37 77 AML AML
comp=E,400μm,0.9s
BOB AML AML
comp=N,633μm,0.8s
BOB AML AML
comp=N,633μm,0.8s
BOB AML AML
comp=E,400μm,0.9s
MSSA Maissana 2.38 88 AML AML
comp=N,551μm,0.9s
MSSA AML AML
comp=E,287μm,0.9s
MSSA AML AML
comp=N,551μm,0.9s
MSSA AML AML
comp=E,287μm,0.9s
MUGIO Muggio 2.59 50 AML AML
comp=N,229μm,0.6s
MUGIO AML AML
comp=E,248μm,0.7s
MUGIO AML AML
comp=N,229μm,0.6s
MUGIO AML AML
comp=E,248μm,0.7s
PGF Pioggiola 2.67 129 *e*Pn **Pn 16 32 39.9 -0.8**
PGF *e*Sn **Sn 16 33 10.4 -2.7**
comp=E,59nm,0.3s
PGF Pioggiola 2.67 129 AML AML
comp=E,167μm,0.4s
PGF AML AML
comp=E,167μm,0.4s
PGF AML AML
comp=N,146μm,1.4s
PGF AML AML
comp=N,146μm,1.4s
GRAM Graiana 2.77 84 AML AML
comp=N,447μm,1.0s
GRAM AML AML
comp=E,444μm,1.4s
GRAM AML AML
comp=N,447μm,1.0s
GRAM AML AML
comp=E,444μm,1.4s
AGO Saint Agoulin 2.81 310 Pn **Pn 16 32 42.7 +0.1**
SMF Signal de Mont 2.90 326 *e*Pn **Pn 16 32 44.0 +0.2**
SMF Signal de Mont 2.90 326 *e*Pg **Pg 16 32 53.4 +0.2**
SMF *e*Sn **Sn 16 33 17.6 -1.1**
comp=E,22nm,0.2s
SMF *e*Sg **Sg 16 33 30.7 0.0**
comp=E,96nm,0.5s
CHMF Charmoille 2.99 6 Pn **Pn 16 32 45.7 +0.6**
SARO Sassorosso 3.01 90 AML AML
comp=N,262μm,0.6s
SARO AML AML
comp=E,154μm,0.6s
SARO AML AML
comp=N,262μm,0.6s
SARO AML AML
comp=E,154μm,0.6s
CAF Calviac 3.03 284 *e*Pn **Pn 16 32 45.6 -0.1**
MTLF Montolieu 3.04 253 *e*Pn **Pn 16 32 45.5 -0.2**
MTLF *e*Sn **Sn 16 33 21.1 -1.1**
comp=E,42nm,0.3s
MAIM Mastiano 3.10 95 AML AML
comp=N,116μm,0.8s
MAIM AML AML
comp=E,238μm,0.6s
MAIM AML AML
comp=N,116μm,0.8s
MAIM AML AML
comp=E,238μm,0.6s
LOMF Lomont 3.11 8 Pn **Pn 16 32 47.4 +0.7**
AVF Avril sur Loir 3.22 322 *e*Pn **Pn 16 32 48.8 +0.6**
AVF Avril sur Loir 3.22 322 *e*Pg **Pg 16 33 01.2 +1.9**
AVF *e*Sn **Sn 16 33 26.2 -0.4**
comp=E,16nm,0.3s
AVF *e*Sg **Sb 16 33 37.1 +3.0**
comp=E,73nm,0.6s
BALST Balsthal 3.23 18 *e*Pn **Pn 16 32 49.3 +0.8**
BALST *e*Sg **Sg 16 33 41.7 +0.3**
BGF Bois d'Agland 3.29 315 *e*Pn **Pn 16 32 49.6 +0.4**
BGF *e*Sn **Sn 16 33 27.0 -1.4**
comp=E,34nm,0.4s
BGF *e*Sg **Sg 16 33 42.9 -0.4**
comp=E,148nm,0.6s
SSF Saint Saulge 3.37 327 *e*Pn **Pn 16 32 51.1 +0.8**
SSF Saint Saulge 3.37 327 *e*Pg **Pg 16 33 02.0 -0.2**
SSF *e*Sn **Sn 16 33 28.6 -1.8**
comp=E,18nm,0.4s
SSF *e*Sg **Sg 16 33 46.2 +0.4**
comp=E,57nm,0.6s
LOR Lormes 3.42 332 *e*Pn **Pn 16 32 51.3 +0.3**
LOR Lormes 3.42 332 *e*Pg **Pg 16 33 04.0 +0.9**
LOR *e*Sn **Sn 16 33 29.7 -1.8**
comp=E,14nm,0.2s
LOR *e*Sg **Sg 16 33 46.2 -1.1**
comp=E,122nm,0.8s
LOR Lormes 3.42 332 Pn **Pn 16 32 51.5 +0.5**
TCF Toulx Ste Croi 3.47 307 *e*Pn **Pn 16 32 52.0 +0.3**
TCF Toulx Ste Croi 3.47 307 *e*Pg **Pg 16 33 05.0 +0.9**
TCF *e*Sn **Sn 16 33 31.3 -1.5**
comp=E,40nm,0.7s
MAGA Magasa 3.47 63 AML AML
comp=E,762μm,1.0s
MAGA AML AML
comp=N,326μm,0.7s
MAGA AML AML
comp=N,326μm,0.7s
MAGA AML AML
comp=E,762μm,1.0s
RJF Les Rejaudoux 3.50 289 *e*Pn **Pn 16 32 51.7 -0.4**
RJF *e*Sn **Sn 16 33 31.4 -2.1**
comp=E,34nm,0.5s
SULZ Cheisacher 3.51 22 *e*Pn **Pn 16 32 53.6 +1.3**
SULZ *e*Pg **Pg 16 33 04.1 -0.8**
SULZ *e*Sg **Sg 16 33 51.8 +1.3**
PLONS Plons/SG 3.56 38 *e*Sg **Sg 16 33 48.6 -3.2**
HINF Hinteralfeld 3.57 7 *e*Pn **Pn 16 32 52.7 -0.4**
HINF Hinteralfeld 3.57 7 *e*Pg **Pg 16 33 05.9 -0.1**
HINF *e*Sn **Sn 16 33 35.0 -0.4**
comp=E,18nm,0.4s
HINF *e*Sg **Sg 16 33 51.1 -1.2**
comp=E,20nm,0.3s
DAVOX Davos/Dischmat 3.59 45 Pn **Pn 16 32 56.6 +3.0**
comp=E,5.9nm,0.3s,baz=202,slow=8.6,SNR=40
DAVOX Sn **Sb 16 33 43.2 -1.9**
comp=E,3.2nm,0.3s,baz=319,slow=19,SNR=3.3
MONQ Montcuq 3.60 273 Pn **Pn 16 32 54.9 +1.4**
MOF Molkenrain 3.63 10 Pn **Pn 16 32 53.8 -0.2**
WILA Wila 3.66 30 *e*Pn **Pn 16 32 55.2 +0.8**
WILA *e*Pg **Pg 16 33 06.7 -1.1**
WILA *e*Sg **Sg 16 33 55.8 +0.6**
HAU Haudompre 3.73 1 *e*Pn **Pn 16 32 55.1 -0.2**
HAU Haudompre 3.73 1 *e*Pg **Pg 16 33 07.5 -1.6**
HAU *e*Sn **Sn 16 33 37.6 -1.7**
comp=E,13nm,0.2s
HAU *e*Sg **Sg 16 33 56.2 -1.3**
comp=E,38nm,0.4s
CSNT Castellina Chi 3.76 101 AML AML
comp=N,59μm,0.9s
CSNT AML AML
comp=E,61μm,0.7s
CSNT AML AML
comp=N,59μm,0.9s
CSNT AML AML
comp=E,61μm,0.7s
SLE Schleitheim 3.83 24 *e*Pn **Pn 16 32 56.5 -0.2**
SLE *e*Pg **Pg 16 33 10.0 -1.1**
BERGE Lenzkirch (DE) 3.85 20 *e*Pn **Pn 16 32 56.8 -0.2**
BERGE *e*Pg **Pg 16 33 09.8 -1.6**
HYF Humbligny 3.90 321 *e*Pn **Pn 16 32 58.9 +1.3**
HYF Humbligny 3.90 321 *e*Pg **Pg 16 33 13.1 +0.8**
HYF *e*Sn **Sn 16 33 41.1 -2.3**
HYF *e*Sg **Sg 16 34 02.6 -0.2**
DAVA Damuels 3.96 39 *i* Pn **Pn 16 33 01.5 +3.0**
comp=E,5.4nm,0.4s
DAVA *e*Sn **Sn 16 33 47.3 +2.3**
comp=E,32nm,0.4s
LFF La Frestale 3.96 282 *e*Pn **Pn 16 32 58.8 +0.4**
LFF *e*Sn **Sn 16 33 43.4 -1.5**
LFF *e*Sg **Sg 16 34 08.9 +4.1**
comp=E,105nm,0.7s
ECH Echery 4.00 9 *e*Pn **Pn 16 32 58.4 -0.5**
ECH *e*Pg **Pg 16 33 15.0 +0.8**
ECH *e*Sg **Sg 16 34 09.7 +3.8**
SFTF Sexfontaines 4.01 349 *e*Pn **Pn 16 33 00.1 +0.9**
baz=163
SFTF Sexfontaines 4.01 349 *e*Pg **Pg 16 33 14.4 -0.1**
baz=158
SFTF *e*Sn **Sn 16 33 44.6 -1.6**
comp=E,18nm,0.4s
SFTF *e*Sg **Sg 16 34 07.8 +1.3**
comp=E,64nm,0.6s
FETA Feichten 4.19 47 *e*Pn **Pb 16 33 06.9 -4.6**
comp=E,8.2nm,0.6s
FETA *e*Sn **Sn 16 33 55.0 +4.2**
comp=E,25nm,0.9s
CDF Champ du Feu 4.20 10 *e*Pn **Pn 16 33 01.2 -0.6**
CDF Champ du Feu 4.20 10 *e*Pg **Pg 16 33 16.9 -1.2**
CDF *e*Sn **Sn 16 33 49.0 -2.0**
comp=E,5.2nm,0.2s
CDF *e*Sg **Sg 16 34 11.1 -1.5**
comp=E,43nm,0.6s
PAGF Fort de Pagny 4.29 356 *e*Pn **Pn 16 33 04.0 +1.0**
baz=173
PAGF Fort de Pagny 4.29 356 *e*Pg **Pg 16 33 20.1 +0.2**
PAGF *e*Sn **Sn 16 33 51.0 -2.1**
comp=E,15nm,0.2s
PAGF *e*Sg **Sg 16 34 14.7 -0.8**
comp=E,121nm,0.8s
MEZF Maizieres J'vi 4.30 350 *e*Pn **Pn 16 33 04.8 +1.7**
baz=174
MEZF Maizieres J'vi 4.30 350 *e*Pg **Pg 16 33 20.1 +0.1**
MEZF *e*Sn **Sn 16 33 52.2 -1.1**
comp=E,21nm,0.4s,baz=171
MEZF *e*Sg **Sg 16 34 14.3 -1.5**
comp=E,77nm,0.6s,baz=172
BFO Black Forest 4.31 19 *e*Pn **Pn 16 33 02.6 -0.7**
BFO *e*Pg **Pg 16 33 22.1 +1.8**
BFO *e*Sg **Sg 16 34 19.0 +2.9**
EPF Esparros 4.44 256 *e*Pn **Pn 16 33 04.4 -0.6**
EPF *e*Sn **Sn 16 33 56.2 -0.6**
comp=E,6.8nm,0.2s
EPF *e*Sg **Sg 16 34 19.0 -1.1**
comp=E,54nm,0.8s
RETA Reutte 4.52 43 *e*Pn **Pn 16 33 09.1 +3.0**
comp=E,1.5nm,0.2s
RETA *e*Sn **Sn 16 34 02.0 +3.2**
comp=E,8.5nm,0.4s
SQTA Sankt Quirin 4.57 48 *i* Pn **Pn 16 33 10.9 +3.9**
comp=E,1.6nm,0.1s,SNR=7.9
SQTA Sn **Sn 16 34 03.2 +3.0**
comp=E,53nm,0.8s
MOTA Moosalm 4.60 46 *e*Pn **Pn 16 33 10.4 +3.1**
comp=E,1.5nm,0.2s,SNR=14
MOTA Sn **Sn 16 34 03.4 +2.6**
comp=E,0.1nm,0.1s
WTTA Wattenberg 4.83 50 *i* Pn **Pn 16 33 13.6 +3.0**
comp=E,2.4nm,0.3s
WTTA *e*Sn **Sn 16 34 08.9 +2.3**
comp=E,32nm,0.6s
WATA Walderalm 4.84 49 *e*Pn **Pn 16 33 13.1 +2.5**
comp=E,1.2nm,0.1s,SNR=14
MFF Saint Martin d 5.04 300 *e*Pn **Pn 16 33 13.5 +0.2**
MFF *e*Sg **Sg 16 34 37.8 -1.6**
comp=E,32nm,0.6s
ABTA Abfaltersbach 5.07 59 *e*Pn **Pn 16 33 17.5 +3.7**
comp=E,7.7nm,0.4s,SNR=9.9
ABTA *e*Sn **Sn 16 34 16.7 +4.2**
comp=E,24nm,0.7s
ETSF Etsaut 5.11 257 *e*Pn **Pn 16 33 15.3 +1.1**
ETSF *e*Sn **Sn 16 34 09.8 -3.5**
comp=E,51nm,0.6s
WLF Walferdange 5.39 360 *e*Sg **Sg 16 34 52.9 +2.2**
SJPF Ste Jean 5.51 260 *e*Pn **Pn 16 33 19.5 -0.3**
SJPF *e*Sn **Sn 16 34 20.2 -3.0**
KBA Koelnbreinsper 5.73 58 *e*Pn **Pn 16 33 25.8 +2.9**
comp=E,5.0nm,0.6s,SNR=9.0
KBA *e*Sn **Sn 16 34 31.3 +2.5**
comp=E,3.9nm,0.6s
MYKA Terra Mystica 5.73 63 *e*Pn **Pn 16 33 24.5 +1.7**
comp=E,2.5nm,0.4s
MYKA *e*Sn **Sn 16 34 30.2 +1.5**
comp=E,7.6nm,0.7s
GIVF Givet 5.91 351 *e*Pn **Pn 16 33 25.7 +0.6**
GIVF *e*Sn **Sn 16 34 29.1 -3.7**
comp=E,4.9nm,0.3s
GIVF *e*Sg **Sg 16 35 06.5 -0.6**
DOU Dourbes 5.93 350 Pn **Pn 16 33 26.2 +0.8**
DOU Pg **Pg 16 33 50.7 -0.4**
DOU Sn **Sn 16 34 32.1 -1.2**
BAIF Baives 5.95 347 *e*Pn **Pn 16 33 26.4 +0.7**
BAIF *e*Sn **Sn 16 34 30.5 -3.3**
comp=E,2.4nm,0.2s
BAIF *e*Sg **Sg 16 35 06.4 -2.0**
BMRD Maredsous 6.11 351 Pn **Pn 16 33 29.1 +1.2**
TNS Taunus Mts 6.14 14 *e*Sg **Sg 16 35 13.7 -0.9**
LDF La Druitiere 6.15 317 *e*Pn **Pn 16 33 29.2 +0.8**
LDF *e*Sg **Sg 16 35 11.7 -3.2**
comp=E,38nm,0.8s
NVLJ Novalja 6.21 84 *e*Pn **Pn 16 33 30.6 +1.3**
NVLJ Sn **Sn 16 34 36.9 -3.4**
OBKA Obir 6.28 66 *e*Pn **Pn 16 33 32.7 +2.3**
comp=E,5.6nm,0.4s,SNR=5.8
OBKA *e*Sn **Sn 16 34 44.5 +2.3**
comp=E,10.0nm,0.6s
GRR Gorron 6.39 313 *e*Pn **Pn 16 33 32.3 +0.5**
GRR *e*Sg **Sg 16 35 20.7 -2.0**
comp=E,14nm,0.6s
FLN La Foliniere 6.44 317 *e*Pn **Pn 16 33 32.6 +0.2**
baz=139
MOA Molln 6.65 55 *e*Pn **Pn 16 33 38.1 +2.8**
comp=E,1.8nm,0.3s,SNR=7.0
MOA *i* Sn **Sn 16 34 52.6 +1.5**
comp=E,1.3nm,0.2s
SOKA Soboth 6.65 66 *e*Pn **Pn 16 33 38.0 +2.6**
comp=E,4.0nm,0.4s,SNR=11
SOKA *e*Sn **Sn 16 34 51.5 +0.2**
comp=E,4.1nm,0.5s
GERES GERESS Array B 6.89 46 Pn **Pn 16 33 39.0 +0.2**
comp=E,2.9nm,0.3s,baz=231,slow=12,SNR=26
GERES Sn **Sn 16 34 57.7 +0.4**
comp=E,2.2nm,0.3s,baz=234,slow=24,SNR=9.4
KHC Kasperske Hory 7.02 44 *e*PN **Pn 16 33 40.4 0.0**
KHC *ex* x 16 33 57.5
KHC *e*SN **Sn 16 35 00.3 +0.1**
KHC *ex* x 16 35 29.5
ARSA Arzberg 7.16 62 *e*Pn **Pn 16 33 44.6 +2.2**
comp=E,3.5nm,0.3s,SNR=9.1
ARSA *e*Sn **Sn 16 35 04.6 +0.8**
comp=E,1.0nm,0.5s
SGMF Saint Gilles 7.26 306 *e*Pn **Pn 16 33 43.5 -0.2**
SGMF *e*Sg **Sg 16 35 47.7 -2.9**
QUIF Quistinic 7.46 302 *e*Sg **Sg 16 35 54.1 -3.0**
CONA Conrad Observa 7.64 58 *e*Pn **Pn 16 33 50.2 +1.2**
comp=E,0.8nm,0.3s
CONA *e*Sn **Sn 16 35 18.7 +3.1**
comp=E,5.7nm,0.9s
KRUC Moravsky 8.48 52 *e*PN **Pn 16 34 00.4 -0.1**
KRUC *e*SN **Sn 16 35 36.6 +0.4**
VRAC Vranov 8.72 51 Pn **Pn 16 34 02.6 -1.2**
comp=E,0.4nm,0.3s,baz=225,slow=15,SNR=3.1
VRAC Sn **Sn 16 35 43.7 +1.7**
comp=E,0.3nm,0.3s,baz=236,slow=10,SNR=6.0
VRAC Vranov 8.72 51 *e*PN **Pn 16 34 03.2 -0.5**
VRAC *e*SN **Sn 16 35 42.3 +0.2**
ESDC Sonseca Array 8.86 242 Pn **Pn 16 34 05.7 0.0**
comp=E,1.8nm,0.3s,baz=58,slow=14,SNR=23
CHVC Chvalec 9.18 43 *e*PN **Pn 16 34 09.4 -0.7**
OSTC Ostas 9.24 44 *e*PN **Pn 16 34 10.5 -0.4**
VYHS Vyhne 9.69 60 *e*PN **Pn 16 34 17.4 +0.4**
EKA Eskdalemuir Ar 12.60 335 Pn **Pn 16 34 56.9 +0.1**
baz=148,slow=14,SNR=4.9
FINES FINESS Array B 20.81 27 P **P 16 36 39.0 +0.1**
comp=E,1.5nm,0.8s,baz=239,slow=10,SNR=3.8
BRTR Keskin Array B 20.84 93 P Pn 16 36 42.7 +0.7
comp=E,0.8nm,0.8s,baz=274,slow=6.8,SNR=4.0

MAN ***01*** *16:35:36.7, 17°.26N×119°.85E, h24km, MS4.8*
MOS ***01*** *16:35:38.0±0.9, 17°.13N×120°.17E, h54km, mb5.0/44, MS4.3/6, Error ellipse: s-maj=9.0km s-min=4.8km az=105.7*
NEIC ***01*** *16:35:38.8±0.9, 17°.11N×120°.05E, h46km±8km, mb4.6/47, Error ellipse: s-maj=9.2km s-min=6.3km az=97.0*
NEIC Felt at Vigan.
ISCJB ***01*** *16:35:39.7±0.3, 17°.17N±0°.02×120°.15E±0°.03, h67km±3km, mb4.6/120, Error ellipse: s-maj=4.1km s-min=2.8km az=178.9*
IDC ***01*** *16:35:39.8±2.0, 17°.12N×120°.16E, h52km±18km, mb4.4/38, mb1 4.5/39, mb1mx4.4/64, mbtmp4.7/39, ML4.7/2, MS4.2/12, Ms1 4.3/12, ms1mx3.8/41, Error ellipse: s-maj=13.6km s-min=8.2km az=87.0*
GCMT ***01*** *16:35:39.8±0.4, 17°.38N±0°.02×119°.63E±0°.03, h41km±1km, MW5.1/69, Moment Tensor Solution. s27,c32; s69,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.34±.33; $M_{\theta\theta}$-0.13±.19; $M_{\phi\phi}$-4.22±.20; $M_{r\theta}$-0.09±.16; $M_{\phi\phi}$-0.63±.11; $M_{\phi r}$-2.54±.18; Best double couple: $M_0$5.01900×10^{16} NP1:ϕ_s185.00000°, δ60.00000°, λ87.00000°. NP2: ϕ_s12.00000°, δ30.00000°, λ96.00000°. Principal axes: T 5.0380, Plg75.0000°, Azm87.0000°; N -0.0440, Plg3.0000°, Azm187.0000°; P -5.0000, Plg15.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BJI ***01*** *16:35:40.8±0.0, 17°.49N×119°.95E, h43km, mb4.6/58, mB4.8/49, Ms4.5/52, Ms7 4.4/47*
ISC 01 16:35:38.0±0.4, 17°.20N±0°.02×119°.97E±0°.04, h32km±2km, h32km:pP-P, n348, σ1°71/383, mb4.7/127, MS4.4/24, 32C-19D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res ISC
BOLP	**Bolinao**	**0.81**	**184**	*e*P	**Pn**	**16 35 52.9**	**-0.3**
BOLP				*e*S	**Sn**	**16 36 04.8**	**+0.6**
ABRA	**Dolores**	**0.84**	**58**	*e*P	**Pn**	**16 35 53.3**	**-0.3**
ABRA				*e*S	**Sn**	**16 36 06.2**	**+1.2**
SMPP	**San Manuel, Pa**	**1.24**	**147**	*e*P	**Pn**	**16 35 59.2**	**0.0**
SMPP				*e*S	**Sb**	**16 36 17.4**	**+0.8**
APYP	**Conner**	**1.39**	**61**	*e*P	**Pn**	**16 36 01.3**	**+0.2**
APYP				*e*S	**Sb**	**16 36 19.8**	**-0.9**
SCZP	**Santa Cruz**	**1.41**	**182**	*e*P	**Pn**	**16 36 01.4**	**-0.1**
SCZP				*e*S	**Sb**	**16 36 21.3**	**-0.1**
CVP	**Callao Caves**	**1.84**	**74**	*e*P	**Pn**	**16 36 08.8**	**+1.4**
BALP	**Baler**	**2.12**	**133**	*e*P	**Pn**	**16 36 13.6**	**+2.4**
BALP				*e*S	**Sb**	**16 36 44.5**	**+2.9**
SGCP	**Mt. Cagua**	**2.24**	**62**	*e*P	**Pn**	**16 36 14.3**	**+1.5**
PALP	**Palanan**	**2.35**	**93**	*e*P	**Pn**	**16 36 17.1**	**+2.6**
PALP				*e*S	**Sb**	**16 36 52.1**	**+3.7**
POLP	**Polillo Island**	**3.10**	**142**	*e*P	**Pn**	**16 36 28.3**	**+3.6**
TGY	**Tagaytay City**	**3.21**	**163**	P	**Pn**	**16 36 28.2**	**+1.9**
	189nm,0.3s,baz=303,slow=2.7,SNR=63						
TGY				S	**Sb**	**16 37 09.6**	**-3.7**
	389nm,0.3s,baz=292,slow=19,SNR=2.7						
TGY				LR	LR	16 38 08.6	
	comp=Z,4μm,20.0s,baz=344,slow=48						
LUBP	**Lubang**	**3.45**	**175**	*e*P	**Pn**	**16 36 33.2**	**+3.6**
BBP	**Basco**	**3.74**	**30**	*e*P	**Pn**	**16 36 33.3**	**-0.3**
BBP				*e*S	**Sb**	**16 37 30.4**	**+2.1**
AUQP	**San Andres**	**4.65**	**145**	*e*P	Pn	16 36 51.6	+5.6
SJMP	**San Jose**	**4.84**	**167**	*e*P	**Pn**	**16 36 52.5**	**+3.9**
OTRP	**Odiongan**	**5.20**	**157**	*e*P	**Pn**	**16 36 56.1**	**+2.5**
PVCP	**Virac**	**5.40**	**131**	*e*P	**Pn**	**16 36 57.7**	**+1.4**
PVCP				*e*S	**Sb**	**16 38 22.2**	**+6.3**
TWG	**Pinlang**	**5.69**	**10**	*e*Pn	**Pn**	**16 37 03.6**	**+3.2**
TPUB	**Ta-pu**	**6.11**	**6**	*e*Pn	**Pn**	**16 37 07.9**	**+1.8**
YULB	**Yu-li**	**6.29**	**11**	*e*Pn	**Pn**	**16 37 11.4**	**+2.8**
CUYO	**Cuyo Island**	**6.39**	**171**	*e*P	**Pn**	**16 37 11.7**	**+1.7**
SSLB	**Suanglung**	**6.62**	**8**	*e*Pn	**Pn**	**16 37 17.1**	**+3.9**
JAP	**San Jose, Anti**	**6.69**	**163**	‖*e*P	Pn	16 37 19.3	+5.2
NACB	**Ninganchiao**	**7.11**	**12**	*e*Pn	**Pn**	**16 37 22.4**	**+2.6**
KNMB	**Chin-men Tao**	**7.38**	**349**	*e*Pn	**Pn**	**16 37 22.4**	**-1.2**
HKPS	**Hong Kong Po S**	**7.46**	**314**	*e*Pn	**Pn**	**16 37 22.6**	**-2.0**
YHNB	**Yeheng**	**7.55**	**10**	*e*Pn	**Pn**	**16 37 29.4**	**+3.5**
OCLP	**Ormoc**	**7.59**	**143**	*e*P	Pn	16 37 35.6	+9.2
PLP	**Palo**	**7.72**	**140**	‖*e*P	**Pn**	**16 37 30.3**	**+2.1**
QZH	**Quanzhou**	**7.81**	**351**	P	**Pn**	**16 37 31.8**	**+2.3**
QZH				S	**Sn**	**16 38 50.5**	**-6.4**
QZH				LR	LR		
	comp=N,2μm,16.9s						
QZH				LR	LR		
	comp=Z,2μm,18.8s						
MSLP	**Maasin**	**8.48**	**145**	*e*P	**Pn**	**16 37 43.0**	**+4.4**
GZH	**Guangzhou**	**8.54**	**314**	P	**Pn**	**16 37 40.0**	**+0.5**
QIZ	**Qiongzhong**	**9.80**	**282**	*e*Pn	**Pn**	**16 37 54.5**	**-2.2**
DAV	**Davao City (W)**	**11.46**	**151**	LR	LR	16 44 12.9	
	comp=Z,2μm,18.1s,baz=18,slow=45						
WHN	**Wuhan**	**14.24**	**340**	⇑P	**P**	**16 39 05.1**	**+0.7**
WHN				S	**S**	**16 41 46.3**	**-7.9**
WHN				LR	LR		
	comp=N,3μm,15.1s						
WHN				LR	LR		
	comp=E,2μm,14.4s						
WHN				LR	LR		
	comp=Z,4μm,16.7s						
PANO	**Nakornpanom**	**14.68**	**272**	P	**P**	**16 39 08.2**	**-1.1**
	comp=Z,0.5nm,1.0s						
NJ2	**Nanjing**	**14.83**	**356**	*e*P	**Pn**	**16 39 06.6**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
SKNT	**Sakolnakorn**	**15.29**	**272**	P	**P**	**16 39 17.3**	**+1.2**
	comp=Z,35nm,1.0s						
GYA	**Guiyang**	**15.40**	**309**	⇑*i*P	**Pn**	**16 39 13.8**	**+0.6**
GYA				pP	pP	16 39 21.9	-3.2
GYA				PP	**pwP**	**16 39 29.6**	**+1.1**
GYA				S	**Sn**	**16 42 01.3**	**-1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,140nm,5.5s						
GYA				LR	LR		
	comp=Z,540nm,15.2s						
GYA				LR	LR		
	comp=Z,890nm,14.3s						
GYA				LR	LR		
	comp=Z,1μm,14.0s						
SLVN	**Son La**	**15.71**	**288**	*e*Pn	**Pn**	**16 39 17.5**	**+0.3**
	comp=Z,20nm,1.0s						
ENH	**Enshi**	**16.16**	**326**	*e*Pn	**Pn**	**16 39 23.2**	**+0.4**
	comp=Z,14nm,0.8s						
KHON	**Khomkaen**	**16.44**	**270**	P	**P**	**16 39 29.5**	**+0.6**
	comp=Z,67μm,0.8s						
SBUM	**Sibu**	**16.51**	**208**	*e*Pn	**Pn**	**16 39 28.4**	**+1.1**
	comp=Z,20nm,1.3s						
MRSI	**Marisa**	**16.73**	**173**	P	**Pn**	**16 39 31.0**	**+1.0**
	comp=Z,15nm,1.0s,comp=Z,242nm						
MPSI	**Mapaga**	**16.75**	**180**	P	**P**	**16 39 32.0**	**-0.3**
	comp=Z,14nm,1.0s						
KMSI	**Cibinong**	**16.98**	**166**	P	**P**	**16 39 35.1**	**+0.2**
	comp=Z,126nm,0.9s,comp=Z,1μm						
PALU	**Palau**	**17.21**	**123**	P	**Pn**	**16 39 37.2**	**+1.0**
	baz=17,SNR=5.8						
CHAI	**Chaiyaphum**	**17.29**	**268**	P	**P**	**16 39 40.1**	**+1.8**
	comp=Z,36μm,0.8s,comp=Z,517μm						
TNTI	**Ternate**	**17.87**	**155**	P	**Pn**	**16 39 43.0**	**-1.3**
	comp=Z,33nm,1.0s						
KMI	**Kunming**	**17.89**	**299**	P	**P**	**16 39 47.0**	**+1.9**
KMI				pP	sP	16 39 55.8	-1.2
KMI				sP	pwP	16 40 01.4	+5.3
KMI				S	**S**	**16 43 08.9**	**-0.3**
KMI				sS	sS	16 43 20.7	-0.7
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						

KMI pmax pmax
comp=Z,360nm,6.5s
KMI LR LR
comp=Z,720nm,13.7s
KMI LR LR
comp=Z,1μm,14.8s
KMI LR LR
comp=Z,1μm,16.6s
PBKT Sadao Pong 18.19 271 P **P 16 39 51.4 +3.1**
comp=Z,16nm,0.9s,comp=Z,395nm
KSM Kuching 18.29 212 *e*P **Pn 16 39 51.4 +2.0**
comp=Z,14nm,0.8s
LUWI Luwuk 18.33 171 *e*P **P 16 39 50.0 +0.2**
comp=Z,57nm,0.7s
LUWI Luwuk 18.33 171 P **Pn 16 39 50.9 +1.0**
comp=Z,81nm,0.8s,comp=Z,2μm
NANT Nan 18.40 278 P **Pn 16 39 53.2 +2.5**
comp=Z,32μm,0.8s
UTTA Uttaradit 18.53 275 P **Pn 16 39 56.1 +3.8**
comp=Z,19μm,0.9s,comp=Z,180μm
JNU Nakatsue 18.66 30 P **Pn 16 39 53.6 -0.2**
comp=Z,1.4nm,0.3s,baz=199,slow=4.5,SNR=43
JNU Nakatsue 18.66 30 *e*P **Pn 16 39 54.0 +0.1**
comp=Z,95nm,0.9s
PHRA Phrae 18.84 277 P **Pn 16 39 58.3 +2.3**
comp=Z,4.7nm,1.9s
LAMP Lampang 19.40 277 P **Pn 16 40 06.2 +3.3**
comp=Z,29μm,0.9s,comp=Z,270μm
XAN Xi'an 19.48 332 P **Pn 16 40 04.0 +0.2**
XAN pP pP 16 40 09.3 -1.1
XAN S **S 16 43 38.7 -2.1**
XAN pmax pmax
comp=Z,8.0nm,0.9s
XAN pmax pmax
comp=Z,130nm,5.9s
XAN LR LR
comp=Z,1μm,14.7s
XAN LR LR
comp=Z,830nm,15.2s
XAN LR LR
comp=Z,1μm,16.2s
XAN Xi'an 19.48 332 *e*P **Pn 16 40 05.4 +1.7**
comp=Z,14nm,0.9s
XAN Xi'an 19.48 332 *e*P **Pn 16 40 05.4 +1.7**
XAN pmax pmax
comp=Z,14nm,0.9s
CM31 Chiang Mai Arr 20.05 277 *e*P Pn 16 40 10.1 -0.5
comp=Z,24nm,1.1s
CM31 *e*PcP **PcP 16 44 24.9 +1.1**
CMAR Chiang Mai Arr 20.05 277 P Pn 16 40 11.1 +0.5
comp=Z,15nm,1.0s,baz=94,slow=8.5,SNR=56
CMAR PcP **PcP 16 44 24.9 +1.1**
comp=Z,1.8nm,0.6s,baz=99,slow=0.3,SNR=12
CMAR LR LR 16 48 04.7
comp=Z,420nm,18.7s,baz=68,slow=37
CMMT Chiang Mai 20.05 278 P Pn 16 40 11.2 +0.5
comp=Z,6.2nm,0.9s,comp=Z,143nm
CHTO Chiang Mai 20.06 278 *e*P Pn 16 40 11.1 +0.5
comp=Z,9.5nm,0.9s
CHTO Chiang Mai 20.06 278 *e*P Pn 16 40 11.1 +0.4
CHTO pmax pmax
comp=Z,10.0nm,0.9s
PHET Kaeng Krachan 20.09 261 P Pn 16 40 12.8 +1.7
comp=Z,73μm,0.8s,comp=Z,967μm
CD2 Chengdu 20.10 316⇑ *i*P Pn 16 40 11.0 -0.1
CD2 sP sP 16 40 22.4 +1.4
CD2 sS sS 16 44 08.1 +2.4
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 pmax pmax
comp=Z,370nm,7.8s
CD2 LR LR
comp=Z,2μm,16.7s
CD2 LR LR
comp=Z,2μm,20.0s
CD2 LR LR
comp=Z,3μm,17.1s
TTSI Tana Toraja 20.11 180 P Pn 16 40 10.7 -0.6
comp=Z,31nm,0.9s
TJN Taejon 20.20 18‖ *e*P **P 16 40 09.1 -1.0**
UMPA Umpang Tak 20.24 270 P Pn 16 40 14.9 +2.0
comp=Z,35μm,0.9s,comp=Z,360μm
SRDT SRDT 20.26 265 P Pn 16 40 16.4 +3.4
comp=Z,15nm,1.1s
SPSI Sidrap Palu 21.03 181 P **P 16 40 20.7 +1.5**
comp=Z,30nm,0.9s
KS15 Wonju Array Si 21.34 18 *e*P **P 16 40 22.0 -0.5**
comp=Z,29nm,0.7s
KSRS Korea Array 21.36 18 P **P 16 40 22.1 -0.6**
comp=Z,22nm,0.7s,baz=202,slow=10,SNR=82
KSRS LR LR 16 49 06.5
comp=Z,439nm,20.2s,baz=182,slow=38
BNSI Bone 21.46 180 P **P 16 40 25.3 +1.5**
DL2 Dalian 21.68 4⇑P **P 16 40 26.5 +0.5**
DL2 pP **sP 16 40 36.9 -1.2**
DL2 S **S 16 44 25.6 +1.2**
DL2 pmax pmax
comp=Z,17nm,0.8s
DL2 pmax pmax
comp=Z,160nm,4.2s
DL2 LR LR
comp=Z,540nm,16.2s
DL2 LR LR
comp=Z,370nm,17.8s
DL2 LR LR
comp=Z,720nm,17.1s
MYKOM Kota Tinggi 22.03 228 *e*P **P 16 40 31.3 +1.2**
comp=Z,13nm,0.8s
KAPI Kappang 22.07 181 P **P 16 40 30.4 +0.1**
comp=Z,24nm,0.9s,baz=0.2,slow=12,SNR=7.8
KAPI Kappang 22.07 181 *e*P **P 16 40 27.3 -3.1**
comp=Z,40nm,1.2s
KAPI Kappang 22.07 181 *e*P **P 16 40 27.3 -3.1**
KAPI pmax pmax
comp=Z,40nm,1.2s
BKSI Bulukumba 22.37 180 P **P 16 40 34.8 +1.1**
comp=Z,14nm,0.8s
BJT Baijiatuau 22.98 353 *e*P **P 16 40 41.7 +1.8**
comp=Z,19nm,1.0s
BJT Baijiatuau 22.98 353 *e*P **P 16 40 41.7 +1.8**
BJT pmax pmax
comp=Z,19nm,1.0s
BJI Beijing 23.00 353⇑ *i*P **P 16 40 41.6 +1.5**
BJI pmax pmax
comp=Z,8.0nm,0.9s
BJI pmax pmax
comp=Z,33nm,4.4s
BJI LR LR
comp=Z,250nm,15.7s
BJI LR LR
comp=Z,240nm,17.1s
TPI Tanjungpandan 23.25 213 P **P 16 40 44.0 +1.2**
comp=Z,21nm,1.4s,comp=Z,375nm
PPBI Pangkal Pinang 23.58 217 P **P 16 40 48.7 +2.6**
comp=Z,12nm,1.0s,comp=Z,3μm
LZH Lanzhou 23.64 326 *e*P **P 16 40 47.1 +0.5**
LZH pP sP 16 40 58.9 +0.3
LZH sP pwP 16 41 04.2 +6.7
LZH sS sS 16 45 12.6 -0.6
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,80nm,4.3s
LZH LR LR
comp=Z,2μm,15.2s
LZH LR LR
comp=Z,1μm,15.2s
LZH LR LR
comp=Z,2μm,15.7s
HHC Hu-ho-hao-te 24.66 345 *e*P **P 16 40 56.6 +0.6**
HHC pP pwP 16 41 05.4 +0.5
HHC sP sP 16 41 11.4 +2.8
HHC S **S 16 45 16.7 +1.1**
HHC sS sS 16 45 29.8 +0.3
HHC pmax pmax
comp=Z,17nm,1.0s
HHC pmax pmax
comp=Z,120nm,4.8s
HHC LR LR
comp=Z,580nm,15.0s
HHC LR LR
comp=Z,500nm,12.6s
HHC LR LR
comp=Z,770nm,12.2s
KMMI Kalianget 24.81 194 P **P 16 40 58.8 +1.4**
comp=Z,58nm,0.8s
BTO Baotou 24.86 342 *e*P **P 16 41 01.0 +3.2**

TSI Tuntungan 25.02 239 P P 16 41 12.7 +13
GRJI Gresik 25.07 198 P **P 16 41 01.1 +1.4**
PSI Prapat 25.13 238 P **P 16 41 02.2 +1.7**
comp=Z,3.3nm,0.5s,baz=0.0,slow=20,SNR=4.3
PSI LR LR 16 51 16.3
comp=Z,644nm,18.0s,baz=88,slow=37
MAJO Matsushiro 25.14 36 *e*P **P 16 40 58.1 -2.1**
comp=Z,10nm,0.7s
MAJO *e*PcP **PcP 16 44 33.8 -0.1**
MAJO Matsushiro 25.14 36 *e*P **P 16 40 58.1 -2.1**
MAJO *e* 16 44 33.8
MAJO pmax pmax
comp=Z,10.0nm,0.7s
MAT Matsushiro 25.14 36 P **P 16 40 57.5 -2.7**
MAT S **S 16 45 26.2 +3.0**
MJAR Matsushiro Arr 25.14 36 P **P 16 40 59.0 -1.3**
comp=Z,8.4nm,0.7s,baz=211,slow=8.7,SNR=44
MJAR PcP **PcP 16 44 33.8 -0.1**
comp=Z,0.7nm,0.8s,baz=147,slow=1.9,SNR=4.9
MJB9 Matsu-Tunnel 25.14 36 *e*P **P 16 40 58.0 -2.2**
comp=Z,10nm,0.7s
NGJI Ngawi 25.81 200 P **P 16 41 09.0 +2.5**
EDFI Ende, Flores 25.84 176 P **P 16 41 06.7 -0.1**
comp=Z,32nm,1.3s,comp=Z,1μm
MNSI Mandailing Nat 25.85 233 P **P 16 41 08.7 +1.9**
comp=Z,26nm,1.0s,comp=Z,883nm
PLAI Plampang 25.95 185 P **P 16 41 07.7 0.0**
comp=Z,98nm,1.2s,comp=Z,1μm
PWJI Pagerwojo 26.32 198 P **P 16 41 12.1 +1.0**
comp=Z,48nm,0.9s
PDSI Padang 26.33 229 P **P 16 41 13.3 +2.1**
WOJI Wonogiri, Jawa 26.43 200 P **P 16 41 12.3 +0.2**
comp=Z,40nm,1.3s
LHSI Lahat 26.46 219 P P 16 41 25.9 +14
MDSI Maura Dua 26.59 217 P **P 16 41 16.1 +2.5**
comp=Z,12nm,1.0s
WBSI Waikabubak, Su 26.67 181 P **P 16 41 14.4 +0.1**
comp=Z,77nm,0.8s
CN2 Changchun 26.93 9 *e*P **P 16 41 19.0 +2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
SHL Shillong 27.40 293 *e*P **P 16 41 23.0 +2.0**
BATI Baumata 27.47 172 P **P 16 41 19.8 -1.7**
comp=Z,19nm,0.6s,baz=152,slow=2.2,SNR=4.7
BATI PcP **PcP 16 44 39.3 -0.3**
comp=Z,11nm,0.7s,baz=162,slow=3.2,SNR=4.5
BATI Baumata 27.47 172 *e*P **P 16 41 19.8 -1.7**
BATI *e*PcP **PcP 16 44 39.3 -0.3**
BATI *e*PcP **PcP 16 44 39.3 -0.3**
SISI Saibi 27.61 230 P **P 16 41 25.6 +2.9**
comp=Z,30nm,1.3s
GTA Gaotai 28.24 326 P **P 16 41 31.4 +3.1**
GTA pP sP 16 41 42.9 +2.4
GTA sP pwP 16 41 48.6 +9.1
GTA PcP **PcP 16 44 41.4 +0.1**
GTA S **S 16 46 17.4 +5.1**
GTA ScS **ScS 16 52 15.1 +2.1**
GTA pmax pmax
comp=Z,36nm,6.4s
GTA LR LR
comp=Z,680nm,17.9s
GTA LR LR
comp=Z,590nm,20.6s
GTA LR LR
comp=Z,1μm,18.2s
JAY Jayapura 28.32 132 LR LR 16 50 40.1
comp=Z,302nm,21.1s,baz=296,slow=32
JAY Jayapura 28.32 132 P **P 16 41 28.3 -0.9**
USRK Ussuriysk Ar. 28.77 18 P **P 16 41 33.2 +0.5**
comp=Z,5.5nm,0.9s,baz=211,slow=11,SNR=7.6
LSA Lhasa 29.13 301 P **P 16 41 38.7 +2.0**
LSA S **S 16 46 26.4 -0.8**
LSA pmax pmax
comp=Z,26nm,1.1s
LSA LR LR
comp=Z,2μm,17.7s
LSA LR LR
comp=Z,1μm,17.8s
LSA LR LR
comp=Z,2μm,16.4s
LSA Lhasa 29.13 301 *e*P **P 16 41 37.1 +0.4**
comp=Z,16nm,1.1s
LSA Lhasa 29.13 301 *e*P **P 16 41 37.1 +0.4**
LSA pmax pmax
comp=Z,15nm,1.1s
ODAN Odare 31.61 293 *e*P **P 16 41 59.8 +1.4**
comp=Z,20nm,0.5s
MTN Manton Dam 31.82 159 P **P 16 41 57.5 -2.4**
baz=32,SNR=4.1
HIA Hailar 31.99 360⇑ *e*P **P 16 42 01.7 +0.5**
HIA pmax pmax
comp=Z,26nm,0.6s
KDU Kakadu 32.16 157 P **P 16 42 00.4 -2.6**
baz=32,SNR=3.8
RAMN Ramite 32.32 293 *e*P **P 16 42 06.2 +1.5**
comp=Z,25nm,0.6s
ULN Ulaanbaatar 32.37 344 *e*P **P 16 42 03.7 -1.0**
comp=Z,5.4nm,1.0s
ULN Ulaanbaatar 32.37 344⇑ *e*P **P 16 42 05.7 +0.9**
ULN pmax pmax
comp=Z,4.0nm,1.3s
SONA0 Songino Array 32.53 343 *e*P **P 16 42 07.4 +1.3**
SONA0 *e*PcP **PcP 16 44 52.2 -0.1**
SONM Songino Array 32.53 343 P **P 16 42 07.4 +1.3**
comp=Z,3.3nm,0.7s,baz=163,slow=10,SNR=20
SONM PcP **PcP 16 44 52.2 -0.1**
comp=Z,0.6nm,0.5s,baz=165,slow=2.6,SNR=3.5
SONM ScP **ScP 16 48 31.0 -3.0**
comp=Z,0.9nm,0.9s,baz=132,slow=2.2,SNR=4.0
SONM LR LR 16 56 12.3
comp=Z,413nm,18.0s,baz=151,slow=38
JIRN Jiri 32.82 295 *e*P **P 16 42 10.5 +1.4**
comp=Z,32nm,0.6s
ASAJ Asahikawa 32.94 31 P **P 16 42 08.9 -0.6**
comp=Z,5.2nm,0.6s,baz=70,slow=6.5,SNR=7.7
ASAJ Asahikawa 32.94 31 P **P 16 42 09.0 -0.6**
GUN Gumba 33.13 295 *e*P **P 16 42 13.0 +1.1**
comp=Z,41nm,0.8s
KLR Kul'dur 33.35 14 P **P 16 42 13.5 +0.4**
comp=Z,19nm,0.8s,baz=224,slow=7.1,SNR=62
KLR PcP **PcP 16 44 54.2 -0.2**
comp=Z,2.2nm,0.6s,baz=183,slow=3.1,SNR=4.5
KLR LR LR 16 56 32.9
comp=Z,418nm,20.3s,baz=178,slow=38
KLR Kul'dur 33.35 14*c i*P **P 16 42 13.1 0.0**
KLR pmax pmax
comp=Z,28nm,0.9s
PKI Pulchoki 33.48 294 *e*P **P 16 42 15.5 +0.6**
comp=Z,12nm,0.7s
PKIN Phulchoki 33.49 294 *e*P **P 16 42 15.2 +0.3**
comp=Z,6.8nm,0.6s
KKN Kakani 33.63 294 *e*P **P 16 42 16.9 +0.8**
comp=Z,19nm,0.8s
DMN Daman 33.75 294 *e*P **P 16 42 17.9 +0.7**
comp=Z,29nm,0.9s
DANN Dangsing 35.06 295 *e*P **P 16 42 29.2 +0.7**
comp=Z,48nm,0.7s
KOLN Koldanda 35.09 294 *e*P **P 16 42 29.2 +0.5**
comp=Z,7.8nm,0.7s
YSS Yuzh-Sakhalins 35.14 27 *e*P **P 16 42 28.5 -0.1**
comp=Z,18nm,0.9s
YSS Yuzh-Sakhalins 35.14 27 *e*P **P 16 42 29.5 +0.9**
YSS pmax pmax
comp=Z,30nm,1.0s
FITZ Fitzroy Crossi 35.51 171 P **P 16 42 29.7 -2.4**
comp=Z,6.6nm,0.7s,baz=345,slow=4.5,SNR=10
FITZ Fitzroy Crossi 35.51 171 *e*P **P 16 42 29.7 -2.4**
comp=Z,8.1nm,0.8s
FITZ Fitzroy Crossi 35.51 171 P **P 16 42 30.0 -2.0**
baz=36,SNR=9.1
PYUN Piuthan 35.68 294 *e*P **P 16 42 34.7 +0.9**
comp=Z,60nm,1.0s
ZAK Zakamensk 35.72 342 *e*P **P 16 42 31.0 -2.7**
ZAK pmax pmax
comp=Z,4.0nm,0.9s
TLY Talaya 36.77 343‖ *e*P **P 16 42 43.2 +0.7**
ZEA Zeya 36.91 7 *e*P **P 16 42 44.0 +0.4**
ZEA pmax pmax
comp=Z,29nm,1.0s
ZEA MLR MLR
comp=Z,800nm,16.0s
ZEA MLR MLR
comp=N,800nm,16.0s
MOY Mondy 37.55 341 *e*P **P 16 42 50.8 +1.5**
MOY pmax pmax
comp=Z,19nm,2.2s

WMQ Urumqi 38.03 321 *e*P **P 16 42 57.2 +3.8**
WMQ pP sP 16 43 07.0 +1.3
WMQ pmax pmax
comp=Z,41nm,0.7s
WMQ pmax pmax
comp=Z,220nm,3.9s
WMQ LR LR
comp=Z,1μm,15.1s
WMQ LR LR
comp=Z,1μm,13.9s
WMQ LR LR
comp=Z,2μm,16.1s
COEN Coen 38.51 142 P **P 16 42 54.2 -3.4**
baz=38,SNR=4.2
WRAB Tennant Creek 39.51 158 *e*P **P 16 43 02.9 -3.0**
comp=Z,10nm,0.6s
WRAB Tennant Creek 39.51 158⇓ *i*P **P 16 43 03.6 -2.3**
WRAB pmax pmax
comp=Z,27nm,2.5s
WR1 Warramunga Arr 39.51 158 *e*P **P 16 43 03.1 -2.9**
WRA Warramunga Arr 39.51 158 P **P 16 43 03.1 -2.9**
comp=Z,9.8nm,0.7s,baz=345,slow=12,SNR=52
WB2 Warramunga Arr 39.52 158 *e*P **P 16 43 03.5 -2.5**
comp=Z,12nm,0.8s
BOD Bodaibo 40.80 355 *e*P **P 16 43 16.8 +0.6**
BOD pmax pmax
comp=Z,8.0nm,1.3s
QIS Mount Isa 42.18 152 P **P 16 43 25.1 -2.8**
baz=42,SNR=7.4
WRKA Warakurna 42.75 169 P **P 16 43 30.3 -2.3**
baz=43,SNR=23
AS31 Alice Springs 42.83 161 *e*P **P 16 43 31.2 -2.0**
comp=Z,3.3nm,0.6s
ASAR Alice Springs 42.83 161 P **P 16 43 31.1 -2.1**
comp=Z,9.7nm,0.7s,baz=341,slow=6.7,SNR=87
ASAR LR LR 17 04 22.3
comp=Z,107nm,21.9s,baz=38,slow=40
MK31 Makanchi Array 42.84 322 *e*P **P 16 43 33.7 +0.6**
comp=Z,18nm,1.1s
MK31 Makanchi Array 42.84 322 *e*P **P 16 43 33.7 +0.6**
MK31 pmax pmax
comp=Z,18nm,1.1s
MKAR Makanchi Array 42.84 322 P **P 16 43 34.8 +1.7**
comp=Z,3.9nm,0.9s,baz=122,slow=9.3,SNR=23
MKAR PcP **PcP 16 45 23.8 -0.1**
comp=Z,5.0nm,0.7s,baz=96,slow=4.2,SNR=7.9
MKAR LR LR 17 02 45.7
comp=Z,485nm,18.8s,baz=110,slow=38
NIL Nilore 44.87 301 *e*P **P 16 43 51.1 +1.6**
comp=Z,24nm,0.6s
NIL Nilore 44.87 301 *e*P **P 16 43 51.2 +1.6**
NIL pmax pmax
comp=Z,25nm,0.6s
CTA Charters Tower 45.16 144 P **P 16 43 50.2 -1.7**
comp=Z,12nm,0.8s,baz=331,slow=9.8,SNR=12
YAK Yakutsk 45.31 6 *e*P **P 16 43 51.2 -1.3**
comp=Z,106nm,0.9s
YAK Yakutsk 45.31 6 *e*P **P 16 43 52.2 -0.4**
YAK *e*S **S 16 50 24.4 -6.4**
ZAA0 Zalesovo Array 45.65 332 *e*P **P 16 43 55.7 +0.3**
comp=Z,6.2nm,0.8s
ZALV Zalesovo Beam 45.65 332 P **P 16 43 55.8 +0.3**
comp=Z,3.4nm,0.7s,baz=118,slow=6.7,SNR=12
ZALV PcP **PcP 16 45 31.9 -1.3**
comp=Z,3.0nm,0.6s,baz=118,slow=4.9,SNR=5.5
AAK Ala-Archa 46.14 313⇑ *e*P **P 16 44 01.1 +1.4**
AAK pmax pmax
comp=Z,2.0nm,0.9s
MORW Morawa 46.15 185 P **P 16 43 58.7 -0.9**
baz=46,SNR=7.3
PETK Petropavlovsk- 46.36 31 P **P 16 44 00.2 -0.8**
comp=Z,6.9nm,0.8s,baz=215,slow=4.1,SNR=11
PETK PcP **PcP 16 45 35.3 -0.5**
comp=Z,6.5nm,0.8s,baz=186,slow=2.9,SNR=4.9
PET Petropavlovsk 46.77 31 *i*P **P 16 44 03.4 -0.9**
PET pmax pmax
comp=Z,19nm,1.6s
KURK Kurchatov 46.92 325 *e*P **P 16 44 06.4 +0.9**
comp=Z,15nm,0.7s
KURK Kurchatov 46.92 325 *e*P **P 16 44 06.4 +0.9**
KURK pmax pmax
comp=Z,15nm,0.7s
NVS Novosibirsk 46.94 332⇑ *i*P **P 16 44 06.3 +0.8**
NVS pmax pmax
comp=N,10.0nm,1.7s
NVS pmax pmax
comp=E,21nm,1.7s
NVS pmax pmax
comp=Z,19nm,1.7s
MA2 Magadan 47.87 21 P **P 16 44 12.0 -0.7**
comp=Z,17nm,0.9s,baz=205,slow=7.5,SNR=11
MA2 Magadan 47.87 21 *e*P **P 16 44 12.4 -0.4**
comp=Z,16nm,0.9s
MA2 Magadan 47.87 21⇑ *i*P **P 16 44 12.2 -0.5**
MA2 pmax pmax
comp=Z,18nm,1.0s
KMBL Kambalda 48.32 178 P **P 16 44 15.0 -1.4**
baz=48,SNR=11
FORT Forrest 48.33 171 P **P 16 44 15.0 -1.5**
baz=48,SNR=8.6
KLBR Kellerberrin 48.55 183 P **P 16 44 17.1 -1.1**
baz=49,SNR=14
NWAO Narrogin (SRO) 49.91 183 P **P 16 44 27.9 -0.7**
comp=Z,25nm,0.8s,baz=4.1,slow=6.9,SNR=11
NWAO Narrogin (SRO) 49.91 183 *e*P **P 16 44 27.9 -0.7**
comp=Z,28nm,0.8s
NWAO Narrogin (SRO) 49.91 183 P **P 16 44 28.0 -0.7**
baz=50,SNR=8.6
NWAO Narrogin (SRO) 49.91 183 *e*P **P 16 44 27.9 -0.7**
NWAO pmax pmax
comp=Z,28nm,0.8s
SEY Seymchan 50.92 18 P **P 16 44 36.5 +0.6**
comp=Z,12nm,0.7s,baz=217,slow=5.1,SNR=39
RKGY Rocky Gully 51.59 183 P **P 16 44 41.1 -0.2**
baz=52,SNR=12
EIDS Eidsvold 52.04 144 *e*P **P 16 44 42.7 -2.1**
comp=Z,10nm,0.8s
EIDS Eidsvold 52.04 144 P **P 16 44 42.5 -2.3**
baz=52,SNR=4.2
BBOO Buckleboo 52.05 163 P **P 16 44 42.2 -2.6**
baz=52,SNR=12
BRVK Borovoye 52.59 325 *e*P **P 16 44 49.3 +0.8**
comp=Z,8.8nm,0.8s
BRVK Borovoye 52.59 325*c i*P **P 16 44 49.4 +0.8**
BRVK pmax pmax
comp=Z,10.0nm,1.5s
STKA Stephens Creek 53.02 157 P **P 16 44 50.1 -1.9**
comp=Z,10nm,0.8s,baz=342,slow=9.1,SNR=12
STKA Stephens Creek 53.02 157 *e*P **P 16 44 50.9 -1.1**
comp=Z,2.5nm,0.9s
STKA Stephens Creek 53.02 157 P **P 16 44 50.0 -2.0**
baz=53,SNR=5.0
STKA Stephens Creek 53.02 157 *e*P **P 16 44 50.9 -1.1**
STKA pmax pmax
comp=Z,3.0nm,0.9s
HTT Hallett 53.50 160 P **P 16 44 53.9 -1.6**
baz=54,SNR=4.0
CMSA Cobar Meteorol 54.38 153 P **P 16 45 00.8 -1.2**
baz=54,SNR=7.9
TIXI Tiksi 54.70 3 *e*P **P 16 45 02.8 -1.0**
comp=Z,8.4nm,0.8s
TIXI Tiksi 54.70 3⇑ *i*P **P 16 45 02.7 -1.0**
TIXI pmax pmax
comp=Z,9.0nm,0.8s
NRIK Noril'sk 55.87 347 P **P 16 45 12.3 +0.2**
comp=Z,16nm,0.7s,baz=131,slow=7.1,SNR=23
GEYT Alibeck 57.56 304 P **P 16 45 26.5 +1.7**
comp=Z,4.0nm,0.7s,baz=147,slow=6.2,SNR=12
GEYT LR LR 17 13 38.2
comp=Z,358nm,18.1s,baz=40,slow=40
GYA0B ALIBECK ARRAY 57.56 304 *e*P **P 16 45 26.6 +1.8**
comp=Z,31nm,0.9s
ABKAR Akbulak array 57.66 318 *e*P **P 16 45 25.9 +0.6**
comp=Z,16nm,0.6s
BILL Bilibino 58.63 19 *e*P **P 16 45 31.0 -0.7**
comp=Z,35nm,0.6s
BILL Bilibino 58.63 19*c i*P **P 16 45 31.5 -0.2**
BILL *e*S **S 16 53 33.3 -0.3**
BILL pmax pmax
comp=Z,34nm,0.7s
BILL MLR MLR
comp=Z,174nm,21.0s
SVE Sverdlovsk 59.10 327⇑ *e*P **P 16 45 36.0 +0.8**
SVE pmax pmax
comp=Z,15nm,0.8s
SVE MLR MLR
comp=Z,334nm,16.0s

TOO	Toolangi	59.54 157	P	P	16 45 37.4	-1.0
	baz=60,SNR=7.7					
ARU	Arti	60.10 326	eP	P	16 45 41.8	-0.3
	comp=Z,12nm,0.8s					
ARU	Arti	60.10 326	c iP	P	16 45 41.9	-0.2
ARU			*PP	pwP	16 45 51.9	-2.1
ARU			S	S	16 53 54.6	+1.6
ARU			SS	SS	16 57 49.0	-0.9
ARU			pmax	pmax		
	comp=Z,7.0nm,0.7s					
ARU			MLR	MLR		
	comp=Z,270nm,16.0s					
KIRV	Kirov	65.36 327	P	P	16 46 16.8	-0.2
	comp=Z,20nm,0.7s,baz=102,slow=1.0,SNR=7.7					
AKT	Akhty	65.61 308	eP	P	16 46 19.6	+0.5
AKT			e		16 46 49.6	
AKT			pmax	pmax		
	comp=Z,21nm,0.7s					
GNI	Garni	67.94 307⇓	eP	P	16 46 36.3	+2.2
GNI			pmax	pmax		
	comp=Z,20nm,1.4s					
ZEI	Tsey	68.39 310	eP	P	16 46 36.7	-0.2
ZEI			pmax	pmax		
	comp=Z,12nm,0.7s					
AKH	Akhalkalaki	68.79 308⇑	iP	P	16 46 41.0	+1.5
AKH	Akhalkalaki	68.79 308	P	P	16 46 40.9	+1.5
KIV	Kislovodsk	69.19 311⇑	iP	P	16 46 42.5	+0.7
KIV	Kislovodsk	69.19 311	eP	P	16 46 42.4	+0.7
KIV			MLR	MLR		
	comp=Z,721nm,17.0s					
NEY	Neytrino	69.22 310⇓	eP	P	16 46 43.6	+1.5
NEY			pmax	pmax		
	comp=Z,1.0nm,0.8s					
VRH	Novokhopyorsk	69.46 319	eP	P	16 46 42.7	-0.4
VRH			e*PP	pwP	16 46 52.8	-2.4
VRH			pmax	pmax		
	comp=Z,20nm,0.6s					
KLMR	Klimovskoe	70.50 329	eP	P	16 46 47.4	-1.9
KLMR			pmax	pmax		
	comp=Z,21nm,1.5s					
VSR	Storozhevoye	71.06 319	eP	P	16 46 51.6	-1.3
VSR			e*PP	pP	16 47 01.6	-0.6
VSR			pmax	pmax		
	comp=Z,7.0nm,0.6s					
LPSR	Galich'ya Gora	71.12 320	eP	P	16 46 53.0	-0.2
LPSR			e*PP	pwP	16 47 03.4	-2.0
LPSR			pmax	pmax		
	comp=Z,10.0nm,0.7s					
TMCR	Tamitsa	71.16 333	eP	P	16 46 52.7	-0.6
TMCR			pmax	pmax		
	comp=Z,15nm,0.8s					
OBN	Obninsk	72.32 323⇑	iP	P	16 46 59.3	-1.1
OBN	Obninsk	72.32 323⇑	eP	P	16 46 59.8	-0.6
OBN			eS	S	16 56 21.0	-0.5
OBN			eSS	SS	17 01 06.7	+7.2
OBN			pmax	pmax		
	comp=Z,14nm,1.3s					
OBN			MLR	MLR		
	comp=Z,181nm,17.0s					
LVZ	Lovozero	72.45 337⇓	eP	P	16 47 00.7	-0.4
LVZ			pmax	pmax		
	comp=Z,5.0nm,0.8s					
KDAK	Kodiak Island	74.28 34	eP	P	16 47 10.9	-1.0
	comp=Z,4.8nm,0.8s					
KDAK	Kodiak Island	74.28 34	eP	P	16 47 10.9	-1.0
KDAK			pmax	pmax		
	comp=Z,5.0nm,0.8s					
TOLK	Toolik Lake Re	74.30 22	eP	P	16 47 11.2	-0.8
	comp=Z,5.4nm,1.0s					
MSF	Maaselka	74.84 335	P	P	16 47 15.6	+0.6
MSF			pmax	pmax		
	comp=Z,19nm,0.7s					
COLA	College	75.51 26⇓	eP	P	16 47 18.7	-0.2
COLA			pmax	pmax		
	comp=Z,5.0nm,0.9s					
CCB	Clear Creek Bu	75.57 26	eP	P	16 47 18.8	-0.5
	comp=Z,2.5nm,0.8s					
ARCES	ARCESS Array B	75.59 339	P	P	16 47 19.4	+0.1
	comp=Z,9.0nm,0.3s,baz=66,slow=6.8,SNR=13					
SML	Sawmill	75.81 29	eP	P	16 47 19.8	-1.0
	comp=Z,21nm,1.4s					
SML	Sawmill	75.81 29	eP	P	16 47 19.8	-1.0
SML			pmax	pmax		
	comp=Z,21nm,1.4s					
ILAR	Eielson Array	75.94 26	P	P	16 47 19.8	-1.6
	comp=Z,1.6nm,0.8s,baz=250,slow=4.6,SNR=13					
HDA	Harding Lake	75.98 27	eP	P	16 47 19.9	-1.7
	comp=Z,3.2nm,0.7s					
SPA0	Spitsbergen Ar	76.04 348	eP	P	16 47 22.1	+0.2
	comp=Z,29nm,0.8s					
SPITS	Spitsbergen Ar	76.04 348	P	P	16 47 22.0	+0.2
	comp=Z,22nm,0.6s,baz=84,slow=8.8,SNR=61					
BR101	Keskin Array S	76.45 308	eP	P	16 47 24.5	-0.5
BRTR	Keskin Array B	76.45 308	P	P	16 47 24.5	-0.5
	comp=Z,0.7nm,0.7s,baz=116,slow=6.3,SNR=4.3					
BRTR	Keskin Array B	76.45 308	i P	P	16 47 26.8	+1.8
BRTR			pmax	pmax		
	comp=Z,1.0nm,0.6s					
SUF	Sumiainen	76.62 332	P	P	16 47 25.7	+0.5
SUF			pmax	pmax		
	comp=Z,20nm,0.8s					
KBS	Kingsbay	76.64 349	c iP	P	16 47 24.8	-0.3
KBS			pmax	pmax		
	comp=Z,33nm,0.8s					
FINES	FINESS Array B	76.91 331	P	P	16 47 26.7	-0.2
	comp=Z,6.9nm,0.6s,baz=48,slow=6.0,SNR=37					
VSU	Vasula	77.19 327	c iP	P	16 47 28.4	-0.2
VSU			pmax	pmax		
	comp=Z,53nm,1.0s					
AKASG	Malin Array Be	77.36 319	P	P	16 47 28.6	-1.0
	comp=Z,1.2nm,0.3s,baz=45,slow=4.1,SNR=6.4					
AKBB	Malin Array Si	77.36 319	eP	P	16 47 27.9	-1.7
	comp=Z,7.1nm,0.8s					
AKBB	Malin Array Si	77.36 319	eP	P	16 47 27.9	-1.7
AKBB			pmax	pmax		
	comp=Z,7.0nm,0.8s					
KIEV	Kiev	77.37 319⇑	iP	P	16 47 28.9	-0.8
KIEV	Kiev	77.37 319⇑	eP	P	16 47 28.4	-1.3
KIEV			pmax	pmax		
	comp=Z,6.0nm,0.8s					
VAF	Ylistaro	78.10 332	P	P	16 47 34.2	+0.7
VAF			pmax	pmax		
	comp=Z,24nm,0.7s					
EGAK	Eagle	78.33 26	eP	P	16 47 33.3	-1.5
	comp=Z,3.6nm,0.9s					
TLCR		78.81 314⇓	iP	P	16 47 37.4	-0.4
TLCR		78.81 314	P	P	16 47 37.3	-0.5
CFR	Carcaliu	79.27 314⇓	iP	P	16 47 39.6	-0.8
PETR	Petresti	79.76 315⇓	iP	P	16 47 44.0	+1.0
TESR	Tescani	79.96 316⇑	iP	P	16 47 44.0	-0.1
VRI	Vrincioaia	80.07 315⇑	iP	P	16 47 45.2	+0.5
VRI	Vrincioaia	80.07 315	P	P	16 47 45.1	+0.4
INK	Inuvik	80.11 21	P	P	16 47 43.6	-0.8
	comp=Z,5.3nm,0.8s,baz=283,slow=4.8,SNR=17					
PLOR	Plostina	80.13 315⇓	iP	P	16 47 45.5	+0.4
BIZ	Bicaz	80.22 316⇓	iP	P	16 47 45.4	-0.1
BURAR	Bucovina Array	80.63 317⇑	iP	P	16 47 47.9	+0.1
SULR		80.69 314⇓	iP	P	16 47 48.9	+0.9
MLR	Muntele Rosu	80.69 315	eP	P	16 47 47.8	-0.4
	comp=Z,8.9nm,0.7s					
MLR	Muntele Rosu	80.69 315⇓	iP	P	16 47 49.0	+0.8
MLR	Muntele Rosu	80.69 315	eP	P	16 47 47.8	-0.4
MLR			pmax	pmax		
	comp=Z,9.0nm,0.7s					
HYT	Haines Junctio	81.11 29	eP	P	16 47 48.7	-1.5
	comp=Z,5.0nm,1.0s					
VOIR		81.32 315⇑	iP	P	16 47 50.8	-0.7
KOLS	Kolonicke sedl	82.16 319	eP	P	16 47 59.0	+3.2
KOLS	Kolonicke sedl	82.16 319	eP	P	16 47 59.0	+3.2
DRGR		82.50 317⇓	iP	P	16 47 57.9	+0.2
DRGR		82.50 317	P	P	16 47 57.9	+0.2
DAG	Danmarks Havn	83.06 351⇑	iP	P	16 47 58.9	-1.0
DAG			pmax	pmax		
	comp=Z,11nm,0.8s					
DAG	Danmarks Havn	83.06 351⇑	iP	P	16 47 58.9	-1.0
	comp=Z,15nm,0.8s					
DAG			i		16 48 08.1	
OJC	Ojcow	83.29 320	eP	P	16 48 01.5	-0.1
	comp=Z,7.6nm,0.7s					
OJC	Ojcow	83.29 320	eP	P	16 48 01.5	-0.1
OJC			pmax	pmax		
	comp=Z,8.0nm,0.7s					
VTS	Vitosha	83.37 312⇓	iP	P	16 48 01.6	-0.8
KMBO	Kilima Mbogo	83.37 267	P	P	16 48 04.1	+1.1
	comp=Z,0.6nm,0.3s,baz=51,slow=8.2,SNR=3.6					
KMBO	Kilima Mbogo	83.37 267	eP	P	16 48 02.8	-0.2
	comp=Z,4.9nm,1.0s					
KMBO	Kilima Mbogo	83.37 267	eP	P	16 48 02.8	-0.2
KMBO			pmax	pmax		
	comp=Z,5.0nm,1.0s					
KECS	Kecovo	83.42 319	eP	P	16 48 02.6	+0.3
KECS	Kecovo	83.42 319	eP	P	16 48 02.6	+0.3
MDVR	Moldovita	83.77 315⇓	iP	P	16 48 03.3	-1.0
NB2	NORSAR Subarra	83.85 332	P	P	16 48 03.1	-1.2
	comp=Z,7.4nm,0.6s,baz=64,slow=4.8					
NB2	NORSAR Subarra	83.85 332	P	P	16 48 03.1	-1.2
	baz=64,slow=4.8					
NOA	NORSAR Array B	83.85 332	P	P	16 48 03.1	-1.2
	comp=Z,6.9nm,0.6s,baz=65,slow=4.8,SNR=63					
NOA			LR	LR	17 28 15.5	
	comp=Z,296nm,18.1s,baz=45,slow=38					
VYHS	Vyhne	84.45 319	eP	P	16 48 10.1	+2.5
VYHS	Vyhne	84.45 319	eP	P	16 48 10.1	+2.5
MORC	Moravsky Berou	84.81 321⇓	iP	P	16 48 09.3	-0.1
MORC	Moravsky Berou	84.81 321	eP	P	16 48 09.3	-0.1
MORC			e		16 48 20.1	
JAVC	Velka Javorina	85.06 320	eP	P	16 48 11.9	+1.2
JAVC			e		16 48 22.7	
OSTC	Ostas	85.33 322	eP	P	16 48 12.3	+0.3
DPC	Dobruska-Polom	85.34 321	eP	P	16 48 12.5	+0.4
DPC			e		16 48 23.1	
DPC	Dobruska-Polom	85.34 321	eP	P	16 48 12.5	+0.4
DPC			epP	pwP	16 48 23.1	-1.5
CHVC	Chvalec	85.42 322	eP	P	16 48 12.4	0.0
CHVC			ex	x	16 48 23.5	
UPC	Upice	85.47 322	eP	P	16 48 12.9	+0.2
UPC			e		16 48 23.3	
UPC	Upice	85.47 322	eP	P	16 48 12.9	+0.2
UPC			epP	pwP	16 48 23.3	-1.8
DLBC	Dease Lake	85.53 30	P	P	16 48 12.9	0.0
	comp=Z,5.0nm,0.9s,baz=304,slow=6.0,SNR=8.9					
VRAC	Vranov	85.56 320⇑	iP	P	16 48 13.6	+0.5
VRAC	Vranov	85.56 320	eP	P	16 48 13.4	+0.3
VRAC			e		16 48 24.0	
RES	Resolute Bay	85.71 9	P	P	16 48 12.8	-0.5
	comp=Z,6.7nm,0.8s,baz=305,slow=5.1,SNR=18					
KRUC	Moravsky	85.77 320	eP	P	16 48 13.9	-0.3
KRUC			e		16 48 25.0	
CONA	Conrad Observa	86.52 319	i PcP	P	16 48 18.1	+0.1
	comp=Z,4.4nm,1.6s					
PRU	Pruhonice	86.54 321	eP	P	16 48 18.1	+0.1
PRU	Pruhonice	86.54 321	eP	P	16 48 18.1	+0.1
BRG	Berggiesshubel	86.55 322	eP	P	16 48 17.9	-0.1
	comp=Z,5.0nm,1.0s					
BRG			e		16 48 28.1	
	comp=Z,4.5nm,0.9s					
BRG	Berggiesshubel	86.55 322	eP	P	16 48 17.9	-0.1
BRG			pmax	pmax		
	comp=Z,5.0nm,1.0s					
CLL	Collm	86.92 323	i P	P	16 48 18.9	-0.9
	comp=Z,4.0nm,0.8s					
CLL			i (pP)	pwP	16 48 29.9	-2.4
	comp=Z,4.0nm,0.6s					
CLL			i sP	sP	16 48 37.2	+4.1
CLL	Collm	86.92 323	i P	P	16 48 18.9	-0.9
CLL			i		16 48 29.9	
CLL			pmax	pmax		
	comp=Z,4.0nm,0.8s					
ARSA	Arzberg	86.98 319	i PcP	P	16 48 20.3	+0.1
	comp=Z,2.5nm,0.8s					
KHC	Kasperske Hory	87.45 321	eP	P	16 48 22.5	0.0
KHC	Kasperske Hory	87.45 321	eP	P	16 48 22.5	0.0
GERES	GERESS Array B	87.49 321	P	P	16 48 22.7	-0.1
	comp=Z,0.9nm,0.7s,baz=75,slow=5.7,SNR=8.5					
SOKA	Soboth	87.51 318	ePcP	P	16 48 23.4	+0.5
	comp=Z,3.4nm,1.2s					
MOA	Molln	87.54 320	i PcP	P	16 48 23.0	+0.1
	comp=Z,7.6nm,1.6s					
KBA	Koelnbreinsper	88.42 319	P	P	16 48 26.4	-0.9
	comp=Z,2.5nm,0.7s					
WTTA	Wattenberg	89.40 320	i PcP	P	16 48 31.4	-0.5
	comp=Z,7.8nm,0.6s					
WATA	Walderalm	89.41 320	i P	P	16 48 30.5	-1.4
	comp=Z,5.9nm,0.7s					
SQTA	Sankt Quirin	89.69 320	i PcP	P	16 48 32.7	-0.5
	comp=Z,5.1nm,0.7s					
MOTA	Moosalm	89.70 320	i P	P	16 48 32.1	-1.2
	comp=Z,2.7nm,0.5s					
YKA	Yellowknife Ar	89.83 22	P	P	16 48 33.2	-0.1
	comp=Z,3.7nm,0.7s,baz=311,slow=4.5,SNR=43					
FETA	Feichten	90.07 320	i PcP	P	16 48 34.6	-0.4
	comp=Z,4.9nm,0.8s					
VNDA	Vanda	97.58 172	P	P	16 49 08.0	-0.5
	comp=Z,0.9nm,0.9s,baz=303,slow=7.1,SNR=6.2					
VNDA	Vanda	97.58 172	eP	P	16 49 08.0	-0.5
NVAR	Mina Array Bea	102.30 43	P	Pdif	16 49 30.5	-0.3
	comp=Z,0.9nm,0.7s,baz=280,slow=5.9,SNR=7.3					
LTX	Lajitas	117.44 43	ePKPdf	PKPdf	16 54 21.2	0.0
LTX	Lajitas	117.44 43	ePKIKP	PKPdf	16 54 21.2	0.0
TXAR	Lajitas Array	117.44 43	PKP	PKPdf	16 54 21.2	0.0
	comp=Z,1.7nm,0.6s,baz=262,slow=0.6,SNR=27					
EFI	East Falkland	145.56 182	ePKPdf	PKPab	16 55 13.6	+0.4
EFI	East Falkland	145.56 182	ePKIKP	PKPab	16 55 13.6	+0.4
CODC	Agustn Codazz	149.96 27	eP	PKPdf	16 55 19.2	-2.1
SMLC	San Martn de	150.68 29	eP	PKPbc	16 55 27.5	-0.4
OCAC	Ocana	151.52 28	eP	PKPbc	16 55 30.2	+0.2
SDV	Santo Domingo	152.05 23	ePKPbc	PKPbc	16 55 30.8	-0.5
PTBC	PUERTO BERRIO	152.44 32	eP	PKPbc	16 55 31.2	-0.8
GUY2C	Guyana, Caldas	153.06 36	eP	PKPbc	16 55 33.6	-0.4
YOTC	Yotoco, Valle	153.50 39	eP	PKPbc	16 55 32.7	-1.8

ISC 01 16:36:36.1±2.4, 49°.8N±0°.1×18°.47E±0°.07, h10km±15km, n6, σ0°.20/11, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	Moravsky Berou	0.60	267	ePG	Pg	16 36 47.6	-0.1
MORC				eSG	Sg	16 36 55.7	+0.1
LANS	Liptovska Anna	0.93	135	ePG	Pg	16 36 54.0	0.0
LANS				eSG	Sb	16 37 06.8	+0.2
JAVC	Velka Javorina	1.08	209	ePG	Pn	16 36 57.2	-0.1
VRAC	Vranov	1.32	248	ePG	Pn	16 37 00.4	-0.1
VRAC				eSG	Sg	16 37 18.6	+0.1
VYHS	Vyhne	1.34	169	ePG	Pn	16 37 00.5	-0.3
VYHS				eSG	Sg	16 37 19.2	0.0
KRUC	Moravsky	1.55	242	ePG	Pn	16 37 03.9	+0.3
KRUC				eSG	Sg	16 37 25.8	0.0

*ISK **01** 16:37:36.7, 40°.40N×34°.96E, h2km, ML2.1/7*
*ISCJB **01** 16:37:37.3±0.7, 40°.41N±0°.04×34°.94E±0°.05, h7km±7km,*
Error ellipse: s-maj=7.7km s-min=5.2km az=44.0
*DDA **01** 16:37:37.1, 40°.41N×34°.92E, h7km±1km, ML2.8*

ISC 01 16:37:37.9±1.0, 40°.40N±0°.04×34°.91E±0°.04, h14km±8km, n12, σ0°.58/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COAL	Corum-Alaca	0.15	158	i P	Pg	16 37 41.7	-0.1
COAL				i S	Sg	16 37 44.6	+0.1
COAL				IAML_P			
	comp=Z,5μm,0.1s						
CORM	Corum	0.31	224	PG	Pg	16 37 44.2	-0.1
CORM				SG	Sb	16 37 49.8	-0.4
YOZ	Yozgat	0.82	157	PG	Pg	16 37 53.1	-0.7
CDAG	Cicekdag	0.88	208	i P	Pg	16 37 54.5	-0.4
CDAG				i S	Sb	16 38 07.0	+0.4
CDAG				IAML_P			
	comp=Z,695nm,0.1s						
HAVZ	Havza	0.91	42	i P	Pg	16 37 54.9	-0.7
HAVZ				i S	Sb	16 38 08.2	+0.6
HAVZ				IAML_P			
	comp=Z,1μm,0.1s						
KVT	Kavak	1.10	51	PG	Pb	16 37 57.9	-0.8
ILGA	Ilgaz	1.12	306	i P	Pb	16 37 59.1	0.0
ILGA				i S	Sn	16 38 14.8	+0.1
ILGA				IAML_P			
	comp=Z,858nm,0.2s						
ELDT	Eldivan	1.14	275	i P	Pb	16 37 58.4	-1.1
ELDT				IAML_P			
	comp=Z,392nm,0.2s						
DIKM	Dikmen	1.28	12	PN	Pb	16 38 01.7	0.0
DIKM				SN	Sg	16 38 19.9	+0.8
SNOP	Sinop	1.63	8	PN	Pb	16 38 07.6	-0.2
SVSK	Karacayir	1.67	106	PN	Pn	16 38 07.2	+0.5
YAYX	Yaylak	1.69	211	PN	Pb	16 38 09.2	+0.4

*IDC **01** 16:41:05.5±11.0, 16°.03S×174°.96W, h244km±121km,*
mb3.5/7, mb1 3.8/7, mb1mx3.4/48, mbtmp4.1/7, Error
ellipse: s-maj=139.7km s-min=25.0km az=155.0
*ISCJB **01** 16:41:06.8±2.4, 16°.3S±0°.8×174°.9W±0°.5, h278km, mb3.7/7,*
Error ellipse: s-maj=128.6km s-min=19.2km az=150.6

ISC 01 16:41:08.2±2.9, 16°.2S±0°.9×174°.9W±0°.5, h278km, n9, σ0°.79/9, mb3.6/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.10	258	P	P	16 47 52.7	0.0
	3.5nm,0.8s,baz=67,slow=13,SNR=2.6						
WRA	Warrumunga Arr	48.30	258	P	P	16 49 21.9	-0.3
	3.2nm,0.6s,baz=87,slow=7.3,SNR=16						
ASAR	Alice Springs	48.53	253	P	P	16 49 23.8	-0.2
	17nm,0.6s,baz=86,slow=7.9,SNR=185						
NVAR	Mina Array Bea	75.88	43	P	P	16 52 25.9	+1.2
	0.4nm,0.7s,baz=233,slow=5.5,SNR=3.8						
ILAR	Eielson Array	83.53	12	P	P	16 53 04.0	-0.7
	0.5nm,0.5s,baz=229,slow=5.6,SNR=7.3						
PDAR	Pinedale Array	83.81	42	P	P	16 53 06.3	-0.6
	0.5nm,0.7s,baz=132,slow=2.2,SNR=4.1						
CMAR	Chiang Mai Arr	91.55	289	P	P	16 53 45.1	+1.0
	0.4nm,0.7s,baz=92,slow=0.9,SNR=4.9						
BRTR	Keskin Array B	145.88	319	PKPbc	PKPbc	17 00 15.2	-0.2
	1.0nm,0.8s,baz=66,slow=1.5,SNR=6.2						
GERES	GERESS Array B	146.72	350	PKPbc	PKPbc	17 00 17.2	-0.3
	0.3nm,0.4s,baz=60,slow=3.2,SNR=4.7						

MAN 01 16:41:42.9, 7°.53N×125°.16E, h151km, MS3.5, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	0.56	141⇑	eP	Pn	16 42 06.2	+1.5
DMPH				eS	Sn	16 42 17.6	-3.7
CGP	Cagayan de Oro	1.03	334⇑	eP	Pn	16 42 08.1	+0.1
CGP				eS	Sn	16 42 23.0	-4.2
MATI	Mati	1.23	118	eP	Pn	16 42 18.1	+8.3
DDMP	Don Marcelino,	1.52	159	eP	Pn	16 42 13.1	+0.4
IPIL	Ipil	2.58	276	eP	Pn	16 42 26.1	+1.2

KRSC 01 16:46:29.8±1.6, 48°.20N×156°.27E, h30km±27km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.49	358	eP	Pn	16 47 09.3	+1.2
SKR				S	Sn	16 47 39.4	+2.0
PAU	Pauzhetka	3.29	6	S	Sb	16 48 03.0	-3.9
KDTR	Khodutka, Kamc	3.80	17	P	Pn	16 47 30.6	+4.5
KDTR				S	Sb	16 48 15.8	-5.7
ASAK	Asacha	4.32	13	eP	Pn	16 47 38.3	+4.9
RUS	Russkaya	4.47	18	P	Pn	16 47 38.8	+3.3
RUS				S	Sn	16 48 31.5	+5.1
PET	Petropavlovsk	5.06	17	S	Sn	16 48 46.3	+5.4
DALK	Dalny	5.09	17	eP	Pn	16 47 48.5	+4.6
AVH	Avacha	5.31	16	P	Pn	16 47 52.6	+5.6
KOK	Koryaka	5.32	16	P	Pn	16 47 53.1	+6.0
SDLR	Sedlovina	5.35	17	eP	Pn	16 47 52.4	+4.8
KRX	Arik	5.38	15	P	Pn	16 47 53.4	+5.3
GNL	Ganaly	5.60	10	eP	Pn	16 47 56.2	+5.1
MKZ	Mys Kozlova	7.22	26	P	Pn	16 48 17.8	+4.7
KBTR	Krutoberegovo	8.97	24	P	Pn	16 48 42.3	+5.2
BKI	Bering	9.24	37	S	Sn	16 50 27.8	+4.2

*ISCJB **01** 16:47:41.7±0.3, 24°.66N±0°.02×121°.87E±0°.02, h74km±2km,*
Error ellipse: s-maj=3.1km s-min=2.3km az=140.7
*TAP **01** 16:47:42.0, 24°.66N×121°.84E, h71km, ML3.7, A*
*JMA **01** 16:47:42.1±0.2, 24°.61N×121°.90E, h66km±3km, M3.0*

ISC 01 16:47:41.8±1.3, 24°.67N±0°.03×121°.88E±0°.02, h75km±5km, n104, σ0°.60/188, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.07	202	P	Pn	16 47 52.7	+0.1
	baz=157						
TWC				eS	Sn	16 48 00.5	0.0
	baz=157						
ILA	Ilan	0.15	309	eP	Pn	16 47 53.5	+0.6
	baz=325						
ILA				eS	Sn	16 48 02.0	+1.1
	baz=325						
EGS		0.18	16	eP	Pn	16 47 53.5	+0.6
	baz=27						
NTC	Toucheng	0.19	347	P	Pn	16 47 53.1	+0.1
	baz=358						
NTC				eS	Sn	16 48 00.8	-0.3
	baz=358						
TWE	Neicheng	0.20	285	eP	Pn	16 47 53.2	+0.2
	baz=293						
TWE				eS	Sn	16 48 02.1	+0.9
	baz=293						
EOS1	EOS1	0.26	118	eP	Pn	16 47 53.6	+0.3
	baz=112						
EOS1				eS	Sn	16 48 02.8	+1.2
	baz=112						
ENA	Nanau	0.27	207	eP	Pn	16 47 53.2	-0.2
	baz=199						
ENA				eS	Sn	16 48 01.8	-0.1
	baz=199						
TIPB	Shuangxi	0.30	351	eP	Pn	16 47 53.9	+0.2
	baz=358						
TIPB				eS	Sn	16 48 02.1	-0.2
	baz=358						
NDT	Datong Townshi	0.34	259	P	Pn	16 47 53.7	-0.1
	baz=259						
NDT				eS	Sn	16 48 01.9	-0.7
	baz=259						
TWB1	Santiao Chiao	0.35	17	P	Pn	16 47 54.0	+0.1
	baz=22						
TWB1				eS	Sn	16 48 02.6	-0.1
	baz=22						
NWLT	Wulai	0.36	287	P	Pn	16 47 53.6	-0.4
	baz=291						
NWLT				eS	Sn	16 48 02.3	-0.6
	baz=291						
NWF	Wu-fen Shan	0.41	348	eP	Pn	16 47 54.7	+0.3
	baz=353						
NWF				eS	Sn	16 48 03.9	+0.2
	baz=353						
WFSB	Wu-fen Shan	0.41	348	eP	Pn	16 47 54.6	+0.3
	baz=352						
WFSB				eS	Sn	16 48 03.6	+0.1
	baz=352						
NHDH	Xindian Distri	0.43	312	P	Pn	16 47 54.5	0.0
	baz=316						
NHDH				eS	Sn	16 48 03.6	-0.2
	baz=316						
YHNB	Yeheng	0.46	270	eP	Pn	16 47 54.7	-0.1
	baz=271						
YHNB				eS	Sn	16 48 03.6	-0.8
	baz=271						
TATO	Taipei	0.47	311	eP	Pn	16 47 54.8	0.0
	baz=315						
TATO				eS	Sn	16 48 04.0	-0.3
	baz=315						
NSK	Sanguang	0.47	271	P	Pn	16 47 54.5	-0.4
	baz=272						
NSK				eS	Sn	16 48 03.8	-0.8
	baz=272						
TAP	Taipei	0.50	318	P	Pn	16 47 55.3	+0.2
	baz=322						
TAP				eS	Sn	16 48 04.7	-0.2
	baz=322						
NNSB	Datong	0.51	242	P	Pn	16 47 55.3	0.0
	baz=241						
NNSB				eS	Sn	16 48

	baz=333						
YM10			eS	Sn	16 48 06.0	0.0	
	baz=333						
YM11	**YM11**	0.56 331	P	Pn	16 47 56.0	+0.2	
	baz=334						
YM11			eS	Sn	16 48 06.1	0.0	
	baz=334						
YM05	**YM05**	0.57 330	P	Pn	16 47 55.9	+0.1	
	baz=333						
YM05			eS	Sn	16 48 06.1	0.0	
	baz=333						
YM04	**YM04**	0.57 327	P	Pn	16 47 55.5	-0.3	
	baz=331						
YM04			eS	Sn	16 48 06.2	0.0	
	baz=331						
YM08	**YM08**	0.58 333	eP	Pn	16 47 55.8	-0.1	
	baz=336						
YM08			eS	Sn	16 48 06.1	-0.2	
	baz=336						
ETLH	**Xiulin Townshi**	0.58 218	eP	Pn	16 47 55.3	-0.7	
	baz=215						
ETLH			S	Sn	16 48 04.9	-1.5	
	baz=215						
YM03	**YM03**	0.59 329	P	Pn	16 47 56.5	+0.5	
	baz=332						
YM03			eS	Sn	16 48 06.6	0.0	
	baz=332						
WLTB	**Daxi**	0.59 288	P	Pn	16 47 56.2	+0.2	
	baz=290						
WLTB			eS	Sn	16 48 06.6	+0.1	
	baz=290						
TWS1	**Kuangyinshan**	0.60 316	P	Pn	16 47 56.5	+0.4	
	baz=319						
TWS1			eS	Sn	16 48 07.4	+0.9	
	baz=319						
ANP	**Anpu**	0.61 328	eS	Sn	16 48 06.7	-0.2	
	baz=331						
NTST	**Danshui**	0.63 322	P	Pn	16 47 56.9	+0.5	
	baz=325						
NTST			eS	Sn	16 48 07.7	+0.7	
	baz=325						
TWD	**Chiawan**	0.64 204	eP	Pn	16 47 55.9	-0.6	
	baz=200						
TWD			eS	Sn	16 48 06.0	-1.3	
	baz=200						
TWY	**Chenhua**	0.65 337	eP	Pn	16 47 56.9	+0.3	
	baz=341						
TWY			eS	Sn	16 48 08.6	+1.1	
	baz=341						
NCU	**National Centr**	0.69 296	P	Pn	16 47 57.2	+0.2	
	baz=297						
NCU			eS	Sn	16 48 08.6	+0.3	
	baz=297						
NCUH	**Zhongli**	0.69 295	P	Pn	16 47 57.1	0.0	
	baz=297						
NCUH			S	Sn	16 48 08.2	-0.1	
	baz=297						
HWA	**Hwalien**	0.73 200	eP	Pn	16 47 56.8	-0.6	
	baz=196						
TWT	**Tachien**	0.76 237	eP	Pn	16 47 58.5	+0.6	
	baz=236						
TWT			eS	Sn	16 48 09.9	0.0	
	baz=236						
WHF	**Hehuan Shan**	0.76 227	P	Pn	16 47 58.1	-0.2	
	baz=225						
WHF			eS	Sn	16 48 09.3	-1.1	
	baz=225						
TDCB	**Techi**	0.78 238	eP	Pn	16 47 58.4	+0.4	
	baz=236						
TDCB			eS	Sn	16 48 09.8	-0.3	
	baz=236						
LIOB	**Emei**	0.78 268	eP	Pn	16 47 58.0	-0.1	
	baz=269						
LIOB			eS	Sn	16 48 09.8	-0.3	
	baz=269						
NSTT	**Nanjuang**	0.80 267	P	Pn	16 47 58.0	-0.2	
	baz=267						
NSTT			eS	Sn	16 48 09.9	-0.5	
	baz=267						
ENLB	**Shoufeng**	0.80 198	P	Pn	16 47 58.6	+0.4	
	baz=195						
ENLB			eS	Sn	16 48 10.3	-0.1	
	baz=195						
SBCB	**Hsinchu**	0.82 279	P	Pn	16 47 58.5	+0.1	
	baz=279						
SBCB			eS	Sn	16 48 10.7	-0.1	
	baz=279						
HSN	**Hsinchu**	0.83 279	P	Pn	16 47 58.3	-0.3	
	baz=282						
HSN			eS	Sn	16 48 10.2	-0.8	
	baz=282						
CHGB	**Renai**	0.88 227	P	Pn	16 47 59.5	+0.1	
	baz=225						
CHGB			eS	Sn	16 48 11.9	-0.6	
	baz=225						
WHP	**Taichung City**	0.93 245	P	Pn	16 48 00.5	+0.7	
	baz=244						
WHP			eS	Sn	16 48 13.0	-0.3	
	baz=244						
OWD	**Renai**	0.96 222	P	Pn	16 48 00.1	-0.1	
	baz=220						
OWD			S	Sn	16 48 12.6	-1.3	
	baz=220						
PCYT	**Pengchaiyu**	0.97 10	eP	Pn	16 48 01.1	+0.9	
	baz=12						
NMLH	**Miaoli**	1.00 263	P	Pn	16 48 00.6	+0.1	
	baz=262						
NMLH			eS	Sn	16 48 14.2	-0.3	
	baz=262						
JYNG	**Yonagunijimaku**	1.00 102	P	Pn	16 48 00.4	-0.1	
JYNG			S	Sn	16 48 13.9	-0.6	
NSY	**Sanyi**	1.05 256	P	Pn	16 48 01.6	+0.4	
	baz=255						
NSY			eS	Sn	16 48 15.3	-0.3	
	baz=255						
YOJ	**Yonaguni jima**	1.05 101	eP	Pn	16 48 01.2	0.0	
	baz=100						
YOJ			eS	Sn	16 48 15.4	-0.3	
	baz=100						
YOJ	**Yonaguni jima**	1.05 101	P	Pn	16 48 01.0	-0.2	
YOJ			eS	Sn	16 48 15.0	-0.7	
TWQ1	**Liyutan**	1.05 253	P	Pn	16 48 01.3	0.0	
	baz=252						
TWQ1			eS	Sn	16 48 15.7	-0.1	
	baz=252						
DPDB	**Guoxing**	1.07 234	eP	Pn	16 48 02.1	+0.6	
	baz=233						
DPDB			eS	Sn	16 48 17.1	+0.8	
	baz=233						
EGFH	**Guangfu**	1.08 202	P	Pn	16 48 01.5	0.0	
	baz=200						
VWDT	**VWDT**	1.13 216	P	Pn	16 48 02.3	+0.1	
	baz=215						
VWDT			eS	Sn	16 48 17.5	0.0	
	baz=215						
WDJ	**Dajia District**	1.17 254	P	Pn	16 48 02.8	+0.1	
	baz=254						
WDJ			eS	Sn	16 48 18.3	0.0	
	baz=254						
SMLT	**Sun Moon Lake**	1.19 229	P	Pn	16 48 03.6	+0.6	
	baz=227						
SMLT			eS	Sn	16 48 18.6	-0.3	
	baz=227						
TYC	**Yuchr**	1.20 231	P	Pn	16 48 03.6	+0.5	
	baz=229						
TYC			eS	Sn	16 48 19.1	+0.1	
	baz=229						
TCU	**Taichung**	1.21 245	eP	Pn	16 48 04.0	+0.8	
	baz=244						
TCU			S	Sn	16 48 19.7	+0.4	
	baz=244						
SSLB	**Suanglung**	1.22 224	P	Pn	16 48 04.1	+0.7	
	baz=222						
SSLB			eS	Sn	16 48 20.4	+0.9	
	baz=222						
HGSD	**Ruisui**	1.24 199	eP	Pn	16 48 04.0	+0.4	
	baz=198						
HGSD			S	Sn	16 48 20.2	+0.2	
	baz=198						
WCHH	**Zhanghua**	1.34 244	P	Pn	16 48 05.1	+0.2	
	baz=243						
WCHH			eS	Sn	16 48 21.9	-0.3	
	baz=243						
WNT	**Mingjian**	1.34 234	eS	Sn	16 48 23.1	+0.8	
	baz=233						
WHYT	**Xinyi Township**	1.35 224	P	Pn	16 48 05.7	+0.7	
	baz=223						
WHYT			eS	Sn	16 48 24.0	+1.5	
	baz=223						
WJS	**Zhushan**	1.35 231	P	Pn	16 48 05.3	+0.4	
	baz=230						
WJS			eS	Sn	16 48 22.3	0.0	
	baz=230						
YULB	**Yu-li**	1.38 203	P	Pn	16 48 05.5	+0.1	
	baz=201						
YULB			eS	Sn	16 48 23.2	+0.1	
	baz=201						
TWF1	**Yuli**	1.42 202	P	Pn	16 48 06.2	+0.3	
	baz=200						
TWF1			eS	Sn	16 48 24.1	+0.1	
	baz=200						
YUS	**Yu-Shan**	1.45 216	S	Sn	16 48 25.9	+0.5	
	baz=214						
WGK	**Gukeng**	1.55 231	eP	Pn	16 48 08.1	+0.5	
	baz=230						
WGK			eS	Sn	16 48 27.6	+0.5	
	baz=230						
WDLH	**Douliu**	1.56 232	eP	Pn	16 48 08.2	+0.5	
	baz=230						
WDLH			eS	Sn	16 48 27.7	+0.3	
	baz=230						
RLNB	**Erlin**	1.59 241	P	Pn	16 48 08.1	+0.1	
	baz=240						
RLNB			eS	Sn	16 48 27.9	0.0	
	baz=240						
WTCT	**Ta-ch'eng**	1.66 241	eP	Pn	16 48 09.1	0.0	
	baz=240						
WTCT			eS	Sn	16 48 29.0	-0.7	
	baz=240						
ELDTW	**Lidau**	1.67 208	eP	Pn	16 48 10.0	+0.7	
	baz=206						
ELDTW			eS	Sn	16 48 30.0	-0.1	
	baz=206						
CHN2	**Minshiung**	1.71 229	eS	Sn	16 48 32.1	+1.2	
	baz=227						
IRIF	**Iriomote-Funau**	1.72 101	P	Pn	16 48 09.7	-0.2	
IRIF			S	Sn	16 48 30.7	-0.4	
CHN4	**Tsaushan**	1.76 222	eP	Pn	16 48 11.5	+1.1	
	baz=221						
CHY	**Chiayi**	1.77 229	P	Pn	16 48 11.4	+0.9	
	baz=227						
CHY			eS	Sn	16 48 32.1	-0.1	
	baz=227						
TPUB	**Ta-pu**	1.78 220	P	Pn	16 48 11.3	+0.7	
	baz=219						
TPUB			eS	Sn	16 48 32.5	0.0	
	baz=219						
STYT	**Tauyuan**	1.82 215	eP	Pn	16 48 12.4	+1.2	
	baz=213						
WSF	**Szhu**	1.83 236	eP	Pn	16 48 11.2	-0.1	
	baz=235						
WSF			eS	Sn	16 48 33.6	0.0	
	baz=235						
WTP	**Ta-pu**	1.83 219	eP	Pn	16 48 12.1	+0.7	
	baz=218						
WLGB	**Puzi**	1.87 231	eS	Sn	16 48 35.8	+1.2	
	baz=230						
TWK	**Hsinying**	1.89 223	eP	Pn	16 48 12.6	+0.5	
	baz=221						
TWK			eS	Sn	16 48 34.9	-0.3	
	baz=221						
SNST	**Tainan City**	1.92 221	eP	Pn	16 48 13.3	+0.8	
	baz=220						
CHN1	**Nanshi**	1.93 220	eP	Pn	16 48 13.2	+0.6	
	baz=219						
CHN1			eS	Sn	16 48 36.0	-0.1	
	baz=219						
TWG	**Pinlang**	1.98 202	eP	Pn	16 48 13.8	+0.4	
	baz=200						
TWG			eS	Sn	16 48 36.9	-0.5	
	baz=200						
TWGBT	**Beinan**	1.98 202	eP	Pn	16 48 14.6	+1.2	
	baz=200						
TWGBT			eS	Sn	16 48 36.9	-0.5	
	baz=200						
JKRS	**Kuro-shima**	1.99 102	P	Pn	16 48 13.8	+0.4	
JKRS			eS	Sn	16 48 37.1	-0.5	
CHN8	**Yiju**	2.01 229	eP	Pn	16 48 13.8	+0.1	
	baz=228						
CHN8			eS	Sn	16 48 39.5	+1.4	
	baz=228						
SLGT	**Liugui**	2.01 214	eP	Pn	16 48 14.9	+1.1	
	baz=213						
JIJ	**Ishigaki jima**	2.09 98	P	Pn	16 48 14.7	0.0	
JIJ			eS	Sn	16 48 39.1	-0.8	
JISG	**Ishigakijimahi**	2.22 92	P	Pn	16 48 16.6	+0.1	
JISG			eS	Sn	16 48 43.0	0.0	
SSD	**Sandimen**	2.23 211	eP	Pn	16 48 18.4	+1.7	
	baz=209						
MATB	**Ma-tsu**	2.29 311	eP	Pn	16 48 17.0	-0.4	
	baz=311						
MATB			eS	Sn	16 48 43.1	-1.5	
	baz=311						
MASBT	**Mashibuluo**	2.34 209	eP	Pn	16 48 19.6	+1.3	
	baz=208						
PNG	**Penghu**	2.39 243	eP	Pn	16 48 17.8	-1.0	
	baz=242						
WDGT	**Dungji**	2.47 236	eP	Pn	16 48 18.9	-0.9	
	baz=234						
WDGT			eS	Sn	16 48 47.8	-1.2	
	baz=234						
VCHM	**Qimei**	2.67 237	eS	Sn	16 48 52.0	-1.9	
	baz=236						
KNM	**Kinmen**	3.15 266	eP	Pn	16 48 30.0	+1.0	
	baz=265						
KNMB	**Chin-men Tao**	3.18 267	eP	Pn	16 48 28.7	-0.8	
	baz=266						

*GUC **01** 16:50:50.9±0.7, 26°.18S×69°.56W, h11km±4km, ML4.0*
*NEIC **01** 16:50:51.0±0.0, 26°.17S×69°.53W, h12km, mb4.6/9, ML4.0(GUC), After GUC.*
*ISCJB **01** 16:50:52.9±0.6, 26°.18S±0°.03×69°.13W±0°.07, h36km±6km, mb4.3/16, MS3.2/4, Error ellipse: s-maj=10.0km s-min=4.3km az=177.8*
*IDC **01** 16:50:56.8±1.9, 26°.18S×69°.08W, h53km±17km, mb4.0/10, mb1 4.1/14, mb1mx4.0/29, mbtmp4.2/14, ML3.9/5, MS3.4/10, Ms1 3.4/10, ms1mx3.4/30, Error ellipse: s-maj=21.6km s-min=12.4km az=87.0*

ISC 01 16:50:53.2±1.8, 26°.15S±0°.03×69°.30W±0°.07, h25km±13km, n61, σ1§57/68, mb4.5/16, MS3.3/4, 4C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**1.02 345**		*e*Pg	**Pn**	**16 51 10.1**	**-2.0**
GO02				*e*Sn	**Sn**	**16 51 26.0**	**+0.2**
GO02	**Mina Guanaco**	**1.02 345**		*e*P	**Pn**	**16 51 09.7**	**-2.4**
GO02				*e*S	**Sn**	**16 51 25.1**	**-0.7**
GO02				IAML		16 51 32.2	
	comp=E,4μm,0.4s						
GO03	**Copiap**	**1.67 210**		*e*Pn	**Pn**	**16 51 19.2**	**-1.7**
GO03				*e*Sn	**Sn**	**16 51 40.7**	**-0.7**
GO03	**Copiap**	**1.67 210**	⇑	*i*P	**Pn**	**16 51 19.1**	**-1.7**
GO03				*i*S	**Sn**	**16 51 40.9**	**-0.6**
GO03				IAML		16 51 49.2	
	comp=E,3μm,0.2s						
PB14	**IPOC Station P**	**1.82 326**	⇓	*i*P	**Pn**	**16 51 23.7**	**+0.6**
PB14				*e*S	**Sn**	**16 51 47.8**	**+2.3**
VCA	**Vinchina**	**2.75 160**		*e*P	**Pn**	**16 51 39.0**	**+3.1**
VCA				*e*S	**Sb**	**16 52 15.4**	**+0.1**
PB10	**IPOC Station P**	**2.86 336**		*e*Pn	**Pn**	**16 51 39.1**	**+1.9**
PB10	**IPOC Station P**	**2.86 336**	⇑	*i*P	**Pn**	**16 51 38.6**	**+1.4**
PB10				*i*S	**Sn**	**16 52 14.3**	**+3.5**
PB10				IAML		16 52 31.5	
	comp=E,1μm,0.5s						
PB15	**IPOC Station P**	**2.93 357**	⇑	*i*P	**Pn**	**16 51 40.8**	**+2.4**
PB15				*e*S	**Sb**	**16 52 19.4**	**-1.0**
LCO	**Las Campanas**	**3.11 203**		*e*Pn	**Pn**	**16 51 41.2**	**+0.2**
LCO	**Las Campanas**	**3.11 203**	⇑	*i*P	**Pn**	**16 51 41.1**	**+0.2**
LCO				*i*S	**Sn**	**16 52 20.4**	**+3.0**
LVC	**Limon Verde**	**3.54 6**		P	**Pn**	**16 51 50.6**	**+3.6**
	comp=E,67nm,0.3s,baz=188,slow=8.4,SNR=83						
LVC				S	**Sb**	**16 52 36.3**	**-1.8**
	comp=E,37nm,0.3s,baz=14,slow=19,SNR=3.1						
LVC				LR	LR	16 53 21.0	
	comp=E,998nm,21.3s,baz=204,slow=41						
PB04	**IPOC Station P**	**3.88 348**		*e*Pn	**Pn**	**16 51 52.8**	**+1.4**
PB03	**IPOC Station P**	**4.10 354**		*e*P	**Pn**	**16 51 56.7**	**+2.2**
GO04	**Tololo Observa**	**4.22 198**		*e*Pn	**Pn**	**16 51 56.0**	**-0.2**
PB01	**IPOC Station P**	**5.08 358**		*e*Pn	**Pn**	**16 52 09.4**	**+1.5**
CFA	**Coronel Fontan**	**5.52 171**		P	**Pn**	**16 52 14.0**	**+0.2**
	comp=E,4.7nm,0.3s,baz=351,slow=14,SNR=58						
CFA				S	**Sn**	**16 53 18.5**	**+2.1**
	comp=E,4.5nm,0.3s,baz=180,slow=19,SNR=3.5						
CFA				LR	LR	16 54 29.0	
	comp=E,406nm,20.0s,baz=345,slow=39						
PB11	**IPOC Station P**	**6.37 357**		*e*Pn	**Pn**	**16 52 25.4**	**-0.2**
GO01	**Chusmiza**	**6.45 1**		*e*Pn	**Pn**	**16 52 28.0**	**+1.0**
MNMC	**Minye Minye**	**6.99 358**		*e*Pn	**Pn**	**16 52 34.3**	**0.0**
PEL	**Peldehue**	**7.08 189**		*e*Pn	**Pn**	**16 52 34.7**	**-0.5**
LPAZ	**La Paz**	**9.87 7**		P	**Pn**	**16 53 15.8**	**+1.6**
	comp=E,1.0nm,0.3s,baz=193,slow=1.6,SNR=16						
LPAZ				LR	LR	16 57 58.0	
	comp=E,192nm,20.5s,baz=192,slow=43						
LPAZ	**La Paz**	**9.87 7**		*e*Pn	**Pn**	**16 53 17.4**	**+3.3**
CPUP	**Villa Florida**	**10.75 94**		P	**Pn**	**16 53 25.9**	**+0.4**
	comp=E,0.1nm,0.3s,baz=180,slow=10,SNR=1.8						
CPUP				LR	LR	16 57 55.1	
	comp=E,373nm,20.6s,baz=269,slow=40						
CPUP	**Villa Florida**	**10.75 94**		*e*Pn	**Pn**	**16 53 23.1**	**-2.4**
SIV	**San Ignacio**	**12.69 39**		P	**Pn**	**16 53 49.2**	**-2.9**
	comp=E,2.4nm,0.3s,baz=247,slow=11,SNR=34						
PLCA	**Paso Flores**	**14.58 184**		P	**Pn**	**16 54 20.5**	**+2.5**
	comp=E,0.1nm,0.3s,baz=9.1,slow=6.0,SNR=2.7						
PLCA				LR	LR	17 00 19.5	
	comp=E,140nm,19.5s,baz=14,slow=39						
NNA	**Nana**	**15.78 332**		LR	LR	16 59 53.3	
	comp=E,130nm,21.0s,baz=162,slow=34						
ATAH	**Atahualpa**	**20.80 334**		LR	LR	17 02 20.2	
	comp=E,66nm,21.3s,baz=169,slow=33						
BDFB	**Brasilia**	**22.43 66**		P	**P**	**16 55 48.7**	**-1.7**
	comp=E,4.6nm,0.6s,baz=238,slow=15,SNR=7.2						
BDFB				LR	LR	17 05 35.6	
	comp=E,162nm,20.5s,baz=182,slow=40						
PTGA	**Pitinga**	**26.82 21**		P	**P**	**16 56 32.5**	**+0.9**
	comp=E,5.8nm,0.8s,baz=182,slow=9.0,SNR=8.9						
PTGA				LR	LR	17 08 58.5	
	comp=E,56nm,21.4s,baz=82,slow=40						
ROSC	**El Rosal**	**31.19 350**		LR	LR	17 09 42.2	
	comp=E,96nm,19.7s,baz=165,slow=36						
TXAR	**Lajitas Array**	**64.27 327**		P	**P**	**17 01 27.5**	**+1.0**
	comp=E,0.3nm,0.5s,baz=160,slow=8.0,SNR=5.4						
WVT	**Waverly**	**64.37 343**		*e*P	**P**	**17 01 26.5**	**-0.3**
	comp=E,5.0nm,0.7s						
T49A	**Edmonton**	**64.75 346**		*e*P	**P**	**17 01 29.1**	**-0.2**
	comp=E,5.5nm,0.6s						
DBIC	**Dimbokro**	**70.45 72**		P	**P**	**17 02 05.4**	**-0.5**
	comp=E,7.2nm,0.8s,baz=191,slow=9.3,SNR=6.3						
DBIC	**Dimbokro**	**70.45 72**		*e*P	**P**	**17 02 05.4**	**-0.5**
	comp=E,10nm,0.9s						
SYO	**Syowa Base**	**72.30 159**	⇓	*e*sP	sP	17 02 25.0	-3.8
SMCO	**Snowmass**	**73.91 330**		*e*P	**P**	**17 02 26.1**	**-0.4**
	comp=E,4.9nm,0.9s						
PDAR	**Pinedale Array**	**77.96 331**		P	**P**	**17 02 50.2**	**+0.9**
	comp=E,0.7nm,0.7s,baz=143,slow=7.7,SNR=6.0						
NVAR	**Mina Array Bea**	**78.94 323**		P	**P**	**17 02 55.4**	**+0.6**
	comp=E,1.5nm,0.8s,baz=146,slow=5.8,SNR=7.5						
TOA0	**Torodi Ar. Sit**	**79.28 70**		*e*P	**P**	**17 02 56.7**	**-0.2**
	comp=E,6.0nm,0.8s						
TOA1	**Torodi Ar. Sit**	**79.28 70**		*e*P	**P**	**17 02 55.2**	**-1.6**
TORD	**Torodi Ar. Bea**	**79.28 70**		P	**P**	**17 02 55.2**	**-1.6**
	comp=E,3.1nm,0.7s,baz=266,slow=4.9,SNR=20						
ULM	**Lac du Bonnet**	**79.63 343**		P	**P**	**17 02 58.5**	**+0.5**
	comp=E,2.8nm,0.5s,baz=197,slow=8.3,SNR=4.4						
RLMT	**Red Lodge**	**79.74 332**		*e*P	**P**	**17 02 59.0**	**0.0**
	comp=E,4.2nm,0.8s						
MAW	**Mawson**	**80.00 163**		P	**P**	**17 02 59.3**	**-0.6**
	comp=E,2.6nm,0.6s,baz=174,slow=5.7,SNR=12						
MAW	**Mawson**	**80.00 163**		*e*P	**P**	**17 02 59.3**	**-0.6**
	comp=E,0.8nm,0.8s						
YHH	**Holmes Hill**	**80.14 331**		*e*P	**P**	**17 03 02.2**	**+0.9**
	comp=E,4.2nm,0.9s						
YKA	**Yellowknife Ar**	**95.43 341**		P	**P**	**17 04 14.9**	**-0.1**
	comp=E,0.4nm,0.5s,baz=136,slow=4.7,SNR=7.4						
ASAR	**Alice Springs**	**125.63 206**		PKP	**PKPdf**	**17 09 52.4**	**-0.7**
	comp=E,1.0nm,0.8s,baz=130,slow=1.7,SNR=9.8						
WR1	**Warramunga Arr**	**128.76 209**		*e*PKPdf	**PKPdf**	**17 09 58.7**	**-0.4**
WRA	**Warramunga Arr**	**128.76 209**		PKP	**PKPdf**	**17 09 58.7**	**-0.4**
	comp=E,0.8nm,0.4s,baz=155,slow=1.7,SNR=7.8						
ZAA1	**Zalesovo Array**	**146.25 28**		*e*PKPdf	**PKPdf**	**17 10 30.8**	**+0.8**
ZALV	**Zalesovo Beam**	**146.26 28**		PKPbc	**PKPdf**	**17 10 30.8**	**+0.9**
	comp=E,10nm,0.7s,baz=290,slow=3.3,SNR=29						
MK32	**Makanchi Array**	**149.50 40**		*e*PKPbc	**PKPbc**	**17 10 40.4**	**+0.2**
MKAR	**Makanchi Array**	**149.50 40**		PKPbc	**PKPbc**	**17 10 40.4**	**+0.2**
	comp=E,6.6nm,0.6s,baz=300,slow=2.5,SNR=58						
SONA0	**Songino Array**	**158.09 8**		*e*PKPab	**PKPab**	**17 11 21.7**	**+0.3**
SONM	**Songino Array**	**158.09 8**		PKPab	**PKPab**	**17 11 21.7**	**+0.3**
	comp=E,0.2nm,0.4s,baz=11,slow=3.0,SNR=4.1						
LZH	**Lanzhou**	**168.49 29**		*e*PKP	**PKPdf**	**17 10 55.5**	**-2.7**
LZH				pPKP	pPKPdf	17 11 04.2	-3.8
LZH				sPKP		17 11 10.0	
CD2	**Chengdu**	**172.27 51**		PKP	**PKPdf**	**17 10 58.3**	**-2.0**

DJA 01 17:00:10.7±0.7, 8°S±2°×12°0E±°, h28km±7km, M3.9/13, mb4.0/2, MLv3.8/13, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.46 122**		P	Pn	17 00 33.4	-1.9
EDFI				S	Sn	17 00 50.6	-3.0
WSI	**Waingapu**	**1.69 185**		P	Pn	17 00 39.8	+1.4
BSSI	**Bau Bau, Buton**	**1.82 2**		P	Pn	17 00 39.4	-0.7
BSSI				S	Sn	17 01 01.6	-0.6
MMRI	**Maumere**	**1.90 111**		P	Pn	17 00 40.1	-1.2
WBSI	**Waikabubak, Su**	**1.96 212**		P	Pn	17 00 42.5	+0.4
BASI	**Baing, Sumba**	**2.24 177**		P	Pn	17 00 46.0	+0.1
BKSI	**Bulukumba**	**2.65 353**		P	Pn	17 00 51.2	-0.4
BKSI				S	Sn	17 01 23.0	+0.2
PLAI	**Plampang**	**2.77 252**		P	Pn	17 00 54.5	+1.2
BBSI	**Bau Bau**	**3.25 41**		P	Pn	17 00 59.8	-0.1
BNSI	**Bone**	**3.56 355**		P	Pn	17 01 05.5	+1.4
SPSI	**Sidrap Palu**	**4.04 350**		P	Pn	17 01 11.9	+1.2
SOEI	**Soe**	**4.18 115**		P	Pn	17 01 14.0	+1.3
KMMI	**Kalianget**	**6.48 278**		P	Pn	17 01 45.5	+1.2

MAN 01 17:15:06.6, 7°.35N×124°.66E, h5km, mb4.3, ML3.1, MS2.9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.66 38**		*e*P	Pg	17 15 20.0	+0.6
BUKP				*e*S	Sb	17 15 30.3	0.0
SKMP	**Bagumbayan, Su**	**0.83 188**		*e*P	Pg	17 15 22.9	+0.3
SKMP				*e*S	Sb	17 15 34.6	-0.6
DMPH	**Davao City--Mi**	**0.89 107**	⇑	*e*P	Pg	17 15 23.4	-0.3
DMPH				*e*S	Sg	17 15 34.6	-0.6
CGP	**Cagayan de Oro**	**1.10 2**	⇑	*i*P	Pg	17 15 26.8	-1.0
CGP				*i*S	Sn	17 15 44.7	+0.4
PAGZ	**Pagadian**	**1.35 291**		*e*P	Pg	17 15 34.5	+1.9
PAGZ				*e*S	Sn	17 15 55.7	+5.1
DDMP	**Don Marcelino,**	**1.62 140**		*e*P	Pn	17 15 35.3	-0.6
DDMP				*e*S	Sb	17 15 58.1	+0.2
MATI	**Mati**	**1.64 104**		*e*P	Pn	17 15 35.6	-0.6
MATI				*e*S	Sn	17 15 55.2	-2.4
IPIL	**Ipil**	**2.11 282**		*e*P	Pg	17 15 48.2	+1.1
IPIL				*e*S	Sg	17 16 16.8	+2.3

**MAN 01 17:21:04.4, 7°.22N×124°.77E, h11km, mb5.4, ML4.4, MS4.6,

*NEIC **01** 17:32:49.6±1.6, 7.03S×155.91E, h56km±4km, mb5.6/199, MW5.5, Error ellipse: s-maj=11.8km s-min=10.9km az=210.0, Moment Tensor Solution. s29 Moment tensor: Scale 10^17Nm; Mrr2.18; Mθθ-1.56; Mφφ-0.62; Mrθ-0.26; Mθφ0.73; Mφr-0.04; Best double couple: M0=2.10000×10^17 NP1:φs295.00000°, δ48.00000°, λ85.00000°. NP2: φs122.00000°, δ42.00000°, λ95.00000°. Principal axes: T 2.2000, Plg85.0000°, Azm157.0000°; N -0.2300, Plg4.0000°, Azm298.0000°; P -1.9700, Plg3.0000°, Azm28.0000°;*

*ISCJB **01** 17:32:50.5±0.6, 7.04S±0.02×155.88E±0.02, h76km±5km, mb5.6/301 Error ellipse: s-maj=3.7km s-min=3.1km az=19.3*

*BJI **01** 17:32:50.0±0.0, 6.78S×155.94E, h68km, mb5.1/70, mB5.2/65, Ms4.9/79, Ms7 4.8/72*

*GCMT **01** 17:32:51.6±0.1, 7.21S±0.01×155.85E±0.01, h52km, MW5.5/122, Moment Tensor Solution. s122,c201; s96,c214; Duration: 1s4 Moment tensor: Scale 10^17Nm; Mrr2.07±.03; Mθθ-1.51±.02; Mφφ-0.56±.02; Mrθ-0.44±.02; Mθφ1.32±.02; Mφr-0.26±.02; Best double couple: M0=2.32200×10^17 NP1:φs292.00000°, δ49.00000°, λ71.00000°. NP2:φs139.00000°, δ44.00000°, λ110.00000°. Principal axes: T 2.1960, Plg76.0000°, Azm135.0000°; N 0.2510, Plg14.0000°, Azm304.0000°; P -2.4480, Plg3.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **01** 17:32:52.3±1.8, 7.04S×155.84E, h75km±16km, mb4.8/36, mb1 4.8/40, mb1mx4.8/46, mbtmp5.1/40, MS4.7/30, Ms1 4.7/30, ms1mx4.6/34 Error ellipse: s-maj=11.0km s-min=8.7km az=85.0*

*DJA **01** 17:32:52.3±0.6, 7.5±3.1×15.6E±.1, h74km±6km, M5.7/83, mb5.8/83, mB6.0/63, Mw(mB)5.7/63, Mwp7.0/1*

ISC 01 17:32:51.2±0.3, 7.02S±0.03×155.92E±0.03, h70km±2km, h70km:pP-P, n933, σ1§37/1003, mb5.5/305, 58C-43D, Bougainville-Solomon Islands region

Code	Station Name	Δ° AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.65 121**	*e*P	**Pn**	**17 34 01.0**	**+2.0**
HNR			*e*S	Sn	17 35 34.0	+42
HNR	**Honiara**	**4.65 121**	P	**Pn**	**17 34 01.8**	**+2.8**
53nm,0.3s,baz=248,slow=1.1,SNR=51						
HNR			S	**Sn**	**17 34 55.7**	**+4.0**
176nm,0.3s,baz=130,slow=20,SNR=7.7						
HNR	**Honiara**	**4.65 121**	*e*Pn	**Pn**	**17 33 59.9**	**+0.9**
HNR	**Honiara**	**4.65 121**	*e*P	**Pn**	**17 33 59.9**	**+0.9**
RABL	**Rabaul**	**4.67 307**	*e*Pn	**Pn**	**17 34 01.1**	**+1.7**
PMG	**Port Moresby**	**8.99 254**	P	**Pn**	**17 34 59.1**	**+0.8**
63nm,0.3s,baz=68,slow=9.0,SNR=91						
PMG			S	**Sn**	**17 36 40.6**	**+2.5**
19nm,0.3s,baz=349,slow=19,SNR=4.2						
PMG			LR	LR	17 38 15.7	
comp=Z,12μm,21.4s,baz=48,slow=36						
MANU	**Manus Island**	**9.85 300**	*e*Pn	**Pn**	**17 35 13.5**	**+3.3**
PATS	**Pohnpei**	**13.97 10**	*e*Pn	**Pn**	**17 36 04.6**	**-1.4**
PATS	**Pohnpei**	**13.97 10**	P	**Pn**	**17 36 06.4**	**+0.4**
baz=14,SNR=4.8						
COEN	**Coen**	**14.30 240**	*e*Pn	**Pn**	**17 36 11.0**	**+0.6**
COEN	**Coen**	**14.30 240**	P	**Pn**	**17 36 10.9**	**+0.6**
baz=14,SNR=31						
JAY	**Jayapura**	**15.80 286**	P	**Pn**	**17 36 29.5**	**-0.3**
4.9nm,0.3s,baz=115,slow=5.0,SNR=23						
JAY	**Jayapura**	**15.80 286**	P	**Pn**	**17 36 29.4**	**-0.3**
2μm,1.2s,23μm						
CTA	**Charters Tower**	**16.02 215**	P	**P**	**17 36 34.4**	**-0.2**
2.9nm,0.3s,baz=35,slow=14,SNR=52						
CTA			S	**S**	**17 39 35.4**	**-3.8**
0.4nm,0.3s,baz=290,slow=12,SNR=2.2						
CTA			LR	LR	17 42 10.3	
comp=Z,5μm,19.2s,baz=58,slow=35						
CTAO	**Charters Tower**	**16.02 215**	*e*Pn	**Pn**	**17 36 32.9**	**+0.5**
473nm,1.5s						
CTAO	**Charters Tower**	**16.02 215**	*e*P	**Pn**	**17 36 32.9**	**+0.5**
CTAO			pmax	pmax		
comp=Z,473nm,1.5s						
GENI	**Genyem**	**16.30 285**	P	**P**	**17 36 37.0**	**-0.7**
comp=Z,318nm,1.5s,comp=Z,5μm						
DZM	**Mont Dzumac**	**18.09 147**	*e*P	**P**	**17 36 57.3**	**-0.2**
comp=Z,387nm,1.3s						
DZM			*e*LR	LR	17 40 28.6	
comp=Z,9μm,28.6s						
DZM	**Mont Dzumac**	**18.09 147**	P	**Pn**	**17 36 58.8**	**+0.9**
comp=Z,4.3nm,0.3s,baz=241,slow=5.8,SNR=36						
DZM			LR	LR	17 43 11.8	
comp=Z,2μm,20.1s,baz=324,slow=34						
DZM	**Mont Dzumac**	**18.09 147**	*e*P	**Pn**	**17 36 58.7**	**+0.7**
comp=Z,474nm,1.7s						
MARNC	**Mare, Loyalty**	**18.54 142**	*e*P	**Pn**	**17 37 05.5**	**+2.1**
comp=Z,468nm,1.2s						
EIDS	**Eidsvold**	**18.82 194**	*e*P	**Pn**	**17 37 07.5**	**+0.8**
comp=Z,301nm,1.5s						
EIDS	**Eidsvold**	**18.82 194**	P	**Pn**	**17 37 07.9**	**+1.2**
baz=19,SNR=7.7						
TARA	**Tarawa**	**18.90 65**	*e*P	**P**	**17 37 03.7**	**-2.6**
comp=Z,1μm,1.8s						
PINNC	**Pines Island,**	**19.07 146**	*e*P	**P**	**17 37 06.0**	**-2.1**
comp=Z,260nm,1.3s						
KWAJ	**Kwajalein Atol**	**19.57 37**	*e*P	**Pn**	**17 37 17.4**	**+1.9**
comp=Z,1μm,0.8s						
KWAJ	**Kwajalein Atol**	**19.57 37**	*e*P	**Pn**	**17 37 17.4**	**+1.9**
KWAJ			pmax	pmax		
comp=Z,1μm,0.8s						
SRPI	**Serui, Papua**	**20.27 284**	P	**P**	**17 37 21.5**	**+0.2**
RMQ	**Roma**	**20.53 199**	P	Pn	17 37 25.7	-1.1
baz=21,SNR=48						
QIS	**Mount Isa**	**20.76 228**	P	**P**	**17 37 27.2**	**+0.7**
baz=21,SNR=68						
RKPI	**Ransiki, Papua**	**22.35 283**	P	**P**	**17 37 45.3**	**+1.6**
comp=Z,1μm,1.5s,comp=Z,12μm						
FUNA	**Funafuti**	**23.11 95**	*e*P	**P**	**17 37 53.5**	**+1.9**
comp=Z,316nm,1.3s						
GUMO	**Guam**	**23.23 332**	P	**P**	**17 37 52.9**	**+0.3**
comp=Z,12nm,0.5s,baz=153,slow=16,SNR=2.6						
GUMO			LR	LR	17 45 56.7	
comp=Z,1μm,22.0s,baz=150,slow=34						
GUMO	**Guam**	**23.23 332**	*e*P	**P**	**17 37 55.0**	**+2.4**
comp=Z,706nm,1.2s						
GUMO	**Guam**	**23.23 332**	*e*P	**P**	**17 37 55.0**	**+2.4**
GUMO			pmax	pmax		
comp=Z,706nm,1.2s						
ARMA	**Armidale**	**23.62 189**	*e*P	**P**	**17 37 56.8**	**+0.5**
comp=Z,335nm,1.4s						
ARMA	**Armidale**	**23.62 189**	P	**P**	**17 37 56.9**	**+0.7**
baz=24,SNR=20						
KDU	**Kakadu**	**23.77 254**	P	**P**	**17 37 57.6**	**0.0**
baz=24,SNR=24						
FAKI	**Fak Fak**	**23.93 279**	*e*P	**P**	**17 37 59.1**	**+0.1**
comp=Z,537nm,1.2s						
SAUI	**Saumlaki**	**24.43 266**	*e*P	**P**	**17 38 04.9**	**+1.3**
comp=Z,814nm,0.7s						
SAUI	**Saumlaki**	**24.43 266**	P	**P**	**17 38 05.2**	**+1.6**
comp=Z,1μm,0.9s,comp=Z,16μm						
WRAB	**Tennant Creek**	**24.55 236**	*e*P	**P**	**17 38 04.0**	**-0.6**
comp=Z,866nm,1.8s						
WRAB	**Tennant Creek**	**24.55 236**	*c iP*	**P**	**17 38 05.0**	**+0.3**
WRAB			pmax	pmax		
comp=Z,312nm,1.7s						
WB2	**Warramunga Arr**	**24.55 236**	*e*P	**P**	**17 38 04.8**	**+0.1**
comp=Z,473nm,1.4s						
WRA	**Warramunga Arr**	**24.56 236**	P	**P**	**17 38 05.3**	**+0.5**
comp=Z,52nm,0.4s,baz=62,slow=10,SNR=393						
WRA			S	**S**	**17 42 25.7**	**+4.7**
comp=Z,8.7nm,1.0s,baz=246,slow=37,SNR=2.0						
MTN	**Manton Dam**	**25.08 255**	*e*P	**P**	**17 38 09.5**	**0.0**
comp=Z,603nm,1.0s						
MTN	**Manton Dam**	**25.08 255**	P	**P**	**17 38 09.8**	**+0.2**
baz=25,SNR=91						
ANA2	**Anatahan**	**25.31 337**	*e*P	**P**	**17 38 12.6**	**+1.0**
comp=Z,89nm,0.8s						
SWI	**Sorong**	**25.34 283**	P	**P**	**17 38 12.2**	**+0.3**
SARN	**Sarigan**	**25.61 337**	*e*P	**P**	**17 38 14.4**	**0.0**
comp=Z,78nm,1.1s						
PALU	**Palau**	**25.71 303**	P	**P**	**17 38 16.0**	**+0.8**
baz=26,SNR=11						
CMSA	**Cobar Meteorol**	**26.20 200**	P	**P**	**17 38 19.4**	**-0.1**
baz=26,SNR=61						
MGCD	**Mangrove Creek**	**26.44 189**	P	**P**	**17 38 22.9**	**+1.2**
baz=27,SNR=11						
AS31	**Alice Springs**	**26.85 230**	*e*P	**P**	**17 38 25.1**	**-0.4**
comp=Z,14nm,0.6s						
AS31			*e*PcP	**PcP**	**17 41 47.1**	**+0.5**
ASAR	**Alice Springs**	**26.85 230**	P	**P**	**17 38 25.1**	**-0.4**
comp=Z,25nm,0.5s,baz=61,slow=9.5,SNR=336						
ASAR			PcP	**PcP**	**17 41 47.1**	**+0.5**
comp=Z,6.9nm,0.4s,baz=60,slow=2.4,SNR=8.5						
ASAR			S	**S**	**17 42 55.1**	**-2.1**
comp=Z,1.7nm,0.9s,baz=60,slow=15,SNR=2.3						
ASAR			ScP	**ScP**	**17 45 21.8**	**+0.8**
comp=Z,5.0nm,0.9s,baz=60,slow=2.7,SNR=6.3						
ASAR			LR	LR	17 48 46.7	
comp=Z,4μm,19.0s,baz=92,slow=36						
RIV	**Riverview**	**27.04 189**	P	**P**	**17 38 28.9**	**+1.9**
baz=27,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	**27.49 23**	T	T	18 06 58.2	
baz=202,slow=76,SNR=1544						
H11S2	**WAKE ISLAND Hy**	**27.49 23**	T	T	18 06 49.9	
baz=202,slow=76,SNR=389						
H11S1	**WAKE ISLAND Hy**	**27.50 23**	T	T	18 06 51.1	
baz=202,slow=76,SNR=355						
KNRA	**Kununurra**	**27.95 250**	P	**P**	**17 38 35.5**	**+0.1**
baz=28,SNR=15						
STKA	**Stephens Creek**	**28.11 207**	P	**P**	**17 38 36.4**	**-0.3**
comp=Z,50nm,1.2s,baz=18,slow=10.0,SNR=17						
STKA			LR	LR	17 49 50.4	
comp=Z,5μm,19.0s,baz=25,slow=36						
STKA	**Stephens Creek**	**28.11 207**	*e*P	**P**	**17 38 36.3**	**-0.3**
comp=Z,19nm,0.8s						
STKA	**Stephens Creek**	**28.11 207**	P	**P**	**17 38 36.4**	**-0.3**
baz=28,SNR=13						
STKA	**Stephens Creek**	**28.11 207**	*e*P	**P**	**17 38 36.3**	**-0.3**
STKA			pmax	pmax		
comp=Z,19nm,0.8s						
WAKE	**Wake Island**	**28.20 22**	*e*P	**P**	**17 38 39.5**	**+2.1**
comp=Z,355nm,1.6s						
H11N1	**WAKE ISLAND Hy**	**28.68 22**	T	T	18 08 28.2	
baz=202,slow=76,SNR=167						
H11N3	**WAKE ISLAND Hy**	**28.69 22**	T	T	18 08 22.7	
baz=202,slow=76,SNR=304						
H11N2	**WAKE ISLAND Hy**	**28.69 22**	T	T	18 08 51.0	
baz=202,slow=76,SNR=137						
CNB	**Canberra Magne**	**28.80 191**	P	**P**	**17 38 43.9**	**+1.1**
baz=29,SNR=6.3						
CAN	**Canberra**	**28.88 192**	*e*P	**P**	**17 38 44.1**	**+0.6**
comp=Z,86nm,1.3s						
CAN	**Canberra**	**28.88 192**	*e*P	**P**	**17 38 44.1**	**+0.6**
CAN			pmax	pmax		
comp=Z,86nm,1.3s						
TNTI	**Ternate**	**29.52 284**	*e*P	**P**	**17 38 49.3**	**0.0**
comp=Z,322nm,1.6s						
TNTI	**Ternate**	**29.52 284**	P	**P**	**17 38 49.8**	**+0.4**
comp=Z,119nm,2.0s,comp=Z,2μm						
HTT	**Hallett**	**30.64 209**	P	**P**	**17 38 59.7**	**+0.6**
baz=31,SNR=8.9						
SOEI	**Soe**	**31.42 263**	*e*P	**P**	**17 39 06.7**	**+0.4**
comp=Z,178nm,0.9s						
SOEI	**Soe**	**31.42 263**	P	**P**	**17 39 07.1**	**+0.8**
comp=Z,212nm,1.1s,comp=Z,3μm						
FITZ	**Fitzroy Crossi**	**31.48 247**	P	**P**	**17 39 06.3**	**-0.3**
comp=Z,78nm,0.6s,baz=78,slow=7.5,SNR=188						
FITZ	**Fitzroy Crossi**	**31.48 247**	*e*P	**P**	**17 39 06.0**	**-0.6**
comp=Z,178nm,0.6s						
FITZ	**Fitzroy Crossi**	**31.48 247**	P	**P**	**17 39 06.3**	**-0.3**
baz=32,SNR=111						
BBOO	**Buckleboo**	**31.61 213**	*e*P	**P**	**17 39 07.1**	**-0.5**
comp=Z,212nm,1.6s						
BBOO	**Buckleboo**	**31.61 213**	P	**P**	**17 39 07.6**	**+0.1**
baz=32,SNR=5.6						
TOO	**Toolangi**	**31.86 196**	*e*P	**P**	**17 39 08.7**	**-1.1**
TOO	**Toolangi**	**31.86 196**	*e*P	**P**	**17 39 08.7**	**-1.1**
WRKA	**Warakurna**	**31.91 233**	P	**P**	**17 39 09.6**	**-0.8**
baz=32,SNR=150						
BATI	**Baumata**	**32.04 262**	P	**P**	**17 39 12.2**	**+0.6**
baz=178,slow=3.3						
BATI			LR	LR	17 53 18.8	
comp=Z,4μm,21.9s,baz=108,slow=38						
BATI	**Baumata**	**32.04 262**	P	**P**	**17 39 12.7**	**+1.1**
comp=Z,98nm,0.9s,comp=Z,1μm						
SGSI	**Sangihe**	**32.14 288**	P	**P**	**17 39 13.0**	**+0.5**
comp=Z,1μm,1.1s,comp=Z,10μm						
ARPS	**Mount Arapiles**	**32.28 201**	P	**P**	**17 39 13.9**	**+0.5**
baz=32,SNR=8.4						
OUZ	**Omahuta**	**32.43 152**	*e*P	**P**	**17 39 14.2**	**-0.6**
comp=Z,104nm,1.6s						
KNTN	**Kanton**	**32.51 84**	*e*P	**P**	**17 39 16.3**	**+0.6**
comp=Z,422nm,2.0s						
MATI	**Mati**	**32.68 295**	*e*P	**P**	**17 39 15.3**	**-1.9**
KMSI	**Cibinong**	**32.74 282**	P	**P**	**17 39 18.3**	**+0.5**
comp=Z,414nm,0.6s,comp=Z,4μm						
DDMP	**Don Marcelino,**	**32.84 293**	*e*P	**P**	**17 39 18.5**	**-0.1**
KDI	**Kendari**	**33.28 273**	P	**P**	**17 39 23.0**	**+0.6**
comp=Z,52nm,0.9s,comp=Z,2μm						
DAV	**Davao City (W)**	**33.34 294**	LR	LR	17 52 48.5	
comp=Z,707nm,19.5s,baz=96,slow=36						
DAV	**Davao City (W)**	**33.34 294**	*iP*	**P**	**17 39 22.3**	**-0.7**
MMRI	**Maumere**	**33.40 265**	*e*P	**P**	**17 39 21.7**	**-1.8**
comp=Z,559nm,0.8s						
MMRI	**Maumere**	**33.40 265**	P	**P**	**17 39 23.1**	**-0.4**
comp=Z,738nm,1.0s,comp=Z,7μm						
LUWI	**Luwuk**	**33.58 279**	*e*P	**P**	**17 39 24.5**	**-0.6**
comp=Z,516nm,1.2s						
LUWI	**Luwuk**	**33.58 279**	P	**P**	**17 39 25.0**	**0.0**
comp=Z,394nm,1.2s,comp=Z,4μm						
EDFI	**Ende, Flores**	**33.94 265**	P	**P**	**17 39 27.6**	**-0.7**
comp=Z,502nm,0.8s,comp=Z,4μm						
SKMP	**Bagumbayan, Su**	**34.07 293**	*e*P	**P**	**17 39 28.3**	**-1.0**
BUKP	**Musuan**	**34.14 295**	*e*P	**P**	**17 39 31.0**	**+1.0**
MRSI	**Marisa**	**34.71 281**	P	**P**	**17 39 34.3**	**-0.5**
comp=Z,70nm,1.3s,comp=Z,943nm						
BASI	**Baing, Sumba**	**35.07 262**	P	P	17 39 43.6	+5.6
BSSI	**Bau Bau, Buton**	**35.20 269**	P	**P**	**17 39 39.4**	**+0.3**
comp=Z,865nm,0.9s,comp=Z,9μm						
FORT	**Forrest**	**35.21 224**	*e*P	**P**	**17 39 38.3**	**-0.6**
comp=Z,204nm,0.6s						
FORT	**Forrest**	**35.21 224**	P	**P**	**17 39 38.7**	**-0.2**
baz=35,SNR=94						
MSLP	**Maasin**	**35.32 299**	*e*P	**P**	**17 39 39.2**	**-0.8**
WSI	**Waingapu**	**35.33 263**	P	**P**	**17 39 41.1**	**+0.9**
comp=Z,794nm,0.9s,comp=Z,15μm						
BESP	**Borongan**	**35.52 301**	*e*P	**P**	**17 39 41.4**	**-0.4**
BKSI	**Bulukumba**	**35.62 271**	P	**P**	**17 39 42.2**	**-0.5**
comp=Z,79nm,1.0s,comp=Z,881nm						
PAGZ	**Pagadian**	**35.65 294**	*e*P	**P**	**17 39 42.2**	**-0.7**
BNSI	**Bone**	**35.72 272**	P	**P**	**17 39 44.0**	**+0.4**
comp=Z,234nm,1.9s,comp=Z,3μm						
HIZ	**Hauiti**	**35.73 154**	*e*P	**P**	**17 39 45.9**	**+2.6**
comp=Z,574nm,2.0s						
OCLP	**Ormoc**	**35.96 300**	*e*P	**P**	**17 39 47.1**	**+1.5**
KAPI	**Kappang**	**36.02 271**	P	**P**	**17 39 46.3**	**+0.3**
comp=Z,67nm,0.6s,baz=95,slow=5.5,SNR=40						
KAPI	**Kappang**	**36.02 271**	*e*P	**P**	**17 39 46.2**	**+0.1**
comp=Z,184nm,0.9s						
KAPI	**Kappang**	**36.02 271**	*e*P	**P**	**17 39 46.2**	**+0.1**
KAPI			pmax	pmax		
comp=Z,184nm,0.9s						
KAPI	**Kappang**	**36.02 271**	P	**P**	**17 39 46.7**	**+0.6**
SNR=35						
SPSI	**Sidrap Palu**	**36.10 273**	P	**P**	**17 39 46.0**	**-0.8**
comp=Z,79nm,1.2s,comp=Z,845nm						
MOO	**Moorlands**	**36.11 191**	P	**P**	**17 39 47.5**	**+1.0**
baz=36,SNR=3.2						
TTSI	**Tana Toraja**	**36.17 274**	P	**P**	**17 39 47.7**	**+0.4**
comp=Z,124nm,1.2s,comp=Z,2μm						
WBSI	**Waikabubak, Su**	**36.23 263**	P	**P**	**17 39 47.7**	**-0.2**
comp=Z,727nm,0.8s,comp=Z,12μmcomp=Z,438μm						
IPIL	**Ipil**	**36.36 293**	*e*P	**P**	**17 39 49.1**	**+0.1**
URZ	**Urewera**	**36.54 151**	P	**P**	**17 39 50.2**	**0.0**
comp=Z,53nm,1.2s,baz=252,slow=2.2,SNR=14						
URZ			LR	LR	17 53 37.6	
comp=Z,1μm,18.9s,baz=356,slow=34						
URZ	**Urewera**	**36.54 151**	*e*P	**P**	**17 39 50.6**	**+0.4**
comp=Z,214nm,1.8s						
TAU	**Tasmania Unive**	**36.54 191**	*e*P	**P**	**17 39 51.5**	**+1.4**
comp=Z,129nm,1.1s						
TAU	**Tasmania Unive**	**36.54 191**	*e*P	**P**	**17 39 51.5**	**+1.4**
TAU			pmax	pmax		
comp=Z,129nm,1.1s						
MXZ	**Matakaoa Point**	**36.58 149**	*e*P	**P**	**17 39 50.7**	**+0.1**
comp=Z,233nm,1.8s						
MPSI	**Mapaga**	**36.67 280**	P	**P**	**17 39 50.7**	**-0.9**
comp=Z,107nm,1.1s,comp=Z,1μm						
BKZ	**Black Stump Fm**	**36.99 153**	*e*P	**P**	**17 39 54.1**	**0.0**
comp=Z,38nm,1.0s						
GUIM	**Jordan**	**37.53 298**	*e*P	**P**	**17 39 57.8**	**-1.1**
PVCP	**Virac**	**37.61 303**	*e*P	**P**	**17 39 59.0**	**-0.6**
PSA00	**Pilbara Seismi**	**37.71 244**	*e*P	**P**	**17 40 00.1**	**-0.3**
comp=Z,338nm,1.4s						
THZ	**Tophouse**	**37.74 159**	*e*P	**P**	**17 40 00.7**	**+0.2**
comp=Z,438nm,1.7s						
PLAI	**Plampang**	**37.81 265**	P	**P**	**17 39 59.7**	**-1.6**
comp=Z,451nm,0.9s,comp=Z,4μm						
SNZO	**South Karori**	**38.02 157**	*e*P	**P**	**17 40 02.1**	**-0.6**
comp=Z,241nm,1.6s						
BFZ	**Birch Farm**	**38.12 155**	*e*P	**P**	**17 40 02.4**	**-1.2**
comp=Z,113nm,1.3s						
FOZ	**Fox Glacier**	**38.36 164**	*e*P	**P**	**17 40 05.4**	**-0.1**
comp=Z,116nm,1.2s						
LTZ	**Lake Taylor**	**38.43 161**	*e*P	**P**	**17 40 06.4**	**+0.2**
comp=Z,413nm,1.7s						
KHZ	**Kahutara**	**38.54 159**	*e*P	**P**	**17 40 06.7**	**-0.3**
comp=Z,440nm,1.7s						
OTRP	**Odiongan**	**38.81 300**	*e*P	**P**	**17 40 09.4**	**-0.3**
OXZ	**Oxford**	**38.84 161**	*e*P	**P**	**17 40 09.0**	**-0.5**
comp=Z,162nm,1.1s						
RPZ	**Rata Peaks**	**38.89 162**	P	**P**	**17 40 10.2**	**+0.2**
comp=Z,58nm,0.8s,baz=328,slow=3.1,SNR=11						
RPZ			LR	LR	17 55 53.3	
comp=Z,2μm,18.4s,baz=320,slow=36						
RPZ	**Rata Peaks**	**38.89 162**	*e*P	**P**	**17 40 09.8**	**-0.2**
comp=Z,179nm,1.2s						
CUYO	**Cuyo Island**	**39.01 297**	*e*P	**P**	**17 40 11.2**	**-0.2**
LBZ	**Lake Benmore**	**39.25 164**	*e*P	**P**	**17 40 13.2**	**+0.2**
comp=Z,142nm,1.5s						
CRLZ	**Canterbury Las**	**39.26 161**	*e*P	**P**	**17 40 13.3**	**+0.3**
comp=Z,314nm,1.2s						
BKB	**Balikpapan**	**39.32 277**	P	**P**	**17 40 14.2**	**+0.2**
comp=Z,164nm,1.2s,comp=Z,2μm						
WKZ	**Wanaka**	**39.35 165**	*e*P	**P**	**17 40 13.6**	**-0.2**
comp=Z,145nm,1.4s						
MQZ	**McQueen's Vall**	**39.38 161**	*e*P	**P**	**17 40 13.8**	**-0.2**
comp=Z,727nm,2.0s						
BOAC	**Boac**	**39.48 301**	*e*P	**P**	**17 40 15.2**	**0.0**
SJMP	**San Jose**	**39.64 299**	*e*P	**P**	**17 40 17.0**	**+0.4**
MLZ	**Mavora Lakes**	**39.64 166**	*e*P	**P**	**17 40 16.6**	**+0.3**
comp=Z,248nm,1.3s						
KMBL	**Kambalda**	**39.96 228**	P	**P**	**17 40 19.1**	**0.0**
baz=40,SNR=18						
ODZ	**Otahua Downs**	**39.99 164**	*e*P	**P**	**17 40 18.8**	**-0.3**
comp=Z,75nm,1.3s						
POLP	**Polillo Island**	**40.03 303**	*e*P	**P**	**17 40 19.7**	**0.0**
BUSP	**Coron**	**40.23 298**	*e*P	**P**	**17 40 20.9**	**-0.6**
IGBI	**Denpasar**	**40.41 265**	P	**P**	**17 40 23.7**	**+0.7**
TGY	**Tagaytay City**	**40.56 301**	P	**P**	**17 40 22.8**	**-1.5**
comp=Z,143nm,0.4s,baz=30,slow=14,SNR=2.3						
ENPP	**El Nido**	**40.58 296**	*e*P	**P**	**17 40 23.6**	**-0.7**
PALP	**Palanan**	**40.85 306**	*e*P	**P**	**17 40 27.8**	**+1.3**
LUBP	**Lubang**	**40.98 300**	*e*P	**P**	**17 40 25.7**	**-1.9**
CAUP	**Cauayan**	**41.27 306**	*e*P	**P**	**17 40 30.0**	**0.0**
MTKI	**Muara Teweh, K**	**41.34 277**	P	**P**	**17 40 31.9**	**+1.2**
comp=Z,83nm,0.9s,comp=Z,3μm						
JAGI	**Jajag, Banyuwa**	**41.40 265**	*e*P	**P**	**17 40 29.2**	**-2.0**
comp=Z,134nm,1.0s						
JAGI	**Jajag, Banyuwa**	**41.40 265**	P	**P**	**17 40 31.9**	**+0.7**
SMPP	**San Manuel, Pa**	**41.79 304**	*e*P	**P**	**17 40 33.2**	**-1.1**
SGCP	**Mt. Cagua**	**41.80 307**	*e*P	**P**	**17 40 35.5**	**+1.2**
JHJ2	**Mitsune**	**42.74 340**	*e*P	**P**	**17 40 43.6**	**+1.8**
comp=Z,1μm,1.4s						
GIRL	**Giralia**	**43.01 244**	*e*P	**P**	**17 40 44.2**	**+0.1**
comp=Z,2μm,1.8s						
GIRL	**Giralia**	**43.01 244**	P	**P**	**17 40 45.2**	**+1.1**
baz=43,SNR=3.7						
JOW	**Kunigami**	**43.01 323**	*e*P	**P**	**17 40 42.9**	**-1.1**
comp=Z,23nm,0.6s						
KLBR	**Kellerberrin**	**43.17 230**	P	**P**	**17 40 44.8**	**-0.6**
baz=43,SNR=43						
MORW	**Morawa**	**43.49 235**	*e*P	**P**	**17 40 46.5**	**-1.4**
comp=Z,81nm,0.8s						
MORW	**Morawa**	**43.49 235**	P	**P**	**17 40 47.5**	**-0.4**
baz=44,SNR=32						
BLDU	**Baliidu**	**43.57 232**	P	**P**	**17 40 48.0**	**-0.5**
baz=44,SNR=24						
PWJI	**Pagerwojo**	**43.73 266**	P	**P**	**17 40 49.7**	**-0.4**
comp=Z,174nm,1.1s,comp=Z,3μm						
NGJI	**Ngawi**	**44.10 267**	P	P	17 41 05.9	+13
NWAO	**Narrogin (SRO)**	**44.17 229**	P	**P**	**17 40 52.2**	**-1.1**
comp=Z,50nm,1.0s,baz=63,slow=7.4,SNR=14						
NWAO	**Narrogin (SRO)**	**44.17 229**	*e*P	**P**	**17 40 52.6**	**-0.7**
comp=Z,108nm,1.1s						
NWAO	**Narrogin (SRO)**	**44.17 229**	P	**P**	**17 40 53.1**	**-0.2**
baz=44,SNR=7.0						
NWAO	**Narrogin (SRO)**	**44.17 229**	*e*P	**P**	**17 40 52.6**	**-0.7**
NWAO			pmax	pmax		
comp=Z,108nm,1.1s						
NWAO	**Narrogin (SRO)**	**44.17 229**	P	**P**	**17 40 53.1**	**-0.2**
SNR=5.5						
PBKI	**Pangkalan Bun**	**44.28 273**	P	**P**	**17 40 56.2**	**+1.7**
MUN	**Mundaring**	**44.53 231**	P	**P**	**17 40 56.1**	**-0.1**
baz=45,SNR=12						
WOJI	**Wonogiri, Jawa**	**44.61 266**	P	**P**	**17 40 57.8**	**+0.7**
comp=Z,81nm,2.1s						
SBUM	**Sibu**	**44.62 281**	*e*PcP

MCQ pmax pmax
comp=Z,289nm,1.4s
CISI Cisompet, Garu 47.70 266 *e*P **P 17 41 19.5 -1.9**
comp=Z,150nm,0.7s
CISI Cisompet, Garu 47.70 266 P **P 17 41 20.7 -0.8**
comp=Z,259nm,0.7s,comp=Z,3µm
LEM Lembang 47.93 267 P **P 17 41 22.9 -0.5**
comp=Z,61nm,0.6s,baz=76,slow=5.3,SNR=16
TPI Tanjungpandan 48.26 273 P **P 17 41 26.0 +0.3**
comp=Z,132nm,0.9s,comp=Z,1µm
QZH Quanzhou 48.27 312⇑ *i*P **P 17 41 26.2 +0.6**
QZH pP **pP 17 41 38.2 -5.0**
QZH S **S 17 48 20.3 -0.1**
QZH pmax pmax
comp=Z,170nm,5.3s
QZH LR LR
comp=Z,470nm,24.1s
QZH LR LR
comp=Z,190nm,18.8s
QZH LR LR
comp=Z,920nm,27.3s
CBJI Citeko 48.72 268 P **P 17 41 28.5 -0.7**
comp=Z,244nm,0.8s
SKJI Sukabumi 48.98 267 P **P 17 41 30.8 -0.4**
comp=Z,385nm,0.8s,comp=Z,5µm
PPBI Pangkal Pinang 49.83 273 P **P 17 41 37.7 -0.1**
comp=Z,46nm,1.4s,comp=Z,798nm
CGJI Cibinong 49.85 267 P **P 17 41 36.0 -1.9**
ERM Erimo 50.17 348 *e*P **P 17 41 41.5 +1.7**
comp=Z,36nm,1.0s
ERM Erimo 50.17 348 *e*P **P 17 41 41.5 +1.7**
ERM pmax pmax
comp=Z,36nm,1.0s
HKPS Hong Kong Po S 50.22 307 *e*P **P 17 41 41.7 +1.2**
comp=Z,154nm,1.1s
SSE Sheshan 50.40 321 P **P 17 41 41.5 -0.2**
SSE S **S 17 48 50.1 0.0**
SSE pmax pmax
comp=Z,10.0nm,0.7s
SSE pmax pmax
comp=Z,100nm,4.5s
SSE LR LR
comp=Z,110nm,19.3s
SSE LR LR
comp=Z,230nm,23.7s
DLV T Lat 50.79 292 *e*P **P 17 41 45.1 -0.1**
comp=Z,565nm,1.0s
TJN Taejon 50.81 330 *c i*P **P 17 41 45.2 +0.5**
KASI Kota Agung 51.12 269 P **P 17 41 45.9 -1.5**
comp=Z,164nm,1.0s
GZH Guangzhou 51.26 307 P **P 17 41 48.8 +0.5**
GZH S **S 17 49 04.7 +2.5**
GZH sS **sS 17 49 33.7 +1.6**
GZH pmax pmax
comp=Z,230nm,6.0s
GZH LR LR
comp=Z,320nm,19.8s
GZH LR LR
comp=Z,400nm,19.0s
KSRS Korea Array 51.39 331 P **P 17 41 49.9 +0.9**
comp=Z,8.0nm,0.7s,baz=147,slow=7.4,SNR=30
KSRS PcP **PcP 17 43 03.6 +0.8**
comp=Z,4.2nm,0.7s,baz=151,slow=3.7,SNR=6.1
KSRS LR LR 18 03 23.2
comp=Z,227nm,20.1s,baz=141,slow=36
KS15 Wonju Array Si 51.40 331 *e*P **P 17 41 49.4 +0.3**
comp=Z,72nm,1.4s
KS15 *e*PcP **PcP 17 43 03.6 +0.8**
MDSI Maura Dua 51.52 270 P **P 17 41 48.9 -1.6**
comp=Z,57nm,0.9s,comp=Z,913nm
LWLI Liwa 51.59 269 P **P 17 41 50.3 -0.9**
comp=Z,59nm,0.9s,comp=Z,36µm
YUK Yuzh-Kuril'sk 51.62 351 *e*P P 17 41 33.3 -17
YUK *e* 17 43 47.2
YUK *e*PPP PPP 17 44 47.3
YUK *e*S **S 17 49 02.5 -4.0**
YUK *e*SS **SS 17 52 35.7 -8.1**
YUK *e*SSS SSS 17 54 20.2
TPRI Tanjung Pinang 51.88 277 P **P 17 41 53.0 -0.1**
comp=Z,117nm,1.2s,comp=Z,2µm
LHSI Lahat 52.24 271 P **P 17 41 55.2 -0.6**
comp=Z,40nm,1.7s
QIZ Qiongzhong 52.26 300 P **P 17 41 56.7 +0.8**
QIZ sP **sP 17 42 24.1 +2.6**
QIZ S **S 17 49 22.8 +6.7**
QIZ pmax pmax
comp=Z,220nm,2.6s
QIZ LR LR
comp=Z,310nm,20.0s
QIZ LR LR
comp=Z,450nm,25.5s
QIZ LR LR
comp=Z,1µm,25.5s
QIZ Qiongzhong 52.26 300 *e*P **P 17 41 56.9 +1.0**
comp=Z,121nm,0.9s
ASAJ Asahikawa 52.30 348 P **P 17 41 57.4 +1.7**
comp=Z,24nm,0.9s,baz=223,slow=8.3,SNR=24
NJ2 Nanjing 52.52 320 *e*P **P 17 41 58.3 +0.8**
NJ2 pP **pP 17 42 10.5 -4.8**
NJ2 sP **sP 17 42 25.8 +2.6**
NJ2 PcP **PcP 17 43 07.1 -0.1**
NJ2 S **S 17 49 22.5 +3.3**
NJ2 sS **sS 17 49 51.3 +1.9**
NJ2 pmax pmax
comp=Z,23nm,1.1s
NJ2 pmax pmax
comp=Z,340nm,11.9s
NJ2 LR LR
comp=Z,580nm,19.5s
NJ2 LR LR
comp=Z,530nm,23.8s
NJ2 LR LR
comp=Z,1µm,22.8s
MYKOM Kota Tinggi 52.69 278 *e*P **P 17 41 58.8 -0.4**
comp=Z,204nm,1.5s
MYKOM Kota Tinggi 52.69 278 P **P 17 42 00.0 +0.8**
MNAI Manna 52.75 270 *e*P **P 17 41 58.1 -1.5**
comp=Z,286nm,1.2s
HON Honolulu 53.27 57 *e*P **P 17 42 04.3 +1.1**
comp=Z,188nm,1.1s
HON Honolulu 53.27 57 *e*P **P 17 42 04.3 +1.1**
HON pmax pmax
comp=Z,188nm,1.1s
OPA Opana 53.42 57 *e*P **P 17 42 05.8 +1.4**
comp=Z,118nm,1.0s
OPA Opana 53.42 57 *e*P **P 17 42 05.8 +1.4**
OPA pmax pmax
comp=Z,118nm,1.0s
PPT Papeete 54.11 107 LR LR 18 00 37.4
comp=Z,600nm,21.1s,baz=294,slow=31
PPT Papeete 54.11 107 *e*P **P 17 42 08.8 -0.7**
PPT Papeete 54.11 107 *e*P **P 17 42 08.8 -0.7**
PPT2 Papeete2 54.11 107 *e*P **P 17 42 08.6 -1.0**
comp=Z,186nm,1.5s
PPT2 *e*S **S 17 49 39.8 -1.7**
comp=Z,504nm,26.2s
PPT2 *e*LR LR 17 57 56.4
comp=Z,1µm,22.5s,baz=258
PPTF Pamatai, Papee 54.12 107 *e*P **P 17 42 09.0 -0.7**
comp=Z,148nm,1.0s
KKH Kailua Kona 54.23 60 *e*P **P 17 42 10.8 +0.6**
KKH Kailua Kona 54.23 60 *e*P **P 17 42 10.8 +0.6**
MSHR Mys Shultsa 54.27 338 *c i*P **P 17 42 11.2 +1.0**
TIAR Tiarei 54.33 107 *e*P **P 17 42 09.6 -1.5**
comp=Z,31nm,0.8s
KHU Kahuku 54.40 60 *e*P **P 17 42 11.3 -0.6**
comp=Z,330nm,1.4s
KHU Kahuku 54.40 60 *e*P **P 17 42 11.3 -0.6**
KHU pmax pmax
comp=Z,330nm,1.4s
TVO Taravao 54.44 107 *e*P **P 17 42 10.7 -1.2**
comp=Z,83nm,1.3s
VLA Vladivostok 54.47 339 *c i*P **P 17 42 13.1 +1.5**
VLA pmax pmax
comp=Z,102nm,1.8s
WHN Wuhan 54.60 315⇑P **P 17 42 13.1 +0.3**
WHN pP **pP 17 42 25.3 -5.4**
WHN S **S 17 49 48.6 +1.2**
WHN pmax pmax
comp=Z,40nm,1.0s
WHN pmax pmax
comp=Z,410nm,4.0s
WHN LR LR
comp=Z,920nm,16.3s
WHN LR LR
comp=Z,1µm,20.5s
WHN LR LR
comp=Z,3µm,24.6s
TEY Ternei 54.65 343⇓ *e*P **P 17 42 14.3 +1.5**
TEY *e* 17 42 26.2
TEY pmax pmax
comp=Z,30nm,0.9s
TEY pmax pmax
comp=N,20nm,0.7s
TEY pmax pmax
comp=E,10.0nm,0.7s
SDSI Sungai Dareh 54.66 274 P **P 17 42 13.8 +0.2**
comp=E,154nm,1.3s,comp=E,4µm
TBI Tubuai 54.83 114 *e*S **S 17 49 50.0 -0.8**
comp=E,407nm,28.8s
TBI *e*LQ LQ 17 55 57.7
comp=E,1µm,33.8s
TBI *e*LR LR 17 58 14.4
comp=E,3µm,29.0s
YSS Yuzh-Sakhalins 54.99 349 *e*P **P 17 42 15.9 +0.6**
comp=E,88nm,0.8s
YSS Yuzh-Sakhalins 54.99 349 *i* P **P 17 42 16.3 +1.0**
YSS pmax pmax
comp=Z,34nm,0.8s
BKNI Bangkinang 55.23 275 P **P 17 42 18.1 +0.4**
USA0B Ussuriysk Arra 55.37 339 *e*P **P 17 42 19.0 +0.9**
comp=Z,187nm,1.6s
USRK Ussuriysk Ar. 55.37 339 P **P 17 42 19.1 +0.9**
comp=Z,14nm,0.8s,baz=145,slow=7.0,SNR=35
USRK LR LR 18 03 28.6
comp=Z,282nm,21.6s,baz=137,slow=33
PMOR Pomariorio Ree 55.60 103 *e*P **P 17 42 18.8 -1.5**
comp=Z,523nm,1.4s
PDSI Padang 55.62 274 P **P 17 42 18.9 -1.6**
DL2 Dalian 55.67 328⇑P **P 17 42 18.7 -1.7**
DL2 pP **pP 17 42 33.0 -5.4**
DL2 S **S 17 49 58.2 -3.3**
DL2 pmax pmax
comp=Z,29nm,1.0s
DL2 pmax pmax
comp=Z,190nm,4.1s
DL2 LR LR
comp=Z,400nm,23.5s
DL2 LR LR
comp=Z,500nm,21.8s
DL2 LR LR
comp=Z,1µm,24.3s
VAH Vaihoa 55.86 104 *e*P **P 17 42 20.6 -1.6**
comp=Z,212nm,1.3s
IPM Ipoh 55.97 280 *e*P **P 17 42 22.3 -0.7**
comp=Z,644nm,1.7s
PANO Nakornpanom 56.10 296 P **P 17 42 24.7 +0.9**
comp=Z,7.6nm,1.0s,comp=Z,83nm
TIA Tai'an 56.34 322 P **P 17 42 24.9 -0.3**
TIA S **S 17 50 10.5 0.0**
TIA pmax pmax
comp=Z,10.0nm,1.1s
TIA LR LR
comp=Z,380nm,20.6s
TIA LR LR
comp=Z,170nm,17.1s
TIA LR LR
comp=Z,570nm,21.4s
KULM Kulim 56.49 281 *e*P **P 17 42 26.2 -0.5**
comp=Z,180nm,1.1s
MDJ Mudanjiang 56.60 338 P **P 17 42 27.7 +0.8**
MDJ pP pP 17 42 45.9 +1.0
MDJ sP sP 17 42 54.4 +1.6
MDJ ScP **ScP 17 47 15.9 -0.2**
MDJ S **S 17 50 15.0 +1.3**
MDJ sS sS 17 50 46.8 +3.8
MDJ pmax pmax
comp=Z,22nm,1.6s
MDJ pmax pmax
comp=Z,350nm,8.0s
MDJ LR LR
comp=Z,280nm,22.7s
MDJ LR LR
comp=Z,350nm,22.7s
MDJ LR LR
comp=Z,540nm,21.4s
MDJ Mudanjiang 56.60 338 *e*P **P 17 42 26.6 -0.4**
comp=Z,238nm,2.0s
SKNT Sakolnakorn 56.60 296 P **P 17 42 27.9 +0.5**
comp=Z,478nm,1.0s,comp=Z,5µm
MNSI Mandailing Nat 56.74 276 P **P 17 42 26.7 -1.8**
SNY Shenyang 56.90 331⇑P **P 17 42 27.8 -1.2**
SNY S **S 17 50 16.6 -1.0**
SNY pmax pmax
comp=Z,13nm,0.8s
SNY pmax pmax
comp=Z,190nm,6.6s
SNY LR LR
comp=Z,420nm,16.4s
SNY LR LR
comp=Z,450nm,18.5s
SNY LR LR
comp=Z,1µm,31.3s
SISI Saibi 56.92 273 P **P 17 42 31.3 +1.5**
comp=Z,46nm,1.3s
SKLT Songkhla 56.93 283 P **P 17 42 29.9 +0.1**
comp=Z,70nm,1.2s,comp=Z,888nm
KHON Khomkaen 57.43 294 P **P 17 42 33.8 +0.5**
comp=Z,520µm,0.9s
SKR Severo-Kuril's 57.47 0 *e*P **P 17 42 35.3 +2.5**
SKR *e*S **S 17 50 25.1 +0.4**
SKR *e*SSS SSS 17 56 36.2
SKR pmax pmax
comp=Z,500nm,4.6s
SKR pmax pmax
comp=Z,109nm,1.2s
SKR MLR MLR
comp=Z,500nm,17.0s
CN2 Changchun 57.61 334 *e*P **P 17 42 34.4 +0.4**
CN2 *e*S **S 17 50 23.6 -3.3**
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,400nm,21.0s
CN2 LR LR
comp=Z,300nm,21.0s
CN2 LR LR
comp=Z,400nm,22.0s
PSI Prapat 57.71 278 P **P 17 42 33.5 -1.9**
comp=Z,5.2nm,0.4s,baz=95,slow=4.9,SNR=14
PSI Prapat 57.71 278 *e*P **P 17 42 32.8 -2.7**
comp=Z,116nm,1.5s
PSI Prapat 57.71 278 *e*P **P 17 42 32.8 -2.7**
PSI pmax pmax
comp=Z,116nm,1.5s
ENH Enshi 57.93 312 *e*P **P 17 42 36.4 -0.2**
comp=Z,61nm,0.8s
TRTT Trang 57.98 284 P **P 17 42 37.2 0.0**
comp=Z,126nm,1.3s,comp=Z,2µm
CHAI Chaiyaphum 58.05 294 P **P 17 42 37.6 0.0**
comp=Z,334µm,0.9s
TSI Tuntungan 58.19 278 P P 17 42 52.0 +13
GYA Guiyang 58.20 307⇑ *i*P **P 17 42 39.2 +0.6**
GYA pP pP 17 42 59.3 +2.5
GYA sP sP 17 43 08.0 +3.4
GYA PP **PP 17 44 48.0 -0.3**
GYA S **S 17 50 32.8 -2.7**
GYA sS sS 17 51 07.8 +1.7
GYA pmax pmax
comp=Z,20nm,0.5s
GYA pmax pmax
comp=Z,190nm,7.3s
GYA LR LR
comp=Z,260nm,20.3s
GYA LR LR
comp=Z,290nm,23.7s
GYA LR LR
comp=Z,240nm,21.8s
SLVN Son La 58.29 300 *e*P **P 17 42 40.1 +0.8**
comp=Z,102nm,1.1s
KRAB Krabi 58.54 284 P **P 17 42 40.9 -0.2**
comp=Z,319µm,0.8s
TMDB BangkokBB_BH_I 58.63 291 P P 17 42 56.4 +15
GSI Gunungsitoli 58.80 276 *e*P **P 17 42 41.0 -1.9**
comp=Z,124nm,0.7s
GSI Gunungsitoli 58.80 276 P **P 17 42 41.4 -1.5**
KCSI Kotacane, Aceh 58.97 278 P **P 17 42 41.8 -2.3**
PBKT Sadao Pong 59.18 294 P **P 17 42 46.4 +0.9**
comp=Z,93nm,1.1s,comp=Z,949nm
PKDT Phuket 59.30 283 P **P 17 42 47.0 +0.6**
comp=Z,238nm,1.3s,comp=Z,3µm
PHET Kaeng Krachan 59.32 289 P **P 17 42 47.5 +1.0**
comp=Z,729µm,1.0s
BJI Beijing 59.46 325⇑ *i*P **P 17 42 46.9 0.0**
BJI sP **sP 17 43 14.0 +1.1**
BJI S **S 17 50 51.2 +0.1**
BJI pmax pmax
comp=Z,8.0nm,1.3s
BJI pmax pmax
comp=Z,97nm,4.3s
BJI LR LR
comp=Z,180nm,19.8s
PET Petropavlovsk 59.86 2 *e*P **P 17 42 49.8 +0.4**
comp=Z,66nm,1.1s
PET Petropavlovsk 59.86 2 *e*P **P 17 42 50.1 +0.7**
PET *e*S **S 17 50 56.9 +1.2**
PET pmax pmax
comp=Z,300nm,8.6s
PET pmax pmax
comp=Z,500nm,6.4s
PET pmax pmax
comp=Z,65nm,1.1s
KLR Kul'dur 59.87 342 P **P 17 42 50.6 +1.0**
comp=Z,11nm,1.0s,baz=145,slow=6.2,SNR=35
KLR Kul'dur 59.87 342 *c i*P **P 17 42 50.5 +0.9**
KLR pmax pmax
comp=Z,54nm,1.5s
PEA0B Petropavlovsk- 59.91 1 *e*P **P 17 42 50.6 +0.7**
comp=Z,304nm,1.5s
PETK Petropavlovsk- 59.91 1 P **P 17 42 51.0 +1.2**
comp=Z,13nm,0.6s,baz=148,slow=6.6,SNR=43
PETK LR LR 18 04 57.5
comp=Z,1µm,21.8s,baz=180,slow=32
UTTA Uttaradit 59.94 295 P **P 17 42 51.4 +0.7**
comp=Z,555µm,0.9s
GRNR Gornyy 59.97 346 *e*P **P 17 42 53.4 +3.1**
GRNR pmax pmax
comp=Z,16nm,1.0s
TIY Taiyuan 60.18 321 *e*P **P 17 42 52.8 +0.7**
TIY pP **pP 17 43 13.5 +3.2**
TIY S **S 17 50 59.4 -1.3**
TIY sS **sS 17 51 34.0 +2.1**
TIY pmax pmax
comp=Z,150nm,6.8s
TIY LR LR
comp=Z,420nm,20.7s
TIY LR LR
comp=Z,130nm,14.4s
TIY LR LR
comp=Z,230nm,15.7s
SRDT SRDT 60.20 291 P **P 17 42 53.5 +1.0**
comp=Z,292nm,1.2s,comp=Z,3µm
XAN Xi'an 60.36 316 P **P 17 42 52.8 -0.6**
XAN PcP **PcP 17 43 41.0 +3.2**
XAN S **S 17 50 59.7 -3.3**
XAN ScS SKKSac 17 52 36.2 -1.7
XAN pmax pmax
comp=Z,29nm,0.8s
XAN pmax pmax
comp=Z,210nm,6.5s
XAN LR LR
comp=Z,500nm,22.8s
XAN LR LR
comp=Z,840nm,25.0s
XAN Xi'an 60.36 316 *e*P **P 17 42 52.7 -0.6**
comp=Z,52nm,0.8s
XAN Xi'an 60.36 316 *e*P **P 17 42 52.7 -0.6**
XAN pmax pmax
comp=Z,52nm,0.8s
MLSI Meulaboh, Aceh 60.45 279 P **P 17 42 53.2 -1.1**
comp=Z,254nm,1.1s
KMI Kunming 60.79 304 P **P 17 42 57.6 +0.9**
KMI PP **PP 17 45 14.7 +3.3**
KMI S **S 17 51 10.3 +1.1**
KMI pmax pmax
comp=Z,15nm,1.7s
KMI pmax pmax
comp=Z,320nm,6.5s
KMI LR LR
comp=Z,170nm,22.4s
KMI LR LR
comp=Z,620nm,22.4s
KMI LR LR
comp=Z,910nm,25.7s
KMI Kunming 60.79 304 *e*P **P 17 42 57.1 +0.4**
comp=Z,78nm,1.0s
KMI Kunming 60.79 304 *e*P **P 17 42 57.1 +0.4**
KMI pmax pmax
comp=Z,78nm,1.0s
UMPA Umpang Tak 60.99 293 P **P 17 42 58.9 +1.0**
comp=Z,337µm,1.1s
LAMP Lampang 61.03 296 P **P 17 42 59.2 +1.1**
comp=Z,483µm,0.9s
PAYA Payao 61.09 297 P **P 17 42 59.3 +0.7**
comp=Z,493µm,0.9s
CM31 Chiang Mai Arr 61.62 295 *e*P **P 17 43 03.0 +0.8**
comp=Z,316nm,1.1s
CM31 Chiang Mai Arr 61.62 295 P **P 17 43 03.5 +1.4**
SNR=112
CMAR Chiang Mai Arr 61.62 295 P **P 17 43 03.1 +1.0**
comp=Z,22nm,0.6s,baz=126,slow=5.6,SNR=154
CMAR LR LR 18 09 52.8
comp=Z,176nm,19.8s,baz=108,slow=36
CMAR PKP2bc 18 12 19.9
comp=Z,0.3nm,0.7s,baz=287,slow=4.8,SNR=4.1
CMMT Chiang Mai 61.73 296 P **P 17 43 03.3 +0.4**
comp=Z,112nm,1.2s,comp=Z,1µm
CHTO Chiang Mai 61.74 296 *e*P **P 17 43 02.9 0.0**
comp=Z,183nm,1.0s
CHTO Chiang Mai 61.74 296 *e*P **P 17 43 02.9 0.0**
CHTO pmax pmax
comp=Z,183nm,1.0s
CHTO Chiang Mai 61.74 296 P **P 17 43 03.7 +0.8**
SNR=80
CD2 Chengdu 62.53 310 P **P 17 43 08.5 +0.5**
CD2 pP pP 17 43 27.0 +0.7
CD2 S **S 17 51 28.9 -1.7**
CD2 sS sS 17 52 04.5 +2.9
CD2 SS **SS 17 55 36.8 +0.7**
CD2 pmax pmax
comp=Z,440nm,5.1s
CD2 LR LR
comp=Z,2µm,25.9s
CD2 LR LR
comp=Z,2µm,23.3s
CD2 LR LR
comp=Z,2µm,24.5s
HHC Hu-ho-hao-te 62.66 323 *e*P **P 17 43 09.4 +0.6**
HHC sP sP 17 43 39.2 +4.3
HHC S **S 17 51 30.6 -1.4**
HHC ScS **SKSac 17 52 52.9 -2.3**
HHC SS **SS 17 55 40.7 +2.8**
HHC pmax pmax
comp=Z,31nm,0.9s
HHC pmax pmax
comp=Z,330nm,6.1s
HHC LR LR
comp=Z,430nm,18.4s
HHC LR LR
comp=Z,1µm,18.9s
HHC LR LR
comp=Z,990nm,19.0s
KIWB Kanaga Island 63.02 18 *e*P **P 17 43 11.8 +1.0**
ADK Adak 63.19 19 *e*P **P 17 43 12.5 +0.6**
comp=Z,92nm,0.9s
ADK Adak 63.19 19 *e*P **P 17 43 12.5 +0.6**
ADK pmax pmax
comp=Z,92nm,0.9s
HIA Hailar 64.33 335 *e*P **P 17 43 20.1 +0.5**
comp=Z,34nm,0.9s
HIA Hailar 64.33 335 *e*P **P 17 43 20.1 +0.5**
HIA pmax pmax
comp=Z,34nm,0.9s
LZH Lanzhou 64.98 315⇓P **P 17 43 25.5 +1.3**
LZH pP pP 17 43 46.1 +3.5
LZH sP PcP 17 43 55.3 -1.4
LZH S **S 17 52 00.6 -0.5**
LZH sS sS 17 52 33.3 +1.0
LZH SS **SS 17 56 17.3 +2.9**
LZH pmax pmax
comp=Z,24nm,1.4s
LZH pmax pmax
comp=Z,120nm,5.4s
LZH LR LR
comp=Z,550nm,16.0s
LZH LR LR

comp=Z,570nm,16.3s
LZH LR LR
ZEA Zeya 65.18 342 *e*P **P 17 43 26.0 +1.1**
ZEA pmax pmax
comp=N,58nm,1.2s
ZEA pmax pmax
comp=Z,71nm,1.2s
MA2 Magadan 66.51 357 P **P 17 43 33.1 -0.2**
comp=Z,7.4nm,0.6s,baz=168,slow=8.3,SNR=8.8
MA2 LR LR 18 09 55.5
comp=Z,565nm,21.3s,baz=206,slow=33
MA2 Magadan 66.51 357 *e*P **P 17 43 33.7 +0.3**
comp=Z,38nm,0.9s
MA2 Magadan 66.51 357⇑ *e*P **P 17 43 35.1 +1.8**
MA2 pmax pmax
comp=Z,50nm,2.5s
CASY Casey 66.86 198 *e*P **P 17 43 35.2 -0.3**
comp=Z,66nm,1.1s
MOKO MOKOCHONG 68.11 302 *e*P **P 17 43 42.2 -2.2**
KOHI KOHIMA 68.25 301 *e*P **P 17 43 42.9 -2.3**
KOHI IAmb IAmb 17 43 48.0
comp=Z,68nm,0.9s
ZIRO ZIRO 69.08 303 *e*P **P 17 43 50.4 -0.1**
ZIRO IAmb IAmb 17 43 54.5
comp=Z,44nm,1.0s
GTA Gaotai 69.39 317 ⇑P **P 17 43 52.7 +0.7**
GTA pP pP 17 44 05.6 -5.0
GTA S **S 17 52 51.7 -2.2**
GTA pmax pmax
comp=Z,15nm,1.2s
GTA pmax pmax
comp=Z,240nm,6.7s
GTA LR LR
comp=Z,270nm,20.6s
GTA LR LR
comp=Z,310nm,21.0s
GTA LR LR
comp=Z,720nm,24.4s
BRDH Bariadhala 69.43 297 P **P 17 43 53.2 +0.8**
comp=Z,156nm,0.4s,baz=99,slow=9.0,SNR=7.9
ULN Ulaanbaatar 69.52 327 *e*P **P 17 43 53.6 +1.0**
comp=Z,82nm,1.2s
ULN Ulaanbaatar 69.52 327*c i*P **P 17 43 54.0 +1.3**
ULN pmax pmax
comp=Z,121nm,1.7s
ULN MLR MLR
comp=Z,315nm,21.0s
ULN Ulaanbaatar 69.52 327 P **P 17 43 54.2 +1.6**
SNR=40
TEZP TEZPUR 69.66 302 *e*P **P 17 43 52.6 -1.2**
BELO BELONIA 69.77 298 *e*P **P 17 43 54.9 +0.4**
SONM Songino Array 69.85 327 P **P 17 43 55.9 +1.2**
comp=Z,45nm,0.6s,baz=138,slow=6.9,SNR=182
SONM LR LR 18 14 30.7
comp=Z,314nm,20.7s,baz=130,slow=36
SHL Shillong 70.10 300 *e*P **P 17 43 56.4 -0.3**
comp=Z,367nm,1.6s
SHL Shillong 70.10 300 *e*P **P 17 43 56.4 -0.3**
SHL pmax pmax
comp=Z,367nm,1.6s
SHL Shillong 70.10 300 *e*P **P 17 43 54.8 -1.9**
VNDA Vanda 70.53 179 P **P 17 43 59.1 +0.9**
comp=Z,28nm,1.3s,baz=335,slow=6.3,SNR=35
VNDA LR LR 18 09 21.5
comp=Z,836nm,21.4s,baz=7.5,slow=31
VNDA Vanda 70.53 179 *e*P **P 17 43 59.0 +0.8**
comp=Z,90nm,1.5s
VNDA Vanda 70.53 179 *e*P **P 17 43 59.0 +0.8**
VNDA pmax pmax
comp=Z,90nm,1.5s
TAWA Tawang 70.76 302 *e*P **P 17 44 02.2 +1.3**
SBA Scott Base 71.03 178 *e*P **P 17 44 02.8 +1.6**
comp=Z,158nm,1.7s
SBA Scott Base 71.03 178 *e*P **P 17 44 02.8 +1.6**
SBA pmax pmax
comp=Z,158nm,1.7s
YAK Yakutsk 71.78 347 *e*P **P 17 44 06.1 +0.3**
comp=Z,43nm,0.7s
YAK Yakutsk 71.78 347 *e*P **P 17 44 05.3 -0.6**
YAK *e**PP **PcP 17 44 19.3 -5.1**
YAK *e* 17 44 28.1
YAK *e*S **S 17 53 19.2 -1.3**
LSA Lhasa 72.04 304 *e*P **P 17 44 09.1 +0.3**
comp=Z,46nm,0.9s
LSA Lhasa 72.04 304 *e*P **P 17 44 09.1 +0.3**
LSA pmax pmax
comp=Z,46nm,0.9s
BOD Bodaibo 72.98 338 *e*P **P 17 44 13.1 0.0**
BOD pmax pmax
comp=Z,40nm,1.9s
ZAK Zakamensk 73.00 328 *e*P **P 17 44 10.2 -3.4**
ZAK pmax pmax
comp=Z,42nm,1.4s
GTK Tadong 73.43 301 *e*P **P 17 44 14.8 -1.8**
TLY Talaya 73.55 329 *e*P **P 17 44 17.1 +0.4**
comp=Z,20nm,0.8s
TLY Talaya 73.55 329 *e*P **P 17 44 17.4 +0.7**
TLY *e*S **S 17 53 47.5 +6.3**
TLY *i* SS **SS 17 58 22.6 -3.0**
TLY pmax pmax
comp=Z,65nm,1.0s
TLY Talaya 73.55 329 P **P 17 44 17.9 +1.2**
SNR=16
IRK Irkutsk 73.56 330 *e*P **P 17 44 16.6 -0.1**
IRK pmax pmax
comp=Z,95nm,1.7s
BWNR Bhubaneshwar 74.03 293 *ex* **P 17 44 15.7 -4.4**
ODAN Odare 74.33 300 *e*P **P 17 44 22.4 +0.3**
comp=Z,258nm,0.6s
GAMB Gambell 74.71 14 *e*P **P 17 44 23.6 +0.6**
comp=Z,90nm,1.8s
BOK Bokaro 74.83 297 *e*P **P 17 44 24.7 0.0**
BOK IAmb IAmb 17 44 27.1
comp=Z,154nm,1.5s
MOY Mondy 74.91 328 *e*P **P 17 44 25.7 +1.0**
MOY pmax pmax
comp=Z,72nm,1.7s
RAMN Ramite 75.04 300 *e*P **P 17 44 26.2 0.0**
comp=Z,66nm,0.6s
BILL Bilibino 75.24 4 *e*P **P 17 44 26.1 0.0**
comp=Z,119nm,1.4s
BILL Bilibino 75.24 4*c i*P **P 17 44 26.9 +0.8**
BILL *i* 17 44 40.4
BILL *e* 17 47 18.2
BILL *e*S **S 17 54 00.6 +1.2**
BILL *e*SS **SS 17 58 55.6 +5.0**
BILL pmax pmax
comp=Z,51nm,1.3s
SII Sitkinak Islan 75.35 26 *e*P **P 17 44 26.8 -0.2**
comp=Z,58nm,1.0s
JIRN Jiri 75.58 301 *e*P **P 17 44 29.8 +0.4**
comp=Z,171nm,0.7s
GUN Gumba 75.92 301 *e*P **P 17 44 31.5 +0.2**
comp=Z,226nm,0.7s
OHAK Old Harbor 76.15 26 *e*P **P 17 44 32.5 +1.0**
comp=Z,92nm,1.7s
PKI Pulchoki 76.23 301 *e*P **P 17 44 33.0 0.0**
comp=Z,58nm,0.6s
PKIN Phulchoki 76.24 301 *e*P **P 17 44 32.9 -0.1**
comp=Z,50nm,0.6s
PALK Pallekele 76.35 279 *e*P **P 17 44 34.0 +0.4**
comp=Z,142nm,1.1s
PALK Pallekele 76.35 279 P **P 17 44 34.4 +0.7**
PALK Pallekele 76.35 279 P **P 17 44 34.4 +0.7**
PALK Pallekele 76.35 279 *e*P **P 17 44 34.0 +0.4**
PALK pmax pmax
comp=Z,142nm,1.1s
KKN Kakani 76.39 301 *e*P **P 17 44 34.0 +0.1**
comp=Z,123nm,0.8s
DMN Daman 76.50 300 *e*P **P 17 44 34.8 +0.3**
comp=Z,174nm,0.7s
KDAK Kodiak Island 76.79 26 *e*P **P 17 44 36.0 +0.9**
comp=Z,20nm,0.9s
KDAK Kodiak Island 76.79 26 *e*P **P 17 44 36.0 +0.9**
KDAK pmax pmax
comp=Z,20nm,0.9s
ANM Nome 77.00 16 *e*P **P 17 44 37.1 +0.9**
comp=Z,40nm,1.3s
ANM Nome 77.00 16 *e*P **P 17 44 37.1 +0.9**
ANM pmax pmax
comp=Z,40nm,1.3s
GKN Gorkha 77.00 301 *e*P **P 17 44 37.2 0.0**
comp=Z,238nm,0.7s
MDRS Chennai 77.76 285 *e*P **P 17 44 41.2 -0.2**
KOLN Koldanda 77.83 300 *e*P **P 17 44 41.9 0.0**
comp=Z,85nm,0.5s
DANN Dangsing 77.84 301 *e*P **P 17 44 41.8 -0.2**
comp=Z,145nm,0.6s
CNPM China Poot 78.40 24 *e*P **P 17 44 44.1 0.0**
comp=Z,62nm,1.0s
PYUN Piuthan 78.43 300 *e*P **P 17 44 44.8 -0.4**
comp=Z,212nm,1.1s
BRLK Bradley Lake 78.68 24 *e*P **P 17 44 45.4 -0.2**
comp=Z,35nm,1.1s
WMQ Urumqi 79.47 317 P **P 17 44 51.2 +0.8**
WMQ PcP **PcP 17 45 03.3 +5.1**
WMQ sP sP 17 45 17.2 +0.3
WMQ S **S 17 54 44.0 -2.4**
WMQ ScS **SKKSac 17 55 01.8 -0.7**
WMQ sS pS 17 55 12.4 +2.5
WMQ pmax pmax
comp=Z,32nm,0.8s
WMQ pmax pmax
comp=Z,270nm,3.8s
WMQ LR LR
comp=Z,270nm,18.1s
WMQ LR LR
comp=Z,430nm,23.5s
WMQ LR LR
comp=Z,1μm,30.3s
SEW Seward 79.47 25 *e*P **P 17 44 49.8 0.0**
comp=Z,39nm,1.0s
RC01 Rabbit Creek A 79.92 24 *e*P **P 17 44 52.8 +0.5**
comp=Z,58nm,1.4s
HYB Hyderabad 80.14 289 *i*P **P 17 44 52.0 -2.5**
HYB *ep*P **pP 17 45 11.0 -2.5**
TRD Trivandrum 80.20 280 *e*P **P 17 44 54.3 -0.6**
NGP Nagpur 80.39 293 *e*P **P 17 44 55.2 -0.5**
NGP IAmb IAmb 17 44 56.9
comp=Z,74nm,0.7s
CAST Castle Rocks 80.41 21 *e*P **P 17 44 54.4 -0.6**
comp=Z,24nm,1.0s
PMR Palmer 80.44 23 *e*P **P 17 44 55.0 -0.1**
comp=Z,31nm,1.1s
TIXI Tiksi 80.51 352 P **P 17 44 55.1 -0.2**
comp=Z,9.8nm,0.6s,baz=134,slow=1.6,SNR=29
TIXI Tiksi 80.51 352 *e*P **P 17 44 54.6 -0.7**
comp=Z,13nm,0.8s
TIXI Tiksi 80.51 352 *e*P **P 17 44 54.6 -0.7**
TIXI pmax pmax
comp=Z,13nm,0.8s
KNK Knik Glacier 80.61 24 *e*P **P 17 44 56.1 0.0**
comp=Z,135nm,1.9s
GHO Glory Hole Cre 80.63 23 *e*P **P 17 44 56.2 0.0**
comp=Z,23nm,0.9s
GLI Glacier Island 80.87 25 *e*P **P 17 44 56.8 -0.6**
comp=Z,26nm,0.9s
SML Sawmill 80.88 23 *e*P **P 17 44 57.1 -0.4**
comp=Z,112nm,1.4s
SML Sawmill 80.88 23 *e*P **P 17 44 57.2 -0.4**
SML pmax pmax
comp=Z,112nm,1.4s
EYAK Cordova Ski Ar 81.26 25 *e*P **P 17 44 59.3 -0.2**
comp=Z,40nm,1.5s
SCM Sheep Creek Mo 81.29 24 *e*P **P 17 45 00.4 +0.6**
comp=Z,45nm,1.2s
SCM Sheep Creek Mo 81.29 24 *e*P **P 17 45 00.4 +0.6**
SCM pmax pmax
comp=Z,45nm,1.2s
DIV Divide 81.55 25 *e*P **P 17 45 01.1 0.0**
comp=Z,21nm,1.0s
DGZ Jazzator, Alta 81.72 322*c i*P **P 17 45 02.5 +0.1**
DGZ pmax pmax
comp=Z,16nm,0.7s
MCK McKinley 81.74 22 *e*P **P 17 45 01.7 -0.3**
comp=Z,51nm,0.9s
MCK McKinley 81.74 22 *e*P **P 17 45 01.7 -0.3**
MCK pmax pmax
comp=Z,51nm,0.9s
HMT Hamilton 81.78 26 *e*P **P 17 45 02.5 +0.2**
comp=Z,22nm,1.0s
MLY Manley 81.86 20 *e*P **P 17 45 02.4 -0.2**
comp=Z,24nm,1.2s
DHY Denali Highway 81.95 23 *e*P **P 17 45 02.0 -1.3**
comp=Z,115nm,2.0s
BHPL Bhopal 82.27 295 *e*P **P 17 45 05.3 -0.4**
BHPL IAmb IAmb 17 45 07.0
comp=Z,88nm,0.8s
WRH Wood River Hil 82.46 21 *e*P **P 17 45 04.8 -1.0**
comp=Z,57nm,1.6s
ZSN Zaisan 82.55 320*c i*P **P 17 45 06.6 0.0**
ZSN pmax pmax
comp=Z,38nm,2.5s
ZSN Zaisan 82.55 320⇑ *i*P **P 17 45 06.7 0.0**
comp=Z,38nm,2.5s
TGL Tana Glacier 82.61 26 *e*P **P 17 45 05.8 -0.9**
comp=Z,17nm,1.0s
PAX Paxson 82.63 23 *e*P **P 17 45 05.8 -1.0**
comp=Z,18nm,1.3s
PAX Paxson 82.63 23 *e*P **P 17 45 05.8 -1.0**
PAX pmax pmax
comp=Z,18nm,1.3s
CCB Clear Creek Bu 82.66 21 *e*P **P 17 45 05.6 -1.2**
comp=Z,57nm,1.8s
TCOL CIGO, UAF Yank 82.77 21 P **P 17 45 07.1 -0.2**
baz=236
COLA College 82.77 21 *e*P **P 17 45 06.1 -1.2**
comp=Z,68nm,1.4s
COLA College 82.77 21*c i*P **P 17 45 06.4 -0.9**
COLA pmax pmax
comp=Z,17nm,1.1s
HDA Harding Lake 82.84 22 *e*P **P 17 45 06.2 -1.5**
comp=Z,16nm,0.8s
HDA Harding Lake 82.84 22 P **P 17 45 07.1 -0.6**
baz=237
BALM Baldy 82.95 26 *e*P **P 17 45 07.1 -1.4**
comp=Z,13nm,1.0s
BALM Baldy 82.95 26 *e*P **P 17 45 07.1 -1.4**
BALM pmax pmax
comp=Z,13nm,1.0s
QSPA South Pole Qui 82.96 180 *e*P **P 17 45 08.3 -0.2**
comp=Z,93nm,1.0s
POKR Poker Flat Res 83.06 21 P **P 17 45 08.8 0.0**
baz=237
ILAR Eielson Array 83.06 21 P **P 17 45 08.2 -0.7**
comp=Z,1.6nm,0.3s,baz=245,slow=5.5,SNR=32
ILAR LR LR 18 17 31.9
comp=Z,1μm,21.8s,baz=250,slow=32
ILB Eielson Array 83.06 21 *e*P **P 17 45 07.6 -1.2**
comp=Z,21nm,1.1s
DDI Dehra Dun 83.14 302 *e*P **P 17 45 09.0 -1.1**
DDI IAmb IAmb 17 45 12.0
comp=Z,80nm,0.8s
RIDG Independent Ri 83.27 23 *e*P **P 17 45 09.3 -0.8**
comp=Z,57nm,1.2s
MENT Mentasta 83.31 24 *e*P **P 17 45 10.0 -0.2**
comp=Z,21nm,1.2s
CTGM Chitina Glacie 83.35 26 *e*P **P 17 45 10.2 -0.4**
comp=Z,26nm,1.0s
DOT Dot Lake 83.53 23 *e*P **P 17 45 11.2 -0.1**
comp=Z,31nm,1.1s
MK31 Makanchi Array 84.03 318 *e*P **P 17 45 14.3 0.0**
comp=Z,50nm,0.9s
MK31 Makanchi Array 84.03 318 *i*P **P 17 45 14.6 +0.3**
MK31 pmax pmax
comp=Z,68nm,0.8s
MKAR Makanchi Array 84.03 318 P **P 17 45 14.6 +0.3**
comp=Z,51nm,0.7s,baz=99,slow=6.0,SNR=300
MKAR LR LR 18 23 06.7
comp=Z,181nm,20.7s,baz=98,slow=36
SMLA Simla 84.05 302 *e*P **P 17 45 14.2 -0.4**
MAKZ Makanchi 84.24 318 P **P 17 45 15.3 0.0**
MAKZ pmax pmax
comp=Z,95nm,1.0s
GOA Goa 84.30 286 *e*P **P 17 45 16.4 +0.3**
GOA IAmb IAmb 17 45 17.6
comp=Z,4μm,3.5s
TOLK Toolik Lake Re 84.37 17 *e*P **P 17 45 15.9 +0.4**
comp=Z,29nm,1.2s
TOLK Toolik Lake Re 84.37 17 P **P 17 45 16.1 +0.6**
baz=234
ZAA0 Zalesovo Array 84.71 326 *e*P **P 17 45 16.5 -0.9**
comp=Z,21nm,0.8s
ZALV Zalesovo Beam 84.71 326 P **P 17 45 16.9 -0.5**
comp=Z,18nm,0.6s,baz=114,slow=5.8,SNR=72
ZALV LR LR 18 25 27.1
comp=Z,193nm,19.0s,baz=70,slow=37
ZALV Zalesovo Beam 84.71 326 P **P 17 45 17.0 -0.5**
MAW Mawson 84.73 203 P **P 17 45 17.9 +0.6**
comp=Z,20nm,0.6s,baz=96,slow=5.8,SNR=81
MAW LR LR 18 21 21.1
comp=Z,264nm,18.4s,baz=80,slow=34
MAW Mawson 84.73 203 *e*P **P 17 45 17.4 +0.1**
comp=Z,12nm,1.0s
MAW Mawson 84.73 203 P **P 17 45 18.0 +0.6**
baz=85,SNR=70
MAW Mawson 84.73 203 *e*P **P 17 45 17.4 +0.1**
MAW pmax pmax
comp=Z,12nm,1.0s
POO Poona 84.75 289 *e*P **P 17 45 18.0 -0.5**
POO IAmb IAmb 17 45 19.5
DIB Dawson Inlet, 84.75 35 *e*P **P 17 45 17.8 +0.1**
comp=Z,44nm,1.5s
HYT Haines Junctio 84.98 27 *e*P **P 17 45 19.6 +0.7**
comp=Z,34nm,1.1s
DHRM DHARAMSHALA 85.00 303 *e*P **P 17 45 18.9 -0.8**
PDGK Podgornoye 85.01 315 P **P 17 45 18.9 -0.5**
PDGK pmax pmax
comp=Z,32nm,0.8s
CRAG Craig 85.14 33 *e*P **P 17 45 20.3 +0.7**
comp=Z,50nm,1.6s
EGAK Eagle 85.19 23 *e*P **P 17 45 19.8 +0.2**
comp=Z,26nm,1.1s
UZB Uzynbulak 85.30 314*c i*P **P 17 45 20.7 -0.2**
UZB pmax pmax
comp=Z,57nm,2.0s
UZB Uzynbulak 85.30 314⇑ *i*P **P 17 45 20.7 -0.2**
comp=Z,57nm,2.0s
JIS Juneau Island 85.47 30 *e*P **P 17 45 21.6 +0.5**
comp=Z,40nm,1.4s
DAWY Dawson 85.55 23 *e*P **P 17 45 21.9 +0.3**
comp=Z,28nm,1.3s
KPKS Kokpek 85.61 315*c i*P **P 17 45 22.3 -0.1**
KPKS pmax pmax
comp=Z,87nm,2.0s
KPKS Kokpek 85.61 315⇑ *i*P **P 17 45 22.4 0.0**
comp=Z,87nm,1.9s
SATY Saty 85.72 314*c i*P **P 17 45 23.1 +0.2**
SATY pmax pmax
comp=Z,87nm,2.0s
SATY Saty 85.72 314⇑ *i*P **P 17 45 23.2 +0.2**
comp=Z,87nm,2.0s
TARG Taragay, Kyrgy 85.84 313 *e*P **P 17 45 23.8 -0.2**
comp=Z,63nm,1.5s
WRAK Wrangell Islan 85.87 32 *e*P **P 17 45 23.5 +0.3**
comp=Z,33nm,1.1s
NVS Novosibirsk 85.88 326⇓ *i*P **P 17 45 23.5 +0.2**
NVS *i* 17 45 37.7
NVS pmax pmax
comp=Z,117nm,2.0s
NVS pmax pmax
comp=N,26nm,1.8s
NVS pmax pmax
comp=E,58nm,1.8s
WHY Whitehorse 86.10 27 *e*P **P 17 45 24.6 +0.2**
comp=E,34nm,1.8s
KDJ Kajisay 86.38 313 *e*P **P 17 45 26.4 +0.1**
comp=E,40nm,0.9s
KDJ Kajisay 86.38 313 *e*P **P 17 45 26.4 +0.1**
KDJ pmax pmax
comp=Z,40nm,0.9s
MDOK Medeo 86.71 314 *i*P **P 17 45 27.7 -0.2**
MDOK *e*S **S 17 55 54.8 -5.1**
MDOK pmax pmax
comp=Z,592nm,1.4s
MDOK smax smax
comp=E,202nm,10.7s
MDOK Medeo 86.71 314 *i*P **P 17 45 27.8 -0.1**
comp=E,592nm,1.4s
MDOK *e*S **S 17 55 54.9 -5.1**
comp=E,202nm,10.7s
MDOK *e*LR LR 18 21 04.8
comp=E,157nm,24.6s
KSH Kashi 86.73 310 P **P 17 45 29.9 +1.9**
KSH pP pP 17 45 50.7 +3.5
KSH PP **PP 17 48 55.6 +4.3**
KSH S **S 17 55 58.8 -1.4**
KSH SS **SS 18 01 47.6 +4.3**
KSH LR LR
comp=E,290nm,9.4s
KSH LR LR
comp=E,180nm,8.5s
KSH LR LR
comp=E,780nm,18.2s
TNSS Tian-Shan 86.75 314⇑ *i*P **P 17 45 28.3 -0.1**
TNSS Tian-Shan 86.75 314⇑ *i*P **P 17 45 28.4 0.0**
AAA Alma-Ata 86.81 314 *e*P **P 17 45 28.8 +0.5**
AAA pmax pmax
comp=Z,200nm,6.3s
ULHL Ulahol 87.09 313 P **P 17 45 30.4 +0.6**
SNR=20
NRN Naryn 87.10 312 *e*P **P 17 45 30.4 +0.4**
comp=Z,118nm,1.7s
KUU Kurty 87.37 315*c i*P **P 17 45 30.3 -0.6**
KUU pmax pmax
comp=Z,212nm,1.9s
KUU Kurty 87.37 315⇑ *i*P **P 17 45 30.3 -0.5**
comp=Z,212nm,1.9s
KURK Kurchatov 87.42 322 *e*P **P 17 45 30.1 -0.8**
comp=Z,117nm,1.7s
KURK Kurchatov 87.42 322*c i*P **P 17 45 30.5 -0.4**
KURK pmax pmax
comp=Z,74nm,1.7s
KURK Kurchatov 87.42 322 P **P 17 45 30.7 -0.2**
SNR=35
KURBB Kurchatov Arra 87.45 322 P **P 17 45 30.6 -0.5**
comp=Z,14nm,0.6s,baz=101,slow=4.5,SNR=211
EPYK Eagle Plains 87.54 22 *e*P **P 17 45 31.3 +0.1**
comp=Z,39nm,1.0s
EPYK Eagle Plains 87.54 22 P **P 17 45 31.6 +0.4**
baz=246
DLBC Dease Lake 87.70 30 P **P 17 45 33.7 +1.6**
comp=Z,4.4nm,0.9s,baz=250,slow=3.0,SNR=12
DLBC LR LR 18 17 38.6
comp=Z,718nm,22.0s,baz=262,slow=31
DLBC Dease Lake 87.70 30 *e*P **P 17 45 33.0 +0.9**
comp=Z,55nm,1.3s
TKM2 Tokmak 2 87.70 314 P **P 17 45 32.9 +0.2**
SNR=43
TKM2 Tokmak 2 87.70 314 P **P 17 45 32.5 -0.2**
TKM2 pmax pmax
comp=Z,26nm,0.8s
KZA Kyzart 87.78 313 P **P 17 45 34.5 +1.1**
SNR=25
NIL Nilore 87.78 304 *e*P **P 17 45 32.5 -0.5**
comp=Z,68nm,0.9s
NIL Nilore 87.78 304 *e*P **P 17 45 32.6 -0.5**
NIL pmax pmax
comp=Z,68nm,0.9s
O02D Mt. Diablo Mer 87.87 49 P **P 17 45 34.9 +1.4**
baz=259
KBK Karagaybulak 88.11 313 P **P 17 45 35.1 +0.4**
SNR=9.9
CHMS Chumysh 88.32 314 P **P 17 45 35.5 +0.1**
SNR=17
UCH Uchtor 88.34 313 P **P 17 45 37.5 +1.4**
SNR=18
AAK Ala-Archa 88.44 313 P **P 17 45 37.1 +1.0**
SNR=10
AAK Ala-Archa 88.44 313 *e*P **P 17 45 36.0 -0.1**
comp=Z,16nm,0.8s
AAK Ala-Archa 88.44 313 *i*P **P 17 45 37.0 +0.8**
SNR=9.7
AAK Ala-Archa 88.44 313 *i*P **P 17 45 37.0 +0.8**
SNR=9.7
AAK Ala-Archa 88.44 313*c i*P **P 17 45 36.5 +0.3**
AAK pmax pmax
comp=Z,40nm,1.7s
AAK Ala-Archa 88.44 313 P **P 17 45 36.9 +0.8**
SNR=17
USP Ospenovka 88.55 314 P **P 17 45 36.9 +0.3**
SNR=13
AML Almayashu 88.92 313 P **P 17 45 39.5 +0.8**
SNR=24
EKS2 Erkin-Say 88.96 313 P **P 17 45 39.1 +0.5**
SNR=13
NRIK Noril'sk 89.06 341 P **P 17 45 37.7 -0.5**
comp=Z,11nm,0.8s,baz=127,slow=3.7,SNR=16
NRIK LR LR 18 25 15.1
comp=Z,337nm,21.6s,baz=89,slow=35
BTLS Baital 89.20 315*c i*P **P 17 45 39.1 -0.4**
BTLS pmax pmax
comp=Z,55nm,2.0s
BTLS Baital 89.20 315⇑ *i*P **P 17 45 39.1 -0.4**
comp=Z,55nm,2.0s
ARSB Arslanbob 89.31 312 *e*P **P 17 45 40.3 0.0**
comp=Z,264nm,1.5s
BHJ Bhuj 89.32 293 *e*P **P 17 45 40.2 -0.3**
BHJ IAmb IAmb 17 45 42.2

comp=Z,3µm,3.4s
INK Inuvik 89.42 21 P **P 17 45 40.1 +0.2**
comp=Z,5.8nm,0.9s,baz=254,slow=7.0,SNR=13
INK LR LR 18 20 43.7
comp=Z,608nm,21.1s,baz=215,slow=32
INK Inuvik 89.42 21 *e*P **P 17 45 39.9 0.0**
comp=Z,23nm,1.1s
INK Inuvik 89.42 21 *e*P **P 17 45 39.9 0.0**
INK pmax pmax
comp=Z,23nm,1.1s
BTK Batken 90.73 310 *e*P **P 17 45 46.8 -0.1**
comp=Z,110nm,1.4s
BTK Batken 90.73 310 *e*P **P 17 45 46.8 -0.1**
BTK pmax pmax
comp=Z,110nm,1.4s
EDW2 Edwards Air Fo 90.77 55 P **P 17 45 48.3 +1.2**
baz=262
CWC Cottonwood Cre 90.91 54 P **P 17 45 50.0 +2.0**
baz=262
OTUK Ortayu 90.92 318 P **P 17 45 46.3 -1.2**
OTUK pmax pmax
comp=Z,17nm,1.1s
I07A Izee 90.95 46 *e*P **P 17 45 48.0 +0.2**
comp=Z,4.1nm,1.0s
BFSC Mount Baldy Ra 90.95 56 P **P 17 45 49.7 +1.6**
baz=262
GAR Garm 90.96 309 *e*P **P 17 45 48.2 +0.2**
comp=Z,62nm,1.1s
GAR Garm 90.96 309 *e*P **P 17 45 48.2 +0.2**
GAR pmax pmax
comp=Z,62nm,1.1s
BRZS Berezniki 90.99 320*c i*P **P 17 45 46.1 -1.6**
BRZS pmax pmax
comp=Z,41nm,2.2s
BRZS Berezniki 90.99 320⇑ *i*P **P 17 45 46.2 -1.5**
comp=Z,41nm,2.1s
NVAR Mina Array Bea 91.02 52 P **P 17 45 49.2 +0.8**
comp=Z,0.7nm,0.6s,baz=231,slow=5.3,SNR=4.3
NVAR LR LR 18 20 09.2
comp=Z,299nm,21.7s,baz=284,slow=31
NV11 Mina Array Sit 91.13 52 *e*P **P 17 45 48.2 -0.6**
comp=Z,1.9nm,1.4s
JBG Jabagly 91.28 312*c i*P **P 17 45 50.0 +0.6**
JBG pmax pmax
comp=Z,50nm,1.6s
WVOR Wild Horse Val 91.33 48 *e*P **P 17 45 49.8 +0.2**
comp=Z,22nm,1.6s
MPMC Manual Prospec 91.34 54 P **P 17 45 50.7 +0.8**
baz=262
KBL Kabul 91.37 304 *e*P **P 17 45 48.6 -1.5**
comp=Z,28nm,0.8s
KBL Kabul 91.37 304 *e*P **P 17 45 48.6 -1.5**
KBL pmax pmax
comp=Z,28nm,0.8s
KK31 Karatay Array 91.40 313 *e*P **P 17 45 48.9 -0.9**
comp=Z,106nm,1.9s
KK31 Karatay Array 91.40 313 *e*P **P 17 45 48.9 -0.9**
KK31 pmax pmax
comp=Z,106nm,1.9s
KKAR Karatay Array 91.40 313 *e*P **P 17 45 49.3 -0.5**
comp=Z,106nm,1.9s
KKAR Karatay Array 91.40 313 *e*P **P 17 45 49.3 -0.5**
KKAR pmax pmax
comp=Z,106nm,1.9s
GRAC Grapevine Rang 91.56 53 P **P 17 45 52.8 +2.1**
baz=262
IUG Iuzhnay 91.62 312*c i*P **P 17 45 50.6 -0.4**
IUG pmax pmax
comp=Z,24nm,2.0s
IUG Iuzhnay 91.62 312⇑ *i*P **P 17 45 50.7 -0.3**
comp=Z,24nm,2.0s
GSC Goldstone, Bar 91.79 55 P **P 17 45 51.2 -0.7**
baz=263
MONP2 Monument Peak 91.80 57 P **P 17 45 53.7 +1.6**
baz=263
TPFO Pinon Flats 91.87 57 P **P 17 45 54.5 +2.1**
baz=263
FURC Furnace Creek, 91.89 54 P **P 17 45 52.9 +0.7**
baz=263
HEC Hector,Ludlow 92.11 55 P **P 17 45 54.1 +0.7**
baz=263
BMN Battle Mountai 92.11 50 *e*P **P 17 45 52.6 -0.8**
comp=Z,11nm,1.1s
BMN Battle Mountai 92.11 50 *e*P **P 17 45 52.6 -0.8**
BMN pmax pmax
comp=Z,11nm,1.1s
BELC Belle Mtn. Jos 92.29 56 P **P 17 45 55.1 +0.8**
baz=263
TPNV Topopah Spring 92.44 53 *e*P **P 17 45 55.4 +0.4**
comp=Z,32nm,1.7s
TPNV Topopah Spring 92.44 53 *e*P **P 17 45 55.4 +0.4**
TPNV pmax pmax
comp=Z,32nm,1.7s
TPNV Topopah Spring 92.44 53 P **P 17 45 55.9 +0.9**
baz=263
SYO Syowa Base 92.60 199⇑ *e*P **P 17 45 52.0 -2.8**
SYO Syowa Base 92.60 199⇓ *e*PcP **P 17 45 53.2 -1.6**
GMRC Granite Mounta 92.66 55 P **P 17 45 56.5 +0.5**
baz=263
BRVK Borovoye 92.93 323 *e*P **P 17 45 55.5 -1.1**
comp=Z,18nm,0.9s
BRVK Borovoye 92.93 323 P **P 17 45 55.2 -1.4**
BRVK pmax pmax
comp=Z,44nm,1.3s
BRVK Borovoye 92.93 323 P **P 17 45 55.9 -0.7**
SNR=21
IRM Iron Mountain 93.01 56 P **P 17 45 58.4 +0.9**
baz=264
R11A Troy Canyon, C 93.12 52 *e*P **P 17 45 58.2 +0.1**
comp=Z,17nm,1.5s
R11A Troy Canyon, C 93.12 52 P **P 17 45 59.4 +1.3**
baz=264
NEW Newport 93.16 42 P **P 17 45 59.5 +1.6**
comp=Z,0.9nm,0.6s,baz=62,slow=2.6,SNR=3.6
NEW Newport 93.16 42 P **P 17 45 59.8 +1.9**
baz=263
ELK Elko 93.65 50 P **P 17 46 01.0 +0.5**
comp=Z,0.5nm,0.3s,baz=36,slow=14,SNR=6.9
ELK Elko 93.65 50 *e*P **P 17 46 00.5 0.0**
comp=Z,9.4nm,1.3s
ELK Elko 93.65 50 *e*P **P 17 46 00.5 0.0**
ELK pmax pmax
comp=Z,9.0nm,1.3s
PSUT Pine Spring 94.50 52 *e*P **P 17 46 03.3 -1.1**
comp=Z,22nm,1.7s
HLID Hailey 94.54 47 P **P 17 46 06.2 +1.7**
baz=265
LCMT Little Creek M 94.84 53 *e*P **P 17 46 04.1 -1.9**
comp=Z,7.9nm,1.3s
SZCU Shurtz Canyon 95.02 53 *e*P **P 17 46 05.6 -1.3**
comp=Z,20nm,1.7s
MTPU Mount Pierson 95.76 52 *e*P **P 17 46 09.2 -1.2**
comp=Z,18nm,1.6s
MSU Marysvale 95.81 52 *e*P **P 17 46 09.7 -0.8**
MSU Marysvale 95.81 52 *e*P **P 17 46 09.7 -0.8**
YKA Yellowknife Ar 95.93 28 P **P 17 46 10.6 +0.5**
comp=Z,1.1nm,0.6s,baz=267,slow=4.4,SNR=13
YKA PKKPbc **PKKPbc 18 02 57.5 -3.6**
comp=Z,0.7nm,0.7s,baz=80,slow=3.0,SNR=7.7
YKA LR LR 18 25 38.2
comp=Z,49nm,19.9s,baz=292,slow=33
YKW3 Yellowknife Ar 95.93 28 *e*P **P 17 46 09.4 -0.7**
comp=Z,19nm,1.5s
BW06 Boulder Array 98.03 48 P **P 17 46 20.4 0.0**
baz=268
PDAR Pinedale Array 98.03 48 P Pdif 17 46 20.5 0.0
comp=Z,0.4nm,0.6s,baz=266,slow=2.2,SNR=4.1
PDAR PKKPbc **PKKPbc 18 02 53.5 -1.5**
comp=Z,0.2nm,0.3s,baz=50,slow=4.8,SNR=3.7
PDAR LR LR 18 27 20.3
comp=Z,812nm,19.0s,baz=290,slow=33
PV12 Saucer Basin, 98.44 52 *e*P **P 17 46 22.2 -0.2**
comp=Z,25nm,1.9s
SVE Sverdlovsk 98.72 326 *e*P P 17 46 13.0 -10
AB31 Akbulak array 99.17 319 *i*P **Pdif 17 46 22.9 -2.2**
AB31 pmax pmax
comp=Z,2.0nm,0.5s
ABKAR Akbulak array 99.17 319 *e*P **Pdif 17 46 22.9 -2.2**
comp=Z,6.4nm,0.8s
ARU Arti 99.88 326 *e*Pdif **Pdif 17 46 25.9 -2.1**
comp=Z,10nm,0.9s
ARU Arti 99.88 326*c i*P **Pdif 17 46 26.5 -1.5**
ARU *PP pP 17 46 38.3 -9.1
ARU 17 50 30.8
ARU PPP PPP 17 52 39.8
ARU S **SKSac 17 57 01.6 +1.1**
ARU SP SP 17 59 25.5 +1.2

ARU pmax pmax
comp=Z,14nm,1.0s
ARU MLR MLR
comp=Z,418nm,21.0s
SNAA Sanae 100.23 187⇓ *e*P **Pdif 17 46 29.2 -0.3**
AKTO Aktyubinsk 100.40 320 P **Pdif 17 46 28.6 -1.9**
GEYT Alibeck 100.42 307 P **Pdif 17 46 29.8 -1.2**
comp=Z,2.9nm,0.7s,baz=151,slow=3.4,SNR=9.4
BANOM Banah 101.66 295 P **Pdif 17 46 37.0 +0.2**
BANOM Banah 101.66 295 Pdiff **Pdif 17 46 37.0 +0.2**
UOSS Minazif 101.71 294 *e*Pdif **Pdif 17 46 35.2 -1.8**
UOSS Minazif 101.71 294 P **Pdif 17 46 35.6 -1.3**
UOSS Minazif 101.71 294 Pdiff **Pdif 17 46 35.6 -1.3**
MSFE Esma-Masafi 101.77 294 P **Pdif 17 46 36.7 -0.5**
MSFE Esma-Masafi 101.77 294 Pdiff **Pdif 17 46 36.7 -0.5**
HATD Hatta, Dubai 101.77 294 P **Pdif 17 46 38.4 +1.1**
HATD Hatta, Dubai 101.77 294 Pdiff **Pdif 17 46 38.4 +1.1**
SHME Shamm 101.81 295 P **Pdif 17 46 37.1 -0.3**
SHME Shamm 101.81 295 Pdiff **Pdif 17 46 37.1 -0.3**
ASHO Ashiyiah 101.83 294 P **Pdif 17 46 37.5 0.0**
ASHO Ashiyiah 101.83 294 Pdiff **Pdif 17 46 37.5 0.0**
TXAR Lajitas Array 102.46 62 PKKPbc PKKPbc 18 02 42.1 +0.4
comp=Z,0.6nm,0.7s,baz=125,slow=2.0,SNR=4.8
PRGR Permogore 105.73 332 *e*P **Pdif 17 46 50.3 -3.6**
PRGR pmax pmax
comp=Z,11nm,0.9s
TMCR Tamitsa 108.21 336 *e*P **Pdif 17 47 04.1 -0.8**
TMCR pmax pmax
comp=Z,6.0nm,0.7s
KLMR Klimovskoe 108.78 332 *e*P **Pdif 17 47 06.0 -1.5**
KLMR pmax pmax
comp=Z,12nm,1.5s
ARCES ARCESS Array B 109.87 343 PKiKP **PKiKP 17 51 13.9 -0.1**
comp=Z,3.8nm,0.8s,baz=93,slow=1.7,SNR=17
ARCES PKKPbc **PKKPbc 18 02 17.6 -2.4**
comp=Z,2.2nm,0.8s,baz=225,slow=1.5,SNR=4.6
KIV Kislovodsk 111.52 314 *i* PKIKP **PKiKP 17 51 15.8 -2.2**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,461nm,21.0s
NEY Neytrino 111.63 314⇓ *i*PKIKP **PKiKP 17 51 19.5 +1.2**
OBN Obninsk 112.26 327⇑ *i*PKIKP **PKiKP 17 51 17.8 -1.1**
OBN *e*SS SS 18 07 48.0 +10
OBN pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 114.33 336 PKiKP PKPdf 17 51 22.3 -0.3
comp=Z,6.7nm,0.6s,baz=103,slow=3.3,SNR=47
FINES PKKPbc **PKKPbc 18 02 03.1 -1.8**
comp=Z,1.2nm,0.6s,baz=196,slow=2.9,SNR=8.8
ANN Anapa 114.98 316 *i* PKIKP PKPdf 17 51 27.2 +2.8
ANN pmax pmax
comp=Z,39nm,0.8s
FRB Frobisher Bay 115.07 20 PKP **PKPdf 17 51 24.6 +0.6**
comp=Z,1.5nm,0.5s,baz=309,slow=3.8,SNR=3.1
VSU Vasula 115.65 333⇓ *i*PKIKP **PKiKP 17 51 24.4 -0.9**
PLCA Paso Flores 116.14 142 PKP **PKiKP 17 51 27.1 +0.1**
comp=Z,1.4nm,0.4s,baz=214,slow=3.6,SNR=6.3
PLCA PKKPbc **PKKPbc 18 01 58.2 -0.1**
comp=Z,4.3nm,0.7s,baz=35,slow=5.3,SNR=5.4
PLCA Paso Flores 116.14 142 *e*PKPdf **PKPdf 17 51 26.6 -0.4**
PLCA *e*PKKPbc **PKKPbc 18 01 57.1 -1.1**
PLCA Paso Flores 116.14 142 *e*PKIKP **PKPdf 17 51 26.6 -0.4**
AKASG Malin Array Be 118.09 325 PKP **PKPdf 17 51 29.8 -0.4**
comp=Z,15nm,0.6s,baz=53,slow=2.7,SNR=63
AKASG PKKPbc **PKKPbc 18 01 51.0 -0.4**
comp=Z,0.1nm,0.3s,baz=276,slow=3.7,SNR=7.6
AKBB Malin Array Si 118.09 325 *e*PKPdf **PKPdf 17 51 29.7 -0.5**
AKBB *e*PKKPbc **PKKPbc 18 01 47.4 -4.0**
AKBB Malin Array Si 118.09 325 *e*PKIKP **PKPdf 17 51 29.7 -0.5**
KIEV Kiev 118.10 325 *e*PKPdf **PKPdf 17 51 29.5 -0.7**
KIEV Kiev 118.10 325⇑ *i*P **PKPdf 17 51 29.8 -0.4**
KIEV Kiev 118.10 325 *i*P **PKPdf 17 51 30.0 -0.3**
SNR=14
KIEV Kiev 118.10 325 *i* PKPdf **PKPdf 17 51 30.0 -0.3**
SNR=14
KIEV Kiev 118.10 325 *e*PKIKP **PKPdf 17 51 29.5 -0.7**
KMBO Kilima Mbogo 118.28 265 PKP **PKiKP 17 51 32.2 +0.2**
comp=Z,1.6nm,0.6s,baz=42,slow=6.7,SNR=5.3
KMBO Kilima Mbogo 118.28 265 *e*PKPdf **PKPdf 17 51 31.9 -0.1**
KMBO Kilima Mbogo 118.28 265 *e*PKIKP **PKPdf 17 51 31.9 -0.1**
ILGA Ilgaz 118.65 313 *e*PKPdf **PKiKP 17 51 32.2 +0.2**
BR131 Keskin Array S 119.08 312 *e*PKPdf **PKPdf 17 51 31.4 -1.3**
BRTR Keskin Array B 119.08 312 PKP **PKPdf 17 51 32.1 -0.6**
comp=Z,3.8nm,0.7s,baz=137,slow=3.5,SNR=18
ANTO Ankara 119.67 312 *e*PKPdf **PKPdf 17 51 33.4 -0.4**
ANTO Ankara 119.67 312⇓ *i*P **PKiKP 17 51 34.1 +0.3**
ANTO Ankara 119.67 312⇓ *e*PKIKP **PKiKP 17 51 34.1 +0.3**
NC303 NORSAR Array S 119.83 341 *e*PKPdf **PKPdf 17 51 32.6 -0.7**
NB2 NORSAR Subarra 120.02 341 PKPdf **PKPdf 17 51 32.9 -0.8**
comp=Z,2.0nm,0.5s,baz=38,slow=1.7
NOA NORSAR Array B 120.02 341 PKP **PKPdf 17 51 33.2 -0.6**
comp=Z,3.1nm,0.7s,baz=46,slow=1.9,SNR=21
NC602 NORSAR Array S 120.14 341 *e*PKPdf **PKPdf 17 51 33.4 -0.5**
NBO00 NORSAR Array S 120.17 341 *e*PKPdf **PKPdf 17 51 33.7 -0.3**
TLCR 120.62 319⇓ *i*P **PKiKP 17 51 35.4 0.0**
TLCR 120.62 319⇓ *e*PKIKP **PKiKP 17 51 35.4 0.0**
BOSA Boshof 120.72 231 *i*P **PKiKP 17 51 36.7 +0.3**
BOSA Boshof 120.72 231 PKP **PKiKP 17 51 36.6 +0.3**
comp=Z,11nm,0.6s,baz=116,slow=2.2,SNR=28
BOSA Boshof 120.72 231 *e*PKPdf **PKPdf 17 51 35.6 -0.6**
BOSA Boshof 120.72 231 *i*P **PKiKP 17 51 36.7 +0.3**
KLNR Kaliningrad 120.80 332*c i*PKIKP **PKiKP 17 51 37.0 +1.6**
CFR Carcaliu 121.06 319⇓ *i*P **PKPdf 17 51 35.9 -0.2**
CFR Carcaliu 121.06 319⇓ *e*PKIKP **PKPdf 17 51 35.9 -0.2**
MFTR Murfatlar 121.27 316⇑ *i*P **PKiKP 17 51 37.1 +0.4**
TLB Topalu 121.36 319⇓ *i*P **PKiKP 17 51 37.0 +0.2**
TLB Topalu 121.36 319⇓ *e*PKIKP **PKiKP 17 51 37.0 +0.2**
HARR Harsova 121.39 319⇑ *i*P **PKPdf 17 51 36.7 -0.1**
HARR Harsova 121.39 319⇓ *e*PKIKP **PKPdf 17 51 36.7 -0.1**
TESR Tescani 121.45 321⇓ *i*P **PKPdf 17 51 36.7 -0.2**
LVV L'vov 121.45 326 *e*PKIKP **PKiKP 17 51 37.6 +0.7**
MATP Matopo 121.57 241 *i*P **PKiKP 17 51 38.6 +0.5**
MATP Matopo 121.57 241 *i*P **PKiKP 17 51 38.6 +0.5**
BLWY Bulawayo 121.58 241 *i*P **PKPdf 17 51 38.0 0.0**
BLWY Bulawayo 121.58 241 *i*P **PKPdf 17 51 38.0 0.0**
BIZ Bicaz 121.59 322⇑ *i*P **PKiKP 17 51 38.0 +0.7**
VRI Vrincioaia 121.68 320⇓ *i*P **PKiKP 17 51 37.4 -0.1**
VRI Vrincioaia 121.68 320⇓ *e*PKIKP **PKiKP 17 51 37.4 -0.1**
PLOR Plostina 121.73 320⇓ *i*P **PKPdf 17 51 36.9 -0.6**
PLOR Plostina 121.73 320⇓ *e*PKIKP **PKPdf 17 51 36.9 -0.6**
BUR08 Bucovina Ar. S 121.82 323 *e*PKPdf **PKiKP 17 51 38.1 +0.2**
BURAR Bucovina Array 121.83 323⇓ *i*P **PKiKP 17 51 38.4 +0.6**
BURAR Bucovina Array 121.83 323⇓ *e*PKIKP **PKiKP 17 51 38.4 +0.6**
BEL Belsk 122.12 329 *e*P **PKiKP 17 51 38.7 +0.6**
BEL Belsk 122.12 329 *e*PKIKP **PKiKP 17 51 38.7 +0.6**
LBTB Lobatse 122.12 235 *e*PKPdf **PKPdf 17 51 38.7 -0.2**
MLR Muntele Rosu 122.33 320 *e*PKPdf **PKPdf 17 51 38.1 -0.7**
MLR Muntele Rosu 122.33 320⇑ *i*P **PKPdf 17 51 38.8 0.0**
MLR Muntele Rosu 122.33 320 *e*PKIKP **PKPdf 17 51 38.1 -0.7**
PRD Provadia 122.33 317 *e*P **PKiKP 17 51 38.8 0.0**
SECR 122.45 320⇑ *i*P **PKiKP 17 51 39.1 +0.1**
PHSR Pinarhisar 122.85 316⇓ *i*P **PKiKP 17 51 39.8 -0.1**
BSD Bornholm Skovb 122.86 335 *e*PKIKP **PKiKP 17 51 39.7 +0.2**
BSD pmax pmax
comp=Z,25nm,0.7s
BSD Bornholm Skovb 122.86 335 *i*P **PKiKP 17 51 39.7 +0.2**
comp=Z,25nm,0.7s
KOLS Kolonicke sedl 122.89 325 *e*PKIKP **PKiKP 17 51 40.4 +0.6**
KOLS Kolonicke sedl 122.89 325 *e*PKP **PKiKP 17 51 40.4 +0.6**
VOIR 122.92 321⇓ *i*P **PKPdf 17 51 39.3 -0.5**
VOIR 122.92 321⇓ *e*PKIKP **PKPdf 17 51 39.3 -0.5**
GKP Gorka Klasztor 123.01 332 *e*P **PKPdf 17 51 39.7 +0.1**
GKP Gorka Klasztor 123.01 332 *e*PKIKP **PKPdf 17 51 39.7 +0.1**
UZH Uzhgorod 123.03 325 *e*PKIKP **PKiKP 17 51 40.4 +0.4**
UZH *e* 17 51 49.7
UZH *e* 17 51 56.2
TRPA Tarpa 123.15 324⇓ *i*P **PKiKP 17 51 40.2 -0.1**
TRPA Tarpa 123.15 324⇓ *e*EP **PKPdf 17 51 40.1 0.0**
ARR Arges 123.22 321⇓ *i*P **PKiKP 17 51 41.6 +1.0**
CJR Cluj-Napoca 123.22 323⇓ *i*P **PKiKP 17 51 40.9 +0.3**
CJR Cluj-Napoca 123.22 323⇓ *e*PKIKP **PKiKP 17 51 40.9 +0.3**
HUMR Humele 123.37 320⇑ *i*P **PKPdf 17 51 40.5 -0.1**
OJC Ojcow 123.55 328 *e*P **PKiKP 17 51 41.1 +0.1**
OJC Ojcow 123.55 328 *e*PKPdf **PKiKP 17 51 41.1 +0.1**
OJC Ojcow 123.55 328 *e*PKIKP **PKiKP 17 51 41.2 +0.1**
LSZ Lusaka 123.67 247 *e*PKPdf **PKPdf 17 51 42.2 +0.1**
LSZ Lusaka 123.67 247 *e*PKIKP **PKPdf 17 51 42.2 +0.1**
PVL Pavlikeni 123.70 318 *e*P **PKiKP 17 51 42.4 +0.9**
DRGR 123.72 323⇑ *i*P **PKPdf 17 51 41.2 -0.1**
DRGR 123.72 323⇑ *e*PKIKP **PKPdf 17 51 41.2 -0.1**
NIE Niedzica 123.73 327 *e*P **PKiKP 17 51 42.0 +0.5**

NIE Niedzica 123.73 327 *e*PKIKP **PKiKP 17 51 42.0 +0.6**
LTVH Ltavrtes, Hu 123.90 324⇓ EP **PKiKP 17 51 42.1 +0.3**
DEV Deva 124.05 322⇓ *i*P **PKiKP 17 51 42.3 +0.2**
DEV Deva 124.05 322⇓ *e*PKIKP **PKiKP 17 51 42.3 +0.2**
KDZ Kurdzhali 124.30 316 *e*P **PKiKP 17 51 46.2 +3.4**
LANS Liptovska Anna 124.33 327 *e*PKIKP **PKiKP 17 51 43.9 +1.2**
LANS Liptovska Anna 124.33 327 *e*PKP **PKiKP 17 51 43.8 +1.1**
EZN Ezine 124.38 314⇑ *i*P **PKPdf 17 51 42.1 -0.5**
EZN Ezine 124.38 314⇑⇑ *i*PKIKP **PKPdf 17 51 42.1 -0.5**
SIRR Siria 124.61 323⇓ *i*P **PKiKP 17 51 43.3 0.0**
OKC Ostrava-Krasne 124.64 328 *e*PKIKP **PKiKP 17 51 43.3 +0.1**
OKC *e* 17 51 58.0
OKC MLR MLR
comp=Z,300nm,16.1s
OKC Ostrava-Krasne 124.64 328 *e*PKP **PKiKP 17 51 43.3 +0.1**
OKC *ep*PKP **pPKPdf 17 51 58.0 -4.9**
OKC AMS AMS 18 48 40.0
comp=Z,300nm,16.1s
PGB Panagyurishte 124.77 318 *e*P **PKPdf 17 51 43.2 -0.2**
PSZ Piszkesteto 124.77 325 *e*PKPdf **PKPdf 17 51 43.0 -0.3**
PSZ Piszkesteto 124.77 325⇑ *i*P **PKPdf 17 51 43.4 +0.1**
PSZ Piszkesteto 124.77 325⇑⇑ *i*PKIKP **PKPdf 17 51 43.4 +0.1**
PSZ Piszkesteto 124.77 325⇓ *i*EP **PKiKP 17 51 44.0 +0.4**
MBAR Mbarara 124.79 264 *e*PKPdf **PKiKP 17 51 44.6 -0.1**
HERR Herculane 124.83 321⇑ *i*P **PKiKP 17 51 43.7 0.0**
BZS Buzias 124.96 322⇑ *i*P **PKPdf 17 51 43.4 -0.2**
BZS Buzias 124.96 322⇑⇑ *i*PKIKP **PKPdf 17 51 43.4 -0.2**
KSP Ksiaz 124.98 330 *e*P **PKPdf 17 51 43.5 0.0**
KSP Ksiaz 124.98 330 *e*PKIKP **PKPdf 17 51 43.5 0.0**
MORC Moravsky Berou 124.99 328 *e*PKPdf **PKiKP 17 51 44.0 +0.1**
MORC Moravsky Berou 124.99 328⇓ *i*P **PKiKP 17 51 44.0 +0.1**
MORC Moravsky Berou 124.99 328 *e*PKIKP **PKiKP 17 51 44.0 +0.1**
MORC Moravsky Berou 124.99 328 *e*PKP **PKiKP 17 51 44.1 +0.1**
MORC *e* 17 51 57.9
VYHS Vyhne 125.04 326 *e*PKIKP **PKiKP 17 51 43.9 -0.2**
VYHS Vyhne 125.04 326 *e*PKP **PKiKP 17 51 43.9 -0.2**
OSTC Ostas 125.20 330 *e*PKP **PKiKP 17 51 44.9 +0.6**
OSTC *ep*PKP **pPKPdf 17 51 59.0 -5.0**
OSTC AMS AMS 18 46 20.0
comp=Z,400nm,18.7s
KRLC Kraliky 125.20 329 *e*PKIKP **PKiKP 17 51 44.9 +0.5**
KRLC Kraliky 125.20 329 *e*PKP **PKiKP 17 51 44.9 +0.5**
KARP Karpathos 125.24 309 *e*PKPdf **PKPdf 17 51 44.1 -0.4**
CHVC Chvalec 125.26 330 *e*PKP **PKPdf 17 51 43.8 -0.3**
CHVC *ep*PKP **pPKPdf 17 51 59.5 -4.6**
CHVC AMS AMS 18 46 40.0
comp=Z,400nm,19.2s
DPC Dobruska-Polom 125.27 329 *e*PKIKP **PKiKP 17 51 45.0 +0.5**
DPC *e* 17 51 58.6
DPC MLR MLR
comp=Z,500nm,25.5s
DPC Dobruska-Polom 125.27 329 *e*PKP **PKiKP 17 51 45.0 +0.5**
DPC *ep*PKP **pPKPdf 17 51 58.6 -5.6**
DPC AMS AMS 18 46 20.0
comp=Z,500nm,25.5s
MDVR Moldovita 125.32 321⇓ *i*P **PKPdf 17 51 44.4 0.0**
UPC Upice 125.33 330 *e*PKIKP **PKiKP 17 51 45.0 +0.4**
UPC *e* 17 51 58.3
UPC MLR MLR
comp=Z,400nm,21.8s
UPC Upice 125.33 330 *e*PKP **PKiKP 17 51 45.0 +0.4**
UPC *ep*PKP **pPKPdf 17 51 58.3 -5.9**
UPC AMS AMS 18 46 30.0
comp=Z,400nm,21.8s
JAVC Velka Javorina 125.47 327 *e*PKP **PKiKP 17 51 45.8 +0.8**
JAVC *e* 17 51 59.8
MMB Musomiste 125.47 317 *e*P **PKPdf 17 51 44.7 -0.1**
SRO Srobarova 125.72 326 *e*PKIKP **PKiKP 17 51 45.6 +0.2**
SRO Srobarova 125.72 326 *e*PKP **PKiKP 17 51 45.6 +0.2**
VRAC Vranov 125.77 328⇓ *i*P **PKiKP 17 51 45.5 0.0**
VRAC Vranov 125.77 328⇓ *e*PKIKP **PKiKP 17 51 45.5 0.0**
VRAC Vranov 125.77 328 *e*PKP **PKiKP 17 51 45.4 0.0**
VRAC *e* 17 51 59.2
MODS Modra-Piesok 125.96 327 *e*PKIKP **PKPdf 17 51 45.4 -0.1**
MODS Modra-Piesok 125.96 327 *e*PKP **PKPdf 17 51 45.4 -0.1**
CSKK Cskako 126.00 326 EP **PKPdf 17 51 45.1 -0.5**
KRUC Moravsky 126.02 328 *e*PKP **PKPdf 17 51 45.7 +0.2**
KRUC *e* 17 51 59.7
PVCC Panska Ves 126.03 330 *e*PKIKP **PKiKP 17 51 46.5 +0.6**
PVCC MLR MLR
comp=Z,400nm,21.5s
PVCC Panska Ves 126.03 330 *e*PKP **PKiKP 17 51 46.5 +0.6**
PVCC AMS AMS 18 49 50.0
comp=Z,400nm,21.5s
BRG Berggiesshubel 126.11 331 *e*P **PKiKP 17 51 45.9 -0.2**
comp=Z,22nm,0.9s
BRG *e* 17 51 59.9
comp=Z,25nm,1.3s
BRG Berggiesshubel 126.11 331 *e*PKIKP **PKiKP 17 51 45.9 -0.2**
BRG *e* 17 51 59.9
BRG pmax pmax
comp=Z,22nm,0.9s
ZST Bratislava 126.16 327 *e*PKIKP **PKPdf 17 51 46.0 +0.2**
ZST Bratislava 126.16 327 *e*PKP **PKPdf 17 51 46.0 +0.2**
CLL Collm 126.27 332 *e*PKPdf **PKPdf 17 51 45.1 -0.8**
CLL Collm 126.27 332 *i*PKPdf **PKPdf 17 51 46.1 +0.2**
comp=Z,24nm,0.8s
CLL *i*pPKPdf **pPKPdf 17 51 59.9 -6.0**
CLL *e*PP **PP 17 53 39.0 -1.8**
CLL *ep*PP 17 53 52.0
CLL *e*(PKSdf) 17 55 26.0
CLL *e*SKSP 18 03 30.0
CLL *e*PKKSbc PKKSbc 18 05 10.0 -3.7
CLL *e*SKKPdf SKKPdf 18 05 30.0 -3.9
CLL Collm 126.27 332 *i*PKIKP **PKPdf 17 51 46.1 +0.2**
CLL *i* 17 51 59.9
CLL pmax pmax
comp=Z,24nm,0.8s
GOPC GO Pecny, Ondr 126.31 330 *e*PKIKP **PKiKP 17 51 46.6 0.0**
GOPC *e* 17 52 00.9
GOPC MLR MLR
comp=Z,300nm,21.4s
GOPC GO Pecny, Ondr 126.31 330 *e*PKP **PKiKP 17 51 46.6 0.0**
GOPC *ep*PKP **pPKPdf 17 52 00.9 -5.2**
GOPC AMS AMS 18 48 10.0
comp=Z,300nm,21.4s
TREC Trest 126.35 329 *e*PKIKP **PKiKP 17 51 47.0 +0.3**
TREC *e* 17 52 01.6
TREC MLR MLR
comp=Z,400nm,17.8s
TREC Trest 126.35 329 *e*PKP **PKiKP 17 51 47.0 +0.3**
TREC *ep*PKP **pPKPdf 17 52 01.6 -4.6**
TREC AMS AMS 18 50 10.0
comp=Z,400nm,17.8s
VAY Valandovo 126.37 317 *i*PKP **PKPdf 17 51 46.0 -0.5**
PRU Pruhonice 126.39 330 *e*PKIKP **PKiKP 17 51 46.9 +0.2**
PRU *e* 17 52 00.8
PRU MLR MLR
comp=Z,400nm,23.3s
PRU Pruhonice 126.39 330 *e*PKP **PKiKP 17 51 46.9 +0.2**
PRU *ep*PKP **pPKPdf 17 52 00.8 -5.4**
PRU AMS AMS 18 49 20.0
comp=Z,400nm,23.3s
TIH Tihany 126.47 325 EP **PKiKP 17 51 47.0 +0.1**
SOP Sopron 126.76 327⇓ EP **PKPdf 17 51 47.1 +0.1**
SKO Skopje 126.83 318 *i*PKP **PKiKP 17 51 47.6 -0.2**
CONA Conrad Observa 126.99 327 *i*PKiKP **PKiKP 17 51 48.4 +0.3**
comp=Z,16nm,0.9s,SNR=13
KRUS Krusevo 127.24 318 *i*PKP **PKPdf 17 51 48.1 -0.2**
NKC Novy Kostel 127.25 331 *e*PKIKP **PKiKP 17 51 48.9 +0.5**
NKC MLR MLR
comp=Z,400nm,21.4s
NKC Novy Kostel 127.25 331 *e*PKP **PKiKP 17 51 48.9 +0.5**
NKC AMS AMS 18 48 30.0
comp=Z,400nm,21.4s
BEHE Becsehely 127.34 325⇓ EP **PKiKP 17 51 49.0 +0.3**
FNA Florina 127.42 317 *e*PKPdf **PKPdf 17 51 47.9 -0.7**
FNA Florina 127.42 317 *e*PKIKP **PKPdf 17 51 47.9 -0.7**
KHC Kasperske Hory 127.42 330 *e*PKPdf **PKPdf 17 51 48.1 -0.2**
KHC Kasperske Hory 127.42 330 *e*PKIKP **PKiKP 17 51 49.0 +0.2**
KHC *e* 17 52 02.6
KHC MLR MLR
comp=Z,400nm,19.1s
KHC Kasperske Hory 127.42 330 *e*PKP **PKiKP 17 51 49.0 +0.2**
KHC *ep*PKP **pPKPdf 17 52 02.6 -5.7**
KHC AMS AMS 18 47 40.0
comp=Z,400nm,19.1s
AGG Agios Georgios 127.53 315 *e*PKPdf **PKPdf 17 51 48.2 -0.6**
AGG Agios Georgios 127.53 315 *e*PKIKP **PKPdf 17 51 48.2 -0.6**
GEC2 GERESS Array S 127.54 329 *e*PKPdf **PKPdf 17 51 48.6 0.0**
GEC2 GERESS Array S 127.54 329 *e*PKIKP **PKPdf 17 51 48.6 0.0**
GERES GERESS Array B 127.54 329 PKP **PKiKP 17 51 49.2 0.0**

comp=Z,11nm,0.6s,baz=72,slow=1.7,SNR=56
ARSA Arzberg 127.58 327 *i* PKiKP **PKiKP 17 51 49.1 -0.1**
comp=Z,4.6nm,0.7s
MOA Molln 127.88 328 *i* PKiKP **PKiKP 17 51 49.6 -0.1**
comp=Z,8.0nm,0.7s,SNR=5.1
SOKA Soboth 128.19 326 *i* PKiKP **PKiKP 17 51 51.1 +0.6**
comp=Z,24nm,1.4s,SNR=9.6
GRA1 Grafenberg Arr 128.20 331 *e*PKPdf **PKPdf 17 51 49.9 +0.2**
GRF Grafenberg Arr 128.20 331 *e*PKIKP **PKPdf 17 51 49.9 +0.2**
GRFO Grafenberg 128.20 331 *e*PKPdf **PKPdf 17 51 49.9 +0.2**
OBKA Obir 128.56 327 *i* PKiKP **PKiKP 17 51 51.2 -0.1**
comp=Z,5.6nm,0.8s
ITM Ithomi 128.59 313 *e*PKPdf **PKPdf 17 51 51.0 +0.2**
BOJS Bojanci 128.77 325 *i* PKPdf **PKPdf 17 51 51.2 +0.3**
KBA Koelnbreinsper 128.85 328 *i* PKiKP **PKPdf 17 51 51.2 0.0**
comp=Z,5.1nm,0.6s
LJU Ljubljana 128.85 326 *i* PKPdf **PKPdf 17 51 51.2 +0.2**
LJU *i* pPKPdf **pPKPdf 17 52 05.5 -5.6**
MYKA Terra Mystica 128.98 327 *i* PKiKP **PKPdf 17 51 51.3 -0.1**
comp=Z,4.9nm,0.6s
CADS Cadrg 129.18 327 *i* PKPdf **PKPdf 17 51 51.6 -0.2**
ABTA Abfaltersbach 129.51 328 *i* PKiKP **PKPdf 17 51 52.2 -0.2**
comp=Z,21nm,1.2s,SNR=7.4
WATA Walderalm 129.61 329 *i* PKPdf **PKPdf 17 51 52.0 -0.7**
comp=Z,8.6nm,0.5s,SNR=8.0
WTTA Wattenberg 129.62 329 *i* PKiKP **PKPdf 17 51 53.0 +0.3**
comp=Z,8.3nm,0.4s,SNR=10
MOTA Moosalm 129.84 329 *i* PKiKP **PKPdf 17 51 53.3 +0.2**
comp=Z,9.2nm,0.4s,SNR=14
MEM Membach 129.85 335 PKPdf **PKPdf 17 51 53.0 +0.2**
MEM PKPdf **PKPdf 17 51 53.0 +0.2**
MEM x x 17 52 07.4
MEM pPKP **pPKPdf 17 52 07.5 -5.3**
SQTA Sankt Quirin 129.87 329 *i* PKiKP **PKPdf 17 51 53.5 +0.3**
comp=Z,16nm,0.7s,SNR=7.6
RETA Reutte 129.92 330 *i* PKPdf **PKPdf 17 51 52.8 -0.3**
comp=Z,2.9nm,0.4s
FETA Feichten 130.25 329 *i* PKiKP **PKiKP 17 51 54.4 -0.3**
comp=Z,15nm,0.8s,SNR=9.0
BCLA Clavier 130.28 336 PKPdf **PKPdf 17 51 53.4 -0.2**
BGES Gesves 130.40 336 PKPdf **PKiKP 17 51 54.8 +0.1**
DAVA Damuels 130.50 330 *i* PKiKP **PKiKP 17 51 55.1 -0.1**
comp=Z,10nm,0.5s
WLF Walferdange 130.50 335 *e*PKPdf **PKPdf 17 51 54.4 +0.3**
WLF Walferdange 130.50 335 *e*PKIKP **PKPdf 17 51 54.4 +0.3**
WLF Walferdange 130.50 335 PKPdf **PKiKP 17 51 55.0 +0.1**
WLF pPKP **pPKPdf 17 52 09.1 -5.0**
BFO Black Forest 130.51 332 *e*PKPdf **PKPdf 17 51 53.2 -1.0**
BFO Black Forest 130.51 332 *i* PKIKP **PKiKP 17 51 56.6 +1.6**
RCHB Rochefort 130.52 336 PKPdf **PKPdf 17 51 52.5 -1.6**
RCHB x x 17 52 06.2
BMRD Maredsous 130.59 336 PKPdf **PKiKP 17 51 55.4 +0.3**
SNF Seneffe 130.63 336 PKPdf **PKiKP 17 51 55.2 +0.1**
LPAZ La Paz 130.64 118 PKP **PKiKP 17 51 57.1 +0.2**
comp=Z,2.3nm,0.8s,baz=31,slow=2.3,SNR=6.9
LPAZ La Paz 130.64 118 *e*PKPdf **PKPdf 17 51 55.2 -0.9**
LPAZ La Paz 130.64 118 *e*P **PKiKP 17 51 59.0 +2.1**
FUORN Ofenpass-Fuorn 130.76 329 *e*PKPdf **PKPdf 17 51 54.3 -0.7**
DOU Dourbes 130.82 336 PKPdf **PKiKP 17 51 55.9 +0.4**
TUE Stuetta 131.32 330 *e*PKPdf **PKPdf 17 51 55.0 -1.0**
TSUM Tsumeb 131.38 237 *e*PKPdf **PKPdf 17 51 56.8 0.0**
SENIN Lac Senin/Sane 132.41 331 *e*PKPdf **PKPdf 17 51 57.9 -0.2**
BNI Bardonecchia 133.65 330 *e*PKPdf **PKPdf 17 52 00.3 0.0**
BNI Bardonecchia 133.65 330 *e*PKIKP **PKPdf 17 52 00.3 0.0**
CPUP Villa Florida 133.74 137 PKP **PKPdf 17 52 01.2 +0.3**
comp=Z,2.8nm,0.8s,baz=185,slow=2.4,SNR=5.0
CPUP Villa Florida 133.74 137 *e*P **PKiKP 17 52 05.6 +3.4**
SDV Santo Domingo 133.88 84 *e*PKPdf **PKPdf 17 52 00.6 -1.1**
KEST Kesra 138.12 318 PKP **PKPdf 17 52 08.7 -0.2**
comp=Z,4.7nm,0.4s,baz=117,slow=2.3,SNR=4.7
KEST Kesra 138.12 318 *e*PKPdf **PKiKP 17 52 09.9 -1.0**
UCM Universidad Co 141.97 334 PKP1 **PKPdf 17 52 12.7 -3.0**
PBRG Braganca 142.09 339 *e*PKP **PKPdf 17 52 11.7 -4.2**
PGAV Gavieira, Arco 142.48 341 *e*LR LR 18 42 08.0
comp=Z,249nm,22.0s
MVO Moncorvo 142.76 339 *e*PKP **PKPdf 17 52 15.7 -1.4**
MVO Moncorvo 142.76 339 *e*LR LR 18 41 44.1
comp=Z,256nm,20.0s
ESDC Sonseca Array 142.80 334 PKP **PKPdf 17 52 15.1 -2.1**
comp=Z,2.2nm,0.6s,baz=20,slow=3.0,SNR=15
POLO Lamas de Olo 142.84 340 *e*PKP **PKPdf 17 52 14.3 -3.0**
PVRL Vila Real 142.90 339 *e*PKP **PKPdf 17 52 15.5 -1.8**
PVIS Viseu 143.46 339 *e*PKP PKPbc 17 52 16.5 +0.8
PVIS *i* LQ LQ 17 52 31.9
MTE Manteigas 143.62 339 *e*PKP PKPbc 17 52 17.2 +1.1
MTE Manteigas 143.62 339 *e*LR LR 18 43 11.2
comp=Z,313nm,24.0s
MTE Manteigas 143.62 339 *e*PKPdf PKPbc 17 52 16.4 +0.3
PCBR Castelo Branco 144.08 338 *e*PKP PKPbc 17 52 18.1 +0.7
PCBR *i* LQ LQ 17 52 31.6
PCAS Casmilo, Conde 144.26 339 *e*PKP **PKPdf 17 52 20.0 +0.3**
PMRV Marv??o 144.41 338 *e*PKP PKPbc 17 52 18.9 +0.4
PMRV Marv??o 144.41 338 *e*LR LR 18 43 57.3
comp=Z,313nm,24.0s
PTOM Tomar 144.62 339 *e*PKP **PKPdf 17 52 19.9 -0.4**
PTOM *i* LQ LQ 17 52 34.6
PMTG Montargil 145.03 338 *e*PKP **PKPbc 17 52 20.4 -0.1**
PMTG *i* LQ LQ 17 52 34.7
VAS01 Vassouras-RJ 145.25 147 *e*P **PKPdf 17 52 23.6 +1.6**
EMAL Malaga-Limoner 145.39 332 PKP1 **PKPbc 17 52 21.1 -0.6**
EMAL Malaga-Limoner 145.39 332 PKP2 PKiKP 17 52 34.4 +8.7
EVO Evora 145.43 338 *e*PKP **PKPab 17 52 22.3 +0.3**
EVO *i* LQ LQ 17 52 36.6
PMAFR Mafra 145.51 339 *e*PKP **PKPab 17 52 23.0 +0.7**
PMAFR *i* LQ LQ 17 52 36.9
BSCB Bom Sucesso 145.53 144 *e*P **PKPab 17 52 23.9 +0.9**
LIS Lisbon 145.68 339 *e*PKPdf **PKPdf 17 52 21.0 -1.1**
LIS AMS AMS 19 00 53.7
comp=E,1μm,17.9s
LIS Lisbon 145.68 339 *e*PKIKP **PKPdf 17 52 21.0 -1.1**
LIJA Lijar 145.72 333 PKP1 **PKPab 17 52 24.0 +0.8**
LIJA Lijar 145.72 333 PKP2 PKiKP 17 52 38.0 +12
PBEJ Beja 145.81 337 *e*PKP **PKiKP 17 52 25.4 -1.1**
PBEJ *i* LQ LQ 17 52 38.8
DUB01 Friburgo-RJ 145.97 149 *e*P **PKiKP 17 52 26.6 -0.8**
PNCL Nicolau / Gran 145.99 338 *e*PKP **PKPab 17 52 24.0 -0.1**
PNCL *i* LQ LQ 17 52 38.6
GIBL Gibalbin 146.04 333 PKP1 **PKPab 17 52 25.0 +0.7**
GIBL Gibalbin 146.04 333 PKP2 PKiKP 17 52 39.5 +12
MESJ Messejana 146.11 337 *e*PKPdf **PKPdf 17 52 22.1 -0.8**
MESJ AMS AMS 18 55 40.6
comp=Z,287nm,23.2s
MESJ Messejana 146.11 337 *e*PKP **PKPab 17 52 25.1 +0.6**
MESJ *i* LQ LQ 17 52 36.1
MESJ Messejana 146.11 337 *e*PKIKP **PKPdf 17 52 22.0 -0.8**
PCVE Castro Verde 146.22 337 *e*PKP **PKPab 17 52 25.1 +0.1**
PCVE *i* LQ LQ 17 52 39.6
PVAQ Vaqueiros 146.29 336 *e*PKP **PKPab 17 52 25.4 +0.2**
PVAQ *i* LQ LQ 17 52 39.2
PVAQ Vaqueiros 146.29 336 *e*LR LR 18 44 45.0
comp=Z,302nm,20.0s
PMNB Patos De Minas 146.37 139 *e*P **PKiKP 17 52 28.0 -0.3**
SFS San Fernando 146.44 333 PKP1 **PKiKP 17 52 27.6 -0.2**
SFS San Fernando 146.44 333 PKP2 PKiKP 17 52 39.7 +12
PBDV Barranco-do-Ve 146.51 336 *e*PKP **PKPab 17 52 26.3 +0.1**
PBDV *i* LQ LQ 17 52 39.3
CEU Ceuta 146.53 332 PKP1 **PKPbc 17 52 25.4 +0.2**
CEU Ceuta 146.53 332 PKP2 PKiKP 17 52 38.1 +10
CAM01 Campos-RJ 146.55 149 *e*P **PKPab 17 52 27.4 +0.8**
PTEO Sao Teotonio 146.56 338 *e*PKP **PKiKP 17 52 27.3 -0.7**
PTEO *i* LQ LQ 17 52 40.4
PVLZ Peæn de 146.60 330 PKP1 **PKPdf 17 52 23.8 +0.1**
MORF Marmelete 146.74 337 *e*PKPdf **PKPdf 17 52 23.1 -1.0**
MORF *e*PKPdf **PKPbc 17 52 23.3 -2.5**
MORF AMS AMS 18 57 51.5
comp=Z,428nm,25.7s
MORF Marmelete 146.74 337 *e*PKP **PKiKP 17 52 27.9 -0.6**
MORF *i* LQ LQ 17 52 41.3
MORF Marmelete 146.74 337 *e*PKIKP **PKPdf 17 52 23.0 -1.0**
PFVI Vila Bisbo 146.96 337 *e*PKP **PKPab 17 52 27.8 -0.1**
PFVI *i* LQ LQ 17 52 40.8
BDFB Brasilia 147.31 134 PKPbc **PKPbc 17 52 27.6 -0.4**
comp=Z,26nm,0.6s,baz=335,slow=0.5,SNR=26
BDFB Brasilia 147.31 134 *e*PKPdf **PKPbc 17 52 27.0 -1.0**
TAM Tamanrasset 147.48 302 *e*PKPdf **PKPdf 17 52 26.6 +0.8**
TAM Tamanrasset 147.48 302 *e*PKIKP **PKPdf 17 52 26.6 +0.8**
ALF01 Guarapari-ES 148.03 150 *e*P **PKPbc 17 52 30.4 +0.7**
IFR Ifrane 148.32 329 PKP1 **PKiKP 17 52 31.7 -0.4**
IFR Ifrane 148.32 329 PKP2 PKPab 17 52 45.1 +11
RIB01 Linhares ES 149.29 149 *e*P **PKPbc 17 52 32.2 -0.8**
MCI9 Montes Claros 149.35 140 *e*P **PKPbc 17 52 33.1 -0.2**
MCI8 Montes Claros 149.36 140 *e*P **PKPbc 17 52 32.5 -0.8**

SJMB Sao Joao De Ma 149.38 147 *e*P **PKPbc 17 52 33.1 -0.2**
BSFB Barra de Sao F 149.45 147 *e*P **PKPdf 17 52 31.0 +2.1**
TOA0 Torodi Ar. Sit 153.92 286 *e*PKPdf **PKPdf 17 52 35.1 -0.7**
TOA0 *e*PKPbc **PKPbc 17 52 43.3 -0.5**
TORD Torodi Ar. Bea 153.92 286 PKP **PKPdf 17 52 35.7 -0.1**
comp=Z,2.8nm,0.7s,baz=39,slow=2.0,SNR=13
TORD PKPbc **PKiKP 17 52 43.9 0.0**
comp=Z,19nm,0.8s,baz=63,slow=1.8,SNR=50
TORD PKPab **PKPab 17 52 56.8 -0.4**
comp=Z,20nm,0.9s,baz=81,slow=1.5,SNR=14
KIC Kosan Boka 160.78 269 *e*PKIKP PKPdf 17 52 58.0 +14
comp=Z,88nm,0.6s
KIC Kosan Boka 160.78 269 *e*PKP1 **PKPab 17 53 27.1 +0.2**
comp=Z,88nm,0.6s
NBLI Livramento-PB 160.79 138 *e*P **PKPdf 17 52 48.3 +3.7**
DBIC Dimbokro 160.91 270 PKP **PKPdf 17 52 44.9 +0.3**
comp=Z,5.7nm,0.9s,baz=169,slow=7.2,SNR=3.3
DBIC PKPab **PKPab 17 53 27.9 +0.5**
comp=Z,28nm,0.6s,baz=80,slow=3.9,SNR=33
DBIC Dimbokro 160.91 270 *e*PKPdf **PKPdf 17 52 43.6 -1.0**
DBIC *e*PKPab **PKPab 17 53 27.4 0.0**
DBIC Dimbokro 160.91 270 *e*PKIKP **PKPdf 17 52 43.6 -1.0**
DBIC *e* 17 53 27.4
LIC Lamto 161.06 269 *e*PKIKP PKPdf 17 52 58.2 +13
comp=Z,339nm,1.5s
LIC Lamto 161.06 269 *e*PKP1 **PKPab 17 53 27.9 -0.2**
comp=Z,339nm,1.5s
TIC Toumodi 161.07 270 *e*PKIKP PKPdf 17 52 58.3 +14
TIC Toumodi 161.07 270 *e*PKP1 **PKPab 17 53 28.3 +0.1**

MAN 01 17:34:50.6, 7°.34N×124°.78E, h6km, mb4.2, ML3.0, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.61**	**28**	*e*P	Pg	17 35 02.6	+0.2
BUKP				*e*S	Sb	17 35 12.0	-0.6
DMPH	**Davao City--Mi**	**0.77**	**109**	*e*P	Pn	17 35 14.8	+6.8
SKMP	**Bagumbayan, Su**	**0.85**	**196**	*e*P	Pg	17 35 07.1	+0.2
SKMP				*e*S	Sn	17 35 21.6	-0.3
PAGZ	**Pagadian**	**1.47**	**290**	*e*P	Pn	17 35 16.9	-0.8
PAGZ				*e*S	Sb	17 35 37.6	+0.2
DDMP	**Don Marcelino,**	**1.54**	**143**	*e*P	Pn	17 35 17.6	-1.0
DDMP				*e*S	Sb	17 35 39.7	+0.4

MAN 01 17:41:17.0, 5°.96N×125°.90E, h136km, mb4.8, ML3.7, MS3.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.24**	**308**	*e*P	Pn	17 41 36.6	+1.0
DDMP				*e*S	Sn	17 41 52.3	+2.5
MATI	**Mati**	**1.04**	**20**	*e*P	Pn	17 41 40.1	-0.7
MATI				*e*S	Sn	17 42 00.4	+1.3
DMPH	**Davao City--Mi**	**1.18**	**341**	*e*P	Pn	17 41 50.6	+8.4
DMPH				*e*S	Sn	17 42 02.0	+0.5
SKMP	**Bagumbayan, Su**	**1.46**	**293**	*e*P	Pn	17 41 46.1	+1.0
SKMP				*e*S	Sn	17 42 07.4	+0.9
BUKP	**Musuan**	**2.08**	**336**	*e*P	Pn	17 41 53.8	+1.5
BUKP				*e*S	Sn	17 42 19.9	+0.4
PAGZ	**Pagadian**	**3.13**	**307**	*e*P	Pn	17 42 06.6	+1.1

*GCG **01** 17:49:25.1±0.6, 14°.34N×91°.53W, h55km±13km, MD4.0*
*SNET **01** 17:49:26.0±1.0, 14°.19N×91°.30W, h14km±6km, ML3.2*
ISC 01 17:49:23.3±3.5, 14°.2N±0°.2×91°.6W±0°.2, h63km±28km, n16, σ0°69/20, 1C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.24**	**17**	↑*i*P	**Pn**	**17 49 33.7**	**+0.3**
STG3	**Santiaguito 3,**	**0.51**	**8**	↓*i*P	**Pn**	**17 49 35.8**	**0.0**
FUG	**Fuego 3**	**0.81**	**73**	↓*e*P	**Pn**	**17 49 39.6**	**+0.4**
PCG	**Pacaya**	**1.02**	**80**	*e*P	**Pn**	**17 49 42.8**	**+0.9**
MOYG	**Moyuta, Jutiap**	**1.52**	**96**	*e*P	**Pn**	**17 49 49.3**	**+0.8**
MOYG				*e*S	**Sn**	**17 50 08.2**	**+0.7**
SBLS	**San Blas**	**1.99**	**100**	*e*P	**Pn**	**17 49 54.9**	**0.0**
SBLS				*e*S	**Sn**	**17 50 17.9**	**-1.0**
CEVE	**Cerro Verde**	**1.99**	**101**	*e*P	**Pn**	**17 49 54.8**	**-0.2**
CEVE				*e*S	**Sn**	**17 50 17.8**	**-1.2**
SNJE	**San Jose**	**2.00**	**99**	*e*P	**Pn**	**17 49 55.2**	**+0.1**
SNJE				*e*S	**Sn**	**17 50 18.4**	**-0.8**
MTO3	**Montecristo**	**2.22**	**85**	*e*P	**Pn**	**17 49 58.2**	**+0.3**
LFU	**La Fuente**	**2.50**	**100**	*e*P	**Pn**	**17 50 01.9**	**+0.3**
PAVA	**Las Pavas**	**2.67**	**100**	*e*P	**Pn**	**17 50 04.7**	**+0.7**
PAVA				IAML		17 50 48.3	
	comp=Z,135nm,0.5s						
VICT	**Victoria**	**2.92**	**94**	*e*P	**Pn**	**17 50 07.3**	**-0.2**
TECA	**Tecapa**	**3.13**	**103**	*e*P	**Pn**	**17 50 11.3**	**+0.9**
LCND	**La Caada**	**3.75**	**103**	*e*P	**Pn**	**17 50 19.5**	**+0.8**
CNCH	**Conchagua**	**3.81**	**104**	*e*P	**Pn**	**17 50 20.1**	**+0.5**
CSGN	**Cosiguina Volc**	**4.15**	**107**	*e*P	**Pn**	**17 50 24.0**	**-0.3**

*ISCJB **01** 17:50:05.3±0.3, 43°.17N±0°.02×18°.95E±0°.03, h3km±3km,*
Error ellipse: s-maj=3.3km s-min=2.7km az=15.3
*BEO **01** 17:50:05.8±0.2, 43°.15N×18°.99E, h0km, ML2.0/10*
*SAR **01** 17:50:06.3±0.3, 43°.16N×18°.96E, h3km±2km, ML2.2/7*
*PDG **01** 17:50:06.1±0.1, 43°.15N×18°.94E, h7km, MD2.4/4,*
ML2.4/11, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0
ISC 01 17:50:06.0±0.8, 43°.16N±0°.02×18°.96E±0°.02, h7km±5km, n48, σ0°86/84, 11C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.06**	**318**	↑*i*Pg	**Pg**	**17 50 07.7**	**-0.2**
UPM				*e*Sg	**Sg**	**17 50 09.0**	**-0.2**
UPM	**Unac-Piva**	**0.06**	**318**	↑*i*Pg	**Pg**	**17 50 07.7**	**-0.2**
UPM				*e*Sg	**Sg**	**17 50 09.2**	**0.0**
NKY	**Niksic**	**0.35**	**176**	↓*i*Pg	**Pg**	**17 50 12.6**	**-0.3**
NKY				*e*Sg	**Sg**	**17 50 17.8**	**+0.4**
PLE	**Pljevlja**	**0.36**	**62**	↑*i*Pg	**Pg**	**17 50 12.9**	**-0.2**
PLE				*e*Sg	**Sg**	**17 50 19.1**	**+1.3**
NKME	**Niksic**	**0.39**	**180**	↑*i*Pg	**Pg**	**17 50 13.4**	**-0.3**
NKME				*e*Sg	**Sg**	**17 50 19.3**	**+0.5**
BRY	**Bratogost**	**0.40**	**230**	↓*i*Pg	**Pg**	**17 50 13.3**	**-0.6**
BRY				*e*Sg	**Sg**	**17 50 19.4**	**+0.3**
BRY	**Bratogost**	**0.40**	**230**	↓*i*Pg	**Pg**	**17 50 13.3**	**-0.6**
BRY				*e*Sg	**Sg**	**17 50 19.2**	**+0.1**
KOME	**Kolasin**	**0.51**	**127**	↑*i*Pg	**Pg**	**17 50 15.7**	**-0.2**
KOME				*e*Sg	**Sg**	**17 50 23.8**	**+1.2**
CEME	**Cevo**	**0.61**	**183**	↑*i*Pg	**Pg**	**17 50 17.1**	**-0.8**
CEME				*e*Sg	**Sg**	**17 50 26.7**	**+0.8**
TREB	**Trebinje**	**0.63**	**225**	*e*Pg	**Pg**	**17 50 17.1**	**-1.0**
TREB				*e*Sg	**Sg**	**17 50 25.5**	**-0.8**
TREB	**Trebinje**	**0.63**	**225**	*e*Pg	**Pg**	**17 50 17.1**	**-1.0**
TREB				*e*Sg	**Sg**	**17 50 27.1**	**+0.8**
IVA	**Berane**	**0.74**	**112**	↓*i*Pg	**Pg**	**17 50 20.1**	**-0.2**
IVA				*e*Sg	**Sb**	**17 50 31.5**	**-0.3**
SJES	**Sjenica**	**0.75**	**82**	*e*Pg	**Pg**	**17 50 18.8**	**-1.7**
SJES				*e*Sg	**Sg**	**17 50 28.0**	**-2.2**
PDG	**Podgorica**	**0.76**	**163**	*e*Pg	**Pg**	**17 50 19.5**	**-1.1**
PDG				*e*Sg	**Sg**	**17 50 29.4**	**-1.1**
PDG	**Podgorica**	**0.76**	**163**	*i*P	**Pg**	**17 50 19.6**	**-1.1**
PDG				S	**Sg**	**17 50 30.8**	**+0.2**
PDG	**Podgorica**	**0.76**	**163**	*i*Pg	**Pg**	**17 50 19.6**	**-1.1**
PDG				*e*Sg	**Sg**	**17 50 30.7**	**+0.2**
TTG	**Podgorica**	**0.76**	**163**	↑*i*Pg	**Pg**	**17 50 19.8**	**-0.9**
TTG				*e*Sg	**Sb**	**17 50 31.6**	**-0.6**
HCY	**Herceg Novi**	**0.79**	**206**	↑*i*Pg	**Pg**	**17 50 20.4**	**-0.8**
HCY				*e*Sg	**Sb**	**17 50 32.6**	**-0.4**
HCY	**Herceg Novi**	**0.79**	**206**	*e*Pg	**Pg**	**17 50 20.5**	**-0.8**
HCY				*e*Sg	**Sg**	**17 50 31.8**	**+0.3**
BUM	**Brajici-Budva**	**0.86**	**183**	*e*Pg	**Pg**	**17 50 21.9**	**-0.7**
BUM				*e*Sg	**Sb**	**17 50 35.1**	**0.0**
HAPS	**Han Pijesak,Bl**	**0.93**	**360**	*e*Pg	**Pg**	**17 50 22.3**	**-1.6**
HAPS				*e*Sg	**Sg**	**17 50 35.4**	**-0.5**
HAPS	**Han Pijesak,Bl**	**0.93**	**360**	*e*Pg	**Pg**	**17 50 22.2**	**-1.6**
HAPS				*e*Sg	**Sg**	**17 50 35.1**	**-0.8**
PVY	**Plav**	**0.93**	**127**	↑*i*Pg	**Pg**	**17 50 23.5**	**-0.4**
PVY				*e*Sg	**Sb**	**17 50 37.9**	**+0.8**
STON	**Ston**	**0.97**	**253**	*e*Pg	**Pg**	**17 50 23.4**	**-1.2**
STON				*e*Sg	**Sb**	**17 50 37.8**	**-0.3**
STON	**Ston**	**0.97**	**253**	*e*Pg	**Pg**	**17 50 23.3**	**-1.3**
STON				Sg	**Sb**	**17 50 37.7**	**-0.3**
STON	**Ston**	**0.97**	**253**	↓*i*Pg	**Pg**	**17 50 23.2**	**-1.3**
STON				*e*Sg	**Sg**	**17 50 37.4**	**+0.3**
DRME	**Dracevica, Mon**	**0.99**	**170**	↑*i*Pg	**Pg**	**17 50 24.1**	**-0.9**
DRME				*e*Sg	**Sb**	**17 50 39.4**	**+0.7**
DRME	**Dracevica, Mon**	**0.99**	**170**	*e*Pg	**Pg**	**17 50 24.5**	**-0.5**
DRME				*e*Sg	**Sg**	**17 50 38.0**	**+0.2**
DIVS	**Divibare**	**1.20**	**38**	*e*Pn	**Pg**	**17 50 28.6**	**-0.5**
DIVS				*e*Sn	**Sn**	**17 50 46.5**	**+0.5**
DIVS	**Divibare**	**1.20**	**38**	↓*i*Pg	**Pg**	**17 50 28.3**	**-0.8**
DIVS				*e*Sg	**Sg**	**17 50 44.6**	**-0.1**
ULC	**Ulcinj**	**1.21**	**170**	↓*i*Pg	**Pg**	**17 50 28.1**	**-1.2**
ULC				*e*Sg	**Sn**	**17 50 47.0**	**+0.8**
GRUS	**Gruza**	**1.47**	**60**	*e*Pn	**Pn**	**17 50 33.1**	**+0.1**
GRUS				*e*Sn	**Sb**	**17 50 53.3**	**+0.6**
TRUS	**Trudelj**	**1.50**	**44**	*e*Pn	**Pn**	**17 50 34.1**	**+0.7**
TRUS				*e*Sn	**Sn**	**17 50 53.7**	**+0.6**
SELS	**Selova**	**1.58**	**87**	*e*Pn	**Pn**	**17 50 35.5**	**+0.9**
SELS				*e*Sn	**Sn**	**17 50 55.4**	**+0.1**
BLY	**Banja Luka**	**2.04**	**322**	*e*Pn	**Pn**	**17 50 42.3**	**+1.5**
BLY	**Banja Luka**	**2.04**	**322**	↓*i*P	**Pg**	**17 50 44.7**	**-0.4**
BLY	**Banja Luka**	**2.04**	**322**	S	**Sg**	**17 51 14.5**	**+2.9**
BLY	**Banja Luka**	**2.04**	**322**	*e*Pn	**Pn**	**17 50 41.3**	**+0.5**
BLY				*e*Sn	**Sn**	**17 51 07.8**	**+1.2**
BOVS	**Bovan**	**2.06**	**76**	*e*Pn	**Pn**	**17 50 41.6**	**+0.5**
BOVS				*e*Sn	**Sn**	**17 51 08.2**	**+1.2**
FRGS	**Fruska Gora**	**2.09**	**17**	*e*Pn	**Pn**	**17 50 42.4**	**+0.9**
BARS	**Barje**	**2.12**	**98**	*e*Pn	**Pn**	**17 50 42.7**	**+0.7**
UDBI	**Udbina**	**2.69**	**302**	*e*Pn	**Pb**	**17 50 53.7**	**-0.8**
ZAPS	**Zavoj**	**2.69**	**86**	*e*Pn	**Pn**	**17 50 49.6**	**-0.2**
BZS	**Buzias**	**3.11**	**37**	*e*Pn	**Pn**	**17 50 55.8**	**+0.3**
BZS	**Buzias**	**3.11**	**37**	↑*i*P	**Pn**	**17 50 55.5**	**0.0**
BZS	**Buzias**	**3.11**	**37**	S	**Sn**	**17 51 33.4**	**+0.5**
GZR	**Gura Zlata**	**3.54**	**50**	↓*i*P	**Pn**	**17 51 01.7**	**+0.2**
GZR	**Gura Zlata**	**3.54**	**50**	S	**Sn**	**17 51 43.9**	**+0.3**

IDC 01 17:50:54.2±7.5, 21°.66S×177°.22W, h370km±65km, mb3.4/4, mb1 3.5/6, mb1mx3.1/29, mbtmp4.2/6, Error ellipse: s-maj=109.1km s-min=27.9km az=70.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.17**	**265**	P	P	17 54 09.5	-0.4
	0.5nm,0.3s,baz=66,slow=24,SNR=3.8						
URZ	**Urewera**	**17.25**	**195**	P	P	17 54 31.8	-0.2
	0.9nm,0.3s,baz=274,slow=3.3,SNR=7.9						
URZ				S	S	17 57 31.6	-0.8
	0.2nm,0.3s,baz=60,slow=20,SNR=5.3						
CTA	**Charters Tower**	**34.12**	**266**	P	P	17 57 05.8	0.0
	3.5nm,0.7s,baz=108,slow=11,SNR=7.3						
STKA	**Stephens Creek**	**37.95**	**246**	P	P	17 57 38.5	+0.6
	1.1nm,0.4s,baz=95,slow=13,SNR=8.6						
ASAR	**Alice Springs**	**44.97**	**258**	P	P	17 58 34.3	-0.1
	2.9nm,0.8s,baz=91,slow=7.9,SNR=26						
WRA	**Warramunga Arr**	**45.17**	**263**	P	P	17 58 35.2	-0.7
	2.0nm,0.8s,baz=95,slow=7.8,SNR=2.3						

MAN 01 17:54:03.6, 7°.28N×124°.78E, h3km, mb5.1, ML4.0, MS4.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.66**	**25**	*e*P	Pg	17 54 16.1	-0.2
BUKP				*e*S	Sb	17 54 26.4	-1.0
DMPH	**Davao City--Mi**	**0.75**	**105**	↑*e*P	Pb	17 54 19.5	+0.2
DMPH				*e*S	Sb	17 54 30.5	+0.5
SKMP	**Bagumbayan, Su**	**0.79**	**197**	*e*P	Pg	17 54 18.3	-0.5
SKMP				*e*S	Sn	17 54 36.0	+2.0
DDMP	**Don Marcelino,**	**1.49**	**142**	*e*P	Pn	17 54 31.1	-0.3
DDMP				*e*S	Sg	17 54 54.7	+3.0
PAGZ	**Pagadian**	**1.49**	**292**	*e*P	Pn	17 54 30.2	-1.1
PAGZ				*e*S	Sb	17 54 51.4	0.0
MATI	**Mati**	**1.50**	**103**	*e*P	Pn	17 54 31.1	-0.5
MATI				*e*S	Sn	17 54 51.0	-0.7
BUTP	**Butuan**	**1.87**	**26**	*e*P	Pb	17 54 38.8	+0.2
BUTP				*e*S	Sg	17 55 06.7	+2.8
IPIL	**Ipil**	**2.25**	**283**	*e*P	Pb	17 54 43.3	-1.5
IPIL				*e*S	Sb	17 55 13.3	+0.2

MAN 01 18:04:03.6, 7°.19N×125°.17E, h34km, mb4.8, ML3.7, MS3.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.69**	**351**	*e*P	Pb	18 04 18.2	+0.8
BUKP				*e*S	Sb	18 04 27.7	+0.8
SKMP	**Bagumbayan, Su**	**0.91**	**223**	*e*P	Pb	18 04 20.6	-0.4
SKMP				*e*S	Sb	18 04 32.5	-0.3
MATI	**Mati**	**1.

YUK				*e*S	Sn	18 08 19.3	-6.6
YUK				pmax	pmax		
	comp=Z,91nm,0.6s						
YUK				pmax	pmax		
	comp=E,33nm,0.2s						
YUK				pmax	pmax		
	comp=N,38nm,0.3s						
TEY	**Ternei**	**8.46 332**	⇓	*e*P	Pn	18 07 35.9	+6.8
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=Z,40nm,0.9s						
TEY				pmax	pmax		
	comp=N,40nm,0.8s						
KUR	**Kuril'sk**	**8.62 27**		*e*P	**Pn**	**18 07 30.8**	**-0.4**
KUR				*e*S	**Sn**	**18 09 01.9**	**-6.6**
KUR				pmax	pmax		
	comp=Z,23nm,0.6s						
KUR				pmax	pmax		
	comp=N,6.0nm,0.2s						
KUR				pmax	pmax		
	comp=E,5.0nm,0.2s						
YSS	**Yuzh-Sakhalins**	**9.25 2**		*e*Pn	Pn	18 07 35.2	-4.7
YSS	**Yuzh-Sakhalins**	**9.25 2**		*e*P	**Pn**	**18 07 38.4**	**-1.5**
YSS				*e*S	**Sn**	**18 09 20.6**	**-3.3**
USA0B	**Ussuriysk Arra**	**10.11 313**		*e*Pn	**Pn**	**18 07 54.3**	**+2.6**
USRK	**Ussuriysk Ar.**	**10.11 313**		P	**Pn**	**18 07 54.3**	**+2.7**
	comp=E,0.4nm,0.3s,baz=119,slow=14,SNR=9.1						
JNU	**Nakatsue**	**10.34 247**		P	**Pn**	**18 07 58.1**	**+3.2**
	comp=E,0.3nm,0.3s,baz=49,slow=9.1,SNR=4.8						
JNU				LR	LR	18 12 25.6	
	comp=E,231nm,19.1s,baz=142,slow=40						
JNU	**Nakatsue**	**10.34 247**		*e*Pn	**Pn**	**18 07 56.1**	**+1.1**
KSRS	**Korea Array**	**11.37 273**		P	**Pn**	**18 08 12.2**	**+3.3**
	comp=E,0.2nm,0.3s,baz=84,slow=14,SNR=12						
KSRS				LR	LR	18 12 13.9	
	comp=E,245nm,20.1s,baz=140,slow=35						
KS15	**Wonju Array Si**	**11.40 273**		*e*Pn	**Pn**	**18 08 13.3**	**+3.9**
KLR	**Kul'dur**	**13.80 330**		P	**P**	**18 08 48.3**	**-2.2**
	comp=E,0.2nm,0.3s,baz=146,slow=12,SNR=4.4						
KLR				LR	LR	18 14 27.0	
	comp=E,354nm,18.2s,baz=170,slow=39						
CN2	**Changchun**	**14.11 301**		*e*P	**P**	**18 08 53.5**	**-0.5**
CN2				pmax	pmax		
	comp=E,10.0nm,0.5s						
DL2	**Dalian**	**16.23 281**		P	**Pn**	**18 09 15.7**	**+1.2**
DL2				pmax	pmax		
	comp=E,15nm,0.5s						
PETK	**Petropavlovsk-**	**18.77 30**		P	**Pn**	**18 09 50.8**	**+4.7**
	comp=E,0.1nm,0.3s,baz=184,slow=10,SNR=3.0						
ZEA	**Zeya**	**19.08 332**		*e*P	**P**	**18 09 48.8**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
NJ2	**Nanjing**	**19.98 261**		*e*P	Pn	18 10 01.0	+0.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MA2	**Magadan**	**22.56 11**		P	**P**	**18 10 29.6**	**+3.0**
	comp=Z,1.3nm,0.3s,baz=95,slow=11,SNR=2.4						
HHC	**Hu-ho-hao-te**	**23.90 287**		*e*P	**P**	**18 10 39.8**	**-0.7**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.0s						
HHC				LR	LR		
	comp=Z,190nm,13.0s						
HHC				LR	LR		
	comp=Z,140nm,12.2s						
HHC				LR	LR		
	comp=Z,330nm,11.2s						
WHN	**Wuhan**	**24.12 261**		*e*P	**P**	**18 10 43.5**	**+1.1**
YAK	**Yakutsk**	**25.57 346**		*e*P	**P**	**18 10 55.3**	**0.0**
YAK				pmax	pmax		
	comp=Z,34nm,0.9s						
SEY	**Seymchan**	**26.01 11**		P	**P**	**18 11 00.9**	**+1.7**
	comp=Z,1.2nm,0.5s,baz=177,slow=11,SNR=5.5						
SEY				LR	LR	18 22 21.5	
	comp=Z,543nm,20.1s,baz=329,slow=39						
XAN	**Xi'an**	**27.17 272**		P	**P**	**18 11 10.7**	**+0.6**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,93nm,4.3s						
XAN				LR	LR		
	comp=Z,120nm,18.4s						
XAN				LR	LR		
	comp=Z,120nm,16.3s						
XAN	**Xi'an**	**27.17 272**		*e*P	**P**	**18 11 10.1**	**0.0**
	comp=Z,6.8nm,0.6s						
XAN	**Xi'an**	**27.17 272**		*e*P	**P**	**18 11 10.1**	**0.0**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BOD	**Bodaibo**	**27.33 327**		*e*P	**P**	**18 11 10.9**	**-0.3**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	**Ulaanbaatar**	**27.54 303**		*e*P	**P**	**18 11 13.6**	**+0.1**
	comp=Z,28nm,1.6s						
ULN	**Ulaanbaatar**	**27.54 303**		*e*P	**P**	**18 11 13.6**	**+0.1**
ULN				pmax	pmax		
	comp=Z,28nm,1.6s						
H11N2	**WAKE ISLAND Hy**	**27.94 123**		T	T	18 40 27.4	
	baz=315,slow=75,SNR=393						
H11N1	**WAKE ISLAND Hy**	**27.95 123**		T	T	18 40 24.3	
	baz=315,slow=75,SNR=368						
H11N3	**WAKE ISLAND Hy**	**27.95 123**		T	T	18 40 30.8	
	baz=315,slow=75,SNR=372						
SONM	**Songino Array**	**27.97 303**		P	**P**	**18 11 17.9**	**+0.6**
	comp=Z,6.4nm,0.7s,baz=100,slow=8.9,SNR=36						
ENH	**Enshi**	**28.05 264**		*e*P	**P**	**18 11 17.5**	**-0.6**
	comp=Z,19nm,0.9s						
H11S1	**WAKE ISLAND Hy**	**28.68 125**		T	T	18 41 38.5	
	baz=317,slow=76,SNR=236						
H11S3	**WAKE ISLAND Hy**	**28.68 125**		T	T	18 41 38.6	
	baz=317,slow=76,SNR=206						
H11S2	**WAKE ISLAND Hy**	**28.70 125**		T	T	18 41 42.4	
	baz=317,slow=76,SNR=222						
ZAK	**Zakamensk**	**30.38 307**		*e*P	**P**	**18 11 34.5**	**-4.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	**Talaya**	**30.40 310**		*e*P	**P**	**18 11 38.5**	**-0.2**
	comp=Z,1.5nm,0.7s						
TLY	**Talaya**	**30.40 310**		*e*P	**P**	**18 11 38.5**	**-0.2**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LZH	**Lanzhou**	**30.61 279**		*e*P	**P**	**18 11 40.8**	**-0.1**
LZH				pP	pP	18 11 45.3	+1.6
LZH				sP	sP	18 11 48.7	+3.8
LZH				PP	**PnPn**	**18 12 39.8**	**-0.2**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,81nm,4.8s						
LZH				LR	LR		
	comp=Z,260nm,14.2s						
LZH				LR	LR		
	comp=Z,250nm,14.6s						
LZH				LR	LR		
	comp=Z,350nm,14.6s						
CD2	**Chengdu**	**32.34 270**		*e*P	**P**	**18 11 54.8**	**-1.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
GTA	**Gaotai**	**33.01 286**	⇓	P	**P**	**18 12 01.7**	**-0.2**
GTA				pP	pP	18 12 06.3	+1.6
GTA				sP	sP	18 12 08.8	+3.0
GTA				pmax	pmax		
	comp=Z,9.0nm,1.7s						
GTA				LR	LR		
	comp=Z,94nm,17.9s						
GTA				LR	LR		
	comp=Z,110nm,19.6s						
GTA				LR	LR		
	comp=Z,170nm,18.6s						
KMI	**Kunming**	**35.72 261**		P	**P**	**18 12 22.9**	**-2.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
DGZ	**Jazzator, Alta**	**40.54 305**	*d*	*i*P	**P**	**18 13 07.0**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ	**Urumqi**	**41.13 296**		*e*P	**P**	**18 13 12.0**	**+1.2**
WMQ				pP	pP	18 13 16.1	+2.5
WMQ				pmax	pmax		
	comp=Z,29nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.3s						
FAKI	**Fak Fak**	**41.47 195**		*e*P	P	18 13 03.6	-10
	comp=Z,99nm,1.5s						
ZAA0	**Zalesovo Array**	**41.96 312**		*e*P	**P**	**18 13 16.6**	**-0.6**
	comp=Z,5.2nm,1.0s						
ZALV	**Zalesovo Beam**	**41.96 312**		P	**P**	**18 13 17.1**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=86,slow=7.6,SNR=13						
ZALV	**Zalesovo Beam**	**41.96 312**		*e*P	**P**	**18 13 17.5**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**42.10 256**		*e*P	**P**	**18 13 17.5**	**-1.4**
	comp=Z,7.3nm,1.4s						
CHTO	**Chiang Mai**	**42.10 256**		*e*P	**P**	**18 13 17.5**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
CMAR	**Chiang Mai Arr**	**42.31 255**		P	**P**	**18 13 20.9**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=45,slow=8.8,SNR=3.2						
MK31	**Makanchi Array**	**44.33 302**		*e*P	**P**	**18 13 36.4**	**-0.2**
	comp=Z,3.8nm,0.8s						
MK31	**Makanchi Array**	**44.33 302**		*e*P	**P**	**18 13 36.4**	**-0.2**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**44.33 302**		P	**P**	**18 13 36.8**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=86,slow=8.9,SNR=27						
MAKZ	**Makanchi**	**44.54 302**		*e*P	**P**	**18 13 38.1**	**-0.2**
	comp=Z,3.7nm,0.8s						
MAKZ	**Makanchi**	**44.54 302**		*e*P	**P**	**18 13 38.1**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TARA	**Tarawa**	**45.87 135**		*e*P	P	18 13 32.2	-17
	comp=Z,362nm,1.8s						
KURK	**Kurchatov**	**46.05 308**		*e*P	**P**	**18 13 49.7**	**-0.4**
	comp=Z,6.7nm,0.8s						
KURK	**Kurchatov**	**46.05 308**		*e*P	**P**	**18 13 49.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MLY	**Manley**	**46.93 32**		*e*P	P	18 13 47.4	-10
	comp=Z,4.7nm,0.6s						
PDGK	**Podgornoye**	**47.05 298**		P	**P**	**18 13 58.0**	**-0.3**
PDGK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ILAR	**Eielson Array**	**48.57 33**		P	**P**	**18 14 11.2**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=268,slow=5.8,SNR=6.1						
KDJ	**Kajisay**	**49.02 297**		*e*P	**P**	**18 14 13.8**	**+0.1**
	comp=Z,2.9nm,0.9s						
KDJ	**Kajisay**	**49.02 297**		*e*P	**P**	**18 14 13.8**	**+0.1**
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HARP	**HAARP**	**49.50 36**		*e*P	P	18 14 08.0	-8.8
	comp=Z,18nm,0.8s						
BMRM	**Bremner River**	**49.92 38**		*e*P	P	18 14 10.4	-10
	comp=Z,7.2nm,0.8s						
OTUK	**Ortayu**	**50.57 306**		P	**P**	**18 14 24.6**	**-0.6**
OTUK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AAK	**Ala-Archa**	**50.76 298**	⇓	*e*P	**P**	**18 14 25.8**	**-1.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ARSB	**Arslanbob**	**52.26 297**		*e*P	**P**	**18 14 37.0**	**-1.1**
KK31	**Karatay Array**	**53.37 300**		*e*P	**P**	**18 14 45.7**	**-0.3**
	comp=Z,7.6nm,1.4s						
KK31	**Karatay Array**	**53.37 300**		*e*P	**P**	**18 14 45.7**	**-0.3**
KK31				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KKAR	**Karatay Array**	**53.37 300**		*e*P	**P**	**18 14 45.7**	**-0.3**
	comp=Z,7.6nm,1.4s						
KKAR	**Karatay Array**	**53.37 300**		*e*P	**P**	**18 14 45.7**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GAR	**Garm**	**55.01 295**		*e*P	**P**	**18 14 57.6**	**-0.7**
	comp=Z,28nm,1.9s						
GAR	**Garm**	**55.01 295**		*e*P	**P**	**18 14 57.6**	**-0.7**
GAR				pmax	pmax		
	comp=Z,28nm,1.9s						
SVE	**Sverdlovsk**	**55.09 318**		*e*P	**P**	**18 14 59.2**	**+0.9**
ARU	**Arti**	**56.30 318**		*e*P	**P**	**18 15 06.2**	**-0.8**
	comp=Z,8.6nm,1.2s						
ARU	**Arti**	**56.30 318**	*d*	*i*P	**P**	**18 15 06.9**	**-0.1**
ARU						18 17 10.1	
ARU				S	**S**	**18 23 02.9**	**+6.0**
ARU				SS	**SS**	**18 26 42.1**	**-1.0**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KBL	**Kabul**	**57.80 291**		*e*P	**P**	**18 15 16.8**	**-1.5**
	comp=Z,4.4nm,0.6s						
KBL	**Kabul**	**57.80 291**		*e*P	**P**	**18 15 16.8**	**-1.5**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WB2	**Warramunga Arr**	**57.82 189**		*e*P	**P**	**18 15 17.8**	**-0.4**
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**57.82 189**		P	**P**	**18 15 18.1**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=358,slow=8.0,SNR=3.6						
ABKAR	**Akbulak array**	**58.02 310**		*e*P	**P**	**18 15 18.0**	**-1.3**
	comp=Z,11nm,1.8s						
ASAR	**Alice Springs**	**61.55 189**		P	**P**	**18 15 43.3**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=16,slow=10,SNR=10.0						
YKA	**Yellowknife Ar**	**62.89 31**		P	**P**	**18 15 53.8**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=298,slow=5.1,SNR=3.6						
GEYT	**Alibeck**	**64.09 299**		P	**P**	**18 16 00.3**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=358,slow=4.5,SNR=2.6						
FIA1	**FINESS Array S**	**68.53 332**		*e*P	**P**	**18 16 28.2**	**-0.6**
	comp=Z,9.3nm,1.2s						
FINES	**FINESS Array B**	**68.53 332**		P	**P**	**18 16 28.5**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=56,slow=7.1,SNR=8.8						
KIV	**Kislovodsk**	**70.97 311**		*e*P	**P**	**18 16 41.3**	**-3.0**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
NB2	**NORSAR Subarra**	**73.82 338**		P	**P**	**18 17 01.0**	**+0.1**
	comp=Z,3.7nm,1.1s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**73.82 338**		P	**P**	**18 17 01.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=38,slow=5.8,SNR=2.8						
AKASG	**Malin Array Be**	**74.17 323**		P	**P**	**18 17 02.7**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=48,slow=5.8,SNR=5.6						
KIEV	**Kiev**	**74.18 323**	*de*	P	**P**	**18 17 02.5**	**-0.6**
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.2s						
PDAR	**Pinedale Array**	**76.72 46**		P	**P**	**18 17 18.6**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=270,slow=6.9,SNR=2.4						
BRTR	**Keskin Array B**	**78.90 312**		P	**P**	**18 17 31.4**	**+1.1**
	comp=Z,1.1nm,1.1s,baz=9.5,slow=8.6,SNR=4.0						
GERES	**GERESS Array B**	**82.49 329**		P	**P**	**18 17 48.6**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=40,slow=7.7,SNR=3.5						
TXAR	**Lajitas Array**	**89.19 53**		P	**P**	**18 18 24.8**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=272,slow=3.2,SNR=2.7						
LPAZ	**La Paz**	**145.78 60**		PKPbc	**PKPab**	**18 25 07.7**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=22,slow=4.8,SNR=5.0						

MEX 01 18:07:21.0±0.6, 16°.13N×98°.45W, h8km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.40**	**50**	*e*P	Pg	18 07 28.5	-0.4
PNIG				*e*S	Sg	18 07 34.5	+0.3
TLIG	**Tlapa**	**1.43**	**356**	*e*P	Pn	18 07 43.0	-4.3
TLIG				*e*S	Sb	18 08 01.6	-4.7
CAIG	**El Cayaco**	**1.96**	**298**	*e*P	Pn	18 07 51.9	-2.8

MAN 01 18:17:16.1, 7°.31N×124°.71E, h1km, mb4.3, ML3.1, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.66**	**31**	*e*P	Pg	18 17 28.5	-0.4
BUKP				*e*S	Sb	18 17 39.0	-1.4
SKMP	**Bagumbayan, Su**	**0.80**	**192**	*e*P	Pg	18 17 30.9	-0.6
SKMP				*e*S	Sn	18 17 47.7	+0.5
DMPH	**Davao City--Mi**	**0.82**	**106**	⇑ *e*P	Pb	18 17 32.5	-0.7
DMPH				*e*S	Sb	18 17 43.7	-1.0
PAGZ	**Pagadian**	**1.43**	**292**	*e*P	Pn	18 17 43.0	-0.1
DDMP	**Don Marcelino,**	**1.55**	**140**	*e*P	Pn	18 17 44.5	-0.4
DDMP				*e*S	Sg	18 18 06.4	+0.3

MAN 01 18:27:26.7, 7°.24N×124°.71E, h1km, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.72**	**29**	*e*P	Pg	18 27 38.6	-2.0
BUKP				*e*S	Sg	18 27 48.4	-1.6
SKMP	**Bagumbayan, Su**	**0.73**	**193**	*e*P	Pg	18 27 41.0	+0.2
SKMP				*e*S	Sn	18 27 55.3	-0.7
DMPH	**Davao City--Mi**	**0.81**	**101**	⇑ *e*P	Pn	18 27 46.0	+0.8
DMPH				*e*S	Sg	18 27 53.1	+0.5
PAGZ	**Pagadian**	**1.45**	**295**	*e*P	Pn	18 27 54.1	0.0
PAGZ				*e*S	Sn	18 28 13.7	0.0
DDMP	**Don Marcelino,**	**1.50**	**139**	*e*P	Pb	18 27 55.1	-0.2
DDMP				*e*S	Sn	18 28 16.3	+1.3
MATI	**Mati**	**1.56**	**101**	*e*P	Pn	18 27 55.8	+0.2
MATI				*e*S	Sn	18 28 16.0	-0.5
IPIL	**Ipil**	**2.19**	**285**	*e*P	Pb	18 28 06.3	-0.9
IPIL				*e*S	Sg	18 28 36.7	-0.5

MAN 01 18:32:13.8, 7°.30N×124°.78E, h1km, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.64**	**26**	*e*P	Pg	18 32 26.1	0.0
BUKP				*e*S	Sb	18 32 36.0	-1.3
DMPH	**Davao City--Mi**	**0.76**	**107**	⇑ *e*P	Pb	18 32 29.4	-0.5
DMPH				*e*S	Sb	18 32 40.4	-0.3
SKMP	**Bagumbayan, Su**	**0.81**	**197**	*e*P	Pg	18 32 28.5	-0.9
SKMP				*e*S	Sn	18 32 45.7	+0.6
PAGZ	**Pagadian**	**1.48**	**292**	*e*P	Pn	18 32 41.0	-0.7
PAGZ				*e*S	Sn	18 33 01.9	+0.3
DDMP	**Don Marcelino,**	**1.51**	**142**	*e*P	Pn	18 32 41.9	-0.1
DDMP				*e*S	Sg	18 33 03.1	+0.7
MATI	**Mati**	**1.51**	**103**	*e*P	Pn	18 32 40.7	-1.3
MATI				*e*S	Sb	18 33 00.9	-1.5
IPIL	**Ipil**	**2.24**	**283**	*e*P	Pb	18 32 54.0	-1.0
IPIL				*e*S	Sb	18 33 23.5	+0.2

MAN 01 18:33:18.3, 7°.32N×124°.70E, h1km, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.66**	**33**	*e*P	Pg	18 33 30.9	-0.1
BUKP				*e*S	Sg	18 33 40.7	+1.1
SKMP	**Bagumbayan, Su**	**0.81**	**191**	*e*P	Pg	18 33 33.8	0.0
DMPH	**Davao City--Mi**	**0.83**	**106**	⇑ *e*P	Pb	18 33 35.7	+0.1
DMPH				*e*S	Sb	18 33 46.9	-0.4
PAGZ	**Pagadian**	**1.41**	**292**	*e*P	Pn	18 33 44.7	-0.4
PAGZ				*e*S	Sn	18 34 06.5	+2.1
DDMP	**Don Marcelino,**	**1.57**	**140**	*e*P	Pn	18 33 47.3	0.0
DDMP				*e*S	Sg	18 34 11.6	+2.8
IPIL	**Ipil**	**2.16**	**283**	*e*P	Pb	18 33 58.3	0.0
IPIL				*e*S	Sg	18 34 28.1	+0.3

NIED ***01*** *18:36:00, 43°.40N×144°.00E, h5km, Mw3.5 Best double couple: M₀2.15000×10¹⁴ NP1:φ₀222.00000°, δ45.00000°, λ120.00000°. NP2:φ₀3.00000°, δ52.00000°, λ63.00000°.*

ISCJB ***01*** *18:36:23.5±0.6, 43°.34N±0°.03×143°.96E±0°.03, h14km±4km, mb3.6/7, Error ellipse: s-maj=5.5km s-min=3.9km az=161.7*

JMA ***01*** *18:36:23.7, 43°.33N×143°.96E, h9km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φ₀27.00000°, δ48.00000°, λ71.00000°. NP2:φ₀234.00000°, δ46.00000°, λ110.00000°. Principal axes: T Plg76.0000°, Azm224.0000°; N Plg14.0000°, Azm40.0000°; P Plg1.0000°, Azm130.0000°;*

JMA Felt I J1.

MOS ***01*** *18:36:25.7±1.6, 43°.45N×143°.88E, h41km, mb4.3/1 Error ellipse: s-maj=14.9km s-min=11.4km az=52.3*

IDC ***01*** *18:36:28.5±2.9, 43°.35N×143°.89E, h50km±22km, mb3.4/7, mb1 3.6/8, mb1mx3.2/33, mbtmp3.6/8, ML2.3/1, Error ellipse: s-maj=26.1km s-min=22.4km az=39.0*

ISC 01 18:36:23.2±1.0, 43°.36N±0°.04×143°.97E±0°.03, h10km±7km, n29, σ1°.08/33, mb3.6/7, 7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.16**	**247**	⇓ P	**Pg**	**18 36 26.9**	**+0.1**
JAR				*e*S	**Sg**	**18 36 29.7**	**+0.5**
JOB	**Onbets**	**0.47**	**193**	⇓ P	**Pg**	**18 36 32.3**	**-0.1**
JOB				*e*S	**Sg**	**18 36 39.4**	**+0.8**
JAK	**Akkeshi**	**0.64**	**124**	⇓ P	**Pg**	**18 36 35.3**	**-0.4**
JMP	**Maruseppu**	**0.78**	**326**	⇓ P	**Pb**	**18 36 38.9**	**-0.1**
JCH	**Churui**	**0.87**	**211**	S	**Sb**	**18 36 51.4**	**-0.7**
JKHN	**Kushirohamanak**	**0.91**	**107**	P	**Pg**	**18 36 40.1**	**-0.7**
JKHN				S	**Sg**	**18 36 53.0**	**+0.3**
JFR	**Furan**	**1.03**	**259**	⇓ P	**Pn**	**18 36 42.7**	**-1.0**
JFR				S	**Sn**	**18 36 56.9**	**-1.3**
GLVR	**Golovnino**	**1.19**	**71**	*e*PN	**Pn**	**18 36 46.0**	**+0.1**
GLVR				*i* S	**Sb**	**18 37 01.9**	**+0.7**
GLVR				smax	smax		
	comp=N,3μm,0.3s						
GLVR				smax	smax		
	comp=E,5μm,0.3s						
ASAJ	**Asahikawa**	**1.25**	**308**	P	**Pg**	**18 36 47.8**	**+0.5**
	comp=E,123nm,0.3s,baz=148,slow=12,SNR=1151						
ASAJ				S	**Sn**	**18 37 04.8**	**+1.1**
	comp=E,43nm,0.3s,baz=123,slow=26,SNR=6.4						
GRPR	**Tuman**	**1.45**	**64**	⇓ *i*PN	**Pn**	**18 36 49.5**	**0.0**
GRPR				*e*S	**Sn**	**18 37 09.0**	**+0.4**
GRPR				pmax	pmax		
	comp=Z,132nm,0.3s						
GRPR				pmax	pmax		
	comp=N,36nm,0.1s						
GRPR				smax	smax		
	comp=E,374nm,0.5s						
GRPR				smax	smax		
	comp=N,150nm,0.3s						
LAGR	**Lagunnoye**	**1.49**	**62**	*e*PN	**Pn**	**18 36 50.1**	**+0.1**
LAGR				*e*S	**Sn**	**18 37 10.7**	**+1.2**
LAGR				pmax	pmax		
	comp=Z,197nm,0.4s						
LAGR				pmax	pmax		
	comp=N,68nm,0.2s						
LAGR				pmax	pmax		
	comp=E,76nm,0.1s						
LAGR				smax	smax		
	comp=N,1μm,0.4s						
LAGR				smax	smax		
	comp=E,815nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.53**	**63**	*d i*PN	**Pn**	**18 36 51.3**	**+0.8**
YUK				*i* S	**Sn**	**18 37 11.4**	**+1.0**
YUK				pmax	pmax		
	comp=E,41nm,0.3s						
YUK				pmax	pmax		
	comp=Z,69nm,0.3s						
YUK				smax	smax		
	comp=N,352nm,0.5s						
YUK				smax	smax		
	comp=E,324nm,0.7s						
KUR	**Kuril'sk**	**3.36**	**55**	PN	**Pb**	**18 37 20.9**	**-2.0**
KUR				*e*S	**Sb**	**18 38 04.1**	**+0.2**
KUR				pmax	pmax		
	comp=E,11nm,0.6s						
KUR				pmax	pmax		
	comp=Z,23nm,0.6s						
KUR				pmax	pmax		
	comp=N,12nm,0.5s						
KUR				smax	smax		
	comp=N,36nm,0.4s						
KUR				smax	smax		
	comp=E,27nm,0.4s						
YSS	**Yuzh-Sakhalins**	**3.69**	**347**	*e

comp=Z,0.5nm,0.6s,baz=82,slow=9.5,SNR=5.8
ILAR Eielson Array 43.16 36 P **P 18 44 24.1 +0.5**
comp=Z,0.8nm,0.9s,baz=262,slow=6.7,SNR=8.7
YKA Yellowknife Ar 57.39 33 P **P 18 46 12.1 +0.7**
comp=Z,0.4nm,0.6s,baz=304,slow=6.2,SNR=4.9
FINES FINESS Array B 64.15 332 P **P 18 46 56.7 -0.7**
comp=Z,1.2nm,1.0s,baz=62,slow=4.9,SNR=5.0
NOA NORSAR Array B 69.10 338 P **P 18 47 28.2 -0.9**
comp=Z,0.7nm,0.7s,baz=38,slow=6.3,SNR=3.7

MAN 01 18:37:17.1, 7°.18N×124°.75E, h15km, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.69**	**197**	*e*P	Pg	18 37 30.5	-0.1
SKMP				*e*S	Sn	18 37 43.4	+0.6
DMPH	**Davao City--Mi**	**0.76**	**97⇑**	*e*P	Pg	18 37 31.5	-0.4
DMPH				*e*S	Sb	18 37 43.0	+0.8
BUKP	**Musuan**	**0.76**	**24**	*e*P	Pg	18 37 27.2	-4.8
BUKP				*e*S	Sg	18 37 36.5	-5.6
DDMP	**Don Marcelino,**	**1.43**	**138**	*e*P	Pb	18 37 44.0	+0.5
DDMP				*e*S	Sg	18 38 05.7	+2.3
PAGZ	**Pagadian**	**1.51**	**296**	*e*P	Pn	18 37 42.0	-1.6
PAGZ				*e*S	Sb	18 38 04.2	+0.4
MATI	**Mati**	**1.52**	**99**	*e*P	Pn	18 37 43.2	-0.5
MATI				*e*S	Sg	18 38 08.2	+2.2
IPIL	**Ipil**	**2.24**	**286**	*e*P	Pb	18 37 55.8	-1.6
IPIL				*e*S	Sb	18 38 25.5	+0.6

NIED ***01*** *18:40:00, 43°.30N×144°.00E, h5km, Mw3.6 Best double couple: M0=2.78000×10^14 NP1:φs=237.00000°, δ51.00000°, λ140.00000°. NP2:φs=354.00000°, δ60.00000°, λ47.00000°.*
ISCJB ***01*** *18:40:03.1±0.6, 43°.32N±0°.03×143°.97E±0°.03, h14km±4km, mb3.6/7, Error ellipse: s-maj=4.7km s-min=3.3km az=179.2*
JMA ***01*** *18:40:03.2, 43°.33N×143°.96E, h8km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs=42.00000°, δ56.00000°, λ102.00000°. NP2: φs=202.00000°, δ36.00000°, λ73.00000°. Principal axes: T Plg76.0000°, Azm349.0000°; N Plg10.0000°, Azm216.0000°; P Plg10.0000°, Azm124.0000°;*
JMA Felt II J1.
MOS ***01*** *18:40:05.2±1.4, 43°.35N×143°.90E, h40km, mb4.1/1 Error ellipse: s-maj=15.2km s-min=11.1km az=56.3*
IDC ***01*** *18:40:08.4±2.7, 43°.31N×143°.82E, h48km±21km, mb3.4/7, mb1 3.6/8, mb1mx3.3/32, mbtmp3.7/8, ML2.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/25, Error ellipse: s-maj=25.9km s-min=23.3km az=37.0*

ISC 01 18:40:03.0±0.9, 43°.33N±0°.03×143°.98E±0°.02, h9km±7km, n33, σ0s79/41, mb3.6/7, 2C-8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.16**	**257**	⇓P	**Pg**	**18 40 06.4**	**-0.1**
JAR				*e*S	**Sg**	**18 40 09.3**	**+0.4**
JOB	**Onbets**	**0.45**	**194**	⇓P	**Pg**	**18 40 11.9**	**+0.2**
JOB				*e*S	**Sb**	**18 40 19.0**	**-0.8**
JNK	**Nakash**	**0.59**	**65**	⇓P	**Pg**	**18 40 14.6**	**+0.1**
JNK				S	**Sg**	**18 40 22.6**	**+0.4**
JAK	**Akkeshi**	**0.62**	**123**	⇓P	**Pg**	**18 40 14.9**	**-0.1**
JTKR	**Abashiri--Toko**	**0.64**	**355**	S	**Sg**	**18 40 24.4**	**+0.6**
JMP	**Maruseppu**	**0.81**	**326**	⇓P	**Pg**	**18 40 18.5**	**-0.2**
JMP				S	**Sg**	**18 40 29.8**	**+0.6**
JCH	**Churui**	**0.85**	**213**	P	**Pg**	**18 40 18.7**	**-0.7**
JCH				S	**Sg**	**18 40 30.6**	**+0.1**
JKHN	**Kushirohamanak**	**0.90**	**106**	P	**Pg**	**18 40 19.6**	**-0.7**
JKHN				S	**Sg**	**18 40 32.5**	**+0.6**
JRA	**Rausu**	**1.02**	**53**	P	**Pg**	**18 40 22.4**	**-0.3**
JFR	**Furan**	**1.03**	**261**	⇓P	**Pg**	**18 40 22.3**	**-0.5**
JFR				S	**Sg**	**18 40 36.5**	**+0.3**
JKK2	**Kamakawa 2**	**1.05**	**301**	⇓P	**Pb**	**18 40 22.8**	**-0.5**
JKK2				S	**Sg**	**18 40 36.9**	**+0.1**
GLVR	**Golovnino**	**1.19**	**70**	*e*PN	**Pb**	**18 40 25.8**	**+0.1**
GLVR				*i* S	**Sb**	**18 40 41.4**	**+0.2**
GLVR				pmax	pmax		
	comp=Z,164nm,0.2s						
GLVR				pmax	pmax		
	comp=E,58nm,0.1s						
GLVR				smax	smax		
	comp=N,5μm,0.2s						
GLVR				smax	smax		
	comp=E,8μm,0.3s						
ASAJ	**Asahikawa**	**1.27**	**308**	P	**Pn**	**18 40 27.4**	**+0.3**
	comp=E,168nm,0.3s,baz=173,slow=14,SNR=186						
ASAJ				S	**Sn**	**18 40 44.3**	**+0.1**
	comp=E,59nm,0.3s,baz=133,slow=29,SNR=5.6						
GRPR	**Tuman**	**1.46**	**62**	*e*PN	**Pn**	**18 40 28.8**	**-0.7**
GRPR				*e*S	**Sn**	**18 40 48.2**	**-0.5**
GRPR				pmax	pmax		
	comp=N,136nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,238nm,0.3s						
GRPR				pmax	pmax		
	comp=E,202nm,0.4s						
GRPR				smax	smax		
	comp=E,436nm,0.5s						
GRPR				smax	smax		
	comp=N,223nm,0.3s						
LAGR	**Lagunnoye**	**1.49**	**60**	⇓*i*PN	**Pn**	**18 40 30.3**	**+0.3**
LAGR				*i* S	**Sb**	**18 40 50.3**	**+0.4**
LAGR				pmax	pmax		
	comp=Z,237nm,0.3s						
LAGR				pmax	pmax		
	comp=N,115nm,0.2s						
LAGR				pmax	pmax		
	comp=E,182nm,0.4s						
LAGR				smax	smax		
	comp=N,1μm,0.4s						
LAGR				smax	smax		
	comp=E,1μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.53**	**62**	*c i*PN	**Pn**	**18 40 31.1**	**+0.6**
YUK				*i* S	**Sn**	**18 40 50.9**	**+0.4**
YUK				pmax	pmax		
	comp=Z,155nm,0.3s						
YUK				pmax	pmax		
	comp=N,56nm,0.4s						
YUK				pmax	pmax		
	comp=E,54nm,0.2s						
YUK				smax	smax		
	comp=E,228nm,0.2s						
KUR	**Kuril'sk**	**3.37**	**54⇑**	*e*PN	**Pb**	**18 41 00.3**	**-2.6**
KUR				*e*S	**Sb**	**18 41 43.5**	**-0.5**
KUR				pmax	pmax		
	comp=Z,42nm,0.9s						
KUR				pmax	pmax		
	comp=E,15nm,0.6s						
KUR				pmax	pmax		
	comp=N,14nm,0.5s						
KUR				smax	smax		
	comp=N,42nm,0.7s						
KUR				smax	smax		
	comp=E,28nm,0.6s						
YSS	**Yuzh-Sakhalins**	**3.72**	**347**	*e*PN	**Pn**	**18 41 00.1**	**-0.5**
YSS				*e*S	**Sn**	**18 41 45.1**	**+0.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.8s						
YSS				smax	smax		
	comp=N,20nm,0.8s						
YSS				smax	smax		
	comp=E,30nm,0.6s						
MJAR	**Matsushiro Arr**	**8.10**	**215**	P	**Pn**	**18 42 02.9**	**+2.0**
	comp=E,0.1nm,0.3s,baz=137,slow=13,SNR=4.0						
KLR	**Kul'dur**	**10.31**	**309**	P	Pn	18 42 37.5	+6.4
	comp=E,0.0nm,0.3s,baz=217,slow=7.8,SNR=3.4						
KLR				LR	LR	18 46 16.9	
	comp=E,85nm,19.7s,baz=38,slow=36						
SONM	**Songino Array**	**26.51**	**293**	P	**P**	**18 45 40.5**	**-0.3**
	comp=E,0.8nm,0.6s,baz=75,slow=8.0,SNR=4.8						
H11N2	**WAKE ISLAND Hy 30.39**	**134**		T	T	19 17 30.0	
	baz=327,slow=75,SNR=83						
H11N1	**WAKE ISLAND Hy 30.40**	**134**		T	T	19 17 09.7	
	baz=327,slow=75,SNR=78						
H11N3	**WAKE ISLAND Hy 30.41**	**134**		T	T	19 17 31.3	
	baz=327,slow=75,SNR=83						
H11S1	**WAKE ISLAND Hy 31.30**	**135**		T	T	19 18 25.4	
	baz=328,slow=76,SNR=114						
H11S3	**WAKE ISLAND Hy 31.31**	**135**		T	T	19 18 37.3	
	baz=328,slow=76,SNR=55						
H11S2	**WAKE ISLAND Hy 31.32**	**135**		T	T	19 18 22.8	
	baz=328,slow=76,SNR=49						
ZALV	**Zalesovo Beam**	**39.41**	**307**	P	**P**	**18 47 32.7**	**-0.2**
	comp=E,1.1nm,0.7s,baz=62,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**42.73**	**297**	P	**P**	**18 48 00.2**	**-0.1**
	comp=E,0.5nm,0.5s,baz=81,slow=9.6,SNR=6.8						
ILAR	**Eielson Array**	**43.18**	**36**	P	**P**	**18 48 05.5**	**+1.8**
	comp=E,1.1nm,0.9s,baz=273,slow=7.2,SNR=9.9						
YKA	**Yellowknife Ar**	**57.41**	**33**	P	**P**	**18 49 51.8**	**+0.4**
	comp=E,0.2nm,0.3s,baz=307,slow=7.1,SNR=5.0						
FINES	**FINESS Array B**	**64.18**	**332**	P	**P**	**18 50 36.4**	**-1.1**
	comp=E,0.9nm,0.6s,baz=35,slow=7.0,SNR=6.6						
NOA	**NORSAR Array B**	**69.13**	**338**	P	**P**	**18 51 08.2**	**-1.0**
	comp=E,0.6nm,0.7s,baz=35,slow=6.0,SNR=3.4						

IDC ***01*** *18:40:24.6±0.6, 33°.46S×77°.82E, h0km, mb4.2/15, mb1 4.3/15, mb1mx4.2/27, mbtmp4.2/15, MS3.9/18, Ms1 3.9/18, ms1mx3.8/29, Error ellipse: s-maj=19.2km s-min=18.0km az=1.0*
ISCJB ***01*** *18:40:25.1±0.3, 33°.56S±0°.05×77°.96E±0°.05, h10km, mb4.8/95, MS4.0/20, Error ellipse: s-maj=7.8km s-min=6.1km az=14.5*
MOS ***01*** *18:40:25.3±1.3, 33°.52S×77°.98E, h10km, mb4.9/35, Error ellipse: s-maj=13.9km s-min=8.2km az=87.7*
GCMT ***01*** *18:40:27.5±0.4, 33°.52S±0°.02×77°.87E±0°.03, h25km±1km, MW5.0/63, Moment Tensor Solution. s15,c16; s63,c89; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.23±.21; Mθθ=2.57±.14; Mφφ=2.81±.15; Mrθ=0.96±.35; Mφφ=0.44±.13; Mφr=1.99±.35; Best double couple: M0=3.46900×10^16 NP1:φs=141.00000°, δ89.00000°, λ142.00000°. NP2: φs=232.00000°, δ52.00000°, λ1.00000°. Principal axes: T 3.7940, Plg26.0000°, Azm90.0000°; N -0.6410, Plg52.0000°, Azm321.0000°; P -3.1450, Plg26.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***01*** *18:40:27.5±1.9, 33°.52S×77°.93E, h16km±4km, mb4.9/67 Error ellipse: s-maj=15.8km s-min=15.1km az=164.0*
BJI ***01*** *18:40:27.0±0.0, 33°.50S×77°.90E, h14km, mb4.6/29, mB5.0/15, Ms4.9/7, Ms7 4.7/3*

ISC 01 18:40:26.9±0.4, 33°.56S±0°.07×77°.93E±0°.07, h10km, n153, σ1s56/144, mb4.8/95, MS4.0/22, 5C-7D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**26.27**	**348**	T	T	19 12 54.6	
	baz=170,slow=76,SNR=2020						
H08S1	**Diego Carcia H**	**26.27**	**348**	T	T	19 13 06.0	
	baz=170,slow=76,SNR=1582						
H08S3	**Diego Garcia H**	**26.29**	**348**	T	T	19 12 56.1	
	baz=170,slow=76,SNR=1982						
H08N1	**Diego Carcia H**	**27.83**	**345**	T	T	19 15 08.4	
	baz=156,slow=75,SNR=24						
H08N3	**Diego Garcia H**	**27.83**	**345**	T	T	19 15 09.2	
	baz=156,slow=75,SNR=22						
H08N2	**Diego Carcia H**	**27.85**	**345**	T	T	19 15 07.7	
	baz=156,slow=75,SNR=23						
MORW	**Morawa**	**32.74**	**93**	*e*P	**P**	**18 47 01.3**	**+1.3**
	74nm,1.7s						
MAW	**Mawson**	**35.20**	**190**	P	**P**	**18 47 20.5**	**-0.3**
	3.2nm,0.9s,baz=29,slow=13,SNR=5.0						
MAW				LR	LR	18 58 38.0	
	comp=Z,172nm,21.3s,baz=37,slow=31						
MAW	**Mawson**	**35.20**	**190**	*e*P	**P**	**18 47 21.5**	**+0.7**
	1.4nm,1.1s						
MAW	**Mawson**	**35.20**	**190**	*e*P	**P**	**18 47 21.5**	**+0.7**
MAW				pmax	pmax		
	comp=Z,1.0nm,1.1s						
LEM	**Lembang**	**38.25**	**53**	P	**P**	**18 47 48.3**	**+0.7**
LEM				pmax	pmax		
	comp=Z,14nm,1.3s						
PSAC1	**Pilbara Seismi**	**38.78**	**83**	*e*P	**P**	**18 47 51.3**	**-0.5**
	comp=Z,124nm,1.8s						
PSAA1	**Pilbara Seismi**	**38.78**	**83**	*e*P	**P**	**18 47 51.5**	**-0.3**
	comp=Z,71nm,1.4s						
PSAB3	**Pilbara Seismi**	**38.79**	**83**	*e*P	**P**	**18 47 50.8**	**-1.1**
	comp=Z,37nm,1.1s						
PSA00	**Pilbara Seismi**	**38.79**	**83**	*e*P	**P**	**18 47 51.5**	**-0.4**
	comp=Z,51nm,1.3s						
PSAA2	**Pilbara Seismi**	**38.79**	**83**	*e*P	**P**	**18 47 51.5**	**-0.4**
	comp=Z,87nm,1.6s						
PSAA3	**Pilbara Seismi**	**38.79**	**83**	*e*P	**P**	**18 47 52.9**	**+0.9**
	comp=Z,30nm,1.1s						
PSAD1	**Pilbara Seismi**	**38.83**	**83**	*e*P	**P**	**18 47 51.5**	**-0.7**
	comp=Z,112nm,1.8s						
PSAC2	**Pilbara Seismi**	**38.84**	**83**	*e*P	**P**	**18 47 52.6**	**+0.2**
	comp=Z,53nm,1.4s						
PSAD2	**Pilbara Seismi**	**38.87**	**83**	*e*P	**P**	**18 47 53.0**	**+0.5**
	comp=Z,164nm,1.8s						
PSI	**Prapat**	**41.24**	**33**	P	**P**	**18 48 12.0**	**-0.3**
	comp=Z,4.3nm,0.7s,baz=6.2,slow=3.6,SNR=4.5						
PSI				LR	LR	19 01 35.4	
	comp=Z,125nm,21.5s,baz=185,slow=31						
SYO	**Syowa Base**	**41.48**	**200**	⇓*e*P	**P**	**18 48 12.9**	**-0.6**
SYO	**Syowa Base**	**41.48**	**200**	⇓*e*pP	pP	18 48 18.0	+2.3
KULM	**Kulim**	**44.23**	**33**	*e*P	**P**	**18 48 34.7**	**-1.7**
	comp=Z,20nm,1.2s						
BOSA	**Boshof**	**44.98**	**261**	LR	LR	19 03 39.2	
	comp=Z,302nm,18.2s,baz=109,slow=31						
BOSA	**Boshof**	**44.98**	**261**	*e*P	**P**	**18 48 41.2**	**-1.5**
	comp=Z,46nm,1.6s						
BOSA	**Boshof**	**44.98**	**261**	*e*P	**P**	**18 48 41.2**	**-1.5**
BOSA				pmax	pmax		
	comp=Z,46nm,1.6s						
FITZ	**Fitzroy Crossi**	**45.23**	**82**	LR	LR	19 05 23.2	
	comp=Z,179nm,18.2s,baz=257,slow=33						
FITZ	**Fitzroy Crossi**	**45.23**	**82**	*e*P	**P**	**18 48 44.1**	**-0.4**
	comp=Z,63nm,1.7s						
MATP	**Matopo**	**45.55**	**274**	P	**P**	**18 48 44.3**	**-2.9**
	comp=Z,3.0nm,0.8s,baz=85,slow=7.2,SNR=4.5						
MATP				LR	LR	19 04 25.8	
	comp=Z,267nm,19.9s,baz=118,slow=32						
LBTB	**Lobatse**	**46.02**	**266**	P	**P**	**18 48 48.3**	**-2.6**
	comp=Z,4.0nm,0.7s,baz=116,slow=6.5,SNR=6.2						
LBTB				LR	LR	19 03 50.2	
	comp=Z,154nm,21.5s,baz=132,slow=31						
LBTB	**Lobatse**	**46.02**	**266**	*e*P	**P**	**18 48 49.4**	**-1.5**
	comp=Z,62nm,1.8s						
LBTB	**Lobatse**	**46.02**	**266**	*e*P	**P**	**18 48 49.4**	**-1.5**
LBTB				pmax	pmax		
	comp=Z,62nm,1.8s						
KAPI	**Kappang**	**48.11**	**63**	LR	LR	19 05 29.9	
	comp=Z,95nm,20.3s,baz=226,slow=31						
SBUM	**Sibu**	**48.25**	**49**	*e*P	**P**	**18 49 07.3**	**-0.8**
	comp=Z,5.5nm,0.9s						
LSZ	**Lusaka**	**48.33**	**280**	LR	LR	19 07 16.7	
	comp=Z,190nm,19.0s,baz=136,slow=33						
LSZ	**Lusaka**	**48.33**	**280**	*e*P	**P**	**18 49 07.3**	**-1.7**
	comp=Z,12nm,0.7s						
LSZ	**Lusaka**	**48.33**	**280**	*e*P	**P**	**18 49 07.3**	**-1.7**
LSZ				pmax	pmax		
	comp=Z,12nm,0.7s						
SOEI	**Soe**	**48.63**	**72**	*e*P	**P**	**18 49 11.3**	**-0.1**
	comp=Z,52nm,1.3s						
ASAR	**Alice Springs**	**49.61**	**94**	P	**P**	**18 49 18.4**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=244,slow=6.4,SNR=52						
ASAR				LR	LR	19 08 44.7	
	comp=Z,108nm,20.2s,baz=257,slow=34						
AS31	**Alice Springs**	**49.61**	**94**	*e*P	**P**	**18 49 18.7**	**0.0**
	comp=Z,1.9nm,0.8s						
KMBO	**Kilima Mbogo**	**49.91**	**302**	*c e*P	**P**	**18 49 23.1**	**+1.9**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**51.60**	**90**	P	**P**	**18 49 33.6**	**-0.1**
	comp=Z,14nm,0.2s,baz=240,slow=6.7,SNR=6.7						
WB2	**Warramunga Arr**	**51.61**	**90**	*e*P	**P**	**18 49 33.4**	**-0.4**
	comp=Z,19nm,1.0s						
WRAB	**Tennant Creek**	**51.61**	**90**	*e*P	**P**	**18 49 33.6**	**-0.2**
	comp=Z,22nm,1.0s						
WRAB	**Tennant Creek**	**51.61**	**90**	⇑*i*P	**P**	**18 49 33.4**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,35nm,1.7s						
WC3	**Warramunga Arr**	**51.62**	**90**	*e*P	**P**	**18 49 33.8**	**0.0**
	comp=Z,18nm,1.0s						
MTN	**Manton Dam**	**52.46**	**80**	*e*P	**P**	**18 49 39.7**	**-0.5**
	comp=Z,31nm,1.3s						
STKA	**Stephens Creek**	**52.83**	**107**	P	**P**	**18 49 42.0**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=304,slow=11,SNR=3.2						
STKA				LR	LR	19 09 24.2	
	comp=Z,194nm,19.2s,baz=212,slow=33						
STKA	**Stephens Creek**	**52.83**	**107**	*e*P	**P**	**18 49 42.9**	**+0.2**
	comp=Z,7.2nm,1.8s						
STKA	**Stephens Creek**	**52.83**	**107**	*e*P	**P**	**18 49 42.9**	**+0.2**
STKA				pmax	pmax		
	comp=Z,7.0nm,1.8s						
LUWI	**Luwuk**	**52.99**	**62**	*e*P	**P**	**18 49 43.0**	**-1.0**
	comp=Z,31nm,1.2s						
DLV	**T Lat**	**53.80**	**38**	*e*P	**P**	**18 49 49.1**	**-1.0**
	comp=Z,14nm,1.1s						
TSUM	**Tsumeb**	**55.23**	**269**	*e*P	**P**	**18 49 59.2**	**-1.3**
	comp=Z,15nm,1.4s						
SAUI	**Saumlaki**	**55.30**	**75**	*e*P	**P**	**18 49 59.6**	**-1.3**
	comp=Z,537nm,1.1s						
CM31	**Chiang Mai Arr**	**55.48**	**24**	*e*P	**P**	**18 50 01.9**	**-0.1**
	comp=Z,11nm,1.5s						
CMAR	**Chiang Mai Arr**	**55.48**	**24**	P	**P**	**18 50 00.1**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=211,slow=7.5,SNR=1						
CMAR				LR	LR	19 09 15.1	
	comp=Z,57nm,21.8s,baz=194,slow=31						
CMAR	**Chiang Mai Arr**	**55.48**	**24**	*e*P	**P**	**18 50 03.1**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SNAA	**Sanae**	**55.65**	**202**	*e*P	**P**	**18 50 03.3**	**+0.6**
	comp=Z,6.6nm,1.3s						
SNAA	**Sanae**	**55.65**	**202**	*e*P	**P**	**18 50 05.2**	**+2.5**
CHTO	**Chiang Mai**	**55.81**	**24**	*e*P	**P**	**18 50 02.6**	**-1.7**
	comp=Z,19nm,1.9s						
CHTO	**Chiang Mai**	**55.81**	**24**	*e*P	**P**	**18 50 02.6**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,19nm,1.9s						
ATD	**Arta Tunnel**	**55.91**	**317**	*e*P	**P**	**18 50 05.7**	**+0.5**
	comp=Z,8.2nm,0.8s						
VNDA	**Vanda**	**56.20**	**165**	P	**P**	**18 50 07.7**	**+1.2**
	comp=Z,2.5nm,1.0s,baz=277,slow=7.2,SNR=11						
VNDA				LR	LR	19 11 37.5	
	comp=Z,154nm,20.1s,baz=269,slow=33						
VNDA	**Vanda**	**56.20**	**165**	*e*P	**P**	**18 50 07.5**	**+1.0**
	comp=Z,4.7nm,1.1s						
VNDA	**Vanda**	**56.20**	**165**	*e*P	**P**	**18 50 07.5**	**+1.0**
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
QSPA	**South Pole Qui**	**56.59**	**180**	*e*P	**P**	**18 50 10.6**	**+0.9**
	comp=Z,12nm,1.1s						
SBA	**Scott Base**	**57.23**	**165**	*e*P	**P**	**18 50 16.5**	**+2.7**
	comp=Z,21nm,1.8s						
SBA	**Scott Base**	**57.23**	**165**	*e*P	**P**	**18 50 16.5**	**+2.7**
SBA				pmax	pmax		
	comp=Z,21nm,1.8s						
SLVN	**Son La**	**59.94**	**28**	*e*P	**P**	**18 50 32.6**	**-0.9**
	comp=Z,23nm,1.9s						
SHL	**Shillong**	**60.28**	**15**	*e*P	**P**	**18 50 35.4**	**-0.4**
	comp=Z,16nm,1.3s						
SHL	**Shillong**	**60.28**	**15**	*e*P	**P**	**18 50 35.4**	**-0.4**
SHL				pmax	pmax		
	comp=Z,17nm,1.3s						
KMI	**Kunming**	**62.95**	**25**	P	**P**	**18 50 56.1**	**+2.2**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
EIDS	**Eidsvold**	**63.04**	**104**	*e*P	**P**	**18 50 54.3**	**-0.2**
	comp=Z,18nm,1.4s						
LSA	**Lhasa**	**64.15**	**13**	*e*P	**P**	**18 51 02.9**	**+0.9**
	comp=Z,16nm,1.7s						
LSA	**Lhasa**	**64.15**	**13**	*e*P	**P**	**18 51 02.9**	**+0.9**
LSA				pmax	pmax		
	comp=Z,16nm,1.7s						
KBL	**Kabul**	**68.25**	**352**	*e*P	**P**	**18 51 28.1**	**+0.1**
	comp=Z,7.2nm,1.0s						
KBL	**Kabul**	**68.25**	**352**	*e*P	**P**	**18 51 28.1**	**+0.1**
KBL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CD2	**Chengdu**	**68.61**	**24**	P	**P**	**18 51 31.9**	**+1.8**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
SSLB	**Suanglung**	**70.21**	**42**	*e*P	**P**	**18 51 39.1**	**-1.0**
	comp=Z,12nm,1.2s						
CHGR	**Chuyangaron**	**72.31**	**353**	*e*P	**P**	**18 51 55.0**	**+2.4**
	comp=Z,24nm,1.3s						
WHN	**Wuhan**	**72.45**	**32**	*e*P	**P**	**18 51 57.1**	**+3.6**
GAR	**Garm**	**72.53**	**354**	*e*P	**P**	**18 51 53.9**	**-0.1**
	comp=Z,27nm,1.8s						
GAR	**Garm**	**72.53**	**354**	*e*P	**P**	**18 51 53.9**	**-0.1**
GAR				pmax	pmax		
	comp=Z,27nm,1.8s						
KSH	**Kashi**	**72.73**	**358**	*e*P	**P**	**18 51 58.5**	**+3.4**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,170nm,4.2s						
XAN	**Xi'an**	**73.27**	**27**	P	**P**	**18 51 56.5**	**-1.8**
XAN				pP	pwP	18 52 09.1	+4.1
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN				LR	LR		
	comp=Z,95nm,18.4s						
XAN	**Xi'an**	**73.27**	**27**	*e*P	**P**	**18 51 56.5**	**-1.8**
	comp=Z,12nm,1.3s						
XAN	**Xi'an**	**73.27**	**27**	*e*P	**P**	**18 51 56.5**	**-1.8**
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
LZH	**Lanzhou**	**73.40**	**22**	*e*P	**P**	**18 52 03.3**	**+4.1**
LZH				pP	pwP	18 52 06.1	+0.2
LZH				sP	sP	18 52 08.4	+6.3
LZH				PP	**PP**	**18 54 47.8**	**+4.6**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.0s						
LZH				LR	LR		
	comp=Z,230nm,16.7s						
LZH				LR	LR		
	comp=Z,240nm,16.2s						
LZH				LR	LR		
	comp=Z,360nm,17.3s						
GEYT	**Alibeck**	**73.47**	**344**	LR	LR	19 19 13.9	
	comp=Z,46nm,20.9s,baz=225,slow=32						
BTK	**Batken**	**73.54**	**354**	*e*P	**P**	**18 51 59.7**	**-0.1**
	comp=Z,8.0nm,1.1s						
BTK	**Batken**	**73.54**	**354**	*e*P	**P**	**18 51 59.7**	**-0.1**
BTK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RABL	**Rabaul**	**74.56**	**85**	*e*P	**P**	**18 52 04.2**	**-2.2**
	comp=Z,42nm,1.4s						
BFZ	**Birch Farm**	**74.61**	**129**	*e*P	**P**	**18 52 05.9**	**-0.4**
	comp=Z,91nm,1.5s						
NRN	**Naryn**	**74.64**	**358**	*e*P	**P**	**18 52 07.2**	**+0.7**
	comp=Z,10nm,1.6s						
NRN	**Naryn**	**74.64**	**358**	*e*P	**P**	**18 52 07.2**	**+0.7**
NRN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
ARSB	**Arslanbob**	**74.65**	**356**	*e*P	**P**	**18 52 07.1**	**+0.7**
	comp=Z,9.3nm,1.3s						
KDJ	**Kajisay**	**75.32**	**359**	*e*P	**P**

WMQ				pmax	pmax		
	comp=Z,28nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,62nm,3.7s						
WMQ				LR	LR		
	comp=Z,240nm,30.5s						
WMQ				LR	LR		
	comp=Z,540nm,38.1s						
AKT	**Akhty**	**79.67**	**337**	*e*P	**P**	**18 52 34.5**	**0.0**
AKT				*e*		18 52 41.5	
AKT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MK31	**Makanchi Array**	**80.08**	**3**	*e*P	**P**	**18 52 34.5**	**-2.0**
	comp=Z,1.5nm,1.0s						
MK31	**Makanchi Array**	**80.08**	**3**	*e*P	**P**	**18 52 34.5**	**-2.0**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	**Makanchi Array**	**80.08**	**3**	P	**P**	**18 52 34.2**	**-2.3**
	comp=Z,0.8nm,0.8s,baz=165,slow=6.1,SNR=9.4						
MKAR				LR	LR	19 25 01.8	
	comp=Z,114nm,21.4s,baz=219,slow=34						
MAKZ	**Makanchi**	**80.08**	**3**	*e*P	**P**	**18 52 36.0**	**-0.5**
	comp=Z,9.3nm,1.7s						
MAKZ	**Makanchi**	**80.08**	**3**	*e*P	**P**	**18 52 36.0**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.7s						
HHC	**Hu-ho-hao-te**	**80.27**	**25**	*e*P	**P**	**18 52 41.1**	**+3.3**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
AKH	**Akhalkalaki**	**81.05**	**334**	*e*P	**P**	**18 52 42.4**	**+0.4**
	comp=Z,6.4nm,1.2s						
AKH	**Akhalkalaki**	**81.05**	**334**	*e*P	**P**	**18 52 42.4**	**+0.4**
AKH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
OTUK	**Ortayu**	**81.59**	**356**	P	**P**	**18 52 45.1**	**+0.6**
OTUK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NCK	**Nalchik**	**82.85**	**336**	⇓*e*P	**P**	**18 52 53.9**	**+2.6**
NCK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
DGZ	**Jazzator, Alta**	**83.32**	**6**	⇓*e*P	**P**	**18 52 55.8**	**+2.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TJN	**Taejon**	**83.49**	**38**	⇓*e*P	**P**	**18 52 55.5**	**+0.8**
KIV	**Kislovodsk**	**83.57**	**335**	*e*P	**P**	**18 52 55.7**	**+0.7**
	comp=Z,4.4nm,0.8s						
KIV	**Kislovodsk**	**83.57**	**335**	*e*P	**P**	**18 52 55.8**	**+0.7**
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
BR131	**Keskin Array S**	**83.64**	**327**	*e*P	**P**	**18 52 55.9**	**+0.3**
	comp=Z,3.0nm,0.8s						
BR131	**Keskin Array S**	**83.64**	**327**	*e*P	**P**	**18 52 55.9**	**+0.3**
BR131				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**83.64**	**327**	P	**P**	**18 52 56.1**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=155,slow=8.0,SNR=19						
KURK	**Kurchatov**	**83.91**	**0**	*e*P	**P**	**18 52 57.5**	**+1.0**
	comp=Z,15nm,1.9s						
KURK	**Kurchatov**	**83.91**	**0**	*e*P	**P**	**18 52 57.5**	**+1.0**
KURK				pmax	pmax		
	comp=Z,15nm,1.9s						
ABKAR	**Akbulak array**	**83.99**	**348**	*e*P	**P**	**18 52 55.5**	**-1.4**
	comp=Z,7.8nm,1.4s						
SONM	**Songino Array**	**84.95**	**19**	P	**P**	**18 53 00.5**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=210,slow=4.4,SNR=4.4						
SONM				LR	LR	19 28 37.9	
	comp=Z,63nm,21.3s,baz=236,slow=34						
ULN	**Ulaanbaatar**	**85.16**	**19**	*e*P	**P**	**18 53 01.6**	**-1.6**
	comp=Z,2.1nm,0.8s						
ULN	**Ulaanbaatar**	**85.16**	**19**	⇑*i*P	**P**	**18 53 01.5**	**-1.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.7s						
TOA0	**Torodi Ar. Sit**	**86.03**	**288**	*e*P	**P**	**18 53 08.0**	**0.0**
	comp=Z,30nm,1.9s						
TORD	**Torodi Ar. Bea**	**86.03**	**288**	P	**P**	**18 53 07.0**	**-1.1**
	comp=Z,3.1nm,1.0s,baz=81,slow=3.4,SNR=12						
TOA1	**Torodi Ar. Sit**	**86.03**	**288**	*e*P	**P**	**18 53 07.0**	**-1.1**
BRVK	**Borovoye**	**86.51**	**355**	*e*P	**P**	**18 53 08.5**	**-0.9**
	comp=Z,3.9nm,1.0s						
BRVK	**Borovoye**	**86.51**	**355**	*d*iP	**P**	**18 53 11.0**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
ZAA0	**Zalesovo Array**	**87.35**	**4**	*e*P	**P**	**18 53 13.8**	**+0.2**
	comp=Z,12nm,1.5s						
ZALV	**Zalesovo Beam**	**87.35**	**4**	P	**P**	**18 53 13.7**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=198,slow=3.9,SNR=8.7						
ZALV				LR	LR	19 29 55.8	
	comp=Z,63nm,21.0s,baz=250,slow=34						
CN2	**Changchun**	**88.35**	**32**	*e*P	**P**	**18 53 19.5**	**+0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAJO	**Matsushiro**	**89.59**	**44**	*e*P	**P**	**18 53 22.7**	**-1.9**
MAJO	**Matsushiro**	**89.59**	**44**	*e*P	**P**	**18 53 22.7**	**-1.9**
MJAR	**Matsushiro Arr**	**89.59**	**44**	P	**P**	**18 53 22.7**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=205,slow=4.7,SNR=5.4						
MJAR				LR	LR	19 30 33.1	
	comp=Z,17nm,20.6s,baz=55,slow=34						
MJA0	**Matsu Arr-Jizo**	**89.61**	**44**	*e*P	**P**	**18 53 22.7**	**-2.1**
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**91.13**	**349**	*d*iP	**P**	**18 53 32.1**	**+0.8**
ARU						18 57 09.9	
ARU				S	**SKSac**	**19 04 04.1**	**+1.2**
ARU				SP	**SPn**	**19 05 45.6**	**+7.9**
ARU				SS	**SS**	**19 10 33.5**	**-0.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MLR	**Muntele Rosu**	**91.68**	**326**	*e*P	**P**	**18 53 33.2**	**-1.1**
	comp=Z,6.4nm,0.9s						
MLR	**Muntele Rosu**	**91.68**	**326**	*e*P	**P**	**18 53 33.2**	**-1.1**
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKASG	**Malin Array Be**	**94.25**	**331**	P	**P**	**18 53 46.5**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=132,slow=3.8,SNR=7.4						
AKASG				LR	LR	19 35 00.0	
	comp=Z,30nm,20.6s,baz=280,slow=35						
AKBB	**Malin Array Si**	**94.25**	**331**	*e*P	**P**	**18 53 45.7**	**-0.1**
	comp=Z,2.7nm,0.8s						
AKBB	**Malin Array Si**	**94.25**	**331**	*e*P	**P**	**18 53 45.7**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIEV	**Kiev**	**94.25**	**331**	⇑*e*P	**P**	**18 53 46.4**	**+0.6**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**149.97**	**12**	PKPbc	**PKPbc**	**19 00 14.8**	**-1.9**
	comp=Z,1.9nm,0.9s,baz=337,slow=3.1,SNR=11						

IDC 01 18:57:38.8±5.9, 31°.71S×80°.02E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/32, mbtmp3.5/3, Error ellipse: s-maj=162.2km s-min=45.0km az=44.0, Broken Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**24.95**	**342**	T	T	19 28 12.5	
	baz=160,slow=75,SNR=22						
H08S1	**Diego Carcia H**	**24.95**	**342**	T	T	19 28 12.7	
	baz=160,slow=75,SNR=19						
H08S3	**Diego Garcia H**	**24.97**	**342**	T	T	19 28 13.6	
	baz=160,slow=75,SNR=13						
ASAR	**Alice Springs**	**47.98**	**94**	P	P	19 06 19.6	**-0.1**
	0.7nm,0.8s,baz=250,slow=7.4,SNR=5.8						
CMAR	**Chiang Mai Arr**	**53.08**	**23**	P	P	19 06 58.0	**0.0**
	0.3nm,0.4s,baz=202,slow=6.8,SNR=5.2						
MKAR	**Makanchi Array**	**78.16**	**2**	P	P	19 09 39.6	**0.0**
	0.2nm,0.5s,baz=193,slow=5.9,SNR=2.6						

MAN 01 18:58:26.2, 7°.31N×124°.71E, h1km, mb4.5, ML3.4, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.67**	**32**	*e*P	Pg	18 58 38.5	-0.6
BUKP				*e*S	Sb	18 58 49.1	-1.4
SKMP	**Bagumbayan, Su**	**0.80**	**192**	*e*P	Pg	18 58 41.4	-0.2
SKMP				*e*S	Sb	18 58 53.3	-1.0
DMPH	**Davao City--Mi**	**0.83**	**106**	⇑*e*P	Pg	18 58 42.3	+0.2
DMPH				*e*S	Sg	18 58 53.9	+1.0
CGP	**Cagayan de Oro**	**1.14**	**359**	*e*P	Pg	18 58 47.3	-0.7
CGP				*e*S	Sg	18 59 03.1	+0.3
PAGZ	**Pagadian**	**1.42**	**292**	*e*P	Pn	18 58 52.5	-0.6
PAGZ				*e*S	Sn	18 59 13.6	+1.1
DDMP	**Don Marcelino,**	**1.56**	**140**	*e*P	Pn	18 58 54.7	-0.4
DDMP				*e*S	Sg	18 59 19.2	+2.8
MATI	**Mati**	**1.58**	**103**	*e*P	Pb	18 58 56.0	-0.2
MATI				*e*S	Sg	18 59 17.4	+0.3
IPIL	**Ipil**	**2.17**	**283**	*e*P	Pn	18 59 04.5	+1.0
IPIL				*e*S	Sg	18 59 35.7	-0.3

DJA 01 19:02:24.5±0.3, 9°S±4°×11°5E±°, h60km±8km, M4.0/14, mb4.3/6, MLv3.9/14, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.62**	**5**	P	Pn	19 02 39.8	+2.0
DNP				S	Sn	19 02 49.0	+1.5
SRBI	**Singaraja**	**1.21**	**3**	P	Pn	19 02 45.3	0.0
SRBI				S	Sn	19 03 01.1	+0.3
JAGI	**Jajag, Banyuwa**	**1.28**	**310**	P	Pn	19 02 47.0	+0.7
JAGI				S	Sn	19 03 03.4	+0.7
KMMI	**Kalianget**	**2.52**	**332**	P	Pn	19 03 03.6	+0.5
KMMI				S	Sn	19 03 33.0	+0.3
PLAI	**Plampang**	**2.64**	**80**	P	Pn	19 03 05.5	+0.8
PLAI				S	Sn	19 03 36.4	+0.9
PWJI	**Pagerwojo**	**3.54**	**291**	P	Pn	19 03 16.4	-0.7
GRJI	**Gresik**	**3.55**	**312**	P	Pn	19 03 17.3	+0.1
WOJI	**Wonogiri, Jawa**	**4.42**	**289**	P	Pn	19 03 29.2	+0.1
BKSI	**Bulukumba**	**6.32**	**52**	P	Pn	19 03 54.6	-0.5
	7.4nm,0.8s,0.0nm						
EDFI	**Ende, Flores**	**6.48**	**86**	P	Pn	19 03 56.0	-1.5
	3.7nm,0.5s,0.0nm						
BNSI	**Bone**	**6.92**	**46**	P	Pn	19 04 03.5	+0.1
	11nm,0.8s						
CISI	**Cisompet, Garu**	**7.46**	**283**	P	Pn	19 04 10.2	-0.6
	28nm,0.6s						
CGJI	**Cibinong**	**9.74**	**285**	P	Pn	19 04 41.1	-0.9
	24nm,0.6s						

*ISCJB **01** 19:26:24.5±0.7, 6°.95S±0°.10×155°.81E±0°.07, h100km, mb4.2/7, Error ellipse: s-maj=13.8km s-min=9.5km az=177.8*
*IDC **01** 19:26:27.6±2.1, 7°.14S×155°.82E, h119km±22km, mb3.7/6, mb1 3.8/9, mb1mx3.6/27, mbtmp4.2/9, MS3.2/4, Ms1 3.2/4, ms1mx3.0/20, Error ellipse: s-maj=23.7km s-min=14.6km az=176.0*

ISC 01 19:26:26.1±0.7, 7°.0S±0°.1×155°.80E±0°.08, h100km, n15, σ1§17/15, mb4.0/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.79**	**121**	*e*P	Pn	19 27 41.0	+5.0
HNR				*e*S	Sn	19 28 41.0	+11
HNR	**Honiara**	**4.79**	**121**	P	**Pn**	**19 27 37.8**	**+1.8**
	11nm,0.3s,baz=169,slow=5.2,SNR=5.0						
HNR				S	**Sn**	**19 28 29.2**	**-1.0**
	10nm,0.3s,baz=280,slow=8.5,SNR=5.3						
HNR				LR	LR	19 29 33.9	
	comp=Z,212nm,18.4s,baz=300,slow=40						
PMG	**Port Moresby**	**8.90**	**253**	P	**Pn**	**19 28 32.3**	**+0.4**
	2.2nm,0.3s,baz=33,slow=10,SNR=7.7						
PMG				S	**Sn**	**19 30 11.3**	**+0.9**
	0.6nm,0.3s,baz=211,slow=5.9,SNR=2.6						
PMG				LR	LR	19 31 31.1	
	comp=Z,121nm,21.4s,baz=99,slow=34						
CTA	**Charters Tower**	**16.01**	**214**	P	**Pn**	**19 30 05.8**	**+0.2**
	0.2nm,0.3s,baz=28,slow=14,SNR=4.9						
GUMO	**Guam**	**23.11**	**332**	LR	LR	19 41 49.3	
	comp=Z,42nm,18.1s,baz=141,slow=40						
WRA	**Warramunga Arr**	**24.51**	**236**	P	**P**	**19 31 35.4**	**-0.9**
	95nm,0.3s,baz=68,slow=9.9,SNR=11						
ASAR	**Alice Springs**	**26.81**	**229**	P	**P**	**19 31 55.4**	**-1.8**
	0.9nm,0.7s,baz=60,slow=9.8,SNR=16						
ASAR				PcP	**PcP**	**19 35 16.4**	**-1.3**
	0.5nm,0.9s,baz=55,slow=2.7,SNR=4.3						
STKA	**Stephens Creek**	**28.12**	**206**	LR	LR	19 42 12.5	
	comp=Z,99nm,20.5s,baz=27,slow=34						
KSRS	**Korea Array**	**51.28**	**332**	P	**P**	**19 35 19.8**	**-0.1**
	0.9nm,0.8s,baz=147,slow=8.2,SNR=4.7						
CMAR	**Chiang Mai Arr**	**61.49**	**295**	P	**P**	**19 36 33.6**	**+0.8**
	0.8nm,0.6s,baz=124,slow=5.1,SNR=7.9						
SONM	**Songino Array**	**69.73**	**327**	P	**P**	**19 37 26.3**	**+0.8**
	4.0nm,0.8s,baz=132,slow=6.0,SNR=18						
MKAR	**Makanchi Array**	**83.90**	**319**	P	**P**	**19 38 45.1**	**+0.1**
	2.5nm,0.8s,baz=104,slow=5.6,SNR=29						
ZALV	**Zalesovo Beam**	**84.59**	**326**	P	**P**	**19 38 47.4**	**-0.8**
	0.8nm,0.5s,baz=116,slow=3.4,SNR=4.0						
GERES	**GERESS Array B**	**127.43**	**329**	PKP	**PKPdf**	**19 45 19.7**	**+0.2**
	0.5nm,0.6s,baz=108,slow=2.2,SNR=3.3						
TORD	**Torodi Ar. Bea**	**153.79**	**286**	PKPbc	**PKPbc**	**19 46 12.9**	**-1.8**
	0.9nm,0.7s,baz=16,slow=4.4,SNR=4.7						

*KRNET **01** 19:27:42.0±0.1, 41°.64N×79°.72E, h1km, mb2.2*
*SOME **01** 19:27:44.9, 41°.85N×79°.57E, h10km*
*NNC **01** 19:27:46.7±1.4, 41°.91N×79°.61E, h0km, mb2.8, mpv2.6, Error ellipse: s-maj=9.0km s-min=6.9km az=143.0*

ISC 01 19:27:42.0±2.3, 41°.70N±0°.08×79°.70E±0°.06, h0km±15km, n25, σ1§09/41, 9C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.42**	**272**	⇑*e*P	**Pn**	**19 28 08.6**	**-0.8**
	baz=74						
TARG				⇑*i*S	**Sb**	**19 28 28.1**	**-0.2**
	baz=74						
SHLS	**Shalkode**	**1.47**	**353**	P	**Pb**	**19 28 10.1**	**-0.1**
	2.0nm,0.2s						
SHLS				S	**Sg**	**19 28 28.0**	**-1.0**
	12nm,0.2s						
SHLS	**Shalkode**	**1.47**	**353**	*e*P	**Pb**	**19 28 10.1**	**-0.1**
	1.7nm,0.1s						
SHLS				*e*S	**Sg**	**19 28 28.0**	**-1.0**
	12nm,0.2s						
PDGK	**Podgornoye**	**1.63**	**355**	P	**Pb**	**19 28 13.0**	**-0.1**
	0.2nm,0.1s						
PDGK				S	**Sb**	**19 28 32.8**	**-1.5**
	0.9nm,0.3s						
PDGK	**Podgornoye**	**1.63**	**355**	⇑P	**Pb**	**19 28 12.7**	**-0.3**
	1.6nm,0.9s						
PDGK				⇓S	**Sb**	**19 28 32.4**	**-1.9**
	1.4nm,0.4s						
PDGK	**Podgornoye**	**1.63**	**355**	⇓*i*P	**Pg**	**19 28 13.5**	**+0.2**
	baz=54						
PDGK				⇓*i*S	**Sg**	**19 28 36.5**	**+2.0**
	baz=54						
SATY	**Saty**	**1.66**	**325**	P	**Pg**	**19 28 14.1**	**+0.3**
	1.5nm,0.1s						
SATY				S	**Sg**	**19 28 34.7**	**-0.6**
	7.5nm,0.1s						
SATY	**Saty**	**1.66**	**325**	*e*P	**Pg**	**19 28 14.1**	**+0.3**
	1.5nm,0.1s						
SATY				*e*S	**Sg**	**19 28 34.7**	**-0.6**
	7.5nm,0.1s						
KTMS	**Ketmen**	**1.81**	**15**	P	**Pg**	**19 28 17.0**	**+0.4**
KTMS				S	**Sg**	**19 28 39.7**	**-0.4**
KTMS	**Ketmen**	**1.81**	**15**	*e*P	**Pg**	**19 28 17.0**	**+0.4**
	0.1nm,0.1s						
KTMS				*e*S	**Sg**	**19 28 39.7**	**-0.4**
	2.5nm,0.1s						
KDJ	**Kajisay**	**1.93**	**284**	⇑*i*P	**Pb**	**19 28 18.8**	**+0.7**
	baz=85						
KDJ				⇑*i*S	**Sg**	**19 28 44.8**	**+0.9**
	baz=85						
MDOK	**Medeo**	**2.45**	**308**	Pg	**Pb**	**19 28 27.4**	**+0.5**
	2.2nm,0.4s						
MDOK				Lg	Lg	19 28 57.5	
	3.8nm,0.3s						
MDOK	**Medeo**	**2.45**	**308**	*e*P	**Pb**	**19 28 27.4**	**+0.5**
	2.2nm,0.4s						
MDOK				*e*S	**Sb**	**19 28 57.5**	**-0.2**
	3.8nm,0.3s						
MNBS	**Baschi**	**2.56**	**339**	Pg	**Pb**	**19 28 29.3**	**+0.5**
	1.3nm,0.2s						
MNBS	**Baschi**	**2.56**	**339**	*e*P	**Pb**	**19 28 29.4**	**+0.5**
	1.3nm,0.2s						
MNBS				*e*S	**Sb**	**19 29 01.0**	**+0.1**
	13nm,0.3s						
DJR	**Jarkent**	**2.63**	**1**	Pg	**Pb**	**19 28 30.7**	**+0.7**
	1.9nm,0.4s						
DJR				Lg	Lg	19 29 03.4	
	3.5nm,0.3s						
DJR	**Jarkent**	**2.63**	**1**	*e*P	**Pb**	**19 28 30.7**	**+0.7**
	1.9nm,0.4s						
DJR				*e*S	**Sg**	**19 29 03.5**	**-3.0**
	3.5nm,0.3s						
ULHL	**Ulahol**	**2.63**	**283**	⇑*i*P	**Pb**	**19 28 28.3**	**-1.8**
	baz=84						
ULHL				⇑*i*S	**Sb**	**19 29 02.0**	**-1.1**
	baz=84						
BOOM	**Boomskoye usch**	**2.91**	**287**	⇑*i*P	**Pn**	**19 28 31.8**	**+2.2**
	baz=88						
BOOM				⇑*i*S	**Sb**	**19 29 08.2**	**-2.7**
	baz=88						
KTBS	**Karatobe**	**3.00**	**313**	Lg	Lg	19 29 13.8	
	3.8nm,0.3s						
KTBS	**Karatobe**	**3.00**	**313**	*e*P	**Pb**	**19 28 36.8**	**+0.6**
	1.4nm,0.5s						
KTBS				*e*S	**Sb**	**19 29 13.8**	**+0.4**
	3.8nm,0.3s						
KUU	**Kurty**	**3.30**	**313**	Lg	Lg	19 29 22.0	
	3.9nm,0.4s						
KUU	**Kurty**	**3.30**	**313**	*e*P	**Pb**	**19 28 41.7**	**+0.3**
	0.8nm,0.3s						
KUU				*e*S	**Sb**	**19 29 22.0**	**-0.2**
	3.9nm,0.4s						
KAPS	**Kapalarasan**	**3.59**	**356**	Lg	Lg	19 29 30.8	
	2.6nm,0.3s						
KAPS	**Kapalarasan**	**3.59**	**356**	*e*P	**Pb**	**19 28 46.8**	**+0.5**
	0.3nm,0.2s						
KAPS				*e*S	**Sb**	**19 29 30.8**	**+0.3**
	2.6nm,0.3s						

MEX 01 19:37:46.4±0.5, 16°.02N×98°.56W, h10km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.56**	**49**	*e*P	Pg	19 37 55.9	-1.3
PNIG				*e*S	Sg	19 38 03.8	-0.8
TLIG	**Tlapa**	**1.53**	**360**	*e*P	Pn	19 38 10.2	-3.7
TLIG				*e*S	Sn	19 38 29.1	-4.9

*NEIC **01** 19:39:10.1±0.0, 58°.19N×138°.11W, h11km, ML2.8(OTT), ML2.8(AEIC), After AEIC.*
*PGC **01** 19:39:10.9±1.1, 58°.36N×137°.93W, h1km, ML2.8/5, 136km Ese of Yakutat, Ak Southeastern Alaska*

ISC 01 19:39:06.9±1.6, 58°.21N±0°.04×138°.06W±0°.03, h3km±12km, n37, σ1§42/65, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**1.53**	**34**	*e*Pn	**Pn**	**19 39 35.6**	**+0.6**
PLBC				*e*Sn	**Sn**	**19 39 53.8**	**-1.7**
PLBC	**Pleasant Camp**	**1.53**	**34**	P	**Pn**	**19 39 35.6**	**+0.6**
PLBC				S	**Sn**	**19 39 53.8**	**-1.7**
YKU2	**Yakutat**	**1.55**	**328**	*e*Pn	**Pn**	**19 39 36.8**	**+1.4**
PNL	**Peninsula**	**1.62**	**335**	*e*Pn	**Pn**	**19 39 36.6**	**+0.2**
PNL				*e*Sn	**Sn**	**19 39 57.7**	**-0.1**
PNL	**Peninsula**	**1.62**	**335**	Pn	**Pn**	**19 39 36.3**	**-0.1**
PNL				Sg	**Sn**	**19 39 57.6**	**-0.1**
BESE	**Bessie Mountai**	**1.73**	**76**	*e*Pn	**Pn**	**19 39 39.0**	**+1.2**
BESE				*e*Sn	**Sb**	**19 40 01.2**	**-0.1**
BESE	**Bessie Mountai**	**1.73**	**76**	Pn	**Pn**	**19 39 38.6**	**+0.8**
BESE				Sg	**Sn**	**19 40 00.4**	**0.0**
SIT	**Sitka**	**1.87**	**127**	*e*Pn	**Pn**	**19 39 40.9**	**+1.2**
SIT				*e*Sn	**Sn**	**19 40 04.9**	**+1.1**
SKAG	**Skagway**	**1.89**	**47**	*e*Pn	**Pb**	**19 39 41.7**	**-0.3**
SKAG				*e*Sn	**Sb**	**19 40 05.5**	**-0.5**
BCPM	**Bancas Point**	**1.93**	**336**	*e*Pn	**Pn**	**19 39 42.4**	**+1.8**
JIS	**Juneau Island**	**1.94**	**86**	*e*Pn	**Pn**	**19 39 42.4**	**+1.7**
JIS				*e*Sn	**Sb**	**19 40 07.0**	**-0.5**
PCA	**Pinnacle**	**2.21**	**330**	*e*Pn	**Pn**	**19 39 46.3**	**+1.8**
PCA	**Pinnacle**	**2.21**	**330**	Pn	**Pn**	**19 39 45.0**	**+0.5**
PCA				Pg	**Pb**	**19 39 46.5**	**-0.9**
PCA				Sg	**Sb**	**19 40 15.0**	**-0.2**
SAMH	**Samovar Hills**	**2.38**	**325**	Pn	**Pn**	**19 39 49.9**	**+3.0**
SAMH				Sg	**Sb**	**19 40 21.6**	**+1.3**
CHX	**Chaix Hills**	**2.44**	**321**	*e*Pn	**Pn**	**19 39 49.0**	**+1.3**
HYT	**Haines Junctio**	**2.64**	**6**	*e*Pn	**Pn**	**19 39 51.9**	**+1.4**
HYT	**Haines Junctio**	**2.64**	**6**	Pn	**Pn**	**19 39 51.4**	**+1.0**
HYT				Sn	**Sn**	**19 40 21.6**	**-1.4**
HYT				Sg	**Sb**	**19 40 26.3**	**-1.3**
RKAV	**Rock Avalanche**	**2.69**	**323**	*e*Pn	**Pb**	**19 39 55.1**	**-0.7**
RKAV				*e*Pg	**Pg**	**19 40 00.4**	**+1.9**
RKAV				*e*Sn	**Sb**	**19 40 29.3**	**+0.1**
RKAV	**Rock Avalanche**	**2.69**	**323**	Pn	**Pb**	**19 39 55.1**	**-0.7**
RKAV				Pg	**Pg**	**19 40 00.4**	**+1.9**
RKAV				Sn	**Sb**	**19 40 29.3**	**+0.1**
YUK6	**Outpost Mounta**	**2.75**	**357**	*e*Pn	**Pn**	**19 39 53.4**	**+1.3**
YUK6				*e*Sn	**Sb**	**19 40 32.3**	**+1.5**
YUK6	**Outpost Mounta**	**2.75**	**357**	Pn	**Pn**	**19 39 53.4**	**+1.3**
YUK6				Sg	**Sb**	**19 40 32.3**	**+1.5**
MESA	**MESA**	**2.81**	**316**	*e*Pn	**Pn**	**19 39 51.9**	**-1.0**
MESA				*e*Sn	**Sb**	**19 40 31.8**	**-1.0**
MESA	**MESA**	**2.81**	**316**	Pn	**Pn**	**19 39 51.9**	**-1.0**
MESA				Sn	**Sb**	**19 40 31.8**	**-1.0**
WHY	**Whitehorse**	**2.94**	**32**	*e*Pn	**Pn**	**19 39 56.4**	**+1.8**
WHY	**Whitehorse**	**2.94**	**32**	Pn	**Pn**	**19 39 56.0**	**+1.4**
WHY				Pg	**Pb**	**19 40 00.7**	**+0.7**
WHY				Sg	**Sb**	**19 40 37.5**	**+1.1**
CTGM	**Chitina Glacie**	**3.23**	**330**	*e*Pn	**Pn**	**19 40 00.2**	**+1.6**
CTGM	**Chitina Glacie**	**3.23**	**330**	Pn	**Pn**	**19 40 00.0**	**+1.5**
KIAG	**Kiagna River**	**3.49**	**323**	Pn	**Pn**	**19 40 03.1**	**+0.9**
BALM	**Baldy**	**3.58**	**324**	Pn	**Pn**	**19 40 04.6**	**+1.3**
BALM				Sg	**Sb**	**19 40 54.3**	**-0.3**
PTPK	**Patty Peak**	**3.73**	**325**	Sg	**Sb**	**19 41 01.1**	**+2.0**
YUK3	**Moose Creek**	**3.77**	**342**	Pn	**Pn**	**19 40 08.0**	**+1.8**
HMT	**Hamilton**	**3.83**	**306**	*e*Pn	**Pn**	**19 40 07.2**	**+0.5**
YUK1	**Sand Pete Hill**	**4.14**	**344**	Sg

GCG ***01*** *20:16:59.6±0.3, 13°.32N×89°.47W, h21km±6km, MD3.7*
SNET ***01*** *20:16:59.1±2.1, 13°.27N×89°.56W, h52km±18km, ML3.4*
ISC 01 20:17:01.5±1.5, 13°.31N±0°.09×89°.50W±0°.05, h43km±18km, n28, σ1§29/49, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.46**	**34**	*eP*	**Pn**	**20 17 11.1**	**-0.9**
SNET				*eS*	**Sn**	**20 17 20.8**	**+1.5**
SNET				IAML		20 17 26.8	
	comp=Z,1μm,0.2s						
UEES	**San Salvador**	**0.48**	**31**	*eP*	**Pn**	**20 17 11.1**	**-1.2**
UEES				*eS*	**Sn**	**20 17 20.6**	**+0.7**
UESS	**San Salvador**	**0.49**	**36**	*eP*	**Pn**	**20 17 11.4**	**-0.9**
OPAM	**San Salvador**	**0.50**	**35**	*eP*	**Pn**	**20 17 11.7**	**-0.8**
OPAM				*eS*	**Sn**	**20 17 20.6**	**+0.4**
OPAM				IAML		20 17 25.9	
	comp=Z,2μm,0.2s						
UDBS	**Soyapango**	**0.53**	**38**	*eP*	**Pn**	**20 17 12.0**	**-0.8**
UDBS				*eS*	**Sn**	**20 17 22.2**	**+1.4**
CEVE	**Cerro Verde**	**0.53**	**346**	*eP*	**Pn**	**20 17 11.8**	**-1.2**
CEVE				*eS*	**Sn**	**20 17 22.0**	**+0.7**
CEVE				IAML		20 17 29.3	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	**0.54**	**347**	*eP*	**Pn**	**20 17 11.9**	**-1.3**
SBLS				*eS*	**Sn**	**20 17 21.5**	**0.0**
SNJE	**San Jose**	**0.57**	**349**	*eP*	**Pn**	**20 17 12.2**	**-1.3**
SNJE				*eS*	**Sn**	**20 17 22.6**	**+0.6**
LFU	**La Fuente**	**0.57**	**40**	*eP*	**Pn**	**20 17 13.1**	**-0.3**
LFU				*eS*	**Sn**	**20 17 23.3**	**+1.3**
RTR	**El Retiro**	**0.60**	**346**	*eP*	**Pn**	**20 17 12.7**	**-1.3**
RTR				*eS*	**Sn**	**20 17 23.4**	**+0.7**
PAVA	**Las Pavas**	**0.68**	**53**	*eP*	**Pn**	**20 17 14.5**	**-0.3**
PAVA				*eS*	**Sn**	**20 17 25.4**	**+1.0**
UNIC	**Santa Ana**	**0.68**	**355**	*eP*	**Pn**	**20 17 13.8**	**-1.1**
UESV	**Ojushtada**	**0.69**	**84**	*eP*	**Pn**	**20 17 15.0**	**+0.1**
UESV				IAML		20 17 15.3	
	comp=Z,1μm,0.1s						
UESV				*eS*	**Sn**	**20 17 27.2**	**+2.6**
SNVI	**San Vicente**	**0.71**	**65**	*eP*	**Pn**	**20 17 14.3**	**-0.9**
SNVI				*eS*	**Sn**	**20 17 26.8**	**+1.6**
MOYG	**Moyuta, Jutiap**	**0.93**	**323**	⇓*iP*	**Pn**	**20 17 17.1**	**-1.2**
MOYG				*eS*	**Sn**	**20 17 30.5**	**-0.1**
TECA	**Tecapa**	**0.98**	**79**	*eP*	**Pn**	**20 17 17.2**	**-1.8**
TECA				*eS*	**Sn**	**20 17 30.5**	**-1.5**
LLGN	**La Laguna**	**1.01**	**32**	*eP*	**Pn**	**20 17 18.9**	**-0.4**
LLGN				*eS*	**Sn**	**20 17 30.0**	**-2.4**
VICT	**Victoria**	**1.06**	**52**	*eP*	**Pn**	**20 17 19.6**	**-0.3**
VICT				*eS*	**Sn**	**20 17 36.7**	**+3.1**
MTO3	**Montecristo**	**1.09**	**7**	*eP*	**Pn**	**20 17 20.1**	**-0.5**
PACA	**Pacayal**	**1.15**	**82**	*eP*	**Pn**	**20 17 20.4**	**-0.9**
PACA				*eS*	**Sn**	**20 17 37.1**	**+1.2**
LCY	**Lacayo**	**1.18**	**84**	*eP*	**Pn**	**20 17 20.4**	**-1.2**
LCY				*eS*	**Sn**	**20 17 37.9**	**+1.4**
VSM	**San Miguel**	**1.20**	**84**	*eP*	**Pn**	**20 17 21.1**	**-0.9**
CAHU	**Cacacuatique**	**1.33**	**70**	*eP*	**Pn**	**20 17 22.9**	**-0.9**
PCG	**Pacaya**	**1.53**	**315**	*eP*	**Pn**	**20 17 26.4**	**-0.1**
PCG				*eS*	**Sn**	**20 17 47.5**	**+2.2**
LCND	**La Caada**	**1.56**	**90**	*eP*	**Pn**	**20 17 25.4**	**-1.4**
LCND				IAML		20 17 49.1	
	comp=Z,351nm,0.4s						
CNCH	**Conchagua**	**1.62**	**91**	*eP*	**Pn**	**20 17 26.9**	**-0.8**
CNCH				*eS*	**Sn**	**20 17 48.1**	**+0.7**
FUG	**Fuego 3**	**1.73**	**311**	*eP*	**Pn**	**20 17 29.0**	**-0.2**
FUG				*eS*	**Sn**	**20 17 52.0**	**+1.8**
CSGN	**Cosiguina Volc**	**1.92**	**100**	*eP*	**Pn**	**20 17 30.1**	**-1.6**

NIED ***01*** *20:32:00, 22°.10N×121°.10E, h50km, Mw4.5 Best double couple: M0=6.79000×10^15 NP1:φs=207.00000°, δ20.00000°, λ-2.00000°. NP2:φs=298.00000°, δ89.00000°, λ-110.00000°.*
MOS ***01*** *20:32:21.1±1.1, 21°.97N×121°.40E, h33km, mb4.9/66, Error ellipse: s-maj=7.8km s-min=4.3km az=108.6*
JMA ***01*** *20:32:21.7±0.2, 22°.08N×121°.12E, h65km±4km, M4.6*
BJI ***01*** *20:32:22.0±0.0, 22°.13N×121°.23E, h12km, mb4.4/40, mB4.5/32, ML4.2/7, Ms4.0/26, Ms7 3.8/28*
NEIC ***01*** *20:32:22.8±1.0, 21°.99N×121°.40E, h35km, mb4.7/88, ML4.9(TAP), Error ellipse: s-maj=13.1km s-min=9.8km az=267.0*
NEIC Recorded [3 TAP] in Taitung and [2 TAP] in Pingtung.
ISCJB ***01*** *20:32:22.5±0.2, 21°.97N±0°.01×121°.37E±0°.02, h44km±1km, mb4.6/144, MS3.7/16, Error ellipse: s-maj=2.4km s-min=1.8km az=9.1*
TAP ***01*** *20:32:23.5, 22°.04N×121°.27E, h32km, ML5.0, C*
IDC ***01*** *20:32:24.2±1.5, 22°.00N×121°.50E, h50km±13km, mb4.2/25, mb1 4.3/28, mb1mx4.2/39, mbtmp4.4/28, ML3.4/3, MS3.7/14, Ms1 3.7/14, ms1mx3.6/26, Error ellipse: s-maj=13.8km s-min=10.6km az=90.0*
ISC 01 20:32:23.1±0.3, 22°.02N±0°.02×121°.31E±0°.02, h35km±1km, n491, σ1§46/595, mb4.7/155, MS3.7/16, 39C-53D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.22**	**84**	⇓*iP*	**Pn**	**20 32 30.7**	**-0.3**
	baz=91						
LAY				S	**Sn**	**20 32 35.5**	**-1.8**
	baz=91						
TSEB	**Hengchuen, Pin**	**0.40**	**253**	⇑*iP*	**Pn**	**20 32 32.8**	**+0.5**
	baz=258						
TSEB				*i* S	**Sn**	**20 32 39.3**	**+0.5**
	baz=258						
TWKBT	**Hengchun**	**0.47**	**261**	⇑P	**Pn**	**20 32 33.0**	**-0.3**
	baz=262						
TWKBT				S	**Sn**	**20 32 39.2**	**-1.2**
	baz=262						
TWK1	**Hengchun**	**0.48**	**261**	⇑*iP*	**Pn**	**20 32 33.0**	**-0.4**
	baz=262						
TWK1				S	**Sn**	**20 32 39.4**	**-1.2**
	baz=262						
TAW	**Tawu**	**0.52**	**311**	⇓*iP*	**Pn**	**20 32 33.3**	**-0.7**
	baz=312						
TAW				*i* S	**Sn**	**20 32 40.3**	**-1.3**
	baz=312						
HEN	**Hengchun**	**0.53**	**269**	⇑*iP*	**Pn**	**20 32 34.2**	**-0.1**
	baz=268						
HEN				*i* S	**Sn**	**20 32 41.9**	**-0.1**
	baz=268						
EAST	**Anshuo**	**0.56**	**310**	⇓*iP*	**Pn**	**20 32 34.1**	**-0.7**
	baz=317						
EAST				*i* S	**Sn**	**20 32 41.6**	**-1.4**
	baz=317						
ECL	**Taimali**	**0.67**	**330**	⇓*iP*	**Pn**	**20 32 35.1**	**-1.0**
	baz=333						
ECL				S	**Sn**	**20 32 42.9**	**-2.4**
	baz=333						
SCZT	**Fangliau**	**0.73**	**299**	⇓*iP*	**Pn**	**20 32 37.0**	**0.0**
	baz=305						
SCZT				S	**Sn**	**20 32 45.5**	**-1.5**
	baz=305						
TTN	**Taitung**	**0.75**	**348**	⇓*iP*	**Pn**	**20 32 37.8**	**+0.5**
	baz=1.0						
TWGBT	**Beinan**	**0.83**	**345**	⇓P	**Pn**	**20 32 37.5**	**-0.8**
	baz=347						
TWGBT				*e*S	**Sn**	**20 32 47.1**	**-2.2**
	baz=347						
TWG	**Pinlang**	**0.83**	**344**	*e*Pn	**Pn**	**20 32 37.4**	**-0.9**
TWG				*e*Sn	**Sn**	**20 32 48.3**	**-1.1**
TWG	**Pinlang**	**0.83**	**344**	⇓*iP*	**Pn**	**20 32 37.5**	**-0.9**
	baz=347						
TWG				*e*S	**Sn**	**20 32 47.1**	**-2.3**
	baz=347						
SSPT	**Xinbi**	**0.83**	**304**	⇓P	**Pn**	**20 32 39.1**	**+0.8**
	baz=311						
SSPT				*e*S	**Sn**	**20 32 49.0**	**-0.4**
	baz=311						
MASBT	**Mashibuluo**	**0.87**	**313**	⇓P	**Pn**	**20 32 38.8**	**0.0**
	baz=314						
WLCH	**Liuqiu**	**0.93**	**291**	*e*P	**Pn**	**20 32 41.9**	**+2.2**
	baz=291						
TWP	**Hsiaoliuchiu**	**0.94**	**291**	⇑*iP*	**Pn**	**20 32 42.2**	**+2.4**
	baz=291						
SSD	**Sandimen**	**0.96**	**319**	⇓*iP*	**Pn**	**20 32 40.0**	**-0.1**
	baz=333						
SGLT	**Jiouru**	**1.04**	**313**	⇓P	**Pn**	**20 32 42.6**	**+1.5**
	baz=314						
CHKT	**Chengkung**	**1.08**	**3**	⇓*iP*	**Pn**	**20 32 41.2**	**-0.6**
	baz=352						
CHKT				*e*S	**Sn**	**20 32 54.5**	**-1.0**
	baz=352						
KAU	**Kaohsiung**	**1.08**	**301**	*e*P	**Pn**	**20 32 43.2**	**+1.4**
	baz=301						
TWM1	**Shoushan**	**1.15**	**314**	⇓*iP*	**Pn**	**20 32 45.3**	**+2.5**
	baz=316						
SLGT	**Liugui**	**1.15**	**328**	*e*P	**Pn**	**20 32 43.0**	**+0.2**
	baz=328						
SLGT				S	**Sn**	**20 32 59.4**	**+2.1**
	baz=328						
SNJT	**Kaohsiung City**	**1.17**	**309**	*e*P	**Pn**	**20 32 44.9**	**+1.9**
	baz=310						
ELDTW	**Lidau**	**1.20**	**347**	⇓*iP*	**Pn**	**20 32 42.6**	**-0.9**
	baz=359						
STYT	**Tauyuan**	**1.25**	**336**	*e*P	**Pn**	**20 32 44.3**	**+0.1**
	baz=347						
SGST	**Jiashian**	**1.26**	**328**	P	**Pn**	**20 32 45.9**	**+1.7**
	baz=341						
SGST				*e*S	**Sn**	**20 33 03.2**	**+3.3**
	baz=341						
TWF1	**Yuli**	**1.33**	**359**	*e*P	**Pn**	**20 32 44.1**	**-1.1**
	baz=353						
YULB	**Yu-li**	**1.37**	**359**	*e*Pn	**Pn**	**20 32 44.6**	**-1.2**
YULB	**Yu-li**	**1.37**	**359**	⇓P	**Pn**	**20 32 44.6**	**-1.2**
	baz=352						
CHN1	**Nanshi**	**1.37**	**328**	P	**Pn**	**20 32 47.4**	**+1.6**
	baz=330						
CHN3	**Shinhua**	**1.37**	**320**	*e*P	**Pn**	**20 32 48.1**	**+2.3**
	baz=322						
WTP	**Ta-pu**	**1.39**	**332**	⇑*iP*	**Pn**	**20 32 47.7**	**+1.7**
	baz=333						
WTP				S	**Sn**	**20 33 05.5**	**+2.4**
	baz=333						
SNST	**Tainan City**	**1.42**	**328**	*e*P	**Pn**	**20 32 48.3**	**+1.9**
	baz=330						
TPUB	**Ta-pu**	**1.43**	**334**	*e*Pn	**Pn**	**20 32 47.8**	**+1.2**
TPUB				*e*Sn	**Sn**	**20 33 07.8**	**+3.7**
TPUB	**Ta-pu**	**1.43**	**334**	⇑P	**Pn**	**20 32 48.2**	**+1.6**
	baz=335						
TPUB				S	**Sn**	**20 33 06.3**	**+2.2**
	baz=335						
TWK	**Hsinying**	**1.46**	**329**	⇑P	**Pn**	**20 32 48.4**	**+1.3**
	baz=331						
HGSD	**Ruisui**	**1.47**	**4**	⇓P	**Pn**	**20 32 47.1**	**-0.1**
	baz=16						
EHY	**Hungye**	**1.48**	**0**	P	**Pn**	**20 32 46.4**	**-1.0**
	baz=354						
CHN4	**Tsaushan**	**1.49**	**334**	⇑*iP*	**Pn**	**20 32 48.9**	**+1.6**
	baz=334						
CHN4				*e*S	**Sn**	**20 33 09.3**	**+3.7**
	baz=334						
YUS	**Yu-Shan**	**1.50**	**347**	⇓P	**Pn**	**20 32 48.0**	**-0.1**
	baz=355						
YUS				*e*S	**Sn**	**20 33 07.3**	**+0.6**
	baz=355						
ALS	**Alishan**	**1.56**	**343**	⇓*iP*	**Pn**	**20 32 49.7**	**+1.1**
	baz=352						
EGFH	**Guangfu**	**1.65**	**4**	*e*P	**Pn**	**20 32 48.7**	**-0.9**
	baz=356						
CHN8	**Yiju**	**1.67**	**323**	*e*P	**Pn**	**20 32 50.2**	**+0.4**
	baz=324						
CHN8				*e*S	**Sn**	**20 33 10.8**	**+0.8**
	baz=324						
BBP	**Basco**	**1.68**	**159**	*e*P	**Pn**	**20 32 49.6**	**-0.4**
BBP				*e*S	**Sn**	**20 33 10.8**	**+0.5**
CHY	**Chiayi**	**1.69**	**331**	*e*P	**Pn**	**20 32 51.3**	**+1.2**
	baz=332						
CHY				S	**Sn**	**20 33 12.6**	**+2.1**
	baz=332						
WHYT	**Xinyi Township**	**1.73**	**346**	*e*P	**Pn**	**20 32 52.4**	**+1.7**
	baz=347						
WHYT				*e*S	**Sn**	**20 33 14.3**	**+2.8**
	baz=347						
WLGB	**Puzi**	**1.73**	**327**	*e*P	**Pn**	**20 32 51.2**	**+0.5**
	baz=328						
WLGB				*e*S	**Sn**	**20 33 13.3**	**+1.8**
	baz=328						
VWDT	**VWDT**	**1.74**	**355**	⇓P	**Pn**	**20 32 51.1**	**+0.3**
	baz=3.0						
ESL	**Shilin**	**1.79**	**4**	*e*P	**Pn**	**20 32 50.8**	**-0.7**
	baz=357						
SSLB	**Suanglung**	**1.79**	**349**	*e*Pn	**Pn**	**20 32 51.5**	**-0.1**
SSLB				*e*Sn	**Sn**	**20 33 15.5**	**+2.3**
SSLB	**Suanglung**	**1.79**	**349**	⇓P	**Pn**	**20 32 52.7**	**+1.0**
	baz=351						
SSLB				S	**Sn**	**20 33 14.2**	**+1.0**
	baz=351						
WGK	**Gukeng**	**1.80**	**338**	*e*P	**Pn**	**20 32 53.1**	**+1.4**
	baz=339						
WGK				S	**Sn**	**20 33 16.1**	**+2.8**
	baz=339						
WDLH	**Douliu**	**1.81**	**337**	*e*P	**Pn**	**20 32 53.3**	**+1.5**
	baz=338						
WDLH				*e*S	**Sn**	**20 33 15.5**	**+1.9**
	baz=338						
WJS	**Zhushan**	**1.88**	**343**	*e*P	**Pn**	**20 32 55.0**	**+2.2**
	baz=345						
WJS				*e*S	**Sn**	**20 33 18.9**	**+3.7**
	baz=345						
SMLT	**Sun Moon Lake**	**1.90**	**348**	P	**Pn**	**20 32 55.0**	**+1.9**
	baz=350						
SMLT				S	**Sn**	**20 33 19.0**	**+3.1**
	baz=350						
ENLB	**Shoufeng**	**1.90**	**8**	*e*P	**Pn**	**20 32 53.4**	**+0.4**
	baz=359						
WSF	**Szhu**	**1.90**	**328**	P	**Pn**	**20 32 53.9**	**+0.8**
	baz=329						
WSF				S	**Sn**	**20 33 16.4**	**+0.6**
	baz=329						
TYC	**Yuchr**	**1.93**	**347**	⇑*iP*	**Pn**	**20 32 55.6**	**+2.2**
	baz=349						
TYC				*e*S	**Sn**	**20 33 19.7**	**+3.3**
	baz=349						
OWD	**Renai**	**1.93**	**356**	*e*P	**Pn**	**20 32 53.9**	**+0.2**
	baz=6.0						
WNT	**Mingjian**	**1.94**	**343**	P	**Pn**	**20 32 55.5**	**+1.8**
	baz=344						
WNT				*e*S	**Sn**	**20 33 19.1**	**+2.4**
	baz=344						
WDGT	**Dungji**	**1.97**	**309**	*e*P	**Pn**	**20 32 53.2**	**-0.7**
	baz=309						
WDGT				*e*S	**Sn**	**20 33 15.6**	**-1.8**
	baz=309						
HWA	**Hwalien**	**1.97**	**8**	*e*P	**Pn**	**20 32 54.7**	**+0.7**
	baz=20						
CHGB	**Renai**	**2.04**	**356**	⇓*e*P	**Pn**	**20 32 55.7**	**+0.6**
	baz=8.0						
DPDB	**Guoxing**	**2.04**	**350**	⇓*iP*	**Pn**	**20 32 57.1**	**+2.1**
	baz=351						
DPDB				*e*S	**Sn**	**20 33 22.3**	**+3.0**
	baz=351						
RLNB	**Erlin**	**2.06**	**335**	P	**Pn**	**20 32 55.8**	**+0.5**
	baz=336						
RLNB				*e*S	**Sn**	**20 33 20.4**	**+0.6**
	baz=336						
TWD	**Chiawan**	**2.07**	**7**	*e*P	**Pn**	**20 32 55.6**	**+0.2**
	baz=360						
WTCT	**Ta-ch'eng**	**2.07**	**333**	*e*P	**Pn**	**20 32 55.4**	**0.0**
	baz=334						
WTCT				*e*S	**Sn**	**20 33 21.5**	**+1.6**
	baz=334						
VCHM	**Qimei**	**2.11**	**305**	⇑P	**Pn**	**20 32 55.7**	**-0.2**
	baz=305						
VCHM				*e*S	**Sn**	**20 33 18.4**	**-2.4**
	baz=305						
WHF	**Hehuan Shan**	**2.12**	**359**	P	**Pn**	**20 32 56.9**	**+0.4**
	baz=9.0						
NACB	**Ninganchiao**	**2.16**	**7**	*e*Pn	**Pn**	**20 32 56.2**	**-0.5**
NACB				*e*Sn	**Sn**	**20 33 22.1**	**-0.1**
NACB	**Ninganchiao**	**2.16**	**7**	P	**Pn**	**20 32 55.9**	**-0.8**
NACB				S	**Sn**	**20 33 22.9**	**+0.6**
WCHH	**Zhanghua**	**2.17**	**341**	*e*P	**Pn**	**20 32 58.5**	**+1.8**
	baz=331						
ETLH	**Xiulin Townshi**	**2.19**	**4**	*e*P	**Pn**	**20 32 56.6**	**-0.5**
	baz=5.0						
PHUB	**P'eng-hu**	**2.19**	**313**	⇑P	**Pn**	**20 32 56.9**	**-0.2**
	baz=302						
PHUB				*e*S	**Sn**	**20 33 20.7**	**-2.3**
	baz=302						
TCU	**Taichung**	**2.20**	**345**	*e*P	**Pn**	**20 32 59.4**	**+2.2**
	baz=334						
TDCB	**Techi**	**2.23**	**356**	*e*P	**Pn**	**20 32 58.5**	**+0.7**
	baz=7.0						
TDCB				*e*S	**Sn**	**20 33 24.1**	**-0.1**
	baz=7.0						
PNG	**Penghu**	**2.24**	**314**	P	**Pn**	**20 32 57.6**	**-0.1**
	baz=302						
PNG				S	**Sn**	**20 33 23.2**	**-0.9**
	baz=302						
WHP	**Taichung City**	**2.28**	**352**	*e*P	**Pn**	**20 33 00.5**	**+2.2**
	baz=353						
WHP				*e*S	**Sn**	**20 33 28.9**	**+3.7**
	baz=353						
TWQ1	**Liyutan**	**2.37**	**348**	*e*P	**Pn**	**20 33 01.7**	**+2.1**
	baz=349						
TWQ1				*e*S	**Sn**	**20 33 31.2**	**+3.7**
	baz=349						
NNSB	**Datong**	**2.40**	**2**	*e*P	**Pn**	**20 33 01.1**	**+1.0**
	baz=10.0						
WDJ	**Dajia District**	**2.40**	**345**	*e*P	**Pn**	**20 33 01.1**	**+1.1**
	baz=335						
NNS	**Nan Shan**	**2.41**	**1**	*e*P	**Pn**	**20 33 01.0**	**+0.8**
	baz=10.0						
ENA	**Nanau**	**2.43**	**9**	*e*P	**Pn**	**20 33 00.6**	**+0.3**
	baz=1.0						
NSY	**Sanyi**	**2.44**	**348**	*e*P	**Pn**	**20 33 02.5**	**+2.0**
	baz=337						
NMLH	**Miaoli**	**2.56**	**349**	*e*P	**Pn**	**20 33 05.1**	**+3.0**
	baz=351						
NDT	**Datong Townshi**	**2.58**	**4**	*e*P	**Pn**	**20 33 03.5**	**+1.1**
	baz=15						
NSTT	**Nanjuang**	**2.62**	**354**	*e*P	**Pn**	**20 33 05.0**	**+2.1**
	baz=342						
TWC	**Suao**	**2.63**	**11**	*e*P	**Pn**	**20 33 05.3**	**+2.3**
	baz=2.0						
TWC				*e*S	**Sn**	**20 33 35.8**	**+2.1**
	baz=2.0						
EOS1	**EOS1**	**2.63**	**16**	*e*P	**Pn**	**20 33 04.8**	**+1.8**
	baz=17						
LIOB	**Emei**	**2.63**	**354**	*e*P	**Pn**	**20 33 05.2**	**+2.0**
	baz=342						
YHNB	**Yeheng**	**2.64**	**1**	*e*Pn	**Pn**	**20 33 04.3**	**+0.9**
YHNB				*e*Sn	**Sn**	**20 33 33.8**	**-0.4**
YHNB	**Yeheng**	**2.64**	**1**	⇑P	**Pn**	**20 33 04.7**	**+1.3**
	baz=9.0						
YHNB				*e*S	**Sn**	**20 33 34.4**	**+0.2**
	baz=9.0						
NSK	**Sanguang**	**2.65**	**1**	*e*P	**Pn**	**20 33 04.3**	**+0.9**
	baz=347						
TWE	**Neicheng**	**2.71**	**7**	*e*P	**Pn**	**20 33 05.0**	**+0.8**
	baz=8.0						
NWLT	**Wulai**	**2.75**	**4**	*e*P	**Pn**	**20 33 06.1**	**+1.2**
	baz=14						
ILA	**Ilan**	**2.77**	**8**	*e*P	**Pn**	**20 33 08.1**	**+3.1**
	baz=2.0						
SBCB	**Hsinchu**	**2.78**	**354**	*e*P	**Pn**	**20 33 08.5**	**+3.4**
	baz=355						
HSN	**Hsinchu**	**2.79**	**354**	*e*P	**Pn**	**20 33 09.2**	**+4.0**
	baz=356						
WLTB	**Daxi**	**2.83**	**359**	*e*P	**Pn**	**20 33 08.2**	**+2.4**
	baz=346						
WLTB				*e*S	**Sn**	**20 33 42.2**	**+3.6**
	baz=346						
JYNG	**Yonagunijimaku**	**2.85**	**31**	P	**Pn**	**20 33 07.5**	**+1.4**
JYNG				S	**Sn**	**20 33 40.3**	**+1.1**
NTC	**Toucheng**	**2.87**	**9**	*e*P	**Pn**	**20 33 08.9**	**+2.6**
	baz=2.0						
NTC				*e*S	**Sn**	**20 33 43.2**	**+3.6**
	baz=2.0						
EGS		**2.87**	**11**	*e*P	**Pn**	**20 33 07.8**	**+1.3**
	baz=23						
EGS				*e*S	**Sn**	**20 33 44.2**	**+4.5**
	baz=23						
YOJ	**Yonaguni jima**	**2.89**	**32**	*e*Pn	**Pn**	**20 33 07.8**	**+1.1**
YOJ				*e*Sn	**Sn**	**20 33 36.5**	**-3.7**
YOJ	**Yonaguni jima**	**2.89**	**32**	*e*P	**Pn**	**20 33 08.0**	**+1.3**
	baz=43						
YOJ				*e*S	**Sn**	**20 33 39.6**	**-0.6**
	baz=43						
YOJ	**Yonaguni jima**	**2.89**	**32**	*e*P	**Pn**	**20 33 07.8**	**+1.1**
YOJ				*e*		20 33 36.5	
YOJ	**Yonaguni jima**	**2.89**	**32**	P	**Pn**	**20 33 08.2**	**+1.5**
YOJ				S	**Sn**	**20 33 41.5**	**+1.3**
NCUH	**Zhongli**	**2.94**	**358**	*e*P	**Pn**	**20 33 11.1**	**+3.8**
	baz=345						
NHDH	**Xindian Distri**	**2.94**	**4**	*e*P	**Pn**	**20 33 08.5**	**+1.2**
	baz=14						
NCU	**National Centr**	**2.94**	**358**	*e*P	**Pn**	**20 33 11.1**	**+3.7**
	baz=345						
TATO	**Taipei**	**2.95**	**3**	*e*Pn	**Pn**	**20 33 08.1**	**+0.6**
TATO	**Taipei**	**2.95**	**3**	*e*P	**Pn**	**20 33 09.0**	**+1.5**
	baz=14						
TATO				*e*S	**Sn**	**20 33 42.5**	**+0.8**
	baz=14						
TIPB	**Shuangxi**	**2.98**	**9**	*e*P	**Pn**	**20 33 10.2**	**+2.3**
	baz=1.0						
TIPB				*e*S	**Sn**	**20 33 44.5**	**+2.0**
	baz=1.0						
TWB1	**Santiao Chiao**	**3.04**	**12**	*e*P	**Pn**	**20 33 11.6**	**+2.9**
	baz=23						
TWB1				*e*S	**Sn**	**20 33 46.6**	**+2.6**
	baz=23						
HATJ	**Hateruma jima**	**3.06**	**48**	P	**Pn**	**20 33 10.4**	**+1.3**
HATJ				S	**Sn**	**20 33 44.4**	**-0.1**
NWF	**Wu-fen Shan**	**3.07**	**8**	*e*P	**Pn**	**20 33 12.0**	**+2.8**
	baz=9.0						
WFSB	**Wu-fen Shan**	**3.07**	**8**	*e*P	**Pn**	**20 33 10.8**	**+1.7**
	baz=9.0						
TWS1	**Kuangyinshan**	**3.07**	**2**	*e*P	**Pn**	**20 33 12.2**	**+3.0**
	baz=348						
YM01	**YM01**	**3.13**	**4**	*e*P	**Pn**	**20 33 11.2**	**+1.3**
	baz=5.0						
YM10	**YM10**	**3.13**	**4**	*e*P	**Pn**	**20 33 11.9**	**+1.8**
	baz=5.0						
YM11	**YM11**	**3.15**	**4**	*e*P	Pn	20 33 15.1	+4.9
	baz=5.0						
YM07	**YM07**	**3.16**	**5**	*e*P	**Pn**	**20 33 11.7**	**+1.3**
	baz=6.0						
YM08	**YM08**	**3.17**	**5**	*e*P	**Pn**	**20 33 11.2**	**+0.7**
	baz=5.0						
IRIF	**Iriomote-Funau**	**3.21**	**43**	P	**Pn**	**20 33 12.4**	**+1.4**
IRIF				S	**Sn**	**20 33 48.1**	**+0.1**
TWY	**Chenhua**	**3.26**	**5**	*e*P	**Pn**	**20 33 15.3**	**+3.6**
	baz=6.0						
JKRS	**Kuro-shima**	**3.32**	**48**	P	**Pn**	**20 33 14.4**	**+1.8**
JKRS				S	**Sn**	**20 33 51.3**	**+0.4**
JIJ	**Ishigaki jima**	**3.50**	**48**	P	**Pn**	**20 33 16.0**	**+1.0**
JIJ				S	**Sn**	**20 33 54.2**	**-1.0**
KNM	**Kinmen**	**3.57**	**313**	*e*P	**Pn**	**20 33 17.4**	**+1.4**
	baz=313						
KNMB	**Chin-men Tao**	**3.63**	**313**	*e*Pn	**Pn**	**20 33 16.7**	**-0.1**
KNMB				*e*Sn	**Sn**	**20 33 56.8**	**-1.6**
KNMB	**Chin-men Tao**	**3.63**	**313**	*e*P	**Pn**	**20 33 16.8**	**-0.1**
	baz=315						
PCYT	**Pengchaiyu**	**3.66**	**11**	*e*P	**Pn**	**20 33 18.8**	**+1.5**
	baz=1.0						
JISG	**Ishigakijimahi**	**3.76

SMPP				*e*S	**Sn**	**20 34 53.1 -0.5**
BALP	**Baler**	**6.25**	**178**	*e*P	**Pn**	**20 33 54.3 +1.4**
BALP				*e*S	**Sn**	**20 35 00.9 -2.1**
SCZP	**Santa Cruz**	**6.35**	**192**	*e*P	**Pn**	**20 33 55.8 +1.6**
HKPS	**Hong Kong Po S**	**6.65**	**274**	*e*Pn	**Pn**	**20 33 58.9 +0.5**
HKPS				*e*Sn	**Sn**	**20 35 11.9 -1.1**
GZH	**Guangzhou**	**7.44**	**280**	Pn	**Pn**	**20 34 07.2 -2.0**
GZH				smax	smax	
	comp=N,130nm,0.9s					
GZH				smax	smax	
	comp=E,64nm,0.8s					
TGY	**Tagaytay City**	**7.88**	**183**	P	**Pn**	**20 34 17.8 +2.5**
	baz=12,slow=6.7,SNR=4.5					
TGY				LR	LR	20 37 58.6
	comp=Z,398nm,21.3s,baz=41,slow=42					
JOW	**Kunigami**	**7.95**	**52**	P	**Pn**	**20 34 15.9 -0.3**
	0.8nm,0.3s,baz=167,slow=12,SNR=6.8					
JOW				S	**Sn**	**20 35 44.4 -0.6**
	0.9nm,0.3s,baz=128,slow=13,SNR=5.3					
JOW	**Kunigami**	**7.95**	**52**	*e*Pn	**Pn**	**20 34 15.5 -0.7**
JOW				*e*Sn	**Sn**	**20 35 43.0 -1.9**
LUBP	**Lubang**	**8.30**	**187**	*e*P	**Pn**	**20 34 24.2 +3.2**
PVCP	**Virac**	**8.80**	**162**	*e*P	**Pn**	**20 34 28.7 +0.8**
SSE	**Sheshan**	**9.04**	**359**	*e*Pn	**Pn**	**20 34 32.2 +1.0**
NJ2	**Nanjing**	**10.23**	**348**	*e*P	Pn	20 34 52.8 +5.3
NJ2				pmax	pmax	
	comp=Z,22nm,0.8s					
NJ2				LR	LR	
	comp=N,460nm,9.5s					
NJ2				LR	LR	
	comp=E,390nm,9.0s					
NJ2				LR	LR	
	comp=Z,600nm,12.3s					
WHN	**Wuhan**	**10.54**	**325**	P	**Pn**	**20 34 51.2 -0.5**
WHN				S	**Sn**	**20 36 44.5 -4.0**
WHN				LR	LR	
	comp=Z,1μm,15.2s					
JNU	**Nakatsue**	**13.93**	**35**	P	**Pn**	**20 35 38.0 -0.1**
	0.2nm,0.3s,baz=170,slow=6.1,SNR=2.7					
JNU	**Nakatsue**	**13.93**	**35**	*e*Pn	**Pn**	**20 35 38.7 +0.6**
TIA	**Tai'an**	**14.61**	**346**	P	**P**	**20 35 55.6 +2.4**
TIA				S	**Sn**	**20 38 29.1 +1.2**
TIA				AMB	AMB	
	comp=Z,9.0nm,0.8s					
TIA				pmax	pmax	
	comp=Z,11nm,1.0s					
TIA				LR	LR	
	comp=N,430nm,16.4s					
TIA				LR	LR	
	comp=E,230nm,7.8s					
TIA				LR	LR	
	comp=Z,570nm,18.5s					
DLV	**T Lat**	**15.82**	**233**	*e*Pn	**Pn**	**20 36 04.2 +0.6**
	comp=Z,12nm,1.0s					
XAN	**Xi'an**	**16.20**	**320**	P	**Pn**	**20 36 09.3 +1.1**
XAN				pP	pP	20 36 15.9 -4.0
XAN				pmax	pmax	
	comp=Z,16nm,0.9s					
XAN				pmax	pmax	
	comp=Z,92nm,4.1s					
XAN				LR	LR	
	comp=Z,280nm,18.4s					
XAN				LR	LR	
	comp=Z,170nm,15.2s					
XAN				LR	LR	
	comp=Z,440nm,15.7s					
XAN	**Xi'an**	**16.20**	**320**	*e*Pn	**Pn**	**20 36 08.8 +0.6**
	comp=Z,14nm,0.8s					
XAN	**Xi'an**	**16.20**	**320**	*e*P	**Pn**	**20 36 08.8 +0.6**
XAN				pmax	pmax	
	comp=Z,14nm,0.8s					
KS15	**Wonju Array Si**	**16.39**	**19**	*e*Pn	**Pn**	**20 36 11.6 +1.2**
	comp=Z,9.3nm,0.7s					
KSRS	**Korea Array**	**16.41**	**19**	P	**Pn**	**20 36 11.9 +1.2**
	comp=Z,0.2nm,0.3s,baz=202,slow=10,SNR=9.9					
KSRS				LR	LR	20 42 33.3
	comp=Z,152nm,21.7s,baz=190,slow=37					
BJT	**Baijiatuau**	**18.47**	**347**	*e*P	**Pn**	**20 36 36.6 +0.4**
	comp=Z,7.1nm,0.7s					
BJT	**Baijiatuau**	**18.47**	**347**	*e*P	**Pn**	**20 36 36.6 +0.4**
BJT				pmax	pmax	
	comp=Z,7.0nm,0.7s					
INU	**Inuyama**	**19.11**	**43**	*e*P	**P**	**20 36 42.2 -0.7**
	comp=Z,31nm,0.9s					
MAJO	**Matsushiro**	**20.61**	**42**	*e*P	**P**	**20 36 58.1 -1.2**
	comp=Z,30nm,1.0s					
MAJO	**Matsushiro**	**20.61**	**42**	⇓*i*P	Pn	20 37 02.0 +0.3
MAJO				pmax	pmax	
	comp=Z,44nm,1.3s					
MAT	**Matsushiro**	**20.61**	**42**	P	Pn	20 37 01.8 +0.1
MAT				*e*S	**S**	**20 40 45.6 -2.2**
MJAR	**Matsushiro Arr**	**20.61**	**42**	P	**P**	**20 36 58.4 -0.9**
	comp=Z,3.1nm,0.7s,baz=222,slow=10.0,SNR=5.0					
MJAR				LR	LR	20 45 26.5
	comp=Z,62nm,19.0s,baz=210,slow=38					
MJB9	**Matsu-Tunnel**	**20.61**	**42**	*e*P	**P**	**20 36 58.3 -1.0**
	comp=Z,31nm,1.0s					
LZH	**Lanzhou**	**20.68**	**316**	⇓P	Pn	20 37 03.4 +0.6
LZH				pP	pP	20 37 06.6 -2.7
LZH				sP	sP	20 37 10.2 -4.5
LZH				PP	**PnPn**	**20 37 21.1 +2.3**
LZH				pmax	pmax	
	comp=Z,32nm,1.4s					
LZH				pmax	pmax	
	comp=Z,100nm,4.7s					
LZH				LR	LR	
	comp=Z,240nm,16.8s					
LZH				LR	LR	
	comp=Z,250nm,14.6s					
LZH				LR	LR	
	comp=Z,360nm,17.3s					
BTO	**Baotou**	**20.86**	**335**	*e*P	Pn	20 37 05.4 +0.7
CMMT	**Chiang Mai**	**21.20**	**265**	P	**P**	**20 37 10.8 +5.0**
	comp=Z,2.3nm,0.9s					
CHTO	**Chiang Mai**	**21.20**	**265**	*e*P	**P**	**20 37 06.4 +0.6**
	comp=Z,3.3nm,0.8s					
CHTO	**Chiang Mai**	**21.20**	**265**	*e*P	**P**	**20 37 06.4 +0.6**
CHTO				pmax	pmax	
	comp=Z,3.0nm,0.8s					
CM31	**Chiang Mai Arr**	**21.28**	**264**	*e*P	**P**	**20 37 07.8 +1.1**
	comp=Z,4.9nm,0.9s					
CMAR	**Chiang Mai Arr**	**21.28**	**264**	P	**P**	**20 37 08.7 +1.9**
	comp=Z,1.8nm,0.7s,baz=68,slow=8.1,SNR=14					
CMAR				sP	**sP**	**20 37 24.9 +4.4**
	comp=Z,1.6nm,0.8s,baz=64,slow=7.3,SNR=4.0					
CMAR				PcP	**PcP**	**20 41 10.9 +0.2**
	comp=Z,2.4nm,0.7s,baz=52,slow=0.7,SNR=21					
CMAR				ScP	**ScP**	**20 44 42.4 -2.6**
	comp=Z,0.8nm,0.8s,baz=39,slow=1.3,SNR=7.1					
CMAR				LR	LR	20 47 28.2
	comp=Z,107nm,18.3s,baz=78,slow=42					
SBUM	**Sibu**	**21.36**	**206**	*e*P	**P**	**20 37 07.9 +0.4**
	comp=Z,5.9nm,0.9s					
SBUM	**Sibu**	**21.36**	**206**	P	**P**	**20 37 10.0 +2.5**
MRSI	**Marisa**	**21.42**	**178**	P	**P**	**20 37 10.4 +2.3**
	comp=Z,55nm,0.8s,comp=Z,466nm					
KMSI	**Cibinong**	**21.47**	**173**	P	**P**	**20 37 09.9 +1.2**
	comp=Z,66nm,1.1s,comp=Z,1μm					
MPSI	**Mapaga**	**21.59**	**184**	P	**P**	**20 37 11.0 +1.0**
	comp=Z,14nm,0.8s					
TNTI	**Ternate**	**21.92**	**164**	*e*P	**P**	**20 37 12.3 -1.2**
	comp=Z,24nm,0.7s					
TNTI	**Ternate**	**21.92**	**164**	P	**P**	**20 37 12.0 -1.5**
	comp=Z,41nm,0.8s					
CN2	**Changchun**	**22.00**	**8**	*e*P	**P**	**20 37 14.6 +0.5**
CN2				pmax	pmax	
	comp=Z,10.0nm,0.5s					
VLA	**Vladivostok**	**22.82**	**20**	*d i*P	**P**	**20 37 24.7 +1.9**
VLA				pmax	pmax	
	comp=Z,22nm,0.9s					
LUWI	**Luwuk**	**22.96**	**176**	*e*P	**P**	**20 37 24.7 +0.1**
	comp=Z,99nm,0.9s					
LUWI	**Luwuk**	**22.96**	**176**	P	**P**	**20 37 25.7 +1.1**
	comp=Z,126nm,0.9s,comp=Z,942nm					
KSM	**Kuching**	**23.06**	**209**	*e*P	**P**	**20 37 25.4 -0.2**
	comp=Z,12nm,0.9s					
KSM	**Kuching**	**23.06**	**209**	P	**P**	**20 37 27.0 +1.4**
MDJ	**Mudanjiang**	**23.55**	**15**	*e*P	**P**	**20 37 30.1 -0.1**
	comp=Z,14nm,0.8s					
USA0B	**Ussuriysk Arra**	**23.82**	**19**	*e*P	**P**	**20 37 32.8 +0.1**
	comp=Z,9.7nm,0.9s					
USA0B	**Ussuriysk Arra**	**23.82**	**19**	*e*P	**P**	**20 37 32.8 +0.1**
USA0B				pmax	pmax	
	comp=Z,10.0nm,0.9s					
USRK	**Ussuriysk Ar.**	**23.82**	**19**	P	**P**	**20 37 29.3 -3.5**
	comp=Z,5.1nm,0.7s,baz=218,slow=12,SNR=10					
USRK				LR	LR	20 46 48.1
	comp=Z,105nm,22.0s,baz=178,slow=36					
TTSI	**Tana Toraja**	**24.95**	**184**	P	**P**	**20 37 44.1 +0.8**
	comp=Z,29nm,0.7s					
GTA	**Gaotai**	**25.24**	**318**	P	**P**	**20 37 47.1 +1.1**
GTA				pP	pP	20 37 52.2 -3.5
GTA				sP	sP	20 37 55.2 -4.8
GTA				PcP	**PcP**	**20 41 19.6 +0.8**
GTA				ScP	**ScP**	**20 44 56.0 +0.6**
GTA				pmax	pmax	
	comp=Z,7.0nm,1.2s					
GTA				pmax	pmax	
	comp=Z,62nm,6.0s					
GTA				LR	LR	
	comp=Z,130nm,15.8s					
GTA				LR	LR	
	comp=Z,150nm,17.5s					
GTA				LR	LR	
	comp=Z,200nm,17.2s					
SPSI	**Sidrap Palu**	**25.86**	**184**	P	**P**	**20 37 52.3 +0.7**
	comp=Z,9.1nm,1.0s					
BNSI	**Bone**	**26.28**	**183**	P	**P**	**20 37 55.7 +0.3**
	comp=Z,14nm,0.8s					
KAPI	**Kappang**	**26.91**	**183**	P	**P**	**20 38 00.3 -0.7**
	comp=Z,3.0nm,0.4s,baz=23,slow=7.4,SNR=3.2					
ERM	**Erimo**	**27.08**	**38**	⇑*e*P	**P**	**20 38 05.1 +2.7**
ERM				pmax	pmax	
	comp=Z,18nm,1.0s					
SHL	**Shillong**	**27.13**	**283**	*e*P	**P**	**20 38 03.7 +0.4**
	comp=Z,10nm,1.1s					
HIA	**Hailar**	**27.22**	**358**	*e*P	**P**	**20 38 02.8 -0.9**
	comp=Z,11nm,0.6s					
HIA	**Hailar**	**27.22**	**358**	*e*P	**P**	**20 38 02.8 -0.9**
HIA				pmax	pmax	
	comp=Z,11nm,0.6s					
LSA	**Lhasa**	**28.14**	**292**	*e*P	**P**	**20 38 12.9 +0.3**
	comp=Z,7.6nm,1.3s					
ASAJ	**Asahikawa**	**28.20**	**34**	P	**P**	**20 38 12.8 +0.5**
	comp=Z,10.0nm,0.5s,baz=217,slow=11,SNR=18					
ULN	**Ulaanbaatar**	**28.22**	**339**	*e*P	**P**	**20 38 12.8 +0.1**
	comp=Z,10nm,0.9s					
ULN	**Ulaanbaatar**	**28.22**	**339**	*c i*P	**P**	**20 38 13.0 +0.3**
ULN				pmax	pmax	
	comp=Z,13nm,1.0s					
PPBI	**Pangkal Pinang**	**28.24**	**214**	P	**P**	**20 38 12.8 -0.2**
	comp=Z,5.3nm,0.8s					
KLR	**Kul'dur**	**28.39**	**14**	P	**P**	**20 38 14.2 +0.1**
	comp=Z,2.6nm,0.5s,baz=210,slow=9.7,SNR=13					
KLR				PcP	**PcP**	**20 41 25.3 -0.5**
	comp=Z,2.4nm,0.6s,baz=190,slow=3.4,SNR=9.8					
KLR	**Kul'dur**	**28.39**	**14**	⇓*e*P	**P**	**20 38 14.8 +0.7**
KLR				pmax	pmax	
	comp=Z,3.0nm,0.7s					
SONA0	**Songino Array**	**28.41**	**339**	*e*P	**P**	**20 38 14.2 -0.3**
SONA0				*e*PcP	**PcP**	**20 41 26.0 -0.2**
SONA0				*e*ScP	**ScP**	**20 45 03.4 -1.3**
SONM	**Songino Array**	**28.41**	**339**	P	**P**	**20 38 14.2 -0.3**
	comp=Z,4.3nm,0.6s,baz=156,slow=9.4,SNR=28					
SONM				PcP	**PcP**	**20 41 26.0 -0.2**
	comp=Z,0.3nm,0.4s,baz=160,slow=4.6,SNR=4.2					
SONM				ScP	**ScP**	**20 45 03.4 -1.3**
	comp=Z,0.8nm,0.9s,baz=160,slow=4.6,SNR=3.9					
SONM				LR	LR	20 51 01.9
	comp=Z,559nm,18.4s,baz=160,slow=39					
YSS	**Yuzh-Sakhalins**	**30.32**	**30**	*e*P	**P**	**20 38 30.8 -0.4**
	comp=Z,30nm,1.1s					
YSS	**Yuzh-Sakhalins**	**30.32**	**30**	*e*P	**P**	**20 38 31.9 +0.7**
YSS				*e*		20 39 40.1
YSS				pmax	pmax	
	comp=Z,20nm,1.0s					
MMRI	**Maumere**	**30.47**	**178**	*e*P	**P**	**20 38 32.4 -0.4**
	comp=Z,36nm,0.9s					
EDFI	**Ende, Flores**	**30.58**	**179**	P	**P**	**20 38 34.1 +0.3**
DNP	**Denpasar**	**31.08**	**192**	P	**P**	**20 38 41.0 +2.9**
SNSI	**Sinabang, Aceh**	**31.14**	**235**	P	**P**	**20 38 39.2 +0.5**
ZAK	**Zakamensk**	**31.66**	**338**	*e*P	**P**	**20 38 38.6 -4.4**
ZAK				pmax	pmax	
	comp=Z,4.0nm,1.3s					
TYV	**Tymovskoe**	**33.28**	**25**	*e*P	**P**	**20 38 55.3 -1.8**
TYV				*e*		20 44 16.1
TYV				pmax	pmax	
	comp=Z,8.0nm,1.8s					
TYV				pmax	pmax	
	comp=Z,100nm,3.6s					
MOY	**Mondy**	**33.53**	**337**	*e*P	**P**	**20 38 59.9 +0.4**
WMQ	**Urumqi**	**35.27**	**316**	*e*P	**P**	**20 39 18.5 +4.0**
BOD	**Bodaibo**	**36.16**	**353**	*e*P	**P**	**20 39 21.0 -0.9**
BOD				pmax	pmax	
	comp=Z,3.0nm,1.0s					
DGZ	**Jazzator, Alta**	**38.40**	**324**	*d i*P	**P**	**20 39 43.0 +1.8**
DGZ				pmax	pmax	
	comp=Z,3.0nm,0.8s					
MK31	**Makanchi Array**	**39.99**	**318**	*e*P	**P**	**20 39 55.3 +0.9**
	comp=Z,11nm,0.8s					
MK31	**Makanchi Array**	**39.99**	**318**	*e*P	**P**	**20 39 55.3 +0.9**
MK31				pmax	pmax	
	comp=Z,11nm,0.8s					
MK32	**Makanchi Array**	**39.99**	**318**	*e*P	**P**	**20 39 55.8 +1.3**
MK32				*e*PcP	**PcP**	**20 41 59.1 0.0**
MK32				*e*ScP	**ScP**	**20 45 45.3 -0.2**
MKAR	**Makanchi Array**	**39.99**	**318**	P	**P**	**20 39 55.8 +1.3**
	comp=Z,9.9nm,0.7s,baz=114,slow=10.0,SNR=130					
MKAR				PcP	**PcP**	**20 41 59.1 0.0**
	comp=Z,2.2nm,0.6s,baz=90,slow=2.4,SNR=9.1					
MKAR				ScP	**ScP**	**20 45 45.3 -0.2**
	comp=Z,0.7nm,0.7s,baz=103,slow=6.0,SNR=4.9					
MKAR				LR	LR	20 58 12.4
	comp=Z,104nm,19.7s,baz=75,slow=39					
FITZ	**Fitzroy Crossi**	**40.09**	**174**	P	**P**	**20 39 53.6 -1.8**
	comp=Z,1.2nm,0.4s,baz=342,slow=9.6,SNR=7.6					
MAKZ	**Makanchi**	**40.20**	**318**	*e*P	**P**	**20 39 56.9 +0.8**
	comp=Z,14nm,0.8s					
YAK	**Yakutsk**	**40.40**	**6**	*e*P	**P**	**20 39 56.8 -0.7**
	comp=Z,29nm,0.7s					
YAK	**Yakutsk**	**40.40**	**6**	*e*P	**P**	**20 39 56.6 -0.9**
YAK				*e**PP	**sP**	**20 40 13.5 +2.4**
YAK				*e*		20 41 27.9
YAK				*e*S	**S**	**20 46 03.8 +0.6**
YAK				*e*SS	**SS**	**20 48 53.0 -10**
YAK				*e*		20 49 55.7
PDGK	**Podgornoye**	**40.59**	**312**	P	**P**	**20 40 01.2 +1.7**
PDGK				pmax	pmax	
	comp=Z,9.0nm,0.8s					
PETK	**Petropavlovsk-**	**41.61**	**33**	P	**P**	**20 40 06.0 -1.6**
	comp=Z,1.1nm,0.5s,baz=243,slow=6.3,SNR=7.5					
PETK				PcP	**PcP**	**20 42 02.9 -1.2**
	comp=Z,1.4nm,0.8s,baz=318,slow=1.9,SNR=3.2					
PETK				LR	LR	20 58 05.6
	comp=Z,54nm,18.2s,baz=225,slow=37					
PEA1	**Petropavlovsk-**	**41.61**	**33**	*e*P	**P**	**20 40 06.0 -1.6**
PEA1				*e*PcP	**PcP**	**20 42 02.9 -1.2**
COEN	**Coen**	**41.69**	**147**	*e*P	**P**	**20 40 07.8 -0.9**
	comp=Z,9.9nm,0.6s					
ZAA0	**Zalesovo Array**	**42.13**	**328**	*e*P	**P**	**20 40 12.2 +0.3**
	comp=Z,15nm,0.9s					
ZALV	**Zalesovo Beam**	**42.13**	**328**	P	**P**	**20 40 12.1 +0.2**
	comp=Z,14nm,0.8s,baz=115,slow=7.5,SNR=47					
ZALV				PcP	**PcP**	**20 42 04.8 -1.0**
	comp=Z,2.2nm,0.6s,baz=120,slow=3.3,SNR=5.6					
ZALV				LR	LR	20 59 10.7
	comp=Z,96nm,20.8s,baz=70,slow=38					
ZALV	**Zalesovo Beam**	**42.13**	**328**	*i* P	**P**	**20 40 12.3 +0.4**
ZALV				pmax	pmax	
	comp=Z,13nm,0.8s					
ZAA1	**Zalesovo Array**	**42.14**	**328**	*e*PcP	**PcP**	**20 42 04.8 -1.0**
H11N1	**WAKE ISLAND Hy**	**42.53**	**84**	T	T	21 25 38.8
	baz=282,slow=74,SNR=100					
H11N2	**WAKE ISLAND Hy**	**42.54**	**84**	T	T	21 25 38.9
	baz=282,slow=74,SNR=128					
H11N3	**WAKE ISLAND Hy**	**42.55**	**84**	T	T	21 25 33.7
	baz=282,slow=84,SNR=84					
NRN	**Naryn**	**42.58**	**308**	*e*P	**P**	**20 40 16.5 +0.4**
	comp=Z,5.4nm,0.9s					
NRN	**Naryn**	**42.58**	**308**	*e*P	**P**	**20 40 16.5 +0.4**
NRN				pmax	pmax	
	comp=Z,5.0nm,0.9s					
H11S3	**WAKE ISLAND Hy**	**42.60**	**86**	T	T	21 25 38.1
	baz=283,slow=75,SNR=182					
H11S1	**WAKE ISLAND Hy**	**42.61**	**86**	T	T	21 25 36.9
	baz=283,slow=75,SNR=196					
H11S2	**WAKE ISLAND Hy**	**42.62**	**86**	T	T	21 25 37.6
	baz=283,slow=75,SNR=150					
PSAC1	**Pilbara Seismi**	**43.31**	**182**	*e*P	**P**	**20 40 20.4 -1.3**
	comp=Z,47nm,1.4s					
NVS	**Novosibirsk**	**43.40**	**329**	⇓*i*P	**P**	**20 40 23.0 +0.9**
NVS				pmax	pmax	
	comp=Z,16nm,1.5s					
NVS				pmax	pmax	
	comp=N,7.0nm,1.4s					
NVS				pmax	pmax	
	comp=E,11nm,1.4s					
WRAB	**Tennant Creek**	**43.60**	**162**	⇓*e*P	**P**	**20 40 22.2 -1.9**
WRAB				pmax	pmax	
	comp=Z,7.0nm,0.9s					
WB2	**Warramunga Arr**	**43.60**	**162**	*e*P	**P**	**20 40 22.8 -1.3**
	comp=Z,9.6nm,0.6s					
NIL	**Nilore**	**43.71**	**296**	*e*P	**P**	**20 40 25.2 +0.2**
	comp=Z,7.4nm,0.8s					
NIL	**Nilore**	**43.71**	**296**	*e*P	**P**	**20 40 25.2 +0.2**
NIL				pmax	pmax	
	comp=Z,7.0nm,0.8s					
KURK	**Kurchatov**	**43.84**	**322**	*e*P	**P**	**20 40 26.2 +0.5**
	comp=Z,15nm,0.9s					
KURK	**Kurchatov**	**43.84**	**322**	*c i*P	**P**	**20 40 26.5 +0.8**
KURK				pmax	pmax	
	comp=Z,29nm,1.7s					
BTK	**Batken**	**46.21**	**305**	*e*P	**P**	**20 40 45.2 +0.3**
	comp=Z,2.3nm,0.6s					
BTK	**Batken**	**46.21**	**305**	*e*P	**P**	**20 40 45.2 +0.3**
BTK				pmax	pmax	
	comp=Z,2.0nm,0.6s					
GAR	**Garm**	**46.48**	**303**	*e*P	**P**	**20 40 47.4 +0.4**
	comp=Z,16nm,0.7s					
GAR	**Garm**	**46.48**	**303**	*e*P	**P**	**20 40 47.4 +0.4**
GAR				pmax	pmax	
	comp=Z,16nm,0.7s					
KK31	**Karatay Array**	**46.90**	**309**	*e*P	**P**	**20 40 50.6 +0.5**
	comp=Z,3.7nm,1.0s					
KK31				*e*PcP	**PcP**	**20 42 22.7 +0.2**
KK31	**Karatay Array**	**46.90**	**309**	*e*P	**P**	**20 40 50.7 +0.5**
KK31				*e*		20 42 22.7
KK31				pmax	pmax	
	comp=Z,4.0nm,1.0s					
KKAR	**Karatay Array**	**46.90**	**309**	*e*P	**P**	**20 40 50.6 +0.5**
	comp=Z,3.7nm,1.0s					
KKAR				*e*PcP	**PcP**	**20 42 22.6 +0.1**
KKAR	**Karatay Array**	**46.90**	**309**	*e*P	**P**	**20 40 50.7 +0.5**
KKAR				*e*		20 42 22.6
KKAR				pmax	pmax	
	comp=Z,4.0nm,1.0s					
AS31	**Alice Springs**	**47.03**	**164**	*e*P	**P**	**20 40 50.3 -0.9**
	comp=Z,1.4nm,0.6s					
ASAR	**Alice Springs**	**47.03**	**164**	P	**P**	**20 40 50.0 -1.2**
	comp=Z,2.8nm,0.5s,baz=350,slow=9.0,SNR=61					
ASAR				PcP	**PcP**	**20 42 22.1 -1.0**
	comp=Z,0.8nm,0.7s,baz=2.9,slow=3.7,SNR=4.2					
ASAR				ScP	**ScP**	**20 46 11.7 -2.6**
	comp=Z,0.3nm,0.5s,baz=351,slow=4.8,SNR=3.6					
KBL	**Kabul**	**47.23**	**297**	*e*P	**P**	**20 40 53.9 +0.8**
	comp=Z,8.0nm,0.9s					
KBL	**Kabul**	**47.23**	**297**	*e*P	**P**	**20 40 53.9 +0.8**
KBL				pmax	pmax	
	comp=Z,8.0nm,0.9s					
CTAO	**Charters Tower**	**48.42**	**148**	*e*P	**P**	**20 41 01.6 -0.5**
	comp=Z,15nm,1.4s					
CTAO	**Charters Tower**	**48.42**	**148**	*e*P	**P**	**20 41 01.6 -0.5**
CTAO				pmax	pmax	
	comp=Z,15nm,1.4s					
BRVK	**Borovoye**	**49.50**	**322**	*e*P	**P**	**20 41 10.8 +0.8**
	comp=Z,25nm,1.5s					
BRVK				*e*PcP	**PcP**	**20 42 31.4 -0.2**
BRVK	**Borovoye**	**49.50**	**322**	*e*P	**P**	**20 41 10.8 +0.8**
BRVK				*e*		20 42 31.4
BRVK				pmax	pmax	
	comp=Z,25nm,1.5s					
TIXI	**Tiksi**	**49.84**	**3**	*e*P	**P**	**20 41 11.5 -0.8**
	comp=Z,8.7nm,0.9s					
TIXI				*e*PcP	**PcP**	**20 42 32.0 -0.5**
TIXI	**Tiksi**	**49.84**	**3**	⇑*i*P	**P**	**20 41 11.8 -0.5**
TIXI				pmax	pmax	
	comp=Z,8.0nm,0.8s					
NRIK	**Noril'sk**	**51.52**	**345**	P	**P**	**20 41 24.6 -0.4**
	comp=Z,12nm,0.5s,baz=130,slow=7.5,SNR=25					
NRIK				LR	LR	21 05 26.2
	comp=Z,115nm,20.0s,baz=171,slow=38					
FORT	**Forrest**	**52.89**	**173**	*e*P	**P**	**20 41 35.1 -0.5**
	comp=Z,28nm,0.9s					
BILL	**Bilibino**	**53.68**	**19**	*e*P	**P**	**20 41 41.3 +0.3**
	comp=Z,5.4nm,1.2s					
BILL	**Bilibino**	**53.68**	**19**	⇑*i*P	**P**	**20 41 41.9 +0.9**
BILL				*i*		20 43 42.5
BILL				pmax	pmax	
	comp=Z,5.0nm,1.3s					
BILL				MLR	MLR	
	comp=Z,116nm,22.0s					
ABKAR	**Akbulak array**	**55.05**	**315**	*e*P	**P**	**20 41 52.1 +0.8**
	comp=Z,6.0nm,1.1s					
ABKAR				*e*PcP	**PcP**	**20 42 52.2 -0.3**
SVE	**Sverdlovsk**	**55.86**	**325**	⇓*e*P	**P**	**20 41 57.9 +0.9**
SVE				pmax	pmax	
	comp=Z,16nm,0.9s					
GEYT	**Alibeck**	**56.01**	**302**	P	**P**	**20 42 00.1 +1.7**
	comp=Z,3.0nm,0.8s,baz=82,slow=3.1,SNR=11					
GEYT				LR	LR	21 09 54.9
	comp=Z,64nm,19.3s,baz=120,slow=40					
GYA0B	**ALIBECK ARRAY**	**56.01**	**302**	*e*P	**P**	**20 41 59.2 +0.8**
	comp=Z,5.2nm,0.9s					
BBOO	**Buckleboo**	**56.31**	**165**	*e*P	**P**	**20 41 59.7 -0.7**
	comp=Z,61nm,1.4s					
ARU	**Arti**	**56.91**	**324**	*e*P	**P**	**20 42 04.8 +0.4**
	comp=Z,12nm,0.6s					
ARU	**Arti**	**56.91**	**324**	*c i*P	**P**	**20 42 04.7 +0.2**
ARU				pmax	pmax	
	comp=Z,5.0nm,0.5s					
STKA	**Stephens Creek**	**57.00**	**159**	P	**P**	**20 42 04.4 -0.9**
	comp=Z,2.3nm,0.5s,baz=338,slow=6.7,SNR=12					
STKA	**Stephens Creek**	**57.00**	**159**	*e*P	**P**	**20 42 04.6 -0.7**
	comp=Z,3.2nm,1.4s					
STKA	**Stephens Creek**	**57.00**	**159**	*e*P	**P**	**20 42 04.6 -0.7**
STKA				pmax	pmax	
	comp=Z,3.0nm,1.4s					
TOO	**Toolangi**	**63.49**	**159**	*e*P	**P**	**20 42 49.0 -0.7**
	comp=Z,47nm,1.6s					
TOO	**Toolangi**	**63.49**	**159**	*e*P	**P**	**20 42 49.0 -0.7**
TOO				pmax	pmax	
	comp=Z,47nm,1.6s					
PRGR	**Permogore**	**64.09**	**329**	⇑*i*P	**P**	**20 42 53.1 -0.2**
PRGR				pmax	pmax	
	comp=Z,14nm,0.7s					
NCK	**Nalchik**	**66.47**	**309**	⇑*e*P	**P**	**20 43 09.4 +0.3**
NCK				pmax	pmax	
	comp=Z,12nm,1.4s					
VRH	**Novokhopyorsk**	**66.72**	**318**	*e*P	**P**	**20 43 09.5

KDAK	Kodiak Island	69.61	35	eP	P	20 43 28.0	-0.5
	comp=Z,4.6nm,0.8s						
KDAK	Kodiak Island	69.61	35	eP	P	20 43 28.0	-0.5
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRLK	Bradley Lake	70.16	33	eP	P	20 43 31.8	-0.1
	comp=Z,4.1nm,0.7s						
WRH	Wood River Hil	70.63	27	eP	P	20 43 34.4	-0.3
	comp=Z,1.9nm,0.8s						
COLA	College	70.66	27	⇓eP	P	20 43 37.3	+2.5
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KEV	Kevo	71.03	338	eP	P	20 43 37.4	+0.4
	comp=Z,17nm,1.2s						
KEV	Kevo	71.03	338	eP	P	20 43 37.4	+0.4
KEV				pmax	pmax		
	comp=Z,17nm,1.2s						
MSF	Maaselka	71.05	334	P	P	20 43 38.7	+1.5
MSF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ILAR	Eielson Array	71.08	27	P	P	20 43 35.0	-2.4
	comp=Z,0.6nm,0.5s,baz=277,slow=5.3,SNR=8.2						
SCM	Sheep Creek Mo	71.48	30	eP	P	20 43 39.5	-0.5
	comp=Z,7.3nm,1.1s						
SCM	Sheep Creek Mo	71.48	30	eP	P	20 43 39.5	-0.5
SCM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARCES	ARCESS Array B	71.59	338	P	P	20 43 38.5	-1.9
	comp=Z,6.1nm,0.3s,baz=73,slow=10,SNR=16						
SPA0	Spitsbergen Ar	71.62	348	eP	P	20 43 40.6	+0.1
	comp=Z,23nm,1.1s						
HSPB	Hornsund (broa	72.19	347	eP	P	20 43 44.3	+0.4
HSPB	Hornsund (broa	72.19	347	eP	P	20 43 44.3	+0.4
SUF	Sumiainen	73.00	331	P	P	20 43 50.0	+1.0
SUF				pmax	pmax		
	comp=Z,19nm,0.8s						
FIA1	FINESS Array S	73.37	330	eP	P	20 43 51.3	+0.1
	comp=Z,8.8nm,0.8s						
FINES	FINESS Array B	73.37	330	P	P	20 43 50.4	-0.7
	comp=Z,3.7nm,0.4s,baz=53,slow=6.1,SNR=72						
FINES				LR	LR	21 18 59.8	
	comp=Z,108nm,19.3s,baz=46,slow=38						
FINES	FINESS Array B	73.37	330	i P	P	20 43 51.5	+0.3
FINES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
EGAK	Eagle	73.46	26	eP	P	20 43 51.5	-0.1
	comp=Z,6.9nm,1.3s						
VSU	Vasula	73.85	327	⇓iP	P	20 43 54.9	+0.9
VSU				pmax	pmax		
	comp=Z,41nm,1.0s						
DAWY	Dawson	74.41	27	eP	P	20 43 57.0	-0.3
	comp=Z,3.2nm,0.8s						
CTGM	Chitina Glacie	74.49	30	eP	P	20 43 57.6	-0.3
	comp=Z,5.5nm,0.6s						
BR131	Keskin Array S	74.56	307	eP	P	20 43 59.1	+0.4
	comp=Z,2.6nm,0.6s						
BR131	Keskin Array S	74.56	307	eP	P	20 43 59.1	+0.4
BR131				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRTR	Keskin Array B	74.56	307	P	P	20 43 58.9	+0.1
	comp=Z,1.8nm,0.6s,baz=107,slow=3.3,SNR=18						
BRTR	Keskin Array B	74.56	307	ceP	P	20 43 59.5	+0.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	74.57	319	P	P	20 43 57.7	-0.7
	comp=Z,2.7nm,0.6s,baz=60,slow=6.2,SNR=16						
AKASG				LR	LR	21 19 10.7	
	comp=Z,46nm,20.2s,baz=75,slow=38						
AKASG	Malin Array Be	74.57	319	ceP	P	20 43 58.2	-0.1
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KIEV	Kiev	74.58	319	eP	P	20 43 58.2	-0.2
	comp=Z,11nm,1.2s						
KIEV	Kiev	74.58	319	⇓iP	P	20 43 58.2	-0.2
KIEV	Kiev	74.58	319	d iP	P	20 43 58.4	0.0
KIEV				pmax	pmax		
	comp=Z,11nm,1.3s						
EPYK	Eagle Plains	74.72	24	eP	P	20 43 58.7	-0.3
	comp=Z,12nm,1.4s						
IDID	Didziasalis	74.72	324	eP	P	20 43 59.8	+0.7
IDID				IAmb	IAmb	20 44 01.2	
	comp=Z,7.8nm,0.8s						
IZAR	Zarasai	74.87	324	eP	P	20 44 00.7	+0.7
IZAR				IAmb	IAmb	20 44 01.9	
	comp=Z,9.2nm,0.5s						
ISAL	Salakas	74.98	324	eP	P	20 44 01.4	+0.7
ISAL				IAmb	IAmb	20 44 02.6	
	comp=Z,4.8nm,0.6s						
IIGN	Ignalina	75.00	324	eP	P	20 44 01.4	+0.7
IIGN				IAmb	IAmb	20 44 02.7	
	comp=Z,3.8nm,0.7s						
ANTO	Ankara	75.14	307	eP	P	20 44 02.2	+0.2
	comp=Z,6.9nm,0.6s						
ANTO	Ankara	75.14	307	⇓iP	P	20 44 02.6	+0.6
ANTO	Ankara	75.14	307	eP	P	20 44 02.2	+0.2
ANTO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
INK	Inuvik	75.18	22	eP	P	20 44 01.1	-0.5
	comp=Z,3.9nm,0.9s						
INK	Inuvik	75.18	22	eP	P	20 44 01.1	-0.5
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLCR		76.41	313	⇓iP	P	20 44 09.9	+0.9
TLCR		76.41	313	P	P	20 44 09.8	+0.8
CFR	Carcaliu	76.87	314	⇓iP	P	20 44 12.3	+0.7
SUW	Suwalki	77.09	323	eP	P	20 44 13.2	+0.5
SUW	Suwalki	77.09	323	eP	P	20 44 12.9	+0.3
	comp=Z,54nm,0.9s						
SUW	Suwalki	77.09	323	eP	P	20 44 13.0	+0.3
SUW				pmax	pmax		
	comp=Z,54nm,0.9s						
TLB	Topalu	77.12	313	⇑iP	P	20 44 13.6	+0.6
ICOR	Ion Corvin	77.43	313	⇓iP	P	20 44 15.8	+1.0
TESR	Tescani	77.44	315	⇓iP	P	20 44 15.4	+0.5
PRAR	RASCA	77.44	316	⇓iP	P	20 44 15.0	+0.1
WHY	Whitehorse	77.57	29	eP	P	20 44 15.6	+0.2
	comp=Z,6.3nm,1.5s						
VRI	Vrincioaia	77.60	315	⇑iP	P	20 44 17.3	+1.5
VRI	Vrincioaia	77.60	315	P	P	20 44 17.2	+1.5
PLOR	Plostina	77.65	315	⇑iP	P	20 44 17.7	+1.6
BIZ	Bicaz	77.66	316	⇓iP	P	20 44 16.6	+0.5
BURAR	Bucovina Array	78.01	317	⇓iP	P	20 44 18.7	+0.6
BURAR	Bucovina Array	78.01	317	P	P	20 44 18.7	+0.6
BUR08	Bucovina Ar. S	78.01	317	eP	P	20 44 18.7	+0.5
	comp=Z,9.8nm,1.3s						
LVV	L'vov	78.01	319	P	P	20 44 18.5	+0.6
OZUR		78.14	315	⇓iP	P	20 44 19.8	+1.0
MLR	Muntele Rosu	78.24	314	eP	P	20 44 19.9	+0.4
	comp=Z,4.1nm,0.6s						
MLR	Muntele Rosu	78.24	314	⇓iP	P	20 44 20.8	+1.3
MLR	Muntele Rosu	78.24	314	eP	P	20 44 19.9	+0.4
MLR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DAG	Danmarks Havn	78.52	351	i P	P	20 44 19.4	-0.8
DAG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DAG	Danmarks Havn	78.52	351	i P	P	20 44 19.4	-0.8
	comp=Z,8.0nm,0.8s						
ARCR	ARCALIA	78.74	316	⇑iP	P	20 44 23.2	+1.2
VOIR		78.85	314	⇓iP	P	20 44 23.5	+0.7
KWP	Kalwaria Pacla	78.88	319	eP	P	20 44 23.9	+1.1
KWP	Kalwaria Pacla	78.88	319	eP	P	20 44 23.4	+0.6
	comp=Z,319nm,1.1s						
KWP	Kalwaria Pacla	78.88	319	eP	P	20 44 23.4	+0.6
HUMR	Humele	79.21	314	⇓iP	P	20 44 24.9	+0.3
BEL	Belsk	79.22	322	eP	P	20 44 25.5	+1.0
BEL	Belsk	79.22	322	eP	P	20 44 25.5	+1.0
CJR	Cluj-Napoca	79.36	316	⇓iP	P	20 44 27.2	+1.7
KOLS	Kolonicke sedl	79.40	319	eP	P	20 44 26.1	+0.5
KOLS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KOLS	Kolonicke sedl	79.40	319	eP	P	20 44 26.1	+0.5
TRPA	Tarpa	79.52	318	⇑iP	P	20 44 27.0	+0.8
NC405	NORSAR Array S	79.94	332	eP	P	20 44 28.1	-0.3
	comp=Z,30nm,0.8s						
DEV	Deva	80.10	315	⇑iP	P	20 44 31.1	+1.6
NB2	NORSAR Subarra	80.19	332	P	P	20 44 29.1	-0.6
	comp=Z,6.5nm,0.7s,baz=62,slow=5.6						
NB200	NORSAR Array S	80.19	332	eP	P	20 44 28.8	-0.9
NOA	NORSAR Array B	80.19	332	P	P	20 44 28.8	-0.9
	comp=Z,4.9nm,0.6s,baz=60,slow=5.4,SNR=22						
NOA				LR	LR	21 23 56.6	
	comp=Z,196nm,18.0s,baz=60,slow=38						
NC204	NORSAR Array S	80.27	333	eP	P	20 44 30.2	0.0
	comp=Z,13nm,0.6s						
GZR	Gura Zlata	80.36	315	⇓iP	P	20 44 32.3	+1.3
OJC	Ojcow	80.41	320	eP	P	20 44 32.0	+1.0
OJC	Ojcow	80.41	320	eP	P	20 44 31.6	+0.5
	comp=Z,28nm,0.8s						
OJC	Ojcow	80.41	320	eP	P	20 44 31.6	+0.5
OJC				pmax	pmax		
	comp=Z,29nm,0.8s						
NIE	Niedzica	80.42	319	eP	P	20 44 32.6	+1.4
NIE	Niedzica	80.42	319	eP	P	20 44 32.6	+1.4
NAO01	NORSAR Array S	80.42	332	eP	P	20 44 30.7	-0.2
	comp=Z,12nm,1.0s						
PUNG	Punghina	80.67	314	⇓iP	P	20 44 34.0	+1.5
RES	Resolute Bay	80.77	9	eP	P	20 44 32.3	-0.2
	comp=Z,3.4nm,0.7s						
RES	Resolute Bay	80.77	9	eP	P	20 44 32.3	-0.2
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HERR	Herculane	80.79	315	⇑iP	P	20 44 34.0	+0.8
LANS	Liptovska Anna	81.02	319	eP	P	20 44 36.2	+1.8
LANS	Liptovska Anna	81.02	319	eP	P	20 44 36.2	+1.8
BZS	Buzias	81.04	316	⇑iP	P	20 44 34.7	+0.2
VTS	Vitosha	81.07	312	eP	P	20 44 35.1	+0.2
	comp=Z,14nm,1.0s						
VTS	Vitosha	81.07	312	⇓iP	P	20 44 36.1	+1.1
VTS	Vitosha	81.07	312	eP	P	20 44 35.2	+0.2
VTS				pmax	pmax		
	comp=Z,14nm,1.0s						
PSZ	Piszkesteto	81.25	318	eP	P	20 44 36.1	+0.4
	comp=Z,5.8nm,0.9s						
PSZ	Piszkesteto	81.25	318	⇓iP	P	20 44 36.8	+1.1
PSZ	Piszkesteto	81.25	318	eP	P	20 44 36.1	+0.4
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDVR	Moldovita	81.29	315	⇑iP	P	20 44 36.3	+0.4
OKC	Ostrava-Krasne	81.54	320	eP	P	20 44 37.9	+0.8
OKC	Ostrava-Krasne	81.54	320	eP	P	20 44 37.9	+0.8
VYHS	Vyhne	81.67	319	eP	P	20 44 38.9	+1.1
VYHS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VYHS	Vyhne	81.67	319	eP	P	20 44 38.9	+1.1
MORC	Moravsky Berou	81.92	321	eP	P	20 44 39.5	+0.4
	comp=Z,5.9nm,1.0s						
MORC	Moravsky Berou	81.92	321	⇑iP	P	20 44 39.9	+0.8
MORC	Moravsky Berou	81.92	321	eP	P	20 44 39.5	+0.4
MORC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MORC	Moravsky Berou	81.92	321	eP	P	20 44 39.9	+0.8
KSP	Ksiaz	82.20	322	eP	P	20 44 41.6	+1.1
KSP	Ksiaz	82.20	322	eP	P	20 44 41.6	+1.1
JAVC	Velka Javorina	82.22	320	eP	P	20 44 42.8	+2.0
KRLC	Kraliky	82.24	321	eP	P	20 44 41.8	+1.0
KRLC	Kraliky	82.24	321	eP	P	20 44 41.8	+1.0
OSTC	Ostas	82.36	322	eP	P	20 44 43.1	+1.7
OSTC				ex	x	20 44 50.5	
DPC	Dobruska-Polom	82.39	321	eP	P	20 44 42.7	+1.1
DPC	Dobruska-Polom	82.39	321	eP	P	20 44 42.7	+1.1
CHVC	Chvalec	82.44	322	eP	P	20 44 42.3	+0.4
CHVC				ex	x	20 44 54.3	
MODS	Modra-Piesok	82.66	319	eP	P	20 44 43.3	+0.3
MODS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MODS	Modra-Piesok	82.66	319	eP	P	20 44 43.3	+0.3
VRAC	Vranov	82.68	320	⇑iP	P	20 44 44.4	+1.4
VRAC	Vranov	82.68	320	eP	P	20 44 44.5	+1.4
KRUC	Moravsky	82.90	320	eP	P	20 44 44.9	+0.7
AGG	Agios Georgios	83.06	309	eP	P	20 44 44.7	-0.6
	comp=Z,28nm,1.5s						
AGG	Agios Georgios	83.06	309	eP	P	20 44 44.7	-0.6
AGG				pmax	pmax		
	comp=Z,28nm,1.5s						
PVCC	Panska Ves	83.32	322	eP	P	20 44 47.6	+1.2
PVCC	Panska Ves	83.32	322	eP	P	20 44 47.6	+1.2
GOPC	GO Pecny, Ondr	83.47	321	eP	P	20 44 47.7	+0.5
GOPC	GO Pecny, Ondr	83.47	321	eP	P	20 44 47.7	+0.5
BRG	Berggiesshubel	83.52	323	eP	P	20 44 48.0	+0.6
	comp=Z,9.6nm,1.0s						
BRG	Berggiesshubel	83.52	323	eP	P	20 44 48.0	+0.6
BRG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PRU	Pruhonice	83.58	322	eP	P	20 44 48.5	+0.8
PRU				e		20 44 58.4	
PRU	Pruhonice	83.58	322	eP	P	20 44 48.5	+0.8
PRU				epP	pP	20 44 58.4	+0.4
CONA	Conrad Observa	83.71	319	i PcP	P	20 44 49.5	+1.0
	comp=Z,11nm,1.1s,SNR=8.8						
CLL	Collm	83.85	323	eP	P	20 44 49.0	0.0
	comp=Z,12nm,0.8s						
CLL	Collm	83.85	323	⇑iP	P	20 44 49.1	0.0
	comp=Z,13nm,0.8s						
CLL				LmV		21 27 00.0	
	comp=Z,100nm,20.6s						
CLL	Collm	83.85	323	eP	P	20 44 49.1	0.0
CLL				pmax	pmax		
	comp=Z,12nm,0.8s						
ARSA	Arzberg	84.21	319	i P	P	20 44 51.3	+0.3
	comp=Z,6.7nm,1.0s						
KHC	Kasperske Hory	84.53	321	eP	P	20 44 52.9	+0.3
	comp=Z,3.0nm,0.8s						
KHC	Kasperske Hory	84.53	321	eP	P	20 44 52.9	+0.3
KHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KHC	Kasperske Hory	84.53	321	eP	P	20 44 53.5	+0.9
GEC2	GERESS Array S	84.59	321	eP	P	20 44 53.2	+0.2
	comp=Z,12nm,0.8s						
GERES	GERESS Array B	84.59	321	P	P	20 44 53.5	+0.5
	comp=Z,7.5nm,0.7s,baz=58,slow=5.0,SNR=41						
SUMG	Summit	84.66	354	eP	P	20 44 53.1	-0.1
	comp=Z,11nm,0.6s						
SUMG	Summit	84.66	354	⇑iP	P	20 44 52.9	-0.4
SUMG				pmax	pmax		
	comp=Z,25nm,0.7s						
SUMG	Summit	84.66	354	⇑iP	P	20 44 52.9	-0.4
	comp=Z,25nm,0.7s						
MOA	Molln	84.71	320	i PcP	P	20 44 54.3	+0.8
	comp=Z,12nm,0.8s,SNR=10						
PERS	Pernice	84.74	318	i P	P	20 44 54.1	+0.4
SOKA	Soboth	84.77	318	i P	P	20 44 54.3	+0.4
	comp=Z,9.0nm,1.0s,SNR=7.0						
YKW3	Yellowknife Ar	84.87	23	eP	P	20 44 53.6	-0.4
	comp=Z,4.4nm,0.9s						
KMBO	Kilima Mbogo	84.91	267	P	P	20 44 56.3	+0.9
	comp=Z,1.0nm,0.2s,baz=191,slow=2.6,SNR=3.4						
KMBO	Kilima Mbogo	84.91	267	i P	P	20 44 56.2	+0.8
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.2s						
YKA	Yellowknife Ar	84.91	23	P	P	20 44 53.2	-1.0
	comp=Z,2.4nm,0.7s,baz=314,slow=4.7,SNR=30						
YKB5	Yellowknife Ar	84.91	23	eP	P	20 44 53.2	-1.0
MOX	Moxa	84.94	323	P	P	20 44 56.6	+2.0
MOX				pmax	pmax		
	comp=Z,9.0nm,0.4s						
PDKS	Podkum	85.07	318	i P	P	20 44 55.8	+0.4
OBKA	Obir	85.14	318	i PcP	P	20 44 56.5	+0.7
	comp=Z,8.8nm,1.2s,SNR=4.1						
GBRS	Gornja Briga	85.42	317	i P	P	20 44 58.0	+0.8
KBA	Koelnbreinsper	85.62	319	i PcP	P	20 44 58.6	+0.3
	comp=Z,4.2nm,0.9s						
MYKA	Terra Mystica	85.64	319	i PcP	P	20 44 59.0	+0.7
	comp=Z,3.5nm,1.0s						
ABTA	Abfaltersbach	86.28	319	i P	P	20 45 00.3	-1.1
	comp=Z,4.5nm,0.7s						
WTTA	Wattenberg	86.56	320	i P	P	20 45 02.7	-0.2
	comp=Z,3.4nm,0.6s,SNR=4.4						
WATA	Walderalm	86.56	320	i PcP	P	20 45 03.2	+0.3
	comp=Z,1.2nm,0.5s						
SQTA	Sankt Quirin	86.83	320	i P	P	20 45 02.3	-1.9
	comp=Z,4.4nm,0.9s						
FETA	Fehten	87.21	320	i PcP	P	20 45 06.4	+0.3
	comp=Z,3.2nm,0.9s						
FUORN	Ofenpass-Fuorn	87.69	320	eP	P	20 45 08.8	+0.2
	comp=Z,5.6nm,0.8s						
NV01	Mina Array Sit	97.93	43	eP	P	20 45 54.0	-1.9
NVAR	Mina Array Bea	97.93	43	P	P	20 45 54.0	-1.9
	comp=Z,0.2nm,0.5s,baz=303,slow=5.0,SNR=3.3						
TORD	Torodi Ar. Bea	111.25	295	PKiKP	PKiKP	20 50 52.0	-2.1
	comp=Z,0.4nm,0.8s,baz=15,slow=5.4,SNR=3.3						
TXAR	Lajitas Array	113.05	42	PKiKP	PKiKP	20 50 55.6	-1.7
	comp=Z,0.3nm,0.5s,baz=234,slow=0.9,SNR=6.7						
CODC	Agustn Codazz	145.10	26	eP	PKPbc	20 51 56.1	-1.0
OCAC	Ocana	146.68	27	eP	PKPdf	20 52 01.3	+0.6

ISK ***01*** *20:37:59.9, 38°.38N×38°.99E, h13km, ML1.9/4*
DDA ***01*** *20:37:59.5, 38°.35N×38°.91E, h7km±1km, ML2.7*

ISCJB ***01*** *20:38:00.6±0.7, 38°.36N±0°.04×38°.99E±0°.06, h10km±5km,*
Error ellipse: s-maj=8.3km s-min=5.2km az=152.2
ISC 01 20:38:00.5±1.1, 38°.37N±0°.06×38°.98E±0°.06, h12km±8km,
n6, σ0°45/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.13	0	i P	Pg	20 38 03.9	+0.1
ELZG				i S	Sg	20 38 06.3	0.0
ELZG				IAML_P			
	comp=Z,23μm,0.2s						
SVRC	Sivrice-ELAZID	0.25	88	PG	Pg	20 38 05.3	-0.5
SVRC				SG	Sg	20 38 09.7	+0.2
URFA	Urfa	0.94	188	PG	Pn	20 38 19.3	-0.2
URFA				SG	Sb	20 38 31.7	+0.6
KEMA	Kemaliye	0.97	337	i P	Pg	20 38 18.7	-0.6
KEMA				i S	Sb	20 38 32.8	+0.5
DYBB	Diyarbakir	1.00	114	PG	Pg	20 38 19.5	-0.3
DYBB				SG	Sn	20 38 34.2	-0.3
MAZI	Mazidag	1.47	128	PN	Pn	20 38 27.3	+0.4
MAZI				SN	Sn	20 38 46.2	0.0

ISCJB ***01*** *20:40:51.5±0.6, 63°.50S±0°.05×171°.3E±0°.3, h10km,*
mb4.2/7, MS4.6/8, Error ellipse: s-maj=20.6km
s-min=7.3km az=4.7
NEIC ***01*** *20:40:54.5±1.9, 63°.48S×170°.79E, h10km, mb4.6/13, Error ellipse: s-maj=28.4km s-min=13.7km az=238.0*
GCMT ***01*** *20:40:55.5±0.2, 63°.24S±0°.01×171°.30E±0°.03, h14km±1km, MW5.3/103, Moment Tensor Solution. s74, c108; s103, c171; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.19±.02; $M_{\theta\theta}$ 1.12±.03; $M_{\phi\phi}$-0.92±.02; $M_{r\theta}$-0.56±.07; $M_{r\phi}$-0.17±.02; $M_{\theta\phi}$0.10±.04; Best double couple: $M_0$1.14200×10^{17} NP1:ϕ_s321.00000°, δ80.00000°, λ18.00000°. NP2:ϕ_s228.00000°, δ72.00000°, λ169.00000°. Principal axes: T 1.3410, Plg20.0000°, Azm185.0000°; N -0.3950, Plg69.0000°, Azm350.0000°; P -0.9430, Plg5.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***01*** *20:40:56.7±1.9, 62°.34S×170°.75E, h0km, mb3.5/1, mb1 3.7/1, mb1mx3.6/12, mbtmp3.5/1, MS4.4/4, Ms1 4.5/4, ms1mx4.1/11 Error ellipse: s-maj=92.3km s-min=61.8km az=48.0*
ISC 01 20:40:53.6±0.7, 63°.45S±0°.08×171°.4E±0°.2, h10km, n33,
σ2°15/22, mb4.3/7, MS4.6/8, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	14.45	188	ePn	Pn	20 44 15.8	-2.1
SBA	Scott Base	14.55	184	ePn	Pn	20 44 16.6	-2.5
WHZ	Wether Hill Ro	17.70	352	ePn	Pn	20 44 58.5	-1.5
	27nm,0.8s						
MLZ	Mavora Lakes	18.21	353	ePn	P	20 45 07.2	+0.7
	61nm,1.4s						
ODZ	Otahua Downs	18.45	358	eP	Pn	20 45 09.4	+0.2
	99nm,1.5s						
WKZ	Wanaka	18.71	355	eP	Pn	20 45 13.1	+0.7
	97nm,1.5s						
LBZ	Lake Benmore	19.11	357	eP	Pn	20 45 17.6	+0.3
	34nm,0.9s						
MQZ	McQueen's Vall	19.80	3	eP	Pn	20 45 25.9	+0.5
	90nm,1.5s						
CRLZ	Canterbury Las	19.93	3	eP	P	20 45 25.6	+0.4
	122nm,1.4s						
KHZ	Kahutara	21.11	5	eP	P	20 45 40.5	+2.5
	26nm,1.1s						
CASY	Casey	25.09	236	eP	P	20 46 17.1	-0.8
	19nm,1.2s						
QSPA	South Pole Qui	26.64	180	eP	P	20 46 32.6	+0.5
	6.2nm,1.1s						
DZM	Mont Dzumac	41.49	353	eS	S	20 54 51.0	-5.0
	359nm,24.4s						
DZM				eLQ	LQ	20 58 10.2	
	2μm,33.1s						
DZM				eLR	LR	21 00 00.5	
	comp=Z,2μm,22.6s						
SNAA	Sanae	45.09	183	eP	P	20 49 09.8	+0.5
	3.7nm,1.0s						
ASAR	Alice Springs	46.87	310	P	P	20 49 20.9	-2.9
	0.6nm,0.8s,baz=155,slow=6.5,SNR=6.0						
AS31	Alice Springs	46.87	310	eP	P	20 49 23.1	-0.7
	2.7nm,1.4s						
TBI	Tubuai	47.77	52	eS	S	20 56 25.2	-1.7
	560nm,24.5s						
TBI				eLQ	LQ	21 00 31.3	
	2μm,28.5s						
TBI				eLR	LR	21 02 39.9	
	comp=Z,1μm,28.5s,baz=194						
WB2	Warramunga Arr	50.17	313	eP	P	20 49 49.7	+0.6
	7.1nm,1.4s						
PPT2	Papeete2	53.05	49	eLQ	LQ	21 02 32.2	
	2μm,25.2s						
PPT2				eLR	LR	21 05 18.0	
	comp=Z,1μm,25.2s,baz=214						
RKT	Rikitea	53.57	67	eT	T	21 47 41.0	
	14nm,0.2s						
HNR	Honiara	54.54	346	LR	LR	21 09 02.4	
	comp=Z,421nm,21.3s,baz=180,slow=32						
VAH	Vaihoa	55.90	50	eT	T	21 50 32.2	
	95nm,0.2s						
PMG	Port Moresby	56.66	331	LR	LR	21 10 11.1	
	comp=Z,446nm,20.4s,baz=166,slow=32						
TAOE	Nuku Hiva Isla	64.48	55	eLR	LR	21 10 40.0	
	comp=Z,645nm,25.4s						
CPUP	Villa Florida	82.66	137	LR	LR	21 27 11.5	
	comp=Z,239nm,18.5s,baz=204,slow=33						
H08S2	Diego Garcia H	87.16	259	T	T	22 30 21.6	
	baz=153,slow=76,SNR=476						
H08S1	Diego Carcia H	87.17	259	T	T	22 30 23.3	
	baz=153,slow=76,SNR=326						
H08S3	Diego Garcia H	87.18	259	T	T	22 30 23.1	
	baz=153,slow=76,SNR=563						
CMAR	Chiang Mai Arr	98.75	294	LR	LR	21 36 38.2	
	comp=

WFSB				eS	Sb	20 56 00.5	+0.5
	baz=287						
TWE	**Neicheng**	**0.75 258**	P		Pn	20 55 52.6	-0.7
	baz=256						
TWE				eS	Sb	20 56 02.4	-0.2
	baz=256						
ENA	**Nanau**	**0.80 236**	P		Pn	20 55 53.4	-0.7
	baz=234						
ENA				eS	Sb	20 56 04.5	+0.4
	baz=234						
YM07	**YM07**	**0.82 291**	eP		Pn	20 55 54.4	-0.1
	baz=291						
PCYT	**Pengchaiyu**	**0.83 334**	eP		Pb	20 55 54.7	+0.5
	baz=336						
YM08	**YM08**	**0.85 291**	P		Pn	20 55 54.7	-0.1
	baz=276						
YM08				eS	Sn	20 56 05.2	-1.4
	baz=276						
YM01	**YM01**	**0.86 288**	P		Pb	20 55 55.1	+0.4
	baz=288						
YM01				S	Sb	20 56 06.8	+0.9
	baz=288						
NHDH	**Xindian Distri**	**0.86 276**	eS		Sn	20 56 05.8	-0.9
	baz=275						
YM11	**YM11**	**0.86 290**	eP		Pb	20 55 55.6	+0.9
	baz=289						
YM11				eS	Sn	20 56 06.3	-0.5
	baz=289						
YM05	**YM05**	**0.87 289**	P		Pn	20 55 55.1	0.0
	baz=289						
YM05				S	Sb	20 56 07.2	+1.0
	baz=289						
YM10	**YM10**	**0.87 289**	eP		Pb	20 55 56.1	+1.2
	baz=288						
YM10				eS	Sn	20 56 06.6	-0.3
	baz=288						
TWY	**Chenhua**	**0.88 297**	eP		Pb	20 55 55.8	+0.7
	baz=296						
TWY				eS	Sb	20 56 07.1	+0.6
	baz=296						
NWLT	**Wulai**	**0.88 264**	eP		Pn	20 55 54.4	-0.9
	baz=263						
NDT	**Datong Townshi**	**0.91 253**	P		Pb	20 55 55.9	+0.3
	baz=251						
NDT				eS	Sb	20 56 07.9	+0.6
	baz=251						
ANP	**Anpu**	**0.91 290**	eP		Pb	20 55 56.4	+0.8
	baz=276						
ANP				eS	Sn	20 56 07.4	-0.7
	baz=276						
YHNB	**Yeheng**	**1.02 258**	P		Pn	20 55 57.3	+0.2
	baz=266						
YHNB				eS	Sb	20 56 11.2	+0.8
	baz=266						
NSK	**Sanguang**	**1.03 259**	eP		Pn	20 55 57.6	+0.3
	baz=267						
NSK				eS	Sb	20 56 11.6	+0.8
	baz=267						
NACB	**Ninganchiao**	**1.06 229**	P		Pb	20 55 58.3	+0.2
	baz=239						
NACB				eS	Sb	20 56 12.1	+0.5
	baz=239						
NNSB	**Datong**	**1.09 246**	P		Pn	20 55 58.4	+0.3
	baz=233						
NNSB				eS	Sb	20 56 13.3	+0.9
	baz=233						
NNS	**Nan Shan**	**1.09 247**	P		Pb	20 55 59.0	+0.3
	baz=232						
NNS				eS	Sb	20 56 13.2	+0.7
	baz=232						
ETLH	**Xiulin Townshi**	**1.12 234**	eP		Pb	20 56 00.0	+0.8
	baz=232						
ETLH				eS	Sb	20 56 14.5	+1.1
	baz=232						
WHF	**Hehuan Shan**	**1.32 237**	eP		Pb	20 56 03.3	+0.6
	baz=235						
WHF				eS	Sb	20 56 20.2	+0.8
	baz=235						
CHGB	**Renai**	**1.44 236**	eP		Pb	20 56 05.0	+0.4
	baz=248						
CHGB				eS	Sb	20 56 23.4	+0.9
	baz=248						
OWD	**Renai**	**1.50 232**	eP		Pb	20 56 05.8	+0.2
	baz=244						
OWD				eS	Sb	20 56 24.8	+0.6
	baz=244						
HGSD	**Ruisui**	**1.68 215**	eP		Pn	20 56 06.9	+0.8
	baz=199						
SMLT	**Sun Moon Lake**	**1.74 236**	eP		Pb	20 56 10.0	+0.2
	baz=221						
SSLB	**Suanglung**	**1.76 232**	eP		Pb	20 56 09.2	-0.9
	baz=214						

*KLM **01** 21:03:48.0, 7°.79S×120°.28E, h427km, mb4.7*
*ISCJB **01** 21:03:49.9±0.2, 7°.44S±0°.04×119°.92E±0°.04, h429km±2km, mb4.3/20, Error ellipse: s-maj=6.4km s-min=5.2km az=28.5*
*DJA **01** 21:03:51.6±0.2, 7°S±2°×12°0E±°, h408km±2km, M4.0/20, mB4.4/9, mb4.3/17, MLv4.5/20, Mw(mB)3.6/9*
*IDC **01** 21:03:51.1±0.7, 7°.35S×119°.87E, h428km±7km, mb3.5/13, mb1 3.8/16, mb1mx3.5/36, mbtmp4.5/16, Error ellipse: s-maj=22.5km s-min=8.4km az=60.0*

ISC 01 21:03:50.6±0.6, 7°.46S±0°.06×119°.89E±0°.05, h427km±6km, n73, σ1°.67/88, mb4.0/20, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**1.43**	**24**	P	**P**	**21 04 45.4**	**-0.8**
BSSI				S	**S**	**21 05 28.3**	**-2.8**
BKSI	**Bulukumba**	**2.13**	**6**	P	**P**	**21 04 49.8**	**-0.1**
EDFI	**Ende, Flores**	**2.19**	**126**	P	P	21 04 36.0	-14
EDFI				S	**S**	**21 05 34.6**	**-4.1**
WBSI	**Waikabubak, Su**	**2.23**	**193**	P	**P**	**21 04 50.5**	**0.0**
WBSI				S	**S**	**21 05 36.6**	**-2.3**
WSI	**Waingapu**	**2.23**	**170**	P	**P**	**21 04 50.3**	**-0.2**
WSI				S	**S**	**21 05 37.0**	**-1.9**
KAPI	**Kappang**	**2.43**	**357**	P	**P**	**21 04 52.6**	**+0.8**
	209nm,0.3s,baz=174,slow=4.6,SNR=999						
KAPI				S	**S**	**21 05 40.8**	**-0.5**
	baz=261,slow=23,SNR=6.6						
PLAI	**Plampang**	**2.50**	**237**	P	**P**	**21 04 52.4**	**+0.2**
PLAI				S	**S**	**21 05 41.5**	**-0.6**
MMRI	**Maumere**	**2.60**	**117**	P	**P**	**21 04 52.0**	**-0.9**
MMRI				S	**S**	**21 05 40.7**	**-2.7**
BASI	**Baing, Sumba**	**2.83**	**166**	P	**P**	**21 04 56.0**	**+1.5**
BASI				S	**S**	**21 05 45.3**	**-1.1**
BNSI	**Bone**	**3.04**	**4**	P	**P**	**21 04 56.4**	**+0.4**
SPSI	**Sidrap Palu**	**3.47**	**358**	P	**P**	**21 04 59.9**	**+0.2**
TTSI	**Tana Toraja**	**4.38**	**359**	P	**P**	**21 05 08.4**	**+0.5**
BATI	**Baumata**	**4.62**	**127**	P	**P**	**21 05 10.9**	**+0.8**
	86nm,0.3s,baz=13,slow=1.1,SNR=88						
BATI				S	**S**	**21 06 13.9**	**-1.0**
	123nm,0.3s,baz=68,slow=18,SNR=9.3						
BATI	**Baumata**	**4.62**	**127**	P	**P**	**21 05 10.8**	**+0.7**
BATI				S	**S**	**21 06 13.9**	**-1.0**
SRBI	**Singaraja**	**4.68**	**262**	P	**P**	**21 05 11.9**	**+1.2**
SRBI				S	**S**	**21 06 16.2**	**+0.3**
DNP	**Denpasar**	**4.79**	**255**	S	**S**	**21 06 17.9**	**-0.1**
IGBI	**Denpasar**	**4.89**	**254**	P	**P**	**21 05 13.6**	**+0.9**
IGBI				S	**S**	**21 06 17.1**	**-2.6**
SOEI	**Soe**	**4.89**	**118**	P	**P**	**21 05 13.6**	**+0.7**
SOEI				S	**S**	**21 06 18.4**	**-1.6**
JAGI	**Jajag, Banyuwa**	**5.78**	**260**	P	**P**	**21 05 22.3**	**+0.6**
	34nm,0.8s,0.5nm						
JAGI				S	**S**	**21 06 30.0**	**-6.2**
	34nm,0.8s,0.5nm						
KMMI	**Kalianget**	**5.89**	**274**	P	**P**	**21 05 23.4**	**+0.4**
	21nm,1.0s,0.1nm						
BKB	**Balikpapan**	**6.84**	**334**	P	**P**	**21 05 36.5**	**+3.1**
	143nm,0.8s,3μm						
LUWI	**Luwuk**	**6.99**	**24**	P	**P**	**21 05 34.6**	**-0.4**
	53nm,0.9s						
SGKI	**Sangatta, Kali**	**7.25**	**342**	P	**P**	**21 05 38.4**	**+0.5**
	66nm,0.7s						
GRJI	**Gresik**	**7.38**	**274**	P	**P**	**21 05 41.0**	**+1.8**
	32nm,0.8s						
MPSI	**Mapaga**	**7.74**	**0**	P	**P**	**21 05 43.7**	**+0.5**
	13nm,0.8s,148nm						
MRSI	**Marisa**	**8.14**	**15**	P	**P**	**21 05 47.8**	**+0.3**
	42nm,0.7s,349nm						
LEM	**Lembang**	**12.20**	**272**	P	**P**	**21 06 32.6**	**+0.4**
	3.1nm,0.3s,baz=50,slow=9.0,SNR=15						
LEM	**Lembang**	**12.20**	**272**	P	**P**	**21 06 33.1**	**+0.9**
CBJI	**Citeko**	**12.99**	**274**	P	**P**	**21 06 40.6**	**-0.1**
KSM	**Kuching**	**13.04**	**312**	P	**P**	**21 06 43.0**	**+1.7**
TPI	**Tanjungpandan**	**13.05**	**290**	P	**P**	**21 06 42.8**	**+1.4**
	29nm,0.8s						
CGJI	**Cibinong**	**14.12**	**273**	P	**P**	**21 06 52.6**	**-0.4**
	55nm,0.7s						
PPBI	**Pangkal Pinang**	**14.68**	**290**	P	**P**	**21 07 00.8**	**+1.8**
	76nm,0.8s,682nm						
DSRI	**Dabo**	**16.77**	**294**	P	**P**	**21 07 23.6**	**+2.2**
	28nm,0.5s,6μm						
TPRI	**Tanjung Pinang**	**17.44**	**298**	P	**P**	**21 07 30.1**	**+1.6**
	44nm,0.9s						
WRA	**Warramunga Arr**	**18.71**	**133**	P	**P**	**21 07 42.5**	**+0.9**
	6.2nm,0.3s,baz=304,slow=10,SNR=207						
KRJI	**Kerinci**	**19.12**	**285**	P	**P**	**21 07 47.0**	**+1.4**
ASAR	**Alice Springs**	**20.99**	**142**	P	**P**	**21 08 03.8**	**+1.2**
	28nm,0.7s,baz=317,slow=8.2,SNR=453						
ASAR				PcP	**PcP**	**21 11 50.4**	**-1.4**
	0.8nm,0.8s,baz=349,slow=1.9,SNR=4.2						
IPM	**Ipoh**	**22.25**	**302**	P	**P**	**21 08 15.0**	**+0.9**
PSI	**Prapat**	**23.27**	**295**	P	**P**	**21 08 21.9**	**-1.5**
	3.2nm,0.7s,baz=186,slow=10,SNR=3.5						
NWAO	**Narrogin (SRO)**	**25.46**	**185**	P	**P**	**21 08 43.8**	**+1.1**
	6.4nm,0.8s,baz=18,slow=9.6,SNR=3.5						
CTA	**Charters Tower**	**28.46**	**119**	P	**P**	**21 09 10.0**	**+0.7**
	2.9nm,0.9s,baz=355,slow=11,SNR=2.4						
SKNT	**Sakolnakorn**	**28.93**	**327**	P	**P**	**21 09 14.5**	**+1.1**
	19nm,0.7s						
CHAI	**Chaiyaphum**	**29.21**	**323**	P	**P**	**21 09 17.3**	**+1.5**
	28μm,0.6s,270μm						
PBKT	**Sadao Pong**	**30.34**	**322**	P	**P**	**21 09 26.8**	**+1.1**
	5.1nm,1.0s,857nm						
UTTA	**Uttaradit**	**31.50**	**323**	P	**P**	**21 09 38.1**	**+2.4**
	13μm,0.7s						
STKA	**Stephens Creek**	**31.61**	**143**	P	**P**	**21 09 37.6**	**+1.1**
	11nm,0.6s,baz=315,slow=10.0,SNR=27						
STKA				PcP	**PcP**	**21 12 16.1**	**-0.7**
	3.6nm,0.8s,baz=55,slow=4.2,SNR=2.9						
CMAR	**Chiang Mai Arr**	**33.02**	**321**	P	**P**	**21 09 48.3**	**-0.5**
	1.3nm,0.8s,baz=144,slow=6.6,SNR=14						
KMI	**Kunming**	**36.44**	**333**	P	P	21 10 29.4	+12
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN	**Xi'an**	**42.56**	**346**	P	**P**	**21 11 06.9**	**-0.3**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ODAN	**Odare**	**46.44**	**319**	eP	**P**	**21 11 37.7**	**-0.1**
	comp=Z,13nm,0.7s						
RAMN	**Ramite**	**47.02**	**318**	eP	**P**	**21 11 42.7**	**+0.5**
	comp=Z,27nm,0.6s						
JIRN	**Jiri**	**47.76**	**318**	eP	**P**	**21 11 48.1**	**+0.1**
	comp=Z,31nm,0.7s						
GUN	**Gumba**	**48.13**	**318**	eP	**P**	**21 11 50.8**	**0.0**
	comp=Z,26nm,0.7s						
PKI	**Pulchoki**	**48.22**	**318**	eP	**P**	**21 11 50.9**	**-0.5**
	comp=Z,13nm,0.5s						
PKIN	**Phulchoki**	**48.23**	**318**	eP	**P**	**21 11 50.9**	**-0.5**
	comp=Z,11nm,0.5s						
KKN	**Kakani**	**48.45**	**318**	eP	**P**	**21 11 52.7**	**-0.3**
	comp=Z,12nm,0.8s						
GKN	**Gorkha**	**49.02**	**317**	eP	**P**	**21 11 56.9**	**-0.3**
	comp=Z,15nm,0.4s						
DANN	**Dangsing**	**49.83**	**317**	eP	**P**	**21 12 03.1**	**-0.3**
	comp=Z,48nm,0.5s						
PYUN	**Piuthan**	**50.20**	**316**	eP	**P**	**21 12 05.6**	**-0.4**
	comp=Z,15nm,0.5s						
GTA	**Gaotai**	**50.21**	**340**	eP	**P**	**21 12 06.8**	**+1.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	**Songino Array**	**56.33**	**349**	P	**P**	**21 12 49.5**	**0.0**
	comp=Z,1.7nm,0.6s,baz=165,slow=8.6,SNR=13						
KSH	**Kashi**	**61.91**	**323**	P	**P**	**21 13 27.4**	**0.0**
KSH				PP	**PP**	**21 15 52.9**	**+2.7**
KSH				S	**S**	**21 21 09.4**	**-8.0**
KSH	**Kashi**	**61.91**	**323**	SS	SS	21 25 22.4	-6.7
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				pmax	pmax		
	comp=Z,190nm,5.1s						
KSH				LR	LR		
	comp=N,180nm,9.3s						
KSH				LR	LR		
	comp=E,140nm,7.4s						
KSH				LR	LR		
	comp=Z,310nm,21.0s						
MKAR	**Makanchi Array**	**63.51**	**332**	P	**P**	**21 13 37.5**	**0.0**
	comp=Z,4.5nm,0.7s,baz=141,slow=7.5,SNR=47						
ZALV	**Zalesovo Beam**	**67.93**	**338**	P	**P**	**21 14 04.0**	**-1.1**
	comp=Z,5.4nm,0.5s,baz=142,slow=4.5,SNR=21						
PETK	**Petropavlovsk-**	**68.31**	**23**	P	**P**	**21 14 07.3**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=170,slow=4.1,SNR=3.4						
GEYT	**Alibeck**	**73.03**	**313**	P	**P**	**21 14 36.1**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=176,slow=10,SNR=3.6						
VNDA	**Vanda**	**73.37**	**171**	P	**P**	**21 14 38.3**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=316,slow=6.9,SNR=26						
BRTR	**Keskin Array B**	**91.84**	**310**	P	**P**	**21 16 10.8**	**-1.4**
	comp=Z,0.4nm,0.9s,baz=66,slow=7.1,SNR=3.3						
TXAR	**Lajitas Array**	**133.65**	**56**	PKP	**PKiKP**	**21 22 19.7**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=235,slow=3.2,SNR=2.9						
CPUP	**Villa Florida**	**146.31**	**184**	PKPbc	**PKPab**	**21 22 44.0**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=174,slow=3.8,SNR=5.7						
LPAZ	**La Paz**	**155.11**	**161**	PKPab	**PKPab**	**21 23 23.9**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=180,slow=3.9,SNR=12						

IDC 01 21:32:53.8±1.4, 30°.08N×104°.94E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.3/38, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.4/31, Error ellipse: s-maj=395.7km s-min=25.9km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.45**	**63**	LR	LR	21 45 09.6	
	comp=Z,28nm,21.8s,baz=130,slow=36						
MKAR	**Makanchi Array**	**24.23**	**320**	P	P	21 38 12.2	0.0
	0.2nm,0.5s,baz=120,slow=8.5,SNR=3.5						
FINES	**FINESS Array B**	**58.82**	**327**	P	P	21 42 53.6	-0.1
	0.9nm,0.7s,baz=98,slow=7.4,SNR=6.8						
ASAR	**Alice Springs**	**60.24**	**149**	P	P	21 43 04.0	0.0
	0.6nm,0.6s,baz=334,slow=8.1,SNR=7.7						
NOA	**NORSAR Array B**	**65.91**	**328**	P	P	21 43 41.3	0.0
	0.7nm,0.7s,baz=74,slow=6.4,SNR=3.6						

MAN 01 21:49:17.1, 7°.39N×124°.90E, h22km, MS3.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.51**	**19**	eP	Pb	21 49 28.0	+0.6
BUKP				eS	Sn	21 49 37.7	+0.5
DMPH	**Davao City--Mi**	**0.68**	**117**	∩eP	Pn	21 49 30.9	-0.5
DMPH				eS	Sn	21 49 42.1	+0.8
SKMP	**Bagumbayan, Su**	**0.94**	**202**	eP	Pb	21 49 31.3	-3.3
SKMP				eS	Sb	21 49 43.2	-3.4
CGP	**Cagayan de Oro**	**1.07**	**349**	∩P	Pn	21 49 36.4	-0.4
CGP				S	Sn	21 49 52.0	+1.0
MATI	**Mati**	**1.42**	**108**	eP	Pb	21 49 44.6	+1.7
DDMP	**Don Marcelino,**	**1.52**	**148**	eP	Pn	21 49 42.8	-0.1
DDMP				eS	Sb	21 50 08.5	+5.2
PAGZ	**Pagadian**	**1.57**	**287**	eP	Pn	21 49 42.6	-0.9
PAGZ				eS	Sn	21 50 03.9	+0.7
BUTP	**Butuan**	**1.72**	**25**	eP	Pb	21 49 50.5	+2.5
BUTP				eS	Sb	21 50 18.7	+9.4

*ISCJB **01** 21:53:55.6±0.4, 24°.90N±0°.02×122°.49E±0°.02, h9km±3km, Error ellipse: s-maj=3.7km s-min=2.4km az=29.6*
*JMA **01** 21:53:56.5, 24°.88N×122°.48E, h38km±2km, M2.8*
*TAP **01** 21:53:56.7, 24°.88N×122°.44E, h6km, ML3.1, C*

ISC 01 21:53:54.3±1.2, 24°.96N±0°.03×122°.51E±0°.02, h8km±9km, n64, σ0°.80/109, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.48**	**276**	P	**Pb**	**21 54 04.8**	**-0.2**
	baz=287						
TWB1				eS	**Sg**	**21 54 10.4**	**+0.5**
	baz=287						
EGS		**0.54**	**258**	P	**Pb**	**21 54 05.6**	**-0.4**
	baz=265						
EOS1	**EOS1**	**0.54**	**220**	P	**Pb**	**21 54 05.8**	**-0.2**
	baz=221						
EOS1				eS	**Sg**	**21 54 12.7**	**+0.9**
	baz=221						
TIPB	**Shuangxi**	**0.62**	**271**	P	**Pb**	**21 54 07.6**	**+0.1**
	baz=279						
TIPB				S	**Sb**	**21 54 15.6**	**-0.8**
	baz=279						
NTC	**Toucheng**	**0.63**	**260**	P	**Pb**	**21 54 07.5**	**0.0**
	baz=267						
JYNG	**Yonagunijimaku**	**0.64**	**142**	P	**Pb**	**21 54 08.4**	**+0.6**
JYNG				S	**Sb**	**21 54 17.1**	**+0.2**
NWF	**Wu-fen Shan**	**0.67**	**280**	P	**Pb**	**21 54 09.2**	**+0.9**
	baz=287						
NWF				S	**Sb**	**21 54 17.6**	**-0.2**
	baz=287						
WFSB	**Wu-fen Shan**	**0.67**	**280**	P	**Pn**	**21 54 09.4**	**-0.7**
	baz=287						
WFSB				eS	**Sb**	**21 54 17.7**	**0.0**
	baz=287						
YOJ	**Yonaguni jima**	**0.67**	**137**	P	**Pb**	**21 54 09.0**	**+0.6**
	baz=128						
YOJ				S	**Sb**	**21 54 18.2**	**+0.4**
	baz=128						
YOJ	**Yonaguni jima**	**0.67**	**137**	P	**Pb**	**21 54 08.8**	**+0.5**
YOJ				eS	**Sb**	**21 54 18.1**	**+0.3**
TWC	**Suao**	**0.69**	**240**	P	**Pg**	**21 54 08.0**	**+0.2**
	baz=243						
TWC				S	**Sg**	**21 54 16.7**	**-0.1**
	baz=243						
PCYT	**Pengchaiyu**	**0.78**	**329**	P	**Pn**	**21 54 12.5**	**+0.9**
	baz=336						
PCYT				eS	**Sn**	**21 54 22.8**	**-0.6**
	baz=336						
TWE	**Neicheng**	**0.80**	**253**	P	**Pg**	**21 54 10.1**	**+0.3**
	baz=256						
TWE				eS	**Sg**	**21 54 20.2**	**-0.1**
	baz=256						
YM07	**YM07**	**0.83**	**285**	P	**Pn**	**21 54 11.9**	**-0.5**
	baz=291						
YM07				eS	**Sb**	**21 54 23.2**	**+0.7**
	baz=291						
YM08	**YM08**	**0.86**	**285**	P	**Pb**	**21 54 11.9**	**+0.3**
	baz=291						
YM08				eS	**Sb**	**21 54 22.8**	**-0.5**
	baz=291						
YM01	**YM01**	**0.87**	**282**	P	**Pn**	**21 54 12.4**	**-0.5**
	baz=288						
YM01				eS	**Sb**	**21 54 24.2**	**+0.6**
	baz=288						
YM11	**YM11**	**0.87**	**284**	P	**Pn**	**21 54 13.1**	**+0.1**
	baz=289						
YM11				eS	**Sb**	**21 54 24.3**	**+0.7**
	baz=289						
ENA	**Nanau**	**0.88**	**233**	P	**Pg**	**21 54 11.2**	**0.0**
	baz=234						
ENA				eS	**Sg**	**21 54 22.6**	**0.0**
	baz=234						
YM05	**YM05**	**0.88**	**284**	P	**Pn**	**21 54 13.0**	**0.0**
	baz=289						
YM05				S	**Sb**	**21 54 24.6**	**+0.7**
	baz=289						
YM10	**YM10**	**0.88**	**283**	P	**Pn**	**21 54 12.8**	**-0.2**
	baz=289						
YM10				eS	**Sb**	**21 54 24.5**	**+0.7**
	baz=289						
TWY	**Chenhua**	**0.88**	**291**	eP	**Pn**	**21 54 12.9**	**-0.1**
	baz=297						
TWY				S	**Sb**	**21 54 24.4**	**+0.6**
	baz=297						
NHDH	**Xindian Distri**	**0.89**	**270**	P	**Pb**	**21 54 12.5**	**+0.4**
	baz=275						
NHDH				S	**Sb**	**21 54 23.9**	**-0.3**
	baz=275						
YM04	**YM04**	**0.90**	**282**	P	**Pn**	**21 54 13.3**	**0.0**
	baz=288						
YM04				eS	**Sb**	**21 54 25.1**	**+0.7**
	baz=288						
YM03	**YM03**	**0.91**	**284**	P	**Pn**	**21 54 13.5**	**+0.1**
	baz=290						
YM03				eS	**Sb**	**21 54 25.4**	**+0.8**
	baz=290						
TATO	**Taipei**	**0.93**	**271**	eP	**Pg**	**21 54 12.0**	**-0.2**
	baz=276						
TATO				eS	**Sg**	**21 54 23.4**	**-0.8**
	baz=276						
NWLT	**Wulai**	**0.93**	**259**	eP	**Pb**	**21 54 12.9**	**+0.1**
	baz=263						
NWLT				S	**Sg**	**21 54 24.4**	**0.0**
	baz=263						
NDT	**Datong Townshi**	**0.97**	**249**	P	**Pb**	**21 54 13.4**	**-0.1**
	baz=252						
NDT				eS	**Sg**	**21 54 25.1**	**-0.6**
	baz=252						
YHNB	**Yeheng**	**1.07**	**255**	P	**Pb**	**21 54 15.2**	**+0.1**
	baz=257						
YHNB				eS	**Sg**	**21 54 28.9**	**+0.1**
	baz=257						
NSK	**Sanguang**	**1.08**	**255**	P	**Pb**	**21 54 15.5**	**+0.2**
	baz=258						
NSK				eS	**Sg**	**21 54 29.2**	**-0.1**
	baz=258						
NACB	**Ninganchiao**	**1.14**	**227**	eP	**Pb**	**21 54 16.5**	**+0.1**
	baz=227						
NACB				S	**Sg**	**21 54 29.7**	**-1.4**
	baz=227						
NNS	**Nan Shan**	**1.16**	**244**	P	**Pg**	**21 54 16.5**	**-0.1**
	baz=245						
NNS				eS	**Sg**	**21 54 31.2**	**-0.4**
	baz=245						
ETLH	**Xiulin Townshi**	**1.20**	**231**	P	**Pb**	**21 54 16.9**	**-0.5**
	baz=232						
ETLH				eS	**Sg**	**21 54 32.7**	**-0.3**
	baz=232						
TWD	**Chiawan**	**1.21**	**224**	eP	**Pb**	**21 54 16.6**	**-0.8**
	baz=223						
TWD				eS	**Sn**	**21 54 33.8**	**-0.2**
	baz=223						
IRIF	**Iriomote-Funau**	**1.27**	**119**	P	**Pn**	**21 54 18.3**	**-0.1**
WHF	**Hehuan Shan**	**1.39**	**235**	P	**Pn**	**21 54 20.6**	**+0.2**
	baz=235						
WHF				eS	**Sb**	**21 54 38.4**	**-0.6**
	baz=235						
HATJ	**Hateruma jima**	**1.48**	**127**	P	**Pn**	**21 54 21.3**	**0.0**
HATJ				eS	**Sn**	**21 54 39.2**	**-1.6**
CHGB	**Renai**	**1.51**	**234**	P	**Pb**	**21 54 22.8**	**0.0**
	baz=234						
CHGB				eS	**Sn**	**21 54 41.4**	**-0.4**
	baz=234						
JKRS	**Kuro-shima**	**1.54**	**117**	S	**Sn**	**21 54 41.5**	**-0.8**
OWD	**Renai**	**1.57**	**231**	P	**Pb**	**21 54 23.3**	**-0.5**
	baz=231						
OWD				eS	**Sn**	**21 54 43.0**	**-0.3**
	baz=231						
WHP	**Taichung City**	**1.58**	**245**	eP	**Pb**	**21 54 23.9**	**+0.2**
	baz=246						
JIJ	**Ishigaki jima**	**1.60**	**111**	eS	**Sn**	**21 54 43.3**	**-0.4**
DPDB	**Guoxing**	**1.71**	**238**	eP	**Pb**	**21 54 26.0**	**-0.1**
	baz=238						
VWDT	**VWDT**	**1.73**	**226**	eP	**Pn**	**21 54 25.5**	**+0.8**
	baz=226						
HGSD	**Ruisui**	**1.77**	**214**	eP	**Pn**	**21 54 23.9**	**-1.3**
	baz=213						
SMLT	**Sun Moon Lake**	**1.82**	**234**	eP	**Pn**	**21 54 26.8**	**+0.8**
	baz=234						
SMLT				eS	**Sn**	**21 54 49.2**	**-0.1**
	baz=234						
SSLB	**Suanglung**	**1.84**	**231**	P	**Pn**	**21 54 27.2**	**+1.0**
	baz=231						
SSLB				eS	**Sb**	**21 54 50.6**	**-0.8**
	baz=231						
WHYT	**Xinyi Township**	**1.97**	**231**	eP	**Pn**	**21 54 29.0**	**+1.0**
	baz=230						
WHYT				eS	**Sn**	**21 54 53

baz=225
TWK Hsinying 2.50 228 P Pn 21 54 37.1 +1.8
baz=227
TWK eS Sn 21 55 05.0 -1.0
baz=227
SNST Tainan City 2.53 227 eP Pn 21 54 37.4 +1.7
baz=227
SNST eS Sn 21 55 07.6 +1.0
baz=227
CHN1 Nanshi 2.53 226 eP Pn 21 54 37.8 +2.1
baz=226
CHN1 eS Sn 21 55 07.6 +0.9
baz=226
SLGT Liugui 2.60 221 eP Pn 21 54 38.1 +1.4
baz=221
SLGT eS Sn 21 55 09.5 +1.2
baz=221
MATB Ma-tsu 2.60 298 eP Pb 21 54 40.7 -0.6
baz=299
MATB eS Sb 21 55 11.4 -1.9
baz=299
ECL Taimali 2.75 212 eP Pb 21 54 41.4 -2.4
baz=210
SSD Sandimen 2.80 218 eP Pn 21 54 41.1 +1.8
baz=217
MASBT Mashibuluo 2.90 217 eP Pn 21 54 42.5 +1.7
baz=216
SCZT Fangliau 3.10 214 eP Pn 21 54 45.2 +1.6
baz=213

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*ISCJB **01** 22:04:00.8±0.4, 29°.68N±0°.06×138°.93E±0°.07, h445km, mb3.6/14, Error ellipse: s-maj=8.8km s-min=5.3km az=169.8*
*JMA **01** 22:04:00.7±0.1, 29°.73N×139°.16E, h468km, M3.4*
*IDC **01** 22:04:02.5±1.3, 29°.67N×138°.80E, h447km±15km, mb3.0/13, mb1 3.1/19, mb1mx3.0/43, mbtmp3.9/19, Error ellipse: s-maj=17.0km s-min=10.2km az=87.0*
ISC 01 22:04:01.8±0.6, 29.70N±0°.06×138°.96E±0°.09, h445km, n33, σ1§41/40, mb3.4/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.48**	**11**	P	**P**	**22 05 14.3**	**+2.2**
	24nm,0.3s,baz=86,slow=23,SNR=5.2						
JHJ				S	**S**	**22 06 07.9**	**-1.5**
	16nm,0.3s,baz=73,slow=19,SNR=2.7						
CBIJ	**Chichi jima**	**3.84**	**132**	P	**P**	**22 05 15.7**	**+0.4**
CBIJ				S	**S**	**22 06 13.0**	**-2.1**
JHH2	**Haha-jima-NKT2**	**4.17**	**136**	S	**S**	**22 06 18.7**	**-1.6**
JTNC	**Tanabenakahech**	**5.00**	**326**	P	**P**	**22 05 27.4**	**+1.5**
JIE	**Ise**	**5.06**	**338**	P	**P**	**22 05 28.0**	**+1.7**
BSO1	**Boso 1**	**5.23**	**19**	P	**P**	**22 05 28.1**	**+0.7**
BSO1				S	**S**	**22 06 37.4**	**-0.1**
JOD2	**Odawara 2**	**5.55**	**1**	P	**P**	**22 05 31.7**	**+0.5**
JOD2				eS	**S**	**22 06 43.0**	**-1.4**
JNY	**Yasuok**	**5.72**	**351**	P	**P**	**22 05 34.4**	**+1.4**
JAO	**Obara**	**5.74**	**346**	P	**P**	**22 05 34.3**	**+1.1**
JRY	**Ryogami san**	**6.30**	**360**	P	**P**	**22 05 39.0**	**+0.1**
JYT	**Yasato**	**6.59**	**9**	P	**P**	**22 05 41.2**	**-0.8**
JYT				eS	**S**	**22 06 59.9**	**-4.1**
MJAR	**Matsushiro Arr**	**6.86**	**355**	P	**P**	**22 05 44.4**	**-0.4**
	0.2nm,0.3s,baz=182,slow=12,SNR=12						
MJAR				S	**S**	**22 07 06.2**	**-2.9**
	0.1nm,0.3s,baz=174,slow=15,SNR=4.2						
JHS	**Saijyo**	**7.24**	**318**	P	**P**	**22 05 49.8**	**+0.9**
JNU	**Nakatsue**	**7.71**	**298**	P	**P**	**22 05 52.9**	**-1.1**
	0.6nm,0.3s,baz=265,slow=10,SNR=6.2						
JMK	**Ichinoseki**	**9.42**	**11**	P	**P**	**22 06 12.6**	**+0.2**
JMK				eS	**S**	**22 07 57.2**	**-2.7**
KSRS	**Korea Array**	**12.02**	**313**	P	**P**	**22 06 40.1**	**-0.6**
	0.2nm,0.3s,baz=126,slow=12,SNR=6.1						
ASAJ	**Asahikawa**	**14.68**	**10**	P	**P**	**22 07 11.7**	**+2.3**
	0.8nm,0.3s,baz=185,slow=13,SNR=4.7						
USRK	**Ussuriysk Ar.**	**15.50**	**341**	P	**P**	**22 07 18.8**	**+0.6**
	2.3nm,0.3s,baz=164,slow=11,SNR=34						
KLR	**Kul'dur**	**20.27**	**346**	P	**P**	**22 08 06.9**	**+1.2**
	2.7nm,0.6s,baz=157,slow=9.0,SNR=11						
SONM	**Songino Array**	**30.88**	**315**	P	**P**	**22 09 39.8**	**-0.3**
	0.4nm,0.4s,baz=110,slow=8.0,SNR=3.1						
CMAR	**Chiang Mai Arr**	**38.04**	**262**	P	**P**	**22 10 40.4**	**-0.4**
	0.8nm,0.3s,baz=62,slow=5.5,SNR=4.3						
TIXI	**Tiksi**	**42.37**	**355**	P	**P**	**22 11 15.2**	**+0.4**
	1.2nm,0.3s,baz=115,slow=9.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**45.67**	**318**	P	**P**	**22 11 40.7**	**-0.1**
	0.5nm,0.4s,baz=96,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**46.64**	**308**	P	**P**	**22 11 47.9**	**-0.6**
	0.1nm,0.3s,baz=85,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**49.55**	**186**	P	**P**	**22 12 10.7**	**+0.1**
	163nm,0.4s,baz=0.2,slow=6.8,SNR=1.6						
ASAR	**Alice Springs**	**53.28**	**186**	P	**P**	**22 12 37.5**	**-0.3**
	1.1nm,0.6s,baz=19,slow=10,SNR=20						
BVAR	**Borovoye Array**	**54.21**	**316**	P	**P**	**22 12 43.9**	**-0.1**
	1.0nm,0.4s,baz=93,slow=7.2,SNR=10						
ILAR	**Eielson Array**	**56.83**	**30**	P	**P**	**22 13 01.3**	**-0.8**
	0.2nm,0.4s,baz=55,slow=8.6,SNR=4.8						
STKA	**Stephens Creek**	**61.29**	**177**	P	**P**	**22 13 33.3**	**+0.7**
	2.2nm,0.6s,baz=324,slow=4.4,SNR=7.2						
INK	**Inuvik**	**61.86**	**25**	P	**P**	**22 13 37.4**	**+1.5**
	0.8nm,0.3s,baz=282,slow=6.4,SNR=7.0						
ARCES	**ARCESS Array B**	**70.15**	**340**	P	**P**	**22 14 28.3**	**+0.4**
	9.6nm,0.4s,baz=64,slow=10,SNR=4.9						
YKA	**Yellowknife Ar**	**71.20**	**28**	P	**P**	**22 14 35.8**	**+1.6**
	0.4nm,0.6s,baz=299,slow=5.8,SNR=3.5						
FINES	**FINESS Array B**	**74.35**	**333**	P	**P**	**22 14 52.5**	**0.0**
	0.6nm,0.6s,baz=69,slow=4.7,SNR=10						

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*NNC **01** 22:20:53.6±0.4, 43°.05N×78°.23E, h1km±3km, mb3.2, mpv3.3, Error ellipse: s-maj=4.5km s-min=1.7km az=177.0*
*KRNET **01** 22:20:54.1±0.1, 43°.07N×78°.22E, h21km, mb2.9*
*SOME **01** 22:20:54.2, 43°.02N×78°.23E, h20km*
ISC 01 22:20:54.1±1.0, 43°.09N±0°.02×78°.15E±0°.01, h10km±8km, n60, σ1§25/116, 18C-17B, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.19**	**100⇑**	*eP*	**Pb**	**22 20 58.7**	**-1.1**
	235nm,0.1s						
SATY				eS	**Sg**	**22 21 01.8**	**+0.8**
	684nm,0.1s						
KURS	**Kuram**	**0.40**	**2**	P	**Pb**	**22 21 03.0**	**-0.2**
	28nm,0.1s						
KURS				S	**Sb**	**22 21 09.1**	**-0.3**
	47nm,0.2s						
KURS	**Kuram**	**0.40**	**2**	*eP*	**Pb**	**22 21 03.0**	**-0.2**
	baz=55						
KURS				eS	**Sb**	**22 21 09.1**	**-0.3**
	baz=55						
KURS	**Kuram**	**0.40**	**2**	*eP*	**Pb**	**22 21 03.0**	**-0.2**
	28nm,0.1s						
KURS				eS	**Sb**	**22 21 09.1**	**-0.3**
	47nm,0.2s						
KPKS	**Kokpek**	**0.54**	**46**	*eP*	**Pb**	**22 21 05.0**	**-0.7**
	baz=41						
KPKS				eS	**Sb**	**22 21 12.3**	**-1.3**
	baz=41						
KPKS	**Kokpek**	**0.54**	**46**	*eP*	**Pb**	**22 21 05.0**	**-0.7**
	73nm,0.1s						
KPKS				eS	**Sb**	**22 21 12.3**	**-1.3**
	346nm,0.3s						
UZB	**Uzynbulak**	**0.64**	**85**	P	**Pg**	**22 21 05.9**	**-0.6**
	49nm,0.1s						
UZB				S	**Sg**	**22 21 14.2**	**-0.8**
	152nm,0.1s						
UZB	**Uzynbulak**	**0.64**	**85⇑**	*eP*	**Pg**	**22 21 05.9**	**-0.6**
	baz=82						
UZB				⇑eS	**Sg**	**22 21 14.2**	**-0.8**
	baz=82						
UZB	**Uzynbulak**	**0.64**	**85⇑**	*eP*	**Pg**	**22 21 05.9**	**-0.6**
	49nm,0.1s						
UZB				eS	**Sg**	**22 21 14.2**	**-0.8**
	152nm,0.1s						
KOTS	**Kotyrbulak**	**0.77**	**281**	P	**Pb**	**22 21 10.1**	**+0.4**
	7.3nm,0.1s						
KOTS				S	**Sb**	**22 21 21.5**	**+1.2**
	28nm,0.2s						
KOTS	**Kotyrbulak**	**0.77**	**281**	*eP*	**Pb**	**22 21 10.1**	**+0.4**
	baz=82						
KOTS				eS	**Sb**	**22 21 21.5**	**+1.2**
	baz=82						
KOTS	**Kotyrbulak**	**0.77**	**281**	*eP*	**Pb**	**22 21 10.1**	**+0.4**
	7.3nm,0.1s						
KOTS				eS	**Sb**	**22 21 21.5**	**+1.2**
	28nm,0.2s						
MDOK	**Medeo**	**0.81**	**275**	Pg	**Pb**	**22 21 10.1**	**-0.2**
	4.9nm,0.2s						
MDOK				Lg	Lg	22 21 21.3	
	9.7nm,0.2s						
MDOK	**Medeo**	**0.81**	**275**	*eP*	**Pb**	**22 21 10.1**	**-0.2**
	baz=77						
MDOK				eS	**Sb**	**22 21 21.3**	**-0.1**
	baz=77						
MDOK	**Medeo**	**0.81**	**275**	*eP*	**Pb**	**22 21 10.1**	**-0.2**
	4.9nm,0.2s						
MDOK				eS	**Sb**	**22 21 21.3**	**-0.1**
	9.7nm,0.2s						
TNSS	**Tian-Shan**	**0.88**	**267**	P	**Pb**	**22 21 11.6**	**-0.1**
	9.5nm,0.1s						
TNSS				S	**Sb**	**22 21 23.9**	**+0.2**
	26nm,0.2s						
TNSS	**Tian-Shan**	**0.88**	**267⇑**	*eP*	**Pb**	**22 21 11.6**	**-0.1**
	baz=69						
TNSS				⇑eS	**Sb**	**22 21 23.9**	**+0.2**
	baz=69						
TNSS	**Tian-Shan**	**0.88**	**267⇑**	*eP*	**Pb**	**22 21 11.6**	**-0.1**
	9.5nm,0.1s						
TNSS				eS	**Sb**	**22 21 23.9**	**+0.2**
	26nm,0.2s						
AAA	**Alma-Ata**	**0.91**	**278**	P	**Pn**	**22 21 12.6**	**-0.4**
	9.1nm,0.1s						
AAA				S	**Sn**	**22 21 25.7**	**-0.5**
	22nm,0.2s						
SHLS	**Shalkode**	**0.96**	**86**	P	**Pn**	**22 21 17.2**	**+3.5**
	7.1nm,0.1s						
SHLS				S	**Sn**	**22 21 33.6**	**+6.0**
	16nm,0.1s						
SHLS	**Shalkode**	**0.96**	**86**	*eP*	**Pn**	**22 21 16.4**	**+2.7**
	baz=85						
SHLS				eS	**Sn**	**22 21 32.3**	**+4.7**
	baz=85						
SHLS	**Shalkode**	**0.96**	**86**	*eP*	**Pn**	**22 21 16.4**	**+2.7**
	7.1nm,0.1s						
SHLS				eS	**Sn**	**22 21 32.3**	**+4.7**
	16nm,0.1s						
MNBS	**Baschi**	**1.00**	**10**	*eP*	**Pn**	**22 21 14.0**	**-0.3**
	22nm,0.1s						
MNBS				eS	**Sn**	**22 21 27.9**	**-0.7**
	34nm,0.1s						
PDGK	**Podgornoye**	**1.01**	**76**	P	**Pg**	**22 21 12.1**	**-1.4**
	9.9nm,0.2s						
PDGK				S	**Sg**	**22 21 25.1**	**-1.5**
	11nm,0.2s						
PDGK	**Podgornoye**	**1.01**	**76**	⇑P	**Pg**	**22 21 12.1**	**-1.4**
	4.3nm,0.2s						
PDGK				⇓S	**Sg**	**22 21 24.8**	**-1.7**
	13nm,0.5s						
PDGK	**Podgornoye**	**1.01**	**76**	⇓*iP*	**Pg**	**22 21 12.1**	**-1.4**
	baz=74						
PDGK				⇓*iS*	**Sg**	**22 21 24.9**	**-1.7**
	baz=74						
ARXS	**Arharly**	**1.15**	**348**	P	**Pg**	**22 21 16.2**	**+0.2**
	5.6nm,0.1s						
ARXS				S	**Sn**	**22 21 32.0**	**0.0**
	14nm,0.1s						
ARXS	**Arharly**	**1.15**	**348**	*eP*	**Pg**	**22 21 16.2**	**+0.2**
	5.6nm,0.1s						
ARXS				eS	**Sn**	**22 21 32.0**	**0.0**
	14nm,0.1s						
KDJ	**Kajisay**	**1.20**	**217**	⇓*iP*	**Pg**	**22 21 16.6**	**-0.5**
	baz=19						
KDJ				⇓*iS*	**Sn**	**22 21 32.7**	**-0.7**
	baz=19						
KTBS	**Karatobe**	**1.24**	**301**	P	**Pg**	**22 21 18.1**	**+0.3**
	6.8nm,0.2s						
KTBS				S	**Sn**	**22 21 35.1**	**+0.9**
	27nm,0.3s						
KTBS	**Karatobe**	**1.24**	**301**	*eP*	**Pg**	**22 21 18.1**	**+0.3**
	6.8nm,0.2s						
KTBS				eS	**Sn**	**22 21 35.1**	**+0.9**
	27nm,0.3s						
MTBS	**Maitube**	**1.26**	**272**	P	**Pg**	**22 21 19.0**	**+0.7**
	2.6nm,0.1s						
MTBS				S	**Sn**	**22 21 36.7**	**+1.8**
	15nm,0.2s						
MTBS	**Maitube**	**1.26**	**272**	*eP*	**Pg**	**22 21 18.4**	**+0.1**
	baz=73						
MTBS				eS	**Sn**	**22 21 35.3**	**+0.5**
	baz=73						
MTBS	**Maitube**	**1.26**	**272**	*eP*	**Pg**	**22 21 18.4**	**+0.1**
	2.6nm,0.1s						
MTBS				eS	**Sn**	**22 21 35.3**	**+0.5**
	15nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.39**	**191**	⇓*iP*	**Pb**	**22 21 19.5**	**-0.8**
	baz=93						
TARG				⇓*iS*	**Sg**	**22 21 37.6**	**-1.1**
	baz=93						
KUU	**Kurty**	**1.54**	**302**	P	**Pg**	**22 21 23.4**	**-0.3**
	2.6nm,0.2s						
KUU				S	**Sg**	**22 21 44.0**	**+0.4**
	60nm,0.2s						
KUU	**Kurty**	**1.54**	**302**	*eP*	**Pg**	**22 21 23.4**	**-0.3**
	baz=2.0						
KUU				eS	**Sg**	**22 21 44.1**	**+0.4**
	baz=2.0						
KUU	**Kurty**	**1.54**	**302**	*eP*	**Pg**	**22 21 23.4**	**-0.3**
	2.6nm,0.2s						
KUU				eS	**Sg**	**22 21 44.0**	**+0.4**
	60nm,0.2s						
KST	**Kastek**	**1.60**	**269**	P	**Pg**	**22 21 24.4**	**-0.4**
	2.7nm,0.2s						
KST				S	**Sg**	**22 21 45.8**	**+0.2**
	6.6nm,0.2s						
KST	**Kastek**	**1.60**	**269**	*eP*	**Pb**	**22 21 24.0**	**+0.2**
	baz=70						
KST				eS	**Sg**	**22 21 45.1**	**-0.6**
	baz=70						
KST	**Kastek**	**1.60**	**269**	*eP*	**Pb**	**22 21 23.9**	**+0.2**
	2.7nm,0.2s						
KST				eS	**Sg**	**22 21 45.0**	**-0.6**
	6.6nm,0.2s						
ULHL	**Ulahol**	**1.64**	**240**	⇓*iP*	**Pg**	**22 21 24.7**	**-0.9**
	baz=41						
ULHL				⇓*iS*	**Sg**	**22 21 47.1**	**+0.2**
	baz=41						
KTMS	**Ketmen**	**1.65**	**77**	P	**Pn**	**22 21 22.9**	**-0.3**
	14nm,0.3s						
KTMS	**Ketmen**	**1.65**	**77**	*eP*	**Pn**	**22 21 22.9**	**-0.3**
	baz=75						
KTMS				eS	**Sn**	**22 21 43.5**	**-1.0**
	baz=75						
KTMS	**Ketmen**	**1.65**	**77**	*eP*	**Pn**	**22 21 22.9**	**-0.3**
	14nm,0.3s						
KTMS				eS	**Sn**	**22 21 43.5**	**-1.0**
	22nm,0.1s						
DJR	**Jarkent**	**1.72**	**43**	P	**Pb**	**22 21 25.2**	**-0.6**
	6.3nm,0.2s						
DJR				S	**Sb**	**22 21 47.5**	**0.0**
	16nm,0.3s						
DJR	**Jarkent**	**1.72**	**43**	*eP*	**Pb**	**22 21 25.2**	**-0.6**
	4.5nm,0.2s						
DJR				eS	**Sb**	**22 21 47.1**	**-0.3**
	19nm,0.2s						
BOOM	**Boomskoye usch**	**1.73**	**250**	⇓*iP*	**Pg**	**22 21 26.6**	**-0.7**
	baz=52						
BOOM				⇓*iS*	**Sg**	**22 21 50.4**	**+0.6**
	baz=52						
TKM2	**Tokmak 2**	**1.88**	**266**	⇑P	**Pg**	**22 21 29.1**	**-1.1**
	1.6nm,0.5s						
TKM2				⇓S	**Sg**	**22 21 54.4**	**-0.1**
	2.2nm,0.2s						
TKM2	**Tokmak 2**	**1.88**	**266**	⇓*iP*	**Pg**	**22 21 29.2**	**-0.9**
	baz=67						
TKM2				⇓*iS*	**Sg**	**22 21 55.0**	**+0.5**
	baz=67						
TDK	**Taldyqorghan**	**1.92**	**5**	P	**Pb**	**22 21 29.5**	**+0.4**
	9.1nm,0.3s						
TDK				S	**Sg**	**22 21 54.8**	**-0.9**
	33nm,0.2s						
TDK	**Taldyqorghan**	**1.92**	**5**	*eP*	**Pb**	**22 21 29.6**	**+0.4**
	9.1nm,0.3s						
TDK				eS	**Sg**	**22 21 54.8**	**-0.9**
	33nm,0.2s						
NRN	**Naryn**	**2.30**	**225**	⇑*iP*	**Pb**	**22 21 34.7**	**-1.1**
	baz=26						
NRN				⇑*iS*	**Sb**	**22 22 04.9**	**+0.5**
	baz=26						
KAPS	**Kapalarasan**	**2.36**	**21**	Lg	Lg	22 22 06.6	
	11nm,0.3s						
KAPS	**Kapalarasan**	**2.36**	**21**	*eP*	**Pb**	**22 21 36.5**	**-0.2**
	1.6nm,0.2s						
KAPS				eS	**Sb**	**22 22 06.6**	**+0.7**
	11nm,0.3s						
KZA	**Kyzart**	**2.37**	**246**	⇑*iP*	**Pb**	**22 21 35.9**	**-1.1**
	baz=47						
KZA				⇑*iS*	**Sb**	**22 22 06.6**	**+0.1**
	baz=47						
CHMS	**Chumysh**	**2.49**	**269**	⇑*iP*	**Pb**	**22 21 37.9**	**-1.0**
	baz=70						
CHMS				⇑*iS*	**Sb**	**22 22 09.5**	**-0.2**
	baz=70						
USP	**Ospenovka**	**2.67**	**275**	⇓*iP*	**Pb**	**22 21 40.3**	**-1.8**
	baz=76						
USP				⇓*iS*	**Sb**	**22 22 14.2**	**-0.7**
	baz=76						
AAK	**Ala-Archa**	**2.73**	**262**	⇑P	**Pb**	**22 21 43.8**	**+0.8**
	1.8nm,0.6s						
AAK				⇓S	**Sg**	**22 22 20.2**	**-1.4**
	5.0nm,0.8s						
UCH	**Uchtor**	**2.82**	**253**	⇑*iP*	**Pb**	**22 21 42.5**	**-2.2**
	baz=54						
UCH				⇑*iS*	**Sb**	**22 22 17.7**	**-1.7**
	baz=54						

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*ISCJB **01** 22:26:40.5±0.7, 12°.4N±0°.1×87°.71W±0°.08, h71km±18km, Error ellipse: s-maj=22.8km s-min=4.9km az=30.3*
*UCR **01** 22:26:40.8±1.8, 12°.38N×87°.76W, h56km±25km, ML4.1*
*SNET **01** 22:26:42.3±0.8, 12°.45N×87°.86W, h30km±3km, ML3.9*
ISC 01 22:26:41.0±1.6, 12°.38N±0°.09×87°.72W±0°.06, h63km±20km, n39, σ0§73/54, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.61**	**14**	*eP*	**Pn**	**22 26 54.5**	**-0.1**
CSGN				eS	**Sn**	**22 27 05.8**	**+1.4**
CSGN				IAML		22 27 06.7	
	comp=N,28μm,0.6s						
CRIN	**San Cristobal**	**0.72**	**64**	*eP*	**Pn**	**22 26 56.1**	**+0.3**
CRIN				eS	**Sn**	**22 27 07.6**	**+1.0**
CNCH	**Conchagua**	**0.90**	**353**	*eP*	**Pn**	**22 26 57.7**	**-0.2**
CNCH				eS	**Sn**	**22 27 10.2**	**-0.3**
CNCH	**Conchagua**	**0.90**	**353**	*eP*	**Pn**	**22 26 57.8**	**-0.2**
CNCH				eS	**Sn**	**22 27 10.2**	**-0.3**
LCND	**La Caada**	**0.94**	**349**	*eP*	**Pn**	**22 26 58.1**	**-0.3**
LCND				eS	**Sn**	**22 27 10.8**	**-0.4**
LCND				IAML		22 27 12.9	
	comp=Z,3μm,0.2s						
LCND	**La Caada**	**0.94**	**349**	*eP*	**Pn**	**22 26 58.1**	**-0.3**
LCND				eS	**Sn**	**22 27 10.8**	**-0.4**
LCND				IAML		22 27 12.9	
	comp=Z,3μm,0.2s						
CNGN	**Cerro Negro**	**1.00**	**83**	*eP*	**Pn**	**22 26 57.8**	**-1.4**
COPN	**Copaltepe**	**1.12**	**100**	*eP*	**Pn**	**22 27 00.3**	**-0.3**
MOMN	**Momotombo**	**1.15**	**89**	*eP*	**Pn**	**22 27 01.0**	**-0.2**
VSM	**San Miguel**	**1.17**	**332**	*eP*	**Pn**	**22 27 01.9**	**+0.2**
VSM				eS	**Sn**	**22 27 17.4**	**+0.4**
VSM	**San Miguel**	**1.17**	**332**	*eP*	**Pn**	**22 27 01.9**	**+0.2**
VSM				eS	**Sn**	**22 27 17.4**	**+0.4**
LCY	**Lacayo**	**1.18**	**331**	*eP*	**Pn**	**22 27 01.2**	**-0.4**
LCY				eS	**Sn**	**22 27 16.2**	**-0.7**
LCY	**Lacayo**	**1.18**	**331**	*eP*	**Pn**	**22 27 01.2**	**-0.4**
LCY				eS	**Sn**	**22 27 16.2**	**-0.7**
PACA	**Pacayal**	**1.23**	**331**	*eP*	**Pn**	**22 27 01.9**	**-0.4**
PACA				eS	**Sn**	**22 27 17.2**	**-1.0**
PACA				IAML		22 27 19.6	
	comp=Z,6μm,0.1s						
PACA	**Pacayal**	**1.23**	**331**	*eP*	**Pn**	**22 27 01.9**	**-0.4**
PACA				eS	**Sn**	**22 27 17.2**	**-1.0**
PACA				IAML		22 27 19.6	
	comp=Z,6μm,0.1s						
TECA	**Tecapa**	**1.34**	**325**	*eP*	**Pn**	**22 27 03.2**	**-0.7**
TECA				eS	**Sn**	**22 27 20.4**	**-0.6**
TECA	**Tecapa**	**1.34**	**325**	*eP*	**Pn**	**22 27 03.2**	**-0.7**
TECA				eS	**Sn**	**22 27 20.4**	**-0.6**
UESV	**Ojushtada**	**1.44**	**314**	*eP*	**Pn**	**22 27 07.2**	**+2.1**
UESV	**Ojushtada**	**1.44**	**314**	*eP*	**Pn**	**22 27 07.2**	**+2.1**
MGAN	**Managua**	**1.45**	**99**	*eP*	**Pn**	**22 27 05.0**	**-0.2**
CAHU	**Cacacuatique**	**1.46**	**341**	*eP*	**Pn**	**22 27 06.4**	**+0.9**
CAHU	**Cacacuatique**	**1.46**	**341**	*eP*	**Pn**	**22 27 06.4**	**+0.9**
ESTN	**Estel**	**1.49**	**61**	*eP*	**Pn**	**22 27 06.2**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.72**	**14**	*eP*	**Pn**	**22 27 09.4**	**+0.8**
TGUH	**Tegucigalpa,Un**	**1.72**	**14**	*eP*	**Pn**	**22 27 09.5**	**+0.8**
PAVA	**Las Pavas**	**1.78**	**318**	*eP*	**Pn**	**22 27 09.5**	**-0.2**
PAVA	**Las Pavas**	**1.78**	**318**	*eP*	**Pn**	**22 27 09.5**	**-0.2**
LFRS	**El Faro**	**1.80**	**313**	*eP*	**Pn**	**22 27 09.5**	**-0.4**
LFRS				eS	**Sn**	**22 27 31.2**	**-0.7**
VICT	**Victoria**	**1.81**	**330**	*eP*	**Pn**	**22 27 10.2**	**+0.2**
VICT	**Victoria**	**1.81**	**330**	*eP*	**Pn**	**22 27 10.2**	**+0.2**
MATN	**Matagalpa**	**1.83**	**73**	*eP*	**Pn**	**22 27 09.7**	**-0.5**
LBRS	**Las Brisas**	**1.87**	**316**	*eP*	**Pn**	**22 27 10.8**	**0.0**
LFU	**La Fuente**	**1.92**	**315**	*eP*	**Pn**	**22 27 11.5**	**-0.1**
LFU	**La Fuente**	**1.92**	**315**	*eP*	**Pn**	**22 27 11.5**	**-0.1**
CONN	**Concepcion**	**2.20**	**112**	*eP*	**Pn**	**22 27 15.9**	**+0.6**
CEVE	**Cerro Verde**	**2.35**	**308**	*eP*	**Pn**	**22 27 18.2**	**+0.7**
CEVE	**Cerro Verde**	**2.35**	**308**	*eP*	**Pn**	**22 27 18.2**	**+0.7**
SBLS	**San Blas**	**2.36**	**308**	*eP*	**Pn**	**22 27 17.9**	**+0.3**
SBLS	**San Blas**	**2.36**	**308**	*eP*	**Pn**	**22 27 17.9**	**+0.3**

IDC 01 22:53:22.3±3.3, 3°.42S×99°.85E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/56, mbtmp3.7/5, Error ellipse: s-maj=131.9km s-min=20.1km az=57.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.75**	**358**	P	P	22 58 15.4	-0.3
	0.7nm,0.7s,baz=185,slow=9.1,SNR=5.1						
WRA	**Warramunga Arr**	**37.43**	**119**	P	P	23 00 37.4	-0.3
	27nm,0.3s,baz=286,slow=12,SNR=1.7						
ASAR	**Alice Springs**	**38.56**	**125**	P	P	23 00 47.2	0.0
	0.6nm,0.7s,baz=303,slow=8.3,SNR=3.3						
SONM	**Songino Array**	**51.36**	**6**	P	P	23 02 29.1	+0.3
	0.8nm,0.7s,baz=184,slow=7.8,SNR=6.6						
MKAR	**Makanchi Array**	**52.34**	**345**	P	P	23 02 36.5	+0.5
	1.4nm,0.7s,baz=146,slow=8.7,SNR=13						
ZALV	**Zalesovo Beam**	**58.52**	**350**	P	P	23 03 19.4	-0.9
	0.7nm,0.4s,baz=181,slow=7.1,SNR=6.2						
TXAR	**Lajitas Array**	**145.90**	**38**	PKPbc	PKPdf	23 13 03.8	-0.3
	0.7nm,0.7s,baz=270,slow=1.3,SNR=6.6						

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*NSSC **01** 23:03:06.8±3.5, 33°.77N×35°.82E, h5km±352km, ML1.3*
*GRAL **01** 23:03:07.5±0.3, 33°.81N×35°.79E, h20km±2km, MD2.7*
ISC 01 23:03:06.4±1.0, 33°.80N±0°.04×35°.86E±0°.05, h12km±8km, n12, σ1§07/17, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.20**	**301**	*eP*	**Pb

ellipse: s-maj=1.4km s-min=0.8km az=300.0
TIR ***01*** *23:03:40.5, 40°.23N×21°.75E, h6km, Md3.8/7*
BEO ***01*** *23:03:41.8±0.4, 40°.17N×21°.77E, h2km±2km, ML3.7/12*
PDG ***01*** *23:03:41.4±0.4, 40°.16N×21°.71E, h13km, MD3.9/1, ML3.9/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
THE ***01*** *23:03:41.8, 40°.18N×21°.68E, h5km, ML3.8/19, Error ellipse: s-maj=0.7km s-min=0.3km az=357.0*
MOS ***01*** *23:03:41.5±1.0, 40°.15N×21°.74E, h19km, mb4.2/6, Error ellipse: s-maj=8.0km s-min=4.1km az=93.3*
NEIC ***01*** *23:03:41.8±0.0, 40°.18N×21°.68E, h5km, mb4.2/4, ML3.8(THE), After THE.*
ISCJB ***01*** *23:03:41.0±0.3, 40°.193N±0°.009×21°.71E±0°.01, h7km±2km, mb4.2/26, Error ellipse: s-maj=1.8km s-min=1.5km az=150.1*
PRU ***01*** *23:03:42.1±0.0, 40°.20N×22°.04E, h0km, M3.8*
SOF ***01*** *23:03:44.5, 40°.28N×22°.55E, h2km*
IDC ***01*** *23:03:45.0±1.3, 40°.12N×21°.60E, h47km±15km, mb3.5/9, mb1 3.6/18, mb1mx3.5/55, mbtmp3.7/18, ML3.7/10, MS3.1/1, Ms1 3.1/1, ms1mx2.4/36, Error ellipse: s-maj=16.3km s-min=10.6km az=59.0*
ISC 01 23:03:41.9±0.8, 40°.17N±0°.02×21°.70E±0°.01, h10km±5km, n345, σ1§51/427, mb4.1/26, 25C-25D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.15**	**21**	P	**Pg**	**23 03 45.5**	**+0.1**
KZN				S	**Sg**	**23 03 47.3**	**-0.6**
	78μm,0.3s						
KZN	**Kozani**	**0.15**	**21**	P	**Pg**	**23 03 45.6**	**+0.1**
KZN				S	**Sg**	**23 03 48.1**	**+0.2**
KZN				AML	AML	23 03 48.7	
KZN				AML	AML	23 03 48.8	
KPRO	**Kipourio**	**0.33**	**231**	P	**Pg**	**23 03 48.0**	**-0.6**
KPRO				S	**Sg**	**23 03 53.5**	**+0.4**
	19μm,0.5s						
KPRO	**Kipourio**	**0.33**	**231**	P	**Pg**	**23 03 48.0**	**-0.6**
KPRO				S	**Sg**	**23 03 54.2**	**+1.1**
KPRO				AML	AML	23 03 57.5	
	comp=N,29685μm,0.6s						
KPRO				AML	AML	23 03 57.5	
	comp=E,46591μm,0.5s						
KTI	**Kastanea**	**0.39**	**54**	P	**Pg**	**23 03 49.8**	**+0.1**
PENT	**Pentalofos**	**0.43**	**274**	P	**Pg**	**23 03 49.6**	**-0.8**
PENT				S	**Sg**	**23 03 55.8**	**-0.3**
	comp=E,20μm,0.6s						
PENT	**Pentalofos**	**0.43**	**274**	P	**Pg**	**23 03 49.6**	**-0.8**
PENT				S	**Sg**	**23 03 55.6**	**-0.5**
PENT				AML	AML	23 03 57.4	
	comp=N,49895μm,0.4s						
PENT				AML	AML	23 04 03.2	
	comp=E,35457μm,0.8s						
NEST	**Nestorio**	**0.56**	**297**	P	**Pg**	**23 03 51.7**	**-1.1**
NEST				S	**Sg**	**23 03 59.1**	**-1.0**
	comp=E,15μm,0.4s						
NEST	**Nestorio**	**0.56**	**297**	P	**Pg**	**23 03 51.7**	**-1.1**
NEST				S	**Sg**	**23 04 00.5**	**+0.3**
NEST				AML	AML	23 04 05.8	
	comp=E,37810μm,0.4s						
NEST				AML	AML	23 04 06.7	
	comp=N,22200μm,0.3s						
LIT	**Litokhoron**	**0.61**	**96**	*e*Pg	**Pg**	**23 03 53.3**	**-0.5**
LIT	**Litokhoron**	**0.61**	**96**	P	**Pg**	**23 03 53.3**	**-0.5**
LIT				S	**Sb**	**23 04 03.1**	**-0.2**
	comp=N,16μm,0.4s						
LIT	**Litokhoron**	**0.61**	**96**	*e*P	**Pg**	**23 03 53.3**	**-0.5**
LIT	**Litokhoron**	**0.61**	**96**	P	**Pg**	**23 03 53.3**	**-0.5**
LIT				S	**Sb**	**23 04 02.8**	**-0.6**
LIT				AML	AML	23 04 06.5	
	comp=N,31238μm,0.4s						
LIT				AML	AML	23 04 07.9	
	comp=E,34174μm,0.4s						
THL	**Klokotos Trika**	**0.65**	**158**	P	**Pg**	**23 03 53.6**	**-0.9**
THL				S	**Sb**	**23 04 03.8**	**-0.5**
	comp=E,10μm,0.6s						
THL	**Klokotos Trika**	**0.65**	**158**	P	**Pg**	**23 03 53.6**	**-0.9**
THL				S	**Sb**	**23 04 04.2**	**-0.2**
THL				AML	AML	23 04 09.4	
	comp=E,23444μm,0.6s						
THL				AML	AML	23 04 09.4	
	comp=N,21404μm,0.5s						
FNA	**Florina**	**0.67**	**338**	*e*Pg	**Pg**	**23 03 54.2**	**-0.6**
FNA				*e*Sg	**Sg**	**23 04 03.0**	**-0.6**
FNA	**Florina**	**0.67**	**338**	*e*Pg	**Pg**	**23 03 54.0**	**-0.8**
FNA	**Florina**	**0.67**	**338**	P	**Pg**	**23 03 53.8**	**-1.0**
FNA				S	**Sg**	**23 04 02.9**	**-0.6**
	comp=N,19μm,0.3s						
FNA	**Florina**	**0.67**	**338**	*e*P	**Pg**	**23 03 54.0**	**-0.8**
FNA	**Florina**	**0.67**	**338**	P	**Pg**	**23 03 53.8**	**-1.0**
FNA				S	**Sg**	**23 04 02.8**	**-0.8**
FNA				AML	AML	23 04 06.0	
	comp=E,35397μm,0.4s						
FNA				AML	AML	23 04 06.2	
	comp=N,39647μm,0.3s						
LRSO	**Larissa Observ**	**0.73**	**133**	P	**Pg**	**23 03 55.7**	**-0.3**
LRSO				S	**Sb**	**23 04 07.2**	**+0.6**
	comp=N,27μm,0.5s						
LRSO	**Larissa Observ**	**0.73**	**133**	P	**Pg**	**23 03 55.8**	**-0.1**
LRSO				AML	AML	23 04 12.4	
	comp=E,56276μm,0.4s						
LRSO				AML	AML	23 04 14.9	
	comp=N,63157μm,0.7s						
JAN	**Janina**	**0.83**	**232**	P	**Pg**	**23 03 56.8**	**-1.1**
JAN				S	**Sb**	**23 04 09.5**	**-0.1**
	comp=N,2μm,0.6s						
JAN	**Janina**	**0.83**	**232**	P	**Pg**	**23 03 56.8**	**-1.1**
JAN				S	**Sb**	**23 04 09.5**	**-0.1**
JAN	**Janina**	**0.83**	**232**	P	**Pg**	**23 03 56.8**	**-1.1**
JAN				S	**Sg**	**23 04 09.2**	**+0.5**
JAN				AML	AML	23 04 20.3	
	comp=E,3926μm,0.6s						
JAN				AML	AML	23 04 20.6	
	comp=N,5489μm,0.7s						
GRG	**Griva**	**0.95**	**34**	P	**Pg**	**23 03 59.5**	**-0.8**
GRG				S	**Sb**	**23 04 13.2**	**-0.1**
	comp=N,4μm,0.7s						
GRG	**Griva**	**0.95**	**34**	P	**Pg**	**23 03 59.6**	**-0.7**
GRG				S	**Sb**	**23 04 13.1**	**-0.1**
GRG				AML	AML	23 04 21.2	
	comp=E,7580μm,0.8s						
GRG				AML	AML	23 04 22.9	
	comp=N,7772μm,0.7s						
THE	**Thessaloniki**	**1.07**	**64**	P	**Pb**	**23 04 02.3**	**-0.3**
THE				S	**Sb**	**23 04 17.0**	**+0.4**
	comp=N,1μm,0.6s						
HORT	**Hortiatis**	**1.15**	**68**	P	**Pb**	**23 04 03.4**	**-0.6**
HORT				S	**Sn**	**23 04 20.4**	**+0.4**
HORT	**Hortiatis**	**1.15**	**68**	P	**Pb**	**23 04 03.4**	**-0.6**
HORT				S	**Sn**	**23 04 20.2**	**+0.2**
HORT				AML	AML	23 04 22.2	
	comp=N,3160μm,0.6s						
HORT				AML	AML	23 04 23.2	
	comp=E,2689μm,0.7s						
OHR	**Ohrid**	**1.17**	**324**	*i* Pn	**Pb**	**23 04 03.0**	**-1.2**
FYTO	**Fytoko, Volos**	**1.22**	**128**	P	**Pn**	**23 04 04.4**	**-0.6**
FYTO				S	**Sn**	**23 04 22.9**	**+1.4**
	comp=E,3μm,0.5s						
IGT	**Igoumenitsa**	**1.23**	**239**	*e*Pg	**Pn**	**23 04 04.5**	**-0.6**
IGT				*e*Sg	**Sn**	**23 04 22.7**	**+1.0**
IGT	**Igoumenitsa**	**1.23**	**239**	P	**Pn**	**23 04 04.1**	**-1.0**
IGT				S	**Sn**	**23 04 21.9**	**+0.2**
IGT	**Igoumenitsa**	**1.23**	**239**	P	**Pn**	**23 04 04.4**	**-0.7**
IGT				S	**Sn**	**23 04 23.0**	**+1.3**
IGT				AML	AML	23 04 27.5	
	comp=N,4007μm,0.9s						
IGT				AML	AML	23 04 28.2	
	comp=E,4254μm,0.4s						
AGG	**Agios Georgios**	**1.24**	**157**	*e*Pn	**Pn**	**23 04 05.2**	**-0.1**
AGG	**Agios Georgios**	**1.24**	**157**	P	**Pn**	**23 04 04.5**	**-0.8**
AGG				S	**Sn**	**23 04 22.7**	**+0.6**
	comp=E,5μm,0.8s						
AGG	**Agios Georgios**	**1.24**	**157**	*e*P	**Pn**	**23 04 05.2**	**-0.1**
AGG	**Agios Georgios**	**1.24**	**157**	P	**Pn**	**23 04 05.0**	**-0.4**
AGG				S	**Sn**	**23 04 22.1**	**-0.1**
AGG				AML	AML	23 04 24.1	
	comp=N,10047μm,0.5s						
AGG				AML	AML	23 04 29.9	
	comp=E,8677μm,0.9s						
EVR	**Evrytania**	**1.25**	**176**	P	**Pn**	**23 04 04.0**	**-1.5**
EVR	**Evrytania**	**1.25**	**176**	P	**Pn**	**23 04 04.0**	**-1.5**
EVR				S	**Sb**	**23 04 21.4**	**-0.4**
EVR				AML	AML	23 04 25.8	
	comp=E,6330μm,0.5s						
EVR				AML	AML	23 04 32.0	
	comp=N,6758μm,0.7s						
KRUS	**Krusevo**	**1.25**	**344**	*i* Pn	**Pn**	**23 04 04.0**	**-1.5**
TPE	**Tepelena**	**1.30**	**276**	P	**Pn**	**23 04 05.4**	**-0.7**
TPE				S	**Sg**	**23 04 24.2**	**+0.5**
	comp=N,4μm,1.0s						
TPE	**Tepelena**	**1.30**	**276**	*i* PN	**Pg**	**23 04 06.8**	**0.0**
TPE				*i* SN	**Sg**	**23 04 25.2**	**+1.4**
VAY	**Valandovo**	**1.33**	**30**	*e*Pg	**Pn**	**23 04 06.0**	**-0.5**
VAY				*e*Sg	**Sb**	**23 04 23.4**	**-0.6**
VAY	**Valandovo**	**1.33**	**30**	*i* Pn	**Pn**	**23 04 06.2**	**-0.3**
SRN	**Sarande**	**1.33**	**258**	P	**Pn**	**23 04 06.1**	**-0.5**
SRN				S	**Sg**	**23 04 25.6**	**+0.7**
	comp=N,3μm,0.8s						
SRN	**Sarande**	**1.33**	**258**	*i* PN	**Pg**	**23 04 07.7**	**+0.1**
SRN				*i* SN	**Sg**	**23 04 27.3**	**+2.4**
KNT	**Kendrikon**	**1.35**	**42**	P	**Pn**	**23 04 06.3**	**-0.5**
KNT	**Kendrikon**	**1.35**	**42**	P	**Pn**	**23 04 06.0**	**-0.8**
KNT				S	**Sb**	**23 04 24.4**	**-0.2**
KNT				AML	AML	23 04 28.8	
	comp=E,1374μm,0.6s						
KNT				AML	AML	23 04 31.9	
	comp=N,1662μm,0.8s						
PLG	**Polygyros**	**1.35**	**81**	P	**Pn**	**23 04 06.2**	**-0.6**
PLG				S	**Sg**	**23 04 25.7**	**+0.2**
PLG	**Polygyros**	**1.35**	**81**	P	**Pn**	**23 04 06.2**	**-0.6**
PLG				S	**Sg**	**23 04 25.3**	**-0.1**
PLG				AML	AML	23 04 29.6	
	comp=N,3470μm,0.9s						
PLG				AML	AML	23 04 31.0	
	comp=E,2279μm,0.6s						
XOR	**Xorichti**	**1.40**	**124**	P	**Pn**	**23 04 07.1**	**-0.4**
SOH	**Sokhos**	**1.42**	**62**	P	**Pn**	**23 04 07.7**	**-0.1**
SOH				S	**Sg**	**23 04 28.0**	**+0.3**
	comp=E,2μm,0.4s						
SOH	**Sokhos**	**1.42**	**62**	P	**Pn**	**23 04 07.9**	**0.0**
SOH				S	**Sg**	**23 04 27.3**	**-0.4**
SOH				AML	AML	23 04 34.0	
	comp=N,3160μm,0.5s						
SOH				AML	AML	23 04 35.5	
	comp=E,2896μm,0.9s						
KEK	**Kerkira**	**1.53**	**253**	P	**Pn**	**23 04 09.2**	**-0.1**
KEK				S	**Sn**	**23 04 29.3**	**+0.1**
	comp=E,1μm,0.5s						
KEK	**Kerkira**	**1.53**	**253**	P	**Pb**	**23 04 09.9**	**-0.4**
PAIG	**Paliouri**	**1.54**	**98**	P	**Pn**	**23 04 08.7**	**-0.7**
PAIG	**Paliouri**	**1.54**	**98**	P	**Pn**	**23 04 08.7**	**-0.7**
PVO	**Paravola**	**1.55**	**185**	P	**Pn**	**23 04 09.7**	**+0.1**
TSLK	**Tsoukalades, L**	**1.56**	**211**	P	**Pn**	**23 04 10.1**	**+0.4**
STIP	**Stip**	**1.57**	**13**	*i* Pn	**Pb**	**23 04 11.2**	**+0.2**
ANX	**Ano Chora**	**1.58**	**174**	P	**Pn**	**23 04 09.7**	**-0.3**
ANX				S	**Sb**	**23 04 30.9**	**-0.4**
LKD2	**Lefkada island**	**1.59**	**211**	P	**Pn**	**23 04 10.4**	**+0.2**
LKD2				S	**Sb**	**23 04 32.2**	**+0.6**
	comp=E,2μm,0.8s						
VLO	**Vlora**	**1.71**	**281**	*i* PN	**Pg**	**23 04 15.1**	**+0.3**
VLO				*i* SN	**Sg**	**23 04 40.3**	**+3.4**
SRS	**Serrai**	**1.73**	**56**	*e*Pg	**Pn**	**23 04 11.7**	**-0.3**
SRS				*e*Sg	**Sn**	**23 04 34.5**	**+0.4**
SRS	**Serrai**	**1.73**	**56**	P	**Pn**	**23 04 11.7**	**-0.3**
SRS	**Serrai**	**1.73**	**56**	P	**Pn**	**23 04 11.4**	**-0.6**
SMIA	**Simia**	**1.74**	**137**	P	**Pn**	**23 04 12.1**	**0.0**
SMIA	**Simia**	**1.74**	**137**	P	**Pn**	**23 04 12.1**	**0.0**
EVGI	**Lefkada island**	**1.74**	**208**	P	**Pb**	**23 04 13.7**	**-0.3**
EFP	**Efpalio**	**1.74**	**175**	P	**Pn**	**23 04 12.7**	**+0.5**
OUR	**Ouranopolis**	**1.75**	**84**	P	**Pn**	**23 04 12.0**	**-0.3**
SERG	**Sergoula**	**1.77**	**171**	P	**Pn**	**23 04 12.5**	**-0.1**
ATAL	**Atalanti**	**1.79**	**145**	P	**Pn**	**23 04 12.6**	**-0.3**
ATAL				S	**Sb**	**23 04 37.3**	**0.0**
PHP	**Peshkopia**	**1.79**	**328**	P	**Pn**	**23 04 12.7**	**-0.2**
PHP	**Peshkopia**	**1.79**	**328**	*i* PN	**Pb**	**23 04 14.7**	**-0.2**
PHP				*i* SN	**Sg**	**23 04 39.5**	**0.0**
KALE	**Kalithea**	**1.81**	**169**	P	**Pn**	**23 04 13.1**	**0.0**
KALE				S	**Sb**	**23 04 37.0**	**-0.7**
	comp=E,2μm,0.6s						
SKO	**Skopje**	**1.81**	**354**	*e*Pg	**Pb**	**23 04 14.3**	**-0.9**
SKO				*e*Sg	**Sg**	**23 04 40.0**	**-0.3**
LKR	**Lokris**	**1.82**	**146**	P	**Pn**	**23 04 13.2**	**-0.1**
LKR	**Lokris**	**1.82**	**146**	P	**Pn**	**23 04 13.1**	**-0.1**
TRIZ	**Trizonia**	**1.82**	**171**	P	**Pn**	**23 04 13.1**	**-0.1**
TRIZ	**Trizonia**	**1.82**	**171**	P	**Pn**	**23 04 13.4**	**+0.2**
TIR	**Tirane**	**1.83**	**311**	*e*Pn	**Pn**	**23 04 14.4**	**+1.1**
TIR	**Tirane**	**1.83**	**311**	P	**Pn**	**23 04 14.3**	**+1.0**
TIR	**Tirane**	**1.83**	**311**	⇑*i*P	**Pb**	**23 04 14.6**	**-0.8**
TIR	**Tirane**	**1.83**	**311**	S	**Sn**	**23 04 36.6**	**+0.1**
TIR	**Tirane**	**1.83**	**311**	*e*P	**Pn**	**23 04 14.4**	**+1.1**
TIR	**Tirane**	**1.83**	**311**	*i* PN	**Pb**	**23 04 15.6**	**+0.2**
TIR				*i* SN	**Sg**	**23 04 41.1**	**+0.5**
DSF	**Desfina**	**1.87**	**160**	P	**Pn**	**23 04 13.8**	**-0.1**
FSK	**Fiskardo**	**1.92**	**208**	P	**Pb**	**23 04 16.1**	**-0.9**
LAKA	**Lakka**	**1.94**	**173**	P	**Pn**	**23 04 15.5**	**+0.6**
KKB	**Krupnik**	**2.00**	**31**	*i* Pg	**Pn**	**23 04 15.8**	**+0.1**
NVR	**Nevrokopi**	**2.02**	**54**	P	**Pn**	**23 04 15.9**	**-0.2**
NVR				S	**Sb**	**23 04 42.8**	**-1.3**
MRKA	**Markates**	**2.06**	**134**	P	**Pn**	**23 04 16.7**	**+0.1**
MMB	**Musomiste**	**2.10**	**47**	*i* Pg	**Pn**	**23 04 16.9**	**-0.2**
PROD	**Prodromos**	**2.12**	**154**	P	**Pn**	**23 04 16.9**	**-0.5**
KLV	**Kalavryta, Ach**	**2.15**	**170**	P	**Pn**	**23 04 18.0**	**+0.2**
VLS	**Valsamata**	**2.17**	**204**	P	**Pn**	**23 04 18.9**	**+0.9**
KFL	**Anninata**	**2.17**	**199**	P	**Pn**	**23 04 19.3**	**+1.2**
GUR	**Goura**	**2.28**	**167**	P	**Pn**	**23 04 19.5**	**-0.2**
KAVA	**Kavala**	**2.30**	**68**	P	**Pn**	**23 04 19.4**	**-0.4**
PUK	**Puka**	**2.32**	**325**	*i* PN	**Pn**	**23 04 21.9**	**+1.7**
PUK				*i* SN	**Sg**	**23 04 55.1**	**-1.4**
THAS	**Thassos island**	**2.35**	**78**	P	**Pn**	**23 04 20.1**	**-0.4**
LOUT	**Loutraki**	**2.39**	**155**	P	**Pn**	**23 04 21.1**	**0.0**
EREA	**Eretria**	**2.46**	**134**	P	**Pn**	**23 04 22.2**	**+0.1**
BCI	**Bajram Curri**	**2.52**	**331**	*i* PN	**Pn**	**23 04 23.8**	**+0.9**
BCI				*i* SN	**Sb**	**23 04 58.8**	**+0.5**
ULC	**Ulcinj**	**2.58**	**315**	⇑*i*Pn	**Pn**	**23 04 24.4**	**+0.6**
ULC				*e*Sn	**Sn**	**23 04 57.3**	**+2.1**
BARS	**Barje**	**2.65**	**2**	*e*Pn	**Pn**	**23 04 25.2**	**+0.5**
BARS	**Barje**	**2.65**	**2**	*e*Pn	Pg	23 04 42.3	+10
TRIP	**Tripoli**	**2.67**	**172**	P	**Pn**	**23 04 25.5**	**+0.5**
ATH	**Athens Observa**	**2.69**	**144**	P	**Pn**	**23 04 25.4**	**-0.3**
PTL	**Penteli**	**2.70**	**141**	P	**Pn**	**23 04 25.6**	**+0.2**
VTS	**Vitosha**	**2.71**	**25**	*e*Pn	**Pn**	**23 04 25.8**	**+0.1**
VTS	**Vitosha**	**2.71**	**25**	*e*Pn	**Pn**	**23 04 25.7**	**+0.1**
VTS	**Vitosha**	**2.71**	**25**	⇑*i*P	**Pn**	**23 04 25.7**	**+0.1**
VTS	**Vitosha**	**2.71**	**25**	S	**Sn**	**23 04 58.7**	**+0.2**
VTS	**Vitosha**	**2.71**	**25**	*e*P	**Pn**	**23 04 25.7**	**+0.1**
VTS	**Vitosha**	**2.71**	**25**	*i* P	**Pn**	**23 04 25.8**	**+0.1**
DION	**Dionisos Attik**	**2.71**	**139**	P	**Pn**	**23 04 25.5**	**-0.1**
ATHU	**Athens Univers**	**2.73**	**143**	P	**Pn**	**23 04 26.0**	**+0.2**
RZN	**Rozhen**	**2.75**	**55**	*i* Pg	**Pn**	**23 04 26.8**	**+0.6**
PVY	**Plav**	**2.76**	**332**	⇓*i*Pn	**Pn**	**23 04 26.9**	**+0.6**
PVY				*e*Sn	**Sn**	**23 05 01.4**	**+1.7**
DRME	**Dracevica, Mon**	**2.77**	**318**	⇑*i*Pn	**Pn**	**23 04 27.6**	**+1.3**
DRME				*e*Sn	**Sn**	**23 05 01.6**	**+1.8**
DRME	**Dracevica, Mon**	**2.77**	**318**	*e*Pn	**Pn**	**23 04 27.2**	**+0.9**
VLY	**Voula,Athens**	**2.83**	**144**	P	**Pn**	**23 04 27.4**	**+0.3**
DID	**Didima**	**2.91**	**155**	P	**Pn**	**23 04 28.1**	**-0.2**
PDG	**Podgorica**	**2.92**	**322**	*e*Pn	**Pn**	**23 04 30.2**	**+1.9**
PDG				*e*Sn	**Sn**	**23 05 05.4**	**+2.0**
PDG	**Podgorica**	**2.92**	**322**	⇓*i*P	**Pn**	**23 04 29.5**	**+1.2**
PDG	**Podgorica**	**2.92**	**322**	S	**Sn**	**23 05 03.1**	**-0.3**
PDG	**Podgorica**	**2.92**	**322**	*e*Pn	**Pn**	**23 04 29.2**	**+0.9**
TTG	**Podgorica**	**2.92**	**322**	⇑*i*Pn	**Pn**	**23 04 29.2**	**+0.9**
TTG				*e*Sn	**Sn**	**23 05 05.2**	**+1.8**
TTG	**Podgorica**	**2.92**	**322**	*e*Pn	**Pn**	**23 04 29.7**	**+1.4**
TTG	**Podgorica**	**2.92**	**322**	*e*P	**Pn**	**23 04 29.7**	**+1.4**
PLD	**Plovdiv**	**2.98**	**49**	*e*Pn	**Pn**	**23 04 30.0**	**+0.8**
PLD				*e*Sn	**Sn**	**23 05 05.4**	**+0.4**
ITM	**Ithomi**	**2.99**	**177**	*e*Pn	**Pb**	**23 04 32.9**	**-2.3**
KRND	**KRANIDI**	**3.00**	**157**	P	**Pn**	**23 04 29.5**	**0.0**
BUM	**Brajici-Budva**	**3.00**	**316**	⇑*i*Pn	**Pn**	**23 04 30.3**	**+0.7**
BUM				*e*Sn	**Sn**	**23 05 07.5**	**+1.8**
IVA	**Berane**	**3.02**	**334**	⇓*i*Pn	**Pn**	**23 04 30.9**	**+1.0**
IVA				*e*Sn	**Sn**	**23 05 08.1**	**+1.9**
RDO	**Rodhopi**	**3.08**	**70**	P	**Pn**	**23 04 30.1**	**-0.5**
SELS	**Selova**	**3.08**	**352**	*e*Pn	**Pn**	**23 04 30.6**	**0.0**
SELS				*e*Sn	**Sn**	**23 05 08.4**	**+0.9**
KOME	**Kolasin**	**3.14**	**329**	⇑*i*Pn	**Pn**	**23 04 32.2**	**+0.6**
KOME				*e*Sn	**Sn**	**23 05 10.9**	**+1.7**
CEME	**Cevo**	**3.17**	**320**	⇓*i*Pn	**Pn**	**23 04 32.4**	**+0.5**
CEME				*e*Sn	**Sn**	**23 05 11.6**	**+1.9**
ZAPS	**Zavoj**	**3.18**	**12**	*e*Pn	**Pn**	**23 04 33.3**	**+1.3**
ZAPS				*e*Sn	**Sn**	**23 05 10.1**	**0.0**
KDZ	**Kurdzhali**	**3.18**	**61**	*i* P	**Pb**	**23 04 35.3**	**-3.3**
NKME	**Niksic**	**3.32**	**322**	⇓*i*Pn	**Pn**	**23 04 35.0**	**+1.1**
NKME				*e*Sn	**Sn**	**23 05 15.3**	**+1.9**
HCY	**Herceg Novi**	**3.32**	**314**	⇑*i*Pn	**Pn**	**23 04 34.6**	**+0.7**
HCY				*e*Sn	**Sn**	**23 05 15.2**	**+1.8**
HCY	**Herceg Novi**	**3.32**	**314**	*e*Pn	**Pn**	**23 04 35.2**	**+1.3**
NKY	**Niksic**	**3.34**	**323**	⇑*i*Pn	**Pn**	**23 04 34.7**	**+0.5**
NKY				*e*Sn	**Sn**	**23 05 15.5**	**+1.6**
SJES	**Sjenica**	**3.35**	**338**	*e*Pn	**Pn**	**23 04 35.8**	**+1.4**
SJES				*e*Sn	**Sn**	**23 05 15.7**	**+1.4**
FASA	**Fasano**	**3.38**	**282**	⇓*i*Pn	**Pn**	**23 04 34.9**	**+0.3**
ALN	**Alexandroupoli**	**3.39**	**76**	*e*Pn	**Pn**	**23 04 35.0**	**+0.2**
ALN	**Alexandroupoli**	**3.39**	**76**	P	**Pn**	**23 04 34.6**	**-0.3**
ALN	**Alexandroupoli**	**3.39**	**76**	*e*P	**Pn**	**23 04 35.1**	**+0.2**
TAR1	**Taranto**	**3.39**	**278**	*e*Pn	**Pn**	**23 04 35.7**	**+0.8**
DIM	**Dimitrovgrad**	**3.46**	**56**	*i* Pg	**Pb**	**23 04 43.4**	**+0.2**
BOVS	**Bovan**	**3.47**	**0**	*e*Pn	**Pn**	**23 04 35.9**	**0.0**
BOVS				*e*Sn	**Sn**	**23 05 18.2**	**+1.2**
MASS	**Massafra**	**3.51**	**279**	*e*Pn	**Pn**	**23 04 37.2**	**+0.7**
MPEP	**Malo Peshtene**	**3.53**	**25**	P	**Pn**	**23 04 37.4**	**+0.6**
VLI	**Veliai**	**3.58**	**164**	P	**Pn**	**23 04 37.3**	**-0.1**
TREB	**Trebinje**	**3.58**	**316**	*e*Pn	**Pn**	**23 04 38.0**	**+0.5**
PLE	**Pljevlja**	**3.60**	**332**	⇓*i*Pn	**Pn**	**23 04 38.6**	**+0.7**
PLE				*e*Sn	**Sn**	**23 05 21.9**	**+1.4**
BRY	**Bratogost**	**3.62**	**320**	⇓*i*Pn	**Pn**	**23 04 38.3**	**+0.2**
BRY				*e*Sn	**Sn**	**23 05 22.6**	**+1.7**
BRY	**Bratogost**	**3.62**	**320**	*e*Pn	**Pn**	**23 04 39.0**	**+0.9**
PRK	**Paraskevi**	**3.65**	**103**	P	**Pn**	**23 04 40.0**	**+1.7**
ZAGS	**Zajecar**	**3.67**	**6**	*e*Pn	**Pn**	**23 04 39.2**	**+0.6**
UPM	**Unac-Piva**	**3.69**	**326**	⇓*i*Pn	**Pn**	**23 04 39.8**	**+0.7**
UPM				*e*Sn	**Sn**	**23 05 24.1**	**+1.4**
UPM	**Unac-Piva**	**3.69**	**326**	*e*Pn	**Pn**	**23 04 41.3**	**+2.2**
BAYC	**CANAKKALE_Bayr**	**3.75**	**95**	*i* P	**Pn**	**23 04 41.7**	**+1.9**
BAYC				IAML_P			
	comp=Z,589nm,0.3s						
BAI	**Bari**	**3.79**	**286**	⇑*i*Pn	**Pn**	**23 04 40.5**	**+0.2**
BAI				Sn	**Sn**	**23 05 22.1**	**-2.7**
GRUS	**Gruza**	**3.79**	**349**	*e*Pn	**Pn**	**23 04 40.9**	**+0.5**
MATE	**Matera**	**3.84**	**279**	⇓*i*P	**Pn**	**23 04 41.3**	**+0.3**
KESN	**Edirne-Kesan**	**3.85**	**79**	*i* P	**Pn**	**23 04 42.0**	**+0.4**
KESN				IAML_P			
	comp=Z,202nm,0.4s						
SG1	**Sgolgore (BA)**	**3.89**	**282**	⇑*i*Pn	**Pn**	**23 04 41.7**	**0.0**
SG1				Sn	**Sn**	**23 05 25.3**	**-2.1**
TIP	**Timpagrande**	**3.94**	**257**	*e*Pn	**Pn**	**23 04 43.6**	**+1.1**
TIP	**Timpagrande**	**3.94**	**257**	⇓*i*P	**Pn**	**23 04 43.6**	**+1.1**
STON	**Ston**	**4.04**	**313**	*e*Pn	**Pn**	**23 04 44.1**	**+0.3**
STON				Sn	**Sn**	**23 05 30.2**	**-0.9**
STON	**Ston**	**4.04**	**313**	*e*Pn	**Pn**	**23 04 44.2**	**+0.5**
SVIS	**Svilajnac**	**4.11**	**355**	*e*Sn	**Sn**	**23 05 33.0**	**+0.1**
DIVS	**Divibare**	**4.13**	**343**	*e*Pn	**Pn**	**23 04 45.7**	**+0.6**
DIVS	**Divibare**	**4.13**	**343**	*e*Pn	**Pn**	**23 04 45.2**	**+0.1**
TRUS	**Trudelj**	**4.17**	**347**	*e*Pn	**Pn**	**23 04 46.1**	**+0.6**
ZEY	**zmir**	**4.20**	**116**	*i* P	**Pn**	**23 04 47.9**	**+2.0**
ZEY				IAML_P			
	comp=Z,332nm,0.3s						
SART	**Tekirdag**	**4.22**	**81**	*i* P	**Pn**	**23 04 47.2**	**+0.9**
SART				IAML_P			
	comp=Z,408nm,0.3s						
KUBS	**Kucevo**	**4.24**	**360**	*e*Pn	**Pn**	**23 04 46.1**	**-0.5**
APE	**Apeiranthos**	**4.31**	**

VYHS	**Vyhne**	8.57	347	*e*PN	**Pn**	**23 05 47.7 +1.7**
VYHS				*e*SN	**Sn**	**23 07 18.1 -4.7**
KOLS	**Kolonicke sedl**	8.78	2	*e*P	**Pn**	**23 05 53.3 +4.5**
KOLS	**Kolonicke sedl**	8.78	2	*e*PN	**Pn**	**23 05 53.3 +4.5**
MODS	**Modra-Piesok**	8.80	340	*e*P	**Pn**	**23 05 50.4 +1.3**
MODS				*e*		23 07 21.6
MODS	**Modra-Piesok**	8.80	340	*e*PN	**Pn**	**23 05 50.4 +1.3**
MODS				*e*SN	**Sn**	**23 07 21.6 -6.6**
MODS				*e*LG	Lg	23 07 43.3
CONA	**Conrad Observa**	8.82	334	*e*Pn	**Pn**	**23 05 52.9 +3.5**
	comp=Z,0.3nm,0.3s					
LANS	**Liptovska Anna**	9.12	351	*e*P	**Pn**	**23 05 57.0 +3.4**
LANS				*e*		23 07 34.8
LANS	**Liptovska Anna**	9.12	351	*e*PN	**Pn**	**23 05 57.0 +3.4**
LANS				*e*SN	**Sn**	**23 07 34.8 -1.5**
JAVC	**Velka Javorina**	9.15	343	*e*PN	**Pn**	**23 05 58.3 +4.3**
BR131	**Keskin Array S**	9.18	89	*e*Pn	**Pn**	**23 05 56.3 +1.7**
BRTR	**Keskin Array B**	9.18	89	P	**Pn**	**23 05 56.5 +2.0**
	comp=Z,0.3nm,0.3s,baz=266,slow=10,SNR=13					
KBA	**Koelnbreinsper**	9.19	322	*e*Pn	**Pn**	**23 05 55.2 +0.6**
	comp=Z,1.5nm,0.5s					
MOA	**Molln**	9.36	328	*e*Pn	**Pn**	**23 06 00.1 +3.3**
	comp=Z,2.0nm,0.3s					
ABTA	**Abfaltersbach**	9.37	318	*e*Pn	**Pn**	**23 05 57.3 +0.3**
	comp=Z,3.0nm,0.6s					
KWP	**Kalwaria Pacla**	9.49	4	*e*Pn	**Pn**	**23 06 00.8 +2.2**
KWP	**Kalwaria Pacla**	9.49	4	*e*P	**Pn**	**23 06 00.8 +2.2**
KRUC	**Moravsky**	9.66	339	*e*PN	**Pn**	**23 06 04.9 +4.0**
VRAC	**Vranov**	9.83	340	P	**Pn**	**23 06 05.5 +2.3**
	comp=Z,0.1nm,0.3s,baz=168,slow=10,SNR=7.3					
VRAC	**Vranov**	9.83	340	*e*PN	**Pn**	**23 06 05.6 +2.3**
OKC	**Ostrava-Krasne**	9.99	347	*e*P	**Pn**	**23 06 08.3 +2.9**
OKC	**Ostrava-Krasne**	9.99	347	*e*P	**Pn**	**23 06 08.3 +2.9**
MORC	**Moravsky Berou**	10.05	344	*e*Pn	**Pn**	**23 06 08.2 +1.9**
MORC	**Moravsky Berou**	10.05	344	*e*P	**Pn**	**23 06 08.2 +1.9**
WTTA	**Wattenberg**	10.16	318	*e*Pn	**Pn**	**23 06 11.7 +3.7**
	comp=Z,3.5nm,0.5s					
WATA	**Walderalm**	10.24	318	*e*Pn	**Pn**	**23 06 09.7 +0.7**
	comp=Z,1.6nm,0.4s					
SQTA	**Sankt Quirin**	10.36	316	*e*Pn	**Pn**	**23 06 11.7 +1.1**
	comp=Z,1.5nm,0.3s					
GERES	**GERESS Array B**	10.38	329	P	**Pn**	**23 06 12.5 +1.6**
	comp=Z,0.2nm,0.3s,baz=153,slow=15,SNR=3.8					
GERES				S	**Sn**	**23 08 06.8 -0.4**
	comp=Z,0.3nm,0.3s,baz=158,slow=24,SNR=3.3					
MOTA	**Moosalm**	10.49	317	*e*Pn	**Pn**	**23 06 11.8 -0.6**
	comp=Z,1.2nm,0.3s					
FETA	**Feichten**	10.49	314	*e*Pn	**Pn**	**23 06 11.4 -1.0**
	comp=Z,1.0nm,0.6s					
KHC	**Kasperske Hory**	10.66	330	*e*Pn	**Pn**	**23 06 15.3 +0.7**
KHC	**Kasperske Hory**	10.66	330	*e*P	Pn	23 06 20.3 +5.7
KHC	**Kasperske Hory**	10.66	330	*e*P	Pn	23 06 20.3 +5.7
KHC				*e*x	x	23 06 23.9
DAVOX	**Davos/Dischmat**	10.83	311	P	**Pn**	**23 06 18.7 +1.6**
	comp=Z,0.4nm,0.3s,baz=118,slow=17,SNR=4.5					
DAVOX				S	**Sn**	**23 08 16.2 -2.2**
	comp=Z,0.5nm,0.3s,baz=317,slow=19,SNR=4.2					
DPC	**Dobruska-Polom**	10.86	341	*e*P	**Pn**	**23 06 21.8 +4.4**
DPC				MLR	MLR	
	comp=Z,100nm,9.7s					
DPC	**Dobruska-Polom**	10.86	341	*e*P	**Pn**	**23 06 21.8 +4.4**
DPC				AMS	AMS	23 11 00.0
	comp=Z,100nm,9.7s					
TUE	**Stuetta**	10.98	309	*e*Pn	**Pn**	**23 06 21.1 +1.9**
PRU	**Pruhonice**	11.04	335	*e*P	**Pn**	**23 06 23.8 +4.0**
PRU	**Pruhonice**	11.04	335	*e*P	**Pn**	**23 06 23.8 +4.0**
UPC	**Upice**	11.09	341	AMS	AMS	23 11 10.0
	comp=Z,100nm,9.3s					
KIEV	**Kiev**	11.77	24⇓	*e*P	**Pn**	**23 06 31.1 +1.4**
KIEV				pmax	pmax	
	comp=Z,3.0nm,1.2s					
AKASG	**Malin Array Be**	11.78	24	P	**Pn**	**23 06 31.3 +1.4**
	comp=Z,0.4nm,0.3s,baz=208,slow=12,SNR=3.2					
NKC	**Novy Kostel**	11.98	330	AMS	AMS	23 11 30.0
	comp=Z,200nm,9.4s					
SENIN	**Lac Senin/Sane**	12.18	305	*e*Pn	**Pn**	**23 06 36.1 +0.5**
BFO	**Black Forest**	12.57	315	*i* P	Pn	23 06 46.5 +5.7
EIL	**Elat**	15.07	130	P	**Pn**	**23 07 15.4 +0.5**
	comp=Z,0.3nm,0.3s,baz=330,slow=16,SNR=2.8					
KBZ	**Khabaz**	16.16	70	P	**Pn**	**23 07 30.1 +1.1**
	comp=Z,1.1nm,0.3s,baz=270,slow=13,SNR=1.9					
VSR	**Storozhevoye**	16.42	42	*e*P	**Pn**	**23 07 32.2 0.0**
VSR				pmax	pmax	
	comp=Z,2.0nm,0.6s					
LPSR	**Galich'ya Gora**	17.15	38	*e*P	**Pn**	**23 07 41.3 -0.1**
LPSR				pmax	pmax	
	comp=Z,8.0nm,0.9s					
VSU	**Vasula**	18.60	8⇑	*e*P	**Pn**	**23 08 00.4 +1.2**
VSU				pmax	pmax	
	comp=Z,17nm,0.7s					
MOS	**Moscow**	18.81	29	*e*P	**P**	**23 08 00.7 -0.6**
ESDC	**Sonseca Array**	19.67	277	P	**P**	**23 08 09.4 -1.7**
	comp=Z,0.2nm,0.3s,baz=80,slow=12,SNR=3.3					
HFS	**Hagfors**	20.61	349	P	**P**	**23 08 19.0 -2.0**
	comp=Z,2.6nm,0.5s,baz=165,slow=12,SNR=17					
HFS	**Hagfors**	20.61	349	P	**P**	**23 08 19.0 -2.0**
FINES	**FINESS Array B**	21.47	6	P	**P**	**23 08 28.8 -1.5**
	comp=Z,2.2nm,0.7s,baz=172,slow=12,SNR=15					
FIA1	**FINESS Array S**	21.48	6	*e*P	**P**	**23 08 29.8 -0.5**
	comp=Z,5.5nm,0.9s					
NC405	**NORSAR Array S**	21.86	347	*e*P	**P**	**23 08 33.1 -1.3**
	comp=Z,27nm,0.8s					
NB201	**NORSAR Array S**	21.87	346	*e*P	**P**	**23 08 33.5 -1.2**
	comp=Z,25nm,0.8s					
NB2	**NORSAR Subarra**	21.88	346	P	**P**	**23 08 33.0 -1.7**
	comp=Z,6.9nm,0.7s,baz=158,slow=11					
NOA	**NORSAR Array B**	21.88	346	P	**P**	**23 08 32.9 -1.7**
	comp=Z,5.4nm,1.0s,baz=161,slow=10,SNR=14					
NBO00	**NORSAR Array S**	21.95	346	*e*P	**P**	**23 08 32.6 -2.8**
	comp=Z,15nm,0.9s					
NC303	**NORSAR Array S**	22.02	347	*e*P	**P**	**23 08 35.3 -0.9**
	comp=Z,22nm,0.8s					
EKA	**Eskdalemuir Ar**	22.40	321	P	**P**	**23 08 38.6 -1.7**
	comp=Z,2.7nm,0.7s,baz=120,slow=8.8,SNR=12					
KLMR	**Klimovskoe**	23.46	22	*e*P	**P**	**23 08 49.8 -1.4**
KLMR				pmax	pmax	
	comp=Z,7.0nm,1.2s					
PRGR	**Permogore**	25.98	26	*e*P	**P**	**23 09 14.5 +0.1**
PRGR				*e*		23 09 55.0
PRGR				pmax	pmax	
	comp=Z,12nm,0.8s					
ARCES	**ARCESS Array B**	29.50	3	P	**P**	**23 09 43.2 -2.7**
	comp=Z,8.8nm,0.4s,baz=184,slow=12,SNR=3.9					
TORD	**Torodi Ar. Bea**	32.15	219	P	**P**	**23 10 07.1 -2.6**
	comp=Z,1.4nm,0.7s,baz=32,slow=9.4,SNR=9.2					
BRVK	**Borovoye**	35.09	52⇑	*e*P	**P**	**23 10 34.5 -0.5**
BRVK				pmax	pmax	
	comp=Z,1.0nm,0.6s					
MK31	**Makanchi Array**	43.50	60	*e*P	**P**	**23 11 44.0 -1.3**
	comp=Z,0.9nm,0.8s					
MK31	**Makanchi Array**	43.50	60	*e*P	**P**	**23 11 44.0 -1.3**
MK31				pmax	pmax	
	comp=Z,1.0nm,0.8s					
MKAR	**Makanchi Array**	43.50	60	P	**P**	**23 11 44.5 -0.9**
	comp=Z,0.6nm,0.5s,baz=278,slow=8.3,SNR=12					
ZALV	**Zalesovo Beam**	43.70	50	P	**P**	**23 11 46.0 -0.8**
	comp=Z,0.7nm,0.4s,baz=288,slow=9.1,SNR=3.5					
ZALV	**Zalesovo Beam**	43.70	50	P	**P**	**23 11 46.0 -0.8**
DGZ	**Jazzator, Alta**	46.12	55⇓	*e*P	**P**	**23 12 06.9 +0.6**
DGZ				pmax	pmax	
	comp=Z,1.0nm,1.3s					
WMQ	**Urumqi**	48.02	63	*e*P	**P**	**23 12 23.1 +2.0**
WMQ				pP	sP	23 12 28.7 +2.6
WMQ				pmax	pmax	
	comp=Z,24nm,0.8s					
WMQ				pmax	pmax	
	comp=Z,81nm,3.7s					
TIXI	**Tiksi**	57.47	21⇓	*e*P	**P**	**23 13 32.3 +1.8**
TIXI				pmax	pmax	
	comp=Z,2.0nm,1.5s					
GTA	**Gaotai**	58.09	63	*e*P	**P**	**23 13 37.6 +2.0**
GTA				pP	sP	23 13 41.2 +0.6
GTA				sP	pP	23 13 43.6 +4.4
GTA				pmax	pmax	
	comp=Z,3.0nm,0.9s					
LZH	**Lanzhou**	62.51	65	*e*P	**P**	**23 14 05.3 -0.6**
LZH				pP	pP	23 14 10.3 +0.8
LZH				sP	sP	23 14 13.7 +2.8
LZH				PP	**PP**	**23 16 29.9 +6.8**
LZH				pmax	pmax	
	comp=Z,23nm,1.3s					
LZH				pmax	pmax	
	comp=Z,76nm,4.3s					
HHC	**Hu-ho-hao-te**	65.17	57	*i* P	**P**	**23 14 24.6 +1.4**
HHC				pmax	pmax	
	comp=Z,28nm,1.2s					
HHC				pmax	pmax	
	comp=Z,71nm,4.9s					
CD2	**Chengdu**	65.20	70	*e*P	**P**	**23 14 22.7 -0.8**
CD2				pmax	pmax	
	comp=Z,10.0nm,0.5s					
YKA	**Yellowknife Ar**	71.83	340	P	**P**	**23 15 03.4 -0.9**
	comp=Z,0.5nm,0.8s,baz=36,slow=5.9,SNR=6.2					
WHN	**Wuhan**	72.89	64	*e*P	**P**	**23 15 15.2 +4.0**
ILAR	**Eielson Array**	75.02	355	P	**P**	**23 15 21.9 -1.2**
	comp=Z,0.3nm,0.8s,baz=355,slow=9.1,SNR=4.4					
NJ2	**Nanjing**	75.03	61	*e*P	**P**	**23 15 23.2 -0.5**
NJ2				pmax	pmax	
	comp=Z,9.0nm,0.5s					
ASAR	**Alice Springs**	121.47	96	PKP	**PKPdf**	**23 22 33.4 -2.4**
	comp=Z,0.4nm,0.6s,baz=307,slow=1.6,SNR=5.0					

IDC 01 23:07:40.9±2.2, 5°.26N×125°.23E, $h0^{km}$, mb3.7/2, mb1 3.9/2, mb1mx3.3/33, mbtmp3.7/2, Error ellipse: s-maj=208.3km s-min=25.7km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.59**	**161**	P	P	23 13 21.8	+0.8
	13nm,0.3s,baz=341,slow=11,SNR=2.1						
ASAR	**Alice Springs**	**29.97**	**164**	P	P	23 13 50.5	-0.6
	0.6nm,0.3s,baz=335,slow=7.8,SNR=16						
MKAR	**Makanchi Array**	**55.46**	**325**	P	P	23 17 17.3	-0.1
	0.3nm,0.4s,baz=128,slow=7.3,SNR=6.7						

MEX 01 23:16:48.1±0.7, 14°.65N×93°.04W, $h87^{km}$±29^{km}, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.79**	**71**	*e*P	Pn	23 17 03.7	-1.5
THIG				*i* S	Sn	23 17 16.3	-1.7
PCIG		**1.06**	**350**	*e*P	Pn	23 17 07.1	-1.3
PCIG				*e*S	Sn	23 17 21.7	-1.8
CCIG	**Comitan**	**1.84**	**28**	*e*P	Pn	23 17 18.8	+0.5
TGIG		**2.12**	**358**	*e*P	Pn	23 17 25.1	+3.2
TGIG				*e*S	Sn	23 17 51.1	+3.5
CMIG	**Matias Romero**	**3.01**	**324**	*e*P	Pn	23 17 32.8	-0.9

RSNC 01 23:41:31.8±0.9, 3°.80N×71°.49W, $h4^{km}$±6^{km}, ML2.9, Mw3.6, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUVC	**San Jose del G**	**1.69**	**223**	*e*Pg	Pn	23 42 01.3	-0.8
GUVC				*e*S	Sn	23 42 23.4	-0.8
GUVC				*i*		23 42 27.4	
	comp=Z,246nm,0.3s						
YOPC	**Yopal, Colombi**	**1.81**	**329**	*e*P	Pn	23 42 02.1	-1.7
YOPC				*e*S	Sn	23 42 27.0	-0.3
YOPC				*i*		23 42 29.3	
	comp=Z,137nm,0.2s						
VILC	**Villavicencio,**	**2.23**	**278**	*e*Pg	Pn	23 42 09.8	+0.1
VILC				*e*S	Sn	23 42 36.9	-0.7
VILC				*i*		23 42 50.1	
	comp=Z,202nm,0.3s						
CHIC	**Chingaza**	**2.39**	**290**	*e*P	Pn	23 42 10.4	-1.7
CHIC				*e*S	Sn	23 42 41.3	-0.8
CHIC				*i*		23 42 44.9	
	comp=Z,84nm,0.3s						
RUSC	**La Rusia**	**2.62**	**323**	*e*P	Pn	23 42 13.2	-2.1
RUSC				*e*S	Sn	23 42 47.0	-0.9
RUSC				*i*		23 43 01.1	
	comp=Z,26nm,0.6s						
TAMC	**Tame, Arauca**	**2.64**	**353**	*e*Pg	Pn	23 42 17.0	+1.8
TAMC				*e*Sg	Sb	23 42 51.7	-0.8
TAMC				*i*		23 43 07.9	
	comp=Z,50nm,0.4s						
MACC	**Macarena, Meta**	**2.87**	**235**	*e*P	Pn	23 42 18.0	-0.5
MACC				*e*Sg	Sb	23 42 58.3	-0.9
MACC				*i*		23 43 04.2	
	comp=Z,57nm,0.4s						
PRAC	**Prado**	**3.40**	**269**	*e*P	Pn	23 42 24.3	-1.3
PRAC				*i*		23 43 31.2	
	comp=Z,29nm,0.4s						
NORC	**Norcasia**	**3.80**	**298**	*e*P	Pn	23 42 29.2	-2.0
NORC				*i*		23 43 38.8	
	comp=Z,16nm,0.5s						
PTBC	**PUERTO BERRIO,**	**4.02**	**313**	*e*P	Pn	23 42 32.2	-2.0
PTBC				*i*		23 43 41.7	
	comp=Z,9.5nm,0.5s						

IDC 01 23:57:53.5±11.0, 5°.22N×92°.29E, $h0^{km}$, mb3.7/3, mb1 3.8/4, mb1mx3.4/47, mbtmp3.7/4, ML3.8/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/32, Error ellipse: s-maj=210.8km s-min=90.0km az=164.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.04**	**110**	LR	LR	00 02 17.3	
	comp=Z,178nm,19.7s,baz=326,slow=37						
PALK	**Pallekele**	**11.70**	**281**	Pn	Pn	00 00 37.6	-4.2
	1.6nm,0.3s,baz=115,slow=14,SNR=14						
PALK				Sn	Sn	00 02 38.4	-15
	0.8nm,0.3s,baz=115,slow=19,SNR=2.7						
PALK				LR	LR	00 04 09.0	
	comp=Z,99nm,21.3s,baz=116,slow=32						
CMAR	**Chiang Mai Arr**	**14.67**	**26**	Pn	Pn	00 01 21.8	-0.7
	0.1nm,0.3s,baz=214,slow=14,SNR=8.0						
BRDH	**Bariadhala**	**17.37**	**358**	LR	LR	00 09 32.1	
	comp=Z,96nm,18.6s,baz=182,slow=40						
H08S3	**Diego Garcia H**	**23.52**	**237**	T	T	00 28 31.9	
	baz=61,slow=75,SNR=28						
H08S2	**Diego Garcia H**	**23.52**	**237**	T	T	00 28 32.2	
	baz=61,slow=75,SNR=28						
H08S1	**Diego Carcia H**	**23.54**	**237**	T	T	00 28 31.9	
	baz=61,slow=75,SNR=25						
MKAR	**Makanchi Array**	**42.31**	**350**	P	P	00 05 48.6	-0.4
	0.6nm,0.9s,baz=167,slow=7.4,SNR=3.3						
SONM	**Songino Array**	**44.15**	**14**	P	P	00 06 04.5	+0.5
	0.4nm,0.4s,baz=190,slow=7.3,SNR=2.9						
ZALV	**Zalesovo Beam**	**48.96**	**354**	P	P	00 06 41.2	-0.3
	1.2nm,0.5s,baz=162,slow=7.4,SNR=5.1						

*IDC **01** 23:58:52.6±1.0, 7°.78N×126°.31E, $h0^{km}$, mb4.1/7, mb1 4.3/8, mb1mx3.9/42, mbtmp4.2/8, ML4.6/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/32, Error ellipse: s-maj=19.0km s-min=12.4km az=122.0*
*MAN **01** 23:58:55.0, 7°.23N×124°.80E, $h9^{km}$, MS4.4*
MAN INTENSITY I - DAVAO CITY.
*NEIC **01** 23:58:55.8±1.3, 7°.26N×124°.82E, $h11^{km}$±5^{km}, mb4.3/10, Error ellipse: s-maj=23.9km s-min=10.0km az=67.0*
NEIC Felt [I PIVS] at Davao.
*ISCJB **01** 23:58:56.1±0.5, 7°.25N±0°.02×124°.83E±0°.03, $h22^{km}$±5^{km}, mb4.1/11, Error ellipse: s-maj=5.4km s-min=4.1km az=175.2*
*DJA **01** 23:58:58.5±0.6, 7°N±6'×12°5E±°, $h10^{km}$, M4.7/6, mb4.6/6, mB4.9/2, MLv4.8/6, Mw(mB)4.2/2*

ISC 01 23:58:55.9±0.6, 7°.31N±0°.03×124°.79E±0°.03, $h8^{km}$±4^{km}, n47, σ1°65/58, mb4.2/11, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.55**	**261⇓**	*e*P	**Pg**	**23 59 05.9**	**-0.6**
CTBH				*i* S	**Sg**	**23 59 14.2**	**+0.5**
BUKP	**Musuan**	**0.63**	**26**	*e*P	**Pg**	**23 59 07.5**	**-0.5**
BUKP				*e*S	**Sb**	**23 59 17.4**	**-0.7**
DMPH	**Davao City--Mi**	**0.75**	**108⇑**	*e*P	**Pg**	**23 59 10.5**	**+0.2**
DMPH				*e*S	**Sn**	**23 59 22.8**	**-1.6**
DAV	**Davao City (W)**	**0.82**	**107**	Pg	**Pb**	**23 59 12.3**	**-0.1**
	733nm,0.3s,baz=288,slow=2.1,SNR=35						
DAV				Lg	Lg	23 59 25.8	
	965nm,0.3s,baz=343,slow=19,SNR=69						
SKMP	**Bagumbayan, Su**	**0.82**	**197**	*e*P	**Pg**	**23 59 10.4**	**-1.4**
SKMP				*e*S	**Sg**	**23 59 22.4**	**-0.1**
CGP	**Cagayan de Oro**	**1.14**	**355⇑**	*e*P	**Pg**	**23 59 16.1**	**-1.8**
CGP				*i* S	**Sg**	**23 59 30.7**	**-1.9**
PAGZ	**Pagadian**	**1.49**	**291**	*e*P	**Pn**	**23 59 21.7**	**-1.4**
PAGZ				*e*S	**Sg**	**23 59 44.0**	**0.0**
MATI	**Mati**	**1.50**	**104**	*e*P	**Pb**	**23 59 23.7**	**-0.4**
MATI				*e*S	**Sg**	**23 59 46.4**	**+2.1**
DDMP	**Don Marcelino,**	**1.51**	**143**	*e*P	**Pn**	**23 59 22.6**	**-0.7**
DDMP				*e*S	**Sg**	**23 59 47.0**	**+2.5**
DCPH	**Dipolog City**	**1.90**	**312⇑**	*e*P	**Pg**	**23 59 34.6**	**+2.1**
DCPH				*e*S	**Sg**	**23 59 59.5**	**+2.4**
IPIL	**Ipil**	**2.25**	**282**	*e*P	**Pn**	**23 59 33.5**	**0.0**
IPIL				*e*S	**Sb**	**00 00 03.8**	**-1.1**
TBP	**Tagbilaran**	**2.54**	**339**	*e*P	**Pn**	**23 59 37.8**	**+0.4**
SNPH	**Sibulan**	**2.54**	**323⇑**	*e*P	**Pb**	**23 59 40.2**	**-1.6**
SNPH				*i* S	**Sb**	**00 00 14.3**	**+1.1**
MSLP	**Maasin**	**2.81**	**1**	*e*P	**Pn**	**23 59 41.2**	**+0.1**
MSLP				*e*S	**Sn**	**00 00 17.4**	**+2.2**
LLP	**Lapu-Lapu**	**3.10**	**345⇓**	*e*P	**Pn**	**23 59 46.6**	**+1.5**
LLP				*e*S	**Sb**	**00 00 27.8**	**-1.4**
SGSI	**Sangihe**	**3.68**	**168**	P	**Pn**	**23 59 53.0**	**-0.1**
OCLP	**Ormoc**	**3.72**	**357**	*e*P	**Pn**	**23 59 57.2**	**+3.5**
PLP	**Palo**	**3.83**	**3⇓**	*e*P	**Pn**	**23 59 56.7**	**+1.4**
MRSI	**Marisa**	**7.36**	**203**	P	**Pn**	**00 00 45.6**	**+1.8**
	0.2nm21nm,1.1s						
TGY	**Tagaytay City**	**7.74**	**331**	LR	LR	00 04 18.6	
	comp=Z,626nm,18.2s,baz=94,slow=40						
MPSI	**Mapaga**	**8.47**	**215**	P	**Pn**	**00 01 00.1**	**+1.0**
LUWI	**Luwuk**	**8.54**	**194**	*e*Pn	**Pn**	**00 01 01.2**	**+1.2**
LUWI	**Luwuk**	**8.54**	**194**	P	**Pn**	**00 01 01.0**	**+1.0**
BATI	**Baumata**	**17.44**	**184**	P	**P**	**00 03 05.5**	**+4.4**
	1.9nm,0.3s,baz=8.1,slow=7.1,SNR=2.4						
BATI				LR	LR	00 11 39.5	
	comp=Z,96nm,18.9s,baz=175,slow=42						
GUMO	**Guam**	**20.70**	**71**	LR	LR	00 11 38.9	
	comp=Z,30nm,18.8s,baz=233,slow=40						
MTN	**Manton Dam**	**20.99**	**162**	*e*P	**P**	**00 03 38.4**	**-1.5**
	25nm,1.1s						
FITZ	**Fitzroy Crossi**	**25.26**	**178**	P	**P**	**00 04 24.1**	**+1.3**
	6.5nm,0.8s,baz=14,slow=8.3,SNR=10						
FITZ				LR	LR	00 15 15.5	
	comp=Z,30nm,20.6s,baz=190,slow=38						
JNU	**Nakatsue**	**26.30**	**12**	LR	LR	00 15 15.5	
	comp=Z,58nm,18.6s,baz=179,slow=38						
WRA	**Warramunga Arr**	**28.67**	**161**	P	**P**	**00 04 50.7**	**-2.8**
	3.8nm,0.9s,baz=345,slow=12,SNR=3.2						
WR1	**Warramunga Arr**	**28.67**	**161**	*e*P	**P**	**00 04 50.7**	**-2.8**
WC3	**Warramunga Arr**	**28.69**	**161**	*e*P	**P**	**00 04 51.3**	**-2.4**
	8.7nm,1.0s						
KSRS	**Korea Array**	**30.14**	**5**	LR	LR	00 16 20.1	
	comp=Z,49nm,21.0s,baz=140,slow=35						
AS31	**Alice Springs**	**32.05**	**164**	*e*P	**P**	**00 05 22.2**	**-1.2**
	1.2nm,0.6s						
ASAR	**Alice Springs**	**32.05**	**164**	P	**P**	**00 05 21.5**	**-1.9**
	1.5nm,0.5s,baz=341,slow=7.0,SNR=20						
FORT	**Forrest**	**38.00**	**175**	*e*P	**P**	**00 06 12.6**	**-2.0**
	17nm,0.8s						
FORT				*e*pP	**pP**	**00 06 17.4**	**+0.4**
BBOO	**Buckleboo**	**41.32**	**166**	*e*P	**P**	**00 06 41.5**	**-0.7**
BBOO				*e*pP	**pP**	**00 06 44.5**	**-0.2**
STKA	**Stephens Creek**	**42.14**	**158**	P	**P**	**00 06 47.1**	**-1.9**
	6.2nm,0.7s,baz=340,slow=8.7,SNR=13						
STKA	**Stephens Creek**	**42.14**	**158**	*e*P	**P**	**00 06 46.6**	**-2.4**
STKA				*e*pP	**pP**	**00 06 51.6**	**+0.1**
ULN	**Ulaanbaatar**	**43.14**	**343**	*e*P	**P**	**00 06 56.5**	**-0.6**
ULN				*e*pP	**sP**	**00 07 00.5**	**-0.2**
SONA0	**Songino Array**	**43.31**	**342**	*e*P	**P**	**00 06 57.8**	**-0.7**
SONM	**Songino Array**	**43.31**	**342**	P	**P**	**00 06 57.8**	**-0.7**
	0.8nm,0.7s,baz=143,slow=8.3,SNR=5.4						
MK31	**Makanchi Array**	**53.53**	**325**	*e*P	**P**	**00 08 17.2**	**0.0**
	1.6nm,0.9s						
MK32	**Makanchi Array**	**53.53**	**325**	*e*P	**P**	**00 08 18.2**	**+1.0**
MKAR	**Makanchi Array**	**53.53**	**325**	P	**P**	**00 08 18.2**	**+1.0**
	0.5nm,0.7s,baz=146,slow=6.7,SNR=4.3						
MKAR				LR	LR	00 31 49.3	
	comp=Z,44nm,20.8s,baz=90,slow=37						
ZALV	**Zalesovo Beam**	**56.54**	**333**	LR	LR	00 34 22.4	
	comp=Z,60nm,18.5s,baz=68,slow=38						
GEYT	**Alibeck**	**67.17**	**308**	P	**P**	**00 09 53.5**	**+2.7**
	0.7nm,0.6s,baz=132,slow=8.7,SNR=3.8						
NOA	**NORSAR Array B**	**94.74**	**333**	LR	LR	00 58 03.9	
	comp=Z,32nm,18.2s,baz=320,slow=37						

MEX 02 00:06:28.6±0.8, 19°.29N×102°.86W, $h58^{km}$±32^{km}, MD3.5, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**1.10**	**205**	*e*P	Pn	00 06 46.0	-1.9
MMIG				*e*S	Sn	00 06 59.9	-2.4
CJM	**Chamela**	**2.07**	**276**	*e*P	Pn	00 07 04.0	+2.9
CJM				*e*S	Sn	00 07 24.6	-1.1
ZIIG	**Zihuatanejo**	**2.14**	**142**	*e*P	Pn	00 07 01.2	-0.7
ZIIG				*e*S	Sn	00 07 25.0	-2.3
ARIG	**Puente Sto Nin**

GRZ	Great Barrier	13.05	198	P	P	00 58	12.5 +1.2
WCZ	Waipu Caves	13.11	202	P	P	00 58	13.8 +1.9
KUZ	Kuaotunu	13.45	196	P	P	00 58	16.1 +0.7
WIAZ	Waiheke Island	13.65	198	P	P	00 58	18.3 +0.8
MXZ	Matakaoa Point	13.79	187	P	P	00 58	20.0 +1.1
MXZ				S	S	01 00	44.2 -0.2
ETAZ	East Tamaki Re	13.86	198	P	P	00 58	20.2 +0.5
HAZ	Te Kaha	14.04	188	P	P	00 58	21.5 +0.1
HAZ				S	S	01 00	49.9 +0.7
RUGZ	Raukumara Rang	14.26	188	P	P	00 58	25.4 +1.5
RUGZ				S	S	01 00	52.1 -1.5
PUZ	Puketiti	14.30	186	P	P	00 58	25.3 +1.1
PUZ				S	S	01 00	55.4 +1.3
TWGZ	Tauwhareparae	14.43	187	P	P	00 58	25.7 +0.2
TWGZ				S	S	01 00	58.9 +2.2
TOZ	Tahuroa Road	14.44	195	P	P	00 58	26.9 +1.3
URZ	Urewera	14.63	190	P	P	00 58	24.7 -2.8
	5.3nm,0.3s,baz=277,slow=2.9,SNR=14						
URZ				S	S	01 00	52.6 -7.8
	1.2nm,0.3s,baz=35,slow=13,SNR=2.0						
URZ	Urewera	14.63	190	*e*P	P	00 58	25.3 -2.2
URZ	Urewera	14.63	190	P	P	00 58	25.8 -1.7
MWZ	Matawai	14.64	189	P	P	00 58	27.0 -0.7
MWZ				S	S	01 01	00.6 -0.1
CNGZ	Carnagh Statio	14.71	186	P	P	00 58	28.0 -0.3
MUGZ	Murupara	14.90	191	P	P	00 58	29.0 -1.3
MUGZ				S	S	01 01	02.9 -2.4
RTZ	Ruatahuna	15.00	190	P	P	00 58	31.6 +0.2
RAHZ	Arahi	15.28	189	P	P	00 58	33.5 -0.7
KNZ	Kokohu	15.30	188	P	P	00 58	33.7 -0.7
MRHZ	Matea Rd	15.31	191	P	P	00 58	32.9 -1.7
HIZ	Hauiti	15.34	196	P	P	00 58	36.2 +1.3
MHGZ	Mahia Peninsul	15.40	187	P	P	00 58	36.3 +0.8
BKZ	Black Stump Fm	15.62	191	*e*P	P	00 58	36.0 -1.8
	20nm,1.0s						
BKZ	Black Stump Fm	15.62	191	P	P	00 58	35.5 -2.2
ARHZ	Aropaoanui	15.63	190	P	P	00 58	37.1 -0.7
TWVZ	Taurewa	15.73	194	P	P	00 58	39.1 +0.1
MCHZ	McNeill Hill	15.86	190	P	P	00 58	38.4 -1.6
KWHZ	Kaweka Forest	15.88	191	P	P	00 58	40.8 +0.5
VRZ	Vera Road	15.95	196	P	P	00 58	41.6 +0.7
MOVZ	Moawhango	15.99	193	P	P	00 58	40.3 -1.1
BHHZ	Black Hill Sta	16.01	192	P	P	00 58	38.6 -3.0
KRHZ	Kereru	16.10	191	P	P	00 58	42.0 -0.5
KAHZ	Kahuranaki	16.17	189	P	P	00 58	42.2 -0.9
PKE	Pukeiti	16.22	198	P	P	00 58	45.6 +2.1
LTZ	Lake Taylor	20.03	197	*e*P	P	00 59	20.3 +2.1
	31nm,0.5s						
OXZ	Oxford	20.59	197	*e*P	P	00 59	24.6 +1.3
	46nm,0.6s						
ARMA	Armidale	26.29	249	*e*P	P	01 00	16.1 +1.8
	24nm,0.8s						
ARMA	Armidale	26.29	249	P	P	01 00	16.1 +1.8
	baz=27,SNR=14						
EIDS	Eidsvold	26.57	261	*e*P	P	01 00	17.6 +0.8
	44nm,0.6s						
EIDS	Eidsvold	26.57	261	P	P	01 00	17.5 +0.8
	baz=27,SNR=43						
MGCD	Mangrove Creek	27.20	243	P	P	01 00	24.3 +2.1
	baz=28,SNR=12						
RMQ	Roma	28.62	258	P	P	01 00	36.5 +1.8
	baz=29,SNR=12						
CNB	Canberra Magne	29.11	240	P	P	01 00	40.6 +1.7
	baz=29,SNR=15						
CMSA	Cobar Meteorol	31.48	248	P	P	01 01	00.2 +1.0
	baz=32,SNR=29						
CTA	Charters Tower	31.73	270	P	P	01 01	02.2 +0.7
	50nm,0.5s,baz=95,slow=11,SNR=142						
CTAO	Charters Tower	31.73	270	*e*P	P	01 01	01.6 0.0
	57nm,0.6s						
CTAO				*e*pP	pP	01 02	29.8 -2.0
CTAO	Charters Tower	31.73	270	*e*P	P	01 01	01.6 0.0
CTAO				*e**PP	pP	01 02	29.8 -2.0
CTAO				pmax	pmax		
	comp=Z,57nm,0.6s						
TOO	Toolangi	32.70	237	*e*P	P	01 01	10.7 +1.2
	comp=Z,23nm,0.6s						
TOO	Toolangi	32.70	237	P	P	01 01	10.9 +1.3
	baz=33,SNR=34						
TOO	Toolangi	32.70	237	*e*P	P	01 01	10.7 +1.2
TOO				pmax	pmax		
	comp=Z,23nm,0.6s						
STKA	Stephens Creek	34.98	248	P	P	01 01	29.6 +0.8
	comp=Z,19nm,0.6s,baz=96,slow=11,SNR=33						
STKA	Stephens Creek	34.98	248	P	P	01 01	29.7 +0.9
	baz=35,SNR=16						
ARPS	Mount Arapiles	35.37	240	P	P	01 01	32.9 +0.9
	baz=36,SNR=13						
COEN	Coen	36.36	279	P	P	01 01	41.3 +1.0
	baz=37,SNR=5.3						
HTT	Hallett	37.33	246	P	P	01 01	48.9 +0.7
	baz=38,SNR=25						
QIS	Mount Isa	37.71	267	P	P	01 01	51.4 0.0
	baz=38,SNR=5.8						
BBOO	Buckleboo	39.70	247	P	P	01 02	07.5 +0.1
	baz=40,SNR=47						
ASAR	Alice Springs	42.30	260	P	P	01 02	28.4 +0.3
	comp=Z,18nm,0.7s,baz=95,slow=8.0,SNR=131						
ASAR				pP	pP	01 04	04.8 +0.2
	comp=Z,3.7nm,0.7s,baz=96,slow=9.2,SNR=3.1						
ASAR				S	S	01 08	06.4 -3.2
	comp=Z,2.8nm,0.8s,baz=98,slow=14,SNR=7.2						
WRAB	Tennant Creek	42.66	266	*e*P	P	01 02	30.9 -0.1
	comp=Z,22nm,0.6s						
WRAB	Tennant Creek	42.66	266	*e*P	P	01 02	30.9 -0.1
WRAB				pmax	pmax		
	comp=Z,22nm,0.6s						
WRA	Warramunga Arr	42.67	266	P	P	01 02	30.6 -0.4
	comp=Z,13nm,0.3s,baz=103,slow=8.9,SNR=180						
WRA				S	S	01 08	11.1 -3.9
	comp=Z,10nm,0.9s,baz=96,slow=15,SNR=11						
JAY	Jayapura	43.73	293	P	P	01 02	38.9 -0.4
	comp=Z,32nm,0.6s,baz=118,slow=4.0,SNR=25						
KDU	Kakadu	46.54	275	P	P	01 03	00.3 -0.4
	baz=47,SNR=8.7						
FORT	Forrest	46.57	249	*e*P	P	01 03	00.9 0.0
	comp=Z,104nm,0.6s						
FORT	Forrest	46.57	249	P	P	01 03	00.8 0.0
	baz=47,SNR=55						
WRKA	Warakurna	47.10	257	P	P	01 03	05.2 +0.2
	baz=47,SNR=66						
KNRA	Kununurra	48.94	270	P	P	01 03	19.3 +0.5
	baz=49,SNR=14						
FAKI	Fak Fak	50.81	287	*e*P	P	01 03	30.6 -1.9
	comp=Z,34nm,1.1s						
GUMO	Guam	50.81	313	P	P	01 03	32.1 -0.4
	comp=Z,81nm,0.6s,baz=170,slow=9.3,SNR=9.0						
GUMO	Guam	50.81	313	*e*P	P	01 03	32.0 -0.4
	comp=Z,123nm,0.9s						
GUMO	Guam	50.81	313	*e*P	P	01 03	32.0 -0.4
GUMO				pmax	pmax		
	comp=Z,123nm,0.9s						
FITZ	Fitzroy Crossi	51.09	265	P	P	01 03	35.2 +0.7
	comp=Z,9.8nm,0.7s,baz=92,slow=3.4,SNR=40						
FITZ	Fitzroy Crossi	51.09	265	P	P	01 03	35.0 +0.6
	baz=51,SNR=16						
VNDA	Vanda	54.46	185	P	P	01 04	00.0 +2.5
	comp=Z,0.6nm,0.6s,baz=19,slow=6.3,SNR=6.3						
VNDA				ScP	ScP	01 07	59.2 +1.0
	comp=Z,1.9nm,0.7s,baz=348,slow=5.3,SNR=9.4						
SOEI	Soe	55.09	275	*e*P	P	01 04	04.3 +1.2
	comp=Z,77nm,1.0s						
KLBR	Kellerberrin	55.25	247	P	P	01 04	04.1 +0.3
	baz=56,SNR=11						
BATI	Baumata	55.48	274	P	P	01 04	07.2 +1.5
	comp=Z,30nm,0.6s,baz=177,slow=5.2,SNR=4.5						
NWAO	Narrogin (SRO)	55.49	245	P	P	01 04	05.5 0.0
	comp=Z,5.6nm,0.7s,baz=135,slow=6.5,SNR=5.7						
BLDU	Ballidu	56.29	248	P	P	01 04	11.3 +0.3
	baz=56,SNR=17						
MUN	Mundaring	56.49	246	P	P	01 04	13.1 +0.7
	baz=57,SNR=3.5						
MORW	Morawa	57.14	250	P	P	01 04	17.5 +0.6
	baz=57,SNR=14						
TGY	Tagaytay City	69.16	297	P	P	01 05	34.3 +0.1
	comp=Z,135nm,0.3s,baz=18,slow=7.8,SNR=3.4						
SBUM	Sibu	71.05	282	P	P	01 05	46.0 +0.6
LEM	Lembang	71.43	271	P	P	01 05	48.0 +0.1
	comp=Z,16nm,0.5s,baz=87,slow=4.1,SNR=5.8						
LEM	Lembang	71.43	271	P	P	01 05	48.0 +0.1
MJAR	Matsushiro Arr	71.99	325	P	P	01 05	50.1 -0.3
	comp=Z,16nm,0.8s,baz=165,slow=6.1,SNR=45						
MAJO	Matsushiro	71.99	325	*e*P	P	01 05	50.4 0.0
	comp=Z,25nm,0.9s						
MAJO	Matsushiro	71.99	325	*e*P	P	01 05	50.4 0.0
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s						
MAT	Matsushiro	71.99	325	P	P	01 05	49.9 -0.5
KSM	Kuching	72.35	280	P	P	01 05	54.0 +1.0
JNU	Nakatsue	73.65	318	P	P	01 06	00.1 0.0
	comp=Z,16nm,1.1s,baz=102,slow=2.1,SNR=7.3						
TPUB	Ta-pu	74.49	305	*e*P	P	01 06	04.0 -1.0
	comp=Z,67nm,1.4s						
SSLB	Suanglung	74.53	305	*e*P	P	01 06	03.3 -1.9
	comp=Z,24nm,0.9s						
ADK	Adak	75.44	2	*e*P	P	01 06	09.5 0.0
	comp=Z,67nm,0.6s						
ADK	Adak	75.44	2	*e*P	P	01 06	09.5 0.0
ADK				pmax	pmax		
	comp=Z,67nm,0.6s						
ASAJ	Asahikawa	75.92	333	P	P	01 06	14.3 +1.9
	comp=Z,37nm,0.8s,baz=199,slow=6.5,SNR=28						
SKR	Severo-Kuril's	77.21	345⇓	*e*P	P	01 06	19.1 -0.2
MAW	Mawson	77.90	200	P	P	01 06	24.7 +1.8
	comp=Z,2.5nm,0.8s,baz=181,slow=6.5,SNR=3.8						
TJN	Taejon	77.98	319	*de*P	P	01 06	23.6 -0.2
YSS	Yuzh-Sakhalins	78.19	335	*e*P	P	01 06	26.1 +1.4
	comp=Z,50nm,0.8s						
YSS	Yuzh-Sakhalins	78.19	335	*i*P	P	01 06	26.0 +1.4
YSS				pmax	pmax		
	comp=Z,71nm,1.0s						
MYKOM	Kota Tinggi	78.33	277	P	P	01 06	27.0 +0.7
KSRS	Korea Array	78.36	320	P	P	01 06	26.9 +1.1
	comp=Z,10nm,0.7s,baz=135,slow=5.6,SNR=57						
PETK	Petropavlovsk-	79.10	346	P	P	01 06	29.6 +0.2
	comp=Z,31nm,0.8s,baz=123,slow=6.7,SNR=50						
MSHR	Mys Shultsa	80.11	325⇑	*i*P	P	01 06	36.5 +1.5
NJ2	Nanjing	80.81	311	⇑P	P	01 06	40.2 +1.3
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
USRK	Ussuriysk Ar.	80.85	327	P	P	01 06	39.8 +1.1
	comp=Z,15nm,0.7s,baz=142,slow=3.6,SNR=38						
TYV	Tymovskoe	81.44	337	*e*P	P	01 06	42.7 +1.1
TYV				pmax	pmax		
	comp=Z,35nm,1.2s						
MDJ	Mudanjiang	82.36	326	P	P	01 06	47.9 +1.4
MDJ				pmax	pmax		
	comp=Z,49nm,0.8s						
SYO	Syowa Base	83.13	193⇓	*e*X	P	01 06	45.0 -5.0
WHN	Wuhan	83.17	308	⇑P	P	01 06	52.2 +1.4
AFDM	Forest Hills D	83.17	42	*e*P	P	01 06	52.2 +1.4
CN2	Changchun	83.99	323	*e*P	P	01 06	55.3 +0.7
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
KDAK	Kodiak Island	84.42	14	*e*P	P	01 06	57.1 +0.7
	comp=Z,44nm,1.7s						
KDAK	Kodiak Island	84.42	14	*e*P	P	01 06	57.1 +0.7
KDAK				pmax	pmax		
	comp=Z,44nm,1.7s						
NVAR	Mina Array Bea	84.53	44	P	P	01 06	58.6 +0.9
	comp=Z,2.5nm,0.8s,baz=227,slow=7.2,SNR=4.9						
KLR	Kul'dur	84.60	330	P	P	01 06	58.7 +1.2
	comp=Z,9.5nm,1.0s,baz=114,slow=4.9,SNR=20						
KLR	Kul'dur	84.60	330	*d*P	P	01 06	58.6 +1.1
KLR				pmax	pmax		
	comp=Z,21nm,1.4s						
TUC	Tucson	86.28	52	*e*P	P	01 07	08.0 +1.9
	comp=Z,4.6nm,0.8s						
MA2	Magadan	86.58	345	P	P	01 07	06.7 0.0
	comp=Z,20nm,0.8s,baz=134,slow=5.0,SNR=17						
MA2	Magadan	86.58	345	*e*P	P	01 07	06.7 0.0
	comp=Z,30nm,0.9s						
MA2	Magadan	86.58	345	*e*P	P	01 07	06.7 0.0
MA2				pmax	pmax		
	comp=Z,34nm,0.9s						
PHET	Kaeng Krachan	86.80	286	P	P	01 07	11.8 +3.0
	comp=Z,45µm,0.7s						
RSO	Redoubt South	86.83	13	*e*P	P	01 07	07.8 -0.3
GYA	Guiyang	86.94	301	*e*P	P	01 07	08.1 -1.3
GYA				sP	sP	01 10	01.3 -1.8
GYA				PP	PP	01 10	43.6 +0.6
GYA				SKS	SKSac	01 16	41.0 -3.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
I07A	Izee	87.18	39	*e*P	P	01 07	11.5 +1.4
	comp=Z,9.3nm,0.9s						
XAN	Xi'an	88.90	308	P	P	01 07	19.7 +1.4
XAN				pmax	pmax		
	comp=Z,27nm,0.7s						
XAN				pmax	pmax		
	comp=Z,77nm,4.4s						
SEY	Seymchan	89.26	348	P	P	01 07	19.4 +0.2
	comp=Z,14nm,0.8s,baz=148,slow=4.0,SNR=33						
WRAK	Wrangell Islan	89.40	24	*e*pP	pP	01 09	17.0 -3.2
KMI	Kunming	89.46	298	P	P	01 07	23.0 +1.7
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	89.75	290	P	P	01 07	24.0 +1.5
	comp=Z,7.6nm,0.8s,baz=136,slow=3.2,SNR=46						
CMAR	Chiang Mai Arr	89.75	290	P	P	01 07	24.0 +1.5
ZEA	Zeya	89.78	332	*e*P	P	01 07	22.9 +1.1
ZEA				pmax	pmax		
	comp=Z,24nm,0.9s						
CMMT	Chiang Mai	89.89	291	P	P	01 07	25.2 +2.0
	comp=Z,10nm,1.1s,comp=Z,221nm						
CHTO	Chiang Mai	89.89	291	*e*P	P	01 07	25.1 +1.9
	comp=Z,17nm,0.9s						
CHTO	Chiang Mai	89.89	291	*e*P	P	01 07	25.1 +1.9
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
TXAR	Lajitas Array	90.18	58	P	P	01 07	26.2 +1.8
	comp=Z,2.2nm,0.7s,baz=224,slow=5.2,SNR=6.4						
HHC	Hu-ho-hao-te	90.56	315	*e*P	P	01 07	27.7 +1.8
HHC				pmax	pmax		
	comp=Z,22nm,0.6s						
HHC				pmax	pmax		
	comp=Z,54nm,5.4s						
CD2	Chengdu	91.26	303	*e*P	P	01 07	29.8 +0.5
WRH	Wood River Hil	91.39	13	*e*pP	pP	01 09	27.1 -2.0
CCB	Clear Creek Bu	91.61	13	*e*pP	pP	01 09	26.9 -3.3
COLA	College	91.80	13⇓	*e*P	P	01 07	30.1 -0.7
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ILAR	Eielson Array	91.91	13	P	P	01 07	30.6 -0.7
	comp=Z,1.6nm,0.7s,baz=228,slow=5.7,SNR=15						
BILL	Bilibino	92.19	355	*e*P	P	01 07	33.0 +0.4
	comp=Z,21nm,1.2s						
BILL	Bilibino	92.19	355	*d*P	P	01 07	32.8 +0.2
BILL				pmax	pmax		
	comp=Z,14nm,1.1s						
PDAR	Pinedale Array	92.47	44	P	P	01 07	35.5 +0.7
	comp=Z,1.0nm,0.6s,baz=224,slow=3.3,SNR=3.6						
EGAK	Eagle	93.23	16	*e*P	P	01 07	38.1 +0.7
	comp=Z,6.6nm,0.6s						
LZH	Lanzhou	93.54	308	*e*P	P	01 07	41.6 +1.8
LZH				pP	pP	01 09	37.8 -1.6
LZH				sP	sP	01 10	36.0 +2.0
LZH				PP	PP	01 11	34.3 -0.1
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,86nm,4.3s						
YAK	Yakutsk	94.61	339	*e*P	P	01 07	43.9 +0.2
YAK				pmax	pmax		
	comp=Z,34nm,0.6s						
TOLK	Toolik Lake Re	94.81	11	*e*pP	pP	01 09	41.9 -3.3
ULN	Ulaanbaatar	96.84	320	*de*P	P	01 07	54.2 -0.2
ULN				pmax	pmax		
	comp=Z,6.0nm,1.9s						
SONM	Songino Array	97.22	319	P	P	01 07	56.2 +0.1
	comp=Z,0.6nm,0.5s,baz=147,slow=4.8,SNR=5.7						
ZALV	Zalesovo Beam	112.06	321	PKiKP	PKiKP	01 12	53.8 -0.9
	comp=Z,1.3nm,0.5s,baz=97,slow=0.9,SNR=4.7						
MKAR	Makanchi Array	112.30	313	Pdiff	Pdif	01 09	04.0 +1.0
	comp=Z,0.4nm,0.7s,baz=84,slow=7.7,SNR=3.3						
MKAR				PKiKP	PKiKP	01 12	55.1 -0.4
	comp=Z,1.9nm,0.6s,baz=204,slow=0.7,SNR=7.4						
MKAR				SKP		01 15	40.5
	comp=Z,0.5nm,0.7s,baz=124,slow=0.7,SNR=4.1						
KURK	Kurchatov	115.33	316	*d*iPKIKP	PKiKP	01 13	00.6 -0.5
KSH	Kashi	115.45	304	*e*PKP	PKiKP	01 13	01.9 0.0
AAK	Ala-Archa	117.07	307	*i*PKIKP	PKPdf	01 13	03.9 -1.1
GAR	Garm	119.70	303	*e*PKPdf	PKiKP	01 13	10.4 +0.2
GAR	Garm	119.70	303	*e*PKiKP	PKiKP	01 13	10.4 +0.2
KBL	Kabul	120.04	297	*e*PKPdf	PKiKP	01 13	12.0 +0.8
CHGR	Chuyangaron	120.55	302	*e*PKPdf	PKiKP	01 13	13.6 +1.8
BRVK	Borovoye	120.62	319	*e*PKPdf	PKiKP	01 13	11.4 0.0
BRVK	Borovoye	120.62	319	*e*PKIKP	PKiKP	01 13	11.4 0.0
BOSA	Boshof	122.57	206	PKP	PKiKP	01 13	17.0 +0.7
	comp=Z,10nm,1.3s,baz=204,slow=4.2,SNR=3.7						
SPA0	Spitsbergen Ar	125.07	356	*e*PKPdf	PKiKP	01 13	19.8 +0.2
SVE	Sverdlovsk	125.78	324	*e*PKIKP	PKiKP	01 13	21.2 -0.3
SVE				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARU	Arti	126.98	324	PKP	PKiKP	01 13	23.5 -0.4
	comp=Z,3.3nm,0.4s,baz=89,slow=4.9,SNR=12						
ARU	Arti	126.98	324	*e*PKPdf	PKiKP	01 13	23.1 -0.8
ARU	Arti	126.98	324	*i*PKIKP	PKiKP	01 13	23.6 -0.4
ARU						01 15	26.9
ARU						01 19	42.4
ABKAR	Akbulak array	127.34	315	*e*PKPdf	PKiKP	01 13	24.9 +0.1
AKTO	Aktyubinsk	128.43	316	PKP	PKiKP	01 13	26.2 -0.8
	comp=Z,4.5nm,0.6s,baz=86,slow=4.3,SNR=19						
GEYT	Alibeck	129.16	300	PKP	PKiKP	01 13	29.2 +0.3
	comp=Z,3.8nm,0.7s,baz=169,slow=2.3,SNR=13						
GEYT				SKPbc	SKPbc	01 16	01.6 +3.3
	comp=Z,2.8nm,0.8s,baz=51,slow=2.8,SNR=8.6						
LVZ	Lovozero	131.15	344⇓	*e*PKIKP	PKPdf	01 13	30.0 -1.0
PRGR	Permogore	131.33	333	*e*PKIKP	PKPdf	01 13	28.7 -2.7
PRGR				*e*		01 16	01.4
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARCES	ARCESS Array B	131.88	348	PKhKP	PKPpre	01 13	24.1
	comp=Z,1.5nm,0.8s,baz=70,slow=1.1,SNR=4.7						
ARCES				PKP	PKiKP	01 13	32.3 -1.1
	comp=Z,9.5nm,0.4s,baz=36,slow=1.2,SNR=28						
ARCES				SKPab	SKPab	01 16	08.7 0.0
	comp=Z,5.3nm,0.9s,baz=24,slow=3.1,SNR=8.4						
KIF	Kilpisjarvi	133.15	350	*e*P	PKPdf	01 13	33.7 -0.9
KLMR	Klimovskoe	134.24	334	*e*PKHKP	PKPpre	01 13	30.5
KLMR				*e*		01 16	15.1
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FIA1	FINESS Array S	138.47	342	*e*PKPpre	PKPpre	01 13	37.7
FINES	FINESS Array B	138.47	342	PKhKP	PKPpre	01 13	34.2
	comp=Z,1.8nm,0.5s,baz=46,slow=4.1,SNR=15						
FINES				PKP	PKPdf	01 13	44.7 0.0
	comp=Z,3.2nm,0.5s,baz=59,slow=2.4,SNR=11						
FINES				SKPbc	SKPbc	01 16	28.2 +0.5
	comp=Z,8.8nm,0.9s,baz=64,slow=3.2,SNR=16						
OBN	Obninsk	138.85	329	SKPbc	SKiKP	01 16	29.7 -2.4
	comp=Z,0.7nm,0.4s,baz=86,slow=9.1,SNR=3.2						
OBN	Obninsk	138.85	329	*i*PKHKP	PKPpre	01 13	39.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GNI	Garni	139.38	304⇓	*e*PKHKP	PKPpre	01 13	45.9
ZEI	Tsey	139.46	309	*e*PKIKP	PKiKP	01 13	50.0 +0.1
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NCK	Nalchik	139.51	310⇓	*i*PKIKP	PKiKP	01 13	48.3 -1.5
KIV	Kislovodsk	140.02	311	*i*PKIKP	PKiKP	01 13	51.0 +0.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NEY	Neytrino	140.19	310⇑	*i*PKIKP	PKiKP	01 13	49.9 -1.5
VSU	Vasula	140.60	338⇓	*e*PKHKP	PKPdf	01 13	48.0 -0.7
VSU	Vasula	140.60	338	*e*P	PKPdf	01 13	48.6 -0.1
VSU				IAmb	IAmb	01 13	50.3
	comp=Z,18nm,0.8s						
NC303	NORSAR Array S	141.86	351	*e*P	PKPpre	01 13	47.1
NB201	NORSAR Array S	142.04	351	*e*P	PKPpre	01 13	47.1
NB2	NORSAR Subarra	142.06	351	PKP	PKPpre	01 13	47.5
	comp=Z,2.0nm,0.6s,baz=16,slow=3.2						
NB2	NORSAR Subarra	142.06	351	PKP	PKPpre	01 13	47.5
	baz=16,slow=3.2						
NOA	NORSAR Array B	142.06	351	PKhKP	PKPpre	01 13	47.3
	comp=Z,7.3nm,0.9s,baz=16,slow=4.6,SNR=22						
NBO00	NORSAR Array S	142.12	352	*e*P	PKPpre	01 13	48.0
NAO01	NORSAR Array S	142.29	352	*e*P	PKPpre	01 13	48.3
NC602	NORSAR Array S	142.30	351	*e*P	PKPpre	01 13	48.1
SLIT	Slitere, Latvi	142.70	341	*e*P	PKPdf	01 13	49.0 -3.4
SLIT				IAmb	IAmb	01 13	49.9
	comp=Z,44nm,0.8s						
IZAR	Zarasai	142.84	336	*e*P	PKPdf	01 13	50.5 -2.2
IZAR				IAmb	IAmb	01 13	52.0
	comp=Z,11nm,0.6s						
IDID	Didziasalis	142.97	335	*e*P	PKPdf	01 13	50.6 -2.4
IDID				IAmb	IAmb	01 13	53.2
	comp=Z,7.4nm,0.9s						
IIGN	Ignalina	143.15	335	*e*P	PKPbc	01 13	51.4 -0.1
IIGN				IAmb	IAmb	01 13	52.4
	comp=Z,7.0nm,0.6s						
OSL	Oslo	143.19	351	*e*P	PKPbc	01 13	51.4 -0.1
ASK	Askoy	143.22	356	*e*P	PKPdf	01 13	51.8 -1.4
NACGM	Naroch	143.26	334	*e*	PKPbc	01 13	51.0 -0.9
ANN	Anapa	143.30

BEL	Belsk	147.92 336	⇓	*e*PKIKP	PKiKP	01 14 06.3	-0.4
GKP	Gorka Klasztor	147.93 341		*e*PKPdf	PKiKP	01 14 06.0	-0.7
GKP	Gorka Klasztor	147.93 341	⇓	*e*PKIKP	PKiKP	01 14 06.0	-0.7
KERG	Konya-Eregli	148.07 303		*i* P	PKiKP	01 14 06.9	-0.8
KERG				IAML_P			
	comp=Z,200nm,0.5s						
LVV	L'vov	148.11 330		*e*PKHKP	PKPbc	01 14 04.9	-1.0
ANTO	Ankara	148.31 308		*e*PKPbc	PKiKP	01 14 07.6	-0.5
ANTO	Ankara	148.31 308	⇓	*i*P	PKiKP	01 14 07.5	-0.5
ANTO	Ankara	148.31 308		*e*PKIKP	PKiKP	01 14 07.6	-0.5
TLCR		148.54 320	⇑	*i*P	PKiKP	01 14 07.8	-0.4
TLCR		148.54 320	⇑	PKIKP	PKiKP	01 14 07.8	-0.4
PRAR	RASCA	148.70 325	⇓	*i*P	PKiKP	01 14 07.8	-0.7
KWP	Kalwaria Pacla	148.84 331		*i* PKPdf	PKiKP	01 14 08.5	-0.2
CFR	Carcaliu	148.95 320	⇑	*i*P	PKiKP	01 14 08.5	-0.5
TESR	Tescani	149.01 323	⇓	*i*P	PKiKP	01 14 08.8	-0.4
BIZ	Bicaz	149.03 325	⇓	*i*P	PKiKP	01 14 09.5	+0.3
BURAR	Bucovina Array	149.06 326	⇑	*i*P	PKiKP	01 14 09.8	+0.4
PETR	Petresti	149.16 322	⇑	*i*P	PKiKP	01 14 09.6	+0.1
ODBI	Odobesti	149.23 322	⇑	*i*P	PKiKP	01 14 09.9	+0.3
TLB	Topalu	149.33 319	⇓	*i*P	PKiKP	01 14 09.7	-0.2
HARR	Harsova	149.34 320	⇓	*i*P	PKiKP	01 14 10.0	+0.1
VRI	Vrincioaia	149.36 322	⇑	*i*P	PKiKP	01 14 09.5	-0.4
PLOR	Plostina	149.41 322	⇓	*i*P	PKiKP	01 14 09.3	-0.8
CVDA	Cernavoda	149.47 319	⇑	*i*P	PKiKP	01 14 10.1	-0.1
KOLS	Kolonicke sedl	149.54 331		*e*PKP	PKiKP	01 14 10.9	+0.7
OJC	Ojcow	149.59 335		*e*PKPdf	PKiKP	01 14 10.1	-0.1
LEF	Lefka	149.59 299	⇓	*i*P	PKPbc	01 14 09.5	-0.5
RUE	Ruedersdorf	149.60 344		*e*P	PKiKP	01 14 10.0	-0.1
RUE				IAmb	IAmb	01 14 10.8	
	comp=Z,24nm,0.6s						
ICOR	Ion Corvin	149.73 319	⇑	*i*P	PKiKP	01 14 11.1	+0.4
OZUR		149.74 324	⇑	*i*P	PKiKP	01 14 10.8	+0.1
AMRR	Amara	149.74 320	⇓	*i*P	PKiKP	01 14 11.1	+0.4
UZH	Uzhgorod	149.76 330	⇑	*i*PKHKP	PKiKP	01 14 10.8	+0.2
UZH				*i*		01 14 18.4	
PGOR	Pogoanele	149.77 321	⇑	*i*P	PKiKP	01 14 11.5	+0.7
ARCR	ARCALIA	149.85 326	⇑	*i*P	PKiKP	01 14 11.4	+0.5
BMR	Baia Mare	149.88 328	⇓	*i*P	PKiKP	01 14 11.4	+0.5
ISR	Istrita	149.91 321	⇑	*i*P	PKiKP	01 14 11.4	+0.3
TRPA	Tarpa	150.01 329	⇓	*i*P	PKiKP	01 14 11.1	0.0
TRPA	Tarpa	150.01 329	⇓	EP	PKiKP	01 14 10.1	-1.1
SILT	Sile	150.01 312	⇓	*i*P	PKiKP	01 14 11.3	-0.1
MLR	Muntele Rosu	150.02 322	⇓	*i*P	PKiKP	01 14 11.2	-0.3
NIE	Niedzica	150.02 333		*e*PKPdf	PKiKP	01 14 11.8	+0.6
SECR		150.23 322	⇑	*i*P	PKiKP	01 14 11.7	-0.1
KSP	Ksiaz	150.32 339		*e*PKPdf	PKiKP	01 14 12.3	+0.6
YLV	Yalova	150.45 311	⇓	*i*P	PKiKP	01 14 11.4	-1.0
PRD	Provadia	150.47 317		*e*P	PKiKP	01 14 13.0	+0.7
CJR	Cluj-Napoca	150.48 326	⇓	*i*P	PKiKP	01 14 12.5	+0.2
OKC	Ostrava-Krasne	150.52 336	⇑	*e*PKP	PKiKP	01 14 12.5	+0.3
OKC				*e*PKPAB	PKPab	01 14 21.2	+0.3
VOIR		150.55 323	⇑	*i*P	PKiKP	01 14 12.4	-0.1
LANS	Liptovska Anna	150.57 334		*e*PKP	PKiKP	01 14 13.7	+1.3
OSTC	Ostas	150.59 339	⇑	*e*PKP	PKiKP	01 14 12.6	+0.3
CHVC	Chvalec	150.62 339	⇑	*e*PKP	PKiKP	01 14 12.9	+0.5
KECS	Kecovo	150.66 332		*e*PKP	PKPab	01 14 22.2	+0.7
ISP	Isparta	150.68 305	⇓	*i*P	PKiKP	01 14 12.3	-0.7
UPC	Upice	150.70 339	⇑	*e*PKP	PKiKP	01 14 13.1	+0.6
UPC				*e*PKPAB	PKPab	01 14 22.5	+0.9
DPC	Dobruska-Polom	150.73 339	⇑	*e*PKP	PKiKP	01 14 13.3	+0.6
DPC				*e*PKPAB	PKPab	01 14 23.0	+1.2
MORC	Moravsky Berou	150.79 337	⇓	*i*P	PKiKP	01 14 13.2	+0.4
MORC	Moravsky Berou	150.79 337		*e*PKP	PKiKP	01 14 13.1	+0.3
MORC				*e*		01 14 22.8	
KRLC	Kraliky	150.81 338	⇑	*e*PKP	PKiKP	01 14 13.0	+0.2
ARR	Arges	150.82 323	⇓	*i*P	PKiKP	01 14 13.9	+0.9
LTVH	Ltavrtes, Hu	150.84 329	⇓	EP	PKiKP	01 14 13.0	+0.1
CLL	Collm	150.87 344	⇓	*i*PKPbc	PKiKP	01 14 13.1	+0.3
CLL	comp=Z,41nm,0.8s						
CLL				*i* PKPab	PKPab	01 14 22.1	-0.1
	comp=Z,19nm,1.0s						
CLL	Collm	150.87 344	⇓	*i*PKIKP	PKiKP	01 14 13.1	+0.3
CLL				*i*		01 14 22.1	
CLL				pmax	pmax		
	comp=Z,41nm,0.8s						
CLL				pmax	pmax		
	comp=Z,19nm,1.0s						
DRGR		150.87 327	⇑	*i*P	PKiKP	01 14 12.9	-0.2
BRG	Berggiesshubel	151.00 342	⇓	*i*PKP	PKiKP	01 14 13.6	+0.4
	comp=Z,26nm,0.6s						
BRG				*i*		01 14 23.3	
	comp=Z,17nm,1.0s						
BRG	Berggiesshubel	151.00 342	⇓	*i*PKIKP	PKiKP	01 14 13.6	+0.4
BRG				*i*		01 14 23.3	
BRG				pmax	pmax		
	comp=Z,26nm,0.6s						
BRG				pmax	pmax		
	comp=Z,17nm,1.0s						
PVCC	Panska Ves	151.13 341	⇑	*e*PKP	PKiKP	01 14 14.1	+0.7
PVCC				*e*PKPAB	PKPab	01 14 24.3	+0.9
HUMR	Humele	151.15 322	⇑	*i*P	PKiKP	01 14 13.6	0.0
PHSR	Pinarhisar	151.20 315	⇑	*i*P	PKiKP	01 14 14.2	+0.4
LOT	Lotru	151.24 324	⇓	*i*P	PKiKP	01 14 13.4	-0.6
SZH	Strazhica	151.33 319		*e*P	PKPab	01 14 25.4	+0.9
VYHS	Vyhne	151.34 334		*e*PKIKP	PKiKP	01 14 14.3	+0.3
VYHS				*e*		01 14 25.3	
VYHS	Vyhne	151.34 334		*e*PKP	PKiKP	01 14 14.3	+0.3
VYHS				*e*		01 14 25.3	
PSZ	Piszkesteto	151.35 332	⇑	*i*P	PKiKP	01 14 14.1	0.0
PSZ	Piszkesteto	151.35 332	⇑	PKIKP	PKiKP	01 14 14.2	+0.1
PSZ	Piszkesteto	151.35 332	⇓	EP	PKiKP	01 14 14.0	0.0
DEV	Deva	151.40 326	⇑	*i*P	PKiKP	01 14 14.4	+0.3
DEV	Deva	151.40 326	⇑	PKIKP	PKiKP	01 14 14.5	+0.3
WTSB	Winterswijk	151.47 352		*e*PKP	PKiKP	01 14 13.9	-0.1
JAVC	Velka Javorina	151.50 336		*e*PKP	PKiKP	01 14 15.7	+1.4
JAVC				*e*		01 14 26.9	
VRAC	Vranov	151.53 337	⇑	*i*P	PKiKP	01 14 14.9	+0.6
VRAC	Vranov	151.53 337		*e*PKP	PKiKP	01 14 14.5	+0.2
VRAC				*e*		01 14 26.1	
GOPC	GO Pecny, Ondr	151.60 340		*e*PKIKP	PKiKP	01 14 14.7	+0.2
GOPC	GO Pecny, Ondr	151.60 340	⇑	*e*PKP	PKiKP	01 14 14.7	+0.2
PRU	Pruhonice	151.62 340		*e*PKIKP	PKiKP	01 14 14.6	+0.2
PRU				*e*		01 14 26.2	
PRU	Pruhonice	151.62 340	⇑	*e*PKP	PKiKP	01 14 14.6	+0.2
PRU				*e*PKPAB	PKPab	01 14 26.2	+0.7
SIRR	Siria	151.76 328	⇑	*i*P	PKiKP	01 14 14.9	0.0
GZR	Gura Zlata	151.80 325	⇓	*i*P	PKiKP	01 14 15.1	0.0
GZR	Gura Zlata	151.80 325	⇓	PKIKP	PKiKP	01 14 15.1	0.0
VLAD	Vladila	151.80 321	⇑	*i*P	PKiKP	01 14 15.8	+0.8
KRUC	Moravsky	151.80 337		*e*PKP	PKiKP	01 14 15.1	+0.2
KRUC				*e*		01 14 27.1	
TREC	Trest	151.92 339	⇑	*e*PKP	PKiKP	01 14 15.3	+0.2
TREC				*e*PKPAB	PKPab	01 14 27.5	+0.7
NKC	Novy Kostel	151.99 343	⇑	*e*PKP	PKiKP	01 14 15.9	+0.7
NKC				*e*PKPAB	PKPab	01 14 27.5	+0.4
MODS	Modra-Piesok	152.05 335		*e*PKIKP	PKiKP	01 14 15.5	+0.1
MODS				*e*		01 14 27.6	
MODS	Modra-Piesok	152.05 335		*e*PKP	PKiKP	01 14 15.5	+0.1
MODS				*e*		01 14 27.6	
SRO	Srobarova	152.10 334		*e*PKP	PKiKP	01 14 16.2	+0.7
SRO				*e*		01 14 28.6	
BZS	Buzias	152.24 327	⇑	*i*P	PKiKP	01 14 15.8	-0.1
BZS	Buzias	152.24 327	⇑	PKIKP	PKiKP	01 14 15.8	-0.1
DIM	Dimitrovgrad	152.25 317		*e*P	PKiKP	01 14 16.6	+0.6
ZST	Bratislava	152.26 335		*e*PKP	PKPab	01 14 28.6	+0.3
BANR	Banloc	152.64 327	⇓	*i*P	PKiKP	01 14 16.6	-0.1
KHC	Kasperske Hory	152.67 341	⇑	*e*PKP	PKiKP	01 14 16.9	+0.2
KHC				*e*PKPAB	PKPab	01 14 30.4	+0.4
HGN	Heimansgroeve	152.76 352		*e*PKP	PKPab	01 14 30.1	-0.2
MDVR	Moldovita	152.76 325	⇑	*i*P	PKiKP	01 14 17.4	+0.3
GRFO	Grafenberg	152.81 344		*e*PKPab	PKPab	01 14 31.4	+0.9
EZN	Ezine	152.86 312	⇓	*i*P	PKiKP	01 14 17.4	+0.1
GERES	GERESS Array B	152.88 340		PKPbc	PKiKP	01 14 17.4	+0.2
	comp=Z,3.0nm,0.8s,baz=64,slow=3.4,SNR=9.7						
GERES				PKPab	PKPab	01 14 31.4	+0.4
	comp=Z,2.1nm,0.7s,baz=29,slow=3.0,SNR=6.6						
SOP	Sopron	152.90 335	⇓	EP	PKiKP	01 14 17.0	-0.1
MEM	Membach	152.91 352	⇑	PKPbc	PKiKP	01 14 17.4	+0.4
CONA	Conrad Observa	152.95 337		*i* PKPab	PKPab	01 14 32.6	+1.3
	comp=Z,14nm,0.7s,SNR=5.5						
BCLA	Clavier	153.18 353	⇑	PKPab	PKPab	01 14 31.8	-0.2
SNF	Seneffe	153.19 354	⇑	PKPab	PKPab	01 14 32.2	+0.1
VTS	Vitosha	153.32 320		*e*PKPab	PKPab	01 14 34.8	+1.6
VTS	Vitosha	153.32 320	⇓	*i*P	PKiKP	01 14 18.2	-0.2
VTS	Vitosha	153.32 320		*e*P	PKPab	01 14 34.4	+1.2
DOU	Dourbes	153.57 354	⇓	PKPbc	PKiKP	01 14 18.8	+0.3
DOU			⇑	PKPab	PKPab	01 14 33.1	-0.6
MMB	Musomiste	153.63 318		*e*P	PKPab	01 14 34.4	0.0
ARSA	Arzberg	153.64 336		*e*PKPab	PKPab	01 14 35.0	+0.8
	comp=Z,5.6nm,0.6s,SNR=5.1						
WLF	Walferdange	153.81 351	⇑	PKPbc	PKiKP	01 14 19.6	+0.6
WLF			⇓	PKPab	PKPab	01 14 35.3	+0.5
KKB	Krupnik	153.86 319		*e*P	PKPab	01 14 31.8	-3.5
SOKA	Soboth	154.31 336		*e*PKPab	PKPab	01 14 37.6	+0.5
	comp=Z,4.6nm,0.6s,SNR=5.3						
PERS	Pernice	154.31 336		*i* PKPdf	PKPab	01 14 37.3	+0.1
KBA	Koelnbreinsper	154.55 339		*e*PKPab	PKPab	01 14 39.5	+1.2
	comp=Z,3.6nm,0.5s						
OBKA	Obir	154.63 337		*e*PKPab	PKPab	01 14 38.5	0.0
	comp=Z,5.2nm,0.8s						
BFO	Black Forest	154.73 347		*e*PKPab	PKPab	01 14 39.0	+0.1
BFO	Black Forest	154.73 347		*e*PKP2	PKPab	01 14 39.0	+0.1
MYKA	Terra Mystica	154.84 338		*e*PKPab	PKPab	01 14 39.2	-0.2
	comp=Z,6.3nm,0.6s						
WATA	Walderalm	154.87 342		*e*PKPab	PKPab	01 14 40.2	+0.6
	comp=Z,3.2nm,0.5s						
WTTA	Wattenberg	154.92 342		*e*PKPab	PKPab	01 14 40.7	+0.9
	comp=Z,10.0nm,0.5s						
RETA	Reutte	154.96 343		*e*PKPab	PKPab	01 14 40.6	+0.7
	comp=Z,10nm,0.7s,SNR=5.6						
MOTA	Moosalm	155.00 342		*e*PKPab	PKPab	01 14 40.7	+0.5
	comp=Z,6.0nm,0.7s						
SQTA	Sankt Quirin	155.08 342		*e*PKPab	PKPab	01 14 41.3	+0.8
	comp=Z,7.7nm,0.8s,SNR=5.3						
ABTA	Abfaltersbach	155.12 340		*e*PKPab	PKPab	01 14 40.4	-0.2
	comp=Z,5.3nm,0.7s						
VISS	Visnje	155.12 335		*i* PKPdf	PKPab	01 14 40.4	-0.2
JAVS	Javornik	155.33 337		*i* PKPdf	PKPab	01 14 40.9	-0.7
DAVA	Damuels	155.37 344		*e*PKPab	PKPab	01 14 42.4	+0.6
	comp=Z,9.2nm,0.6s						
FETA	Feichten	155.39 343		*e*PKPab	PKPab	01 14 42.6	+0.7
	comp=Z,6.1nm,0.9s						
FUORN	Ofenpass-Fuorn	155.89 343		*e*PKPab	PKPab	01 14 45.2	+1.0
ESDC	Sonseca Array	163.81 12		PKPab	PKPab	01 15 18.8	+0.1
	comp=Z,3.4nm,1.0s,baz=339,slow=3.7,SNR=12						
KEST	Kesra	165.78 329		PKPab	PKPab	01 15 27.3	-0.3
	comp=Z,6.4nm,0.8s,baz=261,slow=5.3,SNR=4.7						
TORD	Torodi Ar. Bea	169.28 187		PKP	PKPdf	01 14 27.0	-0.3
	comp=Z,1.8nm,1.0s,baz=5.6,slow=1.2,SNR=6.3						
TORD				PKPab	PKPab	01 15 43.5	+0.2
	comp=Z,0.8nm,0.7s,baz=184,slow=3.0,SNR=5.7						
TORD				SKP		01 17 04.9	
	comp=Z,1.0nm,1.2s,baz=190,slow=2.4,SNR=2.8						
TAM	Tamanrasset	175.07 259		*e*PKPab	PKPab	01 16 09.8	+0.3
TAM	Tamanrasset	175.07 259		*e*PKP2	PKPab	01 16 09.8	+0.3

IDC 02 00:57:27.6±6.1, 15°92S×74°77W, h82km±36km, mb3.9/1, mb1 3.7/3, mb1mx3.4/33, mbtmp3.9/3, MS2.7/1, Ms1 2.7/1, ms1mx2.5/23, Error ellipse: s-maj=92.5km s-min=14.8km az=33.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	4.39	333	P	Pn	00 58 32.0	0.0
	baz=136,slow=16						
NNA				S	Sn	00 59 22.8	+0.7
	6.3nm,0.3s,baz=60,slow=17,SNR=1.8						
NNA				LR	LR	01 00 13.2	
	comp=Z,91nm,21.1s,baz=149,slow=38						
LPAZ	La Paz	6.40	94	P	Pn	00 58 59.5	-0.3
	1.1nm,0.3s,baz=276,slow=9.6,SNR=21						
LPAZ				S	Sn	01 00 13.1	+1.3
	baz=199,slow=22,SNR=1.0						
ATAH	Atahualpa	9.42	337	P	Pn	00 59 40.6	-0.4
	0.2nm,0.3s,baz=129,slow=6.5,SNR=1.9						
ATAH				S	Sn	01 01 35.7	+10
	0.1nm,0.3s,baz=345,slow=17,SNR=2.1						
TORD	Torodi Ar. Bea	80.93	74	P	P	01 09 33.4	-0.2
	1.4nm,0.6s,baz=258,slow=5.2,SNR=26						
SONM	Songino Array	148.16	359	PKPbc	PKPbc	01 17 04.0	-0.2
	0.2nm,0.3s,baz=333,slow=2.9,SNR=3.5						

*ISCJB **02** 00:58:42.7±0.3, 6°77S±0°05×154°63E±0°05, h10km, mb4.7/64, MS4.1/11, Error ellipse: s-maj=7.4km s-min=6.3km az=146.6*

*IDC **02** 00:58:42.4±0.5, 6°69S×154°58E, h0km, mb4.6/18, mb1 4.7/22, mb1mx4.5/46, mbtmp4.5/22, ML4.1/3, MS3.9/9, Ms1 3.9/9, ms1mx3.6/25, Error ellipse: s-maj=17.5km s-min=13.9km az=98.0*

*MOS **02** 00:58:44.0±1.3, 6°69S×154°57E, h18km, mb4.9/21, Error ellipse: s-maj=10.5km s-min=8.9km az=112.3*

*NEIC **02** 00:58:45.6±2.1, 6°69S×154°63E, h18km±2km, mb4.9/33, ML5.2, Error ellipse: s-maj=21.1km s-min=16.0km az=115.0*

*BJI **02** 00:58:46.0±0.0, 6°18S×154°96E, h23km, mb5.1/38, mB4.9/28, Ms4.9/13, Ms7 4.6/8*

ISC 02 00:58:44.1±0.3, 6°70S±0°06×154°62E±0°05, h10km, n144, σ1°63/150, mb4.8/64, MS4.2/12, 10C-11D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.49	315	*e*Pn	Pn	00 59 41.0	+2.5
HNR	Honiara	5.93	118	*e*P	Pb	01 00 24.0	-3.7
HNR				*e*S	Sb	01 01 39.0	+0.1
HNR	Honiara	5.93	118	Pn	Pn	01 00 12.5	+0.4
	7.3nm,0.3s,baz=282,slow=19,SNR=2.3						
HNR				Sn	Sb	01 01 38.5	-0.4
	10nm,0.3s,baz=243,slow=8.7,SNR=4.0						
HNR				LR	LR	01 02 53.1	
	comp=Z,2μm,18.7s,baz=260,slow=42						
PMG	Port Moresby	7.86	249	Pn	Pn	01 00 38.3	-0.4
	2.5nm,0.3s,baz=50,slow=8.9,SNR=14						
PMG				Sn	Sn	01 02 07.4	-0.4
	2.3nm,0.3s,baz=76,slow=22,SNR=9.3						
PMG				LR	LR	01 03 46.7	
	comp=Z,708nm,18.3s,baz=51,slow=39						
PMG	Port Moresby	7.86	249	*e*Pn	Pn	01 00 40.0	+1.3
CTA	Charters Tower	15.59	211	Pn	Pn	01 02 24.4	+0.2
	0.4nm,0.3s,baz=32,slow=14,SNR=2.4						
EIDS	Eidsvold	18.88	190	*e*P	P	01 03 03.9	-0.8
	19nm,1.0s						
DZM	Mont Dzumac	19.08	144	P	P	01 03 08.1	+1.0
	0.6nm,0.3s,baz=315,slow=20,SNR=5.2						
DZM				LR	LR	01 10 06.9	
	comp=Z,360nm,18.1s,baz=318,slow=36						
GUMO	Guam	22.36	334	LR	LR	01 12 25.5	
	comp=Z,48nm,18.6s,baz=108,slow=37						
WRAB	Tennant Creek	23.67	234	*e*P	P	01 03 55.9	-0.3
	27nm,1.0s						
WRAB	Tennant Creek	23.67	234	⇓ *e*P	P	01 03 55.8	-0.3
WRAB				pmax	pmax		
	comp=Z,36nm,1.3s						
WB2	Warramunga Arr	23.68	234	*e*S	S	01 08 12.1	+0.9
WRA	Warramunga Arr	23.68	234	P	P	01 03 55.2	-1.1
	comp=Z,25nm,1.0s,baz=66,slow=10,SNR=12						
WRA				PcP	PcP	01 07 41.3	+0.5
	comp=Z,1.6nm,0.7s,baz=50,slow=2.7,SNR=2.7						
WRA				ScP	ScP	01 11 20.5	+1.2
	comp=Z,1.9nm,0.8s,baz=46,slow=3.6,SNR=3.2						
ASAR	Alice Springs	26.10	228	ScP	ScP	01 11 27.3	+1.2
	comp=Z,2.1nm,1.0s,baz=68,slow=3.2,SNR=9.9						
ASAR				LR	LR	01 14 47.1	
	comp=Z,504nm,18.1s,baz=68,slow=37						
STKA	Stephens Creek	27.85	204	P	P	01 04 32.3	-1.7
	comp=Z,6.4nm,0.8s,baz=11,slow=10,SNR=3.3						
STKA				LR	LR	01 16 13.5	
	comp=Z,349nm,18.5s,baz=20,slow=38						
FITZ	Fitzroy Crossi	30.43	245	P	P	01 04 56.3	-0.8
	comp=Z,14nm,0.8s,baz=56,slow=7.3,SNR=11						
NIUE	Niue	36.60	113	*e*PcP	PcP	01 08 15.2	+1.0
YULB	Yu-li	44.21	314	*e*P	P	01 06 51.7	-2.1
	comp=Z,18nm,1.0s						
NACB	Ninganchiao	44.48	315	*e*P	P	01 06 54.9	-1.0
	comp=Z,39nm,1.0s						
JNU	Nakatsue	45.57	322	P	P	01 07 03.4	-1.1
	comp=Z,16nm,0.8s,baz=155,slow=2.5,SNR=6.2						
TJN	Taejon	49.90	331	⇓ *i*P	P	01 07 37.7	-0.2
KSRS	Korea Array	50.50	332	P	P	01 07 42.0	-0.5
	comp=Z,2.9nm,0.7s,baz=148,slow=8.4,SNR=7.9						
KSRS				LR	LR	01 26 18.4	
	comp=Z,51nm,21.5s,baz=70,slow=33						
NJ2	Nanjing	51.45	321	*e*P	P	01 07 51.1	+1.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CN2	Changchun	56.77	335	*e*P	P	01 08 32.8	+4.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA	Guiyang	56.98	307	*e*P	P	01 08 35.0	+4.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	Kul'dur	59.17	343	P	P	01 08 45.0	-0.2
	comp=Z,3.3nm,0.7s,baz=120,slow=2.5,SNR=6.0						
KLR	Kul'dur	59.17	343	*c i*P	P	01 08 45.1	0.0
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN	Xi'an	59.23	316	P	P	01 08 46.3	+0.3
XAN				pP	pwP	01 08 58.3	+3.9
XAN				sP	sP	01 09 04.3	+16
XAN				S	S	01 16 47.0	-7.2
XAN				pmax	pmax		
	comp=Z,19nm,0.7s						
XAN				pmax	pmax		
	comp=Z,54nm,3.7s						
XAN				LR	LR		
	comp=Z,120nm,15.3s						
XAN				LR	LR		
	comp=Z,110nm,17.1s						
XAN				LR	LR		
	comp=Z,160nm,21.5s						
XAN	Xi'an	59.23	316	*e*P	P	01 08 45.9	-0.1
	comp=Z,15nm,0.8s						
XAN	Xi'an	59.23	316	*e*P	P	01 08 45.9	-0.1
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
KMI	Kunming	59.54	304	P	P	01 08 51.3	+2.8
KMI				pP	pwP	01 09 02.1	+5.3
KMI				sP	sP	01 09 04.8	+14
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
PETK	Petropavlovsk-	59.63	2	P	P	01 08 47.5	-0.8
	comp=Z,1.3nm,0.4s,baz=170,slow=6.1,SNR=3.6						
CMAR	Chiang Mai Arr	60.32	296	P	P	01 08 54.5	+0.9
	comp=Z,5.2nm,0.9s,baz=115,slow=4.8,SNR=12						
CD2	Chengdu	61.34	311	P	P	01 09 01.6	+1.2
CD2				LR	LR		
	comp=Z,440nm,12.7s						
CD2				LR	LR		
	comp=Z,200nm,20.1s						
CD2				LR	LR		
	comp=Z,270nm,21.6s						
HHC	Hu-ho-hao-te	61.63	324	*e*P	P	01 09 05.6	+3.3
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,60nm,6.2s						
LZH	Lanzhou	63.84	316	*e*P	P	01 09 19.3	+2.1
LZH				pP	pwP	01 09 30.6	+4.9
LZH				sP	sP	01 09 35.5	+16
LZH				PP	PP	01 11 35.3	-2.5
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.0s						
LZH				LR	LR		
	comp=Z,220nm,16.2s						
LZH				LR	LR		
	comp=Z,350nm,16.5s						
LZH				LR	LR		
	comp=Z,460nm,17.3s						
ZEA	Zeya	64.48	342	*e*P	P	01 09 20.3	-0.5
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	Gaotai	68.27	317	P	P	01 09 46.9	+1.3
GTA				pP	pwP	01 09 54.1	+0.1
GTA				sP	sP	01 09 57.6	+10
GTA				S	S	01 18 42.2	-4.4
GTA				sS	sS	01 18 57.1	+8.3
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,69nm,5.3s						
GTA				LR	LR		
	comp=Z,79nm,17.5s						
GTA				LR	LR		
	comp=Z,73nm,16.8s						
ULN	Ulaanbaatar	68.55	328	*d i*P	P	01 09 48.3	+1.1
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SHL	Shillong	68.82	301	P	P	01 09 50.4	+1.0
SONM	Songino Array	68.89	327	P	P	01 09 49.9	+0.7
	comp=Z,4.5nm,1.1s,baz=133,slow=5.2,SNR=11						
LSA	Lhasa	70.80	304	P	P	01 10 05.5	+3.7
VNDA	Vanda	70.89	178	P

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KSH                                    PP      PP      01 14 46.8 +5.2
KSH                                    S       S       01 21 54.1 -0.9
KSH                                    SS      SS      01 27 37.2 +6.3
KSH                                    pmax    pmax
      comp=Z,31nm,1.0s
KSH                                    pmax    pmax
      comp=Z,170nm,5.7s
KSH                                    LR      LR
      comp=Z,180nm,10.5s
KSH                                    LR      LR
      comp=Z,210nm,9.2s
KSH                                    LR      LR
      comp=Z,190nm,10.7s
NRN   Naryn            85.93 312 eP             P       01 11 25.2 +0.2
      comp=Z,12nm,1.4s
NRN   Naryn            85.93 312 eP             P       01 11 25.3 +0.2
NRN                                    pmax    pmax
      comp=Z,12nm,1.4s
KURK  Kurchatov        86.37 322⇓iP             P       01 11 26.1 -0.5
KURK                                   pmax    pmax
      comp=Z,8.0nm,1.7s
WHY   Whitehorse       86.42  28 eP             P       01 11 28.0 +1.2
      comp=Z,3.7nm,0.7s
AAK   Ala-Archa        87.28 313 eP             P       01 11 31.6 +0.1
      comp=Z,10.0nm,1.5s
AAK   Ala-Archa        87.28 313 eP             P       01 11 31.6 +0.1
AAK                                    pmax    pmax
      comp=Z,10.0nm,1.5s
EPYK  Eagle Plains     87.72  22 eP             P       01 11 33.1 +0.2
      comp=Z,9.3nm,0.9s
DLBC  Dease Lake       88.08  31 eP             P       01 11 35.3 +0.5
      comp=Z,8.6nm,1.2s
ARSB  Arslanbob        88.13 312 eP             P       01 11 35.9 +0.3
NRIK  Noril'sk         88.33 341 P              P       01 11 34.3 -1.4
      comp=Z,4.9nm,0.9s,baz=111,slow=5.1,SNR=7.2
HUMO  Hull Mountain    88.94  47 eP             P       01 11 41.7 +2.5
      comp=Z,8.0nm,1.1s
BTK   Batken           89.54 310 eP             P       01 11 42.2  0.0
      comp=Z,25nm,1.5s
BTK   Batken           89.54 310 eP             P       01 11 42.2  0.0
BTK                                    pmax    pmax
      comp=Z,25nm,1.5s
AFDM  Forest Hills D   89.83  51 eP             P       01 11 43.3 -0.2
      comp=Z,5.4nm,0.9s
NVAR  Mina Array Bea   91.83  52 P              P       01 11 53.6 +0.5
      comp=Z,6.7nm,0.8s,baz=253,slow=6.6,SNR=32
BRVK  Borovoye         91.90 323⇑eP             P       01 11 52.6 -0.1
BRVK                                   pmax    pmax
      comp=Z,2.0nm,0.7s
NV11  Mina Array Sit   91.94  52 eP             P       01 11 53.6 +0.2
      comp=Z,0.7nm,1.0s
DAC   Darwin (Calif)   92.13  54 eP             P       01 11 57.3 +2.8
      comp=Z,12nm,1.1s
DAC   Darwin (Calif)   92.13  54 eP             P       01 11 57.3 +2.8
DAC                                    pmax    pmax
      comp=Z,12nm,1.1s
G08A  Pilot Rock       92.19  45 eP             P       01 11 52.6 -1.8
      comp=Z,3.5nm,1.1s
TPNV  Topopah Spring   93.28  53 eP             P       01 11 58.1 -1.6
      comp=Z,5.8nm,1.0s
TPNV  Topopah Spring   93.28  53 eP             P       01 11 58.1 -1.6
TPNV                                   pmax    pmax
      comp=Z,6.0nm,1.0s
BMO   Blue Mountains   93.31  45 eP             P       01 11 58.5 -1.1
      comp=Z,14nm,1.8s
BMO   Blue Mountains   93.31  45 eP             P       01 11 58.5 -1.1
BMO                                    pmax    pmax
      comp=Z,14nm,1.8s
LDFC  Landfair         94.02  55 eP             P       01 12 02.3 -0.8
      comp=Z,11nm,1.0s
ELK   Elko             94.42  50 LR             LR      01 45 57.9
      comp=Z,104nm,20.6s,baz=160,slow=30
ELK   Elko             94.42  50 eP             P       01 12 00.8 -4.2
      comp=Z,5.1nm,1.3s
ELK   Elko             94.42  50 eP             P       01 12 00.8 -4.2
ELK                                    pmax    pmax
      comp=Z,5.0nm,1.3s
PSUT  Pine Spring      95.31  52 eP             P       01 12 07.5 -1.5
      comp=Z,4.9nm,1.1s
CCUT  Cedar City       95.63  53 eP             P       01 12 11.1 +0.5
      comp=Z,2.8nm,0.9s
YKA   Yellowknife Ar   96.25  28 P              P       01 12 12.1 -0.3
      comp=Z,0.4nm,0.2s,baz=270,slow=4.4,SNR=7.6
U15A  North Rim        96.41  54 eP             P       01 12 14.4 +0.2
      comp=Z,4.7nm,1.0s
MTPU  Mount Pierson    96.59  53 eP             P       01 12 15.6 +0.5
      comp=Z,6.9nm,1.2s
PDAR  Pinedale Array   98.78  48 P              P       01 12 23.2 -1.4
      comp=Z,0.7nm,0.8s,baz=252,slow=1.8,SNR=5.7
PDAR                                   LR      LR      01 52 26.8
      comp=Z,60nm,18.3s,baz=208,slow=33
NEY   Neytrino        110.47 314⇑iPKIKP        PKiKP   01 17 13.6 -3.7
VSU   Vasula          114.78 333⇑iPKIKP        PKiKP   01 17 22.9 -1.9
VSU                                    pmax    pmax
      comp=Z,38nm,2.5s
AKASG Malin Array Be   117.08 324 PKP            PKPdf   01 17 29.1 -0.4
      comp=Z,0.6nm,0.4s,baz=54,slow=2.4,SNR=4.9
BRTR  Keskin Array B   117.91 312 PKP            PKPdf   01 17 30.6 -1.1
      comp=Z,1.0nm,0.6s,baz=112,slow=1.7,SNR=4.7
ANTO  Ankara           118.50 312⇑iP            PKPdf   01 17 32.8 +0.1
NOA   NORSAR Array B   119.30 341 PKP            PKPdf   01 17 33.1 -0.4
      comp=Z,0.5nm,0.7s,baz=42,slow=1.7,SNR=2.7
BIZ   Bicaz            120.54 322⇓iP            PKPdf   01 17 36.5 +0.2
BURAR Bucovina Array   120.79 323⇓iP            PKPdf   01 17 38.3 +1.4
MLR   Muntele Rosu     121.26 320⇓iP            PKPdf   01 17 37.8 -0.1
KOLS  Kolonicke sedl   121.89 325 ePKIKP        PKPdf   01 17 39.9 +1.1
KOLS  Kolonicke sedl   121.89 325 ePKP          PKPdf   01 17 39.9 +1.1
TRPA  Tarpa            122.14 324⇑iP            PKPdf   01 17 39.4 +0.1
HUMR  Humele           122.29 319⇓iP            PKPdf   01 17 39.4 -0.3
LANS  Liptovska Anna   123.35 326 ePKIKP        PKPdf   01 17 43.0 +1.3
LANS  Liptovska Anna   123.35 326 ePKP          PKPdf   01 17 43.0 +1.3
BZS   Buzias           123.92 322⇓iP            PKPdf   01 17 42.8  0.0
VYHS  Vyhne            124.06 326 ePKIKP        PKPdf   01 17 43.5 +0.5
VYHS  Vyhne            124.06 326 ePKP          PKPdf   01 17 43.5 +0.5
VTS   Vitosha          124.25 318 ePKPdf        PKPdf   01 17 43.5 -0.3
VTS   Vitosha          124.25 318⇑iP            PKPdf   01 17 43.9 +0.1
VTS   Vitosha          124.25 318 ePKIKP        PKPdf   01 17 43.5 -0.3
MDVR  Moldovita        124.26 321⇓iP            PKPdf   01 17 43.3 -0.3
GERES GERESS Array B   126.61 329 PKP            PKPdf   01 17 48.2 +0.2
      comp=Z,2.0nm,0.8s,baz=85,slow=3.2,SNR=7.4
LPAZ  La Paz           131.93 119 PKP            PKPdf   01 18 00.2 +0.6
      comp=Z,1.0nm,0.7s,baz=346,slow=3.0,SNR=4.7
TAM   Tamanrasset      146.21 302 ePKPdf        PKPdf   01 18 25.8 +0.9
TAM   Tamanrasset      146.21 302 ePKP2         PKPdf   01 18 25.8 +0.9
BDFB  Brasilia         148.45 135 PKPbc         PKPdf   01 18 31.7 +3.0
      comp=Z,6.8nm,0.8s,baz=56,slow=4.1,SNR=4.7
BDFB  Brasilia         148.45 135 ePKPdf        PKPdf   01 18 29.6 +0.8
BDFB  Brasilia         148.45 135 ePKIKP        PKPdf   01 18 29.6 +0.8
TOA0  Torodi Ar. Sit   152.59 286 ePKPdf        PKPdf   01 18 34.1 -0.9
TORD  Torodi Ar. Bea   152.59 286 PKP            PKPdf   01 18 34.8 -0.2
      comp=Z,1.7nm,1.0s,baz=97,slow=2.2,SNR=5.7
TORD                                   PKPbc    PKPbc   01 18 41.9 -0.1
      comp=Z,6.7nm,1.0s,baz=79,slow=2.1,SNR=18
DBIC  Dimbokro         159.62 271 PKPab         PKPab   01 19 21.6 -1.2
      comp=Z,6.2nm,1.1s,baz=117,slow=4.5,SNR=2.1
```

SNET **02** *00:58:41.6±1.4, 12.°04N×88.°48W, h30km, ML4.5*
UCR **02** *00:58:42.6±2.6, 12.°09N×88.°40W, h33km±17km, MD5.3, ML4.5, mb5.0(NEIC)*
NEIC **02** *00:58:44.9±0.3, 12.°32N×88.°23W, h35km, mb5.0/102, MD4.5(SNET), Error ellipse: s-maj=7.2km s-min=4.7km az=220.0*
NEIC Felt [I] at San Salvador, El Salvador.
ISCJB **02** *00:58:44.2±0.3, 12.°30N±0.°02×88.°20W±0.°02, h58km±2km, mb4.8/100, MS4.5/28, Error ellipse: s-maj=4.0km s-min=2.2km az=136.0*
BJI **02** *00:58:45.5±0.0, 12.°30N×88.°20W, h35km, mB5.3/3, Ms5.4/8, Ms7 5.2/6*
GCMT **02** *00:58:45.9±0.2, 12.°06N±0.°01×88.°64W±0.°02, h17km, MW5.1/96, Moment Tensor Solution. s68,c95; s96,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.15±.14; $M_{\theta\theta}$-3.53±.10; $M_{\phi\phi}$-0.61±.10; $M_{r\theta}$3.38±.28; $M_{\theta\phi}$1.55±.07; $M_{\phi r}$-3.24±.32; Best double couple: $M_0$6.27000×10^{16} NP1:ϕ_s128.00000°, δ70.00000°, λ100.00000°. NP2: ϕ_s280.00000°, δ23.00000°, λ64.00000°. Principal axes: T 6.3890, Plg64.0000°, Azm55.0000°; N -0.2350, Plg10.0000°, Azm304.0000°; P -6.1520, Plg24.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC **02** *00:58:45.3±1.6, 12.°40N×88.°09W, h46km±16km, mb4.4/23,*

mb1 4.5/27, mb1mx4.4/40, mbtmp4.6/27, ML3.5/4, MS4.5/27, Ms1 4.5/27, ms1mx4.4/31 Error ellipse: s-maj=16.4km s-min=8.9km az=51.0

ISC 02 00:58:46.0±0.7, 12.°27N±0.°04×88.°24W±0.°04, h54km±6km, n820, σ1°37/824, mb4.9/100, MS4.5/28, 21C, Off coast of central America

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Code  Station Name     Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC      h m  s    ISC
CSGN  Cosiguina Volc   0.96  43   ePn              Pn       00 59 03.5 +0.1
CSGN  Cosiguina Volc   0.96  43⇑iP                 Pn       00 59 03.6 +0.1
CSGN                                eS              Sn       00 59 22.1 +5.8
CSGN                                IAML                     00 59 26.7
      comp=N,82μm,0.4s
CSGN  Cosiguina Volc   0.96  43⇑iP                 Pn       00 59 03.6 +0.1
CSGN                                eS              Sn       00 59 22.1 +5.8
CNCH  Conchagua        1.07  21⇑iP                 Pn       00 59 04.2 -0.8
CNCH                                eP                       00 59 04.4
CNCH                                eS              Sn       00 59 24.6 +5.7
CNCH  Conchagua        1.07  21⇑iP                 Pn       00 59 04.2 -0.8
CNCH                                eS              Sn       00 59 24.6 +5.7
LCND  La Caada         1.09  18⇑eP                 Pn       00 59 04.1 -0.9
LCND                                eS              Sn       00 59 23.1 +4.0
LCND                                IAML                     00 59 35.9
      comp=Z,6μm,0.5s
LCND  La Caada         1.09  18⇑eP                 Pn       00 59 04.1 -0.9
LCND                                eS              Sn       00 59 23.1 +4.0
LCND                                IAML                     00 59 35.9
      comp=Z,6μm,0.5s
LCY   Lacayo           1.15 357⇑eP                 Pn       00 59 04.9 -1.1
LCY   Lacayo           1.15 357⇑eP                 Pn       00 59 04.9 -1.1
VSM   San Miguel       1.15 358 eP                 Pn       00 59 05.2 -0.9
PACA  Pacayal          1.20 356⇑iP                 Pn       00 59 05.3 -1.2
PACA                                eS              Sn       00 59 24.8 +2.9
PACA  Pacayal          1.20 356⇑iP                 Pn       00 59 05.3 -1.2
PACA                                eS              Sn       00 59 24.8 +2.9
CRIN  San Cristobal    1.23  70 eP                 Pn       00 59 06.8 -0.2
CRIN                                IAML                     01 00 05.2
      comp=E,11μm,1.0s
TECA  Tecapa           1.25 348⇑eP                 Pn       00 59 05.8 -1.5
TECA  Tecapa           1.25 348⇑eP                 Pn       00 59 05.8 -1.5
TEL3  Telica 3         1.39  77 eP                 Pn       00 59 08.2 -0.9
SNVI  San Vicente      1.46 336 eP                 Pn       00 59 08.2 -1.9
CAHU  Cacacuatique     1.49   1⇑eP                 Pn       00 59 10.3 -0.4
CAHU                                eS              Sn       00 59 35.5 +6.4
CAHU  Cacacuatique     1.49   1⇑eP                 Pn       00 59 10.3 -0.4
CNGN  Cerro Negro      1.52  81 eP                 Pn       00 59 08.3 -2.6
LFRS  El Faro          1.57 329⇑iP                 Pn       00 59 09.0 -2.6
PAVA  Las Pavas        1.59 335⇑eP                 Pn       00 59 10.0 -1.9
PAVA                                IAML                     00 59 39.0
      comp=Z,5μm,0.4s
PAVA  Las Pavas        1.59 335⇑eP                 Pn       00 59 10.0 -1.9
PAVA                                IAML                     00 59 39.0
      comp=Z,5μm,0.4s
COPN  Copaltepe        1.61  93 eP                 Pn       00 59 10.6 -1.4
LBRS  Las Brisas       1.66 332 eP                 Pn       00 59 10.8 -2.0
MOMN  Momotombo        1.66  85 eP                 Pn       00 59 11.2 -1.6
SNET  Serv Nac Est T   1.71 326 eP                 Pn       00 59 11.7 -1.8
SNET                                eS              Sn       00 59 33.1 -1.2
SNET                                IAML                     00 59 46.7
      comp=Z,3μm,0.3s
SNET  Serv Nac Est T   1.71 326 eP                 Pn       00 59 10.7 -2.8
SNET                                IAML                     00 59 46.7
      comp=Z,3μm,0.3s
VICT  Victoria         1.73 347 eP                 Pn       00 59 12.8 -0.9
VICT  Victoria         1.73 347 eP                 Pn       00 59 12.8 -0.9
UEES  San Salvador     1.75 326 eP                 Pn       00 59 11.2 -2.8
UEES  San Salvador     1.75 326 eP                 Pn       00 59 11.2 -2.8
APYN  Apoyeque         1.84  91 eP                 Pn       00 59 13.6 -1.7
MGAN  Managua          1.95  93 eP                 Pn       00 59 15.2 -1.5
MGAN                                eS              Sn       00 59 41.6 +1.7
ESTN  Estel            2.00  65 ePn                Pn       00 59 16.6 -0.8
ESTN  Estel            2.00  65 eP                 Pn       00 59 17.0 -0.5
TGUH  Tegucigalpa,Un   2.01  28 ePn                Pn       00 59 18.0 +0.6
TGUH  Tegucigalpa,Un   2.01  28 eP                 Pn       00 59 18.1 +0.6
CEVE  Cerro Verde      2.06 319⇑eP                 Pn       00 59 15.8 -2.5
CEVE                                IAML                     00 59 54.0
      comp=Z,12μm,0.5s
CEVE  Cerro Verde      2.06 319⇑eP                 Pn       00 59 15.8 -2.5
CEVE                                IAML                     00 59 54.0
      comp=Z,12μm,0.5s
MASN  Masaya           2.06  98 eP                 Pn       00 59 15.5 -2.7
MASN                                eS              Sn       00 59 43.2 +0.4
SBLS  San Blas         2.06 319 eP                 Pn       00 59 16.0 -2.5
SBLS  San Blas         2.06 319 eP                 Pn       00 59 16.0 -2.5
SNJE  San Jose         2.08 320 eP                 Pn       00 59 16.1 -2.5
SNJE  San Jose         2.08 320 eP                 Pn       00 59 16.1 -2.5
RTR   El Retiro        2.12 320 eP                 Pn       00 59 17.0 -2.2
RTR   El Retiro        2.12 320 eP                 Pn       00 59 17.0 -2.2
MATN  Matagalpa        2.35  74 eP                 Pn       00 59 21.4 -0.8
MTO3  Montecristo      2.38 333⇑iP                 Pn       00 59 21.3 -1.5
MTO3  Montecristo      2.38 333⇑iP                 Pn       00 59 21.3 -1.5
CONN  Concepcion       2.65 105 eP                 Pn       00 59 24.6 -1.7
ACON  Acoyapa          3.01  95 ePn                Pn       00 59 29.1 -2.1
ACON  Acoyapa          3.01  95 eP                 Pn       00 59 29.4 -1.8
NY14  Universidad de   3.10 121 iP                 Pn       00 59 31.1 -1.3
LAPC  Finca la Perla   3.13 118 iP                 Pn       00 59 31.4 -1.4
BUEV  Buena Vista      3.13 118 iP                 Pn       00 59 32.8 -0.2
GPS3  Bodega del ICE   3.19 118 iP                 Pn       00 59 32.8 -1.0
LIM1  Limonal          3.32 118 iP                 Pn       00 59 34.4 -1.1
HORNC Hornillas        3.37 117 iP                 Pn       00 59 35.1 -1.1
HORNC                               iS              Sn       01 00 13.2 -1.9
ACAL  Aguas Claras     3.53 117 iP                 Pn       00 59 37.3 -1.2
JTS   Las Juntas de    3.77 121 P                  Pn       00 59 40.9 -0.8
      comp=Z,11nm,0.3s,baz=15,slow=20,SNR=35
JTS                                 S               Sn       01 00 23.1 -1.8
      comp=Z,41nm,0.3s,baz=340,slow=14,SNR=4.9
JTS   Las Juntas de    3.77 121 eP                 Pn       00 59 40.0 -1.7
ESPN  Las Esperanzas   3.85  91 ePn                Pn       00 59 42.1 -0.5
ESPN  Las Esperanzas   3.85  91 eP                 Pn       00 59 40.6 -2.1
ARE1  Arenal 1         3.89 117 eP                 Pn       00 59 41.2 -2.1
SRA1  San Ramn         4.28 120 eP                 Pn       00 59 48.0 -0.7
HDC   Heredia          4.63 119 ePn                Pn       00 59 54.8 +1.3
HDC   Heredia          4.63 119 eP                 Pn       00 59 52.7 -0.8
HDC                                 eS              Sn       01 00 44.5 -1.6
EDDO  Dominical        5.24 124 eP                 Pn       01 00 00.8 -1.0
CCIG  Comitan          5.50 317 ePn                Pn       01 00 06.0 +0.5
EDPN  Palmar Norte     5.73 125 eP                 Pn       01 00 06.9 -1.6
DRK0  Durika           5.74 121 eP                 Pn       01 00 08.6 -0.3
DRK0                                eS              Sn       01 01 11.5 -2.0
EDBA  Buenos Aires     5.77 122 eP                 Pn       01 00 09.0 -0.1
BRU2  Volcan           6.45 122 eP                 Pn       01 00 18.0 -0.6
TBS2                   6.48 122 eP                 Pn       01 00 17.9 -1.1
ICCO  Coco Island      6.78 170 eP                 Pn       01 00 17.4 -5.6
TEIG  Tepich           7.91 360 ePn                Pn       01 00 41.0 +2.6
CMIG  Matias Romero    8.02 307 P                  Pn       01 00 38.6 -1.3
      comp=Z,3.7nm,0.3s,baz=93,slow=8.4,SNR=40
CMIG                                S               Sn       01 02 15.7 +6.4
      comp=Z,3.6nm,0.3s,baz=68,slow=23,SNR=1.6
MYIG  Mrida            8.76 351 ePn                Pn       01 00 46.7 -3.3
BCIP  Isla Barro Col   8.81 110 ePn                Pn       01 00 50.7 -0.1
BCIP  Isla Barro Col   8.81 110 eP                 Pn       01 00 51.8 +1.1
FSCY  Frank Sound, G   9.75  43 ePn                Pn       01 01 00.1 -3.5
TLIG  Tlapa            11.28 299 ePn               Pn       01 01 24.5 -0.2
MTDJ  Mount Denham     11.90  59 ePn               Pn       01 01 31.9 -1.2
PAYG  Puerto Ayora     13.02 189 ePn               Pn       01 01 49.3 +1.0
UREC  San Jos de Ur    13.29 109 eP                P        01 02 00.3 +0.2
HELC  Santa Helena     13.92 115 eP                Pn       01 01 58.3 -2.6
062Z  Marathon         14.13  28 P                 Pn       01 02 01.5 -1.9
      baz=210
SMLC  San Martn de     14.35 103 eP                P        01 02 10.9 -0.9
YOTC  Yotoco, Valle    14.36 124 eP                Pn       01 02 06.9 +0.4
GUY2C Guyana, Caldas   14.51 118 eP                Pn       01 02 09.6 +0.7
RREF  El Recreo        14.69 119 eP                Pn       01 02 12.9 +1.6
PTBC  PUERTO BERRIO,   14.73 111 eP                P        01 02 14.9 -1.3
NORC  Norcasia         14.79 116 eP                Pn       01 02 12.9 +0.9
BBAC  Balboa, Cauca    14.91 132 eP                P        01 02 21.6 +3.2
POPC  Popayan, Colom   14.98 129 eP                P        01 02 18.9 -0.3
061Z  Ochoppi          15.19  26 P                 Pn       01 02 16.2 -0.9
      baz=208
059Z  Ave Maria        15.39  24 P                 Pn       01 02 14.1 -5.6
      baz=206
GCUF  Volcan Galeras   15.39 135 eP                P        01 02 27.5 +3.5
OTAV  Otavalo          15.40 140 ePn               P        01 02 23.1 -1.0
      comp=Z,135nm,1.9s
OTAV  Otavalo          15.40 140 eP                P        01 02 29.5 +5.5
OTAV  Otavalo          15.40 140 eP                P        01 02 27.8 +3.8
ROSC  El Rosal         15.61 117 P                 Pn       01 02 22.6 -0.4
      comp=Z,0.5nm,0.3s,baz=352,slow=12,SNR=7.2
ROSC                                LR              LR       01 09 38.0
      comp=Z,908nm,18.1s,baz=338,slow=42
ROSC  El Rosal         15.61 117 ePn               P        01 02 24.8 -1.5
      comp=Z,29nm,1.0s
PRAC  Prado            15.71 122 eP                P        01 02 28.2 +1.1
PRAC                                eP              Pn       01 02 28.9 +4.9
060Z  West Palm Beac   15.81  26 P                 Pn       01 02 25.2 +0.1
      baz=209
058A  Arcadia          15.90  21 P                 Pn       01 02 25.6 -0.7
      baz=204
059A  Moore Haven      16.07  23 ePn               Pn       01 02 24.3 -4.1
      comp=Z,178nm,1.2s
059A  Moore Haven      16.07  23 P                 Pn       01 02 27.9 -0.4
      baz=206
PAMC  Pamplona, Colo   16.07 106 eP                Pn       01 02 30.2 +1.2
CHIC  Chingaza         16.22 117 eP                P        01 02 32.9 -0.3
RUSC  La Rusia         16.24 112 eP                P        01 02 34.8 +1.4
LGNH  Logne            16.29  66 ePn               P        01 02 35.9 +2.4
      comp=Z,308nm,1.2s
FLOC  Florencia        16.38 129 eP                P        01 02 38.2 +3.7
958A  Wauchula         16.40  21 P                 Pn       01 02 28.7 -3.9
      baz=203
060A  Indiantown       16.45  26 P                 Pn       01 02 29.7 -3.5
      baz=208
LNIG  Linares          16.45 321 ePn               P        01 02 34.4 -0.8
      comp=Z,117nm,0.9s
VILC  Villavicencio,   16.51 118 eP                Pn       01 02 33.5 -0.7
959A  Okeechobee       16.67  23 P                 Pn       01 02 32.2 -3.7
      baz=206
857A  Zephyrhills      16.88  19 P                 Pn       01 02 35.9 -2.6
      baz=201
DWPF  Disney Wildern   17.00  21 ePn               Pn       01 02 40.5 +0.5
      comp=Z,230nm,1.4s
DWPF  Disney Wildern   17.00  21 P                 Pn       01 02 38.9 -1.1
      baz=203
858A  St. Cloud        17.11  21 P                 Pn       01 02 38.8 -2.7
      baz=203
859A  Kempfer Cattle   17.14  23 P                 Pn       01 02 38.1 -3.7
      baz=205
ZAIG  Zacatecas        17.18 309 ePn               P        01 02 44.2 +0.6
      comp=Z,45nm,1.2s
TAMC  Tame, Arauca     17.23 108 eP                P        01 02 44.1 +0.3
MACC  Macarena, Meta   17.45 124 eP                Pn       01 02 44.8 -0.9
757A  Oxford           17.56  18 P                 Pn       01 02 43.0 -3.9
      baz=200
SDDR  Presa de Saban   17.63  66 ePn               P        01 02 50.0 +1.7
      comp=Z,75nm,1.4s
SDV   Santo Domingo    17.63  99 P                 Pn       01 02 46.8 -1.3
      comp=Z,1.0nm,0.3s,baz=280,slow=9.9,SNR=12
SDV                                 S               Sn       01 06 01.5 -2.4
      comp=Z,0.3nm,0.3s,baz=22,slow=18,SNR=1.9
SDV                                 LR              LR       01 10 15.2
      comp=Z,661nm,20.9s,baz=301,slow=39
SDV   Santo Domingo    17.63  99 ePn               Pn       01 02 47.3 -0.8
      comp=Z,56nm,1.1s
SDV   Santo Domingo    17.63  99 eP                Pn       01 02 47.5 -0.6
SDV   Santo Domingo    17.63  99 eP                Pn       01 02 47.6 -0.4
KVTX  Kingsville       17.69 331 ePn               Pn       01 02 46.6 -1.9
      comp=Z,451nm,1.5s
655A  Horseshoe Beac   17.77  14 P                 Pn       01 02 46.7 -2.9
      baz=196
656A  Willston         17.82  16 ePn               P        01 02 52.2 +2.0
      comp=Z,90nm,1.0s
656A  Willston         17.82  16 P                 Pn       01 02 47.5 -2.7
      baz=198
758A  Lake Helen       17.86  20 P                 Pn       01 02 47.8 -2.8
      baz=203
PTLC  Puerto Leguiza   17.95 131 eP                Pn       01 02 57.4 +5.5
552A  Lynn Haven       17.98   8 P                 Pn       01 02 52.1  0.0
      baz=189
657A  Interlachen      18.22  18 P                 P        01 02 53.6 -1.1
      baz=200
554A  Perry            18.22  13 P                 P        01 02 53.3 -1.4
      baz=194
658A  Bunnell          18.26  20 P                 P        01 02 54.5 -0.6
      baz=202
451A  Vernon           18.40   7 P                 P        01 02 56.3 -0.3
      baz=188
449A  Pace             18.43   3 P                 P        01 02 56.7 -0.2
      baz=183
555A  McAlpin          18.43  15 P                 P        01 02 57.0 +0.1
      baz=196
556A  Lake Butler      18.46  16 P                 P        01 02 55.8 -1.5
      baz=198
450A  Crestview        18.51   4 P                 P        01 02 57.6 -0.3
      baz=185
557A  Orange Park      18.66  18 P                 P        01 02 59.9 +0.4
      baz=200
452A  Marianna         18.70   8 P                 Pn       01 03 01.2 +0.4
      baz=189,SNR=9.6
BRAL  Brewton          18.84   3 P                 P        01 03 01.6 +0.1
      baz=184
454A  Quitman          18.84  12 P                 P        01 03 00.1 -1.4
      baz=194
453A  Whigham          18.85  10 eP                Pn       01 03 03.3 +0.8
      comp=Z,435nm,2.0s
453A  Whigham          18.85  10 P                 P        01 03 01.8 +0.2
      baz=192
HKT   Hockley          18.95 339 eP                Pn       01 03 03.9 +0.1
      comp=Z,75nm,1.3s
455A  Stateville       19.00  14 P                 P        01 03 02.2 -1.1
      baz=196
349A  Repton           19.01   3 P                 P        01 03 01.6 -1.8
      baz=183
833A  Chaparral WMA,   19.07 329 P                 P        01 03 04.2 +0.2
      baz=145,SNR=54
350A  Dozier           19.14   5 P                 P        01 03 05.1 +0.4
      baz=186
456A  Hilliard         19.25  16 P                 P        01 03 06.3 +0.4
      baz=199
457A  Yulee            19.28  18 P                 P        01 03 05.7 -0.6
      baz=200
353A  Camilla          19.35  10 P                 Pn       01 03 08.2 -0.3
      baz=192,SNR=16
352A  Blakely          19.36   9 eP                Pn       01 03 09.7 +1.0
      comp=Z,180nm,1.0s
352A  Blakely          19.36   9 P                 Pn       01 03 08.1 -0.6
      baz=190,SNR=23
TIGA  Tifton           19.55  12 eP                Pn       01 03 11.4 +0.5
      comp=Z,98nm,1.0s
TIGA  Tifton           19.55  12 P                 Pn       01 03 10.4 -0.6
      baz=194,SNR=13
355A  Pearson          19.62  14 P                 P        01 03 10.2 +0.2
      baz=196
249A  Camden           19.64   3 P                 Pn       01 03 12.1 +0.1
      baz=183,SNR=16
250A  Grady            19.70   5 eP                Pn       01 03 12.8 +0.1
      comp=Z,307nm,1.9s
250A  Grady            19.70   5 P                 Pn       01 03 12.5 -0.2
      baz=186,SNR=12
356A  Blackshear       19.79  16 P                 Pn       01 03 12.9 -0.8
      baz=198
252A  Lumpkin          19.90   9 P                 P        01 03 13.9 +0.9
      baz=190,SNR=31
251A  Midway           19.90   7 P                 Pn       01 03 14.8 -0.3
      baz=186,SNR=27
VBMS  Vicksburg        19.97 354 eP                Pn       01 03 15.8  0.0
      comp=Z,228nm,1.1s
VBMS  Vicksburg        19.97 354 P                 Pn       01 03 15.8  0.0
      baz=173,SNR=7.8
357A  Townsend         20.05  17 P                 P        01 03 14.8 +0.1
      baz=200
253A  Americus         20.06  10 eP                Pn       01 03 16.2 -0.7
      comp=Z,118nm,1.3s
253A  Americus         20.06  10 P                 P        01 03 15.0 +0.3
      baz=192
254A  Abbeville        20.11  12 P                 P        01 03 15.8 +0.5
      baz=194
255A  Hazlehurst       20.27  14 eP                Pn       01 03 18.5 -0.9
      comp=Z,107nm,1.1s
255A  Hazlehurst       20.27  14 P                 Pn       01 03 18.7 -0.8
      baz=196,SNR=7.1
149A  Jones            20.28   4 P                 Pn       01 03 18.6 -0.9
      baz=184,SNR=21
NATX  Nacogdoches      20.28 344 eP                Pn       01 03 18.8 -0.8
      comp=Z,169nm,1.1s
NATX  Nacogdoches      20.28 344 P                 P        01 03 18.2 +1.0
      baz=162,SNR=11
148A  Greensboro       20.29   2 P                 Pn       01 03 18.8 -0.8
      baz=182,SNR=14
147A  Livingston       20.31 360 eP                P        01 03 18.6 +1.2
      comp=Z,149nm,1.3s
147A  Livingston       20.31 360 P                 Pn       01 03 18.9 -0.9
      baz=180,SNR=13
151A  Opelika          20.34   7 P                 Pn       01 03 19.6 -0.6
      baz=188,SNR=27
150A  Eclectic         20.34   5 P                 Pn       01 03 19.6 -0.7
      baz=186,SNR=28
435B  Jarrell          20.35 336 P                 P        01 03 17.8 -0.2
      baz=153,SNR=12
256A  Glennville       20.47  16 P                 P        01 03 17.4 -1.8
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baz=198
152A **Waverly Hall** 20.56 8 P P 01 03 21.1 +0.9
baz=190,SNR=38
153A **Fort Valley** 20.68 11 P P 01 03 19.9 -1.6
baz=192
LRAL **Lakeview Retre** 20.70 3 P P 01 03 23.0 +1.3
baz=183,SNR=23
257A **Skidaway Islan** 20.70 18 P P 01 03 19.3 -2.4
baz=200
154A **Montrose** 20.79 12 P P 01 03 23.9 +1.3
baz=194,SNR=14
Z49A **Columbiana** 20.89 4 P P 01 03 25.0 +1.3
baz=185,SNR=18
155A **Kite** 20.94 14 P P 01 03 25.7 +1.5
baz=196,SNR=24
Z50A **Ashland** 21.00 5 P P 01 03 26.1 +1.2
baz=186,SNR=25
JCT **Junction City** 21.05 331 P P 01 03 25.1 -0.5
baz=147,SNR=46
Z52A **Williamson** 21.11 9 P P 01 03 27.4 +1.3
baz=190,SNR=9.8
Z51A **Franklin** 21.14 7 P P 01 03 27.4 +1.0
baz=188
156A **Sylvania** 21.21 16 P P 01 03 27.7 +0.5
baz=198
Z41A **Richland Creek** 21.31 349 P P 01 03 29.2 +1.0
baz=168
Z53A **Monticello** 21.34 11 P P 01 03 29.8 +1.2
baz=193,SNR=21
157A **Early Branch** 21.37 17 P P 01 03 30.1 +1.2
baz=200,SNR=6.9
WHTX **Lake Whitney,** 21.38 338 P P 01 03 28.6 -0.5
baz=155,SNR=8.0
Z54A **Sparta** 21.45 12 P P 01 03 30.8 +1.1
baz=194,SNR=14
GOGA **Godfrey** 21.49 11 P P 01 03 31.3 +1.1
baz=193,SNR=25
Y49A **Blount Mountai** 21.55 4 P P 01 03 31.7 +0.9
baz=185,SNR=13
Y48A **Jasper** 21.57 2 P P 01 03 31.7 +0.7
baz=183,SNR=9.8
Z55A **Blythe** 21.59 14 P P 01 03 31.6 +0.4
baz=196,SNR=9.4
ATAH **Atahualpa** 21.62 153 P P 01 03 33.8 +1.7
comp=Z,13nm,0.9s,baz=337,slow=10,SNR=4.6
ATAH LR LR 01 10 26.2
comp=Z,1μm,21.1s,baz=335,slow=32
Y50A **Piedmont** 21.64 6 P P 01 03 32.7 +0.8
baz=187,SNR=10.0
158A **Hollywood** 21.67 19 P P 01 03 31.8 -0.2
baz=202
Y51A **Rockmart** 21.73 7 P P 01 03 33.6 +0.9
baz=188,SNR=25
Y52A **Lilburn** 21.83 9 P P 01 03 35.0 +1.2
baz=191,SNR=12
Z56A **Williston** 21.88 16 P P 01 03 34.8 +0.5
baz=198
Y53A **Monroe** 21.90 10 P P 01 03 35.6 +1.0
baz=192,SNR=25
NHSC **New Hope** 22.01 18 P P 01 03 35.5 -0.2
baz=201
Z57A **Bowman** 22.04 17 P P 01 03 37.1 +1.1
baz=200
SJG **San Juan** 22.08 72 P P 01 03 35.6 -1.1
comp=Z,19nm,0.9s,baz=325,slow=5.1,SNR=5.0
Y54A **Tignall** 22.08 12 P P 01 03 37.4 +0.9
baz=194,SNR=45
X48A **Hartselle** 22.11 3 P P 01 03 37.0 +0.2
baz=183,SNR=7.3
X47A **Russelville** 22.15 1 P P 01 03 37.5 +0.2
baz=181,SNR=18
OXF **Oxford** 22.17 357 P P 01 03 36.7 -0.7
baz=177
X46A **Booneville** 22.19 359 P P 01 03 37.9 +0.2
baz=179,SNR=8.3
X49A **Woodville** 22.21 4 P P 01 03 38.1 +0.2
baz=185,SNR=10
X50B **Fort Payne** 22.22 6 P P 01 03 38.2 +0.2
baz=187,SNR=5.3
TXAR **Lajitas Array** 22.23 322 P P 01 03 38.4 +0.1
comp=Z,20nm,0.7s,baz=146,slow=9.3,SNR=101
TXAR PcP PcP 01 07 32.8 -0.4
comp=Z,3.8nm,1.0s,baz=153,slow=3.0,SNR=4.0
TXAR LR LR 01 14 16.6
comp=Z,483nm,21.7s,baz=0.0,slow=42
X43A **Marvell** 22.28 354 P P 01 03 39.2 +0.6
baz=173
Y56A **Pelion** 22.34 15 P P 01 03 39.4 +0.1
baz=198
Z58A **St. Stephen** 22.34 19 P P 01 03 39.0 -0.3
baz=202
Y55A **Saluda** 22.34 14 P P 01 03 40.8 +1.5
baz=196,SNR=34
X51A **Calhoun** 22.41 7 P P 01 03 39.7 -0.3
baz=189
Z59A **Georgetown, SC** 22.43 20 P P 01 03 39.2 -1.0
baz=203
X40A **Basin Creek Fa** 22.51 350 P P 01 03 41.4 +0.3
baz=168,SNR=9.9
X52A **Dahlonega** 22.58 9 P P 01 03 42.3 +0.4
baz=191,SNR=23
X53A **Estanollee** 22.59 11 P P 01 03 42.5 +0.6
baz=193,SNR=8.0
MIAR **Mount Ida** 22.70 349 P P 01 03 43.5 +0.3
baz=166,SNR=69
UALR **University of** 22.71 351 eP P 01 03 43.0 -0.3
comp=Z,57nm,0.9s
W46A **Michie** 22.76 360 P P 01 03 43.2 -0.6
baz=180,SNR=7.2
H06E1 **SOCORRO T-PHAS** 22.79 289 T T 01 27 06.7
SNR=23
W48A **Pulaski** 22.80 3 P P 01 03 44.1 -0.1
baz=183,SNR=22
Y57A **Sumter** 22.80 17 P P 01 03 44.4 +0.2
baz=200
ABTX **Abilene, Hawle** 22.80 334 P P 01 03 42.9 -1.4
baz=150,SNR=29
X54A **Belton** 22.81 13 P P 01 03 44.9 +0.6
baz=195,SNR=23
W49A **Belvidere** 22.82 4 P P 01 03 44.1 -0.3
baz=185,SNR=17
W47A **Westpoint** 22.89 1 P P 01 03 44.7 -0.3
baz=182,SNR=27
X55A **Gracelyn & Ava** 22.90 14 P P 01 03 46.1 +0.8
baz=197,SNR=40
Y58A **Scranton** 22.91 19 P P 01 03 45.4 +0.1
baz=202
W50A **Signal Mountai** 22.98 6 P P 01 03 45.8 -0.3
baz=187,SNR=10.0
W51A **Cleveland** 23.01 7 P P 01 03 46.6 +0.3
baz=189,SNR=16
W52A **Murphy** 23.06 9 eP P 01 03 47.6 +0.8
comp=Z,59nm,1.2s
W52A **Murphy** 23.06 9 P P 01 03 47.3 +0.5
baz=191,SNR=8.0
X56A **White Oak** 23.07 15 P P 01 03 47.7 +0.8
baz=198,SNR=19
W41B **Gary Mavity, V** 23.09 352 P P 01 03 47.4 +0.3
baz=170,SNR=49
STVI **Saint Thomas** 23.24 72 eP P 01 03 47.7 -1.1
comp=Z,44nm,0.9s
W53A **Cullowhee** 23.26 11 P P 01 03 49.5 +0.6
baz=193,SNR=9.2
X57A **Johnson Farm,** 23.30 17 P P 01 03 49.5 +0.3
baz=200
W54A **Cherokee Point** 23.37 13 P P 01 03 50.8 +1.0
baz=195,SNR=36
BIRD **Birdtown, Kers** 23.37 16 eP P 01 03 50.1 +0.3
comp=Z,54nm,1.1s
W39A **Magazine** 23.37 348 P P 01 03 50.3 +0.5
baz=166,SNR=63
Y48A **Smith Brothers** 23.40 3 P P 01 03 49.7 -0.5
baz=184,SNR=9.1
V46A **Holladay** 23.43 0 P P 01 03 49.0 -1.4
baz=180,SNR=9.4
V47A **Nunnelly** 23.46 1 P P 01 03 49.8 -0.9
baz=182,SNR=11
V50A **Pikevile** 23.47 6 P P 01 03 50.6 -0.1
baz=188,SNR=9.6
Y60A **Bolivia** 23.49 21 eP P 01 03 50.5 -0.4
comp=Z,62nm,0.8s
Y60A **Bolivia** 23.49 21 P P 01 03 50.3 -0.6
baz=205
V49A **McMinnville** 23.49 5 P P 01 03 50.5 -0.5
baz=186,SNR=9.2
SLBS **Sierra La Lagu** 23.53 302 eP P 01 03 53.1 +1.5
comp=Z,63nm,1.3s
X58A **Rowland** 23.61 19 eP P 01 03 52.5 +0.4
comp=Z,82nm,1.4s
X58A **Rowland** 23.61 19 P P 01 03 52.4 +0.3
baz=202
KMSC **Kings Mountain** 23.62 14 eP P 01 03 52.1 0.0
comp=Z,48nm,1.0s
KMSC **Kings Mountain** 23.62 14 P P 01 03 52.7 +0.6
baz=197,SNR=25
V51A **Loudon** 23.69 8 P P 01 03 53.0 +0.2
baz=189
WVT **Waverly** 23.76 1 eP P 01 03 52.6 -0.9
comp=Z,65nm,1.7s
WVT **Waverly** 23.76 1 P P 01 03 52.1 -1.4
baz=181
W56A **Indian Trail** 23.80 16 P P 01 03 54.2 +0.4
baz=199,SNR=9.4
V53A **Saluda** 23.81 11 P P 01 03 54.7 +0.7
baz=193,SNR=27
V52A **Sevierville** 23.84 9 P P 01 03 54.5 +0.3
baz=191,SNR=21
X59A **McDuffie Farm,** 23.87 20 P P 01 03 54.8 +0.3
baz=204
W57A **Gilead** 23.98 17 eP P 01 03 54.6 -0.8
comp=Z,23nm,0.9s
W57A **Gilead** 23.98 17 P P 01 03 55.5 +0.1
baz=200,SNR=7.6
U46A **Springville** 23.99 0 P P 01 03 54.6 -0.9
baz=180,SNR=9.7
LPIG **La Paz** 24.00 302 LR LR 01 14 13.0
comp=Z,2μm,18.1s,baz=124,slow=39
W58A **Raeford** 24.08 18 P P 01 03 56.5 +0.2
baz=202,SNR=9.0
U47A **Clarksville** 24.08 2 P P 01 03 55.2 -1.2
baz=182,SNR=14
V54A **Nebo** 24.09 13 P P 01 03 56.7 +0.2
baz=195,SNR=35
X60A **Albert Glenn T** 24.09 21 P P 01 03 56.6 +0.1
baz=205
U48A **Cassie Pea, Po** 24.18 3 P P 01 03 56.5 -0.8
baz=184,SNR=7.5
U50A **Jamestown** 24.24 7 P P 01 03 57.7 -0.1
baz=188,SNR=22
U49A **Red Boiling Sp** 24.24 5 P P 01 03 57.5 -0.4
baz=186,SNR=21
U51A **La Follette** 24.30 8 P P 01 03 58.6 +0.2
baz=190,SNR=16
V55A **Taylorsville** 24.32 14 P P 01 03 59.2 +0.6
baz=197,SNR=17
WMOK **Wichita Mounta** 24.33 339 P P 01 03 58.1 -0.7
baz=154,SNR=81
U40A **Yellville** 24.34 351 P P 01 03 58.9 +0.2
baz=169,SNR=108
U52A **Thorn Hill** 24.42 10 P P 01 03 59.3 -0.1
baz=192,SNR=13
V56A **Mocksville** 24.46 15 P P 01 04 00.2 +0.4
baz=198,SNR=15
W59A **Clinton** 24.46 20 P P 01 03 59.7 -0.2
baz=204
TUL1 **Leonard** 24.51 345 P P 01 03 59.6 -0.6
baz=162,SNR=24
U53A **Fall Branch** 24.53 11 P P 01 04 00.7 +0.2
baz=193,SNR=20
TZTN **Tazewell** 24.54 9 P P 01 04 00.7 +0.1
baz=191,SNR=9.2
W60A **Pink Hill** 24.61 21 P P 01 03 59.6 -1.6
baz=205
T47A **Sharon Grove** 24.64 2 P P 01 04 00.5 -0.9
baz=183,SNR=19
T45A **Paducah** 24.65 359 P P 01 04 00.6 -1.0
baz=179
T46A **Princeton** 24.67 1 P P 01 04 01.0 -0.8
baz=181,SNR=15
CNNC **Cliffs of the** 24.72 21 P P 01 04 01.1 -1.1
baz=205
V57A **Cotrane Farms** 24.73 17 P P 01 04 02.5 +0.3
baz=200,SNR=17
GDL2 **Guadalupe Moun** 24.76 326 eP P 01 04 03.4 +0.6
T48A **Bowling Green** 24.79 4 P P 01 04 03.1 +0.3
baz=184
U54A **Nelsons Funny** 24.83 12 P P 01 04 03.6 +0.3
baz=195,SNR=31
V58A **Windy Hill, Pi** 24.83 18 P P 01 04 03.3 +0.1
baz=202,SNR=25
T50A **Nancy** 24.83 6 P P 01 04 02.7 -0.6
baz=188,SNR=5.4
T49A **Edmonton** 24.85 5 P P 01 04 02.9 -0.5
baz=186,SNR=14
T51A **Gray** 24.89 8 P P 01 04 03.8 0.0
baz=190,SNR=8.5
MNTX **Cornudas Mount** 24.97 323 P P 01 04 03.9 -0.7
baz=137,SNR=29
W61A **Ground Anchor** 24.98 22 P P 01 04 04.9 +0.4
baz=207
U55A **TA2, Sparta** 24.98 14 P P 01 04 05.2 +0.5
baz=197,SNR=18
U56A **King** 25.00 15 P P 01 04 05.1 +0.4
baz=198,SNR=12
V59A **Middlesex** 25.08 19 P P 01 04 05.7 +0.2
baz=204,SNR=9.5
T53A **Wise** 25.14 11 P P 01 04 06.0 0.0
baz=193,SNR=8.4
T52A **Hallie** 25.18 10 P P 01 04 06.4 0.0
baz=192,SNR=5.8
S47A **Hartford** 25.25 3 P P 01 04 06.0 -1.0
baz=183
S46A **Don Dixon Farm** 25.31 1 P P 01 04 06.8 -0.8
baz=181
S44A **Carbondale** 25.33 358 P P 01 04 06.8 -0.9
baz=178,SNR=12
MSTX **Muleshoe** 25.34 331 P P 01 04 07.3 -0.7
baz=145,SNR=64
S48A **Wiedeman Farm,** 25.36 4 P P 01 04 07.3 -0.7
baz=185
U57A **Blanch** 25.36 17 P P 01 04 08.4 +0.4
baz=201,SNR=16
T54A **Tazewell** 25.40 12 P P 01 04 08.3 -0.1
baz=195,SNR=6.8
V60A **Jim Taylor Roa** 25.41 21 P P 01 04 08.0 -0.5
baz=206
S50A **Richmond** 25.54 7 P P 01 04 09.4 -0.2
baz=189
S49A **Springfield** 25.55 5 P P 01 04 08.2 -1.5
baz=187
U58A **Oxford** 25.56 18 P P 01 04 09.6 -0.2
baz=202,SNR=7.2
S51A **Beattyville** 25.60 9 P P 01 04 09.9 -0.3
baz=190
AMTX **Amarillo** 25.61 334 P P 01 04 10.1 -0.4
baz=148
T55A **Pulaski** 25.63 14 P P 01 04 11.0 +0.5
baz=197,SNR=8.7
V61A **Roper** 25.68 22 P P 01 04 11.5 +0.6
baz=207
V62A **Hyde County Ai** 25.71 24 P P 01 04 12.0 +0.8
baz=209
S52A **Salyersville** 25.72 9 P P 01 04 11.3 0.0
baz=192,SNR=6.1
T56A **Rocky Mt** 25.73 15 P P 01 04 12.1 +0.7
baz=199,SNR=5.9
U59A **Littleton** 25.76 20 P P 01 04 11.5 -0.2
baz=204
BLA **Blacksburg** 25.81 14 P P 01 04 12.4 +0.2
baz=198
CCM **Cathedral Cave** 25.82 355 eP P 01 04 11.3 -0.9
comp=Z,65nm,1.1s
CCM **Cathedral Cave** 25.82 355 P P 01 04 11.3 -0.9
baz=173
R46A **Gibon Southern** 25.84 1 P P 01 04 11.6 -0.7
baz=182
S53A **Williamson** 25.89 11 P P 01 04 12.6 -0.3
baz=194
WCI **Wyandotte Cave** 25.91 4 eP P 01 04 12.6 -0.4
comp=Z,48nm,1.2s
WCI **Wyandotte Cave** 25.91 4 P P 01 04 12.0 -0.9
baz=184
T57A **Hurt** 25.91 17 P P 01 04 12.6 -0.4
baz=200,SNR=9.6
R45A **Skylar, Fairfi** 25.92 360 P P 01 04 12.1 -0.9
baz=180,SNR=7.3
R47A **Wooly Knot Far** 25.96 3 P P 01 04 12.4 -1.1
baz=184,SNR=6.2
R49A **Shelbyville** 26.06 5 P P 01 04 13.5 -0.8
baz=187,SNR=5.3
T58A **Grand View Acr** 26.07 18 P P 01 04 14.5 +0.1
baz=202
U60A **Pendleton** 26.08 21 P P 01 04 14.6 +0.1
baz=205
R48A **Northridge Ran** 26.11 4 P P 01 04 13.9 -0.9
baz=185
R50A **Paris** 26.14 7 P P 01 04 14.7 -0.3
baz=189
S54A **Dingess, Beckl** 26.17 13 P P 01 04 15.4 0.0
baz=195
U61A **Possum Corner** 26.21 22 P P 01 04 14.2 -1.4
baz=207
R51A **Hillsboro** 26.25 8 P P 01 04 15.9 -0.2
baz=190,SNR=6.3
S55A **Lewisburg** 26.32 14 P P 01 04 16.9 +0.2
baz=197,SNR=7.2
T59A **Double "B" Far** 26.40 20 P P 01 04 17.4 -0.1
baz=204
R52A **Catlettsburg** 26.43 10 P P 01 04 17.2 -0.5
baz=192
S56A **Natural Bridge** 26.46 16 P P 01 04 18.3 +0.2
baz=199
Q45A **Warren Harvey,** 26.52 0 P P 01 04 17.8 -0.7
baz=180,SNR=8.8
R53A **Hurricane** 26.55 11 P P 01 04 18.7 -0.1
baz=194
R54A **Victor** 26.60 13 P P 01 04 19.2 0.0
baz=196
Q47A **Bedord North L** 26.61 3 P P 01 04 18.2 -1.1
baz=184,SNR=9.7
NNA **Nana** 26.62 154 LR LR 01 12 58.3
comp=Z,428nm,19.8s,baz=319,slow=32
Q48A **North Vernon** 26.64 4 P P 01 04 18.4 -1.2
baz=185,SNR=5.6
Q46A **CEJHS Indians,** 26.66 2 P P 01 04 18.9 -0.8
baz=182
S57A **Dark Hollow, R** 26.71 17 P P 01 04 20.4 +0.3
baz=200
Q49A **Aurora** 26.79 6 P P 01 04 20.1 -0.8
baz=187,SNR=6.7
T60A **Surry** 26.83 21 P P 01 04 21.4 +0.2
baz=206
S58A **Poland Farm, P** 26.83 18 P P 01 04 21.4 +0.1
baz=202
121A **Cookes Peak, D** 26.99 321 P P 01 04 22.9 -0.1
baz=134,SNR=12
Q51A **Peebles** 27.00 8 P P 01 04 22.6 -0.2
baz=190,SNR=9.0
Q52A **Bidwell** 27.11 10 P P 01 04 23.6 -0.1
baz=193,SNR=8.5
P45A **Graceland, Par** 27.15 1 P P 01 04 23.3 -0.9
baz=181
P47A **Martinsville** 27.16 3 P P 01 04 23.2 -1.1
baz=184
P48A **Milroy** 27.20 5 P P 01 04 23.1 -1.4
baz=186,SNR=6.1
S59A **Mechanicsville** 27.21 19 P P 01 04 22.6 -2.0
baz=204
R58B **Mineral** 27.21 18 P P 01 04 23.0 -1.7
baz=202
P46A **Rosedale** 27.25 2 P P 01 04 24.1 -1.0
baz=182
P43A **Skaggs, Pawnee** 27.29 358 P P 01 04 24.3 -1.0
baz=177
R57A **Stanardsville** 27.33 17 P P 01 04 26.1 +0.3
baz=201
P49A **Miami Univ. Ec** 27.33 6 P P 01 04 25.9 +0.2
baz=188
S60A **Water View** 27.37 20 P P 01 04 23.0 -3.0
baz=205
Q54A **Coxs Mills** 27.41 13 P P 01 04 26.4 -0.1
baz=196,SNR=10.0
R58A **Rapidan** 27.48 18 P P 01 04 27.2 +0.1
baz=202
P51A **Williamsport** 27.49 9 P P 01 04 26.8 -0.3
baz=191
P50A **Jamestown** 27.51 7 P P 01 04 26.9 -0.5
baz=189
Y22D **IRIS PASSCAL I** 27.58 325 P P 01 04 29.3 +1.0
baz=138
Q55A **Buckhannon** 27.59 14 P P 01 04 28.9 +0.8
baz=197
CBN **Corbin Frederi** 27.59 19 P P 01 04 28.7 +0.7
baz=203
LPM **Los Pinos Moun** 27.60 326 eP P 01 04 29.7 +1.2
R59A **King George, V** 27.66 19 P P 01 04 29.3 +0.6
baz=204
S61A **Accomac** 27.69 22 P P 01 04 28.2 -0.7
baz=207
KSU1 **Kansas State U** 27.74 346 P P 01 04 28.7 -0.7
baz=162,SNR=7.6
O44A **Mansfield** 27.77 360 P P 01 04 28.7 -1.0
baz=180
P53A **Whipple** 27.78 11 P P 01 04 29.8 0.0
baz=194,SNR=9.3
P52A **Corning** 27.79 10 P P 01 04 29.3 -0.5
baz=193,SNR=5.8
O45A **Potomac** 27.87 1 P P 01 04 29.5 -1.1
baz=181
O47A **Sheridan** 27.92 3 P P 01 04 29.0 -2.0
baz=184,SNR=8.8
ANMO **Albuquerque** 27.98 327 P P 01 04 31.5 -0.4
comp=Z,7.3nm,1.1s,baz=143,slow=12,SNR=23
ANMO **Albuquerque** 27.98 327 eP P 01 04 32.7 +0.8
comp=Z,17nm,1.2s
ANMO **Albuquerque** 27.98 327 P P 01 04 32.0 +0.2
baz=139
TASM **ASL Pad, Albuq** 27.98 327 P P 01 04 31.9 0.0
baz=139,SNR=19
TASM **ASL Pad, Albuq** 27.98 327 P P 01 04 31.9 0.0
baz=139,SNR=19
O48A **Farmland** 28.01 5 P P 01 04 30.6 -1.2
baz=186
SFIN **Lafayette** 28.02 2 P P 01 04 31.2 -0.7
baz=182
O49A **Covington** 28.02 6 eP P 01 04 31.0 -0.9
comp=Z,16nm,0.9s
O49A **Covington** 28.02 6 P P 01 04 31.1 -0.9
baz=188
Q57A **Strasburg** 28.05 16 P P 01 04 32.3 +0.1
baz=201
O50A **Cable** 28.07 8 P P 01 04 31.6 -0.7
baz=190,SNR=9.8
P54A **Burton** 28.08 13 P P 01 04 32.4 0.0
baz=196,SNR=5.7
P55A **Reedsville** 28.13 14 P P 01 04 32.9 -0.1
baz=198
HDIL **Hopedale** 28.19 358 eP P 01 04 32.1 -1.3
comp=Z,36nm,1.1s
HDIL ePcP PcP 01 07 47.8 +1.7
HDIL **Hopedale** 28.19 358 P P 01 04 32.6 -0.8
baz=178
ACSO **Alum Creek Sta** 28.24 9 P P 01 04 33.4 -0.4
baz=191
MCWV **Mont Chateau** 28.27 14 P P 01 04 34.1 -0.1
baz=198
O52A **Adamsville** 28.31 10 eP P 01 04 33.7 -0.8
comp=Z,38nm,1.3s
O52A **Adamsville** 28.31 10 P P 01 04 34.0 -0.4
baz=193,SNR=7.4
CBKS **Cedar Bluff** 28.35 341 eP P 01 04 33.9 -1.0
comp=Z,104nm,1.5s
CBKS **Cedar Bluff** 28.35 341 P P 01 04 34.7 -0.2
baz=156
P56A **Dayton Farm, R** 28.38 15 P P 01 04 35.4 +0.3
baz=200
R61A **Willards** 28.39 22 P P 01 04 34.8 -0.4
baz=207
N44A **Piper City** 28.42 0 P P 01 04 34.1 -1.3
baz=180
N41A **Harden Midland** 28.42 356 P P 01 04 34.4 -1.1
baz=175
N45A **Kentland** 28.48 1 P P 01 04 33.6 -2.3
baz=182
N46A **Monticello** 28.55 2 P P 01 04 35.1 -1.5
baz=183,SNR=6.7
O53A **New Philadelph** 28.55 11 P P 01 04 36.3 -0.3
baz=194,SNR=6.4
N43A **Stutzman Famil** 28.57 359 P P 01 04 35.8 -1.0
baz=178,SNR=6.4
P57A **Homestead Farm** 28.58 17 P P 01 04 37.5 +0.6
baz=201,SNR=9.5
N47A **Urbana** 28.59 4 P P 01 04 35.0 -2.0
baz=185
N48A **Decatur** 28.62 5 P P 01 04 35.7 -1.5
baz=186
O54A **Avella** 28.66 13 P P 01 04 37.3 -0.2
baz=196
N40A **Mertquake, Sal** 28.66 355 P P 01 04 36.8 -0.8
baz=173
T25A **Trinidad** 28.70 332 eP P 01 04 39.1 +0.8
comp=Z,50nm,1.3s
T25A **Trinidad** 28.70 332 P P 01 04 39.0 +0.7
baz=146,SNR=15
N50A **Nevada** 28.74 8 P P 01 04 37.8 -0.5

baz=190
TUC Tucson 28.75 318 eP P 01 04 41.1 +2.5
comp=Z,10nm,1.0s
TUC Tucson 28.75 318 P P 01 04 39.2 +0.6
baz=129
N49A Columbus Grove 28.76 6 P P 01 04 37.5 -1.0
baz=188,SNR=7.7
Q60A Greensboro 28.81 20 P P 01 04 38.6 -0.3
baz=206
O55A Ligonier 28.92 14 P P 01 04 39.6 -0.4
baz=198
N51A Ashland 29.00 9 P P 01 04 39.8 -0.8
baz=192
M44A Midewin, Midew 29.01 0 P P 01 04 39.6 -1.1
baz=180
N52A McGinn's Farm, 29.01 10 P P 01 04 40.2 -0.5
baz=193
M45A Boilermakers S 29.02 2 P P 01 04 39.5 -1.3
baz=182
M43A Waltham Townsh 29.06 359 P P 01 04 40.1 -1.1
baz=178
M41A Milan 29.07 356 P P 01 04 39.8 -1.4
baz=175
M47A Cromwell 29.07 4 P P 01 04 39.4 -1.8
baz=185
M46A Old House Fiel 29.07 3 P P 01 04 39.4 -1.8
baz=184
N53A Lisbon 29.16 12 eP P 01 04 41.0 -1.1
comp=Z,20nm,1.1s
N53A Lisbon 29.16 12 P P 01 04 41.9 -0.2
baz=195
O56A Blue Knob Stat 29.16 15 eP P 01 04 42.3 +0.1
comp=Z,53nm,1.8s
O56A Blue Knob Stat 29.16 15 P P 01 04 42.5 +0.3
baz=200
P59A Jarrettsville 29.17 19 P P 01 04 41.6 -0.5
baz=204
M48A Edgerton 29.27 5 P P 01 04 43.1 +0.1
baz=187
M49A Liberty Center 29.33 7 P P 01 04 43.0 -0.6
baz=188
O57A Amberson 29.36 17 P P 01 04 43.5 -0.4
baz=202,SNR=6.1
M50A Fremont 29.38 8 P P 01 04 43.5 -0.4
baz=190
M51A Elyria 29.43 9 P P 01 04 43.3 -1.1
baz=192
N54A Moraine State 29.48 13 eP P 01 04 43.7 -1.2
comp=Z,15nm,0.9s
N54A Moraine State 29.48 13 P P 01 04 44.5 -0.4
baz=196,SNR=5.9
KSCO Kaye Shedlock' 29.54 337 eP P 01 04 45.8 +0.2
comp=Z,59nm,1.0s
KSCO Kaye Shedlock' 29.54 337 P P 01 04 45.9 +0.3
baz=150
N55A Marion Center 29.54 14 P P 01 04 45.2 -0.3
baz=198
MVL Millersville 29.55 19 eP P 01 04 45.9 +0.4
comp=Z,80nm,2.0s
P60A Greenville 29.61 20 P P 01 04 46.1 +0.1
baz=206
L42A Oliver, Polo 29.65 358 P P 01 04 44.9 -1.4
baz=177
X18A Snowflake 29.67 322 eP P 01 04 47.3 +0.4
comp=Z,9.9nm,1.2s
SSPA Standing Stone 29.69 16 eP P 01 04 47.1 +0.4
comp=Z,9.6nm,1.0s
SSPA Standing Stone 29.69 16 P P 01 04 46.8 0.0
baz=201
SDCO Great Sand Dun 29.70 332 eP P 01 04 46.6 -0.6
comp=Z,32nm,1.2s
SDCO Great Sand Dun 29.70 332 P P 01 04 48.0 +0.8
baz=144,SNR=23
L47A Sherwood 29.71 5 P P 01 04 45.6 -1.4
baz=186
L48A N Adams 29.75 6 P P 01 04 45.7 -1.6
baz=188
M52A Chesterland 29.77 10 P P 01 04 46.2 -1.3
baz=194
PLIO Pelee Island, 29.78 8 P P 01 04 46.9 -0.6
baz=191
L40A Anamosa 29.80 356 P P 01 04 46.3 -1.4
baz=174
L44A Lake County Fo 29.80 0 P P 01 04 46.1 -1.6
baz=181
M53A WI Miller and 29.80 11 P P 01 04 47.2 -0.5
baz=195
L43A Garden Prairie 29.80 359 P P 01 04 46.5 -1.3
baz=179
N56A West Decatur 29.84 15 P P 01 04 47.5 -0.6
baz=200
SCIA State Center 29.84 353 P P 01 04 47.6 -0.5
baz=170
O59A Robesonia 29.88 19 P P 01 04 49.0 +0.6
baz=204,SNR=5.5
N57A Milroy 29.89 16 P P 01 04 48.5 0.0
baz=201
214A Organ Pipe Nat 29.91 315 P P 01 04 49.2 +0.4
baz=125
L39A Vinton 29.92 354 P P 01 04 47.7 -1.1
baz=173,SNR=14
W18A Petrified Fore 29.95 323 eP P 01 04 49.5 +0.1
comp=Z,20nm,1.0s
W18A Petrified Fore 29.95 323 P P 01 04 49.8 +0.5
baz=134
L49A Milan 29.98 7 P P 01 04 48.7 -0.6
baz=189
L50A Kingsville 30.04 8 P P 01 04 49.0 -0.7
baz=191
M54A Oil Creek Stat 30.08 13 eP P 01 04 49.2 -1.0
comp=Z,33nm,1.5s
M54A Oil Creek Stat 30.08 13 P P 01 04 50.1 -0.1
baz=197
O60A Telford 30.14 20 P P 01 04 49.8 -0.9
baz=206
AAM Ann Arbor 30.18 7 P P 01 04 50.2 -0.9
baz=189
O61A Allentown 30.23 21 P P 01 04 51.8 +0.3
baz=207
M55A Ridgway 30.25 14 P P 01 04 50.8 -0.9
baz=199
BGNE Belgrade 30.30 345 P P 01 04 51.5 -0.7
baz=160
K43A Burlington 30.32 360 P P 01 04 50.5 -1.8
baz=180
S22A 4UR Ranch, Cre 30.33 330 P P 01 04 53.3 +0.5
baz=142,SNR=23
K46A Dorr 30.38 4 P P 01 04 51.0 -1.8
baz=185
L53A Girard 30.38 12 P P 01 04 52.0 -0.9
baz=196
LUPA Lehigh Univers 30.41 20 eP P 01 04 52.0 -1.0
comp=Z,6.2nm,1.7s
M56A Emporium 30.41 15 P P 01 04 52.5 -0.6
baz=200
K42A Prairie Point, 30.41 358 P P 01 04 51.8 -1.3
baz=178
K47A Vermontville 30.42 5 P P 01 04 51.1 -2.0
baz=186
K39A Oelwein 30.49 355 P P 01 04 52.6 -1.2
baz=173,SNR=15
Q24A Divide 30.54 333 P P 01 04 54.5 -0.1
baz=146,SNR=10
N59A State Game Lan 30.57 19 P P 01 04 55.0 +0.5
baz=204,SNR=5.2
JFWS Jewell Farm 30.58 357 P P 01 04 53.4 -1.2
baz=176
ERPA Erie 30.59 12 P P 01 04 54.4 -0.4
baz=196
K48A Perry 30.63 6 P P 01 04 53.5 -1.5
baz=188,SNR=5.9
K49A Clarkson 30.68 7 P P 01 04 54.1 -1.4
baz=189,SNR=7.3
MVCO Mesa Verde 30.77 327 P P 01 04 56.7 0.0
baz=139,SNR=6.6
K50A Casco 30.78 8 P P 01 04 54.9 -1.4
baz=191
L54A Sinclairville 30.85 13 P P 01 04 56.4 -0.6
baz=197
PTGA Pitinga 30.89 113 eP P 01 04 57.6 -0.1
comp=Z,6.3nm,0.9s
PTGA Pitinga 30.89 113 eP P 01 04 57.8 +0.1
K51A Iona Station 30.90 10 P P 01 04 56.6 -0.8
baz=193
J42A Columbus 30.95 359 P P 01 04 56.5 -1.3
baz=178,SNR=7.7
J43A Natural Harves 31.00 360 P P 01 04 56.3 -1.9
baz=180
L55A Hinsdale 31.00 14 P P 01 04 57.9 -0.5
baz=199
J41A Loganville 31.02 357 P P 01 04 57.2 -1.3
baz=177,SNR=7.4
OGNE Ogallala 31.03 339 P P 01 04 58.8 +0.1
baz=153,SNR=5.8
J40A Soldiers Grove 31.09 356 P P 01 04 57.6 -1.4
baz=175,SNR=6.4
K52A Tillsonburg 31.09 11 P P 01 04 58.6 -0.5
baz=194
J45A Montague 31.09 3 P P 01 04 58.8 -0.3
baz=184
J39A Decorah 31.10 355 P P 01 04 57.6 -1.6
baz=173
WUAZ Wupatki 31.20 322 P P 01 05 00.8 +0.4
baz=132,SNR=10
J49A Marlette 31.29 7 P P 01 04 59.6 -1.2
baz=190
K54A Basiliko Farm, 31.35 14 P P 01 04 59.9 -1.4
baz=198
ISCO Idaho Springs 31.43 334 P P 01 05 02.5 0.0
baz=146,SNR=13
I43A Langenfeld Bro 31.50 0 P P 01 05 01.1 -1.5
baz=180,SNR=5.6
PV01 Paradox Valley 31.50 328 eP P 01 05 03.9 +0.8
comp=Z,13nm,1.2s
I42A Draeger Farm, 31.51 359 P P 01 05 01.4 -1.4
baz=179,SNR=7.5
TYNO Tyneside 31.56 12 P P 01 05 02.2 -1.0
baz=196
I40A Norwalk 31.58 357 P P 01 05 01.8 -1.6
baz=176
J52A Paris 31.58 11 P P 01 05 02.6 -0.8
baz=195
I39A Houston 31.60 355 P P 01 05 02.3 -1.2
baz=174
K55A Perry 31.61 14 P P 01 05 03.0 -0.6
baz=199
PV02 Paradox Valley 31.64 328 eP P 01 05 04.5 +0.1
comp=Z,41nm,1.5s
I46A Reed City 31.65 4 P P 01 05 01.8 -2.2
baz=185
BINY Binghamton 31.67 17 P P 01 05 03.7 -0.5
baz=203,SNR=5.9
I45A Fountain 31.70 3 P P 01 05 02.4 -2.0
baz=184
I41A Arkdale 31.71 358 P P 01 05 02.7 -1.8
baz=177
PV05 Paradox Valley 31.73 328 eP P 01 05 06.3 +1.1
comp=Z,32nm,1.2s
I47A Gladwin 31.80 5 P P 01 05 03.6 -1.7
baz=187
STCO Saint Catharin 31.81 13 P P 01 05 04.4 -1.0
baz=197
I49A Point Hope 31.90 7 P P 01 05 04.4 -1.7
baz=190
MEDO Medina 31.93 14 P P 01 05 05.7 -0.7
baz=198
GLA Glamis 31.93 315 P P 01 05 05.5 -1.2
baz=124
PV23 Carpenter Ridg 31.97 328 eP P 01 05 07.7 +0.4
comp=Z,18nm,0.8s
J54A Appleton 31.99 13 P P 01 05 04.9 -2.0
baz=198
ACTO Acton 32.02 11 P P 01 05 06.4 -0.9
baz=195
I51A Listowel 32.03 10 P P 01 05 06.4 -0.9
baz=193,SNR=6.4
PV21 Cone Mtn., Par 32.03 328 eP P 01 05 09.2 +1.4
comp=Z,13nm,1.2s
I48A Sherman Twp 32.04 6 P P 01 05 06.2 -1.2
baz=188
PV09 Paradox Valley 32.07 328 eP P 01 05 09.3 +1.2
H43A Windswept, Lux 32.09 1 P P 01 05 06.7 -1.1
baz=181
Y12C Blythe 32.12 316 eP P 01 05 08.9 +0.7
comp=Z,6.1nm,1.1s
Y12C Blythe 32.12 316 P P 01 05 06.5 -1.7
baz=126
BASO Ashfield 32.13 9 P P 01 05 06.9 -1.3
baz=192
ECSD ERDS Data Cent 32.17 349 P P 01 05 07.3 -1.4
baz=164,SNR=25
PDMCI Parker Dam,Lak 32.19 317 P P 01 05 09.0 +0.1
baz=127
H41A Junction City 32.26 358 P P 01 05 07.9 -1.4
baz=177
H46A Fife Lake 32.26 4 P P 01 05 08.7 -0.7
baz=186
H40A Chili 32.29 357 P P 01 05 08.4 -1.2
baz=176,SNR=15
H45A Beulah 32.30 3 P P 01 05 09.5 -0.2
baz=184
I53A Kortright Cn E 32.31 12 P P 01 05 09.5 -0.3
baz=196
BWLO Walkerton 32.32 10 P P 01 05 08.4 -1.5
baz=193
BRCO Bruce Peninsul 32.39 9 P P 01 05 09.4 -1.1
baz=192
H47A Mio 32.40 5 P P 01 05 08.5 -2.1
baz=187
H39A Augusta 32.40 356 P P 01 05 09.3 -1.3
baz=174,SNR=6.1
I52A Shelburne 32.44 11 P P 01 05 09.6 -1.4
baz=195
H38A Maiden Rock 32.48 355 P P 01 05 09.9 -1.4
baz=173,SNR=11
N23A Red Feather La 32.48 335 eP P 01 05 11.8 +0.2
comp=Z,26nm,1.3s
N23A Red Feather La 32.48 335 P P 01 05 11.4 -0.2
baz=146
W13A Hualapai Mount 32.50 319 eP P 01 05 12.4 +0.5
comp=Z,14nm,1.5s
DRWO Darlington Wes 32.54 13 P P 01 05 10.9 -0.8
baz=197,SNR=5.1
DRCO St. Marys Ceme 32.55 13 P P 01 05 11.3 -0.5
baz=198
SWSC Sam W. Stewart 32.55 314 P P 01 05 12.4 +0.4
baz=123
PKRO Pickering 32.55 12 P P 01 05 11.9 0.0
baz=197
H48A Harrisville 32.59 7 P P 01 05 10.7 -1.5
baz=189,SNR=6.4
IKP In-Ko-Pah, Jac 32.62 313 P P 01 05 13.6 +0.9
baz=122
WLVO Wesleyville 32.66 13 P P 01 05 11.8 -1.0
baz=198,SNR=6.7
BC3 Big Chuckawall 32.70 315 P P 01 05 14.5 +1.0
baz=124
G45A Suttons Bay 32.73 3 P P 01 05 11.6 -1.9
baz=185
BMRO Meriville Lake 32.77 9 P P 01 05 12.7 -1.1
baz=193
IRM Iron Mountain 32.78 316 P P 01 05 13.9 -0.2
baz=125
G41A Antigo 32.84 359 P P 01 05 13.1 -1.3
baz=178
G42A Mountain 32.86 360 P P 01 05 12.9 -1.7
baz=180,SNR=5.9
G43A Wallace 32.88 1 P P 01 05 13.1 -1.6
baz=181
TRY Troy 32.88 20 eP P 01 05 15.1 +0.3
comp=Z,35nm,1.1s
O20A White River Ci 32.89 331 P P 01 05 15.8 +0.6
baz=142,SNR=20
G40A Rib Lake 32.93 357 P P 01 05 13.9 -1.3
baz=176,SNR=8.3
MONP2 Monument Peak 32.97 313 P P 01 05 17.2 +1.2
baz=122
M65A Busby, Falmout 32.99 25 P P 01 05 13.5 -2.2
baz=213
G39A Holcombe 33.00 356 P P 01 05 14.5 -1.3
baz=175,SNR=21
G47A Hillman 33.00 6 P P 01 05 14.1 -1.7
baz=188
PECO Prince Edward 33.01 15 P P 01 05 15.2 -0.6
baz=200
H52A Wyevale 33.05 11 P P 01 05 15.1 -1.1
baz=195
SPMN Marine on St. 33.07 354 P P 01 05 15.1 -1.3
baz=172,SNR=36
I55A Frankford 33.10 14 P P 01 05 15.9 -0.8
baz=199,SNR=6.0
BELC Belle Mtn. Jos 33.27 315 P P 01 05 18.9 +0.4
baz=124
SADO Sadowa 33.31 12 P P 01 05 17.9 -0.6
comp=Z,12nm,0.5s,baz=245,slow=6.1,SNR=19
TOBO Tobermory, Bru 33.34 9 P P 01 05 17.1 -1.6
baz=192
SUSD Miller 33.36 346 P P 01 05 17.5 -1.4
baz=161
F41A Three Lakes 33.37 359 P P 01 05 17.2 -1.8
baz=178
PFO Pinyon Flats O 33.38 314 eP P 01 05 20.9 +1.4
comp=Z,25nm,1.8s
PFO Pinyon Flats O 33.38 314 P P 01 05 20.4 +0.9
baz=123
F45A CMU Biological 33.38 3 P P 01 05 19.2 +0.1
baz=185
DELO Deloro Mine 33.40 14 P P 01 05 18.2 -1.1
baz=199,SNR=6.4
F43A Flat Rock, Esc 33.46 1 P P 01 05 18.1 -1.7
baz=182
GMRC Granite Mounta 33.48 317 P P 01 05 19.9 -0.5
baz=125
F46A Macinaw City C 33.52 4 P P 01 05 18.5 -1.9
baz=186
H55A Tweed 33.54 14 P P 01 05 19.6 -0.9
baz=200,SNR=5.8
F37A Hinrichs Farm, 33.55 354 P P 01 05 19.2 -1.4
baz=172
F40A Park Falls 33.58 358 P P 01 05 19.3 -1.5
baz=177,SNR=7.7
F39A Loretta 33.61 357 P P 01 05 19.7 -1.4
baz=175
F44A Big Bay de Noc 33.63 2 P P 01 05 19.5 -1.7
baz=183,SNR=11
KLBO Killbear Provi 33.68 10 P P 01 05 20.6 -1.0
baz=194
F38A Pierce - Schro 33.72 355 P P 01 05 20.5 -1.5
baz=174,SNR=28
G53A Haliburton 33.76 12 P P 01 05 21.3 -1.1
baz=197,SNR=7.9
F48A Evansville 33.78 7 P P 01 05 21.0 -1.6
baz=190,SNR=5.6
F49A Sandfield 33.79 8 P P 01 05 21.2 -1.5
baz=191
BANO Bancroft 33.81 13 P P 01 05 21.8 -1.0
baz=198
H56A Elgin 33.81 15 P P 01 05 22.1 -0.7
baz=201,SNR=7.0
MURC Murrieta 33.89 314 P P 01 05 25.0 +1.2
baz=122
BUKO Buck Lake 33.91 11 P P 01 05 22.9 -0.8
baz=196,SNR=12
HEC Hector,Ludlow 33.97 316 P P 01 05 25.1 +0.6
baz=125
E43A Lone Tree Farm 34.01 2 eP P 01 05 22.8 -1.8
comp=Z,30nm,1.0s
E43A Lone Tree Farm 34.01 2 P P 01 05 23.1 -1.5
baz=182,SNR=5.8
PLVO Plevna 34.02 14 eP P 01 05 24.0 -0.7
comp=Z,26nm,1.2s
PLVO Plevna 34.02 14 P P 01 05 23.8 -0.9
baz=200,SNR=7.6
TUQ Turquoise Moun 34.04 317 P P 01 05 25.4 +0.2
baz=126
E42A Champion 34.05 0 P P 01 05 23.4 -1.6
baz=181,SNR=8.1
E39A Mellen 34.05 357 P P 01 05 23.7 -1.3
baz=176,SNR=15
E45A Wooded Hills, 34.07 4 P P 01 05 24.1 -1.0
baz=185
E41A Kenton 34.09 359 P P 01 05 23.3 -1.9
baz=179
E40A Wakefield 34.09 358 P P 01 05 23.8 -1.5
baz=177,SNR=12
K22A Casper 34.18 336 eP P 01 05 26.3 -0.1
comp=Z,50nm,1.4s
K22A Casper 34.18 336 P P 01 05 26.5 +0.1
baz=147,SNR=18
F52A Sundridge 34.26 11 P P 01 05 25.7 -1.0
baz=196,SNR=8.0
F51A Arnstein 34.28 10 P P 01 05 25.6 -1.4
baz=194
E44A Grand Marais A 34.29 3 eP P 01 05 25.6 -1.5
comp=Z,82nm,1.1s
E44A Grand Marais A 34.29 3 P P 01 05 26.2 -0.8
baz=184
LONY Lake Ozonia 34.30 17 P P 01 05 26.5 -0.6
baz=204,SNR=13
G55A Calabogie 34.31 14 P P 01 05 26.1 -1.0
baz=200,SNR=7.3
E47A Iron Bridge 34.33 6 P P 01 05 26.0 -1.3
baz=189,SNR=11
E38A The Farm, Brul 34.34 356 P P 01 05 26.1 -1.3
baz=174,SNR=10
E48A Lockeyer 34.48 7 P P 01 05 27.3 -1.4
baz=190,SNR=6.8
MPU Maple Canyon 34.49 327 eP P 01 05 29.1 0.0
comp=Z,14nm,1.0s
RSSD Black Hills 34.53 340 eP P 01 05 29.5 +0.1
comp=Z,36nm,1.4s
RSSD Black Hills 34.53 340 P P 01 05 29.7 +0.3
baz=152
GSC Goldstone, Bar 34.55 316 P P 01 05 29.7 +0.1
baz=124
BFSC Mount Baldy Ra 34.55 314 P P 01 05 29.6 -0.1
baz=122
PEMO Pembroke 34.59 14 P P 01 05 28.6 -1.0
baz=199,SNR=6.4
E50A Wahnapitae 34.63 9 P P 01 05 28.5 -1.5
baz=193,SNR=5.9
LPAZ La Paz 34.65 145 P P 01 05 31.5 +0.4
comp=Z,3.5nm,1.1s,baz=359,slow=6.5,SNR=7.8
LPAZ LR LR 01 20 23.8
comp=Z,616nm,19.1s,baz=315,slow=38
LPAZ La Paz 34.65 145 eP P 01 05 31.6 +0.4
comp=Z,14nm,1.4s
LPAZ La Paz 34.65 145 eP P 01 05 34.6 +3.5
ALGO Algonquin Park 34.67 13 P P 01 05 29.2 -1.1
baz=198,SNR=8.4
D41A Chassel 34.68 360 P P 01 05 28.5 -1.8
baz=179
NLU North Lily Min 34.68 327 eP P 01 05 31.9 +1.1
comp=Z,24nm,1.8s
D46A Sault St. Mari 34.69 5 P P 01 05 29.0 -1.5
baz=187,SNR=5.4
PSUT Pine Spring 34.69 323 eP P 01 05 32.0 +1.2
comp=Z,7.2nm,1.0s
ORIO Orleans, Innes 34.80 16 P P 01 05 30.8 -0.7
baz=202
LBNH Lisbon 34.81 21 P P 01 05 31.2 -0.3
baz=209
JLU Jordanelle 34.83 328 eP P 01 05 32.7 +0.7
comp=Z,32nm,1.8s
E52A Mattawa 34.86 12 P P 01 05 30.8 -1.1
baz=196
D47A Chapleau 34.94 6 P P 01 05 31.0 -1.7
baz=189
E51A G1948 Merrick 34.94 11 P P 01 05 31.4 -1.3
baz=195,SNR=12
F55A Otter Lake 34.95 15 P P 01 05 32.0 -0.6
baz=200
EDW2 Edwards Air Fo 35.13 315 P P 01 05 35.0 +0.4
baz=123
TPNV Topopah Spring 35.15 319 eP P 01 05 35.4 +0.6
comp=Z,13nm,1.4s
TPNV Topopah Spring 35.15 319 P P 01 05 36.1 +1.4
baz=127,SNR=5.1
E53A Dumoine, Ponti 35.16 13 P P 01 05 33.5 -1.0
baz=198,SNR=5.6
LRMC Laurel Mtn Rad 35.24 316 P P 01 05 36.2 +0.6
baz=124
DUG Dugway, Tooele 35.25 326 P P 01 05 35.9 +0.3
baz=135
FURC Furnace Creek, 35.26 318 P P 01 05 36.4 +0.9
baz=126
E54A Lac Daplat, Po 35.31 13 P P 01 05 34.9 -0.9
baz=199,SNR=9.8
D49A Beulah Townshi 35.37 8 P P 01 05 34.6 -1.7
baz=192,SNR=14
MPMC Manual Prospec 35.44 317 P P 01 05 37.5 +0.2
baz=125
BW06 Boulder Array 35.57 333 P P 01 05 37.8 -0.6
baz=142,SNR=6.6
D52A ZEK Kipawa Sen 35.57 12 P P 01 05 37.5 -0.6
baz=197,SNR=11
PDAR Pinedale Array 35.57 333 P P 01 05 38.2 -0.2
comp=Z,1.1nm,0.6s,baz=122,slow=11,SNR=16
PDAR PcP PcP 01 08 07.7 +1.2
comp=Z,3.0nm,0.8s,baz=142,slow=5.1,SNR=6.6
PDAR LR LR 01 24 20.7
comp=Z,619nm,18.6s,baz=138,slow=43
R11A Troy Canyon, C 35.60 322 P P 01 05 37.9 -0.8
baz=130,SNR=7.0

EYMN	Ely	35.67	356	P	P	01 05 37.2	-1.7
	baz=174,SNR=9.8						
D53A	Lac Vacive, Po	35.82	12	P	P	01 05 39.2	-1.0
	baz=198,SNR=14						
D54A	Lac Fusel, La	36.11	13	P	P	01 05 41.8	-0.9
	baz=199,SNR=12						
MNMC	Minye Minye	36.21	149	eP	P	01 05 45.8	+1.6
	comp=Z,31nm,1.2s						
AGMN	Agassiz Nation	36.48	351	P	P	01 05 44.6	-1.1
	baz=167,SNR=50						
PKME	Peaks-Kenny Pk	36.64	23	P	P	01 05 47.1	0.0
	baz=212						
MDND	Maddock	36.72	347	P	P	01 05 47.3	-0.5
	baz=161,SNR=14						
GO01	Chusmiza	36.86	149	eP	P	01 05 51.0	+1.1
	comp=Z,9.0nm,0.8s						
LATQ	La Tuque	37.33	17	P	P	01 05 52.2	-0.8
	baz=205,SNR=5.8						
NVAR	Mina Array Bea	37.34	320	P	P	01 05 54.4	+0.9
	comp=Z,3.7nm,0.9s,baz=135,slow=8.1,SNR=20						
NVAR				PcP	PcP	01 08 13.1	+1.2
	comp=Z,6.5nm,0.8s,baz=133,slow=3.8,SNR=12						
NVAR				LR	LR	01 24 15.6	
	comp=Z,889nm,18.5s,baz=128,slow=41						
RLMT	Red Lodge	37.34	335	P	P	01 05 53.3	-0.1
	baz=145,SNR=18						
YFT	Old Faithful	37.47	333	eP	P	01 05 56.2	+1.6
	comp=Z,33nm,1.0s						
LAO	LASA Array	37.52	340	P	P	01 05 54.5	-0.3
	baz=150,SNR=9.2						
YNR	Norris Junctio	37.61	334	eP	P	01 05 58.8	+3.1
	comp=Z,29nm,1.3s						
PQI	Presque Isle	38.30	23	eP	P	01 06 00.1	-1.1
	comp=Z,44nm,1.4s						
MATQ	Matagami	38.39	11	P	P	01 06 00.6	-1.3
	baz=197,SNR=18						
ULM	Lac du Bonnet	38.39	352	P	P	01 06 00.2	-1.7
	comp=Z,32nm,0.6s,baz=166,slow=8.3,SNR=37						
ULM				LR	LR	01 23 12.2	
	comp=Z,603nm,21.9s,baz=172,slow=38						
DGMT	Dagmar	38.46	343	P	P	01 06 02.7	+0.1
	baz=154,SNR=11						
HLID	Hailey	38.49	329	P	P	01 06 03.3	+0.2
	baz=136						
BOZ	Bozeman (W)	38.72	334	P	P	01 06 05.1	+0.1
	baz=142,SNR=27						
CHGQ	Chibougamau	39.23	14	P	P	01 06 07.8	-1.1
	baz=202,SNR=5.9						
LVC	Limon Verde	39.50	151	eP	P	01 06 17.4	+5.4
	comp=Z,27nm,1.4s						
LVC	Limon Verde	39.50	151	eP	P	01 06 16.8	+4.9
CLDB	Colider	39.58	124	eP	P	01 06 11.4	-0.9
EGMT	Eagleton	39.92	337	P	P	01 06 15.1	+0.2
	baz=146,SNR=23						
MOD	Modoc Plateau	40.64	323	eP	P	01 06 19.9	-1.0
	comp=Z,6.0nm,0.9s						
MSO	Missoula	40.69	333	eP	P	01 06 21.0	-0.3
	comp=Z,37nm,1.2s						
MSO	Missoula	40.69	333	P	P	01 06 20.9	-0.4
	baz=140,SNR=28						
BMO	Blue Mountains	40.88	328	eP	P	01 06 22.0	-0.9
	comp=Z,6.7nm,1.2s						
L04D	Klamath Falls	42.03	322	P	P	01 06 31.8	-0.6
	baz=125						
I04A	Tendick Farm,	43.01	323	P	P	01 06 39.2	-1.0
	baz=126						
K02D	Willamette Mer	43.13	321	P	P	01 06 40.5	-0.7
	baz=124						
NEW	Newport	43.20	332	eP	P	01 06 42.2	+0.6
	comp=Z,21nm,1.6s						
NEW	Newport	43.20	332	P	P	01 06 40.7	-1.0
	baz=136						
G05D	Wamic, OR	43.28	326	P	P	01 06 42.6	+0.3
	baz=129						
I03D	Drain, OR	43.51	323	P	P	01 06 43.3	-0.8
	baz=125						
J01E	Myrtle Point	43.55	322	P	P	01 06 44.7	+0.2
	baz=124						
H04D	Lebanon	43.63	324	P	P	01 06 44.9	-0.3
	baz=127						
F05D	White Salmon	43.76	326	P	P	01 06 46.3	+0.2
	baz=129						
I02D	Swisshome	44.03	323	P	P	01 06 48.5	+0.1
	baz=125						
RPN	Rapa Nui	44.19	207	P	P	01 06 51.0	+1.2
	comp=Z,45nm,0.8s,baz=18,slow=6.4,SNR=2.8						
LTY	Liberty	44.23	328	eP	P	01 06 48.8	-1.2
	comp=Z,6.0nm,0.7s						
B08A	Colville Reser	44.31	330	eP	P	01 06 49.1	-1.4
	comp=Z,6.6nm,1.0s						
G03D	McMinnville, O	44.34	325	P	P	01 06 50.8	-0.1
	baz=127						
LCO	Las Campanas	44.40	158	eP	P	01 06 56.3	+4.6
E04D	Cinebar	44.78	326	P	P	01 06 53.8	-0.5
	baz=128						
D05A	Enumclaw	44.87	328	eP	P	01 06 55.0	0.0
	comp=Z,15nm,0.9s						
SMTB	Santa Maria do	45.53	116	eP	P	01 06 59.1	-1.6
B05A	Bryant	45.62	329	P	P	01 06 59.8	-1.1
	baz=130						
AQDB	Aquidauana	45.64	135	eP	P	01 07 03.5	+2.1
D03D	Eldon	45.67	327	P	P	01 06 59.6	-1.7
	baz=129						
SCHQ	Schefferville	45.67	17	P	P	01 07 00.2	-1.0
	comp=Z,36nm,0.9s,baz=198,slow=5.4,SNR=10						
SCHQ				LR	LR	01 27 51.0	
	comp=Z,2μm,18.1s,baz=196,slow=38						
SCHQ	Schefferville	45.67	17	eP	P	01 07 00.2	-1.0
	comp=Z,63nm,1.1s						
NLWA	Neilton Lookou	46.00	327	eP	P	01 07 02.0	-2.0
	comp=Z,20nm,1.4s						
BDFB	Brasilia	48.51	124	P	P	01 07 23.3	-0.7
	comp=Z,13nm,0.8s,baz=296,slow=10,SNR=17						
BDFB				LR	LR	01 29 41.9	
	comp=Z,756nm,18.8s,baz=300,slow=38						
BDFB	Brasilia	48.51	124	eP	P	01 07 23.9	-0.1
	comp=Z,25nm,1.0s						
CPUP	Villa Florida	48.74	142	P	P	01 07 24.9	-0.5
	comp=Z,8.6nm,1.0s,baz=339,slow=10,SNR=6.8						
CPUP				LR	LR	01 29 11.0	
	comp=Z,529nm,19.1s,baz=338,slow=38						
CPUP	Villa Florida	48.74	142	eP	P	01 07 24.9	-0.5
	comp=Z,13nm,1.0s						
ITRB	Iturama	48.99	130	eP	P	01 07 28.4	+0.9
PTGB	Pitanga	50.96	136	eP	P	01 07 43.7	+1.2
BB19B	Bebedouro	51.18	130	eP	P	01 07 43.7	-0.4
JANB	Januaria	51.27	121	eP	P	01 07 43.9	-1.0
FRTB	Fartura	51.81	133	eP	P	01 07 49.4	+0.6
MCI8	Montes Claros	52.40	122	eP	P	01 07 52.6	-0.6
MCI9	Montes Claros	52.44	122	eP	P	01 07 53.1	-0.5
MCI6	Montes Claros	52.49	122	eP	P	01 07 53.4	-0.6
RCLB	Rio Claro- Sao	52.73	131	eP	P	01 07 55.3	-0.4
YKA	Yellowknife Ar	53.59	345	P	P	01 08 00.2	-1.1
	comp=Z,11nm,0.9s,baz=139,slow=7.7,SNR=145						
YKA				PcP	PcP	01 09 07.3	+0.1
	comp=Z,1.9nm,0.7s,baz=141,slow=3.3,SNR=5.5						
PLCA	Paso Flores	55.22	164	P	P	01 08 13.2	-0.3
	comp=Z,12nm,1.0s,baz=346,slow=8.1,SNR=9.8						
PLCA				LR	LR	01 28 03.1	
	comp=Z,259nm,18.2s,baz=356,slow=32						
PLCA	Paso Flores	55.22	164	eP	P	01 08 14.3	+0.8
	comp=Z,21nm,1.1s						
PLCA	Paso Flores	55.22	164	eP	P	01 08 17.9	+4.4
SJMB	Sao Joao De Ma	55.67	123	eP	P	01 08 16.8	-0.2
TRQA	Tornquist	55.78	155	eP	P	01 08 21.1	+3.6
BSFB	Barra de Sao F	56.01	123	eP	P	01 08 19.5	0.0
JIS	Juneau Island	57.52	333	eP	P	01 08 31.6	+2.1
	comp=Z,13nm,1.3s						
WHY	Whitehorse	59.05	335	eP	P	01 08 39.2	-1.2
	comp=Z,4.8nm,1.1s						
BALM	Baldy	62.40	334	eP	P	01 09 02.9	-0.2
	comp=Z,17nm,1.4s						
RES	Resolute Bay	62.51	358	eP	P	01 09 01.5	-2.0
	comp=Z,9.3nm,0.9s						
EPYK	Eagle Plains	62.97	340	eP	P	01 09 06.7	-0.1
	comp=Z,24nm,1.2s						
EPYK	Eagle Plains	62.97	340	P	P	01 09 06.2	-0.6
	baz=125,SNR=10						
INK	Inuvik	63.15	343	P	P	01 09 07.2	-0.6
	comp=Z,15nm,1.0s,baz=123,slow=7.9,SNR=21						
EYAK	Cordova Ski Ar	63.70	332	eP	P	01 09 12.5	+0.9
	comp=Z,34nm,1.6s						
DOT	Dot Lake	64.28	336	eP	P	01 09 15.6	+0.2
	comp=Z,21nm,1.4s						
RC01	Rabbit Creek A	65.72	332	eP	P	01 09 24.8	0.0
	comp=Z,16nm,1.0s						
HDA	Harding Lake	65.75	336	P	P	01 09 24.0	-0.9
	baz=114						
ILAR	Eielson Array	65.88	336	P	P	01 09 24.9	-0.9
	comp=Z,9.0nm,1.1s,baz=118,slow=4.6,SNR=39						
ILAR				PP	PP	01 11 52.2	+1.1
	comp=Z,1.9nm,0.9s,baz=118,slow=7.3,SNR=4.7						
ILAR				LR	LR	01 43 59.9	
	comp=Z,448nm,18.4s,baz=134,slow=41						
POKR	Poker Plat Res	66.23	337	P	P	01 09 27.6	-0.4
	baz=114						
TCOL	CIGO, UAF Yank	66.30	336	P	P	01 09 29.0	+0.6
	baz=113						
MCK	McKinley	66.30	335	eP	P	01 09 27.5	-1.0
	comp=Z,13nm,0.9s						
SUMG	Summit	66.95	14	eP	P	01 09 31.7	-1.3
	comp=Z,28nm,1.4s						
SUMG	Summit	66.95	14	i P	P	01 09 31.5	-1.5
	comp=Z,30nm,1.0s						
PPT	Papeete	67.43	245	LR	LR	01 31 58.8	
	comp=Z,421nm,18.5s,baz=20,slow=30						
TOLK	Toolik Lake Re	68.39	340	P	P	01 09 41.3	-0.4
	baz=113,SNR=5.3						
DAG	Danmarks Havn	73.50	13	i P	P	01 10 10.5	-1.9
	comp=Z,4.5nm,0.6s						
ESDC	Sonseca Array	77.90	52	P	P	01 10 36.6	-1.8
	comp=Z,0.2nm,0.4s,baz=292,slow=5.9,SNR=5.0						
ESDC				LR	LR	01 44 30.4	
	comp=Z,90nm,18.0s,baz=335,slow=35						
MDT	Midelt	78.16	59	LR	LR	01 39 32.7	
	comp=Z,253nm,21.1s,baz=293,slow=31						
DBIC	Dimbokro	82.17	85	LR	LR	01 44 04.6	
	comp=Z,172nm,21.3s,baz=266,slow=33						
NOA	NORSAR Array B	83.90	29	P	P	01 11 08.7	-1.2
	comp=Z,1.0nm,0.9s,baz=286,slow=5.2,SNR=3.0						
NOA				LR	LR	01 44 37.3	
	comp=Z,194nm,21.7s,baz=280,slow=33						
BILL	Bilibino	84.41	339	eP	P	01 11 12.7	+0.4
	comp=Z,21nm,1.2s						
ARCES	ARCESS Array B	86.60	19	P	P	01 11 22.1	-1.1
	comp=Z,7.0nm,0.3s,baz=296,slow=4.6,SNR=3.3						
ARCES				LR	LR	01 48 24.3	
	comp=Z,207nm,21.8s,baz=306,slow=34						
TORD	Torodi Ar. Bea	87.20	77	P	P	01 11 26.1	-1.1
	comp=Z,0.3nm,0.6s,baz=290,slow=5.7,SNR=4.6						
TORD				LR	LR	01 50 34.8	
	comp=Z,144nm,18.3s,baz=320,slow=36						
CLL	Collm	87.43	38	eP	pP	01 11 40.0	-3.1
CLL				LmV		01 56 00.0	
	comp=Z,200nm,19.4s						
GERES	GERESS Array B	88.57	40	P	P	01 11 32.5	-0.7
	comp=Z,0.5nm,0.5s,baz=289,slow=3.0,SNR=2.8						
GERES				LR	LR	01 46 57.2	
	comp=Z,386nm,20.9s,baz=278,slow=33						
KEST	Kesra	88.98	54	LR	LR	01 45 47.6	
	comp=Z,115nm,19.3s,baz=238,slow=32						
FINES	FINESS Array B	90.47	26	P	P	01 11 41.4	-0.2
	comp=Z,2.2nm,1.1s,baz=282,slow=2.7,SNR=2.8						
FINES				LR	LR	01 53 29.2	
	comp=Z,284nm,18.1s,baz=304,slow=36						
SEY	Seymchan	91.81	336	P	P	01 11 48.5	+0.7
	comp=Z,3.0nm,0.5s,baz=59,slow=5.3,SNR=6.9						
AKASG	Malin Array Be	97.10	35	LR	LR	01 53 35.3	
	comp=Z,244nm,20.8s,baz=25,slow=34						
NRIK	Noril'sk	98.54	2	LR	LR	01 57 54.4	
	comp=Z,442nm,22.0s,baz=3.0,slow=36						
ZALV	Zasovo Beam	113.78	4	PP	PP	01 18 08.8	-2.0
	comp=Z,0.6nm,0.5s,baz=340,slow=7.7,SNR=3.6						
SONM	Songino Array	118.76	349	PKP	PKiKP	01 17 29.5	+1.0
	comp=Z,1.1nm,0.8s,baz=333,slow=0.7,SNR=5.9						
KSRS	Korea Array	120.01	327	PKP	PKiKP	01 17 31.9	+0.9
	comp=Z,3.3nm,1.0s,baz=17,slow=0.7,SNR=9.7						
MKAR	Makanchi Array	120.60	8	PKP	PKPdf	01 17 31.8	-0.2
	comp=Z,0.6nm,0.6s,baz=358,slow=4.0,SNR=4.0						
GEYT	Alibek	120.94	31	PKP	PKiKP	01 17 33.3	+0.4
	comp=Z,1.8nm,0.5s,baz=270,slow=3.0,SNR=7.2						
WMQ	Urumqi	124.06	4	ePKP	PKPdf	01 17 38.1	-0.6
WMQ				LR	LR		
	comp=Z,190nm,24.3s						
WMQ				LR	LR		
	comp=Z,660nm,27.3s						
WMQ				LR	LR		
	comp=Z,940nm,24.3s						
HHC	Hu-ho-hao-te	124.06	342	ePKP	PKiKP	01 17 39.7	+0.6
GTA	Gaotai	128.04	352	ePKP	PKiKP	01 17 47.5	+0.4
NJ2	Nanjing	128.86	330	ePKP	PKPdf	01 17 47.1	-1.0
LZH	Lanzhou	130.57	347	ePKP	PKiKP	01 17 54.4	+2.0
LZH				sPKP		01 18 08.9	
LZH				LR	LR		
	comp=Z,150nm,18.6s						
LZH				LR	LR		
	comp=Z,170nm,18.2s						
LZH				LR	LR		
	comp=Z,230nm,20.1s						
XAN	Xi'an	131.14	341	PKP	PKiKP	01 17 54.0	+0.6
XAN				LR	LR		
	comp=Z,120nm,15.2s						
XAN				LR	LR		
	comp=Z,110nm,15.2s						
XAN				LR	LR		
	comp=Z,150nm,21.7s						
CD2	Chengdu	135.55	345	PKP	PKiKP	01 18 05.3	+2.9
WRA	Warramunga Arr	138.48	254	PKP	PKPdf	01 18 07.3	+0.8
	comp=Z,3.1nm,0.9s,baz=124,slow=1.2,SNR=4.4						
ASAR	Alice Springs	138.49	248	PKP	PKPdf	01 18 06.7	+0.3
	comp=Z,2.4nm,1.0s,baz=128,slow=3.7,SNR=4.7						
PAYA	Payao	147.57	346	P	PKPab	01 18 26.4	-0.9
	comp=Z,44μm,0.9s						
HYB	Hyderabad	147.75	24	i PKP	PKPdf	01 18 24.0	+1.1
PHRA	Phrae	148.31	345	P	PKPbc	01 18 27.9	+0.8
CHTO	Chiang Mai	148.31	347	ePKPdf	PKPdf	01 18 25.2	+1.4
CMMT	Chiang Mai	148.31	347	P	PKPbc	01 18 27.5	+0.4
	comp=Z,11nm,1.9s,comp=Z,252nm						
LAMP	Lampang	148.43	346	P	PKiKP	01 18 29.0	0.0
	comp=Z,19μm,1.0s						
CMAR	Chiang Mai Arr	148.66	347	PKPbc	PKPbc	01 18 26.4	-1.6
	comp=Z,14nm,1.0s,baz=316,slow=2.4,SNR=37						

ISCJB ***02*** *01:12:05.7±1.0, 31°.87S±0°.03×69°.66W±0°.05, h120km±11km, Error ellipse: s-maj=6.5km s-min=4.4km az=14.9*
GUC ***02*** *01:12:05.7±0.4, 31°.91S×70°.05W, h143km±3km, ML3.1*
SJA ***02*** *01:12:05.9±0.7, 31°.86S×69°.55W, h121km±6km, ML2.8, MW3.3*

ISC 02 01:12:05.9±2.3, 31°.87S±0°.03×69°.66W±0°.05, h122km±22km, n16, σ0°.79/30, 2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAL	Salagasta	1.01	136	eP	Pn	01 12 28.3	+0.2
ASAL				eS	Sn	01 12 44.6	-0.5
RTLL	Cerro Villicun	1.15	62	eP	Pn	01 12 29.5	-0.1
RTLL	Cerro Villicun	1.15	62	eS	Sn	01 12 45.4	-2.1
ARCO	CERRO ARCO	1.15	148	eP	Pn	01 12 30.0	+0.3
ARCO				eS	Sn	01 12 48.4	+0.5
ARCO				IAML		01 12 50.3	
	comp=Z,143nm,0.2s						
AMOG	MOGNA	1.36	48	eP	Pn	01 12 32.2	+0.3
AMOG				eS	Sn	01 12 51.2	-0.5
ACCO	Cerro Coronel	1.38	22	eP	Pn	01 12 32.9	+0.5
ACCO				eS	Sn	01 12 53.3	+0.9
AAGR	Agrelo	1.40	150	eP	Pn	01 12 32.6	+0.2
AAGR				eS	Sn	01 12 53.2	+0.6
PEL	Peldehue	1.54	214	eP	Pn	01 12 33.6	-0.3
PEL				eS	Sn	01 12 54.5	-0.7
PEL				IAML		01 12 57.0	
	comp=E,224nm,0.3s						
FCH	Farellones	1.55	200	↓iP	Pn	01 12 35.0	+0.7
FCH				i S	Sn	01 12 56.9	+1.0
FCH				IAML		01 12 58.1	
	comp=E,398nm,0.2s						
ROCH	El Roble	1.58	226	↓iP	Pn	01 12 34.1	-0.5
ROCH				eS	Sn	01 12 55.8	-0.7
ROCH				IAML		01 12 58.7	
	comp=N,320nm,0.3s						
CLCH	Cerro Calan	1.69	206	eP	Pn	01 12 35.9	+0.2
CLCH				eS	Sn	01 12 58.6	0.0
CLCH				IAML		01 13 02.2	
	comp=E,339nm,0.7s						
ACDV	Cuesta del Vie	1.75	16	eP	Pn	01 12 37.4	+0.8
ACDV				eS	Sn	01 13 01.1	+1.1
ACDV				IAML		01 13 02.2	
	comp=Z,68nm,0.3s						
GO04	Tololo Observa	1.95	330	eP	Pn	01 12 39.2	+0.1
GO04				eS	Sn	01 13 05.2	+0.8
LMEL	Las Melosas	2.03	193	eP	Pn	01 12 40.1	+0.2
LMEL				eS	Sn	01 13 06.4	+0.5
LMEL				IAML		01 13 12.3	
	comp=N,157nm,0.3s						
ACAN	Cantantal	2.14	102	eP	Pn	01 12 41.2	0.0
ACAN				eS	Sn	01 13 06.9	-1.3
LSCH	La Serena	2.38	325	eP	Pn	01 12 43.6	-0.5
LSCH				i S	Sn	01 13 12.2	-1.3
LSCH				IAML		01 13 12.8	
	comp=N,39nm,0.3s						

ATH ***02*** *01:24:07.1, 38°.04N×21°.65E, h29km, ML3.5/13, Error ellipse: s-maj=0.8km s-min=0.7km az=191.0*
ISCJB ***02*** *01:24:08.0±0.2, 38°.05N±0°.02×21°.65E±0°.02, h27km±2km, mb3.5/8, Error ellipse: s-maj=2.8km s-min=2.4km az=30.3*
THE ***02*** *01:24:08.3, 38°.05N×21°.67E, h19km, ML3.5/20, Error ellipse: s-maj=0.9km s-min=0.4km az=238.0*
IDC ***02*** *01:24:10.3±2.3, 38°.10N×21°.73E, h42km±27km, mb3.3/9, mb1 3.4/13, mb1mx3.3/46, mbtmp3.4/13, ML3.1/4, Error ellipse: s-maj=20.0km s-min=15.4km az=73.0*
BEO ***02*** *01:24:14.1±1.0, 38°.49N×22°.14E, h5km, ML3.1/4*

ISC 02 01:24:08.1±0.7, 38°.06N±0°.02×21°.68E±0°.02, h24km±4km, n146, σ1°.50/186, mb3.5/8, 8C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRO	Drossia	0.11	168	P	Pb	01 24 12.3	-0.4
DRO				S	Sb	01 24 15.8	0.0
	60μm,0.4s						
DRO	Drossia	0.11	168	P	Pb	01 24 12.2	-0.4
DRO				S	Sb	01 24 15.9	0.0
DRO				AML	AML	01 24 16.0	
DRO				AML	AML	01 24 21.0	
	comp=N,91326μm,0.4s						
RLS	Riolos of Patr	0.17	270	P	Pb	01 24 12.7	-0.5
RLS				S	Sb	01 24 16.8	0.0
	comp=N,38μm,0.1s						
RLS	Riolos of Patr	0.17	270	P	Pb	01 24 12.7	-0.5
RLS				AML	AML	01 24 16.8	
	comp=N,76849μm,0.1s						
RLS				S	Sb	01 24 16.8	0.0
RLS				AML	AML	01 24 16.9	
	comp=E,70902μm,0.1s						
UPR	University Cam	0.24	20	P	Pb	01 24 14.4	+0.2
LAKA	Lakka	0.30	52	P	Pb	01 24 15.2	+0.2
LAKA				S	Sb	01 24 20.5	+0.7
	comp=E,4μm,0.3s						
LAKA	Lakka	0.30	52	P	Pb	01 24 15.2	+0.2
LAKA				S	Sb	01 24 20.6	+0.9
LAKA				AML	AML	01 24 20.8	
	comp=E,18712μm,0.3s						
LAKA				AML	AML	01 24 21.6	
	comp=N,18864μm,0.3s						
KLV	Kalavryta, Ach	0.37	92	P	Pb	01 24 15.7	-0.4
KLV				S	Sb	01 24 22.1	+0.4
KLV	Kalavryta, Ach	0.37	92	P	Pb	01 24 15.8	-0.4
KLV				S	Sb	01 24 22.5	+0.8
KLV				AML	AML	01 24 23.3	
	comp=N,13970μm,0.4s						
KLV				AML	AML	01 24 25.0	
	comp=E,10956μm,0.3s						
ALIK	Aliki, Aigiali	0.40	59	P	Pb	01 24 16.5	0.0
ALIK				S	Sb	01 24 23.2	+1.0
VTN	Vitineika	0.42	250	P	Pb	01 24 16.8	-0.1
VTN	Vitineika	0.42	250	P	Pb	01 24 16.7	-0.1
TRIZ	Trizonia	0.43	45	P	Pb	01 24 17.0	-0.2
TRIZ				S	Sb	01 24 24.1	+0.7
	comp=E,7μm,0.5s						
TRIZ	Trizonia	0.43	45	P	Pb	01 24 17.0	-0.2
TRIZ				S	Sn	01 24 25.3	-0.7
SERG	Sergoula	0.46	40	P	Pb	01 24 17.4	-0.3
SERG				S	Sb	01 24 24.9	+0.7
	comp=E,7μm,0.3s						
SERG	Sergoula	0.46	40	P	Pb	01 24 17.4	-0.3
SERG				S	Sn	01 24 25.2	-1.5
SERG				AML	AML	01 24 27.4	
	comp=N,13928μm,0.3s						
SERG				AML	AML	01 24 27.8	
	comp=E,12025μm,0.3s						
KALE	Kalithea	0.49	47	P	Pb	01 24 17.9	-0.3
KALE				S	Sb	01 24 25.4	+0.4
	comp=E,5μm,0.4s						
KALE	Kalithea	0.49	47	P	Pb	01 24 17.9	-0.3
KALE				S	Sn	01 24 25.8	-1.6
KALE				AML	AML	01 24 26.7	
	comp=N,12932μm,0.5s						
KALE				AML	AML	01 24 28.1	
	comp=E,8081μm,0.3s						
AMT	Artemida-Makis	0.53	178	P	Pb	01 24 18.2	-0.5
AMT				S	Sb	01 24 26.3	+0.4
	comp=E,10μm,0.5s						
AMT	Artemida-Makis	0.53	178	P	Pb	01 24 18.2	-0.5
GUR	Goura	0.54	103	P	Pb	01 24 18.2	-0.8
GUR				S	Sb	01 24 26.7	+0.4
	comp=E,17μm,0.5s						
GUR	Goura	0.54	103	P	Pb	01 24 18.2	-0.8
GUR				S	Sb	01 24 26.9	+0.6
GUR				AML	AML	01 24 29.0	
	comp=E,31818μm,0.3s						
GUR				AML	AML	01 24 29.2	
	comp=N,30526μm,0.3s						
ANX	Ano Chora	0.57	19	P	Pb	01 24 19.1	-0.3
ANX	Ano Chora	0.57	19	P	Pb	01 24 19.2	-0.3
PVO	Paravola	0.57	348	P	Pb	01 24 19.3	-0.2
PVO				S	Sn	01 24 28.6	-0.7
	comp=N,4μm,0.4s						
PVO	Paravola	0.57	348	P	Pb	01 24 19.3	-0.2
PVO				S	Sn	01 24 28.8	-0.6
PVO				AML	AML	01 24 33.6	
	comp=E,7486μm,0.4s						
PVO				AML	AML	01 24 34.9	
	comp=N,7814μm,0.4s						
PDO	Prodromos	0.67	324	P	Pb	01 24 21.0	-0.1
TRIP	Tripoli	0.71	138	P	Pb	01 24 21.0	-0.7
TRIP				S	Sb	01 24 31.9	+0.8
	comp=N,4μm,0.6s						
TRIP	Tripoli	0.71	138	P	Pb	01 24 21.1	-0.7
TRIP				AML	AML	01 24 33.7	
	comp=N,5478μm,0.6s						
TRIP				AML	AML	01 24 35.5	
	comp=E,9493μm,0.6s						
KFL	Anninata	0.71	274	P	Pb	01 24 20.9	-0.8
KFL				S	Sb	01 24 32.1	+1.1
	comp=E,8μm,0.4s						
KFL	Anninata	0.71	274	P	Pb	01 24 21.2	-0.6
DSF	Desfina	0.75	62	P	Pb	01 24 22.2	-0.4
DSF				S	Sn	01 24 33.7	-0.2
	comp=E,3μm,0.4s						
DSF	Desfina	0.75	62	P	P

comp=E,2μm,0.5s
LOUT Loutraki 1.02 94 P Pb 01 24 27.1 0.0
LKD2 Lefkada island 1.09 313 P Pn 01 24 27.4 -0.4
LKD2 Lefkada island 1.09 313 P Pn 01 24 27.4 -0.4
AGG Agios Georgios 1.09 28 P Pn 01 24 27.7 -0.1
AGG Agios Georgios 1.09 28 P Pn 01 24 27.8 -0.1
TSLK Tsoukalades, L 1.11 314 P Pn 01 24 27.9 -0.2
TSLK Tsoukalades, L 1.11 314 P Pn 01 24 28.0 -0.2
PYL PYLOS 1.16 178 P Pn 01 24 28.7 -0.1
LKR Lokris 1.19 60 P Pb 01 24 30.2 +0.2
LKR Lokris 1.19 60 P Pb 01 24 30.5 +0.5
EPID Epidavros 1.22 111 P Pb 01 24 30.4 -0.1
ATAL Atalanti 1.23 59 P Pb 01 24 30.3 -0.3
ATAL S Sb 01 24 46.7 +0.6
ATAL Atalanti 1.23 59 P Pb 01 24 30.5 -0.1
ATAL AML AML 01 24 50.0
comp=N,1543μm,0.8s
ATAL AML AML 01 24 50.6
comp=E,1217μm,0.4s
MES2 Methoni 1.23 179 P Pn 01 24 30.1 +0.4
KRND KRANIDI 1.35 120 P Pb 01 24 32.3 -0.2
KRND KRANIDI 1.35 120 P Pb 01 24 32.4 -0.2
DID Didima 1.35 114 P Pb 01 24 32.1 -0.6
DID Didima 1.35 114 P Pb 01 24 32.1 -0.6
DYR Agios Nikonas 1.39 158 P Pb 01 24 33.1 -0.3
SMIA Simia 1.45 55 P Pb 01 24 33.6 -0.8
SMIA S Sb 01 24 53.0 +0.5
comp=E,2μm,0.8s
SMIA Simia 1.45 55 P Pb 01 24 34.1 -0.3
THL Klokotos Trika 1.53 10 P Pb 01 24 35.7 0.0
ATH Athens Observa 1.61 92 P Pn 01 24 35.7 +0.8
ATH Athens Observa 1.61 92 P Pb 01 24 36.2 -0.9
MRKA Markates 1.63 66 P Pn 01 24 36.1 +0.8
MRKA S Sb 01 24 57.2 -0.4
comp=E,888nm,0.7s
MRKA Markates 1.63 66 P Pn 01 24 36.1 +0.8
ATHU Athens Univers 1.66 92 P Pn 01 24 36.3 +0.6
ATHU Athens Univers 1.66 92 P Pn 01 24 36.6 +0.9
ATHU AML AML 01 25 04.8
comp=E,351μm,0.5s
ATHU AML AML 01 25 05.0
comp=N,810μm,0.4s
FYTO Fytoko, Volos 1.67 36 P Pb 01 24 37.0 -1.1
FYTO S Sb 01 24 57.5 -1.2
FYTO Fytoko, Volos 1.67 36 P Pb 01 24 37.0 -1.1
VLI Veliai 1.67 143 P Pn 01 24 37.0 +1.2
VLI S Sn 01 24 57.3 +0.9
comp=N,712nm,0.9s
VLI Veliai 1.67 143 P Pb 01 24 37.8 -0.3
VLY Voula,Athens 1.68 96 P Pn 01 24 36.4 +0.5
PTL Penteli 1.72 90 P Pn 01 24 37.1 +0.5
PTL Penteli 1.72 90 P Pn 01 24 37.4 +0.8
NEO Neokhori 1.74 44 P Pb 01 24 38.0 -1.3
NEO Neokhori 1.74 44 P Pb 01 24 38.0 -1.3
XOR Xorichti 1.76 42 P Pn 01 24 38.1 +1.1
XOR Xorichti 1.76 42 P Pn 01 24 38.2 +1.1
DION Dionisos Attik 1.78 89 P Pn 01 24 38.3 +1.0
DION Dionisos Attik 1.78 89 P Pn 01 24 38.5 +1.2
EREA Eretria 1.81 78 P Pn 01 24 38.7 +1.0
EREA Eretria 1.81 78 P Pn 01 24 38.9 +1.2
IGT Igoumenitsa 1.81 325 *e*Pn Pb 01 24 44.8 +4.3
IGT *e*Sn Sb 01 25 08.9 +6.1
LIT Litokhoron 2.13 17 P Pb 01 24 44.1 -2.0
KEK Kerkira 2.21 319 P Pn 01 24 45.3 +2.0
SERI Serifos 2.40 111 P Pn 01 24 46.7 +0.9
PAIG Paliouri 2.43 39 P Pn 01 24 46.8 +0.5
FNA Florina 2.73 355 *e*Pn Pb 01 24 53.6 -2.7
OHR Ohrid 3.12 348 *i* Pn Pb 01 25 05.9 +3.0
APE Apeiranthos 3.21 107 ⇓*i*P Pb 01 25 07.3 +2.8
VAY Valandovo 3.33 12 *i* Pn Pb 01 25 02.9 -3.5
SRS Serrai 3.39 25 *e*Pn Pn 01 25 01.2 +1.7
TIR Tirane 3.57 337 ⇑*i*P Pn 01 25 04.8 +2.9
STIP Stip 3.65 6 *i* Pn Pb 01 25 07.3 -4.6
IDI Anoyia 3.78 136 P Pn 01 25 06.2 +1.3
comp=N,2.5nm,0.3s,baz=317,slow=15,SNR=10
IDI S Sn 01 25 49.8 +1.1
comp=N,1.8nm,0.3s,baz=346,slow=10,SNR=2.5
MMB Musomiste 3.86 23 *i* P Pn 01 25 07.7 +1.7
TIP Timpagrande 4.01 288 ⇓*i*P Pn 01 25 10.8 +2.7
TIP Timpagrande 4.01 288 P Pn 01 25 10.1 +2.0
RZN Rozhen 4.31 32 *i* P Pn 01 25 15.0 +2.7
BOSS Bosilegrad 4.47 8 *e*Pn Pn 01 25 16.3 +1.9
KDZ Kurdzhali 4.60 38 *e*P Pb 01 25 22.1 -5.9
MATE Matera 4.64 305 ⇓*i*P Pn 01 25 19.5 +2.9
VTS Vitosha 4.71 14 *e*Pn Pn 01 25 18.5 +0.8
VTS *e*Sn Sn 01 26 06.9 -4.7
PDG Podgorica 4.75 338 ⇑*i*P Pn 01 25 19.9 +1.9
BARS Barje 4.75 1 *e*Pn Pn 01 25 20.9 +2.7
BARS *e*Sn Sn 01 26 09.1 -3.4
SG1 Sgolgore (BA) 4.76 307 ⇑*i*Pn Pn 01 25 19.8 +1.4
BAI Bari 4.80 311 ⇑*i*Pn Pn 01 25 19.9 +1.1
SELS Selova 5.17 355 *e*Pn Pn 01 25 25.7 +1.7
ZAPS Zavoj 5.26 8 *e*Pn Pn 01 25 26.3 +1.1
SJES Sjenica 5.36 347 *e*Pn Pn 01 25 28.9 +2.3
BOVS Bovan 5.57 0 *e*Pn Pn 01 25 31.0 +1.6
STON Ston 5.69 329 *e*Pn Pn 01 25 31.1 +0.2
STON Sn Sn 01 26 31.4 -4.0
GRUS Gruza 5.87 353 *e*Pn Pn 01 25 37.0 +3.5
DIVS Divibare 6.17 349 *e*Pn Pn 01 25 39.1 +1.4
DIVS *e*Sn Sn 01 26 45.8 -1.6
BZS Buzias 7.55 360 ⇑*i*P Pn 01 25 58.4 +1.8
VOIR 7.79 18 ⇑*i*P Pn 01 26 02.8 +2.9
UDBI Udbina 7.85 327 *e*Pn Pn 01 26 01.9 +1.2
MLR Muntele Rosu 8.08 22 P Pn 01 26 05.1 +1.2
comp=N,0.1nm,0.3s,baz=162,slow=13,SNR=2.6
MLR Muntele Rosu 8.08 22 ⇑*i*P Pn 01 26 07.1 +3.2
NVLJ Novalja 8.27 324 *e*Pn Pn 01 26 07.8 +1.4
PLOR Plostina 8.62 24 ⇑*i*P Pn 01 26 13.9 +2.6
VRI Vrincioaia 8.66 24 ⇓*i*P Pn 01 26 15.4 +3.6
BOJS Bojanci 8.85 329 *i* Pn Pn 01 26 14.6 +0.2
BOJS *e*Sn Sn 01 27 48.4 -4.9
CRES Cresnjev 9.04 331 *i* Pn Pn 01 26 16.6 -0.4
GBRS Gornja Briga 9.06 328 *i* Pn Pn 01 26 18.2 +0.9
GBRS *e*Sn Sn 01 27 55.5 -2.9
BRTR Keskin Array B 9.47 76 P Pn 01 26 24.8 +1.7
comp=N,0.1nm,0.3s,baz=253,slow=13,SNR=5.4
MMAI Mount Meron Ar 12.25 110 P Pn 01 27 01.3 +0.2
comp=N,0.3nm,0.3s,baz=300,slow=12,SNR=3.0
ESDC Sonseca Array 20.02 283 P Pn 01 28 40.7 -0.2
comp=N,0.3nm,0.5s,baz=74,slow=11,SNR=4.6
HFS Hagfors 22.67 350 P P 01 29 06.3 -1.1
comp=N,1.0nm,0.5s,baz=165,slow=12,SNR=4.5
FINES FINESS Array B 23.57 5 P P 01 29 15.4 -1.1
comp=N,0.8nm,0.6s,baz=178,slow=11,SNR=7.8
NOA NORSAR Array B 23.93 347 P P 01 29 19.5 -0.4
comp=N,0.5nm,0.7s,baz=161,slow=11,SNR=3.1
EKA Eskdalemuir Ar 24.06 324 P P 01 29 21.5 +0.3
comp=N,0.6nm,0.6s,baz=126,slow=9.5,SNR=4.9
TORD Torodi Ar. Bea 30.52 221 P P 01 30 19.9 +0.4
comp=N,0.5nm,0.6s,baz=31,slow=10.0,SNR=10
MKAR Makanchi Array 44.58 59 P P 01 32 18.0 -0.1
comp=N,0.4nm,0.5s,baz=272,slow=8.2,SNR=9.2
ZALV Zalesovo Beam 45.09 48 P P 01 32 21.6 -0.4
comp=N,1.2nm,0.4s,baz=274,slow=6.9,SNR=4.5
NVAR Mina Array Bea 95.44 330 P P 01 37 30.9 0.0
comp=N,0.1nm,0.5s,baz=48,slow=1.3,SNR=3.1

MAN 02 01:25:49.8, 7°.35N×124°.81E, h5km, mb4.6, ML3.5, MS3.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.57**	**257**	⇓*i*P	Pg	01 26 00.2	-0.7
CTBH				*i* S	Sg	01 26 08.9	+0.7
DMPH	**Davao City--Mi**	**0.74**	**111**	⇑*e*P	Pn	01 26 12.3	+5.3

*IDC **02** 01:27:41.7±4.0, 13°.92N×92°.12W, h0km, mb3.8/5, mb1 3.9/8, mb1mx3.7/33, mbtmp3.7/8, ML3.3/3, Error ellipse: s-maj=143.4km s-min=21.1km az=36.0*
*ISCJB **02** 01:27:42.4±0.7, 13°.62N±0°.08×92°.31W±0°.05, h32km, mb4.2/34, Error ellipse: s-maj=11.3km s-min=7.0km az=14.1*
*NEIC **02** 01:27:45.4±0.6, 13°.70N×92°.30W, h35km, mb4.2/36, Error ellipse: s-maj=10.9km s-min=6.4km az=207.0*
ISC 02 01:27:44.8±1.0, 13°.8N±0°.1×92°.26W±0°.10, h32km, n184, σ1.9 07/175, mb4.2/34, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**2.52**	**3**	*e*Pn	**Pb**	**01 28 27.3**	**-2.3**
CMIG	**Matias Romero**	**4.18**	**323**	Pn	**Pn**	**01 28 44.9**	**-1.5**
	1.3nm,0.3s,baz=146,slow=12,SNR=12						
CMIG				Sn	**Sn**	**01 29 30.3**	**-3.8**
	1.3nm,0.3s,baz=250,slow=20,SNR=1.9						
TLIG	**Tlapa**	**7.16**	**303**	*e*Pn	**Pn**	**01 29 26.3**	**-1.3**
JTS	**Las Juntas de**	**7.93**	**115**	Pn	**Pn**	**01 29 37.4**	**-0.6**
	0.3nm,0.3s,baz=306,slow=19,SNR=2.8						
JTS				Sn	**Sn**	**01 31 02.0**	**-4.7**
	0.2nm,0.3s,baz=23,slow=22,SNR=0.9						
BRAL	**Brewton**	**17.99**	**15**	P	**P**	**01 31 53.9**	**+1.1**
	baz=197						
349A	**Repton**	**18.13**	**14**	P	**P**	**01 31 55.9**	**+1.6**
	baz=196						
556A	**Lake Butler**	**18.56**	**28**	P	**Pn**	**01 32 00.0**	**+0.6**
	baz=211						
249A	**Camden**	**18.74**	**14**	P	**Pn**	**01 32 03.8**	**+2.1**
	baz=196						
LTX	**Lajitas**	**18.77**	**328**	*e*P	**P**	**01 32 00.7**	**-0.8**
TXAR	**Lajitas Array**	**18.77**	**328**	P	**P**	**01 32 00.7**	**-0.8**
	0.0nm,0.3s,baz=157,slow=12,SNR=5.5						
557A	**Orange Park**	**18.89**	**29**	P	**Pn**	**01 32 05.1**	**+1.7**
	baz=213						
352A	**Blakely**	**18.89**	**20**	P	**Pn**	**01 32 06.1**	**+2.7**
	baz=202						
147A	**Livingston**	**19.19**	**10**	P	**Pn**	**01 32 08.6**	**+1.6**
	baz=192						
148A	**Greensboro**	**19.29**	**12**	P	**Pn**	**01 32 09.5**	**+1.3**
	baz=194						
251A	**Midway**	**19.31**	**18**	P	**Pn**	**01 32 09.8**	**+1.3**
	baz=200						
TIGA	**Tifton**	**19.32**	**23**	P	**Pn**	**01 32 09.3**	**+0.7**
	baz=206						
252A	**Lumpkin**	**19.43**	**20**	P	**Pn**	**01 32 10.8**	**+0.9**
	baz=202						
355A	**Pearson**	**19.53**	**25**	P	**Pn**	**01 32 10.8**	**-0.3**
	baz=208						
150A	**Eclectic**	**19.62**	**16**	P	**Pn**	**01 32 12.7**	**+0.5**
	baz=198,SNR=6.1						
151A	**Opelika**	**19.74**	**18**	P	**Pn**	**01 32 14.6**	**+1.0**
	baz=200						
LRAL	**Lakeview Retre**	**19.79**	**13**	*e*P	**P**	**01 32 12.4**	**-0.1**
	12nm,1.2s						
LRAL	**Lakeview Retre**	**19.79**	**13**	P	**Pn**	**01 32 14.8**	**+0.6**
	baz=195,SNR=7.4						
ABTX	**Abilene, Hawle**	**19.96**	**341**	*e*P	**P**	**01 32 14.9**	**+0.5**
	9.3nm,0.6s						
ABTX	**Abilene, Hawle**	**19.96**	**341**	P	Pn	01 32 16.1	-0.2
	baz=159						
Z49A	**Columbiana**	**20.05**	**14**	P	Pn	01 32 19.2	+1.9
	baz=196						
152A	**Waverly Hall**	**20.05**	**19**	*e*P	Pn	01 32 17.4	+0.1
	11nm,0.9s						
152A	**Waverly Hall**	**20.05**	**19**	P	Pn	01 32 19.8	+2.4
	baz=202,SNR=7.4						
Z50A	**Ashland**	**20.26**	**15**	*e*P	Pn	01 32 19.1	-0.6
	8.2nm,1.0s						
Z50A	**Ashland**	**20.26**	**15**	P	Pn	01 32 19.7	0.0
	baz=198						
256A	**Glennville**	**20.48**	**26**	P	**P**	**01 32 21.3**	**+1.3**
	baz=210						
Z51A	**Franklin**	**20.52**	**17**	P	Pn	01 32 22.3	-0.5
	baz=200						
154A	**Montrose**	**20.56**	**22**	P	**P**	**01 32 21.8**	**+0.9**
	baz=206						
Y48A	**Jasper**	**20.60**	**12**	P	Pn	01 32 23.1	-0.6
	baz=194						
Z52A	**Williamson**	**20.63**	**19**	P	Pn	01 32 24.2	+0.1
	baz=202						
Y49A	**Blount Mountai**	**20.71**	**14**	P	Pn	01 32 24.4	-0.7
	baz=196						
MIAR	**Mount Ida**	**20.74**	**357**	P	Pn	01 32 25.0	-0.3
	baz=176						
155A	**Kite**	**20.81**	**24**	P	**P**	**01 32 24.7**	**+1.2**
	baz=208						
X46A	**Booneville**	**20.98**	**8**	P	**P**	**01 32 27.0**	**+1.5**
	baz=190						
X47A	**Russelville**	**21.06**	**10**	P	**P**	**01 32 27.3**	**+1.0**
	baz=192						
Y51A	**Rockmart**	**21.10**	**17**	P	**P**	**01 32 27.6**	**+0.9**
	baz=200						
X48A	**Hartselle**	**21.15**	**12**	*e*P	**P**	**01 32 27.9**	**+0.7**
	10nm,0.9s						
X48A	**Hartselle**	**21.15**	**12**	P	**P**	**01 32 27.7**	**+0.5**
	baz=194,SNR=6.6						
GOGA	**Godfrey**	**21.15**	**21**	P	**P**	**01 32 27.7**	**+0.5**
	baz=204						
Z54A	**Sparta**	**21.21**	**22**	P	**P**	**01 32 29.6**	**+1.7**
	baz=206						
Y52A	**Lilburn**	**21.36**	**19**	P	**P**	**01 32 31.5**	**+1.9**
	baz=202						
GDL2	**Guadalupe Moun**	**21.45**	**331**	*e*P	**P**	**01 32 31.5**	**+0.8**
X50B	**Fort Payne**	**21.47**	**15**	P	**P**	**01 32 31.9**	**+1.1**
	baz=198,SNR=5.2						
Y53A	**Monroe**	**21.51**	**20**	P	**P**	**01 32 32.8**	**+1.6**
	baz=204						
MNTX	**Cornudas Mount**	**21.54**	**328**	P	**P**	**01 32 32.2**	**+0.7**
	baz=143						
WMOK	**Wichita Mounta**	**21.71**	**345**	*e*P	**P**	**01 32 33.9**	**+0.5**
	3.2nm,0.9s						
WMOK	**Wichita Mounta**	**21.71**	**345**	P	**P**	**01 32 34.4**	**+1.0**
	baz=163						
SDV	**Santo Domingo**	**21.74**	**101**	P	**P**	**01 32 34.1**	**+0.1**
	3.3nm,0.2s,baz=297,slow=4.0,SNR=4.3						
W47A	**Westpoint**	**21.82**	**10**	P	**P**	**01 32 34.6**	**+0.2**
	baz=192						
Y54A	**Tignall**	**21.83**	**22**	P	**P**	**01 32 35.4**	**+0.9**
	baz=206						
W48A	**Pulaski**	**21.83**	**12**	P	**P**	**01 32 35.5**	**+0.9**
	baz=194						
W49A	**Belvidere**	**21.96**	**13**	P	**P**	**01 32 36.4**	**+0.5**
	baz=196,SNR=7.3						
X52A	**Dahlonega**	**22.10**	**19**	P	**P**	**01 32 39.1**	**+1.6**
	baz=202						
SWET	**Sewanee**	**22.12**	**14**	*e*P	**P**	**01 32 37.7**	**-0.1**
	13nm,0.9s						
X53A	**Estanollee**	**22.20**	**20**	P	**P**	**01 32 39.9**	**+1.4**
	baz=204						
Y55A	**Saluda**	**22.21**	**23**	P	**P**	**01 32 39.4**	**+0.8**
	baz=208						
W50A	**Signal Mountai**	**22.26**	**15**	*e*P	**P**	**01 32 39.9**	**+0.6**
	14nm,1.4s						
W50A	**Signal Mountai**	**22.26**	**15**	P	**P**	**01 32 40.0**	**+0.8**
	baz=198						
V46A	**Holladay**	**22.27**	**9**	P	**P**	**01 32 39.0**	**-0.3**
	baz=191						
HODGE	**Hodges**	**22.32**	**22**	*e*P	**P**	**01 32 40.8**	**+1.1**
	6.3nm,0.8s						
W51A	**Cleveland**	**22.37**	**16**	P	**P**	**01 32 40.5**	**+0.2**
	baz=199						
V47A	**Nunnelly**	**22.39**	**10**	P	**P**	**01 32 40.2**	**-0.4**
	baz=192						
V48A	**Smith Brothers**	**22.44**	**12**	*e*P	**P**	**01 32 41.0**	**-0.1**
	11nm,0.8s						
V48A	**Smith Brothers**	**22.44**	**12**	P	**P**	**01 32 41.1**	**0.0**
	baz=194,SNR=8.9						
W52A	**Murphy**	**22.54**	**18**	P	**P**	**01 32 43.3**	**+1.1**
	baz=202						
X54A	**Belton**	**22.56**	**22**	P	**P**	**01 32 43.4**	**+1.1**
	baz=206						
WVT	**Waverly**	**22.64**	**9**	*e*P	**P**	**01 32 43.5**	**+0.3**
	4.6nm,0.6s						
WVT	**Waverly**	**22.64**	**9**	P	**P**	**01 32 43.3**	**+0.1**
	baz=191						
V49A	**McMinnville**	**22.66**	**14**	P	**P**	**01 32 44.3**	**+0.9**
	baz=196						
AMTX	**Amarillo**	**22.70**	**340**	*e*P	**P**	**01 32 44.1**	**+0.2**
	13nm,1.0s						
AMTX	**Amarillo**	**22.70**	**340**	P	**P**	**01 32 44.5**	**+0.5**
	baz=156						
JSC	**Jenkinsville**	**22.74**	**24**	*e*P	**P**	**01 32 45.8**	**+1.5**
	9.2nm,1.0s						
V50A	**Pikevile**	**22.76**	**15**	P	**P**	**01 32 44.7**	**+0.2**
	baz=198						
W53A	**Cullowhee**	**22.85**	**19**	P	**P**	**01 32 46.8**	**+1.2**
	baz=203						
CLTN	**Cedars of Leba**	**22.88**	**12**	*e*P	**P**	**01 32 46.0**	**+0.3**
	4.9nm,0.8s						
PBMO	**Poplar Bluff**	**22.99**	**4**	*e*P	**P**	**01 32 46.7**	**-0.1**
	10nm,1.1s						
X56A	**White Oak**	**23.02**	**24**	P	**P**	**01 32 47.4**	**+0.2**
	baz=209						
U47A	**Clarksville**	**23.03**	**10**	P	**P**	**01 32 47.2**	**-0.1**
	baz=192						
V51A	**Loudon**	**23.08**	**17**	*e*P	**P**	**01 32 49.1**	**+1.2**
	8.0nm,0.8s						
V51A	**Loudon**	**23.08**	**17**	P	**P**	**01 32 48.7**	**+0.9**
	baz=200						
W54A	**Cherokee Point**	**23.11**	**21**	P	**P**	**01 32 48.4**	**+0.3**
	baz=206						
U48A	**Cassie Pea, Po**	**23.24**	**12**	P	**P**	**01 32 49.1**	**-0.3**
	baz=194						
V52A	**Sevierville**	**23.34**	**18**	P	**P**	**01 32 50.7**	**+0.3**
	baz=202						
BIRD	**Birdtown, Kers**	**23.38**	**25**	*e*P	**P**	**01 32 51.0**	**+0.2**
	7.4nm,0.9s						
U49A	**Red Boiling Sp**	**23.40**	**13**	P	**P**	**01 32 50.7**	**-0.2**
	baz=196,SNR=13						
V53A	**Saluda**	**23.43**	**20**	P	**P**	**01 32 51.4**	**+0.1**
	baz=204						
KMSC	**Kings Mountain**	**23.47**	**23**	*e*P	**P**	**01 32 52.2**	**+0.6**
	9.5nm,1.0s						
KMSC	**Kings Mountain**	**23.47**	**23**	P	**P**	**01 32 51.9**	**+0.2**
	baz=208						
T46A	**Princeton**	**23.52**	**9**	P	**P**	**01 32 51.4**	**-0.7**
	baz=191						
U50A	**Jamestown**	**23.53**	**15**	P	**P**	**01 32 51.8**	**-0.4**
	baz=198,SNR=10						
T47A	**Sharon Grove**	**23.60**	**10**	*e*P	**P**	**01 32 52.8**	**0.0**
	9.4nm,1.0s						
T47A	**Sharon Grove**	**23.60**	**10**	P	**P**	**01 32 52.8**	**0.0**
	baz=193						
U51A	**La Follette**	**23.72**	**17**	P	**P**	**01 32 54.5**	**+0.4**
	baz=200						
W56A	**Indian Trail**	**23.76**	**24**	P	**P**	**01 32 54.8**	**+0.3**
	baz=209						
V54A	**Nebo**	**23.82**	**21**	P	**P**	**01 32 53.6**	**-1.4**
	baz=206						
T48A	**Bowling Green**	**23.85**	**12**	P	**P**	**01 32 55.4**	**+0.2**
	baz=194						
U52A	**Thorn Hill**	**23.92**	**18**	P	**P**	**01 32 55.8**	**-0.1**
	baz=202						
S44A	**Carbondale**	**24.00**	**6**	P	**P**	**01 32 56.7**	**+0.1**
	baz=187,SNR=12						
TZTN	**Tazewell**	**24.00**	**17**	*e*P	**P**	**01 32 57.0**	**+0.3**
	6.7nm,0.8s						
TZTN	**Tazewell**	**24.00**	**17**	P	**P**	**01 32 56.2**	**-0.6**
	baz=201						
W57A	**Gilead**	**24.02**	**25**	P	**P**	**01 32 56.0**	**-0.9**
	baz=210						
SIUC	**Southern Illin**	**24.02**	**6**	*e*P	**P**	**01 32 56.8**	**-0.1**
	22nm,0.7s						
T49A	**Edmonton**	**24.02**	**13**	*e*P	**P**	**01 32 56.6**	**-0.3**
	5.3nm,0.6s						
T49A	**Edmonton**	**24.02**	**13**	P	**P**	**01 32 56.5**	**-0.3**
	baz=196,SNR=5.5						
U53A	**Fall Branch**	**24.14**	**19**	P	**P**	**01 32 58.2**	**+0.2**
	baz=204						
V55A	**Taylorsville**	**24.15**	**22**	P	**P**	**01 32 58.7**	**+0.7**
	baz=207						
CCM	**Cathedral Cave**	**24.23**	**2**	*e*P	**P**	**01 32 59.6**	**+0.9**
	4.6nm,0.9s						
CCM	**Cathedral Cave**	**24.23**	**2**	P	**P**	**01 33 00.1**	**+1.3**
	baz=182						
W58A	**Raeford**	**24.23**	**27**	P	**P**	**01 32 58.9**	**+0.1**
	baz=212						
S47A	**Hartford**	**24.23**	**10**	P	**P**	**01 32 60.0**	**+1.2**
	baz=193						
T51A	**Gray**	**24.29**	**16**	P	**P**	**01 32 59.1**	**-0.2**
	baz=200,SNR=5.4						
V56A	**Mocksville**	**24.38**	**24**	*e*P	**P**	**01 33 00.8**	**+0.6**
	10nm,0.9s						
V56A	**Mocksville**	**24.38**	**24**	P	**P**	**01 33 00.0**	**-0.2**
	baz=209						
U54A	**Nelsons Funny**	**24.53**	**21**	P	**P**	**01 33 02.8**	**+1.1**
	baz=205						
ANMO	**Albuquerque**	**24.70**	**331**	P	**P**	**01 33 04.9**	**+1.6**
	1.0nm,0.7s,baz=136,slow=10,SNR=5.0						
ANMO	**Albuquerque**	**24.70**	**331**	*e*P	**P**	**01 33 04.9**	**+1.6**
	6.0nm,1.8s						
ANMO	**Albuquerque**	**24.70**	**331**	P	**P**	**01 33 06.5**	**+3.2**
	baz=146						
TASM	**ASL Pad, Albuq**	**24.70**	**331**	P	**P**	**01 33 06.7**	**+3.3**
	baz=146						
TASM	**ASL Pad, Albuq**	**24.70**	**331**	P	**P**	**01 33 06.4**	**+3.0**
	baz=146						
R45A	**Skylar, Fairfi**	**24.70**	**8**	P	**P**	**01 33 03.9**	**+0.8**
	baz=189						
S49A	**Springfield**	**24.73**	**13**	P	**P**	**01 33 03.4**	**+0.1**
	baz=196,SNR=6.1						
V57A	**Coltrane Farms**	**24.74**	**25**	P	**P**	**01 33 03.6**	**+0.2**
	baz=210						
U55A	**TA2, Sparta**	**24.79**	**22**	P	**P**	**01 33 04.3**	**+0.3**
	baz=207						
S50A	**Richmond**	**24.84**	**15**	P	**P**	**01 33 05.2**	**+0.9**
	baz=198						
U56A	**King**	**24.90**	**23**	P	**P**	**01 33 05.3**	**+0.5**
	baz=208						
V58A	**Windy Hill, Pi**	**24.93**	**26**	P	**P**	**01 33 05.5**	**+0.3**
	baz=212						
WCI	**Wyandotte Cave**	**24.95**	**11**	*e*P	**P**	**01 33 05.7**	**+0.4**
	22nm,0.7s						
WCI	**Wyandotte Cave**	**24.95**	**11**	P	**P**	**01 33 05.4**	**+0.1**
	baz=194						
R47A	**Wooly Knot Far**	**24.97**	**11**	P	**P**	**01 33 06.4**	**+0.9**
	baz=193						
S51A	**Beattyville**	**25.01**	**16**	P	**P**	**01 33 06.0**	**+0.1**
	baz=200						
OLIL	**Olney**	**25.16**	**8**	*e*P	**P**	**01 33 08.5**	**+1.3**
	16nm,0.7s						
S52A	**Salyersville**	**25.20**	**17**	P	**P**	**01 33 07.9**	**+0.3**
	baz=201						
R48A	**Northridge Ran**	**25.20**	**12**	P	**P**	**01 33 08.6**	**+1.0**
	baz=195						
R49A	**Shelbyville**	**25.24**	**13**	P	**P**	**01 33 08.6**	**+0.7**
	baz=196						
Q45A	**Warren Harvey,**	**25.31**	**8**	P	**P**	**01 33 09.2**	**+0.7**
	baz=189						
U57A	**Blanch**	**25.39**	**25**	P	**P**	**01 33 09.2**	**-0.1**
	baz=210						
S53A	**Williamson**	**25.49**	**19**	P	**P**	**01 33 10.1**	**-0.1**
	baz=203						
KSU1	**Kansas State U**	**25.54**	**352**	P	**P**	**01 33 11.4**	**+0.7**
	baz=170						
Q47A	**Bedord North L**	**25.61**	**11**	P	**P**	**01 33 11.6**	**+0.3**
	baz=193						
R51A	**Hillsboro**	**25.64**	**16**	P	**P**	**01 33 11.3**	**-0.3**
	baz=200						
U58A	**Oxford**	**25.68**	**26**	P	**P**	**01 33 11.5**	**-0.5**
	baz=212						
T25A	**Trinidad**	**25.70**	**337**	*e*P	**P**	**01 33 14.1**	**+1.7**
	9.1nm,1.2s						
P45A	**Graceland, Par**	**25.98**	**8**	*e*P	**P**	**01 33 15.0**	**+0.3**
	6.6nm,0.7s						
P45A	**Graceland, Par**	**25.98**	**8**	P	**P**	**01 33 14.9**	**+0.2**
	baz=190						
P46A	**Rosedale**	**26.15**	**9**	P	**P**	**01 33 16.8**	**+0.6**
	baz=191						
P47A	**Martinsville**	**26.18**	**11**	P	**P**	**01 33 16.8**	**+0.4**
	baz=193						
P48A	**Milroy**	**26.31**	**12**	P	**P**	**01 33 17.9**	**+0.2**
	baz=195						
R54A	**Victor**	**26.31**	**20**	P	**P**	**01 33 17.7**	**0.0**
	baz=205						
Q51A	**Peebles**	**26.38**	**16**	P	**P**	**01 33 18.7**	**+0.4**
	baz=200						
Q52A	**Bidwell**	**26.62**	**18**	P	**P**	**01 33 20.3**	**-0.1**
	baz=202						
P51A	**Williamsport**	**26.89**	**16**	P	**P**	**01 33 22.6**	**-0.2**
	baz=200						
O48A	**Farmland**	**27.13**	**12**	P	**P**	**01 33 26.0**	**+0.9**
	baz=195						
S22A	**4UR Ranch, Cre**	**27.19**	**334**	*e*P	**P**	**01 33 26.8**	**+0.8**
	3.2nm,1.1s						
R58B	**Mineral**	**27.30**

PDAR	Pinedale Array	32.55	336	P		P	01 34 14.2 +0.9
	0.9nm,0.9s,baz=144,slow=11,SNR=5.5						
PECO	Prince Edward	32.80	21	P		P	01 34 15.9 +0.7
	baz=208						
REDW	Red Top Meadow	33.56	335	*e*P		P	01 34 23.1 +0.9
	5.0nm,1.0s						
NV01	Mina Array Sit	33.71	322	*e*P		P	01 34 25.1 +1.6
NVAR	Mina Array Bea	33.71	322	P		P	01 34 25.1 +1.6
	1.2nm,0.8s,baz=130,slow=8.7,SNR=6.7						
PTGA	Pitinga	35.08	112	*e*P		P	01 34 36.9 +1.6
	5.0nm,0.8s						
D53A	Lac Vacive, Po	35.40	17	P		P	01 34 37.7 +0.1
	baz=205						
D54A	Lac Fusel, La	35.77	18	P		P	01 34 40.7 -0.2
	baz=206						
J08A	Circle Bar Ran	37.12	328	*e*P		P	01 34 53.6 +1.1
	4.2nm,0.6s						
MATQ	Matagami	37.86	15	P		P	01 34 58.3 -0.3
	baz=204						
YKA	Yellowknife Ar	51.21	347	P		P	01 36 45.7 +0.7
	baz=147,slow=7.8,SNR=34						
YKB5	Yellowknife Ar	51.21	347	*e*P		P	01 36 45.7 +0.7
YKW3	Yellowknife Ar	51.27	347	*e*P		P	01 36 45.8 +0.3
	3.5nm,1.0s						
ILAR	Eielson Array	62.97	337	P		P	01 38 08.5 +0.3
	0.4nm,0.9s,baz=142,slow=4.6,SNR=4.1						
ILB	Eielson Array	62.97	337	*e*P		P	01 38 08.5 +0.3
	6.6nm,1.6s						

SOME ***02*** *01:32:33.3, 42°.18N×71°.67E, h5km*
KRNET ***02*** *01:32:33.4±0.1, 42°.16N×71°.62E, h11km, mb3.1*
ISCJB ***02*** *01:32:35.0±0.5, 42°.12N±0°.04×71°.54E±0°.03, h10km, Error ellipse: s-maj=5.4km s-min=3.4km az=8.5*
NNC ***02*** *01:32:34.3±1.2, 42°.25N×71°.55E, h0km, mb3.4, mpv3.3, Error ellipse: s-maj=15.0km s-min=6.2km az=173.0*

ISC 02 01:32:33.5±0.8, 42°.19N±0°.03×71°.63E±0°.02, h10km, n48, σ1§68/82, 26C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.47**	**147**	⇓*i*P		**Pg**	**01 32 42.6 0.0**
	baz=44						
ARK				⇓*i*S		**Sg**	**01 32 48.7 -0.1**
	baz=44						
IUG	**Iuzhnay**	**1.19**	**268**	P		**Pb**	**01 32 55.7 -0.5**
	11nm,0.2s						
IUG				S		**Sg**	**01 33 11.8 0.0**
	114nm,0.3s						
IUG	**Iuzhnay**	**1.19**	**268**	*e*P		**Pb**	**01 32 55.7 -0.5**
	baz=70						
IUG				*e*S		**Sb**	**01 33 11.6 0.0**
	baz=70						
IUG	**Iuzhnay**	**1.19**	**268**	*e*P		**Pb**	**01 32 55.7 -0.5**
	11nm,0.2s						
IUG				*e*S		**Sb**	**01 33 11.6 0.0**
	114nm,0.3s						
KK31	**Karatay Array**	**1.23**	**318**	⇑P		**Pn**	**01 32 56.2 -0.6**
	2.9nm,0.3s,baz=141,slow=17,SNR=174						
KK31				⇑S		**Sb**	**01 33 12.3 -0.4**
	18nm,0.3s,baz=139,slow=29,SNR=22						
MRKS	**Merke**	**1.31**	**64**	P		**Pb**	**01 32 57.9 -0.3**
	13nm,0.2s						
MRKS				S		**Sg**	**01 33 15.5 0.0**
	18nm,0.2s						
MRKS	**Merke**	**1.31**	**64**	⇑*i*P		**Pb**	**01 32 57.9 -0.3**
	baz=63						
MRKS				⇑*i*S		**Sg**	**01 33 15.6 0.0**
	baz=63						
MRKS	**Merke**	**1.31**	**64**	⇑*i*P		**Pb**	**01 32 57.9 -0.3**
	13nm,0.2s						
MRKS				⇑*i*S		**Sg**	**01 33 15.5 0.0**
	18nm,0.2s						
ARSB	**Arslanbob**	**1.33**	**130**	⇓*i*P		**Pn**	**01 32 58.0 -0.3**
	baz=29						
ARSB				⇓*i*S		**Sb**	**01 33 15.7 -0.2**
	baz=29						
AML	**Almayashu**	**1.54**	**92**	P		**Pb**	**01 33 02.2 -0.2**
	SNR=16						
AML	**Almayashu**	**1.54**	**92**	⇑*i*P		**Pb**	**01 33 02.1 -0.2**
	baz=90						
AML				⇑*i*S		**Sg**	**01 33 23.3 +0.3**
	baz=90						
EKS2	**Erkin-Say**	**1.66**	**73**	P		**Pg**	**01 33 04.5 -0.8**
	SNR=6.4						
EKS2	**Erkin-Say**	**1.66**	**73**	⇑*i*P		**Pg**	**01 33 04.8 -0.6**
	baz=72						
EKS2				⇑*i*S		**Sg**	**01 33 27.6 +0.7**
	baz=72						
ARLS	**Aral**	**2.04**	**98**	⇓*i*P		**Pb**	**01 33 11.1 +0.4**
	baz=97						
ARLS				⇓*i*S		**Sg**	**01 33 38.1 -0.8**
	baz=97						
UCH	**Uchtor**	**2.15**	**88**	P		**Pg**	**01 33 13.7 -0.9**
	SNR=15						
UCH	**Uchtor**	**2.15**	**88**	⇑*i*P		**Pb**	**01 33 13.0 +0.3**
	baz=87						
UCH				⇑*i*S		**Sg**	**01 33 41.3 -1.2**
	baz=87						
AAK	**Ala-Archa**	**2.17**	**77**	P		**Pg**	**01 33 14.1 -1.0**
	SNR=35						
AAK	**Ala-Archa**	**2.17**	**77**	⇓Pn		**Pg**	**01 33 14.0 -1.0**
	15nm,0.4s						
AAK				Sn		**Sg**	**01 33 43.5 +0.2**
	10nm,0.4s						
AAK	**Ala-Archa**	**2.17**	**77**	⇑*i*P		**Pb**	**01 33 13.3 +0.3**
	baz=76						
AAK				⇑*i*S		**Sg**	**01 33 41.8 -1.4**
	baz=76						
BTK	**Batken**	**2.22**	**196**	⇑*i*P		**Pb**	**01 33 13.3 -0.4**
	baz=96						
BTK				⇑*i*S		**Sb**	**01 33 41.8 +0.5**
	baz=96						
FRU1	**Bishkek**	**2.31**	**73**	⇑*i*P		**Pb**	**01 33 14.9 -0.3**
	baz=73						
FRU1				⇑*i*S		**Sb**	**01 33 45.0 +1.2**
	baz=73						
USP	**Ospenovka**	**2.37**	**62**	P		**Pb**	**01 33 16.9 +0.5**
	SNR=12						
USP	**Ospenovka**	**2.37**	**62**	⇓*i*P		**Pb**	**01 33 16.2 -0.2**
	baz=61						
USP				⇓*i*S		**Sb**	**01 33 46.9 +1.2**
	baz=61						
CHMS	**Chumysh**	**2.44**	**70**	⇑*e*P		**Pb**	**01 33 16.9 -0.7**
	baz=69						
CHMS				⇑*i*S		**Sb**	**01 33 48.4 +0.7**
	baz=69						
KBK	**Karagaybulak**	**2.50**	**78**	P		**Pb**	**01 33 19.4 +0.8**
	SNR=7.6						
KBK	**Karagaybulak**	**2.50**	**78**	⇓*i*P		**Pb**	**01 33 17.9 -0.7**
	baz=77						
KBK				⇓*i*S		**Sb**	**01 33 49.6 0.0**
	baz=77						
KZA	**Kyzart**	**2.70**	**91**	P		**Pb**	**01 33 23.1 +1.0**
	SNR=28						
KZA	**Kyzart**	**2.70**	**91**	⇑*i*P		**Pb**	**01 33 20.6 -1.5**
	baz=90						
KZA				⇑*i*S		**Sb**	**01 33 54.6 -0.8**
	baz=90						
TKM2	**Tokmak 2**	**3.02**	**75**	P		**Pb**	**01 33 27.1 -0.4**
	SNR=7.1						
TKM2	**Tokmak 2**	**3.02**	**75**	⇑Pn		**Pb**	**01 33 26.9 -0.6**
	2.5nm,0.4s						
TKM2				⇑Sn		**Sg**	**01 34 07.5 -3.1**
	5.5nm,0.6s						
BOOM	**Boomskoye usch**	**3.21**	**83**	⇓*i*P		**Pb**	**01 33 27.7 -3.0**
	baz=83						
BOOM				⇓*i*S		**Sb**	**01 34 06.7 -3.3**
	baz=83						
DGS	**Degeres**	**3.23**	**70**	Pg		**Pb**	**01 33 31.9 +0.9**
	3.7nm,0.4s						
DGS				Lg		Lg	01 34 14.3
	13nm,0.5s						
DGS	**Degeres**	**3.23**	**70**	*e*P		**Pb**	**01 33 31.9 +0.9**
	baz=69						
DGS				*e*S		**Sg**	**01 34 14.3 -2.9**
	baz=69						
DGS	**Degeres**	**3.23**	**70**	*e*P		**Pb**	**01 33 31.9 +0.9**
	3.7nm,0.4s						
DGS				*e*S		**Sg**	**01 34 14.3 -2.9**
	13nm,0.5s						
KST	**Kastek**	**3.31**	**74**	Pg		**Pb**	**01 33 33.3 +0.9**
	3.2nm,0.2s						
KST				Lg		Lg	01 34 17.0
	11nm,0.3s						
KST	**Kastek**	**3.31**	**74**	*e*P		**Pb**	**01 33 33.3 +0.9**
	baz=73						
KST				*e*S		**Sg**	**01 34 17.0 -2.8**
	baz=73						
KST	**Kastek**	**3.31**	**74**	*e*P		**Pb**	**01 33 33.3 +0.9**
	3.2nm,0.2s						
KST				*e*S		**Sg**	**01 34 17.0 -2.8**
	11nm,0.3s						
BTLS	**Baital**	**3.35**	**31**	Pg		**Pn**	**01 33 29.0 +3.1**
	2.0nm,0.2s						
BTLS				Lg		Lg	01 34 09.1
	4.4nm,0.2s						
BTLS	**Baital**	**3.35**	**31**	*e*P		**Pb**	**01 33 34.8 +1.9**
	baz=31						
BTLS				*e*S		**Sg**	**01 34 18.7 -2.2**
	baz=31						
BTLS	**Baital**	**3.35**	**31**	*e*P		**Pb**	**01 33 34.8 +1.9**
	2.3nm,0.4s						
BTLS				*e*S		**Sg**	**01 34 18.7 -2.2**
	8.1nm,0.3s						
NRN	**Naryn**	**3.36**	**102**	⇑*i*P		**Pn**	**01 33 29.1 +2.8**
	baz=1.0						
NRN				⇑*i*S		**Sn**	**01 34 09.5 +3.1**
	baz=1.0						
MDOK	**Medeo**	**4.11**	**75**	Pg		**Pb**	**01 33 48.5 +2.4**
	2.1nm,0.6s						
MDOK				Lg		Lg	01 34 42.3
	4.1nm,0.8s						
MDOK	**Medeo**	**4.11**	**75**	*e*P		**Pb**	**01 33 48.3 +2.2**
	baz=74						
MDOK				*e*S		**Sg**	**01 34 41.8 -3.8**
	baz=74						
MDOK	**Medeo**	**4.11**	**75**	*e*P		**Pb**	**01 33 48.3 +2.2**
	11nm,0.6s						
MDOK				*e*S		**Sg**	**01 34 41.8 -3.8**
	4.1nm,0.8s						
KOTS	**Kotyrbulak**	**4.17**	**74**	Pg		**Pg**	**01 33 50.8 -2.7**
	1.1nm,0.3s						
KOTS				Lg		Lg	01 34 45.4
	4.9nm,0.6s						
KOTS	**Kotyrbulak**	**4.17**	**74**	*e*P		**Pb**	**01 33 49.7 +2.6**
	baz=73						
KOTS				*e*S		**Sg**	**01 34 44.3 -3.2**
	baz=73						
KOTS	**Kotyrbulak**	**4.17**	**74**	*e*P		**Pb**	**01 33 49.7 +2.6**
	7.5nm,0.7s						
KOTS				*e*S		**Sg**	**01 34 44.3 -3.2**
	4.9nm,0.6s						
ARXS	**Arharly**	**4.96**	**64**	Pg		**Pb**	**01 34 02.1 +1.6**
	4.8nm,0.7s						
ARXS				Lg		Lg	01 35 05.6
	5.3nm,0.8s						

DJA ***02*** *01:40:41.5±3.8, 8°.N±34°.×12°.5E±°, h10km, M5.2/6, mb5.0/5, mB4.8/2, MLv5.3/6, Mw(mB)4.1/2*
IDC ***02*** *01:40:45.8±0.5, 7°.19N×124°.71E, h0km, mb4.4/24, mb1 4.5/25, mb1mx4.4/39, mbtmp4.4/25, ML3.4/1, MS4.1/24, Ms1 4.1/24, ms1mx4.0/36, Error ellipse: s-maj=13.5km s-min=10.5km az=60.0*
MAN ***02*** *01:40:46.3, 7°.31N×124°.75E, h2km, mb5.6, ML4.6, MS4.9*
MAN INTENSITY IV - CARMEN NORTH COTABATO; INTENSITY II - MATALAM NORTH COTABATO; DAVAO CITY.
BJI ***02*** *01:40:47.1±0.0, 7°.18N×124°.92E, h16km, mb4.8/45, mB4.9/41, Ms4.6/42, Ms7 4.4/39*
GCMT ***02*** *01:40:47.2±0.2, 7°.32N±0°.01×124°.74E±0°.02, h15km±1km, MW4.9/82, Moment Tensor Solution. s20,c25; s82,c120; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.17±.18; Mθθ2.52±.14; Mφφ-1.35±.12; Mrθ0.66±.21; Mrφ1.69±.09; Mθφ0.16±.26; Best double couple: M0 2.62400×10^16 NP1:φs114.00000°, δ89.00000°, λ11.00000°. NP2: φs24.00000°, δ79.00000°, λ179.00000°. Principal axes: T 3.2550, Plg9.0000°, Azm340.0000°; N -1.2610, Plg79.0000°, Azm122.0000°; P -1.9940, Plg7.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISCJB ***02*** *01:40:48.8±0.7, 7°.24N±0°.03×124°.87E±0°.03, h25km±5km, mb4.8/101, MS4.3/35 Error ellipse: s-maj=5.7km s-min=4.2km az=165.8*
MOS ***02*** *01:40:48.3±1.2, 7°.21N×124°.91E, h26km, mb5.1/43, MS4.5/5, Error ellipse: s-maj=11.5km s-min=5.7km az=110.8*
NEIC ***02*** *01:40:48.2±0.2, 7°.32N×124°.89E, h10km, mb5.0/40, Error ellipse: s-maj=6.4km s-min=4.1km az=72.0*
NEIC Felt [IV PIVS] at Carmen and [II PIVS] at Davao and Matalam.

ISC 02 01:40:49.7±0.7, 7°.28N±0°.03×124°.83E±0°.03, h19km±2km, n209, σ1§97/237, mb4.9/101, MS4.4/36, 12C-17D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.58**	**264**	⇓*i*P		**Pg**	**01 40 57.4 -3.9**
CTBH				*i* S		**Sg**	**01 41 05.8 -3.3**
DMPH	**Davao City--Mi**	**0.70**	**106**	⇑*e*P		**Pg**	**01 41 01.7 -1.9**
DMPH				*e*S		**Sn**	**01 41 14.7 -0.4**
DAV	**Davao City (W)**	**0.78**	**105**	Pg		**Pb**	**01 41 03.7 -0.9**
	827nm,0.3s,baz=308,slow=1.1,SNR=80						
DAV				Lg		Lg	01 41 18.2
	1μm,0.3s,baz=168,slow=23,SNR=17						
DAV	**Davao City (W)**	**0.78**	**105**	P		**Pb**	**01 41 03.8 -0.9**
CGP	**Cagayan de Oro**	**1.18**	**354**	⇑*i*P		**Pn**	**01 41 07.8 -3.4**
CGP				*i* S		**Sb**	**01 41 22.4 -3.9**
BIPH	**Bislig**	**1.77**	**59**	⇑*i*P		**Pn**	**01 41 19.3 0.0**
BIPH				*i* S		**Sb**	**01 41 43.4 0.0**
DCPH	**Dipolog City**	**1.95**	**312**	⇑*e*P		**Pg**	**01 41 25.5 -1.8**
DCPH				*e*S		**Sg**	**01 41 53.4 +0.7**
SCPH	**Surigao**	**2.57**	**15**	*e*P		**Pg**	**01 41 38.3 -0.8**
SCPH				*e*S		**Sg**	**01 42 10.1 -2.4**
TBP	**Tagbilaran**	**2.58**	**338**	*e*P		**Pn**	**01 41 29.8 -0.7**
SNPH	**Sibulan**	**2.58**	**323**	⇓*i*P		**Pn**	**01 41 32.3 +1.7**
SNPH				*i* S		**Sg**	**01 42 12.0 -1.0**
LLP	**Lapu-Lapu**	**3.14**	**344**	*e*P		**Pn**	**01 41 37.1 -1.1**
LLP				*e*S		**Sn**	**01 42 17.1 +1.9**
SGSI	**Sangihe**	**3.64**	**169**	P		**Pn**	**01 41 45.3 +0.2**
PLP	**Palo**	**3.87**	**2**	⇓*e*P		**Pn**	**01 41 49.0 +0.8**
JAP	**San Jose, Anti**	**4.47**	**321**	⇓*e*P		**Pn**	**01 41 59.1 +2.7**
KMSI	**Cibinong**	**6.71**	**187**	P		**Pn**	**01 42 30.2 +2.8**
TNTI	**Ternate**	**6.94**	**158**	*e*Pn		**Pn**	**01 42 31.4 +0.8**
TNTI	**Ternate**	**6.94**	**158**	P		**Pn**	**01 42 34.7 +4.2**
MRSI	**Marisa**	**7.34**	**203**	P		**Pn**	**01 42 34.8 -1.2**
TGY	**Tagaytay City**	**7.78**	**331**	LR		LR	01 46 10.3
	comp=Z,4μm,18.1s,baz=136,slow=42						
MPSI	**Mapaga**	**8.47**	**216**	P		**Pn**	**01 42 50.6 -0.9**
LUWI	**Luwuk**	**8.52**	**194**	*e*Pn		**Pn**	**01 42 54.2 +2.1**
LUWI				*e*Sn		**Sn**	**01 44 32.9 +5.1**
LUWI	**Luwuk**	**8.52**	**194**	P		**Pn**	**01 42 55.0 +2.9**
FAKI	**Fak Fak**	**12.55**	**144**	*e*Pn		**Pn**	**01 43 48.2 +0.7**
KAPI	**Kappang**	**13.22**	**203**	Pn		**Pn**	**01 43 54.4 -2.2**
	0.2nm,0.3s,baz=133,slow=17,SNR=2.3						
KAPI				LR		LR	01 49 36.3
	comp=Z,872nm,18.7s,baz=26,slow=40						
KAPI	**Kappang**	**13.22**	**203**	*e*Pn		**Pn**	**01 43 58.1 +1.5**
KAPI	**Kappang**	**13.22**	**203**	*e*P		**Pn**	**01 43 58.1 +1.5**
KAPI	**Kappang**	**13.22**	**203**	P		**Pn**	**01 43 57.7 +1.1**
SBUM	**Sibu**	**13.44**	**250**	*e*Pn		**Pn**	**01 44 01.2 +1.6**
KSM	**Kuching**	**15.58**	**249**	*e*Pn		**Pn**	**01 44 28.2 -0.3**
	61nm,1.3s						
SSLB	**Suanglung**	**16.83**	**348**	*e*Pn		**Pn**	**01 44 44.9 +0.4**
	19nm,0.9s						
SOEI	**Soe**	**16.93**	**182**	*e*Pn		**P**	**01 44 47.3 -0.5**
	94nm,1.1s						
BATI	**Baumata**	**17.41**	**184**	P		**P**	**01 44 53.0 0.0**
	3.8nm,0.3s,baz=64,slow=3.5,SNR=4.8						
BATI				LR		LR	01 52 12.4
	comp=Z,715nm,21.2s,baz=357,slow=40						
QZH	**Quanzhou**	**18.55**	**342**	⇑*i*P		**Pn**	**01 45 07.7 +2.0**
QZH				S		**S**	**01 48 37.0 +0.6**
QZH				pmax	pmax		
	comp=Z,380nm,7.1s						
QZH				LR	LR		
	comp=N,930nm,22.0s						
QZH				LR	LR		
	comp=E,560nm,16.8s						
QZH				LR	LR		
	comp=Z,590nm,17.7s						
JAY	**Jayapura**	**18.59**	**121**	LR		LR	01 53 08.2
	comp=Z,267nm,19.0s,baz=320,slow=40						
QIZ	**Qiongzhong**	**18.67**	**310**	P		**Pn**	**01 45 07.8 +0.6**
QIZ				S		**S**	**01 48 38.5 -0.5**
QIZ				pmax	pmax		
	comp=Z,14nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,350nm,5.4s						
QIZ				LR	LR		
	comp=N,1μm,14.1s						
QIZ				LR	LR		
	comp=E,800nm,15.5s						
QIZ				LR	LR		
	comp=Z,750nm,18.1s						
GUMO	**Guam**	**20.68**	**71**	LR		LR	01 52 03.9
	comp=Z,346nm,20.0s,baz=236,slow=33						
PANO	**Nakornpanom**	**22.03**	**298**	P		**P**	**01 45 47.4 +4.0**
	0.3nm,1.1s						
LEM	**Lembang**	**22.16**	**231**	P		**P**	**01 45 42.0 -2.9**
	9.3nm,0.3s,baz=27,slow=9.1,SNR=1.8						
SKNT	**Sakolnakorn**	**22.52**	**297**	P		**P**	**01 45 49.0 +0.4**
	21nm,1.1s						
KHON	**Khomkaen**	**23.32**	**295**	P		**P**	**01 45 58.9 +2.0**
	56μm,1.1s						
IPM	**Ipoh**	**23.84**	**265**	*e*P		**P**	**01 46 03.0 +0.9**
	122nm,1.9s						
CHAI	**Chaiyaphum**	**23.94**	**293**	P		**P**	**01 46 04.6 +1.7**
	23μm,1.2s						
KULM	**Kulim**	**24.11**	**267**	*e*P		**P**	**01 46 06.3 +1.7**
	32nm,1.1s						
SLVN	**Son La**	**24.57**	**307**	*e*P		**P**	**01 46 09.8 +1.0**
	38nm,1.6s						
PBKT	**Sadao Pong**	**25.07**	**294**	P		**P**	**01 46 14.4 +1.1**
	6.3nm,0.9s						
WHN	**Wuhan**	**25.14**	**338**	⇓P		**P**	**01 46 15.2 +1.4**
WHN				S		**S**	**01 50 42.1 +4.2**
WHN				pmax	pmax		
	comp=Z,26nm,0.6s						
WHN				LR	LR		
	comp=N,1μm,14.5s						
WHN				LR	LR		
	comp=E,1μm,13.2s						
WHN				LR	LR		
	comp=Z,2μm,18.5s						
FITZ	**Fitzroy Crossi**	**25.23**	**178**	P		**P**	**01 46 13.3 -1.3**
	17nm,0.9s,baz=16,slow=8.0,SNR=23						
FITZ				LR	LR		01 58 13.2
	comp=Z,129nm,19.1s,baz=13,slow=42						
FITZ	**Fitzroy Crossi**	**25.23**	**178**	*e*P		**P**	**01 46 14.9 +0.3**
NJ2	**Nanjing**	**25.27**	**348**	*e*P		**P**	**01 46 16.4 +1.5**
NJ2				pmax	pmax		
	comp=Z,31nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,360nm,3.5s						
NJ2				LR	LR		
	comp=N,650nm,19.0s						
NJ2				LR	LR		
	comp=E,650nm,17.3s						
NJ2				LR	LR		
	comp=Z,660nm,17.4s						
GYA	**Guiyang**	**25.74**	**320**	P		**P**	**01 46 21.9 +2.5**
GYA				pP	sP		01 46 26.0 -1.5
GYA				PP	**PnPn**		**01 47 01.8 +5.6**
GYA				S	**S**		**01 50 54.9 +7.2**
GYA				sS	sS		01 51 02.6 +5.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,6.2s						
GYA				LR	LR		
	comp=N,940nm,16.2s						
GYA				LR	LR		
	comp=E,910nm,18.3s						
GYA				LR	LR		
	comp=Z,740nm,18.3s						
NANT	**Nan**	**26.10**	**298**	P		**P**	**01 46 27.0 +4.3**
	29μm,0.7s						
PSI	**Prapat**	**26.18**	**262**	P		**P**	**01 46 22.1 -1.4**
	5.4nm,0.9s,baz=17,slow=11,SNR=3.6						
PSI				LR	LR		01 58 54.0
	comp=Z,266nm,20.2s,baz=82,slow=42						
PSI	**Prapat**	**26.18**	**262**	*e*P		**P**	**01 46 25.2 +1.7**
	44nm,1.5s						
PSI	**Prapat**	**26.18**	**262**	*e*P		**P**	**01 46 25.2 +1.7**
PSI				pmax	pmax		
	comp=Z,44nm,1.5s						
PHRA	**Phrae**	**26.40**	**297**	P		**P**	**01 46 27.0 +1.6**
	comp=Z,2.1nm,1.4s						
UMPA	**Umpang Tak**	**26.90**	**292**	P		**P**	**01 46 34.2 +4.3**
	comp=Z,35μm,1.2s						
LAMP	**Lampang**	**26.94**	**297**	P		P	01 46 41.4 +11
CM31	**Chiang Mai Arr**	**27.53**	**296**	*e*P		**P**	**01 46 35.0 -0.5**
	comp=Z,15nm,1.2s						
CM31				*e*PcP	**PcP**		**01 49 53.1 -0.4**
CMAR	**Chiang Mai Arr**	**27.53**	**296**	P		**P**	**01 46 35.0 -0.5**
	comp=Z,0.6nm,0.4s,baz=114,slow=7.4,SNR=8.7						
CMAR				PcP	**PcP**		**01 49 53.1 -0.4**
	comp=Z,0.4nm,0.3s,baz=116,slow=2.1,SNR=4.3						
CMAR				LR	LR		01 57 34.2
	comp=Z,302nm,19.2s,baz=111,slow=37						
CMAR	**Chiang Mai Arr**	**27.53**	**296**	*e*P		**P**	**01 46 37.0 +1.5**
KMI	**Kunming**	**27.57**	**313**	P		**P**	**01 46 36.8 +0.7**
KMI				pP	sP		01 46 43.6 -0.6
KMI				sP	pP		01 46 45.1 +3.2
KMI				S	**S**		**01 51 20.2 +3.3**
KMI				sS	sS		01 51 32.2 +5.1
KMI				pmax	pmax		
	comp=Z,12nm,1.2s						
KMI				pmax	pmax		
	comp=Z,56nm,3.1s						
KMI				LR	LR		
	comp=Z,590nm,17.5s						
KMI				LR	LR		
	comp=Z,660nm,18.7s						
KMI				LR	LR		
	comp=Z,550nm,14.7s						
COEN	**Coen**	**27.87**	**139**	*e*P		**P**	**01 46 38.3 -0.3**
	comp=Z,33nm,1.1s						
WRAB	**Tennant Creek**	**28.62**	**161**	⇓*i*P		**P**	**01 46 42.8 -2.4**
WRAB				pmax	pmax		
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**28.62**	**161**	P		**P**	**01 46 42.8 -2.4**
	comp=Z,6.1nm,0.7s,baz=344,slow=11,SNR=8.7						
WB2	**Warramunga Arr**	**28.63**	**161**	*e*P		**P**	**01 46 44.3 -1.0**
	comp=Z,25nm,1.1s						
JHJ	**Hachijo jima 2**	**29.22**	**26**	LR		LR	01 59 40.2
	comp=Z,364nm,18.1s,baz=260,slow=39						
KS15	**Wonju Array Si**	**30.16**	**5**	*e*P		**P**	**01 46 59.2 +0.6**
	comp=Z,31nm,1.7s						
KSAR	**Wonju Array Be**	**30.16**	**5**	P		**P**	**01 46 58.4 -0.2**
KSAR	**Wonju Array Be**	**30.16**	**5**	P		**P**	**01 46 58.4 -0.2**
KSRS	**Korea Array**	**30.17**	**5**	P		**P**	**01 46 58.3 -0.4**
	comp=Z,0.8nm,0.8s,baz=183,slow=8.7,SNR=4.3						
KSRS				LR	LR		01 58 22.1
	comp=Z,263nm,21.1s,baz=210,slow=35						
XAN	**Xi'an**	**30.41**	**333**	P		**P**	**01 47 01.1 +0.1**
XAN				pP	sP		01 47 12.0 +2.8
XAN				S	**S**		**01 51 57.4 -3.7**
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
XAN				pmax	pmax		
	comp=Z,75nm,5.3s						
XAN				LR	LR		
	comp=Z,620nm,19.4s						
XAN				LR	LR		
	comp=Z,310nm,14.3s						
XAN				LR	LR		
	comp=Z,640nm,17.2s						
XAN	**Xi'an**	**30.41**	**333**	*e*P		**P**	**01 47 01.3 +0.3**
	comp=Z,14nm,1.0s						
XAN	**Xi'an**	**30.41**	**333**	*e*P		**P**	**01 47 01.3 +0.3**
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
CD2	**Chengdu**	**30

comp=Z,116nm,20.7s,baz=24,slow=38
BJT Baijiatuau 33.51 348 *e*P **P 01 47 28.1 0.0**
comp=Z,20nm,1.0s
BJT Baijiatuau 33.51 348 *e*P **P 01 47 28.1 0.0**
BJT pmax pmax
comp=Z,20nm,1.0s
LZH Lanzhou 34.50 329 ⇑P **P 01 47 38.1 +1.1**
LZH pP sP 01 47 43.4 -1.8
LZH sP pP 01 47 45.9 +3.1
LZH S **S 01 53 05.6 +0.6**
LZH sS sS 01 53 13.8 -0.8
LZH pmax pmax
comp=Z,25nm,1.6s
LZH pmax pmax
comp=Z,77nm,4.9s
LZH LR LR
comp=Z,980nm,15.1s
LZH LR LR
comp=Z,870nm,15.6s
LZH LR LR
comp=Z,1μm,16.2s
HHC Hu-ho-hao-te 35.46 343 *e*P **P 01 47 48.0 +2.9**
HHC PP **PP 01 49 08.4 +2.6**
HHC S **S 01 53 22.8 +3.3**
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,130nm,5.1s
HHC LR LR
comp=Z,600nm,19.6s
HHC LR LR
comp=Z,350nm,20.0s
HHC LR LR
comp=Z,2μm,19.6s
MSHR Mys Shultsa 35.60 8⇓*e*P **P 01 47 46.1 0.0**
VLA Vladivostok 36.23 9⇓*e*P **P 01 47 52.0 +0.5**
VLA pmax pmax
comp=Z,11nm,1.3s
SHL Shillong 36.30 304 *e*P **P 01 47 52.7 +0.1**
comp=Z,35nm,1.2s
SHL Shillong 36.30 304 *e*P **P 01 47 52.7 +0.1**
SHL pmax pmax
comp=Z,35nm,1.2s
USRK Ussuriysk Ar. 37.31 9 P **P 01 48 00.7 +0.1**
comp=Z,3.5nm,0.8s,baz=193,slow=7.8,SNR=8.0
LSA Lhasa 38.71 310 *e*P **P 01 48 14.5 +1.2**
comp=Z,48nm,1.8s
LSA Lhasa 38.71 310 *e*P **P 01 48 14.5 +1.2**
LSA pmax pmax
comp=Z,48nm,1.8s
TEY Ternei 38.98 13⇓*e*P **P 01 48 12.2 -2.6**
TEY pmax pmax
comp=Z,10.0nm,1.8s
GTA Gaotai 39.10 329 P **P 01 48 17.9 +1.9**
GTA pP sP 01 48 22.2 -2.1
GTA sP pP 01 48 25.0 +3.1
GTA S **S 01 54 14.8 -0.1**
GTA SS **SnSn 01 56 56.0 -12**
GTA pmax pmax
comp=Z,13nm,1.5s
GTA pmax pmax
comp=Z,78nm,4.7s
GTA LR LR
comp=Z,380nm,15.1s
GTA LR LR
comp=Z,450nm,15.5s
GTA LR LR
comp=Z,690nm,14.8s
RAMN Ramite 41.20 303 *e*P **P 01 48 34.9 +1.1**
comp=Z,81nm,1.4s
BBOO Buckleboo 41.28 166 *e*P **P 01 48 33.5 -0.4**
comp=Z,117nm,1.8s
JIRN Jiri 41.80 304 *e*P **P 01 48 39.7 +0.8**
comp=Z,99nm,1.1s
HIA Hailar 42.06 355 *e*P **P 01 48 40.5 +0.3**
comp=Z,16nm,1.4s
HIA Hailar 42.06 355 *i*P **P 01 48 40.6 +0.3**
HIA pmax pmax
comp=Z,142nm,2.2s
STKA Stephens Creek 42.10 159 P **P 01 48 39.9 -0.8**
comp=Z,11nm,0.7s,baz=336,slow=9.4,SNR=12
STKA LR LR 02 06 51.5
comp=Z,212nm,21.2s,baz=4.2,slow=37
STKA Stephens Creek 42.10 159 *e*P **P 01 48 39.9 -0.8**
comp=Z,2.9nm,0.8s
STKA Stephens Creek 42.10 159 *e*P **P 01 48 39.9 -0.8**
STKA pmax pmax
comp=Z,3.0nm,0.8s
GUN Gumba 42.15 304 *e*P **P 01 48 42.6 +0.9**
comp=Z,63nm,0.9s
KLR Kul'dur 42.22 7 P **P 01 48 40.0 -1.4**
comp=Z,1.3nm,0.6s,baz=209,slow=6.7,SNR=7.4
KLR Kul'dur 42.22 7⇑*e*P **P 01 48 41.7 +0.2**
KLR pmax pmax
comp=Z,13nm,1.8s
PKI Pulchoki 42.41 303 *e*P **P 01 48 44.3 +0.5**
comp=Z,28nm,1.1s
PKIN Phulchoki 42.43 303 *e*P **P 01 48 44.3 +0.4**
DMN Daman 42.68 303 *e*P **P 01 48 46.4 +0.5**
comp=Z,58nm,1.3s
ULN Ulaanbaatar 43.18 343 *e*P **P 01 48 49.6 +0.1**
comp=Z,33nm,1.3s
ULN Ulaanbaatar 43.18 343 *d i*P **P 01 48 50.5 +1.0**
ULN pmax pmax
comp=Z,41nm,1.7s
ULN Ulaanbaatar 43.18 343 P **P 01 48 50.5 +1.0**
SNR=19
ULN P **P 01 48 50.5 +1.0**
SNR=19
SONM Songino Array 43.35 342 P **P 01 48 51.1 +0.2**
comp=Z,11nm,1.1s,baz=162,slow=8.4,SNR=41
SONM LR LR 02 08 06.1
comp=Z,590nm,21.2s,baz=132,slow=38
KOLN Koldanda 43.99 303 *e*P **P 01 48 57.3 +0.9**
comp=Z,20nm,0.8s
DANN Dangsing 44.05 304 *e*P **P 01 48 57.6 +0.6**
comp=Z,46nm,1.0s
PYUN Piuthan 44.61 303 *e*P **P 01 49 02.0 +0.6**
comp=Z,69nm,1.1s
HYB Hyderabad 46.20 287 *i*P **P 01 49 14.0 0.0**
ZEA Zeya 46.37 2 *e*P P 01 49 08.9 -5.7
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA MLR MLR
comp=E,300nm,18.0s
ZAK Zakamensk 46.57 341 *e*P **P 01 49 12.9 -3.6**
ZAK pmax pmax
comp=Z,7.0nm,1.5s
TLY Talaya 47.59 342 *e*P **P 01 49 25.0 +0.7**
comp=Z,16nm,0.9s
TLY Talaya 47.59 342 *e*P **P 01 49 25.6 +1.3**
TLY *i* 01 51 19.7
TLY *e*S S 01 56 33.8 +15
TLY pmax pmax
comp=Z,44nm,0.9s
TLY MLR MLR
comp=Z,949nm,19.0s
TLY Talaya 47.59 342 P **P 01 49 25.4 +1.1**
SNR=17
TLY P **P 01 49 25.4 +1.1**
SNR=17
IRK Irkutsk 47.90 343 *e*P **P 01 49 28.3 +1.6**
IRK pmax pmax
comp=Z,54nm,2.1s
MOY Mondy 48.42 340 *e*P **P 01 49 32.1 +1.3**
MOY pmax pmax
comp=Z,44nm,2.4s
WMQ Urumqi 48.75 324 *e*P **P 01 49 33.3 -0.1**
WMQ pP sP 01 49 42.4 +0.6
WMQ pmax pmax
comp=Z,21nm,1.3s
WMQ pmax pmax
comp=Z,190nm,3.9s
WMQ LR LR
comp=Z,1μm,26.1s
WMQ LR LR
comp=Z,720nm,30.1s
WMQ LR LR
comp=Z,950nm,26.1s
BOD Bodaibo 51.11 353 *e*P **P 01 49 50.9 -0.1**
BOD pmax pmax
comp=Z,25nm,1.5s
DGZ Jazzator, Alta 52.59 330 *d i*P **P 01 50 04.0 +1.6**
DGZ pmax pmax
comp=Z,16nm,1.6s
PETK Petropavlovsk- 52.93 24 P **P 01 50 04.8 +0.1**
comp=Z,3.1nm,0.8s,baz=198,slow=5.2,SNR=4.4
PETK LR LR 02 11 33.3
comp=Z,188nm,20.2s,baz=196,slow=35
PEA1 Petropavlovsk- 52.94 24 *e*P **P 01 50 04.8 +0.1**
PDGK Podgornoye 53.49 320 P P 01 50 18.8 +10
PDGK pmax pmax
comp=Z,16nm,1.0s
MK31 Makanchi Array 53.58 325 *e*P **P 01 50 09.6 -0.1**
comp=Z,11nm,1.0s
MK31 Makanchi Array 53.58 325 *i*P **P 01 50 09.4 -0.2**
MK31 pmax pmax
comp=Z,12nm,0.9s
MKAR Makanchi Array 53.58 325 P **P 01 50 09.8 +0.2**
comp=Z,7.9nm,0.9s,baz=127,slow=7.7,SNR=36
MKAR LR LR 02 14 04.1
comp=Z,246nm,20.2s,baz=360,slow=37
MAKZ Makanchi 53.77 325 *e*P **P 01 50 11.4 +0.4**
comp=Z,24nm,1.2s
MAKZ Makanchi 53.77 325 *e*P **P 01 50 11.4 +0.4**
MAKZ pmax pmax
comp=Z,24nm,1.2s
KSH Kashi 54.22 314 P **P 01 50 17.9 +3.4**
KSH PP **PP 01 52 23.1 +6.7**
KSH S **S 01 57 51.1 -0.1**
KSH SS **SS 02 01 35.1 +1.9**
KSH pmax pmax
comp=Z,65nm,1.5s
KSH pmax pmax
comp=Z,190nm,5.0s
KSH LR LR
comp=Z,810nm,13.3s
KSH LR LR
comp=Z,560nm,14.2s
KSH LR LR
comp=Z,890nm,21.3s
NIL Nilore 54.29 306 *e*P **P 01 50 14.7 -0.4**
comp=Z,39nm,1.0s
NIL Nilore 54.29 306 *e*P **P 01 50 14.7 -0.4**
NIL pmax pmax
comp=Z,39nm,1.0s
YAK Yakutsk 54.76 3 *e*P **P 01 50 17.4 -0.5**
YAK *e**PP **sP 01 50 28.5 +2.3**
YAK *e* 01 51 20.1
YAK *e* 01 52 22.9
YAK *e*PPP PPP 01 53 30.9
YAK *e*S **S 01 57 54.5 -2.9**
YAK *e* 02 00 06.4
YAK *e*SS **SS 02 01 41.6 +1.0**
YAK *e*SSS SSS 02 03 43.1
AAK Ala-Archa 56.48 317 *e*P **P 01 50 31.3 +0.5**
comp=Z,5.0nm,0.9s
AAK Ala-Archa 56.48 317 P **P 01 50 31.6 +0.8**
AAK pmax pmax
comp=Z,10.0nm,1.3s
AAK Ala-Archa 56.48 317 P **P 01 50 31.9 +1.1**
SNR=7.0
AAK P **P 01 50 31.9 +1.1**
SNR=7.0
ZALV Zalesovo Beam 56.59 333 P **P 01 50 31.1 -0.1**
comp=Z,4.6nm,0.8s,baz=111,slow=8.1,SNR=13
ZALV LR LR 02 15 42.5
comp=Z,423nm,21.0s,baz=68,slow=37
ZALV Zalesovo Beam 56.59 333 *i*P **P 01 50 31.5 +0.4**
ZALV pmax pmax
comp=Z,5.0nm,0.9s
ZAA1 Zalesovo Array 56.59 333 *e*P **P 01 50 31.1 -0.1**
KURK Kurchatov 57.75 327 *e*P **P 01 50 39.3 -0.1**
comp=Z,88nm,1.6s
KURK Kurchatov 57.75 327 *e*P **P 01 50 39.3 -0.1**
KURK pmax pmax
comp=Z,88nm,1.6s
KURK Kurchatov 57.75 327 P **P 01 50 39.5 0.0**
SNR=25
KURK P **P 01 50 39.5 0.0**
SNR=25
NVS Novosibirsk 57.87 333 *e*P **P 01 50 40.4 +0.2**
NVS pmax pmax
comp=N,12nm,1.8s
NVS pmax pmax
comp=Z,23nm,1.8s
NVS pmax pmax
comp=E,10.0nm,1.4s
KBL Kabul 57.89 306 *e*P **P 01 50 41.6 +0.6**
comp=E,64nm,1.9s
KBL Kabul 57.89 306 *e*P **P 01 50 41.6 +0.6**
KBL pmax pmax
comp=Z,64nm,1.9s
KK31 Karatay Array 59.37 316 *i*P **P 01 50 50.2 -0.7**
KK31 pmax pmax
comp=Z,9.0nm,1.0s
KKAR Karatay Array 59.37 316 *e*P **P 01 50 50.4 -0.5**
comp=Z,17nm,1.3s
KKAR Karatay Array 59.37 316 *e*P **P 01 50 50.4 -0.5**
KKAR pmax pmax
comp=Z,17nm,1.3s
OTUK Ortayu 60.17 322 P P 01 51 06.4 +10
OTUK pmax pmax
comp=Z,27nm,1.5s
BRVK Borovoye 63.40 327 *e*P **P 01 51 17.7 -0.3**
comp=Z,22nm,1.1s
BRVK Borovoye 63.40 327 *d i*P **P 01 51 18.4 +0.4**
BRVK pmax pmax
comp=Z,24nm,1.2s
BRVK Borovoye 63.40 327 P **P 01 51 18.8 +0.8**
SNR=13
BRVK P **P 01 51 18.8 +0.8**
SNR=13
TIXI Tiksi 64.35 1⇑*e*P **P 01 51 25.9 +2.0**
TIXI pmax pmax
comp=Z,12nm,2.5s
NRIK Noril'sk 66.56 346 P **P 01 51 37.2 -1.0**
comp=Z,3.5nm,0.6s,baz=126,slow=5.3,SNR=4.9
NRIK LR LR 02 22 35.5
comp=Z,203nm,19.7s,baz=180,slow=38
BILL Bilibino 66.65 16 *e*P **P 01 51 39.0 +0.1**
comp=Z,24nm,1.7s
BILL Bilibino 66.65 16 *c i*P **P 01 51 39.5 +0.7**
BILL *i* 01 51 44.4
BILL *i* 01 52 06.5
BILL pmax pmax
comp=Z,13nm,1.7s
GEYT Alibeck 67.22 308 P **P 01 51 42.0 -1.1**
comp=Z,5.0nm,0.9s,baz=106,slow=3.2,SNR=14
BANOM Banah 67.56 295 P **P 01 51 45.6 +0.2**
AB31 Akbulak array 68.22 320 *i*P **P 01 51 48.0 -1.1**
AB31 pmax pmax
comp=Z,16nm,1.3s
ABKAR Akbulak array 68.22 320 *e*P **P 01 51 48.8 -0.4**
comp=Z,21nm,1.3s
AKTO Aktyubinsk 69.72 321 P **P 01 51 58.0 -0.5**
AKTO pmax pmax
comp=Z,18nm,1.4s
SVE Sverdlovsk 69.97 328 *e*P **P 01 51 58.6 -1.2**
SVE pmax pmax
comp=Z,20nm,1.1s
ARU Arti 70.94 327 *e*P **P 01 52 05.2 -0.6**
comp=Z,6.9nm,1.1s
ARU Arti 70.94 327 *d i*P **P 01 52 05.2 -0.6**
ARU 01 52 25.4
ARU 01 54 38.9
ARU S **S 02 01 25.5 +5.0**
ARU SS **SS 02 05 48.5 -4.8**
ARU pmax pmax
comp=Z,9.0nm,1.3s
ARU MLR MLR
comp=Z,218nm,18.0s
GNI Garni 77.77 309 *e*P **P 01 52 47.2 +1.0**
comp=Z,23nm,1.1s
GNI Garni 77.77 309 *de*P **P 01 52 47.6 +1.5**
GNI Garni 77.77 309 P **P 01 52 47.2 +1.0**
SNR=5.7
GNI P **P 01 52 47.2 +1.0**
SNR=5.7
TBLG Delisi 77.80 311 *e*P **P 01 52 46.7 +0.6**
comp=Z,26nm,0.9s
TBLG Delisi 77.80 311 *e*P **P 01 52 46.7 +0.6**
TBLG pmax pmax
comp=Z,26nm,0.9s
ZEI Tsey 78.44 312 *e*P **P 01 52 48.7 -1.1**
ZEI pmax pmax
comp=Z,18nm,0.9s
NCK Nalchik 78.67 313⇑*e*P **P 01 52 51.5 +0.6**
NCK pmax pmax
comp=Z,12nm,0.7s
KBZ Khabaz 79.18 313 P **P 01 52 53.3 -0.3**
comp=Z,8.1nm,1.0s,baz=56,slow=3.4,SNR=9.1
KBZ LR LR 02 32 46.1
comp=Z,75nm,18.1s,baz=76,slow=39
NEY Neytrino 79.31 313⇓*e*P **P 01 52 56.6 +2.0**
NEY pmax pmax
comp=Z,4.0nm,1.2s
KIV Kislovodsk 79.34 313 *e*P **P 01 52 55.4 +0.9**
comp=Z,20nm,1.1s
KIV Kislovodsk 79.34 313 *e*P **P 01 52 55.5 +0.9**
KIV pmax pmax
comp=Z,53nm,1.1s
KIV MLR MLR
comp=Z,224nm,19.0s
KIV Kislovodsk 79.34 313 P **P 01 52 55.2 +0.6**
KIV P **P 01 52 55.2 +0.6**
KLMR Klimovskoe 81.40 330 *e*P **P 01 53 02.5 -2.7**
KLMR pmax pmax
comp=Z,9.0nm,1.0s
MCK McKinley 81.86 27 *e*P **P 01 53 08.3 +0.7**
comp=Z,26nm,1.4s
MCK McKinley 81.86 27 *e*P **P 01 53 08.3 +0.7**
MCK pmax pmax
comp=Z,26nm,1.4s
WRH Wood River Hil 82.22 26 *e*P **P 01 53 09.2 -0.3**
comp=Z,37nm,2.0s
COLA College 82.32 25⇓*e*P **P 01 53 12.8 +2.9**
COLA pmax pmax
comp=Z,3.0nm,0.7s
ILAR Eielson Array 82.74 26 P **P 01 53 10.2 -1.9**
comp=Z,1.7nm,1.0s,baz=254,slow=4.8,SNR=8.0
ANN Anapa 83.08 314 *e*P P 01 53 09.0 -5.3
ANN *e**PP **PcP 01 53 14.6 -4.3**
ANN *e*S **S 02 03 25.9 -7.2**
ANN pmax pmax
comp=Z,44nm,1.0s
OBN Obninsk 83.09 325 *i*P **P 01 53 13.7 -0.4**
OBN *i* 01 53 21.0
OBN *i* 01 56 23.5
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,133nm,17.0s
EYAK Cordova Ski Ar 83.43 30 *e*P **P 01 53 16.7 +0.9**
comp=Z,14nm,1.1s
SIM Simferopol' 85.42 315 *e*P **P 01 53 26.7 +0.5**
SIM pmax pmax
comp=Z,10.0nm,0.8s
BRTR Keskin Array B 86.31 309 P **P 01 53 29.7 -1.3**
comp=Z,2.5nm,1.0s,baz=139,slow=5.9,SNR=10.0
BRTR Keskin Array B 86.31 309 *i*P **P 01 53 31.5 +0.5**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
MAW Mawson 86.42 200 P **P 01 53 28.3 -2.3**
comp=Z,2.0nm,0.9s,baz=77,slow=14,SNR=3.3
MAW Mawson 86.42 200 *e*P **P 01 53 28.3 -2.3**
comp=Z,1.2nm,1.1s
MAW Mawson 86.42 200 *e*P **P 01 53 28.3 -2.3**
MAW pmax pmax
comp=Z,1.0nm,1.1s
ARCES ARCESS Array B 86.48 340 LR LR 02 36 59.0
comp=Z,148nm,18.3s,baz=98,slow=39
VNDA Vanda 87.17 172 P **P 01 53 32.3 -1.8**
comp=Z,2.0nm,1.0s,baz=313,slow=6.3,SNR=7.9
VNDA LR LR 02 32 22.4
comp=Z,63nm,19.6s,baz=15,slow=36
VNDA Vanda 87.17 172 *e*P **P 01 53 33.3 -0.8**
comp=Z,4.0nm,1.1s
VNDA Vanda 87.17 172 *e*P **P 01 53 33.3 -0.8**
VNDA pmax pmax
comp=Z,4.0nm,1.1s
FIA0 FINESS Array S 87.83 332 *e*P **P 01 53 36.1 -1.5**
FIA0 FINESS Array S 87.83 332 *e*P **P 01 53 36.1 -1.5**
FINES FINESS Array B 87.83 332 P **P 01 53 36.1 -1.5**
comp=Z,3.2nm,1.1s,baz=333,slow=11,SNR=4.8
FINES LR LR 02 35 27.4
comp=Z,238nm,20.5s,baz=79,slow=37
AKASG Malin Array Be 87.96 321 P **P 01 53 37.2 -1.4**
comp=Z,0.2nm,0.3s,baz=65,slow=5.0,SNR=7.9
AKASG LR LR 02 36 27.8
comp=Z,115nm,18.4s,baz=55,slow=38
AKASG Malin Array Be 87.96 321 *i*P **P 01 53 39.5 +1.0**
KIEV Kiev 87.97 321⇑*i*P **P 01 53 39.4 +0.8**
KIEV pmax pmax
comp=Z,13nm,3.3s
VSU Vasula 88.07 329⇓*e*P **P 01 53 38.9 +0.1**
VSU pmax pmax
comp=Z,15nm,1.0s
NOA NORSAR Array B 94.79 333 LR LR 02 40 05.1
comp=Z,194nm,20.4s,baz=60,slow=38
YKA Yellowknife Ar 97.05 24 P **P 01 54 20.4 +0.1**
comp=Z,0.6nm,1.0s,baz=299,slow=4.2,SNR=4.6
LTX Lajitas 120.84 50 *e*PKPdf **PKPdf 01 59 41.1 -0.5**
LTX Lajitas 120.84 50 *e*PKIKP **PKPdf 01 59 41.1 -0.5**
TXAR Lajitas Array 120.84 50 PKP **PKPdf 01 59 41.1 -0.6**
comp=Z,0.5nm,0.8s,baz=259,slow=0.9,SNR=2.6
PLCA Paso Flores 143.97 160 PKP PKPbc 02 00 22.9 +0.6
comp=Z,2.3nm,0.9s,baz=297,slow=2.3,SNR=2.4

MAN 02 01:48:59.9, 7°.34N×124°.68E, h31km, mb3.9, ML2.7, MS2.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.44**	**255**	⇓*i*P	Pb	01 49 09.8	+0.3
CTBH				*i*S	Sn	01 49 18.5	+1.4
DMPH	**Davao City--Mi**	**0.86**	**107**⇑	*e*P	Pn	01 49 13.0	-2.9
DMPH				*e*S	Sn	01 49 24.6	-2.9

MAN 02 01:58:42.7, 7°.29N×124°.87E, h23km, mb4.4, ML3.3, MS3.0, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.62**	**264**	⇓*i*P	Pb	01 58 54.2	-0.7
CTBH				*i*S	Sb	01 59 02.1	-1.1
DMPH	**Davao City--Mi**	**0.67**	**108**⇑	*e*P	Pn	01 59 03.6	+6.8
DMPH				*e*S	Sn	01 59 12.6	+5.9
CGP	**Cagayan de Oro**	**1.17**	**352**⇑	*e*P	Pn	01 59 03.5	-0.2
CGP				*e*S	Sb	01 59 19.4	+0.3

JMA 02 02:11:30.6±0.2, 38°.22N×144°.21E, h38km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.16**	**273**	P	Pn	02 12 05.3	+1.3
JIKH				*e*S	Sn	02 12 31.2	+1.6
OFUJ	**Ofunato**	**2.17**	**294**	P	Pn	02 12 05.7	+1.6
OFUJ				*e*S	Sn	02 12 31.4	+1.7
JKMT	**Kesennumamotoy**	**2.23**	**286**	P	Pn	02 12 06.3	+1.4
JKMT				*e*S	Sn	02 12 32.9	+1.8
JIO	**Ouri**	**2.26**	**277**	P	Pn	02 12 06.9	+1.5
JIO				S	Sn	02 12 33.5	+1.5
MIYJ	**Miyakonagasawa**	**2.31**	**307**	P	Pn	02 12 07.2	+1.2
MIYJ				*e*S	Sn	02 12 34.5	+1.4
JMK	**Ichinoseki**	**2.46**	**288**	P	Pn	02 12 10.0	+1.9
JMK				S	Sn	02 12 39.3	+2.5
JOM	**Ohasama**	**2.60**	**300**	P	Pn	02 12 12.2	+2.1
JOM				*e*S	Sn	02 12 43.0	+2.6
JANG	**Nango**	**3.00**	**317**	P	Pn	02 12 16.9	+1.3
JANG				*e*S	Sn	02 12 52.1	+1.9
JYK	**Kaneyama**	**3.10**	**284**	P	Pn	02 12 19.5	+2.6
JYK				*e*S	Sn	02 12 55.9	+3.2
JFT	**Otama**	**3.14**	**258**	P	Pn	02 12 19.8	+2.2
JFT				S	Sn	02 12 56.1	+2.3
JOT	**Ohata**	**3.99**	**323**	P	Pn	02 12 32.6	+3.5
JKB	**Kayabe**	**4.40**	**327**	P	Pn	02 12 38.0	+3.2
BSO1	**Boso 1**	**4.41**	**217**	P	Pn	02 12 34.1	-0.4
BSO1				*e*S	Sn	02 13 24.4	+0.1
JCH	**Churui**	**4.44**	**352**	P	Pn	02 12 35.9	+0.6
JCH				*e*S	Sn	02 13 24.4	-1.2
JRY	**Ryogami san**	**4.78**	**244**	P	Pn	02 12 41.3	+1.3
JRY				*e*S	Sn	02 13 33.4	-0.8
NEM2	**Nemuro 2**	**5.27**	**12**	P	Pn	02 12 45.0	-1.7
NEM2				*e*S	Sn	02 13 41.8	-4.3
JTKR	**Abashiri--Toko**	**5.75**	**358**	P	Pn	02 12 54.0	+0.7
JTKR				*e*S	Sn	02 13 56.2	-1.8

ISK ***02*** *02:26:57.2, 38°.98N×43°.61E, h1km, ML2.2/5*
DDA ***02*** *02:26:57.2, 39°.03N×43°.58E, h5km±1km, ML2.8*
ISCJB ***02*** *02:26:58.6±0.6, 39°.02N±0°.03×43°.61E±0°.05, h9km±6km,*

Error ellipse: s-maj=7.1km s-min=5.2km az=26.1

ISC 02 02:26:57.7±1.1, 39°01N±0°.04×43°.61E±0°.03, h7km±9km, n12, σ0°71/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.04	243	*i* P	Pg	02 26 59.3	-0.1
ERCV	ERCIS-VAN	0.21	274	PG	Pg	02 27 02.4	+0.3
CLDR	Caldiran	0.28	60	PG	Pg	02 27 03.9	+0.7
CLDR				SG	Sb	02 27 08.8	-1.3
CLDR	Caldiran	0.28	60	*i* P	Pb	02 27 04.7	-0.4
VANB	Van	0.45	203	PG	Pb	02 27 07.9	-0.1
VANB				SG	Sb	02 27 15.8	+0.9
TVAN	Van	0.50	199	*i* P	Pg	02 27 07.4	-0.1
TVAN				*i* S	Sb	02 27 17.7	+1.0
TVAN				IAML_P			
	comp=Z,1μm,0.2s						
ADCV	BITLIS_Adilcev	0.72	254	*i* P	Pb	02 27 11.6	-1.1
ADCV				*i* S	Sb	02 27 23.2	+0.3
ADCV				IAML_P			
	comp=Z,475nm,0.1s						
TUTA	Tutak	0.74	303	*i* P	Pb	02 27 13.0	-0.1
TUTA				*i* S	Sb	02 27 23.2	-0.2
TUTA				IAML_P			
	comp=Z,3μm,0.2s						
AGRB	Hanur-Agry	0.74	320	PG	Pb	02 27 13.0	-0.2
AGRB				SG	Sb	02 27 24.4	+0.8
MLAZ	Malazgirt-MUS	0.84	280	PG	Pb	02 27 14.8	+0.1
TASB	TASBURUN-IGDIR	1.09	26	PN	Pn	02 27 19.7	+0.2
BLIS	Bitlis-Merkez	1.31	244	*i* P	Pg	02 27 22.1	-0.8
BLIS				IAML_P			
	comp=Z,592nm,0.2s						

*ISCJB **02** 02:27:18.4±0.5, 17°.60N±0°.06×145°.8E±0°.1, h200km, mb3.9/17, Error ellipse: s-maj=18.6km s-min=7.6km az=4.6*

*IDC **02** 02:27:21.0±0.6, 17°.51N×145°.78E, h213km±5km, mb3.7/17, mb1 4.0/18, mb1mx3.8/35, mbtmp4.3/18, Error ellipse: s-maj=15.0km s-min=7.5km az=96.0*

ISC 02 02:27:20.0±0.5, 17°.55N±0°.07×145°.8E±0°.1, h200km, n27, σ1°42/32, mb4.0/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.04	193	P	Pn	02 28 24.4	+2.1
	34nm,0.3s,baz=199,slow=23,SNR=28						
GUMO				S	Sn	02 29 12.0	+0.7
	160nm,0.3s,baz=1.7,slow=23,SNR=12						
H11S3	WAKE ISLAND Hy 19.90	84		T	T	02 52 50.9	
	baz=275,slow=74,SNR=6.1						
H11S1	WAKE ISLAND Hy 19.91	84		T	T	02 52 51.1	
	baz=275,slow=74,SNR=3.9						
H11S2	WAKE ISLAND Hy 19.91	84		T	T	02 52 53.4	
	baz=275,slow=74,SNR=5.5						
MJAR	Matsushiro Arr	20.07	342	P	P	02 31 36.7	-1.5
	1.7nm,0.6s,baz=172,slow=9.6,SNR=9.6						
H11N1	WAKE ISLAND Hy 20.11	81		T	T	02 53 12.9	
	baz=264,slow=74,SNR=15						
H11N2	WAKE ISLAND Hy 20.12	80		T	T	02 53 13.6	
	baz=264,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy 20.13	81		T	T	02 53 12.9	
	baz=264,slow=74,SNR=12						
KSRS	Korea Array	25.30	325	P	P	02 32 27.3	-0.8
	1.1nm,0.5s,baz=144,slow=8.1,SNR=7.1						
KSRS				pP	pP	02 33 10.3	+3.6
	1.0nm,0.7s,baz=139,slow=8.6,SNR=2.2						
PMG	Port Moresby	26.82	177	P	P	02 32 41.4	-0.6
	9.7nm,0.6s,baz=0.0,slow=5.1,SNR=3.9						
PETK	Petropavlovsk-	36.69	12	P	P	02 34 08.6	+1.1
	1.2nm,0.6s,baz=191,slow=6.6,SNR=2.8						
WRA	Warramunga Arr	38.92	197	P	P	02 34 25.4	-1.2
	7.9nm,0.4s,baz=11,slow=7.5,SNR=87						
WRA				PcP	PcP	02 36 32.2	-1.0
	1.6nm,0.4s,baz=8.9,slow=3.2,SNR=3.5						
ASAR	Alice Springs	42.58	196	P	P	02 34 55.9	-0.6
	3.2nm,0.4s,baz=14,slow=6.5,SNR=110						
ASAR				PcP	PcP	02 36 43.9	-1.1
	1.1nm,0.4s,baz=15,slow=2.7,SNR=5.4						
SONM	Songino Array	44.09	322	P	P	02 35 09.3	+0.9
	0.4nm,0.3s,baz=140,slow=12,SNR=4.2						
SONM				pP	pwP	02 35 54.5	-0.9
	0.3nm,0.3s,baz=123,slow=6.9,SNR=1.8						
SONM				PcP	PcP	02 36 49.1	-0.9
	0.3nm,0.3s,baz=116,slow=3.4,SNR=2.9						
CMAR	Chiang Mai Arr	44.47	279	P	P	02 35 12.5	+0.8
	3.7nm,1.0s,baz=67,slow=7.7,SNR=8.8						
CMAR				pP	pwP	02 35 58.2	-0.1
	0.5nm,0.3s,baz=62,slow=6.2,SNR=1.1						
STKA	Stephens Creek	49.31	185	P	P	02 35 47.8	-1.1
	2.5nm,0.3s,baz=7.2,slow=6.8,SNR=13						
ZALV	Zalesovo Beam	58.98	323	P	P	02 36 58.3	-0.1
	1.0nm,0.6s,baz=111,slow=7.9,SNR=2.7						
MKAR	Makanchi Array	59.32	314	P	P	02 37 00.9	0.0
	0.3nm,0.2s,baz=82,slow=9.5,SNR=6.8						
ILAR	Eielson Array	64.63	26	P	P	02 37 35.1	-0.8
	2.8nm,0.6s,baz=252,slow=5.8,SNR=35						
ILAR				pP	pP	02 38 24.0	+2.8
	0.4nm,0.7s,baz=260,slow=5.3,SNR=1.7						
INK	Inuvik	70.39	23	P	P	02 38 11.9	+0.1
	4.0nm,0.7s,baz=264,slow=6.4,SNR=19						
YKA	Yellowknife Ar	78.96	28	P	P	02 39 01.3	+0.1
	2.3nm,0.7s,baz=288,slow=5.4,SNR=33						
YKA				pP	pwP	02 39 52.2	-0.4
	0.4nm,0.3s,baz=288,slow=5.4,SNR=1.3						
ARCES	ARCESS Array B	83.61	342	P	P	02 39 24.3	-1.2
	6.6nm,0.3s,baz=55,slow=7.9,SNR=4.3						
NVAR	Mina Array Bea	83.78	52	P	P	02 39 28.3	+1.0
	1.9nm,0.6s,baz=265,slow=6.2,SNR=14						
NVAR				pP	pwP	02 40 19.2	0.0
	0.5nm,0.7s,baz=261,slow=5.4,SNR=1.7						
FINES	FINESS Array B	87.96	335	P	P	02 39 43.7	-3.3
	0.5nm,0.6s,baz=46,slow=4.0,SNR=6.5						
FINES				pP	pwP	02 40 39.0	-0.5
	1.0nm,0.7s,baz=72,slow=4.5,SNR=2.1						
PDAR	Pinedale Array	88.56	45	P	P	02 39 50.4	-0.2
	0.6nm,0.3s,baz=305,slow=3.2,SNR=2.9						
TORD	Torodi Ar. Bea	133.24	308	PKP	PKPdf	02 46 11.6	-1.3
	0.3nm,0.6s,baz=47,slow=4.3,SNR=2.7						
LPAZ	La Paz	147.55	93	PKPbc	PKPdf	02 46 41.4	+2.1
	1.2nm,0.6s,baz=244,slow=1.7,SNR=7.9						

IDC 02 02:41:17.8±1.5, 2°.99N×126°.09E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.6/41, mbtmp3.8/7, Error ellipse: s-maj=171.0km s-min=20.7km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.19	161	P	P	02 46 36.7	+0.6
	0.7nm,0.4s,baz=337,slow=10,SNR=3.1						
ASAR	Alice Springs	27.57	164	P	P	02 47 06.5	-0.3
	0.3nm,0.7s,baz=354,slow=7.5,SNR=4.2						
SONM	Songino Array	47.79	342	P	P	02 49 56.9	-0.2
	0.4nm,0.5s,baz=148,slow=8.5,SNR=2.2						
MKAR	Makanchi Array	57.79	326	P	P	02 51 11.3	+0.3
	0.7nm,0.4s,baz=120,slow=7.4,SNR=12						
KURBB	Kurchatov Arra	62.01	328	P	P	02 51 39.5	-0.3
	1.2nm,0.6s,baz=130,slow=6.3,SNR=17						
BVAR	Borovoye Array	67.58	327	P	P	02 52 16.7	+0.5
	0.4nm,0.5s,baz=134,slow=8.3,SNR=4.6						
AKTO	Aktyubinsk	73.83	322	P	P	02 52 53.6	-0.7
	0.7nm,0.3s,baz=129,slow=5.7,SNR=3.7						

MAN 02 02:45:20.4, 7°.34N×124°.80E, h17km, mb4.8, ML3.7, MS3.6, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.56	258	‖ *i* P	Pg	02 45 31.1	-0.5
CTBH				*i* S	Sg	02 45 38.4	-0.8
BUKP	Musuan	0.59	26	*e*P	Pb	02 45 32.4	+0.1
BUKP				*e*S	Sn	02 45 42.2	-1.2
DMPH	Davao City--Mi	0.74	110⇑	*e*P	Pn	02 45 35.6	-0.5
DMPH				*e*S	Sn	02 45 47.2	+0.2
SKMP	Bagumbayan, Su	0.86	198	*e*P	Pb	02 45 35.6	-1.1
SKMP				*e*S	Sb	02 45 47.6	-0.4
CGP	Cagayan de Oro	1.11	354⇑	*e*P	Pb	02 45 40.8	-0.4
CGP				*e*S	Sb	02 45 55.4	+0.1
MATI	Mati	1.50	105	*e*P	Pg	02 45 49.2	0.0
MATI				*e*S	Sg	02 46 10.8	+2.1
PAGZ	Pagadian	1.50	290	*e*P	Pn	02 45 45.6	-0.8
PAGZ				*e*S	Sb	02 46 06.3	-0.1
DDMP	Don Marcelino,	1.52	144	*e*P	Pn	02 45 47.1	+0.2
DDMP				*e*S	Sg	02 46 11.2	+1.6
IPIL	Ipil	2.26	281	*e*P	Pn	02 45 57.7	+0.7
IPIL				*e*S	Sb	02 46 26.8	-1.5

*HLW **02** 02:47:53.1, 35°.33N×19°.93E, h10km±19km, Md4.6, Ml4.7*

*ISCJB **02** 02:47:55.7±0.2, 35°.01N±0°.02×19°.46E±0°.02, h10km, mb4.3/37, MS3.5/7, Error ellipse: s-maj=2.8km s-min=2.1km az=7.3*

*IDC **02** 02:47:56.1±0.6, 34°.84N×19°.44E, h0km, mb4.2/23, mb1 4.3/29, mb1mx4.1/51, mbtmp4.2/29, ML4.2/7, MS3.2/12, Ms1 3.3/12, ms1mx3.0/49, Error ellipse: s-maj=16.2km s-min=11.1km az=154.0*

*PDG **02** 02:47:57.0±0.3, 35°.01N×19°.30E, h23km±5km, ML5.2/11, Error ellipse: s-maj=6.7km s-min=1.6km az=90.0*

*MED_RC **02** 02:47:57.0±2.5, 34°.82N×19°.51E, h10km, MW4.3/9, Moment Tensor Solution.Mantle waves: s9,c10; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.58±.27; $M_{\theta\theta}$-0.35±.28; $M_{\phi\phi}$-0.23±.29; $M_{r\theta}$-0.53±1.18; $M_{\theta\phi}$-2.79±.26; $M_{\phi r}$1.23±1.18; Best double couple: $M_0$3.14000×10^{15} NP1:ϕ_s4.00000°, δ77.00000°, λ25.00000°. NP2: ϕ_s268.00000°, δ66.00000°, λ166.00000°. Principal axes: T 3.1300, Plg26.0000°, Azm228.0000°; N 0.0200, Plg62.0000°, Azm29.0000°; P -3.1500, Plg8.0000°, Azm134.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ATH **02** 02:47:58.8, 35°.12N×19°.72E, h10km±31km, ML4.2/10 Error ellipse: s-maj=31.6km s-min=2.1km az=0.0*

*BEO **02** 02:47:59.5±0.6, 35°.20N×19°.07E, h0km, ML4.9/12*

*MOS **02** 02:47:59.4±1.0, 35°.12N×19°.55E, h24km, mb4.5/15, Error ellipse: s-maj=6.7km s-min=3.2km az=73.3*

*NEIC **02** 02:47:59.6±0.0, 34°.89N×19°.56E, h32km, mb3.8/1, ML4.3(THE), After THE.*

*THE **02** 02:47:59.6, 34°.89N×19°.56E, h32km±75km, ML4.3/17, Error ellipse: s-maj=75.4km s-min=1.5km az=0.0*

*GII **02** 02:48:10.3±0.0, 34°.79N×21°.07E, h10km, mb4.5/3, MD4.4/3*

*TIR **02** 02:48:25.0, 36°.98N×20°.62E, h10km, Md4.4/5*

ISC 02 02:47:58.0±0.3, 35°.12N±0°.02×19°.58E±0°.02, h10km, n547, σ2°46/614, mb4.3/37, MS3.9/7, 32C-16D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MES2	Methoni	2.42	45	P	Pb	02 48 39.6	-2.1
MES2				S	Sn	02 49 08.1	+0.7
MES2				AML	AML	02 49 14.2	
	comp=E,2420μm,0.4s						
MES2				AML	AML	02 49 15.3	
	comp=N,1446μm,0.3s						
PYL	PYLOS	2.49	44	*e*Pn	Pb	02 48 40.4	-2.5
PYL				*e*Sn	Sb	02 49 12.4	-1.2
PYL	PYLOS	2.49	44	P	Pb	02 48 40.4	-2.5
PYL				S	Sb	02 49 12.4	-1.2
PYL	PYLOS	2.49	44	P	Pb	02 48 40.4	-2.5
MES3	Kyparissia	2.72	38	P	Pn	02 48 43.8	+2.1
DYR	Agios Nikonas	2.77	53	P	Pn	02 48 44.0	+1.5
DYR				S	Sb	02 49 17.3	-4.4
DYR				AML	AML	02 49 25.6	
	comp=N,252μm,0.3s						
DYR				AML	AML	02 49 27.1	
	comp=E,386μm,0.4s						
ITM	Ithomi	2.80	42	*i* P	Pb	02 48 45.2	-2.9
ITM	Ithomi	2.80	42	*e*Pn	Pn	02 48 45.0	+2.2
ITM				*e*Sn	Sb	02 49 19.0	-3.5
ITM	Ithomi	2.80	42	P	Pn	02 48 45.1	+2.2
ITM				S	Sb	02 49 19.0	-3.5
ITM	Ithomi	2.80	42	P	Pb	02 48 45.1	-2.9
ITM				S	Sn	02 49 17.9	+1.2
ITM				AML	AML	02 49 23.0	
	comp=E,2026μm,0.3s						
ITM				AML	AML	02 49 23.8	
	comp=N,2414μm,0.3s						
AMT	Artemida-Makis	2.96	35	P	Pb	02 48 47.9	-2.9
AMT				S	Sb	02 49 24.4	-2.7
AMT	Artemida-Makis	2.96	35	P	Pn	02 48 47.6	+2.6
AMT				S	Sn	02 49 21.0	+0.3
AMT				AML	AML	02 49 30.5	
	comp=N,3759μm,0.5s						
AMT				AML	AML	02 49 33.2	
	comp=E,3244μm,0.6s						
KTHR	Kythira	3.01	67	P	Pn	02 48 47.3	+1.5
KTHR				S	Sb	02 49 23.7	-4.9
KYTH	Kithira	3.05	67	*e*Pn	Pn	02 48 47.8	+1.6
KYTH				*e*Sn	Sb	02 49 24.8	-4.8
KYTH	Kithira	3.05	67	P	Pn	02 48 47.8	+1.6
KYTH				S	Sb	02 49 24.8	-4.8
KYTH	Kithira	3.05	67	P	Pn	02 48 47.9	+1.7
KYTH				S	Sn	02 49 22.4	-0.4
KYTH				AML	AML	02 49 26.1	
	comp=N,2606μm,0.3s						
KYTH				AML	AML	02 49 38.8	
	comp=E,2979μm,0.5s						
ANKY	Antikythira Is	3.13	75	*e*Pn	Pn	02 48 48.5	+1.2
ANKY				*e*Sn	Sn	02 49 26.1	+1.4
ANKY	Antikythira Is	3.13	75	P	Pn	02 48 48.5	+1.2
ANKY				S	Sn	02 49 26.1	+1.4
ANKY	Antikythira Is	3.13	75	P	Pn	02 48 48.6	+1.3
ANKY				S	Sn	02 49 23.9	-0.9
ANKY				AML	AML	02 49 28.1	
	comp=E,7095μm,0.5s						
ANKY				AML	AML	02 49 28.2	
	comp=N,5585μm,0.7s						
KFL	Anninata	3.14	18	P	Pn	02 48 49.4	+1.9
KFL	Anninata	3.14	18	P	Pn	02 48 49.1	+1.6
KFL				S	Sn	02 49 25.9	+0.9
VLI	Veliai	3.16	59	*e*Pn	Pn	02 48 50.1	+2.3
VLI				*e*Sn	Sb	02 49 28.2	-4.6
VLI	Veliai	3.16	59	P	Pn	02 48 50.1	+2.3
VLI				S	Sb	02 49 28.2	-4.6
VLI	Veliai	3.16	59	P	Pn	02 48 50.0	+2.3
VLI				S	Sn	02 49 26.5	+1.0
VLI				AML	AML	02 49 32.4	
	comp=N,4367μm,0.5s						
VLI				AML	AML	02 49 34.7	
	comp=E,2206μm,0.4s						
VLS	Valsamata	3.16	15	P	Pn	02 48 49.6	+1.8
VLS	Valsamata	3.16	15	P	Pn	02 48 49.6	+1.8
VLS	Valsamata	3.16	15	P	Pn	02 48 49.6	+1.8
VLS	Valsamata	3.16	15	P	Pn	02 48 49.5	+1.8
VLX	Vlachokerasia	3.19	44	P	Pn	02 48 50.7	+2.4
VLX	Vlachokerasia	3.19	44	P	Pn	02 48 50.7	+2.4
VLX	Vlachokerasia	3.19	44	P	Pn	02 48 50.7	+2.4
VLX				S	Sn	02 49 28.7	+2.3
VLX				AML	AML	02 49 34.6	
	comp=E,1862μm,0.5s						
VLX				AML	AML	02 49 37.8	
	comp=N,2166μm,0.6s						
TRIP	Tripoli	3.24	41	P	Pn	02 48 51.3	+2.3
TRIP				S	Sb	02 49 30.8	-4.4
RLS	Riolos of Patr	3.30	27	P	Pn	02 48 52.3	+2.6
RLS				S	Sb	02 49 33.7	-3.2
RLS	Riolos of Patr	3.30	27	P	Pn	02 48 52.3	+2.6
RLS				S	Sb	02 49 33.7	-3.2
RLS	Riolos of Patr	3.30	27	P	Pn	02 48 52.1	+2.4
DRO	Drossia	3.31	31	P	Pn	02 48 52.7	+2.9
DRO				S	Sb	02 49 33.5	-3.6
DRO	Drossia	3.31	31	P	Pn	02 48 52.9	+3.0
AXS	Araxos	3.39	25	P	Pn	02 48 54.4	+3.4
FSK	Fiskardo	3.42	13	P	Pn	02 48 53.8	+2.4
FSK				S	Sn	02 49 35.4	+3.3
KLV	Kalavryta, Ach	3.58	35	P	Pn	02 48 56.5	+2.9
KLV	Kalavryta, Ach	3.58	35	P	Pn	02 48 56.5	+2.9
GUR	Goura	3.58	38	*e*Pn	Pn	02 48 56.8	+3.1
GUR				*e*Sn	Sn	02 49 39.4	+3.2
GUR	Goura	3.58	38	P	Pn	02 48 56.8	+3.1
GUR				S	Sn	02 49 39.4	+3.2
EVGI	Lefkada island	3.60	14	P	Pn	02 48 56.7	+2.9
IMMV	Iera Moni Meta	3.62	83	P	Pn	02 48 56.7	+2.6
IMMV	Iera Moni Meta	3.62	83	P	Pn	02 48 54.3	+0.2
IMMV	Iera Moni Meta	3.62	83	P	Pn	02 48 54.8	+0.7
IMMV				AML	AML	02 49 36.8	
	comp=N,8084μm,0.8s						
IMMV				AML	AML	02 49 50.5	
	comp=E,2949μm,0.7s						
LAKA	Lakka	3.66	31	*e*Pn	Pn	02 48 56.5	+1.8
LAKA				*e*Sn	Sb	02 49 43.0	-4.3
LAKA	Lakka	3.66	31	P	Pn	02 48 56.5	+1.8
LAKA				S	Sb	02 49 43.0	-4.3
KRND	KRANIDI	3.67	51	P	Pn	02 48 56.5	+1.8
CHAN	Chania	3.67	82	P	Pn	02 48 55.0	+0.2
CHAN				S	Sn	02 49 36.8	-1.4
GVD	Gavdhos	3.71	93	P	Pn	02 48 57.1	+1.7
GVD	Gavdhos	3.71	93	*e*Pn	Pn	02 48 55.5	+0.1
GVD	Gavdhos	3.71	93	P	Pn	02 48 55.5	+0.1
GVD	Gavdhos	3.71	93	P	Pn	02 48 55.8	+0.4
ALIK	Aliki, Aigiali	3.74	32	P	Pn	02 48 58.8	+3.1
ALIK				S	Sb	02 49 44.9	-4.5
LKD2	Lefkada island	3.76	13	P	Pn	02 48 58.9	+2.8
LKD2	Lefkada island	3.76	13	P	Pn	02 48 58.9	+2.8
LKD2	Lefkada island	3.76	13	P	Pn	02 48 59.2	+3.1
VAM	Vamos	3.79	84	P	Pn	02 48 56.7	+0.2
VAM				S	Sn	02 49 39.5	-1.7
VAM	Vamos	3.79	84	P	Pn	02 48 56.7	+0.2
VAM				S	Sn	02 49 39.5	-1.7
VAM	Vamos	3.79	84	P	Pn	02 48 56.7	+0.2
VAM				S	Sn	02 49 39.5	-1.7
VAM	Vamos	3.79	84	P	Pn	02 48 57.0	+0.5
VAM				AML	AML	02 49 45.1	
	comp=N,4260μm,0.5s						
VAM				AML	AML	02 49 49.1	
	comp=E,2938μm,0.3s						
EFP	Efpalio	3.79	29	P	Pn	02 49 00.6	+4.1
DID	Didima	3.79	50	*e*Pn	Pn	02 48 58.1	+1.6
DID				*e*Sn	Sn	02 49 43.2	+1.9
DID	Didima	3.79	50	P	Pn	02 48 58.1	+1.6
DID				S	Sn	02 49 43.2	+1.9
DID	Didima	3.79	50	P	Pn	02 48 58.3	+1.7
TSLK	Tsoukalades, L	3.80	13	P	Pn	02 48 59.9	+3.4
PVO	Paravola	3.82	24	P	Pn	02 49 01.0	+4.1
ANX	Ano Chora	3.94	28	P	Pn	02 49 01.2	+2.6
ANX				S	Sn	02 49 49.5	+4.5
LTK	Loutraki	3.98	42	*e*Pn	Pn	02 49 01.1	+2.0
LTK	Loutraki	3.98	42	P	Pn	02 49 01.1	+2.0
DSF	Desfina	4.05	35	P	Pn	02 49 03.0	+2.9
DSF				S	Sn	02 49 50.4	+2.8
DSF	Desfina	4.05	35	P	Pn	02 49 03.0	+2.9
DSF				S	Sn	02 49 50.4	+2.8
PROD	Prodromos	4.12	39	P	Pn	02 49 02.9	+2.0
WDD	Wied Dalam	4.19	281	*e*Pn	Pn	02 48 60.0	-1.9
EVR	Evrytania	4.19	25	P	Pn	02 49 06.5	+4.5
EVR				S	Sn	02 49 55.2	+4.1
EVR	Evrytania	4.19	25	P	Pn	02 49 06.5	+4.5
EVR				S	Sn	02 49 55.2	+4.1
MHLO	Agia Marina, M	4.22	67	P	Pn	02 49 03.0	+0.7
SIVA	Sivas	4.29	90	P	Pn	02 49 05.2	+1.9
SIVA	Sivas	4.29	90	P	Pn	02 49 05.2	+1.9
CEL	Celeste	4.31	318	*e*Pn	Pn	02 49 04.3	+0.7
IDI	Anoyia	4.35	86	Pn	Pn	02 49 04.8	+0.5
	comp=E,13nm,0.3s,baz=258,slow=10,SNR=38						
IDI				Sn	Sn	02 49 53.0	-2.1
	comp=E,30nm,0.3s,baz=308,slow=20,SNR=5.2						
ATH	Athens Observa	4.38	48	P	Pn	02 49 05.9	+1.3
ATH	Athens Observa	4.38	48	P	Pn	02 49 05.9	+1.3
ATH	Athens Observa	4.38	48	P	Pn	02 49 05.9	+1.3
ATHU	Athens Univers	4.42	49	*e*Pn	Pn	02 49 06.0	+0.9
ATHU	Athens Univers	4.42	49	P	Pn	02 49 06.0	+0.9
IGT	Igoumenitsa	4.45	8	*e*Pn	Pn	02 49 07.5	+2.0
IGT	Igoumenitsa	4.45	8	P	Pn	02 49 07.5	+2.0
IGT	Igoumenitsa	4.45	8	*e*P	Pn	02 49 07.5	+2.0
SERI	Serifos	4.46	61	P	Pn	02 49 05.9	+0.2
LKR	Lokris	4.46	37	P	Pn	02 49 09.2	+3.5
LKR	Lokris	4.46	37	P	Pn	02 49 09.2	+3.5
AGG	Agios Georgios	4.47	29	*i* P	Pn	02 49 10.1	+4.2
AGG	Agios Georgios	4.47	29	P	Pn	02 49 09.8	+3.9
AGG	Agios Georgios	4.47	29	P	Pn	02 49 09.8	+3.9
ATAL	Atalanti	4.51	37	*e*Pn	Pn	02 49 08.5	+2.2
ATAL	Atalanti	4.51	37	P	Pn	02 49 08.5	+2.2
PTL	Penteli	4.52	48	*e*Pn	Pn	02 49 07.8	+1.3
PTL	Penteli	4.52	48	P	Pn	02 49 07.8	+1.3
DION	Dionisos Attik	4.58	49	P	Pn	02 49 08.4	+1.0
KEK	Kerkira	4.59	2	P	Pn	02 49 09.0	+1.6
TIP	Timpagrande	4.63	332	*e*Pn	Pn	02 49 07.9	-0.2
TIP	Timpagrande	4.63	332	P	Pn	02 49 08.2	+0.1
TIP	Timpagrande	4.63	332	‖ *i* P	Pn	02 49 08.2	+0.1
JAN	Janina	4.64	12	P	Pn	02 49 11.4	+3.2
JAN	Janina	4.64	12	P	Pn	02 49 11.4	+3.1
SMIA	Simia	4.75	37	P	Pn	02 49 12.1	+2.5
SRN	Sarande	4.76	4	P	Pn	02 49 11.6	+1.8
SRN	Sarande	4.76	4	P	Pn	02 49 11.6	+1.8
SRN	Sarande	4.76	4	*i* PN	Pn	02 49 06.3	-3.5
SRN				*i* SN	Sn	02 49 56.1	-8.9
VAE	Valguarnera	4.79	301	Pn	Pn	02 49 12.2	+1.9
	comp=E,91nm,0.3s,baz=96,slow=24,SNR=207						
VAE				Sn	Sn	02 50 03.6	-2.3
	comp=E,41nm,0.3s,baz=66,slow=12,SNR=3.4						
MRKA	Markates	4.81	41	P	Pn	02 49 12.2	+1.7
LAST	Lasithi	4.83	88	P	Pn	02 49 11.6	+0.7
LAST	Lasithi	4.83	88	P	Pn	02 49 11.6	+0.7
LAST				S	Sn	02 50 06.4	-0.6
THL	Klokotos Trika	4.84	23	P	Pn	02 49 14.2	+3.3
NPS	Neapolis	4.94	87	P	Pn	02 49 12.8	+0.5
NPS	Neapolis	4.94	87	P	Pn	02 49 12.8	+0.5
NPS	Neapolis	4.94	87	P	Pn	02 49 12.8	+0.5
KPRO	Kipourio	5.03	16	P	Pn	02 49 17.4	+3.8
FYTO	Fytoko, Volos	5.05	31	P	Pn	02 49 16.2	+2.4
LRSO	Larissa Observ	5.07	25	P	Pn	02 49 17.1	+3.1
NEO	Neokhori	5.09	34	P	Pn	02 49 17.0	+2.6
NEO				S	Sn	02 50 16.6	+3.4
NEO	Neokhori	5.09	34

TIR	Tirane	6.22	2	ePn	Pn	02 49 31.9	+1.9
TIR	Tirane	6.22	2	⇓iP	Pn	02 49 31.7	+1.9
TIR	Tirane	6.22	2	eP	Pn	02 49 31.9	+2.0
GRG	Griva	6.24	20	P	Pn	02 49 32.5	+2.4
OUR	Ouranopolis	6.27	33	iP	Pn	02 49 33.6	+3.2
OUR	Ouranopolis	6.27	33	ePn	Pn	02 49 32.6	+2.2
OUR	Ouranopolis	6.27	33	P	Pn	02 49 32.6	+2.2
OUR	Ouranopolis	6.27	33	eP	Pn	02 49 32.6	+2.2
BAI	Bari	6.34	341	⇑iPn	Pn	02 49 31.6	+0.1
BAI				Sn	Sn	02 50 40.8	-3.2
KRUS	Krusevo	6.38	11	iPn	Pn	02 49 34.4	+2.4
SMG	Samos	6.40	64	P	Pn	02 49 33.1	+0.8
SMG	Samos	6.40	64	P	Pn	02 49 33.1	+0.8
SOH	Sokhos	6.42	27	P	Pn	02 49 35.4	+2.7
SOH	Sokhos	6.42	27	P	Pn	02 49 35.4	+2.7
SOH	Sokhos	6.42	27	P	Pn	02 49 35.4	+2.7
SIGR	SIGRI	6.46	49	eP	Pn	02 49 35.8	+2.6
URLA	Izmir	6.50	58	iP	Pn	02 49 35.8	+2.1
LIA	Limnos Island	6.53	41	P	Pn	02 49 36.1	+2.1
LIA	Limnos Island	6.53	41	P	Pn	02 49 36.1	+2.1
KNT	Kendrikon	6.57	22	eP	Pn	02 49 37.7	+3.0
PHP	Peshkopia	6.59	6	P	Pn	02 49 36.9	+1.9
PHP	Peshkopia	6.59	6	P	Pn	02 49 36.9	+1.9
PHP	Peshkopia	6.59	6	P	Pn	02 49 36.9	+1.9
VAY	Valandovo	6.62	20	ePn	Pn	02 49 38.0	+2.6
VAY				eSn	Sn	02 50 52.4	+1.5
VAY	Valandovo	6.62	20	iPn	Pn	02 49 38.0	+2.6
DAT	Datca	6.69	74	eP	Pn	02 49 37.6	+1.2
GCAM	G?zelcaml?	6.69	65	eP	Pn	02 49 38.1	+1.9
SRS	Serrai	6.77	27	P	Pn	02 49 39.1	+1.7
SRS	Serrai	6.77	27	P	Pn	02 49 39.1	+1.7
SRS	Serrai	6.77	27	P	Pn	02 49 39.1	+1.7
ULC	Ulcinj	6.84	358	⇑iPn	Pn	02 49 38.8	+0.5
ULC				eSn	Sn	02 50 55.5	-0.7
STIP	Stip	6.88	17	iPn	Pn	02 49 42.8	+4.0
PUK	Puka	6.92	2	iPN	Pn	02 49 36.3	-3.1
PUK				iSN	Sn	02 50 46.8	-11
SKO	Skopje	7.00	11	ePn	Pn	02 49 43.2	+2.7
SKO				eSn	Sn	02 51 00.4	+0.3
SKO	Skopje	7.00	11	iPn	Pn	02 49 43.1	+2.6
ARG	Arkhangelos	7.04	79	eP	Pn	02 49 43.3	+2.2
DRME	Dracevica, Mon	7.06	358	⇓iPn	Pn	02 49 42.0	+0.5
DRME				eSn	Sn	02 51 00.9	-0.8
DRME	Dracevica, Mon	7.06	358	ePn	Pn	02 49 41.9	+0.5
NVR	Nevrokopi	7.07	27	P	Pn	02 49 44.0	+2.4
NVR	Nevrokopi	7.07	27	P	Pn	02 49 44.0	+2.4
SMTH	Samothraki Isl	7.12	40	ePn	Pn	02 49 43.9	+1.7
SMTH	Samothraki Isl	7.12	40	P	Pn	02 49 43.9	+1.7
BUM	Brajici-Budva	7.19	356	⇑iPn	Pn	02 49 43.7	+0.5
BUM				eSn	Sn	02 51 03.9	-1.1
BCI	Bajram Curri	7.25	3	iPN	Pn	02 49 41.5	-2.4
BCI				iSN		02 50 01.1	
PDG	Podgorica	7.30	358	ePn	Pn	02 49 45.0	+0.3
PDG				eSn	Sn	02 51 05.5	-2.1
PDG	Podgorica	7.30	358	⇓iP	Pn	02 49 45.1	+0.3
PDG	Podgorica	7.30	358	ePn	Pn	02 49 44.9	+0.3
TTG	Podgorica	7.30	358	⇓iPn	Pn	02 49 45.2	+0.5
TTG				eSn	Sn	02 51 06.6	-1.0
TTG	Podgorica	7.30	358	ePn	Pn	02 49 45.2	+0.5
TTG	Podgorica	7.30	358	eP	Pn	02 49 45.2	+0.5
HCY	Herceg Novi	7.37	354	⇑iPn	Pn	02 49 45.8	+0.2
HCY				eSn	Sn	02 51 07.7	-1.5
HCY	Herceg Novi	7.37	354	ePn	Pn	02 49 45.4	-0.2
MATC	Matruh	7.43	118	P	Pn	02 49 43.7	-2.8
	baz=121						
MATC				S	Sn	02 50 58.0	-13
	baz=121						
MATC				AMP		02 51 00.0	
	baz=121						
CEME	Cevo	7.43	356	⇑iPn	Pn	02 49 46.9	+0.3
CEME				eSn	Sn	02 51 09.6	-1.4
PVY	Plav	7.47	2	⇑iPn	Pn	02 49 48.4	+1.3
PVY				eSn	Sn	02 51 10.9	-1.0
TURN	Turunc	7.52	74	eP	Pn	02 49 45.7	-2.0
GELI	Tayfur-Gelibol	7.59	44	eP	Pn	02 49 51.3	+2.7
RDO	Rodhopi	7.63	36	eP	Pn	02 49 50.9	+1.7
RDO	Rodhopi	7.63	36	ePn	Pn	02 49 50.9	+1.7
RDO	Rodhopi	7.63	36	P	Pn	02 49 50.9	+1.7
ENEZ	Enez	7.64	41	eP	Pn	02 49 51.7	+2.4
TREB	Trebinje	7.65	353	ePn	Pn	02 49 49.7	+0.1
TREB				eSn	Sn	02 51 12.7	-3.4
TREB	Trebinje	7.65	353	ePn	Pn	02 49 49.0	-0.4
NKME	Niksic	7.65	357	⇑iPn	Pn	02 49 50.4	+0.9
NKME				eSn	Sn	02 51 15.2	-1.1
SWA2		7.69	138	P	Pn	02 49 45.7	-4.4
	baz=140						
NKY	Niksic	7.70	357	⇑iPn	Pn	02 49 50.7	+0.5
NKY				eSn	Sn	02 51 16.1	-1.4
ALN	Alexandroupoli	7.70	40	eP	Pn	02 49 52.2	+2.1
ALN	Alexandroupoli	7.70	40	ePn	Pn	02 49 52.5	+2.3
ALN	Alexandroupoli	7.70	40	eP	Pn	02 49 52.5	+2.3
KOME	Kolasin	7.72	360	⇑iPn	Pn	02 49 52.3	+1.8
KOME				eSn	Sn	02 51 16.9	-1.1
LPK	Lapseki	7.74	45	eP	Pn	02 49 52.2	+1.6
IVA	Berane	7.75	2	⇑iPn	Pn	02 49 52.7	+1.9
IVA				eSn	Sn	02 51 17.3	-1.3
ERIK	Erikli-Kesan	7.79	43	eP	Pn	02 49 53.5	+2.1
BRY	Bratogost	7.81	354	⇑iPn	Pn	02 49 52.4	+0.6
BRY				eSn	Sn	02 51 18.6	-1.8
BRY	Bratogost	7.81	354	ePn	Pn	02 49 51.8	0.0
STON	Ston	7.88	350	ePn	Pn	02 49 52.6	+0.1
STON				Sn	Sn	02 51 17.1	-4.7
STON	Ston	7.88	350	ePn	Pn	02 49 52.2	-0.3
BARS	Barje	7.88	12	ePn	Pn	02 49 54.6	+2.0
BARS				eSn	Sn	02 51 21.0	-0.9
KDZ	Kurdzhali	7.97	33	eP	Pn	02 49 56.1	+2.3
BALB	Balikesir	8.00	53	eP	Pn	02 49 56.8	+2.5
BALB	Balikesir	8.00	53	ePn	Pn	02 49 57.2	+2.9
VTS	Vitosha	8.01	20	ePn	Pn	02 49 56.3	+1.7
VTS				eSn	Sn	02 51 25.6	+0.3
VTS	Vitosha	8.01	20	ePn	Pn	02 49 56.6	+2.0
VTS	Vitosha	8.01	20	⇑iP	Pn	02 49 56.6	+2.0
VTS	Vitosha	8.01	20	eP	Pn	02 49 56.6	+2.0
UPM	Unac-Piva	8.09	356	⇑iPn	Pn	02 49 55.0	+1.3
UPM				eSn	Sn	02 51 25.3	-1.9
UPM	Unac-Piva	8.09	356	ePn	Pn	02 49 55.9	+0.2
SJES	Sjenica	8.14	2	ePn	Pn	02 49 57.5	+1.3
SJES				eSn	Sn	02 51 26.2	-2.1
SELS	Selova	8.18	8	ePn	Pn	02 49 57.4	+0.7
SELS				eSn	Sn	02 51 26.5	-2.7
RKY	Sarkoy-Tekirda	8.18	45	eP	Pn	02 49 59.0	+2.2
PLE	Pljevlja	8.20	359	⇓iPn	Pn	02 49 58.6	+1.5
PLE				eSn	Sn	02 51 28.7	-1.2
AKAS	Kas	8.23	79	eP	Pn	02 49 58.9	+1.3
KEST	Kesra	8.38	277	Pn	Pn	02 49 59.0	-0.5
	comp=E,1.1nm,0.3s,baz=88,slow=4.1,SNR=17						
KEST				Sn	Sn	02 51 26.6	-7.5
	comp=E,6.1nm,0.3s,baz=268,slow=23,SNR=22						
KEST				LR	LR	02 53 06.4	
	comp=E,157nm,19.0s,baz=300,slow=37						
ZAPS	Zavoj	8.48	15	ePn	Pn	02 50 03.5	+2.6
ZAPS				eSn	Sn	02 51 36.3	-0.3
ELL	Elmali	8.54	76	eP	Pn	02 50 02.8	+1.1
KCTX	Karacabey (Bur	8.65	51	eP	Pn	02 50 05.2	+2.0
BOVS	Bovan	8.66	10	ePn	Pn	02 50 04.3	+1.0
BOVS				eSn	Sn	02 51 39.6	-1.4
AQU	L'Aquila	8.68	328	ePn	Pn	02 50 05.1	+1.4
AQU	L'Aquila	8.68	328	eP	Pn	02 50 05.1	+1.4
AQU	L'Aquila	8.68	328	ePn	Pn	02 50 05.9	+2.2
EDRB	Edirne	8.75	38	eP	Pn	02 50 06.8	+2.2
GRUS	Gruza	8.80	5	ePn	Pn	02 50 05.6	+0.4
GRUS				eSn	Sn	02 51 41.1	-3.4
ZAGS	Zajecar	8.92	12	ePn	Pn	02 50 09.4	+2.5
KORT	Korkueli	8.92	75	eP	Pn	02 50 09.1	+2.0
HAPS	Han Pijesak,BI	8.97	357	ePn	Pn	02 50 07.1	-0.5
HAPS				eSn	Sn	02 51 44.2	-4.5
HAPS	Han Pijesak,BI	8.97	357	ePn	Pn	02 50 06.7	-0.9
DIVS	Divibare	8.97	2	ePn	Pn	02 50 08.0	+0.3
DIVS				eSn	Sn	02 51 45.2	-3.6
DIVS	Divibare	8.97	2	ePn	Pn	02 50 08.2	+0.5
TRUS	Trudelj	9.11	4	ePn	Pn	02 50 09.6	+0.1
TRUS				eSn	Sn	02 51 48.6	-3.6
BCK	Bucak	9.19	72	eP	Pn	02 50 11.4	+0.7
ISP	Isparta	9.22	70	eP	Pn	02 50 13.0	+1.9
SVIS	Svilajnac	9.22	7	ePn	Pn	02 50 11.6	+0.6
TEKS	Tekeris	9.42	360	ePn	Pn	02 50 14.3	+0.6
TEKS				eSn	Sn	02 51 55.0	-4.7
TEKS				eSn	Sn	02 51 55.1	-4.6
TEKS	Tekeris	9.42	360	ePn	Pn	02 50 09.6	-4.1
KUBS	Kucevo	9.42	9	ePn	Pn	02 50 14.0	+0.3
MGRS	Mrkonjic Grad	9.48	349	ePn	Pn	02 50 16.2	+1.6
KLYT	Kilyos	9.64	48	⇑iP	Pn	02 50 19.1	+2.4
MDVR	Moldovita	9.79	9	⇑iP	Pn	02 50 19.4	+0.6
BLY	Banja Luka	9.79	350	ePn	Pn	02 50 19.5	+0.7
BLY				eSn	Sn	02 52 03.7	-5.1
BLY	Banja Luka	9.79	350	ePn	Pn	02 50 19.3	+0.5
BLY	Banja Luka	9.79	350	⇑iP	Pn	02 50 19.5	+0.7
BLY	Banja Luka	9.79	350	ePn	Pn	02 50 19.8	+1.0
UDBI	Udbina	9.84	344	ePn	Pn	02 50 20.7	+1.2
FRGS	Fruska Gora	10.03	1	eSn	Sn	02 52 10.4	-4.2
FRGS	Fruska Gora	10.03	1	ePn	Pn	02 50 22.2	+0.1
NVLJ	Novalja	10.10	340	ePn	Pn	02 50 22.8	-0.2
PPCY	Paphos	10.48	88	P	Pn	02 50 26.5	-1.7
GZR	Gura Zlata	10.55	12	⇑iP	Pn	02 50 31.7	+2.5
BZS	Buzias	10.60	8	ePn	Pn	02 50 30.3	+0.4
BZS				eSn	Sn	02 52 24.5	-4.1
BZS	Buzias	10.60	8	⇓iP	Pn	02 50 30.2	+0.4
ALFC	Alefka	10.66	86	P	Pn	02 50 27.2	-3.6
ALFC				S	Sn	02 52 15.9	-14
HNAT	Natroun	10.81	117	P	Pn	02 50 29.4	-3.5
	baz=119						
BOJS	Bojanci	10.88	344	iPn	Pn	02 50 34.5	+0.7
BOJS				iSn	Sn	02 52 30.1	-5.4
HFRF	Wahat Farafira	10.91	134	P	Pn	02 50 29.2	-5.0
	baz=136						
RIY	Rijeka	10.91	341	ePn	Pn	02 50 34.0	-0.1
SZAC	Souni	10.93	88	P	Pn	02 50 32.7	-1.8
SZAC				S	Sn	02 52 22.8	-14
GBRS	Gornja Briga	11.02	342	iPn	Pn	02 50 36.6	+1.0
ZAG	Zagreb	11.04	347	ePn	Pn	02 50 36.5	+0.6
VOIR		11.12	20	⇓iP	Pn	02 50 38.7	+1.7
VOIR		11.12	20	P	Pn	02 50 40.4	+3.4
KNDS	Knezji Dol	11.12	341	iPn	Pn	02 50 37.4	+0.2
CRES	Cresnjev	11.14	345	ePn	Pn	02 50 36.9	-0.4
SIRR	Siria	11.25	7	⇑iP	Pn	02 50 39.6	+0.8
VISS	Visnje	11.26	343	iPn	Pn	02 50 39.4	+0.4
VISS				iSn	Sn	02 52 40.0	-4.9
CSS	Mathiatis	11.28	87	ePn	Pn	02 50 37.7	-1.5
CSS	Mathiatis	11.28	87	P	Pn	02 50 36.8	-2.4
CSS				S	Sn	02 52 30.6	-15
CEY	Cerknica	11.31	341	ePn	Pn	02 50 39.5	-0.1
MLR	Muntele Rosu	11.44	23	Pn	Pn	02 50 44.7	+3.2
	comp=E,0.7nm,0.3s,baz=343,slow=18,SNR=14						
MLR				Sn	Sn	02 52 53.1	+3.8
	comp=E,0.4nm,0.3s,baz=308,slow=23,SNR=1.6						
MLR				LR	LR	02 56 44.3	
	comp=E,95nm,20.9s,baz=168,slow=45						
MLR	Muntele Rosu	11.44	23	ePn	Pn	02 50 44.1	+2.6
MLR				eSn	Sn	02 52 53.1	+3.8
MLR	Muntele Rosu	11.44	23	⇑iP	Pn	02 50 43.8	+2.3
BEHE	Becsehely	11.54	350	ePn	Pn	02 50 43.3	+0.6
BEHE	Becsehely	11.54	350	EPn	Pn	02 50 42.1	-0.6
BEHE				Sn	Sn	02 52 46.1	-5.4
JAVS	Javornik	11.55	340	iPn	Pn	02 50 42.5	-0.5
KOT	Kottamia	11.56	113	P	Pn	02 50 38.5	-4.6
	baz=115						
LJU	Ljubljana	11.56	342	ePn	Pn	02 50 43.4	+0.3
HHAG	Hagoal	11.75	113	P	Pn	02 50 41.8	-3.9
	baz=114						
TIH	Tihany	11.84	354	EPn	Pn	02 50 47.0	+0.3
TIH				Sn	Sn	02 52 56.0	-2.8
PHNC	Paralimni	11.85	86	P	Pn	02 50 45.8	-1.2
NBNS	Bani Suef	11.88	120	P	Pn	02 50 43.6	-3.8
	baz=121						
DRGR		11.90	10	ePn	Pn	02 50 49.0	+1.3
DRGR				eSn	Sn	02 52 56.5	-4.0
DRGR		11.90	10	⇑iP	Pn	02 50 48.3	+0.6
DRGR		11.90	10	P	Pn	02 50 49.6	+1.9
CFR	Carcaliu	11.98	30	⇓iP	Pn	02 50 50.0	+1.2
PERS	Pernice	11.99	345	iPn	Pn	02 50 49.7	+0.8
PERS				iSn	Sn	02 52 55.3	-7.4
PLOR	Plostina	11.99	24	⇑iP	Pn	02 50 51.2	+2.3
PLOR	Plostina	11.99	24	P	Pn	02 50 51.2	+2.3
OBKA	Obir	11.99	343	ePn	Pn	02 50 50.0	+0.9
	comp=E,4.2nm,0.2s						
OBKA				eSn	Sn	02 52 55.4	-7.5
	comp=E,22nm,0.5s						
VRI	Vrincioaia	12.03	25	⇓iP	Pn	02 50 51.5	+2.1
VRI	Vrincioaia	12.03	25	P	Pn	02 50 54.1	+4.7
SOKA	Soboth	12.04	345	ePn	Pn	02 50 49.9	+0.2
	comp=E,11nm,0.3s,SNR=9.4						
SOKA				Sn	Sn	02 52 56.8	-7.3
	comp=E,14nm,0.5s						
BR101	Keskin Array S	12.08	64	ePn	Pn	02 50 53.1	+2.8
BR101				eSn	Sn	02 53 04.3	-0.9
BR131	Keskin Array S	12.08	64	ePn	Pn	02 50 52.8	+2.4
BRTR	Keskin Array B	12.08	64	Pn	Pn	02 50 53.1	+2.8
	comp=E,0.3nm,0.3s,baz=252,slow=14,SNR=16						
BRTR				Sn	Sn	02 53 04.3	-0.9
	comp=E,0.1nm,0.3s,baz=199,slow=14,SNR=1.1						
BRTR				LR	LR	02 56 47.7	
	comp=E,61nm,18.3s,baz=263,slow=43						
TAMRE	El Minia	12.19	124	P	Pn	02 50 47.7	-4.0
	baz=126						
MYKA	Terra Mystica	12.34	341	ePn	Pn	02 50 54.4	+0.7
	comp=E,2.3nm,0.3s						
MYKA				Sn	Sn	02 53 06.0	-5.3
	comp=E,5.4nm,0.4s						
LTVH	Ltavrtes, Hu	12.38	7	Sn	Sn	02 53 10.0	-2.1
ZAF	Zafarana	12.43	114	P	Pn	02 50 50.0	-4.9
	baz=116						
ARSA	Arzberg	12.49	347	ePn	Pn	02 50 56.1	+0.3
	comp=E,16nm,0.3s,SNR=28						
ARSA				eSn	Sn	02 53 07.7	-7.3
	comp=E,9.2nm,0.6s						
ZNM	Zenema	12.62	113	P	Pn	02 50 52.8	-4.8
	baz=115						
SRO2	Moca	12.66	356	eSN	Sn	02 53 11.7	-7.4
SRO	Srobarova	12.72	356	eSN	Sn	02 53 16.5	-3.9
SOP	Sopron	12.75	351	EPn	Pn	02 51 00.1	+0.8
SOP				Sn	Sn	02 53 15.1	-6.2
HDK1	Dakhla	12.76	136	P	Pn	02 50 54.4	-5.2
	baz=137						
ABTA	Abfaltersbach	12.78	338	ePn	Pn	02 50 59.3	-0.5
	comp=E,5.2nm,0.4s,SNR=10.0						
ABTA				eSn	Sn	02 53 16.4	-5.7
	comp=E,7.8nm,0.6s						
PSZ	Piszkesteto	12.79	1	ePn	Pn	02 51 00.4	+0.5
PSZ	Piszkesteto	12.79	1	⇑iP	Pn	02 50 59.7	-0.2
PSZ	Piszkesteto	12.79	1	eP	Pn	02 51 00.4	+0.5
PSZ	Piszkesteto	12.79	1	EPn	Pn	02 51 01.1	+1.2
PSZ				Sn	Sn	02 53 16.1	-6.2
KBA	Koelnbreinsper	12.83	340	ePn	Pn	02 51 01.0	+0.4
	comp=E,2.9nm,0.3s,SNR=7.2						
OFRI	`Ofer	13.04	97	Pn	Pn	02 50 58.5	-4.9
OFRI				Sn	Sn	02 53 10.3	-18
HNTI	Hanita	13.09	94	Pn	Pn	02 50 59.7	-4.2
KZIT	Kziot	13.12	105	Pn	Pn	02 50 59.2	-5.3
KZIT				Sn	Sn	02 53 12.4	-18
GRB	Gharib	13.15	118	P	Pn	02 51 00.3	-4.6
	baz=119						
TRPA	Tarpa	13.19	9	EPn	Pn	02 51 07.0	+1.8
TRPA				Sn	Sn	02 53 29.1	-2.8
SLTI	Sal'it	13.19	98	Pn	Pn	02 51 00.5	-4.9
SLTI				Sn	Sn	02 53 14.1	-18
ZST	Bratislava	13.20	353	eP	Pn	02 51 05.0	-0.4
ZST				e		02 53 26.6	
ZST	Bratislava	13.20	353	ePN	Pn	02 51 04.9	-0.4
ZST	Bratislava	13.20	353	eSN	Sn	02 53 26.6	-5.5
DQRL	Deir Qamar	13.28	92	eP	Pn	02 51 02.3	-4.4
MMA0B	Mount Meron ar	13.29	95	Pn	Pn	02 51 02.2	-4.6
MMAI	Mount Meron Ar	13.29	95	Pn	Pn	02 51 02.9	-3.9
	comp=E,18nm,0.3s,baz=263,slow=12,SNR=60						
MMAI				Sn	Sn	02 53 18.6	-16
	comp=E,20nm,0.3s,baz=269,slow=25,SNR=9.5						
AMAZ	Amatzia	13.31	101	Pn	Pn	02 51 02.4	-4.7
AMAZ				Sn	Sn	02 53 16.6	-19
AMAZ	Amatzia	13.31	101	P	Pn	02 51 02.7	-4.4
AMAZ	Amatzia	13.31	101	P	Sn	02 53 18.2	-17
BHL	Bhannes	13.32	91	eP	Pn	02 51 02.1	-5.0
MODS	Modra-Piesok	13.35	353	eP	Pn	02 51 08.0	+0.5
MODS	Modra-Piesok	13.35	353	ePN	Pn	02 51 08.0	+0.5
MODS	Modra-Piesok	13.35	353	eSN	Sn	02 53 27.9	-8.1
KECS	Kecovo	13.37	3	eSN	Sn	02 53 31.6	-4.8
VYHS	Vyhne	13.38	358	eP	Pn	02 51 08.5	+0.7
VYHS				e		02 53 29.5	
VYHS	Vyhne	13.38	358	ePN	Pn	02 51 08.5	+0.7
VYHS	Vyhne	13.38	358	eSN	Sn	02 53 29.5	-7.0
GEM	Giv'at Ha'Em	13.46	94	Pn	Pn	02 51 04.6	-4.4
KSDI	Kefar Szold	13.46	94	Pn	Pn	02 51 03.7	-5.3
FUORN	Ofenpass-Fuorn	13.46	331	ePn	Pn	02 51 10.3	+1.0
KOLL	Kolacno	13.48	357	eSN	Sn	02 53 32.4	-6.6
NATI	Neve Ativ	13.51	93	Pn	Pn	02 51 05.4	-4.2
YTIR	Yattir	13.53	102	Pn	Pn	02 51 05.5	-4.6
YTIR				Sn	Sn	02 53 22.6	-18
RCY	Rachaya	13.54	92	eP	Pn	02 51 06.1	-4.2
HMDT	Nahal Hemdat	13.59	98	Pn	Pn	02 51 05.5	-5.2
HMDT				Sn	Sn	02 53 24.6	-17
BRBR	Barbar	13.65	93	eP	Pn	02 51 09.3	-2.6
BRBR				AML	AML	02 53 33.9	
	comp=N,36nm,0.3s						
BRBR				AML	AML	02 53 37.7	
	comp=E,28nm,0.3s						
SHMJ	Saham	13.65	95	P	Pn	02 51 09.2	-2.5
SHMJ	Saham	13.65	95	P	Sn	02 53 29.6	-14
DSI	Dead Sea	13.68	101	Pn	Pn	02 51 07.3	-4.7
DSI				Sn	Sn	02 53 25.1	-19
KRMI	Paran Flat	13.70	107	Pn	Pn	02 51 07.4	-5.0
KRMI				Sn	Sn	02 53 25.9	-19
DAVOX	Davos/Dischmat	13.75	331	Pn	Pn	02 51 15.0	+1.9
	comp=E,1.0nm,0.3s,baz=175,slow=10,SNR=8.3						
DAVOX				Sn	Sn	02 53 44.1	-1.8
	comp=E,0.5nm,0.3s,baz=338,slow=22,SNR=1.9						
DAVOX				LR	LR	02 57 37.8	
	comp=E,86nm,19.4s,baz=121,slow=42						
MZDA	Masada	13.75	102	Pn	Pn	02 51 07.9	-5.0
MZDA				Sn	Sn	02 53 26.7	-19
JAVC	Velka Javorina	13.80	355	ePN	Pn	02 51 15.7	+2.0
PRNI	Paran	13.82	106	Pn	Pn	02 51 09.3	-4.8
LISJ	El Lisan	13.87	102	P	Pn	02 51 10.6	-4.0
ZFRI	Zfri	13.88	105	Pn	Pn	02 51 09.5	-5.3
QASN	Qassioun	13.89	92	eP	Pn	02 51 10.7	-4.3
QASN				AML	AML	02 53 46.2	
	comp=E,37nm,0.5s						
QASN				AML	AML	02 53 46.6	
	comp=N,68nm,0.5s						
HKAT	Jabal Katrina	13.90	114	P	Pn	02 51 09.6	-5.7
	baz=115						
GHAJ	Ghor Haditha	13.91	101	Pn	Pn	02 51 11.3	-3.9
GHAJ	Ghor Haditha	13.91	101	P	Pn	02 51 11.4	-3.8
	comp=N,62nm,0.4s						
GHAJ	Ghor Haditha	13.91	101	P	Sn	02 53 31.9	-18
KOLS	Kolonicke sedl	13.95	7	eP	Pn	02 51 17.2	+1.6
KOLS	Kolonicke sedl	13.95	7	ePN	Pn	02 51 17.2	+1.6
KOLS	Kolonicke sedl	13.95	7	eSN	Sn	02 53 41.6	-8.8
HRFI	Mount Harif	13.98	107	Pn	Pn	02 51 11.6	-4.6
MBRI	Mt Berech	13.99	108	Pn	Pn	02 51 11.4	-5.0
WALJ	Wala	14.03	100	P	Pn	02 51 13.0	-3.8
	comp=N,111nm,0.5s						
TOTH	TOTAH	14.05	92	eP	Pn	02 51 13.5	-3.7
TOTH				AML	AML	02 53 45.5	
	comp=N,33nm,0.7s						
TOTH				AML	AML	02 53 55.3	
	comp=E,19nm,0.4s						
EIL	Elat	14.07	108	Pn	Pn	02 51 12.5	-5.0
	comp=E,2.5nm,0.3s,baz=245,slow=2.9,SNR=49						
EIL				Sn	Sn	02 53 33.2	-21
	comp=E,4.1nm,0.3s,baz=92,slow=22,SNR=6.0						
EIL	Elat	14.07	108	Pn	Pn	02 51 12.1	-5.4
AQBJ	Aqaba	14.13	108	P	Pn	02 51 14.0	-4.2
	comp=E,47nm,0.4s						
AQBJ	Aqaba	14.13	108	P	Sn	02 53 39.2	-16
KRUC	Moravsky	14.13	351	ePN	Pn	02 51 20.6	+2.5
JDRJ	Daraweish	14.20	103	P	Pn	02 51 15.6	-3.7
LPG	La Plagne	14.24	321	eP	Pn	02 51 25.2	+5.3
VRAC	Vranov	14.35	352	Pn	Pn	02 51 18.9	-2.2
	comp=E,0.3nm,0.3s,baz=167,slow=4.9,SNR=3.1						
VRAC				Sn	Sn	02 53 52.6	-7.6
	comp=E,0.1nm,0.3s,baz=76,slow=22,SNR=2

comp=Z,11nm,0.7s
IDID Didziasalis 20.79 12 *e*P **P 02 52 40.7 +1.6**
IDID IAmb IAmb 02 52 51.6
comp=Z,8.7nm,0.8s
ISAL Salakas 20.95 10 *e*P **P 02 52 42.3 +1.6**
ISAL IAmb IAmb 02 52 53.5
comp=Z,12nm,0.9s
VSR Storozhevoye 21.41 35 *e*P **P 02 52 47.1 +1.3**
VSR pmax pmax
comp=Z,9.0nm,0.4s
LPSR Galich'ya Gora 22.24 32 *e*P **P 02 53 00.0 +5.3**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
VRH Novokhopyorsk 22.65 38 *e*P **P 02 53 01.9 +2.8**
VRH pmax pmax
comp=Z,20nm,0.6s
OBN Obninsk 23.20 25 LR LR 03 03 27.9
comp=Z,13nm,21.8s,baz=142,slow=40
OBN Obninsk 23.20 25 *i* P **P 02 53 06.2 +1.5**
OBN pmax pmax
comp=Z,13nm,1.0s
VSU Vasula 23.83 9*c*e*P **P 02 53 13.3 +2.3**
VSU pmax pmax
comp=Z,21nm,0.7s
VSU Vasula 23.83 9 *e*P **P 02 53 12.8 +1.8**
VSU IAmb IAmb 02 53 22.2
comp=Z,40nm,0.9s
HFS Hagfors 25.32 353 P **P 02 53 25.9 +1.3**
comp=Z,1.7nm,0.5s,baz=156,slow=11,SNR=20
EKA Eskdalemuir Ar 25.58 329 P **P 02 53 27.9 +1.0**
comp=Z,2.1nm,0.6s,baz=140,slow=11,SNR=15
NB2 NORSAR Subarra 26.49 351 P **P 02 53 36.9 +1.7**
comp=Z,1.9nm,0.8s,baz=164,slow=10
NB200 NORSAR Array S 26.49 351 *e*P **P 02 53 36.5 +1.2**
NOA NORSAR Array B 26.49 351 P **P 02 53 36.5 +1.2**
comp=Z,1.2nm,0.8s,baz=163,slow=9.4,SNR=4.8
NOA LR LR 03 04 39.6
comp=Z,25nm,21.5s,baz=300,slow=38
FIA0 FINESS Array S 26.67 7 *e*P **P 02 53 39.2 +2.5**
FIA0 FINESS Array S 26.67 7 *e*P **P 02 53 39.2 +2.5**
FINES FINESS Array B 26.67 7 P **P 02 53 39.2 +2.5**
comp=Z,1.6nm,0.5s,baz=175,slow=9.8,SNR=12
TOA1 Torodi Ar. Sit 27.20 221 *e*P **P 02 53 38.9 -3.1**
TORD Torodi Ar. Bea 27.20 221 P **P 02 53 38.9 -3.1**
comp=Z,3.9nm,0.8s,baz=32,slow=9.0,SNR=23
KLMR Klimovskoe 28.76 20 P **P 02 53 55.0 -0.5**
KLMR pmax pmax
comp=Z,4.0nm,0.8s
GEYT Alibeck 30.95 73 P **P 02 54 17.3 +2.1**
comp=Z,1.2nm,0.4s,baz=274,slow=8.5,SNR=2.8
AKTO Aktyubinsk 31.69 49 P **P 02 54 24.4 +2.9**
comp=Z,0.5nm,0.3s,baz=270,slow=11,SNR=3.4
ARU Arti 33.88 39⇑*e*P **P 02 54 43.1 +2.5**
ARU pmax pmax
comp=Z,10.0nm,2.9s
ARCES ARCESS Array B 34.62 4 P **P 02 54 48.9 +2.0**
comp=Z,12nm,0.4s,baz=196,slow=7.6,SNR=6.6
DBIC Dimbokro 36.15 224 P **P 02 54 57.6 -3.0**
comp=Z,7.8nm,0.7s,baz=13,slow=8.5,SNR=13
BRVK Borovoye 39.65 47 *e*P **P 02 55 31.1 +1.4**
BRVK Borovoye 39.65 47*de*P **P 02 55 31.7 +1.9**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 39.71 47 P **P 02 55 32.4 +2.1**
comp=Z,2.2nm,0.6s,baz=261,slow=5.5,SNR=17
KK31 Karatay Array 39.80 63 *e*P **P 02 55 32.9 +1.7**
KK31 Karatay Array 39.80 63 *e*P **P 02 55 32.9 +1.7**
KKAR Karatay Array 39.80 63 *e*P **P 02 55 33.0 +1.8**
KKAR Karatay Array 39.80 63 *e*P **P 02 55 33.0 +1.8**
OTUK Ortayu 40.75 55 P **P 02 55 39.6 +0.6**
OTUK pmax pmax
comp=Z,3.0nm,1.4s
AAK Ala-Archa 42.76 63 P **P 02 55 57.5 +1.7**
comp=Z,1.4nm,0.3s,baz=233,slow=10,SNR=1.9
SPA0 Spitsbergen Ar 43.18 359 *e*P **P 02 56 00.6 +2.1**
SPITS Spitsbergen Ar 43.18 359 P **P 02 56 00.6 +2.1**
comp=Z,2.3nm,0.5s,baz=144,slow=10,SNR=11
KSH Kashi 44.45 67 *e*P **P 02 56 13.3 +4.0**
KURBB Kurchatov Arra 44.70 51 P **P 02 56 12.5 +1.5**
comp=Z,2.8nm,0.9s,baz=282,slow=8.5,SNR=17
KURK Kurchatov 44.75 51 *e*P **P 02 56 12.8 +1.4**
KURK Kurchatov 44.75 51 *e*P **P 02 56 12.8 +1.4**
NVS Novosibirsk 47.34 45 *e*P **P 02 56 34.3 +2.5**
NVS pmax pmax
comp=Z,21nm,0.8s
NVS pmax pmax
comp=N,5.0nm,0.9s
NVS pmax pmax
comp=E,7.0nm,0.7s
MK31 Makanchi Array 47.60 56 *e*P **P 02 56 35.4 +1.5**
MK31 Makanchi Array 47.60 56 *e*P **P 02 56 35.4 +1.5**
MK32 Makanchi Array 47.60 56 *e*P **P 02 56 35.4 +1.4**
MKAR Makanchi Array 47.60 56 P **P 02 56 35.4 +1.4**
comp=E,3.3nm,0.6s,baz=272,slow=7.4,SNR=27
ZAA0 Zalesovo Array 48.33 46 *e*P **P 02 56 41.1 +1.7**
ZAA1 Zalesovo Array 48.33 46 *e*P **P 02 56 41.1 +1.7**
ZALV Zalesovo Beam 48.33 46 P **P 02 56 41.1 +1.7**
comp=E,11nm,0.5s,baz=273,slow=9.0,SNR=12
DGZ Jazzator, Alta 50.49 51⇑*e*P **P 02 56 58.1 +1.9**
DGZ pmax pmax
comp=Z,1.0nm,0.6s
WMQ Urumqi 51.95 59 *e*P **P 02 57 09.8 +2.6**
WMQ LR LR
comp=N,370nm,39.1s
WMQ LR LR
comp=E,660nm,39.0s
ZAK Zakamensk 60.16 47 *e*P **P 02 58 05.0 -0.9**
ZAK pmax pmax
comp=Z,2.0nm,1.0s
TIXI Tiksi 62.78 20⇓*e*P **P 02 58 26.2 +3.2**
TIXI pmax pmax
comp=Z,2.0nm,1.2s
SONA0 Songino Array 63.01 49 *e*P **P 02 58 26.7 +1.5**
SONM Songino Array 63.01 49 P **P 02 58 26.7 +1.5**
comp=Z,2.1nm,0.9s,baz=285,slow=8.5,SNR=9.6
ULN Ulaanbaatar 63.40 49⇓*e*P **P 02 58 30.4 +2.6**
ULN pmax pmax
comp=Z,1.0nm,0.5s
LZH Lanzhou 66.28 62 *e*P **P 02 58 49.6 +2.8**
LZH pP pwP 02 58 52.2 -1.0
LZH sP sP 02 58 54.3 +4.5
LZH PP **PP 03 01 12.5 +0.1**
LZH pmax pmax
comp=Z,28nm,1.3s
LZH pmax pmax
comp=Z,100nm,4.9s
CD2 Chengdu 68.64 67 *e*P **P 02 59 00.7 -0.9**
HHC Hu-ho-hao-te 69.42 54 *e*P **P 02 59 07.4 +1.0**
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,140nm,5.8s
KMI Kunming 70.71 72 P **P 02 59 15.7 +1.0**
KMI pmax pmax
comp=Z,9.0nm,0.9s
CM31 Chiang Mai Arr 71.11 80 *e*P **P 02 59 17.4 +0.5**
CMAR Chiang Mai Arr 71.11 80 P **P 02 59 17.4 +0.5**
comp=Z,0.9nm,0.4s,baz=294,slow=6.8,SNR=2.1
BDFB Brasilia 81.51 244 P **P 03 00 14.7 -1.4**
comp=Z,1.9nm,0.5s,baz=60,slow=9.1,SNR=4.2
BDFB LR LR 03 35 18.7
comp=Z,51nm,19.7s,baz=133,slow=35
KS15 Wonju Array Si 81.85 50 *e*P **P 03 00 18.8 +1.2**
KSAR Wonju Array Be 81.85 50 P **P 03 00 18.8 +1.3**
KSAR Wonju Array Be 81.85 50 P **P 03 00 18.8 +1.3**
KSRS Korea Array 81.87 50 P **P 03 00 18.8 +1.2**
comp=Z,0.3nm,0.3s,baz=308,slow=4.0,SNR=2.8
ECSD EROS Data Cent 82.40 319 *e*P **P 03 00 20.9 +0.5**
HYT Haines Junctio 82.57 349 *e*P **P 03 00 20.8 -0.2**
JNU Nakatsue 86.47 52 LR LR 03 44 50.8
comp=Z,48nm,18.1s,baz=183,slow=39
PDAR Pinedale Array 89.63 325 LR LR 03 42 13.4
comp=Z,66nm,19.1s,baz=228,slow=36
WMOK Wichita Mounta 89.76 314 P **P 03 00 56.8 0.0**
WMOK pmax pmax
comp=Z,5.0nm,2.5s
WR1 Warramunga Arr 121.14 94 *e*PKPdf **PKPdf 03 06 50.4 -1.1**
WRA Warramunga Arr 121.14 94 PKP **PKPdf 03 06 50.4 -1.1**
comp=Z,1.4nm,0.9s,baz=296,slow=1.5,SNR=2.5
AS31 Alice Springs 122.56 98 *e*PKPdf **PKPdf 03 06 53.4 -0.8**
ASAR Alice Springs 122.56 98 PKP **PKPdf 03 06 53.4 -0.8**
comp=Z,0.7nm,1.1s,baz=297,slow=1.7,SNR=2.9

MAN 02 02:59:28.8, 7°.29N×124°.81E, h22km, mb4.6, ML3.5, MS3.4, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.56**	**263**	⇓	*i*P	Pb	02 59 40.1	+0.1
CTBH					*i* S	Sb	02 59 48.8	+1.2
BUKP	**Musuan**	**0.64**	**23**	*e*P		Pb	02 59 40.9	-0.5
BUKP					*e*S	Sb	02 59 50.7	+0.8
DMPH	**Davao City--Mi**	**0.72**	**106**⇑	*e*P		Pn	02 59 43.3	-0.4
DMPH					*e*S	Sn	02 59 55.3	+1.2
SKMP	**Bagumbayan, Su**	**0.81**	**199**	*e*P		Pb	02 59 44.2	0.0
SKMP					*e*S	Sn	02 59 55.8	-0.4
CGP	**Cagayan de Oro**	**1.17**	**354**	*e*P		Pn	02 59 49.7	-0.1
CGP					*e*S	Sb	03 00 04.3	-0.6
MATI	**Mati**	**1.48**	**103**	*e*P		Pb	03 00 07.3	+12
MATI					*e*S	Sb	03 00 19.1	+5.2
DDMP	**Don Marcelino,**	**1.48**	**143**	*e*P		Pb	02 59 55.7	+0.1
DDMP					*e*S	Sb	03 00 20.7	+6.7
PAGZ	**Pagadian**	**1.52**	**292**	*e*P		Pn	02 59 55.2	+0.5
PAGZ					*e*S	Sb	03 00 14.9	-0.2
BUTP	**Butuan**	**1.85**	**26**	*e*P		Pb	03 00 05.0	+3.0
BUTP					*e*S	Sb	03 00 31.1	+6.3

MAN 02 03:11:27.1, 7°.36N×124°.78E, h12km, mb3.9, ML2.7, MS2.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.54**	**255**	⇓	*i*P	Pg	03 11 37.9	+0.1
CTBH					*i* S	Sb	03 11 46.1	-0.2
BUKP	**Musuan**	**0.59**	**29**	*e*P		Pb	03 11 39.6	+0.2
BUKP					*e*S	Sn	03 11 50.7	-0.2
SKMP	**Bagumbayan, Su**	**0.87**	**195**	*e*P		Pg	03 11 42.7	-1.3
SKMP					*e*S	Sg	03 11 54.8	-0.5
CGP	**Cagayan de Oro**	**1.09**	**356**⇑	*e*P		Pb	03 11 47.7	-0.2
CGP					*e*S	Sg	03 12 02.4	+0.2
PAGZ	**Pagadian**	**1.46**	**289**	*e*P		Pn	03 11 53.5	+0.2
PAGZ					*e*S	Sb	03 12 12.7	-0.2
DDMP	**Don Marcelino,**	**1.56**	**143**	*e*P		Pn	03 11 54.3	-0.4
DDMP					*e*S	Sg	03 12 20.4	+3.1

MEX 02 03:31:00.7±0.3, 18°.25N×103°.75W, h20km±768km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.38**	**85**	*e*P		Pb	03 31 07.4	-1.4
MMIG					*e*S	Sb	03 31 12.7	-1.6
EZ5V		**1.23**	**6**	*e*P		Pn	03 31 19.8	-3.2
EZ5V					*e*S	Sb	03 31 34.7	-4.2

IDC 02 03:34:03.6±30.0, 4°.10N×126°.22E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.6/43, mbtmp4.1/4, Error ellipse: s-maj=515.6km s-min=106.4km az=146.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.07**	**181**	P		P	03 39 00.7	+0.4
	1.8nm,0.6s,baz=12,slow=9.4,SNR=7.0							
WRA	**Warramunga Arr**	**25.19**	**162**	P		P	03 39 30.7	-0.4
	5.7nm,0.4s,baz=341,slow=12,SNR=62							
ASAR	**Alice Springs**	**28.60**	**165**	P		P	03 40 01.6	-0.2
	0.5nm,0.4s,baz=342,slow=7.6,SNR=13							
STKA	**Stephens Creek**	**38.66**	**159**	P		P	03 41 29.3	+0.3
	1.4nm,0.3s,baz=347,slow=7.8,SNR=5.7							

MAN 02 03:40:44.8, 7°.27N×124°.94E, h38km, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.61**	**11**	*e*P		Pn	03 40 57.8	+0.7
BUKP					*e*S	Sn	03 41 07.9	+2.1
CTBH	**Cotabato--PC H**	**0.69**	**266**⇑	*i*P		Pn	03 41 02.4	+4.3
CTBH					*i* S	Sn	03 41 04.3	-3.3
SKMP	**Bagumbayan, Su**	**0.85**	**208**	*e*P		Pn	03 41 01.1	+0.9
SKMP					*e*S	Sn	03 41 12.9	+1.5
CGP	**Cagayan de Oro**	**1.20**	**348**	*e*P		Pn	03 41 06.3	+1.3
CGP					*e*S	Sn	03 41 21.0	+0.9
PAGZ	**Pagadian**	**1.65**	**290**	*e*P		Pn	03 41 10.8	-0.3
PAGZ					*e*S	Sn	03 41 32.3	+1.2

*ISCJB **02** 04:05:23.5±0.4, 57°.15S±0°.10×141°.6W±0°.1, h10km, mb4.8/27, MS4.7/19, Error ellipse: s-maj=13.9km s-min=8.4km az=4.8*

*IDC **02** 04:05:23.1±0.9, 58°.11S×141°.45W, h0km, mb4.1/2, mb1 4.3/2, mb1mx3.8/20, mbtmp4.1/2, MS4.5/15, Ms1 4.5/15, ms1mx4.5/17, Error ellipse: s-maj=150.1km s-min=28.0km az=175.0*

*NEIC **02** 04:05:25.3±0.3, 57°.19S×141°.68W, h10km, mb5.0/24, MW5.4, Error ellipse: s-maj=14.7km s-min=7.9km az=181.0, Moment Tensor Solution. s16 Moment tensor: Scale 10^{17}Nm; M_{rr}0.01; $M_{\theta\theta}$1.34; $M_{\phi\phi}$-1.35; $M_{r\theta}$-0.35; $M_{\theta\phi}$0.90; $M_{\phi r}$0.22; Best double couple: $M_0$1.70000×10^{17} NP1:ϕ_s118.00000°, δ89.00000°, λ-14.00000°. Principal axes: T 1.6600, Plg9.0000°, Azm164.0000°; N 0.0300, Plg76.0000°, Azm295.0000°; P -1.6900, Plg11.0000°, Azm72.0000°;*

*GCMT **02** 04:05:29.3±0.1, 57°.05S±0°.01×141°.31W±0°.01, h22km, MW5.5/116, Moment Tensor Solution. s106,c180; s116,c216; Duration: 1§3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.12±.03; $M_{\theta\theta}$1.52±.03; $M_{\phi\phi}$-1.40±.02; $M_{r\theta}$0.07±.04; $M_{\theta\phi}$1.49±.02; $M_{\phi r}$-0.02±.04; Best double couple: $M_0$2.08700×10^{17} NP1:ϕ_s112.00000°, δ90.00000°, λ2.00000°. NP2:ϕ_s22.00000°, δ88.00000°, λ180.00000°. Principal axes: T 2.1480, Plg2.0000°, Azm337.0000°; N -0.1210, Plg88.0000°, Azm117.0000°; P -2.0270, Plg1.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 04:05:25.4±0.5, 57°.2S±0°.1×141°.61W±0°.09, h10km, n68, σ1§43/48, mb5.0/27, MS4.8/21, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**26.96**	**201**	*e*P		**P**	**04 11 07.2**	**+0.7**
VNDA	**Vanda**	**27.88**	**203**	LR		LR	04 19 16.2	
	comp=Z,1μm,20.6s,baz=79,slow=31							
VNDA	**Vanda**	**27.88**	**203**	*e*P		**P**	**04 11 15.1**	**+0.4**
	1.6nm,1.3s							
BFZ	**Birch Farm**	**31.60**	**283**	*e*P		**P**	**04 11 47.7**	**-0.3**
	44nm,1.2s							
LTZ	**Lake Taylor**	**32.27**	**276**	*e*P		**P**	**04 11 52.2**	**-1.8**
	28nm,1.3s							
RPZ	**Rata Peaks**	**32.31**	**274**	LR		LR	04 21 39.6	
	comp=Z,2μm,20.7s,baz=126,slow=30							
URZ	**Urewera**	**32.92**	**287**	LR		LR	04 22 15.6	
	comp=Z,1μm,20.0s,baz=126,slow=30							
QSPA	**South Pole Qui**	**32.97**	**180**	*e*P		**P**	**04 11 59.3**	**-0.7**
	9.9nm,1.1s							
TBI	**Tubuai**	**34.28**	**347**	*e*S		S	04 16 53.1	-45
	782nm,26.0s							
TBI				*e*LR		LR	04 20 34.1	
	comp=Z,5μm,29.0s,baz=174							
TBI	**Tubuai**	**34.28**	**347**	*e*T		T	04 47 17.3	
	69nm,0.3s							
RKT	**Rikitea**	**34.37**	**11**	*e*LR		LR	04 20 40.7	
	comp=Z,4μm,30.0s							
RKT	**Rikitea**	**34.37**	**11**	*e*T		T	04 47 39.0	
	5.6nm,0.2s							
RAR	**Rarotonga**	**38.33**	**332**	LR		LR	04 24 49.5	
	comp=Z,584nm,19.0s,baz=142,slow=30							
PPT2	**Papeete2**	**39.98**	**348**	*e*LR		LR	04 23 13.9	
	comp=Z,5μm,29.0s							
PPT	**Papeete**	**40.00**	**348**	LR		LR	04 25 11.1	
	comp=Z,972nm,19.4s,baz=148,slow=29							
PMOR	**Pomariorio Ree**	**42.37**	**351**	*e*T		T	04 57 26.6	
	3.7nm,0.3s							
EFI	**East Falkland**	**46.02**	**121**	*e*P		**P**	**04 13 48.0**	**-0.6**
	52nm,1.4s							
VNA3	**Neumayer Olymp**	**47.48**	**161**	P		**P**	**04 14 00.2**	**+0.4**
GO06	**Curarrehue**	**47.52**	**100**	*e*P		**P**	**04 14 00.4**	**-0.3**
	19nm,1.3s							
VNA2	**Neumayer--Watz**	**48.15**	**162**	P		**P**	**04 14 05.7**	**+0.8**
	baz=208,slow=7.9							
VNA1	**Neumayer--Stat**	**48.23**	**161**	P		**P**	**04 14 06.2**	**+0.7**
SNAA	**Sanae**	**48.24**	**164**	*e*P		**P**	**04 14 06.4**	**+0.7**
	6.5nm,1.0s							
GO05	**Huala**	**50.64**	**95**	*e*P		**P**	**04 14 24.3**	**-0.1**
	41nm,1.3s							
DZM	**Mont Dzumac**	**51.34**	**291**	*e*LQ		LQ	04 26 10.6	
	5μm,27.0s							
DZM				*e*LR		LR	04 28 17.7	
	comp=Z,1μm,25.9s							
MAW	**Mawson**	**54.21**	**191**	LR		LR	04 35 17.6	
	comp=Z,816nm,21.1s,baz=158,slow=34							
STKA	**Stephens Creek**	**56.86**	**262**	LR		LR	04 34 56.2	
	comp=Z,709nm,20.5s,baz=132,slow=31							
GO02	**Mina Guanaco**	**59.54**	**90**	*e*P		**P**	**04 15 28.0**	**-1.1**
	25nm,1.4s							
PB10	**IPOC Station P**	**60.33**	**88**	*e*P		**P**	**04 15 34.5**	**+0.2**
	28nm,1.0s							
LVC	**Limon Verde**	**61.95**	**89**	*e*P		**P**	**04 15 46.2**	**+0.6**
	11nm,1.3s							
CTAO	**Charters Tower**	**63.68**	**274**	*e*P		**P**	**04 15 57.4**	**+0.6**
	11nm,0.9s							
MNMC	**Minye Minye**	**64.39**	**86**	*e*P		**P**	**04 16 03.1**	**+1.3**
	4.7nm,0.8s							
CPUP	**Villa Florida**	**65.25**	**100**	LR		LR	04 39 36.6	
	comp=Z,254nm,18.2s,baz=220,slow=32							
NNA	**Nana**	**66.41**	**75**	*e*P		**P**	**04 16 14.7**	**0.0**
	28nm,1.3s							
AS31	**Alice Springs**	**67.50**	**261**	*e*P		**P**	**04 16 20.4**	**-1.0**
	1.1nm,0.9s							
ASAR	**Alice Springs**	**67.50**	**261**	P		**P**	**04 16 20.4**	**-1.0**
	1.4nm,0.8s,baz=137,slow=6.3,SNR=5.0							
ASAR				LR		LR	04 43 58.0	
	comp=Z,253nm,18.7s,baz=150,slow=34							
LPAZ	**La Paz**	**67.51**	**85**	P		**P**	**04 16 21.1**	**-1.2**
	2.8nm,1.1s,baz=223,slow=5.7,SNR=5.5							
LPAZ				LR		LR	04 36 11.9	
	comp=Z,126nm,22.0s,baz=206,slow=27							
LPAZ	**La Paz**	**67.51**	**85**	*e*P		**P**	**04 16 21.8**	**-0.5**
	4.3nm,1.1s							
WC3	**Warramunga Arr**	**70.25**	**264**	*e*P		**P**	**04 16 38.4**	**-0.2**
	5.5nm,1.0s							
WR1	**Warramunga Arr**	**70.28**	**264**	*e*P		**P**	**04 16 39.2**	**+0.5**
WRA	**Warramunga Arr**	**70.28**	**264**	P		**P**	**04 16 39.2**	**+0.5**
	122nm,0.3s,baz=160,slow=6.0,SNR=1.6							
WRAB	**Tennant Creek**	**70.28**	**264**	*e*P		**P**	**04 16 40.0**	**+1.2**
	9.5nm,0.6s							
COEN	**Coen**	**70.37**	**275**	*e*P		**P**	**04 16 37.5**	**-1.9**
	14nm,1.3s							
PMG	**Port Moresby**	**72.00**	**281**	*e*P		**P**	**04 16 50.7**	**+1.5**
	28nm,1.1s							
SPB	**Sao Paulo**	**72.70**	**107**	*e*P		**P**	**04 16 53.1**	**-0.2**
	10nm,1.2s							
PSAB1	**Pilbara Seismi**	**76.64**	**251**	*e*P		**P**	**04 17 13.8**	**-2.5**
	23nm,1.3s							
BDFB	**Brasilia**	**78.94**	**102**	LR		LR	04 48 33.0	
	comp=Z,222nm,20.1s,baz=203,slow=33							
ROSC	**El Rosal**	**82.00**	**68**	LR		LR	04 49 45.4	
	comp=Z,80nm,18.8s,baz=210,slow=32							
FAKI	**Fak Fak**	**85.47**	**272**	*e*P		**P**	**04 18 04.2**	**+0.9**
	8.8nm,1.1s							
MMRI	**Maumere**	**86.13**	**260**	*e*P		**P**	**04 18 07.9**	**+1.3**
	13nm,0.7s							
TXAR	**Lajitas Array**	**91.94**	**32**	LR		LR	04 50 26.2	
	comp=Z,134nm,20.7s,baz=0.0,slow=29							
TX31	**Lajitas Ar. Si**	**91.94**	**32**	*e*P		**P**	**04 18 34.2**	**+0.5**
	1.0nm,1.3s							
BOSA	**Boshof**	**93.82**	**168**	LR		LR	04 59 03.8	
	comp=Z,477nm,18.2s,baz=180,slow=35							
NVAR	**Mina Array Bea**	**97.26**	**18**	LR		LR	04 52 45.7	
	comp=Z,385nm,20.4s,baz=190,slow=29							
H10S3	**ASCENSION HYDR**	**101.17**	**126**	T		T	06 12 49.5	
	baz=207,slow=75,SNR=8.5							
H10S2	**ASCENSION HYDR**	**101.17**	**126**	T		T	06 12 49.7	
	baz=207,slow=75,SNR=9.4							
H10S1	**ASCENSION HYDR**	**101.19**	**126**	T		T	06 12 54.0	
	baz=207,slow=75,SNR=10							
ILAR	**Eielson Array**	**121.69**	**357**	PKP		**PKiKP**	**04 24 19.8**	**+1.9**
	1.1nm,1.0s,baz=224,slow=2.3,SNR=7.3							
ILB	**Eielson Array**	**121.69**	**357**	*e*PKPdf		**PKPdf**	**04 24 17.5**	**-0.2**
WMQ	**Urumqi**	**146.69**	**268**	*e*P		**PKPdf**	**04 25 05.8**	**+1.0**
WMQ				LR		LR		
	comp=N,500nm,33.1s							
WMQ				LR		LR		
	comp=E,390nm,27.1s							
WMQ				LR		LR		
	comp=Z,450nm,33.1s							
ESDC	**Sonseca Array**	**147.56**	**104**	PKPbc		**PKPbc**	**04 25 07.7**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=264,slow=11,SNR=3.3							
KSH	**Kashi**	**149.92**	**250**	*e*PKPbc		**PKPbc**	**04 25 13.4**	**-1.8**
KSH				PP		**PP**	**04 28 56.1**	**+6.3**
KSH				AMB		AMB		
	comp=Z,210nm,5.5s							
KSH				LR		LR		
	comp=N,360nm,9.6s							
KSH				LR		LR		
	comp=E,250nm,12.1s							
KSH				LR		LR		
	comp=Z,250nm,20.6s							
MK31	**Makanchi Array**	**151.52**	**268**	*e*PKPdf		**PKPdf**	**04 25 12.5**	**0.0**
MK32	**Makanchi Array**	**151.52**	**268**	*e*PKPbc		**PKPbc**	**04 25 17.9**	**-0.7**
MK32				*e*PKPab		**PKPab**	**04 25 26.1**	**-1.1**
MKAR	**Makanchi Array**	**151.52**	**268**	PKPbc		**PKPbc**	**04 25 17.9**	**-0.7**
	comp=Z,2.8nm,1.0s,baz=140,slow=3.2,SNR=9.6							
MKAR				PKPab		**PKPab**	**04 25 26.1**	**-1.1**
	comp=Z,7.2nm,0.9s,baz=106,slow=2.8,SNR=15							
ZALV	**Zalesovo Beam**	**153.94**	**283**	PKPab		**PKPab**	**04 25 35.9**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=102,slow=2.1,SNR=1.9							
ZAA1	**Zalesovo Array**	**153.95**	**283**	*e*PKPab		**PKPab**	**04 25 35.9**	**-1.2**
SPA0	**Spitsbergen Ar**	**157.64**	**12**	*e*PKPdf		**PKPdf**	**04 25 21.4**	**+1.4**
BVAR	**Borovoye Array**	**161.33**	**271**	PKPab		**PKPab**	**04 26 07.3**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=130,slow=7.8,SNR=3.1							

MAN 02 04:10:15.7, 7°.32N×124°.85E, h1km, mb4.3, ML3.1, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.60**	**21**	*e*P		Pg	04 10 27.4	+0.3
BUKP					*e*S	Sb	04 10 38.2	+0.2
CTBH	**Cotabato--PC H**	**0.60**	**261**	⇓	*i*P	Pg	04 10 27.5	+0.3
CTBH					*i* S	Sg	04 10 36.1	+1.0
SKMP	**Bagumbayan, Su**	**0.85**	**201**	*e*P		Pg	04 10 32.1	+0.1
SKMP					*e*S	Sn	04 11 09.4	+22
CGP	**Cagayan de Oro**	**1.14**	**352**⇑	*e*P		Pg	04 10 37.4	-0.2
CGP					*e*S	Sg	04 10 51.8	-0.6
DDMP	**Don Marcelino,**	**1.48**	**144**	*e*P		Pb	04 10 44.0	0.0
DDMP					*e*S	Sn	04 11 08.2	+4.8
PAGZ	**Pagadian**	**1.54**	**290**	*e*P		Pn	04 10 44.0	-0.3
PAGZ					*e*S	Sn	04 11 03.4	-1.7

MAN 02 04:14:52.4, 7°.28N×124°.90E, h24km, mb4.7, ML3.6, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.62**	**15**	*e*P		Pn	04 15 05.9	0.0
BUKP					*e*S	Sn	04 15 15.7	+0.6
DMPH	**Davao City--Mi**	**0.63**	**107**⇑	*e*P		Pn	04 15 09.8	+3.9
DMPH					*e*S	Sn	04 15 21.0	+5.7
CTBH	**Cotabato--PC H**	**0.65**	**265**	⇓	*i*P	Pb	04 15 04.5	-0.7
CTBH					*i* S	Sb	04 15 12.8	-1.0
SKMP	**Bagumbayan, Su

NIUE	**Niue**	**8.22**	**101**	*e*Pn	**Pn**	**04 20 26.3**	**-0.1**	
DZM	**Mont Dzumac**	**14.86**	**250**	P	Pn	04 21 50.8	+5.9	
	0.4nm,0.3s,baz=105,slow=20,SNR=6.0							
BFZ	**Birch Farm**	**23.38**	**190**	*e*P	**P**	**04 23 08.9**	**+0.8**	
	70nm,0.9s							
TOO	**Toolangi**	**37.28**	**231**	*e*P	**P**	**04 25 11.0**	**+1.7**	
	83nm,1.4s							
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**04 25 22.9**	**+1.8**	
	14nm,0.6s,baz=92,slow=10,SNR=50							
STKA	**Stephens Creek**	**38.70**	**241**	*e*P	**P**	**04 25 22.1**	**+1.0**	
	5.0nm,1.0s							
JAY	**Jayapura**	**42.80**	**286**	P	**P**	**04 25 55.4**	**+0.9**	
	3.3nm,0.4s,baz=151,slow=8.7,SNR=4.6							
SDHHI	**Sand Hill**	**43.29**	**33**	*e*P	**P**	**04 25 57.9**	**-0.5**	
	223nm,0.6s							
KKO	**Keanakako`i**	**43.31**	**33**	*e*P	**P**	**04 25 59.1**	**+0.6**	
	258nm,0.8s							
BYL	**Byron's Ledge**	**43.33**	**33**	*e*P	**P**	**04 25 59.4**	**+0.7**	
	285nm,0.6s							
HATHI	**Halema'uma'u T**	**43.34**	**33**	*e*P	**P**	**04 25 59.6**	**+0.9**	
	376nm,0.6s							
SBLHI	**Steaming Bluff**	**43.34**	**33**	*e*P	**P**	**04 25 59.8**	**+1.1**	
	258nm,0.7s							
WRA	**Warramunga Arr**	**44.63**	**259**	P	**P**	**04 26 08.2**	**-0.7**	
	22nm,0.3s,baz=84,slow=9.3,SNR=1.6							
AS31	**Alice Springs**	**44.81**	**254**	*e*P	**P**	**04 26 10.2**	**-0.1**	
	15nm,0.6s							
ASAR	**Alice Springs**	**44.81**	**254**	P	**P**	**04 26 10.6**	**+0.3**	
	44nm,0.6s,baz=88,slow=8.2,SNR=732							
ASAR				PcP	**PcP**	**04 27 42.3**	**-3.2**	
	1.1nm,0.8s,baz=86,slow=6.6,SNR=3.9							
ASAR				S	S	04 32 04.9	-16	
	0.6nm,0.9s,baz=87,slow=16,SNR=4.5							
FORT	**Forrest**	**50.07**	**244**	*e*P	**P**	**04 26 50.0**	**-0.1**	
	42nm,0.6s							
VNDA	**Vanda**	**60.67**	**185**	P	**P**	**04 28 05.6**	**+1.3**	
	1.0nm,0.9s,baz=348,slow=7.6,SNR=6.5							
MJAR	**Matsushiro Arr**	**67.69**	**323**	P	**P**	**04 28 49.7**	**-0.4**	
	1.6nm,0.7s,baz=163,slow=6.3,SNR=7.3							
QSPA	**South Pole Qui**	**72.38**	**180**	*e*P	**P**	**04 29 18.3**	**+0.3**	
	7.7nm,0.9s							
KSM	**Kuching**	**72.61**	**277**	*e*P	**P**	**04 29 19.8**	**-0.4**	
	6.2nm,1.0s							
PETK	**Petropavlovsk-**	**73.44**	**345**	P	**P**	**04 29 23.9**	**-0.2**	
	2.3nm,0.7s,baz=106,slow=8.0,SNR=5.0							
ISA	**Isabella, Lake**	**77.69**	**46**	*e*P	**P**	**04 29 50.5**	**+2.0**	
	3.9nm,0.9s							
MDPB	**Devils Postpil**	**78.34**	**44**	*e*P	**P**	**04 29 54.0**	**+1.8**	
	4.6nm,0.8s							
NVAR	**Mina Array Bea**	**79.29**	**44**	P	**P**	**04 29 59.3**	**+2.0**	
	1.9nm,0.7s,baz=224,slow=8.9,SNR=15							
NV11	**Mina Array Sit**	**79.39**	**44**	*e*P	**P**	**04 29 59.4**	**+1.6**	
KVN	**Kaiserville**	**79.75**	**43**	*e*P	**P**	**04 30 01.1**	**+1.4**	
	2.0nm,0.7s							
MOD	**Modoc Plateau**	**79.94**	**40**	*e*P	**P**	**04 30 03.0**	**+2.4**	
	3.4nm,0.8s							
PINE	**Pine Mountain**	**80.64**	**38**	*e*P	**P**	**04 30 05.7**	**+1.4**	
	5.0nm,0.9s							
WVOR	**Wild Horse Val**	**81.26**	**40**	*e*P	**P**	**04 30 09.0**	**+1.4**	
	5.6nm,1.1s							
I07A	**Izee**	**81.65**	**39**	*e*P	**P**	**04 30 10.4**	**+0.9**	
	2.7nm,0.8s							
J08A	**Circle Bar Ran**	**81.87**	**40**	*e*P	**P**	**04 30 11.4**	**+0.8**	
	4.4nm,1.0s							
X16A	**Lo Mia Camp, P**	**82.07**	**50**	*e*P	**P**	**04 30 13.5**	**+1.6**	
	3.6nm,0.9s							
U15A	**North Rim**	**82.40**	**48**	*e*P	**P**	**04 30 15.4**	**+1.6**	
	3.9nm,0.8s							
G08A	**Pilot Rock**	**82.65**	**38**	*e*P	**P**	**04 30 16.0**	**+1.3**	
	5.6nm,1.4s							
F10A	**Beach Ranch, E**	**84.04**	**38**	*e*P	**P**	**04 30 22.9**	**+1.3**	
	2.5nm,0.8s							
MAW	**Mawson**	**84.06**	**200**	P	**P**	**04 30 19.7**	**-1.6**	
	2.4nm,0.7s,baz=116,slow=3.6,SNR=7.8							
CCB	**Clear Creek Bu**	**85.36**	**13**	*e*P	**P**	**04 30 27.3**	**-0.2**	
	2.8nm,1.0s							
ILAR	**Eielson Array**	**85.67**	**13**	P	**P**	**04 30 27.7**	**-1.4**	
	0.4nm,0.4s,baz=233,slow=5.2,SNR=6.0							
TXAR	**Lajitas Array**	**85.91**	**58**	P	**P**	**04 30 33.6**	**+2.4**	
	1.0nm,0.7s,baz=214,slow=5.8,SNR=8.8							
REDW	**Red Top Meadow**	**86.65**	**42**	*e*P	**P**	**04 30 36.3**	**+1.7**	
	3.3nm,1.0s							
IMW	**Indian Meadow**	**86.84**	**42**	*e*P	**P**	**04 30 37.6**	**+2.0**	
	3.0nm,0.9s							
HHC	**Hu-ho-hao-te**	**87.08**	**314**	*e*P	**P**	**04 30 39.3**	**+2.7**	
HHC				pmax	pmax			
	comp=Z,17nm,0.5s							
HHC				pmax	pmax			
	comp=Z,300nm,5.4s							
PDAR	**Pinedale Array**	**87.21**	**43**	P	**P**	**04 30 38.0**	**+0.6**	
	comp=Z,0.8nm,0.6s,baz=234,slow=2.4,SNR=9.1							
KMI	**Kunming**	**87.68**	**297**	P	**P**	**04 30 42.3**	**+2.4**	
KMI				pmax	pmax			
	comp=Z,5.0nm,0.7s							
CD2	**Chengdu**	**88.90**	**303**	*e*P	**P**	**04 30 45.8**	**+0.5**	
LZH	**Lanzhou**	**90.71**	**308**	*e*P	P	04 30 56.7	+3.0	
LZH				pP	pP	04 32 23.2	+7.8	
LZH				sP	sP	04 32 47.0	-4.5	
LZH				PP	PP	04 34 44.6	+10	
LZH				pmax	pmax			
	comp=Z,23nm,1.5s							
LZH				pmax	pmax			
	comp=Z,67nm,5.4s							
VNA3	**Neumayer Olymp**	**90.98**	**176**	P	**P**	**04 30 52.5**	**-1.6**	
VNA2	**Neumayer--Watz**	**91.41**	**177**	P	**P**	**04 30 55.3**	**-0.9**	
VNA1	**Neumayer--Stat**	**91.64**	**177**	P	**P**	**04 30 56.7**	**-0.5**	
YKA	**Yellowknife Ar**	**94.14**	**25**	P	**P**	**04 31 08.2**	**-0.4**	
	comp=Z,0.4nm,0.7s,baz=245,slow=4.2,SNR=6.4							
FINES	**FINESS Array B**	**132.95**	**344**	PKP	**PKPdf**	**04 36 59.2**	**-3.9**	
	comp=Z,1.3nm,0.9s,baz=45,slow=2.2,SNR=2.4							
EKA	**Eskdalemuir Ar**	**142.24**	**4**	PKP	**PKPdf**	**04 37 16.6**	**-3.8**	
	comp=Z,0.3nm,0.6s,baz=191,slow=0.7,SNR=4.0							
KOLS	**Kolonicke sedl**	**144.57**	**336**	*e*PKP	**PKPdf**	**04 37 23.4**	**-1.3**	
VYHS	**Vyhne**	**146.18**	**339**	*e*PKP	**PKPab**	**04 37 28.2**	**-2.4**	
GERES	**GERESS Array B**	**147.37**	**345**	PKPbc	**PKPbc**	**04 37 30.5**	**-2.0**	
	comp=Z,0.8nm,0.5s,baz=22,slow=1.1,SNR=4.0							

NNC 02 04:36:49.3±7.1,37°71′N×71°10′E,h0km,mb3.7,mpv3.3,
7C-1D,Error ellipse: s-maj=52.8km s-min=31.9km
az=167.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.51**	**350**	Pg	Pg	04 38 14.2	-1.5
	4.7nm,0.3s						
IUG				Lg	Lg	04 39 16.3	
	47nm,0.4s						
MRKS	**Merke**	**5.29**	**17**	Pg	Pb	04 38 26.3	+3.6
	2.9nm,0.4s						
MRKS				Lg	Lg	04 39 37.9	
	16nm,0.5s						
KK31	**Karatay Array**	**5.41**	**355**	⇓Pg	Pb	04 38 26.7	+2.1
	0.6nm,0.4s,baz=184,slow=14,SNR=13						
KK31				⇑Lg	Lg	04 39 37.3	
	4.6nm,0.7s,baz=178,slow=36,SNR=8.8						
AAK	**Ala-Archa**	**5.57**	**27**	⇑Pg	Pg	04 38 32.9	-3.1
	1.2nm,0.7s						
AAK				⇑Lg	Lg	04 39 45.5	
	9.1nm,0.7s						
TKM2	**Tokmak 2**	**6.24**	**32**	⇑Pg	Pb	04 38 38.4	-0.5
	1.4nm,0.8s						
TKM2				⇑Lg	Lg	04 39 58.9	
	2.1nm,0.8s						
AB31	**Akbulak array**	**14.08**	**329**	⇑P	Pn	04 40 10.5	+0.6
	0.6nm,0.7s,baz=143,slow=14,SNR=7.4						
AKTO	**Aktyubinsk**	**15.79**	**328**	⇑P	Pn	04 40 32.4	-0.4
	2.6nm,0.8s						

*IDC **02** 04:48:49.3±0.7,46°00′N×154°35′E,h0km,mb3.9/16,*
mb1 4.0/21,mb1mx4.0/35,mbtmp3.9/21,ML3.3/5,Error
ellipse: s-maj=20.5km s-min=13.5km az=160.0
*ISCJB **02** 04:48:50.9±0.4,46°06′N×0°05′×154°26′E±0°07,h20km,*
mb4.2/37,Error ellipse: s-maj=8.3km s-min=4.3km
az=43.0
*SKHL **02** 04:48:53.1±0.7,45°98′N×154°31′E,h38km±6km,mb4.8/3*
*NEIC **02** 04:48:54.9±0.4,46°09′N×154°22′E,h35km,mb4.4/9,Error*
ellipse: s-maj=9.5km s-min=5.3km az=149.0
*MOS **02** 04:48:55.8±1.8,46°14′N×154°02′E,h53km,mb4.7/10,Error*
ellipse: s-maj=8.8km s-min=7.4km az=99.7
*BJI **02** 04:48:56.2±0.0,47°01′N×154°07′E,h33km,mb4.5/16,*
mB4.6/11,Ms4.7/2
ISC 02 04:48:53.0±0.6,46°05′N±0°07′×154°21′E±0°07,h20km,n111,
σ1°39/110,mb4.1/37,6C-7D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.52**	**262**	*c i*PN	**Pn**	**04 50 00.2**	**-0.1**
KUR				*i* S	**Sn**	**04 50 49.6**	**-2.7**
KUR				pmax	pmax		
	comp=Z,160nm,0.4s						
KUR				pmax	pmax		
	comp=N,45nm,0.3s						
KUR				smax	smax		
	comp=E,258nm,0.4s						
KUR				smax	smax		
	comp=N,257nm,0.5s						
KUR	**Kuril'sk**	**4.52**	**262**	*i* P	**Pn**	**04 50 00.0**	**-0.3**
KUR				AMB	AMB	04 50 02.0	
	comp=N,60nm,0.4s						
KUR				AMB	AMB	04 50 02.0	
	comp=N,45nm,0.4s						
KUR				AMB	AMB	04 50 02.0	
	comp=N,150nm,0.4s						
KUR				*i* S	**Sn**	**04 50 49.7**	**-2.6**
KUR				A	A	04 50 51.0	
	comp=N,280nm,0.5s						
KUR				A	A	04 50 51.0	
	comp=N,310nm,0.5s						
SKR	**Severo-Kuril's**	**4.81**	**15**	*e*PN	**Pn**	**04 50 06.5**	**+2.2**
SKR				pmax	pmax		
	comp=Z,63nm,0.7s						
SKR				MLR	MLR		
	comp=Z,200nm,13.0s						
SKR	**Severo-Kuril's**	**4.81**	**15**	*e*P	**Pn**	**04 50 04.5**	**+0.2**
SKR				AMB	AMB	04 50 10.0	
	comp=Z,18nm,0.3s						
SKR				*e*S	**Sn**	**04 50 58.6**	**-0.7**
SKR				A	A	04 51 15.0	
	comp=Z,78nm,0.3s						
SKR				A	A	04 51 15.0	
	comp=Z,110nm,0.3s						
PETK	**Petropavlovsk-**	**7.42**	**16**	Pn	**Pn**	**04 50 38.6**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=180,slow=13,SNR=14						
PETK				Sn	**Sn**	**04 52 05.5**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=321,slow=48,SNR=2.3						
PEA1	**Petropavlovsk-**	**7.43**	**16**	*e*Pn	**Pn**	**04 50 38.6**	**-1.6**
PEA1				*e*Sn	**Sn**	**04 52 05.5**	**+1.7**
YSS	**Yuzh-Sakhalins**	**7.96**	**281**	*e*PN	**Pn**	**04 50 50.2**	**+2.7**
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS	**Yuzh-Sakhalins**	**7.96**	**281**	*e*P	**Pn**	**04 50 49.6**	**+2.1**
ASAJ	**Asahikawa**	**8.44**	**261**	Pn	**Pn**	**04 50 53.7**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=202,slow=14,SNR=5.9						
ERM	**Erimo**	**8.92**	**247**	*e*Pn	**Pn**	**04 51 01.3**	**+0.6**
ERM	**Erimo**	**8.92**	**247**	*e*PN	**Pn**	**04 51 01.3**	**+0.6**
MA2	**Magadan**	**13.71**	**353**	Pn	**Pn**	**04 52 05.2**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=169,slow=10,SNR=4.2						
MA2	**Magadan**	**13.71**	**353**	⇑*e*P	**Pn**	**04 52 05.8**	**-0.3**
MA2				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MA2	**Magadan**	**13.71**	**353**	*e*P	**Pn**	**04 52 05.8**	**-0.3**
MJAR	**Matsushiro Arr**	**15.30**	**237**	Pn	**Pn**	**04 52 27.2**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=35,slow=8.0,SNR=3.3						
MAJO	**Matsushiro**	**15.30**	**237**	*e*Pn	**Pn**	**04 52 27.2**	**-0.6**
MAJO	**Matsushiro**	**15.30**	**237**	*e*P	**Pn**	**04 52 27.2**	**-0.6**
MAT	**Matsushiro**	**15.30**	**237**	P	**P**	**04 52 33.0**	**+0.6**
EKMR	**Ekimchan**	**15.45**	**305**	*e*P	**Pn**	**04 52 29.0**	**-0.6**
EKMR				AMB	AMB	04 52 36.0	
	comp=Z,18nm,0.8s						
KLR	**Kul'dur**	**15.46**	**290**	Pn	**Pn**	**04 52 29.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=91,slow=10,SNR=4.3						
KLR	**Kul'dur**	**15.46**	**290**	⇑*e*P	**Pn**	**04 52 30.1**	**+0.3**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLR	**Kul'dur**	**15.46**	**290**	*e*P	**Pn**	**04 52 30.1**	**+0.3**
USRK	**Ussuriysk Ar.**	**15.79**	**271**	Pn	**Pn**	**04 52 32.6**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=85,slow=13,SNR=12						
BMKR	**Bomnak**	**18.27**	**308**	*e*P	**P**	**04 53 07.0**	**+1.8**
BMKR				AMB	AMB	04 53 09.5	
	comp=Z,4.0nm,0.8s						
KROS	**Kirovskiy**	**19.24**	**306**	*e*P	**P**	**04 53 15.0**	**-0.8**
KROS				AMB	AMB	04 53 15.3	
	comp=Z,5.0nm,0.4s						
KROS				AMB	AMB	04 53 15.3	
	comp=Z,4.0nm,0.4s						
KROS				AMB	AMB	04 53 15.3	
	comp=Z,10.0nm,0.4s						
YAK	**Yakutsk**	**21.32**	**327**	*e*P	**P**	**04 53 37.5**	**-0.8**
YAK				pmax	pmax		
	comp=Z,55nm,0.6s						
YAK	**Yakutsk**	**21.32**	**327**	*e*P	**P**	**04 53 37.5**	**-0.8**
KSRS	**Korea Array**	**21.33**	**256**	P	**P**	**04 53 39.9**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=62,slow=9.5,SNR=5.9						
KS15	**Wonju Array Si**	**21.37**	**256**	*e*P	**P**	**04 53 39.9**	**+0.8**
KSAR	**Wonju Array Be**	**21.37**	**256**	P	**P**	**04 53 39.9**	**+0.9**
KSAR	**Wonju Array Be**	**21.37**	**256**	P	**P**	**04 53 39.9**	**+0.9**
KSAR	**Wonju Array Be**	**21.37**	**256**	*e*P	**P**	**04 53 39.9**	**+0.9**
TJN	**Taejon**	**22.30**	**254**	⇓*e*P	**P**	**04 53 51.1**	**+2.1**
BILL	**Bilibino**	**22.92**	**12**	*i* P	**P**	**04 53 55.9**	**+0.6**
BILL				*i*		04 54 03.7	
BILL				*i*		04 54 22.7	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BILL	**Bilibino**	**22.92**	**12**	*e*P	**P**	**04 53 55.9**	**+0.6**
BOD	**Bodaibo**	**27.02**	**311**	*e*P	**P**	**04 54 31.1**	**-2.4**
H11N2	**WAKE ISLAND Hy**	**28.25**	**154**	T	T	05 24 15.0	
	baz=342,slow=76,SNR=5.8						
H11N1	**WAKE ISLAND Hy**	**28.27**	**154**	T	T	05 24 08.9	
	baz=342,slow=76,SNR=7.7						
H11N3	**WAKE ISLAND Hy**	**28.27**	**154**	T	T	05 24 14.8	
	baz=342,slow=76,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**29.35**	**155**	T	T	05 25 28.6	
	baz=342,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.36**	**155**	T	T	05 25 35.1	
	baz=342,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**29.36**	**155**	T	T	05 25 35.5	
	baz=342,slow=76,SNR=12						
ULN	**Ulaanbaatar**	**31.85**	**291**	⇑*e*P	**P**	**04 55 16.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ULN	**Ulaanbaatar**	**31.85**	**291**	*e*P	**P**	**04 55 16.9**	**+0.3**
SONA0	**Songino Array**	**32.29**	**291**	*e*P	**P**	**04 55 21.0**	**+0.6**
SONM	**Songino Array**	**32.29**	**291**	P	**P**	**04 55 21.0**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=90,slow=7.4,SNR=2.7						
SONM	**Songino Array**	**32.29**	**291**	P	**P**	**04 55 21.0**	**+0.6**
TLY	**Talaya**	**33.18**	**299**	⇓*i*P	**P**	**04 55 28.8**	**+0.8**
TLY	**Talaya**	**33.18**	**299**	*e*P	**P**	**04 55 28.8**	**+0.8**
ZAK	**Zakamensk**	**33.67**	**296**	*e*P	P	04 55 27.0	-5.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ILAR	**Eielson Array**	**36.63**	**38**	P	**P**	**04 55 57.0**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=248,slow=7.7,SNR=4.6						
ILB	**Eielson Array**	**36.63**	**38**	*e*P	**P**	**04 55 57.0**	**-0.6**
	comp=Z,11nm,1.8s						
GTA	**Gaotai**	**39.84**	**281**	*e*P	P	04 56 36.6	+12
GTA				pP	pwP	04 56 42.0	+3.5
GTA				sP	sP	04 56 44.6	+14
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
DGZ	**Jazzator, Alta**	**43.61**	**300**	⇓*e*P	**P**	**04 56 57.6**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZAA1	**Zalesovo Array**	**43.64**	**307**	*e*P	**P**	**04 56 54.2**	**-1.5**
ZALV	**Zalesovo Beam**	**43.64**	**307**	P	**P**	**04 56 54.2**	**-1.6**
	comp=Z,2.1nm,0.3s,baz=74,slow=6.1,SNR=3.8						
MK32	**Makanchi Array**	**47.94**	**298**	*e*P	**P**	**04 57 28.9**	**-1.0**
MKAR	**Makanchi Array**	**47.94**	**298**	P	**P**	**04 57 28.9**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=66,slow=8.4,SNR=15						
MKAR	**Makanchi Array**	**47.94**	**298**	P	**P**	**04 57 29.0**	**-0.9**
MKAR	**Makanchi Array**	**47.94**	**298**	*e*P	**P**	**04 57 29.0**	**-0.9**
KURK	**Kurchatov**	**48.39**	**305**	*e*P	**P**	**04 57 32.9**	**-0.3**
	comp=Z,6.1nm,0.8s						
KURK	**Kurchatov**	**48.39**	**305**	*d i*P	**P**	**04 57 33.1**	**-0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	**Kurchatov**	**48.39**	**305**	*e*P	**P**	**04 57 33.1**	**-0.2**
YKA	**Yellowknife Ar**	**51.03**	**37**	P	**P**	**04 57 53.3**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=297,slow=7.2,SNR=6.9						
YKB5	**Yellowknife Ar**	**51.03**	**37**	*e*P	**P**	**04 57 53.4**	**+0.1**
BRVK	**Borovoye**	**51.93**	**310**	*e*P	**P**	**04 58 00.7**	**+0.7**
	comp=Z,2.7nm,0.5s						
BRVK	**Borovoye**	**51.93**	**310**	⇓*i*P	**P**	**04 58 00.8**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BRVK	**Borovoye**	**51.93**	**310**	*e*P	**P**	**04 58 00.8**	**+0.7**
CM31	**Chiang Mai Arr**	**52.95**	**258**	*e*P	**P**	**04 58 08.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**52.95**	**258**	P	**P**	**04 58 08.9**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=46,slow=6.8,SNR=2.7						
AAK	**Ala-Archa**	**54.83**	**297**	⇓*e*P	**P**	**04 58 24.8**	**+3.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SVE	**Sverdlovsk**	**54.86**	**318**	*e*P	**P**	**04 58 23.1**	**+1.6**
SVE	**Sverdlovsk**	**54.86**	**318**	*e*P	**P**	**04 58 23.1**	**+1.6**
KSH	**Kashi**	**55.63**	**293**	*e*P	P	04 58 32.5	+5.0
ARU	**Arti**	**56.04**	**318**	*e*P	**P**	**04 58 30.1**	**0.0**
	comp=Z,6.8nm,0.8s						
ARU	**Arti**	**56.04**	**318**	*d i*P	**P**	**04 58 31.2**	**+1.2**
ARU				S	**S**	**05 06 16.4**	**-0.8**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARU	**Arti**	**56.04**	**318**	*e*P	**P**	**04 58 31.2**	**+1.2**
PRGR	**Permogore**	**58.37**	**328**	*e*P	**P**	**04 58 44.9**	**-1.5**
PRGR				*e**PP	**pwP**	**04 58 56.4**	**-4.2**
PRGR				pmax	pmax		
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	**58.77**	**341**	P	**P**	**04 58 49.7**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=26,slow=9.0,SNR=5.3						
ABKAR	**Akbulak array**	**59.46**	**311**	*e*P	**P**	**04 58 54.6**	**+0.4**
	comp=Z,2.1nm,0.8s						
KLMR	**Klimovskoe**	**61.10**	**329**	*e*P	**P**	**04 59 03.2**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NV01	**Mina Array Sit**	**62.09**	**63**	*e*P	**P**	**04 59 12.2**	**-0.4**
NVAR	**Mina Array Bea**	**62.09**	**63**	P	**P**	**04 59 12.2**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=287,slow=6.5,SNR=4.5						
PD31	**Pinedale Array**	**64.55**	**54**	*e*P	**P**	**04 59 26.9**	**-1.8**
	comp=Z,5.5nm,1.8s						
PDAR	**Pinedale Array**	**64.55**	**54**	P	**P**	**04 59 26.9**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=253,slow=1.5,SNR=5.5						
FIA0	**FINESS Array S**	**65.00**	**335**	*e*P	**P**	**04 59 31.6**	**+0.6**
FIA0	**FINESS Array S**	**65.00**	**335**	*e*P	**P**	**04 59 31.6**	**+0.6**
FINES	**FINESS Array B**	**65.00**	**335**	P	**P**	**04 59 31.6**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=40,slow=6.6,SNR=28						
FINES	**FINESS Array B**	**65.00**	**335**	*i* P	**P**	**04 59 32.2**	**+1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OBN	**Obninsk**	**66.32**	**326**	*i* P	**P**	**04 59 42.8**	**+3.2**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GEYT	**Alibeck**	**67.62**	**302**	P	**P**	**04 59 49.6**	**+1.3**
	comp=Z,1.9nm,0.6s,baz=58,slow=3.7,SNR=4.6						
NB2	**NORSAR Subarra**	**69.14**	**342**	P	**P**	**04 59 59.0**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=28,slow=6.2						
NB200	**NORSAR Array S**	**69.14**	**342**	*e*P	**P**	**04 59 58.3**	**+0.9**
NOA	**NORSAR Array B**	**69.14**	**342**	P	**P**	**04 59 58.3**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=27,slow=6.4,SNR=6.0						
AS31	**Alice Springs**	**71.79**	**200**	*e*P	**P**	**05 00 13.6**	**-0.4**
	comp=Z,1.9nm,1.3s						
ASAR	**Alice Springs**	**71.79**	**200**	P	**P**	**05 00 13.6**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=13,slow=5.2,SNR=12						
KIV	**Kislovodsk**	**71.83**	**315**	*e*P	**P**	**05 00 16.7**	**+2.5**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
AKASG	**Malin Array Be**	**72.55**	**327**	P	**P**	**05 00 18.4**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=36,slow=6.0,SNR=4.5						
AKBB	**Malin Array Si**	**72.55**	**327**	*e*P	**P**	**05 00 18.4**	**+0.1**
	comp=Z,3.1nm,0.6s						
AKBB	**Malin Array Si**	**72.55**	**327**	*e*P	**P**	**05 00 18.4**	**+0.1**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KIEV	**Kiev**	**72.56**	**327**	⇑*e*P	**P**	**05 00 20.8**	**+2.5**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ANN	**Anapa**	**73.71**	**319**	*e*P	**P**	**05 00 20.9**	**-4.3**
ANN				*e**PP	**sP**	**05 00 33.2**	**+2.5**
ANN				*e*		05 00 41.2	
ANN				*e*		05 03 04.8	
ANN				*e*S	SKiKP	05 09 42.5	-11
ANN				pmax	pmax		
	comp=Z,33nm,1.4s						
TX31	**Lajitas Ar. Si**	**77.17**	**61**	*e*P	**P**	**05 00 44.3**	**-1.2**
	comp=Z,1.9nm,0.9s						
LTX	**Lajitas**	**77.17**	**61**	*e*P	**P**	**05 00 44.5**	**-1.0**
LTX	**Lajitas**	**77.17**	**61**	*e*P	**P**	**05 00 44.5**	**-1.0**
TXAR	**Lajitas Array**	**77.17**	**61**	P	**P**	**05 00 44.5**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=307,slow=4.2,SNR=21						
BR101	**Keskin Array S**	**79.42**	**318**	*e*P	**P**	**05 00 57.0**	**-0.9**
BRTR	**Keskin Array B**	**79.42**	**318**	P	**P**	**05 00 57.0**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=112,slow=1.4,SNR=4.9						
BRTR	**Keskin Array B**	**79.42**	**318**	*c e*P	**P**	**05 01 00.8**	**+2.9**
BRTR				pmax	pmax		
	comp=Z

PB06			IAML			05 09 23.4	
	comp=E,219nm,0.4s						
FSA	**Cafayete**	**2.55 147**	⇓*e*P	Pn		05 08 43.6	-6.9
FSA			IAML			05 08 43.8	
	comp=Z,7.4nm,0.3s						
YJA	**Yavi**	**2.58 46**	*e*P	Pn		05 08 45.8	-5.3
YJA			IAML			05 08 47.9	
	comp=Z,2.4nm,0.5s						
PB09	**IPOC Station P**	**2.69 324**	*e*P	**Pn**		**05 08 52.9**	**+0.8**
PB09			⇓*e*S	**S**		**05 09 29.8**	**+0.5**
PB09	**IPOC Station P**	**2.69 324**	*e*P	**Pn**		**05 08 52.8**	**+0.6**
PB09			*i* S	**S**		**05 09 29.9**	**+0.5**
PB09			IAML			05 09 30.8	
	comp=E,90nm,0.4s						
PB05	**IPOC Station P**	**2.70 294**	*e*P	**Pn**		**05 08 52.9**	**+0.7**
PB05	**IPOC Station P**	**2.70 294**	*e*P	**Pn**		**05 08 52.6**	**+0.5**
PB05			*e*S	**S**		**05 09 28.5**	**-1.0**
PB05			IAML			05 09 33.5	
	comp=E,66nm,0.4s						
PB14	**IPOC Station P**	**2.71 256**	*e*P	**Pn**		**05 08 52.5**	**+0.1**
PB14	**IPOC Station P**	**2.71 256**	*e*P	**Pn**		**05 08 52.3**	**-0.1**
PB14			*e*S	**S**		**05 09 29.0**	**-0.9**
PB14			IAML			05 09 31.3	
	comp=E,100nm,0.3s						
PB03	**IPOC Station P**	**2.81 313**	*e*S	**S**		**05 09 32.0**	**+0.3**
PB03	**IPOC Station P**	**2.81 313**	*e*P	**Pn**		**05 08 53.8**	**+0.4**
PB03			*e*S	**S**		**05 09 31.4**	**-0.4**
PB03			IAML			05 09 33.2	
	comp=E,154nm,0.3s						
PB10	**IPOC Station P**	**2.81 279**	*e*P	**Pn**		**05 08 54.1**	**+0.8**
PB10	**IPOC Station P**	**2.81 279**	*e*P	**Pn**		**05 08 54.1**	**+0.8**
PB10			IAML			05 09 33.9	
	comp=E,42nm,0.3s						
PB04	**IPOC Station P**	**2.92 304**	⇓*e*P	**Pn**		**05 08 55.6**	**+1.0**
PB04	**IPOC Station P**	**2.92 304**	*e*P	**Pn**		**05 08 55.0**	**+0.3**
PB04			*e*S	**S**		**05 09 33.1**	**-0.8**
PB04			IAML			05 09 40.1	
	comp=N,161nm,0.3s						
PB07	**IPOC Station P**	**3.12 315**	*e*P	**Pn**		**05 08 57.4**	**+0.4**
PB07	**IPOC Station P**	**3.12 315**	*e*P	**Pn**		**05 08 57.4**	**+0.4**
PB07			*i* S	**S**		**05 09 37.7**	**-0.5**
AHML	**Horco Molle**	**3.43 145**	⇓*e*P	Pn		05 08 53.2	-7.0
AHML			IAML			05 08 53.9	
	comp=Z,3.7nm,0.4s						
PB02	**IPOC Station P**	**3.43 320**	⇓*e*P	**Pn**		**05 09 00.7**	**+0.1**
PB02	**IPOC Station P**	**3.43 320**	*e*P	**Pn**		**05 09 00.6**	**+0.1**
PB02			*i* S	**S**		**05 09 43.6**	**-0.9**
PB01	**IPOC Station P**	**3.44 328**	*e*P	**Pn**		**05 09 00.2**	**-0.3**
PB01			*e*S	**S**		**05 09 43.4**	**-1.2**

IDC 02 05:18:21.1±3.3, 16°.67S×174°.00W, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.6/26, mbtmp3.6/3, Error ellipse: s-maj=192.0km s-min=33.1km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**49.18**	**253**	P	P	05 27 11.3	-0.1
	0.9nm,0.5s,baz=88,slow=8.5,SNR=20						
PDAR	**Pinedale Array**	**83.59**	**42**	P	P	05 30 51.7	+0.1
	0.2nm,0.6s,baz=224,slow=3.8,SNR=3.1						
ILAR	**Eielson Array**	**83.79**	**11**	P	P	05 30 51.8	-0.1
	0.3nm,0.6s,baz=220,slow=5.4,SNR=4.9						

IDC 02 05:18:49.7±1.5, 25°.07N×109°.69W, h0km, mb1 3.5/3, mb1mx3.3/30, mbtmp3.0/3, ML3.7/3, Error ellipse: s-maj=33.8km s-min=13.9km az=126.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.12 210**		Pn	Pn	05 19 13.5	+0.9
	46nm,0.3s,baz=31,slow=11,SNR=16						
LPIG				Pg	Pb	05 19 16.8	+4.9
	48nm,0.3s,baz=349,slow=1.9,SNR=13						
LPIG				Sn	Sb	05 19 27.7	+0.7
	40nm,0.3s,baz=158,slow=19,SNR=18						
LPIG				Lg	Lg	05 19 31.5	
	61nm,0.3s,baz=150,slow=20,SNR=11						
TXAR	**Lajitas Array**	**6.84**	**50**	Pn	Pn	05 20 31.3	-0.1
	0.2nm,0.3s,baz=230,slow=13,SNR=13						
TXAR				Sn	Sn	05 21 48.0	-2.1
	0.4nm,0.3s,baz=224,slow=27,SNR=4.8						
TXAR				Lg	Lg	05 22 27.0	
	0.3nm,0.3s,baz=225,slow=24,SNR=4.0						
NVAR	**Mina Array Bea**	**15.19**	**333**	Pn	Pn	05 22 28.2	+2.5
	0.1nm,0.3s,baz=166,slow=13,SNR=2.7						
PDAR	**Pinedale Array**	**17.65**	**0**	P	P	05 22 57.9	-0.5
	0.1nm,0.3s,baz=179,slow=13,SNR=4.3						

*VIE **02** 05:39:20.5±3.2, 44°.77N×19°.05E, h8km, mb2.3/3, ml2.2/4, Error ellipse: s-maj=36.5km s-min=11.8km az=157.0*
*ISCJB **02** 05:39:28.2±0.6, 45°.28N±0°.03×18°.62E±0°.03, h4km±4km, Error ellipse: s-maj=4.8km s-min=2.8km az=12.7*
*SAR **02** 05:39:30.6±0.4, 45°.27N×18°.58E, h7km±3km, ML2.6/1*
*BEO **02** 05:39:31.4±0.5, 45°.23N×18°.61E, h20km±4km, ML2.6/9*

ISC 02 05:39:29.7±1.0, 45°.30N±0°.02×18°.62E±0°.02, h12km±9km, n55, σ0=96/86, 7C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOB	**Doboj**	**0.68 213**		*e*Pg	**Pg**	**05 39 42.4**	**-0.4**
DOB				*e*Sg	**Sb**	**05 39 52.1**	**-0.6**
FRGS	**Fruska Gora**	**0.85 99**		*e*Pg	**Pg**	**05 39 46.5**	**+0.4**
FRGS				*e*Sg	**Sn**	**05 39 59.7**	**-0.2**
FRGS	**Fruska Gora**	**0.85 99**		⇓*i*Pg	**Pg**	**05 39 46.1**	**0.0**
FRGS				*e*Sg	**Sb**	**05 39 58.2**	**+0.4**
TEKS	**Tekeris**	**0.99 139**		*e*Pg	**Pb**	**05 39 49.1**	**+0.4**
TEKS				*e*Sg	**Sb**	**05 40 02.5**	**+0.8**
TEKS	**Tekeris**	**0.99 139**		⇓*i*Pg	**Pb**	**05 39 48.8**	**+0.1**
TEKS				*e*Sg	**Sg**	**05 40 01.4**	**-0.2**
BLY	**Banja Luka**	**1.16 242**		*e*Pg	**Pb**	**05 39 51.1**	**-0.5**
BLY				*e*Sg	**Sb**	**05 40 06.7**	**+0.1**
BLY	**Banja Luka**	**1.16 242**		⇑*i*P	**Pb**	**05 39 51.5**	**-0.1**
BLY				S	**Sb**	**05 40 06.7**	**+0.1**
BLY	**Banja Luka**	**1.16 242**		⇓*i*Pg	**Pb**	**05 39 50.9**	**-0.7**
BLY				*e*Sg	**Sg**	**05 40 06.1**	**-0.9**
HAPS	**Han Pijesak,BI**	**1.24 169**		*e*Pg	**Pb**	**05 39 52.2**	**-0.8**
HAPS				*e*Sg	**Sb**	**05 40 08.6**	**-0.3**
HAPS	**Han Pijesak,BI**	**1.24 169**		⇓*i*Pg	**Pb**	**05 39 52.1**	**-0.9**
HAPS				*e*Sg	**Sb**	**05 40 08.6**	**-0.3**
MGRS	**Mrkonjic Grad**	**1.41 232**		⇑*i*Pg	**Pn**	**05 39 55.3**	**+0.2**
MGRS				*e*Sg	**Sb**	**05 40 13.7**	**0.0**
DIVS	**Divibare**	**1.55 140**		*e*Pg	**Pg**	**05 39 59.0**	**-0.4**
DIVS				*e*Sg	**Sg**	**05 40 18.9**	**-0.6**
DIVS	**Divibare**	**1.55 140**		⇓*i*Pg	**Pb**	**05 39 58.8**	**+0.5**
DIVS				*e*Sg	**Sg**	**05 40 19.3**	**-0.2**
TRUS	**Trudelj**	**1.67 130**		*e*Pg	**Pg**	**05 40 01.2**	**-0.4**
TRUS				*e*Sg	**Sg**	**05 40 22.9**	**-0.3**
TIH	**Tihany**	**1.68 343**		EPn	**Pg**	**05 40 02.0**	**+0.1**
TIH				Sn	**Sb**	**05 40 23.1**	**+1.5**
BEHE	**Becsehely**	**1.74 313**		*e*Pn	**Pb**	**05 40 01.2**	**-0.4**
BEHE				*e*Sn	**Sb**	**05 40 23.7**	**+0.3**
BEHE	**Becsehely**	**1.74 313**		EPn	**Pg**	**05 40 05.0**	**+2.0**
BEHE				Sn	**Sg**	**05 40 26.1**	**+0.4**
ZAG	**Zagreb**	**1.92 287**		*e*Sn	**Sn**	**05 40 27.7**	**+1.4**
GRUS	**Gruza**	**2.06 133**		*e*Pn	**Pn**	**05 40 05.2**	**+1.2**
GRUS				*e*Sg	**Sg**	**05 40 35.7**	**0.0**
CSKK	**Cskako**	**2.08 353**		EPn	**Pg**	**05 40 11.1**	**+1.5**
CSKK				Sn	**Sg**	**05 40 36.0**	**-0.5**
BZS	**Buzias**	**2.13 80**		⇑*i*P	**Pg**	**05 40 10.1**	**-0.4**
BZS	**Buzias**	**2.13 80**		S	**Sg**	**05 40 39.2**	**+1.1**
UDBI	**Udbina**	**2.17 250**		*e*Pn	**Pn**	**05 40 05.7**	**0.0**
UDBI				Sn	**Sn**	**05 40 32.3**	**-0.2**
GCIS	**Gornji Cirnik**	**2.18 286**		*i* Pn	**Pn**	**05 40 04.7**	**-1.0**
GOLS	**Golise**	**2.22 290**		*i* Pn	**Pn**	**05 40 05.4**	**-0.9**
GOLS				*i* Sn	**Sg**	**05 40 41.3**	**+0.4**
MDVR	**Moldovita**	**2.25 102**		⇑*i*P	**Pg**	**05 40 12.6**	**-0.2**
MDVR	**Moldovita**	**2.25 102**		S	**Sg**	**05 40 42.3**	**+0.3**
SJES	**Sjenica**	**2.26 154**		*e*Pn	**Pn**	**05 40 07.1**	**+0.2**
SJES				*e*Sg	**Sg**	**05 40 41.7**	**-0.5**
CRES	**Cresnjev**	**2.29 284**		*i* Pn	**Pn**	**05 40 06.3**	**-0.9**
CRES				*i* Sn	**Sg**	**05 40 41.7**	**-1.3**
CRES	**Cresnjev**	**2.29 284**		*e*Pn	**Pn**	**05 40 08.2**	**+1.0**
CRES				*e*Sn	**Sn**	**05 40 36.2**	**+1.0**
SIRR	**Siria**	**2.34 64**		⇑*i*P	**Pb**	**05 40 13.4**	**+1.7**
KUBS	**Kucevo**	**2.35 111**		*e*Pn	**Pn**	**05 40 08.4**	**+0.4**
KUBS				*e*Sg	**Sg**	**05 40 46.1**	**+1.1**
STON	**Ston**	**2.52 196**		*e*Pn	**Pn**	**05 40 11.6**	**+1.3**
STON	**Ston**	**2.52 196**		*e*Pn	**Pn**	**05 40 11.4**	**+1.1**
SELS	**Selova**	**2.75 138**		*e*Pn	**Pn**	**05 40 13.6**	**0.0**
SELS				*e*Sg	**Sg**	**05 40 56.4**	**-1.5**
PSZ	**Piszkesteto**	**2.76 18**		⇑*i*P	**Pb**	**05 40 20.4**	**+1.4**
PSZ	**Piszkesteto**	**2.76 18**		EPn	**Pn**	**05 40 12.1**	**-1.7**
PSZ				Sn	**Sn**	**05 40 44.1**	**-3.0**
NVLJ	**Novalja**	**2.76 256**		*i* Pn	**Pn**	**05 40 13.7**	**0.0**
BOVS	**Bovan**	**2.77 126**		*e*Pn	**Pn**	**05 40 14.3**	**+0.5**
BOVS				*e*Sg	**Sg**	**05 40 58.7**	**+0.3**
SOP	**Sopron**	**2.78 330**		EPn	**Pn**	**05 40 13.0**	**-0.9**
SOKA	**Soboth**	**2.86 300**		*e*Pn	**Pn**	**05 40 14.0**	**-1.1**
	0.5nm,0.2s						
ARSA	**Arzberg**	**2.90 313**		*i* Pn	**Pn**	**05 40 15.1**	**-0.6**
	3.2nm,0.3s						
GZR	**Gura Zlata**	**2.93 87**		⇓*i*P	**Pb**	**05 40 21.9**	**0.0**
GZR	**Gura Zlata**	**2.93 87**		S	**Sn**	**05 40 51.6**	**+0.3**
ZAGS	**Zajecar**	**2.98 119**		*e*Sg	**Sg**	**05 41 04.5**	**-0.8**
CEY	**Cerknica**	**2.98 280**		*e*Pn	**Pn**	**05 40 18.5**	**+1.7**
CEY				*e*Sn	**Sn**	**05 40 53.0**	**+0.5**
LTVH	**Ltavrtes, Hu**	**3.08 46**		EPn	**Pb**	**05 40 23.0**	**-1.4**
OBKA	**Obir**	**3.09 294**		*e*Pn	**Pn**	**05 40 17.7**	**-0.6**
	1.9nm,0.5s						
DRME	**Dracevica, Mon**	**3.14 172**		*e*Pn	**Pn**	**05 40 20.3**	**+1.4**
DRME				*e*Sn	**Sn**	**05 40 57.6**	**+1.3**
VYHS	**Vyhne**	**3.20 3**		*e*PN	**Pn**	**05 40 19.7**	**-0.1**
VYHS				*e*SN	**Sn**	**05 40 54.8**	**-3.0**
DRGR		**3.21 61**		⇑*i*P	**Pb**	**05 40 25.5**	**-1.2**
CONA	**Conrad Observa**	**3.25 325**		*i* Pn	**Pn**	**05 40 19.9**	**-0.5**
	0.8nm,0.2s						
BARS	**Barje**	**3.39 136**		*e*Pn	**Pn**	**05 40 21.7**	**-0.6**
ZAPS	**Zavoj**	**3.52 124**		*e*Pn	**Pn**	**05 40 25.5**	**+1.3**
BOSS	**Bosilegrad**	**3.95 134**		*e*Pn	**Pn**	**05 40 30.2**	**+0.1**

*NIED **02** 05:43:00.23°.90N×121°.00E, h32km, Mw6.2 Best double couple: M0=2.44000×10^18 NP1:φs=311.00000°, δ68.00000°, λ-10.00000°. NP2:φs=45.00000°, δ81.00000°, λ-157.00000°.*
*BJI **02** 05:43:01.0±0.0, 23°.87N×120°.99E, h5km, mb5.7/51, mB6.3/62, ML6.7/4, Ms6.7/86, Ms7 6.7/71*
*MOS **02** 05:43:02.5±0.9, 23°.83N×121°.20E, h19km, mb6.3/131, MS6.2/140, Error ellipse: s-maj=5.8km s-min=3.5km az=118.3*
*JMA **02** 05:43:02.7±0.1, 23°.88N×120°.98E, h0km, M6.3*
JMA Felt I J1.
*ASIES **02** 05:43:03.6, 23°.87N×121°.00E, h23km, MW5.7*
*TAP **02** 05:43:03.2, 23°.86N×120°.97E, h15km, ML6.5, B*
*NEIC **02** 05:43:03.0±0.0, 23°.79N×121°.03E, h25km, Moment Tensor Solution. s30 Moment tensor: Scale 10^18Nm; Mrr1.87; Mθθ-0.15; Mφφ-1.72; Mrθ-0.39; Mθφ-0.49; Mφr-1.09; Best double couple: M0=2.20000×10^18 NP1: φs=198.00000°, δ61.00000°, λ92.00000°. NP2:φs=14.00000°, δ29.00000°, λ87.00000°. Principal axes: T 2.2000, Plg74.0000°, Azm112.0000°; N -0.0100, Plg1.0000°, Azm17.0000°; P -2.1900, Plg15.0000°, Azm286.0000°;*
*NEIC **02** 05:43:03.5±1.3, 23°.79N×121°.14E, h17km, mb6.1/315, ME6.4, MS6.2/756, MW6.1, MW6.2, MW6.2, ML6.3(TAP) Error ellipse: s-maj=12.7km s-min=6.1km az=292.0, Moment Tensor Solution. s82 Moment tensor: Scale 10^18Nm; Mrr1.58; Mθθ0.06; Mφφ-1.64; Mrθ-0.02; Mθφ-0.95; Mφr-0.84; Best double couple: M0=2.00000×10^18 NP1: φs=192.00000°, δ58.00000°, λ75.00000°. NP2:φs=39.00000°, δ35.00000°, λ113.00000°. Principal axes: T 1.8200, Plg72.0000°, Azm63.0000°; N 0.4100, Plg13.0000°, Azm200.0000°; P -2.2200, Plg12.0000°, Azm293.0000°; Broadband fault plane solution: P waves. NP1: φs=180.00000°, δ70.00000°, λ142.00000°. NP2: φs=285.00000°, δ55.00000°, λ25.00000°. Principal axes: T Plg41.0000°, Azm137.0000°; N Plg0.0000°, Azm0.0000°; P Plg9.0000°, Azm235.0000°; Apparent Stress 0.82 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Three people killed by landslides and one person died from unknown causes in Nantou. Twenty-one people injured. Ninety buildings damaged in Nantou and Taichung. Felt [V] in Taoyuan; [IV] in Hsinchu, Kaohsiung and Taichung; [III] at Taipei. Felt at Fuzhou, Putian, Quanzhou, Xiamen and Zhangzhou, Fujian and at Shantou, Guangdong. Also felt at Shanghai. Recorded [6 TAP] in Yunlin; [5 TAP] in Nantou, Changhua, Chiayi and Taichung; [4 TAP] in Hualien, Miaoli and Taitung; [3 TAP] in Kaohsiung, Pingtung, Taoyuan and Yilan; [2 TAP] in Hsinchu, Taiwan. Recorded [1 JMA] on Iriomote-jima, Ryukyu Islands.
*IDC **02** 05:43:04.0±1.4, 23°.76N×121°.21E, h19km±7km, mb5.3/52, mb1 5.4/55, mb1mx5.3/58, mbtmp5.4/55, ML4.4/3, MS6.1/38, Ms1 6.1/38, ms1mx6.1/40 Error ellipse: s-maj=10.1km s-min=8.0km az=70.0*
*ISCJB **02** 05:43:04.3±0.1, 23°.851N±0°.007×121°.064E±0°.009, h26km, mb5.9/420, MS6.2/801, Error ellipse: s-maj=1.4km s-min=1.1km az=32.8*
*GCMT **02** 05:43:06.5±0.0, 23°.84N×120°.82E, h19km, MW6.3/138, Moment Tensor Solution. s133,c320; s138,c515; Duration: 3s3 Moment tensor: Scale 10^18Nm; Mrr2.03±.01; Mθθ0.11±.01; Mφφ-2.14±.01; Mrθ-0.56±.02; Mθφ-0.35±.01; Mφr-2.25±.04; Best double couple: M0=3.13700×10^18 NP1:φs=193.00000°, δ69.00000°, λ93.00000°. NP2:φs=4.00000°, δ21.00000°, λ82.00000°. Principal axes: T 3.0620, Plg66.0000°, Azm108.0000°; N 0.1490, Plg3.0000°, Azm12.0000°; P -3.2130, Plg24.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **02** 05:43:18.7±0.0, 23°.83N×121°.10E, h10km, Moment Tensor Solution. s50 Moment tensor: Scale 10^18Nm; Mrr1.69; Mθθ0.10; Mφφ-1.79; Mrθ-0.39; Mθφ-0.31; Mφr-1.53; Best double couple: M0=2.40000×10^18 NP1:φs=193.00000°, δ66.00000°, λ93.00000°. NP2:φs=5.00000°, δ24.00000°, λ83.00000°. Principal axes: T 2.3000, Plg69.0000°, Azm109.0000°; N 0.1400, Plg3.0000°, Azm11.0000°; P -2.4400, Plg21.0000°, Azm280.0000°;*

ISC 02 05:43:03.8±0.3, 23°.83N±0°.01×121°.06E±0°.01, h17km±1km, h17km:pP-P, n2841, σ=89/2830, mb6.0/455, MS6.2/810, 147C-99D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.11 245**		*e*Pg	**Pg**	**05 43 06.1**	**-1.3**
SSLB	**Suanglung**	**0.11 245**		⇑*i*P	**Pg**	**05 43 06.2**	**-1.3**
	baz=194						
SSLB				*e*S	**Sg**	**05 43 07.7**	**-2.1**
	baz=194						
VWDT	**VWDT**	**0.11 136**		⇓*i*P	**Pb**	**05 43 08.2**	**+0.7**
	baz=125						
SMLT	**Sun Moon Lake**	**0.15 289**		⇑*i*P	**Pg**	**05 43 06.5**	**-1.7**
	baz=288						
SMLT				*e*S	**Sg**	**05 43 08.2**	**-2.8**
	baz=288						
OWD	**Renai**	**0.16 41**		⇓*i*P	**Pg**	**05 43 08.2**	**0.0**
	baz=63						
OWD				*e*S	**Sb**	**05 43 12.2**	**+0.6**
	baz=63						
TYC	**Yuchr**	**0.20 291**		⇑*i*P	**Pg**	**05 43 06.8**	**-1.8**
	baz=294						
TYC				*e*S	**Sg**	**05 43 08.4**	**-3.4**
	baz=294						
WHYT	**Xinyi Township**	**0.23 234**		⇑P	**Pg**	**05 43 08.3**	**-0.9**
	baz=214						
WHYT				*e*S	**Sb**	**05 43 13.7**	**+0.2**
	baz=214						
DPDB	**Guoxing**	**0.23 329**		⇑P	**Pg**	**05 43 07.8**	**-1.5**
	baz=346						
CHGB	**Renai**	**0.25 25**		⇓*i*P	**Pg**	**05 43 09.2**	**-0.4**
	baz=43						
CHGB				*e*S	**Sg**	**05 43 13.8**	**+0.2**
	baz=43						
WJS	**Zhushan**	**0.30 268**		⇓*i*P	**Pg**	**05 43 09.3**	**-1.0**
	baz=260						
ESL	**Shilin**	**0.34 93**		⇓*i*P	**Pb**	**05 43 12.0**	**+0.5**
	baz=97						
ESL				*e*S	**Sn**	**05 43 19.0**	**-1.6**
	baz=97						
WNT	**Mingjian**	**0.35 278**		⇓*i*P	**Pg**	**05 43 10.1**	**-1.0**
	baz=273						
YUS	**Yu-Shan**	**0.35 196**		⇓*i*P	**Pg**	**05 43 11.3**	**-0.2**
	baz=182						
YUS				*e*S	**Sb**	**05 43 17.8**	**+0.3**
	baz=182						
WHF	**Hehuan Shan**	**0.36 31**		⇓*i*P	**Pg**	**05 43 11.6**	**0.0**
	baz=44						
WHF				*e*S	**Sb**	**05 43 17.7**	**0.0**
	baz=44						
EGFH	**Guangfu**	**0.38 116**		⇓*i*P	**Pb**	**05 43 12.5**	**+0.5**
	baz=115						
EGFH				*e*S	**Sn**	**05 43 20.0**	**-1.3**
	baz=115						
ALS	**Alishan**	**0.40 216**		P	**Pg**	**05 43 11.9**	**-0.2**
	baz=203						
ALS				*e*S	**Sb**	**05 43 19.1**	**+0.7**
	baz=203						
EHY	**Hungye**	**0.40 143**		⇓*i*P	**Pb**	**05 43 13.1**	**+0.6**
	baz=138						
EHY				*e*S	**Sn**	**05 43 20.9**	**-1.2**
	baz=138						
CHN5	**Tsauling**	**0.42 236**		⇓*i*P	**Pg**	**05 43 11.8**	**-0.7**
	baz=226						
CHN5				*e*S	**Sb**	**05 43 19.8**	**+0.8**
	baz=226						
TDCB	**Techi**	**0.43 12**		⇑P	**Pg**	**05 43 11.6**	**-1.0**
	baz=23						
TDCB				*e*S	**Sg**	**05 43 18.2**	**-0.3**
	baz=23						
TWT	**Tachien**	**0.43 14**		*i* P	**Pg**	**05 43 11.8**	**-1.0**
	baz=24						
TWT				*e*S	**Sg**	**05 43 18.3**	**-0.5**
	baz=24						
WHP	**Taichung City**	**0.46 347**		⇑*i*P	**Pg**	**05 43 11.8**	**-1.2**
	baz=341						
WHP				*e*S	**Sb**	**05 43 20.0**	**0.0**
	baz=341						
TCU	**Taichung**	**0.47 312**		*e*P	**Pg**	**05 43 12.4**	**-0.9**
	baz=317						
HGSD	**Ruisui**	**0.48 135**		⇓P	**Pn**	**05 43 14.8**	**-1.0**
	baz=132						
HGSD				*e*S	**Sn**	**05 43 22.9**	**-0.9**
	baz=132						
WGK	**Gukeng**	**0.48 252**		P	**Pg**	**05 43 12.7**	**-0.7**
	baz=245						
WGK				*e*S	**Sb**	**05 43 21.6**	**+1.0**
	baz=245						
YULB	**Yu-li**	**0.49 153**		*e*Pg	**Pb**	**05 43 14.6**	**+0.6**
YULB	**Yu-li**	**0.49 153**		⇓P	**Pb**	**05 43 14.4**	**+0.4**
	baz=148						
YULB				*e*S	**Sn**	**05 43 22.6**	**-1.6**
	baz=148						
WDLH	**Douliu**	**0.50 253**		⇓*i*P	**Pg**	**05 43 13.0**	**-0.8**
	baz=247						
ENLB	**Shoufeng**	**0.50 82**		⇓P	**Pb**	**05 43 14.9**	**+0.7**
	baz=86						
HWA	**Hwalien**	**0.52 74**		⇓P	**Pb**	**05 43 15.3**	**+0.9**
	baz=79						
HWA				*e*S	**Sn**	**05 43 24.2**	**-0.8**
	baz=79						
WCHH	**Zhanghua**	**0.52 298**		⇓P	**Pg**	**05 43 13.2**	**-1.0**
	baz=300						
WCHH				*e*S	**Sb**	**05 43 22.9**	**+1.1**
	baz=300						
TWF1	**Yuli**	**0.53 155**		⇓*i*P	**Pb**	**05 43 15.1**	**+0.5**
	baz=149						
TWF1				S	**Sn**	**05 43 24.1**	**-1.0**
	baz=149						
ETLH	**Xiulin Townshi**	**0.54 46**		⇓*i*P	**Pg**	**05 43 14.4**	**-0.2**
	baz=53						
ETLH				*e*S	**Sb**	**05 43 23.0**	**+0.6**
	baz=53						
TWD	**Chiawan**	**0.55 63**		⇓*i*P	**Pb**	**05 43 15.1**	**+0.1**
	baz=69						
TWD				S	**Sb**	**05 43 23.8**	**+1.2**
	baz=69						
TWQ1	**Liyutan**	**0.58 333**		*e*P	**Pg**	**05 43 14.7**	**-0.6**
	baz=340						
TWQ1				*e*S	**Sg**	**05 43 22.7**	**-0.4**
	baz=340						
NACB	**Ninganchiao**	**0.60 55**		*e*Pg	**Pg**	**05 43 15.5**	**-0.1**
NACB	**Ninganchiao**	**0.60 55**		⇓P	**Pg**	**05 43 15.6**	**-0.1**
	baz=61						
NACB				*e*S	**Sb**	**05 43 24.6**	**+0.7**
	baz=61						
CHN2	**Minshiung**	**0.61 241**		⇓P	**Pg**	**05 43 15.4**	**-0.5**
	baz=234						
CHN2				*e*S	**Sn**	**05 43 25.9**	**-1.3**
	baz=234						
ELDTW	**Lidau**	**0.64 183**		⇓*i*P	**Pg**	**05 43 16.1**	**-0.4**
	baz=176						
ELDTW				S	**Sn**	**05 43 26.8**	**-1.3**
	baz=176						
WDJ	**Dajia District**	**0.64 323**		⇓P	**Pg**	**05 43 15.8**	**-0.7**
	baz=328						
WDJ				*e*S	**Sb**	**05 43 26.1**	**+0.9**
	baz=328						
CHN4	**Tsaushan**	**0.64 222**		⇓P	**Pg**	**05 43 16.1**	**-0.4**
	baz=214						
CHN4				*e*S	**Sn**	**05 43 27.1**	**-0.8**
	baz=214						
NSY	**Sanyi**	**0.64 335**		⇓P	**Pg**	**05 43 16.3**	**-0.2**
	baz=341						
NSY				*e*S	**Sn**	**05 43 26.8**	**-1.2**
	baz=341						
RLNB	**Erlin**	**0.64 275**		⇓P	**Pg**	**05 43 15.2**	**-1.3**
	baz=273						
RLNB				*e*S	**Sb**	**05 43 26.0**	**+0.7**
	baz=273						
TPUB	**Ta-pu**	**0.66 217**		*e*Pg	**Pg**	**05 43 16.4**	**-0.5**
TPUB				*e*Sg	**Sb**	**05 43 25.7**	**-0.1**
TPUB	**Ta-pu**	**0.66 217**		⇓P	**Pg**	**05 43 16.3**	**-0.5**
	baz=210						
TPUB				*e*S	**Sb**	**05 43 26.8**	**+1.0**
	baz=210						
NNS	**Nan Shan**	**0.67 25**		⇓P	**Pg**	**05 43 16.1**	**-1.0**
	baz=33						
NNS				*e*S	**Sb**	**05 43 26.7**	**+0.5**
	baz=33						
CHY	**Chiayi**	**0.67 240**		⇓P	**Pg**	**05 43 16.1**	**-0.9**
	baz=234						
CHY				*e*S	**Sb**	**05 43 26.9**	**+0.9**
	baz=234						
PTSB	**Yuanli**	**0.69 332**		⇓*i*P	**Pg**	**05 43 17.0**	**-0.5**
	baz=337						
WTP	**Ta-pu**	**0.71 215**		⇓P	**Pg**	**05 43 17.3**	**-0.5**
	baz=208						
WTP				*

LIOB	Emei	0.81	357	eP	Pb	05 43 19.0	-0.5
	baz=3.0						
LIOB				eS	Sg	05 43 31.2	+0.8
	baz=3.0						
ENA	Nanau	0.86	46⇓	iP	Pb	05 43 20.2	-0.1
	baz=52						
ENA				eS	Sn	05 43 33.2	-0.2
	baz=52						
SGST	Jiashian	0.86	210	eP	Pb	05 43 20.2	-0.2
	baz=204						
SGST				eS	Sn	05 43 34.4	+0.9
	baz=204						
NDT	Datong Townshi	0.87	28	⇓P	Pb	05 43 19.6	-0.9
	baz=34						
NDT				eS	Sn	05 43 33.8	+0.2
	baz=34						
YHNB	Yeheng	0.88	19	ePg	Pb	05 43 20.2	-0.5
YHNB				eSg	Sg	05 43 32.7	0.0
YHNB	Yeheng	0.88	19⇓	eP	Pb	05 43 19.8	-0.9
	baz=24						
YHNB				eS	Sg	05 43 32.5	-0.2
	baz=24						
NSK	Sanguang	0.88	18	⇓P	Pb	05 43 19.9	-0.8
	baz=24						
NSK				eS	Sn	05 43 33.4	-0.7
	baz=24						
CHN8	Yiju	0.92	238	eP	Pb	05 43 20.1	-1.2
	baz=233						
CHN8				eS	Sn	05 43 34.8	+0.2
	baz=233						
SLGT	Liugui	0.92	205	⇓P	Pb	05 43 21.1	-0.1
	baz=199						
SLGT				eS	Sn	05 43 35.0	+0.3
	baz=199						
SBCB	Hsinchu	0.96	356	eP	Pg	05 43 22.1	-0.3
	baz=1.0						
SBCB				eS	Sn	05 43 37.9	+2.1
	baz=1.0						
HSN	Hsinchu	0.97	355	eP	Pn	05 43 22.7	0.0
	baz=2.0						
HSN				eS	Sn	05 43 37.5	+1.5
	baz=2.0						
CHN3	Shinhua	0.99	220	eP	Pb	05 43 22.4	0.0
	baz=216						
CHN3				eS	Sn	05 43 39.1	+2.7
	baz=216						
TWG	Pinlang	1.01	179	ePn	Pg	05 43 23.5	+0.2
TWG	Pinlang	1.01	179	P	Pg	05 43 23.5	+0.2
	baz=175						
TWG				eS	Sn	05 43 39.6	+2.7
	baz=175						
TWGBT	Beinan	1.01	179	⇑P	Pg	05 43 23.4	0.0
	baz=175						
TWGBT				eS	Sn	05 43 39.5	+2.5
	baz=175						
NWLT	Wulai	1.02	23	⇓P	Pb	05 43 22.3	-0.8
	baz=28						
SCLT	Jiali	1.03	231	eP	Pb	05 43 22.8	-0.3
	baz=226						
SCLT				eS	Sn	05 43 38.7	+1.2
	baz=226						
WLTB	Daxi	1.03	10	eP	Pn	05 43 23.4	-0.2
	baz=14						
TWE	Neicheng	1.04	32	⇓P	Pb	05 43 23.2	-0.2
	baz=37						
TWE				eS	Sn	05 43 39.3	+1.4
	baz=37						
TWC	Suao	1.06	43⇓	eP	Pb	05 43 23.6	0.0
	baz=47						
TWC				eS	Sn	05 43 39.6	+1.4
	baz=47						
TTN	Taitung	1.08	176	eP	Pg	05 43 25.2	+0.6
	baz=171						
TTN				eS	Sg	05 43 42.6	+3.8
	baz=171						
TAI1	Yung-k'ang	1.10	224	eP	Pn	05 43 24.5	+0.1
	baz=220						
TAI1				eS	Sg	05 43 41.7	+2.3
	baz=220						
ILA	Ilan	1.12	34	eP	Pb	05 43 25.1	+0.3
	baz=38						
ILA				eS	Sg	05 43 43.2	+3.0
	baz=38						
NCUH	Zhongli	1.14	6	eP	Pn	05 43 24.8	-0.2
	baz=10.0						
NCUH				eS	Sg	05 43 42.7	+1.9
	baz=10.0						
NCU	National Centr	1.14	6	eP	Pn	05 43 24.9	-0.1
	baz=10.0						
NCU				eS	Sg	05 43 41.6	+0.9
	baz=10.0						
SSD	Sandimen	1.15	200	⇑P	Pg	05 43 25.6	-0.4
	baz=195						
SSD				eS	Sg	05 43 43.2	+2.1
	baz=195						
TWM1	Shoushan	1.16	210⇓	eP	Pg	05 43 26.6	+0.3
	baz=206						
NHDH	Xindian Distri	1.20	21	eP	Pb	05 43 26.3	+0.1
	baz=25						
TATO	Taipei	1.20	19	ePn	Pb	05 43 26.3	+0.1
TATO	Taipei	1.20	19⇓	eP	Pb	05 43 26.2	+0.1
	baz=23						
TATO	Taipei	1.20	19	P	Pg	05 43 27.6	+0.5
	SNR=703						
EOS1	EOS1	1.21	54	eP	Pg	05 43 27.4	+0.2
	baz=57						
EOS1				eS	Sg	05 43 45.9	+2.9
	baz=57						
SGLT	Jiouru	1.22	205	eP	Pg	05 43 27.5	+0.1
	baz=201						
SGLT				eS	Sg	05 43 47.7	+4.4
	baz=201						
ECL	Taimali	1.23	185⇑	eP	Pb	05 43 27.1	+0.4
	baz=181						
ECL				eS	Sg	05 43 45.4	+1.6
	baz=181						
NTC	Toucheng	1.24	34	eP	Pb	05 43 26.5	-0.2
	baz=38						
NTC				eS	Sg	05 43 44.5	+0.6
	baz=38						
SNJT	Kaohsiung City	1.26	212⇓	eP	Pb	05 43 27.5	+0.4
	baz=208						
SNJT				eS	Sg	05 43 46.3	+1.6
	baz=208						
TAP	Taipei	1.27	19	eP	Pb	05 43 27.5	+0.2
	baz=23						
TAP				eS	Sg	05 43 46.2	+1.3
	baz=23						
MASBT	Mashibuluo	1.28	198⇑	eP	Pb	05 43 27.3	-0.1
	baz=194						
MASBT				eS	Sg	05 43 46.0	+0.9
	baz=194						
TWS1	Kuangyinshan	1.30	14	eP	Pb	05 43 27.6	-0.3
	baz=18						
TWS1				eS	Sg	05 43 49.3	+3.2
	baz=18						
TIPB	Shuangxi	1.33	31	eP	Pb	05 43 28.2	-0.2
	baz=35						
TIPB				eS	Sg	05 43 46.6	-0.3
	baz=35						
NTST	Danshui	1.37	15	eP	Pb	05 43 28.9	-0.1
	baz=18						
YM04	YM04	1.39	18	eP	Pn	05 43 28.4	0.0
	baz=22						
YM04				eS	Sg	05 43 49.4	+0.8
	baz=22						
YM01	YM01	1.39	19	eP	Pn	05 43 28.5	0.0
	baz=23						
YM01				eS	Sg	05 43 48.9	+0.1
	baz=23						
YM10	YM10	1.40	19	eP	Pn	05 43 28.7	+0.1
	baz=23						
NWF	Wu-fen Shan	1.40	28	eP	Pb	05 43 29.9	+0.3
	baz=31						
WFSB	Wu-fen Shan	1.40	28	eP	Pb	05 43 29.6	+0.1
	baz=31						
WFSB				eS	Sg	05 43 51.2	+2.1
	baz=31						
PHUB	P'eng-hu	1.40	257⇓	eP	Pn	05 43 26.8	-1.7
	baz=255						
PHUB				eS	Sn	05 43 46.0	-0.7
	baz=255						
PNG	Penghu	1.40	259⇓	eP	Pn	05 43 27.0	-1.6
	baz=257						
PNG				eS	Sn	05 43 46.4	-0.3
	baz=257						
WDGT	Dungji	1.40	246⇓	eP	Pn	05 43 27.2	-1.4
	baz=243						
WDGT				eS	Sn	05 43 46.2	-0.6
	baz=243						
YM05	YM05	1.40	19	eP	Pn	05 43 28.8	+0.1
	baz=23						
YM05				eS	Sg	05 43 50.0	+0.7
	baz=23						
YM11	YM11	1.41	19	eP	Pn	05 43 28.9	+0.2
	baz=23						
YM11				eS	Sg	05 43 50.2	+0.8
	baz=23						
YM03	YM03	1.41	18	eP	Pn	05 43 29.0	+0.2
	baz=21						
YM03				eS	Sb	05 43 48.4	+0.8
	baz=21						
ANP	Anpu	1.41	17	eP	Pn	05 43 28.5	-0.3
	baz=21						
ANP				eS	Sg	05 43 48.8	-0.7
	baz=21						
SSPT	Xinbi	1.42	199⇑	eP	Pb	05 43 29.7	0.0
	baz=195						
SSPT				eS	Sg	05 43 51.0	+1.5
	baz=195						
YM07	YM07	1.43	21	eP	Pn	05 43 29.2	+0.2
	baz=24						
YM07				eS	Sg	05 43 51.5	+1.4
	baz=24						
YM08	YM08	1.43	20	eP	Pn	05 43 29.4	+0.3
	baz=23						
KAU	Kaohsiung	1.44	209	eP	Pn	05 43 29.4	+0.4
	baz=205						
TWB1	Santiao Chiao	1.45	36	eP	Pb	05 43 30.5	+0.2
	baz=39						
TWB1				eS	Sg	05 43 51.9	+1.3
	baz=39						
EAST	Anshuo	1.46	188⇑	eP	Pb	05 43 30.5	0.0
	baz=184						
EAST				eS	Sg	05 43 52.4	+1.6
	baz=184						
TAW	Tawu	1.48	186	eP	Pb	05 43 31.0	+0.2
	baz=182						
TAW				eS	Sg	05 43 53.3	+1.8
	baz=182						
SCZT	Fangliau	1.51	196⇑	eP	Pb	05 43 30.7	-0.7
	baz=192						
SCZT				eS	Sg	05 43 53.3	+0.8
	baz=192						
WLCH	Liuqiu	1.60	203	eP	Pb	05 43 32.5	-0.4
	baz=200						
WLCH				eS	Sb	05 43 54.1	+1.2
	baz=200						
TWP	Hsiaoliuchiu	1.61	204	eP	Pn	05 43 32.2	+0.7
	baz=200						
TWP				eS	Sb	05 43 54.0	+0.9
	baz=200						
VCHM	Qimei	1.62	248⇓	eP	Pn	05 43 30.2	-1.3
	baz=245						
VCHM				eS	Sn	05 43 52.2	+0.2
	baz=245						
JYNG	Yonagunijimaku	1.83	70	P	Pb	05 43 35.9	-0.9
JYNG				eS	Sb	05 44 00.9	+1.4
LAY	Lan-yu	1.84	166	eP	Pn	05 43 35.1	+0.4
	baz=163						
LAY				eS	Sb	05 43 59.4	-0.4
	baz=163						
HEN	Hengchun	1.84	189	eP	Pn	05 43 35.8	+1.1
	baz=186						
YOJ	Yonaguni jima	1.89	70	ePn	Pb	05 43 37.2	-0.7
YOJ	Yonaguni jima	1.89	70	eP	Pn	05 43 36.4	+1.1
	baz=72						
YOJ				eS	Sb	05 44 01.5	+0.3
	baz=72						
YOJ	Yonaguni jima	1.89	70	eP	Pb	05 43 37.2	-0.7
YOJ	Yonaguni jima	1.89	70	P	Pn	05 43 36.5	+1.1
YOJ				eS	Sb	05 44 01.0	-0.2
TWK1	Hengchun	1.89	187	eP	Pn	05 43 36.2	+0.9
	baz=184						
TWKBT	Hengchun	1.90	187⇑	eP	Pn	05 43 36.1	+0.7
	baz=184						
TSEB	Hengchuen, Pin	1.93	184	eP	Pb	05 43 37.7	-0.8
	baz=183						
TSEB				eS	Sg	05 44 06.2	+0.3
	baz=183						
PCYT	Pengchaiyu	2.01	27	eP	Pn	05 43 37.6	+0.6
	baz=30						
PTTC	Pingtan	2.03	325	eP	Pn	05 43 35.1	-2.2
	baz=326						
PTTC				eS	Sn	05 44 02.5	+0.2
	baz=326						
KNM	Kinmen	2.47	284	eP	Pn	05 43 42.7	-0.5
	baz=282						
KNM				eS	Sb	05 44 15.7	-2.2
	baz=282						
IRIF	Iriomote-Funau	2.49	78	P	Pn	05 43 45.2	+1.6
IRIF				S	Sb	05 44 16.5	-2.0
QZH	Quanzhou	2.51	297⇓	iPn	Pn	05 43 42.3	-1.5
QZH				Sn	Sn	05 44 11.0	-3.0
KNMB	Chin-men Tao	2.52	285	ePn	Pn	05 43 44.1	+0.1
KNMB	Chin-men Tao	2.52	285	eP	Pn	05 43 41.6	-2.3
	baz=284						
KNMB				eS	Sn	05 44 14.3	0.0
	baz=284						
MATB	Ma-tsu	2.52	337	eP	Pn	05 43 42.0	-2.0
	baz=337						
MATB				eS	Sn	05 44 14.2	-0.1
	baz=337						
HATJ	Hateruma jima	2.52	84	P	Pn	05 43 45.4	+1.4
HATJ				eS	Sb	05 44 17.4	-2.0
JKRS	Kuro-shima	2.73	81	P	Pn	05 43 49.3	+2.5
JKRS				eS	Sb	05 44 23.3	-2.0
JIJ	Ishigaki jima	2.87	79	P	Pn	05 43 49.8	+1.0
JIJ				eS	Sn	05 44 26.0	+3.1
MHZQ	Yeshan	2.91	321⇓	eP	Pn	05 43 47.5	-1.9
	baz=322						
MHZQ				eS	Sn	05 44 24.2	+0.2
	baz=322						
LYJJ	Jianjiangzhen	2.95	337⇓	eP	Pn	05 43 48.6	-1.3
	baz=338						
LYJJ				eS	Sn	05 44 24.0	-0.9
	baz=338						
AXDP	Jialang	3.01	291⇓	eP	Pn	05 43 48.6	-2.1
	baz=291						
AXDP				eS	Sn	05 44 26.9	+0.4
	baz=291						
ZPLA	Ao Xicun	3.03	273⇓	eP	Pn	05 43 49.2	-1.8
	baz=271						
ZPLA				eS	Sn	05 44 26.2	-0.7
	baz=271						
JISG	Ishigakijimahi	3.06	75	P	Pn	05 43 52.5	+1.1
JISG				S	Sn	05 44 30.5	+2.8
XPSS	Dashiqiu	3.18	346	eP	Pn	05 43 51.8	-1.3
	baz=347						
XPSS				eS	Sn	05 44 30.0	-0.7
	baz=347						
ZZJH	Jiuhuzhen	3.20	282	eP	Pn	05 43 51.1	-2.1
	baz=281						
ZZJH				eS	Sn	05 44 30.4	-0.6
	baz=281						
JTJ	Tarama	3.42	76	P	Pn	05 43 58.2	+1.8
JTJ				S	Sn	05 44 41.0	+4.4
BBP	Basco	3.48	166⇓	iP	Pn	05 43 58.6	+1.4
BBP				i S	Sb	05 44 43.0	-3.9
JIRB	Irabujima	3.88	74	P	Pn	05 44 04.7	+2.0
JIRB				eS	Sn	05 44 50.4	+2.5
JIKM	Ikemajima	3.97	73	P	Pn	05 44 06.7	+2.8
JIKM				eS	Sn	05 44 54.6	+4.5
JMJ	Miyako jima 2	3.98	75	eP	Pn	05 44 06.0	+1.9
	baz=76						
JMJ				eS	Sn	05 44 53.9	+3.4
	baz=76						
JMJ2	Miyako jima3	4.00	76	P	Pn	05 44 07.3	+3.0
JMJ2				S	Sn	05 44 54.0	+3.2
JOGS	Gusukube	4.07	76	P	Pn	05 44 08.1	+2.8
SGCP	Mt. Cagua	5.64	170	eP	Pn	05 44 29.1	+2.2
APYP	Conner	5.94	178	eP	Pn	05 44 32.1	+1.0
CVP	Callao Caves	6.14	173⇓	iP	Pn	05 44 37.2	+3.4
CVP				i S	Sn	05 45 48.2	+4.5
ABRA	Dolores	6.16	183	eP	Pn	05 44 36.4	+2.4
HKC	Hong Kong Obse	6.52	258	⇑P	Pn	05 44 39.0	0.0
HKPS	Hong Kong Po S	6.56	258	ePn	Pn	05 44 39.3	-0.2
HKPS				eSn	Sn	05 45 51.8	-2.1
PALP	Palanan	6.86	169	eP	Pn	05 44 48.5	+4.9
CAUP	Cauayan	6.89	174	eP	Pn	05 44 50.0	+5.9
GZH	Guangzhou	7.12	266	P	Pn	05 44 41.3	-6.0
GZH				S	Sn	05 45 53.6	-14
GZH				smax	smax		
	comp=N,20μm,1.1s						
GZH				smax	smax		
	comp=E,30μm,1.0s						
JOW	Kunigami	7.18	64	Pn	Pn	05 44 47.8	-0.3
	comp=E,19nm,0.3s,baz=187,slow=15,SNR=34						
JOW				Sn	Sn	05 46 09.7	+0.5
	baz=79,slow=18,SNR=1.3						
JOW	Kunigami	7.18	64	ePn	Pn	05 44 49.2	+1.2
JOW	Kunigami	7.18	64	eP	Pn	05 44 48.6	+0.6
	baz=66						
SSE	Sheshan	7.24	1	P	Pn	05 44 48.8	0.0
SSE				S	Sn	05 46 08.7	-1.9
SSE	Sheshan	7.24	1	ePn	Pn	05 44 48.6	-0.2
BOLP	Bolinao	7.49	188	eP	Pn	05 44 55.6	+3.3
SMPP	San Manuel, Pa	7.65	183	eP	Pn	05 44 53.1	-1.4
SCZP	Santa Cruz	8.09	188	eP	Pn	05 45 03.0	+2.4
JTK	Tokunoshima	8.13	59	⇑P	Pn	05 45 01.0	-0.1
NJ2	Nanjing	8.42	347	eP	Pn	05 45 03.6	-1.4
NJ2				S	Sn	05 46 37.4	-2.2
NJ2				pmax	pmax		
	comp=E,1μm,0.9s						
NJ2				smax	smax		
	comp=E,12μm,1.1s						
NJ2				smax	smax		
	comp=E,11μm,1.8s						
NJ2				LR	LR		
	comp=E,334μm,14.1s						
NJ2				LR	LR		
	comp=E,438μm,16.8s						
NJ2				LR	LR		
	comp=E,396μm,14.1s						
WHN	Wuhan	8.96	320	⇓P	Pn	05 45 11.2	-1.3
WHN				S	Sn	05 46 46.2	-6.9
WHN				pmax	pmax		
	comp=E,590nm,1.1s						
POLP	Polillo Island	9.09	175	eP	Pn	05 45 18.7	+4.4
TGY	Tagaytay City	9.68	181	Pn	Pn	05 45 28.5	+6.0
	comp=E,37nm,0.3s,baz=294,slow=3.2,SNR=22						
TGY				LR	LR	05 50 13.2	
	comp=E,180μm,18.1s,baz=23,slow=45						
TGY	Tagaytay City	9.68	181⇑	eP	Pn	05 45 29.4	+7.0
TGY				eS	Sn	05 46 39.6	-31
LUBP	Lubang	10.07	185	eP	Pn	05 45 32.5	+4.7
AUQP	San Andres	10.56	171	eP	Pn	05 45 48.9	+14
PVCP	Virac	10.59	163	eP	Pn	05 45 32.0	-2.9
SJMP	San Jose	11.31	180	eP	Pn	05 45 46.7	+2.0
OTRP	Odiongan	11.45	175	eP	Pn	05 45 48.9	+2.3
QIZ	Qiongzhong	11.48	248	P	Pn	05 45 47.0	-0.1
QIZ				pP		05 45 54.1	
QIZ				sP		05 45 58.7	
QIZ				S	Sn	05 47 55.0	-0.1
QIZ				sS		05 48 03.5	
QIZ				pmax	pmax		
	comp=E,49nm,0.8s						
QIZ				pmax	pmax		
	comp=E,4μm,8.2s						
QIZ				LR	LR		
	comp=E,247μm,17.2s						
QIZ				LR	LR		
	comp=E,124μm,16.5s						
QIZ				LR	LR		
	comp=E,221μm,14.0s						
QIZ	Qiongzhong	11.48	248	ePn	Pn	05 45 46.7	-0.4
CNP	Catarman	11.77	162	eP	Pn	05 45 56.2	+5.2
BUSP	Coron	11.79	184	eP	Pn	05 45 55.9	+4.6
ENH	Enshi	12.14	304	ePn	Pn	05 45 55.5	-0.6
JNU	Nakatsue	12.65	41	Pn	Pn	05 46 06.8	+3.8
	comp=E,2.7nm,0.3s,baz=229,slow=8.4,SNR=35						
JNU				LR	LR	05 51 58.1	
	comp=E,117μm,19.5s,baz=224,slow=42						
JNU	Nakatsue	12.65	41	ePn	Pn	05 46 06.9	+3.9
ENPP	El Nido	12.65	187	eP	Pn	05 46 03.2	+0.2
TIA	Tai'an	12.80	345	P	Pn	05 46 04.0	-1.0
TIA				S	Sn	05 48 29.3	+2.2
TIA				pmax	pmax		
	comp=E,3μm,13.7s						
TIA				LR	LR		
	comp=E,201μm,15.2s						
TIA				LR	LR		
	comp=E,40μm,10.3s						
TIA				LR	LR		
	comp=E,232μm,13.2s						
CUYO	Cuyo Island	12.91	180	eP	Pn	05 46 09.7	+3.0
PLP	Palo	13.14	163⇓	eP	Pn	05 46 14.0	+4.3
OCLP	Ormoc	13.15	165	eP	Pn	05 46 14.6	+4.7
GUIM	Jordan	13.21	173	eP	Pn	05 46 15.2	+4.4
GYA	Guiyang	13.30	284⇓	iP	Pn	05 46 11.0	-1.0
GYA				PP	P	05 46 22.8	+1.1
GYA				S	Sn	05 48 37.2	-2.4
GYA				pmax	pmax		
	comp=E,740nm,1.3s						
GYA				pmax	pmax		
	comp=E,6μm,10.6s						
GYA				LR	LR		
	comp=E,119μm,10.9s						
GYA				LR	LR		
	comp=E,472μm,10.2s						
GYA				LR	LR		
	comp=E,530μm,14.9s						
TJN	Taejon	13.64	22	i P	Pn	05 46 20.1	+3.7
LLP	Lapu-Lapu	13.72	168	eP	Pn	05 46 20.7	+2.9
MSLP	Maasin	14.10	164	eP	Pn	05 46 26.2	+3.4
XAN	Xi'an	14.70	317	P	Pn	05 46 31.1	+0.1
XAN				pP	P	05 46 34.7	-2.4
XAN				sP		05 46 38.0	
XAN				pmax	pmax		
	comp=E,100nm,1.7s						
XAN				pmax	pmax		
	comp=E,4μm,7.9s						
XAN				LR	LR		
	comp=E,301μm,11.6s						
XAN				LR	LR		
	comp=E,532μm,12.3s						
XAN	Xi'an	14.70	317	ePn	Pn	05 46 31.7	+0.7
XAN	Xi'an	14.70	317	eP	Pn	05 46 31.7	+0.7
KS15	Wonju Array Si	14.78	22	ePn	Pn	05 46 34.7	+2.7
KSRS	Korea Array	14.80	22	Pn	Pn	05 46 34.1	+1.8
	comp=E,1.8nm,0.3s,baz=206,slow=13,SNR=65						
KSRS				LR	LR	05 52 34.2	
	comp=E,53μm,20.6s,baz=204,slow=38						
DL2	Dalian	15.04	2⇑	iP	P	05 46 38.6	-2.2
DL2				S	Sn	05 49 27.8	+6.2
DL2				pmax	pmax		
	comp=E,130nm,1.4s						
DL2				pmax	pmax		
	comp=E,2μm,6.5s						
DL2				LR	LR		
	comp=E,19μm,18.3s						
DL2				LR	LR		
	comp=E,125μm,17.7s						
DL2				LR	LR		
	comp=E,88μm,16.3s						
DCPH	Dipolog City	15.32	171⇑	eP	P	05 46 51.7	+7.6
CGP	Cagayan de Oro	15.68	167⇓	eP	P	05 46 52.5	+4.5
TIY	Taiyuan	15.68	334	eP	P	05 46 48.2	+0.1
TIY				S	Sn	05 49 40.6	+3.0
TIY				LR	LR		
	comp=E,327μm,11.5s						
TIY				LR	LR		
	comp=E,460μm,11.9s						
IPIL	Ipil	16.02	175	eP	P	05 46 52.3	+0.5
SLVN	Son La	16.04	264	ePn	Pn	05 46 49.0	+0.3
	comp=E,833nm,1.3s						
PAGZ	Pagadian	16.05	172	eP	Pn	05 46 45.4	-3.4
BUKP	Musuan	16.32	166	eP	P	05 46 54.4	-0.9
BJT	Baijiatuau	16.66	347	ePn	P	05 46 58.0	-0.8
	comp=E,450nm,1.1s						
BJI	Beijing	16.68	347	P	P	05 46 59.1	+0.1
BJI				S	Sn	05 50 03.9	+2.4
BJI				pmax	pmax		
	comp=E,150nm,1.3s						
KMI	Kunming	16.73	278	P	Pn	05 46 56.6	-1.1
KMI				pP	pP	05 47 03.4	-1.6
KMI				sP	sP	05 47 05.7	-1.5
KMI				S	Sn	05 50 03.4	+0.1
KMI				pmax	pmax		
	comp=E,4μm,6.9s						
KMI	Kunming	16.73	278	ePn	Pn	05 46 56.8	-0.9
	comp=E,2μm,1.5s						
KMI	Kunming	16.73	278	eP	Pn	05 46 56.8	-0.9
KMI				pmax	pmax		
	comp=Z,2μm,1.5s						
PANO	Nakornpanom	16.77	250	P	P	05 47 00.3	+0.1
	comp=Z,12nm,1.6s,comp=Z,367nm						
CTBH	Cotabato--PC H	16.80	169⇑	iP	P	05 47 03.0	+2.5
DLV	T Lat	16.80	227	ePn	P	05 47 01.0	+0.2

comp=Z,671nm,1.2s
CD2 Chengdu 16.90 298⇑ *i*P Pn 05 46 58.7 -0.9
CD2 sP sP 05 47 10.4 +1.5
CD2 S **S 05 50 14.5 -2.8**
CD2 SS **SnSn 05 50 30.6 +10**
CD2 PcP **PcP 05 51 43.4 -3.0**
CD2 pmax pmax
comp=Z,160nm,1.5s
CD2 pmax pmax
comp=Z,13μm,7.7s
DMPH Davao City--Mi 17.19 165 *e*P P 05 47 22.3 +17
DAV Davao City (W) 17.22 165 LR LR 05 53 25.8
comp=Z,90μm,20.0s,baz=341,slow=36
DAV Davao City (W) 17.22 165 P **Pn 05 47 01.8 -1.9**
SKNT Sakolnakorn 17.39 250 P **P 05 47 08.2 +1.1**
comp=Z,336nm,1.5s
MATI Mati 17.52 163 *e*P P 05 47 09.0 +0.5
SKMP Bagumbayan, Su 17.54 168 *e*P Pn 05 47 07.0 -0.7
INU Inuyama 17.98 47 *e*Pn Pn 05 47 11.3 -1.7
comp=Z,418nm,1.3s
SNY Shenyang 18.07 6 ⇑P P 05 47 16.0 +1.7
SNY S **S 05 50 40.3 -0.6**
SNY pmax pmax
comp=Z,360nm,1.8s
SNY pmax pmax
comp=Z,23μm,9.2s
SNY LR LR
comp=Z,69μm,14.7s
SNY LR LR
comp=Z,62μm,13.9s
SNY LR LR
comp=Z,106μm,15.3s
DDMP Don Marcelino, 18.18 165 *e*P Pn 05 47 09.5 -6.1
KHON Khomkaen 18.67 250 P **Pn 05 47 24.6 +3.1**
comp=Z,913μm,1.3s
HHC Hu-ho-hao-te 18.75 337 *e*P Pn 05 47 26.5 +4.1
HHC PP **PnPn 05 47 42.7 +8.0**
HHC S **S 05 50 57.0 +2.1**
HHC pmax pmax
comp=Z,140nm,1.4s
HHC pmax pmax
comp=Z,14μm,5.7s
HHC LR LR
comp=Z,129μm,14.1s
HHC LR LR
comp=Z,170μm,13.7s
HHC LR LR
comp=Z,183μm,17.2s
JHJ Hachijo jima 2 18.86 56 P **Pn 05 47 25.6 +1.9**
comp=Z,42nm,0.3s,baz=218,slow=8.4,SNR=11
JHJ LR LR 05 54 17.0
comp=Z,63μm,21.8s,baz=253,slow=36
JHJ2 Mitsune 18.88 57 *e*P P 05 47 23.5 +0.1
comp=Z,9μm,1.7s
BTO Baotou 19.13 334 *e*P Pn 05 47 30.4 +3.4
BTO S **Sn 05 50 56.2 -4.8**
LZH Lanzhou 19.24 313 ⇓P Pn 05 47 29.6 +1.1
LZH pP sP 05 47 34.5 -0.7
LZH sP pP 05 47 36.9 +4.3
LZH PP **PnPn 05 47 44.5 +3.0**
LZH SS S 05 51 24.1 +19
LZH pmax pmax
comp=Z,440nm,1.5s
LZH pmax pmax
comp=Z,13μm,4.3s
LZH LR LR
comp=Z,280μm,10.8s
LZH LR LR
comp=Z,307μm,12.4s
MJB9 Matsu-Tunnel 19.46 45 *e*P P 05 47 28.3 -1.5
comp=Z,158nm,0.9s
MAJO Matsushiro 19.46 45 *e*P P 05 47 28.3 -1.4
comp=Z,151nm,0.9s
MAJO *e*ScP **ScP 05 55 25.9 0.0**
MAJO Matsushiro 19.46 45 *e*P P 05 47 28.3 -1.4
MAJO pmax pmax
comp=Z,151nm,0.9s
MAT Matsushiro 19.46 45 P **P 05 47 29.4 -0.3**
MAT S **S 05 51 12.6 +3.5**
MJAR Matsushiro Arr 19.46 45 P **P 05 47 29.8 +0.1**
comp=Z,0.5nm,0.3s,baz=229,slow=9.1,SNR=100
MJAR ScP **ScP 05 55 24.2 -1.8**
comp=Z,0.0nm,0.3s,baz=234,slow=3.5,SNR=16
MJAR LR LR 05 55 52.9
comp=Z,62μm,20.4s,baz=235,slow=40
CHAI Chaiyaphum 19.58 250 P **Pn 05 47 33.7 +1.2**
comp=Z,394μm,1.2s
UTTA Uttaradit 20.09 256 P Pn 05 47 40.1 +1.5
comp=Z,213μm,1.0s
PHRA Phrae 20.13 259 P Pn 05 47 39.8 +0.8
comp=Z,66nm,1.6s,comp=Z,2μm
PBKT Sadao Pong 20.18 253 P Pn 05 47 39.9 +0.3
comp=Z,345nm,1.3s,comp=Z,9μmcomp=Z,39μm
PAYA Payao 20.19 261 P Pn 05 47 41.1 +1.3
comp=Z,505μm,1.1s
CN2 Changchun 20.24 9⇑ *i*P P 05 47 39.1 +0.9
CN2 *e*sP sP 05 47 45.5 -0.2
CN2 *e*S **S 05 51 21.3 -3.3**
CN2 PcP **PcP 05 51 51.5 -0.3**
CN2 pmax pmax
comp=Z,80nm,0.8s
CN2 pmax pmax
comp=Z,10μm,12.0s
CN2 LR LR
comp=Z,78μm,16.0s
CN2 LR LR
comp=Z,113μm,16.0s
CN2 LR LR
comp=Z,80μm,14.0s
SGSI Sangihe 20.49 167 P **P 05 47 41.0 0.0**
MSHR Mys Shultsa 20.49 22*c* *i*P P 05 47 41.8 +1.0
LAMP Lampang 20.66 259 P Pn 05 47 45.9 +0.7
comp=Z,451μm,1.0s
CMMT Chiang Mai 21.19 261 P **P 05 47 50.5 +1.9**
comp=Z,287nm,1.6s,comp=Z,6μm
CHTO Chiang Mai 21.19 261 *e*P P 05 47 50.0 +1.4
comp=Z,507nm,1.1s
CHTO LR LR
comp=Z,41μm,20.0s
CHTO Chiang Mai 21.19 261 *e*P P 05 47 50.0 +1.4
CHTO pmax pmax
comp=Z,507nm,1.1s
CHTO MLR MLR
comp=Z,41μm,20.0s
CHTO Chiang Mai 21.19 261 P **P 05 47 50.3 +1.6**
SNR=155
CHTO P **P 05 47 50.3 +1.6**
SNR=155
VLA Vladivostok 21.22 22*c* *i*P P 05 47 49.8 +1.1
VLA pmax pmax
comp=Z,282nm,1.2s
VLA MLR MLR
comp=Z,58μm,16.0s
CM31 Chiang Mai Arr 21.30 260 *e*P P 05 47 51.3 +1.5
comp=Z,570nm,1.1s
CM31 Chiang Mai Arr 21.30 260 P **P 05 47 51.6 +1.8**
SNR=163
CMAR Chiang Mai Arr 21.30 260 P **P 05 47 51.5 +1.7**
comp=Z,66nm,0.9s,baz=65,slow=8.5,SNR=87
CMAR PcP **PcP 05 51 53.8 -0.5**
comp=Z,12nm,0.6s,baz=29,slow=2.1,SNR=9.9
CMAR LR LR 05 55 46.0
comp=Z,34μm,18.3s,baz=71,slow=36
CMAR Chiang Mai Arr 21.30 260 *i*P P 05 47 51.5 +1.7
CMAR pmax pmax
comp=Z,75nm,0.9s
MDJ Mudanjiang 21.88 17 P **P 05 47 56.2 +0.4**
MDJ sP pP 05 48 01.8 +0.7
MDJ pP sP 05 48 05.1 +1.8
MDJ S Sn 05 52 03.0 -3.9
MDJ LR LR
comp=Z,86μm,12.9s
MDJ LR LR
comp=Z,50μm,13.6s
MDJ LR LR
comp=Z,105μm,14.2s
MDJ Mudanjiang 21.88 17 *e*P P 05 47 55.9 +0.2
comp=Z,336nm,1.0s
MDJ LR LR
comp=Z,61μm,18.0s
UMPA Umpang Tak 22.18 254 P **P 05 48 03.1 +3.8**
comp=Z,787μm,1.6s
USA0B Ussuriysk Arra 22.20 21 PFAKE 05 48 10.0 +11
USA0B LR LR
comp=Z,46μm,20.0s
USRK Ussuriysk Ar. 22.20 21 P **P 05 48 00.6 +1.3**
comp=Z,73nm,0.8s,baz=211,slow=10,SNR=68
USRK PcP **PcP 05 51 53.4 -2.2**
comp=Z,12nm,0.8s,baz=237,slow=3.9,SNR=4.3
USRK ScP **ScP 05 55 31.2 -1.1**
comp=Z,4.8nm,0.8s,baz=220,slow=2.4,SNR=4.7
USRK LR LR 05 57 08.2
comp=Z,43μm,19.8s,baz=186,slow=38
SRDT SRDT 22.75 249 P **P 05 48 08.1 +2.8**
comp=Z,150nm,1.2s,comp=Z,7μmcomp=Z,34μm
SBUM Sibu 22.91 203 *e*P P 05 48 06.4 -0.7
comp=Z,283nm,1.0s
SBUM LR LR
comp=Z,44μm,18.0s
SBUM Sibu 22.91 203 P **P 05 48 07.0 0.0**
LKP Lekhapani 23.00 284 *e*P P 05 48 07.9 0.0
LKP IAmb IAmb 05 48 11.3
comp=Z,341nm,0.6s
PHET Kaeng Krachan 23.02 246 P **P 05 48 12.7 +4.5**
comp=Z,259μm,1.0s
MRSI Marisa 23.23 178 P **P 05 48 09.4 -0.9**
KMSI Cibinong 23.29 173 P **P 05 48 10.9 0.0**
comp=Z,710nm,1.1s,comp=Z,9μm
MPSI Mapaga 23.38 183 P **P 05 48 11.2 -0.6**
comp=Z,134nm,1.3s,comp=Z,5μmcomp=Z,20μm
TNTI Ternate 23.73 164 *e*P P 05 48 13.0 -2.2
comp=Z,437nm,1.0s
TNTI Ternate 23.73 164 P **P 05 48 12.3 -2.9**
GTA Gaotai 23.76 316 ⇓P P 05 48 16.0 +0.5
GTA pP pP 05 48 20.4 -0.4
GTA sP sP 05 48 23.3 0.0
GTA S **S 05 52 28.9 -1.3**
GTA sS sS 05 52 37.5 -1.6
GTA pmax pmax
comp=Z,8μm,8.3s
GTA LR LR
comp=Z,186μm,12.0s
GTA LR LR
comp=Z,347μm,13.7s
DIBR DIBRUGARH 23.83 284 *e*P P 05 48 16.7 +0.6
MOKO MOKOCHONG 24.16 281 *e*P P 05 48 18.5 -0.9
MOKO IAmb IAmb 05 48 27.0
comp=Z,490nm,1.7s
SARN Sarigan 24.23 102 *e*P P 05 48 16.5 -3.5
comp=Z,2μm,2.0s
SARN LR LR
comp=Z,26μm,18.0s
ANA2 Anatahan 24.30 103 *e*P P 05 48 21.0 +0.4
comp=Z,1μm,1.3s
ANA2 LR LR
comp=Z,32μm,19.0s
JORH JORHAT 24.40 282 *e*P P 05 48 21.7 +0.3
SGKI Sangatta, Kali 24.45 188 P P 05 48 13.2 -8.7
KOHI KOHIMA 24.53 280 *e*P P 05 48 20.9 -2.0
KSM Kuching 24.55 207 *e*P P 05 48 22.4 -0.4
comp=Z,518nm,1.2s
KSM LR LR
comp=Z,40μm,22.0s
KSM Kuching 24.55 207 P **P 05 48 23.0 +0.2**
TEY Ternei 24.65 27⇓ *e*P P 05 48 23.6 +0.1
TEY *e* 05 48 31.1
TEY *e* 05 49 02.2
TEY *e*S **S 05 52 42.1 -2.1**
TEY pmax pmax
comp=Z,5μm,12.6s
TEY MLR MLR
comp=E,22μm,15.0s
TEY MLR MLR
comp=N,7μm,13.0s
TEY MLR MLR
comp=Z,42μm,13.0s
GUMO Guam 24.71 110 P **P 05 48 24.4 +0.1**
comp=Z,2μm,1.0s,baz=221,slow=2.7,SNR=66
GUMO LR LR 05 56 45.8
comp=Z,44μm,18.7s,baz=247,slow=34
GUMO Guam 24.71 110 *e*P P 05 48 23.8 -0.5
comp=Z,5μm,1.2s
GUMO LR LR
comp=Z,47μm,19.0s
GUMO Guam 24.71 110 *e*P P 05 48 23.8 -0.5
GUMO pmax pmax
comp=Z,5μm,1.2s
GUMO MLR MLR
comp=Z,47μm,19.0s
IMP Imphal 24.71 278 *e*P P 05 48 23.5 -0.9
IMP IAmb IAmb 05 48 32.0
comp=Z,154nm,0.3s
ZIRO ZIRO 24.78 284 *e*P P 05 48 26.1 +1.0
LUWI Luwuk 24.78 176 *e*P P 05 48 24.4 -0.6
comp=Z,2μm,1.1s
LUWI LR LR
comp=Z,50μm,22.0s
LUWI Luwuk 24.78 176 P **P 05 48 22.5 -2.4**
ITAN ITANAGAR 24.88 283 *e*P P 05 48 26.9 +1.1
ITAN IAmb IAmb 05 48 35.3
comp=Z,2μm,1.2s
BKB Balikpapan 25.27 190 P **P 05 48 29.7 +0.4**
MTKI Muara Teweh, K 25.34 195 P **P 05 48 29.9 -0.1**
HIA Hailar 25.41 358 *e*P P 05 48 29.7 -0.6
comp=Z,494nm,1.3s
HIA LR LR
comp=Z,79μm,18.0s
HIA Hailar 25.41 358 *e*P P 05 48 29.7 -0.6
HIA pmax pmax
comp=Z,495nm,1.3s
HIA MLR MLR
comp=Z,79μm,18.0s
SKLT Songkhla 25.67 233 P **P 05 48 39.9 +6.9**
comp=Z,85nm,1.4s,comp=Z,3μm
TEZP TEZPUR 25.70 282 *e*P P 05 48 33.0 -0.1
SILR SILCHAR 25.75 278 *e*P P 05 48 34.9 +1.1
ERM Erimo 25.82 40 *e*P P 05 48 33.8 -0.3
comp=Z,125nm,0.9s
ERM LR LR
comp=Z,49μm,18.0s
ERM Erimo 25.82 40 *e*P P 05 48 33.8 -0.3
ERM pmax pmax
comp=Z,125nm,0.9s
ERM MLR MLR
comp=Z,49μm,18.0s
SAIH SAIHA 25.83 273 *e*P P 05 48 34.3 -0.3
TRTT Trang 25.93 236 P P 05 48 43.2 +7.8
ULN Ulaanbaatar 26.45 339 *e*P P 05 48 40.9 +0.9
comp=Z,483nm,1.2s
ULN LR LR
comp=Z,113μm,20.0s
ULN Ulaanbaatar 26.45 339 *e*P P 05 48 40.9 +0.9
ULN pmax pmax
comp=Z,483nm,1.2s
ULN MLR MLR
comp=Z,113μm,20.0s
ULN Ulaanbaatar 26.45 339 P **P 05 48 41.6 +1.6**
SNR=440
ULN P **P 05 48 41.6 +1.6**
SNR=440
TAWA Tawang 26.54 284 *e*P P 05 48 41.6 +0.3
SHL Shillong 26.54 280 *e*P P 05 48 42.4 +1.3
comp=Z,932nm,1.1s
SHL LR LR
comp=Z,38μm,18.0s
SHL Shillong 26.54 280 *e*P P 05 48 42.4 +1.3
SHL pmax pmax
comp=Z,932nm,1.1s
SHL MLR MLR
comp=Z,38μm,18.0s
SHL Shillong 26.54 280 *e*P P 05 48 41.0 0.0
SHL *e*S S 05 53 27.5 +12
SONA0 Songino Array 26.65 338 *e*P P 05 48 42.9 +1.1
SONA0 *e*PcP **PcP 05 52 04.6 -0.8**
SONA0 *e*ScP **ScP 05 55 43.6 -1.1**
SONM Songino Array 26.65 338 P **P 05 48 42.9 +1.1**
comp=Z,37nm,0.8s,baz=158,slow=8.9,SNR=130
SONM PcP **PcP 05 52 04.6 -0.8**
comp=Z,17nm,1.1s,baz=160,slow=5.3,SNR=3.2
SONM ScP **ScP 05 55 43.6 -1.1**
comp=Z,13nm,1.0s,baz=187,slow=1.2,SNR=4.2
SONM LR LR 06 00 22.0
comp=Z,146μm,19.6s,baz=148,slow=39
SONM P3KPbc 06 21 23.1
comp=Z,0.7nm,0.6s,baz=318,slow=1.9,SNR=10
GUWA GUWAHATI 26.69 281 *e*P P 05 48 42.7 +0.5
GUWA IAML 05 48 50.1
comp=Z,230nm,1.1s
KLR Kul'dur 26.71 16 P **P 05 48 42.8 +0.7**
comp=Z,44nm,0.7s,baz=221,slow=7.7,SNR=59
KLR PcP **PcP 05 52 04.6 -0.7**
comp=Z,35nm,0.8s,baz=277,slow=1.8,SNR=5.8
KLR ScP **ScP 05 55 42.7 -2.1**
comp=Z,9.6nm,1.1s,baz=229,slow=12,SNR=2.6
KLR LR LR 06 00 18.6
comp=Z,42μm,20.2s,baz=200,slow=39
KLR Kul'dur 26.71 16*c* *i*P P 05 48 41.6 -0.5
KLR pmax pmax
comp=Z,92nm,1.1s
KLR MLR MLR
comp=Z,66μm,16.0s
TTSI Tana Toraja 26.74 183 P **P 05 48 41.6 -1.1**
comp=Z,273nm,1.3s,comp=Z,7μmcomp=Z,23μm
ASAJ Asahikawa 26.84 36 P **P 05 48 42.9 -0.5**
comp=Z,40nm,0.6s,baz=230,slow=12,SNR=33
ASAJ ScP **ScP 05 55 43.5 -1.7**
comp=Z,27nm,1.2s,baz=239,slow=11,SNR=3.9
ASAJ LR LR 05 59 55.2
comp=Z,71μm,19.1s,baz=240,slow=38
PKDT Phuket 26.93 238 P P 05 48 52.9 +8.5
KULM Kulim 26.95 230 PFAKE 05 49 00.0 +15
KULM LR LR
comp=Z,59μm,21.0s
KULM Kulim 26.95 230 P **P 05 48 50.0 +5.4**
BRDH Bariadhala 27.03 274 P **P 05 48 46.8 +1.5**
comp=Z,68nm,0.3s,baz=70,slow=12,SNR=15
BRDH LR LR 06 02 08.4
comp=Z,37μm,19.2s,baz=90,slow=42
BELO BELONIA 27.13 275 *e*P P 05 48 46.2 0.0
BELO IAMs_20 IAMs_20 06 09 32.0
comp=Z,51μm,3.7s
AGT Agartala 27.24 276 *e*P P 05 48 49.0 +1.9
IPM Ipoh 27.26 228 *e*P P 05 48 47.6 +0.1
comp=Z,916nm,1.6s
IPM LR LR
comp=Z,48μm,20.0s
IPM Ipoh 27.26 228 P **P 05 48 49.0 +1.6**
LSA Lhasa 27.29 289 P **P 05 48 49.6 +1.5**
LSA S **S 05 53 25.1 -2.2**
LSA LR LR
comp=Z,182μm,10.8s
LSA Lhasa 27.29 289 *e*P P 05 48 50.4 +2.3
comp=Z,245nm,0.8s
LSA LR LR
comp=Z,125μm,18.0s
LSA Lhasa 27.29 289 *i*P P 05 48 50.8 +2.7
SNR=36
LSA Lhasa 27.29 289 *e*P P 05 48 50.4 +2.3
LSA pmax pmax
comp=Z,245nm,0.8s
LSA MLR MLR
comp=Z,125μm,18.0s
MYKOM Kota Tinggi 27.53 220 *e*P P 05 48 49.3 -0.4
MYKOM LR LR
comp=Z,43μm,22.0s
MYKOM Kota Tinggi 27.53 220 P **P 05 48 51.0 +1.2**
SPSI Sidrap Palu 27.66 183 P **P 05 48 49.4 -1.5**
comp=Z,88nm,1.3s,comp=Z,3μm
KDI Kendari 27.66 177 P **P 05 48 51.4 +0.5**
TPRI Tanjung Pinang 27.85 218 P **P 05 48 54.1 +1.4**
comp=Z,235nm,1.0s,comp=Z,7μm
PBKI Pangkalan Bun 27.91 200 P **P 05 48 54.2 +1.0**
BNSI Bone 28.08 182 P **P 05 48 54.0 -0.6**
comp=Z,214nm,1.5s,comp=Z,8μmcomp=Z,22μm
DHUB DHUBRI 28.22 281 *e*P P 05 48 56.6 +0.7
DHUB IAmb IAmb 05 49 05.1
comp=Z,162nm,0.9s
YUK Yuzh-Kuril'sk 28.61 39*d* *i*P P 05 48 59.1 -0.1
YUK MLR MLR
comp=Z,42μm,16.3s
KAPI Kappang 28.70 183 P **P 05 48 59.0 -1.1**
comp=Z,47nm,0.7s,baz=7.2,slow=9.1,SNR=16
KAPI PcP **PcP 05 52 09.7 -1.0**
comp=Z,9.8nm,0.7s,baz=225,slow=5.6,SNR=2.4
KAPI ScP **ScP 05 55 50.9 -0.5**
comp=Z,14nm,0.8s,baz=3.6,slow=3.9,SNR=4.7
KAPI LR LR 06 00 56.9
comp=Z,29μm,21.6s,baz=3.5,slow=38
KAPI Kappang 28.70 183 *e*P P 05 48 59.6 -0.6
comp=Z,951nm,1.9s
KAPI *e*PcP **PcP 05 52 09.7 -1.0**
KAPI *e*SS SS 05 55 50.9 +0.3
KAPI LR LR
comp=Z,28μm,21.0s
KAPI Kappang 28.70 183 *e*P P 05 48 59.6 -0.6
KAPI *e* 05 52 09.7
KAPI pmax pmax
comp=Z,951nm,1.9s
KAPI MLR MLR
comp=Z,28μm,21.0s
KAPI Kappang 28.70 183 P **P 05 48 59.8 -0.4**
SNR=52
KAPI P **P 05 48 59.8 -0.4**
SNR=52
KAPI P **P 05 48 59.8 -0.4**
SNR=52
CIT Chita 28.73 350 *e*P P 05 49 01.4 +1.2
CIT *e* 05 49 57.5
CIT *e* 05 52 12.6
CIT pmax pmax
comp=Z,1μm,1.8s
FAKI Fak Fak 28.73 156 *e*P P 05 48 58.8 -1.7
comp=Z,237nm,1.1s
FAKI LR LR
comp=Z,20μm,19.0s
FAKI Fak Fak 28.73 156 P **P 05 48 58.8 -1.7**
comp=Z,203nm,1.2s,comp=Z,4μmcomp=Z,22μm
YSS Yuzh-Sakhalins 28.89 32 *e*P P 05 49 01.3 -0.4
comp=Z,266nm,1.0s
YSS LR LR
comp=Z,23μm,21.0s
YSS Yuzh-Sakhalins 28.89 32 *e*P P 05 49 01.2 -0.4
YSS *e* 05 50 03.0
YSS *e*S **S 05 53 46.3 -4.8**
YSS *e*SSS SSS 05 55 39.0
YSS pmax pmax
comp=Z,130nm,0.8s
YSS pmax pmax
comp=N,3μm,11.0s
YSS pmax pmax
comp=Z,6μm,11.0s
YSS pmax pmax
comp=E,2μm,12.0s
YSS MLR MLR
comp=Z,29μm,15.0s
YSS MLR MLR
comp=N,21μm,16.0s
YSS MLR MLR
comp=E,20μm,15.0s
DSRI Dabo 28.99 216 P **P 05 49 06.3 +3.5**
BKSI Bulukumba 28.99 182 P **P 05 49 02.4 -0.4**
GRNR Gornyy 29.41 20 *e*P P 05 49 08.2 +1.9
GRNR pmax pmax
comp=Z,21nm,1.0s
GTK Tadong 29.44 284 *e*P P 05 49 06.8 -0.1
GTK IAmb IAmb 05 49 18.8
comp=Z,202nm,0.6s
BNDI Bandanaira 29.47 162 P P 05 49 13.7 +6.6
TPI Tanjungpandan 29.48 208 P **P 05 49 08.3 +1.2**
PBA Port Blair 29.49 251 *e*P P P 05 49 07.7 +0.4
PBA IAmb IAmb 05 49 12.9
comp=Z,460nm,2.1s
SRPI Serui, Papua 29.51 148 P **P 05 49 06.3 -1.1**
PPBI Pangkal Pinang 29.64 211 P **P 05 49 10.0 +1.5**
TSI Tuntungan 29.67 230 P P 05 49 17.4 +8.5
BSSI Bau Bau, Buton 29.80 181 P **P 05 49 10.5 +0.6**
ZAK Zakamensk 29.90 337 *e*P P 05 49 07.2 -3.5
ZAK pmax pmax
comp=Z,84nm,1.7s
PSI Prapat 29.92 229 P **P 05 49 12.7 +1.5**
comp=Z,50nm,1.0s,baz=49,slow=4.6,SNR=18
PSI PcP **PcP 05 52 13.4 -0.6**
comp=Z,23nm,1.1s,baz=31,slow=5.9,SNR=2.2
PSI ScP **ScP 05 55 56.0 +0.5**
comp=Z,17nm,1.0s,baz=25,slow=22,SNR=9.3
PSI LR LR 06 00 34.8
comp=Z,48μm,21.9s,baz=48,slow=35
PSI Prapat 29.92 229 *e*P P 05 49 11.2 0.0
comp=Z,334nm,1.2s
PSI *e*PcP **PcP 05 52 13.4 -0.6**
PSI *e*ScP **ScP 05 55 56.6 +1.1**
PSI LR LR
comp=Z,50μm,22.0s
PSI Prapat 29.92 229 *e*P P 05 49 11.2 0.0
PSI *e* 05 52 13.4
PSI pmax pmax
comp=Z,334nm,1.2s
PSI MLR MLR

comp=Z,50μm,22.0s
KMPI Kaimana, Papua 29.98 154 P P 05 49 10.3 -1.2
KCSI Kotacane, Aceh 30.22 232 P P 05 49 19.8 +6.0
ZEA Zeya 30.23 7*c*eP P 05 49 13.2 -0.2
ZEA *e* 05 50 26.0
ZEA *e* 05 52 22.0
ZEA *e*S **S 05 54 10.0 -2.1**
ZEA pmax pmax
comp=N,140nm,1.4s
ZEA pmax pmax
comp=Z,26nm,1.4s
ZEA pmax pmax
comp=Z,6μm,12.0s
ZEA pmax pmax
comp=N,4μm,13.0s
ZEA smax smax
comp=E,5μm,18.0s
ZEA smax smax
comp=N,2μm,15.0s
ZEA MLR MLR
comp=Z,71μm,14.0s
ZEA MLR MLR
comp=E,17μm,18.0s
ZEA MLR MLR
comp=N,49μm,13.0s
BKNI Bangkinang 30.38 223 *e*P **P 05 49 16.5 +1.3**
BKNI LR LR
comp=N,443nm,1.1s
BKNI LR LR
comp=Z,26μm,20.0s
BKNI Bangkinang 30.38 223 P **P 05 49 18.8 +3.6**
KUR Kuril'sk 30.48 39*c i*P **P 05 49 16.6 +0.9**
KUR *i* *PP **pP 05 49 21.5 -0.1**
KUR *e*PPP PPP 05 50 27.9
KUR *e* 05 52 15.3
KUR *i* S **S 05 54 20.4 +4.2**
KUR pmax pmax
comp=Z,3μm,7.5s
KUR pmax pmax
comp=Z,352nm,1.4s
KUR MLR MLR
comp=Z,49μm,19.0s
KUR MLR MLR
comp=N,30μm,18.0s
KUR MLR MLR
comp=E,13μm,20.0s
MLSI Meulaboh, Aceh 30.72 235 P P 05 49 25.1 +6.9
TLY Talaya 30.86 339 *e*P **P 05 49 19.9 +0.9**
TLY LR LR
comp=E,688nm,1.9s
TLY LR LR
comp=Z,124μm,20.0s
TLY Talaya 30.86 339*c i*P **P 05 49 19.8 +0.7**
TLY *i* S **S 05 54 22.2 +0.1**
TLY *i* SS **SS 05 56 33.4 -0.6**
TLY pmax pmax
comp=Z,520nm,1.6s
TLY MLR MLR
comp=Z,360μm,14.0s
TLY Talaya 30.86 339 P **P 05 49 20.0 +0.9**
SNR=115
TLY P **P 05 49 20.0 +0.9**
SNR=115
MNSI Mandailing Nat 30.95 225 P **P 05 49 22.0 +1.8**
IRK Irkutsk 31.14 340 *e*P **P 05 49 22.4 +0.9**
IRK pmax pmax
comp=Z,400nm,2.7s
SDSI Sungai Dareh 31.14 221 P **P 05 49 21.0 -0.8**
RAMN Ramite 31.23 283 *e*P **P 05 49 25.4 +2.5**
comp=Z,1μm,1.2s
KMMI Kalianget 31.46 194 P **P 05 49 26.1 +1.4**
JIRN Jiri 31.57 284 *e*P **P 05 49 28.5 +2.4**
comp=Z,719nm,1.0s
GRJI Gresik 31.69 196 P **P 05 49 30.1 +3.5**
PDSI Padang 31.71 222 P **P 05 49 28.7 +1.8**
TYV Tymovskoe 31.75 26 *e*P **P 05 49 28.8 +2.0**
TYV pmax pmax
comp=Z,21nm,0.9s
MOY Mondy 31.78 336 *e*P P 05 49 32.1 +4.8
GUN Gumba 31.85 285 *e*P **P 05 49 30.7 +2.3**
comp=Z,2μm,1.8s
GSI Gunungsitoli 31.92 229 PFAKE 05 49 40.0 +11
GSI LR LR
comp=Z,47μm,20.0s
GSI Gunungsitoli 31.92 229 P **P 05 49 30.2 +1.4**
SNSI Sinabang, Aceh 32.03 232 P P 05 49 37.9 +8.2
KRJI Kerinci 32.05 219 P **P 05 49 34.3 +4.3**
BOK Bokaro 32.13 277 *e*P **P 05 49 32.2 +1.7**
BOK IAmb IAmb 05 49 39.4
comp=Z,982nm,1.9s
BOK IAMs_20 IAMs_20 06 12 24.4
comp=Z,16μm,9.2s
GENI Genyem 32.18 142 P **P 05 49 30.6 -0.4**
SRBI Singaraja 32.23 191 P **P 05 49 35.5 +4.1**
PKI Pulchoki 32.27 284 *e*P **P 05 49 33.8 +1.7**
comp=Z,450nm,1.2s
PKIN Phulchoki 32.28 284 *e*P **P 05 49 33.8 +1.6**
comp=Z,594nm,1.4s
MMRI Maumere 32.29 178 *e*P **P 05 49 30.6 -1.3**
comp=Z,2μm,1.6s
MMRI LR LR
comp=Z,17μm,19.0s
MMRI Maumere 32.29 178 P **P 05 49 31.9 0.0**
LHSI Lahat 32.37 214 P **P 05 49 36.6 +4.0**
KKN Kakani 32.38 285 *e*P **P 05 49 34.7 +1.7**
comp=Z,542nm,1.1s
EDFI Ende, Flores 32.39 179 P **P 05 49 31.3 -1.6**
NGJI Ngawi 32.40 198 P **P 05 49 35.9 +3.1**
SMRI Semarang 32.40 200 *e*P **P 05 49 34.5 +1.6**
comp=Z,651nm,1.1s
SMRI LR LR
comp=Z,39μm,18.0s
SMRI Semarang 32.40 200 P **P 05 49 36.0 +3.1**
JAY Jayapura 32.42 141 P **P 05 49 32.9 -0.3**
PBSI Pulau Batu 32.44 226 P P 05 49 40.6 +7.3
DMN Daman 32.54 284 *e*P **P 05 49 36.3 +1.9**
comp=Z,776nm,1.3s
KLI Kotabumi 32.60 211 P **P 05 49 39.4 +4.7**
MDSI Maura Dua 32.60 212 P **P 05 49 35.7 +1.0**
comp=Z,213nm,1.1s,comp=Z,5μm
PLAI Plampang 32.62 186 P **P 05 49 35.5 +0.7**
comp=Z,271nm,1.6s,comp=Z,6μm
JAGI Jajag, Banyuwa 32.81 193 PFAKE 05 49 50.0 +14
JAGI LR LR
comp=Z,15μm,22.0s
JAGI Jajag, Banyuwa 32.81 193 P P 05 49 48.0 +12
BWNR Bhubaneshwar 32.81 271 *ex* **P 05 49 32.7 -3.8**
DNP Denpasar 32.81 191 P P 05 49 41.9 +5.4
BLSI Bandar Lampung 32.87 210 P P 05 49 53.8 +17
SISI Saibi 32.88 224 P **P 05 49 39.9 +2.7**
PWJI Pagerwojo 32.92 197 P **P 05 49 38.1 +0.6**
comp=Z,535nm,0.9s,comp=Z,7μm
IGBI Denpasar 32.96 191 P P 05 49 42.6 +4.8
WOJI Wonogiri, Jawa 33.00 199 P **P 05 49 39.2 +1.1**
comp=Z,703nm,1.4s,comp=Z,9μm
MNAI Manna 33.12 215 PFAKE 05 49 50.0 +11
MNAI LR LR
comp=Z,22μm,19.0s
LWLI Liwa 33.12 212 P **P 05 49 42.4 +3.0**
SBJI Serang 33.14 208 P **P 05 49 42.3 +2.9**
YOGI Yogyakarta 33.17 200 P P 05 49 44.6 +5.0
UGM Wanagama 33.19 199 *e*P **P 05 49 39.1 -0.7**
comp=Z,2μm,1.3s
UGM LR LR
comp=Z,26μm,19.0s
UGM Wanagama 33.19 199 P **P 05 49 42.3 +2.5**
WSI Waingapu 33.30 181 P P 05 49 51.8 +11
WBSI Waikabubak, Su 33.31 183 P **P 05 49 43.6 +2.7**
KASI Kota Agung 33.35 211 P **P 05 49 43.9 +2.7**
PPSI Pulau Pagai 33.45 221 P P 05 49 51.5 +9.4
SOEI Soe 33.53 174 *e*P **P 05 49 42.4 -0.5**
comp=Z,291nm,1.0s
SOEI LR LR
comp=Z,21μm,21.0s
SOEI Soe 33.53 174 P **P 05 49 43.6 +0.7**
comp=Z,312nm,1.0s,comp=Z,4μm
DANN Dangsing 33.71 286 *e*P **P 05 49 46.6 +1.9**
comp=Z,516nm,0.9s
SKJI Sukabumi 33.76 207 P P 05 49 59.3 +14
CISI Cisompet, Garu 33.77 204 *e*P **P 05 49 44.5 -0.4**
comp=Z,383nm,1.0s
CISI LR LR
comp=Z,18μm,19.0s
CISI Cisompet, Garu 33.77 204 P **P 05 49 48.1 +3.1**
CGJI Cibinong 33.77 208 P **P 05 49 46.1 +1.2**
comp=Z,97nm,0.9s,comp=Z,4μm
WMQ Urumqi 33.82 314 P **P 05 49 47.8 +2.6**

WMQ pP sP 05 49 53.8 +0.7
WMQ PP **PnPn 05 50 58.2 +0.5**
WMQ S **S 05 55 11.9 +3.4**
WMQ sS sS 05 55 19.8 +2.2
WMQ pmax pmax
comp=Z,420nm,1.7s
WMQ pmax pmax
comp=Z,900nm,3.6s
WMQ LR LR
comp=Z,86μm,12.5s
WMQ LR LR
comp=Z,117μm,13.5s
WMQ LR LR
comp=Z,71μm,14.1s
WMQ Urumqi 33.82 314 PFAKE 05 50 00.0 +15
WMQ LR LR
comp=Z,31μm,18.0s
BASI Baing, Sumba 33.84 181 P **P 05 49 49.1 +3.6**
KOLN Koldanda 33.87 285 *e*P **P 05 49 47.9 +1.9**
comp=Z,270nm,0.9s
BATI Baumata 33.92 175 P **P 05 49 45.7 -0.5**
comp=Z,110nm,0.7s,comp=Z,2μm
BOD Bodaibo 34.33 353 *e*P **P 05 49 48.4 -0.9**
BOD pmax pmax
comp=Z,178nm,2.0s
PYUN Piuthan 34.40 285 *e*P **P 05 49 52.6 +2.1**
comp=Z,976nm,1.1s
MANU Manus Island 36.28 132 *e*P **P 05 50 07.0 +0.4**
comp=Z,168nm,0.7s
MANU LR LR
comp=Z,44μm,19.0s
DGZ Jazzator, Alta 36.81 323*c i*P **P 05 50 12.4 +1.5**
DGZ pmax pmax
comp=Z,65nm,1.8s
DGZ MLR MLR
comp=Z,56μm,14.0s
ZSN Zaisan 37.19 318 *e*P **P 05 50 15.2 +1.2**
ZSN *e*S **S 05 56 00.8 +0.8**
ZSN pmax pmax
comp=Z,373nm,4.6s
ZSN smax smax
comp=E,264nm,10.0s
ZSN MLR MLR
comp=Z,12μm,13.0s
ZSN Zaisan 37.19 318 *e*P **P 05 50 15.2 +1.2**
comp=Z,373nm,4.5s
ZSN *e*S **S 05 56 00.8 +0.8**
comp=Z,264nm,10.0s
ZSN *e*LR LR 06 06 06.5
comp=Z,12μm,12.6s
JBP Jabalpur 37.58 277 *e*P **P 05 50 19.2 +1.6**
JBP *ex* x 05 56 09.2
MTN Manton Dam 37.76 164 *e*P **P 05 50 15.7 -3.4**
comp=Z,126nm,0.6s
SKR Severo-Kuril's 38.11 36*c i*P **P 05 50 19.6 -2.1**
SKR *e* 05 50 29.0
SKR *e* 05 51 53.5
SKR *e*S **S 05 56 07.3 -6.5**
SKR pmax pmax
comp=Z,173nm,0.9s
SKR pmax pmax
comp=Z,3μm,11.9s
SKR smax smax
comp=N,4μm,16.5s
SKR MLR MLR
comp=Z,46μm,21.0s
SKR MLR MLR
comp=Z,39μm,19.0s
MK31 Makanchi Array 38.51 316 *e*P **P 05 50 26.3 +1.0**
comp=Z,535nm,1.4s
MK31 pmax pmax
comp=Z,267nm,0.9s
MK32 Makanchi Array 38.51 316 *e*P **P 05 50 25.8 +0.6**
MK32 *e*PcP **PcP 05 52 37.4 -0.5**
MKAR Makanchi Array 38.51 316 P **P 05 50 25.8 +0.6**
comp=Z,37nm,0.6s,baz=108,slow=8.1,SNR=187
MKAR PcP **PcP 05 52 37.4 -0.5**
comp=Z,18nm,0.8s,baz=101,slow=5.2,SNR=2.9
MKAR ScP **ScP 05 56 24.8 -0.5**
comp=Z,23nm,1.1s,baz=101,slow=6.3,SNR=6.0
MKAR LR LR 06 06 45.5
comp=Z,20μm,20.1s,baz=105,slow=37
MKAR Makanchi Array 38.51 316 *i* P **P 05 50 25.7 +0.5**
MKAR pmax pmax
comp=Z,37nm,0.6s
YAK Yakutsk 38.63 6 *e*P **P 05 50 25.0 -1.0**
comp=Z,227nm,1.0s
YAK LR LR
comp=Z,108μm,20.0s
YAK Yakutsk 38.63 6 *e*P **P 05 50 24.2 -1.7**
YAK *e**PP **sP 05 50 32.7 -1.1**
YAK *e* 05 51 53.9
YAK *e*PPP PPP 05 52 15.7
YAK *e* 05 52 36.5
YAK *e*S **S 05 56 19.3 -2.1**
YAK *e**SS **sS 05 56 33.0 +2.5**
YAK *e*SS **SnSn 05 59 02.6 -6.9**
YAK *e*SSS SSS 05 59 32.5
YAK *e* 06 00 33.7
DDI Dehra Dun 38.66 289 *e*P **P 05 50 26.7 0.0**
DDI IAmb IAmb 05 50 31.5
comp=Z,838nm,1.6s
MAKZ Makanchi 38.72 316 *e*P **P 05 50 28.0 +1.1**
comp=Z,847nm,1.4s
MAKZ LR LR
comp=Z,30μm,19.0s
MAKZ Makanchi 38.72 316 *e*P **P 05 50 28.0 +1.1**
MAKZ pmax pmax
comp=Z,847nm,1.4s
MAKZ MLR MLR
comp=Z,30μm,19.0s
NGP Nagpur 38.81 275↑ *i*P **P 05 50 28.2 +0.2**
NGP *ex* x 05 56 30.4
SHLS Shalkode 39.20 310 *e*P **P 05 50 29.9 -1.2**
SHLS *e*S **S 05 56 28.5 -2.3**
SHLS pmax pmax
comp=Z,324nm,1.5s
SHLS smax smax
comp=E,1μm,6.8s
SHLS MLR MLR
comp=Z,26μm,11.0s
SHLS Shalkode 39.20 310 *e*P **P 05 50 29.9 -1.2**
comp=Z,324nm,1.5s
SHLS *e*S **S 05 56 28.5 -2.3**
comp=Z,1μm,6.8s
SHLS *e*LR LR 06 09 01.2
comp=Z,26μm,10.9s
SMLA Simla 39.41 291 *e*P **P 05 50 33.0 +0.1**
SMLA IAmb IAmb 05 50 41.5
comp=Z,1μm,1.8s
NDI New Delhi 39.45 287 *e*P **P 05 50 34.0 +0.7**
UZB Uzynbulak 39.51 310 *i* P **P 05 50 34.8 +1.1**
UZB *e*S **S 05 56 38.8 +3.4**
UZB pmax pmax
comp=Z,327nm,1.8s
UZB smax smax
comp=E,1μm,6.8s
UZB MLR MLR
comp=Z,23μm,13.0s
UZB Uzynbulak 39.51 310 *i* P **P 05 50 34.8 +1.1**
comp=Z,327nm,1.8s
UZB *e*S **S 05 56 38.9 +3.4**
comp=Z,1μm,6.8s
UZB *e*LR LR 06 09 08.1
comp=Z,23μm,13.1s
PATS Pohnpei 39.53 109 *e*P **P 05 50 32.5 -1.5**
comp=Z,923nm,1.3s
PATS LR LR
comp=Z,31μm,19.0s
KPKS Kokpek 39.83 310 *e*P **P 05 50 37.9 +1.5**
KPKS *e*S **S 05 56 37.7 -2.5**
KPKS pmax pmax
comp=Z,204nm,1.6s
KPKS smax smax
comp=E,830nm,6.0s
KPKS MLR MLR
comp=Z,45μm,13.0s
KPKS Kokpek 39.83 310 *e*P **P 05 50 38.0 +1.5**
comp=Z,204nm,1.6s
KPKS *e*S **S 05 56 37.8 -2.5**
comp=Z,830nm,6.0s
KPKS *e*LR LR 06 09 27.8
comp=Z,45μm,12.5s
BHPL Bhopal 39.89 278 *e*P **P 05 50 37.1 0.0**
BHPL IAmb IAmb 05 50 44.7
comp=Z,86nm,0.5s
SATY Saty 39.92 309 *e*P **P 05 50 38.6 +1.4**
SATY *e*S **S 05 56 42.3 +0.7**
SATY pmax pmax
comp=Z,276nm,1.7s
SATY smax smax
comp=E,665nm,6.1s
SATY MLR MLR
comp=Z,22μm,11.0s
SATY Saty 39.92 309 *e*P **P 05 50 38.6 +1.4**
comp=Z,276nm,1.7s
SATY *e*S **S 05 56 42.3 +0.7**
comp=Z,665nm,6.1s
SATY *e*LR LR 06 07 38.3
comp=Z,22μm,11.3s
TARG Taragay, Kyrgy 40.03 307 PFAKE 05 50 50.0 +12
TARG LR LR
comp=Z,52μm,18.0s
MDRS Chennai 40.04 262 *e*P **P 05 50 38.7 +0.4**
MDRS IAmb IAmb 05 50 49.9
DHRM DHARAMSHALA 40.15 292 *e*P **P 05 50 40.2 +0.9**
DHRM IAmb IAmb 05 50 48.8
comp=Z,389nm,1.1s
HYB Hyderabad 40.18 269 *i* P P 05 50 45.0 +5.5
HYB *e*PP **PP 05 52 18.0 +6.0**
HYB *e*S **S 05 56 44.0 -1.8**
PEA0B Petropavlovsk- 40.22 34 *e*P **P 05 50 38.9 -0.5**
comp=Z,66nm,1.1s
PEA0B LR LR
comp=Z,26μm,18.0s
PETK Petropavlovsk- 40.22 34 P **P 05 50 39.6 +0.2**
comp=Z,20nm,0.7s,baz=231,slow=5.0,SNR=26
PETK PcP **PcP 05 52 42.6 -0.5**
comp=Z,8.5nm,0.7s,baz=202,slow=1.6,SNR=4.8
PETK ScP **ScP 05 56 29.7 -2.0**
comp=Z,12nm,1.1s,baz=234,slow=1.3,SNR=5.1
PETK LR LR 06 08 04.0
comp=Z,21μm,19.1s,baz=226,slow=37
PEA1 Petropavlovsk- 40.22 34 *e*P **P 05 50 39.6 +0.2**
PEA1 *e*PcP **PcP 05 52 42.6 -0.5**
PEA1 *e*ScP **ScP 05 56 29.7 -2.1**
TDK Taldyqorghan 40.45 312 *e*P **P 05 50 43.2 +1.8**
TDK *e*S **S 05 56 52.3 +3.0**
TDK pmax pmax
comp=Z,376nm,1.6s
TDK smax smax
comp=E,4μm,10.4s
TDK MLR MLR
comp=Z,54μm,14.0s
TDK Taldyqorghan 40.45 312 *e*P **P 05 50 43.3 +1.8**
comp=Z,376nm,1.6s
TDK *e*S **S 05 56 52.3 +3.0**
comp=Z,4μm,10.4s
TDK *e*LR LR 06 08 18.4
comp=Z,54μm,14.4s
ZAA0 Zalesovo Array 40.48 327 *e*P **P 05 50 41.6 +0.1**
comp=Z,316nm,1.0s
ZAA0 LR LR
comp=Z,51μm,21.0s
ZALV Zalesovo Beam 40.48 327 P **P 05 50 41.4 0.0**
comp=Z,91nm,0.7s,baz=117,slow=7.0,SNR=95
ZALV PcP **PcP 05 52 44.4 +0.5**
comp=Z,17nm,0.6s,baz=116,slow=3.2,SNR=4.6
ZALV ScP **ScP 05 56 31.0 -1.6**
comp=Z,17nm,1.0s,baz=116,slow=3.4,SNR=4.5
ZALV LR LR 06 07 39.6
comp=Z,30μm,18.5s,baz=137,slow=36
ZALV Zalesovo Beam 40.48 327 *i* P **P 05 50 41.9 +0.4**
ZALV pmax pmax
comp=Z,90nm,0.7s
ZAA1 Zalesovo Array 40.48 327 *e*P **P 05 50 41.4 -0.1**
ZAA1 *e*PcP **PcP 05 52 44.4 +0.5**
ZAA1 *e*ScP **ScP 05 56 31.0 -1.7**
KDJ Kajisay 40.58 308 *e*P **P 05 50 44.6 +1.9**
comp=Z,994nm,1.9s
KDJ LR LR
comp=Z,53μm,18.0s
KDJ Kajisay 40.58 308 *e*P **P 05 50 44.6 +1.9**
KDJ pmax pmax
comp=Z,994nm,1.9s
KDJ MLR MLR
comp=Z,53μm,18.0s
PET Petropavlovsk 40.67 34 *e*P **P 05 50 42.5 -0.5**
comp=Z,226nm,1.3s
PET LR LR
comp=Z,25μm,19.0s
PET Petropavlovsk 40.67 34*d i*P **P 05 50 38.5 -4.5**
PET *e*S **S 05 56 46.0 -6.2**
PET pmax pmax
comp=Z,3μm,14.3s
PET pmax pmax
comp=Z,4μm,12.9s
PET pmax pmax
comp=Z,142nm,1.5s
PET MLR MLR
comp=Z,26μm,19.0s
PET MLR MLR
comp=Z,25μm,17.0s
MDOK Medeo 40.91 309 *e*P **P 05 50 46.6 +1.2**
MDOK *e*S **S 05 56 59.7 +3.3**
MDOK pmax pmax
comp=Z,5μm,5.9s
MDOK MLR MLR
comp=Z,44μm,13.0s
MDOK Medeo 40.91 309 *e*P **P 05 50 46.6 +1.2**
comp=Z,5μm,5.9s
MDOK *e*S **S 05 56 59.7 +3.3**
comp=Z,7μm,10.9s
MDOK *e*LR LR 06 08 03.7
comp=Z,44μm,13.1s
TNSS Tian-Shan 40.95 309 *e*P **P 05 50 47.2 +1.2**
TNSS Tian-Shan 40.95 309 *e*P **P 05 50 47.3 +1.2**
KSH Kashi 40.99 303 P P 05 50 51.4 +5.3
KSH sP sP 05 51 01.7 +7.6
KSH PP PP 05 52 31.4 +11
KSH PcS **PcS 05 56 43.0 +5.8**
KSH S **S 05 57 04.7 +6.9**
KSH SS **SS 06 00 02.3 +2.5**
KSH pmax pmax
comp=Z,1μm,1.4s
KSH pmax pmax
comp=Z,8μm,4.7s
KSH LR LR
comp=Z,76μm,12.2s
KSH LR LR
comp=Z,174μm,21.6s
AAA Alma-Ata 41.01 309 *e*P **P 05 50 49.7 +3.5**
AAA *e*S **S 05 57 03.3 +5.5**
AAA pmax pmax
comp=Z,2μm,3.5s
AAA MLR MLR
comp=Z,55μm,13.0s
AAA Alma-Ata 41.01 309 *e*P P 05 50 51.1 +5.0
comp=Z,2μm,4.7s
AAA *e*S **S 05 57 02.2 +4.3**
comp=Z,4μm,9.9s
AAA *e*LR LR 06 10 10.1
comp=Z,38μm,14.1s
RABL Rabaul 41.16 128 *e*P **P 05 50 48.8 +1.1**
comp=Z,534nm,0.8s
RABL LR LR
comp=Z,28μm,20.0s
SEM Semipalatinsk 41.21 321 *e*P **P 05 50 47.9 0.0**
SEM pmax pmax
comp=Z,745nm,1.9s
SEM MLR MLR
comp=Z,26μm,11.0s
SEM Semipalatinsk 41.21 321 *e*P **P 05 50 47.9 0.0**
comp=Z,745nm,1.9s
SEM *e*LR LR 06 08 28.1
comp=Z,26μm,11.2s
ULHL Ulahol 41.28 308 P **P 05 50 50.7 +2.1**
SNR=24
NRN Naryn 41.30 306 *e*P **P 05 50 50.9 +2.0**
comp=Z,1μm,1.5s
NRN LR LR
comp=Z,53μm,18.0s
NRN Naryn 41.30 306 *e*P **P 05 50 50.9 +2.0**
NRN pmax pmax
comp=Z,1μm,1.5s
NRN MLR MLR
comp=Z,53μm,18.0s
MA2 Magadan 41.35 22 ScP **ScP 05 56 34.2 -1.8**
comp=Z,22nm,1.0s,baz=193,slow=6.2,SNR=5.4
MA2 Magadan 41.35 22 *e*P **P 05 50 47.7 -0.9**
comp=Z,75nm,0.9s

MA2				*e*ScP	**ScP**	**05 56 35.2 -0.8**
MA2				LR	LR	
	comp=Z,41μm,18.0s					
MA2	**Magadan**	**41.35**	**22***c*	*i*P	**P**	**05 50 48.0 -0.6**
MA2				pmax	pmax	
	comp=Z,46nm,0.7s					
MA2				MLR	MLR	
	comp=Z,41μm,17.0s					
KUU	**Kurty**	**41.58 310**		*e*P	**P**	**05 50 52.5 +1.8**
KUU				*e*S	**S**	**05 57 12.6 +6.4**
KUU				pmax	pmax	
	comp=Z,288nm,1.5s					
KUU				smax	smax	
	comp=E,5μm,10.6s					
KUU				MLR	MLR	
	comp=Z,7μm,8.0s					
KUU	**Kurty**	**41.58 310**		*e*P	**P**	**05 50 52.6 +1.8**
	comp=Z,288nm,1.5s					
KUU				*e*S	**S**	**05 57 12.6 +6.4**
	comp=Z,5μm,10.6s					
KUU				*e*SS	**SnSn**	**06 00 20.9 -0.4**
KUU				*e*LR	LR	06 08 34.9
	comp=Z,7μm,7.8s					
PMG	**Port Moresby**	**41.74 139**		*e*P	**P**	**05 50 51.9 -0.3**
	comp=Z,869nm,2.0s					
PMG				LR	LR	
	comp=Z,28μm,19.0s					
PMG	**Port Moresby**	**41.74 139**	*c*	*i*P	**P**	**05 50 51.8 -0.4**
PMG				pmax	pmax	
	comp=Z,488nm,1.1s					
PMG				MLR	MLR	
	comp=Z,67μm,17.0s					
NVS	**Novosibirsk**	**41.74 328**	⇓	*i*P	**P**	**05 50 53.7 +1.9**
NVS				*i*		05 52 39.5
NVS				*e*S	**S**	**05 57 08.8 +0.7**
NVS				pmax	pmax	
	comp=N,339nm,1.6s					
NVS				pmax	pmax	
	comp=E,378nm,1.6s					
NVS				pmax	pmax	
	comp=Z,560nm,1.6s					
NVS				pmax	pmax	
	comp=Z,234nm,1.8s					
NVS				smax	smax	
	comp=E,179nm,2.2s					
TKM2	**Tokmak 2**	**41.89 308**		P	**P**	**05 50 55.0 +1.4**
	SNR=93					
KZA	**Kyzart**	**41.97 307**		P	**P**	**05 50 56.8 +2.3**
	SNR=75					
PALK	**Pallekele**	**42.03 254**		P	P	05 51 00.0 +5.2
KURK	**Kurchatov**	**42.29 320**		*e*P	**P**	**05 50 57.4 +1.0**
	comp=E,2μm,1.7s					
KURK				LR	LR	
	comp=Z,66μm,18.0s					
KURK	**Kurchatov**	**42.29 320**		*e*P	**P**	**05 50 57.4 +1.0**
KURK				pmax	pmax	
	comp=Z,2μm,1.7s					
KURK				MLR	MLR	
	comp=Z,66μm,18.0s					
KURK	**Kurchatov**	**42.29 320**		P	**P**	**05 50 57.6 +1.3**
	SNR=451					
KURK				P	**P**	**05 50 57.6 +1.3**
	SNR=451					
KBK	**Karagaybulak**	**42.30 308**		P	**P**	**05 50 58.8 +1.9**
	SNR=34					
KURBB	**Kurchatov Arra**	**42.30 320**		PcP	**PcP**	**05 52 49.9 -0.1**
	comp=Z,23nm,1.0s,baz=124,slow=6.0,SNR=3.4					
KURBB				ScP	**ScP**	**05 56 38.4 -1.6**
	comp=Z,14nm,1.2s,baz=105,slow=3.8,SNR=4.8					
WAKE	**Wake Island**	**42.51 87**		PFAKE		05 51 10.0 +11
WAKE				LR	LR	
	comp=Z,14μm,20.0s					
CHMS	**Chumysh**	**42.51 308**		P	**P**	**05 51 00.4 +2.0**
	SNR=21					
UCH	**Uchtor**	**42.54 307**		P	**P**	**05 51 01.0 +1.9**
	SNR=134					
H11N1	**WAKE ISLAND Hy**	**42.62 86**		T	T	06 36 12.0
	baz=283,slow=74,SNR=586					
H11N2	**WAKE ISLAND Hy**	**42.62 86**		T	T	06 36 12.7
	baz=283,slow=74					
AAK	**Ala-Archa**	**42.63 308**		LR	LR	06 11 25.0
	comp=Z,50μm,18.0s,baz=83,slow=40					
AAK	**Ala-Archa**	**42.63 308**		P	**P**	**05 51 01.6 +2.1**
	SNR=18					
AAK	**Ala-Archa**	**42.63 308**		*e*P	**P**	**05 51 00.0 +0.5**
	comp=Z,166nm,1.3s					
AAK				LR	LR	
	comp=Z,55μm,20.0s					
AAK	**Ala-Archa**	**42.63 308**		*i*P	**P**	**05 51 01.4 +1.9**
	SNR=35					
AAK	**Ala-Archa**	**42.63 308**		*e*P	**P**	**05 51 00.0 +0.5**
AAK				pmax	pmax	
	comp=Z,166nm,1.3s					
AAK				MLR	MLR	
	comp=Z,55μm,20.0s					
AAK	**Ala-Archa**	**42.63 308**		P	**P**	**05 51 01.3 +1.8**
	SNR=84					
AAK				P	**P**	**05 51 01.3 +1.8**
	SNR=84					
H11N3	**WAKE ISLAND Hy**	**42.64 86**		T	T	06 36 13.0
	baz=283,slow=74,SNR=603					
NIL	**Nilore**	**42.72 294**		*e*P	**P**	**05 51 00.9 +0.7**
	comp=Z,250nm,1.1s					
NIL				LR	LR	
	comp=Z,13μm,18.0s					
NIL	**Nilore**	**42.72 294**		*e*P	**P**	**05 51 00.9 +0.7**
NIL				pmax	pmax	
	comp=Z,250nm,1.1s					
NIL				MLR	MLR	
	comp=Z,13μm,18.0s					
H11S3	**WAKE ISLAND Hy**	**42.74 88**		T	T	06 36 14.7
	baz=284,slow=74,SNR=780					
USP	**Ospenovka**	**42.75 309**		P	**P**	**05 51 01.7 +1.4**
	SNR=19					
H11S1	**WAKE ISLAND Hy**	**42.75 88**		T	T	06 36 22.4
	baz=284,slow=74,SNR=610					
H11S2	**WAKE ISLAND Hy**	**42.76 88**		T	T	06 36 16.0
	baz=284,slow=74,SNR=501					
AML	**Almayashu**	**43.12 307**		P	**P**	**05 51 06.2 +2.5**
	SNR=41					
EKS2	**Erkin-Say**	**43.15 308**		P	**P**	**05 51 05.2 +1.4**
	SNR=20					
COEN	**Coen**	**43.34 148**		*e*P	**P**	**05 51 04.5 -0.7**
	comp=Z,276nm,0.8s					
COEN				LR	LR	
	comp=Z,27μm,20.0s					
BTLS	**Baital**	**43.45 311**		*e*P	**P**	**05 51 07.1 +1.2**
BTLS				*e*S	**S**	**05 57 36.0 +2.5**
BTLS				*e*SS	**ScS**	**06 01 03.1 -2.0**
BTLS				pmax	pmax	
	comp=Z,94nm,1.6s					
BTLS				smax	smax	
	comp=E,785nm,7.4s					
BTLS				MLR	MLR	
	comp=Z,8μm,11.0s					
BTLS	**Baital**	**43.45 311**		*e*P	**P**	**05 51 07.1 +1.2**
	comp=Z,94nm,1.6s					
BTLS				*e*S	**S**	**05 57 36.1 +2.5**
	comp=Z,785nm,7.4s					
BTLS				*e*SS	**ScS**	**06 01 03.1 -2.0**
BTLS				*e*LR	LR	06 09 51.0
	comp=Z,8μm,10.7s					
ARSB	**Arslanbob**	**43.52 306**		*e*P	**P**	**05 51 07.8 +1.1**
	comp=Z,380nm,1.3s					
ARSB				LR	LR	
	comp=Z,54μm,20.0s					
POO	**Poona**	**44.18 272**		*e*P	**P**	**05 51 13.0 +0.9**
POO				IAmb	IAmb	05 51 20.7
	comp=Z,223nm,0.8s					
POO				IAMs_20	IAMs_20	06 13 13.3
	comp=Z,19μm,18.4s					
SEY	**Seymchan**	**44.35 20**		ScP	**ScP**	**05 56 46.9 -1.2**
	comp=Z,22nm,1.1s,baz=203,slow=3.5,SNR=5.1					
SEY				LR	LR	06 11 02.3
	comp=Z,17μm,20.0s,baz=217,slow=38					
MBWA	**Marble Bar**	**44.74 182**		PFAKE		05 51 30.0 +14
MBWA				LR	LR	
	comp=Z,7μm,22.0s					
MBWA	**Marble Bar**	**44.74 182**		P	**P**	**05 51 15.3 -1.1**
	SNR=11					
MBWA				P	**P**	**05 51 15.3 -1.1**
	SNR=11					
TRD	**Trivandrum**	**44.80 258**		*e*P	**P**	**05 51 16.3 -0.8**
TRD				IAMs_20	IAMs_20	06 13 38.2
	comp=Z,28μm,5.5s					
BTK	**Batken**	**45.00 303**		PFAKE		05 51 30.0 +11
BTK				LR	LR	
	comp=Z,70μm,18.0s					
GOA	**Goa**	**45.08 268**		*e*P	**P**	**05 51 20.5 +1.2**
GOA				IAmb	IAmb	05 51 28.3
	comp=Z,280nm,1.1s					
GOA				IAMs_20	IAMs_20	06 14 43.6
	comp=Z,25μm,18.4s					
PSA00	**Pilbara Seismi**	**45.15 182**		*e*P	**P**	**05 51 18.2 -1.4**
	comp=Z,830nm,1.3s					
GAR	**Garm**	**45.30 302**		*e*P	**P**	**05 51 22.4 +1.4**
	comp=Z,908nm,1.3s					
GAR				LR	LR	
	comp=Z,100μm,19.0s					
GAR	**Garm**	**45.30 302**		*e*P	**P**	**05 51 22.4 +1.4**
GAR				pmax	pmax	
	comp=Z,908nm,1.3s					
GAR				MLR	MLR	
	comp=Z,100μm,19.0s					
OTUK	**Ortayu**	**45.36 315**		P	**P**	**05 51 22.3 +1.1**
OTUK				pmax	pmax	
	comp=Z,508nm,1.3s					
WC1	**Warramunga Arr**	**45.38 162**		PFAKE		05 51 30.0 +8.5
WC1				LR	LR	
	comp=Z,7μm,20.0s					
WC2	**Warramunga Arr**	**45.38 162**		PFAKE		05 51 30.0 +8.4
WC2				LR	LR	
	comp=Z,10μm,21.0s					
WRAB	**Tennant Creek**	**45.39 162**		*e*P	**P**	**05 51 19.7 -1.9**
	comp=Z,266nm,1.4s					
WRAB				LR	LR	
	comp=Z,8μm,20.0s					
WRAB	**Tennant Creek**	**45.39 162**	*c*	*i*P	**P**	**05 51 20.3 -1.3**
WRAB				pmax	pmax	
	comp=Z,266nm,1.4s					
WRAB				MLR	MLR	
	comp=Z,6μm,18.0s					
WR1	**Warramunga Arr**	**45.39 162**		*e*P	**P**	**05 51 19.5 -2.1**
WR1				*e*PcP	**PcP**	**05 53 00.9 0.0**
WRA	**Warramunga Arr**	**45.39 162**		P	**P**	**05 51 19.5 -2.1**
	comp=Z,31nm,0.5s,baz=346,slow=11,SNR=82					
WRA				PcP	**PcP**	**05 53 00.9 0.0**
	comp=Z,26nm,0.8s,baz=305,slow=2.9,SNR=2.8					
WB2	**Warramunga Arr**	**45.40 162**		PFAKE		05 51 30.0 +8.3
WB2				LR	LR	
	comp=Z,9μm,18.0s					
JBG	**Jabagly**	**45.48 307**		*e*P	**P**	**05 51 25.1 +2.8**
JBG				*e*S	**S**	**05 58 06.7 +3.3**
JBG				pmax	pmax	
	comp=Z,99nm,1.6s					
JBG				smax	smax	
	comp=E,424nm,8.5s					
JBG				MLR	MLR	
	comp=Z,13μm,15.0s					
KK31	**Karatay Array**	**45.59 308**		*e*P	**P**	**05 51 23.5 +0.4**
	comp=Z,110nm,0.9s					
KK31	**Karatay Array**	**45.59 308**		*i*P	**P**	**05 51 24.1 +1.0**
KK31				pmax	pmax	
	comp=Z,131nm,1.1s					
KKAR	**Karatay Array**	**45.59 308**		*e*P	**P**	**05 51 23.6 +0.5**
	comp=Z,110nm,0.9s					
KKAR	**Karatay Array**	**45.59 308**		*e*P	**P**	**05 51 23.6 +0.5**
KKAR				pmax	pmax	
	comp=Z,110nm,0.9s					
BRZS	**Berezniki**	**45.62 318**		*e*P	**P**	**05 51 24.4 +1.3**
BRZS				pmax	pmax	
	comp=Z,255nm,1.4s					
BRZS				MLR	MLR	
	comp=Z,18μm,11.0s					
BRZS	**Berezniki**	**45.62 318**		*e*P	**P**	**05 51 24.4 +1.3**
	comp=Z,255nm,1.4s					
BRZS				*e*LR	LR	06 11 09.1
	comp=Z,18μm,11.3s					
IUG	**Iuzhnay**	**45.82 306**		*e*P	**P**	**05 51 27.0 +2.0**
IUG				*e*S	**S**	**05 58 14.5 +6.2**
IUG				pmax	pmax	
	comp=Z,163nm,1.6s					
IUG				smax	smax	
	comp=E,402nm,3.8s					
IUG				MLR	MLR	
	comp=Z,4μm,13.0s					
IUG	**Iuzhnay**	**45.82 306**		*e*P	**P**	**05 51 27.1 +2.0**
	comp=Z,164nm,1.6s					
IUG				*e*S	**S**	**05 58 14.5 +6.2**
	comp=Z,402nm,3.8s					
IUG				*e*LR	LR	06 11 26.2
	comp=Z,4μm,13.5s					
CHM	**Chimkent**	**46.16 306**		*e*P	P	05 51 33.5 +6.0
CHM				pmax	pmax	
	comp=Z,138nm,1.5s					
CHM				MLR	MLR	
	comp=Z,7μm,14.0s					
CHM	**Chimkent**	**46.16 306**		*e*P	P	05 51 33.6 +6.0
	comp=Z,138nm,1.5s					
CHM				*e*LR	LR	06 11 40.5
	comp=Z,7μm,13.8s					
KBL	**Kabul**	**46.21 296**		*e*P	**P**	**05 51 30.0 +1.7**
KBL				LR	LR	
	comp=Z,42μm,22.0s					
KBL	**Kabul**	**46.21 296**		*e*P	**P**	**05 51 30.0 +1.7**
KBL				MLR	MLR	
	comp=Z,42μm,22.0s					
GIRL	**Giralia**	**46.67 189**		*e*P	**P**	**05 51 31.9 +0.3**
	comp=Z,2μm,1.2s					
KWAJ	**Kwajalein Atol**	**46.88 101**		PFAKE		05 51 40.0 +6.5
KWAJ				LR	LR	
	comp=Z,16μm,21.0s					
BHJ	**Bhuj**	**46.91 280**		*e*P	**P**	**05 51 33.4 -0.3**
BVAR	**Borovoye Array**	**47.87 321**		P	**P**	**05 51 42.3 +1.5**
	comp=Z,38nm,0.7s,baz=106,slow=9.2,SNR=3.8					
BVAR				PcP	**PcP**	**05 53 09.5 +0.2**
	comp=Z,23nm,0.6s,baz=123,slow=3.0,SNR=6.7					
BVAR				ScP	**ScP**	**05 57 01.8 -1.2**
	comp=Z,5.0nm,0.7s,baz=105,slow=5.2,SNR=5.0					
BRVK	**Borovoye**	**47.94 321**		*e*P	**P**	**05 51 41.6 +0.4**
	comp=Z,878nm,1.6s					
BRVK				LR	LR	
	comp=Z,18μm,19.0s					
BRVK	**Borovoye**	**47.94 321**	*c*	*i*P	**P**	**05 51 41.7 +0.4**
BRVK				pmax	pmax	
	comp=Z,642nm,1.6s					
BRVK				MLR	MLR	
	comp=Z,27μm,15.0s					
BRVK	**Borovoye**	**47.94 321**		P	**P**	**05 51 42.0 +0.7**
	SNR=292					
BRVK				P	**P**	**05 51 42.0 +0.7**
	SNR=292					
TIXI	**Tiksi**	**48.05 3**		PcP	**PcP**	**05 53 09.3 -0.1**
	comp=Z,33nm,0.8s,baz=210,slow=1.0,SNR=4.1					
TIXI	**Tiksi**	**48.05 3**		*e*P	**P**	**05 51 40.7 -1.1**
	comp=Z,229nm,1.1s					
TIXI				LR	LR	
	comp=Z,34μm,18.0s					
TIXI	**Tiksi**	**48.05 3**		*e*P	**P**	**05 51 40.7 -1.1**
TIXI				pmax	pmax	
	comp=Z,229nm,1.1s					
TIXI				MLR	MLR	
	comp=Z,34μm,18.0s					
MNCI	**Minicoy**	**48.40 260**		PFAKE		05 52 00.0 +15
MNCI				LR	LR	
	comp=Z,26μm,18.0s					
MNCY	**Minicoy**	**48.43 260**		*e*P	**P**	**05 51 43.6 -1.9**
MNCY				IAMs_20	IAMs_20	06 14 52.8
	comp=Z,16μm,20.3s					
AS31	**Alice Springs**	**48.83 164**		*e*P	**P**	**05 51 47.3 -1.2**
	comp=Z,17nm,0.7s					
AS31				*e*PcP	**PcP**	**05 53 12.1 -1.0**
AS31				*e*ScP	**ScP**	**05 57 04.7 -2.7**
AS31				*e*S	**S**	**05 58 51.1 -0.2**
AS31				*e*		06 00 01.2
AS31				LR	LR	
	comp=Z,100nm,18.0s					
ASAR	**Alice Springs**	**48.83 164**		P	**P**	**05 51 47.2 -1.3**
	comp=Z,48nm,0.9s,baz=340,slow=6.9,SNR=118					
ASAR				PcP	**PcP**	**05 53 12.1 -1.0**
	comp=Z,18nm,0.8s,baz=341,slow=3.3,SNR=5.0					
ASAR				ScP	**ScP**	**05 57 04.7 -2.7**
	comp=Z,8.8nm,1.0s,baz=350,slow=4.3,SNR=5.1					
ASAR				S	**S**	**05 58 51.1 -0.2**
	comp=Z,3.1nm,0.9s,baz=356,slow=17,SNR=4.3					
ASAR				PKiKP	**PKiKP**	**06 00 01.2 -1.1**
	comp=Z,1.5nm,0.9s,baz=16,slow=0.7,SNR=4.4					
ASAR				LR	LR	06 13 52.9
	comp=Z,5μm,18.3s,baz=340,slow=38					
SMY	**Shemya**	**49.17 40**		*e*P	**P**	**05 51 51.0 +0.3**
	comp=Z,217nm,1.1s					
SMY				LR	LR	
	comp=Z,10μm,21.0s					
SMY	**Shemya**	**49.17 40**		*e*P	**P**	**05 51 51.0 +0.3**
SMY				pmax	pmax	
	comp=Z,217nm,1.1s					
SMY				MLR	MLR	
	comp=Z,10μm,21.0s					
NRIK	**Noril'sk**	**49.71 345**		P	**P**	**05 51 54.4 -0.3**
	comp=Z,160nm,1.1s,baz=134,slow=7.0,SNR=70					
NRIK				LR	LR	06 14 42.7
	comp=Z,31μm,19.8s,baz=146,slow=38					
CTAO	**Charters Tower**	**50.09 149**		*e*P	**P**	**05 51 57.8 -0.3**
	comp=Z,297nm,1.1s					
CTAO				LR	LR	
	comp=Z,18μm,20.0s					
CTAO	**Charters Tower**	**50.09 149**		*e*P	**P**	**05 51 57.8 -0.3**
CTAO				pmax	pmax	
	comp=Z,297nm,1.1s					
CTAO				MLR	MLR	
	comp=Z,18μm,20.0s					
HNR	**Honiara**	**50.37 126**		*e*P	**P**	**05 51 59.0 -1.3**
HNR	**Honiara**	**50.37 126**		PFAKE		05 52 10.0 +10
HNR				LR	LR	
	comp=Z,15μm,20.0s					
BILL	**Bilibino**	**52.05 20**		*e*P	**P**	**05 52 11.6 -0.7**
	comp=Z,104nm,1.2s					
BILL				LR	LR	
	comp=Z,46μm,19.0s					
BILL	**Bilibino**	**52.05 20**	*c*	*i*P	**P**	**05 52 12.0 -0.3**
BILL				*i*		05 52 20.2
BILL				*i*		05 53 25.4
BILL				*i*S	**S**	**05 59 27.2 -7.8**
BILL				pmax	pmax	
	comp=Z,39nm,1.1s					
BILL				MLR	MLR	
	comp=Z,41μm,18.0s					
MORW	**Morawa**	**52.82 186**		*e*P	**P**	**05 52 17.1 -1.3**
	comp=Z,634nm,1.9s					
MORW				LR	LR	
	comp=Z,7μm,20.0s					
AB31	**Akbulak array**	**53.60 315**		*i*P	**P**	**05 52 25.4 +1.4**
AB31				pmax	pmax	
	comp=Z,290nm,1.0s					
ABKAR	**Akbulak array**	**53.60 315**		*e*P	**P**	**05 52 24.6 +0.5**
	comp=Z,1μm,1.7s					
SVE	**Sverdlovsk**	**54.26 324**	*d*	*i*P	**P**	**05 52 29.9 +1.2**
SVE				*e*		05 53 32.5
SVE				*e*		05 54 28.4
SVE				*e*PPP	PPP	05 55 43.2
SVE				*e*S	**S**	**06 00 06.8 +1.5**
SVE				*e*SS	**SS**	**06 03 48.9 +1.9**
SVE				pmax	pmax	
	comp=Z,815nm,1.4s					
SVE				pmax	pmax	
	comp=Z,3μm,12.6s					
SVE				MLR	MLR	
	comp=E,24μm,13.0s					
SVE				MLR	MLR	
	comp=Z,31μm,13.0s					
KIWB	**Kanaga Island**	**54.29 42**		*e*P	**P**	**05 52 28.9 -0.1**
ADK	**Adak**	**54.58 42**		*e*P	**P**	**05 52 30.2 -0.8**
	comp=Z,419nm,1.3s					
ADK				LR	LR	
	comp=Z,8μm,21.0s					
ADK	**Adak**	**54.58 42**		*e*P	**P**	**05 52 30.3 -0.8**
ADK				pmax	pmax	
	comp=Z,419nm,1.3s					
ADK				MLR	MLR	
	comp=Z,8μm,21.0s					
FORT	**Forrest**	**54.71 173**		*e*P	**P**	**05 52 31.8 -0.4**
	comp=Z,816nm,1.5s					
GEYT	**Alibeck**	**54.88 301**		P	**P**	**05 52 35.8 +2.3**
	comp=Z,60nm,1.0s,baz=90,slow=4.4,SNR=66					
GEYT				LR	LR	06 20 19.3
	comp=Z,50μm,19.4s,baz=105,slow=41					
GYA0B	**ALIBECK ARRAY**	**54.88 301**		*e*P	**P**	**05 52 36.5 +3.0**
	comp=Z,666nm,1.3s					
TARA	**Tarawa**	**54.92 106**		PFAKE		05 52 50.0 +16
TARA				LR	LR	
	comp=Z,23μm,21.0s					
AKTO	**Aktyubinsk**	**54.95 316**		P	**P**	**05 52 35.2 +1.4**
	comp=Z,68nm,1.0s,baz=93,slow=8.6,SNR=82					
AKTO	**Aktyubinsk**	**54.95 316**		P	**P**	**05 52 34.8 +1.0**
AKTO				pmax	pmax	
	comp=Z,641nm,1.6s					
GSTR	**Great Sitkin T**	**54.99 42**		*e*P	**P**	**05 52 33.9 -0.2**
ARU	**Arti**	**55.32 323**		P	**P**	**05 52 37.4 +1.0**
	comp=Z,53nm,0.8s,baz=98,slow=5.1,SNR=117					
ARU	**Arti**	**55.32 323**		*e*P	**P**	**05 52 36.5 +0.1**
	comp=Z,2μm,1.8s					
ARU				LR	LR	
	comp=Z,27μm,18.0s					
ARU	**Arti**	**55.32 323**	*c*	*i*P	**P**	**05 52 36.7 +0.3**
ARU						05 53 33.9
ARU						05 54 42.6
ARU				*e*S	**S**	**06 00 20.3 +0.7**
ARU						06 02 21.9
ARU				SS	**SS**	**06 03 59.5 -4.2**
ARU				pmax	pmax	
	comp=Z,326nm,1.1s					
ARU				pmax	pmax	
	comp=Z,2μm,8.3s					
ARU				MLR	MLR	
	comp=Z,28μm,15.0s					
ATKA	**Atka Island**	**56.14 42**		*e*P	**P**	**05 52 42.6 +0.2**
	comp=Z,272nm,0.8s					
ATKA				LR	LR	
	comp=Z,12μm,22.0s					
JLN	**Jalan Bani Buh**	**56.37 282**		P	**P**	**05 52 49.0 +4.5**
	SNR=36					
JLN				P	**P**	**05 52 49.0 +4.5**
	SNR=36					
NWAO	**Narrogin (SRO)**	**56.56 184**		*e*P	**P**	**05 52 44.8 -0.6**
	comp=Z,1μm,1.8s					
NWAO	**Narrogin (SRO)**	**56.56 184**		*e*P	**P**	**05 52 44.8 -0.6**
NWAO				pmax	pmax	
	comp=Z,1μm,1.8s					
NWAO	**Narrogin (SRO)**	**56.56 184**		P	**P**	**05 52 45.5 0.0**
	SNR=22					
NWAO				P	**P**	**05 52 45.5 0.0**
	SNR=22					
NWAO				P	**P**	**05 52 45.5 0.0**
	SNR=22					
WBK	**Wadi Bani Khal**	**56.65 282**		P	**P**	**05 52 46.6 +0.1**
	SNR=10					
DGAR	**Diego Garcia**	**56.70 243**		PFAKE		05 53 00.0 +13
DGAR				LR	LR	
	comp=Z,21μm,18.0s					
EIDS	**Eidsvold**	**56.90 147**		*e*P	**P**	**05 52 47.5 -0.5**
	comp=Z,608nm,1.9s					
EIDS				LR	LR	
	comp=Z,12μm,21.0s					
BIDO	**Bidbid**	**57.19 283**		P	**P**	**05 52 54.0 +3.8**
	SNR=62					
BIDO				P	**P**	**05 52 54.0 +3.8**
	SNR=62					
SMDO	**Samad**	**57.37 283**		P	**P**	**05 52 56.3 +4.7**
	SNR=13					
HOQ	**Hoqain**	**57.90 284**		P	P	05 53 00.4 +5.2
	SNR=24					
MHTO	**MHTO**	**57.97 281**		P	**P**	**05 52 57.5 +1.7**
	SNR=33					
MHTO				P	**P**	**05 52 57.5 +1.7**
	SNR=33					
MHTO				P	**P**	**05 52 57.5 +1.7**
	SNR=33					
BBOO	**Buckleboo**	**58.12 165**		*e*P	**P**	**05 52 55.3 -1.1**
	comp=Z,249nm,1.1s					
BBOO				LR	LR	
	comp=Z,8μm,20.0s					
BSY	**Bisya**	**58.20 283**		P	P	05 53 03.2 +5.7
	SNR=11					
BANOM	**Banah**	**58.24 287**		*i*P	**P**	**05 53 01.3 +3.6**
	SNR=22					
BANOM	**Banah**	**58.24 287**		P	P	05 53 02.7 +5.0
	SNR=23					
BANOM				P	P	05 53 02.7 +5.0
	SNR=23					
SHME	**Shamm**	**58.35 287**		*i*P	**P**	**05 53 01.1 +2.7**
	SNR=15					
MDH	**Madha**	**58.38 286**		*i*P	**P**	**05 53 00.1 +1.4**
	SNR=7.3					
MDH	**Madha**	**58.38 286**		P	**P**	**05 53 02.1 +3.4**
	SNR=6.5					
MDH				P	**P**	**05 53 02.1 +3.4**
	SNR=6.5					
MDH				P	**P**	**05 53 02.1 +3.4**
	SNR=6.5					
SOHO	**SOHO**	**58.45 285**		P	**P**	**05 53 01.3 +2.2**
	SNR=51					

SOHO				P	P	05 53 01.3 +2.2
	SNR=51					
MSFE	**Esma-Masafi**	**58.49**	**286**	*i* P	**P**	**05 53 02.3 +2.8**
	SNR=7.0					
UOSS	**Minazif**	**58.55**	**286**	PFAKE		05 53 10.0 +10
UOSS				LR	LR	
	comp=Z,9μm,21.0s					
UOSS	**Minazif**	**58.55**	**286**	*i* P	**P**	**05 53 02.4 +2.6**
	SNR=12					
UOSS	**Minazif**	**58.55**	**286**	P	**P**	**05 53 03.4 +3.6**
	SNR=16					
UOSS				P	**P**	**05 53 03.4 +3.6**
	SNR=16					
UOSS				P	**P**	**05 53 03.4 +3.6**
	SNR=16					
HATD	**Hatta, Dubai**	**58.64**	**285**	*i* P	**P**	**05 53 03.3 +2.8**
	SNR=22					
HATD	**Hatta, Dubai**	**58.64**	**285**	P	**P**	**05 53 05.1 +4.6**
	SNR=21					
HATD				P	**P**	**05 53 05.1 +4.6**
	SNR=21					
HATD				P	**P**	**05 53 05.1 +4.6**
	SNR=21					
DQM	**DQM**	**58.65**	**280**	P	**P**	**05 53 04.0 +3.4**
	SNR=18					
DQM				P	**P**	**05 53 04.0 +3.4**
	SNR=18					
ARQ	**Araqi**	**58.66**	**284**	P	P	05 53 08.1 +7.5
	SNR=11					
ASHO	**Ashiyiah**	**58.74**	**285**	*i* P	**P**	**05 53 03.3 +2.1**
	SNR=50					
ASHO	**Ashiyiah**	**58.74**	**285**	P	**P**	**05 53 03.1 +1.9**
	SNR=54					
ASHO				P	**P**	**05 53 03.1 +1.9**
	SNR=54					
ASHO				P	**P**	**05 53 03.1 +1.9**
	SNR=54					
STKA	**Stephens Creek**	**58.77**	**160**	P	**P**	**05 52 59.8 -1.2**
	comp=Z,72nm,0.6s,baz=338,slow=7.1,SNR=119					
STKA				LR	LR	06 19 25.3
	comp=Z,9μm,21.3s,baz=344,slow=37					
STKA	**Stephens Creek**	**58.77**	**160**	*e*P	**P**	**05 53 00.5 -0.6**
	comp=Z,5.2nm,1.8s					
STKA				LR	LR	
	comp=Z,3μm,20.0s					
STKA	**Stephens Creek**	**58.77**	**160**	*e*P	**P**	**05 53 00.5 -0.6**
STKA				MLR	MLR	
	comp=Z,3μm,20.0s					
SPIA	**Saint Paul Isl**	**58.79**	**36**	*e*P	**P**	**05 53 01.0 +0.1**
	comp=Z,499nm,1.0s					
SPIA				LR	LR	
	comp=Z,11μm,20.0s					
GAMB	**Gambell**	**58.84**	**29**	*e*P	**P**	**05 53 01.3 +0.1**
	comp=Z,158nm,1.1s					
GAMB				LR	LR	
	comp=Z,11μm,18.0s					
UMQ	**Umm Al-Quwin**	**58.89**	**286**	*i* P	**P**	**05 53 04.6 +2.4**
	SNR=14					
UMQ	**Umm Al-Quwin**	**58.89**	**286**	P	P	05 53 08.7 +6.5
	SNR=13					
UMQ				P	P	05 53 08.7 +6.5
	SNR=13					
UMQ				P	P	05 53 08.7 +6.5
	SNR=13					
NAZ	**Nazwa, Dubai**	**59.02**	**286**	*i* P	**P**	**05 53 04.9 +1.9**
	SNR=26					
NAZ	**Nazwa, Dubai**	**59.02**	**286**	P	**P**	**05 53 06.0 +2.9**
	SNR=35					
NAZ				P	**P**	**05 53 06.0 +2.9**
	SNR=35					
NAZ				P	**P**	**05 53 06.0 +2.9**
	SNR=35					
FAQ	**Al Faqa, Dubai**	**59.14**	**286**	*i* P	**P**	**05 53 05.2 +1.3**
	SNR=15					
FAQ	**Al Faqa, Dubai**	**59.14**	**286**	P	**P**	**05 53 08.1 +4.2**
	SNR=20					
FAQ				P	**P**	**05 53 08.1 +4.2**
	SNR=20					
FAQ				P	**P**	**05 53 08.1 +4.2**
	SNR=20					
ALNE	**Al Ain**	**59.16**	**285**	*i* P	**P**	**05 53 07.7 +3.6**
	SNR=29					
ASUD	**Al Ashush, Dub**	**59.40**	**285**	*i* P	**P**	**05 53 08.4 +2.7**
	SNR=26					
ASUD	**Al Ashush, Dub**	**59.40**	**285**	P	P	05 53 11.0 +5.3
	SNR=29					
ASUD				P	P	05 53 11.0 +5.3
	SNR=29					
NIKH	**Nikolski High**	**59.43**	**41**	*e*P	**P**	**05 53 05.1 -0.3**
	comp=Z,358nm,0.7s					
NIKH				LR	LR	
	comp=Z,7μm,20.0s					
AJN	**Ajban**	**59.72**	**285**	*i* P	**P**	**05 53 11.3 +3.5**
	SNR=23					
AJN	**Ajban**	**59.72**	**285**	P	P	05 53 12.8 +4.9
	SNR=24					
AJN				P	P	05 53 12.8 +4.9
	SNR=24					
KIRV	**Kirov**	**60.44**	**325**	P	**P**	**05 53 12.6 +0.3**
	comp=Z,189nm,0.9s,baz=92,slow=5.5,SNR=79					
UNV	**Unalaska Valle**	**60.83**	**40**	*e*P	**P**	**05 53 14.7 -0.3**
	comp=Z,133nm,1.0s					
UNV				LR	LR	
	comp=Z,6μm,22.0s					
AKUT	**Akutan**	**61.26**	**40**	PFAKE		05 53 30.0 +12
AKUT				LR	LR	
	comp=Z,6μm,19.0s					
ARMA	**Armidale**	**61.40**	**150**	*e*P	**P**	**05 53 18.9 -0.4**
	comp=Z,231nm,1.5s					
ARMA				LR	LR	
	comp=Z,15μm,20.0s					
MZR	**Muzera**	**61.45**	**284**	*i* P	**P**	**05 53 23.7 +4.0**
	SNR=27					
MZR	**Muzera**	**61.45**	**284**	P	**P**	**05 53 23.9 +4.2**
	SNR=27					
MZR				P	**P**	**05 53 23.9 +4.2**
	SNR=27					
ANM	**Nome**	**61.69**	**28**	*e*P	**P**	**05 53 21.0 +0.3**
	comp=Z,150nm,1.0s					
ANM				LR	LR	
	comp=Z,10μm,22.0s					
ANM	**Nome**	**61.69**	**28**	*e*P	**P**	**05 53 21.0 +0.3**
ANM				pmax	pmax	
	comp=Z,151nm,1.0s					
ANM				MLR	MLR	
	comp=Z,10μm,22.0s					
MAK	**Makhachkala**	**62.41**	**307**	*e*P	**P**	**05 53 25.9 0.0**
MAK				*e*		05 55 41.6
MAK				*e*S	**S**	**06 01 52.6 +0.5**
MAK				*e*SS	**SS**	**06 06 02.4 +6.8**
MAK				pmax	pmax	
	comp=Z,486nm,1.3s					
MAK				MLR	MLR	
	comp=Z,21μm,15.0s					
PRGR	**Permogore**	**62.42**	**329**	⇓*i*P	**P**	**05 53 26.3 +0.7**
PRGR				pmax	pmax	
	comp=Z,285nm,0.9s					
AKT	**Akhty**	**62.45**	**306**	⇓*i*P	**P**	**05 53 27.9 +1.6**
AKT				*e*		05 55 48.3
AKT				pmax	pmax	
	comp=Z,577nm,1.4s					
FALS	**False Pass**	**62.60**	**39**	*e*P	**P**	**05 53 26.1 -0.8**
	comp=Z,250nm,0.6s					
FALS				LR	LR	
	comp=Z,7μm,20.0s					
SEKA	**Sheki**	**62.89**	**305**	P	**P**	**05 53 31.9 +2.7**
RDOG	**Red Dog Mine**	**62.91**	**24**	PFAKE		05 53 40.0 +11
RDOG				LR	LR	
	comp=Z,11μm,20.0s					
MNGR	**Mingechevir, A**	**63.04**	**305**	P	**P**	**05 53 33.3 +3.2**
DZM	**Mont Dzumac**	**63.48**	**132**	*e*P	**P**	**05 53 33.8 +0.5**
	comp=Z,428nm,1.7s					
DZM				*e*S	**S**	**06 02 06.9 +0.8**
	comp=Z,29μm,29.4s					
DZM				*e*SS	**SS**	**06 06 15.3 +1.6**
	comp=Z,9μm,26.0s					
DZM				*e*LR	LR	06 12 29.8
	comp=Z,42μm,23.2s					
DZM	**Mont Dzumac**	**63.48**	**132**	*e*P	**P**	**05 53 32.4 -0.9**
	comp=Z,584nm,1.9s					
DZM				LR	LR	
	comp=Z,21μm,20.0s					
GROC	**Groznyy**	**63.61**	**308**	*e*P	**P**	**05 53 35.0 +1.1**
GROC				*e*		05 54 06.2
GROC				*e*		05 55 57.6
GROC				*e*S	**S**	**06 02 13.2 +6.0**
GROC				pmax	pmax	
	comp=Z,601nm,1.4s					
GANJ	**Ganja**	**63.63**	**305**	P	**P**	**05 53 36.4 +2.3**
ONTNC	**Ouen Toro**	**63.65**	**133**	*e*P	**P**	**05 53 33.9 -0.4**
MARNC	**Mare, Loyalty**	**64.17**	**131**	PFAKE		05 53 50.0 +12
MARNC				LR	LR	
	comp=Z,18μm,22.0s					
SDPT	**Sand Point**	**64.25**	**38**	*e*P	**P**	**05 53 37.2 -0.6**
	comp=Z,185nm,0.7s					
SDPT				LR	LR	
	comp=Z,5μm,20.0s					
CAN	**Canberra**	**64.51**	**155**	*e*P	**P**	**05 53 39.2 -0.6**
	comp=Z,618nm,2.0s					
CAN				LR	LR	
	comp=Z,15μm,19.0s					
CAN	**Canberra**	**64.51**	**155**	*e*P	**P**	**05 53 39.2 -0.6**
CAN				pmax	pmax	
	comp=Z,618nm,2.0s					
CAN				MLR	MLR	
	comp=Z,15μm,19.0s					
NAX	**Nakhchivan**	**64.52**	**304**	P	**P**	**05 53 42.1 +2.1**
PINNC	**Pines Island,**	**64.53**	**132**	*e*P	**P**	**05 53 39.1 -0.9**
	comp=Z,258nm,1.3s					
PINNC				LR	LR	
	comp=Z,20μm,21.0s					
TBLG	**Delisi**	**64.63**	**306**	*e*P	**P**	**05 53 42.2 +1.6**
TBLG	**Delisi**	**64.63**	**306**	*e*P	**P**	**05 53 42.5 +1.9**
	comp=Z,358nm,1.6s					
TBLG	**Delisi**	**64.63**	**306**	*e*P	**P**	**05 53 42.5 +1.9**
TBLG				pmax	pmax	
	comp=Z,358nm,1.6s					
TBLG	**Delisi**	**64.63**	**306**	*i* P	**P**	**05 53 45.4 +4.7**
TBLG				IAML_P		
	comp=Z,217nm,0.1s					
GNI	**Garni**	**64.91**	**305**	*e*P	**P**	**05 53 44.7 +2.0**
GNI	**Garni**	**64.91**	**305**	P	**P**	**05 53 45.4 +2.8**
	comp=Z,52nm,1.2s,baz=197,slow=2.2,SNR=35					
GNI	**Garni**	**64.91**	**305**	*e*P	**P**	**05 53 44.6 +1.9**
	comp=Z,778nm,1.3s					
GNI				LR	LR	
	comp=Z,13μm,18.0s					
GNI	**Garni**	**64.91**	**305**	*i* P	**P**	**05 53 44.5 +1.9**
	SNR=36					
GNI	**Garni**	**64.91**	**305**	*c i* P	**P**	**05 53 44.5 +1.9**
GNI				pmax	pmax	
	comp=Z,957nm,1.7s					
GNI				MLR	MLR	
	comp=Z,42μm,16.0s					
GNI	**Garni**	**64.91**	**305**	P	**P**	**05 53 45.5 +2.8**
	SNR=147					
JOHN	**Johnston Islan**	**64.94**	**82**	PFAKE		05 53 50.0 +7.0
JOHN				LR	LR	
	comp=Z,9μm,22.0s					
ZEI	**Tsey**	**65.05**	**308**	*e*P	**P**	**05 53 40.7 -2.9**
ZEI				*e*S	**S**	**06 02 27.4 +1.9**
ZEI				pmax	pmax	
	comp=Z,242nm,1.0s					
ZEI				pmax	pmax	
	comp=N,191nm,1.0s					
ZEI				pmax	pmax	
	comp=Z,1μm,6.9s					
ZEI				pmax	pmax	
	comp=E,319nm,1.0s					
ZEI				MLR	MLR	
	comp=Z,21μm,14.0s					
ZEI				MLR	MLR	
	comp=E,14μm,13.0s					
ZEI				MLR	MLR	
	comp=N,10μm,13.0s					
NCK	**Nalchik**	**65.15**	**308**	⇓*i*P	**P**	**05 53 45.3 +1.3**
NCK				MLR	MLR	
	comp=Z,34μm,16.0s					
VRH	**Novokhopyorsk**	**65.23**	**317**	*e*P	**P**	**05 53 44.6 +0.3**
VRH				*e*		05 53 47.7
VRH				*e*S	**S**	**06 02 24.9 -2.0**
VRH				pmax	pmax	
	comp=Z,1μm,1.8s					
VRH				smax	smax	
	comp=E,8μm,11.7s					
VRH				MLR	MLR	
	comp=Z,19μm,13.0s					
TOO	**Toolangi**	**65.26**	**159**	*e*P	**P**	**05 53 44.5 -0.1**
	comp=Z,136nm,0.9s					
TOO				LR	LR	
	comp=Z,10μm,18.0s					
TOO	**Toolangi**	**65.26**	**159**	*e*P	**P**	**05 53 44.5 -0.1**
TOO				pmax	pmax	
	comp=Z,136nm,0.9s					
TOO				MLR	MLR	
	comp=Z,10μm,18.0s					
TASB	**TASBURUN-IGDIR**	**65.32**	**305**	*e*P	**P**	**05 53 47.4 +2.2**
KLMR	**Klimovskoe**	**65.40**	**328**	*e*P	**P**	**05 53 44.4 -0.8**
KLMR				pmax	pmax	
	comp=Z,987nm,1.5s					
ONI	**Oni**	**65.41**	**308**	*e*P	**P**	**05 53 48.3 +2.5**
IGDI	**IGDIR**	**65.46**	**304**	*i* P	**P**	**05 53 49.8 +3.7**
IGDI				IAML_P		
	comp=Z,58nm,0.2s					
BGD	**Bogdanovka**	**65.55**	**306**	*e*P	P	05 53 52.6 +5.7
AKH	**Akhalkalaki**	**65.60**	**306**	*e*P	**P**	**05 53 49.3 +2.1**
AKH	**Akhalkalaki**	**65.60**	**306**	*e*P	**P**	**05 53 49.2 +2.1**
	comp=Z,2μm,2.0s					
AKH				LR	LR	
	comp=Z,24μm,19.0s					
AKH	**Akhalkalaki**	**65.60**	**306**	⇑*i*P	**P**	**05 53 50.4 +3.2**
AKH	**Akhalkalaki**	**65.60**	**306**	P	**P**	**05 53 50.3 +3.1**
KBZ	**Khabaz**	**65.61**	**309**	P	**P**	**05 53 48.7 +1.8**
	comp=Z,41nm,0.9s,baz=78,slow=5.2,SNR=32					
KBZ				PKP2bc		06 22 28.4
	comp=Z,2.7nm,0.9s,baz=298,slow=4.5,SNR=4.5					
KBZ				LR	LR	06 27 01.2
	comp=Z,23μm,18.2s,baz=64,slow=40					
EAK	**Akyaka**	**65.66**	**305**	*i* P	**P**	**05 53 52.1 +4.6**
EAK				IAML_P		
	comp=Z,313nm,0.5s					
KIV	**Kislovodsk**	**65.72**	**309**	*e*P	**P**	**05 53 49.4 +1.6**
KIV	**Kislovodsk**	**65.72**	**309**	*e*P	**P**	**05 53 48.9 +1.2**
	comp=Z,625nm,1.4s					
KIV				LR	LR	
	comp=Z,16μm,18.0s					
KIV	**Kislovodsk**	**65.72**	**309**	⇑*i*P	**P**	**05 53 50.1 +2.3**
KIV	**Kislovodsk**	**65.72**	**309**	*i* P	**P**	**05 53 49.5 +1.8**
	SNR=105					
KIV	**Kislovodsk**	**65.72**	**309**	*e*P	**P**	**05 53 48.5 +0.7**
KIV				*e*		05 56 13.6
KIV				*e*		06 02 33.7
KIV				pmax	pmax	
	comp=Z,759nm,1.1s					
KIV				MLR	MLR	
	comp=Z,53μm,17.0s					
KIV	**Kislovodsk**	**65.72**	**309**	P	**P**	**05 53 49.5 +1.8**
	SNR=132					
KIV				P	**P**	**05 53 49.5 +1.8**
	SNR=132					
KIV				P	**P**	**05 53 49.5 +1.8**
	SNR=132					
CLDR	**Caldiran**	**65.73**	**304**	*e*P	**P**	**05 53 50.5 +2.4**
CLDR	**Caldiran**	**65.73**	**304**	*i* P	**P**	**05 53 51.1 +3.0**
CLDR				IAML_P		
	comp=Z,209nm,0.2s					
TMCR	**Tamitsa**	**65.80**	**332**	*e*P	**P**	**05 53 46.4 -1.3**
TMCR				*e*S	**S**	**06 02 29.6 -3.8**
TMCR				pmax	pmax	
	comp=Z,578nm,1.4s					
DYDN	**Diyadin**	**65.82**	**304**	*i* P	**P**	**05 53 53.4 +4.7**
DYDN				IAML_P		
	comp=Z,224nm,0.1s					
DIGO	**Kars**	**65.88**	**305**	*i* P	**P**	**05 53 53.6 +4.5**
DIGO				IAML_P		
	comp=Z,494nm,0.1s					
LHI	**Lord Howe Isla**	**65.97**	**145**	PFAKE		05 54 00.0 +11
LHI				LR	LR	
	comp=Z,7μm,19.0s					
VMUR	**Van-Muradiye**	**66.02**	**304**	*i* P	**P**	**05 53 52.6 +2.7**
VMUR				IAML_P		
	comp=Z,151nm,0.2s					
EPOS	**Posof**	**66.15**	**306**	*i* P	**P**	**05 53 54.0 +3.4**
HAKT	**HAKKARI**	**66.22**	**302**	*i* P	**P**	**05 53 54.0 +2.7**
VANB	**Van**	**66.24**	**303**	*e*P	**P**	**05 53 53.3 +2.0**
SVW2	**Sparrevohn**	**66.26**	**32**	*e*P	**P**	**05 53 51.6 +0.8**
	comp=Z,184nm,1.4s					
SVW2				LR	LR	
	comp=Z,6μm,20.0s					
AGRB	**Hanur-Agry**	**66.34**	**304**	*e*P	**P**	**05 53 53.9 +1.9**
TUTA	**Tutak**	**66.51**	**304**	*i* P	**P**	**05 53 56.9 +3.8**
TUTA				IAML_P		
	comp=Z,1μm,0.3s					
GEVA	**Gevas**	**66.56**	**303**	*i* P	**P**	**05 53 55.6 +2.2**
GEVA				IAML_P		
	comp=Z,507nm,0.6s					
SENK	**Senkaya-Erzuru**	**66.62**	**306**	*e*P	**P**	**05 53 56.1 +2.4**
EATA	**Eleskirt**	**66.66**	**305**	*i* P	**P**	**05 53 57.3 +3.2**
EATA				IAML_P		
	comp=Z,57nm,0.1s					
VORR	**Voronezh**	**66.72**	**318**	*e*P	**P**	**05 53 54.0 +0.1**
VORR				pmax	pmax	
	comp=Z,500nm,1.4s					
LPSR	**Galich'ya Gora**	**66.74**	**319**	*e*P	**P**	**05 53 54.0 0.0**
LPSR				*e*		05 53 56.6
LPSR				*e*S	**S**	**06 02 44.0 -1.2**
LPSR				pmax	pmax	
	comp=Z,750nm,1.8s					
LPSR				smax	smax	
	comp=E,6μm,12.1s					
LPSR				MLR	MLR	
	comp=Z,12μm,12.0s					
VORD	**Divnogorie**	**66.78**	**317**	*e*P	**P**	**05 53 54.8 +0.5**
VORD				*e*		05 53 56.8
VORD				*e*S	**S**	**06 02 43.0 -2.8**
VORD				pmax	pmax	
	comp=Z,270nm,1.4s					
VORD				smax	smax	
	comp=E,2μm,9.3s					
VORD				MLR	MLR	
	comp=Z,13μm,12.0s					
ARTV	**Artvin**	**66.80**	**306**	*i* P	**P**	**05 53 57.5 +2.6**
ARTV				IAML_P		
	comp=Z,46nm,0.3s					
LVZ	**Lovozero**	**66.82**	**336**	*e*P	**P**	**05 53 54.6 +0.4**
	comp=Z,144nm,1.0s					
LVZ				LR	LR	
	comp=Z,25μm,20.0s					
LVZ	**Lovozero**	**66.82**	**336**	*c e*P	**P**	**05 53 54.7 +0.4**
LVZ				pmax	pmax	
	comp=Z,217nm,1.7s					
LVZ				MLR	MLR	
	comp=Z,23μm,15.0s					
VSR	**Storozhevoye**	**66.82**	**317**	*e*P	**P**	**05 53 55.1 +0.6**
VSR				*e*		05 53 56.9
VSR				*e*S	**S**	**06 02 43.0 -3.2**
VSR				pmax	pmax	
	comp=Z,640nm,1.7s					
VSR				smax	smax	
	comp=E,2μm,8.6s					
VSR				MLR	MLR	
	comp=Z,21μm,13.0s					
DAGI	**Agillar**	**66.83**	**306**	*i* P	**P**	**05 53 58.2 +3.2**
DAGI				IAML_P		
	comp=Z,437nm,0.6s					
BATM	**Batumi**	**66.89**	**307**	*e*P	**P**	**05 53 55.9 +0.7**
DBOC	**Borcka**	**66.96**	**306**	*i* P	**P**	**05 53 58.1 +2.4**
DBOC				IAML_P		
	comp=Z,522nm,0.6s					
BCA	**Borcka**	**66.97**	**307**	*e*P	**P**	**05 53 55.3 -0.5**
DBAD	**Bademkaya**	**67.01**	**306**	*i* P	**P**	**05 53 59.5 +3.4**
DBAD				IAML_P		
	comp=Z,301nm,0.5s					
MOS	**Moscow**	**67.01**	**322**	*e*P	**P**	**05 53 54.1 -1.5**
MOS				*e*		05 54 01.1
MOS				*e*		05 54 21.1
MOS				*e*		05 56 23.2
MOS				*e*PPP	PPP	05 57 57.4
MOS				*e*S	**S**	**06 02 47.0 -1.3**
MOS				*e*SS	**SS**	**06 07 09.7 +3.1**
MOS				pmax	pmax	
	comp=Z,258nm,1.4s					
MOS				MLR	MLR	
	comp=Z,24μm,15.0s					
MOS				MLR	MLR	
	comp=E,16μm,14.0s					
HOMI	**Horasan**	**67.06**	**305**	*i* P	**P**	**05 53 59.6 +3.0**
HOMI				IAML_P		
	comp=Z,32nm,0.1s					
KOPR	**Koprukoy-ERZUR**	**67.11**	**305**	*e*P	**P**	**05 53 58.9 +2.1**
SIRT	**Sirnak**	**67.22**	**302**	*e*P	**P**	**05 53 58.9 +1.4**
SIRT	**Sirnak**	**67.22**	**302**	*e*P	**P**	**05 53 58.8 +1.3**
	comp=Z,2μm,1.1s					
SIRT				LR	LR	
	comp=Z,35μm,19.0s					
SIRN	**Sırnak**	**67.24**	**302**	*i* P	**P**	**05 54 01.8 +4.2**
SIRN				IAML_P		
	comp=Z,867nm,0.2s					
BLIS	**Bitlis-Merkez**	**67.26**	**303**	*i* P	P	05 54 02.7 +4.9
BLIS				IAML_P		
	comp=Z,950nm,0.6s					
APA	**Apatity**	**67.33**	**335**	⇓*i*P	**P**	**05 53 57.2 -0.3**
APA				*i*		05 54 08.8
APA				*i*		05 56 24.3
APA				*i* PPP	PPP	05 58 06.0
APA				*i* S	**S**	**06 02 54.0 +2.1**
APA				*i*		06 03 32.0
APA				pmax	pmax	
	comp=Z,77nm,1.0s					
APA				MLR	MLR	
	comp=Z,20μm,14.0s					
AKDA	**Akdag**	**67.45**	**305**	*i* P	**P**	**05 54 03.3 +4.2**
SRTM	**Siirt_Merkez**	**67.50**	**303**	*i* P	**P**	**05 54 01.2 +2.0**
SRTM				IAML_P		
	comp=Z,594nm,0.8s					
CAST	**Castle Rocks**	**67.58**	**29**	*e*P	**P**	**05 53 59.5 +0.3**
	comp=Z,732nm,1.8s					
CAST				LR	LR	
	comp=Z,9μm,19.0s					
VRTB	**Varto-Mus**	**67.59**	**304**	*e*P	**P**	**05 54 03.4 +3.5**
VRTB	**Varto-Mus**	**67.59**	**304**	*i* P	P	05 54 07.8 +7.9
VRTB				IAML_P		
	comp=Z,7μm,0.4s					
SII	**Sitkinak Islan**	**67.61**	**37**	*e*P	**P**	**05 53 59.3 -0.2**
	comp=Z,334nm,1.1s					
SII				LR	LR	
	comp=Z,7μm,20.0s					
MUSM	**Mu-Merkez**	**67.65**	**304**	*i* P	**P**	**05 54 03.4 +3.1**
MUSM				IAML_P		
	comp=Z,29nm,0.3s					
OBN	**Obninsk**	**67.70**	**322**	P	**P**	**05 53 59.5 -0.5**
	comp=Z,8.9nm,0.6s,baz=66,slow=5.6,SNR=43					
OBN	**Obninsk**	**67.70**	**322**	*e*P	**P**	**05 54 00.0 0.0**
	comp=Z,1μm,1.8s					
OBN				LR	LR	
	comp=Z,21μm,18.0s					
OBN	**Obninsk**	**67.70**	**322**	⇓*i*P	**P**	**05 54 02.2 +2.2**
OBN	**Obninsk**	**67.70**	**322**	*c i* P	**P**	**05 54 00.3 +0.3**
OBN				*i*		05 54 05.4
OBN				*i*		05 54 29.0
OBN				*i*		05 56 26.3
OBN				*i* S	**S**	**06 02 49.4 -7.3**
OBN				pmax	pmax	
	comp=Z,138nm,1.3s					
OBN				MLR	MLR	
	comp=Z,18μm,18.0s					
RSO	**Redoubt South**	**67.72**	**32**	*e*P	**P**	**05 54 00.2 -0.1**
KRIK	**Erzurum-spir**	**67.73**	**306**	*i* P	**P**	**05 54 03.5 +2.7**
KRIK				IAML_P		
	comp=Z,152nm,0.4s					
COLD	**Coldfoot**	**67.79**	**25**	*e*P	**P**	**05 54 00.4 -0.1**
	comp=Z,242nm,2.0s					
COLD				LR	LR	
	comp=Z,8μm,22.0s					
TOLK	**Toolik Lake Re**	**67.82**	**23**	*e*P	**P**	**05 54 00.5 -0.1**
	comp=Z,106nm,1.0s					
TOLK				LR	LR	
	comp=Z,12μm,19.0s					
TOLK	**Toolik Lake Re**	**67.82**	**23**	P	**P**	**05 54 00.7 +0.1**
	baz=278					
KARO	**Karliova-Bingo**	**67.87**	**304**	*e*P	**P**	**05 54 04.1 +2.4**
BNGL	**BINGOL**	**67.87**	**304**	*i* P	**P**	**05 54 05.4 +3.6**
SOC	**Sochi**	**67.90**	**309**	*c i*P	**P**	**05 54 02.1 +0.6**
SOC				*e*PP	**sP**	**05 54 10.0 +0.3**
SOC				*e*S	**S**	**06 02 59.9 +0.4**
SOC				*e*SS	sS	06 03 19.2 +10
SOC				*e*SS	**SS**	**06 07 18.8 -2.2**
SOC				pmax	pmax	
	comp=Z,862nm,0.8s					
SOC				pmax	pmax	
	comp=Z,12μm,2.5s					
SOC				MLR	MLR	
	comp=Z,152μm,14.0s					
MLY	**Manley**	**67.91**	**27**	*e*P	**P**	**05 54 01.5 +0.2**
	comp=Z,147nm,1.0s					
MLY				LR	LR	
	comp=Z,11μm,19.0s					
SPU	**Mount Spurr**	**67.94**	**31**	*e*P	**P**	**05 54 01.2 -0.3**

BPAW	**Bear Paw Mtn.**	**67.96**	**28**	PFAKE			05 54 10.0 +8.4
BPAW				LR	LR		
	comp=Z,7μm,20.0s						
OHAK	**Old Harbor**	**67.98**	**36**	*e*P	**P**		**05 54 00.9 -0.8**
	comp=Z,372nm,1.2s						
OHAK				LR	LR		
	comp=Z,8μm,20.0s						
SVAN	**Silvan-Diyarba**	**68.02**	**303**	*e*P	**P**		**05 54 03.7 +1.2**
BTMN	**Batman**	**68.03**	**303**	*i* P	**P**		**05 54 04.7 +2.1**
BTMN				IAML_P			
	comp=Z,0.8nm,0.3s						
KOPT	**Kop Dagi**	**68.12**	**305**	*i* P	**P**		**05 54 06.6 +3.3**
KOPT				IAML_P			
	comp=Z,78nm,0.1s						
YEDI	**Yedisu-Bingol**	**68.22**	**305**	*e*P	**P**		**05 54 06.7 +2.9**
BNGB	**Bingl**	**68.22**	**304**	*e*P	**P**		**05 54 05.2 +1.4**
BAYB	**BAYBURT**	**68.24**	**306**	*i* P	**P**		**05 54 06.3 +2.3**
BAYB				IAML_P			
	comp=Z,874nm,0.7s						
KDAK	**Kodiak Island**	**68.26**	**35**	*e*P	**P**		**05 54 02.7 -0.8**
	comp=Z,932nm,1.4s						
KDAK				LR	LR		
	comp=Z,8μm,21.0s						
KDAK	**Kodiak Island**	**68.26**	**35**	*e*P	**P**		**05 54 02.7 -0.8**
KDAK				pmax	pmax		
	comp=Z,932nm,1.4s						
KDAK				MLR	MLR		
	comp=Z,8μm,21.0s						
HOM	**Homer**	**68.40**	**33**	*e*P	**P**		**05 54 03.9 -0.4**
	comp=Z,638nm,1.3s						
HOM				LR	LR		
	comp=Z,6μm,18.0s						
HOPEN	**Hopen**	**68.41**	**345**	*e*P	**P**		**05 54 04.6 +0.5**
HOPEN				IVMs_BB	IVMs_BB		06 30 15.5
	comp=Z,16μm,15.7s						
SUA	**Susitna One**	**68.51**	**31**	*e*P	**P**		**05 54 04.5 -0.7**
	comp=Z,1μm,2.0s						
SUA				LR	LR		
	comp=Z,6μm,19.0s						
MARD	**Mardin**	**68.54**	**302**	*i* P	**P**		**05 54 08.6 +2.7**
MARD				IAML_P			
	comp=Z,2μm,0.6s						
HANI	**Diyarbakir_Han**	**68.57**	**304**	*i* P	**P**		**05 54 09.0 +3.1**
HANI				IAML_P			
	comp=Z,1μm,0.7s						
BWN	**Browne**	**68.60**	**28**	*e*P	**P**		**05 54 05.8 +0.3**
	comp=Z,328nm,1.3s						
BWN				LR	LR		
	comp=Z,10μm,18.0s						
CNPM	**China Poot**	**68.63**	**33**	*e*P	**P**		**05 54 04.4 -1.4**
	comp=Z,94nm,0.8s						
CNPM				LR	LR		
	comp=Z,8μm,20.0s						
BRLK	**Bradley Lake**	**68.76**	**33**	*e*P	**P**		**05 54 05.3 -1.3**
	comp=Z,247nm,1.1s						
BRLK				LR	LR		
	comp=Z,8μm,20.0s						
MAZI	**Mazidag**	**68.77**	**303**	*e*P	**P**		**05 54 08.2 +1.0**
DYBB	**Diyarbakir**	**68.88**	**303**	*e*P	**P**		**05 54 11.7 +3.8**
DIYA	**Diyarbakir**	**68.90**	**303**	*i* P	**P**		**05 54 04.7 -3.3**
DIYA				IAML_P			
	comp=Z,773nm,0.1s						
MCK	**McKinley**	**68.91**	**28**	*e*P	**P**		**05 54 06.9 -0.7**
	comp=Z,371nm,1.3s						
MCK				LR	LR		
	comp=Z,10μm,20.0s						
MCK	**McKinley**	**68.91**	**28**	*e*P	**P**		**05 54 06.9 -0.7**
MCK				pmax	pmax		
	comp=Z,371nm,1.3s						
MCK				MLR	MLR		
	comp=Z,10μm,20.0s						
MDM	**Murphy Dome**	**68.98**	**27**	*e*P	**P**		**05 54 08.2 +0.3**
	comp=Z,154nm,1.4s						
RND	**Reindeer**	**69.01**	**29**	PFAKE			05 54 20.0 +12
RND				LR	LR		
	comp=Z,8μm,20.0s						
KELT	**Kelkit**	**69.02**	**306**	*i* P	**P**		**05 54 11.7 +2.8**
KELT				IAML_P			
	comp=Z,269nm,0.5s						
TNCL	**Tunceli-Merkez**	**69.05**	**305**	*i* P	P		05 54 16.1 +7.1
TNCL				IAML_P			
	comp=Z,449nm,0.7s						
RC01	**Rabbit Creek A**	**69.06**	**31**	*e*P	**P**		**05 54 07.4 -1.1**
	comp=Z,290nm,1.4s						
RC01				LR	LR		
	comp=Z,8μm,20.0s						
WRH	**Wood River Hil**	**69.13**	**28**	*e*P	**P**		**05 54 08.0 -0.9**
	comp=Z,161nm,1.1s						
WRH				LR	LR		
	comp=Z,14μm,19.0s						
TCOL	**CIGO, UAF Yank**	**69.15**	**27**	P	**P**		**05 54 08.6 -0.4**
	baz=282						
COLA	**College**	**69.15**	**27**	*e*P	**P**		**05 54 08.8 -0.2**
	comp=Z,151nm,1.3s						
COLA				LR	LR		
	comp=Z,10μm,18.0s						
COLA	**College**	**69.15**	**27***c*	*i* P	**P**		**05 54 09.3 +0.4**
COLA				pmax	pmax		
	comp=Z,135nm,1.4s						
COLA				MLR	MLR		
	comp=Z,9μm,17.0s						
CCB	**Clear Creek Bu**	**69.22**	**27**	*e*P	**P**		**05 54 08.4 -1.0**
	comp=Z,49nm,1.0s						
CCB				LR	LR		
	comp=Z,12μm,18.0s						
ANN	**Anapa**	**69.23**	**311***c*	*i* P	**P**		**05 54 10.2 +0.4**
ANN				*i* *PP	**sP**		**05 54 18.7 +0.7**
ANN				*e*PPP	PPP		05 58 20.1
ANN				*i* S	**S**		**06 03 16.6 +1.3**
ANN				pmax	pmax		
	comp=Z,266nm,1.5s						
ANN				MLR	MLR		
	comp=N,11μm,17.0s						
ANN				MLR	MLR		
	comp=E,22μm,17.0s						
ANN				MLR	MLR		
	comp=Z,32μm,17.0s						
PMR	**Palmer**	**69.25**	**31**	*e*P	**P**		**05 54 08.7 -0.9**
	comp=Z,556nm,1.8s						
PMR				*e*S	**S**		**06 03 15.9 +1.0**
PMR				LR	LR		
	comp=Z,9μm,20.0s						
PMR	**Palmer**	**69.25**	**31**	*e*P	**P**		**05 54 08.7 -0.9**
PMR				*e*S	**S**		**06 03 15.9 +1.0**
PMR				pmax	pmax		
	comp=Z,557nm,1.8s						
PMR				MLR	MLR		
	comp=Z,9μm,20.0s						
KEV	**Kevo**	**69.26**	**338**	*e*P	**P**		**05 54 10.0 +0.5**
	comp=Z,309nm,1.1s						
KEV				LR	LR		
	comp=Z,30μm,20.0s						
KEV	**Kevo**	**69.26**	**338**	*e*P	**P**		**05 54 10.0 +0.5**
KEV				pmax	pmax		
	comp=Z,309nm,1.1s						
KEV				MLR	MLR		
	comp=Z,30μm,20.0s						
POKR	**Poker Plat Res**	**69.28**	**27**	P	**P**		**05 54 09.7 -0.1**
	baz=282						
GHO	**Glory Hole Cre**	**69.31**	**31**	*e*P	**P**		**05 54 09.3 -0.8**
	comp=Z,160nm,1.1s						
GHO				LR	LR		
	comp=Z,11μm,19.0s						
SEW	**Seward**	**69.40**	**32**	*e*P	**P**		**05 54 09.6 -0.9**
	comp=Z,633nm,1.3s						
SEW				LR	LR		
	comp=Z,9μm,20.0s						
SVRC	**Sivrice-ELAZID**	**69.41**	**304**	*e*P	**P**		**05 54 12.7 +1.4**
SML	**Sawmill**	**69.58**	**30**	*e*P	**P**		**05 54 11.1 -0.6**
	comp=Z,440nm,1.2s						
SML				LR	LR		
	comp=Z,11μm,21.0s						
SML	**Sawmill**	**69.58**	**30**	*e*P	**P**		**05 54 11.1 -0.6**
SML				pmax	pmax		
	comp=Z,440nm,1.2s						
SML				MLR	MLR		
	comp=Z,11μm,21.0s						
ILAR	**Eielson Array**	**69.58**	**27**	P	**P**		**05 54 10.7 -1.0**
	comp=Z,9.1nm,0.5s,baz=278,slow=3.1,SNR=82						
ILAR				PKPPKP	**P'P'df**		**06 22 16.9 -7.1**
	comp=Z,8.7nm,1.2s,baz=121,slow=1.8,SNR=13						
ILAR				LR	LR		06 27 40.0
	comp=Z,8μm,18.7s,baz=294,slow=38						
ILB	**Eielson Array**	**69.58**	**27**	*e*P	**P**		**05 54 10.1 -1.6**
	comp=Z,5.1nm,1.5s						
KNK	**Knik Glacier**	**69.60**	**31**	*e*P	**P**		**05 54 11.6 -0.3**
	comp=Z,1μm,1.8s						
KNK				LR	LR		
	comp=Z,10μm,19.0s						
ELZG	**Elazig**	**69.63**	**304**	*i* P	P		05 54 17.9 +5.3
ELZG				IAML_P			
	comp=Z,89nm,0.1s						
HDA	**Harding Lake**	**69.63**	**28**	*e*P	**P**		**05 54 10.8 -1.1**
	comp=Z,106nm,1.0s						
HDA				LR	LR		
	comp=Z,18μm,18.0s						
HDA	**Harding Lake**	**69.63**	**28**	P	**P**		**05 54 10.9 -1.1**
	baz=282						
DHY	**Denali Highway**	**69.74**	**29**	*e*P	**P**		**05 54 12.1 -0.7**
	comp=Z,336nm,1.8s						
SPA0	**Spitsbergen Ar**	**69.80**	**348**	*e*P	**P**		**05 54 12.7 -0.1**
	comp=Z,377nm,1.0s						
SPA0	**Spitsbergen Ar**	**69.80**	**348**	*e*P	**P**		**05 54 13.6 +0.8**
SPA0				IVmB_BB			05 54 22.0
	comp=Z,4μm,2.4s						
SPA0				*e*S	**S**		**06 03 23.7 +2.6**
SPA0				IVMs_BB	IVMs_BB		06 28 56.8
	comp=Z,17μm,14.7s						
SPITS	**Spitsbergen Ar**	**69.80**	**348**	P	**P**		**05 54 12.0 -0.8**
	comp=Z,72nm,0.8s,baz=110,slow=12,SNR=40						
ARCES	**ARCESS Array B**	**69.82**	**338**	P	**P**		**05 54 13.0 -0.1**
	comp=Z,60nm,0.8s,baz=70,slow=7.0,SNR=74						
ARCES				PKPPKP	**P'P'df**		**06 22 16.9 -6.7**
	comp=Z,5.0nm,0.9s,baz=45,slow=14,SNR=3.9						
ARCES				LR	LR		06 28 12.1
	comp=Z,20μm,18.6s,baz=66,slow=39						
ARE0	**ARCESS Array S**	**69.82**	**338**	*e*P	**P**		**05 54 13.4 +0.4**
	comp=Z,18nm,1.3s						
ARE0				LR	LR		
	comp=Z,1μm,19.0s						
ARE0	**ARCESS Array S**	**69.82**	**338**	*e*S	**S**		**06 03 23.7 +2.2**
ARE0				IVmB_BB			06 29 37.1
	comp=Z,12μm,12.7s						
MSEY	**Mahe Island**	**69.83**	**255**	PFAKE			05 54 30.0 +16
MSEY				LR	LR		
	comp=Z,13μm,21.0s						
MSEY	**Mahe Island**	**69.83**	**255**	P	**P**		**05 54 18.6 +4.6**
FYU	**Fort Yukon**	**69.84**	**25**	*e*P	**P**		**05 54 13.6 +0.4**
	comp=Z,340nm,1.4s						
FYU				LR	LR		
	comp=Z,11μm,18.0s						
PRP	**Porcupine Dome**	**69.97**	**26**	*e*P	**P**		**05 54 14.0 -0.2**
	comp=Z,105nm,1.2s						
PRP				LR	LR		
	comp=Z,9μm,21.0s						
URFA	**Urfa**	**70.02**	**303**	*e*P	**P**		**05 54 17.1 +2.1**
SCM	**Sheep Creek Mo**	**70.03**	**30**	*e*P	**P**		**05 54 14.4 -0.2**
	comp=Z,1μm,1.8s						
SCM				LR	LR		
	comp=Z,12μm,20.0s						
SCM	**Sheep Creek Mo**	**70.03**	**30**	*e*P	**P**		**05 54 14.4 -0.2**
SCM				pmax	pmax		
	comp=Z,1μm,1.8s						
SCM				MLR	MLR		
	comp=Z,12μm,20.0s						
PUL	**Pulkovo**	**70.09**	**327***c*	*e*P	**P**		**05 54 16.8 +2.0**
PUL				pmax	pmax		
	comp=Z,547nm,1.7s						
PUL	**Pulkovo**	**70.09**	**327**	*e*P	**P**		**05 54 15.1 +0.3**
HAMF	**Hammerfest**	**70.15**	**339**	*e*P	**P**		**05 54 16.0 +1.1**
HAMF				*e*S	**S**		**06 03 28.0 +2.9**
HAMF				IVMs_BB	IVMs_BB		06 31 22.5
	comp=Z,12μm,13.5s						
SURC	**SANLIURFA_SURC**	**70.33**	**302**	*i* P	**P**		**05 54 19.8 +3.0**
SURC				IAML_P			
	comp=Z,76nm,0.3s						
BJO	**Bjornoya**	**70.34**	**344**	*e*P	**P**		**05 54 17.2 +1.1**
BJO				*e*S	**S**		**06 03 30.1 +2.7**
BJO				IVMs_BB	IVMs_BB		06 32 22.3
	comp=Z,15μm,12.7s						
KBS	**Kingsbay**	**70.35**	**349**	*e*P	**P**		**05 54 15.8 -0.3**
	comp=Z,64nm,1.1s						
KBS				LR	LR		
	comp=Z,48μm,18.0s						
KBS	**Kingsbay**	**70.35**	**349**	*e*P	**P**		**05 54 15.9 -0.3**
KBS				pmax	pmax		
	comp=Z,64nm,1.1s						
KBS				MLR	MLR		
	comp=Z,48μm,18.0s						
KBS	**Kingsbay**	**70.35**	**349**	*e*P	**P**		**05 54 17.4 +1.3**
KBS				IVmB_BB			05 54 25.3
	comp=Z,2μm,2.6s						
KBS				*e*S	**S**		**06 03 29.7 +2.3**
KBS				IVMs_BB	IVMs_BB		06 28 58.2
	comp=Z,27μm,16.3s						
GLI	**Glacier Island**	**70.37**	**31**	PFAKE			05 54 30.0 +13
GLI				LR	LR		
	comp=Z,8μm,22.0s						
HSPB	**Hornsund (broa**	**70.37**	**347**	*e*P	**P**		**05 54 16.5 +0.2**
HSPB				*e*S	**S**		**06 03 28.4 +0.7**
HSPB				LMZ	LR		06 29 04.6
	comp=Z,234μm,18.6s						
HSPB	**Hornsund (broa**	**70.37**	**347**	*e*P	**P**		**05 54 16.5 +0.2**
HSPB				*e*S	**S**		**06 03 28.4 +0.7**
HSPB				MLR	MLR		
	comp=Z,234μm,18.6s						
HSPB	**Hornsund (broa**	**70.37**	**347**	*e*P	**P**		**05 54 17.7 +1.5**
HSPB				IVmB_BB			05 54 24.5
	comp=Z,4μm,2.2s						
HSPB				IVMs_BB	IVMs_BB		06 29 12.8
	comp=Z,16μm,17.1s						
PAX	**Paxson**	**70.61**	**29**	*e*P	**P**		**05 54 17.7 -0.4**
	comp=Z,127nm,1.2s						
PAX				LR	LR		
	comp=Z,14μm,18.0s						
PAX	**Paxson**	**70.61**	**29**	*e*P	**P**		**05 54 17.7 -0.4**
PAX				pmax	pmax		
	comp=Z,127nm,1.2s						
PAX				MLR	MLR		
	comp=Z,14μm,18.0s						
TAU	**Tasmania Unive**	**70.68**	**160**	*e*P	**P**		**05 54 18.2 -0.3**
	comp=Z,219nm,1.1s						
TAU				LR	LR		
	comp=Z,10μm,19.0s						
TAU	**Tasmania Unive**	**70.68**	**160**	*e*P	**P**		**05 54 18.2 -0.3**
TAU				pmax	pmax		
	comp=Z,219nm,1.1s						
TAU				MLR	MLR		
	comp=Z,10μm,19.0s						
RIDG	**Independent Ri**	**70.69**	**28**	*e*P	**P**		**05 54 17.5 -1.0**
	comp=Z,377nm,1.4s						
RIDG				LR	LR		
	comp=Z,10μm,19.0s						
KTK1	**Kautokeino**	**70.74**	**338**	*e*P	**P**		**05 54 20.1 +1.4**
KTK1				IVmB_BB			05 54 28.0
	comp=Z,4μm,2.1s						
KTK1				*e*S	**S**		**06 03 32.8 +0.6**
KTK1				IVMs_BB	IVMs_BB		06 29 28.5
	comp=Z,13μm,13.4s						
DARE	**Darende-Malaty**	**70.74**	**304**	*e*P	**P**		**05 54 20.4 +1.0**
SVSK	**Karacayir**	**70.75**	**306**	*e*P	**P**		**05 54 20.9 +1.7**
KLU	**Klutina**	**70.77**	**30**	PFAKE			05 54 30.0 +11
KLU				LR	LR		
	comp=Z,11μm,20.0s						
HARP	**HAARP**	**70.89**	**29**	*e*P	**P**		**05 54 19.9 +0.1**
	comp=Z,188nm,1.0s						
HARP				LR	LR		
	comp=Z,10μm,21.0s						
DIV	**Divide**	**70.93**	**31**	*e*P	**P**		**05 54 19.7 -0.4**
	comp=Z,646nm,1.5s						
DIV				LR	LR		
	comp=Z,10μm,20.0s						
DOT	**Dot Lake**	**71.05**	**28**	*e*P	**P**		**05 54 19.7 -1.0**
	comp=Z,142nm,1.3s						
DOT				LR	LR		
	comp=Z,9μm,19.0s						
EYAK	**Cordova Ski Ar**	**71.09**	**31**	*e*P	**P**		**05 54 20.9 0.0**
	comp=Z,786nm,1.8s						
EYAK				LR	LR		
	comp=Z,13μm,20.0s						
MID	**Middleton Isla**	**71.09**	**33**	*e*P	**P**		**05 54 20.6 -0.2**
	comp=Z,248nm,1.1s						
MID				LR	LR		
	comp=Z,8μm,20.0s						
MID	**Middleton Isla**	**71.09**	**33**	*e*P	**P**		**05 54 20.7 -0.2**
MID				pmax	pmax		
	comp=Z,248nm,1.1s						
MID				MLR	MLR		
	comp=Z,8μm,20.0s						
KVT	**Kavak**	**71.14**	**307**	*e*P	**P**		**05 54 23.2 +1.5**
GAZ	**Gaziantep**	**71.33**	**303**	*e*P	**P**		**05 54 24.3 +1.4**
MENT	**Mentasta**	**71.39**	**29**	*e*P	**P**		**05 54 22.6 -0.1**
	comp=Z,140nm,1.0s						
MENT				LR	LR		
	comp=Z,11μm,20.0s						
SIM	**Simferopol'**	**71.48**	**312***c*	*i* P	**P**		**05 54 24.2 +0.6**
SIM				*i*			05 57 03.0
SIM				*i* S	**S**		**06 03 41.8 +0.2**
SIM				*i* PS	PnS		06 04 29.0 +18
SIM				pmax	pmax		
	comp=Z,2μm,5.3s						
SIM				pmax	pmax		
	comp=Z,340nm,9.1s						
SNOP	**Sinop**	**71.50**	**308**	*e*P	P		05 54 30.0 +6.3
SNOP	**Sinop**	**71.50**	**308**	*e*P	**P**		**05 54 24.0 +0.2**
	comp=Z,482nm,1.7s						
SNOP				LR	LR		
	comp=Z,12μm,19.0s						
DIKM	**Dikmen**	**71.56**	**308**	*e*P	**P**		**05 54 24.7 +0.6**
DIKM	**Dikmen**	**71.56**	**308**⇑	*i* P	**P**		**05 54 26.1 +2.0**
FIA1	**FINESS Array S**	**71.69**	**330**	*e*P	**P**		**05 54 24.7 +0.2**
	comp=Z,975nm,1.7s						
FIA0	**FINESS Array S**	**71.69**	**330**	*e*P	**P**		**05 54 24.7 +0.2**
FIA0	**FINESS Array S**	**71.69**	**330**	*e*P	**P**		**05 54 24.7 +0.2**
FINES	**FINESS Array B**	**71.69**	**330**	P	**P**		**05 54 24.7 +0.2**
	comp=Z,57nm,0.8s,baz=76,slow=8.0,SNR=75						
FINES				LR	LR		06 28 39.3
	comp=Z,33μm,18.9s,baz=74,slow=38						
FINES	**FINESS Array B**	**71.69**	**330**	*i* P	**P**		**05 54 24.7 +0.2**
FINES				pmax	pmax		
	comp=Z,58nm,0.8s						
HMT	**Hamilton**	**71.86**	**31**	*e*P	**P**		**05 54 25.6 -0.1**
	comp=Z,344nm,1.3s						
HMT				LR	LR		
	comp=Z,14μm,18.0s						
SEVA	**Sevastopol**	**71.89**	**311**⇑	*i* P	**P**		**05 54 29.0 +2.9**
BNN	**Bunyan**	**71.90**	**305**	*e*P	**P**		**05 54 27.9 +1.5**
EGAK	**Eagle**	**71.95**	**27**	*e*P	**P**		**05 54 25.3 -0.7**
	comp=Z,110nm,0.8s						
EGAK				LR	LR		
	comp=Z,9μm,18.0s						
TRO	**Tromso**	**72.00**	**339**	*e*P	**P**		**05 54 26.9 +0.7**
TRO				IVmBBB			05 54 35.2
	comp=Z,3μm,2.2s						
TRO				*e*S	**S**		**06 03 49.0 +2.4**
TRO				IVMs_BB	IVMs_BB		06 30 33.2
	comp=Z,16μm,13.5s						
KEKH	**Kekaha**	**72.04**	**73**	PFAKE			05 54 40.0 +13
KEKH				LR	LR		
	comp=Z,14μm,22.0s						
YOZ	**Yozgat**	**72.07**	**306**	*e*P	**P**		**05 54 26.5 -0.9**
VSU	**Vasula**	**72.21**	**327***c*	*i* P	**P**		**05 54 28.0 +0.4**
VSU				pmax	pmax		
	comp=Z,2μm,1.7s						
VSU	**Vasula**	**72.21**	**327**	*e*P	**P**		**05 54 28.1 +0.4**
VSU				IAmb	IAmb		05 54 32.0
	comp=Z,1μm,1.2s						
DAMY	**Dhamar**	**72.25**	**278**	PFAKE			05 54 40.0 +11
DAMY				LR	LR		
	comp=Z,9μm,19.0s						
CRQM	**Cirque**	**72.27**	**31**	*e*P	**P**		**05 54 27.8 -0.5**
	comp=Z,232nm,1.0s						
KOZT	**Kozan**	**72.30**	**304**	*e*P	**P**		**05 54 30.1 +1.4**
TAHT	**Tahtakopru-Hat**	**72.34**	**302**	*e*P	P		05 54 35.8 +6.9
TGL	**Tana Glacier**	**72.41**	**31**	PFAKE			05 54 40.0 +11
TGL				LR	LR		
	comp=Z,13μm,20.0s						
CORM	**Corum**	**72.43**	**307**	*e*P	**P**		**05 54 31.2 +1.7**
CEYT	**Ceyhan**	**72.50**	**303**	*e*P	**P**		**05 54 31.4 +1.6**
BALM	**Baldy**	**72.56**	**30**	*e*P	**P**		**05 54 29.5 -0.4**
	comp=Z,213nm,1.2s						
BALM				LR	LR		
	comp=Z,10μm,20.0s						
BALM	**Baldy**	**72.56**	**30**	*e*P	**P**		**05 54 29.5 -0.4**
BALM				pmax	pmax		
	comp=Z,213nm,1.2s						
BALM				MLR	MLR		
	comp=Z,10μm,20.0s						
MICGM	**Minsk**	**72.74**	**322**⇓	*i* P	**P**		**05 54 32.0 +1.1**
MICGM				PM			05 54 34.0
	comp=Z,1.0nm,1.0s						
MICGM				PM			05 54 35.0
	comp=E,0.8nm,1.0s						
MICGM				*e*PcP	**PcP**		**05 54 50.0 +1.8**
MICGM				*e*PP	**PP**		**05 57 10.0 -2.4**
MICGM				*e*PPP	PPP		05 59 04.0
MICGM				*e*S	**S**		**06 03 56.0 +0.4**
MICGM				SM			06 04 00.0
	comp=E,6.6nm,10.0s						
MICGM				*e*PS	**PnS**		**06 04 26.0 -1.1**
MICGM				*e*SS	**SS**		**06 08 42.0 +7.3**
MICGM				*e*SSS	SSS		06 11 50.0
MICGM				*e*LQ	LQ		06 20 52.0
MICGM				LQM			06 23 17.0
	comp=E,8.2nm,16.0s						
MICGM				LQM			06 23 45.0
	comp=N,27nm,16.0s						
MICGM				*e*LR	LR		06 24 46.0
MICGM				LRM	MLR		06 29 20.0
	comp=N,22nm,12.0s						
MICGM				LRM	MLR		06 29 40.0
	comp=E,26nm,14.0s						
MICGM				LRM	MLR		06 29 44.0
	comp=Z,34nm,12.0s						
MNK	**Minsk**	**72.74**	**322**⇓	*i* P	**P**		**05 54 32.0 +1.1**
MNK				*e*			05 54 50.0
MNK				*e*			05 57 10.0
MNK				*e*S	**S**		**06 03 56.0 +0.4**
MNK				*e*SS	**SS**		**06 08 42.0 +7.3**
MNK				pmax	pmax		
	comp=Z,950nm,1.0s						
MNK				smax	smax		
	comp=E,6μm,10.0s						
MNK				MLR	MLR		
	comp=Z,34μm,12.0s						
DAWY	**Dawson**	**72.90**	**27**	*e*P	**P**		**05 54 31.4 -0.4**
	comp=Z,118nm,0.9s						
DAWY				LR	LR		
	comp=Z,11μm,20.0s						
KARA	**Karaisali**	**72.95**	**304**	*e*P	**P**		**05 54 33.1 +0.5**
CANT	**Cankiri**	**73.04**	**307**	*e*P	**P**		**05 54 33.1 0.0**
TOTH	**TOTAH**	**73.05**	**299**	*e*P	**P**		**05 54 35.4 +2.2**
CTGM	**Chitina Glacie**	**73.05**	**30**	PFAKE			05 54 40.0 +7.2
CTGM				LR	LR		
	comp=Z,12μm,22.0s						
AKASG	**Malin Array Be**	**73.06**	**318**	P	**P**		**05 54 32.6 -0.2**
	comp=Z,15nm,0.7s,baz=59,slow=5.9,SNR=88						
AKASG				PKKP	**PKKPdf**		**06 13 56.1 -0.3**
	comp=Z,0.3nm,0.4s,baz=197,slow=13,SNR=5.1						
AKASG				PKPPKP			06 22 13.7
	comp=Z,0.4nm,0.4s,baz=268,slow=3.1,SNR=5.9						
AKBB	**Malin Array Si**	**73.06**	**318**	*e*P	**P**		**05 54 32.7 -0.2**
	comp=Z,413nm,1.6s						
AKBB				*e*PKKPdf	**PKKPdf**		**06 13 56.1 -0.3**
AKBB				LR	LR		
	comp=Z,16μm,20.0s						
AKBB	**Malin Array Si**	**73.06**	**318**	*e*P	**P**		**05 54 32.7 -0.2**
AKBB				pmax	pmax		
	comp=Z,413nm,1.6s						
AKBB				MLR	MLR		
	comp=Z,16μm,20.0s						
KIEV	**Kiev**	**73.07**	**318**	*e*P	**P**		**05 54 32.7 -0.2**
	comp=Z,398nm,1.6s						
KIEV				LR	LR		
	comp=Z,16μm,21.0s						
KIEV	**Kiev**	**73.07**	**318**⇑	*i* P	**P**		**05 54 33.8 +0.9**
KIEV	**Kiev**	**73.07**	**318**	*i* P	**P**		**05 54 32.9 0.0**
	SNR=54						
KIEV	**Kiev**	**73.07**	**318***c*	*i* P	**P**		**05 54 32.8 -0.2**
KIEV				pmax	pmax		
	comp=Z,275nm,1.5s						
QASN	**Qassioun**	**73.11**	**300**	*e*P	**P**		**05 54 36.2 +2.5**
IDID	**Didziasalis**	**73.13**	**323**	*e*P	**P**		**05 54 33.9 +0.7**
IDID				IAmb	IAmb		05 54 37.5
	comp=Z,106nm,1.0s						
EPYK	**Eagle Plains**	**73.17**	**24**	*e*P	**P**		**05 54 32.6 -0.7**
	comp=Z,158nm,1.0s						
EPYK				LR	LR		
	comp=Z,10μm,18.0s						
EPYK	**Eagle Plains**	**73.17**	**24**	P	**P**		**05 54 32.6 -0.7**
	baz=291						
NACGM	**Naroch**	**73.23**	**323**	*e*P	**P**		**05 54 33.0 -0.8**
NACGM				*e*P	**

NACGM ePS 06 04 34.0
NACGM eSS SS 06 09 03.0 +21
NACGM eSSS SSS 06 12 40.0
NACGM eLQ LQ 06 20 10.0
NACGM eLR LR 06 23 32.0
NACGM LRM MLR 06 31 16.0
comp=N,28nm,12.0s
NACGM LRM MLR 06 31 18.0
comp=E,51nm,14.0s
NACGM LRM MLR 06 31 18.0
comp=Z,54nm,13.0s
IZAR Zarasai 73.26 324 eP **P 05 54 34.7 +0.7**
BR101 Keskin Array S 73.29 306 eP **P 05 54 35.2 +0.6**
BR131 Keskin Array S 73.29 306 eP **P 05 54 35.2 +0.5**
comp=Z,147nm,1.1s
BRTR Keskin Array B 73.29 306 P **P 05 54 35.2 +0.5**
comp=Z,14nm,0.6s,baz=100,slow=3.8,SNR=55
BRTR PKPPKP 06 22 12.8
comp=Z,0.6nm,0.8s,baz=119,slow=10,SNR=3.6
BRTR LR LR 06 32 48.1
comp=Z,8μm,18.7s,baz=54,slow=41
KURC Kurucasile-Bar 73.31 309 eP **P 05 54 35.3 +0.7**
ISAL Salakas 73.38 324 eP **P 05 54 35.3 +0.6**
ISAL IAmb IAmb 05 54 39.0
comp=Z,77nm,1.0s
YAYX Yaylak 73.39 306 eP **P 05 54 35.7 +0.4**
IIGN Ignalina 73.40 324 eP **P 05 54 35.3 +0.5**
IIGN IAmb IAmb 05 54 39.1
comp=Z,72nm,1.0s
BRBR Barbar 73.41 300 eP **P 05 54 38.0 +2.4**
MERS Mersin 73.48 303 eP **P 05 54 35.7 0.0**
BHL Bhannes 73.50 300 eP **P 05 54 36.9 +0.9**
SERE Serefilkochisa 73.58 306 eP **P 05 54 36.6 +0.2**
INK Inuvik 73.59 22 P **P 05 54 35.1 -0.6**
comp=Z,27nm,0.8s,baz=302,slow=6.0,SNR=65
INK Inuvik 73.59 22 eP **P 05 54 35.1 -0.6**
comp=Z,184nm,1.0s
INK LR LR
comp=Z,13μm,20.0s
INK Inuvik 73.59 22 eP **P 05 54 35.1 -0.6**
INK pmax pmax
comp=Z,184nm,1.0s
INK MLR MLR
comp=Z,13μm,20.0s
SHBL Chebaa 73.59 300 eP **P 05 54 37.7 +1.1**
OPA Opana 73.63 73 PFAKE 05 54 50.0 +13
OPA LR LR
comp=Z,18μm,21.0s
KIP Kipapa 73.71 73 PFAKE 05 54 50.0 +13
KIP LR LR
comp=Z,18μm,22.0s
HON Honolulu 73.76 74 PFAKE 05 54 50.0 +12
HON LR LR
comp=Z,17μm,21.0s
SHMJ Saham 73.77 299 P **P 05 54 40.1 +2.6**
SHMJ Saham 73.77 299 P P 05 54 45.4 +7.9
comp=Z,126nm,0.8s
AFSR Afar-Bala (An 73.79 306 eP **P 05 54 38.0 +0.4**
PCA Pinnacle 73.83 31 PFAKE 05 54 50.0 +13
PCA LR LR
comp=Z,10μm,20.0s
SULT Sultanhani-AKS 73.84 305 eP **P 05 54 38.4 +0.5**
ANTO Ankara 73.87 307 eP **P 05 54 38.4 +0.4**
ANTO Ankara 73.87 307 eP **P 05 54 38.6 +0.6**
comp=Z,663nm,1.8s
ANTO LR LR
comp=Z,9μm,22.0s
ANTO Ankara 73.87 307⇑iP **P 05 54 39.9 +1.9**
ANTO Ankara 73.87 307 eP **P 05 54 38.6 +0.6**
ANTO pmax pmax
comp=Z,663nm,1.8s
ANTO MLR MLR
comp=Z,9μm,22.0s
ANTO Ankara 73.87 307 P **P 05 54 39.0 +1.0**
SNR=57
ANTO P **P 05 54 39.0 +1.0**
SNR=57
STEI Steigen 73.88 338 eP **P 05 54 37.8 +0.4**
STEI IVmB_BB 05 54 46.4
comp=Z,4μm,2.2s
STEI eS **S 06 04 11.5 +3.4**
STEI IVMs_BB IVMs_BB 06 31 31.6
comp=Z,23μm,13.4s
LOD Lodumlu 73.88 307 eP **P 05 54 39.2 +1.1**
KIZK Mersin 73.89 303 eP **P 05 54 38.0 0.0**
WALJ Wala 74.09 298 P **P 05 54 41.4 +2.1**
MMLI Mount Malkishu 74.13 299 eP **P 05 54 41.7 +2.1**
EREN Erenkoy 74.16 302 eP **P 05 54 43.4 +3.8**
BCPM Bancas Point 74.18 31 PFAKE 05 54 50.0 +11
BCPM LR LR
comp=Z,10μm,20.0s
CHBY Cihanbeyli 74.19 305 eP **P 05 54 39.1 -0.8**
KEBE Keben-Mersin 74.23 303 eP **P 05 54 40.4 +0.3**
YKU2 Yakutat 74.31 32 PFAKE 05 54 50.0 +10
YKU2 LR LR
comp=Z,6μm,19.0s
IKL Isikli 74.31 303 eP **P 05 54 43.6 +3.1**
KARJ 74.36 297 P **P 05 54 42.2 +1.3**
GHAJ Ghor Haditha 74.38 298 P **P 05 54 43.0 +2.0**
GHAJ Ghor Haditha 74.38 298 P **P 05 54 42.4 +1.4**
comp=Z,130nm,1.1s
LOF Lofoten 74.38 338 eP **P 05 54 39.8 -0.5**
LOF IVmBBB 05 54 50.4
comp=Z,3μm,2.6s
LOF eS **S 06 04 14.4 +0.7**
LOF IVMs_BB IVMs_BB 06 31 60.0
comp=Z,12μm,13.6s
KIS Kishinev 74.43 315 eP **P 05 54 40.0 -1.0**
comp=Z,220nm,1.5s
KIS Kishinev 74.43 315 ePP PP 05 57 36.0 +9.0
KIS Kishinev 74.43 315 eP **P 05 54 40.0 -1.0**
KIS eS **S 06 04 12.0 -3.0**
KIS ePS **PnS 06 04 40.0 -10**
KIS pmax pmax
comp=Z,220nm,1.5s
KIS pmax pmax
comp=Z,4μm,15.0s
KIS MLR MLR
comp=Z,26μm,18.0s
KIS MLR MLR
comp=N,11μm,15.0s
TEVE Tevekalti-Mers 74.44 303 eP **P 05 54 41.4 0.0**
AKKU Akkuyu-Mersin 74.44 303 eP **P 05 54 45.8 +4.5**
LISJ El Lisan 74.47 298 P **P 05 54 43.8 +2.4**
LISJ El Lisan 74.47 298 P **P 05 54 45.1 +3.7**
comp=N,133nm,1.5s
JDRJ Daraweish 74.48 297 P **P 05 54 42.8 +1.0**
JDRJ Daraweish 74.48 297 P **P 05 54 44.5 +2.7**
comp=N,172nm,1.5s
LADK Ladik-KONYA 74.70 305 eP **P 05 54 43.4 +0.5**
SLIT Slitere, Latvi 74.72 327 eP **P 05 54 42.2 -0.2**
SLIT IAmb IAmb 05 54 50.6
comp=Z,2μm,1.1s
ATD Arta Tunnel 74.74 276 PFAKE 05 55 00.0 +17
ATD LR LR
comp=Z,6μm,21.0s
AMAZ Amatzia 74.83 298 P **P 05 54 45.2 +1.5**
AMAZ Amatzia 74.83 298 P P 05 54 49.7 +6.0
comp=Z,278nm,1.4s
KIZT Kizilcal 74.85 306 eP **P 05 54 44.3 +0.5**
HYT Haines Junctio 74.85 30 eP **P 05 54 43.5 +0.1**
comp=Z,129nm,1.0s
HYT LR LR
comp=Z,11μm,20.0s
MOR8 Moi Rana 74.89 336 eP **P 05 54 43.2 -0.1**
MOR8 IVmB_BB 05 54 51.2
comp=Z,4μm,2.1s
MOR8 eS **S 06 04 20.2 +0.7**
MOR8 IVMs_BB IVMs_BB 06 31 01.5
comp=Z,22μm,15.0s
SVRH Sivrihisar-ESK 74.93 307 eP **P 05 54 43.0 -1.2**
CSS Mathiatis 74.99 302 eP **P 05 54 45.1 +0.6**
comp=Z,172nm,0.9s
CSS LR LR
comp=Z,11μm,21.0s
CSS Mathiatis 74.99 302 P **P 05 54 46.8 +2.3**
CSS Mathiatis 74.99 302 P **P 05 54 45.1 +0.6**
TLCR 75.01 313⇑iP **P 05 54 47.2 +2.8**
TLCR 75.01 313 P **P 05 54 47.1 +2.7**
MAMC Mammari 75.01 302 P **P 05 54 46.3 +1.7**
IAS Iasi 75.18 315⇓iP **P 05 54 47.7 +2.3**
HRFI Mount Harif 75.22 297 eP **P 05 54 47.4 +1.5**
KONS Konsvik 75.23 337 eP **P 05 54 46.0 +0.8**
KONS IVmB_BB 05 54 52.9
comp=Z,3μm,2.1s
KONS IVMs_BB IVMs_BB 06 32 25.3
comp=Z,21μm,12.4s
LEF Lefka 75.28 302 eP **P 05 54 46.8 +0.6**
LEF Lefka 75.28 302⇑iP **P 05 54 49.0 +2.8**
KHLH Kahului Airpor 75.28 73 PFAKE 05 55 00.0 +14
KHLH LR LR
comp=Z,19μm,21.0s
CIFT Cifteler, Eski 75.30 307 eP **P 05 54 46.1 -0.2**
AQBJ Aqaba 75.31 296 P **P 05 54 48.7 +2.3**
AQBJ Aqaba 75.31 296 P **P 05 54 49.9 +3.5**
comp=Z,132nm,1.0s
GULT Gulveren 75.35 308 eP **P 05 54 46.8 +0.2**
SAUV Serdivan-Sakar 75.39 308 eP **P 05 54 46.7 0.0**
SRCK Saricakaya, Es 75.39 308 eP **P 05 54 47.6 +0.8**
SZAC Souni 75.41 302 P **P 05 54 49.4 +2.5**
EIL Elat 75.41 296 eP P 05 54 52.5 +5.5
EIL Elat 75.41 296 P P 05 54 52.5 +5.5
EIL Elat 75.41 296 P P 05 54 52.1 +5.1
comp=Z,104nm,1.6s
SPNC Sapanca-Adapaz 75.42 308 eP **P 05 54 47.6 +0.8**
KZIT Kziot 75.45 298 eP **P 05 54 48.7 +1.4**
CFR Carcaliu 75.46 313⇑iP **P 05 54 48.4 +1.4**
PBUR Paburg 75.47 325 eP **P 05 54 47.3 +0.5**
HLK Haleakala 75.49 74 PFAKE 05 55 00.0 +12
HLK LR LR
comp=Z,22μm,22.0s
ALFC Alefka 75.49 302 P **P 05 54 49.0 +1.5**
SUW Suwalki 75.51 323 eP **P 05 54 47.2 +0.1**
SUW eS **S 06 04 26.3 -0.4**
SUW LMZ LR 06 32 21.4
comp=Z,29μm,17.4s
SUW Suwalki 75.51 323 eP **P 05 54 47.2 +0.1**
comp=Z,710nm,1.1s
SUW LR LR
comp=Z,26μm,18.0s
SUW Suwalki 75.51 323 eP **P 05 54 47.2 +0.1**
SUW pmax pmax
comp=Z,710nm,1.1s
SUW MLR MLR
comp=Z,26μm,18.0s
TLB Topalu 75.72 313⇑iP **P 05 54 50.1 +1.6**
SILT Sile 75.74 309 eP **P 05 54 49.8 +1.1**
HARR Harsova 75.76 313⇑iP **P 05 54 47.3 -1.4**
PPCY Paphos 75.78 302 P **P 05 54 46.3 -2.7**
HRT Hereke 75.83 309 eP **P 05 54 50.0 +0.7**
MRIV Mauritius Mete 75.87 240 PFAKE 05 55 00.0 +10
MRIV LR LR
comp=Z,3μm,19.0s
PETR Petresti 75.88 314⇑iP **P 05 54 52.3 +2.9**
ADVT Abdulvahap 75.91 308 eP **P 05 54 49.8 +0.1**
PSN Preselentsi 75.92 312 iP **P 05 54 50.6 +0.9**
SHUT Suhut-Afyon 75.94 306 eP **P 05 54 51.2 +1.2**
PRAR RASCA 75.98 316⇑iP **P 05 54 51.9 +1.9**
ODBI Odobesti 75.98 314⇓iP **P 05 54 54.7 +4.7**
TESR Tescani 76.00 315⇑iP **P 05 54 51.5 +1.4**
WHY Whitehorse 76.11 29 eP **P 05 54 50.7 +0.1**
comp=Z,229nm,1.4s
WHY LR LR
comp=Z,6μm,19.0s
YLV Yalova 76.13 308 eP **P 05 54 51.7 +0.7**
YLV Yalova 76.13 308⇑iP **P 05 54 52.5 +1.4**
YLV Yalova 76.13 308 P **P 05 54 52.4 +1.4**
KLYT Kilyos 76.14 309 eP **P 05 54 51.6 +0.7**
KLYT Kilyos 76.14 309⇓iP **P 05 54 53.4 +2.5**
VRI Vrincioaia 76.17 314 eP **P 05 54 52.4 +1.3**
VRI Vrincioaia 76.17 314⇑iP **P 05 54 53.3 +2.2**
ISK Istanbul-Kandi 76.19 309 eP **P 05 54 51.6 +0.4**
ISK Istanbul-Kandi 76.19 309 P **P 05 54 51.3 +0.1**
ISP Isparta 76.20 305 eP **P 05 54 51.8 +0.3**
ISP Isparta 76.20 305 eP **P 05 54 51.5 0.0**
comp=Z,270nm,1.1s
ISP LR LR
comp=Z,8μm,20.0s
ISP Isparta 76.20 305 P **P 05 54 50.7 -0.8**
ISP Isparta 76.20 305⇑iP **P 05 54 53.8 +2.3**
ISP Isparta 76.20 305 eP **P 05 54 51.5 0.0**
ISP pmax pmax
comp=Z,270nm,1.1s
ISP MLR MLR
comp=Z,8μm,20.0s
BIZ Bicaz 76.20 315⇓iP **P 05 54 52.6 +1.3**
KHLU Kahalu`u 76.21 75 PFAKE 05 55 00.0 +8.2
KHLU LR LR
comp=Z,7μm,20.0s
BUY Buyukada 76.22 309 eP **P 05 54 52.0 +0.6**
PLOR Plostina 76.22 314⇑iP **P 05 54 53.5 +2.1**
HUH Hualalai 76.22 74 PFAKE 05 55 00.0 +7.8
HUH LR LR
comp=Z,8μm,18.0s
HPAH Hawaii Prepara 76.23 74 PFAKE 05 55 00.0 +8.1
HPAH LR LR
comp=Z,10μm,22.0s
BCK Bucak 76.27 305 eP **P 05 54 52.7 +0.8**
GEMT Gemlik 76.30 308 eP **P 05 54 52.7 +0.8**
BGKT Bogazkoy 76.35 309 eP **P 05 54 52.8 +0.6**
SKAG Skagway 76.39 31 eP **P 05 54 52.4 +0.4**
comp=Z,206nm,1.0s
SKAG LR LR
comp=Z,8μm,20.0s
POHA Pohakuloa 76.47 74 PFAKE 05 55 00.0 +6.5
POHA LR LR
comp=Z,8μm,19.0s
ARMT Armutlu 76.50 308 eP **P 05 54 53.6 +0.6**
LVV L'vov 76.50 319 eP **P 05 54 53.4 +0.6**
LVV e 05 57 54.7
LVV eS **S 06 04 36.3 -1.5**
MWH Moku'aweowe 76.50 75 PFAKE 05 55 00.0 +5.9
MWH LR LR
comp=Z,7μm,20.0s
MLOA Mauna Loa Obse 76.51 74 PFAKE 05 55 00.0 +6.1
MLOA LR LR
comp=Z,8μm,18.0s
CTKS Kestanelik-??a 76.52 309 eP **P 05 54 52.7 -0.4**
BUR08 Bucovina Ar. S 76.54 316 eP **P 05 54 53.4 +0.1**
comp=Z,124nm,1.3s
BURAR Bucovina Array 76.54 316⇑iP **P 05 54 54.8 +1.5**
NSS Namsos 76.54 335 eP **P 05 54 53.2 +0.4**
NSS eS **S 06 04 40.0 +2.2**
NSS IVMs_BB IVMs_BB 06 32 10.5
comp=Z,39μm,12.8s
MDNY Mudanya-Bursa 76.55 308 eP **P 05 54 52.7 -0.6**
HMH Humu'ula Sheep 76.56 74 PFAKE 05 55 10.0 +16
HMH LR LR
comp=Z,9μm,19.0s
KHU Kahuku 76.57 75 PFAKE 05 55 00.0 +5.9
KHU LR LR
comp=Z,7μm,20.0s
LEHL Lehliu 76.58 313⇑iP **P 05 54 56.0 +2.6**
CTYL Yalikoy Yolu 76.59 310 eP **P 05 54 53.4 -0.1**
CTYL Yalikoy Yolu 76.59 310⇓iP **P 05 54 55.9 +2.4**
KORT Korkueli 76.60 305 eP **P 05 54 53.8 -0.1**
PRD Provadia 76.62 311 iP **P 05 54 54.7 +1.0**
AIN Ainahou 76.67 75 PFAKE 05 55 10.0 +15
AIN LR LR
comp=Z,8μm,19.0s
MLH Mauna Loa 76.69 74 PFAKE 05 55 10.0 +15
MLH LR LR
comp=Z,8μm,18.0s
DAG Danmarks Havn 76.70 351⇑iP **P 05 54 52.4 -1.1**
DAG MLR MLR
comp=Z,12μm,18.0s
DAG Danmarks Havn 76.70 351⇑iP **P 05 54 52.4 -1.1**
comp=Z,11μm,18.0s
OZUR 76.70 315⇑iP **P 05 54 56.3 +2.2**
SLVT Silivri 76.73 309 eP **P 05 54 55.3 +1.0**
WRMHI West Rim 76.80 74 PFAKE 05 55 10.0 +15
WRMHI LR LR
comp=Z,7μm,20.0s
UWE Uwekahuna 76.80 74 PFAKE 05 55 10.0 +15
UWE LR LR
comp=Z,7μm,19.0s
OBL Observatory Le 76.81 74 PFAKE 05 55 10.0 +15
OBL LR LR
comp=Z,8μm,20.0s
SDHHI Sand Hill 76.81 74 PFAKE 05 55 10.0 +15
SDHHI LR LR
comp=Z,7μm,19.0s
UWB Uwekahuna B 76.81 74 PFAKE 05 55 10.0 +15
UWB LR LR
comp=Z,8μm,19.0s
NPH North Pit 76.81 74 PFAKE 05 55 10.0 +15
NPH LR LR
comp=Z,7μm,20.0s
MLR Muntele Rosu 76.81 314 P **P 05 54 55.7 +0.8**
comp=Z,55nm,1.0s,baz=34,slow=2.7,SNR=45
MLR Muntele Rosu 76.81 314 eP **P 05 54 55.2 +0.3**
comp=Z,278nm,1.3s
MLR LR LR
comp=Z,18μm,20.0s
MLR Muntele Rosu 76.81 314⇑iP **P 05 54 56.5 +1.6**
MLR Muntele Rosu 76.81 314 eP **P 05 54 55.2 +0.3**
MLR pmax pmax
comp=Z,278nm,1.3s
MLR MLR MLR
comp=Z,18μm,20.0s
RIM Rim 76.82 74 PFAKE 05 55 10.0 +15
RIM LR LR
comp=Z,7μm,19.0s
HATHI Halema'uma'u T 76.82 74 PFAKE 05 55 10.0 +15
HATHI LR LR
comp=Z,8μm,21.0s
HLP Hilina Pali 76.83 75 PFAKE 05 55 10.0 +15
HLP LR LR
comp=Z,8μm,19.0s
BYL Byron's Ledge 76.83 74 PFAKE 05 55 10.0 +15
BYL LR LR
comp=Z,7μm,20.0s
KKO Keanakako`i 76.83 74 PFAKE 05 55 10.0 +15
KKO LR LR
comp=Z,7μm,18.0s
PUH Pauahi 76.88 74 PFAKE 05 55 10.0 +14
PUH LR LR
comp=Z,7μm,19.0s
SECR 76.89 314⇓iP **P 05 54 58.0 +2.8**
SULR 76.89 313⇑iP **P 05 54 57.6 +2.5**
STCH Steam Cracks 76.96 74 PFAKE 05 55 10.0 +14
STCH LR LR
comp=Z,8μm,22.0s
KCTX Karacabey (Bur 76.96 308 eP **P 05 54 56.6 +0.9**
NPOC North of Pu'u 76.97 74 PFAKE 05 55 10.0 +14
NPOC LR LR
comp=Z,7μm,19.0s
BESE Bessie Mountai 76.97 31 eP **P 05 54 55.5 +0.1**
comp=Z,198nm,1.2s
BESE LR LR
comp=Z,6μm,19.0s
OUZ Omahuta 76.97 138 eP **P 05 54 55.8 +0.2**
comp=Z,174nm,1.5s
OUZ LR LR
comp=Z,15μm,21.0s
JCUZ Jacuzzi 76.98 74 PFAKE 05 55 10.0 +14
JCUZ LR LR
comp=Z,2μm,22.0s
ELL Elmali 77.02 305 eP **P 05 54 55.8 -0.4**
PHSR Pinarhisar 77.08 310 eP **P 05 54 57.7 +1.4**
SGRR Singureni 77.24 313⇓iP **P 05 54 59.0 +1.9**
ARCR ARCALIA 77.28 316⇑iP **P 05 54 59.9 +2.6**
EDC Edincik 77.29 309 eP **P 05 54 58.5 +1.0**
JIS Juneau Island 77.32 32 eP **P 05 54 57.7 +0.4**
comp=Z,150nm,1.0s
JIS LR LR
comp=Z,9μm,20.0s
KWP Kalwaria Pacla 77.36 319 eP **P 05 54 58.9 +1.1**
KWP eS **S 06 04 48.0 +0.6**
KWP LMZ LR 06 31 29.6
comp=Z,20μm,19.0s
KWP Kalwaria Pacla 77.36 319 PFAKE 05 55 10.0 +12
KWP LR LR
comp=Z,178μm,20.0s
KWP Kalwaria Pacla 77.36 319 eP **P 05 54 58.9 +1.1**
KWP eS **S 06 04 48.0 +0.6**
KWP MLR MLR
comp=Z,20μm,19.0s
SIT Sitka 77.37 33 eP **P 05 54 57.8 +0.2**
comp=Z,209nm,1.0s
SIT Sitka 77.37 33 eP **P 05 54 57.8 +0.2**
SIT pmax pmax
comp=Z,209nm,1.0s
VOIR 77.42 314⇓iP **P 05 54 59.4 +1.2**
MANT Manisa 77.43 307 eP **P 05 54 59.3 +0.7**
comp=Z,589nm,1.4s
MANT LR LR
comp=Z,27μm,20.0s
AKAS Kas 77.43 304 eP **P 05 54 56.9 -1.6**
JMB Yambol 77.44 311 iP **P 05 54 59.3 +1.0**
MTUR Matau 77.49 314⇑iP **P 05 55 01.0 +2.4**
BALB Balikesir 77.52 308 eP **P 05 54 58.6 -0.2**
BALB Balikesir 77.52 308 eP **P 05 54 59.5 +0.7**
comp=Z,2μm,1.6s
EDRB Edirne 77.55 310 eP **P 05 54 59.8 +0.9**
EDRB Edirne 77.55 310 P **P 05 54 57.4 -1.5**
BMR Baia Mare 77.60 317⇑iP **P 05 55 01.4 +2.3**
SZH Strazhica 77.61 312 iP **P 05 54 59.8 +0.6**
BEL Belsk 77.66 321 eP **P 05 55 00.2 +0.9**
BEL eS **S 06 04 51.1 +0.7**
BEL LMZ LR 06 31 58.9
comp=Z,29μm,17.6s
BEL Belsk 77.66 321 eP **P 05 55 00.2 +0.9**
BEL eS **S 06 04 51.1 +0.7**
BEL MLR MLR
comp=Z,29μm,17.6s
RKY Sarkoy-Tekirda 77.66 309 eP **P 05 55 00.2 +0.6**
FETY Fethiye 77.68 305 eP **P 05 54 58.8 -1.0**
FETY Fethiye 77.68 305 P **P 05 55 00.0 +0.2**
RER Riviere de l'E 77.71 240 PFAKE 05 55 10.0 +10
RER LR LR
comp=Z,8μm,20.0s
TBLU Trondheim 77.81 334 eP **P 05 54 60.0 0.0**
TBLU IVmB_BB 05 55 08.3
comp=Z,4μm,2.7s
TBLU eS **S 06 04 52.0 +0.3**
TBLU IVMs_BB IVMs_BB 06 32 40.4
comp=Z,24μm,15.2s
HFS Hagfors 77.82 331 P **P 05 55 00.6 +0.6**
comp=Z,84nm,0.8s,baz=76,slow=6.3,SNR=79
KOLS Kolonicke sedl 77.89 318 eP **P 05 55 01.7 +1.0**
KOLS pmax pmax
comp=Z,155nm,2.1s
KOLS Kolonicke sedl 77.89 318 eP **P 05 55 01.7 +1.0**
KOLS eS **S 06 04 51.5 -1.6**
KOLS eSS **SS 06 09 56.3 +3.1**
KOLS eL L 06 34 41.5
CJR Cluj-Napoca 77.89 316⇑iP **P 05 55 03.2 +2.4**
DALY Dalyan (Mula) 77.94 305 eP **P 05 55 00.2 -1.0**
TURN Turunc 77.96 305 eP **P 05 55 04.3 +3.0**
UZH Uzhgorod 77.99 318 eP **P 05 54 59.6 -1.6**
UZH e 05 55 01.6
UZH e 05 55 07.0
UZH i 05 55 13.5
UZH i 05 57 53.0
UZH iS **S 06 04 48.7 -5.4**
UZH eSS **SS 06 09 52.3 -2.4**
UZH MLR MLR
comp=Z,3μm,17.0s
TRPA Tarpa 78.03 317⇑iP **P 05 55 02.4 +1.0**
TRPA Tarpa 78.03 317 ⇑EP **P 05 55 01.0 -0.4**
TRPA EPP 05 57 57.0
TRPA ES **S 06 04 50.1 -4.5**
TRPA ESS 06 10 00.0
PVL Pavlikeni 78.03 312 iP **P 05 55 03.4 +1.8**
LPK Lapseki 78.06 309 eP **P 05 55 01.7 -0.1**
AYDB Zeytinkoy-Aydi 78.11 306 eP **P 05 55 01.9 -0.4**
ERIK Erikli-Kesan 78.13 309 eP **P 05 55 03.3 +1.1**
NC405 NORSAR Array S 78.23 332 eP **P 05 55 02.3 -0.1**
comp=Z,707nm,1.0s
LOT Lotru 78.25 315⇓iP P 05 54 56.1 -6.8
GELI Tayfur-Gelibol 78.26 309 eP **P 05 55 03.9 +1.0**
ANKE Ethiopia-Afar 78.30 275 iP **P 05 55 01.4 -2.6**
DIM Dimitrovgrad 78.32 311 iP **P 05 55 03.8 +0.6**
NC303 NORSAR Array S 78.33 332 eP **P 05 55 03.0 +0.1**
comp=Z,751nm,1.4s
NC303 NORSAR Array S 78.33 332 eP **P 05 55 03.3 +0.4**
VLAD Vladila 78.37 313⇑iP **P 05 55 05.7 +2.3**
ALN Alexandroupoli 78.38 310 eP **P 05 55 03.5 0.0**
ALN Alexandroupoli 78.38 310 eP **P 05 55 03.8 +0.3**
comp=Z,119nm,1.4s
ALN LR LR
comp=Z,7μm,20.0s
ALN Alexandroupoli 78.38 310 P **P 05 55 02.1 -1.4**
ALN Alexandroupoli 78.38 310 eP **P 05 55 03.8 +0.3**
ALN pmax pmax
comp=Z,119nm,1.4s
ALN MLR MLR
comp=Z,7μm,20.0s
DRGR 78.43 316⇑iP **P 05 55 04.7 +0.9**
DRGR 78.43 316 P **P 05 55 04.7 +0.9**
NB201 NORSAR Array S 78.44 332 eP **P 05 55 03.5 -0.1**

comp=Z,483nm,1.1s
NB2 NORSAR Subarra 78.48 332 P **P** **05 55 04.0 +0.2**
comp=Z,199nm,1.0s,baz=59,slow=5.9
NB2 NORSAR Subarra 78.48 332 P **P** **05 55 04.0 +0.2**
baz=59,slow=5.9
NB200 NORSAR Array S 78.48 332 *e*P **P** **05 55 03.4 -0.3**
NOA NORSAR Array B 78.48 332 P **P** **05 55 03.4 -0.3**
comp=Z,99nm,0.9s,baz=59,slow=5.6,SNR=201
NOA LR LR 06 33 42.2
comp=Z,45μm,18.9s,baz=65,slow=39
NC602 NORSAR Array S 78.48 332 *e*P **P** **05 55 03.3 -0.5**
comp=Z,353nm,1.3s
KDZ Kurdzhali 78.55 310 *e*P P 05 55 09.7 +5.2
KDZ Kurdzhali 78.55 310 *i* P P 05 55 09.4 +4.9
ARG Arkhangelos 78.55 305 P **P** **05 55 02.3 -2.3**
NC204 NORSAR Array S 78.56 332 *e*P **P** **05 55 04.2 0.0**
comp=Z,431nm,1.3s
EZN Ezine 78.57 308 *e*P **P** **05 55 07.8 +3.2**
EZN Ezine 78.57 308 P **P** **05 55 04.3 -0.3**
EZN Ezine 78.57 308⇑*i*P **P** **05 55 06.1 +1.5**
BLCB Balcova 78.58 307 *e*P **P** **05 55 05.5 +0.8**
RDO Rodhopi 78.65 310 *e*P **P** **05 55 05.4 +0.4**
RDO Rodhopi 78.65 310 P **P** **05 55 04.6 -0.4**
DEV Deva 78.65 315⇑*i*P **P** **05 55 07.1 +2.1**
NBO00 NORSAR Array S 78.67 332 *e*P **P** **05 55 04.5 -0.3**
comp=Z,569nm,1.5s
GCAM G?zelcaml? 78.69 306 *e*P **P** **05 55 05.5 +0.2**
LTVH Ltavrtes, Hu 78.71 317 EP **P** **05 55 05.0 -0.2**
LTVH EPP 05 58 02.0
LTVH ES **S** **06 05 10.0 +8.1**
LTVH ESS 06 10 13.0
NAO01 NORSAR Array S 78.72 332 *e*P **P** **05 55 04.5 -0.5**
comp=Z,566nm,1.5s
BOZC Bozcaada 78.76 309 *e*P **P** **05 55 06.4 +0.7**
DAT Datca 78.78 305 *e*P **P** **05 55 09.6 +3.6**
PRK Paraskevi 78.82 308 P **P** **05 55 06.8 +0.8**
BODT Bodrum 78.86 306 *e*P **P** **05 55 06.5 +0.1**
BODT Bodrum 78.86 306 P **P** **05 55 06.4 +0.1**
OJC Ojcow 78.87 320 *e*P **P** **05 55 06.8 +0.7**
OJC *e*S **S** **06 05 02.7 -0.8**
OJC LMZ LR 06 30 26.6
comp=Z,17μm,21.5s
OJC Ojcow 78.87 320 *e*P **P** **05 55 06.9 +0.8**
comp=Z,440nm,1.4s
OJC Ojcow 78.87 320 *e*P **P** **05 55 06.8 +0.7**
OJC *e*S **S** **06 05 02.7 -0.8**
OJC MLR MLR
comp=Z,17μm,21.5s
PLD Plovdiv 78.88 311 *e*P **P** **05 55 06.8 +0.6**
DOMB Dombas 78.89 334 *e*P **P** **05 55 06.8 +0.8**
DOMB *e*S **S** **06 05 04.5 +1.1**
DOMB *e*SS **SS** **06 10 10.5 +2.9**
DOMB IVMs_BB IVMs_BB 06 33 17.5
comp=Z,36μm,14.6s
NIE Niedzica 78.89 319 *e*P **P** **05 55 07.7 +1.4**
NIE *e*S **S** **06 05 05.8 +1.9**
NIE LMZ LR 06 35 45.7
comp=Z,15μm,16.7s
NIE Niedzica 78.89 319 *e*P **P** **05 55 07.7 +1.4**
NIE *e*S **S** **06 05 05.8 +1.9**
SMTH Samothraki Isl 78.90 309 P **P** **05 55 05.9 -0.6**
URLA Izmir 78.91 307 *e*P **P** **05 55 06.1 -0.5**
GZR Gura Zlata 78.92 315⇓*i*P **P** **05 55 07.8 +1.3**
SMG Samos 78.97 306 P **P** **05 55 05.1 -1.8**
RZN Rozhen 79.02 311 *i* P **P** **05 55 08.0 +0.7**
RES Resolute Bay 79.03 9 *e*P **P** **05 55 05.7 -0.7**
comp=Z,116nm,1.4s
RES LR LR
comp=Z,17μm,22.0s
RES Resolute Bay 79.03 9 *e*P **P** **05 55 05.7 -0.7**
RES pmax pmax
comp=Z,116nm,1.4s
RES MLR MLR
comp=Z,17μm,22.0s
GKP Gorka Klasztor 79.06 324 *e*P **P** **05 55 07.1 +0.1**
GKP *e*S **S** **06 05 06.8 +1.5**
GKP LMZ LR 06 33 11.9
comp=Z,37μm,19.0s
GKP Gorka Klasztor 79.06 324 *e*P **P** **05 55 07.1 +0.1**
GKP *e*S **S** **06 05 06.8 +1.5**
GKP MLR MLR
comp=Z,37μm,19.0s
MPEP Malo Peshtene 79.06 313 P **P** **05 55 08.4 +1.1**
WRAK Wrangell Islan 79.12 33 *e*P **P** **05 55 07.5 +0.2**
comp=Z,112nm,0.9s
WRAK LR LR
comp=Z,7μm,19.0s
SIGR SIGRI 79.14 308 *e*P **P** **05 55 08.5 +0.8**
SIGR SIGRI 79.14 308 P **P** **05 55 07.0 -0.7**
JMIC Jan Mayen 79.14 345 P **P** **05 55 09.1 +2.0**
comp=Z,100nm,0.8s,baz=336,slow=6.1,SNR=9.0
JMIC Jan Mayen 79.14 345 *e*P **P** **05 55 09.8 +2.7**
JMIC IVmB_BB 05 55 17.3
comp=Z,5μm,1.3s
JMIC IVMs_BB IVMs_BB 06 33 53.9
comp=Z,6μm,14.6s
KECS Kecovo 79.16 318 *e*P **P** **05 55 09.2 +1.5**
KECS pmax pmax
comp=Z,667nm,1.5s
KECS Kecovo 79.16 318 *e*P **P** **05 55 09.2 +1.5**
CRAG Craig 79.16 34 *e*P **P** **05 55 07.7 +0.2**
MOL Molde 79.23 334 *e*P **P** **05 55 09.3 +1.5**
MOL IVmBBB 05 55 17.1
comp=Z,4μm,1.8s
MOL *e*S **S** **06 05 08.0 +1.2**
MOL IVMs_BB IVMs_BB 06 33 29.8
comp=Z,23μm,13.1s
OSL Oslo 79.23 331 *e*P **P** **05 55 09.0 +1.2**
OSL IVmB_BB 05 55 16.9
comp=Z,3μm,1.9s
OSL *e*S **S** **06 05 09.0 +2.1**
OSL IVMs_BB IVMs_BB 06 33 28.1
comp=Z,38μm,14.5s
PUNG Punghina 79.25 314⇑*i*P **P** **05 55 10.3 +2.1**
CHOS Chios island 79.30 307 *e*P **P** **05 55 10.7 +2.0**
CHOS Chios island 79.30 307 P **P** **05 55 10.8 +2.0**
SIRR Siria 79.30 316⇓*i*P **P** **05 55 10.0 +1.5**
DLBC Dease Lake 79.31 30 P **P** **05 55 09.0 +0.6**
comp=Z,21nm,0.7s,baz=300,slow=5.7,SNR=39
DLBC Dease Lake 79.31 30 *e*P **P** **05 55 08.8 +0.4**
comp=Z,140nm,1.1s
DLBC LR LR
comp=Z,10μm,21.0s
LIA Limnos Island 79.36 309 P **P** **05 55 10.8 +1.8**
AAE Adis Abeba 79.40 275 *e*P **P** **05 55 13.7 +3.7**
AAE *e*S PP 05 58 20.0 +10
KAVA Kavala 79.42 310 P **P** **05 55 09.2 -0.1**
THAS Thassos island 79.43 310 P **P** **05 55 08.6 -0.7**
BSD Bornholm Skovb 79.48 326⇑*i*P **P** **05 55 09.3 0.0**
BSD pmax pmax
comp=Z,630nm,1.3s
BSD MLR MLR
comp=Z,37μm,14.0s
BSD Bornholm Skovb 79.48 326⇑*i*P **P** **05 55 09.3 0.0**
comp=Z,626nm,1.3s
comp=Z,37μm,14.0s
LANS Liptovska Anna 79.50 319 *e*P **P** **05 55 11.5 +1.9**
LANS Liptovska Anna 79.50 319 *e*P **P** **05 55 11.5 +1.9**
KARP Karpathos 79.53 304 *e*P **P** **05 55 10.8 +0.8**
KARP Karpathos 79.53 304 *e*P **P** **05 55 09.3 -0.7**
comp=Z,397nm,1.2s
KARP Karpathos 79.53 304 P **P** **05 55 08.6 -1.4**
FURI Furi 79.53 275 PFAKE 05 55 20.0 +9.3
FURI LR LR
comp=Z,8μm,19.0s
AKN Aaknes 79.65 334 *e*P **P** **05 55 11.3 +1.2**
AKN IVmB_BB 05 55 18.6
comp=Z,4μm,2.3s
AKN *e*S **S** **06 05 13.2 +1.7**
AKN IVMs_BB IVMs_BB 06 33 48.1
comp=Z,28μm,13.2s
TULEG Thule 79.67 2 *e*P **P** **05 55 09.4 -0.5**
comp=Z,62nm,1.2s
TULEG LR LR
comp=Z,14μm,20.0s
VTS Vitosha 79.69 312 *e*P **P** **05 55 12.0 +1.1**
comp=Z,292nm,1.1s
VTS LR LR
comp=Z,13μm,19.0s
VTS Vitosha 79.69 312 P **P** **05 55 10.8 -0.1**
VTS Vitosha 79.69 312⇑*i*P **P** **05 55 12.1 +1.2**
VTS Vitosha 79.69 312 *i* P **P** **05 55 11.9 +1.1**
NVR Nevrokopi 79.74 311 P **P** **05 55 09.6 -1.5**
MMB Musomiste 79.74 311 *i* P **P** **05 55 11.0 -0.1**

PSZ Piszkesteto 79.75 318 *e*P **P** **05 55 11.6 +0.6**
comp=Z,235nm,1.4s
PSZ LR LR
comp=Z,19μm,18.0s
PSZ Piszkesteto 79.75 318⇓*i*P **P** **05 55 12.4 +1.4**
PSZ Piszkesteto 79.75 318⇑EP **P** **05 55 11.0 0.0**
PSZ EPP 05 58 10.1
PSZ ES **S** **06 05 17.1 +4.0**
PSZ ESS 06 10 21.0
MDVR Moldovita 79.85 314⇓*i*P **P** **05 55 12.6 +1.0**
KONO Kongsberg 79.86 331 *e*P **P** **05 55 11.4 +0.1**
comp=Z,94nm,1.0s
KONO LR LR
comp=Z,78μm,18.0s
KONO Kongsberg 79.86 331 *e*P **P** **05 55 11.4 +0.1**
KONO pmax pmax
comp=Z,94nm,1.0s
KONO MLR MLR
comp=Z,78μm,18.0s
KONO Kongsberg 79.86 331 *e*P **P** **05 55 11.6 +0.3**
KONO IVmB_BB 05 55 20.2
comp=Z,4μm,6.8s
KONO *e*S **S** **06 05 15.3 +1.6**
KONO IVMs_BB IVMs_BB 06 33 48.5
comp=Z,45μm,14.4s
RAC Raciborz 79.86 320 *e*P **P** **05 55 12.8 +1.3**
RAC *e*S **S** **06 05 14.4 +0.3**
RAC MLR MLR
comp=Z,15μm,21.4s
HIZ Hauiti 79.91 140 *e*P **P** **05 55 11.6 -0.1**
comp=Z,416nm,1.2s
HIZ LR LR
comp=Z,11μm,22.0s
OKC Ostrava-Krasne 80.00 320 *e*P **P** **05 55 13.6 +1.4**
OKC *e* 05 55 20.1
OKC *e*S **S** **06 05 11.4 -4.1**
OKC MLR MLR
comp=Z,18μm,13.6s
OKC Ostrava-Krasne 80.00 320 *e*P **P** **05 55 13.6 +1.4**
OKC *e*x x 05 55 20.1
OKC *e*S **S** **06 05 11.4 -4.1**
OKC AMS AMS 06 33 10.0
comp=Z,18μm,13.6s
AMGA Amorgos Island 80.00 306 P **P** **05 55 16.3 +3.8**
SRS Serrai 80.02 310 P **P** **05 55 10.8 -1.8**
OUR Ouranopolis 80.05 310 *e*P **P** **05 55 12.7 0.0**
OUR Ouranopolis 80.05 310 P **P** **05 55 12.2 -0.5**
KKB Krupnik 80.08 311 *i* P **P** **05 55 13.3 +0.4**
VYHS Vyhne 80.15 319 *e*P **P** **05 55 14.1 +1.0**
VYHS pmax pmax
comp=Z,228nm,1.5s
VYHS Vyhne 80.15 319 *e*P **P** **05 55 14.1 +1.0**
VYHS Vyhne 80.15 319 *e*S **S** **06 05 18.3 +1.1**
VYHS *e*SS SS 06 10 39.4 +12
VYHS *e*L L 06 31 19.1
APE Apeiranthos 80.18 306 *e*P **P** **05 55 13.9 +0.4**
APE Apeiranthos 80.18 306 P **P** **05 55 16.6 +3.1**
SKY Skiros Island 80.20 308 P **P** **05 55 16.7 +3.1**
SOH Sokhos 80.30 310 P **P** **05 55 13.5 -0.6**
MORC Moravsky Berou 80.38 320 *e*P **P** **05 55 15.1 +0.8**
comp=Z,218nm,1.4s
MORC LR LR
comp=Z,16μm,18.0s
MORC Moravsky Berou 80.38 320⇓*i*P **P** **05 55 15.6 +1.3**
MORC Moravsky Berou 80.38 320 *e*P **P** **05 55 15.1 +0.8**
MORC pmax pmax
comp=Z,219nm,1.4s
MORC MLR MLR
comp=Z,16μm,18.0s
MORC Moravsky Berou 80.38 320⇑*i*P **P** **05 55 14.9 +0.6**
MORC Moravsky Berou 80.38 320 *e*S **S** **06 05 17.5 -2.1**
ZKR Zakros 80.40 304 P P 05 55 20.1 +5.4
PLG Polygyros 80.41 310 P **P** **05 55 14.1 -0.6**
PAIG Paliouri 80.42 309 P **P** **05 55 14.1 -0.6**
COP Copenhagen 80.47 327 *e*P **P** **05 55 15.5 +0.9**
COP pmax pmax
comp=Z,240nm,1.3s
COP MLR MLR
comp=Z,36μm,15.0s
COP Copenhagen 80.47 327 *i* P **P** **05 55 15.5 +0.9**
comp=Z,235nm,1.3s
comp=Z,36μm,15.0s
KNT Kendrikon 80.49 311 *e*P **P** **05 55 15.3 +0.2**
KNT Kendrikon 80.49 311 P **P** **05 55 14.7 -0.4**
IOSP Ios island 80.49 306 P **P** **05 55 19.2 +4.1**
DIB Dawson Inlet, 80.51 36 *e*P **P** **05 55 15.2 +0.3**
comp=Z,124nm,1.0s
DIB LR LR
comp=Z,6μm,20.0s
HYA Hoyanger 80.52 334 *e*P **P** **05 55 16.0 +1.2**
HYA *e*S **S** **06 05 22.5 +2.1**
HYA IVMs_BB IVMs_BB 06 34 25.6
comp=Z,17μm,13.6s
RGN Rugen 80.56 326 PFAKE 05 55 30.0 +15
RGN LR LR
comp=Z,38μm,19.0s
RGN Rugen 80.56 326 *e*P **P** **05 55 15.7 +0.6**
RGN IAmb IAmb 05 55 18.6
comp=Z,296nm,1.3s
HORT Hortiatis 80.57 310 *e*P **P** **05 55 14.7 -0.9**
HORT Hortiatis 80.57 310 P **P** **05 55 14.4 -1.2**
FOZ Fox Glacier 80.60 146 PFAKE 05 55 30.0 +15
FOZ LR LR
comp=Z,9μm,20.0s
KSP Ksiaz 80.63 322 *e*P **P** **05 55 16.7 +1.1**
KSP *e*S **S** **06 05 23.4 +1.3**
KSP LMZ LR 06 34 27.2
comp=Z,13μm,25.7s
KSP Ksiaz 80.63 322 *e*P **P** **05 55 16.7 +1.1**
KSP *e*S **S** **06 05 23.4 +1.3**
KSP MLR MLR
comp=Z,13μm,25.7s
VAY Valandovo 80.65 311 *i* P **P** **05 55 16.1 +0.2**
KRLC Kraliky 80.69 321 *e*P **P** **05 55 16.7 +0.7**
KRLC *e* 05 55 22.6
KRLC *e*S **S** **06 05 21.9 -1.0**
KRLC Kraliky 80.69 321 *e*P **P** **05 55 16.7 +0.7**
KRLC *e*pP **PcP** **05 55 22.6 -0.2**
KRLC *e*S **S** **06 05 21.9 -1.0**
JAVC Velka Javorina 80.70 319⇑*i*P **P** **05 55 18.0 +1.9**
JAVC Velka Javorina 80.70 319 *e*S **S** **06 05 25.2 +2.2**
DCZ Deep Cove 80.71 149 *e*P **P** **05 55 16.1 +0.3**
comp=Z,118nm,1.2s
DCZ LR LR
comp=Z,6μm,20.0s
SRO2 Moca 80.73 318 *e*P **P** **05 55 16.8 +0.6**
SRO Srobarova 80.76 318 *e*P **P** **05 55 17.8 +1.5**
SRO Srobarova 80.76 318 *e*P **P** **05 55 17.8 +1.5**
NPS Neapolis 80.81 304 P **P** **05 55 16.4 -0.5**
OSTC Ostas 80.81 321 *e*P **P** **05 55 17.7 +1.1**
OSTC *e*S **S** **06 05 20.5 -3.5**
OSTC AMS AMS 06 35 40.0
comp=Z,20μm,15.1s
EREA Eretria 80.83 308 P **P** **05 55 21.1 +4.1**
DPC Dobruska-Polom 80.83 321 *e*P **P** **05 55 17.6 +0.8**
DPC *e* 05 55 24.9
DPC *e*S **S** **06 05 18.9 -5.5**
DPC MLR MLR
comp=Z,20μm,14.6s
DPC Dobruska-Polom 80.83 321 *e*P **P** **05 55 17.6 +0.8**
DPC *e*pP **sP** **05 55 24.9 -0.1**
DPC *e*S **S** **06 05 18.9 -5.5**
DPC AMS AMS 06 34 00.0
comp=Z,20μm,14.6s
CHVC Chvalec 80.88 321 *e*P **P** **05 55 17.9 +0.9**
CHVC *e*S **S** **06 05 27.7 +2.9**
CHVC AMS AMS 06 34 50.0
comp=Z,20μm,12.9s
GRG Griva 80.91 311 *e*P **P** **05 55 17.1 -0.3**
GRG Griva 80.91 311 P **P** **05 55 16.8 -0.6**
SERI Serifos 80.91 307 P **P** **05 55 20.5 +3.1**
FRGS Fruska Gora 80.94 315⇑*i*P **P** **05 55 17.7 +0.3**
UPC Upice 80.94 321 *e*P **P** **05 55 18.7 +1.4**
UPC *e* 05 55 22.9
UPC *e*S **S** **06 05 23.6 -1.8**
UPC MLR MLR
comp=Z,23μm,14.5s
UPC Upice 80.94 321 *e*P **P** **05 55 18.7 +1.4**
UPC *e*pP **pP** **05 55 22.9 -0.5**
UPC *e*S **S** **06 05 23.6 -1.8**
UPC AMS AMS 06 35 40.0
comp=Z,23μm,14.5s
LAST Lasithi 80.94 304 P **P** **05 55 19.3 +1.6**

DION Dionisos Attik 80.96 308 P **P** **05 55 20.1 +2.4**
MRKA Markates 80.96 308 P **P** **05 55 16.7 -1.0**
CSKK Cskako 80.98 318 EP **P** **05 55 17.1 -0.5**
CSKK EPP 05 58 19.1
CSKK ES **S** **06 05 30.1 +4.2**
CSKK EP 06 23 32.1
XOR Xorichti 80.99 309 P **P** **05 55 15.6 -2.2**
NEO Neokhori 80.99 309 P **P** **05 55 17.3 -0.5**
THZ Tophouse 80.99 143 *e*P **P** **05 55 16.2 -1.4**
comp=Z,104nm,1.2s
THZ LR LR
comp=Z,6μm,20.0s
HOMB Homborsund 81.06 330 *e*P **P** **05 55 17.6 -0.1**
HOMB IVMs_BB IVMs_BB 06 35 01.4
comp=Z,22μm,13.2s
MLZ Mavora Lakes 81.09 149 PFAKE 05 55 30.0 +12
MLZ LR LR
comp=Z,6μm,20.0s
URZ Urewera 81.09 139 P **P** **05 55 16.2 -1.8**
comp=Z,44nm,0.7s,baz=326,slow=0.6,SNR=39
URZ Urewera 81.09 139 *e*P **P** **05 55 16.3 -1.8**
comp=Z,62nm,0.8s
URZ LR LR
comp=Z,11μm,22.0s
ATHU Athens Univers 81.11 307 P **P** **05 55 18.4 -0.1**
WKZ Wanaka 81.14 148 PFAKE 05 55 30.0 +12
WKZ LR LR
comp=Z,7μm,19.0s
VRAC Vranov 81.14 320 P **P** **05 55 19.3 +1.0**
comp=Z,70nm,0.9s,baz=70,slow=5.8,SNR=64
VRAC Vranov 81.14 320⇑*i*P **P** **05 55 19.4 +1.0**
VRAC Vranov 81.14 320⇑*i*P **P** **05 55 19.5 +1.1**
VRAC Vranov 81.14 320 *e*S **S** **06 05 28.4 +0.9**
MODS Modra-Piesok 81.14 319 *e*P **P** **05 55 18.9 +0.5**
MODS pmax pmax
comp=Z,282nm,1.7s
MODS Modra-Piesok 81.14 319 *e*P **P** **05 55 18.9 +0.5**
MODS Modra-Piesok 81.14 319 *e*S **S** **06 05 21.6 -6.0**
MODS *e*SS **SS** **06 10 45.9 +4.0**
MODS *e*L L 06 31 56.6
FYTO Fytoko, Volos 81.15 309 P **P** **05 55 17.6 -1.0**
VLY Voula,Athens 81.15 307 P **P** **05 55 16.7 -2.0**
ATH Athens Observa 81.16 308 P **P** **05 55 19.2 +0.5**
SKO Skopje 81.17 312 *i* P **P** **05 55 19.4 +0.7**
DIVS Divibare 81.26 314⇑*i*P **P** **05 55 19.3 +0.1**
RUE Ruedersdorf 81.28 324 *e*P **P** **05 55 19.7 +0.7**
RUE IAmb IAmb 05 55 23.3
comp=Z,175nm,1.1s
BER Bergen 81.30 333 *e*P **P** **05 55 20.6 +1.7**
BER *e*S **S** **06 05 30.5 +1.8**
BER IVMs_BB IVMs_BB 06 34 49.8
comp=Z,25μm,15.9s
ASK Askoy 81.30 333 *e*P **P** **05 55 20.5 +1.5**
ASK *e*S **S** **06 05 30.7 +2.1**
ASK IVMs_BB IVMs_BB 06 34 41.8
comp=Z,19μm,16.8s
BKZ Black Stump Fm 81.31 140 *e*P **P** **05 55 17.7 -1.6**
comp=Z,264nm,1.7s
BKZ LR LR
comp=Z,13μm,21.0s
ZST Bratislava 81.33 319 *e*P **P** **05 55 19.9 +0.5**
ZST *e*S **S** **06 05 29.5 +0.1**
ZST Bratislava 81.33 319 *e*P **P** **05 55 19.9 +0.5**
LTZ Lake Taylor 81.35 145 PFAKE 05 55 30.0 +11
LTZ LR LR
comp=Z,9μm,20.0s
BLS5 Blasjo 81.35 332 *e*P **P** **05 55 20.4 +1.1**
BLS5 IVmB_BB 05 55 28.7
comp=Z,3μm,2.0s
BLS5 *e*S **S** **06 05 30.3 +0.9**
BLS5 IVMs_BB IVMs_BB 06 34 52.6
comp=Z,57μm,14.1s
RPZ Rata Peaks 81.36 146 P **P** **05 55 18.0 -1.5**
comp=Z,89nm,0.9s,baz=358,slow=9.5,SNR=9.5
RPZ Rata Peaks 81.36 146 *e*P **P** **05 55 18.7 -0.7**
comp=Z,166nm,1.0s
RPZ LR LR
comp=Z,8μm,20.0s
KRUC Moravsky 81.36 320⇑*i*P **P** **05 55 20.3 +0.7**
KRUC Moravsky 81.36 320 *e*S **S** **06 05 29.4 -0.4**
TEKS Tekeris 81.37 315 *e*P **P** **05 55 20.7 +1.0**
ATAL Atalanti 81.38 308 P **P** **05 55 18.4 -1.4**
MXZ Matakaoa Point 81.39 137 *e*P **P** **05 55 18.3 -1.4**
comp=Z,125nm,0.8s
MXZ LR LR
comp=Z,13μm,21.0s
LBZ Lake Benmore 81.40 147 *e*P **P** **05 55 18.8 -0.8**
comp=Z,175nm,1.5s
LBZ LR LR
comp=Z,6μm,21.0s
XMAS Kiritimati 81.40 92 PFAKE 05 55 30.0 +10
XMAS LR LR
comp=Z,8μm,19.0s
WHZ Wether Hill Ro 81.40 149 *e*P **P** **05 55 18.8 -0.8**
comp=Z,105nm,1.2s
WHZ LR LR
comp=Z,6μm,21.0s
TIH Tihany 81.41 318⇑EP **P** **05 55 20.1 +0.2**
TIH EPP 05 58 24.1
TIH ES **S** **06 05 34.0 +3.7**
LKR Lokris 81.41 308 P **P** **05 55 20.4 +0.4**
OXZ Oxford 81.60 145 PFAKE 05 55 30.0 +9.3
OXZ LR LR
comp=Z,10μm,20.0s
AXAR Agios Charalam 81.61 309 P **P** **05 55 22.5 +1.4**
KZN Kozani 81.61 310 P **P** **05 55 19.8 -1.4**
SNZO South Karori 81.68 142 PFAKE 05 55 30.0 +8.9
SNZO LR LR
comp=Z,11μm,21.0s
MUD Monsted U'grnd 81.68 329 *i* P **P** **05 55 21.8 +0.8**
MUD MLR MLR
comp=Z,58μm,15.0s
MUD Monsted U'grnd 81.68 329 *i* P **P** **05 55 21.8 +0.8**
comp=Z,58μm,15.0s
LOUT Loutraki 81.69 308 P **P** **05 55 24.4 +2.9**
DID Didima 81.69 307 P P 05 55 26.5 +4.9
FNA Florina 81.69 311 *e*P **P** **05 55 20.4 -1.2**
FNA Florina 81.69 311 *e*P **P** **05 55 20.9 -0.7**
comp=Z,141nm,1.2s
FNA LR LR
comp=Z,10μm,21.0s
FNA Florina 81.69 311 P **P** **05 55 19.8 -1.8**
AGG Agios Georgios 81.74 309 *e*P **P** **05 55 20.5 -1.3**
comp=Z,189nm,1.3s
AGG LR LR
comp=Z,8μm,20.0s
AGG Agios Georgios 81.74 309 P **P** **05 55 20.4 -1.3**
AGG Agios Georgios 81.74 309 *e*P **P** **05 55 20.5 -1.3**
AGG pmax pmax
comp=Z,189nm,1.3s
AGG MLR MLR
comp=Z,8μm,20.0s
THL Klokotos Trika 81.74 310 P **P** **05 55 21.5 -0.2**
PVCC Panska Ves 81.75 322 *e*P **P** **05 55 22.8 +1.2**
PVCC *e* 05 55 29.7
PVCC MLR MLR
comp=Z,24μm,15.0s
PVCC Panska Ves 81.75 322 *e*P **P** **05 55 22.8 +1.2**
PVCC *e*pP **sP** **05 55 29.7 -0.1**
PVCC AMS AMS 06 36 20.0
comp=Z,24μm,15.0s
KHZ Kahutara 81.78 144 *e*P **P** **05 55 20.4 -1.2**
comp=Z,107nm,1.0s
KHZ LR LR
comp=Z,10μm,19.0s
TREC Trest 81.79 320 *e*P **P** **05 55 23.1 +1.2**
TREC *e* 05 55 28.7
TREC *e*S **S** **06 05 33.8 -0.5**
TREC MLR MLR
comp=Z,22μm,14.1s
TREC Trest 81.79 320 *e*P **P** **05 55 23.1 +1.2**
TREC *e*pP **pP** **05 55 28.7 +0.8**
TREC *e*S **S** **06 05 33.8 -0.5**
TREC AMS AMS 06 35 10.0
comp=Z,22μm,14.1s
KRND KRANIDI 81.81 307 P **P** **05 55 24.3 +2.2**
KULLO Kullorsuaq 81.82 360⇑*i*P **P** **05 55 20.8 -0.7**
KULLO MLR MLR
comp=Z,14μm,16.0s
KULLO Kullorsuaq 81.82 360⇑*i*P **P** **05 55 20.8 -0.7**
comp=Z,14μm,16.0s
IVA Berane 81.84 313⇑*i*P **P** **05 55 22.5 +0.2**
DSF Desfina 81.84 308 P **P** **05 55 21.5 -0.9**
SOP Sopron 81.88 319 EP **P** **05 55 22.0 -0.3**

SOP EPP **PP** **05 58 25.0 -4.3**
SOP ES **S** **06 05 41.0 +5.8**
SOP ESS **SS** **06 10 56.1 +3.3**
PVY Plav 81.91 313⇑ *i*P **P** **05 55 23.2 +0.5**
GOPC GO Pecny, Ondr 81.91 321 *e*P **P** **05 55 23.5 +1.0**
GOPC *e* 05 55 29.2
GOPC *e*S **S** **06 05 37.1 +1.6**
GOPC MLR MLR
comp=Z,27μm,16.9s
GOPC GO Pecny, Ondr 81.91 321 *e*P **P** **05 55 23.5 +1.0**
GOPC *e*pP **pP** **05 55 29.2 +0.6**
GOPC *e*S **S** **06 05 37.1 +1.6**
GOPC AMS AMS 06 34 40.0
comp=Z,27μm,16.9s
HAPS Han Pijesak,BI 81.94 315 *e*P **P** **05 55 23.1 +0.2**
BRG Berggiesshubel 81.95 322 *i* P **P** **05 55 23.2 +0.6**
comp=Z,328nm,1.6s
BRG PP **PP** **05 58 36.0 +6.3**
BRG S **S** **06 05 40.0 +4.2**
BRG SS **SS** **06 10 55.0 +1.3**
comp=N,25μm,14.8s
comp=E,33μm,16.6s
comp=Z,44μm,15.6s
BRG Berggiesshubel 81.95 322 *i* P **P** **05 55 23.2 +0.6**
BRG 05 58 36.0
BRG S **S** **06 05 40.0 +4.2**
BRG SS **SS** **06 10 55.0 +1.3**
BRG pmax pmax
comp=Z,328nm,1.6s
BRG MLR MLR
comp=N,25μm,14.8s
BRG MLR MLR
comp=E,33μm,16.6s
BRG MLR MLR
comp=Z,44μm,15.6s
IMMV Iera Moni Meta 81.96 305 *e*P **P** **05 55 25.9 +2.9**
IMMV Iera Moni Meta 81.96 305 P **P** **05 55 25.3 +2.3**
OHR Ohrid 81.96 311 *i* P **P** **05 55 24.0 +1.1**
PHP Peshkopia 81.96 312 P **P** **05 55 22.8 -0.2**
PLE Pljevlja 81.98 314⇑ *i*P **P** **05 55 24.0 +0.9**
PRU Pruhonice 82.02 321 *e*P **P** **05 55 23.8 +0.8**
PRU *e* 05 55 29.8
PRU *e*S **S** **06 05 35.5 -1.1**
PRU MLR MLR
comp=Z,20μm,17.2s
PRU Pruhonice 82.02 321 *e*P **P** **05 55 23.8 +0.8**
PRU *e*pP **pP** **05 55 29.8 +0.7**
PRU *e*S **S** **06 05 35.5 -1.1**
PRU AMS AMS 06 34 40.0
comp=Z,20μm,17.2s
KPRO Kipourio 82.04 310 P **P** **05 55 21.3 -2.1**
NEST Nestorio 82.07 311 P **P** **05 55 23.7 +0.1**
ODZ Otahua Downs 82.10 147 PFAKE 05 55 30.0 +6.8
ODZ LR LR
comp=Z,5μm,20.0s
KOME Kolasin 82.10 313⇑ *i*P **P** **05 55 24.4 +0.7**
PENT Pentalofos 82.10 310 P **P** **05 55 27.9 +4.1**
GVD Gavdhos 82.12 304 P **P** **05 55 26.3 +2.5**
KALE Kalithea 82.13 308 P **P** **05 55 22.3 -1.6**
BFZ Birch Farm 82.14 141 *e*P **P** **05 55 22.0 -1.6**
comp=Z,244nm,1.0s
BFZ LR LR
comp=Z,9μm,22.0s
EVR Evrytania 82.15 309 P **P** **05 55 21.4 -2.7**
GUR Goura 82.17 308 P **P** **05 55 24.2 0.0**
SERG Sergoula 82.18 308 P **P** **05 55 24.5 +0.4**
CONA Conrad Observa 82.19 319 *e*P **P** **05 55 25.0 +1.0**
comp=Z,226nm,1.5s,SNR=62
MQZ McQueen's Vall 82.19 145 PFAKE 05 55 30.0 +6.3
MQZ LR LR
comp=Z,8μm,20.0s
TRIZ Trizonia 82.19 308 P **P** **05 55 25.9 +1.8**
ANX Ano Chora 82.20 309 P **P** **05 55 22.8 -1.5**
CLL Collm 82.26 323 *e*P **P** **05 55 24.5 +0.2**
comp=Z,637nm,1.9s
CLL LR LR
comp=Z,28μm,19.0s
CLL Collm 82.26 323⇑ *i*P **P** **05 55 24.6 +0.4**
comp=Z,241nm,1.5s
CLL *i* sP **pP** **05 55 30.0 -0.3**
comp=Z,469nm,1.8s
CLL *e*PP **PP** **05 58 33.0 +0.7**
CLL *e*S **S** **06 05 40.0 +1.0**
CLL *e*PS **PnS** **06 06 28.0 -0.6**
CLL *e*SS **SS** **06 11 00.0 +1.7**
CLL *e*PKKPbc **PKKPbc** **06 13 49.0 -3.6**
comp=Z,17nm,1.6s
CLL *e*(SSS) 06 14 54.0
CLL *e*SSSS 06 17 06.0
CLL *e*PKPPKPdf P'P'df 06 21 51.0 -10
comp=Z,12nm,1.5s
CLL LmH 06 28 00.0
comp=N,24μm,21.4s
CLL LmH 06 28 00.0
comp=E,15μm,21.9s
CLL Lm MLR 06 36 00.0
comp=N,15μm,18.8s
CLL Lm MLR 06 36 00.0
comp=E,21μm,18.2s
CLL Lmax 06 37 00.0
CLL Collm 82.26 323⇑ *i*P **P** **05 55 24.6 +0.4**
CLL *i* 05 55 30.0
CLL *e*S **S** **06 05 40.0 +1.0**
CLL pmax pmax
comp=Z,241nm,1.5s
KLV Kalavryta, Ach 82.26 308 P **P** **05 55 24.6 0.0**
EFP Efpalio 82.28 309 P **P** **05 55 23.6 -1.0**
BEHE Becsehely 82.29 317⇑ *i*P **P** **05 55 25.3 +0.8**
BEHE Becsehely 82.29 317 ⇑EP **P** **05 55 25.0 +0.5**
BEHE EPP 05 58 35.1
BEHE ES **S** **06 05 40.0 +0.6**
BEHE ESS 06 10 57.1
ANKY Antikythira Is 82.30 306 P **P** **05 55 25.4 +0.6**
LAKA Lakka 82.31 308 P **P** **05 55 24.3 -0.5**
UPM Unac-Piva 82.35 314⇑ *i*P **P** **05 55 25.7 +0.6**
UPM Unac-Piva 82.35 314 *e*P **P** **05 55 26.3 +1.2**
KTHR Kythira 82.36 306 P **P** **05 55 21.9 -3.2**
SCO Scoresbysund 82.38 348 *e*P **P** **05 55 24.7 +0.2**
comp=Z,399nm,1.5s
SCO LR LR
comp=Z,9μm,18.0s
SCO Scoresbysund 82.38 348 *e*P **P** **05 55 24.7 +0.2**
SCO pmax pmax
comp=Z,399nm,1.5s
SCO MLR MLR
comp=Z,9μm,18.0s
SCO Scoresbysund 82.38 348 *i* P **P** **05 55 24.9 +0.4**
comp=Z,11μm,15.0s
PDG Podgorica 82.45 313⇑ *i*P **P** **05 55 26.7 +1.3**
PDG Podgorica 82.45 313⇑ *i*P **P** **05 55 25.5 +0.2**
TTG Podgorica 82.45 313⇑ *i*P **P** **05 55 25.9 +0.5**
TTG Podgorica 82.45 313 *e*P **P** **05 55 25.6 +0.2**
comp=Z,174nm,1.5s
TTG LR LR
comp=Z,10μm,21.0s
TTG Podgorica 82.45 313 *e*P **P** **05 55 25.6 +0.2**
TTG pmax pmax
comp=Z,174nm,1.5s
TTG MLR MLR
comp=Z,10μm,21.0s
NKY Niksic 82.46 313⇑ *i*P **P** **05 55 26.0 +0.4**
PVO Paravola 82.48 309 P **P** **05 55 27.4 +1.8**
TIR Tirane 82.50 312 *e*P **P** **05 55 25.6 -0.1**
comp=Z,413nm,1.3s
TIR LR LR
comp=Z,16μm,18.0s
TIR Tirane 82.50 312 P **P** **05 55 26.8 +1.1**
TIR Tirane 82.50 312⇑ *i*P **P** **05 55 27.1 +1.4**
TIR Tirane 82.50 312 *e*P **P** **05 55 25.6 -0.1**
TIR pmax pmax
comp=Z,413nm,1.3s
TIR MLR MLR
comp=Z,16μm,18.0s
NKME Niksic 82.51 313⇑ *i*P **P** **05 55 26.1 +0.3**
JAN Janina 82.52 310 P **P** **05 55 25.5 -0.4**
DRME Dracevica, Mon 82.60 313⇑ *i*P **P** **05 55 26.8 +0.6**
DRME Dracevica, Mon 82.60 313⇑ *i*P **P** **05 55 26.6 +0.4**
DRO Drossia 82.62 308 P **P** **05 55 26.8 +0.4**
CEME Cevo 82.62 313⇑ *i*P **P** **05 55 26.8 +0.4**
ULC Ulcinj 82.66 313⇑ *i*P **P** **05 55 27.3 +0.8**
ARSA Arzberg 82.70 319 *e*P **P** **05 55 27.4 +0.8**
comp=Z,102nm,1.5s,SNR=27
BRY Bratogost 82.72 314⇑ *i*P **P** **05 55 27.3 +0.3**
BRY Bratogost 82.72 314 *e*P **P** **05 55 27.5 +0.5**

BUM Brajici-Budva 82.75 313⇑ *i*P **P** **05 55 27.6 +0.5**
RLS Riolos of Patr 82.75 308 P **P** **05 55 26.4 -0.6**
ITM Ithomi 82.78 307 *e*P **P** **05 55 28.3 +1.0**
ITM Ithomi 82.78 307 *e*P **P** **05 55 26.6 -0.6**
comp=Z,198nm,0.9s
ITM Ithomi 82.78 307 P **P** **05 55 23.9 -3.4**
AMT Artemida-Makis 82.79 308 P **P** **05 55 27.3 0.0**
BLY Banja Luka 82.80 316 *e*P **P** **05 55 27.6 +0.5**
comp=Z,136nm,1.2s
BLY LR LR
comp=Z,18μm,20.0s
BLY Banja Luka 82.80 316⇑ *i*P **P** **05 55 28.9 +1.7**
BLY Banja Luka 82.80 316⇑ *i*P **P** **05 55 27.8 +0.6**
SUMG Summit 82.84 354 PFAKE 05 55 40.0 +13
SUMG LR LR
comp=Z,11μm,18.0s
SUMG Summit 82.84 354 *i* P **P** **05 55 27.4 0.0**
SUMG MLR MLR
comp=Z,26μm,17.0s
SUMG Summit 82.84 354 *i* P **P** **05 55 27.4 0.0**
comp=Z,26μm,17.0s
TREB Trebinje 82.93 314 *e*P **P** **05 55 26.4 -1.5**
IGT Igoumenitsa 82.94 310 P **P** **05 55 28.4 +0.4**
HCY Herceg Novi 82.95 313⇑ *i*P **P** **05 55 28.7 +0.7**
HCY Herceg Novi 82.95 313 *e*P **P** **05 55 25.5 -2.5**
KHC Kasperske Hory 82.98 321 *e*P **P** **05 55 28.4 +0.4**
comp=Z,86nm,1.4s
KHC LR LR
comp=Z,9μm,19.0s
KHC Kasperske Hory 82.98 321 *e*P **P** **05 55 28.6 +0.5**
KHC *e* 05 55 35.8
KHC *e* 05 58 40.0
KHC *e*S **S** **06 05 45.9 -0.6**
KHC MLR MLR
comp=Z,24μm,14.1s
KHC Kasperske Hory 82.98 321 *e*P **P** **05 55 28.6 +0.5**
KHC *e*pP **sP** **05 55 35.8 -0.5**
KHC *e*x x 05 58 40.0
KHC *e*S **S** **06 05 45.9 -0.6**
KHC AMS AMS 06 36 30.0
comp=Z,24μm,14.1s
MGRS Mrkonjic Grad 83.01 316 *e*P **P** **05 55 30.0 +1.7**
LKD2 Lefkada island 83.02 309 P **P** **05 55 31.7 +3.2**
GEC2 GERESS Array S 83.04 321 *e*P **P** **05 55 28.4 -0.1**
comp=Z,122nm,1.1s
GEC2 LR LR
comp=Z,19μm,21.0s
GEC2 GERESS Array S 83.04 321 *e*P **P** **05 55 28.4 -0.1**
GEC2 pmax pmax
comp=Z,122nm,1.1s
GEC2 MLR MLR
comp=Z,19μm,21.0s
GERES GERESS Array B 83.04 321 P **P** **05 55 29.0 +0.5**
comp=Z,41nm,0.9s,baz=58,slow=5.0,SNR=78
GERES PKKPbc **PKKPbc** **06 13 49.5 -1.4**
comp=Z,1.2nm,0.6s,baz=126,slow=1.8,SNR=4.6
GERES LR LR 06 35 45.0
comp=Z,19μm,18.8s,baz=56,slow=38
ZAG Zagreb 83.07 317 *e*P **P** **05 55 29.7 +1.2**
NKC Novy Kostel 83.09 322 *e*P **P** **05 55 29.7 +1.1**
NKC *e* 05 55 35.8
NKC *e*S **S** **06 05 42.9 -4.7**
NKC Novy Kostel 83.09 322 *e*P **P** **05 55 29.7 +1.1**
NKC *e*x x 05 55 35.8
NKC *e*S **S** **06 05 42.9 -4.7**
MOA Molln 83.18 320 *e*PcP **P** **05 55 30.5 +1.4**
comp=Z,77nm,0.9s,SNR=21
KFL Anninata 83.22 309 P **P** **05 55 28.7 -0.8**
FSK Fiskardo 83.23 309 P **P** **05 55 26.8 -2.7**
PERS Pernice 83.23 318 *i* P **P** **05 55 29.8 +0.3**
PERS *e*PP **PP** **05 58 47.3 +6.8**
PERS *e*S **S** **06 05 44.5 -4.7**
PERS *e* 06 06 36.7
KEK Kerkira 83.24 310 P **P** **05 55 32.3 +2.7**
SOKA Soboth 83.26 318 *e*P **P** **05 55 30.1 +0.4**
comp=Z,117nm,1.5s,SNR=68
YKW3 Yellowknife Ar 83.29 23 *e*P **P** **05 55 28.5 -0.8**
comp=Z,91nm,1.0s
YKW3 LR LR
comp=Z,9μm,20.0s
STON Ston 83.29 314 P **P** **05 55 29.8 +0.1**
STON Ston 83.29 314 *e*P **P** **05 55 28.4 -1.3**
VLS Valsamata 83.33 309 P **P** **05 55 28.7 -1.4**
BBB Bella Bella 83.33 35 P **P** **05 55 29.9 +0.2**
comp=Z,30nm,1.1s,baz=138,slow=1.7,SNR=4.3
BBB Bella Bella 83.33 35 *e*P **P** **05 55 28.9 -0.8**
comp=Z,108nm,1.4s
BBB LR LR
comp=Z,4μm,18.0s
YKA Yellowknife Ar 83.34 23 P **P** **05 55 29.2 -0.3**
comp=Z,28nm,0.6s,baz=311,slow=4.9,SNR=349
YKA PKIKP **PKiKP** **06 00 45.2 -2.0**
comp=Z,1.1nm,0.8s,baz=305,slow=1.1,SNR=4.1
YKA S **S** **06 05 52.0 +2.5**
comp=Z,0.3nm,0.5s,baz=322,slow=6.5,SNR=4.0
YKA PKKP **PKKPdf** **06 13 36.5 -3.7**
comp=Z,0.4nm,0.6s,baz=171,slow=2.3,SNR=4.5
YKA PKKPbc **PKKPbc** **06 13 48.3 -2.1**
comp=Z,1.0nm,0.6s,baz=128,slow=2.4,SNR=14
YKA PKPPKP 06 21 51.9
comp=Z,0.7nm,0.8s,baz=134,slow=2.5,SNR=7.0
YKA LR LR 06 37 58.5
comp=Z,790nm,18.7s,baz=324,slow=40
YKB5 Yellowknife Ar 83.34 23 *e*P **P** **05 55 29.2 -0.3**
YKB5 *e*PKiKP **PKiKP** **06 00 45.2 -2.0**
YKB5 *e*S **S** **06 05 52.0 +2.5**
YKB5 *e*PKKPdf **PKKPdf** **06 13 36.5 -3.7**
YKB5 *e*PKKPbc **PKKPbc** **06 13 48.4 -2.1**
CRES Cresnjev 83.40 317⇑ *i*P **P** **05 55 30.8 +0.5**
ABPO Ambohimpanom 83.62 246 *e*P **P** **05 55 31.9 -0.1**
comp=Z,258nm,1.5s
ABPO LR LR
comp=Z,7μm,18.0s
ABPO Ambohimpanom 83.62 246 *e*P **P** **05 55 31.9 -0.1**
ABPO pmax pmax
comp=Z,258nm,1.5s
ABPO MLR MLR
comp=Z,7μm,18.0s
OBKA Obir 83.64 318 *e*P **P** **05 55 32.1 +0.5**
comp=Z,67nm,0.9s,SNR=26
BOJS Bojanci 83.67 317 *e*P **P** **05 55 32.5 +0.8**
BOJS *e*S **S** **06 05 51.7 -1.9**
BOJS *e* 06 06 51.3
BOJS *i* SS **SS** **06 11 21.5 +2.0**
VISS Visnje 83.79 317 *i* P **P** **05 55 32.8 +0.6**
VISS *e*S **S** **06 05 52.0 -2.7**
VISS *e* 06 06 52.0
UDBI Udbina 83.80 316 P **P** **05 55 33.2 +0.8**
LJU Ljubljana 83.87 318⇑ *i*P **P** **05 55 33.0 +0.3**
GRA1 Grafenberg Arr 84.05 322 *e*P **P** **05 55 34.2 +0.7**
comp=Z,682nm,1.6s
GRA1 LR LR
comp=Z,20μm,19.0s
GRF Grafenberg Arr 84.05 322 *e*P **P** **05 55 34.2 +0.7**
GRF pmax pmax
comp=Z,682nm,1.6s
GRF MLR MLR
comp=Z,20μm,19.0s
GRFO Grafenberg 84.05 322 *e*P **P** **05 55 34.3 +0.8**
comp=Z,531nm,1.5s
GRFO LR LR
comp=Z,19μm,19.0s
GRFO Grafenberg 84.05 322 *e*P **P** **05 55 34.3 +0.8**
GRFO pmax pmax
comp=Z,531nm,1.5s
GRFO MLR MLR
comp=Z,19μm,19.0s
LRW Lerwick 84.07 335 *e*P **P** **05 55 34.7 +1.3**
LRW IAmb IAmb 05 55 41.0
comp=Z,294nm,1.2s
CEY Cerknica 84.07 318⇑ *i*P **P** **05 55 34.1 +0.3**
KBA Koelnbreinsper 84.09 319 *e*P **P** **05 55 34.3 +0.2**
comp=Z,64nm,0.8s,SNR=35
MYKA Terra Mystica 84.13 319 *i* P **P** **05 55 34.0 -0.1**
comp=Z,156nm,1.6s,SNR=28
JAVS Javornik 84.22 318 *i* P **P** **05 55 34.5 -0.1**
JAVS *e*S **S** **06 05 59.5 +0.2**
RIY Rijeka 84.23 317⇑ *i*P **P** **05 55 34.7 +0.2**
NVLJ Novalja 84.35 316 P **P** **05 55 35.0 -0.1**
CGL1 Ceglie Messapi 84.43 312⇓ *i*P **P** **05 55 37.4 +1.8**
FASA Fasano 84.44 312⇓ *i*P **P** **05 55 36.3 +0.6**
TAR1 Taranto 84.61 312⇑ *i*P **P** **05 55 36.6 +0.1**
BAI Bari 84.63 313⇓ *i*P **P** **05 55 37.0 +0.4**
MASS Massafra 84.66 312⇑ *i*P **P** **05 55 36.8 0.0**

ABTA Abfaltersbach 84.75 319 *i* P **P** **05 55 36.6 -0.7**
comp=Z,100nm,1.2s,SNR=66
KMBO Kilima Mbogo 84.78 266 P **P** **05 55 39.0 +0.9**
comp=Z,21nm,1.2s,baz=43,slow=6.0,SNR=21
KMBO LR LR 06 31 57.4
comp=Z,6μm,21.4s,baz=58,slow=34
KMBO Kilima Mbogo 84.78 266 *e*P **P** **05 55 39.8 +1.6**
comp=Z,110nm,1.3s
KMBO LR LR
comp=Z,12μm,1.9s
KMBO Kilima Mbogo 84.78 266 *i* P **P** **05 55 40.3 +2.1**
SNR=28
KMBO Kilima Mbogo 84.78 266 *e*P **P** **05 55 39.8 +1.6**
KMBO pmax pmax
comp=Z,110nm,1.3s
KMBO MLR MLR
comp=Z,12μm,1.9s
KMBO Kilima Mbogo 84.78 266 P **P** **05 55 40.1 +1.9**
SNR=32
KMBO P **P** **05 55 40.1 +1.9**
SNR=32
SG1 Sgolgore (BA) 84.88 312⇓ *i*P **P** **05 55 38.6 +0.6**
MATE Matera 84.95 312⇑ *i*P **P** **05 55 40.6 +2.4**
WATA Walderalm 85.02 320 *e*P **P** **05 55 38.5 -0.2**
comp=Z,30nm,0.7s,SNR=46
WTTA Wattenberg 85.02 320 *e*P **P** **05 55 38.7 0.0**
comp=Z,156nm,1.1s,SNR=58
WTSB Winterswijk 85.25 326 *e*P **P** **05 55 39.9 +0.4**
NAI Nairobi 85.25 267 PFAKE 05 55 50.0 +10
NAI LR LR
comp=Z,7μm,22.0s
MOTA Moosalm 85.29 320 *e*P **P** **05 55 40.0 -0.1**
comp=Z,13nm,0.8s,SNR=38
SQTA Sankt Quirin 85.30 320 *e*P **P** **05 55 40.1 +0.1**
SNR=55
RETA Reutte 85.42 320 *e*PcP **P** **05 55 41.0 +0.4**
comp=Z,15nm,0.8s,SNR=15
TIP Timpagrande 85.58 311 *e*P **P** **05 55 42.0 +0.4**
comp=Z,423nm,1.5s
TIP LR LR
comp=Z,12μm,20.0s
TIP Timpagrande 85.58 311 P **P** **05 55 40.0 -1.6**
TIP Timpagrande 85.58 311⇑ *i*P **P** **05 55 43.2 +1.6**
STU Stuttgart 85.66 322 *e*P **P** **05 55 41.6 0.0**
comp=Z,330nm,1.8s
STU LR LR
comp=Z,30μm,21.0s
STU Stuttgart 85.66 322 *e*P **P** **05 55 41.6 0.0**
STU pmax pmax
comp=Z,330nm,1.8s
STU MLR MLR
comp=Z,30μm,21.0s
FETA Feichten 85.68 320 *i* PcP **P** **05 55 42.1 +0.1**
SNR=59
HKB Herkenbosch 86.00 325 P **P** **05 55 43.8 +0.5**
DAVA Damuels 86.04 320 *i* PcP **P** **05 55 44.3 +0.5**
comp=Z,74nm,1.2s,SNR=17
MLA1 Latheron 86.10 334⇑ *e*P **P** **05 55 43.6 0.0**
FUORN Ofenpass-Fuorn 86.16 320 *e*P **P** **05 55 44.6 +0.2**
comp=Z,107nm,0.9s
FUORN LR LR
comp=Z,23μm,21.0s
DAVOX Davos/Dischmat 86.30 320 P **P** **05 55 45.5 +0.4**
comp=Z,42nm,0.8s,baz=72,slow=5.7,SNR=56
AQU L'Aquila 86.34 315 *e*P **P** **05 55 45.7 +0.5**
comp=Z,487nm,1.4s
AQU LR LR
comp=Z,13μm,20.0s
AQU L'Aquila 86.34 315⇑ *i*P **P** **05 55 45.7 +0.5**
HGN Heimansgroeve 86.36 325 *e*P **P** **05 55 45.2 +0.2**
HGN Heimansgroeve 86.36 325 *e*S **S** **06 06 11.8 -8.2**
HGN *e*SS SS 06 12 09.6 +11
BFO Black Forest 86.38 322 *e*P **P** **05 55 44.5 -0.8**
comp=Z,188nm,1.6s
BFO LR LR
comp=Z,24μm,18.0s
BFO Black Forest 86.38 322 *e*P **P** **05 55 44.5 -0.8**
BFO pmax pmax
comp=Z,188nm,1.6s
BFO MLR MLR
comp=Z,24μm,18.0s
MEM Membach 86.41 325 ⇑P **P** **05 55 45.4 +0.1**
MEM x x 05 55 52.6
BEBN Eben Emael 86.48 325 P **P** **05 55 45.8 +0.2**
BEBN x x 05 55 53.2
MCD Coleburn Disti 86.53 334 *e*P **P** **05 55 45.3 -0.5**
BMOL Mol 86.55 325 P **P** **05 55 46.7 +0.8**
BHOU Houvegnez 86.55 324 P **P** **05 55 46.5 +0.4**
BHOU x x 05 55 53.8
BDSL Dessel 86.56 326 P **P** **05 55 46.7 +0.7**
CEL Celeste 86.61 310 *e*P **P** **05 55 47.1 +0.5**
comp=Z,860nm,1.4s
CEL LR LR
comp=Z,8μm,19.0s
LKLB Kalborn 86.64 324 P **P** **05 55 47.1 +0.7**
comp=Z,105nm,1.5s
DRUM Mains of Drumt 86.65 333 *e*P **P** **05 55 45.9 -0.5**
DRUM IAmb IAmb 05 55 53.8
comp=Z,85nm,1.0s
BSTI Sart Tilman 86.66 325 P **P** **05 55 46.9 +0.4**
TUE Stuetta 86.78 320 *e*P **P** **05 55 47.5 +0.1**
comp=Z,406nm,1.8s
TUE LR LR
comp=Z,23μm,18.0s
WLF Walferdange 86.86 324 *e*P **P** **05 55 48.4 +0.8**
comp=Z,1μm,1.1s
WLF LR LR
comp=Z,80μm,21.0s
WLF Walferdange 86.86 324 *e*P **P** **05 55 48.4 +0.8**
WLF pmax pmax
comp=Z,1μm,1.1s
WLF MLR MLR
comp=Z,80μm,21.0s
WLF Walferdange 86.86 324 P **P** **05 55 48.3 +0.8**
BCLA Clavier 86.89 325 P **P** **05 55 47.9 +0.2**
comp=Z,96nm,1.8s
BGES Gesves 87.02 325 P **P** **05 55 49.0 +0.6**
BORG Borgarnes 87.03 345 PFAKE 05 56 00.0 +12
BORG LR LR
comp=Z,17μm,18.0s
ILULI Ilulissat 87.05 357 *e*P **P** **05 55 48.7 +0.7**
comp=Z,159nm,1.6s
ILULI LR LR
comp=Z,12μm,18.0s
ILULI Ilulissat 87.05 357 *i* P **P** **05 55 48.6 +0.6**
ILULI MLR MLR
comp=Z,14μm,17.0s
ILULI Ilulissat 87.05 357 *i* P **P** **05 55 48.6 +0.6**
comp=Z,14μm,17.0s
RCHB Rochefort 87.08 325 P **P** **05 55 46.3 -2.3**
RCHB PcP **PcP** **05 55 48.1 -2.6**
RCHB x x 05 55 53.4
ECH Echery 87.10 322 *e*P **P** **05 55 48.4 -0.4**
comp=Z,187nm,2.0s
ECH LR LR
comp=Z,19μm,18.0s
ECH Echery 87.10 322 *e*P **P** **05 55 48.4 -0.4**
ECH pmax pmax
comp=Z,187nm,2.0s
ECH MLR MLR
comp=Z,19μm,18.0s
EDU Dundee 87.11 333 *e*P **P** **05 55 48.0 -0.6**
BCES Court-Saint-Et 87.17 325 P **P** **05 55 49.0 0.0**
UCC Uccle 87.17 325 *e*P **P** **05 55 49.2 +0.2**
comp=Z,381nm,1.7s
UCC LR LR
comp=Z,39μm,18.0s
UCC Uccle 87.17 325 *e*P **P** **05 55 49.2 +0.2**
UCC pmax pmax
comp=Z,381nm,1.7s
UCC MLR MLR
comp=Z,39μm,18.0s
UCC Uccle 87.17 325 P **P** **05 55 49.2 +0.2**
BMRD Maredsous 87.24 325 P **P** **05 55 49.5 +0.2**
comp=Z,113nm,1.4s
VLC Villacollemand 87.35 318 PFAKE 05 56 00.0 +10
VLC LR LR
comp=Z,14μm,19.0s
ESY Stoneypath 87.35 332 *e*P **P** **05 55 49.3 -0.5**
SNF Seneffe 87.37 325 P **P** **05 55 49.8 -0.2**
BSKQ Steenkerk 87.40 325 P **P** **05 55 50.2 +0.1**
KAC Achnashellach 87.41 334 *e*P **P** **05 55 49.3 -0.7**
DOU Dourbes 87.45 325 P **P** **05 55 50.5 +0.1**
comp=Z,82nm,1.1s
LLLB Lillooet 87.46 35 *e*P **P** **05 55 50.2 -0.3**
comp=Z,79nm,1.0s

LLLB LR LR
comp=Z,6μm,20.0s
GDLE Glaisdale, N Y 87.51 330 *e*P **P 05 55 50.6 +0.1**
EBL Broad Law 87.63 332⇑ *e*P **P 05 55 51.1 0.0**
EDMD Edmundbyers 87.77 331 *e*P **P 05 55 50.8 -1.0**
WACR West Acre 87.89 328 *e*P **P 05 55 52.2 -0.2**
WACR IAmb IAmb 05 55 59.7
comp=Z,266nm,1.0s
EKA Eskdalemuir Ar 87.97 332 P **P 05 55 52.4 -0.3**
comp=Z,13nm,0.8s,baz=39,slow=1.4,SNR=29
ESK Eskdalemuir 88.00 332 *e*P **P 05 55 52.9 0.0**
comp=Z,165nm,1.4s
ESK LR LR
comp=Z,73μm,18.0s
ESK Eskdalemuir 88.00 332 *e*P **P 05 55 52.3 -0.6**
ESK IAmb IAmb 05 56 01.6
comp=Z,228nm,1.5s
ESK Eskdalemuir 88.00 332 *e*P **P 05 55 52.9 0.0**
ESK pmax pmax
comp=Z,165nm,1.4s
ESK MLR MLR
comp=Z,73μm,18.0s
SENIN Lac Senin/Sane 88.03 321 *e*P **P 05 55 53.5 -0.1**
comp=Z,56nm,1.0s
SENIN LR LR
comp=Z,28μm,18.0s
A04D Lummi Island 88.11 36 P **P 05 55 53.3 -0.2**
baz=305
BHH Howats Hill 88.15 332⇑ *e*P **P 05 55 53.6 0.0**
HPK Haverah Park 88.17 330 *e*P **P 05 55 53.2 -0.5**
HPK IAmb IAmb 05 56 02.5
comp=Z,464nm,1.7s
NLWA Neilton Lookou 88.22 38 *e*P **P 05 55 54.0 -0.1**
comp=Z,100nm,1.0s
NLWA LR LR
comp=Z,4μm,20.0s
PGBU Glenifferbraes 88.22 333⇑ *e*P **P 05 55 53.9 0.0**
PGBU IAmb IAmb 05 56 02.6
comp=Z,127nm,1.2s
LAWE Loch Awe, Argy 88.29 333 *e*P **P 05 55 54.6 +0.3**
LAWE IAmb IAmb 05 56 02.4
comp=Z,118nm,1.5s
BBO1 Bothel 88.39 331 *e*P **P 05 55 54.5 -0.3**
D03D Eldon 88.57 38 P **P 05 55 56.6 +0.8**
baz=304,SNR=44
LBWR Ladybower, Pea 88.57 330 *e*P **P 05 55 55.5 -0.2**
LBWR IAmb IAmb 05 56 04.0
comp=Z,928nm,1.9s
ELSH Elham, Standar 88.61 327 *e*P **P 05 55 55.8 0.0**
ELSH IAmb IAmb 05 55 58.4
comp=Z,225nm,1.1s
B05A Bryant 88.70 37 P **P 05 55 56.8 +0.4**
baz=305,SNR=15
CWF Charnwood Fore 88.80 329 *e*P **P 05 55 56.2 -0.5**
CWF IAmb IAmb 05 56 04.7
comp=Z,649nm,2.1s
B06A Marblemount 88.89 36 *e*P **P 05 55 56.8 -0.4**
comp=Z,107nm,1.0s
B06A LR LR
comp=Z,8μm,18.0s
GAL1 Galloway 88.94 332 *e*P **P 05 55 56.9 -0.5**
GAL1 IAmb IAmb 05 56 06.0
comp=Z,28nm,1.0s
D04E Lakebay 88.95 38 P **P 05 55 58.8 +1.2**
baz=305
BNI Bardonecchia 89.11 320 *e*P **P 05 55 58.0 -0.6**
comp=Z,69nm,0.9s
BNI LR LR
comp=Z,29μm,21.0s
HMNX Herstmonceux 89.18 327 *e*P **P 05 55 58.9 +0.3**
HMNX IAmb IAmb 05 56 06.3
comp=Z,262nm,1.1s
SFJD Kangerlussuaq 89.24 357 P **P 05 55 57.6 -0.9**
comp=Z,15nm,0.8s,baz=9.0,slow=4.0,SNR=7.9
SFJD Kangerlussuaq 89.24 357 *e*P **P 05 55 57.9 -0.6**
comp=Z,278nm,2.0s
SFJD LR LR
comp=Z,9μm,20.0s
SFJD Kangerlussuaq 89.24 357 *e*P **P 05 55 57.9 -0.6**
SFJD pmax pmax
comp=Z,278nm,2.0s
SFJD MLR MLR
comp=Z,9μm,20.0s
SFJD Kangerlussuaq 89.24 357 *i* P **P 05 55 57.5 -1.0**
comp=Z,8μm,17.0s
ANGG Ammassalik, Gr 89.35 351 *e*P **P 05 55 58.8 -0.2**
comp=Z,194nm,1.8s
ANGG LR LR
comp=Z,13μm,19.0s
D05A Enumclaw 89.38 37 *e*P **P 05 56 00.1 +0.5**
comp=Z,374nm,1.4s
D05A LR LR
comp=Z,5μm,19.0s
E04D Cinebar 89.42 38 P **P 05 56 00.5 +0.7**
baz=305,SNR=11
F04D Rainier, OR 89.44 39 P **P 05 56 00.0 +0.2**
baz=305
C06D Leavenworth 89.56 36 P **P 05 56 00.1 -0.3**
baz=306
FOEL Foel Wylfa 89.58 330 *e*P **P 05 56 00.4 0.0**
FOEL IAmb IAmb 05 56 08.9
comp=Z,427nm,1.6s
LON Longmire 89.74 38 *e*P **P 05 56 01.1 -0.3**
comp=Z,72nm,1.0s
LON LR LR
comp=Z,4μm,21.0s
LON Longmire 89.74 38 *e*P **P 05 56 01.1 -0.3**
LON pmax pmax
comp=Z,72nm,1.0s
LON MLR MLR
comp=Z,4μm,21.0s
WME Myndd Eilian 89.75 331⇑ *e*P **P 05 56 01.2 0.0**
G03D McMinnville, O 89.79 40 P **P 05 56 02.1 +0.6**
baz=304,SNR=14
SWN1 Swindon 89.82 328 *e*P **P 05 56 01.4 -0.2**
SWN1 IAmb IAmb 05 56 10.8
comp=Z,306nm,1.3s
STRD Stroud 89.82 329⇑ *e*P **P 05 56 01.3 -0.2**
STRD IAmb IAmb 05 56 09.0
comp=Z,258nm,1.1s
LLW Llanuwchllyn 89.82 330 *e*P **P 05 56 00.6 -1.0**
WPS Cemaes, Angles 89.83 331⇑ *e*P **P 05 56 00.7 -0.8**
WPS IAmb IAmb 05 56 09.7
comp=Z,105nm,1.4s
WLF1 Llynfaes 89.86 331⇑ *e*P **P 05 56 01.7 0.0**
WLF1 IAmb IAmb 05 56 10.6
comp=Z,162nm,0.8s
GMM Mts of Mourne 89.90 332⇑ *e*P **P 05 56 01.1 -0.8**
YRC Rhoscolyn 89.97 331⇑ *e*P **P 05 56 01.9 -0.3**
I02D Swisshome 90.06 41 P **P 05 56 03.5 +0.7**
baz=304,SNR=9.2
LTY Liberty 90.07 37 *e*P **P 05 56 02.5 -0.4**
comp=Z,80nm,1.1s
LTY LR LR
comp=Z,5μm,19.0s
MCH1 Michaelchurch 90.07 329⇑ *e*P **P 05 56 02.0 -0.7**
MCH1 IAmb IAmb 05 56 11.6
comp=Z,302nm,1.7s
MONM Monmouth 90.08 329⇑ *e*P **P 05 56 02.4 -0.3**
MONM IAmb IAmb 05 56 05.3
comp=Z,46nm,1.1s
COR Corvallis 90.12 40 *e*P **P 05 56 02.8 -0.3**
comp=Z,161nm,0.9s
COR LR LR
comp=Z,4μm,19.0s
COR Corvallis 90.12 40 *e*P **P 05 56 02.8 -0.3**
COR pmax pmax
comp=Z,161nm,0.9s
COR MLR MLR
comp=Z,4μm,19.0s
B08A Colville Reser 90.14 35 *e*P **P 05 56 03.1 -0.1**
comp=Z,84nm,1.0s
B08A LR LR
comp=Z,5μm,20.0s
CASY Casey 90.18 184 PFAKE 05 56 10.0 +7.4
CASY LR LR
comp=Z,3μm,18.0s
SSB Saint Sauveur 90.24 321 *e*P **P 05 56 03.5 -0.2**
comp=Z,53nm,1.2s
SSB LR LR
comp=Z,20μm,18.0s
SSB Saint Sauveur 90.24 321 *e*P **P 05 56 03.5 -0.2**
SSB pmax pmax
comp=Z,53nm,1.2s
SSB MLR MLR
comp=Z,20μm,18.0s
F05D White Salmon 90.44 38 P **P 05 56 05.1 +0.6**
baz=306
KEBM Edson Butte 90.45 42 *e*P **P 05 56 05.4 +0.6**
comp=Z,223nm,1.0s
KEBM LR LR
comp=Z,4μm,18.0s
H04D Lebanon 90.48 40 P **P 05 56 05.6 +0.8**
baz=305,SNR=17
MBAR Mbarara 90.53 270 PFAKE 05 56 20.0 +14
MBAR LR LR
comp=Z,7μm,20.0s
J01E Myrtle Point 90.54 42 P **P 05 56 05.5 +0.4**
baz=304,SNR=15
I03D Drain, OR 90.59 41 P **P 05 56 05.9 +0.6**
baz=304,SNR=26
H04A Detroit Lake 90.72 40 *e*P **P 05 56 05.7 -0.2**
comp=Z,113nm,1.3s
H04A LR LR
comp=Z,3μm,20.0s
DSB Dublin 90.77 331 *e*P **P 05 56 05.6 -0.3**
comp=Z,124nm,1.6s
DSB LR LR
comp=Z,46μm,18.0s
G05D Wamic, OR 90.89 39 P **P 05 56 07.3 +0.5**
baz=306,SNR=14
K02D Willamette Mer 90.96 42 P **P 05 56 07.1 -0.1**
baz=304,SNR=8.0
C09A Chrisman Ranch 91.04 35 *e*P **P 05 56 07.6 +0.3**
comp=Z,111nm,1.3s
C09A LR LR
comp=Z,7μm,19.0s
I04A Tendick Farm, 91.09 40 P **P 05 56 08.0 +0.2**
baz=305,SNR=35
D08A Wollman Farm, 91.15 36 *e*P **P 05 56 07.8 0.0**
comp=Z,54nm,0.9s
D08A LR LR
comp=Z,6μm,20.0s
HAWA Hanford 91.22 37 *e*P **P 05 56 08.4 +0.2**
comp=Z,99nm,1.3s
HAWA LR LR
comp=Z,5μm,19.0s
G06A Carlson Farm, 91.29 38 *e*P **P 05 56 07.9 -0.8**
comp=Z,154nm,1.3s
G06A LR LR
comp=Z,3μm,20.0s
F07A Phinny Hill Vi 91.30 38 *e*P **P 05 56 08.4 -0.1**
comp=Z,65nm,0.9s
F07A LR LR
comp=Z,6μm,18.0s
L02E Cave Junction 91.30 42 P **P 05 56 08.6 -0.1**
baz=304
NEW Newport 91.36 35 P **P 05 56 08.4 -0.5**
comp=Z,20nm,0.8s,baz=306,slow=4.5,SNR=22
NEW Newport 91.36 35 *e*P **P 05 56 08.8 -0.1**
comp=Z,195nm,1.8s
NEW LR LR
comp=Z,6μm,20.0s
NEW Newport 91.36 35 *e*P **P 05 56 08.8 -0.1**
NEW pmax pmax
comp=Z,195nm,1.8s
NEW MLR MLR
comp=Z,6μm,20.0s
NEW Newport 91.36 35 P **P 05 56 08.8 -0.1**
baz=309
I05D Terrebonne, OR 91.41 40 P **P 05 56 09.4 +0.2**
baz=306,SNR=27
E08A Dider Farm, El 91.42 37 *e*P **P 05 56 09.5 +0.4**
comp=Z,201nm,1.8s
E08A LR LR
comp=Z,4μm,21.0s
HUMO Hull Mountain 91.44 42 *e*P **P 05 56 08.5 -0.8**
comp=Z,44nm,1.0s
HUMO LR LR
comp=Z,4μm,19.0s
KRMB Red Mountain 91.47 43 *e*P **P 05 56 09.7 +0.1**
J04D Umpqua Nationa 91.59 41 P **P 05 56 10.4 +0.1**
baz=305,SNR=30
JCC Jacoby Creek, 91.78 44 PFAKE 05 56 20.0 +9.1
JCC LR LR
comp=Z,4μm,20.0s
E09A Wood Farm, Sta 91.90 36 *e*P **P 05 56 11.8 +0.4**
comp=Z,112nm,1.3s
E09A LR LR
comp=Z,7μm,20.0s
KHMM Horse Mountain 91.94 43 PFAKE 05 56 20.0 +8.1
KHMM LR LR
comp=Z,5μm,21.0s
PINE Pine Mountain 91.96 40 *e*P **P 05 56 12.3 +0.3**
comp=Z,156nm,1.1s
L04D Klamath Falls 92.06 42 P **P 05 56 12.4 0.0**
baz=305,SNR=38
J05D Fort Rock, OR 92.09 40 P **P 05 56 13.0 +0.5**
baz=306,SNR=38
YBH Yreka Blue Hor 92.09 42 P **P 05 56 12.0 -0.4**
comp=Z,12nm,0.9s,baz=6.1,slow=1.7,SNR=16
YBH Yreka Blue Hor 92.09 42 *e*P **P 05 56 12.6 +0.1**
comp=Z,66nm,1.2s
YBH LR LR
comp=Z,5μm,22.0s
YBH Yreka Blue Hor 92.09 42 *e*P **P 05 56 12.6 +0.1**
YBH pmax pmax
comp=Z,66nm,1.2s
YBH MLR MLR
comp=Z,5μm,22.0s
K04D Chiloquin, OR 92.16 41 P **P 05 56 12.7 -0.1**
baz=305,SNR=14
M02C Callahan 92.20 43 P **P 05 56 13.2 +0.3**
baz=305,SNR=12
G08A Pilot Rock 92.20 38 *e*P **P 05 56 13.0 +0.1**
comp=Z,30nm,1.0s
G08A LR LR
comp=Z,5μm,22.0s
KMRM Mail Ridge 92.32 44 PFAKE 05 56 20.0 +6.5
KMRM LR LR
comp=Z,9μm,18.0s
KEST Kesra 92.41 311 P **P 05 56 14.0 0.0**
comp=Z,43nm,1.1s,baz=353,slow=3.6,SNR=14
KEST LR LR 06 44 11.9
comp=Z,7μm,18.1s,baz=341,slow=40
KEST Kesra 92.41 311 *e*P **P 05 56 13.7 -0.4**
comp=Z,26nm,1.4s
WALA Waterton Lakes 92.47 33 *e*P **P 05 56 13.6 -0.5**
comp=Z,185nm,1.4s
WALA LR LR
comp=Z,8μm,21.0s
N02D Trinity Center 92.53 43 P **P 05 56 14.6 +0.2**
baz=305
M04C Macdoel 92.60 42 P **P 05 56 14.8 0.0**
baz=305,SNR=30
K05A Summer Lake 92.62 41 *e*P **P 05 56 15.1 0.0**
comp=Z,136nm,1.0s
K05A LR LR
comp=Z,4μm,19.0s
I07A Izee 92.62 39 *e*P **P 05 56 14.5 -0.4**
comp=Z,52nm,1.1s
I07A LR LR
comp=Z,4μm,20.0s
KCPM Cahto Peak 92.70 44 PFAKE 05 56 30.0 +15
KCPM LR LR
comp=Z,6μm,19.0s
FCC Fort Churchill 92.71 17 *e*P **P 05 56 14.0 -0.8**
comp=Z,52nm,1.1s
FCC LR LR
comp=Z,10μm,20.0s
FCC Fort Churchill 92.71 17 *e*P **P 05 56 14.0 -0.8**
FCC pmax pmax
comp=Z,52nm,1.1s
FCC MLR MLR
comp=Z,10μm,20.0s
F10A Beach Ranch, E 92.74 36 *e*P **P 05 56 15.6 +0.3**
comp=Z,32nm,1.0s
F10A LR LR
comp=Z,6μm,20.0s
WDC Whiskeytown Da 92.85 43 *e*P **P 05 56 15.4 -0.4**
comp=Z,67nm,1.1s
WDC LR LR
comp=Z,6μm,21.0s
WDC Whiskeytown Da 92.85 43 *e*P **P 05 56 15.4 -0.4**
WDC pmax pmax
comp=Z,67nm,1.1s
WDC MLR MLR
comp=Z,6μm,21.0s
O02D Mt. Diablo Mer 92.93 44 P **P 05 56 16.0 -0.3**
baz=305
CMAH Djebel Manchou 93.25 312 P **P 05 56 19.9 +2.0**
BMO Blue Mountains 93.39 37 *e*P **P 05 56 17.9 -0.4**
comp=Z,41nm,1.1s
BMO Blue Mountains 93.39 37 *e*P **P 05 56 18.0 -0.4**
BMO pmax pmax
comp=Z,41nm,1.1s
ABSA Djebel Ababsia 93.40 312 P **P 05 56 19.4 +0.8**
HOPS Hopland Field 93.42 45 PFAKE 05 56 30.0 +12
HOPS LR LR
comp=Z,6μm,21.0s
MOD Modoc Plateau 93.46 41 *e*P **P 05 56 18.8 -0.1**
comp=Z,94nm,1.0s
MOD LR LR
comp=Z,4μm,20.0s
O03E Paynes Creek 93.48 43 P **P 05 56 18.1 -0.7**
baz=305,SNR=7.7
MAHO Mahon 93.49 317 *i* P P 05 56 24.0 +5.2
MAHO *i* SKS **SKSac 06 06 53.7 +1.0**
CAEH 'Ain El Ouahch 93.55 313 P **P 05 56 21.0 +1.8**
J08A Circle Bar Ran 93.66 39 *e*P **P 05 56 20.0 +0.3**
comp=Z,76nm,1.0s
J08A LR LR
comp=Z,4μm,19.0s
GDXM Geysers 93.70 45 PFAKE 05 56 30.0 +10
GDXM LR LR
comp=Z,6μm,21.0s
CRZF Crozet Islands 93.74 220 PFAKE 05 56 30.0 +10
CRZF LR LR
comp=Z,4μm,20.0s
CKFL Kef-Lekhel 93.85 313 P **P 05 56 21.7 +1.0**
MSO Missoula 93.93 34 *e*P **P 05 56 20.0 -0.8**
comp=Z,101nm,1.6s
MSO LR LR
comp=Z,6μm,19.0s
MSO Missoula 93.93 34 P **P 05 56 20.0 -0.8**
baz=311
PLID Pearl Lake 93.97 37 *e*P **P 05 56 20.3 -0.9**
comp=Z,19nm,0.8s
PLID LR LR
comp=Z,9μm,22.0s
MCCM Marconi Confer 94.02 45 PFAKE 05 56 30.0 +8.8
MCCM LR LR
comp=Z,3μm,20.0s
CASM Ain Smara 94.08 313 P **P 05 56 23.7 +2.0**
ORV Oroville 94.09 43 *e*P **P 05 56 20.8 -0.8**
comp=Z,24nm,0.8s
ORV LR LR
comp=Z,4μm,19.0s
ORV Oroville 94.09 43 *e*P **P 05 56 20.8 -0.8**
ORV pmax pmax
comp=Z,24nm,0.8s
ORV MLR MLR
comp=Z,4μm,19.0s
WVOR Wild Horse Val 94.13 40 *e*P **P 05 56 21.9 0.0**
comp=Z,40nm,1.1s
WVOR LR LR
comp=Z,4μm,18.0s
WVOR Wild Horse Val 94.13 40 *e*P **P 05 56 21.9 0.0**
WVOR pmax pmax
comp=Z,40nm,1.1s
WVOR MLR MLR
comp=Z,4μm,18.0s
CTEI Djebel Teioual 94.24 312 P **P 05 56 23.9 +1.4**
DFRA Djebel Bou Aff 94.33 313 P **P 05 56 25.4 +2.5**
NRS Narsarsuaq 94.61 353 PFAKE 05 56 30.0 +6.6
NRS LR LR
comp=Z,10μm,18.0s
BEKR Beckworth 94.63 43 *e*P **P 05 56 23.7 -0.5**
comp=Z,45nm,1.0s
BEKR LR LR
comp=Z,6μm,20.0s
AFDM Forest Hills D 94.78 44 *e*P **P 05 56 24.2 -0.6**
comp=Z,28nm,0.9s
AFDM LR LR
comp=Z,5μm,22.0s
IVI Ivigtut 94.82 355 PFAKE 05 56 40.0 +16
IVI LR LR
comp=Z,12μm,19.0s
SET Setif 94.84 313 P **P 05 56 28.0 +2.8**
CKHR Kef el Ahmar 94.87 313 P **P 05 56 27.4 +2.0**
HRY Holter Researc 95.09 33 *e*P **P 05 56 25.4 -0.7**
EGMT Eagleton 95.20 31 *e*P **P 05 56 26.0 -0.6**
comp=Z,29nm,0.9s
EGMT LR LR
comp=Z,6μm,19.0s
EGMT Eagleton 95.20 31 P **P 05 56 25.7 -0.9**
baz=314
RUBR Rubicon Trail 95.23 43 *e*P **P 05 56 26.9 -0.2**
comp=Z,86nm,0.9s
RUBR LR LR
comp=Z,5μm,20.0s
PAHR Pah Rah Range 95.33 42 *e*P **P 05 56 27.1 -0.4**
comp=Z,41nm,1.0s
PAHR LR LR
comp=Z,5μm,20.0s
VCNR Virginia City 95.41 43 *e*P **P 05 56 27.0 -0.9**
comp=Z,28nm,0.9s
VCNR LR LR
comp=Z,6μm,18.0s
PNTR Pine Nut 95.56 43 *e*P **P 05 56 28.8 +0.2**
comp=Z,46nm,0.9s
PNTR LR LR
comp=Z,5μm,21.0s
DLMT Dillon 95.60 35 *e*P **P 05 56 28.4 -0.2**
comp=Z,41nm,1.0s
CMB Columbia Colle 95.69 44 *e*P **P 05 56 28.3 -0.7**
comp=Z,42nm,1.0s
CMB LR LR
comp=Z,3μm,19.0s
CMB Columbia Colle 95.69 44 *e*P **P 05 56 28.3 -0.7**
CMB pmax pmax
comp=Z,42nm,1.0s
CMB MLR MLR
comp=Z,3μm,19.0s
SAO San Andreas Ge 95.74 46 PFAKE 05 56 40.0 +11
SAO LR LR
comp=Z,5μm,22.0s
HLID Hailey 95.82 37 *e*P **P 05 56 30.3 +0.6**
comp=Z,30nm,1.0s
HLID LR LR
comp=Z,6μm,19.0s
HLID Hailey 95.82 37 P **P 05 56 29.7 0.0**
baz=311
MCMT McKenzie Canyo 95.83 35 *e*P **P 05 56 29.4 -0.4**
YERR Yerington 95.85 43 *e*P **P 05 56 29.2 -0.7**
comp=Z,43nm,1.2s
YERR LR LR
comp=Z,6μm,22.0s
BOZ Bozeman (W) 95.95 34 *e*P **P 05 56 29.5 -0.7**
comp=Z,33nm,1.4s
BOZ LR LR
comp=Z,7μm,18.0s
BOZ Bozeman (W) 95.95 34 *e*P **P 05 56 29.5 -0.7**
BOZ pmax pmax
comp=Z,33nm,1.4s
BOZ MLR MLR
comp=Z,7μm,18.0s
BOZ Bozeman (W) 95.95 34 P **P 05 56 29.6 -0.5**
baz=313
WAKR Walker 96.01 43 *e*P **P 05 56 29.6 -1.0**
comp=Z,35nm,1.2s
WAKR LR LR
comp=Z,6μm,22.0s
BMN Battle Mountai 96.20 41 PFAKE 05 56 40.0 +8.6
BMN LR LR
comp=Z,5μm,19.0s
PPT Papeete 96.36 106 LR LR 06 31 28.1
comp=Z,8μm,21.4s,baz=287,slow=30
PPT2 Papeete2 96.37 106 *e*PP **PP 06 00 22.1 -4.3**
comp=Z,1μm,24.2s
PPT2 *e*SKSac **SKSac 06 07 05.9 -2.9**
comp=Z,3μm,25.0s
PPT2 Papeete2 96.37 106 *e*PS PS 06 09 13.8 -0.4
comp=Z,7μm,27.5s
PPT2 Papeete2 96.37 106 *e*LR LR 06 27 37.6
comp=Z,19μm,23.5s,baz=293
RYN Ryan 96.51 43 *e*P **P 05 56 32.5 -0.4**
comp=Z,34nm,1.2s
RYN LR LR
comp=Z,6μm,22.0s
KVN Kaiserville 96.51 42 *e*P **P 05 56 32.4 -0.5**
comp=Z,38nm,1.0s
KVN LR LR
comp=Z,4μm,19.0s
KVN Kaiserville 96.51 42 *e*P **P 05 56 32.4 -0.5**
KVN pmax pmax
comp=Z,38nm,1.0s
KVN MLR MLR
comp=Z,4μm,19.0s
QLMT Earthquake Lak 96.57 35 *e*P **P 05 56 32.8 -0.3**
YHB Horse Butte 96.75 35 *e*P **P 05 56 33.3 -0.6**
comp=Z,29nm,1.3s

MDPB	**Devils Postpil**	**96.76**	**44**	*e*P	**P**	**05 56 34.5**	**+0.3**
	comp=Z,30nm,1.3s						
MDPB				LR	LR		
	comp=Z,4μm,20.0s						
NV01	**Mina Array Sit**	**96.77**	**43**	*e*P	**P**	**05 56 33.7**	**-0.4**
NV01				*e*PP	**PP**	**06 00 26.1**	**-2.3**
NV01				*e*PKKPdf	**PKKPdf**	**06 13 17.2**	**-0.1**
NVAR	**Mina Array Bea**	**96.77**	**43**	P	**P**	**05 56 33.7**	**-0.4**
	comp=Z,7.2nm,0.8s,baz=288,slow=4.6,SNR=20						
NVAR				PP	**PP**	**06 00 26.1**	**-2.3**
	comp=Z,3.9nm,0.9s,baz=285,slow=7.0,SNR=3.8						
NVAR				PKKP	**PKKPdf**	**06 13 17.2**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=160,slow=2.9,SNR=2.3						
NVAR				LR	LR	06 36 47.1	
	comp=Z,4μm,21.0s,baz=306,slow=33						
OMMB	**Old Mammoth Mi**	**96.82**	**44**	*e*P	**P**	**05 56 34.3**	**-0.2**
	comp=Z,25nm,1.3s						
NV11	**Mina Array Sit**	**96.86**	**43**	*e*P	**P**	**05 56 33.9**	**-0.5**
	comp=Z,1.4nm,1.1s						
NV11				LR	LR		
	comp=Z,400nm,22.0s						
YHH	**Holmes Hill**	**96.90**	**34**	*e*P	**P**	**05 56 34.9**	**+0.1**
	comp=Z,14nm,1.2s						
MLAC	**Mammoth, Mammo**	**96.92**	**44**	P	**P**	**05 56 35.0**	**+0.1**
	baz=307						
PAGB	**Antelope Grade**	**97.13**	**46**	*e*P	**P**	**05 56 34.9**	**-0.7**
	comp=Z,55nm,1.2s						
PAGB				LR	LR		
	comp=Z,5μm,20.0s						
ELK	**Elko**	**97.17**	**40**	PFAKE		05 56 50.0	+14
ELK				LR	LR		
	comp=Z,4μm,20.0s						
LKWY	**Lake**	**97.29**	**34**	PFAKE		05 56 50.0	+14
LKWY				LR	LR		
	comp=Z,10μm,21.0s						
H17A	**Grant Village**	**97.31**	**35**	*e*P	Pdif	05 56 37.0	+0.4
	comp=Z,30nm,1.3s						
H17A				LR	LR		
	comp=Z,10μm,21.0s						
H17A	**Grant Village**	**97.31**	**35**	P	Pdif	05 56 37.0	+0.4
	baz=314						
VOG	**Valley Oaks Go**	**97.35**	**45**	P	Pdif	05 56 37.5	+0.9
	baz=307						
DGMT	**Dagmar**	**97.42**	**28**	*e*P	**P**	**05 56 36.5**	**-0.1**
DGMT				LR	LR		
	comp=Z,6μm,19.0s						
DGMT	**Dagmar**	**97.42**	**28**	P	**P**	**05 56 35.5**	**-1.1**
	baz=319						
FLWY	**Flagg Ranch**	**97.47**	**35**	PFAKE		05 56 50.0	+13
FLWY				LR	LR		
	comp=Z,6μm,19.0s						
IMW	**Indian Meadow**	**97.47**	**35**	*e*P	**P**	**05 56 36.7**	**-0.5**
	comp=Z,16nm,1.1s						
IMW				LR	LR		
	comp=Z,4μm,18.0s						
RLMT	**Red Lodge**	**97.48**	**33**	*e*P	**P**	**05 56 37.0**	**-0.2**
	comp=Z,63nm,1.7s						
RLMT				LR	LR		
	comp=Z,7μm,21.0s						
RLMT	**Red Lodge**	**97.48**	**33**	P	Pdif	05 56 37.3	0.0
	baz=315						
SMMC	**Simmler**	**97.54**	**46**	P	**P**	**05 56 37.2**	**-0.2**
	baz=306						
FXWY	**Fox Creek**	**97.60**	**35**	*e*P	**P**	**05 56 36.9**	**-0.9**
	comp=Z,8.8nm,1.1s						
TIN	**Tinemaha, Big**	**97.65**	**44**	P	**P**	**05 56 37.6**	**-0.4**
	baz=307						
MOOW	**Moose Ponds**	**97.67**	**35**	PFAKE		05 56 50.0	+12
MOOW				LR	LR		
	comp=Z,4μm,21.0s						
TPAW	**Teton Pass**	**97.74**	**35**	PFAKE		05 56 50.0	+11
TPAW				LR	LR		
	comp=Z,5μm,18.0s						
UCM	**Universidad Co**	**97.80**	**320**	*i* P	Pdif	05 56 43.1	+4.5
UCM				*i* SKS	**SKSac**	**06 07 17.2**	**+1.6**
VES	**Vestal, Richgr**	**97.83**	**45**	P	**P**	**05 56 38.2**	**-0.4**
	baz=307						
LAO	**LASA Array**	**97.83**	**31**	PFAKE		05 56 50.0	+11
LAO				LR	LR		
	comp=Z,7μm,20.0s						
LAO	**LASA Array**	**97.83**	**31**	P	**P**	**05 56 38.3**	**-0.2**
	baz=317						
LOHW	**Long Hollow**	**97.84**	**35**	PFAKE		05 56 50.0	+11
LOHW				LR	LR		
	comp=Z,4μm,19.0s						
SNOW	**Snow King Moun**	**97.86**	**35**	PFAKE		05 56 50.0	+11
SNOW				LR	LR		
	comp=Z,6μm,18.0s						
REDW	**Red Top Meadow**	**97.88**	**35**	PFAKE		05 56 50.0	+11
REDW				LR	LR		
	comp=Z,6μm,18.0s						
HVU	**Hansel Valley**	**97.90**	**38**	*e*P	**P**	**05 56 38.4**	**-0.7**
	comp=Z,18nm,1.2s						
HVU	**Hansel Valley**	**97.90**	**38**	*e*P	**P**	**05 56 38.4**	**-0.7**
HVU				pmax	pmax		
	comp=Z,18nm,1.2s						
PKM	**Mcpherson Peak**	**97.91**	**46**	P	**P**	**05 56 38.1**	**-1.2**
	baz=306						
CWC	**Cottonwood Cre**	**98.11**	**44**	P	**P**	**05 56 39.8**	**-0.4**
	baz=308						
AHID	**Auburn Hatcher**	**98.16**	**36**	PFAKE		05 56 50.0	+10
AHID				LR	LR		
	comp=Z,5μm,20.0s						
CART	**Cartagena**	**98.17**	**317**	PFAKE		05 56 50.0	+10
CART				LR	LR		
	comp=Z,10μm,18.0s						
CART	**Cartagena**	**98.17**	**317**	*i* P	Pdif	05 56 44.0	+3.8
CART				*i* SKS	**SKSac**	**06 07 15.4**	**-2.1**
GRAC	**Grapevine Rang**	**98.23**	**44**	P	Pdif	05 56 41.0	+0.5
	baz=308						
SBC	**Santa Barbara**	**98.24**	**47**	P	**P**	**05 56 40.1**	**-0.4**
	baz=306						
BGU	**Big Grassy Mou**	**98.33**	**38**	*e*P	**P**	**05 56 39.9**	**-1.1**
	comp=Z,33nm,2.0s						
ISA	**Isabella, Lake**	**98.33**	**45**	PFAKE		05 56 50.0	+8.9
ISA				LR	LR		
	comp=Z,4μm,21.0s						
ISA	**Isabella, Lake**	**98.33**	**45**	P	**P**	**05 56 40.0**	**-1.1**
	baz=307						
SPUT	**South Promonto**	**98.40**	**38**	*e*P	**P**	**05 56 41.2**	**-0.2**
	comp=Z,13nm,1.3s						
ARVC	**Arvin**	**98.42**	**46**	P	**P**	**05 56 40.9**	**-0.5**
	baz=307						
R11A	**Troy Canyon, C**	**98.49**	**42**	*e*P	**P**	**05 56 41.0**	**-0.8**
	comp=Z,11nm,0.9s						
R11A				LR	LR		
	comp=Z,4μm,21.0s						
R11A	**Troy Canyon, C**	**98.49**	**42**	P	**P**	**05 56 41.4**	**-0.4**
	baz=309						
DAC	**Darwin (Calif)**	**98.53**	**44**	*e*P	**P**	**05 56 41.7**	**-0.3**
	comp=Z,30nm,1.6s						
DAC				LR	LR		
	comp=Z,4μm,21.0s						
DAC	**Darwin (Calif)**	**98.53**	**44**	*e*P	**P**	**05 56 41.7**	**-0.3**
DAC				pmax	pmax		
	comp=Z,30nm,1.6s						
DAC				MLR	MLR		
	comp=Z,4μm,21.0s						
SCZ2	**Santa Cruz Isl**	**98.56**	**47**	P	**P**	**05 56 41.5**	**-0.5**
	baz=306						
LSZ	**Lusaka**	**98.60**	**257**	*e*P	**P**	**05 56 42.3**	**-0.2**
	comp=Z,23nm,1.0s						
LSZ				LR	LR		
	comp=Z,12μm,20.0s						
LSZ	**Lusaka**	**98.60**	**257**	*e*P	**P**	**05 56 42.3**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,23nm,1.0s						
LSZ				MLR	MLR		
	comp=Z,12μm,20.0s						
ESDC	**Sonseca Array**	**98.63**	**320**	P	Pdif	05 56 42.4	+0.1
	comp=Z,1.2nm,0.9s,baz=27,slow=4.4,SNR=6.5						
ESDC				PP	**PP**	**06 00 41.7**	**-0.7**
	comp=Z,7.2nm,1.0s,baz=48,slow=8.5,SNR=6.2						
ESDC				PKKP	**PKKPbc**	**06 13 10.2**	**-1.2**
	comp=Z,1.6nm,0.7s,baz=257,slow=2.1,SNR=9.2						
ESDC				LR	LR	06 46 13.8	
	comp=Z,7μm,18.4s,baz=45,slow=38						
ESLA	**Sonseca Array**	**98.63**	**320**	PFAKE		05 56 50.0	+7.7
ESLA				LR	LR		
	comp=Z,13μm,18.0s						
TBI	**Tubuai**	**98.67**	**112**	*e*PP	**PP**	**06 00 38.8**	**-5.1**
	comp=Z,1μm,27.0s						
TBI				*e*SKSac	**SKSac**	**06 07 18.4**	**-1.8**
	comp=Z,2μm,24.8s						
TBI	**Tubuai**	**98.67**	**112**	*e*PS	PS	06 09 38.3	-0.6
	comp=Z,4μm,29.8s						
TBI	**Tubuai**	**98.67**	**112**	*e*LR	LR	06 28 34.5	
	comp=Z,7μm,33.0s,baz=299						
MPMC	**Manual Prospec**	**98.73**	**44**	P	**P**	**05 56 42.7**	**-0.2**
	baz=308						
PBRG	**Braganca**	**98.79**	**323**	*e*P	Pdif	05 56 44.2	+1.3
PBRG	**Braganca**	**98.79**	**323**	*e*PP	**PP**	**06 00 47.2**	**+3.7**
OSI	**Osito Audit: C**	**98.80**	**46**	PFAKE		05 56 50.0	+6.9
OSI				LR	LR		
	comp=Z,6μm,20.0s						
OSI	**Osito Audit: C**	**98.80**	**46**	P	**P**	**05 56 42.3**	**-0.8**
	baz=307						
BLG	**Laguna Peak, P**	**98.87**	**47**	P	**P**	**05 56 41.9**	**-1.5**
	baz=307						
FURC	**Furnace Creek,**	**98.87**	**44**	P	**P**	**05 56 42.8**	**-0.5**
	baz=308						
DUG	**Dugway, Tooele**	**98.93**	**39**	*e*P	Pdif	05 56 43.8	+0.1
	comp=Z,16nm,1.3s						
DUG				LR	LR		
	comp=Z,4μm,20.0s						
DUG	**Dugway, Tooele**	**98.93**	**39**	P	**P**	**05 56 43.6**	**-0.2**
	baz=312						
PAB	**San Pablo**	**98.94**	**320**	PFAKE		05 56 50.0	+6.3
PAB				LR	LR		
	comp=Z,11μm,18.0s						
LRMC	**Laurel Mtn Rad**	**98.95**	**45**	P	**P**	**05 56 43.0**	**-0.9**
	baz=308						
TPNV	**Topopah Spring**	**98.96**	**43**	*e*P	**P**	**05 56 43.8**	**-0.1**
	comp=Z,15nm,0.9s						
TPNV				LR	LR		
	comp=Z,4μm,18.0s						
TPNV	**Topopah Spring**	**98.96**	**43**	*e*P	**P**	**05 56 43.8**	**-0.1**
TPNV				pmax	pmax		
	comp=Z,15nm,0.9s						
TPNV				MLR	MLR		
	comp=Z,4μm,18.0s						
TPNV	**Topopah Spring**	**98.96**	**43**	P	**P**	**05 56 43.2**	**-0.7**
	baz=309						
BW06	**Boulder Array**	**98.98**	**35**	*e*P	**P**	**05 56 43.5**	**-0.5**
	comp=Z,6.6nm,1.0s						
BW06				LR	LR		
	comp=Z,6μm,19.0s						
BW06	**Boulder Array**	**98.98**	**35**	P	**P**	**05 56 42.7**	**-1.3**
	baz=314						
PD31	**Pinedale Array**	**98.98**	**35**	*e*P	**P**	**05 56 42.8**	**-1.2**
	comp=Z,6.2nm,1.0s						
PD31				*e*PP	**PP**	**06 00 44.0**	**-1.1**
PD31				*e*PKKPbc	**PKKPbc**	**06 13 09.8**	**-1.0**
PDAR	**Pinedale Array**	**98.98**	**35**	P	**P**	**05 56 43.6**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=90,slow=1.8,SNR=3.7						
PDAR				PP	**PP**	**06 00 44.0**	**-1.1**
	comp=Z,2.4nm,1.0s,baz=356,slow=3.6,SNR=3.1						
PDAR				PKKPbc	**PKKPbc**	**06 13 09.8**	**-1.0**
	comp=Z,1.4nm,1.0s,baz=122,slow=5.6,SNR=6.4						
PDAR				LR	LR	06 40 35.1	
	comp=Z,4μm,21.3s,baz=340,slow=35						
SNCC	**San Nicolas Is**	**99.07**	**48**	PFAKE		05 56 50.0	+5.7
SNCC				LR	LR		
	comp=Z,4μm,20.0s						
TCUT	**Toone Canyon**	**99.11**	**37**	*e*P	**Pdif**	**05 56 44.2**	**-0.4**
	comp=Z,13nm,0.9s						
DECC	**Green Verdugo**	**99.27**	**46**	P	**Pdif**	**05 56 43.6**	**-1.6**
	baz=307						
ULM	**Lac du Bonnet**	**99.31**	**23**	P	**Pdif**	**05 56 44.1**	**-0.9**
	comp=Z,3.1nm,0.7s,baz=339,slow=7.3,SNR=2.9						
ULM				PKKPbc	**PKKPbc**	**06 13 07.5**	**-2.3**
	comp=Z,3.4nm,0.8s,baz=219,slow=4.2,SNR=3.9						
ULM				LR	LR	06 45 20.9	
	comp=Z,5μm,18.9s,baz=344,slow=38						
ULM	**Lac du Bonnet**	**99.31**	**23**	PFAKE		05 57 00.0	+15
ULM				LR	LR		
	comp=Z,6μm,18.0s						
MVO	**Moncorvo**	**99.38**	**323**	*e*P	**Pdif**	**05 56 48.9**	**+3.3**
MVO	**Moncorvo**	**99.38**	**323**	*e*PP	**PP**	**06 00 53.0**	**+4.9**
MVO				*e*SKS	**SKSac**	**06 07 25.3**	**+1.6**
MVO				*e*SS	**SS**	**06 15 13.3**	**+7.6**
MVO	**Moncorvo**	**99.38**	**323**	*e*LQ	LQ	06 32 15.9	
MVO				*e*LR	LR	06 36 07.8	
	comp=Z,13μm,20.0s						
PASC	**Pasadena Art C**	**99.42**	**46**	PFAKE		05 57 00.0	+14
PASC				LR	LR		
	comp=Z,6μm,20.0s						
PGAV	**Gavieira, Arco**	**99.51**	**324**	*e*P	**Pdif**	**05 56 47.3**	**+1.1**
PGAV	**Gavieira, Arco**	**99.51**	**324**	*e*PP	**PP**	**06 00 52.2**	**+3.1**
PGAV				*e*SKS	**SKSac**	**06 07 24.6**	**+0.3**
PGAV	**Gavieira, Arco**	**99.51**	**324**	*e*LQ	LQ	06 28 32.7	
PGAV				*e*LR	LR	06 33 45.0	
	comp=Z,16μm,18.0s						
PCAB	**Cabril**	**99.55**	**324**	*e*P	**Pdif**	**05 56 51.2**	**+4.9**
PCAB	**Cabril**	**99.55**	**324**	*e*PP	**PP**	**06 00 55.9**	**+6.6**
SHOC	**Shoshone, Teco**	**99.60**	**44**	P	**Pdif**	**05 56 45.3**	**-1.3**
	baz=309						
FMP	**Fort Macarthur**	**99.62**	**47**	P	**Pdif**	**05 56 45.2**	**-1.5**
	baz=307						
GSC	**Goldstone, Bar**	**99.63**	**45**	*e*Pdif	**Pdif**	**05 56 46.2**	**-0.7**
	comp=Z,11nm,0.6s						
GSC				LR	LR		
	comp=Z,4μm,20.0s						
GSC	**Goldstone, Bar**	**99.63**	**45**	*e*P	**Pdif**	**05 56 46.2**	**-0.7**
GSC				pmax	pmax		
	comp=Z,11nm,0.6s						
GSC				MLR	MLR		
	comp=Z,4μm,20.0s						
GSC	**Goldstone, Bar**	**99.63**	**45**	P	**Pdif**	**05 56 45.8**	**-1.1**
	baz=308						
POLO	**Lamas de Olo**	**99.66**	**324**	*e*P	**Pdif**	**05 56 49.1**	**+2.2**
POLO	**Lamas de Olo**	**99.66**	**324**	*e*PP	**PP**	**06 00 55.1**	**+4.9**
POLO				*e*SKS	**SKSac**	**06 07 26.8**	**+1.7**
PVRL	**Vila Real**	**99.68**	**323**	*e*P	**Pdif**	**05 56 53.0**	**+6.1**
PVRL	**Vila Real**	**99.68**	**323**	*e*PP	**PP**	**06 00 57.2**	**+6.8**
MDND	**Maddock**	**99.84**	**26**	PFAKE		05 57 00.0	+13
MDND				LR	LR		
	comp=Z,9μm,20.0s						
MDND	**Maddock**	**99.84**	**26**	P	**Pdif**	**05 56 47.5**	**0.0**
	baz=323						
SHPR	**Sheep Range**	**99.92**	**43**	*e*Pdif	**Pdif**	**05 56 47.5**	**-0.7**
	comp=Z,12nm,1.1s						
SHPR				LR	LR		
	comp=Z,5μm,21.0s						
PVIS	**Viseu**	**100.17**	**323**	*e*P	**Pdif**	**05 56 51.4**	**+2.3**
PVIS	**Viseu**	**100.17**	**323**	*e*PP	PP	06 01 02.4	+8.3
MTE	**Manteigas**	**100.19**	**323**	*e*P	**Pdif**	**05 56 51.8**	**+2.6**
MTE	**Manteigas**	**100.19**	**323**	*e*PP	**PP**	**06 01 00.1**	**+5.8**
MTE				*e*SKS	**SKSac**	**06 07 28.2**	**+0.5**
MTE				*e*SS	**SS**	**06 15 24.7**	**+7.7**
MTE	**Manteigas**	**100.19**	**323**	*e*LQ	LQ	06 32 39.1	
MTE				*e*LR	LR	06 38 35.3	
	comp=Z,12μm,20.0s						
MTE	**Manteigas**	**100.19**	**323**	PFAKE		05 57 00.0	+11
MTE				LR	LR		
	comp=Z,11μm,19.0s						
MSU	**Marysvale**	**100.42**	**40**	*e*Pdif	**Pdif**	**05 56 49.3**	**-1.2**
MSU	**Marysvale**	**100.42**	**40**	*e*P	**Pdif**	**05 56 49.3**	**-1.2**
PCBR	**Castelo Branco**	**100.54**	**322**	*e*P	**Pdif**	**05 56 51.4**	**+0.7**
PCBR	**Castelo Branco**	**100.54**	**322**	*e*PP	**PP**	**06 00 58.8**	**+2.0**
K22A	**Casper**	**100.63**	**34**	PFAKE		05 57 00.0	+8.7
K22A				LR	LR		
	comp=Z,5μm,22.0s						
K22A	**Casper**	**100.63**	**34**	P	**Pdif**	**05 56 51.0**	**-0.2**
	baz=317						
MAW	**Mawson**	**100.73**	**199**	P	**Pdif**	**05 56 49.4**	**-1.2**
	comp=Z,2.1nm,0.8s,baz=61,slow=7.8,SNR=5.2						
MAW				PKKPbc	**PKKPbc**	**06 13 05.5**	**-1.2**
	comp=Z,2.5nm,1.0s,baz=235,slow=9.9,SNR=3.7						
MAW	**Mawson**	**100.73**	**199**	*e*Pdif	**Pdif**	**05 56 50.1**	**-0.5**
MAW				*e*PKKPbc	**PKKPbc**	**06 13 05.5**	**-1.2**
MAW				LR	LR		
	comp=Z,800nm,20.0s						
MAW	**Mawson**	**100.73**	**199**	*e*P	**Pdif**	**05 56 50.1**	**-0.5**
MAW				MLR	MLR		
	comp=Z,800nm,20.0s						
RSSD	**Black Hills**	**100.77**	**31**	PFAKE		05 57 00.0	+8.1
RSSD				LR	LR		
	comp=Z,5μm,19.0s						
RSSD	**Black Hills**	**100.77**	**31**	P	**Pdif**	**05 56 50.8**	**-1.1**
	baz=319						
PMRV	**Marv??o**	**100.77**	**322**	*e*P	**Pdif**	**05 56 53.8**	**+2.0**
PMRV	**Marv??o**	**100.77**	**322**	*e*PP	**PP**	**06 01 04.0**	**+5.4**
PMRV				*e*SKS	**SKSac**	**06 07 32.5**	**+2.1**
PMRV				*e*SS	**SS**	**06 15 33.5**	**+8.5**
PMRV	**Marv??o**	**100.77**	**322**	*e*LQ	LQ	06 34 08.9	
PMRV				*e*LR	LR	06 39 11.0	
	comp=Z,15μm,18.0s						
COI	**Coimbra**	**100.80**	**323**	*e*P	**Pdif**	**05 56 54.5**	**+2.7**
COI	**Coimbra**	**100.80**	**323**	*e*PP	**PP**	**06 01 02.1**	**+3.3**
COI	**Coimbra**	**100.80**	**323**	PFAKE		05 57 00.0	+8.2
COI				LR	LR		
	comp=Z,15μm,20.0s						
EMAL	**Malaga-Limoner**	**100.81**	**318**	*i* P	**Pdif**	**05 56 54.2**	**+2.3**
EMAL	**Malaga-Limoner**	**100.81**	**318**	*i* PS	PS	06 10 01.4	+0.6
MELI	**Melilla**	**100.82**	**316**	*i* P	**Pdif**	**05 56 54.8**	**+2.8**
MELI	**Melilla**	**100.82**	**316**	*i* PS	PS	06 10 03.2	+2.2
LDFC	**Landfair**	**100.85**	**44**	PFAKE		05 57 00.0	+7.6
LDFC				LR	LR		
	comp=Z,4μm,22.0s						
PFO	**Pinyon Flats O**	**100.89**	**46**	PFAKE		05 57 00.0	+7.4
PFO				LR	LR		
	comp=Z,6μm,20.0s						
CPE	**Camp Elliot**	**100.91**	**47**	PFAKE		05 57 00.0	+7.5
CPE				LR	LR		
	comp=Z,3μm,20.0s						
AGMN	**Agassiz Nation**	**100.94**	**24**	PFAKE		05 57 00.0	+7.7
AGMN				LR	LR		
	comp=Z,8μm,22.0s						
AGMN	**Agassiz Nation**	**100.94**	**24**	P	**Pdif**	**05 56 51.5**	**-0.8**
	baz=326						
PCAS	**Casmilo, Conde**	**100.96**	**323**	*e*P	**Pdif**	**05 56 55.1**	**+2.5**
PCAS	**Casmilo, Conde**	**100.96**	**323**	*e*PP	**PP**	**06 01 05.0**	**+5.0**
PCAS				*e*SKS	**SKSac**	**06 07 31.8**	**+0.5**
RWWY	**Rawlins**	**100.97**	**35**	PFAKE		05 57 00.0	+7.1
RWWY				LR	LR		
	comp=Z,7μm,22.0s						
KNB	**Kanab**	**101.02**	**41**	*e*Pdif	**Pdif**	**05 56 51.1**	**-2.1**
KNB	**Kanab**	**101.02**	**41**	*e*P	**Pdif**	**05 56 51.1**	**-2.1**
PTOM	**Tomar**	**101.21**	**323**	*e*P	**Pdif**	**05 56 58.8**	**+5.1**
PTOM	**Tomar**	**101.21**	**323**	*e*PP	**PP**	**06 01 07.6**	**+5.7**
BAR	**Barrett**	**101.33**	**47**	PFAKE		05 57 10.0	+16
BAR				LR	LR		
	comp=Z,4μm,19.0s						
SCHQ	**Schefferville**	**101.37**	**5**	PFAKE		05 57 10.0	+16
SCHQ				LR	LR		
	comp=Z,10μm,21.0s						
PMTG	**Montargil**	**101.49**	**322**	*e*P	**Pdif**	**05 56 56.5**	**+1.6**
PMTG	**Montargil**	**101.49**	**322**	*e*PP	**PP**	**06 01 07.0**	**+3.0**
PMTG				*e*SKS	**SKSac**	**06 07 34.0**	**+0.2**
PMTG				*e*SS	**SS**	**06 15 42.2**	**+7.3**
TAOE	**Nuku Hiva Isla**	**101.52**	**95**	PFAKE		05 57 10.0	+14
TAOE				LR	LR		
	comp=Z,6μm,22.0s						
O20A	**White River Ci**	**101.53**	**36**	PFAKE		05 57 10.0	+15
O20A				LR	LR		
	comp=Z,5μm,19.0s						
W13A	**Hualapai Mount**	**101.61**	**43**	PFAKE		05 57 10.0	+14
W13A				LR	LR		
	comp=Z,3μm,20.0s						
U15A	**North Rim**	**101.73**	**41**	*e*Pdif	**Pdif**	**05 56 55.3**	**-1.1**
U15A				LR	LR		
	comp=Z,4μm,21.0s						
PVLZ	**Peæn de**	**101.76**	**317**	*i* P	**Pdif**	**05 56 59.0**	**+2.8**
PVLZ				*i* SKS		06 07 31.4	
CEU	**Ceuta**	**101.95**	**318**	*i* P	**Pdif**	**05 56 59.6**	**+2.6**
CEU				*i* SKS		06 07 39.2	
PBEJ	**Beja**	**102.00**	**321**	*e*PP	**PKiKP**	**06 01 16.4**	**-3.5**
Y12C	**Blythe**	**102.07**	**45**	PFAKE		05 57 10.0	+12
Y12C				LR	LR		
	comp=Z,6μm,19.0s						
SFS	**San Fernando**	**102.08**	**319**	PFAKE		05 57 10.0	+12
SFS				LR	LR		
	comp=Z,12μm,20.0s						
SFS	**San Fernando**	**102.08**	**319**	*i* P	**Pdif**	**05 57 03.6**	**+6.1**
SFS				*i* SKS		06 07 42.7	
TAM	**Tamanrasset**	**102.09**	**302**	PFAKE		05 57 10.0	+12
TAM				LR	LR		
	comp=Z,5μm,20.0s						
PHWY	**Pilot Hill**	**102.16**	**34**	PFAKE		05 57 10.0	+12
PHWY				LR	LR		
	comp=Z,5μm,19.0s						
PMAFR	**Mafra**	**102.16**	**323**	*e*P	**Pdif**	**05 56 58.8**	**+0.9**
PMAFR	**Mafra**	**102.16**	**323**	*e*PP	**PP**	**06 01 12.9**	**+3.8**
PMAFR				*e*SKS	**SKSac**	**06 07 38.4**	**+1.3**
N23A	**Red Feather La**	**102.20**	**35**	PFAKE		05 57 10.0	+12
N23A				LR	LR		
	comp=Z,6μm,21.0s						
N23A	**Red Feather La**	**102.20**	**35**	P	**Pdif**	**05 56 57.2**	**-1.2**
	baz=317						
PV21	**Cone Mtn., Par**	**102.22**	**38**	PFAKE		05 57 10.0	+11
PV21				LR	LR		
	comp=Z,7μm,20.0s						
LIS	**Lisbon**	**102.25**	**322**	*e*Pdif	**Pdif**	**05 56 58.4**	**0.0**
LIS				*e*PP	**PP**	**06 01 10.6**	**+0.9**
LIS				AMS	AMS	06 50 23.2	
	comp=Z,20μm,18.0s						
LIS	**Lisbon**	**102.25**	**322**	*e*P	**Pdif**	**05 56 58.3**	**0.0**
LIS				*e*		06 01 10.6	
PV23	**Carpenter Ridg**	**102.28**	**38**	PFAKE		05 57 10.0	+11
PV23				LR	LR		
	comp=Z,9μm,20.0s						
GLA	**Glamis**	**102.31**	**45**	PFAKE		05 57 10.0	+11
GLA				LR	LR		
	comp=Z,4μm,20.0s						
PV10	**Paradox Valley**	**102.31**	**38**	PFAKE		05 57 10.0	+11
PV10				LR	LR		
	comp=Z,7μm,21.0s						
PNCL	**Nicolau / Gran**	**102.32**	**322**	*e*P	**Pdif**	**05 56 59.7**	**+1.1**
PNCL	**Nicolau / Gran**	**102.32**	**322**	*e*PP	**PP**	**06 01 14.4**	**+4.1**
PNCL				*e*SKS	**SKSac**	**06 07 39.2**	**+1.4**
PNCL				*e*SS	**SS**	**06 15 52.4**	**+6.0**
PV14	**Lion Creek, Pa**	**102.33**	**38**	PFAKE		05 57 10.0	+11
PV14				LR	LR		
	comp=Z,7μm,20.0s						
MESJ	**Messejana**	**102.33**	**321**	*e*Pdif	**Pdif**	**05 56 58.7**	**-0.1**
MESJ				*e*PP	**PP**	**06 01 11.2**	**+0.8**
MESJ				*e*SKSac	**SKSac**	**06 07 37.0**	**-0.9**
MESJ				AMS	AMS	06 41 24.4	
	comp=N,20μm,24.4s						
MESJ	**Messejana**	**102.33**	**321**	*e*P	**Pdif**	**05 56 59.8**	**+1.1**
MESJ	**Messejana**	**102.33**	**321**	*e*PP	**PP**	**06 01 13.3**	**+2.9**
MESJ	**Messejana**	**102.33**	**321**	*e*P	**Pdif**	**05 56 58.6**	**-0.1**
MESJ				*e*		06 01 11.1	
MESJ				*e*		06 07 37.0	
PVAQ	**V

PBDV				*e*SS	**SS**	**06 15 44.2**	**-5.9**
PV13	**Radium Mtn., P**	**102.59**	**38**	PFAKE		05 57 10.0	+10
PV13				LR	LR		
comp=Z,5μm,20.0s							
PV01	**Paradox Valley**	**102.75**	**38**	PFAKE		05 57 10.0	+9.1
PV01				LR	LR		
comp=Z,5μm,20.0s							
EYMN	**Ely**	**102.80**	**22**	PFAKE		05 57 10.0	+9.4
EYMN				LR	LR		
comp=Z,7μm,20.0s							
EYMN	**Ely**	**102.80**	**22**	P	**Pdif**	**05 56 59.7**	**-0.9**
baz=330							
PTEO	**Sao Teotonio**	**102.82**	**321**	*e*P	**Pdif**	**05 57 10.4**	**+10**
PTEO	**Sao Teotonio**	**102.82**	**321**	*e*PP	PP	06 01 25.6	+12
SUSD	**Miller**	**102.83**	**28**	P	**Pdif**	**05 56 59.9**	**-0.9**
baz=323							
WUAZ	**Wupatki**	**102.89**	**42**	PFAKE		05 57 10.0	+8.5
WUAZ				LR	LR		
comp=Z,4μm,20.0s							
WUAZ	**Wupatki**	**102.89**	**42**	P	**Pdif**	**05 57 02.0**	**+0.5**
baz=312							
SMCO	**Snowmass**	**102.89**	**36**	PFAKE		05 57 10.0	+8.3
SMCO				LR	LR		
comp=Z,5μm,19.0s							
Y14A	**Wickenburg**	**102.92**	**44**	*e*Pdif	**Pdif**	**05 57 00.8**	**-0.6**
Y14A				LR	LR		
comp=Z,4μm,21.0s							
MORF	**Marmelete**	**102.95**	**321**	*e*Pdif	**Pdif**	**05 57 01.4**	**-0.1**
MORF				*e*SKSac	**SKSac**	**06 07 39.8**	**-1.1**
MORF				AMS	AMS	06 41 51.3	
comp=N,22μm,20.3s							
MORF	**Marmelete**	**102.95**	**321**	*e*P	**Pdif**	**05 57 05.2**	**+3.7**
MORF	**Marmelete**	**102.95**	**321**	*e*PP	**PP**	**06 01 22.0**	**+6.9**
MORF				*e*SKS		06 07 42.2	
MORF				*e*SS	**SS**	**06 16 01.3**	**+6.1**
MORF	**Marmelete**	**102.95**	**321**	*e*P	**Pdif**	**05 57 01.4**	**-0.1**
MORF				*e*		06 07 39.8	
PFVI	**Vila Bisbo**	**103.17**	**321**	*e*P	**Pdif**	**05 57 06.1**	**+3.7**
PFVI	**Vila Bisbo**	**103.17**	**321**	*e*PP	PP	06 01 25.9	+9.2
PFVI				*e*SKS		06 07 43.0	
PFVI				*e*SS	**SS**	**06 16 06.0**	**+7.8**
PFVI	**Vila Bisbo**	**103.17**	**321**	PFAKE		05 57 10.0	+7.6
PFVI				LR	LR		
comp=Z,16μm,18.0s							
ISCO	**Idaho Springs**	**103.17**	**35**	PFAKE		05 57 10.0	+7.2
ISCO				LR	LR		
comp=Z,6μm,21.0s							
ISCO	**Idaho Springs**	**103.17**	**35**	P	**Pdif**	**05 57 02.9**	**0.0**
baz=317							
113A	**Mohawk Valley,**	**103.18**	**45**	PFAKE		05 57 10.0	+7.4
113A				LR	LR		
comp=Z,5μm,20.0s							
IFR	**Ifrane**	**103.35**	**316**	*i* P	**Pdif**	**05 57 08.0**	**+4.5**
IFR				*i* SKS		06 07 46.9	
MVCO	**Mesa Verde**	**103.43**	**39**	PFAKE		05 57 10.0	+6.1
MVCO				LR	LR		
comp=Z,4μm,18.0s							
MVCO	**Mesa Verde**	**103.43**	**39**	P	**Pdif**	**05 57 03.3**	**-0.7**
baz=314							
X16A	**Lo Mia Camp, P**	**103.58**	**42**	PFAKE		05 57 20.0	+15
X16A				LR	LR		
comp=Z,4μm,20.0s							
C40A	**Isle Royale Na**	**103.60**	**20**	PFAKE		05 57 10.0	+5.9
C40A				LR	LR		
comp=Z,10μm,18.0s							
C40A	**Isle Royale Na**	**103.60**	**20**	P	**Pdif**	**05 57 03.4**	**-0.7**
baz=332							
E38A	**The Farm, Brul**	**103.93**	**23**	PFAKE		05 57 20.0	+14
E38A				LR	LR		
comp=Z,9μm,20.0s							
E38A	**The Farm, Brul**	**103.93**	**23**	P	**Pdif**	**05 57 06.0**	**+0.3**
baz=329							
VNDA	**Vanda**	**103.97**	**172**	Pdiff	**Pdif**	**05 57 06.0**	**+1.1**
comp=Z,3.8nm,1.0s,baz=319,slow=6.4,SNR=12							
VNDA				PKiKP	**PKiKP**	**06 01 20.4**	**-1.8**
comp=Z,7.8nm,1.0s,baz=87,slow=23,SNR=13							
VNDA				PKKPbc	**PKKPbc**	**06 12 55.4**	**-1.9**
comp=Z,1.6nm,0.8s,baz=39,slow=0.3,SNR=6.9							
VNDA	**Vanda**	**103.97**	**172**	*e*Pdif	**Pdif**	**05 57 03.6**	**-1.3**
VNDA				*e*PP	**PP**	**06 01 23.4**	**+0.8**
VNDA				*e*PKKPbc	**PKKPbc**	**06 12 56.0**	**-1.3**
VNDA	**Vanda**	**103.97**	**172**	*e*P	**Pdif**	**05 57 03.6**	**-1.3**
VNDA				*e*		06 01 23.4	
S22A	**4UR Ranch, Cre**	**104.00**	**37**	PFAKE		05 57 20.0	+13
S22A				LR	LR		
comp=Z,7μm,22.0s							
S22A	**4UR Ranch, Cre**	**104.00**	**37**	P	**Pdif**	**05 57 05.2**	**-1.3**
baz=316							
Q24A	**Divide**	**104.03**	**35**	PFAKE		05 57 20.0	+13
Q24A				LR	LR		
comp=Z,7μm,22.0s							
Q24A	**Divide**	**104.03**	**35**	P	**Pdif**	**05 57 06.4**	**-0.3**
baz=317							
OGNE	**Ogallala**	**104.14**	**32**	PFAKE		05 57 20.0	+13
OGNE				LR	LR		
comp=Z,6μm,20.0s							
OGNE	**Ogallala**	**104.14**	**32**	P	**Pdif**	**05 57 05.5**	**-1.3**
baz=320							
W18A	**Petrified Fore**	**104.15**	**41**	PFAKE		05 57 20.0	+13
W18A				LR	LR		
comp=Z,5μm,20.0s							
W18A	**Petrified Fore**	**104.15**	**41**	P	**Pdif**	**05 57 05.9**	**-1.2**
baz=313							
F37A	**Hinrichs Farm,**	**104.30**	**24**	P	**Pdif**	**05 57 06.6**	**-0.7**
baz=328							
214A	**Organ Pipe Nat**	**104.32**	**45**	P	**Pdif**	**05 57 06.6**	**-1.1**
baz=310							
F38A	**Pierce - Schro**	**104.37**	**23**	P	**Pdif**	**05 57 06.2**	**-1.4**
baz=329							
ECSD	**EROS Data Cent**	**104.40**	**27**	PFAKE		05 57 20.0	+12
ECSD				LR	LR		
comp=Z,8μm,21.0s							
ECSD	**EROS Data Cent**	**104.40**	**27**	P	**Pdif**	**05 57 06.2**	**-1.5**
baz=325							
X18A	**Snowflake**	**104.42**	**41**	PFAKE		05 57 20.0	+12
X18A				LR	LR		
comp=Z,4μm,20.0s							
E39A	**Mellen**	**104.48**	**22**	P	**Pdif**	**05 57 06.9**	**-1.2**
baz=330							
D41A	**Chassel**	**104.54**	**20**	PFAKE		05 57 20.0	+12
D41A				LR	LR		
comp=Z,10μm,20.0s							
D41A	**Chassel**	**104.54**	**20**	P	**Pdif**	**05 57 07.9**	**-0.4**
baz=332							
E40A	**Wakefield**	**104.64**	**22**	P	**Pdif**	**05 57 08.0**	**-0.9**
baz=331							
SPMN	**Marine on St.**	**104.66**	**24**	PFAKE		05 57 20.0	+11
SPMN				LR	LR		
comp=Z,10μm,18.0s							
SPMN	**Marine on St.**	**104.66**	**24**	P	**Pdif**	**05 57 07.9**	**-1.1**
baz=328							
SDCO	**Great Sand Dun**	**104.73**	**37**	PFAKE		05 57 20.0	+10
SDCO				LR	LR		
comp=Z,8μm,21.0s							
SDCO	**Great Sand Dun**	**104.73**	**37**	P	**Pdif**	**05 57 08.2**	**-1.6**
baz=317							
F39A	**Loretta**	**104.75**	**22**	P	**Pdif**	**05 57 08.0**	**-1.3**
baz=330							
MATQ	**Matagami**	**104.88**	**12**	P	**Pdif**	**05 57 09.4**	**-0.4**
baz=342							
SBA	**Scott Base**	**104.90**	**171**	PFAKE		05 57 20.0	+11
SBA				LR	LR		
comp=Z,3μm,22.0s							
E41A	**Kenton**	**104.94**	**21**	P	**Pdif**	**05 57 09.0**	**-1.1**
baz=332							
F40A	**Park Falls**	**105.02**	**22**	P	**Pdif**	**05 57 09.4**	**-1.1**
baz=331							
G38A	**Ridgeland**	**105.06**	**23**	P	**Pdif**	**05 57 09.3**	**-1.4**
baz=329							
COWI	**Conover**	**105.20**	**21**	PFAKE		06 01 40.0	+14
COWI				LR	LR		
comp=Z,12μm,19.0s							
G39A	**Holcombe**	**105.20**	**23**	P	**Pdif**	**05 57 09.7**	**-1.7**
baz=330							
E42A	**Champion**	**105.30**	**20**	P	**PKiKP**	**06 01 25.3**	**-0.4**
baz=333							
KSCO	**Kaye Shedlock'**	**105.31**	**34**	PFAKE		06 01 40.0	+14
KSCO				LR	LR		
comp=Z,8μm,19.0s							
KSCO	**Kaye Shedlock'**	**105.31**	**34**	P	**PKiKP**	**06 01 25.6**	**-0.4**
baz=319							
CHGQ	**Chibougamau**	**105.32**	**10**	P	**PKiKP**	**06 01 25.6**	**0.0**
baz=345							
H38A	**Maiden Rock**	**105.32**	**24**	P	**PKiKP**	**06 01 26.1**	**+0.3**
baz=328							
TUC	**Tucson**	**105.39**	**44**	PFAKE		06 01 40.0	+14
TUC				LR	LR		
comp=Z,6μm,20.0s							
TUC	**Tucson**	**105.39**	**44**	P	**PKiKP**	**06 01 26.4**	**+0.1**
baz=312							
F41A	**Three Lakes**	**105.53**	**21**	PFAKE		06 01 40.0	+14
F41A				LR	LR		
comp=Z,11μm,19.0s							
F41A	**Three Lakes**	**105.53**	**21**	P	**PKiKP**	**06 01 26.6**	**+0.4**
baz=332							
G40A	**Rib Lake**	**105.56**	**22**	PFAKE		06 01 40.0	+14
G40A				LR	LR		
comp=Z,9μm,20.0s							
G40A	**Rib Lake**	**105.56**	**22**	P	**PKiKP**	**06 01 25.8**	**-0.4**
baz=330							
BGNE	**Belgrade**	**105.60**	**30**	PFAKE		06 01 40.0	+14
BGNE				LR	LR		
comp=Z,4μm,19.0s							
BGNE	**Belgrade**	**105.60**	**30**	P	**PKiKP**	**06 01 24.5**	**-2.0**
baz=323							
E43A	**Lone Tree Farm**	**105.64**	**20**	PFAKE		06 01 40.0	+14
E43A				LR	LR		
comp=Z,6μm,20.0s							
E43A	**Lone Tree Farm**	**105.64**	**20**	P	**PKiKP**	**06 01 25.2**	**-1.1**
baz=333							
LSQQ	**Lebel-sur-Quev**	**105.67**	**12**	P	**PKiKP**	**06 01 26.6**	**+0.3**
baz=343							
H39A	**Augusta**	**105.69**	**23**	P	**PKiKP**	**06 01 25.8**	**-0.7**
baz=329							
E44A	**Grand Marais A**	**105.75**	**19**	PFAKE		06 01 40.0	+14
E44A				LR	LR		
comp=Z,8μm,21.0s							
E44A	**Grand Marais A**	**105.75**	**19**	P	**PKiKP**	**06 01 25.6**	**-0.9**
baz=334							
T25A	**Trinidad**	**105.76**	**36**	PFAKE		06 01 40.0	+13
T25A				LR	LR		
comp=Z,5μm,21.0s							
T25A	**Trinidad**	**105.76**	**36**	P	**PKiKP**	**06 01 25.7**	**-1.4**
baz=317							
F42A	**Maple Grove Fa**	**105.83**	**21**	P	**PKiKP**	**06 01 25.6**	**-1.0**
baz=332							
G41A	**Antigo**	**105.96**	**22**	P	**PKiKP**	**06 01 25.8**	**-1.1**
baz=331							
D46A	**Sault St. Mari**	**106.04**	**18**	P	**PKiKP**	**06 01 26.0**	**-1.0**
baz=336							
H40A	**Chili**	**106.06**	**23**	P	**PKiKP**	**06 01 26.9**	**-0.3**
baz=330							
F43A	**Flat Rock, Esc**	**106.07**	**20**	P	**PKiKP**	**06 01 25.6**	**-1.5**
baz=333							
D47A	**Chapleau**	**106.14**	**17**	P	**PKiKP**	**06 01 25.4**	**-1.8**
baz=337							
F44A	**Big Bay de Noc**	**106.18**	**20**	P	**PKiKP**	**06 01 25.4**	**-1.9**
baz=334							
G42A	**Mountain**	**106.19**	**21**	PFAKE		06 01 40.0	+13
G42A				LR	LR		
comp=Z,9μm,20.0s							
G42A	**Mountain**	**106.19**	**21**	P	**PKiKP**	**06 01 26.5**	**-0.8**
baz=332							
TASM	**ASL Pad, Albuq**	**106.20**	**39**	P	**PKiKP**	**06 01 26.3**	**-1.6**
baz=315							
TASM	**ASL Pad, Albuq**	**106.20**	**39**	P	**PKiKP**	**06 01 26.4**	**-1.5**
baz=315							
ANMO	**Albuquerque**	**106.20**	**39**	PKiKP	**PKiKP**	**06 01 27.6**	**-0.3**
comp=Z,2.7nm,0.9s,baz=284,slow=5.9,SNR=4.7							
ANMO	**Albuquerque**	**106.20**	**39**	*e*PKiKP	**PKiKP**	**06 01 29.4**	**+1.4**
ANMO				LR	LR		
comp=Z,5μm,19.0s							
ANMO	**Albuquerque**	**106.20**	**39**	P	**PKiKP**	**06 01 26.8**	**-1.1**
baz=315							
E45A	**Wooded Hills,**	**106.20**	**19**	P	**PKiKP**	**06 01 25.9**	**-1.5**
baz=335							
I39A	**Houston**	**106.31**	**24**	PFAKE		06 01 40.0	+12
I39A				LR	LR		
comp=Z,7μm,18.0s							
I39A	**Houston**	**106.31**	**24**	P	**PKiKP**	**06 01 26.6**	**-1.0**
baz=329							
H41A	**Junction City**	**106.32**	**22**	PFAKE		06 01 40.0	+12
H41A				LR	LR		
comp=Z,13μm,20.0s							
H41A	**Junction City**	**106.32**	**22**	P	**PKiKP**	**06 01 26.7**	**-1.0**
baz=331							
D49A	**Beulah Townshi**	**106.39**	**16**	P	**PKiKP**	**06 01 26.6**	**-1.1**
baz=339							
G43A	**Wallace**	**106.42**	**21**	PFAKE		06 01 40.0	+12
G43A				LR	LR		
comp=Z,9μm,20.0s							
G43A	**Wallace**	**106.42**	**21**	P	**PKiKP**	**06 01 27.1**	**-0.7**
baz=333							
E46A	**Sault Ste Mari**	**106.45**	**18**	PFAKE		06 01 40.0	+12
E46A				LR	LR		
comp=Z,8μm,19.0s							
E46A	**Sault Ste Mari**	**106.45**	**18**	P	**PKiKP**	**06 01 27.3**	**-0.4**
baz=336							
VLDQ	**Val d'Or**	**106.48**	**13**	PFAKE		06 01 40.0	+12
VLDQ				LR	LR		
comp=Z,10μm,19.0s							
Y22D	**IRIS PASSCAL I**	**106.54**	**40**	PFAKE		06 01 40.0	+11
Y22D				LR	LR		
comp=Z,6μm,21.0s							
Y22D	**IRIS PASSCAL I**	**106.54**	**40**	P	**PKiKP**	**06 01 27.5**	**-1.0**
baz=315							
I40A	**Norwalk**	**106.61**	**23**	P	**PKiKP**	**06 01 26.6**	**-1.6**
baz=330							
E47A	**Iron Bridge**	**106.65**	**17**	P	**PKiKP**	**06 01 27.5**	**-0.6**
baz=337							
J39A	**Decorah**	**106.69**	**24**	P	**PKiKP**	**06 01 27.0**	**-1.3**
baz=329							
F45A	**CMU Biological**	**106.71**	**19**	P	**PKiKP**	**06 01 27.2**	**-1.1**
baz=335							
I41A	**Arkdale**	**106.73**	**23**	PFAKE		06 01 40.0	+12
I41A				LR	LR		
comp=Z,8μm,18.0s							
I41A	**Arkdale**	**106.73**	**23**	P	**PKiKP**	**06 01 27.7**	**-0.7**
baz=331							
H42A	**Shiocton**	**106.80**	**22**	PFAKE		06 01 40.0	+12
H42A				LR	LR		
comp=Z,9μm,19.0s							
H42A	**Shiocton**	**106.80**	**22**	P	**PKiKP**	**06 01 27.0**	**-1.5**
baz=332							
F46A	**Macinaw City C**	**106.86**	**19**	P	**PKiKP**	**06 01 27.3**	**-1.2**
baz=335							
CBKS	**Cedar Bluff**	**106.90**	**32**	PFAKE		06 01 40.0	+11
CBKS				LR	LR		
comp=Z,8μm,19.0s							
CBKS	**Cedar Bluff**	**106.90**	**32**	P	**PKiKP**	**06 01 28.4**	**-0.6**
baz=321							
E48A	**Lockeyer**	**106.92**	**17**	P	**PKiKP**	**06 01 28.5**	**-0.2**
baz=338							
319A	**Douglas**	**106.96**	**44**	PFAKE		06 01 40.0	+11
319A				LR	LR		
comp=Z,6μm,20.0s							
J40A	**Soldiers Grove**	**106.99**	**24**	P	**PKiKP**	**06 01 27.8**	**-1.1**
baz=330							
D51A	**Lot 18 Range I**	**107.04**	**14**	P	**PKiKP**	**06 01 28.0**	**-0.9**
baz=340							
H43A	**Windswept, Lux**	**107.09**	**21**	PFAKE		06 01 40.0	+11
H43A				LR	LR		
comp=Z,10μm,19.0s							
H43A	**Windswept, Lux**	**107.09**	**21**	P	**PKiKP**	**06 01 27.9**	**-1.2**
baz=332							
121A	**Cookes Peak, D**	**107.10**	**42**	P	**PKiKP**	**06 01 27.6**	**-2.0**
baz=314							
K39A	**Oelwein**	**107.15**	**25**	P	**PKiKP**	**06 01 27.3**	**-1.9**
baz=329							
I42A	**Draeger Farm,**	**107.21**	**22**	PFAKE		06 01 40.0	+11
I42A				LR	LR		
comp=Z,11μm,20.0s							
I42A	**Draeger Farm,**	**107.21**	**22**	P	**PKiKP**	**06 01 28.5**	**-0.7**
baz=331							
DRLN	**Deer Lake**	**107.23**	**359**	PFAKE		06 01 40.0	+11
DRLN				LR	LR		
comp=Z,10μm,20.0s							
G46A	**Petoskey**	**107.24**	**19**	P	**PKiKP**	**06 01 27.7**	**-1.6**
baz=335							
G45A	**Suttons Bay**	**107.25**	**19**	PFAKE		06 01 40.0	+11
G45A				LR	LR		
comp=Z,10μm,19.0s							
G45A	**Suttons Bay**	**107.25**	**19**	P	**PKiKP**	**06 01 27.3**	**-2.0**
baz=334							
J41A	**Loganville**	**107.28**	**23**	P	**PKiKP**	**06 01 27.8**	**-1.7**
baz=330							
SCIA	**State Center**	**107.31**	**26**	PFAKE		06 01 40.0	+10
SCIA				LR	LR		
comp=Z,10μm,18.0s							
SCIA	**State Center**	**107.31**	**26**	P	**PKiKP**	**06 01 27.9**	**-1.6**
baz=327							
E50A	**Wahnapitae**	**107.34**	**16**	P	**PKiKP**	**06 01 28.8**	**-0.7**
baz=339							
D52A	**ZEK Kipawa Sen**	**107.36**	**14**	P	**PKiKP**	**06 01 26.8**	**-2.7**
baz=341							
F48A	**Evansville**	**107.41**	**17**	P	**PKiKP**	**06 01 28.9**	**-0.7**
baz=337							
D53A	**Lac Vacive, Po**	**107.42**	**13**	PFAKE		06 01 40.0	+10
D53A				LR	LR		
comp=Z,10μm,19.0s							
D53A	**Lac Vacive, Po**	**107.42**	**13**	P	**PKiKP**	**06 01 27.7**	**-1.9**
baz=342							
HSIG		**107.44**	**46**	PFAKE		06 01 40.0	+10
HSIG				LR	LR		
comp=Z,3μm,19.0s							
I43A	**Langenfeld Bro**	**107.48**	**22**	P	**PKiKP**	**06 01 26.2**	**-3.6**
baz=332							
H45A	**Beulah**	**107.51**	**20**	P	**PKiKP**	**06 01 28.7**	**-1.1**
baz=334							
E51A	**G1948 Merrick**	**107.53**	**15**	P	**PKiKP**	**06 01 29.5**	**-0.3**
baz=340							
D54A	**Lac Fusel, La**	**107.56**	**13**	P	**PKiKP**	**06 01 29.2**	**-0.6**
baz=343							
JFWS	**Jewell Farm**	**107.59**	**24**	PFAKE		06 01 40.0	+10
JFWS				LR	LR		
comp=Z,7μm,18.0s							
JFWS	**Jewell Farm**	**107.59**	**24**	P	**PKiKP**	**06 01 28.5**	**-1.6**
baz=330							
L39A	**Vinton**	**107.61**	**25**	P	**PKiKP**	**06 01 29.3**	**-0.8**
baz=328							
F49A	**Sandfield**	**107.62**	**17**	P	**PKiKP**	**06 01 29.3**	**-0.7**
baz=336							
J42A	**Columbus**	**107.64**	**23**	P	**PKiKP**	**06 01 28.1**	**-2.0**
baz=331							
G47A	**Hillman**	**107.67**	**18**	P	**PKiKP**	**06 01 28.2**	**-1.9**
baz=336							
SRIG	**Santa Rosalia**	**107.67**	**48**	PFAKE		06 01 40.0	+9.4
SRIG				LR	LR		
comp=Z,5μm,19.0s							
GLMI	**Grayling**	**107.76**	**19**	PFAKE		06 01 40.0	+10
GLMI				LR	LR		
comp=Z,9μm,18.0s							
GLMI	**Grayling**	**107.76**	**19**	P	**PKiKP**	**06 01 28.8**	**-1.5**
baz=335							
J43A	**Natural Harves**	**107.83**	**22**	P	**PKiKP**	**06 01 29.3**	**-1.2**
baz=332							
H46A	**Fife Lake**	**107.84**	**19**	P	**PKiKP**	**06 01 29.3**	**-1.1**
baz=335							
L40A	**Anamosa**	**107.96**	**25**	PFAKE		06 01 40.0	+9.3
L40A				LR	LR		
comp=Z,7μm,20.0s							
L40A	**Anamosa**	**107.96**	**25**	P	**PKiKP**	**06 01 28.7**	**-2.0**
baz=329							
E52A	**Mattawa**	**107.96**	**14**	P	**PKiKP**	**06 01 29.9**	**-0.7**
baz=341							
I45A	**Fountain**	**107.97**	**20**	PFAKE		06 01 40.0	+9.3
I45A				LR	LR		
comp=Z,8μm,19.0s							
I45A	**Fountain**	**107.97**	**20**	P	**PKiKP**	**06 01 28.2**	**-2.4**
baz=334							
F51A	**Arnstein**	**108.00**	**15**	P	**PKiKP**	**06 01 31.4**	**+0.7**
baz=340							
LATQ	**La Tuque**	**108.03**	**10**	P	**PKiKP**	**06 01 30.0**	**-0.6**
baz=347							
K42A	**Prairie Point,**	**108.03**	**23**	P	**PKiKP**	**06 01 31.5**	**+0.6**
baz=331							
H47A	**Mio**	**108.09**	**19**	P	**PKiKP**	**06 01 30.2**	**-0.7**
baz=336							
E54A	**Lac Daplat, Po**	**108.14**	**13**	P	**PKiKP**	**06 01 31.2**	**+0.3**
baz=342							
KSU1	**Kansas State U**	**108.16**	**30**	PFAKE		06 01 40.0	+8.8
KSU1				LR	LR		
comp=Z,8μm,18.0s							
KSU1	**Kansas State U**	**108.16**	**30**	P	**PKiKP**	**06 01 30.0**	**-1.2**
baz=324							
H48A	**Harrisville**	**108.25**	**18**	PFAKE		06 01 40.0	+8.8
H48A				LR	LR		
comp=Z,5μm,18.0s							
H48A	**Harrisville**	**108.25**	**18**	P	**PKiKP**	**06 01 31.0**	**-0.2**
baz=336							
TOBO	**Tobermory, Bru**	**108.26**	**17**	P	**PKiKP**	**06 01 30.1**	**-1.1**
baz=338							
F52A	**Sundridge**	**108.27**	**15**	P	**PKiKP**	**06 01 28.1**	**-3.2**
baz=340							
I46A	**Reed City**	**108.31**	**20**	P	**PKiKP**	**06 01 27.1**	**-4.2**
baz=334							
EPT	**El Paso**	**108.41**	**41**	PFAKE		06 01 40.0	+8.0
EPT				LR	LR		
comp=Z,4μm,21.0s							
ALGO	**Algonquin Park**	**108.41**	**14**	P	**PKiKP**	**06 01 29.5**	**-2.0**
baz=342							
K43A	**Burlington**	**108.46**	**22**	PFAKE		06 01 40.0	+8.4
K43A				LR	LR		
comp=Z,9μm,20.0s							
K43A	**Burlington**	**108.46**	**22**	P	**PKiKP**	**06 01 30.0**	**-1.6**
baz=332							
J45A	**Montague**	**108.46**	**21**	PFAKE		06 01 40.0	+8.4
J45A				LR	LR		
comp=Z,10μm,18.0s							
J45A	**Montague**	**108.46**	**21**	P	**PKiKP**	**06 01 30.9**	**-0.7**
baz=334							
KLBO	**Killbear Provi**	**108.47**	**16**	P	**PKiKP**	**06 01 31.4**	**-0.2**
baz=340							
I47A	**Gladwin**	**108.53**	**19**	PFAKE		06 01 40.0	+8.3
I47A				LR	LR		
comp=Z,10μm,19.0s							
I47A	**Gladwin**	**108.53**	**19**	P	**PKiKP**	**06 01 30.6**	**-1.1**
baz=335							
BUKO	**Buck Lake**	**108.58**	**15**	P	**PKiKP**	**06 01 31.6**	**-0.2**
baz=340							
L42A	**Oliver, Polo**	**108.59**	**24**	PFAKE		06 01 40.0	+8.1
L42A				LR	LR		
comp=Z,5μm,20.0s							
L42A	**Oliver, Polo**	**108.59**	**24**	P	**PKiKP**	**06 01 29.9**	**-2.1**
baz=330							
I48A	**Sherman Twp**	**108.61**	**19**	P	**PKiKP**	**06 01 30.8**	**-1.1**
baz=336							
L43A	**Garden Prairie**	**108.77**	**23**	P	**PKiKP**	**06 01 31.1**	**-1.2**
baz=331							
J46A	**Howard City**	**108.78**	**20**	P	**PKiKP**	**06 01 30.3**	**-2.0**
baz=334							
M41A	**Milan**	**108.81**	**25**	P	**PKiKP**	**06 01 31.6**	**-0.7**
baz=330							
N40A	**Mertquake, Sal**	**108.83**	**26**	P	**PKiKP**	**06 01 28.7**	**-3.6**
baz=329							
PEMO	**Pembroke**	**108.85**	**13**	P	**PKiKP**	**06 01 31.2**	**-1.1**
baz=342							
F55A	**Otter Lake**	**108.88**	**13**	P	**PKiKP**	**06 01 29.5**	**-2.9**
baz=343							
AMTX	**Amarillo**	**108.92**	**36**	PFAKE		06 01 40.0	+7.1
AMTX				LR	LR		
comp=Z,7μm,19.0s							
AMTX	**Amarillo**	**108.92**	**36**	P	**PKiKP**	**06 01 28.5**	**-4.3**
baz=319							
BMRO	**Meriville Lake**	**108.92**	**17**	P	**PKiKP**	**06 01 29.1**	**-3.3**
baz=338							
MSTX	**Muleshoe**	**109.00**	**37**	PFAKE		06 01 40.0	+6.9
MSTX				LR	LR		
comp=Z,8μm,20.0s							
MSTX	**Muleshoe**	**109.00**	**37**	P	**PKiKP**	**06 01 31.1**	**-1.9**
baz=318							
SYO	**Syowa Base**	**109.02**	**202**	‖*e*X	Pdif	05 57 45.8	+18
SYO	**Syowa Base**	**109.02**	**202**	‖*e*PKiKP	**PKiKP**	**06 01 31.0**	**-0.7**
SYO	**Syowa Base**	**109.

comp=Z,6μm,21.0s
BANO Bancroft 109.32 14 P PKiKP 06 01 32.1 -1.1
baz=342
K46A Dorr 109.33 21 P PKiKP 06 01 31.7 -1.6
baz=334
M43A Waltham Townsh 109.35 23 P PKiKP 06 01 33.0 -0.3
baz=331
PQI Presque Isle 109.35 7 PFAKE 06 01 40.0 +6.8
PQI LR LR
comp=Z,11μm,18.0s
G55A Calabogie 109.36 13 P PKiKP 06 01 31.3 -2.0
baz=343
BWLO Walkerton 109.39 17 P PKiKP 06 01 32.6 -0.7
baz=338
J48A Bridge Port 109.40 19 PFAKE 06 01 50.0 +17
J48A LR LR
comp=Z,7μm,19.0s
J48A Bridge Port 109.40 19 P PKiKP 06 01 32.3 -1.0
baz=336
ORIO Orleans, Innes 109.42 12 P PKiKP 06 01 31.4 -2.0
baz=344
TSUM Tsumeb 109.45 257 PFAKE 06 01 50.0 +16
TSUM LR LR
comp=Z,6μm,20.0s
PLVO Plevna 109.49 14 PFAKE 06 01 40.0 +6.5
PLVO LR LR
comp=Z,8μm,20.0s
PLVO Plevna 109.49 14 P PKiKP 06 01 32.8 -0.7
baz=342
J49A Marlette 109.53 18 P PKiKP 06 01 31.2 -2.5
baz=336
K47A Vermontville 109.60 20 P PKiKP 06 01 31.7 -2.1
baz=335
I52A Shelburne 109.68 16 P PKiKP 06 01 31.4 -2.5
baz=339
N43A Stutzman Famil 109.70 24 P PKiKP 06 01 31.1 -3.0
baz=331
I51A Listowel 109.71 17 P PKiKP 06 01 32.4 -1.6
baz=338
M44A Midewin, Midew 109.72 23 PFAKE 06 01 50.0 +16
M44A LR LR
comp=Z,9μm,19.0s
M44A Midewin, Midew 109.72 23 P PKiKP 06 01 32.0 -2.1
baz=332
K48A Perry 109.75 19 P PKiKP 06 01 32.9 -1.2
baz=336
L46A Eue Claire 109.77 21 PFAKE 06 01 50.0 +16
L46A LR LR
comp=Z,8μm,19.0s
L46A Eue Claire 109.77 21 P PKiKP 06 01 33.8 -0.3
baz=333
DELO Deloro Mine 109.87 14 P PKiKP 06 01 33.1 -1.1
baz=342
H55A Tweed 109.93 14 P PKiKP 06 01 33.7 -0.7
baz=342
HDIL Hopedale 109.99 24 PFAKE 06 01 50.0 +15
HDIL LR LR
comp=Z,7μm,18.0s
HDIL Hopedale 109.99 24 P PKiKP 06 01 34.7 +0.1
baz=330
M45A Boilermakers S 110.00 22 P PKiKP 06 01 35.1 +0.6
baz=332
PKRO Pickering 110.05 15 P PKiKP 06 01 35.2 +0.6
baz=340
ACTO Acton 110.14 16 P PKiKP 06 01 31.9 -2.9
baz=339
I55A Frankford 110.14 14 P PKiKP 06 01 34.1 -0.7
baz=342
L47A Sherwood 110.16 21 P PKiKP 06 01 33.2 -1.6
baz=334
N44A Piper City 110.21 23 P PKiKP 06 01 33.3 -1.6
baz=332
K50A Casco 110.22 18 PFAKE 06 01 50.0 +15
K50A LR LR
comp=Z,4μm,20.0s
DRWO Darlington Wes 110.22 15 P PKiKP 06 01 35.1 +0.2
baz=341
WLVO Wesleyville 110.25 15 P PKiKP 06 01 32.5 -2.4
baz=341
TOA1 Torodi Ar. Sit 110.28 295 *e*Pdif **Pdif 05 57 33.5 -0.9**
TOA1 *e*PKiKP **PKiKP 06 01 36.2 +0.5**
TOA1 *e*PKKPbc **PKKPbc 06 12 34.1 -1.7**
TOA1 *e*PKKPab **PKKPab 06 12 46.8 -1.5**
TORD Torodi Ar. Bea 110.28 295 Pdiff **Pdif 05 57 33.5 -0.9**
comp=Z,1.7nm,1.3s,baz=31,slow=3.4,SNR=3.1
TORD PKiKP **PKiKP 06 01 36.2 +0.5**
comp=Z,3.0nm,0.6s,baz=25,slow=3.0,SNR=17
TORD PKKPbc **PKKPbc 06 12 34.1 -1.7**
comp=Z,1.5nm,0.6s,baz=208,slow=2.6,SNR=7.5
TORD PKKPab **PKKPab 06 12 46.8 -1.5**
comp=Z,3.6nm,0.7s,baz=298,slow=4.0,SNR=7.3
M46A Old House Fiel 110.29 22 PFAKE 06 01 50.0 +15
M46A LR LR
comp=Z,9μm,19.0s
M46A Old House Fiel 110.29 22 P PKiKP 06 01 33.0 -2.1
baz=333
AAM Ann Arbor 110.35 19 PFAKE 06 01 50.0 +15
AAM LR LR
comp=Z,9μm,18.0s
AAM Ann Arbor 110.35 19 P PKiKP 06 01 32.3 -2.9
baz=336
FRNY Flat Rock 110.37 11 PFAKE 06 01 50.0 +15
FRNY LR LR
comp=Z,9μm,18.0s
J52A Paris 110.38 17 P PKiKP 06 01 32.3 -2.9
baz=339
N45A Kentland 110.38 23 P PKiKP 06 01 34.1 -1.2
baz=332
LONY Lake Ozonia 110.39 12 PFAKE 06 01 50.0 +15
LONY LR LR
comp=Z,10μm,22.0s
L48A N Adams 110.43 20 P PKiKP 06 01 32.5 -2.9
baz=335,SNR=6.5
LMN Caledonia Moun 110.44 4 PFAKE 06 01 50.0 +15
LMN LR LR
comp=Z,12μm,19.0s
L49A Milan 110.49 19 P PKiKP 06 01 34.3 -1.2
baz=336
WMOK Wichita Mounta 110.56 34 PFAKE 06 01 50.0 +14
WMOK LR LR
comp=Z,6μm,18.0s
WMOK Wichita Mounta 110.56 34 P PKiKP 06 01 34.9 -0.9
baz=321
PECO Prince Edward 110.56 14 P PKiKP 06 01 34.4 -1.1
baz=342
M47A Cromwell 110.58 21 P PKiKP 06 01 31.6 -4.1
baz=334
PKME Peaks-Kenny Pk 110.59 8 PFAKE 06 01 50.0 +14
PKME LR LR
comp=Z,13μm,21.0s
PKME Peaks-Kenny Pk 110.59 8 P PKiKP 06 01 34.9 -0.7
baz=350
SUR Sutherland 110.61 243 PFAKE 06 01 50.0 +14
SUR LR LR
comp=Z,8μm,18.0s
N46A Monticello 110.61 22 P PKiKP 06 01 35.0 -0.8
baz=333
O44A Mansfield 110.65 24 P PKiKP 06 01 33.0 -2.9
baz=331
TYNO Tyneside 110.67 16 P PKiKP 06 01 32.9 -2.9
baz=340
P43A Skaggs, Pawnee 110.70 25 P PKiKP 06 01 32.2 -3.7
baz=330
STCO Saint Catharin 110.74 16 P PKiKP 06 01 33.9 -2.0
baz=340
K52A Tillsonburg 110.74 17 P PKiKP 06 01 33.9 -2.1
baz=339
M48A Edgerton 110.76 20 PFAKE 06 01 50.0 +14
M48A LR LR
comp=Z,10μm,20.0s
M48A Edgerton 110.76 20 P PKiKP 06 01 34.0 -2.0
baz=335
J54A Appleton 110.81 15 PFAKE 06 01 50.0 +14
J54A LR LR
comp=Z,7μm,22.0s
J54A Appleton 110.81 15 P PKiKP 06 01 33.6 -2.4
baz=341
L50A Kingsville 110.84 19 P PKiKP 06 01 33.7 -2.4
baz=337
O45A Potomac 110.84 23 P PKiKP 06 01 33.2 -3.0
baz=332
SFIN Lafayette 110.95 23 PFAKE 06 01 50.0 +14
SFIN LR LR
comp=Z,7μm,20.0s
SFIN Lafayette 110.95 23 P PKiKP 06 01 33.8 -2.5
baz=332
MEDO Medina 110.96 15 P PKiKP 06 01 33.8 -2.5
baz=341
N47A Urbana 110.98 21 P PKiKP 06 01 34.8 -1.7
baz=334
VT1 Waterbury 111.00 11 PFAKE 06 01 50.0 +14
VT1 LR LR
comp=Z,7μm,20.0s
M49A Liberty Center 111.00 20 P PKiKP 06 01 34.4 -2.1
baz=336
GGN Saint George 111.01 6 PFAKE 06 01 50.0 +14
GGN LR LR
comp=Z,12μm,18.0s
J55A Hilton 111.01 15 PFAKE 06 01 50.0 +14
J55A LR LR
comp=Z,8μm,19.0s
J55A Hilton 111.01 15 P PKiKP 06 01 34.4 -2.0
baz=342
PMOZ Porto Moniz, M 111.01 323 *e*LR LR 06 38 11.1
comp=Z,8μm,18.0s
PSCM Serra do Cume 111.02 334 *e*PP **PP 06 02 18.7 +4.8**
PSCM *e*P **PS 06 11 40.7 -4.7**
GBN Guysborough 111.06 2 PFAKE 06 01 50.0 +14
GBN LR LR
comp=Z,9μm,19.0s
LPIG La Paz 111.06 50 PKiKP **PKiKP 06 01 37.5 +0.5**
comp=Z,18nm,0.3s,baz=119,slow=2.5,SNR=4.1
PGRA Graciosa 111.08 335 *e*PP PP 06 02 22.1 +7.8
PGRA *e*P **PS 06 11 48.8 +2.9**
PGRA Graciosa 111.08 335 *e*LR LR 06 36 48.4
comp=Z,945nm,17.6s
NCB Newcomb 111.09 12 PFAKE 06 01 50.0 +13
NCB LR LR
comp=Z,8μm,22.0s
ADH Angra Heroismo 111.10 334 *e*PP **PP 06 02 17.7 +3.2**
TUL1 Leonard 111.11 31 PFAKE 06 01 50.0 +13
TUL1 LR LR
comp=Z,10μm,18.0s
TUL1 Leonard 111.11 31 P PKiKP 06 01 35.1 -1.8
baz=324
RKT Rikitea 111.12 107 *e*SKSac **SKSac 06 08 13.2 -3.6**
comp=Z,2μm,24.8s
RKT Rikitea 111.12 107 *e*PS PS 06 11 46.5 -1.4
comp=Z,7μm,33.5s
RKT Rikitea 111.12 107 *e*LR LR 06 34 29.3
comp=Z,12μm,24.0s
CMLA Cha da Macela 111.15 332 *e*PP **PP 06 02 17.5 +2.6**
CMLA *e*P **PS 06 11 45.3 -1.4**
CMLA Cha da Macela 111.15 332 PFAKE 06 01 50.0 +13
CMLA LR LR
comp=Z,8μm,18.0s
GRON Grota Negra 111.15 332 *e*PP **PP 06 02 17.5 +2.6**
GRON *e*P **PS 06 11 43.0 -3.7**
PLIO Pelee Island, 111.16 19 P **PKiKP 06 01 34.7 -2.1**
baz=337
PSET Sete Cidades 111.18 332 *e*PP **PP 06 02 19.9 +4.7**
PSET *e*P **PS 06 11 42.5 -4.5**
PSET Sete Cidades 111.18 332 *e*LR LR 06 36 49.9
comp=Z,577nm,19.9s
PDA Ponta Delgada 111.22 332 *e*PP **PP 06 02 22.3 +6.9**
N48A Decatur 111.22 21 P **PKiKP 06 01 34.4 -2.5**
baz=334
LBNH Lisbon 111.22 10 PFAKE 06 01 50.0 +13
LBNH LR LR
comp=Z,8μm,20.0s
LBNH Lisbon 111.22 10 P PKiKP 06 01 34.3 -2.5
baz=347
WVL Waterville 111.23 8 PFAKE 06 01 50.0 +13
WVL LR LR
comp=Z,12μm,21.0s
SLM Saint Louis 111.28 26 PFAKE 06 01 50.0 +13
SLM LR LR
comp=Z,8μm,18.0s
EMMW East Machias 111.35 7 PFAKE 06 01 50.0 +13
EMMW LR LR
comp=Z,8μm,19.0s
M50A Fremont 111.35 19 PFAKE 06 01 50.0 +13
M50A LR LR
comp=Z,9μm,19.0s
M50A Fremont 111.35 19 P PKiKP 06 01 33.7 -3.4
baz=336
CCM Cathedral Cave 111.37 27 PFAKE 06 01 50.0 +13
CCM LR LR
comp=Z,7μm,20.0s
CCM Cathedral Cave 111.37 27 P PKiKP 06 01 35.5 -1.7
baz=328
O47A Sheridan 111.39 22 P PKiKP 06 01 36.2 -1.0
baz=333,SNR=6.9
K54A Basiliko Farm, 111.42 16 P PKiKP 06 01 35.6 -1.7
baz=341
N49A Columbus Grove 111.44 20 PFAKE 06 01 50.0 +13
N49A LR LR
comp=Z,10μm,20.0s
N49A Columbus Grove 111.44 20 P PKiKP 06 01 36.1 -1.2
baz=335
ROSA Rosais 111.45 335 *e*PP **PP 06 02 23.2 +6.2**
ROSA *e*P **PS 06 11 40.2 -9.2**
ROSA Rosais 111.45 335 *e*LR LR 06 36 48.4
comp=Z,758nm,17.6s
ROSA Rosais 111.45 335 PFAKE 06 01 50.0 +13
ROSA LR LR
comp=Z,8μm,21.0s
K55A Perry 111.46 15 P PKiKP 06 01 35.2 -2.1
baz=341
PMAN Manadas 111.46 334 *e*PP **PP 06 02 21.2 +4.1**
PMAN *e*P **PS 06 11 47.0 -2.5**
P45A Graceland, Par 111.46 24 PFAKE 06 01 50.0 +13
P45A LR LR
comp=Z,7μm,19.0s
P45A Graceland, Par 111.46 24 P PKiKP 06 01 34.5 -2.9
baz=332
MMNY Mt. Morris Dam 111.50 15 PFAKE 06 01 50.0 +13
MMNY LR LR
comp=Z,9μm,21.0s
ERPA Erie 111.56 17 PFAKE 06 01 50.0 +12
ERPA LR LR
comp=Z,8μm,19.0s
ERPA Erie 111.56 17 P PKiKP 06 01 35.4 -2.1
baz=339
SLBS Sierra La Lagu 111.58 50 PFAKE 06 01 50.0 +12
SLBS LR LR
comp=Z,5μm,18.0s
P46A Rosedale 111.58 23 P PKiKP 06 01 35.9 -1.7
baz=332
PSMN Pico do Norte, 111.58 331 *e*PP **PP 06 02 23.7 +5.6**
PSMN *e*P **PS 06 11 50.5 -0.2**
PSMN Pico do Norte, 111.58 331 *e*LR LR 06 36 36.4
comp=Z,612nm,20.7s
PSMA Santa Maria 111.62 331 *e*P **SP 06 11 53.4 +4.8**
L54A Sinclairville 111.62 16 P PKiKP 06 01 36.0 -1.7
baz=340
L53A Girard 111.64 17 P PKiKP 06 01 37.8 +0.1
baz=339
PPNO Prainha do Nor 111.67 334 *e*P **SP 06 11 41.9 -7.2**
H07N1 FLORES T-PHASB 111.67 337 *e*PP **PP 06 02 20.9 +2.3**
M51A Elyria 111.67 19 P PKiKP 06 01 37.4 -0.3
baz=337
HHAR Hobbs 111.68 30 PFAKE 06 01 50.0 +12
HHAR LR LR
comp=Z,6μm,20.0s
HNH Hanover 111.69 10 PFAKE 06 01 50.0 +12
HNH LR LR
comp=Z,8μm,19.0s
PCED Cedros 111.71 335 *e*PP **PP 06 02 23.8 +5.0**
M52A Chesterland 111.72 18 PFAKE 06 01 50.0 +12
M52A LR LR
comp=Z,8μm,19.0s
M52A Chesterland 111.72 18 P PKiKP 06 01 36.2 -1.7
baz=338
O48A Farmland 111.72 21 P PKiKP 06 01 36.6 -1.2
baz=334
ABTX Abilene, Hawle 111.73 36 PFAKE 06 01 50.0 +12
ABTX LR LR
comp=Z,7μm,19.0s
ABTX Abilene, Hawle 111.73 36 P PKiKP 06 01 38.5 +0.4
baz=320
HAL Halifax 111.73 4 PFAKE 06 01 50.0 +12
HAL LR LR
comp=Z,11μm,19.0s
CALA Caldeira 111.75 335 *e*P **SP 06 11 39.6 -10**
ACCN Adirondack Com 111.76 12 PFAKE 06 01 50.0 +12
ACCN LR LR
comp=Z,8μm,22.0s
PCAN Candelaria 111.77 335 *e*PP **PP 06 02 23.3 +4.0**
FVM French Village 111.77 26 PFAKE 06 01 50.0 +12
FVM LR LR
comp=Z,10μm,22.0s
HOR Horta 111.77 335 *e*PP **PP 06 02 25.2 +6.0**
LTX Lajitas 111.86 41 *e*Pdif **Pdif 05 57 41.0 -0.3**
LTX *e*PKiKP **PKiKP 06 01 38.6 0.0**
LTX *e*PP **PP 06 02 19.5 -1.1**
LTX Lajitas 111.86 41 *i*PKIKP **PKiKP 06 01 38.6 0.0**
LTX *e* 06 02 19.5
TXAR Lajitas Array 111.86 41 Pdiff **Pdif 05 57 41.0 -0.3**
comp=Z,0.2nm,0.7s,baz=286,slow=4.6,SNR=3.5
TXAR PKiKP **PKiKP 06 01 38.6 0.0**
comp=Z,5.2nm,0.8s,baz=347,slow=0.6,SNR=16
TXAR PP **PP 06 02 19.5 -1.1**
comp=Z,8.3nm,1.0s,baz=298,slow=2.7,SNR=7.2
Q45A Warren Harvey, 111.87 24 P PKiKP 06 01 37.8 -0.4
baz=331
L55A Hinsdale 111.89 16 P PKiKP 06 01 36.9 -1.3
baz=341
N50A Nevada 111.90 20 P PKiKP 06 01 37.0 -1.2
baz=336
ALLY Alegheny Colle 111.95 17 PFAKE 06 01 50.0 +12
ALLY LR LR
comp=Z,8μm,19.0s
H07S1 FLORES T-PHASB 111.98 337 *e*PP **PP 06 02 22.9 +2.1**
N51A Ashland 112.00 19 PFAKE 06 01 50.0 +12
N51A LR LR
comp=Z,9μm,18.0s
M53A WI Miller and 112.00 17 P PKiKP 06 01 36.3 -2.1
baz=338
FFD Franklin Falls 112.02 10 PFAKE 06 01 50.0 +12
FFD LR LR
comp=Z,8μm,20.0s
OLIL Olney 112.03 24 PFAKE 06 01 50.0 +12
OLIL LR LR
comp=Z,8μm,18.0s
P47A Martinsville 112.03 23 P PKiKP 06 01 37.2 -1.2
baz=333,SNR=8.0
Q46A CEJHS Indians, 112.05 24 P PKiKP 06 01 36.8 -1.7
baz=332
O49A Covington 112.05 21 PFAKE 06 01 50.0 +11
O49A LR LR
comp=Z,11μm,19.0s
O49A Covington 112.05 21 P PKiKP 06 01 37.3 -1.2
baz=335
U40A Yellville 112.11 29 P PKiKP 06 01 37.4 -1.3
baz=327
M54A Oil Creek Stat 112.21 17 PFAKE 06 01 50.0 +11
M54A LR LR
comp=Z,8μm,18.0s
M54A Oil Creek Stat 112.21 17 P PKiKP 06 01 37.1 -1.7
baz=340
BLO Bloomington 112.22 23 PFAKE 06 01 50.0 +11
BLO LR LR
comp=Z,8μm,19.0s
HPIG 112.30 45 PFAKE 06 01 50.0 +10
HPIG LR LR
comp=Z,4μm,20.0s
N52A McGinn's Farm, 112.30 18 P PKiKP 06 01 38.2 -0.8
baz=338
O50A Cable 112.32 20 P PKiKP 06 01 38.2 -0.8
baz=336
P48A Milroy 112.34 22 P PKiKP 06 01 37.8 -1.3
baz=334
R45A Skylar, Fairfi 112.34 25 P PKiKP 06 01 38.3 -0.8
baz=331
TRY Troy 112.39 12 PFAKE 06 01 50.0 +11
TRY LR LR
comp=Z,7μm,22.0s
BINY Binghamton 112.44 14 PFAKE 06 01 50.0 +11
BINY LR LR
comp=Z,7μm,20.0s
BINY Binghamton 112.44 14 P PKiKP 06 01 38.9 -0.4
baz=343
ACSO Alum Creek Sta 112.44 20 PFAKE 06 01 50.0 +11
ACSO LR LR
comp=Z,6μm,21.0s
ACSO Alum Creek Sta 112.44 20 P PKiKP 06 01 38.0 -1.3
baz=336
Q47A Bedord North L 112.46 23 P PKiKP 06 01 38.1 -1.3
baz=333
M55A Ridgway 112.48 16 P PKiKP 06 01 38.1 -1.3
baz=340
SIUC Southern Illin 112.48 26 PFAKE 06 01 50.0 +11
SIUC LR LR
comp=Z,6μm,19.0s
S44A Carbondale 112.49 26 P PKiKP 06 01 39.0 -0.4
baz=330
P49A Miami Univ. Ec 112.52 21 P PKiKP 06 01 38.6 -0.8
baz=334
N53A Lisbon 112.55 18 PFAKE 06 01 50.0 +11
N53A LR LR
comp=Z,7μm,20.0s
N53A Lisbon 112.55 18 P PKiKP 06 01 38.2 -1.3
baz=338
M56A Emporium 112.61 16 P PKiKP 06 01 37.9 -1.7
baz=341
N54A Moraine State 112.64 17 PFAKE 06 01 50.0 +10
N54A LR LR
comp=Z,7μm,19.0s
N54A Moraine State 112.64 17 P PKiKP 06 01 38.4 -1.3
baz=339
W39A Magazine 112.64 30 PFAKE 06 01 50.0 +10
W39A LR LR
comp=Z,6μm,18.0s
W39A Magazine 112.64 30 P PKiKP 06 01 38.4 -1.3
baz=326
Q48A North Vernon 112.72 22 P PKiKP 06 01 38.9 -0.9
baz=333,SNR=12
P50A Jamestown 112.75 21 P PKiKP 06 01 39.1 -0.8
baz=335,SNR=6.4
PBMO Poplar Bluff 112.80 27 PFAKE 06 01 50.0 +10
PBMO LR LR
comp=Z,8μm,19.0s
USIN University of 112.87 24 PFAKE 06 01 50.0 +10
USIN LR LR
comp=Z,7μm,18.0s
O52A Adamsville 112.90 19 PFAKE 06 01 50.0 +10
O52A LR LR
comp=Z,10μm,21.0s
O52A Adamsville 112.90 19 P PKiKP 06 01 39.3 -0.8
baz=337
O53A New Philadelph 112.95 18 P PKiKP 06 01 39.9 -0.4
baz=338
HRV Adam Dziewonsk 112.97 10 PFAKE 06 01 50.0 +10
HRV LR LR
comp=Z,8μm,21.0s
HRV Adam Dziewonsk 112.97 10 P PKiKP 06 01 38.5 -1.6
baz=347
R47A Wooly Knot Far 113.00 23 P PKiKP 06 01 39.1 -1.3
baz=333
QUA2 Belchertown 113.06 11 PFAKE 06 01 50.0 +10
QUA2 LR LR
comp=Z,10μm,18.0s
N55A Marion Center 113.07 16 PFAKE 06 01 50.0 +10
N55A LR LR
comp=Z,9μm,18.0s
N55A Marion Center 113.07 16 P PKiKP 06 01 39.2 -1.3
baz=340
KSPA Keystone Colle 113.10 14 PFAKE 06 01 50.0 +10
KSPA LR LR
comp=Z,9μm,18.0s
P51A Williamsport 113.10 20 PFAKE 06 01 50.0 +9.5
P51A LR LR
comp=Z,11μm,18.0s
P51A Williamsport 113.10 20 P PKiKP 06 01 39.3 -1.3
baz=336
N56A West Decatur 113.12 16 P PKiKP 06 01 38.8 -1.7
baz=341
WES Weston 113.13 10 PFAKE 06 01 50.0 +10
WES LR LR
comp=Z,8μm,18.0s
R48A Northridge Ran 113.14 23 P PKiKP 06 01 39.8 -0.8
baz=333,SNR=20
WCI Wyandotte Cave 113.14 23 PFAKE 06 01 50.0 +9.4
WCI LR LR
comp=Z,8μm,20.0s
WCI Wyandotte Cave 113.14 23 P PKiKP 06 01 39.8 -0.8
baz=333
PARMO Parma 113.17 27 PFAKE 06 01 50.0 +9.3
PARMO LR LR
comp=Z,9μm,22.0s
BCX Boston College 113.20 10 PFAKE 06 01 50.0 +9.4
BCX LR LR
comp=Z,7μm,19.0s
WHAR Wooly Hollow 113.25 29 PFAKE 06 01 50.0 +9.1
WHAR LR LR
comp=Z,8μm,20.0s
P52A Corning 113.25 19 P PKiKP 06 01 39.5 -1.3
baz=337

O54A	Avella	113.25	18	P	PKiKP	06 01 40.9	+0.1
	baz=339						
JCT	Junction City	113.27	38	PFAKE		06 01 50.0	+8.8
JCT				LR	LR		
	comp=Z,6μm,19.0s						
JCT	Junction City	113.27	38	P	PKiKP	06 01 39.7	-1.5
	baz=319						
MIAR	Mount Ida	113.28	31	PFAKE		06 01 50.0	+9.0
MIAR				LR	LR		
	comp=Z,4μm,21.0s						
MIAR	Mount Ida	113.28	31	P	PKiKP	06 01 40.5	-0.5
	baz=326						
T45A	Paducah	113.31	26	PFAKE		06 01 50.0	+9.0
T45A				LR	LR		
	comp=Z,6μm,20.0s						
T45A	Paducah	113.31	26	P	PKiKP	06 01 38.4	-2.5
	baz=330						
W41B	Gary Mavity, V	113.36	29	PFAKE		06 01 50.0	+8.9
W41B				LR	LR		
	comp=Z,8μm,20.0s						
W41B	Gary Mavity, V	113.36	29	P	PKiKP	06 01 40.2	-0.9
	baz=327						
WHTX	Lake Whitney,	113.39	35	PFAKE		06 01 50.0	+8.7
WHTX				LR	LR		
	comp=Z,7μm,18.0s						
WHTX	Lake Whitney,	113.39	35	P	PKiKP	06 01 39.9	-1.4
	baz=322						
KSCT	Kent School, K	113.40	12	PFAKE		06 01 50.0	+9.0
KSCT				LR	LR		
	comp=Z,11μm,22.0s						
PVMO	Portageville	113.41	27	PFAKE		06 01 50.0	+8.8
PVMO				LR	LR		
	comp=Z,10μm,21.0s						
Q51A	Peebles	113.43	21	PFAKE		06 01 50.0	+8.8
Q51A				LR	LR		
	comp=Z,11μm,18.0s						
Q51A	Peebles	113.43	21	P	PKiKP	06 01 39.9	-1.3
	baz=336						
N57A	Milroy	113.45	15	P	PKiKP	06 01 39.9	-1.3
	baz=341						
R49A	Shelbyville	113.48	22	P	PKiKP	06 01 39.1	-2.2
	baz=334						
SSPA	Standing Stone	113.48	16	PFAKE		06 01 50.0	+8.8
SSPA				LR	LR		
	comp=Z,10μm,18.0s						
SSPA	Standing Stone	113.48	16	P	PKiKP	06 01 39.5	-1.7
	baz=341						
S47A	Hartford	113.49	24	P	PKiKP	06 01 40.0	-1.3
	baz=332						
O55A	Ligonier	113.52	17	P	PKiKP	06 01 41.4	0.0
	baz=340						
BRYW	Bryant College	113.55	10	PFAKE		06 01 50.0	+8.7
BRYW				LR	LR		
	comp=Z,8μm,20.0s						
P53A	Whipple	113.61	19	PFAKE		06 01 50.0	+8.5
P53A				LR	LR		
	comp=Z,9μm,21.0s						
P53A	Whipple	113.61	19	P	PKiKP	06 01 41.5	+0.1
	baz=338						
QSPA	South Pole Qui	113.62	180	PFAKE		06 01 50.0	+9.4
QSPA				LR	LR		
	comp=Z,4μm,20.0s						
UALR	University of	113.65	30	PFAKE		06 01 50.0	+8.3
UALR				LR	LR		
	comp=Z,8μm,20.0s						
O56A	Blue Knob Stat	113.66	16	PFAKE		06 01 50.0	+8.4
O56A				LR	LR		
	comp=Z,6μm,22.0s						
O56A	Blue Knob Stat	113.66	16	P	PKiKP	06 01 41.2	-0.4
	baz=340						
GNAR	Gosnell	113.66	27	PFAKE		06 01 50.0	+8.3
GNAR				LR	LR		
	comp=Z,6μm,22.0s						
X40A	Basin Creek Fa	113.67	30	PFAKE		06 01 50.0	+8.3
X40A				LR	LR		
	comp=Z,5μm,19.0s						
X40A	Basin Creek Fa	113.67	30	P	PKiKP	06 01 41.3	-0.5
	baz=326						
GLAT	Glass	113.70	26	PFAKE		06 01 50.0	+8.3
GLAT				LR	LR		
	comp=Z,8μm,22.0s						
N59A	State Game Lan	113.71	14	PFAKE		06 01 50.0	+8.3
N59A				LR	LR		
	comp=Z,9μm,21.0s						
N59A	State Game Lan	113.71	14	P	PKiKP	06 01 40.8	-0.8
	baz=343						
S48A	Wiedeman Farm,	113.73	23	P	PKiKP	06 01 40.9	-0.9
	baz=333						
HBAR	Harrisburg	113.74	28	PFAKE		06 01 50.0	+8.2
HBAR				LR	LR		
	comp=Z,8μm,20.0s						
P54A	Burton	113.77	18	P	PKiKP	06 01 40.9	-0.9
	baz=338						
R50A	Paris	113.78	22	P	PKiKP	06 01 41.0	-0.9
	baz=335						
ODNJ	Ogdensburg	113.80	13	PFAKE		06 01 50.0	+8.2
ODNJ				LR	LR		
	comp=Z,10μm,20.0s						
Q52A	Bidwell	113.83	20	P	PKiKP	06 01 40.6	-1.3
	baz=337						
MCWV	Mont Chateau	113.89	18	PFAKE		06 01 50.0	+8.0
MCWV				LR	LR		
	comp=Z,4μm,18.0s						
MCWV	Mont Chateau	113.89	18	P	PKiKP	06 01 40.7	-1.3
	baz=339						
S49A	Springfield	113.89	23	P	PKiKP	06 01 41.7	-0.4
	baz=334						
YLE	Yale	113.90	11	PFAKE		06 01 50.0	+8.1
YLE				LR	LR		
	comp=Z,8μm,21.0s						
T47A	Sharon Grove	113.94	24	PFAKE		06 01 50.0	+7.8
T47A				LR	LR		
	comp=Z,5μm,20.0s						
T47A	Sharon Grove	113.94	24	P	PKiKP	06 01 42.6	+0.5
	baz=332						
O57A	Amberson	113.95	16	P	PKiKP	06 01 40.9	-1.3
	baz=341						
HALT	Halls	113.99	27	PFAKE		06 01 50.0	+7.7
HALT				LR	LR		
	comp=Z,8μm,21.0s						
R51A	Hillsboro	114.01	21	P	PKiKP	06 01 41.0	-1.3
	baz=335						
PAL	Palisades	114.01	12	PFAKE		06 01 50.0	+7.8
PAL				LR	LR		
	comp=Z,12μm,22.0s						
PAL	Palisades	114.01	12	P	PKiKP	06 01 41.4	-0.8
	baz=345						
P55A	Reedsville	114.04	18	P	PKiKP	06 01 40.1	-2.2
	baz=339						
M65A	Busby, Falmout	114.04	10	P	PKiKP	06 01 40.1	-2.1
	baz=348						
U46A	Springville	114.07	26	P	PKiKP	06 01 41.1	-1.3
	baz=331						
T48A	Bowling Green	114.09	24	P	PKPdf	06 01 42.5	0.0
	baz=332						
LUPA	Lehigh Univers	114.10	14	PFAKE		06 01 50.0	+7.6
LUPA				LR	LR		
	comp=Z,700nm,19.0s						
Q53A	Leroy	114.15	19	P	PKiKP	06 01 40.8	-1.7
	baz=337						
PAGS	Pennsylvania G	114.15	15	PFAKE		06 01 50.0	+7.5
PAGS				LR	LR		
	comp=Z,11μm,19.0s						
BRNJ	Basking Ridge	114.19	13	PFAKE		06 01 50.0	+7.5
BRNJ				LR	LR		
	comp=Z,9μm,20.0s						
O59A	Robesonia	114.19	14	P	PKiKP	06 01 41.8	-0.8
	baz=343						
CPNY	Central Park	114.21	12	PFAKE		06 01 50.0	+7.4
CPNY				LR	LR		
	comp=Z,9μm,20.0s						
Q54A	Coxs Mills	114.24	19	PFAKE		06 01 50.0	+7.3
Q54A				LR	LR		
	comp=Z,7μm,20.0s						
Q54A	Coxs Mills	114.24	19	P	PKiKP	06 01 41.9	-0.8
	baz=338						
435B	Jarrell	114.26	36	PFAKE		06 01 50.0	+7.0
435B				LR	LR		
	comp=Z,5μm,18.0s						
435B	Jarrell	114.26	36	P	PKiKP	06 01 41.6	-1.4
	baz=321						
R52A	Catlettsburg	114.28	20	P	PKiKP	06 01 41.2	-1.6
	baz=336						
S50A	Richmond	114.30	22	P	PKiKP	06 01 41.4	-1.4
	baz=334,SNR=12						
P56A	Dayton Farm, R	114.31	17	P	PKiKP	06 01 42.0	-0.8
	baz=340						
U47A	Clarksville	114.35	25	P	PKiKP	06 01 42.1	-0.9
	baz=332						
O60A	Telford	114.36	14	P	PKiKP	06 01 42.2	-0.7
	baz=343						
WVT	Waverly	114.41	25	PFAKE		06 01 50.0	+6.9
WVT				LR	LR		
	comp=Z,8μm,19.0s						
WVT	Waverly	114.41	25	P	PKiKP	06 01 41.8	-1.3
	baz=331						
T49A	Edmonton	114.41	23	PFAKE		06 01 50.0	+6.9
T49A				LR	LR		
	comp=Z,7μm,20.0s						
T49A	Edmonton	114.41	23	P	PKiKP	06 01 41.8	-1.3
	baz=333						
MET	Memphis--Engin	114.42	28	PFAKE		06 01 50.0	+6.9
MET				LR	LR		
	comp=Z,9μm,22.0s						
Q55A	Buckhannon	114.44	18	P	PKiKP	06 01 42.3	-0.9
	baz=339						
MVL	Millersville	114.45	15	PFAKE		06 01 50.0	+6.9
MVL				LR	LR		
	comp=Z,10μm,19.0s						
R53A	Hurricane	114.50	20	PFAKE		06 01 50.0	+6.7
R53A				LR	LR		
	comp=Z,7μm,18.0s						
R53A	Hurricane	114.50	20	P	PKiKP	06 01 42.8	-0.4
	baz=337						
X43A	Marvell	114.52	29	PFAKE		06 01 50.0	+6.6
X43A				LR	LR		
	comp=Z,5μm,19.0s						
X43A	Marvell	114.52	29	P	PKiKP	06 01 42.0	-1.3
	baz=328						
P57A	Homestead Farm	114.54	16	P	PKiKP	06 01 41.4	-1.9
	baz=341						
U48A	Cassie Pea, Po	114.57	24	P	PKiKP	06 01 41.2	-2.2
	baz=332						
V46A	Holladay	114.58	26	P	PKiKP	06 01 42.6	-0.9
	baz=331						
S51A	Beattyville	114.61	21	PFAKE		06 01 50.0	+6.5
S51A				LR	LR		
	comp=Z,9μm,21.0s						
S51A	Beattyville	114.61	21	P	PKiKP	06 01 41.7	-1.7
	baz=335,SNR=14						
CCAR	Cane Creek	114.63	30	PFAKE		06 01 50.0	+6.4
CCAR				LR	LR		
	comp=Z,9μm,20.0s						
Z41A	Richland Creek	114.70	31	PFAKE		06 01 50.0	+6.3
Z41A				LR	LR		
	comp=Z,6μm,19.0s						
PSUB	Penn St. - Bra	114.73	14	PFAKE		06 01 50.0	+6.4
PSUB				LR	LR		
	comp=Z,10μm,20.0s						
T50A	Nancy	114.74	23	P	PKiKP	06 01 41.6	-2.2
	baz=334,SNR=16						
S52A	Salyersville	114.74	21	P	PKiKP	06 01 42.2	-1.5
	baz=336,SNR=6.4						
V47A	Nunnelly	114.79	25	P	PKiKP	06 01 43.0	-0.9
	baz=331						
P60A	Greenville	114.80	14	P	PKiKP	06 01 42.5	-1.3
	baz=343						
P59A	Jarrettsville	114.81	15	P	PKiKP	06 01 42.9	-0.8
	baz=342						
U49A	Red Boiling Sp	114.85	24	P	PKiKP	06 01 42.8	-1.2
	baz=333						
Q57A	Strasburg	114.86	17	P	PKiKP	06 01 42.4	-1.5
	baz=340						
SDMD	Soldier's Deli	114.90	15	PFAKE		06 02 00.0	+16
SDMD				LR	LR		
	comp=Z,5μm,19.0s						
R54A	Victor	114.93	19	P	PKiKP	06 01 42.8	-1.3
	baz=338						
NATX	Nacogdoches	115.02	33	PFAKE		06 02 00.0	+16
NATX				LR	LR		
	comp=Z,7μm,18.0s						
CLTN	Cedars of Leba	115.02	24	PFAKE		06 02 00.0	+16
CLTN				LR	LR		
	comp=Z,3μm,20.0s						
S53A	Williamson	115.04	20	P	PKiKP	06 01 43.5	-0.8
	baz=336						
W46A	Michie	115.05	26	P	PKiKP	06 01 42.6	-1.8
	baz=330						
R55A	Marlinton	115.09	18	P	PKiKP	06 01 43.5	-1.0
	baz=339						
T51A	Gray	115.09	22	P	PKiKP	06 01 43.2	-1.3
	baz=335,SNR=8.2						
P61A	Hammonton	115.11	13	P	PKiKP	06 01 42.2	-2.1
	baz=344						
833A	Chaparral WMA,	115.13	39	PFAKE		06 02 00.0	+15
833A				LR	LR		
	comp=Z,6μm,19.0s						
833A	Chaparral WMA,	115.13	39	P	PKiKP	06 01 43.7	-1.0
	baz=319						
V48A	Smith Brothers	115.14	25	PFAKE		06 02 00.0	+15
V48A				LR	LR		
	comp=Z,10μm,18.0s						
V48A	Smith Brothers	115.14	25	P	PKiKP	06 01 42.7	-1.8
	baz=332						
OXF	Oxford	115.16	28	PFAKE		06 02 00.0	+15
OXF				LR	LR		
	comp=Z,8μm,21.0s						
OXF	Oxford	115.16	28	P	PKiKP	06 01 42.8	-1.8
	baz=329						
S54A	Dingess, Beckl	115.19	19	P	PKiKP	06 01 42.8	-1.8
	baz=337						
W47A	Westpoint	115.27	26	P	PKiKP	06 01 43.4	-1.4
	baz=331						
U50A	Jamestown	115.28	23	P	PKiKP	06 01 43.8	-1.1
	baz=334,SNR=35						
T52A	Hallie	115.29	21	*e*PKiKP	PKiKP	06 01 44.1	-0.7
T52A				LR	LR		
	comp=Z,8μm,20.0s						
T52A	Hallie	115.29	21	P	PKiKP	06 01 43.6	-1.2
	baz=336						
PLAL	Pickwick Lake	115.31	26	*e*PKiKP	PKiKP	06 01 42.8	-2.1
PLAL				LR	LR		
	comp=Z,7μm,21.0s						
S55A	Lewisburg	115.46	19	P	PKiKP	06 01 43.6	-1.6
	baz=338						
V49A	McMinnville	115.47	24	P	PKiKP	06 01 43.4	-1.8
	baz=333						
X46A	Booneville	115.47	27	P	PKiKP	06 01 44.1	-1.1
	baz=330						
Q60A	Greensboro	115.52	15	P	PKiKP	06 01 43.2	-1.9
	baz=343						
R57A	Stanardsville	115.52	17	P	PKiKP	06 01 44.3	-0.9
	baz=340						
T53A	Wise	115.55	21	P	PKiKP	06 01 44.6	-0.8
	baz=336						
U51A	La Follette	115.60	22	P	PKiKP	06 01 44.4	-1.1
	baz=334						
TZTN	Tazewell	115.61	22	*e*PKPdf	PKiKP	06 01 44.6	-0.9
TZTN				LR	LR		
	comp=Z,9μm,20.0s						
TZTN	Tazewell	115.61	22	P	PKiKP	06 01 44.5	-1.0
	baz=335,SNR=7.9						
W48A	Pulaski	115.63	25	P	PKiKP	06 01 44.1	-1.4
	baz=332						
R58A	Rapidan	115.66	17	P	PKiKP	06 01 45.0	-0.4
	baz=341						
T54A	Tazewell	115.78	20	P	PKiKP	06 01 44.0	-1.9
	baz=337						
X47A	Russelville	115.80	26	P	PKiKP	06 01 44.5	-1.3
	baz=331						
U52A	Thorn Hill	115.81	22	P	PKiKP	06 01 44.5	-1.4
	baz=335						
S56A	Natural Bridge	115.81	18	P	PKiKP	06 01 44.4	-1.4
	baz=339						
V50A	Pikeville	115.85	24	P	PKiKP	06 01 44.6	-1.3
	baz=333,SNR=7.6						
HKT	Hockley	115.85	35	*e*PKPdf	PKPdf	06 01 46.0	0.0
HKT				LR	LR		
	comp=Z,4μm,19.0s						
W49A	Belvidere	115.90	25	P	PKiKP	06 01 44.2	-1.8
	baz=332						
S57A	Dark Hollow, R	115.91	18	*e*PKPdf	PKiKP	06 01 44.1	-1.9
S57A				LR	LR		
	comp=Z,8μm,18.0s						
S57A	Dark Hollow, R	115.91	18	P	PKiKP	06 01 43.8	-2.2
	baz=340						
CBN	Corbin Frederi	115.91	16	PFAKE		06 02 00.0	+14
CBN				LR	LR		
	comp=Z,7μm,18.0s						
CBN	Corbin Frederi	115.91	16	P	PKiKP	06 01 44.0	-1.9
	baz=341						
SWET	Sewanee	115.94	24	*e*PKPdf	PKiKP	06 01 44.5	-1.6
SWET				LR	LR		
	comp=Z,8μm,19.0s						
T55A	Pulaski	115.98	19	P	PKiKP	06 01 44.8	-1.4
	baz=338						
R59A	King George, V	115.98	16	P	PKiKP	06 01 44.6	-1.5
	baz=341						
BLA	Blacksburg	116.00	19	*e*PKPdf	PKiKP	06 01 45.2	-1.0
BLA				LR	LR		
	comp=Z,8μm,21.0s						
BLA	Blacksburg	116.00	19	*e*PKIKP	PKiKP	06 01 45.2	-1.0
BLA				MLR	MLR		
	comp=Z,8μm,21.0s						
BLA	Blacksburg	116.00	19	P	PKiKP	06 01 44.8	-1.4
	baz=338						
V51A	Loudon	116.00	23	*e*PKPdf	PKiKP	06 01 45.3	-0.9
V51A				LR	LR		
	comp=Z,11μm,20.0s						
V51A	Loudon	116.00	23	P	PKiKP	06 01 44.8	-1.4
	baz=334,SNR=11						
R58B	Mineral	116.01	17	*e*PKPdf	PKiKP	06 01 45.5	-0.6
R58B				LR	LR		
	comp=Z,10μm,20.0s						
R58B	Mineral	116.01	17	P	PKiKP	06 01 44.8	-1.3
	baz=341						
R60A	Leonardtown, M	116.05	15	P	PKiKP	06 01 44.0	-2.2
	baz=342						
U53A	Fall Branch	116.10	21	P	PKiKP	06 01 45.2	-1.2
	baz=336						
X48A	Hartselle	116.18	26	*e*PKPdf	PKiKP	06 01 43.8	-2.8
X48A				LR	LR		
	comp=Z,8μm,21.0s						
X48A	Hartselle	116.18	26	P	PKiKP	06 01 44.3	-2.3
	baz=331						
W50A	Signal Mountai	116.19	24	*e*PKPdf	PKiKP	06 01 45.8	-0.8
W50A				LR	LR		
	comp=Z,6μm,20.0s						
W50A	Signal Mountai	116.19	24	P	PKiKP	06 01 45.4	-1.2
	baz=333,SNR=14						
U54A	Nelsons Funny	116.20	20	PFAKE		06 02 00.0	+13
U54A				LR	LR		
	comp=Z,9μm,20.0s						
U54A	Nelsons Funny	116.20	20	P	PKiKP	06 01 45.6	-1.1
	baz=337						
V52A	Sevierville	116.23	22	*e*PKPdf	PKiKP	06 01 45.4	-1.3
V52A				LR	LR		
	comp=Z,7μm,20.0s						
V52A	Sevierville	116.23	22	P	PKiKP	06 01 44.9	-1.8
	baz=335,SNR=26						
CPCT	Cooper Cave	116.26	23	*e*PKPdf	PKiKP	06 01 45.7	-1.0
CPCT				LR	LR		
	comp=Z,13μm,19.0s						
T56A	Rocky Mt	116.28	19	P	PKiKP	06 01 44.5	-2.3
	baz=338						
S58A	Poland Farm, P	116.29	17	*e*PKPdf	PKiKP	06 01 45.2	-1.5
S58A				LR	LR		
	comp=Z,9μm,19.0s						
S58A	Poland Farm, P	116.29	17	P	PKiKP	06 01 44.6	-2.1
	baz=340						
S59A	Mechanicsville	116.35	16	P	PKiKP	06 01 45.8	-1.0
	baz=341						
X49A	Woodville	116.41	25	P	PKiKP	06 01 45.7	-1.3
	baz=332						
W51A	Cleveland	116.43	23	P	PKiKP	06 01 45.0	-2.0
	baz=334						
U55A	TA2, Sparta	116.46	20	P	PKiKP	06 01 45.3	-1.9
	baz=337						
T57A	Hurt	116.54	18	*e*PKPdf	PKPdf	06 01 45.3	-1.9
T57A				LR	LR		
	comp=Z,8μm,19.0s						
T57A	Hurt	116.54	18	P	PKPdf	06 01 45.8	-1.4
	baz=339						
KVTX	Kingsville	116.58	39	PFAKE		06 02 00.0	+12
KVTX				LR	LR		
	comp=Z,6μm,19.0s						
Y48A	Jasper	116.61	26	P	PKPdf	06 01 45.1	-2.3
	baz=331						
VBMS	Vicksburg	116.62	30	PFAKE		06 02 00.0	+13
VBMS				LR	LR		
	comp=Z,6μm,21.0s						
VBMS	Vicksburg	116.62	30	P	PKPdf	06 01 46.0	-1.5
	baz=328						
V53A	Saluda	116.65	22	*e*PKPdf	PKPdf	06 01 46.6	-0.9
V53A				LR	LR		
	comp=Z,10μm,20.0s						
V53A	Saluda	116.65	22	P	PKPdf	06 01 46.0	-1.5
	baz=336,SNR=15						
X50B	Fort Payne	116.72	25	P	PKPdf	06 01 46.2	-1.5
	baz=333						
T58A	Grand View Acr	116.79	18	P	PKPdf	06 01 45.9	-1.8
	baz=340						
W52A	Murphy	116.79	23	*e*PKPdf	PKPdf	06 01 47.1	-0.7
W52A				LR	LR		
	comp=Z,9μm,20.0s						
W52A	Murphy	116.79	23	P	PKPdf	06 01 46.2	-1.6
	baz=334,SNR=13						
U56A	King	116.81	19	P	PKPdf	06 01 46.5	-1.2
	baz=338						
S61A	Accomac	116.82	15	PFAKE		06 02 00.0	+12
S61A				LR	LR		
	comp=Z,8μm,20.0s						
V54A	Nebo	116.84	21	P	PKPdf	06 01 45.6	-2.3
	baz=336						
X51A	Calhoun	116.92	24	*e*PKPdf	PKPdf	06 01 47.4	-0.6
X51A				LR	LR		
	comp=Z,6μm,19.0s						
X51A	Calhoun	116.92	24	P	PKPdf	06 01 46.4	-1.6
	baz=333						
Y49A	Blount Mountai	116.95	26	*e*PKPdf	PKPdf	06 01 47.2	-0.9
Y49A				LR	LR		
	comp=Z,10μm,19.0s						
Y49A	Blount Mountai	116.95	26	P	PKPdf	06 01 46.2	-1.9
	baz=332						
W53A	Cullowhee	116.99	22	P	PKPdf	06 01 46.9	-1.4
	baz=335,SNR=37						
V55A	Taylorsville	117.01	20	P	PKPdf	06 01 46.0	-2.2
	baz=337						
T59A	Double "B" Far	117.03	17	*e*PKPdf	PKPdf	06 01 47.3	-0.8
T59A				LR	LR		
	comp=Z,10μm,19.0s						
T59A	Double "B" Far	117.03	17	P	PKPdf	06 01 47.2	-0.9
	baz=341						
U57A	Blanch	117.04	18	P	PKPdf	06 01 47.2	-0.9
	baz=339						
T60A	Surry	117.08	16	PFAKE		06 02 00.0	+12
T60A				LR	LR		
	comp=Z,9μm,18.0s						
Y50A	Piedmont	117.19	25	P	PKPdf	06 01 47.6	-0.9
	baz=332						
ZAIG	Zacatecas	117.21	46	*e*PKPdf	PKPdf	06 01 48.6	-0.6
ZAIG				LR	LR		
	comp=Z,5μm,20.0s						
147A	Livingston	117.22	28	*e*PKPdf	PKPdf	06 01 47.8	-0.8
147A				LR	LR		
	comp=Z,5μm,18.0s						
147A	Livingston	117.22	28	P	PKPdf	06 01 47.5	-1.1
	baz=330						
X52A	Dahlonega	117.24	23	P	PKPdf	06 01 47.8	-0.9
	baz=334,SNR=20						
V56A	Mocksville	117.27	20	*e*PKPdf	PKPdf	06 01 47.9	-0.7
V56A				LR	LR		
	comp=Z,9μm,18.0s						
V56A	Mocksville	117.27	20	P	PKPdf	06 01 47.0	-1.7
	baz=338						
U58A	Oxford	117.30	18	P	PKPdf	06 01 47.3	-1.4
	baz=340						
W54A	Cherokee Point	117.39	21	P	PKPdf	06 01 47.5	-1.4
	baz=336						
V57A	Coltrane Farms	117.42	19	P	PKPdf	06 01 47.0	-1.9
	baz=338						
Y51A	Rockmart	117.44	24	P	PKPdf	06 01 47.1	-1.9
	baz=333						
LRAL	Lakeview Retre	117.44	26	*e*PKPdf	PKPdf	06 01 47.3	-1.7
LRAL				LR	LR		
	comp=Z,6μm,21.0s						
LRAL	Lakeview Retre	117.44	26	P	PKPdf	06 01 47.6	-1.4
	baz=331						
Z49A	Columbiana	117.49	26	P	PKPdf	06 01 47.6	-1.5
	baz=332						
148A	Greensboro	117.54	27	P	PKPdf	06 01 48.2	-1.0
	baz=330						
X53A	Estanollee	117.54	23	P	PKPdf	06 01 48.1	-1.1
	baz=335,SNR=14						
U59A	Littleton	117.55	17	PFAKE		06 02 00.0	+11
U59A				LR	LR		
	comp=Z,10μm,20.0s						
U60A	Pendleton	117.60	17	P	PKPdf	06 01 48.8	-0.5
	baz=341						
KMSC	Kings Mountain	117.62	21	*e*PKPdf	PKPdf	06 01 47.5	-1.8
KMSC	Kings Mountain	117.62	21	P	PKPdf	06 01 47.9	-1.4

	baz=337							
LNIG	**Linares**	**117.64**	**42**	*e*PKPdf	**PKPdf**	**06 01 48.5**	**-1.2**	
LNIG				LR	LR			
	comp=Z,4μm,20.0s							
Z50A	**Ashland**	**117.68**	**25**	*e*PKPdf	**PKPdf**	**06 01 47.9**	**-1.6**	
Z50A				LR	LR			
	comp=Z,8μm,20.0s							
Z50A	**Ashland**	**117.68**	**25**	P	**PKPdf**	**06 01 48.1**	**-1.4**	
	baz=332							
V58A	**Windy Hill, Pi**	**117.70**	**18**	P	**PKPdf**	**06 01 48.1**	**-1.4**	
	baz=339							
PAULI	**Pauline**	**117.76**	**21**	*e*PKPdf	**PKPdf**	**06 01 48.3**	**-1.3**	
PAULI				LR	LR			
	comp=Z,8μm,21.0s							
X54A	**Belton**	**117.82**	**22**	P	**PKPdf**	**06 01 49.0**	**-0.7**	
	baz=336,SNR=13							
Y52A	**Lilburn**	**117.84**	**24**	*e*PKPdf	**PKPdf**	**06 01 48.9**	**-0.9**	
Y52A				LR	LR			
	comp=Z,10μm,20.0s							
Y52A	**Lilburn**	**117.84**	**24**	P	**PKPdf**	**06 01 48.8**	**-1.0**	
	baz=334,SNR=15							
W56A	**Indian Trail**	**117.87**	**20**	P	**PKPdf**	**06 01 48.8**	**-1.0**	
	baz=338							
149A	**Jones**	**117.91**	**27**	P	**PKPdf**	**06 01 48.5**	**-1.4**	
	baz=331							
Z51A	**Franklin**	**117.91**	**25**	P	**PKPdf**	**06 01 48.8**	**-1.2**	
	baz=333,SNR=9.0							
U61A	**Possum Corner**	**117.92**	**16**	PFAKE		06 02 00.0	+10	
U61A				LR	LR			
	comp=Z,9μm,20.0s							
U61A	**Possum Corner**	**117.92**	**16**	P	**PKPdf**	**06 01 48.9**	**-0.9**	
	baz=342							
V59A	**Middlesex**	**117.98**	**18**	P	**PKPdf**	**06 01 48.2**	**-1.8**	
	baz=340							
Y53A	**Monroe**	**118.02**	**23**	P	**PKPdf**	**06 01 49.3**	**-0.8**	
	baz=334,SNR=7.3							
W57A	**Gilead**	**118.03**	**19**	*e*PKPdf	**PKPdf**	**06 01 49.1**	**-1.0**	
W57A				LR	LR			
	comp=Z,9μm,22.0s							
W57A	**Gilead**	**118.03**	**19**	P	**PKPdf**	**06 01 49.1**	**-1.0**	
	baz=338							
X55A	**Gracelyn & Ava**	**118.14**	**21**	P	**PKPdf**	**06 01 49.5**	**-0.9**	
	baz=336							
HODGE	**Hodges**	**118.15**	**22**	*e*PKPdf	**PKPdf**	**06 01 49.5**	**-0.9**	
HODGE				LR	LR			
	comp=Z,9μm,18.0s							
150A	**Eclectic**	**118.21**	**26**	P	**PKPdf**	**06 01 48.6**	**-1.9**	
	baz=332							
V60A	**Jim Taylor Roa**	**118.24**	**17**	*e*PKPdf	**PKPdf**	**06 01 48.8**	**-1.6**	
V60A				LR	LR			
	comp=Z,8μm,19.0s							
V60A	**Jim Taylor Roa**	**118.24**	**17**	P	**PKPdf**	**06 01 48.7**	**-1.8**	
	baz=341							
249A	**Camden**	**118.31**	**27**	P	**PKPdf**	**06 01 49.5**	**-1.3**	
	baz=331							
Z52A	**Williamson**	**118.31**	**24**	P	**PKPdf**	**06 01 48.6**	**-2.1**	
	baz=333,SNR=9.7							
X56A	**White Oak**	**118.32**	**21**	P	**PKPdf**	**06 01 48.8**	**-1.9**	
	baz=337							
Y54A	**Tignall**	**118.34**	**22**	P	**PKPdf**	**06 01 49.2**	**-1.5**	
	baz=335,SNR=10							
W58A	**Raeford**	**118.39**	**19**	P	**PKPdf**	**06 01 49.4**	**-1.4**	
	baz=339							
V61A	**Roper**	**118.40**	**16**	PFAKE		06 02 00.0	+9.2	
V61A				LR	LR			
	comp=Z,8μm,18.0s							
V61A	**Roper**	**118.40**	**16**	P	**PKPdf**	**06 01 49.1**	**-1.7**	
	baz=342							
JSC	**Jenkinsville**	**118.44**	**21**	*e*PKPdf	**PKPdf**	**06 01 48.9**	**-2.0**	
JSC				LR	LR			
	comp=Z,11μm,20.0s							
JSC	**Jenkinsville**	**118.44**	**21**	*e*PKIKP	**PKPdf**	**06 01 48.9**	**-2.0**	
JSC				MLR	MLR			
	comp=Z,11μm,20.0s							
GOGA	**Godfrey**	**118.47**	**23**	*e*PKPdf	**PKPdf**	**06 01 50.2**	**-0.8**	
GOGA				LR	LR			
	comp=Z,12μm,20.0s							
GOGA	**Godfrey**	**118.47**	**23**	*e*PKIKP	**PKPdf**	**06 01 50.2**	**-0.8**	
GOGA				MLR	MLR			
	comp=Z,12μm,20.0s							
GOGA	**Godfrey**	**118.47**	**23**	P	**PKPdf**	**06 01 49.3**	**-1.7**	
	baz=334,SNR=8.5							
W59A	**Clinton**	**118.48**	**18**	P	**PKPdf**	**06 01 49.3**	**-1.7**	
	baz=340							
Z53A	**Monticello**	**118.55**	**23**	P	**PKPdf**	**06 01 49.5**	**-1.6**	
	baz=334,SNR=11							
Y55A	**Saluda**	**118.55**	**22**	P	**PKPdf**	**06 01 49.8**	**-1.4**	
	baz=336							
151A	**Opelika**	**118.55**	**25**	P	**PKPdf**	**06 01 50.6**	**-0.6**	
	baz=332							
CNNC	**Cliffs of the**	**118.57**	**18**	PFAKE		06 02 00.0	+8.8	
CNNC				LR	LR			
	comp=Z,6μm,20.0s							
X57A	**Johnson Farm,**	**118.64**	**20**	P	**PKPdf**	**06 01 50.8**	**-0.5**	
	baz=338							
250A	**Grady**	**118.66**	**26**	*e*PKPdf	**PKPdf**	**06 01 50.0**	**-1.4**	
250A				LR	LR			
	comp=Z,8μm,20.0s							
250A	**Grady**	**118.66**	**26**	P	**PKPdf**	**06 01 50.9**	**-0.5**	
	baz=331							
152A	**Waverly Hall**	**118.66**	**25**	*e*PKPdf	**PKPdf**	**06 01 50.1**	**-1.3**	
152A				LR	LR			
	comp=Z,6μm,20.0s							
152A	**Waverly Hall**	**118.66**	**25**	P	**PKPdf**	**06 01 50.8**	**-0.6**	
	baz=333,SNR=10							
V62A	**Hyde County Ai**	**118.77**	**16**	PFAKE		06 02 00.0	+8.5	
V62A				LR	LR			
	comp=Z,8μm,18.0s							
V62A	**Hyde County Ai**	**118.77**	**16**	P	**PKPdf**	**06 01 50.5**	**-1.0**	
	baz=342							
X58A	**Rowland**	**118.79**	**19**	*e*PKPdf	**PKPdf**	**06 01 51.0**	**-0.6**	
X58A				LR	LR			
	comp=Z,10μm,22.0s							
X58A	**Rowland**	**118.79**	**19**	P	**PKPdf**	**06 01 50.6**	**-1.0**	
	baz=339							
W60A	**Pink Hill**	**118.79**	**18**	P	**PKPdf**	**06 01 50.6**	**-1.0**	
	baz=340							
349A	**Repton**	**118.82**	**28**	P	**PKPdf**	**06 01 50.1**	**-1.6**	
	baz=330							
Z54A	**Sparta**	**118.85**	**23**	P	**PKPdf**	**06 01 50.8**	**-0.9**	
	baz=335,SNR=12							
W61A	**Ground Anchor**	**118.87**	**17**	P	**PKPdf**	**06 01 50.7**	**-1.0**	
	baz=341							
Y56A	**Pelion**	**118.87**	**21**	P	**PKPdf**	**06 01 50.7**	**-1.0**	
	baz=337							
251A	**Midway**	**118.91**	**26**	P	**PKPdf**	**06 01 50.9**	**-0.9**	
	baz=332							
Y57A	**Sumter**	**118.96**	**20**	*e*PKPdf	**PKPdf**	**06 01 50.4**	**-1.6**	
Y57A				LR	LR			
	comp=Z,8μm,19.0s							
Y57A	**Sumter**	**118.96**	**20**	P	**PKPdf**	**06 01 50.9**	**-1.0**	
	baz=338							
X59A	**McDuffie Farm,**	**118.99**	**19**	P	**PKPdf**	**06 01 51.0**	**-1.0**	
	baz=339							
153A	**Fort Valley**	**119.02**	**24**	P	**PKPdf**	**06 01 50.6**	**-1.5**	
	baz=334							
BRAL	**Brewton**	**119.04**	**28**	*e*PKPdf	**PKiKP**	**06 01 52.2**	**0.0**	
BRAL				LR	LR			
	comp=Z,6μm,18.0s							
BRAL	**Brewton**	**119.04**	**28**	P	**PKPdf**	**06 01 50.2**	**-1.9**	
	baz=330							
Z55A	**Blythe**	**119.11**	**22**	P	**PKPdf**	**06 01 51.3**	**-0.9**	
	baz=336							
350A	**Dozier**	**119.12**	**27**	P	**PKPdf**	**06 01 51.2**	**-1.1**	
	baz=331							
DBIC	**Dimbokro**	**119.16**	**293**	PKP	**PKPdf**	**06 01 52.4**	**-0.3**	
	comp=Z,17nm,0.9s,baz=66,slow=2.0,SNR=14							
DBIC				PKKPab	**PKKPbc**	**06 12 07.1**	**+1.8**	
	comp=Z,5.1nm,0.9s,baz=214,slow=4.7,SNR=3.9							
DBIC	**Dimbokro**	**119.16**	**293**	*e*PKPdf	**PKiKP**	**06 01 53.6**	**+0.8**	
DBIC				*e*PKKPbc	**PKKPbc**	**06 12 07.1**	**+1.8**	
DBIC	**Dimbokro**	**119.16**	**293**	*e*PKIKP	**PKiKP**	**06 01 53.6**	**+0.8**	
X60A	**Albert Glenn T**	**119.16**	**18**	P	**PKPdf**	**06 01 51.8**	**-0.5**	
	baz=340							
KIC	**Kosan Boka**	**119.22**	**293**	*e*P	**PKPdf**	**06 01 52.3**	**-0.6**	
	comp=Z,108nm,1.3s							
252A	**Lumpkin**	**119.25**	**25**	P	**PKPdf**	**06 01 51.9**	**-0.7**	
	baz=333,SNR=13							
Z56A	**Williston**	**119.28**	**21**	*e*PKPdf	**PKPdf**	**06 01 52.4**	**-0.2**	
Z56A				LR	LR			
	comp=Z,8μm,20.0s							
Z56A	**Williston**	**119.28**	**21**	P	**PKPdf**	**06 01 52.1**	**-0.5**	
	baz=336							
Y58A	**Scranton**	**119.29**	**20**	*e*PKPdf	**PKPdf**	**06 01 52.3**	**-0.3**	
Y58A				LR	LR			
	comp=Z,7μm,21.0s							
Y58A	**Scranton**	**119.29**	**20**	P	**PKPdf**	**06 01 50.9**	**-1.6**	
	baz=338							
TIC	**Toumodi**	**119.31**	**293**	*e*P	**PKiKP**	**06 01 53.8**	**+0.6**	
154A	**Montrose**	**119.31**	**23**	*e*PKPdf	**PKPdf**	**06 01 52.2**	**-0.5**	
154A				LR	LR			
	comp=Z,12μm,20.0s							
154A	**Montrose**	**119.31**	**23**	P	**PKPdf**	**06 01 50.7**	**-1.9**	
	baz=334							
449A	**Pace**	**119.33**	**28**	P	**PKPdf**	**06 01 51.6**	**-1.1**	
	baz=330							
253A	**Americus**	**119.43**	**25**	PFAKE		06 02 00.0	+7.1	
253A				LR	LR			
	comp=Z,6μm,18.0s							
253A	**Americus**	**119.43**	**25**	P	**PKPdf**	**06 01 52.2**	**-0.7**	
	baz=333							
Z57A	**Bowman**	**119.52**	**21**	P	**PKPdf**	**06 01 52.0**	**-1.0**	
	baz=337							
155A	**Kite**	**119.54**	**23**	P	**PKPdf**	**06 01 51.8**	**-1.3**	
	baz=335							
LIC	**Lamto**	**119.54**	**293**	*e*P	**PKiKP**	**06 01 54.3**	**+0.7**	
	comp=Z,173nm,1.7s							
450A	**Crestview**	**119.55**	**27**	P	**PKPdf**	**06 01 52.1**	**-1.1**	
	baz=331							
Y60A	**Bolivia**	**119.63**	**18**	PFAKE		06 02 00.0	+6.7	
Y60A				LR	LR			
	comp=Z,9μm,20.0s							
352A	**Blakely**	**119.64**	**26**	PFAKE		06 02 00.0	+6.6	
352A				LR	LR			
	comp=Z,8μm,20.0s							
Z58A	**St. Stephen**	**119.77**	**20**	P	**PKPdf**	**06 01 51.6**	**-1.8**	
	baz=336							
156A	**Sylvania**	**119.84**	**22**	P	**PKPdf**	**06 01 52.2**	**-1.5**	
	baz=336							
254A	**Abbeville**	**119.85**	**24**	P	**PKPdf**	**06 01 52.6**	**-1.0**	
	baz=334							
NHSC	**New Hope**	**119.87**	**21**	PFAKE		06 02 00.0	+6.2	
NHSC				LR	LR			
	comp=Z,9μm,20.0s							
NHSC	**New Hope**	**119.87**	**21**	P	**PKPdf**	**06 01 52.5**	**-1.2**	
	baz=336							
353A	**Camilla**	**120.03**	**25**	P	**PKPdf**	**06 01 53.1**	**-1.0**	
	baz=333,SNR=6.8							
452A	**Marianna**	**120.09**	**26**	P	**PKPdf**	**06 01 53.0**	**-1.2**	
	baz=332							
255A	**Hazlehurst**	**120.16**	**23**	*e*PKPdf	**PKPdf**	**06 01 53.7**	**-0.6**	
255A				LR	LR			
	comp=Z,11μm,19.0s							
255A	**Hazlehurst**	**120.16**	**23**	P	**PKPdf**	**06 01 53.7**	**-0.6**	
	baz=335							
TIGA	**Tifton**	**120.19**	**24**	*e*PKPdf	**PKPdf**	**06 01 54.3**	**-0.1**	
TIGA				LR	LR			
	comp=Z,10μm,19.0s							
TIGA	**Tifton**	**120.19**	**24**	P	**PKPdf**	**06 01 53.8**	**-0.5**	
	baz=334,SNR=9.7							
MOIG	**Morelia**	**120.28**	**47**	PFAKE		06 02 10.0	+15	
MOIG				LR	LR			
	comp=Z,5μm,21.0s							
256A	**Glennville**	**120.32**	**23**	P	**PKPdf**	**06 01 53.5**	**-1.1**	
	baz=336							
453A	**Whigham**	**120.43**	**25**	*e*PKPdf	**PKPdf**	**06 01 54.5**	**-0.4**	
453A				LR	LR			
	comp=Z,9μm,18.0s							
453A	**Whigham**	**120.43**	**25**	P	**PKPdf**	**06 01 54.0**	**-0.9**	
	baz=333,SNR=11							
355A	**Pearson**	**120.55**	**24**	P	**PKPdf**	**06 01 54.1**	**-1.0**	
	baz=334							
257A	**Skidaway Islan**	**120.62**	**22**	PFAKE		06 02 10.0	+15	
257A				LR	LR			
	comp=Z,8μm,20.0s							
552A	**Lynn Haven**	**120.68**	**27**	P	**PKPdf**	**06 01 53.2**	**-2.1**	
	baz=332							
454A	**Quitman**	**120.82**	**25**	P	**PKPdf**	**06 01 53.8**	**-1.8**	
	baz=334							
356A	**Blackshear**	**120.83**	**23**	P	**PKPdf**	**06 01 54.4**	**-1.2**	
	baz=335,SNR=6.8							
455A	**Stateville**	**121.03**	**24**	P	**PKPdf**	**06 01 55.7**	**-0.2**	
	baz=334,SNR=7.4							
456A	**Hilliard**	**121.41**	**23**	*e*PKPdf	**PKiKP**	**06 01 57.1**	**+0.3**	
456A				LR	LR			
	comp=Z,6μm,18.0s							
456A	**Hilliard**	**121.41**	**23**	P	**PKPdf**	**06 01 55.8**	**-0.9**	
	baz=335,SNR=7.2							
555A	**McAlpin**	**121.61**	**24**	*e*PKPdf	**PKPdf**	**06 01 57.0**	**-0.1**	
555A				LR	LR			
	comp=Z,9μm,20.0s							
555A	**McAlpin**	**121.61**	**24**	P	**PKPdf**	**06 01 55.9**	**-1.2**	
	baz=334							
556A	**Lake Butler**	**121.92**	**24**	P	**PKPdf**	**06 01 56.1**	**-1.6**	
	baz=335							
557A	**Orange Park**	**122.16**	**23**	P	**PKPdf**	**06 01 56.8**	**-1.4**	
	baz=335							
656A	**Willston**	**122.44**	**24**	PFAKE		06 02 10.0	+11	
656A				LR	LR			
	comp=Z,12μm,20.0s							
657A	**Interlachen**	**122.50**	**24**	P	**PKPdf**	**06 01 57.9**	**-0.9**	
	baz=335							
658A	**Bunnell**	**122.87**	**23**	PFAKE		06 02 10.0	+10	
658A				LR	LR			
	comp=Z,8μm,18.0s							
SNAA	**Sanae**	**122.87**	**198**	PKPdf	**PKiKP**	**06 01 58.5**	**0.0**	
SNAA	**Sanae**	**122.87**	**198**	*e*PKPdf	**PKPdf**	**06 01 58.1**	**-0.2**	
SNAA				LR	LR			
	comp=Z,4μm,19.0s							
SNAA	**Sanae**	**122.87**	**198**	*e*PKIKP	**PKPdf**	**06 01 58.1**	**-0.2**	
SNAA				MLR	MLR			
	comp=Z,4μm,19.0s							
757A	**Oxford**	**123.00**	**24**	P	**PKPdf**	**06 01 58.7**	**-1.1**	
	baz=335							
LVIG	**Laguna Verde**	**123.36**	**43**	PFAKE		06 02 10.0	+9.1	
LVIG				LR	LR			
	comp=Z,4μm,18.0s							
TLIG	**Tlapa**	**123.53**	**47**	*e*PKPdf	**PKPdf**	**06 02 01.2**	**-0.1**	
TLIG				LR	LR			
	comp=Z,6μm,18.0s							
857A	**Zephyrhills**	**123.55**	**25**	P	**PKPdf**	**06 01 59.6**	**-1.3**	
	baz=334							
BBSR	**BB Station**	**123.84**	**6**	*e*PKPdf	**PKPdf**	**06 02 00.5**	**-0.8**	
DWPF	**Disney Wildern**	**123.99**	**24**	*e*PKPdf	**PKPdf**	**06 02 01.0**	**-0.7**	
DWPF				LR	LR			
	comp=Z,7μm,20.0s							
DWPF	**Disney Wildern**	**123.99**	**24**	P	**PKPdf**	**06 02 00.6**	**-1.2**	
	baz=335							
957A	**Wimauma**	**124.08**	**25**	PFAKE		06 02 10.0	+7.8	
957A				LR	LR			
	comp=Z,10μm,20.0s							
859A	**Kempfer Cattle**	**124.23**	**24**	P	**PKPdf**	**06 02 01.5**	**-0.7**	
	baz=336							
958A	**Wauchula**	**124.34**	**25**	P	**PKPdf**	**06 02 01.5**	**-1.0**	
	baz=334							
VNA2	**Neumayer--Watz**	**124.52**	**198**	PKPdf	**PKiKP**	**06 02 01.8**	**+0.1**	
959A	**Okeechobee**	**124.73**	**24**	P	**PKPdf**	**06 02 02.3**	**-0.9**	
	baz=335							
058A	**Arcadia**	**124.80**	**25**	P	**PKPdf**	**06 02 02.0**	**-1.3**	
	baz=334							
VNA1	**Neumayer--Stat**	**124.91**	**198**	PKPdf	**PKiKP**	**06 02 02.4**	**0.0**	
VNA3	**Neumayer Olymp**	**124.99**	**197**	PKPdf	**PKPdf**	**06 02 02.3**	**0.0**	
059A	**Moore Haven**	**125.13**	**24**	*e*PKPdf	**PKPdf**	**06 02 03.5**	**-0.5**	
059A				LR	LR			
	comp=Z,9μm,18.0s							
059A	**Moore Haven**	**125.13**	**24**	P	**PKPdf**	**06 02 03.2**	**-0.7**	
	baz=335							
060A	**Indiantown**	**125.36**	**24**	*e*PKPdf	**PKiKP**	**06 02 04.9**	**+0.2**	
060A				LR	LR			
	comp=Z,8μm,19.0s							
060A	**Indiantown**	**125.36**	**24**	P	**PKPdf**	**06 02 03.2**	**-1.2**	
	baz=336							
059Z	**Ave Maria**	**125.58**	**25**	P	**PKPdf**	**06 02 03.6**	**-1.2**	
	baz=334							
060Z	**West Palm Beac**	**125.86**	**24**	P	**PKPdf**	**06 02 04.0**	**-1.4**	
	baz=335							
061Z	**Ochoppi**	**126.22**	**25**	PFAKE		06 02 20.0	+14	
061Z				LR	LR			
	comp=Z,7μm,19.0s							
061Z	**Ochoppi**	**126.22**	**25**	P	**PKPdf**	**06 02 04.8**	**-1.2**	
	baz=335							
MYIG	**Mrida**	**126.32**	**36**	PFAKE		06 02 20.0	+13	
MYIG				LR	LR			
	comp=Z,4μm,19.0s							
TEIG	**Tepich**	**127.70**	**36**	PFAKE		06 02 20.0	+10	
TEIG				LR	LR			
	comp=Z,4μm,20.0s							
SACV	**Santiago Islan**	**128.24**	**315**	PFAKE		06 02 20.0	+9.2	
SACV				LR	LR			
	comp=Z,8μm,18.0s							
CCIG	**Comitan**	**128.61**	**42**	*e*PKPdf	**PKPdf**	**06 02 10.1**	**-1.0**	
CCIG				LR	LR			
	comp=Z,4μm,19.0s							
SHEL	**Horse Pasture**	**129.61**	**269**	PFAKE		06 02 20.0	+6.5	
SHEL				LR	LR			
	comp=Z,4μm,21.0s							
TGUH	**Tegucigalpa,Un**	**133.25**	**39**	*e*PKPpre	PKPpre	06 02 08.8		
TGUH				LR	LR			
	comp=Z,4μm,21.0s							
GRTK	**Grand Turk**	**133.39**	**16**	PFAKE		06 02 30.0	+9.0	
GRTK				LR	LR			
	comp=Z,6μm,22.0s							
GTBY	**Guantanamo Bay**	**133.74**	**21**	PFAKE		06 02 30.0	+8.3	
GTBY				LR	LR			
	comp=Z,4μm,20.0s							
CSGN	**Cosiguina Volc**	**133.94**	**40**	PFAKE		06 02 30.0	+7.6	
CSGN				LR	LR			
	comp=Z,3μm,21.0s							
MTDJ	**Mount Denham**	**134.43**	**25**	PFAKE		06 02 30.0	+6.7	
MTDJ				LR	LR			
	comp=Z,6μm,21.0s							
ESTN	**Estel**	**134.54**	**39**	PFAKE		06 02 30.0	+6.4	
ESTN				LR	LR			
	comp=Z,3μm,19.0s							
SDDR	**Presa de Saban**	**135.77**	**17**	PFAKE		06 02 40.0	+14	
SDDR				LR	LR			
	comp=Z,6μm,20.0s							
ACON	**Acoyapa**	**136.14**	**39**	*e*PKPdf	**PKPdf**	**06 02 24.7**	**-0.4**	
ACON				LR	LR			
	comp=Z,3μm,22.0s							
ESPN	**Las Esperanzas**	**136.45**	**37**	PFAKE		06 02 40.0	+13	
ESPN				LR	LR			
	comp=Z,3μm,21.0s							
SDD	**Santo Domingo**	**136.62**	**15**	PFAKE		06 02 40.0	+12	
SDD				LR	LR			
	comp=Z,6μm,20.0s							
AOPR	**Arecibo Observ**	**137.39**	**11**	*e*PKPdf	**PKPdf**	**06 02 26.1**	**-1.3**	
AOPR				LR	LR			
	comp=Z,5μm,22.0s							
MPR	**Mayaguez**	**137.45**	**12**	PFAKE		06 02 40.0	+11	
MPR				LR	LR			
	comp=Z,6μm,22.0s							
CBYP	**Canovanas**	**137.61**	**10**	PFAKE		06 02 40.0	+10	
CBYP				LR	LR			
	comp=Z,4μm,20.0s							
JTS	**Las Juntas de**	**137.61**	**40**	*e*PKPpre	PKPpre	06 02 18.1		
JTS				LR	LR			
	comp=Z,3μm,22.0s							
JTS	**Las Juntas de**	**137.61**	**40**	*e*PKHKP	PKPpre	06 02 18.1		
JTS				MLR	MLR			
	comp=Z,3μm,22.0s							
CRPR	**Cabo Rojo, PR**	**137.66**	**12**	*e*PKPdf	**PKPdf**	**06 02 26.3**	**-1.5**	
STVI	**Saint Thomas**	**137.66**	**8**	*e*PKPdf	**PKPdf**	**06 02 26.7**	**-1.1**	
STVI				LR	LR			
	comp=Z,5μm,22.0s							
OBIP	**Obispado Ponce**	**137.71**	**11**	*e*PKPdf	**PKPdf**	**06 02 26.8**	**-1.1**	
OBIP				LR	LR			
	comp=Z,5μm,20.0s							
SJG	**San Juan**	**137.72**	**10**	*e*PKPdf	**PKPdf**	**06 02 27.9**	**0.0**	
SJG				LR	LR			
	comp=Z,4μm,19.0s							
SJG	**San Juan**	**137.72**	**10**	*e*P	**PKPdf**	**06 02 27.5**	**-0.4**	
HUMP	**Col San Antoni**	**137.74**	**10**	*e*PKPdf	**PKPdf**	**06 02 25.2**	**-2.7**	
MTP	**Monte Pirata**	**137.83**	**9**	PFAKE		06 02 40.0	+10	
MTP				LR	LR			
	comp=Z,4μm,22.0s							
ICMP	**Isla Caja de M**	**137.88**	**11**	*e*PKPdf	**PKPdf**	**06 02 27.1**	**-1.1**	
ICMP				LR	LR			
	comp=Z,4μm,21.0s							
SMRT	**St. Maarten**	**138.18**	**6**	*e*PKPdf	**PKPdf**	**06 02 28.1**	**-0.7**	
SMRT				LR	LR			
	comp=Z,4μm,22.0s							
CDVI	**St. Croix**	**138.28**	**8**	*e*PKPdf	**PKPdf**	**06 02 29.4**	**+0.5**	
HDC	**Heredia**	**138.33**	**39**	PFAKE		06 02 40.0	+8.6	
HDC				LR	LR			
	comp=Z,5μm,20.0s							
ANWB	**Willy Bob**	**138.66**	**4**	PFAKE		06 02 40.0	+8.2	
ANWB				LR	LR			
	comp=Z,4μm,21.0s							
SEUS	**St. Eustatius**	**138.74**	**6**	PFAKE		06 02 40.0	+8.1	
SEUS				LR	LR			
	comp=Z,4μm,22.0s							
SKI	**Saint Kitts**	**138.92**	**6**	PFAKE		06 02 40.0	+7.6	
SKI				LR	LR			
	comp=Z,7μm,22.0s							
PMSA	**Palmer Station**	**138.93**	**177**	*e*P	PKiKP	06 02 42.2	+11	
BCIP	**Isla Barro Col**	**141.36**	**34**	*e*PKPpre	PKPpre	06 02 26.1		
BCIP				LR	LR			
	comp=Z,5μm,20.0s							
BCIP	**Isla Barro Col**	**141.36**	**34**	*e*PKHKP	PKPpre	06 02 26.1		
BCIP				MLR	MLR			
	comp=Z,5μm,20.0s							
BCIP	**Isla Barro Col**	**141.36**	**34**	*e*P	**PKPdf**	**06 02 27.5**	**-7.1**	
FDF	**Fort de France**	**141.61**	**3**	*e*PKPdf	**PKPdf**	**06 02 33.9**	**-1.2**	
FDF				LR	LR			
	comp=Z,4μm,20.0s							
FDF	**Fort de France**	**141.61**	**3**	*e*PKIKP	**PKPdf**	**06 02 33.9**	**-1.2**	
FDF				MLR	MLR			
	comp=Z,4μm,20.0s							
PAYG	**Puerto Ayora**	**141.88**	**57**	PFAKE		06 02 50.0	+11	
PAYG				LR	LR			
	comp=Z,5μm,20.0s							
SVB	**Belmont**	**143.06**	**4**	PFAKE		06 02 50.0	+9.1	
SVB				LR	LR			
	comp=Z,4μm,22.0s							
BBGH	**Gun Hill**	**143.25**	**1**	PFAKE		06 02 50.0	+8.7	
BBGH				LR	LR			
	comp=Z,5μm,19.0s							
CODC	**Agustn Codazz**	**143.57**	**25**	*e*P	PKPab	06 02 34.8	-0.1	
GRGR	**Grenville**	**144.16**	**5**	PFAKE		06 02 50.0	+6.8	
GRGR				LR	LR			
	comp=Z,4μm,21.0s							
SMLC	**San Martn de**	**144.35**	**26**	*e*P	**PKPab**	**06 02 34.2**	**-3.8**	
UREC	**San Jos de Ur**	**144.67**	**29**	*e*P	**PKPab**	**06 02 37.5**	**-1.6**	
UREC				*e*P	PKPbc	06 02 39.5	+0.2	
OCAC	**Ocana**	**145.17**	**25**	*e*P	**PKPbc**	**06 02 40.2**	**-0.9**	
HOPE	**Hope Point**	**145.26**	**203**	*e*PKPbc	**PKPbc**	**06 02 39.4**	**-0.5**	
SDV	**Santo Domingo**	**145.53**	**21**	*e*PKPdf	**PKPdf**	**06 02 41

NBLI	Livramento-PB	153.30	304	eP	PKiKP	06 03 02.7	+0.6
PTGA	Pitinga	157.01	3	ePKPdf	PKPdf	06 02 58.8	-0.6
PTGA				ePKPab	PKPab	06 03 28.9	-0.5
PTGA				LR	LR		
	comp=Z,6μm,21.0s						
NNA	Nana	159.32	58	PKP	PKPdf	06 03 02.3	+0.1
	comp=Z,16nm,0.8s,baz=3.5,slow=5.8,SNR=4.5						
NNA	Nana	159.32	58	ePKPdf	PKPdf	06 03 00.6	-1.6
NNA				LR	LR		
	comp=Z,3μm,20.0s						
NNA	Nana	159.32	58	ePKIKP	PKPdf	06 03 00.6	-1.6
NNA				MLR	MLR		
	comp=Z,3μm,20.0s						
PLCA	Paso Flores	160.53	153	PKP	PKPdf	06 03 02.7	-0.2
	comp=Z,5.1nm,0.8s,baz=169,slow=0.6,SNR=7.6						
PLCA				PKPab	PKPab	06 03 44.9	+0.7
	comp=Z,9.4nm,0.7s,baz=263,slow=2.7,SNR=8.9						
PLCA	Paso Flores	160.53	153	ePKPdf	PKPdf	06 03 01.6	-1.3
PLCA				ePKPab	PKPab	06 03 44.9	+0.7
PLCA	Paso Flores	160.53	153	ePKIKP	PKPdf	06 03 01.6	-1.3
PLCA	Paso Flores	160.53	153	eP	PKPdf	06 03 17.7	+15
GO06	Curarrehue	161.05	149	ePKPdf	PKPdf	06 03 02.1	-1.4
BSFB	Barra de Sao F	162.43	283	eP	PKPdf	06 03 15.9	+10
SJMB	Sao Joao De Ma	162.69	284	eP	PKPdf	06 03 15.9	+10
JANB	Januaria	163.69	300	eP	PKPdf	06 03 15.6	+8.8
CAM01	Campos-RJ	163.94	274	eP	PKPdf	06 03 17.1	+10
MCI8	Montes Claros	164.21	294	eP	PKPdf	06 03 18.0	+11
TRQA	Tornquist	165.58	170	ePKPdf	PKPdf	06 03 07.5	-0.3
TRQA				ePKPab	PKPab	06 04 05.5	-0.7
TRQA	Tornquist	165.58	170	ePKIKP	PKPdf	06 03 07.5	-0.3
TRQA				e		06 04 05.5	
PEL	Peldehue	166.13	135	ePKPdf	PKPdf	06 03 08.0	-0.4
PEL	Peldehue	166.13	135	ePKIKP	PKPdf	06 03 08.0	-0.4
ESAR	Angra dos Reis	166.66	271	eP	PKPdf	06 03 20.7	+12
CLDB	Colider	166.77	346	eP	PKPdf	06 03 19.2	+10
BDFB	Brasilia	166.88	306	PKP	PKPdf	06 03 08.8	-0.7
	comp=Z,9.1nm,0.9s,baz=32,slow=2.8,SNR=12						
BDFB				PKPab	PKPab	06 04 13.7	+1.0
	comp=Z,26nm,0.8s,baz=56,slow=3.8,SNR=14						
BDFB	Brasilia	166.88	306	ePKPdf	PKPdf	06 03 08.6	-0.9
BDFB				ePKPdf	PKPdf	06 03 08.8	-0.7
BDFB				ePKPab	PKPab	06 04 13.6	+0.8
BDFB				ePKPab	PKPab	06 04 13.7	+1.0
BDFB	Brasilia	166.88	306	ePKIKP	PKPdf	06 03 08.6	-0.9
PARB	Paraibuna	167.78	270	eP	PKPdf	06 03 21.9	+12
PB12	IPOC Station P	168.18	66	eP	PKPdf	06 03 10.4	+0.1
LCO	Las Campanas	168.27	119	ePKPdf	PKPdf	06 03 09.5	-0.9
LCO	Las Campanas	168.27	119	ePKIKP	PKPdf	06 03 09.5	-0.9
LPAZ	La Paz	168.56	51	PKP	PKPdf	06 03 11.5	+0.2
	comp=Z,36nm,0.9s,baz=180,slow=6.3,SNR=73						
LPAZ	La Paz	168.56	51	ePKPdf	PKPdf	06 03 11.2	0.0
LPAZ	La Paz	168.56	51	ePKIKP	PKPdf	06 03 11.3	0.0
ACAN	Cantantal	168.88	141	eP	PKPdf	06 03 11.1	+0.7
LPA	La Plata	168.93	184	ceP	KIKP	PKPdf	06 03 07.0	-3.2
GO03	Copiap	169.15	113	ePKPdf	PKPdf	06 03 11.3	+0.6
SPB	Sao Paulo	169.45	269	ePKPdf	PKPdf	06 03 09.4	-1.5
SPB	Sao Paulo	169.45	269	eP	PKPdf	06 03 22.8	+12
MRA	San Martin	169.57	147	eP	PKPdf	06 03 09.9	-1.0
BB19B	Bebedouro	169.98	284	eP	PKPdf	06 03 22.2	+11
VCA	Vinchina	170.36	122	eP	PKPdf	06 03 13.6	+2.0
CNLB	Canela	170.93	231	eP	PKPdf	06 03 23.4	+12
TCA	Tanti	171.00	147	eP	PKPdf	06 03 11.1	-0.6
ITRB	Iturama	171.03	296	eP	PKPdf	06 03 24.0	+12
SIV	San Ignacio	171.95	15	PKP	PKPdf	06 03 12.0	-0.4
	comp=Z,16nm,0.9s,baz=190,slow=0.6,SNR=42						
SIV				PKPab	PKPab	06 04 34.5	-0.4
	comp=Z,4.2nm,0.8s,baz=15,slow=4.8,SNR=2.5						
CYA	Choya	172.31	128	eP	PKPdf	06 03 12.3	0.0
FSA	Cafayete	173.22	111	eP	PKPdf	06 03 12.9	-0.1
AHML	Horco Molle	173.51	118	eP	PKPdf	06 03 12.9	0.0
YJA	Yavi	173.72	76	eP	PKPdf	06 03 14.2	+0.6
HJA	Humahuaca	174.03	85	eP	PKPdf	06 03 14.2	+0.5
AZAP	Zapla	174.39	95	eP	PKPdf	06 03 12.3	-1.2
CPUP	Villa Florida	177.12	210	PKP	PKPdf	06 03 13.0	-0.8
	comp=Z,10nm,0.8s,baz=344,slow=0.1,SNR=19						
CPUP				PKPab	PKPab	06 04 54.9	-2.7
	comp=Z,6.6nm,0.9s,baz=121,slow=5.5,SNR=5.3						
CPUP	Villa Florida	177.12	210	eP	PKPdf	06 03 25.5	+12

TAP 02 05:45:16.5, 23°.82N×121°.00E, h15km, ML3.9, 2C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	Suanglung	0.05	230	⇑P	Pg	05 45 19.4	+0.2
SSLB	baz=229			S	Sg	05 45 21.3	+0.1
SMLT	Sun Moon Lake	0.11	305	⇑P	Pb	05 45 20.3	-0.2
SMLT	baz=307			S	Sb	05 45 23.1	+0.1
VWDT	VWDT	0.15	116	P	Pb	05 45 21.5	+0.5
VWDT	baz=116			S	Sb	05 45 24.9	+0.9
TYC	Yuchr	0.15	303	P	Pb	05 45 20.8	-0.3
TYC	baz=306			S	Sg	05 45 23.3	+0.4
OWD	Renai	0.21	51	P	Pb	05 45 22.4	+0.2
OWD	baz=50			S	Sb	05 45 25.7	-0.3
DPDB	Guoxing	0.22	343	P	Pb	05 45 22.1	-0.2
DPDB	baz=343			S	Sb	05 45 25.9	-0.3
CHGB	Renai	0.29	34	P	Pb	05 45 23.4	-0.2
WNT	baz=34 Mingjian	0.29	281	P	Pb	05 45 23.5	0.0
WNT	baz=281			eS	Sb	05 45 28.6	+0.4
YUS	Yu-Shan	0.33	187	eP	Pb	05 45 24.3	-0.2
CHN5	baz=187 Tsauling	0.37	233	P	Pb	05 45 24.8	0.0
CHN5	baz=232			S	Sb	05 45 30.5	+0.1
ESL	Shilin	0.40	91	P	Pb	05 45 25.4	+0.1
ESL	baz=91			S	Sb	05 45 31.4	+0.1
WHF	Hehuan Shan	0.41	37	P	Pb	05 45 25.9	+0.2
WHF	baz=38			S	Sb	05 45 31.7	-0.2
WGK	Gukeng	0.42	252	eP	Pb	05 45 25.4	-0.2
EGFH	baz=250 Guangfu	0.42	111	P	Pb	05 45 25.8	+0.1
EHY	baz=110 Hungye	0.43	136	eP	Pb	05 45 25.9	0.0
WDLH	baz=135 Douliu	0.44	253	eP	Pg	05 45 24.2	-1.0
WHP	baz=252 Taichung City	0.46	354	eP	Pb	05 45 26.9	+0.5
WCHH	baz=354 Zhanghua	0.48	303	eP	Pb	05 45 26.9	+0.2
YULB	baz=302 Yu-li	0.51	147	eP	Pb	05 45 26.9	-0.3
YULB	baz=147			eS	Sb	05 45 34.4	0.0
TWF1	baz=147 Yuli	0.54	149	eP	Pb	05 45 27.8	+0.1
CHN2	baz=148 Minshiung	0.56	239	eP	Pb	05 45 27.8	-0.2
CHN2	baz=239			eS	Sb	05 45 36.6	+0.9
	baz=239						

TAP 02 05:45:34.8, 23°.81N×121°.02E, h13km, ML3.9, 2C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	Suanglung	0.06	250	⇑P	Pg	05 45 37.7	+0.3
SSLB	baz=250			S	Sg	05 45 39.6	+0.3
VWDT	VWDT	0.13	115	P	Pb	05 45 39.5	+0.4
VWDT	baz=115			S	Sb	05 45 42.3	+0.3
SMLT	Sun Moon Lake	0.13	305	⇑iP	Pg	05 45 38.6	+0.3
SMLT	baz=306			S	Sb	05 45 41.5	-0.7
TYC	Yuchr	0.17	303	P	Pg	05 45 39.1	+0.3
TYC	baz=305			S	Sb	05 45 42.6	-0.8
OWD	Renai	0.21	45	P	Pb	05 45 40.4	-0.2
OWD	baz=45			S	Sb	05 45 43.6	-0.8
DPDB	Guoxing	0.24	340	P	Pg	05 45 40.5	+0.5
DPDB	baz=339			S	Sg	05 45 44.3	+0.9
CHGB	Renai	0.29	30	P	Pb	05 45 42.0	-0.1
CHGB	baz=29			S	Sg	05 45 45.9	+0.9
WNT	Mingjian	0.31	283	P	Pb	05 45 42.0	-0.3
WNT	baz=283			S	Sb	05 45 47.3	0.0
YUS	Yu-Shan	0.32	190	eP	Pb	05 45 43.2	+0.4
YUS	baz=190			S	Sg	05 45 46.9	+0.7
CHN5	Tsauling	0.37	236	P	Pb	05 45 43.3	-0.1
CHN5	baz=235			S	Sb	05 45 49.3	+0.1
ESL	Shilin	0.38	89	P	Pb	05 45 43.5	0.0
EGFH	baz=89 Guangfu	0.40	110	eP	Pb	05 45 43.5	-0.3
WHF	baz=110 Hehuan Shan	0.41	34	eP	Pb	05 45 44.5	+0.4
EHY	baz=35 Hungye	0.41	137	eP	Pb	05 45 43.8	-0.2
WGK	baz=136 Gukeng	0.43	254	eP	Pg	05 45 43.6	+0.1
WDLH	baz=253 Douliu	0.45	255	eP	Pb	05 45 44.3	-0.4
TCU	baz=254 Taichung	0.46	317	eP	Pb	05 45 44.9	+0.1
TDCB	baz=317 Techi	0.46	16	eP	Pg	05 45 44.3	+0.3
TWT	baz=16 Tachien	0.47	18	eP	Pg	05 45 44.5	+0.3
WHP	baz=16 Taichung City	0.47	352	eP	Pb	05 45 45.2	+0.1
WHP	baz=352			eS	Sb	05 45 52.7	+0.6
YULB	Yu-li	0.49	148	P	Pg	05 45 44.9	+0.4
YULB	baz=148			S	Sb	05 45 52.1	-0.3
WCHH	Zhanghua	0.50	303	P	Pb	05 45 45.7	+0.2
WCHH	baz=302			eS	Sb	05 45 53.5	+0.8
TWF1	baz=302 Yuli	0.52	150	P	Pb	05 45 45.9	0.0
CHN2	baz=149 Minshiung	0.57	241	eP	Pb	05 45 46.4	-0.2
ETLH	baz=241 Xiulin Townshi	0.58	47	eP	Pb	05 45 46.7	-0.3
TWD	baz=46 Chiawan	0.60	63	eP	Pb	05 45 47.7	+0.5
RLNB	baz=63 Erlin	0.61	278	eP	Pg	05 45 46.9	+0.3
RLNB	baz=277			eS	Sb	05 45 56.4	+0.6
ELDTW	baz=277 Lidau	0.62	180	eP	Pb	05 45 47.4	-0.2
CHY	baz=179 Chiayi	0.62	240	eP	Pg	05 45 47.0	0.0
NACB	baz=239 Ninganchiao	0.64	55	eP	Pg	05 45 47.1	-0.2
NSY	baz=55 Sanyi	0.65	339	eP	Pb	05 45 48.6	+0.5
	baz=339						

TAP 02 05:47:45.0, 23°.79N×120°.95E, h15km, ML3.5, 3C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	Suanglung	0.00	68	⇑P	Pg	05 47 47.8	0.0
SSLB	baz=73			S	Sg	05 47 49.5	-0.1
SMLT	Sun Moon Lake	0.11	335	⇑iP	Pb	05 47 48.9	+0.1
SMLT	baz=338			S	Sb	05 47 51.8	+0.4
TYC	Yuchr	0.14	324	⇑iP	Pb	05 47 49.4	-0.1
TYC	baz=336			iS	Sb	05 47 52.4	0.0
VWDT	VWDT	0.18	100	⇓P	Pb	05 47 50.1	+0.1
VWDT	baz=100			S	Sb	05 47 53.7	+0.4
DPDB	Guoxing	0.25	355	P	Pg	05 47 50.8	+0.3
DPDB	baz=1.0			S	Sg	05 47 54.8	+0.5
WNT	Mingjian	0.26	291	P	Pb	05 47 51.9	+0.5
OWD	baz=291 Renai	0.27	51	⇓P	Pb	05 47 51.3	-0.3
OWD	baz=51			S	Sg	05 47 54.9	0.0
YUS	Yu-Shan	0.29	180	eP	Pg	05 47 51.6	0.0
CHN5	baz=174 Tsauling	0.31	233	P	Pb	05 47 52.3	0.0
CHN5	baz=233			eS	Sb	05 47 57.6	+0.3
CHGB	Renai	0.34	37	P	Pg	05 47 52.5	+0.3
CHGB	baz=45			S	Sg	05 47 56.9	-0.2
WGK	Gukeng	0.37	254	eP	Pb	05 47 53.6	+0.4
WDLH	baz=254 Douliu	0.39	256	eP	Pb	05 47 53.7	+0.1
TCU	baz=256 Taichung	0.44	325	eP	Pb	05 47 55.4	+0.9
EHY	baz=326 Hungye	0.44	129	P	Pg	05 47 54.1	+0.3
ESL	baz=122 Shilin	0.44	86	P	Pg	05 47 54.1	+0.2
EGFH	baz=86 Guangfu	0.45	105	P	Pb	05 47 54.4	-0.3
EGFH	baz=105			S	Sb	05 48 01.2	0.0
WHF	Hehuan Shan	0.46	39	P	Pb	05 47 54.9	-0.1
WHF	baz=46			S	Sb	05 48 01.4	-0.4
WCHH	Zhanghua	0.46	309	P	Pb	05 47 55.5	+0.7
WCHH	baz=309			S	Sn	05 48 03.3	-1.7
WHP	Taichung City	0.49	360	P	Pb	05 47 55.6	+0.2
WHP	baz=3.0			S	Sb	05 48 03.5	+1.1
TDCB	Techi	0.50	22	P	Pg	05 47 55.0	0.0
TDCB	baz=28			S	Sg	05 48 01.4	-0.4
CHN2	Minshiung	0.50	240	eP	Pb	05 47 56.0	+0.5
YULB	baz=241 Yu-li	0.51	141	P	Pg	05 47 55.3	+0.2
YULB	baz=132			eS	Sg	05 48 02.0	+0.2
TWT	baz=132 Tachien	0.51	24	P	Pg	05 47 55.0	-0.2
HGSD	baz=28 Ruisui	0.52	124	eP	Pb	05 47 56.2	+0.3
HGSD	baz=124			S	Sb	05 48 04.0	+0.7
TWF1	Yuli	0.54	144	P	Pb	05 47 56.1	0.0
	baz=138						

CHN4	Tsaushan	0.54	217	eP	Pb	05 47 56.7	+0.5
CHN4	baz=216			eS	Sb	05 48 05.3	+1.5
RLNB	baz=216 Erlin	0.55	281	P	Pb	05 47 56.2	-0.2
RLNB	baz=281			S	Sb	05 48 05.0	+1.0
CHY	baz=281 Chiayi	0.56	239	eP	Pb	05 47 56.7	+0.1
CHY	baz=238			eS	Sb	05 48 05.8	+1.4
TPUB	baz=238 Ta-pu	0.57	211	P	Pb	05 47 56.5	-0.1
TPUB	baz=211			S	Sb	05 48 05.3	+0.8
ELDTW	baz=211 Lidau	0.60	174	P	Pg	05 47 56.6	-0.3
WTCT	baz=174 Ta-ch'eng	0.62	277	eP	Pb	05 47 57.4	-0.1
WTP	baz=277 Ta-pu	0.62	210	P	Pb	05 47 57.7	+0.2
WTP	baz=209			eS	Sb	05 48 06.8	+0.7
WDJ	baz=209 Dajia District	0.63	333	eP	Pb	05 47 58.2	+0.6
WDJ	baz=334			S	Sn	05 48 08.4	-0.7
HWA	baz=334 Hwalien	0.63	72	eP	Pb	05 47 58.2	+0.5
STYT	baz=72 Tauyuan	0.65	196	P	Pg	05 47 57.8	+0.1
NSY	baz=207 Sanyi	0.65	345	P	Pn	05 47 59.4	-0.3
NSY	baz=334			eS	Sn	05 48 09.1	-0.6
TWD	baz=334 Chiawan	0.66	64	eP	Pb	05 47 58.4	+0.2
TWD	baz=64			eS	Sg	05 48 06.6	-0.1
TWK	baz=64 Hsinying	0.67	219	P	Pb	05 47 58.7	+0.3
TWK	baz=218			S	Sb	05 48 08.7	+1.2
PTSB	baz=218 Yuanli	0.69	341	P	Pn	05 47 59.8	-0.5
PTSB	baz=342			eS	Sn	05 48 11.1	+0.4
SNST	baz=342 Tainan City	0.70	216	eP	Pg	05 47 57.8	-0.9
SNST	baz=216			eS	Sb	05 48 09.1	+0.7
NACB	baz=216 Ninganchiao	0.70	57	eP	Pg	05 47 58.2	-0.6
NACB	baz=57			eS	Sg	05 48 08.0	-0.2
CHN1	baz=57 Nanshi	0.71	213	eP	Pb	05 47 59.6	+0.4
CHN1	baz=212			S	Sb	05 48 09.7	+0.9
NNS	baz=212 Nan Shan	0.76	31	P	Pg	05 47 59.4	-0.5
NMLH	baz=37 Miaoli	0.76	349	eP	Pn	05 48 01.8	+0.6
CHN8	baz=348 Yiju	0.81	237	eP	Pg	05 48 00.8	0.0
LIOB	baz=238 Emei	0.86	4	eP	Pn	05 48 02.2	-0.3
YHNB	baz=349 Yeheng	0.96	24	eP	Pn	05 48 04.6	+0.6
YHNB	baz=24			eS	Sg	05 48 16.5	+0.1
TWG	baz=24 Pinlang	0.97	173	P	Pn	05 48 04.0	0.0
TWGBT	baz=163 Beinan	0.97	173	P	Pb	05 48 03.6	+0.1
SSD	baz=163 Sandimen	1.08	196	eP	Pg	05 48 06.1	+0.3
	baz=185						

VIE 02 05:53:13.7±0.6, 46°.66N×9°.82E, h4km±15km, mb0.9/1, ml0.9/2, Error ellipse: s-maj=2.5km s-min=1.9km az=140.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETA	Feichten	0.72	60	Pg	Pg	05 53 27.7	+0.1
FETA	0.1nm,0.1s			Sg	Sg	05 53 37.0	0.0
	0.2nm,0.2s						

*SOME **02** 05:55:57.0, 43°.42N×82°.37E, h5km*
*NNC **02** 05:56:01.4±1.5, 43°.48N×82°.02E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=11.9km s-min=8.1km az=148.0*
ISC 02 05:55:58.6±2.5, 43°.39N±0°.09×82°.16E±0°.09, h16km±11km, n15, σ1°51/23, 1C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.32	273	P	Pg	05 56 23.6	-0.5
KTMS	0.3nm,0.1s			S	Sg	05 56 39.9	-1.4
KTMS	8.8nm,0.3s Ketmen	1.32	273	eP	Pb	05 56 24.1	+1.0
KTMS	0.3nm,0.1s			eS	Sn	05 56 42.9	+3.1
PDGK	8.8nm,0.3s Podgornoye	1.95	269	Pg	Pb	05 56 35.2	+1.4
PDGK	2.3nm,0.2s			Lg	Lg	05 57 01.1	
PDGK	16nm,0.7s Podgornoye	1.95	269	⇑Pg	Pg	05 56 36.0	0.0
PDGK	15nm,0.5s			⇓Lg	Lg	05 57 01.4	
DJR	37nm,0.7s Jarkent	1.96	300	P	Pb	05 56 34.7	+0.8
DJR	34nm,0.3s			S	Sb	05 56 59.1	+1.0
DJR	16nm,0.5s Jarkent	1.96	300	eP	Pb	05 56 35.0	+1.1
DJR	34nm,0.3s			eS	Sg	05 57 02.4	+0.8
SHLS	16nm,0.5s Shalkode	1.98	264	P	Pn	05 56 30.6	-1.0
SHLS	17nm,0.3s			S	Sn	05 56 52.9	-3.3
SHLS	30nm,0.5s Shalkode	1.98	264	eP	Pn	05 56 31.0	-0.6
SHLS	17nm,0.3s			eS	Sn	05 56 54.6	-1.6
UZB	30nm,0.5s Uzynbulak	2.31	265	Pg	Pg	05 56 42.4	-0.4
UZB	14nm,0.4s			Lg	Lg	05 57 12.3	
UZB	23nm,0.8s Uzynbulak	2.31	265	eP	Pg	05 56 42.4	-0.4
UZB	14nm,0.4s			eS	Sg	05 57 14.2	+1.5
SATY	17nm,0.7s Saty	2.76	264	Pg	Pb	05 56 49.6	+1.9
SATY				Lg	Lg	05 57 25.7	
MNBS	Baschi	2.81	286	Pg	Pb	05 56 48.0	-0.5
MNBS	7.5nm,0.6s			Lg	Lg	05 57 23.0	
MNBS	5.7nm,0.2s Baschi	2.81	286	eP	Pg	05 56 50.9	-1.6
MNBS	5.8nm,0.9s			eS	Sg	05 57 28.7	-0.2
ARXS	8.6nm,0.5s Arharly	3.24	286	Pg	Pb	05 56 56.5	+0.7
ARXS	5.0nm,0.9s			Lg	Lg	05 57 36.5	
MK31	7.6nm,0.6s Makanchi Array	3.41	1	⇓Pg	Pb	05 56 59.5	+0.9
MK31	12nm,1.0s,baz=183,slow=16,SNR=7.9			Lg	Lg	05 57 48.5	
	20nm,1.3s,baz=181,slow=28,SNR=4.3						

*ISCJB **02** 06:01:59.7±0.8, 21°.17S±0°.03×68°.64W±0°.09, h145km±9km, Error ellipse: s-maj=13.6km s-min=4.5km az=178.3*
*GUC **02** 06:02:00.0±0.8, 21°.17S×68°.58W, h132km±5km, ML3.5*
ISC 02 06:01:59.4±1.7, 21°.16S±0°.04×68°.60W±0°.09, h147km±14km, n18, σ0°68/34, 3C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.84**	**277**	*e*P	**Pn**	**06 02 22.7**	**0.0**
PB01				*e*S	**Sn**	**06 02 39.5**	**-0.9**
PB01				IAML		06 02 40.9	
	comp=N,963nm,0.3s						
PB09	**IPOC Station P**	**0.88**	**223**	*e*P	**Pn**	**06 02 23.4**	**+0.3**
PB09				*i* S	**Sn**	**06 02 40.2**	**-0.9**
PB09				IAML		06 02 41.9	
	comp=N,603nm,0.5s						
PB08	**IPOC Station P**	**1.14**	**333**⇑	*e*P	**Pn**	**06 02 26.2**	**+0.6**
PB08				*e*S	**Sn**	**06 02 45.5**	**0.0**
PB08				IAML		06 02 46.9	
	comp=E,600nm,0.7s						
PB02	**IPOC Station P**	**1.22**	**262**	*e*P	**Pn**	**06 02 26.5**	**+0.4**
PB02				*e*S	**Sn**	**06 02 46.0**	**-0.4**
PB02				IAML		06 02 48.9	
	comp=E,1μm,0.2s						
PB07	**IPOC Station P**	**1.33**	**244**	*e*P	**Pn**	**06 02 27.7**	**+0.5**
PB07				*e*S	**Sn**	**06 02 48.2**	**-0.2**
PB07				IAML		06 02 49.3	
	comp=N,1μm,0.2s						
PB03	**IPOC Station P**	**1.40**	**230**⇓	*e*P	**Pn**	**06 02 28.2**	**+0.4**
PB03				*i* S	**Sn**	**06 02 49.3**	**-0.3**
PB03				IAML		06 02 50.0	
	comp=E,782nm,0.2s						
LVC	**Limon Verde**	**1.48**	**191**⇓	*i*P	**Pn**	**06 02 29.0**	**0.0**
LVC				*i* S	**Sn**	**06 02 50.4**	**-1.1**
GO01	**Chusmiza**	**1.58**	**339**⇑	*i*P	**Pn**	**06 02 30.8**	**+0.6**
GO01				*e*S	**Sn**	**06 02 54.4**	**+0.8**
PB11	**IPOC Station P**	**1.71**	**324**⇑	*e*P	**Pn**	**06 02 31.6**	**+0.3**
PB11				*e*S	**Sn**	**06 02 55.7**	**+0.2**
PB11				IAML		06 02 56.9	
	comp=N,662nm,0.6s						
PB06	**IPOC Station P**	**1.79**	**210**⇓	*e*P	**Pn**	**06 02 32.4**	**+0.3**
PB06				*i* S	**Sn**	**06 02 56.8**	**-0.4**
PB06				IAML		06 02 57.6	
	comp=N,540nm,0.3s						
PB04	**IPOC Station P**	**1.86**	**231**	*e*P	**Pn**	**06 02 33.5**	**+0.6**
PB04				*i* S	**Sn**	**06 02 58.1**	**-0.5**
PB04				IAML		06 03 00.9	
	comp=E,295nm,0.2s						
PSGC	**Pisagua**	**2.11**	**317**	*e*P	**Pn**	**06 02 35.8**	**0.0**
PSGC				*i* S	**Sn**	**06 03 03.6**	**-0.2**
PSGC				IAML		06 03 07.1	
	comp=E,204nm,0.6s						
PB15	**IPOC Station P**	**2.20**	**201**	*e*P	**Pn**	**06 02 38.1**	**+1.1**
PB15				*e*S	**Sn**	**06 03 06.7**	**+0.9**
MNMC	**Minye Minye**	**2.22**	**335**	*e*P	**Pn**	**06 02 38.3**	**+1.0**
MNMC				*i* S	**Sn**	**06 03 07.5**	**+1.0**
PB05	**IPOC Station P**	**2.25**	**221**	*e*P	**Pn**	**06 02 38.1**	**+0.6**
PB05				*e*S	**Sn**	**06 03 05.6**	**-1.2**
PB05				IAML		06 03 08.7	
	comp=N,159nm,0.4s						
PB12	**IPOC Station P**	**3.01**	**327**	*e*P	**Pn**	**06 02 46.5**	**-0.4**
PB12				*e*S	**Sn**	**06 03 23.0**	**-0.6**
PB12				IAML		06 03 29.9	
	comp=N,95nm,0.4s						
SLA	**San Lorenzo**	**4.55**	**142**	*e*P	**Pn**	**06 03 07.4**	**+0.4**
LPAZ	**La Paz**	**4.86**	**5**	*e*P	**Pn**	**06 03 10.5**	**-1.1**

MEX 02 06:10:39.6±0.4, 15°.08N×93°.16W, h78km±6km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.62**	**355**	*i* P	Pn	06 10 53.0	-1.3
PCIG				*i* S	Sn	06 11 03.4	-1.8
THIG		**0.88**	**101**	*i* P	Pn	06 10 55.9	-1.2
THIG				*e*S	Sn	06 11 08.6	-1.7
TGIG		**1.69**	**1**	*e*P	Pn	06 11 06.3	-1.0
TGIG				*e*S	Sn	06 11 26.4	-2.0
CMIG	**Matias Romero**	**2.59**	**321**	*e*P	Pn	06 11 18.3	-1.1

TAP 02 06:12:01.5, 23°.80N×120°.93E, h12km, ML3.5, 9C-15D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.03**	**107**	⇑P	Pg	06 12 03.9	+0.3
	baz=106						
SSLB				S	Sg	06 12 05.4	+0.2
	baz=106						
SMLT	**Sun Moon Lake**	**0.09**	**344**⇑	*i*P	Pg	06 12 04.7	+0.4
	baz=349						
SMLT				*i* S	Sg	06 12 06.6	+0.2
	baz=349						
WHYT	**Xinyi Township**	**0.12**	**214**⇑	*i*P	Pg	06 12 05.2	+0.6
	baz=215						
WHYT				S	Sg	06 12 07.8	+1.0
	baz=215						
TYC	**Yuchr**	**0.13**	**329**⇑	*i*P	Pg	06 12 05.2	+0.6
	baz=336						
TYC				*i* S	Sg	06 12 07.5	+0.5
	baz=336						
VWDT	**VWDT**	**0.20**	**102**	⇓P	Pb	06 12 06.8	-0.3
	baz=95						
VWDT				S	Sg	06 12 10.2	+1.4
	baz=95						
DPDB	**Guoxing**	**0.24**	**360**	⇑P	Pg	06 12 07.0	+0.5
	baz=6.0						
DPDB				S	Sg	06 12 10.9	+1.0
	baz=6.0						
WNT	**Mingjian**	**0.24**	**290**⇓	*i*P	Pb	06 12 07.8	0.0
	baz=292						
WNT				*e*S	Sg	06 12 12.3	+2.5
	baz=292						
OWD	**Renai**	**0.28**	**55**	⇓P	Pg	06 12 07.8	+0.6
	baz=55						
OWD				*e*S	Sg	06 12 11.5	+0.3
	baz=55						
CHN5	**Tsauling**	**0.30**	**229**⇓	*i*P	Pb	06 12 08.7	-0.2
	baz=229						
CHN5				S	Sb	06 12 13.9	0.0
	baz=229						
YUS	**Yu-Shan**	**0.30**	**176**⇓	*i*P	Pg	06 12 08.5	+0.6
	baz=165						
YUS				S	Sb	06 12 13.4	-0.9
	baz=165						
CHGB	**Renai**	**0.35**	**41**	⇓P	Pg	06 12 08.9	+0.3
	baz=48						
CHGB				*e*S	Sg	06 12 13.4	+0.1
	baz=48						
WGK	**Gukeng**	**0.35**	**252**⇓	*i*P	Pb	06 12 09.8	+0.1
	baz=252						
WGK				S	Sb	06 12 16.0	+0.8
	baz=252						
WDLH	**Douliu**	**0.37**	**254**	P	Pb	06 12 10.2	+0.2
	baz=254						
WDLH				*e*S	Sb	06 12 16.6	+0.9
	baz=254						
TCU	**Taichung**	**0.42**	**327**	*e*P	Pb	06 12 11.2	+0.3
	baz=314						
TCU				*e*S	Sb	06 12 18.0	+0.8
	baz=314						
WCHH	**Zhanghua**	**0.44**	**310**	⇓P	Pb	06 12 11.5	+0.3
	baz=310						
WCHH				S	Sb	06 12 18.7	+0.9
	baz=310						
EHY	**Hungye**	**0.46**	**128**	P	Pb	06 12 11.3	-0.2
	baz=118						
EHY				S	Sb	06 12 18.1	-0.3
	baz=118						
ESL	**Shilin**	**0.46**	**88**	P	Pb	06 12 11.3	-0.3
	baz=87						
ESL				S	Sb	06 12 18.1	-0.4
	baz=87						
WHF	**Hehuan Shan**	**0.47**	**42**⇓	*i*P	Pb	06 12 11.4	-0.5
	baz=51						
WHF				S	Sg	06 12 17.7	+0.6
	baz=51						
EGFH	**Guangfu**	**0.47**	**105**	P	Pb	06 12 11.6	-0.2
	baz=104						
EGFH				S	Sb	06 12 18.2	-0.5
	baz=104						
WHP	**Taichung City**	**0.48**	**2**	*e*P	Pb	06 12 11.6	-0.4
	baz=9.0						
WHP				*e*S	Sb	06 12 19.2	+0.1
	baz=9.0						
CHN2	**Minshiung**	**0.49**	**238**	P	Pb	06 12 12.4	+0.4
	baz=238						
CHN2				S	Sb	06 12 20.2	+1.0
	baz=238						
TDCB	**Techi**	**0.50**	**25**	⇑P	Pg	06 12 11.4	+0.1
	baz=31						
TDCB				*e*S	Sg	06 12 17.4	-0.7
	baz=31						
TWT	**Tachien**	**0.51**	**26**	P	Pg	06 12 11.5	0.0
	baz=31						
TWT				*e*S	Sg	06 12 17.6	-0.8
	baz=31						
YULB	**Yu-li**	**0.53**	**140**	⇓P	Pb	06 12 12.4	-0.3
	baz=139						
YULB				S	Sg	06 12 19.3	+0.6
	baz=139						
RLNB	**Erlin**	**0.53**	**281**	⇓P	Pb	06 12 12.8	+0.1
	baz=282						
RLNB				S	Sb	06 12 21.0	+0.7
	baz=282						
CHN4	**Tsaushan**	**0.54**	**215**	*e*P	Pb	06 12 13.1	+0.2
	baz=214						
CHN4				S	Sb	06 12 21.8	+1.3
	baz=214						
HGSD	**Ruisui**	**0.55**	**123**	⇓P	Pb	06 12 13.3	+0.3
	baz=117						
HGSD				*e*S	Sb	06 12 21.1	+0.3
	baz=117						
CHY	**Chiayi**	**0.55**	**237**	*e*P	Pb	06 12 13.2	+0.2
	baz=238						
CHY				*e*S	Sb	06 12 21.7	+0.8
	baz=238						
TWF1	**Yuli**	**0.56**	**142**⇓	*i*P	Pb	06 12 13.1	-0.1
	baz=131						
TWF1				S	Sg	06 12 20.4	+0.7
	baz=131						
TPUB	**Ta-pu**	**0.56**	**209**	⇑P	Pb	06 12 13.4	+0.1
	baz=208						
TPUB				S	Sb	06 12 21.8	+0.5
	baz=208						
TWQ1	**Liyutan**	**0.57**	**346**	P	Pb	06 12 13.9	+0.5
	baz=332						
TWQ1				*e*S	Sb	06 12 21.4	-0.1
	baz=332						
WTCT	**Ta-ch'eng**	**0.60**	**277**	P	Pb	06 12 13.7	-0.2
	baz=277						
WTCT				S	Sb	06 12 22.9	+0.7
	baz=277						
ELDTW	**Lidau**	**0.61**	**172**⇓	*i*P	Pg	06 12 13.5	+0.2
	baz=171						
ELDTW				*e*S	Sg	06 12 21.9	+0.4
	baz=171						
WDJ	**Dajia District**	**0.61**	**335**	P	Pb	06 12 14.8	+0.7
	baz=335						
WDJ				*e*S	Sn	06 12 24.2	-1.5
	baz=335						
WTP	**Ta-pu**	**0.62**	**208**	P	Pb	06 12 14.3	+0.1
	baz=206						
WTP				*e*S	Sb	06 12 23.6	+0.7
	baz=206						
ENLB	**Shoufeng**	**0.63**	**80**	*e*P	Pb	06 12 14.5	+0.2
	baz=80						
ENLB				*e*S	Sb	06 12 23.9	+0.7
	baz=80						
NSY	**Sanyi**	**0.64**	**346**⇑	*i*P	Pb	06 12 15.4	+0.8
	baz=333						
NSY				S	Sn	06 12 25.1	-1.4
	baz=333						
WMLT	**Mailiao**	**0.65**	**271**	*e*P	Pb	06 12 14.4	-0.3
	baz=272						
WMLT				*e*S	Sb	06 12 24.4	+0.7
	baz=272						
HWA	**Hwalien**	**0.65**	**74**	P	Pb	06 12 15.0	+0.3
	baz=74						
HWA				*e*S	Sb	06 12 23.9	+0.2
	baz=74						
STYT	**Tauyuan**	**0.65**	**194**	*e*P	Pb	06 12 14.8	+0.1
	baz=193						
STYT				*e*S	Sb	06 12 23.6	-0.2
	baz=193						
ETLH	**Xiulin Townshi**	**0.65**	**51**	P	Pg	06 12 14.5	+0.3
	baz=46						
ETLH				*e*S	Sg	06 12 23.1	+0.3
	baz=46						
WLGB	**Puzi**	**0.66**	**241**	*e*P	Pg	06 12 14.5	+0.2
	baz=242						
WLGB				*e*S	Sb	06 12 25.4	+1.4
	baz=242						
TWK	**Hsinying**	**0.66**	**218**	P	Pb	06 12 15.2	+0.1
	baz=216						
TWK				*e*S	Sb	06 12 25.0	+0.8
	baz=216						
WSF	**Szhu**	**0.67**	**257**	P	Pb	06 12 14.8	-0.2
	baz=257						
WSF				S	Sb	06 12 24.9	+0.7
	baz=257						
SNST	**Tainan City**	**0.69**	**215**	*e*P	Pb	06 12 15.6	+0.1
	baz=214						
SNST				*e*S	Sb	06 12 26.2	+1.1
	baz=214						
CHN1	**Nanshi**	**0.71**	**211**	P	Pb	06 12 16.0	+0.2
	baz=211						
CHN1				S	Sb	06 12 26.4	+0.9
	baz=211						
NACB	**Ninganchiao**	**0.72**	**58**	⇓P	Pg	06 12 15.4	0.0
	baz=58						
NACB				*e*S	Sg	06 12 25.0	+0.2
	baz=58						
NMLH	**Miaoli**	**0.75**	**350**	P	Pn	06 12 17.4	-0.5
	baz=351						
NMLH				*e*S	Sn	06 12 28.1	-1.1
	baz=351						
NNS	**Nan Shan**	**0.76**	**32**	*e*P	Pg	06 12 16.0	-0.2
	baz=41						
SGST	**Jiashian**	**0.78**	**204**	*e*P	Pb	06 12 17.4	+0.4
	baz=215						
SGST				*e*S	Sb	06 12 28.6	+1.2
	baz=215						
CHN8	**Yiju**	**0.80**	**236**	P	Pb	06 12 17.5	+0.3
	baz=251						
CHN8				*e*S	Sn	06 12 29.4	-0.9
	baz=251						
CHKT	**Chengkung**	**0.80**	**150**	P	Pn	06 12 18.1	-0.5
	baz=148						
CHKT				*e*S	Sn	06 12 31.0	+0.5
	baz=148						
NSTT	**Nanjuang**	**0.83**	**5**	P	Pb	06 12 18.4	+0.4
	baz=6.0						
NSTT				S	Sb	06 12 29.7	+0.6
	baz=6.0						
SLGT	**Liugui**	**0.84**	**198**	*e*P	Pb	06 12 18.3	+0.3
	baz=197						
SLGT				*e*S	Sn	06 12 30.9	-0.5
	baz=197						
LIOB	**Emei**	**0.85**	**5**	⇑P	Pn	06 12 19.0	-0.3
	baz=7.0						
LIOB				*e*S	Sn	06 12 30.7	-1.0
	baz=7.0						
SCLT	**Jiali**	**0.91**	**228**	*e*P	Pb	06 12 19.5	+0.3
	baz=227						
SCLT				*e*S	Sn	06 12 33.8	+0.6
	baz=227						
NSK	**Sanguang**	**0.96**	**24**	*e*P	Pg	06 12 19.8	-0.2
	baz=35						
YHNB	**Yeheng**	**0.96**	**25**	*e*P	Pg	06 12 19.7	-0.4
	baz=35						
NDT	**Datong Townshi**	**0.97**	**34**	*e*P	Pg	06 12 19.9	-0.2
	baz=34						
ENA	**Nanau**	**0.97**	**50**	*e*P	Pb	06 12 20.3	0.0
	baz=50						
ENA				*e*S	Sb	06 12 33.5	+0.3
	baz=50						
TWG	**Pinlang**	**0.98**	**172**	P	Pn	06 12 21.1	+0.1
	baz=158						
TWG				S	Sn	06 12 34.5	-0.3
	baz=158						
TWGBT	**Beinan**	**0.98**	**172**	P	Pn	06 12 20.8	-0.3
	baz=158						
TWGBT				S	Sn	06 12 34.6	-0.4
	baz=158						
SBCB	**Hsinchu**	**0.99**	**3**	*e*P	Pn	06 12 21.2	-0.1
	baz=4.0						
SBCB				*e*S	Sn	06 12 35.3	0.0
	baz=4.0						
HSN	**Hsinchu**	**1.00**	**2**	*e*P	Pn	06 12 21.4	0.0
	baz=5.0						
TTN	**Taitung**	**1.06**	**169**	*e*P	Pg	06 12 21.8	0.0
	baz=169						
TWM1	**Shoushan**	**1.07**	**206**	*e*P	Pn	06 12 23.4	+1.1
	baz=205						
SSD	**Sandimen**	**1.08**	**195**	*e*P	Pn	06 12 22.9	+0.5
	baz=194						
WLTB	**Daxi**	**1.09**	**16**	*e*P	Pn	06 12 23.2	+0.6
	baz=26						
NWLT	**Wulai**	**1.11**	**28**	*e*P	Pb	06 12 22.5	-0.1
	baz=29						
TWE	**Neicheng**	**1.14**	**36**	*e*P	Pg	06 12 23.6	+0.1
	baz=46						
TWC	**Suao**	**1.17**	**46**	*e*P	Pg	06 12 24.1	+0.1
	baz=46						
TWC				*e*S	Sn	06 12 39.5	0.0
	baz=46						
NCUH	**Zhongli**	**1.19**	**11**	*e*P	Pg	06 12 25.5	+1.1
	baz=12						
NCU	**National Centr**	**1.19**	**11**	*e*P	Pn	06 12 24.0	0.0
	baz=12						
MASBT	**Mashibuluo**	**1.21**	**193**	P	Pg	06 12 25.1	+0.4
	baz=205						
MASBT				*e*S	Sn	06 12 42.5	+2.0
	baz=205						
PHUB	**P'eng-hu**	**1.27**	**258**	*e*P	Pn	06 12 24.4	-0.7
	baz=259						
PHUB				*e*S	Sb	06 12 41.0	-0.8
	baz=259						
PNG	**Penghu**	**1.28**	**260**	*e*P	Pn	06 12 24.5	-0.7
	baz=261						
PNG				*e*S	Sb	06 12 41.3	-0.6
	baz=261						
WDGT	**Dungji**	**1.28**	**246**	P	Pn	06 12 24.6	-0.6
	baz=246						
WDGT				*e*S	Sb	06 12 41.9	0.0
	baz=246						
TATO	**Taipei**	**1.28**	**23**	*e*P	Pg	06 12 26.5	+0.3
	baz=29						
NHDH	**Xindian Distri**	**1.28**	**25**	*e*P	Pg	06 12 26.2	0.0
	baz=31						
EOS1	**EOS1**	**1.33**	**55**	*e*P	Pg	06 12 27.4	+0.4
	baz=55						
NTC	**Toucheng**	**1.34**	**38**	*e*P	Pg	06 12 27.9	+0.7
	baz=47						
EAST	**Anshuo**	**1.41**	**183**	*e*P	Pb	06 12 28.0	+0.2
	baz=172						
EAST				*e*S	Sg	06 12 47.5	+0.6
	baz=172						
TIPB	**Shuangxi**	**1.43**	**35**	*e*P	Pg	06 12 29.0	+0.1
	baz=35						
TAW	**Tawu**	**1.43**	**181**	*e*P	Pg	06 12 28.9	-0.1
	baz=171						
NTST	**Danshui**	**1.44**	**19**	*e*P	Pg	06 12 29.3	+0.1
	baz=3.0						
SCZT	**Fangliau**	**1.44**	**191**	*e*P	Pb	06 12 28.3	0.0
	baz=189						
SCZT				*e*S	Sg	06 12 49.2	+1.2
	baz=189						
YM01	**YM01**	**1.47**	**23**	*e*P	Pn	06 12 28.2	+0.3
	baz=25						
YM01				*e*S	Sg	06 12 49.1	+0.3
	baz=25						
YM10	**YM10**	**1.47**	**23**	*e*P	Pn	06 12 28.3	+0.4
	baz=4.0						
YM11	**YM11**	**1.49**	**23**	*e*P	Pb	06 12 28.8	-0.3
	baz=4.0						
NWF	**Wu-fen Shan**	**1.49**	**31**	*e*P	Pg	06 12 30.1	0.0
	baz=17						
NWF				*e*S	Sg	06 12 50.7	+1.2
	baz=17						
WFSB	**Wu-fen Shan**	**1.49**	**31**	*e*P	Pg	06 12 29.7	-0.4
	baz=17						
WFSB				*e*S	Sg	06 12 50.2	+0.8
	baz=17						
VCHM	**Qimei**	**1.49**	**247**	*e*P	Pn	06 12 28.1	0.0
	baz=248						
VCHM				*e*S	Sn	06 12 47.7	+0.2
	baz=248						
YM08	**YM08**	**1.51**	**23**	*e*P	Pb	06 12 29.3	-0.2
	baz=24						
YM07	**YM07**	**1.51**	**25**	*e*P	Pn	06 12 28.6	+0.2
	baz=26						
WLCH	**Liuqiu**	**1.52**	**199**	*e*P	Pb	06 12 30.0	+0.4
	baz=201						
TWB1	**Santiao Chiao**	**1.55**	**38**	*e*P	Pb	06 12 30.6	+0.5
	baz=49						
TWB1				*e*S	Sg	06 12 51.7	+0.4
	baz=49						
YOJ	**Yonaguni jima**	**2.02**	**70**	P	Pn	06 12 36.0	+0.7
	baz=70						
YOJ				S	Sb	06 13 02.0	-1.1
	baz=70						
PCYT	**Pengchaiyu**	**2.10**	**29**	*e*P	Pn	06 12 37.1	+0.6
	baz=30						
KNMB	**Chin-men Tao**	**2.41**	**287**	*e*P	Pn	06 12 40.0	-0.8
	baz=287						
MATB	**Ma-tsu**	**2.51**	**339**	*e*P	Pn	06 12 41.0	-1.1
	baz=339						
MHZQ	**Yeshan**	**2.87**	**324**	*e*P	Pn	06 12 46.6	-0.5
	baz=324						
ZPLA	**Ao Xicun**	**2.91**	**273**	*e*P	Pn	06 12 46.9	-0.8
	baz=273						
AXDP	**Jialang**	**2.91**	**293**	*e*P	Pn	06 12 47.1	-0.5
	baz=293						
LYJJ	**Jianjiangzhen**	**2.94**	**339**	*e*P	Pn	06 12 47.1	-0.9
	baz=339						
XPSS	**Dashiqiu**	**3.19**	**348**	*e*P	Pn	06 12 50.4	-1.1
	baz=348						

SJA 02 06:21:21.9±0.6, 27°.09S×66°.65W, h98km±8km, ML3.3, MW3.5, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSA	**Cafayete**	**1.15**	**32**	*e*P	Pn	06 21 45.4	+1.3
FSA				*e*S	Sn	06 22 02.3	+1.6
FSA				IAML		06 22 03.6	
	comp=Z,228nm,0.1s						
CYA	**Choya**	**1.54**	**151**	*e*P	Pn	06 21 49.6	+1.0
CYA				*e*S	Sn	06 22 10.1	+1.3
CYA				IAML		06 22 12.1	
	comp=Z,303nm,0.3s						
VCA	**Vinchina**	**2.14**	**220**	*e*P	Pn	06 21 57.2	+0.9
VCA				*e*S	Sn	06 22 24.2	+1.6
VCA				IAML		06 22 24.3	
	comp=Z,655nm,0.4s						
SLA	**San Lorenzo**	**2.58**	**24**	*e*P	Pn	06 22 11.0	+8.8
SLA				*e*S	Sn	06 22 50.0	+17
AZAP	**Zapla**	**3.19**	**27**	*e*P	Pn	06 22 16.6	+6.2
AZAP				*e*S	Sn	06 23 07.2	+19
AZAP				IAML		06 23 07.9	
	comp=Z,76nm,0.3s						
TCA	**Tanti**	**4.60**	**157**	*e*P	Pn	06 22 30.7	+1.5
TCA				IAML		06 22 46.4	
	comp=Z,18nm,0.3s						
TCA				*e*S	Sn	06 23 40.8	+19

UCR 02 06:21:23.6±2.6, 8°.76N×83°.14W, h38km±9km, MD3.8, 3C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDSV	**San Vito**	**0.17**	**69**⇑	*e*P	Pn	06 21 30.8	-2.1
EDSV				*e*S	Sn	06 21 38.1	-3.4
EDPN	**Palmar Norte**	**0.38**	**303**⇓	*e*P	Pn	06 21 31.9	-0.6
EDPN				*e*S	Sn	06 21 39.5	+0.4
EDBA	**Buenos Aires**	**0.42**	**341**⇓	*e*P	Pn	06 21 32.8	-0.4
EDBA				*e*S	Sn	06 21 40.9	+0.8
BRU2	**Volcan**	**0.44**	**85**⇑	*e*P	Pn	06 21 32.9	-0.7
BRU2				*e*S	Sn	06 21 41.6	+0.9
TBS2		**0.48**	**86**⇑	*e*P	Pn	06 21 33.7	-0.3
TBS2				*e*S	Sn	06 21 42.7	+1.3
DRK0	**Durika**	**0.51**	**348**⇓	*i*P	Pn	06 21 33.6	-1.0
DRK0				*e*S	Sn	06 21 41.7	-0.7
DVD	**David**	**0.75**	**115**⇓	*i*P	Pn	06 21 36.8	-0.9
DVD				*e*S	Sn	06 21 48.3	+0.5
HDC	**Heredia**	**1.57**	**322**	*e*P	Pn	06 21 50.0	+1.0
HDC				*e*S	Sn	06 22 08.9	+0.7
FORC	**Fortuna**	**2.27**	**318**	*i* P	Pn	06 21 59.4	+0.8
FORC				*i* S	Sn	06 22 29.7	+4.3
CASO	**Castillo**	**2.29**	**317**	*i* P	Pn	06 21 60.0	+1.0
CASO				*i* S	Sn	06 22 30.5	+4.6
CEDE	**Laguna Cedeo**	**2.31**	**318**	*i* P	Pn	06 22 00.1	+0.9
JTS	**Las Juntas de**	**2.35**	**311**	*e*P	Pn	06 21 59.7	0.0
JTS				*e*S	Sn	06 22 27.5	+0.2
AZU	**Azuero**	**2.99**	**109**	*e*P	Pn	06 22 09.2	+0.7
AZU				*e*S	Sn	06 22 45.1	+1.9
BCIP	**Isla Barro Col**	**3.29**	**83**	*e*P	Pn	06 22 11.3	-1.2
BCIP				*e*S	Sn	06 22 49.4	-1.0
UPA	**Univ. de Panam**	**3.57**	**86**	*e*P	Pn	06 22 18.3	+1.9
UPA				*e*S	Sn	06 23 00.1	+2.7

*JMA **02** 06:24:14.2±0.1,23°.83N×120°.98E,h0km,M3.5*
*TAP **02** 06:24:14.7,23°.81N×120°.97E,h13km,ML3.9,B*
*ISCJB **02** 06:24:15.5±0.2,23°.816N±0°.008×120°.98E±0°.01,*
h10km±1km,Error ellipse: s-maj=1.7km s-min=1.1km
az=31.0
ISC 02 06:24:15.2±0.8,23°.83N±0°.01×120°.96E±0°.01,h13km±4km,
n127,σ0°65/220,13C-28D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung** baz=203	**0.04**	**182**	⇑P	**Pg**	**06 24 17.4**	**-0.3**
SSLB	baz=203			S	**Sg**	**06 24 19.0**	**-0.4**
SMLT	**Sun Moon Lake** baz=323	**0.08**	**318**	⇓*i*P	**Pg**	**06 24 18.1**	**0.0**
SMLT	baz=323			*i* S	**Sg**	**06 24 20.3**	**+0.2**
TYC	**Yuchr** baz=318	**0.12**	**310**	⇓*i*P	**Pg**	**06 24 18.6**	**+0.1**
TYC	baz=318			*i* S	**Sg**	**06 24 21.1**	**+0.4**
WHYT	**Xinyi Township** baz=222	**0.16**	**216**	⇑*i*P	**Pg**	**06 24 19.1**	**+0.1**
WHYT	baz=222			S	**Sg**	**06 24 22.2**	**+0.5**
VWDT	**VWDT** baz=109	**0.18**	**113**	⇓P	**Pg**	**06 24 19.6**	**+0.1**
VWDT	baz=109			S	**Sg**	**06 24 22.7**	**+0.4**
DPDB	**Guoxing** baz=357	**0.21**	**353**	P	**Pg**	**06 24 20.0**	**+0.2**
DPDB	baz=357			*i* S	**Sg**	**06 24 23.6**	**+0.6**
OWD	**Renai** baz=53	**0.24**	**58**	⇓P	**Pg**	**06 24 20.4**	**0.0**
OWD	baz=53			*e*S	**Sg**	**06 24 23.6**	**-0.3**
WNT	**Mingjian** baz=285	**0.25**	**282**	⇓*i*P	**Pb**	**06 24 21.5**	**-0.1**
WNT	baz=285			S	**Sb**	**06 24 26.4**	**+0.4**
CHGB	**Renai** baz=46	**0.31**	**41**	⇓P	**Pg**	**06 24 21.5**	**-0.1**
CHGB	baz=46			*e*S	**Sg**	**06 24 25.6**	**-0.3**
YUS	**Yu-Shan** baz=172	**0.34**	**181**	⇑*i*P	**Pg**	**06 24 22.1**	**-0.2**
YUS	baz=172			*e*S	**Sg**	**06 24 27.0**	**0.0**
CHN5	**Tsauling** baz=231	**0.34**	**228**	⇓*i*P	**Pg**	**06 24 22.6**	**+0.4**
CHN5	baz=231			S	**Sb**	**06 24 28.5**	**-0.1**
ALS	**Alishan** baz=196	**0.34**	**204**	⇑*i*P	**Pg**	**06 24 22.4**	**0.0**
ALS	baz=196			S	**Sg**	**06 24 27.8**	**+0.7**
WGK	**Gukeng** baz=251	**0.39**	**249**	⇓*i*P	**Pb**	**06 24 23.8**	**-0.2**
WGK	baz=251			S	**Sb**	**06 24 30.2**	**+0.4**
WDLH	**Douliu** baz=253	**0.41**	**250**	⇓P	**Pb**	**06 24 24.2**	**0.0**
WDLH	baz=253			*e*S	**Sb**	**06 24 31.0**	**+0.6**
TCU	**Taichung** baz=323	**0.41**	**321**	*e*P	**Pb**	**06 24 24.5**	**+0.2**
TCU	baz=323			*e*S	**Sb**	**06 24 31.4**	**+0.9**
WHF	**Hehuan Shan** baz=47	**0.42**	**42**	⇓*i*P	**Pg**	**06 24 24.0**	**+0.1**
WHF	baz=47			S	**Sg**	**06 24 29.8**	**+0.1**
ESL	**Shilin** baz=90	**0.44**	**92**	⇓*i*P	**Pg**	**06 24 24.0**	**0.0**
ESL	baz=90			S	**Sg**	**06 24 29.8**	**0.0**
WCHH	**Zhanghua** baz=306	**0.44**	**305**	⇓P	**Pb**	**06 24 25.1**	**+0.2**
WCHH	baz=306			S	**Sb**	**06 24 32.7**	**+1.3**
WHP	**Taichung City** baz=1.0	**0.45**	**359**	*e*P	**Pg**	**06 24 24.4**	**+0.3**
WHP	baz=1.0			*e*S	**Sb**	**06 24 31.9**	**+0.2**
EGFH	**Guangfu** baz=108	**0.46**	**110**	⇓*i*P	**Pg**	**06 24 24.3**	**-0.1**
EGFH	baz=108			*e*S	**Sg**	**06 24 30.5**	**0.0**
TDCB	**Techi** baz=28	**0.46**	**24**	⇓P	**Pg**	**06 24 24.0**	**-0.5**
TDCB	baz=28			*e*S	**Sg**	**06 24 29.9**	**-0.8**
EHY	**Hungye** baz=126	**0.46**	**133**	P	**Pg**	**06 24 24.4**	**0.0**
EHY	baz=126			S	**Sg**	**06 24 30.7**	**+0.1**
TWT	**Tachien** baz=28	**0.47**	**25**	P	**Pg**	**06 24 24.1**	**-0.5**
TWT	baz=28			*e*S	**Sg**	**06 24 30.2**	**-0.7**
CHN2	**Minshiung** baz=238	**0.53**	**236**	⇓*i*P	**Pb**	**06 24 26.4**	**0.0**
CHN2	baz=238			S	**Sb**	**06 24 34.6**	**+0.7**
YULB	**Yu-li** baz=143	**0.53**	**144**	⇑P	**Pg**	**06 24 25.4**	**-0.3**
YULB	baz=143			S	**Sg**	**06 24 32.2**	**-0.6**
HGSD	**Ruisui** baz=121	**0.54**	**128**	⇓P	**Pb**	**06 24 26.2**	**-0.4**
HGSD	baz=121			S	**Sg**	**06 24 33.2**	**+0.1**
TWQ1	**Liyutan** baz=330	**0.55**	**342**	⇑*i*P	**Pb**	**06 24 27.0**	**+0.3**
TWQ1	baz=330			S	**Sb**	**06 24 35.6**	**+1.2**
RLNB	**Erlin** baz=279	**0.55**	**277**	⇓P	**Pb**	**06 24 26.6**	**-0.1**
RLNB	baz=279			S	**Sb**	**06 24 35.2**	**+0.7**
TWF1	**Yuli** baz=145	**0.57**	**146**	⇑*i*P	**Pg**	**06 24 26.2**	**-0.1**
TWF1	baz=145			S	**Sg**	**06 24 33.5**	**-0.4**
CHN4	**Tsaushan** baz=216	**0.58**	**215**	⇓P	**Pb**	**06 24 26.9**	**-0.3**
CHN4	baz=216			S	**Sb**	**06 24 36.0**	**+0.6**
CHY	**Chiayi** baz=237	**0.59**	**236**	⇓*i*P	**Pb**	**06 24 27.3**	**-0.1**
CHY	baz=237			S	**Sb**	**06 24 36.4**	**+0.8**
WDJ	**Dajia District** baz=332	**0.59**	**331**	⇑*e*P	**Pb**	**06 24 28.0**	**+0.5**
WDJ	baz=332			*e*S	**Sn**	**06 24 37.5**	**-1.4**
ENLB	**Shoufeng** baz=81	**0.60**	**83**	⇓P	**Pg**	**06 24 27.0**	**+0.1**
ENLB	baz=81			S	**Sb**	**06 24 35.7**	**-0.2**
TPUB	**Ta-pu** baz=211	**0.60**	**210**	⇓P	**Pg**	**06 24 27.1**	**+0.1**
TPUB	baz=211			S	**Sb**	**06 24 36.2**	**+0.1**
ETLH	**Xiulin Townshi** baz=48	**0.61**	**52**	⇓*i*P	**Pg**	**06 24 26.9**	**-0.3**
ETLH	baz=48			*e*S	**Sg**	**06 24 34.9**	**-0.5**
NSY	**Sanyi** baz=330	**0.61**	**343**	⇑*i*P	**Pb**	**06 24 28.6**	**+0.8**
NSY	baz=330			S	**Sn**	**06 24 38.2**	**-1.2**
WTCT	**Ta-ch'eng** baz=275	**0.62**	**274**	⇓*i*P	**Pg**	**06 24 27.4**	**+0.1**
WTCT	baz=275			*e*S	**Sb**	**06 24 37.1**	**+0.6**
ELDTW	**Lidau** baz=174	**0.64**	**175**	⇑*i*P	**Pg**	**06 24 27.0**	**-0.7**
ELDTW	baz=174			*e*S	**Sg**	**06 24 35.3**	**-0.8**
WTP	**Ta-pu** baz=209	**0.66**	**209**	⇓*i*P	**Pg**	**06 24 28.1**	**0.0**
WTP	baz=209			S	**Sb**	**06 24 37.9**	**+0.2**
WMLT	**Mailiao** baz=270	**0.67**	**268**	*e*P	**Pg**	**06 24 28.3**	**0.0**
WMLT	baz=270			*e*S	**Sb**	**06 24 38.8**	**+0.7**
NACB	**Ninganchiao** baz=58	**0.68**	**59**	P	**Pg**	**06 24 27.9**	**-0.5**
NACB	baz=58			*e*S	**Sg**	**06 24 36.8**	**-0.6**
STYT	**Tauyuan** baz=195	**0.69**	**195**	P	**Pg**	**06 24 28.4**	**-0.2**
STYT	baz=195			*e*S	**Sb**	**06 24 38.5**	**0.0**
WLGB	**Puzi** baz=241	**0.69**	**240**	*e*P	**Pg**	**06 24 28.7**	**0.0**
WLGB	baz=241			*e*S	**Sb**	**06 24 39.7**	**+1.0**
WSF	**Szhu** baz=256	**0.70**	**255**	*e*P	**Pg**	**06 24 28.5**	**-0.3**
WSF	baz=256			*e*S	**Sb**	**06 24 39.2**	**+0.4**
TWK	**Hsinying** baz=218	**0.70**	**218**	⇓*i*P	**Pg**	**06 24 29.0**	**0.0**
TWK	baz=218			S	**Sb**	**06 24 39.3**	**+0.3**
NNS	**Nan Shan** baz=40	**0.72**	**32**	*e*P	**Pg**	**06 24 28.5**	**-0.7**
NMLH	**Miaoli** baz=348	**0.72**	**348**	*e*P	**Pn**	**06 24 30.5**	**-0.7**
NMLH	baz=348			*e*S	**Sn**	**06 24 41.4**	**-0.8**
SNST	**Tainan City** baz=216	**0.74**	**215**	*e*P	**Pg**	**06 24 29.3**	**-0.2**
SNST	baz=216			*e*S	**Sb**	**06 24 40.4**	**+0.5**
CHN1	**Nanshi** baz=212	**0.75**	**212**	⇓P	**Pg**	**06 24 29.6**	**-0.2**
CHN1	baz=212			S	**Sb**	**06 24 40.8**	**+0.4**
NSTT	**Nanjuang** baz=11	**0.80**	**3**	*e*P	**Pb**	**06 24 31.3**	**+0.2**
NSTT	baz=11			*e*S	**Sb**	**06 24 42.7**	**+0.9**
CHKT	**Chengkung** baz=151	**0.82**	**152**	*e*P	**Pn**	**06 24 31.8**	**-0.7**
LIOB	**Emei** baz=11	**0.82**	**4**	P	**Pb**	**06 24 31.8**	**+0.5**
LIOB	baz=11			*e*S	**Sn**	**06 24 43.5**	**-1.0**
SGST	**Jiashian** baz=216	**0.82**	**205**	*e*P	**Pg**	**06 24 31.0**	**-0.1**
SGST	baz=216			*e*S	**Sn**	**06 24 43.0**	**-1.4**
CHN8	**Yiju** baz=236	**0.83**	**235**	⇓P	**Pg**	**06 24 31.0**	**-0.4**
CHN8	baz=236			S	**Sn**	**06 24 43.9**	**-1.0**
SLGT	**Liugui** baz=199	**0.88**	**199**	*e*P	**Pb**	**06 24 31.9**	**-0.4**
SLGT	baz=199			*e*S	**Sn**	**06 24 45.2**	**-0.7**
NSK	**Sanguang** baz=23	**0.92**	**23**	P	**Pb**	**06 24 32.4**	**-0.8**
NSK	baz=23			*e*S	**Sb**	**06 24 45.0**	**-0.3**
CHN3	**Shinhua** baz=230	**0.92**	**216**	*e*P	**Pg**	**06 24 33.2**	**+0.1**
CHN3	baz=230			*e*S	**Sn**	**06 24 48.0**	**+1.0**
YHNB	**Yeheng** baz=24	**0.92**	**24**	P	**Pb**	**06 24 32.2**	**-1.0**
YHNB	baz=24			*e*S	**Sb**	**06 24 45.1**	**-0.3**
NDT	**Datong Townshi** baz=33	**0.93**	**33**	*e*P	**Pb**	**06 24 32.2**	**-0.9**
ENA	**Nanau** baz=49	**0.93**	**50**	P	**Pb**	**06 24 32.7**	**-0.6**
ENA	baz=49			*e*S	**Sb**	**06 24 44.4**	**-1.2**
SCLT	**Jiali** baz=227	**0.95**	**227**	⇑P	**Pb**	**06 24 33.3**	**-0.3**
SCLT	baz=227			S	**Sn**	**06 24 47.9**	**+0.1**
SBCB	**Hsinchu** baz=2.0	**0.96**	**2**	*e*P	**Pn**	**06 24 34.6**	**+0.2**
SBCB	baz=2.0			*e*S	**Sn**	**06 24 48.1**	**+0.1**
HSN	**Hsinchu** baz=3.0	**0.97**	**1**	*e*P	**Pn**	**06 24 34.7**	**+0.1**
HSN	baz=3.0			*e*S	**Sn**	**06 24 49.1**	**+0.9**
TWG	**Pinlang** baz=164	**1.01**	**174**	⇑P	**Pb**	**06 24 34.1**	**-0.4**
TWG	baz=164			*e*S	**Sg**	**06 24 48.0**	**+0.2**
TWGBT	**Beinan** baz=164	**1.01**	**173**	⇑P	**Pb**	**06 24 34.1**	**-0.5**
TWGBT	baz=164			*e*S	**Sg**	**06 24 48.1**	**+0.2**
TAI1	**Yung-k'ang** baz=231	**1.03**	**221**	*e*P	**Pb**	**06 24 34.8**	**-0.1**
TAI1	baz=231			*e*S	**Sn**	**06 24 50.9**	**+1.3**
WLTB	**Daxi** baz=22	**1.06**	**15**	P	**Pg**	**06 24 36.1**	**+0.5**
WLTB	baz=22			*e*S	**Sn**	**06 24 50.9**	**+0.5**
NWLT	**Wulai** baz=28	**1.07**	**28**	*e*P	**Pb**	**06 24 34.9**	**-0.7**
TTN	**Taitung** baz=170	**1.08**	**171**	*e*P	**Pg**	**06 24 36.5**	**+0.4**
TTN	baz=170			*e*S	**Sn**	**06 24 52.2**	**+1.3**
TWE	**Neicheng** baz=36	**1.10**	**36**	P	**Pb**	**06 24 35.8**	**-0.4**
TWE	baz=36			*e*S	**Sn**	**06 24 51.4**	**0.0**
TWM1	**Shoushan** baz=206	**1.11**	**206**	*e*P	**Pg**	**06 24 37.2**	**+0.5**
TWM1	baz=206			*e*S	**Sn**	**06 24 53.7**	**+1.9**
SSD	**Sandimen** baz=184	**1.12**	**196**	P	**Pn**	**06 24 36.5**	**-0.1**
SSD	baz=184			*e*S	**Sn**	**06 24 52.2**	**+0.4**
TWC	**Suao** baz=46	**1.13**	**46**	P	**Pb**	**06 24 36.3**	**-0.3**
TWC	baz=46			*e*S	**Sg**	**06 24 51.3**	**-0.4**
NCUH	**Zhongli** baz=354	**1.16**	**10**	*e*P	**Pg**	**06 24 37.8**	**+0.3**
NCUH	baz=354			*e*S	**Sg**	**06 24 53.9**	**+1.4**
NCU	**National Centr** baz=355	**1.16**	**10**	*e*P	**Pg**	**06 24 37.6**	**0.0**
NCU	baz=355			*e*S	**Sg**	**06 24 53.7**	**+1.1**
SGLT	**Jiouru** baz=202	**1.18**	**201**	*e*P	**Pg**	**06 24 38.5**	**+0.6**
SNJT	**Kaohsiung City** baz=210	**1.21**	**208**	*e*P	**Pg**	**06 24 39.0**	**+0.4**
ECL	**Taimali** baz=179	**1.22**	**180**	*e*P	**Pn**	**06 24 37.6**	**-0.5**
ECL	baz=179			*e*S	**Sg**	**06 24 54.9**	**+0.1**
TATO	**Taipei** baz=26	**1.24**	**23**	*e*P	**Pb**	**06 24 38.7**	**+0.1**
TATO	baz=26			*e*S	**Sg**	**06 24 55.7**	**+0.4**
MASBT	**Mashibuluo** baz=193	**1.25**	**194**	*e*P	**Pb**	**06 24 38.5**	**-0.1**
MASBT	baz=193			*e*S	**Sg**	**06 24 56.2**	**+0.8**
NHDH	**Xindian Distri** baz=24	**1.25**	**25**	*e*P	**Pb**	**06 24 38.7**	**+0.1**
NHDH	baz=24			*e*S	**Sg**	**06 24 56.2**	**+0.8**
EOS1	**EOS1** baz=55	**1.29**	**56**	*e*P	**Pg**	**06 24 39.8**	**-0.2**
EOS1	baz=55			*e*S	**Sg**	**06 24 57.8**	**+1.0**
NTC	**Toucheng** baz=47	**1.30**	**38**	*e*P	**Pb**	**06 24 39.5**	**0.0**
PHUB	**P'eng-hu** baz=248	**1.31**	**256**	*e*P	**Pn**	**06 24 38.0**	**-1.2**
PHUB	baz=248			*e*S	**Sb**	**06 24 55.0**	**-1.3**
TAP	**Taipei** baz=29	**1.31**	**22**	*e*P	**Pg**	**06 24 40.6**	**+0.2**
PNG	**Penghu** baz=260	**1.31**	**259**	⇓*e*P	**Pn**	**06 24 38.1**	**-1.1**
PNG	baz=260			*e*S	**Sb**	**06 24 55.6**	**-0.8**
WDGT	**Dungji** baz=245	**1.32**	**245**	*e*P	**Pn**	**06 24 38.5**	**-0.9**
WDGT	baz=245			*e*S	**Sb**	**06 24 56.1**	**-0.5**
TWS1	**Kuangyinshan** baz=18	**1.34**	**18**	*e*P	**Pb**	**06 24 39.8**	**-0.4**
TWS1	baz=18			*e*S	**Sg**	**06 24 58.4**	**+0.1**
SSPT	**Xinbi** baz=209	**1.38**	**195**	*e*P	**Pb**	**06 24 40.5**	**-0.4**
TIPB	**Shuangxi** baz=34	**1.39**	**35**	*e*P	**Pb**	**06 24 40.8**	**-0.3**
TIPB	baz=34			*e*S	**Sb**	**06 24 59.1**	**+0.4**
NTST	**Danshui** baz=2.0	**1.41**	**19**	*e*P	**Pg**	**06 24 42.3**	**0.0**
YM01	**YM01** baz=23	**1.43**	**23**	*e*P	**Pn**	**06 24 40.8**	**-0.1**
YM01	baz=23			*e*S	**Sb**	**06 25 00.2**	**+0.4**
YM10	**YM10** baz=22	**1.43**	**23**	*e*P	**Pn**	**06 24 40.8**	**-0.2**
YM10	baz=22			*e*S	**Sn**	**06 24 59.6**	**-0.1**
EAST	**Anshuo** baz=174	**1.44**	**184**	P	**Pb**	**06 24 41.6**	**-0.4**
EAST	baz=174			*e*S	**Sg**	**06 25 01.2**	**-0.5**
YM11	**YM11** baz=24	**1.45**	**23**	*e*P	**Pn**	**06 24 41.2**	**0.0**
NWF	**Wu-fen Shan** baz=31	**1.45**	**31**	*e*P	**Pg**	**06 24 43.5**	**+0.4**
WFSB	**Wu-fen Shan** baz=31	**1.45**	**31**	*e*P	**Pg**	**06 24 43.1**	**0.0**
TAW	**Tawu** baz=172	**1.46**	**182**	*e*P	**Pb**	**06 24 41.9**	**-0.4**
YM07	**YM07** baz=25	**1.47**	**24**	*e*P	**Pg**	**06 24 43.1**	**-0.4**
YM08	**YM08** baz=24	**1.47**	**23**	*e*P	**Pn**	**06 24 41.8**	**+0.3**
SCZT	**Fangliau** baz=191	**1.48**	**192**	P	**Pn**	**06 24 41.8**	**+0.2**
SCZT	baz=191			*e*S	**Sb**	**06 25 01.8**	**+0.5**
TWB1	**Santiao Chiao** baz=48	**1.51**	**38**	*e*P	**Pb**	**06 24 43.3**	**+0.3**
TWB1	baz=48			*e*S	**Sg**	**06 25 02.9**	**-0.9**
VCHM	**Qimei** baz=248	**1.53**	**247**	*e*P	**Pn**	**06 24 41.3**	**-1.0**
VCHM	baz=248			*e*S	**Sn**	**06 25 01.4**	**-0.6**
WLCH	**Liuqiu** baz=202	**1.56**	**200**	*e*P	**Pb**	**06 24 43.7**	**-0.3**
TWP	**Hsiaoliuchiu** baz=202	**1.57**	**200**	*e*P	**Pb**	**06 24 43.8**	**-0.4**
TWKBT	**Hengchun** baz=202	**1.88**	**184**	*e*P	**Pn**	**06 24 47.5**	**+0.3**
TSEB	**Hengchuen, Pin** baz=200	**1.92**	**182**	*e*P	**Pb**	**06 24 50.7**	**+0.6**
JYNG	**Yonagunijimaku**	**1.92**	**71**	P	**Pb**	**06 24 48.6**	**-1.5**
JYNG				*e*S	**Sb**	**06 25 14.1**	**+0.1**
YOJ	**Yonaguni jima** baz=68	**1.98**	**71**	*e*P	**Pn**	**06 24 48.6**	**+0.1**
YOJ	**Yonaguni jima**	**1.98**	**71**	P	**Pn**	**06 24 48.6**	**+0.1**
PTTC	**Pingtan** baz=328	**1.98**	**327**	*e*P	**Pn**	**06 24 47.2**	**-1.3**
PCYT	**Pengchaiyu** baz=15	**2.06**	**29**	*e*P	**Pn**	**06 24 50.0**	**+0.4**
PCYT	baz=15			*e*S	**Sn**	**06 25 16.4**	**+1.2**
KNM	**Kinmen** baz=284	**2.38**	**285**	*e*P	**Pn**	**06 24 54.4**	**+0.5**
KNMB	**Chin-men Tao** baz=286	**2.43**	**286**	*e*P	**Pn**	**06 24 53.4**	**-1.2**
MATB	**Ma-tsu** baz=339	**2.49**	**339**	*e*P	**Pn**	**06 24 54.2**	**-1.3**
IRIF	**Iriomote-Funau**	**2.59**	**78**	P	**Pn**	**06 24 57.2**	**+0.4**
IRIF				*e*S	**Sn**	**06 25 30.1**	**+2.0**
HATJ	**Hateruma jima**	**2.62**	**84**	S	**Sn**	**06 25 30.6**	**+1.7**
JKRS	**Kuro-shima**	**2.82**	**81**	P	**Pn**	**06 25 01.0**	**+1.0**
JKRS				*e*S	**Sn**	**06 25 35.8**	**+1.9**
MHZQ	**Yeshan** baz=323	**2.86**	**323**	*e*P	**Pn**	**06 24 59.7**	**-0.8**
LYJJ	**Jianjiangzhen** baz=339	**2.92**	**338**	*e*P	**Pn**	**06 25 00.2**	**-1.2**
AXDP	**Jialang** baz=292	**2.92**	**292**	*e*P	**Pn**	**06 25 00.5**	**-0.9**
ZPLA	**Ao Xicun** baz=273	**2.94**	**273**	*e*P	**Pn**	**06 25 00.7**	**-0.9**
JIJ	**Ishigaki jima**	**2.96**	**79**	P	**Pn**	**06 25 01.9**	**-0.1**
JIJ				S	**Sn**	**06 25 38.5**	**+1.1**
ZZJH	**Jiuhuzhen** baz=283	**3.10**	**283**	*e*P	**Pn**	**06 25 02.8**	**-1.1**
JISG	**Ishigakijimahi**	**3.15**	**75**	P	**Pn**	**06 25 04.6**	**0.0**
JISG				*e*S	**Sn**	**06 25 41.9**	**-0.3**
XPSS	**Dashiqiu** baz=348	**3.17**	**348**	*e*P	**Pn**	**06 25 03.8**	**-1.0**
JTJ	**Tarama**	**3.52**	**76**	P	**Pn**	**06 25 10.1**	**+0.5**

*ISCJB **02** 06:28:37.5±0.4,27°.34N±0°.04×140°.13E±0°.06,h450km,*
mb3.9/34,Error ellipse: s-maj=7.2km s-min=5.3km az=7.7
*JMA **02** 06:28:39.3±0.1,27°.49N×140°.29E,h452km,M4.2*
*IDC **02** 06:28:39.0±1.2,27°.36N×140°.13E,h458km±12km,*
mb3.4/21,mb1 3.5/28,mb1mx3.4/41,mbtmp4.2/28,Error
ellipse: s-maj=14.6km s-min=11.0km az=108.0
*NEIC **02** 06:28:41.4±1.2,27°.64N×140°.09E,h473km±11km,mb4.2/9,*
Error ellipse: s-maj=30.6km s-min=27.9km az=222.0
ISC 02 06:28:38.4±0.5,27°.38N±0°.07×140°.19E±0°.08,h450km,n72,
σ1°38/84,mb4.0/34,1C,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.80**	**99**	P	**P**	**06 29 38.7**	**+0.8**
CBIJ				*e*S	**S**	**06 30 25.3**	**-0.7**
JHH2	**Haha-jima-NKT2**	**1.92**	**112**	P	**P**	**06 29 40.2**	**+1.7**
JHH2				S	**S**	**06 30 28.2**	**+1.0**
JHJ2	**Mitsune**	**5.72**	**357**	*e*P	**P**	**06 30 11.7**	**+2.0**
JHJ2				*e*S	**S**	**06 31 23.8**	**-0.6**
JHJ2	**Mitsune**	**5.72**	**357**	P	**P**	**06 30 11.6**	**+1.8**
JHJ	**Hachijo jima 2** 20nm,0.3s,baz=38,slow=23,SNR=6.7	**5.73**	**357**	P	**P**	**06 30 11.2**	**+1.3**
JHJ	18nm,0.3s,baz=58,slow=19,SNR=2.9			S	**S**	**06 31 23.6**	**-1.0**
BSO1	**Boso 1**	**7.28**	**5**	P	**P**	**06 30 27.2**	**+1.8**
BSO1				*e*S	**S**	**06 31 53.7**	**+0.5**
JIE	**Ise**	**7.60**	**338**	P	**P**	**06 30 33.0**	**+3.6**
JKN2	**Miekihoku**	**7.62**	**335**	P	**P**	**06 30 33.0**	**+3.4**
JOD2	**Odawara 2**	**7.91**	**353**	P	**P**	**06 30 33.9**	**+1.1**
JOD2				*e*S	**S**	**06 32 04.3**	**-2.4**
INU	**Inuyama**	**8.39**	**342**	*e*P	**P**	**06 30 38.4**	**+0.5**
JRY	**Ryogami san**	**8.68**	**353**	P	**P**	**06 30 41.6**	**+0.5**
JRY				*e*S	**S**	**06 32 19.5**	**-2.4**
MJAR	**Matsushiro Arr** 0.4nm,0.3s,baz=182,slow=12,SNR=23	**9.29**	**350**	P	**P**	**06 30 47.8**	**+0.1**
MAJO	**Matsushiro**	**9.29**	**350**	*e*P	**P**	**06 30 48.0**	**+0.3**
MAT	**Matsushiro**	**9.29**	**350**	P	**P**	**06 30 48.7**	**+1.0**
MAT				S	**S**	**06 32 33.8**	**-0.2**
MJB9	**Matsu-Tunnel**	**9.29**	**350**	*e*P	**P**	**06 30 47.9**	**+0.2**
JHS	**Saijyo**	**9.71**	**323**	P	**P**	**06 30 55.1**	**+2.8**
JAMN	**Amaminishikomi**	**9.79**	**278**	P	**P**	**06 30 55.7**	**+2.5**
JNU	**Nakatsue** 1.5nm,0.3s,baz=208,slow=2.0,SNR=19	**9.88**	**308**	P	**P**	**06 30 56.6**	**+2.5**
JNU	**Nakatsue**	**9.88**	**308**	*e*P	**P**	**06 30 56.1**	**+2.0**
JSJ	**Shimokoshiki**	**10.08**	**298**	P	**P**	**06 30 58.5**	**+2.2**
JOW	**Kunigami** 1.1nm,0.3s,baz=145,slow=12,SNR=7.6	**10.63**	**270**	P	**P**	**06 31 03.7**	**+1.2**
JOT	**Ohata**	**13.98**	**3**	P	**P**	**06 31 40.3**	**+1.8**
KSRS	**Korea Array** 0.3nm,0.3s,baz=132,slow=10,SNR=7.0	**14.42**	**317**	P	**P**	**06 31 42.4**	**-0.8**
ASAJ	**Asahikawa** 0.3nm,0.3s,baz=118,slow=17,SNR=3.5	**16.81**	**6**	P	**P**	**06 32 10.2**	**+1.7**
USRK	**Ussuriysk Ar.** 1.6nm,0.3s,baz=156,slow=8.9,SNR=30	**18.04**	**341**	P	**P**	**06 32 22.1**	**+0.9**
KLR	**Kul'dur** 2.0nm,0.4s,baz=177,slow=7.0,SNR=17	**22.77**	**346**	P	**P**	**06 33 04.2**	**-0.4**
WHN	**Wuhan**	**22.81**	**284**	⇑P	P	06 32 58.9	-6.4
WHN	comp=Z,40nm,0.5s			pmax	pmax		
XAN	**Xi'an**	**27.62**	**292**	P	**P**	**06 33 47.9**	**-0.2**
XAN	comp=Z,9.0nm,0.8s			pmax	pmax		

MA2	Magadan	33.00	10	P		P	06 34 34.7 +0.5
	comp=Z,2.9nm,0.5s,baz=9.0,slow=19,SNR=3.5						
SONM	Songino Array	33.29	317	P		P	06 34 37.2 +0.2
	comp=Z,1.5nm,0.6s,baz=123,slow=8.0,SNR=10.0						
SONM				PcP		PcP	06 37 06.8 +0.1
	comp=Z,0.3nm,0.4s,baz=151,slow=3.7,SNR=4.5						
SONM				ScP		ScP	06 40 06.7 -1.0
	comp=Z,0.3nm,0.4s,baz=124,slow=2.6,SNR=3.4						
SEY	Seymchan	36.45	9	P		P	06 35 04.5 +1.3
	comp=Z,2.6nm,0.7s,baz=198,slow=8.1,SNR=6.6						
CMAR	Chiang Mai Arr	38.87	266	P		P	06 35 23.9 0.0
	comp=Z,1.0nm,0.7s,baz=46,slow=10,SNR=6.3						
RAMN	Ramite	47.36	282	eP		P	06 36 30.9 +0.1
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	47.38	187	P		P	06 36 29.9 -0.7
	comp=Z,0.4nm,0.3s,baz=0.0,slow=6.2,SNR=2.3						
JIRN	Jiri	47.56	283	eP		P	06 36 33.0 +0.6
	comp=Z,21nm,0.3s						
GUN	Gumba	47.77	284	eP		P	06 36 34.5 +0.5
	comp=Z,20nm,0.6s						
ZALV	Zalesovo Beam	48.11	319	P		P	06 36 35.2 -0.4
	comp=Z,5.8nm,0.3s,baz=112,slow=7.3,SNR=10.0						
PKI	Pulchoki	48.25	284	eP		P	06 36 37.4 -0.2
	comp=Z,3.7nm,0.4s						
PKIN	Phulchoki	48.26	284	eP		P	06 36 37.0 -0.6
	comp=Z,6.3nm,0.5s						
MKAR	Makanchi Array	48.92	309	P		P	06 36 41.9 0.0
	comp=Z,2.4nm,0.5s,baz=93,slow=9.4,SNR=16						
MKAR				PcP		PcP	06 37 57.4 -0.7
	comp=Z,1.4nm,0.7s,baz=82,slow=8.7,SNR=4.1						
MKAR				ScP		ScP	06 41 07.3 -2.3
	comp=Z,0.8nm,0.6s,baz=132,slow=1.8,SNR=3.9						
DANN	Dangsing	49.50	285	eP		P	06 36 47.2 +0.4
	comp=Z,20nm,0.5s						
PYUN	Piuthan	50.22	285	eP		P	06 36 52.3 +0.3
	comp=Z,27nm,0.4s						
ASAR	Alice Springs	51.11	187	P		P	06 36 57.5 -0.8
	comp=Z,0.2nm,0.4s,baz=0.7,slow=4.2,SNR=7.5						
KURK	Kurchatov	51.52	314	eP		P	06 37 00.3 -0.6
	comp=Z,41nm,1.4s						
NRIK	Noril'sk	51.74	339	P		P	06 37 02.3 +0.1
	comp=Z,1.5nm,0.4s,baz=118,slow=7.8,SNR=6.3						
KSH	Kashi	53.91	300	P		P	06 37 22.1 +3.6
KSH				S		S	06 44 19.8 +0.8
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,2μm,9.3s						
KSH				LR	LR		
	comp=N,2μm,11.9s						
KSH				LR	LR		
	comp=E,1μm,12.5s						
KSH				LR	LR		
	comp=Z,5μm,18.6s						
BRVK	Borovoye	56.69	317	eP		P	06 37 37.0 -0.6
	comp=Z,16nm,0.7s						
NIL	Nilore	57.12	294	eP		P	06 37 40.9 -0.1
	comp=Z,7.2nm,0.6s						
KK31	Karatay Array	57.48	305	eP		P	06 37 43.2 0.0
	comp=Z,6.5nm,0.8s						
KKAR	Karatay Array	57.48	305	eP		P	06 37 43.4 +0.2
	comp=Z,6.5nm,0.8s						
ILAR	Eielson Array	58.32	29	P		P	06 37 48.7 +0.2
	comp=Z,0.5nm,0.5s,baz=247,slow=5.8,SNR=6.1						
EPYK	Eagle Plains	62.50	27	eP		P	06 38 16.9 +0.5
	comp=Z,4.8nm,0.6s						
INK	Inuvik	63.51	24	P		P	06 38 22.8 0.0
	comp=Z,0.5nm,0.4s,baz=285,slow=3.9,SNR=3.9						
ABKAR	Akbulak array	63.62	314	eP		P	06 38 23.2 -0.7
	comp=Z,6.6nm,0.6s						
ARCES	ARCESS Array B	72.68	340	P		P	06 39 19.1 +0.2
	comp=Z,6.6nm,0.3s,baz=74,slow=8.4,SNR=32						
YKA	Yellowknife Ar	72.73	28	P		P	06 39 19.5 +0.3
	comp=Z,1.4nm,0.5s,baz=297,slow=5.9,SNR=38						
KBZ	Khabaz	76.51	312	P		P	06 39 41.5 +0.5
	comp=Z,4.3nm,0.7s,baz=98,slow=4.3,SNR=9.1						
FINES	FINESS Array B	76.90	333	P		P	06 39 42.4 -0.4
	comp=Z,11nm,0.4s,baz=68,slow=5.1,SNR=235						
AKASG	Malin Array Be	81.33	323	P		P	06 40 05.0 -1.6
	comp=Z,0.8nm,0.3s,baz=51,slow=5.6,SNR=12						
AKBB	Malin Array Si	81.33	323	eP		P	06 40 05.5 -1.2
	comp=Z,4.7nm,0.6s						
NVAR	Mina Array Bea	81.73	51	P		P	06 40 10.8 +1.5
	comp=Z,0.4nm,0.7s,baz=300,slow=6.7,SNR=3.6						
NB2	NORSAR Subarra	82.68	338	P		P	06 40 12.2 -1.2
	comp=Z,2.2nm,0.5s,baz=48,slow=4.6						
NB2	NORSAR Subarra	82.68	338	P		P	06 40 12.4 -1.1
	comp=Z,4.2nm,0.5s,baz=45,slow=5.1						
NOA	NORSAR Array B	82.68	338	P		P	06 40 12.3 -1.1
	comp=Z,5.8nm,0.7s,baz=46,slow=4.9,SNR=17						
BRTR	Keskin Array B	84.50	312	P		P	06 40 22.1 -1.0
	comp=Z,1.7nm,0.8s,baz=85,slow=3.8,SNR=7.2						
BUR08	Bucovina Ar. S	85.24	322	eP		P	06 40 25.0 -1.6
	comp=Z,1.6nm,0.7s						
KWP	Kalwaria Pacla	85.37	325	eS		S	06 50 16.6 -2.9
VYHS	Vyhne	88.06	325	eP		P	06 40 39.6 -0.2
MODS	Modra-Piesok	88.92	326	eP		P	06 40 41.7 -2.1
GERES	GERESS Array B	90.34	328	P		P	06 40 48.8 -1.7
	comp=Z,1.0nm,0.7s,baz=69,slow=4.4,SNR=4.6						
TXAR	Lajitas Array	96.84	52	P		P	06 41 20.9 +0.3
	comp=Z,0.7nm,1.0s,baz=208,slow=6.9,SNR=4.3						
TORD	Torodi Ar. Bea	123.05	310	PKP		PKPdf	06 46 42.2 -1.3
	comp=Z,0.6nm,0.5s,baz=24,slow=2.0,SNR=6.0						

*MDD **02** 06:32:36.8±1.3, 36°.71N×9°.54W, h40km±19km, mb3.5/3, Error ellipse: s-maj=11.8km s-min=9.6km az=15.0, PRXIMO*
*INMG **02** 06:32:37.4±1.1, 36°.68N×9°.51W, h31km, ML1.9, Error ellipse: s-maj=4.4km s-min=2.7km az=74.0*
*IGIL **02** 06:32:37.4, 36°.68N×9°.50W, h31km, ML1.8*
ISC 02 06:32:36.5±3.2, 36°.8N±0°.1×9°.5W±0°.1, h35km, n51, σ0°91/96, 2C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.67	58	↑iP	Pn	06 32 49.9	+0.5
PFVI				eS	Sn	06 32 59.2	+0.5
PFVI				A	A	06 33 00.1	
	26nm,0.4s						
PFVI	Vila Bisbo	0.67	58	P	Pn	06 32 49.9	+0.5
	23nm,0.9s,SNR=16						
PFVI				S	Sn	06 32 59.1	+0.4
	10.0nm,0.3s,SNR=22						
MORF	Marmelete	0.88	54	eP	Pn	06 32 52.9	+0.4
MORF				eS	Sn	06 33 04.3	+0.3
MORF				AML	AML	06 33 05.0	
	comp=N,35nm,0.1s						
MORF	Marmelete	0.88	54	eP	Pn	06 32 52.8	+0.4
MORF				eS	Sn	06 33 04.6	+0.6
MORF				A	A	06 33 06.6	
	comp=N,20nm,0.2s						
MORF	Marmelete	0.88	54	P	Pn	06 32 52.8	+0.4
MORF				S	Sn	06 33 04.6	+0.6
	comp=N,20nm,0.2s						
PTEO	Sao Teotonio	1.00	40	eP	Pn	06 32 55.0	+1.0
PTEO				eS	Sn	06 33 07.9	+1.1
PTEO				A	A	06 33 08.3	
	comp=N,10nm,0.3s						
PTEO	Sao Teotonio	1.00	40	P	Pn	06 32 55.0	+1.0
PTEO				S	Sn	06 33 07.9	+1.1
	comp=N,5.2nm,0.3s						
PBDV	Barranco-do-Ve	1.36	70	eP	Pn	06 32 59.4	+0.4
PBDV				eS	Sn	06 33 15.8	-0.1
PBDV				A	A	06 33 16.5	
	comp=N,2.2nm,0.1s						
PBDV	Barranco-do-Ve	1.36	70	P	Pn	06 32 59.4	+0.4
PBDV				S	Sn	06 33 15.8	-0.1
	comp=N,2.2nm,0.1s						
PCVE	Castro Verde	1.47	54	eP	Pn	06 33 01.3	+0.9
PCVE				eS	Sn	06 33 18.8	+0.4
PCVE				A	A	06 33 20.6	
	comp=N,4.9nm,0.5s						
PCVE	Castro Verde	1.47	54	P	Pn	06 33 01.3	+0.9
PCVE				S	Sn	06 33 18.8	+0.4
	comp=N,4.9nm,0.5s						
MESJ	Messejana	1.49	45	eP	Pn	06 33 01.3	+0.7
MESJ				eS	Sn	06 33 19.2	+0.3
MESJ				AML	AML	06 33 19.9	
	comp=N,5.8nm,0.3s						
MESJ	Messejana	1.49	45	eP	Pn	06 33 01.4	+0.7
MESJ				eS	Sn	06 33 19.5	+0.6
MESJ				A	A	06 33 21.9	
	comp=N,4.4nm,0.2s						
MESJ	Messejana	1.49	45	P	Pn	06 33 01.3	+0.7
MESJ				S	Sn	06 33 19.2	+0.3
	comp=N,5.8nm,0.3s						
PNCL	Nicolau / Gran	1.55	31	eP	Pn	06 33 02.1	+0.6
PNCL				eS	Sn	06 33 20.5	+0.1
PNCL				A	A	06 33 22.4	
	comp=N,7.5nm,0.2s						
PNCL	Nicolau / Gran	1.55	31	P	Pn	06 33 02.1	+0.6
PNCL				S	Sn	06 33 20.5	+0.1
	comp=N,7.5nm,0.2s						
PVAQ	Vaqueiros	1.58	66	↑eP	Pn	06 33 02.3	+0.3
PVAQ				eS	Sn	06 33 20.7	-0.5
PVAQ				A	A	06 33 22.8	
	comp=N,4.3nm,0.2s						
PVAQ	Vaqueiros	1.58	66	P	Pn	06 33 02.3	+0.3
PVAQ				S	Sn	06 33 20.7	-0.5
	comp=N,4.3nm,0.2s						
EGRO	El Granado	1.80	65	P	Pn	06 33 05.6	+0.6
	comp=N,0.1nm,0.1s,SNR=7.9						
EGRO				S	Sn	06 33 26.5	-0.2
	comp=N,1.4nm,0.1s,SNR=7.9						
PBEJ	Beja	1.82	47	ePn	Pn	06 33 06.7	+1.4
PBEJ				eSn	Sn	06 33 27.4	+0.3
PBEJ				A	A	06 33 30.0	
	comp=N,3.5nm,0.2s						
PMAFR	Mafra	2.17	5	ePn	Pn	06 33 10.7	+0.6
PMAFR				eSn	Sn	06 33 37.0	+1.1
PMAFR				A	A	06 33 38.7	
	comp=N,12nm,0.2s						
PMAFR	Mafra	2.17	5	P	Pn	06 33 10.8	+0.6
	comp=N,22nm,0.7s,SNR=6.7						
PMAFR				S	Sn	06 33 36.7	+0.8
	comp=N,9.5nm,0.3s,SNR=12						
EMIN	Mina Concepcio	2.49	66	P	Pn	06 33 14.5	0.0
	comp=N,0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	06 33 42.8	-0.8
	comp=N,0.6nm,0.1s,SNR=7.9						
PMTG	Montargil	2.50	24	ePn	Pn	06 33 15.3	+0.6
PMTG				eSn	Sn	06 33 43.7	-0.3
PMTG				A	A	06 33 45.7	
	comp=N,2.9nm,0.4s						
PMTG	Montargil	2.50	24	P	Pn	06 33 15.3	+0.6
PMTG				S	Sn	06 33 43.7	-0.3
	comp=N,2.9nm,0.4s						
EBAD	Badajoz	2.81	45	P	Pn	06 33 19.0	+0.1
	comp=N,2.7nm,0.9s,SNR=8.6						
EBAD				S	Sn	06 33 51.2	-0.2
	comp=N,2.3nm,0.7s,SNR=6.3						
PTOM	Tomar	2.96	17	ePn	Pn	06 33 21.6	+0.6
PTOM				eSn	Sn	06 33 55.0	-0.3
PTOM				A	A	06 33 57.4	
	comp=N,3.5nm,0.2s						
PTOM	Tomar	2.96	17	P	Pn	06 33 21.6	+0.6
PTOM				S	Sn	06 33 55.0	-0.3
	comp=N,1.8nm,0.2s						
PMRV	Marv??o	3.13	32	ePn	Pn	06 33 23.9	+0.5
PMRV				eSn	Sn	06 33 58.1	-1.5
PMRV				A	A	06 34 00.6	
	comp=N,3.3nm,0.7s						
PMRV	Marv??o	3.13	32	P	Pn	06 33 23.9	+0.5
PMRV				S	Sn	06 33 58.1	-1.5
	comp=N,3.3nm,0.7s						
PCAS	Casmilo, Conde	3.36	14	eSn	Sn	06 34 05.0	-0.2
PCAS	Casmilo, Conde	3.36	14	S	Sn	06 34 05.0	-0.2
PCBR	Castelo Branco	3.45	27	ePn	Pn	06 33 28.7	+1.0
PCBR				eSn	Sn	06 34 07.0	-0.4
PCBR				A	A	06 34 08.6	
	comp=N,1.1nm,0.1s						
PCBR	Castelo Branco	3.45	27	P	Pn	06 33 28.7	+1.0
PCBR				S	Sn	06 34 07.0	-0.4
	comp=N,0.6nm,0.1s						
ECAB	El Cabril	3.52	67	P	Pn	06 33 29.0	+0.3
	comp=N,0.1nm,0.1s,SNR=7.9						
ECAB				S	Sn	06 34 06.7	-2.5
	comp=N,0.2nm,0.1s,SNR=7.9						
MTE	Manteigas	3.93	23	ePn	Pn	06 33 35.1	+0.7
MTE				eSn	Sn	06 34 18.3	-1.0
MTE	Manteigas	3.93	23	P	Pn	06 33 35.1	+0.7
MTE				S	Sn	06 34 18.3	-1.0
PVIS	Viseu	4.13	18	ePn	Pn	06 33 37.7	+0.6
PVIS	Viseu	4.13	18	P	Pn	06 33 37.7	+0.6
EPLA	Plasencia	4.25	39	P	Pn	06 33 39.1	+0.4
	SNR=7.9						
EPLA				S	Sn	06 34 25.6	-1.5
	comp=N,1.1nm,0.1s,SNR=7.9						
PVRL	Vila Real	4.70	17	ePn	Pn	06 33 46.0	+1.1
PVRL				eSn	Sn	06 34 37.3	-1.0
PVRL				A	A	06 34 39.1	
	comp=N,2.6nm,0.3s						
PVRL	Vila Real	4.70	17	P	Pn	06 33 46.0	+1.1
PVRL				S	Sn	06 34 37.3	-1.0
	comp=N,1.3nm,0.3s						
POLO	Lamas de Olo	4.78	16	ePn	Pn	06 33 46.7	+0.7
POLO				eSn	Sn	06 34 38.4	-1.8
POLO				A	A	06 34 39.6	
	comp=N,1.2nm,0.8s						
POLO	Lamas de Olo	4.78	16	P	Pn	06 33 46.7	+0.7
POLO				S	Sn	06 34 38.4	-1.8
	comp=N,1.2nm,0.8s						
MVO	Moncorvo	4.79	23	ePn	Pn	06 33 46.8	+0.6
MVO				eSn	Sn	06 34 38.9	-1.5
MVO	Moncorvo	4.79	23	P	Pn	06 33 46.7	+0.6
	comp=N,0.6nm,0.1s,SNR=7.9						
MVO				S	Sn	06 34 37.7	-2.7
	comp=N,0.7nm,0.3s,SNR=7.9						
ELOB	Lobios	5.20	12	P	Pn	06 33 52.1	+0.3
	comp=N,0.4nm,0.2s,SNR=7.9						
ELOB				S	Sn	06 34 48.0	-2.6
	comp=N,0.2nm,0.1s,SNR=7.9						
PGAV	Gavieira, Arco	5.26	10	ePn	Pn	06 33 53.0	+0.3
PGAV				eSn	Sn	06 34 50.4	-1.8
PGAV	Gavieira, Arco	5.26	10	P	Pn	06 33 53.0	+0.3
PGAV				S	Sn	06 34 50.4	-1.8
PBRG	Braganca	5.46	23	ePn	Pn	06 33 56.3	+0.9
PBRG	Braganca	5.46	23	P	Pn	06 33 56.3	+0.9

*IDC **02** 06:41:58.5±7.2, 7°.12N×124°.65E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.5/36, mbtmp3.9/3, Error ellipse: s-maj=122.6km s-min=13.0km az=164.0*
*MAN **02** 06:41:59.6, 7°.26N×124°.75E, h19km, MS4.1*
*ISCJB **02** 06:42:00.2±0.5, 7°.29N±0°.03×124°.80E±0°.03, h25km±5km, mb4.0/4, Error ellipse: s-maj=5.6km s-min=5.3km az=21.4*
ISC 02 06:42:00.4±3.2, 7°.29N±0°.03×124°.80E±0°.03, h18km±24km, n16, σ1°62/26, mb4.0/4, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.55	263	↓iP	Pb	06 42 10.6	-0.9
CTBH				i S	Sb	06 42 19.0	-0.1
BUKP	Musuan	0.64	24	eP	Pb	06 42 11.6	-1.4
BUKP				eS	Sb	06 42 21.1	-0.5
DMPH	Davao City--Mi	0.73	106	↑eP	Pb	06 42 14.1	-0.5
DMPH				eS	Sn	06 42 26.1	-0.4
DAV	Davao City (W)	0.80	106	Pg	Pb	06 42 16.1	+0.3
	369nm,0.3s,baz=276,slow=8.1,SNR=15						
DAV				Lg	Lg	06 42 29.2	
	324nm,0.3s,baz=163,slow=19,SNR=36						
SKMP	Bagumbayan, Su	0.81	198	eP	Pb	06 42 14.7	-1.3
SKMP				eS	Sb	06 42 26.1	-0.4
CGP	Cagayan de Oro	1.16	355	eP	Pn	06 42 20.3	-1.5
CGP				i S	Sb	06 42 34.8	-2.0
MATI	Mati	1.49	103	eP	Pn	06 42 26.4	+0.1
MATI				eS	Sb	06 42 50.2	+4.1
PAGZ	Pagadian	1.51	292	eP	Pn	06 42 25.7	-0.8
PAGZ				eS	Sb	06 42 46.9	+0.1
DCPH	Dipolog City	1.93	312	↑eP	Pb	06 42 39.0	+4.0
DCPH				eS	Sb	06 43 08.3	+10
IPIL	Ipil	2.26	283	eP	Pn	06 42 37.6	+0.7
IPIL				eS	Sn	06 43 05.1	+0.7
SNPH	Sibulan	2.56	323	↓iP	Pb	06 42 45.1	-0.8
SNPH				i S	Sb	06 43 18.6	+1.6
LLP	Lapu-Lapu	3.12	345	eP	Pn	06 42 50.9	+2.2
LLP				eS	Sb	06 43 31.5	-1.6
FITZ	Fitzroy Crossi	25.24	178	P	P	06 47 25.2	-0.3
	2.8nm,0.8s,baz=7.6,slow=15,SNR=4.4						
WRA	Warramunga Arr	28.64	161	P	P	06 47 56.1	-0.1
	6.5nm,0.3s,baz=345,slow=12,SNR=2.0						
ASAR	Alice Springs	32.03	164	P	P	06 48 25.3	-0.8
	0.7nm,0.6s,baz=342,slow=7.0,SNR=7.9						
STKA	Stephens Creek	42.12	158	P	P	06 49 52.0	+0.3
	1.9nm,0.6s,baz=349,slow=10,SNR=3.0						

*ISK **02** 06:44:05.0, 43°.31N×41°.48E, h18km, ML3.2/2*

*TIF **02** 06:44:05.9, 43°.23N×41°.56E, h29km±3km*
*NORS **02** 06:44:07.6±0.0, 43°.17N×41°.82E, h5km, MPVA3.7*
*DDA **02** 06:44:45.7, 43°.13N×41°.60E, h5km, ML3.4*
ISC 02 06:44:06.5±0.9, 43°.21N±0°.02×41°.73E±0°.02, h11km±7km, n33, σ1°45/63, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOMR	Dombai	0.11	317	i Pg	Pg	06 44 09.2	-0.3
DOMR				eSg	Sg	06 44 11.4	-0.4
NEY	Neytrino	0.73	87	ePg	Pg	06 44 20.0	-0.6
NEY				eSg	Sg	06 44 29.4	-0.8
SHA1	Shidzhatmaz	0.86	52	i Pg	Pb	06 44 23.4	-0.1
SHA1				eSg	Sb	06 44 35.4	+0.3
KIV	Kislovodsk	1.02	43	PN	Pg	06 44 26.1	0.0
KIV0	Kislovodsk Arr	1.02	43	i Pg	Pn	06 44 26.5	-0.4
KIV0				eSg	Sn	06 44 40.5	-0.8
RPOR	Krasnaya Polya	1.17	295	ePg	Pg	06 44 31.0	+2.0
RPOR				eSg	Sn	06 44 47.2	+2.4
TKB	Tkibuli	1.27	132	P	Pg	06 44 30.8	0.0
TKB				S	Sg	06 44 49.9	+2.6
PYA1	Pyatigorsk	1.31	49	ePg	Pb	06 44 31.0	-0.1
PYA1				eSg	Sg	06 44 48.3	-0.3
KBTC	Kuba-Taba	1.36	63	ePg	Pg	06 44 33.4	+0.7
KBTC				eSg	Sg	06 44 52.4	+2.0
DIGR	Digorskoe uzhe	1.39	102	ePg	Pg	06 44 34.3	+1.1
DIGR				eSg	Sg	06 44 53.3	+1.9
ONI	Oni	1.41	116	PN	Pb	06 44 33.1	+0.2
ONI				SN	Sg	06 44 54.2	+2.3
ONI	Oni	1.41	116	P	Pb	06 44 33.0	+0.2
ONI				S	Sg	06 44 54.1	+2.3
NVNR	Nevinnomyssk	1.41	7	ePg	Pg	06 44 35.5	+1.9
NVNR				eSg	Sg	06 44 53.3	+1.3
SOC	Sochi	1.51	285	ePg	Pb	06 44 34.5	0.0
SOC				eSg	Sg	06 44 55.8	+0.7
LABN	Labinsk	1.60	333	ePg	Pg	06 44 36.4	-0.9
LABN				eSg	Sg	06 44 59.9	+1.8
BATM	Batumi	1.61	181	PN	Pn	06 44 34.9	+0.1
BATM				SN	Sn	06 44 56.1	+0.6
BATM	Batumi	1.61	181	P	Pn	06 44 33.9	-0.9
BATM				S	Sn	06 44 54.9	-0.6
ZEI	Tsey	1.65	104	ePg	Pg	06 44 38.4	+0.2
ZEI				eSg	Sb	06 44 57.7	-0.2
BCA	Borcka	1.77	183	PN	Pn	06 44 37.1	+0.1
LZRR	Lazarevskoye	1.85	294	ePg	Pb	06 44 40.2	-0.2
LZRR				eSg	Sg	06 45 06.2	+0.2
EPOS	Posof	1.86	156	i P	Pb	06 44 39.9	-0.7
EPOS				i S	Sb	06 45 04.7	+0.8
DBOC	Borcka	1.87	181	i P	Pn	06 44 38.5	+0.2
DBOC				i S	Sn	06 44 59.4	-2.5
DBOC				IAML_P			
	comp=Z,1μm,0.2s						
LACR	Lac	1.92	101	ePg	Pg	06 44 42.5	-0.8
LACR				eSg	Sg	06 45 08.5	+0.2
ARTV	Artvin	2.03	176	i P	Pn	06 44 40.8	0.0
ARTV				i S	Sn	06 45 05.1	-1.2
ARTV				IAML_P			
	comp=Z,2μm,0.1s						
DAGI	Agillar	2.14	176	i P	Pn	06 44 43.5	+1.3
DAGI				i S	Sn	06 45 04.1	-4.7
DAGI				IAML_P			
	comp=Z,471nm,0.1s						
GUDG	Gudauri	2.16	109	P	Pg	06 44 49.1	+1.3
DBAD	Bademkaya	2.19	181	i P	Pn	06 44 43.9	+1.0
DBAD				i S	Sn	06 45 06.2	-3.9
DBAD				IAML_P			
	comp=Z,1μm,0.2s						
AKH	Akhalkalaki	2.23	143	PN	Pn	06 44 44.8	+1.3
AKH				SN	Sb	06 45 14.1	-0.3
AKH	Akhalkalaki	2.23	143	P	Pb	06 44 46.4	-0.4
AKH				S	Sg	06 45 16.8	-1.2
BGD	Bogdanovka	2.39	144	P	Pb	06 44 48.0	-1.6
BGD				S	Sb	06 45 18.7	-0.5
ERBR	Yeremizino-Bor	2.66	341	ePn	Pb	06 44 51.5	-2.5
ERBR				eSn	Sb	06 45 24.1	-2.5
KRIK	Erzurum-spir	2.93	192	i P	Pn	06 44 54.9	+1.7
KRIK				i S	Sn	06 45 29.3	+0.8
BAYB	BAYBURT	3.15	201	i P	Pn	06 44 57.0	+0.8
BAYB				i S	Sn	06 45 33.7	-0.2
BAYB				IAML_P			
	comp=Z,182nm,0.1s						

TAP 02 06:55:03.0, 23°.88N×120°.99E, h12km, ML1.5, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLT	Sun Moon Lake	0.08	270	P	Pg	06 55 06.1	+0.4
	baz=269						
SMLT				eS	Sg	06 55 08.8	+1.1
	baz=269						
SSLB	Suanglung	0.10	200	eP	Pg	06 55 06.0	+0.2
	baz=200						
SSLB				eS	Sg	06 55 08.0	+0.1
	baz=200						
TYC	Yuchr	0.12	280	P	Pg	06 55 06.5	+0.4
	baz=281						
TYC				S	Sg	06 55 09.0	+0.6
	baz=281						
DPDB	Guoxing	0.16	338	P	Pb	06 55 07.4	-0.6
	baz=338						
DPDB				S	Sg	06 55 10.5	+1.2
	baz=338						
OWD	Renai	0.18	67	eP	Pb	06 55 08.0	-0.4
	baz=66						
OWD				eS	Sg	06 55 11.4	+1.4
	baz=66						
VWDT	VWDT	0.19	133	eP	Pb	06 55 08.1	-0.3
	baz=133						
VWDT				eS	Sg	06 55 11.6	+1.7
	baz=133						
CHGB	Renai	0.24	43	eP	Pb	06 55 09.0	-0.5
	baz=43						
CHGB				eS	Sg	06 55 12.9	+1.2
	baz=43						
WNT	Mingjian	0.28	269	eS	Sb	06 55 14.8	+0.1
	baz=268						
WHF	Hehuan Shan	0.36	44	P	Pb	06 55 11.4	-0.2
	baz=44						
WHF				S	Sb	06 55 16.9	-0.6
	baz=44						
YUS	Yu-Shan	0.39	185	eS	Sb	06 55 18.2	-0.2
	baz=185			

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
CHN5	**Tsauling** baz=235	**0.31**	**235**	*e*P		Pg	06 55 18.3	-0.1
CHN5	baz=235			*e*S		Sb	06 55 25.0	+0.4
CHN5	**Tsauling** baz=225	**0.31**	**235**	*e*S		Pg	06 55 18.3	0.0

SJA ***02*** *07:15:22.7±0.9, 33.°34S×70.°38W, h107km±6km, ML3.3, MW3.2*
ISCJB ***02*** *07:15:23.5±1.2, 33.°32S±0.°08×70.°37W±0.°07, h108km±8km, Error ellipse: s-maj=13.1km s-min=9.2km az=8.2*
GUC ***02*** *07:15:23.5±0.6, 33.°18S×70.°16W, h101km±4km, ML3.7*
ISC 02 07:15:24.5±2.5, 33.°33S±0.°09×70.°36W±0.°07, h101km±15km, n19, σ0.64/29, 5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
FCH	**Farellones**	**0.05**	**88**	‖*i*P		**Pn**	**07 15 38.1**	**-0.8**
FCH				*i*S		**Sn**	**07 15 49.2**	**-0.5**
FCH	comp=E,2μm,0.2s			IAML			07 15 49.6	
CLCH	**Cerro Calan**	**0.17**	**246**	‖*i*P		**Pn**	**07 15 38.5**	**-0.4**
CLCH				*i*S		**Sn**	**07 15 49.5**	**-0.1**
CLCH	comp=E,7μm,0.4s			IAML			07 15 51.2	
FSR	**Penalolen**	**0.21**	**224**	*i*P		**Pn**	**07 15 39.6**	**+0.7**
FSR				*i*S		**Sn**	**07 15 50.7**	**+1.0**
PEL	**Peldehue**	**0.33**	**304**	*e*P		**Pn**	**07 15 39.0**	**-0.4**
PEL				*e*S		**Sn**	**07 15 50.5**	**-0.1**
PEL	**Peldehue**	**0.33**	**304**	*e*P		**Pn**	**07 15 38.6**	**-0.9**
PEL				*i*S		**Sn**	**07 15 50.2**	**-0.5**
PEL	comp=E,5μm,0.2s			IAML			07 15 51.1	
ANTU	**Antumapu**	**0.33**	**224**	*e*P		**Pn**	**07 15 40.0**	**+0.5**
ANTU				*i*S		**Sn**	**07 15 51.6**	**+1.0**
LMEL	**Las Melosas**	**0.53**	**166**	*i*P		**Pn**	**07 15 40.5**	**-0.4**
LMEL				*e*S		**Sn**	**07 15 53.8**	**+0.7**
LMEL	comp=N,2μm,0.3s			IAML			07 15 55.6	
ROCH	**El Roble**	**0.66**	**303**	‖*e*P		**Pn**	**07 15 41.5**	**-0.4**
ROCH				*i*S		**Sn**	**07 15 54.7**	**-0.3**
ROCH	comp=N,4μm,0.5s			IAML			07 15 58.5	
ARCO	**CERRO ARCO**	**1.29**	**68**	*e*P		**Pn**	**07 15 48.4**	**-0.1**
ARCO	comp=Z,429nm,0.2s			IAML			07 15 48.9	
ARCO				*e*S		**Sn**	**07 16 07.3**	**+0.8**
AAGR	**Agrelo**	**1.30**	**80**	*e*P		**Pn**	**07 15 48.8**	**+0.2**
AAGR				*e*S		**Sn**	**07 16 07.4**	**+0.6**
AUSP	**Uspallata**	**1.37**	**37**	*e*P		**Pn**	**07 15 49.8**	**+0.2**
ASAL	**Salagasta**	**1.48**	**60**	*e*P		**Pn**	**07 15 50.5**	**-0.1**
AMOG	**MOGNA**	**2.86**	**34**	‖*e*P		**Pn**	**07 16 08.3**	**-0.2**
ACAN	**Cantantal**	**2.87**	**69**	‖*e*P		**Pn**	**07 16 07.8**	**-0.8**
ACCO	**Cerro Coronel**	**2.94**	**22**	*e*P		**Pn**	**07 16 09.7**	**-0.2**
AROD	**Rodeo**	**3.24**	**14**	*e*P		**Pn**	**07 16 14.8**	**+0.9**
ACDV	**Cuesta del Vie**	**3.32**	**19**	*e*P		**Pn**	**07 16 14.8**	**0.0**
MRA	**San Martin**	**4.01**	**78**	*e*P		**Pn**	**07 16 22.5**	**-1.4**
MRA	comp=Z,23nm,0.4s			IAML			07 16 33.8	
VCA	**Vinchina**	**4.94**	**23**	*e*P		**Pn**	**07 16 36.6**	**0.0**
VCA	comp=Z,31nm,0.5s			IAML			07 17 39.5	

TAP 02 07:23:05.4, 23.°77N×120.°94E, h12km±1km, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
SSLB	**Suanglung** baz=29	**0.02**	**29**	P		Pg	07 23 08.0	+0.4
SSLB	baz=29			*e*S		Sg	07 23 09.6	+0.5
WHYT	**Xinyi Township** baz=228	**0.11**	**229**	*e*P		Pb	07 23 09.0	-0.5
SMLT	**Sun Moon Lake** baz=344	**0.12**	**341**	*e*P		Pg	07 23 09.0	+0.4
SMLT	baz=344			*e*S		Sg	07 23 12.0	+1.1
TYC	**Yuchr** baz=333	**0.16**	**330**	P		Pg	07 23 09.4	+0.4
VWDT	**VWDT** baz=94	**0.18**	**95**	*e*P		Pb	07 23 10.7	0.0
OWD	**Renai** baz=49	**0.28**	**49**	*e*P		Pb	07 23 12.1	-0.4
OWD	baz=49			*e*S		Sb	07 23 17.1	-0.3

TAP 02 07:23:08.2, 23.°78N×120.°95E, h14km±1km, ML0.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
SSLB	**Suanglung** baz=32	**0.01**	**30**	*e*P		Pg	07 23 11.2	+0.5
SSLB	baz=32			*e*S		Sg	07 23 12.9	+0.5
WHYT	**Xinyi Township** baz=226	**0.12**	**227**	*e*P		Pg	07 23 11.4	-0.1
WHYT	baz=226			*e*S		Sb	07 23 15.0	-0.1
WHYT	**Xinyi Township** baz=228	**0.12**	**227**	*e*S		Pb	07 23 11.4	-0.9
TYC	**Yuchr** baz=330	**0.15**	**326**	*e*P		Pb	07 23 12.8	-0.1
TYC	baz=330			*e*S		Sb	07 23 15.6	-0.3
TYC	**Yuchr** baz=333	**0.15**	**326**	*e*S		Pb	07 23 12.7	-0.2
VWDT	**VWDT** baz=97	**0.18**	**98**	*e*P		Pb	07 23 13.4	0.0
VWDT	baz=97			*e*S		Sb	07 23 16.7	-0.1
VWDT	**VWDT** baz=94	**0.18**	**98**	*e*S		Pb	07 23 13.4	+0.1
OWD	**Renai** baz=49	**0.27**	**50**	*e*P		Pg	07 23 14.3	+0.2
OWD	baz=49			*e*S		Sg	07 23 18.2	+0.2

MAN 02 07:36:41.5, 7.°34N×124.°80E, h11km, MS2.9, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
CTBH	**Cotabato--PC H**	**0.56**	**258**	‖*i*P		Pg	07 36 52.7	+0.2
CTBH				*i*S		Sb	07 37 01.5	+0.1
BUKP	**Musuan**	**0.60**	**25**	*e*P		Pb	07 36 53.9	-0.2
BUKP				*e*S		Sb	07 37 03.5	+1.0
DMPH	**Davao City--Mi**	**0.74**	**110**	‖*e*P		Pn	07 36 59.1	+1.2
DMPH				*e*S		Sn	07 37 08.5	-0.7
SKMP	**Bagumbayan, Su**	**0.85**	**198**	*e*P		Pg	07 36 55.6	-2.3
CGP	**Cagayan de Oro**	**1.12**	**355**	‖*e*P		Pb	07 37 02.6	-0.2
CGP				*i*S		Sb	07 37 17.4	0.0
PAGZ	**Pagadian**	**1.50**	**290**	*e*P		Pn	07 37 07.3	-1.0
PAGZ				*e*S		Sg	07 37 29.3	-0.4
DDMP	**Don Marcelino,**	**1.52**	**143**	*e*P		Pn	07 37 08.2	-0.4
DDMP				*e*S		Sg	07 37 33.0	+2.5

JMA 02 07:38:07.4±0.8, 34.°95N×143.°99E, h56km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
BSO1	**Boso 1**	**2.50**	**264**	P		Pn	07 38 46.2	+1.1
BSO1				*e*S		Sn	07 39 15.2	+1.1
BSO3	**Boso 3**	**2.87**	**268**	P		Pn	07 38 52.0	+1.6
JOD2	**Odawara 2**	**4.03**	**276**	P		Pn	07 39 07.4	+0.8
JRY	**Ryogami san**	**4.29**	**286**	P		Pn	07 39 12.1	+2.0
JMK	**Ichinoseki**	**4.57**	**332**	P		Pn	07 39 14.8	+0.9

ISCJB ***02*** *07:44:30.3±1.0, 22.°1N±0.°1×143.°5E±0.°3, h200km, mb3.7/7, Error ellipse: s-maj=40.4km s-min=15.1km az=171.6*
IDC ***02*** *07:44:33.6±5.2, 22.°12N×143.°50E, h217km±48km, mb3.2/7, mb1 3.4/8, mb1mx3.1/35, mbtmp3.8/8, Error ellipse: s-maj=38.2km s-min=15.2km az=84.0*
ISC 02 07:44:31.8±1.2, 22.°1N±0.°1×143.°5E±0.°3, h200km, n9, σ0.58/9, mb3.6/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
MJAR	**Matsushiro Arr** 0.1nm,0.3s,baz=114,slow=13,SNR=4.3	**15.13**	**343**	P		**Pn**	**07 47 56.1**	**+0.6**
KSRS	**Korea Array** 2.0nm,0.7s,baz=147,slow=8.6,SNR=11	**20.40**	**322**	P		**P**	**07 48 53.7**	**+0.3**
SONM	**Songino Array** 0.7nm,0.4s,baz=134,slow=7.1,SNR=4.2	**39.24**	**320**	P		**P**	**07 51 40.2**	**-0.8**
WRA	**Warramunga Arr** 1.4nm,0.3s,baz=9.2,slow=7.7,SNR=31	**42.72**	**193**	P		**P**	**07 52 09.9**	**+0.5**
ASAR	**Alice Springs** 0.2nm,0.4s,baz=6.2,slow=6.5,SNR=4.1	**46.43**	**192**	P		**P**	**07 52 38.5**	**-0.2**
MKAR	**Makanchi Array** 0.6nm,0.5s,baz=88,slow=8.6,SNR=8.7	**54.67**	**312**	P		**P**	**07 53 40.5**	**+0.3**
YKA	**Yellowknife Ar** 0.2nm,0.3s,baz=293,slow=5.9,SNR=3.7	**75.97**	**28**	P		**P**	**07 55 56.4**	**0.0**
ARCES	**ARCESS Array B** 7.5nm,0.3s,baz=72,slow=9.1,SNR=5.1	**78.66**	**342**	P		**P**	**07 56 11.4**	**+0.2**
FINES	**FINESS Array B** 1.0nm,0.3s,baz=65,slow=5.0,SNR=24	**82.97**	**335**	P		**P**	**07 56 33.4**	**-0.8**

ISCJB ***02*** *07:57:32.0±0.5, 36.°98N±0.°06×28.°35E±0.°04, h15km±10km, Error ellipse: s-maj=10.2km s-min=5.8km az=171.8*
DDA ***02*** *07:57:31.4, 37.°01N×28.°44E, h9km±1km, ML2.2*
ISK ***02*** *07:57:31.8, 37.°00N×28.°40E, h9km±4km, ML2.5/8*
ISC 02 07:57:31.4±1.2, 37.°05N±0.°04×28.°29E±0.°04, h3km±15km, n15, σ1.02/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
TURN	**Turunc**	**0.30**	**125**	PG		**Pg**	**07 57 37.3**	**0.0**
TURN				SG		**Sg**	**07 57 41.4**	**+0.1**
TURN	**Turunc**	**0.30**	**125**	*i*P		**Pg**	**07 57 37.9**	**+0.6**
TURN				*i*S		**Sg**	**07 57 42.6**	**+1.4**
MRSB	**Marmaris-Mugla**	**0.34**	**193**	PG		**Pg**	**07 57 38.6**	**+0.6**
DALY	**Dalyan (Mula)**	**0.37**	**128**	PG		**Pg**	**07 57 37.8**	**-0.8**
DALY				SG		**Sg**	**07 57 42.1**	**-1.3**
DALY	**Dalyan (Mula)**	**0.37**	**128**	*i*P		**Pg**	**07 57 37.1**	**-1.5**
DALY				*i*S		**Sg**	**07 57 41.2**	**-2.2**
DALY	comp=Z,3μm,0.2s			IAML_P				
BBRN	**Bozburun-Marma**	**0.41**	**207**	PG		**Pg**	**07 57 40.4**	**+1.1**
TAVA	**DENIZLI_Tavas**	**0.65**	**50**	*i*P		**Pg**	**07 57 43.7**	**-0.2**
TAVA				*i*S		**Sg**	**07 57 53.4**	**+1.0**
TAVA	comp=Z,457nm,0.1s			IAML_P				
DAT	**Datca**	**0.65**	**241**	PG		**Pb**	**07 57 46.0**	**+0.4**
DAT	**Datca**	**0.65**	**241**	*i*P		**Pg**	**07 57 43.4**	**-0.6**
DAT				*i*S		**Sn**	**07 57 58.1**	**-0.4**
BDRM	**Kayabasi**	**0.68**	**272**	*i*P		**Pg**	**07 57 43.1**	**-1.4**
AYDN	**Tasoluk**	**0.69**	**332**	*i*P		**Pb**	**07 57 47.3**	**+1.1**
BODT	**Bodrum**	**0.79**	**271**	PG		**Pn**	**07 57 49.4**	**0.0**
ARG	**Arkhangelos**	**0.84**	**189**	PG		**Pg**	**07 57 47.7**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**0.95**	**341**	PG		**Pn**	**07 57 51.8**	**-0.1**
KHAL	**Karahalli**	**1.63**	**35**	*i*P		**Pb**	**07 58 02.4**	**+0.2**
KHAL	comp=Z,72nm,0.1s			IAML_P				

IDC 02 07:57:34.5±81.0, 19.°51S×176.°66W, h0km, mb4.2/3, mb1 4.3/3, mb1mx3.7/31, mbtmp4.2/3, MS4.4/2, Ms1 4.4/2, ms1mx3.5/44, Error ellipse: s-maj=1494.0km s-min=185.1km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
CTA	**Charters Tower** comp=Z,582nm,18.7s,baz=317,slow=35	**34.86**	**263**	LR		LR	08 18 05.7	
STKA	**Stephens Creek** 0.9nm,0.5s,baz=95,slow=11,SNR=4.3	**39.36**	**243**	P		P	08 05 06.4	+0.5
ASAR	**Alice Springs** 3.9nm,0.8s,baz=97,slow=7.7,SNR=50	**45.98**	**256**	P		P	08 05 59.5	-0.4
WRA	**Warramunga Arr** 2.0nm,0.5s,baz=99,slow=7.7,SNR=22	**46.00**	**261**	P		P	08 05 59.7	-0.3
ATAH	**Atahualpa** comp=Z,188nm,18.4s,baz=342,slow=32	**95.37**	**99**	LR		LR	08 47 35.0	

MOS ***02*** *08:08:31.9±0.8, 6.°15S×147.°40E, h65km, mb4.9/32, Error ellipse: s-maj=11.6km s-min=7.6km az=102.6*
BJI ***02*** *08:08:31.8±0.0, 6.°12S×147.°80E, h70km, mb4.8/40, mB5.1/25, Ms4.9/16, Ms7 4.6/9*
ISCJB ***02*** *08:08:33.6±0.2, 6.°21S±0.°02×147.°41E±0.°03, h77km, mb5.0/115, Error ellipse: s-maj=4.2km s-min=3.2km az=23.6*
NEIC ***02*** *08:08:33.2±1.6, 6.°22S×147.°40E, h59km±4km, mb5.1/73, Error ellipse: s-maj=14.2km s-min=10.5km az=101.0*
NEIC Felt at Lae.
IDC ***02*** *08:08:35.2±1.1, 6.°17S×147.°46E, h75km±9km, mb4.3/28, mb1 4.5/34, mb1mx4.5/40, mbtmp4.7/34, MS4.1/9, Ms1 4.1/9, ms1mx3.8/32, Error ellipse: s-maj=12.1km s-min=7.8km az=96.0*
DJA ***02*** *08:08:36.8±0.5, 6.°S±4.°×14.°7E±.°, h84km±5km, M5.5/24, mb5.6/24, mB5.7/19, MLv6.2/2, Mw(mB)5.3/19*
GCMT ***02*** *08:08:38.2±0.2, 6.°26S±0.°01×147.°42E±0.°02, h82km±3km, MW5.2/90, Moment Tensor Solution. s19,c20; s90,c139; Duration: 1!0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.19±.03; $M_{\theta\theta}$0.71±.03; $M_{\phi\phi}$-0.52±.03; $M_{r\theta}$0.07±.02; $M_{\theta\phi}$-0.53±.03; $M_{\phi r}$-0.43±.02; Best double couple: $M_0$0.93600×10^{17} NP1:ϕ_s332.00000°, δ79.00000°, λ-29.00000°. NP2:ϕ_s68.00000°, δ62.00000°, λ-167.00000°. Principal axes: T 0.9510, Plg12.0000°, Azm23.0000°; N -0.0290, Plg59.0000°, Azm133.0000°; P -0.9220, Plg28.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 08:08:35.2±0.2, 6.°24S±0.°04×147.°35E±0.°04, h77km, n386, σ1.89/414, mb4.9/114, 3C-3D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
PMG	**Port Moresby** 125nm,0.3s,baz=21,slow=5.2,SNR=177	**3.15**	**183**	P		**Pn**	**08 09 22.2**	**-0.4**
PMG	436nm,0.3s,baz=2.1,slow=15,SNR=5.4			S		**Sn**	**08 09 56.9**	**-2.2**
PMG	**Port Moresby**	**3.15**	**183**	*e*Pn		**Pn**	**08 09 22.0**	**-0.6**
PMG				*e*Sn		**Sn**	**08 09 58.9**	**-0.2**
PMG	**Port Moresby**	**3.15**	**183**	*e*P		**Pn**	**08 09 22.0**	**-0.6**
PMG				*e*			08 09 58.9	
MANU	**Manus Island**	**4.17**	**0**	*e*Pn		**Pn**	**08 09 37.4**	**+0.8**
RABL	**Rabaul**	**5.21**	**67**	*e*Pn		**Pn**	**08 09 50.8**	**+0.1**
JAY	**Jayapura** 26nm,0.3s,baz=156,slow=12,SNR=84	**7.59**	**299**	P		**Pn**	**08 10 25.6**	**+2.3**
JAY	5.8nm,0.3s,baz=45,slow=16,SNR=1.8			S		Sn	08 11 57.4	+10
JAY	**Jayapura**	**7.59**	**299**	P		**Pn**	**08 10 25.5**	**+2.3**
GENI	**Genyem** 721nm,0.8s,9μm	**8.03**	**297**	P		**Pn**	**08 10 31.0**	**+1.9**
COEN	**Coen**	**8.70**	**208**	*e*Pn		**Pn**	**08 10 39.0**	**+0.6**
COEN	**Coen** baz=8.7,SNR=132	**8.70**	**208**	P		**Pn**	**08 10 36.4**	**-1.9**
SRPI	**Serui, Papua** 695nm,0.4s	**11.90**	**291**	P		**Pn**	**08 11 22.7**	**+0.7**
HNR	**Honiara**	**12.87**	**105**	*e*P		**P**	**08 11 45.0**	**+1.9**
HNR				*e*S		**Sn**	**08 14 04.0**	**+7.2**
HNR	**Honiara** 7.4nm,0.3s,baz=204,slow=2.1,SNR=6.6	**12.87**	**105**	P		**Pn**	**08 11 34.8**	**-0.5**
HNR	11nm,0.3s,baz=158,slow=19,SNR=2.4			S		**Sn**	**08 13 58.5**	**+1.7**
HNR	comp=Z,329nm,21.2s,baz=276,slow=28			LR		LR	08 14 38.6	
HNR	**Honiara**	**12.87**	**105**	*e*Pn		**Pn**	**08 11 33.1**	**-2.2**
HNR				*e*Sn		Sn	08 14 07.1	+10
HNR	**Honiara** 228nm,1.3s,3μm	**12.87**	**105**	*e*P		**Pn**	**08 11 33.1**	**-2.2**
CTA	**Charters Tower** 2.2nm,0.3s,baz=2.8,slow=14,SNR=38	**13.80**	**184**	P		**Pn**	**08 11 49.0**	**+1.5**
CTAO	**Charters Tower**	**13.80**	**184**	*e*Pn		**Pn**	**08 11 48.3**	**+0.8**
CTAO	**Charters Tower**	**13.80**	**184**	*e*P		**Pn**	**08 11 48.3**	**+0.8**
KMPI	**Kaimana, Papua** 358nm,0.8s,4μm	**13.83**	**280**	P		**Pn**	**08 11 48.7**	**+0.8**
FAKI	**Fak Fak** 174nm,0.9s	**15.41**	**282**	*e*Pn		**Pn**	**08 12 08.5**	**+0.2**
FAKI	**Fak Fak** 228nm,1.3s,3μm	**15.41**	**282**	P		**Pn**	**08 12 09.8**	**+1.5**
KDU	**Kakadu** baz=16,SNR=124	**16.00**	**245**	P		**Pn**	**08 12 16.3**	**+0.5**
SAUI	**Saumlaki**	**16.02**	**263**	P		**Pn**	**08 12 13.8**	**-2.2**
QIS	**Mount Isa** baz=16,SNR=47	**16.09**	**207**	P		**Pn**	**08 12 16.7**	**-0.2**
PATS	**Pohnpei** 378nm,1.2s	**16.98**	**40**	*e*Pn		**Pn**	**08 12 27.7**	**-0.3**
PATS	**Pohnpei** baz=17,SNR=9.2	**16.98**	**40**	P		**P**	**08 12 30.4**	**+1.6**
MTN	**Manton Dam** 61nm,0.7s	**17.28**	**247**	*e*Pn		**P**	**08 12 32.1**	**+0.2**
MTN	**Manton Dam** baz=17,SNR=5.2	**17.28**	**247**	P		**P**	**08 12 33.2**	**+1.2**
BNDI	**Bandanaira**	**17.45**	**275**	P		**Pn**	**08 12 33.7**	**-0.1**
WRAB	**Tennant Creek** 79nm,0.8s	**18.57**	**222**	*e*P		**P**	**08 12 46.3**	**+0.1**
WRAB				*e*Sn		**S**	**08 16 13.1**	**-0.4**
WRAB	**Tennant Creek**	**18.57**	**222**	*e*P		**P**	**08 12 46.3**	**+0.1**
WRAB				*e*			08 16 13.1	
WRAB	comp=Z,79nm,0.8s			pmax		pmax		
WB2	**Warramunga Arr** comp=Z,84nm,0.8s	**18.57**	**222**	*e*P		**P**	**08 12 46.0**	**-0.3**
WR1	**Warramunga Arr**	**18.58**	**222**	*e*P		**Pn**	**08 12 47.0**	**-0.4**
WR1				*e*Sn		**S**	**08 16 11.3**	**-2.5**
WRA	**Warramunga Arr** comp=Z,4.2nm,0.3s,baz=45,slow=11,SNR=100	**18.58**	**222**	P		**Pn**	**08 12 47.0**	**-0.4**
WRA	comp=Z,2.3nm,0.3s,baz=46,slow=22,SNR=4.1			S		**S**	**08 16 11.3**	**-2.5**
PALU	**Palau** baz=19,SNR=11	**18.63**	**316**	P		**Pn**	**08 12 47.7**	**-0.3**
EIDS	**Eidsvold** comp=Z,80nm,0.8s	**19.35**	**170**	*e*P		**P**	**08 12 53.9**	**-0.7**
EIDS	**Eidsvold** baz=19,SNR=22	**19.35**	**170**	P		**Pn**	**08 12 55.7**	**-0.8**
GUMO	**Guam** comp=Z,1.5nm,0.3s,baz=0.0,slow=11,SNR=3.1	**19.86**	**353**	P		**P**	**08 12 58.3**	**-1.9**
GUMO	comp=Z,197nm,19.7s,baz=171,slow=34			LR		LR	08 19 58.0	
GUMO	**Guam** comp=Z,101nm,1.0s	**19.86**	**353**	*e*P		**P**	**08 12 59.1**	**-1.1**
GUMO	**Guam** comp=Z,101nm,1.0s	**19.86**	**353**	*e*P		**P**	**08 12 59.1**	**-1.1**
GUMO				pmax		pmax		
RMQ	**Roma** baz=20,SNR=47	**20.18**	**176**	P		Pn	08 13 05.0	-1.2
KNRA	**Kununurra** baz=20,SNR=24	**20.50**	**241**	P		**P**	**08 13 07.3**	**+0.1**
TNTI	**Ternate** comp=Z,80nm,1.0s	**21.13**	**289**	*e*P		**P**	**08 13 14.0**	**-0.1**
AS31	**Alice Springs** comp=Z,49nm,0.6s	**21.62**	**215**	*e*P		**P**	**08 13 19.4**	**+0.2**
AS31				*e*S		**S**	**08 17 18.2**	**+3.6**
AS31				*e*ScP		**ScP**	**08 20 51.4**	**+2.5**
ASAR	**Alice Springs** comp=Z,24nm,0.5s,baz=52,slow=8.8,SNR=308	**21.62**	**215**	P		**P**	**08 13 19.6**	**+0.4**
ASAR	comp=Z,108nm,0.9s,baz=31,slow=21,SNR=13			S		**S**	**08 17 18.2**	**+3.6**
ASAR	comp=Z,45nm,1.0s,baz=45,slow=3.1,SNR=19			ScP		**ScP**	**08 20 51.4**	**+2.5**
ASAR	comp=Z,1μm,19.5s,baz=131,slow=39			LR		LR	08 22 38.2	
SOEI	**Soe** comp=Z,212nm,0.9s	**23.12**	**260**	*e*P		**P**	**08 13 35.9**	**+0.7**
SOEI	**Soe**	**23.12**	**260**	P		**P**	**08 13 36.4**	**+1.3**
BATI	**Baumata** comp=Z,719nm,1.0s,baz=129,slow=1.8,SNR=37	**23.77**	**259**	P		**P**	**08 13 44.0**	**+3.0**
BATI	comp=Z,974nm,19.5s,baz=91,slow=45			LR		LR	08 26 32.7	
BATI	**Baumata**	**23.77**	**259**	*e*P		**P**	**08 13 44.0**	**+3.0**
BATI				*e*P		**P**	**08 13 44.0**	**+3.0**
BATI	**Baumata**	**23.77**	**259**	P		**P**	**08 13 42.6**	**+1.6**
FITZ	**Fitzroy Crossi** comp=Z,317nm,0.9s,baz=55,slow=9.5,SNR=166	**24.24**	**239**	P		**P**	**08 13 46.3**	**+1.2**
FITZ	comp=Z,14nm,0.9s,baz=270,slow=4.0,SNR=2.1			S		**S**	**08 17 55.9**	**-2.5**
FITZ	comp=Z,779nm,19.6s,baz=73,slow=37			LR		LR	08 23 46.8	
FITZ	**Fitzroy Crossi** comp=Z,362nm,0.9s	**24.24**	**239**	*e*P		**P**	**08 13 46.1**	**+1.0**
FITZ				*e*S		**S**	**08 17 55.9**	**-2.5**
FITZ	**Fitzroy Crossi** baz=24,SNR=156	**24.24**	**239**	P		**P**	**08 13 45.6**	**+0.5**
DZM	**Mont Dzumac** comp=Z,6.0nm,0.5s,baz=239,slow=12,SNR=6.4	**24.25**	**132**	P		**P**	**08 13 44.8**	**-0.5**
DZM	**Mont Dzumac** comp=Z,126nm,0.9s	**24.25**	**132**	*e*P		**P**	**08 13 43.8**	**-1.5**
ARMA	**Armidale** comp=Z,70nm,0.9s	**24.38**	**171**	*e*P		**P**	**08 13 46.7**	**+0.3**
ARMA	**Armidale** baz=24,SNR=39	**24.38**	**171**	P		**P**	**08 13 47.1**	**+0.7**
KDI	**Kendari** comp=Z,50nm,1.0s,comp=Z,826nm	**24.74**	**274**	P		**P**	**08 13 50.6**	**+0.9**
MMRI	**Maumere** comp=Z,546nm,1.0s	**25.01**	**263**	*e*P		**P**	**08 13 52.3**	**+0.1**
MMRI	**Maumere**	**25.01**	**263**	P		**P**	**08 13 52.1**	**-0.1**
LUWI	**Luwuk** comp=Z,687nm,0.9s	**25.06**	**281**	*e*P		**P**	**08 13 54.1**	**+1.4**
CMSA	**Cobar Meteorol** baz=25,SNR=47	**25.21**	**183**	P		**P**	**08 13 55.1**	**+1.3**
DAV	**Davao City (W)** comp=Z,222nm,21.9s,baz=132,slow=35	**25.43**	**301**	LR		LR	08 23 17.9	
EDFI	**Ende, Flores** comp=Z,92nm,0.7s,comp=Z,1μm	**25.56**	**263**	P		**P**	**08 13 56.8**	**-0.5**
STKA	**Stephens Creek** comp=Z,25nm,0.5s,baz=355,slow=8.6,SNR=66	**26.07**	**191**	P		**P**	**08 14 01.6**	**0.0**
STKA	comp=Z,12nm,1.0s,baz=282,slow=2.5,SNR=4.6			ScP		**ScP**	**08 21 04.5**	**+3.8**
STKA	comp=Z,702nm,19.5s,baz=147,slow=38			LR		LR	08 25 14.9	
STKA	**Stephens Creek** comp=Z,7.4nm,0.9s	**26.07**	**191**	*e*P		**P**	**08 14 01.4**	**-0.2**
STKA				*e*ScP		**ScP**	**08 21 04.5**	**+3.8**
STKA	**Stephens Creek** baz=26,SNR=40	**26.07**	**191**	P		**P**	**08 14 01.9**	**+0.3**
STKA	**Stephens Creek** comp=Z,7.0nm,0.9s	**26.07**	**191**	*e*P		**P**	**08 14 01.4**	**-0.2**
STKA				pmax		pmax		
WRKA	**Warakurna** baz=26,SNR=127	**26.12**	**222**	P		**P**	**08 14 02.5**	**+0.3**
WSI	**Waingapu**	**27.00**	**261**	P		**P**	**08 14 10.7**	**+0.5**
MGCD	**Mangrove Creek** baz=27,SNR=5.2	**27.06**	**173**	P		**P**	**08 14 14.0**	**+3.5**
BKSI	**Bulukumba**	**27.10**	**271**	P		**P**	**08 14 11.6**	**+0.5**
BNSI	**Bone**	**27.19**	**273**	P		**P**	**08 14 12.8**	**+0.9**
KAPI	**Kappang** comp=Z,32nm,0.7s,baz=102,slow=5.7,SNR=10	**27.49**	**271**	P		**P**	**08 14 16.1**	**+1.5**
KAPI	**Kappang** comp=Z,80nm,1.2s	**27.49**	**271**	*e*P		**P**	**08 14 15.6**	**+1.0**
KAPI	**Kappang**	**27.49**	**271**	*e*P		**P**	**08 14 15.6**	**+1.0**
KAPI	comp=Z,80nm,1.2s			pmax		pmax		
WBSI	**Waikabubak, Su**	**27.89**	**261**	P		**P**	**08 14 18.1**	**-0.1**
YNG	**Young** baz=28,SNR=16	**27.93**	**178**	P		**P**	**08 14 20.9**	**+2.5**
HTT	**Hallett** baz=28,SNR=40	**28.16**	**195**	P		**P**	**08 14 21.0**	**+0.6**
BBOO	**Buckleboo** comp=Z,40nm,1.0s	**28.45**	**200**	*e*P		**P**	**08 14 22.9**	**0.0**
BBOO	**Buckleboo** baz=28,SNR=41	**28.45**	**200**	P		**P**	**08 14 23.2**	**+0.3**
FORT	**Forrest** comp=Z,39nm,0.8s	**30.39**	**214**	*e*P		**P**	**08 14 40.5**	**+0.4**
FORT	**Forrest** baz=30,SNR=8.4	**30.39**	**214**	P		**P**	**08 14 41.0**	**+0.9**
PSA00	**P

NWAO	Narrogin (SRO)	38.59	223	P	P	08 15 51.8	+1.0
	comp=Z,18nm,0.8s,baz=76,slow=9.5,SNR=12						
NWAO	Narrogin (SRO)	38.59	223	eP	P	08 15 50.4	-0.4
	comp=Z,28nm,0.9s						
NWAO				eP	P	08 15 51.8	+1.0
NWAO	Narrogin (SRO)	38.59	223	eP	P	08 15 50.4	-0.4
NWAO				pmax	pmax		
	comp=Z,27nm,0.9s						
MUN	Mundaring	38.73	225	P	P	08 15 53.2	+1.1
	baz=39,SNR=11						
CISI	Cisompet, Garu	39.26	266	eP	P	08 15 56.5	-0.3
	comp=Z,243nm,0.9s						
RKGY	Rocky Gully	39.78	221	P	P	08 16 02.8	+2.1
	baz=40,SNR=6.7						
KNTN	Kanton	40.94	87	eP	P	08 16 09.1	-1.5
	comp=Z,238nm,1.0s						
URZ	Urewera	41.75	144	P	P	08 16 17.0	+0.1
	comp=Z,2.4nm,0.6s,baz=166,slow=4.2,SNR=2.8						
RPZ	Rata Peaks	42.74	155	P	P	08 16 25.9	+1.0
	comp=Z,17nm,0.6s,baz=270,slow=5.1,SNR=4.9						
MJAR	Matsushiro Arr	43.41	349	P	P	08 16 29.7	-0.7
	comp=Z,5.8nm,0.9s,baz=173,slow=8.3,SNR=8.7						
MAJO	Matsushiro	43.41	349	eP	P	08 16 30.2	-0.2
	comp=Z,42nm,1.1s						
MAJO	Matsushiro	43.41	349	eP	P	08 16 30.2	-0.2
MAJO				pmax	pmax		
	comp=Z,42nm,1.1s						
MAT	Matsushiro	43.41	349	P	P	08 16 32.4	+2.0
MAT				S	S	08 22 47.8	-5.2
MJB9	Matsu-Tunnel	43.42	349	eP	P	08 16 30.4	0.0
	comp=Z,42nm,1.1s						
MYKOM	Kota Tinggi	44.16	279	eP	P	08 16 37.2	+0.4
	comp=Z,128nm,1.0s						
MYKOM	Kota Tinggi	44.16	279	P	P	08 16 39.0	+2.3
BKNI	Bangkinang	46.68	276	eP	P	08 16 57.8	+1.1
	comp=Z,231nm,1.0s						
NJ2	Nanjing	46.77	326	eP	P	08 16 58.7	+1.6
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
KSRS	Korea Array	47.10	339	P	P	08 16 59.7	+0.2
	comp=Z,4.1nm,0.9s,baz=155,slow=8.6,SNR=16						
KSRS				ScP	ScP	08 22 18.0	+0.5
	comp=Z,2.2nm,1.0s,baz=156,slow=5.5,SNR=5.6						
KSRS				LR	LR	08 33 25.4	
	comp=Z,233nm,20.9s,baz=85,slow=32						
KS15	Wonju Array Si	47.11	339	eP	P	08 16 59.5	0.0
	comp=Z,11nm,1.1s						
KS15				eScP	ScP	08 22 19.8	+2.3
IPM	Ipoh	47.46	282	eP	P	08 17 03.0	+0.2
	comp=Z,41nm,0.9s						
IPM	Ipoh	47.46	282	P	P	08 17 04.0	+1.2
KULM	Kulim	48.01	283	eP	P	08 17 07.0	0.0
	comp=Z,64nm,1.2s						
KULM	Kulim	48.01	283	P	P	08 17 08.0	+1.0
SKNT	Sakolnakorn	48.68	299	P	P	08 17 14.7	+2.6
	comp=Z,37nm,0.7s						
PSI	Prapat	49.18	279	eP	P	08 17 16.4	+0.2
	comp=Z,286nm,1.6s						
PSI	Prapat	49.18	279	eP	P	08 17 16.4	+0.2
PSI				pmax	pmax		
	comp=Z,286nm,1.6s						
CHAI	Chaiyaphum	50.01	297	P	P	08 17 26.5	+4.3
	comp=Z,33µm,0.9s						
GSI	Gunungsitoli	50.25	277	eP	P	08 17 24.3	+0.1
	comp=Z,210nm,0.6s						
ASAJ	Asahikawa	50.31	356	P	P	08 17 25.6	+1.6
	comp=Z,5.3nm,0.7s,baz=224,slow=22,SNR=3.5						
DL2	Dalian	50.86	334	eP	P	08 17 40.0	+12
DL2				pmax	pmax		
	comp=Z,16nm,1.1s						
PHET	Kaeng Krachan	51.09	292	P	P	08 17 34.4	+4.0
	comp=Z,36µm,0.9s						
GYA	Guiyang	51.10	311	P	P	08 17 34.8	+4.3
GYA				pP	pP	08 17 53.4	+3.6
GYA				sP	sP	08 18 01.6	+3.1
GYA				PP	PP	08 19 32.0	+4.1
GYA				S	S	08 24 35.9	-7.0
GYA				sS	sS	08 25 17.8	+0.9
GYA				SS	SS	08 28 17.0	-2.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=Z,320nm,18.2s						
USRK	Ussuriysk Ar.	52.09	346	P	P	08 17 37.7	+0.4
	comp=Z,3.2nm,0.8s,baz=174,slow=6.9,SNR=6.8						
USRK				ScP	ScP	08 22 38.1	-0.6
	comp=Z,4.6nm,0.8s,baz=134,slow=4.2,SNR=5.6						
NANT	Nan	52.27	299	P	P	08 17 42.2	+3.0
	comp=Z,59µm,0.9s,comp=Z,922µm						
UMPA	Umpang Tak	52.91	296	P	P	08 17 47.8	+3.9
	comp=Z,42µm,0.9s						
YSS	Yuzh-Sakhalins	53.12	356	eP	P	08 17 45.6	+0.7
YSS				e		08 18 06.8	
YSS				eS	S	08 25 10.6	+1.1
YSS				MLR	MLR		
	comp=Z,300nm,19.0s						
KMI	Kunming	53.42	308	P	P	08 17 50.6	+2.8
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CN2	Changchun	53.60	340	eP	P	08 17 52.3	+3.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CM31	Chiang Mai Arr	53.67	298	eP	P	08 17 50.2	+0.8
	comp=Z,13nm,0.8s						
CMAR	Chiang Mai Arr	53.67	298	P	P	08 17 50.2	+0.8
	comp=Z,3.9nm,0.8s,baz=121,slow=5.8,SNR=13						
CMAR	Chiang Mai Arr	53.67	298	i P	P	08 17 50.5	+1.0
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMMT	Chiang Mai	53.80	299	P	P	08 17 54.0	+3.5
	comp=Z,8.8nm,1.0s						
CHTO	Chiang Mai	53.81	299	eP	P	08 17 50.2	-0.3
	comp=Z,9.1nm,1.1s						
CHTO	Chiang Mai	53.81	299	eP	P	08 17 50.2	-0.3
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN	Xi'an	54.09	320	P	P	08 17 51.6	-0.7
XAN				pP	pP	08 18 13.3	+1.5
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN				LR	LR		
	comp=Z,270nm,23.8s						
XAN				LR	LR		
	comp=Z,170nm,22.8s						
XAN	Xi'an	54.09	320	eP	P	08 17 51.8	-0.5
	comp=Z,16nm,1.0s						
XAN	Xi'an	54.09	320	eP	P	08 17 51.8	-0.5
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
KLR	Kul'dur	56.90	348	P	P	08 18 12.8	+0.7
	comp=Z,3.4nm,0.8s,baz=173,slow=14,SNR=3.9						
KLR				ScP	ScP	08 22 58.8	-0.8
	comp=Z,5.0nm,0.9s,baz=161,slow=3.6,SNR=6.7						
KLR	Kul'dur	56.90	348	‖ i P	P	08 18 12.3	+0.2
KLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TYV	Tymovskoe	57.02	356	eP	P	08 18 19.4	+6.5
TYV				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC	Hu-ho-hao-te	57.22	328	eP	P	08 18 17.2	+2.5
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,6.0s						
GRNR	Gornyy	57.56	352	eP	P	08 18 10.3	-6.5
LZH	Lanzhou	58.62	319	eP	P	08 18 25.3	+0.6
LZH				pP	pP	08 18 43.5	-0.8
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LZH				LR	LR		
	comp=Z,380nm,17.9s						
LZH				LR	LR		
	comp=Z,500nm,17.7s						
LZH				LR	LR		
	comp=Z,450nm,17.9s						
PETK	Petropavlovsk-	59.77	7	P	P	08 18 32.1	+0.1
	comp=Z,9.7nm,0.7s,baz=166,slow=6.2,SNR=19						
PEA1	Petropavlovsk-	59.78	7	eP	P	08 18 32.1	0.0
ZEA	Zeya	62.11	347	eP	P	08 18 48.8	+0.9
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
SHL	Shillong	62.44	303	eP	P	08 18 50.1	-0.9
	comp=Z,12nm,0.7s						
SHL	Shillong	62.44	303	eP	P	08 18 50.1	-0.9
SHL				pmax	pmax		
	comp=Z,12nm,0.7s						
SHL	Shillong	62.44	303	eP	P	08 18 50.0	-0.9
GTA	Gaotai	63.15	320	P	P	08 18 55.9	+0.6
GTA				pP	pP	08 19 16.1	+0.9
GTA				sP	sP	08 19 24.1	+0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GTA				LR	LR		
	comp=Z,410nm,22.0s						
GTA				LR	LR		
	comp=Z,580nm,20.3s						
GTA				LR	LR		
	comp=Z,380nm,21.6s						
ULN	Ulaanbaatar	64.49	331	eP	P	08 19 04.1	+0.2
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	64.49	331	eP	P	08 19 04.1	+0.2
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONA0	Songino Array	64.78	331	eP	P	08 19 06.3	+0.5
SONM	Songino Array	64.78	331	P	P	08 19 06.3	+0.5
	comp=Z,3.5nm,0.8s,baz=147,slow=6.0,SNR=18						
MA2	Magadan	65.67	2	P	P	08 19 11.1	0.0
	comp=Z,5.6nm,0.7s,baz=104,slow=7.5,SNR=5.5						
ZAK	Zakamensk	68.02	331	eP	P	08 19 21.9	-4.5
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s						
TLY	Talaya	68.72	333	eP	P	08 19 31.2	+0.5
TLY				i		08 19 51.2	
TLY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SEY	Seymchan	69.09	2	P	P	08 19 32.7	+0.1
	comp=Z,3.0nm,0.8s,baz=172,slow=5.3,SNR=5.2						
BOD	Bodaibo	69.32	342	eP	P	08 19 34.0	-0.2
BOD				pmax	pmax		
	comp=Z,15nm,1.5s						
YAK	Yakutsk	69.43	351	eP	P	08 19 40.8	+6.0
YAK				e*PP	pP	08 19 51.6	-3.5
YAK				e		08 20 05.1	
YAK				e		08 22 12.0	
YAK				eS	S	08 28 42.9	+7.1
YAK				e*SS	sS	08 29 12.8	+2.9
YAK				e		08 29 31.6	
YAK				eSS	SS	08 33 11.0	+6.3
YAK				eSSS	SSS	08 36 11.9	
MOY	Mondy	69.95	331	eP	P	08 19 26.8	-12
MOY				pmax	pmax		
	comp=Z,13nm,1.7s						
VNDA	Vanda	71.65	177	P	P	08 19 49.5	+1.3
	comp=Z,4.0nm,0.7s,baz=328,slow=6.5,SNR=51						
VNDA	Vanda	71.65	177	eP	P	08 19 48.8	+0.7
	comp=Z,4.7nm,0.8s						
VNDA	Vanda	71.65	177	eP	P	08 19 48.8	+0.7
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HYB	Hyderabad	71.87	291	i P	P	08 19 50.0	-0.6
WMQ	Urumqi	73.20	319	eP	P	08 20 00.5	+2.5
WMQ				sP	sP	08 20 28.3	+0.9
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.1s						
WMQ				LR	LR		
	comp=Z,1µm,30.1s						
BILL	Bilibino	75.31	7	eP	P	08 20 09.6	-0.1
	comp=Z,11nm,1.2s						
BILL	Bilibino	75.31	7	i P	P	08 20 09.3	-0.4
BILL				i		08 20 17.2	
BILL				i		08 20 29.4	
BILL				i S	SKSac	08 30 06.7	-5.3
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DGZ	Jazzator, Alta	76.03	325	i P	P	08 20 12.5	-1.9
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GAMB	Gambell	76.30	17	eP	P	08 20 14.9	-0.5
	comp=Z,3.9nm,1.0s						
MK31	Makanchi Array	77.91	320	P	P	08 20 14.8	-10
MK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK32	Makanchi Array	77.91	320	eP	P	08 20 24.5	-0.3
MKAR	Makanchi Array	77.91	320	P	P	08 20 24.5	-0.3
	comp=Z,2.7nm,0.6s,baz=102,slow=7.2,SNR=11						
MKAR	Makanchi Array	77.91	320	i P	P	08 20 26.7	+1.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PDGK	Podgornoye	78.49	316	P	P	08 20 31.5	+3.2
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TIXI	Tiksi	78.69	354	P	P	08 20 27.7	-0.8
	comp=Z,1.0nm,0.4s,baz=133,slow=5.0,SNR=3.2						
TIXI	Tiksi	78.69	354	ceP	P	08 20 27.2	-1.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZAA0	Zalesovo Array	79.40	328	eP	P	08 20 31.6	-1.3
	comp=Z,4.4nm,0.7s						
ZALV	Zalesovo Beam	79.40	328	P	P	08 20 31.6	-1.2
	comp=Z,3.0nm,0.5s,baz=116,slow=6.2,SNR=6.9						
ZAA1	Zalesovo Array	79.40	328	eP	P	08 20 31.6	-1.2
KSH	Kashi	79.80	312	eP	P	08 20 40.7	+5.2
KSH				S	S	08 30 36.9	+4.2
KSH				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,290nm,9.8s						
KSH				LR	LR		
	comp=Z,150nm,9.2s						
KSH				LR	LR		
	comp=Z,230nm,8.3s						
KSH				LR	LR		
	comp=Z,500nm,19.5s						
NIL	Nilore	80.35	306	eP	P	08 20 38.2	-0.3
	comp=Z,23nm,0.8s						
NIL	Nilore	80.35	306	eP	P	08 20 38.2	-0.3
NIL				pmax	pmax		
	comp=Z,23nm,0.8s						
NVS	Novosibirsk	80.62	328	eP	P	08 20 49.5	+10
NVS				e		08 30 38.3	
NVS				pmax	pmax		
	comp=Z,13nm,1.4s						
RSO	Redoubt South	81.19	26	eP	P	08 20 46.2	+3.6
CNPM	China Poot	81.40	27	eP	P	08 20 42.7	-0.8
	comp=Z,13nm,0.9s						
KURK	Kurchatov	81.61	323	eP	P	08 20 43.7	-1.0
	comp=Z,7.1nm,1.0s						
KURK	Kurchatov	81.61	323	i P	P	08 20 43.3	-1.4
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AAK	Ala-Archa	81.76	315	eP	P	08 20 45.7	-0.2
	comp=Z,4.1nm,0.8s						
AAK	Ala-Archa	81.76	315	i P	P	08 20 45.9	0.0
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAW	Mawson	82.16	203	P	P	08 20 47.9	+0.6
	comp=Z,4.0nm,1.0s,baz=77,slow=3.5,SNR=8.6						
MAW	Mawson	82.16	203	eP	P	08 20 47.4	+0.1
	comp=Z,1.4nm,0.8s						
MAW	Mawson	82.16	203	P	P	08 20 48.1	+0.8
	baz=82,SNR=5.3						
MAW	Mawson	82.16	203	eP	P	08 20 47.4	+0.1
MAW				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SML	Sawmill	83.71	26	eP	P	08 20 53.3	-2.2
	comp=Z,12nm,1.0s						
SML	Sawmill	83.71	26	eP	P	08 20 53.3	-2.2
SML				pmax	pmax		
	comp=Z,12nm,1.0s						
QSPA	South Pole Qui	83.73	180	eP	P	08 20 56.0	+0.3
	comp=Z,26nm,1.0s						
SCM	Sheep Creek Mo	84.15	26	eP	P	08 20 56.6	-1.1
	comp=Z,13nm,1.2s						
SCM	Sheep Creek Mo	84.15	26	eP	P	08 20 56.6	-1.1
SCM				pmax	pmax		
	comp=Z,13nm,1.2s						
MCK	McKinley	84.31	24	eP	P	08 20 56.7	-1.7
	comp=Z,14nm,1.1s						
MCK	McKinley	84.31	24	eP	P	08 20 56.7	-1.7
MCK				pmax	pmax		
	comp=Z,14nm,1.1s						
DHY	Denali Highway	84.66	25	eP	P	08 20 59.2	-1.2
	comp=Z,5.7nm,0.9s						
KK31	Karatay Array	84.71	314	eP	P	08 21 00.3	-0.5
	comp=Z,9.3nm,1.2s						
KK31	Karatay Array	84.71	314	eP	P	08 21 00.4	-0.5
KK31				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KKAR	Karatay Array	84.71	314	eP	P	08 21 00.2	-0.7
	comp=Z,9.3nm,1.2s						
KKAR	Karatay Array	84.71	314	eP	P	08 21 00.2	-0.7
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
OTUK	Ortayu	84.75	320	P	P	08 21 00.3	-0.7
OTUK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CCB	Clear Creek Bu	85.16	23	eP	P	08 21 00.4	-2.2
	comp=Z,7.4nm,1.2s						
COLA	College	85.24	23	c i P	P	08 21 00.6	-2.4
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HDA	Harding Lake	85.39	23	P	P	08 21 03.2	-0.6
	baz=245						
COLD	Coldfoot	85.44	20	eP	P	08 21 04.3	+0.3
	comp=Z,2.6nm,0.9s						
ILAR	Eielson Array	85.57	23	P	P	08 21 02.5	-2.1
	comp=Z,4.5nm,0.8s,baz=256,slow=5.1,SNR=24						
ILB	Eielson Array	85.57	23	eP	P	08 21 02.5	-2.1
	comp=Z,5.5nm,0.7s						
CRQM	Cirque	85.60	27	eP	P	08 21 02.6	-2.6
NRIK	Noril'sk	85.61	342	P	P	08 21 04.7	-0.1
	comp=Z,2.4nm,0.8s,baz=138,slow=3.8,SNR=5.2						
RIDG	Independent Ri	85.97	24	eP	P	08 21 05.7	-1.1
	comp=Z,8.8nm,1.1s						
DOT	Dot Lake	86.26	25	eP	P	08 21 07.1	-1.1
	comp=Z,8.2nm,1.1s						
TOLK	Toolik Lake Re	86.31	19	eP	P	08 21 07.4	-0.9
	comp=Z,3.3nm,0.9s						
TOLK	Toolik Lake Re	86.31	19	P	P	08 21 08.3	-0.1
	baz=243						
BRVK	Borovoye	87.24	324	i P	P	08 21 11.6	-1.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
EGAK	Eagle	87.84	24	eP	P	08 21 14.9	-0.8
	comp=Z,12nm,1.2s						
HYT	Haines Junctio	88.24	28	eP	P	08 21 17.6	-0.3
	comp=Z,12nm,1.1s						
DAWY	Dawson	88.34	25	eP	P	08 21 18.1	-0.1
	comp=Z,17nm,1.4s						
EPYK	Eagle Plains	90.08	23	eP	P	08 21 25.9	-0.5
	comp=Z,15nm,1.3s						
EPYK	Eagle Plains	90.08	23	P	P	08 21 26.2	-0.1
	baz=255						
SYO	Syowa Base	90.49	200	‖ eP	P	08 21 28.0	-0.1
SYO	Syowa Base	90.49	200	‖ eX	P	08 21 38.0	+10
INK	Inuvik	91.75	21	P	P	08 21 33.0	-0.9
	comp=Z,3.5nm,1.0s,baz=138,slow=15,SNR=3.6						
INK	Inuvik	91.75	21	eP	P	08 21 32.4	-1.5
	comp=Z,6.1nm,1.1s						
INK	Inuvik	91.75	21	eP	P	08 21 32.4	-1.5
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ABKAR	Akbulak array	92.99	319	eP	P	08 21 38.0	-2.1
	comp=Z,2.1nm,0.8s						
GEYT	Alibeck	93.19	308	P	P	08 21 40.3	-1.0
	comp=Z,0.9nm,0.5s,baz=208,slow=6.0,SNR=3.8						
ARU	Arti	94.48	326	P	P	08 21 44.2	-2.6
ARU						08 25 32.4	
ARU				S	SKSac	08 32 11.7	-3.4
NV01	Mina Array Sit	97.24	52	eP	P	08 21 60.0	-0.1
NVAR	Mina Array Bea	97.24	52	P	P	08 21 60.0	-0.1
	comp=Z,0.7nm,0.7s,baz=260,slow=5.9,SNR=5.4						
NVAR				LR	LR	08 59 36.0	
	comp=Z,155nm,20.8s,baz=212,slow=32						
EDW2	Edwards Air Fo	97.34	56	P	P	08 21 59.9	-0.5
	baz=268						
LRMC	Laurel Mtn Rad	97.62	55	P	Pdif	08 22 02.2	+0.3
	baz=268						
MURC	Murrieta	97.95	57	P	Pdif	08 22 03.6	+0.4
	baz=268						
HEC	Hector,Ludlow	98.71	56	P	P	08 22 06.1	-0.5
	baz=268						
TPNV	Topopah Spring	98.83	54	P	P	08 22 06.8	-0.3
	baz=269						
BELC	Belle Mtn. Jos	98.96	57	P	P	08 22 07.4	-0.4
	baz=268						
SWSC	Sam W. Stewart	99.10	58	P	Pdif	08 22 08.7	+0.4
	baz=268						
YKA	Yellowknife Ar	99.22	28	P	Pdif	08 22 07.0	-1.0
	comp=Z,0.5nm,0.8s,baz=278,slow=4.9,SNR=7.5						
YKA				PP	PP	08 26 06.5	-5.0
	comp=Z,1.0nm,0.9s,baz=274,slow=7.4,SNR=6.4						
YKA				PKKPbc	PKKPbc	08 38 31.3	-3.8
	comp=Z,0.2nm,0.7s,baz=88,slow=3.0,SNR=5.7						
YKB5	Yellowknife Ar	99.22	28	eP	Pdif	08 22 07.0	-1.0
YKB5				ePP	PP	08 26 06.5	-5.1
YKB5				ePKKPbc	PKKPbc	08 38 31.3	-3.8
VNA2	Neumayer--Watz	101.16	188	P	Pdif	08 22 16.9	+0.3
VNA3	Neumayer Olymp	101.18	187	P	Pdif	08 22 15.6	-1.1
PD31	Pinedale Array	103.82	48	ePdif	Pdif	08 22 28.2	-1.1
PD31				ePKKPbc	PKKPbc	08 38 13.8	-7.6
PDAR	Pinedale Array	103.82	48	Pdiff	Pdif	08 22 27.1	-2.3
	comp=Z,0.4nm,0.8s,baz=207,slow=1.3,SNR=3.9						
PDAR				PKKPbc	PKKPbc	08 38 13.8	-7.6
	comp=Z,0.2nm,0.4s,baz=140,slow=5.7,SNR=3.4						
KLMR	Klimovskoe	104.08	331	eP	Pdif	08 22 33.6	+3.9
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
APA	Apatity	104.75	339	‖ i P	Pdif	08 22 45.2	+13
APA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
I39A	Houston	116.51	44	P	PKPdf	08 27 09.8	-0.7
	baz=288						
JFWS	Jewell Farm	117.69	44	P	PKPdf	08 27 12.3	-0.5
	baz=289						
J41A	Loganville	117.70	44	P	PKPdf	08 27 11.9	-0.9
	baz=289						
M43A	Waltham Townsh	119.07	46	P	PKiKP	08 27 15.8	+0.3
	baz=289						
N43A	Stutzman Famil	119.07	46	P	PKiKP	08 27 16.1	+0.5
	baz=288						
VYHS	Vyhne	119.50	323	ePKIKP	PKiKP	08 27 17.6	+1.4
VYHS	Vyhne	119.50	323	ePKP	PKiKP	08 27 17.6	+1.4
E46A	Sault Ste Mari	120.33	39	P	PKPdf	08 27 16.3	-1.5
	baz=295						
Q45A	Warren Harvey,	120.46	48	P	PKPdf	08 27 17.4	-0.9
	baz=288						
P45A	Graceland, Par	120.56	47	P	PKPdf	08 27 17.1	-1.3
	baz=289						
BRG	Berggiesshubel	121.09	327	eP	PKiKP	08 27 29.0	+10
	comp=Z,2.6nm,0.9s						
T46A	Princeton	121.22	50	P	PKPdf	08 27 18.2	-1.6
	baz=287						
E48A	Lockeyer	121.61	38	P	PKPdf	08 27 19.3	-0.9
	baz=297						
F48A	Evansville	121.62	39	P	PKPdf	08 27 18.9	-1.3
	baz=297						
P47A	Martinsville	121.65	47	P	PKPdf	08 27 19.0	-1.5
	baz=290						
PLCA	Paso Flores	121.73	147	PKP	PKiKP	08 27 21.8	+0.8
	comp=Z,1.8nm,0.5s,baz=247,slow=3.0,SNR=8.3						
PLCA				SKP		08 30 50.7	
	comp=Z,3.4nm,0.9s,baz=244,slow=6.7,SNR=4.5						
PLCA	Paso Flores	121.73	147	ePKIKP	PKiKP	08 27 21.5	+0.5
T47A	Sharon Grove	121.83	50	P	PKPdf	08 27 19.1	-1.8
	baz=288						
R47A	Wooly Knot Far	121.86	48	P	PKPdf	08 27 19.4	-1.6
	baz=289						
U47A	Clarksville	121.86	51	P	PKPdf	08 27 19.6	-1.4
	baz=287						
V47A	Nunnelly	121.86	51	P	PKPdf	08 27 19.8	-1.2
	baz=287						
X47A	Russelville	121.96	53	P	PKPdf	08 27 20.5	-0.

baz=287
W48A Pulaski 122.52 52 P **PKPdf 08 27 20.9 -1.5**
baz=287
N49A Columbus Grove 122.62 45 P **PKPdf 08 27 22.4 0.0**
baz=292
T49A Edmonton 122.99 49 P **PKPdf 08 27 20.9 -2.3**
baz=289
U49A Red Boiling Sp 122.99 50 P **PKPdf 08 27 21.1 -2.1**
baz=289
W49A Belvidere 123.05 52 P **PKPdf 08 27 21.0 -2.3**
baz=287
V49A McMinnville 123.13 51 P **PKPdf 08 27 21.8 -1.7**
baz=288
F51A Arnstein 123.25 38 P **PKPdf 08 27 22.7 -0.7**
baz=299
LSQQ Lebel-sur-Quev 123.31 33 P **PKPdf 08 27 22.6 -0.9**
baz=304
O50A Cable 123.32 45 P **PKPdf 08 27 22.2 -1.6**
baz=292
T50A Nancy 123.54 49 P **PKPdf 08 27 22.6 -1.7**
baz=290
VLDQ Val d'Or 123.56 35 *e*PKPdf **PKPdf 08 27 23.3 -0.6**
D52A ZEK Kipawa Sen 123.62 36 P **PKPdf 08 27 22.7 -1.4**
baz=301
S50A Richmond 123.65 48 P **PKPdf 08 27 23.0 -1.4**
baz=290
U50A Jamestown 123.74 50 P **PKPdf 08 27 22.8 -1.9**
baz=289
W50A Signal Mountai 123.77 52 P **PKPdf 08 27 23.0 -1.8**
baz=288
J52A Paris 124.16 41 P **PKPdf 08 27 24.6 -0.6**
baz=297
T51A Gray 124.23 49 P **PKPdf 08 27 24.1 -1.5**
baz=290
S51A Beattyville 124.26 48 P **PKPdf 08 27 25.1 -0.6**
baz=291
E53A Dumoine, Ponti 124.37 36 P **PKPdf 08 27 24.8 -0.8**
baz=302
G53A Haliburton 124.43 38 P **PKPdf 08 27 24.7 -1.0**
baz=300
D54A Lac Fusel, La 124.54 35 P **PKPdf 08 27 24.7 -1.2**
baz=303
151A Opelika 124.54 55 P **PKPdf 08 27 25.0 -1.3**
baz=286
P52A Corning 124.57 45 P **PKPdf 08 27 25.0 -1.2**
baz=293
E54A Lac Daplat, Po 124.62 36 P **PKPdf 08 27 25.1 -1.0**
baz=302
U52A Thorn Hill 124.87 50 P **PKPdf 08 27 26.7 -0.2**
baz=290
W52A Murphy 124.88 51 P **PKPdf 08 27 25.4 -1.5**
baz=289
V52A Sevierville 124.88 50 P **PKPdf 08 27 25.6 -1.3**
baz=290
BANO Bancroft 124.91 38 P **PKPdf 08 27 25.0 -1.7**
baz=301
N53A Lisbon 124.99 44 P **PKPdf 08 27 25.3 -1.6**
baz=295
X52A Dahlonega 125.06 52 P **PKPdf 08 27 25.9 -1.3**
baz=289
P53A Whipple 125.15 45 P **PKPdf 08 27 26.1 -1.2**
baz=294
Y52A Lilburn 125.16 53 P **PKPdf 08 27 26.3 -1.1**
baz=288
DELO Deloro Mine 125.36 38 P **PKPdf 08 27 25.6 -1.9**
baz=301
PLVO Plevna 125.42 38 P **PKPdf 08 27 27.2 -0.4**
baz=301
W53A Cullowhee 125.44 51 P **PKPdf 08 27 27.3 -0.8**
baz=290
I55A Frankford 125.47 39 P **PKPdf 08 27 27.3 -0.4**
baz=300
U53A Fall Branch 125.47 49 P **PKPdf 08 27 27.8 -0.2**
baz=291
M54A Oil Creek Stat 125.48 42 P **PKPdf 08 27 27.1 -0.7**
baz=297
V53A Saluda 125.54 50 P **PKPdf 08 27 27.5 -0.7**
baz=290
Y53A Monroe 125.54 53 P **PKPdf 08 27 26.6 -1.5**
baz=288
O54A Avella 125.57 44 P **PKPdf 08 27 26.7 -1.4**
baz=295
Q54A Coxs Mills 125.75 46 P **PKPdf 08 27 27.0 -1.4**
baz=294
S54A Dingess, Beckl 125.88 47 P **PKPdf 08 27 27.9 -0.9**
baz=293
R54A Victor 125.96 47 P **PKPdf 08 27 27.4 -1.5**
baz=294
T54A Tazewell 125.97 48 P **PKPdf 08 27 26.8 -2.2**
baz=292
H56A Elgin 126.15 38 P **PKPdf 08 27 27.3 -1.7**
baz=302
Y54A Tignall 126.24 52 P **PKPdf 08 27 28.8 -0.7**
baz=289
Q55A Buckhannon 126.28 45 P **PKPdf 08 27 29.1 -0.4**
baz=295
M56A Emporium 126.48 42 P **PKPdf 08 27 28.4 -1.4**
baz=298
U55A TA2, Sparta 126.57 49 P **PKPdf 08 27 28.8 -1.4**
baz=292
N56A West Decatur 126.67 42 P **PKPdf 08 27 28.5 -1.6**
baz=298
O56A Blue Knob Stat 126.78 43 P **PKiKP 08 27 30.7 -0.2**
baz=297
X55A Gracelyn & Ava 126.86 51 P **PKPdf 08 27 30.0 -0.7**
baz=290
P56A Dayton Farm, R 126.94 44 P **PKPdf 08 27 29.9 -0.8**
baz=296
SSPA Standing Stone 127.07 43 P **PKPdf 08 27 29.7 -1.2**
baz=296
655A Horseshoe Beac 127.08 58 P **PKPdf 08 27 29.6 -1.6**
baz=286
555A McAlpin 127.15 57 P **PKPdf 08 27 30.4 -1.0**
baz=286
N57A Milroy 127.24 42 P **PKPdf 08 27 31.4 +0.1**
baz=298
X56A White Oak 127.32 51 P **PKPdf 08 27 30.7 -0.9**
baz=291
O60A Telford 128.88 42 P **PKPdf 08 27 31.8 -2.5**
baz=300
CFA Coronel Fontan 129.31 140 SKP SKPbc 08 30 53.6 +3.1
comp=Z,4.8nm,0.7s,baz=160,slow=1.5,SNR=3.9
ATAH Atahualpa 132.47 106 SKPab **SKPab 08 31 06.8 +2.8**
comp=Z,19nm,0.8s,baz=245,slow=5.7,SNR=9.4
BCIP Isla Barro Col 133.17 83 *e*P **PKPdf 08 27 41.2 -2.0**
GCUF Volcan Galeras 135.14 95 *e*P **PKiKP 08 27 49.2 +0.1**
POPC Popayan, Colom 135.96 93 *e*P **PKPdf 08 27 49.2 +0.4**
YOTC Yotoco, Valle 136.43 91 *e*P **PKPdf 08 27 49.2 -0.3**
FLOC Florencia 136.86 94 *e*P **PKPdf 08 27 50.5 +0.3**
HELC Santa Helena 137.38 88 *e*P **PKPdf 08 27 52.5 +1.0**
GUY2C Guyana, Caldas 137.49 89 *e*P **PKPdf 08 27 51.8 -0.1**
PRAC Prado 137.86 91 *e*P **PKPdf 08 27 51.8 -0.2**
ESDC Sonseca Array 137.88 326 SKPbc **SKPbc 08 31 12.4 -6.3**
comp=Z,0.1nm,0.3s,baz=63,slow=3.4,SNR=3.0
LPAZ La Paz 138.36 123 PKhKP PKPpre 08 27 46.0
comp=Z,1.1nm,0.5s,baz=279,slow=3.4,SNR=11
LPAZ SKPbc **SKPbc 08 31 23.2 +1.8**
comp=Z,4.0nm,0.9s,baz=276,slow=1.8,SNR=7.7
LPAZ La Paz 138.36 123 *e*SKPbc **SKiKP 08 31 24.1 -1.1**
PTBC PUERTO BERRIO 138.46 87 *e*P PKPdf 08 27 42.5 -11
ROSC El Rosal 138.51 90 PKhKP PKPpre 08 27 44.3
comp=Z,2.7nm,0.4s,baz=97,slow=17,SNR=2.6
ROSC PKP **PKPdf 08 27 53.8 +0.1**
comp=Z,5.5nm,0.4s,baz=100,slow=17,SNR=6.4
GIRC Giron, Santand 139.73 86 *e*P PKPdf 08 27 47.2 -8.4
CPUP Villa Florida 139.73 145 PKP **PKPdf 08 27 54.8 -0.3**
comp=Z,2.6nm,0.9s,baz=225,slow=1.7,SNR=5.6
CPUP SKPbc **SKPbc 08 31 22.1 -2.0**
comp=Z,1.6nm,0.6s,baz=256,slow=5.8,SNR=2.1
CPUP Villa Florida 139.73 145 *e*PKiKP **PKPdf 08 27 54.9 -0.2**
RUSC La Rusia 139.80 88 *e*P PKPdf 08 27 47.2 -9.0
SDV Santo Domingo 142.27 84 PKhKP PKPpre 08 27 56.2
comp=Z,7.5nm,0.3s,baz=326,slow=3.6,SNR=3.2
SIV San Ignacio 144.23 128 PKP **PKPab 08 28 01.3 +0.1**
comp=Z,7.2nm,0.6s,baz=233,slow=14,SNR=3.3
SIV SKPbc **SKiKP 08 31 36.9 +0.4**
comp=Z,3.2nm,1.1s,baz=229,slow=6.9,SNR=3.5
SJG San Juan 145.27 67 *e*P **PKPab 08 28 05.1 +0.1**
TOA0 Torodi Ar. Sit 145.49 284 *e*PKPdf **PKPab 08 28 06.3 +0.3**
TORD Torodi Ar. Bea 145.49 284 PKPbc **PKPdf 08 28 05.5 -0.1**
comp=Z,34nm,0.9s,baz=28,slow=3.8,SNR=86
TORD SKPbc **SKPbc 08 31 37.8 -0.9**
comp=Z,7.6nm,1.2s,baz=57,slow=2.7,SNR=3.6
TOA1 Torodi Ar. Sit 145.49 284 *e*PKPdf **PKPdf 08 28 05.5 -0.1**
TOA1 *e*SKPbc **SKPbc 08 31 37.8 -0.9**
HUMP Col San Antoni 145.53 67 *e*PKPdf **PKPdf 08 28 04.9 -0.6**
MTP Monte Pirata 145.82 67 *e*PKPdf **PKPdf 08 28 05.8 -0.2**

PTGA Pitinga 151.87 103 PKP **PKPdf 08 28 17.1 +1.1**
comp=Z,2.2nm,0.5s,baz=342,slow=6.9,SNR=5.2
PTGA PKPbc **PKPbc 08 28 22.6 +0.2**
comp=Z,16nm,0.7s,baz=280,slow=4.5,SNR=21
PTGA Pitinga 151.87 103 *e*PKPdf **PKPdf 08 28 15.6 -0.4**
PTGA *e*PKPbc **PKiKP 08 28 23.1 +0.3**
KIC Kosan Boka 152.26 272 *e*PKiKP **PKiKP 08 28 24.2 +0.6**
comp=Z,69nm,0.9s
DBIC Dimbokro 152.38 272 PKPbc **PKiKP 08 28 24.2 +0.4**
comp=Z,9.8nm,0.7s,baz=74,slow=3.3,SNR=13
DBIC PKPab **PKPab 08 28 34.0 +0.1**
comp=Z,21nm,0.9s,baz=42,slow=4.1,SNR=3.6
DBIC Dimbokro 152.38 272 *e*PKPbc **PKiKP 08 28 24.6 +0.8**
LIC Lamto 152.54 271 *e*PKiKP **PKiKP 08 28 24.3 +0.1**
comp=Z,58nm,0.9s
TIC Toumodi 152.54 272 *e*PKiKP **PKPbc 08 28 23.8 -0.2**
BDFB Brasilia 153.46 145 PKP **PKPdf 08 28 20.1 +1.8**
comp=Z,2.5nm,0.9s,baz=326,slow=3.6,SNR=2.7
BDFB PKPbc **PKiKP 08 28 26.1 0.0**
comp=Z,5.7nm,0.6s,baz=62,slow=0.1,SNR=13
BDFB Brasilia 153.46 145 *e*PKPdf **PKPdf 08 28 20.1 +1.8**
BDFB *e*PKPbc **PKiKP 08 28 26.1 0.0**
BDFB *e*PKPbc **PKPbc 08 28 26.4 +0.4**

*ISCJB **02** 08:19:41.5±0.7, 37°.77N±0°.03×141°.68E±0°.08, h56km±4km, mb4.0/11, Error ellipse: s-maj=10.4km s-min=4.5km az=15.9*
*NEIC **02** 08:19:41.6±1.1, 37°.83N×141°.85E, h46km±9km, mb4.2/3, Error ellipse: s-maj=15.3km s-min=4.3km az=185.0*
NEIC Recorded [2 JMA] in Miyagi.
*IDC **02** 08:19:41.6±3.0, 37°.89N×141°.89E, h41km±23km, mb3.8/8, mb1 3.8/13, mb1mx3.6/44, mbtmp3.9/13, ML3.1/5, Error ellipse: s-maj=37.1km s-min=16.8km az=82.0*
*JMA **02** 08:19:43.2, 37°.79N×141°.57E, h48km±1km, M3.9*
JMA Felt II J1.
ISC 02 08:19:42.3±1.5, 37°.79N±0°.05×141°.72E±0°.10, h44km±12km, n47, σ1.956/55, mb4.1/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.56**	**339**	P	**Pn**	**08 19 54.8**	**+0.9**
JIKH				S	**Sn**	**08 20 02.6**	**+0.4**
JIO	**Ouri**	**0.73**	**336**	P	**Pn**	**08 19 56.9**	**+0.8**
JIO				S	**Sn**	**08 20 06.0**	**-0.2**
JMM	**Marumori**	**0.74**	**276**	P	**Pn**	**08 19 55.9**	**-0.4**
JMM				S	**Sn**	**08 20 04.9**	**-1.5**
JFK	**Kawauchi**	**0.79**	**238**	P	**Pn**	**08 19 56.7**	**-0.4**
JFK				S	**Sn**	**08 20 06.1**	**-1.7**
ONAJ	**Iwakimizuishiy**	**1.00**	**227**	P	**Pn**	**08 19 59.6**	**-0.4**
ONAJ				S	**Sn**	**08 20 11.0**	**-2.0**
JOU	**Okura**	**1.01**	**305**	P	**Pn**	**08 20 00.0**	**-0.1**
JOU				S	**Sn**	**08 20 12.5**	**-0.7**
JKMT	**Kesennumamotoy**	**1.04**	**349**	P	**Pn**	**08 20 01.3**	**+0.9**
JKMT				S	**Sn**	**08 20 13.9**	**+0.2**
JFT	**Otama**	**1.13**	**257**	P	**Pn**	**08 20 01.7**	**0.0**
JFT				S	**Sn**	**08 20 14.7**	**-1.3**
JMK	**Ichinoseki**	**1.23**	**342**	P	**Pn**	**08 20 03.9**	**+0.9**
JMK				S	**Sn**	**08 20 18.8**	**+0.5**
JYS	**Shiratake**	**1.38**	**289**	P	**Pn**	**08 20 04.9**	**-0.1**
JYK	**Kaneyama**	**1.55**	**317**	P	**Pn**	**08 20 07.9**	**+0.4**
JFY	**Yanaizu**	**1.64**	**257**	P	**Pn**	**08 20 08.6**	**-0.1**
JFY				S	**Sn**	**08 20 27.6**	**-1.1**
MJAR	**Matsushiro Arr**	**3.07**	**247**	P	**Pn**	**08 20 29.2**	**+0.9**
0.9nm,0.3s,baz=54,slow=9.8,SNR=35							
MJAR				S	**Sn**	**08 21 10.2**	**+6.5**
1.5nm,0.3s,baz=76,slow=15,SNR=5.8							
MAJO	**Matsushiro**	**3.07**	**247**	*e*Pn	**Pn**	**08 20 29.1**	**+0.9**
MAT	**Matsushiro**	**3.07**	**247**	P	**Pn**	**08 20 29.3**	**+1.0**
MAT				S	**Sn**	**08 21 09.0**	**+5.3**
MJB9	**Matsu-Tunnel**	**3.07**	**247**	*e*Pn	**Pn**	**08 20 29.2**	**+0.9**
ERM	**Erimo**	**4.36**	**14**	*e*Pn	**Pn**	**08 20 45.0**	**-1.0**
INU	**Inuyama**	**4.50**	**239**	*e*Pn	**Pn**	**08 20 48.7**	**+0.8**
JHJ2	**Mitsune**	**4.92**	**199**	*e*Pn	**Pn**	**08 20 54.1**	**+0.5**
JHJ	**Hachijo jima 2**	**4.92**	**199**	P	**Pn**	**08 20 54.6**	**+1.0**
9.2nm,0.3s,baz=211,slow=5.9,SNR=4.0							
JHJ				S	**Sn**	**08 21 47.4**	**-1.9**
34nm,0.3s,baz=247,slow=21,SNR=6.8							
ASAJ	**Asahikawa**	**6.36**	**6**	P	**Pn**	**08 21 10.5**	**-2.8**
0.7nm,0.3s,baz=78,slow=20,SNR=4.0							
ASAJ				S	**Sn**	**08 22 23.7**	**-0.9**
0.7nm,0.3s,baz=72,slow=20,SNR=2.6							
USA0B	**Ussuriysk Arra**	**9.75**	**314**	*e*Pn	**Pn**	**08 22 00.2**	**+0.3**
USRK	**Ussuriysk Ar.**	**9.75**	**314**	P	**Pn**	**08 21 59.6**	**-0.2**
0.5nm,0.3s,baz=121,slow=14,SNR=5.9							
KSRS	**Korea Array**	**10.95**	**272**	P	**Pn**	**08 22 19.8**	**+3.5**
0.1nm,0.3s,baz=83,slow=14,SNR=6.0							
SONA0	**Songino Array**	**27.57**	**303**	*e*P	**P**	**08 25 25.0**	**-0.2**
SONM	**Songino Array**	**27.57**	**303**	P	**P**	**08 25 25.0**	**-0.2**
1.0nm,0.6s,baz=97,slow=9.2,SNR=3.5							
H11N2	**WAKE ISLAND Hy**	**28.34**	**122**	T	T	08 55 48.9	
baz=315,slow=75,SNR=168							
H11N1	**WAKE ISLAND Hy**	**28.34**	**122**	T	T	08 55 49.5	
baz=315,slow=75,SNR=208							
H11N3	**WAKE ISLAND Hy**	**28.35**	**122**	T	T	08 55 50.2	
baz=315,slow=75,SNR=209							
H11S1	**WAKE ISLAND Hy**	**29.07**	**124**	T	T	08 56 44.6	
baz=317,slow=76,SNR=87							
H11S3	**WAKE ISLAND Hy**	**29.08**	**124**	T	T	08 56 40.1	
baz=317,slow=76,SNR=134							
H11S2	**WAKE ISLAND Hy**	**29.09**	**124**	T	T	08 56 42.6	
baz=317,slow=76,SNR=52							
ZAA1	**Zalesovo Array**	**41.59**	**312**	*e*P	**P**	**08 27 24.6**	**-1.1**
ZALV	**Zalesovo Beam**	**41.59**	**312**	P	**P**	**08 27 24.6**	**-1.1**
2.2nm,0.7s,baz=92,slow=9.2,SNR=4.4							
MK32	**Makanchi Array**	**43.93**	**301**	*e*P	**P**	**08 27 44.3**	**-0.4**
MKAR	**Makanchi Array**	**43.93**	**301**	P	**P**	**08 27 44.3**	**-0.4**
1.6nm,0.8s,baz=97,slow=7.7,SNR=5.1							
KURK	**Kurchatov**	**45.66**	**308**	*e*P	**P**	**08 27 57.9**	**-0.5**
4.3nm,0.8s							
WR1	**Warramunga Arr**	**57.84**	**188**	*e*P	**P**	**08 29 29.3**	**-0.1**
WRA	**Warramunga Arr**	**57.84**	**188**	P	**P**	**08 29 29.3**	**-0.1**
1.6nm,0.9s,baz=5.7,slow=9.3,SNR=5.5							
AS31	**Alice Springs**	**61.57**	**188**	*e*P	**P**	**08 29 54.0**	**-1.1**
2.5nm,1.4s							
ASAR	**Alice Springs**	**61.57**	**188**	P	**P**	**08 29 55.8**	**+0.7**
0.3nm,0.8s,baz=18,slow=6.2,SNR=4.2							
FIA0	**FINESS Array S**	**68.26**	**332**	*e*P	**P**	**08 30 38.0**	**-0.1**
FINES	**FINESS Array B**	**68.26**	**332**	P	**P**	**08 30 38.0**	**-0.1**
1.9nm,0.6s,baz=37,slow=9.2,SNR=8.5							
NB200	**NORSAR Array S**	**73.58**	**337**	*e*P	**P**	**08 31 10.7**	**+0.2**
NOA	**NORSAR Array B**	**73.58**	**337**	P	**P**	**08 31 10.7**	**+0.2**
0.9nm,0.8s,baz=37,slow=6.0,SNR=3.2							
AKASG	**Malin Array Be**	**73.85**	**322**	P	**P**	**08 31 11.7**	**-0.5**
1.4nm,0.4s,baz=45,slow=6.5,SNR=8.2							
AKBB	**Malin Array Si**	**73.85**	**322**	*e*P	**P**	**08 31 11.1**	**-1.1**
2.2nm,0.7s							

*ISCJB **02** 08:32:40.1±0.3, 13°.60N±0°.04×92°.23W±0°.03, h37km, mb4.4/157, MS3.6/1, Error ellipse: s-maj=5.9km s-min=3.5km az=19.8*
*NEIC **02** 08:32:42.6±1.4, 13°.60N×92°.24W, h44km±7km, mb4.4/177, Error ellipse: s-maj=20.0km s-min=11.8km az=45.0*
*IDC **02** 08:32:45.1±6.2, 14°.25N×91°.89W, h30km±48km, mb4.1/10, mb1 4.3/14, mb1mx3.9/44, mbtmp4.2/14, ML3.4/4, MS3.7/1, Ms1 3.7/1, ms1mx3.0/30, Error ellipse: s-maj=69.0km s-min=14.2km az=40.0*
ISC 02 08:32:41.7±0.7, 13°.65N±0°.09×92°.28W±0°.09, h37km, n453, σ1.955/439, mb4.5/157, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**2.62**	**3**	*e*Pn	**Pn**	**08 33 25.8**	**+4.2**
CMIG	**Matias Romero**	**4.24**	**324**	Pn	**Pn**	**08 33 43.2**	**-0.5**
2.6nm,0.3s,baz=165,slow=12,SNR=45							
CMIG				Sn	**Sn**	**08 34 25.8**	**-6.2**
8.7nm,0.3s,baz=59,slow=16,SNR=8.1							
CSGN	**Cosiguina Volc**	**4.65**	**98**	*e*Pn	**Pn**	**08 33 51.2**	**+1.8**
TGUH	**Tegucigalpa,Un**	**4.88**	**85**	*e*Pn	**Pn**	**08 33 53.6**	**+1.1**
ESTN	**Estel**	**5.78**	**95**	*e*Pn	**Pn**	**08 34 05.8**	**+0.8**
ACON	**Acoyapa**	**7.13**	**103**	*e*Pn	**Pn**	**08 34 23.3**	**-0.2**
TLIG	**Tlapa**	**7.19**	**304**	*e*Pn	**Pn**	**08 34 24.1**	**-0.3**
JTS	**Las Juntas de**	**7.91**	**114**	Pn	**Pn**	**08 34 36.6**	**+2.3**
3.6nm,0.3s,baz=2.6,slow=7.5,SNR=28							
JTS	**Las Juntas de**	**7.91**	**114**	*e*Pn	**Pn**	**08 34 36.1**	**+1.9**
ESPN	**Las Esperanzas**	**7.92**	**100**	*e*Pn	**Pn**	**08 34 34.9**	**+0.6**
HDC	**Heredia**	**8.78**	**114**	*e*Pn	**Pn**	**08 34 48.3**	**+2.0**
MOIG	**Morelia**	**10.43**	**306**	*e*Pn	**Pn**	**08 35 09.8**	**+0.9**
BCIP	**Isla Barro Col**	**12.99**	**109**	*e*Pn	**Pn**	**08 35 44.6**	**+0.9**
LNIG	**Linares**	**13.08**	**330**	*e*Pn	**Pn**	**08 35 46.6**	**+1.7**

ZAIG Zacatecas 13.32 314 *e*Pn **Pn 08 35 47.4 -1.2**
435B Jarrell 17.74 345 *e*Pn **P 08 36 47.1 +0.8**
11nm,0.8s
BRAL Brewton 18.09 15 P **Pn 08 36 43.5 -6.5**
baz=196
JCT Junction City 18.13 339 *e*P **P 08 36 52.4 +1.8**
11nm,0.9s
349A Repton 18.23 14 P **P 08 36 45.8 -5.9**
baz=196
TXAR Lajitas Array 18.84 328 P **Pn 08 37 00.8 +1.5**
0.0nm,0.3s,baz=153,slow=11,SNR=12
LTX Lajitas 18.84 328 *e*P **Pn 08 37 00.8 +1.5**
249A Camden 18.84 14 P **Pn 08 37 01.0 +1.8**
baz=196
WHTX Lake Whitney, 18.86 346 *e*P **Pn 08 37 00.8 +1.4**
8.9nm,0.8s
352A Blakely 18.99 20 *e*P **P 08 36 58.4 -1.7**
29nm,0.9s
352A Blakely 18.99 20 P **P 08 36 55.8 -4.2**
baz=202
250A Grady 19.06 16 *e*P **Pn 08 37 02.0 +0.2**
22nm,0.6s
250A Grady 19.06 16 P **P 08 37 00.7 -0.1**
baz=198
OTAV Otavalo 19.11 133 *e*P **P 08 37 01.5 -0.5**
2.6nm,0.8s
148A Greensboro 19.39 12 P **P 08 37 03.5 -1.0**
baz=194,SNR=6.2
TIGA Tifton 19.42 23 *e*P **P 08 37 03.7 -1.1**
89nm,1.4s
149A Jones 19.52 14 P **Pn 08 37 07.7 +0.4**
baz=196,SNR=12
150A Eclectic 19.72 16 P **Pn 08 37 09.9 +0.3**
baz=198,SNR=14
ROSC El Rosal 19.76 115 P **Pn 08 37 12.5 +1.8**
0.5nm,0.3s,baz=108,slow=19,SNR=3.3
ROSC El Rosal 19.76 115 *e*P **Pn 08 37 09.9 -0.9**
7.7nm,1.2s
253A Americus 19.79 21 *e*P **P 08 37 08.9 +0.1**
88nm,1.4s
151A Opelika 19.84 18 P **Pn 08 37 10.6 -0.5**
baz=200,SNR=21
LRAL Lakeview Retre 19.89 13 P **P 08 37 08.8 -1.0**
baz=195,SNR=11
254A Abbeville 19.99 23 P **P 08 37 06.7 -4.3**
baz=206
ABTX Abilene, Hawle 20.05 342 *e*P Pn 08 37 13.8 +0.2
26nm,0.8s
Z49A Columbiana 20.15 14 P **P 08 37 12.7 -0.1**
baz=196,SNR=20
152A Waverly Hall 20.15 19 *e*P **P 08 37 12.4 -0.4**
26nm,0.5s
152A Waverly Hall 20.15 19 P **P 08 37 13.5 +0.8**
baz=202
CCAR Cane Creek 20.18 1 *e*P **P 08 37 14.1 +1.0**
17nm,0.8s
Z50A Ashland 20.36 15 *e*P Pn 08 37 17.2 0.0
24nm,0.8s
Z50A Ashland 20.36 15 P **P 08 37 13.8 -1.2**
baz=198,SNR=16
153A Fort Valley 20.43 21 P **P 08 37 15.1 -0.6**
baz=204,SNR=5.9
Z51A Franklin 20.62 17 P **P 08 37 15.4 -2.4**
baz=200,SNR=6.2
154A Montrose 20.65 22 *e*P **P 08 37 18.4 +0.2**
86nm,1.3s
Y48A Jasper 20.70 12 P Pn 08 37 20.5 -0.7
baz=194,SNR=14
X40A Basin Creek Fa 20.75 359 P Pn 08 37 21.8 +0.1
baz=178
Y49A Blount Mountai 20.81 14 *e*P **P 08 37 20.3 +0.4**
12nm,0.8s
Y49A Blount Mountai 20.81 14 P Pn 08 37 22.2 -0.3
baz=196,SNR=6.1
X43A Marvell 20.81 3 *e*P **P 08 37 19.7 -0.1**
18nm,0.8s
MIAR Mount Ida 20.84 357 *e*P Pn 08 37 21.7 -1.1
11nm,1.0s
MIAR Mount Ida 20.84 357 P Pn 08 37 22.7 0.0
baz=176
OXF Oxford 20.93 7 *e*P **P 08 37 22.1 +0.9**
16nm,0.6s
OXF Oxford 20.93 7 P Pn 08 37 22.8 -1.0
baz=188,SNR=5.3
Y50A Piedmont 21.01 15 P **P 08 37 23.8 +1.8**
baz=198,SNR=9.7
UALR University of 21.03 360 *e*P **P 08 37 20.4 -1.9**
17nm,1.1s
X46A Booneville 21.08 9 P **P 08 37 23.8 +1.0**
baz=190,SNR=6.5
Z53A Monticello 21.09 21 P **P 08 37 20.8 -2.1**
baz=204,SNR=8.5
X47A Russelville 21.16 10 P **P 08 37 24.7 +1.1**
baz=192,SNR=8.7
Y51A Rockmart 21.20 17 P **P 08 37 26.0 +1.9**
baz=200,SNR=20
X48A Hartselle 21.25 12 *e*P **P 08 37 25.1 +0.6**
20nm,0.8s
X48A Hartselle 21.25 12 P **P 08 37 25.6 +1.1**
baz=194,SNR=14
GOGA Godfrey 21.25 21 *e*P **P 08 37 25.2 +0.7**
14nm,0.8s
GOGA Godfrey 21.25 21 P **P 08 37 21.5 -3.0**
baz=204,SNR=8.7
Z54A Sparta 21.31 22 P **P 08 37 23.9 -1.4**
baz=206
156A Sylvania 21.33 26 P **P 08 37 22.1 -3.3**
baz=210
X49A Woodville 21.46 14 P **P 08 37 28.5 +1.6**
baz=196
Y52A Lilburn 21.46 19 *e*P **P 08 37 27.9 +0.9**
16nm,0.7s
Y52A Lilburn 21.46 19 P **P 08 37 24.7 -2.2**
baz=202,SNR=8.6
W39A Magazine 21.49 357 *e*P **P 08 37 27.6 +0.3**
5.5nm,1.0s
W39A Magazine 21.49 357 P **P 08 37 30.4 +3.2**
baz=176
GDL2 Guadalupe Moun 21.52 331 *e*P **P 08 37 27.6 -0.1**
157A Early Branch 21.56 27 P **P 08 37 21.4 -6.5**
baz=211
Z55A Blythe 21.56 24 P **P 08 37 24.6 -3.4**
baz=208
X50B Fort Payne 21.57 15 P **P 08 37 28.3 +0.2**
baz=198,SNR=15
PLAL Pickwick Lake 21.57 9 *e*P **P 08 37 28.0 -0.1**
5.9nm,0.9s
BANI BANI 21.59 75 *e*P **P 08 37 26.6 -1.9**
Y53A Monroe 21.61 20 P **P 08 37 26.0 -2.5**
baz=203,SNR=9.2
MNTX Cornudas Mount 21.61 328 *e*P **P 08 37 30.2 +1.6**
5.6nm,0.8s
W46A Michie 21.68 9 P **P 08 37 29.3 +0.1**
baz=190
SDV Santo Domingo 21.75 100 P **P 08 37 29.8 -0.5**
17nm,0.6s,baz=311,slow=4.6,SNR=7.3
SDV Santo Domingo 21.75 100 *e*P **P 08 37 30.5 +0.1**
27nm,0.8s
WMOK Wichita Mounta 21.80 345 *e*P **P 08 37 30.7 +0.2**
10nm,0.9s
X51A Calhoun 21.88 17 *e*P **P 08 37 30.7 -0.6**
9.6nm,0.8s
W47A Westpoint 21.92 10 P **P 08 37 32.1 +0.3**
baz=192,SNR=7.4
Y54A Tignall 21.93 22 P **P 08 37 29.6 -2.3**
baz=206,SNR=6.3
W48A Pulaski 21.93 12 P **P 08 37 32.8 +0.8**
baz=194,SNR=9.6
Z56A Williston 21.96 25 *e*P **P 08 37 33.0 +0.8**
17nm,0.8s
CPRX Cap Rock 21.99 333 *e*P **P 08 37 32.5 -0.3**
W49A Belvidere 22.05 13 P **P 08 37 33.9 +0.7**
baz=196,SNR=14
FCAR Ozark Folk Cen 22.14 0 *e*P **P 08 37 34.6 +0.4**
3.3nm,0.7s
X52A Dahlonega 22.20 19 P **P 08 37 32.1 -2.8**
baz=202
SWET Sewanee 22.22 14 *e*P **P 08 37 35.8 +0.7**
22nm,0.9s
X53A Estanollee 22.30 20 P **P 08 37 34.0 -1.8**
baz=203
MSTX Muleshoe 22.36 337 *e*P **P 08 37 38.0 +1.3**
6.8nm,0.8s
W50A Signal Mountai 22.36 15 *e*P **P 08 37 37.5 +0.9**
8.1nm,0.8s
W50A Signal Mountai 22.36 15 P **P 08 37 36.7 +0.2**
baz=198
V46A Holladay 22.37 9 P **P 08 37 36.7 +0.1**

	baz=190,SNR=16						
TUL1	Leonard	22.39	353	eP		P	08 37 37.0 +0.2
	6.0nm,0.6s						
TUL1	Leonard	22.39	353	P		P	08 37 37.8 +1.0
	baz=171						
HODGE	Hodges	22.41	22	eP		P	08 37 38.4 +1.2
	14nm,0.8s						
W51A	Cleveland	22.47	16	P		P	08 37 35.9 -1.7
	baz=199						
V47A	Nunnelly	22.49	10	P		P	08 37 38.0 0.0
	baz=192						
V48A	Smith Brothers	22.54	12	eP		P	08 37 38.7 +0.2
	24nm,0.8s						
V48A	Smith Brothers	22.54	12	P		P	08 37 38.5 +0.1
	baz=194,SNR=19						
HHAR	Hobbs	22.58	357	eP		P	08 37 40.1 +1.2
	11nm,1.3s						
U40A	Yellville	22.61	359	P		P	08 37 40.3 +1.1
	baz=178						
W52A	Murphy	22.64	18	eP		P	08 37 41.2 +1.6
	11nm,0.6s						
W52A	Murphy	22.64	18	P		P	08 37 36.8 -2.7
	baz=201						
X54A	Belton	22.66	22	P		P	08 37 36.0 -3.7
	baz=206						
WVT	Waverly	22.74	9	eP		P	08 37 41.0 +0.5
	11nm,0.6s						
V49A	McMinnville	22.76	14	P		P	08 37 41.2 +0.5
	baz=196,SNR=9.0						
AMTX	Amarillo	22.78	340	eP		P	08 37 42.4 +1.3
	20nm,0.7s						
AMTX	Amarillo	22.78	340	P		P	08 37 42.2 +1.1
	baz=156						
CPCT	Cooper Cave	22.80	17	eP		P	08 37 42.1 +0.9
	12nm,1.0s						
JSC	Jenkinsville	22.84	24	eP		P	08 37 42.5 +0.9
	11nm,0.8s						
V50A	Pikevile	22.86	15	P		P	08 37 42.9 +1.1
	baz=198,SNR=7.9						
X55A	Gracelyn & Ava	22.86	23	P		P	08 37 40.8 -1.1
	baz=207						
U46A	Springville	22.91	9	P		P	08 37 42.4 +0.1
	baz=190,SNR=14						
W53A	Cullowhee	22.95	19	P		P	08 37 42.9 0.0
	baz=203						
Y57A	Sumter	22.97	26	eP		P	08 37 43.3 +0.4
	12nm,0.7s						
Y57A	Sumter	22.97	26	P		P	08 37 40.0 -3.0
	baz=211						
CLTN	Cedars of Leba	22.98	12	eP		P	08 37 43.7 +0.7
	7.3nm,0.7s						
PARMO	Parma	23.03	5	eP		P	08 37 44.1 +0.6
	50nm,0.8s						
PBMO	Poplar Bluff	23.09	4	eP		P	08 37 44.4 +0.2
	16nm,0.5s						
PAULI	Pauline	23.11	22	eP		P	08 37 45.9 +1.6
	10.0nm,0.9s						
X56A	White Oak	23.12	24	P		P	08 37 42.2 -2.2
	baz=209						
U47A	Clarksville	23.13	10	P		P	08 37 44.5 0.0
	baz=192						
V51A	Loudon	23.18	17	eP		P	08 37 46.8 +1.7
	20nm,1.0s						
V51A	Loudon	23.18	17	P		P	08 37 46.3 +1.2
	baz=200,SNR=6.3						
Y58A	Scranton	23.19	27	eP		P	08 37 45.6 +0.4
	44nm,0.9s						
Y58A	Scranton	23.19	27	P		P	08 37 41.6 -3.6
	baz=212						
W54A	Cherokee Point	23.21	21	P		P	08 37 46.3 +1.0
	baz=205,SNR=7.5						
U48A	Cassie Pea, Po	23.34	12	P		P	08 37 46.9 +0.3
	baz=194						
V52A	Sevierville	23.44	18	eP		P	08 37 49.0 +1.4
	16nm,1.2s						
V52A	Sevierville	23.44	18	P		P	08 37 48.7 +1.1
	baz=201						
T45A	Paducah	23.50	7	eP		P	08 37 48.9 +0.8
	51nm,0.6s						
U49A	Red Boiling Sp	23.50	13	P		P	08 37 48.6 +0.4
	baz=196,SNR=22						
V53A	Saluda	23.52	20	eP		P	08 37 49.6 +1.1
	9.3nm,0.8s						
V53A	Saluda	23.52	20	P		P	08 37 48.6 +0.1
	baz=203,SNR=6.9						
319A	Douglas	23.56	321	eP		P	08 37 50.0 +1.0
	11nm,1.0s						
KMSC	Kings Mountain	23.57	23	eP		P	08 37 50.1 +1.2
	21nm,1.0s						
KMSC	Kings Mountain	23.57	23	P		P	08 37 48.5 -0.4
	baz=207						
T46A	Princeton	23.62	9	P		P	08 37 49.8 +0.4
	baz=190,SNR=9.5						
U50A	Jamestown	23.63	15	P		P	08 37 50.1 +0.6
	baz=198,SNR=15						
T47A	Sharon Grove	23.70	10	eP		P	08 37 50.5 +0.5
	60nm,1.4s						
T47A	Sharon Grove	23.70	10	P		P	08 37 50.6 +0.6
	baz=192,SNR=13						
U51A	La Follette	23.82	17	P		P	08 37 52.2 +1.0
	baz=200,SNR=15						
W56A	Indian Trail	23.86	24	P		P	08 37 49.6 -2.0
	baz=209						
V54A	Nebo	23.91	21	P		P	08 37 53.2 +1.0
	baz=205						
T48A	Bowling Green	23.95	12	P		P	08 37 52.5 +0.1
	baz=194						
U52A	Thorn Hill	24.02	18	P		P	08 37 53.5 +0.3
	baz=202						
S44A	Carbondale	24.09	6	P		P	08 37 54.7 +0.9
	baz=187,SNR=28						
TZTN	Tazewell	24.10	17	eP		P	08 37 54.2 +0.3
	19nm,1.0s						
TZTN	Tazewell	24.10	17	P		P	08 37 54.3 +0.3
	baz=201,SNR=5.7						
W57A	Gilead	24.11	25	eP		P	08 37 54.4 +0.5
	33nm,1.4s						
W57A	Gilead	24.11	25	P		P	08 37 51.3 -2.7
	baz=210						
SIUC	Southern Illin	24.12	6	eP		P	08 37 54.9 +1.0
	62nm,0.8s						
T49A	Edmonton	24.12	13	eP		P	08 37 54.6 +0.6
	35nm,1.3s						
T49A	Edmonton	24.12	13	P		P	08 37 54.8 +0.8
	baz=196,SNR=11						
BNM	Barren Site	24.20	330	eP		P	08 37 57.6 +2.5
T50A	Nancy	24.20	15	P		P	08 37 55.0 +0.2
	baz=198,SNR=6.4						
U53A	Fall Branch	24.24	19	P		P	08 37 56.2 +1.0
	baz=203						
V55A	Taylorsville	24.24	22	P		P	08 37 56.2 +1.1
	baz=207,SNR=6.5						
S46A	Don Dixon Farm	24.28	9	P		P	08 37 56.4 +0.9
	baz=191,SNR=5.9						
CCM	Cathedral Cave	24.32	2	eP		P	08 37 55.7 -0.2
	14nm,1.2s						
CCM	Cathedral Cave	24.32	2	P		P	08 37 56.7 +0.8
	baz=182						
W58A	Raeford	24.32	27	P		P	08 37 53.9 -1.9
	baz=212						
S47A	Hartford	24.33	10	P		P	08 37 57.3 +1.4
	baz=193,SNR=7.8						
LENM	Lemitar	24.39	329	eP		P	08 37 59.8 +3.0
T51A	Gray	24.39	16	P		P	08 37 57.2 +0.8
	baz=200,SNR=10						
V56A	Mocksville	24.48	24	eP		P	08 37 58.4 +1.1
	9.8nm,0.8s						
V56A	Mocksville	24.48	24	P		P	08 37 58.5 +1.2
	baz=208						
X60A	Albert Glenn T	24.53	29	P		P	08 37 55.8 -2.0
	baz=215						
S48A	Wiedeman Farm,	24.54	12	P		P	08 37 59.1 +1.2
	baz=194						
USIN	University of	24.56	9	eP		P	08 37 59.8 +1.8
	27nm,0.7s						
U54A	Nelsons Funny	24.63	21	eP		P	08 37 59.9 +1.1
	15nm,0.8s						
U54A	Nelsons Funny	24.63	21	P		P	08 37 59.2 +0.4
	baz=205,SNR=6.3						
LAZ	Ladron	24.66	329	eP		P	08 37 57.2 -2.0
ANMO	Albuquerque	24.77	331	P		P	08 38 02.4 +2.2
	2.0nm,0.5s,baz=144,slow=14,SNR=8.2						
ANMO	Albuquerque	24.77	331	eP		P	08 38 01.2 +1.0
	2.8nm,0.7s						
T52A	Hallie	24.79	18	eP		P	08 38 01.2 +1.0
	21nm,1.3s						
T52A	Hallie	24.79	18	P		P	08 38 01.1 +0.9
	baz=202						
R45A	Skylar, Fairfi	24.80	8	P		P	08 38 00.9 +0.8
	baz=189,SNR=8.4						
T53A	Wise	24.82	19	P		P	08 38 01.2 +0.8
	baz=203						
S49A	Springfield	24.83	13	P		P	08 38 01.2 +0.8
	baz=196,SNR=8.6						
V57A	Coltrane Farms	24.83	25	P		P	08 38 00.8 +0.3
	baz=210,SNR=5.1						
U55A	TA2, Sparta	24.88	22	P		P	08 38 01.8 +0.7
	baz=206,SNR=5.8						
S50A	Richmond	24.94	15	P		P	08 38 03.0 +1.5
	baz=198,SNR=10						
SLM	Saint Louis	24.95	4	eP		P	08 38 02.1 +0.6
	16nm,0.8s						
U56A	King	25.00	23	P		P	08 38 03.3 +1.3
	baz=208						
V58A	Windy Hill, Pi	25.03	26	P		P	08 38 02.1 -0.1
	baz=211						
W60A	Pink Hill	25.04	29	P		P	08 38 03.0 +0.6
	baz=215						
WCI	Wyandotte Cave	25.05	11	eP		P	08 38 03.5 +1.1
	34nm,0.8s						
WCI	Wyandotte Cave	25.05	11	P		P	08 38 03.7 +1.3
	baz=194						
R47A	Wooly Knot Far	25.07	11	P		P	08 38 03.6 +0.9
	baz=193,SNR=7.5						
CNNC	Cliffs of the	25.11	29	P		P	08 38 03.9 +0.9
	baz=214						
S51A	Beattyville	25.11	16	eP		P	08 38 03.7 +0.6
	11nm,0.8s						
S51A	Beattyville	25.11	16	P		P	08 38 04.0 +0.9
	baz=200,SNR=7.5						
TUC	Tucson	25.12	321	eP		P	08 38 04.2 +0.9
	4.5nm,1.3s						
T54A	Tazewell	25.20	20	P		P	08 38 04.7 +0.8
	baz=205						
OLIL	Olney	25.26	8	eP		P	08 38 05.4 +1.1
	38nm,0.8s						
S52A	Salyersville	25.30	17	P		P	08 38 05.7 +1.0
	baz=201						
R48A	Northridge Ran	25.30	12	P		P	08 38 04.9 +0.2
	baz=194,SNR=9.1						
R49A	Shelbyville	25.34	13	eP		P	08 38 05.4 +0.3
	20nm,0.6s						
R49A	Shelbyville	25.34	13	P		P	08 38 05.1 0.0
	baz=196,SNR=9.6						
V59A	Middlesex	25.39	27	P		P	08 38 01.8 -3.8
	baz=213						
Q45A	Warren Harvey,	25.41	8	P		P	08 38 06.3 +0.6
	baz=189,SNR=6.5						
U57A	Blanch	25.48	25	P		P	08 38 07.7 +1.3
	baz=210						
T55A	Pulaski	25.53	22	P		P	08 38 08.3 +1.4
	baz=206						
R50A	Paris	25.53	15	eP		P	08 38 07.8 +1.0
	12nm,0.6s						
R50A	Paris	25.53	15	P		P	08 38 08.4 +1.6
	baz=198						
S53A	Williamson	25.59	19	P		P	08 38 08.3 +1.0
	baz=203						
KSU1	Kansas State U	25.64	352	P		P	08 38 08.8 +1.0
	baz=170						
Q47A	Bedord North L	25.71	11	P		P	08 38 09.6 +1.2
	baz=193						
T56A	Rocky Mt	25.73	23	P		P	08 38 09.2 +0.6
	baz=208						
R51A	Hillsboro	25.74	16	P		P	08 38 09.9 +1.2
	baz=200						
BLA	Blacksburg	25.74	22	eP		P	08 38 10.2 +1.3
	12nm,1.0s						
BLA	Blacksburg	25.74	22	P		P	08 38 09.7 +0.9
	baz=207						
T25A	Trinidad	25.78	337	P		P	08 38 12.2 +2.9
	baz=152						
U58A	Oxford	25.78	26	P		P	08 38 10.5 +1.4
	baz=212						
V60A	Jim Taylor Roa	25.84	29	eP		P	08 38 10.3 +0.7
	35nm,1.4s						
V60A	Jim Taylor Roa	25.84	29	P		P	08 38 10.2 +0.7
	baz=215						
Q48A	North Vernon	25.84	12	P		P	08 38 10.3 +0.7
	baz=195,SNR=6.6						
CBKS	Cedar Bluff	25.92	347	eP		P	08 38 12.3 +1.9
	13nm,0.8s						
BLO	Bloomington	25.92	10	eP		P	08 38 12.3 +1.9
	6.9nm,0.6s						
S54A	Dingess, Beckl	25.96	20	P		P	08 38 11.7 +0.9
	baz=205						
P43A	Skaggs, Pawnee	26.00	5	P		P	08 38 15.2 +4.1
	baz=186						
T57A	Hurt	26.00	24	eP		P	08 38 12.5 +1.4
	7.8nm,0.9s						
T57A	Hurt	26.00	24	P		P	08 38 12.6 +1.4
	baz=210						
R52A	Catlettsburg	26.03	17	P		P	08 38 12.5 +1.2
	baz=202						
U59A	Littleton	26.08	27	eP		P	08 38 11.6 -0.2
	18nm,1.4s						
U59A	Littleton	26.08	27	P		P	08 38 10.8 -1.0
	baz=213						
P45A	Graceland, Par	26.08	8	eP		P	08 38 13.5 +1.7
	12nm,0.8s						
P45A	Graceland, Par	26.08	8	P		P	08 38 12.4 +0.6
	baz=190						
Q49A	Aurora	26.08	13	P		P	08 38 13.5 +1.7
	baz=196						
S55A	Lewisburg	26.21	21	P		P	08 38 13.0 -0.1
	baz=206						
X18A	Snowflake	26.23	325	eP		P	08 38 14.3 +0.9
	3.0nm,1.0s						
R53A	Hurricane	26.23	19	P		P	08 38 12.4 -0.8
	baz=203						
P46A	Rosedale	26.25	9	P		P	08 38 14.7 +1.4
	baz=191						
T58A	Grand View Acr	26.25	25	P		P	08 38 13.0 -0.4
	baz=211						
P47A	Martinsville	26.27	11	P		P	08 38 14.3 +0.8
	baz=193						
P48A	Milroy	26.41	12	eP		P	08 38 15.6 +0.8
	12nm,0.9s						
P48A	Milroy	26.41	12	P		P	08 38 15.5 +0.8
	baz=195						
R54A	Victor	26.41	20	P		P	08 38 15.9 +1.1
	baz=205						
U60A	Pendleton	26.46	28	P		P	08 38 12.0 -3.2
	baz=214						
S56A	Natural Bridge	26.47	23	P		P	08 38 17.2 +1.8
	baz=208						
Q51A	Peebles	26.48	16	eP		P	08 38 16.2 +0.7
	10.0nm,0.8s						
Q51A	Peebles	26.48	16	P		P	08 38 16.4 +1.0
	baz=200						
T59A	Double "B" Far	26.70	27	P		P	08 38 17.2 -0.2
	baz=213						
Q52A	Bidwell	26.72	18	P		P	08 38 19.1 +1.5
	baz=202						
SDCO	Great Sand Dun	26.73	336	eP		P	08 38 18.4 +0.3
	9.2nm,1.2s						
SDCO	Great Sand Dun	26.73	336	P		P	08 38 20.8 +2.8
	baz=150						
Q53A	Leroy	26.85	19	P		P	08 38 18.7 -0.1
	baz=204						
KSCO	Kaye Shedlock'	26.86	342	eP		P	08 38 21.0 +2.0
	13nm,1.0s						
P50A	Jamestown	26.91	15	P		P	08 38 20.9 +1.5
	baz=198						
HDIL	Hopedale	26.93	5	eP		P	08 38 19.9 +0.5
	11nm,0.8s						
HDIL	Hopedale	26.93	5	P		P	08 38 20.6 +1.2
	baz=186						
N41A	Harden Midland	26.98	2	P		P	08 38 21.2 +1.3
	baz=183						
P51A	Williamsport	26.98	16	eP		P	08 38 20.2 +0.3
	5.8nm,0.5s						
P51A	Williamsport	26.98	16	P		P	08 38 21.3 +1.3
	baz=200						
X16A	Lo Mia Camp, P	26.99	323	eP		P	08 38 21.4 +1.1
	2.6nm,1.1s						
SFIN	Lafayette	27.01	9	P		P	08 38 20.8 +0.6
	baz=191						
O47A	Sheridan	27.02	10	P		P	08 38 21.2 +1.0
	baz=193						
Q54A	Coxs Mills	27.19	20	eP		P	08 38 22.3 +0.5
	22nm,1.4s						
Q54A	Coxs Mills	27.19	20	P		P	08 38 23.3 +1.5
	baz=205						
O48A	Farmland	27.23	12	P		P	08 38 23.7 +1.5
	baz=195						
S22A	4UR Ranch, Cre	27.27	334	eP		P	08 38 23.9 +1.0
	6.3nm,1.2s						
S22A	4UR Ranch, Cre	27.27	334	P		P	08 38 27.3 +4.4
	baz=148						
N44A	Piper City	27.28	7	P		P	08 38 23.8 +1.2
	baz=189						
N43A	Stutzman Famil	27.32	5	P		P	08 38 24.0 +1.0
	baz=186						
O49A	Covington	27.34	13	P		P	08 38 24.2 +1.0
	baz=197						
P52A	Corning	27.38	17	P		P	08 38 24.4 +0.8
	baz=202						
R58B	Mineral	27.39	25	P		P	08 38 23.8 +0.1
	baz=212						
N45A	Kentland	27.41	8	P		P	08 38 25.2 +1.4
	baz=190						
R57A	Stanardsville	27.42	24	P		P	08 38 20.0 -3.8
	baz=210						
Q55A	Buckhannon	27.45	21	P		P	08 38 24.7 +0.5
	baz=206						
O50A	Cable	27.47	14	P		P	08 38 25.4 +1.1
	baz=198						
MVCO	Mesa Verde	27.57	331	eP		P	08 38 26.4 +0.8
	6.6nm,0.9s						
MVCO	Mesa Verde	27.57	331	P		P	08 38 27.9 +2.4
	baz=144						
N46A	Monticello	27.57	9	P		P	08 38 25.8 +0.6
	baz=192						
R58A	Rapidan	27.63	25	P		P	08 38 26.6 +0.9
	baz=211						
M41A	Milan	27.66	3	P		P	08 38 26.0 0.0
	baz=184						
ACSO	Alum Creek Sta	27.71	15	P		P	08 38 26.3 -0.1
	baz=200						
N47A	Urbana	27.73	11	P		P	08 38 26.2 -0.4
	baz=194						
WUAZ	Wupatki	27.74	325	eP		P	08 38 28.5 +1.5
	2.8nm,0.8s						
CBN	Corbin Frederi	27.81	26	P		P	08 38 25.8 -1.6
	baz=212						
M43A	Waltham Townsh	27.83	5	P		P	08 38 27.6 +0.1
	baz=187						
N48A	Decatur	27.84	12	P		P	08 38 27.6 0.0
	baz=195						
P54A	Burton	27.86	20	P		P	08 38 27.6 -0.3
	baz=205						
R59A	King George, V	27.91	26	P		P	08 38 28.4 +0.1
	baz=213						
O52A	Adamsville	27.91	17	eP		P	08 38 28.0 -0.3
	7.4nm,0.7s						
O52A	Adamsville	27.91	17	P		P	08 38 27.1 -1.2
	baz=202						
P55A	Reedsville	28.00	21	P		P	08 38 23.6 -5.5
	baz=206						
N49A	Columbus Grove	28.08	13	P		P	08 38 29.9 +0.2
	baz=197						
O53A	New Philadelph	28.22	18	P		P	08 38 30.1 -1.0
	baz=203						
L40A	Anamosa	28.32	2	P		P	08 38 33.6 +1.7
	baz=182						
L42A	Oliver, Polo	28.34	4	P		P	08 38 34.3 +2.2
	baz=185						
P56A	Dayton Farm, R	28.35	22	P		P	08 38 31.1 -1.0
	baz=208						
PV01	Paradox Valley	28.35	332	eP		P	08 38 33.1 +0.5
	5.2nm,1.1s						
O54A	Avella	28.42	19	P		P	08 38 31.5 -1.3
	baz=205						
PV13	Radium Mtn., P	28.49	332	eP		P	08 38 34.0 +0.3
	7.9nm,1.0s						
SMCO	Snowmass	28.54	336	eP		P	08 38 35.4 +1.0
	5.2nm,1.2s						
PV03	Paradox Valley	28.58	332	eP		P	08 38 33.7 -0.8
	7.7nm,1.1s						
PV12	Saucer Basin,	28.61	332	eP		P	08 38 36.9 +2.2
	9.3nm,0.8s						
PV11	David Mesa, Pa	28.62	332	eP		P	08 38 35.9 +1.1
	10nm,1.1s						
PV07	Paradox Valley	28.64	333	eP		P	08 38 35.1 +0.1
	8.0nm,0.9s						
P57A	Homestead Farm	28.64	23	P		P	08 38 35.9 +1.2
	baz=210						
PV17	East Wray Mesa	28.65	332	eP		P	08 38 35.7 +0.6
	5.3nm,0.9s						
M49A	Liberty Center	28.65	13	P		P	08 38 35.9 +1.1
	baz=197						
PV16	Nyswonger Mesa	28.65	332	eP		P	08 38 36.2 +1.0
	4.1nm,0.9s						
PV14	Lion Creek, Pa	28.75	332	eP		P	08 38 37.5 +1.5
	6.6nm,1.0s						
PV22	Blue Mesa, Par	28.78	332	eP		P	08 38 35.0 -1.3
	5.4nm,0.9s						
PV23	Carpenter Ridg	28.81	332	eP		P	08 38 35.0 -1.6
N53A	Lisbon	28.85	18	eP		P	08 38 37.3 +0.7
	9.6nm,0.9s						
N53A	Lisbon	28.85	18	P		P	08 38 37.1 +0.5
	baz=203						
L47A	Sherwood	28.88	11	P		P	08 38 37.0 +0.1
	baz=194						
U15A	North Rim	28.91	325	eP		P	08 38 39.9 +2.4
	4.0nm,1.2s						
L48A	N Adams	29.00	12	P		P	08 38 38.3 +0.3
	baz=196						
O56A	Blue Knob Stat	29.12	22	eP		P	08 38 39.7 +0.7
	6.2nm,1.0s						
O56A	Blue Knob Stat	29.12	22	P		P	08 38 39.3 +0.2
	baz=208						
PLIO	Pelee Island,	29.23	15	P		P	08 38 41.1 +1.1
	baz=199						
N54A	Moraine State	29.25	19	eP		P	08 38 40.7 +0.5
	6.7nm,0.9s						
N54A	Moraine State	29.25	19	P		P	08 38 41.1 +0.9
	baz=205						
M52A	Chesterland	29.37	17	P		P	08 38 37.9 -3.3
	baz=202						
KNB	Kanab	29.63	325	eP		P	08 38 45.2 +1.4
	5.8nm,1.2s						
J40A	Soldiers Grove	29.67	2	P		P	08 38 46.5 +2.7
	baz=183						
J41A	Loganville	29.67	3	P		P	08 38 49.6 +5.7
	baz=184						
SSPA	Standing Stone	29.69	22	eP		P	08 38 45.0 +1.0
	14nm,1.4s						
SSPA	Standing Stone	29.69	22	P		P	08 38 45.0 +1.0
	baz=209						
NNA	Nana	29.72	148	LR		LR	08 49 51.8
	comp=Z,134nm,20.6s,baz=302,slow=34						
N56A	West Decatur	29.79	22	P		P	08 38 45.6 +0.6
	baz=208						
N57A	Milroy	29.92	23	P		P	08 38 45.4 -0.7
	baz=210						
MTPU	Mount Pierson	30.05	328	eP		P	08 38 48.4 +0.7
	3.8nm,1.1s						
J47A	Sunmer	30.18	11	P		P	08 38 49.7 +1.4
	baz=194						
Q16A	Castle Valley	30.20	330	eP		P	08 38 50.5 +1.7
	8.3nm,1.3s						
ECSD	EROS Data Cent	30.21	354	eP		P	08 38 49.6 +1.0
	7.4nm,1.4s						
ECSD	EROS Data Cent	30.21	354	P		P	08 38 49.6 +1.0
	baz=172						
CCUT	Cedar City	30.32	326	eP		P	08 38 50.7 +0.7
	4.7nm,1.2s						
P17A	Butcher Ranch,	30.43	331	eP		P	08 38 53.2 +2.4
	4.5nm,0.9s						
TMUT	Trail Mountain	30.52	330	eP		P	08 38 53.8 +2.0
	5.7nm,1.2s						
L54A	Sinclairville	30.62	19	P		P	08 38 51.3 -1.0
	baz=205						
J49A	Marlette	30.63	13	P		P	08 38 47.7 -4.6
	baz=198						
LUPA	Lehigh Univers	30.66	26	eP		P	08 38 52.8 +0.2
	0.9nm,0.6s						
K52A	Tillsonburg	30.70	17	P		P	08 38 50.9 -2.0
	baz=202						
N59A	State Game Lan	30.76	25	P		P	08 38 50.3 -3.3
	baz=212						
J52A	Paris	31.19	17	P		P	08 38 53.3 -4.0
	baz=202						
K22A	Casper	31.41	340	P		P	08 39 01.0 +1.6
	baz=153						
SPMN	Marine on St.	31.47	359	P		P	08 39 02.5 +2.8
	baz=179						
I51A	Listowel	31.56	16	P		P	08 39 00.7 +0.2
	baz=201						
BINY	Binghamton	31.76	23	eP		P	08 39 03.6 +1.3
	17nm,1.3s						
BINY	Binghamton	31.76	23	P		P	08 38 59.9 -2.4

baz=211
DUG Dugway, Tooele 31.99 330 P P 08 39 07.6 +3.0
baz=140
TCUT Toone Canyon 32.05 332 *e*P P 08 39 05.9 +0.7
10nm,0.9s
KSCT Kent School, K 32.40 27 *e*P P 08 39 07.7 -0.2
5.8nm,0.9s
BW06 Boulder Array 32.62 336 *e*P P 08 39 10.4 +0.2
4.8nm,1.4s
BW06 Boulder Array 32.62 336 P P 08 39 11.8 +1.6
baz=148
PD31 Pinedale Array 32.62 336 *e*P P 08 39 11.2 +1.0
PDAR Pinedale Array 32.62 336 P P 08 39 11.2 +1.0
1.3nm,0.9s,baz=134,slow=10,SNR=9.2
BGU Big Grassy Mou 32.66 330 *e*P P 08 39 11.2 +0.8
3.0nm,1.1s
SPUT South Promonto 32.68 331 *e*P P 08 39 11.7 +1.1
3.8nm,1.2s
HVU Hansel Valley 33.20 331 *e*P P 08 39 17.3 +2.2
7.4nm,1.2s
E44A Grand Marais A 33.30 8 P P 08 39 15.8 +0.1
baz=191
BUKO Buck Lake 33.52 17 P P 08 39 17.2 -0.5
baz=203
E47A Iron Bridge 33.57 11 P P 08 39 18.9 +0.9
baz=196
ELK Elko 33.63 328 *e*P P 08 39 18.7 -0.3
4.1nm,1.3s
SNOW Snow King Moun 33.68 335 *e*P P 08 39 20.4 +1.0
14nm,0.9s
H56A Elgin 33.73 21 P P 08 39 19.9 +0.4
baz=209
LOHW Long Hollow 33.75 336 *e*P P 08 39 21.4 +1.4
6.0nm,0.9s
NV01 Mina Array Sit 33.77 322 *e*P P 08 39 22.8 +2.6
NVAR Mina Array Bea 33.77 322 P P 08 39 22.8 +2.6
3.7nm,0.8s,baz=139,slow=8.6,SNR=21
TPAW Teton Pass 33.79 335 *e*P P 08 39 20.5 +0.2
15nm,1.3s
PLVO Plevna 33.85 20 P P 08 39 19.6 -1.0
baz=207
MOOW Moose Ponds 33.92 336 *e*P P 08 39 22.5 +1.0
6.3nm,1.4s
FXWY Fox Creek 33.94 335 *e*P P 08 39 23.7 +2.1
2.2nm,0.9s
IMW Indian Meadow 34.12 336 *e*P P 08 39 24.1 +0.9
5.5nm,1.3s
LONY Lake Ozonia 34.36 23 P P 08 39 23.8 -1.2
baz=211
H17A Grant Village 34.39 337 P P 08 39 28.2 +2.6
baz=147
E51A G1948 Merrick 34.50 16 P P 08 39 26.6 +0.5
baz=202
RLMT Red Lodge 34.53 339 *e*P P 08 39 27.8 +1.1
RLMT Red Lodge 34.53 339 P P 08 39 27.3 +0.6
baz=150
MDND Maddock 34.63 351 *e*P P 08 39 28.0 +0.7
25nm,0.8s
MDND Maddock 34.63 351 P P 08 39 28.0 +0.7
baz=167
AGMN Agassiz Nation 34.67 356 *e*P P 08 39 28.7 +1.1
3.1nm,0.9s
YMR Madison River 34.77 336 *e*P P 08 39 29.9 +1.1
10nm,1.3s
YHH Holmes Hill 34.83 337 *e*P P 08 39 30.1 +0.6
2.8nm,1.1s
LAO LASA Array 34.95 343 P P 08 39 30.3 +0.1
baz=156
PNTR Pine Nut 34.97 321 *e*P P 08 39 31.6 +1.0
5.0nm,0.7s
E54A Lac Daplat, Po 35.06 18 P P 08 39 25.2 -5.8
baz=206
PTGA Pitinga 35.07 111 P P 08 39 36.3 +4.8
7.0nm,0.8s,baz=306,slow=8.9,SNR=12
PTGA Pitinga 35.07 111 *e*P P 08 39 31.3 -0.2
7.7nm,0.8s
D52A ZEK Kipawa Sen 35.20 17 P P 08 39 26.1 -6.1
baz=204
GCMT Greycliff 35.25 339 *e*P P 08 39 34.1 +1.3
HLID Hailey 35.35 332 *e*P P 08 39 34.3 +0.6
2.1nm,0.9s
HLID Hailey 35.35 332 P P 08 39 35.3 +1.6
baz=141
D53A Lac Vacive, Po 35.49 17 P P 08 39 35.1 +0.4
baz=205
MCMT McKenzie Canyo 35.66 335 *e*P P 08 39 37.7 +1.2
BOZ Bozeman (W) 35.81 337 *e*P P 08 39 39.4 +1.8
3.8nm,1.3s
BOZ Bozeman (W) 35.81 337 P P 08 39 40.2 +2.6
baz=147
DLMT Dillon 36.00 335 *e*P P 08 39 40.8 +1.6
7.4nm,1.1s
DGMT Dagmar 36.09 347 *e*P P 08 39 41.0 +1.1
12nm,1.1s
DGMT Dagmar 36.09 347 P P 08 39 38.7 -1.2
baz=160
ULM Lac du Bonnet 36.61 356 P P 08 39 44.2 -0.1
2.7nm,0.7s,baz=164,slow=4.0,SNR=3.4
WVOR Wild Horse Val 36.63 327 *e*P P 08 39 46.0 +1.3
7.3nm,1.2s
J08A Circle Bar Ran 37.19 328 *e*P P 08 39 51.6 +2.3
9.7nm,0.6s
MOD Modoc Plateau 37.19 325 *e*P P 08 39 49.9 +0.4
5.9nm,1.3s
EGMT Eagleton 37.22 341 *e*P P 08 39 51.2 +1.6
20nm,1.4s
EGMT Eagleton 37.22 341 P P 08 39 50.7 +1.1
baz=151
LSQQ Lebel-sur-Quev 37.49 17 P P 08 39 40.9 -11
baz=205
BMO Blue Mountains 37.68 331 *e*P P 08 39 55.0 +1.5
3.0nm,1.4s
MATQ Matagami 37.96 15 P P 08 39 44.3 -11
baz=203
I07A Izee 38.23 328 *e*P P 08 39 57.5 -0.7
5.5nm,1.1s
F10A Beach Ranch, E 38.48 332 *e*P P 08 39 59.4 -0.9
3.9nm,0.8s
PQI Presque Isle 38.71 27 *e*P P 08 40 02.6 +0.6
9.5nm,1.1s
J04D Umpqua Nationa 39.07 325 P P 08 40 05.7 +0.4
baz=130
G05D Wamic, OR 39.96 328 P P 08 40 12.0 -0.6
baz=133
PB11 IPOC Station P 39.98 146 *e*P P 08 40 11.5 -1.7
9.5nm,1.0s
H04A Detroit Lake 40.05 326 *e*P P 08 40 12.9 -0.3
9.4nm,0.9s
H04D Lebanon 40.24 326 P P 08 40 16.4 +1.5
baz=130
PB10 IPOC Station P 42.62 150 *e*P P 08 40 31.8 -2.8
70nm,1.2s
FCC Fort Churchill 45.05 359 *e*P P 08 40 54.6 +1.0
5.8nm,1.1s
SCHQ Schefferville 45.64 20 *e*P P 08 40 58.3 -0.1
9.5nm,1.1s
YKA Yellowknife Ar 51.30 347 P P 08 41 43.3 +1.5
4.5nm,0.8s,baz=151,slow=7.3,SNR=54
YKB5 Yellowknife Ar 51.30 347 *e*P P 08 41 43.3 +1.5
YKW3 Yellowknife Ar 51.36 347 *e*P P 08 41 43.4 +1.1
8.8nm,1.0s
DLBC Dease Lake 52.86 336 *e*P P 08 41 54.8 +1.2
12nm,1.4s
INK Inuvik 60.69 344 P P 08 42 49.9 +1.0
4.6nm,0.7s,baz=122,slow=6.8,SNR=8.1
INK Inuvik 60.69 344 *e*P P 08 42 49.1 +0.2
4.9nm,0.8s
EGAK Eagle 60.93 338 *e*P P 08 42 51.0 +0.4
7.3nm,1.4s
RES Resolute Bay 61.04 359 P P 08 42 50.6 -0.5
2.9nm,0.7s,baz=191,slow=8.4,SNR=14
RES Resolute Bay 61.04 359 *e*P P 08 42 51.5 +0.4
3.7nm,0.8s
DOT Dot Lake 61.43 336 *e*P P 08 42 54.8 +0.8
3.8nm,1.0s
SML Sawmill 62.34 334 *e*P P 08 42 59.4 -0.8
3.9nm,0.8s
PMR Palmer 62.60 333 *e*P P 08 43 01.9 0.0
3.6nm,1.0s
HDA Harding Lake 62.91 337 *e*P P 08 43 03.6 -0.3
3.9nm,1.0s
HDA Harding Lake 62.91 337 P P 08 43 04.4 +0.4
baz=117
ILAR Eielson Array 63.05 337 P P 08 43 05.8 +0.9
2.3nm,0.9s,baz=136,slow=4.4,SNR=13
TCOL CIGO, UAF Yank 63.47 337 P P 08 43 08.8 +1.2
baz=116
BWN Browne 63.79 336 *e*P P 08 43 10.5 +0.7
16nm,0.8s
CAST Castle Rocks 64.57 334 *e*P P 08 43 15.0 +0.1
2.1nm,0.6s
COLD Coldfoot 65.35 339 *e*P P 08 43 21.0 +1.1
1.9nm,1.0s
TOLK Toolik Lake Re 65.75 340 *e*P P 08 43 24.0 +1.5
4.9nm,0.8s
TOLK Toolik Lake Re 65.75 340 P P 08 43 23.7 +1.1
baz=116
PVAQ Vaqueiros 77.58 54 *e*P P 08 44 33.1 -1.0
10nm,1.1s
BILL Bilibino 81.68 338 *e*P P 08 44 56.5 +0.7
5.8nm,1.2s
WLF Walferdange 85.09 40 *e*P P 08 45 13.6 -0.2
63nm,1.4s
BFO Black Forest 86.84 41 *e*P P 08 45 21.0 -1.4
3.5nm,1.1s
LZH Lanzhou 128.24 343 *e*PKP PKiKP 08 51 45.5 0.0
LZH pPKP pPKPdf 08 51 57.9 +2.2
LZH sPKP 08 52 02.7
CD2 Chengdu 133.09 341 PKP PKPdf 08 51 54.0 0.0
CMAR Chiang Mai Arr 146.23 341 PKPbc PKPab 08 52 19.8 0.0
3.0nm,0.5s,baz=336,slow=3.3,SNR=13

NEIC ***02*** *08:33:19.0±2.9, 16°.33N×87°.87W, h10km, mb4.3/99, Error ellipse: s-maj=16.7km s-min=8.3km az=258.0*
NEIC Felt [II] at San Pedro Sula. Also felt at Belmopan, Belize.
IDC ***02*** *08:33:19.3±1.5, 16°.36N×87°.56W, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.0/40, mbtmp4.0/12, ML4.7/1, MS3.9/4, Ms1 3.9/4, ms1mx3.4/30, Error ellipse: s-maj=47.3km s-min=17.2km az=34.0*
ISCJB ***02*** *08:33:21.1±0.8, 16°.40N±0°.02×87°.84W±0°.03, h33km±7km, mb4.3/78, MS3.9/3, Error ellipse: s-maj=4.9km s-min=2.8km az=3.6*
UCR ***02*** *08:33:21.9±2.3, 16°.32N×88°.20W, h15km, ML4.7, mb4.3(NEIC)*
SNET ***02*** *08:33:23.8±1.0, 16°.07N×87°.84W, h20km, ML4.9*
ISC 02 08:33:22.0±1.6, 16°.37N±0°.04×87°.95W±0°.05, h30km±13km, n212, σ2°31/223, mb4.3/78, MS3.7/3, 5C, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTO3	**Montecristo**	**2.39**	**215**	*e*P	**Pn**	**08 34 00.9**	**+1.6**
MTO3	**Montecristo**	**2.39**	**215**	*e*P	**Pn**	**08 34 00.9**	**+1.6**
LLGN	**La Laguna**	**2.39**	**204**	*e*P	**Pn**	**08 33 59.3**	**0.0**
LLGN				*e*S	**Sn**	**08 34 26.4**	**-1.3**
LLGN				IAML		08 34 29.6	
	comp=Z,9μm,0.5s						
LLGN	**La Laguna**	**2.39**	**204**	*e*P	**Pn**	**08 33 59.3**	**0.0**
LLGN				*e*S	**Sn**	**08 34 26.4**	**-1.3**
LLGN				IAML		08 34 29.6	
	comp=Z,9μm,0.5s						
TGUH	**Tegucigalpa,Un**	**2.39**	**164**	*e*Pn	**Pn**	**08 33 56.4**	**-2.8**
TGUH				*e*Sn	**Sn**	**08 34 24.9**	**-2.6**
TGUH	**Tegucigalpa,Un**	**2.39**	**164**	*e*P	**Pn**	**08 33 56.8**	**-2.4**
TGUH				*e*S	**Sn**	**08 34 24.3**	**-3.2**
TGUH	**Tegucigalpa,Un**	**2.39**	**164**	*e*P	**Pn**	**08 33 56.8**	**-2.4**
TGUH				*e*S	**Sn**	**08 34 24.3**	**-3.2**
VICT	**Victoria**	**2.49**	**196**	*e*P	**Pn**	**08 33 59.4**	**-1.2**
VICT	**Victoria**	**2.49**	**196**	*e*P	**Pn**	**08 33 59.4**	**-1.2**
CAHU	**Cacacuatique**	**2.60**	**186**	*e*P	**Pn**	**08 34 00.9**	**-1.3**
CAHU	**Cacacuatique**	**2.60**	**186**	*e*P	**Pn**	**08 34 00.9**	**-1.3**
PAVA	**Las Pavas**	**2.81**	**200**	*e*P	**Pn**	**08 34 04.6**	**-0.5**
PAVA	**Las Pavas**	**2.81**	**200**	*e*P	**Pn**	**08 34 04.6**	**-0.5**
LBRS	**Las Brisas**	**2.82**	**202⇑**	*e*P	**Pn**	**08 34 05.1**	**-0.1**
LFU	**La Fuente**	**2.84**	**203⇑**	*e*P	**Pn**	**08 34 05.5**	**+0.1**
LFU	**La Fuente**	**2.84**	**203⇑**	*e*P	**Pn**	**08 34 05.5**	**+0.1**
SNVI	**San Vicente**	**2.88**	**197**	*e*P	**Pn**	**08 34 05.9**	**-0.1**
UDBS	**Soyapango**	**2.88**	**204⇑**	*e*P	**Pn**	**08 34 06.0**	**+0.1**
UDBS				IAML		08 34 46.5	
	comp=Z,5μm,0.7s						
UDBS	**Soyapango**	**2.88**	**204⇑**	*e*P	**Pn**	**08 34 06.0**	**+0.1**
UDBS				IAML		08 34 46.5	
	comp=Z,5μm,0.7s						
PACA	**Pacayal**	**2.91**	**187**	*e*P	**Pn**	**08 34 05.6**	**-0.9**
PACA	**Pacayal**	**2.91**	**187**	*e*P	**Pn**	**08 34 05.6**	**-0.9**
LFRS	**El Faro**	**2.94**	**202**	*i* P	**Pn**	**08 34 06.9**	**+0.2**
SNET	**Serv Nac Est T**	**2.94**	**205**	*e*P	**Pn**	**08 34 06.4**	**-0.5**
SNET				*e*S	**Sn**	**08 34 39.9**	**-1.3**
SNET				IAML		08 35 02.4	
	comp=Z,3μm,0.7s						
SNET	**Serv Nac Est T**	**2.94**	**205**	*e*P	**Pn**	**08 34 06.7**	**-0.1**
SNET				*e*S	**Sn**	**08 34 39.9**	**-1.3**
SNET				IAML		08 35 02.4	
	comp=Z,3μm,0.7s						
LCND	**La Caada**	**3.05**	**179**	*e*P	**Pn**	**08 34 06.3**	**-1.9**
LCND	**La Caada**	**3.05**	**179**	*e*P	**Pn**	**08 34 06.3**	**-1.9**
CNCH	**Conchagua**	**3.08**	**178**	*e*P	**Pn**	**08 34 11.0**	**+2.2**
CSGN	**Cosiguina Volc**	**3.40**	**174**	*e*Pn	**Pn**	**08 34 13.6**	**+0.5**
CSGN				*e*Sn	**Sn**	**08 34 52.8**	**+0.3**
CSGN	**Cosiguina Volc**	**3.40**	**174**	*e*P	**Pn**	**08 34 13.8**	**+0.7**
CSGN				*e*S	**Sn**	**08 34 55.1**	**+2.7**
ESTN	**Estel**	**3.59**	**155**	*e*Pn	**Pn**	**08 34 16.1**	**+0.3**
ESTN				*e*Sn	**Sn**	**08 34 55.0**	**-2.3**
ESTN	**Estel**	**3.59**	**155**	*e*P	**Pn**	**08 34 18.1**	**+2.3**
ESTN				*e*S	**Sn**	**08 35 00.6**	**+3.3**
CRIN	**San Cristobal**	**3.75**	**166**	*e*P	**Pn**	**08 34 19.3**	**+1.3**
CRIN				*e*S	**Sn**	**08 35 06.0**	**+4.7**
TEIG	**Tepich**	**3.84**	**355**	*e*Pn	**Pn**	**08 34 21.7**	**+2.5**
TELN	**Telica**	**3.90**	**164**	*e*P	**Pn**	**08 34 20.9**	**+0.9**
TELN				*e*S	**Sn**	**08 35 10.4**	**+5.5**
TEL3	**Telica 3**	**3.93**	**164**	*e*P	**Pn**	**08 34 21.8**	**+1.5**
MATN	**Matagalpa**	**3.94**	**150**	*e*P	**Pn**	**08 34 24.3**	**+3.7**
MATN				*e*S	**Sn**	**08 35 10.1**	**+4.1**
CCIG	**Comitan**	**4.02**	**269**	*e*Pn	**Pn**	**08 34 22.9**	**+1.2**
CNGN	**Cerro Negro**	**4.04**	**162**	*e*P	**Pn**	**08 34 22.7**	**+0.8**
CNGN				*e*S	**Sn**	**08 35 12.0**	**+3.8**
CNGN				IAML		08 35 17.3	
	comp=E,3μm,0.4s						
MOMN	**Momotombo**	**4.17**	**161**	*e*P	**Pn**	**08 34 25.9**	**+2.2**
COPN	**Copaltepe**	**4.37**	**162**	*e*P	**Pn**	**08 34 29.0**	**+2.6**
MYIG	**Mrida**	**4.87**	**340**	*e*Pn	**Pn**	**08 34 32.8**	**-0.4**
ACON	**Acoyapa**	**5.14**	**148**	*e*Pn	**Pn**	**08 34 36.8**	**-0.2**
ESPN	**Las Esperanzas**	**5.46**	**139**	*e*Pb	**Pb**	**08 34 56.0**	**-0.6**
JTS	**Las Juntas de**	**6.71**	**154**	*e*Pn	**Pn**	**08 34 59.0**	**+0.4**
FSCY	**Frank Sound, G**	**7.08**	**65**	*e*Pn	**Pn**	**08 35 01.9**	**-1.7**
HDC	**Heredia**	**7.35**	**149**	*e*Pn	Pb	08 35 20.0	-9.0
HDC				*e*Sb	**Sb**	**08 36 55.3**	**-1.1**
LVIG	**Laguna Verde**	**8.71**	**294**	*e*Pn	**Pn**	**08 35 26.0**	**-0.1**
MTDJ	**Mount Denham**	**10.12**	**78**	*e*Pn	**Pn**	**08 35 44.8**	**-0.7**
TLIG	**Tlapa**	**10.22**	**278**	*e*Pn	**Pn**	**08 35 48.4**	**+1.5**
061Z	**Ochoppi**	**11.50**	**34**	*e*Pn	**Pn**	**08 36 04.7**	**+0.4**
061Z	**Ochoppi**	**11.50**	**34**	P	**Pn**	**08 36 05.0**	**+0.7**
	baz=223						
058A	**Arcadia**	**12.06**	**27**	P	**Pn**	**08 36 12.1**	**+0.1**
	baz=218						
060Z	**West Palm Beac**	**12.12**	**33**	P	**Pn**	**08 36 14.1**	**+1.4**
	baz=223						
059A	**Moore Haven**	**12.29**	**30**	*e*Pn	**Pn**	**08 36 14.9**	**-0.1**
059A	**Moore Haven**	**12.29**	**30**	P	**Pn**	**08 36 15.4**	**+0.4**
	baz=220						
GTBY	**Guantanamo Bay**	**12.71**	**72**	*e*Pn	**Pn**	**08 36 18.8**	**-1.9**
060A	**Indiantown**	**12.74**	**32**	*e*Pn	**Pn**	**08 36 21.8**	**+0.7**
060A	**Indiantown**	**12.74**	**32**	P	**Pn**	**08 36 22.1**	**+1.0**
	baz=222						
857A	**Zephyrhills**	**12.96**	**23**	P	**Pn**	**08 36 23.0**	**-1.3**
	baz=214						
MOIG	**Morelia**	**13.01**	**287**	*e*Pn	**Pn**	**08 36 29.3**	**+4.1**
DWPF	**Disney Wildern**	**13.14**	**26**	P	**Pn**	**08 36 26.5**	**-0.2**
	baz=217						
858A	**St. Cloud**	**13.26**	**26**	P	**Pn**	**08 36 28.3**	**0.0**
	baz=217						
859A	**Kempfer Cattle**	**13.33**	**28**	P	**Pn**	**08 36 29.3**	**0.0**
	baz=218						
757A	**Oxford**	**13.63**	**22**	P	**Pn**	**08 36 32.0**	**-1.3**
	baz=214						
655A	**Horseshoe Beac**	**13.77**	**17**	P	**Pn**	**08 36 31.8**	**-3.5**
	baz=210						
656A	**Willston**	**13.86**	**20**	*e*Pn	**Pn**	**08 36 36.5**	**0.0**
656A	**Willston**	**13.86**	**20**	P	**Pn**	**08 36 34.5**	**-1.9**
	baz=212						
554A	**Perry**	**14.20**	**15**	P	**Pn**	**08 36 40.6**	**-0.5**
	baz=208						
657A	**Interlachen**	**14.29**	**22**	P	**Pn**	**08 36 41.9**	**-0.4**
	baz=213						
555A	**McAlpin**	**14.43**	**18**	*e*Pn	**Pn**	**08 36 43.9**	**-0.3**
555A	**McAlpin**	**14.43**	**18**	P	**Pn**	**08 36 43.0**	**-1.2**
	baz=209						
556A	**Lake Butler**	**14.49**	**20**	P	**Pn**	**08 36 45.1**	**0.0**
	baz=211						
452A	**Marianna**	**14.63**	**9**	P	**Pn**	**08 36 43.4**	**-3.5**
	baz=202						
557A	**Orange Park**	**14.73**	**22**	P	**Pn**	**08 36 48.3**	**0.0**
	baz=213						
453A	**Whigham**	**14.79**	**12**	*e*Pn	**Pn**	**08 36 51.7**	**+2.5**
453A	**Whigham**	**14.79**	**12**	P	**Pn**	**08 36 46.2**	**-2.9**
	baz=205						
454A	**Quitman**	**14.81**	**15**	P	**Pn**	**08 36 47.4**	**-2.0**
	baz=207						
455A	**Stateville**	**15.00**	**17**	P	**Pn**	**08 36 50.3**	**-1.6**
	baz=208						
350A	**Dozier**	**15.05**	**5**	P	**Pn**	**08 36 50.8**	**-1.8**
	baz=198						
ZAIG	**Zacatecas**	**15.17**	**297**	*e*Pn	**P**	**08 36 58.3**	**-0.9**
	comp=E,18nm,1.0s						
353A	**Camilla**	**15.29**	**12**	P	**Pn**	**08 36 53.0**	**-2.8**
	baz=204						
HKT	**Hockley**	**15.32**	**333**	*e*Pn	**Pn**	**08 36 57.5**	**+1.4**
	comp=E,6.2nm,0.9s						
TIGA	**Tifton**	**15.52**	**14**	P	**Pn**	**08 36 56.6**	**-2.1**
	baz=206						
251A	**Midway**	**15.82**	**8**	P	**Pn**	**08 36 59.9**	**-2.8**
	baz=200,SNR=12						
252A	**Lumpkin**	**15.83**	**10**	P	**Pn**	**08 37 01.2**	**-1.5**
	baz=202,SNR=8.4						
833A	**Chaparral WMA,**	**15.91**	**320**	*e*Pn	**Pn**	**08 37 05.9**	**+2.2**
	comp=E,59nm,1.0s						
253A	**Americus**	**16.00**	**12**	P	**Pn**	**08 37 03.7**	**-1.3**
	baz=204						
255A	**Hazlehurst**	**16.27**	**17**	P	**Pn**	**08 37 07.1**	**-1.2**
	baz=208						
256A	**Glennville**	**16.49**	**18**	P	**Pn**	**08 37 10.6**	**-0.5**
	baz=210						
NATX	**Nacogdoches**	**16.49**	**339**	*e*Pn	**Pn**	**08 37 12.4**	**+1.2**
	comp=E,34nm,0.8s						
NATX				*e*Sn	**Sn**	**08 40 10.8**	**-2.5**
LRAL	**Lakeview Retre**	**16.61**	**3**	*e*Pn	**Pn**	**08 37 12.8**	**+0.1**
	comp=E,18nm,1.0s						
LRAL				*e*Sn	**Sn**	**08 40 09.3**	**-7.0**
154A	**Montrose**	**16.75**	**14**	P	**Pn**	**08 37 14.5**	**0.0**
	baz=206						
435B	**Jarrell**	**16.83**	**330**	*e*Pn	**P**	**08 37 17.0**	**-0.3**
	comp=E,26nm,0.5s						
435B				*e*Sn	**Sn**	**08 40 24.4**	**+2.8**
155A	**Kite**	**16.92**	**16**	P	**Pn**	**08 37 15.8**	**-0.8**
	baz=207						
Z52A	**Williamson**	**17.05**	**10**	P	**Pn**	**08 37 16.0**	**-2.2**
	baz=202,SNR=7.5						
Z41A	**Richland Creek**	**17.37**	**346**	*e*P	**P**	**08 37 23.6**	**+0.3**
	comp=E,13nm,0.8s						
Z41A				*e*Sn	**Sn**	**08 40 29.2**	**-5.5**
ROSC	**El Rosal**	**17.61**	**129**	LR	LR	08 45 34.7	
	comp=E,194nm,18.9s,baz=30,slow=42						
JCT	**Junction City**	**17.74**	**324**	*e*Pn	**P**	**08 37 29.1**	**+1.6**
	comp=E,8.5nm,0.4s						
WHTX	**Lake Whitney,**	**17.79**	**333**	*e*P	**P**	**08 37 28.5**	**+0.6**
	comp=E,40nm,0.4s						
WHTX				*e*Sn	**Sn**	**08 40 39.8**	**-5.0**
CCAR	**Cane Creek**	**17.80**	**350**	*e*Pn	**P**	**08 37 29.8**	**+1.6**
	comp=E,19nm,0.6s						
CCAR				*e*Sn	**Sn**	**08 40 38.8**	**-6.4**
NHSC	**New Hope**	**18.08**	**21**	P	**Pn**	**08 37 27.3**	**-3.7**
	baz=212						
Y55A	**Saluda**	**18.33**	**16**	P	**P**	**08 37 31.4**	**-2.5**
	baz=207						
Z58A	**St. Stephen**	**18.42**	**22**	P	**P**	**08 37 31.3**	**-3.6**
	baz=213						
PLAL	**Pickwick Lake**	**18.53**	**360**	*e*P	**Pn**	**08 37 38.4**	**+1.9**
	comp=E,7.8nm,1.1s						
PLAL				*e*Sn	**Sn**	**08 41 02.3**	**-0.5**
X40A	**Basin Creek Fa**	**18.56**	**347**	*e*P	**Pn**	**08 37 39.9**	**+3.1**
	comp=E,11nm,1.0s						
X40A				*e*Sn	**Sn**	**08 40 55.5**	**-8.1**
OTAV	**Otavalo**	**18.57**	**149**	*e*P	**P**	**08 37 36.2**	**-1.0**
	comp=E,4.9nm,1.3s						
UALR	**University of**	**18.74**	**349**	*e*P	**Pn**	**08 37 41.7**	**+2.7**
	comp=E,15nm,1.4s						
MIAR	**Mount Ida**	**18.79**	**345**	*e*P	**Pn**	**08 37 41.1**	**+1.6**
	comp=E,9.4nm,0.9s						
W50A	**Signal Mountai**	**18.90**	**7**	*e*P	**Pn**	**08 37 43.9**	**+2.9**
	comp=E,19nm,1.2s						
W41B	**Gary Mavity, V**	**19.11**	**349**	*e*P	**Pn**	**08 37 49.4**	**+5.9**
	comp=E,10nm,1.0s						
ABTX	**Abilene, Hawle**	**19.34**	**329**	*e*P	**P**	**08 37 46.2**	**+1.2**
	comp=E,12nm,0.8s						
TXAR	**Lajitas Array**	**19.36**	**314**	P	**Pn**	**08 37 49.8**	**+3.1**
	comp=E,0.5nm,0.3s,baz=130,slow=9.5,SNR=13						
W39A	**Magazine**	**19.46**	**346**	*e*P	**Pn**	**08 37 50.0**	**+2.4**
	comp=E,7.4nm,1.1s						
HPIG		**19.51**	**306**	*e*P	**P**	**08 37 46.0**	**-1.2**
	comp=E,12nm,0.7s						
FCAR	**Ozark Folk Cen**	**19.79**	**350**	*e*P	**Pn**	**08 37 52.3**	**+0.7**
	comp=E,4.6nm,0.9s						
PARMO	**Parma**	**20.27**	**356**	*e*P	Pn	08 37 58.6	+1.3
	comp=E,18nm,0.8s						
V56A	**Mocksville**	**20.47**	**18**	*e*P	**P**	**08 37 56.1**	**-1.1**
	comp=E,9.8nm,0.8s						
HHAR	**Hobbs**	**20.53**	**346**	*e*P	**P**	**08 37 58.4**	**+0.4**
	comp=E,3.7nm,0.7s						
T47A	**Sharon Grove**	**20.55**	**2**	*e*P	Pn	08 38 01.3	+0.8
	comp=E,20nm,0.9s						
TUL1	**Leonard**	**20.68**	**342**	*e*P	Pn	08 38 02.7	+0.7
WMOK	**Wichita Mounta**	**20.71**	**334**	*e*P	Pn	08 38 03.3	+1.0
	comp=E,5.0nm,0.9s						
SJG	**San Juan**	**20.89**	**82**	P	**P**	**08 38 00.2**	**-1.8**
	comp=E,6.6nm,0.6s,baz=283,slow=14,SNR=3.0						
SJG				LR	LR	08 45 15.8	
	comp=E,287nm,22.0s,baz=262,slow=35						
CCM	**Cathedral Cave**	**21.79**	**353**	*e*P	**P**	**08 38 15.5**	**+4.0**
	comp=E,18nm,0.8s						
R49A	**Shelbyville**	**21.97**	**6**	*e*P	**P**	**08 38 17.7**	**+4.3**
	comp=E,8.7nm,0.8s						
MNTX	**Cornudas Mount**	**22.00**	**317**	*e*P	**P**	**08 38 14.4**	**+0.6**
	comp=E,11nm,1.3s						
MSTX	**Muleshoe**	**22.02**	**325**	*e*P	**P**	**08 38 13.0**	**-1.1**
	comp=E,16nm,0.8s						
OLIL	**Olney**	**22.28**	**360**	*e*P	**P**	**08 38 17.2**	**+0.4**
	comp=E,29nm,0.9s						
T59A	**Double "B" Far**	**22.49**	**22**	*e*P	**P**	**08 38 18.4**	**-0.6**
	comp=E,5.2nm,0.8s						
R53A	**Hurricane**	**22.50**	**12**	*e*P	**P**	**08 38 22.6**	**+3.5**
	comp=E,9.0nm,0.8s						
S57A	**Dark Hollow, R**	**22.74**	**19**	*e*P	**P**	**08 38 20.6**	**-1.0**
	comp=E,7.4nm,1.1s						
BLO	**Bloomington**	**22.75**	**3**	*e*P	**P**	**08 38 22.7**	**+1.0**
	comp=E,14nm,1.0s						
P48A	**Milroy**	**23.11**	**5**	*e*P	**P**	**08 38 25.2**	**-0.3**
	comp=E,27nm,1.4s						
R58B	**Mineral**	**23.27**	**20**	*e*P	**P**	**08 38 25.9**	**-1.1**
	comp=E,12nm,1.4s						
P51A	**Williamsport**	**23.42**	**10**	*e*P	**P**	**08 38 32.1**	**+3.6**
	comp=E,15nm,1.0s						
P53A	**Whipple**	**23.73**	**13**	*e*P	**P**	**08 38 36.1**	**+4.5**
	comp=E,23nm,0.9s						
SFIN	**Lafayette**	**23.93**	**2**	*e*P	**P**	**08 38 37.6**	**+4.2**
	comp=E,29nm,0.8s						
O49A	**Covington**	**23.94**	**7**	*e*P	**P**	**08 38 37.4**	**+3.9**
	comp=E,41nm,1.1s						
HDIL	**Hopedale**	**24.12**	**357**	*e*P	**P**	**08 38 35.6**	**+0.4**
	comp=E,8.3nm,0.7s						
ACSO	**Alum Creek Sta**	**24.16**	**9**	*e*P	**P**	**08 38 34.0**	**-1.5**
	comp=E,5.2nm,0.8s						
O52A	**Adamsville**	**24.25**	**11**	*e*P	**P**	**08 38 36.1**	**-0.3**
	comp=E,6.3nm,0.8s						
N41A	**Harden Midland**	**24.38**	**355**	*e*P	**P**	**08 38 36.0**	**-1.5**
	comp=E,9.3nm,0.9s						
BNM	**Barren Site**	**24.39

comp=E,58nm,1.1s
KSCO Kaye Shedlock' 25.96 333 *e*P P 08 38 51.0 -1.0
comp=E,7.6nm,0.8s
M54A Oil Creek Stat 26.05 14 *e*P P 08 38 51.6 -1.1
comp=E,17nm,1.5s
TUC Tucson 26.08 312 *e*P P 08 38 54.3 +1.1
comp=E,8.1nm,1.5s
K43A Burlington 26.25 359 *e*P P 08 38 53.7 -0.7
comp=E,53nm,1.4s
X18A Snowflake 26.76 317 *e*P P 08 38 59.5 +0.1
comp=E,7.6nm,1.4s
W18A Petrified Fore 26.98 318 *e*P P 08 39 06.7 +5.3
comp=E,14nm,1.2s
I39A Houston 27.56 354 *e*P P 08 39 06.9 +0.6
comp=E,9.1nm,1.1s
X16A Lo Mia Camp, P 27.69 315 *e*P P 08 39 07.2 -0.6
comp=E,2.2nm,1.1s
WUAZ Wupatki 28.28 317 *e*P P 08 39 13.2 +0.2
comp=E,7.3nm,1.2s
113A Mohawk Valley, 28.48 310 *e*P P 08 39 15.8 +1.1
comp=E,1.3nm,1.0s
SADO Sadowa 29.27 13 LR LR 08 51 58.4
comp=E,162nm,18.3s,baz=198,slow=38
SADO Sadowa 29.27 13 *e*P P 08 39 21.3 -0.1
comp=E,5.2nm,1.1s
U15A North Rim 29.42 317 *e*P P 08 39 21.7 -1.6
comp=E,2.6nm,1.2s
KNB Kanab 30.11 318 *e*P P 08 39 27.3 -2.0
comp=E,3.7nm,1.2s
E38A The Farm, Brul 30.29 355 *e*P P 08 39 30.2 -0.3
comp=E,17nm,0.2s
LONY Lake Ozonia 30.34 19 *e*P P 08 39 31.1 +0.1
comp=E,2.3nm,0.7s
LDFC Landfair 30.59 313 *e*P P 08 39 38.2 +4.8
comp=E,4.7nm,0.8s
CCUT Cedar City 30.78 318 *e*P P 08 39 39.2 +3.9
comp=E,4.6nm,1.2s
PFO Pinyon Flats O 30.87 309 *e*P P 08 39 35.5 -0.5
comp=E,2.7nm,1.3s
EYMN Ely 31.62 355 *e*P P 08 39 40.3 -1.9
comp=E,3.3nm,1.0s
PSUT Pine Spring 31.68 319 *e*P P 08 39 41.8 -1.3
comp=E,1.9nm,0.9s
MOQ Mont Orford 31.72 21 *e*P P 08 39 41.5 -1.7
PDAR Pinedale Array 32.14 329 P P 08 39 51.0 +3.8
comp=E,0.2nm,0.4s,baz=128,slow=5.8,SNR=2.3
TPNV Topopah Spring 32.35 315 *e*P P 08 39 54.4 +5.4
comp=E,8.8nm,1.1s
PTGA Pitinga 32.43 119 P P 08 39 48.6 -1.1
comp=E,7.1nm,0.6s,baz=306,slow=15,SNR=8.9
PTGA Pitinga 32.43 119 *e*P P 08 39 45.8 -3.8
comp=E,9.7nm,0.7s
AGMN Agassiz Nation 32.49 350 *e*P P 08 39 49.7 -0.2
comp=E,4.4nm,1.4s
R11A Troy Canyon, C 32.67 318 *e*P P 08 39 53.6 +1.8
comp=E,1.0nm,1.1s
TPAW Teton Pass 33.36 329 *e*P P 08 39 56.0 -1.9
comp=E,6.5nm,1.2s
FLWY Flagg Ranch 33.67 330 *e*P P 08 39 59.4 -1.1
comp=E,3.4nm,0.9s
LAO LASA Array 33.83 337 *e*P P 08 40 01.1 -0.5
comp=E,3.3nm,0.9s
ULM Lac du Bonnet 34.39 351 P P 08 40 07.7 +1.3
comp=E,1.5nm,0.5s,baz=150,slow=7.0,SNR=2.2
NVAR Mina Array Bea 34.51 316 P P 08 40 12.9 +5.1
comp=E,1.5nm,0.8s,baz=123,slow=11,SNR=4.5
DGMT Dagmar 34.67 341 *e*P P 08 40 12.4 +3.5
comp=E,18nm,1.3s
KVN Kaiserville 34.70 317 *e*P P 08 40 09.2 -0.3
comp=E,2.5nm,1.2s
BOZ Bozeman (W) 35.24 331 *e*P P 08 40 18.9 +4.9
comp=E,4.2nm,1.2s
LRM Limekiln Ridge 35.80 330 *e*P P 08 40 23.9 +5.0
WALA Waterton Lakes 38.85 333 *e*P P 08 40 45.7 +1.1
comp=E,1.5nm,0.7s
MNMC Minye Minye 39.63 152 *e*P P 08 40 51.0 -0.6
comp=E,9.3nm,0.9s
PB11 IPOC Station P 40.16 153 *e*P P 08 40 54.1 -1.7
comp=E,7.4nm,0.8s
FCC Fort Churchill 42.56 355 *e*P P 08 41 15.4 +0.6
comp=E,2.1nm,0.9s
FRB Frobisher Bay 49.19 11 P P 08 42 07.8 +0.8
comp=E,3.4nm,0.8s,baz=214,slow=9.7,SNR=6.2
YKA Yellowknife Ar 49.72 344 P P 08 42 13.8 +2.7
comp=E,0.9nm,0.5s,baz=137,slow=7.9,SNR=13
DLBC Dease Lake 52.19 334 *e*P P 08 42 29.2 -0.7
comp=E,2.5nm,0.6s
RES Resolute Bay 58.45 358 *e*P P 08 43 15.3 +0.7
comp=E,2.5nm,1.3s
DOT Dot Lake 60.69 335 *e*P P 08 43 32.7 +2.4
comp=E,3.3nm,0.8s
HDA Harding Lake 62.15 335 *e*P P 08 43 38.9 -1.3
comp=E,1.6nm,0.6s
ILAR Eielson Array 62.26 335 P P 08 43 43.5 +2.6
comp=E,0.8nm,0.6s,baz=118,slow=5.2,SNR=5.1
CCB Clear Creek Bu 62.59 335 *e*P P 08 43 41.5 -1.5
comp=E,1.4nm,0.9s
ESDC Sonseca Array 75.18 53 P P 08 45 02.6 +0.7
comp=E,0.3nm,0.4s,baz=294,slow=4.8,SNR=4.5
NB2 NORSAR Subarra 80.19 29 P P 08 45 38.2 +8.8
comp=Z,1.2nm,0.7s,baz=288,slow=5.6
DBIC Dimbokro 81.55 86 P P 08 45 37.0 -0.5
comp=Z,3.3nm,0.9s,baz=256,slow=8.3,SNR=3.6
ARCES ARCESS Array B 82.65 19 P P 08 45 44.0 +1.7
comp=Z,8.2nm,0.3s,baz=302,slow=5.2,SNR=3.5
FUORN Ofenpass-Fuorn 83.78 43 *e*P P 08 45 47.4 -1.4
comp=Z,3.9nm,1.1s
NRIK Noril'sk 94.46 2 LR LR 09 30 32.3
comp=Z,154nm,21.0s,baz=80,slow=36
WR1 Warramunga Arr 139.73 258 *e*PKPdf **PKPdf** 08 52 48.3 +0.5
WRA Warramunga Arr 139.73 258 PKP **PKPdf** 08 52 48.3 +0.5
comp=Z,1.2nm,0.6s,baz=103,slow=1.8,SNR=6.8
ASAR Alice Springs 140.12 253 PKP **PKPdf** 08 52 48.9 +0.4
comp=Z,0.7nm,0.7s,baz=100,slow=2.9,SNR=7.7

TAP 02 08:35:37.9, 23°.77N×120°.94E, h10km±1km, ML0.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung** baz=34	**0.03**	**35**	P	Pg	08 35 40.2	+0.4
SSLB	baz=34			S	Sg	08 35 41.7	+0.5
WHYT	**Xinyi Township** baz=228	**0.10**	**228**	P	Pb	08 35 41.4	-0.7
VWDT	**VWDT** baz=93	**0.19**	**93**	P	Pb	08 35 42.7	-0.8
DPDB	**Guoxing** baz=357	**0.27**	**358**	*e*P	Pg	08 35 43.9	+0.5
ALS	**Alishan** baz=203	**0.28**	**206**	*e*P	Pg	08 35 44.0	+0.3
YULB	**Yu-li** baz=138	**0.50**	**138**	*e*P	Pb	08 35 48.5	-0.3

TAP 02 08:35:41.7, 23°.82N×120°.96E, h13km, ML1.3, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung** baz=196	**0.03**	**196**	P	Pg	08 35 44.1	+0.1
SSLB	baz=196			*e*S	Sg	08 35 45.7	0.0
TYC	**Yuchr** baz=336	**0.13**	**312**	*e*S	Pg	08 35 45.4	+0.4
TYC	**Yuchr** baz=316	**0.13**	**312**	*i* P	Pg	08 35 45.4	+0.4
TYC	baz=316			S	Sb	08 35 48.5	-0.5
WHYT	**Xinyi Township** baz=220	**0.16**	**220**	P	Pb	08 35 46.4	-0.1
WHYT	baz=220			*e*S	Sb	08 35 49.1	-0.6
VWDT	**VWDT** baz=110	**0.17**	**111**	P	Pb	08 35 46.8	0.0
VWDT	baz=110			*e*S	Sb	08 35 50.2	0.0
VWDT	**VWDT** baz=93	**0.17**	**111**	*e*S	Pb	08 35 46.7	-0.1
DPDB	**Guoxing** baz=351	**0.22**	**351**	*e*S	Sb	08 35 51.2	-0.4
OWD	**Renai** baz=54	**0.24**	**55**	P	Pb	08 35 47.8	-0.2
OWD	baz=54			*e*S	Sg	08 35 51.3	+0.9
CHGB	**Renai** baz=38	**0.31**	**38**	*e*S	Sb	08 35 53.5	-0.8
ALS	**Alishan** baz=204	**0.34**	**205**	*e*P	Pb	08 35 49.9	+0.2
ALS	baz=204			S	Sb	08 35 54.7	-0.5
CHN5	**Tsauling** baz=230	**0.34**	**230**	*e*P	Pb	08 35 49.6	-0.1
CHN5	baz=230			*e*S	Sb	08 35 55.1	+0.1
YULB	**Yu-li** baz=143	**0.52**	**144**	*e*P	Pg	08 35 52.3	+0.4
YULB	baz=143			*e*S	Sb	08 35 59.8	-0.4
TWF1	**Yuli** baz=145	**0.55**	**146**	*e*P	Pb	08 35 53.4	+0.1
TWF1	baz=145			*e*S	Sb	08 36 00.8	-0.4

MAN 02 08:39:40.1, 7°.32N×124°.80E, h0km, MS4.3, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.56**	**260**	⇑*i* P	Pb	08 39 52.0	-0.7
CTBH				*i* S	Sb	08 40 00.9	-0.3
BUKP	**Musuan**	**0.61**	**25**	*e*P	Pg	08 39 52.3	+0.4
BUKP				*e*S	Sb	08 40 01.9	-1.1
DMPH	**Davao City--Mi**	**0.74**	**108**	⇓*e*P	Pg	08 39 54.4	+0.1
DMPH				*e*S	Sb	08 40 07.0	+0.4
SKMP	**Bagumbayan, Su**	**0.83**	**198**	*e*P	Pg	08 39 55.6	-0.5
SKMP				*e*S	Sb	08 40 08.4	-0.9
CGP	**Cagayan de Oro**	**1.13**	**355**	⇑*e*P	Pg	08 40 01.7	-0.1
CGP				*i* S	Sg	08 40 16.1	-0.5
MATI	**Mati**	**1.49**	**104**	*e*P	Pn	08 40 08.1	-0.1
PAGZ	**Pagadian**	**1.50**	**291**	*e*P	Pn	08 40 07.7	-0.6
PAGZ				*e*S	Sg	08 40 27.3	-1.1
DDMP	**Don Marcelino,**	**1.51**	**143**	*e*P	Pn	08 40 07.3	-1.1
DDMP				*e*S	Sn	08 40 29.6	+0.8
BUTP	**Butuan**	**1.83**	**26**	*e*P	Pg	08 40 15.0	-0.2
BUTP				*e*S	Sg	08 40 40.9	+2.0
DCPH	**Dipolog City**	**1.91**	**311**	⇑*e*P	Pg	08 40 23.7	+7.1
DCPH				*e*S	Sg	08 40 47.1	+5.7
IPIL	**Ipil**	**2.26**	**282**	*e*P	Pb	08 40 20.5	-1.2
IPIL				*e*S	Sb	08 40 49.1	-1.1

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*ISCJB **02** 08:53:28.8±0.9, 33°.79N±0°.04×35°.76E±0°.08, h10km±9km,*
Error ellipse: s-maj=12.2km s-min=5.7km az=154.5
*NSSC **02** 08:53:28.5±0.3, 33°.81N×35°.76E, h5km±7km, ML1.4*
*GRAL **02** 08:53:29.5±0.3, 33°.78N×35°.78E, h3km±11km, MD2.7*
ISC 02 08:53:28.7±1.6, 33°.79N±0°.04×35°.75E±0°.07, h13km±16km, n7, ∠0°37/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.14**	**326**	*e*P	**Pg**	**08 53 32.4**	**+0.1**
BHL				*e*S	**Sg**	**08 53 34.6**	**-0.2**
DQRL	**Deir Qamar**	**0.17**	**240**	*e*P	**Pg**	**08 53 33.0**	**+0.3**
RCY	**Rachaya**	**0.30**	**166**	*e*P	**Pg**	**08 53 34.7**	**-0.3**
RCY				*e*S	**Sg**	**08 53 38.7**	**-0.6**
BRBR	**Barbar**	**0.41**	**156**	*e*P	**Pg**	**08 53 36.9**	**-0.1**
BRBR				*e*S	**Sg**	**08 53 43.3**	**+0.6**
BRBR	comp=N,50nm,0.4s			AML	AML	08 53 46.5	
BRBR	comp=E,41nm,0.3s			AML	AML	08 53 46.8	
QASN	**Qassioun**	**0.51**	**120**	*e*P	**Pg**	**08 53 38.9**	**+0.2**
QASN				*e*S	**Sg**	**08 53 45.8**	**+0.2**
QASN	comp=E,31nm,0.3s			AML	AML	08 53 49.9	
QASN	comp=N,110nm,0.4s			AML	AML	08 53 50.8	
HWQ	**Hawqa**	**0.52**	**19**	*e*P	**Pg**	**08 53 38.8**	**-0.1**
TOTH	**TOTAH**	**0.71**	**127**	*e*P	**Pb**	**08 53 43.0**	**0.0**
TOTH				*e*S	**Sg**	**08 53 52.0**	**+0.1**
TOTH	comp=N,9.8nm,0.4s			AML	AML	08 53 58.5	
TOTH	comp=E,7.0nm,0.8s			AML	AML	08 54 01.0	

MEX 02 08:54:10.6±0.5, 16°.28N×98°.02W, h12km±5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.16**	**317**	*e*P	Pg	08 54 13.5	-0.8
PNIG				*i* S	Sg	08 54 16.7	-0.3
TLIG	**Tlapa**	**1.39**	**338**	*e*P	Pn	08 54 32.3	-3.6
TLIG				*e*S	Sn	08 54 48.7	-5.5
CAIG	**El Cayaco**	**2.29**	**290**	*e*P	Pn	08 54 49.1	+0.9

KRSC 02 09:00:33.8±1.1, 52°.38N×159°.82E, h28km±16km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.73**	**9**	*e*P	Pn	09 00 48.6	+0.4
SPN				*e*S	Sn	09 00 59.4	+0.9
RUS	**Russkaya**	**0.80**	**275**	*e*P	Pn	09 00 49.5	+0.3
RUS				*e*S	Sn	09 01 00.1	-0.1
NLC	**Nalytchevo**	**0.85**	**340**	*e*P	Pb	09 00 50.1	+0.2
NLC				*e*S	Sn	09 01 01.7	+0.4
DALK	**Dalny**	**0.92**	**316**	*e*P	Pb	09 00 51.1	-0.1
DALK				*e*S	Sb	09 01 02.8	-0.3
PET	**Petropavlovsk**	**0.96**	**313**	*e*P	Pb	09 00 51.7	-0.1
PET				*e*S	Sn	09 01 03.4	-0.7
MTVR	**Mutnovka**	**1.01**	**277**	*e*P	Pb	09 00 53.0	+0.3
MTVR				*e*S	Sb	09 01 06.3	+0.7
UGLR	**Uglovaya**	**1.03**	**324**	*e*P	Pb	09 00 53.2	+0.1
UGLR				*e*S	Sb	09 01 07.0	+0.7
SDLR	**Sedlovina**	**1.07**	**328**	*e*P	Pb	09 00 53.4	-0.3
SDLR				*e*S	Sb	09 01 07.6	+0.3
SMAR	**Somma**	**1.08**	**326**	*e*P	Pb	09 00 53.7	-0.3
AVH	**Avacha**	**1.11**	**324**	*e*P	Pb	09 00 54.4	+0.1
KRER	**Koryakskii**	**1.14**	**325**	*e*P	Pb	09 00 54.7	-0.2
KOK	**Koryaka**	**1.17**	**322**	*e*P	Pb	09 00 55.4	+0.1
ASAK	**Asacha**	**1.18**	**271**	*e*P	Pb	09 00 55.7	+0.2
ASAK				*e*S	Sb	09 01 11.3	+0.9
KRX	**Arik**	**1.22**	**325**	*e*P	Pb	09 00 55.6	-0.6
KRX				*e*S	Sb	09 01 11.6	+0.1
KDTR	**Khodutka, Kamc**	**1.22**	**243**	*e*P	Pb	09 00 55.9	-0.2
KDTR				*e*S	Sb	09 01 11.5	+0.1
APC	**Apacha**	**1.71**	**290**	*e*P	Pb	09 01 03.6	-0.9
APC				*e*S	Sb	09 01 25.5	-0.1
GNL	**Ganaly**	**1.74**	**320**	*e*P	Pb	09 01 03.8	-1.3
GNL				*e*S	Sb	09 01 25.3	-1.3
KZV	**Kizimen**	**2.76**	**6**	*e*P	Pb	09 01 19.5	-2.9
KZV				*e*S	Sb	09 01 54.5	-1.3
TUMD	**Tumrok D**	**2.85**	**7**	*e*P	Pb	09 01 21.9	-2.1
TUMD				*e*S	Sb	09 01 54.8	-3.6
TUMR	**Tumrok**	**2.92**	**4**	*e*P	Pb	09 01 22.3	-2.8
KBTR	**Krutoberegovo**	**4.22**	**23**	*e*P	Pn	09 01 39.5	+3.4
BKI	**Bering**	**4.62**	**50**	*e*P	Pn	09 01 43.2	+1.7

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*ISK **02** 09:10:53.7, 38°.77N×43°.33E, h16km, ML1.9/4*
*DDA **02** 09:10:54.6, 38°.73N×43°.24E, h7km±3km, ML2.6*
*ISCJB **02** 09:10:55.5±0.5, 38°.77N±0°.03×43°.26E±0°.05, h12km±6km,*
Error ellipse: s-maj=6.3km s-min=4.7km az=15.1
ISC 02 09:10:54.1±1.3, 38°.73N±0°.04×43°.38E±0°.06, h21km±1km, n10, ∠0°82/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.14**	**175**	PG	**Pb**	**09 11 00.3**	**0.0**
VANB				SG	**Sb**	**09 11 04.4**	**-0.3**
TVAN	**Van**	**0.20**	**173**	*i* P	**Pb**	**09 11 00.4**	**+0.2**
TVAN				*i* S	**Sb**	**09 11 04.5**	**0.0**
VMUR	**Van-Muradiye**	**0.30**	**31**	*i* P	**Pn**	**09 11 02.8**	**-0.6**
VMUR				*i* S	**Sn**	**09 11 08.3**	**-1.1**
AKDM	**Akdamar-Van**	**0.51**	**218**	PG	**Pb**	**09 11 04.2**	**-0.2**
AKDM				SG	**Sb**	**09 11 12.5**	**+1.1**
ADCV	**BITLIS_Adilcev**	**0.52**	**279**	*i* P	**Pb**	**09 11 03.9**	**-0.7**
ADCV				*i* S	**Sb**	**09 11 10.6**	**-1.1**
ADCV	comp=Z,553nm,0.1s			IAML_P			
TUTA	**Tutak**	**0.80**	**327**	*i* P	**Pb**	**09 11 09.7**	**+0.2**
AGRB	**Hanur-Agry**	**0.90**	**341**	PG	**Pb**	**09 11 10.6**	**-0.4**
AGRB				SG	**Sb**	**09 11 22.7**	**+0.1**
BLIS	**Bitlis-Merkez**	**1.04**	**253**	*i* P	**Pn**	**09 11 13.8**	**+0.3**
BLIS				*i* S	**Sb**	**09 11 26.7**	**+0.1**
BLIS				IAML_P			
	comp=Z,892nm,0.2s						
EATA	**Eleskirt**	**1.32**	**329**	*i* P	**Pb**	**09 11 19.0**	**+0.7**
EATA				*i* S	**Sb**	**09 11 36.9**	**+1.9**
EATA	comp=Z,521nm,0.3s			IAML_P			
GNI	**Garni**	**1.77**	**36**	PN	**Pn**	**09 11 24.3**	**+0.7**

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*ISCJB **02** 09:35:14.2±0.3, 24°.06N±0°.02×122°.49E±0°.02, h15km±3km,*
Error ellipse: s-maj=3.4km s-min=2.1km az=156.8
*JMA **02** 09:35:15.3±0.1, 24°.16N×122°.46E, h46km±3km, M2.1*
*TAP **02** 09:35:15.4, 24°.14N×122°.48E, h41km, ML2.9, D*
ISC 02 09:35:13.6±1.1, 24°.11N±0°.02×122°.48E±0°.02, h17km±9km, n67, ∠0°68/123, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.54**	**51**	P	**Pn**	**09 35 26.6**	**0.0**
JYNG				S	**Sn**	**09 35 34.7**	**-0.6**
EOS1	**EOS1** baz=316	**0.55**	**324**	*i* P	**Pn**	**09 35 26.8**	**+0.3**
EOS1	baz=316			S	**Sn**	**09 35 35.4**	**+0.1**
YOJ	**Yonaguni jima** baz=63	**0.60**	**54**	*i* P	**Pn**	**09 35 27.5**	**+0.2**
YOJ	baz=63			S	**Sn**	**09 35 36.4**	**-0.2**
YOJ	**Yonaguni jima**	**0.60**	**54**	P	**Pn**	**09 35 27.3**	**0.0**
YOJ				*e*S	**Sn**	**09 35 36.1**	**-0.5**
ENA	**Nanau** baz=301	**0.75**	**295**	*i* P	**Pn**	**09 35 29.5**	**+0.1**
ENA	baz=301			S	**Sn**	**09 35 40.0**	**-0.3**
TWC	**Suao** baz=302	**0.76**	**311**	P	**Pn**	**09 35 29.7**	**+0.1**
TWC	baz=302			S	**Sn**	**09 35 40.0**	**-0.7**
HWA	**Hwalien** baz=258	**0.81**	**261**	*e*S	**Sn**	**09 35 42.1**	**+0.2**
NACB	**Ninganchiao** baz=261	**0.81**	**275**	*i* P	**Pn**	**09 35 30.4**	**+0.1**
NACB	baz=261			S	**Sg**	**09 35 41.2**	**+0.9**
ENLB	**Shoufeng** baz=244	**0.83**	**256**	*e*P	**Pn**	**09 35 31.2**	**+0.7**
ENLB	baz=244			*e*S	**Sn**	**09 35 43.2**	**+0.8**
ETLH	**Xiulin Townshi** baz=274	**0.92**	**276**	P	**Pn**	**09 35 32.0**	**+0.1**
ETLH	baz=274			S	**Sg**	**09 35 44.0**	**+0.4**
NTC	**Toucheng** baz=321	**0.95**	**322**	P	**Pn**	**09 35 33.5**	**+1.4**
NTC	baz=321			S	**Sn**	**09 35 45.2**	**-0.2**
TWE	**Neicheng** baz=309	**0.96**	**310**	P	**Pn**	**09 35 32.9**	**+0.6**
TWE	baz=309			*e*S	**Sn**	**09 35 45.6**	**0.0**
ESL	**Shilin** baz=242	**1.00**	**253**	*e*P	**Pb**	**09 35 32.5**	**0.0**
ESL	baz=242			*e*S	**Sb**	**09 35 46.1**	**+0.7**
TWB1	**Santiao Chiao** baz=346	**1.00**	**333**	P	**Pn**	**09 35 33.0**	**+0.1**
TWB1	baz=346			*e*S	**Sn**	**09 35 45.9**	**-0.8**
NDT	**Datong Townshi** baz=288	**1.01**	**299**	P	**Pn**	**09 35 33.8**	**+0.8**
NDT	baz=288			S	**Sn**	**09 35 47.0**	**+0.1**
TIPB	**Shuangxi** baz=325	**1.05**	**325**	*i* P	**Pg**	**09 35 33.9**	**0.0**
TIPB	baz=325			S	**Sn**	**09 35 47.1**	**-0.7**
NNSB	**Datong** baz=286	**1.05**	**288**	P	**Pb**	**09 35 33.5**	**0.0**
NNSB	baz=286			S	**Sn**	**09 35 48.5**	**+0.4**
EGFH	**Guangfu** baz=244	**1.06**	**246**	*e*P	**Pb**	**09 35 33.7**	**+0.2**
EGFH	baz=244			*e*S	**Sb**	**09 35 47.1**	**+0.1**
NNS	**Nan Shan** baz=287	**1.06**	**288**	*e*P	**Pn**	**09 35 33.9**	**0.0**
NNS	baz=287			S	**Sg**	**09 35 48.0**	**-0.2**
WHF	**Hehuan Shan** baz=258	**1.11**	**272**	P	**Pn**	**09 35 35.0**	**+0.2**
WHF	baz=258			S	**Sb**	**09 35 48.8**	**-0.2**
NWLT	**Wulai** baz=295	**1.11**	**307**	*i* P	**Pg**	**09 35 35.2**	**0.0**
NWLT	baz=295			S	**Sn**	**09 35 49.4**	**0.0**
HGSD	**Ruisui** baz=236	**1.15**	**238**	*e*P	**Pn**	**09 35 34.9**	**+0.1**
HGSD	baz=236			S	**Sb**	**09 35 49.2**	**-0.3**
NWF	**Wu-fen Shan** baz=326	**1.15**	**327**	P	**Pg**	**09 35 35.4**	**-0.5**
NWF	baz=326			S	**Sn**	**09 35 49.6**	**-0.8**
WFSB	**Wu-fen Shan** baz=326	**1.15**	**327**	P	**Pg**	**09 35 35.7**	**-0.2**
WFSB	baz=326			S	**Sg**	**09 35 50.2**	**-0.8**
YHNB	**Yeheng** baz=298	**1.15**	**299**	*i* P	**Pg**	**09 35 35.8**	**-0.1**
YHNB	baz=298			S	**Sb**	**09 35 49.7**	**-0.1**
IRIF	**Iriomote-Funau**	**1.16**	**78**	P	**Pg**	**09 35 35.9**	**-0.1**
IRIF				*e*S	**Sb**	**09 35 50.0**	**0.0**
NSK	**Sanguang** baz=298	**1.17**	**299**	P	**Pg**	**09 35 35.8**	**-0.4**
NSK	baz=298			S	**Sb**	**09 35 50.2**	**-0.1**
CHGB	**Renai** baz=266	**1.20**	**268**	*e*P	**Pb**	**09 35 36.3**	**+0.3**
CHGB	baz=266			*e*S	**Sb**	**09 35 50.2**	**-1.0**
TWT	**Tachien** baz=267	**1.20**	**277**	*e*P	**Pg**	**09 35 37.1**	**+0.2**
OWD	**Renai** baz=261	**1.20**	**263**	*e*P	**Pn**	**09 35 35.6**	**-0.1**
OWD	baz=261			S	**Sb**	**09 35 50.7**	**-0.7**
TDCB	**Techi** baz=264	**1.22**	**277**	*e*P	**Pn**	**09 35 36.0**	**+0.1**
TDCB	baz=264			*e*S	**Sb**	**09 35 51.4**	**-0.4**
EHY	**Hungye** baz=251	**1.22**	**241**	P	**Pn**	**09 35 36.4**	**+0.6**
EHY	baz=251			*e*S	**Sb**	**09 35 51.1**	**-0.6**
NHDH	**Xindian Distri** baz=327	**1.22**	**315**	*e*S	**Sg**	**09 35 52.6**	**-0.5**
VWDT	**VWDT** baz=252	**1.28**	**254**	*e*P	**Pb**	**09 35 37.4**	**+0.2**
VWDT	baz=252			S	**Sb**	**09 35 52.1**	**-1.2**
YULB	**Yu-li** baz=248	**1.30**	**237**	P	**Pn**	**09 35 35.4**	**-1.6**
YULB	baz=248			S	**Sn**	**09 35 53.2**	**-0.7**
TWF1	**Yuli** baz=225	**1.32**	**236**	P	**Pn**	**09 35 37.3**	**+0.1**
TWF1	baz=225			S	**Sn**	**09 35 53.9**	**-0.6**
YM07	**YM07** baz=323	**1.32**	**324**	P	**Pb**	**09 35 37.8**	**-0.2**
YM07	baz=323			S	**Sb**	**09 35 54.0**	**-0.6**
YM01	**YM01** baz=321	**1.33**	**321**	*e*P	**Pb**	**09 35 37.8**	**-0.3**
YM01	baz=321			*e*S	**Sn**	**09 35 54.4**	**-0.3**
JKRS	**Kuro-shima**	**1.40**	**84**	P	**Pb**	**09 35 39.6**	**+0.3**
JKRS				*e*S	**Sb**	**09 35 57.6**	**+0.7**
WHP	**Taichung City** baz=266	**1.41**	**277**	*e*P	**Pg**	**09 35 40.8**	**-0.1**
WHP	baz=266			*e*S	**Sb**	**09 35 57.5**	**+0.1**
DPDB	**Guoxing** baz=266	**1.42**	**267**	*e*S	**Sn**	**09 35 57.3**	**+0.2**
CHKT	**Chengkung**	**1.43**	**226**	*e*P	**Pn**	**09 35 38.8**	**0.0**

baz=224
CHKT S **Sn** 09 35 55.0 -2.2
baz=224
SSLB Suanglung 1.43 257 *eP* **Pb** 09 35 39.9 0.0
baz=256
SSLB *eS* **Sn** 09 35 57.0 -0.3
baz=256
LIOB Emei 1.44 292 P **Pb** 09 35 40.5 +0.5
baz=291
LIOB S **Sb** 09 35 58.7 +0.6
baz=291
NSTT Nanjuang 1.45 291 P **Pb** 09 35 40.6 +0.5
baz=290
NSTT S **Sb** 09 35 58.8 +0.5
baz=290
SMLT Sun Moon Lake 1.46 262 *eP* **Pb** 09 35 40.4 0.0
baz=252
SMLT *eS* **Sn** 09 35 58.3 +0.1
baz=252
TYC Yuchr 1.50 263 *eP* **Pb** 09 35 41.3 +0.3
baz=261
TYC *eS* **Sn** 09 35 59.1 +0.2
baz=261
YUS Yu-Shan 1.53 247 *eS* **Sn** 09 35 59.2 -1.2
baz=245
JIJ Ishigaki jima 1.54 80 P **Pn** 09 35 40.8 +0.6
JIJ *eS* **Sn** 09 35 59.2 -0.6
WHYT Xinyi Township 1.55 255 *eP* **Pb** 09 35 41.7 -0.1
baz=245
WHYT *eS* **Sn** 09 36 00.9 +0.8
baz=245
ELDTW Lidau 1.62 236 P **Pn** 09 35 41.8 +0.2
baz=234
ELDTW S **Sn** 09 36 00.0 -2.1
baz=234
WNT Mingjian 1.66 262 *eS* **Sb** 09 36 05.3 +0.9
baz=261
CHN5 Tsauling 1.73 253 *eP* **Pb** 09 35 45.2 +0.3
baz=252
CHN5 *eS* **Sb** 09 36 06.8 +0.4
baz=252
JISG Ishigakijimahi 1.73 74 P **Pn** 09 35 43.6 +0.7
JISG S **Sn** 09 36 03.8 -0.9
TWGBT Beinan 1.82 225 *eP* **Pn** 09 35 44.9 +0.8
baz=235
TWGBT *eS* **Sn** 09 36 05.1 -1.7
baz=235
TWG Pinlang 1.82 226 *eP* **Pn** 09 35 44.9 +0.7
baz=235
TWG S **Sn** 09 36 05.6 -1.2
baz=235
WDLH Douliu 1.83 257 *eP* **Pb** 09 35 46.1 -0.5
baz=256
WDLH *eS* **Sb** 09 36 09.4 +0.2
baz=256
CHN4 Tsaushan 1.89 247 *eP* **Pb** 09 35 47.3 -0.3
baz=245
CHN4 *eS* **Sb** 09 36 10.5 -0.4
baz=245
WTP Ta-pu 1.92 244 *eS* **Sn** 09 36 10.9 +1.6
baz=242
RLNB Erlin 1.95 264 *eS* **Sb** 09 36 13.0 +0.2
baz=262
TWK Hsinying 2.01 246 *eP* **Pb** 09 35 49.1 -0.6
baz=244
TWK S **Sn** 09 36 13.2 +1.6
baz=244
CHN1 Nanshi 2.01 243 *eP* **Pb** 09 35 49.2 -0.6
baz=242
CHN1 *eS* **Sb** 09 36 14.0 -0.6
baz=242
SLGT Liugui 2.02 237 *eP* **Pb** 09 35 49.4 -0.4
baz=228
SLGT S **Sn** 09 36 13.2 +1.5
baz=228
SGST Jiashian 2.02 240 *eS* **Sb** 09 36 14.3 -0.4
baz=238
SNST Tainan City 2.02 245 S **Sb** 09 36 14.6 -0.2
baz=243
JTJ Tarama 2.09 75 P **Pn** 09 35 48.9 +1.0
JTJ S **Sn** 09 36 13.9 +0.4
MASBT Mashibuluo 2.26 229 *eP* **Pn** 09 35 52.0 +1.9
baz=220

BJI ***02*** *09:39:26.6±0.0,23°.79S×179°.76W,h546km,mb4.6/14, mB4.8/12*
ISCJB ***02*** *09:39:27.2±0.1,23°.30S±0°.02×179°.96W±0°.03,h532km, mb4.6/148,Error ellipse: s-maj=4.2km s-min=2.4km az=31.5*
MOS ***02*** *09:39:27.6±0.9,23°.26S×179°.94W,h539km,mb4.7/28, Error ellipse: s-maj=10.2km s-min=8.5km az=56.2*
IDC ***02*** *09:39:28.9±1.3,23°.26S×179°.86W,h547km±13km, mb4.0/27,mb1 4.2/28,mb1mx4.0/43,mbtmp4.9/28,Error ellipse: s-maj=12.7km s-min=10.3km az=112.0*
NEIC ***02*** *09:39:30.2±1.9,23°.28S×179°.88W,h557km±4km, mb4.7/186,Error ellipse: s-maj=13.2km s-min=10.2km az=170.0*

ISC 02 09:39:27.5±0.3,23°.34S±0°.05×179°.89W±0°.05,h532km, n441,σ1§45/464,mb4.6/146,9C-1D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**6.14**	**164**	P	**P**	**09 41 07.7**	**+1.2**
RAO	**Raoul Island**	**6.15**	**164**	*eP*	**P**	**09 41 07.7**	**+1.1**
RAO				*eS*	**S**	**09 42 33.9**	**+6.2**
RAO	**Raoul Island**	**6.15**	**164**	*eP*	**P**	**09 41 07.7**	**+1.1**
RAO				*eS*	**S**	**09 42 33.9**	**+6.2**
GLKZ	**Green Lake**	**6.16**	**164**	P	**P**	**09 41 08.8**	**+2.2**
GLKZ				S	**S**	**09 42 32.9**	**+5.1**
NIUE	**Niue**	**10.21**	**67**	*eP*	**P**	**09 41 48.3**	**+0.8**
NIUE				*eS*	**S**	**09 43 47.5**	**+4.9**
NIUE	**Niue**	**10.21**	**67**	P	P	09 41 35.2	-12
baz=9.8,SNR=3.9							
MARNC	**Mare, Loyalty**	**11.33**	**277**	*eP*	**P**	**09 42 02.4**	**+3.4**
PINNC	**Pines Island,**	**11.69**	**271**	*eP*	**P**	**09 42 05.9**	**+3.1**
DZM	**Mont Dzumac**	**12.68**	**273**	P	**P**	**09 42 15.6**	**+2.3**
1.5nm,0.3s,baz=85,slow=16,SNR=15							
OUZ	**Omahuta**	**13.13**	**204**	*eP*	**P**	**09 42 20.0**	**+2.4**
OUZ	**Omahuta**	**13.13**	**204**	P	**P**	**09 42 19.9**	**+2.3**
GRZ	**Great Barrier**	**13.48**	**196**	P	**P**	**09 42 22.6**	**+1.3**
WCZ	**Waipu Caves**	**13.52**	**200**	P	**P**	**09 42 24.4**	**+2.8**
KUZ	**Kuaotunu**	**13.89**	**195**	P	**P**	**09 42 27.1**	**+1.5**
WIAZ	**Waiheke Island**	**14.08**	**197**	P	**P**	**09 42 29.7**	**+2.2**
MXZ	**Matakaoa Point**	**14.26**	**186**	*eP*	**P**	**09 42 29.1**	**-0.3**
MXZ	**Matakaoa Point**	**14.26**	**186**	P	**P**	**09 42 30.6**	**+1.2**
MXZ				S	**S**	**09 44 55.3**	**-4.1**
ETAZ	**East Tamaki Re**	**14.29**	**197**	P	P	09 42 34.6	+4.9
WMGZ	**Waiomatatini S**	**14.51**	**185**	P	**P**	**09 42 33.2**	**+1.2**
WMGZ				S	**S**	**09 44 59.4**	**-4.7**
HAZ	**Te Kaha**	**14.51**	**187**	P	**P**	**09 42 32.0**	**+0.1**
HAZ				S	**S**	**09 45 00.3**	**-3.8**
TGRZ	**Tauranga**	**14.72**	**192**	P	**P**	**09 42 36.5**	**+2.3**
RUGZ	**Raukumara Rang**	**14.73**	**188**	P	**P**	**09 42 34.3**	**-0.1**
PUZ	**Puketiti**	**14.77**	**186**	P	**P**	**09 42 35.4**	**+0.7**
PUZ				S	**S**	**09 45 03.3**	**-5.9**
TOZ	**Tahuroa Road**	**14.88**	**194**	P	**P**	**09 42 37.3**	**+1.5**
KMRZ	**Kaimai**	**14.90**	**193**	P	**P**	**09 42 37.5**	**+1.4**
TWGZ	**Tauwhareparae**	**14.90**	**187**	P	**P**	**09 42 35.8**	**-0.3**
TWGZ				S	**S**	**09 45 09.6**	**-2.0**
URZ	**Urewera**	**15.09**	**189**	P	**P**	**09 42 35.4**	**-2.7**
6.0nm,0.3s,baz=255,slow=3.2,SNR=34							
URZ				S	**S**	**09 45 10.2**	**-4.8**
1.2nm,0.3s,baz=235,slow=22,SNR=9.1							
URZ	**Urewera**	**15.09**	**189**	*eP*	**P**	**09 42 35.2**	**-2.9**
38nm,0.6s							
NGRZ	**Ngongotaha**	**15.10**	**192**	P	**P**	**09 42 40.8**	**+2.7**
HRRZ	**Handcock Road**	**15.36**	**191**	P	**P**	**09 42 42.3**	**+1.4**
HIZ	**Hauiti**	**15.78**	**195**	*eP**	**P**	**09 42 45.7**	**+0.6**
62nm,1.1s							
BKZ	**Black Stump Fm**	**16.08**	**190**	*eP*	**P**	**09 42 45.4**	**-2.8**
12nm,0.8s							
BFZ	**Birch Farm**	**17.60**	**190**	*eP*	**P**	**09 43 01.5**	**-0.9**
58nm,1.3s							
SNZO	**South Karori**	**18.49**	**193**	*eP*	**P**	**09 43 10.7**	**+0.3**
94nm,1.3s							
THZ	**Tophouse**	**19.34**	**196**	*eP*	**P**	**09 43 18.6**	**+0.3**
26nm,0.6s							
KHZ	**Kahutara**	**19.80**	**194**	*eP*	**P**	**09 43 21.9**	**-0.5**
39nm,1.2s							
LTZ	**Lake Taylor**	**20.45**	**197**	*eP*	**P**	**09 43 28.1**	**-0.3**
46nm,0.5s							
OXZ	**Oxford**	**21.02**	**197**	*eP*	**P**	**09 43 33.4**	**-0.2**
52nm,0.5s							
CRLZ	**Canterbury Las**	**21.11**	**195**	*eP*	**P**	**09 43 33.8**	**-0.4**
129nm,1.4s							
MQZ	**McQueen's Vall**	**21.23**	**195**	*eP*	**P**	**09 43 35.1**	**-0.3**
50nm,1.3s							
RPZ	**Rata Peaks**	**21.65**	**198**	P	**P**	**09 43 41.6**	**+2.3**
19nm,0.5s,baz=43,slow=12,SNR=6.3							
RPZ	**Rata Peaks**	**21.65**	**198**	*eP*	**P**	**09 43 42.6**	**+3.4**
68nm,1.4s							
FOZ	**Fox Glacier**	**21.86**	**200**	*eP*	**P**	**09 43 42.1**	**+1.0**
136nm,1.2s							
KNTN	**Kanton**	**21.92**	**22**	*eP*	**P**	**09 43 41.4**	**-0.5**
110nm,1.0s							
LBZ	**Lake Benmore**	**22.52**	**199**	*eP*	**P**	**09 43 46.8**	**-0.2**
57nm,1.5s							
ODZ	**Otahua Downs**	**22.99**	**197**	*eP*	**P**	**09 43 52.0**	**+0.8**
66nm,1.4s							
WKZ	**Wanaka**	**23.28**	**200**	*eP*	**P**	**09 43 53.2**	**-0.5**
110nm,1.5s							
HNR	**Honiara**	**23.73**	**302**	*eP*	**P**	**09 43 59.2**	**+1.0**
70nm,0.9s							
HNR	**Honiara**	**23.73**	**302**	*eP*	**P**	**09 43 59.2**	**+1.0**
HNR				pmax	pmax		
comp=Z,70nm,0.9s							
MLZ	**Mavora Lakes**	**24.05**	**201**	*eP*	**P**	**09 44 00.9**	**+0.3**
comp=Z,18nm,0.6s							
DCZ	**Deep Cove**	**24.46**	**202**	*eP*	**P**	**09 44 05.0**	**+0.7**
comp=Z,58nm,1.2s							
WHZ	**Wether Hill Ro**	**24.57**	**201**	*eP*	**P**	**09 44 06.7**	**+1.5**
comp=Z,86nm,0.9s							
ARMA	**Armidale**	**26.32**	**248**	*eP*	**P**	**09 44 24.0**	**+3.0**
comp=Z,37nm,0.9s							
ARMA	**Armidale**	**26.32**	**248**	P	**P**	**09 44 23.2**	**+2.2**
baz=27,SNR=14							
EIDS	**Eidsvold**	**26.50**	**260**	*eP*	**P**	**09 44 24.2**	**+1.6**
comp=Z,34nm,0.8s							
EIDS	**Eidsvold**	**26.50**	**260**	P	**P**	**09 44 24.0**	**+1.5**
baz=27,SNR=14							
MGCD	**Mangrove Creek**	**27.29**	**242**	P	**P**	**09 44 31.7**	**+2.3**
baz=28,SNR=5.8							
RMQ	**Roma**	**28.57**	**257**	P	**P**	**09 44 43.0**	**+2.3**
baz=29,SNR=27							
CNB	**Canberra Magne**	**29.23**	**239**	P	**P**	**09 44 48.2**	**+1.9**
baz=30,SNR=19							
CAN	**Canberra**	**29.51**	**239**	*eP*	**P**	**09 44 51.0**	**+2.2**
comp=Z,45nm,0.7s							
CAN	**Canberra**	**29.51**	**239**	*eP*	**P**	**09 44 51.0**	**+2.2**
CAN				pmax	pmax		
comp=Z,45nm,0.7s							
YNG	**Young**	**29.74**	**241**	P	**P**	**09 44 52.9**	**+2.1**
baz=30,SNR=7.4							
CMSA	**Cobar Meteorol**	**31.52**	**247**	P	**P**	**09 45 07.1**	**+1.0**
baz=32,SNR=97							
CTA	**Charters Tower**	**31.58**	**269**	P	**P**	**09 45 07.8**	**+1.1**
comp=Z,107nm,0.5s,baz=93,slow=11,SNR=209							
CTAO	**Charters Tower**	**31.58**	**269**	*eP*	**P**	**09 45 08.0**	**+1.3**
comp=Z,133nm,0.5s							
CTAO	**Charters Tower**	**31.58**	**269**	*eP*	**P**	**09 45 08.0**	**+1.3**
TOO	**Toolangi**	**32.84**	**236**	*eP*	**P**	**09 45 18.7**	**+1.4**
comp=Z,29nm,0.7s							
TOO	**Toolangi**	**32.84**	**236**	P	**P**	**09 45 18.5**	**+1.2**
baz=33,SNR=34							
TOO	**Toolangi**	**32.84**	**236**	*eP*	**P**	**09 45 18.7**	**+1.4**
TOO				pmax	pmax		
comp=Z,29nm,0.7s							
XMAS	**Kiritimati**	**33.38**	**44**	*eP*	**P**	**09 45 22.5**	**+0.5**
comp=Z,96nm,0.8s							
TAU	**Tasmania Unive**	**33.39**	**226**	*eP*	**P**	**09 45 23.2**	**+1.5**
comp=Z,36nm,0.8s							
TAU	**Tasmania Unive**	**33.39**	**226**	*eP*	**P**	**09 45 23.3**	**+1.5**
TAU				pmax	pmax		
comp=Z,36nm,0.8s							
PMG	**Port Moresby**	**34.41**	**288**	P	**P**	**09 45 31.4**	**+0.6**
comp=Z,88nm,0.8s,baz=76,slow=6.0,SNR=18							
PMG	**Port Moresby**	**34.41**	**288**	*eP*	**P**	**09 45 32.0**	**+1.3**
comp=Z,84nm,0.8s							
PMG	**Port Moresby**	**34.41**	**288**	*eP*	**P**	**09 45 32.0**	**+1.3**
PMG				pmax	pmax		
comp=Z,83nm,0.8s							
STKA	**Stephens Creek**	**35.03**	**247**	P	**P**	**09 45 36.6**	**+0.9**
comp=Z,36nm,0.7s,baz=92,slow=9.9,SNR=97							
STKA	**Stephens Creek**	**35.03**	**247**	*eP*	**P**	**09 45 36.8**	**+1.1**
comp=Z,7.2nm,0.7s							
STKA	**Stephens Creek**	**35.03**	**247**	P	**P**	**09 45 37.4**	**+1.7**
baz=35,SNR=28							
STKA	**Stephens Creek**	**35.03**	**247**	*eP*	**P**	**09 45 36.8**	**+1.1**
STKA				pmax	pmax		
comp=Z,7.0nm,0.7s							
ARPS	**Mount Arapiles**	**35.49**	**239**	P	**P**	**09 45 40.6**	**+1.1**
baz=36,SNR=20							
COEN	**Coen**	**36.13**	**278**	*eP*	**P**	**09 45 46.5**	**+1.4**
comp=Z,12nm,0.9s							
COEN	**Coen**	**36.13**	**278**	P	**P**	**09 45 45.5**	**+0.5**
baz=36,SNR=15							
HTT	**Hallett**	**37.40**	**245**	P	**P**	**09 45 56.3**	**+1.0**
baz=38,SNR=19							
QIS	**Mount Isa**	**37.59**	**266**	P	**P**	**09 45 57.3**	**+0.3**
baz=38,SNR=8.0							
BBOO	**Buckleboo**	**39.76**	**246**	*eP*	**P**	**09 46 14.5**	**+0.1**
comp=Z,75nm,1.2s							
BBOO	**Buckleboo**	**39.76**	**246**	P	**P**	**09 46 14.3**	**-0.1**
baz=40,SNR=26							
AS31	**Alice Springs**	**42.23**	**260**	*eP*	**P**	**09 46 34.4**	**+0.1**
comp=Z,14nm,0.6s							
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**09 46 34.4**	**+0.2**
comp=Z,58nm,0.8s,baz=94,slow=8.1,SNR=315							
ASAR				ScP	**ScP**	**09 51 16.7**	**+0.7**
comp=Z,5.5nm,1.0s,baz=106,slow=4.3,SNR=13							
ASAR				S	**S**	**09 52 12.6**	**-3.7**
comp=Z,1.0nm,0.8s,baz=95,slow=15,SNR=4.6							
WB2	**Warramunga Arr**	**42.54**	**265**	*eP*	**P**	**09 46 36.3**	**-0.3**
comp=Z,67nm,0.7s							
WRAB	**Tennant Creek**	**42.54**	**266**	*eP*	**P**	**09 46 36.4**	**-0.3**
comp=Z,57nm,0.8s							
WRAB	**Tennant Creek**	**42.54**	**266**	*eP*	**P**	**09 46 36.4**	**-0.3**
WRAB				pmax	pmax		
comp=Z,57nm,0.8s							
WR1	**Warramunga Arr**	**42.55**	**265**	*eP*	**P**	**09 46 36.5**	**-0.3**
WR1				*eScP*	**ScP**	**09 51 17.7**	**+0.4**
WR1				*eS*	**S**	**09 52 17.1**	**-3.7**
WRA	**Warramunga Arr**	**42.55**	**265**	P	**P**	**09 46 36.5**	**-0.3**
comp=Z,58nm,0.7s,baz=93,slow=9.5,SNR=226							
WRA				ScP	**ScP**	**09 51 17.7**	**+0.4**
comp=Z,4.8nm,0.9s,baz=126,slow=4.2,SNR=6.3							
WRA				S	**S**	**09 52 17.2**	**-3.8**
comp=Z,2.3nm,0.7s,baz=91,slow=13,SNR=9.1							
JAY	**Jayapura**	**43.39**	**293**	P	**P**	**09 46 43.5**	**+0.1**
comp=Z,19nm,0.6s,baz=165,slow=2.9,SNR=11							
JAY	**Jayapura**	**43.39**	**293**	P	**P**	**09 46 43.6**	**+0.2**
KDU	**Kakadu**	**46.34**	**275**	P	**P**	**09 47 05.6**	**-0.4**
baz=47,SNR=11							
FORT	**Forrest**	**46.60**	**249**	*eP*	**P**	**09 47 08.1**	**+0.3**
comp=Z,205nm,0.7s							
FORT	**Forrest**	**46.60**	**249**	P	**P**	**09 47 07.4**	**-0.4**
baz=47,SNR=71							
WRKA	**Warakurna**	**47.06**	**257**	P	**P**	**09 47 11.3**	**-0.1**
baz=47,SNR=164							
MTN	**Manton Dam**	**47.52**	**274**	*eP*	**P**	**09 47 15.3**	**+0.5**
comp=Z,26nm,0.6s							
KHLU	**Kahalu`u**	**48.67**	**31**	*eP*	**P**	**09 47 23.7**	**+0.3**
comp=Z,99nm,1.1s							
HUH	**Hualalai**	**48.78**	**31**	*eP*	**P**	**09 47 24.7**	**+0.3**
comp=Z,276nm,1.5s							
KNRA	**Kununurra**	**48.80**	**269**	P	**P**	**09 47 24.4**	**0.0**
baz=49,SNR=31							
MLH	**Mauna Loa**	**48.83**	**31**	*eP*	**P**	**09 47 26.0**	**+1.2**
comp=Z,181nm,1.5s							
MLH	**Mauna Loa**	**48.83**	**31**	*eP*	**P**	**09 47 26.0**	**+1.2**
MLH				pmax	pmax		
comp=Z,181nm,1.5s							
HMH	**Humu`ula Sheep**	**48.87**	**31**	*eP*	**P**	**09 47 25.5**	**+0.3**
comp=Z,210nm,1.3s							
HPAH	**Hawaii Prepara**	**49.14**	**31**	*eP*	**P**	**09 47 27.3**	**+0.4**
comp=Z,142nm,0.8s							
KEKH	**Kekaha**	**49.14**	**25**	*eP*	**P**	**09 47 27.1**	**+0.3**
comp=Z,58nm,0.9s							
MHA	**Mahukona**	**49.18**	**30**	*eP*	**P**	**09 47 28.5**	**+1.5**
MHA	**Mahukona**	**49.18**	**30**	*eP*	**P**	**09 47 28.5**	**+1.5**
GUMO	**Guam**	**50.36**	**313**	P	**P**	**09 47 34.7**	**-1.2**
comp=Z,25nm,0.6s,baz=112,slow=5.4,SNR=4.4							
FAKI	**Fak Fak**	**50.52**	**286**	*eP*	**P**	**09 47 37.8**	**+0.6**
comp=Z,44nm,1.0s							
KMBL	**Kambalda**	**51.83**	**248**	P	**P**	**09 47 46.5**	**0.0**
baz=52,SNR=6.2							
SOEI	**Soe**	**54.90**	**274**	*eP*	**P**	**09 48 09.8**	**+1.2**
comp=Z,98nm,0.8s							
SOEI	**Soe**	**54.90**	**274**	P	**P**	**09 48 09.9**	**+1.3**
SBA	**Scott Base**	**54.94**	**183**	*eP*	**P**	**09 48 10.3**	**+2.6**
comp=Z,16nm,1.0s							
SBA	**Scott Base**	**54.94**	**183**	*eP*	**P**	**09 48 10.3**	**+2.6**
SBA				pmax	pmax		
comp=Z,16nm,1.0s							
VNDA	**Vanda**	**54.95**	**185**	P	**P**	**09 48 09.0**	**+1.3**
comp=Z,4.7nm,0.7s,baz=355,slow=7.1,SNR=21							
VNDA				ScP	**ScP**	**09 52 06.2**	**-2.8**
comp=Z,0.5nm,0.6s,baz=2.8,slow=2.9,SNR=3.9							
VNDA	**Vanda**	**54.95**	**185**	*eP*	**P**	**09 48 09.6**	**+1.9**
comp=Z,5.0nm,0.7s							
VNDA				*eScP*	**ScP**	**09 52 06.5**	**-2.6**
VNDA	**Vanda**	**54.95**	**185**	*eP*	**P**	**09 48 09.6**	**+1.9**
VNDA				pmax	pmax		
comp=Z,5.0nm,0.7s							
BATI	**Baumata**	**55.29**	**274**	P	**P**	**09 48 13.2**	**+2.0**
KLBR	**Kellerberrin**	**55.30**	**247**	P	**P**	**09 48 10.7**	**-0.3**
baz=56,SNR=19							
PSA00	**Pilbara Seismi**	**55.37**	**259**	*eP*	**P**	**09 48 11.2**	**-0.4**
comp=Z,20nm,0.7s							
NWAO	**Narrogin (SRO)**	**55.56**	**245**	P	**P**	**09 48 12.6**	**-0.2**
comp=Z,12nm,0.5s,baz=120,slow=7.5,SNR=18							
NWAO	**Narrogin (SRO)**	**55.56**	**245**	*eP*	**P**	**09 48 12.9**	**+0.1**
comp=Z,42nm,1.2s							
NWAO	**Narrogin (SRO)**	**55.56**	**245**	P	**P**	**09 48 12.7**	**-0.2**
baz=56,SNR=13							
NWAO	**Narrogin (SRO)**	**55.56**	**245**	*eP*	**P**	**09 48 12.9**	**+0.1**
NWAO				pmax	pmax		
comp=Z,42nm,1.2s							
RKGY	**Rocky Gully**	**55.58**	**243**	P	**P**	**09 48 13.6**	**+0.7**
baz=56,SNR=7.7							
BLDU	**Ballidu**	**56.33**	**248**	P	**P**	**09 48 17.7**	**-0.5**
baz=57,SNR=42							
MUN	**Mundaring**	**56.55**	**246**	P	**P**	**09 48 20.1**	**+0.5**
baz=57,SNR=12							
TNTI	**Ternate**	**56.56**	**287**	P	**P**	**09 48 20.0**	**+0.1**
MORW	**Morawa**	**57.16**	**250**	*eP*	**P**	**09 48 23.6**	**-0.3**
comp=Z,38nm,0.8s							
MORW	**Morawa**	**57.16**	**250**	P	**P**	**09 48 23.7**	**-0.2**
baz=58,SNR=20							
EDFI	**Ende, Flores**	**57.63**	**274**	P	**P**	**09 48 27.5**	**+0.1**
GIRL	**Giralia**	**60.15**	**256**	*eP*	**P**	**09 48 45.7**	**+1.6**
comp=Z,200nm,1.3s							
GIRL	**Giralia**	**60.15**	**256**	P	**P**	**09 48 45.5**	**+1.4**
baz=60,SNR=4.6							
BKSI	**Bulukumba**	**60.39**	**277**	P	**P**	**09 48 46.0**	**+0.2**
comp=Z,22nm,1.1s							
CASY	**Casey**	**60.66**	**206**	*eP*	**P**	**09 48 46.5**	**-0.2**
comp=Z,18nm,0.8s							
BNSI	**Bone**	**60.78**	**278**	P	**P**	**09 48 46.6**	**-1.8**
comp=Z,30nm,1.6s							
PLAI	**Plampang**	**61.20**	**273**	P	**P**	**09 48 51.3**	**+0.2**
SPSI	**Sidrap Palu**	**61.26**	**279**	P	**P**	**09 48 50.9**	**-0.6**
TTSI	**Tana Toraja**	**61.60**	**280**	P	P	09 49 06.1	+12
MPSI	**Mapaga**	**62.98**	**283**	P	**P**	**09 49 02.1**	**-0.6**
QSPA	**South Pole Qui**	**66.74**	**180**	*eP*	**P**	**09 49 26.6**	**+0.9**
comp=Z,15nm,0.8s							
GRJI	**Gresik**	**66.77**	**272**	P	**P**	**09 49 27.5**	**+0.9**
PWJI	**Pagerwojo**	**66.98**	**271**	P	**P**	**09 49 27.7**	**-0.2**
UGM	**Wanagama**	**68.20**	**271**	*eP*	**P**	**09 49 35.9**	**+0.5**
comp=Z,275nm,1.4s							
LEM	**Lembang**	**71.27**	**271**	P	**P**	**09 49 54.3**	**+0.4**
comp=Z,33nm,0.6s,baz=330,slow=20							
MJAR	**Matsushiro Arr**	**71.50**	**325**	P	**P**	**09 49 54.9**	**+0.4**
comp=Z,2.6nm,0.8s,baz=168,slow=5.3,SNR=6.2							
MAJO	**Matsushiro**	**71.50**	**325**	*eP*	**P**	**09 49 54.9**	**+0.4**
MAJO	**Matsushiro**	**71.50**	**325**	*eP*	**P**	**09 49 54.9**	**+0.4**
KSM	**Kuching**	**72.11**	**280**	*eP*	**P**	**09 49 59.5**	**+0.9**
comp=Z,19nm,0.8s							
ADK	**Adak**	**74.95**	**2**	*eP*	**P**	**09 50 13.3**	**-0.5**
comp=Z,48nm,0.7s							
ADK	**Adak**	**74.95**	**2**	*eP*	**P**	**09 50 13.3**	**-0.5**
ADK				pmax	pmax		
comp=Z,48nm,0.7s							
MDSI	**Maura Dua**	**75.33**	**271**	P	**P**	**09 50 16.3**	**-0.6**
ATKA	**Atka Island**	**75.38**	**4**	*eP*	**P**	**09 50 15.8**	**-0.4**
comp=Z,65nm,0.9s							
ASAJ	**Asahikawa**	**75.41**	**333**	P	**P**	**09 50 16.6**	**0.0**
comp=Z,9.6nm,0.8s,baz=182,slow=4.5,SNR=7.1							
NIKH	**Nikolski High**	**76.59**	**7**	*eP*	**P**	**09 50 22.6**	**-0.3**
comp=Z,91nm,0.7s							
YSS	**Yuzh-Sakhalins**	**77.67**	**335**	P	**P**	**09 50 30.3**	**+1.4**
YSS				pmax	pmax		
comp=Z,12nm,1.0s							
UNV	**Unalaska Valle**	**77.73**	**8**	*eP*	**P**	**09 50 28.6**	**-0.4**
comp=Z,58nm,1.4s							
KSRS	**Korea Array**	**77.88**	**320**	P	**P**	**09 50 30.6**	**+0.3**
comp=Z,1.0nm,0.7s,baz=143,slow=5.8,SNR=5.1							
AKUT	**Akutan**	**78.11**	**8**	*eP*	**P**	**09 50 30.6**	**-0.4**
comp=Z,111nm,1.1s							
PET	**Petropavlovsk**	**78.30**	**347**	*eP*	**P**	**09 50 30.8**	**-1.3**
PET				pmax	pmax		
comp=Z,21nm,1.0s							
MAW	**Mawson**	**78.31**	**200**	P	**P**	**09 50 32.6**	**+0.5**
comp=Z,5.1nm,0.6s,baz=133,slow=7.1,SNR=29							
MAW	**Mawson**	**78.31**	**200**	P	**P**	**09 50 32.6**	**+0.5**
baz=78,SNR=15							
PETK	**Petropavlovsk-**	**78.58**	**346**	P	**P**	**09 50 33.5**	**-0.2**
comp=Z,11nm,0.7s,baz=126,slow=7.1,SNR=23							
PEA1	**Petropavlovsk-**	**78.58**	**346**	*eP*	**P**	**09 50 33.5**	**-0.2**
USRK	**Ussuriysk Ar.**	**80.35**	**327**	P	**P**	**09 50 44.1**	**+0.9**
comp=Z,2.0nm,0.8s,baz=180,slow=5.2,SNR=6.5							
NJ2	**Nanjing**	**80.37**	**311**	*eP*	**P**	**09 50 43.8**	**+0.2**
NJ2				pmax	pmax		
comp=Z,15nm,0.5s							
NJ2				pmax	pmax		
comp=Z,440nm,12.0s							
SCI2	**San Clemente I**	**80.96**	**48**	P	**P**	**09 50 47.7**	**+1.1**
baz=235							
HOPS	**Hopland Field**	**81.65**	**41**	*eP*	**P**	**09 50 51.3**	**+1.2**
comp=Z,56nm,1.4s							
IPM	**Ipoh**	**81.78**	**278**	*eP*	**P**	**09 50 52.3**	**+0.9**
comp=Z,9.4nm,0.6s							
DECC	**Green Verdugo**	**81.84**	**47**	P	**P**	**09 50 52.0**	**+0.8**
baz=235							
109C	**Camp Elliot, M**	**81.90**	**49**	P	**P**	**09 50 52.0**	**+0.5**
baz=236							
MWC	**Mount Wilson**	**82.01**	**48**	*eP*	**P**	**09 50 52.8**	**+0.5**
comp=Z,17nm,1.2s							
MWC	**Mount Wilson**	**82.01**	**48**	*eP*	**P**	**09

AFDM	Forest Hills D	82.91	42	eP		P	09 50 56.8	+0.3
	comp=Z,9.7nm,0.9s							
WDC	Whiskeytown Da	82.97	40	eP		P	09 50 57.5	+0.9
	comp=Z,16nm,1.2s							
WDC	Whiskeytown Da	82.97	40	eP		P	09 50 57.6	+0.9
WDC					pmax	pmax		
	comp=Z,16nm,1.2s							
N02D	Trinity Center	83.11	40	P		P	09 50 58.6	+1.0
	baz=231							
O03E	Paynes Creek	83.23	41	P		P	09 50 58.2	0.0
	baz=232,SNR=6.9							
CWC	Cottonwood Cre	83.27	46	P		P	09 50 58.9	+0.3
	baz=235							
M02C	Callahan	83.29	39	P		P	09 50 59.8	+1.4
	baz=231							
BELC	Belle Mtn. Jos	83.29	49	P		P	09 50 59.3	+0.6
	baz=236,SNR=10							
OHAK	Old Harbor	83.31	14	eP		P	09 50 58.1	+0.1
	comp=Z,31nm,1.5s							
L02E	Cave Junction	83.34	39	P		P	09 50 59.6	+1.0
	baz=230							
MPMC	Manual Prospec	83.44	46	P		P	09 50 59.9	+0.4
	baz=235,SNR=5.4							
GSC	Goldstone, Bar	83.47	47	eP		P	09 51 00.3	+0.8
	comp=Z,6.8nm,0.8s							
GSC	Goldstone, Bar	83.47	47	eP		P	09 51 00.3	+0.8
GSC					pmax	pmax		
	comp=Z,7.0nm,0.8s							
GSC	Goldstone, Bar	83.47	47	P		P	09 50 59.9	+0.4
	baz=236,SNR=6.5							
MLAC	Mammoth, Mammo	83.47	44	P		P	09 51 00.1	+0.5
	baz=234							
BC3	Big Chuckawall	83.48	49	P		P	09 51 00.3	+0.8
	baz=236,SNR=5.7							
RUBR	Rubicon Trail	83.48	43	eP		P	09 51 00.8	+1.2
	comp=Z,17nm,1.0s							
CN2	Changchun	83.50	324	eP		P	09 51 05.1	+5.8
HEC	Hector,Ludlow	83.52	48	P		P	09 51 00.2	+0.5
	baz=236,SNR=9.0							
TIN	Tinemaha, Big	83.53	45	P		P	09 51 00.2	+0.4
	baz=234							
SYO	Syowa Base	83.58	193⇓	eP		P	09 50 57.0	-2.3
SYO	Syowa Base	83.58	193⇑	ePcP		PcP	09 51 01.2	-1.0
GLA	Glamis	83.59	50	eP		P	09 51 01.4	+1.4
	comp=Z,17nm,0.9s							
GLA	Glamis	83.59	50	eP		P	09 51 01.4	+1.4
GLA					pmax	pmax		
	comp=Z,17nm,0.9s							
GLA	Glamis	83.59	50	P		P	09 51 00.8	+0.7
	baz=237,SNR=9.2							
YBH	Yreka Blue Hor	83.59	39	eP		P	09 51 00.9	+1.0
	comp=Z,9.8nm,1.0s							
YBH	Yreka Blue Hor	83.59	39	eP		P	09 51 00.9	+1.0
YBH					pmax	pmax		
	comp=Z,10.0nm,1.0s							
WAKR	Walker	83.60	43	eP		P	09 51 01.8	+1.6
	comp=Z,9.9nm,0.9s							
K02D	Willamette Mer	83.65	38	P		P	09 51 01.2	+1.0
	baz=230							
J01E	Myrtle Point	83.80	38	P		P	09 51 01.8	+1.1
	baz=230							
BEKR	Beckworth	83.84	42	eP		P	09 51 01.9	+0.6
	comp=Z,6.1nm,0.9s							
PNTR	Pine Nut	83.85	43	eP		P	09 51 02.6	+1.2
	comp=Z,17nm,0.8s							
GMRC	Granite Mounta	83.96	48	P		P	09 51 02.3	+0.4
	baz=236,SNR=7.5							
IRM	Iron Mountain	83.97	49	P		P	09 51 02.6	+0.7
	baz=237,SNR=9.2							
KDAK	Kodiak Island	83.98	14	eP		P	09 51 01.6	+0.3
	comp=Z,8.9nm,0.9s							
KDAK	Kodiak Island	83.98	14	eP		P	09 51 01.6	+0.3
KDAK					pmax	pmax		
	comp=Z,9.0nm,0.9s							
HUMO	Hull Mountain	84.00	38	eP		P	09 51 03.0	+1.2
	comp=Z,22nm,1.3s							
YERR	Yerington	84.01	43	eP		P	09 51 03.0	+0.8
	comp=Z,9.3nm,0.9s							
GRAC	Grapevine Rang	84.06	46	P		P	09 51 02.8	+0.5
	baz=235							
FURC	Furnace Creek,	84.09	46	P		P	09 51 03.0	+0.7
	baz=235							
KLR	Kul'dur	84.10	330	P		P	09 51 02.6	+0.5
	comp=Z,0.5nm,0.5s,baz=244,slow=0.4,SNR=4.8							
KLR	Kul'dur	84.10	330	i P		P	09 51 03.5	+1.4
KLR					pmax	pmax		
	comp=Z,5.0nm,1.5s							
L04D	Klamath Falls	84.13	39	P		P	09 51 03.2	+0.6
	baz=231							
M04C	Macdoel	84.13	40	P		P	09 51 03.1	+0.4
	baz=232							
TUQ	Turquoise Moun	84.14	48	P		P	09 51 03.3	+0.4
	baz=236							
SHOC	Shoshone, Teco	84.16	47	P		P	09 51 03.4	+0.6
	baz=236							
Y12C	Blythe	84.18	50	P		P	09 51 03.7	+0.8
	baz=237,SNR=5.1							
RYN	Ryan	84.25	44	eP		P	09 51 04.2	+0.8
	comp=Z,8.7nm,1.2s							
NV01	Mina Array Sit	84.28	44	eP		P	09 51 03.7	+0.1
NVAR	Mina Array Bea	84.28	44	P		P	09 51 03.7	+0.1
	comp=Z,5.5nm,0.9s,baz=220,slow=8.0,SNR=19							
HSIG		84.31	55	eP		P	09 51 04.3	+0.7
	comp=Z,12nm,0.8s							
PAHR	Pah Rah Range	84.35	42	eP		P	09 51 04.5	+0.7
	comp=Z,11nm,1.2s							
NV11	Mina Array Sit	84.37	44	eP		P	09 51 04.3	+0.4
	comp=Z,0.8nm,1.1s							
214A	Organ Pipe Nat	84.44	52	P		P	09 51 05.1	+0.8
	baz=238,SNR=6.0							
I02D	Swisshome	84.45	37	P		P	09 51 05.0	+1.1
	baz=230							
I03D	Drain, OR	84.47	37	P		P	09 51 04.9	+0.8
	baz=230,SNR=5.3							
LDFC	Landfair	84.50	48	eP		P	09 51 05.3	+0.7
	comp=Z,26nm,0.8s							
PDMCI	Parker Dam,Lak	84.75	49	P		P	09 51 06.3	+0.6
	baz=237,SNR=6.9							
TPNV	Topopah Spring	84.77	46	P		P	09 51 06.2	+0.3
	baz=236,SNR=6.4							
KVN	Kaiserville	84.77	44	eP		P	09 51 06.3	+0.4
	comp=Z,4.9nm,0.9s							
KVN	Kaiserville	84.77	44	eP		P	09 51 06.3	+0.4
KVN					pmax	pmax		
	comp=Z,5.0nm,0.9s							
J04D	Umpqua Nationa	84.88	38	P		P	09 51 07.2	+0.9
	baz=231,SNR=6.2							
I04A	Tendick Farm,	85.06	38	P		P	09 51 07.3	+0.3
	baz=231,SNR=5.2							
H04D	Lebanon	85.33	37	P		P	09 51 09.2	+1.0
	baz=231							
J05D	Fort Rock, OR	85.41	39	P		P	09 51 09.6	+0.8
	baz=232,SNR=12							
VNA3	Neumayer Olymp	85.43	177	P		P	09 51 07.2	-1.3
G03D	McMinnville, O	85.48	36	P		P	09 51 10.1	+1.2
	baz=230							
VNA2	Neumayer--Watz	85.85	178	P		P	09 51 09.7	-0.7
	baz=193,slow=3.9							
CNPM	China Poot	85.86	14	eP		P	09 51 09.9	-0.5
	comp=Z,18nm,0.9s							
R11A	Troy Canyon, C	85.99	45	P		P	09 51 12.0	+0.2
	baz=236							
I05D	Terrebonne, OR	86.00	38	P		P	09 51 12.1	+0.5
	baz=232							
MA2	Magadan	86.06	346	P		P	09 51 10.6	-0.7
	comp=Z,8.6nm,0.7s,baz=151,slow=7.3,SNR=9.4							
MA2	Magadan	86.06	346	ceP		P	09 51 10.5	-0.9
MA2					pmax	pmax		
	comp=Z,9.0nm,0.9s							
VNA1	Neumayer--Stat	86.08	177	P		P	09 51 10.7	-0.8
TUC	Tucson	86.10	52	eP		P	09 51 13.7	+1.4
	comp=Z,9.7nm,0.8s							
TUC	Tucson	86.10	52	eP		P	09 51 13.7	+1.4
TUC					pmax	pmax		
	comp=Z,10.0nm,0.8s							
TUC	Tucson	86.10	52	P		P	09 51 13.0	+0.7
	baz=239							
G05D	Wamic, OR	86.57	37	P		P	09 51 15.0	+0.8
	baz=232							
X16A	Lo Mia Camp, P	86.70	50	eP		P	09 51 16.9	+1.7
	comp=Z,5.6nm,0.8s							
E04D	Cinebar	86.71	36	P		P	09 51 15.7	+1.0
	baz=231							
LCMT	Little Creek M	86.81	47	eP		P	09 51 16.5	+0.9
	comp=Z,6.0nm,0.9s							
I07A	Izee	86.89	39	eP		P	09 51 16.4	+0.5
	comp=Z,14nm,1.0s							
G06A	Carlson Farm,	86.95	37	eP		P	09 51 16.1	+0.2
	comp=Z,11nm,0.9s							
D03D	Eldon	87.06	35	P		P	09 51 17.6	+1.2
	baz=230							
GAMB	Gambell	87.06	4	eP		P	09 51 16.2	+0.3
	comp=Z,5.8nm,0.9s							
U15A	North Rim	87.16	48	eP		P	09 51 17.8	+0.3
	comp=Z,11nm,0.8s							
LON	Longmire	87.24	36	eP		P	09 51 17.2	-0.1
	comp=Z,5.2nm,0.9s							
LON	Longmire	87.24	36	eP		P	09 51 17.2	-0.1
LON					pmax	pmax		
	comp=Z,5.0nm,0.9s							
WUAZ	Wupatki	87.32	49	P		P	09 51 18.7	+0.6
	baz=239							
ELK	Elko	87.54	43	eP		P	09 51 19.6	+0.4
	comp=Z,5.8nm,1.1s							
ELK	Elko	87.54	43	eP		P	09 51 19.6	+0.4
ELK					pmax	pmax		
	comp=Z,6.0nm,1.1s							
PKCU	Pink Cliffs	87.67	47	eP		P	09 51 21.8	+1.8
	comp=Z,13nm,0.9s							
B05A	Bryant	88.04	34	P		P	09 51 21.7	+0.7
	baz=231							
MTPU	Mount Pierson	88.07	47	eP		P	09 51 23.1	+1.3
	comp=Z,8.5nm,0.8s							
EYAK	Cordova Ski Ar	88.08	16	eP		P	09 51 20.1	-0.8
	comp=Z,8.3nm,0.8s							
LTY	Liberty	88.17	36	eP		P	09 51 22.1	+0.5
	comp=Z,8.3nm,0.9s							
W18A	Petrified Fore	88.27	50	P		P	09 51 22.9	+0.3
	baz=240							
MSU	Marysvale	88.33	47	eP		P	09 51 24.5	+1.7
121A	Cookes Peak, D	88.41	54	P		P	09 51 23.6	+0.3
	baz=241							
C06D	Leavenworth	88.45	35	P		P	09 51 23.7	+0.8
	baz=232							
SEY	Seymchan	88.75	348	P		P	09 51 23.8	-0.1
	comp=Z,6.6nm,0.8s,baz=153,slow=5.8,SNR=15							
DUG	Dugway, Tooele	88.80	45	P		P	09 51 25.0	+0.1
	baz=238							
SCM	Sheep Creek Mo	88.81	15	eP		P	09 51 24.1	-0.2
	comp=Z,19nm,0.8s							
SCM	Sheep Creek Mo	88.81	15	eP		P	09 51 24.1	-0.2
SCM					pmax	pmax		
	comp=Z,19nm,0.8s							
WRAK	Wrangell Islan	89.01	24	eP		P	09 51 26.3	+1.1
	comp=Z,12nm,0.8s							
KMI	Kunming	89.09	298	P		P	09 51 26.7	0.0
KMI					pmax	pmax		
	comp=Z,5.0nm,0.5s							
Q16A	Castle Valley	89.21	47	eP		P	09 51 28.0	+1.1
	comp=Z,9.2nm,1.0s							
TMUT	Trail Mountain	89.38	46	eP		P	09 51 29.1	+1.2
	comp=Z,16nm,0.8s							
BALM	Baldy	89.39	17	eP		P	09 51 27.0	-0.1
	comp=Z,11nm,0.9s							
BALM	Baldy	89.39	17	eP		P	09 51 27.0	-0.1
BALM					pmax	pmax		
	comp=Z,11nm,0.9s							
CMAR	Chiang Mai Arr	89.43	290	P		P	09 51 29.4	+1.2
	comp=Z,3.5nm,0.9s,baz=135,slow=3.6,SNR=16							
PLID	Pearl Lake	89.51	40	eP		P	09 51 28.4	+0.2
	comp=Z,12nm,1.3s							
HLID	Hailey	89.61	41	P		P	09 51 29.4	+0.7
	baz=237							
HVU	Hansel Valley	89.66	44	eP		P	09 51 29.4	+0.5
	comp=Z,8.7nm,0.8s							
HVU	Hansel Valley	89.66	44	eP		P	09 51 29.4	+0.5
HVU					pmax	pmax		
	comp=Z,9.0nm,0.8s							
SRU	San Rafael Swe	89.74	47	eP		P	09 51 29.9	+0.6
	comp=Z,12nm,0.8s							
SRU	San Rafael Swe	89.74	47	eP		P	09 51 29.9	+0.6
SRU					pmax	pmax		
	comp=Z,12nm,0.8s							
LENM	Lemitar	89.79	52	eP		P	09 51 30.7	+1.0
MNTX	Conudas Mount	89.81	55	P		P	09 51 30.2	+0.6
	baz=242							
JLU	Jordanelle	89.89	45	eP		P	09 51 30.7	+0.6
	comp=Z,6.6nm,1.0s							
TX31	Lajitas Ar. Si	90.05	58	eP		P	09 51 31.6	+0.7
	comp=Z,6.8nm,0.9s							
TXAR	Lajitas Array	90.05	58	P		P	09 51 31.6	+0.7
	comp=Z,3.6nm,0.7s,baz=217,slow=5.5,SNR=21							
TXAR					pP	pwP	09 53 32.9	+2.0
	comp=Z,1.1nm,1.1s,baz=191,slow=8.3,SNR=1.8							
HHC	Hu-ho-hao-te	90.09	315	eP		P	09 51 33.1	+2.3
HHC					pmax	pmax		
	comp=Z,5.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,99nm,5.3s							
LPM	Los Pinos Moun	90.11	52	eP		P	09 51 31.6	+0.4
MVCO	Mesa Verde	90.17	49	P		P	09 51 31.5	0.0
	baz=240							
HWUT	Hardware Ranch	90.34	44	eP		P	09 51 32.4	+0.3
	comp=Z,4.2nm,0.7s							
TASM	ASL Pad, Albuq	90.53	52	P		P	09 51 33.1	0.0
	baz=242							
TASM	ASL Pad, Albuq	90.53	52	P		P	09 51 33.2	+0.1
	baz=242							
ANMO	Albuquerque	90.53	52	eP		P	09 51 33.1	0.0
	comp=Z,5.0nm,1.0s							
ANMO	Albuquerque	90.53	52	eP		P	09 51 33.1	0.0
ANMO					pmax	pmax		
	comp=Z,5.0nm,1.0s							
ANMO	Albuquerque	90.53	52	P		P	09 51 33.0	0.0
	baz=242							
PV01	Paradox Valley	90.58	48	eP		P	09 51 32.5	-0.8
	comp=Z,3.3nm,0.8s							
MENT	Mentasta	90.62	16	eP		P	09 51 33.2	+0.5
	comp=Z,4.8nm,0.7s							
CD2	Chengdu	90.86	303	eP		P	09 51 34.4	-0.1
CD2					pmax	pmax		
	comp=Z,30nm,0.5s							
HDA	Harding Lake	91.14	14	P		P	09 51 34.1	-0.8
	baz=210							
CCB	Clear Creek Bu	91.16	13	eP		P	09 51 33.9	-1.1
	comp=Z,3.3nm,0.8s							
TCOL	CIGO, UAF Yank	91.35	13	P		P	09 51 35.0	-0.9
	baz=209							
COLA	College	91.35	13	i P		P	09 51 34.0	-1.9
COLA					pmax	pmax		
	comp=Z,3.0nm,1.0s							
ILAR	Eielson Array	91.46	14	P		P	09 51 34.9	-1.6
	comp=Z,1.3nm,0.7s,baz=225,slow=5.3,SNR=13							
S22A	4UR Ranch, Cre	91.59	49	eP		P	09 51 38.7	+0.6
	comp=Z,6.2nm,1.0s							
S22A	4UR Ranch, Cre	91.59	49	P		P	09 51 37.9	-0.2
	baz=242							
BILL	Bilibino	91.68	355	eP		P	09 51 37.5	+0.2
	comp=Z,7.6nm,1.0s							
BILL	Bilibino	91.68	355	i P		P	09 51 37.6	+0.2
BILL					pmax	pmax		
	comp=Z,9.0nm,1.0s							
TPAW	Teton Pass	91.70	43	eP		P	09 51 39.2	+0.8
	comp=Z,7.8nm,1.4s							
O20A	White River Ci	91.78	47	P		P	09 51 38.9	+0.2
	baz=241							
IMW	Indian Meadow	91.92	42	eP		P	09 51 39.9	+0.5
LOHW	Long Hollow	91.98	43	eP		P	09 51 40.0	+0.3
	comp=Z,1.0nm,0.6s							
SMCO	Snowmass	92.17	48	eP		P	09 51 41.1	+0.3
	comp=Z,2.6nm,0.8s							
BW06	Boulder Array	92.22	44	P		P	09 51 41.1	+0.3
	baz=240							
PDAR	Pinedale Array	92.22	44	P		P	09 51 40.2	-0.5
	comp=Z,2.6nm,0.7s,baz=215,slow=3.5,SNR=24							
PDAR					PP	PP	09 55 26.8	-4.0
	comp=Z,1.3nm,1.0s,baz=242,slow=3.2,SNR=5.6							
BOZ	Bozeman (W)	92.38	41	P		P	09 51 42.2	+0.9
	baz=239							
H17A	Grant Village	92.40	42	P		P	09 51 42.5	+0.9
	baz=239							
SDCO	Great Sand Dun	92.52	50	eP		P	09 51 42.7	+0.3
	comp=Z,3.3nm,0.8s							
SDCO	Great Sand Dun	92.52	50	P		P	09 51 42.5	+0.1
	baz=242							
EGAK	Eagle	92.79	16	eP		P	09 51 42.1	-0.4
	comp=Z,5.1nm,0.8s							
MSTX	Muleshoe	92.79	54	P		P	09 51 43.4	0.0
	baz=244							
T25A	Trinidad	93.02	51	P		P	09 51 44.3	-0.2
	baz=243							
LZH	Lanzhou	93.11	308	eP		P	09 51 47.5	+2.6
LZH					pP	pwP	09 53 44.8	-1.8
LZH					sP	sP	09 54 40.0	+5.8
LZH					pmax	pmax		
	comp=Z,22nm,1.3s							
LZH					pmax	pmax		
	comp=Z,94nm,4.9s							
Q24A	Divide	93.33	49	P		P	09 51 45.9	-0.1
	baz=243							
ISCO	Idaho Springs	93.39	48	P		P	09 51 46.3	-0.1
	baz=242							
JCT	Junction City	93.56	58	P		P	09 51 47.0	0.0
	baz=245							
RLMT	Red Lodge	93.57	42	P		P	09 51 46.9	+0.1
	baz=240							
N23A	Red Feather La	93.68	47	P		P	09 51 47.3	-0.3
	baz=242							
KSCO	Kaye Shedlock'	95.11	50	P		P	09 51 53.4	-0.5
	baz=244							
EPYK	Eagle Plains	95.18	16	eP		P	09 51 52.5	-0.9
	comp=Z,3.2nm,0.8s							
EPYK	Eagle Plains	95.18	16	P		P	09 51 53.6	+0.2
	baz=219							
WHTX	Lake Whitney,	96.02	58	P		P	09 51 57.1	-0.8
	baz=246							
LAO	LASA Array	96.19	42	P		P	09 51 58.7	+0.3
	baz=242							
INK	Inuvik	97.46	16	P		Pdif	09 52 01.9	-1.7
	comp=Z,1.5nm,0.8s,baz=219,slow=2.8,SNR=3.1							
YKA	Yellowknife Ar	99.81	25	P		Pdif	09 52 13.1	-1.1
	comp=Z,0.2nm,0.6s,baz=237,slow=4.5,SNR=4.6							
YKA					PP	PP	09 56 24.1	-3.6
	comp=Z,0.6nm,0.9s,baz=242,slow=7.4,SNR=6.0							
TIXI	Tiksi	101.03	345	ceP		Pdif	09 52 19.5	+0.1
TIXI					pmax	pmax		
	comp=Z,1.0nm,1.0s							
KURK	Kurchatov	114.87	317	PKIKP		PKPdf	09 57 06.0	-1.5
KURBB	Kurchatov Arra	114.91	317	PKP		PKPdf	09 57 06.0	-1.6
	comp=Z,0.4nm,0.7s,baz=112,slow=1.9,SNR=5.5							
KSH	Kashi	115.05	304	ePKP		PKPdf	09 57 06.4	-2.0
BVAR	Borovoye Array	120.09	319	PKP		PKPdf	09 57 15.5	-2.0
	comp=Z,0.5nm,0.5s,baz=89,slow=2.8,SNR=5.9							
ARU	Arti	126.49	324	PKP		PKPdf	09 57 28.8	-0.9
	comp=Z,0.5nm,0.4s,baz=100,slow=19,SNR=4.6							
AKTO	Aktyubinsk	127.96	317	PKP		PKPdf	09 57 30.4	-2.3
	comp=Z,0.4nm,0.3s,baz=68,slow=5.4							
ARCES	ARCESS Array B	131.36	348	PKP		PKPdf	09 57 37.1	-1.4
	comp=Z,1.4nm,0.6s,baz=48,slow=1.8,SNR=4.9							
ARCES					SKPab	SKPbc	10 00 12.5	-1.6
	comp=Z,6.1nm,0.9s,baz=54,slow=6.2,SNR=8.2							
KMBO	Kilima Mbogo	136.46	241	SKP		SKPbc	10 00 31.7	-0.9
	comp=Z,2.2nm,0.5s,baz=79,slow=5.4,SNR=9.3							
FINES	FINESS Array B	137.95	342	PKP		PKPdf	09 57 51.0	0.0
	comp=Z,1.0nm,0.6s,baz=94,slow=7.6,SNR=3.7							
FINES					SKPbc	SKPbc	10 00 32.5	-2.5
	comp=Z,3.3nm,0.8s,baz=45,slow=2.5,SNR=10							
NC303	NORSAR Array S	141.34	351	ePKPpre		PKPdf	09 57 51.5	-5.7
NB2	NORSAR Subarra	141.34	351	PKP		PKPdf	09 57 51.7	-6.0
	comp=Z,0.5nm,0.4s,baz=16,slow=3.2							
NB200	NORSAR Array S	141.34	351	ePKPpre		PKPdf	09 57 52.0	-5.7
NB200				eSKPbc		SKPbc	10 00 42.0	-2.7
NOA	NORSAR Array B	141.54	351	PKhKP		PKPdf	09 57 52.0	-5.7
	comp=Z,2.4nm,0.7s,baz=16,slow=4.7,SNR=14							
NOA					SKPbc	SKPbc	10 00 42.0	-2.7
	comp=Z,1.1nm,0.8s,baz=13,slow=4.1,SNR=4.2							
KONO	Kongsberg	143.10	352	ePKPdf		PKPab	09 57 57.7	-0.3
KONO	Kongsberg	143.10	352	ePKIKP		PKPab	09 57 57.7	-0.3
AKASG	Malin Array Be	144.56	328	PKP		PKPdf	09 58 01.7	-1.5
	comp=Z,4.0nm,0.6s,baz=43,slow=4.5,SNR=32							
AKASG					SKPbc	SKPbc	10 00 50.2	-1.9
	comp=Z,0.9nm,0.5s,baz=49,slow=2.2,SNR=6.9							
AKBB	Malin Array Si	144.56	328	ePKPdf		PKPdf	09 58 01.9	-1.3
AKBB	Malin Array Si	144.56	328	ePKIKP		PKPdf	09 58 01.9	-1.3
KIEV	Kiev	144.57	328	ePKPdf		PKPdf	09 58 01.4	-1.8
KIEV	Kiev	144.57	328	ePKIKP		PKPdf	09 58 01.4	-1.8
SUW	Suwalki	144.79	336	ePKPdf		PKPdf	09 58 02.6	-0.9
SUW	Suwalki	144.79	336	ePKIKP		PKPdf	09 58 02.6	-0.9
BR101	Keskin Array S	147.32	308	ePKPbc		PKPbc	09 58 10.3	-1.4
BRTR	Keskin Array B	147.32	308	PKPbc		PKPbc	09 58 10.3	-1.4
	comp=Z,0.5nm,0.6s,baz=122,slow=1.9,SNR=3.3							
BEL	Belsk	147.41	336	ePKP		PKPbc	09 58 10.7	-0.6
BEL	Belsk	147.41	336	ePKP2		PKPbc	09 58 10.7	-0.6
BUR08	Bucovina Ar. S	148.55	327	ePKPbc		PKPbc	09 58 15.1	+0.6
KOLS	Kolonicke sedl	149.03	331	ePKP2		PKPbc	09 58 15.8	+0.3
KOLS	Kolonicke sedl	149.03	331	ePKP		PKPbc	09 58 15.8	+0.3
OJC	Ojcow	149.07	335	ePKP		PKPbc	09 58 15.5	0.0
NIE	Niedzica	149.51	334	ePKP		PKiKP	09 58 17.1	-0.3
KSP	Ksiaz	149.80	339	ePKP		PKPbc	09 58 17.0	-0.2
OKC	Ostrava-Krasne	150.01	336⇑	ePKP		PKPbc	09 58 17.7	-0.1
OKC				ePKPAB		PKPab	09 58 25.8	0.0
LANS	Liptovska Anna	150.06	334	ePKP		PKiKP	09 58 18.5	-0.1
LANS				e			09 58 27.2	
OSTC	Ostas	150.07	339⇑	ePKP		PKPbc	09 58 18.2	+0.3
OSTC				ePKPAB		PKPab	09 58 26.9	+0.8
CHVC	Chvalec	150.10	339⇑	ePKP		PKiKP	09 58 18.5	-0.1
CHVC				ePKPAB		PKPab	09 58 25.5	-0.7
UPC	Upice	150.18	339	ePKIKP		PKPbc	09 58 18.2	0.0
UPC	Upice	150.18	339⇑	ePKP		PKPbc	09 58 18.2	0.0
DPC	Dobruska-Polom	150.22	339	ePKIKP		PKPbc	09 58 18.2	-0.1
DPC	Dobruska-Polom	150.22	339⇑	ePKP		PKPbc	09 58 18.2	-0.1
DPC				ePKPAB		PKPab	09 58 27.5	+0.7
MORC	Moravsky Berou	150.28	337	ePKPbc		PKPbc	09 58 18.7	+0.3
MORC	Moravsky Berou	150.28	337	ePKP		PKPbc	09 58 18.5	0.0
MORC				e			09 58 27.4	
CLL	Collm	150.35	344	ePKPbc		PKPbc	09 58 18.3	-0.2
CLL	Collm	150.35	344	i PKPbc

ml2.8/16, Error ellipse: s-maj=1.0km s-min=0.8km az=83.0, felt 5 ems98 at Pyhrmpass / Upper Austria
*PRU **02** 09:51:43.3±0.0, 47°.64N×14°.33E, h4km*
*BGR **02** 09:51:43.5±0.3, 47°.64N×14°.33E, h10km, ML2.9/19, Error ellipse: s-maj=2.2km s-min=2.2km az=80.0*
BGR Strong vibrations of buildings and furniture.
*LDG **02** 09:51:43.0±0.2, 47°.65N×14°.43E, h2km, Ml3.0/4*

ISC 02 09:51:42.7±1.0, 47°.64N±0°.01×14°.32E±0°.02, h6km±8km, n70, σ1.20/136, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOA	**Molln**	**0.22**	**351**	*i* Pg	**Pg**	**09 51 46.6**	**-0.4**
	32nm,0.1s,SNR=53						
MOA				*e*Sg	**Sg**	**09 51 50.4**	**+0.4**
	192nm,0.1s						
MOA	**Molln**	**0.22**	**351**	*e*Pg	**Pg**	**09 51 46.7**	**-0.4**
MOA				*e*Sg	**Sg**	**09 51 50.6**	**+0.6**
KBA	**Koelnbreinsper**	**0.86**	**230**	*e*Pg	**Pg**	**09 51 58.6**	**-0.7**
	7.2nm,0.3s,SNR=15						
KBA				Sg	**Sg**	**09 52 10.0**	**-0.5**
	13nm,0.2s						
KBA	**Koelnbreinsper**	**0.86**	**230**	*e*Pg	**Pg**	**09 51 58.6**	**-0.7**
KBA				*e*Sg	**Sg**	**09 52 10.4**	**-0.2**
ARSA	**Arzberg**	**0.91**	**115**	*e*Pg	**Pg**	**09 51 59.5**	**-0.5**
	11nm,0.3s,SNR=49						
ARSA				Sg	**Sb**	**09 52 13.3**	**+0.2**
	16nm,0.3s						
ARSA	**Arzberg**	**0.91**	**115**	*e*Pg	**Pg**	**09 51 59.6**	**-0.5**
ARSA				*e*Sg	**Sb**	**09 52 12.7**	**-0.4**
SOKA	**Soboth**	**1.07**	**153**	*e*Pg	**Pg**	**09 52 02.8**	**-0.6**
	4.4nm,0.2s,SNR=19						
SOKA				Sg	**Sg**	**09 52 17.0**	**-0.3**
	14nm,0.3s						
CONA	**Conrad Observa**	**1.08**	**74**	*e*Pg	**Pg**	**09 52 03.4**	**-0.1**
	3.7nm,0.1s,SNR=36						
CONA				Sg	**Sn**	**09 52 19.7**	**-0.1**
	92nm,0.4s						
MYKA	**Terra Mystica**	**1.11**	**205**	*e*Pg	**Pg**	**09 52 03.6**	**-0.4**
	3.3nm,0.2s,SNR=15						
MYKA				Sg	**Sg**	**09 52 18.7**	**+0.4**
	11nm,0.3s						
OBKA	**Obir**	**1.14**	**172**	*i* Pg	**Pg**	**09 52 03.7**	**-0.8**
	5.8nm,0.1s,SNR=7.0						
OBKA				Sg	**Sb**	**09 52 19.8**	**-0.1**
	46nm,0.3s						
PERS	**Pernice**	**1.14**	**151**	*i* Pg	**Pg**	**09 52 03.9**	**-0.7**
PERS				*i* Sg	**Sg**	**09 52 19.6**	**+0.3**
GEC2	**GERESS Array S**	**1.28**	**341**	*e*Pn	**Pg**	**09 52 06.9**	**-0.3**
GEC2				*e*Pg	**Pb**	**09 52 07.5**	**+0.3**
GEC2				*e*Sg	**Sb**	**09 52 24.0**	**0.0**
GORS	**Gorjuse**	**1.34**	**190**	*i* Pg	**Pn**	**09 52 08.1**	**+0.1**
GORS				*i* Sg	**Sb**	**09 52 25.2**	**-0.5**
	comp=Z,27nm,0.4s						
MOZS	**Mozjanca**	**1.34**	**176**	*i* Pg	**Pn**	**09 52 08.2**	**+0.1**
MOZS				*i* Sg	**Sb**	**09 52 24.8**	**-1.0**
	comp=Z,17nm,0.4s						
GROS	**Grobnik**	**1.43**	**145**	*i* Pg	**Pn**	**09 52 09.0**	**-0.3**
GROS				*i* Sg	**Sg**	**09 52 28.9**	**+0.4**
	comp=Z,22nm,0.4s						
SOP	**Sopron**	**1.52**	**87**	EPn	**Pn**	**09 52 10.0**	**-0.3**
SOP				EPg		09 52 11.0	
SOP				Sn	**Sb**	**09 52 31.1**	**+0.4**
ABTA	**Abfaltersbach**	**1.52**	**235**	Pg	**Pb**	**09 52 11.1**	**-0.2**
	comp=Z,12nm,0.4s,SNR=13						
ABTA				Sg	**Sg**	**09 52 32.5**	**+1.0**
	comp=Z,24nm,0.3s						
KHC	**Kasperske Hory**	**1.58**	**342**	*e*PG	**Pb**	**09 52 12.3**	**0.0**
KHC				*e*SG	**Sg**	**09 52 33.7**	**+0.3**
	comp=Z,100nm,0.6s						
WET	**Wettzell**	**1.79**	**328**	*e*Pg	**Pb**	**09 52 16.2**	**+0.3**
WET				*e*Sg	**Sg**	**09 52 39.9**	**-0.3**
TREC	**Trest**	**1.83**	**25**	*e*PG	**Pn**	**09 52 15.6**	**+0.8**
TREC				*e*SG	**Sg**	**09 52 40.9**	**-0.8**
	comp=Z,61nm,0.3s						
WTTA	**Wattenberg**	**1.86**	**259**	Pg	**Pg**	**09 52 17.9**	**-0.3**
	comp=Z,7.8nm,0.2s,SNR=26						
WTTA				Sg	**Sg**	**09 52 43.9**	**+1.5**
	comp=Z,16nm,0.3s						
WTTA	**Wattenberg**	**1.86**	**259**	*e*Pg	**Pg**	**09 52 18.0**	**-0.3**
WTTA				*e*Sg	**Sg**	**09 52 43.2**	**+0.8**
WATA	**Walderalm**	**1.88**	**262**	Pg	**Pb**	**09 52 17.6**	**+0.1**
	comp=Z,2.6nm,0.2s,SNR=6.2						
ZST	**Bratislava**	**1.96**	**72**	*e*PG	**Pn**	**09 52 16.5**	**+0.1**
ZST				*e*SG	**Sb**	**09 52 43.8**	**+0.4**
KRUC	**Moravsky**	**1.99**	**43**	*e*PN	**Pn**	**09 52 17.2**	**+0.3**
KRUC				*e*SN	**Sb**	**09 52 44.5**	**+0.1**
KRUC	**Moravsky**	**1.99**	**43**	*e*Pn	**Pn**	**09 52 17.1**	**+0.2**
	baz=224						
KRUC				*e*Sn	**Sb**	**09 52 44.5**	**+0.1**
	comp=Z,46nm,0.5s,baz=224						
FUR	**Furstenfeldbru**	**2.11**	**286**	*e*Pg	**Pg**	**09 52 23.0**	**-0.2**
FUR				*e*Sg	**Sg**	**09 52 50.7**	**+0.1**
MODS	**Modra-Piesok**	**2.12**	**69**	*e*PG	**Pb**	**09 52 20.7**	**-0.9**
MODS				*e*SG	**Sn**	**09 52 46.8**	**+1.4**
MODS				*e*LG	Lg	09 52 59.6	
SQTA	**Sankt Quirin**	**2.15**	**260**	Pg	**Pb**	**09 52 22.8**	**+0.7**
	comp=Z,1.6nm,0.1s,SNR=9.2						
SQTA				Sg	**Sg**	**09 52 53.3**	**+1.5**
	comp=Z,14nm,0.3s						
MOTA	**Moosalm**	**2.20**	**264**	Pg	**Pb**	**09 52 23.4**	**+0.4**
	comp=Z,1.2nm,0.1s						
VRAC	**Vranov**	**2.26**	**41**	*e*PN	**Pn**	**09 52 20.7**	**+0.1**
VRAC				*e*SN	**Sb**	**09 52 51.1**	**-1.0**
VRAC	**Vranov**	**2.26**	**41**	*e*Pn	**Pn**	**09 52 20.7**	**+0.1**
	baz=223						
VRAC				*e*Sn	**Sb**	**09 52 51.0**	**-1.0**
	comp=Z,22nm,0.2s,baz=223						
GOPC	**GO Pecny, Ondr**	**2.30**	**8**	*e*PN	**Pn**	**09 52 21.5**	**+0.3**
GOPC				*e*PG	**Pb**	**09 52 25.4**	**+0.7**
GOPC				*e*SG	**Sg**	**09 52 55.8**	**-0.9**
	comp=Z,25nm,0.4s						
PRU	**Pruhonice**	**2.36**	**4**	*e*PG	**Pb**	**09 52 25.3**	**-0.3**
PRU				*e*SG	**Sg**	**09 52 57.4**	**-1.1**
	comp=Z,36nm,0.4s						
FETA	**Feichten**	**2.52**	**257**	Pg	**Pb**	**09 52 29.1**	**+0.7**
	comp=Z,2.1nm,0.2s						
FETA				Sg	**Sg**	**09 53 04.3**	**+0.7**
	comp=Z,3.4nm,0.4s						
ROTZ	**Rotzenmuhle**	**2.55**	**328**	*e*Pg	**Pg**	**09 52 31.5**	**-0.1**
ROTZ				*e*Sg	**Sg**	**09 53 04.4**	**-0.3**
JAVC	**Velka Javorina**	**2.55**	**60**	*e*PN	**Pn**	**09 52 26.1**	**+1.4**
MANZ	**Manzenberg**	**2.77**	**329**	*e*Sg	**Sg**	**09 53 10.7**	**-0.9**
UBR	**Ueberruh**	**2.84**	**272**	*e*Sg	**Sg**	**09 53 13.8**	**-0.3**
NKC	**Novy Kostel**	**2.88**	**335**	*e*SG	**Sg**	**09 53 15.1**	**0.0**
	comp=Z,34nm,0.5s						
PVCC	**Panska Ves**	**2.90**	**3**	*e*SG	**Sg**	**09 53 14.5**	**-1.4**
	comp=Z,64nm,0.4s						
GRF	**Grafenberg Arr**	**2.91**	**316**	*e*Pg	**Pg**	**09 52 38.7**	**+0.3**
GRF				*e*Sg	**Sg**	**09 53 16.1**	**+0.1**
ROHR	**Rohrbach**	**2.92**	**334**	*e*Pg	**Pg**	**09 52 38.7**	**+0.1**
ROHR				*e*Sg	**Sg**	**09 53 15.8**	**-0.6**
WERN	**Wernitzgruen**	**2.95**	**335**	*e*Pg	**Pg**	**09 52 38.9**	**-0.3**
WERN				*e*Sg	**Sg**	**09 53 17.7**	**+0.3**
DPC	**Dobruska-Polom**	**3.02**	**25**	*e*PN	**Pn**	**09 52 31.3**	**+0.2**
DPC				*e*PG	**Pb**	**09 52 37.6**	**+0.7**
DPC				*e*SG	**Sg**	**09 53 19.9**	**+0.2**
	comp=Z,33nm,0.6s						
MORC	**Moravsky Berou**	**3.03**	**44**	*e*PN	**Pn**	**09 52 31.5**	**+0.3**
MORC				*e*SN	**Sn**	**09 53 10.5**	**+2.7**
MORC	**Moravsky Berou**	**3.03**	**44**	*e*Pn	**Pn**	**09 52 31.5**	**+0.3**
	baz=226						
MORC				*e*Sn	**Sn**	**09 53 10.4**	**+2.7**
	comp=Z,29nm,0.6s,baz=226						
GUNZ	**Gunzen**	**3.03**	**335**	*e*Pg	**Pg**	**09 52 40.7**	**-0.1**
GUNZ				*e*Sg	**Sg**	**09 53 19.0**	**-0.9**
DAVA	**Damuels**	**3.03**	**265**	Pg	**Pg**	**09 52 40.4**	**-0.4**
	comp=Z,4.6nm,0.2s						
DAVA				*e*Sn	**Sn**	**09 53 11.2**	**+3.2**
	comp=Z,2.8nm,0.3s						
DAVA				Sg	**Sg**	**09 53 20.9**	**+0.9**
	comp=Z,2.4nm,0.2s						
DAVA	**Damuels**	**3.03**	**265**	*e*Pg	**Pg**	**09 52 40.6**	**-0.1**
DAVA				*e*Sg	**Sg**	**09 53 20.9**	**+0.9**
TRIB	**Obertriebel**	**3.07**	**333**	*e*Sg	**Sg**	**09 53 20.4**	**-1.1**
UPC	**Upice**	**3.08**	**21**	*e*PG	**Pb**	**09 52 39.4**	**+1.4**
UPC				*e*SG	**Sg**	**09 53 21.1**	**-0.6**
	comp=Z,54nm,0.6s						
VYHS	**Vyhne**	**3.15**	**73**	*e*PN	**Pn**	**09 52 34.2**	**+1.3**
VYHS				*e*SN	**Sn**	**09 53 11.6**	**+0.8**
CHVC	**Chvalec**	**3.17**	**20**	*e*PN	**Pn**	**09 52 33.3**	**+0.2**
CHVC				*e*SG	**Sg**	**09 53 24.5**	**0.0**
	comp=Z,29nm,0.5s						
OSTC	**Ostas**	**3.18**	**22**	*e*PN	**Pn**	**09 52 33.7**	**+0.4**
OSTC				*e*PG	**Pb**	**09 52 41.1**	**+1.5**
OSTC				*e*SG	**Sg**	**09 53 24.6**	**-0.2**
	comp=Z,54nm,0.9s						
BRG	**Berggiesshubel**	**3.25**	**356**	PG	**Pg**	**09 52 43.6**	**-1.4**
BRG				SN	**Sn**	**09 53 12.3**	**-0.9**
BRG				SG	**Sg**	**09 53 26.9**	**-0.2**
	comp=Z,24nm,0.6s						
OKC	**Ostrava-Krasne**	**3.36**	**48**	*e*SG	**Sg**	**09 53 29.5**	**-1.1**
	comp=Z,13nm,0.4s						
MOX	**Moxa**	**3.50**	**331**	*e*Pn	**Pn**	**09 52 38.9**	**+1.3**
MOX				*e*Sg	**Sg**	**09 53 33.7**	**-1.3**
CLL	**Collm**	**3.77**	**347**	*e*(Pn)	**Pn**	**09 52 43.0**	**+1.6**
CLL				*e*Pg	**Pg**	**09 52 54.0**	**-1.0**
CLL				*e*		09 53 30.0	
CLL				*i* Sg	**Sg**	**09 53 41.4**	**-2.5**
	comp=Z,39nm,0.6s						
CLL	**Collm**	**3.77**	**347**	*e*Sg	**Sg**	**09 53 43.2**	**-0.7**
BFO	**Black Forest**	**4.08**	**282**	*e*Pn	**Pn**	**09 52 46.4**	**+0.8**
BFO				*e*Sg	**Sg**	**09 53 52.2**	**-1.6**
CDF	**Champ du Feu**	**4.79**	**282**	*e*Pg	**Pg**	**09 53 16.0**	**+1.6**
CDF				*e*Sg	**Sg**	**09 54 16.0**	**-0.4**
	comp=Z,6.1nm,0.4s						
HINF	**Hinteralfeld**	**5.04**	**275**	*e*Sn	**Sn**	**09 53 55.1**	**-2.3**
	comp=Z,3.2nm,0.3s						
HINF				*e*Sg	**Sg**	**09 54 25.2**	**+0.7**
	comp=Z,7.7nm,0.5s						
HAU	**Haudompre**	**5.38**	**277**	*e*Pg	**Pg**	**09 53 23.4**	**-2.4**
HAU				*e*Sn	**Sn**	**09 54 05.7**	**0.0**
HAU				*e*Sg	**Sg**	**09 54 34.7**	**-0.7**
	comp=Z,6.9nm,0.4s						
LPL	**La Plagne**	**5.64**	**251**	*e*Pn	**Pn**	**09 53 08.8**	**+1.5**
CABF	**La Chapelle**	**5.71**	**263**	*e*Pn	**Pn**	**09 53 11.3**	**+3.2**
CABF				*e*Sn	**Sn**	**09 54 08.5**	**-5.4**
ORIF	**Oris-en-Rattie**	**6.45**	**248**	*e*Pn	**Pn**	**09 53 19.9**	**+1.7**
GIVF	**Givet**	**6.73**	**295**	*e*Pn	**Pn**	**09 53 24.7**	**+2.7**
GIVF				*e*Sn	**Sn**	**09 54 34.4**	**-4.5**
GIVF				*e*Sg	**Sg**	**09 55 15.5**	**-3.2**
BAIF	**Baives**	**7.10**	**294**	*e*Pn	**Pn**	**09 53 28.8**	**+1.8**
BAIF				*e*Sn	**Sn**	**09 54 46.4**	**-1.5**
VIVF	**Saint-Julien-l**	**7.24**	**251**	*e*Pn	**Pn**	**09 53 28.8**	**-0.3**

MEX 02 10:03:52.0±0.8, 15°.92N×98°.07W, h16km±14km, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.47**	**353**	*e*P	Pg	10 04 00.1	-1.4
PNIG				*i* S	Sg	10 04 06.1	-2.0
TLIG	**Tlapa**	**1.70**	**344**	*e*P	Pn	10 04 18.3	-2.8
TLIG				*i* S	Sn	10 04 37.3	-5.4

*ISCJB **02** 10:09:04.8±0.4, 37°.88N±0°.02×21°.36E±0°.02, h10km±2km, Error ellipse: s-maj=3.2km s-min=2.5km az=35.0*
*ATH **02** 10:09:04.3, 37°.88N×21°.37E, h21km±1km, ML3.1/31, Error ellipse: s-maj=1.1km s-min=0.6km az=328.0*
*THE **02** 10:09:04.8, 37°.87N×21°.37E, h0km±1km, ML3.2/18, Error ellipse: s-maj=1.5km s-min=0.4km az=229.0*
*IDC **02** 10:09:35.7±5.2, 40°.83N×25°.33E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.3/36, mbtmp3.6/4, Error ellipse: s-maj=109.6km s-min=44.1km az=21.0*

ISC 02 10:09:04.9±0.8, 37°.88N±0°.02×21°.37E±0°.02, h17km±5km, n94, σ0.71/140, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTN	**Vitineika**	**0.15**	**284**	P	**Pg**	**10 09 09.3**	**+0.2**
VTN	**Vitineika**	**0.15**	**284**	P	**Pg**	**10 09 09.5**	**+0.4**
VTN				S	**Sb**	**10 09 12.9**	**+0.7**
RLS	**Riolos of Patr**	**0.19**	**23**	P	**Pg**	**10 09 09.2**	**-0.4**
RLS				S	**Sg**	**10 09 11.9**	**-1.0**
RLS	**Riolos of Patr**	**0.19**	**23**	P	**Pg**	**10 09 09.3**	**-0.4**
RLS				S	**Sg**	**10 09 13.0**	**+0.1**
RLS				AML	AML	10 09 13.0	
	comp=N,42251μm,0.2s						
RLS				AML	AML	10 09 13.2	
	comp=E,40018μm,0.2s						
DRO	**Drossia**	**0.28**	**75**	P	**Pg**	**10 09 10.6**	**-0.5**
DRO				S	**Sg**	**10 09 15.0**	**-0.2**
DRO	**Drossia**	**0.28**	**75**	P	**Pg**	**10 09 10.6**	**-0.5**
DRO				S	**Sg**	**10 09 15.8**	**+0.6**
DRO				AML	AML	10 09 16.2	
	comp=N,53061μm,0.3s						
DRO				AML	AML	10 09 18.3	
	comp=E,44992μm,0.2s						
AXS	**Araxos**	**0.32**	**1**	P	**Pg**	**10 09 11.2**	**-0.4**
AXS				S	**Sg**	**10 09 16.0**	**-0.3**
AXS	**Araxos**	**0.32**	**1**	P	**Pg**	**10 09 11.3**	**-0.4**
AXS				S	**Sg**	**10 09 16.2**	**-0.1**
AXS				AML	AML	10 09 19.6	
	comp=E,9538μm,0.3s						
AXS				AML	AML	10 09 19.7	
	comp=N,10507μm,0.2s						
AMT	**Artemida-Makis**	**0.44**	**142**	P	**Pg**	**10 09 13.4**	**-0.4**
AMT				S	**Sg**	**10 09 20.2**	**+0.3**
AMT	**Artemida-Makis**	**0.44**	**142**	P	**Pg**	**10 09 13.5**	**-0.4**
AMT				S	**Sg**	**10 09 19.8**	**-0.1**
AMT				AML	AML	10 09 24.1	
	comp=N,7108μm,0.3s						
AMT				AML	AML	10 09 24.6	
	comp=E,7106μm,0.3s						
KFL	**Anninata**	**0.51**	**297**	P	**Pg**	**10 09 15.0**	**-0.2**
KFL				S	**Sg**	**10 09 22.8**	**+0.6**
KFL	**Anninata**	**0.51**	**297**	P	**Pg**	**10 09 15.0**	**-0.2**
KFL				S	**Sg**	**10 09 22.4**	**+0.2**
KFL				AML	AML	10 09 30.4	
	comp=E,7092μm,0.3s						
KFL				AML	AML	10 09 30.6	
	comp=N,9840μm,0.4s						
UPR	**University Cam**	**0.52**	**39**	P	**Pg**	**10 09 15.3**	**0.0**
UPR				S	**Sg**	**10 09 22.3**	**-0.1**
LAKA	**Lakka**	**0.60**	**53**	P	**Pg**	**10 09 16.2**	**-0.6**
LAKA				S	**Sb**	**10 09 25.7**	**+0.5**
LAKA	**Lakka**	**0.60**	**53**	P	**Pg**	**10 09 16.2**	**-0.6**
LAKA				S	**Sg**	**10 09 24.5**	**-0.3**
LAKA				AML	AML	10 09 27.8	
	comp=E,4494μm,0.6s						
LAKA				AML	AML	10 09 28.9	
	comp=N,3601μm,0.5s						
KLV	**Kalavryta, Ach**	**0.64**	**75**	P	**Pg**	**10 09 16.4**	**-1.1**
KLV				S	**Sg**	**10 09 26.2**	**+0.1**
KLV	**Kalavryta, Ach**	**0.64**	**75**	P	**Pg**	**10 09 16.2**	**-1.4**
KLV				S	**Sb**	**10 09 26.7**	**+0.3**
KLV				AML	AML	10 09 32.0	
	comp=E,2962μm,0.3s						
KLV				AML	AML	10 09 32.4	
	comp=N,3730μm,0.4s						
VLS	**Valsamata**	**0.69**	**296**	P	**Pg**	**10 09 17.3**	**-1.1**
VLS				S	**Sb**	**10 09 28.1**	**+0.5**
VLS	**Valsamata**	**0.69**	**296**	P	**Pg**	**10 09 17.2**	**-1.2**
EFP	**Efpalio**	**0.69**	**38**	P	**Pg**	**10 09 17.8**	**-0.7**
EFP				S	**Sb**	**10 09 28.8**	**+1.0**
EFP	**Efpalio**	**0.69**	**38**	P	**Pg**	**10 09 17.9**	**-0.7**
EFP				S	**Sg**	**10 09 27.7**	**0.0**
EFP				AML	AML	10 09 31.1	
	comp=E,4052μm,0.3s						
EFP				AML	AML	10 09 31.2	
	comp=N,4490μm,0.3s						
ALIK	**Aliki, Aigiali**	**0.70**	**57**	P	**Pg**	**10 09 18.2**	**-0.4**
ALIK				S	**Sb**	**10 09 28.5**	**+0.5**
TRIZ	**Trizonia**	**0.74**	**49**	P	**Pb**	**10 09 18.5**	**-0.8**
TRIZ				S	**Sb**	**10 09 30.2**	**+1.1**
TRIZ	**Trizonia**	**0.74**	**49**	P	**Pb**	**10 09 18.5**	**-0.8**
TRIZ				S	**Sb**	**10 09 29.7**	**+0.6**
PVO	**Paravola**	**0.75**	**9**	P	**Pb**	**10 09 19.4**	**-0.1**
PVO	**Paravola**	**0.75**	**9**	P	**Pb**	**10 09 19.4**	**-0.1**
PVO				S	**Sb**	**10 09 28.9**	**-0.5**
PVO				AML	AML	10 09 33.5	
	comp=E,3944μm,0.3s						
PVO				AML	AML	10 09 40.2	
	comp=N,2423μm,0.5s						
SERG	**Sergoula**	**0.76**	**45**	P	**Pb**	**10 09 18.9**	**-0.8**
SERG				S	**Sb**	**10 09 30.1**	**+0.3**
SERG	**Sergoula**	**0.76**	**45**	P	**Pb**	**10 09 19.1**	**-0.7**
SERG				S	**Sb**	**10 09 29.8**	**0.0**
SERG				AML	AML	10 09 33.4	
	comp=E,6062μm,0.3s						
SERG				AML	AML	10 09 33.5	
	comp=N,7077μm,0.3s						
GUR	**Goura**	**0.77**	**86**	P	**Pb**	**10 09 18.6**	**-1.4**
GUR	**Goura**	**0.77**	**86**	P	**Pb**	**10 09 18.9**	**-1.1**
GUR				S	**Sb**	**10 09 30.4**	**+0.2**
GUR				AML	AML	10 09 32.6	
	comp=E,20072μm,0.5s						
GUR				AML	AML	10 09 34.0	
	comp=N,14460μm,0.3s						
KALE	**Kalithea**	**0.79**	**50**	P	**Pb**	**10 09 19.4**	**-0.9**
KALE				S	**Sg**	**10 09 31.9**	**+1.0**
KALE	**Kalithea**	**0.79**	**50**	P	**Pb**	**10 09 19.5**	**-0.9**
KALE				S	**Sg**	**10 09 31.3**	**+0.3**
KALE				AML	AML	10 09 34.9	
	comp=N,6820μm,0.4s						
KALE				AML	AML	10 09 36.0	
	comp=E,4025μm,0.2s						
TRIP	**Tripoli**	**0.80**	**116**	P	**Pb**	**10 09 19.5**	**-0.9**
TRIP				S	**Sb**	**10 09 31.0**	**+0.1**
TRIP	**Tripoli**	**0.80**	**116**	P	**Pb**	**10 09 19.4**	**-1.0**
TRIP				S	**Sb**	**10 09 31.1**	**+0.2**
TRIP				AML	AML	10 09 36.1	
	comp=N,3458μm,0.7s						
TRIP				AML	AML	10 09 40.4	
	comp=E,3574μm,0.6s						
ITM	**Ithomi**	**0.83**	**148**	P	**Pb**	**10 09 19.9**	**-1.0**
ITM	**Ithomi**	**0.83**	**148**	P	**Pb**	**10 09 20.3**	**-0.6**
ITM				S	**Sb**	**10 09 31.8**	**0.0**
ITM				AML	AML	10 09 38.0	
	comp=N,1212μm,0.5s						
ITM				AML	AML	10 09 39.4	
	comp=E,1510μm,0.7s						
ANX	**Ano Chora**	**0.83**	**31**	P	**Pb**	**10 09 20.1**	**-1.0**
ANX				S	**Sg**	**10 09 32.7**	**+0.4**
ANX	**Ano Chora**	**0.83**	**31**	P	**Pb**	**10 09 20.4**	**-0.7**
ANX				S	**Sb**	**10 09 31.5**	**-0.5**
ANX				AML	AML	10 09 37.0	
	comp=N,4875μm,0.5s						
ANX				AML	AML	10 09 37.0	
	comp=E,4481μm,0.6s						
FSK	**Fiskardo**	**0.86**	**312**	P	**Pb**	**10 09 20.4**	**-1.0**
FSK				S	**Sg**	**10 09 33.9**	**+0.8**
FSK	**Fiskardo**	**0.86**	**312**	P	**Pb**	**10 09 20.4**	**-1.0**
FSK				S	**Sb**	**10 09 32.7**	**0.0**
MGNA	**Meganis**	**0.90**	**330**	P	**Pb**	**10 09 22.4**	**+0.3**
MGNA				S	**Sb**	**10 09 34.1**	**+0.3**
EVGI	**Lefkada island**	**0.93**	**323**	P	**Pb**	**10 09 21.9**	**-0.7**
EVGI				S	**Sn**	**10 09 36.9**	**+0.7**
EVGI	**Lefkada island**	**0.93**	**323**	P	**Pb**	**10 09 22.2**	**-0.4**
EVGI				S	**Sb**	**10 09 34.8**	**+0.1**
VLX	**Vlachokerasia**	**0.95**	**122**	P	**Pb**	**10 09 22.1**	**-0.9**
VLX	**Vlachokerasia**	**0.95**	**122**	P	**Pb**	**10 09 21.8**	**-1.2**
VLX				S	**Sg**	**10 09 36.0**	**+0.1**
VLX				AML	AML	10 09 45.8	
	comp=N,2009μm,0.7s						
VLX				AML	AML	10 09 47.1	
	comp=E,2858μm,0.6s						
PYL	**PYLOS**	**1.03**	**163**	P	**Pb**	**10 09 23.3**	**-1.0**
PYL				S	**Sn**	**10 09 39.4**	**+0.9**
PYL	**PYLOS**	**1.03**	**163**	P	**Pb**	**10 09 23.4**	**-0.8**
DSF	**Desfina**	**1.05**	**59**	P	**Pb**	**10 09 23.9**	**-0.9**
DSF				S	**Sn**	**10 09 40.5**	**+1.1**
DSF	**Desfina**	**1.05**	**59**	P	**Pb**	**10 09 23.9**	**-0.9**
DSF				AML	AML	10 09 44.4	
	comp=N,1600μm,0.4s						
DSF				AML	AML	10 09 45.4	
	comp=E,1487μm,0.3s						
LKD2	**Lefkada island**	**1.07**	**329**	P	**Pb**	**10 09 24.1**	**-0.9**
LKD2	**Lefkada island**	**1.07**	**329**	P	**Pb**	**10 09 24.4**	**-0.6**
LKD2				AML	AML	10 09 46.7	
	comp=E,3579μm,0.5s						
LKD2				AML	AML	10 09 47.3	
	comp=N,2984μm,0.6s						
DLFA	**Delphi**	**1.07**	**56**	P	**Pb**	**10 09 23.9**	**-1.1**
DLFA				S	**Sg**	**10 09 39.9**	**+0.2**
EVR	**Evrytania**	**1.09**	**18**	P	**Pb**	**10 09 25.3**	**-0.1**
EVR	**Evrytania**	**1.09**	**18**	P	**Pb**	**10 09 25.5**	**0.0**
EVR				AML	AML	10 09 50.0	
	comp=N,853μm,0.6s						
EVR				AML	AML	10 09 52.2	
	comp=E,1040μm,0.6s						
TSLK	**Tsoukalades, L**	**1.10**	**329**	P	**Pb**	**10 09 25.1**	**-0.4**
TSLK	**Tsoukalades, L**	**1.10**	**329**	P	**Pb**	**10 09 25.1**	**-0.4**
LOUT	**Loutraki**	**1.27**	**85**	P	**Pn**	**10 09 28.1**	**+0.1**
LOUT	**Loutraki**	**1.27**	**85**	P	**Pn**	**10 09 27.7**	**-0.3**
LOUT				AML	AML	10 09 52.4	
	comp=E,610μm,0.6s						
LOUT				AML	AML	10 09 56.8	
	comp=N,317μm,0.5s						
AGG	**Agios Georgios**	**1.37**	**33**	P	**Pb**	**10 09 30.2**	**+0.1**
AGG				S	**Sg**	**10 09 49.8**	**+0.7**
AGG	**Agios Georgios**	**1.37**	**33**	P	**Pb**	**10 09 30.4**	**+0.2**
AGG				AML	AML	10 09 53.2	
	comp=E,882μm,0.7s						
AGG				AML	AML	10 09 58.4	
	comp=N,704μm,0.6s						
EPID	**Epidavros**	**1.41**	**100**	P	**Pn**	**10 09 30.7**	**+0.8**
LKR	**Lokris**	**1.50**	**59**	P	**Pn**	**10 09 31.5**	**+0.5**
LKR	**Lokris**	**1.50**	**59**	P	**Pn**	**10 09 31.6**	**+0.6**
LKR				AML	AML	10 09 58.4	
	comp=N,779μm,0.5s						
LKR				AML	AML

STON	Ston	5.72 332	ePn	Pn	10 10 28.5	-0.5
UDBI	Udbina	7.87 329	ePn	Pn	10 10 58.1	-0.6
FINES	FINESS Array B	23.77 6	P	P	10 14 16.5	+0.2
	comp=N,0.9nm,0.8s,baz=176,slow=9.8,SNR=4.0					
MKAR	Makanchi Array	44.89 58	P	P	10 17 18.1	-0.3
	comp=N,1.1nm,0.4s,baz=274,slow=7.1,SNR=18					
ZALV	Zalesovo Beam	45.39 48	P	P	10 17 21.3	-1.0
	comp=N,0.7nm,0.4s,baz=287,slow=9.2,SNR=2.8					
YKA	Yellowknife Ar	73.90 340	P	P	10 21 01.5	+23
	comp=N,0.2nm,0.8s,baz=35,slow=5.5,SNR=2.9					

ISCJB ***02*** *10:16:09.7±0.6,22°.1S±0°.1×177°.4W±0°.1,h150km, mb3.9/12,Error ellipse: s-maj=17.0km s-min=15.2km az=152.3*

IDC ***02*** *10:16:13.3±7.4,22°.07S×177°.35W,h170km±65km, mb3.7/12,mb1 4.0/13,mb1mx3.8/27,mbtmp4.3/13,Error ellipse: s-maj=24.8km s-min=18.9km az=40.0*

ISC 02 10:16:11.1±0.6,22°.1S±0°.1×177°.2W±0°.1,h150km,n25, σ2%12/25,mb4.0/12,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.21	267	P	P	10 19 46.0	+6.3
	1.7nm,0.3s,baz=80,slow=19,SNR=21						
URZ	Urewera	16.82	196	P	P	10 19 58.3	+0.9
	4.5nm,0.3s,baz=313,slow=1.6,SNR=33						
URZ				S	S	10 22 49.8	-15
	0.5nm,0.3s,baz=184,slow=22,SNR=1.7						
STKA	Stephens Creek	37.83	246	P	P	10 23 12.8	-0.5
	4.0nm,0.5s,baz=99,slow=10,SNR=25						
ASAR	Alice Springs	44.94	258	P	P	10 24 10.5	-0.9
	4.4nm,0.7s,baz=95,slow=7.6,SNR=52						
ASAR				PcP	PcP	10 25 50.2	0.0
	1.0nm,0.5s,baz=108,slow=4.1,SNR=7.7						
WRA	Warramunga Arr	45.18	263	P	P	10 24 11.6	-1.7
	3.2nm,0.6s,baz=100,slow=7.5,SNR=7.0						
JAY	Jayapura	45.31	289	P	P	10 24 12.6	-1.9
	5.9nm,0.5s,baz=120,slow=3.8,SNR=9.7						
FITZ	Fitzroy Crossi	53.61	263	P	P	10 25 15.3	-1.9
	4.3nm,0.5s,baz=84,slow=5.7,SNR=19						
VNDA	Vanda	56.37	185	P	P	10 25 36.7	+0.5
	1.9nm,0.9s,baz=346,slow=8.2,SNR=8.8						
MAW	Mawson	80.31	200	P	P	10 28 04.4	-0.7
	1.6nm,0.6s,baz=122,slow=6.4,SNR=6.4						
NVAR	Mina Array Bea	81.66	43	P	P	10 28 14.1	+1.1
	0.3nm,0.6s,baz=224,slow=7.3,SNR=2.4						
VNA3	Neumayer Olymp	86.48	176	P	P	10 28 35.3	-1.3
VNA2	Neumayer--Watz	86.93	177	P	P	10 28 37.7	-1.1
	baz=187,slow=3.9						
VNA1	Neumayer--Stat	87.15	176	P	P	10 28 37.1	-2.7
TXAR	Lajitas Array	87.27	57	P	P	10 28 42.1	+0.9
	0.8nm,0.9s,baz=242,slow=5.3,SNR=4.1						
PLCA	Paso Flores	87.59	133	P	P	10 28 43.4	+0.7
	1.5nm,0.8s,baz=266,slow=9.0,SNR=3.1						
PDAR	Pinedale Array	89.60	43	P	P	10 28 51.8	-0.2
	0.3nm,0.8s,baz=132,slow=4.4,SNR=3.8						
CMAR	Chiang Mai Arr	91.40	289	P	P	10 29 00.2	-0.4
	1.1nm,0.8s,baz=132,slow=3.2,SNR=5.8						
MKAR	Makanchi Array	112.88	313	PKiKP	PKiKP	10 34 30.6	+0.4
	5.1nm,1.3s,baz=196,slow=38,SNR=2.1						
BVAR	Borovoye Array	120.82	319	PKP	PKPdf	10 34 45.0	-0.2
	0.7nm,0.5s,baz=63,slow=0.7,SNR=5.6						
ARCES	ARCESS Array B	130.65	350	PKP	PKPdf	10 35 01.2	-2.3
	6.7nm,0.3s,baz=343,slow=1.3,SNR=8.0						
FINES	FINESS Array B	137.54	344	PKP	PKPdf	10 35 16.3	-0.3
	1.4nm,0.9s,baz=8.4,slow=4.8,SNR=2.2						
AKASG	Malin Array Be	144.81	331	PKP	PKPab	10 35 26.9	-2.5
	2.2nm,0.4s,baz=45,slow=4.2,SNR=14						
BRTR	Keskin Array B	148.50	311	PKPbc	PKPbc	10 35 40.6	+0.1
	1.7nm,0.6s,baz=130,slow=4.0,SNR=5.5						
GERES	GERESS Array B	151.97	345	PKPbc	PKPdf	10 35 47.1	+5.3
	0.7nm,0.7s,baz=192,slow=36,SNR=2.0						
TORD	Torodi Ar. Bea	171.01	173	PKPab	PKPab	10 37 20.6	-1.1
	2.3nm,1.1s,baz=150,slow=4.3,SNR=5.0						

NIED ***02*** *10:16:00,23°.90N×121°.00E,h29km,Mw3.9 Best double couple: M0:8.97000×10^14 NP1:φs:302.00000°,δ33.00000°, λ-22.00000°. NP2:φs:51.00000°,δ78.00000°, λ-121.00000°.*

IDC ***02*** *10:16:57.6±3.0,23°.98N×120°.98E,h0km,mb3.8/7, mb1 3.8/8,mb1mx3.6/43,mbtmp3.8/8,ML2.9/1,MS3.5/3, Ms1 3.5/3,ms1mx2.7/52,Error ellipse: s-maj=61.4km s-min=31.4km az=159.0*

BJI ***02*** *10:16:57.5±0.0,23°.87N×121°.05E,h13km,mb4.2/2, ML3.6/3,Ms3.9/4,Ms7 3.8/3*

JMA ***02*** *10:16:57.5±0.1,23°.87N×120°.96E,h0km,M3.9*

ASIES ***02*** *10:16:58.7,23°.87N×121°.00E,h19km,MW3.5*

TAP ***02*** *10:16:58.5,23°.87N×120°.98E,h14km,ML4.4,B*

ISCJB ***02*** *10:16:59.1±0.2,23°.874N±0°.008×121°.00E±0°.01, h13km±1km,mb4.0/8,MS3.8/4,Error ellipse: s-maj=1.7km s-min=1.2km az=33.5*

ISC 02 10:16:58.9±0.7,23°.86N±0°.01×120°.99E±0°.01,h13km±4km, n148,σ0%67/229,mb4.0/8,MS3.6/4,8C-43D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	Suanglung	0.08	204	⇓P	Pg	10 17 01.6	0.0
	baz=195						
SSLB				S	Sg	10 17 03.6	0.0
	baz=195						
SMLT	Sun Moon Lake	0.09	287	⇑iP	Pg	10 17 01.8	0.0
	baz=284						
SMLT				S	Sg	10 17 03.9	0.0
	baz=284						
TYC	Yuchr	0.13	291	⇑iP	Pg	10 17 02.1	-0.1
	baz=293						
TYC				i S	Sg	10 17 04.5	-0.1
	baz=293						
VWDT	VWDT	0.17	126	⇓P	Pb	10 17 03.7	-0.2
	baz=125						
VWDT				eS	Sb	10 17 07.0	-0.3
	baz=125						
DPDB	Guoxing	0.18	342	⇑iP	Pg	10 17 03.0	-0.1
	baz=352						
DPDB				i S	Sg	10 17 06.0	-0.1
	baz=352						
OWD	Renai	0.20	61	⇓P	Pg	10 17 03.7	+0.4
	baz=63						
OWD				S	Sg	10 17 06.9	+0.4
	baz=63						
WHYT	Xinyi Township	0.20	218	P	Pg	10 17 03.7	+0.3
	baz=214						
WHYT				S	Sb	10 17 07.5	-0.7
	baz=214						
CHGB	Renai	0.26	40	⇓P	Pg	10 17 04.7	+0.1
	baz=48						
CHGB				S	Sg	10 17 08.5	+0.1
	baz=48						
WNT	Mingjian	0.28	274	⇓iP	Pg	10 17 05.4	+0.7
	baz=273						
WNT				eS	Sb	10 17 10.1	-0.3
	baz=273						
YUS	Yu-Shan	0.37	185	⇓iP	Pg	10 17 06.7	+0.2
	baz=175						
YUS				S	Sb	10 17 12.7	-0.7
	baz=175						
WHF	Hehuan Shan	0.38	41	⇓iP	Pg	10 17 07.1	+0.4
	baz=51						
WHF				S	Sg	10 17 12.4	+0.4
	baz=51						
ALS	Alishan	0.38	206	⇑iP	Pb	10 17 07.3	-0.4
	baz=193						
ALS				i S	Sb	10 17 13.3	-0.3
	baz=193						
CHN5	Tsauling	0.39	228	⇓iP	Pb	10 17 07.2	-0.4
	baz=226						
CHN5				i S	Sb	10 17 13.7	+0.2
	baz=226						
TCU	Taichung	0.41	315	P	Pg	10 17 07.7	+0.7
	baz=302						
TCU				eS	Sg	10 17 13.5	+1.1
	baz=302						
ESL	Shilin	0.41	96	⇓iP	Pb	10 17 07.6	-0.4
	baz=87						
ESL				S	Sb	10 17 13.5	-0.6
	baz=87						
WHP	Taichung City	0.42	355	⇑iP	Pg	10 17 07.1	-0.2
	baz=359						
WHP				S	Sg	10 17 14.0	+1.1
	baz=359						
TDCB	Techi	0.42	21	⇓P	Pg	10 17 06.9	-0.5
	baz=26						
TDCB				eS	Sg	10 17 11.7	-1.4
	baz=26						
WGK	Gukeng	0.43	246	⇓iP	Pb	10 17 08.1	-0.2
	baz=245						
WGK				S	Sb	10 17 14.7	+0.1
	baz=245						
TWT	Tachien	0.43	23	⇓P	Pg	10 17 06.9	-0.6
	baz=30						
TWT				eS	Sg	10 17 12.1	-1.2
	baz=30						
EGFH	Guangfu	0.44	115	⇓P	Pb	10 17 08.1	-0.5
	baz=115						
EGFH				eS	Sb	10 17 14.4	-0.7
	baz=115						
WDLH	Douliu	0.45	248	⇓P	Pb	10 17 08.5	-0.1
	baz=247						
WDLH				eS	Sb	10 17 15.7	+0.5
	baz=247						
WCHH	Zhanghua	0.45	299	⇓P	Pg	10 17 08.5	+0.7
	baz=299						
WCHH				S	Sb	10 17 15.3	0.0
	baz=299						
EHY	Hungye	0.47	139	⇓iP	Pb	10 17 08.7	-0.2
	baz=132						
EHY				S	Sb	10 17 15.5	-0.2
	baz=132						
TWQ1	Liyutan	0.53	338	⇓iP	Pg	10 17 09.9	+0.7
	baz=340						
TWQ1				eS	Sb	10 17 17.6	0.0
	baz=340						
HGSD	Ruisui	0.54	132	⇓P	Pb	10 17 10.4	+0.2
	baz=129						
HGSD				eS	Sb	10 17 17.9	+0.1
	baz=129						
YULB	Yu-li	0.54	148	⇓P	Pb	10 17 09.9	-0.3
	baz=147						
YULB				eS	Sb	10 17 17.3	-0.7
	baz=147						
ENLB	Shoufeng	0.56	85	⇓P	Pb	10 17 10.4	-0.1
	baz=86						
ENLB				eS	Sb	10 17 18.5	0.0
	baz=86						
ETLH	Xiulin Townshi	0.57	52	⇓P	Pg	10 17 09.9	-0.1
	baz=51						
ETLH				S	Sg	10 17 17.2	-0.4
	baz=51						
HWA	Hwalien	0.58	78	⇓P	Pb	10 17 10.9	+0.1
	baz=79						
HWA				S	Sb	10 17 19.2	+0.3
	baz=79						
RLNB	Erlin	0.58	273	⇓P	Pg	10 17 10.4	+0.3
	baz=273						
RLNB				S	Sb	10 17 19.0	+0.1
	baz=273						
TWF1	Yuli	0.58	151	⇓iP	Pb	10 17 10.7	-0.1
	baz=149						
TWF1				S	Sb	10 17 18.7	-0.2
	baz=149						
WDJ	Dajia District	0.58	327	eP	Pb	10 17 11.1	+0.1
	baz=328						
WDJ				eS	Sb	10 17 20.0	+0.9
	baz=328						
NSY	Sanyi	0.59	340	⇓iP	Pb	10 17 11.6	+0.5
	baz=341						
NSY				eS	Sb	10 17 20.2	+0.8
	baz=341						
CHN4	Tsaushan	0.62	216	⇓iP	Pb	10 17 11.5	-0.1
	baz=215						
CHN4				S	Sb	10 17 21.0	+0.8
	baz=215						
CHY	Chiayi	0.63	235	⇓P	Pb	10 17 11.6	-0.1
	baz=234						
CHY				S	Sb	10 17 21.3	+0.8
	baz=234						
NACB	Ninganchiao	0.64	60	⇓P	Pg	10 17 11.1	-0.2
	baz=70						
NACB				S	Sg	10 17 19.5	-0.2
	baz=70						
PTSB	Yuanli	0.64	336	⇓iP	Pb	10 17 12.3	+0.3
	baz=337						
PTSB				eS	Sb	10 17 21.5	+0.6
	baz=337						
TPUB	Ta-pu	0.65	211	⇓iP	Pb	10 17 11.7	-0.3
	baz=210						
TPUB				S	Sb	10 17 21.2	+0.3
	baz=210						
WTCT	Ta-ch'eng	0.65	271	⇓P	Pg	10 17 11.4	-0.1
	baz=270						
WTCT				S	Sb	10 17 21.2	+0.2
	baz=270						
ELDTW	Lidau	0.67	178	⇓P	Pg	10 17 11.5	-0.3
	baz=183						
ELDTW				eS	Sb	10 17 21.0	-0.6
	baz=183						
NNSB	Datong	0.67	32	⇓P	Pg	10 17 11.2	-0.8
	baz=40						
NNSB				eS	Sg	10 17 19.2	-1.7
	baz=40						
NNS	Nan Shan	0.68	31	eP	Pg	10 17 11.4	-0.7
	baz=39						
NNS				eS	Sg	10 17 20.2	-0.9
	baz=39						
WTP	Ta-pu	0.70	210	⇓iP	Pg	10 17 12.6	+0.2
	baz=208						
WTP				S	Sb	10 17 22.9	+0.4
	baz=208						
NMLH	Miaoli	0.70	345	eP	Pb	10 17 13.2	+0.2
	baz=346						
NMLH				eS	Sb	10 17 23.4	+0.9
	baz=346						
WMLT	Mailiao	0.70	266	eP	Pg	10 17 12.5	0.0
	baz=266						
WMLT				eS	Sb	10 17 22.9	+0.3
	baz=266						
STYT	Tauyuan	0.72	197	P	Pb	10 17 13.3	0.0
	baz=195						
STYT				eS	Sb	10 17 23.4	+0.2
	baz=195						
WLGB	Puzi	0.74	239	eP	Pg	10 17 13.3	+0.2
	baz=239						
WLGB				eS	Sb	10 17 24.5	+1.0
	baz=239						
WSF	Szhu	0.74	253	eP	Pg	10 17 12.7	-0.5
	baz=252						
WSF				S	Sb	10 17 23.6	+0.1
	baz=252						
TWK	Hsinying	0.75	218	⇓iP	Pg	10 17 13.5	+0.1
	baz=216						
TWK				eS	Sb	10 17 24.3	+0.5
	baz=216						
NSTT	Nanjuang	0.77	1	eP	Pg	10 17 13.8	0.0
	baz=10.0						
NSTT				eS	Sb	10 17 24.8	+0.3
	baz=10.0						
SNST	Tainan City	0.78	215	eP	Pb	10 17 14.1	-0.2
	baz=214						
SNST				eS	Sb	10 17 25.1	+0.4
	baz=214						
LIOB	Emei	0.79	2	eP	Pg	10 17 14.3	+0.2
	baz=10.0						
LIOB				eS	Sg	10 17 25.0	+0.6
	baz=10.0						
CHN1	Nanshi	0.79	212	⇓iP	Pg	10 17 14.1	-0.2
	baz=223						
CHN1				S	Sb	10 17 25.8	+0.6
	baz=223						
CHKT	Chengkung	0.83	155	⇑iP	Pn	10 17 16.0	-0.2
	baz=135						
CHKT				eS	Sn	10 17 28.5	+0.2
	baz=135						
CHN8	Yiju	0.88	235	eP	Pb	10 17 15.1	-0.8
	baz=246						
CHN8				eS	Sn	10 17 28.5	-1.0
	baz=246						
NSK	Sanguang	0.88	22	⇓iP	Pb	10 17 15.1	-1.0
	baz=34						
YHNB	Yeheng	0.88	24	⇓P	Pb	10 17 15.1	-1.0
	baz=24						
YHNB				eS	Sb	10 17 27.3	-0.5
	baz=24						
NDT	Datong Townshi	0.88	33	eP	Pb	10 17 15.1	-1.0
	baz=33						
NDT				eS	Sb	10 17 27.8	0.0
	baz=33						
ENA	Nanau	0.89	50	P	Pb	10 17 15.7	-0.5
	baz=51						
ENA				eS	Sb	10 17 26.8	-1.2
	baz=51						
SLGT	Liugui	0.92	200	eP	Pg	10 17 16.7	+0.1
	baz=199						
SLGT				eS	Sn	10 17 30.0	-0.5
	baz=199						
SBCB	Hsinchu	0.93	360	eP	Pb	10 17 17.1	+0.2
	baz=343						
HSN	Hsinchu	0.94	359	eP	Pn	10 17 18.5	+0.7
	baz=2.0						
HSN				eS	Sn	10 17 31.3	+0.2
	baz=2.0						
CHN3	Shinhua	0.97	216	eP	Pn	10 17 17.8	-0.4
	baz=228						
CHN3				eS	Sn	10 17 32.5	+0.8
	baz=228						
SCLT	Jiali	1.00	227	P	Pb	10 17 18.0	0.0
	baz=226						
SCLT				eS	Sn	10 17 33.3	+0.9
	baz=226						
WLTB	Daxi	1.02	14	eP	Pb	10 17 18.7	+0.3
	baz=22						
WLTB				eS	Sg	10 17 32.2	+0.4
	baz=22						
NWLT	Wulai	1.03	27	eP	Pb	10 17 18.1	-0.5
	baz=29						
TWG	Pinlang	1.03	176	P	Pn	10 17 18.9	-0.2
	baz=166						
TWG				eS	Sn	10 17 33.5	+0.1
	baz=166						
TWGBT	Beinan	1.04	175	⇑P	Pn	10 17 18.9	-0.2
	baz=166						
TWGBT				eS	Sn	10 17 33.3	-0.2
	baz=166						
TWE	Neicheng	1.06	36	eP	Pb	10 17 18.6	-0.4
	baz=34						
TWE				eS	Sn	10 17 33.8	-0.2
	baz=34						
TAI1	Yung-k'ang	1.07	221	eP	Pg	10 17 19.6	0.0
	baz=220						
TAI1				eS	Sn	10 17 36.0	+1.7
	baz=220						
TWC	Suao	1.08	46	eP	Pb	10 17 19.0	-0.5
	baz=47						
TWC				eS	Sb	10 17 33.8	+0.2
	baz=47						
TTN	Taitung	1.11	172	eP	Pg	10 17 20.8	+0.6
	baz=170						
NCUH	Zhongli	1.12	9	eP	Pg	10 17 21.4	+0.9
	baz=12						
NCU	National Centr	1.12	9	eP	Pn	10 17 20.5	+0.2
	baz=354						
NCU				eS	Sg	10 17 36.0	+0.9
	baz=354						
TWM1	Shoushan	1.15	207	eP	Pg	10 17 21.3	+0.2
	baz=205						
SSD	Sandimen	1.15	197	eP	Pg	10 17 20.9	-0.2
	baz=185						
SSD				eS	Sg	10 17 36.7	+0.6
	baz=185						
TATO	Taipei	1.20	22	eP	Pn	10 17 21.2	-0.1
	baz=26						
TATO				eS	Sg	10 17 38.2	+0.5
	baz=26						
NHDH	Xindian Distri	1.20	24	eP	Pb	10 17 21.6	+0.1
	baz=30						
SGLT	Jiouru	1.22	202	eP	Pg	10 17 22.2	-0.1
	baz=201						
EOS1	EOS1	1.25	56	eP	Pb	10 17 22.6	+0.3
	baz=58						
SNJT	Kaohsiung City	1.25	209	eP	Pb	10 17 22.1	-0.3
	baz=208						
NTC	Toucheng	1.25	38	eP	Pn	10 17 22.1	0.0
	baz=31						
ECL	Taimali	1.25	181	⇑P	Pg	10 17 22.6	-0.4
	baz=180						
ECL				eS	Sg	10 17 39.2	-0.1
	baz=180						
TAP	Taipei	1.27	22	eP	Pb	10 17 22.9	+0.3
	baz=7.0						
MASBT	Mashibuluo	1.28	195	⇓P	Pb	10 17 22.8	0.0
	baz=194						
MASBT				eS	Sg	10 17 40.9	+0.7
	baz=194						
TWS1	Kuangyinshan	1.30	17	eP	Pn	10 17 22.8	+0.1
	baz=4.0						
PHUB	P'eng-hu	1.34	256	⇓eP	Pn	10 17 22.2	-1.1
	baz=255						
PNG	Penghu	1.34	258	⇓eP	Pn	10 17 22.2	-1.1
	baz=257						
TIPB	Shuangxi	1.35	34	eP	Pn	10 17 23.5	+0.1
	baz=18						
TIPB				eS	Sb	10 17 41.6	+0.4
	baz=18						
WDGT	Dungji	1.36	244	⇓eP	Pn	10 17 22.5	-1.0
	baz=243						
NTST	Danshui	1.37	18	eP	Pg	10 17 25.2	0.0
	baz=3.0						
YM01	YM01	1.39	22	eP	Pn	10 17 23.7	-0.3
	baz=25						
YM10	YM10	1.39	22	eP	Pn	10 17 23.8	-0.3
	baz=25						
YM11	YM11	1.41	22	eP	Pn	10 17 23.6	-0.7
	baz=25						
WFSB	Wu-fen Shan	1.41	31	eP	Pb	10 17 25.4	+0.4
	baz=33						
SSPT	Xinbi	1.42	196	eP	Pb	10 17 24.9	-0.3
	baz=207						
YM07	YM07	1.43	24	eP	Pn	10 17 24.3	-0.3
	baz=26						
YM08	YM08	1.43	22	eP	Pn	10 17 25.1	+0.5
	baz=25						
TWB1	Santiao Chiao	1.46	38	eP	Pb	10 17 25.7	-0.2
	baz=51						
EAST	Anshuo	1.47	185	eP	Pb	10 17 25.6	-0.6
	baz=204						
TAW	Tawu	1.50	183	eP	Pb	10 17 26.8	+0.3
	baz=173						
SCZT	Fangliau	1.52	193	eP	Pb	10 17 26.2	-0.7
	baz=181						
VCHM	Qimei	1.57	246	eP	Pn	10 17 25.7	-0.7
	baz=234						
WLCH	Liuqiu	1.60	201	eP	Pb	10 17 27.6	-0.7
	baz=200						
TWP	Hsiaoliuchiu	1.61	201	eP	Pn	10 17 27.5	+0.5
	baz=201						
HEN	Hengchun	1.86	187	eP	Pb	10 17 33.1	+0.5
	baz=186						
JYNG	Yonagunijimaku	1.88	71	P	Pn	10 17 31.1	+0.4
JYNG				eS	Sb	10 17 55.1	-1.4
TWK1	Hengchun	1.91	185	eP	Pn	10 17 31.9	+0.8
	baz=200						
TWKBT	Hengchun	1.92	185	eP	Pn	10 17 31.7	+0.6
	baz=200						
YOJ	Yonaguni jima	1.94	72	eP	Pn	10 17 31.7	+0.2
	baz=72						
YOJ	Yonaguni jima	1.94	72	P	Pn	10 17 31.8	+0.2
YOJ				eS	Sn	10 17 56.6	+0.8
TSEB	Hengchuen, Pin	1.95	182	eP	Pb	10 17 32.8	-1.4
	baz=199						
PTTC	Pingtan	1.98	326	eP	Pn	10 17 30.3	-1.7
	baz=326						
PCYT	Pengchaiyu	2.02	29	eP	Pn	10 17 33.1	+0.5
	baz=18						
PTMZ	Houxiangcun	2.07	305	eP	Pn	10 17 31.6	-1.7
	baz=317						
KNM	Kinmen	2.40	284	eP	Pn	10 17 38.1	+0.3
	baz=282						
QZH	Quanzhou	2.44	297	Pn	Pn	10 17 37.2	-1.2
QZH				Sn	Sn	10 18 04.5	-3.5
QZH				smax	smax		
	comp=N,480nm,0.4s						
QZH				smax	smax		
	comp=E,250nm,0.4s						
KNMB	Chin-men Tao	2.45	285	eP	Pn	10 17 37.0	-1.5
	baz=284						
IRIF	Iriomote-Funau	2.55	79	P	Pn	10 17 40.4	+0.5
IRIF				eS	Sn	10 18 11.9	+1.1
HATJ	Hateruma jima	2.58	85	P	Pn	10 17 40.8	+0.4
HATJ				eS	Sn	10 18 11.0	-0.7
JKRS	Kuro-shima	2.79	82	P	Pn	10 17 43.9	+0.7
JKRS				eS	Sn	10 18 17.4	+0.7
MHZQ	Yeshan	2.85	322	eP	Pn	10 17 43.4	-0.7
	baz=321						
LYJJ	Jianjiangzhen	2.90	338	eP	Pn	10 17 43.4	-1.3
	baz=338						
JIJ	Ishigaki jima	2.93	79	P	Pn	10 17 45.2	+0.1
JIJ				eS	Sn	10 18 19.9	-0.2
AXDP	Jialang	2.94	291	eP	Pn	10 17 44.2	-1.1
	baz=291						
ZPLA	Ao Xicun	2.96	272	⇓eP	Pn	10 17 44.5	-1.2
	baz=271						

JISG	Ishigakijimahi	3.12	76	P	Pn	10 17 47.9	+0.2
ZZJH	Jiuhuzhen	3.13	282	eP	Pn	10 17 46.5	-1.4
	baz=281						
XPSS	Dashiqiu	3.14	347	eP	Pn	10 17 47.2	-0.9
	baz=347						
JTJ	Tarama	3.48	76	P	Pn	10 17 53.2	+0.5
JTJ				eS	Sn	10 18 35.0	+1.3
JIRB	Irabujima	3.94	75	P	Pn	10 18 00.0	+1.0
JIRB				eS	Sn	10 18 45.8	+0.7
JIKM	Ikemajima	4.03	74	eS	Sn	10 18 47.7	+0.5
JMJ	Miyako jima 2	4.04	75	eP	Pn	10 18 01.4	+0.9
	baz=73						
JMJ2	Miyako jima3	4.05	77	P	Pn	10 18 01.5	+0.9
JMJ2				eS	Sn	10 18 49.1	+1.1
JOW	Kunigami	7.23	64	Pn	Pn	10 18 44.7	+0.5
	0.4nm,0.3s,baz=111,slow=14,SNR=8.0						
XAN	Xi'an	14.63	317	P	P	10 20 31.9	-0.1
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				LR	LR		
	comp=N,150nm,8.2s						
XAN				LR	LR		
	comp=E,170nm,9.8s						
XAN				LR	LR		
	comp=Z,150nm,15.7s						
KSRS	Korea Array	14.80	22	Pn	P	10 20 33.1	-0.7
	0.2nm,0.3s,baz=198,slow=11,SNR=9.9						
CMAR	Chiang Mai Arr	21.24	260	P	P	10 21 46.4	+1.5
	0.8nm,0.3s,baz=57,slow=7.8,SNR=6.8						
SONM	Songino Array	26.60	338	P	P	10 22 37.6	+0.6
	0.3nm,0.3s,baz=157,slow=8.0,SNR=3.7						
LEM	Lembang	33.17	205	LR	LR	10 37 25.1	
	comp=Z,48nm,18.5s,baz=33,slow=37						
WMQ	Urumqi	33.75	314	eP	P	10 23 41.2	+0.9
WMQ				pmax	pmax		
	comp=Z,35nm,0.6s						
WMQ				LR	LR		
	comp=N,1μm,34.5s						
WMQ				LR	LR		
	comp=E,1μm,32.7s						
MKAR	Makanchi Array	38.45	316	P	P	10 24 20.8	+0.4
	comp=E,1.7nm,0.6s,baz=107,slow=11,SNR=11						
ZALV	Zalesovo Beam	40.42	327	P	P	10 24 36.4	-0.3
	comp=E,1.8nm,0.7s,baz=102,slow=6.8,SNR=6.1						
KURBB	Kurchatov Arra	42.24	320	P	P	10 24 51.5	-0.1
	comp=E,0.4nm,0.5s,baz=101,slow=6.7,SNR=5.1						
GEYT	Alibeck	54.81	301	P	P	10 26 28.6	-0.1
	comp=E,1.6nm,0.7s,baz=151,slow=6.6,SNR=4.7						
ARCES	ARCESS Array B	69.77	338	LR	LR	11 01 39.5	
	comp=E,62nm,18.4s,baz=360,slow=38						
FINES	FINESS Array B	71.64	330	P	P	10 28 18.9	-1.0
	comp=E,2.2nm,1.1s,baz=63,slow=8.8,SNR=4.5						
NOA	NORSAR Array B	78.43	332	LR	LR	11 06 56.3	
	comp=E,18nm,21.0s,baz=345,slow=38						

*ISK **02** 10:18:33.0, 40°.86N×44°.28E, h20km, ML2.2/4*
*TIF **02** 10:18:34.5, 40°.87N×44°.34E, h12km±3km*
*DDA **02** 10:18:35.4, 41°.10N×43°.99E, h7km±2km, ML2.5*

ISC 02 10:18:33.7±1.2, 40°.85N±0°.03×44°.26E±0°.03, h10km±11km, n17, σ0°78/30, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAK	Akyaka	0.53	252	i P		Pb	10 18 45.2 +0.1
EAK				i S		Sb	10 18 53.3 +0.5
EAK				IAML_P			
	comp=Z,2μm,0.2s						
KZRT	Kazreti	0.54	11	P		Pb	10 18 45.4 0.0
KZRT				S		Sb	10 18 52.5 -0.8
BGD	Bogdanovka	0.65	309	P		Pn	10 18 48.5 -0.7
BGD				S		Sn	10 18 58.7 -0.9
GNI	Garni	0.79	152	PG		Pg	10 18 49.1 +0.1
GNI				SG		Sb	10 19 00.6 +0.1
AKH	Akhalkalaki	0.81	314	PG		Pb	10 18 49.4 -0.5
AKH	Akhalkalaki	0.81	314	P		Pn	10 18 50.9 -0.4
AKH				S		Sn	10 19 02.8 -0.6
DIGO	Kars	0.81	237	i P		Pb	10 18 50.1 +0.2
DIGO				i S		Sb	10 19 01.4 +0.4
TASB	TASBURUN-IGDIR	0.87	181	PG		Pg	10 18 49.8 -0.6
BTNK	Botanikuri	0.92	26	P		Pb	10 18 51.9 +0.1
BTNK				S		Sb	10 19 04.9 +0.8
BTNK	Botanikuri	0.92	26	i P		Pb	10 18 52.0 +0.1
BTNK				i S		Sn	10 19 05.9 -0.2
BTNK				IAML_P			
	comp=Z,4μm,0.1s						
TBLG	Delisi	0.95	22	PG		Pg	10 18 51.6 -0.3
TBLG				SG		Sb	10 19 04.9 0.0
TBLG	Delisi	0.95	22	P		Pn	10 18 53.6 +0.5
TBLG				S		Sb	10 19 05.5 +0.6
TBLG	Delisi	0.95	22	i P		Pb	10 18 52.6 +0.3
TBLG				i S		Sb	10 19 05.3 +0.4
TBLG				IAML_P			
	comp=Z,1μm,0.1s						
IGDI	IGDIR	0.99	188	i P		Pb	10 18 53.4 +0.4
IGDI				i S		Sb	10 19 07.2 +0.9
TKB	Tkibuli	1.77	328	P		Sg	10 19 32.1 +1.3
LGD	Lagodekhi	1.78	56	P		Pb	10 19 06.6 +0.1
LGD				S		Sg	10 19 30.1 -1.0
ONI	Oni	1.84	341	P		Sb	10 19 33.1 +2.6

IDC 02 10:27:23.6±29.0, 21°.47S×172°.72W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/43, mbtmp4.0/4, Error ellipse: s-maj=533.2km s-min=170.1km az=74.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	38.31	264	P	P	10 34 46.0	-0.2
	1.4nm,0.3s,baz=94,slow=10,SNR=6.9						
STKA	Stephens Creek	41.85	246	P	P	10 35 15.8	+0.2
	4.1nm,1.1s,baz=63,slow=6.8,SNR=3.9						
ASAR	Alice Springs	49.10	257	P	P	10 36 13.1	-0.2
	0.4nm,0.5s,baz=101,slow=6.7,SNR=7.9						
WRA	Warramunga Arr	49.35	262	P	P	10 36 14.9	-0.2
	1.0nm,0.7s,baz=101,slow=7.7,SNR=1.4						

DJA 02 10:33:13.7±0.4, 7°S±4°×10°9E±°, h10km, M3.6/7, MLv3.6/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.92	263	P	Pg	10 33 30.5	-1.0
CISI				S	Sg	10 33 43.2	-0.3
LEM	Lembang	1.27	299	P	Pb	10 33 38.0	+0.1
LEM				S	Sn	10 33 55.7	+0.7
YOGI	Yogyakarta	1.58	103	P	Pn	10 33 34.0	-7.9
SMRI	Semarang	1.73	77	P	Pn	10 33 43.9	0.0
UGM	Wanagama	1.83	105	P	Pn	10 33 45.6	+0.4

IDC 02 10:35:07.0±9.2, 2°.02N×126°.08E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.5/41, mbtmp3.8/4, ML4.1/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/49, Error ellipse: s-maj=149.7km s-min=107.8km az=138.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	15.30	107	LR	LR	10 44 18.9	
	comp=Z,21nm,18.6s,baz=178,slow=36						
FITZ	Fitzroy Crossi	19.99	181	P	P	10 39 40.4	-0.8
	0.4nm,0.3s,baz=17,slow=9.5,SNR=18						
WRA	Warramunga Arr	23.28	160	P	P	10 40 18.3	+1.8
	1.0nm,0.3s,baz=341,slow=11,SNR=3.2						
ASAR	Alice Springs	26.64	164	P	P	10 40 47.1	-0.4
	0.3nm,0.4s,baz=341,slow=6.8,SNR=8.4						
STKA	Stephens Creek	36.79	158	P	P	10 42 16.2	-0.3
	1.6nm,0.7s,baz=342,slow=9.6,SNR=3.9						

WEL 02 10:37:50.0±1.0, 34°S±20°×17°9W±2°9, h383km±18km, M4.0/3, mB4.8/3, MLv4.0/2, Mw(mB)4.0/3, Error ellipse: s-maj=0.0km s-min=0.0km az=122.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.16	206	P	Pn	10 39 01.8	-0.7
MXZ				S	S	10 39 59.1	-2.2
WMGZ	Waiomatatini S	4.35	204	P	Pn	10 39 05.4	+1.0
WMGZ				S	S	10 40 05.6	+0.9
HAZ	Te Kaha	4.54	210	P	Pn	10 39 05.4	-0.9
PUZ	Puketiti	4.63	204	P	Pn	10 39 07.7	+0.3
PUZ				S	S	10 40 10.3	+0.2
RUGZ	Raukumara Rang	4.76	209	P	Pn	10 39 09.0	+0.3
TWGZ	Tauwhareparae	4.82	206	P	Pn	10 39 11.4	+2.0
TWGZ				S	S	10 40 14.8	+1.1
TKGZ	Te Karaka	5.10	205	P	Pn	10 39 13.9	+1.7
MWZ	Matawai	5.13	208	P	Pn	10 39 13.6	+1.1
MWZ				S	S	10 40 19.6	-0.1
URZ	Urewera	5.25	212	P	Pn	10 39 12.6	-1.0
URZ				S	S	10 40 22.3	+0.6
MUGZ	Murupara	5.58	213	P	Pn	10 39 16.3	-1.0
MUGZ				S	S	10 40 29.1	+0.8
HLRZ	Highlands Stat	5.60	217	P	Pn	10 39 19.9	+2.4
RTZ	Ruatahuna	5.60	211	P	Pn	10 39 17.2	-0.4
MTHZ	Maungataniwha	5.86	210	P	Pn	10 39 21.4	+1.0
TLZ	Tolley Road	6.08	221	P	Pn	10 39 23.7	+0.8
ARHZ	Aropaanui	6.14	207	P	Pn	10 39 24.4	+0.9
BKZ	Black Stump Fm	6.27	211	P	Pn	10 39 24.7	-0.2
KWHZ	Kaweka Forest	6.51	210	P	Pn	10 39 24.9	-2.8
HIZ	Hauiti	6.59	223	P	Pn	10 39 28.6	0.0
KRHZ	Kereru	6.72	209	P	Pn	10 39 27.8	-2.2
KRHZ				S	S	10 40 51.8	+0.3
BHHZ	Black Hill Sta	6.72	212	P	Pn	10 39 28.4	-1.6
BHHZ				S	S	10 40 52.5	+0.9
PXZ	Pawanui	6.87	205	P	Pn	10 39 31.6	0.0
PXZ				S	S	10 40 55.8	+1.3
TSZ	Takapari Road	7.24	210	P	Pn	10 39 35.3	-0.5

*ARE **02** 10:46:24.0±0.0, 14°.56S×75°.70W, h72km*
*ISCJB **02** 10:46:26.7±0.7, 14°.41S±0°.05×75°.31W±0°.08, h68km±7km, mb4.4/39, Error ellipse: s-maj=14.4km s-min=4.5km az=151.9*
*NEIC **02** 10:46:27.4±2.1, 14°.45S×75°.42W, h61km±8km, mb4.6/43, ML4.6(ARE), Error ellipse: s-maj=15.3km s-min=7.6km az=108.0*
NEIC Felt [III] at Ica and Palpa and [II] at Pisco.
*IDC **02** 10:46:27.3±0.6, 14°.50S×75°.42W, h53km±5km, mb3.7/8, mb1 4.0/13, mb1mx3.8/33, mbtmp4.1/13, MS3.3/7, Ms1 3.3/7, ms1mx3.2/29, Error ellipse: s-maj=25.2km s-min=9.2km az=61.0*

ISC 02 10:46:26.8±0.5, 14°.62S±0°.05×75°.53W±0°.08, h54km±5km, h53km:pP-P, n97, σ2°13/111, mb4.5/39, MS3.7/4, 4C-2D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.91	334	P	Pn	10 47 09.5	-1.3
	124nm,0.3s,baz=195,slow=11,SNR=48						
NNA				S	Sn	10 47 45.7	+1.1
	252nm,0.3s,baz=103,slow=20,SNR=8.2						
NNA				LR	LR	10 48 18.8	
	comp=Z,159nm,20.7s,baz=164,slow=39						
NNA	Nana	2.91	334	ePn	Pn	10 47 09.3	-1.5
NNA				eSn	Sn	10 47 45.1	+0.5
PB12	IPOC Station P	6.38	129	⇓iP	Pn	10 47 58.1	-0.2
PB12				i S	Sn	10 49 05.2	-4.7
PB16	IPOC Station P	6.86	123	⇑iP	Pn	10 48 06.8	+1.4
PSGC	Pisagua	7.16	134	i P	Pn	10 48 09.3	+0.2
PSGC				i S	Sn	10 49 24.6	-4.5
MNMC	Minye Minye	7.24	129	ePn	Pn	10 48 11.2	+0.8
MNMC				eSn	Sn	10 49 29.0	-2.4
MNMC	Minye Minye	7.24	129	⇓iP	Pn	10 48 10.7	+0.3
MNMC				i S	Sn	10 49 25.1	-6.3
LPAZ	La Paz	7.33	104	P	Pn	10 48 15.8	+3.9
	9.3nm,0.3s,baz=293,slow=9.7,SNR=195						
LPAZ	La Paz	7.33	104	ePn	Pn	10 48 16.6	+4.7
LPAZ				eSn	Sn	10 49 40.9	+6.9
LPAZ	La Paz	7.33	104	⇑iP	Pn	10 48 16.2	+4.4
PB11	IPOC Station P	7.59	133	ePn	Pn	10 48 15.1	0.0
PB11				eSn	Sn	10 49 36.4	-3.5
PB11	IPOC Station P	7.59	133	i P	Pn	10 48 15.4	+0.3
PB11				i S	Sn	10 49 35.3	-4.6
GO01	Chusmiza	7.87	131	ePn	Pn	10 48 20.1	+1.0
GO01				eSn	Sn	10 49 43.2	-3.9
ATAH	Atahualpa	7.95	339	P	Pn	10 48 19.2	-1.0
	1.4nm,0.3s,baz=143,slow=3.3,SNR=9.8						
ATAH				S	Sn	10 49 49.3	+0.2
	6.0nm,0.3s,baz=234,slow=8.7,SNR=4.2						
ATAH				LR	LR	10 51 35.2	
	comp=Z,90nm,19.8s,baz=181,slow=39						
PB08	IPOC Station P	8.20	133	⇑iP	Pn	10 48 24.0	+0.5
PB08				i S	Sn	10 49 49.7	-5.4
PB01	IPOC Station P	8.60	139	ePn	Pn	10 48 30.4	+1.6
PB01				eSn	Sn	10 49 58.8	-5.7
PB04	IPOC Station P	9.21	147	ePn	Pn	10 48 41.7	+4.4
PB04				eSn	Sn	10 50 17.5	-2.2
LVC	Limon Verde	10.12	143	P	Pn	10 48 52.6	+2.7
	2.6nm,0.3s,baz=329,slow=9.3,SNR=15						
LVC				LR	LR	10 52 59.5	
	comp=Z,90nm,18.1s,baz=294,slow=39						
LVC	Limon Verde	10.12	143	ePn	Pn	10 48 52.4	+2.5
GO02	Mina Guanaco	11.88	153	ePn	Pn	10 49 15.8	+2.0
SIV	San Ignacio	14.02	97	P	Pn	10 49 42.7	-0.2
	0.7nm,0.3s,baz=295,slow=10,SNR=20						
PTLC	Puerto Leguiza	14.72	3	eP	Pn	10 49 44.6	-7.4
LCO	Las Campanas	15.00	163	ePn	P	10 50 01.0	+0.7
	40nm,1.5s						
OTAV	Otavalo	15.04	349	ePn	P	10 50 01.2	+0.2
OTAV	Otavalo	15.04	349	eP	P	10 50 00.9	-0.1
OTAV				⇑eP	Pn	10 50 03.1	+6.5
GCUF	Volcan Galeras	15.85	353	eP	P	10 50 09.5	-0.5
FLOC	Florencia	16.10	360	eP	Pn	10 50 09.5	-0.3
CRUC	La Cruz	16.15	355	eP	P	10 50 12.2	-1.0
SOTA	Rioblanco	16.68	356	eP	P	10 50 21.6	+2.4
MACC	Macarena, Meta	16.74	6	eP	P	10 50 19.7	+0.3
POPC	Popayan, Colom	17.09	356	eP	P	10 50 24.1	+0.7
CFA	Coronel Fontan	18.18	160	P	Pn	10 50 38.2	+2.8
	0.5nm,0.3s,baz=346,slow=12,SNR=17						
PRAC	Prado	18.23	2	eP	Pn	10 50 41.2	+5.1
YOTC	Yotoco, Valle	18.50	357	eP	Pn	10 50 51.9	+12
ROC1	El Roble	18.73	168	eP	Pn	10 50 46.0	+3.7
GUY2C	Guyana, Caldas	19.72	0	eP	Pn	10 50 56.1	+1.7
NORC	Norcasia	20.07	2	eP	P	10 50 55.2	-0.7
RUSC	La Rusia	20.52	7	eP	Pn	10 51 02.0	-2.0
CPUP	Villa Florida	20.62	127	P	Pn	10 51 03.1	-1.5
	4.1nm,1.0s,baz=305,slow=10,SNR=5.2						
CPUP	Villa Florida	20.62	127	eP	Pn	10 51 03.7	-0.9
	18nm,1.4s						
PTGA	Pitinga	20.67	49	P	P	10 51 01.5	-1.0
	7.2nm,0.9s,baz=218,slow=9.8,SNR=11						
PTGA	Pitinga	20.67	49	eP	P	10 51 01.7	-0.8
	21nm,1.3s						
PTBC	PUERTO BERRIO,	21.05	3	eP	P	10 51 06.2	-0.4
PLCA	Paso Flores	26.38	171	P	P	10 51 59.7	+1.5
	4.4nm,0.9s,baz=5.9,slow=8.8,SNR=9.5						
PLCA				LR	LR	11 00 40.4	
	comp=Z,52nm,19.4s,baz=346,slow=32						
PLCA	Paso Flores	26.38	171	eP	P	10 52 00.2	+2.1
	9.9nm,1.3s						
BDFB	Brasilia	26.58	96	LR	LR	11 03 22.6	
	comp=Z,180nm,18.2s,baz=85,slow=38						
MTP	Monte Pirata	33.97	17	eP	P	10 53 04.2	-1.1
	52nm,1.5s						
GO09	Cerro Castillo	36.65	177	eP	P	10 53 31.0	+2.9
	26nm,1.4s						
GOGA	Godfrey	48.36	351	eP	P	10 55 02.2	-1.1
	7.7nm,1.3s						
Z50A	Ashland	48.63	348	eP	P	10 55 04.0	-1.4
	2.2nm,0.6s						
LRAL	Lakeview Retre	48.64	347	eP	P	10 55 04.2	-1.2
	6.0nm,1.2s						
HODGE	Hodges	49.00	353	eP	P	10 55 06.4	-1.8
	9.4nm,1.4s						
Y49A	Blount Mountai	49.31	348	eP	P	10 55 08.8	-1.8
	4.7nm,1.1s						
PAULI	Pauline	49.53	353	eP	P	10 55 11.1	-1.1
	11nm,1.2s						
W57A	Gilead	49.68	355	eP	P	10 55 11.7	-1.6
	9.9nm,1.1s						
V56A	Mocksville	50.38	355	eP	P	10 55 18.0	-0.6
	5.5nm,0.9s						
W50A	Signal Mountai	50.41	350	eP	P	10 55 17.2	-1.7
	12nm,1.4s						
V53A	Saluda	50.49	352	eP	P	10 55 17.8	-1.7
	5.3nm,1.1s						
CPCT	Cooper Cave	50.52	350	eP	P	10 55 18.2	-1.5
	7.2nm,1.4s						
SWET	Sewanee	50.54	349	eP	P	10 55 17.6	-2.3
	18nm,1.4s						
V52A	Sevierville	50.76	352	eP	P	10 55 19.7	-1.9
	6.9nm,1.1s						
V48A	Smith Brothers	51.21	348	eP	P	10 55 23.0	-1.9
	5.0nm,1.2s						
TZTN	Tazewell	51.45	352	eP	P	10 55 24.9	-1.8
	6.7nm,1.1s						
TXAR	Lajitas Array	51.45	328	P	P	10 55 26.4	-0.5
	0.7nm,0.5s,baz=158,slow=8.5,SNR=5.6						
TXAR				pP	pP	10 55 40.4	-1.2
	2.0nm,1.0s,baz=144,slow=11,SNR=5.0						
T52A	Hallie	51.93	352	eP	P	10 55 28.4	-1.8
	14nm,1.4s						
T49A	Edmonton	52.30	350	eP	P	10 55 31.2	-1.8
	4.1nm,0.6s						
WCI	Wyandotte Cave	53.53	349	eP	P	10 55 40.2	-1.9
	7.6nm,0.8s						
SIUC	Southern Illin	53.62	347	eP	P	10 55 41.1	-1.7
	5.2nm,0.6s						
BLO	Bloomington	54.49	350	eP	P	10 55 46.9	-2.1
	5.5nm,0.5s						
N49A	Columbus Grove	55.84	352	eP	P	10 55 56.5	-2.2
	16nm,1.4s						
SDCO	Great Sand Dun	59.21	333	eP	P	10 56 24.0	+1.1
	2.2nm,0.9s						
ECSD	EROS Data Cent	61.19	343	eP	P	10 56 35.0	-1.0
	1.2nm,0.8s						
MTPU	Mount Pierson	62.66	328	eP	P	10 56 47.2	+0.8
	2.5nm,1.4s						
MTPU				epP	pP	10 57 01.9	+0.6
P17A	Butcher Ranch,	63.04	330	eP	P	10 56 48.7	0.0
	2.7nm,0.7s						
P17A				epP	pP	10 57 03.7	+0.1
SHPR	Sheep Range	63.12	325	eP	P	10 56 49.9	+0.7
	1.4nm,0.8s						
DUG	Dugway, Tooele	64.61	329	eP	P	10 56 59.5	+0.5
	2.9nm,0.8s						
R11A	Troy Canyon, C	64.68	326	eP	P	10 57 00.2	+0.7
	4.6nm,1.4s						
R11A				epP	pP	10 57 15.3	+0.7
NVAR	Mina Array Bea	66.24	324	P	P	10 57 09.7	0.0
	0.2nm,0.4s,baz=144,slow=8.3,SNR=4.4						
NVAR				pP	pP	10 57 24.4	-0.3
	0.8nm,0.6s,baz=143,slow=6.8,SNR=7.1						
PAHR	Pah Rah Range	67.73	325	eP	P	10 57 19.7	+0.7
	5.8nm,1.4s						
PAHR				epP	pP	10 57 34.9	+0.8
DBIC	Dimbokro	73.19	78	LR	LR	11 27 26.4	
	comp=Z,60nm,21.1s,baz=223,slow=34						
QSPA	South Pole Qui	75.53	180	eP	P	10 58 07.5	+2.0
	7.5nm,1.2s						
TOA0	Torodi Ar. Sit	81.27	74	eP	P	10 58 37.5	-0.4
	6.9nm,1.0s						
TORD	Torodi Ar. Bea	81.27	74	P	P	10 58 37.3	-0.6
	4.8nm,1.0s,baz=264,slow=5.1,SNR=12						
VNDA	Vanda	82.45	191	P	P	10 58 44.8	+1.8
	1.1nm,0.9s,baz=93,slow=2.3,SNR=4.5						
YKA	Yellowknife Ar	82.72	343	P	P	10 58 43.5	-0.9
	0.4nm,0.8s,baz=142,slow=5.6,SNR=5.8						
YKA				pP	pP	10 58 58.1	-1.8
	0.7nm,0.7s,baz=142,slow=5.9,SNR=6.8						
BORG	Borgarnes	89.07	20	LR	LR	11 39 10.0	
	comp=Z,36nm,18.2s,baz=289,slow=36						
ASAR	Alice Springs	132.29	218	PKP	PKPdf	11 05 35.7	-0.1
	0.9nm,0.9s,baz=122,slow=2.0,SNR=7.5						
ASAR				pPKP	pPKPdf	11 05 53.3	+1.3
	0.5nm,0.8s,baz=121,slow=2.1,SNR=2.5						
WRAB	Tennant Creek	134.80	221	ePKPdf	PKPdf	11 05 39.1	-1.4
WRA	Warramunga Arr	134.80	221	PKP	PKPdf	11 05 41.0	+0.4
	2.2nm,0.8s,baz=168,slow=1.7,SNR=3.2						
ZALV	Zalesovo Beam	137.84	17	PKP	PKPdf	11 05 44.3	-0.8
	1.3nm,0.7s,baz=308,slow=7.1,SNR=3.9						
ULN	Ulaanbaatar	146.78	357	ePKPbc	PKPab	11 06 03.2	-1.3
SONM	Songino Array	146.85	358	PKPbc	PKPbc	11 06 03.1	-0.2
	1.0nm,0.5s,baz=314,slow=2.5,SNR=6.2						
SONM				pPKPbc	pPKPdf	11 06 19.2	+1.5
	1.8nm,0.8s,baz=322,slow=1.7,SNR=5.4						
KSRS	Korea Array	149.16	322	PKPbc	PKPbc	11 06 09.1	-0.5
	0.7nm,0.9s,baz=149,slow=31,SNR=4.2						
KSRS				pPKPbc	pPKPbc	11 06 25.4	-0.4
	0.9nm,0.8s,baz=52,slow=2.1,SNR=3.4						
KS15	Wonju Array Si	149.19	322	ePKPdf	PKPdf	11 06 05.5	+0.1
MMRI	Maumere	150.94	218	ePKPab	PKPab	11 06 20.9	-1.1
YULB	Yu-li	161.87	301	ePKPdf	PKPdf	11 06 21.4	-1.4
SBUM	Sibu	165.69	213	ePKPdf	PKPdf	11 06 24.8	-1.8

MEX 02 10:48:35.1±0.6, 16°.22N×98°.07W, h5km±5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	342	eP	Pg	10 48 38.2	-0.5
PNIG				i S	Sg	10 48 41.2	+0.1
TLIG	Tlapa	1.42	340	eP	Pn	10 48 57.9	-3.8
TLIG				eS	Sb	10 49 15.3	-5.3
CAIG	El Cayaco	2.26	292	eP	Pg	10 49 17.5	-1.0

MAN 02 10:50:20.4, 7°.36N×124°.77E, h1km, MS3.9, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.54	255	⇓iP	Pg	10 50 31.2	+0.4
CTBH				i S	Sn	10 50 45.4	+0.3
BUKP	Musuan	0.59	29	eP	Pg	10 50 31.9	+0.2
BUKP				eS	Sb	10 50 41.8	-0.6
DMPH	Davao City--Mi	0.78	111	⇑eP	Pb	10 50 37.0	+0.2
DMPH				eS	Sg	10 50 45.8	+0.3
SKMP	Bagumbayan, Su	0.87	195	eP	Pg	10 50 35.6	-1.5
SKMP				eS	Sg	10 50 47.1	-1.3
CGP	Cagayan de Oro	1.09	356	⇑eP	Pg	10 50 40.9	-0.3
CGP				eS	Sb	10 50 56.2	-0.5
PAGZ	Pagadian	1.46	289	eP	Pn	10 50 47.2	-0.7
PAGZ				eS	Sn	10 51 07.9	+0.2
MATI	Mati	1.53	106	eP	Pn	10 50 48.1	-0.7
MATI				eS	Sg	10 51 09.9	+0.3
DDMP	Don Marcelino,	1.56	143	eP	Pn	10 50 48.5	-0.7
DDMP				eS	Sn	10 51 08.1	-2.1
IPIL	Ipil	2.22	281	eP	Pb	10 51 00.1	-1.3
IPIL				eS	Sn	10 51 27.9	+1.3

**SOME 02 10:56:23.5, 40°.93N×71°.27E, h0km, T

CEP	Cherat	2.97	156	⇓P	Pn	10 58 35.1	-0.7
CEP				S	S	10 59 12.0	-2.0
CHCP	Chirah Chowk	3.69	140	⇓P	Pn	10 58 44.1	-0.3
NIL	Nilore	3.69	141	*e*Pn	Pn	10 58 44.2	-0.2
NIL				*e*Sn	S	10 59 27.9	-1.5
NIL	Nilore	3.69	141	*e*PN	Pn	10 58 44.2	-0.2
NIL				*e*		10 59 27.9	
THW	Thamme Wali	3.89	164	⇓P	Pn	10 58 45.7	-1.1
SARP	Sargodha	4.96	157	⇓P	Pn	10 58 58.6	-1.6
ARSB	Arslanbob	5.17	22	*e*Pn	Pn	10 59 01.9	-1.0
ARSB				*e*Sn	S	10 59 59.7	-3.4
KSH	Kashi	5.28	54	P	Pn	10 58 59.4	-4.9
KSH				S	S	10 59 53.1	-13
KSH				smax	smax		
	comp=N,240nm,0.5s						
KSH				smax	smax		
	comp=E,160nm,0.5s						
AML	Almayashu	6.12	23	P	Pn	10 59 14.7	-0.6
	SNR=176						
DHRM	DHARAMSHALA	6.46	130	*e*P	Pn	10 59 18.1	-1.5
DHRM				*e*S	S	11 00 28.7	-4.9
UCH	Uchtor	6.50	28	P	Pn	10 59 19.6	-0.6
	SNR=177						
NRN	Naryn	6.53	40	*e*Pn	Pn	10 59 18.4	-2.1
NRN				*e*Sn	S	11 00 31.2	-3.9
NRN	Naryn	6.53	40	*e*PN	Pn	10 59 18.4	-2.1
KK31	Karatay Array	6.55	0	*e*Pn	Pn	10 59 19.7	-0.8
KK31				*e*Sn	S	11 00 32.2	-3.1
KK31	Karatay Array	6.55	0	⇑P	Pn	10 59 19.5	-1.0
	11nm,0.3s,baz=174,slow=11,SNR=439						
KK31				⇑S	S	11 00 30.3	-4.9
	44nm,0.6s,baz=183,slow=23,SNR=5.3						
KK31	Karatay Array	6.55	0	*e*PN	Pn	10 59 19.7	-0.8
KK31				*e*		11 00 32.2	
KKAR	Karatay Array	6.55	0	*e*Pn	Pn	10 59 19.6	-0.9
KKAR				*e*Sn	S	11 00 32.3	-3.0
KKAR	Karatay Array	6.55	0	*e*PN	Pn	10 59 19.6	-0.9
KKAR				*e*		11 00 32.3	
EKS2	Erkin-Say	6.63	22	P	Pn	10 59 21.5	-0.2
	SNR=30						
KZA	Kyzart	6.67	33	P	Pn	10 59 21.6	-0.8
	SNR=21						
AAK	Ala-Archa	6.84	26	P	Pn	10 59 24.2	-0.2
	15nm,0.3s,baz=188,slow=6.6,SNR=44						
AAK				S	S	11 00 39.6	-2.8
	12nm,0.3s,baz=320,slow=22,SNR=26						
AAK	Ala-Archa	6.84	26	P	Pn	10 59 24.2	-0.2
	SNR=34						
AAK	Ala-Archa	6.84	26	*e*Pn	Pn	10 59 24.0	-0.4
AAK				*e*Sn	S	11 00 39.4	-2.9
AAK	Ala-Archa	6.84	26	⇑P	Pn	10 59 23.9	-0.5
	15nm,0.3s						
AAK				⇑S	S	11 00 39.4	-2.9
	127nm,0.6s						
KBK	Karagaybulak	7.03	28	P	Pn	10 59 26.9	+0.1
	SNR=26						
CHMS	Chumysh	7.25	26	P	Pn	10 59 29.6	0.0
	SNR=11						
ULHL	Ulahol	7.25	36	P	Pn	10 59 30.8	+1.0
	SNR=6.1						
USP	Ospenovka	7.41	24	P	Pn	10 59 31.3	-0.3
	SNR=8.1						
TKM2	Tokmak 2	7.51	30	P	Pn	10 59 32.7	-0.4
	SNR=24						
TKM2	Tokmak 2	7.51	30	⇓P	Pn	10 59 32.6	-0.5
	42nm,0.5s						
TKM2				⇑S	S	11 00 55.3	-2.8
	31nm,0.8s						
TKM2	Tokmak 2	7.51	30	PN	Pn	10 59 32.6	-0.5
TKM2				S	S	11 00 55.3	-2.8
KDJ	Kajisay	7.64	41	*e*Pn	Pn	10 59 34.1	-0.7
KDJ	Kajisay	7.64	41	*e*PN	Pn	10 59 34.1	-0.7
TARG	Taragay, Kyrgy	7.72	46	*e*Pn	Pn	10 59 35.1	-0.9
SMLA	Simla	7.78	132	*e*P	Pn	10 59 34.3	-2.1
SMLA				*e*S	S	11 00 58.4	-5.9
SMLA				IAML		11 01 01.6	
	comp=N,125nm,0.8s						
SMLA				IAML		11 01 01.7	
	comp=E,175nm,0.8s						
DDI	Dehra Dun	8.88	132	*e*P	Pn	10 59 49.7	-1.3
DDI				*e*S	S	11 01 23.1	-7.7
DDI				IAML		11 01 27.6	
	comp=N,133nm,0.2s						
DDI				IAML		11 01 28.1	
	comp=E,190nm,0.1s						
KHET	Khetri	9.58	150	*e*P	Pn	10 59 57.0	-3.0
KHET				*e*S	S	11 01 37.1	-10
JOSI	Joshimath	9.67	126	*e*P	Pn	11 00 00.4	-0.9
JOSI				*e*S	S	11 01 44.6	-5.1
JOSI				IAML		11 01 46.0	
	comp=N,246nm,0.8s						
JOSI				IAML		11 01 47.6	
	comp=E,141nm,0.2s						
KUDL	Kundal	9.81	147	*e*P	Pn	10 59 52.3	-11
KUDL				*e*S	S	11 01 33.6	-19
KUDL				IAML		11 01 37.8	
	comp=N,19nm,0.6s						
KUDL				IAML		11 01 38.3	
	comp=E,39nm,0.4s						
GEYT	Alibeck	9.92	282	P	Pn	11 00 01.9	-2.4
	comp=E,0.6nm,0.3s,baz=132,slow=10,SNR=6.5						
GEYT				S	S	11 01 50.3	-5.2
	comp=E,1.9nm,0.3s,baz=111,slow=12,SNR=4.3						
GYA0B	ALIBECK ARRAY	9.92	282	*e*Pn	Pn	11 00 02.0	-2.4
GYA0B				*e*Sn	S	11 01 53.5	-2.0
OTUK	Ortayu	11.78	6	⇓P	Pn	11 00 26.7	-1.2
	comp=E,10nm,0.9s						
OTUK	Ortayu	11.78	6	P	Pn	11 00 26.7	-1.2
OTUK				pmax	pmax		
	comp=Z,11nm,0.9s						
MAKZ	Makanchi	13.38	36	*e*P	Pn	11 00 48.0	-0.1
MAKZ	Makanchi	13.38	36	*e*P	Pn	11 00 48.0	-0.1
MK31	Makanchi Array	13.53	37	*e*Pn	Pn	11 00 50.3	+0.4
MK31	Makanchi Array	13.53	37	*e*P	Pn	11 00 50.3	+0.4
MKAR	Makanchi Array	13.53	37	P	Pn	11 00 50.3	+0.4
	comp=Z,0.9nm,0.3s,baz=209,slow=9.1,SNR=16						
PYUN	Piuthan	13.54	125	*e*P	Pn	11 00 47.4	-3.0
	comp=Z,24nm,0.4s						
DANN	Dangsing	13.89	122	*e*P	Pn	11 00 53.2	-1.7
	comp=Z,29nm,0.4s						
KOLN	Koldanda	14.16	124	*e*P	Pn	11 00 56.0	-2.1
	comp=Z,12nm,0.3s						
BHPL	Bhopal	14.57	154	*e*P	Pn	11 01 02.7	-0.3
BHPL				*ex*	x	11 03 19.1	
AB31	Akbulak array	14.83	332	P	Pn	11 01 04.3	-1.6
	comp=Z,7.2nm,0.5s,baz=145,slow=12,SNR=132						
AB31				⇑S	S	11 03 44.1	-6.2
	comp=Z,2.5nm,0.5s,baz=158,slow=22,SNR=5.6						
AB31	Akbulak array	14.83	332	P	Pn	11 01 04.3	-1.6
AB31				S	S	11 03 44.5	-5.8
ABKAR	Akbulak array	14.83	332	*e*Pn	Pn	11 01 04.7	-1.2
WMQ	Urumqi	15.04	56	*e*P	Pn	11 01 08.9	+0.2
WMQ				sP	sP	11 01 59.2	-11
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
KURBB	Kurchatov Arra	15.23	20	P	Pn	11 01 09.4	-1.4
	comp=Z,0.2nm,0.3s,baz=209,slow=10,SNR=12						
DMN	Daman	15.28	121	*e*P	Pn	11 01 10.4	-1.5
	comp=Z,28nm,0.5s						
KKN	Kakani	15.29	121	*e*P	Pn	11 01 10.1	-1.8
	comp=Z,22nm,0.4s						
KURK	Kurchatov	15.34	20	*e*P	Pn	11 01 11.3	-0.8
	comp=Z,2.7nm,0.8s						
KURK	Kurchatov	15.34	20	⇓P	Pn	11 01 10.9	-1.2
	comp=Z,4.0nm,1.0s						
KURK	Kurchatov	15.34	20	*e*P	Pn	11 01 11.3	-0.8
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PKIN	Phulchoki	15.50	121	*e*P	Pn	11 01 13.1	-1.4
	comp=Z,22nm,0.4s						
PKI	Pulchoki	15.51	121	*e*P	Pn	11 01 13.3	-1.4
	comp=Z,36nm,0.5s						
GUN	Gumba	15.63	119	*e*P	P	11 01 15.0	-1.1
	comp=Z,19nm,0.4s						
JIRN	Jiri	16.00	119	*e*P	P	11 01 19.8	-0.4
	comp=Z,56nm,0.4s						
BVAR	Borovoye Array	16.48	360	P	Pn	11 01 25.6	-0.2
	comp=Z,2.1nm,0.3s,baz=160,slow=10.0,SNR=28						
BVA3	Borovoye Array	16.48	360	⇑P	Pn	11 01 26.3	+0.5
	comp=Z,5.9nm,0.5s						
BRVK	Borovoye	16.52	360	*e*P	Pn	11 01 25.9	-0.3
	comp=Z,7.7nm,0.7s						
BRVK	Borovoye	16.52	360	*e*P	Pn	11 01 25.9	-0.3
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AKTO	Aktyubinsk	16.52	331	P	Pn	11 01 26.3	0.0
	comp=Z,3.4nm,0.3s,baz=146,slow=11,SNR=111						
AKTO				S	S	11 04 24.7	-2.9
	comp=Z,0.2nm,0.3s,baz=129,slow=21,SNR=2.4						
AKTO	Aktyubinsk	16.52	331	⇑P	Pn	11 01 26.2	-0.1
	comp=Z,34nm,0.8s						
RAMN	Ramite	16.73	120	*e*P	P	11 01 28.1	0.0
	comp=Z,25nm,0.6s						
NGP	Nagpur	17.08	152	*e*P	Pn	11 01 33.5	+0.3
ODAN	Odare	17.33	119	*e*P	P	11 01 35.4	+0.7
	comp=Z,24nm,0.4s						
DGZ	Jazzator, Alta	18.02	38	*i* P	Pn	11 01 43.1	-1.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAA0	Zalesovo Array	20.07	25	*e*P	P	11 02 04.3	+0.7
	comp=Z,5.5nm,0.6s						
ZALV	Zalesovo Beam	20.07	25	P	P	11 02 04.4	+0.7
	comp=Z,4.3nm,0.3s,baz=221,slow=12,SNR=17						
ZALV	Zalesovo Beam	20.07	25	*i* P	Pn	11 02 09.8	+1.5
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
NVS	Novosibirsk	20.31	22	*i* P	P	11 02 07.4	+1.2
GNI	Garni	20.45	288	*c*eP	P	11 02 08.9	+0.8
GNI				pmax	pmax		
	comp=Z,14nm,1.0s						
SHL	Shillong	21.34	115	*e*P	P	11 02 17.8	+0.2
	comp=Z,8.8nm,0.9s						
SHL	Shillong	21.34	115	*e*P	P	11 02 17.8	+0.2
SHL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SHL	Shillong	21.34	115	*e*P	P	11 02 17.3	-0.3
ARU	Arti	21.45	342	P	P	11 02 19.2	+1.1
	comp=Z,2.8nm,0.5s,baz=104,slow=13,SNR=12						
ARU	Arti	21.45	342	*e*P	P	11 02 20.0	+1.8
	comp=Z,7.1nm,0.6s						
ARU	Arti	21.45	342	*c i*P	P	11 02 19.3	+1.1
ARU				*PP	pP	11 02 49.0	-4.4
ARU						11 02 57.7	
ARU				S	S	11 06 07.1	+4.5
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA	Gaotai	23.29	74	*e*P	P	11 02 38.2	+2.4
GTA				sP	sP	11 03 38.6	-2.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LZH	Lanzhou	26.85	81	*e*P	P	11 03 10.7	+2.7
LZH				pP	pP	11 03 48.7	-1.8
LZH				PP	PP	11 04 08.1	-4.7
LZH				pmax	pmax		
	comp=Z,11nm,1.2s						
LZH				pmax	pmax		
	comp=Z,99nm,5.4s						
SONM	Songino Array	28.68	56	P	P	11 03 25.6	+1.5
	comp=Z,1.0nm,0.7s,baz=258,slow=8.9,SNR=5.9						
ANTO	Ankara	29.62	288	*e*P	P	11 03 33.9	+1.5
	comp=Z,14nm,0.9s						
ANTO	Ankara	29.62	288	*e*P	P	11 03 33.9	+1.5
ANTO				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI	Kunming	29.85	103	P	P	11 03 37.5	+2.8
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	Chiang Mai Arr	30.87	118	P	P	11 03 44.6	+1.1
	comp=Z,1.1nm,0.3s,baz=300,slow=7.2,SNR=5.2						
HHC	Hu-ho-hao-te	32.17	70	*e*P	P	11 03 56.3	+1.5
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,56nm,5.5s						
AKASG	Malin Array Be	32.57	309	P	P	11 03 58.6	+0.6
	comp=Z,1.2nm,0.6s,baz=75,slow=7.9,SNR=5.8						
AKBB	Malin Array Si	32.57	309	*e*P	P	11 03 58.8	+0.8
	comp=Z,1.5nm,0.6s						
AKBB	Malin Array Si	32.57	309	*e*P	P	11 03 58.8	+0.8
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIEV	Kiev	32.58	309	*e*P	P	11 03 58.7	+0.7
	comp=Z,1.4nm,0.6s						
KIEV	Kiev	32.58	309	*e*P	P	11 03 58.7	+0.7
KIEV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	37.20	326	P	P	11 04 38.4	+1.1
	comp=Z,0.7nm,0.4s,baz=108,slow=6.2,SNR=6.7						
ARCES	ARCESS Array B	40.93	338	P	P	11 05 09.8	+1.6
	comp=Z,2.8nm,0.7s,baz=108,slow=7.8,SNR=8.6						
ARE0	ARCESS Array S	40.93	338	*e*P	P	11 05 09.9	+1.7
	comp=Z,0.4nm,0.8s						
IPM	Ipoh	42.51	131	*e*P	P	11 05 21.7	+0.1
	comp=Z,18nm,1.3s						
NC405	NORSAR Array S	43.84	323	*e*P	P	11 05 32.8	+1.0
	comp=Z,10nm,1.3s						
NC303	NORSAR Array S	44.02	323	*e*P	P	11 05 34.5	+1.4
	comp=Z,11nm,1.1s						
NB2	NORSAR Subarra	44.08	323	P	P	11 05 33.8	+0.2
	comp=Z,2.8nm,0.8s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.08	323	P	P	11 05 34.0	+0.3
	comp=Z,0.4nm,0.7s,baz=104,slow=7.3,SNR=8.1						
NOA	NORSAR Array B	44.08	323	P	P	11 05 34.0	+0.3
NBO00	NORSAR Array S	44.29	323	*e*P	P	11 05 36.0	+0.7
	comp=Z,20nm,1.4s						
KLR	Kul'dur	45.48	54	P	P	11 05 46.1	+1.3
	comp=Z,0.6nm,0.4s,baz=255,slow=0.5,SNR=5.0						
TIXI	Tiksi	45.91	22	P	P	11 05 48.5	+0.7
	comp=Z,1.7nm,0.3s,baz=111,slow=1.4,SNR=3.6						
TIXI	Tiksi	45.91	22	*e*P	P	11 05 48.9	+1.1
	comp=Z,3.9nm,1.1s						
TIXI	Tiksi	45.91	22	*e*P	P	11 05 48.9	+1.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SPA0	Spitsbergen Ar	47.35	347	*e*P	P	11 06 01.2	+2.3
	comp=Z,21nm,1.2s						
KMBO	Kilima Mbogo	48.53	227	*c*eP	P	11 06 10.6	+1.5
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SUMG	Summit	60.88	341	*e*P	P	11 07 39.3	+2.2
	comp=Z,0.8nm,0.5s						
SUMG	Summit	60.88	341	*e*P	P	11 07 39.3	+2.2
SUMG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LSZ	Lusaka	65.16	226	*e*P	P	11 08 06.6	+1.0
	comp=Z,3.0nm,0.9s						
LSZ	Lusaka	65.16	226	*e*P	P	11 08 06.6	+1.0
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TOA0	Torodi Ar. Sit	65.27	268	*e*P	P	11 08 05.2	-1.2
	comp=Z,3.6nm,1.3s						
TORD	Torodi Ar. Bea	65.27	268	P	P	11 08 04.9	-1.4
	comp=Z,0.5nm,0.4s,baz=48,slow=6.9,SNR=11						
TOLK	Toolik Lake Re	71.00	14	*e*P	P	11 08 43.1	+1.9
	comp=Z,2.0nm,0.6s						
LBTB	Lobatse	74.41	222	*e*P	P	11 09 03.1	+1.3
LBTB	Lobatse	74.41	222	*e*P	P	11 09 03.1	+1.3
BPAW	Bear Paw Mtn.	74.49	18	*e*P	P	11 09 03.3	+1.6
	comp=Z,1.9nm,1.0s						
CAST	Castle Rocks	74.79	18	*e*P	P	11 09 05.0	+1.5
	comp=Z,5.3nm,1.1s						
ILAR	Eielson Array	74.86	16	P	P	11 09 04.7	+0.9
	comp=Z,1.0nm,0.8s,baz=323,slow=5.0,SNR=7.9						
RND	Reindeer	75.59	17	*e*P	P	11 09 08.8	+0.7
	comp=Z,1.6nm,0.7s						
RND	Reindeer	75.59	17	*e*P	P	11 09 08.8	+0.7
RND				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PAX	Paxson	76.74	16	*e*P	P	11 09 16.2	+1.6
	comp=Z,1.9nm,0.7s						
PAX	Paxson	76.74	16	*e*P	P	11 09 16.2	+1.6
PAX				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RC01	Rabbit Creek A	77.34	19	*e*P	P	11 09 19.1	+1.3
	comp=Z,5.8nm,1.1s						
BOSA	Boshof	77.49	220	P	P	11 09 18.5	-0.7
	comp=Z,4.6nm,0.8s,baz=19,slow=4.5,SNR=7.9						
BOSA	Boshof	77.49	220	*e*P	P	11 09 19.4	+0.2
	comp=Z,21nm,1.4s						
BOSA	Boshof	77.49	220	*e*P	P	11 09 19.4	+0.2
BOSA				pmax	pmax		
	comp=Z,21nm,1.4s						
KDAK	Kodiak Island	79.33	22	*e*P	P	11 09 30.2	+1.4
	comp=Z,4.1nm,0.6s						
KDAK	Kodiak Island	79.33	22	*e*P	P	11 09 30.2	+1.4
KDAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OHAK	Old Harbor	79.58	22	*e*P	P	11 09 31.5	+1.4
	comp=Z,9.1nm,1.2s						
WHY	Whitehorse	80.94	12	*e*P	P	11 09 38.4	+0.8
	comp=Z,3.3nm,1.5s						
YKA	Yellowknife Ar	81.22	2	P	P	11 09 39.6	+0.8
	comp=Z,0.9nm,0.6s,baz=348,slow=5.2,SNR=11						
YKA				pP	pP	11 10 28.8	+0.2
	comp=Z,0.4nm,0.5s,baz=352,slow=5.5,SNR=4.9						
WRA	Warramunga Arr	82.40	122	P	P	11 09 43.8	-1.7
	comp=Z,1.9nm,0.5s,baz=319,slow=5.5,SNR=11						
FCC	Fort Churchill	84.18	352	*e*P	P	11 09 55.5	+1.4
FCC	Fort Churchill	84.18	352	*e*P	P	11 09 55.5	+1.4
AS31	Alice Springs	84.65	125	*e*P	P	11 09 56.0	-1.0
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	84.65	125	P	P	11 09 55.8	-1.2
	comp=Z,1.7nm,0.6s,baz=312,slow=4.9,SNR=40						
GO04	Tololo Observa	147.17	270	*e*PKPdf	PKPbc	11 17 04.4	-1.2
GO05	Huala	149.56	262	*e*PKPbc	PKPbc	11 17 11.1	-0.2
GO06	Curarrehue	150.00	252	*e*PKPbc	PKPbc	11 17 12.1	-0.3
RPN	Rapa Nui	170.61	359	*e*PKPdf	PKPdf	11 17 33.0	+3.2
RPN	Rapa Nui	170.61	359	*e*PKIKP	PKPdf	11 17 33.0	+3.2

MAN 02 11:31:27.6, 7°.25N×124°.76E, h5km, mb4.9, ML3.9, MS3.9, 5C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.51	266	⇑*i*P		Pb	11 31 39.5	+0.4
CTBH				*i* S		Sb	11 31 48.1	+1.3
BUKP	Musuan	0.69	26	*e*P		Pg	11 31 40.3	-0.6
BUKP				*e*S		Sg	11 31 49.6	-0.2
DMPH	Davao City--Mi	0.76	103	⇑*e*P		Pg	11 31 42.2	0.0
DMPH				*e*S		Sb	11 31 54.3	+0.3
SKMP	Bagumbayan, Su	0.76	197	*e*P		Pg	11 31 42.0	-0.2
SKMP				*e*S		Sb	11 31 53.6	-0.4
CGP	Cagayan de Oro	1.20	357	⇑*i*P		Pg	11 31 49.3	-1.2
CGP				*i* S		Sg	11 32 03.9	-2.2
DDMP	Don Marcelino,	1.48	140	*e*P		Pn	11 31 54.7	-0.3
DDMP				*e*S		Sg	11 32 15.3	+0.1
PAGZ	Pagadian	1.49	293	*e*P		Pn	11 31 53.7	-1.3
PAGZ				*e*S		Sn	11 32 14.4	-0.5
MATI	Mati	1.52	102	*e*P		Pn	11 31 53.5	-1.9
MATI				*e*S		Sg	11 32 16.3	-0.1
BUTP	Butuan	1.91	26	*e*P		Pn	11 32 01.5	+0.7
BUTP				*e*S		Sb	11 32 27.0	0.0
DCPH	Dipolog City	1.92	314	⇑*e*P		Pg	11 32 07.0	+2.5
DCPH				*e*S		Sg	11 32 34.5	+5.1
IPIL	Ipil	2.24	284	*e*P		Pn	11 32 06.4	+1.1
IPIL				*e*S		Sn	11 32 34.7	+1.4
SNPH	Sibulan	2.57	324	⇑*i*P		Pb	11 32 13.9	-0.3
SNPH				*i* S		Sg	11 32 52.4	+2.2
TBP	Tagbilaran	2.58	340	*e*P		Pn	11 32 12.2	+2.1
MSLP	Maasin	2.86	2	*e*P		Pn	11 32 14.3	+0.3
LLP	Lapu-Lapu	3.14	346	*e*P		Pn	11 32 19.4	+1.5
LLP				*e*S		Sn	11 32 59.1	+3.3

MAN 02 11:38:28.3, 7°.47N×125°.17E, h19km, mb4.7, ML3.6, MS3.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.42	345	*e*P		Pb	11 38 38.0	+0.8
BUKP				*e*S		Sn	11 38 48.1	+1.4
CGP	Cagayan de Oro	1.09	334	⇑*i*P		Pb	11 38 47.4	-1.2
CGP				*i* S		Sb	11 39 02.3	-0.1
MATI	Mati	1.20	116	*e*P		Pn	11 38 49.1	-1.0
DDMP	Don Marcelino,	1.46	159	*e*P		Pn	11 38 53.0	-0.7
DDMP				*e*S		Sb	11 39 13.3	+0.2

ISCJB ***02*** *11:52:56.5±0.5, 45°.91N±0°.06×150°.85E±0°.07, h88km, mb3.6/12, Error ellipse: s-maj=10.7km s-min=3.7km az=141.5*
JMA ***02*** *11:52:56.3±0.5, 45°.88N×150°.94E, h30km, M4.7*
MOS ***02*** *11:52:58.6±0.9, 46°.01N×150°.75E, h111km, mb4.7/1, Error ellipse: s-maj=13.3km s-min=8.5km az=55.2*
SKHL ***02*** *11:52:58.1±0.5, 45°.77N×150°.89E, h116km±5km, mb4.8/5, msh5.7/6*
IDC ***02*** *11:53:00.9±2.2, 46°.08N×150°.77E, h113km±19km, mb3.4/12, mb1 3.6/20, mb1mx3.4/45, mbtmp3.8/20, Error ellipse: s-maj=19.6km s-min=11.4km az=132.0*

ISC 02 11:52:57.4±0.6, 45°.84N±0°.07×150°.88E±0°.07, h88km, n61, σ 2.22/76, mb3.7/12, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.20	255	*c i*PN		Pn	11 53 32.8	+0.7
KUR				*i* S		Sn	11 53 59.1	+0.4
KUR				pmax		pmax		
	comp=Z,204nm,0.4s							
KUR				pmax		pmax		
	comp=E,95nm,0.2s							
KUR				pmax		pmax		
	comp=N,48nm,0.1s							
KUR				smax		smax		
	comp=E,289nm,0.2s							
KUR				smax		smax		
	comp=N,997nm,0.3s							
KUR	Kuril'sk	2.20	255	*i* P		Pn	11 53 32.8	+0.7
KUR				AMB		AMB	11 53 34.0	
	comp=N,169nm,0.4s							
KUR				*i* S		Sn	11 53 59.2	+0.5
KUR				A		A	11 54 05.2	
	comp=N,450nm,0.3s							
KUR				A		A	11 54 05.2	
	comp=N,289nm,0.3s							
YUK	Yuzh-Kuril'sk	4.00	245	*e*PN		Pn	11 53 58.9	+2.6
YUK				*i* S		Sn	11 54 43.9	+2.0
YUK				pmax		pmax		
	comp=N,114nm,0.2s							
YUK				pmax		pmax		
	comp=Z,226nm,0.2s							
YUK				smax		smax		
	comp=N,321nm,0.5s							
YUK				smax		smax		
	comp=E,945nm,0.5s							
YUK	Yuzh-Kuril'sk	4.00	245	*e*P		Pn	11 53 58.0	+1.7
YUK				AMB		AMB	11 54 02.6	
	comp=E,23nm,0.2s							
YUK				*i* S		Sn	11 54 42.5	+0.6
YUK				A		A

GLVR				A	A	11 55 08.8	
	comp=N,190nm,0.5s						
NEM2	**Nemuro 2**	**4.43**	**238**	P	**Pn**	**11 54 01.3**	**-0.8**
NEM2				*e*S	**Sn**	**11 54 49.8**	**-2.6**
JRA	**Rausu**	**4.51**	**247**	P	**Pn**	**11 54 06.0**	**+2.7**
JNK	**Nakash**	**4.94**	**245**	P	**Pn**	**11 54 10.1**	**+1.0**
JNK				*e*S	**Sn**	**11 55 05.3**	**+0.4**
JAK	**Akkeshi**	**5.26**	**239**	P	**Pn**	**11 54 12.8**	**-0.7**
JAK				*e*S	**Sn**	**11 55 09.6**	**-3.2**
JTKR	**Abashiri--Toko**	**5.29**	**252**	P	**Pn**	**11 54 16.0**	**+2.1**
JMP	**Maruseppu**	**5.65**	**254**	P	**Pn**	**11 54 21.6**	**+2.9**
JAR	**Ashorobuto**	**5.68**	**246**	P	**Pn**	**11 54 20.5**	**+1.3**
JAR				*e*S	**Sn**	**11 55 22.4**	**-0.6**
YSS	**Yuzh-Sakhalins**	**5.73**	**284**	*e*PN	**Pn**	**11 54 20.9**	**+1.1**
YSS				*e*S	**Sn**	**11 55 21.0**	**-3.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				smax	smax		
	comp=N,20nm,0.7s						
YSS				smax	smax		
	comp=E,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**5.73**	**284**	*e*P	**Pn**	**11 54 20.9**	**+1.1**
YSS				AMB	AMB	11 54 21.2	
	comp=E,20nm,0.5s						
JOB	**Onbets**	**5.84**	**242**	P	**Pn**	**11 54 21.3**	**-0.1**
JOB				*e*S	**Sn**	**11 55 25.3**	**-1.6**
SKR	**Severo-Kuril's**	**5.97**	**34**	*e*PN	**Pn**	**11 54 25.0**	**+1.9**
SKR				*e*S	**Sn**	**11 55 25.5**	**-4.5**
SKR				pmax	pmax		
	comp=Z,34nm,0.7s						
SKR				smax	smax		
	comp=E,33nm,0.8s						
SKR				smax	smax		
	comp=N,48nm,0.9s						
SKR				MLR	MLR		
	comp=Z,100nm,12.0s						
SKR	**Severo-Kuril's**	**5.97**	**34**	*e*P	**Pn**	**11 54 25.0**	**+1.9**
SKR				AMB	AMB	11 54 26.0	
	comp=Z,34nm,0.7s						
SKR				*e*S	**Sn**	**11 55 26.5**	**-3.5**
SKR				A	A	11 55 49.0	
	comp=Z,148nm,0.7s						
SKR				A	A	11 55 49.0	
	comp=Z,59nm,0.7s						
JKK2	**Kamakawa 2**	**6.11**	**254**	P	**Pn**	**11 54 27.5**	**+2.5**
JKA	**Kamikawa-asahi**	**6.12**	**257**	*e*P	**Pn**	**11 54 27.1**	**+1.9**
ASAJ	**Asahikawa**	**6.12**	**257**	P	**Pn**	**11 54 27.1**	**+1.9**
	comp=Z,4.0nm,0.3s,baz=53,slow=12,SNR=26						
ASAJ				S	**Sn**	**11 55 39.9**	**+6.1**
	baz=183,slow=19,SNR=1.5						
ASAJ	**Asahikawa**	**6.12**	**257**	P	**Pn**	**11 54 27.8**	**+2.6**
JCH	**Churui**	**6.29**	**242**	P	**Pn**	**11 54 27.4**	**-0.1**
JCH				*e*S	**Sn**	**11 55 33.7**	**-4.2**
JNB	**Noboribetsu**	**7.84**	**248**	P	**Pn**	**11 54 49.0**	**+0.4**
JNB				*e*S	**Sn**	**11 56 13.9**	**-1.7**
JKB	**Kayabe**	**8.14**	**244**	P	**Pn**	**11 54 51.8**	**-0.8**
JKB				*e*S	**Sn**	**11 56 16.3**	**-6.6**
JYM2	**Yakumo 2**	**8.44**	**248**	P	**Pn**	**11 54 56.4**	**-0.4**
PETK	**Petropavlovsk-**	**8.52**	**29**	P	**Pn**	**11 54 58.2**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=212,slow=8.2,SNR=11						
JTM	**Tenmabayashi**	**8.76**	**238**	P	**Pn**	**11 54 59.6**	**-1.5**
JTM				*e*S	Sn	11 56 29.9	-8.1
JANG	**Nango**	**8.76**	**235**	P	**Pn**	**11 54 58.5**	**-2.7**
JANG				*e*S	Sn	11 56 28.5	-10
JTH	**Tanohata**	**8.86**	**231**	*e*S	Sn	11 56 31.5	-9.2
MJAR	**Matsushiro Arr**	**13.30**	**230**	P	**P**	**11 56 07.9**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=24,slow=13,SNR=5.8						
KLR	**Kul'dur**	**13.36**	**292**	P	**Pn**	**11 56 04.2**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=110,slow=14,SNR=7.1						
USRK	**Ussuriysk Ar.**	**13.47**	**270**	P	**Pn**	**11 56 06.5**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=70,slow=12,SNR=3.0						
EKMR	**Ekimchan**	**13.70**	**308**	*e*P	**Pn**	**11 56 07.0**	**-0.7**
EKMR				AMB	AMB	11 56 14.5	
	comp=Z,5.0nm,0.5s						
MA2	**Magadan**	**13.76**	**360**	P	**Pn**	**11 56 08.2**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=191,slow=11,SNR=9.2						
BMKR	**Bomnak**	**16.59**	**310**	*e*P	**Pn**	**11 56 42.0**	**-2.3**
BMKR				AMB	AMB	11 56 47.0	
	comp=Z,17nm,0.2s						
SEY	**Seymchan**	**17.15**	**2**	P	**Pn**	**11 56 51.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=186,slow=16,SNR=2.2						
KROS	**Kirovskiy**	**17.50**	**308**	*e*P	**Pn**	**11 56 52.5**	**-3.0**
KROS				AMB	AMB	11 56 58.7	
	comp=Z,5.0nm,0.4s						
KSRS	**Korea Array**	**19.05**	**252**	P	**Pn**	**11 57 14.1**	**0.0**
	comp=Z,0.3nm,0.3s,baz=56,slow=11,SNR=13						
TIXI	**Tiksi**	**27.93**	**345**	P	**P**	**11 58 36.1**	**-2.7**
	comp=Z,1.2nm,0.4s,baz=136,slow=8.5,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**29.20**	**148**	T	T	12 29 38.6	
	SNR=233						
H11N1	**WAKE ISLAND Hy**	**29.21**	**148**	T	T	12 30 26.1	
	baz=337,slow=74,SNR=206						
H11N3	**WAKE ISLAND Hy**	**29.22**	**148**	T	T	12 30 27.5	
	baz=176,slow=74,SNR=242						
H11S1	**WAKE ISLAND Hy**	**30.25**	**149**	T	T	12 31 42.7	
	baz=340,slow=76,SNR=287						
H11S3	**WAKE ISLAND Hy**	**30.26**	**149**	T	T	12 31 45.6	
	SNR=205						
H11S2	**WAKE ISLAND Hy**	**30.27**	**149**	T	T	12 31 13.3	
	baz=350,slow=76,SNR=195						
ILAR	**Eielson Array**	**38.22**	**38**	P	**P**	**12 00 08.4**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=266,slow=6.1,SNR=4.9						
CMAR	**Chiang Mai Arr**	**50.65**	**255**	P	**P**	**12 01 48.6**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=41,slow=8.4,SNR=4.2						
YKA	**Yellowknife Ar**	**52.57**	**36**	P	**P**	**12 02 01.6**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=299,slow=6.6,SNR=8.1						
FINES	**FINESS Array B**	**64.19**	**334**	P	**P**	**12 03 20.6**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=30,slow=8.8,SNR=7.7						
NVAR	**Mina Array Bea**	**64.23**	**61**	P	**P**	**12 03 24.1**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=290,slow=7.5,SNR=4.3						
GEYT	**Alibeck**	**65.73**	**300**	P	**P**	**12 03 33.3**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=74,slow=7.7,SNR=2.9						
WRA	**Warramunga Arr**	**67.17**	**197**	P	**P**	**12 03 42.9**	**+1.1**
	comp=Z,1.7nm,1.0s,baz=20,slow=9.8,SNR=2.7						
NOA	**NORSAR Array B**	**68.57**	**340**	P	**P**	**12 03 49.8**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=28,slow=6.5,SNR=2.8						
ASAR	**Alice Springs**	**70.88**	**196**	P	**P**	**12 04 06.8**	**+2.1**
	comp=Z,0.8nm,0.8s,baz=12,slow=5.2,SNR=9.5						
AKASG	**Malin Array Be**	**71.42**	**325**	P	**P**	**12 04 06.7**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=35,slow=6.8,SNR=4.4						
TXAR	**Lajitas Array**	**79.29**	**59**	P	**P**	**12 04 54.6**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=310,slow=4.4,SNR=7.3						

NNC 02 11:58:21.9±5.7, 41°.24N×82°.94E, h0km, mb3.6, mpv3.2, 2C-1D, Error ellipse: s-maj=46.0km s-min=30.6km az=162.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**3.30**	**310**	⇓Pn	Pn	11 59 13.8	-1.2
	1.9nm,0.3s						
PDGK				⇑Sn	Sn	11 59 56.5	+1.5
	10.0nm,0.6s						
MK31	**Makanchi Array**	**5.57**	**355**	Pn	Pn	11 59 46.4	+0.3
	2.1nm,0.6s,baz=165,slow=16,SNR=25						
MK31				Sn	Sn	12 00 49.8	-1.0
	1.8nm,0.5s,baz=168,slow=28,SNR=4.0						
MAKZ	**Makanchi**	**5.61**	**353**	⇑Pn	Pn	11 59 48.7	+2.1
	3.7nm,0.9s						
MAKZ				Sn	Sn	12 00 52.7	+1.0
	4.6nm,1.0s						

MAN 02 12:04:02.7, 7°.39N×124°.86E, h15km, mb4.9, ML3.8, MS3.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.53**	**22**	*e*P	Pg	12 04 13.3	+0.1
BUKP				*e*S	Sn	12 04 23.1	-1.4
BUKP	**Musuan**	**0.53**	**22**	*e*P	Pg	12 04 13.3	+0.1
BUKP				*e*S	Sn	12 04 23.1	-1.4
CTBH	**Cotabato--PC H**	**0.63**	**255**	⇓*i*P	Pg	12 04 15.0	-0.1
CTBH				*i* S	Sg	12 04 21.6	-2.0
CGP	**Cagayan de Oro**	**1.07**	**351**	*e*P	Pb	12 04 22.6	-0.4
CGP				*e*S	Sn	12 04 37.7	-0.2
DDMP	**Don Marcelino,**	**1.53**	**146**	*e*P	Pn	12 04 28.9	-0.7
DDMP	**Don Marcelino,**	**1.53**	**146**	*e*P	Pn	12 04 28.9	-0.7

NEIC 02 12:39:24.5±0.0, 51°.11N×176°.10W, h17km, mb3.7/16, ML3.2(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETKA	**Kagalaska Isla**	**0.78**	**346**	*e*Pg	Pb	12 39 39.5	-0.1
ETKA				*e*Sn	Sg	12 39 50.9	+0.7
ADK	**Adak**	**0.86**	**335**	*e*Pg	Pb	12 39 40.4	-0.6
ADK				*e*Sn	Sg	12 39 52.8	+0.2
ADAG	**Mount Adagdak**	**0.93**	**341**	*e*Pg	Pb	12 39 42.2	+0.1
GSMY	**Great Sitkin M**	**0.94**	**2**	*e*Pg	Pb	12 39 42.2	-0.1
GSTD	**Great Sitkin T**	**0.95**	**358**	*e*Pg	Pb	12 39 42.5	0.0
GSTD				*e*Sn	Sn	12 39 56.1	-0.2
KIMD	**Kanaga Island**	**0.97**	**313**	*e*Pg	Pb	12 39 42.0	-0.8
GSTR	**Great Sitkin T**	**0.99**	**1**	*e*Pg	Pb	12 39 43.2	0.0
KIWB	**Kanaga Island**	**1.00**	**319**	*e*Sg	Sb	12 39 53.0	-3.1
KIRH	**Kanaga Island**	**1.01**	**322**	*e*Pg	Pb	12 39 43.0	-0.4
KIRH				*e*Sn	Sn	12 39 57.6	0.0
KIKV	**Kanaga Island**	**1.02**	**320**	*e*Pg	Pb	12 39 43.2	-0.6
KICM	**Kanaga Island**	**1.06**	**320**	*e*Pg	Pb	12 39 43.8	-0.6
TAPA	**Tanaga Point A**	**1.29**	**304**	*e*Pn	Pn	12 39 46.7	-1.0
TAPA				*e*Sn	Sb	12 40 04.1	-0.3
TASE	**Tanaga Southea**	**1.42**	**302**	*e*Pn	Pn	12 39 48.8	-0.7
TAFP	**Tanaga Falls P**	**1.42**	**305**	*e*Pn	Pn	12 39 48.6	-0.9
TAFP				*e*Sn	Sn	12 40 07.7	-0.1
TANO	**Tanaga North**	**1.50**	**304**	*e*Pn	Pn	12 39 50.5	0.0
ATKA	**Atka Island**	**1.62**	**46**	*e*Pn	Pn	12 39 51.1	-1.1
ATKA				*e*Sn	Sn	12 40 12.2	-0.4
KOKL	**Mount Kliuchef**	**1.70**	**43**	*e*Pn	Pn	12 39 53.2	-0.2
KOWE	**Korovin West**	**1.71**	**42**	*e*Pn	Pn	12 39 53.6	+0.1
KOFP	**Korovin Flat P**	**1.71**	**46**	*e*Pn	Pn	12 39 53.3	-0.2
GAEA	**Gareloi East**	**1.79**	**293**	*e*Pn	Pn	12 39 54.3	-0.3
GALAA	**Gareloi Lava P**	**1.80**	**293**	*e*Pn	Pn	12 39 54.6	-0.1
NIKH	**Nikolski High**	**4.85**	**64**	*e*Pn	Pn	12 40 38.5	+2.0
UNV	**Unalaska Valle**	**6.47**	**61**	*e*Pn	Pn	12 41 01.3	+2.5
SPIA	**Saint Paul Isl**	**6.99**	**27**	*e*Pn	Pn	12 41 09.1	+3.3
SII	**Sitkinak Islan**	**14.02**	**59**	*e*P	P	12 42 50.0	+0.1
OHAK	**Old Harbor**	**14.66**	**56**	*e*Pn	P	12 42 56.7	-0.2
KDAK	**Kodiak Island**	**15.17**	**55**	*e*Pn	Pn	12 42 57.2	-0.5
	8.2nm,1.0s						
PEA0B	**Petropavlovsk-**	**16.19**	**287**	*e*Pn	P	12 43 14.5	+0.5
	17nm,1.4s						
CNPM	**China Poot**	**16.39**	**49**	*e*Pn	P	12 43 15.4	-0.7
	11nm,1.2s						
SEW	**Seward**	**17.43**	**49**	*e*P	P	12 43 28.0	+0.4
	7.2nm,1.1s						
CAST	**Castle Rocks**	**17.77**	**37**	*e*Pn	P	12 43 32.9	+1.5
	1.3nm,0.8s						
BPAW	**Bear Paw Mtn.**	**18.55**	**36**	*e*P	Pn	12 43 41.5	+1.3
	2.7nm,1.3s						
SCM	**Sheep Creek Mo**	**19.00**	**45**	*e*P	P	12 43 44.3	-0.8
	3.6nm,1.0s						
RND	**Reindeer**	**19.02**	**39**	*e*P	P	12 43 45.0	-0.1
	2.3nm,0.8s						
CCB	**Clear Creek Bu**	**20.01**	**37**	*e*P	P	12 43 55.0	-0.9
	2.6nm,1.2s						
ILB	**Eielson Array**	**20.42**	**37**	*e*P	P	12 44 01.2	+0.8
	0.8nm,0.6s						
RIDG	**Independent Ri**	**20.78**	**41**	*e*P	P	12 44 03.7	-0.7
	5.8nm,1.4s						
DOT	**Dot Lake**	**21.07**	**41**	*e*P	P	12 44 06.7	-0.8
	4.9nm,1.4s						
EGAK	**Eagle**	**22.66**	**40**	*e*P	P	12 44 24.7	+0.3
	4.6nm,1.4s						
PV02	**Paradox Valley**	**47.99**	**78**	*e*P	P	12 47 59.8	-2.7
	4.1nm,1.0s						
KURK	**Kurchatov**	**60.42**	**315**	*e*P	P	12 49 31.0	-1.6
	1.6nm,0.6s						
FIA1	**FINESS Array S**	**66.41**	**349**	*e*P	P	12 50 13.3	+1.4
	4.1nm,1.0s						

KRSC 02 12:49:18.9±1.9, 49°.29N×156°.59E, h6km±30km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.42**	**348**	*e*P	Pn	12 49 44.2	-1.1
SKR				*e*S	Sb	12 50 02.9	-1.3
ALID	**Alaid**	**1.71**	**337**	*e*P	Pn	12 49 47.8	-1.6
PAU	**Pauzhetka**	**2.18**	**4**	*e*P	Pn	12 49 56.9	+1.2
PAU				*e*S	Sb	12 50 25.1	-0.9
KDTR	**Khodutka, Kamc**	**2.69**	**20**	*e*P	Pn	12 50 04.9	+2.2
KDTR				*e*S	Sb	12 50 38.8	-1.9
ASAK	**Asacha**	**3.20**	**15**	*e*P	Pb	12 50 13.3	-2.9
MTVR	**Mutnovka**	**3.35**	**17**	*e*P	Pb	12 50 15.5	-3.3
MTVR				*e*S	Sb	12 50 57.1	-2.7
RUS	**Russkaya**	**3.37**	**20**	*e*P	Pn	12 50 15.0	+3.0
APC	**Apacha**	**3.66**	**5**	*e*P	Pn	12 50 19.6	+3.7
PET	**Petropavlovsk**	**3.96**	**18**	*e*P	Pn	12 50 23.9	+3.9
DALK	**Dalny**	**3.98**	**19**	*e*P	Pn	12 50 24.2	+3.8
DALK				*e*S	Sb	12 51 13.0	-4.8
UGLR	**Uglovaya**	**4.17**	**19**	*e*P	Pn	12 50 27.4	+4.4
AVH	**Avacha**	**4.20**	**18**	*e*P	Pn	12 50 26.8	+3.3
KOK	**Koryaka**	**4.21**	**17**	*e*P	Pn	12 50 28.1	+4.5
SMAR	**Somma**	**4.21**	**18**	*e*P	Pb	12 50 29.2	-4.3
KRER	**Koryakskii**	**4.24**	**18**	*e*P	Pn	12 50 28.7	+4.6
SDLR	**Sedlovina**	**4.24**	**19**	*e*P	Pn	12 50 28.0	+3.9
KRX	**Arik**	**4.27**	**17**	*e*P	Pb	12 50 29.6	-4.9
SPN	**Mys Shipunski**	**4.38**	**28**	*e*P	Pn	12 50 29.8	+3.9
SPN				*e*S	Sn	12 51 22.4	+5.3
GNL	**Ganaly**	**4.49**	**10**	*e*P	Pn	12 50 31.6	+4.1
MKZ	**Mys Kozlova**	**6.16**	**29**	*e*P	Pn	12 50 53.1	+2.9

*TIR **02** 12:54:39.8, 41°.96N×19°.06E, h48km, Md3.2/4*
*ISCJB **02** 12:54:41.8±0.5, 41°.89N±0°.02×19°.16E±0°.03, h10km±2km, Error ellipse: s-maj=4.3km s-min=2.7km az=33.7*
*SAR **02** 12:54:41.6±0.7, 41°.84N×19°.26E, h4km±2km, ML2.9/9*
*PDG **02** 12:54:42.7±0.4, 41°.93N×19°.20E, h14km, MD2.8/2, ML2.7/13, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*BEO **02** 12:54:43.6±0.3, 41°.95N×19°.21E, h5km±2km, ML2.5/14*
ISC 02 12:54:42.8±0.9, 41°.90N±0°.02×19°.18E±0°.02, h11km±6km, n75, σ0.87/119, 18C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.07**	**37**	⇑*i*Pg	**Pg**	**12 54 45.0**	**-0.2**
ULC				*e*Sg	**Sg**	**12 54 47.4**	**+0.5**
DRME	**Dracevica, Mon**	**0.28**	**0**	⇓*i*Pg	**Pg**	**12 54 48.3**	**-0.3**
DRME				*e*Sg	**Sg**	**12 54 52.6**	**+0.2**
DRME	**Dracevica, Mon**	**0.28**	**0**	⇓*i*Pg	**Pg**	**12 54 48.2**	**-0.3**
DRME				*e*Sg	**Sg**	**12 54 53.2**	**+0.8**
BUM	**Brajici-Budva**	**0.45**	**332**	⇓*i*Pg	**Pg**	**12 54 51.3**	**-0.4**
BUM				*e*Sg	**Sb**	**12 54 59.1**	**-0.6**
PDG	**Podgorica**	**0.53**	**6**	*e*Pg	**Pg**	**12 54 52.1**	**-1.0**
PDG				*e*Sg	**Sg**	**12 54 59.3**	**-0.8**
PDG	**Podgorica**	**0.53**	**6**	⇓*i*P	**Pg**	**12 54 52.1**	**-1.0**
PDG				S	**Sg**	**12 54 59.8**	**-0.3**
PDG	**Podgorica**	**0.53**	**6**	⇓*i*Pg	**Pg**	**12 54 52.0**	**-1.0**
PDG				*e*Sg	**Sb**	**12 55 01.1**	**-0.7**
TTG	**Podgorica**	**0.53**	**6**	⇓*i*Pg	**Pg**	**12 54 52.1**	**-1.0**
TTG				*e*Sg	**Sg**	**12 55 00.7**	**+0.6**
CEME	**Cevo**	**0.67**	**343**	⇑*i*Pg	**Pg**	**12 54 54.8**	**-1.0**
CEME				*e*Sg	**Sb**	**12 55 05.8**	**-0.2**
HCY	**Herceg Novi**	**0.75**	**317**	⇓*i*Pg	**Pg**	**12 54 56.4**	**-0.8**
HCY				*e*Sg	**Sb**	**12 55 08.3**	**+0.2**
HCY	**Herceg Novi**	**0.75**	**317**	⇑*i*Pg	**Pg**	**12 54 56.3**	**-0.9**
HCY				*e*Sg	**Sb**	**12 55 08.2**	**+0.2**
TIR	**Tirane**	**0.76**	**137**	*e*Pg	**Pg**	**12 54 57.0**	**-0.3**
TIR				*e*Sg	**Sb**	**12 55 08.3**	**0.0**
TIR	**Tirane**	**0.76**	**137**	*i* PG	**Pg**	**12 54 57.1**	**-0.2**
TIR				*i* SG	**Sn**	**12 55 10.3**	**-0.6**
BCI	**Bajram Curri**	**0.80**	**55**	*i* PG	**Pg**	**12 54 56.1**	**-2.2**
BCI				*i* SG	**Sb**	**12 55 10.7**	**+1.0**
NKME	**Niksic**	**0.88**	**349**	⇑*i*Pg	**Pg**	**12 54 58.8**	**-0.9**
NKME				*e*Sg	**Sb**	**12 55 12.5**	**+0.6**
PVY	**Plav**	**0.90**	**40**	⇑*i*Pg	**Pg**	**12 54 58.8**	**-1.3**
PVY				*e*Sg	**Sb**	**12 55 12.9**	**+0.3**
NKY	**Niksic**	**0.92**	**351**	⇑*i*Pg	**Pg**	**12 55 00.0**	**-0.5**
NKY				*e*Sg	**Sb**	**12 55 13.8**	**+0.6**
PHP	**Peshkopia**	**0.96**	**103**	*i* PN	**Pg**	**12 55 00.4**	**-1.0**
PHP				*i* SN	**Sb**	**12 55 15.1**	**+0.7**
KOME	**Kolasin**	**0.98**	**14**	⇑*i*Pg	**Pg**	**12 55 00.4**	**-1.2**
KOME				*e*Sg	**Sn**	**12 55 16.0**	**-0.5**
TREB	**Trebinje**	**1.02**	**323**	*e*Pg	**Pg**	**12 55 01.3**	**-1.1**
TREB				*e*Sg	**Sg**	**12 55 14.3**	**-1.4**
TREB	**Trebinje**	**1.02**	**323**	⇓*i*Pg	**Pg**	**12 55 01.4**	**-1.0**
TREB				*e*Sg	**Sb**	**12 55 16.7**	**+0.7**
IVA	**Berane**	**1.10**	**28**	⇑*i*Pg	**Pb**	**12 55 02.8**	**-1.1**
IVA				*e*Sg	**Sn**	**12 55 19.7**	**+0.1**
BRY	**Bratogost**	**1.10**	**335**	⇓*i*Pg	**Pb**	**12 55 03.3**	**-0.8**
BRY				*e*Sg	**Sn**	**12 55 20.3**	**+0.5**
BRY	**Bratogost**	**1.10**	**335**	*e*Pg	**Pb**	**12 55 02.9**	**-1.1**
BRY				*e*Sg	**Sn**	**12 55 19.7**	**-0.1**
UPM	**Unac-Piva**	**1.31**	**351**	⇓*i*Pg	**Pn**	**12 55 06.9**	**-0.4**
UPM				*e*Sg	**Sg**	**12 55 27.0**	**+1.9**
UPM	**Unac-Piva**	**1.31**	**351**	*e*Pg	**Pn**	**12 55 06.9**	**-0.4**
UPM				*e*Sg	**Sg**	**12 55 25.7**	**+0.6**
PLE	**Pljevlja**	**1.43**	**6**	⇑*i*Pg	**Pb**	**12 55 09.6**	**0.0**
PLE				*e*Sg	**Sg**	**12 55 30.3**	**+1.4**
STON	**Ston**	**1.46**	**312**	*e*Pg	**Pn**	**12 55 09.6**	**+0.4**
STON				*e*Sg	**Sg**	**12 55 30.0**	**+0.1**
STON	**Ston**	**1.46**	**312**	*e*Pn	**Pn**	**12 55 09.4**	**+0.2**
STON				Sg	**Sg**	**12 55 30.0**	**+0.1**
STON	**Ston**	**1.46**	**312**	⇓*i*Pn	**Pn**	**12 55 09.6**	**+0.4**
STON				*e*Sn	**Sg**	**12 55 30.8**	**+0.9**
SJES	**Sjenica**	**1.48**	**23**	*e*Pg	**Pn**	**12 55 09.6**	**+0.1**
SJES				*e*Sg	Sn	12 55 28.9	0.0
KRUS	**Krusevo**	**1.64**	**108**	*i* Pn	**Pb**	**12 55 12.9**	**-0.2**
SKO	**Skopje**	**1.68**	**87**	*e*Pg	**Pb**	**12 55 13.5**	**-0.3**
SKO	**Skopje**	**1.68**	**87**	*i* Pn	**Pb**	**12 55 13.5**	**-0.3**
SELS	**Selova**	**1.94**	**47**	*e*Pn	**Pn**	**12 55 16.4**	**+0.6**
SRN	**Sarande**	**2.12**	**163**	*i* PN	**Sn**	**12 55 44.0**	**-0.4**
BARS	**Barje**	**2.15**	**64**	*e*Pn	**Pn**	**12 55 19.3**	**+0.6**
BARS				*e*Sn	**Sn**	**12 55 45.1**	**-0.3**
HAPS	**Han Pijesak,Bl**	**2.19**	**356**	*e*Pn	**Pn**	**12 55 19.7**	**+0.4**
HAPS				*e*Sn	**Sn**	**12 55 47.0**	**+0.6**
HAPS	**Han Pijesak,Bl**	**2.19**	**356**	*e*Pn	**Pn**	**12 55 19.6**	**+0.3**
HAPS				*e*Sn	**Sn**	**12 55 47.4**	**+1.0**
MATE	**Matera**	**2.25**	**237**	⇑*i*P	**Pb**	**12 55 23.9**	**+0.5**
STIP	**Stip**	**2.25**	**94**	*i* Pn	**Pb**	**12 55 22.8**	**-0.7**
DIVS	**Divibare**	**2.27**	**15**	*e*Pn	**Pn**	**12 55 21.2**	**+0.8**
DIVS	**Divibare**	**2.27**	**15**	⇑*i*Pn	**Pn**	**12 55 20.8**	**+0.4**
DIVS				*e*Sn	**Sn**	**12 55 49.3**	**+0.8**
GRUS	**Gruza**	**2.28**	**29**	*e*Pn	**Pn**	**12 55 21.4**	**+1.0**
TRUS	**Trudelj**	**2.49**	**21**	*e*Pn	**Pn**	**12 55 24.6**	**+1.4**
BOSS	**Bosilegrad**	**2.52**	**75**	*e*Pn	**Pn**	**12 55 24.6**	**+0.9**
BOSS				*e*Sn	**Sn**	**12 55 55.3**	**+0.8**
BOVS	**Bovan**	**2.54**	**46**	*e*Pn	**Pn**	**12 55 24.3**	**+0.3**
BOVS				*e*Sn	**Sn**	**12 55 56.3**	**+1.4**
VAY	**Valandovo**	**2.60**	**102**	*e*Pn	**Pn**	**12 55 25.8**	**+0.9**
TEKS	**Tekeris**	**2.66**	**5**	*e*Pn	**Pn**	**12 55 26.5**	**+0.9**
TEKS				*e*Sn	**Sn**	**12 55 59.1**	**+1.3**
ZAPS	**Zavoj**	**2.89**	**61**	*e*Pn	**Pn**	**12 55 28.9**	**0.0**
ZAPS				*e*Sn	**Sn**	**12 56 05.2**	**+1.5**
VTS	**Vitosha**	**3.09**	**75**	*e*Pn	**Pn**	**12 55 32.3**	**+0.6**
VTS				*e*Sn	**Sn**	**12 56 09.3**	**+0.6**
VTS	**Vitosha**	**3.09**	**75**	⇑*i*P	**Pn**	**12 55 32.6**	**+0.9**
VTS	**Vitosha**	**3.09**	**75**	S	**Sn**	**12 56 09.4**	**+0.7**
BLY	**Banja Luka**	**3.20**	**334**	*e*Pn	**Pn**	**12 55 35.0**	**+2.0**
BLY	**Banja Luka**	**3.20**	**334**	⇑*i*P	Pn	12 55 28.0	-5.0
BLY	**Banja Luka**	**3.20**	**334**	*e*Pn	**Pn**	**12 55 33.7**	**+0.7**
BLY				*e*Sn	**Sn**	**12 56 13.1**	**+2.0**
FRGS	**Fruska Gora**	**3.28**	**8**	*e*Pn	**Pn**	**12 55 35.2**	**+1.0**
FRGS	**Fruska Gora**	**3.28**	**8**	*e*Pn	**Pn**	**12 55 34.5**	**+0.3**
FRGS			

RUS eS Sn 13 55 41.4 +2.7
RUS Russkaya 1.17 285 PN Pn 13 55 23.5 -0.4
RUS S Sn 13 55 41.4 +2.7
NLC Nalytchevo 1.20 329 eP Pn 13 55 24.0 -0.3
NLC eS Sn 13 55 44.6 +5.2
NLC Nalytchevo 1.20 329 PN Pn 13 55 24.0 -0.3
DALK Dalny 1.33 313 eP Pn 13 55 25.8 -0.2
DALK eS Sn 13 55 47.6 +5.2
DALK Dalny 1.33 313 PN Pn 13 55 25.8 -0.2
PET Petropavlovsk 1.37 311 eP Pn 13 55 26.6 0.0
PET Petropavlovsk 1.37 311α iPN Pn 13 55 26.7 +0.1
PET eS Sn 13 55 45.8 +2.4
PET pmax pmax
comp=Z,3μm,0.5s
PET smax smax
comp=N,8μm,0.6s
PET smax smax
comp=E,7μm,0.6s
MTVR Mutnovka 1.38 285 eP Pn 13 55 26.9 0.0
MTVR Mutnovka 1.38 285 PN Pn 13 55 26.9 0.0
UGLR Uglovaya 1.42 319 eP Pn 13 55 27.8 +0.4
UGLR Uglovaya 1.42 319 PN Pn 13 55 27.8 +0.4
SDLR Sedlovina 1.45 322 eP Pn 13 55 27.7 -0.2
SDLR Sedlovina 1.45 322 PN Pn 13 55 27.7 -0.2
KDTR Khodutka, Kamc 1.45 258 eP Pn 13 55 27.0 -0.7
KDTR eS Sn 13 55 45.8 +0.2
KDTR Khodutka, Kamc 1.45 258 PN Pn 13 55 27.0 -0.7
KDTR S Sn 13 55 45.8 +0.2
GRL Gorelyy 1.46 287 eP Pn 13 55 29.3 +1.3
GRL Gorelyy 1.46 287 PN Pn 13 55 29.3 +1.3
SMAR Somma 1.47 320 eP Pn 13 55 28.1 -0.1
SMAR Somma 1.47 320 PN Pn 13 55 28.1 -0.1
AVH Avacha 1.50 319 eP Pn 13 55 29.1 +0.6
AVH Avacha 1.50 319 PN Pn 13 55 29.1 +0.6
KRER Koryakskii 1.52 320 eP Pn 13 55 29.6 +0.7
KRER Koryakskii 1.52 320 PN Pn 13 55 29.6 +0.7
ASAK Asacha 1.53 280 eP Pn 13 55 29.4 +0.5
ASAK Asacha 1.53 280 PN Pn 13 55 29.4 +0.5
KOK Koryaka 1.56 318 eP Pn 13 55 29.8 +0.5
KOK Koryaka 1.56 318 PN Pn 13 55 29.8 +0.5
KRX Arik 1.60 320 eP Pn 13 55 30.2 +0.2
KRX Arik 1.60 320 PN Pn 13 55 30.2 +0.2
PEA0B Petropavlovsk- 1.89 302 ePn Pn 13 55 34.5 +0.7
PETK Petropavlovsk- 1.89 302 Pn Pn 13 55 34.5 +0.7
comp=E,63nm,0.3s,baz=105,slow=20,SNR=493
PETK Sn Sn 13 56 02.0 +5.6
comp=E,202nm,0.3s,baz=105,slow=17,SNR=3.8
PETK LR LR 13 56 06.8
comp=E,1μm,19.8s,baz=41,slow=39
PEA1 Petropavlovsk- 1.89 302 ePn Pn 13 55 34.5 +0.7
PEA1 eSn Sn 13 56 02.0 +5.5
APC Apacha 2.11 293 eP Pn 13 55 38.2 +1.4
APC eS Sn 13 56 07.3 +5.6
APC Apacha 2.11 293 PN Pn 13 55 38.2 +1.4
GNL Ganaly 2.14 318 eP Pn 13 55 38.4 +1.1
GNL Ganaly 2.14 318 PN Pn 13 55 38.4 +1.1
PAU Pauzhetka 2.31 254 eP Pn 13 55 39.3 -0.2
PAU Pauzhetka 2.31 254 PN Pn 13 55 39.3 -0.2
MKZ Mys Kozlova 2.55 18 eP Pn 13 55 41.2 -1.6
MKZ Mys Kozlova 2.55 18 PN Pn 13 55 41.2 -1.6
KZV Kizimen 2.98 359 eP Pn 13 55 48.8 0.0
KZV eS Sn 13 56 25.5 +2.2
KZV Kizimen 2.98 359 PN Pn 13 55 48.8 0.0
KZV S Sn 13 56 25.5 +2.2
SKR Severo-Kuril's 3.03 243 eP Pn 13 55 48.4 -1.0
SKR eS Sn 13 56 24.0 -0.5
SKR Severo-Kuril's 3.03 243 ePN Pn 13 55 49.0 -0.4
SKR eS Sn 13 56 23.6 -0.9
SKR pmax pmax
comp=Z,168nm,0.5s
SKR smax smax
comp=N,2μm,0.6s
SKR smax smax
comp=E,2μm,0.6s
SKR MLR MLR
comp=Z,2μm,13.0s
TUMD Tumrok D 3.07 0 eP Pn 13 55 49.3 -0.6
TUMD eS Sn 13 56 25.9 +0.5
TUMR Tumrok 3.15 358 eP Pn 13 55 51.7 +0.5
TUMR Tumrok 3.15 358 PN Pn 13 55 49.3 -1.9
TUMR S Sn 13 56 25.9 -1.6
ALID Alaid 3.27 249 eP Pn 13 55 52.7 -0.1
ALID Alaid 3.27 249 PN Pn 13 55 52.7 -0.1
ESO Esso 3.92 346 eP Pn 13 56 02.4 +0.8
ESO Esso 3.92 346 PN Pn 13 56 02.4 +0.8
KOZ Kozyrevsk 3.94 356 eP Pn 13 56 03.0 +1.2
KOZ Kozyrevsk 3.94 356 PN Pn 13 56 03.0 +1.2
LGNR Loginova 3.95 3 eP Pn 13 56 03.8 +1.4
LGNR Loginova 3.95 3 PN Pn 13 56 03.8 +1.4
CIRR Tsirk 3.99 3 eP Pn 13 56 04.3 +1.6
CIRR Tsirk 3.99 3 PN Pn 13 56 04.3 +1.6
KRSR Krestovskiy 4.08 2 eP Pn 13 56 03.2 -0.8
KLY Klyuchi 4.18 2 eP Pn 13 56 05.5 +0.3
KLY Klyuchi 4.18 2 PN Pn 13 56 05.5 +0.3
SRDR Sredinnyy 4.20 355 eP Pn 13 56 06.1 +0.6
SRDR Sredinnyy 4.20 355 PN Pn 13 56 06.1 +0.6
KBTR Krutoberegovo 4.32 19 eP Pn 13 56 06.2 -0.9
KBTR Krutoberegovo 4.32 19 PN Pn 13 56 06.2 -0.9
KBG Krutoberegovo 4.34 18 eP Pn 13 56 08.0 +0.6
KBG Krutoberegovo 4.34 18 PN Pn 13 56 08.0 +0.6
BDR Baidarnaya 4.46 6 eP Pn 13 56 09.3 +0.2
BDR Baidarnaya 4.46 6 PN Pn 13 56 09.3 +0.2
SMKR Semkarok 4.50 8 eP Pn 13 56 10.0 +0.4
SMKR Semkarok 4.50 8 PN Pn 13 56 10.0 +0.4
BKI Bering 4.53 45 eP Pn 13 56 07.9 -2.1
BKI eS Sn 13 56 55.2 -6.1
BKI Bering 4.53 45 PN Pn 13 56 07.9 -2.1
SRKR Sorokina 4.55 6 eP Pn 13 56 11.8 +1.5
SRKR Sorokina 4.55 6 PN Pn 13 56 11.8 +1.5
OSSR Ossora 7.29 11 eP Pn 13 56 47.1 -0.6
OSSR Ossora 7.29 11 PN Pn 13 56 47.1 -0.6
SMY Shemya 8.42 81 ePn Pn 13 57 01.4 -1.9
SMY Shemya 8.42 81 ePN Pn 13 57 01.4 -1.9
MA2 Magadan 9.19 328 Pn Pn 13 57 14.0 +0.1
comp=Z,0.2nm,0.3s,baz=150,slow=8.1,SNR=3.6
MA2 LR LR 14 01 33.9
comp=Z,1μm,18.1s,baz=146,slow=44
MA2 Magadan 9.19 328 i PN Pn 13 57 12.8 -1.0
MA2 pmax pmax
comp=Z,4.0nm,0.6s
OKH Okha 10.64 284 dePN Pn 13 57 34.3 +0.6
OKH pmax pmax
comp=Z,100nm,10.0s
OKH MLR MLR
comp=Z,1μm,13.0s
KUR Kuril'sk 10.76 235 ePN Pn 13 57 38.0 +2.6
KUR MLR MLR
comp=Z,2μm,16.0s
TYV Tymovskoe 11.11 270 ePN Pn 13 57 42.3 +2.1
TYV e 13 59 46.3
TYV pmax pmax
comp=Z,11nm,1.1s
TYV MLR MLR
comp=Z,2μm,16.0s
SEY Seymchan 11.62 342 Pn Pn 13 57 47.6 +0.5
comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=6.1
UGL Uglegorsk 12.02 262 ePN Pn 13 57 57.4 +4.8
UGL pmax pmax
comp=Z,36nm,1.0s
YSS Yuzh-Sakhalins 12.55 253 ePN Pn 13 58 01.8 +2.0
YSS pmax pmax
comp=Z,20nm,1.4s
YSS MLR MLR
comp=Z,500nm,14.0s
YUK Yuzh-Kuril'sk 12.62 236 ePN P 13 58 16.6 +5.1
YUK MLR MLR
comp=Z,1μm,18.0s
ASAJ Asahikawa 14.30 243 Pn Pn 13 58 23.5 -0.2
comp=Z,2.2nm,0.3s,baz=76,slow=12,SNR=23
ASAJ LR LR 14 04 50.1
comp=Z,528nm,18.1s,baz=52,slow=42
GRNR Gornyy 14.97 274 eP P 13 58 36.0 -1.6
GRNR pmax pmax
comp=Z,13nm,1.0s
ERM Erimo 15.45 236 ePn Pn 13 58 34.6 -4.4
comp=Z,35nm,1.2s
ERM Erimo 15.45 236 eP Pn 13 58 34.6 -4.4
ERM pmax pmax
comp=Z,35nm,1.2s
BILL Bilibino 16.20 8 ePn Pn 13 58 47.0 -1.4
comp=Z,31nm,0.9s
BILL Bilibino 16.20 8c iP Pn 13 58 48.0 -0.4
BILL pmax pmax
comp=Z,26nm,0.8s
BILL MLR MLR
comp=Z,483nm,19.0s
TEY Ternei 17.20 255⇑ eP P 13 59 02.0 -0.3
TEY pmax pmax
comp=E,30nm,0.7s
TEY pmax pmax
comp=Z,20nm,0.9s
KLR Kul'dur 18.31 272 P Pn 13 59 14.6 -0.1
comp=Z,0.8nm,0.3s,baz=50,slow=9.4,SNR=36
KLR LR LR 14 07 14.4
comp=Z,531nm,18.4s,baz=74,slow=40
KLR Kul'dur 18.31 272c iP Pn 13 59 14.9 +0.2
KLR pmax pmax
comp=Z,12nm,0.8s
GAMB Gambell 18.66 41 eP Pn 13 59 21.3 +2.5
comp=Z,11nm,1.3s
YAK Yakutsk 19.20 313 eP P 13 59 20.5 -3.6
comp=Z,93nm,0.8s
YAK Yakutsk 19.20 313c iP P 13 59 21.9 -2.2
YAK eS Sn 14 02 50.3 -8.9
ZEA Zeya 19.92 288 eP P 13 59 30.2 -1.9
ZEA pmax pmax
comp=Z,15nm,1.0s
ZEA MLR MLR
comp=Z,2μm,15.0s
ZEA MLR MLR
comp=N,400nm,14.0s
ZEA MLR MLR
comp=E,1μm,14.0s
USA0B Ussuriysk Arra 20.42 258 eP P 13 59 34.2 -3.3
USRK Ussuriysk Ar. 20.42 258 P P 13 59 35.8 -1.8
comp=E,31nm,1.1s,baz=56,slow=11,SNR=24
USRK LR LR 14 07 36.7
comp=E,312nm,20.0s,baz=57,slow=37
ANM Nome 21.52 42 eP P 13 59 52.1 +2.9
comp=E,6.9nm,0.9s
ANM Nome 21.52 42 eP P 13 59 52.1 +2.9
ANM pmax pmax
comp=Z,7.0nm,0.9s
MDJ Mudanjiang 21.66 262 P P 13 59 49.5 -1.3
MDJ pmax pmax
comp=Z,19nm,1.3s
MDJ Mudanjiang 21.66 262 eP P 13 59 46.7 -4.1
comp=Z,13nm,0.8s
MSHR Mys Shultsa 21.84 256 i P P 13 59 50.9 -1.9
MJB9 Matsu-Tunnel 22.10 234 eP P 13 59 56.0 +0.4
comp=Z,28nm,0.6s
MAJO Matsushiro 22.10 234 eP P 13 59 56.1 +0.4
comp=Z,28nm,0.6s
MAJO Matsushiro 22.10 234 eP P 13 59 56.1 +0.4
MAJO pmax pmax
comp=Z,28nm,0.6s
MAT Matsushiro 22.10 234 P P 13 59 56.2 +0.5
MAT S S 14 03 53.8 -3.1
MJAR Matsushiro Arr 22.10 234 P P 13 59 56.8 +1.1
comp=Z,9.8nm,0.7s,baz=18,slow=10,SNR=40
MJAR LR LR 14 09 02.9
comp=Z,411nm,21.2s,baz=45,slow=38
INU Inuyama 23.63 234 eP P 14 00 12.7 +1.3
comp=Z,29nm,0.9s
TIXI Tiksi 24.02 336 P P 14 00 13.4 -1.1
comp=Z,32nm,0.8s,baz=128,slow=8.6,SNR=86
TIXI Tiksi 24.02 336 eP P 14 00 12.2 -2.4
comp=Z,29nm,0.8s
TIXI Tiksi 24.02 336ce P P 14 00 13.7 -0.9
TIXI pmax pmax
comp=Z,33nm,0.8s
CN2 Changchun 24.62 264 eP P 14 00 18.5 -1.9
CN2 epP pP 14 00 29.2 -1.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=Z,410nm,16.0s
CN2 LR LR
comp=Z,390nm,16.0s
CN2 LR LR
comp=Z,460nm,18.0s
HIA Hailar 25.65 280 eP P 14 00 27.5 -2.2
comp=Z,32nm,0.9s
HIA Hailar 25.65 280 eP P 14 00 27.5 -2.2
HIA pmax pmax
comp=Z,32nm,0.9s
BOD Bodaibo 26.76 301 eP P 14 00 37.4 -2.2
BOD pmax pmax
comp=Z,9.0nm,1.4s
KSRS Korea Array 27.03 250 P P 14 00 42.5 +0.4
comp=Z,4.1nm,0.6s,baz=44,slow=9.2,SNR=21
KSRS LR LR 14 12 37.3
comp=Z,191nm,18.2s,baz=56,slow=39
KS15 Wonju Array Si 27.06 250 eP P 14 00 42.5 +0.1
comp=Z,15nm,1.1s
KSAR Wonju Array Be 27.06 250 P P 14 00 42.5 +0.1
KSAR Wonju Array Be 27.06 250 P P 14 00 42.6 +0.1
JNU Nakatsue 28.54 240 P P 14 00 58.5 +2.7
comp=Z,21nm,1.0s,baz=23,slow=12,SNR=6.6
TOLK Toolik Lake Re 28.63 36 eP P 14 00 56.8 +0.5
comp=Z,2.9nm,0.6s
WRH Wood River Hil 28.86 45 eP P 14 01 02.9 +4.6
comp=Z,5.2nm,1.0s
ILAR Eielson Array 29.38 44 P P 14 01 02.5 -0.3
comp=Z,1.0nm,0.9s,baz=266,slow=8.4,SNR=9.8
DL2 Dalian 29.81 259 P P 14 01 07.7 +0.8
DL2 eS S 14 06 03.9 +3.2
DL2 pmax pmax
comp=Z,18nm,0.6s
DL2 pmax pmax
comp=Z,37nm,5.0s
DL2 LR LR
comp=Z,320nm,16.3s
DL2 LR LR
comp=Z,250nm,16.5s
DL2 LR LR
comp=Z,290nm,23.1s
PRP Porcupine Dome 29.95 43 eP P 14 01 10.7 +2.6
comp=Z,3.5nm,0.9s
H11N2 WAKE ISLAND Hy 32.75 169 T T 14 36 59.4
SNR=108
H11N3 WAKE ISLAND Hy 32.76 169 T T 14 36 57.0
baz=352,slow=74,SNR=120
H11N1 WAKE ISLAND Hy 32.76 169 T T 14 37 00.9
baz=161,slow=74,SNR=114
ULN Ulaanbaatar 33.88 284 eP P 14 01 40.6 -2.2
comp=Z,4.7nm,0.9s
ULN Ulaanbaatar 33.88 284ce P P 14 01 41.9 -0.9
ULN pmax pmax
comp=Z,4.0nm,0.8s
H11S1 WAKE ISLAND Hy 33.93 169 T T 14 39 10.3
baz=92,slow=74,SNR=6.5
H11S3 WAKE ISLAND Hy 33.94 169 T T 14 39 08.9
baz=354,slow=74,SNR=11
H11S2 WAKE ISLAND Hy 33.95 169 T T 14 38 25.8
SNR=3.4
TLY Talaya 34.23 292 eP P 14 01 44.7 -0.9
TLY pmax pmax
comp=Z,46nm,1.3s
TLY MLR MLR
comp=Z,1μm,16.0s
SONA0 Songino Array 34.29 285 eP P 14 01 45.1 -1.2
SONA0 ePcP PcP 14 04 22.5 +0.8
SONM Songino Array 34.29 285 P P 14 01 45.1 -1.2
comp=Z,1.4nm,0.4s,baz=61,slow=7.5,SNR=10
SONM PcP PcP 14 04 22.5 +0.8
comp=Z,1.3nm,0.8s,baz=82,slow=2.4,SNR=3.6
SONM LR LR 14 17 14.8
comp=Z,808nm,18.3s,baz=84,slow=39
INK Inuvik 34.53 37 P P 14 01 49.9 +1.9
comp=Z,2.5nm,0.7s,baz=131,slow=4.9,SNR=3.2
INK Inuvik 34.53 37 eP P 14 01 49.9 +1.9
comp=Z,8.0nm,1.3s
HHC Hu-ho-hao-te 34.81 271 eP P 14 01 50.3 -0.5
HHC PP PnPn 14 03 06.0 -1.7
HHC S S 14 07 14.4 -4.3
HHC pmax pmax
comp=Z,16nm,0.6s
HHC pmax pmax
comp=Z,59nm,5.3s
HHC LR LR
comp=Z,550nm,14.5s
HHC LR LR
comp=Z,320nm,15.1s
HHC LR LR
comp=Z,650nm,14.7s
ZAK Zakamensk 34.98 290 eP P 14 01 47.3 -4.9
ZAK pmax pmax
comp=Z,10.0nm,1.0s
WHY Whitehorse 35.43 50 eP P 14 01 59.2 +3.3
comp=Z,3.0nm,0.8s
MOY Mondy 35.74 293 eP P 14 01 58.2 -0.5
MOY pmax pmax
comp=Z,13nm,1.3s
NJ2 Nanjing 36.12 253 eP P 14 02 02.0 0.0
NJ2 pmax pmax
comp=Z,20nm,0.5s
NRIK Noril'sk 36.78 326 P P 14 02 06.3 -0.9
comp=Z,3.1nm,0.5s,baz=91,slow=11,SNR=9.4
NRIK LR LR 14 18 43.3
comp=Z,654nm,18.6s,baz=44,slow=39
DLBC Dease Lake 38.49 52 P P 14 02 23.8 +1.9
comp=Z,1.6nm,0.7s,baz=295,slow=14,SNR=2.1
WHN Wuhan 39.87 256 ⇓P P 14 02 35.7 +2.1
WHN pmax pmax
comp=Z,29nm,0.6s
WHN pmax pmax
comp=Z,220nm,2.9s
WHN LR LR
comp=Z,510nm,10.3s
WHN LR LR
comp=Z,510nm,11.0s
WHN LR LR
comp=Z,550nm,17.1s
XAN Xi'an 40.73 264 P P 14 02 40.5 -0.3
XAN pP pwP 14 02 53.6 -1.1
XAN pmax pmax
comp=Z,4.0nm,0.8s
XAN LR LR
comp=Z,410nm,19.5s
XAN LR LR
comp=Z,390nm,21.7s
XAN LR LR
comp=Z,290nm,17.3s
LZH Lanzhou 42.51 271 eP P 14 02 52.3 -3.2
LZH pP pP 14 03 05.2 -0.7
LZH PP PP 14 04 37.1 +2.8
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,110nm,4.8s
LZH LR LR
comp=Z,440nm,17.3s
LZH LR LR
comp=Z,400nm,15.7s
LZH LR LR
comp=Z,590nm,17.3s
GTA Gaotai 42.89 278 eP P 14 02 58.2 -0.3
GTA pP pP 14 03 07.5 -1.6
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,66nm,6.4s
GTA LR LR
comp=Z,440nm,15.8s
GTA LR LR
comp=Z,370nm,13.4s
GTA LR LR
comp=Z,560nm,16.8s
ENH Enshi 42.99 260 eP P 14 02 57.8 -1.5
comp=Z,16nm,0.8s
ZAA1 Zalesovo Array 43.43 304 eP P 14 03 00.3 -2.2
ZAA0 Zalesovo Array 43.44 304 eP P 14 02 58.5 -4.0
comp=Z,4.9nm,0.8s
ZALV Zalesovo Beam 43.44 304 P P 14 03 00.3 -2.2
comp=Z,3.5nm,0.7s,baz=62,slow=7.0,SNR=12
ZALV LR LR 14 22 36.0
comp=Z,361nm,18.5s,baz=70,slow=38
YKA Yellowknife Ar 43.76 42 P P 14 03 05.3 +0.4
comp=Z,0.5nm,0.7s,baz=300,slow=8.5,SNR=4.2
YKB5 Yellowknife Ar 43.76 42 eP P 14 03 05.3 +0.4
NVS Novosibirsk 43.80 305⇓ iP P 14 03 04.0 -1.4
NVS eS S 14 09 30.0 -2.9
NVS pmax pmax
comp=N,8.0nm,0.9s
NVS pmax pmax
comp=E,16nm,0.9s
NVS pmax pmax
comp=Z,29nm,0.9s
NVS smax smax
comp=E,4.0nm,0.9s
RES Resolute Bay 44.15 22 P P 14 03 07.8 -0.1
comp=E,2.8nm,0.7s,baz=313,slow=6.2,SNR=11
RES Resolute Bay 44.15 22 eP P 14 03 08.6 +0.6
comp=E,4.2nm,0.9s
RES Resolute Bay 44.15 22 eP P 14 03 08.6 +0.6
RES pmax pmax
comp=Z,4.0nm,0.9s
DGZ Jazzator, Alta 44.24 297c iP P 14 03 08.5 -0.8
DGZ pmax pmax
comp=Z,11nm,0.8s
CD2 Chengdu 46.05 265 eP P 14 03 21.4 -2.3
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 LR LR
comp=Z,1μm,20.6s
CD2 LR LR
comp=Z,840nm,19.1s
CD2 LR LR
comp=Z,540nm,15.7s
WMQ Urumqi 47.45 290 eP P 14 03 35.3 +0.8
WMQ sP sP 14 03 50.1 +0.3
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,190nm,4.7s
WMQ LR LR
comp=Z,460nm,18.9s
WMQ LR LR
comp=Z,460nm,15.1s
WMQ LR LR
comp=Z,740nm,15.1s
TULEG Thule 47.84 14 eP P 14 03 39.3 +2.3
comp=Z,5.2nm,0.8s
KBS Kingsbay 47.84 352 eP P 14 03 37.6 +0.5
comp=Z,16nm,0.8s
KBS Kingsbay 47.84 352ce P P 14 03 37.5 +0.5
KBS pmax pmax
comp=Z,53nm,0.7s
SPA0 Spitsbergen Ar 48.10 351 eP P 14 03 38.7 -0.3
comp=Z,49nm,1.0s
SPA0 Spitsbergen Ar 48.10 351 eP P 14 03 40.1 +1.0
SPITS Spitsbergen Ar 48.10 351 LR LR 14 25 13.6
comp=Z,91nm,18.7s,baz=20,slow=38
KURK Kurchatov 48.38 303 eP P 14 03 39.5 -2.0
comp=Z,33nm,1.0s
KURK Kurchatov 48.38 303 eP P 14 03 39.5 -2.0
KURK pmax pmax
comp=Z,33nm,1.0s
MK31 Makanchi Array 48.72 297 eP P 14 03 42.0 -2.3
comp=Z,5.1nm,0.6s
MK31 Makanchi Array 48.72 297 eP P 14 03 42.0 -2.3
MK31 pmax pmax
comp=Z,5.0nm,0.6s
MK32 Makanchi Array 48.72 297 eP P 14 03 42.7 -1.6
MKAR Makanchi Array 48.72 297 P P 14 03 42.7 -1.6
comp=Z,5.3nm,0.5s,baz=57,slow=7.1,SNR=82
MKAR Makanchi Array 48.72 297 i P P 14 03 42.9 -1.4
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MAKZ Makanchi 48.89 297 eP P 14 03 43.0 -2.5
comp=Z,6.9nm,0.8s
MAKZ Makanchi 48.89 297 P P 14 03 43.1 -2.4
MAKZ pmax pmax
comp=Z,7.0nm,0.8s
KMI Kunming 50.83 261 P P 14 04 01.5 +0.8
KMI pmax pmax
comp=Z,10.0nm,0.5s
KMI LR LR
comp=Z,330nm,17.8s
KMI LR LR
comp=Z,240nm,18.8s
KMI LR LR
comp=Z,200nm,22.8s
KULLO Kullorsuaq 51.09 12 i P P 14 04 02.2 +0.5
KULLO pmax pmax
comp=Z,16nm,0.8s
KULLO Kullorsuaq 51.09 12 i P P 14 04 02.2 +0.5
comp=Z,16nm,0.8s
BRVK Borovoye 51.14 309 eP P 14 04 00.8 -1.6
comp=Z,23nm,0.7s
BRVK Borovoye 51.14 309d iP P 14 04 01.4 -1.1
BRVK pmax pmax
comp=Z,23nm,0.7s
DAG Danmarks Havn 51.36 360 i P P 14 04 03.6 -0.2
DAG pmax pmax

comp=Z,6.0nm,0.8s
DAG Danmarks Havn 51.36 360 *i* P **P 14 04 03.6 -0.2**
comp=Z,7.8nm,0.8s
PDGK Podgornoye 52.42 295 P **P 14 04 11.5 -0.9**
PDGK pmax pmax
comp=Z,9.0nm,1.0s
SLVN Son La 52.97 257 *e*P **P 14 04 16.9 +0.4**
comp=Z,6.6nm,0.9s
OTUK Ortayu 53.13 303 P **P 14 04 15.5 -1.9**
OTUK pmax pmax
comp=Z,9.0nm,0.7s
HAMF Hammerfest 53.63 343 *e*P **P 14 04 19.6 -1.1**
LVZ Lovozero 53.64 338 P **P 14 04 20.4 -0.4**
LVZ pmax pmax
comp=Z,36nm,0.9s
KEV Kevo 53.77 342 *e*P **P 14 04 21.2 -0.5**
FCC Fort Churchill 54.12 38 *e*P **P 14 04 25.2 +0.8**
comp=Z,3.3nm,0.8s
FCC Fort Churchill 54.12 38 *e*P **P 14 04 25.2 +0.8**
FCC pmax pmax
comp=Z,3.0nm,0.8s
ARU Arti 54.21 318 P **P 14 04 24.6 -0.5**
comp=Z,5.4nm,0.4s,baz=54,slow=4.1,SNR=13
ARU Arti 54.21 318 *e*P **P 14 04 24.2 -0.9**
comp=Z,20nm,1.0s
ARU Arti 54.21 318*c i*P **P 14 04 24.4 -0.7**
ARU *PP **pwP 14 04 37.8 -0.8**
ARU S **S 14 11 58.2 -0.9**
ARU pmax pmax
comp=Z,12nm,0.6s
ARU MLR MLR
comp=Z,236nm,18.0s
ARCES ARCESS Array B 54.24 342 P **P 14 04 24.9 -0.3**
comp=Z,7.1nm,0.4s,baz=38,slow=8.7,SNR=19
ARE0 ARCESS Array S 54.24 342 *e*P **P 14 04 25.1 0.0**
KDJ Kajisay 54.50 295 *e*P **P 14 04 26.4 -1.2**
comp=Z,10.0nm,0.8s
KDJ Kajisay 54.50 295 *e*P **P 14 04 26.4 -1.2**
KDJ pmax pmax
comp=Z,10.0nm,0.8s
SUMG Summit 54.89 7 *e*P **P 14 04 30.7 +0.4**
comp=Z,19nm,0.9s
SUMG Summit 54.89 7 *i*P **P 14 04 31.1 +0.8**
SUMG pmax pmax
comp=Z,42nm,0.8s
SUMG Summit 54.89 7 *i*P **P 14 04 31.1 +0.8**
comp=Z,42nm,0.8s
BOOM Boomskoye usch 54.95 296 *e*P **P 14 04 28.8 -2.1**
BOOM Boomskoye usch 54.95 296 *e*P **P 14 04 28.8 -2.1**
KTK1 Kautokeino 55.12 343 *e*P **P 14 04 32.0 +0.5**
TRO Tromso 55.32 345 *e*P **P 14 04 32.8 -0.1**
PRGR Permogore 55.34 328 *e*P **P 14 04 31.7 -1.4**
PRGR pmax pmax
comp=Z,15nm,0.6s
HEF Hetta 55.56 342 *e*P **P 14 04 34.4 -0.3**
KIF Kilpisjarvi 55.56 344 *e*P **P 14 04 34.2 -0.4**
AAK Ala-Archa 55.65 297 *e*P **P 14 04 34.6 -1.3**
comp=Z,12nm,1.1s
AAK Ala-Archa 55.65 297 *e*P **P 14 04 34.6 -1.3**
AAK pmax pmax
comp=Z,12nm,1.1s
TMCR Tamitsa 55.70 333 *e*P **P 14 04 35.6 -0.1**
TMCR pmax pmax
comp=Z,48nm,0.9s
PANO Nakornpanom 55.78 253 P **P 14 04 39.5 +2.6**
comp=Z,0.6nm,0.9s
NV01 Mina Array Sit 55.91 70 *e*P **P 14 04 39.6 +1.7**
NVAR Mina Array Bea 55.91 70 P **P 14 04 39.6 +1.7**
comp=Z,1.4nm,0.8s,baz=287,slow=6.7,SNR=9.9
KIRV Kirov 56.26 324 P **P 14 04 40.2 +0.4**
comp=Z,25nm,0.5s,baz=53,slow=4.6,SNR=9.9
KIRV LR LR 14 31 50.2
comp=Z,232nm,18.0s,baz=109,slow=39
SKNT Sakolnakorn 56.29 253 P **P 14 04 42.4 +1.9**
comp=Z,26nm,1.0s
MSF Maaselka 56.56 338 P **P 14 04 42.3 +0.5**
MSF pmax pmax
comp=Z,51nm,1.2s
PAYA Payao 56.90 259 P **P 14 04 46.8 +1.9**
comp=Z,38μm,0.8s
JMIC Jan Mayen 56.92 356 LR LR 14 27 09.0
comp=Z,43nm,20.2s,baz=28,slow=34
KSH Kashi 56.93 293 *e*P **P 14 04 47.5 +2.5**
KSH S **S 14 12 32.1 -3.9**
KSH pmax pmax
comp=Z,7.0nm,0.6s
KSH pmax pmax
comp=Z,110nm,4.5s
KSH LR LR
comp=Z,500nm,16.6s
KSH LR LR
comp=Z,250nm,8.7s
KSH LR LR
comp=Z,740nm,14.0s
SHL Shillong 57.17 270 *e*P **P 14 04 46.0 -0.9**
comp=Z,7.8nm,0.5s
SHL Shillong 57.17 270 *e*P **P 14 04 46.0 -0.9**
SHL pmax pmax
comp=Z,8.0nm,0.5s
ARSB Arslanbob 57.37 297 *e*P **P 14 04 47.2 -0.9**
comp=Z,8.9nm,1.0s
SALU Saltoluokta 57.40 344 *e*P **P 14 04 47.0 -0.8**
KK31 Karatay Array 57.50 300 *e*P **P 14 04 47.2 -1.6**
comp=Z,4.8nm,0.8s
KK31 Karatay Array 57.50 300 *e*P **P 14 04 47.2 -1.6**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 57.50 300 *e*P **P 14 04 47.2 -1.6**
comp=Z,4.8nm,0.8s
KKAR Karatay Array 57.50 300 *e*P **P 14 04 47.2 -1.6**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
LOF Lofoten 57.52 346 *e*P **P 14 04 48.5 -0.1**
LAMP Lampang 57.69 258 P **P 14 04 52.4 +2.0**
comp=Z,32μm,0.7s,comp=Z,315μm
UTTA Uttaradit 57.73 257 P **P 14 04 52.8 +2.1**
comp=Z,25μm,0.8s
PD31 Pinedale Array 57.85 60 *e*P **P 14 04 54.2 +2.7**
comp=Z,7.2nm,1.3s
PDAR Pinedale Array 57.85 60 P **P 14 04 53.1 +1.5**
comp=Z,0.4nm,0.5s,baz=330,slow=0.5,SNR=3.9
KLMR Klimovskoe 57.86 330 *e*P **P 14 04 50.1 -0.9**
KLMR pmax pmax
comp=Z,18nm,0.9s
CMMT Chiang Mai 57.88 259 P **P 14 04 53.1 +1.3**
comp=Z,12nm,0.9s
CHTO Chiang Mai 57.88 259 *e*P **P 14 04 52.6 +0.8**
comp=Z,14nm,0.8s
CHTO Chiang Mai 57.88 259 *e*P **P 14 04 52.6 +0.8**
CHTO pmax pmax
comp=Z,14nm,0.8s
TPNV Topopah Spring 58.12 70 *e*P **P 14 04 57.2 +3.8**
comp=Z,24nm,2.0s
CM31 Chiang Mai Arr 58.15 259 *e*P **P 14 04 53.6 -0.1**
comp=Z,10nm,0.7s
CMAR Chiang Mai Arr 58.15 259 P **P 14 04 55.0 +1.3**
comp=Z,7.5nm,0.8s,baz=26,slow=6.9,SNR=62
CMAR LR LR 14 32 26.4
comp=Z,106nm,18.5s,baz=46,slow=39
JOF Joensuu 58.50 335 P **P 14 04 55.7 +0.2**
JOF pmax pmax
comp=Z,32nm,1.8s
AB31 Akbulak array 58.54 311 *i*P **P 14 04 54.9 -1.1**
AB31 pmax pmax
comp=Z,10.0nm,0.8s
ABKAR Akbulak array 58.54 311 *e*P **P 14 04 54.9 -1.1**
comp=Z,9.9nm,0.8s
AKTO Aktyubinsk 58.59 313 P **P 14 04 55.4 -1.0**
comp=Z,3.0nm,0.5s,baz=78,slow=10,SNR=14
AKTO LR LR 14 32 59.3
comp=Z,194nm,18.3s,baz=30,slow=39
AKTO Aktyubinsk 58.59 313 P **P 14 04 55.2 -1.2**
AKTO pmax pmax
comp=Z,4.0nm,0.6s
JIRN Jiri 59.15 276 *e*P **P 14 05 00.8 -0.2**
comp=Z,30nm,0.8s
GUN Gumba 59.16 277 *e*P **P 14 05 00.7 -0.4**
comp=Z,23nm,0.7s
MOR8 Moi Rana 59.19 345 *e*P **P 14 04 58.5 -1.8**
RAMN Ramite 59.41 275 *e*P **P 14 05 02.4 -0.3**
comp=Z,50nm,0.5s
KKN Kakani 59.62 277 *e*P **P 14 05 03.8 -0.3**
comp=Z,39nm,0.6s
PKI Pulchoki 59.70 277 *e*P **P 14 05 04.4 -0.3**
comp=Z,23nm,0.7s
PKIN Phulchoki 59.70 277 *e*P **P 14 05 04.3 -0.4**

comp=Z,19nm,0.7s
RSSD Black Hills 59.80 56 *e*P **P 14 05 07.5 +2.4**
comp=Z,7.9nm,0.7s
RSSD Black Hills 59.80 56 *e*P **P 14 05 07.5 +2.4**
RSSD pmax pmax
comp=Z,8.0nm,0.7s
SRU San Rafael Swe 59.85 64 *e*P **P 14 05 07.7 +2.2**
comp=Z,5.5nm,0.9s
SRU San Rafael Swe 59.85 64 *e*P **P 14 05 07.7 +2.2**
SRU pmax pmax
comp=Z,6.0nm,0.9s
DMN Daman 59.85 277 *e*P **P 14 05 05.5 -0.2**
comp=Z,37nm,0.6s
SUF Sumiainen 59.94 338 P **P 14 05 06.0 +0.5**
SUF pmax pmax
comp=Z,63nm,0.8s
UMPA Umpang Tak 59.94 257 P **P 14 05 10.1 +4.0**
comp=Z,33μm,0.7s
DANN Dangsing 60.14 279 *e*P **P 14 05 07.7 0.0**
comp=Z,43nm,0.7s
VAF Ylistaro 60.44 339 P **P 14 05 09.9 +1.0**
VAF pmax pmax
comp=Z,30nm,1.3s
KOLN Koldanda 60.66 278 *e*P **P 14 05 10.8 -0.4**
comp=Z,28nm,0.6s
PYUN Piuthan 60.79 279 *e*P **P 14 05 11.8 -0.3**
comp=Z,31nm,0.7s
FIA1 FINESS Array S 61.06 337 *e*P **P 14 05 12.9 -0.2**
comp=Z,22nm,0.6s
FIA0 FINESS Array S 61.06 337 *e*P **P 14 05 13.3 +0.2**
FIA0 FINESS Array S 61.06 337 *e*P **P 14 05 13.3 +0.2**
FINES FINESS Array B 61.06 337 P **P 14 05 13.3 +0.2**
comp=Z,19nm,0.6s,baz=32,slow=8.4,SNR=136
FINES LR LR 14 35 24.3
comp=Z,133nm,19.8s,baz=28,slow=40
NSS Namsos 61.11 345 *e*P **P 14 05 14.3 +0.9**
PHET Kaeng Krachan 62.06 254 P **P 14 05 23.5 +3.0**
comp=Z,36μm,0.8s
MOS Moscow 62.55 328 *e*P **P 14 05 21.6 -1.6**
MOS *e* 14 05 36.7
MOS *e* 14 05 56.5
NIL Nilore 62.60 290 *e*P **P 14 05 22.9 -1.0**
comp=Z,21nm,0.8s
NIL Nilore 62.60 290 *e*P **P 14 05 23.0 -1.0**
NIL pmax pmax
comp=Z,21nm,0.8s
OBN Obninsk 63.41 328 P **P 14 05 28.1 -0.8**
comp=Z,3.2nm,0.5s,baz=20,slow=21,SNR=3.5
OBN Obninsk 63.41 328 *i*P **P 14 05 27.4 -1.5**
OBN *i* 14 06 04.8
OBN pmax pmax
comp=Z,11nm,0.9s
OBN MLR MLR
comp=Z,85nm,15.0s
VSU Vasula 63.48 335*ce*P **P 14 05 29.3 0.0**
VSU pmax pmax
comp=Z,25nm,0.6s
VSU Vasula 63.48 335 *e*P **P 14 05 29.4 0.0**
VSU IAmb IAmb 14 05 31.1
comp=Z,44nm,0.8s
MOL Molde 63.63 346 *e*P **P 14 05 30.5 +0.2**
DOMB Dombas 63.91 345 *e*P **P 14 05 31.9 -0.3**
NC303 NORSAR Array S 64.30 344 *e*P **P 14 05 34.0 -0.7**
comp=Z,20nm,0.8s
NC303 NORSAR Array S 64.30 344 *e*P **P 14 05 34.8 +0.1**
NC405 NORSAR Array S 64.35 344 *e*P **P 14 05 34.8 -0.3**
comp=Z,26nm,0.9s
KBL Kabul 64.36 294 *e*P **P 14 05 33.8 -2.0**
comp=Z,6.7nm,0.7s
KBL Kabul 64.36 294 *e*P **P 14 05 33.8 -2.0**
KBL pmax pmax
comp=Z,7.0nm,0.7s
NC204 NORSAR Array S 64.36 344 *e*P **P 14 05 35.0 -0.1**
comp=Z,25nm,0.8s
NC204 NORSAR Array S 64.36 344 *e*P **P 14 05 35.2 +0.1**
NB201 NORSAR Array S 64.48 344 *e*P **P 14 05 35.9 0.0**
comp=Z,26nm,0.8s
NB201 NORSAR Array S 64.48 344 *e*P **P 14 05 36.1 +0.2**
NB2 NORSAR Subarra 64.50 344 P **P 14 05 36.1 0.0**
comp=Z,10.0nm,0.8s,baz=22,slow=6.9
NB200 NORSAR Array S 64.50 344 *e*P **P 14 05 36.2 0.0**
NOA NORSAR Array B 64.50 344 P **P 14 05 36.2 0.0**
comp=Z,9.7nm,0.8s,baz=21,slow=6.6,SNR=43
NOA LR LR 14 36 19.9
comp=Z,55nm,19.4s,baz=65,slow=39
NBO00 NORSAR Array S 64.58 344 *e*P **P 14 05 37.2 +0.6**
comp=Z,91nm,1.8s
NBO00 NORSAR Array S 64.58 344 *e*P **P 14 05 37.1 +0.4**
LPSR Galich'ya Gora 64.66 325 *e*P **P 14 05 36.5 -0.7**
LPSR pmax pmax
comp=Z,20nm,0.7s
NC602 NORSAR Array S 64.73 344 *e*P **P 14 05 38.1 +0.5**
NAO01 NORSAR Array S 64.74 344 *e*P **P 14 05 37.4 -0.2**
comp=Z,92nm,1.8s
NAO01 NORSAR Array S 64.74 344 *e*P **P 14 05 37.6 0.0**
VRH Novokhopyorsk 64.77 322 *e*P **P 14 05 36.5 -1.4**
VRH pmax pmax
comp=Z,10.0nm,0.6s
HFS Hagfors 64.91 342 P **P 14 05 38.8 +0.1**
comp=Z,6.6nm,0.5s,baz=46,slow=4.3,SNR=30
VSR Storozhevoye 65.70 324 *e*P **P 14 05 43.0 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.9s
ISAL Salakas 66.17 334 *e*P **P 14 05 47.1 +0.2**
ISAL IAmb IAmb 14 05 50.3
comp=Z,6.7nm,0.8s
IDID Didziasalis 66.23 333 *e*P **P 14 05 47.5 +0.2**
IDID IAmb IAmb 14 05 49.1
comp=Z,4.8nm,0.7s
IIGN Ignalina 66.34 333 *e*P **P 14 05 48.1 +0.1**
IIGN IAmb IAmb 14 05 49.9
comp=Z,7.5nm,0.6s
GEYT Alibeck 67.75 303 P **P 14 05 57.5 +0.2**
comp=Z,8.0nm,0.8s,baz=25,slow=3.9,SNR=17
GYA0B ALIBECK ARRAY 67.75 303 *e*P **P 14 05 56.1 -1.2**
comp=Z,7.7nm,0.8s
WMOK Wichita Mounta 69.44 60 *e*P **P 14 06 09.8 +1.9**
comp=Z,3.4nm,0.9s
WMOK Wichita Mounta 69.44 60 *e*P **P 14 06 09.8 +1.9**
WMOK pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 69.52 329 P **P 14 06 07.7 -0.3**
comp=Z,5.3nm,0.5s,baz=31,slow=6.4,SNR=32
AKASG LR LR 14 42 12.2
comp=Z,116nm,18.6s,baz=20,slow=41
AKBB Malin Array Si 69.52 329 *e*P **P 14 06 07.3 -0.7**
comp=Z,13nm,0.8s
KIEV Kiev 69.53 329 *e*P **P 14 06 07.0 -1.1**
comp=Z,12nm,0.8s
KIEV Kiev 69.53 329⇑ *i*P **P 14 06 07.9 -0.2**
KIEV Kiev 69.53 329*c i*P **P 14 06 07.7 -0.4**
KIEV pmax pmax
comp=Z,13nm,0.8s
KBZ Khabaz 70.34 317 P **P 14 06 14.1 +0.9**
comp=Z,8.9nm,0.8s,baz=77,slow=3.3,SNR=22
ZEI Tsey 70.68 316 *e*P **P 14 06 14.5 -1.1**
ZEI pmax pmax
comp=Z,7.0nm,0.7s
LTX Lajitas 70.86 67 *e*P **P 14 06 17.9 +1.1**
LTX Lajitas 70.86 67 *e*P **P 14 06 17.9 +1.1**
TXAR Lajitas Array 70.86 67 P **P 14 06 17.9 +1.1**
comp=Z,1.0nm,0.7s,baz=301,slow=4.7,SNR=8.8
ANN Anapa 71.67 321 *e*P P 14 06 14.3 -6.9
ANN *e**PP pP 14 06 33.0 +0.6
ANN *e* 14 06 36.8
ANN *e*S S 14 15 24.4 -13
ANN pmax pmax
comp=Z,46nm,1.3s
LVV L'vov 71.87 332 P **P 14 06 22.4 0.0**
AKH Akhalkalaki 71.98 315 *e*P **P 14 06 22.2 -1.2**
AKH Akhalkalaki 71.98 315 *e*P **P 14 06 22.2 -1.2**
EKA Eskdalemuir Ar 72.02 350 P **P 14 06 23.9 +0.7**
comp=Z,2.0nm,0.6s,baz=16,slow=5.2,SNR=18
KWP Kalwaria Pacla 72.41 333 *e*P **P 14 06 25.7 0.0**
comp=Z,272nm,0.9s
KWP Kalwaria Pacla 72.41 333 *e*P **P 14 06 25.7 0.0**
GNI Garni 72.45 314 P **P 14 06 27.2 +1.0**
comp=Z,4.5nm,0.4s,baz=329,slow=4.6,SNR=3.9
GNI Garni 72.45 314*ce*P **P 14 06 27.4 +1.2**
GNI pmax pmax
comp=Z,59nm,1.0s
OJC Ojcow 72.67 335 *e*P **P 14 06 27.5 +0.3**
comp=Z,9.0nm,0.9s
OJC Ojcow 72.67 335 *e*P **P 14 06 27.5 +0.3**
OJC pmax pmax
comp=Z,9.0nm,0.9s

KOLS Kolonicke sedl 73.17 333 *e*P **P 14 06 30.9 +0.8**
KOLS pmax pmax
comp=Z,7.0nm,0.8s
KOLS Kolonicke sedl 73.17 333 *e*P **P 14 06 30.9 +0.8**
OSTC Ostas 73.27 337 *e*P **P 14 06 31.6 +0.9**
OSTC AMS AMS 14 45 00.0
comp=Z,200nm,17.1s
CHVC Chvalec 73.28 337 *e*P **P 14 06 31.7 +0.9**
CHVC *ex* x 14 06 43.8
CHVC AMS AMS 14 45 10.0
comp=Z,200nm,15.6s
CLL Collm 73.30 339 *e*P **P 14 06 30.8 -0.1**
comp=Z,12nm,1.0s
CLL Collm 73.30 339 *i*P **P 14 06 31.1 +0.2**
comp=Z,11nm,0.9s
CLL *i* pP **pwP 14 06 43.6 -1.2**
CLL Collm 73.30 339 *i*P **P 14 06 31.1 +0.2**
CLL *i* *PP **pwP 14 06 43.6 -1.2**
CLL pmax pmax
comp=Z,11nm,0.9s
UPC Upice 73.36 337 *e*P **P 14 06 32.3 +1.1**
UPC *e* 14 06 44.4
UPC MLR MLR
comp=Z,200nm,12.9s
UPC Upice 73.36 337 *e*P **P 14 06 32.3 +1.1**
UPC *e*pP **pwP 14 06 44.4 -0.8**
UPC AMS AMS 14 45 10.0
comp=Z,200nm,12.9s
DPC Dobruska-Polom 73.43 337 *e*P **P 14 06 32.9 +1.2**
DPC *e* 14 06 45.2
DPC MLR MLR
comp=Z,200nm,17.9s
DPC Dobruska-Polom 73.43 337 *e*P **P 14 06 32.9 +1.2**
DPC *e*pP **pwP 14 06 45.2 -0.4**
DPC AMS AMS 14 42 50.0
comp=Z,200nm,17.9s
UZH Uzhgorod 73.43 332 *e*P **P 14 06 30.0 -1.7**
OKC Ostrava-Krasne 73.45 336 *e*P **P 14 06 33.3 +1.5**
OKC Ostrava-Krasne 73.45 336 *e*P **P 14 06 33.3 +1.5**
BUR08 Bucovina Ar. S 73.46 330 *e*P **P 14 06 31.8 -0.2**
comp=Z,11nm,0.7s
BURAR Bucovina Array 73.48 330⇑ *i*P **P 14 06 32.5 +0.4**
BRG Berggiesshubel 73.50 339 *e*P **P 14 06 32.4 +0.4**
comp=Z,4.4nm,1.1s
BRG *e* 14 06 44.6
comp=Z,5.2nm,1.1s
BRG Berggiesshubel 73.50 339 *e*P **P 14 06 32.4 +0.4**
BRG *e* 14 06 44.7
BRG pmax pmax
comp=Z,4.0nm,1.1s
MORC Moravsky Berou 73.66 336 *e*P **P 14 06 33.6 +0.5**
comp=Z,10nm,0.9s
MORC Moravsky Berou 73.66 336⇑ *i*P **P 14 06 34.1 +1.0**
MORC Moravsky Berou 73.66 336 *e*P **P 14 06 33.6 +0.5**
MORC pmax pmax
comp=Z,10.0nm,0.9s
MORC Moravsky Berou 73.66 336 *e*P **P 14 06 34.0 +1.0**
PVCC Panska Ves 73.68 338 AMS AMS 14 44 00.0
comp=Z,200nm,16.5s
LANS Liptovska Anna 73.74 334 *e*P **P 14 06 35.7 +2.2**
LANS *e* 14 06 47.3
LANS Liptovska Anna 73.74 334 *e*P **P 14 06 35.7 +2.2**
LANS *es*P **pwP 14 06 47.3 -0.2**
TRPA Tarpa 73.82 332⇑ *i*P **P 14 06 35.0 +1.1**
TESR Tescani 74.01 329⇑ *i*P **P 14 06 35.2 +0.1**
KECS Kecovo 74.07 334 *e*P **P 14 06 36.3 +0.9**
KECS pmax pmax
comp=Z,29nm,0.9s
KECS Kecovo 74.07 334 *e*P **P 14 06 36.3 +0.9**
DZM Mont Dzumac 74.08 174 LR LR 14 34 11.0
comp=Z,70nm,19.9s,baz=24,slow=32
PRU Pruhonice 74.19 338 *e*P **P 14 06 36.9 +0.8**
PRU MLR MLR
comp=Z,200nm,8.8s
PRU Pruhonice 74.19 338 *e*P **P 14 06 36.9 +0.8**
PRU AMS AMS 14 44 20.0
comp=Z,200nm,8.8s
GOPC GO Pecny, Ondr 74.20 338 AMS AMS 14 43 20.0
comp=Z,200nm,15.9s
MOX Moxa 74.22 340 P **P 14 06 38.0 +1.7**
MOX pmax pmax
comp=Z,9.0nm,1.0s
VRAC Vranov 74.33 336 P **P 14 06 38.1 +1.2**
comp=Z,8.9nm,0.8s,baz=25,slow=5.7,SNR=14
VRAC Vranov 74.33 336⇑ *i*P **P 14 06 38.0 +1.0**
VRAC Vranov 74.33 336 *e*P **P 14 06 38.0 +1.0**
JAVC Velka Javorina 74.48 335 *e*P **P 14 06 39.7 +1.8**
VYHS Vyhne 74.51 335 *e*P **P 14 06 39.0 +1.0**
VYHS *e* 14 06 50.7
VYHS pmax pmax
comp=Z,4.0nm,0.8s
VYHS Vyhne 74.51 335 *e*P **P 14 06 39.0 +1.0**
VYHS *e*pP **pwP 14 06 50.7 -1.2**
VRI Vrincioaia 74.56 328⇑ *i*P **P 14 06 38.7 +0.4**
VRI Vrincioaia 74.56 328 P **P 14 06 38.0 -0.3**
VRI pmax pmax
comp=Z,8.0nm,0.9s
PLOR Plostina 74.60 328⇑ *i*P **P 14 06 38.7 +0.1**
KRUC Moravsky 74.61 336 *e*P **P 14 06 39.6 +1.1**
TREC Trest 74.61 337 *e*P **P 14 06 39.8 +1.2**
TREC MLR MLR
comp=Z,200nm,16.2s
TREC Trest 74.61 337 *e*P **P 14 06 39.8 +1.2**
TREC AMS AMS 14 46 00.0
comp=Z,200nm,16.2s
CFR Carcaliu 74.70 327⇓ *i*P **P 14 06 39.2 +0.1**
DRGR 74.97 331⇑ *i*P **P 14 06 41.1 +0.3**
DRGR 74.97 331 P **P 14 06 41.2 +0.4**
DRGR pmax pmax
comp=Z,20nm,0.9s
MODS Modra-Piesok 75.03 336 *e*P **P 14 06 41.4 +0.4**
MODS pmax pmax
comp=Z,9.0nm,1.0s
MODS Modra-Piesok 75.03 336 *e*P **P 14 06 41.4 +0.4**
MLR Muntele Rosu 75.15 329 *e*P **P 14 06 42.5 +0.6**
comp=Z,14nm,0.6s
MLR Muntele Rosu 75.15 329⇑ *i*P **P 14 06 42.2 +0.3**
MLR Muntele Rosu 75.15 329 *e*P **P 14 06 42.5 +0.6**
MLR pmax pmax
comp=Z,14nm,0.6s
GRA1 Grafenberg Arr 75.21 340 *e*P **P 14 06 43.1 +1.1**
comp=Z,15nm,0.9s
GRF Grafenberg Arr 75.21 340 *e*P **P 14 06 43.1 +1.1**
GRF pmax pmax
comp=Z,15nm,0.9s
GRFO Grafenberg 75.21 340 *e*P **P 14 06 43.1 +1.1**
comp=Z,19nm,1.1s
GRFO Grafenberg 75.21 340 *e*P **P 14 06 43.1 +1.1**
GRFO pmax pmax
comp=Z,19nm,1.1s
KHC Kasperske Hory 75.22 338 *e*P **P 14 06 43.1 +1.0**
comp=Z,2.6nm,0.9s
KHC Kasperske Hory 75.22 338 *e*P **P 14 06 43.1 +1.0**
KHC pmax pmax
comp=Z,3.0nm,0.9s
KHC Kasperske Hory 75.22 338 *e*P **P 14 06 43.1 +1.0**
KHC *e*pP **PcP 14 06 54.5 -0.9**
KHC AMS AMS 14 46 10.0
comp=Z,200nm,13.9s
ZST Bratislava 75.23 336 *e*P **P 14 06 43.0 +0.8**
ZST Bratislava 75.23 336 *e*P **P 14 06 43.0 +0.8**
MEM Membach 75.34 343 P **P 14 06 43.8 +1.0**
MEM pP **sP 14 06 58.5 -0.1**
MEM Membach 75.34 343 P **P 14 06 43.8 +1.0**
MEM pP **sP 14 06 58.5 -0.1**
GEC2 GERESS Array S 75.46 338 *e*P **P 14 06 43.4 -0.2**
comp=Z,3.7nm,0.7s
GEC2 GERESS Array S 75.46 338 *e*P **P 14 06 43.4 -0.2**
GEC2 pmax pmax
comp=Z,4.0nm,0.7s
GERES GERESS Array B 75.46 338 P **P 14 06 44.0 +0.4**
comp=Z,2.8nm,0.7s,baz=45,slow=5.8,SNR=13
GERES LR LR 14 44 21.8
comp=Z,88nm,18.1s,baz=26,slow=39
GERES GERESS Array B 75.46 338 P **P 14 06 44.0 +0.4**
VOIR 75.48 329⇓ *i*P **P 14 06 44.6 +0.9**
SIRR Siria 75.76 332⇓ *i*P **P 14 06 46.4 +1.2**
CONA Conrad Observa 75.80 336 *i*P **P 14 06 47.1 +1.6**
comp=Z,4.4nm,0.8s
BMRD Maredsous 75.85 344 P **P 14 06 46.0 +0.4**
W50A Signal Mountai 75.88 50 *e*P **P 14 06 49.4 +3.3**
comp=Z,6.0nm,0.8s
DOU Dourbes 76.08 344 P **P 14 06 47.0 +0.1**
DOU pP **sP 14 07 02.2 -0.6**

GZR	Gura Zlata	76.22 331	⇑ *i* P	P	14 06 48.3	+0.4
MOA	Molln	76.26 337	*e* P	P	14 06 49.0	+1.0
	comp=Z,7.3nm,0.9s					
ILGA	Ilgaz	76.29 321	*e* P	P	14 06 47.3	-1.3
	comp=Z,20nm,0.8s					
BZS	Buzias	76.36 332	⇑ *i* P	P	14 06 49.0	+0.4
ARSA	Arzberg	76.51 336	*e* P	P	14 06 50.7	+1.2
	comp=Z,5.8nm,0.7s					
HERR	Herculane	76.79 331	⇓ *i* P	P	14 06 51.4	+0.3
MDVR	Moldovita	77.09 331	⇑ *i* P	P	14 06 53.1	+0.3
SOKA	Soboth	77.17 336	*e* P	P	14 06 54.6	+1.3
	comp=Z,3.3nm,0.6s					
KBA	Koelnbreinsper	77.20 338	*e* P	P	14 06 55.3	+1.7
	comp=Z,19nm,0.8s,SNR=16					
WATA	Walderalm	77.36 339	*i* P	P	14 06 55.4	+1.0
	comp=Z,2.7nm,0.8s					
WTTA	Wattenberg	77.42 339	*e* P	P	14 06 56.3	+1.5
	comp=Z,6.7nm,1.1s					
ECH	Echery	77.43 342	*e* P	P	14 06 53.6	-1.1
	comp=Z,6.5nm,0.9s					
ECH	Echery	77.43 342	*e* P	P	14 06 53.6	-1.1
ECH			pmax	pmax		
	comp=Z,7.0nm,0.9s					
OBKA	Obir	77.44 337	*e* P	P	14 06 56.1	+1.3
	comp=Z,3.8nm,0.7s					
MOTA	Moosalm	77.46 339	*e* P	P	14 06 56.2	+1.2
	comp=Z,8.4nm,0.9s					
BR101	Keskin Array S	77.46 321	*e* P	P	14 06 55.5	+0.4
BR131	Keskin Array S	77.46 321	*e* P	P	14 06 53.8	-1.3
	comp=Z,5.5nm,0.8s					
BRTR	Keskin Array B	77.46 321	P	P	14 06 55.5	+0.4
	comp=Z,4.3nm,0.9s,baz=34,slow=4.0,SNR=20					
BRTR			LR	LR	14 46 30.2	
	comp=Z,76nm,19.5s,baz=40,slow=40					
SQTA	Sankt Quirin	77.55 339	*e* P	P	14 06 57.0	+1.5
	comp=Z,9.0nm,0.8s					
ANTO	Ankara	77.66 321	*e* P	P	14 06 53.9	-2.3
	comp=Z,52nm,0.7s					
ANTO	Ankara	77.66 321	*e* P	P	14 06 53.9	-2.3
ANTO			pmax	pmax		
	comp=Z,53nm,0.7s					
ABTA	Abfaltersbach	77.70 338	*e* P	P	14 06 57.4	+1.1
	comp=Z,6.3nm,0.8s					
FETA	Feichten	77.84 339	*e* P	P	14 06 58.6	+1.4
	comp=Z,8.0nm,1.0s					
DAVOX	Davos/Dischmat	78.26 340	P	P	14 07 01.2	+1.7
	comp=Z,3.9nm,0.6s,baz=33,slow=5.5,SNR=8.3					
FUORN	Ofenpass-Fuorn	78.33 339	*e* P	P	14 07 00.1	+0.2
	comp=Z,10.0nm,1.0s					
VTS	Vitosha	78.58 329	*e* P	P	14 07 01.4	+0.1
	comp=Z,7.7nm,0.7s					
VTS	Vitosha	78.58 329	⇓ *i* P	P	14 07 02.1	+0.8
VTS	Vitosha	78.58 329	*e* P	P	14 07 01.4	+0.1
VTS			pmax	pmax		
	comp=Z,8.0nm,0.7s					
TUE	Stuetta	78.66 340	*e* P	P	14 07 02.9	+1.1
	comp=Z,10nm,0.7s					
WSAR	Wadi Sarin	78.83 293	P	P	14 07 03.3	+0.5
	comp=Z,3.7nm,0.8s,baz=116,slow=3.9,SNR=3.9					
AS31	Alice Springs	78.96 205	*e* P	P	14 07 04.3	+1.1
	comp=Z,3.7nm,1.4s					
ASAR	Alice Springs	78.96 205	P	P	14 07 04.3	+1.1
	comp=Z,0.9nm,0.5s,baz=15,slow=5.3,SNR=23					
SENIN	Lac Senin/Sane	79.18 341	*e* P	P	14 07 05.6	+1.0
	comp=Z,6.4nm,0.9s					
STIP	Stip	79.75 330	*i* P	P	14 07 07.2	-0.3
PDG	Podgorica	79.96 332	⇓ *i* P	P	14 07 09.1	+0.5
KRUS	Krusevo	80.34 330	*i* P	P	14 07 11.2	+0.3
MMAI	Mount Meron Ar	82.51 316	P	P	14 07 23.1	+0.7
	comp=Z,8.3nm,0.6s,baz=42,slow=7.9,SNR=16					
ASF	Jabal al Asfar	82.58 314	P	P	14 07 24.0	+1.2
	comp=Z,5.3nm,0.8s,baz=304,slow=1.5,SNR=9.0					
ASF	Jabal al Asfar	82.58 314	P	P	14 07 24.0	+1.2
EIL	Elat	85.58 315	P	P	14 07 38.6	+0.6
	comp=Z,3.4nm,0.6s,baz=8.1,slow=7.7,SNR=5.0					
ESDC	Sonseca Array	87.55 348	P	P	14 07 48.2	+0.7
	comp=Z,1.2nm,0.7s,baz=10,slow=4.8,SNR=12					
KEST	Kesra	88.90 337	LR	LR	14 53 09.3	
	comp=Z,123nm,18.2s,baz=295,slow=39					

*ISCJB **02** 14:05:28.6±0.5, 7°.48S±0°.05×128°.48E±0°.05, h151km, mb3.5/7, Error ellipse: s-maj=7.6km s-min=6.2km az=139.8*
*DJA **02** 14:05:31.1±0.6, 7°.5S±5°.×12°.8E±°, h131km±34km, M4.4/6, mB4.8/2, mb4.3/6, MLv4.5/6, Mw(mB)4.1/2*
*IDC **02** 14:05:35.1±4.5, 7°.70S×128°.18E, h206km±46km, mb3.2/7, mb1 3.4/10, mb1mx3.2/41, mbtmp3.8/10, Error ellipse: s-maj=46.6km s-min=16.0km az=55.0*

ISC 02 14:05:29.5±0.7**, 7°.65S**±0°.06×**128°.53E**±0°.06**, h151**km**, n17,** σ2§**49**/24**, mb3.5/7, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.76	97	P	Pn	14 06 18.2	+4.3
SOEI	Soe	4.71	243	P	Pn	14 06 41.9	+2.7
SOEI				S	Sn	14 07 33.3	-0.2
BATI	Baumata	5.44	242	P	Pn	14 06 51.6	+2.8
	15nm,0.3s,baz=76,slow=3.5,SNR=19						
BATI				S	Sn	14 07 51.1	+0.3
	43nm,0.3s,baz=6.8,slow=20,SNR=19						
BATI	Baumata	5.44	242	P	Pn	14 06 51.4	+2.6
	34nm,0.5s,0.4nm						
BATI				S	Sn	14 07 50.1	-0.7
	34nm,0.5s,0.4nm						
FAKI	Fak Fak	5.98	38	P	Pn	14 06 56.7	+0.7
EDFI	Ende, Flores	6.86	260	P	Pn	14 07 10.2	+2.4
	7.5nm,2.4s,0.0nm						
EDFI				S	Sn	14 08 24.1	-0.8
	7.5nm,2.4s,0.0nm						
SWI	Sorong	7.27	22	P	Pn	14 07 10.5	-2.6
FITZ	Fitzroy Crossi	10.76	195	P	Pn	14 08 00.8	+1.2
	1.6nm,0.3s,baz=23,slow=9.6,SNR=44						
FITZ				S	Sn	14 09 55.5	-3.1
	2.3nm,0.3s,baz=129,slow=20,SNR=6.9						
WRA	Warramunga Arr	13.46	156	P	Pn	14 08 35.7	+1.1
	5.5nm,0.3s,baz=331,slow=14,SNR=2.1						
WRA				S	Sn	14 10 57.6	-6.0
	3.8nm,0.3s,baz=336,slow=24,SNR=2.2						
ASAR	Alice Springs	16.74	163	P	Pn	14 09 17.9	+2.7
	0.4nm,0.3s,baz=334,slow=10,SNR=21						
ASAR				S	S	14 12 19.2	-2.2
	0.3nm,0.3s,baz=317,slow=17,SNR=6.4						
STKA	Stephens Creek	27.01	155	P	P	14 11 00.5	+3.1
	1.2nm,0.6s,baz=315,slow=11,SNR=4.1						
CMAR	Chiang Mai Arr	39.05	312	P	P	14 12 41.5	-0.4
	0.6nm,0.7s,baz=130,slow=8.4,SNR=4.4						
SONM	Songino Array	58.61	343	P	P	14 15 09.9	-0.7
	0.2nm,0.3s,baz=182,slow=7.4,SNR=4.2						
PETK	Petropavlovsk-	65.39	19	P	P	14 15 55.7	+0.1
	0.7nm,0.6s,baz=203,slow=7.0,SNR=2.9						
MKAR	Makanchi Array	67.98	328	P	P	14 16 11.8	-0.4
	0.4nm,0.7s,baz=124,slow=6.7,SNR=2.8						
KURBB	Kurchatov Arra	72.31	329	P	P	14 16 36.2	-2.2
	1.2nm,0.8s,baz=130,slow=4.9,SNR=11						
BVAR	Borovoye Array	77.84	328	P	P	14 17 09.7	-0.4
	0.3nm,0.5s,baz=120,slow=8.5,SNR=2.2						

MAN 02 14:10:15.7, 7°.35N×124°.85E, h15km, mb4.6, ML3.4, MS3.3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.56	22	*e* P	Pb	14 10 27.8	+0.5
BUKP				*e* S	Sn	14 10 38.4	+0.1
CTBH	Cotabato--PC H	0.62	258	⇓ *i* P	Pg	14 10 27.4	-0.5
CTBH				*i* S	Sg	14 10 36.2	+0.1
DDMP	Don Marcelino,	1.50	145	*e* P	Pn	14 10 41.6	-0.5
PAGZ	Pagadian	1.54	289	*e* P	Pn	14 10 41.7	-1.0
PAGZ				*e* S	Sb	14 11 03.3	0.0

*ISCJB **02** 14:15:15.9±0.3, 50°.05N±0°.02×18°.32E±0°.02, h0km, Error ellipse: s-maj=2.8km s-min=1.7km az=17.5*
*IDC **02** 14:15:16.4±2.0, 49°.85N×18°.69E, h0km, mb1 3.3/5, mb1mx3.1/41, mbtmp3.2/5, ML2.7/5, Error ellipse: s-maj=28.0km s-min=8.6km az=128.0*
*IPEC **02** 14:15:17.3±0.1, 50°.09N×18°.43E, h0km±2km, ML2.9/4, Error ellipse: s-maj=1.5km s-min=0.8km az=178.0*
*PRU **02** 14:15:18.0±0.0, 50°.09N×18°.37E, h0km*
*BGR **02** 14:15:18.1±0.3, 50°.09N×18°.37E, h1km, ML3.3/11, Error ellipse: s-maj=5.6km s-min=4.4km az=2.0*

ISC 02 14:15:15.9±0.6**, 50°.07N**±0°.02×**18°.39E**±0°.02**, h0**km**, n70,** σ1§**37**/130**, 8C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	Raciborz	0.12	275	*i* Pg	Pg	14 15 21.4	+3.1
RAC				*e* Sg	Sg	14 15 24.6	+4.7
OKC	Ostrava-Krasne	0.28	214	*e* Pg	Pb	14 15 23.8	-0.1
OKC				*e* Sg	Sb	14 15 28.5	-0.6
OKC	Ostrava-Krasne	0.28	214	*e* PG	Pb	14 15 23.7	-0.1
OKC				*e* SG	Sb	14 15 27.5	-1.6
	comp=Z,830nm,0.5s						
CHZP	Chorzow	0.45	60	*e* Pg	Pb	14 15 26.4	-0.2
CHZP				*e* Sg	Sb	14 15 33.1	-0.8
MORC	Moravsky Berou	0.62	242	⇑ *i* P	Pb	14 15 29.8	+0.1
MORC				S	Sb	14 15 38.5	-0.4
MORC	Moravsky Berou	0.62	242	*e* PG	Pb	14 15 29.7	+0.1
MORC				*e* SG	Sb	14 15 38.0	-0.9
MORC	Moravsky Berou	0.62	242	*e* Pg	Pb	14 15 29.7	+0.1
	baz=61						
MORC				*e* Sg	Sb	14 15 38.0	-0.9
	271nm,0.3s,baz=61						
MORC	Moravsky Berou	0.62	242	*e* Pg	Pb	14 15 29.8	+0.1
MORC				*e* Sg	Sb	14 15 39.1	+0.2
ANAC	Anensky vrch	0.65	271	*e* Pg	Pb	14 15 30.4	+0.3
	baz=88						
ANAC				*e* Sg	Sb	14 15 38.5	-1.3
	225nm,0.3s,baz=88						
OJC	Ojcow	0.92	80	*e* Pg	Pg	14 15 34.4	+0.9
OJC				*e* Sg	Sb	14 15 47.1	-0.4
OJC	Ojcow	0.92	80	*e* Pg	Pb	14 15 34.5	-0.2
OJC				*e* Sg	Sb	14 15 47.2	-0.3
LANS	Liptovska Anna	1.16	142	*e* PG	Pn	14 15 39.6	+0.2
LANS				*e* SG	Sn	14 15 56.5	+0.5
JAVC	Velka Javorina	1.30	201	*e* PG	Pn	14 15 42.8	+1.4
DPC	Dobruska-Polom	1.36	283	*e* Pg	Pb	14 15 43.4	+1.2
DPC				*e* Sg	Sn	14 16 01.5	+0.7
DPC	Dobruska-Polom	1.36	283	*e* PG	Pb	14 15 43.4	+1.2
DPC				*e* SG	Sn	14 16 01.2	+0.4
	comp=Z,196nm,0.5s						
VRAC	Vranov	1.39	237	Pg	Pb	14 15 43.7	+0.9
	15nm,0.3s,baz=63,slow=13,SNR=74						
VRAC				Lg	Lg	14 16 02.2	
	72nm,0.3s,baz=296,slow=22,SNR=31						
VRAC	Vranov	1.39	237	⇑ *i* P	Pb	14 15 43.4	+0.6
VRAC	Vranov	1.39	237	S	Sn	14 16 02.0	+0.3
VRAC	Vranov	1.39	237	*e* PG	Pb	14 15 43.6	+0.8
VRAC				*e* SG	Sn	14 16 02.1	+0.3
VRAC	Vranov	1.39	237	*e* Pg	Pb	14 15 43.6	+0.8
	baz=56						
VRAC				*e* Sg	Sn	14 16 02.0	+0.3
	205nm,0.4s,baz=56						
NIE	Niedzica	1.40	117	*e* Pg	Pb	14 15 44.1	+1.2
NIE				*e* Sg	Sn	14 16 03.9	+1.9
OSTC	Ostas	1.47	290	*e* PG	Pb	14 15 44.7	+0.5
OSTC				*e* SG	Sn	14 16 05.6	+1.9
	comp=Z,97nm,0.4s						
KSP	Ksiaz	1.54	301	*e* Pg	Pb	14 15 45.5	+0.1
KSP				*e* Sg	Sg	14 16 06.5	+1.0
KSP	Ksiaz	1.54	301	*e* Pn	Pb	14 15 45.6	+0.2
KSP				*e* Pg	Pg	14 15 47.8	+2.3
KSP				*e* Sg	Sg	14 16 07.1	+1.6
CHVC	Chvalec	1.58	290	*e* PG	Pg	14 15 46.6	+0.4
CHVC				*e* SG	Sg	14 16 09.0	+2.3
	comp=Z,82nm,0.4s						
UPC	Upice	1.58	287	*e* PG	Pg	14 15 46.6	+0.4
UPC				*e* SG	Sg	14 16 08.4	+1.6
	comp=Z,106nm,0.6s						
VYHS	Vyhne	1.61	169	*e* PG	Pb	14 15 46.2	-0.2
VYHS				*e* SG	Sg	14 16 09.1	+1.7
KRUC	Moravsky	1.64	233	*e* PG	Pg	14 15 47.7	+0.3
KRUC				*e* SG	Sg	14 16 09.8	+1.1
KRUC	Moravsky	1.64	233	*e* Pg	Pg	14 15 47.7	+0.3
	baz=51						
KRUC				*e* Sg	Sg	14 16 09.7	+1.1
	108nm,0.3s,baz=51						
MODS	Modra-Piesok	1.85	204	*e* PN	Pn	14 15 48.9	0.0
MODS				*e* SG	Sb	14 16 14.4	+0.2
MODS				*e* LG	Lg	14 16 22.8	
TREC	Trest	2.04	249	*e* PG	Pg	14 15 55.3	+0.4
TREC				*e* SG	Sg	14 16 22.3	+1.0
	comp=Z,106nm,0.6s						
ZST	Bratislava	2.06	205	*e* PN	Pn	14 15 52.1	+0.4
ZST				*e* SN	Sn	14 16 17.8	-0.2
KECS	Kecovo	2.10	138	*e* PN	Pn	14 15 53.4	+1.1
KECS				*e* SN	Sn	14 16 18.8	-0.3
KECS				*e* LG	Lg	14 16 27.1	
GOPC	GO Pecny, Ondr	2.33	267	*e* PG	Pg	14 16 01.0	+0.5
GOPC				*e* SG	Sg	14 16 31.5	+0.8
	comp=Z,81nm,0.8s						
PSZ	Piszkesteto	2.37	155	⇑ *i* P	Pn	14 15 57.1	+1.0
PSZ	Piszkesteto	2.37	155	EPn	Pn	14 15 57.0	+1.0
PSZ	Piszkesteto	2.37	155	Sn	Sn	14 16 26.1	+0.1
PVCC	Panska Ves	2.49	282	*e* PG	Pg	14 16 03.6	0.0
PVCC				*e* SG	Sg	14 16 37.5	+1.6
	comp=Z,141nm,0.6s						
CSKK	Cskako	2.71	182	EPn	Pn	14 16 02.0	+1.3
CSKK				Sn	Sn	14 16 34.1	-0.1
CONA	Conrad Observa	2.71	219	Pn	Pn	14 16 01.9	+1.1
	2.5nm,0.4s						
CONA				Sn	Sn	14 16 34.6	+0.2
	12nm,0.3s						
KOLS	Kolonicke sedl	2.78	113	*e* PN	Pn	14 16 03.8	+2.2
KOLS				*e* PG	Pg	14 16 11.9	+2.8
KOLS				*e* SN	Sn	14 16 36.8	+1.0
KOLS				*e* LG	Lg	14 16 51.7	
BRG	Berggiesshubel	2.95	287	PG	Pg	14 16 12.2	-0.2
BRG				SG	Sg	14 16 50.8	+0.2
	43nm,0.5s						
BRG	Berggiesshubel	2.95	287	*e* Pg	Pg	14 16 12.1	-0.2
BRG				*e* Sg	Sg	14 16 50.7	+0.1
TIH	Tihany	3.19	186	EPn	Pn	14 16 08.1	+0.8
TIH				Sn	Sn	14 16 46.1	+0.1
KHC	Kasperske Hory	3.27	255	*e* PN	Pn	14 16 10.5	+2.1
KHC				*e* PG	Pg	14 16 18.0	-0.5
KHC				*e* SN	Sn	14 16 46.5	-1.4
KHC				*e* SG	Sg	14 17 01.8	+1.0
	comp=Z,47nm,0.4s						
GEC2	GERESS Array S	3.29	250	*e* Pn	Pn	14 16 10.3	+1.5
GEC2				*e* Pg	Pg	14 16 19.6	+0.7
GEC2				*e* Sg	Sg	14 17 00.0	-1.6
GERES	GERESS Array B	3.29	250	Pn	Pn	14 16 10.9	+2.1
	0.7nm,0.3s,baz=73,slow=14,SNR=8.8						
GERES				Pg	Pg	14 16 19.1	+0.1
	2.0nm,0.3s,baz=70,slow=18,SNR=22						
GERES				Lg	Lg	14 17 00.0	
	8.5nm,0.3s,baz=78,slow=26,SNR=20						
FBE	Freiberg	3.32	287	*e* Sg	Sg	14 17 02.6	0.0
TRPA	Tarpa	3.35	124	⇑ *i* P	Pn	14 16 10.4	+1.0
TRPA	Tarpa	3.35	124	EPn	Pn	14 16 12.1	+2.7
TRPA				Sn	Sn	14 16 52.0	+2.1
TRPA				ESg		14 17 05.1	
ARSA	Arzberg	3.40	215	*e* Pn	Pn	14 16 12.1	+1.9
	1.4nm,0.2s						
ARSA				*e* Sn	Sn	14 16 54.0	+2.7
	7.5nm,0.5s						
MOA	Molln	3.51	232	Pg	Pg	14 16 23.1	0.0
	4.5nm,0.3s						
MOA				Sg	Sg	14 17 08.2	-0.4
	33nm,0.7s						
CLL	Collm	3.64	292	*e* Pn	Pn	14 16 16.0	+2.6
CLL				*e* Pg	Pg	14 16 28.0	+2.4
CLL				*e*		14 16 42.0	
CLL				*e*		14 16 46.0	
CLL				*e* Sg	Sg	14 17 13.0	+0.2
	comp=Z,25nm,0.5s						
CLL	Collm	3.64	292	*e* Pg	Pg	14 16 27.3	+1.7
CLL				*e* Sg	Sg	14 17 14.0	+1.2
WET	Wettzell	3.70	258	*e* Pn	Pn	14 16 15.7	+1.4
WET				*e* Pg	Pg	14 16 28.5	+1.7
WET				*e* Sg	Sg	14 17 12.7	-2.0
BEHE	Becsehely	3.76	197	EPn	Pn	14 16 16.0	+0.9
BEHE				Sn	Sn	14 17 00.0	0.0
TANN	Tannenbergstha	3.82	277	*e* Pn	Pn	14 16 16.7	+0.8
TANN				*e* Pg	Pg	14 16 28.9	-0.1
TANN				*e* Sg	Sg	14 17 16.8	-1.7
NKC	Novy Kostel	3.82	275	*e* SG	Sg	14 17 19.5	+0.9
	comp=Z,40nm,0.5s						
DRGR		4.37	137	⇑ *i* P	Pn	14 16 24.6	+1.1
SIRR	Siria	4.39	149	⇑ *i* P	Pn	14 16 24.9	+1.1
KBA	Koelnbreinsper	4.49	230	*e* Pn	Pn	14 16 27.3	+2.0
	comp=Z,0.9nm,0.4s						
KBA				Pg	Pg	14 16 43.0	+1.1
	comp=Z,2.1nm,0.3s						
KBA				Sn	Sn	14 17 20.7	+2.4
	comp=Z,3.6nm,0.5s						
BZS	Buzias	4.96	153	⇑ *i* P	Pn	14 16 32.8	+1.2
BURAR	Bucovina Array	5.14	116	⇓ *i* P	Pn	14 16 35.9	+1.8
GZR	Gura Zlata	5.54	146	⇑ *i* P	Pn	14 16 41.3	+1.7
DAVOX	Davos/Dischmat	6.55	243	Pn	Pn	14 16 54.3	+0.8
	comp=Z,0.5nm,0.3s,baz=60,slow=14,SNR=4.5						
DAVOX				Sn	Sn	14 18 09.2	+0.2
	comp=Z,0.4nm,0.3s,baz=157,slow=20,SNR=1.9						
DAVOX				Lg	Lg	14 18 45.5	
	comp=Z,1.2nm,0.3s,baz=235,slow=18,SNR=6.5						
AKASG	Malin Array Be	6.96	81	Sn	Sn	14 18 16.1	-2.7
	comp=Z,1.3nm,0.3s,baz=260,slow=23,SNR=4.7						
AKASG				Lg	Lg	14 18 46.5	
	comp=Z,0.7nm,0.3s,baz=280,slow=29,SNR=3.3						
HFS	Hagfors	10.43	347	Pn	Pn	14 17 45.2	-1.4
	comp=Z,0.1nm,0.3s,baz=162,slow=11,SNR=4.0						
HFS				Sn	Sn	14 19 40.2	-3.9
	comp=Z,0.1nm,0.3s,baz=171,slow=28,SNR=2.9						
NOA	NORSAR Array B	11.71	343	Pn	Pn	14 18 02.1	-1.9
	comp=Z,0.0nm,0.3s,baz=156,slow=11,SNR=3.0						
FINES	FINESS Array B	12.18	18	Pn	Pn	14 18 07.5	-2.9
	comp=Z,0.2nm,0.3s,baz=199,slow=12,SNR=11						
FINES				Sn	Sn	14 20 14.7	-12
	comp=Z,0.1nm,0.3s,baz=194,slow=23,SNR=2.7						
ARCES	ARCESS Array B	19.82	7	Pn	P	14 19 46.1	-1.6
	comp=Z,1.2nm,0.7s,baz=193,slow=12,SNR=2.0						

MAN 02 14:17:08.2, 7°.92N×124°.88E, h32km, mb4.2, ML3.0, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.18	101	*e* P	Pn	14 17 15.8	+1.0
CTBH	Cotabato--PC H	0.94	223	⇓ *i* P	Pb	14 17 25.7	-0.3
CTBH				*i* S	Sn	14 17 36.6	-0.9
DDMP	Don Marcelino,	1.98	155	*e* P	Pn	14 17 40.0	+0.5

*MAN **02** 14:36:13.5, 10°.82N×127°.20E, h92km, mb5.0, ML3.9, MS3.9*
*ISCJB **02** 14:36:14.6±0.9, 10°.75N±0°.06×126°.96E±0°.08, h10km, mb3.8/4, Error ellipse: s-maj=12.0km s-min=7.6km az=148.8*
*IDC **02** 14:36:14.6±2.6, 10°.86N×127°.55E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.4/37, mbtmp3.8/4, Error ellipse: s-maj=178.3km s-min=24.9km az=73.0*

ISC 02 14:36:15.0±1.0**, 10°.72N**±0°.06×**127°.19E**±0°.07**, h10**km**, n18,** σ2§**87**/23**, mb3.7/4, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.91	241	*e* P	Pg	14 36 55.3	+3.6
SCPH				*e* S	Sg	14 37 16.1	-0.3
BESP	Borongan	1.93	297	*e* P	Pn	14 36 44.8	-3.1
BESP				*e* S	Sn	14 37 07.1	-5.1
MSLP	Maasin	2.36	256	*e* P	Pn	14 36 52.8	-1.1
MSLP				*e* S	Sn	14 37 19.4	-3.5
CNP	Catarman	3.05	306	*e* P	Pn	14 37 00.6	-2.7
CNP				*e* S	Sn	14 37 35.0	-4.9
CGP	Cagayan de Oro	3.33	228	*e* P	Pb	14 37 16.3	+2.1
BUKP	Musuan	3.51	217	*e* P	Pn	14 37 07.8	-1.9
BUKP				*e* S	Pb	14 37 17.3	0.0
MATI	Mati	3.86	194	*e* P	Pb	14 37 20.9	-2.3
DMPH	Davao City--Mi	3.97	205	⇑ *e* P	Pn	14 37 09.5	-6.5
DMPH				*e* S	Pb	14 37 21.2	-3.9
DCPH	Dipolog City	4.33	241	*e* P	Pb	14 37 31.8	+0.5
DCPH				*e* S	Sn	14 38 01.9	-10
GUIM	Jordan	4.52	269	*e* P	Pn	14 37 21.9	-1.7
PAGZ	Pagadian	4.71	233	*e* P	Pn	14 37 21.2	-5.0
PAGZ				*e* S	Pg	14 37 42.1	-3.2
DDMP	Don Marcelino,	4.81	198	*e* P	Pn	14 37 21.6	-5.9
DDMP				*e* S	Pg	14 37 44.0	-3.1
IPIL	Ipil	5.41	238	*e* P	Pn	14 37 34.1	-1.6
IPIL				*e* S	Pg	14 38 02.4	+3.8
APYP	Conner	9.14	322	*e* P	Pn	14 38 25.8	-1.3
FITZ	Fitzroy Crossi	28.67	183	P	P	14 42 14.7	+2.5
	1.2nm,0.8s,baz=0.0,slow=14,SNR=0.9						
ASAR	Alice Springs	34.80	169	P	P	14 43 07.9	+1.8
	0.2nm,0.4s,baz=353,slow=7.2,SNR=9.2						
MKAR	Makanchi Array	52.23	322	P	P	14 45 28.4	+2.2
	0.6nm,0.7s,baz=107,slow=8.3,SNR=6.1						
FINES	FINESS Array B	85.93	332	P	P	14 48 56.4	+1.3
	2.8nm,1.2s,baz=63,slow=6.5,SNR=5.5						

*KRSC **02** 14:41:18.2±0.8, 53°.64N×160°.79E, h51km±14km, ML4.1*
*ISCJB **02** 14:41:19.8±0.5, 53°.64N±0°.03×160°.75E±0°.07, h61km±6km, mb3.6/6, Error ellipse: s-maj=8.9km s-min=2.9km az=36.9*
*IDC **02** 14:41:22.7±5.6, 53°.81N×160°.41E, h73km±36km, mb3.2/5, mb1 3.4/5, mb1mx3.1/37, mbtmp3.5/5, MS3.0/2, Ms1 3.0/2, ms1mx2.5/34, Error ellipse: s-maj=61.9km s-min=28.2km az=120.0*

ISC 02 14:41:19.9±1.0**, 53°.65N**±0°.04×**160°.74E**±0°.05**, h53**km**±11**km**, n53,** σ1§**51**/67**, mb3.7**/6**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.70	218	*e* P	Pn	14 41 33.5	-0.3
SPN				*e* S	Sn	14 41 43.4	-0.5
NLC	Nalytchevo	0.97	241	*e* P

OSSR	**Ossora**	5.76	12	*e*P	Pn	14 42 46.9	+4.3
MA2	**Magadan**	8.09	321	LR	LR	14 46 20.2	
	comp=Z,38nm,19.6s,baz=149,slow=38						
MJAR	**Matsushiro Arr**	23.20	232	P	P	14 46 22.3	+0.3
	1.7nm,0.9s,baz=19,slow=10,SNR=6.6						
SONM	**Songino Array**	34.15	283	LR	LR	15 03 13.5	
	comp=Z,58nm,19.1s,baz=250,slow=39						
H11N2	**WAKE ISLAND Hy**	34.19	170	T	T	15 24 53.3	
	baz=354,slow=76,SNR=59						
H11N3	**WAKE ISLAND Hy**	34.20	170	T	T	15 24 54.3	
	baz=354,slow=76,SNR=56						
H11N1	**WAKE ISLAND Hy**	34.21	170	T	T	15 24 57.4	
	baz=354,slow=76,SNR=64						
H11S1	**WAKE ISLAND Hy**	35.38	170	T	T	15 25 52.6	
	baz=352,slow=76,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	35.39	170	T	T	15 25 59.5	
	baz=352,slow=76,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	35.40	170	T	T	15 26 23.0	
	baz=352,slow=76,SNR=4.2						
MKAR	**Makanchi Array**	48.26	296	P	P	14 49 52.3	-2.9
	0.2nm,0.5s,baz=61,slow=9.5,SNR=4.1						
ARCES	**ARCESS Array B**	52.88	342	P	P	14 50 29.0	-0.7
	0.9nm,0.6s,baz=9.9,slow=11,SNR=2.6						
CMAR	**Chiang Mai Arr**	58.68	258	P	P	14 51 12.0	+0.2
	0.3nm,0.5s,baz=20,slow=6.7,SNR=4.2						
FINES	**FINESS Array B**	59.76	337	P	P	14 51 18.4	-0.3
	0.3nm,0.4s,baz=28,slow=6.3,SNR=4.1						
NOA	**NORSAR Array B**	63.11	344	P	P	14 51 40.6	-0.8
	0.2nm,0.3s,baz=23,slow=6.8,SNR=3.1						

IDC 02 14:45:51.7±5.0, 6°.96S×129°.75E, h192km±48km, mb3.2/1, mb1 3.3/4, mb1mx2.9/31, mbtmp3.8/4, Error ellipse: s-maj=47.5km s-min=21.1km az=57.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	6.83	241	P	Pn	14 47 30.2	+0.5
	4.7nm,0.3s,baz=78,slow=2.5,SNR=6.9						
BATI				S	Sn	14 48 48.6	+1.3
	3.2nm,0.3s,baz=73,slow=21,SNR=6.5						
FITZ	**Fitzroy Crossi**	11.77	200	P	Pn	14 48 32.8	-1.2
	0.4nm,0.3s,baz=30,slow=15,SNR=20						
FITZ				S	Sn	14 50 40.4	-4.7
	1.0nm,0.3s,baz=5.5,slow=23,SNR=9.2						
WRA	**Warramunga Arr**	13.65	161	P	Pn	14 48 55.9	-1.7
	14nm,0.3s,baz=336,slow=12,SNR=2.8						
WRA				S	Sn	14 51 20.8	-9.2
	10.0nm,0.3s,baz=348,slow=23,SNR=1.8						
ASAR	**Alice Springs**	17.08	167	P	Pn	14 49 39.7	+0.3
	0.3nm,0.3s,baz=345,slow=9.8,SNR=34						
ASAR				S	S	14 52 47.2	+1.0
	0.1nm,0.3s,baz=353,slow=27,SNR=4.3						
MKAR	**Makanchi Array**	68.06	327	P	P	14 56 30.4	-0.1
	0.3nm,0.4s,baz=112,slow=7.9,SNR=6.5						

TAP 02 14:50:18.7, 24°.82N×122°.11E, h86km±1km, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	0.22	330	*e*P	Pn	14 50 31.6	+0.3
	baz=331						
NTC	**Toucheng**	0.26	278	*e*P	Pn	14 50 31.1	-0.3
	baz=278						
EOS1	**EOS1**	0.27	176	P	Pn	14 50 31.4	0.0
	baz=176						
EOS1				S	Sn	14 50 41.4	+0.6
	baz=176						
TIPB	**Shuangxi**	0.30	301	P	Pn	14 50 32.1	+0.4
	baz=301						
TIPB				S	Sn	14 50 41.4	+0.1
	baz=301						
TWC	**Suao**	0.31	229	*e*P	Pn	14 50 31.5	-0.2
	baz=227						
TWE	**Neicheng**	0.41	257	*e*P	Pn	14 50 32.3	0.0
	baz=255						
SLBB	**Yuanshan**	0.43	262	*e*P	Pn	14 50 33.4	+0.8
	baz=261						
ENA	**Nanau**	0.51	221	*e*P	Pn	14 50 33.6	+0.5
	baz=220						
NWLT	**Wulai**	0.55	266	*e*P	Pn	14 50 33.2	-0.3
	baz=265						
NWLT				*e*S	Sn	14 50 44.8	+0.3
	baz=265						
YM07	**YM07**	0.57	309	*e*P	Pn	14 50 33.9	+0.2
	baz=308						
NDT	**Datong Townshi**	0.58	249	P	Pn	14 50 34.3	+0.6
	baz=248						
NDT				*e*S	Sn	14 50 46.2	+1.3
	baz=248						
YM01	**YM01**	0.59	304	*e*P	Pn	14 50 35.0	+1.1
	baz=303						
YM01				*e*S	Sn	14 50 45.4	+0.3
	baz=303						
YM05	**YM05**	0.60	305	*e*P	Pn	14 50 35.1	+1.2
	baz=305						
YHNB	**Yeheng**	0.68	258	*e*P	Pn	14 50 34.5	-0.2
	baz=257						
YHNB				*e*S	Sn	14 50 46.9	+0.2
	baz=257						
NSK	**Sanguang**	0.70	259	*e*P	Pn	14 50 35.2	+0.3
	baz=258						
NSK				S	Sn	14 50 47.2	+0.3
	baz=258						
NNSB	**Datong**	0.77	240	*e*P	Pn	14 50 35.5	-0.1
	baz=239						
NNSB				*e*S	Sn	14 50 48.6	+0.3
	baz=239						
NNS	**Nan Shan**	0.77	241	*e*P	Pn	14 50 36.0	+0.3
	baz=240						
LIOB	**Emei**	1.01	260	*e*P	Pn	14 50 38.2	0.0
	baz=260						
LIOB				*e*S	Sn	14 50 53.4	+0.6
	baz=260						
WHF	**Hehuan Shan**	1.02	229	*e*P	Pn	14 50 38.4	-0.4
	baz=228						
NSTT	**Nanjuang**	1.02	260	*e*P	Pn	14 50 37.8	-0.6
	baz=259						
NSTT				*e*S	Sn	14 50 53.7	+0.6
	baz=259						

JMA 02 14:50:33.3±0.1, 24°.80N×123°.39E, h19km±4km, M1.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.48	226	P	Pg	14 50 42.8	-0.3
YOJ				S	Sg	14 50 49.1	-0.6
JYNG	**Yonagunijimaku**	0.53	229	P	Pb	14 50 43.8	-0.2
JYNG				S	Sb	14 50 51.1	-0.2
IRIF	**Iriomote-Funau**	0.56	146	P	Pb	14 50 44.2	-0.2
IRIF				S	Sb	14 50 51.5	-0.4
JKRS	**Kuro-shima**	0.80	135	P	Pb	14 50 48.2	-0.3
JKRS				S	Sb	14 50 58.7	-0.2
JIJ	**Ishigaki jima**	0.81	122	P	Pb	14 50 48.3	-0.5
JIJ				*e*S	Sb	14 50 58.2	-1.2
HATJ	**Hateruma jima**	0.83	153	P	Pb	14 50 49.1	0.0
HATJ				*e*S	Sb	14 50 59.8	-0.1
JISG	**Ishigakijimahi**	0.86	104	P	Pb	14 50 49.2	-0.5
JISG				*e*S	Sb	14 51 00.0	-0.9
JTJ	**Tarama**	1.20	97	P	Pn	14 50 55.2	+0.1

IDC 02 14:54:58.9±2.0, 7°.05S×128°.46E, h0km, mb3.6/1, mb1 3.6/2, mb1mx3.3/20, mbtmp3.6/2, ML5.2/1, Error ellipse: s-maj=134.2km s-min=31.6km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.04	157	Pn	Pn	14 58 18.6	-0.6
	12nm,0.3s,baz=335,slow=13,SNR=3.5						
WRA				Sn	Sn	15 00 40.6	-15
	9.0nm,0.3s,baz=323,slow=24,SNR=1.7						
ASAR	**Alice Springs**	17.34	163	P	Pn	14 59 02.9	+0.4
	0.2nm,0.3s,baz=340,slow=11,SNR=12						
ASAR				S	Sn	15 02 02.0	-14
	0.2nm,0.3s,baz=315,slow=20,SNR=6.1						
MKAR	**Makanchi Array**	67.43	328	P	P	15 05 56.5	0.0
	0.3nm,0.4s,baz=115,slow=7.9,SNR=6.4						

*ISCJB **02** 15:16:07.6±0.5, 6°.61S±0°.05×129°.93E±0°.06, h146km, mb4.0/3, Error ellipse: s-maj=9.0km s-min=5.7km az=32.2*

*DJA **02** 15:16:08.9±0.5, 7°.5S±4°.×13°.0E±°, h213km±12km, M4.5/9, mb4.1/5, mB4.7/3, MLv4.7/9, Mw(mB)4.0/3*

*IDC **02** 15:16:13.2±3.8, 6°.80S×129°.68E, h196km±38km, mb3.6/4, mb1 3.7/7, mb1mx3.3/35, mbtmp4.2/7, Error ellipse: s-maj=35.4km s-min=13.1km az=50.0*

ISC 02 15:16:08.1±0.7, 6°.62S±0°.06×129°.83E±0°.07, h146km, n17, σ3§48/21, mb4.2/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	1.99	133	P	Pn	15 16 47.1	+4.3
SAUI				S	Sn	15 17 15.4	+5.9
BNDI	**Bandanaira**	2.09	2	P	Pn	15 16 49.6	+5.6
FAKI	**Fak Fak**	4.39	33	P	Pn	15 17 13.8	+0.3
FAKI				S	Sn	15 18 01.1	-3.2
KMPI	**Kaimana, Papua**	4.85	53	P	Pn	15 17 20.5	+1.1
SWI	**Sorong**	5.89	14	P	Pn	15 17 33.1	-0.3
SOEI	**Soe**	6.33	240	P	Pn	15 17 42.9	+3.6
RKPI	**Ransiki, Papua**	6.67	41	P	Pn	15 17 44.3	+0.5
BATI	**Baumata**	7.07	239	P	Pn	15 17 52.3	+3.2
	16nm,0.3s,baz=138,slow=1.4,SNR=27						
BATI				S	Sn	15 19 09.6	+1.4
	17nm,0.3s,baz=232,slow=15,SNR=14						
BATI	**Baumata**	7.07	239	P	Pn	15 17 52.3	+3.2
	19nm,0.7s,0.2nm						
EDFI	**Ende, Flores**	8.34	255	P	Pn	15 18 09.3	+3.1
FITZ	**Fitzroy Crossi**	12.12	199	P	Pn	15 18 56.8	+0.7
	0.7nm,0.3s,baz=27,slow=12,SNR=32						
FITZ				S	Sn	15 21 01.6	-8.4
	2.4nm,0.3s,baz=208,slow=12,SNR=7.9						
WRA	**Warramunga Arr**	13.95	162	P	Pn	15 19 17.3	-2.3
	13nm,0.3s,baz=337,slow=13,SNR=1.6						
WRA				S	Sn	15 21 44.0	-10
	25nm,0.3s,baz=343,slow=22,SNR=4.0						
ASAR	**Alice Springs**	17.39	167	P	Pn	15 20 02.5	+0.5
	1.1nm,0.3s,baz=348,slow=11,SNR=54						
ASAR				S	S	15 23 09.6	-5.3
	0.5nm,0.3s,baz=345,slow=25,SNR=6.0						
CTA	**Charters Tower**	20.81	132	P	P	15 20 39.4	+1.2
	4.3nm,0.8s,baz=299,slow=13,SNR=8.1						
STKA	**Stephens Creek**	27.43	158	P	P	15 21 40.2	0.0
	1.9nm,0.3s,baz=336,slow=8.4,SNR=22						
CMAR	**Chiang Mai Arr**	39.36	310	P	P	15 23 23.3	-0.2
	0.5nm,0.6s,baz=134,slow=6.4,SNR=3.9						
MKAR	**Makanchi Array**	67.82	327	P	P	15 26 50.7	+0.3
	2.9nm,0.4s,baz=120,slow=7.6,SNR=49						

*ISCJB **02** 15:22:47.5±1.2, 17°.9S±0°.3×177°.2W±0°.2, h361km, mb4.0/10, Error ellipse: s-maj=44.0km s-min=13.4km az=146.7*

*IDC **02** 15:22:49.9±2.9, 17°.94S×177°.12W, h374km±29km, mb3.6/9, mb1 3.8/10, mb1mx3.5/30, mbtmp4.3/10, Error ellipse: s-maj=38.4km s-min=12.2km az=147.0*

ISC 02 15:22:48.5±1.3, 17°.9S±0°.3×177°.2W±0°.2, h361km, n13, σ0§54/14, mb4.0/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	15.96	252	P	Pn	15 26 15.5	-0.8
	0.9nm,0.3s,baz=141,slow=16,SNR=9.5						
CTA	**Charters Tower**	34.62	260	P	P	15 29 05.7	+0.5
	2.6nm,0.4s,baz=83,slow=8.1,SNR=12						
STKA	**Stephens Creek**	39.67	241	P	P	15 29 47.5	+0.4
	4.6nm,0.5s,baz=83,slow=9.3,SNR=26						
WRA	**Warramunga Arr**	45.80	259	P	P	15 30 35.2	-0.8
	63nm,0.3s,baz=86,slow=7.6,SNR=1.9						
ASAR	**Alice Springs**	45.94	254	P	P	15 30 37.1	+0.1
	7.8nm,0.5s,baz=90,slow=8.6,SNR=259						
ASAR				S	S	15 36 54.0	-0.1
	0.6nm,1.0s,baz=87,slow=17,SNR=5.1						
MJAR	**Matsushiro Arr**	68.64	323	P	P	15 33 13.8	0.0
	1.8nm,0.7s,baz=169,slow=6.3,SNR=6.2						
PETK	**Petropavlovsk-**	74.00	345	P	P	15 33 45.9	+0.7
	2.1nm,0.7s,baz=115,slow=7.8,SNR=7.2						
NVAR	**Mina Array Bea**	78.61	43	P	P	15 34 11.0	-0.6
	1.1nm,0.7s,baz=226,slow=9.0,SNR=9.2						
SEY	**Seymchan**	84.06	347	P	P	15 34 39.1	+0.1
	1.7nm,0.6s,baz=5.2,slow=21,SNR=11						
TXAR	**Lajitas Array**	85.00	57	P	P	15 34 44.8	+0.2
	1.6nm,0.9s,baz=231,slow=4.0,SNR=11						
ILAR	**Eielson Array**	85.64	13	P	P	15 34 46.0	-0.7
	0.8nm,0.6s,baz=227,slow=5.8,SNR=13						
BRTR	**Keskin Array B**	145.63	316	PKPbc	PKPdf	15 41 45.2	+0.5
	0.5nm,0.7s,baz=63,slow=1.6,SNR=3.3						
GERES	**GERESS Array B**	147.92	346	PKPbc	PKPbc	15 41 51.9	+0.2
	1.1nm,0.5s,baz=30,slow=3.7,SNR=6.3						

*IDC **02** 15:44:52.2±1.0, 36°.82N×69°.86E, h0km, mb3.6/8, mb1 3.8/14, mb1mx3.6/60, mbtmp3.8/14, ML3.8/6, MS2.5/1, Ms1 2.5/1, ms1mx2.1/35, Error ellipse: s-maj=19.6km s-min=16.1km az=151.0*

*ISCJB **02** 15:44:57.6±0.5, 37°.22N±0°.05×69°.54E±0°.05, h37km, mb4.0/10, Error ellipse: s-maj=7.3km s-min=4.7km az=150.8*

*NNC **02** 15:44:59.3±4.3, 37°.50N×69°.50E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=56.7km s-min=19.0km az=154.0*

*NEIC **02** 15:45:00.3±0.7, 37°.19N×69°.65E, h54km±8km, mb4.0/2, Error ellipse: s-maj=8.5km s-min=7.6km az=145.0*

ISC 02 15:44:58.9±0.7, 37°.14N±0°.07×69°.62E±0°.06, h37km, n50, σ1§73/55, mb3.6/10, 7C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	2.63	190	*e*Pn	Pn	15 45 42.9	+3.8
NIL	**Nilore**	4.57	139	*e*Pn	Pn	15 46 08.5	+3.0
ARSB	**Arslanbob**	4.92	31	*e*Pn	Pn	15 46 11.5	+1.0
AML	**Almayashu**	5.89	31	P	Pn	15 46 26.0	+2.0
	SNR=11						
KK31	**Karatay Array**	6.00	6	*e*Pn	Pn	15 46 26.4	+1.4
KK31	**Karatay Array**	6.00	6	⇓Pn	Pn	15 46 26.4	+1.4
	1.4nm,0.4s,baz=190,slow=16,SNR=53						
KK31				⇑Sn	Sn	15 47 33.2	+0.8
	4.6nm,0.3s,baz=188,slow=22,SNR=6.6						
KKAR	**Karatay Array**	6.00	6	*e*Pn	Pn	15 46 26.3	+1.3
UCH	**Uchtor**	6.33	35	P	Pn	15 46 31.6	+1.6
	SNR=32						
NRN	**Naryn**	6.54	47	*e*Pn	Pn	15 46 32.9	+0.1
KZA	**Kyzart**	6.57	40	P	Pn	15 46 34.9	+1.6
	SNR=16						
AAK	**Ala-Archa**	6.65	33	Pn	Pn	15 46 35.5	+1.4
	12nm,0.3s,baz=198,slow=6.2,SNR=43						
AAK				Sn	Sn	15 47 49.5	+0.9
	0.5nm,0.3s,baz=319,slow=20,SNR=3.3						
AAK	**Ala-Archa**	6.65	33	P	Pn	15 46 35.9	+1.8
	SNR=27						
AAK	**Ala-Archa**	6.65	33	⇑Pn	Pn	15 46 35.7	+1.6
	14nm,0.5s						
AAK				⇑Sn	Sn	15 47 49.4	+0.7
	9.0nm,0.6s						
KBK	**Karagaybulak**	6.86	35	P	Pn	15 46 39.9	+2.9
	SNR=11						
CHMS	**Chumysh**	7.05	32	P	Pn	15 46 41.4	+1.9
	SNR=44						
USP	**Ospenovka**	7.17	30	P	Pn	15 46 42.5	+1.3
	SNR=8.7						
ULHL	**Ulahol**	7.21	43	P	Pn	15 46 43.5	+1.6
	SNR=6.8						
TKM2	**Tokmak 2**	7.37	37	P	Pn	15 46 45.5	+1.5
	SNR=15						
TKM2	**Tokmak 2**	7.37	37	⇑Pn	Pn	15 46 45.3	+1.2
	2.9nm,0.3s						
TKM2				⇑Sn	Sn	15 48 05.6	-0.9
	5.3nm,0.8s						
TARG	**Taragay, Kyrgy**	7.81	52	*e*Pn	Pn	15 46 51.0	+0.6
GEYT	**Alibeck**	9.18	278	Pn	Pn	15 47 08.5	-0.2
	1.4nm,0.3s,baz=119,slow=9.3,SNR=23						
GEYT				Sn	Sn	15 48 51.0	+0.3
	1.2nm,0.3s,baz=153,slow=17,SNR=6.6						
GEYT				LR	LR	15 51 59.2	
	comp=Z,28nm,21.6s,baz=280,slow=45						
GYA0B	**ALIBECK ARRAY**	9.18	278	*e*Pn	Pn	15 47 07.3	-1.4
GYA0B	**ALIBECK ARRAY**	9.18	278	⇓P	Pn	15 47 08.7	0.0
MK31	**Makanchi Array**	13.47	40	⇑P	Pn	15 48 11.7	+4.3
	1.6nm,0.8s,baz=227,slow=15,SNR=4.4						
MK32	**Makanchi Array**	13.47	40	*e*Pn	Pn	15 48 07.5	+0.1
MKAR	**Makanchi Array**	13.47	40	Pn	Pn	15 48 07.5	+0.1
	0.1nm,0.3s,baz=218,slow=14,SNR=4.2						
AB31	**Akbulak array**	14.00	333	P	Pn	15 48 12.6	-2.0
	0.9nm,0.3s,baz=162,slow=12,SNR=42						
ABKAR	**Akbulak array**	14.00	333	*e*Pn	Pn	15 48 11.3	-3.2
KURBB	**Kurchatov Arra**	14.91	23	Pn	Pn	15 48 24.2	-2.7
	0.2nm,0.3s,baz=216,slow=9.2,SNR=4.7						
AKTO	**Aktyubinsk**	15.69	332	Pn	Pn	15 48 36.6	-0.4
	0.7nm,0.3s,baz=149,slow=12,SNR=17						
AKTO	**Aktyubinsk**	15.69	332	⇑P	P	15 48 40.2	-0.4
	8.4nm,0.7s						
BVAR	**Borovoye Array**	15.89	2	Pn	Pn	15 48 38.1	-1.6
	0.3nm,0.3s,baz=174,slow=14,SNR=5.5						
ZAA0	**Zalesovo Array**	19.82	27	*e*P	P	15 49 26.2	0.0
	2.6nm,0.5s						
ZALV	**Zalesovo Beam**	19.82	27	P	P	15 49 25.4	-0.7
	1.1nm,0.4s,baz=210,slow=9.9,SNR=6.1						
ZAA1	**Zalesovo Array**	19.82	27	*e*P	P	15 49 25.4	-0.8
KBZ	**Khabaz**	21.33	296	P	P	15 49 43.6	+1.1
	1.4nm,0.6s,baz=157,slow=7.4,SNR=5.0						
SHL	**Shillong**	22.18	115	*e*P	P	15 49 52.8	+0.8
	6.5nm,0.7s						
BR101	**Keskin Array S**	28.19	286	*e*P	P	15 50 49.2	+1.1
BRTR	**Keskin Array B**	28.19	286	P	P	15 50 49.2	+1.1
	0.7nm,0.8s,baz=106,slow=9.2,SNR=5.1						
FIA0	**FINESS Array S**	36.34	326	*e*P	P	15 52 01.4	+2.6
FINES	**FINESS Array B**	36.34	326	P	P	15 52 01.4	+2.6
	0.2nm,0.4s,baz=115,slow=9.3,SNR=1.3						
ARCES	**ARCESS Array B**	40.13	338	P	P	15 52 32.1	+1.4
	6.5nm,0.3s,baz=127,slow=10,SNR=4.4						
NB200	**NORSAR Array S**	43.20	323	*e*P	P	15 52 55.9	-0.1
NOA	**NORSAR Array B**	43.20	323	P	P	15 52 55.9	-0.1
	0.6nm,0.6s,baz=98,slow=7.9,SNR=2.8						
TIXI	**Tiksi**	45.60	22	P	P	15 53 15.2	+0.3
	0.4nm,0.3s,baz=323,slow=5.9,SNR=2.7						
TOA1	**Torodi Ar. Sit**	64.64	268	*e*P	P	15 55 33.4	+0.3
TORD	**Torodi Ar. Bea**	64.64	267	P	P	15 55 33.4	+0.3
	0.2nm,0.4s,baz=51,slow=7.3,SNR=4.4						
WR1	**Warramunga Arr**	83.27	121	*e*P	P	15 57 19.2	-2.5
WRA	**Warramunga Arr**	83.27	121	P	P	15 57 19.2	-2.5
	132nm,0.3s,baz=298,slow=6.5,SNR=1.4						
ASAR	**Alice Springs**	85.53	124	P	P	15 57 30.7	-2.5
	0.3nm,0.5s,baz=312,slow=4.5,SNR=13						

TAP 02 15:47:50.3, 24°.36N×121°.40E, h13km±1km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	0.07	345	*e*P	Pg	15 47 54.0	+0.9
	baz=344						
NNSB				*e*S	Sg	15 47 55.2	+0.2
	baz=344						
NNS	**Nan Shan**	0.08	341	*i* P	Pg	15 47 54.2	+0.9
	baz=345						
NNS				*i* S	Sg	15 47 55.7	+0.4
	baz=345						
ETLH	**Xiulin Townshi**	0.17	155	*e*P	Pb	15 47 55.6	+0.3
	baz=154						
ETLH				*e*S	Sb	15 47 58.0	-0.7
	baz=154						
WHF	**Hehuan Shan**	0.25	210	P	Pb	15 47 56.7	-0.3
	baz=208						
WHF				S	Sb	15 48 00.6	-0.7
	baz=208						
NACB	**Ninganchiao**	0.26	137	*e*P	Pb	15 47 57.2	+0.4
	baz=136						
NACB				*e*S	Sb	15 48 00.7	-0.4
	baz=136						
NDT	**Datong Townshi**	0.26	23	*e*P	Pb	15 47 56.8	0.0
	baz=22						
NDT				*e*S	Sb	15 48 01.0	-0.3
	baz=22						
YHNB	**Yeheng**	0.31	356	*e*P	Pb	15 47 57.7	0.0
	baz=355						
YHNB				*e*S	Sb	15 48 02.3	-0.4
	baz=355						
NSK	**Sanguang**	0.31	353	P	Pb	15 47 57.4	-0.4
	baz=353						
NSK				S	Sb	15 48 02.6	-0.2
	baz=353						
ENA	**Nanau**	0.32	78	*e*P	Pb	15 47 58.0	+0.2
	baz=78						
ENA				S	Sb	15 48 03.0	+0.2
	baz=78						
CHGB	**Renai**	0.37	215	*e*P	Pb	15 47 58.9	+0.2
	baz=214						
CHGB				*e*S	Sb	15 48 03.9	-0.6
	baz=214						
NWLT	**Wulai**	0.42	12	*e*P	Pb	15 47 59.6	-0.1
	baz=12						
NWLT				*e*S	Sb	15 48 05.4	-0.5
	baz=12						
SLBB	**Yuanshan**	0.44	29	*e*P	Pb	15 47 59.7	-0.3
	baz=28						
SLBB				*e*S	Sb	15 48 07.1	+0.5
	baz=28						
OWD	**Renai**	0.46	207	*e*P	Pb	15 48 00.2	0.0
	baz=206						
OWD				*e*S	Sb	15 48 07.1	+0.1
	baz=206						

JMA 02 15:48:29.8±0.1, 24°.80N×123°.39E, h21km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.48	226	P	Pb	15 48 39.4	-0.1
YOJ				S	Sb	15 48 45.9	-0.3
JYNG	**Yonagunijimaku**	0.53	229	P	Pb	15 48 40.4	-0.1
JYNG				S	Sb	15 48 47.6	-0.2
IRIF	**Iriomote-Funau**	0.56	146	P	Pb	15 48 40.8	-0.1
IRIF				S	Sb	15 48 47.9	-0.6
JKRS	**Kuro-shima**	0.80	135	P	Pb	15 48 44.8	-0.1
JKRS				S	Sb	15 48 55.6	+0.4
JIJ	**Ishigaki jima**	0.81	122	P	Pb	15 48 44.7	-0.5
JIJ				*e*S	Sb	15 48 54.8	-0.9
HATJ	**Hateruma jima**	0.83	153	P	Pb	15 48 45.5	0.0
HATJ				S	Sb	15 48 56.5	+0.2
JISG	**Ishigakijimahi**	0.86	104	P	Pb	15 48 45.7	-0.4
JTJ	**Tarama**	1.20	97	P	Pb	15 48 51.8	-0.1
JTJ				*e*S	Sb	15 49 06.7	-0.3

*DDA **02** 15:58:09.0, 39°.21N×26°.15E, h7km±5km, ML2.6*

*ISK **02** 15:58:09.4, 39°.24N×26°.10E, h2km, ML2.3/13*

*ISCJB **02** 15:58:10.2±0.4, 39°.21N±0°.02×26°.09E±0°.03, h7km±3km, Error ellipse: s-maj=3.8km s-min=3.0km az=1.0*

*ATH **02** 15:58:10.1, 39°.23N×26°.09E, h15km±2km, ML2.0/2, Error ellipse: s-maj=2.5km s-min=1.1km az=104.0*

ISC 02 15:58:10.1±0.8, 39°.23N±0°.02×26°.09E±0°.03, h14km±6km, n28, σ0§48/44, Turkey

| Code

CHOS	**Chios island**	**0.84 182**	PG		**Pb**	**15 58 26.5**	**+0.1**
CHOS	**Chios island**	**0.84 182**	P		**Pg**	**15 58 25.7**	**-0.7**
CHOS			S		**Sb**	**15 58 38.2**	**+0.6**
URLA	**Izmir**	**0.95 155**	PG		**Pn**	**15 58 28.8**	**-0.2**
URLA	**Izmir**	**0.95 155**	*i* P		**Pg**	**15 58 28.7**	**+0.2**
URLA			*i* S		**Sg**	**15 58 41.2**	**+0.3**
URLA			IAML_P				
	comp=Z,929nm,0.1s						
LIA	**Limnos Island**	**0.97 314**	P		**Pb**	**15 58 28.6**	**0.0**
LIA			S		**Sg**	**15 58 42.0**	**+0.4**
ZEY	**zmir**	**1.04 162**	*i* P		**Pb**	**15 58 28.8**	**-1.0**
ZEY			*i* S		**Sb**	**15 58 42.8**	**-0.3**
ZEY			IAML_P				
	comp=Z,613nm,0.2s						
GELI	**Tayfur-Gelibol**	**1.21 14**	PN		**Pb**	**15 58 33.0**	**+0.3**
GELI			SN		**Sg**	**15 58 50.4**	**+1.2**
LPK	**Lapseki**	**1.26 24**	PN		**Pb**	**15 58 33.9**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.27 83**	*i* P		**Pg**	**15 58 35.4**	**+0.8**
STEP			*i* S		**Sg**	**15 58 51.9**	**+0.6**
SMTH	**Samothraki Isl**	**1.32 341**	P		**Pb**	**15 58 34.8**	**+0.2**
DGB	**zmir**	**1.33 152**	*i* P		**Pn**	**15 58 34.2**	**+0.1**
DGB			*i* S		**Sn**	**15 58 51.8**	**+0.2**
DGB			IAML_P				
	comp=Z,291nm,0.2s						
BALB	**Balikesir**	**1.45 73**	PN		**Pg**	**15 58 37.7**	**-0.2**
ERIK	**Erikli-Kesan**	**1.48 13**	PN		**Pb**	**15 58 37.1**	**-0.3**
ENEZ	**Enez**	**1.51 2**	PN		**Pg**	**15 58 38.7**	**-0.4**
ALN	**Alexandroupoli**	**1.67 359**	PN		**Pb**	**15 58 40.6**	**0.0**
ALN	**Alexandroupoli**	**1.67 359**	P		**Pb**	**15 58 40.5**	**0.0**

GUC 02 16:08:51.3±0.5, 38°.06S×75°.06W, h10km, ML3.7, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**2.79**	**59**	*e*P	Pn	16 09 36.4	+0.4
CCHI				*i* S	Sn	16 10 10.4	+0.7
CCHI				IAML		16 10 14.0	
	comp=N,311nm,0.5s						
GO06	**Curarrehue**	**3.19**	**120**	*e*P	Pn	16 09 42.4	+0.8
GO06				*i* S	Sn	16 10 20.6	+0.8
GO06				IAML		16 10 24.9	
	comp=N,130nm,0.9s						
GO05	**Huala**	**3.95**	**41**	*e*P	Pn	16 09 51.8	-0.2
GO05				*e*S	Sn	16 10 37.8	-0.7
PLCA	**Paso Flores**	**4.40**	**129**	*e*P	Pn	16 09 58.6	+0.4
PLCA				*e*S	Sn	16 10 49.5	0.0

IDC ***02*** *16:39:17.1±0.4, 6°.31S×154°.39E, h0km, mb4.5/27, mb1 4.7/30, mb1mx4.6/38, mbtmp4.5/30, ML4.1/3, MS4.8/24, Ms1 4.8/24, ms1mx4.7/29, Error ellipse: s-maj=15.6km s-min=11.5km az=87.0*

MOS ***02*** *16:39:20.9±1.7, 6°.35S×154°.42E, h34km, mb5.2/42, MS4.9/6, Error ellipse: s-maj=7.9km s-min=6.6km az=93.0*

ISCJB ***02*** *16:39:20.1±0.8, 6°.40S±0°.03×154°.45E±0°.03, h33km±7km, mb5.0/157, MS4.8/56, Error ellipse: s-maj=5.4km s-min=4.8km az=140.4*

GCMT ***02*** *16:39:23.3±0.2, 6°.22S±0°.02×154°.21E±0°.02, h52km±2km, MW5.0/72, Moment Tensor Solution. s37,c42; s72,c105; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.96±.22; Mθθ3.00±.12; Mϕϕ-1.05±.15; Mrθ1.41±.11; Mrϕ-1.06±.11; Mθϕ-2.73±.12; Best double couple: M=4.18300×10^16 NP1:ϕs318.00000°, δ73.00000°, λ-57.00000°. NP2: ϕs72.00000°, δ36.00000°, λ-151.00000°. Principal axes: T 4.0720, Plg22.0000°, Azm24.0000°; N 0.2140, Plg31.0000°, Azm127.0000°; P -4.2950, Plg51.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *16:39:24.3±0.8, 6°.36S×154°.37E, h56km±7km, mb5.0/97 Error ellipse: s-maj=5.1km s-min=4.9km az=105.0*

DJA ***02*** *16:39:25.4±0.7, 6°.5±3°×15°.4E±°, h58km±6km, M5.2/33, mB5.6/18, mb5.2/33, MLv5.5/1, Mw(mB)5.1/18*

ISC 02 16:39:24.4±0.5, 6°.41S±0°.04×154°.32E±0°.04, h46km±3km, h46km:pP-P, n329, σ2°.09/355, mb5.0/157, MS4.8/56, 9C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.08**	**316**	*e*Pn	**Pn**	**16 40 10.2**	**-0.4**
HNR	**Honiara**	**6.33**	**119**	*e*P	**Pn**	**16 40 59.0**	**+3.8**
HNR				*e*S	**Sn**	**16 42 13.0**	**+6.7**
HNR	**Honiara**	**6.33**	**119**	Pn	**Pn**	**16 40 58.9**	**+3.7**
	37nm,0.3s,baz=257,slow=2.8,SNR=34						
HNR				Sn	**Sn**	**16 42 11.9**	**+5.6**
	12nm,0.3s,baz=222,slow=22,SNR=4.1						
HNR				LR	LR	16 43 41.8	
	comp=Z,11μm,18.9s,baz=296,slow=42						
HNR	**Honiara**	**6.33**	**119**	*e*Pn	**Pn**	**16 40 57.2**	**+2.0**
HNR				Sn	**Sn**	**16 42 11.9**	**+5.6**
HNR	**Honiara**	**6.33**	**119**	*e*P	**Pn**	**16 40 57.2**	**+2.0**
HNR						16 42 11.9	
PMG	**Port Moresby**	**7.70**	**247**	Pn	**Pn**	**16 41 13.3**	**-0.6**
	24nm,0.3s,baz=56,slow=8.5,SNR=47						
PMG				Sn	**Sn**	**16 42 42.9**	**+3.0**
	4.5nm,0.3s,baz=46,slow=20,SNR=2.1						
PMG				LR	LR	16 44 14.5	
	comp=Z,10μm,20.8s,baz=9.5,slow=38						
PMG	**Port Moresby**	**7.70**	**247**	*e*Pn	**Pn**	**16 41 13.7**	**-0.3**
PMG	**Port Moresby**	**7.70**	**247**	*i* P	**Pn**	**16 41 13.8**	**-0.2**
COEN	**Coen**	**13.29**	**235**	*e*Pn	**Pn**	**16 42 30.7**	**+0.2**
COEN	**Coen**	**13.29**	**235**	P	**P**	**16 42 35.0**	**-4.2**
	baz=13,SNR=7.5						
PATS	**Pohnpei**	**13.75**	**17**	*e*Pn	**Pn**	**16 42 34.7**	**-2.1**
PATS	**Pohnpei**	**13.75**	**17**	P	**Pn**	**16 42 34.9**	**-1.9**
	baz=14,SNR=5.7						
JAY	**Jayapura**	**14.12**	**285**	Pn	**Pn**	**16 42 42.8**	**+1.0**
	0.3nm,0.3s,baz=112,slow=14,SNR=5.2						
JAY				LR	LR	16 48 03.7	
	comp=Z,5μm,18.7s,baz=58,slow=37						
CTA	**Charters Tower**	**15.70**	**209**	Pn	**Pn**	**16 43 02.5**	**0.0**
	1.1nm,0.3s,baz=32,slow=13,SNR=30						
CTA				LR	LR	16 48 35.2	
	comp=Z,4μm,19.6s,baz=38,slow=35						
CTAO	**Charters Tower**	**15.70**	**209**	*e*Pn	**Pn**	**16 43 00.6**	**-2.0**
	167nm,1.3s						
CTAO	**Charters Tower**	**15.70**	**209**	*e*P	**Pn**	**16 43 00.6**	**-2.0**
CTAO				pmax	pmax		
	comp=Z,167nm,1.3s						
EIDS	**Eidsvold**	**19.11**	**189**	*e*P	**P**	**16 43 43.2**	**-0.4**
	comp=Z,191nm,1.6s						
EIDS	**Eidsvold**	**19.11**	**189**	P	**Pn**	**16 43 44.4**	**-0.4**
	baz=19,SNR=5.5						
DZM	**Mont Dzumac**	**19.48**	**144**	*e*P	**P**	**16 43 47.9**	**+0.1**
	comp=Z,158nm,1.3s						
DZM				*e*LR	LR	16 48 24.5	
	comp=Z,3μm,23.7s						
DZM	**Mont Dzumac**	**19.48**	**144**	P	**P**	**16 43 47.7**	**-0.1**
	comp=Z,2.6nm,0.3s,baz=332,slow=16,SNR=24						
DZM	**Mont Dzumac**	**19.48**	**144**	*e*P	**P**	**16 43 47.7**	**-0.1**
	comp=Z,153nm,1.5s						
MARNC	**Mare, Loyalty**	**20.01**	**140**	*e*P	**P**	**16 43 53.8**	**+0.3**
	comp=Z,374nm,1.4s						
QIS	**Mount Isa**	**20.04**	**224**	P	**P**	**16 43 53.7**	**-0.1**
	baz=20,SNR=43						
RMQ	**Roma**	**20.66**	**194**	P	**P**	**16 44 00.8**	**+0.3**
	baz=21,SNR=29						
GUMO	**Guam**	**21.97**	**335**	P	**P**	**16 44 12.0**	**-2.6**
	comp=Z,21nm,0.7s,baz=154,slow=9.6,SNR=2.5						
GUMO				LR	LR	16 51 15.1	
	comp=Z,1μm,21.9s,baz=148,slow=33						
GUMO	**Guam**	**21.97**	**335**	*e*P	**P**	**16 44 15.0**	**+0.4**
	comp=Z,154nm,1.2s						
GUMO	**Guam**	**21.97**	**335**	*e*P	**P**	**16 44 15.0**	**+0.4**
GUMO				pmax	pmax		
	comp=Z,154nm,1.2s						
KDU	**Kakadu**	**22.42**	**252**	P	**P**	**16 44 18.2**	**-1.3**
	baz=22,SNR=26						
WRAB	**Tennant Creek**	**23.60**	**233**	*e*P	**P**	**16 44 30.2**	**-1.2**
	comp=Z,186nm,1.2s						
WRAB	**Tennant Creek**	**23.60**	**233**	*e*P	**P**	**16 44 30.2**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,186nm,1.2s						
WB2	**Warramunga Arr**	**23.61**	**233**	*e*P	**P**	**16 44 30.2**	**-1.2**
	comp=Z,214nm,1.3s						
WR1	**Warramunga Arr**	**23.61**	**233**	*e*P	**P**	**16 44 30.4**	**-1.2**
WR1				*e*ScP	**ScP**	**16 51 53.2**	**+2.9**
WRA	**Warramunga Arr**	**23.61**	**233**	P	**P**	**16 44 30.4**	**-1.2**
	comp=Z,145nm,0.3s,baz=56,slow=8.6,SNR=4.1						
WRA				ScP	**ScP**	**16 51 53.2**	**+2.9**
	comp=Z,138nm,0.3s,baz=57,slow=3.1,SNR=1.7						
MTN	**Manton Dam**	**23.73**	**253**	*e*P	**P**	**16 44 31.2**	**-1.4**
	comp=Z,50nm,1.0s						
MTN	**Manton Dam**	**23.73**	**253**	P	**P**	**16 44 31.5**	**-1.1**
	baz=24,SNR=3.8						
ARMA	**Armidale**	**24.02**	**186**	P	**P**	**16 44 36.4**	**+1.1**
	baz=24,SNR=6.0						
PALU	**Palau**	**24.06**	**304**	P	**P**	**16 44 36.1**	**+0.5**
	baz=24,SNR=7.5						
AS31	**Alice Springs**	**26.07**	**227**	*e*P	**P**	**16 44 52.7**	**-1.3**
	comp=Z,5.8nm,0.6s						
ASAR	**Alice Springs**	**26.07**	**227**	P	**P**	**16 44 53.0**	**-1.0**
	comp=Z,7.0nm,0.6s,baz=57,slow=9.3,SNR=69						
ASAR				ScP	**ScP**	**16 52 00.9**	**+3.7**
	comp=Z,0.9nm,0.8s,baz=58,slow=2.3,SNR=4.3						
ASAR				LR	LR	16 55 02.9	
	comp=Z,4μm,19.7s,baz=56,slow=36						
ASAR	**Alice Springs**	**26.07**	**227**	P	**P**	**16 44 53.0**	**-1.0**
CMSA	**Cobar Meteorol**	**26.27**	**197**	P	**P**	**16 44 54.9**	**-0.8**
	baz=26,SNR=33						
KNRA	**Kununurra**	**26.70**	**248**	P	**P**	**16 44 59.6**	**0.0**
	baz=27,SNR=8.4						
TNTI	**Ternate**	**27.84**	**284**	P	**P**	**16 45 11.0**	**+1.2**
	comp=Z,15nm,1.6s,comp=Z,517nm						
STKA	**Stephens Creek**	**27.99**	**204**	P	**P**	**16 45 09.4**	**-1.6**
	comp=Z,9.2nm,0.5s,baz=16,slow=10,SNR=18						
STKA				ScP	**ScP**	**16 52 06.2**	**+3.5**
	comp=Z,6.9nm,0.9s,baz=21,slow=6.4,SNR=7.1						
STKA				LR	LR	16 56 23.3	
	comp=Z,3μm,19.4s,baz=20,slow=36						
STKA	**Stephens Creek**	**27.99**	**204**	*e*P	**P**	**16 45 09.4**	**-1.6**
	comp=Z,26nm,1.9s						
STKA				ScP	**ScP**	**16 52 06.2**	**+3.5**
STKA	**Stephens Creek**	**27.99**	**204**	P	**P**	**16 45 09.5**	**-1.5**
	baz=28,SNR=5.2						
STKA	**Stephens Creek**	**27.99**	**204**	*e*P	**P**	**16 45 09.4**	**-1.6**
STKA				pmax	pmax		
	comp=Z,26nm,1.9s						
FITZ	**Fitzroy Crossi**	**30.29**	**245**	*e*P	**P**	**16 45 30.6**	**-1.0**
	comp=Z,28nm,0.8s						
FITZ	**Fitzroy Crossi**	**30.29**	**245**	P	**P**	**16 45 30.6**	**-1.0**
	baz=30,SNR=11						
HTT	**Hallett**	**30.45**	**206**	P	**P**	**16 45 31.5**	**-1.4**
	baz=31,SNR=5.8						
WRKA	**Warakurna**	**31.05**	**231**	P	**P**	**16 45 36.9**	**-1.4**
	baz=31,SNR=28						
KMSI	**Cibinong**	**31.07**	**282**	P	**P**	**16 45 38.3**	**-0.2**
	comp=Z,115nm,0.8s						
BBOO	**Buckleboo**	**31.29**	**211**	P	**P**	**16 45 38.7**	**-1.6**
	baz=31,SNR=16						
MMRI	**Maumere**	**31.88**	**264**	*e*P	**P**	**16 45 44.7**	**-1.0**
	comp=Z,70nm,0.8s						
MMRI	**Maumere**	**31.88**	**264**	P	**P**	**16 45 42.8**	**-2.9**
	comp=Z,112nm,0.8s,comp=Z,1μm						
LUWI	**Luwuk**	**31.92**	**278**	*e*P	**P**	**16 45 45.6**	**-0.4**
	comp=Z,149nm,1.3s						
LUWI	**Luwuk**	**31.92**	**278**	P	**P**	**16 45 46.6**	**+0.6**
	comp=Z,77nm,1.3s,comp=Z,1μm						
EDFI	**Ende, Flores**	**32.42**	**264**	P	**P**	**16 45 49.0**	**-1.6**
	comp=Z,55nm,0.8s,comp=Z,1μm						
MRSI	**Marisa**	**33.03**	**281**	P	**P**	**16 45 54.8**	**-1.0**
	comp=Z,20nm,0.8s						
BSSI	**Bau Bau, Buton**	**33.63**	**269**	P	**P**	**16 46 00.6**	**-0.4**
	comp=Z,106nm,0.9s,comp=Z,1μm						
BKSI	**Bukukumba**	**34.03**	**270**	P	**P**	**16 46 03.2**	**-1.3**
BNSI	**Bone**	**34.12**	**272**	P	**P**	**16 46 03.7**	**-1.5**
KAPI	**Kappang**	**34.42**	**270**	*e*P	**P**	**16 46 11.4**	**+3.5**
KAPI				pmax	pmax		
	comp=Z,22nm,1.7s						
SPSI	**Sidrap Palu**	**34.49**	**272**	P	**P**	**16 46 08.3**	**-0.2**
	comp=Z,6.8nm,0.8s,comp=Z,340nm						
TTSI	**Tana Toraja**	**34.54**	**274**	P	**P**	**16 46 11.2**	**+2.3**
	comp=Z,15nm,0.7s						
FORT	**Forrest**	**34.56**	**222**	*e*P	**P**	**16 46 07.5**	**-1.3**
	comp=Z,48nm,1.1s						
MPSI	**Mapaga**	**35.00**	**280**	P	**P**	**16 46 12.0**	**-0.9**
	comp=Z,30nm,1.0s,comp=Z,445nm						
PLAI	**Plampang**	**36.29**	**264**	P	**P**	**16 46 20.4**	**-3.6**
	comp=Z,80nm,0.9s						
URZ	**Urewera**	**37.84**	**150**	P	**P**	**16 46 36.8**	**0.0**
	comp=Z,6.0nm,0.6s,baz=318,slow=3.3,SNR=11						
URZ	**Urewera**	**37.84**	**150**	*e*P	**P**	**16 46 37.1**	**+0.3**
	comp=Z,16nm,0.7s						
BKZ	**Black Stump Fm**	**38.26**	**152**	*e*P	**P**	**16 46 40.4**	**+0.1**
	comp=Z,116nm,1.9s						
THZ	**Tophouse**	**38.89**	**158**	*e*P	**P**	**16 46 45.2**	**-0.5**
	comp=Z,34nm,0.7s						
TGY	**Tagaytay City**	**38.90**	**302**	P	**P**	**16 46 45.7**	**-0.3**
	comp=Z,185nm,0.3s,baz=80,slow=22,SNR=4.1						
KMBL	**Kambalda**	**39.20**	**227**	P	**P**	**16 46 47.5**	**-0.9**
	baz=39,SNR=7.3						
RPZ	**Rata Peaks**	**39.96**	**161**	P	**P**	**16 46 54.6**	**+0.1**
	comp=Z,16nm,0.9s,baz=329,slow=5.9,SNR=3.8						
RPZ				LR	LR	17 02 48.7	
	comp=Z,2μm,18.6s,baz=326,slow=35						
KLBR	**Kellerberrin**	**42.36**	**229**	P	**P**	**16 47 13.0**	**-1.4**
	baz=42,SNR=15						
MORW	**Morawa**	**42.56**	**233**	*e*P	**P**	**16 47 15.2**	**-0.8**
	comp=Z,91nm,1.5s						
MORW	**Morawa**	**42.56**	**233**	P	**P**	**16 47 15.2**	**-0.8**
	baz=43,SNR=4.9						
BLDU	**Ballidu**	**42.70**	**231**	P	**P**	**16 47 15.7**	**-1.5**
	baz=43,SNR=7.8						
SBUM	**Sibu**	**42.95**	**281**	*e*P	**P**	**16 47 18.7**	**-0.6**
	comp=Z,35nm,1.9s						
SBUM	**Sibu**	**42.95**	**281**	P	**P**	**16 47 21.0**	**+1.6**
NWAO	**Narrogin (SRO)**	**43.39**	**228**	P	**P**	**16 47 21.6**	**-1.0**
	baz=44,SNR=3.8						
MUN	**Mundaring**	**43.70**	**229**	P	**P**	**16 47 24.1**	**-1.1**
	baz=44,SNR=3.9						
YULB	**Yu-li**	**43.80**	**314**	*e*P	**P**	**16 47 26.0**	**0.0**
	comp=Z,62nm,1.0s						
NACB	**Ninganchiao**	**44.07**	**315**	*e*P	**P**	**16 47 28.6**	**+0.4**
	comp=Z,106nm,1.0s						
TPUB	**Ta-pu**	**44.22**	**313**	*e*P	**P**	**16 47 29.2**	**-0.3**
	comp=Z,46nm,0.9s						
SSLB	**Suanglung**	**44.29**	**314**	*e*P	**P**	**16 47 30.3**	**+0.3**
	comp=Z,40nm,0.8s						
RKGY	**Rocky Gully**	**44.41**	**226**	P	**P**	**16 47 30.9**	**0.0**
	baz=44,SNR=6.0						
YHNB	**Yeheng**	**44.54**	**315**	*e*P	**P**	**16 47 32.7**	**+0.6**
	comp=Z,76nm,0.9s						
KSM	**Kuching**	**44.63**	**279**	*e*P	**P**	**16 47 32.3**	**-0.6**
	comp=Z,17nm,0.8s						
KSM	**Kuching**	**44.63**	**279**	P	**P**	**16 47 33.0**	**+0.1**
JNU	**Nakatsue**	**45.18**	**332**	*e*P	**P**	**16 47 35.6**	**-1.4**
	comp=Z,22nm,0.8s						
MJAR	**Matsushiro Arr**	**45.32**	**342**	P	**P**	**16 47 35.5**	**-2.5**
	comp=Z,1.2nm,0.6s,baz=174,slow=8.5,SNR=6.6						
MJAR				LR	LR	17 06 09.6	
	comp=Z,346nm,19.4s,baz=195,slow=36						
MAJO	**Matsushiro**	**45.32**	**342**	*e*P	**P**	**16 47 35.5**	**-2.5**
MAJO	**Matsushiro**	**45.32**	**342**	*e*P	**P**	**16 47 35.5**	**-2.5**
CISI	**Cisompet, Garu**	**46.16**	**266**	P	**P**	**16 47 44.4**	**-0.7**
	comp=Z,123nm,0.8s						
LEM	**Lembang**	**46.38**	**267**	P	**P**	**16 47 46.4**	**-0.6**
LEM				pmax	pmax		
	comp=Z,30nm,1.1s						
LEM	**Lembang**	**46.38**	**267**	P	**P**	**16 47 47.7**	**+0.7**
	comp=Z,475nm,1.1s						
QZH	**Quanzhou**	**46.70**	**313**	P	**P**	**16 47 52.7**	**+3.7**
QZH				S	**S**	**16 54 40.5**	**+4.9**
QZH				LR	LR		
	comp=Z,640nm,18.0s						
QZH				LR	LR		
	comp=Z,860nm,19.9s						
QZH				LR	LR		
	comp=Z,670nm,17.5s						
RAR	**Rarotonga**	**46.75**	**113**	LR	LR	17 05 41.0	
	comp=Z,561nm,18.2s,baz=270,slow=34						
CGJI	**Cibinong**	**48.30**	**267**	P	**P**	**16 48 00.2**	**-1.5**
	comp=Z,53nm,1.2s						
DLV	**T Lat**	**49.09**	**292**	*e*P	**P**	**16 48 07.8**	**-0.2**
	comp=Z,72nm,1.0s						
MDSI	**Maura Dua**	**49.94**	**270**	P	**P**	**16 48 14.3**	**+0.1**
	comp=Z,22nm,1.4s,comp=Z,601nm						
KSRS	**Korea Array**	**50.11**	**333**	P	**P**	**16 48 13.5**	**-1.5**
	comp=Z,6.7nm,0.9s,baz=152,slow=8.0,SNR=17						
KSRS				LR	LR	17 08 18.6	
	comp=Z,317nm,19.3s,baz=142,slow=35						
KSAR	**Wonju Array Be**	**50.12**	**332**	P	**P**	**16 48 13.6**	**-1.6**
KSAR	**Wonju Array Be**	**50.12**	**332**	P	**P**	**16 48 13.6**	**-1.6**
QIZ	**Qiongzhong**	**50.59**	**301**	P	**P**	**16 48 17.6**	**-1.5**
QIZ				S	**S**	**16 55 33.7**	**+3.0**
QIZ				pmax	pmax		
	comp=Z,200nm,7.8s						
QIZ				LR	LR		
	comp=Z,210nm,20.1s						
QIZ				LR	LR		
	comp=Z,690nm,19.1s						
QIZ				LR	LR		
	comp=Z,880nm,15.8s						
YUK	**Yuzh-Kuril'sk**	**50.79**	**352**	*e*P	**P**	**16 48 18.8**	**-1.3**
YUK				*e*PPP	PPP	16 51 21.1	
YUK				*e*S	**S**	**16 55 30.1**	**-2.5**
YUK				MLR	MLR		
	comp=Z,680nm,14.0s						
MYKOM	**Kota Tinggi**	**51.04**	**277**	P	**P**	**16 48 23.0**	**+0.4**
NJ2	**Nanjing**	**51.04**	**321**	*e*P	**P**	**16 48 21.2**	**-1.0**
NJ2				S	**S**	**16 55 36.4**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,310nm,4.3s						
NJ2				LR	LR		
	comp=Z,950nm,17.9s						
NJ2				LR	LR		
	comp=Z,680nm,19.5s						
NJ2				LR	LR		
	comp=Z,1μm,18.4s						
WHN	**Wuhan**	**53.06**	**316**	⇑P	**P**	**16 48 39.8**	**+2.6**
WHN				S	**S**	**16 56 09.3**	**+5.1**
WHN				pmax	pmax		
	comp=Z,42nm,0.9s						
WHN				pmax	pmax		
	comp=Z,220nm,5.3s						
WHN				LR	LR		
	comp=Z,1μm,16.2s						
WHN				LR	LR		
	comp=Z,2μm,17.8s						
WHN				LR	LR		
	comp=Z,2μm,19.1s						
YSS	**Yuzh-Sakhalins**	**54.11**	**350**	*e*P	**P**	**16 48 46.0**	**+1.4**
YSS				*e*S	**S**	**16 56 17.4**	**-0.5**
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS				MLR	MLR		
	comp=Z,700nm,14.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
USRK	**Ussuriysk Ar.**	**54.26**	**340**	P	**P**	**16 48 44.7**	**-1.1**
	comp=E,2.7nm,0.7s,baz=135,slow=5.0,SNR=4.0						
USRK				LR	LR	17 10 20.8	
	comp=E,321nm,20.1s,baz=149,slow=34						
DL2	**Dalian**	**54.32**	**329**	P	**P**	**16 48 50.2**	**+3.9**
DL2				S	**S**	**16 56 27.7**	**+6.6**
DL2				pmax	pmax		
	comp=E,13nm,0.8s						
DL2				pmax	pmax		
	comp=E,58nm,5.0s						
DL2				LR	LR		
	comp=E,620nm,17.6s						
DL2				LR	LR		
	comp=E,470nm,18.8s						
DL2				LR	LR		
	comp=E,610nm,19.4s						
PANO	**Nakornpanom**	**54.41**	**296**	P	**P**	**16 48 52.0**	**+4.6**
	comp=E,0.3nm,1.0s						
KULM	**Kulim**	**54.82**	**281**	P	**P**	**16 48 53.0**	**+2.5**
SKNT	**Sakolnakorn**	**54.91**	**296**	P	**P**	**16 48 53.9**	**+2.8**
	comp=E,22nm,1.3s						
KHON	**Khomkaen**	**55.73**	**295**	P	P	16 49 09.5	+13
PPT	**Papeete**	**55.80**	**107**	LR	LR	17 09 20.3	
	comp=E,443nm,19.1s,baz=292,slow=32						
PPT2	**Papeete2**	**55.81**	**107**	*e*LQ	LQ	17 02 56.0	
	comp=E,1μm,23.0s						
PPT2				*e*LR	LR	17 05 20.4	
	comp=E,674nm,21.8s						
TRTT	**Trang**	**56.29**	**284**	P	P	16 49 15.3	+14
CHAI	**Chaiyaphum**	**56.35**	**294**	P	**P**	**16 49 02.7**	**+1.3**
	comp=E,20μm,0.7s,comp=E,225μm						
ENH	**Enshi**	**56.35**	**313**	*e*P	**P**	**16 48 59.5**	**-1.7**
	comp=E,39nm,0.8s						
CN2	**Changchun**	**56.38**	**335**	*e*P	**P**	**16 49 00.3**	**-0.8**
CN2				*e*S	**S**	**16 56 47.0**	**-1.5**
CN2				pmax	pmax		
	comp=E,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=E,200nm,3.0s						
CN2				LR	LR		
	comp=E,380nm,16.0s						
CN2				LR	LR		
	comp=E,260nm,16.0s						
CN2				LR	LR		
	comp=E,410nm,16.0s						
TBI	**Tubual**	**56.52**	**114**	*e*LQ	LQ	17 03 08.2	
	comp=E,2μm,27.2s						
TBI				*e*LR	LR	17 05 34.3	
	comp=E,1μm,25.8s,baz=294						
GYA	**Guiyang**	**56.57**	**307**	⇑*i*P	P	16 49 10.2	+7.3
GYA				sP	pwP	16 49 23.0	+1.5
GYA				pP	sP	16 49 25.3	+6.7
GYA				PP	**PP**	**16 51 16.7**	**+7.4**
GYA				S	**S**	**16 56 56.7**	**+4.9**
GYA				sS	sS	16 57 16.9	+6.6
GYA	**Guiyang**	**56.57**	**307**	SS	**SS**	**17 00 35.0**	**-5.1**
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,7.1s						
GYA				LR	LR		
	comp=N,520nm,17.4s						
GYA				LR	LR		
	comp=E,570nm,18.0s						
GYA				LR	LR		
	comp=Z,850nm,19.9s						
SLVN	**Son La**	**56.61**	**301**	*e*P	**P**	**16 49 01.8**	**-1.5**
	comp=Z,30nm,1.6s						
PBKT	**Sadao Pong**	**57.49**	**294**	P	**P**	**16 49 12.3**	**+2.9**
	comp=Z,5.0nm,0.7s						
PHET	**Kaeng Krachan**	**57.63**	**290**	P	P	16 49 24.5	+14
NANT	**Nan**	**58.48**	**297**	P	**P**	**16 49 18.9**	**+2.6**
	comp=Z,35μm,1.2s,comp=Z,315μm						
TIY	**Taiyuan**	**58.72**	**322**	*e*P	**P**	**16 49 20.4**	**+2.6**
TIY				sP

KMI LR LR
comp=Z,400nm,17.7s
KMI LR LR
comp=Z,550nm,21.2s
PET Petropavlovsk 59.32 3 *e*P **P 16 49 20.8 -0.7**
PET *e*S **S 16 57 26.1 -0.4**
PET *e*SS **SS 17 01 23.2 +1.1**
PET pmax pmax
comp=Z,200nm,16.2s
PET pmax pmax
comp=Z,300nm,17.9s
PET pmax pmax
comp=Z,13nm,1.2s
LAMP Lampang 59.33 296 P P 16 49 35.5 +13
PETK Petropavlovsk- 59.36 2 P **P 16 49 20.9 -0.9**
comp=Z,1.4nm,0.6s,baz=145,slow=6.0,SNR=5.9
PETK LR LR 17 11 02.4
comp=Z,705nm,21.3s,baz=179,slow=32
PEA1 Petropavlovsk- 59.36 2 *e*P **P 16 49 20.9 -1.0**
CM31 Chiang Mai Arr 59.93 295 *e*P **P 16 49 25.3 -1.1**
comp=Z,20nm,1.1s
CMAR Chiang Mai Arr 59.93 295 P **P 16 49 27.3 +0.9**
comp=Z,2.4nm,0.7s,baz=122,slow=5.7,SNR=18
CMAR LR LR 17 15 36.5
comp=Z,348nm,18.8s,baz=105,slow=36
CMAR Chiang Mai Arr 59.93 295 *i* P **P 16 49 27.8 +1.4**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
CHTO Chiang Mai 60.05 296 *e*P **P 16 49 27.8 +0.6**
comp=Z,27nm,1.3s
CHTO Chiang Mai 60.05 296 *e*P **P 16 49 27.8 +0.6**
CHTO pmax pmax
comp=Z,27nm,1.3s
CD2 Chengdu 60.93 311⇑ *i*P **P 16 49 33.8 +0.7**
CD2 pP sP 16 49 47.7 -1.1
CD2 sP pwP 16 49 54.7 +2.8
CD2 S **S 16 57 50.4 +2.2**
CD2 sS sS 16 58 13.7 +7.5
CD2 pmax pmax
comp=Z,70nm,0.5s
CD2 pmax pmax
comp=Z,310nm,3.7s
CD2 LR LR
comp=Z,1μm,18.0s
CD2 LR LR
comp=Z,2μm,18.8s
CD2 LR LR
comp=Z,2μm,18.4s
HHC Hu-ho-hao-te 61.23 324 *e*P **P 16 49 37.2 +2.2**
HHC PP **PP 16 51 55.1 +4.7**
HHC S **S 16 57 52.6 +0.8**
HHC pmax pmax
comp=Z,20nm,0.5s
HHC pmax pmax
comp=Z,170nm,6.9s
HHC LR LR
comp=Z,580nm,17.6s
HHC LR LR
comp=Z,560nm,16.7s
HHC LR LR
comp=Z,980nm,17.1s
HIA Hailar 63.11 335 *e*P **P 16 49 45.8 -1.5**
comp=Z,16nm,0.8s
HIA Hailar 63.11 335 *e*P **P 16 49 45.8 -1.5**
HIA pmax pmax
comp=Z,16nm,0.8s
LZH Lanzhou 63.43 316 ⇑P **P 16 49 51.3 +1.4**
LZH pP sP 16 50 05.8 +0.2
LZH sP pwP 16 50 09.8 +0.9
LZH S **S 16 58 20.5 +0.7**
LZH sS sS 16 58 45.5 +6.9
LZH pmax pmax
comp=Z,26nm,1.3s
LZH pmax pmax
comp=Z,200nm,4.8s
LZH LR LR
comp=Z,570nm,16.8s
LZH LR LR
comp=Z,770nm,17.0s
LZH LR LR
comp=Z,1μm,17.0s
ZEA Zeya 64.12 343 *e*P **P 16 49 52.2 -1.6**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,48nm,1.6s
TAOE Nuku Hiva Isla 64.93 97 *e*LR LR 17 09 33.5
comp=Z,636nm,21.7s
MA2 Magadan 65.83 358 *i* P **P 16 50 02.2 -2.7**
MA2 pmax pmax
comp=Z,5.0nm,0.9s
GTA Gaotai 67.86 317 P **P 16 50 18.8 +0.4**
GTA pP pP 16 50 30.4 +0.8
GTA sP sP 16 50 35.0 +0.9
GTA S **S 16 59 17.3 +3.6**
GTA sS sS 16 59 40.0 +6.1
GTA pmax pmax
comp=Z,5.0nm,1.1s
GTA pmax pmax
comp=Z,88nm,4.4s
GTA LR LR
comp=Z,360nm,19.9s
GTA LR LR
comp=Z,500nm,18.2s
GTA LR LR
comp=Z,620nm,18.2s
ULN Ulaanbaatar 68.15 328 *e*P **P 16 50 19.4 -0.7**
comp=Z,18nm,1.1s
ULN Ulaanbaatar 68.15 328 *e*P **P 16 50 19.4 -0.7**
ULN pmax pmax
comp=Z,18nm,1.1s
SHL Shillong 68.42 301 *e*P **P 16 50 22.0 -0.3**
comp=Z,57nm,0.9s
SHL Shillong 68.42 301 *e*P **P 16 50 22.0 -0.3**
SONA0 Songino Array 68.48 327 *e*P **P 16 50 21.3 -0.8**
SONM Songino Array 68.48 327 P **P 16 50 21.3 -0.8**
comp=Z,1.7nm,0.6s,baz=150,slow=9.5,SNR=5.1
SONM LR LR 17 20 29.2
comp=Z,524nm,19.4s,baz=88,slow=36
LSA Lhasa 70.39 304 P **P 16 50 35.8 +1.1**
LSA Lhasa 70.39 304 *e*P **P 16 50 33.1 -1.6**
comp=Z,35nm,0.8s
LSA Lhasa 70.39 304 *e*P **P 16 50 33.1 -1.6**
LSA pmax pmax
comp=Z,35nm,0.8s
YAK Yakutsk 70.85 348 *e*P **P 16 50 34.8 -1.3**
comp=Z,13nm,0.8s
YAK Yakutsk 70.85 348 *e*P **P 16 50 39.2 +3.1**
YAK *e**PP **pP 16 50 46.2 -1.8**
YAK *e* 16 50 58.0
YAK *e* 16 53 11.9
YAK *e*PPP PPP 16 54 58.2
YAK *e*S **S 16 59 52.2 +4.5**
YAK *e**SS **SKiKP 17 00 14.9 0.0**
YAK *e*SS **SS 17 04 18.4 -2.7**
VNDA Vanda 71.18 178 P **P 16 50 37.6 -0.5**
comp=Z,2.6nm,0.7s,baz=323,slow=7.2,SNR=18
VNDA Vanda 71.18 178 *e*P **P 16 50 37.8 -0.2**
comp=Z,8.1nm,1.0s
VNDA Vanda 71.18 178 *e*P **P 16 50 37.8 -0.2**
VNDA pmax pmax
comp=Z,8.0nm,1.0s
ZAK Zakamensk 71.65 328 *e*P **P 16 50 36.9 -4.5**
ZAK pmax pmax
comp=Z,14nm,1.0s
BOD Bodaibo 71.83 339 *e*P **P 16 50 44.9 +2.7**
BOD pmax pmax
comp=Z,7.0nm,1.5s
TLY Talaya 72.22 330 *i* P **P 16 50 45.0 +0.3**
ODAN Odare 72.66 301 *e*P **P 16 50 49.0 +0.9**
comp=Z,41nm,0.7s
RAMN Ramite 73.36 300 *e*P **P 16 50 52.7 +0.4**
comp=Z,12nm,0.5s
MOY Mondy 73.57 329 *e*P **P 16 50 56.4 +3.6**
MOY pmax pmax
comp=Z,23nm,2.6s
JIRN Jiri 73.91 301 *e*P **P 16 50 56.3 +0.6**
comp=Z,33nm,0.8s
GUN Gumba 74.25 301 *e*P **P 16 50 58.1 +0.5**
comp=Z,62nm,0.8s
GAMB Gambell 74.52 15 *e*P **P 16 50 59.2 +1.3**
comp=Z,12nm,1.0s
PKI Pulchoki 74.55 301 *e*P **P 16 50 59.6 +0.3**
comp=Z,31nm,0.9s
PKIN Phulchoki 74.56 301 *e*P **P 16 50 59.6 +0.3**
comp=Z,12nm,0.5s

KKN Kakani 74.72 301 *e*P **P 16 51 00.7 +0.5**
comp=Z,19nm,0.6s
BILL Bilibino 74.75 5 *e*P **P 16 50 57.2 -2.0**
comp=Z,13nm,1.2s
BILL Bilibino 74.75 5 *i* P **P 16 50 55.9 -3.3**
BILL *i* 16 51 09.5
BILL *i* 16 53 44.4
BILL *i* S **S 17 00 29.1 -2.9**
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,488nm,18.0s
DMN Daman 74.82 301 *e*P **P 16 51 01.5 +0.7**
comp=Z,42nm,0.6s
KOLN Koldanda 76.15 301 *e*P **P 16 51 08.5 +0.1**
comp=Z,47nm,0.8s
DANN Dangsing 76.17 301 *e*P **P 16 51 08.4 -0.2**
comp=Z,34nm,0.6s
PYUN Piuthan 76.76 301 *e*P **P 16 51 11.7 -0.1**
comp=Z,76nm,0.9s
ANM Nome 76.86 17 *e*P **P 16 51 10.1 -1.2**
comp=Z,15nm,1.0s
ANM Nome 76.86 17 *e*P **P 16 51 10.1 -1.2**
ANM pmax pmax
comp=Z,15nm,1.0s
KDAK Kodiak Island 76.93 26 *e*P **P 16 51 11.2 -0.6**
comp=Z,29nm,1.4s
KDAK Kodiak Island 76.93 26 *e*P **P 16 51 11.2 -0.6**
KDAK pmax pmax
comp=Z,29nm,1.4s
WMQ Urumqi 77.94 317 *e*P **P 16 51 18.8 +0.9**
WMQ pP pP 16 51 31.4 +2.0
WMQ S **S 17 01 09.6 +1.5**
WMQ SS **SS 17 06 10.4 +0.4**
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ pmax pmax
comp=Z,190nm,4.9s
WMQ LR LR
comp=Z,830nm,24.7s
WMQ LR LR
comp=Z,430nm,27.9s
WMQ LR LR
comp=Z,350nm,15.5s
HYB Hyderabad 78.45 289 *i* P **P 16 51 22.0 +0.8**
CNPM China Poot 78.51 25 *e*P **P 16 51 19.1 -1.6**
comp=Z,30nm,1.0s
BRLK Bradley Lake 78.79 25 *e*P **P 16 51 20.4 -1.8**
comp=Z,14nm,1.0s
TIXI Tiksi 79.68 352 *i* P **P 16 51 28.4 +1.6**
TIXI pmax pmax
comp=Z,5.0nm,1.4s
RC01 Rabbit Creek A 80.00 24 *e*P **P 16 51 26.8 -2.0**
comp=Z,19nm,1.2s
DGZ Jazzator, Alta 80.27 323 *d* *i*P **P 16 51 33.1 +2.4**
DGZ pmax pmax
comp=Z,6.0nm,1.3s
CAST Castle Rocks 80.42 22 *e*P **P 16 51 28.4 -2.6**
comp=Z,10nm,0.8s
PMR Palmer 80.52 24 *e*P **P 16 51 29.2 -2.3**
comp=Z,12nm,1.0s
PMR Palmer 80.52 24 *e*P **P 16 51 29.2 -2.3**
PMR pmax pmax
comp=Z,12nm,1.0s
KNK Knik Glacier 80.70 24 *e*P **P 16 51 30.4 -2.1**
comp=Z,20nm,1.2s
GHO Glory Hole Cre 80.70 24 *e*P **P 16 51 30.1 -2.5**
comp=Z,13nm,0.9s
SML Sawmill 80.96 24 *e*P **P 16 51 31.1 -2.8**
comp=Z,26nm,1.1s
SML Sawmill 80.96 24 *e*P **P 16 51 31.1 -2.8**
SML pmax pmax
comp=Z,26nm,1.1s
SCM Sheep Creek Mo 81.38 24 *e*P **P 16 51 34.1 -2.1**
comp=Z,11nm,0.7s
SCM Sheep Creek Mo 81.38 24 *e*P **P 16 51 34.1 -2.1**
SCM pmax pmax
comp=Z,11nm,0.7s
DIV Divide 81.67 25 *e*P **P 16 51 35.5 -2.2**
comp=Z,17nm,1.3s
MCK McKinley 81.77 22 *e*P **P 16 51 35.1 -3.0**
comp=Z,17nm,0.9s
MCK McKinley 81.77 22 *e*P **P 16 51 35.1 -3.0**
MCK pmax pmax
comp=Z,17nm,0.9s
MLY Manley 81.84 21 *e*P **P 16 51 36.2 -2.3**
comp=Z,7.8nm,1.0s
DHY Denali Highway 82.01 23 *e*P **P 16 51 37.0 -2.6**
comp=Z,7.0nm,0.9s
WRH Wood River Hil 82.48 22 *e*P **P 16 51 39.0 -2.8**
comp=Z,14nm,1.4s
MK31 Makanchi Array 82.53 319 *e*P **P 16 51 39.4 -3.1**
comp=Z,7.6nm,0.8s
MK31 Makanchi Array 82.53 319 *e*P **P 16 51 39.4 -3.1**
MK31 pmax pmax
comp=Z,8.0nm,0.8s
MK32 Makanchi Array 82.53 319 *e*P **P 16 51 42.2 -0.3**
MKAR Makanchi Array 82.53 319 P **P 16 51 42.2 -0.3**
comp=Z,1.5nm,0.5s,baz=100,slow=4.5,SNR=16
MKAR LR LR 17 28 14.0
comp=Z,437nm,20.5s,baz=93,slow=36
CCB Clear Creek Bu 82.67 22 *e*P **P 16 51 39.6 -3.2**
comp=Z,7.0nm,1.2s
COLA College 82.78 21 *i* P **P 16 51 39.4 -3.9**
COLA pmax pmax
comp=Z,7.0nm,0.8s
ILAR Eielson Array 83.08 22 P **P 16 51 42.0 -2.9**
comp=Z,2.1nm,0.8s,baz=246,slow=5.2,SNR=22
ILAR LR LR 17 27 58.1
comp=Z,1μm,19.1s,baz=246,slow=35
ILAR Eielson Array 83.08 22 P **P 16 51 42.0 -2.9**
ILB Eielson Array 83.08 22 *e*P **P 16 51 41.8 -3.1**
comp=Z,3.6nm,0.8s
BALM Baldy 83.09 26 *e*P **P 16 51 42.8 -2.4**
comp=Z,23nm,1.6s
BALM Baldy 83.09 26 *e*P **P 16 51 42.8 -2.4**
BALM pmax pmax
comp=Z,23nm,1.6s
ZAA0 Zalesovo Array 83.32 326 *e*P **P 16 51 43.9 -2.5**
comp=Z,9.0nm,0.8s
ZALV Zalesovo Beam 83.32 326 P **P 16 51 44.8 -1.6**
comp=Z,1.8nm,0.5s,baz=120,slow=5.4,SNR=7.8
ZALV LR LR 17 28 51.4
comp=Z,337nm,20.7s,baz=69,slow=36
ZAA1 Zalesovo Array 83.33 326 *e*P **P 16 51 44.8 -1.6**
RIDG Independent Ri 83.33 23 *e*P **P 16 51 43.8 -2.5**
comp=Z,15nm,1.1s
PDGK Podgornoye 83.46 315 P **P 16 51 49.8 +2.3**
PDGK pmax pmax
comp=Z,6.0nm,1.3s
CTGM Chitina Glacie 83.50 26 *e*P **P 16 51 44.5 -2.9**
comp=Z,12nm,1.0s
QSPA South Pole Qui 83.56 180 *e*P **P 16 51 45.0 -2.6**
comp=Z,18nm,0.8s
DOT Dot Lake 83.59 23 *e*P **P 16 51 45.1 -2.6**
comp=Z,10nm,1.0s
TARG Taragay, Kyrgy 84.27 313 *e*P **P 16 51 48.7 -3.3**
comp=Z,12nm,1.0s
TOLK Toolik Lake Re 84.27 18 *e*P **P 16 51 47.7 -3.3**
comp=Z,5.1nm,0.8s
NVS Novosibirsk 84.50 327 *e*P **P 16 51 54.2 +1.9**
NVS pmax pmax
comp=N,6.0nm,1.3s
NVS pmax pmax
comp=Z,15nm,1.3s
NVS pmax pmax
comp=E,10.0nm,1.1s
MAW Mawson 84.68 203 P **P 16 51 52.9 -0.2**
comp=E,6.9nm,0.6s,baz=97,slow=5.7,SNR=38
MAW LR LR 17 26 34.7
comp=E,421nm,20.1s,baz=80,slow=34
MAW Mawson 84.68 203 *e*P **P 16 51 50.4 -2.6**
comp=E,17nm,1.8s
MAW Mawson 84.68 203 P **P 16 51 53.3 +0.3**
baz=85,SNR=20
MAW Mawson 84.68 203 *e*P **P 16 51 50.4 -2.6**
MAW pmax pmax
comp=Z,17nm,1.8s
KDJ Kajisay 84.81 313 *e*P **P 16 51 52.4 -2.1**
comp=Z,20nm,0.8s
KDJ Kajisay 84.81 313 *e*P **P 16 51 52.4 -2.1**
KDJ pmax pmax
comp=Z,20nm,0.8s
KSH Kashi 85.12 311 P **P 16 51 58.3 +2.2**
KSH pP pwP 16 52 15.3 -0.1
KSH S **S 17 02 22.5 -0.2**
KSH pmax pmax
comp=Z,20nm,0.9s
KSH pmax pmax
comp=Z,300nm,4.8s
KSH LR LR
comp=Z,470nm,12.0s
KSH LR LR
comp=Z,690nm,14.1s
KSH LR LR
comp=Z,810nm,20.2s
HYT Haines Junctio 85.16 27 *e*P **P 16 51 54.4 -1.3**
comp=Z,8.8nm,0.9s
EGAK Eagle 85.24 23 *e*P **P 16 51 54.2 -1.6**
comp=Z,9.3nm,1.0s
DAWY Dawson 85.63 24 *e*P **P 16 51 55.5 -2.5**
comp=Z,20nm,1.8s
KURK Kurchatov 85.96 322 *e*P **P 16 51 58.5 -1.3**
comp=Z,16nm,1.1s
KURK Kurchatov 85.96 322 *c*e*P **P 16 52 02.1 +2.3**
KURK pmax pmax
comp=Z,55nm,1.7s
KURBB Kurchatov Arra 85.99 322 P **P 16 51 58.0 -1.9**
comp=Z,0.6nm,0.5s,baz=97,slow=5.1,SNR=8.8
NIL Nilore 86.13 304 *e*P **P 16 51 59.9 -1.2**
comp=Z,27nm,0.8s
NIL Nilore 86.13 304 *e*P **P 16 51 59.9 -1.2**
NIL pmax pmax
comp=Z,27nm,0.8s
AAK Ala-Archa 86.86 313 P **P 16 52 03.1 -1.5**
comp=Z,2.1nm,0.5s,baz=62,slow=5.9,SNR=5.6
AAK Ala-Archa 86.86 313 *e*P **P 16 52 02.7 -1.9**
comp=Z,5.8nm,0.8s
AAK Ala-Archa 86.86 313⇑ *e*P **P 16 52 06.2 +1.5**
AAK pmax pmax
comp=Z,10.0nm,1.8s
EPYK Eagle Plains 87.57 22 *e*P **P 16 52 05.6 -1.8**
comp=Z,31nm,1.4s
NRIK Noril'sk 87.97 341 P **P 16 52 06.7 -2.4**
comp=Z,3.0nm,0.6s,baz=89,slow=2.3,SNR=4.1
NRIK LR LR 17 30 43.2
comp=Z,352nm,21.7s,baz=88,slow=35
YBH Yreka Blue Hor 88.99 48 P **P 16 52 13.3 -1.4**
comp=Z,2.0nm,0.8s,baz=225,slow=5.7,SNR=2.7
INK Inuvik 89.41 21 P **P 16 52 14.4 -1.5**
comp=Z,1.4nm,0.6s,baz=236,slow=3.6,SNR=2.8
INK Inuvik 89.41 21 *e*P **P 16 52 13.9 -2.0**
comp=Z,9.9nm,1.4s
INK Inuvik 89.41 21 *e*P **P 16 52 13.9 -2.0**
INK pmax pmax
comp=Z,10.0nm,1.4s
BEKR Beckworth 90.48 50 *e*P **P 16 52 20.9 -0.9**
comp=Z,4.7nm,0.9s
PNTR Pine Nut 90.96 51 *e*P **P 16 52 21.9 -2.2**
comp=Z,11nm,0.9s
BRVK Borovoye 91.50 323 *i* P **P 16 52 28.2 +2.2**
BRVK pmax pmax
comp=Z,4.0nm,0.9s
MWC Mount Wilson 91.60 56 *e*P **P 16 52 25.6 -1.6**
comp=Z,19nm,0.9s
MWC Mount Wilson 91.60 56 *e*P **P 16 52 25.6 -1.6**
MWC pmax pmax
comp=Z,19nm,0.9s
RYN Ryan 91.73 52 *e*P **P 16 52 24.2 -3.5**
comp=Z,9.9nm,1.1s
NV01 Mina Array Sit 91.88 52 *e*P **P 16 52 28.1 -0.4**
NVAR Mina Array Bea 91.88 52 P **P 16 52 28.1 -0.4**
comp=Z,5.5nm,0.8s,baz=255,slow=5.5,SNR=23
NVAR LR LR 17 29 31.1
comp=Z,1μm,19.1s,baz=286,slow=33
NV11 Mina Array Sit 92.00 52 *e*P **P 16 52 25.6 -3.3**
comp=Z,0.8nm,0.8s
KVN Kaiserville 92.11 51 *e*P **P 16 52 26.4 -3.1**
comp=Z,6.3nm,0.9s
KVN Kaiserville 92.11 51 *e*P **P 16 52 26.4 -3.1**
KVN pmax pmax
comp=Z,6.0nm,0.9s
G08A Pilot Rock 92.20 45 *e*P **P 16 52 27.1 -2.5**
comp=Z,5.0nm,1.0s
DAC Darwin (Calif) 92.20 54 *e*P **P 16 52 26.8 -3.1**
comp=Z,12nm,1.1s
DAC Darwin (Calif) 92.20 54 *e*P **P 16 52 26.8 -3.1**
DAC pmax pmax
comp=Z,12nm,1.1s
J08A Circle Bar Ran 92.32 47 *e*P **P 16 52 27.8 -2.4**
comp=Z,3.1nm,0.8s
SYO Syowa Base 92.66 199⇑ *e*P **P 16 52 28.8 -2.3**
GSC Goldstone, Bar 92.74 55 *e*P **P 16 52 29.6 -2.7**
comp=Z,6.5nm,1.1s
PFO Pinyon Flats O 92.85 57 P **P 16 52 32.5 -0.4**
comp=Z,4.1nm,0.7s,baz=265,slow=2.1,SNR=5.2
PFO Pinyon Flats O 92.85 57 *e*P **P 16 52 29.6 -3.3**
comp=Z,8.4nm,0.8s
BMN Battle Mountai 92.93 50 *e*P **P 16 52 29.5 -3.7**
comp=Z,3.0nm,0.7s
BMN Battle Mountai 92.93 50 *e*P **P 16 52 29.5 -3.7**
BMN pmax pmax
comp=Z,3.0nm,0.7s
BMO Blue Mountains 93.31 45 *e*P **P 16 52 32.3 -2.4**
comp=Z,8.7nm,1.4s
BMO Blue Mountains 93.31 45 *e*P **P 16 52 32.3 -2.4**
BMO pmax pmax
comp=Z,9.0nm,1.4s
NEW Newport 93.77 42 P **P 16 52 35.8 -0.9**
comp=Z,3.1nm,0.8s,baz=194,slow=4.2,SNR=2.0
R11A Troy Canyon, C 94.00 52 *e*P **P 16 52 36.6 -1.6**
comp=Z,5.8nm,1.1s
SHPR Sheep Range 94.18 54 *e*P **P 16 52 37.9 -1.1**
comp=Z,7.6nm,0.9s
ELK Elko 94.47 50 P **P 16 52 39.6 -0.7**
comp=Z,0.8nm,0.8s,baz=282,slow=6.2,SNR=3.5
W13A Hualapai Mount 95.10 55 *e*P **P 16 52 42.9 -0.5**
comp=Z,4.2nm,0.8s
LCMT Little Creek M 95.75 53 *e*P **P 16 52 44.7 -1.4**
comp=Z,3.8nm,1.1s
KNB Kanab 96.09 54 *e*P **P 16 52 47.5 -0.2**
comp=Z,6.9nm,1.2s
YKA Yellowknife Ar 96.13 28 P **P 16 52 46.5 -0.6**
comp=Z,0.7nm,0.7s,baz=272,slow=4.5,SNR=5.2
YKA LR LR 17 33 22.5
comp=Z,26nm,19.1s,baz=285,slow=34
YKB5 Yellowknife Ar 96.13 28 *e*P **P 16 52 46.5 -0.6**
HVU Hansel Valley 96.39 49 *e*P **P 16 52 47.5 -1.4**
comp=Z,3.6nm,0.8s
HVU Hansel Valley 96.39 49 *e*P **P 16 52 47.6 -1.4**
HVU pmax pmax
comp=Z,4.0nm,0.8s
ARU Arti 98.49 326 *c* *i*P **P 16 52 57.5 -0.3**
ARU 16 56 59.1
ARU S **SKSac 17 03 32.9 +0.9**
ARU SS **SS 17 11 05.5 -2.7**
ARU pmax pmax
comp=Z,4.0nm,1.2s
ARU MLR MLR
comp=Z,565nm,19.0s
GEYT Alibeck 98.79 307 LR LR 17 40 09.1
comp=Z,255nm,19.7s,baz=50,slow=37
PD31 Pinedale Array 98.80 48 *e*P **P 16 52 57.6 -2.3**
comp=Z,4.3nm,1.3s
PDAR Pinedale Array 98.80 48 P **P 16 52 57.8 -2.1**
comp=Z,0.8nm,0.6s,baz=224,slow=2.7,SNR=12
PDAR LR LR 17 35 22.3
comp=Z,696nm,18.4s,baz=281,slow=34
FIA0 FINESS Array S 113.13 336 *e*PKiKP **PKiKP 16 57 56.6 +0.1**
FIA0 FINESS Array S 113.13 336 *e*PKiKP **PKiKP 16 57 56.6 +0.1**
FINES FINESS Array B 113.13 336 PKiKP **PKiKP 16 57 56.6 +0.1**
comp=Z,1.1nm,0.9s,baz=124,slow=2.0,SNR=2.0
AKASG Malin Array Be 116.68 324 PKP **PKiKP 16 58 04.4 +0.8**
comp=Z,0.1nm,0.2s,baz=117,slow=1.7,SNR=3.4
AKBB Malin Array Si 116.68 324 *e*PKPdf **PKiKP 16 58 04.4 +0.8**
BR101 Keskin Array S 117.50 312 *e*PKPdf **PKPdf 16 58 03.9 -1.9**
BRTR Keskin Array B 117.50 312 PKP **PKPdf 16 58 03.9 -1.9**
comp=Z,0.5nm,0.8s,baz=139,slow=2.0,SNR=2.6
BOSA Boshof 119.86 232 PKP **PKiKP 16 58 12.0 +1.3**
comp=Z,2.8nm,0.8s,baz=83,slow=1.6,SNR=3.6
OKC Ostrava-Krasne 123.28 328 AMS AMS 17 54 00.0
comp=Z,400nm,23.8s
VYHS Vyhne 123.66 326 *e*PKiKP **PKiKP 16 58 17.4 -0.1**
VYHS Vyhne 123.66 326 *e*PKP **PKiKP 16 58 17.4 -0.1**
OSTC Ostas 123.87 329 AMS AMS 17 54 20.0
comp=Z,400nm,19.8s
CHVC Chvalec 123.93 329 AMS AMS 17 55 30.0
comp=Z,300nm,16.1s
DPC Dobruska-Polom 123.94 329 AMS AMS 17 54 30.0
comp=Z,400nm,19.0s
UPC Upice 124.00 329 AMS AMS 17 54 30.0
comp=Z,400nm,20.1s
PVCC Panska Ves 124.72 330 AMS AMS 17 53 00.0
comp=Z,300nm,26.7s

CLL	**Collm**	**124.98 331**	*e*PKPdf	**PKPdf**	**16 58 18.0**	**-1.6**
CLL			Lm	MLR	17 54 00.0	
	comp=N,300nm,20.8s					
CLL			Lm	MLR	17 54 00.0	
	comp=E,200nm,19.9s					
CLL			Lm	MLR	17 54 00.0	
	comp=Z,400nm,21.3s					
CLL	**Collm**	**124.98 331**	*e*PKIKP	**PKPdf**	**16 58 18.0**	**-1.6**
CLL			MLR	MLR		
	comp=Z,400nm,21.3s					
GOPC	**GO Pecny, Ondr**	**124.99 329**	AMS	AMS	17 54 30.0	
	comp=Z,300nm,21.1s					
TREC	**Trest**	**125.00 328**	AMS	AMS	17 54 10.0	
	comp=Z,400nm,15.2s					
PRU	**Pruhonice**	**125.07 329**	AMS	AMS	17 52 40.0	
	comp=Z,300nm,18.0s					
NKC	**Novy Kostel**	**125.95 331**	AMS	AMS	17 57 40.0	
	comp=Z,300nm,16.3s					
KHC	**Kasperske Hory**	**126.09 329**	*e*PKIKP	**PKiKP**	**16 58 26.5**	**+4.2**
KHC			MLR	MLR		
	comp=Z,400nm,16.8s					
KHC	**Kasperske Hory**	**126.09 329**	*e*PKP	**PKiKP**	**16 58 26.5**	**+4.2**
KHC			AMS	AMS	17 55 10.0	
	comp=Z,400nm,16.8s					
GERES	**GERESS Array B**	**126.21 329**	PKP	**PKPdf**	**16 58 22.2**	**0.0**
	comp=Z,0.3nm,0.4s,baz=46,slow=2.8,SNR=2.7					
LPAZ	**La Paz**	**132.32 119**	PKP	**PKPdf**	**16 58 35.0**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=248,slow=4.7,SNR=5.3					
PTGA	**Pitinga**	**145.05 100**	*e*PKPbc	**PKPbc**	**16 58 55.5**	**-1.9**
BDFB	**Brasília**	**148.86 135**	PKPbc	**PKPbc**	**16 59 07.2**	**-1.1**
	comp=Z,4.7nm,0.6s,baz=343,slow=3.5,SNR=3.2					
TOA0	**Torodi Ar. Sit**	**152.22 286**	*e*PKPbc	**PKPbc**	**16 59 15.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**152.22 286**	PKPbc	**PKPbc**	**16 59 15.5**	**-0.7**
	comp=Z,7.5nm,0.7s,baz=77,slow=2.1,SNR=51					
TORD			PKPab	**sPKPdf**	**16 59 26.4**	**+0.4**
	comp=Z,16nm,0.7s,baz=92,slow=2.2,SNR=17					
TOA1	**Torodi Ar. Sit**	**152.23 286**	*e*PKPbc	**PKPbc**	**16 59 15.5**	**-0.7**
TOA1			*e*PKPab	**sPKPdf**	**16 59 26.4**	**+0.4**

ISCJB ***02*** *16:44:17.8±1.3, 33°.77N±0°.04×35°.68E±0°.09, h15km±13km, Error ellipse: s-maj=12.1km s-min=6.1km az=171.0*
GRAL ***02*** *16:44:18.6±0.3, 33°.78N×35°.76E, h0km±17km, MD2.8*
NSSC ***02*** *16:44:18.1±0.5, 33°.68N×35°.63E, h17km±2km, ML1.7*

ISC 02 16:44:17.0±1.1, 33°.82N±0°.07×35°.73E±0°.06, h15km±11km, n9, σ0°59/59/16, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.11**	**325**	*e*P	**Pb**	**16 44 21.2**	**+0.2**
BHL				*e*S	**Sb**	**16 44 23.4**	**-0.2**
DQRL	**Deir Qamar**	**0.17**	**231**	*e*P	**Pg**	**16 44 21.8**	**+0.5**
DQRL				*e*S	**Sg**	**16 44 24.1**	**0.0**
BEYL	**Beirut**	**0.20**	**286**	*e*P	**Pb**	**16 44 22.9**	**+0.4**
QRWL	**Qaraoun**	**0.27**	**188**	*e*P	**Pg**	**16 44 22.9**	**+0.1**
QRWL				*e*S	**Sg**	**16 44 26.2**	**-0.6**
RCY	**Rachaya**	**0.33**	**164**	*e*P	**Pg**	**16 44 23.8**	**-0.1**
RCY				*e*S	**Sg**	**16 44 27.7**	**-0.9**
BRBR	**Barbar**	**0.44**	**155**	*e*P	**Pg**	**16 44 25.9**	**0.0**
BRBR				*e*S	**Sg**	**16 44 31.7**	**-0.3**
BRBR				AML	AML	16 44 36.6	
	comp=N,81nm,0.4s						
BRBR				AML	AML	16 44 39.3	
	comp=E,49nm,0.6s						
HWQ	**Hawqa**	**0.50**	**21**	*e*P	**Pb**	**16 44 28.0**	**+0.4**
QASN	**Qassioun**	**0.54**	**122**	*e*P	**Pn**	**16 44 29.6**	**-0.7**
QASN				*e*S	**Sb**	**16 44 36.9**	**+1.0**
QASN				AML	AML	16 44 41.4	
	comp=E,57nm,0.4s						
QASN				AML	AML	16 44 43.9	
	comp=N,136nm,0.4s						
TOTH	**TOTAH**	**0.74**	**128**	*e*P	**Pb**	**16 44 32.2**	**+0.6**
TOTH				*e*S	**Sb**	**16 44 42.2**	**+0.6**
TOTH				AML	AML	16 44 50.5	
	comp=E,19nm,0.5s						
TOTH				AML	AML	16 44 50.8	
	comp=N,23nm,0.5s						

SJA 02 16:50:32.3±0.8, 31°.60S×67°.74W, h19km±2km, ML3.4, MW4.1, 3C-14D, Fault plane solution: NP1: ϕ_s223.30000°, δ74.50000°, λ150.00000°., San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFA	**Coronel Fontan**	**0.43**	**269**	⇓*i*P	Pb	16 50 41.8	+0.4
CFA				AMPG		16 50 41.8	
	comp=Z,948μm,0.1s						
CFA				*i* S	Sb	16 50 48.1	+0.5
CFA				AMSG		16 50 48.2	
	comp=Z,849μm,0.2s						
CFA				AMSG		16 50 48.4	
	comp=Z,1085μm,0.2s						
RTLL	**Cerro Villicun**	**0.69**	**293**	⇓*e*P	Pg	16 50 46.0	+0.1
RTLL				*i* S	Sg	16 50 56.0	+0.9
SJA	**San Juan**	**0.71**	**276**	⇓*e*P	Pg	16 50 46.5	+0.3
SJA				IAML		16 50 47.1	
	comp=Z,1μm,0.2s						
ACAN	**Cantantal**	**0.82**	**145**	⇓*e*P	Pn	16 50 48.8	0.0
ACAN				*i* S	Sg	16 50 59.6	+0.4
AMOG	**MOGNA**	**0.92**	**315**	⇓*i*P	Pn	16 50 50.4	0.0
AMOG				*i* S	Sn	16 51 03.0	-0.2
ASAL	**Salagasta**	**1.36**	**223**	⇓*i*P	Pg	16 50 58.0	-0.6
ASAL				*i* S	Sg	16 51 17.1	+0.8
ACCO	**Cerro Coronel**	**1.52**	**311**	⇓*i*P	Pb	16 51 00.6	+0.4
ACCO				*i* S	Sg	16 51 21.0	-0.6
AUSP	**Uspallata**	**1.54**	**246**	⇓*i*P	Pb	16 51 00.9	+0.5
AUSP				*e*S	Sg	16 51 21.5	-0.6
ARCO	**CERRO ARCO**	**1.60**	**219**	⇓*e*P	Pb	16 51 02.2	+0.9
ARCO				*i* S	Sb	16 51 22.2	+0.9
ARCO				IAML		16 51 27.3	
	comp=Z,602nm,0.3s						
UTNM	**Universidad Te**	**1.60**	**216**	*i* S	Sg	16 51 24.5	+0.4
AAGR	**Agrelo**	**1.75**	**212**	⇑*e*P	Pb	16 51 04.0	+0.1
AAGR				*i* S	Sg	16 51 27.1	-1.5
ACDV	**Cuesta del Vie**	**1.86**	**320**	⇓*e*P	Pb	16 51 06.0	+0.2
ACDV				IAML		16 51 32.9	
	comp=Z,190nm,0.3s						
MRA	**San Martin**	**1.90**	**116**	⇓*i*P	Pb	16 51 05.8	-0.7
MRA				AMPN		16 51 05.9	
	comp=Z,36nm,0.1s						
MRA				*i* S	Sb	16 51 30.6	+0.8
MRA				AMSN		16 51 30.8	
	comp=Z,522nm,0.2s						
MRA				IAML		16 51 36.5	
	comp=Z,328nm,0.5s						
AVIZ	**Vizcacheras**	**1.98**	**199**	*e*P	Pg	16 51 09.2	-1.2
AVIZ				*i* S	Sg	16 51 34.8	-1.4
AROD	**Rodeo**	**2.07**	**313**	⇓*i*P	Pb	16 51 09.6	+0.2
AROD				*i* S	Sb	16 51 36.5	+1.6
TCA	**Tanti**	**2.70**	**85**	⇓*e*P	Pn	16 51 16.2	+1.5
TCA				*i* S	Sg	16 51 57.4	-1.6
TCA				IAML		16 52 02.0	
	comp=Z,194nm,0.4s						
VCA	**Vinchina**	**2.88**	**352**	⇑*e*P	Pb	16 51 20.9	-2.4
VCA				*i* S	Sb	16 52 01.4	+3.2
VCA				IAML		16 52 07.6	
	comp=Z,185nm,0.2s						
GO04	**Tololo Observa**	**2.99**	**298**	*i* P	Pb	16 51 22.4	-2.8
GO04				*i* S	Sb	16 52 02.5	+1.1
ROC1	**El Roble**	**3.10**	**243**	*e*P	Pn	16 51 23.2	+2.8
ROC1				*i* S	Sb	16 52 01.6	-2.9
CYA	**Choya**	**3.57**	**29**	⇑*e*P	Pn	16 51 28.8	+2.1
CYA				*i* S	Sb	16 52 15.3	-2.4
CYA				IAML		16 52 32.4	
	comp=Z,119nm,0.6s						
LCO	**Las Campanas**	**3.64**	**314**	⇓*i*P	Pn	16 51 31.2	+3.3
AHML	**Horco Molle**	**5.24**	**24**	*i* P	Pn	16 51 51.0	+1.3
AHML				*i* S	Sn	16 52 52.8	+3.2
FSA	**Cafayete**	**5.68**	**16**	*i* P	Pn	16 51 58.5	+2.6
FSA				IAML		16 53 39.6	
	comp=Z,9.0nm,0.6s						

RSNC 02 16:51:10.2±1.1, 3°.83N×71°.42W, h5km±13km, ML3.3, Mw3.5, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUVC	**San Jose del G**	**1.76**	**224**	*e*P	Pn	16 51 39.4	-1.9
GUVC				*e*S	Sn	16 52 02.7	-1.4
YOPC	**Yopal, Colombi**	**1.82**	**327**	*e*P	Pn	16 51 41.4	-0.9
YOPC				*e*S	Sn	16 52 04.8	-0.9
YOPC				*i*		16 52 09.8	
	comp=E,182nm,0.7s						
VILC	**Villavicencio,**	**2.29**	**277**	*e*S	Sn	16 52 16.1	-1.4
VILC				*i*		16 52 37.0	
	comp=E,396nm,0.4s						
CHIC	**Chingaza**	**2.44**	**289**	*e*P	Pn	16 51 49.8	-1.4
CHIC				*e*S	Sn	16 52 20.9	-0.7
CHIC				*i*		16 52 22.8	
	comp=E,153nm,0.3s						
TAMC	**Tame, Arauca**	**2.62**	**352**	*e*P	Pn	16 51 50.5	-2.7
TAMC				*e*S	Sn	16 52 24.1	-1.3
TAMC				*i*		16 52 32.3	
	comp=E,130nm,0.3s						
RUSC	**La Rusia**	**2.64**	**321**	*e*P	Pn	16 51 52.2	-1.7
RUSC				*e*S	Sn	16 52 25.9	-0.7
MACC	**Macarena, Meta**	**2.95**	**236**	*e*P	Pn	16 51 57.4	-0.3
MACC				*i*		16 52 44.8	
	comp=N,176nm,0.3s						
PRAC	**Prado**	**3.46**	**268**	*e*P	Pn	16 52 04.2	-0.7
PRAC				*e*S	Sn	16 52 44.7	-1.7
PRAC				*i*		16 53 08.3	
	comp=E,45nm,0.4s						
ELOV	**Elorza**	**3.69**	**31**	*e*S	Sn	16 52 51.1	-0.9

IDC ***02*** *17:03:06.6±0.6, 6°.80S×154°.42E, h0km, mb4.0/20, mb1 4.1/22, mb1mx4.0/35, mbtmp4.0/22, ML2.0/1, MS3.7/5, Ms1 3.8/5, ms1mx3.5/32, Error ellipse: s-maj=18.8km s-min=12.7km az=95.0*
NEIC ***02*** *17:03:12.0±0.5, 6°.76S×154°.47E, h35km, mb4.4/9, Error ellipse: s-maj=13.7km s-min=10.2km az=93.0*
BJI ***02*** *17:03:16.0±0.0, 6°.70S×154°.10E, h40km, mb4.7/18, mB5.1/11, Ms4.7/1*

ISC 02 17:03:16.8±1.5, 6°.72S±0°.07×154°.12E±0°.08, h59km±13km, n60, σ2°73/60, mb4.0/25, MS3.9/3, 1C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.18**	**322**	*e*Pn	**Pn**	**17 04 05.0**	**+0.5**
HNR	**Honiara**	**6.37**	**115**	*e*P	Pn	17 04 54.0	+5.9
HNR				*e*S	Sn	17 06 11.0	+12
HNR	**Honiara**	**6.37**	**115**	Pn	Pn	17 04 37.9	-10
	2.0nm,0.3s,baz=194,slow=16,SNR=4.1						
HNR				Sn	**Sn**	**17 06 04.1**	**+4.6**
	4.6nm,0.3s,baz=225,slow=17,SNR=1.7						
HNR				LR	LR	17 06 52.7	
	comp=Z,287nm,19.6s,baz=329,slow=37						
PMG	**Port Moresby**	**7.39**	**248**	Pn	**Pn**	**17 05 00.9**	**-1.2**
	1.3nm,0.3s,baz=43,slow=12,SNR=6.2						
PMG				Sn	Sn	17 06 37.3	+13
	0.5nm,0.3s,baz=22,slow=5.4,SNR=1.8						
PMG				LR	LR	17 07 55.7	
	comp=Z,807nm,19.5s,baz=9.5,slow=38						
PMG	**Port Moresby**	**7.39**	**248**	*e*Pn	**Pn**	**17 05 04.5**	**+2.4**
PMG				*e*Sn	Sn	17 06 37.3	+13
MANU	**Manus Island**	**8.18**	**304**	*e*Pn	**Pn**	**17 05 10.3**	**-2.7**
PATS	**Pohnpei**	**14.10**	**17**	*e*Pn	Pn	17 06 28.2	-5.5
CTA	**Charters Tower**	**15.33**	**209**	Pn	**Pn**	**17 06 51.7**	**+2.1**
	0.1nm,0.3s,baz=49,slow=15,SNR=3.7						
DZM	**Mont Dzumac**	**19.35**	**143**	P	**P**	**17 07 34.5**	**-3.2**
	0.1nm,0.3s,baz=336,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	**19.35**	**143**	*e*P	**P**	**17 07 32.5**	**-5.2**
	7.6nm,0.9s						
DZM				*e*PcP	**PcP**	**17 11 59.3**	**+1.3**
WB2	**Warramunga Arr**	**23.26**	**234**	*e*P	**P**	**17 08 18.4**	**-1.0**
	28nm,0.9s						
WB2				*e*PcP	**PcP**	**17 12 11.1**	**+5.6**
WR1	**Warramunga Arr**	**23.27**	**234**	*e*P	**P**	**17 08 18.4**	**-1.0**
WRA	**Warramunga Arr**	**23.27**	**234**	P	**P**	**17 08 18.4**	**-1.1**
	141nm,0.3s,baz=61,slow=9.5,SNR=1.7						
ASAR	**Alice Springs**	**25.72**	**227**	P	**P**	**17 08 40.9**	**-0.9**
	1.2nm,1.1s,baz=56,slow=9.5,SNR=15						
STKA	**Stephens Creek**	**27.63**	**203**	P	**P**	**17 08 56.0**	**-2.9**
	1.2nm,0.8s,baz=26,slow=15,SNR=2.3						
STKA				LR	LR	17 19 10.8	
	comp=Z,462nm,19.4s,baz=12,slow=35						
STKA	**Stephens Creek**	**27.63**	**203**	*e*P	**P**	**17 08 56.0**	**-2.9**
	0.8nm,0.9s						
STKA				*e*PcP	**PcP**	**17 12 20.1**	**+4.9**
FITZ	**Fitzroy Crossi**	**29.97**	**245**	P	**P**	**17 09 18.0**	**-1.9**
	2.8nm,0.8s,baz=100,slow=9.0,SNR=4.9						
FITZ				LR	LR	17 21 55.0	
	comp=Z,233nm,18.5s,baz=77,slow=37						
URZ	**Urewera**	**37.68**	**150**	P	P	17 10 21.7	-4.7
	4.5nm,0.8s,baz=349,slow=5.2,SNR=2.5						
JNU	**Nakatsue**	**45.36**	**332**	P	**P**	**17 11 28.0**	**-1.4**
	6.2nm,0.8s,baz=74,slow=4.2,SNR=2.9						
JNU	**Nakatsue**	**45.36**	**332**	*e*P	**P**	**17 11 28.0**	**-1.4**
	22nm,1.1s						
MJAR	**Matsushiro Arr**	**45.55**	**342**	P	**P**	**17 11 29.3**	**-1.5**
	1.2nm,0.9s,baz=178,slow=8.5,SNR=2.6						
MJAR				PcP	**PcP**	**17 13 08.7**	**0.0**
	0.9nm,0.8s,baz=113,slow=2.8,SNR=3.2						
MAJO	**Matsushiro**	**45.55**	**342**	*e*P	**P**	**17 11 29.3**	**-1.5**
MAJO				*e*PcP	**PcP**	**17 13 08.7**	**0.0**
KSRS	**Korea Array**	**50.30**	**333**	P	**P**	**17 12 05.7**	**-1.8**
	1.0nm,0.7s,baz=142,slow=6.7,SNR=3.6						
KS15	**Wonju Array Si**	**50.30**	**333**	*e*P	**P**	**17 12 05.7**	**-1.8**
	6.2nm,1.1s						
WHN	**Wuhan**	**53.14**	**316**	⇑P	**P**	**17 12 29.2**	**+0.4**
USRK	**Ussuriysk Ar.**	**54.48**	**341**	P	**P**	**17 12 37.7**	**-0.7**
	0.8nm,0.6s,baz=157,slow=4.7,SNR=4.0						
XAN	**Xi'an**	**58.91**	**317**	P	**P**	**17 13 13.1**	**+3.0**
XAN				pP	sP	17 13 23.2	-5.9
XAN				sP	pwP	17 13 27.8	-6.2
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KLR	**Kul'dur**	**59.05**	**343**	P	**P**	**17 13 10.4**	**-0.3**
	1.2nm,0.6s,baz=172,slow=3.3,SNR=6.4						
PETK	**Petropavlovsk-**	**59.68**	**2**	P	**P**	**17 13 14.6**	**-0.3**
	4.3nm,1.1s,baz=156,slow=5.3,SNR=3.1						
PEA1	**Petropavlovsk-**	**59.68**	**2**	*e*P	**P**	**17 13 14.6**	**-0.3**
CM31	**Chiang Mai Arr**	**59.88**	**296**	*e*P	**P**	**17 13 16.1**	**-0.9**
	3.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**59.88**	**296**	P	**P**	**17 13 16.1**	**-0.9**
	0.2nm,0.5s,baz=126,slow=5.5,SNR=2.8						
CMAR				LR	LR	17 39 56.5	
	comp=Z,29nm,19.3s,baz=210,slow=37						
MA2	**Magadan**	**66.14**	**358**	P	**P**	**17 13 56.4**	**-1.3**
	2.0nm,0.6s,baz=219,slow=15,SNR=2.5						
MA2	**Magadan**	**66.14**	**358**	*e*P	**P**	**17 13 56.9**	**-0.8**
	6.3nm,1.0s						
GTA	**Gaotai**	**67.95**	**317**	*e*P	**P**	**17 14 13.9**	**+4.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONA0	**Songino Array**	**68.64**	**328**	*e*P	**P**	**17 14 14.3**	**+0.4**
SONM	**Songino Array**	**68.64**	**328**	P	**P**	**17 14 14.3**	**+0.4**
	0.7nm,0.5s,baz=149,slow=3.0,SNR=2.3						
LSA	**Lhasa**	**70.40**	**305**	P	**P**	**17 14 30.2**	**+4.6**
VNDA	**Vanda**	**70.88**	**178**	P	**P**	**17 14 24.4**	**-2.7**
	0.2nm,0.6s,baz=328,slow=7.5,SNR=2.1						
ODAN	**Odare**	**72.65**	**301**	*e*P	**P**	**17 14 43.1**	**+4.2**
	25nm,0.9s						
GUN	**Gumba**	**74.23**	**301**	*e*P	**P**	**17 14 52.6**	**+4.2**
	20nm,0.8s						
PKI	**Pulchoki**	**74.54**	**301**	*e*P	**P**	**17 14 53.9**	**+3.8**
	6.1nm,0.7s						
PKIN	**Phulchoki**	**74.55**	**301**	*e*P	**P**	**17 14 54.3**	**+4.2**
	4.7nm,0.7s						
KKN	**Kakani**	**74.71**	**301**	*e*P	**P**	**17 14 55.0**	**+4.0**
	9.2nm,0.6s						
DMN	**Daman**	**74.81**	**301**	*e*P	**P**	**17 14 55.7**	**+4.1**
	16nm,0.6s						
KOLN	**Koldanda**	**76.14**	**301**	*e*P	**P**	**17 15 02.8**	**+3.6**
	16nm,0.7s						
DANN	**Dangsing**	**76.15**	**301**	*e*P	**P**	**17 15 02.9**	**+3.6**
	16nm,0.6s						
PYUN	**Piuthan**	**76.74**	**301**	*e*P	**P**	**17 15 06.1**	**+3.5**
	20nm,0.8s						
MK32	**Makanchi Array**	**82.63**	**319**	*e*P	**P**	**17 15 31.9**	**-1.9**
MKAR	**Makanchi Array**	**82.63**	**319**	P	**P**	**17 15 31.9**	**-1.9**
	0.5nm,0.9s,baz=101,slow=5.5,SNR=2.3						
ILAR	**Eielson Array**	**83.44**	**22**	P	**P**	**17 15 34.7**	**-2.9**
	0.8nm,0.9s,baz=253,slow=5.7,SNR=7.3						
ILB	**Eielson Array**	**83.44**	**22**	*e*P	**P**	**17 15 34.8**	**-2.9**
	1.7nm,0.9s						
ZALV	**Zalesovo Beam**	**83.47**	**326**	P	**P**	**17 15 36.5**	**-1.5**
	0.5nm,0.5s,baz=110,slow=6.3,SNR=2.3						
ZAA1	**Zalesovo Array**	**83.47**	**326**	*e*P	**P**	**17 15 36.5**	**-1.5**
MAW	**Mawson**	**84.31**	**203**	P	**P**	**17 15 41.2**	**-0.8**
	1.3nm,0.9s,baz=100,slow=6.1,SNR=2.8						
NV01	**Mina Array Sit**	**92.23**	**52**	*e*P	P	17 16 17.2	-3.6
NVAR	**Mina Array Bea**	**92.23**	**52**	P	P	17 16 17.2	-3.6
	0.4nm,0.7s,baz=258,slow=6.7,SNR=9.3						
PDAR	**Pinedale Array**	**99.16**	**48**	P	**Pdif**	**17 16 48.5**	**-3.8**
	0.3nm,0.6s,baz=259,slow=0.9,SNR=2.4						
TORD	**Torodi Ar. Bea**	**152.12**	**285**	PKP	**PKPdf**	**17 23 00.2**	**+0.1**
	0.6nm,0.6s,baz=127,slow=2.1,SNR=3.7						
TOA1	**Torodi Ar. Sit**	**152.12**	**285**	*e*PKPdf	**PKPdf**	**17 23 00.2**	**+0.1**

TAP 02 17:04:46.2, 23°.78N×120°.98E, h12km, ML1.2, 1C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.02**	**283**	⇑*i*P	Pg	17 04 48.8	+0.3
	baz=282						
SSLB				S	Sg	17 04 50.6	+0.6
	baz=282						
SMLT	**Sun Moon Lake**	**0.12**	**324**	*i* P	Pg	17 04 49.9	+0.4
	baz=326						
SMLT				S	Sg	17 04 52.8	+0.9
	baz=326						
WHYT	**Xinyi Township**	**0.14**	**234**	*i* P	Pg	17 04 50.0	+0.3
	baz=233						
WHYT				S	Sg	17 04 52.7	+0.5
	baz=233						
VWDT	**VWDT**	**0.15**	**101**	P	Pb	17 04 51.0	+0.1
	baz=100						
VWDT				*e*S	Sg	17 04 54.5	+2.2
	baz=100						
WJS	**Zhushan**	**0.23**	**280**	P	Pb	17 04 51.9	-0.4
	baz=279						
WJS				*e*S	Sg	17 04 56.6	+2.0
	baz=279						
OWD	**Renai**	**0.25**	**46**	P	Pb	17 04 53.1	+0.4
	baz=46						
OWD				S	Sg	17 04 56.0	+0.9
	baz=46						
DPDB	**Guoxing**	**0.26**	**349**	*e*P	Pb	17 04 52.3	-0.5
	baz=348						
DPDB				*e*S	Sb	17 04 56.3	-0.9
	baz=348						
WNT	**Mingjian**	**0.29**	**289**	*e*P	Pg	17 04 52.5	+0.4
	baz=289						
WNT				*e*S	Sb	17 04 57.8	-0.2
	baz=289						
CHGB	**Renai**	**0.33**	**33**	P	Pg	17 04 53.5	+0.5
	baz=32						
CHGB				*e*S	Sg	17 04 58.4	+0.9
	baz=32						
CHN5	**Tsauling**	**0.33**	**236**	*e*P	Pg	17 04 53.4	+0.5
	baz=236						
CHN5				S	Sb	17 04 59.3	-0.1
	baz=236						
EHY	**Hungye**	**0.42**	**131**	*e*P	Pb	17 04 55.2	-0.2
	baz=130						
EHY				S	Sb	17 05 02.2	+0.5
	baz=130						
EGFH	**Guangfu**	**0.42**	**105**	*e*P	Pg	17 04 55.0	+0.4
	baz=105						
EGFH				*e*S	Sb	17 05 02.9	+0.9
	baz=105						
WHF	**Hehuan Shan**	**0.45**	**36**	*e*P	Pb	17 04 56.3	+0.1
	baz=36						
WHF				*e*S	Sb	17 05 02.8	-0.2
	baz=36						
YULB	**Yu-li**	**0.48**	**143**	*e*P	Pg	17 04 56.1	+0.4
	baz=143						
YULB				S	Sb	17 05 03.1	-0.6
	baz=143						
CHN4	**Tsaushan**	**0.56**	**220**	P	Pb	17 04 57.9	0.0
	baz=219						
CHN4				S	Sb	17 05 07.0	+1.2
	baz=219						
TPUB	**Ta-pu**	**0.58**	**214**	*e*S	Sb	17 05 06.8	+0.4
	baz=213						
WTP	**Ta-pu**	**0.63**	**212**	*e*S	Sb	17 05 08.4	+0.5
	baz=211						
CHN1	**Nanshi**	**0.72**	**215**	*e*S	Sb	17 05 11.3	+0.7
	baz=214						
ENA	**Nanau**	**0.95**	**47**	*e*P	Pg	17 05 04.2	-0.2
	baz=47						
ENA				*e*S	Sb	17 05 17.6	+0.6
	baz=47						
NDT	**Datong Townshi**	**0.95**	**31**	*e*S	Sn	17 05 18.6	-0.2
	baz=30						

TAP 02 17:04:47.5, 24°.88N×122°.44E, h9km±1km, ML1.9, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.43**	**287**	P	Pg	17 04 56.6	+0.7
	baz=287						
TWB1				S	Sb	17 05 03.6	-0.1
	baz=287						
EOS1	**EOS1**	**0.43**	**221**	*e*P	Pb	17 04 57.3	0.0
	baz=207						
EOS1				S	Sb	17 05 04.5	+0.6
	baz=207						
NTC	**Toucheng**	**0.55**	**267**	*e*P	Pb	17 05 00.3	+0.9
	baz=267						
TIPB	**Shuangxi**	**0.56**	**279**	P	Pb	17 04 59.6	0.0
	baz=279						
TIPB				S	Sb	17 05 07.9	+0.2
	baz=279						
TWC	**Suao**	**0.60**	**243**	*e*P	Pg	17 04 59.5	+0.3
	baz=242						
YOJ	**Yonaguni jima**	**0.67**	**129**	P	Pb	17 05 00.9	-0.4
	baz=128						
TWE	**Neicheng**	**0.72**	**257**	*e*P	Pb	17 05 01.9	-0.3
	baz=256						
TWE				S	Sb	17 05 12.5	+0.3
	baz=256						
ENA	**Nanau**	**0.78**	**235**	*e*P	Pb	17 05 03.2	0.0
	baz=233						
ENA				*e*S	Sb	17 05 14.0	+0.1
	baz=233						
YM07	**YM07**	**0.80**	**292**	*e*P	Pb	17 05 03.8	+0.2
	baz=292						
YM01	**YM01**	**0.83**	**289**	P	Pb	17 05 04.5	+0.3
	baz=288						
YM01				*e*S	Sb	17 05 16.0	+0.6
	baz=288						
NDT	**Datong

*JMA **02** 17:09:30.8±0.1,24°.83N×122°.42E,h2km,M2.1*
*ISCJB **02** 17:09:31.0±0.4,24°.88N±0°.02×122°.44E±0°.02,h6km±2km,*
Error ellipse: s-maj=3.4km s-min=2.5km az=32.1
*TAP **02** 17:09:31.3,24°.88N×122°.37E,h8km,ML2.8,C*
ISC 02 17:09:31.0±1.2,24°.85N±0°.02×122°.41E±0°.02,h3km±10km,
n76,σ0°73/135,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.39 220**		P	**Pb**	**17 09 40.3**	**-0.3**
	baz=213						
EOS1				S	**Sb**	**17 09 47.0**	**-0.1**
	baz=213						
TWB1	**Santiao Chiao**	**0.41 292**		*i* P	**Pg**	**17 09 39.5**	**+0.6**
	baz=289						
TWB1				S	**Sg**	**17 09 45.4**	**+1.2**
	baz=289						
NTC	**Toucheng**	**0.52 270**		P	**Pb**	**17 09 42.0**	**-0.9**
	baz=266						
NTC				*e*S	**Sb**	**17 09 49.7**	**-1.2**
	baz=266						
TIPB	**Shuangxi**	**0.54 283**		*i* P	**Pb**	**17 09 42.3**	**-0.9**
	baz=280						
TIPB				S	**Sb**	**17 09 50.2**	**-1.1**
	baz=280						
TWC	**Suao**	**0.56 245**		P	**Pg**	**17 09 42.4**	**+0.6**
	baz=239						
TWC				S	**Sb**	**17 09 50.8**	**-1.2**
	baz=239						
NWF	**Wu-fen Shan**	**0.61 291**		P	**Pb**	**17 09 43.7**	**-0.6**
	baz=289						
NWF				S	**Sb**	**17 09 52.7**	**-0.7**
	baz=289						
WFSB	**Wu-fen Shan**	**0.61 291**		P	**Pb**	**17 09 43.6**	**-0.7**
	baz=289						
WFSB				S	**Sb**	**17 09 52.5**	**-0.8**
	baz=289						
JYNG	**Yonagunijimaku**	**0.63 129**		P	**Pg**	**17 09 43.0**	**-0.2**
JYNG				*e*S	**Sg**	**17 09 51.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.67 125**	⇑	*e*P	**Pg**	**17 09 43.7**	**-0.3**
	baz=125						
YOJ				*e*S	**Sb**	**17 09 56.6**	**+1.4**
	baz=125						
YOJ	**Yonaguni jima**	**0.67 125**		P	**Pg**	**17 09 43.6**	**-0.4**
YOJ				*e*S	**Sg**	**17 09 52.3**	**-0.4**
TWE	**Neicheng**	**0.68 259**		*i* P	**Pg**	**17 09 44.7**	**+0.5**
	baz=255						
TWE				S	**Sb**	**17 09 55.0**	**-0.5**
	baz=255						
ENA	**Nanau**	**0.74 235**		*i* P	**Pg**	**17 09 45.7**	**+0.5**
	baz=231						
ENA				*e*S	**Sb**	**17 09 56.4**	**-0.6**
	baz=231						
YM07	**YM07**	**0.78 294**		*i* P	**Pg**	**17 09 46.3**	**+0.2**
	baz=293						
YM07				S	**Sb**	**17 09 58.0**	**-0.3**
	baz=293						
NHDH	**Xindian Distri**	**0.81 278**		*i* P	**Pb**	**17 09 47.4**	**-0.4**
	baz=275						
NHDH				S	**Sb**	**17 09 58.3**	**-0.7**
	baz=275						
YM08	**YM08**	**0.81 294**		P	**Pg**	**17 09 46.8**	**+0.2**
	baz=293						
YM08				*e*S	**Sb**	**17 09 59.2**	**0.0**
	baz=293						
YM01	**YM01**	**0.81 291**		*i* P	**Pg**	**17 09 46.9**	**+0.3**
	baz=289						
YM01				S	**Sb**	**17 09 58.8**	**-0.5**
	baz=289						
YM11	**YM11**	**0.82 293**		*i* P	**Pb**	**17 09 47.7**	**-0.2**
	baz=291						
NWLT	**Wulai**	**0.82 265**		*i* P	**Pb**	**17 09 47.4**	**-0.6**
	baz=262						
NWLT				S	**Sb**	**17 09 58.8**	**-0.8**
	baz=262						
YM10	**YM10**	**0.82 292**		P	**Pb**	**17 09 47.9**	**-0.1**
	baz=290						
YM10				*e*S	**Sb**	**17 09 59.2**	**-0.4**
	baz=290						
PCYT	**Pengchaiyu**	**0.83 339**		P	**Pb**	**17 09 47.5**	**-0.6**
	baz=340						
TAP	**Taipei**	**0.84 283**		*e*P	**Pb**	**17 09 47.8**	**-0.4**
	baz=281						
TAP				*e*S	**Sb**	**17 09 59.8**	**-0.1**
	baz=281						
TATO	**Taipei**	**0.84 279**		P	**Pg**	**17 09 47.5**	**+0.3**
	baz=276						
TATO				S	**Sb**	**17 09 59.0**	**-1.0**
	baz=276						
TWY	**Chenhua**	**0.84 300**		P	**Pb**	**17 09 48.4**	**0.0**
	baz=299						
TWY				S	**Sb**	**17 09 59.6**	**-0.5**
	baz=299						
NDT	**Datong Townshi**	**0.85 253**		*i* P	**Pb**	**17 09 48.2**	**-0.2**
	baz=250						
NDT				S	**Sn**	**17 10 01.3**	**-1.6**
	baz=250						
ANP	**Anpu**	**0.87 293**		*e*P	**Pb**	**17 09 48.3**	**-0.6**
	baz=291						
NTST	**Danshui**	**0.92 290**		*e*P	**Pg**	**17 09 48.6**	**-0.1**
	baz=288						
TWS1	**Kuangyinshan**	**0.93 286**		*e*P	**Pb**	**17 09 49.9**	**+0.1**
	baz=284						
TWS1				S	**Sb**	**17 10 02.7**	**+0.1**
	baz=284						
YHNB	**Yeheng**	**0.95 259**		P	**Pb**	**17 09 49.9**	**-0.4**
	baz=256						
YHNB				*e*S	**Sb**	**17 10 03.9**	**+0.5**
	baz=256						
NSK	**Sanguang**	**0.97 260**		*i* P	**Pg**	**17 09 49.8**	**+0.2**
	baz=257						
NSK				S	**Sb**	**17 10 03.8**	**+0.1**
	baz=257						
NACB	**Ninganchiao**	**1.00 228**		*i* P	**Pg**	**17 09 49.9**	**-0.3**
	baz=225						
NACB				S	**Sb**	**17 10 03.8**	**-0.8**
	baz=225						
NNSB	**Datong**	**1.02 246**		P	**Pg**	**17 09 50.7**	**+0.1**
	baz=243						
NNSB				S	**Sb**	**17 10 05.7**	**+0.3**
	baz=243						
NNS	**Nan Shan**	**1.02 247**		P	**Pb**	**17 09 51.3**	**-0.2**
	baz=243						
NNS				S	**Sb**	**17 10 05.6**	**+0.1**
	baz=243						
WLTB	**Daxi**	**1.05 270**		*e*P	**Pg**	**17 09 51.2**	**+0.1**
	baz=268						
WLTB				*e*S	**Sb**	**17 10 06.3**	**+0.3**
	baz=268						
ETLH	**Xiulin Townshi**	**1.06 233**		*i* P	**Pg**	**17 09 51.4**	**+0.1**
	baz=230						
ETLH				S	**Sb**	**17 10 06.6**	**+0.3**
	baz=230						
NCUH	**Zhongli**	**1.11 276**		*e*S	**Sn**	**17 10 08.2**	**-1.3**
	baz=274						
WHF	**Hehuan Shan**	**1.25 236**		P	**Pb**	**17 09 55.4**	**-0.2**
	baz=233						
WHF				S	**Sn**	**17 10 12.6**	**-1.0**
	baz=233						
TWT	**Tachien**	**1.27 242**		*e*S	**Sn**	**17 10 13.8**	**+0.3**
	baz=240						
LIOB	**Emei**	**1.28 261**		P	**Pg**	**17 09 54.6**	**-1.0**
	baz=259						
LIOB				*e*S	**Sn**	**17 10 13.5**	**-0.1**
	baz=259						
TDCB	**Techi**	**1.28 243**		*e*P	**Pn**	**17 09 56.6**	**+0.6**
	baz=240						
TDCB				S	**Sn**	**17 10 14.0**	**+0.2**
	baz=240						
NSTT	**Nanjuang**	**1.30 261**		P	**Pn**	**17 09 55.3**	**-0.8**
	baz=258						
NSTT				*e*S	**Sn**	**17 10 13.5**	**-0.4**
	baz=258						
IRIF	**Iriomote-Funau**	**1.31 113**		P	**Pn**	**17 09 55.4**	**-0.9**
ESL	**Shilin**	**1.36 221**		*e*P	**Pn**	**17 09 56.3**	**-0.7**
	baz=218						
ESL				*e*S	**Sn**	**17 10 16.2**	**+0.7**
	baz=218						
CHGB	**Renai**	**1.37 235**		*i* P	**Pg**	**17 09 57.4**	**+0.1**
	baz=233						
CHGB				*e*S	**Sn**	**17 10 15.7**	**-0.4**
	baz=233						
OWD	**Renai**	**1.43 232**		*i* P	**Pn**	**17 09 57.9**	**-0.2**
	baz=229						
OWD				S	**Sn**	**17 10 17.5**	**-0.1**
	baz=229						
WHP	**Taichung City**	**1.45 247**		*e*P	**Pg**	**17 09 58.8**	**0.0**
	baz=245						
WHP				*e*S	**Sg**	**17 10 18.4**	**+0.8**
	baz=245						
EGFH	**Guangfu**	**1.48 217**		*e*P	**Pn**	**17 09 58.3**	**-0.2**
	baz=215						
EGFH				*e*S	**Sg**	**17 10 18.6**	**+0.1**
	baz=215						
DPDB	**Guoxing**	**1.57 239**		P	**Pb**	**17 10 00.6**	**-0.3**
	baz=237						
DPDB				*e*S	**Sg**	**17 10 21.6**	**-0.1**
	baz=237						
JKRS	**Kuro-shima**	**1.58 112**		P	**Pb**	**17 10 00.6**	**-0.4**
VWDT	**VWDT**	**1.59 227**		P	**Pb**	**17 10 00.4**	**-0.7**
	baz=225						
VWDT				*e*S	**Sg**	**17 10 21.7**	**-0.4**
	baz=225						
HGSD	**Ruisui**	**1.62 214**		*e*P	**Pn**	**17 10 00.2**	**-0.4**
	baz=212						
HGSD				*e*S	**Sg**	**17 10 23.1**	**-0.1**
	baz=212						
JIJ	**Ishigaki jima**	**1.65 107**		P	**Pn**	**17 10 01.3**	**+0.3**
EHY	**Hungye**	**1.67 217**		*e*P	**Pn**	**17 10 00.7**	**-0.5**
	baz=214						
EHY				*e*S	**Sb**	**17 10 23.8**	**0.0**
	baz=214						
SMLT	**Sun Moon Lake**	**1.68 235**		P	**Pb**	**17 10 02.1**	**-0.5**
	baz=233						
SMLT				*e*S	**Sb**	**17 10 24.0**	**-0.3**
	baz=233						
SSLB	**Suanglung**	**1.70 232**		*e*P	**Pb**	**17 10 02.2**	**-0.8**
	baz=229						
SSLB				*e*S	**Sb**	**17 10 24.9**	**+0.2**
	baz=229						
TYC	**Yuchr**	**1.70 237**		P	**Pb**	**17 10 02.3**	**-0.6**
	baz=234						
TYC				*e*S	**Sb**	**17 10 24.2**	**-0.5**
	baz=234						
JISG	**Ishigakijimahi**	**1.75 98**		P	**Pn**	**17 10 03.0**	**+0.7**
YULB	**Yu-li**	**1.77 215**		*e*P	**Pn**	**17 10 02.5**	**-0.1**
	baz=213						
WHYT	**Xinyi Township**	**1.82 231**		P	**Pb**	**17 10 04.9**	**-0.2**
	baz=229						
WHYT				S	**Sb**	**17 10 27.4**	**-1.0**
	baz=229						
WJS	**Zhushan**	**1.84 237**		*e*P	**Pb**	**17 10 04.6**	**-0.8**
	baz=234						
WJS				*e*S	**Sb**	**17 10 27.8**	**-1.0**
	baz=234						
WNT	**Mingjian**	**1.84 239**		*e*P	**Pb**	**17 10 04.3**	**-1.1**
	baz=236						
WNT				*e*S	**Sb**	**17 10 28.1**	**-0.8**
	baz=236						
CHN5	**Tsauling**	**2.01 232**		P	**Pb**	**17 10 07.4**	**-0.9**
	baz=230						
CHN5				*e*S	**Sb**	**17 10 32.5**	**-1.4**
	baz=230						
WDLH	**Douliu**	**2.06 236**		*e*P	**Pn**	**17 10 07.4**	**+0.9**
	baz=234						
WDLH				*e*S	**Sn**	**17 10 33.2**	**+0.4**
	baz=234						
ELDTW	**Lidau**	**2.09 218**		*e*P	**Pn**	**17 10 07.5**	**+0.4**
	baz=216						
ELDTW				*e*S	**Sn**	**17 10 34.4**	**+0.8**
	baz=216						
CHN4	**Tsaushan**	**2.23 228**		P	**Pb**	**17 10 10.4**	**-1.6**
	baz=226						
CHN4				*e*S	**Sn**	**17 10 37.8**	**+0.8**
	baz=226						
TWK	**Hsinying**	**2.36 228**		P	**Pn**	**17 10 12.1**	**+1.4**
	baz=226						
SNST	**Tainan City**	**2.38 227**		*e*P	**Pn**	**17 10 11.8**	**+0.8**
	baz=226						
SNST				*e*S	**Sn**	**17 10 41.6**	**+0.8**
	baz=226						
CHN1	**Nanshi**	**2.39 226**		*e*S	**Sn**	**17 10 41.8**	**+0.9**
	baz=224						
SLGT	**Liugui**	**2.45 221**		P	**Pn**	**17 10 13.5**	**+1.5**
	baz=220						
SLGT				S	**Sn**	**17 10 43.2**	**+0.7**
	baz=220						
ECL	**Taimali**	**2.61 211**		*e*P	**Pn**	**17 10 15.9**	**+1.7**
	baz=209						
SSD	**Sandimen**	**2.65 218**		*e*P	**Pn**	**17 10 16.0**	**+1.3**
	baz=216						
SSD				*e*S	**Sn**	**17 10 48.3**	**+0.9**
	baz=216						
MASBT	**Mashibuluo**	**2.76 216**		*e*P	**Pn**	**17 10 18.2**	**+2.0**
	baz=215						
MASBT				S	**Sn**	**17 10 51.4**	**+1.3**
	baz=215						
EAST	**Anshuo**	**2.84 210**		*e*P	**Pn**	**17 10 18.8**	**+1.4**
	baz=209						
EAST				*e*S	**Sn**	**17 10 53.0**	**+0.8**
	baz=209						
XPSS	**Dashiqiu**	**2.88 317**		*e*P	**Pn**	**17 10 18.6**	**+0.8**
	baz=316						
PHUB	**P'eng-hu**	**2.91 243**		*e*S	**Sn**	**17 10 54.9**	**+1.1**
	baz=241						
LYJJ	**Jianjiangzhen**	**2.92 306**		*e*P	**Pn**	**17 10 19.1**	**+0.7**
	baz=305						
LYJJ				*e*S	**Sn**	**17 10 54.6**	**+0.4**
	baz=305						
VCHM	**Qimei**	**3.17 240**		*e*P	**Pn**	**17 10 22.2**	**+0.3**
	baz=238						

*IDC **02** 17:28:38.2±2.7,31°.63S×177°.69W,h0km,mb4.2/5,*
mb1 4.2/5,mb1mx3.8/40,mbtmp4.2/5,Error ellipse:
s-maj=112.2km s-min=32.1km az=157.0
*ISCJB **02** 17:28:39.7±1.5,31°.93S±0°.09×177°.4W±0°.2,h35km,*
mb4.4/12,Error ellipse: s-maj=30.2km s-min=9.8km
az=15.4
*NEIC **02** 17:28:40.8±1.2,31°.67S×177°.88W,h10km,mb4.3/8,Error*
ellipse: s-maj=26.6km s-min=14.0km az=96.0
ISC 02 17:28:41.7±1.3,31°.9S±0°.1×177°.4W±0°.2,h35km,n27,
σ1§45/27,mb4.3/12,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.77 214**		*e*Pn	**Pn**	**17 30 32.6**	**+0.4**
URZ				*e*Sn	**Sn**	**17 31 57.7**	**-1.2**
OUZ	**Omahuta**	**8.22 244**		*e*Pn	**Pn**	**17 30 40.8**	**+2.4**
BKZ	**Black Stump Fm**	**8.78 213**		*e*Pn	**Pn**	**17 30 47.7**	**+1.5**
SNZO	**South Karori**	**11.32 212**		*e*Pn	**Pn**	**17 31 24.1**	**+3.3**
THZ	**Tophouse**	**12.52 216**		*e*Pn	**Pn**	**17 31 36.9**	**-0.5**
CTA	**Charters Tower**	**34.59 281**		P	**P**	**17 35 27.5**	**+0.1**
	1.7nm,0.5s,baz=104,slow=9.5,SNR=9.0						
CTAO	**Charters Tower**	**34.59 281**		*e*P	**P**	**17 35 27.9**	**+0.5**
	7.1nm,1.1s						
STKA	**Stephens Creek**	**34.69 259**		P	**P**	**17 35 28.4**	**+0.3**
	2.0nm,0.9s,baz=99,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**34.69 259**		*e*P	**P**	**17 35 28.4**	**+0.3**
	0.3nm,0.9s						
BBOO	**Buckleboo**	**39.09 256**		*e*P	**P**	**17 36 04.1**	**-1.5**
	6.1nm,1.0s						
AS31	**Alice Springs**	**43.58 268**		*e*P	**P**	**17 36 41.2**	**-1.3**
	1.0nm,0.9s						
ASAR	**Alice Springs**	**43.58 268**		P	**P**	**17 36 41.2**	**-1.3**
	0.8nm,0.3s,baz=107,slow=7.6,SNR=19						
WB2	**Warramunga Arr**	**44.70 273**		*e*P	**P**	**17 36 50.2**	**-1.3**
	2.9nm,0.8s						
WRAB	**Tennant Creek**	**44.70 273**		*e*P	**P**	**17 36 51.2**	**-0.3**
	25nm,0.8s						
WR1	**Warramunga Arr**	**44.71 273**		*e*P	**P**	**17 36 50.4**	**-1.2**
WRA	**Warramunga Arr**	**44.71 273**		P	**P**	**17 36 50.4**	**-1.2**
	131nm,0.3s,baz=104,slow=8.6,SNR=1.3						
MTN	**Manton Dam**	**50.76 280**		*e*P	**P**	**17 37 39.0**	**+0.4**
	7.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.91 271**		P	**P**	**17 37 53.8**	**-0.7**
	2.3nm,0.9s,baz=127,slow=10,SNR=3.5						
FITZ	**Fitzroy Crossi**	**52.91 271**		*e*P	**P**	**17 37 50.9**	**-3.6**
	4.9nm,1.1s						
QSPA	**South Pole Qui**	**58.19 180**		*e*P	P	17 38 38.4	+6.4
	1.6nm,0.8s						
PETK	**Petropavlovsk-**	**87.42 345**		P	**P**	**17 41 23.9**	**-0.9**
	4.0nm,1.1s,baz=126,slow=2.5,SNR=3.8						
PEA1	**Petropavlovsk-**	**87.42 345**		*e*P	**P**	**17 41 23.9**	**-0.9**
FIA0	**FINESS Array S**	**146.76 340**		*e*PKPdf	**PKPab**	**17 48 20.8**	**+0.4**
FINES	**FINESS Array B**	**146.76 340**		PKPbc	**PKPab**	**17 48 20.8**	**+0.4**
	1.5nm,0.5s,baz=66,slow=4.7,SNR=15						
AKASG	**Malin Array Be**	**152.83 321**		PKPbc	**PKiKP**	**17 48 35.5**	**+0.8**
	0.3nm,0.4s,baz=50,slow=2.8,SNR=3.3						
BR101	**Keskin Array S**	**153.77 296**		*e*PKPbc	**PKiKP**	**17 48 38.5**	**+1.2**
BRTR	**Keskin Array B**	**153.77 296**		PKPbc	**PKiKP**	**17 48 38.5**	**+1.2**
	0.6nm,0.6s,baz=146,slow=3.6,SNR=3.8						

*IDC **02** 17:36:22.1±0.7,6°.37S×154°.41E,h0km,mb4.0/12,*
mb1 4.2/15,mb1mx4.0/47,mbtmp4.1/15,ML3.2/3,MS3.6/1,
Ms1 3.6/1,ms1mx3.0/25,Error ellipse: s-maj=20.4km
s-min=15.5km az=96.0
*ISCJB **02** 17:36:26.8±0.4,6°.40S±0°.05×154°.44E±0°.07,h48km,*
mb4.3/22,Error ellipse: s-maj=9.6km s-min=7.5km az=3.1
*NEIC **02** 17:36:28.8±1.1,6°.37S×154°.39E,h48km±10km,mb4.3/16,*
Error ellipse: s-maj=11.3km s-min=6.8km az=99.0
ISC 02 17:36:28.3±0.5,6°.44S±0°.06×154°.41E±0°.06,h48km,n54,
σ1§67/47,mb4.1/22,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.16 315**		*e*Pn	**Pn**	**17 37 16.2**	**+0.5**
HNR	**Honiara**	**6.24 119**		Pn	**Pn**	**17 37 58.0**	**+0.1**
	1.3nm,0.3s,baz=217,slow=2.7,SNR=2.1						
HNR				Sn	**Sn**	**17 39 02.7**	**-5.2**
	3.0nm,0.3s,baz=165,slow=12,SNR=2.9						
PMG	**Port Moresby**	**7.76 247**		Pn	**Pn**	**17 38 18.6**	**-0.2**
	4.2nm,0.3s,baz=51,slow=8.9,SNR=16						
PMG				Sn	**Sn**	**17 39 39.8**	**-5.5**
	baz=146,slow=7.3,SNR=1.7						
PMG				LR	LR	17 41 47.9	
	comp=Z,366nm,18.1s,baz=58,slow=42						
PMG	**Port Moresby**	**7.76 247**		*e*Pn	**Pn**	**17 38 19.9**	**+1.2**
PMG				*e*Sn	**Sn**	**17 39 39.8**	**-5.5**
PATS	**Pohnpei**	**13.76 17**		*e*Pn	**Pn**	**17 39 38.9**	**-2.0**
CTA	**Charters Tower**	**15.70 210**		Pn	**P**	**17 40 11.8**	**+2.0**
	0.3nm,0.3s,baz=38,slow=13,SNR=15						
CTAO	**Charters Tower**	**15.70 210**		*e*Pn	**P**	**17 40 11.7**	**+2.0**
	12nm,0.8s						
EIDS	**Eidsvold**	**19.09 189**		*e*P	**Pn**	**17 40 49.0**	**+0.7**
	4.9nm,0.8s						
DZM	**Mont Dzumac**	**19.41 144**		P	**Pn**	**17 40 52.4**	**+0.2**
	0.2nm,0.3s,baz=288,slow=19,SNR=3.2						
DZM	**Mont Dzumac**	**19.41 144**		*e*P	**Pn**	**17 40 52.4**	**+0.2**
	5.2nm,0.8s						
GUMO	**Guam**	**22.04 335**		*e*P	**P**	**17 41 19.2**	**+0.1**
	44nm,1.0s						
WRAB	**Tennant Creek**	**23.65 234**		*e*P	**P**	**17 41 36.2**	**+0.7**
	18nm,0.8s						
WB2	**Warramunga Arr**	**23.65 234**		*e*P	**P**	**17 41 36.0**	**+0.4**
	18nm,0.8s						
WR1	**Warramunga Arr**	**23.66 234**		*e*P	**P**	**17 41 35.5**	**-0.1**
WRA	**Warramunga Arr**	**23.66 234**		P	**P**	**17 41 35.5**	**-0.1**
	133nm,0.3s,baz=59,slow=9.8,SNR=2.0						
AS31	**Alice Springs**	**26.11 227**		*e*P	**P**	**17 41 58.4**	**+0.4**
	0.9nm,0.6s						
ASAR	**Alice Springs**	**26.11 227**		P	**P**	**17 41 58.0**	**+0.1**
	1.1nm,0.4s,baz=56,slow=9.2,SNR=23						
STKA	**Stephens Creek**	**27.99 204**		P	**P**	**17 42 14.2**	**-0.6**
	2.4nm,0.7s,baz=16,slow=10,SNR=7.0						
STKA	**Stephens Creek**	**27.99 204**		*e*P	**P**	**17 42 14.2**	**-0.6**
	1.3nm,1.0s						
FITZ	**Fitzroy Crossi**	**30.35 245**		P	**P**	**17 42 35.4**	**-0.4**
	7.0nm,0.7s,baz=80,slow=5.7,SNR=12						
FITZ	**Fitzroy Crossi**	**30.35 245**		*e*P	**P**	**17 42 35.4**	**-0.4**
	6.1nm,0.7s						
BBOO	**Buckleboo**	**31.30 211**		*e*P	**P**	**17 42 44.1**	**+0.1**
JNU	**Nakatsue**	**45.25 332**		P	**P**	**17 44 41.5**	**+0.3**
	11nm,1.0s,baz=236,slow=16,SNR=3.0						
JNU	**Nakatsue**	**45.25 332**		*e*P	**P**	**17 44 41.5**	**+0.3**
	23nm,1.1s						
KSRS	**Korea Array**	**50.18 332**		P	**P**	**17 45 20.1**	**+0.8**
	1.6nm,0.8s,baz=155,slow=8.5,SNR=10						
KS15	**Wonju Array Si**	**50.19 332**		*e*P	**P**	**17 45 20.1**	**+0.7**
	5.4nm,0.9s						
KLR	**Kul'dur**	**58.87 343**		P	**P**	**17 46 22.1**	**0.0**
	1.1nm,0.8s,baz=147,slow=5.9,SNR=3.7						
CM31	**Chiang Mai Arr**	**60.02 295**		*e*P	**P**	**17 46 32.1**	**+1.4**
	6.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**60.02 295**		P	**P**	**17 46 32.1**	**+1.4**
	0.5nm,0.6s,baz=116,slow=6.1,SNR=3.9						
CHTO	**Chiang Mai**	**60.14 296**		*e*P	**P**	**17 46 30.5**	**-1.0**
	2.0nm,1.1s						
SPIA	**Saint Paul Isl**	**69.64 20**		*e*P	**P**	**17 47 32.3**	**-0.2**
	136nm,1.2s						
VNDA	**Vanda**	**71.14 178**		P	**P**	**17 47 43.3**	**+1.8**
	0.5nm,0.7s,baz=324,slow=6.8,SNR=5.6						
ODAN	**Odare**	**72.75 301**		*e*P	P	17 48 05.8	+13
	30nm,0.8s						
RAMN	**Ramite**	**73.45 300**		*e*P	P	17 48 09.6	+13
JIRN	**Jiri**	**74.00 301**		*e*P	P	17 48 13.2	+13
GUN	**Gumba**	**74.33 301**		*e*P	P	17 48 15.2	+13
	37nm,0.8s						
PKI	**Pulchoki**	**74.64 301**		*e*P	P	17 48 16.5	+13
	26nm,1.1s						
PKIN	**Phulchoki**	**74.66 301**		*e*P	P	17 48 16.3	+13
	18nm,1.0s						
KKN	**Kakani**	**74.81 301**		*e*P	P	17 48 17.5	+13
	23nm,0.9s						
DMN	**Daman**	**74.91 301**		*e*P	P	17 48 18.3	+13
	51nm,0.9s						
GKN	**Gorkha**	**75.42 301**		*e*P	P	17 48 20.9	+13
	62nm,1.0s						
KOLN	**Koldanda**	**76.24 301**		*e*P	P	17 48 25.6	+13
	32nm,0.8s						
DANN	**Dangsing**	**76.26 301**		*e*P	P	17 48 25.5	+13
	30nm,0.7s						
PYUN	**Piuthan**	**76.85 301**		*e*P	P	17 48 28.7	+13
	54nm,0.9s						
MK32	**Makanchi Array**	**82.61 319**		*e*P	**P**	**17 48 46.8**	**+0.3**
MKAR	**Makanchi Array**	**82.61 319**		P	**P**	**17 48 46.8**	**+0.3**
	0.3nm,0.7s,baz=97,slow=7.3,SNR=2.7						
ILAR	**Eielson Array**	**83.08 22**		P	**P**	**17 48 48.5**	**-0.1**
	0.6nm,0.8s,baz=255,slow=4.8,SNR=3.6						
ILB	**Eielson Array**	**83.08 22**		*e*P	**P**	**17 48 48.5**	**-0.1**
	1.1nm,0.7s						
QSPA	**South Pole Qui**	**83.53 180**		*e*P	**P**	**17 48 53.0**	**+1.9**
	8.1nm,1.1s						
MAW	**Mawson**	**84.68 203**		P	**P**	**17 48 58.2**	**+1.5**
	1.6nm,0.6s,baz=97,slow=6.6,SNR=8.4						
MAW	**Mawson**	**84.68 203**		*e*P	**P**	**17 48 58.2**	**+1.5**
	0.8nm,1.1s						
NVAR	**Mina Array Bea**	**91.84 52**		P	**P**	**17 49 30.9**	**-1.0**
	0.6nm,0.8s,baz=256,slow=6.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**152.32 286**		PKP	**PKPdf**	**17 56 12.9**	**-0.3**
	0.6nm,1.0s,baz=263,slow=2.3,SNR=3.0						
TORD				PKPbc	**PKiKP**	**17 56 20.8**	**+0.5**
	1.9nm,0.8s,baz=94,slow=3.1,SNR=9.0						
TOA1	**Torodi Ar. Sit**	**152.32 286**		*e*PKPdf	**PKPdf**	**17 56 12.9**	**-0.3**
TOA1				*e*PKPbc	**PKiKP**	**17 56 20.8**	**+0.5**

DJA 02 17:44:22.8±0.5,2°S±2°×10°1E±°,h21km±5km,M3.7/10,
MLv3.7/10,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.58 95**		P	Pb	17 44 35.2	+0.7
KRJI				S	Sn	17 44 44.8

PB14	**IPOC Station P**	**2.96 254**	*e*P	Pn	18 02 12.2	-0.2
PB10	**IPOC Station P**	**3.02 275**	⇑*i*P	Pn	18 02 13.3	+0.7
PB10			*i* S	S	18 02 52.4	-1.3
PB04	**IPOC Station P**	**3.04 299**	*e*P	Pn	18 02 13.4	+0.4
PB04			*e*S	S	18 02 53.3	-1.1
PB07	**IPOC Station P**	**3.20 311**	*e*P	Pn	18 02 15.0	+0.2
PB07			*e*S	S	18 02 56.3	-1.2
PB01	**IPOC Station P**	**3.45 323**	*e*P	Pn	18 02 17.8	+0.1
PB01			*i* S	S	18 03 01.3	-1.4
PB02	**IPOC Station P**	**3.48 315**	*e*P	Pn	18 02 18.5	+0.4
PB02			*e*S	S	18 03 02.2	-1.1
PB08	**IPOC Station P**	**4.07 334**	*e*P	Pn	18 02 26.6	+1.4
PB08			*e*S	S	18 03 16.6	+0.3

MAN 02 18:04:47.2, 8°.70N×123°.73E, h332km, mb4.4, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**1.55**	**122**	*e*P	Pn	18 05 34.7	+0.8
CTBH	**Cotabato--PC H**	**1.55**	**161**	⇓*i*P	Pn	18 05 34.5	+0.5

*IDC **02** 18:04:43.1±0.8, 6°.66S×154°.49E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.8/39, mbtmp3.8/10, ML3.7/1, Error ellipse: s-maj=28.4km s-min=19.0km az=121.0*
*ISCJB **02** 18:04:48.0±0.5, 6°.73S±0°.07×154°.51E±0°.06, h48km, mb4.0/15, Error ellipse: s-maj=11.5km s-min=8.1km az=147.5*
*NEIC **02** 18:04:48.4±1.4, 6°.70S×154°.48E, h38km±13km, mb4.0/9, Error ellipse: s-maj=13.8km s-min=13.1km az=52.0*
ISC 02 18:04:49.1±0.6, 6°.69S±0°.09×154°.54E±0°.08, h48km, n30, σ1§30/31, mb3.9/15, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.42**	**316**	*e*Pn	**Pn**	**18 05 37.0**	**-3.1**
HNR	**Honiara**	**6.01**	**117**	Pn	**Pn**	**18 06 14.9**	**-0.6**
1.8nm,0.3s,baz=39,slow=18,SNR=1.8							
HNR	**Honiara**	**6.01**	**117**	*e*Pn	**Pn**	**18 06 16.3**	**+0.7**
PMG	**Port Moresby**	**7.79**	**249**	Pn	**Pn**	**18 06 39.9**	**0.0**
2.1nm,0.3s,baz=48,slow=8.6,SNR=9.9							
PMG				Sn	**Sn**	**18 08 07.7**	**+0.8**
0.7nm,0.3s,baz=173,slow=5.5,SNR=3.1							
CTA	**Charters Tower**	**15.56**	**210**	Pn	**P**	**18 08 27.9**	**-1.1**
0.0nm,0.3s,baz=34,slow=18,SNR=1.6							
WRAB	**Tennant Creek**	**23.61**	**234**	*e*P	**P**	**18 09 56.3**	**+0.3**
WB2	**Warramunga Arr**	**23.61**	**234**	*e*P	**P**	**18 09 54.3**	**-1.7**
4.1nm,0.9s							
WR1	**Warramunga Arr**	**23.62**	**234**	*e*P	**P**	**18 09 56.1**	**0.0**
WRA	**Warramunga Arr**	**23.62**	**234**	P	**P**	**18 09 56.1**	**0.0**
120nm,0.3s,baz=55,slow=9.5,SNR=1.2							
AS31	**Alice Springs**	**26.04**	**227**	*e*P	**P**	**18 10 18.9**	**+0.7**
1.5nm,1.1s							
ASAR	**Alice Springs**	**26.04**	**227**	P	**P**	**18 10 18.9**	**+0.7**
0.4nm,0.4s,baz=57,slow=9.4,SNR=24							
STKA	**Stephens Creek**	**27.83**	**204**	P	**P**	**18 10 35.2**	**+1.1**
1.9nm,0.7s,baz=34,slow=14,SNR=4.1							
STKA	**Stephens Creek**	**27.83**	**204**	*e*P	**P**	**18 10 35.2**	**+1.1**
1.4nm,1.1s							
CAN	**Canberra**	**28.95**	**189**	*e*P	**P**	**18 10 42.7**	**-1.4**
12nm,1.1s							
FITZ	**Fitzroy Crossi**	**30.37**	**245**	P	**P**	**18 10 56.2**	**-0.5**
1.3nm,0.6s,baz=58,slow=10,SNR=4.8							
FITZ	**Fitzroy Crossi**	**30.37**	**245**	*e*P	**P**	**18 10 56.2**	**-0.5**
5.3nm,1.1s							
LBZ	**Lake Benmore**	**39.97**	**162**	*e*P	**P**	**18 12 16.6**	**-2.4**
24nm,1.1s							
KSRS	**Korea Array**	**50.46**	**332**	P	**P**	**18 13 43.2**	**+1.0**
0.4nm,0.5s,baz=150,slow=7.5,SNR=4.4							
KS15	**Wonju Array Si**	**50.46**	**332**	*e*P	**P**	**18 13 43.2**	**+0.9**
4.6nm,1.1s							
MK32	**Makanchi Array**	**82.88**	**319**	*e*P	**P**	**18 17 10.7**	**+1.9**
MKAR	**Makanchi Array**	**82.88**	**319**	P	**P**	**18 17 10.7**	**+1.9**
0.2nm,0.4s,baz=95,slow=6.3,SNR=2.3							
ILAR	**Eielson Array**	**83.25**	**22**	P	**P**	**18 17 12.4**	**+2.1**
0.2nm,0.7s,baz=232,slow=5.5,SNR=2.9							
ILB	**Eielson Array**	**83.25**	**22**	*e*P	**P**	**18 17 12.4**	**+2.1**
1.4nm,1.1s							
ZALV	**Zalesovo Beam**	**83.67**	**326**	P	**P**	**18 17 12.0**	**-0.6**
0.6nm,0.4s,baz=132,slow=2.1,SNR=3.5							
ZAA1	**Zalesovo Array**	**83.67**	**326**	*e*P	**P**	**18 17 12.0**	**-0.7**
MAW	**Mawson**	**84.51**	**203**	P	**P**	**18 17 17.0**	**+0.3**
0.9nm,0.7s,baz=90,slow=6.4,SNR=7.1							
NV01	**Mina Array Sit**	**91.89**	**52**	*e*P	**P**	**18 17 53.4**	**+0.5**
NVAR	**Mina Array Bea**	**91.89**	**52**	P	**P**	**18 17 53.4**	**+0.5**
0.3nm,0.6s,baz=256,slow=3.6,SNR=2.6							
TORD	**Torodi Ar. Bea**	**152.51**	**286**	PKPbc	**PKPbc**	**18 24 40.6**	**-0.7**
0.7nm,0.6s,baz=103,slow=2.3,SNR=6.4							
TOA1	**Torodi Ar. Sit**	**152.51**	**286**	*e*PKPbc	**PKPbc**	**18 24 40.5**	**-0.7**

*IDC **02** 18:05:32.4±2.7, 12°.01N×125°.65E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.3/43, mbtmp3.5/3, Error ellipse: s-maj=104.3km s-min=30.2km az=57.0*
ISC 02 18:05:35.5±2.4, 12°.23N±0°.07×125°.6E±0°.1, h6km±13km, n14, σ2§45/16, mb3.4/3, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.65**	**195**	*e*P	**Pg**	**18 05 48.9**	**+0.8**
BESP				*e*S	**Sn**	**18 06 01.4**	**-0.6**
CNP	**Cataman**	**0.97**	**287**	*e*P	Pb	18 05 54.9	+0.1
CNP				*e*S	**Sb**	**18 06 11.6**	**+3.8**
PLP	**Palo**	**1.23**	**210**	⇑*e*P	**Pb**	**18 05 57.6**	**-1.6**
PLP				*e*S	**Sn**	**18 06 17.7**	**+1.4**
OCLP	**Ormoc**	**1.53**	**220**	*e*P	**Pn**	**18 06 03.7**	**+0.3**
OCLP				*e*S	**Sn**	**18 06 23.2**	**-0.5**
MSLP	**Maasin**	**2.21**	**200**	*e*P	**Pn**	**18 06 12.8**	**0.0**
MSLP				*e*S	**Sb**	**18 06 42.7**	**-1.0**
SCPH	**Surigao**	**2.44**	**183**	*e*P	**Sn**	**18 06 46.6**	**+0.5**
SCPH				*e*S	**Sn**	**18 06 52.8**	**+6.7**
LLP	**Lapu-Lapu**	**2.50**	**220**	*e*P	**Pn**	**18 06 16.1**	**-0.6**
LLP				*e*S	**Sn**	**18 06 49.0**	**+1.5**
GUIM	**Jordan**	**3.37**	**242**	*e*P	Pn	18 06 24.8	-3.9
GUIM				*e*S	**Sn**	**18 07 08.1**	**-1.0**
CMAR	**Chiang Mai Arr**	**26.43**	**287**	P	**P**	**18 11 12.2**	**-1.3**
0.4nm,0.7s,baz=97,slow=7.9,SNR=4.8							
ASAR	**Alice Springs**	**36.59**	**167**	P	P	18 12 38.4	-4.3
0.6nm,0.9s,baz=352,slow=7.3,SNR=4.5							
H11N1	**WAKE ISLAND Hy**	**40.30**	**74**	T	T	18 56 22.1	
baz=266,slow=74,SNR=4.7							
H11N2	**WAKE ISLAND Hy**	**40.30**	**74**	T	T	18 56 18.7	
baz=266,slow=74,SNR=3.7							
H11N3	**WAKE ISLAND Hy**	**40.31**	**74**	T	T	18 56 22.0	
baz=266,slow=74,SNR=4.9							
MKAR	**Makanchi Array**	**50.09**	**322**	P	**P**	**18 14 30.6**	**-0.8**
0.4nm,0.6s,baz=125,slow=7.3,SNR=3.7							

*ISCJB **02** 18:07:54.9±0.5, 21°.62S±0°.03×70°.02W±0°.07, h91km±4km, Error ellipse: s-maj=10.6km s-min=4.8km az=4.3*
*SJA **02** 18:07:54.9±1.2, 21°.63S×69°.92W, h83km±4km, ML2.8, MW3.5*
*NEIC **02** 18:07:56.0±0.0, 21°.66S×69°.88W, h81km, mb4.3/6, ML4.1(GUC), After GUC.*
NEIC Felt [II] at Tocopilla.
*GUC **02** 18:07:56.0±0.7, 21°.66S×69°.88W, h81km±3km, ML4.1*
ISC 02 18:07:55.3±0.8, 21°.62S±0°.03×70°.01W±0°.05, h84km±5km, n44, σ1§15/64, 5C-10D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB07	**IPOC Station P**	**0.16**	**133**	*e*P	**Pn**	**18 08 08.4**	**+0.6**
PB07				*e*S	**Sn**	**18 08 17.2**	**+0.4**
PB07	**IPOC Station P**	**0.16**	**133**	⇓*i*P	**Pn**	**18 08 08.3**	**+0.6**
PB07				*i* S	**Sn**	**18 08 17.1**	**+0.2**
PB07				IAML		18 08 17.4	
comp=N,10μm,0.1s							
PB02	**IPOC Station P**	**0.31**	**20**	*e*P	**Pn**	**18 08 09.3**	**+1.0**
PB02				*e*S	**Sn**	**18 08 18.4**	**+0.6**
PB02	**IPOC Station P**	**0.31**	**20**	⇓*i*P	**Pn**	**18 08 09.3**	**+1.0**
PB02				*i* S	**Sn**	**18 08 18.4**	**+0.6**
PB02				IAML		18 08 19.1	
comp=E,13μm,0.1s							
PB03	**IPOC Station P**	**0.49**	**151**	*e*P	**Pn**	**18 08 10.0**	**+0.3**
PB03				*e*S	**Sn**	**18 08 19.7**	**-0.6**
PB03	**IPOC Station P**	**0.49**	**151**	⇓*i*P	**Pn**	**18 08 10.0**	**+0.3**
PB03				*i* S	**Sn**	**18 08 19.6**	**-0.6**
PB03				IAML		18 08 20.1	
comp=E,19μm,0.1s							
PB04	**IPOC Station P**	**0.73**	**190**	*e*Pn	**Pn**	**18 08 12.7**	**+0.8**
PB04	**IPOC Station P**	**0.73**	**190**	⇓*e*P	**Pn**	**18 08 12.7**	**+0.8**
PB04				*e*S	**Sn**	**18 08 24.9**	**+0.9**
PB04	**IPOC Station P**	**0.73**	**190**	⇓*i*P	**Pn**	**18 08 12.7**	**+0.8**
PB04				*i* S	**Sn**	**18 08 24.8**	**+0.7**
PB04				IAML		18 08 26.4	
comp=N,8μm,0.1s							
PB09	**IPOC Station P**	**0.74**	**104**	*e*P	**Pn**	**18 08 12.2**	**+0.2**
PB09				*e*S	**Sn**	**18 08 23.2**	**-1.1**
PB09	**IPOC Station P**	**0.74**	**104**	⇓*i*P	**Pn**	**18 08 11.9**	**0.0**
PB09				*i* S	**Sn**	**18 08 23.1**	**-1.1**
PB09				IAML		18 08 23.9	
comp=N,10μm,0.2s							
PB01	**IPOC Station P**	**0.75**	**41**	*e*P	**Pn**	**18 08 12.3**	**+0.3**
PB01	**IPOC Station P**	**0.75**	**41**	⇓*i*P	**Pn**	**18 08 12.2**	**+0.3**
PB01				*i* S	**Sn**	**18 08 23.9**	**-0.4**
PB01				IAML		18 08 24.8	
comp=N,12μm,0.2s							
PB06	**IPOC Station P**	**1.16**	**159**	*e*P	**Pn**	**18 08 16.9**	**+0.2**
PB06				*e*S	**Sn**	**18 08 31.7**	**-1.1**
PB06	**IPOC Station P**	**1.16**	**159**	⇓*i*P	**Pn**	**18 08 16.6**	**-0.1**
PB06				*i* S	**Sn**	**18 08 32.1**	**-0.6**
PB05	**IPOC Station P**	**1.24**	**188**	*e*P	**Pn**	**18 08 18.4**	**+0.7**
PB05				*e*S	**Sn**	**18 08 34.8**	**+0.3**
PB05	**IPOC Station P**	**1.24**	**188**	⇑*i*P	**Pn**	**18 08 18.4**	**+0.7**
PB05				*i* S	**Sn**	**18 08 35.5**	**+1.0**
LVC	**Limon Verde**	**1.42**	**134**	*e*Pn	**Pn**	**18 08 20.7**	**+0.5**
LVC	**Limon Verde**	**1.42**	**134**	*e*P	**Pn**	**18 08 20.8**	**+0.6**
LVC				*e*S	**Sn**	**18 08 38.6**	**-0.3**
LVC				IAML		18 08 38.9	
comp=Z,528nm,0.2s							
LVC	**Limon Verde**	**1.42**	**134**	⇑*i*P	**Pn**	**18 08 20.6**	**+0.5**
LVC				*i* S	**Sn**	**18 08 38.6**	**-0.3**
PB15	**IPOC Station P**	**1.66**	**163**	*e*P	**Pn**	**18 08 23.4**	**+0.3**
PB15				*e*S	**Sn**	**18 08 47.1**	**+2.9**
PB15	**IPOC Station P**	**1.66**	**163**	⇑*i*P	**Pn**	**18 08 23.3**	**+0.2**
PB15				*e*S	**Sn**	**18 08 44.5**	**+0.3**
PB08	**IPOC Station P**	**1.67**	**29**	⇓*e*P	**Pn**	**18 08 24.4**	**+1.0**
PB08				*e*S	**Sn**	**18 08 45.1**	**+0.4**
PB08	**IPOC Station P**	**1.67**	**29**	⇑*i*P	**Pn**	**18 08 24.4**	**+1.0**
PB11	**IPOC Station P**	**1.88**	**10**	*e*Pn	**Pn**	**18 08 26.4**	**+0.6**
PB11	**IPOC Station P**	**1.88**	**10**	*e*P	**Pn**	**18 08 26.5**	**+0.6**
PB11				*e*S	**Sn**	**18 08 45.2**	**-3.9**
PB11	**IPOC Station P**	**1.88**	**10**	⇑*i*P	**Pn**	**18 08 26.5**	**+0.6**
PB10	**IPOC Station P**	**1.95**	**195**	*e*Pn	**Pn**	**18 08 27.1**	**+0.4**
PB10	**IPOC Station P**	**1.95**	**195**	⇓*e*P	**Pn**	**18 08 27.2**	**+0.4**
PSGCX	**Pisagua**	**2.01**	**357**	*e*P	**Pn**	**18 08 28.1**	**+0.5**
GO01	**Chusmiza**	**2.08**	**22**	*e*Pn	**Pn**	**18 08 29.8**	**+0.9**
GO01	**Chusmiza**	**2.08**	**22**	*e*P	**Pn**	**18 08 30.0**	**+1.0**
MNMC	**Minye Minye**	**2.50**	**9**	*e*Pn	**Pn**	**18 08 35.3**	**+1.0**
GO02	**Mina Guanaco**	**3.55**	**174**	*e*Pn	**Pn**	**18 08 48.6**	**0.0**
YJA	**Yavi**	**4.21**	**98**	*e*P	**Pn**	**18 08 59.8**	**+2.1**
YJA				IAML		18 09 03.9	
comp=Z,3.2nm,0.5s							
HJA	**Humahuaca**	**4.54**	**111**	*e*P	**Pn**	**18 09 04.6**	**+2.5**
HJA				*e*S	Sn	18 09 28.3	-26
LPAZ	**La Paz**	**5.59**	**19**	*e*Pn	**Pn**	**18 09 20.7**	**+4.1**
GO09	**Cerro Castillo**	**29.66**	**183**	*e*P	**P**	**18 13 51.0**	**-1.8**
comp=Z,7.1nm,1.1s							
GRGR	**Grenville**	**34.53**	**15**	*e*P	**P**	**18 14 34.6**	**-1.2**
comp=Z,96nm,0.9s							
AOPR	**Arecibo Observ**	**39.84**	**5**	*e*P	**P**	**18 15 20.1**	**-0.6**
comp=Z,26nm,1.0s							
PCDR	**Punta Cana, DR**	**39.91**	**2**	*e*P	**P**	**18 15 21.7**	**+0.4**
comp=Z,229nm,1.1s							
PMSA	**Palmer Station**	**43.32**	**176**	*e*P	**P**	**18 15 49.5**	**+0.9**
comp=Z,34nm,1.1s							
MYIG	**Mrida**	**46.49**	**334**	*e*P	**P**	**18 16 13.9**	**-0.4**
comp=Z,44nm,0.8s							
PV03	**Paradox Valley**	**69.83**	**328**	*e*pP	pP	18 19 21.5	+2.6

MAN 02 18:10:52.1, 7°.45N×124°.68E, h26km, mb3.7, ML2.4, MS1.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.48**	**242**	⇓*i*P	Pn	18 11 03.4	+0.1
CTBH				*i* S	Sn	18 11 12.3	+1.3
BUKP	**Musuan**	**0.57**	**42**	*e*P	Pn	18 11 04.4	-0.2
BUKP				*e*S	Sn	18 11 14.2	+0.9
SKMP	**Bagumbayan, Su**	**0.94**	**188**	*e*P	Pn	18 11 08.3	-1.3
CGP	**Cagayan de Oro**	**1.00**	**1**	*e*P	Pb	18 11 13.2	+2.4
CGP				*e*S	Sn	18 11 28.6	+4.9
DDMP	**Don Marcelino,**	**1.69**	**142**	*e*P	Pn	18 11 20.6	+0.6
DDMP				*e*S	Sn	18 11 41.4	+0.6

*ISCJB **02** 18:14:27.0±0.2, 7°.10S±0°.03×129°.27E±0°.03, h200km, mb4.2/41, Error ellipse: s-maj=4.8km s-min=3.9km az=142.6*
*IDC **02** 18:14:27.1±2.3, 7°.01S×129°.31E, h181km±22km, mb3.7/12, mb1 3.8/13, mb1mx3.7/28, mbtmp4.2/13, MS3.4/2, Ms1 3.5/2, ms1mx2.8/30, Error ellipse: s-maj=20.2km s-min=10.3km az=61.0*
*NEIC **02** 18:14:27.9±0.6, 7°.07S×129°.28E, h191km±7km, mb4.3/31, Error ellipse: s-maj=9.7km s-min=6.1km az=55.0*
*DJA **02** 18:14:28.0±0.2, 7°.S±2°×12°.9E±°, h182km±4km, M4.7/29, mB5.2/11, mb4.6/29, MLv5.0/12, Mw(mB)4.5/11*
ISC 02 18:14:28.4±0.4, 7°.12S±0°.05×129°.22E±0°.06, h200km, n102, σ1§36/104, mb4.2/41, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.23**	**113**	*e*Pn	**Pn**	**18 15 09.1**	**-0.3**
SAUI	**Saumlaki**	**2.23**	**113**	P	**Pn**	**18 15 09.4**	**+0.1**
BNDI	**Bandanaira**	**2.67**	**15**	P	**Pn**	**18 15 15.3**	**+1.0**
FAKI	**Fak Fak**	**5.15**	**36**	*e*Pn	**Pn**	**18 15 41.3**	**-3.5**
FAKI	**Fak Fak**	**5.15**	**36**	P	**Pn**	**18 15 41.1**	**-3.7**
138nm,0.5s,5μm1.1nm							
SOEI	**Soe**	**5.56**	**242**	*e*Pn	**Pn**	**18 15 50.4**	**+0.3**
SOEI	**Soe**	**5.56**	**242**	P	**Pn**	**18 15 50.7**	**+0.6**
435nm,0.8s,3μm2.1nm							
KMPI	**Kaimana, Papua**	**5.63**	**53**	P	**Pn**	**18 15 49.1**	**-1.9**
307nm,0.6s,10μm2.8nm							
MTN	**Manton Dam**	**5.99**	**162**	*e*Pn	**Pn**	**18 15 54.8**	**-0.7**
BATI	**Baumata**	**6.29**	**240**	P	**Pn**	**18 16 00.5**	**+1.0**
61nm,0.3s,baz=132,slow=2.4,SNR=119							
BATI				S	**Sn**	**18 17 08.9**	**-2.7**
60nm,0.3s,baz=126,slow=20,SNR=14							
BATI	**Baumata**	**6.29**	**240**	P	**Pn**	**18 16 00.3**	**+0.8**
208nm,0.6s,1μm0.7nm							
MMRI	**Maumere**	**7.08**	**257**	*e*Pn	**Pn**	**18 16 10.7**	**+1.0**
MMRI	**Maumere**	**7.08**	**257**	P	**Pn**	**18 16 10.0**	**+0.3**
78nm,0.5s,1μm							
RKPI	**Ransiki, Papua**	**7.45**	**42**	P	**Pn**	**18 16 13.5**	**-1.0**
413nm,0.8s,4μm							
EDFI	**Ende, Flores**	**7.63**	**257**	P	**Pn**	**18 16 18.0**	**+1.0**
52nm,0.7s,1μm							
TNTI	**Ternate**	**8.06**	**347**	*e*Pn	**Pn**	**18 16 22.6**	**0.0**
TNTI	**Ternate**	**8.06**	**347**	P	**Pn**	**18 16 22.5**	**0.0**
11nm,1.2s							
SRPI	**Serui, Papua**	**8.73**	**54**	P	**Pn**	**18 16 30.2**	**-1.0**
86nm,0.8s							
WSI	**Waingapu**	**9.18**	**253**	P	**Pn**	**18 16 36.1**	**-1.0**
373nm,0.9s							
BKSI	**Bulukumba**	**9.22**	**281**	P	**Pn**	**18 16 39.2**	**+1.6**
14nm,0.9s							
BNSI	**Bone**	**9.46**	**286**	P	**Pn**	**18 16 42.1**	**+1.3**
KAPI	**Kappang**	**9.65**	**282**	P	**Pn**	**18 16 42.2**	**-1.0**
0.6nm,0.3s,baz=105,slow=12,SNR=2.9							
KAPI	**Kappang**	**9.65**	**282**	*e*Pn	**Pn**	**18 16 43.4**	**+0.3**
SPSI	**Sidrap Palu**	**9.92**	**288**	P	**Pn**	**18 16 45.6**	**-1.1**
WBSI	**Waikabubak, Su**	**10.04**	**255**	P	**Pn**	**18 16 46.9**	**-1.4**
125nm,1.0s							
TTSI	**Tana Toraja**	**10.20**	**293**	P	P	18 17 02.8	+4.7
FITZ	**Fitzroy Crossi**	**11.45**	**197**	P	**Pn**	**18 17 04.0**	**-2.4**
3.6nm,0.3s,baz=27,slow=11,SNR=173							
FITZ				S	Sn	18 19 04.0	-10
5.4nm,0.3s,baz=53,slow=20,SNR=9.0							
FITZ				LR	LR	18 21 54.7	
comp=Z,46nm,18.8s,baz=75,slow=39							
FITZ	**Fitzroy Crossi**	**11.45**	**197**	*e*Pn	**Pn**	**18 17 06.6**	**+0.2**
MPSI	**Mapaga**	**11.89**	**308**	P	**P**	**18 17 14.2**	**-2.7**
WRAB	**Tennant Creek**	**13.67**	**159**	*e*Pn	**Pn**	**18 17 34.6**	**+0.3**
WRA	**Warramunga Arr**	**13.68**	**159**	P	**Pn**	**18 17 31.3**	**-3.1**
39nm,0.3s,baz=335,slow=13,SNR=1.9							
WRA				S	S	18 19 57.3	-10
29nm,0.3s,baz=329,slow=23,SNR=2.4							
WB2	**Warramunga Arr**	**13.68**	**159**	*e*Pn	**Pn**	**18 17 31.8**	**-2.7**
KMMI	**Kalianget**	**15.14**	**269**	P	**Pn**	**18 17 52.6**	**+0.1**
COEN	**Coen**	**15.30**	**117**	*e*Pn	**P**	**18 17 55.7**	**+1.0**
13nm,0.8s							
AS31	**Alice Springs**	**17.05**	**165**	*e*P	**Pn**	**18 18 15.4**	**+0.1**
51nm,0.6s							
ASAR	**Alice Springs**	**17.05**	**165**	P	**Pn**	**18 18 15.4**	**0.0**
15nm,0.3s,baz=340,slow=9.9,SNR=976							
ASAR				S	**S**	**18 21 17.0**	**-4.5**
0.4nm,0.3s,baz=350,slow=26,SNR=4.8							
PWJI	**Pagerwojo**	**17.29**	**266**	P	**Pn**	**18 18 19.2**	**+1.0**
41nm,2.0s							
SBUM	**Sibu**	**19.45**	**299**	*e*P	**Pn**	**18 18 41.8**	**-2.0**
9.7nm,0.9s							
KSM	**Kuching**	**20.72**	**294**	*e*P	**P**	**18 18 51.5**	**-2.1**
24nm,0.9s							
CTA	**Charters Tower**	**20.95**	**130**	P	**P**	**18 18 56.8**	**+0.8**
12nm,0.8s,baz=314,slow=12,SNR=20							
CTAO	**Charters Tower**	**20.95**	**130**	*e*P	**P**	**18 18 57.4**	**+1.4**
16nm,0.9s							
LEM	**Lembang**	**21.45**	**269**	P	**P**	**18 19 02.6**	**+1.2**
12nm,0.6s,baz=76,slow=7.4,SNR=3.2							
PPBI	**Pangkal Pinang**	**23.52**	**281**	P	**P**	**18 19 23.2**	**+2.5**
15nm,0.9s,7μm							
FORT	**Forrest**	**23.56**	**183**	*e*P	**P**	**18 19 22.1**	**+1.2**
66nm,0.7s							
BBOO	**Buckleboo**	**26.34**	**167**	*e*P	**P**	**18 19 46.6**	**+0.7**
9.7nm,0.8s							
STKA	**Stephens Creek**	**27.20**	**156**	P	**P**	**18 19 53.6**	**-0.1**
13nm,0.7s,baz=332,slow=9.1,SNR=26							
STKA	**Stephens Creek**	**27.20**	**156**	*e*P	**P**	**18 19 53.7**	**0.0**
2.4nm,0.8s							
EIDS	**Eidsvold**	**27.66**	**133**	*e*P	**P**	**18 19 55.7**	**-2.1**
5.1nm,1.0s							
NWAO	**Narrogin (SRO)**	**27.99**	**202**	*e*P	**P**	**18 20 02.1**	**+1.5**
3.8nm,0.8s							
MNSI	**Mandailing Nat**	**30.60**	**284**	P	**P**	**18 20 25.5**	**+1.5**
18nm,1.0s							
TWG	**Pinlang**	**30.81**	**345**	*e*P	**P**	**18 20 25.0**	**-0.7**
54nm,1.1s							
ARMA	**Armidale**	**31.29**	**141**	*e*P	**P**	**18 20 27.6**	**-2.3**
10nm,0.9s							
PSI	**Prapat**	**31.81**	**287**	*e*P	**P**	**18 20 33.1**	**-1.5**
12nm,0.8s							
GSI	**Gunungsitoli**	**32.67**	**284**	*e*P	**P**	**18 20 42.8**	**+0.8**
22nm,1.1s							
CAN	**Canberra**	**33.43**	**150**	*e*P	**P**	**18 20 50.4**	**+2.0**
18nm,0.8s							
TOO	**Toolangi**	**33.72**	**156**	*e*P	**P**	**18 20 53.6**	**+2.7**
5.5nm,1.0s							
PANO	**Nakornpanom**	**34.26**	**315**	P	**P**	**18 20 56.8**	**+1.1**
0.3nm,1.8s							
SKNT	**Sakolnakorn**	**34.59**	**314**	P	**P**	**18 20 59.1**	**+0.6**
12nm,0.8s							
UTTA	**Uttaradit**	**37.58**	**311**	P	**P**	**18 21 24.9**	**+1.0**
14μm,0.9s							
CMAR	**Chiang Mai Arr**	**39.22**	**311**	P	**P**	**18 21 38.3**	**+0.7**
3.2nm,0.9s,baz=139,slow=7.1,SNR=25							
CMAR				PcP	**PcP**	**18 23 43.8**	**+1.2**
0.5nm,0.7s,baz=161,slow=3.8,SNR=4.3							
CMMT	**Chiang Mai**	**39.44**	**311**	P	**P**	**18 21 40.2**	**+0.8**
5.1nm,1.6s							
CHTO	**Chiang Mai**	**39.44**	**311**	*e*P	**P**	**18 21 40.1**	**+0.7**
8.1nm,1.0s							
MAJO	**Matsushiro**	**44.25**	**10**	*e*P	**P**	**18 22 18.2**	**+0.2**
4.1nm,1.0s							
MJAR	**Matsushiro Arr**	**44.25**	**10**	P	**P**	**18 22 16.7**	**-1.3**
1.3nm,0.9s,baz=188,slow=7.4,SNR=4.3							
MJB9	**Matsu-Tunnel**	**44.25**	**10**	*e*P	**P**	**18 22 18.3**	**+0.2**
3.9nm,1.0s							
KSRS	**Korea Array**	**44.36**	**359**	P	**P**	**18 22 18.5**	**-0.3**
1.1nm,1.0s,baz=176,slow=7.3,SNR=4.4							
WHZ	**Wether Hill Ro**	**51.03**	**146**	*e*P	**P**	**18 23 10.9**	**+0.8**
29nm,1.1s							
RPZ	**Rata Peaks**	**51.61**	**142**	*e*P	**P**	**18 23 16.6**	**+2.2**
29nm,1.1s							
LSA	**Lhasa**	**51.76**	**317**	*e*P	**P**	**18 23 17.3**	**+1.0**
3.6nm,0.6s							
ODAN	**Odare**	**52.76**

DMPH	Davao City--Mi	0.68	102	eP	Pn	18 39 26.9	+4.0
BUKP	Musuan	0.68	19	eP	Pb	18 39 22.1	+0.2
BUKP				eS	Sn	18 39 33.8	+0.9
SKMP	Bagumbayan, Su	0.77	203	eP	Pb	18 39 22.8	-0.4
SKMP				eS	Sn	18 39 35.9	+1.0
CGP	Cagayan de Oro	1.23	353	eP	Pb	18 39 31.9	+0.8

ISCJB **02** *19:13:31.5±0.3, 17°.85N±0°.03×100°.67W±0°.02, h71km±2km, mb4.3/36, Error ellipse: s-maj=5.6km s-min=3.1km az=12.7*
NEIC **02** *19:13:32.0±0.0, 17°.84N×100°.84W, h54km, mb4.5/41, MD4.6(MEX), After MEX.*
NEIC Felt at Morelia.
MEX **02** *19:13:33.1±0.7, 17°.82N×100°.82W, h48km±8km, MD4.6*
IDC **02** *19:13:38.1±2.3, 18°.32N×100°.26W, h91km±18km, mb3.8/14, mb1 4.0/17, mb1mx3.8/40, mbtmp4.1/17, MS3.6/20, Ms1 3.6/20, ms1mx3.4/36, Error ellipse: s-maj=33.8km s-min=12.1km az=37.0*

ISC 02 19:13:32.1±0.7, 17°.81N±0°.04×100°.81W±0°.04, h55km±7km, n400, σ1°56/392, mb4.4/36, MS3.5/15, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.65	43	eP		Pn	19 13 44.0	-1.4
ARIG				i S		Sn	19 13 53.4	-1.7
ZIIG	Zihuatanejo	0.65	252	eP		Pn	19 13 44.2	-1.2
ZIIG				eS		Sn	19 13 54.3	-0.9
CAIG	El Cayaco	0.92	145	eP		Pn	19 13 48.1	-0.8
CAIG				eS		Sn	19 14 00.0	-1.2
ACP2	Acapulco	1.28	136	eP		Pn	19 13 53.6	-0.1
ACP2				eS		Sn	19 14 08.4	-1.5
PLIG	Platanillo	1.38	65	eP		Pn	19 13 54.7	-0.3
PLIG				eS		Sn	19 14 10.8	-1.5
MAVM	Malinalco, Edo	1.70	47	eP		Pn	19 13 58.8	-0.8
TOVM	TOLUCA	1.82	36	eP		Pn	19 14 00.6	-0.7
MOIG	Morelia	1.89	349	ePn		Pn	19 14 01.8	-0.5
MOIG				eSn		Sn	19 14 28.6	+3.5
MOIG	Morelia	1.89	349	eP		Pn	19 14 01.5	-0.8
YAIG	Yautepec	1.96	57	eP		Pn	19 14 02.5	-0.6
URUA	Uruapan	2.00	324	eP		Pn	19 14 03.4	-0.2
URUA				eS		Sn	19 14 26.2	-1.5
ATVM	ATLACOMULCO	2.15	25	eP		Pn	19 14 05.2	-0.6
TLIG	Tlapa	2.16	96	ePn		Pn	19 14 06.5	+0.8
TLIG				eSn		Sn	19 14 36.0	+4.7
UNM	Universidad Na	2.17	45	eP		Pn	19 14 15.4	+9.4
UNM				eS		Sn	19 14 35.8	+3.9
PBVM	Pinon	2.31	45	eP		Pn	19 14 07.4	-0.2
AMVM	AMECAMECA	2.33	55	i P		Pn	19 14 11.6	+3.3
PPM	Popocatepetl	2.42	59	eP		Pn	19 14 09.6	-0.1
MMIG	Aquila	2.46	282	eP		Pn	19 14 08.6	-1.1
MMIG				eS		Sn	19 14 41.3	+2.7
ZUVM	ZUMPANGO	2.59	39	eP		Pn	19 14 11.3	-0.5
EZ5V		3.12	303	eP		Pn	19 14 19.5	+0.5
LVIG	Laguna Verde	4.58	65	ePn		Pn	19 14 37.4	-1.4
LVIG				eSn		Sn	19 15 11.7	-19
ZAIG	Zacatecas	5.20	342	ePn		Pn	19 14 48.6	+0.9
CMIG	Matias Romero	5.70	96	P		Pn	19 14 55.2	+0.9
	19nm,0.3s,baz=275,slow=11,SNR=219							
CMIG				S		Sn	19 15 53.8	-4.6
	27nm,0.3s,baz=261,slow=18,SNR=4.2							
CMIG				LR		LR	19 17 18.7	
	comp=Z,601nm,20.0s,baz=288,slow=42							
LNIG	Linares	7.17	10	ePn		Pn	19 15 14.1	-0.2
CCIG	Comitan	8.44	99	ePn		Pn	19 15 34.1	+2.2
H06E1	SOCORRO T-PHAS	9.65	277	T		T	19 25 13.1	
	SNR=12							
H06S1	SOCORRO T	9.68	277	T		T	19 25 13.7	
	SNR=10							
H06N1	SOCORRO T-PHAS	9.72	278	T		T	19 25 18.2	
	SNR=4.4							
HPIG		10.13	335	ePn		Pn	19 15 56.5	+1.5
SLBS	Sierra La Lagu	10.35	306	ePn		Pn	19 16 00.9	+2.9
833A	Chaparral WMA,	10.55	7	P		Pn	19 16 01.6	+1.0
	baz=188							
LPIG	La Paz	10.86	307	P		Pn	19 16 12.8	+8.1
	baz=0.0,slow=1.0,SNR=3.5							
LPIG				LR		LR	19 19 54.6	
	comp=Z,378nm,20.2s,baz=162,slow=34							
TXAR	Lajitas Array	11.77	348	P		Pn	19 16 18.5	+1.2
	0.1nm,0.3s,baz=160,slow=15,SNR=14							
TXAR				LR		LR	19 21 11.9	
	comp=Z,360nm,19.1s,baz=0.0,slow=40							
LTX	Lajitas	11.77	348	ePn		Pn	19 16 18.5	+1.2
JCT	Junction City	12.65	4	P		Pn	19 16 30.6	+1.3
	baz=184							
435B	Jarrell	13.25	12	P		Pn	19 16 37.8	+0.4
	baz=194							
TGUH	Tegucigalpa,Un	13.54	104	ePn		Pn	19 16 42.3	+0.7
CSGN	Cosiguina Volc	13.65	109	ePn		Pn	19 16 46.2	+3.2
MNTX	Cornudas Mount	14.44	344	ePn		Pn	19 16 52.8	-0.6
MNTX	Cornudas Mount	14.44	344	P		Pn	19 16 54.0	+0.6
	baz=162,SNR=18							
WHTX	Lake Whitney,	14.45	12	P		Pn	19 16 54.5	+1.0
	baz=193							
HSIG		14.52	322	ePn		Pn	19 16 54.5	0.0
ABTX	Abilene, Hawle	14.79	4	ePn		Pn	19 16 57.5	-0.5
ABTX	Abilene, Hawle	14.79	4	P		Pn	19 16 58.4	+0.3
	baz=184,SNR=7.5							
NATX	Nacogdoches	14.97	21	ePn		Pn	19 16 58.9	-1.4
NATX	Nacogdoches	14.97	21	P		Pn	19 16 60.0	-0.3
	baz=203							
121A	Cookes Peak, D	15.95	338	P		Pn	19 17 12.5	-0.6
	baz=155							
ACON	Acoyapa	16.19	109	ePn		P	19 17 18.0	-0.4
	31nm,0.9s							
MSTX	Muleshoe	16.19	354	ePn		Pn	19 17 15.7	-0.4
	26nm,0.8s							
MSTX	Muleshoe	16.19	354	P		Pn	19 17 15.4	-0.7
	baz=173,SNR=17							
WMOK	Wichita Mounta	16.96	6	ePn		Pn	19 17 25.4	-0.2
	20nm,1.3s							
WMOK	Wichita Mounta	16.96	6	P		Pn	19 17 25.1	-0.5
	baz=187,SNR=5.4							
Z41A	Richland Creek	16.99	24	eP		P	19 17 27.1	+0.1
	94nm,1.1s							
Z41A	Richland Creek	16.99	24	P		Pn	19 17 26.0	+0.1
	baz=207,SNR=12							
TUC	Tucson	17.02	330	ePn		Pn	19 17 25.9	-0.5
	23nm,1.0s							
TUC	Tucson	17.02	330	P		Pn	19 17 26.9	+0.5
	baz=146							
AMTX	Amarillo	17.02	358	ePn		Pn	19 17 24.5	-1.9
	21nm,0.8s							
AMTX	Amarillo	17.02	358	P		Pn	19 17 26.0	-0.5
	baz=177							
JTS	Las Juntas de	17.10	114	P		P	19 17 33.5	+5.1
	5.4nm,0.3s,baz=18,slow=6.3,SNR=19							
JTS				LR		LR	19 23 35.9	
	comp=Z,160nm,22.0s,baz=12,slow=36							
JTS	Las Juntas de	17.10	114	ePn		P	19 17 33.8	+5.3
	54nm,1.1s							
VBMS	Vicksburg	17.10	31	P		Pn	19 17 26.0	-1.3
	baz=215							
LPM	Los Pinos Moun	17.24	344	ePn		P	19 17 30.7	+0.6
214A	Organ Pipe Nat	17.78	325	P		P	19 17 37.1	+1.2
	baz=140,SNR=9.9							
ANMO	Albuquerque	17.79	345	P		P	19 17 37.4	+1.2
	0.6nm,0.3s,baz=151,slow=12,SNR=53							
ANMO				LR		LR	19 24 58.2	
	comp=Z,462nm,18.3s,baz=168,slow=39							
ANMO	Albuquerque	17.79	345	ePn		P	19 17 37.5	+1.2
	21nm,1.0s							
ANMO	Albuquerque	17.79	345	P		P	19 17 37.3	+1.2
	baz=162							
TASM	ASL Pad, Albuq	17.80	345	P		P	19 17 37.2	+0.9
	baz=162,SNR=31							
TASM	ASL Pad, Albuq	17.80	345	P		P	19 17 37.1	+0.9
	baz=162,SNR=29							
MIAR	Mount Ida	17.88	20	P		Pn	19 17 36.0	-0.9
	baz=203,SNR=6.8							
349A	Repton	18.28	40	P		P	19 17 40.2	-1.2
	baz=226							
W39A	Magazine	18.41	18	eP		Pn	19 17 43.6	+0.2
	78nm,1.4s							
W39A	Magazine	18.41	18	P		P	19 17 42.6	-0.2
	baz=202,SNR=8.6							
X18A	Snowflake	18.54	336	eP		Pn	19 17 46.4	+1.2
	28nm,1.1s							
U32A	Winter Ranch,	18.57	5	eP		P	19 17 39.7	-4.8
	20nm,0.8s							
TUL1	Leonard	18.57	13	P		P	19 17 42.9	-1.7
	baz=195,SNR=9.5							
147A	Livingston	18.62	35	P		P	19 17 43.7	-1.5
	baz=220							
249A	Camden	18.77	39	P		P	19 17 46.7	0.0
	baz=224							
X43A	Marvell	18.86	26	P		P	19 17 47.0	-0.6
	baz=211,SNR=6.1							
W41B	Gary Mavity, V	18.90	22	P		P	19 17 46.1	-2.1
	baz=206							
113A	Mohawk Valley,	18.92	324	eP		Pn	19 17 50.0	+0.5
	169nm,1.9s							
W18A	Petrified Fore	18.98	337	eP		Pn	19 17 51.2	+0.8
	35nm,1.3s							
W18A	Petrified Fore	18.98	337	P		P	19 17 48.7	-0.5
	baz=153							
148A	Greensboro	18.99	36	P		P	19 17 47.2	-1.9
	baz=222							
X16A	Lo Mia Camp, P	19.07	332	eP		Pn	19 17 52.1	+0.6
	67nm,0.9s							
250A	Grady	19.29	40	P		P	19 17 50.4	-2.0
	baz=226							
149A	Jones	19.41	38	P		P	19 17 52.2	-1.5
	baz=224,SNR=5.5							
OXF	Oxford	19.50	29	P		P	19 17 53.8	-0.9
	baz=214							
T25A	Trinidad	19.52	351	P		P	19 17 54.5	-0.6
	baz=170,SNR=8.3							
GLA	Glamis	19.73	323	P		P	19 17 57.8	+0.5
	baz=137,SNR=7.7							
U40A	Yellville	19.77	19	P		P	19 17 56.5	-1.1
	baz=203,SNR=6.7							
352A	Blakely	19.81	44	P		P	19 17 56.0	-2.1
	baz=230							
453A	Whigham	19.83	46	P		P	19 17 56.7	-1.6
	baz=233							
150A	Eclectic	19.87	39	P		P	19 17 57.8	-1.0
	baz=226							
251A	Midway	19.90	41	P		P	19 17 57.8	-1.3
	baz=228							
X46A	Booneville	19.93	31	P		P	19 17 58.8	-0.6
	baz=216							
WUAZ	Wupatki	19.98	334	P		Pn	19 18 01.8	-0.4
	baz=149,SNR=40							
Y12C	Blythe	20.08	325	P		P	19 18 00.9	-0.1
	baz=139,SNR=12							
Y48A	Jasper	20.16	35	P		P	19 18 00.3	-1.6
	baz=221							
353A	Camilla	20.20	45	P		P	19 18 01.3	-1.0
	baz=232,SNR=9.3							
IKP	In-Ko-Pah, Jac	20.21	320	P		Pn	19 18 03.9	-1.0
	baz=133,SNR=6.5							
SWSC	Sam W. Stewart	20.22	321	P		P	19 18 03.6	+1.0
	baz=135,SNR=14							
454A	Quitman	20.23	47	P		P	19 18 01.9	-0.8
	baz=234,SNR=7.5							
151A	Opelika	20.24	41	P		P	19 18 01.7	-1.1
	baz=227							
252A	Lumpkin	20.27	43	P		P	19 18 02.1	-1.0
	baz=230							
X47A	Russelville	20.27	32	P		P	19 18 02.2	-0.9
	baz=218							
SDCO	Great Sand Dun	20.28	349	P		P	19 18 03.5	0.0
	baz=167,SNR=29							
PDMCI	Parker Dam,Lak	20.29	327	P		Pn	19 18 04.7	-1.1
	baz=141,SNR=12							
059A	Moore Haven	20.32	60	P		P	19 18 03.6	-0.2
	baz=247							
555A	McAlpin	20.37	50	P		P	19 18 03.5	-0.7
	baz=237							
Z50A	Ashland	20.39	38	P		P	19 18 03.2	-1.2
	baz=225							
MVCO	Mesa Verde	20.48	342	eP		P	19 18 05.8	+0.2
	24nm,0.9s							
MVCO	Mesa Verde	20.48	342	P		P	19 18 05.8	+0.2
	baz=159,SNR=8.0							
W46A	Michie	20.50	30	P		P	19 18 06.3	+0.8
	baz=216							
BC3	Big Chuckawall	20.53	323	P		P	19 18 06.6	+0.6
	baz=137,SNR=13							
Y49A	Blount Mountai	20.54	36	P		P	19 18 06.5	+0.4
	baz=222							
S22A	4UR Ranch, Cre	20.55	346	P		P	19 18 07.0	+0.6
	baz=164,SNR=6.3							
MONP2	Monument Peak	20.57	320	P		Pn	19 18 07.9	-1.3
	baz=133,SNR=17							
BAR	Barrett	20.58	319	eP		Pn	19 18 08.2	-1.0
	26nm,1.1s							
060Z	West Palm Beac	20.61	62	P		P	19 18 05.5	-1.3
	baz=250							
X48A	Hartselle	20.64	34	P		P	19 18 06.3	-0.8
	baz=220							
455A	Stateville	20.67	48	P		P	19 18 06.4	-1.1
	baz=236,SNR=7.0							
TIGA	Tifton	20.68	46	eP		P	19 18 05.7	-1.9
	90nm,1.4s							
TIGA	Tifton	20.68	46	P		P	19 18 06.4	-1.1
	baz=233,SNR=6.7							
556A	Lake Butler	20.71	51	P		P	19 18 07.0	-0.9
	baz=238							
152A	Waverly Hall	20.72	41	P		P	19 18 07.1	-0.9
	baz=226							
IRM	Iron Mountain	20.72	325	P		Pn	19 18 09.5	-1.4
	baz=138,SNR=32							
W13A	Hualapai Mount	20.78	328	eP		P	19 18 09.5	+0.6
	16nm,0.9s							
NEE2	Needles Airpor	20.90	327	P		P	19 18 11.3	+1.3
	baz=141,SNR=8.0							
657A	Interlachen	20.90	52	P		P	19 18 08.9	-1.1
	baz=240							
CBKS	Cedar Bluff	20.95	2	P		P	19 18 08.9	-1.5
	baz=183							
859A	Kempfer Cattle	20.96	57	P		P	19 18 10.3	-0.3
	baz=245							
W47A	Westpoint	20.98	32	P		P	19 18 09.9	-0.9
	baz=218							
109C	Camp Elliot, M	20.99	319	P		P	19 18 11.5	+0.6
	baz=132							
CPE	Camp Elliot	20.99	319	eP		P	19 18 12.1	+1.2
	34nm,0.9s							
PBMO	Poplar Bluff	21.00	24	eP		P	19 18 09.2	-1.7
	26nm,1.0s							
X49A	Woodville	21.07	35	P		P	19 18 10.5	-1.2
	baz=222							
PFO	Pinyon Flats O	21.08	321	P		P	19 18 13.6	+1.6
	16nm,1.0s,baz=124,slow=7.8,SNR=11							
PFO				LR		LR	19 26 49.6	
	comp=Z,222nm,19.6s,baz=143,slow=38							
PFO	Pinyon Flats O	21.08	321	eP		P	19 18 13.4	+1.3
	42nm,1.3s							
PFO	Pinyon Flats O	21.08	321	P		P	19 18 13.2	+1.2
	baz=135,SNR=11							
BELC	Belle Mtn. Jos	21.09	323	P		P	19 18 13.1	+1.0
	baz=136,SNR=7.7							
V46A	Holladay	21.16	30	P		P	19 18 11.5	-1.3
	baz=215,SNR=15							
KSCO	Kaye Shedlock'	21.18	356	eP		P	19 18 12.2	-0.9
	48nm,0.7s							
KSCO	Kaye Shedlock'	21.18	356	P		P	19 18 12.1	-0.9
	baz=175,SNR=7.0							
254A	Abbeville	21.19	45	P		P	19 18 11.4	-1.7
	baz=232,SNR=12							
W48A	Pulaski	21.23	33	P		P	19 18 12.2	-1.2
	baz=219,SNR=6.8							
Z52A	Williamson	21.25	41	P		P	19 18 12.6	-1.1
	baz=228							
658A	Bunnell	21.29	54	P		P	19 18 13.6	-0.5
	baz=241							
Y51A	Rockmart	21.35	38	P		P	19 18 13.9	-0.8
	baz=225,SNR=6.6							
PV01	Paradox Valley	21.36	343	eP		P	19 18 14.8	-0.3
	15nm,1.1s							
456A	Hilliard	21.38	50	P		P	19 18 14.4	-0.7
	baz=237							
Q24A	Divide	21.41	351	P		P	19 18 15.0	-0.7
	baz=169							
GMRC	Granite Mounta	21.47	325	P		P	19 18 16.5	+0.3
	baz=138,SNR=11							
V47A	Nunnelly	21.47	31	P		P	19 18 14.9	-1.2
	baz=217							
PV02	Paradox Valley	21.48	343	eP		P	19 18 15.5	-0.8
	9.8nm,0.8s							
MURC	Murrieta	21.52	320	P		P	19 18 17.5	+0.8
	baz=133,SNR=7.8							
KSU1	Kansas State U	21.53	9	P		P	19 18 15.2	-1.4
	baz=191,SNR=6.0							
W49A	Belvidere	21.56	34	P		P	19 18 16.7	-0.3
	baz=221							
WVT	Waverly	21.57	30	eP		P	19 18 15.9	-1.1
	17nm,0.6s							
WVT	Waverly	21.57	30	P		P	19 18 16.6	-0.4
	baz=216							
457A	Yulee	21.66	50	P		P	19 18 17.1	-1.0
	baz=238							
154A	Montrose	21.72	44	P		P	19 18 16.6	-2.1
	baz=232							
255A	Hazlehurst	21.73	46	P		P	19 18 16.7	-2.1
	baz=234							
V48A	Smith Brothers	21.75	32	P		P	19 18 18.2	-0.8
	baz=218							
PV22	Blue Mesa, Par	21.79	343	eP		P	19 18 18.8	-0.9
	16nm,1.0s							
CCM	Cathedral Cave	21.84	21	P		P	19 18 19.5	-0.5
	baz=205							
KNB	Kanab	21.86	333	eP		P	19 18 21.4	+1.0
	23nm,1.1s							
HEC	Hector,Ludlow	21.88	324	P		P	19 18 20.9	+0.4
	baz=137,SNR=6.2							
GOGA	Godfrey	22.00	42	P		P	19 18 19.9	-1.8
	baz=229							
PKCU	Pink Cliffs	22.02	335	eP		P	19 18 23.3	+1.0
	19nm,1.1s							
U47A	Clarksville	22.08	30	P		P	19 18 21.1	-1.4
	baz=216							
TUQ	Turquoise Moun	22.10	326	P		P	19 18 22.5	-0.4
	baz=139,SNR=5.6							
W50A	Signal Mountai	22.14	36	P		P	19 18 22.1	-1.2
	baz=222							
CIS	Catalina Islan	22.15	318	P		P	19 18 23.3	-0.1
	baz=130							
155A	Kite	22.15	45	P		P	19 18 22.0	-1.3
	baz=233,SNR=7.0							
256A	Glennville	22.17	47	P		P	19 18 21.7	-1.9
	baz=235							
Y53A	Monroe	22.21	41	P		P	19 18 22.5	-1.5
	baz=228							
BFSC	Mount Baldy Ra	22.24	321	P		P	19 18 24.5	0.0
	baz=133							
V49A	McMinnville	22.25	34	P		P	19 18 22.8	-1.5
	baz=220							
S44A	Carbondale	22.26	25	P		P	19 18 22.9	-1.5
	baz=210,SNR=5.6							
T46A	Princeton	22.29	28	P		P	19 18 24.4	-0.4
	baz=214							
Z54A	Sparta	22.29	43	P		P	19 18 23.7	-1.0
	baz=231							
RRX	Edison Barstow	22.29	323	P		P	19 18 25.6	+0.7
	baz=136							
ISCO	Idaho Springs	22.31	350	P		P	19 18 24.0	-1.3
	baz=168,SNR=14							
W51A	Cleveland	22.42	36	P		P	19 18 25.0	-1.2
	baz=224							
GSC	Goldstone, Bar	22.49	324	eP		P	19 18 27.2	+0.2
	15nm,1.2s							
GSC	Goldstone, Bar	22.49	324	P		P	19 18 26.4	-0.6
	baz=137,SNR=9.3							
U48A	Cassie Pea, Po	22.50	31	P		P	19 18 25.4	-1.7
	baz=218,SNR=7.4							
X52A	Dahlonega	22.53	39	P		P	19 18 25.8	-1.6
	baz=226,SNR=7.9							
T47A	Sharon Grove	22.60	30	P		P	19 18 25.3	-2.8
	baz=216							
V50A	Pikevile	22.60	35	P		P	19 18 25.3	-2.9
	baz=222							
156A	Sylvania	22.83	46	P		P	19 18 28.6	-2.0
	baz=234							
SRU	San Rafael Swe	22.85	340	eP		P	19 18 30.2	-0.7
	9.7nm,0.7s							
W52A	Murphy	22.85	38	P		P	19 18 29.5	-1.3
	baz=225,SNR=5.4							
EDW2	Edwards Air Fo	22.88	321	P		P	19 18 30.8	-0.3
	baz=134,SNR=6.2							
Q16A	Castle Valley	22.89	339	eP		P	19 18 31.4	+0.1
	8.8nm,0.8s							
MSU	Marysvale	22.89	337	eP		P	19 18 31.6	+0.2
BLG	Laguna Peak, P	23.02	318	P		P	19 18 30.9	-1.6
	baz=130							
T48A	Bowling Green	23.04	31	P		P	19 18 29.8	-2.8
	baz=217							
LRMC	Laurel Mtn Rad	23.11	323	P		P	19 18 31.4	-2.2
	baz=135							
V51A	Loudon	23.11	36	P		P	19 18 30.8	-2.7
	baz=223							
O20A	White River Ci	23.16	345	P		P	19 18 32.7	-1.3
	baz=162							
R45A	Skylar, Fairfi	23.17	26	P		P	19 18 31.2	-2.7
	baz=212							
157A	Early Branch	23.19	47	P		P	19 18 31.1	-3.1
	baz=235							
S47A	Hartford	23.20	29	P		P	19 18 31.4	-2.8
	baz=216							
TMUT	Trail Mountain	23.24	339	eP		P	19 18 34.8	-0.2
	10nm,0.7s							
U50A	Jamestown	23.30	34	P		P	19 18 33.1	-2.1
	baz=222							
SCZ2	Santa Cruz Isl	23.31	317	P		P	19 18 34.7	-0.7
	baz=129							
W53A	Cullowhee	23.36	39	P		P	19 18 33.8	-2.1
	baz=227,SNR=6.9							
Y55A	Saluda	23.36	43	P		P	19 18 33.5	-2.3
	baz=231							
FURC	Furnace Creek,	23.38	326	P		P	19 18 36.1	+0.2
	baz=138							
MPMC	Manual Prospec	23.42	324	P		P	19 18 37.0	+0.5
	baz=137,SNR=11							
TPNV	Topopah Spring	23.42	328	P		P	19 18 36.3	-0.3
	baz=140,SNR=12							
X54A	Belton	23.42	41	P		P	19 18 34.0	-2.3
	baz=229							
R46A	Gibon Southern	23.43	27	P		P	19 18 33.7	-2.7
	baz=213							
N23A	Red Feather La	23.43	350	P		P	19 18 35.4	-1.3
	baz=168,SNR=7.5							
T49A	Edmonton	23.46	32	P		P	19 18 34.9	-1.9
	baz=219							
ARVC	Arvin	23.55	321	P		P	19 18 37.7	+0.2
	baz=133							
V52A	Sevierville	23.57	37	P		P	19 18 35.7	-2.1
	baz=225							
S48A	Wiedeman Farm,	23.64	30	P		P	19 18 36.1	-2.2
	baz=217							
ISA	Isabella, Lake	23.70	322	P		P	19 18 39.2	+0.2
	baz=134,SNR=9.9							
U51A	La Follette	23.72	35	P		P	19 18 36.8	-2.3
	baz=223							
Z57A	Bowman	23.75	46	P		P	19 18 37.2	-2.2
	baz=234							
T50A	Nancy	23.75	33	P		P	19 18 36.3	-3.1
	baz=221,SNR=6.1							
X55A	Gracelyn & Ava	23.84	42	P		P	19 18 39.0	-1.3
	baz=231							
P43A	Skaggs, Pawnee	23.86	22	P		P	19 18 38.8	-1.5
	baz=208,SNR=5.7							
W54A	Cherokee Point	23.89	40	P		P	19 18 38.8	-1.9
	baz=229							
V53A	Saluda	23.91	38	P		P	19 18 38.7	-2.2
	baz=227							
R47A	Wooly Knot Far	23.93	29	P		P	19 18 39.2	-1.8
	baz=215,SNR=8.2							
WCI	Wyandotte Cave	23.98	29	P		P	19 18 39.5	-2.0
	baz=216							
NHSC	New Hope	24.00	47	P		P	19 18 40.9	-0.8
	baz=236

	baz=204							
SMMC	Simmler	24.39	319	P		P	19 18 44.7	-0.6
	baz=131							
P45A	Graceland, Par	24.44	25	P		P	19 18 43.8	-1.8
	baz=211							
KMSC	Kings Mountain	24.46	41	P		P	19 18 43.6	-2.3
	baz=230							
S50A	Richmond	24.48	33	P		P	19 18 44.2	-1.8
	baz=220,SNR=6.0							
V54A	Nebo	24.50	39	P		P	19 18 43.9	-2.4
	baz=228,SNR=7.1							
Q47A	Bedord North L	24.50	28	P		P	19 18 45.1	-1.2
	baz=215							
U53A	Fall Branch	24.52	37	P		P	19 18 44.8	-1.7
	baz=226							
TIN	Tinemaha, Big	24.55	325	P		P	19 18 46.5	-0.4
	baz=137							
DUG	Dugway, Tooele	24.60	338	P		P	19 18 45.7	-1.7
	baz=152,SNR=6.7							
VOG	Valley Oaks Go	24.69	322	P		P	19 18 47.9	-0.1
	baz=134							
O44A	Mansfield	24.70	23	P		P	19 18 45.4	-2.6
	baz=209,SNR=11							
HDIL	Hopedale	24.75	21	P		P	19 18 46.5	-2.0
	baz=207,SNR=11							
Y58A	Scranton	24.80	46	P		P	19 18 47.5	-1.5
	baz=235							
Q48A	North Vernon	24.81	29	P		P	19 18 47.8	-1.3
	baz=216							
T52A	Hallie	24.82	36	P		P	19 18 48.0	-1.2
	baz=224							
X57A	Johnson Farm,	24.84	44	P		P	19 18 47.8	-1.6
	baz=233							
S51A	Beattyville	24.87	34	P		P	19 18 48.1	-1.5
	baz=222							
SCIA	State Center	24.88	14	P		P	19 18 48.6	-1.0
	baz=197							
W56A	Indian Trail	24.93	42	P		P	19 18 48.9	-1.3
	baz=231							
R50A	Paris	24.98	32	P		P	19 18 49.2	-1.3
	baz=220							
T53A	Wise	24.98	36	P		P	19 18 48.6	-2.1
	baz=225							
V55A	Taylorsville	24.99	40	P		P	19 18 49.3	-1.5
	baz=229							
P47A	Martinsville	25.02	27	P		P	19 18 49.4	-1.6
	baz=214							
O45A	Potomac	25.06	24	P		P	19 18 49.5	-1.8
	baz=211,SNR=6.6							
U54A	Nelsons Funny	25.07	38	P		P	19 18 49.8	-1.8
	baz=227							
M41A	Milan	25.09	18	P		P	19 18 50.7	-0.9
	baz=204							
N43A	Stutzman Famil	25.14	21	P		P	19 18 50.5	-1.4
	baz=207,SNR=8.5							
S52A	Salyersville	25.18	35	P		P	19 18 50.8	-1.6
	baz=223							
K22A	Casper	25.23	350	P		P	19 18 52.7	-0.3
	baz=167,SNR=17							
Q49A	Aurora	25.26	30	P		P	19 18 51.8	-1.3
	baz=218							
W57A	Gilead	25.32	43	P		P	19 18 52.6	-1.1
	baz=232							
R51A	Hillsboro	25.37	33	P		P	19 18 52.9	-1.2
	baz=221							
P48A	Milroy	25.38	29	P		P	19 18 53.1	-1.1
	baz=216							
N44A	Piper City	25.38	23	P		P	19 18 52.9	-1.3
	baz=209							
X58A	Rowland	25.40	45	P		P	19 18 53.5	-0.9
	baz=234							
V56A	Mocksville	25.41	41	P		P	19 18 53.4	-1.1
	baz=230							
SFIN	Lafayette	25.42	25	P		P	19 18 53.4	-1.2
	baz=212,SNR=8.6							
U55A	TA2, Sparta	25.52	39	P		P	19 18 52.8	-2.8
	baz=228,SNR=6.8							
L40A	Anamosa	25.53	17	P		P	19 18 53.9	-1.6
	baz=202							
Q50A	Georgetown	25.58	32	P		P	19 18 56.0	-0.1
	baz=220							
T54A	Tazewell	25.59	38	P		P	19 18 54.3	-1.9
	baz=227							
NVAR	Mina Array Bea	25.60	327	P		P	19 18 58.2	+1.7
	11nm,0.7s,baz=150,slow=9.1,SNR=49							
NVAR				LR		LR	19 30 26.8	
	comp=Z,99nm,19.9s,baz=194,slow=40							
M43A	Waltham Townsh	25.65	21	P		P	19 18 55.7	-0.9
	baz=207,SNR=5.7							
N45A	Kentland	25.66	24	P		P	19 18 57.4	+0.6
	baz=210							
O47A	Sheridan	25.68	27	P		P	19 18 55.4	-1.6
	baz=214							
S53A	Williamson	25.70	36	P		P	19 18 55.6	-1.7
	baz=225							
W58A	Raeford	25.74	44	P		P	19 18 55.9	-1.6
	baz=234							
P49A	Miami Univ. Ec	25.77	30	P		P	19 18 55.6	-2.1
	baz=217							
U56A	King	25.82	40	P		P	19 18 56.1	-2.2
	baz=230							
V57A	Coltrane Farms	25.91	42	P		P	19 18 57.2	-1.9
	baz=232							
L42A	Oliver, Polo	25.93	19	P		P	19 18 57.4	-1.8
	baz=205							
M44A	Midewin, Midew	25.93	22	P		P	19 18 57.3	-1.8
	baz=209							
K39A	Oelwein	25.95	15	P		P	19 18 57.9	-1.5
	baz=200							
BW06	Boulder Array	25.97	345	P		P	19 18 58.3	-1.5
	baz=161							
PDAR	Pinedale Array	25.97	345	P		P	19 18 59.0	-0.8
	4.0nm,0.7s,baz=139,slow=14,SNR=14							
PDAR				LR		LR	19 30 11.1	
	comp=Z,201nm,20.6s,baz=183,slow=39							
N46A	Monticello	26.00	25	P		P	19 18 58.5	-1.3
	baz=212							
ELK	Elko	26.02	334	P		P	19 19 00.6	+0.3
	0.3nm,0.3s,baz=67,slow=7.7,SNR=2.3							
ELK				LR		LR	19 30 15.1	
	comp=Z,360nm,19.1s,baz=155,slow=39							
Q51A	Peebles	26.04	32	P		P	19 18 57.7	-2.5
	baz=221							
ECSD	EROS Data Cent	26.09	7	P		P	19 18 59.9	-0.7
	baz=189							
T55A	Pulaski	26.09	39	P		P	19 18 58.7	-2.1
	baz=228							
O48A	Farmland	26.14	28	P		P	19 18 59.1	-2.1
	baz=216,SNR=7.6							
M45A	Boilermakers S	26.23	24	P		P	19 19 01.0	-0.8
	baz=210							
S54A	Dingess, Beckl	26.25	37	P		P	19 19 01.4	-0.8
	baz=226							
P50A	Jamestown	26.26	31	P		P	19 18 59.5	-2.7
	baz=219,SNR=8.0							
R53A	Hurricane	26.26	35	P		P	19 18 59.8	-2.4
	baz=224							
V58A	Windy Hill, Pi	26.28	43	P		P	19 19 00.9	-1.5
	baz=233							
BLA	Blacksburg	26.37	39	P		P	19 19 00.9	-2.3
	baz=228							
RSSD	Black Hills	26.37	355	P		P	19 19 02.9	-0.5
	baz=173							
N47A	Urbana	26.42	26	P		P	19 19 01.0	-2.6
	baz=214,SNR=6.2							
O49A	Covington	26.46	29	P		P	19 19 00.8	-3.2
	baz=217,SNR=5.9							
T56A	Rocky Mt	26.48	40	P		P	19 19 02.4	-1.8
	baz=229							
U57A	Blanch	26.53	41	P		P	19 19 02.5	-2.2
	baz=231							
P51A	Williamsport	26.53	32	P		P	19 19 02.2	-2.5
	baz=220							
Q52A	Bidwell	26.55	34	P		P	19 19 01.9	-2.9
	baz=223,SNR=6.0							
J39A	Decorah	26.59	15	P		P	19 19 04.8	-0.3
	baz=200							
M46A	Old House Fiel	26.59	25	P		P	19 19 03.9	-1.2
	baz=212							
SUSD	Miller	26.60	3	P		P	19 19 05.0	-0.2
	baz=184							
N48A	Decatur	26.69	27	P		P	19 19 03.9	-2.2
	baz=215,SNR=5.5							
R54A	Victor	26.69	37	P		P	19 19 04.7	-1.4
	baz=226							
S55A	Lewisburg	26.70	38	P		P	19 19 05.0	-1.1
	baz=227							
O50A	Cable	26.77	30	P		P	19 19 05.6	-1.2
	baz=219							
Q53A	Leroy	26.88	35	P		P	19 19 07.3	-0.5
	baz=224							
T57A	Hurt	26.94	40	P		P	19 19 07.2	-1.1
	baz=231							
N49A	Columbus Grove	27.12	28	P		P	19 19 08.5	-1.4
	baz=217							
P52A	Corning	27.12	33	P		P	19 19 08.2	-1.7
	baz=222							
L46A	Eue Claire	27.13	24	P		P	19 19 08.9	-1.1
	baz=212							
ACSO	Alum Creek Sta	27.14	31	P		P	19 19 09.0	-1.1
	baz=220							
S56A	Natural Bridge	27.19	39	P		P	19 19 09.5	-1.0
	baz=229							
Q54A	Coxs Mills	27.34	35	P		P	19 19 11.5	-0.5
	baz=225							
T58A	Grand View Acr	27.36	41	P		P	19 19 10.7	-1.4
	baz=232							
N50A	Nevada	27.48	30	P		P	19 19 12.5	-0.6
	baz=219							
S57A	Dark Hollow, R	27.61	40	P		P	19 19 13.0	-1.3
	baz=230							
O52A	Adamsville	27.63	33	P		P	19 19 13.0	-1.5
	baz=222							
M49A	Liberty Center	27.66	28	P		P	19 19 13.5	-1.1
	baz=216							
Q55A	Buckhannon	27.77	36	P		P	19 19 11.6	-4.3
	baz=226							
I42A	Draeger Farm,	27.87	19	P		P	19 19 15.2	-1.5
	baz=205							
U60A	Pendleton	27.96	44	P		P	19 19 16.0	-1.4
	baz=235							
L49A	Milan	28.26	27	P		P	19 19 18.9	-1.1
	baz=216							
AAM	Ann Arbor	28.46	27	P		P	19 19 20.7	-1.1
	baz=216							
P57A	Homestead Farm	29.29	38	P		P	19 19 28.9	-0.3
	baz=229							
K50A	Casco	29.30	28	P		P	19 19 28.6	-0.6
	baz=217							
N55A	Marion Center	29.61	35	P		P	19 19 30.4	-1.8
	baz=226							
I48A	Sherman Twp	29.98	25	P		P	19 19 35.2	-0.1
	baz=214							
PLID	Pearl Lake	30.02	338	eP		P	19 19 35.1	-0.8
	3.4nm,0.8s							
SSPA	Standing Stone	30.12	36	eP		P	19 19 36.8	+0.2
	20nm,1.4s							
SSPA	Standing Stone	30.12	36	P		P	19 19 36.3	-0.3
	baz=228							
M55A	Ridgway	30.22	34	P		P	19 19 35.7	-1.8
	baz=225							
YBH	Yreka Blue Hor	30.32	326	LR		LR	19 30 51.9	
	comp=Z,104nm,21.2s,baz=142,slow=34							
N57A	Milroy	30.39	36	P		P	19 19 36.7	-2.3
	baz=228							
AGMN	Agassiz Nation	30.68	6	P		P	19 19 40.7	-0.8
	baz=189							
BASO	Ashfield	30.70	28	P		P	19 19 35.7	-6.0
	baz=218							
F10A	Beach Ranch, E	31.22	338	eP		P	19 19 46.0	-0.4
	15nm,0.9s							
KLBO	Killbear Provi	32.40	28	P		P	19 19 55.9	-0.7
	baz=219							
SADO	Sadowa	32.44	29	LR		LR	19 34 49.7	
	comp=Z,68nm,20.5s,baz=346,slow=40							
ULM	Lac du Bonnet	32.61	6	P		P	19 19 56.0	-2.3
	3.4nm,0.6s,baz=182,slow=8.6,SNR=6.2							
ULM				LR		LR	19 33 11.9	
	comp=Z,78nm,19.0s,baz=232,slow=37							
BUKO	Buck Lake	32.83	28	P		P	19 19 58.2	-2.2
	baz=220							
F52A	Sundridge	33.14	28	P		P	19 20 00.9	-2.2
	baz=220							
NEW	Newport	33.16	340	LR		LR	19 33 03.8	
	comp=Z,107nm,20.0s,baz=162,slow=36							
BANO	Bancroft	33.20	30	P		P	19 20 01.4	-2.2
	baz=223							
E53A	Dumoine, Ponti	34.33	29	P		P	19 20 12.2	-1.2
	baz=222							
E54A	Lac Daplat, Po	34.59	29	P		P	19 20 15.4	-0.3
	baz=222							
ORIO	Orleans, Innes	34.70	32	P		P	19 20 14.3	-2.2
	baz=226							
D54A	Lac Fusel, La	35.37	29	P		P	19 20 21.6	-0.8
	baz=222							
LSQQ	Lebel-sur-Quev	36.66	26	P		P	19 20 31.7	-1.7
	baz=220							
MATQ	Matagami	36.93	25	P		P	19 20 34.9	-0.7
	baz=219							
CHGQ	Chibougamau	38.43	28	P		P	19 20 47.5	-0.8
	baz=223							
SCHQ	Schefferville	45.17	27	LR		LR	19 42 52.4	
	comp=Z,69nm,19.0s,baz=259,slow=39							
YKA	Yellowknife Ar	45.67	351	P		P	19 21 45.5	-1.5
	1.5nm,0.7s,baz=159,slow=7.3,SNR=5.8							
YKA				LR		LR	19 42 10.7	
	comp=Z,22nm,19.6s,baz=160,slow=38							
LPAZ	La Paz	46.74	135	P		P	19 21 58.8	+2.0
	0.6nm,0.8s,baz=321,slow=6.5,SNR=2.6							
LPAZ				LR		LR	19 41 23.2	
	comp=Z,39nm,18.6s,baz=316,slow=36							
LPAZ	La Paz	46.74	135	eP		P	19 21 57.2	+0.4
EPYK	Eagle Plains	53.90	343	P		P	19 22 49.7	+0.1
	baz=136							
INK	Inuvik	54.53	346	P		P	19 22 53.3	-0.8
	3.1nm,0.9s,baz=125,slow=8.3,SNR=6.7							
RIDG	Independent Ri	54.76	338	eP		P	19 22 56.4	+0.4
	13nm,0.9s							
BRLK	Bradley Lake	55.14	332	eP		P	19 22 58.0	-0.6
	13nm,0.9s							
PMR	Palmer	55.25	334	eP		P	19 23 00.1	+0.7
	6.1nm,0.7s							
HDA	Harding Lake	55.91	338	eP		P	19 23 04.6	+0.5
	8.1nm,1.0s							
HDA	Harding Lake	55.91	338	P		P	19 23 04.2	+0.1
	baz=124							
ILAR	Eielson Array	56.09	338	P		P	19 23 05.5	+0.2
	3.3nm,0.9s,baz=144,slow=5.9,SNR=31							
WRH	Wood River Hil	56.36	338	eP		P	19 23 07.5	+0.2
	5.8nm,0.9s							
TCOL	CIGO, UAF Yank	56.49	338	P		P	19 23 07.4	-0.9
	baz=123							
RES	Resolute Bay	56.98	2	P		P	19 23 10.2	-1.4
	1.3nm,0.8s,baz=202,slow=8.2,SNR=3.0							
TOLK	Toolik Lake Re	59.14	341	P		P	19 23 26.3	-0.5
	baz=124							
CPUP	Villa Florida	60.91	135	LR		LR	19 51 22.1	
	comp=Z,32nm,18.2s,baz=48,slow=37							
PLCA	Paso Flores	64.68	155	LR		LR	19 47 09.8	
	comp=Z,40nm,21.3s,baz=320,slow=31							
PEA1	Petropavlovsk-	82.64	323	eP		P	19 25 52.0	+2.5
PETK	Petropavlovsk-	82.64	323	P		P	19 25 52.0	+2.5
	5.6nm,1.1s,baz=110,slow=13,SNR=4.1							
ESDC	Sonseca Array	83.94	50	P		P	19 25 55.2	-1.4
	0.1nm,0.3s,baz=302,slow=2.9,SNR=3.2							
NB200	NORSAR Array S	84.74	27	eP		P	19 25 59.8	-0.3
NOA	NORSAR Array B	84.74	27	P		P	19 25 59.8	-0.3
	0.2nm,0.5s,baz=301,slow=5.0,SNR=2.4							
NOA				LR		LR	20 04 42.2	
	comp=Z,34nm,20.2s,baz=350,slow=36							
ARCES	ARCESS Array B	85.06	17	P		P	19 25 59.1	-2.5
	8.7nm,0.3s,baz=331,slow=5.2,SNR=3.6							
NRIK	Noril'sk	92.89	357	P		P	19 26 37.6	-1.1
	1.2nm,0.4s,baz=31,slow=2.1,SNR=4.6							
KIRV	Kirov	100.03	15	LR		LR	20 13 59.2	
	comp=Z,23nm,18.3s,baz=161,slow=36							
HHC	Hu-ho-hao-te	114.35	334	eP		PKPdf	19 32 10.7	+4.6
HHC				pmax		pmax		
	comp=Z,23nm,1.0s							
HHC				pmax		pmax		
	comp=Z,96nm,5.4s							
NJ2	Nanjing	117.53	322	eP		PKiKP	19 32 14.3	+2.0
NJ2				pmax		pmax		
	comp=Z,15nm,0.5s							
LZH	Lanzhou	121.54	337	ePKP		PKiKP	19 32 24.3	+4.0
LZH				pPKP		pPKPdf	19 32 33.2	-3.9
LZH				sPKP			19 32 39.0	
CD2	Chengdu	126.11	334	PKP		PKPdf	19 32 28.7	-0.2

*ISCJB **02** 19:17:12.3±0.5, 20°.42S±0°.05×177°.8W±0°.1, h534km, mb3.8/17, Error ellipse: s-maj=12.7km s-min=6.9km az=178.0*
*IDC **02** 19:17:13.6±2.5, 20°.35S×177°.87W, h534km±27km, mb3.4/17, mb1 3.6/18, mb1mx3.5/36, mbtmp4.3/18, Error ellipse: s-maj=16.2km s-min=13.1km az=136.0*

ISC 02 19:17:13.0±0.6, 20°.35S±0°.09×177°.8W±0°.1, h534km, n50, σ2^{0}03/53, mb3.7/17, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	8.88	181	P	P	19 19 10.4	-8.6
GLKZ				S	S	19 20 47.6	-15
DZM	Mont Dzumac	14.83	261	P	P	19 20 20.5	-0.7
	0.4nm,0.3s,baz=105,slow=18,SNR=4.4						
OUZ	Omahuta	16.66	205	P	P	19 20 39.5	+0.3
OUZ				S	S	19 23 36.3	+8.7
WCZ	Waipu Caves	17.01	202	P	P	19 20 42.3	-0.2
KUZ	Kuaotunu	17.30	198	P	P	19 20 44.1	-1.0
MXZ	Matakaoa Point	17.49	190	P	P	19 20 45.5	-1.4
WIAZ	Waiheke Island	17.52	199	P	P	19 20 46.4	-0.8
HAZ	Te Kaha	17.77	192	P	P	19 20 48.1	-1.3
HAZ				S	S	19 24 04.3	+18
PKGZ	Pakihiroa	17.85	191	P	P	19 20 51.4	+1.2
PKGZ				S	S	19 24 03.8	+17
RUGZ	Raukumara Rang	18.00	192	P	P	19 20 50.4	-1.2
RUGZ				S	S	19 24 08.1	+18
KMRZ	Kaimai	18.27	196	P	P	19 20 54.3	+0.2
TOZ	Tahuroa Road	18.29	197	P	P	19 20 54.1	0.0
MWZ	Matawai	18.38	192	P	P	19 20 52.5	-2.6
MWZ				S	S	19 24 13.9	+18
URZ	Urewera	18.39	193	P	P	19 20 50.3	-4.8
	2.2nm,0.3s,baz=279,slow=3.0,SNR=17						
URZ				S	S	19 23 53.5	-2.3
	0.2nm,0.3s,baz=8.1,slow=18,SNR=2.0						
MTHZ	Maungataniwha	19.02	193	P	P	19 20 58.7	-2.2
MTHZ				S	S	19 24 22.4	+16
MRHZ	Matea Rd	19.10	194	P	P	19 20 59.2	-2.4
BKZ	Black Stump Fm	19.40	194	P	P	19 21 01.1	-3.3
BKZ				S	S	19 24 36.8	+25
MCHZ	McNeill Hill	19.62	193	P	P	19 21 04.3	-2.0
VRZ	Vera Road	19.79	197	P	P	19 21 08.5	+0.6
BHHZ	Black Hill Sta	19.80	194	P	P	19 21 04.8	-3.2
BHHZ				S	S	19 24 43.1	+24
DVHZ	Dannevirke	20.55	193	P	P	19 21 12.8	-1.9
BFZ	Birch Farm	20.91	193	P	P	19 21 14.8	-3.1
BFZ				S	S	19 25 06.0	+30
MRZ	Mangatainoka R	21.03	194	P	P	19 21 15.7	-3.4
OGWZ	Otaki Gorge	21.28	195	P	P	19 21 19.2	-2.0
CTA	Charters Tower	33.73	264	P	P	19 23 09.4	-1.0
	2.5nm,0.3s,baz=88,slow=11,SNR=13						
STKA	Stephens Creek	38.06	244	P	P	19 23 45.8	-0.2
	6.6nm,0.8s,baz=87,slow=9.6,SNR=15						
JAY	Jayapura	44.21	288	P	P	19 24 35.2	+0.1
	3.9nm,0.4s,baz=136,slow=4.1,SNR=7.4						
ASAR	Alice Springs	44.77	257	P	P	19 24 39.0	-0.4
	19nm,0.8s,baz=100,slow=7.6,SNR=157						
ASAR				PcP	PcP	19 26 10.0	-0.1
	1.2nm,0.8s,baz=107,slow=4.0,SNR=4.7						
ASAR				S	S	19 30 37.1	-0.6
	0.9nm,0.9s,baz=91,slow=16,SNR=3.6						
WRA	Warramunga Arr	44.84	262	P	P	19 24 39.0	-1.0
	1.6nm,0.3s,baz=93,slow=8.1,SNR=40						
FITZ	Fitzroy Crossi	53.27	262	P	P	19 25 41.7	-0.6
	3.8nm,0.6s,baz=104,slow=5.5,SNR=17						
VNDA	Vanda	58.08	185	P	P	19 26 15.6	+0.9
	0.4nm,0.4s,baz=9.8,slow=7.4,SNR=6.9						
MJAR	Matsushiro Arr	70.22	323	P	P	19 27 32.2	-0.2
	1.3nm,0.7s,baz=157,slow=6.4,SNR=6.9						
ASAJ	Asahikawa	73.70	331	P	P	19 27 53.4	+1.0
	5.9nm,0.8s,baz=263,slow=8.1,SNR=3.7						
PETK	Petropavlovsk-	76.18	345	P	P	19 28 06.1	0.0
	1.9nm,0.7s,baz=127,slow=8.4,SNR=3.8						
KSRS	Korea Array	76.92	318	P	P	19 28 11.5	+1.0
	0.5nm,0.6s,baz=115,slow=5.8,SNR=3.4						
USRK	Ussuriysk Ar.	78.97	326	P	P	19 28 22.9	+1.6
	2.1nm,0.7s,baz=86,slow=9.9,SNR=4.8						
MAW	Mawson	81.78	200	P	P	19 28 35.8	+0.1
	1.1nm,0.5s,baz=197,slow=11,SNR=3.9						
TXAR	Lajitas Array	86.78	57	P	P	19 29 02.4	+1.3
	0.4nm,0.7s,baz=210,slow=5.2,SNR=5.4						
ILAR	Eielson Array	88.12	13	P	P	19 29 05.5	-0.8
	0.3nm,0.6s,baz=218,slow=5.5,SNR=5.5						
VNA3	Neumayer Olymp	88.28	176	P	P	19 29 07.0	-0.2
PDAR	Pinedale Array	88.70	43	P	P	19 29 09.9	0.0
	0.3nm,0.4s,baz=208,slow=5.1,SNR=2.8						
VNA2	Neumayer--Watz	88.72	177	P	P	19 29 09.1	-0.1
	baz=191,slow=4.5						
VNA1	Neumayer--Stat	88.95	177	P	P	19 29 09.7	-0.5
CMAR	Chiang Mai Arr	90.28	289	P	P	19 29 19.3	+1.8
	2.3nm,0.8s,baz=88,slow=3.9,SNR=4.1						
MKAR	Makanchi Array	111.26	313	PKiKP	PKiKP	19 34 45.5	-0.7
	0.3nm,0.6s,baz=114,slow=1.7,SNR=2.9						
AKASG	Malin Array Be	142.99	331	PKhKP	PKPpre	19 35 43.0	
	2.3nm,0.5s,baz=44,slow=4.4,SNR=16						
BRTR	Keskin Array B	146.90	313	PKPbc	PKPbc	19 35 55.1	-0.9
	1.0nm,0.6s,baz=132,slow=5.3,SNR=6.9						
CLL	Collm	147.97	347	∥i PKPbc	PKPbc	19 35 58.5	+0.4
	comp=Z,7.0nm,0.8s						
GERES	GERESS Array B	150.12	345	PKPbc	PKPbc	19 36 03.7	+0.1
	comp=Z,1.0nm,0.8s,baz=80,slow=1.6,SNR=6.6						
TORD	Torodi Ar. Bea	172.82	176	PKP	PKPdf	19 36 20.0	-1.7
	comp=Z,0.9nm,1.0s,baz=243,slow=1.9,SNR=3.3						
TORD				PKPab	PKPab	19 37 52.8	+1.3
	comp=Z,0.3nm,0.7s,baz=197,slow=1.5,SNR=2.7						

*ISCJB **02** 19:21:03.2±0.8, 17°.8S±0°.3×178°.6W±0°.2, h579km, mb3.7/10, Error ellipse: s-maj=46.4km s-min=13.9km az=151.4*
*IDC **02** 19:21:06.6±6.5, 17°.80S×178°.69W, h610km±81km, mb3.1/9, mb1 3.4/10, mb1mx3.1/36, mbtmp4.1/10, Error ellipse: s-maj=49.4km s-min=25.4km az=136.0*

ISC 02 19:21:04.0±1.0, 17°.9S±0°.3×178°.6W±0°.2, h579km, n11, σ0^{9}67/11, mb3.6/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.68	251	P	P	19 24 09.8	-0.1
	0.7nm,0.3s,baz=75,slow=18,SNR=8.7						
CTA	Charters Tower	33.28	260	P	P	19 26 54.9	0.0
	2.4nm,0.6s,baz=102,slow=10.0,SNR=7.0						
STKA	Stephens Creek	38.50	241	P	P	19 27 38.5	+0.8
	6.5nm,0.7s,baz=95,slow=9.6,SNR=16						
WRA	Warramunga Arr	44.47	259	P	P	19 28 24.6	-0.3
	1.0nm,0.2s,baz=94,slow=7.9,SNR=21						
ASAR	Alice Springs	44.63	254	P	P	19 28 26.4	+0.1
	25nm,0.6s,baz=88,slow=8.3,SNR=259						
FITZ	Fitzroy Crossi	52.86	261	P	P	19 29 27.3	+0.3
	0.8nm,0.3s,baz=127,slow=3.1,SNR=8.6						
NVAR	Mina Array Bea	79.50	44	P	P	19 32 12.5	+0.8
	0.7nm,0.6s,baz=220,slow=8.0,SNR=4.6						
MAW	Mawson	83.86	200	P	P	19 32 32.3	-0.7
	0.8nm,0.7s,baz=180,slow=6

VNDA	Vanda	71.12	178	P	P	19 35	13.7 +1.0
	0.7nm,1.0s,baz=316,slow=7.9,SNR=3.1						
MKAR	Makanchi Array	82.60	319	P	P	19 36	18.4 +0.4
	0.5nm,0.7s,baz=116,slow=4.7,SNR=3.5						
ILAR	Eielson Array	83.12	22	P	P	19 36	21.8 +1.6
	0.4nm,0.7s,baz=248,slow=4.8,SNR=4.4						
MAW	Mawson	84.64	203	P	P	19 36	28.5 +0.6
	0.9nm,0.5s,baz=78,slow=5.3,SNR=7.6						
NVAR	Mina Array Bea	91.89	52	P	P	19 37	03.1 -0.5
	0.5nm,0.8s,baz=254,slow=6.5,SNR=3.1						
TORD	Torodi Ar. Bea	152.28	286	PKPbc	PKPbc	19 43	50.1 -1.3
	1.4nm,0.6s,baz=99,slow=2.4,SNR=9.0						

GUC 02 19:25:01.2±0.7,24°.15S×67°.61W,h226km±12km,ML3.7, 6C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.95	298	eP	Pn	19 25 43.3	+1.8
PB15				eS	S	19 26 15.1	+2.3
GO02	Mina Guanaco	2.07	240	⇑iP	Pn	19 25 44.0	+1.3
GO02				eS	S	19 26 17.2	+2.2
PB06	IPOC Station P	2.31	308	eP	Pn	19 25 46.9	+1.9
PB06				eP		19 25 47.0	
PB06				IAML		19 26 24.1	
	comp=E,238nm,0.3s						
PB05	IPOC Station P	2.71	298	⇑iP	Pn	19 25 51.6	+2.4
PB05				eS	S	19 26 28.4	+1.8
PB05				IAML		19 26 35.6	
	comp=E,78nm,0.2s						
PB10	IPOC Station P	2.77	283	⇑eP	Pn	19 25 51.7	+2.0
PB10				eS	S	19 26 29.8	+2.2
PB09	IPOC Station P	2.78	327	⇑iP	Pn	19 25 51.9	+1.8
PB09				iS	S	19 26 30.5	+2.2
PB03	IPOC Station P	2.88	316	ePn	Pn	19 25 52.8	+1.8
PB03				eS	S	19 26 32.2	+2.2
PB03				IAML		19 26 36.2	
	comp=E,152nm,0.2s						
PB07	IPOC Station P	3.20	318	⇑iP	Pn	19 25 56.5	+1.8
PB07				iS	S	19 26 38.4	+1.8
PB01	IPOC Station P	3.54	330	⇑iP	Pn	19 25 59.5	+0.8
PB01				iS	S	19 26 44.4	+0.6

ISCJB ***02*** *20:03:17.8±0.6,9°.15S±0°.08×113°.03E±0°.05,h63km, mb3.9/5,Error ellipse: s-maj=12.2km s-min=5.7km az=19.9*

IDC ***02*** *20:03:18.5±4.0,8°.54S×113°.37E,h66km±43km,mb3.7/5, mb1 3.9/7,mb1mx3.4/43,mbtmp4.0/7,ML3.7/2,Error ellipse: s-maj=62.7km s-min=14.3km az=40.0*

DJA ***02*** *20:03:19.1±3.0,9°.S±7°.×11°.3E±°,h22km±29km,M4.6/12, mb5.2/1,mB5.5/1,MLv4.3/12,Mw(mB)5.0/1*

ISC 02 20:03:19.2±0.9,9°.1S±0°.1×113°.05E±0°.05,h63km,n18, σ1°.24/18,mb3.8/5,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.25	61	P	Pn	20 03 40.7	+0.1
PWJI	Pagerwojo	1.62	310	P	Pn	20 03 44.2	-1.4
DNP	Denpasar	2.17	79	P	Pn	20 03 53.8	+0.8
KMMI	Kalianget	2.22	24	P	Pn	20 03 53.8	+0.2
GRJI	Gresik	2.23	345	P	Pn	20 03 53.4	-0.4
NGJI	Ngawi	2.32	317	P	Pn	20 03 55.6	+0.5
SRBI	Singaraja	2.36	65	P	Pn	20 03 56.2	+0.7
WOJI	Wonogiri, Jawa	2.44	300	P	Pn	20 03 56.1	-0.6
UGM	Wanagama	2.76	295	P	Pn	20 04 00.6	-0.5
SMRI	Semarang	3.28	308	P	Pn	20 04 06.7	-1.5
CISI	Cisompet, Garu	5.40	286	P	Pn	20 04 37.4	+0.2
LEM	Lembang	5.83	292	P	Pn	20 04 45.8	+2.6
	3.5nm,0.3s,baz=12,slow=18,SNR=8.0						
LEM				S	Sn	20 05 51.1	+2.3
	2.6nm,0.3s,baz=319,slow=20,SNR=2.4						
FITZ	Fitzroy Crossi	15.16	128	P	Pn	20 06 48.2	-1.4
	0.2nm,0.3s,baz=306,slow=7.8,SNR=12						
FITZ				S	Sn	20 09 25.3	-11
	0.1nm,0.3s,baz=330,slow=16,SNR=5.7						
WRA	Warramunga Arr	23.23	120	P	P	20 08 19.9	-1.3
	2.3nm,0.8s,baz=287,slow=12,SNR=15						
ASAR	Alice Springs	24.66	129	P	P	20 08 34.3	+0.1
	2.2nm,0.6s,baz=303,slow=8.6,SNR=47						
ASAR				PcP	PcP	20 12 09.6	-0.9
	0.4nm,1.0s,baz=311,slow=1.7,SNR=4.3						
STKA	Stephens Creek	34.86	135	P	P	20 10 05.1	+0.6
	3.5nm,0.6s,baz=308,slow=7.8,SNR=14						
MKAR	Makanchi Array	62.02	337	P	P	20 13 29.2	-3.7
	0.3nm,0.4s,baz=142,slow=7.2,SNR=6.3						
ZALV	Zalesovo Beam	67.18	342	P	P	20 14 02.4	-4.0
	0.5nm,0.4s,baz=138,slow=7.4,SNR=3.6						

IDC ***02*** *20:08:23.8±0.3,7°.26N×124°.64E,h0km,mb5.0/33, mb1 5.1/35,mb1mx5.1/38,mbtmp5.0/35,ML3.7/2,MS4.9/36, Ms1 4.9/36,ms1mx4.8/47,Error ellipse: s-maj=10.1km s-min=7.6km az=41.0*

NEIC ***02*** *20:08:26.6±0.2,7°.28N×124°.93E,h10km,mb5.8/71, MS5.2/298,MW5.5,Error ellipse: s-maj=5.8km s-min=3.8km az=79.0,Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M_{rr}0.55; $M_{\theta\theta}$1.69; $M_{\phi\phi}$-2.24; $M_{r\theta}$0.19; $M_{\theta\phi}$0.61; $M_{\phi r}$-0.11; Best double couple: $M_0$2.10000×10^{17} NP1:ϕ_s36.00000°,δ82.00000°, λ176.00000°. NP2:ϕ_s127.00000°,δ86.00000°,λ8.00000°. Principal axes: T 1.8100, Plg8.0000°, Azm352.0000°; N 0.5300, Plg82.0000°, Azm152.0000°; P -2.3400, Plg3.0000°, Azm261.0000°;*

NEIC Felt [VI PIVS] at Carmen, [V PIVS] at Kabacan and [IV PIVS] at Matalam. Felt [IV] at Davao. Felt in much of central Mindanao.

MAN ***02*** *20:08:26.1,7°.36N×124°.79E,h12km,MS5.7*

MAN INTENSITY VI - CARMEN NORTH COTABATO; INTENSITY V - KABACAN NORTH COTABATO; INTENSITY IV - MATALAM NORTH COTABATO; INTENSITY III - KIDAPAWAN CITY CAGAYAN DE ORO CITY DAVAO CITY PRESIDENT ROXAS ARAKAN MAGPET AND MAKILALA NORTH COTABATO; COTABATO CITY NTENSITY II - KORONADAL SOUTH COTABATO; QUEZON MARAMAG VALENCIA AND DON CARLOS BUKIDNON; MISAMIS ORIENTAL; INTENSITY I - GENERAL SANTOS CITY; BUTUAN CITY.

ISCJB ***02*** *20:08:26.2±0.4,7°.26N±0°.01×124°.86E±0°.02,h16km±2km, mb5.6/195,MS5.2/389,Error ellipse: s-maj=2.9km s-min=2.1km az=170.5*

GCMT ***02*** *20:08:26.6±0.1,7°.37N±0°.01×124°.84E±0°.01,h13km, MW5.5/126,Moment Tensor Solution. s94,c158; s126,c290; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}0.04±.03; $M_{\theta\theta}$2.43±.03; $M_{\phi\phi}$-2.47±.04; $M_{r\theta}$-0.10±.07; $M_{\theta\phi}$0.56±.03; $M_{\phi r}$-0.83±.10; Best double couple: $M_0$2.64000×10^{17} NP1:ϕ_s39.00000°,δ82.00000°, λ-165.00000°. NP2:ϕ_s307.00000°,δ75.00000°, λ-8.00000°. Principal axes: T 2.5100, Plg5.0000°, Azm173.0000°; N 0.2630, Plg73.0000°, Azm67.0000°; P -2.7710, Plg16.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

MOS ***02*** *20:08:27.7±1.1,7°.18N×124°.74E,h29km,mb5.9/75, MS5.1/41 Error ellipse: s-maj=8.8km s-min=4.2km az=116.2*

BJI ***02*** *20:08:28.3±0.0,7°.13N×124°.97E,h49km,mb5.2/84, mB5.6/63,Ms5.5/96,Ms7 5.2/88*

DJA ***02*** *20:08:29.6±0.6,7°N±2°.×12°5E±°,h30km±5km,M5.6/107, mb5.6/107,mB6.0/88,MLv6.0/7,Mw(mB)5.6/88,Mwp5.4/5*

KLM ***02*** *20:08:31.0,7°.31N×125°.08E,h50km,mb5.5*

ISC 02 20:08:29.8±0.4,7°.22N±0°.02×124°.82E±0°.02,h32km±2km, h33km:pP-P,n1183,σ1°.65/972,mb5.6/207,MS5.2/389, 41C-23D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.57	270	⇓iP	Pb	20 08 37.0	-4.4
CTBH				iS	Sb	20 08 45.3	-4.1
BUKP	Musuan	0.70	20	eP	Pb	20 08 38.5	-5.1
BUKP				eS	Sb	20 08 48.2	-4.8
DMPH	Davao City--Mi	0.70	101	⇓iP	Pb	20 08 41.3	-2.3
DMPH				eS	Sn	20 08 53.5	+0.3
SKMP	Bagumbayan, Su	0.75	201	eP	Pb	20 08 41.4	-3.1
SKMP				eS	Sn	20 08 57.6	+3.1
DAV	Davao City (W)	0.77	101	Pg	Pb	20 08 43.0	-1.7
	7μm,0.3s,baz=297,slow=2.3,SNR=640						
DAV				Lg	Lg	20 08 55.7	
	8μm,0.3s,baz=323,slow=20,SNR=177						
DAV	Davao City (W)	0.77	101	ePn	Pb	20 08 43.4	-1.4
DAV				eSn	Sb	20 08 43.7	-11
DAV	Davao City (W)	0.77	101	P	Pb	20 08 41.1	-3.7
DAV	Davao City (W)	0.77	101	P	Pb	20 08 42.9	-1.8
	SNR=5469						
CGP	Cagayan de Oro	1.23	354	⇑iP	Pn	20 08 46.3	-4.5
CGP				iS	Sn	20 09 01.3	-5.1
DDMP	Don Marcelino,	1.42	141	ePn	Pn	20 08 53.4	0.0
DDMP				eS	Sb	20 09 19.0	+5.5
MATI	Mati	1.45	101	ePn	Pn	20 08 54.3	+0.4
MATI				eS	Sn	20 09 11.8	-0.1
PAGZ	Pagadian	1.55	294	ePn	Pn	20 08 52.3	-3.0
PAGZ				eS	Sn	20 09 12.6	-1.8
BIPH	Bislig	1.80	58	⇑ePn	Pn	20 08 57.5	-1.2
BIPH				eS	Sb	20 09 22.8	-1.6
BUTP	Butuan	1.91	25	ePn	Pn	20 09 00.2	+0.1
BUTP				eS	Sb	20 09 27.8	+0.4
DCPH	Dipolog City	1.98	313	⇓ePn	Pb	20 09 04.5	-0.8
DCPH				eS	Sb	20 09 31.0	+1.4
SNPH	Sibulan	2.63	323	⇑iP	Pn	20 09 10.2	+0.2
SNPH				iS	Sb	20 09 49.4	+1.3
SCPH	Surigao	2.63	15	⇑iP	Pb	20 09 17.5	+1.3
SCPH				iS	Sb	20 09 50.0	+1.9
ZCP	Zamboanga City	2.74	264	⇓iP	Pn	20 09 10.1	-1.4
ZCP				iS	Sn	20 09 45.7	+2.1
MSLP	Maasin	2.89	1	ePn	Pn	20 09 11.8	-1.8
LLP	Lapu-Lapu	3.19	345	⇑ePn	Pn	20 09 17.1	-0.7
LLP				eS	Sb	20 09 59.5	-4.7
SGSI	Sangihe	3.58	169	P	Pn	20 09 22.6	-0.6
OCLP	Ormoc	3.81	357	ePn	Pn	20 09 25.0	-1.4
PLP	Palo	3.92	2	⇑ePn	Pn	20 09 26.9	-0.9
PLP				iS	Sn	20 10 10.5	-2.3
GUIM	Jordan	4.04	327	ePn	Pn	20 09 29.1	-0.3
JAP	San Jose, Anti	4.51	321	⇓ePn	Pn	20 09 35.4	-0.5
KALP	Kalibo	5.06	331	⇓ePn	Pn	20 09 46.2	+2.7
CUYO	Cuyo Island	5.20	314	ePn	Pn	20 09 43.8	-1.7
MMPH	Masbate	5.24	347	ePn	Pb	20 09 59.6	-1.1
MMPH				eS	Sn	20 10 46.6	+1.3
CNP	Catarman	5.26	358	ePn	Pn	20 09 46.0	-0.2
OTRP	Odiongan	5.80	332	ePn	Pn	20 09 53.0	-0.7
SJMP	San Jose	6.36	325	ePn	Pn	20 09 58.8	-2.5
PVCP	Virac	6.37	354	ePn	Pn	20 10 01.7	+0.2
PPR	Puerto Princes	6.54	293	ePn	Pn	20 10 08.0	+4.2
BUSP	Coron	6.58	317	ePn	Pn	20 10 02.2	-2.3
ENPP	El Nido	6.63	307	ePn	Pn	20 10 02.9	-2.2
ENPP				eS	Sn	20 11 29.9	+10
KMSI	Cibinong	6.66	187	P	Pn	20 10 05.7	+0.2
BOAC	Boac	6.85	335	ePn	Pn	20 10 09.0	+0.9
BOAC				eS	Sn	20 10 52.4	-33
TNTI	Ternate	6.89	158	ePn	Pn	20 10 09.2	+0.5
TNTI	Ternate	6.89	158	P	Pn	20 10 09.7	+1.0
	560nm,0.9s,9μm11μm2.5nm						
BATP	Bataraza	7.12	283	ePn	Pn	20 10 07.4	-4.5
BATP				eS	Sn	20 11 29.3	-2.5
MRSI	Marisa	7.29	203	P	Pn	20 10 13.4	-0.7
	510nm,0.7s,5μm6μm5.0nm						
TGY	Tagaytay City	7.83	331	Pn	Pn	20 10 24.4	+2.7
	25nm,0.3s,baz=157,slow=12,SNR=1.7						
LUBP	Lubang	7.88	326	ePn	Pn	20 10 23.2	+1.0
MPSI	Mapaga	8.42	216	P	Pn	20 10 26.8	-2.8
	64nm,1.0s,780nm						
LUWI	Luwuk	8.46	194	ePn	Pn	20 10 32.3	+2.1
LUWI	Luwuk	8.46	194	P	Pn	20 10 31.4	+1.2
	4μm,1.0s,35μm						
BALP	Baler	9.04	340	ePn	Pn	20 10 37.7	-0.5
BALP				eS		20 10 56.1	
PALU	Palau	9.58	89	P	Pn	20 10 42.4	-3.2
	baz=9.4,SNR=9.3						
SMPP	San Manuel, Pa	9.75	336	ePn	Pn	20 10 49.8	+1.8
SCZP	Santa Cruz	9.77	331	ePn	Pn	20 10 48.7	+0.6
CAUP	Cauayan	10.10	343	ePn	Pn	20 10 52.6	0.0
SWI	Sorong	10.29	141	P	Pn	20 10 54.5	-0.8
	117nm,0.9s,2μm						
SGKI	Sangatta, Kali	10.54	223	P	Pn	20 10 56.9	-1.9
ABRA	Dolores	11.11	339	ePn	Pn	20 11 07.0	+0.4
ABRA				eS		20 11 34.7	
KDI	Kendari	11.32	191	P	Pn	20 11 09.0	-0.4
TTSI	Tana Toraja	11.35	206	P	Pn	20 11 11.0	+1.1
	591nm,1.5s,5μm						
SPSI	Sidrap Palu	12.20	205	P	Pn	20 11 22.6	+1.1
	105nm,1.1s,2μm						
BNSI	Bone	12.47	202	P	Pn	20 11 25.2	+0.1
	293nm,1.2s,5μm						
FAKI	Fak Fak	12.51	143	ePn	Pn	20 11 26.6	+0.8
FAKI	Fak Fak	12.51	143	P	Pn	20 11 27.0	+1.3
	368nm,1.3s,4μm5μm						
RKPI	Ransiki, Papua	12.75	133	P	Pn	20 11 29.6	+0.6
MTKI	Muara Teweh, K	12.80	231	P	Pn	20 11 29.3	-0.4
BBSI	Bau Bau	12.82	190	P	Pn	20 11 29.4	-0.6
KAPI	Kappang	13.16	203	Pn	Pn	20 11 35.0	+0.3
	3.0nm,0.3s,baz=39,slow=13,SNR=53						
KAPI				LR	LR	20 16 38.6	
	comp=Z,11μm,21.7s,baz=25,slow=38						
KAPI	Kappang	13.16	203	P	Pn	20 11 37.7	+3.0
	SNR=29						
BKSI	Bulukumba	13.31	201	P	Pn	20 11 37.2	+0.5
	98nm,1.6s,2μm						
SBUM	Sibu	13.42	250	ePn	Pn	20 11 40.6	+2.5
SBUM	Sibu	13.42	250	P	Pn	20 11 41.0	+2.9
BSSI	Bau Bau, Buton	13.96	198	P	Pn	20 11 46.7	+1.1
	164nm,0.9s,5μm						
KMPI	Kaimana, Papua	13.98	140	P	Pn	20 11 45.5	-0.4
SRPI	Serui, Papua	14.54	128	P	Pn	20 11 55.2	+1.7
	555nm,1.1s,7μm						
KSM	Kuching	15.55	249	ePn	Pn	20 12 07.5	+0.6
	338nm,1.3s						
KSM	Kuching	15.55	249	P	Pn	20 12 08.0	+1.1
TWG	Pinlang	15.92	347	ePn	Pn	20 12 11.8	+0.1
	292nm,0.9s						
MMRI	Maumere	15.96	189	ePn	Pn	20 12 13.0	+0.8
	814nm,1.3s						
MMRI	Maumere	15.96	189	P	P	20 12 14.3	-1.1
	507nm,1.2s,11μm						
EDFI	Ende, Flores	16.17	191	P	P	20 12 16.6	-1.2
	168nm,2.0s,4μm						
PBKI	Pangkalan Bun	16.41	234	P	P	20 12 21.3	+0.8
SAUI	Saumlaki	16.43	157	ePn	Pn	20 12 18.7	+0.6
	824nm,0.7s						
YULB	Yu-li	16.43	348	ePn	Pn	20 12 18.5	+0.3
	145nm,1.4s						
TPUB	Tau	16.49	346	ePn	Pn	20 12 19.4	+0.5
	158nm,0.9s						
SOEI	Soe	16.88	182	ePn	P	20 12 25.7	0.0
	1μm,1.2s						
SOEI	Soe	16.88	182	P	Pn	20 12 23.9	0.0
SSLB	Suanglung	16.88	348	ePn	Pn	20 12 23.1	-0.8
	86nm,1.0s						
NACB	Ninganchiao	17.14	350	ePn	P	20 12 28.3	-0.1
	153nm,1.4s						
YOJ	Yonaguni jima	17.23	354	P	P	20 12 30.8	+1.4
BATI	Baumata	17.35	184	P	Pn	20 12 29.1	-0.7
	18nm,0.3s,baz=13,slow=1.2,SNR=26						
BATI				LR	LR	20 19 53.5	
	comp=Z,9μm,21.5s,baz=8.0,slow=40						
BATI	Baumata	17.35	184	P	Pn	20 12 29.6	-0.1
WSI	Waingapu	17.37	195	P	Pn	20 12 30.5	+0.5
	694nm,1.1s,18μm						
PLAI	Plampang	17.42	204	P	P	20 12 31.2	-0.4
WBSI	Waikabubak, Su	17.60	198	P	P	20 12 33.8	+0.1
	191nm,1.2s,5μm						
KMMI	Kalianget	17.84	218	P	P	20 12 40.1	+3.9
	171nm,0.8s,2μm						
SRBI	Singaraja	17.97	212	P	P	20 12 41.6	+3.9
	133nm,1.2s,3μm						
GENI	Genyem	18.16	122	P	Pn	20 12 39.2	-0.5
HKC	Hong Kong Obse	18.17	327	⇑P	P	20 12 41.0	+1.2
DNP	Denpasar	18.47	211	P	Pn	20 12 45.0	+1.5
JAY	Jayapura	18.57	121	P	P	20 12 44.5	+0.1
	0.8nm,0.3s,baz=19,slow=4.5,SNR=5.4						
JAY				LR	LR	20 18 36.6	
	comp=Z,5μm,20.1s,baz=303,slow=33						
QZH	Quanzhou	18.60	342	⇑iP	Pn	20 12 44.9	-0.1
QZH				S	S	20 16 15.8	+0.9
QZH				pmax	pmax		
	comp=Z,6μm,7.1s						
QZH				LR	LR		
	comp=N,8μm,19.9s						
QZH				LR	LR		
	comp=E,6μm,21.3s						
QZH				LR	LR		
	comp=Z,8μm,27.5s						
GRJI	Gresik	18.67	222	P	Pn	20 12 47.0	+1.1
QIZ	Qiongzhong	18.70	310	P	Pn	20 12 45.8	-0.4
QIZ				pP	pP	20 12 53.6	-0.6
QIZ				S	S	20 16 15.6	-1.4
QIZ				pmax	pmax		
	comp=Z,37nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,2μm,3.7s						
QIZ				LR	LR		
	comp=N,9μm,14.3s						
QIZ				LR	LR		
	comp=E,5μm,15.6s						
QIZ				LR	LR		
	comp=Z,7μm,19.2s						
QIZ	Qiongzhong	18.70	310	eP	Pn	20 12 46.4	+0.1
	204nm,1.5s						
JAGI	Jajag, Banyuwa	18.87	214	eP	Pn	20 12 48.8	+0.4
	249nm,1.1s						
JAGI	Jajag, Banyuwa	18.87	214	P	Pn	20 12 50.5	+2.2
GZH	Guangzhou	19.25	326	P	Pn	20 12 56.8	+4.0
GZH				S	S	20 16 32.0	+4.0
GZH				pmax	pmax		
	comp=Z,2μm,6.1s						
GZH				LR	LR		
	comp=N,5μm,15.4s						
GZH				LR	LR		
	comp=E,10μm,15.8s						
NGJI	Ngawi	19.68	223	P	Pn	20 13 00.5	+2.4
	482nm,1.2s						
JOW	Kunigami	19.78	9	P	P	20 12 57.4	-0.1
	0.2nm,0.3s,baz=179,slow=14,SNR=21						
JOW	Kunigami	19.78	9	eP	P	20 12 57.5	+0.1
	337nm,1.4s						
TPI	Tanjungpandan	19.79	241	P	Pn	20 12 59.1	-0.3
	118nm,1.1s						
PWJI	Pagerwojo	19.94	221	P	Pn	20 13 02.3	+1.2
	232nm,1.5s						
SMRI	Semarang	20.17	226	P	Pn	20 13 06.8	+3.0
	378nm,2.3s,13μm						
WOJI	Wonogiri, Jawa	20.39	223	P	Pn	20 13 06.6	+0.2
	215nm,1.5s,3μm						
GUMO	Guam	20.70	71	P	P	20 13 07.3	-0.3
	47nm,0.8s,baz=170,slow=11,SNR=5.8						
GUMO				LR	LR	20 19 43.4	
	comp=Z,3μm,20.7s,baz=252,slow=33						
GUMO	Guam	20.70	71	eP	Pn	20 13 10.0	-0.1
	1μm,1.3s						
GUMO				LR	LR		
	comp=Z,5μm,20.0s						
GUMO	Guam	20.70	71	eP	Pn	20 13 10.0	0.0
GUMO				pmax	pmax		
	comp=Z,1μm,1.3s						
GUMO				MLR	MLR		
	comp=Z,5μm,20.0s						
UGM	Wanagama	20.72	224	eP	Pn	20 13 10.0	-0.3
	comp=Z,1μm,1.4s						
UGM	Wanagama	20.72	224	P	Pn	20 13 10.9	+0.6
	comp=Z,577nm,1.5s,comp=Z,12μm						
YOGI	Yogyakarta	20.81	224	P	P	20 13 08.4	-0.3
PPBI	Pangkal Pinang	20.84	244	P	P	20 13 09.6	+0.5
MTN	Manton Dam	20.90	163	eP	P	20 13 09.4	-0.2
	comp=Z,720nm,1.3s						
MTN				LR	LR		
	comp=Z,4μm,21.0s						
MTN	Manton Dam	20.90	163	P	P	20 13 09.2	-0.4
	baz=21,SNR=81						
TPRI	Tanjung Pinang	21.18	254	P	P	20 13 14.9	+2.2
	comp=Z,108nm,1.4s,comp=Z,2μm						
KDU	Kakadu	21.19	159	P	P	20 13 12.2	-0.6
	baz=21,SNR=215						
MYKOM	Kota Tinggi	21.58	257	eP	P	20 13 17.8	+0.7
	comp=Z,195nm,1.4s						
MYKOM				LR	LR		
	comp=Z,5μm,19.0s						
MYKOM	Kota Tinggi	21.58	257	P	P	20 13 18.0	+0.9
MMPI	Merauke	21.99	135	P	P	20 13 22.0	+0.6
PANO	Nakornpanom	22.05	298	P	P	20 13 21.7	-0.4
	comp=Z,1.3nm,1.1s						
LEM	Lembang	22.12	231	P	P	20 13 25.1	+2.1
	comp=Z,185nm,0.9s,baz=88,slow=9.1,SNR=19						
LEM	Lembang	22.12	231	P	P	20 13 24.8	+1.8
PMBI	Palembang	22.40	244	P	P	20 13 29.7	+3.8
CISI	Cisompet, Garu	22.43	229	eP	P	20 13 27.4	+1.2
	comp=Z,329nm,1.0s						
CISI	Cisompet, Garu	22.43	229	P	P	20 13 25.5	-0.7
CBJI	Citeko	22.47	233	P	P	20 13 30.7	+4.1
	comp=Z,422nm,1.3s,comp=Z,11μm						
SKNT	Sakolnakorn	22.54	297	P	P	20 13 26.3	-1.0
	comp=Z,89nm,1.1s						
SARN	Sarigan	22.54	63	PFAKE		20 13 40.0	+13
SARN				LR	LR		
	comp=Z,3μm,20.0s						
SBJI	Serang	22.88	235	P	P	20 13 33.1	+2.2
SKJI	Sukabumi	23.06	233	P	P	20 13 33.5	+0.8
KNRA	Kununurra	23.08	170	P	P	20 13 32.2	-0.8
	baz=23,SNR=45						
BLSI	Bandar Lampung	23.19	238	P	P	20 13 36.7	+2.6
	comp=Z,279nm,1.1s,comp=Z,4μm						
KLI	Kotabumi	23.26	239	P	P	20 13 37.2	+2.4
	comp=Z,470nm,1.1s,comp=Z,9μm						
KHON	Khomkaen	23.34	295	P	P	20 13 35.1	-0.4
	comp=Z,233μm,1.0s						
CGJI	Cibinong	23.51	235	P	P	20 13 39.5	+2.2
	comp=Z,320nm,1.3s,comp=Z,5μm						
MDSI	Maura Dua	23.66	241	P	P	20 13 39.6	+1.0
	comp=Z,156nm,1.2s,comp=Z,2μm						
IPM	Ipoh	23.82	265	eP	P	20 13 40.0	-0.3
	comp=Z,460nm,1.6s						
IPM				LR	LR		
	comp=Z,2μm,20.0s						
IPM	Ipoh	23.82	265	P	P	20 13 40.0	-0.3
KASI	Kota Agung	23.91	239	P	P	20 13 42.8	+1.8
	comp=Z,269nm,1.3s,comp=Z,4μm						
LHSI	Lahat	23.92	243	P	P	20 13 43.8	+2.7
	comp=Z,204nm,1.1s,comp=Z,3μm						
CHAI	Chaiyaphum	23.95	293	P	P	20 13 40.7	-0.7
	comp=Z,56μm,0.8s,comp=Z,697μm						
SSE	Sheshan	23.99	352	P	P	20 13 41.9	+0.3
SSE				S	S	20 17 59.7	+3.1
SSE				pmax	pmax		
	comp=Z,31nm,0.9s						
SSE				pmax	pmax		
	comp=Z,1.0nm,2.9s						
SSE				LR	LR		
	comp=Z,1μm,17.9s						
SSE				LR	LR		

WHN			LR	LR	
	comp=Z,8μm,12.5s				
WHN			LR	LR	
	comp=Z,14μm,19.6s				
NJ2	**Nanjing**	**25.32 348**	*e*P	**P**	**20 13 54.3 +0.6**
NJ2			pP	**sP**	**20 14 03.3 -3.5**
NJ2			sP	pP	20 14 11.2 +8.2
NJ2			S	**S**	**20 18 19.3 +1.4**
NJ2			pmax	pmax	
	comp=Z,220nm,1.5s				
NJ2			pmax	pmax	
	comp=Z,2μm,3.5s				
NJ2			LR	LR	
	comp=Z,4μm,20.1s				
NJ2			LR	LR	
	comp=Z,6μm,19.0s				
NJ2			LR	LR	
	comp=Z,4μm,22.8s				
PHET	**Kaeng Krachan**	**25.43 285**	P	**P**	**20 13 56.0 +1.1**
	comp=Z,120μm,1.1s				
PDSI	**Padang**	**25.61 253**	P	**P**	**20 14 00.9 +4.3**
	comp=Z,97nm,1.4s,comp=Z,1μm				
GYA	**Guiyang**	**25.78 320**⇑	*i*P	**P**	**20 14 00.4 +2.3**
GYA			pP	sP	20 14 11.8 +0.6
GYA			sP	pP	20 14 17.5 +10
GYA			PP	**PnPn**	**20 14 42.0 +6.4**
GYA			S	**S**	**20 18 27.9 +2.4**
GYA			sS	sS	20 18 46.6 +5.7
GYA			ScP	**ScP**	**20 21 01.6 -3.3**
GYA			pmax	pmax	
	comp=Z,30nm,0.8s				
GYA			pmax	pmax	
	comp=Z,730nm,6.2s				
GYA			LR	LR	
	comp=Z,9μm,17.0s				
GYA			LR	LR	
	comp=Z,6μm,13.9s				
GYA			LR	LR	
	comp=Z,3μm,19.5s				
UTTA	**Uttaradit**	**25.86 296**	P	**P**	**20 14 00.1 +1.3**
	comp=Z,44μm,1.1s,comp=Z,405μm				
MNSI	**Mandailing Nat**	**25.96 257**	P	**P**	**20 14 00.2 +0.4**
	comp=Z,122nm,1.5s,comp=Z,2μm				
NANT	**Nan**	**26.12 298**	P	**P**	**20 14 01.8 +0.6**
	comp=Z,45μm,0.8s,comp=Z,674μm				
PSI	**Prapat**	**26.16 262**	P	**P**	**20 13 59.8 -1.9**
	comp=Z,16nm,0.9s,baz=62,slow=8.4,SNR=8.4				
PSI			PcP	**PcP**	**20 17 27.1 -1.5**
	comp=Z,25nm,1.0s,baz=232,slow=3.3,SNR=4.8				
PSI	**Prapat**	**26.16 262**	P	**P**	**20 14 02.6 +0.9**
PSI			PCP	**PcP**	**20 17 27.5 -1.1**
PSI			pmax	pmax	
	comp=Z,66nm,1.4s				
SRDT	**SRDT**	**26.20 288**	P	**P**	**20 14 03.9 +2.0**
	comp=Z,30nm,1.6s,comp=Z,724nm				
PKDT	**Phuket**	**26.26 273**	P	**P**	**20 14 07.7 +5.2**
	comp=Z,100nm,1.5s,comp=Z,2μm				
JNU	**Nakatsue**	**26.38 12**	P	**P**	**20 14 00.7 -2.7**
	comp=Z,9.6nm,0.9s,baz=121,slow=5.9,SNR=3.7				
JNU			LR	LR	20 23 35.5
	comp=Z,2μm,21.9s,baz=205,slow=35				
TSI	**Tuntungan**	**26.39 263**	P	**P**	**20 14 05.4 +1.7**
PPSI	**Pulau Pagai**	**26.67 249**	P	**P**	**20 14 09.7 +3.5**
UMPA	**Umpang Tak**	**26.91 292**	P	**P**	**20 14 10.7 +2.4**
	comp=Z,74μm,1.0s,comp=Z,809μm				
LAMP	**Lampang**	**26.96 297**	P	**P**	**20 14 11.8 +3.1**
	comp=Z,80μm,1.0s,comp=Z,719μm				
SISI	**Saibi**	**27.04 253**	P	**P**	**20 14 08.9 -0.6**
PAYA	**Payao**	**27.07 299**	P	**P**	**20 14 10.0 +0.3**
	comp=Z,86μm,1.1s,comp=Z,854μm				
ENH	**Enshi**	**27.07 330**	*e*P	**P**	**20 14 09.2 -0.4**
	comp=Z,176nm,1.6s				
ENH			LR	LR	
	comp=Z,6μm,21.0s				
KCSI	**Kotacane, Aceh**	**27.17 264**	P	**P**	**20 14 08.6 -2.1**
CM31	**Chiang Mai Arr**	**27.55 296**	*e*P	**P**	**20 14 14.7 +0.7**
	comp=Z,55nm,1.3s				
CM31			*e*PcP	**PcP**	**20 17 31.2 -0.4**
CM31	**Chiang Mai Arr**	**27.55 296**	P	**P**	**20 14 14.0 0.0**
	SNR=11				
CMAR	**Chiang Mai Arr**	**27.55 296**	P	**P**	**20 14 10.0 -4.0**
	comp=Z,1.2nm,0.3s,baz=120,slow=7.2,SNR=13				
CMAR			PcP	**PcP**	**20 17 31.2 -0.4**
	comp=Z,5.0nm,1.0s,baz=93,slow=1.2,SNR=6.6				
CMAR			LR	LR	20 25 15.7
	comp=Z,4μm,19.2s,baz=110,slow=37				
CMAR	**Chiang Mai Arr**	**27.55 296**	*i* P	**P**	**20 14 12.8 -1.2**
KMI	**Kunming**	**27.60 313**	P	**P**	**20 14 16.0 +1.3**
KMI			pP	sP	20 14 25.8 -2.1
KMI			sP	pP	20 14 31.1 +7.1
KMI			PP	**PP**	**20 15 08.9 -8.5**
KMI			S	**S**	**20 18 56.1 +1.5**
KMI			sS	sS	20 19 17.0 +7.0
KMI			pmax	pmax	
	comp=Z,39nm,1.5s				
KMI			pmax	pmax	
	comp=Z,500nm,4.9s				
KMI			LR	LR	
	comp=Z,5μm,16.0s				
KMI			LR	LR	
	comp=Z,7μm,17.4s				
KMI			LR	LR	
	comp=Z,6μm,17.2s				
KMI	**Kunming**	**27.60 313**	*e*P	**P**	**20 14 15.1 +0.4**
	comp=Z,118nm,1.4s				
KMI			LR	LR	
	comp=Z,5μm,19.0s				
CMMT	**Chiang Mai**	**27.67 297**	P	**P**	**20 14 15.0 -0.1**
	comp=Z,13nm,1.2s,comp=Z,440nm				
CHTO	**Chiang Mai**	**27.67 297**	*e*P	**P**	**20 14 14.7 -0.4**
	comp=Z,69nm,1.5s				
CHTO			LR	LR	
	comp=Z,4μm,19.0s				
CHTO	**Chiang Mai**	**27.67 297**	*e*P	**P**	**20 14 14.7 -0.4**
CHTO			pmax	pmax	
	comp=Z,69nm,1.5s				
CHTO			MLR	MLR	
	comp=Z,4μm,19.0s				
CHTO	**Chiang Mai**	**27.67 297**	P	**P**	**20 14 17.6 +2.4**
	SNR=15				
CHTO			P	**P**	**20 14 17.6 +2.4**
	SNR=15				
PMG	**Port Moresby**	**27.72 126**	P	**P**	**20 14 14.3 -1.3**
	comp=Z,80nm,0.9s,baz=277,slow=6.2,SNR=11				
PMG			LR	LR	20 27 03.8
	comp=Z,2μm,19.3s,baz=290,slow=40				
PMG	**Port Moresby**	**27.72 126**	*e*P	**P**	**20 14 15.1 -0.5**
	comp=Z,108nm,1.0s				
PMG			LR	LR	
	comp=Z,3μm,18.0s				
PMG	**Port Moresby**	**27.72 126** *c*	*i*P	**P**	**20 14 14.4 -1.2**
PMG			pmax	pmax	
	comp=Z,270nm,0.9s				
GSI	**Gunungsitoli**	**27.78 259**	*e*PcP	**PcP**	**20 17 32.6 +0.3**
GSI			LR	LR	
	comp=Z,4μm,18.0s				
GSI	**Gunungsitoli**	**27.78 259**	P	**P**	**20 14 14.2 -2.0**
COEN	**Coen**	**27.83 139**	*e*P	**P**	**20 14 16.0 -0.6**
	comp=Z,238nm,1.0s				
COEN			LR	LR	
	comp=Z,4μm,22.0s				
COEN	**Coen**	**27.83 139**	P	**P**	**20 14 15.9 -0.6**
	baz=28,SNR=13				
MLSI	**Meulaboh, Aceh**	**28.42 266**	P	**P**	**20 14 21.0 -0.9**
WRAB	**Tennant Creek**	**28.57 161**	*e*P	**P**	**20 14 21.3 -1.8**
	comp=Z,203nm,1.2s				
WRAB	**Tennant Creek**	**28.57 161** *c*	*e*P	**P**	**20 14 21.6 -1.5**
WRAB			pmax	pmax	
	comp=Z,233nm,1.3s				
WRA	**Warramunga Arr**	**28.57 161**	P	**P**	**20 14 21.7 -1.4**
	comp=Z,94nm,1.1s,baz=339,slow=10,SNR=108				
WRA	**Warramunga Arr**	**28.57 161**	*i* P	**P**	**20 14 21.7 -1.4**
WRA			pmax	pmax	
	comp=Z,97nm,1.1s				
JHJ2	**Mitsune**	**29.28 26**	PFAKE		20 14 40.0 +11
JHJ2			LR	LR	
	comp=Z,6μm,18.0s				
TIA	**Tai'an**	**29.70 347**	P	**P**	**20 14 31.7 -1.3**
TIA			S	**S**	**20 19 26.4 -0.5**
TIA			pmax	pmax	
	comp=Z,45nm,1.6s				
TIA			pmax	pmax	
	comp=Z,480nm,2.6s				
TIA			LR	LR	
	comp=Z,3μm,20.6s				
TIA			LR	LR	
	comp=Z,3μm,16.7s				
TIA			LR	LR	
	comp=Z,4μm,16.7s				
INU	**Inuyama**	**30.15 20**	*e*P	**P**	**20 14 35.3 -1.7**
	comp=Z,101nm,1.7s				
INU			LR	LR	
	comp=Z,3μm,20.0s				
KSRS	**Korea Array**	**30.23 5**	P	**P**	**20 14 34.8 -2.8**
	comp=Z,2.6nm,0.8s,baz=183,slow=9.5,SNR=14				
XAN	**Xi'an**	**30.46 333**	P	**P**	**20 14 38.2 -1.6**
XAN			pP	sP	20 14 49.0 -4.0
XAN			sP	pP	20 14 54.4 +5.2
XAN			PP	**PnPn**	**20 15 35.4 -3.8**
XAN			S	**S**	**20 19 31.7 -7.3**
XAN			pmax	pmax	
	comp=Z,56nm,1.6s				
XAN			pmax	pmax	
	comp=Z,590nm,4.9s				
XAN			LR	LR	
	comp=Z,4μm,15.9s				
XAN			LR	LR	
	comp=Z,3μm,14.9s				
XAN			LR	LR	
	comp=Z,4μm,20.2s				
XAN	**Xi'an**	**30.46 333**	*e*P	**P**	**20 14 38.7 -1.1**
	comp=Z,210nm,1.7s				
XAN			LR	LR	
	comp=Z,5μm,20.0s				
XAN	**Xi'an**	**30.46 333**	*e*P	**P**	**20 14 38.7 -1.1**
XAN			pmax	pmax	
	comp=Z,211nm,1.7s				
XAN			MLR	MLR	
	comp=Z,5μm,20.0s				
CD2	**Chengdu**	**30.72 323**⇑	*i*P	**P**	**20 14 42.9 +0.7**
CD2			S	**S**	**20 19 44.2 +1.0**
CD2			sS	sS	20 20 04.5 +5.9
CD2			ScS	**ScS**	**20 25 12.0 -4.7**
CD2			pmax	pmax	
	comp=Z,110nm,1.9s				
CD2			pmax	pmax	
	comp=Z,690nm,4.7s				
CD2			LR	LR	
	comp=Z,16μm,18.6s				
CD2			LR	LR	
	comp=Z,18μm,17.1s				
CD2			LR	LR	
	comp=Z,8μm,17.7s				
QIS	**Mount Isa**	**31.20 153**	P	**P**	**20 14 45.8 -0.6**
	baz=31,SNR=43				
GIRL	**Giralia**	**31.44 199**	P	**P**	**20 14 49.7 +1.2**
	baz=32,SNR=4.0				
MAJO	**Matsushiro**	**31.64 21**	*e*P	**P**	**20 14 48.3 -1.8**
	comp=Z,103nm,1.9s				
MAJO			LR	LR	
	comp=Z,4μm,20.0s				
MAJO	**Matsushiro**	**31.64 21** *c*	*i*P	**P**	**20 14 49.8 -0.3**
MAJO			pmax	pmax	
	comp=Z,64nm,2.1s				
MAT	**Matsushiro**	**31.64 21**	P	**P**	**20 14 48.1 -2.0**
MAT			S	**S**	**20 19 57.4 0.0**
MJAR	**Matsushiro Arr**	**31.64 21**	P	**P**	**20 14 47.5 -2.6**
	comp=Z,3.7nm,0.8s,baz=196,slow=9.9,SNR=14				
MJAR			LR	LR	20 27 06.4
	comp=Z,3μm,19.7s,baz=205,slow=35				
MJB9	**Matsu-Tunnel**	**31.64 21**	*e*P	**P**	**20 14 48.1 -2.0**
	comp=Z,101nm,1.9s				
MJB9			LR	LR	
	comp=Z,4μm,20.0s				
DL2	**Dalian**	**31.68 355**	P	**P**	**20 14 49.6 -0.7**
DL2			S	**S**	**20 19 54.1 -3.6**
DL2			pmax	pmax	
	comp=Z,22nm,0.8s				
DL2			pmax	pmax	
	comp=Z,290nm,3.6s				
DL2			LR	LR	
	comp=Z,2μm,18.7s				
DL2			LR	LR	
	comp=Z,4μm,14.5s				
DL2			LR	LR	
	comp=Z,4μm,15.1s				
PBA	**Port Blair**	**31.93 280**	*e*P	P	20 14 53.7 +0.8
AS31	**Alice Springs**	**31.96 164**	*e*P	**P**	**20 14 52.6 -0.5**
	comp=Z,11nm,0.8s				
AS31			*e*PcP	**PcP**	**20 17 41.8 -1.1**
ASAR	**Alice Springs**	**31.96 164**	P	**P**	**20 14 52.0 -1.1**
	comp=Z,22nm,0.6s,baz=342,slow=6.9,SNR=208				
ASAR			PcP	**PcP**	**20 17 41.8 -1.1**
	comp=Z,4.7nm,0.8s,baz=348,slow=3.0,SNR=2.9				
WRKA	**Warakurna**	**32.24 174**	P	**P**	**20 14 55.1 -0.4**
	baz=32,SNR=94				
TIY	**Taiyuan**	**32.37 341**	*e*P	**P**	**20 14 59.1 +2.5**
TIY			S	**S**	**20 20 08.2 -0.6**
TIY			sS	**sS**	**20 20 29.1 +4.8**
TIY			pmax	pmax	
	comp=Z,170nm,1.6s				
TIY			LR	LR	
	comp=Z,2μm,13.1s				
TIY			LR	LR	
	comp=Z,4μm,17.3s				
TIY			LR	LR	
	comp=Z,5μm,19.6s				
PATS	**Pohnpei**	**33.24 89**	PFAKE		20 15 20.0 +16
PATS			LR	LR	
	comp=Z,4μm,20.0s				
BJT	**Baijiatuau**	**33.56 348**	*e*P	**P**	**20 15 06.1 -0.8**
	comp=Z,666nm,1.9s				
BJT			LR	LR	
	comp=Z,2μm,18.0s				
BJT	**Baijiatuau**	**33.56 348**	*e*P	**P**	**20 15 06.1 -0.8**
BJT			pmax	pmax	
	comp=Z,666nm,1.9s				
BJT			MLR	MLR	
	comp=Z,2μm,18.0s				
BJI	**Beijing**	**33.58 348**	P	**P**	**20 15 06.0 -1.0**
BJI			S	**S**	**20 20 28.4 +1.0**
BJI			pmax	pmax	
	comp=Z,70nm,1.9s				
BJI			LR	LR	
	comp=Z,780nm,25.1s				
BJI			LR	LR	
	comp=Z,2μm,25.7s				
BJI			LR	LR	
	comp=Z,970nm,42.2s				
CTAO	**Charters Tower**	**34.37 143**	*e*P	**P**	**20 15 14.2 +0.1**
	comp=Z,189nm,1.6s				
CTAO			LR	LR	
	comp=Z,3μm,20.0s				
CTAO	**Charters Tower**	**34.37 143**	*e*P	**P**	**20 15 14.2 +0.1**
CTAO			pmax	pmax	
	comp=Z,189nm,1.6s				
CTAO			MLR	MLR	
	comp=Z,3μm,20.0s				
SNY	**Shenyang**	**34.48 358**⇓	P	**P**	**20 15 14.1 -0.7**
SNY			S	**S**	**20 20 39.2 -2.0**
SNY			pmax	pmax	
	comp=Z,140nm,1.8s				
SNY			pmax	pmax	
	comp=Z,520nm,3.5s				
SNY			LR	LR	
	comp=Z,3μm,17.1s				
SNY			LR	LR	
	comp=Z,3μm,19.0s				
SNY			LR	LR	
	comp=Z,2μm,26.3s				
MOKO	**MOKOCHONG**	**34.52 307**	*e*P	**P**	**20 15 15.3 -0.3**
LZH	**Lanzhou**	**34.55 329**⇑	P	**P**	**20 15 16.7 +1.0**
LZH			pP	sP	20 15 31.0 +2.1
LZH			sP	pP	20 15 35.4 +10
LZH			PP	**PnPn**	**20 16 32.3 +0.8**
LZH			S	**S**	**20 20 44.6 +1.8**
LZH			pmax	pmax	
	comp=Z,100nm,1.6s				
LZH			pmax	pmax	
	comp=Z,540nm,4.9s				
LZH			LR	LR	
	comp=Z,5μm,15.2s				
LZH			LR	LR	
	comp=Z,6μm,15.7s				
LZH			LR	LR	
	comp=Z,7μm,15.7s				
KOHI	**KOHIMA**	**34.58 306**	*e*P	**P**	**20 15 13.6 -2.5**
JORH	**JORHAT**	**34.93 307**	*e*P	**P**	**20 15 18.9 0.0**
HHC	**Hu-ho-hao-te**	**35.51 343**	*e*P	**P**	**20 15 26.2 +2.3**
HHC			PP	**PP**	**20 16 47.5 +2.6**
HHC			S	**S**	**20 20 58.3 +0.9**
HHC			pmax	pmax	
	comp=Z,150nm,1.9s				
HHC			pmax	pmax	
	comp=Z,1μm,5.3s				
HHC			LR	LR	
	comp=Z,5μm,19.2s				
HHC			LR	LR	
	comp=Z,5μm,20.8s				
HHC			LR	LR	
	comp=Z,7μm,19.8s				
ZIRO	**ZIRO**	**35.62 308**	*e*P	**P**	**20 15 24.7 -0.4**
ZIRO			IAmb	IAmb	20 15 28.4
	comp=Z,329nm,2.1s				
MSHR	**Mys Shultsa**	**35.66 8**⇓	*i*P	**P**	**20 15 23.9 -1.0**
BTO	**Baotou**	**35.77 341**	*e*P	**P**	**20 15 26.0 -0.1**
BELO	**BELONIA**	**35.80 300**	*e*P	**P**	**20 15 26.6 +0.2**
BELO			IAmb	IAmb	20 15 30.9
	comp=Z,2μm,3.0s				
TEZP	**TEZPUR**	**36.03 306**	*e*P	**P**	**20 15 27.7 -0.7**
VLA	**Vladivostok**	**36.29 9**	*d i*P	**P**	**20 15 31.6 +1.3**
VLA			pmax	pmax	
	comp=Z,117nm,1.5s				
SHL	**Shillong**	**36.32 304**	*e*P	**P**	**20 15 31.1 0.0**
	comp=Z,244nm,1.6s				
SHL			LR	LR	
	comp=Z,4μm,21.0s				
SHL	**Shillong**	**36.32 304**	*e*P	**P**	**20 15 31.1 0.0**
SHL			pmax	pmax	
	comp=Z,244nm,1.6s				
SHL			MLR	MLR	
	comp=Z,4μm,21.0s				
SHL	**Shillong**	**36.32 304**	*e*P	**P**	**20 15 30.8 -0.3**
CN2	**Changchun**	**36.44 1**	*e*P	**P**	**20 15 32.2 +0.6**
CN2			PP	**PP**	**20 16 59.8 +4.9**
CN2			*e*S	**S**	**20 21 11.1 -0.2**
CN2			pmax	pmax	
	comp=Z,20nm,0.6s				
CN2			pmax	pmax	
	comp=Z,200nm,3.0s				
CN2			LR	LR	
	comp=Z,2μm,14.0s				
CN2			LR	LR	
	comp=Z,2μm,14.0s				
CN2			LR	LR	
	comp=Z,2μm,17.0s				
MORW	**Morawa**	**37.06 193**	PFAKE		20 15 50.0 +13
MORW			LR	LR	
	comp=Z,2μm,22.0s				
MORW	**Morawa**	**37.06 193**	P	**P**	**20 15 37.0 0.0**
	baz=37,SNR=23				
TAWA	**Tawang**	**37.21 307**	*e*P	**P**	**20 15 37.6 -1.2**
USA0B	**Ussuriysk Arra**	**37.36 9**	*e*P	**P**	**20 15 38.5 -1.0**
USRK	**Ussuriysk Ar.**	**37.36 9**	P	**P**	**20 15 37.7 -1.8**
	comp=Z,15nm,0.7s,baz=192,slow=6.8,SNR=27				
USRK			LR	LR	20 34 08.2
	comp=Z,2μm,18.0s,baz=179,slow=41				
MDJ	**Mudanjiang**	**37.48 6**	P	**P**	**20 15 40.0 -0.5**
MDJ			PP	**PnPn**	**20 17 09.1 +1.8**
MDJ			S	**S**	**20 21 30.1 +3.0**
MDJ			pmax	pmax	
	comp=Z,62nm,2.6s				
MDJ			LR	LR	
	comp=Z,4μm,18.0s				
MDJ			LR	LR	
	comp=Z,2μm,15.0s				
MDJ			LR	LR	
	comp=Z,5μm,18.1s				
MDJ	**Mudanjiang**	**37.48 6**	*e*P	**P**	**20 15 40.5 +0.1**
	comp=Z,237nm,1.9s				
MDJ			*e*PcP	**PcP**	**20 17 58.7 +0.2**
MDJ			LR	LR	
	comp=Z,3μm,18.0s				
FORT	**Forrest**	**37.91 175**	PFAKE		20 16 00.0 +16
FORT			LR	LR	
	comp=Z,1μm,20.0s				
FORT	**Forrest**	**37.91 175**	P	**P**	**20 15 44.6 +0.3**
	baz=38,SNR=81				
ERM	**Erimo**	**38.27 22**	PFAKE		20 16 00.0 +13
ERM			LR	LR	
	comp=Z,3μm,20.0s				
ERM	**Erimo**	**38.27 22**	P	**P**	**20 15 48.7 +1.6**
BLDU	**Ballidu**	**38.42 191**	P	**P**	**20 15 48.3 -0.2**
	baz=39,SNR=42				
KMBL	**Kambalda**	**38.47 184**	P	**P**	**20 15 48.8 -0.2**
	baz=39,SNR=35				
HNR	**Honiara**	**38.71 115**	PFAKE		20 16 00.0 +8.7
HNR			LR	LR	
	comp=Z,2μm,20.0s				
LSA	**Lhasa**	**38.74 310**	PFAKE		20 16 00.0 +8.1
LSA			LR	LR	
	comp=Z,2μm,20.0s				
LSA	**Lhasa**	**38.74 310**	P	**P**	**20 15 52.8 +1.0**
TEY	**Ternei**	**39.04 13**⇓	*e*P	**P**	**20 15 53.4 -0.1**
TEY			pmax	pmax	
	comp=Z,30nm,1.0s				
TEY			pmax	pmax	
	comp=N,30nm,1.0s				
GTA	**Gaotai**	**39.14 329**⇓	P	**P**	**20 15 55.3 +0.6**
GTA			pP	sP	20 16 06.2 -1.8
GTA			sP	pP	20 16 12.0 +7.8
GTA			PP	**PnPn**	**20 17 30.9 +3.4**
GTA			S	**S**	**20 21 55.0 +2.3**
GTA			sS	sS	20 22 16.5 +8.1
GTA			pmax	pmax	
	comp=N,26nm,1.3s				
GTA			pmax	pmax	
	comp=N,710nm,5.7s				
GTA			LR	LR	
	comp=N,4μm,19.6s				
GTA			LR	LR	
	comp=N,3μm,18.9s				
GTA			LR	LR	
	comp=N,5μm,14.4s				
KLBR	**Kellerberrin**	**39.18 190**	P	**P**	**20 15 54.8 -0.1**
	baz=40,SNR=100				
GTK	**Tadong**	**39.72 305**	*e*P	**P**	**20 15 59.3 -0.4**
GTK			IAmb	IAmb	20 16 04.1
	comp=Z,370nm,1.9s				
MUN	**Mundaring**	**39.84 191**	P	**P**	**20 16 00.6 +0.2**
	baz=40,SNR=20				
ASAJ	**Asahikawa**	**39.90 20**	LR	LR	20 31 07.8
	comp=Z,2μm,21.9s,baz=215,slow=34				
BWNR	**Bhubaneshwar**	**39.94 293**	*ex*	**P**	**20 15 56.9 -4.5**
BWNR			IAmb	IAmb	20 15 59.4
	comp=Z,307nm,2.3s				
ODAN	**Odare**	**40.54 303**	*e*P	**P**	**20 16 06.6 0.0**
	comp=Z,132nm,1.1s				
NWAO	**Narrogin (SRO)**	**40.57 190**	P	**P**	**20 16 05.8 -0.7**
	comp=Z,118nm,0.7s,baz=23,slow=8.2,SNR=80				
NWAO	**Narrogin (SRO)**	**40.57 190**	*e*P	**P**	**20 16 05.8 -0.7**
NWAO			*e*P	**P**	**20 16 06.8 +0.4**
NWAO			LR	LR	
	comp=Z,2μm,20.0s				
NWAO	**Narrogin (SRO)**	**40.57 190**	P	**P**	**20 16 06.7 +0.2**
	baz=41,SNR=71				
NWAO	**Narrogin (SRO)**	**40.57 190**	*e*P	**P**	**20 16 05.8 -0.7**
NWAO			MLR	MLR	
	comp=Z,2μm,20.0s				
NWAO	**Narrogin (SRO)**	**40.57 190**	P	**P**	**20 16 06.5 0.0**
	SNR=11				
BOK	**Bokaro**	**40.79 298**	*e*P	**P**	**20 16 08.6 0.0**
BOK			IAmb	IAmb	20 16 12.2
YUK	**Yuzh-Kuril'sk**	**41.03 23**	*e*P	P	20 16 03.1 -7.0
YUK			*e*PPP	PPP	20 18 06.6
YUK			*e*S	**S**	**20 22 18.5 -1.9**
YUK			MLR	MLR	
	comp=Z,1μm,19.0s				
YUK			MLR	MLR	
	comp=E,1μm,15.0s				
BBOO	**Buckleboo**	**41.22 166**	*e*P	**P**	**20 16 12.3 +0.4**
	comp=E,722nm,1.4s				
BBOO			LR	LR	
	comp=Z,2μm,20.0s				
BBOO	**Buckleboo**	**41.22 166**	P	**P**	**20 16 11.8 0.0**
	baz=41,SNR=144				
RAMN	**Ramite**	**41.23 303**	*e*P	**P**	**20 16 12.5 +0.2**
	comp=Z,422nm,1.7s				
EIDS	**Eidsvold**	**41.26 143**	*e*P	**P**	**20 16 10.2 -2.0**
	comp=Z,71nm,1.3s				
EIDS			LR	LR	
	comp=Z,3μm,20.0s				
EIDS	**Eidsvold**	**41.26 143**	P	**P**	**20 16 11.3 -0.9**
	baz=41,SNR=7.6				
JIRN	**Jiri**	**41.83 304**	*e*P	**P**	**20 16 17.6 +0.2**
	comp=Z,314nm,1.3s				
STKA	**Stephens Creek**	**42.05 158**	P	**P**	**20 16 17.5 -1.1**
	comp=Z,115nm,0.8s,baz=334,slow=8.3,SNR=222				

STKA			PP	**PP**	**20 17 55.5**	**-0.9**
	comp=Z,34nm,0.7s,baz=341,slow=8.1,SNR=3.4					
STKA			LR	LR	20 35 59.4	
	comp=Z,666nm,18.8s,baz=334,slow=39					
STKA	**Stephens Creek**	**42.05 158**	*e*P	**P**	**20 16 19.0**	**+0.4**
	comp=Z,26nm,0.8s					
STKA			LR	LR		
	comp=Z,300nm,21.0s					
STKA	**Stephens Creek**	**42.05 158**	P	**P**	**20 16 18.4**	**-0.3**
	baz=42,SNR=190					
STKA	**Stephens Creek**	**42.05 158**	*e*P	**P**	**20 16 19.0**	**+0.4**
STKA			pmax	pmax		
	comp=Z,26nm,0.8s					
STKA			MLR	MLR		
	comp=Z,300nm,21.0s					
HIA	**Hailar**	**42.12 355**	*e*P	**P**	**20 16 20.1**	**+1.1**
	comp=Z,175nm,1.5s					
HIA			LR	LR		
	comp=Z,3μm,18.0s					
HIA	**Hailar**	**42.12 355**	*e*P	**P**	**20 16 20.2**	**+1.1**
HIA			pmax	pmax		
	comp=Z,175nm,1.5s					
HIA			MLR	MLR		
	comp=Z,3μm,18.0s					
GUN	**Gumba**	**42.17 304**	*e*P	**P**	**20 16 20.3**	**+0.1**
	comp=Z,204nm,1.0s					
RKGY	**Rocky Gully**	**42.26 190**	P	**P**	**20 16 22.4**	**+2.2**
	baz=42,SNR=9.4					
KLR	**Kul'dur**	**42.27 7**	P	**P**	**20 16 18.8**	**-1.4**
	comp=Z,19nm,0.9s,baz=202,slow=7.7,SNR=24					
KLR			LR	LR	20 37 20.8	
	comp=Z,2μm,18.2s,baz=195,slow=41					
KLR	**Kul'dur**	**42.27 7***d*	*i*P	**P**	**20 16 19.7**	**-0.5**
KLR			pmax	pmax		
	comp=Z,56nm,1.4s					
WAKE	**Wake Island**	**42.33 69**	PFAKE		20 16 30.0	+8.9
WAKE			LR	LR		
	comp=Z,1μm,19.0s					
KWAJ	**Kwajalein Atol**	**42.39 85**	PFAKE		20 16 30.0	+8.3
KWAJ			LR	LR		
	comp=Z,3μm,19.0s					
PKI	**Pulchoki**	**42.44 303**	*e*P	**P**	**20 16 21.8**	**-0.5**
	comp=Z,232nm,1.6s					
PKIN	**Phulchoki**	**42.45 303**	*e*P	**P**	**20 16 21.8**	**-0.6**
	comp=Z,51nm,1.0s					
YSS	**Yuzh-Sakhalins**	**42.47 18**	PFAKE		20 16 30.0	+8.2
YSS			LR	LR		
	comp=Z,900nm,18.0s					
YSS	**Yuzh-Sakhalins**	**42.47 18***d*	*i*P	**P**	**20 16 22.3**	**+0.5**
YSS			*e**SP	**sP**	**20 16 37.9**	**+2.6**
YSS			*e*		20 18 13.1	
YSS			*e*S	**S**	**20 22 41.6**	**-0.1**
YSS			*e*		20 26 19.2	
YSS			pmax	pmax		
	comp=Z,30nm,1.2s					
YSS			pmax	pmax		
	comp=Z,500nm,6.3s					
YSS			MLR	MLR		
	comp=Z,1μm,15.0s					
YSS			MLR	MLR		
	comp=N,800nm,15.5s					
HTT	**Hallett**	**42.59 162**	P	**P**	**20 16 24.1**	**+1.0**
	baz=43,SNR=46					
KKN	**Kakani**	**42.62 304**	*e*P	**P**	**20 16 23.3**	**-0.4**
	comp=N,171nm,1.4s					
DMN	**Daman**	**42.70 303**	*e*P	**P**	**20 16 24.3**	**-0.1**
	comp=N,399nm,1.9s					
KUR	**Kuril'sk**	**42.82 24**	*e*P	**P**	**20 16 25.8**	**+1.1**
KUR			*e*S	**S**	**20 22 46.8**	**-0.1**
KUR			MLR	MLR		
	comp=Z,800nm,15.0s					
KUR			MLR	MLR		
	comp=N,2μm,20.0s					
KUR			MLR	MLR		
	comp=E,700nm,18.0s					
GKN	**Gorkha**	**43.23 304**	*e*P	**P**	**20 16 28.0**	**-0.6**
ULN	**Ulaanbaatar**	**43.23 343**	*e*P	**P**	**20 16 28.3**	**+0.1**
	comp=E,574nm,1.7s					
ULN			LR	LR		
	comp=Z,5μm,21.0s					
ULN	**Ulaanbaatar**	**43.23 343**	*e*P	**P**	**20 16 28.3**	**+0.1**
ULN			pmax	pmax		
	comp=Z,574nm,1.7s					
ULN			MLR	MLR		
	comp=Z,5μm,21.0s					
ULN	**Ulaanbaatar**	**43.23 343**	P	**P**	**20 16 28.4**	**+0.1**
	SNR=148					
CMSA	**Cobar Meteorol**	**43.40 154**	P	**P**	**20 16 29.8**	**+0.3**
	baz=44,SNR=16					
SONM	**Songino Array**	**43.41 342**	P	**P**	**20 16 28.3**	**-1.3**
	comp=Z,28nm,1.1s,baz=169,slow=6.8,SNR=48					
SONM			LR	LR	20 35 35.0	
	comp=Z,6μm,21.2s,baz=158,slow=38					
PALK	**Pallekele**	**43.75 273**	PFAKE		20 16 50.0	+17
PALK			LR	LR		
	comp=Z,1μm,20.0s					
KOLN	**Koldanda**	**44.01 303**	*e*P	**P**	**20 16 34.8**	**-0.1**
	comp=Z,50nm,0.7s					
DANN	**Dangsing**	**44.08 304**	*e*P	**P**	**20 16 35.2**	**-0.3**
	comp=Z,110nm,0.8s					
MDRS	**Chennai**	**44.21 281**	*e*P	**P**	**20 16 36.5**	**+0.1**
MDRS			IAmb	IAmb	20 16 43.0	
	comp=Z,3μm,3.9s					
GRNR	**Gornyy**	**44.47 11**	*e*P	**P**	**20 16 39.8**	**+1.9**
GRNR			*e*		20 19 02.1	
GRNR			pmax	pmax		
	comp=Z,13nm,1.0s					
PYUN	**Piuthan**	**44.63 303**	*e*P	**P**	**20 16 39.9**	**0.0**
	comp=Z,131nm,0.9s					
ARMA	**Armidale**	**45.41 147**	*e*P	**P**	**20 16 45.1**	**-0.8**
	comp=Z,161nm,1.5s					
ARMA	**Armidale**	**45.41 147**	P	**P**	**20 16 46.3**	**+0.5**
	baz=46,SNR=16					
CIT	**Chita**	**45.62 350**	*e*P	**P**	**20 16 47.3**	**+0.2**
CIT			*e*		20 16 59.6	
CIT			pmax	pmax		
	comp=Z,415nm,1.8s					
TYV	**Tymovskoe**	**45.96 16**	*e*P	**P**	**20 16 52.0**	**+2.3**
TYV			*e*		20 23 38.9	
TYV			pmax	pmax		
	comp=Z,51nm,2.4s					
TYV			pmax	pmax		
	comp=Z,700nm,2.8s					
HYB	**Hyderabad**	**46.21 287**	*i*P	**P**	**20 16 52.0**	**-0.3**
HYB			*e*S	**S**	**20 23 40.0**	**+2.9**
NGP	**Nagpur**	**46.30 292**	*e*P	**P**	**20 16 52.8**	**-0.2**
NGP			IAmb	IAmb	20 16 56.5	
	comp=Z,2μm,3.8s					
NGP	**Nagpur**	**46.30 292⇑**	*e*P	**P**	**20 16 56.0**	**+3.0**
NGP			*e*S	S	20 24 01.1	+23
ZEA	**Zeya**	**46.42 2**	*e*P	**P**	**20 16 52.8**	**-0.5**
ZEA			*e*		20 18 45.0	
ZEA			*e*		20 27 04.0	
ZEA			pmax	pmax		
	comp=N,170nm,2.0s					
ZEA			pmax	pmax		
	comp=Z,230nm,2.0s					
ZEA			pmax	pmax		
	comp=N,300nm,4.0s					
ZEA			pmax	pmax		
	comp=Z,500nm,4.0s					
ZEA			pmax	pmax		
	comp=N,400nm,9.0s					
ZEA			pmax	pmax		
	comp=Z,600nm,9.0s					
ARPS	**Mount Arapiles**	**46.58 161**	P	**P**	**20 16 55.3**	**+0.5**
	baz=47,SNR=29					
ZAK	**Zakamensk**	**46.62 341**	*e*P	P	20 16 49.4	-5.7
ZAK			pmax	pmax		
	comp=Z,60nm,1.7s					
YNG	**Young**	**46.94 153**	P	**P**	**20 16 58.7**	**+1.0**
	baz=47,SNR=5.1					
TRD	**Trivandrum**	**47.41 275**	*e*P	**P**	**20 17 02.2**	**+0.5**
TLY	**Talaya**	**47.64 342**	*e*P	**P**	**20 17 03.2**	**+0.3**
	comp=Z,665nm,2.0s					
TLY			LR	LR		
	comp=Z,3μm,21.0s					
TLY	**Talaya**	**47.64 342**	*e*P	**P**	**20 17 03.2**	**+0.3**
TLY			*e*		20 18 57.3	
TLY			*e*S	**S**	**20 24 02.1**	**+5.6**
TLY			pmax	pmax		
	comp=Z,637nm,1.7s					
TLY			MLR	MLR		
	comp=Z,8μm,21.0s					
TLY	**Talaya**	**47.64 342**	P	**P**	**20 17 03.5**	**+0.5**
	SNR=77					
TLY			P	**P**	**20 17 03.5**	**+0.5**
	SNR=77					
IRK	**Irkutsk**	**47.95 343**	*e*P	**P**	**20 17 07.0**	**+1.7**
IRK			*e*		20 19 03.0	
IRK			pmax	pmax		
	comp=Z,437nm,2.7s					
CAN	**Canberra**	**48.06 153**	P	**P**	**20 17 06.2**	**-0.3**
BHPL	**Bhopal**	**48.18 295**	*e*P	**P**	**20 17 07.6**	**0.0**
BHPL			IAmb	IAmb	20 17 11.6	
	comp=Z,4μm,4.4s					
CNB	**Canberra Magne**	**48.22 153**	P	**P**	**20 17 08.9**	**+1.2**
	baz=48,SNR=7.1					
TARA	**Tarawa**	**48.30 95**	PFAKE		20 17 20.0	+11
TARA			LR	LR		
	comp=Z,5μm,21.0s					
MOY	**Mondy**	**48.47 340**	*e*P	**P**	**20 17 09.8**	**+0.3**
MOY			pmax	pmax		
	comp=Z,453nm,2.5s					
TOO	**Toolangi**	**48.57 158**	*e*P	**P**	**20 17 11.4**	**+1.1**
	comp=Z,199nm,1.4s					
TOO	**Toolangi**	**48.57 158**	P	**P**	**20 17 11.4**	**+1.1**
	baz=49,SNR=13					
TOO	**Toolangi**	**48.57 158**	*e*P	**P**	**20 17 11.4**	**+1.1**
TOO			pmax	pmax		
	comp=Z,199nm,1.4s					
WMQ	**Urumqi**	**48.79 325**	P	**P**	**20 17 12.9**	**+0.9**
WMQ			pP	sP	20 17 24.1	-1.4
WMQ			sP	pP	20 17 34.8	+13
WMQ			PcP	**PcP**	**20 18 38.8**	**+2.2**
WMQ			PP	**PP**	**20 19 02.9**	**-2.5**
WMQ			S	**S**	**20 24 15.6**	**+2.5**
WMQ			sS	sS	20 24 29.6	+0.5
WMQ			pmax	pmax		
	comp=Z,120nm,1.7s					
WMQ			LR	LR		
	comp=Z,7μm,22.7s					
WMQ			LR	LR		
	comp=Z,5μm,20.1s					
WMQ			LR	LR		
	comp=Z,4μm,23.9s					
WMQ	**Urumqi**	**48.79 325**	PFAKE		20 17 20.0	+8.0
WMQ			LR	LR		
	comp=Z,3μm,18.0s					
DDI	**Dehra Dun**	**49.43 304**	*e*P	**P**	**20 17 17.4**	**+0.3**
DDI			IAmb	IAmb	20 17 20.0	
	comp=Z,67nm,0.9s					
MILA	**Mila**	**49.59 154**	P	**P**	**20 17 19.2**	**+1.0**
	baz=50,SNR=3.1					
DZM	**Mont Dzumac**	**50.11 127**	*e*P	**P**	**20 17 22.0**	**-0.4**
	comp=Z,110nm,1.2s					
DZM			*e*S	**S**	**20 24 33.6**	**+1.4**
	comp=Z,682nm,23.9s					
DZM			*e*LR	LR	20 31 42.0	
	comp=Z,3μm,24.3s					
SMLA	**Simla**	**50.40 305**	*e*P	**P**	**20 17 24.0**	**-0.4**
SMLA			IAmb	IAmb	20 17 26.9	
	comp=Z,283nm,1.4s					
SKR	**Severo-Kuril's**	**50.53 25**	*e*P	**P**	**20 17 26.4**	**+1.4**
SKR			*e*S	**S**	**20 24 39.8**	**+2.8**
SKR			*e*SSS	SSS	20 29 41.5	
SKR			pmax	pmax		
	comp=Z,300nm,3.0s					
SKR			pmax	pmax		
	comp=Z,900nm,2.7s					
SKR			pmax	pmax		
	comp=Z,75nm,1.0s					
SKR			MLR	MLR		
	comp=Z,2μm,18.0s					
SKR			MLR	MLR		
	comp=Z,2μm,20.0s					
LHI	**Lord Howe Isla**	**50.55 142**	*e*PcP	**PcP**	**20 18 45.0**	**+1.9**
GOA	**Goa**	**50.56 284**	*e*P	**P**	**20 17 25.8**	**0.0**
GOA			IAmb	IAmb	20 17 29.1	
	comp=Z,150nm,1.5s					
POO	**Poona**	**50.78 288**	*e*P	**P**	**20 17 27.1**	**-0.4**
POO			IAmb	IAmb	20 17 31.0	
	comp=Z,60nm,1.2s					
BOD	**Bodaibo**	**51.17 353⇑**	*i*P	**P**	**20 17 29.3**	**-0.4**
BOD			pmax	pmax		
	comp=Z,269nm,1.7s					
DHRM	**DHARAMSHALA**	**51.45 306**	*e*P	**P**	**20 17 32.2**	**-0.4**
DHRM			IAmb	IAmb	20 17 35.4	
	comp=Z,438nm,1.7s					
ZSN	**Zaisan**	**52.56 327**	*e*P	**P**	**20 17 39.8**	**-0.5**
ZSN			*e*S	**S**	**20 25 04.8**	**-0.4**
ZSN	**Zaisan**	**52.56 327**	*e*P	**P**	**20 17 39.8**	**-0.5**
ZSN			*e*S	**S**	**20 25 04.8**	**-0.4**
DGZ	**Jazzator, Alta**	**52.64 330⇓**	*i*P	**P**	**20 17 41.3**	**+0.3**
DGZ			pmax	pmax		
	comp=Z,113nm,1.6s					
PEA0B	**Petropavlovsk-**	**52.99 24**	PFAKE		20 17 50.0	+6.6
PEA0B			LR	LR		
	comp=Z,2μm,20.0s					
PETK	**Petropavlovsk-**	**52.99 24**	P	**P**	**20 17 42.8**	**-0.6**
	comp=Z,21nm,0.8s,baz=195,slow=4.9,SNR=36					
PETK			LR	LR	20 40 30.2	
	comp=Z,2μm,19.9s,baz=221,slow=36					
PET	**Petropavlovsk**	**53.32 25**	*e*P	**P**	**20 17 45.8**	**+0.1**
	comp=Z,359nm,1.9s					
PET			LR	LR		
	comp=Z,1μm,20.0s					
PET	**Petropavlovsk**	**53.32 25***d*	*i*P	**P**	**20 17 47.5**	**+1.8**
PET			*e*S	**S**	**20 25 15.1**	**-0.1**
PET			pmax	pmax		
	comp=Z,20nm,0.7s					
PET			pmax	pmax		
	comp=Z,100nm,7.7s					
SHLS	**Shalkode**	**53.47 320**	*e*P	**P**	**20 17 45.6**	**-1.6**
SHLS			*e*S	**S**	**20 25 18.2**	**+0.3**
SHLS			pmax	pmax		
	comp=Z,238nm,2.1s					
SHLS			smax	smax		
	comp=N,107nm,5.9s					
SHLS	**Shalkode**	**53.47 320**	*e*P	**P**	**20 17 45.6**	**-1.6**
	comp=N,238nm,2.1s					
SHLS			*e*S	**S**	**20 25 18.2**	**+0.3**
	comp=N,107nm,5.9s					
PDGK	**Podgornoye**	**53.53 320**	P	**P**	**20 17 49.2**	**+1.5**
MK31	**Makanchi Array**	**53.62 325**	P	**P**	**20 17 47.0**	**-1.2**
MKAR	**Makanchi Array**	**53.62 325**	P	**P**	**20 17 46.8**	**-1.4**
	comp=N,27nm,0.9s,baz=126,slow=7.5,SNR=70					
MKAR			LR	LR	20 41 34.0	
	comp=N,1μm,20.8s,baz=110,slow=37					
MKAR			PKPPKP		20 48 04.4	
	comp=N,1.7nm,1.1s,baz=239,slow=6.2,SNR=5.0					
MKAR	**Makanchi Array**	**53.62 325**	*i*P	**P**	**20 17 48.2**	**0.0**
MKAR			pmax	pmax		
	comp=Z,27nm,0.9s					
UZB	**Uzynbulak**	**53.74 319**	*e*P	**P**	**20 17 49.4**	**+0.1**
UZB			pmax	pmax		
	comp=Z,161nm,2.2s					
UZB	**Uzynbulak**	**53.74 319**	*e*P	**P**	**20 17 49.5**	**+0.1**
	comp=Z,161nm,2.2s					
MAKZ	**Makanchi**	**53.81 325**	*e*P	**P**	**20 17 49.7**	**+0.2**
	comp=Z,324nm,1.7s					
MAKZ			*e*PcP	**PcP**	**20 18 56.0**	**+0.9**
MAKZ			LR	LR		
	comp=Z,2μm,21.0s					
MAKZ	**Makanchi**	**53.81 325**	*e*P	**P**	**20 17 49.7**	**+0.2**
MAKZ			*e*		20 18 56.0	
MAKZ			pmax	pmax		
	comp=Z,324nm,1.7s					
MAKZ			MLR	MLR		
	comp=Z,2μm,21.0s					
TARG	**Taragay, Kyrgy**	**53.90 317**	*e*P	**P**	**20 17 51.6**	**+0.9**
	comp=Z,190nm,1.8s					
TARG			LR	LR		
	comp=Z,3μm,21.0s					
SATY	**Saty**	**54.10 319**	*e*P	**P**	**20 17 52.3**	**+0.4**
SATY			*e*S	**S**	**20 25 28.3**	**+1.8**
SATY			pmax	pmax		
	comp=Z,279nm,2.0s					
SATY	**Saty**	**54.10 319**	*e*P	**P**	**20 17 52.3**	**+0.4**
	comp=Z,279nm,2.0s					
SATY			*e*S	**S**	**20 25 28.4**	**+1.8**
KPKS	**Kokpek**	**54.11 320**	*e*P	**P**	**20 17 51.7**	**-0.2**
KPKS			pmax	pmax		
	comp=Z,328nm,2.3s					
KPKS	**Kokpek**	**54.11 320**	*e*P	**P**	**20 17 51.7**	**-0.2**
	comp=Z,328nm,2.3s					
KSH	**Kashi**	**54.25 314**	P	**P**	**20 17 57.2**	**+4.2**
KSH			pP	sP	20 18 09.7	+3.1
KSH			PP	**PP**	**20 20 01.4**	**+6.3**
KSH			S	**S**	**20 25 31.7**	**+3.0**
KSH			SS	**SS**	**20 29 13.2**	**+2.3**
KSH			pmax	pmax		
	comp=Z,330nm,1.6s					
KSH			pmax	pmax		
	comp=Z,890nm,5.2s					
KSH			LR	LR		
	comp=Z,4μm,14.9s					
KSH			LR	LR		
	comp=Z,5μm,15.0s					
KSH			LR	LR		
	comp=Z,6μm,17.1s					
NIL	**Nilore**	**54.31 306**	*e*P	**P**	**20 17 53.8**	**+0.3**
	comp=Z,334nm,1.3s					
NIL	**Nilore**	**54.31 306**	*e*P	**P**	**20 17 53.8**	**+0.3**
NIL			pmax	pmax		
	comp=Z,334nm,1.3s					
KDJ	**Kajisay**	**54.50 318**	PFAKE		20 18 10.0	+15
KDJ			LR	LR		
	comp=Z,3μm,22.0s					
YAK	**Yakutsk**	**54.81 3**	*e*P	**P**	**20 17 55.6**	**-0.9**
	comp=Z,594nm,1.6s					
YAK			*e*PcP	**PcP**	**20 18 58.1**	**-0.5**
YAK			LR	LR		
	comp=Z,4μm,19.0s					
YAK	**Yakutsk**	**54.81 3**	*e*P	**P**	**20 17 56.4**	**-0.1**
YAK			*e**PP	**sP**	**20 18 07.2**	**-2.8**
YAK			*e*		20 18 56.0	
YAK			*e*		20 19 55.8	
YAK			*e*PPP	PPP	20 21 10.1	
YAK			*e*S	**S**	**20 25 34.4**	**-0.8**
YAK			*e**SS	**sS**	**20 25 55.8**	**+4.6**
YAK			*e*		20 27 47.1	
YAK			*e*SS	**SS**	**20 29 17.8**	**-0.9**
NRN	**Naryn**	**55.00 316**	PFAKE		20 18 10.0	+11
NRN			LR	LR		
	comp=Z,2μm,19.0s					
TDK	**Taldyqorghan**	**55.02 321**	*e*P	**P**	**20 17 58.4**	**0.0**
TDK			pmax	pmax		
	comp=Z,645nm,2.2s					
TDK	**Taldyqorghan**	**55.02 321**	*e*P	**P**	**20 17 58.4**	**0.0**
	comp=Z,645nm,2.2s					
MDOK	**Medeo**	**55.04 319**	*e*P	**P**	**20 17 58.7**	**0.0**
MDOK			*e*S	**S**	**20 25 43.6**	**+4.5**
MDOK			pmax	pmax		
	comp=Z,2μm,2.4s					
MDOK	**Medeo**	**55.04 319**	*e*P	**P**	**20 17 58.7**	**0.0**
	comp=Z,2μm,2.4s					
MDOK			*e*S	**S**	**20 25 43.7**	**+4.5**
	comp=Z,594nm,7.5s					
AAA	**Alma-Ata**	**55.14 319**	*e*P	**P**	**20 18 01.9**	**+2.5**
AAA			*e*S	**S**	**20 25 40.0**	**-0.4**
AAA			pmax	pmax		
	comp=Z,300nm,1.6s					
AAA			smax	smax		
	comp=N,400nm,8.0s					
ULHL	**Ulahol**	**55.17 317**	P	**P**	**20 18 00.5**	**+0.7**
	SNR=21					
BHJ	**Bhuj**	**55.23 293**	*e*P	**P**	**20 17 60.0**	**-0.2**
KZA	**Kyzart**	**55.78 317**	P	**P**	**20 18 05.0**	**+0.7**
	SNR=34					
KUU	**Kurty**	**55.82 319**	*e*P	**P**	**20 18 04.2**	**0.0**
KUU			pmax	pmax		
	comp=Z,789nm,2.0s					
KUU	**Kurty**	**55.82 319**	*e*P	**P**	**20 18 04.2**	**0.0**
	comp=Z,789nm,1.9s					
MA2	**Magadan**	**55.84 16**	P	**P**	**20 18 03.6**	**-0.3**
	comp=Z,11nm,0.8s,baz=211,slow=7.8,SNR=13					
MA2	**Magadan**	**55.84 16**	*e*P	**P**	**20 18 04.0**	**0.0**
	comp=Z,182nm,1.6s					
MA2			LR	LR		
	comp=Z,2μm,18.0s					
MA2	**Magadan**	**55.84 16***ce*P		**P**	**20 18 03.6**	**-0.3**
MA2			pmax	pmax		
	comp=Z,214nm,2.5s					
TKM2	**Tokmak 2**	**55.89 318**	P	**P**	**20 18 05.3**	**+0.3**
	SNR=32					
KBK	**Karagaybulak**	**56.22 317**	P	**P**	**20 18 08.1**	**+0.8**
	SNR=29					
UCH	**Uchtor**	**56.34 317**	P	**P**	**20 18 09.5**	**+1.1**
	SNR=49					
CHMS	**Chumysh**	**56.49 318**	P	**P**	**20 18 11.8**	**+2.8**
	SNR=28					
AAK	**Ala-Archa**	**56.52 317**	P	**P**	**20 18 12.7**	**+3.4**
	SNR=16					
AAK	**Ala-Archa**	**56.52 317**	*e*P	**P**	**20 18 09.9**	**+0.6**
	comp=Z,286nm,1.9s					
AAK			LR	LR		
	comp=Z,3μm,22.0s					
AAK	**Ala-Archa**	**56.52 317**	*i* P	**P**	**20 18 09.8**	**+0.4**
	SNR=50					
AAK	**Ala-Archa**	**56.52 317**	*e*P	**P**	**20 18 09.9**	**+0.6**
AAK			pmax	pmax		
	comp=Z,286nm,1.9s					
AAK			MLR	MLR		
	comp=Z,3μm,22.0s					
AAK	**Ala-Archa**	**56.52 317**	P	**P**	**20 18 10.1**	**+0.8**
	SNR=88					
ZAA0	**Zalesovo Array**	**56.63 333**	PFAKE		20 18 20.0	+10
ZAA0			LR	LR		
	comp=Z,2μm,20.0s					
ZALV	**Zalesovo Beam**	**56.63 333**	P	**P**	**20 18 08.7**	**-1.0**
	comp=Z,20nm,0.9s,baz=129,slow=5.5,SNR=31					
ZALV			LR	LR	20 43 33.8	
	comp=Z,2μm,20.4s,baz=114,slow=37					
ZALV			PKPPKP		20 48 03.8	
	comp=Z,0.3nm,0.5s,baz=126,slow=39,SNR=2.5					
ZALV			PKP2bc		20 48 15.2	
	comp=Z,0.3nm,0.3s,baz=282,slow=2.9,SNR=4.6					
ZALV	**Zalesovo Beam**	**56.63 333**	*i* P	**P**	**20 18 08.6**	**-1.1**
ZALV			pmax	pmax		
	comp=Z,20nm,0.9s					
USP	**Ospenovka**	**56.77 318**	P	**P**	**20 18 11.1**	**+0.2**
	SNR=33					
AML	**Almayashu**	**56.86 316**	P	**P**	**20 18 12.9**	**+0.8**
	SNR=21					
EKS2	**Erkin-Say**	**57.01 317**	P	**P**	**20 18 13.2**	**+0.4**
	SNR=34					
KURK	**Kurchatov**	**57.79 327**	*e*P	**P**	**20 18 17.3**	**-0.7**
	comp=Z,604nm,1.6s					
KURK			LR	LR		
	comp=Z,1μm,19.0s					
KURK	**Kurchatov**	**57.79 327**	*e*P	**P**	**20 18 17.3**	**-0.7**
KURK			pmax	pmax		
	comp=Z,603nm,1.6s					
KURK			MLR	MLR		
	comp=Z,1μm,19.0s					
KURK	**Kurchatov**	**57.79 327**	P	**P**	**20 18 17.4**	**-0.6**
	SNR=168					
BTLS	**Baital**	**57.80 320**	*e*P	**P**	**20 18 17.4**	**-0.7**
BTLS			*e*S	**S**	**20 26 14.0**	**-1.4**
BTLS			pmax	pmax		
	comp=Z,108nm,2.0s					
BTLS			smax	smax		
	comp=E,25nm,3.1s					
BTLS	**Baital**	**57.80 320**	*e*P	**P**	**20 18 17.4**	**-0.7**
	comp=E,108nm,2.0s					
BTLS			*e*S	**S**	**20 26 14.0**	**-1.4**
	comp=E,25nm,3.1s					
KBL	**Kabul**	**57.92 306**	*e*P	**P**	**20 18 19.5**	**+0.1**
	comp=E,151nm,1.5s					
KBL			LR	LR		
	comp=Z,800nm,21.0s					
KBL	**Kabul**	**57.92 306**	*e*P	**P**	**20 18 19.5**	**+0.1**
KBL			pmax	pmax		
	comp=Z,151nm,1.5s					
KBL			MLR	MLR		
	comp=Z,800nm,21.0s					
NVS	**Novosibirsk**	**57.92 333**	*e*P	**P**	**20 18 18.0**	**-0.7**
NVS			*e*S	**S**	**20 26 17.9**	**+1.4**
NVS			pmax	pmax		
	comp=N,102nm,1.6s					
NVS			pmax	pmax		
	comp=Z,194nm,1.6s					
NVS			pmax	pmax		
	comp=E,95nm,1.5s					
NVS			smax	smax		
	comp=E,30nm,2.5s					
BTK	**Batken**	**58.15 313**	PFAKE		20 18 30.0	+9.2
BTK			LR	LR		
	comp=Z,2μm,20.0s					
SEY	**Seymchan**	**59.11 14**	P	**P**	**20 18 26.4**	**-0.5**
	comp=Z,24nm,0.9s,baz=216,slow=7.8,SNR=32					
SEY			PKP2bc		20 48 13.3	
	comp=Z,3.7nm,1.1s,baz=292,slow=2.1,SNR=4.5					
JBG	**Jabagly**	**59.14 316**	*e*P	**P**	**20 18 28.1**	**+0.3**
JBG			pmax	pmax		
	comp=Z,196nm,1.9s					
KK31	**Karatay Array**	**59.40 316**	*i* P	**P**	**20 18 29.2**	**-0.2**

KK31 pmax pmax
comp=Z,104nm,1.3s
IUG Iuzhnay 59.41 315 *e*P **P 20 18 29.2 -0.3**
IUG pmax pmax
comp=Z,83nm,2.0s
IUG Iuzhnay 59.41 315 *e*P **P 20 18 29.2 -0.3**
comp=Z,83nm,2.0s
TAS Tashkent 59.67 314 P **P 20 18 32.7 +1.5**
OTUK Ortayu 60.21 322 *i* P **P 20 18 35.1 +0.2**
OTUK pmax pmax
comp=Z,220nm,1.7s
BRZS Berezniki 60.76 324 *e*P **P 20 18 37.5 -1.1**
BRZS pmax pmax
comp=Z,287nm,2.0s
BRZS Berezniki 60.76 324 *e*P **P 20 18 37.5 -1.1**
comp=Z,287nm,2.0s
BRVK Borovoye 63.45 327 *e*P **P 20 18 56.0 -0.5**
comp=Z,393nm,1.8s
BRVK LR LR
comp=Z,1μm,20.0s
BRVK Borovoye 63.45 327 *e*P **P 20 18 56.0 -0.5**
BRVK pmax pmax
comp=Z,393nm,1.8s
BRVK MLR MLR
comp=Z,1μm,20.0s
BRVK Borovoye 63.45 327 P **P 20 18 56.2 -0.3**
SNR=110
BRVK P **P 20 18 56.2 -0.3**
SNR=110
TIXI Tiksi 64.41 1 LR LR 20 49 01.9
comp=Z,1μm,19.8s,baz=198,slow=38
TIXI Tiksi 64.41 1 *e*P **P 20 19 02.8 +0.4**
comp=Z,101nm,1.4s
TIXI LR LR
comp=Z,2μm,18.0s
TIXI Tiksi 64.41 1*d i*P **P 20 19 02.4 -0.1**
TIXI pmax pmax
comp=Z,101nm,1.8s
JLN Jalan Bani Buh 64.56 291 P **P 20 19 05.8 +1.4**
SNR=7.1
ADK Adak 65.21 36 PFAKE 20 19 20.0 +12
ADK LR LR
comp=Z,1μm,20.0s
WSAR Wadi Sarin 65.33 292 P **P 20 19 09.1 -0.3**
SNR=6.4
RPZ Rata Peaks 65.69 145 LR LR 20 47 34.1
comp=Z,996nm,21.8s,baz=304,slow=36
BIDO Bidbid 65.80 292 P **P 20 19 12.0 -0.5**
SNR=15
MHTO MHTO 65.86 290 P **P 20 19 13.5 +0.7**
SNR=10
DQM DQM 66.24 289 P **P 20 19 17.5 +2.2**
SNR=7.3
URZ Urewera 66.38 137 LR LR 20 48 51.1
comp=Z,906nm,20.3s,baz=352,slow=36
BKZ Black Stump Fm 66.44 138 *e*P **P 20 19 16.3 +0.1**
comp=Z,88nm,0.9s
BKZ LR LR
comp=Z,1μm,18.0s
SNZO South Karori 66.46 141 *e*P **P 20 19 14.9 -1.3**
comp=Z,122nm,1.1s
NRIK Noril'sk 66.61 346 P **P 20 19 16.4 -0.3**
comp=Z,11nm,0.8s,baz=122,slow=5.8,SNR=13
NRIK LR LR 20 50 03.5
comp=Z,2μm,19.8s,baz=154,slow=38
BILL Bilibino 66.71 16 PFAKE 20 19 30.0 +13
BILL LR LR
comp=Z,1μm,21.0s
BILL Bilibino 66.71 16*d i*P **P 20 19 18.5 +1.1**
BILL *i* 20 19 47.2
BILL *i* 20 21 51.9
BILL pmax pmax
comp=Z,159nm,1.7s
BILL MLR MLR
comp=Z,906nm,20.0s
ASHT Ashkhabad 67.04 308 P **P 20 19 20.6 +0.5**
GEYT Alibeck 67.25 308 P **P 20 19 20.6 -0.8**
comp=Z,18nm,1.1s,baz=150,slow=6.3,SNR=36
GEYT LR LR 20 51 57.6
comp=Z,1μm,19.6s,baz=65,slow=39
GYA0B ALIBECK ARRAY 67.25 308 *e*P **P 20 19 22.1 +0.7**
comp=Z,350nm,1.8s
GYA0B LR LR
comp=Z,1μm,20.0s
SOHO SOHO 67.28 293 P **P 20 19 21.0 -0.9**
SNR=9.1
MDH Madha 67.55 294 P **P 20 19 23.0 -0.6**
UOSS Minazif 67.62 294 P **P 20 19 23.3 -0.7**
MSFE Esma-Masafi 67.67 294 P **P 20 19 23.8 -0.6**
HATD Hatta, Dubai 67.68 294 P **P 20 19 24.7 +0.3**
HATD Hatta, Dubai 67.68 294 P **P 20 19 24.1 -0.3**
SNR=5.3
HATD P **P 20 19 24.1 -0.3**
SNR=5.3
ASHO Ashiyiah 67.74 294 *i* P **P 20 19 24.9 +0.1**
SNR=5.3
ASHO Ashiyiah 67.74 294 P **P 20 19 26.3 +1.5**
SNR=6.4
ALNE Al Ain 68.00 293 *i* P **P 20 19 26.8 +0.4**
SNR=8.3
NAZ Nazwa, Dubai 68.11 294 P **P 20 19 27.1 0.0**
FAQ Al Faqa, Dubai 68.16 294 P **P 20 19 27.3 -0.2**
FAQ Al Faqa, Dubai 68.16 294 P **P 20 19 29.9 +2.4**
SNR=5.5
AB31 Akbulak array 68.26 320 *i* P **P 20 19 26.6 -1.0**
AB31 pmax pmax
comp=Z,164nm,1.6s
ABKAR Akbulak array 68.26 320 *e*P **P 20 19 27.0 -0.6**
comp=Z,239nm,1.6s
ASUD Al Ashush, Dub 68.40 294 *i* P **P 20 19 29.7 +0.8**
SNR=5.5
ASUD Al Ashush, Dub 68.40 294 P **P 20 19 28.9 0.0**
SNR=7.3
AJN Ajban 68.71 293 *i* P **P 20 19 31.2 +0.4**
SNR=6.0
AJN Ajban 68.71 293 P **P 20 19 33.0 +2.2**
SNR=9.3
AKTO Aktyubinsk 69.76 321 *i* P **P 20 19 37.2 +0.3**
AKTO pmax pmax
comp=Z,240nm,1.8s
SVE Sverdlovsk 70.01 328*c e*P **P 20 19 37.6 -0.7**
SVE *e*PPP PPP 20 23 59.9
SVE *e*S **S 20 28 44.1 -2.4**
SVE pmax pmax
comp=Z,129nm,1.8s
SVE MLR MLR
comp=Z,2μm,20.0s
ARU Arti 70.99 327 *e*P **P 20 19 42.6 -1.6**
comp=Z,135nm,1.7s
ARU LR LR
comp=Z,2μm,18.0s
ARU Arti 70.99 327*d i*P **P 20 19 43.1 -1.1**
ARU *e*S **S 20 28 58.8 +0.9**
ARU pmax pmax
comp=Z,52nm,1.1s
ARU MLR MLR
comp=Z,1μm,17.0s
UNV Unalaska Valle 71.68 36 PFAKE 20 20 00.0 +12
UNV LR LR
comp=Z,1μm,22.0s
GAMB Gambell 72.02 25 *e*P **P 20 19 50.4 +0.1**
comp=Z,197nm,1.7s
FALS False Pass 73.66 35 PFAKE 20 20 10.0 +10
FALS LR LR
comp=Z,1μm,19.0s
CASY Casey 74.05 186 *e*P **P 20 20 01.9 -0.2**
comp=Z,41nm,0.8s
LKRN Lenkeran, Azer 74.63 308 P **P 20 20 07.4 +1.2**
ANM Nome 74.90 25 PFAKE 20 20 20.0 +13
ANM LR LR
comp=Z,800nm,22.0s
AKT Akhty 75.58 311 *e*P **P 20 20 11.4 -0.4**
AKT *e* 20 20 20.4
AKT *e* 20 22 56.7
AKT *e*S **S 20 29 51.2 +0.3**
AKT *e* 20 30 22.2
AKT pmax pmax
comp=Z,186nm,1.4s
MAK Makhachkala 75.83 312 *e*P **P 20 20 10.3 -2.7**
MAK *e* 20 23 00.1
MAK *e*S **S 20 29 51.1 -2.2**
MAK pmax pmax
comp=Z,285nm,1.8s
MAK MLR MLR
comp=Z,441nm,14.0s
SEKA Sheki 75.97 311 P **P 20 20 14.8 +0.8**

MNGR Mingechevir, A 76.03 310 P **P 20 20 15.0 +0.8**
GANJ Ganja 76.61 310 P **P 20 20 18.5 +0.9**
GROC Groznyy 77.09 313 *e*P **P 20 20 18.1 -2.1**
GROC *e* 20 20 27.3
GROC *e*S **S 20 30 09.3 +2.2**
GROC pmax pmax
comp=Z,347nm,1.6s
NAX Nakhchivan 77.21 308 P **P 20 20 21.8 +0.8**
GNI Garni 77.80 309 PFAKE 20 20 40.0 +16
GNI LR LR
comp=Z,600nm,20.0s
GNI Garni 77.80 309 *i* P **P 20 20 24.7 +0.2**
SNR=76
GNI Garni 77.80 309*c e*P **P 20 20 24.7 +0.2**
GNI pmax pmax
comp=Z,242nm,1.4s
GNI Garni 77.80 309 P **P 20 20 24.6 +0.2**
SNR=95
TBLG Delisi 77.83 311 *e*P **P 20 20 24.8 +0.4**
comp=Z,272nm,1.4s
TBLG Delisi 77.83 311 *e*P **P 20 20 24.8 +0.4**
TBLG pmax pmax
comp=Z,272nm,1.4s
OBL Observatory Le 78.14 72 PFAKE 20 20 40.0 +13
OBL LR LR
comp=Z,2μm,22.0s
UWB Uwekahuna B 78.14 72 PFAKE 20 20 40.0 +13
UWB LR LR
comp=Z,800nm,19.0s
TASB TASBURUN-IGDIR 78.19 309 P **P 20 20 27.3 +0.8**
STCH Steam Cracks 78.29 72 PFAKE 20 20 40.0 +13
STCH LR LR
comp=Z,2μm,22.0s
NPOC North of Pu'u 78.31 72 PFAKE 20 20 40.0 +12
NPOC LR LR
comp=Z,2μm,22.0s
CLDR Caldiran 78.43 308 P **P 20 20 28.8 +0.7**
CLDR Caldiran 78.43 308 *i* P **P 20 20 29.7 +1.6**
CLDR IAML_P
comp=Z,113nm,0.5s
ZEI Tsey 78.47 312 *e*P **P 20 20 25.0 -3.2**
ZEI pmax pmax
comp=Z,118nm,1.1s
PRGR Permogore 78.55 331⇑*i*P **P 20 20 28.8 +0.9**
PRGR pmax pmax
comp=Z,20nm,1.0s
HAKT HAKKARI 78.60 307 *i* P **P 20 20 29.3 +0.3**
HAKT IAML_P
comp=Z,41nm,0.1s
EAK Akyaka 78.67 310 *i* P **P 20 20 30.5 +1.2**
EAK IAML_P
comp=Z,467nm,0.8s
CUKT Cukurca 78.68 306 P **P 20 20 29.2 -0.2**
VMUR Van-Muradiye 78.70 308 *i* P **P 20 20 33.7 +4.2**
VMUR IAML_P
comp=Z,392nm,1.2s
NCK Nalchik 78.71 313 *i* P **P 20 20 29.0 -0.2**
NCK pmax pmax
comp=Z,131nm,1.4s
AKH Akhalkalaki 78.76 311 PFAKE 20 20 40.0 +10
AKH LR LR
comp=Z,1μm,21.0s
AKH Akhalkalaki 78.76 311⇑*i*P **P 20 20 30.1 +0.3**
AKH Akhalkalaki 78.76 311 P **P 20 20 30.1 +0.3**
VANB Van 78.85 308 P **P 20 20 31.9 +1.7**
SII Sitkinak Islan 79.05 34 PFAKE 20 20 40.0 +9.2
SII LR LR
comp=Z,1μm,20.0s
KARS Kars 79.08 310 P **P 20 20 32.8 +1.3**
GEVA Gevas 79.11 308 *i* P **P 20 20 32.7 +1.0**
GEVA IAML_P
comp=Z,48nm,0.4s
AGRB Hanur-Agry 79.15 309 P **P 20 20 33.4 +1.5**
AKDM Akdamar-Van 79.17 308 P **P 20 20 32.7 +0.6**
KBZ Khabaz 79.22 313 P **P 20 20 29.5 -2.4**
comp=Z,10nm,1.0s,baz=96,slow=4.5,SNR=16
KBZ LR LR 20 59 39.5
comp=Z,739nm,18.4s,baz=80,slow=39
TUTA Tutak 79.29 309 *i* P **P 20 20 35.2 +2.4**
TUTA IAML_P
comp=Z,262nm,0.1s
EPOS Posof 79.34 311 *i* P **P 20 20 33.6 +0.7**
KIV Kislovodsk 79.37 313 *e*P **P 20 20 32.4 -0.6**
comp=Z,258nm,1.5s
KIV LR LR
comp=Z,600nm,18.0s
KIV Kislovodsk 79.37 313⇑*i*P **P 20 20 33.6 +0.7**
KIV Kislovodsk 79.37 313 *i* P **P 20 20 32.9 0.0**
SNR=34
KIV Kislovodsk 79.37 313 *e*P **P 20 20 32.8 -0.1**
KIV pmax pmax
comp=Z,247nm,1.0s
KIV MLR MLR
comp=Z,2μm,19.0s
KIV Kislovodsk 79.37 313 P **P 20 20 33.0 0.0**
SNR=50
MLAZ Malazgirt-MUS 79.50 308 P **P 20 20 35.1 +1.3**
EATA Eleskirt 79.53 309 *i* P **P 20 20 35.2 +1.0**
EATA IAML_P
comp=Z,319nm,0.8s
OHAK Old Harbor 79.58 33 PFAKE 20 20 40.0 +6.4
OHAK LR LR
comp=Z,900nm,21.0s
SIRT Sirnak 79.61 307 P **P 20 20 34.5 +0.1**
SIRN Sırnak 79.63 307 *i* P **P 20 20 34.9 +0.4**
SIRN IAML_P
comp=Z,911nm,0.9s
SENK Senkaya-Erzuru 79.63 310 P **P 20 20 37.4 +2.8**
BLIS Bitlis-Merkez 79.85 308 *i* P **P 20 20 36.9 +1.2**
BLIS IAML_P
comp=Z,322nm,0.4s
ARTV Artvin 79.94 310 *i* P **P 20 20 37.9 +1.6**
ARTV IAML_P
comp=Z,138nm,0.3s
DAGI Agillar 79.96 310 *i* P **P 20 20 37.1 +0.9**
DAGI IAML_P
comp=Z,215nm,0.7s
HOMI Horasan 79.98 309 *i* P **P 20 20 37.9 +1.3**
HOMI IAML_P
comp=Z,65nm,0.1s
KDAK Kodiak Island 79.98 33 *e*P **P 20 20 36.6 +0.8**
comp=Z,172nm,1.4s
KDAK LR LR
comp=Z,1μm,21.0s
KDAK Kodiak Island 79.98 33 *e*P **P 20 20 36.6 +0.8**
KDAK pmax pmax
comp=Z,172nm,1.4s
KDAK MLR MLR
comp=Z,1μm,21.0s
SRTM Siirt_Merkez 80.01 307 *i* P **P 20 20 37.3 +0.7**
SRTM IAML_P
comp=Z,9.7nm,0.2s
KOPR Koprukoy-ERZUR 80.02 309 P **P 20 20 37.9 +1.2**
RSO Redoubt South 80.02 30 *e*P **P 20 20 36.4 +0.1**
DDEM Demirkent 80.08 310 *i* P **P 20 20 37.4 +0.5**
DDEM IAML_P
comp=Z,575nm,0.6s
VRH Novokhopyorsk 80.09 321 *e*P **P 20 20 35.7 -0.8**
VRH pmax pmax
comp=Z,150nm,1.8s
DBAD Bademkaya 80.12 310 *i* P **P 20 20 37.1 +0.1**
DBAD IAML_P
comp=Z,995nm,0.8s
DBOC Borcka 80.14 311 *i* P **P 20 20 37.4 +0.3**
DBOC IAML_P
comp=Z,537nm,0.8s
BCA Borcka 80.17 311 P **P 20 20 37.5 +0.3**
BCA Borcka 80.17 311⇑*i*P **P 20 20 37.7 +0.5**
MUSM Mu-Merkez 80.31 308 *i* P **P 20 20 39.4 +1.1**
MUSM IAML_P
comp=Z,20nm,0.2s
VRTB Varto-Mus 80.35 308 P **P 20 20 42.6 +4.2**
BTMN Batman 80.53 307 *i* P **P 20 20 40.0 +0.7**
BTMN IAML_P
comp=Z,170nm,0.5s
SVAN Silvan-Diyarba 80.58 307 P **P 20 20 41.0 +1.5**
BNGL BINGOL 80.59 308 *i* P **P 20 20 41.6 +1.8**
KARO Karliova-Bingo 80.66 309 P **P 20 20 41.6 +1.5**
ABPO Ambohimpanom 80.72 249 *e*P **P 20 20 40.3 -0.5**
comp=Z,89nm,1.6s
ABPO Ambohimpanom 80.72 249 *e*P **P 20 20 40.3 -0.5**
ABPO pmax pmax
comp=Z,89nm,1.6s
KRIK Erzurum-spir 80.72 310 *i* P **P 20 20 42.5 +2.0**
KRIK IAML_P

comp=Z,239nm,0.5s
CNPM China Poot 80.75 31 *e*P **P 20 20 39.9 0.0**
comp=Z,167nm,1.4s
ATD Arta Tunnel 80.76 281 PFAKE 20 20 50.0 +9.1
ATD LR LR
comp=Z,300nm,19.0s
MARD Mardin 80.94 307 *i* P **P 20 20 45.3 +3.7**
MARD IAML_P
comp=Z,109nm,0.1s
BNGB Bingl 80.95 308 P **P 20 20 42.5 +0.9**
BPAW Bear Paw Mtn. 81.01 26 *e*P **P 20 20 41.4 +0.1**
comp=Z,274nm,1.3s
BPAW LR LR
comp=Z,500nm,20.0s
YEDI Yedisu-Bingol 81.04 309 P **P 20 20 42.5 +0.4**
KOPT Kop Dagi 81.06 309 *i* P **P 20 20 44.6 +2.2**
KOPT IAML_P
comp=Z,613nm,0.3s
MLY Manley 81.15 25 PFAKE 20 20 50.0 +8.0
MLY LR LR
comp=Z,500nm,21.0s
HANI Diyarbakir_Han 81.19 308 *i* P **P 20 20 43.1 +0.2**
HANI IAML_P
comp=Z,335nm,0.4s
MAZI Mazidag 81.19 307 P **P 20 20 43.3 +0.4**
BAYB BAYBURT 81.24 310 *i* P **P 20 20 44.7 +1.5**
BAYB IAML_P
comp=Z,229nm,0.1s
DYBB Diyarbakir 81.42 307 P **P 20 20 45.7 +1.7**
KLMR Klimovskoe 81.45 330 *e*P **P 20 20 41.6 -2.0**
KLMR *e* 20 23 49.1
KLMR pmax pmax
comp=Z,55nm,1.3s
SOC Sochi 81.53 313 *e*P **P 20 20 41.8 -2.6**
SOC *e* 20 23 47.7
SOC *e*S **S 20 30 50.3 -3.9**
SOC pmax pmax
comp=Z,651nm,1.3s
SOC MLR MLR
comp=Z,5μm,21.0s
KTUT Trabzon 81.58 310 P **P 20 20 47.9 +3.2**
KTUT Trabzon 81.58 310⇑*i*P **P 20 20 45.2 +0.5**
VORD Divnogorie 81.62 320 *e*P **P 20 20 46.0 +1.3**
VORD pmax pmax
comp=Z,120nm,1.8s
ERZN Erzincan 81.67 309 *e*P **P 20 20 48.8 +3.4**
EUZM Uzumlu 81.69 309 *i* P **P 20 20 49.9 +4.4**
EUZM IAML_P
comp=Z,208nm,0.1s
VSR Storozhevoye 81.70 321 *e*P **P 20 20 44.6 -0.5**
VSR pmax pmax
comp=Z,80nm,1.7s
TOLK Toolik Lake Re 81.72 22 P **P 20 20 44.5 -0.4**
baz=268
LPSR Galich'ya Gora 81.82 322 *e*P **P 20 20 45.2 -0.5**
LPSR pmax pmax
comp=Z,60nm,1.8s
MCK McKinley 81.91 27 PFAKE 20 21 00.0 +14
MCK LR LR
comp=Z,700nm,20.0s
KELT Kelkit 82.01 309 *i* P **P 20 20 48.4 +1.1**
KELT IAML_P
comp=Z,5.4nm,0.4s
SVRC Sivrice-ELAZID 82.05 308 P **P 20 20 47.9 +0.4**
TMCR Tamitsa 82.15 334 *e*P **P 20 20 46.5 -0.7**
TMCR pmax pmax
comp=Z,24nm,0.9s
TCOL CIGO, UAF Yank 82.37 25 P **P 20 20 47.9 -0.5**
baz=271
COLA College 82.38 25 PFAKE 20 21 00.0 +12
COLA LR LR
comp=Z,400nm,20.0s
COLA College 82.38 25⇑*i*P **P 20 20 48.8 +0.4**
COLA pmax pmax
comp=Z,16nm,0.9s
CCB Clear Creek Bu 82.40 26 PFAKE 20 21 00.0 +11
CCB LR LR
comp=Z,600nm,20.0s
URFA Urfa 82.49 307 P **P 20 20 50.4 +0.7**
MOS Moscow 82.50 325 *e*P **P 20 20 48.4 -0.8**
MOS *e* 20 21 02.6
MOS *e* 20 23 57.7
MOS pmax pmax
comp=Z,106nm,2.1s
MOS MLR MLR
comp=Z,1μm,20.0s
POKR Poker Plat Res 82.55 25 P **P 20 20 48.8 -0.5**
baz=271
DHY Denali Highway 82.62 27 PFAKE 20 21 00.0 +10
DHY LR LR
comp=Z,500nm,20.0s
HDA Harding Lake 82.77 26 PFAKE 20 21 00.0 +9.5
HDA LR LR
comp=Z,500nm,20.0s
HDA Harding Lake 82.77 26 P **P 20 20 49.5 -1.0**
baz=272
ILAR Eielson Array 82.79 26 P **P 20 20 48.6 -1.9**
comp=Z,9.4nm,1.1s,baz=256,slow=4.8,SNR=34
ILAR LR LR 20 59 27.7
comp=Z,297nm,19.5s,baz=270,slow=37
ANN Anapa 83.11 314 *e*P **P 20 20 50.4 -2.2**
ANN *e**PP **pP 20 21 00.8 -2.0**
ANN *e*S **S 20 31 08.1 -2.2**
ANN *e*SS **SS 20 36 32.9 -1.7**
ANN pmax pmax
comp=Z,237nm,1.5s
ANN MLR MLR
comp=E,340nm,20.0s
ANN MLR MLR
comp=Z,720nm,20.0s
ANN MLR MLR
comp=N,307nm,20.0s
OBN Obninsk 83.13 325 PFAKE 20 21 00.0 +7.5
OBN LR LR
comp=Z,1μm,20.0s
OBN Obninsk 83.13 325*c i*P **P 20 20 53.8 +1.3**
OBN *i* 20 24 06.0
OBN *i* S S 20 30 59.7 -10
OBN pmax pmax
comp=Z,21nm,1.1s
OBN MLR MLR
comp=Z,1μm,21.0s
LVZ Lovozero 83.42 338 PFAKE 20 21 10.0 +16
LVZ LR LR
comp=Z,2μm,21.0s
DIV Divide 83.44 29 PFAKE 20 21 10.0 +16
DIV LR LR
comp=Z,600nm,21.0s
RSDY Resadiye-TOKAT 83.47 310 P **P 20 20 54.6 0.0**
DARE Darende-Malaty 83.47 308 P **P 20 20 57.1 +2.3**
EYAK Cordova Ski Ar 83.49 30 PFAKE 20 21 10.0 +16
EYAK LR LR
comp=Z,1μm,22.0s
RIDG Independent Ri 83.73 27 PFAKE 20 21 10.0 +14
RIDG LR LR
comp=Z,500nm,20.0s
SVSK Karacayir 83.75 309 P **P 20 20 57.1 +1.1**
GAZ Gaziantep 83.79 307 P **P 20 20 59.2 +2.8**
APA Apatity 83.92 337⇑*i*P **P 20 20 56.9 +0.6**
APA pmax pmax
comp=Z,6.0nm,1.3s
APA MLR MLR
comp=Z,1μm,18.0s
KMRS Kahramanmaras 84.01 307 P **P 20 20 57.6 +0.1**
TOKT Tokat 84.07 310 P **P 20 20 58.5 +0.8**
DOT Dot Lake 84.08 27 PFAKE 20 21 10.0 +13
DOT LR LR
comp=Z,500nm,20.0s
HMT Hamilton 84.24 30 PFAKE 20 21 10.0 +12
HMT LR LR
comp=Z,700nm,21.0s
MENT Mentasta 84.29 27 PFAKE 20 21 10.0 +12
MENT LR LR
comp=Z,600nm,19.0s
KVT Kavak 84.39 311 P **P 20 21 00.1 +0.8**
TAHT Tahtakopru-Hat 84.67 306 P **P 20 21 00.9 +0.1**
BNN Bunyan 84.73 308 P **P 20 21 00.9 -0.3**
TOTH TOTAH 84.74 303 *e*P **P 20 21 01.5 +0.2**
QASN Qassioun 84.85 303 *e*P **P 20 21 02.5 +0.6**
KOZT Kozan 84.86 307 P **P 20 21 01.4 -0.4**
TGL Tana Glacier 84.91 30 *e*P **P 20 21 02.1 +0.5**
TGL LR LR
comp=Z,600nm,22.0s
DIKM Dikmen 84.93 311 P **P 20 21 02.5 +0.5**
SNOP Sinop 84.93 312 P **P 20 21 03.8 +1.8**

CEYT	**Ceyhan**	**84.97 307**	P	**P**	**20 21 03.1 +0.8**	
YOZ	**Yozgat**	**85.06 309**	*e*P	**P**	**20 21 03.5 +0.6**	
YURE	**YUREGIR**	**85.08 306**	P	**P**	**20 21 05.6 +2.7**	
BALM	**Baldy**	**85.11 29**	PFAKE		20 21 10.0 +7.3	
BALM			LR	LR		
	comp=Z,400nm,18.0s					
FURI	**Furi**	**85.11 278**	PFAKE		20 21 20.0 +16	
FURI			LR	LR		
	comp=Z,900nm,19.0s					
BRBR	**Barbar**	**85.13 303**	*e*P	**P**	**20 21 03.5 0.0**	
JOF	**Joensuu**	**85.22 333**	P	**P**	**20 21 04.2 +1.2**	
JOF			pmax	pmax		
	comp=Z,37nm,1.8s					
EGAK	**Eagle**	**85.24 25**	PFAKE		20 21 10.0 +7.0	
EGAK			LR	LR		
	comp=Z,400nm,19.0s					
KRTS	**Karatas**	**85.31 306**	*e*P	**P**	**20 21 06.9 +2.9**	
SHBL	**Chebaa**	**85.31 303**	*e*P	**P**	**20 21 04.2 0.0**	
BHL	**Bhannes**	**85.33 303**	*e*P	**P**	**20 21 04.0 -0.3**	
SHMJ	**Saham**	**85.35 302**	P	**P**	**20 21 05.8 +1.5**	
SIM	**Simferopol'**	**85.45 315***d*	*i*P	**P**	**20 21 05.3 +0.8**	
SIM			*i*		20 24 31.0	
SIM			*e*S	**S**	**20 31 36.5 +2.7**	
SIM			*e*PS	**PnS**	**20 32 30.0 -2.7**	
SIM			pmax	pmax		
	comp=Z,280nm,1.8s					
SIM			pmax	pmax		
	comp=Z,80nm,8.5s					
KARA	**Karaisali**	**85.50 307**	P	**P**	**20 21 05.6 +0.7**	
KARJ		**85.61 301**	P	**P**	**20 21 06.2 +0.6**	
CTGM	**Chitina Glacie**	**85.61 29**	PFAKE		20 21 20.0 +15	
CTGM			LR	LR		
	comp=Z,500nm,20.0s					
JDRJ	**Daraweish**	**85.63 300**	P	**P**	**20 21 05.7 -0.2**	
GHAJ	**Ghor Haditha**	**85.66 301**	P	**P**	**20 21 06.0 +0.2**	
LISJ	**El Lisan**	**85.74 301**	P	**P**	**20 21 07.2 +1.0**	
MSF	**Maaselka**	**85.82 336**	P	**P**	**20 21 07.5 +1.6**	
MSF			pmax	pmax		
	comp=Z,37nm,1.4s					
KEV	**Kevo**	**85.98 340**	PFAKE		20 21 20.0 +13	
KEV			LR	LR		
	comp=Z,1μm,18.0s					
DAWY	**Dawson**	**86.09 26**	PFAKE		20 21 20.0 +13	
DAWY			LR	LR		
	comp=Z,800nm,20.0s					
AMAZ	**Amatzia**	**86.19 301**	P	**P**	**20 21 08.4 -0.1**	
AQBJ	**Aqaba**	**86.27 299**	P	**P**	**20 21 09.7 +0.8**	
BR131	**Keskin Array S**	**86.34 309**	P	**P**	**20 21 08.4 -0.8**	
	SNR=16					
BRTR	**Keskin Array B**	**86.34 309**	P	**P**	**20 21 08.0 -1.3**	
	comp=Z,13nm,1.1s,baz=116,slow=5.6,SNR=30					
BRTR			LR	LR	21 04 59.7	
	comp=Z,317nm,20.0s,baz=70,slow=39					
EIL	**Elat**	**86.36 299**	P	P	20 21 15.9 +6.5	
MAW	**Mawson**	**86.36 200**	P	**P**	**20 21 07.5 -0.9**	
	comp=Z,9.8nm,0.9s,baz=50,slow=6.5,SNR=15					
MAW			LR	LR	20 55 08.1	
	comp=Z,557nm,21.5s,baz=53,slow=32					
MAW	**Mawson**	**86.36 200**	PFAKE		20 21 20.0 +12	
MAW			LR	LR		
	comp=Z,200nm,19.0s					
MAW	**Mawson**	**86.36 200**	P	**P**	**20 21 07.9 -0.5**	
	baz=87,SNR=11					
MAW	**Mawson**	**86.36 200**	P	**P**	**20 21 07.6 -0.8**	
ARCES	**ARCESS Array B**	**86.53 340**	P	**P**	**20 21 07.3 -2.1**	
	comp=Z,3.3nm,0.8s,baz=83,slow=9.9,SNR=4.5					
ARCES			LR	LR	21 04 03.5	
	comp=Z,1μm,18.0s,baz=86,slow=39					
ARE0	**ARCESS Array S**	**86.53 340**	PFAKE		20 21 20.0 +11	
ARE0			LR	LR		
	comp=Z,100nm,20.0s					
EPYK	**Eagle Plains**	**86.82 24**	P	**P**	**20 21 10.3 -0.6**	
	baz=281					
ANTO	**Ankara**	**86.98 310**	P	**P**	**20 21 15.4 +3.1**	
ANTO			pmax	pmax		
	comp=Z,49nm,1.8s					
ANTO	**Ankara**	**86.98 310**	P	**P**	**20 21 12.5 +0.2**	
	SNR=10.0					
VNDA	**Vanda**	**87.11 172**	P	**P**	**20 21 11.2 -0.8**	
	comp=Z,16nm,0.9s,baz=314,slow=5.9,SNR=68					
VNDA			LR	LR	21 03 40.2	
	comp=Z,211nm,18.1s,baz=340,slow=38					
VNDA	**Vanda**	**87.11 172**	P	**P**	**20 21 11.3 -0.7**	
VNDA			pmax	pmax		
	comp=Z,32nm,1.7s					
CSS	**Mathiatis**	**87.13 305**	PFAKE		20 21 20.0 +7.0	
CSS			LR	LR		
	comp=Z,600nm,22.0s					
KBS	**Kingsbay**	**87.25 350**	PFAKE		20 21 20.0 +7.3	
KBS			LR	LR		
	comp=Z,2μm,19.0s					
HYT	**Haines Junctio**	**87.48 29**	PFAKE		20 21 30.0 +16	
HYT			LR	LR		
	comp=Z,600nm,21.0s					
SUF	**Sumiainen**	**87.60 333**	P	**P**	**20 21 14.2 -0.4**	
SUF			pmax	pmax		
	comp=Z,33nm,1.7s					
INK	**Inuvik**	**87.63 21**	PFAKE		20 21 30.0 +15	
INK			LR	LR		
	comp=Z,700nm,19.0s					
INK	**Inuvik**	**87.63 21**	P	**P**	**20 21 16.8 +2.1**	
INK			pmax	pmax		
	comp=Z,20nm,1.2s					
KMBO	**Kilima Mbogo**	**87.73 269**	P	**P**	**20 21 15.4 -1.2**	
	comp=Z,3.8nm,0.9s,baz=54,slow=19,SNR=7.9					
KMBO			LR	LR	20 58 07.4	
	comp=Z,344nm,20.1s,baz=96,slow=34					
KMBO	**Kilima Mbogo**	**87.73 269**	PFAKE		20 21 30.0 +13	
KMBO			LR	LR		
	comp=Z,500nm,19.0s					
KMBO	**Kilima Mbogo**	**87.73 269**	*i* P	**P**	**20 21 16.3 -0.3**	
	SNR=20					
KMBO	**Kilima Mbogo**	**87.73 269**	P	**P**	**20 21 16.1 -0.5**	
	SNR=14					
FINES	**FINESS Array B**	**87.88 332**	P	**P**	**20 21 13.4 -2.6**	
	comp=Z,2.1nm,0.7s,baz=38,slow=5.1,SNR=13					
FINES			LR	LR	21 03 07.7	
	comp=Z,2μm,21.4s,baz=83,slow=37					
PPT	**Papeete**	**87.99 108**	LR	LR	20 53 01.2	
	comp=Z,476nm,20.8s,baz=290,slow=30					
PPT2	**Papeete2**	**87.99 108**	*e*LQ	LQ	20 45 35.7	
	comp=Z,3μm,34.8s					
PPT2			*e*LR	LR	20 49 13.4	
	comp=Z,2μm,24.5s					
AKASG	**Malin Array Be**	**88.00 321**	P	**P**	**20 21 14.6 -2.2**	
	comp=Z,2.7nm,0.6s,baz=66,slow=4.5,SNR=31					
AKASG			LR	LR	21 03 28.8	
	comp=Z,836nm,21.1s,baz=80,slow=38					
AKBB	**Malin Array Si**	**88.00 321**	PFAKE		20 21 30.0 +13	
AKBB			LR	LR		
	comp=Z,1μm,19.0s					
KIEV	**Kiev**	**88.01 321**	PFAKE		20 21 30.0 +13	
KIEV			LR	LR		
	comp=Z,1μm,19.0s					
KIEV	**Kiev**	**88.01 321** ⇓	*i* P	**P**	**20 21 16.9 0.0**	
KIEV	**Kiev**	**88.01 321**	*i* P	**P**	**20 21 15.6 -1.3**	
	SNR=7.5					
KIEV	**Kiev**	**88.01 321***c*	*i* P	**P**	**20 21 15.7 -1.2**	
KIEV			pmax	pmax		
	comp=Z,62nm,2.4s					
SBA	**Scott Base**	**88.03 172**	*e*P	**P**	**20 21 16.7 +0.3**	
	comp=Z,94nm,1.5s					
SBA	**Scott Base**	**88.03 172**	*e*P	**P**	**20 21 16.7 +0.3**	
SBA			pmax	pmax		
	comp=Z,94nm,1.5s					
VSU	**Vasula**	**88.11 329***ce*	P	**P**	**20 21 17.0 -0.2**	
VSU			pmax	pmax		
	comp=Z,75nm,1.7s					
VSU	**Vasula**	**88.11 329**	*e*P	**P**	**20 21 17.2 0.0**	
VSU			IAmb	IAmb	20 21 34.0	
	comp=Z,37nm,0.8s					
NAI	**Nairobi**	**88.19 268**	PFAKE		20 21 30.0 +11	
NAI			LR	LR		
	comp=Z,700nm,22.0s					
MICGM	**Minsk**	**88.19 325**	*e*	**P**	**20 21 18.0 +0.4**	
MICGM			*e*LR	LR	21 00 52.0	
MNK	**Minsk**	**88.19 325**	*e*P	**P**	**20 21 18.0 +0.4**	
IDID	**Didziasalis**	**88.70 326**	*e*P	**P**	**20 21 19.8 -0.2**	
IDID			IAmb	IAmb	20 21 31.7	
	comp=Z,5.8nm,1.0s					
KIS	**Kishinev**	**88.85 317**	*e*P	**P**	**20 21 20.0 -0.9**	
	comp=Z,170nm,2.0s					
KIS			*e*SKS	S	20 31 56.0 -10	
KIS			*e*S	**ScS**	**20 32 10.0 -1.7**	
KIS	**Kishinev**	**88.85 317**	*e*PS	PS	20 32 40.0 -34	
KIS	**Kishinev**	**88.85 317**	*e*P	**P**	**20 21 20.0 -0.9**	
KIS			*e*		20 26 55.0	
KIS			*e*S	**ScS**	**20 32 10.0 -1.7**	
KIS			pmax	pmax		
	comp=Z,179nm,2.0s					
KIS			MLR	MLR		
	comp=Z,700nm,20.0s					
KIS			MLR	MLR		
	comp=N,700nm,18.0s					
TBI	**Tubuai**	**88.92 114**	*e*S	**S**	**20 32 05.0 -2.9**	
	comp=N,840nm,28.8s					
TBI	**Tubuai**	**88.92 114**	*e*LQ	LQ	20 46 00.5	
	comp=N,1μm,40.0s					
TBI			*e*LR	LR	20 49 37.3	
	comp=N,1μm,25.8s					
IIGN	**Ignalina**	**88.98 326**	*e*P	**P**	**20 21 21.2 -0.1**	
IIGN			IAmb	IAmb	20 21 31.1	
	comp=Z,3.6nm,1.0s					
ISAL	**Salakas**	**88.99 326**	*e*P	**P**	**20 21 21.4 0.0**	
ISAL			IAmb	IAmb	20 21 35.4	
	comp=Z,13nm,1.4s					
VAF	**Ylistaro**	**89.08 334**	P	**P**	**20 21 23.0 +1.4**	
VAF			pmax	pmax		
	comp=Z,16nm,2.0s					
PABE	**Paberze**	**90.20 326**	*e*P	**P**	**20 21 24.9 -2.1**	
PABE			IAmb	IAmb	20 21 38.4	
	comp=Z,52nm,1.5s					
TESR	**Tescani**	**90.40 317** ⇓	*i* P	**P**	**20 21 28.4 +0.2**	
VRI	**Vrincioaia**	**90.47 316** ⇑	*i* P	**P**	**20 21 29.7 +1.1**	
VRI	**Vrincioaia**	**90.47 316**	P	**P**	**20 21 31.5 +2.9**	
VRI			pmax	pmax		
	comp=Z,44nm,1.9s					
PLOR	**Plostina**	**90.53 316** ⇑	*i* P	**P**	**20 21 29.2 +0.3**	
SUW	**Suwalki**	**90.99 325**	*e*P	**P**	**20 21 29.0 -1.8**	
SUW	**Suwalki**	**90.99 325**	PFAKE		20 21 40.0 +9.2	
SUW			LR	LR		
	comp=Z,1μm,22.0s					
SUW	**Suwalki**	**90.99 325**	*e*P	**P**	**20 21 29.0 -1.8**	
OZUR		**91.07 317** ⇑	*i* P	**P**	**20 21 28.6 -2.8**	
MLR	**Muntele Rosu**	**91.08 316**	PFAKE		20 21 40.0 +8.4	
MLR			LR	LR		
	comp=Z,900nm,20.0s					
MLR	**Muntele Rosu**	**91.08 316** ⇑	*i* P	**P**	**20 21 31.1 -0.5**	
BURAR	**Bucovina Array**	**91.15 318** ⇑	*i* P	**P**	**20 21 32.2 +0.4**	
JMB	**Yambol**	**91.21 313**	P	**P**	**20 21 30.0 -2.1**	
LVV	**L'vov**	**91.44 320**	*e*P	**P**	**20 21 32.4 -0.6**	
LVV			*e*		20 25 14.8	
LVV			*e*S	**S**	**20 32 26.0 -4.3**	
LVV			MLR	MLR		
	comp=Z,500nm,16.0s					
LVV			MLR	MLR		
	comp=N,200nm,18.0s					
SZH	**Strazhica**	**91.53 314**	P	**P**	**20 21 34.3 +0.8**	
VOIR		**91.71 316** ⇑	*i* P	**P**	**20 21 34.8 +0.4**	
DLBC	**Dease Lake**	**91.73 31**	LR	LR	20 58 11.3	
	comp=N,349nm,21.5s,baz=316,slow=32					
HUMR	**Humele**	**91.95 315** ⇑	*i* P	**P**	**20 21 36.1 +0.7**	
PVL	**Pavlikeni**	**91.97 314**	P	**P**	**20 21 34.7 -0.8**	
KWP	**Kalwaria Pacla**	**92.32 320**	*e*P	**P**	**20 21 36.4 -0.7**	
KWP	**Kalwaria Pacla**	**92.32 320**	PFAKE		20 21 50.0 +13	
KWP			LR	LR		
	comp=Z,11μm,20.0s					
KWP	**Kalwaria Pacla**	**92.32 320**	*e*P	**P**	**20 21 36.4 -0.7**	
LOT	**Lotru**	**92.59 316** ⇑	*i* P	**P**	**20 21 35.5 -3.0**	
KOLS	**Kolonicke sedl**	**92.77 320**	*e*P	**P**	**20 21 42.3 +3.2**	
KOLS	**Kolonicke sedl**	**92.77 320**	*e*P	**P**	**20 21 42.3 +3.2**	
UZH	**Uzhgorod**	**92.83 320**	*e*P	**P**	**20 21 38.0 -1.4**	
UZH			*i*		20 21 49.0	
UZH			*e*		20 27 22.0	
UZH			*i* S	**S**	**20 32 38.0 -4.7**	
UZH			MLR	MLR		
	comp=Z,100nm,18.0s					
BEL	**Belsk**	**92.94 323**	*e*P	**P**	**20 21 39.3 -0.5**	
BEL	**Belsk**	**92.94 323**	*e*P	**P**	**20 21 39.3 -0.5**	
DRGR		**93.00 318** ⇑	*i* P	**P**	**20 21 40.3 0.0**	
DRGR		**93.00 318**	P	**P**	**20 21 42.2 +1.9**	
DRGR			pmax	pmax		
	comp=Z,30nm,1.9s					
PUNG	**Punghina**	**93.43 315** ⇓	*i* P	**P**	**20 21 43.3 +1.0**	
MMB	**Musomiste**	**93.47 312**	P	**P**	**20 21 40.7 -1.9**	
DAG	**Danmarks Havn**	**93.56 352**	*i* P	**P**	**20 21 40.0 -2.2**	
DAG			pmax	pmax		
	comp=Z,50nm,1.3s					
DAG	**Danmarks Havn**	**93.56 352**	*i* P	**P**	**20 21 40.0 -2.2**	
	comp=Z,26nm,1.3s					
VTS	**Vitosha**	**93.60 314**	PFAKE		20 21 50.0 +6.7	
VTS			LR	LR		
	comp=Z,900nm,22.0s					
VTS	**Vitosha**	**93.60 314**	P	**P**	**20 21 43.2 -0.1**	
KKB	**Krupnik**	**93.88 313**	P	**P**	**20 21 42.8 -1.7**	
NIE	**Niedzica**	**93.89 321**	*e*P	**P**	**20 21 43.4 -0.9**	
NIE	**Niedzica**	**93.89 321**	*e*P	**P**	**20 21 43.4 -0.9**	
OJC	**Ojcow**	**93.98 322**	*e*P	**P**	**20 21 43.6 -1.1**	
OJC	**Ojcow**	**93.98 322**	*e*P	**P**	**20 21 43.6 -1.1**	
MBAR	**Mbarara**	**94.12 270**	PFAKE		20 22 00.0 +14	
MBAR			LR	LR		
	comp=Z,700nm,19.0s					
MDVR	**Moldovita**	**94.16 316** ⇑	*i* P	**P**	**20 21 46.3 +0.6**	
VAY	**Valandovo**	**94.38 312**	*i* P	**P**	**20 21 47.4 +0.6**	
PSZ	**Piszkesteto**	**94.56 319**	PFAKE		20 22 00.0 +12	
PSZ			LR	LR		
	comp=Z,1μm,20.0s					
STIP	**Stip**	**94.57 313**	*i* P	**P**	**20 21 46.8 -0.9**	
GKP	**Gorka Klasztor**	**94.60 325**	*e*P	**P**	**20 21 49.0 +1.6**	
GKP	**Gorka Klasztor**	**94.60 325**	*e*P	**P**	**20 21 49.0 +1.6**	
RES	**Resolute Bay**	**94.73 10**	LR	LR	21 06 43.6	
	comp=Z,309nm,20.3s,baz=338,slow=37					
RES	**Resolute Bay**	**94.73 10**	*e*P	**P**	**20 21 47.1 -0.4**	
	comp=Z,17nm,1.3s					
RES			LR	LR		
	comp=Z,500nm,20.0s					
RES	**Resolute Bay**	**94.73 10**	*e*P	**P**	**20 21 47.2 -0.4**	
RES			pmax	pmax		
	comp=Z,17nm,1.3s					
RES			MLR	MLR		
	comp=Z,500nm,20.0s					
NB2	**NORSAR Subarra**	**94.83 333**	P	**P**	**20 21 46.0 -2.4**	
	comp=Z,10nm,1.0s,baz=65,slow=4.6					
NB2	**NORSAR Subarra**	**94.83 333**	P	**P**	**20 21 46.0 -2.4**	
	baz=65,slow=4.6					
NOA	**NORSAR Array B**	**94.83 333**	P	**P**	**20 21 45.7 -2.7**	
	comp=Z,2.4nm,1.0s,baz=66,slow=4.5,SNR=3.9					
NOA			LR	LR	21 07 35.1	
	comp=Z,885nm,19.1s,baz=65,slow=38					
SYO	**Syowa Base**	**94.98 201** ⇑	*e*P	**P**	**20 21 48.0 -0.7**	
SYO	**Syowa Base**	**94.98 201** ⇑	*e*pP	pP	20 22 02.0 +3.0	
SKO	**Skopje**	**95.05 313**	*i* P	**P**	**20 21 50.6 +0.8**	
VYHS	**Vyhne**	**95.08 320**	*e*P	**P**	**20 21 51.7 +1.9**	
VYHS	**Vyhne**	**95.08 320**	*e*P	**P**	**20 21 51.7 +1.9**	
OKC	**Ostrava-Krasne**	**95.11 321**	*e*P	**P**	**20 21 52.6 +2.7**	
OKC			*e*		20 21 59.2	
OKC			MLR	MLR		
	comp=Z,900nm,17.5s					
OKC	**Ostrava-Krasne**	**95.11 321**	*e*P	**P**	**20 21 52.6 +2.7**	
OKC			*ex*	x	20 21 59.2	
OKC			*ex*	x	20 22 17.2	
OKC			AMS	AMS	21 08 20.0	
	comp=Z,900nm,17.5s					
KRUS	**Krusevo**	**95.34 313**	*i* P	**P**	**20 21 50.4 -0.9**	
FNA	**Florina**	**95.39 312**	PFAKE		20 22 00.0 +8.6	
FNA			LR	LR		
	comp=Z,500nm,20.0s					
MORC	**Moravsky Berou**	**95.50 322**	PFAKE		20 22 00.0 +8.2	
MORC			LR	LR		
	comp=Z,900nm,18.0s					
MORC	**Moravsky Berou**	**95.50 322**	*e*P	**P**	**20 21 50.7 -1.1**	
JAVC	**Velka Javorina**	**95.70 321**	*e*P	**P**	**20 21 52.5 -0.2**	
KSP	**Ksiaz**	**95.93 323**	*e*P	**P**	**20 21 52.4 -1.2**	
KSP	**Ksiaz**	**95.93 323**	*e*P	**P**	**20 21 52.4 -1.2**	
TULEG	**Thule**	**96.00 3**	PFAKE		20 22 00.0 +6.6	
TULEG			LR	LR		
	comp=Z,600nm,20.0s					
OSTC	**Ostas**	**96.07 323**	*e*P	**P**	**20 21 55.7 +1.4**	
OSTC			*ex*	x	20 22 03.8	
OSTC			AMS	AMS	21 09 10.0	
	comp=Z,1μm,18.7s					
DPC	**Dobruska-Polom**	**96.07 322**	*e*P	**P**	**20 21 57.3 +3.0**	
DPC			*e*		20 22 04.0	
DPC			*e*S	**S**	**20 33 14.4 +3.2**	
DPC			MLR	MLR		
	comp=Z,2μm,17.6s					
DPC	**Dobruska-Polom**	**96.07 322**	*e*P	**P**	**20 21 57.3 +3.0**	
DPC			*ex*	x	20 22 04.0	
DPC			*ex*	x	20 22 21.8	
DPC			*e*S	**S**	**20 33 14.4 +3.2**	
DPC			AMS	AMS	21 09 10.0	
	comp=Z,2μm,17.6s					
KONO	**Kongsberg**	**96.15 332**	PFAKE		20 22 10.0 +16	
KONO			LR	LR		
	comp=Z,1μm,19.0s					
CHVC	**Chvalec**	**96.16 323**	*e*P	**P**	**20 21 57.1 +2.4**	
CHVC			*ex*	x	20 22 20.2	
CHVC			AMS	AMS	21 09 20.0	
	comp=Z,1μm,19.7s					
UPC	**Upice**	**96.21 323**	*ex*	x	20 22 22.1	
UPC			AMS	AMS	21 09 20.0	
	comp=Z,2μm,19.4s					
VRAC	**Vranov**	**96.24 321**	P	**P**	**20 21 58.0 +2.9**	
VRAC			pmax	pmax		
	comp=Z,9.0nm,1.7s					
VRAC	**Vranov**	**96.24 321**	*e*P	**P**	**20 21 54.0 -1.1**	
RGN	**Rugen**	**96.33 327**	PFAKE		20 22 10.0 +15	
RGN			LR	LR		
	comp=Z,2μm,20.0s					
TIR	**Tirane**	**96.35 313**	PFAKE		20 22 10.0 +14	
TIR			LR	LR		
	comp=Z,600nm,22.0s					
KRUC	**Moravsky**	**96.44 321**	*e*P	**P**	**20 21 54.7 -1.3**	
TTG	**Podgorica**	**96.50 314**	PFAKE		20 22 10.0 +14	
TTG			LR	LR		
	comp=Z,600nm,22.0s					
TREC	**Trest**	**96.93 322**	*e*P	**P**	**20 22 00.9 +2.7**	
TREC			*e*		20 22 07.5	
TREC			MLR	MLR		
	comp=Z,1μm,18.8s					
TREC	**Trest**	**96.93 322**	*e*P	**P**	**20 22 00.9 +2.7**	
TREC			*ex*	x	20 22 07.5	
TREC			*ex*	x	20 22 25.2	
TREC			AMS	AMS	21 09 30.0	
	comp=Z,1μm,18.8s					
PVCC	**Panska Ves**	**97.07 323**	*e*P	Pdif	20 22 01.3 +2.4	
PVCC			MLR	MLR		
	comp=Z,1μm,18.6s					
PVCC	**Panska Ves**	**97.07 323**	*e*P	Pdif	20 22 01.3 +2.4	
PVCC			AMS	AMS	21 10 40.0	
	comp=Z,1μm,18.6s					
YKW3	**Yellowknife Ar**	**97.07 24**	PFAKE		20 22 10.0 +11	
YKW3			LR	LR		
	comp=Z,400nm,20.0s					
QSPA	**South Pole Qui**	**97.11 180**	*e*P	**P**	**20 21 58.2 -0.4**	
	comp=Z,19nm,1.0s					
QSPA			LR	LR		
	comp=Z,900nm,22.0s					
YKA	**Yellowknife Ar**	**97.11 24**	P	**P**	**20 21 57.0 -1.6**	
	comp=Z,6.9nm,1.1s,baz=299,slow=4.6,SNR=3.7					
YKA			PKKPbc	**PKKPbc**	**20 38 39.4 -1.5**	
	comp=Z,1.0nm,1.0s,baz=100,slow=1.7,SNR=3.6					
GOPC	**GO Pecny, Ondr**	**97.15 322**	AMS	AMS	21 10 00.0	
	comp=Z,2μm,19.2s					
BLY	**Banja Luka**	**97.27 317**	PFAKE		20 22 10.0 +10	
BLY			LR	LR		
	comp=Z,900nm,22.0s					
PRU	**Pruhonice**	**97.27 322**	*e*P	Pdif	20 22 02.4 +2.6	
PRU			MLR	MLR		
	comp=Z,2μm,18.4s					
PRU	**Pruhonice**	**97.27 322**	*e*P	Pdif	20 22 02.4 +2.6	
PRU			AMS	AMS	21 09 50.0	
	comp=Z,2μm,18.4s					
BRG	**Berggiesshubel**	**97.32 323**	*e*P	Pdif	20 22 01.1 +1.2	
	comp=Z,50nm,1.8s					
BRG			*e*PP	**PP**	**20 25 57.0 +0.6**	
	comp=Z,36nm,1.8s					
BRG			S	S	20 33 04.0 -18	
BRG			SS	**SS**	**20 40 06.0 +6.4**	
	comp=N,867nm,17.1s					
	comp=E,821nm,22.7s					
	comp=Z,1μm,21.1s					
BRG	**Berggiesshubel**	**97.32 323**	*e*P	Pdif	20 22 01.1 +1.1	
BRG			*e*		20 25 57.0	
BRG			SS	SS	20 40 06.0 +6.4	
BRG			pmax	pmax		
	comp=Z,50nm,1.8s					
BRG			pmax	pmax		
	comp=Z,36nm,1.8s					
BRG			MLR	MLR		
	comp=N,867nm,17.1s					
BRG			MLR	MLR		
	comp=E,821nm,22.7s					
BRG			MLR	MLR		
	comp=Z,1μm,21.1s					
CLL	**Collm**	**97.71 324**	PFAKE		20 22 10.0 +8.3	
CLL			LR	LR		
	comp=Z,2μm,20.0s					
CLL	**Collm**	**97.71 324**	*i* P	Pdif	20 22 02.9 +1.2	
	comp=Z,33nm,1.7s					
CLL			*e*		20 22 12.0	
CLL			*e*PP	**PP**	**20 25 59.0 -0.4**	
CLL			*e*S	**S**	**20 33 23.0 -2.1**	
CLL			*e*PS	PS	20 34 51.0 -0.7	
CLL			*e*SS	**SS**	**20 40 06.0 +0.9**	
CLL			*e*SSSS		20 46 24.0	
CLL			Lm	MLR	21 11 00.0	
	comp=Z,2μm,20.9s					
CLL	**Collm**	**97.71 324**	*i* P	Pdif	20 22 02.9 +1.2	
CLL			*e*		20 22 12.0	
CLL			*e*S	**S**	**20 33 23.0 -2.1**	
CLL			pmax	pmax		
	comp=Z,33nm,1.7s					
CLL			MLR	MLR		
	comp=Z,2μm,20.9s					
KHC	**Kasperske Hory**	**98.16 322**	PFAKE		20 22 20.0 +16	
KHC			LR	LR		
	comp=Z,300nm,20.0s					
KHC	**Kasperske Hory**	**98.16 322**	*e*P	Pdif	20 22 06.4 +2.6	
KHC			*e*S	**S**	**20 33 26.8 -2.3**	
KHC			MLR	MLR		
	comp=Z,1μm,15.9s					
KHC	**Kasperske Hory**	**98.16 322**	*e*P	Pdif	20 22 06.4 +2.6	
KHC			*ex*	x	20 22 34.3	
KHC			*e*S	**S**	**20 33 26.8 -2.3**	
KHC			AMS	AMS	21 10 30.0	
	comp=Z,1μm,15.9s					
GEC2	**GERESS Array S**	**98.19 321**	PFAKE		20 22 20.0 +16	
GEC2			LR	LR		
	comp=Z,900nm,19.0s					
GERES	**GERESS Array B**	**98.19 321**	LR	LR	21 10 48.2	
	comp=Z,705nm,18.3s,baz=76,slow=38					
NKC	**Novy Kostel**	**98.44 323**	AMS	AMS	21 10 20.0	
	comp=Z,1μm,18.6s					
NLWA	**Neilton Lookou**	**98.82 40**	PFAKE		20 22 20.0 +13	
NLWA			LR	LR		
	comp=Z,800nm,20.0s					
TIP	**Timpagrande**	**99.24 312**	PFAKE		20 22 20.0 +11	
TIP			LR	LR		
	comp=Z,800nm,22.0s					
D03D	**Eldon**	**99.27 40**	P	**Pdif**	**20 22 09.6 +0.9**	
	baz=291					
SCO	**Scoresbysund**	**99.28 349**	PFAKE		20 22 20.0 +12	
SCO			LR	LR		
	comp=Z,500nm,22.0s					
GRA1	**Grafenberg Arr**	**99.38 323**	PFAKE		20 22 20.0 +11	
GRA1			LR	LR		
	comp=Z,1μm,19.0s					
GRFO	**Grafenberg**	**99.38 323**	PFAKE		20 22 20.0 +11	
GRFO			LR	LR		
	comp=Z,900nm,20.0s					
B05A	**Bryant**	**99.61 39**	P	**Pdif**	**20 22 09.9 -0.3**	
	baz=292					
SUMG	**Summit**	**99.62 355**	PFAKE		20 22 20.0 +10	
SUMG			LR	LR		
	comp=Z,800nm,20.0s					
CEL	**Celeste**	**100.16 311**	PFAKE		20 22 20.0 +7.0	
CEL			LR	LR		

YBH **Yreka Blue Hor** **101.60** **45** PFAKE 20 22 30.0 +11
YBH LR LR
comp=Z,900nm,22.0s
BFO **Black Forest** **101.67** **322** PFAKE 20 22 30.0 +11
BFO LR LR
comp=Z,900nm,19.0s
G06A **Carlson Farm,** **101.70** **41** PFAKE 20 22 30.0 +10
G06A LR LR
comp=Z,500nm,20.0s
TUE **Stuetta** **101.81** **320** PFAKE 20 22 30.0 +10
TUE LR LR
comp=Z,1µm,19.0s
VLC **Villacollemand** **102.04** **318** PFAKE 20 22 30.0 +8.8
VLC LR LR
comp=Z,1µm,22.0s
PINE **Pine Mountain** **102.06** **42** PFAKE 20 22 30.0 +8.5
PINE LR LR
comp=Z,800nm,22.0s
WDC **Whiskeytown Da** **102.12** **46** PFAKE 20 22 30.0 +8.4
WDC LR LR
comp=Z,600nm,20.0s
WLF **Walferdange** **102.38** **324** PFAKE 20 22 30.0 +7.5
WLF LR LR
comp=Z,6µm,19.0s
ECH **Echery** **102.43** **323** PFAKE 20 22 30.0 +7.2
ECH LR LR
comp=Z,900nm,18.0s
GDXM **Geysers** **102.55** **48** PFAKE 20 22 30.0 +6.4
GDXM LR LR
comp=Z,1µm,21.0s
UCC **Uccle** **102.86** **326** PFAKE 20 22 40.0 +15
UCC LR LR
comp=Z,1µm,21.0s
I07A **Izee** **102.90** **42** PFAKE 20 22 40.0 +15
I07A LR LR
comp=Z,500nm,20.0s
SENIN **Lac Senin/Sane** **103.14** **321** PFAKE 20 22 40.0 +14
SENIN LR LR
comp=Z,1µm,20.0s
MOD **Modoc Plateau** **103.21** **44** PFAKE 20 22 40.0 +13
MOD LR LR
comp=Z,500nm,21.0s
ORV **Oroville** **103.23** **47** PFAKE 20 22 40.0 +13
ORV LR LR
comp=Z,500nm,21.0s
F10A **Beach Ranch, E** **103.58** **39** PFAKE 20 22 40.0 +12
F10A LR LR
comp=Z,600nm,20.0s
AFDM **Forest Hills D** **103.83** **47** PFAKE 20 22 40.0 +11
AFDM LR LR
comp=Z,600nm,22.0s
J08A **Circle Bar Ran** **103.88** **42** PFAKE 20 22 40.0 +11
J08A LR LR
comp=Z,600nm,22.0s
BEKR **Beckworth** **103.94** **46** PFAKE 20 22 40.0 +10
BEKR LR LR
comp=Z,700nm,20.0s
BNI **Bardonecchia** **104.10** **320** PFAKE 20 22 40.0 +10
BNI LR LR
comp=Z,2µm,21.0s
WVOR **Wild Horse Val** **104.14** **43** PFAKE 20 22 40.0 +9.3
WVOR LR LR
comp=Z,500nm,20.0s
WALA **Waterton Lakes** **104.16** **35** PFAKE 20 22 40.0 +9.4
WALA LR LR
comp=Z,600nm,21.0s
ESK **Eskdalemuir** **104.29** **332** PFAKE 20 22 40.0 +9.1
ESK LR LR
comp=Z,1µm,19.0s
RUBR **Rubicon Trail** **104.39** **47** PFAKE 20 22 40.0 +8.0
RUBR LR LR
comp=Z,800nm,21.0s
CMB **Columbia Colle** **104.59** **48** PFAKE 20 22 40.0 +7.3
CMB LR LR
comp=Z,900nm,22.0s
VCNR **Virginia City** **104.66** **46** PFAKE 20 22 40.0 +6.8
VCNR LR LR
comp=Z,700nm,22.0s
PAHR **Pah Rah Range** **104.69** **46** PFAKE 20 22 40.0 +6.8
PAHR LR LR
comp=Z,700nm,21.0s
PNTR **Pine Nut** **104.77** **47** PFAKE 20 22 40.0 +6.3
PNTR LR LR
comp=Z,700nm,21.0s
YERR **Yerington** **105.07** **47** PFAKE 20 22 50.0 +15
YERR LR LR
comp=Z,800nm,20.0s
WAKR **Walker** **105.11** **47** PFAKE 20 22 50.0 +15
WAKR LR LR
comp=Z,900nm,21.0s
SSB **Saint Sauveur** **105.35** **321** PFAKE 20 27 00.0 +10
SSB LR LR
comp=Z,800nm,20.0s
MDPB **Devils Postpil** **105.70** **48** PFAKE 20 27 00.0 +9.1
MDPB LR LR
comp=Z,800nm,21.0s
RYN **Ryan** **105.72** **47** PFAKE 20 27 00.0 +9.2
RYN LR LR
comp=Z,700nm,22.0s
OMMB **Old Mammoth Mi** **105.77** **48** PFAKE 20 27 00.0 +8.9
OMMB LR LR
comp=Z,900nm,21.0s
KVN **Kaiserville** **105.86** **46** PFAKE 20 27 00.0 +8.9
KVN LR LR
comp=Z,600nm,22.0s
SFJD **Kangerlussuaq** **105.89** **358** PKKPbc PKKPbc 20 38 12.1 -3.5
comp=Z,4.1nm,0.6s,baz=222,slow=6.3,SNR=4.6
NV01 **Mina Array Sit** **105.96** **47** *e*Pdif **Pdif** **20 22 39.0** **0.0**
NVAR **Mina Array Bea** **105.96** **47** Pdiff **Pdif** **20 22 39.0** **0.0**
comp=Z,0.2nm,0.3s,baz=241,slow=2.8,SNR=3.0
NVAR PKKPbc **PKKPbc** **20 38 12.7** **-2.1**
comp=Z,0.9nm,0.9s,baz=161,slow=3.3,SNR=4.9
DLMT **Dillon** **106.75** **38** PFAKE 20 27 00.0 +7.5
DLMT LR LR
comp=Z,1µm,21.0s
DSB **Dublin** **107.03** **332** PFAKE 20 27 00.0 +7.5
DSB LR LR
comp=Z,1µm,20.0s
DAC **Darwin (Calif)** **107.32** **49** PFAKE 20 27 10.0 +16
DAC LR LR
comp=Z,700nm,18.0s
R11A **Troy Canyon, C** **107.95** **46** PFAKE 20 27 10.0 +15
R11A LR LR
comp=Z,600nm,20.0s
TPNV **Topopah Spring** **108.05** **48** PFAKE 20 27 10.0 +15
TPNV LR LR
comp=Z,800nm,20.0s
SNAA **Sanae** **108.07** **195** PFAKE 20 27 10.0 +16
SNAA LR LR
comp=Z,1µm,20.0s
IMW **Indian Meadow** **108.50** **39** PFAKE 20 27 10.0 +14
IMW LR LR
comp=Z,500nm,20.0s
LOHW **Long Hollow** **108.85** **39** PFAKE 20 27 10.0 +13
LOHW LR LR
comp=Z,600nm,19.0s
AHID **Auburn Hatcher** **108.96** **40** PFAKE 20 27 10.0 +13
AHID LR LR
comp=Z,600nm,20.0s
SHPR **Sheep Range** **109.03** **48** PFAKE 20 27 10.0 +13
SHPR LR LR
comp=Z,800nm,22.0s
PDAR **Pinedale Array** **109.94** **40** PKKPab PKKPab 20 38 10.0 -3.8
comp=Z,2.2nm,0.8s,baz=118,slow=6.7,SNR=14
Y12C **Blythe** **110.64** **50** PFAKE 20 27 10.0 +10
Y12C LR LR
comp=Z,600nm,20.0s
U15A **North Rim** **111.14** **47** PFAKE 20 27 10.0 +8.9
U15A LR LR
comp=Z,800nm,21.0s
Y14A **Wickenburg** **111.71** **49** PFAKE 20 27 10.0 +8.0
Y14A LR LR
comp=Z,700nm,21.0s
RWWY **Rawlins** **111.99** **40** PFAKE 20 27 10.0 +7.4
RWWY LR LR
comp=Z,600nm,20.0s
WUAZ **Wupatki** **112.22** **47** PFAKE 20 27 10.0 +6.9
WUAZ LR LR
comp=Z,600nm,21.0s
PV11 **David Mesa, Pa** **112.65** **43** PFAKE 20 27 20.0 +16
PV11 LR LR
comp=Z,400nm,20.0s
PV18 **Skein Mesa, Pa** **112.66** **43** PFAKE 20 27 20.0 +16
PV18 LR LR
comp=Z,700nm,21.0s

CART **Cartagena** **112.67** **316** PFAKE 20 27 20.0 +16
CART LR LR
comp=Z,400nm,20.0s
PV13 **Radium Mtn., P** **112.76** **44** PFAKE 20 27 20.0 +16
PV13 LR LR
comp=Z,500nm,19.0s
N23A **Red Feather La** **113.22** **40** PFAKE 20 27 20.0 +15
N23A LR LR
comp=Z,600nm,22.0s
PHWY **Pilot Hill** **113.31** **39** PFAKE 20 27 20.0 +15
PHWY LR LR
comp=Z,200nm,19.0s
MVCO **Mesa Verde** **113.45** **44** PFAKE 20 27 20.0 +15
MVCO LR LR
comp=Z,800nm,21.0s
TAM **Tamanrasset** **113.57** **299** PFAKE 20 27 20.0 +14
TAM LR LR
comp=Z,400nm,21.0s
W18A **Petrified Fore** **113.59** **47** PFAKE 20 27 20.0 +14
W18A LR LR
comp=Z,700nm,21.0s
ESDC **Sonseca Array** **113.59** **319** PKKPab PKKPab 20 37 54.8 -2.6
comp=Z,1.0nm,0.9s,baz=255,slow=2.9,SNR=5.2
ESLA **Sonseca Array** **113.59** **319** PFAKE 20 27 20.0 +15
ESLA LR LR
comp=Z,500nm,20.0s
PAB **San Pablo** **113.91** **319** PFAKE 20 27 20.0 +14
PAB LR LR
comp=Z,600nm,22.0s
TUC **Tucson** **114.09** **50** PFAKE 20 27 20.0 +13
TUC LR LR
comp=Z,600nm,21.0s
AGMN **Agassiz Nation** **114.17** **28** PFAKE 20 27 20.0 +14
AGMN LR LR
comp=Z,600nm,20.0s
MVO **Moncorvo** **114.70** **322** *i* LQ LQ 20 37 45.6
MVO **Moncorvo** **114.70** **322** *e*LQ LQ 21 01 16.5
MVO *e*LR LR 21 05 14.6
comp=Z,595nm,18.0s
PGAV **Gavieira, Arco** **114.98** **323** *e*PP PP 20 28 13.2 +6.5
PGAV *i* LQ LQ 20 37 46.6
PGAV **Gavieira, Arco** **114.98** **323** *e*LQ LQ 21 00 29.9
PGAV *e*LR LR 21 04 37.3
comp=Z,872nm,20.0s
POLO **Lamas de Olo** **115.05** **322** *i* LQ LQ 20 37 45.6
HSIG **115.38** **53** PFAKE 20 27 20.0 +11
HSIG LR LR
comp=Z,700nm,22.0s
MTE **Manteigas** **115.46** **321** *e*PP PP 20 28 17.4 +7.3
MTE *i* LQ LQ 20 37 49.7
MTE **Manteigas** **115.46** **321** *e*LQ LQ 21 01 09.8
MTE *e*LR LR 21 05 14.6
comp=Z,705nm,18.0s
MTE **Manteigas** **115.46** **321** PFAKE 20 27 20.0 +11
MTE LR LR
comp=Z,800nm,19.0s
OGNE **Ogallala** **115.62** **38** PFAKE 20 27 20.0 +11
OGNE LR LR
comp=Z,400nm,19.0s
319A **Douglas** **115.65** **50** PFAKE 20 27 20.0 +10
319A LR LR
comp=Z,600nm,20.0s
PMRV **Marv??o** **115.93** **320** *e*PP PP 20 28 17.4 +4.0
PMRV *i* LQ LQ 20 37 51.8
PMRV **Marv??o** **115.93** **320** *e*LR LR 21 05 58.2
comp=Z,572nm,20.0s
TASM **ASL Pad, Albuq** **116.02** **45** P **PKiKP** **20 27 09.3** **-1.1**
baz=301
COI **Coimbra** **116.11** **322** *e*PP PP 20 28 18.9 +4.3
COI *i* LQ LQ 20 37 54.9
COI **Coimbra** **116.11** **322** PFAKE 20 27 20.0 +10
COI LR LR
comp=Z,1µm,21.0s
Y22D **IRIS PASSCAL I** **116.12** **47** PFAKE 20 27 20.0 +9.4
Y22D LR LR
comp=Z,800nm,22.0s
121A **Cookes Peak, D** **116.24** **48** P **PKiKP** **20 27 13.7** **+2.8**
baz=299
PCAS **Casmilo, Conde** **116.26** **321** *e*PP PP 20 28 21.5 +5.9
PCAS *i* LQ LQ 20 37 56.0
T25A **Trinidad** **116.28** **42** P **PKiKP** **20 27 12.7** **+1.9**
baz=303
KSCO **Kaye Shedlock'** **116.39** **40** PFAKE 20 27 20.0 +9.1
KSCO LR LR
comp=Z,900nm,22.0s
EYMN **Ely** **116.43** **26** PFAKE 20 27 20.0 +9.4
EYMN LR LR
comp=Z,700nm,18.0s
SFS **San Fernando** **116.81** **317** PFAKE 20 27 20.0 +8.4
SFS LR LR
comp=Z,600nm,20.0s
ECSD **EROS Data Cent** **116.95** **33** P **PKPdf** **20 27 11.3** **-0.4**
baz=313
PVAQ **Vaqueiros** **117.30** **319** *i* LQ LQ 20 38 21.1
PVAQ **Vaqueiros** **117.30** **319** *e*LR LR 21 06 16.9
comp=Z,467nm,18.0s
PVAQ **Vaqueiros** **117.30** **319** PFAKE 20 27 20.0 +7.5
PVAQ LR LR
comp=Z,500nm,19.0s
PCVE **Castro Verde** **117.38** **319** *e*PP PP 20 28 25.3 +1.8
PCVE **Castro Verde** **117.38** **319** *i* LQ LQ 20 38 33.1
PMAFR **Mafra** **117.40** **321** *e*PP PP 20 28 51.0 +27
PMAFR *i* LQ LQ 20 38 01.7
PNCL **Nicolau / Gran** **117.42** **320** *i* LQ LQ 20 38 08.5
PNCL *e*SS SS 20 44 36.6 +4.5
PBDV **Barranco-do-Ve** **117.53** **319** *e*PP PP 20 28 32.8 +8.2
PBDV *i* LQ LQ 20 38 10.3
EPT **El Paso** **117.56** **49** PFAKE 20 27 20.0 +6.6
EPT LR LR
comp=Z,600nm,20.0s
E39A **Mellen** **118.03** **27** P **PKiKP** **20 27 14.8** **+1.1**
baz=319
PFVI **Vila Bisbo** **118.18** **319** *i* LQ LQ 20 38 21.8
PFVI **Vila Bisbo** **118.18** **319** PFAKE 20 27 30.0 +16
PFVI LR LR
comp=Z,600nm,21.0s
E40A **Wakefield** **118.28** **27** P **PKPdf** **20 27 14.0** **-0.1**
baz=320
SLBS **Sierra La Lagu** **118.35** **58** PFAKE 20 27 30.0 +15
SLBS LR LR
comp=Z,1µm,20.0s
MNTX **Cornudas Mount** **118.43** **48** PFAKE 20 27 30.0 +15
MNTX LR LR
comp=Z,500nm,22.0s
MNTX **Cornudas Mount** **118.43** **48** P **PKPdf** **20 27 14.9** **0.0**
baz=300
F40A **Park Falls** **118.58** **27** P **PKPdf** **20 27 12.4** **-2.4**
baz=320
G40A **Rib Lake** **119.04** **28** PFAKE 20 27 30.0 +14
G40A LR LR
comp=Z,700nm,20.0s
MSTX **Muleshoe** **119.12** **45** PFAKE 20 27 30.0 +14
MSTX LR LR
comp=Z,700nm,19.0s
I39A **Houston** **119.47** **29** PFAKE 20 27 30.0 +13
I39A LR LR
comp=Z,700nm,21.0s
H41A **Junction City** **119.78** **28** PFAKE 20 27 30.0 +13
H41A LR LR
comp=Z,600nm,20.0s
TORD **Torodi Ar. Bea** **119.99** **290** PKP **PKPdf** **20 27 15.9** **-2.3**
comp=Z,3.1nm,0.9s,baz=14,slow=4.4,SNR=8.3
TORD PP **PP** **20 28 44.2** **+1.5**
comp=Z,2.5nm,1.0s,baz=94,slow=3.8,SNR=3.7
TORD PKKPab **PKKPab** **20 37 29.4** **+0.5**
comp=Z,1.9nm,1.1s,baz=298,slow=3.2,SNR=3.7
TOA1 **Torodi Ar. Sit** **120.00** **290** *e*PKPdf **PKPdf** **20 27 15.9** **-2.3**
HPIG **120.49** **53** PFAKE 20 27 30.0 +11
HPIG LR LR
comp=Z,800nm,22.0s
I42A **Draeger Farm,** **120.68** **28** PFAKE 20 27 30.0 +11
I42A LR LR
comp=Z,600nm,20.0s
JFWS **Jewell Farm** **120.79** **29** PFAKE 20 27 30.0 +11
JFWS LR LR
comp=Z,600nm,19.0s
LTX **Lajitas** **120.89** **50** *e*PKPdf **PKPdf** **20 27 18.3** **-1.5**
LTX **Lajitas** **120.89** **50** *e*PKIKP **PKPdf** **20 27 18.3** **-1.5**
TXAR **Lajitas Array** **120.89** **50** PKP **PKPdf** **20 27 18.3** **-1.5**
comp=Z,1.9nm,1.0s,baz=253,slow=1.3,SNR=8.4
TXAR PKKPbc **PKKPbc** **20 37 21.4** **-2.5**
comp=Z,2.5nm,1.2s,baz=116,slow=2.9,SNR=4.1
WMOK **Wichita Mounta** **121.39** **42** P **PKPdf** **20 27 20.0** **-0.5**
baz=307
VLDQ **Val d'Or** **121.51** **17** PFAKE 20 27 30.0 +10

VLDQ LR LR
comp=Z,800nm,19.0s
K43A **Burlington** **121.86** **28** PFAKE 20 27 30.0 +8.7
K43A LR LR
comp=Z,700nm,20.0s
ABTX **Abilene, Hawle** **122.04** **44** PFAKE 20 27 30.0 +8.0
ABTX LR LR
comp=Z,700nm,22.0s
TUL1 **Leonard** **122.58** **39** PFAKE 20 27 30.0 +7.1
TUL1 LR LR
comp=Z,800nm,19.0s
JCT **Junction City** **123.14** **46** PFAKE 20 27 40.0 +16
JCT LR LR
comp=Z,500nm,19.0s
JCT **Junction City** **123.14** **46** P **PKPdf** **20 27 23.4** **-0.6**
baz=304
ALGO **Algonquin Park** **123.25** **19** P **PKiKP** **20 27 25.2** **+1.3**
baz=332
CCM **Cathedral Cave** **123.81** **34** P **PKPdf** **20 27 22.9** **-2.1**
baz=315
WHTX **Lake Whitney,** **123.92** **44** PFAKE 20 27 40.0 +14
WHTX LR LR
comp=Z,500nm,22.0s
SADO **Sadowa** **123.93** **20** PFAKE 20 27 40.0 +15
SADO LR LR
comp=Z,800nm,20.0s
U40A **Yellville** **124.07** **37** P **PKPdf** **20 27 24.6** **-1.0**
baz=313
L48A **N Adams** **124.24** **26** P **PKPdf** **20 27 24.2** **-1.6**
baz=324
W39A **Magazine** **124.29** **38** P **PKPdf** **20 27 26.0** **0.0**
baz=312
PLVO **Plevna** **124.38** **19** P **PKiKP** **20 27 27.6** **+1.4**
baz=333
P45A **Graceland, Par** **124.58** **30** P **PKiKP** **20 27 27.6** **+0.8**
baz=320
833A **Chaparral WMA,** **124.61** **48** PFAKE 20 27 40.0 +13
833A LR LR
comp=Z,700nm,22.0s
833A **Chaparral WMA,** **124.61** **48** P **PKiKP** **20 27 28.5** **+1.3**
baz=303
O47A **Sheridan** **124.80** **29** P **PKPdf** **20 27 26.0** **-0.9**
baz=322
MIAR **Mount Ida** **124.85** **39** PFAKE 20 27 40.0 +13
MIAR LR LR
comp=Z,900nm,20.0s
MIAR **Mount Ida** **124.85** **39** P **PKPdf** **20 27 25.9** **-1.2**
baz=311
Q45A **Warren Harvey,** **124.85** **31** P **PKPdf** **20 27 26.6** **-0.4**
baz=319
ZAIG **Zacatecas** **124.89** **56** PFAKE 20 27 40.0 +12
ZAIG LR LR
comp=Z,700nm,22.0s
PQI **Presque Isle** **125.14** **11** PFAKE 20 27 40.0 +12
PQI LR LR
comp=Z,800nm,20.0s
S44A **Carbondale** **125.16** **33** P **PKiKP** **20 27 29.2** **+1.2**
baz=317
R45A **Skylar, Fairfi** **125.24** **32** P **PKiKP** **20 27 28.3** **+0.2**
baz=318
W41B **Gary Mavity, V** **125.24** **37** P **PKiKP** **20 27 28.1** **-0.1**
baz=313
O48A **Farmland** **125.27** **28** P **PKiKP** **20 27 28.8** **+0.7**
baz=323
M50A **Fremont** **125.28** **26** PFAKE 20 27 40.0 +12
M50A LR LR
comp=Z,600nm,19.0s
P47A **Martinsville** **125.34** **29** P **PKiKP** **20 27 29.7** **+1.5**
baz=321
X40A **Basin Creek Fa** **125.34** **38** PFAKE 20 27 40.0 +12
X40A LR LR
comp=Z,900nm,22.0s
X40A **Basin Creek Fa** **125.34** **38** P **PKiKP** **20 27 29.8** **+1.4**
baz=312
MEDO **Medina** **125.57** **21** PFAKE 20 27 40.0 +11
MEDO LR LR
comp=Z,800nm,20.0s
R46A **Gibon Southern** **125.70** **31** P **PKiKP** **20 27 29.2** **+0.2**
baz=319
O49A **Covington** **125.70** **27** PFAKE 20 27 40.0 +11
O49A LR LR
comp=Z,700nm,18.0s
J55A **Hilton** **125.71** **20** PFAKE 20 27 40.0 +11
J55A LR LR
comp=Z,900nm,20.0s
P48A **Milroy** **125.77** **29** P **PKiKP** **20 27 30.3** **+1.2**
baz=322
USIN **University of** **125.80** **32** PFAKE 20 27 40.0 +11
USIN LR LR
comp=Z,900nm,20.0s
NATX **Nacogdoches** **125.94** **42** PFAKE 20 27 40.0 +10
NATX LR LR
comp=Z,700nm,19.0s
Q48A **North Vernon** **126.04** **29** P **PKPdf** **20 27 28.6** **-0.7**
baz=321
P49A **Miami Univ. Ec** **126.04** **28** P **PKiKP** **20 27 29.6** **-0.1**
baz=323
R47A **Wooly Knot Far** **126.13** **30** P **PKPdf** **20 27 29.3** **-0.2**
baz=320
PMOZ **Porto Moniz, M** **126.23** **320** *e*LR LR 21 08 21.4
comp=Z,345nm,20.0s
PKME **Peaks-Kenny Pk** **126.24** **12** PFAKE 20 27 40.0 +10
PKME LR LR
comp=Z,900nm,21.0s
ACSO **Alum Creek Sta** **126.27** **26** P **PKPdf** **20 27 29.5** **-0.1**
baz=325
WCI **Wyandotte Cave** **126.30** **30** P **PKPdf** **20 27 28.7** **-1.1**
baz=320
LNIG **Linares** **126.35** **52** PFAKE 20 27 40.0 +9.3
LNIG LR LR
comp=Z,500nm,22.0s
T46A **Princeton** **126.37** **32** P **PKPdf** **20 27 29.6** **-0.3**
baz=318
R48A **Northridge Ran** **126.38** **30** P **PKPdf** **20 27 28.7** **-1.3**
baz=321
P50A **Jamestown** **126.41** **27** P **PKiKP** **20 27 30.9** **+0.5**
baz=324
L55A **Hinsdale** **126.44** **21** P **PKiKP** **20 27 30.6** **+0.2**
baz=331
S47A **Hartford** **126.49** **31** P **PKiKP** **20 27 31.4** **+0.8**
baz=320
M54A **Oil Creek Stat** **126.56** **23** P **PKiKP** **20 27 31.2** **+0.5**
baz=329
LBNH **Lisbon** **126.59** **15** PFAKE 20 27 40.0 +9.4
LBNH LR LR
comp=Z,700nm,20.0s
N53A **Lisbon** **126.70** **24** P **PKiKP** **20 27 31.1** **+0.2**
baz=328
U46A **Springville** **126.73** **33** P **PKiKP** **20 27 31.4** **+0.3**
baz=318
R49A **Shelbyville** **126.81** **29** P **PKPdf** **20 27 30.9** **+0.1**
baz=322
WVL **Waterville** **126.82** **13** PFAKE 20 27 40.0 +9.0
WVL LR LR
comp=Z,800nm,21.0s
T47A **Sharon Grove** **126.83** **32** P **PKiKP** **20 27 32.1** **+0.7**
baz=319
P51A **Williamsport** **126.84** **27** PFAKE 20 27 40.0 +8.7
P51A LR LR
comp=Z,500nm,19.0s
O52A **Adamsville** **126.86** **25** PFAKE 20 27 40.0 +8.7
O52A LR LR
comp=Z,600nm,19.0s
O52A **Adamsville** **126.86** **25** P **PKiKP** **20 27 31.5** **+0.2**
baz=326
S48A **Wiedeman Farm,** **126.86** **31** P **PKPdf** **20 27 29.7** **-1.1**
baz=320
N54A **Moraine State** **126.91** **23** P **PKiKP** **20 27 31.5** **+0.2**
baz=329
M55A **Ridgway** **126.94** **22** P **PKiKP** **20 27 32.1** **+0.6**
baz=330
O53A **New Philadelph** **127.01** **25** P **PKPdf** **20 27 29.5** **-1.6**
baz=327
Q51A **Peebles** **127.08** **27** PFAKE 20 27 40.0 +8.2
Q51A LR LR
comp=Z,500nm,20.0s
WVT **Waverly** **127.08** **33** P **PKPdf** **20 27 30.6** **-0.7**
baz=318
T48A **Bowling Green** **127.11** **31** P **PKPdf** **20 27 31.5** **+0.1**
baz=320
P52A **Corning** **127.13** **26** P **PKPdf** **20 27 31.3** **0.0**
baz=326
EMMW **East Machias** **127.14** **11** PFAKE 20 27 40.0 +8.3
EMMW LR LR
comp=Z,900nm,20.0s
M56A **Emporium** **127.14** **22** P **PKPdf** **20 27 31.5** **+0.2**
baz=331

U47A	Clarksville	127.14	33	P	PKPdf	20 27 30.9	-0.5
	baz=319						
S49A	Springfield	127.15	30	P	PKPdf	20 27 30.6	-0.8
	baz=321						
V46A	Holladay	127.17	34	P	PKPdf	20 27 30.3	-1.2
	baz=317						
R50A	Paris	127.22	29	P	PKPdf	20 27 30.1	-1.5
	baz=323						
BINY	Binghamton	127.27	19	P	PKPdf	20 27 31.7	+0.2
	baz=334						
GBN	Guysborough	127.30	6	PFAKE		20 27 40.0	+8.0
GBN				LR	LR		
	comp=Z,800nm,22.0s						
OXF	Oxford	127.37	36	P	PKPdf	20 27 31.0	-0.9
	baz=316						
O54A	Avella	127.41	24	P	PKiKP	20 27 32.3	-0.1
	baz=328						
MOIG	Morelia	127.41	59	PFAKE		20 27 40.0	+6.8
MOIG				LR	LR		
	comp=Z,900nm,21.0s						
V47A	Nunnelly	127.48	33	P	PKPdf	20 27 31.7	-0.4
	baz=318						
U48A	Cassie Pea, Po	127.49	32	P	PKPdf	20 27 31.6	-0.6
	baz=319						
T49A	Edmonton	127.55	31	PFAKE		20 27 40.0	+7.2
T49A				LR	LR		
	comp=Z,600nm,22.0s						
T49A	Edmonton	127.55	31	P	PKPdf	20 27 31.2	-1.0
	baz=321						
P53A	Whipple	127.57	26	P	PKiKP	20 27 33.4	+0.7
	baz=326						
Q52A	Bidwell	127.62	27	P	PKiKP	20 27 33.1	+0.2
	baz=325						
S50A	Richmond	127.66	29	P	PKPdf	20 27 32.2	-0.2
	baz=322						
PLAL	Pickwick Lake	127.79	34	PFAKE		20 27 40.0	+6.7
PLAL				LR	LR		
	comp=Z,500nm,19.0s						
O55A	Ligonier	127.82	23	P	PKPdf	20 27 33.0	+0.3
	baz=329						
P54A	Burton	127.86	25	P	PKPdf	20 27 30.8	-2.0
	baz=328						
W47A	Westpoint	127.86	34	P	PKPdf	20 27 32.0	-0.9
	baz=318						
U49A	Red Boiling Sp	127.88	31	P	PKPdf	20 27 31.4	-1.5
	baz=320						
ROSA	Rosais	127.89	333	PFAKE		20 27 40.0	+6.6
ROSA				LR	LR		
	comp=Z,800nm,19.0s						
KIC	Kosan Boka	127.90	284	eP	PKPdf	20 27 33.8	+0.3
	comp=Z,126nm,1.6s						
CLTN	Cedars of Leba	127.92	32	PFAKE		20 27 40.0	+6.5
CLTN				LR	LR		
	comp=Z,300nm,20.0s						
V48A	Smith Brothers	127.92	33	PFAKE		20 27 40.0	+6.5
V48A				LR	LR		
	comp=Z,500nm,19.0s						
DBIC	Dimbokro	127.94	284	PKP	PKPdf	20 27 31.7	-1.8
	comp=Z,9.2nm,1.0s,baz=64,slow=6.3,SNR=4.8						
T50A	Nancy	127.97	30	P	PKPdf	20 27 32.0	-1.0
	baz=322						
SSPA	Standing Stone	127.99	22	PFAKE		20 27 40.0	+6.5
SSPA				LR	LR		
	comp=Z,800nm,21.0s						
S51A	Beattyville	128.08	29	P	PKPdf	20 27 32.8	-0.4
	baz=323						
TIC	Toumodi	128.10	284	eP	PKiKP	20 27 35.9	+1.4
P55A	Reedsville	128.21	24	P	PKiKP	20 27 33.8	-0.2
	baz=328						
LIC	Lamto	128.21	284	eP	PKiKP	20 27 36.7	+2.0
	comp=Z,91nm,1.6s						
X47A	Russelville	128.25	35	P	PKiKP	20 27 34.0	-0.3
	baz=317						
S52A	Salyersville	128.29	28	P	PKiKP	20 27 34.7	+0.4
	baz=324						
W48A	Pulaski	128.31	33	P	PKPdf	20 27 32.6	-1.1
	baz=318						
V49A	McMinnville	128.39	32	P	PKiKP	20 27 34.4	-0.1
	baz=320						
U50A	Jamestown	128.44	31	P	PKPdf	20 27 32.7	-1.2
	baz=321						
T51A	Gray	128.45	29	P	PKiKP	20 27 35.1	+0.5
	baz=322						
P56A	Dayton Farm, R	128.61	23	P	PKPdf	20 27 34.1	0.0
	baz=329						
W49A	Belvidere	128.69	33	P	PKPdf	20 27 32.9	-1.6
	baz=319						
S53A	Williamson	128.74	27	P	PKiKP	20 27 35.3	+0.2
	baz=325						
X48A	Hartselle	128.76	34	PFAKE		20 27 50.0	+15
X48A				LR	LR		
	comp=Z,500nm,20.0s						
X48A	Hartselle	128.76	34	P	PKPdf	20 27 34.4	-0.1
	baz=318						
SWET	Sewanee	128.79	32	PFAKE		20 27 50.0	+15
SWET				LR	LR		
	comp=Z,500nm,20.0s						
T52A	Hallie	128.80	29	P	PKPdf	20 27 34.7	0.0
	baz=324						
R54A	Victor	128.83	26	P	PKiKP	20 27 35.5	+0.2
	baz=326						
U51A	La Follette	128.88	30	P	PKiKP	20 27 36.9	+1.4
	baz=322						
V50A	Pikevile	128.88	31	P	PKiKP	20 27 35.9	+0.5
	baz=321						
LUPA	Lehigh Univers	128.91	20	PFAKE		20 27 50.0	+15
LUPA				LR	LR		
	comp=Z,100nm,19.0s						
P57A	Homestead Farm	128.95	23	P	PKiKP	20 27 36.5	+1.0
	baz=330						
TZTN	Tazewell	128.98	29	P	PKiKP	20 27 36.8	+1.1
	baz=323						
S54A	Dingess, Beckl	129.00	27	P	PKiKP	20 27 35.8	+0.1
	baz=326						
Y48A	Jasper	129.08	35	P	PKiKP	20 27 36.2	+0.3
	baz=317						
X49A	Woodville	129.11	33	P	PKPdf	20 27 35.4	+0.2
	baz=319						
T53A	Wise	129.11	28	P	PKiKP	20 27 36.7	+0.7
	baz=324						
W50A	Signal Mountai	129.13	32	P	PKPdf	20 27 35.3	0.0
	baz=320						
V51A	Loudon	129.16	31	P	PKiKP	20 27 37.3	+1.2
	baz=322						
Q57A	Strasburg	129.18	23	P	PKiKP	20 27 36.6	+0.7
	baz=330						
147A	Livingston	129.34	37	PFAKE		20 27 50.0	+14
147A				LR	LR		
	comp=Z,700nm,22.0s						
147A	Livingston	129.34	37	P	PKiKP	20 27 37.0	+0.6
	baz=316						
S55A	Lewisburg	129.38	26	P	PKPdf	20 27 35.4	-0.3
	baz=327						
SDMD	Soldier's Deli	129.45	22	PFAKE		20 27 50.0	+14
SDMD				LR	LR		
	comp=Z,400nm,21.0s						
W51A	Cleveland	129.45	32	P	PKiKP	20 27 37.5	+0.9
	baz=321						
T54A	Tazewell	129.49	27	P	PKPdf	20 27 35.5	-0.5
	baz=325						
V52A	Sevierville	129.51	30	PFAKE		20 27 50.0	+13
V52A				LR	LR		
	comp=Z,600nm,19.0s						
V52A	Sevierville	129.51	30	P	PKPdf	20 27 35.7	-0.3
	baz=322						
X50B	Fort Payne	129.51	33	P	PKPdf	20 27 34.3	-1.8
	baz=319						
Y49A	Blount Mountai	129.55	34	P	PKPdf	20 27 34.0	-2.1
	baz=318						
U53A	Fall Branch	129.59	29	P	PKPdf	20 27 35.0	-1.1
	baz=324						
T55A	Pulaski	129.81	27	P	PKPdf	20 27 34.3	-2.2
	baz=326						
U54A	Nelsons Funny	129.82	28	PFAKE		20 27 50.0	+13
U54A				LR	LR		
	comp=Z,500nm,21.0s						
LRAL	Lakeview Retre	129.82	35	PFAKE		20 27 50.0	+13
LRAL				LR	LR		
	comp=Z,600nm,19.0s						
LRAL	Lakeview Retre	129.82	35	P	PKPdf	20 27 35.2	-1.4
	baz=317						
X51A	Calhoun	129.86	32	PFAKE		20 27 50.0	+13
X51A				LR	LR		
	comp=Z,500nm,20.0s						
BLA	Blacksburg	129.89	26	PFAKE		20 27 50.0	+12
BLA				LR	LR		
	comp=Z,500nm,20.0s						
Y50A	Piedmont	129.90	33	P	PKPdf	20 27 36.1	-0.7
	baz=319						
W52A	Murphy	129.93	31	P	PKPdf	20 27 36.5	-0.4
	baz=322						
Z49A	Columbiana	129.97	35	P	PKPdf	20 27 36.4	-0.5
	baz=318						
V53A	Saluda	130.03	30	P	PKPdf	20 27 36.2	-0.9
	baz=323						
S57A	Dark Hollow, R	130.05	25	PFAKE		20 27 50.0	+12
S57A				LR	LR		
	comp=Z,600nm,21.0s						
W53A	Cullowhee	130.26	30	P	PKPdf	20 27 36.9	-0.6
	baz=322						
149A	Jones	130.26	35	P	PKiKP	20 27 38.6	+0.3
	baz=317						
Z50A	Ashland	130.27	34	PFAKE		20 27 50.0	+12
Z50A				LR	LR		
	comp=Z,800nm,21.0s						
Z50A	Ashland	130.27	34	P	PKiKP	20 27 38.9	+0.5
	baz=318						
CBN	Corbin Frederi	130.30	23	PFAKE		20 27 50.0	+12
CBN				LR	LR		
	comp=Z,2μm,19.0s						
R58B	Mineral	130.31	24	PFAKE		20 27 50.0	+12
R58B				LR	LR		
	comp=Z,700nm,22.0s						
X52A	Dahlonega	130.33	31	P	PKiKP	20 27 39.0	+0.5
	baz=321						
V54A	Nebo	130.37	29	P	PKiKP	20 27 39.5	+1.0
	baz=324						
S58A	Poland Farm, P	130.55	24	PFAKE		20 27 50.0	+11
S58A				LR	LR		
	comp=Z,600nm,22.0s						
S58A	Poland Farm, P	130.55	24	P	PKPdf	20 27 37.9	+0.1
	baz=330						
T57A	Hurt	130.57	25	PFAKE		20 27 50.0	+11
T57A				LR	LR		
	comp=Z,700nm,20.0s						
TLIG	Tlapa	130.57	60	PFAKE		20 27 50.0	+11
TLIG				LR	LR		
	comp=Z,600nm,20.0s						
Y52A	Lilburn	130.81	32	PFAKE		20 27 50.0	+11
Y52A				LR	LR		
	comp=Z,500nm,19.0s						
349A	Repton	130.93	37	P	PKPdf	20 27 38.9	+0.1
	baz=316						
V56A	Mocksville	131.02	27	PFAKE		20 27 50.0	+10
V56A				LR	LR		
	comp=Z,500nm,22.0s						
250A	Grady	131.02	36	PFAKE		20 27 50.0	+10
250A				LR	LR		
	comp=Z,700nm,20.0s						
BRAL	Brewton	131.14	37	P	PKiKP	20 27 40.6	+0.4
	baz=316						
151A	Opelika	131.15	34	P	PKiKP	20 27 41.2	+1.1
	baz=319						
KMSC	Kings Mountain	131.17	29	PFAKE		20 27 50.0	+10
KMSC				LR	LR		
	comp=Z,700nm,20.0s						
KMSC	Kings Mountain	131.17	29	P	PKPdf	20 27 39.0	-0.2
	baz=324						
PAULI	Pauline	131.20	29	PFAKE		20 27 50.0	+10
PAULI				LR	LR		
	comp=Z,600nm,20.0s						
V57A	Coltrane Farms	131.28	27	P	PKiKP	20 27 40.1	-0.2
	baz=327						
T59A	Double "B" Far	131.30	24	PFAKE		20 27 50.0	+10
T59A				LR	LR		
	comp=Z,900nm,22.0s						
T59A	Double "B" Far	131.30	24	P	PKiKP	20 27 41.4	+1.2
	baz=330						
LVIG	Laguna Verde	131.37	56	PFAKE		20 27 50.0	+9.2
LVIG				LR	LR		
	comp=Z,400nm,20.0s						
152A	Waverly Hall	131.38	34	PFAKE		20 27 50.0	+9.4
152A				LR	LR		
	comp=Z,600nm,22.0s						
152A	Waverly Hall	131.38	34	P	PKPdf	20 27 39.7	+0.1
	baz=319						
U58A	Oxford	131.38	25	P	PKiKP	20 27 40.2	-0.3
	baz=328						
251A	Midway	131.42	35	P	PKPdf	20 27 39.8	+0.1
	baz=318						
HODGE	Hodges	131.45	30	PFAKE		20 27 50.0	+9.3
HODGE				LR	LR		
	comp=Z,600nm,20.0s						
T60A	Surry	131.48	23	PFAKE		20 27 50.0	+9.4
T60A				LR	LR		
	comp=Z,700nm,21.0s						
GOGA	Godfrey	131.48	32	P	PKiKP	20 27 40.7	-0.1
	baz=321						
Y54A	Tignall	131.53	31	P	PKiKP	20 27 42.7	+1.8
	baz=322						
W56A	Indian Trail	131.53	28	P	PKiKP	20 27 41.6	+0.8
	baz=325						
X55A	Gracelyn & Ava	131.57	29	P	PKiKP	20 27 43.1	+2.2
	baz=324						
W57A	Gilead	131.79	27	PFAKE		20 27 50.0	+8.7
W57A				LR	LR		
	comp=Z,500nm,20.0s						
252A	Lumpkin	131.87	34	P	PKiKP	20 27 43.8	+2.2
	baz=319						
Y55A	Saluda	131.89	30	P	PKiKP	20 27 43.5	+2.0
	baz=323						
JSC	Jenkinsville	131.90	29	PFAKE		20 27 50.0	+8.4
JSC				LR	LR		
	comp=Z,600nm,20.0s						
Z54A	Sparta	131.94	32	P	PKiKP	20 27 42.8	+1.1
	baz=322						
352A	Blakely	132.15	35	PFAKE		20 27 50.0	+7.9
352A				LR	LR		
	comp=Z,700nm,22.0s						
253A	Americus	132.16	34	PFAKE		20 27 50.0	+7.8
253A				LR	LR		
	comp=Z,600nm,22.0s						
154A	Montrose	132.29	32	PFAKE		20 27 50.0	+7.6
154A				LR	LR		
	comp=Z,500nm,21.0s						
U61A	Possum Corner	132.29	23	PFAKE		20 27 50.0	+7.7
U61A				LR	LR		
	comp=Z,800nm,20.0s						
V60A	Jim Taylor Roa	132.46	24	PFAKE		20 27 50.0	+7.4
V60A				LR	LR		
	comp=Z,600nm,21.0s						
Y57A	Sumter	132.54	29	PFAKE		20 27 50.0	+7.2
Y57A				LR	LR		
	comp=Z,700nm,21.0s						
X58A	Rowland	132.58	27	PFAKE		20 27 50.0	+7.1
X58A				LR	LR		
	comp=Z,700nm,20.0s						
V61A	Roper	132.71	24	PFAKE		20 27 50.0	+6.9
V61A				LR	LR		
	comp=Z,700nm,20.0s						
453A	Whigham	132.96	35	PFAKE		20 27 50.0	+6.2
453A				LR	LR		
	comp=Z,800nm,20.0s						
Y58A	Scranton	132.97	28	PFAKE		20 27 50.0	+6.3
Y58A				LR	LR		
	comp=Z,600nm,21.0s						
255A	Hazlehurst	133.16	32	PFAKE		20 27 50.0	+5.8
255A				LR	LR		
	comp=Z,700nm,22.0s						
NHSC	New Hope	133.38	29	PFAKE		20 28 00.0	+15
NHSC				LR	LR		
	comp=Z,700nm,20.0s						
Y60A	Bolivia	133.55	27	PFAKE		20 28 00.0	+15
Y60A				LR	LR		
	comp=Z,600nm,22.0s						
CMIG	Matias Romero	133.91	58	PKP	PKPdf	20 27 43.6	-1.1
	comp=Z,0.5nm,0.5s,baz=238,slow=19,SNR=2.8						
555A	McAlpin	134.28	34	PFAKE		20 28 00.0	+14
555A				LR	LR		
	comp=Z,700nm,20.0s						
656A	Willston	135.09	35	PFAKE		20 28 00.0	+12
656A				LR	LR		
	comp=Z,700nm,21.0s						
658A	Bunnell	135.76	33	PFAKE		20 28 00.0	+10
658A				LR	LR		
	comp=Z,700nm,21.0s						
MYIG	Mrida	136.00	50	PFAKE		20 28 00.0	+10
MYIG				LR	LR		
	comp=Z,500nm,22.0s						
957A	Wimauma	136.55	36	PFAKE		20 28 00.0	+8.8
957A				LR	LR		
	comp=Z,600nm,21.0s						
CCIG	Comitan	136.61	57	PFAKE		20 28 00.0	+8.2
CCIG				LR	LR		
	comp=Z,700nm,21.0s						
DWPF	Disney Wildern	136.68	35	PFAKE		20 28 00.0	+8.6
DWPF				LR	LR		
	comp=Z,700nm,22.0s						
059A	Moore Haven	137.72	36	PFAKE		20 28 00.0	+6.5
059A				LR	LR		
	comp=Z,400nm,21.0s						
061Z	Ochoppi	138.69	36	PFAKE		20 28 10.0	+14
061Z				LR	LR		
	comp=Z,400nm,20.0s						
TGUH	Tegucigalpa,Un	141.77	56	PFAKE		20 28 10.0	+7.7
TGUH				LR	LR		
	comp=Z,500nm,22.0s						
PLCA	Paso Flores	143.92	160	PKP	PKPab	20 27 59.8	+0.2
	comp=Z,38nm,1.2s,baz=339,slow=2.2,SNR=17						
PLCA	Paso Flores	143.92	160	ePKPdf	PKPbc	20 28 00.3	0.0
PLCA	Paso Flores	143.92	160	ePKIKP	PKPbc	20 28 00.3	+0.1
ACON	Acoyapa	144.60	58	ePKPdf	PKPab	20 28 02.8	0.0
JTS	Las Juntas de	145.63	60	ePKPdf	PKPab	20 28 08.2	+1.6
JTS	Las Juntas de	145.63	60	ePKP2	PKPab	20 28 08.2	+1.6
TRQA	Tornquist	148.69	170	ePKPbc	PKPbc	20 28 13.9	-0.4
TRQA	Tornquist	148.69	170	ePKP2	PKPbc	20 28 13.9	-0.4
SDDR	Presa de Saban	149.50	31	PFAKE		20 28 20.0	-1.7
SDDR				LR	LR		
	comp=Z,500nm,21.0s						
ROC1	El Roble	150.46	152	ePKPbc	PKPbc	20 28 19.1	0.0
PEL	Peldehue	150.47	153	ePKPbc	PKPbc	20 28 18.6	-0.3
PEL	Peldehue	150.47	153	ePKIKP	PKPbc	20 28 18.6	-0.3
BCIP	Isla Barro Col	150.53	57	ePKPbc	PKPbc	20 28 19.0	-0.5
BCIP	Isla Barro Col	150.53	57	eP	PKPdf	20 28 15.0	+0.9
MPR	Mayaguez	152.11	25	PFAKE		20 28 30.0	-2.4
MPR				LR	LR		
	comp=Z,600nm,20.0s						
EMPR	Esperanza - Ma	152.12	24	PFAKE		20 28 30.0	-2.4
EMPR				LR	LR		
	comp=Z,800nm,20.0s						
CRPR	Cabo Rojo, PR	152.30	25	PFAKE		20 28 30.0	-3.2
CRPR				LR	LR		
	comp=Z,500nm,22.0s						
SJG	San Juan	152.60	23	PFAKE		20 28 30.0	-4.4
SJG				LR	LR		
	comp=Z,400nm,22.0s						
ICMP	Isla Caja de M	152.65	24	PFAKE		20 28 30.0	-4.7
ICMP				LR	LR		
	comp=Z,400nm,18.0s						
HUMP	Col San Antoni	152.69	23	PFAKE		20 28 30.0	-4.8
HUMP				LR	LR		
	comp=Z,300nm,20.0s						
SMRT	St. Maarten	153.71	17	PFAKE		20 28 30.0	+3.3
SMRT				LR	LR		
	comp=Z,500nm,20.0s						
SKI	Saint Kitts	154.48	17	PFAKE		20 28 30.0	+1.7
SKI				LR	LR		
	comp=Z,900nm,21.0s						
URIC	Uribia, Colomb	154.84	42	eP	PKPdf	20 28 21.1	+0.7
SMLC	San Martn de	155.35	50	eP	PKPdf	20 28 25.2	+4.1
OTAV	Otavalo	155.64	73	PFAKE		20 28 30.0	+7.9
OTAV				LR	LR		
	comp=Z,400nm,20.0s						
OTAV	Otavalo	155.64	73	eP	PKPab	20 28 49.7	+1.4
YOTC	Yotoco, Valle	156.12	63	eP	PKPdf	20 28 22.3	-0.1
GUY2C	Guyana, Caldas	156.37	59	eP	PKPdf	20 28 36.9	+14
PTBC	PUERTO BERRIO	156.41	55	eP	PKPab	20 28 43.5	-7.5
RREF	El Recreo	156.55	60	eP	PKPab	20 28 53.4	+1.0
NORC	Norcasia	156.61	58	eP	PKPab	20 28 49.7	-2.2
SOTA	Rioblanco	156.69	67	eP	PKPdf	20 28 23.4	-0.2
PCON	Cinco Dias	156.80	67	eP	PKPab	20 28 54.9	+1.5
ROSC	El Rosal	157.45	58	PKP	PKPdf	20 28 22.2	-2.2
	comp=Z,2.2nm,0.4s,baz=120,slow=20,SNR=2.0						
ROSC	El Rosal	157.45	58	PFAKE		20 28 40.0	+16
ROSC				LR	LR		
	comp=Z,200nm,22.0s						
PRAC	Prado	157.53	62	eP	PKPab	20 28 58.6	+2.7
FLOC	Florencia	157.78	68	eP	PKPab	20 29 01.4	+4.4
SDV	Santo Domingo	157.79	44	PFAKE		20 28 40.0	+15
SDV				LR	LR		
	comp=Z,400nm,21.0s						
RUSC	La Rusia	157.89	54	eP	PKPab	20 28 49.7	-8.2
CPUP	Villa Florida	160.89	174	PKP	PKPdf	20 28 26.1	-1.5
	comp=Z,6.6nm,1.1s,baz=336,slow=2.2,SNR=5.8						
CPUP				PKPab	PKPab	20 29 09.8	0.0
	comp=Z,12nm,1.0s,baz=199,slow=5.0,SNR=8.0						
LPAZ	La Paz	164.46	127	PKP	PKPdf	20 28 30.8	-1.3
	comp=Z,13nm,1.3s,baz=2.1,slow=2.4,SNR=8.8						
LPAZ				PKPab	PKPab	20 29 27.7	+1.0
	comp=Z,12nm,1.1s,baz=256,slow=2.6,SNR=4.9						

NNC 02 20:09:03.9±8.5, 37°.51N×71°.03E, h0km, mb3.8, mpv3.5, 2C-4D, Error ellipse: s-maj=80.9km s-min=44.8km az=157.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.61	356	⇓P	Pn	20 10 31.2	+2.6
	2.6nm,0.3s,baz=177,slow=13,SNR=41						
KK31				⇓S	Sn	20 11 37.0	+3.3
	1.0nm,0.3s,baz=180,slow=23,SNR=5.6						
AAK	Ala-Archa	5.77	26	⇑P	Pn	20 10 30.6	-0.4
	3.1nm,0.5s						
AAK				⇓S	Sn	20 11 36.5	-1.5
	2.4nm,0.6s						
TKM2	Tokmak 2	6.44	31	⇓P	Pn	20 10 38.7	-1.5
	1.5nm,0.5s						
TKM2				⇑S	Sn	20 11 57.2	+2.8
	0.3nm,0.4s						
AB31	Akbulak array	14.22	329	P	Pn	20 12 25.9	-0.6
	0.2nm,0.3s,baz=135,slow=14,SNR=23						

SJA ***02*** *20:11:10.1±1.1, 30°.95S×68°.61W, h11km±6km, ML3.5, MW3.6*
GUC ***02*** *20:11:12.0±0.4, 30°.87S×68°.12W, h100km±94km, ML4.0*
ISC 02 20:11:09.8±1.0, 30°.91S±0°.03×68°.43W±0°.04, h14km±7km, n27, σ1°.08/37, 2C-13D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMOG	MOGNA	0.06	238	⇓eP	Pg	20 11 13.1	+0.4
SJA	San Juan	0.63	190	⇓eP	Pb	20 11 22.4	-0.2
SJA				⇓eS	Sg	20 11 30.5	0.0
SJA				IAML		20 11 32.0	
	comp=Z,3μm,0.2s						
ACCO	Cerro Coronel	0.63	300	⇓eP	Pg	20 11 21.6	-0.7
CFA	Coronel Fontan	0.72	166	⇓eP	Pb	20 11 24.1	0.0
CFA				⇓eS	Sb	20 11 33.7	-0.1
ACDV	Cuesta del Vie	0.94	321	⇓eP	Pb	20 11 27.8	-0.2
AROD	Rodeo	1.16	309	⇓eP	Pg	20 11 31.3	-0.9
AROD				eS	Sg	20 11 45.8	-1.6
AUSP	Uspallata	1.54	212	eP	Pn	20 11 37.8	+0.7
AUSP				eS	Sn	20 11 57.2	+0.1
ASAL	Salagasta	1.71	191	⇓eP	Pg	20 11 41.7	-1.0
ACAN	Cantantal	1.73	142	eP	Pg	20 11 43.3	+0.3
ARCO	CERRO ARCO	1.98	192	⇓eP	Pg	20 11 46.4	-1.3
ARCO				IAML		20 12 17.6	
	comp=Z,310nm,0.3s						
GO04	Tololo Observa	2.17	289	eP	Pb	20 11 48.9	-0.1
GO04	Tololo Observa	2.17	289	⇓iP	Pb	20 11 48.6	-0.4
VCA	Vinchina	2.17	5	eP	Pg	20 11 50.6	-0.9
VCA				IAML		20 12 23.9	
	comp=Z,975nm,0.3s						
AAGR	Agrelo	2.20	189	eP	Pg	20 11 51.1	-0.9
AVIZ	Vizcacheras	2.56	182	⇓eP	Pg	20 11 57.2	-1.7
AVIZ				eS	Sg	20 12 33.3	+1.2
LCO	Las Campanas	2.73	313	eP	Pb	20 11 58.4	-0.1
LCO	Las Campanas	2.73	313	⇑iP	Pb	20 11 58.5	-0.1
LCO				iS	Sb	20 12 33.7	+1.8
LCO				IAML		20 12 36.8	
	comp=N,351nm,0.6s						
MRA	San Martin	2.76	124	eP	Pb	20 11 58.6	-0.4
MRA				IAML		20 12 44.7	
	comp=Z,101nm,0.4s						
FCH	Farellones	2.88	213	eP	Pb	20 12 00.8	-0.4
FCH				iS	Sb	20 12 37.7	+1.2
PEL	Peldehue	2.94	220	eP	Pb	20 12 00.5	-1.4
PEL	Peldehue	2.94	220	eP	Pb	20 12 00.6	-1.4
PEL				iS	Sb	20 12 38.2	+0.5
PEL				IAML		20 12 46.4	
	comp=N,185nm,0.5s						
ROCH	El Roble	3.01	226	eP	Pb	20 12 00.8	-2.5
ROCH				eS	Sb	20 12 39.4	-0.5
ROC1	El Roble	3.01	226	⇓eP	Pb	20 12 02.3	-1.0
CLCH	Cerro Calan	3.06	215	eP	Pb	20

CLCH				*i* S	**Sb**	20 12 41.1	0.0
CLCH				IAML		20 12 47.3	
	comp=E,341nm,0.4s						
LMEL	**Las Melosas**	**3.29**	**207**	*e*P	**Pb**	**20 12 08.9**	**+0.9**
TCA	**Tanti**	**3.32**	**98**	*e*P	**Pb**	**20 12 06.3**	**-2.2**
TCA				IAML		20 13 00.7	
	comp=Z,102nm,0.4s						
SYO	**Syowa Base**	**67.61**	**158⇑**	*e*sP	**P**	**20 22 06.8**	**+1.3**

KRSC ***02*** *20:23:20.1±2.1, 52°.03N×160°.83E, h60km±22km, ML3.8*
IDC ***02*** *20:23:20.2±1.1, 52°.36N×160°.48E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.7/48, mbtmp3.9/12, MS3.7/2, Ms1 3.8/2, ms1mx3.2/47, Error ellipse: s-maj=29.0km s-min=19.2km az=170.0*
MOS ***02*** *20:23:23.4±1.3, 52°.15N×160°.68E, h49km, mb4.3/9, Error ellipse: s-maj=10.1km s-min=5.4km az=112.5*
ISCJB ***02*** *20:23:24.3±0.8, 52°.19N±0°.05×160°.64E±0°.08, h52km±6km, mb4.0/24, MS3.8/2, Error ellipse: s-maj=10.3km s-min=5.6km az=139.8*
NEIC ***02*** *20:23:24.5±0.5, 52°.20N×160°.65E, h35km, mb4.0/12, Error ellipse: s-maj=13.5km s-min=8.2km az=177.0*

ISC 02 20:23:23.7±1.0, 52°.10N±0°.05×160°.70E±0°.05, h34km±3km, n97, σ1§12/111, mb4.0/24, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.08**	**338**	*e*P	**Pn**	**20 23 41.3**	**-1.0**
SPN				*e*S	**Sn**	**20 23 54.6**	**-1.5**
SPN	**Mys Shipunski**	**1.08**	**338**	PN	**Pn**	**20 23 41.3**	**-1.0**
SPN				S	**Sn**	**20 23 54.6**	**-1.5**
NLC	**Nalytchevo**	**1.35**	**323**	*e*P	**Pn**	**20 23 46.1**	**0.0**
NLC				*e*S	**Sn**	**20 24 04.9**	**+2.1**
NLC	**Nalytchevo**	**1.35**	**323**	PN	**Pn**	**20 23 46.1**	**0.0**
NLC				S	**Sn**	**20 24 04.9**	**+2.1**
RUS	**Russkaya**	**1.38**	**285**	*e*P	**Pn**	**20 23 46.3**	**-0.2**
RUS				*e*S	**Sn**	**20 24 04.7**	**+1.1**
RUS	**Russkaya**	**1.38**	**285**	PN	**Pn**	**20 23 46.3**	**-0.2**
RUS				S	**Sn**	**20 24 04.7**	**+1.1**
DALK	**Dalny**	**1.51**	**309**	*e*P	**Pn**	**20 23 48.2**	**0.0**
DALK	**Dalny**	**1.51**	**309**	PN	**Pn**	**20 23 48.2**	**0.0**
PET	**Petropavlovsk**	**1.55**	**307**	*e*Pn	**Pn**	**20 23 49.2**	**+0.4**
PET	**Petropavlovsk**	**1.55**	**307**	*e*P	**Pn**	**20 23 49.3**	**+0.4**
PET	**Petropavlovsk**	**1.55**	**307**	*e*PN	**Pn**	**20 23 49.0**	**+0.2**
PET				*e*S	**Sn**	**20 24 07.1**	**-0.6**
PET				pmax	pmax		
	comp=Z,117nm,0.5s						
PET				smax	smax		
	comp=E,537nm,0.6s						
PET				smax	smax		
	comp=N,665nm,0.7s						
MTVR	**Mutnovka**	**1.59**	**285**	*e*P	**Pn**	**20 23 49.7**	**+0.2**
MTVR	**Mutnovka**	**1.59**	**285**	PN	**Pn**	**20 23 49.7**	**+0.2**
UGLR	**Uglovaya**	**1.59**	**315**	*e*P	**Pn**	**20 23 50.3**	**+0.8**
UGLR	**Uglovaya**	**1.59**	**315**	PN	**Pn**	**20 23 50.3**	**+0.8**
SDLR	**Sedlovina**	**1.61**	**318**	*e*P	**Pn**	**20 23 50.3**	**+0.5**
SDLR	**Sedlovina**	**1.61**	**318**	PN	**Pn**	**20 23 50.3**	**+0.5**
SMAR	**Somma**	**1.64**	**316**	*e*P	**Pn**	**20 23 50.4**	**+0.2**
SMAR	**Somma**	**1.64**	**316**	PN	**Pn**	**20 23 50.4**	**+0.2**
KDTR	**Khodutka, Kamc**	**1.65**	**261**	*e*P	**Pn**	**20 23 49.2**	**-1.0**
KDTR				*e*S	**Sn**	**20 24 09.8**	**-0.3**
KDTR	**Khodutka, Kamc**	**1.65**	**261**	PN	**Pn**	**20 23 49.2**	**-1.0**
KDTR				S	**Sn**	**20 24 09.8**	**-0.3**
AVH	**Avacha**	**1.67**	**315**	*e*P	**Pn**	**20 23 51.5**	**+1.0**
AVH	**Avacha**	**1.67**	**315**	PN	**Pn**	**20 23 51.5**	**+1.0**
KRER	**Koryakskii**	**1.69**	**316**	*e*P	**Pn**	**20 23 51.6**	**+0.7**
KRER	**Koryakskii**	**1.69**	**316**	PN	**Pn**	**20 23 51.6**	**+0.7**
KOK	**Koryaka**	**1.73**	**314**	*e*P	**Pn**	**20 23 52.4**	**+1.0**
KOK	**Koryaka**	**1.73**	**314**	PN	**Pn**	**20 23 52.4**	**+1.0**
ASAK	**Asacha**	**1.74**	**280**	*e*P	**Pn**	**20 23 52.0**	**+0.4**
ASAK	**Asacha**	**1.74**	**280**	PN	**Pn**	**20 23 52.0**	**+0.4**
KRX	**Arik**	**1.77**	**316**	*e*P	**Pn**	**20 23 52.7**	**+0.7**
KRX	**Arik**	**1.77**	**316**	PN	**Pn**	**20 23 52.7**	**+0.7**
PEA0B	**Petropavlovsk-**	**2.09**	**300**	*e*Pn	**Pn**	**20 23 56.8**	**+0.5**
PETK	**Petropavlovsk-**	**2.09**	**300**	Pn	**Pn**	**20 23 57.1**	**+0.9**
	comp=N,3.8nm,0.3s,baz=107,slow=18,SNR=75						
PETK				Sn	**Sb**	**20 24 25.6**	**-0.8**
	comp=N,11nm,0.3s,baz=128,slow=49,SNR=6.8						
PEA1	**Petropavlovsk-**	**2.09**	**300**	*e*Pn	**Pn**	**20 23 57.1**	**+0.8**
PEA1				*e*Sn	**Sb**	**20 24 25.6**	**-0.9**
GNL	**Ganaly**	**2.31**	**315**	*e*P	**Pn**	**20 24 01.0**	**+1.6**
GNL	**Ganaly**	**2.31**	**315**	PN	**Pn**	**20 24 01.0**	**+1.6**
APC	**Apacha**	**2.31**	**292**	*e*P	**Pn**	**20 24 00.5**	**+1.2**
APC	**Apacha**	**2.31**	**292**	PN	**Pn**	**20 24 00.5**	**+1.2**
MKZ	**Mys Kozlova**	**2.53**	**14**	*e*P	**Pn**	**20 24 01.4**	**-0.9**
MKZ				*e*S	**Sn**	**20 24 31.4**	**-0.5**
MKZ	**Mys Kozlova**	**2.53**	**14**	PN	**Pn**	**20 24 01.4**	**-0.9**
MKZ				S	**Sn**	**20 24 31.4**	**-0.5**
SKR	**Severo-Kuril's**	**3.20**	**245**	*e*PN	**Pn**	**20 24 08.7**	**-2.8**
SKR				*e*S	**Sn**	**20 24 47.8**	**-0.6**
SKR				pmax	pmax		
	comp=Z,36nm,0.4s						
SKR				smax	smax		
	comp=E,85nm,0.6s						
SKR				smax	smax		
	comp=N,119nm,0.6s						
SKR				MLR	MLR		
	comp=Z,400nm,13.0s						
TUMR	**Tumrok**	**3.20**	**354**	*e*P	**Pn**	**20 24 12.9**	**+1.2**
TUMR	**Tumrok**	**3.20**	**354**	PN	**Pn**	**20 24 12.9**	**+1.2**
KBTR	**Krutoberegovo**	**4.30**	**16**	*e*P	**Pn**	**20 24 26.2**	**-0.4**
KBTR	**Krutoberegovo**	**4.30**	**16**	PN	**Pn**	**20 24 26.2**	**-0.4**
BILL	**Bilibino**	**16.21**	**8**	*i* P	**Pn**	**20 27 07.6**	**-0.9**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YAK	**Yakutsk**	**19.38**	**313**	*e*P	**P**	**20 27 44.6**	**-1.5**
	comp=Z,8.1nm,0.7s						
YAK	**Yakutsk**	**19.38**	**313**	*i* P	**P**	**20 27 45.0**	**-1.1**
YAK				pmax	pmax		
	comp=Z,24nm,0.7s						
MJA0	**Matsu Arr-Jizo**	**22.22**	**234**	*e*P	**P**	**20 28 19.5**	**+2.3**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAJO	**Matsushiro**	**22.24**	**234**	*e*P	**P**	**20 28 18.0**	**+0.6**
MAJO	**Matsushiro**	**22.24**	**234**	*e*P	**P**	**20 28 18.0**	**+0.6**
MJAR	**Matsushiro Arr**	**22.24**	**234**	P	**P**	**20 28 18.0**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=31,slow=7.9,SNR=5.8						
TIXI	**Tiksi**	**24.14**	**336**	P	**P**	**20 28 34.2**	**-1.8**
	comp=Z,1.7nm,0.3s,baz=312,slow=0.6,SNR=8.7						
TIXI	**Tiksi**	**24.14**	**336**	*e*P	**P**	**20 28 35.6**	**-0.3**
	comp=Z,3.2nm,1.1s						
TIXI	**Tiksi**	**24.14**	**336**	*i* P	**P**	**20 28 35.2**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,11nm,2.8s						
SCM	**Sheep Creek Mo**	**29.17**	**50**	*e*P	**P**	**20 29 21.9**	**+0.5**
	comp=Z,3.7nm,1.0s						
SCM	**Sheep Creek Mo**	**29.17**	**50**	*e*P	**P**	**20 29 22.0**	**+0.5**
SCM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILB	**Eielson Array**	**29.26**	**44**	*e*P	**P**	**20 29 23.5**	**+1.4**
	comp=Z,0.9nm,0.8s						
BALM	**Baldy**	**31.65**	**51**	*e*P	**P**	**20 29 41.9**	**-1.5**
	comp=Z,3.3nm,1.1s						
BALM	**Baldy**	**31.65**	**51**	*e*P	**P**	**20 29 41.9**	**-1.5**
BALM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DAWY	**Dawson**	**32.55**	**45**	*e*P	**P**	**20 29 49.8**	**-1.4**
	comp=Z,0.5nm,0.8s						
NRIK	**Noril'sk**	**36.93**	**326**	P	**P**	**20 30 26.8**	**-2.0**
	comp=Z,3.3nm,0.4s,baz=134,slow=4.8,SNR=4.3						
GUMO	**Guam**	**40.47**	**204**	*e*P	**P**	**20 30 59.8**	**+0.9**
	comp=Z,54nm,1.0s						
GUMO	**Guam**	**40.47**	**204**	*e*P	**P**	**20 30 59.8**	**+0.9**
DGZ	**Jazzator, Alta**	**44.44**	**297**	*i* P	**P**	**20 31 31.1**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**48.58**	**303**	*e*P	**P**	**20 32 02.3**	**-1.0**
	comp=Z,2.3nm,1.1s						
KURK	**Kurchatov**	**48.58**	**303**	*e*P	**P**	**20 32 02.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK31	**Makanchi Array**	**48.92**	**297**	*e*P	**P**	**20 32 05.6**	**-0.5**
	comp=Z,1.2nm,1.0s						
MK31	**Makanchi Array**	**48.92**	**297**	*e*P	**P**	**20 32 05.6**	**-0.5**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK32	**Makanchi Array**	**48.92**	**297**	*e*P	**P**	**20 32 05.3**	**-0.8**
MKAR	**Makanchi Array**	**48.92**	**297**	P	**P**	**20 32 05.3**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=53,slow=7.3,SNR=3.5						
BRVK	**Borovoye**	**51.33**	**309**	*e*P	**P**	**20 32 24.3**	**+0.1**
	comp=Z,2.9nm,0.8s						
BRVK	**Borovoye**	**51.33**	**309**	*e*P	**P**	**20 32 24.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	**Arti**	**54.38**	**318**	*d i* P	**P**	**20 32 44.5**	**-2.1**
ARU				*PP	**sP**	**20 32 58.8**	**-0.2**
ARU				S	**S**	**20 40 18.7**	**-3.4**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.7s						
NV01	**Mina Array Sit**	**55.74**	**70**	*e*P	**P**	**20 32 58.9**	**+1.9**
NVAR	**Mina Array Bea**	**55.74**	**70**	P	**P**	**20 32 58.9**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=307,slow=7.8,SNR=4.6						
JAY	**Jayapura**	**56.99**	**204**	LR	LR	20 51 47.0	
	comp=Z,22nm,21.7s,baz=92,slow=30						
PD31	**Pinedale Array**	**57.69**	**61**	*e*P	**P**	**20 33 12.7**	**+1.9**
	comp=Z,1.1nm,0.8s						
PDAR	**Pinedale Array**	**57.69**	**61**	P	**P**	**20 33 12.7**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=318,slow=2.0,SNR=7.5						
CM31	**Chiang Mai Arr**	**58.35**	**259**	*e*P	**P**	**20 33 17.2**	**+1.9**
	comp=Z,2.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**58.35**	**259**	P	**P**	**20 33 17.2**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=30,slow=6.9,SNR=8.7						
FIA0	**FINESS Array S**	**61.18**	**337**	*e*P	**P**	**20 33 34.8**	**+0.6**
FIA0	**FINESS Array S**	**61.18**	**337**	*e*P	**P**	**20 33 34.8**	**+0.6**
FINES	**FINESS Array B**	**61.18**	**337**	P	**P**	**20 33 34.8**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=34,slow=8.2,SNR=13						
FINES	**FINESS Array B**	**61.18**	**337**	*i* P	**P**	**20 33 35.4**	**+1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**64.60**	**344**	P	**P**	**20 33 57.5**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=21,slow=6.9						
NB200	**NORSAR Array S**	**64.60**	**344**	*e*P	**P**	**20 33 56.9**	**-0.2**
NOA	**NORSAR Array B**	**64.60**	**344**	P	**P**	**20 33 56.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=21,slow=6.6,SNR=4.4						
GEYT	**Alibeck**	**67.94**	**304**	P	**P**	**20 34 19.5**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=336,slow=3.2,SNR=3.4						
AKASG	**Malin Array Be**	**69.65**	**329**	P	**P**	**20 34 29.3**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=30,slow=6.5,SNR=4.8						
AKASG	**Malin Array Be**	**69.65**	**329**	*e*P	**P**	**20 34 29.7**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKBB	**Malin Array Si**	**69.65**	**329**	*e*P	**P**	**20 34 29.3**	**+0.1**
	comp=Z,2.3nm,0.8s						
AKBB	**Malin Array Si**	**69.65**	**329**	*e*P	**P**	**20 34 29.3**	**+0.1**
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LTX	**Lajitas**	**70.69**	**67**	*e*P	**P**	**20 34 37.5**	**+1.4**
LTX	**Lajitas**	**70.69**	**67**	*e*P	**P**	**20 34 37.5**	**+1.4**
TXAR	**Lajitas Array**	**70.69**	**67**	P	**P**	**20 34 37.5**	**+1.4**
	comp=Z,1.1nm,0.6s,baz=318,slow=5.3,SNR=3.6						
ESDC	**Sonseca Array**	**87.63**	**348**	LR	LR	21 20 28.9	
	comp=Z,138nm,18.6s,baz=50,slow=39						

IDC ***02*** *20:37:13.6±1.9, 6°.46S×154°.38E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/40, mbtmp3.8/6, Error ellipse: s-maj=63.8km s-min=31.9km az=107.0*
ISCJB ***02*** *20:37:17.4±1.1, 6°.6S±0°.1×154°.6E±0°.2, h48km, mb3.9/11, Error ellipse: s-maj=22.5km s-min=14.7km az=165.4*
NEIC ***02*** *20:37:18.1±1.0, 6°.60S×154°.60E, h35km, mb4.1/8, Error ellipse: s-maj=22.5km s-min=13.6km az=68.0*

ISC 02 20:37:18.1±1.1, 6°.4S±0°.1×154°.7E±0°.2, h48km, n17, σ1§70/18, mb4.0/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.34**	**311**	*e*Pn	**Pn**	**20 38 09.1**	**+1.2**
WRAB	**Tennant Creek**	**23.91**	**234**	*e*P	**P**	**20 42 27.5**	**-0.2**
	13nm,0.6s						
WB2	**Warramunga Arr**	**23.91**	**234**	*e*P	**P**	**20 42 27.5**	**-0.3**
	6.8nm,0.9s						
WR1	**Warramunga Arr**	**23.92**	**234**	*e*P	**P**	**20 42 26.6**	**-1.3**
WRA	**Warramunga Arr**	**23.92**	**234**	P	**P**	**20 42 26.6**	**-1.3**
	2.7nm,0.8s,baz=56,slow=8.7,SNR=9.9						
SARN	**Sarigan**	**24.59**	**339**	*e*P	**P**	**20 42 29.5**	**-4.3**
	18nm,0.8s						
AS31	**Alice Springs**	**26.35**	**227**	*e*P	**P**	**20 42 49.4**	**-0.5**
	0.5nm,0.9s						
ASAR	**Alice Springs**	**26.36**	**227**	P	**P**	**20 42 49.4**	**-0.6**
	0.4nm,0.6s,baz=58,slow=9.1,SNR=5.2						
STKA	**Stephens Creek**	**28.16**	**204**	P	**P**	**20 43 05.8**	**-0.1**
	0.9nm,0.6s,baz=27,slow=16,SNR=3.4						
FITZ	**Fitzroy Crossi**	**30.63**	**245**	P	**P**	**20 43 26.4**	**-1.6**
	2.5nm,0.9s,baz=61,slow=19,SNR=2.7						
FITZ	**Fitzroy Crossi**	**30.63**	**245**	*e*P	**P**	**20 43 26.4**	**-1.6**
	4.1nm,1.1s						
URZ	**Urewera**	**37.67**	**151**	*e*P	**P**	**20 44 28.2**	**-0.6**
	7.4nm,1.1s						
MK32	**Makanchi Array**	**82.76**	**319**	*e*P	**P**	**20 49 38.2**	**+1.1**
MKAR	**Makanchi Array**	**82.76**	**319**	P	**P**	**20 49 38.2**	**+1.1**
	0.7nm,0.8s,baz=90,slow=5.0,SNR=3.5						
MAW	**Mawson**	**84.83**	**203**	P	**P**	**20 49 48.8**	**+1.6**
	0.8nm,0.7s,baz=74,slow=7.4,SNR=4.1						
TORD	**Torodi Ar. Bea**	**152.58**	**286**	PKPbc	**PKiKP**	**20 57 12.1**	**+1.5**
	1.3nm,0.6s,baz=102,slow=2.4,SNR=9.2						
TORD				PKPab	**pPKPbc**	**20 57 23.4**	**-0.8**
	1.2nm,0.7s,baz=49,slow=3.8,SNR=5.8						
TOA1	**Torodi Ar. Sit**	**152.58**	**286**	*e*PKPab	**PKPab**	**20 57 23.4**	**+2.3**

MDD ***02*** *20:46:56.4±1.6, 36°.64N×9°.70W, h43km±36km, mb3.5/4, Error ellipse: s-maj=13.8km s-min=12.7km az=59.0, PRXIMO*
INMG ***02*** *20:46:56.6±1.1, 36°.66N×9°.65W, h20km±4km, ML1.4, Error ellipse: s-maj=5.7km s-min=3.8km az=89.0*
IGIL ***02*** *20:46:56.8, 36°.66N×9°.65W, h20km, ML1.3*

ISC 02 20:46:56.0±3.2, 36°.7N±0°.1×9°.7W±0°.1, h32km±12km, n28, σ0§77/55, 5C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.80**	**56⇑**	*i* P	**Pb**	**20 47 11.5**	**+0.1**
PFVI				*e*S	**Sn**	**20 47 22.2**	**+0.5**
PFVI				A	A	20 47 22.8	
	3.4nm,0.2s						
PFVI	**Vila Bisbo**	**0.80**	**56**	P	**Pb**	**20 47 11.4**	**+0.1**
	3.8nm,0.2s,SNR=13						
PFVI				S	**Sn**	**20 47 22.1**	**+0.5**
	6.2nm,0.2s,SNR=7.9						
MORF	**Marmelete**	**1.01**	**52**	*e*P	**Pn**	**20 47 14.5**	**+0.5**
MORF				*e*S	**Sn**	**20 47 27.4**	**+0.4**
MORF				AML	AML	20 47 28.8	
	comp=N,6.6nm,0.1s						
MORF	**Marmelete**	**1.01**	**52**	*e*P	**Pn**	**20 47 14.5**	**+0.5**
MORF				*e*S	**Sb**	**20 47 28.1**	**+0.1**
MORF				A	A	20 47 28.2	
	comp=N,4.3nm,0.1s						
MORF	**Marmelete**	**1.01**	**52**	P	**Pn**	**20 47 14.5**	**+0.5**
MORF				S	**Sn**	**20 47 27.4**	**+0.4**
	comp=N,6.6nm,0.1s						
PTEO	**Sao Teotonio**	**1.13**	**40**	*e*P	**Pn**	**20 47 16.4**	**+0.8**
PTEO				*e*S	**Sb**	**20 47 30.9**	**-0.5**
PTEO				A	A	20 47 31.6	
	comp=N,3.5nm,0.1s						
PTEO	**Sao Teotonio**	**1.13**	**40**	P	**Pn**	**20 47 16.4**	**+0.8**
PTEO				S	**Sb**	**20 47 30.9**	**-0.5**
	comp=N,1.8nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.48**	**68⇑**	*i* P	**Pn**	**20 47 21.0**	**+0.6**
PBDV				*e*S	**Sn**	**20 47 39.0**	**+0.3**
PBDV	**Barranco-do-Ve**	**1.48**	**68**	P	**Pn**	**20 47 21.0**	**+0.6**
PBDV				S	**Sn**	**20 47 39.0**	**+0.3**
PCVE	**Castro Verde**	**1.59**	**53⇑**	*e*P	**Pn**	**20 47 22.8**	**+0.9**
PCVE				*e*S	**Sn**	**20 47 42.3**	**+0.9**
PCVE				A	A	20 47 43.2	
	comp=N,0.9nm,0.1s						
PCVE	**Castro Verde**	**1.59**	**53**	P	**Pn**	**20 47 22.8**	**+0.9**
PCVE				S	**Sn**	**20 47 42.3**	**+0.9**
	comp=N,0.9nm,0.1s						
MESJ	**Messejana**	**1.62**	**44**	*e*P	**Pn**	**20 47 22.9**	**+0.6**
MESJ				*e*S	**Sn**	**20 47 42.2**	**+0.2**
MESJ				AML	AML	20 47 44.3	
	comp=N,2.1nm,0.4s						
MESJ	**Messejana**	**1.62**	**44⇑**	*e*Pn	**Pn**	**20 47 22.9**	**+0.6**
MESJ				*e*Sn	**Sn**	**20 47 42.4**	**+0.4**
MESJ				A	A	20 47 59.9	
	comp=N,2.1nm,0.5s						
MESJ	**Messejana**	**1.62**	**44**	P	**Pn**	**20 47 22.9**	**+0.6**
MESJ				S	**Sn**	**20 47 42.2**	**+0.2**
	comp=N,2.1nm,0.4s						
PNCL	**Nicolau / Gran**	**1.68**	**32**	*e*Pn	**Pn**	**20 47 23.6**	**+0.5**
PNCL				*e*Sn	**Sn**	**20 47 43.7**	**+0.2**
PNCL				A	A	20 47 47.9	
	comp=N,2.0nm,0.1s						
PNCL	**Nicolau / Gran**	**1.68**	**32**	P	**Pn**	**20 47 23.6**	**+0.5**
PNCL				S	**Sn**	**20 47 43.7**	**+0.2**
	comp=N,2.0nm,0.1s						
PVAQ	**Vaqueiros**	**1.70**	**65⇑**	*e*Pn	**Pn**	**20 47 23.9**	**+0.5**
PVAQ				*e*Sn	**Sn**	**20 47 44.5**	**+0.4**
PVAQ				A	A	20 47 51.5	
	comp=N,1.9nm,0.6s						
PVAQ	**Vaqueiros**	**1.70**	**65**	P	**Pn**	**20 47 23.9**	**+0.5**
PVAQ				S	**Sn**	**20 47 44.5**	**+0.4**
	comp=N,1.9nm,0.6s						
EGRO	**El Granado**	**1.93**	**63**	P	**Pn**	**20 47 27.1**	**+0.7**
	comp=N,0.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**20 47 50.3**	**+0.7**
	comp=N,0.7nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.28**	**7**	S	**Sn**	**20 47 57.3**	**-1.1**
	comp=N,7.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.61**	**65**	P	**Pn**	**20 47 35.8**	**0.0**
	comp=N,0.2nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**20 48 05.9**	**-0.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
PMTG	**Montargil**	**2.63**	**25**	*e*Pn	**Pn**	**20 47 37.1**	**+0.9**
PMTG				*e*Sn	**Sn**	**20 48 06.4**	**-0.6**
PMTG				A	A	20 48 08.0	
	comp=N,1.6nm,0.3s						
PMTG	**Montargil**	**2.63**	**25**	P	**Pn**	**20 47 37.1**	**+0.9**
PMTG				S	**Sn**	**20 48 06.4**	**-0.6**
	comp=N,1.6nm,0.3s						
EBAD	**Badajoz**	**2.94**	**45**	P	**Pn**	**20 47 40.5**	**+0.1**
	comp=N,3.5nm,1.0s,SNR=5.9						
EBAD				S	**Sn**	**20 48 12.7**	**-1.9**
	comp=N,1.0nm,0.2s,SNR=7.9						
ESPR	**Espera**	**3.05**	**85**	P	**Pn**	**20 47 42.1**	**+0.2**
	comp=N,1.4nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**20 48 15.8**	**-1.5**
	comp=N,5.1nm,0.3s,SNR=7.9						
PMRV	**Marv??o**	**3.27**	**32**	*e*Pn	**Pn**	**20 47 45.1**	**+0.2**
PMRV				*e*Sn	**Sn**	**20 48 21.3**	**-1.4**
PMRV				A	A	20 48 21.7	
	comp=N,1.5nm,0.7s						
PMRV	**Marv??o**	**3.27**	**32**	P	**Pn**	**20 47 45.1**	**+0.2**
PMRV				S	**Sn**	**20 48 21.3**	**-1.4**
	comp=N,1.5nm,0.7s						
ECAB	**El Cabril**	**3.64**	**66**	P	**Pn**	**20 47 50.1**	**-0.1**
	comp=N,2.4nm,0.9s,SNR=6.9						
ECAB				S	**Sn**	**20 48 29.6**	**-2.4**
	comp=N,0.3nm,0.2s,SNR=7.9						

ISCJB ***02*** *20:48:48.2±0.6, 6°.13N±0°.03×73°.33W±0°.04, h170km±4km, mb3.5/2, Error ellipse: s-maj=5.9km s-min=4.7km az=21.0*
IDC ***02*** *20:48:48.5±0.9, 6°.04N×73°.11W, h171km±6km, mb3.4/2, mb1 3.7/3, mb1mx3.0/39, mbtmp3.8/3, Error ellipse: s-maj=46.3km s-min=8.6km az=132.0*
RSNC ***02*** *20:48:50.1±1.4, 6°.11N×73°.35W, h160km±6km, ML3.7, Mw4.0*

ISC 02 20:48:48.9±0.8, 6°.13N±0°.04×73°.32W±0°.04, h168km±6km, n25, σ0§95/43, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUSC	**La Rusia**	**0.33**	**134⇓**	*i* P	**Pn**	**20 49 12.4**	**+0.1**
RUSC				*e*S	**Sn**	**20 49 29.4**	**-0.7**
BARC	**Barichara**	**0.48**	**17**	*e*P	**Pn**	**20 49 12.6**	**+0.1**
BARC				*e*S	**Sn**	**20 49 29.6**	**-1.1**
BARC				*i*		20 49 31.4	
	comp=Z,512nm,0.3s						
GIRC	**Giron, Santand**	**0.96**	**8**	*e*P	**Pn**	**20 49 15.6**	**+0.4**
GIRC				*e*S	**Sn**	**20 49 35.5**	**-0.1**
BRRC	**Barranca, Sant**	**1.05**	**338**	*e*P	**Pn**	**20 49 16.4**	**+0.6**
BRRC				*e*S	**Sn**	**20 49 37.5**	**+0.9**
BRRC				*i*		20 49 40.0	
	comp=Z,393nm,0.4s						
YOPC	**Yopal, Colombi**	**1.18**	**130**	*e*P	**Pn**	**20 49 17.3**	**+0.3**
YOPC				*e*S	**Sn**	**20 49 38.6**	**-0.1**
YOPC				*i*		20 49 39.5	
	comp=Z,1μm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.20**	**290**	*e*P	**Pn**	**20 49 17.2**	**+0.1**
PTBC				*e*S	**Sn**	**20 49 37.4**	**-1.3**
PTBC				*i*		20 49 42.6	
	comp=Z,680nm,0.5s						
PAMC	**Pamplona, Colo**	**1.36**	**27**	*e*P	**Pn**	**20 49 20.1**	**+1.1**
PAMC				*e*S	**Sn**	**20 49 41.7**	**-0.5**
PAMC				*i*		20 49 46.0	

JFK	**Kawauchi**	**1.47 225**	P	Pn	20 57 06.1	-0.6
JFK			S	Sn	20 57 23.6	-1.2
JYK	**Kaneyama**	**1.50 290**	P	Pn	20 57 08.0	+0.9
JYK			*e*S	Sn	20 57 26.7	+1.1
JRG	**Rokugo**	**1.54 310**	P	Pn	20 57 09.0	+1.3
JRG			*e*S	Sb	20 57 29.9	+0.3

MAN 02 20:57:32.9, 7°.31N×124°.77E, h10km, MS3.8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.52**	**260**	⇓*i*P	Pb	20 57 44.2	0.0
CTBH				*i* S	Sb	20 57 52.5	+0.6
BUKP	**Musuan**	**0.64**	**27**	*e*P	Pg	20 57 45.3	+0.1
BUKP				*e*S	Sb	20 57 55.6	+0.5
DMPH	**Davao City--Mi**	**0.77**	**107**	⇑*e*P	Pn	20 57 50.2	+0.3
DMPH				*e*S	Sn	20 58 01.2	-0.3
SKMP	**Bagumbayan, Su**	**0.82**	**196**	*e*P	Pg	20 57 47.9	-0.8
SKMP				*e*S	Sg	20 57 58.9	-0.5
CGP	**Cagayan de Oro**	**1.14**	**356**	*e*P	Pb	20 57 53.7	-1.0
PAGZ	**Pagadian**	**1.47**	**291**	*e*P	Pn	20 57 58.3	-1.2
PAGZ				*e*S	Sn	20 58 19.0	+0.1
DDMP	**Don Marcelino,**	**1.52**	**142**	*e*P	Pn	20 57 59.9	-0.3
DDMP				*e*S	Sg	20 58 24.5	+2.6
BUTP	**Butuan**	**1.85**	**27**	*e*P	Pb	20 58 07.0	+0.2
BUTP				*e*S	Sg	20 58 35.1	+2.6

NEIC 02 20:58:54.0±0.0, 12°.81S×76°.56W, h74km, mb4.2/4, ML4.1(ARE), After ARE., Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.86**	**341**	*e*Pn	Pn	20 59 13.7	+2.6
NNA				*e*Sn	Sn	20 59 26.9	+3.0
LPAZ	**La Paz**	**8.86**	**114**	*e*Pn	Pn	21 00 55.5	-4.4
PB11	**IPOC Station P**	**9.57**	**137**	*e*Pn	Pn	21 01 09.8	+0.6
PB01	**IPOC Station P**	**10.62**	**141**	*e*Pn	Pn	21 01 21.6	-1.8
PB04	**IPOC Station P**	**11.27**	**148**	*e*Pn	Pn	21 01 31.0	-1.4
PB10	**IPOC Station P**	**12.07**	**153**	*e*Pn	Pn	21 01 41.2	-2.0
BANI	**BANI**	**31.60**	**11**	*e*P	P	21 05 10.2	+0.1
FSCY	**Frank Sound, G** 603nm,1.4s	**32.24**	**352**	*e*P	P	21 05 13.3	-2.2
CBYP	**Canovanas** 14nm,0.8s	**32.64**	**19**	*e*P	P	21 05 16.8	-2.3
BOZ	**Bozeman (W)** 4.4nm,1.5s	**66.19**	**334**	*e*P	P	21 09 35.5	+1.5

MAN 02 21:12:58.2, 7°.35N×124°.78E, h12km, MS2.8, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.54**	**256**	⇓*i*P	Pb	21 13 09.7	+0.1
CTBH				*i* S	Sb	21 13 17.9	+0.5
DMPH	**Davao City--Mi**	**0.77**	**110**	⇑*e*P	Pg	21 13 11.1	-2.0
DMPH				*e*S	Sg	21 13 21.9	-1.4
CGP	**Cagayan de Oro**	**1.10**	**356**	⇑*e*P	Pb	21 13 19.2	0.0
CGP				*e*S	Sg	21 13 33.7	-0.1

ISCJB ***02*** *21:19:05.5±0.7, 25°.6S±0°.1×177°.7W±0°.2, h160km, mb3.5/7, Error ellipse: s-maj=24.1km s-min=20.4km az=21.1*
IDC ***02*** *21:19:07.2±13.0, 25°.51S×177°.67W, h163km±121km, mb3.4/7, mb1 3.6/7, mb1mx3.4/26, mbtmp3.8/7, Error ellipse: s-maj=36.5km s-min=25.9km az=85.0*

ISC 02 21:19:06.6±0.7, 25°.5S±0°.2×177°.6W±0°.2, h160km, n16, σ0°47/16, mb3.6/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.90**	**262**	P	**P**	**21 26 58.0**	**+0.3**
	0.6nm,0.5s,baz=90,slow=7.6,SNR=10						
WRA	**Warramunga Arr**	**44.45**	**267**	P	**P**	**21 27 01.7**	**-0.2**
	0.8nm,0.7s,baz=96,slow=7.7,SNR=4.2						
VNDA	**Vanda**	**52.95**	**185**	P	**P**	**21 28 06.3**	**+0.3**
	0.2nm,0.4s,baz=9.3,slow=7.3,SNR=1.6						
MAW	**Mawson**	**76.96**	**200**	P	**P**	**21 30 41.7**	**+0.7**
	1.3nm,0.6s,baz=167,slow=3.6,SNR=8.0						
PETK	**Petropavlovsk-**	**81.20**	**345**	P	**P**	**21 31 04.2**	**+0.1**
	1.7nm,0.6s,baz=115,slow=7.1,SNR=3.7						
VNA3	**Neumayer Olymp**	**83.12**	**176**	P	**P**	**21 31 13.5**	**-0.6**
VNA2	**Neumayer--Watz**	**83.56**	**177**	P	**P**	**21 31 16.0**	**-0.3**
	baz=195,slow=4.8						
VNA1	**Neumayer--Stat**	**83.79**	**176**	P	**P**	**21 31 16.5**	**-0.9**
NVAR	**Mina Array Bea**	**84.47**	**43**	P	**P**	**21 31 22.2**	**+0.6**
	0.6nm,0.5s,baz=220,slow=7.7,SNR=4.9						
PDAR	**Pinedale Array**	**92.39**	**43**	P	**P**	**21 31 59.4**	**+0.1**
	0.3nm,0.6s,baz=215,slow=3.0,SNR=4.0						
ARCES	**ARCESS Array B**	**133.91**	**349**	PKP	**PKiKP**	**21 38 04.7**	**-0.5**
	3.4nm,0.9s,baz=23,slow=2.9,SNR=4.0						
NB2	**NORSAR Subarra**	**144.00**	**353**	PKP	**PKPab**	**21 38 20.3**	**0.0**
	comp=Z,0.8nm,0.6s,baz=9.9,slow=3.4						
NOA	**NORSAR Array B**	**144.00**	**353**	PKP	**PKPab**	**21 38 20.4**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=18,slow=2.8,SNR=5.5						
AKASG	**Malin Array Be**	**147.50**	**328**	PKPbc	**PKPbc**	**21 38 31.2**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=37,slow=3.9,SNR=4.6						
BRTR	**Keskin Array B**	**150.27**	**306**	PKPbc	**PKPbc**	**21 38 38.9**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=144,slow=4.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**167.66**	**177**	PKPab	**PKPab**	**21 40 00.9**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=47,slow=3.0,SNR=2.6						

MEX 02 21:27:43.3±0.5, 16°.04N×94°.67W, h61km±15km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.06**	**349**	*e*P	Pn	21 28 00.6	-1.6
CMIG				*i* S	Sn	21 28 14.5	-1.7
HUIG	**Huatulco**	**1.41**	**259**	*e*P	Pn	21 28 05.4	-1.4
HUIG				*e*S	Sn	21 28 22.6	-1.9
PCIG		**1.43**	**103**	*e*P	Pn	21 28 05.5	-1.6
PCIG				*e*S	Sn	21 28 22.9	-2.1
TGIG		**1.65**	**64**	*e*P	Pn	21 28 08.2	-2.0
TGIG				*i* S	Sn	21 28 27.5	-2.9

ATH ***02*** *21:28:38.8, 40°.05N×22°.35E, h19km±1km, ML3.1/8, Error ellipse: s-maj=1.3km s-min=0.7km az=338.0*
SOF ***02*** *21:28:38.4, 39°.97N×22°.32E, h13km, MD2.9*
ISCJB ***02*** *21:28:38.8±0.3, 40°.07N±0°.01×22°.38E±0°.02, h2km±2km, mb3.3/3, Error ellipse: s-maj=2.0km s-min=1.7km az=156.6*
THE ***02*** *21:28:39.3, 40°.05N×22°.33E, h0km±1km, ML3.0/20, Error ellipse: s-maj=1.5km s-min=0.4km az=328.0*
BEO ***02*** *21:28:39.6±0.7, 40°.03N×22°.47E, h3km±4km, ML3.0/4*
PDG ***02*** *21:28:40.3±0.7, 40°.09N×22°.39E, h11km±1km, ML3.2/11, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
IDC ***02*** *21:28:40.5±1.3, 40°.21N×22°.58E, h0km, mb3.1/4, mb1 3.3/5, mb1mx3.2/29, mbtmp3.2/5, ML3.3/1, Error ellipse: s-maj=35.2km s-min=19.9km az=164.0*

ISC 02 21:28:39.8±0.9, 40°.05N±0°.01×22°.36E±0°.02, h5km±7km, n181, σ0°99/227, mb3.2/3, 16C-11D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIT	**Litokhoron**	**0.11**	**65**	P	**Pg**	**21 28 42.3**	**+0.1**
LIT				S	**Sg**	**21 28 44.8**	**+1.1**
LIT	**Litokhoron**	**0.11**	**65**	P	**Pg**	**21 28 42.3**	**+0.1**
LIT				S	**Sg**	**21 28 44.8**	**+1.1**
LIT				AML	AML	21 28 45.1	
LIT				AML	AML	21 28 45.2	
LRSO	**Larissa Observ**	**0.38**	**176**	P	**Pg**	**21 28 47.0**	**-0.2**
LRSO				S	**Sg**	**21 28 52.0**	**-0.2**
LRSO	**Larissa Observ**	**0.38**	**176**	P	**Pg**	**21 28 47.0**	**-0.2**
LRSO				AML	AML	21 28 56.2	
	comp=N,9201μm,0.2s						
LRSO				AML	AML	21 29 00.5	
	comp=E,6737μm,0.3s						
KTI	**Kastanea**	**0.39**	**331**	P	**Pg**	**21 28 46.6**	**-0.8**
KZN	**Kozani**	**0.52**	**299**	P	**Pg**	**21 28 48.4**	**-1.4**
KZN				S	**Sg**	**21 28 55.4**	**-1.1**
KZN	**Kozani**	**0.52**	**299**	P	**Pg**	**21 28 48.4**	**-1.4**
KZN				S	**Sg**	**21 28 56.0**	**-0.5**
KZN				AML	AML	21 28 56.1	
	comp=N,4250μm,0.4s						
KZN				AML	AML	21 29 00.0	
	comp=E,9990μm,0.4s						
THL	**Klokotos Trika**	**0.56**	**209**	P	**Pg**	**21 28 49.3**	**-1.2**
THL				S	**Sg**	**21 28 57.2**	**-0.5**
THL	**Klokotos Trika**	**0.56**	**209**	P	**Pg**	**21 28 49.3**	**-1.2**
THL				S	**Sg**	**21 28 57.5**	**-0.2**
THL				AML	AML	21 29 00.2	
	comp=N,4326μm,0.2s						
THL				AML	AML	21 29 01.4	
	comp=E,4905μm,0.5s						
THE	**Thessaloniki**	**0.74**	**39**	P	**Pg**	**21 28 53.9**	**-0.2**
THE	**Thessaloniki**	**0.74**	**39**	P	**Pg**	**21 28 53.7**	**-0.4**
THE				AML	AML	21 29 07.7	
	comp=E,1525μm,0.9s						
THE				AML	AML	21 29 08.2	
	comp=N,1170μm,0.6s						
KPRO	**Kipourio**	**0.77**	**263**	P	**Pg**	**21 28 53.2**	**-1.5**
KPRO				S	**Sg**	**21 29 04.7**	**0.0**
KPRO	**Kipourio**	**0.77**	**263**	P	**Pg**	**21 28 53.2**	**-1.5**
FYTO	**Fytoko, Volos**	**0.78**	**145**	P	**Pg**	**21 28 54.5**	**-0.4**
FYTO				S	**Sb**	**21 29 06.6**	**-0.3**
FYTO	**Fytoko, Volos**	**0.78**	**145**	P	**Pg**	**21 28 54.5**	**-0.4**
HORT	**Hortiatis**	**0.79**	**46**	P	**Pg**	**21 28 54.6**	**-0.3**
HORT				S	**Sb**	**21 29 06.1**	**-0.9**
HORT	**Hortiatis**	**0.79**	**46**	P	**Pg**	**21 28 54.4**	**-0.5**
PLG	**Polygyros**	**0.89**	**69**	P	**Pg**	**21 28 56.5**	**-0.5**
PLG	**Polygyros**	**0.89**	**69**	P	**Pg**	**21 28 56.5**	**-0.5**
GRG	**Griva**	**0.90**	**2**	P	**Pg**	**21 28 56.3**	**-0.9**
GRG				S	**Sb**	**21 29 10.6**	**+0.2**
GRG	**Griva**	**0.90**	**2**	P	**Pg**	**21 28 56.3**	**-0.9**
MEV	**Metsovon**	**0.91**	**253**	P	**Pg**	**21 28 56.8**	**-0.5**
XOR	**Xorichti**	**0.94**	**137**	P	**Pg**	**21 28 56.9**	**-1.0**
XOR				S	**Sb**	**21 29 11.8**	**+0.4**
XOR	**Xorichti**	**0.94**	**137**	P	**Pg**	**21 28 57.1**	**-0.8**
XOR				AML	AML	21 29 13.0	
	comp=N,4166μm,0.4s						
XOR				AML	AML	21 29 13.6	
	comp=E,2194μm,0.2s						
PENT	**Pentalofos**	**0.95**	**279**	P	**Pg**	**21 28 56.5**	**-1.5**
PENT	**Pentalofos**	**0.95**	**279**	P	**Pg**	**21 28 56.5**	**-1.5**
NEO	**Neokhori**	**1.00**	**138**	P	**Pg**	**21 28 58.1**	**-0.9**
NEO				S	**Sb**	**21 29 13.2**	**0.0**
NEO	**Neokhori**	**1.00**	**138**	P	**Pg**	**21 28 58.1**	**-0.9**
PAIG	**Paliouri**	**1.02**	**97**	P	**Pg**	**21 28 59.0**	**-0.5**
PAIG				S	**Sb**	**21 29 13.9**	**+0.1**
PAIG	**Paliouri**	**1.02**	**97**	P	**Pg**	**21 28 58.8**	**-0.6**
PAIG				AML	AML	21 29 16.8	
	comp=E,1138μm,0.4s						
PAIG				AML	AML	21 29 17.8	
	comp=N,888μm,0.5s						
AGG	**Agios Georgios**	**1.03**	**181**	P	**Pg**	**21 28 58.8**	**-0.8**
AGG				S	**Sg**	**21 29 13.2**	**+0.2**
AGG	**Agios Georgios**	**1.03**	**181**	P	**Pg**	**21 28 58.9**	**-0.8**
FNA	**Florina**	**1.05**	**314**	*e*Pg	**Pg**	**21 28 58.8**	**-1.1**
FNA				*e*Sg	**Sn**	**21 29 15.8**	**-0.5**
FNA	**Florina**	**1.05**	**314**	P	**Pg**	**21 28 58.3**	**-1.6**
FNA				S	**Sg**	**21 29 13.4**	**-0.1**
FNA	**Florina**	**1.05**	**314**	*i* PN	**Pg**	**21 28 56.6**	**-3.3**
FNA				*i* SN	**Sg**	**21 29 12.1**	**-1.4**
FNA	**Florina**	**1.05**	**314**	P	**Pg**	**21 28 58.6**	**-1.3**
NEST	**Nestorio**	**1.07**	**290**	P	**Pg**	**21 28 58.6**	**-1.7**
NEST	**Nestorio**	**1.07**	**290**	P	**Pg**	**21 28 58.7**	**-1.6**
SOH	**Sokhos**	**1.08**	**44**	P	**Pg**	**21 28 59.5**	**-1.1**
SOH				S	**Sn**	**21 29 16.2**	**-0.9**
SOH	**Sokhos**	**1.08**	**44**	P	**Pg**	**21 28 59.3**	**-1.3**
SOH				AML	AML	21 29 18.8	
	comp=E,3143μm,0.6s						
SOH				AML	AML	21 29 18.8	
	comp=N,2791μm,0.6s						
KNT	**Kendrikon**	**1.18**	**20**	P	**Pg**	**21 29 01.5**	**-1.0**
KNT				S	**Sn**	**21 29 18.9**	**-0.7**
KNT	**Kendrikon**	**1.18**	**20**	P	**Pg**	**21 29 01.5**	**-1.0**
EVR	**Evrytania**	**1.21**	**201**	P	**Pg**	**21 29 01.8**	**-1.3**
EVR				S	**Sn**	**21 29 19.7**	**-0.7**
EVR	**Evrytania**	**1.21**	**201**	P	**Pg**	**21 29 01.8**	**-1.3**
JAN	**Janina**	**1.23**	**252**	P	**Pg**	**21 29 01.8**	**-1.5**
JAN	**Janina**	**1.23**	**252**	P	**Pg**	**21 29 01.9**	**-1.5**
OUR	**Ouranopolis**	**1.27**	**77**	P	**Pn**	**21 29 03.0**	**-1.3**
OUR				S	**Sn**	**21 29 21.6**	**-0.2**
OUR	**Ouranopolis**	**1.27**	**77**	P	**Pn**	**21 29 03.1**	**-1.3**
VAY	**Valandovo**	**1.28**	**7**	*e*Pg	**Pn**	**21 29 03.2**	**-1.2**
VAY				*e*Sg	**Sg**	**21 29 20.7**	**-0.2**
VAY	**Valandovo**	**1.28**	**7**	*i* Pn	**Pn**	**21 29 03.6**	**-0.8**
SMIA	**Simia**	**1.34**	**150**	P	**Pn**	**21 29 04.0**	**-1.3**
SMIA	**Simia**	**1.34**	**150**	P	**Pn**	**21 29 04.4**	**-0.9**
SRS	**Serrai**	**1.42**	**41**	*e*Pg	**Pn**	**21 29 05.0**	**-1.3**
SRS				*e*Sg	**Sb**	**21 29 22.5**	**-2.7**
SRS	**Serrai**	**1.42**	**41**	P	**Pn**	**21 29 05.1**	**-1.3**
SRS	**Serrai**	**1.42**	**41**	P	**Pn**	**21 29 05.1**	**-1.3**
ATAL	**Atalanti**	**1.45**	**159**	P	**Pn**	**21 29 05.8**	**-0.9**
ATAL				S	**Sg**	**21 29 27.6**	**+1.1**
ATAL	**Atalanti**	**1.45**	**159**	P	**Pn**	**21 29 05.9**	**-0.9**
LKR	**Lokris**	**1.49**	**160**	P	**Pn**	**21 29 06.9**	**-0.4**
ANX	**Ano Chora**	**1.50**	**193**	P	**Pn**	**21 29 07.0**	**-0.4**
ANX				S	**Sg**	**21 29 28.0**	**0.0**
ANX	**Ano Chora**	**1.50**	**193**	P	**Pn**	**21 29 07.1**	**-0.4**
KRUS	**Krusevo**	**1.56**	**328**	*i* Pn	**Pn**	**21 29 08.2**	**-0.1**
PVO	**Paravola**	**1.57**	**205**	P	**Pn**	**21 29 08.4**	**0.0**
STIP	**Stip**	**1.64**	**355**	*i* Pn	**Pn**	**21 29 09.8**	**+0.4**
DSF	**Desfina**	**1.65**	**175**	P	**Pn**	**21 29 08.4**	**-1.1**
DSF	**Desfina**	**1.65**	**175**	P	**Pn**	**21 29 08.8**	**-0.7**
IGT	**Igoumenitsa**	**1.65**	**252**	*e*Pg	**Pb**	**21 29 10.6**	**-0.1**
IGT				*e*Sg	**Sg**	**21 29 34.0**	**+1.3**
IGT	**Igoumenitsa**	**1.65**	**252**	P	**Pn**	**21 29 09.4**	**0.0**
MRKA	**Markates**	**1.65**	**144**	P	**Pn**	**21 29 08.4**	**-1.1**
MRKA	**Markates**	**1.65**	**144**	P	**Pn**	**21 29 08.4**	**-1.1**
SERG	**Sergoula**	**1.66**	**188**	P	**Pn**	**21 29 09.1**	**-0.5**
EFP	**Efpalio**	**1.66**	**192**	P	**Pn**	**21 29 09.0**	**-0.6**
EFP				S	**Sn**	**21 29 31.4**	**0.0**
EFP	**Efpalio**	**1.66**	**192**	P	**Pn**	**21 29 09.1**	**-0.5**
KALE	**Kalithea**	**1.67**	**186**	P	**Pn**	**21 29 09.3**	**-0.5**
KALE				S	**Sb**	**21 29 31.9**	**-0.5**
KALE	**Kalithea**	**1.67**	**186**	P	**Pn**	**21 29 09.1**	**-0.7**
TRIZ	**Trizonia**	**1.70**	**188**	P	**Pn**	**21 29 09.0**	**-1.2**
TRIZ	**Trizonia**	**1.70**	**188**	P	**Pn**	**21 29 09.7**	**-0.4**
NVR	**Nevrokopi**	**1.73**	**41**	P	**Pn**	**21 29 09.5**	**-1.1**
NVR				S	**Sb**	**21 29 33.5**	**-0.6**
NVR	**Nevrokopi**	**1.73**	**41**	P	**Pn**	**21 29 09.7**	**-0.9**
TSLK	**Tsoukalades, L**	**1.80**	**228**	P	**Pg**	**21 29 13.9**	**-0.5**
TPE	**Tepelena**	**1.81**	**278**	P	**Pb**	**21 29 13.6**	**0.0**
SRN	**Sarande**	**1.82**	**265**	P	**Pb**	**21 29 13.2**	**-0.4**
SRN	**Sarande**	**1.82**	**265**	*i* PN	**Pb**	**21 29 13.0**	**-0.7**
SRN				*i* SN	**Sg**	**21 29 38.3**	**-0.1**
LKD2	**Lefkada island**	**1.82**	**227**	P	**Pb**	**21 29 13.4**	**-0.3**
LAKA	**Lakka**	**1.83**	**189**	P	**Pn**	**21 29 11.9**	**-0.2**
PROD	**Prodromos**	**1.84**	**167**	P	**Pn**	**21 29 10.5**	**-1.6**
PROD	**Prodromos**	**1.84**	**167**	P	**Pn**	**21 29 10.7**	**-1.4**
MMB	**Musomiste**	**1.85**	**34**	*i* P	**Pn**	**21 29 11.3**	**-1.0**
MMB	**Musomiste**	**1.85**	**34**	*i* P	**Pn**	**21 29 11.5**	**-0.8**
THAS	**Thassos island**	**1.89**	**72**	P	**Pn**	**21 29 11.0**	**-1.7**
THAS	**Thassos island**	**1.89**	**72**	P	**Pn**	**21 29 11.3**	**-1.4**
KKB	**Krupnik**	**1.89**	**17**	*i* P	**Pn**	**21 29 12.0**	**-0.9**
KKB	**Krupnik**	**1.89**	**17**	*i* P	**Pn**	**21 29 12.2**	**-0.7**
KAVA	**Kavala**	**1.89**	**59**	P	**Pn**	**21 29 11.4**	**-1.5**
EVGI	**Lefkada island**	**1.95**	**223**	P	**Pb**	**21 29 15.3**	**-0.5**
KEK	**Kerkira**	**2.00**	**261**	P	**Pb**	**21 29 15.7**	**-1.0**
KLV	**Kalavryta, Ach**	**2.01**	**185**	P	**Pn**	**21 29 13.7**	**-0.8**
KLV	**Kalavryta, Ach**	**2.01**	**185**	P	**Pn**	**21 29 13.7**	**-0.8**
EREA	**Eretria**	**2.04**	**143**	P	**Pn**	**21 29 14.1**	**-0.8**
EREA	**Eretria**	**2.04**	**143**	P	**Pn**	**21 29 14.2**	**-0.6**
SKO	**Skopje**	**2.04**	**340**	*e*Pn	**Pn**	**21 29 15.1**	**+0.3**
GUR	**Goura**	**2.11**	**180**	P	**Pn**	**21 29 15.2**	**-0.8**
FSK	**Fiskardo**	**2.12**	**222**	P	**Pn**	**21 29 16.2**	**+0.3**
DRO	**Drossia**	**2.16**	**194**	P	**Pn**	**21 29 16.9**	**+0.4**
LIA	**Limnos Island**	**2.17**	**93**	P	**Pn**	**21 29 15.7**	**-1.0**
LIA	**Limnos Island**	**2.17**	**93**	P	**Pn**	**21 29 15.7**	**-1.0**
PHP	**Peshkopia**	**2.18**	**319**	P	**Pn**	**21 29 16.8**	**-0.1**
PHP	**Peshkopia**	**2.18**	**319**	*i* PN	**Pn**	**21 29 17.1**	**+0.2**
PHP				*i* SN	**Sn**	**21 29 43.6**	**-0.8**
TIR	**Tirane**	**2.29**	**305**	*e*Pn	**Pn**	**21 29 19.5**	**+1.1**
DION	**Dionisos Attik**	**2.32**	**148**	P	**Pn**	**21 29 18.1**	**-0.6**
DION	**Dionisos Attik**	**2.32**	**148**	P	**Pn**	**21 29 18.2**	**-0.6**
ATHU	**Athens Univers**	**2.36**	**152**	P	**Pn**	**21 29 18.9**	**-0.3**
SMTH	**Samothraki Isl**	**2.46**	**79**	P	**Pn**	**21 29 19.3**	**-1.4**
VLY	**Voula,Athens**	**2.47**	**153**	P	**Pn**	**21 29 20.8**	**+0.1**
EPID	**Epidavros**	**2.51**	**166**	P	**Pn**	**21 29 21.2**	**-0.1**
DID	**Didima**	**2.63**	**165**	P	**Pn**	**21 29 22.4**	**-0.7**
VTS	**Vitosha**	**2.65**	**14**	*e*Pn	**Pn**	**21 29 22.9**	**-0.4**
VTS	**Vitosha**	**2.65**	**14**	P	**Pn**	**21 29 22.6**	**-0.7**
VTS	**Vitosha**	**2.65**	**14**	⇑*i*P	**Pn**	**21 29 22.8**	**-0.5**
VTS	**Vitosha**	**2.65**	**14**	S	**Sn**	**21 29 56.9**	**+1.0**
VTS	**Vitosha**	**2.65**	**14**	*i* P	**Pn**	**21 29 22.8**	**-0.5**
VTS	**Vitosha**	**2.65**	**14**	P	**Pn**	**21 29 23.0**	**-0.4**
RDO	**Rodhopi**	**2.66**	**65**	P	**Pn**	**21 29 21.7**	**-1.6**
PLD	**Plovdiv**	**2.71**	**40**	*e*Pn	**Pn**	**21 29 24.1**	**+0.1**
BARS	**Barje**	**2.79**	**352**	*e*Pn	**Pn**	**21 29 25.1**	**-0.1**
ALN	**Alexandroupoli**	**2.94**	**72**	P	**Pn**	**21 29 26.1**	**-1.1**
ULC	**Ulcinj**	**3.03**	**310**	⇓*i*Pn	**Pn**	**21 29 30.4**	**+1.9**
ULC				*e*Sn	**Sn**	**21 30 07.3**	**+2.1**
EZN	**Ezine**	**3.06**	**93**	⇑*i*P	**Pn**	**21 29 28.8**	**0.0**
PVY	**Plav**	**3.12**	**325**	⇑*i*Pn	**Pn**	**21 29 30.8**	**+1.0**
PVY				*e*Sn	**Sn**	**21 30 08.8**	**+1.3**
DRME	**Dracevica, Mon**	**3.21**	**313**	⇓*i*Pn	**Pn**	**21 29 32.3**	**+1.4**
DRME				*e*Sn	**Sn**	**21 30 11.1**	**+1.6**
ZAPS	**Zavoj**	**3.22**	**4**	*e*Pn	**Pn**	**21 29 32.5**	**+1.3**
BAYC	**CANAKKALE_Bayr**	**3.24**	**94**	*i* P	**Pn**	**21 29 31.3**	**-0.1**
BAYC				*i* S	**Sn**	**21 30 07.7**	**-2.6**
BAYC				IAML_P			
	comp=Z,464nm,0.3s						
SELS	**Selova**	**3.30**	**344**	*e*Pn	**Pn**	**21 29 31.5**	**-0.7**
PDG	**Podgorica**	**3.33**	**316**	*e*Pn	**Pn**	**21 29 33.6**	**+1.0**
PDG	**Podgorica**	**3.33**	**316**	⇑*i*P	**Pn**	**21 29 33.8**	**+1.2**
TTG	**Podgorica**	**3.33**	**316**	⇓*i*Pn	**Pn**	**21 29 33.9**	**+1.3**
TTG				*e*Sn	**Sn**	**21 30 13.9**	**+1.3**
IVA	**Berane**	**3.37**	**327**	⇓*i*Pn	**Pn**	**21 29 33.8**	**+0.6**
IVA				*e*Sn	**Sn**	**21 30 14.1**	**+0.4**
KESN	**Edirne-Kesan**	**3.39**	**75**	*i* P	**Pn**	**21 29 33.8**	**+0.1**
KESN				IAML_P			
	comp=Z,102nm,0.1s						
AYVA	**Ayvalik**	**3.42**	**101**	*i* P	**Pn**	**21 29 33.9**	**0.0**
AYVA				IAML_P			
	comp=Z,179nm,0.1s						
BUM	**Brajici-Budva**	**3.45**	**312**	⇑*i*Pn	**Pn**	**21 29 35.3**	**+1.0**
BUM				*e*Sn	**Sn**	**21 30 17.1**	**+1.6**
KOME	**Kolasin**	**3.52**	**324**	⇓*i*Pn	**Pn**	**21 29 36.6**	**+1.3**
KOME				*e*Sn	**Sn**	**21 30 17.8**	**+0.5**
CEME	**Cevo**	**3.59**	**315**	⇑*i*Pn	**Pn**	**21 29 36.9**	**+0.6**
CEME				*e*Sn	**Sn**	**21 30 20.4**	**+1.2**
BOVS	**Bovan**	**3.61**	**352**	*e*Pn	**Pn**	**21 29 36.3**	**-0.2**
SJES	**Sjenica**	**3.67**	**332**	*e*Pn	**Pn**	**21 29 38.1**	**+0.7**
ZEY	**zmir**	**3.70**	**118**	*i* P	**Pn**	**21 29 37.9**	**+0.2**
ZEY				IAML_P			
	comp=Z,218nm,0.2s						
URLA	**Izmir**	**3.70**	**116**	*i* P	**Pn**	**21 29 38.0**	**+0.3**
URLA				IAML_P			
	comp=Z,430nm,0.2s						
NKME	**Niksic**	**3.73**	**318**	⇑*i*Pn	**Pn**	**21 29 39.0**	**+0.9**
NKME				*e*Sn	**Sn**	**21 30 23.4**	**+0.9**
NKY	**Niksic**	**3.74**	**319**	⇑*i*Pn	**Pn**	**21 29 39.6**	**+1.2**
NKY				*e*Sn	**Sn**	**21 30 23.8**	**+0.9**
ZAGS	**Zajecar**	**3.76**	**359**	*e*Pn	**Pn**	**21 29 38.5**	**0.0**
HCY	**Herceg Novi**	**3.77**	**311**	⇓*i*Pn	**Pn**	**21 29 39.9**	**+1.3**
HCY				*e*Sn	**Sn**	**21 30 24.9**	**+1.5**
ZEDA	**zmir-Bergama**	**3.81**	**105**	*i* P	**Pn**	**21 29 39.5**	**+0.4**
ZEDA				IAML_P			
	comp=Z,303nm,0.1s						
APE	**Apeiranthos**	**3.88**	**139**	⇓*i*Pn	**Pn**	**21 29 39.8**	**-0.4**
PLE	**Pljevlja**	**3.96**	**327**	⇓*i*Pn	**Pn**	**21 29 42.8**	**+1.5**
PLE				*e*Sn	**Sn**	**21 30 28.5**	**+0.3**
KIRK	**Kırklareli**	**3.98**	**63**	*i* P	**Pn**	**21 29 41.5**	**0.0**
KIRK				IAML_P			
	comp=Z,90nm,0.1s

SNR=5.3
AAK Ala-Archa 5.47 18 ⇓P Pn 21 58 08.8 +1.7
2.1nm,0.3s
AAK ⇑S Sn 21 59 07.3 -1.5
4.9nm,0.6s
KK31 Karatay Array 5.78 348 P Pn 21 58 12.6 +1.5
2.0nm,0.3s,baz=156,slow=10,SNR=34
KK31 S Sn 21 59 12.1 -3.9
8.6nm,0.3s,baz=164,slow=23,SNR=26
CHMS Chumysh 5.87 19 P Pn 21 58 14.1 +1.7
SNR=5.1
PYUN Piuthan 13.03 133 *eP* Pn 21 59 47.8 -1.1
13nm,0.3s
DANN Dangsing 13.31 130 *eP* Pn 21 59 51.9 -0.7
12nm,0.3s
KOLN Koldanda 13.64 132 *eP* Pn 21 59 56.2 -0.5
6.9nm,0.3s
GKN Gorkha 14.10 128 *eP* Pn 22 00 01.6 -1.0
17nm,0.2s
KKN Kakani 14.65 127 *eP* Pn 22 00 08.8 -0.9
3.4nm,0.2s
AB31 Akbulak array 14.74 327 P Pn 22 00 09.6 -0.9
0.9nm,0.4s,baz=132,slow=13,SNR=50
PKIN Phulchoki 14.88 128 *eP* Pn 22 00 12.3 -0.3
4.9nm,0.3s
PKI Pulchoki 14.89 128 *eP* Pn 22 00 12.5 -0.3
4.5nm,0.3s
JIRN Jiri 15.32 126 *eP* Pn 22 00 17.9 -0.5
22nm,0.4s
RAMN Ramite 16.08 127 *eP* Pn 22 00 25.9 -1.7
5.9nm,0.3s
AKTO Aktyubinsk 16.45 327 ⇑P P 22 00 34.8 +2.3
1.3nm,0.8s

IDC 02 22:22:29.5±2.0, 3°92S×131°65E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.7/26, mbtmp3.9/6, ML3.9/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/30, Error ellipse: s-maj=145.9km s-min=22.0km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.91 264**		LR	LR	22 29 49.6	
	comp=Z,94nm,22.0s,baz=93,slow=37						
FITZ	**Fitzroy Crossi**	**15.28 202**		Pn	Pn	22 25 59.6	-7.0
	0.8nm,0.3s,baz=33,slow=11,SNR=18						
FITZ				Sn	Sn	22 28 38.6	-18
	0.4nm,0.3s,baz=119,slow=6.5,SNR=1.8						
WRA	**Warramunga Arr**	**16.14 171**		Pn	Pn	22 26 13.6	-4.4
	0.2nm,0.3s,baz=347,slow=14,SNR=6.8						
WRA				Sn	Sn	22 29 01.7	-16
	0.3nm,0.3s,baz=343,slow=19,SNR=4.6						
ASAR	**Alice Springs**	**19.76 174**		P	P	22 27 00.9	-0.3
	0.4nm,0.3s,baz=350,slow=12,SNR=18						
ASAR				S	S	22 30 27.8	-17
	0.0nm,0.3s,baz=355,slow=29,SNR=3.4						
LEM	**Lembang**	**24.10 262**		LR	LR	22 38 13.0	
	comp=Z,50nm,21.3s,baz=244,slow=39						
STKA	**Stephens Creek**	**29.34 163**		P	P	22 28 35.4	+1.1
	0.9nm,0.5s,baz=340,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**66.60 325**		P	P	22 33 22.7	+0.9
	1.0nm,0.6s,baz=113,slow=7.2,SNR=10						
ZALV	**Zalesovo Beam**	**69.59 333**		P	P	22 33 39.2	-1.2
	1.3nm,0.9s,baz=134,slow=4.2,SNR=3.7						
VNDA	**Vanda**	**75.30 174**		P	P	22 34 13.4	-0.7
	0.4nm,0.8s,baz=316,slow=5.3,SNR=3.8						
MAW	**Mawson**	**78.40 201**		P	P	22 34 31.7	0.0
	2.4nm,1.0s,baz=68,slow=11,SNR=2.5						

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*ISCJB **02** 22:57:48.9±0.7, 2°46N±0°07×98°92E±0°07, h152km±6km, mb3.5/3, Error ellipse: s-maj=12.3km s-min=9.7km az=148.4*
*IDC **02** 22:57:49.0±2.6, 2°40N×98°44E, h137km±73km, mb3.4/3, mb1 3.4/4, mb1mx3.0/31, mbtmp3.7/4, Error ellipse: s-maj=319.5km s-min=59.7km az=99.0*
*DJA **02** 22:57:51.7±1.0, 2°N±4°×9°9E±°, h125km±10km, M3.0/6, MLv3.0/6*
ISC 02 22:57:49.8±1.0, 2°45N±0°07×98°94E±0°08, h148km±8km, n10, σ0°80/15, mb3.6/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.34 357**		P	Pn	22 58 10.4	0.0
	44nm,0.3s,baz=315,slow=2.9,SNR=94						
PSI				S	Sn	22 58 25.8	-0.3
	baz=99,slow=17,SNR=3.6						
KCSI	**Kotacane, Aceh**	**1.58 312**		P	Pn	22 58 20.7	+0.7
KCSI				S	Sn	22 58 42.4	-0.8
MNSI	**Mandailing Nat**	**1.77 159**		P	Pn	22 58 22.5	+0.4
MNSI				S	Sn	22 58 46.9	0.0
GSI	**Gunungsitoli**	**1.78 230**		P	Pn	22 58 22.5	+0.2
GSI				S	Sn	22 58 46.9	-0.3
SNSI	**Sinabang, Aceh**	**2.61 269**		P	Pn	22 58 33.4	+1.2
SNSI				S	Sn	22 59 03.9	-1.0
MLSI	**Meulaboh, Aceh**	**3.11 305**		P	Pn	22 58 39.0	+0.5
CMAR	**Chiang Mai Arr**	**15.90 360**		P	Pn	23 01 27.0	+1.5
	0.4nm,0.3s,baz=199,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**46.48 344**		P	P	23 06 01.7	-0.4
	0.3nm,0.4s,baz=158,slow=9.2,SNR=9.4						
ZALV	**Zalesovo Beam**	**52.63 350**		P	P	23 06 48.0	-0.3
	0.6nm,0.3s,baz=170,slow=6.7,SNR=3.2						
FINES	**FINESS Array B**	**79.70 332**		P	P	23 09 40.1	-0.7
	0.9nm,0.8s,baz=96,slow=8.5,SNR=3.7						

IDC 02 23:06:50.9±1.9, 5°88S×123°44E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.3/26, mbtmp3.3/3, ML5.7/1, Error ellipse: s-maj=75.8km s-min=27.2km az=48.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.77 283**		Pn	Pn	23 07 49.2	-1.2
	0.7nm,0.3s,baz=121,slow=12,SNR=2.9						
KAPI				Sn	Sn	23 08 29.0	-6.5
	3.8nm,0.3s,baz=150,slow=20,SNR=3.9						
WRA	**Warramunga Arr**	**17.54 144**		P	Pn	23 10 56.1	-1.0
	26nm,0.3s,baz=322,slow=13,SNR=1.0						
ASAR	**Alice Springs**	**20.35 151**		P	P	23 11 29.7	+0.6
	0.3nm,0.3s,baz=331,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**63.85 330**		P	P	23 17 25.7	+0.3
	0.4nm,0.7s,baz=140,slow=4.9,SNR=3.1						
ANKE	**Ethiopia-Afar**	**84.80 280**	*i* P		P	23 19 28.2	-0.3

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*MOS **02** 23:30:52.8±1.2, 50°17N×156°72E, h107km, mb3.8/1, Error ellipse: s-maj=26.5km s-min=5.0km az=77.9*
*KRSC **02** 23:30:53.8±1.9, 50°23N×157°13E, h81km±27km, ML4.2*
*ISCJB **02** 23:30:54.1±1.1, 50°19N±0°09×157°1E±0°2, h85km±14km, Error ellipse: s-maj=21.6km s-min=7.6km az=42.2*
*IDC **02** 23:30:56.8±7.3, 50°44N×156°35E, h111km±45km, mb3.3/3, mb1 3.6/4, mb1mx3.0/57, mbtmp3.7/4, Error ellipse: s-maj=89.9km s-min=28.7km az=176.0*
ISC 02 23:30:52.4±2.0, 50°1N±0°1×157°08E±0°09, h86km±13km, n57, σ1°54/79, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.89 316**		*eP*	Pn	23 31 11.4	+0.9
SKR				*eS*	Sn	23 31 23.5	-0.5
SKR	**Severo-Kuril's**	**0.89 316**		PN	Pn	23 31 11.4	+0.9
SKR				S	Sn	23 31 23.5	-0.5
ALID	**Alaid**	**1.28 311**		*eP*	Pn	23 31 15.9	+0.6
ALID				S	Sn	23 31 31.9	-0.6
ALID	**Alaid**	**1.28 311**		PN	Pn	23 31 15.9	+0.6
ALID				S	Sn	23 31 31.9	-0.6
PAU	**Pauzhetka**	**1.43 353**		*eP*	Pn	23 31 17.9	+0.9
PAU				*eS*	Sn	23 31 34.9	-0.8
PAU	**Pauzhetka**	**1.43 353**		PN	Pn	23 31 17.9	+0.9
PAU				S	Sn	23 31 34.9	-0.8
KDTR	**Khodutka, Kamc**	**1.87 19**		*eP*	Pn	23 31 23.5	+0.8
KDTR				*eS*	Sn	23 31 44.5	-1.3
KDTR	**Khodutka, Kamc**	**1.87 19**		PN	Pn	23 31 23.5	+0.8
KDTR				S	Sn	23 31 44.5	-1.3
ASAK	**Asacha**	**2.40 12**		*eP*	Pn	23 31 30.8	+1.1
ASAK				*eS*	Sn	23 31 58.8	+0.5
ASAK	**Asacha**	**2.40 12**		PN	Pn	23 31 30.8	+1.1
ASAK				S	Sn	23 31 58.8	+0.5
MTVR	**Mutnovka**	**2.54 15**		*eP*	Pn	23 31 32.9	+1.2
MTVR				*eS*	Sn	23 32 00.8	-1.0
MTVR	**Mutnovka**	**2.54 15**		PN	Pn	23 31 32.9	+1.2
MTVR				S	Sn	23 32 00.8	-1.0
RUS	**Russkaya**	**2.55 20**		*eP*	Pn	23 31 32.2	+0.5
RUS				*eS*	Sn	23 31 59.9	-2.0
RUS	**Russkaya**	**2.55 20**		PN	Pn	23 31 32.2	+0.5
RUS				S	Sn	23 31 59.9	-2.0
KRMR	**Karymshinskiy**	**2.86 13**		*eP*	Pn	23 31 37.2	+1.3
KRMR				*eS*	Sn	23 32 10.0	+0.6
KRMR	**Karymshinskiy**	**2.86 13**		PN	Pn	23 31 37.2	+1.3
KRMR				S	Sn	23 32 10.0	+0.6
APC	**Apacha**	**2.88 1**		*eP*	Pn	23 31 36.9	+0.7
APC	**Apacha**	**2.88 1**		PN	Pn	23 31 36.9	+0.7
PETK	**Petropavlovsk-**	**3.09 7**		P	Pn	23 31 40.1	+1.1
	8.1nm,0.3s,baz=179,slow=13,SNR=98						
PET	**Petropavlovsk**	**3.14 18**		*eP*	Pn	23 31 40.4	+0.8
PET				*eS*	Sn	23 32 15.2	-0.8
PET	**Petropavlovsk**	**3.14 18**		⇑*i*PN	Pn	23 31 40.6	+1.0
PET				*eS*	Sn	23 32 15.0	-1.0
PET				pmax	pmax		
	comp=Z,79nm,0.5s						
PET				smax	smax		
	comp=E,55nm,0.5s						
PET				smax	smax		
	comp=N,105nm,0.5s						
DALK	**Dalny**	**3.17 19**		*eP*	Pn	23 31 41.1	+1.1
DALK				*eS*	Sn	23 32 15.6	-1.1
DALK	**Dalny**	**3.17 19**		PN	Pn	23 31 41.1	+1.1
DALK				S	Sn	23 32 15.6	-1.1
UGLR	**Uglovaya**	**3.35 18**		*eP*	Pn	23 31 44.3	+1.8
UGLR	**Uglovaya**	**3.35 18**		PN	Pn	23 31 44.3	+1.8
AVH	**Avacha**	**3.38 17**		*eP*	Pn	23 31 45.2	+2.2
AVH	**Avacha**	**3.38 17**		PN	Pn	23 31 45.2	+2.2
KOK	**Koryaka**	**3.39 16**		*eP*	Pn	23 31 45.3	+2.2
KOK	**Koryaka**	**3.39 16**		PN	Pn	23 31 45.3	+2.2
SMAR	**Somma**	**3.39 18**		*eP*	Pn	23 31 44.7	+1.4
SMAR	**Somma**	**3.39 18**		PN	Pn	23 31 44.7	+1.4
KRER	**Koryakskii**	**3.42 17**		*eP*	Pn	23 31 45.8	+2.1
KRER				*eS*	Sn	23 32 23.8	+0.6
KRER	**Koryakskii**	**3.42 17**		PN	Pn	23 31 45.8	+2.1
KRER				S	Sn	23 32 23.8	+0.6
SDLR	**Sedlovina**	**3.42 18**		*eP*	Pn	23 31 44.7	+1.1
SDLR				*eS*	Sn	23 32 22.5	-0.7
SDLR	**Sedlovina**	**3.42 18**		PN	Pn	23 31 44.7	+1.1
SDLR				S	Sn	23 32 22.5	-0.7
NLC	**Nalytchevo**	**3.43 23**		*eP*	Pn	23 31 43.3	-0.3
NLC				*eS*	Sn	23 32 20.0	-3.1
NLC	**Nalytchevo**	**3.43 23**		PN	Pn	23 31 43.3	-0.3
NLC				S	Sn	23 32 20.0	-3.1
KRX	**Arik**	**3.46 16**		*eP*	Pn	23 31 45.9	+1.8
KRX	**Arik**	**3.46 16**		PN	Pn	23 31 45.9	+1.8
SPN	**Mys Shipunski**	**3.56 30**		*eP*	Pn	23 31 46.4	+1.0
SPN				*eS*	Sn	23 32 23.5	-2.8
SPN	**Mys Shipunski**	**3.56 30**		PN	Pn	23 31 46.4	+1.0
SPN				S	Sn	23 32 23.5	-2.8
GNL	**Ganaly**	**3.69 8**		*eP*	Pn	23 31 48.6	+1.4
GNL	**Ganaly**	**3.69 8**		PN	Pn	23 31 48.6	+1.4
TUMR	**Tumrok**	**5.57 18**		*eP*	Pn	23 32 15.9	+3.2
TUMR	**Tumrok**	**5.57 18**		PN	Pn	23 32 15.9	+3.2
KBTR	**Krutoberegovo**	**7.07 27**		*eP*	Pn	23 32 33.1	+0.1
KBTR	**Krutoberegovo**	**7.07 27**		PN	Pn	23 32 33.1	+0.1
H11N2	**WAKE ISLAND Hy 31.24 162**			T	T	00 10 58.1	
	baz=348,slow=76,SNR=9.3						
H11N1	**WAKE ISLAND Hy 31.26 162**			T	T	00 10 59.5	
	baz=348,slow=76,SNR=8.7						
H11N3	**WAKE ISLAND Hy 31.26 162**			T	T	00 10 59.4	
	baz=348,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy 32.40 163**			T	T	00 12 23.0	
	baz=348,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy 32.41 163**			T	T	00 12 23.0	
	baz=348,slow=76,SNR=49						
H11S2	**WAKE ISLAND Hy 32.41 163**			T	T	00 12 23.6	
	baz=348,slow=76,SNR=21						
INK	**Inuvik**	**37.44 35**		P	P	23 37 58.5	+1.8
	comp=N,1.0nm,0.4s,baz=289,slow=9.7,SNR=2.8						
MKAR	**Makanchi Array**	**47.81 297**		P	P	23 39 18.2	-2.7
	comp=N,0.4nm,0.4s,baz=55,slow=6.7,SNR=11						
ARCES	**ARCESS Array B**	**55.59 341**		P	P	23 40 16.2	-2.2
	comp=N,9.9nm,0.4s,baz=45,slow=7.8,SNR=3.5						
TXAR	**Lajitas Array**	**73.61 64**		P	P	23 42 19.2	+2.8
	comp=N,0.2nm,0.5s,baz=304,slow=6.4,SNR=2.6						

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*MAN **02** 23:31:01.6, 7°26N×124°82E, h0km, MS3.8*
MAN INTENSITY II - MATALAM NORTH COTABATO.
*ISCJB **02** 23:31:01.9±0.8, 7°24N±0°02×124°84E±0°02, h10km±5km, mb4.5/38, MS3.7/30, Error ellipse: s-maj=4.2km s-min=3.7km az=177.7*
*IDC **02** 23:31:01.1±0.6, 7°22N×124°82E, h0km, mb4.1/16, mb1 4.2/17, mb1mx4.0/50, mbtmp4.1/17, ML4.7/1, MS3.7/27, Ms1 3.7/27, ms1mx3.6/40, Error ellipse: s-maj=15.5km s-min=10.9km az=53.0*
*BJI **02** 23:31:03.5±0.0, 7°30N×124°85E, h14km, mb4.6/33, mB4.8/22, Ms4.1/18, Ms7 3.9/18*
*NEIC **02** 23:31:04.9±2.8, 7°16N×124°94E, h21km±22km, mb4.6/12, Error ellipse: s-maj=22.7km s-min=12.4km az=86.0*
NEIC Felt [II PIVS] at Matalam.
*DJA **02** 23:31:05.2±0.5, 7°N±4°×12°5E±°, h12km±4km, M4.9/19, mB5.4/7, mb4.8/19, MLv5.0/7, Mw(mB)4.9/7*
ISC 02 23:31:02.5±1.1, 7°24N±0°03×124°82E±0°03, h2km±7km, n97, σ2°05/98, mb4.4/38, MS3.8/30, 4C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.56 268**		⇓*i*P	Pg	23 31 13.8	+0.4
CTBH				*i* S	Sb	23 31 23.0	-0.6
BUKP	**Musuan**	**0.68 21**		*eP*	Pg	23 31 14.3	-1.3
BUKP				*eS*	Sg	23 31 24.5	0.0
DMPH	**Davao City--Mi**	**0.71 103**		⇑*eP*	Pg	23 31 15.1	-1.0
DMPH				*eS*	Sb	23 31 26.9	-0.7
SKMP	**Bagumbayan, Su**	**0.77 201**		*eP*	Pg	23 31 16.9	-0.3
SKMP				*eS*	Sb	23 31 29.1	-0.3
DAV	**Davao City (W)**	**0.78 103**		Pg	Pg	23 31 17.3	-0.2
	1μm,0.3s,baz=293,slow=2.6,SNR=266						
DAV	**Davao City (W)**	**0.78 103**		*e*Pg	Pg	23 31 17.5	0.0
CGP	**Cagayan de Oro**	**1.21 354**		⇑*i*P	Pg	23 31 24.2	-1.6
CGP				*i* S	Sg	23 31 38.0	-3.6
DDMP	**Don Marcelino,**	**1.44 142**		*eP*	Pn	23 31 28.3	-1.3
DDMP				*eS*	Sg	23 31 49.1	+0.3
MATI	**Mati**	**1.46 101**		*eP*	Pn	23 31 27.9	-2.0
MATI				*eS*	Sg	23 31 54.2	+4.6
PAGZ	**Pagadian**	**1.54 293**		*eP*	Pn	23 31 29.4	-1.6
BIPH	**Bislig**	**1.80 58**		⇓*i*P	Pn	23 31 34.1	-0.5
BIPH				*i* S	Sn	23 31 57.9	0.0
BUTP	**Butuan**	**1.89 25**		*eP*	Pn	23 31 35.5	-0.4
BUTP				*eS*	Sg	23 32 07.8	+4.3
SNPH	**Sibulan**	**2.61 323**		⇓*i*P	Pn	23 31 47.5	+1.7
SNPH				*i* S	Sg	23 32 25.2	-1.2
ZCP	**Zamboanga City**	**2.74 264**		⇓*i*P	Pn	23 31 46.7	-0.8
ZCP				*i* S	Sn	23 32 21.7	+0.6
MSLP	**Maasin**	**2.88 1**		*eP*	Pn	23 31 48.4	-1.0
LLP	**Lapu-Lapu**	**3.17 345**		*eP*	Pn	23 31 52.6	-0.8
LLP				*eS*	Sn	23 32 34.4	+2.6
SGSI	**Sangihe**	**3.60 169**		P	Pn	23 31 59.3	-0.1
PLP	**Palo**	**3.90 2**		⇑*e*P	Pn	23 32 03.5	0.0
CNP	**Catarman**	**5.24 358**		*eP*	Pn	23 32 23.4	+1.5
KMSI	**Cibinong**	**6.67 187**		P	Pn	23 32 45.4	+3.8
	166nm,0.4s						
TNTI	**Ternate**	**6.91 158**		P	Pn	23 32 47.0	+2.1
MRSI	**Marisa**	**7.30 203**		P	Pn	23 32 48.9	-1.4
	74nm,0.7s,634nm						
MRSI				S	Sn	23 34 08.4	-5.4
	74nm,0.7s,634nm						
MPSI	**Mapaga**	**8.43 216**		P	Pb	23 33 28.2	-1.1
LUWI	**Luwuk**	**8.48 194**		*e*Pn	Pn	23 33 06.2	-0.2
LUWI	**Luwuk**	**8.48 194**		P	Pn	23 33 07.9	+1.5
	315nm,0.9s,5μm						
TTSI	**Tana Toraja**	**11.37 206**		P	Pn	23 33 45.8	-0.2
SPSI	**Sidrap Palu**	**12.22 204**		P	Pn	23 34 00.1	+2.4
KAPI	**Kappang**	**13.18 203**		LR	LR	23 39 24.6	
	comp=Z,496nm,20.8s,baz=44,slow=38						
SOEI	**Soe**	**16.89 182**		P	Pn	23 34 59.3	-1.1
SOEI				pP	Pn	23 35 04.5	+4.1
BATI	**Baumata**	**17.37 184**		P	Pn	23 35 04.5	-1.8
	2.4nm,0.3s,baz=329,slow=12,SNR=3.8						
BATI				LR	LR	23 41 38.7	
	comp=Z,260nm,21.1s,baz=34,slow=37						
JAY	**Jayapura**	**18.58 121**		LR	LR	23 40 59.7	
	comp=Z,271nm,21.8s,baz=282,slow=32						
QIZ	**Qiongzhong**	**18.68 310**		P	P	23 35 20.6	-1.6
QIZ				S	Sn	23 38 51.5	-0.5
QIZ				LR	LR		
	comp=N,410nm,15.9s						
QIZ				LR	LR		
	comp=E,330nm,17.9s						
QIZ				LR	LR		
	comp=Z,520nm,17.4s						
GUMO	**Guam**	**20.70 71**		LR	LR	23 44 08.7	
	comp=Z,34nm,20.1s,baz=253,slow=38						
PPBI	**Pangkal Pinang**	**20.85 244**		P	P	23 35 45.4	-0.4
PANO	**Nakornpanom**	**22.04 298**		P	P	23 36 00.8	+2.1
SKNT	**Sakolnakorn**	**22.53 297**		P	P	23 36 03.4	-0.5
	16nm,0.8s						
KHON	**Khomkaen**	**23.33 295**		P	P	23 36 17.6	+5.4
MDSI	**Maura Dua**	**23.66 241**		P	P	23 36 15.8	+0.2
CHAI	**Chaiyaphum**	**23.94 293**		P	P	23 36 20.6	+2.3
	21μm,1.0s						
LWLI	**Liwa**	**24.03 240**		P	P	23 36 22.8	+3.6
PBKT	**Sadao Pong**	**25.08 294**		P	P	23 36 33.1	+4.4
FITZ	**Fitzroy Crossi**	**25.19 178**		P	P	23 36 27.5	-2.1
	9.4nm,0.8s,baz=0.7,slow=4.4,SNR=11						
FITZ				LR	LR	23 45 52.4	
	comp=Z,61nm,21.7s,baz=12,slow=35						
FITZ	**Fitzroy Crossi**	**25.19 178**		*eP*	P	23 36 28.1	-1.4
NJ2	**Nanjing**	**25.30 348**		*eP*	P	23 36 32.9	+2.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
PSI	**Prapat**	**26.16 262**		P	P	23 36 39.0	+0.3
	3.5nm,0.5s,baz=0.0,slow=4.0,SNR=3.5						
PSI				LR	LR	23 47 34.6	
	comp=Z,144nm,20.2s,baz=73,slow=38						
JNU	**Nakatsue**	**26.36 12**		LR	LR	23 45 58.2	
	comp=Z,184nm,21.3s,baz=196,slow=34						
UMPA	**Umpang Tak**	**26.90 292**		P	P	23 36 51.4	+6.2
CMAR	**Chiang Mai Arr**	**27.53 296**		P	P	23 36 50.8	-0.1
	0.8nm,0.8s,baz=115,slow=8.0,SNR=3.9						
CMAR				LR	LR	23 48 30.5	
	comp=Z,237nm,19.3s,baz=114,slow=38						
KMI	**Kunming**	**27.59 313**		P	P	23 36 51.7	+0.1
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				LR	LR		
	comp=N,220nm,15.3s						
KMI				LR	LR		
	comp=E,280nm,16.4s						
KMI				LR	LR		
	comp=Z,340nm,17.5s						
PMG	**Port Moresby**	**27.73 126**		LR	LR	23 49 19.6	
	comp=Z,130nm,18.1s,baz=308,slow=40						
WRA	**Warramunga Arr**	**28.59 161**		P	P	23 36 57.6	-2.7
	111nm,0.3s,baz=336,slow=10.0,SNR=2.0						
JHJ	**Hachijo jima 2**	**29.26 26**		LR	LR	23 48 25.7	
	comp=Z,200nm,18.7s,baz=244,slow=36						
KSRS	**Korea Array**	**30.21 5**		LR	LR	23 49 33.8	
	comp=Z,120nm,20.6s,baz=190,slow=37						
XAN	**Xi'an**	**30.44 333**		P	P	23 37 20.4	+3.8
XAN				pP	sP	23 37 27.8	+10
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				LR	LR		
	comp=N,190nm,20.6s						
XAN				LR	LR		
	comp=E,260nm,20.6s						
XAN				LR	LR		
	comp=Z,240nm,19.5s						
MJAR	**Matsushiro Arr**	**31.63 21**		LR	LR	23 48 41.4	
	comp=Z,184nm,21.8s,baz=190,slow=34						
ASAR	**Alice Springs**	**31.98 164**		P	P	23 37 28.1	-2.2
	1.8nm,0.5s,baz=343,slow=8.1,SNR=11						
LZH	**Lanzhou**	**34.53 329**		*eP*	P	23 37 54.0	+1.4
LZH				pP	sP	23 37 57.5	+3.9
LZH				sP	pP	23 38 01.0	+7.7
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,4.8s						
LZH				LR	LR		
	comp=N,170nm,15.7s						
LZH				LR	LR		
	comp=E,160nm,15.3s						
LZH				LR	LR		
	comp=Z,230nm,15.7s						
HHC	**Hu-ho-hao-te**	**35.49 343**		*e*P	P	23 38 01.0	+0.2
HHC				PP	PP	23 39 21.4	+0.1
HHC				S	S	23 43 35.8	-1.2
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,6.2s						
HHC				LR	LR		
	comp=N,230nm,15.7s						
HHC				LR	LR		
	comp=E,440nm,18.1s						
HHC				LR	LR		
	comp=Z,860nm,19.6s						
SHL	**Shillong**	**36.31 304**		*e*P	P	23 38 09.5	+1.5
USRK	**Ussuriysk Ar.**	**37.35 9**		P	P	23 38 13.6	-2.7
	2.6nm,0.9s,baz=190,slow=5.3,SNR=5.3						
USRK				LR	LR	23 52 24.9	
	comp=Z,122nm,21.5s,baz=173,slow=34						
GTA	**Gaotai**	**39.13 329**		P	P	23 38 31.1	-0.5
GTA				pP	sP	23 38 35.0	+2.3
GTA				sP	pP	23 38 37.1	+4.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,55nm,5.3s						
GTA				LR	LR		
	comp=N,150nm,18.6s						
GTA				LR	LR		
	comp=E,160nm,18.2s						
GTA				LR	LR		
	comp=Z,240nm,17.9s						
BBOO	**Buckleboo**	**41.24 166**		*e*P	P	23 38 47.8	-1.2
	15nm,0.8s						
STKA	**Stephens Creek**	**42.07 158**		P	P	23 38 54.6	-1.2
	4.9nm,0.6s,baz=335,slow=7.6,SNR=12						
STKA	**Stephens Creek**	**42.07 158**		*e*P	P	23 38 53.0	-2.9
	2.5nm,0.9s						
KLR	**Kul'dur**	**42.26 7**		P	P	23 38 54.6	-2.6
	1.2nm,0.8s,baz=232,slow=6.1,SNR=3.7						
ULN	**Ulaanbaatar**	**43.22 343**		*e*P	P	23 39 04.4	-0.8
	8.2nm,1.2s						
SONM	**Songino Array**	**43.39 342**		P	P	23 39 05.5	-1.1
	1.7nm,0.8s,baz=161,slow=9.2,SNR=2.4						
SONM				LR	LR	23 58 22.6	
	comp=Z,221nm,21.3s,baz=101,slow=38						
WMQ	**Urumqi**	**48.78 324**		*e*P	P	23 39 50.5	+1.4
WMQ				pP	sP	23 39 55.0	+

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
ABKAR	**Akbulak array** 3.7nm,1.2s	**68.25**	**320**	*eP*	**P**	**23 42 06.3**	**+1.5**
KBZ	**Khabaz** comp=Z,26nm,18.4s,baz=91,slow=40	**79.20**	**313**	LR	LR	00 24 03.1	
SIRT	**Sirnak** 33nm,1.0s	**79.60**	**307**	*eP*	**P**	**23 43 13.7**	**+2.0**
ILAR	**Eielson Array** 0.5nm,0.7s,baz=244,slow=5.9,SNR=5.3	**82.78**	**26**	P	**P**	**23 43 25.7**	**-2.2**
DOT	**Dot Lake** 8.8nm,1.3s	**84.07**	**27**	*eP*	**P**	**23 43 34.9**	**+0.3**
CTGM	**Chitina Glacie** 6.9nm,0.8s	**85.60**	**29**	*eP*	**P**	**23 43 42.0**	**-0.6**
BRTR	**Keskin Array B** comp=Z,15nm,18.9s,baz=86,slow=40	**86.33**	**309**	LR	LR	00 28 52.3	
VNDA	**Vanda** 0.5nm,0.9s,baz=299,slow=6.8,SNR=4.4	**87.13**	**172**	P	**P**	**23 43 49.7**	**+0.2**
KMBO	**Kilima Mbogo** comp=Z,36nm,20.3s,baz=90,slow=33	**87.72**	**269**	LR	LR	00 19 19.2	
FINES	**FINESS Array B** comp=Z,74nm,20.6s,baz=62,slow=38	**87.86**	**332**	LR	LR	00 25 55.7	
NOA	**NORSAR Array B** comp=Z,64nm,21.2s,baz=60,slow=37	**94.81**	**333**	LR	LR	00 29 47.6	
SYO	**Syowa Base**	**94.99**	**201⇑**	*eP*	**P**	**23 44 29.3**	**+3.1**
GERES	**GERESS Array B** comp=Z,27nm,19.6s,baz=61,slow=37	**98.17**	**321**	LR	LR	00 31 01.2	

*ISCJB **02** 23:31:42.3±0.3,55°.18N±0°.08×162°.16W±0°.08, h111km±4km, mb3.7/10, Error ellipse: s-maj=14.6km s-min=3.2km az=151.1*
*IDC **02** 23:31:42.8±5.2,55°.34N×162°.42W, h86km±44km, mb3.4/9, mb1 3.6/11, mb1mx3.4/60, mbtmp3.7/11, Error ellipse: s-maj=36.3km s-min=18.7km az=179.0*
*NEIC **02** 23:31:44.8±0.0,54°.87N×161°.95W, h91km, ML3.5(AEIC), After AEIC.*

ISC 02 23:31:43.3±0.7,55°.1N±0°.1×162°.15W±0°.06, h106km±6km, n75, σ1°.43/83, mb3.6/10, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRIA	**Deer Island**	**0.12**	**214**	*e*Pn	**Pn**	**23 31 57.4**	**-0.7**
DOL	**Dolgoi Island**	**0.18**	**63**	*e*Pn	**Pn**	**23 31 57.7**	**-0.6**
PS4A	**Pavlof South-4**	**0.33**	**30**	*e*Pn	**Pn**	**23 31 58.7**	**-0.1**
PVV	**Pavlof Volcano**	**0.37**	**33**	*e*Pn	**Pn**	**23 31 58.9**	**0.0**
PVV				*e*Sn	**Sn**	**23 32 10.5**	**-0.2**
FALS	**False Pass**	**0.76**	**255**	*e*Pn	**Pn**	**23 32 01.8**	**0.0**
FALS				*e*Sn	**Sn**	**23 32 15.7**	**0.0**
SDPT	**Sand Point**	**1.00**	**73**	*e*Pn	**Pn**	**23 32 03.9**	**-0.2**
SDPT				*e*Sn	**Sn**	**23 32 18.8**	**-1.1**
WEBT	**Westdahl Beart**	**1.58**	**254**	*e*Pn	**Pn**	**23 32 11.9**	**+1.0**
WESP	**Westdahl Peak**	**1.60**	**250**	*e*Pn	**Pn**	**23 32 12.2**	**+1.0**
WESP				*e*Sn	**Sn**	**23 32 33.8**	**+1.5**
VNWF	**Veniaminof 8**	**1.83**	**52**	*e*Pn	**Pn**	**23 32 14.8**	**+0.8**
VNHG	**Veniaminof 1**	**2.05**	**54**	*e*Pn	**Pn**	**23 32 17.4**	**+0.6**
AKSA	**Akutan Strait**	**2.27**	**247**	*e*Pn	**Pn**	**23 32 20.4**	**+0.9**
AKSA				*e*Sn	**Sn**	**23 32 48.1**	**+0.9**
AKUT	**Akutan**	**2.31**	**248**	*e*Pn	**Pn**	**23 32 20.5**	**+0.5**
AKUT				*e*Sn	**Sn**	**23 32 43.2**	**-5.0**
AHB	**Akutan Harbor**	**2.34**	**247**	*e*Pn	**Pn**	**23 32 21.1**	**+0.6**
ZRO	**Akutan Zero**	**2.43**	**248**	*e*Pn	**Pn**	**23 32 22.2**	**+0.5**
AKRB	**Akutan Reef Bi**	**2.47**	**249**	*e*Pn	**Pn**	**23 32 22.8**	**+0.7**
UNV	**Unalaska Valle**	**2.82**	**246**	*e*Pn	**Pn**	**23 32 26.8**	**0.0**
AZAC	**Aniakchak**	**2.86**	**49**	*e*Pn	**Pn**	**23 32 28.1**	**+0.7**
ANNW	**Aniakchak Nort**	**2.92**	**48**	*e*Pn	**Pn**	**23 32 29.2**	**+1.1**
MSW	**Makushin Switc**	**2.94**	**249**	*e*Pn	**Pn**	**23 32 28.6**	**+0.2**
MSW				*e*Sn	**Sn**	**23 33 02.7**	**-0.4**
MREP	**Makushin Rep't**	**2.97**	**247**	*e*Pn	**Pn**	**23 32 29.1**	**+0.3**
MCIR	**Makushin Cirqu**	**2.98**	**250**	*e*Pn	**Pn**	**23 32 29.6**	**+0.6**
OKTU	**Okmok Mt. Tuli**	**3.85**	**246**	*e*Pn	**Pn**	**23 32 41.1**	**+0.6**
OKAK	**Okmok**	**3.93**	**250**	*e*Pn	**Pn**	**23 32 43.2**	**+1.6**
NIKH	**Nikolski High**	**4.48**	**245**	*e*Pn	**Pn**	**23 32 48.0**	**-0.9**
SII	**Sitkinak Islan**	**4.73**	**68**	*e*Pn	**Pn**	**23 32 51.4**	**-1.0**
KELA	**Mount Kelaz**	**4.88**	**44**	*e*Pn	**Pn**	**23 32 55.5**	**+1.0**
KAHC	**Katmai Hardscr**	**5.31**	**45**	*e*Pn	**Pn**	**23 33 01.4**	**+1.0**
OHAK	**Old Harbor**	**5.40**	**63**	*e*Pn	**Pn**	**23 33 00.1**	**-1.3**
KDAK	**Kodiak Island**	**5.96**	**59**	*e*Pn	**Pn**	**23 33 07.2**	**-1.8**
RDWB	**Redoubt West**	**7.37**	**39**	*e*Pn	**Pn**	**23 33 28.8**	**+0.6**
RSO	**Redoubt South**	**7.38**	**39**	*e*Pn	**Pn**	**23 33 25.4**	**-3.0**
CNPM	**China Poot**	**7.41**	**48**	*e*Pn	**Pn**	**23 33 27.9**	**-0.7**
BRLK	**Bradley Lake**	**7.69**	**48**	*e*Pn	**Pn**	**23 33 30.9**	**-1.5**
SPCP	**Crater Peak Br**	**8.15**	**36**	*e*Pn	**Pn**	**23 33 40.8**	**+2.0**
SLKM	**Skilak Lake**	**8.38**	**45**	*e*Pn	**Pn**	**23 33 42.0**	**+0.2**
SEW	**Seward**	**8.48**	**48**	*e*Pn	**Pn**	**23 33 42.3**	**-0.8**
SUA	**Susitna One**	**8.78**	**38**	*e*Pn	**Pn**	**23 33 47.2**	**-0.1**
GSTD	**Great Sitkin T**	**8.86**	**256**	*e*Pn	**Pn**	**23 33 48.8**	**+0.4**
RC01	**Rabbit Creek A**	**8.92**	**42**	*e*Pn	**Pn**	**23 33 48.7**	**-0.4**
ADK	**Adak**	**9.24**	**256**	*e*Pn	**Pn**	**23 33 53.1**	**-0.4**
PMR	**Palmer**	**9.46**	**41**	*e*Pn	**Pn**	**23 33 54.7**	**-1.6**
KNK	**Knik Glacier**	**9.61**	**43**	*e*Pn	**Pn**	**23 33 57.1**	**-1.3**
MID	**Middleton Isla**	**9.61**	**57**	*e*Pn	**Pn**	**23 33 56.4**	**-2.1**
GHO	**Glory Hole Cre**	**9.64**	**40**	*e*Pn	**Pn**	**23 33 56.5**	**-2.5**
ANM	**Nome**	**9.67**	**352**	*e*Pn	**Pn**	**23 33 57.6**	**-1.6**
CAST	**Castle Rocks**	**9.82**	**27**	*e*Pn	**Pn**	**23 34 00.1**	**-1.2**
GLI	**Glacier Island**	**9.88**	**48**	*e*Pn	**Pn**	**23 33 59.7**	**-2.4**
SML	**Sawmill**	**9.89**	**41**	*e*Pn	**Pn**	**23 34 00.2**	**-2.1**
SCM	**Sheep Creek Mo**	**10.29**	**43**	*e*Pn	**Pn**	**23 34 05.4**	**-2.4**
EYAK	**Cordova Ski Ar**	**10.31**	**51**	*e*Pn	**Pn**	**23 34 05.7**	**-2.3**
HMT	**Hamilton**	**10.91**	**54**	*e*Pn	**Pn**	**23 34 14.7**	**-1.4**
DHY	**Denali Highway**	**11.03**	**37**	*e*Pn	**Pn**	**23 34 15.1**	**-2.8**
MLY	**Manley**	**11.48**	**25**	*e*Pn	**Pn**	**23 34 23.9**	**+0.2**
CCB	**Clear Creek Bu**	**11.97**	**31**	*e*Pn	**Pn**	**23 34 30.0**	**-0.2**
BALM	**Baldy**	**12.04**	**52**	*e*Pn	**Pn**	**23 34 30.3**	**-1.0**
MENT	**Mentasta**	**12.30**	**43**	*e*Pn	**Pn**	**23 34 33.5**	**-1.1**
ILAR	**Eielson Array** 0.3nm,0.3s,baz=221,slow=13,SNR=9.9	**12.34**	**32**	P	**Pn**	**23 34 31.5**	**-3.6**
ILB	**Eielson Array**	**12.34**	**32**	*e*Pn	**Pn**	**23 34 32.8**	**-2.3**
CTGM	**Chitina Glacie**	**12.48**	**53**	*e*Pn	**Pn**	**23 34 36.3**	**-0.8**
PCA	**Pinnacle**	**12.75**	**58**	*e*Pn	**Pn**	**23 34 40.3**	**-0.3**
COLD	**Coldfoot**	**13.46**	**20**	*e*Pn	**Pn**	**23 34 48.1**	**-1.5**
HYT	**Haines Junctio**	**14.24**	**56**	*e*Pn	**Pn**	**23 35 00.5**	**+0.5**
DAWY	**Dawson**	**14.55**	**43**	*e*Pn	**Pn**	**23 35 02.6**	**-1.2**
TOLK	**Toolik Lake Re**	**14.80**	**18**	*e*Pn	**Pn**	**23 35 09.1**	**+2.1**
INK	**Inuvik** 0.3nm,0.3s,baz=230,slow=12,SNR=5.3	**18.72**	**34**	P	**P**	**23 35 52.8**	**-0.4**
PETK	**Petropavlovsk-** 1.2nm,0.3s,baz=74,slow=13,SNR=7.0	**23.41**	**282**	P	**P**	**23 36 42.9**	**+0.4**
SEY	**Seymchan** 1.5nm,0.3s,baz=34,slow=19,SNR=4.9	**24.23**	**307**	P	**P**	**23 36 48.5**	**-1.3**
YKA	**Yellowknife Ar** 0.6nm,0.5s,baz=278,slow=9.3,SNR=3.7	**25.21**	**54**	P	**P**	**23 37 00.9**	**+2.2**
TXAR	**Lajitas Array** 0.4nm,0.5s,baz=315,slow=6.9,SNR=5.9	**48.60**	**97**	P	**P**	**23 40 18.1**	**+2.0**
TXAR				pP	**pP**	**23 40 41.8**	**+0.6**
ARCES	**ARCESS Array B** 0.2nm,0.6s,baz=312,slow=5.4,SNR=1.8	**55.58**	**357**	P	**P**	**23 41 06.9**	**-0.3**
FINES	**FINESS Array B** 0.8nm,0.5s,baz=353,slow=8.5,SNR=7.8	**63.65**	**356**	P	**P**	**23 42 02.2**	**-0.3**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=40,slow=7.1,SNR=4.6	**64.92**	**317**	P	**P**	**23 42 09.6**	**-1.6**
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=7.8,slow=5.4,SNR=3.3	**74.18**	**353**	P	**P**	**23 43 07.1**	**-0.7**
CMAR	**Chiang Mai Arr** 1.9nm,0.8s,baz=14,slow=5.9,SNR=9.8	**80.05**	**288**	P	**P**	**23 43 41.9**	**+0.7**
ESDC	**Sonseca Array** 0.2nm,0.5s,baz=349,slow=3.9,SNR=3.9	**83.80**	**17**	P	**P**	**23 44 01.4**	**+0.8**

IDC 02 23:36:12.0±2.1,33°.77S×178°.46W, h0km, mb4.7/2, mb1 4.8/3, mb1mx4.0/34, mbtmp4.6/3, ML3.8/1, Error ellipse: s-maj=65.9km s-min=33.8km az=128.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera** 2.6nm,0.3s,baz=38,slow=19,SNR=19	**5.75**	**217**	Pn	Pn	23 37 39.6	+1.1
URZ				Sn	Sn	23 38 43.5	-1.7
ASAR	**Alice Springs** 3.9nm,0.3s,baz=145,slow=20,SNR=8.7	**42.66**	**271**	P	P	23 44 10.5	0.0
ASAR				PcP	PcP	23 46 02.2	-0.4
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=126,slow=3.9,SNR=3.9	**43.95**	**276**	P	P	23 44 20.8	-0.1
FINES	**FINESS Array B** 18nm,0.3s,baz=112,slow=8.5,SNR=1.4	**148.14**	**338**	PKPbc	PKPbc	23 55 58.4	-0.5
BRTR	**Keskin Array B** 0.8nm,0.5s,baz=58,slow=3.4,SNR=8.8	**153.69**	**292**	PKPbc	PKPbc	23 56 12.3	-0.7
BRTR				PKPab	PKPab	23 56 25.6	-0.1
	0.7nm,0.8s,baz=76,slow=2.5,SNR=3.9						
	0.4nm,0.5s,baz=109,slow=3.7,SNR=4.5						

MAN 03 00:00:56.9,7°.31N×124°.67E, h1km, mb4.6, ML3.4, MS3.3, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.43**	**258⇓**	*i*P	Pb	00 01 08.7	+1.3
CTBH				*i* S	Sb	00 01 17.6	+3.2
BUKP	**Musuan**	**0.68**	**34**	*e*P	Pg	00 01 09.9	-0.1
BUKP				*e*S	Sn	00 01 25.0	0.0
SKMP	**Bagumbayan, Su**	**0.80**	**189**	*e*P	Pg	00 01 12.4	+0.2
SKMP				*e*S	Sg	00 01 23.3	+0.7
DMPH	**Davao City--Mi**	**0.86**	**105⇑**	*e*P	Pb	00 01 14.1	-0.6
DMPH				*e*S	Sg	00 01 23.5	-1.0
CGP	**Cagayan de Oro**	**1.14**	**11⇑**	*e*P	Pb	00 01 19.4	+0.1
CGP				*e*S	Sb	00 01 34.5	-0.1
PAGZ	**Pagadian**	**1.39**	**293**	*e*P	Pn	00 01 23.4	0.0
PAGZ				*e*S	Sn	00 01 43.4	+1.0

*GUC **03** 00:11:25.9±0.7,21°.11S×68°.98W, h114km±3km, ML3.5*
*SJA **03** 00:11:25.4±1.1,21°.12S×68°.96W, h121km±6km, ML2.4, MW2.9*
*ISCJB **03** 00:11:26.3±0.8,21°.13S±0°.02×69°.00W±0°.05, h120km±8km, Error ellipse: s-maj=7.6km s-min=4.1km az=174.8*

ISC 03 00:11:26.8±1.5,21°.12S±0°.03×69°.00W±0°.05, h117km±11km, n29, σ0°.49/55, 2C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.46**	**279**	*e*P	**Pn**	**00 11 43.9**	**-0.4**
PB01				*e*S	**Sn**	**00 11 57.0**	**-0.4**
PB01				IAML		00 11 57.9	
	comp=E,2μm,0.2s						
PB09	**IPOC Station P**	**0.71**	**198**	*e*P	**Pn**	**00 11 46.3**	**+0.2**
PB09				*e*S	**Sn**	**00 12 01.4**	**+0.6**
PB09	**IPOC Station P**	**0.71**	**198**	*e*P	**Pn**	**00 11 45.8**	**-0.3**
PB09				*e*S	**Sn**	**00 12 00.2**	**-0.5**
PB02	**IPOC Station P**	**0.86**	**256**	*e*P	**Pn**	**00 11 47.6**	**+0.3**
PB02				*e*S	**Sn**	**00 12 04.1**	**+1.3**
PB02	**IPOC Station P**	**0.86**	**256**	*e*P	**Pn**	**00 11 47.1**	**-0.2**
PB02				*e*S	**Sn**	**00 12 02.8**	**0.0**
PB02				IAML		00 12 04.7	
	comp=E,3μm,0.3s						
PB08	**IPOC Station P**	**0.98**	**352**	*e*P	**Pn**	**00 11 48.8**	**0.0**
PB08				*e*S	**Sn**	**00 12 05.5**	**+0.1**
PB08	**IPOC Station P**	**0.98**	**352**	*e*P	**Pn**	**00 11 48.8**	**0.0**
PB08				*e*S	**Sn**	**00 12 05.3**	**-0.1**
PB07	**IPOC Station P**	**1.02**	**234**	*e*P	**Pn**	**00 11 49.2**	**+0.2**
PB07				*e*S	**Sn**	**00 12 06.0**	**+0.2**
PB07	**IPOC Station P**	**1.02**	**234**	*e*P	**Pn**	**00 11 49.1**	**+0.1**
PB07				*e*S	**Sn**	**00 12 06.0**	**+0.2**
PB07				IAML		00 12 06.8	
	comp=N,786nm,0.1s						
PB03	**IPOC Station P**	**1.16**	**217**	*e*P	**Pn**	**00 11 50.4**	**0.0**
PB03				⇓*e*S	**Sn**	**00 12 08.2**	**-0.1**
PB03	**IPOC Station P**	**1.16**	**217⇑**	*i*P	**Pn**	**00 11 50.4**	**0.0**
PB03				*i* S	**Sn**	**00 12 08.2**	**-0.1**
PB03				IAML		00 12 08.8	
	comp=E,962nm,0.4s						
GO01	**Chusmiza**	**1.45**	**353**	*e*P	**Pn**	**00 11 53.6**	**-0.4**
GO01				*i* S	**Sn**	**00 12 14.7**	**+0.1**
PB11	**IPOC Station P**	**1.48**	**335**	*e*P	**Pn**	**00 11 53.8**	**-0.2**
PB11				*e*S	**Sn**	**00 12 14.7**	**0.0**
PB11	**IPOC Station P**	**1.48**	**335**	*e*P	**Pn**	**00 11 53.6**	**-0.4**
PB11				*e*S	**Sn**	**00 12 14.6**	**0.0**
PB11				IAML		00 12 16.6	
	comp=E,1μm,0.6s						
LVC	**Limon Verde**	**1.49**	**177**	*e*P	**Pn**	**00 11 54.2**	**-0.1**
LVC				*e*S	**Sn**	**00 12 15.1**	**-0.1**
LVC				IAML		00 12 18.1	
	comp=Z,129nm,0.2s						
LVC	**Limon Verde**	**1.49**	**177**	*e*P	**Pn**	**00 11 54.2**	**-0.1**
LVC				*i* S	**Sn**	**00 12 15.2**	**+0.1**
PB04	**IPOC Station P**	**1.61**	**221**	*e*P	**Pn**	**00 11 55.5**	**0.0**
PB04				*e*S	**Sn**	**00 12 17.5**	**0.0**
PB04	**IPOC Station P**	**1.61**	**221**	*e*P	**Pn**	**00 11 55.6**	**0.0**
PB04				*e*S	**Sn**	**00 12 17.9**	**+0.4**
PB04				IAML		00 12 19.4	
	comp=E,461nm,0.3s						
PB06	**IPOC Station P**	**1.67**	**198**	*e*P	**Pn**	**00 11 56.2**	**0.0**
PB06				*e*S	**Sn**	**00 12 18.5**	**-0.1**
PB06	**IPOC Station P**	**1.67**	**198**	*e*P	**Pn**	**00 11 56.2**	**0.0**
PB06				*e*S	**Sn**	**00 12 18.9**	**+0.4**
PB06				IAML		00 12 20.2	
	comp=E,783nm,0.3s						
PSGC	**Pisagua**	**1.84**	**325⇓**	*i*P	**Pn**	**00 11 57.5**	**-0.7**
PSGCX	**Pisagua**	**1.84**	**325**	*e*P	**Pn**	**00 11 57.8**	**-0.4**
PSGCX				*e*S	**Sn**	**00 12 22.4**	**+0.1**
MNMC	**Minye Minye**	**2.05**	**344⇓**	*i*P	**Pn**	**00 12 00.8**	**-0.2**
MNMC				*i* S	**Sn**	**00 12 27.6**	**+0.4**
MNMCX	**Minye Minye**	**2.05**	**344**	*e*P	**Pn**	**00 12 01.1**	**0.0**
MNMCX				*e*S	**Sn**	**00 12 28.4**	**+1.2**
PB05	**IPOC Station P**	**2.06**	**213**	*e*P	**Pn**	**00 12 01.0**	**0.0**
PB05				*e*S	**Sn**	**00 12 25.0**	**-2.0**
PB05	**IPOC Station P**	**2.06**	**213⇑**	*i*P	**Pn**	**00 12 00.9**	**0.0**
PB15	**IPOC Station P**	**2.13**	**192**	*e*P	**Pn**	**00 12 02.3**	**+0.4**
YJA	**Yavi**	**3.41**	**109**	*e*P	**Pn**	**00 12 18.7**	**-0.1**
YJA				IAML		00 12 23.4	
	comp=Z,3.4nm,0.7s						
YJA				*e*S	**Sn**	**00 12 57.9**	**-1.0**
HJA	**Humahuaca**	**3.92**	**123**	*e*P	**Pn**	**00 12 26.5**	**+0.9**
HJA				*e*S	**Sn**	**00 13 11.3**	**+0.2**
HJA				IAML		00 13 16.0	
	comp=Z,2.9nm,0.4s						

MAN 03 00:12:27.8,7°.30N×124°.81E, h20km, mb3.5, ML2.1, MS1.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.56**	**262⇓**	*i*P	Pb	00 12 38.9	-0.2
CTBH				*i* S	Sb	00 12 47.0	+0.4

MAN 03 00:21:22.6,7°.35N×124°.77E, h5km, mb4.3, ML3.1, MS2.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAGZ	**Pagadian**	**1.47**	**290**	*e*P	Pn	00 21 49.6	-0.1
PAGZ				*e*S	Sg	00 22 10.5	+0.7

IDC 03 01:02:49.4±4.2,47°.12N×152°.96E, h110km±33km, mb3.3/5, mb1 3.5/7, mb1mx3.2/41, mbtmp3.6/7, MS2.6/1, Ms1 2.6/1, ms1mx2.1/21, Error ellipse: s-maj=47.4km s-min=25.3km az=162.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-** 0.4nm,0.3s,baz=181,slow=11,SNR=5.8	**6.72**	**25**	P	Pn	01 04 25.2	-0.1
MA2	**Magadan** comp=Z,25nm,19.4s,baz=116,slow=38	**12.54**	**355**	LR	LR	01 10 45.0	
MJAR	**Matsushiro Arr** 0.0nm,0.3s,baz=35,slow=15,SNR=4.9	**15.22**	**231**	P	Pn	01 06 18.2	-0.1
H11N2	**WAKE ISLAND Hy** baz=340,slow=76,SNR=78	**29.60**	**153**	T	T	01 40 04.3	
H11N1	**WAKE ISLAND Hy** baz=340,slow=76,SNR=68	**29.61**	**153**	T	T	01 40 10.3	
H11N3	**WAKE ISLAND Hy** baz=340,slow=76,SNR=57	**29.62**	**153**	T	T	01 40 10.8	
H11S1	**WAKE ISLAND Hy** baz=341,slow=76,SNR=54	**30.69**	**154**	T	T	01 41 27.7	
H11S3	**WAKE ISLAND Hy** baz=341,slow=76,SNR=67	**30.70**	**154**	T	T	01 41 24.7	
H11S2	**WAKE ISLAND Hy** baz=341,slow=76,SNR=59	**30.71**	**154**	T	T	01 41 27.7	
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=76,slow=6.1,SNR=3.5	**46.67**	**297**	P	P	01 11 07.0	+0.3
YKA	**Yellowknife Ar** 0.5nm,0.6s,baz=299,slow=7.5,SNR=2.6	**50.69**	**37**	P	P	01 11 37.1	+0.1
FINES	**FINESS Array B** 0.5nm,0.6s,baz=46,slow=8.2,SNR=6.0	**63.66**	**335**	P	P	01 13 08.3	+0.1
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=37,slow=6.5,SNR=4.9	**71.18**	**326**	P	P	01 13 55.2	-0.5
TXAR	**Lajitas Array** 0.3nm,0.6s,baz=301,slow=4.1,SNR=4.7	**77.40**	**61**	P	P	01 14 32.3	0.0

*IDC **03** 01:09:03.6±1.4,2°.57N×91°.93E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.7/37, mbtmp3.9/7, ML4.8/1, Error ellipse: s-maj=50.2km s-min=26.9km az=51.0*
*NEIC **03** 01:09:05.8±2.9,2°.88N×92°.23E, h10km±4km, mb4.4/3, Error ellipse: s-maj=30.5km s-min=13.8km az=65.0*
*ISCJB **03** 01:09:07.2±1.0,2°.7N±0°.2×92°.2E±0°.1, h33km, mb4.0/7, Error ellipse: s-maj=27.6km s-min=8.4km az=31.9*

ISC 03 01:09:08.6±1.0,2°.6N±0°.2×92°.1E±0°.1, h35km, n19, σ1°.31/18, mb4.1/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**5.60**	**103**	*e*Pn	**Pn**	**01 10 30.1**	**+0.6**
GSI				*e*Sn	**Sn**	**01 11 32.3**	**-0.4**
PBA	**Port Blair**	**9.00**	**4**	*e*Pn	Pn	01 11 10.3	-5.8
MYKOM	**Kota Tinggi**	**11.75**	**94**	*e*Pn	Pn	01 11 44.0	-10
CMAR	**Chiang Mai Arr** 1.2nm,0.3s,baz=217,slow=14,SNR=4.5	**17.10**	**23**	P	**P**	**01 13 06.7**	**+0.3**
XMIS	**Christmas Isla** 120nm,1.1s	**18.73**	**134**	*e*P	**P**	**01 13 21.7**	**-2.7**
LSA	**Lhasa** 5.1nm,0.4s	**26.95**	**358**	*e*P	**P**	**01 14 44.6**	**-2.8**
MK32	**Makanchi Array**	**44.83**	**350**	*e*P	**P**	**01 17 20.1**	**+0.8**
MKAR	**Makanchi Array** 0.9nm,0.8s,baz=163,slow=6.3,SNR=6.3	**44.83**	**350**	P	**P**	**01 17 20.1**	**+0.8**
WR1	**Warramunga Arr**	**47.11**	**120**	*e*P	**P**	**01 17 39.0**	**+1.4**
WRA	**Warramunga Arr** 1.1nm,0.5s,baz=299,slow=9.2,SNR=3.6	**47.11**	**120**	P	**P**	**01 17 39.0**	**+1.4**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,baz=198,slow=8.3,SNR=2.3	**51.52**	**354**	P	**P**	**01 18 11.8**	**+1.1**
ZAA1	**Zalesovo Array**	**51.52**	**354**	*e*P	**P**	**01 18 11.8**	**+1.0**
BRTR	**Keskin Array B** 0.6nm,0.9s,baz=103,slow=9.0,SNR=4.8	**64.43**	**313**	P	**P**	**01 19 41.3**	**-0.4**
BR101	**Keskin Array S**	**64.43**	**313**	*e*P	**P**	**01 19 41.4**	**-0.4**
NRIK	**Noril'sk** 0.8nm,0.4s,baz=180,slow=5.1,SNR=2.8	**66.68**	**358**	P	**P**	**01 19 54.8**	**-0.7**
GEC2	**GERESS Array S** 2.8nm,0.8s	**80.41**	**319**	*e*P	**P**	**01 21 17.4**	**+0.6**
GERES	**GERESS Array B** 1.1nm,0.7s,baz=111,slow=5.4,SNR=6.0	**80.41**	**319**	P	**P**	**01 21 17.4**	**+0.6**
LTX	**Lajitas**	**144.81**	**24**	*e*PKPdf	**PKPdf**	**01 28 43.3**	**+0.6**
TXAR	**Lajitas Array** 0.8nm,0.8s,baz=151,slow=2.9,SNR=5.7	**144.81**	**24**	PKP	**PKPdf**	**01 28 43.3**	**+0.6**

*SJA **03** 01:13:28.1±0.5,24°.25S×67°.26W, h192km±15km, ML2.3, MW2.9*
*ISCJB **03** 01:13:29.9±1.1,24°.23S±0°.06×67°.33W±0°.04, h170km±14km, Error ellipse: s-maj=10.4km s-min=4.6km az=26.1*
*GUC **03** 01:13:31.5±0.5,24°.06S×67°.74W, h215km±8km, ML3.6*

ISC 03 01:13:28.3±2.5,24°.25S±0°.07×67°.29W±0°.05, h192km±25km, n16, σ1°.22/29, 5C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.69**	**106**	*i* P	**Pn**	**01 14 03.8**	**+0.6**
SLA				IAML		01 14 05.0	
	comp=E,23nm,0.5s						
SLA				*i* S	**S**	**01 14 29.7**	**-0.6**
HJA	**Humahuaca**	**2.01**	**59**	*i* P	**Pn**	**01 14 07.5**	**+0.7**
HJA				IAML		01 14 09.3	
	comp=Z,9.2nm,0.4s						
AZAP	**Zapla**	**2.03**	**90**	*i* P	**Pn**	**01 14 06.9**	**+0.2**
AZAP				*i* S	**S**	**01 14 36.2**	**-0.3**
AZAP				IAML		01 14 38.0	
	comp=Z,13nm,0.6s						
FSA	**Cafayete**	**2.20**	**148**	*i* P	**Pn**	**01 14 09.0**	**+0.5**
FSA				IAML		01 14 09.5	
	comp=Z,12nm,0.4s						
PB15	**IPOC Station P**	**2.26**	**297⇑**	*i*P	**Pn**	**01 14 10.7**	**+1.5**
PB15				*e*S	**S**	**01 14 40.7**	**-0.2**
PB06	**IPOC Station P**	**2.60**	**306⇑**	*i*P	**Pn**	**01 14 14.4**	**+1.3**
PB06				*i* S	**S**	**01 14 47.0**	**-0.8**
PB06				IAML		01 14 47.8	
	comp=E,286nm,0.1s						
YJA	**Yavi**	**2.63**	**39**	*i* P	**Pn**	**01 14 14.2**	**+0.5**
YJA				*i* S	**S**	**01 14 48.9**	**0.0**
YJA				IAML		01 14 51.7	
	comp=E,2.4nm,0.6s						
PB05	**IPOC Station P**	**3.02**	**297⇑**	*i*P	**Pn**	**01 14 19.0**	**+1.2**
PB05				*e*S	**S**	**01 14 54.6**	**-1.9**
PB05				IAML		01 14 56.9	
	comp=E,100nm,0.1s						
PB09	**IPOC Station P**	**3.04**	**323⇓**	*i*P	**Pn**	**01 14 20.1**	**+1.9**
PB09				*e*S	**S**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.52**	**246**	⇓*iP*	Pg	02 47 55.5	+0.6
CTBH				*i* S	Sb	02 48 04.5	-0.2
BUKP	**Musuan**	**0.55**	**37**	*eP*	Pg	02 47 55.9	+0.5
BUKP				*eS*	Sb	02 48 05.2	-0.3
DMPH	**Davao City--Mi**	**0.85**	**114**	⇑*eP*	Pn	02 48 06.2	+2.6
DMPH				*eS*	Sn	02 48 18.1	+1.5
SKMP	**Bagumbayan, Su**	**0.93**	**192**	*eP*	Pg	02 48 01.6	-1.0
SKMP				*eS*	Sg	02 48 12.3	-2.3
CGP	**Cagayan de Oro**	**1.02**	**358**	⇑*eP*	Pg	02 48 04.5	+0.2
CGP				*eS*	Sb	02 48 19.4	+0.5
PAGZ	**Pagadian**	**1.40**	**287**	*eP*	Pn	02 48 11.2	0.0
PAGZ				*eS*	Sn	02 48 33.0	+2.8

*SOME **03** 02:56:02.6, 50.°00N×81.°10E, h0km*
*NNC **03** 02:56:09.3±1.7, 49.°39N×80.°61E, h0km, mb3.1, mpv2.8,*
Error ellipse: s-maj=37.9km s-min=8.3km az=55.0
ISC 03 02:56:02.7±1.5, 50.°1N±0.°1×81.°26E±0.°09, h10km, n7, σ3°30/12, 4C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEM	**Semipalatinsk**	**0.74**	**300**	*eP*	**Pb**	**02 56 16.5**	**-1.3**
	14nm,0.2s						
SEM				*eS*	**Sn**	**02 56 28.7**	**-2.1**
	123nm,0.2s						
KURK	**Kurchatov**	**1.81**	**293**	⇓Pn	Pg	02 56 43.2	+5.7
	14nm,0.7s						
KURK				⇓Sn	**Sg**	**02 57 06.6**	**+5.6**
	39nm,0.7s						
KURBB	**Kurchatov Arra**	**1.84**	**289**	⇓Pn	Pg	02 56 43.4	+5.5
	21nm,0.5s						
KURBB				⇓Sn	**Sg**	**02 57 06.8**	**+5.1**
	33nm,0.3s						
MAKZ	**Makanchi**	**3.28**	**171**	⇓Pn	**Pn**	**02 56 52.4**	**-1.7**
	0.4nm,0.4s						
MAKZ				⇑Pg	**Pb**	**02 57 00.9**	**0.0**
	1.7nm,0.4s						
MAKZ				⇓Lg	Lg	02 57 39.9	
	6.0nm,0.5s						
MK31	**Makanchi Array**	**3.33**	**168**	⇑Pn	**Pn**	**02 56 52.9**	**-1.9**
	0.8nm,0.4s,baz=355,slow=12,SNR=79						
MK31				⇑Pg	**Pb**	**02 57 02.8**	**+1.0**
	1.2nm,0.3s,baz=359,slow=16,SNR=4.3						
MK31				⇑Lg	Lg	02 57 42.3	
	3.0nm,0.5s,baz=352,slow=32,SNR=9.7						
ZSN	**Zaisan**	**3.53**	**136**	*eP*	**Pb**	**02 57 04.6**	**-0.6**
	1.6nm,0.2s						
ZSN				*eS*	**Sb**	**02 57 51.0**	**+2.8**
	9.5nm,0.5s						
OTUK	**Ortayu**	**6.12**	**256**	⇓Pn	**Pn**	**02 57 31.4**	**-1.8**
	0.4nm,0.3s						
OTUK				⇓Sn	**Sn**	**02 58 39.4**	**-3.9**
	0.8nm,0.3s						

MAN 03 02:58:49.9, 7.°29N×124.°82E, h2km, mb4.7, ML3.6, MS3.5, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.57**	**263**	⇓*iP*	Pb	02 59 02.2	-0.4
CTBH				*i* S	Sb	02 59 11.0	-0.1
BUKP	**Musuan**	**0.64**	**23**	*eP*	Pg	02 59 02.9	+0.7
BUKP				*eS*	Sb	02 59 14.3	+1.1
DMPH	**Davao City--Mi**	**0.72**	**106**	⇓*eP*	Pg	02 59 03.0	-0.7
DMPH				*eS*	Sb	02 59 14.4	-0.9
SKMP	**Bagumbayan, Su**	**0.81**	**200**	*eP*	Pg	02 59 05.5	+0.1
SKMP				*eS*	Sb	02 59 17.1	-1.0
CGP	**Cagayan de Oro**	**1.17**	**354**	⇑*iP*	Pg	02 59 11.9	-0.3
CGP				*i* S	Sg	02 59 27.1	-0.3
PAGZ	**Pagadian**	**1.53**	**292**	*eP*	Pn	02 59 18.0	-0.2
PAGZ				*eS*	Sg	02 59 39.5	+0.5

MEX 03 03:08:30.0±0.6, 14.°64N×95.°07W, h20km±36km, MD3.9, Off coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.51**	**318**	*eP*	Pn	03 08 53.1	-2.9
HUIG				*i* S	Sn	03 09 10.1	-4.9
PCIG		**2.08**	**59**	*eP*	Pn	03 09 00.4	-3.3
PCIG				*eS*	Sn	03 09 25.7	-3.3
CMIG	**Matias Romero**	**2.45**	**4**	*iP*	Pn	03 09 06.8	-2.1
CMIG				*i* S	Sn	03 09 34.6	-3.6
TGIG		**2.84**	**41**	*eP*	Pn	03 09 11.2	-3.0
TGIG				*eS*	Sn	03 09 45.1	-2.8
CCIG	**Comitan**	**3.26**	**60**	*eP*	Pn	03 09 19.5	-0.7
CCIG				*eS*	Sn	03 10 00.1	+1.5

*NEIC **03** 03:24:42.1±3.0, 2.°94S×36.°10E, h10km±3km, mb4.5/15,*
Error ellipse: s-maj=16.8km s-min=14.1km az=152.0
NEIC Felt at Nairobi, Kenya.
*EAF **03** 03:24:43.9±2.8, 2.°61S×36.°07E, h10km±266km*
*IDC **03** 03:24:43.5±0.6, 2.°72S×36.°03E, h0km, mb4.2/18,*
mb1 4.3/22, mb1mx4.1/47, mbtmp4.2/22, ML4.4/5, MS3.7/22,
Ms1 3.6/22, ms1mx3.5/41, Error ellipse: s-maj=17.4km
s-min=9.8km az=121.0
ISC 03 03:24:43.3±1.4, 2.°95±0.°04×36.°12E±0.°05, h9km±9km, n73, σ2°39/80, mb4.3/23, MS3.6/18, 2C, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAI	**Nairobi**	**1.80**	**22**	*ePn*	**Pn**	**03 25 13.5**	**-1.3**
NAI				*eSn*	**Sn**	**03 25 32.8**	**-5.1**
I32KE	**NAIROBI INFRAS**	**1.84**	**23**	Pg	**Pn**	**03 25 13.9**	**-1.4**
	baz=216,slow=47,SNR=0.4						
I32KE				Lg	Lg	03 25 37.4	
	baz=180,slow=32						
I32KE				*i*		03 34 50.0	
	baz=210,slow=320,SNR=1.4						
KOND	**Kondoa**	**1.97**	**189**	*iP*	**Pg**	**03 25 23.0**	**+1.9**
KOND				*i* S	**Sg**	**03 25 51.1**	**+4.4**
KMBO	**Kilima Mbogo**	**2.14**	**32**	*iP*	**Pn**	**03 25 18.9**	**-0.6**
KMBO				*i* S	**Sn**	**03 25 45.6**	**-0.7**
KMBO	**Kilima Mbogo**	**2.14**	**32**	Pn	**Pn**	**03 25 18.6**	**-0.8**
	208nm,0.3s,baz=313,slow=8.9,SNR=649						
KMBO				Pg	**Pb**	**03 25 20.6**	**-1.8**
	335nm,0.3s,baz=318,slow=7.8,SNR=197						
KMBO				Lg	Lg	03 25 45.2	
	2μm,0.3s,baz=316,slow=23,SNR=41						
KMBO	**Kilima Mbogo**	**2.14**	**32**	*ePn*	**Pn**	**03 25 18.2**	**-1.2**
KMBO				*ePg*	**Pb**	**03 25 18.4**	**-4.0**
KMBO	**Kilima Mbogo**	**2.14**	**32**	*iP*	**Pn**	**03 25 18.9**	**-0.6**
KMBO				*i* S	**Sn**	**03 25 45.6**	**-0.7**
KIBA	**Kibaya**	**2.38**	**169**	*iP*	**Pg**	**03 25 26.9**	**-2.1**
KIBA				*i* S	**Sg**	**03 25 58.1**	**-1.9**
MBAR	**Mbarara**	**5.86**	**293**	Pn	**Pn**	**03 26 07.8**	**-2.8**
	44nm,0.3s,baz=105,slow=19,SNR=58						
MBAR				Sn	**Sn**	**03 27 11.4**	**-6.6**
	200nm,0.3s,baz=351,slow=22,SNR=12						
MBAR				Lg	Lg	03 27 41.4	
	415nm,0.3s,baz=26,slow=19,SNR=11						
MBAR				LR	LR	03 28 32.5	
	comp=Z,664nm,18.4s,baz=99,slow=40						
MBAR	**Mbarara**	**5.86**	**293**	⇑*eP*	**Pn**	**03 26 10.0**	**-0.6**
MBAR				⇑*eS*	**Sb**	**03 27 42.1**	**+5.9**
FURI	**Furi**	**12.04**	**12**	*ePn*	**Pn**	**03 27 38.2**	**+2.6**
LSZ	**Lusaka**	**14.53**	**212**	*iP*	**Pn**	**03 28 10.4**	**+1.1**
LSZ				*i* S	**Sn**	**03 30 49.4**	**-1.3**
LSZ	**Lusaka**	**14.53**	**212**	*iP*	**Pn**	**03 28 07.5**	**-1.9**
LSZ				*i* S	**Sn**	**03 30 47.5**	**-3.2**
LSZ	**Lusaka**	**14.53**	**212**	Pn	**Pn**	**03 28 10.7**	**+1.3**
	0.3nm,0.3s,baz=28,slow=14,SNR=7.5						
LSZ				Sn	**Sn**	**03 30 46.8**	**-3.9**
	1.1nm,0.3s,baz=54,slow=18,SNR=5.3						
LSZ				Lg	Lg	03 32 20.9	
	2.5nm,0.3s,baz=108,slow=19,SNR=9.1						
LSZ	**Lusaka**	**14.53**	**212**	*ePn*	**Pn**	**03 28 10.4**	**+1.1**
LSZ				*eSn*	**Sn**	**03 30 43.2**	**-7.5**
LSZ	**Lusaka**	**14.53**	**212**	*iP*	**Pn**	**03 28 07.5**	**-1.9**
LSZ				*i* S	**Sn**	**03 30 47.5**	**-3.2**
ATD	**Arta Tunnel**	**15.87**	**25**	Pn	**Pn**	**03 28 24.6**	**-2.6**
	1.0nm,0.3s,baz=262,slow=23,SNR=2.1						
ATD				Lg	Lg	03 32 58.6	
	0.9nm,0.3s,baz=244,slow=18,SNR=7.9						
ATD				LR	LR	03 34 15.3	
	comp=Z,165nm,18.3s,baz=149,slow=36						
ATD	**Arta Tunnel**	**15.87**	**25**	*ePn*	**Pn**	**03 28 24.5**	**-2.6**
	16nm,1.0s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLWY	**Bulawayo**	**18.59**	**203**	*iP*	P	03 28 47.1	-14
BLWY	**Bulawayo**	**18.59**	**203**	*iP*	**P**	**03 28 59.4**	**-1.7**
BLWY	**Bulawayo**	**18.59**	**203**	*iP*	**P**	**03 28 59.4**	**-1.7**
MATP	**Matopo**	**18.89**	**203**	*iP*	**P**	**03 29 02.4**	**-2.0**
MATP				*i* S	**Sn**	**03 32 34.7**	**-1.9**
MATP	**Matopo**	**18.89**	**203**	P	**Pn**	**03 29 06.5**	**+1.6**
	0.6nm,0.3s,baz=28,slow=12,SNR=16						
MATP				Lg	Lg	03 34 44.8	
	0.4nm,0.3s,baz=272,slow=21,SNR=4.8						
MATP				LR	LR	03 36 24.6	
	comp=Z,555nm,18.7s,baz=29,slow=37						
MATP	**Matopo**	**18.89**	**203**	*iP*	**P**	**03 29 02.4**	**-2.0**
MATP				*i* S	**Sn**	**03 32 34.7**	**-1.9**
OPO	**Ambohidratompo**	**18.93**	**146**	P	**Pn**	**03 29 07.7**	**+2.2**
	0.5nm,0.3s,baz=301,slow=12,SNR=2.7						
OPO				LR	LR	03 36 22.5	
	comp=Z,143nm,18.6s,baz=199,slow=36						
MSEY	**Mahe Island**	**19.40**	**96**	*eP*	**P**	**03 29 08.7**	**-1.2**
	66nm,1.0s						
MSNA	**Messina**	**20.16**	**197**	*iP*	**P**	**03 29 15.4**	**-2.8**
MSNA	**Messina**	**20.16**	**197**	*iP*	**P**	**03 29 15.4**	**-2.8**
LBTB	**Lobatse**	**24.16**	**204**	P	**P**	**03 30 02.9**	**+2.8**
	5.3nm,0.9s,baz=15,slow=11,SNR=5.3						
LBTB				LR	LR	03 39 45.6	
	comp=Z,223nm,20.8s,baz=28,slow=37						
LBTB	**Lobatse**	**24.16**	**204**	*eP*	**P**	**03 29 58.4**	**-1.7**
	10nm,1.0s						
TSUM	**Tsumeb**	**24.27**	**227**	P	**P**	**03 30 04.2**	**+3.0**
	1.3nm,0.4s,baz=2.6,slow=8.7,SNR=3.1						
TSUM				LR	LR	03 40 12.3	
	comp=Z,325nm,18.2s,baz=54,slow=38						
TSUM	**Tsumeb**	**24.27**	**227**	*eP*	**P**	**03 29 59.2**	**-2.1**
	4.4nm,1.1s						
MRIV	**Mauritius Mete**	**27.06**	**131**	*eP*	**P**	**03 30 24.9**	**-1.4**
	25nm,1.1s						
BOSA	**Boshof**	**27.54**	**201**	P	**P**	**03 30 33.5**	**+2.8**
	9.2nm,0.7s,baz=19,slow=9.4,SNR=13						
BOSA				LR	LR	03 41 07.2	
	comp=Z,234nm,18.1s,baz=23,slow=36						
BOSA	**Boshof**	**27.54**	**201**	*eP*	**P**	**03 30 31.6**	**+0.9**
	19nm,1.1s						
TORD	**Torodi Ar. Bea**	**37.73**	**296**	P	**P**	**03 31 59.4**	**-0.3**
	1.8nm,1.0s,baz=123,slow=5.5,SNR=5.9						
TORD				PcP	**PcP**	**03 34 19.2**	**+2.3**
	1.5nm,1.0s,baz=112,slow=3.2,SNR=4.7						
TORD				LR	LR	03 47 32.3	
	comp=Z,121nm,18.6s,baz=65,slow=36						
TOA1	**Torodi Ar. Sit**	**37.73**	**296**	*eP*	**P**	**03 31 59.4**	**-0.4**
TOA1				*ePcP*	**PcP**	**03 34 19.2**	**+2.3**
DBIC	**Dimbokro**	**42.00**	**283**	P	**P**	**03 32 34.9**	**-0.4**
	4.3nm,0.8s,baz=118,slow=13,SNR=3.1						
DBIC				LR	LR	03 50 28.8	
	comp=Z,51nm,18.6s,baz=86,slow=37						
DBIC	**Dimbokro**	**42.00**	**283**	*eP*	**P**	**03 32 33.3**	**-2.0**
	5.0nm,0.8s						
BRTR	**Keskin Array B**	**42.53**	**357**	P	**P**	**03 32 39.9**	**+0.4**
	0.6nm,0.7s,baz=171,slow=10.0,SNR=3.8						
BRTR				PcP	**PcP**	**03 34 34.6**	**+2.5**
	1.7nm,0.9s,baz=151,slow=3.8,SNR=5.6						
BRTR				LR	LR	03 49 29.5	
	comp=Z,26nm,18.4s,baz=228,slow=35						
BR101	**Keskin Array S**	**42.53**	**357**	*eP*	**P**	**03 32 39.9**	**+0.4**
BR101				*ePcP*	**PcP**	**03 34 34.6**	**+2.5**
GEYT	**Alibeck**	**45.50**	**25**	LR	LR	03 53 56.5	
	comp=Z,64nm,18.8s,baz=245,slow=39						
KEST	**Kesra**	**45.91**	**329**	LR	LR	03 52 05.1	
	comp=Z,124nm,18.8s,baz=316,slow=36						
KBZ	**Khabaz**	**46.87**	**7**	LR	LR	03 53 12.0	
	comp=Z,75nm,20.5s,baz=189,slow=37						
AKASG	**Malin Array Be**	**53.77**	**355**	P	**P**	**03 34 05.4**	**-0.5**
	1.8nm,0.6s,baz=172,slow=5.0,SNR=4.8						
AKASG				PcP	**PcP**	**03 35 12.5**	**+0.7**
	1.7nm,0.3s,baz=178,slow=4.1,SNR=6.7						
GERES	**GERESS Array B**	**55.15**	**342**	P	**P**	**03 34 16.8**	**+0.7**
	2.3nm,0.9s,baz=156,slow=5.1,SNR=10						
KSH	**Kashi**	**55.90**	**37**	*eP*	**P**	**03 34 22.7**	**+0.9**
ESDC	**Sonseca Array**	**56.13**	**323**	P	**P**	**03 34 23.3**	**-0.1**
	2.1nm,1.0s,baz=135,slow=6.5,SNR=9.5						
AKTO	**Aktyubinsk**	**56.41**	**17**	P	**P**	**03 34 25.4**	**+0.3**
	2.2nm,0.7s,baz=208,slow=10						
AKTO				LR	LR	04 00 25.2	
	comp=Z,28nm,21.6s,baz=193,slow=38						
TARG	**Taragay, Kyrgy**	**58.38**	**36**	*eP*	**P**	**03 34 39.3**	**-0.4**
	4.3nm,0.8s						
ARU	**Arti**	**61.95**	**14**	P	**P**	**03 35 02.6**	**-0.7**
	3.1nm,0.2s,baz=270,slow=19,SNR=3.4						
ARU	**Arti**	**61.95**	**14**	*eP*	**P**	**03 35 01.8**	**-1.5**
	6.6nm,0.6s						
MKAR	**Makanchi Array**	**64.03**	**33**	P	**P**	**03 35 16.9**	**-0.4**
	2.2nm,0.9s,baz=231,slow=5.8,SNR=9.1						
KURBB	**Kurchatov Arra**	**64.52**	**28**	P	**P**	**03 35 20.8**	**+0.3**
	1.1nm,0.9s,baz=233,slow=6.7,SNR=7.7						
KURK	**Kurchatov**	**64.62**	**28**	*eP*	**P**	**03 35 20.1**	**-1.0**
	4.4nm,1.1s						
FINES	**FINESS Array B**	**64.68**	**355**	P	**P**	**03 35 21.8**	**+0.5**
	1.3nm,0.7s,baz=142,slow=9.6,SNR=5.5						
FINES				LR	LR	04 06 51.2	
	comp=Z,31nm,18.9s,baz=209,slow=39						
CM31	**Chiang Mai Arr**	**65.37**	**68**	*eP*	**P**	**03 35 26.4**	**-0.3**
	11nm,1.1s						
CMAR	**Chiang Mai Arr**	**65.37**	**68**	P	**P**	**03 35 28.6**	**+1.9**
	3.3nm,0.7s,baz=258,slow=8.2,SNR=12						
NOA	**NORSAR Array B**	**66.66**	**347**	LR	LR	04 10 04.2	
	comp=Z,13nm,18.7s,baz=295,slow=41						
MAW	**Mawson**	**67.11**	**169**	P	P	03 35 41.1	+4.2
	3.0nm,0.8s,baz=319,slow=8.9,SNR=7.3						
MAW				LR	LR	04 00 32.6	
	comp=Z,64nm,21.1s,baz=267,slow=32						
MAW	**Mawson**	**67.11**	**169**	*eP*	**P**	**03 35 39.6**	**+2.8**
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**69.61**	**28**	LR	LR	04 10 14.5	
	comp=Z,34nm,19.5s,baz=246,slow=39						
ARCES	**ARCESS Array B**	**72.70**	**356**	P	**P**	**03 36 11.4**	**+0.2**
	1.8nm,0.9s,baz=160,slow=2.9,SNR=5.0						
SNAA	**Sanae**	**72.89**	**192**	LR	LR	04 04 15.1	
	comp=Z,78nm,20.5s,baz=57,slow=32						
VNA2	**Neumayer--Watz**	**73.35**	**194**	P	P	03 36 19.8	+4.7
	baz=37,slow=5.1						
VNA1	**Neumayer--Stat**	**73.37**	**194**	P	P	03 36 21.0	+5.8
VNA3	**Neumayer Olymp**	**74.11**	**194**	P	P	03 36 24.3	+4.7
SONA0	**Songino Array**	**79.09**	**40**	*eP*	**P**	**03 36 50.9**	**+2.5**
SONM	**Songino Array**	**79.09**	**40**	P	**P**	**03 36 50.9**	**+2.5**
	1.2nm,0.5s,baz=270,slow=5.8,SNR=2.9						
JMIC	**Jan Mayen**	**79.36**	**346**	LR	LR	04 14 29.4	
	comp=Z,28nm,18.1s,baz=146,slow=38						
NRIK	**Norilʼsk**	**80.03**	**16**	LR	LR	04 15 56.4	
	comp=Z,60nm,20.5s,baz=200,slow=38						
NJ2	**Nanjing**	**85.40**	**58**	*eP*	**P**	**03 37 22.2**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VNDA	**Vanda**	**94.41**	**170**	LR	LR	04 19 46.8	
	comp=Z,47nm,18.7s,baz=214,slow=35						

MAN 03 03:25:01.1, 7.°34N×124.°70E, h1km, mb4.5, ML3.4, MS3.2, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.47**	**256**	⇓*iP*	Pg	03 25 09.1	-0.9
CTBH				*i* S	Sb	03 25 21.2	+1.8
BUKP	**Musuan**	**0.65**	**34**	*eP*	Pg	03 25 13.8	+0.3
BUKP				*eS*	Sg	03 25 23.2	+1.3
SKMP	**Bagumbayan, Su**	**0.83**	**191**	*eP*	Pg	03 25 17.6	+0.6
SKMP				*eS*	Sn	03 25 34.8	+2.1
DMPH	**Davao City--Mi**	**0.84**	**107**	⇑*iP*	Pn	03 25 28.9	+8.8
CGP	**Cagayan de Oro**	**1.11**	**360**	⇑*eP*	Pg	03 25 22.4	0.0
CGP				*eS*	Sg	03 25 36.9	0.0
DDMP	**Don Marcelino,**	**1.58**	**141**	*eP*	Pn	03 25 30.5	+0.2
DDMP				*eS*	Sg	03 25 53.7	+1.7

*ISCJB **03** 03:29:25.6±0.8, 31.°82S±0.°03×70.°09W±0.°05, h127km±8km,*
Error ellipse: s-maj=6.4km s-min=4.4km az=12.7
*SJA **03** 03:29:26.2±1.1, 31.°80S×70.°13W, h109km±9km, ML3.1,*
MW3.2
*GUC **03** 03:29:26.2±0.6, 31.°82S×70.°35W, h126km±9km, ML3.0*
ISC 03 03:29:25.0±1.7, 31.°83S±0.°03×70.°08W±0.°04, h136km±14km, n21, σ1°27/38, 1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**0.70**	**124**	*eP*	**Pn**	**03 29 46.3**	**-0.1**
AUSP				*eS*	**Sn**	**03 30 00.8**	**-1.8**
ASAL	**Salagasta**	**1.30**	**126**	*eP*	**Pn**	**03 29 52.1**	**+0.7**
ASAL				*eS*	**Sn**	**03 30 11.9**	**+0.3**
ROCH	**El Roble**	**1.39**	**215**	*eP*	**Pn**	**03 29 52.4**	**-0.1**
ROCH				*i* S	**Sn**	**03 30 12.5**	**-1.1**
ROCH				IAML		03 30 13.9	
	comp=N,618nm,0.4s						
ROC1	**El Roble**	**1.39**	**215**	*eP*	**Pn**	**03 29 52.5**	**-0.2**
ROC1				*eS*	**Sn**	**03 30 12.5**	**-1.2**
ARCO	**CERRO ARCO**	**1.40**	**137**	*eP*	**Pn**	**03 29 53.8**	**+1.2**
ARCO				*eS*	**Sn**	**03 30 14.3**	**+0.6**
ARCO				IAML		03 30 17.0	
	comp=Z,271nm,0.4s						
PEL	**Peldehue**	**1.41**	**201**	*eP*	**Pn**	**03 29 52.3**	**-0.3**
PEL				*i* S	**Sn**	**03 30 12.8**	**-0.9**
PEL				IAML		03 30 13.8	
	comp=E,171nm,0.1s						
FCH	**Farellones**	**1.51**	**187**	*eP*	**Pn**	**03 29 54.9**	**+0.9**
FCH				*i* S	**Sn**	**03 30 16.8**	**+0.8**
FCH				IAML		03 30 18.5	
	comp=E,174nm,0.7s						
ACCO	**Cerro Coronel**	**1.51**	**35**	*eP*	**Pn**	**03 29 54.5**	**+0.4**
ACCO				*eS*	**Sn**	**03 30 15.9**	**-0.1**
CLCH	**Cerro Calan**	**1.61**	**194**	*eP*	**Pn**	**03 29 55.5**	**+0.6**
CLCH				*i* S	**Sn**	**03 30 17.4**	**-0.3**
AMOG	**MOGNA**	**1.62**	**57**	*eP*	**Pn**	**03 29 55.2**	**+0.3**
AMOG				*eS*	**Sn**	**03 30 16.3**	**-1.4**
AAGR	**Agrelo**	**1.64**	**140**	*eP*	**Pn**	**03 29 56.4**	**+1.2**
AAGR				*eS*	**Sn**	**03 30 19.2**	**+1.0**
AROD	**Rodeo**	**1.73**	**17**	⇓*eP*	**Pn**	**03 29 58.1**	**+1.5**
AROD				*eS*	**Sn**	**03 30 21.2**	**+0.6**
GO04	**Tololo Observa**	**1.76**	**339**	*eP*	**Pn**	**03 29 57.2**	**+0.4**
GO04				*eS*	**Sn**	**03 30 20.2**	**-0.8**
GO04	**Tololo Observa**	**1.76**	**339**	*eP*	**Pn**	**03 29 57.1**	**+0.3**
GO04				*i* S	**Sn**	**03 30 20.5**	**-0.6**
ACDV	**Cuesta del Vie**	**1.84**	**27**	*eP*	**Pn**	**03 29 58.8**	**+1.1**
LMEL	**Las Melosas**	**2.02**	**183**	*i* S	**Sn**	**03 30 27.9**	**+1.7**
LSCH	**La Serena**	**2.16**	**332**	*i* S	**Sn**	**03 30 27.2**	**-1.9**
ACAN	**Cantantal**	**2.49**	**101**	*eP*	**Pn**	**03 30 05.8**	**+0.4**
ACAN				*eS*	**Sn**	**03 30 36.0**	**-0.5**
VCA	**Vinchina**	**3.48**	**28**	*eP*	**Pn**	**03 30 19.4**	**+1.1**
VCA				*eS*	**Sn**	**03 31 01.8**	**+2.3**
VCA				IAML		03 31 06.0	
	comp=Z,24nm,0.6s						
MRA	**San Martin**	**3.74**	**100**	*eP*	**Pn**	**03 30 21.7**	**+0.1**
MRA				IAML		03 30 22.1	
	comp=Z,29nm,0.2s						
TCA	**Tanti**	**4.70**	**85**	*eP*	**Pn**	**03 30 33.8**	**-0.6**
TCA				IAML		03 30 35.4	
	comp=Z,12nm,0.3s						
TCA				*eS*	**Sn**	**03 31 23.7**	**-4.5**

*NIED **03** 03:47:00, 37.°20N×142.°50E, h8km, Mw3.4 Best double*
couple: M0 1.26000×10^14 NP1:φ0=221.00000°, δ47.00000°,
λ-67.00000°. NP2:φ0=9.00000°, δ48.00000°, λ-113.00000°.
JMA 03 03:47:24.3±0.4, 37.°16N×142.°53E, h1km±5km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.39**	**268**	P	Pn	03 47 50.6	-0.2
ONAJ				*eS*	Sb	03 48 09.5	+0.3
JIKH	**Ishinomakikobu**	**1.43**	**324**	P	Pn	03 47 51.0	-0.3
JMM	**Marumori**	**1.55**	**298**	P	Pn	03 47 53.0	0.0
JMM				S	Sn	03 48 13.7	-0.1
JIO	**Ouri**	**1.59**	**324**	P	Pn	03 47 53.4	-0.2
JFT	**Otama**	**1.78**	**282**	P	Pn	03 47 56.8	+0.5
JOU	**Okura**	**1.91**	**310**	P	Pn	03 47 58.6	+0.6
JMK	**Ichinoseki**	**2.07**	**330**	P	Pn	03 48 01.0	+0.9
JYK	**Kaneyama**	**2.45**	**316**	P	Pn	03 48 06.2	+0.7
JAG	**Ashikaga**	**2.58**	**254**	P	Pn	03 48 08.0	+0.8
MAT	**Matsushiro**	**3.52**	**261**	P	Pn	03 48 23.2	+3.0
MAT				S	Sn	03 49 05.2	+2.7

*ISCJB **03** 03:53:18.9±0.8, 14.°43S±0.°08×167.°2E±0.°2, h170km,*
mb3.8/8, Error ellipse: s-maj=22.8km s-min=11.1km
az=5.1
*IDC **03** 03:53:20.0±4.3, 14.°44S×167.°33E, h169km±38km, mb3.4/7,*
mb1 3.6/8, mb1mx3.4/36, mbtmp3.8/8, Error ellipse:
s-maj=27.8km s-min=24.2km az=176.0
ISC 03 03:53:19.9±0.9, 14.°45±0.°1×167.°3E±0.°2, h170km, n11, σ0°95/11, mb3.6/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.67**	**186**	P	**Pn**	**03 55 10.3**	**+1.3**
	0.4nm,0.3s,baz=16,slow=19,SNR=3.5						
DZM				S	**Sn**	**03 56 33.2**	**-1.9**
	0.1nm,0.3s,baz=88,slow=14,SNR=1.9						
STKA	**Stephens Creek**	**29.24**	**229**	P	**P**	**03 59 06.4**	**+0.5**

ACAN	**Cantantal**	**4.22 102**	*e*P	**Pb**	**03 56 37.4**	**-3.7**
VCA	**Vinchina**	**4.35 51**	*e*P	**Pb**	**03 56 41.1**	**-2.1**
VCA			IAML		03 57 50.5	
	comp=Z,143nm,0.5s					
MRA	**San Martin**	**5.48 101**	*e*P	Pn	03 56 53.7	+5.1
MRA			IAML		03 58 34.8	
	comp=Z,38nm,0.5s					
TCA	**Tanti**	**6.39 90**	*e*P	Pn	03 57 05.8	+4.6
TCA			IAML		03 57 09.4	
	comp=Z,35nm,0.5s					

IDC 03 04:18:10.9±55.0, 21°.93S×175°.57W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/26, mbtmp4.2/3, Error ellipse: s-maj=1019.0km s-min=175.6km az=86.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.25**	**246**	P	P	04 25 41.2	-0.1
	1.3nm,0.4s,baz=75,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**46.42**	**258**	P	P	04 26 39.5	-0.2
	1.7nm,0.5s,baz=101,slow=7.0,SNR=15						
WRA	**Warramunga Arr**	**46.66**	**263**	P	P	04 26 41.6	0.0
	3.0nm,0.5s,baz=100,slow=8.3,SNR=16						

*ATH **03** 04:35:21.6, 41°.29N×19°.94E, h14km±3km, ML2.9/1, Error ellipse: s-maj=4.9km s-min=1.2km az=273.0*
*TIR **03** 04:35:21.5, 41°.34N×19°.97E, h11km, Md2.8/4*
*SKO **03** 04:35:23.0, 41°.38N×19°.88E, h7km*
*BEO **03** 04:35:24.0±0.3, 41°.37N×19°.92E, h0km, ML2.0/9*
ISC 03 04:35:22.6±0.8, 41°.36N±0°.03×19°.92E±0°.03, h10km±6km, n27, σ0°90/43, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.04 258**		*e*Pg	**Pg**	**04 35 24.4**	**-0.1**
TIR				*e*Sg	**Sg**	**04 35 25.9**	**-0.1**
TIR	**Tirane**	**0.04 258**		*i* Pg	**Pg**	**04 35 24.5**	**-0.1**
TIR	**Tirane**	**0.04 258**		*i* PG	**Pg**	**04 35 24.4**	**-0.1**
TIR				*i* SG	Sg	04 35 36.5	+10
TIR	**Tirane**	**0.04 258**		P	**Pg**	**04 35 24.5**	**0.0**
TIR				S	**Sg**	**04 35 26.4**	**+0.4**
TIR				AML	AML	04 35 26.8	
	comp=E,15526μm,0.2s						
TIR				AML	AML	04 35 26.9	
	comp=N,20632μm,0.2s						
PHP	**Peshkopia**	**0.51**	**50**	*i* PG	**Pg**	**04 35 31.1**	**-1.4**
PHP				*i* SG	**Sg**	**04 35 39.0**	**-0.3**
PUK	**Puka**	**0.69 358**		*i* PG	**Pg**	**04 35 35.7**	**-0.2**
PUK				*i* SG	**Sb**	**04 35 46.2**	**0.0**
OHR	**Ohrid**	**0.71 110**		*i* Pg	**Pg**	**04 35 36.3**	**+0.1**
OHR				*i* Sg	**Sb**	**04 35 47.7**	**+1.0**
ULC	**Ulcinj**	**0.79 320**		*i* Pg	**Pg**	**04 35 36.5**	**-1.3**
KRUS	**Krusevo**	**1.00**	**89**	*i* Pg	**Pg**	**04 35 41.0**	**-0.9**
KRUS				*i* Sg	**Sn**	**04 35 57.8**	**+0.8**
BCI	**Bajram Curri**	**1.01**	**6**	*i* PG	**Pg**	**04 35 41.7**	**-0.4**
BCI				*i* SG	**Sg**	**04 35 55.0**	**-0.3**
PDG	**Podgorica**	**1.18 335**		*e*Pg	**Pb**	**04 35 45.3**	**+0.2**
PDG				*e*Sg	**Sb**	**04 36 00.5**	**+0.1**
FNA	**Florina**	**1.24 117**		*i* Pg	**Pb**	**04 35 46.6**	**+0.5**
FNA	**Florina**	**1.24 117**		P	**Pn**	**04 35 44.1**	**-1.9**
NEST	**Nestorio**	**1.27 137**		P	**Pn**	**04 35 45.0**	**-1.5**
SKO	**Skopje**	**1.29**	**61**	*e*Pg	**Pg**	**04 35 47.4**	**0.0**
SKO				*e*Sg	**Sg**	**04 36 04.5**	**+0.3**
SKO	**Skopje**	**1.29**	**61**	*i* Pg	**Pn**	**04 35 46.9**	**+0.2**
SKO				*i* Sg	**Sg**	**04 36 04.9**	**+0.7**
KEK	**Kerkira**	**1.65 183**		P	**Pn**	**04 35 51.1**	**-0.4**
STIP	**Stip**	**1.73**	**78**	*i* Pn	**Pg**	**04 35 56.5**	**+0.7**
KPRO	**Kipourio**	**1.78 141**		P	**Pn**	**04 35 52.7**	**-0.7**
TREB	**Trebinje**	**1.79 320**		*e*Pn	**Pn**	**04 35 54.8**	**+1.2**
TREB				*e*Sn	**Sb**	**04 36 19.0**	**+0.9**
SJES	**Sjenica**	**1.90**	**1**	*e*Pn	**Pb**	**04 35 57.8**	**+0.3**
SJES				*e*Sn	**Sb**	**04 36 21.8**	**+0.5**
GRG	**Griva**	**1.92 101**		P	**Pn**	**04 35 55.8**	**+0.6**
BARS	**Barje**	**2.03**	**43**	*e*Pn	**Pb**	**04 35 59.9**	**+0.4**
SELS	**Selova**	**2.06**	**25**	*e*Pn	**Pb**	**04 35 58.9**	**-1.2**
SELS				*e*Sn	**Sb**	**04 36 25.8**	**0.0**
BOSS	**Bosilegrad**	**2.22**	**58**	*e*Pn	**Pb**	**04 36 02.2**	**-0.6**
BOSS				*e*Sn	**Sb**	**04 36 30.7**	**+0.3**
STON	**Ston**	**2.24 313**		*e*Pn	**Pb**	**04 36 02.2**	**-0.9**
STON				*e*Sn	**Sb**	**04 36 30.3**	**-0.6**
ZAPS	**Zavoj**	**2.78**	**45**	*e*Pn	**Pb**	**04 36 09.9**	**-2.4**
ZAPS				*e*Sn	**Sn**	**04 36 42.9**	**+2.2**

*ISCJB **03** 04:43:23.7±0.7, 24°.87N±0°.03×122°.43E±0°.02, h15km±5km, Error ellipse: s-maj=4.5km s-min=2.4km az=12.6*
*JMA **03** 04:43:23.1±0.1, 24°.83N×122°.42E, h6km±3km, M3.2*
*TAP **03** 04:43:23.8, 24°.88N×122°.37E, h15km±2km, ML3.4, C*
ISC 03 04:43:23.0±1.0, 24°.86N±0°.03×122°.41E±0°.02, h11km±9km, n53, σ0°52/83, 2C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.40 220**		⇑*i*P	**Pb**	**04 43 32.5**	**+0.4**
	baz=213						
EOS1				S	**Sb**	**04 43 39.3**	**+1.1**
	baz=213						
NTC	**Toucheng**	**0.53 270**		*e*P	**Pb**	**04 43 34.5**	**+0.2**
	baz=266						
NTC				*e*S	**Sb**	**04 43 41.7**	**-0.3**
	baz=266						
TIPB	**Shuangxi**	**0.55 282**		P	**Pb**	**04 43 34.4**	**-0.3**
	baz=280						
TIPB				*e*S	**Sg**	**04 43 41.3**	**+0.4**
	baz=280						
TWC	**Suao**	**0.57 245**		*e*P	**Pg**	**04 43 34.3**	**+0.2**
	baz=239						
TWC				*e*S	**Sg**	**04 43 41.9**	**+0.3**
	baz=239						
ILA	**Ilan**	**0.61 262**		*e*P	**Pb**	**04 43 35.6**	**-0.1**
	baz=258						
ILA				*e*S	**Sg**	**04 43 43.4**	**+0.5**
	baz=258						
NWF	**Wu-fen Shan**	**0.61 291**		P	**Pb**	**04 43 35.8**	**0.0**
	baz=289						
NWF				S	**Sb**	**04 43 44.0**	**-0.5**
	baz=289						
WFSB	**Wu-fen Shan**	**0.61 291**		⇓*i*P	**Pb**	**04 43 35.8**	**0.0**
	baz=289						
WFSB				*e*S	**Sb**	**04 43 43.6**	**-0.8**
	baz=289						
JYNG	**Yonagunijimaku**	**0.63 130**		P	**Pg**	**04 43 35.1**	**-0.2**
JYNG				*e*S	**Sg**	**04 43 43.7**	**+0.1**
YOJ	**Yonaguni jima**	**0.67 126**		*e*P	**Pg**	**04 43 35.7**	**-0.4**
	baz=125						
YOJ	**Yonaguni jima**	**0.67 126**		P	**Pg**	**04 43 35.7**	**-0.4**
YOJ				S	**Sg**	**04 43 44.2**	**-0.7**
ENA	**Nanau**	**0.74 235**		P	**Pb**	**04 43 37.9**	**-0.1**
	baz=231						
ENA				*e*S	**Sb**	**04 43 47.9**	**-0.3**
	baz=231						
YM07	**YM07**	**0.79 294**		⇓*i*P	**Pg**	**04 43 38.3**	**0.0**
	baz=293						
YM07				*e*S	**Sb**	**04 43 49.1**	**-0.4**
	baz=293						
NHDH	**Xindian Distri**	**0.81 278**		*e*P	**Pg**	**04 43 39.0**	**+0.3**
	baz=276						
NHDH				*e*S	**Sb**	**04 43 50.1**	**0.0**
	baz=276						
YM08	**YM08**	**0.82 294**		*e*P	**Pg**	**04 43 38.7**	**-0.1**
	baz=293						
YM08				*e*S	**Sg**	**04 43 48.5**	**-1.0**
	baz=293						
YM01	**YM01**	**0.82 291**		*e*P	**Pg**	**04 43 38.8**	**-0.1**
	baz=290						
YM01				*e*S	**Sb**	**04 43 50.3**	**-0.1**
	baz=290						
YM11	**YM11**	**0.82 292**		*e*P	**Pb**	**04 43 40.0**	**+0.6**
	baz=291						
NWLT	**Wulai**	**0.83 265**		⇑*i*P	**Pb**	**04 43 39.7**	**+0.2**
	baz=262						
NWLT				*e*S	**Sb**	**04 43 50.5**	**-0.2**
	baz=262						
PCYT	**Pengchaiyu**	**0.83 338**		*e*P	**Pg**	**04 43 38.5**	**-0.6**
	baz=340						
TATO	**Taipei**	**0.85 278**		*e*P	**Pb**	**04 43 39.7**	**-0.1**
	baz=276						
YM04	**YM04**	**0.85 291**		*e*P	**Pg**	**04 43 39.4**	**0.0**
	baz=289						
YM03	**YM03**	**0.85 292**		*e*P	**Pg**	**04 43 39.6**	**+0.1**
	baz=291						
NDT	**Datong Townshi**	**0.85 253**		*e*P	**Pb**	**04 43 40.2**	**+0.3**
	baz=250						
NDT				*e*S	**Sb**	**04 43 52.0**	**+0.6**
	baz=250						
TWS1	**Kuangyinshan**	**0.94 285**		*e*P	**Pg**	**04 43 41.2**	**+0.2**
	baz=284						
TWS1				*e*S	**Sb**	**04 43 53.4**	**-0.3**
	baz=284						
YHNB	**Yeheng**	**0.96 259**		P	**Pg**	**04 43 41.2**	**-0.4**
	baz=256						
YHNB				*e*S	**Sn**	**04 43 55.4**	**-0.9**
	baz=256						
NSK	**Sanguang**	**0.97 260**		*e*P	**Pb**	**04 43 42.4**	**+0.4**
	baz=257						
NSK				*e*S	**Sb**	**04 43 55.6**	**+0.6**
	baz=257						
NACB	**Ninganchiao**	**1.01 228**		P	**Pg**	**04 43 41.8**	**-0.7**
	baz=224						
NACB				*e*S	**Sb**	**04 43 55.9**	**+0.1**
	baz=224						
NNSB	**Datong**	**1.03 246**		*e*P	**Pg**	**04 43 42.7**	**-0.1**
	baz=243						
NNSB				*e*S	**Sb**	**04 43 56.7**	**+0.2**
	baz=243						
NNS	**Nan Shan**	**1.03 247**		*e*P	**Pg**	**04 43 43.1**	**+0.2**
	baz=243						
NNS				*e*S	**Sn**	**04 43 57.6**	**-0.5**
	baz=243						
ETLH	**Xiulin Townshi**	**1.06 233**		*e*P	**Pg**	**04 43 43.3**	**-0.2**
	baz=230						
ETLH				*e*S	**Sb**	**04 43 58.1**	**+0.6**
	baz=230						
WHF	**Hehuan Shan**	**1.26 236**		*e*P	**Pn**	**04 43 46.7**	**-0.3**
	baz=233						
WHF				*e*S	**Sb**	**04 44 03.2**	**-0.3**
	baz=233						
TWT	**Tachien**	**1.27 242**		*e*P	**Pg**	**04 43 47.8**	**+0.2**
	baz=240						
LIOB	**Emei**	**1.29 261**		*e*P	**Pg**	**04 43 48.4**	**+0.6**
	baz=259						
TDCB	**Techi**	**1.29 243**		*e*P	**Pb**	**04 43 47.6**	**+0.2**
	baz=240						
TDCB				*e*S	**Sn**	**04 44 05.0**	**+0.5**
	baz=240						
IRIF	**Iriomote-Funau**	**1.31 113**		P	**Pn**	**04 43 47.4**	**+0.2**
IRIF				*e*S	**Sb**	**04 44 04.0**	**-0.4**
ESL	**Shilin**	**1.37 221**		*e*P	**Pn**	**04 43 47.6**	**-0.5**
	baz=218						
CHGB	**Renai**	**1.38 235**		*e*P	**Pb**	**04 43 49.3**	**+0.3**
	baz=233						
CHGB				*e*S	**Sb**	**04 44 06.1**	**-0.6**
	baz=233						
OWD	**Renai**	**1.44 232**		*e*P	**Pn**	**04 43 49.5**	**+0.3**
	baz=229						
OWD				*e*S	**Sn**	**04 44 06.8**	**-1.4**
	baz=229						
WHP	**Taichung City**	**1.45 247**		*e*P	**Pn**	**04 43 50.0**	**+0.6**
	baz=245						
HATJ	**Hateruma jima**	**1.50 122**		P	**Pn**	**04 43 50.1**	**+0.2**
HATJ				*e*S	**Sn**	**04 44 09.0**	**-0.4**
JKRS	**Kuro-shima**	**1.58 113**		P	**Pn**	**04 43 51.9**	**+0.9**
VWDT	**VWDT**	**1.60 227**		*e*P	**Pb**	**04 43 52.2**	**-0.3**
	baz=224						
HGSD	**Ruisui**	**1.63 214**		*e*P	**Pn**	**04 43 51.8**	**+0.1**
	baz=211						
JIJ	**Ishigaki jima**	**1.65 107**		P	**Pn**	**04 43 52.8**	**+0.8**
JIJ				*e*S	**Sn**	**04 44 13.2**	**0.0**
SMLT	**Sun Moon Lake**	**1.69 235**		*e*P	**Pn**	**04 43 53.0**	**+0.4**
	baz=233						
SSLB	**Suanglung**	**1.70 232**		*e*P	**Pn**	**04 43 53.7**	**+1.0**
	baz=229						
TYC	**Yuchr**	**1.71 237**		*e*P	**Pn**	**04 43 53.5**	**+0.8**
	baz=234						
JISG	**Ishigakijimahi**	**1.75 98**		P	**Pb**	**04 43 55.3**	**+0.2**
YULB	**Yu-li**	**1.78 215**		*e*P	**Pn**	**04 43 54.4**	**+0.6**
	baz=213						
WHYT	**Xinyi Township**	**1.83 231**		*e*P	**Pb**	**04 43 55.8**	**-0.8**
	baz=229						
CHN5	**Tsauling**	**2.02 232**		*e*P	**Pn**	**04 43 57.8**	**+0.7**
	baz=230						
JTJ	**Tarama**	**2.09 95**		P	**Pn**	**04 43 59.8**	**+1.7**
TWK	**Hsinying**	**2.37 228**		*e*P	**Pn**	**04 44 02.3**	**+0.4**
	baz=226						
SGST	**Jiashian**	**2.43 224**		*e*P	**Pn**	**04 44 02.5**	**-0.3**
	baz=222						

*JMA **03** 04:47:51.7±0.1, 24°.84N×122°.43E, h0km, M2.7*
*TAP **03** 04:47:52.5, 24°.90N×122°.40E, h19km, ML3.4, C*
ISC 03 04:47:51.9±1.0, 24°.87N±0°.03×122°.42E±0°.02, h11km±9km, n49, σ0°43/71, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.41 220**		P	**Pb**	**04 48 01.7**	**+0.5**
	baz=215						
EOS1				S	**Sb**	**04 48 08.5**	**+1.0**
	baz=215						
TWB1	**Santiao Chiao**	**0.42 289**		⇑*i*P	**Pb**	**04 48 01.0**	**-0.3**
	baz=286						
TWB1				S	**Sg**	**04 48 06.7**	**+1.0**
	baz=286						
NTC	**Toucheng**	**0.54 268**		P	**Pb**	**04 48 03.4**	**0.0**
	baz=265						
TIPB	**Shuangxi**	**0.55 281**		P	**Pb**	**04 48 03.8**	**+0.2**
	baz=277						
TIPB				*e*S	**Sb**	**04 48 11.1**	**-0.5**
	baz=277						
TWC	**Suao**	**0.58 244**		P	**Pg**	**04 48 03.7**	**+0.5**
	baz=240						
TWC				*e*S	**Sg**	**04 48 11.4**	**+0.5**
	baz=240						
NWF	**Wu-fen Shan**	**0.61 289**		P	**Pb**	**04 48 04.9**	**+0.1**
	baz=287						
NWF				*e*S	**Sb**	**04 48 13.2**	**-0.3**
	baz=287						
WFSB	**Wu-fen Shan**	**0.61 289**		*e*P	**Pb**	**04 48 04.8**	**+0.1**
	baz=287						
WFSB				*e*S	**Sb**	**04 48 13.6**	**+0.2**
	baz=287						
JYNG	**Yonagunijimaku**	**0.63 131**		P	**Pg**	**04 48 04.0**	**-0.2**
JYNG				*e*S	**Sg**	**04 48 12.6**	**+0.1**
YOJ	**Yonaguni jima**	**0.67 127**		⇑P	**Pg**	**04 48 04.5**	**-0.4**
	baz=119						
YOJ				*e*S	**Sg**	**04 48 13.7**	**-0.1**
	baz=119						
YOJ	**Yonaguni jima**	**0.67 127**		P	**Pg**	**04 48 04.5**	**-0.4**
YOJ				*e*S	**Sg**	**04 48 13.5**	**-0.3**
TWE	**Neicheng**	**0.70 258**		P	**Pb**	**04 48 06.2**	**+0.1**
	baz=248						
TWE				*e*S	**Sb**	**04 48 15.6**	**-0.2**
	baz=248						
ENA	**Nanau**	**0.76 235**		*e*P	**Pb**	**04 48 07.1**	**-0.1**
	baz=231						
ENA				*e*S	**Sg**	**04 48 16.8**	**+0.3**
	baz=231						
YM07	**YM07**	**0.79 293**		P	**Pb**	**04 48 07.6**	**-0.1**
	baz=291						
YM07				*e*S	**Sg**	**04 48 17.9**	**+0.4**
	baz=291						
YM08	**YM08**	**0.82 293**		*e*P	**Pg**	**04 48 07.8**	**+0.1**
	baz=291						
NHDH	**Xindian Distri**	**0.82 277**		*e*P	**Pb**	**04 48 08.5**	**+0.3**
	baz=275						
PCYT	**Pengchaiyu**	**0.82 337**		*e*P	**Pg**	**04 48 07.4**	**-0.4**
	baz=322						
YM01	**YM01**	**0.82 290**		*e*P	**Pb**	**04 48 08.2**	**0.0**
	baz=288						
YM01				*e*S	**Sg**	**04 48 18.3**	**-0.2**
	baz=288						
YM11	**YM11**	**0.82 291**		*e*P	**Pb**	**04 48 08.3**	**0.0**
	baz=290						
NWLT	**Wulai**	**0.84 264**		P	**Pb**	**04 48 08.8**	**+0.2**
	baz=261						
NWLT				*e*S	**Sb**	**04 48 19.8**	**-0.1**
	baz=261						
TWY	**Chenhua**	**0.85 299**		*e*P	**Pb**	**04 48 08.8**	**+0.1**
	baz=297						
YM04	**YM04**	**0.85 290**		*e*P	**Pb**	**04 48 08.7**	**-0.1**
	baz=288						
TATO	**Taipei**	**0.85 277**		P	**Pb**	**04 48 08.8**	**0.0**
	baz=275						
YM03	**YM03**	**0.86 291**		*e*P	**Pb**	**04 48 09.2**	**+0.3**
	baz=289						
NDT	**Datong Townshi**	**0.87 252**		*e*P	**Pb**	**04 48 09.2**	**+0.1**
	baz=238						
NDT				*e*S	**Sb**	**04 48 20.7**	**0.0**
	baz=238						
ANP	**Anpu**	**0.88 291**		*e*P	**Pb**	**04 48 09.5**	**+0.2**
	baz=290						
TWS1	**Kuangyinshan**	**0.94 284**		*e*P	**Pg**	**04 48 10.0**	**0.0**
	baz=283						
YHNB	**Yeheng**	**0.97 258**		*e*P	**Pg**	**04 48 10.5**	**-0.1**
	baz=265						
YHNB				*e*S	**Sg**	**04 48 22.6**	**-0.7**
	baz=265						
NSK	**Sanguang**	**0.98 259**		*e*P	**Pg**	**04 48 11.0**	**+0.1**
	baz=266						
NACB	**Ninganchiao**	**1.02 228**		P	**Pg**	**04 48 11.0**	**-0.6**
	baz=235						
NACB				*e*S	**Sg**	**04 48 24.1**	**-0.8**
	baz=235						
NNSB	**Datong**	**1.04 245**		*e*P	**Pg**	**04 48 12.2**	**+0.2**
	baz=232						
NNSB				*e*S	**Sg**	**04 48 24.6**	**-1.0**
	baz=232						
ETLH	**Xiulin Townshi**	**1.08 233**		*e*P	**Pg**	**04 48 12.6**	**-0.2**
	baz=230						
ETLH				*e*S	**Sg**	**04 48 26.7**	**-0.1**
	baz=230						
WHF	**Hehuan Shan**	**1.28 236**		P	**Pn**	**04 48 15.8**	**-0.4**
	baz=234						
LIOB	**Emei**	**1.30 260**		*e*P	**Pn**	**04 48 15.4**	**-0.7**
	baz=258						
TDCB	**Techi**	**1.30 242**		*e*P	**Pn**	**04 48 16.3**	**0.0**
	baz=240						
IRIF	**Iriomote-Funau**	**1.30 114**		P	**Pn**	**04 48 16.3**	**+0.2**
ESL	**Shilin**	**1.39 221**		*e*P	**Pn**	**04 48 17.0**	**-0.2**
	baz=202						
CHGB	**Renai**	**1.39 235**		*e*P	**Pb**	**04 48 18.3**	**+0.2**
	baz=233						
CHGB				*e*S	**Sb**	**04 48 35.1**	**-0.9**
	baz=233						
OWD	**Renai**	**1.46 231**		*e*P	**Pn**	**04 48 18.8**	**+0.4**
	baz=242						
OWD				*e*S	**Sn**	**04 48 37.7**	**+0.2**
	baz=242						
WHP	**Taichung City**	**1.47 247**		*e*P	**Pb**	**04 48 19.6**	**+0.3**
	baz=245						
HATJ	**Hateruma jima**	**1.50 122**		P	**Pb**	**04 48 20.0**	**+0.2**
JKRS	**Kuro-shima**	**1.58 113**		P	**Pn**	**04 48 20.7**	**+0.8**
VWDT	**VWDT**	**1.61 227**		*e*P	**Pn**	**04 48 21.1**	**+0.8**
	baz=209						
VWDT				*e*S	**Sn**	**04 48 40.8**	**-0.4**
	baz=209						
HGSD	**Ruisui**	**1.65 214**		*e*P	**Pn**	**04 48 21.4**	**+0.6**
	baz=199						
JIJ	**Ishigaki jima**	**1.65 107**		P	**Pb**	**04 48 22.0**	**-0.3**
SMLT	**Sun Moon Lake**	**1.70 235**		*e*P	**Pn**	**04 48 21.3**	**-0.4**
	baz=233						
JISG	**Ishigakijimahi**	**1.74 99**		P	**Pn**	**04 48 23.0**	**+0.9**
YULB	**Yu-li**	**1.79 215**		*e*P	**Pn**	**04 48 23.2**	**+0.3**
	baz=214						
WHYT	**Xinyi Township**	**1.85 231**		*e*P	**Pn**	**04 48 24.2**	**+0.5**
	baz=216						
CHN5	**Tsauling**	**2.03 232**		*e*P	**Pn**	**04 48 26.4**	**+0.2**
	baz=214						

*JMA **03** 05:06:17.5±0.1, 23°.80N×120°.96E, h0km, M3.7*
*ISCJB **03** 05:06:18.9±0.2, 23°.800N±0°.009×120°.98E±0°.01, h11km±1km, Error ellipse: s-maj=1.8km s-min=1.3km az=35.0*
*TAP **03** 05:06:18.2, 23°.80N×120°.99E, h12km, ML3.6, A*
ISC 03 05:06:18.7±0.7, 23°.80N±0°.01×120°.97E±0°.01, h16km±4km, n105, σ0°81/183, 8C-25D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.02 225**		⇓*i*P	**Pg**	**05 06 20.8**	**-0.7**
	baz=246						
SSLB				S	**Sg**	**05 06 22.5**	**-0.9**
	baz=246						
SMLT	**Sun Moon Lake**	**0.10 323**		⇑*i*P	**Pg**	**05 06 21.8**	**-0.5**
	baz=319						
SMLT				*i* S	**Sg**	**05 06 24.4**	**-0.1**
	baz=319						
TYC	**Yuchr**	**0.14 316**		⇑*e*P	**Pg**	**05 06 22.2**	**-0.4**
	baz=314						
TYC				*e*S	**Sg**	**05 06 25.1**	**-0.1**
	baz=314						
WHYT	**Xinyi Township**	**0.15 225**		⇑*i*P	**Pg**	**05 06 22.3**	**-0.4**
	baz=229						
WHYT				*e*S	**Sg**	**05 06 25.2**	**-0.1**
	baz=229						
VWDT	**VWDT**	**0.17 106**		⇓*e*P	**Pg**	**05 06 23.1**	**+0.3**
	baz=107						
VWDT				*e*S	**Sg**	**05 06 25.6**	**0.0**
	baz=107						
WJS	**Zhushan**	**0.22 276**		⇑*i*P	**Pg**	**05 06 23.9**	**+0.1**
	baz=275						
WJS				S	**Sg**	**05 06 28.4**	**+1.3**
	baz=275						
DPDB	**Guoxing**	**0.23 351**		⇑*i*P	**Pg**	**05 06 23.8**	**-0.3**
	baz=347						
DPDB				*e*S	**Sg**	**05 06 27.5**	**-0.1**
	baz=347						
OWD	**Renai**	**0.24 51**		⇓*i*P	**Pg**	**05 06 24.2**	**-0.1**
	baz=48						
OWD				*i* S	**Sg**	**05 06 27.6**	**-0.4**
	baz=48						
WNT	**Mingjian**	**0.27 287**		⇓*i*P	**Pb**	**05 06 25.0**	**-0.2**
	baz=286						
WNT				*e*S	**Sb**	**05 06 29.4**	**-0.2**
	baz=286						
YUS	**Yu-Shan**	**0.31 183**		⇓*i*P	**Pb**	**05 06 25.3**	**-0.9**
	baz=185						
YUS				*e*S	**Sb**	**05 06 31.0**	**-0.2**
	baz=185						
CHGB	**Renai**	**0.32 36**		⇓*i*P	**Pb**	**05 06 25.4**	**-0.9**
	baz=33						
CHGB				S	**Sg**	**05 06 29.7**	**-0.6**
	baz=33						
ALS	**Alishan**	**0.33 207**		⇑P	**Pb**	**05 06 25.5**	**-0.8**
	baz=208						
ALS				*e*S	**Sb**	**05 06 30.9**	**-0.6**
	baz=208						
CHN5	**Tsauling**	**0.33 233**		⇓*i*P	**Pb**	**05 06 25.8**	**-0.6**
	baz=234						
CHN5				*e*S	**Sb**	**05 06 30.8**	**-0.8**
	baz=234						
WGK	**Gukeng**	**0.39 253**		⇓P	**Pb**	**05 06 27.1**	**-0.2**
	baz=253						
WGK				*e*S	**Sb**	**05 06 33.3**	**+0.3**
	baz=253						
WDLH	**Douliu**	**0.41 254**		⇓*i*P	**Pb**	**05 06 27.4**	**-0.2**
	baz=254						
WDLH				S	**Sb**	**05 06 34.1**	**+0.5**
	baz=254						
ESL	**Shilin**	**0.43 88**		⇓*i*P	**Pb**	**05 06 27.6**	**-0.3**
	baz=88						
ESL				S	**Sb**	**05 06 33.9**	**-0.2**
	baz=88						
EHY	**Hungye**	**0.44 132**		*i* P	**Pb**	**05 06 27.6**	**-0.5**
	baz=132						
EHY				*e*S	**Sb**	**05 06 33.7**	**-0.7**
	baz=132						
TCU	**Taichung**	**0.44 322**		⇓P	**Pb**	**05 06 28.2**	**+0.1**
	baz=321						
TCU				*e*S	**Sb**	**05 06 34.7**	**+0.2**
	baz=321						
WHF	**Hehuan Shan**	**0.44 38**		⇓*i*P	**Pb**	**05 06 27.8**	**-0.6**
	baz=37						
WHF				S	**Sb**	**05 06 34.0**	**-0.9**
	baz=37						
EGFH	**Guangfu**	**0.44 107**		*i* P	**Pb**	**05 06 27.7**	**-0.5**
	baz=107						
EGFH				*e

YULB	**Yu-li**	**0.51**	**143**⇑	*i*P	**Pb**	**05 06 28.7**	**-0.6**
	baz=144						
YULB				S	**Sg**	**05 06 34.8**	**-0.8**
	baz=144						
HGSD	**Ruisui**	**0.52**	**126**	⇓P	**Pb**	**05 06 29.5**	**+0.1**
	baz=127						
HGSD				*e*S	**Sb**	**05 06 35.9**	**-0.8**
	baz=127						
CHN2	**Minshiung**	**0.53**	**240**	P	**Pb**	**05 06 29.6**	**0.0**
	baz=240						
CHN2				*e*S	**Sb**	**05 06 37.5**	**+0.6**
	baz=240						
TWF1	**Yuli**	**0.54**	**146**⇑	*i*P	**Pb**	**05 06 29.4**	**-0.4**
	baz=146						
TWF1				*e*S	**Sg**	**05 06 36.3**	**-0.3**
	baz=146						
CHN4	**Tsaushan**	**0.56**	**218**⇓	*e*P	**Pb**	**05 06 30.1**	**-0.2**
	baz=218						
CHN4				*e*S	**Sb**	**05 06 39.2**	**+1.1**
	baz=218						
RLNB	**Erlin**	**0.56**	**279**⇓	*e*P	**Pb**	**05 06 30.0**	**-0.3**
	baz=279						
RLNB				*e*S	**Sb**	**05 06 38.8**	**+0.7**
	baz=279						
TWQ1	**Liyutan**	**0.57**	**342**⇓	*e*P	**Pb**	**05 06 30.6**	**+0.1**
	baz=340						
TWQ1				*e*S	**Sb**	**05 06 39.6**	**+1.2**
	baz=340						
CHY	**Chiayi**	**0.58**	**239**⇓	*e*P	**Pb**	**05 06 30.4**	**-0.2**
	baz=239						
CHY				*e*S	**Sb**	**05 06 39.2**	**+0.6**
	baz=239						
TPUB	**Ta-pu**	**0.59**	**212**	⇓P	**Pb**	**05 06 30.3**	**-0.3**
	baz=213						
TPUB				*e*S	**Sb**	**05 06 39.2**	**+0.4**
	baz=213						
ENLB	**Shoufeng**	**0.59**	**80**	*e*P	**Pb**	**05 06 30.7**	**0.0**
	baz=79						
ENLB				*e*S	**Sb**	**05 06 38.7**	**-0.2**
	baz=79						
HWA	**Hwalien**	**0.61**	**73**	*e*P	**Pb**	**05 06 31.2**	**+0.1**
	baz=73						
HWA				*e*S	**Sb**	**05 06 40.0**	**+0.6**
	baz=73						
ELDTW	**Lidau**	**0.61**	**176**	P	**Pg**	**05 06 30.2**	**-0.6**
	baz=176						
ELDTW				*e*S	**Sb**	**05 06 40.1**	**+0.6**
	baz=176						
ETLH	**Xiulin Townshi**	**0.62**	**49**	⇓P	**Pb**	**05 06 30.7**	**-0.6**
	baz=48						
ETLH				*e*S	**Sg**	**05 06 38.7**	**-0.6**
	baz=48						
WDJ	**Dajia District**	**0.62**	**331**⇓	*e*P	**Pb**	**05 06 31.6**	**+0.4**
	baz=330						
WDJ				*e*S	**Sb**	**05 06 39.8**	**+0.1**
	baz=330						
WTCT	**Ta-ch'eng**	**0.63**	**276**	*e*P	**Pb**	**05 06 30.8**	**-0.6**
	baz=275						
WTCT				*e*S	**Sb**	**05 06 40.6**	**+0.5**
	baz=275						
WTP	**Ta-pu**	**0.64**	**211**⇓	*e*P	**Pb**	**05 06 31.3**	**-0.3**
	baz=211						
WTP				*e*S	**Sb**	**05 06 40.9**	**+0.6**
	baz=211						
NSY	**Sanyi**	**0.64**	**343**⇓	*e*P	**Pb**	**05 06 32.3**	**+0.7**
	baz=342						
STYT	**Tauyuan**	**0.66**	**197**	*e*P	**Pb**	**05 06 31.6**	**-0.3**
	baz=197						
STYT				*e*S	**Sb**	**05 06 41.3**	**+0.3**
	baz=197						
NACB	**Ninganchiao**	**0.68**	**57**	P	**Pb**	**05 06 31.8**	**-0.6**
	baz=56						
NACB				*e*S	**Sb**	**05 06 41.0**	**-0.5**
	baz=56						
PTSB	**Yuanli**	**0.69**	**340**⇓	*e*P	**Pb**	**05 06 33.0**	**+0.6**
	baz=338						
PTSB				*e*S	**Sb**	**05 06 42.1**	**+0.4**
	baz=338						
TWK	**Hsinying**	**0.69**	**220**	⇓P	**Pb**	**05 06 32.2**	**-0.3**
	baz=219						
TWK				*e*S	**Sb**	**05 06 42.5**	**+0.7**
	baz=219						
WLGB	**Puzi**	**0.69**	**242**	*e*P	**Pb**	**05 06 32.2**	**-0.2**
	baz=242						
WLGB				*e*S	**Sb**	**05 06 43.0**	**+1.3**
	baz=242						
WSF	**Szhu**	**0.70**	**257**	*e*P	**Pb**	**05 06 32.1**	**-0.5**
	baz=256						
WSF				*e*S	**Sb**	**05 06 42.6**	**+0.6**
	baz=256						
SNST	**Tainan City**	**0.72**	**217**	*e*P	**Pb**	**05 06 32.7**	**-0.3**
	baz=217						
SNST				*e*S	**Sb**	**05 06 42.9**	**+0.3**
	baz=217						
NNSB	**Datong**	**0.73**	**31**	*e*P	**Pg**	**05 06 32.3**	**-0.8**
	baz=30						
NNSB				*e*S	**Sb**	**05 06 43.5**	**+0.4**
	baz=30						
CHN1	**Nanshi**	**0.73**	**213**	P	**Pb**	**05 06 33.0**	**-0.2**
	baz=214						
CHN1				*e*S	**Sb**	**05 06 43.8**	**+0.8**
	baz=214						
NNS	**Nan Shan**	**0.74**	**30**	*e*P	**Pb**	**05 06 32.6**	**-0.7**
	baz=29						
NNS				*e*S	**Sb**	**05 06 42.9**	**-0.3**
	baz=29						
NMLH	**Miaoli**	**0.75**	**348**	*e*P	**Pb**	**05 06 33.9**	**+0.5**
	baz=346						
NMLH				*e*S	**Sb**	**05 06 44.6**	**+1.1**
	baz=346						
CHKT	**Chengkung**	**0.79**	**152**	*e*P	**Pn**	**05 06 34.7**	**-0.5**
	baz=152						
SGST	**Jiashian**	**0.80**	**206**	*e*P	**Pb**	**05 06 34.4**	**+0.1**
	baz=206						
SGST				*e*S	**Sb**	**05 06 46.1**	**+1.3**
	baz=206						
NSTT	**Nanjuang**	**0.83**	**2**	*e*P	**Pb**	**05 06 35.2**	**+0.4**
	baz=1.0						
NSTT				*e*S	**Sb**	**05 06 46.5**	**+0.7**
	baz=1.0						
CHN8	**Yiju**	**0.83**	**237**	*e*P	**Pb**	**05 06 34.4**	**-0.3**
	baz=237						
CHN8				*e*S	**Sb**	**05 06 47.0**	**+1.3**
	baz=237						
LIOB	**Emei**	**0.84**	**3**	*e*P	**Pb**	**05 06 35.3**	**+0.2**
	baz=1.0						
LIOB				*e*S	**Sb**	**05 06 47.1**	**+0.9**
	baz=1.0						
SLGT	**Liugui**	**0.86**	**200**	*e*P	**Pb**	**05 06 35.3**	**0.0**
	baz=201						
SLGT				*e*S	**Sb**	**05 06 47.8**	**+1.3**
	baz=201						
CHN3	**Shinhua**	**0.91**	**218**	*e*P	**Pb**	**05 06 36.3**	**+0.2**
	baz=218						
NDT	**Datong Townshi**	**0.94**	**32**	*e*P	**Pb**	**05 06 36.3**	**-0.4**
	baz=31						
NDT				*e*S	**Sb**	**05 06 50.1**	**+1.1**
	baz=31						
NSK	**Sanguang**	**0.94**	**22**	*e*P	**Pb**	**05 06 36.3**	**-0.4**
	baz=21						
NSK				*e*S	**Sb**	**05 06 50.2**	**+1.1**
	baz=21						
YHNB	**Yeheng**	**0.94**	**23**	*e*P	**Pg**	**05 06 36.2**	**-0.8**
	baz=22						
YHNB				*e*S	**Sb**	**05 06 49.8**	**+0.7**
	baz=22						
ENA	**Nanau**	**0.94**	**48**	*e*P	**Pb**	**05 06 36.5**	**-0.3**
	baz=48						
ENA				*e*S	**Sb**	**05 06 49.8**	**+0.8**
	baz=48						
SCLT	**Jiali**	**0.94**	**229**	*e*P	**Pb**	**05 06 36.5**	**-0.3**
	baz=229						
TWG	**Pinlang**	**0.98**	**174**	*e*P	**Pb**	**05 06 37.4**	**0.0**
	baz=174						
TWG				*e*S	**Sb**	**05 06 51.3**	**+1.3**
	baz=174						
TWGBT	**Beinan**	**0.98**	**174**	*e*P	**Pb**	**05 06 37.5**	**0.0**
	baz=174						
TWGBT				*e*S	**Sb**	**05 06 51.0**	**+0.8**
	baz=174						
NWLT	**Wulai**	**1.09**	**27**	*e*P	**Pb**	**05 06 39.0**	**-0.3**
	baz=25						
NWLT				*e*S	**Sn**	**05 06 54.4**	**+0.2**
	baz=25						
SSD	**Sandimen**	**1.09**	**196**	*e*P	**Pn**	**05 06 39.5**	**+0.1**
	baz=196						
SSD				*e*S	**Sn**	**05 06 54.9**	**+0.7**
	baz=196						
TWM1	**Shoushan**	**1.09**	**207**	*e*P	**Pg**	**05 06 38.8**	**-1.0**
	baz=207						
TWE	**Neicheng**	**1.12**	**35**	*e*P	**Pb**	**05 06 39.7**	**0.0**
	baz=34						
TWE				*e*S	**Sn**	**05 06 55.4**	**+0.6**
	baz=34						
SLBB	**Yuanshan**	**1.13**	**33**	*e*S	**Sn**	**05 06 56.8**	**+1.6**
	baz=32						
TWC	**Suao**	**1.14**	**45**	*e*P	**Pb**	**05 06 40.0**	**-0.1**
	baz=44						
TWC				*e*S	**Sn**	**05 06 55.9**	**+0.5**
	baz=44						
SGLT	**Jiouru**	**1.16**	**202**	*e*P	**Pb**	**05 06 40.4**	**0.0**
	baz=202						
ECL	**Taimali**	**1.20**	**181**	*e*P	**Pg**	**05 06 39.9**	**-1.9**
	baz=181						
MASBT	**Mashibuluo**	**1.22**	**195**	*e*P	**Pn**	**05 06 41.7**	**+0.5**
	baz=195						
MASBT				*e*S	**Sn**	**05 06 58.4**	**+1.0**
	baz=195						
TATO	**Taipei**	**1.26**	**22**	*e*P	**Pg**	**05 06 42.1**	**-0.9**
	baz=21						
NHDH	**Xindian Distri**	**1.26**	**24**	*e*P	**Pn**	**05 06 41.9**	**+0.1**
	baz=23						
EOS1	**EOS1**	**1.30**	**55**	*e*P	**Pg**	**05 06 43.2**	**-0.5**
	baz=54						
NTC	**Toucheng**	**1.31**	**37**	*e*P	**Pg**	**05 06 42.9**	**-1.1**
	baz=36						
WDGT	**Dungji**	**1.31**	**246**	*e*P	**Pn**	**05 06 41.6**	**-0.8**
	baz=245						
WDGT				*e*S	**Sg**	**05 07 00.3**	**-0.9**
	baz=245						
PNG	**Penghu**	**1.32**	**260**	*e*P	**Pn**	**05 06 41.5**	**-1.0**
	baz=259						
PNG				*e*S	**Sb**	**05 06 60.0**	**+0.3**
	baz=259						
SSPT	**Xinbi**	**1.36**	**196**	*e*P	**Pn**	**05 06 43.5**	**+0.4**
	baz=196						
TIPB	**Shuangxi**	**1.41**	**34**	*e*P	**Pg**	**05 06 44.6**	**-1.2**
	baz=33						
TIPB				*e*S	**Sg**	**05 07 03.4**	**-0.7**
	baz=33						
EAST	**Anshuo**	**1.42**	**184**	*e*P	**Pn**	**05 06 44.2**	**+0.3**
	baz=184						
YM01	**YM01**	**1.45**	**22**	*e*P	**Pn**	**05 06 44.5**	**+0.2**
	baz=21						
YM01				*e*S	**Sb**	**05 07 03.4**	**-0.2**
	baz=21						
SCZT	**Fangliau**	**1.46**	**193**	*e*P	**Pb**	**05 06 45.1**	**-0.4**
	baz=192						
SCZT				*e*S	**Sg**	**05 07 05.3**	**-0.5**
	baz=192						
YM05	**YM05**	**1.46**	**22**	*e*P	**Pn**	**05 06 44.7**	**+0.1**
	baz=21						
YM05				*e*S	**Sn**	**05 07 04.2**	**+0.7**
	baz=21						
NWF	**Wu-fen Shan**	**1.47**	**30**	*e*P	**Pg**	**05 06 46.6**	**-0.4**
	baz=29						
YM11	**YM11**	**1.47**	**22**	*e*P	**Pn**	**05 06 44.9**	**+0.3**
	baz=21						
ANP	**Anpu**	**1.47**	**20**	*e*P	**Pn**	**05 06 45.0**	**+0.4**
	baz=19						
YM07	**YM07**	**1.49**	**23**	*e*P	**Pn**	**05 06 45.1**	**+0.1**
	baz=22						
VCHM	**Qimei**	**1.53**	**248**	*e*P	**Pn**	**05 06 44.8**	**-0.6**
	baz=247						
VWUC	**VWUC**	**1.82**	**311**	*e*P	**Pn**	**05 06 47.8**	**-1.7**
	baz=310						
YOJ	**Yonaguni jima**	**1.98**	**70**	*e*P	**Pn**	**05 06 52.4**	**+0.8**
	baz=70						
YOJ	**Yonaguni jima**	**1.98**	**70**	P	**Pn**	**05 06 52.4**	**+0.8**
PTTC	**Pingtan**	**2.01**	**327**	*e*P	**Pn**	**05 06 50.6**	**-1.5**
	baz=326						
KNM	**Kinmen**	**2.40**	**285**	*e*P	**Pn**	**05 06 59.0**	**+1.6**
	baz=283						
KNMB	**Chin-men Tao**	**2.45**	**286**	*e*P	**Pn**	**05 06 56.8**	**-1.2**
	baz=285						
MATB	**Ma-tsu**	**2.52**	**339**	*e*P	**Pn**	**05 06 57.5**	**-1.6**
	baz=338						
HATJ	**Hateruma jima**	**2.61**	**84**	P	**Pn**	**05 07 01.0**	**+0.7**
HATJ				*e*S	**Sn**	**05 07 33.4**	**+1.7**
JKRS	**Kuro-shima**	**2.81**	**80**	P	**Pn**	**05 07 04.4**	**+1.3**
JKRS				S	**Sn**	**05 07 39.7**	**+3.0**
LYJJ	**Jianjiangzhen**	**2.95**	**338**	*e*P	**Pn**	**05 07 03.1**	**-1.8**
	baz=337						
JIJ	**Ishigaki jima**	**2.96**	**78**	P	**Pn**	**05 07 05.5**	**+0.5**
JIJ				*e*S	**Sn**	**05 07 40.2**	**0.0**
JISG	**Ishigakijimahi**	**3.15**	**75**	P	**Pn**	**05 07 08.1**	**+0.4**
JISG				*e*S	**Sn**	**05 07 44.4**	**-0.7**
JTJ	**Tarama**	**3.51**	**75**	P	**Pn**	**05 07 13.7**	**+1.0**
JTJ				S	**Sn**	**05 07 58.3**	**+4.4**

WEL 03 05:22:12.4±1.0, 35°S±16°×18°0W±1°7, h144km±46km, M4.1/20, MLv4.1/20, Error ellipse: s-maj=0.0km s-min=0.0km az=127.6, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**3.10**	**211**	P	Pn	05 23 00.2	-0.6
PUZ				S	Sn	05 23 39.5	+1.3
RUGZ	**Raukumara Rang**	**3.28**	**219**	P	Pn	05 23 02.8	-0.4
RUGZ				S	Sn	05 23 41.8	-0.7
TWGZ	**Tauwhareparae**	**3.31**	**213**	P	Pn	05 23 03.2	-0.3
TWGZ				S	Sn	05 23 45.3	+2.3
CNGZ	**Carnagh Statio**	**3.47**	**208**	P	Pn	05 23 05.6	0.0
TKGZ	**Te Karaka**	**3.58**	**212**	P	Pn	05 23 07.1	+0.2
TKGZ				S	Sn	05 23 49.7	+0.4
MWZ	**Matawai**	**3.64**	**216**	P	Pn	05 23 06.9	-0.9
URZ	**Urewera**	**3.80**	**221**	P	Pn	05 23 08.8	-1.0
URZ				S	Sn	05 23 52.3	-2.0
RIGZ	**Rimuhau**	**3.84**	**211**	P	Pn	05 23 10.5	+0.1
RIGZ				S	Sn	05 23 56.7	+1.3
EDRZ	**Edgecumbe**	**3.90**	**226**	P	Pn	05 23 12.8	+1.6
PRGZ	**Paritu Road**	**3.98**	**208**	P	Pn	05 23 11.5	-0.6
PRGZ				S	Sn	05 23 59.1	+0.4
SNGZ	**Shannon Statio**	**4.09**	**214**	P	Pn	05 23 13.9	+0.3
SNGZ				S	Sn	05 24 02.7	+1.4
OMRZ	**Omania**	**4.12**	**228**	P	Pn	05 23 14.0	0.0
TARZ	**Mount Tarawera**	**4.12**	**226**	P	Pn	05 23 17.4	+3.2
RTZ	**Ruatahuna**	**4.13**	**219**	P	Pn	05 23 13.8	-0.4
RTZ				S	Sn	05 24 01.6	-0.8
MUGZ	**Murupara**	**4.14**	**222**	P	Pn	05 23 14.0	-0.3
MUGZ				S	Sn	05 24 01.4	-1.0
KNZ	**Kokohu**	**4.14**	**209**	P	Pn	05 23 13.4	-0.9
KNZ				S	Sn	05 24 01.9	-0.6
MHGZ	**Mahia Peninsul**	**4.17**	**206**	P	Pn	05 23 13.9	-0.8
MHGZ				S	Sn	05 24 03.8	+0.6
RAHZ	**Arahi**	**4.31**	**215**	P	Pn	05 23 17.0	+0.4
RAHZ				S	Sn	05 24 07.5	+0.9
MTHZ	**Maungataniwha**	**4.38**	**218**	P	Pn	05 23 17.5	-0.1
MTHZ				S	Sn	05 24 10.5	+2.3
ALRZ	**Allen Road**	**4.44**	**224**	P	Pn	05 23 19.0	+0.8
NMHZ	**Naumai**	**4.59**	**216**	P	Pn	05 23 21.2	+0.9
ARHZ	**Aropaoanui**	**4.63**	**213**	P	Pn	05 23 20.9	+0.1
BKZ	**Black Stump Fm**	**4.80**	**218**	P	Pn	05 23 23.0	0.0
MCHZ	**McNeill Hill**	**4.92**	**214**	P	Pn	05 23 24.8	+0.2
RATZ	**Rangitukua**	**4.97**	**225**	P	Pn	05 23 24.7	-0.6
KAHZ	**Kahuranaki**	**5.13**	**211**	P	Pn	05 23 26.1	-1.3
KRVZ	**Karewarewa**	**5.20**	**224**	P	Pn	05 23 29.8	+1.3
WTVZ	**West Tongariro**	**5.25**	**224**	P	Pn	05 23 28.8	-0.2
NGZ	**Ngauruhoe**	**5.28**	**223**	P	Pn	05 23 31.5	+2.0
TUVZ	**Tukino**	**5.31**	**222**	P	Pn	05 23 31.5	+1.5
MOVZ	**Moawhango**	**5.36**	**221**	P	Pn	05 23 30.7	+0.2
FWVZ	**Far West T-bar**	**5.36**	**223**	P	Pn	05 23 32.5	+1.8
PKVZ	**Pokaka**	**5.50**	**224**	P	Pn	05 23 34.7	+2.3
VRZ	**Vera Road**	**5.74**	**228**	P	Pn	05 23 38.6	+3.1

*NEIC **03** 05:27:05.0±2.9, 7°51N×124°77E, h10km, mb4.5/21, Error ellipse: s-maj=19.3km s-min=9.9km az=69.0*
NEIC Felt [II PIVS] at Cagayan de Oro and Cotabato and [I PIVS] at Davao.
*IDC **03** 05:27:06.0±1.1, 7°17N×124°61E, h0km, mb4.1/6, mb1 4.3/6, mb1mx3.9/40, mbtmp4.1/6, MS3.0/3, Ms1 3.0/3, ms1mx2.7/41, Error ellipse: s-maj=21.2km s-min=12.3km az=4.0*
*MAN **03** 05:27:07.8, 7°26N×124°75E, h5km, mb5.3, ML4.3, MS4.5*
MAN INTENSITY III - CARMEN AND MATALAM NORTH COTABATO; INTENSITY II - COTABATO CITY; CAGAYAN DE ORO CITY; INTENSITY I - DAVAO CITY.
*ISCJB **03** 05:27:09.4±0.3, 7°51N±0°05×124°98E±0°05, h66km±4km, mb4.3/24, Error ellipse: s-maj=10.2km s-min=4.9km az=135.8*

ISC 03 05:27:09.9±1.0, 7°35N±0°05×124°87E±0°04, h43km±11km, n46, σ2s22/47, mb4.3/24, 4C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.56**	**20**	*e*P	**Pn**	**05 27 19.7**	**-1.9**
BUKP				*e*S	**Sn**	**05 27 29.2**	**-0.7**
DMPH	**Davao City--Mi**	**0.69**	**113**⇑	*e*P	**Pn**	**05 27 22.5**	**-0.7**
DMPH				*e*S	**Sn**	**05 27 34.9**	**+2.1**
DAV	**Davao City (W)**	**0.76**	**111**	Pg	**Pn**	**05 27 24.8**	**+0.7**
	575nm,0.3s,baz=254,slow=5.8,SNR=23						
DAV				Lg	Lg	05 27 38.0	
	1μm,0.3s,baz=135,slow=19,SNR=69						
DAV	**Davao City (W)**	**0.76**	**111**	*e*Pn	**Pn**	**05 27 24.6**	**+0.4**
DAV				*e*Sg	**Sn**	**05 27 35.0**	**+0.5**
SKMP	**Bagumbayan, Su**	**0.89**	**201**	*e*P	**Pn**	**05 27 23.4**	**-2.5**
CGP	**Cagayan de Oro**	**1.11**	**351**⇑	*i*P	**Pn**	**05 27 28.4**	**-0.6**
CGP				*i* S	**Sn**	**05 27 43.1**	**-0.1**
MATI	**Mati**	**1.43**	**106**	*e*P	**Pn**	**05 27 34.8**	**+1.4**
DDMP	**Don Marcelino,**	**1.49**	**146**	*e*P	**Pn**	**05 27 35.4**	**+1.2**
PAGZ	**Pagadian**	**1.56**	**289**	*e*P	**Pn**	**05 27 34.1**	**-0.9**
BUTP	**Butuan**	**1.77**	**25**	*e*P	**Pn**	**05 27 41.4**	**+3.3**
BUTP				*e*S	Sn	05 28 09.8	+10
DCPH	**Dipolog City**	**1.94**	**309**⇑	*e*P	Pn	05 27 44.9	+4.6
DCPH				*e*S	**Sn**	**05 28 04.6**	**+1.1**
IPIL	**Ipil**	**2.32**	**281**	*e*P	**Pn**	**05 27 45.6**	**0.0**
IPIL				*e*S	**Sn**	**05 28 15.9**	**+3.1**
SNPH	**Sibulan**	**2.56**	**321**⇑	*e*P	**Pn**	**05 27 52.2**	**+3.4**
SNPH				*i* S	**Sn**	**05 28 24.9**	**+6.1**
GUIM	**Jordan**	**3.96**	**326**	*e*P	Pn	05 28 12.1	+4.0
LUWI	**Luwuk**	**8.59**	**194**	*e*Pn	**Pn**	**05 29 10.3**	**-1.5**
JAY	**Jayapura**	**18.59**	**121**	LR	LR	05 36 57.0	
	comp=Z,44nm,21.4s,baz=356,slow=32						
GUMO	**Guam**	**20.61**	**71**	LR	LR	05 40 41.0	
	comp=Z,14nm,19.2s,baz=190,slow=39						
MTN	**Manton Dam**	**21.00**	**163**	*e*P	**P**	**05 31 52.2**	**+2.3**
	52nm,1.4s						
IPM	**Ipoh**	**23.89**	**264**	*e*P	**P**	**05 32 21.6**	**+1.8**
	28nm,1.4s						
FITZ	**Fitzroy Crossi**	**25.30**	**178**	P	**P**	**05 32 31.9**	**-0.6**
	2.3nm,0.6s,baz=11,slow=8.9,SNR=5.0						
FITZ	**Fitzroy Crossi**	**25.30**	**178**	*e*P	**P**	**05 32 33.4**	**+0.8**
	20nm,1.3s						
PMG	**Port Moresby**	**27.75**	**127**	*e*P	**P**	**05 32 54.8**	**0.0**
	15nm,0.9s						
WR1	**Warramunga Arr**	**28.68**	**161**	*e*P	**P**	**05 33 04.1**	**+1.1**
WRA	**Warramunga Arr**	**28.68**	**161**	P	**P**	**05 33 04.1**	**+1.1**
	3.7nm,0.7s,baz=341,slow=9.9,SNR=7.5						
WB2	**Warramunga Arr**	**28.68**	**161**	*e*P	**P**	**05 33 03.6**	**+0.6**
	8.0nm,1.0s						
PSA00	**Pilbara Seismi**	**29.16**	**190**	*e*P	**P**	**05 33 08.4**	**+1.2**
	15nm,1.2s						
ASAR	**Alice Springs**	**32.06**	**164**	P	**P**	**05 33 33.8**	**+0.8**
	1.4nm,0.6s,baz=343,slow=6.8,SNR=14						
USA0B	**Ussuriysk Arra**	**37.23**	**8**	*e*P	**P**	**05 34 13.1**	**-4.1**
	5.0nm,1.0s						
FORT	**Forrest**	**38.03**	**176**	*e*P	**P**	**05 34 24.0**	**-0.2**
	16nm,0.8s						
LSA	**Lhasa**	**38.70**	**309**	*e*P	P	05 34 25.3	-5.1
	2.9nm,0.7s						
BBOO	**Buckleboo**	**41.33**	**166**	*e*P	**P**	**05 34 47.5**	**-4.2**
	17nm,0.6s						
STKA	**Stephens Creek**	**42.15**	**159**	P	**P**	**05 35 00.3**	**+2.0**
	10nm,0.7s,baz=345,slow=9.1,SNR=21						
STKA	**Stephens Creek**	**42.15**	**159**	*e*P	**P**	**05 34 59.4**	**+1.1**
	2.5nm,0.8s						
YSS	**Yuzh-Sakhalins**	**42.34**	**18**	*e*P	**P**	**05 34 58.1**	**-1.5**
	27nm,1.1s						
DZM	**Mont Dzumac**	**50.15**	**127**	*e*P	**P**	**05 35 59.5**	**-2.0**
	30nm,1.3s						
MK31	**Makanchi Array**	**53.55**	**325**	*e*P	**P**	**05 36 23.3**	**-3.2**
	1.2nm,0.9s						
MK32	**Makanchi Array**	**53.55**	**325**	*e*P	**P**	**05 36 29.7**	**+3.3**
MKAR	**Makanchi Array**	**53.55**	**325**	P	**P**	**05 36 29.7**	**+3.3**
	1.0nm,0.7s,baz=118,slow=8.6,SNR=5.8						
MAKZ	**Makanchi**	**53.74**	**325**	*e*P	**P**	**05 36 26.8**	**-1.0**
	2.3nm,1.0s						
AAK	**Ala-Archa**	**56.46**	**317**	*e*P	**P**	**05 36 45.6**	**-2.1**
	1.3nm,0.5s						
ZAA0	**Zalesovo Array**	**56.54**	**333**	*e*P	**P**	**05 36 44.6**	**-3.3**
	23nm,1.2s						
KK31	**Karatay Array**	**59.35**	**316**	*e*P	**P**	**05 37 06.7**	**-1.1**
	2.7nm,1.2s						
KKAR	**Karatay Array**	**59.35**	**316**	*e*P	**P**	**05 37 07.2**	**-0.7**
	2.7nm,1.2s						
BRVK	**Borovoye**	**63.37**	**327**	*e*P	**P**	**05 37 33.0**	**-1.8**
	4.0nm,1.2s						
GEYT	**Alibeck**	**67.21**	**308**	LR	LR	06 12 07.3	
	comp=Z,26nm,18.1s,baz=290,slow=40						
ILAR	**Eielson Array**	**82.66**	**26**	P	**P**	**05 39 31.2**	**+2.6**
	0.3nm,0.7s,baz=241,slow=5.0,SNR=3.5						

*NEIC **03** 05:48:01.8±0.0, 19°29N×68°10W, h99km, MD3.4(RSPR), After RSPR.*

RSPR 03 05:48:01.8, 19°29N×68°10W, h99km±4km, MD3.4/14, 9C-4D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.82**	**199**⇓	*e*P	Pn	05 48 15.9	-4.4
PCDR	**Punta Cana, DR**	**0.82**	**199**	*e*S	Sn	05 48 25.0	-9.1
PCDR	**Punta Cana, DR**	**0.82**	**199**	*e*Pn	Pn	05 48 16.1	-4.1
PCDR				*e*Sn	Sn	05 48 25.7	-8.4
AGPR	**Aguadilla, PR**	**1.25**	**131**⇑	*e*P	Pn	05 48 24.2	-0.7
AGP	**Aguadilla**	**1.27**	**134**	*e*Pn	Pn	05 48 22.2	-3.0
AGP				*e*Sn	Sn	05 48 38.4	-4.4
MPR	**Mayaguez**	**1.41**	**140**	*e*Pn	Pn	05 48 24.7	-2.2
MPR				*e*Sn	Sn	05 48 44.7	-1.1
AOPR	**Arecibo Observ**	**1.59**	**126**⇑	*e*P	Pn	05 48 28.5	-0.5
AOPR	**Arecibo Observ**	**1.59**	**126**	*e*S	Sn	05 48 49.9	+0.1
AOPR	**Arecibo Observ**	**1.59**	**126**	*e*Pn	Pn	05 48 27.7	-1.4
AOPR				*e*Sn	Sn	05 48 47.1	-2.7
CRPR	**Cabo Rojo, PR**	**1.59**	**144**⇑	*e*P	Pn	05 48 29.0	0.0
CRPR	**Cabo Rojo, PR**	**1.59**	**144**	*e*S	Sn	05 48 49.7	-0.1
CRPR	**Cabo Rojo, P

CDVI	**St. Croix**	**3.52 115**	*e*Pn	Pn	05 48 57.3 +2.9
CDVI			*e*Sn	Sn	05 49 31.1 -4.1

ISCJB ***03*** *05:50:50.5±1.1, 17.°5S±0.°4×178.°3W±0.°2, h550km, mb4.0/9, Error ellipse: s-maj=56.3km s-min=14.3km az=153.0*
IDC ***03*** *05:50:55.3±8.3, 17.°68S×178.°32W, h602km±108km, mb3.5/9, mb1 3.7/10, mb1mx3.2/40, mbtmp4.5/10, Error ellipse: s-maj=53.0km s-min=36.1km az=150.0*
ISC 03 05:50:51.2±1.3, 17.°6S±0.°4×178.°2W±0.°2, h550km, n10, σ0°79/10, mb4.5/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.10**	**250**	P	**P**	**05 54 02.1**	**+0.3**
	0.4nm,0.3s,baz=336,slow=18,SNR=4.6						
CTA	**Charters Tower**	**33.68**	**260**	P	**P**	**05 56 47.2**	**+0.1**
	6.5nm,0.6s,baz=90,slow=11,SNR=11						
STKA	**Stephens Creek**	**38.93**	**241**	P	**P**	**05 57 30.4**	**+0.1**
	6.3nm,0.5s,baz=89,slow=10.0,SNR=23						
JAY	**Jayapura**	**43.00**	**286**	P	**P**	**05 58 03.8**	**+1.0**
	8.8nm,0.6s,baz=161,slow=7.7,SNR=4.5						
WRA	**Warramunga Arr**	**44.87**	**259**	P	**P**	**05 58 16.2**	**-1.0**
	4.9nm,0.3s,baz=86,slow=8.5,SNR=74						
ASAR	**Alice Springs**	**45.05**	**254**	P	**P**	**05 58 17.9**	**-0.6**
	23nm,0.5s,baz=86,slow=8.7,SNR=292						
NVAR	**Mina Array Bea**	**79.08**	**44**	P	**P**	**06 01 59.4**	**+0.2**
	1.3nm,0.7s,baz=229,slow=7.7,SNR=5.2						
ILAR	**Eielson Array**	**85.55**	**13**	P	**P**	**06 02 29.9**	**-1.1**
	0.2nm,0.4s,baz=221,slow=4.4,SNR=4.7						
TXAR	**Lajitas Array**	**85.68**	**58**	P	**P**	**06 02 33.4**	**+0.8**
	1.6nm,0.7s,baz=198,slow=7.6,SNR=4.6						
PDAR	**Pinedale Array**	**87.01**	**43**	P	**P**	**06 02 38.6**	**-0.1**
	0.6nm,0.6s,baz=221,slow=3.8,SNR=7.3						

NIED ***03*** *05:56:00, 36.°10N×140.°10E, h68km, Mw4.1 Best double couple: M0 1.49000×10^15 NP1:φs197.00000°, δ23.00000°, λ111.00000°. NP2:φs354.00000°, δ68.00000°, λ81.00000°.*
ISCJB ***03*** *05:56:10.2±0.4, 35.°93N±0.°03×140.°16E±0.°05, h76km±3km, mb4.0/13, Error ellipse: s-maj=7.3km s-min=5.3km az=175.6*
IDC ***03*** *05:56:12.3±1.6, 35.°94N×140.°13E, h79km±13km, mb3.7/12, mb1 3.8/17, mb1mx3.7/42, mbtmp4.1/17, MS2.6/4, Ms1 2.6/4, ms1mx2.4/32, Error ellipse: s-maj=16.2km s-min=11.7km az=79.0*
JMA ***03*** *05:56:12.3±0.1, 35.°99N×140.°08E, h61km±1km, M4.3 Broadband fault plane solution: P waves. NP1: φs352.00000°, δ73.00000°, λ73.00000°. NP2: φs217.00000°, δ24.00000°, λ133.00000°. Principal axes: T Plg59.0000°, Azm238.0000°; N Plg16.0000°, Azm357.0000°; P Plg26.0000°, Azm95.0000°;*
JMA Felt II J1.
ISC 03 05:56:11.5±0.8, 35.°96N±0.°05×140.°14E±0.°06, h71km±6km, n38, σ0°98/43, mb4.0/13, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.28**	**9**	⇑P	**Pn**	**05 56 22.3**	**-0.2**
JYT				S	**Sn**	**05 56 29.7**	**-1.0**
JIHU	**Itakohorinouch**	**0.31**	**88**	P	**Pn**	**05 56 23.5**	**+0.7**
TOK	**Tokyo**	**0.41**	**229**	P	**Pn**	**05 56 24.7**	**+1.2**
JAG	**Ashikaga**	**0.73**	**310**	⇓P	**Pn**	**05 56 26.5**	**-0.2**
JAG				S	**Sn**	**05 56 36.9**	**-1.1**
JRY	**Ryogami san**	**1.01**	**274**	⇓P	**Pn**	**05 56 30.0**	**-0.1**
JRY				S	**Sn**	**05 56 43.4**	**-0.6**
JKT	**Katashina**	**1.08**	**319**	⇓P	**Pn**	**05 56 30.9**	**-0.2**
JKT				S	**Sn**	**05 56 45.5**	**-0.3**
JOD2	**Odawara 2**	**1.10**	**231**	⇓P	**Pn**	**05 56 31.0**	**-0.3**
JOD2				S	**Sn**	**05 56 44.5**	**-1.6**
BSO3	**Boso 3**	**1.19**	**165**	P	**Pn**	**05 56 32.3**	**+0.2**
JIM2	**Oshima 3**	**1.36**	**205**	P	**Pn**	**05 56 34.0**	**-0.7**
JIM2				S	**Sn**	**05 56 51.0**	**-1.1**
JYN	**Shimob**	**1.38**	**251**	⇓P	**Pn**	**05 56 35.1**	**+0.2**
JYN				S	**Sn**	**05 56 51.8**	**-0.7**
MJAR	**Matsushiro Arr**	**1.67**	**291**	P	**Pn**	**05 56 38.7**	**0.0**
	26nm,0.3s,baz=98,slow=8.3,SNR=722						
MJAR				S	**Sn**	**05 56 59.8**	**+0.6**
	9.4nm,0.3s,baz=62,slow=20,SNR=11						
MJAR				LR	LR	05 57 28.3	
	comp=Z,195nm,20.6s,baz=145,slow=47						
MAT	**Matsushiro**	**1.67**	**291**	P	**Pn**	**05 56 39.3**	**+0.6**
MAT				S	**Sn**	**05 57 00.0**	**+0.7**
JHJ	**Hachijo jima 2**	**2.84**	**186**	P	**Pn**	**05 56 54.7**	**+0.1**
	81nm,0.3s,baz=72,slow=22,SNR=21						
JHJ				S	**Sn**	**05 57 25.4**	**-2.4**
	85nm,0.3s,baz=73,slow=19,SNR=11						
JHJ				LR	LR	05 57 35.1	
	comp=Z,33nm,20.3s,baz=268,slow=29						
JNU	**Nakatsue**	**8.15**	**252**	P	**Pn**	**05 58 07.4**	**+0.4**
	0.6nm,0.3s,baz=72,slow=8.4,SNR=3.7						
JNU				LR	LR	06 01 36.0	
	comp=Z,91nm,19.9s,baz=161,slow=40						
ASAJ	**Asahikawa**	**8.37**	**12**	P	**Pn**	**05 58 09.9**	**0.0**
	3.8nm,0.3s,baz=224,slow=11,SNR=6.5						
ASAJ				S	**Sn**	**05 59 41.8**	**-1.0**
	1.0nm,0.3s,baz=47,slow=34,SNR=3.4						
ASAJ				LR	LR	06 02 27.5	
	comp=Z,26nm,19.9s,baz=188,slow=45						
KSRS	**Korea Array**	**9.93**	**282**	P	**Pn**	**05 58 33.8**	**+2.6**
	0.5nm,0.3s,baz=97,slow=13,SNR=6.2						
KSRS				LR	LR	06 02 13.3	
	comp=Z,55nm,19.2s,baz=110,slow=36						
USRK	**Ussuriysk Ar.**	**10.33**	**325**	P	**Pn**	**05 58 39.3**	**+2.6**
	0.3nm,0.3s,baz=141,slow=13,SNR=8.2						
KLR	**Kul'dur**	**14.62**	**338**	P	**Pn**	**05 59 34.0**	**-0.4**
	0.3nm,0.3s,baz=178,slow=8.1,SNR=5.4						
H11N2	**WAKE ISLAND Hy**	**28.52**	**117**	T	T	06 32 19.6	
	baz=312,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**28.53**	**117**	T	T	06 32 27.5	
	baz=312,slow=75,SNR=9.5						
H11N3	**WAKE ISLAND Hy**	**28.54**	**117**	T	T	06 32 22.3	
	baz=312,slow=75,SNR=10.0						
H11S1	**WAKE ISLAND Hy**	**29.18**	**120**	T	T	06 33 09.9	
	baz=314,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**29.18**	**120**	T	T	06 33 11.1	
	baz=314,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**29.20**	**120**	T	T	06 33 12.1	
	baz=314,slow=76,SNR=11						
ZALV	**Zalesovo Beam**	**41.89**	**313**	P	**P**	**06 03 54.2**	**-0.3**
	2.9nm,0.6s,baz=96,slow=6.6,SNR=10						
MKAR	**Makanchi Array**	**43.83**	**303**	P	**P**	**06 04 10.3**	**-0.1**
	3.2nm,0.8s,baz=78,slow=7.5,SNR=5.8						
KURBB	**Kurchatov Arra**	**45.86**	**309**	P	**P**	**06 04 26.2**	**-0.3**
	2.8nm,0.4s,baz=81,slow=7.6,SNR=7.0						
ILAR	**Eielson Array**	**50.95**	**32**	P	**P**	**06 05 06.7**	**+1.3**
	0.5nm,0.6s,baz=270,slow=5.9,SNR=7.6						
INK	**Inuvik**	**55.81**	**27**	P	**P**	**06 05 42.1**	**+1.3**
	1.4nm,0.8s,baz=284,slow=8.3,SNR=2.7						
WRA	**Warramunga Arr**	**55.86**	**187**	P	**P**	**06 05 41.3**	**-0.5**
	1.5nm,0.3s,baz=360,slow=7.5,SNR=21						
ASAR	**Alice Springs**	**59.59**	**187**	P	**P**	**06 06 07.7**	**-0.2**
	0.6nm,0.8s,baz=14,slow=7.9,SNR=6.9						
ARCES	**ARCESS Array B**	**64.64**	**339**	P	**P**	**06 06 41.4**	**+0.2**
	0.4nm,0.3s,baz=52,slow=7.3,SNR=6.7						
STKA	**Stephens Creek**	**67.49**	**179**	P	**P**	**06 06 59.8**	**0.0**
	1.5nm,0.6s,baz=319,slow=13,SNR=3.5						
FINES	**FINESS Array B**	**69.29**	**332**	P	**P**	**06 07 10.2**	**-0.5**
	0.7nm,0.3s,baz=67,slow=5.2,SNR=7.4						
AKASG	**Malin Array Be**	**74.52**	**322**	P	**P**	**06 07 41.7**	**-0.6**
	1.1nm,0.6s,baz=49,slow=6.0,SNR=5.6						
NOA	**NORSAR Array B**	**74.78**	**337**	P	**P**	**06 07 43.5**	**-0.1**
	0.8nm,0.7s,baz=38,slow=6.0,SNR=3.4						
BRTR	**Keskin Array B**	**78.79**	**311**	P	**P**	**06 08 06.4**	**-0.4**
	0.8nm,0.6s,baz=36,slow=7.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	**117.34**	**313**	PKP	**PKPdf**	**06 14 48.0**	**-1.4**
	0.2nm,0.6s,baz=349,slow=2.9,SNR=2.5						

SOME ***03*** *06:02:50.7, 44.°70N×82.°15E, h20km*
NNC ***03*** *06:02:52.3±1.0, 44.°70N×82.°06E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=11.7km s-min=3.7km az=122.0*
ISC 03 06:02:48.4±3.2, 44.°55N±0.°07×82.°5E±0.°1, h12km±27km, n19, σ1°12/33, 4C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.98**	**265**	P	**Pn**	**06 03 22.9**	**+1.0**
	9.1nm,0.2s						
DJR				S	**Sn**	**06 03 46.1**	**-0.6**
	10nm,0.3s						
DJR	**Jarkent**	**1.98**	**265**	*e*P	**Pn**	**06 03 22.9**	**+1.0**
	2.0nm,0.2s						
DJR				*e*S	**Sn**	**06 03 46.1**	**-0.6**
	10nm,0.3s						
MK31	**Makanchi Array**	**2.25**	**356**	⇑Pn	**Pb**	**06 03 28.8**	**-0.1**
	6.3nm,0.3s,baz=188,slow=16,SNR=118						
MK31				⇑Sn	**Sb**	**06 03 56.8**	**+0.1**
	1.6nm,0.3s,baz=185,slow=26,SNR=18						
MAKZ	**Makanchi**	**2.29**	**350**	⇑Pn	**Pb**	**06 03 28.7**	**-1.0**
	4.1nm,0.5s						
MAKZ				⇓Sn	**Sb**	**06 03 56.4**	**-1.6**
	9.8nm,0.5s						
KAPS	**Kapalarasan**	**2.38**	**289**	Pg	**Pn**	**06 03 28.9**	**+1.6**
	3.7nm,0.3s						
KAPS				Lg	Lg	06 03 57.1	
	15nm,0.4s						
KAPS	**Kapalarasan**	**2.38**	**289**	⇓*i*P	**Pn**	**06 03 28.9**	**+1.6**
	3.7nm,0.3s						
KAPS				*e*S	**Sn**	**06 03 56.7**	**+0.3**
	14nm,0.3s						
PDGK	**Podgornoye**	**2.52**	**242**	Pg	**Pb**	**06 03 33.4**	**-0.2**
	1.9nm,0.1s						
PDGK				Lg	Lg	06 04 04.4	
	9.4nm,0.4s						
PDGK	**Podgornoye**	**2.52**	**242**	⇓Pn	**Pb**	**06 03 32.1**	**-1.6**
	1.2nm,0.4s						
PDGK				⇑Sn	**Sb**	**06 04 03.4**	**-1.3**
	13nm,0.5s						
SHLS	**Shalkode**	**2.63**	**239**	Pg	**Pn**	**06 03 32.0**	**+1.2**
	11nm,0.2s						
SHLS				Lg	Lg	06 04 02.1	
	22nm,0.3s						
SHLS	**Shalkode**	**2.63**	**239**	*e*P	**Pn**	**06 03 32.0**	**+1.2**
	10.0nm,0.3s						
SHLS				*e*S	**Sn**	**06 04 01.8**	**-0.9**
	22nm,0.3s						
UZB	**Uzynbulak**	**2.91**	**242**	Pg	**Pb**	**06 03 39.5**	**-0.8**
	2.5nm,0.2s						
UZB				Lg	Lg	06 04 14.8	
	4.6nm,0.3s						
UZB	**Uzynbulak**	**2.91**	**242**	*e*P	**Pb**	**06 03 39.5**	**-0.8**
	2.5nm,0.2s						
UZB				*e*S	**Sb**	**06 04 14.8**	**-1.1**
	4.6nm,0.3s						
KPKS	**Kokpek**	**2.99**	**250**	*e*P	**Pb**	**06 03 41.1**	**-0.5**
	11nm,0.1s						
KPKS				*e*S	**Sb**	**06 04 17.4**	**-0.7**
	34nm,0.3s						
SATY	**Saty**	**3.34**	**245**	Pg	**Pb**	**06 03 47.3**	**-0.5**
	4.0nm,0.2s						
SATY				Lg	Lg	06 04 27.9	
	20nm,0.3s						
SATY	**Saty**	**3.34**	**245**	*e*P	**Pb**	**06 03 47.3**	**-0.5**
	2.8nm,0.1s						
SATY				*e*S	**Sb**	**06 04 27.9**	**-0.5**
	20nm,0.3s						
KOTS	**Kotyrbulak**	**4.14**	**253**	*e*P	**Pb**	**06 04 01.8**	**+0.5**
	1.3nm,0.3s						
KOTS				*e*S	**Sb**	**06 04 52.6**	**+1.3**
	6.8nm,0.4s						
KTBS	**Karatobe**	**4.30**	**261**	*e*P	**Pb**	**06 04 02.6**	**-1.3**
	0.7nm,0.3s						
KTBS				*e*S	**Sb**	**06 04 54.1**	**-1.8**
	10nm,1.1s						
TNSS	**Tian-Shan**	**4.32**	**251**	*e*P	**Pb**	**06 04 05.3**	**+0.7**
	0.9nm,0.5s						
TNSS				*e*S	**Sb**	**06 04 59.0**	**+2.2**
	2.6nm,0.6s						
KUU	**Kurty**	**4.51**	**264**	*e*P	**Pb**	**06 04 06.8**	**-0.6**
	0.5nm,0.1s						
KUU				*e*S	**Sb**	**06 05 01.3**	**-0.4**
	3.6nm,0.3s						

NIED ***03*** *06:11:00, 45.°30N×151.°30E, h32km, Mw4.7 Best double couple: M0 1.39000×10^16 NP1:φs246.00000°, δ40.00000°, λ131.00000°. NP2:φs18.00000°, δ61.00000°, λ61.00000°.*
IDC ***03*** *06:11:28.2±0.4, 45.°42N×151.°04E, h0km, mb4.7/28, mb1 4.8/34, mb1mx4.8/36, mbtmp4.7/34, ML4.2/5, MS4.0/30, Ms1 4.0/30, ms1mx3.9/48, Error ellipse: s-maj=12.8km s-min=11.2km az=135.0*
JMA ***03*** *06:11:30.6±0.6, 45.°30N×151.°33E, h30km, M5.0*
ISCJB ***03*** *06:11:31.0±0.7, 45.°25N±0.°02×151.°08E±0.°02, h31km±5km, mb4.9/341, MS4.2/49, Error ellipse: s-maj=4.2km s-min=2.1km az=152.5*
BJI ***03*** *06:11:31.5±0.0, 45.°31N×151.°04E, h36km, mb5.2/67, mB5.0/44, Ms4.4/62, Ms7 4.2/56*
SKHL ***03*** *06:11:32.6±0.7, 45.°16N×151.°25E, h53km±6km, mb5.3/3, Ms4.5/7, msh4.5/1*
MOS ***03*** *06:11:33.3±0.9, 45.°39N×151.°01E, h46km, mb5.3/95, MS4.2/16, Error ellipse: s-maj=5.9km s-min=4.0km az=106.4*
NEIC ***03*** *06:11:34.2±1.6, 45.°31N×151.°08E, h42km±4km, mb4.9/263, Error ellipse: s-maj=15.1km s-min=10.9km az=140.0*
ISC 03 06:11:33.0±0.3, 45.°20N±0.°04×151.°17E±0.°04, h35km±2km, n779, σ1°44/830, mb5.0/361, MS4.3/51, 32C-33D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.34**	**272**	*e*PN	**Pn**	**06 12 08.2**	**-0.6**
KUR				*e*		06 12 34.1	
KUR				pmax	pmax		
	comp=N,991nm,0.3s						
KUR				pmax	pmax		
	comp=E,340nm,0.3s						
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				smax	smax		
	comp=N,11μm,1.5s						
KUR				smax	smax		
	comp=E,9μm,1.9s						
KUR				smax	smax		
	comp=N,5μm,0.5s						
KUR				smax	smax		
	comp=E,1μm,0.3s						
KUR				MLR	MLR		
	comp=Z,8μm,10.0s						
KUR	**Kuril'sk**	**2.34**	**272**	*i*P	**Pn**	**06 12 09.5**	**+0.7**
KUR				AMB	AMB	06 12 10.0	
	comp=Z,831nm,0.3s						
KUR				AMB	AMB	06 12 10.0	
	comp=Z,207nm,0.3s						
KUR				AMB	AMB	06 12 10.0	
	comp=Z,3μm,0.3s						
KUR				*i* S	**Sn**	**06 12 37.5**	**+1.2**
KUR				A	A	06 12 50.0	
	comp=Z,5μm,0.6s						
KUR				A	A	06 12 50.0	
	comp=Z,2μm,0.6s						
KUR				AMS	AMS	06 13 20.4	
	comp=Z,12μm,12.0s						
KUR				AMS	AMS	06 13 20.4	
	comp=Z,9μm,12.0s						
KUR				AMS	AMS	06 13 20.4	
	comp=Z,11μm,12.0s						
YUK	**Yuzh-Kuril'sk**	**3.97**	**255**	*d i*PN	**Pn**	**06 12 32.0**	**+0.8**
YUK				*i* S	**Sn**	**06 13 20.0**	**+3.5**
YUK				pmax	pmax		
	comp=N,618nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				pmax	pmax		
	comp=E,2μm,0.4s						
YUK				smax	smax		
	comp=E,6μm,0.6s						
YUK				smax	smax		
	comp=N,5μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**3.97**	**255**	*i* P	**Pn**	**06 12 32.0**	**+0.8**
YUK				AMB	AMB	06 12 36.0	
	comp=N,618nm,0.4s						
YUK				AMB	AMB	06 12 36.0	
	comp=N,2μm,0.4s						
YUK				AMB	AMB	06 12 36.0	
	comp=N,2μm,0.4s						
YUK				*i* S	**Sn**	**06 13 16.8**	**+0.3**
YUK				A	A	06 13 33.0	
	comp=N,5μm,0.7s						
YUK				A	A	06 13 33.0	
	comp=N,6μm,0.7s						
LAGR	**Lagunnoye**	**4.01**	**255**	⇑PN	**Pn**	**06 12 33.4**	**+1.6**
LAGR				*e*S	**Sn**	**06 13 18.9**	**+1.3**
LAGR				pmax	pmax		
	comp=N,329nm,0.3s						
LAGR				pmax	pmax		
	comp=E,165nm,0.3s						
LAGR				pmax	pmax		
	comp=Z,982nm,0.3s						
LAGR				smax	smax		
	comp=N,8μm,0.6s						
LAGR				smax	smax		
	comp=E,5μm,0.3s						
LAGR				MLR	MLR		
	comp=Z,12μm,13.0s						
LAGR	**Lagunnoye**	**4.01**	**255**	*i* P	**Pn**	**06 12 33.0**	**+1.2**
LAGR				AMB	AMB	06 12 35.0	
	comp=Z,329nm,0.3s						
LAGR				AMB	AMB	06 12 35.0	
	comp=Z,165nm,0.3s						
LAGR				AMB	AMB	06 12 35.0	
	comp=Z,982nm,0.3s						
LAGR				*e*S	**Sn**	**06 13 18.0**	**+0.4**
LAGR				A	A	06 13 34.0	
	comp=Z,8μm,0.6s						
LAGR				A	A	06 13 34.0	
	comp=Z,5μm,0.6s						
LAGR				AMS	AMS	06 13 58.0	
	comp=Z,12μm,13.0s						
GRPR	**Tuman**	**4.04**	**255**	*c i*PN	**Pn**	**06 12 32.8**	**+0.5**
GRPR				*i* S	**Sn**	**06 13 20.3**	**+2.0**
GRPR				pmax	pmax		
	comp=N,229nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,2μm,0.3s						
GRPR				pmax	pmax		
	comp=E,632nm,0.4s						
GRPR				smax	smax		
	comp=N,2μm,0.4s						
GRPR				smax	smax		
	comp=E,2μm,0.4s						
GRPR				MLR	MLR		
	comp=Z,3μm,11.0s						
GRPR	**Tuman**	**4.04**	**255**	*i* P	**Pn**	**06 12 32.0**	**-0.3**
GRPR				AMB	AMB	06 12 36.0	
	comp=Z,229nm,0.4s						
GRPR				AMB	AMB	06 12 36.0	
	comp=Z,632nm,0.4s						
GRPR				AMB	AMB	06 12 36.0	
	comp=Z,2μm,0.4s						
GRPR				*i* S	**Sn**	**06 13 18.3**	**0.0**
GRPR				A	A	06 13 29.0	
	comp=Z,2μm,0.4s						
GRPR				A	A	06 13 29.0	
	comp=Z,2μm,0.4s						
GRPR				AMS	AMS	06 13 47.0	
	comp=Z,3μm,11.0s						
GLVR	**Golovnino**	**4.30**	**252**	*c i*PN	**Pn**	**06 12 37.0**	**+1.2**
GLVR				*i* S	**Sn**	**06 13 29.1**	**+4.4**
GLVR				pmax	pmax		
	comp=Z,1μm,0.3s						
GLVR				pmax	pmax		
	comp=N,237nm,0.6s						
GLVR				pmax	pmax		
	comp=E,183nm,0.2s						
GLVR				smax	smax		
	comp=N,5μm,0.5s						
GLVR				smax	smax		
	comp=E,2μm,0.5s						
GLVR	**Golovnino**	**4.30**	**252**	*i* P	**Pn**	**06 12 37.0**	**+1.2**
GLVR				AMB	AMB	06 12 38.0	
	comp=E,1μm,0.3s						
GLVR				*i* S	**Sn**	**06 13 25.0**	**+0.3**
GLVR				A	A	06 13 50.0	
	comp=E,5μm,0.5s						
GLVR				A	A	06 13 50.0	
	comp=E,2μm,0.5s						
NEM2	**Nemuro 2**	**4.31**	**247**	P	**Pn**	**06 12 35.3**	**-0.6**
NEM2				*e*S	**Sn**	**06 13 22.4**	**-2.5**
JRA	**Rausu**	**4.50**	**256**	P	**Pn**	**06 12 40.2**	**+1.6**
JNK	**Nakash**	**4.90**	**253**	P	**Pn**	**06 12 44.9**	**+0.8**
JNK				*e*S	**Sn**	**06 13 39.2**	**-0.3**
JAK	**Akkeshi**	**5.16**	**247**	P	**Pn**	**06 12 47.1**	**-0.5**
JTKR	**Abashiri--Toko**	**5.33**	**259**	P	**Pn**	**06 12 51.6**	**+1.6**
JAR	**Ashorobuto**	**5.65**	**253**	P	**Pn**	**06 12 55.4**	**+1.1**
JAR				*e*S	**Sn**	**06 13 57.6**	**-0.3**
JMP	**Maruseppu**	**5.71**	**261**	P	**Pn**	**06 12 57.0**	**+1.9**
JOB	**Onbets**	**5.77**	**249**	P	**Pn**	**06 12 56.2**	**+0.3**
JOB				*e*S	**Sn**	**06 13 59.4**	**-1.4**
JSE	**Soyaes**	**6.09**	**271**	P	**Pn**	**06 13 03.1**	**+2.8**
YSS	**Yuzh-Sakhalins**	**6.11**	**290**	*e*Pn	**Pn**	**06 13 02.2**	**+1.6**
YSS				*e*Sn	**Sn**	**06 14 09.1**	**-0.3**
YSS	**Yuzh-Sakhalins**	**6.11**	**290**	⇓*e*PN	**Pn**	**06 13 02.7**	**+2.0**
YSS				*e*S	**Sn**	**06 14 09.8**	**+0.5**
YSS				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.11**	**290**	*i* P	**Pn**	**06 13 02.3**	**+1.6**
YSS				AMB	AMB	06 13 04.2	
	comp=Z,50nm,0.4s						
YSS				AMB	AMB	06 13 04.2	
	comp=Z,100nm,0.4s						
YSS				*e*S	**Sn**	**06 14 09.0**	**-0.3**
YSS				A	A	06 14 15.0	
	comp=Z,100nm,0.7s						
YSS				AMS	AMS	06 15 22.0	
	comp=Z,900nm,17.0s						
YSS				AMS	AMS	06 15 22.0	
	comp=Z,2μm,17.0s						
YSS				AMS	AMS	06 15 22.0	
	comp=Z,2μm,17.0s						
JKK2	**Kamakawa 2**	**6.17**	**261**	P	**Pn**	**06 13 03.6**	**+2.1**
JCH	**Churui**	**6.21**	**248**	P	**Pn**	**06 13 01.8**	**-0.2**
JCH				*e*S	**Sn**	**06 14 10.1**	**-1.6**
ASAJ	**Asahikawa**	**6.21**	**263**	Pn	**Pn**	**06 13 04.3**	**+2.2**
	comp=Z,33nm,0.3s,baz=83,slow=11,SNR=65						
ASAJ				Sn	Sn	06 14 29.3	+17
	comp=Z,5.6nm,0.3s,baz=30,slow=20,SNR=2.1						
ASAJ				LR	LR	06 15 32.3	
	comp=Z,2μm,21.4s,baz=94,slow=40						
ASAJ	**Asahikawa**	**6.21**	**263**	P	**Pn**	**06 13 04.5**	**+2.4**
SKR	**Severo-Kuril's**	**6.41**	**29**	*e*PN	**Pn**	**06 13 05.2**	**+0.5**
SKR				pmax	pmax		
	comp=Z,200nm,2.0s						
SKR				pmax	pmax		
	comp=Z,264nm,0.6s						
SKR				MLR	MLR		
	comp=Z,2μm,15.0s						
SKR	**Severo-Kuril's**	**6.41**	**29**	*e*P	**Pn**	**06 13 05.0**	**+0.2**
SKR				AMB	AMB	06 13 05.0	
	comp=Z,200nm,2.0s						
SKR				AMB	AMB	06 13 07.0	
	comp=Z,264nm,0.6s						
SKR				*e*S	**Sn**	**06 14 13.0**	**-3.6**
SKR				A	A	06 14 45.0	
	comp=Z,545nm,0.8s						
SKR				A	A	06 14 45.0	
	comp=Z,498nm,0.8s						
SKR				AMS	AMS	06 15 36.6	
	comp=Z,2μm,15.0s						
SKR				AMS	AMS	06 15 36.6	
	comp=Z,2μm,15.0s						
SKR				AMS	AMS	06 15 36.6	
	comp=Z,2μm,15.0s						
JFR	**Furan**	**6.50**	**255**	P	**Pn**	**06 13 07.5**	**+1.5**
JFR				*e*S	**Sn**	**06 14 21.3**	**+2.5**
JWK2	**Keihoku**	**6.55**	**274**	P	**Pn**	**06 13 10.5**	**+3.8**
JEM	**Erimo**	**6.63**	**244**	P	**Pn**	**06 13 08.8**	**+1.0**
ERM	**Erimo**	**6.63**	**244**	*e*Pn	**Pn**	**06 13 09.4**	**+1.6**
ERM				*e*Sn	**Sn**	**06 14 23.2**	**+1.1**
ERM	**Erimo**	**6.63**	**244**	*e*PN	**Pn**	**06 13 09.4**	**+1.6**
JAB	**Ashibetsu**	**6.64**	**258**	P	**Pn**	**06 13 10.5**	**+2.6**
JSS	**Shosan

UGL				eS	Sn	06 14 38.6	-0.4
UGL				A	A	06 14 47.0	
	comp=N,178nm,0.8s						
UGL				AMS	AMS	06 16 45.1	
	comp=N,1μm,14.0s						
UGL				AMS	AMS	06 16 45.1	
	comp=N,2μm,14.0s						
UGL				AMS	AMS	06 16 45.1	
	comp=N,3μm,14.0s						
JEW	**Eniwo**	**7.40**	**255**	P	**Pn**	**06 13 19.6**	**+1.3**
JNB	**Noboribetsu**	**7.82**	**253**	P	**Pn**	**06 13 24.1**	**0.0**
JNB				eS	**Sn**	**06 14 49.3**	**-2.0**
JSK	**Shakotan**	**7.90**	**260**	P	**Pn**	**06 13 29.2**	**+4.0**
TYV	**Tymovskoe**	**8.04**	**318**	ePN	**Pn**	**06 13 28.6**	**+1.5**
TYV				eS	**Sn**	**06 14 59.1**	**+2.4**
TYV				pmax	pmax		
	comp=Z,62nm,0.6s						
TYV				pmax	pmax		
	comp=Z,300nm,2.9s						
TYV				smax	smax		
	comp=E,88nm,0.8s						
TYV				smax	smax		
	comp=N,100nm,2.2s						
TYV				MLR	MLR		
	comp=E,3μm,17.0s						
TYV				MLR	MLR		
	comp=Z,2μm,17.0s						
TYV	**Tymovskoe**	**8.04**	**318**	eP	**Pn**	**06 13 28.6**	**+1.5**
TYV				AMB	AMB	06 13 30.2	
	comp=Z,61nm,0.6s						
TYV				AMB	AMB	06 13 32.1	
	comp=Z,300nm,3.0s						
TYV				eS	**Sn**	**06 14 56.0**	**-0.7**
TYV				A	A	06 15 00.0	
	comp=Z,87nm,0.8s						
TYV				A	A	06 15 01.4	
	comp=Z,100nm,2.0s						
TYV				AMS	AMS	06 16 33.5	
	comp=Z,2μm,16.0s						
TYV				AMS	AMS	06 16 33.5	
	comp=Z,3μm,16.0s						
TYV				AMS	AMS	06 16 33.5	
	comp=Z,2μm,16.0s						
JKB	**Kayabe**	**8.08**	**249**	P	**Pn**	**06 13 26.9**	**-0.7**
JKB				eS	**Sn**	**06 14 51.1**	**-6.5**
JYM2	**Yakumo 2**	**8.42**	**252**	P	**Pn**	**06 13 32.1**	**-0.2**
JANG	**Nango**	**8.58**	**239**	P	**Pn**	**06 13 31.1**	**-3.5**
JANG				eS	Sn	06 15 01.2	-8.9
JTM	**Tenmabayashi**	**8.62**	**243**	P	**Pn**	**06 13 33.6**	**-1.5**
JTM				eS	**Sn**	**06 15 02.5**	**-8.5**
JTH	**Tanohata**	**8.65**	**236**	P	**Pn**	**06 13 32.4**	**-3.1**
JTH				eS	Sn	06 15 02.7	-9.0
JSR	**Shiriuchi**	**8.65**	**249**	P	**Pn**	**06 13 34.6**	**-0.9**
PEA0B	**Petropavlovsk-**	**8.99**	**26**	ePn	**Pn**	**06 13 40.9**	**+0.8**
PEA0B				eSn	**Sn**	**06 15 18.1**	**-2.0**
PETK	**Petropavlovsk-**	**8.99**	**26**	Pn	**Pn**	**06 13 39.9**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=181,slow=9.0,SNR=21						
PETK				Sn	**Sn**	**06 15 26.0**	**+5.9**
	baz=178,slow=18,SNR=2.1						
PETK				LR	LR	06 17 20.3	
	comp=Z,776nm,18.3s,baz=217,slow=40						
PEA1	**Petropavlovsk-**	**9.00**	**26**	ePn	**Pn**	**06 13 39.9**	**-0.3**
PEA1				eSn	**Sn**	**06 15 26.0**	**+5.8**
JOSM	**Okushiri--Mats**	**9.04**	**254**	P	**Pn**	**06 13 40.2**	**-0.6**
PET	**Petropavlovsk**	**9.23**	**29**	ePn	**Pn**	**06 13 45.5**	**+2.0**
PET	**Petropavlovsk**	**9.23**	**29**	ePN	**Pn**	**06 13 45.5**	**+2.0**
PET	**Petropavlovsk**	**9.23**	**29**	eP	**Pn**	**06 13 44.3**	**+0.9**
PET				eS	**Sn**	**06 15 22.8**	**-3.2**
PET				AMS	AMS	06 17 20.5	
	comp=Z,780nm,12.0s						
OFUJ	**Ofunato**	**9.34**	**232**	P	**Pn**	**06 13 41.9**	**-3.0**
OFUJ				eS	Sn	06 15 20.0	-8.6
JRG	**Rokugo**	**9.72**	**237**	P	**Pn**	**06 13 47.2**	**-3.0**
OKH	**Okha**	**9.93**	**330**	dePN	**Pn**	**06 13 50.2**	**-2.8**
OKH				MLR	MLR		
	comp=Z,1μm,13.0s						
OKH	**Okha**	**9.93**	**330**	eP	**Pn**	**06 13 54.3**	**+1.3**
OKH				eS	**Sn**	**06 15 43.2**	**+0.2**
OKH				AMS	AMS	06 17 21.0	
	comp=Z,969nm,16.0s						
OKH				AMS	AMS	06 17 21.0	
	comp=Z,1μm,16.0s						
OKH				AMS	AMS	06 17 21.0	
	comp=Z,970nm,16.0s						
JIO	**Ouri**	**9.95**	**231**	P	**Pn**	**06 13 50.9**	**-2.5**
TEY	**Ternei**	**10.30**	**274**	⇓ePN	Pn	06 14 05.2	+7.1
TEY				eS	**Sn**	**06 15 58.3**	**+6.0**
TEY				pmax	pmax		
	comp=Z,90nm,1.7s						
TEY				pmax	pmax		
	comp=E,90nm,0.9s						
TEY				MLR	MLR		
	comp=Z,1μm,13.0s						
TEY	**Ternei**	**10.30**	**274**	eP	**Pn**	**06 14 00.0**	**+1.9**
TEY				AMB	AMB	06 14 06.9	
	comp=Z,90nm,1.0s						
TEY				AMS	AMS	06 18 49.0	
	comp=Z,1μm,13.0s						
NKL	**Nikolayevsk**	**10.50**	**323**	eP	**Pn**	**06 14 02.0**	**+1.2**
NKL				AMB	AMB	06 14 04.7	
	comp=Z,140nm,1.0s						
NKL				AMB	AMB	06 14 04.7	
	comp=Z,84nm,1.0s						
NKL				AMB	AMB	06 14 04.7	
	comp=Z,210nm,1.0s						
JYA	**Atsumi**	**10.79**	**236**	P	**Pn**	**06 14 01.2**	**-3.6**
GRNR	**Gornyy**	**11.34**	**305**	ePN	Pn	06 14 17.2	+4.9
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
GRNR	**Gornyy**	**11.34**	**305**	eP	**Pn**	**06 14 14.0**	**+1.7**
GRNR				AMB	AMB	06 14 18.8	
	comp=Z,25nm,1.0s						
JFY	**Yanaizu**	**11.61**	**232**	P	**Pn**	**06 14 14.2**	**-1.9**
MAJO	**Matsushiro**	**13.07**	**233**	ePn	**Pn**	**06 14 33.8**	**-2.2**
MAJO				eSn	**Sn**	**06 17 01.4**	**+1.3**
MAJO	**Matsushiro**	**13.07**	**233**	ePN	**Pn**	**06 14 33.8**	**-2.2**
MAT	**Matsushiro**	**13.07**	**233**	P	**Pn**	**06 14 33.7**	**-2.3**
MAT				S	**Sn**	**06 17 00.9**	**+0.9**
MJAR	**Matsushiro Arr**	**13.07**	**233**	Pn	**Pn**	**06 14 34.6**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=29,slow=13,SNR=15						
MJAR				Sn	**Sn**	**06 17 01.4**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=20,slow=18,SNR=4.0						
MJAR				LR	LR	06 20 07.7	
	comp=Z,454nm,21.4s,baz=50,slow=40						
MJB9	**Matsu-Tunnel**	**13.07**	**233**	ePn	**Pn**	**06 14 34.3**	**-1.7**
USA0B	**Ussuriysk Arra**	**13.69**	**273**	ePn	**Pn**	**06 14 44.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**13.69**	**273**	Pn	**Pn**	**06 14 44.0**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=83,slow=12,SNR=25						
USRK				LR	LR	06 20 01.8	
	comp=Z,769nm,18.6s,baz=71,slow=38						
KLR	**Kul'dur**	**13.80**	**294**	Pn	**Pn**	**06 14 47.8**	**+1.9**
	comp=Z,1.0nm,0.3s,baz=101,slow=15,SNR=25						
KLR				LR	LR	06 20 20.2	
	comp=Z,1μm,19.0s,baz=98,slow=39						
EKMR	**Ekimchan**	**14.27**	**310**	eP	**Pn**	**06 14 51.5**	**-0.7**
EKMR				AMB	AMB	06 15 00.0	
	comp=Z,18nm,1.0s						
MA2	**Magadan**	**14.40**	**359**	Pn	**Pn**	**06 14 53.6**	**-0.5**
	comp=Z,3.0nm,0.3s,baz=190,slow=9.4,SNR=10						
MA2				LR	LR	06 20 51.4	
	comp=Z,516nm,18.4s,baz=178,slow=40						
MA2	**Magadan**	**14.40**	**359**	ePn	**Pn**	**06 14 54.2**	**+0.2**
MA2	**Magadan**	**14.40**	**359**	ceP	**Pn**	**06 14 52.3**	**-1.7**
MA2				pmax	pmax		
	comp=Z,30nm,1.7s						
MA2	**Magadan**	**14.40**	**359**	eP	**Pn**	**06 14 52.3**	**-1.7**
INU	**Inuyama**	**14.59**	**233**	ePn	**Pn**	**06 14 55.9**	**-0.9**
JHJ	**Hachijo jima 2**	**14.93**	**220**	LR	LR	06 23 57.2	
	comp=Z,86nm,18.0s,baz=95,slow=50						
MDJ	**Mudanjiang**	**15.30**	**275**	P	**Pn**	**06 15 05.7**	**-0.4**
MDJ				PP	**PnPn**	**06 15 15.7**	**+1.4**
MDJ				S	**Sn**	**06 18 01.1**	**+6.7**
MDJ				SS	**S**	**06 18 15.1**	**+5.2**
MDJ				pmax	pmax		
	comp=Z,15nm,1.1s						
MDJ				LR	LR		
	comp=Z,820nm,18.8s						
MDJ				LR	LR		
	comp=Z,730nm,21.0s						
MDJ				LR	LR		
	comp=Z,2μm,17.1s						
MDJ	**Mudanjiang**	**15.30**	**275**	ePn	**Pn**	**06 15 05.8**	**-0.3**
	comp=Z,49nm,0.8s						
SMY	**Shemya**	**16.78**	**55**	ePn	**P**	**06 15 26.5**	**-0.4**
	comp=Z,29nm,0.7s						
SMY	**Shemya**	**16.78**	**55**	eP	**P**	**06 15 26.5**	**-0.4**
SMY				pmax	pmax		
	comp=Z,29nm,0.7s						
BMKR	**Bomnak**	**17.17**	**312**	eP	**Pn**	**06 15 27.0**	**-2.8**
BMKR				AMB	AMB	06 15 37.0	
	comp=Z,29nm,0.5s						
ZEA	**Zeya**	**17.67**	**307**	eP	**Pn**	**06 15 34.5**	**-1.6**
ZEA				pmax	pmax		
	comp=Z,200nm,3.0s						
ZEA				pmax	pmax		
	comp=N,71nm,1.0s						
ZEA				pmax	pmax		
	comp=E,65nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,99nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,15.0s						
ZEA				MLR	MLR		
	comp=E,900nm,16.0s						
ZEA				MLR	MLR		
	comp=N,700nm,14.0s						
ZEA	**Zeya**	**17.67**	**307**	eP	**Pn**	**06 15 34.5**	**-1.6**
ZEA				AMB	AMB	06 15 38.0	
	comp=N,200nm,3.0s						
ZEA				AMB	AMB	06 15 39.9	
	comp=N,71nm,1.0s						
ZEA				AMB	AMB	06 15 39.9	
	comp=N,65nm,1.0s						
ZEA				AMB	AMB	06 15 39.9	
	comp=N,99nm,1.0s						
ZEA				AMS	AMS	06 23 01.0	
	comp=N,700nm,15.0s						
ZEA				AMS	AMS	06 23 01.0	
	comp=N,900nm,15.0s						
ZEA				AMS	AMS	06 23 01.0	
	comp=N,1μm,15.0s						
SEY	**Seymchan**	**17.78**	**2**	P	**Pn**	**06 15 35.8**	**-1.6**
	comp=N,2.0nm,0.3s,baz=178,slow=13,SNR=15						
SEY	**Seymchan**	**17.78**	**2**	eP	**Pn**	**06 15 35.6**	**-1.7**
KROS	**Kirovskiy**	**18.07**	**309**	eP	**P**	**06 15 42.1**	**+1.0**
KROS				AMB	AMB	06 15 46.2	
	comp=N,6.0nm,0.4s						
KROS				AMB	AMB	06 15 46.2	
	comp=N,8.0nm,0.4s						
KROS				AMB	AMB	06 15 46.2	
	comp=N,18nm,0.4s						
CN2	**Changchun**	**18.39**	**275**	eP	**P**	**06 15 43.0**	**-1.6**
CN2				epP	pP	06 15 52.4	-0.6
CN2				eS	**Sn**	**06 19 01.4**	**-7.7**
CN2				pmax	pmax		
	comp=N,20nm,1.0s						
CN2				pmax	pmax		
	comp=N,200nm,3.0s						
CN2				LR	LR		
	comp=N,770nm,20.0s						
CN2				LR	LR		
	comp=N,450nm,20.0s						
CN2				LR	LR		
	comp=N,810nm,21.0s						
KSRS	**Korea Array**	**19.06**	**254**	P	**P**	**06 15 50.8**	**-1.3**
	comp=N,0.9nm,0.3s,baz=62,slow=11,SNR=41						
KSRS				PcP	**PcP**	**06 20 17.1**	**+1.4**
	comp=N,0.2nm,0.3s,baz=60,slow=2.9,SNR=5.0						
KSRS				LR	LR	06 23 15.1	
	comp=N,419nm,18.9s,baz=58,slow=37						
KS15	**Wonju Array Si**	**19.09**	**254**	eP	**P**	**06 15 52.6**	**+0.2**
	comp=N,24nm,0.9s						
JNU	**Nakatsue**	**19.77**	**239**	P	**Pn**	**06 16 01.4**	**-0.2**
	comp=N,1.1nm,0.3s,baz=36,slow=6.7,SNR=9.0						
JNU				LR	LR	06 25 03.0	
	comp=N,285nm,18.9s,baz=29,slow=41						
JNU	**Nakatsue**	**19.77**	**239**	eP	**Pn**	**06 16 02.2**	**+0.7**
	comp=N,60nm,1.0s						
TJN	**Taejon**	**20.01**	**252**	ceP	**P**	**06 16 01.3**	**-1.2**
SNY	**Shenyang**	**20.26**	**270**	⇑P	**P**	**06 16 05.1**	**0.0**
SNY				pmax	pmax		
	comp=N,50nm,1.1s						
SNY				LR	LR		
	comp=N,340nm,13.9s						
SNY				LR	LR		
	comp=N,770nm,14.6s						
SNY				LR	LR		
	comp=N,1μm,16.0s						
YAK	**Yakutsk**	**20.96**	**331**	eP	**P**	**06 16 12.4**	**-0.1**
	comp=N,502nm,0.9s						
YAK	**Yakutsk**	**20.96**	**331**	eP	**P**	**06 16 12.2**	**-0.3**
YAK				e		06 16 30.2	
YAK				eS	**S**	**06 20 00.8**	**-3.1**
YAK				eSS	Sn	06 20 17.9	+7.1
YAK				eSSS	SSS	06 20 36.6	
YAK	**Yakutsk**	**20.96**	**331**	eP	**P**	**06 16 12.2**	**-0.3**
ADK	**Adak**	**22.18**	**61**	eP	**P**	**06 16 26.4**	**+0.7**
	comp=N,37nm,1.3s						
ADK	**Adak**	**22.18**	**61**	eP	**P**	**06 16 26.4**	**+0.7**
ADK				pmax	pmax		
	comp=Z,37nm,1.3s						
GSTR	**Great Sitkin T**	**22.58**	**60**	eP	**P**	**06 16 29.5**	**-0.5**
DL2	**Dalian**	**22.74**	**264**	P	**P**	**06 16 31.8**	**0.0**
DL2				S	**S**	**06 20 38.4**	**+0.3**
DL2				pmax	pmax		
	comp=Z,51nm,1.0s						
DL2				pmax	pmax		
	comp=Z,200nm,4.0s						
DL2				LR	LR		
	comp=Z,270nm,17.3s						
DL2				LR	LR		
	comp=Z,100nm,12.8s						
DL2				LR	LR		
	comp=Z,260nm,20.6s						
ATKA	**Atka Island**	**23.73**	**60**	eP	**P**	**06 16 42.3**	**+0.8**
	comp=Z,42nm,1.1s						
BILL	**Bilibino**	**24.21**	**14**	eP	**P**	**06 16 46.0**	**+0.2**
	comp=Z,7.9nm,0.5s						
BILL	**Bilibino**	**24.21**	**14**	i P	**P**	**06 16 44.0**	**-1.9**
BILL				i		06 17 26.5	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,670nm,16.0s						
BILL	**Bilibino**	**24.21**	**14**	eP	**P**	**06 16 44.0**	**-1.9**
BOD	**Bodaibo**	**25.98**	**312**	eP	**P**	**06 16 57.3**	**-4.7**
BJI	**Beijing**	**26.13**	**271**	P	**P**	**06 17 03.9**	**+0.4**
BJI				S	**S**	**06 21 31.8**	**-0.8**
BJI				LR	LR		
	comp=Z,150nm,14.3s						
BJI				LR	LR		
	comp=Z,270nm,14.5s						
BJT	**Baijiatuau**	**26.14**	**271**	eP	**P**	**06 17 04.4**	**+0.8**
	comp=Z,24nm,0.8s						
BJT	**Baijiatuau**	**26.14**	**271**	eP	**P**	**06 17 04.4**	**+0.8**
BJT				pmax	pmax		
	comp=Z,24nm,0.8s						
GAMB	**Gambell**	**27.87**	**35**	eP	**P**	**06 17 19.1**	**+0.2**
	comp=Z,6.3nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**28.55**	**148**	T	T	06 48 06.8	
	baz=336						
H11N1	**WAKE ISLAND Hy**	**28.56**	**148**	T	T	06 48 23.0	
	baz=336,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.56**	**148**	T	T	06 48 19.3	
	baz=336,slow=74						
TIXI	**Tiksi**	**28.60**	**345**	P	**P**	**06 17 22.2**	**-3.1**
	comp=Z,4.7nm,0.4s,baz=157,slow=8.8,SNR=10.0						
TIXI				LR	LR	06 29 34.3	
	comp=Z,168nm,18.5s,baz=178,slow=38						
TIXI	**Tiksi**	**28.60**	**345**	eP	**P**	**06 17 22.3**	**-3.1**
	comp=Z,5.6nm,0.5s						
TIXI	**Tiksi**	**28.60**	**345**	i P	**P**	**06 17 25.3**	**0.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**29.08**	**276**	eP	**P**	**06 17 31.0**	**+1.0**
HHC				pP	pP	06 17 41.6	+2.5
HHC				sP	pwP	06 17 49.8	+6.0
HHC				S	**S**	**06 22 23.5**	**+4.2**
HHC				pmax	pmax		
	comp=Z,71nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,6.4s						
HHC				LR	LR		
	comp=Z,630nm,16.7s						
HHC				LR	LR		
	comp=Z,950nm,15.1s						
HHC				LR	LR		
	comp=Z,2μm,15.4s						
H11S1	**WAKE ISLAND Hy**	**29.59**	**149**	T	T	06 49 41.1	
	baz=337,slow=76,SNR=828						
H11S3	**WAKE ISLAND Hy**	**29.60**	**149**	T	T	06 49 30.7	
	baz=337,slow=76,SNR=781						
H11S2	**WAKE ISLAND Hy**	**29.61**	**149**	T	T	06 49 35.3	
	baz=337,slow=76,SNR=661						
ULN	**Ulaanbaatar**	**30.16**	**291**	eP	**P**	**06 17 39.4**	**-0.2**
	comp=Z,14nm,0.9s						
ULN	**Ulaanbaatar**	**30.16**	**291**	ceP	**P**	**06 17 39.7**	**+0.1**
ULN				pmax	pmax		
	comp=Z,16nm,1.0s						
ULN	**Ulaanbaatar**	**30.16**	**291**	eP	**P**	**06 17 39.7**	**+0.1**
BTO	**Baotou**	**30.25**	**276**	eP	**P**	**06 17 39.9**	**-0.6**
SONA0	**Songino Array**	**30.60**	**291**	eP	**P**	**06 17 42.4**	**-1.1**
SONM	**Songino Array**	**30.60**	**291**	P	**P**	**06 17 42.4**	**-1.1**
	comp=Z,8.9nm,1.0s,baz=81,slow=9.5,SNR=8.8						
ANM	**Nome**	**30.74**	**36**	eP	**P**	**06 17 45.3**	**+0.9**
	comp=Z,9.2nm,1.0s						
ANM	**Nome**	**30.74**	**36**	eP	**P**	**06 17 45.3**	**+0.9**
ANM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TLY	**Talaya**	**31.72**	**299**	i P	**P**	**06 17 53.5**	**+0.3**
TLY	**Talaya**	**31.72**	**299**	eP	**P**	**06 17 53.5**	**+0.3**
NACB	**Ninganchiao**	**31.84**	**239**	eP	**P**	**06 17 54.4**	**0.0**
	comp=Z,18nm,0.8s						
GUMO	**Guam**	**31.96**	**192**	LR	LR	06 28 54.4	
	comp=Z,161nm,20.8s,baz=26,slow=32						
WHN	**Wuhan**	**32.23**	**256**	⇓P	**P**	**06 17 57.9**	**+0.1**
WHN				pmax	pmax		
	comp=Z,58nm,0.6s						
WHN				pmax	pmax		
	comp=Z,220nm,3.1s						
WHN				LR	LR		
	comp=Z,390nm,11.7s						
WHN				LR	LR		
	comp=Z,1μm,16.7s						
WHN				LR	LR		
	comp=Z,960nm,19.1s						
RDOG	**Red Dog Mine**	**32.84**	**30**	eP	**P**	**06 18 02.8**	**+0.1**
	comp=Z,6.0nm,0.5s						
TPUB	**Ta-pu**	**33.07**	**239**	eP	**P**	**06 18 05.8**	**+0.5**
	comp=Z,31nm,1.0s						
TWG	**Pinlang**	**33.17**	**238**	eP	**P**	**06 18 05.3**	**-0.7**
	comp=Z,86nm,0.8s						
XAN	**Xi'an**	**34.05**	**266**	P	**P**	**06 18 13.4**	**-0.3**
XAN				pP	pP	06 18 23.5	+0.6
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
XAN				pmax	pmax		
	comp=Z,53nm,3.6s						
XAN				LR	LR		
	comp=Z,290nm,14.3s						
XAN				LR	LR		
	comp=Z,170nm,17.5s						
XAN				LR	LR		
	comp=Z,290nm,17.6s						
XAN	**Xi'an**	**34.05**	**266**	eP	**P**	**06 18 13.2**	**-0.5**
	comp=Z,14nm,0.8s						
XAN	**Xi'an**	**34.05**	**266**	eP	**P**	**06 18 13.2**	**-0.5**
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
ENH	**Enshi**	**35.76**	**260**	eP	**P**	**06 18 27.3**	**-1.2**
	comp=Z,29nm,0.9s						
OHAK	**Old Harbor**	**35.80**	**50**	eP	**P**	**06 18 29.7**	**+1.2**
	comp=Z,40nm,1.3s						
KDAK	**Kodiak Island**	**36.13**	**49**	eP	**P**	**06 18 31.9**	**+0.6**
	comp=Z,32nm,1.2s						
KDAK	**Kodiak Island**	**36.13**	**49**	eP	**P**	**06 18 31.9**	**+0.6**
KDAK				pmax	pmax		
	comp=Z,32nm,1.2s						
CAST	**Castle Rocks**	**36.29**	**39**	eP	**P**	**06 18 34.2**	**+1.5**
	comp=Z,9.0nm,0.9s						
HOM	**Homer**	**36.50**	**46**	eP	**P**	**06 18 32.5**	**-2.0**
	comp=Z,85nm,1.1s						
LZH	**Lanzhou**	**36.59**	**273**	⇑P	**P**	**06 18 36.6**	**+0.9**
LZH				pP	pP	06 18 47.9	+3.0
LZH				sP	pwP	06 18 52.8	+3.4
LZH				PP	**PP**	**06 20 00.6**	**+1.3**
LZH				sS	sS	06 24 31.3	+1.6
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
LZH				pmax	pmax		
	comp=Z,150nm,5.2s						
LZH				LR	LR		
	comp=Z,280nm,14.6s						
LZH				LR	LR		
	comp=Z,340nm,13.6s						
LZH				LR	LR		
	comp=Z,350nm,15.2s						
CNPM	**China Poot**	**36.72**	**46**	eP	**P**	**06 18 36.7**	**+0.3**
	comp=Z,29nm,1.2s						
BPAW	**Bear Paw Mtn.**	**36.81**	**38**	eP	**P**	**06 18 37.8**	**+0.7**
	comp=Z,7.0nm,0.8s						
BRLK	**Bradley Lake**	**36.88**	**46**	eP	**P**	**06 18 38.5**	**+0.8**
	comp=Z,20nm,1.4s						
MLY	**Manley**	**36.97**	**37**	eP	**P**	**06 18 39.0**	**+0.5**
	comp=Z,7.4nm,0.7s						
MLY				ePcP	**PcP**	**06 20 59.9**	**+1.0**
COLD	**Coldfoot**	**37.37**	**33**	eP	**P**	**06 18 42.5**	**+0.7**
	comp=Z,3.2nm,0.7s						
RC01	**Rabbit Creek A**	**37.38**	**43**	eP	**P**	**06 18 43.3**	**+1.3**
	comp=Z,7.4nm,0.7s						
BWN	**Browne**	**37.48**	**38**	eP	**P**	**06 18 43.5**	**+0.8**
	comp=Z,40nm,0.9s						
SEW	**Seward**	**37.58**	**45**	eP	**P**	**06 18 44.2**	**+0.7**
	comp=Z,17nm,1.2s						
PMR	**Palmer**	**37.66**	**43**	eP	**P**	**06 18 44.9**	**+0.7**
	comp=Z,8.1nm,0.8s						
PMR	**Palmer**	**37.66**	**43**	eP	**P**	**06 18 44.9**	**+0.7**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RND	**Reindeer**	**37.74**	**40**	eP	**P**	**06 18 45.4**	**+0.3**
	comp=Z,12nm,1.0s						
RND	**Reindeer**	**37.74**	**40**	eP	**P**	**06 18 45.4**	**+0.3**
RND				pmax	pmax		
	comp=Z,12nm,1.0s						
GHO	**Glory Hole Cre**	**37.75**	**42**	eP	**P**	**06 18 45.5**	**+0.4**
	comp=Z,12nm,1.1s						
TOLK	**Toolik Lake Re**	**37.77**	**31**	eP	**P**	**06 18 44.6**	**-0.6**
	comp=Z,9.2nm,0.6s						
HKPS	**Hong Kong Po S**	**37.88**	**245**	eP	**P**	**06 18 46.2**	**-0.3**
	comp=Z,40nm,0.8s						
GTA	**Gaotai**	**37.89**	**280**	⇑P	**P**	**06 18 46.9**	**+0.3**
GTA				pP	pP	06 18 57.4	+1.6
GTA				sP	sP	06 19 01.3	+0.7
GTA				PcP	**PcP**	**06 21 04.0**	**+1.7**
GTA				S	**S**	**06 24 31.0**	**-4.7**
GTA				pmax	pmax		
	comp=Z,37nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,4.2s						
GTA				LR	LR		
	comp=Z,180nm,17.2s						
GTA				LR	LR		
	comp=Z,320nm,13.7s						
GTA				LR	LR		
	comp=Z,430nm,13.7s						
KNK	**Knik Glacier**	**37.99**	**43**	eP	**P**	**06 18 48.1**	**+1.1**
	comp=Z,17nm,1.0s						
SML	**Sawmill**	**38.02**	**42**	eP	**P**	**06 18 47.8**	**+0.4**
	comp=Z,34nm,0.7s						
SML	**Sawmill**	**38.02**	**42**	eP	**P**	**06 18 47.8**	**+0.4**
SML				pmax	pmax		
	comp=Z,35nm,0.7s						
WRH	**Wood River Hil**	**38.08**	**38**	eP	**P**	**06 18 48.4**	**+0.6**
	comp=Z,7.7nm,0.6s						
COLA	**College**	**38.19**	**37**	eP	**P**	**06 18 49.6**	**+0.9**
	comp=Z,18nm,0.6s						
COLA	**College**	**38.19**	**37**	eP	**P**	**06 18 49.6**	**+0.9**
COLA				pmax	pmax		
	comp=Z,18nm,0.6s						
CCB	**Clear Creek Bu**	**38.21**	**38**	eP	**P**	**06 18 49.0**	**+0.2**
	comp=Z,4.3nm,0.6s						
DHY	**Denali Highway**	**38.42**	**40**	eP	**P**	**06 18 51.3**	**+0.5**
	comp=Z,6.8nm,0.7s						
SCM	**Sheep Creek Mo**	**38.50**	**42**	e

FYU Fort Yukon 39.29 34 *eP* **P 06 18 59.3 +1.4**
comp=Z,14nm,0.8s
DIV Divide 39.30 43 *eP* **P 06 18 59.4 +1.3**
comp=Z,11nm,0.7s
EYAK Cordova Ski Ar 39.37 44 *eP* **P 06 18 59.3 +0.6**
comp=Z,14nm,1.4s
CD2 Chengdu 39.41 265⇑ *iP* **P 06 18 59.5 +0.2**
CD2 sP sP 06 19 13.5 +0.4
CD2 PP **PnPn 06 20 32.7 -0.3**
CD2 S **S 06 24 55.7 -2.9**
CD2 sS sS 06 25 12.6 +0.7
CD2 SS **SS 06 27 49.3 -3.9**
CD2 pmax pmax
comp=Z,120nm,0.7s
CD2 pmax pmax
comp=Z,190nm,5.9s
CD2 LR LR
comp=Z,320nm,11.6s
CD2 LR LR
comp=Z,340nm,17.9s
NRIK Noril'sk 39.41 330 P **P 06 18 56.4 -2.4**
comp=Z,3.9nm,0.5s,baz=101,slow=11,SNR=7.0
NRIK LR LR 06 35 53.5
comp=Z,202nm,19.1s,baz=50,slow=37
RIDG Independent Ri 39.53 39 *eP* **P 06 19 00.6 +0.6**
comp=Z,8.0nm,0.7s
DOT Dot Lake 39.88 39 *eP* **P 06 19 02.6 -0.3**
comp=Z,4.9nm,0.6s
BMRM Bremner River 39.88 43 *eP* **P 06 18 59.9 -3.1**
comp=Z,1.9nm,0.7s
SCRK Sand Creek 39.89 39 *eP* **P 06 19 03.5 +0.5**
comp=Z,4.3nm,0.7s
GYA Guiyang 40.06 258⇑ *iP* **P 06 19 04.2 -0.7**
GYA pP pP 06 19 16.8 +3.1
GYA PP **PnPn 06 20 41.7 +0.8**
GYA PcP **PcP 06 21 14.4 +5.2**
GYA S **S 06 25 07.8 -0.8**
GYA sS sS 06 25 28.9 +6.6
GYA SS **SS 06 28 03.0 -3.5**
GYA pmax pmax
comp=Z,30nm,0.7s
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=Z,170nm,18.6s
GYA LR LR
comp=Z,250nm,18.4s
GYA LR LR
comp=Z,330nm,19.1s
MENT Mentasta 40.09 40 *eP* **P 06 19 06.3 +1.7**
comp=Z,6.1nm,0.8s
HMT Hamilton 40.13 44 *eP* **P 06 19 06.7 +1.7**
comp=Z,14nm,1.0s
BALM Baldy 40.97 43 *eP* **P 06 19 13.4 +1.4**
comp=Z,15nm,1.0s
BALM Baldy 40.97 43 *eP* **P 06 19 13.4 +1.4**
BALM pmax pmax
comp=Z,15nm,1.0s
EGAK Eagle 41.05 37 *eP* **P 06 19 13.2 +0.7**
comp=Z,18nm,1.1s
CTGM Chitina Glacie 41.46 43 *eP* **P 06 19 17.8 +1.7**
comp=Z,22nm,0.8s
DAWY Dawson 41.90 38 *eP* **P 06 19 20.1 +0.6**
comp=Z,4.4nm,0.9s
PCA Pinnacle 42.14 44 *eP* **P 06 19 23.4 +1.8**
comp=Z,13nm,0.8s
DGZ Jazzator, Alta 42.19 300 *i* P **P 06 19 21.5 -0.7**
DGZ pmax pmax
comp=Z,2.0nm,0.4s
ZAA1 Zalesovo Array 42.43 307 *eP* **P 06 19 20.9 -3.1**
ZAA1 ePcP **PcP 06 21 16.8 +0.4**
ZALV Zalesovo Beam 42.44 307 P **P 06 19 20.9 -3.1**
comp=Z,2.8nm,0.5s,baz=87,slow=6.2,SNR=5.8
ZALV PcP **PcP 06 21 16.8 +0.4**
comp=Z,6.8nm,0.6s,baz=86,slow=2.2,SNR=8.2
ZALV LR LR 06 38 00.5
comp=Z,274nm,20.6s,baz=68,slow=38
ZALV Zalesovo Beam 42.44 307 *i* P **P 06 19 24.7 +0.8**
ZALV pmax pmax
comp=Z,2.0nm,0.3s
EPYK Eagle Plains 42.71 34 *eP* **P 06 19 27.5 +1.4**
comp=Z,24nm,1.1s
NVS Novosibirsk 43.07 308 *eP* **P 06 19 28.4 -0.7**
NVS Novosibirsk 43.07 308 *eP* **P 06 19 28.4 -0.7**
HYT Haines Junctio 43.33 43 *eP* **P 06 19 33.1 +1.9**
comp=Z,35nm,1.2s
KMI Kunming 43.63 259 P **P 06 19 35.6 +1.4**
KMI pmax pmax
comp=Z,24nm,0.5s
KMI LR LR
comp=Z,170nm,13.1s
KMI LR LR
comp=Z,140nm,14.3s
KMI LR LR
comp=Z,220nm,17.5s
KMI Kunming 43.63 259 *eP* **P 06 19 35.1 +0.9**
comp=Z,29nm,1.0s
INK Inuvik 43.68 31 *eP* **P 06 19 35.0 +1.2**
comp=Z,14nm,0.9s
INK Inuvik 43.68 31 *eP* **P 06 19 35.0 +1.2**
INK pmax pmax
comp=Z,14nm,0.9s
WMQ Urumqi 44.24 292 P **P 06 19 39.3 +0.6**
WMQ pP sP 06 19 54.1 +1.2
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ pmax pmax
comp=Z,81nm,3.6s
WMQ LR LR
comp=Z,750nm,15.9s
WMQ LR LR
comp=Z,350nm,18.1s
WMQ LR LR
comp=Z,660nm,23.9s
WMQ Urumqi 44.24 292 *eP* **P 06 19 39.5 +0.8**
comp=Z,13nm,0.6s
WMQ Urumqi 44.24 292 *eP* **P 06 19 39.5 +0.8**
WMQ pmax pmax
comp=Z,13nm,0.6s
WHY Whitehorse 44.62 42 *eP* **P 06 19 43.7 +2.1**
comp=Z,11nm,0.9s
SKAG Skagway 44.72 44 *eP* **P 06 19 44.8 +2.6**
comp=Z,5.8nm,1.0s
BESE Bessie Mountai 45.20 45 *eP* **P 06 19 45.8 -0.4**
comp=Z,13nm,1.4s
SLVN Son La 45.33 254 *eP* **P 06 19 47.6 0.0**
comp=Z,8.1nm,1.0s
MK31 Makanchi Array 46.46 298 *eP* **P 06 19 55.0 -1.3**
comp=Z,15nm,0.6s
MK31 Makanchi Array 46.46 298 *i* P **P 06 19 55.1 -1.1**
MK31 pmax pmax
comp=Z,15nm,0.6s
MK32 Makanchi Array 46.46 298 *eP* **P 06 19 55.0 -1.3**
MK32 *e*PcP **PcP 06 21 30.5 +0.1**
MKAR Makanchi Array 46.46 298 P **P 06 19 55.0 -1.3**
comp=Z,15nm,0.7s,baz=75,slow=8.0,SNR=74
MKAR PcP **PcP 06 21 30.5 +0.1**
comp=Z,5.4nm,0.6s,baz=77,slow=2.7,SNR=6.6
MKAR LR LR 06 40 27.3
comp=Z,584nm,19.4s,baz=66,slow=38
MAKZ Makanchi 46.65 298 *eP* **P 06 19 56.4 -1.3**
comp=Z,15nm,0.7s
MAKZ Makanchi 46.65 298 P **P 06 19 56.5 -1.3**
MAKZ pmax pmax
comp=Z,13nm,0.7s
KURK Kurchatov 47.10 304 *eP* **P 06 19 59.0 -2.2**
comp=Z,16nm,0.6s
KURK Kurchatov 47.10 304 *ce*P **P 06 19 58.2 -3.0**
KURK pmax pmax
comp=Z,26nm,1.3s
DLBC Dease Lake 47.65 44 *eP* **P 06 20 05.2 -0.1**
comp=Z,7.3nm,0.8s
PANO Nakornpanom 47.78 250 P **P 06 20 10.7 +3.9**
comp=Z,0.2nm,0.9s
SKNT Sakolnakorn 48.32 250 P **P 06 20 12.1 +1.1**
comp=Z,19nm,1.2s
JAY Jayapura 48.41 194 LR LR 06 37 22.2
comp=Z,48nm,21.2s,baz=347,slow=32
LSA Lhasa 49.01 273 P **P 06 20 18.3 +1.6**
LSA pmax pmax
comp=Z,130nm,0.6s
LSA Lhasa 49.01 273 *eP* **P 06 20 18.3 +1.6**
comp=Z,39nm,1.0s
LSA Lhasa 49.01 273 *eP* **P 06 20 18.3 +1.6**
LSA pmax pmax
comp=Z,39nm,1.0s
DLV T Lat 49.16 241 *eP* **P 06 20 19.1 +1.4**
comp=Z,21nm,1.0s
PAYA Payao 49.43 256 P **P 06 20 21.1 +1.6**
comp=Z,34μm,0.8s
KHON Khomkaen 49.55 251 P **P 06 20 23.2 +2.8**
PHRA Phrae 49.78 255 P **P 06 20 23.4 +1.3**
comp=Z,3.0nm,0.9s
PDGK Podgornoye 49.78 295 P **P 06 20 21.7 -0.4**
PDGK pmax pmax
comp=Z,13nm,0.7s
LAMP Lampang 50.17 255 P **P 06 20 26.6 +1.5**
CHAI Chaiyaphum 50.42 251 P **P 06 20 28.0 +1.0**
comp=Z,19μm,0.7s
CMMT Chiang Mai 50.44 256 P **P 06 20 28.2 +1.0**
comp=Z,9.2nm,0.7s
CHTO Chiang Mai 50.44 256 *eP* **P 06 20 27.4 +0.2**
comp=Z,14nm,0.8s
CHTO Chiang Mai 50.44 256 *eP* **P 06 20 27.4 +0.2**
CHTO pmax pmax
comp=Z,14nm,0.8s
PBKT Sadao Pong 50.62 252 P **P 06 20 32.2 +3.7**
comp=Z,3.0nm,0.7s
CM31 Chiang Mai Arr 50.69 256 *eP* **P 06 20 30.4 +1.4**
comp=Z,6.3nm,0.6s
CMAR Chiang Mai Arr 50.69 256 P **P 06 20 30.1 +1.1**
comp=Z,4.5nm,0.8s,baz=38,slow=7.6,SNR=20
CMAR PcP **PcP 06 21 47.0 +1.0**
comp=Z,2.2nm,0.6s,baz=20,slow=3.3,SNR=5.8
CMAR LR LR 06 44 52.0
comp=Z,153nm,19.2s,baz=27,slow=40
BRVK Borovoye 50.85 310 *eP* **P 06 20 28.2 -1.6**
comp=Z,7.1nm,1.0s
BRVK Borovoye 50.85 310 *eP* **P 06 20 28.2 -1.6**
BRVK pmax pmax
comp=Z,7.0nm,1.0s
SHL Shillong 50.98 268 *eP* **P 06 20 31.0 -0.4**
comp=Z,73nm,0.7s
SHL Shillong 50.98 268 *eP* **P 06 20 31.0 -0.4**
SHL pmax pmax
comp=Z,73nm,0.7s
SHL Shillong 50.98 268⇑ *iP* **P 06 20 31.5 +0.2**
MRSI Marisa 51.48 219 P **P 06 20 35.0 +0.1**
comp=Z,9.4nm,0.9s
TARG Taragay, Kyrgy 51.65 294 *eP* **P 06 20 37.1 +0.5**
comp=Z,20nm,0.6s
KDJ Kajisay 51.85 295 *eP* **P 06 20 38.0 +0.3**
comp=Z,38nm,0.6s
KDJ Kajisay 51.85 295 *eP* **P 06 20 38.0 +0.3**
KDJ pmax pmax
comp=Z,38nm,0.6s
ULHL Ulahol 52.40 295 P **P 06 20 42.6 +0.8**
SNR=79
BOOM Boomskoye usch 52.47 296 *eP* **P 06 20 42.6 +0.3**
comp=Z,30nm,0.6s
BOOM Boomskoye usch 52.47 296 *eP* **P 06 20 42.6 +0.3**
BOOM pmax pmax
comp=Z,30nm,0.6s
TKM2 Tokmak 2 52.47 296 P **P 06 20 42.5 +0.2**
SNR=27
LUWI Luwuk 52.48 217 *eP* **P 06 20 40.9 -1.5**
comp=Z,47nm,0.4s
MPSI Mapaga 52.53 221 P **P 06 20 44.4 +1.7**
comp=Z,11nm,0.6s,comp=Z,4μm
RES Resolute Bay 52.73 18 *eP* **P 06 20 43.2 -0.3**
comp=Z,9.5nm,0.8s
RES Resolute Bay 52.73 18 *eP* **P 06 20 43.2 -0.3**
RES pmax pmax
comp=Z,9.0nm,0.8s
YKW3 Yellowknife Ar 52.94 35 *eP* **P 06 20 45.7 +0.5**
comp=Z,5.5nm,0.8s
BRDH Bariadhala 52.97 266 P **P 06 20 47.1 +1.1**
comp=Z,67nm,0.3s,baz=55,slow=16,SNR=4.2
BRDH LR LR 06 43 22.3
comp=Z,110nm,21.7s,baz=104,slow=36
YKA Yellowknife Ar 52.97 35 P **P 06 20 45.9 +0.5**
comp=Z,2.7nm,0.7s,baz=299,slow=7.2,SNR=13
YKA LR LR 06 45 49.8
comp=Z,7.8nm,18.9s,baz=298,slow=39
YKB5 Yellowknife Ar 52.97 35 *eP* **P 06 20 45.9 +0.5**
USP Ospenovka 52.99 297 P **P 06 20 46.1 +0.2**
SNR=17
KBK Karagaybulak 53.01 296 P **P 06 20 47.0 +0.7**
SNR=19
KZA Kyzart 53.12 295 P **P 06 20 48.4 +1.0**
SNR=34
FRU1 Bishkek 53.14 297 *eP* **P 06 20 48.0 +1.0**
comp=Z,32nm,0.8s
FRU1 Bishkek 53.14 297 *eP* **P 06 20 48.1 +1.0**
FRU1 pmax pmax
comp=Z,32nm,0.8s
AAK Ala-Archa 53.31 296 P **P 06 20 48.9 +0.4**
baz=168,slow=3.1,SNR=1.2
AAK Ala-Archa 53.31 296 P **P 06 20 49.0 +0.5**
SNR=17
AAK Ala-Archa 53.31 296 *eP* **P 06 20 48.9 +0.4**
comp=Z,20nm,0.8s
AAK Ala-Archa 53.31 296 *i* P **P 06 20 48.7 +0.2**
SNR=18
AAK Ala-Archa 53.31 296 P **P 06 20 48.2 -0.3**
AAK pmax pmax
comp=Z,18nm,0.8s
AAK Ala-Archa 53.31 296 *eP* **P 06 20 48.2 -0.3**
ODAN Odare 53.36 273 *eP* **P 06 20 49.7 +0.6**
comp=Z,87nm,0.9s
UCH Uchtor 53.51 296 P P 06 20 55.3 +5.0
SNR=5.5
JIRN Jiri 53.72 274 *eP* **P 06 20 52.8 +0.9**
comp=Z,139nm,0.6s
EKS2 Erkin-Say 53.75 297 P **P 06 20 52.4 +0.7**
SNR=5.2
GUN Gumba 53.79 275 *eP* **P 06 20 52.9 +0.5**
comp=Z,111nm,0.6s
KBS Kingsbay 53.82 351 *eP* **P 06 20 51.2 -0.2**
comp=Z,17nm,1.0s
KBS Kingsbay 53.82 351 *eP* **P 06 20 51.3 -0.2**
KBS pmax pmax
comp=Z,17nm,1.0s
RAMN Ramite 53.86 273 *eP* **P 06 20 53.3 +0.5**
comp=Z,136nm,0.6s
KSH Kashi 53.99 292 P **P 06 20 57.4 +3.9**
KSH pP sP 06 21 13.6 +6.6
KSH PP **PP 06 23 01.5 +6.7**
KSH S **S 06 28 27.4 +0.5**
KSH SS **SS 06 32 09.1 +1.1**
KSH pmax pmax
comp=Z,100nm,1.3s
KSH pmax pmax
comp=Z,230nm,4.7s
KSH LR LR
comp=Z,2μm,21.3s
KSH LR LR
comp=Z,440nm,13.4s
KSH LR LR
comp=Z,1μm,19.3s
SVE Sverdlovsk 54.05 317 *eP* **P 06 20 51.7 -1.7**
SVE pmax pmax
comp=Z,13nm,0.9s
AML Almayashu 54.08 296 P **P 06 20 55.4 +0.9**
SNR=9.2
KKN Kakani 54.28 275 *eP* **P 06 20 56.4 +0.6**
comp=Z,142nm,0.8s
PKI Pulchoki 54.32 275 *eP* **P 06 20 56.7 +0.4**
comp=Z,121nm,1.1s
DMN Daman 54.51 275 *eP* **P 06 20 58.4 +0.8**
comp=Z,56nm,0.6s
ARSB Arslanbob 54.96 296 *eP* **P 06 21 01.2 +0.7**
comp=Z,52nm,0.9s
DANN Dangsing 55.01 277 *eP* **P 06 21 02.2 +1.0**
comp=Z,130nm,0.6s
ARU Arti 55.24 318 P **P 06 21 00.4 -1.6**
comp=Z,3.8nm,0.3s,baz=65,slow=5.0,SNR=14
ARU Arti 55.24 318 *eP* **P 06 20 59.6 -2.5**
comp=Z,9.9nm,0.8s
ARU Arti 55.24 318 *ce*P **P 06 21 00.1 -2.0**
ARU pmax pmax
comp=Z,14nm,1.3s
KOLN Koldanda 55.48 276 *eP* **P 06 21 05.3 +0.8**
comp=Z,26nm,0.3s
KK31 Karatay Array 55.56 299 *eP* **P 06 21 03.6 -1.0**
comp=Z,16nm,0.8s
KK31 Karatay Array 55.56 299 *eP* **P 06 21 03.6 -1.0**
KK31 pmax pmax
comp=Z,16nm,0.8s
KKAR Karatay Array 55.56 299 *eP* **P 06 21 03.8 -0.9**
comp=Z,16nm,0.8s
KKAR Karatay Array 55.56 299 *eP* **P 06 21 03.8 -0.9**
KKAR pmax pmax
comp=Z,16nm,0.8s
PYUN Piuthan 55.70 277 *eP* **P 06 21 06.9 +0.8**
comp=Z,72nm,0.5s
TULEG Thule 55.90 10 *eP* **P 06 21 05.5 -1.0**
comp=Z,16nm,0.9s
KSM Kuching 56.46 232 *eP* **P 06 21 12.1 +0.8**
comp=Z,10nm,1.0s
BTK Batken 57.03 296 *eP* **P 06 21 15.1 -0.2**
comp=Z,29nm,0.8s
BTK Batken 57.03 296 *eP* **P 06 21 15.1 -0.2**
BTK pmax pmax
comp=Z,29nm,0.8s
LTY Liberty 57.77 54 *eP* **P 06 21 20.2 -0.1**
comp=Z,5.3nm,1.0s
PRGR Permogore 57.94 327 *eP* **P 06 21 17.6 -3.5**
PRGR pmax pmax
comp=Z,12nm,0.8s
DAG Danmarks Havn 58.13 357⇑ *iP* **P 06 21 21.4 -0.9**
DAG pmax pmax
comp=Z,8.0nm,0.8s
DAG Danmarks Havn 58.13 357⇑ *iP* **P 06 21 21.4 -0.9**
comp=Z,10nm,0.8s
KIRV Kirov 58.20 323 P **P 06 21 20.9 -2.1**
comp=Z,20nm,0.5s,baz=74,slow=6.7,SNR=3.5
KEV Kevo 58.35 340 *eP* **P 06 21 22.8 -1.1**
comp=Z,18nm,1.1s
KEV Kevo 58.35 340 *eP* **P 06 21 22.8 -1.1**
KEV pmax pmax
comp=Z,18nm,1.1s
AB31 Akbulak array 58.38 310 P **P 06 21 23.9 -0.5**
AB31 pmax pmax
comp=Z,8.0nm,0.4s
ABKAR Akbulak array 58.38 310 *eP* **P 06 21 23.1 -1.3**
comp=Z,19nm,0.5s
AKTO Aktyubinsk 58.75 312 P **P 06 21 26.6 -0.4**
comp=Z,4.5nm,0.5s,baz=64,slow=9.3,SNR=16
ARCES ARCESS Array B 58.87 340 P **P 06 21 26.0 -1.5**
comp=Z,2.6nm,0.6s,baz=32,slow=8.1,SNR=18
ARCES PcP **PcP 06 22 17.6 +1.0**
comp=Z,5.2nm,1.0s,baz=60,slow=5.3,SNR=5.2
ARCES LR LR 06 51 57.1
comp=Z,136nm,18.4s,baz=74,slow=41
ARE0 ARCESS Array S 58.87 340 *eP* **P 06 21 26.8 -0.8**
comp=Z,1.4nm,1.4s
KULLO Kullorsuaq 59.00 9 *i* P **P 06 21 27.4 -1.0**
KULLO pmax pmax
comp=Z,21nm,0.7s
KULLO Kullorsuaq 59.00 9 *i* P **P 06 21 27.4 -1.0**
comp=Z,21nm,0.7s
TMCR Tamitsa 59.07 332 *eP* **P 06 21 28.0 -1.0**
TMCR pmax pmax
comp=Z,24nm,0.6s
NIL Nilore 59.11 288 *eP* **P 06 21 30.8 +1.0**
comp=Z,114nm,0.8s
NIL Nilore 59.11 288 *eP* **P 06 21 30.8 +1.0**
NIL pmax pmax
comp=Z,114nm,0.8s
KULM Kulim 59.18 244 *eP* **P 06 21 31.8 +1.4**
comp=Z,16nm,0.7s
PINE Pine Mountain 59.56 57 *eP* **P 06 21 33.8 +0.8**
comp=Z,6.0nm,0.8s
IPM Ipoh 59.56 243 *eP* **P 06 21 32.5 -0.6**
comp=Z,14nm,1.0s
WALA Waterton Lakes 60.47 49 *eP* **P 06 21 40.3 +1.2**
comp=Z,5.3nm,0.9s
MTN Manton Dam 60.55 203 *eP* **P 06 21 41.0 +1.3**
comp=Z,49nm,1.4s
KLMR Klimovskoe 60.73 329 *eP* **P 06 21 38.6 -1.8**
KLMR pmax pmax
comp=Z,11nm,1.0s
MOD Modoc Plateau 61.04 59 *eP* **P 06 21 43.9 +0.8**
comp=Z,4.9nm,0.9s
KBL Kabul 61.38 291 *eP* **P 06 21 44.8 -0.7**
comp=Z,57nm,0.7s
KBL Kabul 61.38 291 *eP* **P 06 21 44.8 -0.7**
KBL pmax pmax
comp=Z,57nm,0.7s
PLID Pearl Lake 61.68 53 *eP* **P 06 21 49.8 +2.3**
comp=Z,8.2nm,1.0s
WVOR Wild Horse Val 61.73 57 *eP* **P 06 21 49.7 +2.0**
comp=Z,3.7nm,0.8s
WVOR Wild Horse Val 61.73 57 *eP* **P 06 21 49.7 +2.0**
WVOR pmax pmax
comp=Z,4.0nm,0.8s
MSO Missoula 61.78 51 *eP* **P 06 21 50.7 +2.7**
comp=Z,6.1nm,0.8s
JOF Joensuu 62.12 333 P **P 06 21 49.1 -0.7**
BEKR Beckworth 62.22 60 *eP* **P 06 21 51.6 +0.5**
comp=Z,4.1nm,0.9s
SUMG Summit 62.33 3 *eP* **P 06 21 51.2 -0.3**
comp=Z,57nm,0.9s
SUMG Summit 62.33 3 *eP* **P 06 21 51.3 -0.3**
SUMG pmax pmax
comp=Z,57nm,0.9s
SUMG Summit 62.33 3 *i* P **P 06 21 51.9 +0.3**
comp=Z,131nm,0.9s
LRM Limekiln Ridge 63.22 51 *eP* **P 06 21 53.3 -4.5**
FCC Fort Churchill 63.30 32 *eP* **P 06 21 57.9 +0.2**
comp=Z,12nm,0.8s
FCC Fort Churchill 63.30 32 *eP* **P 06 21 57.9 +0.2**
FCC pmax pmax
comp=Z,12nm,0.8s
EGMT Eagleton 63.30 48 *eP* **P 06 21 57.1 -0.9**
comp=Z,11nm,1.1s
DLMT Dillon 63.42 52 *eP* **P 06 21 57.0 -2.0**
comp=Z,3.2nm,1.3s
SMRI Semarang 63.54 226 *eP* **P 06 22 00.1 +0.3**
comp=Z,98nm,0.5s
SDSI Sungai Dareh 63.55 238 P **P 06 22 01.8 +1.8**
BMN Battle Mountai 63.78 58 *eP* **P 06 21 59.4 -2.1**
comp=Z,4.4nm,0.8s
BMN Battle Mountai 63.78 58 *eP* **P 06 21 59.4 -2.1**
BMN pmax pmax
comp=Z,4.0nm,0.8s
BOZ Bozeman (W) 63.81 51 *eP* **P 06 22 01.4 -0.1**
comp=Z,3.6nm,0.8s
SUF Sumiainen 63.85 335 P **P 06 22 00.8 -0.5**
SUF pmax pmax
comp=Z,15nm,0.6s
KVN Kaiserville 64.10 60 *eP* **P 06 22 04.6 +1.0**
comp=Z,4.6nm,0.9s
KVN Kaiserville 64.10 60 *eP* **P 06 22 04.6 +1.0**
KVN pmax pmax
comp=Z,5.0nm,0.9s
NV01 Mina Array Sit 64.36 61 *eP* **P 06 22 07.0 +1.6**
NVAR Mina Array Bea 64.36 61 P **P 06 22 07.0 +1.6**
comp=Z,2.1nm,0.8s,baz=284,slow=7.1,SNR=7.3
SCO Scoresbysund 64.52 357 *eP* **P 06 22 05.7 +0.1**
comp=Z,14nm,0.8s
SCO Scoresbysund 64.52 357 *eP* **P 06 22 05.7 +0.1**
SCO pmax pmax
comp=Z,14nm,0.8s
SCO Scoresbysund 64.52 357 *i* P **P 06 22 05.6 +0.1**
comp=Z,15nm,0.9s
VAF Ylistaro 64.60 337 P **P 06 22 05.6 -0.6**
VAF pmax pmax
comp=Z,12nm,0.8s
FIA1 FINESS Array S 64.86 334 *eP* **P 06 22 06.4 -1.5**
comp=Z,17nm,0.8s
FIA0 FINESS Array S 64.86 334 *eP* **P 06 22 06.0 -1.8**
FIA0 FINESS Array S 64.86 334 *eP* **P 06 22 06.1 -1.8**
FINES FINESS Array B 64.86 334 P **P 06 22 06.0 -1.8**
comp=Z,12nm,0.5s,baz=36,slow=6.8,SNR=85
FINES LR LR 06 52 49.8
comp=Z,208nm,19.6s,baz=36,slow=38
H17A Grant Village 65.14 51 *eP* **P 06 22 10.5 +0.1**
comp=Z,12nm,1.5s
IMW Indian Meadow 65.26 52 *eP* **P 06 22 11.5 +0.3**
comp=Z,3.6nm,1.0s
FLWY Flagg Ranch 65.28 52 *eP* **P 06 22 09.8 -1.4**
comp=Z,7.6nm,1.3s
CISI Cisompet, Garu 65.34 229 *eP* **P 06 22 10.2 -1.5**
comp=Z,58nm,0.8s
FXWY Fox Creek 65.38 52 *eP* **P 06 22 14.0 +2.1**
comp=Z,5.4nm,1.3s
MOOW Moose Ponds 65.46 52 *eP* **P 06 22 14.5 +2.0**
comp=Z,3.7nm,0.9s
TPAW Teton Pass 65.51 52 *eP* **P 06 22 14.8 +2.0**
comp=Z,9.9nm,1.0s
LOHW Long Hollow 65.63 52 *eP* **P 06 22 15.8 +2.3**
SNOW Snow King Moun 65.64 52 *eP* **P 06 22 15.9 +2.2**
comp=Z,4.9nm,1.0s
REDW Red Top Meadow 65.65 52 *eP* **P 06 22 12.8 -0.9**
comp=Z,10.0nm,1.2s
OBN Obninsk 65.81 325 *i* P **P 06 22 12.8 -1.4**
OBN *i* 06 22 45.3
OBN pmax pmax
comp=Z,9.0nm,1.2s

OBN MLR MLR
comp=Z,142nm,16.0s
R11A Troy Canyon, C 66.08 59 *eP* **P 06 22 16.4 0.0**
comp=Z,3.0nm,0.9s
GEYT Alibeck 66.23 300 P **P 06 22 17.3 0.0**
comp=Z,24nm,0.7s,baz=29,slow=3.4,SNR=40
GEYT LR LR 06 53 38.0
comp=Z,101nm,18.7s,baz=45,slow=38
GYA0B ALIBECK ARRAY 66.23 300 *eP* **P 06 22 16.6 -0.7**
comp=Z,31nm,0.8s
VRH Novokhopyorsk 66.32 320 *eP* **P 06 22 16.5 -1.0**
VRH pmax pmax
comp=Z,10.0nm,0.4s
LPSR Galich'ya Gora 66.60 322 *eP* **P 06 22 18.3 -1.0**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
WRAB Tennant Creek 66.61 197 *eP* **P 06 22 20.3 +0.7**
comp=Z,14nm,0.8s
WRAB Tennant Creek 66.61 197 *ceP* **P 06 22 20.5 +0.9**
WRAB pmax pmax
comp=Z,13nm,0.8s
WB2 Warramunga Arr 66.62 197 *eP* **P 06 22 20.9 +1.3**
comp=Z,16nm,0.8s
WR1 Warramunga Arr 66.62 197 *eP* **P 06 22 20.3 +0.6**
WRA Warramunga Arr 66.62 197 P **P 06 22 20.3 +0.6**
comp=Z,9.9nm,0.9s,baz=3.3,slow=5.8,SNR=17
WC3 Warramunga Arr 66.63 197 *eP* **P 06 22 20.3 +0.5**
comp=Z,13nm,0.8s
BW06 Boulder Array 66.76 52 *eP* **P 06 22 19.5 -1.3**
comp=Z,3.0nm,0.8s
PD31 Pinedale Array 66.76 52 *eP* **P 06 22 20.9 +0.1**
comp=Z,3.3nm,0.9s
PDAR Pinedale Array 66.76 52 P **P 06 22 21.6 +0.8**
comp=Z,1.8nm,0.7s,baz=281,slow=2.3,SNR=11
PDAR LR LR 06 54 08.8
comp=Z,27nm,18.0s,baz=322,slow=38
SFJD Kangerlussuaq 66.90 9 *i P* **P 06 22 20.3 -0.7**
SFJD Kangerlussuaq 66.90 9 *i P* **P 06 22 20.3 -0.7**
VSU Vasula 66.95 332 *ceP* **P 06 22 19.1 -2.3**
VSU pmax pmax
comp=Z,39nm,1.3s
VSU Vasula 66.95 332 *eP* **P 06 22 20.4 -1.0**
VSU IAmb IAmb 06 22 21.8
comp=Z,31nm,0.8s
VSR Storozhevoye 67.47 321 *eP* **P 06 22 23.8 -1.0**
VSR pmax pmax
comp=Z,20nm,0.5s
VORD Divnogorie 67.59 321 *eP* **P 06 22 24.6 -1.0**
VORD pmax pmax
comp=Z,10.0nm,0.5s
LCMT Little Creek M 68.36 59 *eP* **P 06 22 32.9 +2.0**
comp=Z,3.9nm,0.9s
ULM Lac du Bonnet 68.58 39 P **P 06 22 31.6 -0.2**
comp=Z,4.2nm,0.6s,baz=312,slow=4.7,SNR=4.8
KNB Kanab 68.61 59 *eP* **P 06 22 34.4 +2.0**
comp=Z,5.3nm,1.0s
RSSD Black Hills 68.86 48 *eP* **P 06 22 33.4 -0.6**
comp=Z,5.7nm,0.8s
RSSD Black Hills 68.86 48 *eP* **P 06 22 33.4 -0.6**
RSSD pmax pmax
comp=Z,6.0nm,0.8s
NC303 NORSAR Array S 69.05 340 *eP* **P 06 22 34.0 -0.6**
comp=Z,23nm,0.6s
SLIT Slitere, Latvi 69.06 333 *eP* **P 06 22 32.0 -2.7**
SLIT IAmb IAmb 06 22 34.7
comp=Z,98nm,0.9s
NC405 NORSAR Array S 69.06 340 *eP* **P 06 22 33.6 -1.0**
comp=Z,56nm,0.6s
NC204 NORSAR Array S 69.14 341 *eP* **P 06 22 34.0 -1.2**
comp=Z,37nm,0.7s
NB201 NORSAR Array S 69.22 340 *eP* **P 06 22 35.1 -0.6**
comp=Z,52nm,0.7s
NB2 NORSAR Subarra 69.25 340 P **P 06 22 34.9 -0.9**
comp=Z,18nm,0.7s,baz=27,slow=6.5
NB2 NORSAR Subarra 69.25 340 P **P 06 22 34.9 -0.9**
baz=27,slow=6.5
NB200 NORSAR Array S 69.25 340 *eP* **P 06 22 35.1 -0.7**
NOA NORSAR Array B 69.25 340 P **P 06 22 35.1 -0.7**
comp=Z,13nm,0.6s,baz=28,slow=6.4,SNR=61
NOA LR LR 06 57 36.9
comp=Z,114nm,18.2s,baz=15,slow=40
U15A North Rim 69.31 59 *eP* **P 06 22 38.4 +1.4**
comp=Z,5.3nm,1.0s
NBO00 NORSAR Array S 69.36 341 *eP* **P 06 22 36.1 -0.4**
comp=Z,39nm,1.1s
IDID Didziasalis 69.41 330 *eP* **P 06 22 35.5 -1.4**
IDID IAmb IAmb 06 22 38.5
comp=Z,14nm,0.5s
ISAL Salakas 69.42 330 *eP* **P 06 22 35.9 -1.1**
ISAL IAmb IAmb 06 22 41.5
comp=Z,13nm,0.5s
NC602 NORSAR Array S 69.44 340 *eP* **P 06 22 35.7 -1.3**
comp=Z,26nm,1.0s
NAO01 NORSAR Array S 69.50 340 *eP* **P 06 22 36.3 -1.0**
comp=Z,58nm,1.0s
IIGN Ignalina 69.56 330 *eP* **P 06 22 36.1 -1.7**
IIGN IAmb IAmb 06 22 38.4
comp=Z,3.7nm,0.7s
GROC Groznyy 69.80 311 *eP* **P 06 22 37.6 -1.9**
GROC *e* 06 23 01.0
GROC pmax pmax
comp=Z,23nm,0.6s
AKT Akhty 69.93 309 *eP* **P 06 22 41.0 +0.5**
AKT *e* 06 23 02.0
AKT pmax pmax
comp=Z,74nm,0.9s
GOF Gofitskoye 69.94 314⇑ *eP* **P 06 22 40.7 +0.3**
GOF pmax pmax
comp=Z,103nm,0.6s
PV14 Lion Creek, Pa 69.97 56 *eP* **P 06 22 41.1 +0.2**
comp=Z,5.5nm,0.7s
AGMN Agassiz Nation 69.99 41 *eP* **P 06 22 40.4 -0.2**
comp=Z,5.5nm,0.8s
PABE Paberze 70.22 331 *eP* **P 06 22 37.8 -4.0**
PABE IAmb IAmb 06 22 42.2
comp=Z,27nm,0.9s
PV13 Radium Mtn., P 70.23 56 *eP* **P 06 22 44.0 +1.4**
comp=Z,5.2nm,0.6s
AS31 Alice Springs 70.32 197 *eP* **P 06 22 43.7 +1.0**
comp=Z,3.1nm,0.6s
ASAR Alice Springs 70.32 197 P **P 06 22 44.5 +1.7**
comp=Z,7.4nm,0.8s,baz=15,slow=6.2,SNR=54
SEKA Sheki 70.41 309 P **P 06 22 43.5 +0.1**
PBUR Paburg 70.48 333 *eP* **P 06 22 41.7 -1.7**
PBUR IAmb IAmb 06 22 46.1
comp=Z,26nm,0.6s
SMCO Snowmass 70.61 54 *eP* **P 06 22 44.8 -0.2**
comp=Z,3.8nm,0.8s
NCK Nalchik 70.75 313 *i P* **P 06 22 45.3 -0.1**
NCK pmax pmax
comp=Z,56nm,1.1s
KONO Kongsberg 70.86 340 *ceP* **P 06 22 43.5 -2.2**
KONO pmax pmax
comp=Z,60nm,2.5s
KIV Kislovodsk 70.90 314 *eP* **P 06 22 46.5 +0.2**
comp=Z,46nm,0.8s
KIV Kislovodsk 70.90 314⇓ *iP* **P 06 22 47.3 +1.0**
KIV Kislovodsk 70.90 314 *i P* **P 06 22 47.0 +0.7**
SNR=5.8
KIV Kislovodsk 70.90 314 *eP* **P 06 22 46.2 -0.1**
KIV pmax pmax
comp=Z,173nm,1.0s
KIV MLR MLR
comp=Z,613nm,18.0s
KIV Kislovodsk 70.90 314 *eP* **P 06 22 46.2 -0.1**
ISCO Idaho Springs 70.95 53 *eP* **P 06 22 47.8 +0.8**
comp=Z,4.1nm,0.8s
ISCO Idaho Springs 70.95 53 *eP* **P 06 22 47.8 +0.8**
ISCO pmax pmax
comp=Z,4.0nm,0.8s
KBZ Khabaz 70.95 313 P **P 06 22 47.2 +0.8**
comp=Z,52nm,0.9s,baz=69,slow=4.0,SNR=70
KBZ LR LR 06 57 42.7
comp=Z,441nm,20.0s,baz=45,slow=39
MVCO Mesa Verde 71.06 56 *eP* **P 06 22 49.1 +1.6**
comp=Z,5.7nm,1.1s
ZEI Tsey 71.09 312 *eP* **P 06 22 46.8 -0.8**
ZEI pmax pmax
comp=Z,26nm,0.8s
ZEI Tsey 71.09 312 *eP* **P 06 22 46.8 -0.8**
X16A Lo Mia Camp, P 71.17 60 *eP* **P 06 22 47.7 -0.6**
comp=Z,4.3nm,0.8s
LKRN Lenkeran, Azer 71.23 306 P **P 06 22 48.6 +0.3**
GANJ Ganja 71.28 309 P **P 06 22 49.0 +0.4**
NEY Neytrino 71.38 313 *i P* **P 06 22 48.5 -0.9**
NEY pmax pmax
comp=Z,4.0nm,0.8s
TBLG Delisi 71.38 311 *eP* **P 06 22 50.4 +1.1**
comp=Z,80nm,0.7s
S22A 4UR Ranch, Cre 71.66 55 *eP* **P 06 22 52.6 +1.3**
comp=Z,5.4nm,0.9s
SUW Suwalki 71.70 331 *eP* **P 06 22 49.9 -0.9**
SUW Suwalki 71.70 331 *eP* **P 06 22 50.0 -0.9**
comp=Z,58nm,1.2s
SUW Suwalki 71.70 331 *eP* **P 06 22 50.0 -0.9**
SUW pmax pmax
comp=Z,58nm,1.2s
AKASG Malin Array Be 72.07 325 P **P 06 22 52.1 -1.1**
comp=Z,13nm,0.3s,baz=38,slow=6.4,SNR=56
AKASG LR LR 06 57 09.9
comp=Z,230nm,18.8s,baz=10.0,slow=38
AKASG Malin Array Be 72.07 325 *i P* **P 06 22 52.2 -0.9**
AKASG pmax pmax
comp=Z,13nm,0.4s
AKBB Malin Array Si 72.07 325 *eP* **P 06 22 51.8 -1.3**
comp=Z,20nm,0.8s
AKBB Malin Array Si 72.07 325 *eP* **P 06 22 51.8 -1.3**
AKBB pmax pmax
comp=Z,20nm,0.8s
KIEV Kiev 72.08 325 *eP* **P 06 22 51.8 -1.4**
comp=Z,20nm,0.8s
KIEV Kiev 72.08 325⇑ *iP* **P 06 22 52.6 -0.6**
KIEV Kiev 72.08 325 *i P* **P 06 22 52.1 -1.1**
SNR=17
KIEV Kiev 72.08 325 *eP* **P 06 22 51.8 -1.4**
KIEV pmax pmax
comp=Z,20nm,0.8s
KLNR Kaliningrad 72.21 333 *i P* **P 06 22 51.7 -2.2**
KLNR pmax pmax
comp=Z,63nm,1.0s
EYMN Ely 72.22 39 *eP* **P 06 22 54.2 0.0**
comp=Z,19nm,1.3s
AKH Akhalkalaki 72.27 311 *eP* **P 06 22 55.3 +0.5**
comp=Z,26nm,0.8s
AKH Akhalkalaki 72.27 311⇓ *iP* **P 06 22 56.3 +1.5**
AKH Akhalkalaki 72.27 311 P **P 06 22 56.3 +1.5**
GNI Garni 72.49 310 *eP* **P 06 22 54.1 -1.9**
comp=Z,36nm,0.9s
GNI Garni 72.49 310 P **P 06 22 57.5 +1.5**
GNI Garni 72.49 310 *i P* **P 06 22 55.4 -0.7**
GNI pmax pmax
comp=Z,46nm,0.7s
ANN Anapa 72.90 317 *eP* **P 06 22 58.0 -0.2**
ANN *eS* **S 06 32 17.9 -4.0**
ANN pmax pmax
comp=Z,41nm,0.6s
ANN MLR MLR
comp=Z,268nm,19.0s
ECSD EROS Data Cent 72.94 45 *eP* **P 06 22 58.7 +0.2**
comp=Z,17nm,1.4s
KARS Kars 73.05 311 *eP* **P 06 23 01.1 +1.7**
comp=Z,212nm,1.2s
KARS Kars 73.05 311 *eP* **P 06 23 01.1 +1.7**
KARS pmax pmax
comp=Z,212nm,1.2s
E38A The Farm, Brul 73.21 40 *eP* **P 06 22 59.9 -0.1**
comp=Z,12nm,0.7s
BCA Borcka 73.23 312⇓ *iP* **P 06 23 00.6 +0.3**
SPMN Marine on St. 73.67 41 *eP* **P 06 23 03.1 +0.4**
comp=Z,8.5nm,1.0s
ANMO Albuquerque 73.81 57 *eP* **P 06 23 04.7 +0.7**
comp=Z,2.5nm,0.9s
ANMO Albuquerque 73.81 57 *eP* **P 06 23 04.7 +0.7**
ANMO pmax pmax
comp=Z,2.0nm,0.9s
GKP Gorka Klasztor 74.29 333 *eP* **P 06 23 06.0 -0.2**
GKP Gorka Klasztor 74.29 333 *eP* **P 06 23 06.0 -0.2**
BEL Belsk 74.31 331 *eP* **P 06 23 05.9 -0.5**
BEL Belsk 74.31 331 *eP* **P 06 23 05.9 -0.5**
SIM Simferopol' 74.36 319 *deP* **P 06 23 07.1 +0.3**
SIM pmax pmax
comp=Z,44nm,0.9s
SIM MLR MLR
comp=Z,70nm,16.6s
319A Douglas 74.57 61 *eP* **P 06 23 08.3 0.0**
comp=Z,13nm,0.9s
BIGH Upper Bighouse 74.63 347 *eP* **P 06 23 06.7 -1.3**
BIGH IAmb IAmb 06 23 09.0
comp=Z,94nm,1.8s
LVV L'vov 74.80 328 *eP* **P 06 23 08.7 -0.5**
G40A Rib Lake 74.84 40 *eP* **P 06 23 09.0 -0.5**
comp=Z,4.9nm,0.8s
SCHQ Schefferville 75.25 22 P **P 06 23 10.1 -1.7**
comp=Z,7.3nm,0.5s,baz=295,slow=6.0,SNR=4.3
SCHQ LR LR 06 58 54.3
comp=Z,75nm,20.9s,baz=326,slow=38
SCHQ Schefferville 75.25 22 *eP* **P 06 23 10.4 -1.4**
comp=Z,9.1nm,0.7s
I39A Houston 75.31 42 *eP* **P 06 23 11.6 -0.7**
comp=Z,12nm,0.8s
KWP Kalwaria Pacla 75.44 328 *eP* **P 06 23 13.3 +0.4**
KWP Kalwaria Pacla 75.44 328 *eP* **P 06 23 13.3 +0.4**
H41A Junction City 75.59 40 *eP* **P 06 23 13.8 -0.1**
comp=Z,7.1nm,0.7s
KAC Achnashellach 75.80 347⇑ *eP* **P 06 23 14.5 -0.3**
MSFE Esma-Masafi 75.80 292 P **P 06 23 15.4 0.0**
DRUM Mains of Drumt 75.89 345 *eP* **P 06 23 14.2 -1.1**
DRUM IAmb IAmb 06 23 15.6
comp=Z,11nm,0.7s
SCIA State Center 75.97 44 *eP* **P 06 23 16.3 +0.2**
comp=Z,20nm,0.8s
G43A Wallace 75.97 39 *eP* **P 06 23 16.2 +0.2**
comp=Z,9.2nm,0.8s
OJC Ojcow 76.01 330 *eP* **P 06 23 16.3 +0.2**
OJC Ojcow 76.01 330 *eP* **P 06 23 16.1 -0.1**
comp=Z,62nm,1.1s
OJC Ojcow 76.01 330 *eP* **P 06 23 16.1 -0.1**
OJC pmax pmax
comp=Z,62nm,1.1s
KPL Plockton 76.01 347 *eP* **P 06 23 15.1 -0.9**
KPL IAmb IAmb 06 23 16.2
comp=Z,21nm,0.8s
RUE Ruedersdorf 76.04 335 *eP* **P 06 23 15.5 -0.7**
UOSS Minazif 76.05 291 P **P 06 23 16.6 -0.3**
BUR08 Bucovina Ar. S 76.10 326 *eP* **P 06 23 16.8 -0.1**
comp=Z,43nm,0.6s
BURAR Bucovina Array 76.12 326⇓ *iP* **P 06 23 17.3 +0.3**
KOLS Kolonicke sedl 76.18 328 *eP* **P 06 23 17.4 +0.2**
KOLS pmax pmax
comp=Z,29nm,1.1s
KOLS Kolonicke sedl 76.18 328 *eP* **P 06 23 17.4 +0.2**
HATD Hatta, Dubai 76.18 291 P **P 06 23 17.9 +0.3**
BIZ Bicaz 76.31 325⇑ *iP* **P 06 23 18.4 +0.5**
ASHO Ashiyiah 76.33 291 P **P 06 23 18.8 +0.3**
UZH Uzhgorod 76.42 328⇓ *iP* **P 06 23 17.9 -0.6**
UZH *i* 06 23 30.4
UZH *i* 06 23 34.9
TESR Tescani 76.43 324⇑ *iP* **P 06 23 18.7 +0.1**
NIE Niedzica 76.50 329 *eP* **P 06 23 19.5 +0.5**
NIE Niedzica 76.50 329 *eP* **P 06 23 19.5 +0.5**
TLCR 76.56 322⇓ *iP* **P 06 23 19.6 +0.2**
TLCR 76.56 322 P **P 06 23 19.6 +0.2**
INVG Invergeldie, C 76.62 346 *eP* **P 06 23 18.4 -1.1**
INVG IAmb IAmb 06 23 19.8
comp=Z,12nm,0.8s
KSP Ksiaz 76.67 333 *eP* **P 06 23 19.5 -0.4**
KSP Ksiaz 76.67 333 *eP* **P 06 23 19.5 -0.4**
TRPA Tarpa 76.74 327⇓ *iP* **P 06 23 21.1 +0.8**
PETR Petresti 76.81 323⇓ *iP* **P 06 23 22.4 +1.6**
ASUD Al Ashush, Dub 76.85 292 P **P 06 23 21.7 +0.3**
ODBI Odobesti 76.86 323⇓ *iP* **P 06 23 22.6 +1.6**
ESY Stoneypath 76.86 345 *eP* **P 06 23 20.1 -0.7**
CFR Carcaliu 76.86 322⇓ *iP* **P 06 23 21.2 +0.2**
ARCR ARCALIA 76.89 326⇓ *iP* **P 06 23 22.4 +1.2**
EAB Aberfoyle 76.90 346 *eP* **P 06 23 20.7 -0.3**
OKC Ostrava-Krasne 76.90 331 *eP* **P 06 23 21.3 +0.1**
OKC Ostrava-Krasne 76.90 331 *eP* **P 06 23 21.3 +0.1**
VRI Vrincioaia 76.91 324⇑ *iP* **P 06 23 21.5 +0.1**
VRI Vrincioaia 76.91 324 P **P 06 23 23.5 +2.1**
VRI pmax pmax
comp=Z,22nm,1.0s
OSTC Ostas 76.94 332 *eP* **P 06 23 21.2 -0.3**
PLOR Plostina 76.95 324⇓ *iP* **P 06 23 22.0 +0.3**
CHVC Chvalec 76.96 333 *eP* **P 06 23 21.7 +0.1**
LANS Liptovska Anna 77.02 330 *eP* **P 06 23 23.0 +1.0**
LANS Liptovska Anna 77.02 330 *eP* **P 06 23 23.0 +1.0**
UPC Upice 77.05 332 *eP* **P 06 23 22.1 +0.1**
UPC MLR MLR
comp=Z,200nm,16.8s
UPC Upice 77.05 332 *eP* **P 06 23 22.1 +0.1**
UPC AMS AMS 07 01 10.0
comp=Z,200nm,16.8s
EBL Broad Law 77.07 345 *eP* **P 06 23 21.8 -0.3**
EAU Auchinoon 77.07 346 *eP* **P 06 23 22.0 -0.1**
DPC Dobruska-Polom 77.08 332 *eP* **P 06 23 22.7 +0.4**
DPC MLR MLR
comp=Z,200nm,17.8s
DPC Dobruska-Polom 77.08 332 *eP* **P 06 23 22.7 +0.4**
DPC AMS AMS 07 00 50.0
comp=Z,200nm,17.8s
OZUR 77.12 324⇓ *iP* **P 06 23 23.7 +1.1**
MORC Moravsky Berou 77.16 331 *eP* **P 06 23 22.7 -0.1**
comp=Z,40nm,0.9s
MORC Moravsky Berou 77.16 331⇑ *iP* **P 06 23 23.1 +0.3**
MORC Moravsky Berou 77.16 331 *eP* **P 06 23 22.7 -0.1**
KRLC Kraliky 77.16 332 *eP* **P 06 23 22.9 +0.1**
KRLC Kraliky 77.16 332 *eP* **P 06 23 22.9 +0.1**
STKA Stephens Creek 77.20 188 P **P 06 23 25.0 +2.1**
comp=Z,2.4nm,0.8s,baz=346,slow=8.7,SNR=4.1
STKA LR LR 06 56 37.6
comp=Z,48nm,21.4s,baz=25,slow=35
STKA Stephens Creek 77.20 188 *eP* **P 06 23 24.4 +1.5**
comp=Z,2.6nm,1.4s
KECS Kecovo 77.22 329 *eP* **P 06 23 23.2 +0.2**
KECS pmax pmax
comp=Z,71nm,0.9s
KECS Kecovo 77.22 329 *eP* **P 06 23 23.2 +0.2**
CLL Collm 77.30 335 *eP* **P 06 23 22.6 -0.8**
comp=Z,66nm,1.1s
CLL Collm 77.30 335⇑ *iP* **P 06 23 22.9 -0.5**
comp=Z,58nm,1.0s
CLL *e*(PcP) **PcP 06 23 32.0 -1.9**
CLL Lm MLR 07 00 00.0
comp=Z,200nm,22.0s
CLL Collm 77.30 335 *eP* **P 06 23 22.6 -0.8**
CLL pmax pmax
comp=Z,66nm,1.1s
HARR Harsova 77.34 322⇓ *iP* **P 06 23 24.1 +0.4**
TLB Topalu 77.37 322⇓ *iP* **P 06 23 24.3 +0.4**
BRG Berggiesshubel 77.39 334 *i P* **P 06 23 23.5 -0.4**
comp=Z,13nm,0.9s
BRG Berggiesshubel 77.39 334 *i P* **P 06 23 23.5 -0.4**
BRG pmax pmax
comp=Z,13nm,0.9s
PVCC Panska Ves 77.49 333 *eP* **P 06 23 24.7 +0.2**
PVCC MLR MLR
comp=Z,300nm,17.5s
PVCC Panska Ves 77.49 333 *eP* **P 06 23 24.7 +0.2**
PVCC AMS AMS 07 01 00.0
comp=Z,300nm,17.5s
CJR Cluj-Napoca 77.50 326⇓ *iP* **P 06 23 25.5 +0.8**
ILGA Ilgaz 77.52 317 *eP* **P 06 23 26.6 +1.4**
comp=Z,69nm,1.2s
ESK Eskdalemuir 77.53 345 *eP* **P 06 23 24.7 0.0**
comp=Z,17nm,1.1s
ESK Eskdalemuir 77.53 345 *eP* **P 06 23 24.5 -0.2**
ESK IAmb IAmb 06 23 25.2
comp=Z,17nm,1.1s
ESK Eskdalemuir 77.53 345 *eP* **P 06 23 24.7 0.0**
ESK pmax pmax
comp=Z,17nm,1.1s
MLR Muntele Rosu 77.54 324 *eP* **P 06 23 25.0 -0.1**
comp=Z,28nm,0.9s
MLR Muntele Rosu 77.54 324 *eP* **P 06 23 25.0 -0.1**
MLR pmax pmax
comp=Z,28nm,0.9s
ISR Istrita 77.59 323⇑ *iP* **P 06 23 26.1 +0.9**
GLMI Grayling 77.64 37 *eP* **P 06 23 25.5 0.0**
comp=Z,34nm,1.0s
K43A Burlington 77.68 41 *eP* **P 06 23 24.7 -1.0**
comp=Z,24nm,1.1s
BHH Howats Hill 77.75 345 *eP* **P 06 23 25.3 -0.5**
VLDQ Val d'Or 77.78 31 *eP* **P 06 23 25.1 -1.0**
comp=Z,12nm,1.1s
DRGR 77.78 327⇓ *iP* **P 06 23 26.5 +0.2**
DRGR 77.78 327 P **P 06 23 26.4 +0.2**
DRGR pmax pmax
comp=Z,42nm,0.8s
VYHS Vyhne 77.80 330 *eP* **P 06 23 26.6 +0.3**
VYHS pmax pmax
comp=Z,15nm,1.1s
VYHS Vyhne 77.80 330 *eP* **P 06 23 26.6 +0.3**
ICOR Ion Corvin 77.85 322⇓ *iP* **P 06 23 27.6 +1.0**
VRAC Vranov 77.89 332⇑ *iP* **P 06 23 27.6 +0.8**
VRAC Vranov 77.89 332 P **P 06 23 27.1 +0.3**
VRAC pmax pmax
comp=Z,47nm,0.9s
VRAC Vranov 77.89 332 *eP* **P 06 23 26.9 +0.1**
JAVC Velka Javorina 77.90 331 *eP* **P 06 23 28.0 +1.1**
PSZ Piszkesteto 77.91 329 *eP* **P 06 23 26.9 -0.1**
comp=Z,29nm,1.0s
PSZ Piszkesteto 77.91 329⇓ *iP* **P 06 23 27.8 +0.8**
PSZ Piszkesteto 77.91 329 *eP* **P 06 23 26.9 -0.1**
PSZ pmax pmax
comp=Z,29nm,1.0s
VOIR 77.95 324⇓ *iP* **P 06 23 28.1 +0.8**
GOPC GO Pecny, Ondr 77.96 333 *eP* **P 06 23 27.1 -0.1**
GOPC *e* 06 23 30.6
GOPC MLR MLR
comp=Z,200nm,15.5s
GOPC GO Pecny, Ondr 77.96 333 *eP* **P 06 23 27.1 -0.1**
GOPC *ex* x 06 23 30.6
GOPC AMS AMS 07 03 20.0
comp=Z,200nm,15.5s
PRU Pruhonice 77.97 333 *eP* **P 06 23 27.0 -0.2**
PRU *e* 06 23 30.3
PRU MLR MLR
comp=Z,200nm,19.1s
PRU Pruhonice 77.97 333 *eP* **P 06 23 27.0 -0.2**
PRU *ex* x 06 23 30.3
PRU AMS AMS 07 01 10.0
comp=Z,200nm,19.1s
N41A Harden Midland 78.03 43 *eP* **P 06 23 27.6 -0.1**
comp=Z,27nm,0.8s
BBO1 Bothel 78.09 345 *eP* **P 06 23 27.8 +0.1**
KRUC Moravsky 78.16 332 *eP* **P 06 23 28.3 0.0**
ARR Arges 78.18 325⇓ *iP* **P 06 23 29.9 +1.4**
KESW Keswick, Cumbr 78.21 345 *eP* **P 06 23 28.4 0.0**
KESW IAmb IAmb 06 23 29.4
comp=Z,34nm,0.9s
GAL1 Galloway 78.23 346 *eP* **P 06 23 28.2 -0.3**
GAL1 IAmb IAmb 06 23 29.0
comp=Z,11nm,1.1s
CLGH Cloghs, Cushen 78.25 347 *eP* **P 06 23 28.5 -0.1**
CLGH IAmb IAmb 06 23 29.2
comp=Z,18nm,1.1s
TREC Trest 78.27 332 *eP* **P 06 23 29.1 +0.2**
TREC MLR MLR
comp=Z,200nm,20.8s
TREC Trest 78.27 332 *eP* **P 06 23 29.1 +0.2**
TREC AMS AMS 07 00 30.0
comp=Z,200nm,20.8s
WMOK Wichita Mounta 78.37 52 *eP* **P 06 23 30.6 +0.9**
comp=Z,5.9nm,0.9s
WMOK Wichita Mounta 78.37 52 *eP* **P 06 23 30.6 +0.9**
WMOK pmax pmax
comp=Z,6.0nm,0.9s
NKC Novy Kostel 78.41 334 *eP* **P 06 23 29.6 -0.1**
NKC MLR MLR
comp=Z,200nm,21.1s
NKC Novy Kostel 78.41 334 *eP* **P 06 23 29.6 -0.1**
NKC AMS AMS 07 02 10.0
comp=Z,200nm,21.1s
MODS Modra-Piesok 78.45 331 *eP* **P 06 23 29.5 -0.4**
MODS pmax pmax
comp=Z,35nm,1.1s
MODS Modra-Piesok 78.45 331 *eP* **P 06 23 29.5 -0.4**
WTSB Winterswijk 78.46 338 *eP* **P 06 23 29.1 -0.7**
HPK Haverah Park 78.53 344 *eP* **P 06 23 29.9 -0.3**
HPK IAmb IAmb 06 23 31.2
comp=Z,45nm,0.7s
BR101 Keskin Array S 78.57 316 *eP* **P 06 23 31.1 +0.2**
BR131 Keskin Array S 78.57 316 *eP* **P 06 23 31.2 +0.2**
comp=Z,17nm,1.0s
BRTR Keskin Array B 78.57 316 P **P 06 23 31.1 +0.2**
comp=Z,10nm,0.9s,baz=60,slow=3.7,SNR=31
SIRR Siria 78.62 327⇓ *iP* **P 06 23 31.6 +0.7**
ZST Bratislava 78.66 331 *eP* **P 06 23 30.5 -0.6**
ZST Bratislava 78.66 331 *eP* **P 06 23 30.5 -0.6**
ANTO Ankara 78.88 316 *eP* **P 06 23 33.2 +0.7**
comp=Z,20nm,0.8s
ANTO Ankara 78.88 316⇑ *iP* **P 06 23 33.2 +0.7**
ANTO Ankara 78.88 316 *eP* **P 06 23 33.2 +0.7**
ANTO pmax pmax
comp=Z,20nm,0.8s

HDIL	Hopedale	78.90	42	eP	P	06 23 32.8	+0.3
	comp=Z,26nm,0.6s						
BR231	Keskin MP Arra	78.91	316	eP	P	06 23 33.7	+1.0
	comp=Z,47nm,1.2s						
GZR	Gura Zlata	78.91	326 ||| iP	P	06 23 32.6	+0.1
WIM	Isle of Man	78.91	346	eP	P	06 23 31.9	-0.4
KHC	Kasperske Hory	79.03	333	eP	P	06 23 33.2	+0.1
	comp=Z,14nm,0.9s						
KHC	Kasperske Hory	79.03	333	eP	P	06 23 33.2	+0.1
KHC				pmax	pmax		
	comp=Z,14nm,0.9s						
KHC	Kasperske Hory	79.03	333	eP	P	06 23 33.4	+0.3
KHC				ex	x	06 23 36.5	
KHC				AMS	AMS	07 02 10.0	
	comp=Z,300nm,17.0s						
GMM	Mts of Mourne	79.04	347	eP	P	06 23 32.6	-0.4
LBWR	Ladybower, Pea	79.07	344	eP	P	06 23 33.1	-0.1
LBWR				IAmb	IAmb	06 23 34.2	
	comp=Z,61nm,0.9s						
BZS	Buzias	79.18	327 ||| iP	P	06 23 33.8	-0.1
WACR	West Acre	79.23	342	eP	P	06 23 34.1	+0.1
WACR				IAmb	IAmb	06 23 35.0	
	comp=Z,63nm,1.0s						
GEC2	GERESS Array S	79.24	333	eP	P	06 23 34.2	-0.1
	comp=Z,17nm,1.1s						
GEC2	GERESS Array S	79.24	333	eP	P	06 23 34.3	0.0
GEC2				pmax	pmax		
	comp=Z,17nm,1.1s						
GERES	GERESS Array B	79.24	333	P	P	06 23 34.1	-0.1
	comp=Z,7.9nm,0.7s,baz=33,slow=5.1,SNR=43						
GRA1	Grafenberg Arr	79.26	335	eP	P	06 23 34.4	0.0
	comp=Z,40nm,0.9s						
GRFO	Grafenberg	79.27	335	eP	P	06 23 34.3	-0.1
	comp=Z,35nm,0.9s						
GRFO	Grafenberg	79.27	335	eP	P	06 23 34.3	-0.1
GRFO				pmax	pmax		
	comp=Z,35nm,0.9s						
CONA	Conrad Observa	79.32	331	eP	P	06 23 35.5	+0.7
	comp=Z,9.1nm,0.6s,SNR=12						
TX31	Lajitas Ar. Si	79.44	59	eP	P	06 23 35.9	+0.1
	comp=Z,5.2nm,0.8s						
LTX	Lajitas	79.44	59	eP	P	06 23 36.4	+0.6
LTX	Lajitas	79.44	59	eP	P	06 23 36.4	+0.6
TXAR	Lajitas Array	79.44	59	P	P	06 23 36.4	+0.6
	comp=Z,1.5nm,0.7s,baz=302,slow=4.3,SNR=20						
WME	Myndd Eilian	79.56	345	eP	P	06 23 35.4	-0.5
RAR	Rarotonga	79.75	134	LR	LR	06 57 11.6	
	comp=Z,110nm,20.0s,baz=314,slow=34						
PUNG	Punghina	79.77	325 ⇑	iP	P	06 23 37.3	+0.2
HGN	Heimansgroeve	79.78	338	eP	P	06 23 37.0	-0.1
MDVR	Moldovita	79.84	326 ||| iP	P	06 23 37.4	-0.2
FOEL	Foel Wylfa	79.84	345	eP	P	06 23 37.4	0.0
FOEL				IAmb	IAmb	06 23 40.0	
	comp=Z,18nm,0.9s						
HHAR	Hobbs	79.85	48	eP	P	06 23 37.5	-0.2
	comp=Z,9.0nm,0.9s						
CCM	Cathedral Cave	79.88	45	eP	P	06 23 37.7	-0.2
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	79.88	45	eP	P	06 23 37.7	-0.2
CCM				pmax	pmax		
	comp=Z,11nm,0.8s						
MEM	Membach	79.90	338	P	P	06 23 36.3	-1.4
	comp=Z,28nm,1.0s						
MOA	Molln	79.92	332	eP	P	06 23 38.1	+0.1
	comp=Z,8.5nm,0.7s						
LLW	Llanuwychllyn	79.97	345	eP	P	06 23 37.8	-0.2
ARSA	Arzberg	80.02	331	eP	P	06 23 38.9	+0.4
	comp=Z,5.3nm,0.6s						
DSB	Dublin	80.06	347	eP	P	06 23 38.6	+0.1
	comp=Z,28nm,1.3s						
SFIN	Lafayette	80.08	41	eP	P	06 23 39.4	+0.5
	comp=Z,9.3nm,0.9s						
HLM1	Long Mynd	80.14	344	eP	P	06 23 38.1	-0.9
HLM1				IAmb	IAmb	06 23 38.9	
	comp=Z,24nm,1.2s						
BCLA	Clavier	80.26	339	P	P	06 23 38.8	-0.8
BCLA				sP	pwP	06 23 56.9	+2.4
FVM	French Village	80.34	45	eP	P	06 23 41.4	+1.0
	comp=Z,7.9nm,0.7s						
BGES	Gesves	80.35	339	P	P	06 23 39.2	-1.0
P45A	Graceland, Par	80.44	42	eP	P	06 23 41.1	+0.2
	comp=Z,9.3nm,0.8s						
BMRD	Maredsous	80.50	339	P	P	06 23 41.0	0.0
	comp=Z,27nm,1.1s						
SOKA	Soboth	80.69	331	eP	P	06 23 42.2	0.0
	comp=Z,14nm,0.8s,SNR=14						
STU	Stuttgart	80.69	336	eP	P	06 23 41.2	-0.8
	comp=Z,43nm,1.3s						
PERS	Pernice	80.69	331	iP	P	06 23 42.1	0.0
WLF	Walferdange	80.73	338	eP	P	06 23 40.8	-1.4
	comp=Z,136nm,1.3s						
WLF	Walferdange	80.73	338	eP	P	06 23 40.8	-1.4
WLF				pmax	pmax		
	comp=Z,136nm,1.3s						
DOU	Dourbes	80.74	339	P	P	06 23 42.1	-0.2
W39A	Magazine	80.75	49	eP	P	06 23 42.3	-0.3
	comp=Z,8.5nm,0.9s						
MONM	Monmouth	80.77	344	eP	P	06 23 42.0	-0.3
MONM				IAmb	IAmb	06 23 47.1	
	comp=Z,37nm,0.9s						
OLIL	Olney	80.90	43	eP	P	06 23 43.7	+0.4
	comp=Z,12nm,1.0s						
KBA	Koelnbreinsper	80.90	332	iP	P	06 23 44.2	+0.8
	comp=Z,15nm,0.6s,SNR=18						
JCT	Junction City	80.91	56	eP	P	06 23 43.8	+0.2
	comp=Z,12nm,0.9s						
JCT	Junction City	80.91	56	eP	P	06 23 43.8	+0.2
JCT				pmax	pmax		
	comp=Z,12nm,0.9s						
WOL	Wolverton	80.95	343	eP	P	06 23 43.3	-0.1
OBKA	Obir	81.00	331	iP	P	06 23 43.8	0.0
	comp=Z,7.4nm,0.8s						
VTS	Vitosha	81.01	324	eP	P	06 23 44.4	+0.4
	comp=Z,41nm,0.9s						
VTS	Vitosha	81.01	324 ||| iP	P	06 23 44.8	+0.7
RSBS	Rosebush, Pemb	81.02	345	eP	P	06 23 43.5	-0.3
RSBS				IAmb	IAmb	06 23 45.0	
	comp=Z,5.8nm,1.0s						
GOLS	Golise	81.06	330	iP	P	06 23 43.8	-0.4
SIUC	Southern Illin	81.15	44	eP	P	06 23 45.2	+0.5
	comp=Z,17nm,0.8s						
GCIS	Gornji Cirnik	81.18	330	iP	P	06 23 44.5	-0.3
MYKA	Terra Mystica	81.20	332	eP	P	06 23 44.5	-0.4
	comp=Z,2.6nm,0.5s						
ALN	Alexandroupoli	81.21	321	eP	P	06 23 44.9	-0.1
	comp=Z,15nm,1.0s						
ALN	Alexandroupoli	81.21	321	P	P	06 23 45.4	+0.5
ALN				pmax	pmax		
	comp=Z,14nm,1.0s						
WATA	Walderalm	81.24	334	eP	P	06 23 45.6	+0.4
	comp=Z,8.4nm,0.4s,SNR=8.5						
PBMO	Poplar Bluff	81.28	46	eP	P	06 23 45.6	+0.2
	comp=Z,14nm,1.0s						
WTTA	Wattenberg	81.29	333	iP	P	06 23 46.0	+0.5
	comp=Z,13nm,0.5s,SNR=8.1						
BFO	Black Forest	81.33	336	eP	P	06 23 44.6	-0.9
	comp=Z,17nm,1.0s						
BFO	Black Forest	81.33	336	eP	P	06 23 44.6	-0.9
BFO				pmax	pmax		
	comp=Z,17nm,1.0s						
MIAR	Mount Ida	81.36	49	eP	P	06 23 46.5	+0.6
	comp=Z,17nm,1.0s						
MIAR	Mount Ida	81.36	49	eP	P	06 23 46.5	+0.6
MIAR				pmax	pmax		
	comp=Z,17nm,1.0s						
RETA	Reutte	81.36	334	eP	P	06 23 46.0	+0.2
	comp=Z,3.3nm,0.5s						
PMOR	Pomariorio Ree	81.37	121	eT	T	07 53 41.0	
	comp=Z,7.3nm,0.2s						
MOTA	Moosalm	81.38	334	eP	P	06 23 46.2	+0.2
	comp=Z,12nm,0.7s,SNR=8.1						
SQTA	Sankt Quirin	81.46	334	iP	P	06 23 46.7	+0.4
	comp=Z,20nm,1.0s,SNR=7.1						
ABTA	Abfaltersbach	81.47	333	eP	P	06 23 46.6	+0.3
	comp=Z,5.5nm,0.9s						
WHAR	Wooly Hollow	81.47	48	eP	P	06 23 46.7	+0.3
	comp=Z,15nm,1.0s						
W41B	Gary Mavity, V	81.58	48	eP	P	06 23 47.1	+0.1
	comp=Z,11nm,0.9s						
PARMO	Parma	81.71	45	eP	P	06 23 48.4	+0.8
	comp=Z,40nm,0.7s						
ECH	Echery	81.77	337	eP	P	06 23 47.5	-0.4
	comp=Z,16nm,1.0s						
ECH	Echery	81.77	337	eP	P	06 23 47.5	-0.4
ECH				pmax	pmax		
	comp=Z,16nm,1.0s						
FETA	Feichten	81.79	334	eP	P	06 23 48.4	+0.2
	comp=Z,11nm,1.1s						
X40A	Basin Creek Fa	81.80	49	eP	P	06 23 48.1	-0.1
	comp=Z,10nm,1.1s						
DAVA	Damuels	81.81	335	eP	P	06 23 48.5	+0.3
	comp=Z,12nm,1.0s,SNR=5.0						
MANT	Manisa	81.99	318	eP	P	06 23 48.4	-1.1
	comp=Z,54nm,1.0s						
MOQ	Mont Orford	82.02	29	eP	P	06 23 49.5	+0.2
WCI	Wyandotte Cave	82.16	42	eP	P	06 23 50.0	0.0
	comp=Z,9.5nm,0.8s						
WCI	Wyandotte Cave	82.16	42	eP	P	06 23 50.1	0.0
WCI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STIP	Stip	82.21	324	iP	P	06 23 49.4	-0.9
WLAR	White Oak Lake	82.26	49	eP	P	06 23 51.1	+0.5
	comp=Z,28nm,1.0s						
SKO	Skopje	82.29	325	iP	P	06 23 50.9	+0.3
FUORN	Ofenpass-Fuorn	82.29	334	eP	P	06 23 51.4	+0.5
	comp=Z,18nm,1.1s						
VAY	Valandovo	82.36	324	iP	P	06 23 51.2	+0.2
PPT	Papeete	82.38	124	LR	LR	06 57 40.4	
	comp=Z,218nm,18.8s,baz=332,slow=34						
PPT2	Papeete2	82.39	124	eLR	LR	06 49 52.8	
	comp=Z,244nm,23.2s						
NVLJ	Novalja	82.58	330	P	P	06 23 50.7	-1.4
TUE	Stuetta	82.71	334	eP	P	06 23 48.4	-4.6
	comp=Z,17nm,0.9s						
T47A	Sharon Grove	82.76	43	eP	P	06 23 53.6	+0.5
	comp=Z,8.4nm,0.7s						
PDG	Pogorica	82.78	326 ||| iP	P	06 23 52.9	-0.2
TTG	Podgorica	82.78	326	eP	P	06 23 52.7	-0.4
	comp=Z,16nm,0.7s						
TTG	Podgorica	82.78	326	eP	P	06 23 52.7	-0.4
TTG				pmax	pmax		
	comp=Z,16nm,0.7s						
CCAR	Cane Creek	82.80	48	eP	P	06 23 50.5	-2.9
	comp=Z,47nm,1.3s						
KRUS	Krusevo	82.87	324	iP	P	06 23 53.5	-0.3
Q51A	Peebles	82.89	40	eP	P	06 23 53.1	-0.7
	comp=Z,8.8nm,0.9s						
WVT	Waverly	83.08	44	eP	P	06 23 55.1	+0.2
	comp=Z,5.8nm,0.8s						
FNA	Florina	83.31	324	eP	P	06 23 55.2	-0.8
	comp=Z,12nm,1.0s						
SENIN	Lac Senin/Sane	83.41	336	eP	P	06 23 56.4	-0.2
	comp=Z,11nm,0.9s						
T49A	Edmonton	83.42	42	eP	P	06 23 56.8	+0.2
	comp=Z,3.9nm,0.8s						
TIR	Tirane	83.45	325	eP	P	06 23 54.3	-2.4
	comp=Z,45nm,1.2s						
TIR	Tirane	83.45	325	eP	P	06 23 54.3	-2.4
TIR				pmax	pmax		
	comp=Z,45nm,1.2s						
SSF	Saint Saulge	83.82	338	eP	P	06 23 58.1	-0.3
SSF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CLTN	Cedars of Leba	83.85	43	eP	P	06 23 59.2	+0.4
	comp=Z,5.5nm,0.8s						
PLAL	Pickwick Lake	83.87	45	eP	P	06 23 58.5	-0.4
	comp=Z,13nm,1.4s						
LPL	La Plagne	84.35	336	eP	P	06 24 02.0	+0.5
LPL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SWET	Sewanee	84.75	44	eP	P	06 24 03.5	+0.1
	comp=Z,16nm,0.8s						
BNI	Bardonecchia	84.79	336	eP	P	06 24 03.8	+0.2
	comp=Z,5.9nm,0.8s						
BNI	Bardonecchia	84.79	336	eP	P	06 24 03.8	+0.2
BNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
X48A	Hartselle	84.81	45	eP	P	06 24 03.5	-0.1
	comp=Z,4.4nm,0.8s						
AQU	L'Aquila	85.03	330	eP	P	06 24 04.8	0.0
	comp=Z,16nm,0.6s						
AQU	L'Aquila	85.03	330	eP	P	06 24 04.8	0.0
AQU				pmax	pmax		
	comp=Z,16nm,0.6s						
V51A	Loudon	85.03	42	eP	P	06 24 05.1	+0.3
	comp=Z,10nm,0.9s						
W50A	Signal Mountai	85.06	43	eP	P	06 24 05.2	+0.2
	comp=Z,6.1nm,0.8s						
MFF	Saint Martin d	85.15	341	eP	P	06 24 04.9	-0.3
MFF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SSB	Saint Sauveur	85.19	337	eP	P	06 24 06.1	+0.7
	comp=Z,44nm,1.5s						
SSB	Saint Sauveur	85.19	337	eP	P	06 24 06.1	+0.7
SSB				pmax	pmax		
	comp=Z,44nm,1.5s						
CPCT	Cooper Cave	85.24	43	eP	P	06 24 06.5	+0.7
	comp=Z,16nm,1.4s						
MATE	Matera	85.29	327 ⇑	iP	P	06 24 05.6	-0.4
V52A	Sevierville	85.36	42	eP	P	06 24 07.0	+0.5
	comp=Z,15nm,1.2s						
147A	Livingston	85.59	47	eP	P	06 24 08.7	+1.1
	comp=Z,33nm,1.1s						
Y49A	Blount Mountai	85.59	45	eP	P	06 24 07.6	0.0
	comp=Z,6.0nm,0.8s						
URZ	Urewera	86.31	160	LR	LR	06 54 11.6	
	comp=Z,105nm,22.0s,baz=354,slow=30						
Z50A	Ashland	86.32	45	eP	P	06 24 11.5	+0.3
	comp=Z,37nm,1.3s						
LFF	La Frestale	86.50	339	eP	P	06 24 12.6	+0.7
LFF				pmax	pmax		
	comp=Z,14nm,0.7s						
TBI	Tubuai	87.00	128	eLR	LR	06 51 44.8	
	comp=Z,167nm,23.5s						
152A	Waverly Hall	87.39	44	eP	P	06 24 16.4	0.0
	comp=Z,6.5nm,0.9s						
352A	Blakely	88.25	45	eP	P	06 24 21.5	+0.9
	comp=Z,33nm,1.4s						
KEST	Kesra	92.35	330	P	P	06 24 39.5	-0.2
	comp=Z,6.8nm,0.9s,baz=317,slow=2.0,SNR=5.4						
KEST	Kesra	92.35	330	eP	P	06 24 39.5	-0.2
	comp=Z,7.7nm,0.9s						
ESDC	Sonseca Array	92.60	341	P	P	06 24 40.5	-0.3
	comp=Z,1.2nm,0.7s,baz=16,slow=4.0,SNR=7.3						
TOA1	Torodi Ar. Sit	115.68	327	ePKPdf	PKiKP	06 30 10.4	-1.4
TORD	Torodi Ar. Bea	115.69	327	PKP	PKiKP	06 30 10.4	-1.4
	comp=Z,0.3nm,0.4s,baz=19,slow=2.6,SNR=6.7						
VNDA	Vanda	122.62	177	PKP	PKiKP	06 30 23.7	+0.3
	comp=Z,0.7nm,0.8s,baz=351,slow=4.9,SNR=4.4						
VNDA	Vanda	122.62	177	ePKPdf	PKiKP	06 30 25.5	+2.2
MAW	Mawson	130.18	210	PKP	PKiKP	06 30 38.4	-0.2
	comp=Z,1.5nm,0.8s,baz=325,slow=3.4,SNR=5.9						
LPAZ	La Paz	136.26	62	PKP	PKiKP	06 30 52.4	-0.9
	comp=Z,1.0nm,0.8s,baz=26,slow=11,SNR=4.5						
LPAZ	La Paz	136.26	62	ePKPdf	PKPdf	06 30 51.5	-0.1
LPAZ	La Paz	136.26	62	ePKIKP	PKPdf	06 30 51.5	-0.1
BDFB	Brasilia	146.39	35	PKPbc	PKPbc	06 31 10.5	+0.1
	comp=Z,11nm,0.9s,baz=260,slow=2.2,SNR=16						
PLCA	Paso Flores	149.39	97	PKPbc	PKiKP	06 31 18.9	0.0
	comp=Z,5.9nm,1.0s,baz=278,slow=3.6,SNR=7.8						
CPUP	Villa Florida	150.41	60	PKPbc	PKPbc	06 31 20.8	+0.3
	comp=Z,4.1nm,0.8s,baz=320,slow=2.0,SNR=10						
CPUP	Villa Florida	150.41	60	ePKPbc	PKiKP	06 31 20.9	-0.4
SNAA	Sanae	150.69	196	PKPdf	PKiKP	06 31 20.2	-0.3
SNAA	Sanae	150.69	196	PKPbc	PKiKP	06 31 20.4	-0.2
	comp=Z,9.5nm,0.8s,baz=196,slow=4.3,SNR=57						
SNAA	Sanae	150.69	196	ePKPbc	PKiKP	06 31 20.5	-0.1
SNAA	Sanae	150.69	196	ePKIKP	PKiKP	06 31 20.5	-0.1
VNA2	Neumayer--Watz	152.16	195	PKPdf	PKiKP	06 31 23.9	+0.3
	baz=104,slow=1.0						
VNA3	Neumayer Olymp	152.28	193	PKPdf	PKiKP	06 31 23.8	0.0
VNA1	Neumayer--Stat	152.55	195	PKPdf	PKiKP	06 31 24.7	+0.4

ISCJB ***03*** *06:16:24.0±0.4, 43°.68S±0°.07×16°.2W±0°.1, h10km, mb4.4/12, MS4.2/14, Error ellipse: s-maj=14.1km s-min=10.4km az=175.8*

IDC ***03*** *06:16:24.6±1.0, 43°.73S×16°.10W, h0km, mb4.2/6, mb1 4.3/6, mb1mx4.0/23, mbtmp4.2/6, MS4.2/14, Ms1 4.2/14, ms1mx4.1/18, Error ellipse: s-maj=31.2km s-min=27.0km az=157.0*

GCMT ***03*** *06:16:24.8±0.2, 44°.15S±0°.03×15°.89W±0°.02, h12km, MW4.9/84, Moment Tensor Solution. s24,c27; s84,c110; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=3.39±.09; Mθθ=0.74±.11; Mφφ=2.65±.07; Mrθ=0.22±.40; Mφφ=0.42±.07; Mφr=0.27±.31; Best double couple: M=3.08100×10^16 NP1:φs=164.00000°, δ=43.00000°, λ=-96.00000°. NP2: φs=352.00000°, δ=47.00000°, λ=-85.00000°. NP2: T 2.7460, Plg2.0000°, Azm78.0000°; N 0.6710, Plg4.0000°, Azm169.0000°; P -3.4160, Plg86.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***03*** *06:16:25.8±0.4, 43°.61S×16°.23W, h10km, mb4.5/8 Error ellipse: s-maj=16.2km s-min=15.2km az=101.0*

ISC 03 06:16:25.8±0.5, 43.7S±0°.1×16°.2W±0°.1, h10km, n53, σ1§04/39, mb4.4/12, MS4.2/14, 1C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	27.33	174	P	P	06 22 11.1	+0.8
VNA2	Neumayer--Watz	27.66	174	P	P	06 22 12.9	-0.6
	baz=344,slow=11						
VNA3	Neumayer Olymp	27.82	175	P	P	06 22 14.3	-0.6
SNAA	Sanae	28.81	171	LR	LR	06 31 12.0	
	comp=Z,157nm,18.7s,baz=12,slow=31						
H10S2	ASCENSION HYDR	34.62	3	T	T	07 00 00.7	
	baz=182,slow=75,SNR=16						
H10S3	ASCENSION HYDR	34.62	3	T	T	07 00 01.2	
	baz=182,slow=75,SNR=30						
H10S1	ASCENSION HYDR	34.63	3	T	T	07 00 01.8	
	baz=182,slow=75,SNR=23						
H10N1	ASCENSION HYDR	35.73	3	T	T	07 01 39.6	
	baz=180						
H10N3	ASCENSION HYDR	35.73	3	T	T	07 01 29.6	
	baz=180						
H10N2	ASCENSION HYDR	35.74	3	T	T	07 01 32.9	
	baz=180						
BOSA	Boshof	36.29	79	LR	LR	06 35 01.8	
	comp=Z,206nm,20.1s,baz=218,slow=31						
TSUM	Tsumeb	37.35	60	eP	P	06 23 38.5	-0.2
	16nm,1.4s						
CPUP	Villa Florida	37.44	284	P	P	06 23 39.9	+0.6
	4.8nm,0.8s,baz=126,slow=7.0,SNR=9.8						
CPUP				LR	LR	06 37 58.8	
	comp=Z,423nm,18.1s,baz=138,slow=34						
CPUP	Villa Florida	37.44	284	eP	P	06 23 40.6	+1.4
SYO	Syowa Base	37.91	151 ⇑	eP	P	06 23 40.6	-2.1
BDFB	Brasilia	38.90	306	LR	LR	06 37 03.9	
	comp=Z,374nm,19.2s,baz=129,slow=32						
PLCA	Paso Flores	39.77	255	P	P	06 23 59.2	+0.4
	2.1nm,1.0s,baz=108,slow=8.1,SNR=4.0						
PLCA				LR	LR	06 37 49.9	
	comp=Z,431nm,21.7s,baz=150,slow=32						
PLCA	Paso Flores	39.77	255	eP	P	06 23 59.1	+0.4
	14nm,1.6s						
MAW	Mawson	46.49	149	P	P	06 24 51.9	-0.7
	4.0nm,1.0s,baz=266,slow=8.3,SNR=5.9						
MAW				LR	LR	06 40 24.1	
	comp=Z,190nm,22.0s,baz=261,slow=31						
MAW	Mawson	46.49	149	eP	P	06 24 52.7	+0.1
	1.4nm,1.0s						
QSPA	South Pole Qui	46.58	180	eP	P	06 24 53.9	+0.3
	20nm,1.1s						
GO01	Chusmiza	50.08	281	eP	P	06 25 22.2	+0.6
	18nm,1.6s						
DBIC	Dimbokro	51.16	15	LR	LR	06 41 46.5	
	comp=Z,153nm,21.9s,baz=158,slow=30						
LPAZ	La Paz	51.58	285	LR	LR	06 47 12.5	
	comp=Z,659nm,19.0s,baz=126,slow=36						
LPAZ	La Paz	51.58	285	eP	P	06 25 30.8	-2.3
PTGA	Pitinga	57.82	305	eP	P	06 26 16.1	-1.5
	4.1nm,1.2s						
SBA	Scott Base	58.73	181	eP	P	06 26 25.1	+2.0
	2.0nm,1.0s						
TOA0	Torodi Ar. Sit	58.87	20	ePdif	P	06 26 25.2	+0.5
TOA0	Torodi Ar. Sit	58.87	20	eP	P	06 26 24.7	0.0
	4.3nm,0.8s						
TORD	Torodi Ar. Bea	58.87	20	P	P	06 26 24.0	-0.8
	3.4nm,0.9s,baz=244,slow=5.4,SNR=12						
TORD				LR	LR	06 46 26.0	
	comp=Z,116nm,21.6s,baz=55,slow=31						
TOA1	Torodi Ar. Sit	58.87	20	eP	P	06 26 24.0	-0.8
VNDA	Vanda	59.07	180	LR	LR	06 48 27.5	
	comp=Z,82nm,21.8s,baz=174,slow=33						
VNDA	Vanda	59.07	180	eP	P	06 26 25.7	+0.2
KMBO	Kilima Mbogo	63.55	64	LR	LR	06 51 32.8	
	comp=Z,508nm,21.6s,baz=199,slow=33						
ROSC	El Rosal	71.09	297	LR	LR	06 57 43.0	
	comp=Z,305nm,19.1s,baz=178,slow=35						
KEST	Kesra	82.39	21	LR	LR	07 01 22.1	
	comp=Z,127nm,21.0s,baz=297,slow=33						
ESDC	Sonseca Array	83.71	9	P	P	06 28 55.9	+1.4
	0.2nm,0.3s,baz=193,slow=4.6,SNR=5.4						
BRTR	Keskin Array B	94.43	36	P	P	06 29 47.0	+1.2
	2.4nm,0.9s,baz=160,slow=7.7,SNR=8.8						
BRTR				LR	LR	07 11 10.6	
	comp=Z,89nm,19.9s,baz=156,slow=35						
BR101	Keskin Array S	94.43	36	eP	P	06 29 47.0	+1.2
FYU	Fort Yukon	144.44	328	ePKPdf	PKPbc	06 36 00.4	+0.8
SCRK	Sand Creek	144.47	323	ePKPdf	PKPbc	06 36 00.1	+0.2
DOT	Dot Lake	144.55	323	ePKPdf	PKPbc	06 36 00.7	+0.6
PRP	Porcupine Dome	144.81	326	ePKPdf	PKPab	06 36 00.2	-0.8
PRP				epPKPdf	PKPdf	06 36 02.2	+0.3
RIDG	Independent Ri	144.88	323	ePKPdf	PKPab	06 36 00.6	-0.6
RIDG				epPKPdf	PKPdf	06 36 02.4	+0.4
TOLK	Toolik Lake Re	145.38	332	ePKPbc	PKPbc	06 36 02.6	-0.1
ILAR	Eielson Array	145.54	325	PKPbc	PKPab	06 36 03.7	+0.2
	3.0nm,0.8s,baz=150,slow=3.2,SNR=21						
ILB	Eielson Array	145.54	325	ePKPdf	PKPdf	06 36 02.0	-1.0
ILB				ePKPbc	pPKPdf	06 36 04.7	-0.7
HDA	Harding Lake	145.65	324	ePKPdf	PKPdf	06 36 00.3	-3.0
HDA				ePKPbc	PKPab	06 36 04.2	+0.3
EYAK	Cordova Ski Ar	145.76	317	ePKPdf	PKPab	06 36 04.5	+0.2
CCB	Clear Creek Bu	145.96	325	ePKPdf	PKPbc	06 36 04.7	+0.3
WRH	Wood River Hil	146.12	325	ePKPdf	PKPbc	06 36 05.3	+0.3
DHY	Denali Highway	146.12	322	ePKPdf	PKPbc	06 36 05.6	+0.3
MLY	Manley	147.

YOJ Yonaguni jima 4.08 235 *e*Pn **Pn 06 24 46.2 -0.4**
YOJ *e*Sn **Sn 06 25 32.3 -1.4**
YOJ Yonaguni jima 4.08 235 *e*P **Pn 06 24 46.3 -0.4**
YOJ *e* 06 25 32.3
YHNB Yeheng 5.26 247 *e*Pn **Pn 06 25 01.9 -0.7**
NACB Ninganchiao 5.31 241 *e*Pn **Pn 06 25 03.1 -0.2**
NACB *e*Sn **Sn 06 26 01.1 -2.3**
YULB Yu-li 5.97 236 *e*Pn **Pn 06 25 10.4 -1.8**
YULB *e*Sn **Sn 06 26 15.7 -3.7**
SSLB Suanglung 6.01 241 *e*Pn **Pn 06 25 12.3 -0.5**
SSLB *e*Sn **Sn 06 26 19.3 -1.1**
TWG Pinlang 6.49 233 *e*Pn **Pn 06 25 17.6 -1.6**
TWG *e*Sn **Sn 06 26 27.7 -4.1**
TPUB Ta-pu 6.53 239 *e*Pn **Pn 06 25 20.1 +0.3**
TPUB *e*Sn **Sn 06 26 32.8 -0.1**
JNU Nakatsue 7.23 29 P **Pn 06 25 30.4 +1.2**
4.2nm,0.3s,baz=240,slow=6.2,SNR=22
JNU S **Sn 06 26 54.1 +4.3**
0.6nm,0.3s,baz=36,slow=19,SNR=2.5
JNU Nakatsue 7.23 29 *e*Pn **Pn 06 25 30.8 +1.5**
JNU *e*Sn **Sn 06 26 50.4 +0.5**
TJN Taejon 9.52 3*ce*P **Pn 06 26 00.1 0.0**
KS15 Wonju Array Si 10.61 5 *e*Pn **Pn 06 26 14.1 -0.8**
KSRS Korea Array 10.63 5 P **Pn 06 26 17.7 +2.6**
0.6nm,0.3s,baz=179,slow=14,SNR=61
WHN Wuhan 11.44 292 ⇊P P 06 26 44.0 +8.9
DL2 Dalian 12.75 342 P **P 06 26 52.1 +2.4**
DL2 *e*S **S 06 29 19.6 -2.1**
DL2 pmax pmax
comp=Z,60nm,0.8s
MAJO Matsushiro 13.76 43 *e*Pn **Pn 06 26 56.8 +0.4**
MAJO Matsushiro 13.76 43 *e*P **Pn 06 26 56.8 +0.4**
MJAR Matsushiro Arr 13.76 43 P **Pn 06 26 56.7 +0.4**
comp=Z,0.1nm,0.3s,baz=228,slow=11,SNR=2.5
BJT Baijiatuau 15.78 329 *e*Pn **P 06 27 24.2 +0.9**
comp=Z,12nm,0.8s
BJT Baijiatuau 15.78 329 *e*P **P 06 27 24.3 +0.9**
BJT pmax pmax
comp=Z,12nm,0.8s
XAN Xi'an 16.90 299 *e*Pn **P 06 27 37.5 +1.6**
comp=Z,7.8nm,0.8s
XAN Xi'an 16.90 299 *e*P **P 06 27 37.5 +1.6**
XAN pmax pmax
comp=Z,8.0nm,0.8s
CN2 Changchun 16.95 357 *e*P **P 06 27 38.2 +2.0**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
QIZ Qiongzhong 17.34 247 P Pn 06 27 48.6 +7.4
QIZ S **S 06 31 02.4 +6.9**
QIZ LR LR
comp=N,230nm,17.8s
QIZ LR LR
comp=E,100nm,15.0s
QIZ LR LR
comp=Z,200nm,17.5s
USRK Ussuriysk Ar. 17.84 13 P **Pn 06 27 46.7 -0.2**
comp=Z,0.5nm,0.3s,baz=193,slow=9.3,SNR=7.8
MDJ Mudanjiang 17.89 7 *e*P **P 06 27 46.1 -0.5**
comp=Z,9.4nm,0.4s
HHC Hu-ho-hao-te 18.74 322 *e*P **Pn 06 27 59.6 +1.8**
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,260nm,7.2s
DMPH Davao City--Mi 19.69 183 ⇊*i*P Pn 06 28 17.8 +8.8
CD2 Chengdu 20.47 287 ⇊P **P 06 28 14.5 -0.4**
CD2 pmax pmax
comp=Z,30nm,0.7s
LZH Lanzhou 21.51 301 ⇑P **P 06 28 25.0 -1.1**
LZH pP pP 06 28 48.3 +0.6
LZH PP **PnPn 06 28 54.1 +1.1**
LZH sP sP 06 29 06.2 +4.1
LZH pmax pmax
comp=Z,23nm,1.1s
LZH pmax pmax
comp=Z,71nm,4.6s
GUMO Guam 21.53 124 *e*P **P 06 28 27.3 +1.1**
comp=Z,133nm,1.1s
GUMO Guam 21.53 124 *e*P **P 06 28 27.3 +1.1**
GUMO pmax pmax
comp=Z,133nm,1.1s
KMI Kunming 21.59 271 P **P 06 28 26.6 -0.5**
KMI pmax pmax
comp=Z,12nm,0.5s
KLR Kul'dur 22.69 9 P **P 06 28 35.9 -2.0**
comp=Z,1.0nm,0.4s,baz=199,slow=11,SNR=4.5
GTA Gaotai 25.65 306 P **P 06 29 04.6 -0.7**
GTA pP pP 06 29 32.1 +1.9
GTA sP sP 06 29 45.6 +1.9
GTA S **S 06 33 30.0 +4.8**
GTA pmax pmax
comp=Z,17nm,1.0s
GTA pmax pmax
comp=Z,47nm,6.4s
GTA LR LR
comp=Z,160nm,15.1s
GTA LR LR
comp=Z,320nm,13.7s
GTA LR LR
comp=Z,430nm,13.4s
ULN Ulaanbaatar 26.01 329 *e*P **P 06 29 08.5 +0.1**
comp=Z,11nm,1.0s
ULN Ulaanbaatar 26.01 329 *e*P **P 06 29 08.5 +0.1**
ULN pmax pmax
comp=Z,11nm,1.0s
SONA0 Songino Array 26.29 328 *e*P **P 06 29 10.6 -0.4**
SONM Songino Array 26.29 328 P **P 06 29 10.6 -0.4**
comp=Z,6.3nm,0.3s,baz=134,slow=7.7,SNR=12
FAKI Fak Fak 30.08 169 *e*P **P 06 29 44.4 -0.4**
comp=Z,12nm,0.6s
TLY Talaya 30.30 331 *i*P **P 06 29 46.3 -0.1**
LSA Lhasa 31.35 284 *e*P **P 06 29 55.9 -0.6**
comp=Z,4.1nm,0.6s
LSA Lhasa 31.35 284 *e*P **P 06 29 55.9 -0.6**
LSA pmax pmax
comp=Z,4.0nm,0.6s
ODAN Odare 34.96 279 *e*P **P 06 30 27.6 0.0**
comp=Z,33nm,0.6s
YAK Yakutsk 35.24 2 *i*P **P 06 30 30.7 +1.5**
YAK pmax pmax
comp=Z,22nm,0.8s
PET Petropavlovsk 35.33 34 *i*P **P 06 30 29.6 -0.5**
PET pmax pmax
comp=Z,30nm,1.2s
RAMN Ramite 35.65 279 *e*P **P 06 30 32.9 -0.6**
comp=Z,9.0nm,0.5s
WMQ Urumqi 35.65 309 *e*P **P 06 30 35.0 +1.9**
GUN Gumba 36.13 281 *e*P **P 06 30 38.4 +0.6**
comp=Z,12nm,0.4s
PKI Pulchoki 36.60 281 *e*P **P 06 30 41.3 -0.4**
comp=Z,14nm,0.4s
KKN Kakani 36.68 281 *e*P **P 06 30 42.6 +0.4**
comp=Z,17nm,0.4s
DMN Daman 36.86 281 *e*P **P 06 30 44.2 +0.4**
comp=Z,11nm,0.6s
DGZ Jazzator, Alta 37.74 318 *i*P **P 06 30 50.4 -0.4**
DGZ pmax pmax
comp=Z,1.0nm,0.3s
DANN Dangsing 37.93 282 *e*P **P 06 30 53.4 +0.5**
comp=Z,38nm,0.6s
KOLN Koldanda 38.15 282 *e*P **P 06 30 54.8 +0.2**
PYUN Piuthan 38.63 282 *e*P **P 06 30 58.4 -0.3**
comp=Z,26nm,0.9s
MTN Manton Dam 39.69 173 *e*P **P 06 31 06.5 -0.6**
SEY Seymchan 39.85 18 *i*P **P 06 31 10.3 +2.3**
MK31 Makanchi Array 40.09 312 *e*P **P 06 31 10.0 -0.3**
comp=Z,7.9nm,0.5s
MK31 *e*PcP **PcP 06 33 12.7 -0.1**
MK31 Makanchi Array 40.09 312 *e*P **P 06 31 10.0 -0.3**
MK31 *e* 06 33 12.7
MK31 pmax pmax
comp=Z,8.0nm,0.5s
MK32 Makanchi Array 40.09 312 *e*P **P 06 31 09.8 -0.5**
MK32 *e*PcP **PcP 06 33 12.8 0.0**
MK32 *e*ScP **ScP 06 36 52.8 +1.5**
MKAR Makanchi Array 40.09 312 P **P 06 31 09.8 -0.5**
comp=Z,13nm,0.5s,baz=94,slow=10,SNR=173
MKAR PcP **PcP 06 33 12.8 +0.1**
comp=Z,3.3nm,0.7s,baz=86,slow=3.8,SNR=12
MKAR ScP **ScP 06 36 52.8 +1.5**
comp=Z,1.4nm,0.8s,baz=98,slow=3.9,SNR=8.6
MAKZ Makanchi 40.31 312 *e*P **P 06 31 11.6 -0.5**
comp=Z,8.3nm,0.4s
MAKZ Makanchi 40.31 312 *e*P **P 06 31 11.6 -0.5**
MAKZ pmax pmax
comp=Z,8.0nm,0.4s
ZAA0 Zalesovo Array 40.92 323 *e*P **P 06 31 16.2 -0.8**
comp=Z,12nm,0.4s
ZALV Zalesovo Beam 40.92 323 P **P 06 31 16.1 -0.8**
comp=Z,12nm,0.4s,baz=114,slow=7.8,SNR=26
ZALV ScP **ScP 06 36 53.1 -1.2**
comp=Z,1.0nm,0.3s,baz=98,slow=4.4,SNR=2.6
ZAA1 Zalesovo Array 40.92 323 *e*P **P 06 31 16.1 -0.9**
ZAA1 *e*ScP **ScP 06 36 53.1 -1.2**
PDGK Podgornoye 41.40 306 P **P 06 31 21.1 -0.1**
PDGK pmax pmax
comp=Z,7.0nm,1.1s
TARG Taragay, Kyrgy 42.47 303 *e*P **P 06 31 31.0 +0.7**
comp=Z,1.9nm,0.8s
KDJ Kajisay 42.96 304 *e*P **P 06 31 32.3 -1.7**
comp=Z,2.5nm,0.6s
KDJ Kajisay 42.96 304 *e*P **P 06 31 32.3 -1.7**
KDJ pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 43.42 317 *e*P **P 06 31 37.1 -0.2**
comp=Z,6.4nm,0.5s
KURK Kurchatov 43.42 317 *e*P **P 06 31 37.1 -0.2**
KURK pmax pmax
comp=Z,6.0nm,0.5s
COEN Coen 43.61 156 *e*P **P 06 31 39.6 +0.4**
comp=Z,10nm,0.6s
FITZ Fitzroy Crossi 44.69 181 *e*P **P 06 31 46.3 -1.4**
NIL Nilore 46.23 292 *e*P **P 06 31 59.9 0.0**
comp=Z,13nm,1.1s
NIL Nilore 46.23 292 *e*P **P 06 31 59.9 0.0**
NIL pmax pmax
comp=Z,13nm,1.1s
WRAB Tennant Creek 47.09 170 *e*P **P 06 32 06.3 -0.3**
comp=Z,12nm,0.8s
WRAB Tennant Creek 47.09 170 *e*P **P 06 32 06.3 -0.3**
WRAB pmax pmax
comp=Z,12nm,0.8s
WR1 Warramunga Arr 47.10 170 *e*P **P 06 32 06.4 -0.3**
WRA Warramunga Arr 47.10 170 P **P 06 32 06.4 -0.3**
comp=Z,9.2nm,0.6s,baz=349,slow=8.5,SNR=40
WB2 Waramunga Arr 47.10 170 *e*P **P 06 32 06.5 -0.2**
comp=Z,14nm,0.7s
KK31 Karatay Array 47.92 305 *e*P **P 06 32 11.9 -1.0**
comp=Z,1.4nm,0.5s
KK31 *e*PcP **PcP 06 33 39.4 -0.2**
KK31 Karatay Array 47.92 305 *e*P **P 06 32 11.9 -1.0**
KK31 *e* 06 33 39.4
KK31 pmax pmax
comp=Z,1.0nm,0.5s
KKAR Karatay Array 47.92 305 *e*P **P 06 32 12.2 -0.7**
comp=Z,1.4nm,0.5s
KKAR *e*PcP **PcP 06 33 39.1 -0.4**
KKAR Karatay Array 47.92 305 *e*P **P 06 32 12.2 -0.7**
KKAR *e* 06 33 39.1
KKAR pmax pmax
comp=Z,1.0nm,0.5s
NRIK Noril'sk 48.25 343 PcP **PcP 06 33 40.3 +0.2**
comp=Z,5.6nm,0.7s,baz=112,slow=5.3,SNR=7.9
BRVK Borovoye 48.96 318 *e*P **P 06 32 19.6 -1.1**
comp=Z,6.5nm,0.4s
BRVK *e*PcP **PcP 06 33 42.9 -0.2**
BRVK Borovoye 48.96 318 *e*P **P 06 32 19.6 -1.1**
BRVK *e* 06 33 42.9
BRVK pmax pmax
comp=Z,6.0nm,0.4s
KBL Kabul 49.59 294 *e*P **P 06 32 25.3 -0.7**
comp=Z,11nm,0.8s
KBL *e*PcP **PcP 06 33 46.6 +0.7**
KBL Kabul 49.59 294 *e*P **P 06 32 25.3 -0.7**
KBL *e* 06 33 46.7
KBL pmax pmax
comp=Z,11nm,0.8s
AS31 Alice Springs 50.70 171 *e*P **P 06 32 33.4 -0.7**
comp=Z,3.7nm,0.5s
ASAR Alice Springs 50.70 171 P **P 06 32 34.5 +0.3**
comp=Z,7.3nm,0.5s,baz=358,slow=14,SNR=94
ASAR PcP **PcP 06 33 49.8 0.0**
comp=Z,0.5nm,0.6s,baz=352,slow=2.8,SNR=2.3
ABKAR Akbulak array 55.22 313 *e*P **P 06 33 07.2 +0.2**
comp=Z,5.7nm,0.8s
ARU Arti 56.05 322 *e*P **P 06 33 12.2 -0.7**
comp=Z,5.2nm,1.1s
ARU Arti 56.05 322*c i*P **P 06 33 12.4 -0.5**
ARU 06 35 14.0
ARU S **S 06 41 00.6 +8.3**
ARU pmax pmax
comp=Z,5.0nm,1.0s
GEYT Alibeck 57.78 300 P **P 06 33 25.8 +0.3**
comp=Z,2.1nm,0.5s,baz=64,slow=3.4,SNR=3.8
BBOO Buckleboo 59.99 171 *e*P **P 06 33 40.4 -0.1**
comp=Z,2.6nm,0.6s
STKA Stephens Creek 60.10 165 P **P 06 33 41.0 -0.3**
comp=Z,4.9nm,0.6s,baz=352,slow=8.1,SNR=15
STKA Stephens Creek 60.10 165 *e*P **P 06 33 41.4 +0.1**
comp=Z,1.0nm,0.7s
STKA Stephens Creek 60.10 165 *e*P **P 06 33 41.4 +0.1**
STKA pmax pmax
comp=Z,1.0nm,0.7s
DZM Mont Dzumac 62.01 138 *e*P **P 06 33 55.2 +0.7**
comp=Z,7.1nm,1.0s
RSO Redoubt South 62.43 33 *e*P **P 06 33 57.3 +0.3**
CAST Castle Rocks 62.45 30 *e*P **P 06 33 57.1 +0.2**
comp=Z,7.8nm,0.9s
OHAK Old Harbor 62.54 37 *e*P **P 06 33 57.4 -0.1**
KDAK Kodiak Island 62.84 36 *e*P **P 06 33 59.2 -0.2**
comp=Z,4.1nm,0.6s
KDAK Kodiak Island 62.84 36 *e*P **P 06 33 59.3 -0.2**
KDAK pmax pmax
comp=Z,4.0nm,0.6s
BPAW Bear Paw Mtn. 62.87 29 *e*P **P 06 34 00.5 +0.8**
comp=Z,4.4nm,0.7s
MLY Manley 62.89 28 *e*P **P 06 34 00.3 +0.6**
comp=Z,8.0nm,0.8s
TOLK Toolik Lake Re 63.02 24 *e*P **P 06 34 00.1 -0.5**
comp=Z,5.1nm,0.8s
CNPM China Poot 63.30 34 *e*P **P 06 34 01.6 -1.0**
comp=Z,12nm,1.1s
BRLK Bradley Lake 63.45 34 *e*P **P 06 34 02.0 -1.5**
comp=Z,9.4nm,0.9s
RC01 Rabbit Creek A 63.82 33 *e*P **P 06 34 05.9 0.0**
comp=Z,5.7nm,1.2s
RND Reindeer 63.90 30 *e*P **P 06 34 06.2 -0.2**
comp=Z,16nm,0.8s
RND Reindeer 63.90 30 *e*P **P 06 34 06.2 -0.2**
RND pmax pmax
comp=Z,16nm,0.8s
PMR Palmer 64.04 32 *e*P **P 06 34 07.2 -0.1**
comp=Z,6.8nm,1.2s
PMR Palmer 64.04 32 *e*P **P 06 34 07.2 -0.1**
PMR pmax pmax
comp=Z,7.0nm,1.2s
GHO Glory Hole Cre 64.11 32 *e*P **P 06 34 07.9 0.0**
comp=Z,4.1nm,0.7s
SEW Seward 64.11 34 *e*P **P 06 34 07.2 -0.6**
comp=Z,11nm,0.9s
COLA College 64.13 28 *i*P **P 06 34 06.6 -1.2**
COLA pmax pmax
comp=Z,3.0nm,0.9s
CCB Clear Creek Bu 64.18 28 *e*P **P 06 34 08.4 +0.3**
comp=Z,2.6nm,0.6s
SML Sawmill 64.38 32 *e*P **P 06 34 09.2 -0.3**
comp=Z,9.3nm,1.2s
SML Sawmill 64.38 32 *e*P **P 06 34 09.3 -0.3**
SML pmax pmax
comp=Z,9.0nm,1.2s
KNK Knik Glacier 64.38 32 *e*P **P 06 34 10.0 +0.4**
comp=Z,6.7nm,0.9s
ILAR Eielson Array 64.55 28 P **P 06 34 09.3 -1.3**
comp=Z,0.9nm,0.5s,baz=259,slow=5.2,SNR=23
ILB Eielson Array 64.55 28 *e*P **P 06 34 10.1 -0.5**
comp=Z,1.9nm,0.9s
HDA Harding Lake 64.58 29 *e*P **P 06 34 10.2 -0.6**
comp=Z,9.6nm,0.9s
DHY Denali Highway 64.61 30 *e*P **P 06 34 10.8 -0.5**
comp=Z,2.6nm,1.1s
SCM Sheep Creek Mo 64.84 32 *e*P **P 06 34 12.6 -0.1**
comp=Z,14nm,1.1s
SCM Sheep Creek Mo 64.84 32 *e*P **P 06 34 12.6 -0.1**
SCM pmax pmax
comp=Z,14nm,1.1s
FYU Fort Yukon 64.93 26 *e*P **P 06 34 14.0 +1.0**
comp=Z,5.0nm,0.6s
PRP Porcupine Dome 65.00 27 *e*P **P 06 34 13.3 -0.4**
comp=Z,5.0nm,0.8s
GLI Glacier Island 65.13 33 *e*P **P 06 34 14.4 0.0**
comp=Z,8.9nm,1.0s
RIDG Independent Ri 65.61 29 *e*P **P 06 34 17.0 -0.6**
comp=Z,12nm,1.2s
DIV Divide 65.71 32 *e*P **P 06 34 19.1 +0.9**
comp=Z,11nm,1.0s
EYAK Cordova Ski Ar 65.84 33 *e*P **P 06 34 17.9 -1.0**
comp=Z,4.6nm,1.2s
SCRK Sand Creek 65.94 29 *e*P **P 06 34 19.3 -0.4**
comp=Z,5.0nm,0.8s
DOT Dot Lake 65.97 29 *e*P **P 06 34 19.7 -0.1**
comp=Z,8.8nm,0.8s
EGAK Eagle 66.95 28 *e*P **P 06 34 26.2 +0.2**
comp=Z,4.9nm,0.8s
ZEI Tsey 67.25 308 *e*P **P 06 34 26.6 -2.0**
ZEI pmax pmax
comp=Z,4.0nm,0.4s
KBZ Khabaz 67.70 309 P **P 06 34 31.2 +0.2**
comp=Z,7.1nm,0.9s,baz=110,slow=6.6,SNR=9.3
KIV Kislovodsk 67.78 309 *e*P **P 06 34 28.7 -3.0**
KIV pmax pmax
comp=Z,50nm,1.1s
CTGM Chitina Glacie 67.85 32 *e*P **P 06 34 32.5 +0.6**
comp=Z,4.1nm,0.8s
DAWY Dawson 67.88 28 *e*P **P 06 34 32.0 +0.1**
comp=Z,3.3nm,0.8s
EPYK Eagle Plains 68.30 26 *e*P **P 06 34 34.9 +0.3**
comp=Z,18nm,0.6s
INK Inuvik 68.87 23 *e*P **P 06 34 38.0 +0.2**
comp=Z,13nm,0.9s
INK Inuvik 68.87 23 *e*P **P 06 34 38.1 +0.2**
INK pmax pmax
comp=Z,13nm,0.9s
ARCES ARCESS Array B 68.93 338 P **P 06 34 37.0 -1.3**
comp=Z,8.8nm,0.3s,baz=65,slow=6.9,SNR=5.0
ARCES ARCESS Array B 68.93 338 P **P 06 34 37.0 -1.3**
HYT Haines Junctio 69.68 31 *e*P **P 06 34 44.3 +1.1**
comp=Z,4.3nm,1.1s
WHY Whitehorse 70.95 31 *e*P **P 06 34 51.4 +0.4**
comp=Z,2.8nm,0.6s
SKAG Skagway 71.17 32 *e*P **P 06 34 52.8 +0.7**
comp=Z,4.1nm,0.6s
FIA1 FINESS Array S 71.64 330 *e*P **P 06 34 54.5 -0.4**
comp=Z,4.3nm,0.8s
FIA0 FINESS Array S 71.64 330 *e*P **P 06 34 54.1 -0.8**
FIA0 FINESS Array S 71.64 330 *e*P **P 06 34 54.1 -0.8**
FINES FINESS Array B 71.64 330 P **P 06 34 54.1 -0.8**
comp=Z,2.0nm,0.4s,baz=68,slow=5.6,SNR=19
FINES FINESS Array B 71.64 330 *i*P **P 06 34 54.2 -0.7**
FINES pmax pmax
comp=Z,2.0nm,0.4s
VSU Vasula 72.48 327*ce*P **P 06 34 58.1 -1.9**
VSU pmax pmax
comp=Z,8.0nm,0.6s
AKASG Malin Array Be 74.16 319 P **P 06 35 08.9 -1.1**
comp=Z,2.6nm,0.4s,baz=59,slow=6.2,SNR=7.8
AKASG Malin Array Be 74.16 319 *i*P **P 06 35 08.8 -1.2**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 74.16 319 *e*P **P 06 35 08.7 -1.3**
comp=Z,5.2nm,0.8s
AKBB Malin Array Si 74.16 319 *e*P **P 06 35 08.7 -1.3**
AKBB pmax pmax
comp=Z,5.0nm,0.8s
KIEV Kiev 74.18 319⇑*i*P **P 06 35 09.2 -0.9**
KIEV Kiev 74.18 319 *i*P **P 06 35 07.5 -2.6**
KIEV pmax pmax
comp=Z,3.0nm,0.9s
DAG Danmarks Havn 74.46 352 *e*P **P 06 35 09.4 -1.9**
DAG *i* 06 35 24.7
DAG Danmarks Havn 74.46 352 *i*P **P 06 35 09.4 -1.9**
DAG *i* 06 35 24.7
RES Resolute Bay 75.20 11 *e*P **P 06 35 15.2 -0.3**
comp=Z,7.8nm,0.7s
RES Resolute Bay 75.20 11 *e*P **P 06 35 15.2 -0.3**
RES pmax pmax
comp=Z,8.0nm,0.7s
BR101 Keskin Array S 75.56 307 *e*P **P 06 35 18.4 0.0**
BR131 Keskin Array S 75.56 307 *e*P **P 06 35 18.1 -0.4**
comp=Z,4.6nm,1.0s
BRTR Keskin Array B 75.56 307 P **P 06 35 18.4 0.0**
comp=Z,2.7nm,0.8s,baz=110,slow=5.4,SNR=10.0
TULEG Thule 76.41 4 *e*P **P 06 35 21.3 -1.1**
comp=Z,7.1nm,0.8s
TESR Tescani 77.45 316⇑*i*P **P 06 35 28.2 -0.6**
BIZ Bicaz 77.60 316⇑*i*P **P 06 35 29.8 +0.2**
VRI Vrincioaia 77.68 315⇑*i*P **P 06 35 30.6 +0.5**
VRI Vrincioaia 77.68 315 ⇑P **P 06 35 30.7 +0.6**
PLOR Plostina 77.73 315⇊*i*P **P 06 35 30.7 +0.3**
PLOR Plostina 77.73 315 ⇊P **P 06 35 30.7 +0.3**
BUR08 Bucovina Ar. S 77.84 317 *e*P **P 06 35 31.3 +0.2**
comp=Z,3.4nm,0.8s
BURAR Bucovina Array 77.84 317⇑*i*P **P 06 35 30.9 -0.2**
BURAR Bucovina Array 77.84 317 ⇑P **P 06 35 30.9 -0.2**
NC405 NORSAR Array S 77.90 333 *e*P **P 06 35 30.4 -0.6**
comp=Z,19nm,1.0s
NB2 NORSAR Subarra 78.15 333 P **P 06 35 31.2 -1.2**
comp=Z,0.9nm,0.5s,baz=55,slow=5.6
NB200 NORSAR Array S 78.15 333 *e*P **P 06 35 31.3 -1.2**
NOA NORSAR Array B 78.15 333 P **P 06 35 31.3 -1.2**
comp=Z,1.6nm,0.6s,baz=52,slow=5.8,SNR=7.5
MLR Muntele Rosu 78.34 315⇊*i*P **P 06 35 33.8 -0.1**
MLR Muntele Rosu 78.34 315 ⇊P **P 06 35 33.8 -0.1**
KWP Kalwaria Pacla 78.41 320 *e*P **P 06 35 33.1 -1.0**
comp=Z,94nm,0.4s
KWP Kalwaria Pacla 78.41 320 *e*P **P 06 35 33.1 -1.0**
YKW3 Yellowknife Ar 78.50 24 *e*P **P 06 35 33.7 -0.6**
comp=Z,4.2nm,0.7s
YKA Yellowknife Ar 78.55 25 P **P 06 35 34.5 0.0**
comp=Z,2.5nm,0.5s,baz=307,slow=5.7,SNR=24
YKB5 Yellowknife Ar 78.55 25 *e*P **P 06 35 34.5 0.0**
KULLO Kullorsuaq 78.79 1 *i*P **P 06 35 35.0 -0.7**
KULLO pmax pmax
comp=Z,13nm,0.7s
KULLO Kullorsuaq 78.79 1 *i*P **P 06 35 35.0 -0.7**
comp=Z,13nm,0.7s
VOIR 78.92 315⇑*i*P **P 06 35 36.4 -0.7**
VOIR 78.92 315 ⇑P **P 06 35 36.4 -0.7**
HUMR Humele 79.38 315⇑*i*P **P 06 35 38.5 -0.9**
OJC Ojcow 79.77 321 *e*P **P 06 35 41.4 -0.1**
comp=Z,6.1nm,1.0s
OJC Ojcow 79.77 321 *e*P **P 06 35 41.4 -0.1**
OJC pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 80.32 356 *e*P **P 06 35 44.8 +0.3**
comp=Z,13nm,1.0s
SUMG Summit 80.32 356 *i*P **P 06 35 44.6 +0.1**
SUMG pmax pmax
comp=Z,31nm,1.0s
SUMG Summit 80.32 356 *i*P **P 06 35 44.6 +0.1**
comp=Z,31nm,1.0s
ALN Alexandroupoli 80.33 311 *e*P **P 06 35 43.2 -1.4**
comp=Z,2.6nm,0.9s
ALN Alexandroupoli 80.33 311 *e*P **P 06 35 43.2 -1.4**
ALN pmax pmax
comp=Z,3.0nm,0.9s
GZR Gura Zlata 80.36 316⇑*i*P **P 06 35 44.1 -0.7**
BKZ Black Stump Fm 80.46 143 *e*P **P 06 35 46.5 +1.3**
comp=Z,3.7nm,0.9s
VYHS Vyhne 81.19 320 *e*P **P 06 35 49.7 +0.6**
VYHS Vyhne 81.19 320 *e*P **P 06 35 49.7 +0.6**
MDVR Moldovita 81.32 316⇑*i*P **P 06 35 49.5 -0.4**
VTS Vitosha 81.39 313 *e*P **P 06 35 49.7 -0.8**
comp=Z,7.8nm,0.8s
VTS Vitosha 81.39 313⇊*i*P **P 06 35 50.9 +0.4**
VTS Vitosha 81.39 313 *e*P **P 06 35 49.7 -0.8**
VTS pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 82.85 325 *e*P **P 06 35 57.0 -0.7**
CLL Collm 82.85 325 *e*P **P 06 35 57.0 -0.7**
AGG Agios Georgios 83.73 311 *e*P **P 06 36 01.0 -1.5**
comp=Z,6.3nm,0.9s
AGG Agios Georgios 83.73 311 *e*P **P 06 36 01.0 -1.5**
AGG pmax pmax
comp=Z,6.0nm,0.9s
GERES GERESS Array B 83.87 322 P **P 06 36 02.5 -0.6**
comp=Z,1.1nm,0.5s,baz=61,slow=3.3,SNR=7.3
PDG Podgorica 84.04 315⇑*i*P **P 06 36 00.8 -3.1**
ITM Ithomi 84.92 309 *e*P **P 06 36 07.7 -0.9**
comp=Z,29nm,0.8s
SFJD Kangerlussuaq 86.43 359 *i*P **P 06 36 14.6 -0.7**
SFJD pmax pmax
comp=Z,9.0nm,0.5s
SFJD Kangerlussuaq 86.43 359 *i*P **P 06 36 14.6 -0.7**
comp=Z,8.7nm,0.5s
BFO Black Forest 87.06 324 *i*P **P 06 36 15.3 -3.5**
FCC Fort Churchill 88.24 20 *e*P **P 06 36 23.9 -0.2**
comp=Z,4.7nm,0.7s
FCC Fort Churchill 88.24 20 *e*P **P 06 36 24.0 -0.2**

FCC pmax pmax
comp=Z,5.0nm,0.7s
ULM Lac du Bonnet 94.48 26 P P 06 36 52.9 -0.4
comp=Z,2.6nm,0.6s,baz=323,slow=5.1,SNR=3.3

NIED ***03*** *06:32:00,37°.50N×143°.70E,h5km,Mw3.9 Best double couple: M0 8.33000×10^14 NP1:φs 39.00000°,δ55.00000°, λ-36.00000°. NP2:φs 151.00000°,δ61.00000°, λ-139.00000°.*
ISCJB ***03*** *06:32:51.9±1.2,37°.44N±0°.03×143°.80E±0°.04,h19km±9km, mb4.3/26,MS3.6/1,Error ellipse: s-maj=5.3km s-min=4.5km az=142.6*
IDC ***03*** *06:32:51.6±0.9,37°.49N×143°.81E,h0km,mb4.0/9, mb1 4.1/13,mb1mx3.9/44,mbtmp4.1/13,ML4.1/3,MS3.1/6, Ms1 3.1/6,ms1mx2.8/43,Error ellipse: s-maj=23.8km s-min=16.4km az=111.0*
JMA ***03*** *06:32:54.6±0.2,37°.45N×143°.74E,h62km,M4.2*
MOS ***03*** *06:32:54.1±0.9,37°.55N×143°.82E,h31km,mb4.3/13,Error ellipse: s-maj=12.4km s-min=7.8km az=110.2*
NEIC ***03*** *06:32:55.8±1.8,37°.47N×143°.80E,h31km±7km,mb4.6/11, Error ellipse: s-maj=21.3km s-min=13.6km az=117.0*
ISC 03 06:32:55.1±2.6,37°.52N±0°.05×143°.84E±0°.07,h26km±18km, n82,σ1°.94/98,mb4.2/26,2C-1D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.04**	**294**	P	**Pn**	**06 33 27.0**	**-0.7**
JIKH				S	**Sn**	**06 33 50.8**	**-1.5**
JIO	**Ouri**	**2.18**	**296**	P	**Pn**	**06 33 29.1**	**-0.5**
JIO				S	**Sn**	**06 33 54.2**	**-1.5**
JKMT	**Kesennumamotoy**	**2.27**	**305**	P	**Pn**	**06 33 30.0**	**-0.9**
JKMT				S	**Sn**	**06 33 56.4**	**-1.6**
OFUJ	**Ofunato**	**2.31**	**313**	P	**Pn**	**06 33 30.7**	**-0.8**
OFUJ				*e*S	**Sn**	**06 33 57.8**	**-1.3**
JFK	**Kawauchi**	**2.36**	**267**	P	**Pn**	**06 33 30.9**	**-1.3**
JFK				S	**Sn**	**06 33 57.6**	**-2.8**
JMK	**Ichinoseki**	**2.51**	**306**	*e*S	**Sn**	**06 34 03.3**	**-0.6**
JFT	**Otama**	**2.78**	**271**	P	**Pn**	**06 33 37.9**	**-0.1**
JFT				S	**Sn**	**06 34 09.3**	**-1.4**
JOM	**Ohasama**	**2.79**	**315**	P	**Pn**	**06 33 38.1**	**0.0**
JOM				S	**Sn**	**06 34 10.5**	**-0.5**
JYK	**Kaneyama**	**3.08**	**298**	P	**Pn**	**06 33 42.3**	**+0.3**
JYK				*e*S	**Sn**	**06 34 17.1**	**-0.8**
JANG	**Nango**	**3.38**	**328**	P	**Pn**	**06 33 45.8**	**-0.4**
JAG	**Ashikaga**	**3.67**	**254**	P	**Pn**	**06 33 48.7**	**-1.6**
JAG				*e*S	**Sn**	**06 34 29.3**	**-3.5**
BSO1	**Boso 1**	**3.68**	**220**	P	**Pn**	**06 33 47.0**	**-2.8**
BSO1				*e*S	**Sn**	**06 34 28.2**	**-3.8**
JRY	**Ryogami san**	**4.24**	**251**	P	**Pn**	**06 33 56.3**	**-1.7**
JRY				S	**Sn**	**06 34 41.8**	**-4.8**
JOT	**Ohata**	**4.42**	**332**	P	**Pn**	**06 34 00.8**	**+0.3**
JOD2	**Odawara 2**	**4.44**	**241**	P	**Pn**	**06 33 58.5**	**-2.3**
JOD2				*e*S	**Sn**	**06 34 45.6**	**-6.1**
ERM	**Erimo**	**4.52**	**354**	*e*Pn	**Pn**	**06 34 00.9**	**-1.0**
ERM	**Erimo**	**4.52**	**354**	*e*P	**Pn**	**06 34 00.9**	**-1.0**
MJAR	**Matsushiro Arr**	**4.61**	**259**	Pn	**Pn**	**06 34 03.3**	**+0.2**
	2.4nm,0.3s,baz=90,slow=15,SNR=61						
MJAR				Sn	**Sn**	**06 34 54.9**	**-0.9**
	0.8nm,0.3s,baz=92,slow=26,SNR=5.2						
MJAR				LR	LR	06 36 09.9	
	comp=Z,155nm,19.0s,baz=95,slow=44						
MAJO	**Matsushiro**	**4.61**	**260**	*e*Pn	**Pn**	**06 34 02.8**	**-0.3**
MAJO				*e*Sn	**Sn**	**06 34 54.9**	**-0.9**
MAJO	**Matsushiro**	**4.61**	**260**	*e*P	**Pn**	**06 34 02.8**	**-0.3**
MAJO				*e*		06 34 54.9	
MAT	**Matsushiro**	**4.61**	**260**	P	**Pn**	**06 34 02.5**	**-0.6**
MAT				S	**Sn**	**06 34 54.7**	**-1.1**
JKB	**Kayabe**	**4.87**	**335**	P	**Pn**	**06 34 06.6**	**-0.1**
JKB				*e*S	**Sn**	**06 34 59.1**	**-3.1**
JCH	**Churui**	**5.10**	**356**	P	**Pn**	**06 34 08.5**	**-1.4**
JCH				*e*S	**Sn**	**06 35 04.2**	**-3.7**
JHJ2	**Mitsune**	**5.49**	**218**	*e*Pn	**Pn**	**06 34 13.0**	**-2.2**
JHJ2	**Mitsune**	**5.49**	**218**	P	**Pn**	**06 34 11.9**	**-3.3**
JHJ2				*e*S	Sn	06 35 07.9	-10
JHJ	**Hachijo jima 2**	**5.50**	**218**	Pn	**Pn**	**06 34 12.9**	**-2.4**
	16nm,0.3s,baz=339,slow=22,SNR=6.3						
JHJ				Sn	Sn	06 35 07.8	-10
	39nm,0.3s,baz=69,slow=23,SNR=6.1						
INU	**Inuyama**	**5.91**	**251**	*e*Pn	**Pn**	**06 34 18.6**	**-2.4**
NEM2	**Nemuro 2**	**6.02**	**13**	P	**Pn**	**06 34 19.2**	**-3.2**
NEM2				*e*S	**Sn**	**06 35 23.7**	**-6.7**
JTKR	**Abashiri--Toko**	**6.45**	**0**	P	**Pn**	**06 34 27.0**	**-1.3**
JTKR				*e*S	**Sn**	**06 35 35.4**	**-5.6**
ASAJ	**Asahikawa**	**6.66**	**352**	Pn	**Pn**	**06 34 31.2**	**-0.1**
	7.3nm,0.3s,baz=212,slow=17,SNR=15						
ASAJ				Sn	**Sn**	**06 35 43.7**	**-2.5**
	1.5nm,0.3s,baz=79,slow=19,SNR=2.5						
YSS	**Yuzh-Sakhalins**	**9.46**	**355**	P	**Pn**	**06 35 10.6**	**+0.9**
USRK	**Ussuriysk Ar.**	**11.18**	**310**	Pn	**Pn**	**06 35 33.7**	**+0.5**
	0.4nm,0.3s,baz=113,slow=15,SNR=6.4						
USRK				LR	LR	06 39 55.3	
	comp=Z,73nm,18.4s,baz=96,slow=38						
JNU	**Nakatsue**	**11.46**	**251**	LR	LR	06 39 26.8	
	comp=Z,72nm,19.4s,baz=175,slow=35						
KSRS	**Korea Array**	**12.64**	**275**	Pn	**Pn**	**06 35 55.5**	**+2.3**
	0.2nm,0.3s,baz=91,slow=13,SNR=11						
KSRS				LR	LR	06 40 49.1	
	comp=Z,88nm,18.1s,baz=100,slow=38						
KS15	**Wonju Array Si**	**12.68**	**275**	*e*Pn	**Pn**	**06 35 53.1**	**-0.6**
TJN	**Taejon**	**13.23**	**270**	*ce*P	**Pn**	**06 36 02.5**	**+1.3**
KLR	**Kul'dur**	**14.62**	**327**	LR	LR	06 42 17.1	
	comp=Z,43nm,20.4s,baz=154,slow=39						
KLR	**Kul'dur**	**14.62**	**327**	*i* P	**Pn**	**06 36 23.2**	**+3.1**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HIA	**Hailar**	**20.98**	**312**	*i* P	**P**	**06 37 36.5**	**+0.2**
HIA				pmax	pmax		
	comp=Z,23nm,0.9s						
SEY	**Seymchan**	**25.98**	**9**	P	**P**	**06 38 26.6**	**+1.2**
	comp=Z,2.5nm,0.4s,baz=184,slow=9.2,SNR=12						
H11N2	**WAKE ISLAND Hy**	**26.79**	**125**	T	T	07 05 34.2	
	baz=316,slow=74						
H11N1	**WAKE ISLAND Hy**	**26.80**	**125**	T	T	07 05 37.6	
	baz=316,slow=74						
H11N3	**WAKE ISLAND Hy**	**26.80**	**125**	T	T	07 05 37.0	
	baz=316						
BILL	**Bilibino**	**33.03**	**15**	*i* P	**P**	**06 39 27.3**	**-0.6**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TIXI	**Tiksi**	**35.06**	**352**	*e*P	**P**	**06 39 49.6**	**+4.2**
	comp=Z,6.3nm,0.3s						
TIXI	**Tiksi**	**35.06**	**352**	*i* P	**P**	**06 39 45.6**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DGZ	**Jazzator, Alta**	**41.68**	**306**	*i* P	**P**	**06 40 42.4**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ZAA1	**Zalesovo Array**	**43.02**	**312**	*e*P	**P**	**06 40 52.1**	**-0.1**
ZALV	**Zalesovo Beam**	**43.02**	**312**	P	**P**	**06 40 52.1**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=72,slow=9.3,SNR=3.0						
MK31	**Makanchi Array**	**45.50**	**302**	*e*P	**P**	**06 41 12.8**	**+0.7**
	comp=Z,4.4nm,1.7s						
MK31	**Makanchi Array**	**45.50**	**302**	*e*P	**P**	**06 41 12.9**	**+0.7**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.7s						
MK32	**Makanchi Array**	**45.50**	**302**	*e*P	**P**	**06 41 12.6**	**+0.3**
MKAR	**Makanchi Array**	**45.50**	**302**	P	**P**	**06 41 12.6**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=85,slow=9.2,SNR=5.7						
MKAR	**Makanchi Array**	**45.50**	**302**	*ce*P	**P**	**06 41 13.0**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAKZ	**Makanchi**	**45.71**	**302**	*e*P	**P**	**06 41 15.8**	**+2.0**
	comp=Z,11nm,1.8s						
MAKZ	**Makanchi**	**45.71**	**302**	*e*P	**P**	**06 41 15.9**	**+2.0**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.8s						
KURK	**Kurchatov**	**47.16**	**308**	*e*P	**P**	**06 41 24.4**	**-0.7**
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**47.16**	**308**	*e*P	**P**	**06 41 24.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	**48.05**	**33**	P	**P**	**06 41 32.1**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=270,slow=6.7,SNR=15						
ILB	**Eielson Array**	**48.05**	**33**	*e*P	**P**	**06 41 32.0**	**+0.2**
	comp=Z,8.8nm,1.6s						
BMRM	**Bremner River**	**49.30**	**38**	*e*P	**P**	**06 41 42.7**	**+1.1**
	comp=Z,22nm,1.4s						
MENT	**Mentasta**	**49.54**	**35**	*e*P	**P**	**06 41 42.6**	**-0.7**
	comp=Z,4.1nm,0.6s						
BRVK	**Borovoye**	**51.73**	**312**	*i* P	**P**	**06 41 59.5**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**53.07**	**27**	P	**P**	**06 42 10.4**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=303,slow=6.1,SNR=7.6						
INK	**Inuvik**	**53.07**	**27**	*e*P	**P**	**06 42 10.3**	**+0.6**
	comp=Z,4.7nm,1.4s						
INK	**Inuvik**	**53.07**	**27**	*e*P	**P**	**06 42 10.3**	**+0.6**
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ARU	**Arti**	**57.27**	**319**	*d i* P	**P**	**06 42 39.8**	**-0.4**
ARU						06 44 42.3	
ARU				S	**S**	**06 50 36.7**	**+2.3**
ARU				SS	**SS**	**06 54 21.6**	**-1.6**
ARU				pmax	pmax		
	comp=Z,16nm,2.6s						
WB2	**Warramunga Arr**	**57.85**	**191**	*e*P	**P**	**06 42 44.6**	**+0.1**
	comp=Z,45nm,1.8s						
WR1	**Warramunga Arr**	**57.85**	**191**	*e*P	**P**	**06 42 44.8**	**+0.2**
WRA	**Warramunga Arr**	**57.85**	**191**	P	**P**	**06 42 44.7**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=6.8,slow=7.7,SNR=6.5						
ABKAR	**Akbulak array**	**59.10**	**311**	*e*P	**P**	**06 42 53.3**	**+0.3**
	comp=Z,8.3nm,1.8s						
ASAR	**Alice Springs**	**61.57**	**190**	P	**P**	**06 43 10.8**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=9.6,slow=7.7,SNR=5.1						
TULEG	**Thule**	**64.36**	**8**	*e*P	**P**	**06 43 27.9**	**-0.1**
	comp=Z,24nm,1.9s						
STKA	**Stephens Creek**	**69.07**	**182**	LR	LR	07 19 58.1	
	comp=Z,32nm,18.1s,baz=196,slow=41						
FIA0	**FINESS Array S**	**69.28**	**333**	*e*P	**P**	**06 44 00.1**	**+0.6**
FIA0	**FINESS Array S**	**69.28**	**333**	*e*P	**P**	**06 44 00.1**	**+0.6**
FINES	**FINESS Array B**	**69.28**	**333**	P	**P**	**06 44 00.1**	**+0.6**
	comp=Z,2.8nm,1.1s,baz=27,slow=6.7,SNR=3.7						
KIV	**Kislovodsk**	**72.04**	**312**	*e*P	**P**	**06 44 16.1**	**-0.7**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
NEY	**Neytrino**	**72.42**	**311**	*i* P	**P**	**06 44 18.6**	**-0.7**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
AKASG	**Malin Array Be**	**75.08**	**323**	P	**P**	**06 44 34.6**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=45,slow=6.1,SNR=4.4						
KIEV	**Kiev**	**75.09**	**323**	*i* P	**P**	**06 44 32.0**	**-2.5**
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLNR	**Kaliningrad**	**76.29**	**330**	*i* P	**P**	**06 44 42.4**	**+1.1**
KLNR				pmax	pmax		
	comp=Z,40nm,1.1s						

NDI 03 06:40:43.8±2.4,24°.16N×91°.64E,h16km±10km,ML3.5, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.45**	**233**	*e*P	Pg	06 40 52.5	-0.3
AGT				*e*S	Sg	06 40 59.3	+0.3
AGT				IAML		06 40 59.8	
	comp=N,6μm,0.4s						
AGT				IAML		06 40 59.8	
	comp=E,5μm,0.5s						
BELO	**BELONIA**	**0.92**	**191**	*e*P	Pb	06 41 01.0	-0.5
BELO				*e*S	Sn	06 41 16.2	+1.1
BELO				IAML		06 41 17.3	
	comp=E,2μm,0.1s						
BELO				IAML		06 41 17.5	
	comp=N,2μm,0.1s						
SHL	**Shillong**	**1.42**	**9**	*e*P	Pb	06 41 10.1	+0.1
SHL				*e*S	Sg	06 41 29.4	-0.3
SHL				IAML		06 41 30.0	
	comp=E,585nm,0.5s						
SHL				IAML		06 41 30.6	
	comp=N,484nm,0.2s						
GUWA	**GUWAHATI**	**2.03**	**1**	*e*P	Pn	06 41 18.5	+1.2
GUWA				*e*S	Sn	06 41 42.2	-0.1
GUWA				IAML		06 41 49.4	
GUWA				IAML		06 41 51.0	
	comp=E,83nm,0.3s						
SAIH	**SAIHA**	**2.07**	**143**	*e*P	Pn	06 41 18.3	+0.2
SAIH				*e*S	Sn	06 41 42.1	-1.5
TEZP	**TEZPUR**	**2.66**	**23**	*e*P	Pn	06 41 27.3	+1.2
TEZP				*e*S	Sn	06 41 56.5	-1.5
ZIRO	**ZIRO**	**3.90**	**30**	*e*P	Pn	06 41 43.1	-0.2
ZIRO				*e*S	Sn	06 42 27.5	-1.3
GTK	**Tadong**	**4.17**	**320**	*e*P	Pn	06 41 45.8	-1.2
GTK				*e*S	Sn	06 42 32.5	-3.1
LKP	**Lekhapani**	**4.94**	**49**	*ex*	Pn	06 41 59.8	+2.5
LKP				*e*S	Sn	06 42 50.0	-4.1

IDC ***03*** *06:47:54.2±1.7,27°.27S×176°.92W,h0km,mb4.3/6, mb1 4.3/7,mb1mx4.0/25,mbtmp4.2/7,ML3.2/1,MS4.4/1, Ms1 4.4/1,ms1mx2.9/30,Error ellipse: s-maj=52.3km s-min=29.6km az=134.0*
ISCJB ***03*** *06:48:04.2±0.7,27°.48S±0°.05×177°.0W±0°.1,h100km, mb4.3/14,Error ellipse: s-maj=15.1km s-min=6.1km az=10.6*
NEIC ***03*** *06:48:05.8±2.9,27°.55S×176°.91W,h108km±18km, mb4.5/13,Error ellipse: s-maj=49.8km s-min=19.8km az=139.0*
ISC 03 06:48:05.8±0.8,27°.47S±0°.07×177°.0W±0°.1,h100km,n38, σ1°.48/41,mb4.4/14,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.95**	**204**	*e*Pn	**Pn**	**06 48 38.1**	**+0.5**
NIUE	**Niue**	**10.59**	**39**	*e*Pn	**Pn**	**06 50 33.6**	**-0.9**
NIUE				*e*Sn	Sn	06 52 22.2	-9.0
URZ	**Urewera**	**11.84**	**203**	Pn	**Pn**	**06 50 49.1**	**-2.1**
	0.2nm,0.3s,baz=34,slow=11,SNR=4.0						
URZ				Sn	**Sn**	**06 53 01.6**	**+0.4**
	2.6nm,0.3s,baz=236,slow=22,SNR=12						
URZ	**Urewera**	**11.84**	**203**	*e*Pn	**Pn**	**06 50 48.6**	**-2.6**
URZ				*e*Sn	**Sn**	**06 53 01.8**	**+0.6**
BKZ	**Black Stump Fm**	**12.86**	**203**	*e*Pn	**Pn**	**06 51 02.4**	**-2.4**
BKZ				*e*Sn	**Sn**	**06 53 31.3**	**+5.1**
BFZ	**Birch Farm**	**14.31**	**201**	*e*Pn	**Pn**	**06 51 22.9**	**-0.7**
BFZ				*e*Sn	**Sn**	**06 53 59.7**	**-1.4**
PINNC	**Pines Island,**	**14.89**	**286**	*e*Pn	**Pn**	**06 51 30.5**	**-0.7**
SNZO	**South Karori**	**15.39**	**204**	*e*Pn	**Pn**	**06 51 37.8**	**+0.5**
	37nm,0.9s						
THZ	**Tophouse**	**16.48**	**208**	*e*Pn	**Pn**	**06 51 50.5**	**-0.4**
	34nm,1.2s						
KHZ	**Kahutara**	**16.79**	**205**	*e*Pn	**Pn**	**06 51 52.8**	**-1.8**
	51nm,1.4s						
HNR	**Honiara**	**28.19**	**305**	LR	LR	07 03 13.7	
	comp=Z,650nm,18.8s,baz=274,slow=33						
CTA	**Charters Tower**	**34.32**	**274**	P	**P**	**06 54 44.6**	**+1.7**
	2.1nm,0.3s,baz=99,slow=11,SNR=5.5						
CTAO	**Charters Tower**	**34.32**	**274**	*e*P	**P**	**06 54 42.3**	**-0.6**
	12nm,1.4s						
PMG	**Port Moresby**	**38.25**	**291**	*e*P	**P**	**06 55 17.1**	**+0.7**
	28nm,1.1s						
COEN	**Coen**	**39.42**	**282**	*e*P	**P**	**06 55 26.1**	**-0.1**
	23nm,1.5s						
AS31	**Alice Springs**	**44.22**	**263**	*e*P	**P**	**06 56 05.2**	**-0.1**
	2.1nm,1.4s						
ASAR	**Alice Springs**	**44.22**	**263**	P	**P**	**06 56 05.7**	**+0.4**
	0.5nm,0.3s,baz=97,slow=6.9,SNR=12						
WC3	**Warramunga Arr**	**44.91**	**269**	*e*P	**P**	**06 56 10.6**	**-0.2**
	12nm,1.4s						
WB2	**Warramunga Arr**	**44.94**	**269**	*e*P	**P**	**06 56 11.0**	**0.0**
	6.4nm,1.1s						
WRAB	**Tennant Creek**	**44.94**	**269**	*e*P	**P**	**06 56 09.5**	**-1.5**
	5.6nm,0.8s						
WR1	**Warramunga Arr**	**44.95**	**269**	*e*P	**P**	**06 56 10.7**	**-0.3**
WRA	**Warramunga Arr**	**44.95**	**269**	P	**P**	**06 56 10.7**	**-0.3**
	2.1nm,0.7s,baz=100,slow=7.6,SNR=11						
KSM	**Kuching**	**75.37**	**279**	*e*P	**P**	**06 59 35.8**	**-3.1**
	6.4nm,0.8s						
MJAR	**Matsushiro Arr**	**76.36**	**324**	P	**P**	**06 59 43.7**	**-0.3**
	2.7nm,0.6s,baz=169,slow=6.1,SNR=8.0						
MAJO	**Matsushiro**	**76.36**	**324**	*e*P	**P**	**06 59 43.7**	**-0.3**
MJB9	**Matsu-Tunnel**	**76.36**	**324**	*e*P	**P**	**06 59 43.4**	**-0.6**
	4.2nm,0.7s						
KSRS	**Korea Array**	**82.70**	**319**	P	**P**	**07 00 19.9**	**+1.6**
	2.4nm,0.6s,baz=128,slow=6.2,SNR=11						
PETK	**Petropavlovsk-**	**83.21**	**345**	P	**P**	**07 00 22.6**	**+2.0**
	2.0nm,0.8s,baz=122,slow=7.0,SNR=3.8						
PEA1	**Petropavlovsk-**	**83.22**	**345**	*e*P	**P**	**07 00 22.6**	**+2.0**
ARCES	**ARCESS Array B**	**135.91**	**349**	PKP	**PKiKP**	**07 07 15.6**	**-0.1**
	2.1nm,0.9s,baz=341,slow=1.9,SNR=4.4						
FIA0	**FINESS Array S**	**142.67**	**342**	*e*PKPpre	PKPpre	07 07 23.3	
FINES	**FINESS Array B**	**142.67**	**342**	PKhKP	PKPpre	07 07 23.3	
	1.3nm,0.7s,baz=69,slow=6.3,SNR=5.9						
NB2	**NORSAR Subarra**	**145.98**	**353**	PKP	**PKPab**	**07 07 34.5**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=23,slow=3.3						
NB200	**NORSAR Array S**	**145.98**	**353**	*e*PKPdf	**PKPab**	**07 07 34.2**	**+0.2**
NOA	**NORSAR Array B**	**145.98**	**353**	PKPbc	**PKPab**	**07 07 34.2**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=16,slow=4.7,SNR=4.7						
AKASG	**Malin Array Be**	**149.42**	**326**	PKPbc	**PKiKP**	**07 07 43.7**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=40,slow=3.7,SNR=5.1						
BR101	**Keskin Array S**	**151.84**	**304**	*e*PKPbc	**PKPbc**	**07 07 49.4**	**+0.2**
BR101				*e*PKPab	**PKPab**	**07 08 00.2**	**+1.7**
BRTR	**Keskin Array B**	**151.84**	**304**	PKPbc	**PKPbc**	**07 07 49.4**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=93,slow=2.9,SNR=2.6						
BRTR				PKPab	**PKPab**	**07 08 00.2**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=96,slow=3.1,SNR=5.6						

MEX 03 06:48:09.6±0.5,16°.01N×98°.79W,h16km±10km,MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.74**	**59**	*i* P	Pg	06 48 21.2	-2.9
PNIG				*e*S	Sg	06 48 30.5	-3.3
TLIG	**Tlapa**	**1.56**	**8**	*e*P	Pn	06 48 33.0	-3.8
TLIG				*e*S	Sn	06 48 51.7	-5.1
CAIG	**El Cayaco**	**1.76**	**306**	*e*P	Pn	06 48 36.2	-3.2
CAIG				*e*S	Sn	06 48 56.4	-5.1

TIR ***03*** *06:55:10.9,39°.18N×18°.87E,h10km,Md3.8/6*
ISCJB ***03*** *06:55:11.7±1.1,39°.20N±0°.04×18°.83E±0°.06,h6km±9km, Error ellipse: s-maj=8.1km s-min=5.1km az=144.9*
ATH ***03*** *06:55:11.1,39°.17N×18°.82E,h16km±2km,ML2.2/3,Error ellipse: s-maj=3.3km s-min=1.0km az=41.0*
ISC 03 06:55:11.3±1.3,39°.19N±0°.04×18°.83E±0°.04,h13km±11km, n21,σ0°.79/31,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.92**	**55**	P	**Pg**	**06 55 28.8**	**-0.2**
KEK				S	**Sn**	**06 55 42.3**	**-0.7**
KEK				AML	AML	06 55 44.0	
	comp=E,451μm,0.6s						
KEK				AML	AML	06 55 44.7	
	comp=N,470μm,0.5s						
SCTE	**Santa Cesarea**	**0.93**	**343**	*i* PG	**Pn**	**06 55 29.8**	**-0.3**
SCTE				*i* SG	**Sn**	**06 55 43.3**	**0.0**
SCTE	**Santa Cesarea**	**0.93**	**343**	P	**Pg**	**06 55 29.2**	**0.0**
SCTE				S	**Sb**	**06 55 42.2**	**+0.7**
SCTE				AML	AML	06 55 43.9	
	comp=N,185μm,0.4s						
SCTE				AML	AML	06 55 45.9	
	comp=E,260μm,0.4s						
SRN	**Sarande**	**1.14**	**52**	*i* PN	**Pb**	**06 55 32.7**	**-0.2**
SRN				*i* SN	**Sn**	**06 55 49.2**	**+0.7**
IGT	**Igoumenitsa**	**1.22**	**73**	*i* PN	**Pb**	**06 55 34.0**	**-0.2**
IGT				*i* SN	**Sg**	**06 55 51.1**	**+0.6**
IGT	**Igoumenitsa**	**1.22**	**73**	P	**Pn**	**06 55 33.6**	**-0.4**
IGT				S	**Sg**	**06 55 51.2**	**+0.7**
IGT				AML	AML	06 55 55.5	
	comp=E,136μm,0.7s						
IGT				AML	AML	06 55 58.8	
	comp=N,136μm,0.4s						
TPE	**Tepelena**	**1.44**	**39**	*i* PN	**Pb**	**06 55 37.9**	**0.0**
TPE				*i* SN	**Sg**	**06 55 58.6**	**+1.1**
TSLK	**Tsoukalades, L**	**1.47**	**104**	P	**Pg**	**06 55 38.8**	**-0.6**
LKD2	**Lefkada island**	**1.48**	**105**	*i* PN	**Pb**	**06 55 38.8**	**+0.1**
LKD2				*i* SN	**Sg**	**06 55 59.1**	**+0.2**
LKD2	**Lefkada island**	**1.48**	**105**	P	**Pb**	**06 55 38.8**	**+0.1**
LKD2				S	**Sg**	**06 55 59.0**	**+0.2**
EVGI	**Lefkada island**	**1.53**	**111**	P	**Pb**	**06 55 39.7**	**+0.1**
FSK	**Fiskardo**	**1.54**	**118**	P	**Pg**	**06 55 40.3**	**-0.4**
FSK				S	**Sg**	**06 56 01.4**	**+0.7**
TIP	**Timpagrande**	**1.61**	**270**	P	**Pb**	**06 55 40.6**	**-0.2**
VLS	**Valsamata**	**1.71**	**126**	P	**Pb**	**06 55 42.3**	**-0.3**
KFL	**Anninata**	**1.87**	**124**	P	**Pb**	**06 55 45.4**	**+0.1**
PDO	**Prodromos**	**1.93**	**107**	P	**Pb**	**06 55 45.5**	**-0.8**
MEV	**Metsovon**	**1.95**	**71**	P	**Pb**	**06 55 46.1**	**-0.7**
NOCI	**Noci**	**2.10**	**320**	P	**Pb**	**06 55 48.2**	**-1.0**
THL	**Klokotos Trika**	**2.50**	**80**	P	**Pb**	**06 55 53.9**	**-2.1**
FNA	**Florina**	**2.53**	**50**	*i* PN	**Pb**	**06 55 54.9**	**-1.7**
FNA	**Florina**	**2.53**	**50**	P	**Pn**	**06 55 53.6**	**+1.6**

IDC 03 07:02:23.9±1.4,9°.24S×160°.01E,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.8/29,mbtmp3.8/4,Error ellipse: s-maj=49.3km s-min=12.0km az=103.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.20**	**198**	*i* P	Pg	07 02 34.0	+6.2
HNR				*i* S	Sg	07 02 45.0	+15
HNR	**Honiara**	**0.20**	**198**	Pn	Pg	07 02 34.7	+6.9
	2μm,0

KELT IAML_P
comp=Z,3μm,0.1s
BAYB BAYBURT 0.56 39 *i* P **Pb 07 18 06.7 +0.4**
BAYB *i* S **Sn 07 18 15.8 -1.9**
BAYB IAML_P
comp=Z,3μm,0.2s
KOPT Kop Dagi 0.57 70 *i* P **Pn 07 18 07.9 -0.8**
KOPT *i* S **Sn 07 18 19.5 +1.4**
KOPT IAML_P
comp=Z,2μm,0.2s
BAYT Aydintepe-Bayb 0.63 25 PG **Pg 07 18 06.6 -0.1**
YEDI Yedisu-Bingol 0.69 124 PG **Pg 07 18 05.9 -2.0**
KRIK Erzurum-spir 1.01 59 *i* P **Pn 07 18 15.5 +0.9**
KRIK *i* S **Sn 07 18 31.4 +2.6**
MACK Trabzon 1.12 359 *i* P **Pg 07 18 16.3 +0.3**
MACK *i* S **Sn 07 18 31.3 0.0**
MACK IAML_P
comp=Z,8μm,0.2s
KEMA Kemaliye 1.15 242 *i* P **Pg 07 18 16.9 +0.3**
KEMA *i* S **Sb 07 18 31.3 0.0**
KEMA IAML_P
comp=Z,1μm,0.1s
KTUT Trabzon 1.16 359 PN **Pn 07 18 15.8 -0.7**
KTUT SN **Sg 07 18 31.8 -0.1**
SUSE Susehri 1.28 288 *i* P **Pn 07 18 17.6 -0.8**
SUSE *i* S **Sb 07 18 34.8 -0.3**
SUSE IAML_P
comp=Z,576nm,0.2s

MEX 03 07:22:12.9±1.4, 16°.30N×98°.10W, h2km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.09**	**342**	*i* P	Pg	07 22 13.9	-0.8
PNIG				*i* S	Sg	07 22 16.0	0.0
TLIG	**Tlapa**	**1.33**	**340**	*i* P	Pg	07 22 35.7	-2.7
TLIG				*e*S	Sg	07 22 52.3	-3.4
HUIG	**Huatulco**	**1.99**	**105**	*e*P	Pn	07 22 44.1	-3.4
HUIG				*e*S	Sb	07 23 15.8	+0.8
CAIG	**El Cayaco**	**2.21**	**290**	*e*P	Pn	07 22 46.4	-4.2
CAIG				*e*S	Sn	07 23 18.2	-0.3
CMIG	**Matias Romero**	**3.18**	**75**	*e*P	Pn	07 23 01.6	-2.4

IDC ***03*** *07:29:01.0±1.6, 22°.48N×123°.81E, h0km, mb3.3/2, mb1 3.6/5, mb1mx3.4/37, mbtmp3.6/5, ML2.9/3, Error ellipse: s-maj=40.6km s-min=27.2km az=98.0*
NIED ***03*** *07:29:00, 22°.60N×123°.90E, h23km, Mw3.9 Best double couple: M0=6.81000×10^14 NP1:φ=220.00000°, δ=55.00000°, λ=142.00000°. NP2:φ=334.00000°, δ=59.00000°, λ=41.00000°.*
JMA ***03*** *07:29:04.4±0.4, 22°.57N×123°.92E, h54km, M4.0*
ISC 03 07:29:04.0±2.7, 22°.70N±0°.08×124°.04E±0°.06, h15km±15km, n18, σ1§61/31, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.37**	**351**	P	**Pb**	**07 29 29.5**	**+0.2**
HATJ				S	**Sg**	**07 29 47.1**	**-1.0**
JKRS	**Kuro-shima**	**1.53**	**359**	P	**Pb**	**07 29 32.3**	**+0.2**
JKRS				*e*S	**Sg**	**07 29 52.4**	**-0.9**
IRIF	**Iriomote-Funau**	**1.65**	**350**	P	**Pb**	**07 29 33.8**	**-0.4**
IRIF				*e*S	**Sn**	**07 29 53.8**	**+0.3**
JIJ	**Ishigaki jima**	**1.66**	**3**	P	**Pn**	**07 29 33.6**	**+1.0**
JIJ				S	**Sb**	**07 29 54.1**	**-0.9**
JISG	**Ishigakijimahi**	**1.89**	**7**	P	**Pn**	**07 29 36.7**	**+0.9**
JISG				*e*S	**Sb**	**07 30 01.1**	**-0.7**
YOJ	**Yonaguni jima**	**1.99**	**332**	P	**Pn**	**07 29 38.5**	**+1.3**
YOJ				*e*S	**Sn**	**07 30 01.7**	**-0.2**
JYNG	**Yonagunijimaku**	**2.01**	**330**	P	**Pn**	**07 29 38.3**	**+0.9**
JYNG				*e*S	**Sn**	**07 30 01.7**	**-0.7**
JTJ	**Tarama**	**2.02**	**17**	P	**Pn**	**07 29 38.7**	**+1.1**
JTJ				S	**Sb**	**07 30 04.8**	**-0.7**
JMJ2	**Miyako jima3**	**2.35**	**30**	P	**Pn**	**07 29 43.7**	**+1.6**
JMJ2				*e*S	**Sb**	**07 30 12.9**	**-2.0**
JIRB	**Irabujima**	**2.36**	**26**	P	**Pn**	**07 29 43.7**	**+1.5**
JOGS	**Gusukube**	**2.40**	**31**	P	**Pn**	**07 29 44.7**	**+1.9**
JOGS				S	**Sb**	**07 30 15.3**	**-1.1**
JIKM	**Ikemajima**	**2.47**	**26**	P	**Pn**	**07 29 46.0**	**+2.2**
JIKM				*e*S	**Sb**	**07 30 16.7**	**-1.8**
JKE	**Kume jima 2**	**4.39**	**34**	P	**Pn**	**07 30 11.3**	**+1.1**
JKE				S	**Sn**	**07 31 00.8**	**-0.3**
JOW	**Kunigami**	**5.63**	**42**	Pn	**Pn**	**07 30 28.2**	**+1.0**
JOW	0.3nm,0.3s,baz=200,slow=15,SNR=15			Sn	**Sn**	**07 31 28.9**	**-2.8**
	0.4nm,0.3s,baz=87,slow=20,SNR=5.1						
KSRS	**Korea Array**	**15.08**	**12**	Pn	**Pn**	**07 32 38.0**	**+1.4**
	0.3nm,0.3s,baz=187,slow=13,SNR=21						
MJAR	**Matsushiro Arr**	**18.46**	**38**	P	**P**	**07 33 23.8**	**+4.5**
	0.1nm,0.3s,baz=230,slow=10,SNR=8.7						
MKAR	**Makanchi Array**	**41.22**	**316**	P	**P**	**07 36 47.5**	**-0.9**
	0.3nm,0.6s,baz=120,slow=8.5,SNR=4.1						
ASAR	**Alice Springs**	**47.08**	**168**	P	**P**	**07 37 33.2**	**-2.2**
	0.3nm,0.8s,baz=352,slow=13,SNR=5.7						

ISCJB ***03*** *07:36:56.7±0.4, 28°.37N±0°.03×57°.29E±0°.07, h10km, Error ellipse: s-maj=8.5km s-min=3.7km az=8.9*
DSN ***03*** *07:36:56.9±1.0, 28°.43N×57°.14E, h10km, ML3.8/6, Error ellipse: s-maj=45.7km s-min=8.0km az=114.0*
TEH ***03*** *07:36:57.8, 28°.38N×57°.33E, h24km, ML3.6*
OMAN ***03*** *07:37:00.0±0.1, 28°.25N×57°.26E, h8km, ml3.8/5, Error ellipse: s-maj=6.7km s-min=2.8km az=285.0*
ISC 03 07:36:57.2±0.9, 28°.40N±0°.03×57°.28E±0°.05, h10km, n27, σ0§94/30, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.58**	**140**	*e*Pg	**Pg**	**07 37 08.0**	**-0.5**
NIAN	**Nian**	**0.93**	**206**	*e*Pg	**Pn**	**07 37 15.8**	**-0.5**
NIAN				IAMB	IAmb	07 37 43.1	
	comp=Z,0.0nm,0.2s						
NGRK	**Negar Kerman**	**1.33**	**339**	*e*Pg	**Pg**	**07 37 22.4**	**-0.5**
NGRK				IAMB	IAmb	07 37 51.5	
	comp=Z,0.0nm,0.2s						
GENO	**Geno**	**1.40**	**225**	*e*Pg	**Pg**	**07 37 23.7**	**-0.4**
GENO				IAMB	IAmb	07 37 24.6	
	comp=Z,0.0nm,0.2s						
CHMN	**Cheshme madani**	**1.48**	**9**	*e*Pn	**Pb**	**07 37 24.4**	**-0.6**
CHMN				IAMB	IAmb	07 37 44.7	
	comp=Z,0.0nm,0.3s						
KRBR	**Kerman**	**1.64**	**344**	*e*Pg	**Pg**	**07 37 28.5**	**-0.3**
TVBK	**TV Kerman**	**1.65**	**344**	*e*Pn	**Pg**	**07 37 27.6**	**-1.3**
TVBK				IAMB	IAmb	07 37 34.9	
	comp=Z,0.0nm,0.2s						
KHGB	**Koh Gabri**	**2.09**	**341**	*e*Pn	**Pb**	**07 37 34.8**	**-0.6**
KHGB				IAMB	IAmb	07 38 11.2	
	comp=Z,0.0nm,0.3s						
SHME	**Shamm**	**2.55**	**204**	*e*P	**Pn**	**07 37 38.3**	**-0.4**
SHME	SNR=14			S	**Sn**	**07 38 10.2**	**+0.4**
BANOM	**Banah**	**2.62**	**200**	*e*P	**Pn**	**07 37 39.7**	**+0.1**
	SNR=16						
BANOM	**Banah**	**2.62**	**200**	P	**Pn**	**07 37 39.4**	**-0.2**
	SNR=17						
BANOM				S	**Sn**	**07 38 12.1**	**+0.7**
MSFE	**Esma-Masafi**	**3.19**	**199**	P	**Pn**	**07 37 47.9**	**+0.4**
UOSS	**Minazif**	**3.57**	**196**	P	**Pn**	**07 37 52.1**	**-0.6**
GHIR	**Ghir-Karzin**	**3.79**	**269**	*e*Pn	**Pn**	**07 37 56.3**	**+0.5**
ASHO	**Ashiyiah**	**3.86**	**197**	*i* P	**Pn**	**07 37 56.2**	**-0.5**
	SNR=8.7						
ASHO	**Ashiyiah**	**3.86**	**197**	P	**Pn**	**07 37 58.0**	**+1.3**
	SNR=8.9						
BSRN	**Basiran**	**3.90**	**24**	*e*Pn	**Pn**	**07 37 58.6**	**+1.3**
FAQ	**Al Faqa, Dubai**	**3.94**	**203**	P	**Pn**	**07 37 57.3**	**-0.4**
CHBR	**Chabahar**	**3.99**	**134**	*e*Pn	**Pn**	**07 37 58.6**	**+0.2**
ASUD	**Al Ashush, Dub**	**4.14**	**205**	*i* P	**Pn**	**07 37 59.8**	**-0.7**
	SNR=14						
ASUD	**Al Ashush, Dub**	**4.14**	**205**	P	**Pn**	**07 38 01.8**	**+1.2**
	SNR=14						
ASUD				S	**Sn**	**07 38 49.6**	**+0.6**
IKOO	**Kooshah**	**4.28**	**20**	*e*Pn	**Pn**	**07 38 04.6**	**+1.9**
YZKH	**Yazd**	**4.61**	**330**	*e*Pn	**Pn**	**07 38 08.8**	**+1.8**
TABS	**Tabas**	**5.24**	**358**	*e*Pn	**Pn**	**07 38 17.2**	**+1.5**
WSAR	**Wadi Sarin**	**5.28**	**166**	P	**Pn**	**07 38 16.0**	**-0.2**
BSY	**Bisya**	**5.63**	**181**	P	**Pn**	**07 38 22.5**	**+1.5**
SHRT	**Shahrakht**	**5.83**	**26**	*e*Pn	**Pn**	**07 38 25.0**	**+1.2**

BJI ***03*** *08:03:35.5±0.0, 7°.13S×154°.83E, h29km, mb4.8/25, mB4.9/17, Ms4.6/4, Ms7 4.6/3*

ISCJB ***03*** *08:03:42.4±0.3, 6°.54S±0°.05×154°.26E±0°.05, h48km, mb4.6/52, Error ellipse: s-maj=7.1km s-min=6.6km az=31.4*
NEIC ***03*** *08:03:42.8±2.0, 6°.55S×154°.26E, h38km±5km, mb4.6/39, Error ellipse: s-maj=13.0km s-min=8.4km az=85.0*
IDC ***03*** *08:03:46.6±2.8, 6°.48S×154°.30E, h82km±26km, mb3.9/12, mb1 4.1/15, mb1mx4.0/29, mbtmp4.3/15, MS3.5/9, Ms1 3.5/9, ms1mx3.3/26, Error ellipse: s-maj=20.1km s-min=16.5km az=87.0*
ISC 03 08:03:44.0±0.4, 6°.52S±0°.05×154°.23E±0°.05, h48km, n89, σ2§92/84, mb4.6/52, 1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.10**	**318**	*e*Pn	**Pn**	**08 04 29.4**	**-1.0**
RABL				*e*Sn	**Sn**	**08 05 03.5**	**-2.7**
HNR	**Honiara**	**6.36**	**117**	P	**Pn**	**08 05 18.0**	**+2.8**
	2.2nm,0.3s,baz=174,slow=7.8,SNR=5.6						
HNR				S	**Sn**	**08 06 33.1**	**+6.5**
	6.5nm,0.3s,baz=210,slow=17,SNR=3.0						
HNR				LR	LR	08 07 37.7	
	comp=Z,240nm,20.1s,baz=328,slow=37						
HNR	**Honiara**	**6.36**	**117**	*e*Pn	**Pn**	**08 05 13.8**	**-1.4**
HNR				*e*Sn	**Sn**	**08 06 20.8**	**-5.8**
PMG	**Port Moresby**	**7.56**	**247**	P	**Pn**	**08 05 35.2**	**+3.5**
	4.0nm,0.3s,baz=60,slow=11,SNR=6.4						
PMG				S	**Sn**	**08 06 59.0**	**+2.9**
	3.9nm,0.3s,baz=17,slow=19,SNR=3.5						
PMG				LR	LR	08 08 49.9	
	comp=Z,544nm,18.7s,baz=69,slow=40						
PMG	**Port Moresby**	**7.56**	**247**	*e*Pn	**Pn**	**08 05 29.4**	**-2.3**
PMG				*e*Sn	**Sn**	**08 06 50.2**	**-5.9**
MANU	**Manus Island**	**8.16**	**303**	*e*Pn	**Pn**	**08 05 42.5**	**+2.6**
PATS	**Pohnpei**	**13.88**	**17**	*e*Pn	**Pn**	**08 06 55.1**	**-3.1**
JAY	**Jayapura**	**14.05**	**286**	LR	LR	08 12 19.6	
	comp=Z,208nm,18.3s,baz=77,slow=36						
CTA	**Charters Tower**	**15.55**	**209**	P	**P**	**08 07 24.9**	**+1.2**
	0.2nm,0.3s,baz=31,slow=13,SNR=6.3						
CTAO	**Charters Tower**	**15.55**	**209**	*e*Pn	**Pn**	**08 07 17.0**	**-3.1**
	18nm,1.0s						
EIDS	**Eidsvold**	**18.98**	**189**	*e*P	**P**	**08 08 00.6**	**-0.9**
	9.8nm,0.9s						
DZM	**Mont Dzumac**	**19.45**	**144**	P	**P**	**08 08 07.2**	**+0.4**
	0.5nm,0.3s,baz=330,slow=8.1,SNR=4.8						
DZM				LR	LR	08 13 36.0	
	comp=Z,216nm,18.2s,baz=8.5,slow=30						
DZM	**Mont Dzumac**	**19.45**	**144**	*e*P	**P**	**08 08 06.6**	**-0.1**
	48nm,1.5s						
GUMO	**Guam**	**22.04**	**335**	LR	LR	08 15 32.6	
	comp=Z,56nm,19.5s,baz=155,slow=32						
FAKI	**Fak Fak**	**22.19**	**278**	*e*P	**P**	**08 08 36.8**	**+0.4**
	26nm,1.3s						
WRAB	**Tennant Creek**	**23.46**	**233**	*e*P	**P**	**08 08 50.0**	**+0.7**
	29nm,1.0s						
WB2	**Warramunga Arr**	**23.46**	**233**	*e*P	**P**	**08 08 48.7**	**-0.7**
	34nm,1.1s						
WR1	**Warramunga Arr**	**23.47**	**233**	*e*P	**P**	**08 08 49.8**	**+0.3**
WRA	**Warramunga Arr**	**23.47**	**233**	P	**P**	**08 08 49.8**	**+0.3**
	17nm,0.8s,baz=61,slow=11,SNR=26						
AS31	**Alice Springs**	**25.92**	**227**	*e*P	**P**	**08 09 11.4**	**-0.5**
	1.2nm,0.9s						
ASAR	**Alice Springs**	**25.93**	**227**	P	**P**	**08 09 11.8**	**-0.2**
	3.2nm,0.9s,baz=61,slow=8.8,SNR=17						
STKA	**Stephens Creek**	**27.85**	**203**	P	**P**	**08 09 28.1**	**-1.0**
	1.8nm,0.4s,baz=19,slow=9.9,SNR=7.5						
STKA				LR	LR	08 20 40.5	
	comp=Z,163nm,18.9s,baz=26,slow=36						
STKA	**Stephens Creek**	**27.85**	**203**	*e*P	**P**	**08 09 30.3**	**+1.2**
	4.4nm,1.4s						
BBOO	**Buckleboo**	**31.14**	**211**	*e*P	**P**	**08 09 56.3**	**-2.0**
	24nm,1.4s						
SSLB	**Suanglung**	**44.30**	**314**	*e*P	**P**	**08 11 50.5**	**+1.1**
JNU	**Nakatsue**	**45.24**	**332**	P	**P**	**08 11 55.9**	**-0.9**
	9.2nm,0.9s,baz=196,slow=7.4,SNR=3.5						
MJAR	**Matsushiro Arr**	**45.39**	**342**	P	**P**	**08 11 55.1**	**-2.8**
	0.7nm,0.4s,baz=163,slow=8.9,SNR=3.2						
MAJO	**Matsushiro**	**45.40**	**342**	*e*P	**P**	**08 11 55.1**	**-2.8**
DLV	**T Lat**	**49.05**	**292**	*e*P	**P**	**08 12 27.1**	**+0.1**
	17nm,1.0s						
KSRS	**Korea Array**	**50.17**	**333**	P	**P**	**08 12 33.0**	**-1.9**
	2.2nm,0.9s,baz=143,slow=7.7,SNR=6.1						
KSRS				LR	LR	08 32 17.9	
	comp=Z,16nm,20.4s,baz=275,slow=34						
KS15	**Wonju Array Si**	**50.18**	**333**	*e*P	**P**	**08 12 32.5**	**-2.4**
	10nm,1.3s						
NJ2	**Nanjing**	**51.07**	**321**	*e*P	**P**	**08 12 44.3**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
WHN	**Wuhan**	**53.07**	**316**	‖P	P	08 13 08.5	+12
WHN				pmax	pmax		
	comp=Z,32nm,1.0s						
SBLHI	**Steaming Bluff**	**56.01**	**61**	*e*P	**P**	**08 13 17.8**	**-0.6**
	comp=Z,109nm,0.8s						
HATHI	**Halema'uma'u T**	**56.01**	**61**	*e*P	**P**	**08 13 18.5**	**+0.1**
	comp=Z,199nm,0.9s						
ENH	**Enshi**	**56.36**	**313**	*e*P	**P**	**08 13 20.7**	**+0.2**
	comp=Z,18nm,0.8s						
XAN	**Xi'an**	**58.84**	**316**	P	P	08 13 48.7	+11
XAN				pP	pwP	08 14 01.4	+3.5
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,80nm,5.1s						
XAN				LR	LR		
	comp=N,250nm,6.3s						
XAN				LR	LR		
	comp=E,160nm,6.1s						
XAN				LR	LR		
	comp=Z,180nm,10.7s						
XAN	**Xi'an**	**58.84**	**316**	*e*P	**P**	**08 13 37.3**	**-0.6**
	comp=Z,8.9nm,0.9s						
KMI	**Kunming**	**59.12**	**304**	P	**P**	**08 13 42.7**	**+2.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PETK	**Petropavlovsk-**	**59.48**	**2**	LR	LR	08 35 10.3	
	comp=Z,43nm,21.6s,baz=149,slow=32						
CM31	**Chiang Mai Arr**	**59.89**	**296**	*e*P	**P**	**08 13 44.2**	**-1.3**
	comp=Z,8.8nm,1.2s						
CMAR	**Chiang Mai Arr**	**59.89**	**296**	P	**P**	**08 13 46.6**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=102,slow=4.4,SNR=4.9						
CHTO	**Chiang Mai**	**60.01**	**296**	*e*P	**P**	**08 13 46.6**	**+0.3**
	comp=Z,5.0nm,1.1s						
CD2	**Chengdu**	**60.93**	**311**	P	**P**	**08 13 52.4**	**0.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	**Hu-ho-hao-te**	**61.27**	**324**	*e*P	**P**	**08 13 58.0**	**+3.5**
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,74nm,6.3s						
LZH	**Lanzhou**	**63.45**	**316**	*e*P	**P**	**08 14 10.3**	**+1.0**
LZH				pP	pP	08 14 18.2	-2.6
LZH				sP	sP	08 14 21.5	-3.9
LZH				*e*PP	**PP**	**08 16 32.4**	**+3.0**
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,7.9s						
LZH				LR	LR		
	comp=Z,290nm,16.2s						
LZH				LR	LR		
	comp=Z,290nm,16.0s						
LZH				LR	LR		
	comp=Z,400nm,18.3s						
GTA	**Gaotai**	**67.88**	**317**	P	**P**	**08 14 37.9**	**+0.1**
GTA				pP	pP	08 14 44.9	-4.4
GTA				sP	sP	08 14 49.6	-4.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,6.2s						
GTA				LR	LR		
	comp=Z,110nm,21.0s						
GTA				LR	LR		
	comp=Z,130nm,21.6s						
ULN	**Ulaanbaatar**	**68.20**	**328**	*e*P	**P**	**08 14 39.7**	**+0.1**
	comp=Z,6.6nm,1.0s						
SONA0	**Songino Array**	**68.53**	**328**	*e*P	**P**	**08 14 41.8**	**+0.1**
SONM	**Songino Array**	**68.53**	**328**	P	**P**	**08 14 41.8**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=129,slow=5.7,SNR=2.6						
LSA	**Lhasa**	**70.38**	**305**	*e*P	**P**	**08 14 53.7**	**-0.2**
	comp=Z,13nm,0.8s						
VNDA	**Vanda**	**71.07**	**178**	P	**P**	**08 14 56.5**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=335,slow=6.1,SNR=5.5						
VNDA	**Vanda**	**71.07**	**178**	*e*P	**P**	**08 14 56.4**	**-0.3**
JIRN	**Jiri**	**73.89**	**301**	*e*P	P	08 15 26.2	+11
	comp=Z,29nm,0.8s						
GUN	**Gumba**	**74.22**	**301**	*e*P	P	08 15 27.5	+11
	comp=Z,42nm,0.9s						
PKI	**Pulchoki**	**74.53**	**301**	*e*P	P	08 15 29.2	+11
	comp=Z,38nm,1.1s						
PKIN	**Phulchoki**	**74.54**	**301**	*e*P	P	08 15 29.5	+11
GAMB	**Gambell**	**74.66**	**15**	*e*P	**P**	**08 15 20.0**	**+2.0**
	comp=Z,5.2nm,1.1s						
KKN	**Kakani**	**74.70**	**301**	*e*P	P	08 15 30.1	+11
	comp=Z,28nm,0.8s						
DMN	**Daman**	**74.80**	**301**	*e*P	P	08 15 31.4	+11
	comp=Z,80nm,1.0s						
BILL	**Bilibino**	**74.87**	**5**	*e*P	**P**	**08 15 20.1**	**+0.9**
	comp=Z,3.8nm,1.0s						
KOLN	**Koldanda**	**76.13**	**301**	*e*P	P	08 15 38.7	+11
	comp=Z,46nm,0.9s						
DANN	**Dangsing**	**76.14**	**301**	*e*P	P	08 15 38.7	+11
	comp=Z,43nm,0.8s						
PYUN	**Piuthan**	**76.73**	**301**	*e*P	P	08 15 41.9	+11
	comp=Z,97nm,0.9s						
WMQ	**Urumqi**	**77.96**	**317**	*e*P	**P**	**08 15 39.1**	**+1.8**
RDOG	**Red Dog Mine**	**80.26**	**15**	*e*P	**P**	**08 15 49.6**	**+0.4**
	comp=Z,10nm,1.3s						
CAST	**Castle Rocks**	**80.57**	**22**	*e*P	**P**	**08 15 51.8**	**+0.8**
	comp=Z,2.9nm,0.9s						
DIV	**Divide**	**81.81**	**25**	*e*P	**P**	**08 15 57.9**	**+0.1**
	comp=Z,8.8nm,1.4s						
MCK	**McKinley**	**81.91**	**22**	*e*P	**P**	**08 15 56.0**	**-2.1**
	comp=Z,10nm,1.2s						
BWN	**Browne**	**81.95**	**22**	*e*P	**P**	**08 16 00.3**	**+2.0**
	comp=Z,17nm,0.8s						
MLY	**Manley**	**81.98**	**21**	*e*P	**P**	**08 16 00.3**	**+1.8**
	comp=Z,2.5nm,0.9s						
MK31	**Makanchi Array**	**82.55**	**319**	*e*P	**P**	**08 16 01.8**	**-0.1**
	comp=Z,2.6nm,1.1s						
MK32	**Makanchi Array**	**82.55**	**319**	*e*P	**P**	**08 16 02.0**	**+0.1**
MKAR	**Makanchi Array**	**82.55**	**319**	P	**P**	**08 16 02.0**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=104,slow=5.1,SNR=7.4						
MAKZ	**Makanchi**	**82.76**	**319**	*e*P	**P**	**08 16 03.0**	**0.0**
	comp=Z,2.9nm,0.8s						
CCB	**Clear Creek Bu**	**82.82**	**22**	*e*P	**P**	**08 16 03.5**	**+0.6**
	comp=Z,2.6nm,1.0s						
ILAR	**Eielson Array**	**83.22**	**22**	P	**P**	**08 16 01.7**	**-3.2**
	comp=Z,1.3nm,0.9s,baz=246,slow=5.0,SNR=3.9						
ILAR				LR	LR	08 52 54.9	
	comp=Z,80nm,18.4s,baz=234,slow=36						
QSPA	**South Pole Qui**	**83.45**	**180**	*e*P	**P**	**08 16 06.5**	**+0.2**
	comp=Z,7.6nm,1.0s						
MAW	**Mawson**	**84.54**	**203**	*e*P	**P**	**08 16 12.1**	**+0.5**
	comp=Z,2.1nm,1.3s						
KDJ	**Kajisay**	**84.82**	**313**	*e*P	**P**	**08 16 14.2**	**+0.3**
	comp=Z,8.4nm,1.0s						
KSH	**Kashi**	**85.13**	**311**	P	**P**	**08 16 17.1**	**+1.7**
KSH				pP	pP	08 16 28.3	+1.3
KSH				PP	**PP**	**08 19 37.3**	**+4.1**
KSH				S	**S**	**08 26 41.4**	**-0.4**
KSH				pmax	pmax		
	comp=Z,46nm,1.4s						
KSH				pmax	pmax		
	comp=Z,140nm,5.1s						
KSH				LR	LR		
	comp=Z,180nm,12.1s						
EGAK	**Eagle**	**85.38**	**23**	*e*P	**P**	**08 16 15.7**	**-0.1**
	comp=Z,6.7nm,1.2s						
EPYK	**Eagle Plains**	**87.71**	**22**	*e*P	**P**	**08 16 28.2**	**+0.9**
	comp=Z,6.3nm,1.0s						
NV01	**Mina Array Sit**	**92.03**	**52**	*e*P	**P**	**08 16 47.1**	**-1.2**
NVAR	**Mina Array Bea**	**92.03**	**52**	P	**P**	**08 16 47.2**	**-1.2**
	comp=Z,2.1nm,0.9s,baz=249,slow=4.5,SNR=4.1						
NV11	**Mina Array Sit**	**92.14**	**52**	*e*P	**P**	**08 16 51.5**	**+2.7**
	comp=Z,0.3nm,1.0s						
TOA0	**Torodi Ar. Sit**	**152.16**	**286**	*e*PKPbc	**PKPbc**	**08 23 34.6**	**-0.8**
TOA0				*e*PKPab	**pPKPbc**	**08 23 46.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**152.16**	**286**	PKPbc	**PKPbc**	**08 23 33.0**	**-2.3**
	comp=Z,4.8nm,0.9s,baz=94,slow=2.0,SNR=18						
TOA1	**Torodi Ar. Sit**	**152.17**	**286**	*e*PKPbc	**PKPbc**	**08 23 33.0**	**-2.3**

IDC ***03*** *08:29:20.5±5.0, 14°.10N×93°.91W, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.5/33, mbtmp3.4/4, ML3.4/2, MS2.4/1, Ms1 2.4/1, ms1mx2.1/36, Error ellipse: s-maj=113.7km s-min=80.9km az=60.0*
ISCJB ***03*** *08:29:24.9±0.9, 14°.32N±0°.06×93°.79W±0°.05, h33km, mb3.8/2, Error ellipse: s-maj=9.1km s-min=5.6km az=27.7*
NEIC ***03*** *08:29:24.2±0.0, 14°.36N×93°.79W, h102km, MD4.1(MEX), After MEX.*
MEX ***03*** *08:29:24.2±0.4, 14°.36N×93°.80W, h100km±39km, MD4.1*
ISC 03 08:29:26.5±1.6, 14°.3N±0°.1×93°.82W±0°.06, h35km, n16, σ1§61/29, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.48**	**23**	*e*Pn	**Pn**	**08 29 48.8**	**-1.8**
PCIG				*e*Sn	**Sn**	**08 30 07.5**	**-1.2**
PCIG		**1.48**	**23**	*e*P	**Pn**	**08 29 48.8**	**-1.8**
PCIG				*i* S	**Sn**	**08 30 07.5**	**-1.2**
THIG		**1.60**	**69**	*e*Pn	**Pn**	**08 29 50.5**	**-1.8**
THIG				*e*Sn	**Sn**	**08 30 10.8**	**-1.0**
THIG		**1.60**	**69**	*e*P	**Pn**	**08 29 50.2**	**-2.1**
THIG				*e*P		08 29 50.5	
THIG				*i* S	**Sn**	**08 30 10.8**	**-1.0**
TGIG		**2.52**	**15**	*e*Pn	**Pn**	**08 30 05.1**	**+0.1**
TGIG				*e*Sn	**Sn**	**08 30 35.1**	**+0.6**
TGIG		**2.52**	**15**	*e*P	**Pn**	**08 30 05.1**	**+0.1**
TGIG				*e*S	**Sn**	**08 30 35.1**	**+0.6**
CCIG	**Comitan**	**2.52**	**40**	*e*Pn	**Pn**	**08 30 05.8**	**+0.6**
CCIG				*e*Sn	**Sn**	**08 30 34.8**	**0.0**

DZM	Mont Dzumac	21.82	143	P		P	08 42 41.4 +2.4
	22nm,1.1s,baz=335,slow=14,SNR=4.3						
DZM	Mont Dzumac	21.82	143	eP		P	08 42 39.9 +0.9
	42nm,1.4s						
MTN	Manton Dam	22.73	248	eP		P	08 42 48.7 0.0
	25nm,1.3s						
WRAB	Tennant Creek	23.37	228	eP		P	08 42 54.9 -0.2
	11nm,0.8s						
WB2	Warramunga Arr	23.38	228	eP		P	08 42 54.5 -0.7
	9.1nm,0.6s						
WR1	Warramunga Arr	23.38	228	eP		P	08 42 54.4 -0.9
WRA	Warramunga Arr	23.39	228	P		P	08 42 54.4 -0.9
	6.7nm,0.4s,baz=54,slow=9.7,SNR=107						
AS31	Alice Springs	26.11	222	eP		P	08 43 18.8 -1.2
	1.5nm,0.9s						
ASAR	Alice Springs	26.11	222	P		P	08 43 19.7 -0.4
	2.3nm,0.5s,baz=56,slow=8.7,SNR=31						
STKA	Stephens Creek	28.94	200	P		P	08 43 44.6 -0.6
	1.2nm,0.8s,baz=62,slow=15,SNR=5.1						
STKA				LR	LR		08 55 07.9
	comp=Z,75nm,20.9s,baz=22,slow=36						
STKA	Stephens Creek	28.94	200	eP		P	08 43 44.0 -1.2
	1.9nm,1.4s						
FITZ	Fitzroy Crossi	29.56	241	P		P	08 43 49.4 -1.6
	5.4nm,0.5s,baz=64,slow=9.1,SNR=21						
FITZ				LR	LR		08 54 32.4
	comp=Z,61nm,21.8s,baz=64,slow=34						
FITZ	Fitzroy Crossi	29.56	241	eP		P	08 43 48.9 -2.1
	5.4nm,0.6s						
BBOO	Buckleboo	31.96	207	eP		P	08 44 11.8 -0.1
	16nm,1.4s						
FORT	Forrest	34.76	219	eP		P	08 44 35.5 -0.8
	29nm,1.2s						
PSA00	Pilbara Seismi	35.94	239	eP		P	08 44 45.6 -1.1
	16nm,1.1s						
MORW	Morawa	42.28	231	eP		P	08 45 39.4 -0.1
	11nm,1.1s						
JNU	Nakatsue	42.92	333	P		P	08 45 46.3 +1.6
	7.4nm,0.7s,baz=42,slow=3.0,SNR=5.9						
JNU	Nakatsue	42.92	333	eP		P	08 45 46.6 +2.0
	28nm,1.4s						
MJAR	Matsushiro Arr	43.21	343	LR		LR	09 01 29.9
	comp=Z,40nm,21.9s,baz=75,slow=33						
KSRS	Korea Array	47.86	333	LR		LR	09 05 09.3
	comp=Z,30nm,19.0s,baz=176,slow=34						
KLR	Kul'dur	56.73	344	LR		LR	09 08 59.9
	comp=Z,48nm,21.4s,baz=176,slow=33						
CM31	Chiang Mai Arr	57.71	295	eP		P	08 47 37.2 +0.5
CMAR	Chiang Mai Arr	57.71	295	P		P	08 47 37.2 +0.5
	1.9nm,0.6s,baz=115,slow=5.5,SNR=6.6						
CMAR				LR	LR		09 09 59.7
	comp=Z,11nm,21.6s,baz=125,slow=33						
PETK	Petropavlovsk-	57.77	4	P		P	08 47 37.6 +1.2
	1.6nm,0.7s,baz=157,slow=4.7,SNR=3.9						
PETK				LR	LR		09 07 32.4
	comp=Z,32nm,21.3s,baz=172,slow=31						
PEA1	Petropavlovsk-	57.77	4	eP		P	08 47 37.6 +1.2
MA2	Magadan	64.11	359	LR		LR	09 10 38.4
	comp=Z,18nm,21.7s,baz=146,slow=30						
VNDA	Vanda	72.91	178	eP		P	08 49 13.5 -0.5
	1.9nm,1.2s						
RDOG	Red Dog Mine	78.95	16	eP		P	08 49 50.0 +1.5
	8.6nm,1.0s						
CAST	Castle Rocks	79.49	22	eP		P	08 49 51.8 +0.2
	6.6nm,0.8s						
PMR	Palmer	79.67	24	eP		P	08 49 52.5 -0.1
	6.3nm,0.8s						
GHO	Glory Hole Cre	79.85	24	eP		P	08 49 53.9 +0.2
	6.0nm,0.6s						
SML	Sawmill	80.11	24	eP		P	08 49 55.5 +0.5
	16nm,0.6s						
GLI	Glacier Island	80.18	26	eP		P	08 49 55.1 -0.2
	12nm,0.8s						
RND	Reindeer	80.71	23	eP		P	08 49 58.4 +0.1
	8.8nm,0.7s						
MCK	McKinley	80.85	23	eP		P	08 49 59.5 +0.6
	19nm,1.0s						
MLY	Manley	80.86	21	eP		P	08 49 60.0 +1.0
	8.9nm,0.6s						
DIV	Divide	80.87	26	eP		P	08 50 00.3 +1.2
	9.0nm,1.0s						
ZALV	Zalesovo Beam	81.00	326	P		P	08 50 00.7 +0.8
	3.2nm,0.6s,baz=116,slow=6.8,SNR=2.8						
ZAA1	Zalesovo Array	81.01	326	eP		P	08 50 00.7 +0.8
DHY	Denali Highway	81.13	24	eP		P	08 50 00.0 -0.5
	7.0nm,1.0s						
WRH	Wood River Hil	81.54	22	eP		P	08 49 59.5 -3.0
	6.7nm,0.9s						
CCB	Clear Creek Bu	81.74	22	eP		P	08 50 03.2 -0.3
	4.6nm,0.8s						
COLA	College	81.83	22	eP		P	08 50 03.8 -0.3
	11nm,0.9s						
HDA	Harding Lake	81.94	22	eP		P	08 50 04.6 0.0
	3.3nm,0.9s						
TGL	Tana Glacier	81.99	27	eP		P	08 50 06.7 +1.6
	6.1nm,0.9s						
ILAR	Eielson Array	82.14	22	P		P	08 50 05.5 -0.2
	4.4nm,0.7s,baz=252,slow=5.3,SNR=52						
ILAR				LR	LR		09 23 12.1
	comp=Z,22nm,20.2s,baz=172,slow=33						
ILB	Eielson Array	82.14	22	eP		P	08 50 05.5 -0.2
BALM	Baldy	82.32	26	eP		P	08 50 08.2 +1.3
	6.6nm,0.7s						
RIDG	Independent Ri	82.45	23	eP		P	08 50 07.9 +0.5
MENT	Mentasta	82.54	24	eP		P	08 50 05.6 -2.2
	3.7nm,0.6s						
DOT	Dot Lake	82.72	24	eP		P	08 50 08.0 -0.7
	8.2nm,0.8s						
CTGM	Chitina Glacie	82.75	27	eP		P	08 50 10.2 +1.1
	12nm,0.7s						
SCRK	Sand Creek	82.89	23	eP		P	08 50 10.6 +0.8
	4.4nm,0.8s						
PCA	Pinnacle	82.90	28	eP		P	08 50 10.2 +0.4
	8.4nm,0.8s						
TOLK	Toolik Lake Re	83.19	18	eP		P	08 50 12.1 +1.0
	4.7nm,0.9s						
KURK	Kurchatov	83.61	322	eP		P	08 50 14.4 +0.9
	7.4nm,0.9s						
NIL	Nilore	83.81	304	eP		P	08 50 11.2 -3.8
	13nm,0.8s						
EGAK	Eagle	84.35	23	eP		P	08 50 17.9 +0.9
	6.3nm,1.0s						
HYT	Haines Junctio	84.43	28	eP		P	08 50 19.5 +1.8
	11nm,0.9s						
DAWY	Dawson	84.78	24	eP		P	08 50 20.2 +0.9
	2.4nm,0.6s						
BESE	Bessie Mountai	84.99	30	eP		P	08 50 19.7 -0.8
	4.4nm,0.9s						
EPYK	Eagle Plains	86.65	22	eP		P	08 50 28.8 +0.3
	15nm,0.8s						
DLBC	Dease Lake	87.39	31	eP		P	08 50 33.1 +0.8
	8.8nm,1.1s						
INK	Inuvik	88.44	21	eP		P	08 50 36.1 -0.8
	6.1nm,1.0s						
BVAR	Borovoye Array	89.09	323	P		P	08 50 40.2 -0.2
	1.0nm,0.5s,baz=90,slow=5.8,SNR=7.0						
NV01	Mina Array Sit	92.15	52	eP		P	08 50 58.0 +2.7
NVAR	Mina Array Bea	92.15	52	P		P	08 50 58.0 +2.7
	0.4nm,0.5s,baz=262,slow=5.4,SNR=3.3						
NVAR				LR	LR		09 26 43.0
	comp=Z,38nm,19.5s,baz=260,slow=32						
J08A	Circle Bar Ran	92.39	47	eP		P	08 50 56.3 +0.1
	6.1nm,1.4s						
BMO	Blue Mountains	93.33	45	eP		P	08 50 57.7 -2.7
	2.6nm,1.0s						
YKA	Yellowknife Ar	95.43	28	P		P	08 51 10.4 +1.0
	1.5nm,0.8s,baz=276,slow=4.4,SNR=12						
YKB5	Yellowknife Ar	95.43	28	eP		P	08 51 10.4 +1.0
PD31	Pinedale Array	98.91	48	eP		P	08 51 26.6 +0.7
PDAR	Pinedale Array	98.91	48	P		P	08 51 26.6 +0.7
	0.9nm,0.9s,baz=248,slow=2.4,SNR=5.4						
PDAR				LR	LR		09 31 59.0
	comp=Z,22nm,19.0s,baz=254,slow=33						
GERES	GERESS Array B	123.91	328	PKP		PKPdf	08 56 43.3 -0.1
	0.9nm,0.5s,baz=46,slow=2.8,SNR=6.7						
TORD	Torodi Ar. Bea	150.14	288	PKPbc		PKPbc	08 57 35.6 -1.3
	7.1nm,0.9s,baz=36,slow=3.2,SNR=25						
TOA1	Torodi Ar. Sit	150.14	288	ePKPbc		PKPbc	08 57 35.6 -1.3
BDFB	Brasilia	151.23	135	PKPbc		PKiKP	08 57 40.7 +0.6
	2.2nm,0.4s,baz=162,slow=3.0,SNR=5.2						

*NNC **03** 08:47:06.6±1.9, 53°.43N×87°.60E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=15.0km s-min=7.2km az=66.0, Suspected Mining explosion.*
*IDC **03** 08:47:06.8±2.5, 53°.49N×87°.60E, h0km, mb1 3.5/3, mb1mx3.2/42, mbtmp3.5/3, ML3.3/3, Error ellipse: s-maj=22.1km s-min=13.0km az=64.0*

KRAR 03 08:47:03.9±0.1, 53°.55N×87°.73E, M2.5, 11C-3D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.77	284	i		08 58 27.2	
	baz=102,slow=335,SNR=2.5						
ZAA0	Zalesovo Array	1.77	284	⇑Pn	Pb	08 47 37.1	-0.2
	2.2nm,0.5s						
ZAA0				⇑Sn	Sg	08 48 02.1	+1.2
	13nm,0.9s						
ZALV	Zalesovo Beam	1.77	284	Pg	Pb	08 47 36.6	-0.7
	9.6nm,0.3s,baz=102,slow=14,SNR=65						
ZALV				Lg	Lg	08 48 01.8	
	7.9nm,0.3s,baz=107,slow=24,SNR=17						
KURK	Kurchatov	6.29	247	⇑Pn	Pn	08 48 39.7	+1.9
	1.6nm,0.5s						
KURK				⇑Sn	Sn	08 49 50.7	+0.5
	1.2nm,0.7s						
KURK				⇓Lg	Lg	08 50 20.9	
	8.7nm,0.9s						
KURBB	Kurchatov Arra	6.38	246	Pn	Pn	08 48 41.2	+2.2
	0.4nm,0.3s,baz=62,slow=14,SNR=20						
KURBB				Sn	Sn	08 49 52.0	-0.6
	0.0nm,0.3s,baz=62,slow=20,SNR=2.8						
KURBB				Lg	Lg	08 50 24.7	
	0.1nm,0.3s,baz=64,slow=32,SNR=5.3						
KURBB	Kurchatov Arra	6.38	246	⇑Pn	Pn	08 48 41.3	+2.2
	4.3nm,0.5s						
KURBB				⇑Sn	Sn	08 49 51.9	-0.7
	7.6nm,0.6s						
KURBB				⇓Lg	Lg	08 50 28.5	
	19nm,0.7s						
MK31	Makanchi Array	7.61	209	⇑Pn	Pn	08 48 58.4	+2.4
	1.0nm,0.5s,baz=30,slow=12,SNR=21						
MK31				⇑Sn	Sn	08 50 22.4	-0.5
	0.9nm,0.6s,baz=34,slow=27,SNR=2.6						
MK31				⇑Lg	Lg	08 51 04.5	
	2.2nm,0.6s,baz=30,slow=28,SNR=4.9						
MKAR	Makanchi Array	7.61	209	Pn	Pn	08 48 59.0	+3.0
	1.0nm,0.3s,baz=30,slow=13,SNR=26						
MKAR				Sn	Sn	08 50 23.3	+0.4
	0.3nm,0.3s,baz=27,slow=28,SNR=6.6						
MKAR				Lg	Lg	08 51 05.4	
	0.5nm,0.3s,baz=30,slow=32,SNR=7.5						
MAKZ	Makanchi	7.69	211	⇑Pn	Pn	08 48 58.9	+1.8
	1.7nm,0.5s						
MAKZ				⇑Sn	Sn	08 50 26.1	+1.2
	2.1nm,0.8s						
MAKZ				⇓Lg	Lg	08 51 05.5	
	5.4nm,1.2s						
BVAR	Borovoye Array	10.40	274	Pn	Pn	08 49 34.9	+0.8
	0.2nm,0.3s,baz=78,slow=13,SNR=3.3						

*ISCJB **03** 08:49:31.6±0.6, 39°.64N±0°.03×29°.46E±0°.05, h0km, Error ellipse: s-maj=5.2km s-min=3.3km az=22.5*
*DDA **03** 08:49:31.0, 39°.66N×29°.46E, h7km±2km, ML2.6*
*ISK **03** 08:49:31.6, 39°.63N×29°.43E, h9km, ML2.1/7, Suspected Mining explosion.*

ISC 03 08:49:30.8±0.9, 39°.61N±0°.03×29°.46E±0°.04, h0km, n16, σ0s47/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.52	179	iP	Pb	08 49 42.5	-0.4
ULDT	Uludag	0.59	335	iP	Pg	08 49 42.6	+0.4
ULDT				iS	Sg	08 49 50.1	+0.2
CAVI	Cavuskoy	0.66	26	PG	Pg	08 49 44.0	+0.4
CAVI				SG	Sb	08 49 54.2	-0.9
DURS	Dursunbey	0.77	270	iP	Pg	08 49 46.0	+0.5
DURS				iS	Sb	08 49 57.9	-0.2
DURS				IAML_P			
	comp=Z,862nm,0.1s						
GEMT	Gemlik	0.86	346	PG	Pg	08 49 47.9	+0.6
USAK	Uak-Merkez	0.95	201	iP	Pn	08 49 51.3	-0.3
USAK				iS	Sn	08 50 05.6	-0.2
YLV	Yalova	0.96	356	PG	Pb	08 49 50.2	-0.3
SRCK	Saricakaya, Es	0.99	64	PG	Pb	08 49 51.5	+0.5
ARMT	Armutlu	1.07	334	PG	Pb	08 49 51.8	-0.4
KCTX	Karacabey (Bur	1.08	308	PG	Pb	08 49 52.1	-0.3
BUY	Buyukada	1.27	348	iP	Pg	08 49 54.9	-0.4
BUY				iS	Sg	08 50 11.7	-0.1
BUY				IAML_P			
	comp=Z,1μm,0.3s						
MANT	Manisa	1.32	213	iP	Pg	08 49 56.2	+0.2
MANT				iS	Sb	08 50 14.1	0.0
MANT				IAML_P			
	comp=Z,249nm,0.1s						
STEP	BALIKESIR_Sava	1.37	261	iP	Pn	08 49 57.3	0.0
STEP				iS	Sn	08 50 17.3	+1.2
STEP				IAML_P			
	comp=Z,868nm,0.4s						
BALY	Balya	1.43	276	iP	Pb	08 49 58.5	+0.1
BALY				iS	Sg	08 50 16.9	+0.1
BALY				IAML_P			
	comp=Z,293nm,0.4s						
EDC	Edincik	1.44	302	PN	Pn	08 49 57.9	-0.2
BAYC	CANAKKALE_Bayr	2.26	274	iP	Pg	08 50 13.8	-0.2
BAYC				IAML_P			
	comp=Z,103nm,0.2s						

*NNC **03** 08:57:28.7±2.2, 41°.10N×71°.17E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=18.3km s-min=7.2km az=25.0*
*KRNET **03** 08:57:29.3±0.1, 41°.42N×71°.03E, h12km, mb2.5*

ISC 03 08:57:30.7±1.4, 41°.37N±0°.04×71°.18E±0°.05, h2km±13km, n16, σ2s27/30, 26C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	Arkit	0.72	54	⇑iP	Pg	08 57 45.0	+0.4
	baz=63						
ARK				⇑iS	Sb	08 57 56.2	-0.4
	baz=63						
BTK	Batken	1.34	192	⇑iP	Pb	08 57 55.0	-1.6
	baz=87						
BTK				⇑iS	Sg	08 58 14.6	+0.8
	baz=87						
ARSB	Arslanbob	1.35	91	⇑iP	Pb	08 57 57.1	+0.2
	baz=93						
ARSB				⇑iS	Sg	08 58 17.4	+3.1
	baz=93						
KK31	Karatay Array	1.80	344	⇓Pn	Pg	08 58 04.5	-0.8
	3.5nm,0.3s,baz=167,slow=18,SNR=56						
KK31				⇓Sn	Sg	08 58 32.0	+3.4
	4.9nm,0.4s,baz=160,slow=26,SNR=11						
AML	Almayashu	2.03	67	⇑iP	Pb	08 58 07.7	-0.8
	baz=69						
AML				⇑iS	Sg	08 58 36.2	+0.3
	baz=69						
EKS2	Erkin-Say	2.32	55	⇑iP	Pb	08 58 11.4	-2.0
	baz=58						
EKS2				⇑iS	Sb	08 58 42.4	-0.2
	baz=58						
ARLS	Aral	2.41	77	⇑iP	Pb	08 58 13.5	-1.3
	baz=79						
ARLS				⇑iS	Sb	08 58 45.5	+0.5
	baz=79						
UCH	Uchtor	2.63	70	⇑iP	Pb	08 58 16.2	-2.7
	baz=72						
UCH				⇑iS	Sb	08 58 51.2	-0.6
	baz=72						
AAK	Ala-Archa	2.77	62	⇑Pg	Pb	08 58 21.4	+0.3
	1.4nm,0.3s						
AAK				⇑Lg	Lg	08 59 01.8	
	1.4nm,0.6s						
AAK	Ala-Archa	2.77	62	⇑iP	Pb	08 58 17.7	-3.4
	baz=64						
AAK				⇑iS	Sb	08 58 53.3	-2.3
	baz=64						
KBK	Karagaybulak	3.09	64	⇑iP	Pn	08 58 22.3	+1.7
	baz=66						
KBK				⇑iS	Sb	08 59 01.1	-3.5
	baz=66						
USP	Ospenovka	3.10	51	⇓iP	Pn	08 58 21.9	+1.2
	baz=53						
USP				⇓iS	Sb	08 59 00.8	-4.2
	baz=53						
CHMS	Chumysh	3.11	57	⇑iP	Pn	08 58 22.1	+1.3
	baz=59						
CHMS				⇑iS	Sb	08 59 01.1	-4.0
	baz=59						
KZA	Kyzart	3.12	76	⇑eP	Pn	08 58 23.2	+1.9
	baz=77						
KZA				⇑iS	Sb	08 59 02.9	-3.0
	baz=77						
TKM2	Tokmak 2	3.63	63	⇑Pg	Pg	08 58 38.7	-1.6
	2.4nm,0.9s						
TKM2				⇑Lg	Lg	08 59 27.7	
	1.6nm,0.8s						
TKM2	Tokmak 2	3.63	63	⇓iP	Pn	08 58 30.0	+1.9
	baz=65						
TKM2				⇓iS	Sn	08 59 14.2	+2.6
	baz=65						

NNC 03 08:58:55.9±6.1, 38°.59N×69°.41E, h29km±30km, mb3.6, mpv3.2, 5C-5D, Error ellipse: s-maj=45.0km s-min=25.3km az=176.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	4.59	10	⇓Pn	Pn	09 00 05.2	+1.9
	0.4nm,0.3s,baz=195,slow=10,SNR=5.5						
KK31				⇑Pg	Pb	09 00 20.2	+4.5
	3.1nm,0.6s,baz=172,slow=12,SNR=3.5						
KK31				⇑Lg	Lg	09 01 20.9	
	5.9nm,0.6s,baz=192,slow=30,SNR=6.5						
AAK	Ala-Archa	5.60	42	⇑Pn	Pn	09 00 16.7	-0.6
	1.9nm,0.5s						
AAK				⇓Lg	Lg	09 01 54.0	
	5.2nm,0.7s						
TKM2	Tokmak 2	6.39	45	⇓Pn	Pn	09 00 25.6	-2.7
	1.9nm,0.5s						
TKM2				⇑Sn	Sn	09 01 41.8	+1.5
	2.4nm,0.7s						
TKM2				⇓Lg	Lg	09 02 16.0	
	1.8nm,0.7s						
AB31	Akbulak array	12.65	331	⇑Pn	Pn	09 01 54.1	+0.4
	0.4nm,0.4s,baz=152,slow=12,SNR=21						
AB31				⇓Sn	Sn	09 04 10.1	-3.3
	0.3nm,0.5s						

DJA 03 09:03:03.9±1.3, 2°.S±8°.×14°.0E±°, h10km, M3.6/3, MLv3.6/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	0.61	146	P	Pb	09 03 16.9	+0.2
GENI				S	Sg	09 03 23.2	-0.6
JAY	Jayapura	0.97	116	P	Pg	09 03 22.4	-0.3
JAY				S	Sn	09 03 37.4	-0.2
WAMI	Wamena	2.11	212	P	Pn	09 03 38.2	-1.1
WAMI				S	Sg	09 04 10.4	-1.5

*IDC **03** 09:06:24.2±4.8, 15°.44S×173°.87W, h51km±40km, mb4.1/9, mb1 4.4/10, mb1mx3.9/36, mbtmp4.3/10, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/23, Error ellipse: s-maj=32.8km s-min=12.9km az=127.0*
*NEIC **03** 09:06:25.4±1.5, 15°.36S×173°.94W, h58km±8km, mb4.5/19, Error ellipse: s-maj=22.9km s-min=5.5km az=132.0*
*ISCJB **03** 09:06:27.5±0.4, 15°.46S±0°.09×173°.98W±0°.08, h94km, mb4.3/23, Error ellipse: s-maj=14.5km s-min=9.3km az=141.9*

ISC 03 09:06:28.5±0.6, 15°.43S±0°.09×173°.90W±0°.09, h94km, n38, σ1s48/39, mb4.4/23, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.25	134	ePn	Pn	09 07 45.1	+0.5
NIUE				eSn	Sn	09 08 38.7	-5.1
FUNA	Funafuti	9.63	315	ePn	Pn	09 08 40.0	-4.3
DZM	Mont Dzumac	19.74	247	P		P	09 10 51.0 -0.1
	0.1nm,0.3s,baz=90,slow=20,SNR=3.1						
DZM	Mont Dzumac	19.74	247	eP		P	09 10 51.0 -0.1
	17nm,1.1s						
URZ	Urewera	24.08	198	P		P	09 11 34.6 -0.6
	6.1nm,0.3s,baz=266,slow=1.7,SNR=14						
URZ				S		S	09 15 50.0 +4.0
	4.8nm,0.9s,baz=270,slow=20,SNR=2.3						
URZ	Urewera	24.08	198	eP		P	09 11 35.1 -0.1
	12nm,0.7s						
HNR	Honiara	26.21	280	LR	LR		09 20 50.3
	comp=Z,80nm,18.1s,baz=38,slow=33						
STKA	Stephens Creek	43.60	240	P		P	09 14 23.6 -0.1
	1.1nm,0.4s,baz=96,slow=10,SNR=3.2						
WR1	Warramunga Arr	49.37	257	eP		P	09 15 09.1 +0.2
WRA	Warramunga Arr	49.37	257	P		P	09 15 09.1 +0.2
	3.1nm,0.6s,baz=85,slow=7.4,SNR=32						
AS31	Alice Springs	49.64	252	eP		P	09 15 11.1 +0.1
	2.2nm,0.8s						
ASAR	Alice Springs	49.64	252	P		P	09 15 11.1 +0.1
	6.6nm,0.7s,baz=88,slow=7.0,SNR=83						
PETK	Petropavlovsk-	72.52	343	P		P	09 17 46.0 +1.0
	1.2nm,0.6s,baz=97,slow=7.4,SNR=4.0						
PEA1	Petropavlovsk-	72.52	343	eP		P	09 17 46.0 +1.0
CMB	Columbia Colle	73.11	42	eP		P	09 17 49.1 +0.2
	4.5nm,0.8s						
BEKR	Beckworth	74.20	40	eP		P	09 17 56.7 +1.3
	4.4nm,0.8s						
VCNR	Virginia City	74.31	41	eP		P	09 17 57.5 +1.4
	5.5nm,0.9s						
NV01	Mina Array Sit	74.68	42	eP		P	09 17 59.5 +1.3
NVAR	Mina Array Bea	74.68	42	P		P	09 17 59.5 +1.3
	6.5nm,0.7s,baz=227,slow=10,SNR=35						
KVN	Kaiserville	75.16	42	eP		P	09 18 02.2 +1.2
	4.4nm,0.8s						
MOD	Modoc Plateau	75.45	38	eP		P	09 18 03.8 +1.2
	6.1nm,0.8s						
PSUT	Pine Spring	77.67	44	eP		P	09 18 15.6 +0.4
	3.2nm,0.8s						
ELK	Elko	77.93	42	eP		P	09 18 16.6 0.0
	2.6nm,0.8s						
SKAG	Skagway	80.93	19	eP		P	09 18 32.3 +0.2
	3.9nm,1.0s						
LTX	Lajitas	81.03	56	eP		P	09 18 34.7 +1.1
TXAR	Lajitas Array	81.03	56	P		P	09 18 34.7 +1.1
	1.0nm,0.8s,baz=224,slow=7.6,SNR=9.0						
MCK	McKinley	81.25	11	eP		P	09 18 34.4 +0.6
	7.3nm,0.9s						
WRH	Wood River Hil	82.08	11	eP		P	09 18 38.8 +0.7
	10nm,1.0s						
DOT	Dot Lake	82.15	13	eP		P	09 18 39.5 +1.0
	7.8nm,1.2s						
CCB	Clear Creek Bu	82.29	11	eP		P	09 18 39.7 +0.5
	5.2nm,0.8s						
COLA	College	82.49	11	eP		P	09 18 41.0 +0.8
	7.5nm,0.8s						
ILAR	Eielson Array	82.57	11	P		P	09 18 40.6 -0.1
	1.4nm,0.5s,baz=227,slow=6.3,SNR=21						
ILB	Eielson Array	82.57	11	eP		P	09 18 40.6 -0.1
PD31	Pinedale Array	82.61	42	eP		P	09 18 41.6 -0.1
PDAR	Pinedale Array	82.61	42	P		P	09 18 41.6 -0.1
	2.5nm,0.8s,baz=222,slow=3.1,SNR=19						
ARCES	ARCESS Array B	124.58	352	PKP	PKPdf	09 25 16.5	+0.1
	10nm,0.3s,baz=339,slow=3.0,SNR=4.4						
BR101	Keskin Array S	145.88	321	ePKPdf	PKPab	09 25 58.5	+0.3
BRTR	Keskin Array B	145.88	321	PKPbc	PKPab	09 25 58.5	+0.3
	1.5nm,0.8s,baz=124,slow=3.2,SNR=

HOPB	**Hope**	**4.39 228**	Pn	Pn	09 15 52.0	-1.1
HOPB			Sn	Sn	09 16 43.6	-1.3
HOPB			Sg	Sb	09 17 00.8	+4.1
MANA	**Manning**	**4.48 351**	Sn	Sn	09 16 44.4	-2.6
MANA			Sg	Sb	09 17 02.7	+3.6
B08A	**Colville Reser**	**4.49 206**	Pn	Pn	09 15 53.5	-0.9
B08A			Sn	Sn	09 16 44.2	-3.2
UBRB	**Upper Baezaeko**	**4.68 279**	Pn	Pn	09 15 56.2	-0.9
UBRB			Sg	Sg	09 17 11.3	-4.2
WSLR	**Whistler**	**4.69 243**	Pg	Pb	09 16 09.7	+1.4
WSLR			Sn	Sn	09 16 50.1	-2.1
WSLR			Sg	Sb	09 17 09.3	+4.1
BSMT	**Bassoo Peak**	**4.72 166**	Pn	Pn	09 15 57.4	-0.4
BSMT			Pg	Pb	09 16 09.8	+0.9
C09A	**Chrisman Ranch**	**4.80 195**	Pn	Pn	09 15 59.2	+0.5
C09A			Sg	Sg	09 17 14.0	-5.3
YBMT	**Yellow Bay**	**4.84 160**	Pn	Pb	09 15 59.1	-0.3
YBMT			Pg	Pb	09 16 11.0	0.0
JTMT	**Jette**	**4.90 163**	Pn	Pn	09 15 59.9	-0.3
JTMT			Pg	Pb	09 16 12.3	+0.3
JTMT			Sg	Sb	09 17 14.5	+3.0
VDB	**Vedder Mountai**	**4.97 229**	Pn	Pn	09 15 60.0	-1.0
VDB			Pg	Pb	09 16 14.3	+1.2
VDB			Sg	Sg	09 17 19.3	-5.4
MBW	**Mount Baker**	**5.05 226**	Pn	Pn	09 16 02.1	-0.3
MBW			Pg	Pb	09 16 16.2	+1.7
MBW			Sg	Sb	09 17 21.3	+5.4
B06A	**Marblemount**	**5.08 221**	Pn	Pn	09 16 02.0	-0.6
B06A			Sn	Sn	09 17 00.2	-1.7
B06A			Sg	Sb	09 17 21.4	+4.9
SWMT	**Swartz Lake**	**5.18 161**	Pn	Pn	09 16 03.4	-0.7
SWMT			Pg	Pb	09 16 18.3	+1.5
SWMT			Sn	Sn	09 17 03.3	-1.2
SWMT			Sg	Sb	09 17 23.1	+3.6
FBMT	**Ferry Basin**	**5.21 165**	Pg	Pb	09 16 17.9	+0.7
FBMT			Sg	Sb	09 17 24.9	+4.7
JCW	**Jim Creek**	**5.52 222**	Pn	Pn	09 16 08.1	-0.6
JCW			Pg	Pb	09 16 23.4	+0.9
JCW			Sg	Sg	09 17 36.7	-5.8
SLMT	**Seeley Lake**	**5.54 159**	Pn	Pn	09 16 07.6	-1.5
SLMT			Pg	Pb	09 16 23.6	+0.7
SLMT			Sg	Sb	09 17 34.1	+4.2
SNB	**Saturna Island**	**5.65 232**	Sg	Sb	09 17 39.5	+6.8
OVMT	**Ovando**	**5.83 156**	Pn	Pn	09 16 12.6	-0.3
OVMT			Pg	Pb	09 16 26.3	-1.5
OVMT			Sg	Sb	09 17 42.4	+4.4
LTY	**Liberty**	**5.87 210**	Pn	Pn	09 16 13.2	-0.2
LTY			Sn	Sn	09 17 17.7	-3.7
LTY			Sg	Sg	09 17 46.7	-7.0
LYMT	**Lyon Mountain**	**6.10 152**	Sg	Sb	09 17 51.8	+5.8
BPMT	**Black Pine Rid**	**6.32 161**	Pn	Pn	09 16 19.5	-0.3
BPMT			Sg	Sb	09 17 59.1	+6.8
ELMT	**Elliston**	**6.46 155**	Sg	Sb	09 18 02.4	+6.1
BTB	**Buttle Lake**	**6.47 246**	Pn	Pn	09 16 24.4	+2.7
BTB			Sg	Sb	09 18 02.7	+6.2
HRY	**Holter Researc**	**6.47 151**	Pn	Pn	09 16 21.6	-0.1
HRY			Sg	Sb	09 18 03.5	+7.0
FMW	**Mount Fremont**	**6.48 214**	Pn	Pn	09 16 22.3	+0.4
HBMT	**Mount Humbug**	**7.11 158**	Pn	Pn	09 16 29.8	-0.9
HBMT			Pg	Pb	09 16 48.5	-1.2
HBMT			Sg	Sb	09 18 23.9	+8.8
LRM	**Limekiln Ridge**	**7.12 157**	Pn	Pn	09 16 29.2	-1.6
LRM			Sg	Sg	09 18 24.9	-9.0
BBB	**Bella Bella**	**7.17 273**	Sg	Sg	09 18 27.4	-7.9
FNBB	**Fort Nelson**	**7.45 333**	Pn	Pn	09 16 33.6	-1.5
FNBB			Sn	Sn	09 17 53.9	-6.3
YKW1	**Yellowknife Ar**	**10.13 5**	Pn	Pn	09 17 09.3	-2.4
YKW1			Sn	Sn	09 18 55.0	-11
YKW3	**Yellowknife Ar**	**10.19 5**	Pn	Pn	09 17 09.8	-2.8
YKW3			Sn	Sn	09 18 58.0	-9.4
FCC	**Fort Churchill**	**14.08 55**	Pn	Pn	09 17 58.6	-7.1
FCC			Sn	Sn	09 20 26.1	-16

*ISCJB **03** 09:15:03.5±0.6, 24°.89N±0°.02×122°.44E±0°.02, h12km±4km, Error ellipse: s-maj=4.4km s-min=3.1km az=30.7*
*JMA **03** 09:15:03.8±0.3, 24°.73N×122°.39E, h0km, M2.2*
*TAP **03** 09:15:04.2, 24°.90N×122°.37E, h18km±1km, ML2.7, C*
ISC 03 09:15:03.7±1.0, 24°.84N±0°.03×122°.40E±0°.02, h12km±9km, n42, σ0°61/78, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.38 221**		*eP*	**Pb**	**09 15 13.1**	**+0.8**
	baz=212						
EOS1				*eS*	**Sb**	**09 15 19.9**	**+1.8**
	baz=212						
TWB1	**Santiao Chiao**	**0.41 294**		P	**Pg**	**09 15 12.0**	**+0.2**
	baz=288						
TWB1				S	**Sg**	**09 15 17.8**	**+0.5**
	baz=288						
NTC	**Toucheng**	**0.52 272**		*eP*	**Pb**	**09 15 14.5**	**-0.2**
	baz=265						
NTC				*eS*	**Sb**	**09 15 22.3**	**+0.1**
	baz=265						
TIPB	**Shuangxi**	**0.54 284**		P	**Pg**	**09 15 14.8**	**+0.6**
	baz=278						
TIPB				S	**Sb**	**09 15 22.9**	**+0.1**
	baz=278						
TWC	**Suao**	**0.55 246**		P	**Pb**	**09 15 15.2**	**-0.1**
	baz=238						
TWC				*eS*	**Sn**	**09 15 25.2**	**-1.3**
	baz=238						
NWF	**Wu-fen Shan**	**0.61 293**		P	**Pb**	**09 15 16.4**	**+0.1**
	baz=288						
NWF				S	**Sb**	**09 15 24.7**	**-0.2**
	baz=288						
WFSB	**Wu-fen Shan**	**0.61 293**		*eP*	**Pb**	**09 15 16.3**	**0.0**
	baz=288						
WFSB				*eS*	**Sb**	**09 15 24.6**	**-0.2**
	baz=288						
JYNG	**Yonagunijimaku**	**0.63 128**		P	**Pg**	**09 15 15.6**	**-0.3**
JYNG				*eS*	**Sg**	**09 15 24.1**	**-0.1**
YOJ	**Yonaguni jima**	**0.67 124**		*eP*	**Pg**	**09 15 16.0**	**-0.7**
	baz=126						
YOJ				*eS*	**Sg**	**09 15 25.1**	**-0.4**
	baz=126						
YOJ	**Yonaguni jima**	**0.67 124**		P	**Pg**	**09 15 16.2**	**-0.5**
YOJ				*eS*	**Sg**	**09 15 25.2**	**-0.4**
TWE	**Neicheng**	**0.68 260**		P	**Pg**	**09 15 17.1**	**+0.3**
	baz=254						
TWE				S	**Sb**	**09 15 27.0**	**+0.3**
	baz=254						
ENA	**Nanau**	**0.72 236**		P	**Pb**	**09 15 18.6**	**+0.4**
	baz=230						
ENA				S	**Sn**	**09 15 30.1**	**-0.7**
	baz=230						
YM07	**YM07**	**0.78 296**		*eP*	**Pb**	**09 15 19.4**	**+0.2**
	baz=292						
YM07				*eS*	**Sg**	**09 15 29.4**	**+0.3**
	baz=292						
ENTT	**Nioudou**	**0.78 256**		P	**Pb**	**09 15 20.0**	**+0.8**
	baz=250						
ENTT				S	**Sb**	**09 15 31.2**	**+1.3**
	baz=250						
YM01	**YM01**	**0.81 292**		*eP*	**Pg**	**09 15 19.4**	**0.0**
	baz=288						
YM01				*eS*	**Sg**	**09 15 30.4**	**+0.4**
	baz=288						
YM08	**YM08**	**0.81 296**		*eP*	**Pg**	**09 15 19.9**	**+0.5**
	baz=292						
YM08				*eS*	**Sg**	**09 15 30.3**	**+0.3**
	baz=292						
YM11	**YM11**	**0.82 294**		*eP*	**Pg**	**09 15 19.3**	**-0.2**
	baz=290						
YM11				*eS*	**Sb**	**09 15 31.0**	**+0.1**
	baz=290						
NWLT	**Wulai**	**0.82 266**		P	**Pb**	**09 15 20.0**	**+0.1**
	baz=261						
NWLT				S	**Sb**	**09 15 30.8**	**0.0**
	baz=261						
YM05	**YM05**	**0.82 293**		*eP*	**Pb**	**09 15 20.1**	**+0.2**
	baz=290						
YM05				*eS*	**Sg**	**09 15 30.3**	**-0.1**
	baz=290						
YM10	**YM10**	**0.82 293**		*eP*	**Pg**	**09 15 19.9**	**+0.3**
	baz=289						
YM10				*eS*	**Sb**	**09 15 31.3**	**+0.3**
	baz=289						
TATO	**Taipei**	**0.84 280**		*eP*	**Pg**	**09 15 19.6**	**-0.3**
	baz=275						
TATO				*eS*	**Sg**	**09 15 31.2**	**+0.3**
	baz=275						
NDT	**Datong Townshi**	**0.84 254**		P	**Pb**	**09 15 20.8**	**+0.6**
	baz=249						
NDT				S	**Sb**	**09 15 32.4**	**-0.9**
	baz=249						
PCYT	**Pengchaiyu**	**0.84 339**		*eP*	**Pg**	**09 15 19.3**	**-0.6**
	baz=340						
YM04	**YM04**	**0.84 292**		*eP*	**Pg**	**09 15 19.9**	**-0.1**
	baz=288						
TWY	**Chenhua**	**0.85 301**		P	**Pg**	**09 15 20.0**	**0.0**
	baz=298						
TWY				S	**Sg**	**09 15 31.6**	**+0.5**
	baz=298						
YM03	**YM03**	**0.85 294**		*eP*	**Pg**	**09 15 18.4**	**-1.7**
	baz=290						
ANP	**Anpu**	**0.87 294**		*eP*	**Pg**	**09 15 19.4**	**-1.1**
	baz=290						
ANP				*eS*	**Sg**	**09 15 31.1**	**-0.8**
	baz=290						
YHNB	**Yeheng**	**0.95 260**		*eP*	**Pb**	**09 15 22.2**	**+0.2**
	baz=255						
YHNB				*eS*	**Sb**	**09 15 34.8**	**+0.2**
	baz=255						
NSK	**Sanguang**	**0.96 261**		P	**Pb**	**09 15 22.4**	**+0.1**
	baz=256						
NSK				*eS*	**Sg**	**09 15 34.6**	**-0.1**
	baz=256						
NNSB	**Datong**	**1.01 246**		*eP*	**Pb**	**09 15 23.5**	**+0.3**
	baz=242						
NNSB				*eS*	**Sn**	**09 15 37.5**	**-0.5**
	baz=242						
NNS	**Nan Shan**	**1.01 247**		*eP*	**Pg**	**09 15 21.5**	**-1.7**
	baz=243						
NNS				*eS*	**Sb**	**09 15 37.2**	**+0.6**
	baz=243						
ETLH	**Xiulin Townshi**	**1.05 233**		*eP*	**Pn**	**09 15 24.2**	**0.0**
	baz=229						
ETLH				*eS*	**Sn**	**09 15 39.0**	**+0.2**
	baz=229						
TWD	**Chiawan**	**1.05 224**		*eP*	**Pb**	**09 15 23.8**	**-0.1**
	baz=220						
TWD				*eS*	**Sb**	**09 15 38.2**	**+0.6**
	baz=220						
WHF	**Hehuan Shan**	**1.24 236**		P	**Pg**	**09 15 27.1**	**-0.5**
	baz=233						
WHF				S	**Sn**	**09 15 44.3**	**+0.1**
	baz=233						
TDCB	**Techi**	**1.27 243**		*eP*	**Pg**	**09 15 27.9**	**-0.2**
	baz=239						
TDCB				*eS*	**Sn**	**09 15 44.8**	**+0.3**
	baz=239						
LIOB	**Emei**	**1.27 262**		*eP*	**Pn**	**09 15 26.0**	**-1.3**
	baz=258						
LIOB				*eS*	**Sg**	**09 15 44.4**	**-0.3**
	baz=258						
NSTT	**Nanjuang**	**1.29 261**		*eP*	**Pn**	**09 15 27.8**	**+0.3**
	baz=257						
CHGB	**Renai**	**1.36 235**		*eP*	**Pb**	**09 15 29.2**	**0.0**
	baz=232						
CHGB				*eS*	**Sb**	**09 15 46.3**	**-0.4**
	baz=232						
OWD	**Renai**	**1.42 232**		*eP*	**Pn**	**09 15 29.9**	**+0.4**
	baz=229						
OWD				*eS*	**Sb**	**09 15 48.1**	**-0.3**
	baz=229						
VWDT	**VWDT**	**1.58 227**		*eP*	**Pn**	**09 15 32.1**	**+0.7**
	baz=224						
VWDT				*eS*	**Sg**	**09 15 53.4**	**-1.0**
	baz=224						
JKRS	**Kuro-shima**	**1.58 112**		P	**Pb**	**09 15 33.5**	**+0.6**
JIJ	**Ishigaki jima**	**1.66 106**		P	**Pn**	**09 15 33.1**	**+0.5**

*EAF **03** 09:53:03.4±2.9, 1°.59S×34°.70E, h10km, MD3.2*
*ISCJB **03** 09:53:09.2±0.3, 2°.71S±0°.04×35°.92E±0°.05, h10km, mb4.4/21, MS3.6/20, Error ellipse: s-maj=7.6km s-min=4.8km az=25.3*
*IDC **03** 09:53:09.5±0.6, 2°.74S×36°.05E, h0km, mb4.3/14, mb1 4.5/17, mb1mx4.2/43, mbtmp4.3/17, ML4.6/4, MS3.6/25, Ms1 3.6/25, ms1mx3.5/41, Error ellipse: s-maj=18.6km s-min=11.2km az=119.0*
*NEIC **03** 09:53:11.0±2.0, 2°.70S×36°.00E, h10km±2km, mb4.6/10, Error ellipse: s-maj=11.6km s-min=7.1km az=93.0*
ISC 03 09:53:10.8±0.5, 2°.69S±0°.04×35°.92E±0°.04, h10km, n64, σ1846/65, mb4.4/21, MS3.7/20, 2C, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAI	**Nairobi**	**1.66**	**32**	*ePn*	**Pn**	**09 53 40.0**	**-0.2**
NAI				*eSn*	**Sb**	**09 54 01.8**	**-1.0**
I32KE	**NAIROBI INFRAS**	**1.70**	**32**	Pg	**Pn**	**09 53 40.5**	**-0.2**
	baz=194,slow=61,SNR=0.7						
I32KE				Lg	Lg	09 54 03.1	
	baz=181,slow=31						
I32KE				*i*		10 03 20.0	
	baz=209,slow=317,SNR=2.4						
KMBO	**Kilima Mbogo**	**2.05**	**41**	*i* P	**Pn**	**09 53 45.0**	**-0.5**
KMBO				*i* S	**Sn**	**09 54 11.6**	**+0.3**
KMBO	**Kilima Mbogo**	**2.05**	**41**	Pn	**Pn**	**09 53 44.9**	**-0.7**
	272nm,0.3s,baz=357,slow=3.8,SNR=441						
KMBO				Lg	Lg	09 54 12.7	
	1μm,0.3s,baz=302,slow=21,SNR=28						
KMBO	**Kilima Mbogo**	**2.05**	**41**	*ePn*	**Pn**	**09 53 44.7**	**-0.8**
KMBO				*ePg*	**Pn**	**09 53 44.8**	**-0.7**
KMBO				*eSn*	**Sn**	**09 54 10.5**	**-0.8**
KMBO				*eSg*	**Sb**	**09 54 10.8**	**-3.1**
KMBO	**Kilima Mbogo**	**2.05**	**41**	*i* P	**Pn**	**09 53 45.0**	**-0.5**
KOND	**Kondoa**	**2.21**	**183**	*i* P	**Pn**	**09 53 48.2**	**+0.6**
KIBA	**Kibaya**	**2.68**	**166**	*i* P	**Pn**	**09 53 52.9**	**-1.3**
MBAR	**Mbarara**	**5.58**	**292**	Pn	**Pn**	**09 54 34.1**	**0.0**
	66nm,0.3s,baz=309,slow=13,SNR=80						
MBAR				Sn	**Sn**	**09 55 37.2**	**-1.2**
	482nm,0.3s,baz=354,slow=23,SNR=11						
MBAR				Lg	Lg	09 56 08.2	
	983nm,0.3s,baz=30,slow=20,SNR=9.7						
MBAR				LR	LR	09 56 59.4	
	comp=Z,886nm,19.0s,baz=100,slow=40						
MBAR	**Mbarara**	**5.58**	**292**	*ePn*	**Pn**	**09 54 35.4**	**+1.2**
MBAR				*eSn*	**Sn**	**09 55 37.2**	**-1.2**
MBAR	**Mbarara**	**5.58**	**292**	⇑*eP*	**Pn**	**09 54 35.6**	**+1.5**
MBAR				⇑*eS*	**Sg**	**09 56 05.9**	**-4.2**
LSZ	**Lusaka**	**14.64**	**211**	*i* P	**Pn**	**09 56 35.1**	**-3.3**
LSZ	**Lusaka**	**14.64**	**211**	Pn	**Pn**	**09 56 34.8**	**-3.5**
	1.5nm,0.3s,baz=19,slow=15,SNR=7.6						
LSZ				Sn	Sn	09 59 11.3	-10
	2.2nm,0.3s,baz=307,slow=20,SNR=3.2						
LSZ				Lg	Lg	10 00 45.7	
	8.5nm,0.3s,baz=309,slow=23,SNR=5.0						
LSZ				LR	LR	10 01 33.0	
	comp=Z,266nm,18.8s,baz=52,slow=34						
LSZ	**Lusaka**	**14.64**	**211**	*i* P	**Pn**	**09 56 35.1**	**-3.3**
ATD	**Arta Tunnel**	**15.72**	**26**	Lg	Lg	10 01 23.4	
	0.8nm,0.3s,baz=239,slow=18,SNR=5.4						
ATD				LR	LR	10 01 52.9	
	comp=Z,93nm,20.0s,baz=151,slow=33						
BLWY	**Bulawayo**	**18.75**	**202**	*i* P	**P**	**09 57 29.7**	**-0.5**
BLWY	**Bulawayo**	**18.75**	**202**	*i* P	**P**	**09 57 29.7**	**-0.5**
MATP	**Matopo**	**19.06**	**202**	*i* P	**P**	**09 57 32.0**	**-1.6**
MATP	**Matopo**	**19.06**	**202**	P	**P**	**09 57 33.8**	**+0.3**
	1.5nm,0.3s,baz=23,slow=12,SNR=33						
MATP				LR	LR	10 03 58.4	
	comp=Z,339nm,19.8s,baz=28,slow=34						
MATP	**Matopo**	**19.06**	**202**	*i* P	**P**	**09 57 34.2**	**+0.7**
OPO	**Ambohidratompo**	**19.26**	**146**	P	**P**	**09 57 36.4**	**+0.6**
	0.5nm,0.3s,baz=286,slow=20,SNR=3.8						
OPO				LR	LR	10 04 58.8	
	comp=Z,129nm,21.1s,baz=189,slow=37						
MSNA	**Messina**	**20.36**	**196**	*i* P	**P**	**09 57 46.7**	**-1.0**
MSNA	**Messina**	**20.36**	**196**	*i* P	**P**	**09 57 48.7**	**+1.0**
TSUM	**Tsumeb**	**24.31**	**226**	P	**P**	**09 58 29.8**	**+0.8**
	2.8nm,0.8s,baz=218,slow=9.4,SNR=3.5						
TSUM				LR	LR	10 08 31.0	
	comp=Z,416nm,19.4s,baz=146,slow=38						
LBTB	**Lobatse**	**24.32**	**203**	P	**P**	**09 58 28.9**	**-0.1**
	6.6nm,0.7s,baz=19,slow=8.5,SNR=11						
LBTB				LR	LR	10 07 46.1	
	comp=Z,142nm,20.7s,baz=28,slow=36						
LBTB	**Lobatse**	**24.32**	**203**	*eP*	**P**	**09 58 28.9**	**-0.1**
	12nm,0.8s						
BOSA	**Boshof**	**27.71**	**200**	P	**P**	**09 58 59.2**	**-0.4**
	16nm,0.7s,baz=18,slow=9.0,SNR=25						
BOSA				LR	LR	10 11 00.6	
	comp=Z,130nm,19.6s,baz=25,slow=39						
TORD	**Torodi Ar. Bea**	**37.44**	**296**	P	**P**	**10 00 25.3**	**+0.6**
	3.2nm,1.1s,baz=116,slow=11,SNR=6.8						
TORD				PcP	**PcP**	**10 02 44.3**	**+0.8**
	1.6nm,0.8s,baz=122,slow=4.4,SNR=4.6						
TORD				LR	LR	10 15 49.5	
	comp=Z,144nm,18.2s,baz=305,slow=36						
TOA1	**Torodi Ar. Sit**	**37.44**	**296**	*eP*	**P**	**10 00 25.3**	**+0.6**
TOA1				*e*PcP	**PcP**	**10 02 44.3**	**+0.8**
DBIC	**Dimbokro**	**41.75**	**283**	LR	LR	10 19 17.6	
	comp=Z,68nm,19.4s,baz=92,slow=37						
BR101	**Keskin Array S**	**42.26**	**357**	*eP*	**P**	**10 01 05.3**	**+0.7**
BR101				*e*PcP	**PcP**	**10 03 01.1**	**+2.5**
BRTR	**Keskin Array B**	**42.26**	**357**	P	**P**	**10 01 05.3**	**+0.7**
	0.4nm,0.6s,baz=326,slow=44,SNR=4.5						
BRTR				PcP	**PcP**	**10 03 01.1**	**+2.5**
	0.7nm,0.8s,baz=156,slow=4.0,SNR=4.2						
BRTR				LR	LR	10 17 55.4	
	comp=Z,25nm,18.9s,baz=196,slow=35						
GEYT	**Alibeck**	**45.35**	**25**	LR	LR	10 22 05.3	
	comp=Z,89nm,18.1s,baz=225,slow=38						
KEST	**Kesra**	**45.59**	**329**	LR	LR	10 21 41.9	
	comp=Z,168nm,19.5s,baz=300,slow=38						
KBZ	**Khabaz**	**46.63**	**7**	LR	LR	10 21 27.6	
	comp=Z,102nm,20.5s,baz=184,slow=36						
PSZ	**Piszkesteto**	**52.31**	**346**	*eP*	**P**	**10 02 22.4**	**-0.3**
	6.8nm,0.8s						
AKASG	**Malin Array Be**	**53.49**	**355**	P	**P**	**10 02 32.1**	**+0.8**
	1.8nm,0.6s,baz=173,slow=5.7,SNR=8.0						
AKBB	**Malin Array Si**	**53.49**	**355**	*eP*	**P**	**10 02 32.1**	**+0.8**
	3.7nm,0.8s						
GERES	**GERESS Array B**	**54.84**	**342**	P	**P**	**10 02 43.5**	**+2.2**
	3.6nm,0.9s,baz=152,slow=6.7,SNR=12						
GERES				LR	LR	10 31 04.5	
	comp=Z,36nm,18.4s,baz=120,slow=41						
KHC	**Kasperske Hory**	**55.13**	**342**	*eP*	**P**	**10 02 39.5**	**-3.8**
ESDC	**Sonseca Array**	**55.81**	**323**	P	**P**	**10 02 50.5**	**+2.1**
	1.4nm,0.7s,baz=131,slow=6.8,SNR=8.0						
MK32	**Makanchi Array**	**63.92**	**34**	*eP*	**P**	**10 03 43.5**	**-0.6**
MKAR	**Makanchi Array**	**63.92**	**34**	P	**P**	**10 03 43.5**	**-0.6**
	2.6nm,1.0s,baz=225,slow=6.7,SNR=11						
MKAR				LR	LR	10 34 36.4	
	comp=Z,63nm,19.1s,baz=230,slow=39						
FIA0	**FINESS Array S**	**64.40**	**355**	*eP*	**P**	**10 03 46.3**	**-0.6**
FINES	**FINESS Array B**	**64.40**	**355**	P	**P**	**10 03 46.3**	**-0.6**
	1.9nm,0.8s,baz=180,slow=1.5,SNR=4.7						
FINES				LR	LR	10 36 48.7	
	comp=Z,24nm,18.6s,baz=224,slow=41						
KURK	**Kurchatov**	**64.49**	**29**	*eP*	**P**	**10 03 48.3**	**+0.6**
	2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**65.45**	**68**	P	**P**	**10 03 54.3**	**-0.3**
	4.1nm,0.6s,baz=260,slow=7.5,SNR=17						
CMAR				LR	LR	10 27 59.6	
	comp=Z,28nm,21.9s,baz=196,slow=32						
CHTO	**Chiang Mai**	**65.53**	**68**	*eP*	**P**	**10 03 54.8**	**-0.2**
	4.4nm,0.7s						
NOA	**NORSAR Array B**	**66.36**	**347**	LR	LR	10 38 40.1	
	comp=Z,10nm,19.5s,baz=290,slow=41						
MAW	**Mawson**	**67.40**	**169**	*eP*	**P**	**10 04 07.2**	**+1.1**
	1.3nm,0.9s						
MYKOM	**Kota Tinggi**	**68.06**	**87**	*eP*	**P**	**10 04 11.9**	**+0.6**
	17nm,0.3s						
ZALV	**Zalesovo Beam**	**69.48**	**28**	P	**P**	**10 04 18.6**	**-0.8**
	0.8nm,0.3s,baz=235,slow=5.1,SNR=2.1						
ZALV				LR	LR	10 38 00.2	
	comp=Z,35nm,18.8s,baz=70,slow=39						
ZAA1	**Zalesovo Array**	**69.48**	**28**	*eP*	**P**	**10 04 18.6**	**-0.8**
ARCES	**ARCESS Array B**	**72.43**	**356**	P	**P**	**10 04 37.7**	**+0.7**
	3.6nm,0.8s,baz=145,slow=4.4,SNR=7.0						
NRIK	**Noril'sk**	**79.84**	**16**	LR	LR	10 44 33.6	
	comp=Z,66nm,19.6s,baz=218,slow=39						
SPB	**Sao Paulo**	**82.84**	**247**	*eP*	**P**	**10 05 37.9**	**+1.9**
	23nm,0.4s						
FITZ	**Fitzroy Crossi**	**88.91**	**108**	LR	LR	10 39 30.3	
	comp=Z,31nm,21.1s,baz=16,slow=31						
PTGA	**Pitinga**	**95.84**	**269**	LR	LR	10 46 20.6	
	comp=Z,8.9nm,18.1s,baz=100,slow=33						
SIV	**San Ignacio**	**95.98**	**254**	LR	LR	10 46 55.5	
	comp=Z,64nm,21.0s,baz=236,slow=34						
WRA	**Warramunga Arr**	**97.00**	**110**	P	**P**	**10 06 43.1**	**-0.5**
	1.6nm,0.8s,baz=249,slow=4.4,SNR=4.4						
WR1	**Warramunga Arr**	**97.00**	**110**	*eP*	**P**	**10 06 43.1**	**-0.5**
SCHQ	**Schefferville**	**99.53**	**325**	LR	LR	10 51 08.3	
	comp=Z,23nm,18.4s,baz=54,slow=35						
LTX	**Lajitas**	**133.38**	**309**	*e*PKPdf	**PKPdf**	**10 12 28.3**	**+0.1**
TXAR	**Lajitas Array**	**133.38**	**309**	PKP	**PKPdf**	**10 12 28.3**	**+0.1**
	0.3nm,0.9s,baz=73,slow=1.2,SNR=2.5						

TIR 03 09:57:13.5, 41°.46N×19°.85E, h7km, Md1.9/2, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.11 174**		*i* PG	Pg	09 57 16.5	+0.6
TIR				*i* SG	Sg	09 57 18.5	+0.8
PHP	**Peshkopia**	**0.50**	**63**	*i* PG	Pg	09 57 23.4	+0.3
PHP				*i* SG	Sb	09 57 31.2	-0.9

IDC 03 09:57:30.2±4.4, 21°.06S×174°.42W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/29, mbtmp3.9/3, Error ellipse: s-maj=254.2km s-min=31.8km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**47.65**	**257**	P	P	10 06 08.8	+0.3
	1.1nm,0.7s,baz=103,slow=7.4,SNR=20						
WRA	**Warramunga Arr**	**47.84**	**262**	P	P	10 06 09.3	-0.8
	1.8nm,0.8s,baz=96,slow=8.0,SNR=8.6						
NVAR	**Mina Array Bea**	**79.17**	**42**	P	P	10 09 36.9	-0.3
	0.5nm,0.6s,baz=231,slow=6.5,SNR=3.7						
AKASG	**Malin Array Be**	**145.06**	**334**	PKPbc	PKPbc	10 17 08.5	-0.2
	0.5nm,0.4s,baz=37,slow=4.7,SNR=6.9						

ATH 03 09:57:58.9, 38°.37N×21°.88E, h12km±3km, ML1.3/2, Error ellipse: s-maj=3.1km s-min=1.4km az=53.0, Greece

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

SMAR	**Somma**	**3.04**	**99**	P	**P**	**10 01 41.1**	**0.0**
UGLR	**Uglovaya**	**3.07**	**100**	*e*P	**P**	**10 01 40.7**	**-0.5**
UGLR	**Uglovaya**	**3.07**	**100**	P	**P**	**10 01 40.7**	**-0.5**
SDLR	**Sedlovina**	**3.09**	**99**	*e*P	**P**	**10 01 40.8**	**-0.5**
SDLR	**Sedlovina**	**3.09**	**99**	P	**P**	**10 01 40.8**	**-0.5**
RUS	**Russkaya**	**3.18**	**115**	P	**P**	**10 01 40.4**	**-1.2**
RUS				*e*S	**S**	**10 02 47.2**	**-3.2**
RUS	**Russkaya**	**3.18**	**115**	P	**P**	**10 01 40.4**	**-1.2**
RUS				S	**S**	**10 02 47.2**	**-3.2**
KDTR	**Khodutka, Kamc**	**3.31**	**127**	*e*S	**S**	**10 02 46.4**	**-5.3**
ESO	**Esso**	**3.50**	**52**	*e*P	**P**	**10 01 43.4**	**+0.1**
ESO	**Esso**	**3.50**	**52**	P	**P**	**10 01 43.4**	**+0.1**
SPN	**Mys Shipunski**	**3.80**	**99**	*e*P	**P**	**10 01 44.0**	**-1.2**
SPN				*e*S	**S**	**10 02 51.8**	**-5.2**
SPN	**Mys Shipunski**	**3.80**	**99**	P	**P**	**10 01 44.0**	**-1.2**
SPN				S	**S**	**10 02 51.8**	**-5.2**
MKZ	**Mys Kozlova**	**4.71**	**78**	*e*P	**P**	**10 01 49.1**	**-2.0**
MKZ				*e*S	**S**	**10 03 03.0**	**-5.0**
MKZ	**Mys Kozlova**	**4.71**	**78**	P	**P**	**10 01 49.1**	**-2.0**
MKZ				S	**S**	**10 03 03.0**	**-5.0**
KBTR	**Krutoberegovo**	**5.69**	**62**	*e*P	**P**	**10 01 56.9**	**-1.7**
KBTR				*e*S	**S**	**10 03 15.9**	**-5.6**
KBTR	**Krutoberegovo**	**5.69**	**62**	P	**P**	**10 01 56.9**	**-1.7**
KBTR				S	**S**	**10 03 15.9**	**-5.6**
MA2	**Magadan**	**5.96**	**345**	P	**P**	**10 01 58.5**	**-2.1**
	0.4nm,0.3s,baz=92,slow=5.4,SNR=5.8						
BKI	**Bering**	**7.21**	**74**	*e*S	**S**	**10 03 48.2**	**+3.6**
KLR	**Kul'dur**	**14.46**	**260**	P	**P**	**10 03 17.6**	**-1.0**
	0.5nm,0.3s,baz=66,slow=9.3,SNR=7.0						
ILAR	**Eielson Array**	**30.96**	**46**	P	**P**	**10 05 46.4**	**+2.1**
	0.1nm,0.5s,baz=270,slow=6.0,SNR=4.3						
MKAR	**Makanchi Array**	**44.40**	**291**	P	**P**	**10 07 31.3**	**-1.5**
	0.3nm,0.5s,baz=53,slow=7.5,SNR=3.2						
YKA	**Yellowknife Ar**	**45.09**	**41**	P	**P**	**10 07 40.1**	**+2.4**
	0.2nm,0.6s,baz=304,slow=6.6,SNR=2.8						
TXAR	**Lajitas Array**	**73.71**	**63**	P	**P**	**10 10 50.8**	**+3.4**
	0.3nm,0.6s,baz=305,slow=4.4,SNR=4.6						
WRA	**Warramunga Arr**	**75.39**	**199**	P	**P**	**10 10 58.0**	**+1.4**
	2.3nm,1.0s						
WRA	**Warramunga Arr**	**75.39**	**199**	P	**P**	**10 10 58.0**	**+1.4**
ASAR	**Alice Springs**	**79.10**	**199**	P	**P**	**10 11 18.5**	**+2.0**
	0.5nm,0.4s,baz=12,slow=4.9,SNR=16						

*IDC **03** 10:17:46.4±1.0,2°.66S×138°.62E,h0km,mb3.9/5,*
mb1 4.2/8,mb1mx4.0/22,mbtmp4.0/8,ML3.8/2,MS3.0/1,
Ms1 3.0/1,ms1mx2.6/17,Error ellipse: s-maj=30.0km
s-min=20.9km az=103.0
*NEIC **03** 10:17:48.9±1.2,2°.75S×138°.67E,h12km±6km,mb4.1/6,*
Error ellipse: s-maj=18.7km s-min=13.9km az=206.0
*ISCJB **03** 10:17:50.3±0.5,2°.86S±0°.06×138°.63E±0°.04,h32km,*
mb3.8/6,MS3.0/1,Error ellipse: s-maj=9.0km s-min=5.5km
az=166.6
*DJA **03** 10:17:53.3±1.6,3°.S±8°.×13°.9E±°,h25km±14km,M4.5/5,*
MLv4.5/5

ISC 03 10:17:50.7±0.6,2°.73S±0°.08×138°.63E±0°.04,h32km,n23,
σ1§46/25,mb4.0/6,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.55**	**85**	P	**Pb**	**10 18 17.0**	**-1.8**
GENI				S	**Sb**	**10 18 37.1**	**-0.9**
JAY	**Jayapura**	**2.09**	**84**	Pn	**Pn**	**10 18 23.7**	**+0.2**
	25nm,0.3s,baz=241,slow=11,SNR=106						
JAY				Lg	Lg	10 18 48.0	
	41nm,0.3s,baz=312,slow=21,SNR=6.3						
JAY	**Jayapura**	**2.09**	**84**	P	**Pn**	**10 18 23.1**	**-0.4**
JAY				S	**Sn**	**10 18 49.2**	**+0.7**
SRPI	**Serui, Papua**	**2.53**	**290**	P	**Pb**	**10 18 34.1**	**-1.4**
SRPI				S	**Sb**	**10 19 04.1**	**-2.2**
FAKI	**Fak Fak**	**6.37**	**268**	*e*Pn	**Pn**	**10 19 24.4**	**+2.0**
COEN	**Coen**	**12.03**	**158**	*e*Pn	**Pn**	**10 20 41.0**	**+0.9**
SOEI	**Soe**	**15.88**	**243**	*e*Pn	**P**	**10 21 33.0**	**-2.6**
	79nm,0.9s						
WRAB	**Tennant Creek**	**17.60**	**193**	*e*Pn	**Pn**	**10 21 52.6**	**-1.1**
	13nm,0.7s						
WB2	**Warramunga Arr**	**17.61**	**193**	*e*Pn	**P**	**10 21 54.2**	**-0.3**
	11nm,0.6s						
WR1	**Warramunga Arr**	**17.61**	**193**	*e*Pn	**P**	**10 21 53.9**	**-0.7**
WRA	**Warramunga Arr**	**17.61**	**193**	P	**P**	**10 21 53.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.88**	**219**	P	**Pn**	**10 22 20.2**	**-1.1**
	0.2nm,0.3s,baz=43,slow=13,SNR=7.3						
FITZ	**Fitzroy Crossi**	**19.88**	**219**	*e*P	**Pn**	**10 22 20.2**	**-1.1**
	4.1nm,0.6s						
AS31	**Alice Springs**	**21.31**	**192**	*e*P	**P**	**10 22 35.7**	**+0.7**
	5.7nm,0.6s						
ASAR	**Alice Springs**	**21.31**	**192**	P	**P**	**10 22 35.6**	**+0.7**
	3.9nm,0.7s,baz=14,slow=11,SNR=71						
STKA	**Stephens Creek**	**29.13**	**175**	P	**P**	**10 23 49.3**	**+0.5**
	0.9nm,0.5s,baz=354,slow=7.0,SNR=3.8						
STKA	**Stephens Creek**	**29.13**	**175**	*e*P	**P**	**10 23 49.3**	**+0.5**
	0.4nm,1.0s						
MJAR	**Matsushiro Arr**	**39.07**	**359**	LR	LR	10 38 56.1	
	comp=Z,21nm,20.2s,baz=270,slow=33						
KIWB	**Kanaga Island**	**65.99**	**28**	*e*S	**S**	**10 37 23.1**	**+3.6**
MK32	**Makanchi Array**	**69.75**	**322**	*e*P	**P**	**10 28 58.8**	**+0.9**
MKAR	**Makanchi Array**	**69.75**	**322**	P	**P**	**10 28 58.8**	**+0.9**
	0.3nm,0.5s,baz=118,slow=7.1,SNR=3.4						
VNDA	**Vanda**	**75.77**	**175**	P	**P**	**10 29 34.4**	**+1.4**
	1.4nm,0.6s,baz=322,slow=6.6,SNR=17						
ILAR	**Eielson Array**	**85.89**	**24**	P	**P**	**10 30 26.2**	**-0.9**
	0.8nm,0.7s,baz=259,slow=4.7,SNR=7.1						

*ISCJB **03** 10:31:52.6±0.6,26°.96S±0°.03×71°.36W±0°.10,h25km,*
mb4.1/2,MS3.2/1,Error ellipse: s-maj=12.3km
s-min=3.8km az=175.8
*IDC **03** 10:31:52.7±2.2,27°.00S×70°.35W,h0km,mb4.1/2,*
mb1 3.8/4,mb1mx3.5/33,mbtmp3.8/4,ML3.2/2,MS3.1/2,
Ms1 3.1/2,ms1mx2.7/20,Error ellipse: s-maj=100.9km
s-min=27.3km az=93.0
*SJA **03** 10:31:54.5±1.3,27°.01S×71°.08W,h41km±7km,ML3.6,*
MW3.6
*GUC **03** 10:31:57.0±0.6,27°.32S×71°.11W,h40km±7km,ML3.4*

ISC 03 10:31:53.4±0.9,27°.04S±0°.04×71°.22W±0°.08,h25km,n33,
σ2§49/40,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**1.03**	**122**	*i* P	**Pb**	**10 32 13.2**	**+0.5**
GO03				*i* S	**Sn**	**10 32 25.7**	**-0.4**
GO03	**Copiap**	**1.03**	**122**	*e*P	**Pb**	**10 32 12.9**	**+0.2**
GO03				*i* S	**Sn**	**10 32 25.8**	**-0.4**
GO03				IAML		10 32 26.5	
	comp=N,3μm,0.3s						
LCO	**Las Campanas**	**2.02**	**167**	*i* P	**Pb**	**10 32 28.0**	**-1.6**
LCO				*i* S	**Sn**	**10 32 51.8**	**+1.2**
LCO	**Las Campanas**	**2.02**	**167**	*i* P	**Pb**	**10 32 27.5**	**-2.0**
LCO				*i* S	**Sn**	**10 32 50.4**	**-0.3**
LCO				IAML		10 33 04.7	
	comp=E,505nm,0.4s						
GO02	**Mina Guanaco**	**2.37**	**38**	*i* S	Sb	10 33 11.5	+6.9
PB14	**IPOC Station P**	**2.51**	**17**	*i* P	**Pb**	**10 32 34.3**	**-3.7**
GO04	**Tololo Observa**	**3.14**	**173**	*i* P	**Pn**	**10 32 43.4**	**+1.9**
GO04				*i* S	**Sn**	**10 33 20.6**	**+2.2**
GO04	**Tololo Observa**	**3.14**	**173**	*e*P	**Pn**	**10 32 43.7**	**+2.2**
VCA	**Vinchina**	**3.16**	**123**	*i* P	**Pb**	**10 32 48.2**	**-0.8**
VCA				*i* S	**Sb**	**10 33 25.1**	**-1.9**
VCA				IAML		10 33 41.5	
	comp=Z,238nm,0.8s						
AROD	**Rodeo**	**3.47**	**154**	*i* P	**Pb**	**10 32 50.9**	**-3.5**
ACDV	**Cuesta del Vie**	**3.62**	**150**	*i* P	**Pb**	**10 32 53.0**	**-3.8**
ACDV				*i* S	**Sb**	**10 33 38.4**	**-2.1**
ACDV				IAML		10 33 49.6	
	comp=Z,51nm,0.5s						
ACCO	**Cerro Coronel**	**4.01**	**152**	*i* P	Pb	10 32 58.0	-5.5
ACCO				*i* S	**Sb**	**10 33 44.7**	**-7.0**
PB05	**IPOC Station P**	**4.27**	**13**	*i* P	**Pn**	**10 32 57.6**	**+0.7**
PB06	**IPOC Station P**	**4.57**	**19**	*i* P	**Pn**	**10 33 02.4**	**+1.4**
PB04	**IPOC Station P**	**4.79**	**12**	*i* P	**Pn**	**10 33 04.4**	**+0.4**
LVC	**Limon Verde**	**4.88**	**26**	Pn	**Pn**	**10 33 03.7**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=206,slow=13,SNR=9.6						
LVC				Sn	**Sn**	**10 34 03.2**	**+1.7**
	comp=Z,2.7nm,0.3s,baz=227,slow=2.7,SNR=4.0						
LVC				LR	LR	10 35 13.9	
	comp=Z,123nm,19.2s,baz=208,slow=44						
LVC	**Limon Verde**	**4.88**	**26**	*i* P	**Pn**	**10 33 04.6**	**-1.0**
PB03	**IPOC Station P**	**5.14**	**15**	*i* P	**Pn**	**10 33 09.6**	**+0.6**
CFA	**Coronel Fontan**	**5.24**	**151**	Pn	**Pn**	**10 33 13.1**	**+2.8**
	comp=Z,2.2nm,0.3s,baz=314,slow=12,SNR=31						
CFA				Sn	**Sn**	**10 34 12.3**	**+2.5**
	comp=Z,0.9nm,0.3s,baz=108,slow=20,SNR=2.8						
AUSP	**Uspallata**	**5.41**	**163**	*i* P	**Pn**	**10 33 16.7**	**+4.0**
AUSP				*i* S	**Sb**	**10 34 26.1**	**-5.7**
PB02	**IPOC Station P**	**5.82**	**12**	*i* P	**Pn**	**10 33 18.7**	**+0.4**
ASAL	**Salagasta**	**5.91**	**160**	*i* P	Pn	10 33 23.7	+4.3
ARCO	**CERRO ARCO**	**6.11**	**162**	*i* P	**Pn**	**10 33 24.5**	**+2.2**
ARCO				IAML		10 35 16.5	
	comp=Z,28nm,0.7s						
ACAN	**Cantantal**	**6.29**	**147**	*i* P	**Pn**	**10 33 27.3**	**+2.8**
LPAZ	**La Paz**	**11.08**	**16**	Pn	**Pn**	**10 34 30.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=187,slow=6.1,SNR=4.5						
ROSC	**El Rosal**	**31.83**	**354**	LR	LR	10 51 39.1	
	comp=Z,49nm,21.2s,baz=128,slow=37						
VNA3	**Neumayer Olymp**	**55.58**	**160**	P	**P**	**10 41 28.7**	**+2.3**
VNA2	**Neumayer--Watz**	**56.19**	**159**	P	**P**	**10 41 33.0**	**+2.2**
	baz=285,slow=9.1						
SNAA	**Sanae**	**57.80**	**160**	P	**P**	**10 41 44.1**	**+1.8**
SNAA	**Sanae**	**57.80**	**160**	P	**P**	**10 41 44.0**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=273,slow=9.3,SNR=9.6						
TORD	**Torodi Ar. Bea**	**81.19**	**70**	P	**P**	**10 44 06.6**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=256,slow=4.5,SNR=9.2						
ZALV	**Zalesovo Beam**	**147.83**	**27**	PKPbc	**PKiKP**	**10 51 36.6**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=309,slow=4.6,SNR=6.0						
MKAR	**Makanchi Array**	**151.29**	**40**	PKPbc	**PKiKP**	**10 51 47.2**	**+2.1**
	comp=Z,1.1nm,0.7s,baz=293,slow=2.6,SNR=7.2						

TAP 03 10:33:19.3,24°.39N×121°.38E,h7km,ML1.1,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.04**	**2**	*e*P	Pg	10 33 20.7	-0.2
	baz=2.0						
NNSB				*e*S	Sg	10 33 21.7	-0.4
	baz=2.0						
NNS	**Nan Shan**	**0.05**	**352**	*e*P	Pg	10 33 20.8	-0.2
NNS				*e*S	Sg	10 33 22.0	-0.2
ETLH	**Xiulin Townshi**	**0.20**	**153**	*e*P	Pg	10 33 23.4	+0.1
	baz=152						
ETLH				*e*S	Sg	10 33 26.2	+0.1
	baz=152						
TWT	**Tachien**	**0.23**	**235**	*e*P	Pg	10 33 23.8	-0.1
	baz=235						
WHF	**Hehuan Shan**	**0.26**	**204**	*e*P	Pg	10 33 24.3	-0.3
	baz=202						
YHNB	**Yeheng**	**0.28**	**359**	*e*P	Pg	10 33 24.8	-0.1
	baz=359						

TAP 03 10:33:22.7,23°.89N×121°.22E,h5km,ML1.1,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OWD	**Renai**	**0.08**	**326**	*e*P	Pg	10 33 25.2	+0.7
	baz=326						
OWD				*e*S	Sg	10 33 26.3	+0.5
	baz=326						
VWDT	**VWDT**	**0.16**	**209**	*e*P	Pg	10 33 26.4	+0.5
	baz=217						
VWDT				*e*S	Sg	10 33 28.3	+0.4
	baz=217						
CHGB	**Renai**	**0.17**	**345**	*e*P	Pg	10 33 26.7	+0.4
	baz=210						
CHGB	**Renai**	**0.17**	**345**	*e*P	Pg	10 33 26.6	+0.4
	baz=345						
CHGB				*e*S	Sg	10 33 29.6	+1.0
	baz=345						
ESL	**Shilin**	**0.21**	**112**	*e*P	Pg	10 33 27.9	+1.1
	baz=112						
ESL				*e*S	Sg	10 33 30.7	+1.1
	baz=112						
WHF	**Hehuan Shan**	**0.26**	**9**	P	Pg	10 33 28.3	+0.5
	baz=10.0						
WHF	**Hehuan Shan**	**0.26**	**9**	*e*S	Pg	10 33 28.3	+0.5
	baz=202						
SSLB	**Suanglung**	**0.27**	**247**	*e*P	Pg	10 33 28.5	+0.6
	baz=248						
SSLB				*e*S	Sg	10 33 31.7	+0.3
	baz=248						
SMLT	**Sun Moon Lake**	**0.30**	**269**	P	Pg	10 33 29.4	+0.8
	baz=268						
ETLH	**Xiulin Townshi**	**0.39**	**37**	*e*P	Pg	10 33 30.8	+0.4
	baz=29						
YULB	**Yu-li**	**0.50**	**172**	*e*P	Pg	10 33 32.5	+0.2
	baz=164						
YULB				*e*S	Sg	10 33 39.2	+0.4
	baz=164						
NNSB	**Datong**	**0.56**	**15**	*e*S	Sg	10 33 42.0	+1.3
	baz=13						

ISK 03 10:34:55.8,39°.49N×25°.84E,h8km,ML1.8/7,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.28**	**177**	PG	Pg	10 35 01.8	+0.5
SIGR				SG	Sg	10 35 06.1	+1.2
BOZC	**Bozcaada**	**0.39**	**25**	PG	Pg	10 35 04.1	+0.6
BOZC				SG	Sg	10 35 09.8	+1.2
GELI	**Tayfur-Gelibol**	**1.03**	**28**	PG	Pb	10 35 16.0	0.0
CHOS	**Chios island**	**1.11**	**171**	PN	Pb	10 35 17.5	+0.1
LPK	**Lapseki**	**1.14**	**39**	PN	Pg	10 35 17.3	-0.3
URLA	**Izmir**	**1.27**	**152**	PN	Pg	10 35 20.4	+0.2
ALN	**Alexandroupoli**	**1.42**	**6**	PN	Pn	10 35 22.1	+0.2

DDA 03 10:35:43.2,39°.50N×28°.12E,h7km±4km,ML2.1,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.29**	**69**	*i* P	Pg	10 35 49.3	+0.3
DURS				*i* S	Sb	10 35 54.6	-1.3
STEP	**BALIKESIR_Sava**	**0.33**	**249**	*i* P	Pb	10 35 50.9	-0.7
STEP				*i* S	Sg	10 35 55.5	+1.4
STEP				IAML_P			
	comp=Z,1μm,0.2s						
ULDT	**Uludag**	**1.01**	**50**	*i* P	Pn	10 36 04.1	0.0
ULDT				*i* S	Sg	10 36 14.9	-0.9
ULDT				IAML_P			
	comp=Z,256nm,0.3s						
MANT	**Manisa**	**1.06**	**161**	*i* P	Pn	10 36 04.6	-0.1
MANT				IAML_P			
	comp=Z,347nm,0.3s						
GDZ	**Gediz**	**1.13**	**111**	*i* P	Pg	10 36 03.3	-1.6

*ISCJB **03** 10:36:27.3±0.3,3°.90S±0°.04×142°.82E±0°.04,h35km,*
mb4.5/37,MS3.4/12,Error ellipse: s-maj=6.1km
s-min=4.7km az=143.0
*BJI **03** 10:36:28.8±0.0,4°.08S×142°.96E,h56km,mb4.9/18,*
mB5.1/10,Ms4.6/4,Ms7 4.3/4
*IDC **03** 10:36:30.2±1.5,3°.91S×142°.70E,h45km±15km,mb4.1/16,*
mb1 4.3/20,mb1mx4.2/29,mbtmp4.4/20,ML4.5/2,MS3.4/15,
Ms1 3.4/15,ms1mx3.3/27,Error ellipse: s-maj=17.4km
s-min=8.7km az=58.0
*DJA **03** 10:36:31.1±1.2,4°.S±6°.×14°.3E±°,h29km±12km,M4.8/13,*
mb4.6/13,mB5.0/5,MLv5.2/4,Mw(mB)4.3/5
*NEIC **03** 10:36:32.9±2.7,3°.94S×142°.67E,h74km±7km,mb4.6/19,*
Error ellipse: s-maj=16.0km s-min=12.5km az=224.0

ISC 03 10:36:29.9±0.4,4°.00S±0°.05×142°.69E±0°.06,h35km,n79,
σ2§50/79,mb4.5/37,MS3.4/12,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.47**	**307**	P	**Pn**	**10 37 07.8**	**+0.1**
	16nm,0.3s,baz=151,slow=9.4,SNR=47						
JAY				S	**Sn**	**10 37 35.8**	**-0.8**
	60nm,0.3s,baz=244,slow=10,SNR=8.2						
JAY				LR	LR	10 38 24.8	
	comp=Z,2μm,20.1s,baz=106,slow=47						
JAY	**Jayapura**	**2.47**	**307**	P	**Pn**	**10 37 08.1**	**+0.5**
GENI	**Genyem**	**2.88**	**299**	P	**Pn**	**10 37 14.5**	**+1.3**
MMPI	**Merauke**	**4.99**	**207**	P	Pn	10 37 50.5	+8.1
SRPI	**Serui, Papua**	**6.77**	**288**	P	**Pn**	**10 38 09.5**	**+2.6**
SRPI				S	**Sn**	**10 39 25.8**	**+2.9**
PMG	**Port Moresby**	**6.97**	**141**	P	**Pn**	**10 38 12.3**	**+2.7**
	9.6nm,0.3s,baz=27,slow=5.3,SNR=11						
PMG				S	**Sn**	**10 39 30.0**	**+2.3**
	2.3nm,0.3s,baz=288,slow=20,SNR=2.4						
PMG				LR	LR	10 41 08.1	
	comp=Z,524nm,19.9s,baz=350,slow=40						
PMG	**Port Moresby**	**6.97**	**141**	*e*Pn	**Pn**	**10 38 13.5**	**+4.0**
PMG				*e*Sn	**Sn**	**10 39 30.0**	**+2.3**
RABL	**Rabaul**	**9.46**	**91**	*e*Pn	Pn	10 38 49.3	+5.5
COEN	**Coen**	**9.91**	**177**	*e*Pn	**Pn**	**10 38 53.8**	**+3.9**
FAKI	**Fak Fak**	**10.47**	**276**	*e*Pn	**Pn**	**10 39 00.8**	**+3.1**
FAKI	**Fak Fak**	**10.47**	**276**	P	Pn	10 39 03.3	+5.7
	29nm,0.8s						
GUMO	**Guam**	**17.61**	**7**	LR	LR	10 47 35.7	
	comp=Z,26nm,19.7s,baz=210,slow=38						
WRAB	**Tennant Creek**	**17.80**	**206**	*e*P	**Pn**	**10 40 33.8**	**-1.2**
	33nm,0.9s						
WB2	**Warramunga Arr**	**17.81**	**206**	*e*P	**Pn**	**10 40 34.0**	**-1.1**
	43nm,1.0s						
WR1	**Warramunga Arr**	**17.81**	**207**	*e*P	**Pn**	**10 40 35.1**	**-0.1**
WR1				*e*Sn	**Sn**	**10 43 46.4**	**-6.4**
WRA	**Warramunga Arr**	**17.81**	**207**	P	**Pn**	**10 40 35.1**	**-0.1**
	4.0nm,0.3s,baz=24,slow=12,SNR=12						
WRA				S	**Sn**	**10 43 46.4**	**-6.4**
	2.5nm,0.3s,baz=37,slow=17,SNR=3.5						
SOEI	**Soe**	**19.15**	**252**	*e*P	**Pn**	**10 40 51.9**	**+0.4**
	97nm,0.9s						
SOEI				*e*S	**Sn**	**10 44 24.5**	**-0.9**
SOEI	**Soe**	**19.15**	**252**	P	**Pn**	**10 40 52.0**	**+0.4**
	108nm,0.9s						
BATI	**Baumata**	**19.85**	**251**	P	**Pn**	**10 40 59.9**	**+0.1**
	14nm,0.3s,baz=237,slow=0.5,SNR=5.6						
LUWI	**Luwuk**	**20.11**	**278**	P	Pn	10 41 08.7	+5.9
DAV	**Davao City (W)**	**20.31**	**303**	LR	LR	10 49 45.5	
	comp=Z,44nm,18.3s,baz=112,slow=39						
MRSI	**Marisa**	**21.20**	**282**	P	**P**	**10 41 19.4**	**+6.7**
	21nm,0.7s						
APSI	**Ampana**	**21.24**	**278**	P	**P**	**10 41 15.2**	**+2.1**
	58nm,0.9s,601nm						
AS31	**Alice Springs**	**21.31**	**203**	*e*P	**P**	**10 41 15.0**	**+1.2**
	6.4nm,0.4s						
ASAR	**Alice Springs**	**21.31**	**203**	P	**P**	**10 41 15.2**	**+1.3**
	6.4nm,0.5s,baz=30,slow=11,SNR=150						
ASAR				S	**S**	**10 45 08.9**	**+0.1**
	0.8nm,0.5s,baz=16,slow=27,SNR=4.9						
ASAR				LR	LR	10 50 03.2	
	comp=Z,248nm,20.0s,baz=25,slow=38						
EDFI	**Ende, Flores**	**21.39**	**256**	P	**P**	**10 41 16.3**	**+1.5**
	14nm,0.6s,1μm						
FITZ	**Fitzroy Crossi**	**21.79**	**229**	P	**P**	**10 41 18.1**	**-0.8**
	6.6nm,0.4s,baz=67,slow=10,SNR=28						
FITZ				S	**S**	**10 45 11.6**	**-6.6**
	6.5nm,0.8s,baz=219,slow=18,SNR=3.0						
FITZ				LR	LR	10 50 19.0	
	comp=Z,81nm,18.2s,baz=50,slow=38						
BNSI	**Bone**	**22.52**	**268**	P	**P**	**10 41 32.0**	**+5.1**
	37nm,0.8s						
BKSI	**Bulukumba**	**22.52**	**266**	P	**P**	**10 41 30.5**	**+3.6**
	19nm,0.7s,252nm						
TTSI	**Tana Toraja**	**22.84**	**272**	P	**P**	**10 41 34.3**	**+4.0**
SPSI	**Sidrap Palu**	**22.86**	**269**	P	**P**	**10 41 35.7**	**+5.2**
	11nm,0.9s,415nm						
KAPI	**Kappang**	**22.88**	**267**	P	**P**	**10 41 32.2**	**+1.5**
	2.7nm,0.3s,baz=190,slow=18,SNR=2.8						
MPSI	**Mapaga**	**23.17**	**280**	P	**P**	**10 41 39.5**	**+5.9**
	8.1nm,1.3s						
STKA	**Stephens Creek**	**27.75**	**182**	P	**P**	**10 42 14.7**	**-0.6**
	1.6nm,0.7s,baz=1.5,slow=11,SNR=3.6						
STKA				LR	LR	10 53 47.3	
	comp=Z,58nm,20.2s,baz=15,slow=37						
STKA	**Stephens Creek**	**27.75**	**182**	*e*P	**P**	**10 42 14.7**	**-0.6**
	5.8nm,1.9s						
TGY	**Tagaytay City**	**28.09**	**310**	LR	LR	10 52 50.1	
	comp=Z,150nm,21.5s,baz=38,slow=35						
DZM	**Mont Dzumac**	**29.21**	**130**	P	**P**	**10 42 27.5**	**-1.1**
	3.5nm,0.8s,baz=229,slow=20,SNR=3.9						
DZM	**Mont Dzumac**	**29.21**	**130**	*e*P	**P**	**10 42 27.5**	**-1.1**
	20nm,1.1s						
MJAR	**Matsushiro Arr**	**40.55**	**354**	P	**P**	**10 44 03.2**	**-2.7**
	2.9nm,0.9s,baz=180,slow=6.9,SNR=5.4						
MJAR				LR	LR	10 59 55.3	
	comp=Z,38nm,19.9s,baz=295,slow=35						
MAJO	**Matsushiro**	**40.55**	**354**	*e*P	**P**	**10 44 03.2**	**-2.7**
NJ2	**Nanjing**	**42.41**	**329**	*e*P	**P**	**10 44 23.4**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSRS	**Korea Array**	**43.47**	**343**	P	**P**	**10 44 29.9**	**+0.2**
	1.8nm,0.6s,baz=158,slow=9.7,SNR=11						
KSRS				LR	LR	11 00 06.1	
	comp=Z,40nm,19.3s,baz=138,slow=33						
URZ	**Urewera**	**46.33**	**142**	P	**P**	**10 44 52.9**	**+0.4**
	7.3nm,0.7s,baz=243,slow=5.9,SNR=6.4						
CMAR	**Chiang Mai Arr**	**48.52**	**299**	P	**P**	**10 45 09.8**	**-0.1**
	0.6nm,0.4s,baz=128,slow=6.4,SNR=4.1						
CMAR				LR	LR	11 03 54.3	
	comp=Z,28nm,21.6s,baz=178,slow=34						
USRK	**Ussuriysk Ar.**	**48.93**	**350**	P	**P**	**10 45 12.4**	**-0.1**
	4.9nm,0.7s,baz=170,slow=6.5,SNR=9.7						
XAN	**Xi'an**	**49.45**	**323**	P	**P**	**10 45 16.3**	**-0.5**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PETK	**Petropavlovsk-**	**58.29**	**11**	P	**P**	**10 46 20.9**	**-0

ISC 03 11:25:15.0±0.9, 39°30N±0°.03×41°.01E±0°.04, h14km±6km, n12, σ0°59/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARO	**Karliova-Bingo**	**0.03**	**70**	PG	**Pg**	**11 25 17.8**	**0.0**
KARO				SG	**Sg**	**11 25 19.8**	**+0.1**
ECAT	**Cat-ERZURUM**	**0.31**	**354**	*i* P	**Pb**	**11 25 22.4**	**-0.1**
BNGL	**BINGOL**	**0.36**	**163**	*i* P	**Pb**	**11 25 23.4**	**+0.1**
BNGL				*i* S	**Sb**	**11 25 28.8**	**-0.1**
VRTB	**Varto-Mus**	**0.37**	**112**	PG	**Pg**	**11 25 21.9**	**-0.7**
YEDI	**Yedisu-Bingol**	**0.39**	**291**	PG	**Pg**	**11 25 22.8**	**-0.1**
YEDI				SG	**Sb**	**11 25 28.9**	**-0.8**
BNGB	**Bingl**	**0.40**	**220**	PG	**Pg**	**11 25 22.8**	**-0.3**
BGOL	**Bingol**	**0.41**	**221**	*i* P	**Pb**	**11 25 23.7**	**-0.3**
BGOL				*i* S	**Sg**	**11 25 28.1**	**-0.6**
BGOL				IAML_P			
	comp=Z,1μm,0.2s						
MUSM	**Mu-Merkez**	**0.69**	**146**	*i* P	**Pg**	**11 25 28.3**	**-0.3**
MUSM				IAML_P			
	comp=Z,2μm,0.2s						
KOPT	**Kop Dagi**	**0.82**	**331**	*i* P	**Pb**	**11 25 31.0**	**-0.2**
KOPT				*i* S	**Sn**	**11 25 43.9**	**-0.6**
KOPT				IAML_P			
	comp=Z,1μm,0.1s						
HANI	**Diyarbakir_Han**	**1.00**	**209**	*i* P	**Pn**	**11 25 35.9**	**+1.2**
HANI				IAML_P			
	comp=Z,493nm,0.2s						
KRIK	**Erzurum-spir**	**1.04**	**356**	*i* P	**Pn**	**11 25 36.3**	**+0.9**
TNCL	**Tunceli-Merkez**	**1.16**	**261**	*i* P	**Pg**	**11 25 37.5**	**+0.2**

*ISCJB **03** 11:38:13.5±0.7, 24°.90N±0°.03×122°.45E±0°.02, h13km±5km, Error ellipse: s-maj=6.0km s-min=3.3km az=18.3*
*JMA **03** 11:38:13.2±0.3, 24°.85N×122°.43E, h1km±4km, M2.3*
*TAP **03** 11:38:13.6, 24°.88N×122°.39E, h18km±1km, ML2.6, D*

ISC 03 11:38:13.2±1.1, 24°.88N±0°.04×122°.42E±0°.03, h11km±12km, n30, σ0°32/50, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.41**	**288**	P	**Pg**	**11 38 22.1**	**+0.7**
	baz=289						
TWB1				S	**Sb**	**11 38 28.1**	**-0.8**
	baz=289						
EOS1	**EOS1**	**0.42**	**219**	*e*P	**Pb**	**11 38 23.0**	**+0.2**
	baz=216						
EOS1				*e*S	**Sb**	**11 38 29.8**	**+0.6**
	baz=216						
NTC	**Toucheng**	**0.54**	**268**	*e*P	**Pg**	**11 38 24.3**	**+0.5**
	baz=267						
TIPB	**Shuangxi**	**0.55**	**280**	P	**Pb**	**11 38 24.9**	**-0.1**
	baz=279						
TIPB				S	**Sb**	**11 38 32.5**	**-0.4**
	baz=279						
TWC	**Suao**	**0.59**	**243**	P	**Pg**	**11 38 24.9**	**+0.3**
	baz=240						
TWC				S	**Sb**	**11 38 33.7**	**-0.2**
	baz=240						
NWF	**Wu-fen Shan**	**0.61**	**288**	P	**Pb**	**11 38 26.1**	**+0.1**
	baz=288						
NWF				S	**Sb**	**11 38 35.0**	**+0.2**
	baz=288						
WFSB	**Wu-fen Shan**	**0.61**	**288**	P	**Pb**	**11 38 26.0**	**0.0**
	baz=288						
WFSB				S	**Sb**	**11 38 34.7**	**0.0**
	baz=288						
JYNG	**Yonagunijimaku**	**0.64**	**132**	P	**Pg**	**11 38 25.4**	**-0.2**
JYNG				*e*S	**Sg**	**11 38 34.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.68**	**128**	P	**Pg**	**11 38 26.1**	**-0.3**
	baz=126						
YOJ	**Yonaguni jima**	**0.68**	**128**	P	**Pg**	**11 38 26.1**	**-0.3**
YOJ				*e*S	**Sg**	**11 38 34.8**	**-0.4**
TWE	**Neicheng**	**0.70**	**257**	P	**Pb**	**11 38 27.5**	**-0.1**
	baz=255						
TWE				S	**Sb**	**11 38 37.0**	**-0.3**
	baz=255						
TWA	**Mucha**	**0.77**	**278**	*e*S	**Sb**	**11 38 39.5**	**+0.3**
	baz=277						
YM07	**YM07**	**0.79**	**292**	*e*P	**Pg**	**11 38 28.6**	**+0.1**
	baz=292						
YM07				*e*S	**Sb**	**11 38 39.8**	**0.0**
	baz=292						
ENTT	**Nioudou**	**0.81**	**253**	*e*P	**Pb**	**11 38 29.6**	**+0.1**
	baz=252						
ENTT				*e*S	**Sb**	**11 38 40.5**	**0.0**
	baz=252						
YM08	**YM08**	**0.82**	**292**	*e*P	**Pg**	**11 38 28.4**	**-0.6**
	baz=292						
YM01	**YM01**	**0.82**	**289**	*e*P	**Pg**	**11 38 29.1**	**+0.1**
	baz=289						
YM01				*e*S	**Sg**	**11 38 39.5**	**-0.2**
	baz=289						
YM05	**YM05**	**0.83**	**290**	*e*P	**Pg**	**11 38 29.5**	**+0.2**
	baz=290						
NWLT	**Wulai**	**0.84**	**263**	*e*P	**Pb**	**11 38 29.8**	**-0.2**
	baz=262						
NWLT				*e*S	**Sb**	**11 38 41.1**	**-0.2**
	baz=262						
NDT	**Datong Townshi**	**0.87**	**252**	*e*P	**Pb**	**11 38 30.8**	**+0.3**
	baz=250						
NDT				*e*S	**Sb**	**11 38 42.3**	**+0.1**
	baz=250						
YHNB	**Yeheng**	**0.97**	**258**	*e*P	**Pg**	**11 38 32.0**	**0.0**
	baz=257						
YHNB				*e*S	**Sb**	**11 38 44.8**	**-0.4**
	baz=257						
NSK	**Sanguang**	**0.99**	**258**	*e*P	**Pb**	**11 38 32.7**	**+0.2**
	baz=257						
NACB	**Ninganchiao**	**1.03**	**227**	*e*P	**Pg**	**11 38 32.9**	**-0.2**
	baz=225						
NACB				*e*S	**Sb**	**11 38 46.5**	**-0.2**
	baz=225						
NNSB	**Datong**	**1.05**	**245**	*e*P	**Pb**	**11 38 33.4**	**-0.1**
	baz=243						
NNSB				*e*S	**Sb**	**11 38 47.7**	**+0.4**
	baz=243						
NNS	**Nan Shan**	**1.05**	**246**	*e*P	**Pb**	**11 38 33.6**	**0.0**
	baz=244						
NNS				*e*S	**Sb**	**11 38 47.7**	**+0.3**
	baz=244						
ETLH	**Xiulin Townshi**	**1.09**	**232**	*e*P	**Pg**	**11 38 33.8**	**-0.3**
	baz=231						
ETLH				*e*S	**Sb**	**11 38 48.3**	**-0.1**
	baz=231						
WHF	**Hehuan Shan**	**1.28**	**236**	*e*P	**Pg**	**11 38 37.9**	**-0.1**
	baz=234						
WHF				*e*S	**Sg**	**11 38 54.3**	**-0.3**
	baz=234						
IRIF	**Iriomote-Funau**	**1.31**	**114**	P	**Pb**	**11 38 38.1**	**+0.2**
CHGB	**Renai**	**1.40**	**235**	*e*P	**Pb**	**11 38 39.8**	**+0.2**
	baz=233						
HATJ	**Hateruma jima**	**1.50**	**123**	P	**Pb**	**11 38 41.7**	**+0.5**
JIJ	**Ishigaki jima**	**1.65**	**108**	P	**Pn**	**11 38 42.3**	**+0.1**

*ISCJB **03** 11:40:48.4±0.8, 24°.90N±0°.03×122°.46E±0°.03, h13km±5km, Error ellipse: s-maj=5.9km s-min=3.9km az=23.9*
*JMA **03** 11:40:48.6±0.1, 24°.91N×122°.48E, h29km, M1.8*
*TAP **03** 11:40:49.0, 24°.91N×122°.45E, h15km±1km, ML2.5, C*

ISC 03 11:40:48.0±1.2, 24°.91N±0°.04×122°.47E±0°.03, h22km±8km, n23, σ0°43/42, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.45**	**282**	*e*P	**Pb**	**11 40 56.9**	**-0.4**
	baz=282						
TWB1				*e*S	**Sb**	**11 41 02.6**	**-0.9**
	baz=282						
EOS1	**EOS1**	**0.48**	**221**	P	**Pb**	**11 40 58.0**	**+0.3**
	baz=218						
EOS1				S	**Sb**	**11 41 05.0**	**+0.7**
	baz=218						
TIPB	**Shuangxi**	**0.59**	**276**	P	**Pb**	**11 40 59.8**	**+0.1**
	baz=275						
TIPB				S	**Sb**	**11 41 07.8**	**+0.1**
	baz=275						
JYNG	**Yonagunijimaku**	**0.63**	**137**	P	**Pn**	**11 41 00.7**	**-0.9**
JYNG				S	**Sb**	**11 41 09.3**	**+0.5**
TWC	**Suao**	**0.64**	**242**	P	**Pb**	**11 41 00.2**	**-0.4**
	baz=240						
TWC				*e*S	**Sb**	**11 41 08.7**	**-0.4**
	baz=240						
NWF	**Wu-fen Shan**	**0.65**	**284**	*e*P	**Pb**	**11 41 01.1**	**+0.4**
	baz=284						
NWF				*e*S	**Sb**	**11 41 09.4**	**+0.1**
	baz=284						
WFSB	**Wu-fen Shan**	**0.65**	**284**	*e*P	**Pb**	**11 41 01.0**	**+0.4**
	baz=284						
WFSB				*e*S	**Sb**	**11 41 09.6**	**+0.4**
	baz=284						
YOJ	**Yonaguni jima**	**0.67**	**132**	P	**Pb**	**11 41 01.2**	**+0.2**
	baz=131						
YOJ				*e*S	**Sb**	**11 41 09.8**	**+0.1**
	baz=131						
YOJ	**Yonaguni jima**	**0.67**	**132**	P	**Pb**	**11 41 01.1**	**+0.2**
YOJ				*e*S	**Sb**	**11 41 09.9**	**+0.1**
TWE	**Neicheng**	**0.76**	**256**	P	**Pb**	**11 41 02.6**	**+0.1**
	baz=254						
TWE				S	**Sb**	**11 41 12.1**	**-0.2**
	baz=254						
PCYT	**Pengchaiyu**	**0.80**	**333**	*e*P	**Pn**	**11 41 04.1**	**+0.1**
	baz=334						
YM07	**YM07**	**0.81**	**289**	P	**Pn**	**11 41 03.9**	**-0.4**
	baz=289						
YM07				*e*S	**Sb**	**11 41 14.6**	**+0.4**
	baz=289						
ENA	**Nanau**	**0.82**	**234**	*e*P	**Pn**	**11 41 04.2**	**0.0**
	baz=232						
ENA				*e*S	**Sb**	**11 41 13.7**	**-0.6**
	baz=232						
YM08	**YM08**	**0.85**	**289**	*e*P	**Pn**	**11 41 04.3**	**-0.3**
	baz=289						
YM01	**YM01**	**0.85**	**286**	*e*P	**Pb**	**11 41 04.3**	**+0.2**
	baz=286						
ENTT	**Nioudou**	**0.87**	**252**	P	**Pn**	**11 41 04.8**	**0.0**
	baz=250						
ENTT				S	**Sb**	**11 41 16.2**	**+0.7**
	baz=250						
NWLT	**Wulai**	**0.89**	**262**	P	**Pb**	**11 41 05.0**	**+0.2**
	baz=261						
NWLT				*e*S	**Sb**	**11 41 15.5**	**-0.8**
	baz=261						
NDT	**Datong Townshi**	**0.93**	**251**	P	**Pn**	**11 41 05.9**	**+0.2**
	baz=250						
NDT				S	**Sb**	**11 41 17.0**	**-0.2**
	baz=250						
YHNB	**Yeheng**	**1.02**	**257**	*e*P	**Pn**	**11 41 07.1**	**0.0**
	baz=256						
YHNB				*e*S	**Sb**	**11 41 20.2**	**+0.1**
	baz=256						
NACB	**Ninganchiao**	**1.08**	**228**	*e*S	**Sb**	**11 41 21.3**	**-0.6**
	baz=226						
NNSB	**Datong**	**1.10**	**244**	*e*P	**Pb**	**11 41 08.6**	**+0.2**
	baz=243						
NNSB				*e*S	**Sb**	**11 41 22.9**	**+0.5**
	baz=243						
ETLH	**Xiulin Townshi**	**1.14**	**232**	*e*P	**Pb**	**11 41 09.6**	**+0.5**
	baz=231						
ETLH				*e*S	**Sn**	**11 41 23.3**	**-0.5**
	baz=231						
WHF	**Hehuan Shan**	**1.34**	**235**	*e*P	**Pb**	**11 41 13.0**	**+0.3**
	baz=234						
WHF				*e*S	**Sn**	**11 41 29.6**	**+0.5**
	baz=234						

*NIED **03** 11:53:00, 45°.30N×151°.50E, h35km, Mw4.6 Best double couple: M_0=7.52000×10^{15} NP1:ϕ_s=228.00000°, δ27.00000°, λ117.00000°. NP2:ϕ_s=19.00000°, δ66.00000°, λ77.00000°.*
*ISCJB **03** 11:53:56.2±0.8, 45°.22N±0°.03×151°.15E±0°.03, h20km±5km, mb4.8/175, MS4.0/34, Error ellipse: s-maj=4.9km s-min=2.5km az=148.0*
*JMA **03** 11:53:56.2±0.6, 45°.34N×151°.47E, h30km, M5.2*
*BJI **03** 11:53:58.7±0.0, 45°.31N×151°.07E, h41km, mb4.9/58, mB4.8/37, Ms4.2/43, Ms7 4.1/43*
*SKHL **03** 11:53:58.1±0.2, 45°.12N×151°.41E, h53km, mb5.0/2, Ms4.3/7*
*MOS **03** 11:53:59.0±1.0, 45°.31N×151°.09E, h40km, mb5.1/58, MS3.6/9, Error ellipse: s-maj=6.1km s-min=4.6km az=107.1*
*NEIC **03** 11:54:00.2±0.9, 45°.34N×151°.02E, h34km±5km, mb4.8/107, Error ellipse: s-maj=16.3km s-min=7.0km az=166.0*
*IDC **03** 11:54:02.3±2.0, 45°.40N×150°.98E, h49km±18km, mb4.2/23, mb1 4.3/31, mb1mx4.2/41, mbtmp4.4/31, ML3.8/7, MS3.8/26, Ms1 3.8/26, ms1mx3.7/42, Error ellipse: s-maj=15.4km s-min=10.4km az=146.0*

ISC 03 11:53:58.4±1.0, 45°.22N±0°.04×151°.11E±0°.04, h25km±6km, n471, σ1°68/506, mb4.8/175, MS4.0/36, 42C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.29**	**272**	*e*PN	**Pn**	**11 54 34.7**	**+0.1**
KUR				*i* S	**Sb**	**11 55 05.3**	**-1.7**
KUR				pmax	pmax		
	comp=N,283nm,0.5s						
KUR				pmax	pmax		
	comp=Z,590nm,0.5s						
KUR				pmax	pmax		
	comp=E,210nm,0.4s						
KUR				smax	smax		
	comp=N,5μm,1.8s						
KUR				smax	smax		
	comp=E,4μm,2.2s						
KUR				smax	smax		
	comp=N,3μm,0.5s						
KUR				smax	smax		
	comp=E,847nm,0.5s						
KUR				MLR	MLR		
	comp=Z,5μm,13.0s						
KUR	**Kuril'sk**	**2.29**	**272**	*i* P	**Pn**	**11 54 35.5**	**+0.9**
KUR				AMB	AMB	11 54 37.0	
	comp=Z,120nm,0.2s						
KUR				AMB	AMB	11 54 37.0	
	comp=Z,37nm,0.2s						
KUR				AMB	AMB	11 54 37.0	
	comp=Z,625nm,0.2s						
KUR				*i* S	**Sn**	**11 55 03.7**	**+1.6**
KUR				A	A	11 55 10.0	
	comp=Z,3μm,0.5s						
KUR				A	A	11 55 10.0	
	comp=Z,556nm,0.5s						
KUR				AMS	AMS	11 55 47.0	
	comp=Z,7μm,13.0s						
KUR				AMS	AMS	11 55 47.0	
	comp=Z,5μm,13.0s						
KUR				AMS	AMS	11 55 47.0	
	comp=Z,6μm,13.0s						
YUK	**Yuzh-Kuril'sk**	**3.93**	**254**	*d* PN	**Pn**	**11 54 58.4**	**+1.3**
YUK				*i* S	**Sn**	**11 55 47.3**	**+4.9**
YUK				pmax	pmax		
	comp=E,538nm,0.4s						
YUK				pmax	pmax		
	comp=Z,625nm,0.4s						
YUK				pmax	pmax		
	comp=N,199nm,0.3s						
YUK				smax	smax		
	comp=N,2μm,0.8s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.93**	**254**	*i* P	**Pn**	**11 54 58.5**	**+1.3**
YUK				AMB	AMB	11 55 03.0	
	comp=E,199nm,0.4s						
YUK				AMB	AMB	11 55 03.0	
	comp=E,538nm,0.4s						
YUK				AMB	AMB	11 55 03.0	
	comp=E,625nm,0.4s						
YUK				*i* S	**Sn**	**11 55 43.6**	**+1.2**
YUK				A	A	11 56 00.0	
	comp=E,2μm,0.8s						
YUK				A	A	11 56 00.0	
	comp=E,2μm,0.8s						
LAGR	**Lagunnoye**	**3.98**	**255**	*e*PN	**Pn**	**11 54 58.5**	**+0.7**
LAGR				*e*S	**Sn**	**11 55 47.5**	**+4.0**
LAGR				pmax	pmax		
	comp=N,982nm,0.5s						
LAGR				pmax	pmax		
	comp=Z,1μm,0.5s						
LAGR				pmax	pmax		
	comp=E,780nm,0.4s						
LAGR				smax	smax		
	comp=N,3μm,0.5s						
LAGR				smax	smax		
	comp=E,1μm,0.6s						
LAGR	**Lagunnoye**	**3.98**	**255**	*e*P	**Pn**	**11 54 58.0**	**+0.2**
LAGR				AMB	AMB	11 55 12.0	
	comp=E,982nm,0.5s						
LAGR				AMB	AMB	11 55 12.0	
	comp=E,780nm,0.5s						
LAGR				*e*S	**Sn**	**11 55 47.0**	**+3.5**
LAGR				A	A	11 56 05.0	
	comp=E,3μm,0.6s						
LAGR				A	A	11 56 05.0	
	comp=E,1μm,0.6s						
GRPR	**Tuman**	**4.01**	**254**	*e*PN	**Pn**	**11 55 00.2**	**+2.0**
GRPR				*e*S	**Sn**	**11 55 49.6**	**+5.3**
GRPR				pmax	pmax		
	comp=Z,671nm,0.3s						
GRPR				pmax	pmax		
	comp=N,195nm,0.2s						
GRPR				pmax	pmax		
	comp=E,181nm,0.2s						
GRPR				smax	smax		
	comp=N,378nm,0.4s						
GRPR				smax	smax		
	comp=E,1μm,0.5s						
GRPR	**Tuman**	**4.01**	**254**	*e*P	**Pn**	**11 55 00.0**	**+1.8**
GRPR				AMB	AMB	11 55 06.0	
	comp=E,195nm,0.2s						
GRPR				AMB	AMB	11 55 06.0	
	comp=E,181nm,0.2s						
GRPR				AMB	AMB	11 55 06.0	
	comp=E,671nm,0.2s						
GRPR				*e*S	**Sn**	**11 55 47.6**	**+3.3**
GRPR				A	A	11 56 00.0	
	comp=E,378nm,0.5s						
GRPR				A	A	11 56 00.0	
	comp=E,1μm,0.5s						
GLVR	**Golovnino**	**4.27**	**252**	*e*PN	**Pn**	**11 55 04.1**	**+2.3**
GLVR				*e*S	**Sn**	**11 55 55.7**	**+5.0**
GLVR				pmax	pmax		
	comp=Z,734nm,0.5s						
GLVR				pmax	pmax		
	comp=N,90nm,0.6s						
GLVR				smax	smax		
	comp=N,2μm,0.4s						
GLVR				smax	smax		
	comp=E,650nm,0.5s						
GLVR	**Golovnino**	**4.27**	**252**	*e*P	**Pn**	**11 55 04.0**	**+2.3**
GLVR				AMB	AMB	11 55 04.0	
	comp=E,90nm,0.6s						
GLVR				AMB	AMB	11 55 04.0	
	comp=E,734nm,0.6s						
GLVR				*e*S	**Sn**	**11 55 55.0**	**+4.3**
GLVR				A	A	11 56 04.0	
	comp=E,2μm,0.5s						
GLVR				A	A	11 56 04.0	
	comp=E,650nm,0.5s						
NEM2	**Nemuro 2**	**4.28**	**246**	P	**Pn**	**11 55 02.1**	**+0.2**
NEM2				*e*S	**Sn**	**11 55 51.4**	**+0.5**
JRA	**Rausu**	**4.47**	**256**	P	**Pn**	**11 55 07.6**	**+3.1**
JNK	**Nakash**	**4.86**	**253**	P	**Pn**	**11 55 12.0**	**+2.0**
JAK	**Akkeshi**	**5.13**	**247**	P	**Pn**	**11 55 13.9**	**+0.3**
JTKR	**Abashiri--Toko**	**5.29**	**259**	P	**Pn**	**11 55 18.7**	**+2.8**
JAR	**Ashorobuto**	**5.61**	**253**	P	**Pn**	**11 55 22.6**	**+2.3**
JAR				*e*S	**Sn**	**11 56 26.2**	**+2.3**
JMP	**Maruseppu**	**5.67**	**260**	P	**Pn**	**11 55 23.9**	**+2.9**
JOB	**Onbets**	**5.73**	**249**	P	**Pn**	**11 55 23.2**	**+1.3**
JOB				*e*S	**Sn**	**11 56 26.7**	**-0.1**
JSE	**Soyaes**	**6.04**	**271**	P	**Pn**	**11 55 29.8**	**+3.6**
YSS	**Yuzh-Sakhalins**	**6.07**	**290**	*e*Pn	**Pn**	**11 55 26.9**	**+0.4**
YSS	**Yuzh-Sakhalins**	**6.07**	**290**	*e*PN	**Pn**	**11 55 29.9**	**+3.4**
YSS				*e*S	**Sn**	**11 56 36.6**	**+1.5**
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				smax	smax		
	comp=N,60nm,0.8s						
YSS				MLR	MLR		
	comp=Z,1μm,17.0s						
YSS				MLR	MLR		
	comp=N,500nm,18.0s						
YSS				MLR	MLR		
	comp=E,1μm,18.0s						
YSS	**Yuzh-Sakhalins**	**6.07**	**290**	*e*P	**Pn**	**11 55 29.9**	**+3.4**
YSS				AMB	AMB	11 55 30.7	
	comp=E,30nm,0.4s						
YSS				AMS	AMS	11 57 41.0	
	comp=E,500nm,17.0s						
YSS				AMS	AMS	11 57 41.0	
	comp=E,1μm,17.0s						
YSS				AMS	AMS	11 57 41.0	
	comp=E,1μm,17.0s						
JKK2	**Kamakawa 2**	**6.13**	**260**	P	**Pn**	**11 55 30.5**	**+3.1**
JKA	**Kamikawa-asahi**	**6.17**	**263**	*e*P	**Pn**	**11 55 31.1**	**+3.2**
JCH	**Churui**	**6.17**	**248**	P	**Pn**	**11 55 29.4**	**+1.5**
JCH				*e*S	**Sn**	**11 56 37.8**	**+0.1**
ASAJ	**Asahikawa**	**6.17**	**263**	P	**Pn**	**11 55 31.1**	**+3.1**
	comp=E,8.2nm,0.3s,baz=74,slow=20,SNR=53						
ASAJ				S	**Sn**	**11 56 46.2**	**+8.5**
	baz=37,slow=20,SNR=1.3						
ASAJ				LR	LR	11 57 59.2	
	comp=E,1μm,21.2s,baz=89,slow=39						
ASAJ	**Asahikawa**	**6.17**	**263**	P	**Pn**	**11 55 31.4**	**+3.4**
SKR	**Severo-Kuril's**	**6.42**	**30**	*e*PN	**Pn**	**11 55 31.5**	**+0.2**
SKR				*e*S	**Sn**	**11 56 46.4**	**+2.7**
SKR				pmax	pmax		
	comp=Z,151nm,0.5s						
SKR				pmax	pmax		
	comp=Z,200nm,2.4s						
SKR				smax	smax		
	comp=N,284nm,0.6s						
SKR				smax	smax		
	comp=E,316nm,0.8s						
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
SKR	**Severo-Kuril's**	**6.42**	**30**	*e*P	**Pn**	**11 55 30.0**	**-1.3**
SKR				AMB	AMB	11 55 33.0	
	comp=Z,151nm,0.5s						
SKR				AMB	AMB	11 55 35.0	
	comp=Z,200nm,2.4s						
SKR				*e*S	**Sn**	**11 56 39.2**	**-4.5**
SKR				A	A	11 57 12.0	
	comp=Z,283nm,0.8s						
SKR				A	A	11 57 12.0	
	comp=Z,316nm,0.8s						
SKR				AMS	AMS	11 58 12.0	
	comp=Z,960nm,16.0s						
SKR				AMS	AMS	11 58 12.0	
	comp=Z,1μm,16.0s						
SKR				AMS	AMS	11 58 12.0	
	comp=Z,1μm,16.0s						
JFR	**Furan**	**6.46**	**254**	P	**Pn**	**11 55 34.4**	**+2.5**
JWK2	**Keihoku**	**6.51**	**274**	P	Pn	11 55 37.8	+5.3
JAB	**Ashibetsu**	**6.60**	**258**	P	**Pn**	**11 55 38.1**	**+4.3**
JEM	**Erimo**	**6.60**	**244**	P	**Pn**	**11 55 35.6**	**+1.8**
JEM				*e*S	**Sn**	**11 56 46.6**	**-1.6**
ERM	**Erimo**	**6.60**	**244**	*e*Pn	**Pn**	**11 55 35.5**	**+1.7**
ERM				*e*Sn	**Sn**	**11 56 48.2**	**0.0**
ERM	**Erimo**	**6.60**	**244**	*e*PN	**Pn**	**11 55 35.5**	**+1.7**
JNBK	**Urakawa-nobuka**	**6.73**	**247**	P	**Pn**	**11 55 35.9**	**+0.3**
JBT2	**Biratori 2**	**6.76**	**252**	P	**Pn**	**11 55 37.3**	**+1.2**
UGL	**Uglegorsk**	**7.28**	**305**	*e*PN	**Pn**	**11 55 46.6**	**+3.5**
UGL				pmax	pmax		
	comp=Z,86nm,0.5s						
UGL				MLR	MLR		
	comp=Z,2μm,17.0s						
UGL				MLR	MLR		
	comp=N,1μm,11.0s						
UGL				MLR	MLR		
	comp=E,2μm,17.0s						
UGL	**Uglegorsk**	**7.28**	**305**	*e*P	**Pn**	**11 55 45.6**	**+2.5**
UGL				AMB	AMB	11 55 48.0	
	comp=E,86nm,0.5s						
UGL				*e*S	**Sn**	**11 57 06.1**	**+1.3**
UGL				A	A	11 57 10.0	
	comp=E,115nm,0.7s						
UGL				AMS	AMS	11 59 05.0	
	comp=E,1μm,16.0s						
UGL				AMS	AMS	11 59 05.0	
	comp=E,2μm,16.0s						
JEW	**Eniwo**	**7.36**	**255**	P	**Pn**	**11 55 47.0**	**+2.8**
JNB	**Noboribetsu**	**7.78**	**253**	P	**Pn**	**11 55 51.7**	**+1.7**
JNB				*e*S	**Sn**	**11 57 17.2**	**-0.1**
TYV	**Tymovskoe**	**8.00**	**318**	*e*PN	**Pn**	**11 55 54.7**	**+1.7**
TYV				*e*S	**Sn**	**11 57 27.0**	**+4.4**
TYV				pmax	pmax		
	comp=Z,35nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
TYV				smax	smax		
	comp=N,28nm,0.9s						
TYV				MLR	MLR		
	comp=Z,1μm,17.0s						
TYV	**Tymovskoe**	**8.00**	**318**	*e*P	**Pn**	**11 55 55.5**	**+2.5**

TYV				AMB	AMB	11 55 56.0	
	comp=Z,35nm,0.8s						
TYV				AMB	AMB	11 55 57.0	
	comp=Z,100nm,3.4s						
TYV				*e*S	**Sn**	**11 57 27.0**	**+4.4**
TYV				A	A	11 57 28.0	
	comp=Z,28nm,0.9s						
TYV				AMS	AMS	11 59 07.0	
	comp=Z,2μm,16.0s						
TYV				AMS	AMS	11 59 07.0	
	comp=Z,1μm,16.0s						
JKB	**Kayabe**	**8.04 249**		P	**Pn**	**11 55 54.2**	**+0.6**
JKB				*e*S	**Sn**	**11 57 19.5**	**-4.2**
JYM2	**Yakumo 2**	**8.38 252**		P	**Pn**	**11 56 00.1**	**+1.9**
JANG	**Nango**	**8.55 239**		P	**Pn**	**11 55 59.0**	**-1.6**
JANG				*e*S	**Sn**	**11 57 28.6**	**-7.7**
JTM	**Tenmabayashi**	**8.59 243**		P	**Pn**	**11 56 00.7**	**-0.4**
JTM				*e*S	**Sn**	**11 57 31.0**	**-6.1**
JTH	**Tanohata**	**8.62 236**		P	**Pn**	**11 55 59.2**	**-2.4**
JTH				*e*S	**Sn**	**11 57 30.1**	**-7.9**
PEA0B	**Petropavlovsk-**	**9.00**	**26**	*e*Pn	**Pn**	**11 56 06.5**	**-0.2**
PETK	**Petropavlovsk-**	**9.00**	**26**	P	**Pn**	**11 56 06.0**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=176,slow=12,SNR=12						
PETK				S	**Sn**	**11 57 53.4**	**+6.3**
	baz=76,slow=4.9,SNR=1.8						
PETK				LR	LR	11 59 47.0	
	comp=Z,410nm,18.5s,baz=215,slow=39						
PETK	**Petropavlovsk-**	**9.00**	**26**	PN	**Pn**	**11 56 06.0**	**-0.7**
JOSM	**Okushiri--Mats**	**9.00**	**254**	P	**Pn**	**11 56 08.3**	**+1.6**
PEA1	**Petropavlovsk-**	**9.00**	**26**	*e*Pn	**Pn**	**11 56 06.0**	**-0.7**
PET	**Petropavlovsk**	**9.24**	**30**	*e*Pn	**Pn**	**11 56 09.4**	**-0.6**
PET	**Petropavlovsk**	**9.24**	**30**	*e*PN	**Pn**	**11 56 10.6**	**+0.6**
PET				pmax	pmax		
	comp=Z,22nm,0.9s						
PET				MLR	MLR		
	comp=Z,400nm,15.0s						
PET				MLR	MLR		
	comp=Z,500nm,13.0s						
PET	**Petropavlovsk**	**9.24**	**30**	*e*P	**Pn**	**11 56 09.6**	**-0.4**
PET				AMB	AMB	11 56 18.9	
	comp=Z,22nm,0.9s						
PET				AMS	AMS	11 59 47.8	
	comp=Z,520nm,13.0s						
OFUJ	**Ofunato**	**9.31**	**232**	P	**Pn**	**11 56 09.4**	**-1.6**
JRG	**Rokugo**	**9.70**	**237**	P	**Pn**	**11 56 15.3**	**-1.0**
OKH	**Okha**	**9.89**	**330**	*e*P	**Pn**	**11 56 22.5**	**+3.6**
OKH				AMS	AMS	12 01 36.7	
	comp=Z,600nm,14.0s						
JIO	**Ouri**	**9.93**	**231**	P	**Pn**	**11 56 17.9**	**-1.6**
TEY	**Ternei**	**10.26**	**274⇑**	*e*PN	Pn	11 56 30.4	+6.4
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
TEY				pmax	pmax		
	comp=E,50nm,0.8s						
TEY	**Ternei**	**10.26**	**274**	*e*P	Pn	11 56 30.4	+6.4
TEY				AMB	AMB	11 56 32.8	
	comp=E,50nm,0.8s						
TEY				AMB	AMB	11 56 32.8	
	comp=E,40nm,0.8s						
NKL	**Nikolayevsk**	**10.46**	**323**	*e*P	**Pn**	**11 56 29.0**	**+2.3**
NKL				AMB	AMB	11 56 31.2	
	comp=E,130nm,1.0s						
NKL				AMB	AMB	11 56 31.2	
	comp=E,120nm,1.0s						
NKL				AMS	AMS	12 00 53.0	
	comp=E,1μm,14.0s						
JYA	**Atsumi**	**10.76**	**236**	P	**Pn**	**11 56 30.3**	**-0.6**
GRNR	**Gornyy**	**11.30**	**305**	*e*PN	Pn	11 56 44.4	+6.2
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
GRNR	**Gornyy**	**11.30**	**305**	*e*P	**Pn**	**11 56 42.0**	**+3.8**
GRNR				AMB	AMB	11 56 45.1	
	comp=Z,13nm,1.0s						
JFY	**Yanaizu**	**11.59**	**232**	P	**Pn**	**11 56 42.2**	**0.0**
MAJO	**Matsushiro**	**13.04**	**233**	*e*Pn	**Pn**	**11 57 01.4**	**-0.7**
MAJO				*e*Sn	**Sn**	**11 59 30.1**	**+3.8**
MAJO	**Matsushiro**	**13.04**	**233**	*e*PN	**Pn**	**11 57 01.4**	**-0.7**
MAT	**Matsushiro**	**13.04**	**233**	P	**Pn**	**11 57 00.8**	**-1.3**
MAT				S	**Sn**	**11 59 27.0**	**+0.7**
MJAR	**Matsushiro Arr**	**13.04**	**233**	P	**Pn**	**11 57 01.1**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=13						
MJAR				S	**Sn**	**11 59 30.1**	**+3.8**
	comp=Z,0.0nm,0.3s,baz=87,slow=27,SNR=3.7						
MJAR				LR	LR	12 02 34.6	
	comp=Z,240nm,21.5s,baz=50,slow=39						
MJB9	**Matsu-Tunnel**	**13.04**	**233**	*e*Pn	**Pn**	**11 57 01.3**	**-0.8**
USA0B	**Ussuriysk Arra**	**13.64**	**273**	*e*Pn	**Pn**	**11 57 10.3**	**+0.1**
USRK	**Ussuriysk Ar.**	**13.64**	**273**	P	**Pn**	**11 57 12.3**	**+2.1**
	comp=Z,0.9nm,0.3s,baz=82,slow=12,SNR=18						
USRK				LR	LR	12 02 28.6	
	comp=Z,415nm,18.8s,baz=76,slow=37						
KLR	**Kul'dur**	**13.75**	**294**	P	**Pn**	**11 57 13.0**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=204,slow=20,SNR=5.1						
KLR				LR	LR	12 02 55.9	
	comp=Z,605nm,18.0s,baz=96,slow=39						
KLR	**Kul'dur**	**13.75**	**294**	*i* P	**Pn**	**11 57 14.0**	**+2.3**
EKMR	**Ekimchan**	**14.22**	**310**	*e*P	**Pn**	**11 57 18.0**	**-0.1**
EKMR				AMB	AMB	11 57 26.0	
	comp=Z,14nm,0.9s						
MA2	**Magadan**	**14.39**	**359**	P	**Pn**	**11 57 20.3**	**0.0**
	comp=Z,1.9nm,0.3s,baz=178,slow=11,SNR=13						
MA2				LR	LR	12 03 18.0	
	comp=Z,294nm,18.2s,baz=180,slow=39						
MA2	**Magadan**	**14.39**	**359**	*e*Pn	**Pn**	**11 57 20.0**	**-0.3**
MA2	**Magadan**	**14.39**	**359**	*i* P	**Pn**	**11 57 20.4**	**+0.1**
MA2	**Magadan**	**14.39**	**359**	*e*P	**Pn**	**11 57 20.4**	**+0.1**
INU	**Inuyama**	**14.57**	**232**	*e*Pn	**Pn**	**11 57 22.2**	**-0.7**
JHJ	**Hachijo jima 2**	**14.92**	**220**	LR	LR	12 04 36.5	
	comp=Z,55nm,20.2s,baz=94,slow=42						
MDJ	**Mudanjiang**	**15.26**	**275**	P	**Pn**	**11 57 33.6**	**+1.5**
MDJ				S	**Sn**	**12 00 25.7**	**+5.5**
MDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,180nm,3.9s						
MDJ				LR	LR		
	comp=Z,420nm,15.5s						
MDJ				LR	LR		
	comp=Z,450nm,17.6s						
MDJ				LR	LR		
	comp=Z,800nm,17.9s						
MDJ	**Mudanjiang**	**15.26**	**275**	*e*Pn	**Pn**	**11 57 31.5**	**-0.6**
	comp=Z,29nm,0.9s						
BMKR	**Bomnak**	**17.12**	**312**	*e*P	**Pn**	**11 57 54.0**	**-1.9**
BMKR				AMB	AMB	11 58 13.4	
	comp=Z,14nm,0.5s						
ZEA	**Zeya**	**17.63**	**307**	*e*P	**P**	**11 58 03.1**	**+0.2**
ZEA				pmax	pmax		
	comp=N,41nm,1.0s						
ZEA				pmax	pmax		
	comp=E,41nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,46nm,1.0s						
ZEA				MLR	MLR		
	comp=E,500nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,15.0s						
ZEA				MLR	MLR		
	comp=N,300nm,13.0s						
ZEA	**Zeya**	**17.63**	**307**	*e*P	**Pn**	**11 58 00.5**	**-1.6**
ZEA				AMB	AMB	11 58 06.2	
	comp=N,41nm,1.0s						
ZEA				AMB	AMB	11 58 06.2	
	comp=N,46nm,1.0s						
ZEA				AMS	AMS	12 05 27.0	
	comp=N,300nm,14.0s						
ZEA				AMS	AMS	12 05 27.0	
	comp=N,500nm,14.0s						
ZEA				AMS	AMS	12 05 27.0	
	comp=N,800nm,14.0s						
SEY	**Seymchan**	**17.77**	**2**	P	**Pn**	**11 58 03.0**	**-0.8**
	comp=N,0.2nm,0.3s,baz=144,slow=7.2,SNR=9.4						
SEY	**Seymchan**	**17.77**	**2**	*e*P	**Pn**	**11 58 02.3**	**-1.5**
KROS	**Kirovskiy**	**18.02**	**309**	*e*P	**P**	**11 58 10.4**	**+3.1**
KROS				AMB	AMB	11 58 14.7	
	comp=N,7.0nm,0.4s						
KROS				AMB	AMB	11 58 14.7	
	comp=N,10.0nm,0.4s						
KROS				AMB	AMB	11 58 14.7	
	comp=N,15nm,0.4s						
CN2	**Changchun**	**18.34**	**275**	*e*P	**P**	**11 58 10.6**	**-0.3**
CN2				*es*P	pwP	11 58 23.1	+1.7
CN2				*e*S	**Sn**	**12 01 29.4**	**-5.5**
CN2				pmax	pmax		
	comp=N,20nm,0.7s						
CN2				pmax	pmax		
	comp=N,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,19.0s						
CN2				LR	LR		
	comp=N,240nm,19.0s						
CN2				LR	LR		
	comp=N,330nm,21.0s						
KSRS	**Korea Array**	**19.02**	**254**	P	**P**	**11 58 18.0**	**-0.3**
	comp=N,0.4nm,0.3s,baz=60,slow=11,SNR=27						
KSRS				PcP	**PcP**	**12 02 43.7**	**+1.0**
	comp=N,0.1nm,0.3s,baz=242,slow=0.8,SNR=5.6						
KSRS				LR	LR	12 05 42.0	
	comp=N,192nm,18.6s,baz=18,slow=37						
KS15	**Wonju Array Si**	**19.05**	**254**	*e*P	**P**	**11 58 18.3**	**-0.4**
	comp=N,14nm,0.9s						
JNU	**Nakatsue**	**19.74**	**239**	P	**Pn**	**11 58 28.1**	**+0.3**
	comp=N,0.8nm,0.3s,baz=348,slow=5.8,SNR=6.8						
JNU				LR	LR	12 07 29.6	
	comp=N,138nm,18.8s,baz=28,slow=41						
JNU	**Nakatsue**	**19.74**	**239**	*e*P	**Pn**	**11 58 27.8**	**-0.1**
	comp=N,24nm,1.0s						
TJN	**Taejon**	**19.98**	**252**	*ce*P	**P**	**11 58 29.1**	**+0.3**
SNY	**Shenyang**	**20.21**	**270**	⇑P	**P**	**11 58 31.7**	**+0.4**
SNY				LR	LR		
	comp=N,250nm,14.2s						
SNY				LR	LR		
	comp=N,420nm,17.1s						
SNY				LR	LR		
	comp=N,610nm,16.7s						
YAK	**Yakutsk**	**20.93**	**331**	*e*P	**P**	**11 58 37.9**	**-1.0**
	comp=N,80nm,1.0s						
YAK	**Yakutsk**	**20.93**	**331**	*e*P	**P**	**11 58 38.8**	**-0.2**
YAK				*e*		11 58 58.6	
YAK				*e*S	**S**	**12 02 27.8**	**-2.9**
YAK				*e*SS	**SnSn**	**12 02 44.2**	**-7.5**
YAK				*e*SSS	SSS	12 03 17.5	
YAK	**Yakutsk**	**20.93**	**331**	*e*P	**P**	**11 58 38.7**	**-0.2**
HIA	**Hailar**	**21.59**	**292**	*e*P	**P**	**11 58 43.0**	**-3.3**
	comp=N,14nm,1.0s						
HIA	**Hailar**	**21.59**	**292**	*e*P	**P**	**11 58 43.0**	**-3.3**
HIA				pmax	pmax		
	comp=Z,14nm,1.0s						
ADK	**Adak**	**22.21**	**61**	*e*P	**P**	**11 58 53.7**	**+1.0**
	comp=Z,35nm,1.3s						
ADK	**Adak**	**22.21**	**61**	*e*P	**P**	**11 58 53.7**	**+1.0**
ADK				pmax	pmax		
	comp=Z,35nm,1.3s						
ATKA	**Atka Island**	**23.76**	**60**	*e*P	**P**	**11 59 08.9**	**+0.3**
	comp=Z,64nm,1.3s						
BILL	**Bilibino**	**24.21**	**14**	*e*P	**P**	**11 59 12.7**	**0.0**
	comp=Z,4.3nm,0.8s						
BILL	**Bilibino**	**24.21**	**14**	*i* P	**P**	**11 59 11.4**	**-1.3**
BILL				*i*		11 59 21.6	
BILL				*i*		11 59 42.1	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,395nm,16.0s						
BILL	**Bilibino**	**24.21**	**14**	*e*P	**P**	**11 59 11.4**	**-1.3**
BJI	**Beijing**	**26.09**	**271**	P	**P**	**11 59 31.0**	**+1.0**
BJI				S	**S**	**12 04 00.2**	**+0.5**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BJI				LR	LR		
	comp=Z,98nm,16.8s						
BJI				LR	LR		
	comp=Z,150nm,16.5s						
BJT	**Baijiatuau**	**26.10**	**271**	*e*P	**P**	**11 59 30.3**	**+0.2**
	comp=Z,19nm,1.1s						
BJT	**Baijiatuau**	**26.10**	**271**	*e*P	**P**	**11 59 30.3**	**+0.2**
BJT				pmax	pmax		
	comp=Z,19nm,1.1s						
NJ2	**Nanjing**	**28.22**	**253**	*e*P	**P**	**11 59 49.1**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,16nm,0.8s						
TIXI	**Tiksi**	**28.58**	**345**	P	**P**	**11 59 52.0**	**0.0**
	comp=Z,1.8nm,0.3s,baz=147,slow=7.1,SNR=5.2						
TIXI	**Tiksi**	**28.58**	**345**	*i* P	**P**	**11 59 51.1**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.58**	**148**	T	T	12 30 43.0	
	baz=337,slow=75,SNR=143						
H11N1	**WAKE ISLAND Hy**	**28.60**	**148**	T	T	12 30 39.4	
	baz=337,slow=75,SNR=110						
H11N3	**WAKE ISLAND Hy**	**28.60**	**148**	T	T	12 30 32.0	
	baz=337,slow=75,SNR=129						
HHC	**Hu-ho-hao-te**	**29.03**	**276**	*e*P	**P**	**11 59 57.5**	**+1.0**
HHC				pP	pwP	12 00 07.9	-0.1
HHC				S	**S**	**12 04 48.1**	**+1.8**
HHC				sS	sS	12 05 01.2	+4.0
HHC				pmax	pmax		
	comp=Z,36nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
HHC				LR	LR		
	comp=Z,330nm,17.1s						
HHC				LR	LR		
	comp=Z,530nm,14.6s						
HHC				LR	LR		
	comp=Z,670nm,15.2s						
H11S1	**WAKE ISLAND Hy**	**29.63**	**149**	T	T	12 31 59.9	
	baz=337,slow=76,SNR=119						
H11S3	**WAKE ISLAND Hy**	**29.64**	**149**	T	T	12 31 55.1	
	baz=337,slow=76,SNR=62						
H11S2	**WAKE ISLAND Hy**	**29.65**	**149**	T	T	12 31 58.4	
	baz=337,slow=76,SNR=118						
ULN	**Ulaanbaatar**	**30.12**	**291**	*e*P	**P**	**12 00 05.7**	**-0.4**
	comp=Z,5.2nm,0.8s						
ULN	**Ulaanbaatar**	**30.12**	**291**	*ce*P	**P**	**12 00 04.9**	**-1.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONA0	**Songino Array**	**30.56**	**291**	*e*P	**P**	**12 00 10.5**	**+0.6**
SONM	**Songino Array**	**30.56**	**291**	P	**P**	**12 00 10.5**	**+0.6**
	comp=Z,3.7nm,0.5s,baz=74,slow=11,SNR=5.4						
SONM				LR	LR	12 13 30.5	
	comp=Z,311nm,18.1s,baz=82,slow=38						
TLY	**Talaya**	**31.68**	**299**	*i* P	**P**	**12 00 17.9**	**-1.7**
ZAK	**Zakamensk**	**32.09**	**297**	*e*P	P	12 00 17.4	-6.0
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WHN	**Wuhan**	**32.20**	**256**	⇓P	**P**	**12 00 24.9**	**+0.6**
WHN				S	**S**	**12 05 36.7**	**+0.9**
WHN				pmax	pmax		
	comp=Z,34nm,0.8s						
WHN				pmax	pmax		
	comp=Z,130nm,4.0s						
WHN				LR	LR		
	comp=Z,66nm,8.9s						
WHN				LR	LR		
	comp=Z,620nm,16.0s						
WHN				LR	LR		
	comp=Z,580nm,21.5s						
TPUB	**Ta-pu**	**33.04**	**239**	*e*P	**P**	**12 00 32.8**	**+0.9**
TWG	**Pinlang**	**33.14**	**238**	*e*P	**P**	**12 00 33.0**	**+0.4**
	comp=Z,86nm,1.0s						
XAN	**Xi'an**	**34.00**	**266**	P	**P**	**12 00 40.7**	**+0.5**
XAN				pP	pP	12 00 46.8	+0.4
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
XAN				pmax	pmax		
	comp=Z,100nm,5.2s						
XAN				LR	LR		
	comp=Z,220nm,15.0s						
XAN				LR	LR		
	comp=Z,150nm,13.2s						
XAN				LR	LR		
	comp=Z,170nm,17.7s						
XAN	**Xi'an**	**34.00**	**266**	*e*P	**P**	**12 00 39.9**	**-0.3**
	comp=Z,35nm,1.6s						
XAN	**Xi'an**	**34.00**	**266**	*e*P	**P**	**12 00 39.9**	**-0.3**
XAN				pmax	pmax		
	comp=Z,35nm,1.6s						
ENH	**Enshi**	**35.72**	**260**	*e*P	**P**	**12 00 54.8**	**-0.2**
	comp=Z,12nm,0.9s						
LZH	**Lanzhou**	**36.55**	**272**	*e*P	**P**	**12 01 03.6**	**+1.4**
LZH				pP	pwP	12 01 14.2	+0.5
LZH				sP	sP	12 01 18.7	+7.7
LZH				*e*PP	**PP**	**12 02 28.1**	**+2.6**
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,83nm,5.0s						
LZH				LR	LR		
	comp=Z,320nm,12.9s						
LZH				LR	LR		
	comp=Z,330nm,13.2s						
LZH				LR	LR		
	comp=Z,430nm,16.3s						
BRLK	**Bradley Lake**	**36.90**	**46**	*e*P	**P**	**12 01 04.8**	**0.0**
	comp=Z,50nm,1.6s						
KRAR	**Krasnoyarsk**	**37.42**	**308**	*i* P	**P**	**12 01 08.5**	**-0.6**
SEW	**Seward**	**37.60**	**45**	*e*P	**P**	**12 01 10.6**	**0.0**
	comp=Z,20nm,1.4s						
PMR	**Palmer**	**37.67**	**43**	*e*P	**P**	**12 01 11.2**	**0.0**
	comp=Z,4.1nm,0.8s						
PMR	**Palmer**	**37.67**	**43**	*e*P	**P**	**12 01 11.2**	**0.0**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TOLK	**Toolik Lake Re**	**37.78**	**31**	*e*P	**P**	**12 01 12.1**	**0.0**
	comp=Z,5.2nm,0.7s						
GTA	**Gaotai**	**37.84**	**280**	⇑P	**P**	**12 01 14.0**	**+0.9**
GTA				pP	sP	12 01 23.1	+1.2
GTA				sP	pwP	12 01 27.3	+2.5
GTA				sS	sS	12 07 19.5	+5.3
GTA				pmax	pmax		
	comp=Z,18nm,1.1s						
GTA				pmax	pmax		
	comp=Z,73nm,5.4s						
GTA				LR	LR		
	comp=Z,93nm,16.1s						
GTA				LR	LR		
	comp=Z,180nm,13.7s						
GTA				LR	LR		
	comp=Z,230nm,14.8s						
KNK	**Knik Glacier**	**38.00**	**43**	*e*P	**P**	**12 01 13.7**	**-0.4**
	comp=Z,14nm,1.1s						
SML	**Sawmill**	**38.04**	**42**	*e*P	**P**	**12 01 14.8**	**+0.4**
	comp=Z,22nm,0.7s						
SML	**Sawmill**	**38.04**	**42**	*e*P	**P**	**12 01 14.9**	**+0.4**
SML				pmax	pmax		
	comp=Z,22nm,0.7s						
WRH	**Wood River Hil**	**38.10**	**38**	*e*P	**P**	**12 01 14.5**	**-0.3**
	comp=Z,4.4nm,0.5s						
COLA	**College**	**38.20**	**37**	*e*P	**P**	**12 01 15.9**	**+0.2**
	comp=Z,11nm,0.7s						
COLA	**College**	**38.20**	**37**	*i* P	**P**	**12 01 15.3**	**-0.3**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CCB	**Clear Creek Bu**	**38.22**	**38**	*e*P	**P**	**12 01 15.8**	**0.0**
	comp=Z,3.6nm,0.7s						
DHY	**Denali Highway**	**38.44**	**40**	*e*P	**P**	**12 01 18.0**	**+0.1**
	comp=Z,25nm,1.7s						
SCM	**Sheep Creek Mo**	**38.52**	**42**	*e*P	**P**	**12 01 18.8**	**+0.3**
	comp=Z,22nm,1.4s						
SCM	**Sheep Creek Mo**	**38.52**	**42**	*e*P	**P**	**12 01 18.8**	**+0.3**
SCM				pmax	pmax		
	comp=Z,22nm,1.4s						
HDA	**Harding Lake**	**38.59**	**38**	*e*P	**P**	**12 01 18.9**	**0.0**
	comp=Z,7.7nm,0.5s						
ILAR	**Eielson Array**	**38.62**	**37**	P	**P**	**12 01 19.4**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=262,slow=7.6,SNR=34						
ILAR				LR	LR	12 18 35.8	
	comp=Z,96nm,20.1s,baz=286,slow=38						
ILB	**Eielson Array**	**38.62**	**37**	*e*P	**P**	**12 01 18.9**	**-0.3**
	comp=Z,19nm,1.6s						
KWAJ	**Kwajalein Atol**	**38.98**	**153**	P	**P**	**12 01 22.1**	**-0.5**
PRP	**Porcupine Dome**	**39.19**	**36**	*e*P	**P**	**12 01 23.9**	**-0.2**
	comp=Z,3.3nm,0.8s						
FYU	**Fort Yukon**	**39.30**	**34**	*e*P	**P**	**12 01 25.0**	**+0.1**
	comp=Z,20nm,1.4s						
DIV	**Divide**	**39.32**	**43**	*e*P	**P**	**12 01 25.0**	**-0.2**
	comp=Z,7.4nm,0.7s						
CD2	**Chengdu**	**39.36**	**265**	P	**P**	**12 01 26.7**	**+0.8**
CD2				pmax	pmax		
	comp=Z,70nm,0.7s						
NRIK	**Noril'sk**	**39.37**	**330**	LR	LR	12 18 20.6	
	comp=Z,115nm,19.5s,baz=36,slow=37						
RIDG	**Independent Ri**	**39.54**	**39**	*e*P	**P**	**12 01 26.7**	**-0.3**
	comp=Z,12nm,1.2s						
GYA	**Guiyang**	**40.02**	**257⇓**	*i*P	**P**	**12 01 31.9**	**+0.4**
GYA				pP	sP	12 01 40.8	+0.4
GYA				PP	**PnPn**	**12 03 06.0**	**-1.1**
GYA				S	**S**	**12 07 32.5**	**-3.3**
GYA				sS	sS	12 07 52.2	+6.0
GYA				SS	**SS**	**12 10 23.6**	**-10**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=Z,150nm,14.7s						
GYA				LR	LR		
	comp=Z,150nm,16.4s						
GYA				LR	LR		
	comp=Z,170nm,16.2s						
EGAK	**Eagle**	**41.07**	**37**	*e*P	**P**	**12 01 39.4**	**-0.1**
	comp=Z,10nm,1.1s						
CTGM	**Chitina Glacie**	**41.48**	**43**	*e*P	**P**	**12 01 43.3**	**+0.1**
	comp=Z,15nm,0.8s						
DGZ	**Jazzator, Alta**	**42.14**	**300**	*i* P	**P**	**12 01 49.6**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAA1	**Zalesovo Array**	**42.39**	**307**	*e*P	**P**	**12 01 49.5**	**-0.9**
ZALV	**Zalesovo Beam**	**42.39**	**307**	P	**P**	**12 01 49.5**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=67,slow=10.0,SNR=3.8						
ZALV				PcP	**PcP**	**12 03 42.7**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=66,slow=3.3,SNR=9.7						
ZALV				LR	LR	12 20 27.4	
	comp=Z,149nm,20.4s,baz=72,slow=38						
EPYK	**Eagle Plains**	**42.73**	**34**	*e*P	**P**	**12 01 53.2**	**+0.1**
	comp=Z,16nm,1.1s						
QIZ	**Qiongzhong**	**42.96**	**246**	P	**P**	**12 01 58.7**	**+3.2**
QIZ				S	**S**	**12 08 24.4**	**+5.2**
QIZ				LR	LR		
	comp=Z,44nm,6.0s						
QIZ				LR	LR		
	comp=Z,120nm,16.4s						
QIZ				LR	LR		
	comp=Z,170nm,20.4s						
HYT	**Haines Junctio**	**43.35**	**43**	*e*P	**P**	**12 01 59.2**	**+0.9**
	comp=Z,18nm,1.2s						
KMI	**Kunming**	**43.59**	**259**	P	**P**	**12 02 01.1**	**+0.3**
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
INK	**Inuvik**	**43.69**	**31**	P	**P**	**12 02 01.7**	**+0.9**
	comp=Z,6.3nm,0.8s,baz=283,slow=7.1,SNR=31						
INK	**Inuvik**	**43.69**	**31**	*e*P	**P**	**12 02 00.9**	**+0.1**
	comp=Z,6.9nm,0.9s						
INK	**Inuvik**	**43.69**	**31**	*e*P	**P**	**12 02 00.9**	**+0.1**
INK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMQ	**Urumqi**	**44.19**	**292**	*e*P	**P**	**12 02 06.6**	**+1.4**
WMQ				LR	LR		
	comp=Z,380nm,12.9s						
WMQ				LR	LR		
	comp=Z,280nm,15.1s						
WMQ				LR	LR		
	comp=Z,370nm,22.1s						
WHY	**Whitehorse**	**44.64**	**42**	*e*P	**P**	**12 02 09.0**	**+0.3**
	comp=Z,5.6nm,0.9s						
MK31	**Makanchi Array**	**46.42**	**298**	*e*P	**P**	**12 02 22.5**	**-0.3**
	comp=Z,7.4nm,0.7s						
MK31	**Makanchi Array**	**46.42**	**298**	*e*P	**P**	**12 02 22.5**	**-0.3**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MK32	**Makanchi Array**	**46.42**	**298**	*e*P	**P**	**12 02 22.3**	**-0.5**
MK32				*e*PcP	**PcP**	**12 03 57.7**	**+0.4**
MKAR	**Makanchi Array**	**46.42**	**298**	P	**P**	**

SKNT	Sakolnakorn	48.28 250	P	P	12 02 39.8 +2.2
	comp=Z,14nm,1.0s				
LSA	Lhasa	48.96 273	P	P	12 02 45.0 +1.7
LSA	Lhasa	48.96 273	eP	P	12 02 43.6 +0.3
	comp=Z,15nm,0.8s				
LSA	Lhasa	48.96 273	eP	P	12 02 43.6 +0.3
LSA			pmax	pmax	
	comp=Z,15nm,0.8s				
PAYA	Payao	49.39 256	P	P	12 02 48.3 +2.2
	comp=Z,19µm,0.8s,comp=Z,719µm				
PDGK	Podgornoye	49.74 295	P	P	12 02 49.0 +0.4
PDGK			pmax	pmax	
	comp=Z,10.0nm,0.9s				
PHRA	Phrae	49.74 255	P	P	12 02 50.3 +1.6
	comp=Z,1.4nm,0.9s				
LAMP	Lampang	50.13 255	P	P	12 02 54.9 +3.2
	comp=Z,14µm,0.8s				
CHAI	Chaiyaphum	50.38 251	P	P	12 02 54.8 +1.2
	comp=Z,18µm,1.0s				
CMMT	Chiang Mai	50.40 256	P	P	12 02 55.3 +1.5
	comp=Z,4.6nm,0.7s				
CHTO	Chiang Mai	50.40 256	eP	P	12 02 53.9 +0.1
	comp=Z,6.5nm,0.8s				
CHTO	Chiang Mai	50.40 256	eP	P	12 02 53.9 +0.1
CHTO			pmax	pmax	
	comp=Z,6.0nm,0.8s				
CM31	Chiang Mai Arr	50.65 256	eP	P	12 02 56.1 +0.5
	comp=Z,5.3nm,0.9s				
CMAR	Chiang Mai Arr	50.65 256	P	P	12 02 57.1 +1.5
	comp=Z,2.7nm,0.8s,baz=39,slow=7.8,SNR=14				
CMAR			PcP	PcP	12 04 14.7 +1.8
	comp=Z,0.9nm,0.4s,baz=16,slow=3.3,SNR=5.2				
CMAR			LR	LR	12 27 19.4
	comp=Z,91nm,18.4s,baz=50,slow=40				
BRVK	Borovoye	50.80 310	eP	P	12 02 56.1 -0.3
	comp=Z,3.8nm,0.9s				
BRVK	Borovoye	50.80 310	c iP	P	12 02 56.8 +0.4
BRVK			pmax	pmax	
	comp=Z,3.0nm,0.9s				
BRVK	Borovoye	50.80 310	eP	P	12 02 56.8 +0.4
SHL	Shillong	50.93 268	eP	P	12 02 58.0 0.0
	comp=Z,38nm,0.7s				
SHL	Shillong	50.93 268	eP	P	12 02 58.0 0.0
SHL			pmax	pmax	
	comp=Z,38nm,0.7s				
TARG	Taragay, Kyrgy	51.61 294	eP	P	12 03 03.4 +0.3
	comp=Z,9.9nm,0.7s				
BOOM	Boomskoye usch	52.42 296	eP	P	12 03 09.2 +0.4
	comp=Z,15nm,0.6s				
BOOM	Boomskoye usch	52.42 296	eP	P	12 03 09.3 +0.4
BOOM			pmax	pmax	
	comp=Z,15nm,0.6s				
TKM2	Tokmak 2	52.42 296	P	P	12 03 10.0 +1.1
	SNR=7.7				
RES	Resolute Bay	52.73 18	P	P	12 03 10.4 0.0
	comp=Z,5.4nm,0.8s,baz=356,slow=11,SNR=17				
RES	Resolute Bay	52.73 18	eP	P	12 03 10.0 -0.4
	comp=Z,28nm,1.5s				
RES	Resolute Bay	52.73 18	eP	P	12 03 10.0 -0.4
RES			pmax	pmax	
	comp=Z,28nm,1.5s				
USP	Ospenovka	52.94 297	P	P	12 03 13.6 +1.1
	SNR=12				
KBK	Karagaybulak	52.97 296	P	P	12 03 14.0 +1.1
	SNR=9.5				
YKA	Yellowknife Ar	52.98 35	P	P	12 03 12.9 +0.5
	comp=Z,1.3nm,0.7s,baz=299,slow=7.1,SNR=12				
YKA			LR	LR	12 27 34.9
	comp=Z,6.2nm,20.7s,baz=296,slow=38				
YKB5	Yellowknife Ar	52.98 35	eP	P	12 03 12.9 +0.5
KZA	Kyzart	53.07 295	P	P	12 03 15.5 +1.5
	SNR=11				
AAK	Ala-Archa	53.27 296	P	P	12 03 16.0 +0.9
	SNR=6.1				
AAK	Ala-Archa	53.27 296	eP	P	12 03 14.4 -0.6
	comp=Z,9.7nm,0.8s				
AAK	Ala-Archa	53.27 296	ceP	P	12 03 15.0 -0.1
AAK			pmax	pmax	
	comp=Z,9.0nm,0.7s				
AAK	Ala-Archa	53.27 296	eP	P	12 03 15.0 -0.1
ODAN	Odare	53.31 273	eP	P	12 03 17.0 +1.3
JIRN	Jiri	53.67 274	eP	P	12 03 19.5 +1.0
	comp=Z,72nm,0.6s				
EKS2	Erkin-Say	53.71 297	P	P	12 03 19.3 +1.0
	SNR=11				
GUN	Gumba	53.74 275	eP	P	12 03 19.8 +0.8
	comp=Z,53nm,0.6s				
RAMN	Ramite	53.82 273	eP	P	12 03 20.1 +0.7
	comp=Z,80nm,0.6s				
KSH	Kashi	53.95 292	P	P	12 03 25.1 +5.0
KSH			PP	PP	12 05 29.5 +8.3
KSH			S	S	12 11 00.9 +6.7
KSH			pmax	pmax	
	comp=Z,24nm,0.5s				
KSH			pmax	pmax	
	comp=Z,390nm,4.9s				
KSH			LR	LR	
	comp=Z,610nm,16.6s				
SVE	Sverdlovsk	54.01 317	eP	P	12 03 19.5 -0.6
SVE			pmax	pmax	
	comp=Z,8.0nm,0.7s				
KKN	Kakani	54.24 275	eP	P	12 03 23.8 +1.4
	comp=Z,61nm,0.8s				
PKI	Pulchoki	54.28 275	eP	P	12 03 23.4 +0.5
	comp=Z,28nm,0.7s				
PKIN	Phulchoki	54.28 275	eP	P	12 03 23.4 +0.6
	comp=Z,19nm,0.6s				
DMN	Daman	54.47 275	eP	P	12 03 25.0 +0.8
	comp=Z,68nm,0.9s				
ARSB	Arslanbob	54.91 296	eP	P	12 03 27.6 +0.5
	comp=Z,26nm,0.9s				
DANN	Dangsing	54.97 277	eP	P	12 03 28.9 +1.1
	comp=Z,60nm,0.6s				
ARU	Arti	55.20 317	d iP	P	12 03 26.8 -1.9
ARU					12 04 26.8
ARU			S	S	12 11 08.2 -2.1
ARU			SS	SS	12 14 49.5 -4.3
ARU			pmax	pmax	
	comp=Z,5.0nm,0.8s				
KOLN	Koldanda	55.43 276	eP	P	12 03 32.1 +1.0
	comp=Z,31nm,0.6s				
KK31	Karatay Array	55.52 299	eP	P	12 03 30.8 -0.5
	comp=Z,8.5nm,0.8s				
KK31	Karatay Array	55.52 299	eP	P	12 03 30.8 -0.5
KK31			pmax	pmax	
	comp=Z,9.0nm,0.8s				
PYUN	Piuthan	55.66 277	eP	P	12 03 33.6 +0.9
	comp=Z,30nm,0.6s				
TULEG	Thule	55.90 10	eP	P	12 03 32.2 -1.2
	comp=Z,11nm,1.0s				
BTK	Batken	56.98 296	eP	P	12 03 41.7 -0.1
	comp=Z,18nm,0.9s				
BTK	Batken	56.98 296	eP	P	12 03 41.7 -0.1
BTK			pmax	pmax	
	comp=Z,18nm,0.9s				
ABKAR	Akbulak array	58.34 310	eP	P	12 03 50.5 -0.6
	comp=Z,7.6nm,0.5s				
ARCES	ARCESS Array B	58.84 340	P	P	12 03 52.8 -1.5
	comp=Z,8.5nm,0.4s,baz=30,slow=9.9,SNR=6.5				
ARCES			LR	LR	12 32 54.4
	comp=Z,70nm,19.6s,baz=93,slow=40				
TMCR	Tamitsa	59.04 332	eP	P	12 03 53.9 -1.8
TMCR			pmax	pmax	
	comp=Z,19nm,0.6s				
NIL	Nilore	59.06 288	eP	P	12 03 56.7 +0.3
	comp=Z,69nm,0.9s				
NIL	Nilore	59.06 288	eP	P	12 03 56.7 +0.3
NIL			pmax	pmax	
	comp=Z,69nm,0.9s				
KLMR	Klimovskoe	60.69 329	eP	P	12 04 05.4 -1.7
KLMR			pmax	pmax	
	comp=Z,9.0nm,1.4s				
KBL	Kabul	61.33 291	eP	P	12 04 11.2 -1.0
	comp=Z,28nm,0.7s				
KBL	Kabul	61.33 291	eP	P	12 04 11.2 -1.0
KBL			pmax	pmax	
	comp=Z,28nm,0.7s				
SUMG	Summit	62.32 3	eP	P	12 04 18.4 -0.1
	comp=Z,35nm,1.0s				
SUMG	Summit	62.32 3	eP	P	12 04 18.4 -0.1
SUMG			pmax	pmax	
	comp=Z,35nm,1.0s				
BOZ	Bozeman (W)	63.83 51	eP	P	12 04 29.0 +0.4
	comp=Z,2.2nm,0.7s				
BOZ	Bozeman (W)	63.83 51	eP	P	12 04 29.0 +0.4
BOZ			pmax	pmax	
	comp=Z,2.0nm,0.7s				
NV01	Mina Array Sit	64.39 61	eP	P	12 04 33.7 +1.2
NVAR	Mina Array Bea	64.39 61	P	P	12 04 33.7 +1.2
	comp=Z,0.9nm,0.7s,baz=287,slow=5.8,SNR=6.3				
SCO	Scoresbysund	64.51 357	eP	P	12 04 32.2 -0.2
	comp=Z,9.1nm,0.9s				
SCO	Scoresbysund	64.51 357	eP	P	12 04 32.2 -0.2
SCO			pmax	pmax	
	comp=Z,9.0nm,0.9s				
FIA0	FINESS Array S	64.83 334	eP	P	12 04 33.0 -1.7
FIA0	FINESS Array S	64.83 334	eP	P	12 04 33.0 -1.7
FINES	FINESS Array B	64.83 334	P	P	12 04 33.0 -1.7
	comp=Z,6.7nm,0.6s,baz=36,slow=7.7,SNR=27				
FINES			LR	LR	12 35 26.4
	comp=Z,97nm,19.4s,baz=32,slow=38				
FINES	FINESS Array B	64.83 334	P	P	12 04 33.0 -1.7
TPAW	Teton Pass	65.54 52	eP	P	12 04 40.4 +0.4
	comp=Z,3.6nm,0.8s				
GEYT	Alibeck	66.19 300	P	P	12 04 44.0 +0.1
	comp=Z,11nm,0.6s,baz=20,slow=4.7,SNR=15				
GEYT			LR	LR	12 35 34.9
	comp=Z,42nm,18.9s,baz=60,slow=38				
GYA0B	ALIBECK ARRAY	66.19 300	eP	P	12 04 43.7 -0.2
	comp=Z,17nm,0.9s				
LPSR	Galich'ya Gora	66.56 322	eP	P	12 04 44.6 -1.4
LPSR			pmax	pmax	
	comp=Z,10.0nm,0.5s				
WRAB	Tennant Creek	66.61 197	ceP	P	12 04 47.5 +0.9
WRAB			pmax	pmax	
	comp=Z,30nm,2.5s				
WB2	Warramunga Arr	66.62 197	eP	P	12 04 47.3 +0.6
	comp=Z,11nm,0.9s				
WR1	Warramunga Arr	66.62 197	eP	P	12 04 47.7 +1.0
WRA	Warramunga Arr	66.62 197	P	P	12 04 47.7 +1.0
	comp=Z,18nm,0.3s,baz=12,slow=7.4,SNR=1.4				
WC3	Warramunga Arr	66.63 197	eP	P	12 04 47.2 +0.5
	comp=Z,13nm,1.0s				
BW06	Boulder Array	66.78 52	eP	P	12 04 48.2 +0.3
	comp=Z,1.7nm,0.8s				
PD31	Pinedale Array	66.78 52	eP	P	12 04 47.9 0.0
	comp=Z,1.6nm,0.8s				
PDAR	Pinedale Array	66.78 52	P	P	12 04 48.4 +0.4
	comp=Z,0.9nm,0.8s,baz=260,slow=2.6,SNR=8.4				
VSU	Vasula	66.92 332	i P	P	12 04 46.7 -1.5
VSU			pmax	pmax	
	comp=Z,26nm,1.0s				
VSR	Storozhevoye	67.43 321	eP	P	12 04 50.5 -1.0
VSR			pmax	pmax	
	comp=Z,8.0nm,0.5s				
LCMT	Little Creek M	68.38 59	eP	P	12 04 58.8 +0.8
	comp=Z,2.5nm,0.9s				
KNB	Kanab	68.64 59	eP	P	12 04 59.9 +0.3
	comp=Z,8.9nm,1.4s				
KNB	Kanab	68.64 59	eP	P	12 04 59.9 +0.3
KNB			pmax	pmax	
	comp=Z,9.0nm,1.4s				
RSSD	Black Hills	68.88 48	eP	P	12 05 01.1 0.0
	comp=Z,4.3nm,0.9s				
RSSD	Black Hills	68.88 48	eP	P	12 05 01.1 0.0
RSSD			pmax	pmax	
	comp=Z,4.0nm,0.9s				
NC303	NORSAR Array S	69.02 340	eP	P	12 05 00.8 -0.6
	comp=Z,14nm,0.7s				
NC204	NORSAR Array S	69.12 341	eP	P	12 05 01.3 -0.7
	comp=Z,32nm,0.8s				
NB201	NORSAR Array S	69.19 340	eP	P	12 05 01.7 -0.7
	comp=Z,100nm,1.5s				
NB2	NORSAR Subarra	69.22 340	P	P	12 05 01.5 -1.1
	comp=Z,10nm,0.8s,baz=28,slow=6.5				
NB200	NORSAR Array S	69.22 340	eP	P	12 05 01.9 -0.7
NOA	NORSAR Array B	69.22 340	P	P	12 05 01.9 -0.7
	comp=Z,8.1nm,0.6s,baz=28,slow=6.4,SNR=28				
NOA			LR	LR	12 40 03.6
	comp=Z,61nm,18.2s,baz=25,slow=40				
AKT	Akhty	69.89 309	eP	P	12 05 08.0 +0.8
AKT			e		12 05 28.9
AKT			e		12 07 47.6
AKT			pmax	pmax	
	comp=Z,25nm,0.7s				
PV02	Paradox Valley	70.27 55	eP	P	12 05 09.2 -0.6
	comp=Z,4.6nm,1.0s				
AS31	Alice Springs	70.32 197	eP	P	12 05 11.0 +1.2
	comp=Z,1.6nm,0.7s				
ASAR	Alice Springs	70.32 197	P	P	12 05 11.6 +1.8
	comp=Z,5.6nm,0.8s,baz=11,slow=5.9,SNR=64				
KIV	Kislovodsk	70.86 314	eP	P	12 05 13.0 -0.1
	comp=Z,25nm,0.8s				
KIV	Kislovodsk	70.86 314	⇑iP	P	12 05 14.4 +1.3
KIV	Kislovodsk	70.86 314	eP	P	12 05 13.3 +0.2
KIV			pmax	pmax	
	comp=Z,101nm,1.0s				
KIV			MLR	MLR	
	comp=Z,330nm,18.0s				
KIV	Kislovodsk	70.86 314	eP	P	12 05 13.3 +0.2
KBZ	Khabaz	70.91 313	P	P	12 05 14.1 +0.9
	comp=Z,28nm,0.9s,baz=56,slow=3.5,SNR=34				
KBZ			LR	LR	12 40 39.9
	comp=Z,240nm,19.8s,baz=40,slow=40				
ZEI	Tsey	71.05 312	eP	P	12 05 12.1 -2.3
ZEI			pmax	pmax	
	comp=Z,12nm,0.7s				
X16A	Lo Mia Camp, P	71.20 60	eP	P	12 05 16.1 +0.7
	comp=Z,2.3nm,0.9s				
NEY	Neytrino	71.34 313	i P	P	12 05 16.1 0.0
NEY			pmax	pmax	
	comp=Z,3.0nm,1.0s				
TBLG	Delisi	71.34 311	eP	P	12 05 16.2 +0.2
	comp=Z,44nm,0.7s				
TBLG	Delisi	71.34 311	eP	P	12 05 16.2 +0.2
TBLG			pmax	pmax	
	comp=Z,44nm,0.7s				
AKASG	Malin Array Be	72.03 325	P	P	12 05 19.0 -0.9
	comp=Z,5.1nm,0.4s,baz=35,slow=6.6,SNR=22				
AKASG			LR	LR	12 39 36.6
	comp=Z,128nm,18.6s,baz=45,slow=38				
KIEV	Kiev	72.04 325	eP	P	12 05 19.0 -1.0
	comp=Z,10nm,0.9s				
KIEV	Kiev	72.04 325	⇑iP	P	12 05 19.4 -0.5
KIEV	Kiev	72.04 325	eP	P	12 05 19.0 -1.0
KIEV			pmax	pmax	
	comp=Z,10.0nm,0.9s				
AKH	Akhalkalaki	72.23 311	eP	P	12 05 21.4 -0.1
	comp=Z,21nm,0.7s				
AKH	Akhalkalaki	72.23 311	⇑iP	P	12 05 21.1 -0.4
AKH	Akhalkalaki	72.23 311	eP	P	12 05 21.4 -0.1
AKH			pmax	pmax	
	comp=Z,21nm,0.7s				
GNI	Garni	72.45 310	ceP	P	12 05 23.9 +1.1
GNI			pmax	pmax	
	comp=Z,139nm,1.3s				
ECSD	EROS Data Cent	72.96 45	eP	P	12 05 25.3 -0.2
	comp=Z,7.0nm,1.1s				
E38A	The Farm, Brul	73.22 40	eP	P	12 05 26.3 -0.8
	comp=Z,7.4nm,0.7s				
ANMO	Albuquerque	73.84 57	i P	P	12 05 30.6 -0.5
ANMO			pmax	pmax	
	comp=Z,1.0nm,1.1s				
SIM	Simferopol'	74.32 319	eP	P	12 05 34.5 +1.0
SIM			pmax	pmax	
	comp=Z,22nm,0.7s				
SIM			MLR	MLR	
	comp=Z,60nm,17.9s				
LVV	L'vov	74.76 328	eP	P	12 05 35.0 -1.0
SCHQ	Schefferville	75.26 22	LR	LR	12 41 10.7
	comp=Z,42nm,20.5s,baz=322,slow=38				
KWP	Kalwaria Pacla	75.41 328	eP	P	12 05 40.1 +0.4
KWP	Kalwaria Pacla	75.41 328	eP	P	12 05 40.1 +0.4
OJC	Ojcow	75.97 330	eP	P	12 05 43.0 0.0
OJC	Ojcow	75.97 330	eP	P	12 05 42.6 -0.4
	comp=Z,21nm,0.9s				
OJC	Ojcow	75.97 330	eP	P	12 05 42.6 -0.4
OJC			pmax	pmax	
	comp=Z,21nm,0.9s				
BUR08	Bucovina Ar. S	76.07 326	eP	P	12 05 43.4 -0.3
	comp=Z,21nm,0.6s				
BURAR	Bucovina Array	76.08 326	⇑iP	P	12 05 43.9 +0.1
KOLS	Kolonicke sedl	76.15 328	eP	P	12 05 44.1 +0.1
KOLS			pmax	pmax	
	comp=Z,16nm,1.1s				
KOLS	Kolonicke sedl	76.15 328	eP	P	12 05 44.1 +0.1
BIZ	Bicaz	76.27 325	⇑iP	P	12 05 45.0 +0.3
UZH	Uzhgorod	76.39 328	P	P	12 05 45.6 +0.3
TESR	Tescani	76.39 324	⇑iP	P	12 05 44.9 -0.5
NIE	Niedzica	76.47 329	eP	P	12 05 45.7 -0.1
NIE	Niedzica	76.47 329	eP	P	12 05 45.7 -0.1
TLCR		76.52 322	⇑iP	P	12 05 46.5 +0.4
TLCR		76.52 322	P	P	12 05 46.5 +0.4
KSP	Ksiaz	76.64 332	eP	P	12 05 46.5 -0.1
KSP	Ksiaz	76.64 332	eP	P	12 05 46.6 -0.1
CFR	Carcaliu	76.82 322	⇑iP	P	12 05 47.5 -0.3
OKC	Ostrava-Krasne	76.87 331	eP	P	12 05 48.8 +0.8
OKC	Ostrava-Krasne	76.87 331	eP	P	12 05 48.8 +0.8
VRI	Vrincioaia	76.87 324	⇑iP	P	12 05 48.6 +0.4
OSTC	Ostas	76.91 332	eP	P	12 05 48.1 -0.2
CHVC	Chvalec	76.93 332	eP	P	12 05 48.4 0.0
LANS	Liptovska Anna	76.99 330	eP	P	12 05 49.7 +0.9
LANS	Liptovska Anna	76.99 330	eP	P	12 05 49.7 +0.9
DPC	Dobruska-Polom	77.05 332	eP	P	12 05 49.3 +0.2
DPC	Dobruska-Polom	77.05 332	eP	P	12 05 49.3 +0.2
MORC	Moravsky Berou	77.13 331	eP	P	12 05 49.3 -0.2
	comp=Z,21nm,0.9s				
MORC	Moravsky Berou	77.13 331	⇑iP	P	12 05 50.0 +0.4
MORC	Moravsky Berou	77.13 331	P	P	12 05 49.9 +0.4
MORC	Moravsky Berou	77.13 331	eP	P	12 05 49.7 +0.1
KRLC	Kraliky	77.13 332	eP	P	12 05 50.0 +0.4
KRLC	Kraliky	77.13 332	eP	P	12 05 50.0 +0.4
KECS	Kecovo	77.18 329	eP	P	12 05 50.1 +0.3
KECS			pmax	pmax	
	comp=Z,40nm,1.0s				
KECS	Kecovo	77.18 329	eP	P	12 05 50.1 +0.3
CLL	Collm	77.27 335	eP	P	12 05 49.2 -1.1
	comp=Z,28nm,1.0s				
CLL	Collm	77.27 335	⇑iP	P	12 05 49.7 -0.5
	comp=Z,32nm,1.1s				
CLL			i		12 05 54.2
CLL			ePP	PP	12 08 42.0 -1.6
CLL			Lm	MLR	12 42 00.0
	comp=Z,100nm,20.8s				
CLL	Collm	77.27 335	⇑iP	P	12 05 49.7 -0.5
CLL			i		12 05 54.2
CLL			pmax	pmax	
	comp=Z,32nm,1.1s				
TIRR	Tirgusor	77.27 322	⇑iP	P	12 05 49.9 -0.5
HARR	Harsova	77.30 322	⇑iP	P	12 05 50.9 +0.4
TLB	Topalu	77.33 322	⇑iP	P	12 05 50.9 +0.2
BRG	Berggiesshubel	77.36 334	eP	P	12 05 50.5 -0.3
	comp=Z,12nm,1.3s				
BRG	Berggiesshubel	77.36 334	eP	P	12 05 50.5 -0.3
BRG			pmax	pmax	
	comp=Z,12nm,1.3s				
CJR	Cluj-Napoca	77.46 326	⇑iP	P	12 05 52.1 +0.6
PVCC	Panska Ves	77.46 333	eP	P	12 05 51.0 -0.3
PVCC	Panska Ves	77.46 333	eP	P	12 05 51.0 -0.3
MLR	Muntele Rosu	77.50 324	eP	P	12 05 51.7 -0.1
	comp=Z,15nm,1.0s				
MLR	Muntele Rosu	77.50 324	⇑iP	P	12 05 52.5 +0.7
MLR	Muntele Rosu	77.50 324	eP	P	12 05 51.7 -0.1
MLR			pmax	pmax	
	comp=Z,15nm,1.0s				
ISR	Istrita	77.55 323	⇑iP	P	12 05 52.3 +0.3
DRGR		77.74 327	P	P	12 05 53.8 +0.7
VYHS	Vyhne	77.77 330	eP	P	12 05 53.5 +0.4
VYHS			pmax	pmax	
	comp=Z,9.0nm,1.1s				
VYHS	Vyhne	77.77 330	eP	P	12 05 53.5 +0.4
ICOR	Ion Corvin	77.81 322	⇓iP	P	12 05 54.4 +1.0
VRAC	Vranov	77.85 331	⇑iP	P	12 05 53.6 0.0
VRAC	Vranov	77.85 331	eP	P	12 05 53.9 +0.3
JAVC	Velka Javorina	77.87 331	eP	P	12 05 54.9 +1.2
PSZ	Piszkesteto	77.87 329	eP	P	12 05 53.7 -0.1
	comp=Z,13nm,0.9s				
PSZ	Piszkesteto	77.87 329	⇑iP	P	12 05 54.5 +0.7
PSZ	Piszkesteto	77.87 329	eP	P	12 05 53.7 -0.1
PSZ			pmax	pmax	
	comp=Z,13nm,0.9s				
VOIR		77.92 324	⇑iP	P	12 05 54.5 +0.4
GOPC	GO Pecny, Ondr	77.92 333	eP	P	12 05 53.8 -0.2
GOPC	GO Pecny, Ondr	77.92 333	eP	P	12 05 53.8 -0.2
PRU	Pruhonice	77.94 333	eP	P	12 05 54.0 0.0
PRU			MLR	MLR	
	comp=Z,200nm,20.7s				
PRU	Pruhonice	77.94 333	eP	P	12 05 54.0 0.0
PRU			AMS	AMS	12 43 40.0
	comp=Z,200nm,20.7s				
KRUC	Moravsky	78.13 331	eP	P	12 05 55.3 +0.2
ARR	Arges	78.14 325	⇑iP	P	12 05 56.5 +1.2
NKC	Novy Kostel	78.38 334	eP	P	12 05 56.6 +0.1
NKC	Novy Kostel	78.38 334	eP	P	12 05 56.6 +0.1
MODS	Modra-Piesok	78.42 331	eP	P	12 05 56.3 -0.4
MODS			pmax	pmax	
	comp=Z,19nm,1.1s				
MODS	Modra-Piesok	78.42 331	eP	P	12 05 56.3 -0.4
BR131	Keskin Array S	78.53 316	eP	P	12 05 57.4 -0.3
	comp=Z,8.4nm,1.0s				
BRTR	Keskin Array B	78.53 316	P	P	12 05 58.2 +0.5
	comp=Z,5.2nm,0.9s,baz=57,slow=5.2,SNR=13				
BRTR			LR	LR	12 46 12.3
	comp=Z,50nm,19.4s,baz=90,slow=40				
ANTO	Ankara	78.84 316	⇑iP	P	12 06 00.5 +1.2
GZR	Gura Zlata	78.87 326	⇑iP	P	12 05 59.1 -0.2
HDIL	Hopedale	78.92 42	eP	P	12 05 59.5 -0.1
	comp=Z,18nm,0.6s				
KHC	Kasperske Hory	79.00 333	eP	P	12 05 59.9 0.0
	comp=Z,6.9nm,0.8s				
KHC	Kasperske Hory	79.00 333	c iP	P	12 06 00.0 0.0
KHC			pmax	pmax	
	comp=Z,37nm,0.9s				
KHC	Kasperske Hory	79.00 333	eP	P	12 06 00.1 +0.2
KHC			epP	pwP	12 06 12.0 +0.8
KHC			AMS	AMS	12 44 40.0
	comp=Z,200nm,20.5s				
BZS	Buzias	79.14 327	⇑iP	P	12 06 01.0 +0.3
GERES	GERESS Array B	79.21 333	P	P	12 06 00.9 -0.2
	comp=Z,4.1nm,0.7s,baz=46,slow=5.8,SNR=24				
GERES			LR	LR	12 44 42.0
	comp=Z,58nm,18.7s,baz=14,slow=38				
GRFO	Grafenberg	79.23 335	eP	P	12 06 01.0 -0.2
	comp=Z,21nm,1.0s				
GRFO	Grafenberg	79.23 335	eP	P	12 06 01.0 -0.2
GRFO			pmax	pmax	
	comp=Z,21nm,1.0s				
CONA	Conrad Observa	79.29 331	eP	P	12 06 02.2 +0.6
	comp=Z,5.6nm,0.8s				
HERR	Herculane	79.44 326	⇑iP	P	12 06 01.6 -0.8
TX31	Lajitas Ar. Si	79.47 59	eP	P	12 06 02.9 0.0
	comp=Z,3.6nm,0.8s				
TXAR	Lajitas Array	79.47 59	P	P	12 06 03.4 +0.5
	comp=Z,0.7nm,0.6s,baz=304,slow=4.0,SNR=14				
RAR	Rarotonga	79.79 134	LR	LR	12 34 08.1
	comp=Z,117nm,21.9s,baz=50,slow=30				
MDVR	Moldovita	79.80 326	⇑iP	P	12 06 03.9 -0.5
MEM	Membach	79.87 338	P	P	12 06 03.6 -1.0
	comp=Z,16nm,1.1s				
MOA	Molln	79.89 332	eP	P	12 06 05.2 +0.4
	comp=Z,5.0nm,0.7s				
CCM	Cathedral Cave	79.90 45	eP	P	12 06 04.7 -0.3
	comp=Z,5.5nm,0.7s				
CCM	Cathedral Cave	79.90 45	eP	P	12 06 04.7 -0.3
CCM			pmax	pmax	
	comp=Z,5.0nm,0.7s				
ARSA	Arzberg	79.99 331	eP	P	12 06 05.9 +0.5
	comp=Z,6.6nm,1.0s				
BCLA	Clavier	80.23 339	⇓P	P	12 06 06.6 +0.1
SOKA	Soboth	80.65 331	eP	P	12 06 09.0 0.0
	comp=Z,7.9nm,0.9s,SNR=7.7				
PERS	Pernice	80.66 331	i P	P	12 06 09.0 0.0
DOU	Dourbes	80.71 339	⇓P	P	12 06 09.1 0.0
KBA	Koelnbreinsper	80.87 332	eP	P	12 06 11.0 +0.7
	comp=Z,10.0nm,0.8s,SNR=13				
OBKA	Obir	80.96 331	eP	P	12 06 10.6 -0.1
	comp=Z,4.6nm,1.0s				
VTS	Vitosha	80.97 324	eP	P	12 06 10.8 -0.1
	comp=Z,22nm,0.9s				
VTS	Vitosha	80.97 324	⇑iP	P	12 06 11.1 +0.2
VTS	Vitosha	80.97 324	eP	P	12 06 10.8 -0.1
VTS			pmax	pmax	
	comp=Z,22nm,0.9s				
GOLS	Golise	81.03 330	i P	P	12 06 10.7 -0.3
GCIS	Gornji Cirnik	81.15 330	i P	P	12 06 11.1 -0.5
MYKA	Terra Mystica	81.16 332	eP	P	12 06 10.9 -0.8
	comp=Z,6.2nm,1.0s				
ALN	Alexandroupoli	81.17 321	eP	P	12 06 11.1 -0.6
	comp=Z,11nm,1.2s				
ALN	Alexandroupoli	81.17 321

BFO Black Forest 81.30 336 *ce*P **P 12 06 12.8 +0.4**
MOTA Moosalm 81.35 334 *e*P **P 12 06 13.5 +0.7**
comp=Z,14nm,1.0s
MIAR Mount Ida 81.38 49 *e*P **P 12 06 13.1 +0.1**
comp=Z,11nm,1.0s
MIAR Mount Ida 81.38 49 *e*P **P 12 06 13.1 +0.1**
MIAR pmax pmax
comp=Z,11nm,1.0s
PMOR Pomariorio Ree 81.42 121 *e*T T 13 36 01.4
comp=Z,2.4nm,0.2s
SQTA Sankt Quirin 81.43 334 *e*P **P 12 06 13.7 +0.5**
comp=Z,6.8nm,0.7s
ABTA Abfaltersbach 81.43 333 *e*P **P 12 06 13.3 +0.2**
comp=Z,6.0nm,1.1s
W41B Gary Mavity, V 81.60 48 *e*P **P 12 06 14.4 +0.3**
comp=Z,7.6nm,0.9s
ECH Echery 81.74 337 *e*P **P 12 06 14.1 -0.6**
comp=Z,7.7nm,1.0s
ECH Echery 81.74 337 *e*P **P 12 06 14.1 -0.6**
ECH pmax pmax
comp=Z,8.0nm,1.0s
FETA Feichten 81.76 334 *i* P **P 12 06 15.2 +0.2**
comp=Z,4.8nm,1.1s
DAVA Damuels 81.78 334 *e*P **P 12 06 15.5 +0.4**
comp=Z,7.8nm,1.0s
PPT2 Papeete2 82.44 124 *e*LR LR 12 32 11.7
comp=Z,123nm,23.5s
TUE Stuetta 82.67 334 *e*P **P 12 06 19.6 -0.3**
comp=Z,10nm,1.2s
PDG Podgorica 82.74 326⇑*i*P **P 12 06 19.7 -0.3**
TTG Podgorica 82.74 326 *e*P **P 12 06 19.2 -0.8**
comp=Z,8.7nm,0.7s
TTG Podgorica 82.74 326 *e*P **P 12 06 19.2 -0.8**
TTG pmax pmax
comp=Z,9.0nm,0.7s
FNA Florina 83.27 324 *e*P **P 12 06 22.3 -0.5**
comp=Z,8.3nm,1.1s
FNA Florina 83.27 324 *e*P **P 12 06 22.3 -0.5**
FNA pmax pmax
comp=Z,8.0nm,1.1s
SSF Saint Saulge 83.79 338 *e*P **P 12 06 25.2 -0.1**
SSF pmax pmax
comp=Z,7.0nm,1.0s
CLTN Cedars of Leba 83.87 43 *e*P **P 12 06 26.1 +0.2**
comp=Z,2.9nm,0.9s
LPL La Plagne 84.32 336 *e*P **P 12 06 28.6 +0.3**
LPL pmax pmax
comp=Z,5.0nm,0.7s
SWET Sewanee 84.76 44 *e*P **P 12 06 30.3 -0.2**
comp=Z,8.3nm,0.7s
MFF Saint Martin d 85.12 341 *e*P **P 12 06 31.4 -0.6**
MFF pmax pmax
comp=Z,13nm,1.1s
CPCT Cooper Cave 85.26 43 *e*P **P 12 06 32.9 0.0**
comp=Z,4.4nm,0.9s
CAF Calviac 86.14 339 *e*P **P 12 06 37.2 0.0**
CAF pmax pmax
comp=Z,9.0nm,0.8s
Z50A Ashland 86.34 45 *e*P **P 12 06 38.2 -0.2**
comp=Z,8.6nm,0.8s
LFF La Frestale 86.47 339 *e*P **P 12 06 39.8 +1.1**
LFF pmax pmax
comp=Z,4.0nm,0.4s
KEST Kesra 92.32 330 LR LR 12 53 58.5
comp=Z,54nm,18.3s,baz=266,slow=39
ESDC Sonseca Array 92.57 341 P **P 12 07 07.5 -0.2**
comp=Z,0.7nm,0.7s,baz=352,slow=4.5,SNR=4.1
MSEY Mahe Island 97.26 271 *ce*P Pdif 12 07 30.3 +0.8
TOA1 Torodi Ar. Sit 115.65 327 *e*PKPdf **PKiKP 12 12 37.5 -1.2**
TORD Torodi Ar. Bea 115.65 327 PKP **PKiKP 12 12 37.5 -1.2**
comp=Z,0.7nm,0.8s,baz=36,slow=2.0,SNR=2.8
BDFB Brasilia 146.40 35 PKPbc **PKPdf 12 13 36.6 +0.3**
comp=Z,4.9nm,0.7s,baz=282,slow=1.8,SNR=7.0
PLCA Paso Flores 149.44 97 PKPbc **PKPbc 12 13 45.5 +0.6**
comp=Z,2.1nm,0.7s,baz=262,slow=3.6,SNR=5.3
CPUP Villa Florida 150.44 60 PKPbc **PKPbc 12 13 47.5 -0.2**
comp=Z,2.5nm,0.6s,baz=303,slow=2.3,SNR=6.2
SNAA Sanae 150.69 196 PKPdf **PKPbc 12 13 47.1 +0.1**
VNA2 Neumayer--Watz 152.16 195 PKPdf **PKiKP 12 13 50.7 0.0**
baz=95,slow=0.7
VNA3 Neumayer Olymp 152.28 193 PKPdf **PKPbc 12 13 50.7 +0.1**
VNA1 Neumayer--Stat 152.55 195 PKPdf **PKiKP 12 13 51.6 +0.2**

ISK ***03*** *12:17:15.9, 38°.09N×27°.03E, h11km, ML2.3/6*
DDA ***03*** *12:17:16.4, 38°.09N×27°.00E, h7km±1km, ML2.7*
ISCJB ***03*** *12:17:17.1±0.5, 38°.07N±0°.03×27°.02E±0°.05, h8km±6km, Error ellipse: s-maj=7.2km s-min=4.0km az=138.3*
ISC 03 12:17:16.9±0.9, 38°.10N±0°.03×27°.03E±0°.03, h12km±7km, n18, σ0.84/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	**zmir**	**0.12**	**249**	*i* P	**Pg**	**12 17 19.9**	**-0.1**
DGB				*i* S	**Sg**	**12 17 23.6**	**+1.3**
DGB				IAML_P			
comp=Z,9μm,0.3s							
BLCB	**Balcova**	**0.29**	**2**	PG	**Pg**	**12 17 22.0**	**-0.9**
GCAM	**G?zelcaml?**	**0.43**	**157**	PG	**Pg**	**12 17 24.8**	**-0.6**
GCAM	**G?zelcaml?**	**0.43**	**157**	*i* P	**Pb**	**12 17 25.7**	**-0.7**
GCAM				*i* S	**Sb**	**12 17 32.5**	**-0.3**
GCAM				IAML_P			
comp=Z,5μm,0.2s							
URLA	**Izmir**	**0.43**	**308**	PG	**Pg**	**12 17 24.9**	**-0.6**
URLA				SG	**Sb**	**12 17 31.9**	**-1.0**
URLA	**Izmir**	**0.43**	**308**	*i* P	**Pb**	**12 17 25.9**	**-0.6**
URLA				*i* S	**Sb**	**12 17 33.0**	**0.0**
URLA				IAML_P			
comp=Z,1μm,0.2s							
ZEY	**zmir**	**0.44**	**289**	*i* P	**Pg**	**12 17 25.4**	**-0.2**
ZEY				*i* S	**Sb**	**12 17 32.7**	**-0.4**
ZEY				IAML_P			
comp=Z,4μm,0.1s							
AYDB	**Zeytinkoy-Aydi**	**0.70**	**102**	PG	**Pg**	**12 17 29.7**	**-0.8**
AYDN	**Tasoluk**	**0.80**	**123**	*i* P	**Pg**	**12 17 32.1**	**-0.4**
AYDN				*i* S	**Sn**	**12 17 46.9**	**+0.9**
AYDN				IAML_P			
comp=Z,3μm,0.2s							
CHOS	**Chios island**	**0.82**	**291**	PG	**Pg**	**12 17 32.4**	**-0.4**
CHOS				SG	**Sb**	**12 17 44.3**	**+0.1**
ZEDA	**zmir-Bergama**	**0.87**	**3**	*i* P	**Pn**	**12 17 34.8**	**-0.2**
ZEDA				*i* S	**Sn**	**12 17 48.3**	**+0.7**
ZEDA				IAML_P			
comp=Z,356nm,0.1s							
BODT	**Bodrum**	**1.06**	**168**	PG	**Pb**	**12 17 36.6**	**-0.6**
BDRM	**Kayabasi**	**1.08**	**162**	*i* P	**Pn**	**12 17 37.9**	**-0.1**
BDRM				*i* S	**Sn**	**12 17 55.5**	**+2.7**
BDRM				IAML_P			
comp=Z,596nm,0.2s							
MANT	**Manisa**	**1.27**	**71**	*i* P	**Pg**	**12 17 41.4**	**0.0**
MANT				*i* S	**Sg**	**12 17 57.8**	**-0.1**
MANT				IAML_P			
comp=Z,2μm,0.2s							
KULA	**Kula-Manisa**	**1.35**	**72**	PN	**Pn**	**12 17 41.5**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.39**	**23**	*i* P	**Pg**	**12 17 43.9**	**+0.3**
STEP				*i* S	**Sg**	**12 18 02.9**	**+1.2**
STEP				IAML_P			
comp=Z,495nm,0.1s							
SIGR	**SIGRI**	**1.44**	**321**	PN	**Pn**	**12 17 42.9**	**0.0**
APE	**Apeiranthos**	**1.57**	**230**	PN	**Pn**	**12 17 43.8**	**-0.9**

IDC ***03*** *12:18:49.5±1.5, 11°.87N×86°.61W, h0km, mb3.3/5, mb1 3.7/7, mb1mx3.6/30, mbtmp3.3/7, ML3.3/2, MS2.6/2, Ms1 2.6/2, ms1mx2.4/24, Error ellipse: s-maj=96.1km s-min=19.3km az=47.0*
ISCJB ***03*** *12:18:50.4±0.7, 11°.04N±0°.05×87°.37W±0°.04, h40km±10km, mb3.2/5, MS2.8/1, Error ellipse: s-maj=9.6km s-min=4.0km az=41.6*
UCR ***03*** *12:18:51.0±1.8, 11°.06N×87°.38W, h35km±999km, MD4.2, ML3.8*
SNET ***03*** *12:18:52.6±1.3, 11°.31N×87°.42W, h13km±33km, ML3.8*
SSS ***03*** *12:18:52.6, 11°.31N×87°.42W, h13km, ML3.8*
ISC 03 12:18:51.6±1.9, 11°.19N±0°.06×87°.26W±0.06, h26km±13km, n52, σ1.20/69, mb3.3/5, 3C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.18**	**34**	*e*P	**Pb**	**12 19 13.9**	**+0.5**
MGAN	**Managua**	**1.38**	**46**	*e*P	**Pb**	**12 19 16.6**	**-0.1**
MOMN	**Momotombo**	**1.40**	**30**	*e*P	**Pb**	**12 19 16.9**	**-0.3**
MOMN				*e*S	**Sb**	**12 19 37.0**	**+2.3**
CNGN	**Cerro Negro**	**1.41**	**23**	*e*P	**Pb**	**12 19 16.1**	**-1.3**
CNGN				*e*S	**Sb**	**12 19 35.9**	**+0.9**
CNGN				IAML		12 19 44.9	
comp=N,522nm,0.3s							
CNGN	**Cerro Negro**	**1.41**	**23**	*e*P	**Pb**	**12 19 15.9**	**-1.5**
CNGN				*e*S	**Sb**	**12 19 35.9**	**+0.9**
CRIN	**San Cristobal**	**1.52**	**8**⇑	*i*P	**Pb**	**12 19 18.6**	**-0.5**
CRIN				*e*S	**Sb**	**12 19 40.0**	**+2.1**
CONN	**Concepcion**	**1.65**	**77**	*e*P	**Pn**	**12 19 18.9**	**0.0**
BRAN	**Las Pilas**	**1.76**	**30**	*e*P	**Pn**	**12 19 15.8**	**-4.6**
NY14	**Universidad de**	**1.78**	**107**	*i* P	**Pn**	**12 19 20.6**	**-0.2**
CSGN	**Cosiguina Volc**	**1.80**	**351**⇑	*i*P	**Pb**	**12 19 22.7**	**-1.2**
CSGN				*e*S	**Sb**	**12 19 45.7**	**-0.4**
GPS1	**Guardaparques**	**1.92**	**102**	*i* P	**Pn**	**12 19 22.4**	**-0.4**
LIM1	**Limonal**	**2.04**	**104**	*i* P	**Pn**	**12 19 24.1**	**-0.1**
ESTN	**Estel**	**2.09**	**25**	*e*P	**Pb**	**12 19 26.3**	**-2.6**
ESTN				*e*P	**Pn**	**12 19 26.7**	**+1.6**
ESTN	**Estel**	**2.09**	**25**	*e*P	**Pb**	**12 19 26.3**	**-2.6**
CNCH	**Conchagua**	**2.15**	**345**	*e*P	**Pn**	**12 19 26.5**	**+0.7**
CNCH				*e*S	**Sn**	**12 19 51.9**	**+0.2**
CNCH	**Conchagua**	**2.15**	**345**	*e*P	**Pn**	**12 19 26.6**	**+0.7**
CNCH				*e*S	**Sn**	**12 19 51.9**	**+0.2**
MATN	**Matagalpa**	**2.17**	**37**	*e*P	**Pb**	**12 19 27.2**	**-3.1**
MATN				IAML		12 19 59.9	
comp=E,852nm,0.3s							
ACON	**Acoyapa**	**2.19**	**69**	*e*P	**Pn**	**12 19 26.1**	**-0.2**
ACON				IAML		12 20 03.5	
comp=E,3μm,0.5s							
LCND	**La Caada**	**2.19**	**344**	*e*P	**Pn**	**12 19 26.9**	**+0.5**
LCND				*e*S	**Sn**	**12 19 52.3**	**-0.4**
LCND				IAML		12 19 59.0	
comp=Z,482nm,0.3s							
LCND	**La Caada**	**2.19**	**344**	*e*P	**Pn**	**12 19 26.9**	**+0.5**
LCND				*e*S	**Sn**	**12 19 52.3**	**-0.4**
LCND				IAML		12 19 59.0	
comp=Z,482nm,0.3s							
ACAL	**Aguas Claras**	**2.26**	**104**	*i* P	**Pn**	**12 19 27.6**	**+0.3**
ACAL				*i* S	**Sn**	**12 19 55.2**	**+0.8**
LCY	**Lacayo**	**2.44**	**336**	*e*P	**Pn**	**12 19 29.9**	**0.0**
LCY	**Lacayo**	**2.44**	**336**	*e*P	**Pn**	**12 19 29.9**	**0.0**
JTS	**Las Juntas de**	**2.44**	**111**	Pn	**Pn**	**12 19 29.0**	**-0.9**
comp=Z,7.1nm,0.3s,baz=354,slow=23,SNR=38							
JTS				LR	LR	12 19 56.8	
comp=Z,60nm,19.3s,baz=2.5,slow=30							
JTS				Sn	**Sn**	**12 19 57.7**	**-1.2**
comp=Z,13nm,0.3s,baz=349,slow=12,SNR=9.0							
JTS	**Las Juntas de**	**2.44**	**111**	*e*P	**Pn**	**12 19 28.9**	**-0.9**
JTS				*e*S	**Sn**	**12 19 58.6**	**-0.3**
PACA	**Pacayal**	**2.49**	**336**	*e*P	**Pn**	**12 19 31.0**	**+0.4**
PACA	**Pacayal**	**2.49**	**336**	*e*P	**Pn**	**12 19 31.0**	**+0.4**
TECA	**Tecapa**	**2.59**	**332**	*e*P	**Pn**	**12 19 31.9**	**-0.1**
TECA				*e*S	**Sn**	**12 20 03.4**	**+0.6**
TECA	**Tecapa**	**2.59**	**332**	*e*P	**Pn**	**12 19 31.9**	**-0.1**
TECA				*e*S	**Sn**	**12 20 03.4**	**+0.6**
ARE1	**Arenal 1**	**2.60**	**106**⇑	*i*P	**Pn**	**12 19 32.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.85**	**360**	*e*P	**Pn**	**12 19 37.0**	**+1.6**
TGUH	**Tegucigalpa,Un**	**2.85**	**360**	*e*P	**Pn**	**12 19 37.0**	**+1.6**
LFRS	**El Faro**	**2.99**	**324**	*e*P	**Pn**	**12 19 36.4**	**-1.0**
LFRS				*e*S	**Sn**	**12 20 11.9**	**-0.6**
VICT	**Victoria**	**3.06**	**334**	*e*P	**Pn**	**12 19 38.9**	**+0.5**
VICT	**Victoria**	**3.06**	**334**	*e*P	**Pn**	**12 19 38.9**	**+0.5**
ESPN	**Las Esperanzas**	**3.07**	**71**	*e*P	**Pn**	**12 19 39.0**	**+0.6**
LFU	**La Fuente**	**3.12**	**325**	*e*P	**Pn**	**12 19 39.2**	**0.0**
LFU	**La Fuente**	**3.12**	**325**	*e*P	**Pn**	**12 19 39.2**	**0.0**
CEVE	**Cerro Verde**	**3.49**	**319**	*e*P	**Pn**	**12 19 44.7**	**+0.2**
CEVE				*e*S	**Sn**	**12 20 25.4**	**+0.3**
CEVE				IAML		12 20 33.5	
comp=Z,300nm,0.3s							
CEVE	**Cerro Verde**	**3.49**	**319**	*e*P	**Pn**	**12 19 44.7**	**+0.2**
CEVE				*e*S	**Sn**	**12 20 25.4**	**+0.3**
CEVE				IAML		12 20 33.5	
comp=Z,300nm,0.3s							
MTO3	**Montecristo**	**3.79**	**328**	*e*P	**Pn**	**12 19 49.5**	**+0.9**
MTO3	**Montecristo**	**3.79**	**328**	*e*P	**Pn**	**12 19 49.5**	**+0.9**
DRK0	**Durika**	**4.39**	**115**⇑	*i*P	**Pn**	**12 19 57.1**	**+0.2**
CMIG	**Matias Romero**	**9.43**	**309**	Pn	**Pn**	**12 21 07.7**	**+1.8**
comp=Z,0.3nm,0.3s,baz=150,slow=10,SNR=4.2							
SJG	**San Juan**	**21.54**	**69**	LR	LR	12 31 12.2	
comp=Z,35nm,20.7s,baz=100,slow=36							
TXAR	**Lajitas Array**	**23.67**	**322**	P	**P**	**12 24 02.5**	**+1.3**
comp=Z,0.3nm,0.6s,baz=134,slow=7.2,SNR=4.2							
PDAR	**Pinedale Array**	**36.98**	**332**	P	**P**	**12 25 58.2**	**-0.8**
comp=Z,0.1nm,0.4s,baz=135,slow=12,SNR=3.1							
NVAR	**Mina Array Bea**	**38.77**	**320**	P	**P**	**12 26 16.0**	**+1.7**
comp=Z,0.7nm,0.7s,baz=144,slow=6.0,SNR=4.6							
YKA	**Yellowknife Ar**	**54.87**	**345**	P	**P**	**12 28 18.0**	**-1.5**
comp=Z,0.2nm,0.6s,baz=172,slow=5.0,SNR=3.6							
ILAR	**Eielson Array**	**67.24**	**336**	P	**P**	**12 29 42.6**	**-0.9**
comp=Z,0.2nm,0.4s,baz=152,slow=5.3,SNR=3.7							
ASAR	**Alice Springs**	**138.96**	**247**	PKP	**PKPdf**	**12 38 17.7**	**+1.0**
comp=Z,0.4nm,0.9s,baz=90,slow=2.8,SNR=3.6							
CMAR	**Chiang Mai Arr**	**149.91**	**348**	PKPbc	**PKPbc**	**12 38 40.6**	**0.0**
comp=Z,0.4nm,0.4s,baz=26,slow=2.3,SNR=3.2							

JMA ***03*** *12:34:00.9±0.2, 37°.09N×142°.68E, h18km, M4.0*
NIED ***03*** *12:34:00, 37°.10N×142°.70E, h11km, Mw3.9 Best double couple: M0=8.28000×10^14 NP1:ϕs=247.00000°, δ54.00000°, λ-7.00000°. NP2:ϕs=341.00000°, δ84.00000°, λ-144.00000°.*
ISCJB ***03*** *12:34:02.1±0.4, 37°.10N±0°.03×142°.57E±0°.04, h9km, mb4.2/23, MS3.4/1, Error ellipse: s-maj=4.7km s-min=3.7km az=38.4*
IDC ***03*** *12:34:02.9±0.8, 37°.03N×142°.60E, h0km, mb3.8/10, mb1 4.0/16, mb1mx3.8/53, mbtmp3.9/16, ML3.3/5, MS2.9/5, Ms1 2.9/5, ms1mx2.6/57, Error ellipse: s-maj=18.9km s-min=14.1km az=121.0*
NEIC ***03*** *12:34:08.1±1.1, 37°.10N×142°.45E, h35km, mb4.2/15, Error ellipse: s-maj=20.1km s-min=8.4km az=131.0*
ISC 03 12:34:04.3±0.7, 37°.11N±0°.05×142°.48E±0°.06, h9km, n62, σ1.33/67, mb4.0/23, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.30**	**282**	P	**Pn**	**12 34 26.5**	**-2.2**
JFK				S	**Sb**	**12 34 45.6**	**-0.3**
ONAJ	**Iwakimizuishiy**	**1.34**	**270**	P	**Pn**	**12 34 27.1**	**-2.2**
ONAJ				S	**Sb**	**12 34 46.5**	**-0.4**
JIKH	**Ishinomakikobu**	**1.44**	**327**	P	**Pn**	**12 34 28.0**	**-2.6**
JFFD	**Fukushimafurud**	**1.53**	**270**	P	**Pn**	**12 34 30.3**	**-1.5**
JFFD				S	**Sn**	**12 34 51.9**	**0.0**
JFT	**Otama**	**1.75**	**284**	P	**Pn**	**12 34 33.8**	**-1.1**
JFT				S	**Sn**	**12 34 57.4**	**0.0**
JYK	**Kaneyama**	**2.46**	**318**	P	**Pn**	**12 34 43.2**	**-1.4**
JYK				S	**Sn**	**12 35 14.9**	**+0.1**
JAG	**Ashikaga**	**2.52**	**255**	P	**Pn**	**12 34 45.1**	**-0.3**
JAG				S	**Sn**	**12 35 17.2**	**+0.9**
JOM	**Ohasama**	**2.54**	**339**	P	**Pn**	**12 34 43.2**	**-2.5**
JOM				S	**Sn**	**12 35 15.0**	**-1.7**
MJAR	**Matsushiro Arr**	**3.47**	**262**	Pn	**Pn**	**12 34 59.8**	**+1.3**
0.6nm,0.3s,baz=93,slow=16,SNR=31							
MJAR				Sn	**Sb**	**12 35 44.4**	**-3.8**
0.6nm,0.3s,baz=245,slow=26,SNR=4.6							
MAJO	**Matsushiro**	**3.47**	**262**	*e*Pn	**Pn**	**12 35 00.3**	**+1.8**
MAT	**Matsushiro**	**3.47**	**262**	P	**Pn**	**12 35 00.4**	**+1.9**
MAT				*e*S	**Sn**	**12 35 40.5**	**+0.7**
MJB9	**Matsu-Tunnel**	**3.47**	**262**	*e*Pn	**Pn**	**12 35 00.3**	**+1.8**
JHJ2	**Mitsune**	**4.54**	**209**	*e*Pn	**Pn**	**12 35 14.2**	**+0.9**
JHJ2				*e*Sn	**Sn**	**12 36 05.9**	**-0.3**
JHJ	**Hachijo jima 2**	**4.55**	**210**	Pn	**Pn**	**12 35 12.9**	**-0.4**
9.4nm,0.3s,baz=326,slow=20,SNR=15							
JHJ				Sn	**Sn**	**12 36 04.5**	**-1.8**
11nm,0.3s,baz=13,slow=17,SNR=3.5							
JHJ				LR	LR	12 36 44.0	
comp=Z,51nm,18.4s,baz=14,slow=36							
INU	**Inuyama**	**4.75**	**250**	*e*Pn	**Pn**	**12 35 17.5**	**+1.5**
ERM	**Erimo**	**4.93**	**6**	*e*Pn	**Pn**	**12 35 17.4**	**-1.1**
ERM				*e*Sn	**Sn**	**12 36 16.2**	**+0.6**
ASAJ	**Asahikawa**	**7.00**	**1**	Pn	**Pn**	**12 35 48.6**	**+1.7**
2.0nm,0.3s,baz=230,slow=11,SNR=9.5							
ASAJ				Sn	**Sn**	**12 37 07.4**	**+0.7**
0.7nm,0.3s,baz=256,slow=4.2,SNR=2.2							
ASAJ				LR	LR	12 39 03.0	
comp=Z,83nm,19.1s,baz=186,slow=42							
JNU	**Nakatsue**	**10.30**	**251**	Pn	**Pn**	**12 36 35.0**	**+2.7**
0.2nm,0.3s,baz=62,slow=16,SNR=4.5							
JNU	**Nakatsue**	**10.30**	**251**	*e*Pn	**Pn**	**12 36 33.7**	**+1.5**
USA0B	**Ussuriysk Arra**	**10.65**	**315**	*e*Pn	**Pn**	**12 36 38.9**	**+1.8**
USRK	**Ussuriysk Ar.**	**10.65**	**315**	Pn	**Pn**	**12 36 40.5**	**+3.4**
0.2nm,0.3s,baz=146,slow=13,SNR=7.8							
KSRS	**Korea Array**	**11.60**	**276**	Pn	**Pn**	**12 36 53.5**	**+3.5**
baz=91,slow=14,SNR=12							
KSRS				LR	LR	12 41 15.5	
comp=Z,60nm,18.7s,slow=37							
KLR	**Kul'dur**	**14.40**	**331**	LR	LR	12 42 09.0	
comp=Z,36nm,20.0s,baz=185,slow=34							
SEY	**Seymchan**	**26.56**	**10**	P	**P**	**12 39 43.1**	**+0.9**
1.6nm,0.7s,baz=180,slow=4.8,SNR=10							
H11N2	**WAKE ISLAND Hy**	**27.46**	**122**	T	T	13 08 36.2	
baz=315,slow=75,SNR=124							
H11N1	**WAKE ISLAND Hy**	**27.47**	**122**	T	T	13 08 37.5	
baz=315,slow=75,SNR=79							
H11N3	**WAKE ISLAND Hy**	**27.48**	**122**	T	T	13 08 41.4	
baz=315,slow=75,SNR=63							
ULN	**Ulaanbaatar**	**28.02**	**304**	*e*P	**P**	**12 39 55.9**	**+0.2**
4.2nm,1.1s							
ENH	**Enshi**	**28.18**	**266**	*e*P	**P**	**12 39 56.6**	**-0.6**
9.6nm,1.0s							
H11S1	**WAKE ISLAND Hy**	**28.19**	**125**	T	T	13 09 33.2	
baz=317,slow=76,SNR=57							
H11S3	**WAKE ISLAND Hy**	**28.20**	**125**	T	T	13 09 43.1	
baz=317,slow=76,SNR=48							
H11S2	**WAKE ISLAND Hy**	**28.21**	**125**	T	T	13 09 34.2	
baz=317,slow=76,SNR=44							
SONA0	**Songino Array**	**28.45**	**304**	*e*P	**P**	**12 39 59.4**	**-0.2**
SONM	**Songino Array**	**28.45**	**304**	P	**P**	**12 39 59.4**	**-0.2**
1.3nm,0.4s,baz=98,slow=10,SNR=4.2							
ZAA0	**Zalesovo Array**	**42.49**	**312**	*e*P	**P**	**12 42 00.2**	**+0.5**
3.5nm,1.1s							
ZAA1	**Zalesovo Array**	**42.49**	**312**	*e*P	**P**	**12 42 00.2**	**+0.6**
ZALV	**Zalesovo Beam**	**42.49**	**312**	P	**P**	**12 42 00.2**	**+0.6**
0.7nm,0.5s,baz=90,slow=8.9,SNR=3.8							
MK31	**Makanchi Array**	**44.80**	**302**	*e*P	**P**	**12 42 17.9**	**-0.4**
1.1nm,0.8s							
MK32	**Makanchi Array**	**44.80**	**302**	*e*P	**P**	**12 42 18.3**	**-0.1**
MKAR	**Makanchi Array**	**44.80**	**302**	P	**P**	**12 42 18.3**	**-0.1**
0.9nm,0.7s,baz=94,slow=8.9,SNR=9.0							
MAKZ	**Makanchi**	**45.01**	**302**	*e*P	**P**	**12 42 19.9**	**-0.1**
1.9nm,0.9s							
OHAK	**Old Harbor**	**46.12**	**43**	*e*P	**P**	**12 42 28.6**	**-0.1**
52nm,1.4s							
KURK	**Kurchatov**	**46.55**	**308**	*e*P	**P**	**12 42 32.0**	**-0.1**
3.3nm,0.7s							
ILAR	**Eielson Array**	**48.98**	**32**	P	**P**	**12 42 50.8**	**0.0**
0.7nm,0.7s,baz=268,slow=6.9,SNR=11							
ILB	**Eielson Array**	**48.98**	**32**	*e*P	**P**	**12 42 51.2**	**+0.4**
1.9nm,0.9s							
KK31	**Karatay Array**	**53.82**	**300**	*e*P	**P**	**12 43 27.3**	**-0.1**
4.7nm,1.5s							
INK	**Inuvik**	**53.93**	**27**	P	**P**	**12 43 28.1**	**+0.3**
0.5nm,0.6s,baz=295,slow=6.5,SNR=5.3							
INK	**Inuvik**	**53.93**	**27**	*e*P	**P**	**12 43 27.8**	**+0.1**
4.3nm,1.4s							
WB2	**Warramunga Arr**	**57.26**	**189**	*e*P	**P**	**12 43 52.1**	**-0.1**
3.6nm,0.8s							
WR1	**Warramunga Arr**	**57.26**	**189**	*e*P	**P**	**12 43 51.3**	**-0.9**
WRA	**Warramunga Arr**	**57.26**	**189**	P	**P**	**12 43 51.3**	**-0.9**
127nm,0.3s,baz=344,slow=8.1,SNR=1.2							
ABKAR	**Akbulak array**	**58.54**	**310**	*e*P	**P**	**12 44 00.5**	**-0.4**
1.6nm,0.9s							
AS31	**Alice Springs**	**60.98**	**189**	*e*P	**P**	**12 44 18.0**	**0.0**
ASAR	**Alice Springs**	**60.99**	**189**	P	**P**	**12 44 17.8**	**-0.2**
0.8nm,0.8s,baz=9.3,slow=8.5,SNR=7.6							
PALK	**Pallekele**	**63.21**	**258**	*e*P	**P**	**12 44 32.4**	**-0.9**
52nm,1.4s							
FIA0	**FINESS Array S**	**69.14**	**333**	*e*P	**P**	**12 45 10.8**	**+0.3**
FINES	**FINESS Array B**	**69.14**	**333**	P	**P**	**12 45 10.8**	**+0.3**
1.5nm,0.7s,baz=11,slow=4.1,SNR=4.8							
GNI	**Garni**	**72.34**	**307**	*e*P	**P**	**12 45 30.4**	**-0.3**
8.9nm,0.8s							
AKASG	**Malin Array Be**	**74.75**	**323**	LR	LR	13 23 04.0	
comp=Z,18nm,18.1s,baz=50,slow=39							
PD31	**Pinedale Array**	**77.01**	**46**	*e*P	**P**	**12 45 57.7**	**-0.1**
1.0nm,0.9s							
PDAR	**Pinedale Array**	**77.01**	**46**	P	**P**	**12 45 58.5**	**+0.7**
0.1nm,0.4s,baz=294,slow=4.5,SNR=3.0							
TXAR	**Lajitas Array**	**89.40**	**53**	P	**P**	**12 47 01.7**	**-0.1**
0.4nm,0.8s,baz=317,slow=4.5,SNR=4.3							

ISCJB ***03*** *12:41:13.6±0.3, 22°.22S±0°.05×170°.38E±0°.05, h10km, mb4.7/34, MS3.9/16, Error ellipse: s-maj=8.3km s-min=4.9km az=43.2*
IDC ***03*** *12:41:13.8±0.9, 22°.22S×170°.48E, h0km, mb4.3/11, mb1 4.4/14, mb1mx4.2/33, mbtmp4.4/14, ML4.1/3, MS3.9/18, Ms1 3.9/18, ms1mx3.7/29, Error ellipse: s-maj=26.2km s-min=20.6km az=110.0*
NEIC ***03*** *12:41:16.2±1.1, 22°.21S×170°.32E, h13km±2km, mb4.8/28, Error ellipse: s-maj=17.6km s-min=13.5km az=54.0*
ISC 03 12:41:16.2±0.5, 22°.26S±0°.07×170°.31E±0°.07, h10km, n110, σ1.83/105, mb4.7/34, MS3.8/16, 6C-1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.25**	**290**	*e*Pn	**Pn**	**12 41 53.5**	**0.0**
MARNC				*e*Sn	**Sn**	**12 42 20.3**	**-1.1**
PINNC	**Pines Island,**	**2.67**	**262**	*e*Pn	**Pn**	**12 41 59.4**	**+0.2

SBA	Scott Base	55.67	181	eP	P	12 50 52.5	+0.5
	3.9nm,0.9s						
CASY	Casey	57.78	204	eP	P	12 51 06.0	-1.2
	15nm,1.5s						
KSM	Kuching	63.04	284	eP	P	12 51 43.4	-0.6
	9.5nm,1.0s						
MJAR	Matsushiro Arr	65.88	332	P	P	12 52 00.6	-1.5
	3.4nm,0.6s,baz=168,slow=8.0,SNR=11						
MJAR				LR	LR	13 21 03.4	
	comp=Z,44nm,18.8s,baz=190,slow=36						
MAJO	Matsushiro	65.88	332	eP	P	12 52 00.8	-1.3
	14nm,1.3s						
MAT	Matsushiro	65.88	332	P	P	12 52 00.5	-1.6
TPUB	Ta-pu	66.23	310	eP	P	12 52 03.3	-1.4
	17nm,1.0s						
JNU	Nakatsue	66.69	325	eP	P	12 52 06.7	-0.7
	29nm,1.2s						
QSPA	South Pole Qui	67.81	180	eP	P	12 52 13.6	-0.7
	9.8nm,1.1s						
KSRS	Korea Array	71.55	326	P	P	12 52 37.2	-0.2
	2.8nm,0.8s,baz=141,slow=6.5,SNR=16						
NJ2	Nanjing	73.06	316	eP	P	12 52 50.6	+4.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
USRK	Ussuriysk Ar.	74.86	332	P	P	12 52 57.4	+0.5
	comp=Z,1.7nm,0.8s,baz=120,slow=6.8,SNR=4.8						
USRK				LR	LR	13 24 54.5	
	comp=Z,36nm,19.8s,baz=152,slow=35						
PETK	Petropavlovsk-	75.85	352	P	P	12 53 01.9	-0.4
	comp=Z,4.9nm,0.9s,baz=142,slow=7.5,SNR=5.9						
PETK				LR	LR	13 20 09.9	
	comp=Z,99nm,21.3s,baz=154,slow=31						
PEA1	Petropavlovsk-	75.85	352	eP	P	12 53 01.9	-0.4
MAW	Mawson	76.02	202	LR	LR	13 24 18.2	
	comp=Z,56nm,18.2s,baz=66,slow=34						
ENH	Enshi	78.36	310	eP	P	12 53 16.1	-0.9
	comp=Z,23nm,1.3s						
CM31	Chiang Mai Arr	80.65	294	eP	P	12 53 29.6	-0.1
	comp=Z,8.4nm,1.1s						
CMAR	Chiang Mai Arr	80.65	294	P	P	12 53 31.2	+1.5
	comp=Z,1.7nm,0.5s,baz=129,slow=4.0,SNR=12						
CHTO	Chiang Mai	80.81	295	eP	P	12 53 31.2	+0.6
	comp=Z,10nm,1.2s						
XAN	Xi'an	80.88	312	P	P	12 53 31.3	+0.6
XAN				pP	pwP	12 53 44.3	+5.7
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN	Xi'an	80.88	312	eP	P	12 53 29.8	-0.9
	comp=Z,6.3nm,0.9s						
SEY	Seymchan	86.08	352	P	P	12 53 55.2	-1.4
	comp=Z,3.7nm,1.0s,baz=155,slow=5.1,SNR=7.4						
SNAA	Sanae	86.20	182	Pdiff	P	12 53 55.4	-2.1
SNAA	Sanae	86.20	182	eP	P	12 53 54.9	-2.6
	comp=Z,4.3nm,1.1s						
VNA3	Neumayer Olymp	86.75	180	Pdiff	P	12 53 59.0	-1.2
VNA2	Neumayer--Watz	87.06	181	Pdiff	P	12 54 00.3	-1.4
	baz=169,slow=4.3						
SHL	Shillong	89.64	298	eP	P	12 54 13.6	-1.3
	comp=Z,10nm,0.4s						
ULN	Ulaanbaatar	89.87	323	eP	P	12 54 14.4	-1.0
	comp=Z,5.2nm,1.0s						
NVAR	Mina Array Bea	90.05	48	LR	LR	13 29 11.0	
	comp=Z,102nm,18.5s,baz=202,slow=32						
SONA0	Songino Array	90.22	323	eP	P	12 54 17.1	+0.1
SONM	Songino Array	90.22	323	P	P	12 54 17.1	+0.1
	comp=Z,2.8nm,0.8s,baz=126,slow=2.6,SNR=7.7						
ILAR	Eielson Array	92.81	17	P	P	12 54 25.6	-2.8
	comp=Z,0.4nm,0.7s,baz=242,slow=4.1,SNR=3.6						
ILAR				LR	LR	13 33 29.0	
	comp=Z,58nm,18.4s,baz=217,slow=34						
TXAR	Lajitas Array	97.33	61	LR	LR	13 31 07.6	
	comp=Z,56nm,19.4s,baz=0.0,slow=31						
PDAR	Pinedale Array	97.93	47	LR	LR	13 31 07.3	
	comp=Z,39nm,21.9s,baz=262,slow=31						
ARCES	ARCESS Array B	128.23	345	PKP	PKPdf	13 00 21.1	-1.1
	comp=Z,11nm,0.4s,baz=4.3,slow=4.9,SNR=6.0						
DRGR		144.20	321	⇑iP	PKPab	13 00 51.0	+0.9
GZR	Gura Zlata	144.88	319	⇑iP	PKPab	13 00 51.5	-1.2
PSZ	Piszkesteto	145.14	324	ePKPbc	PKPbc	13 00 53.1	-0.4
MORC	Moravsky Berou	145.16	329	ePKPbc	PKPbc	13 00 53.0	-0.5
MORC	Moravsky Berou	145.16	329	ePKP	PKPbc	13 00 52.7	-0.8
OSTC	Ostas	145.24	331	ePKP	PKPbc	13 00 53.3	-0.4
CHVC	Chvalec	145.29	331	ePKP	PKPbc	13 00 53.7	-0.1
KRLC	Kraliky	145.32	330	ePKP	PKPbc	13 00 54.0	0.0
DPC	Dobruska-Polom	145.34	330	ePKP	PKPbc	13 00 54.0	0.0
DPC				ex	x	13 01 03.2	
VYHS	Vyhne	145.35	326	ePKP	PKPbc	13 00 53.9	-0.2
HERR	Herculane	145.36	318	⇑iP	PKPbc	13 00 55.3	+1.1
UPC	Upice	145.37	331	ePKP	PKPbc	13 00 53.9	-0.1
UPC				ex	x	13 01 04.0	
JAVC	Velka Javorina	145.71	327	ePKP	PKPdf	13 00 56.0	+1.1
MDVR	Moldovita	145.84	319	⇑iP	PKPdf	13 00 56.2	+1.0
VTS	Vitosha	145.90	314	⇑iP	PKPdf	13 00 55.8	+0.2
VRAC	Vranov	145.93	329	⇑iP	PKPdf	13 00 55.4	+0.2
VRAC	Vranov	145.93	329	ePKP	PKPdf	13 00 55.4	+0.2
PVCC	Panska Ves	145.99	332	ePKP	PKPdf	13 00 56.1	+0.9
BRG	Berggiesshubel	146.00	333	ePKP	PKPdf	13 00 55.2	0.0
	comp=Z,12nm,0.9s						
BRG				i		13 01 07.4	
	comp=Z,13nm,1.0s						
CLL	Collm	146.06	334	ePKPdf	PKPdf	13 00 55.0	-0.3
CLL	Collm	146.06	334	⇓iPKPbc	PKPdf	13 00 55.6	+0.3
	comp=Z,28nm,1.5s						
CLL				i PKiKP	PKPbc	13 00 59.1	+2.9
	comp=Z,10.0nm,0.8s						
CLL				epPKiKP	pPKiKP	13 01 05.0	+3.8
KRUC	Moravsky	146.19	329	ePKP	PKPdf	13 00 56.1	+0.5
MODS	Modra-Piesok	146.22	327	ePKP	PKPdf	13 00 56.9	+1.2
PRU	Pruhonice	146.40	331	ePKP	PKPdf	13 00 57.1	+1.1
NKC	Novy Kostel	147.11	334	ePKP	PKPdf	13 00 59.0	+1.8
CONA	Conrad Observa	147.22	328	ePKPab	PKPdf	13 01 00.2	+2.7
	comp=Z,2.9nm,0.9s						
KHC	Kasperske Hory	147.46	331	ePKPdf	PKPdf	13 00 58.3	+0.5
KHC	Kasperske Hory	147.46	331	ePKP	PKPdf	13 01 00.4	+2.6
KHC				ex	x	13 01 08.9	
GERES	GERESS Array B	147.61	331	PKPbc	PKPdf	13 01 00.2	+2.1
	comp=Z,4.2nm,0.8s,baz=29,slow=3.0,SNR=12						
SOKA	Soboth	148.48	327	epPKPdf	PKPdf	13 01 02.4	+2.8
KBA	Koelnbreinsper	149.04	329	ePKPbc	PKPdf	13 01 03.4	+2.7
	comp=Z,2.2nm,0.5s						
MYKA	Terra Mystica	149.22	328	epPKPdf	PKPdf	13 01 04.1	+3.2
	comp=Z,1.9nm,0.5s						
ABTA	Abfaltersbach	149.68	329	ePKPbc	PKPdf	13 01 05.4	+3.8
	comp=Z,4.0nm,0.7s						
WTTA	Wattenberg	149.71	331	ePKPbc	PKPdf	13 01 05.5	+3.8
	comp=Z,3.6nm,0.5s						
MOTA	Moosalm	149.89	331	ePKPbc	PKPdf	13 01 06.0	+4.0
	comp=Z,2.7nm,0.5s						
SQTA	Sankt Quirin	149.94	331	ePKiKP	PKPdf	13 01 06.6	+4.6
	comp=Z,2.3nm,0.5s						
FETA	Feichten	150.30	331	ePKiKP	PKPdf	13 01 07.7	+5.1
	comp=Z,9.0nm,1.0s						
DAVA	Damuels	150.47	332	ePKiKP	PKPbc	13 01 08.8	+0.6
	comp=Z,7.7nm,0.9s						
FUORN	Ofenpass-Fuorn	150.81	331	ePKPbc	PKPdf	13 01 08.2	+4.6
FUORN				ePKPab	sPKPbc	13 01 16.6	+5.1
TUE	Stuetta	151.33	332	ePKPbc	PKPdf	13 01 09.9	+5.5
TUE				ePKPab	sPKPbc	13 01 18.3	+5.6
TORD	Torodi Ar. Bea	165.87	232	PKP	PKPdf	13 01 21.4	-0.8
	comp=Z,0.8nm,0.9s,baz=82,slow=3.1,SNR=2.5						
TOA1	Torodi Ar. Sit	165.88	232	ePKPdf	PKPdf	13 01 21.4	-0.8

*IDC **03** 12:43:33.1±1.5, 33°.17N×115°.63W, h0km, mb1 3.3/3, mb1mx3.1/46, mbtmp2.8/3, ML3.5/2, Error ellipse: s-maj=24.9km s-min=8.5km az=26.0*
*ANF **03** 12:43:33.9±0.2, 33°.23N×115°.64W, h14km±2km, ML3.3/24, Error ellipse: s-maj=1.4km s-min=1.2km az=150.0*
*NEIC **03** 12:43:34.5±0.0, 33°.23N×115°.63W, h2km, ML3.1(PAS), After PAS.*
*SCEDC **03** 12:43:34.5, 33°.23N×115°.63W, h2km*
*PAS **03** 12:43:34.5, 33°.23N×115°.63W, h2km, ML3.1*

ISC 03 12:43:34.5±1.1, 33°.22N±0°.02×115°.64W±0°.02, h3km±11km, n63, σ1§02/78, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWSC	Sam W. Stewart	0.30	205	P	Pg	12 43 41.0	+0.6
	baz=27,SNR=122						
BC3	Big Chuckawall	0.46	20	P	Pg	12 43 43.2	-0.1
	baz=199,SNR=160						
BC3				S	Sg	12 43 49.5	0.0
	baz=199						
IKP	In-Ko-Pah, Jac	0.69	215	P	Pg	12 43 47.9	+0.2
	baz=35,SNR=101						
IKP				S	Sg	12 43 57.5	+0.8
	baz=35						
GLA	Glamis	0.71	104	ePg	Pg	12 43 47.4	-0.6
GLA				eSg	Sg	12 43 56.8	-0.4
GLA	Glamis	0.71	104	P	Pg	12 43 47.5	-0.6
	baz=285,SNR=236						
GLA				S	Sg	12 43 57.4	+0.2
	baz=285						
MONP2	Monument Peak	0.73	244	P	Pg	12 43 48.8	+0.2
	baz=63,SNR=83						
MONP2				S	Sg	12 43 58.8	+0.8
	baz=63						
PFO	Pinyon Flats O	0.79	300	Pg	Pg	12 43 49.3	-0.2
	50nm,0.3s,baz=108,slow=17,SNR=105						
PFO				Lg	Lg	12 43 60.0	
	75nm,0.3s,baz=32,slow=19,SNR=49						
PFO	Pinyon Flats O	0.79	300	ePg	Pg	12 43 49.0	-0.5
PFO				eSg	Sg	12 43 59.7	-0.1
PFO	Pinyon Flats O	0.79	300	P	Pg	12 43 49.0	-0.5
	baz=118,SNR=85						
PFO				S	Sg	12 43 59.9	+0.1
	baz=118						
BELC	Belle Mtn. Jos	0.83	339	P	Pg	12 43 50.0	-0.5
	baz=158,SNR=119						
BELC				S	Sg	12 44 01.8	+0.5
	baz=158						
BAR	Barrett	1.02	238	ePg	Pg	12 43 53.1	-0.9
BAR				eSg	Sg	12 44 07.8	+0.6
IRM	Iron Mountain	1.02	24	P	Pg	12 43 53.2	-0.9
	baz=204,SNR=175						
IRM				S	Sg	12 44 07.0	-0.4
	baz=204						
Y12C	Blythe	1.07	60	ePg	Pg	12 43 54.3	-0.8
Y12C				eSg	Sg	12 44 08.5	-0.5
Y12C	Blythe	1.07	60	P	Pg	12 43 54.1	-1.0
	baz=241,SNR=88						
Y12C				S	Sg	12 44 08.6	-0.5
	baz=241						
109C	Camp Elliot, M	1.27	255	P	Pg	12 43 56.9	-1.9
	baz=74,SNR=35						
CPE	Camp Elliot	1.27	255	ePg	Pg	12 43 56.8	-2.0
MURC	Murrieta	1.35	287	P	Pn	12 43 57.6	-2.7
	baz=105,SNR=49						
BBRC	Big Bear Solar	1.49	315	Pb	Pn	12 44 00.7	-1.6
	baz=133,SNR=52						
GMRC	Granite Mounta	1.56	360	Pb	Pn	12 44 02.2	-1.0
	baz=179,SNR=102						
GMRC				Sb	Sn	12 44 23.7	-0.3
	baz=179						
113A	Mohawk Valley,	1.64	105	ePn	Pn	12 44 03.5	-0.7
PDMCI	Parker Dam,Lak	1.65	49	Pb	Pn	12 44 04.3	-0.1
	baz=230,SNR=18						
PDMCI				Sb	Sn	12 44 25.5	-0.6
	baz=230						
HEC	Hector,Ludlow	1.70	341	Pg	Pb	12 44 06.6	+0.1
	baz=160						
NEE2	Needles Airpor	1.76	29	P	Pn	12 44 04.6	-1.3
	baz=209,SNR=41						
NEE2				Sb	Sb	12 44 29.7	-0.2
	baz=209						
LDFC	Landfair	1.91	13	ePn	Pn	12 44 08.2	+0.2
BFSC	Mount Baldy Ra	1.96	302	P	Pn	12 44 06.7	-2.0
	baz=120,SNR=13						
BFSC				Sb	Sb	12 44 36.1	+0.2
	baz=120						
RRX	Edison Barstow	2.00	326	Pg	Pg	12 44 12.5	-0.3
	baz=145						
TUQ	Turquoise Moun	2.22	354	Pg	Pb	12 44 16.1	+0.7
	baz=174						
MWC	Mount Wilson	2.25	297	ePn	Pn	12 44 12.0	-0.7
GSC	Goldstone, Bar	2.29	335	ePn	Pn	12 44 13.5	+0.3
GSC	Goldstone, Bar	2.29	335	Pg	Pg	12 44 17.6	-0.8
	baz=154						
Y14A	Wickenburg	2.32	71	ePn	Pn	12 44 14.0	+0.4
PASC	Pasadena Art C	2.32	295	ePn	Pg	12 44 18.7	-0.3
CIS	Catalina Islan	2.33	275	Pb	Pb	12 44 16.0	-1.1
	baz=93						
CIS				Sb	Sb	12 44 46.9	+0.6
	baz=93						
W13A	Hualapai Mount	2.37	37	ePn	Pn	12 44 14.7	+0.2
EDW2	Edwards Air Fo	2.56	311	Pb	Pb	12 44 20.6	-0.5
	baz=129						
214A	Organ Pipe Nat	2.70	117	P	Pn	12 44 16.4	-2.4
	baz=299,SNR=11						
SHOC	Shoshone, Teco	2.72	349	Pg	Pg	12 44 25.6	-1.1
	baz=168						
OSI	Osito Audit: C	2.91	299	ePn	Pn	12 44 23.0	+1.2
SHPR	Sheep Range	3.30	7	ePn	Pn	12 44 28.2	+1.0
ISA	Isabella, Lake	3.38	317	ePn	Pn	12 44 28.3	+0.1
DAC	Darwin (Calif)	3.44	333	ePn	Pn	12 44 30.4	+1.1
X16A	Lo Mia Camp, P	3.70	70	ePn	Pn	12 44 34.0	+1.3
TPNV	Topopah Spring	3.75	353	ePn	Pn	12 44 33.3	-0.1
TUC	Tucson	4.19	101	ePn	Pn	12 44 40.0	+0.6
WUAZ	Wupatki	4.21	56	ePn	Pn	12 44 38.9	-0.8
U15A	North Rim	4.22	40	ePn	Pn	12 44 40.4	+0.4
LCMT	Little Creek M	4.26	27	ePn	Pn	12 44 40.1	-0.3
KNB	Kanab	4.44	31	ePn	Pn	12 44 41.7	-1.1
CCUT	Cedar City	4.71	23	ePn	Pn	12 44 46.4	-0.1
SZCU	Shurtz Canyon	4.84	25	ePn	Pn	12 44 48.6	+0.2
X18A	Snowflake	4.91	73	ePn	Pn	12 44 50.0	+0.6
MDPB	Devils Postpil	5.22	328	ePg	Pb	12 45 09.0	+2.5
W18A	Petrified Fore	5.25	67	ePn	Pn	12 44 55.7	+1.7
PSUT	Pine Spring	5.50	15	ePn	Pn	12 44 58.8	+1.3
MTPU	Mount Pierson	5.57	29	ePn	Pn	12 45 00.4	+1.7
NV01	Mina Array Sit	5.63	338	ePn	Pn	12 44 59.7	+0.4
NVAR	Mina Array Bea	5.63	338	Pn	Pn	12 44 59.7	+0.4
	0.1nm,0.3s,baz=163,slow=17,SNR=2.3						
NVAR				Lg	Lg	12 46 31.5	
	baz=191,slow=34,SNR=1.9						
319A	Douglas	5.69	107	ePn	Pn	12 44 59.2	-0.9
TCRU	Three Creeks R	5.97	25	ePn	Pn	12 45 04.3	+0.3
ELK	Elko	7.52	2	Lg	Lg	12 47 30.1	
	0.1nm,0.3s,baz=32,slow=15,SNR=2.2						
ANMO	Albuquerque	7.81	75	Lg	Lg	12 47 38.9	
	0.1nm,0.3s,baz=155,slow=20,SNR=3.6						
PDAR	Pinedale Array	10.67	25	Pn	Pn	12 46 11.3	+2.9
	0.1nm,0.3s,baz=200,slow=13,SNR=5.8						
TXAR	Lajitas Array	10.95	108	Pn	Pn	12 46 12.4	+0.1
	0.0nm,0.3s,baz=291,slow=13,SNR=2.2						
TXAR				Lg	Lg	12 49 15.6	
	0.0nm,0.3s,baz=311,slow=32,SNR=3.1						

*ISCJB **03** 12:55:01.6±0.3, 12°.12N±0°.04×68°.86W±0°.05, h10km, Error ellipse: s-maj=7.6km s-min=3.3km az=34.1*
*NEIC **03** 12:55:04.3±0.0, 12°.16N×68°.87W, h9km, mb4.0/2, MW3.5(CAR), After CAR.*
NEIC Felt [III] at Willemstad. Also felt at Newport.

ISC 03 12:55:03.3±0.9, 12°.15N±0°.06×68°.83W±0°.08, h10km, n42, σ1§50/45, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URIC	Uribia, Colomb	3.13	262	eP	Pn	12 55 52.8	+0.1
SDV	Santo Domingo	3.70	209	ePn	Pn	12 56 02.0	+1.3
SDV				eSn	Sn	12 56 42.4	-2.0
SDV	Santo Domingo	3.70	209	eP	Pn	12 56 02.8	+2.1
CODC	Agustn Codazz	5.04	245	eP	Pn	12 56 18.7	-0.3
SMRC	Santa Marta, M	5.38	260	eP	Pn	12 56 26.7	+3.0
ARGC	Ariguani, Magd	5.79	247	eP	Pn	12 56 28.7	-0.6
OCAC	Ocana	5.89	229	eP	Pn	12 56 30.0	-0.8
CRPR	Cabo Rojo, PR	6.06	16	ePn	Pn	12 56 34.8	+1.8
PAMC	Pamplona, Colo	6.12	219	eP	Pn	12 56 33.4	-0.9
ICMP	Isla Caja de M	6.12	21	ePn	Pn	12 56 35.5	+1.7
SMLC	San Martn de	6.14	238	eP	Pn	12 56 34.0	-0.1
OBIP	Obispado Ponce	6.24	20	ePn	Pn	12 56 36.7	+1.1
PCDR	Punta Cana, DR	6.34	4	ePn	Pn	12 56 38.1	+1.2
PCDR				eSn	Sn	12 57 49.0	-0.4
AOPR	Arecibo Observ	6.48	18	ePn	Pn	12 56 40.7	+1.9
MTP	Monte Pirata	6.71	28	ePn	Pn	12 56 43.5	+1.6
CBYP	Canovanas	6.73	25	ePn	Pn	12 56 44.1	+1.8
CDVI	St. Croix	6.81	35	ePn	Pn	12 56 44.9	+1.5
CDVI				eSn	Sn	12 57 56.7	-4.4
BRRC	Barranca, Sant	6.95	224	eP	Pn	12 56 44.6	-0.6
BARC	Barichara	7.00	218	eP	Pn	12 56 46.0	-0.1
GRGR	Grenville	7.01	89	ePn	Pn	12 56 47.4	+1.3
CUPR	Culebra, Puert	7.01	29	ePn	Pn	12 56 47.4	+1.2
SDDR	Presa de Saban	7.20	341	ePn	Pn	12 56 51.0	+2.2
STVI	Saint Thomas	7.21	31	ePn	Pn	12 56 50.7	+1.8
SVB	Belmont	7.47	81	ePn	Pn	12 56 52.6	+0.1
RUSC	La Rusia	7.50	214	eP	Pn	12 56 54.0	+0.6
PTBC	PUERTO BERRIO,	7.87	225	eP	Pn	12 56 56.0	-2.0
FDF	Fort de France	7.90	70	ePn	Pn	12 56 59.2	+0.9
UREC	San Jos de Ur	7.92	237	eP	Pn	12 56 57.9	-0.7
NORC	Norcasia	8.86	223	eP	Pn	12 57 13.2	+1.7
HELC	Santa Helena	8.88	229	eP	Pn	12 57 14.6	+2.5
CHIC	Chingaza	8.91	213	eP	Pn	12 57 12.6	0.0
ROSC	El Rosal	9.07	217	ePn	Pn	12 57 15.9	+1.2
GUY2C	Guyana, Caldas	9.44	224	eP	Pn	12 57 19.2	-0.7
GRTK	Grand Turk	9.57	347	ePn	Pn	12 57 21.8	+0.6
RREF	El Recreo	9.66	222	eP	Pn	12 57 24.5	+1.4
GTBY	Guantanamo Bay	9.81	323	ePn	Pn	12 57 25.0	+0.5
PTAC	Punta Ardita,	10.15	242	eP	Pn	12 57 27.8	-1.4
PRAC	Prado	10.30	216	eP	Pn	12 57 31.2	-0.2
YOTC	Yotoco, Valle	11.01	223	eP	Pn	12 57 41.8	+0.7
BCIP	Isla Barro Col	11.22	256	ePn	Pn	12 57 43.8	-0.1
OTAV	Otavalo	15.21	220	ePn	Pn	12 58 39.1	+0.4
	7.9nm,0.7s						
PTGA	Pitinga	15.53	145	ePn	Pn	12 58 42.2	-0.4
	5.7nm,1.2s						

*BJI **03** 12:58:20.6±0.0, 10°.41N×126°.83E, h17km, mb4.8/30, mB4.9/21, Ms4.3/9, Ms7 4.1/10*
*IDC **03** 12:58:21.4±0.5, 10°.64N×126°.74E, h0km, mb4.3/30, mb1 4.4/31, mb1mx4.3/55, mbtmp4.4/31, ML4.6/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/39, Error ellipse: s-maj=21.7km s-min=11.4km az=83.0*
*MOS **03** 12:58:22.5±1.0, 10°.63N×126°.68E, h20km, mb5.0/37, Error ellipse: s-maj=11.5km s-min=6.0km az=111.2*
*NEIC **03** 12:58:22.8±1.4, 10°.61N×126°.77E, h10km, mb4.7/59, Error ellipse: s-maj=15.2km s-min=3.4km az=135.0*
*ISCJB **03** 12:58:23.3±1.4, 10°.67N±0°.02×126°.84E±0°.03, h26km±10km, mb4.7/108, MS3.6/9, Error ellipse: s-maj=5.4km s-min=4.0km az=162.3*
*MAN **03** 12:58:23.1, 10°.73N×126°.90E, h47km, MS4.7*
*DJA **03** 12:58:24.5±2.0, 11°.N±6°.×12°.7E±°, h20km±13km, M5.2/24, mB5.8/6, mb4.8/24, MLv5.2/1, Mw(mB)5.3/6*
*KLM **03** 12:58:29.0, 10°.68N×126°.74E, h42km, mb5.0*

ISC 03 12:58:23.4±1.4, 10°.69N±0°.03×126°.78E±0°.05, h13km±8km, n221, σ1§54/227, mb4.8/108, MS3.7/10, 6C-4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.55	235	⇑iP	Pg	12 58 59.0	+5.7
SCPH				i S	Sg	12 59 18.4	+4.9
PLP	Palo	1.83	285	⇓eP	Pn	12 58 54.6	+0.1
PLP				i S	Sn	12 59 17.2	-0.4
MSLP	Maasin	1.97	254	eP	Pn	12 58 56.8	+0.4
MSLP				eS	Sb	12 59 22.2	-1.3
BUTP	Butuan	2.05	214	eP	Pn	12 58 57.3	-0.3
OCLP	Ormoc	2.16	280	eP	Pb	12 59 00.8	-1.7
OCLP				eS	Sg	12 59 34.4	+1.4
CNP	Catarman	2.75	311	eP	Pn	12 59 07.0	-0.2
CNP				eS	Sn	12 59 39.6	-0.8
LLP	Lapu-Lapu	2.79	263	eP	Pn	12 59 08.7	+1.0
LLP				eS	Sn	12 59 42.2	+0.8
CGP	Cagayan de Oro	3.02	223	⇓eP	Pn	12 59 11.4	+0.4
TBP	Tagbilaran	3.04	251	eP	Pn	12 59 12.8	+1.6
BUKP	Musuan	3.26	211	eP	Pn	12 59 15.4	+1.1
BUKP				eS	Sb	12 59 58.1	-2.8
SNPH	Sibulan	3.73	249	eP	Pn	12 59 23.2	+2.4
MATI	Mati	3.75	188	eP	Pn	12 59 20.1	-0.9
DAV	Davao City (W)	3.78	198	LR	LR	13 00 55.3	
	comp=Z,287nm,20.7s,baz=36,slow=41						
DAV	Davao City (W)	3.78	198	ePn	Pn	12 59 20.6	-0.8
PVCP	Virac	3.87	319	eP	Pn	12 59 22.1	-0.6
PVCP				eS	Sn	13 00 08.2	+0.3
GUIM	Jordan	4.12	270	eP	Pn	12 59 26.8	+0.7
PAGZ	Pagadian	4.38	230	eP	Pn	12 59 29.7	0.0
PAGZ				eS	Sn	13 00 21.9	+1.3
DDMP	Don Marcelino,	4.67	193	eP	Pn	12 59 37.6	+3.9
SKMP	Bagumbayan, Su	4.69	208	eP	Pg	12 59 51.8	-1.6
OTRP	Odiongan	4.95	290	eP	Pg	13 00 10.6	+12
CUYO	Cuyo Island	5.66	272	eP	Pn	12 59 48.6	+1.3
SJMP	San Jose	5.82	288	eP	Pn	12 59 51.5	+2.0
TGY	Tagaytay City	6.64	301	LR	LR	13 02 46.9	
	comp=Z,175nm,19.6s,baz=203,slow=40						
CAUP	Cauayan	7.87	323	eP	Pn	13 00 16.7	-0.8
SMPP	San Manuel, Pa	8.04	313	eP	Pn	13 00 20.4	+0.3
SMPP				eS	Sn	13 01 47.6	-3.3
TNTI	Ternate	9.87	177	ePn	Pn	13 00 44.5	-0.6
TNTI	Ternate	9.87	177	P	Pn	13 00 43.3	-1.7
KKM	Kota Kinabalu	11.42	247	ePn	Pn	13 01 07.3	+0.9
MPSI	Mapaga	12.35	214	P	P	13 01 30.1	-1.1
APSI	Ampana	12.60	204	P	Pn	13 01 24.0	+1.5
TPUB	Ta-pu	13.85	336	ePn	P	13 01 44.4	-3.5
FAKI	Fak Fak	14.57	158	ePn	Pn	13 01 48.1

PHRA	Phrae	26.82	290	P	P	13 04 03.2	-0.5
	comp=Z,1.0nm,0.9s,comp=Z,127nm						
MDSI	Maura Dua	27.08	237	P	P	13 04 06.1	0.0
PAYA	Payao	27.35	292	P	P	13 04 07.9	-0.6
	comp=Z,20μm,0.8s						
LWLI	Liwa	27.48	236	P	P	13 04 09.8	0.0
BKNI	Bangkinang	27.58	250	eP	P	13 04 09.7	-0.8
	comp=Z,60nm,0.5s						
MAJO	Matsushiro	27.74	20	eP	P	13 04 10.9	-0.9
	comp=Z,5.8nm,1.0s						
MAJO	Matsushiro	27.74	20	i P	P	13 04 13.9	+2.1
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MJAR	Matsushiro Arr	27.74	20	P	P	13 04 09.7	-2.1
	comp=Z,1.8nm,0.8s,baz=190,slow=9.4,SNR=5.0						
CM31	Chiang Mai Arr	28.00	289	eP	P	13 04 13.4	-0.8
	comp=Z,8.3nm,1.2s						
CMAR	Chiang Mai Arr	28.00	289	P	P	13 04 13.3	-0.9
	comp=Z,2.7nm,0.8s,baz=104,slow=7.4,SNR=16						
CMAR				LR	LR	13 16 09.6	
	comp=Z,39nm,19.1s,baz=192,slow=38						
XAN	Xi'an	28.42	328	P	P	13 04 19.8	+1.9
XAN				pP	pwP	13 04 28.1	-2.6
XAN				pmax	pmax		
	comp=Z,12nm,0.7s						
XAN	Xi'an	28.42	328	eP	P	13 04 18.8	+0.9
	comp=Z,17nm,0.9s						
XAN	Xi'an	28.42	328	eP	P	13 04 18.8	+0.9
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
FITZ	Fitzroy Crossi	28.62	182	P	P	13 04 20.5	+0.8
	comp=Z,4.1nm,0.9s,baz=337,slow=7.7,SNR=3.8						
PSI	Prapat	28.73	256	eP	P	13 04 20.9	0.0
	comp=Z,12nm,0.9s						
PSI	Prapat	28.73	256	eP	P	13 04 20.9	0.0
PSI				pmax	pmax		
	comp=Z,13nm,0.9s						
MNSI	Mandailing Nat	28.76	252	P	P	13 04 24.0	+2.9
GSI	Gunungsitoli	30.47	254	eP	P	13 04 35.9	-0.4
	comp=Z,37nm,0.9s						
WB2	Warramunga Arr	31.34	166	eP	P	13 04 42.4	-1.4
	comp=Z,11nm,1.4s						
PSA00	Pilbara Seismi	32.77	192	eP	P	13 04 56.0	-0.4
	comp=Z,28nm,1.2s						
USA0B	Ussuriysk Arra	33.70	7	eP	P	13 05 05.0	+0.8
	comp=Z,4.3nm,0.8s						
USA0B	Ussuriysk Arra	33.70	7	eP	P	13 05 05.0	+0.8
USA0B				pmax	pmax		
	comp=Z,4.0nm,0.8s						
USRK	Ussuriysk Ar.	33.70	7	P	P	13 05 05.0	+0.8
	comp=Z,2.4nm,0.7s,baz=216,slow=9.4,SNR=6.0						
AS31	Alice Springs	34.84	169	eP	P	13 05 12.0	-2.4
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	34.84	169	P	P	13 05 12.6	-1.9
	comp=Z,0.8nm,0.5s,baz=351,slow=6.8,SNR=31						
ASAR				PcP	PcP	13 07 46.6	-0.9
	comp=Z,1.0nm,0.8s,baz=345,slow=2.9,SNR=5.4						
SHL	Shillong	36.18	299	eP	P	13 05 24.7	-1.5
	comp=Z,22nm,0.9s						
SHL	Shillong	36.18	299	eP	P	13 05 24.7	-1.5
SHL				pmax	pmax		
	comp=Z,22nm,0.9s						
GTA	Gaotai	37.33	325	⇑P	P	13 05 37.8	+2.1
GTA				pP	pwP	13 05 46.0	-2.5
GTA				sP	sP	13 05 50.7	+12
GTA				pmax	pmax		
	comp=Z,15nm,1.1s						
GTA				pmax	pmax		
	comp=Z,57nm,4.6s						
GTA				LR	LR		
	comp=Z,69nm,19.2s						
GTA				LR	LR		
	comp=Z,57nm,18.2s						
GTA				LR	LR		
	comp=Z,72nm,19.9s						
LSA	Lhasa	38.20	305	eP	P	13 05 43.4	-0.2
	comp=Z,5.6nm,0.5s						
LSA	Lhasa	38.20	305	eP	P	13 05 43.4	-0.2
LSA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YSS	Yuzh-Sakhalins	38.60	18	i P	P	13 05 47.8	+1.6
YSS				pmax	pmax		
	comp=Z,23nm,1.3s						
KLR	Kul'dur	38.65	5	P	P	13 05 47.3	+0.8
	comp=Z,1.3nm,0.5s,baz=228,slow=7.3,SNR=4.5						
KLR	Kul'dur	38.65	5	i P	P	13 05 46.6	+0.1
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	40.61	340	eP	P	13 06 04.5	+1.5
	comp=Z,3.0nm,0.9s						
ULN	Ulaanbaatar	40.61	340	eP	P	13 06 04.6	+1.5
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GRNR	Gornyy	40.75	9	eP	P	13 05 54.4	-10
GRNR				e		13 06 07.4	
SONA0	Songino Array	40.81	339	eP	P	13 06 05.0	+0.3
SONM	Songino Array	40.81	339	P	P	13 06 05.0	+0.3
	comp=Z,0.6nm,0.3s,baz=186,slow=6.7,SNR=3.8						
MORW	Morawa	40.86	194	eP	P	13 06 04.7	-0.4
	comp=Z,3.8nm,1.0s						
FORT	Forrest	41.24	178	eP	P	13 06 07.6	-0.7
	comp=Z,17nm,0.7s						
TYV	Tymovskoe	42.13	15	eP	P	13 06 20.1	+4.8
TYV				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZAK	Zakamensk	44.06	338	eP	P	13 06 26.8	-4.3
ZAK				e		13 08 13.1	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BBOO	Buckleboo	44.15	169	eP	P	13 06 30.9	-1.0
	comp=Z,14nm,0.7s						
NWAO	Narrogin (SRO)	44.31	192	eP	P	13 06 32.6	-0.6
	comp=Z,28nm,1.3s						
NWAO	Narrogin (SRO)	44.31	192	eP	P	13 06 32.6	-0.6
NWAO				pmax	pmax		
	comp=Z,28nm,1.3s						
STKA	Stephens Creek	44.63	162	P	P	13 06 34.3	-1.5
	comp=Z,2.2nm,0.8s,baz=320,slow=19,SNR=5.1						
STKA	Stephens Creek	44.63	162	eP	P	13 06 34.4	-1.4
	comp=Z,1.2nm,1.0s						
STKA	Stephens Creek	44.63	162	eP	P	13 06 34.4	-1.4
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
PALK	Pallekele	45.61	270	LR	LR	13 27 06.4	
	comp=Z,116nm,18.2s,baz=114,slow=38						
SKR	Severo-Kuril's	46.59	25	eP	P	13 06 58.6	+7.6
SKR				pmax	pmax		
	comp=Z,200nm,3.6s						
SKR				MLR	MLR		
	comp=Z,100nm,19.0s						
WMQ	Urumqi	47.21	322	eP	P	13 06 56.7	+0.6
	comp=Z,22nm,1.2s						
WMQ	Urumqi	47.21	322	eP	P	13 06 56.7	+0.6
WMQ				pmax	pmax		
	comp=Z,23nm,1.2s						
PEA0B	Petropavlovsk-	49.06	24	eP	P	13 07 10.7	+0.5
	comp=Z,30nm,1.4s						
PEA0B	Petropavlovsk-	49.06	24	eP	P	13 07 10.7	+0.5
PEA0B				pmax	pmax		
	comp=Z,30nm,1.4s						
PETK	Petropavlovsk-	49.06	24	P	P	13 07 11.2	+1.1
	comp=Z,2.9nm,0.6s,baz=215,slow=2.6,SNR=6.7						
DGZ	Jazzator, Alta	50.68	328	eP	P	13 07 23.2	+0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YAK	Yakutsk	51.30	2	i P	P	13 07 25.7	-1.3
YAK				pmax	pmax		
	comp=Z,13nm,0.7s						
MK31	Makanchi Array	52.00	322	eP	P	13 07 33.8	+1.3
	comp=Z,11nm,0.9s						
MK31	Makanchi Array	52.00	322	i P	P	13 07 33.4	+0.8
MK31				pmax	pmax		
	comp=Z,12nm,0.8s						
MK32	Makanchi Array	52.00	322	eP	P	13 07 33.8	+1.2
MKAR	Makanchi Array	52.00	322	P	P	13 07 33.8	+1.2
	comp=Z,10nm,0.8s,baz=116,slow=8.4,SNR=75						
MAKZ	Makanchi	52.20	322	eP	P	13 07 34.5	+0.5
	comp=Z,40nm,1.5s						
MAKZ	Makanchi	52.20	322	eP	P	13 07 34.5	+0.5
MAKZ				pmax	pmax		
	comp=Z,40nm,1.5s						
PDGK	Podgornoye	52.23	317	P	P	13 07 34.5	0.0
PDGK				pmax	pmax		
	comp=Z,27nm,1.0s						
KSH	Kashi	53.33	312	P	P	13 07 45.2	+2.6
KSH				PP	PP	13 09 47.4	+4.5
KSH				S	S	13 15 15.8	+1.5
KSH				SS	SS	13 18 56.2	+1.9
KSH				pmax	pmax		
	comp=Z,44nm,1.3s						
KSH				pmax	pmax		
	comp=Z,200nm,5.4s						
KSH				LR	LR		
	comp=Z,230nm,16.4s						
NIL	Nilore	53.92	304	eP	P	13 07 46.4	-0.5
	comp=Z,12nm,0.7s						
NIL	Nilore	53.92	304	eP	P	13 07 46.4	-0.5
NIL				pmax	pmax		
	comp=Z,12nm,0.7s						
ZAA0	Zalesovo Array	54.51	331	eP	P	13 07 50.7	-0.1
	comp=Z,5.0nm,1.0s						
ZALV	Zalesovo Beam	54.51	331	P	P	13 07 51.0	+0.2
	comp=Z,3.6nm,0.7s,baz=128,slow=6.2,SNR=7.7						
ZALV	Zalesovo Beam	54.51	331	P	P	13 07 51.0	+0.2
KZA	Kyzart	54.67	314	P	P	13 07 54.0	+1.2
	SNR=14						
TKM2	Tokmak 2	54.72	315	P	P	13 07 53.7	+0.8
	SNR=7.2						
KBK	Karagaybulak	55.08	315	P	P	13 07 56.8	+1.4
	SNR=9.8						
UCH	Uchtor	55.24	314	P	P	13 07 58.0	+1.1
	SNR=19						
SEY	Seymchan	55.30	14	P	P	13 07 57.8	+1.4
	comp=Z,2.1nm,0.8s,baz=219,slow=5.7,SNR=5.1						
CHMS	Chumysh	55.33	315	P	P	13 07 57.8	+0.8
	SNR=5.0						
AAK	Ala-Archa	55.39	315	P	P	13 07 58.2	+0.6
	comp=Z,1.7nm,0.5s,baz=129,slow=4.3,SNR=7.1						
AAK				LR	LR	13 31 52.4	
	comp=Z,34nm,20.6s,baz=148,slow=36						
AAK	Ala-Archa	55.39	315	eP	P	13 07 58.3	+0.6
	comp=Z,11nm,1.4s						
AAK	Ala-Archa	55.39	315	eP	P	13 07 58.3	+0.6
AAK				pmax	pmax		
	comp=Z,11nm,1.4s						
USP	Ospenovka	55.59	316	P	P	13 07 59.8	+0.9
	SNR=6.9						
KURK	Kurchatov	56.01	325	eP	P	13 08 01.9	+0.2
	comp=Z,26nm,1.0s						
KURK	Kurchatov	56.01	325	ceP	P	13 08 02.0	+0.3
KURK				pmax	pmax		
	comp=Z,45nm,1.7s						
KURBB	Kurchatov Arra	56.02	325	P	P	13 08 02.5	+0.7
	comp=Z,9.5nm,0.5s,baz=128,slow=7.0,SNR=35						
ARSB	Arslanbob	56.05	313	eP	P	13 08 01.8	-0.6
	comp=Z,7.2nm,0.8s						
BTK	Batken	57.29	311	eP	P	13 08 11.2	0.0
	comp=Z,7.9nm,0.6s						
BTK	Batken	57.29	311	eP	P	13 08 11.2	0.0
BTK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KBL	Kabul	57.51	304	eP	P	13 08 11.7	-1.3
	comp=Z,7.2nm,1.0s						
KBL	Kabul	57.51	304	eP	P	13 08 11.7	-1.3
KBL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KK31	Karatay Array	58.32	314	eP	P	13 08 18.3	0.0
	comp=Z,17nm,1.3s						
KK31	Karatay Array	58.32	314	eP	P	13 08 18.3	0.0
KK31				pmax	pmax		
	comp=Z,17nm,1.3s						
TIXI	Tiksi	60.93	1	P	P	13 08 35.7	0.0
	comp=Z,2.1nm,0.8s,baz=86,slow=1.1,SNR=4.7						
TIXI	Tiksi	60.93	1	eP	P	13 08 36.8	+1.1
	comp=Z,3.4nm,0.8s						
TIXI	Tiksi	60.93	1	ceP	P	13 08 38.0	+2.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
BVAR	Borovoye Array	61.61	325	P	P	13 08 41.3	+0.7
	comp=Z,3.4nm,0.6s,baz=117,slow=8.6,SNR=22						
BRVK	Borovoye	61.68	325	eP	P	13 08 41.3	+0.1
	comp=Z,8.4nm,0.8s						
BRVK	Borovoye	61.68	325	d iP	P	13 08 41.1	0.0
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BILL	Bilibino	62.87	16	i P	P	13 08 49.2	+0.4
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
NRIK	Noril'sk	63.74	346	P	P	13 08 53.0	-1.5
	comp=Z,2.5nm,0.5s,baz=159,slow=3.2,SNR=3.0						
GEYT	Alibeck	66.70	307	P	P	13 09 14.3	-0.2
	comp=Z,3.0nm,0.6s,baz=186,slow=6.0,SNR=3.7						
AB31	Akbulak array	66.89	319	i P	P	13 09 14.8	-0.5
AB31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ABKAR	Akbulak array	66.89	319	eP	P	13 09 15.3	0.0
	comp=Z,7.1nm,0.8s						
BKZ	Black Stump Fm	67.78	140	eP	P	13 09 20.2	-1.0
	comp=Z,22nm,1.4s						
SVE	Sverdlovsk	68.13	327	eP	P	13 09 23.5	+0.4
SVE				pmax	pmax		
	comp=Z,11nm,1.3s						
AKTO	Aktyubinsk	68.33	320	P	P	13 09 24.3	-0.1
	comp=Z,3.7nm,0.8s,baz=99,slow=7.3,SNR=12						
ARU	Arti	69.16	326	P	P	13 09 29.2	-0.3
	comp=Z,1.9nm,0.5s,baz=114,slow=5.1,SNR=7.1						
ARU	Arti	69.16	326	eP	P	13 09 28.8	-0.6
	comp=Z,5.3nm,0.6s						
ARU	Arti	69.16	326	c iP	P	13 09 28.5	-1.0
ARU				S	S	13 18 36.3	+1.5
ARU				SS	SS	13 22 56.9	-4.0
ARU				pmax	pmax		
	comp=Z,16nm,1.6s						
KIRV	Kirov	74.36	328	P	P	13 09 59.9	-0.8
	comp=Z,12nm,0.6s,baz=127,slow=4.5,SNR=4.3						
CAST	Castle Rocks	76.55	27	eP	P	13 10 13.6	+0.4
	comp=Z,2.7nm,0.9s						
BPAW	Bear Paw Mtn.	77.07	27	eP	P	13 10 15.1	-1.1
	comp=Z,8.6nm,1.3s						
MLY	Manley	77.21	26	eP	P	13 10 16.1	-0.9
	comp=Z,2.8nm,1.1s						
ZEI	Tsey	77.62	312	eP	P	13 10 13.9	-6.0
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
CASY	Casey	77.68	187	eP	P	13 10 18.9	-0.5
	comp=Z,7.1nm,0.7s						
KIV	Kislovodsk	78.44	313	eP	P	13 10 23.3	-1.0
KIV				pmax	pmax		
	comp=Z,33nm,1.1s						
COLA	College	78.44	26	i P	P	13 10 19.6	-4.1
COLA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VRH	Novokhopyorsk	78.67	320	eP	P	13 10 23.8	-1.5
VRH				pmax	pmax		
	comp=Z,30nm,1.2s						
ILAR	Eielson Array	78.85	26	P	P	13 10 25.6	-0.5
	comp=Z,0.4nm,0.7s,baz=243,slow=5.5,SNR=4.6						
KLMR	Klimovskoe	79.42	330	eP	P	13 10 27.2	-2.0
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
VORD	Divnogorie	80.21	320	eP	P	13 10 32.0	-1.7
VORD				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VSR	Storozhevoye	80.27	320	eP	P	13 10 33.2	-0.8
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN	Obninsk	81.45	324	i P	P	13 10 39.2	-1.0
OBN				i		13 10 51.4	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HYT	Haines Junctio	83.53	29	eP	P	13 10 51.3	+0.1
	comp=Z,4.9nm,1.3s						
ARCES	ARCESS Array B	83.98	340	P	P	13 10 53.4	+0.2
	comp=Z,7.1nm,0.3s,baz=82,slow=6.6,SNR=4.5						
WHY	Whitehorse	84.83	29	eP	P	13 10 57.9	+0.2
	comp=Z,6.9nm,1.3s						
SKAG	Skagway	84.87	31	eP	P	13 10 58.5	+0.7
	comp=Z,8.7nm,1.3s						
BR131	Keskin Array S	85.66	309	eP	P	13 11 01.8	-0.6
	comp=Z,4.7nm,1.1s						
BR131	Keskin Array S	85.66	309	eP	P	13 11 01.8	-0.6
BR131				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRTR	Keskin Array B	85.66	309	P	P	13 11 01.8	-0.6
	comp=Z,3.3nm,0.8s,baz=122,slow=4.9,SNR=14						
FIA0	FINESS Array S	85.77	332	eP	P	13 11 02.4	+0.2
FIA0	FINESS Array S	85.77	332	eP	P	13 11 02.4	+0.2
FINES	FINESS Array B	85.77	332	P	P	13 11 02.4	+0.2
	comp=Z,3.2nm,0.8s,baz=88,slow=5.9,SNR=8.5						
VSU	Vasula	86.18	329	ceP	P	13 11 01.9	-2.4
VSU				pmax	pmax		
	comp=Z,30nm,1.0s						
AKASG	Malin Array Be	86.56	321	P	P	13 11 06.7	+0.3
	comp=Z,3.5nm,0.8s,baz=63,slow=4.8,SNR=12						
AKBB	Malin Array Si	86.56	321	eP	P	13 11 06.2	-0.2
	comp=Z,10nm,1.0s						
AKBB	Malin Array Si	86.56	321	eP	P	13 11 06.2	-0.2
AKBB				pmax	pmax		
	comp=Z,11nm,1.0s						
KIEV	Kiev	86.57	321	i P	P	13 11 04.8	-1.6
KIEV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CSS	Mathiatis	86.76	305	eP	P	13 11 06.8	-0.9
	comp=Z,22nm,0.9s						
KMBO	Kilima Mbogo	89.74	269	LR	LR	13 47 30.1	
	comp=Z,39nm,21.9s,baz=87,slow=33						
BUR08	Bucovina Ar. S	89.87	319	eP	P	13 11 22.4	0.0
	comp=Z,2.7nm,0.8s						
VNDA	Vanda	90.28	173	P	P	13 11 24.0	+0.6
	comp=Z,0.7nm,0.5s,baz=303,slow=4.0,SNR=9.5						
VNDA	Vanda	90.28	173	eP	P	13 11 24.0	+0.6
	comp=Z,4.1nm,1.2s						
VNDA	Vanda	90.28	173	eP	P	13 11 24.0	+0.6
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
YKA	Yellowknife Ar	93.18	24	P	P	13 11 39.2	+2.0
	comp=Z,0.4nm,0.7s,baz=288,slow=4.5,SNR=3.7						
YKB5	Yellowknife Ar	93.18	24	eP	P	13 11 39.2	+2.0
VYHS	Vyhne	93.66	321	eP	P	13 11 41.8	+2.0
VYHS	Vyhne	93.66	321	eP	P	13 11 41.8	+2.0
MSU	Marysvale	106.47	44	ePdif	Pdif	13 12 37.8	0.0
MSU	Marysvale	106.47	44	eP	Pdif	13 12 37.8	0.0
TORD	Torodi Ar. Bea	120.58	292	PKP	PKiKP	13 17 18.2	+2.2
	comp=Z,0.8nm,0.7s,baz=43,slow=2.1,SNR=2.9						
TOA1	Torodi Ar. Sit	120.58	292	ePKPdf	PKiKP	13 17 18.2	+2.2

IDC 03 13:07:32.1±1.6, 6°29S×154°45E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.5/34, mbtmp3.8/2, MS3.2/2, Ms1 3.1/2, ms1mx2.7/25, Error ellipse: s-maj=142.6km s-min=31.5km az=138.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.86	246	LR	LR	13 12 42.6	
	comp=Z,114nm,20.1s,baz=70,slow=40						
WRA	Warramunga Arr	23.79	233	P	P	13 12 46.1	-0.6
	137nm,0.3s,baz=60,slow=8.8,SNR=1.5						
ASAR	Alice Springs	26.25	227	P	P	13 13 09.2	0.0
	0.5nm,0.8s,baz=58,slow=9.0,SNR=7.1						
STKA	Stephens Creek	28.15	204	LR	LR	13 23 49.5	
	comp=Z,58nm,18.7s,baz=22,slow=35						
NVAR	Mina Array Bea	91.71	52	P	P	13 20 42.3	+0.1
	0.2nm,0.3s,baz=241,slow=8.0,SNR=3.9						
TORD	Torodi Ar. Bea	152.31	286	PKPbc	PKPbc	13 27 31.2	+0.1
	0.7nm,0.5s,baz=93,slow=2.4,SNR=7.5						

*KRNET **03** 13:09:16.7±0.1, 39°36N×72°67E, h20km, mb2.8*
*NNC **03** 13:09:23.7±3.8, 39°88N×72°37E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=30.8km s-min=18.1km az=176.0*

ISC 03 13:09:17.9±2.2, 39°4N±0°1×72°64E±0°06, h3km±17km, n15, σ0°87/24, 19C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.66	280	⇓iP	Pg	13 09 30.0	-0.5
DRK				⇓iS	Sg	13 09 39.2	+0.2
	baz=81						
BTK	Batken	1.56	297	⇑iP	Pn	13 09 45.7	-0.9
BTK				⇑iS	Sn	13 10 07.4	0.0
	baz=97						
ARSB	Arslanbob	1.97	8	⇑iP	Pn	13 09 52.2	-0.1
ARSB				⇑iS	Sb	13 10 18.3	-1.1
	baz=7.0						
ARK	Arkit	2.48	348	⇑iP	Pn	13 09 59.4	+0.1
ARK				⇑iS	Sn	13 10 30.3	+0.2
	baz=48						
ARLS	Aral	2.80	27	⇑iP	Pn	13 10 03.7	0.0
ARLS				⇑iS	Sn	13 10 38.1	0.0
	baz=26						
AML	Almayashu	2.87	16	⇑iP	Pn	13 10 04.8	-0.1
AML				⇑iS	Sn	13 10 40.2	0.0
	baz=15						
UCH	Uchtor	3.19	26	⇑iP	Pn	13 10 09.1	-0.2
UCH				⇑iS	Sn	13 10 47.7	-0.4
	baz=25						
KZA	Kyzart	3.35	35	⇑iP	Pn	13 10 11.3	-0.3
KZA				⇑iS	Sn	13 10 51.6	-0.5
	baz=35						
MRKS	Merke	3.40	7	Pg	Pb	13 10 18.0	-0.8
MRKS				Lg	Lg	13 11 00.5	
	18nm,0.4s						
IUG	Iuzhnay	3.41	325	Pg	Pn	13 10 14.1	+2.1
IUG				Lg	Lg	13 10 53.5	
	12nm,0.4s						
AAK	Ala-Archa	3.55	23	⇑Pn	Pn	13 10 14.8	+0.7
AAK				⇑Lg	Lg	13 11 04.5	
	5.2nm,0.3s						
AAK	Ala-Archa	3.55	23	⇑iP	Pn	13 10 14.0	-0.1
AAK				⇑iS	Sn	13 10 56.2	-0.5
	35nm,0.4s						
KK31	Karatay Array	4.06	337	⇓Pn	Pn	13 10 22.0	+1.1
KK31				⇓Lg	Lg	13 11 13.2	
	6.8nm,0.6s						
TKM2	Tokmak 2	4.19	31	⇑Pg	Pb	13 10 32.8	+0.4
TKM2				⇓Lg	Lg	13 11 28.5	
	2.3nm,0.7s						
DGS	Degeres	4.53	30	Pg	Pb	13 10 40.3	+2.2
DGS				Lg	Lg	13 11 38.4	
	4.7nm,0.9s						
	6.0nm,0.5s						
	8.7nm,0.6s						

*IDC **03** 13:16:28.2±1.1, 28°25N×51°70E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/40, mbtmp3.8/10, ML3.7/2, MS2.9/2, Ms1 2.9/2, ms1mx2.4/43, Error ellipse: s-maj=27.9km s-min=21.3km az=34.0*
*ISCJB **03** 13:16:29.9±0.6, 28°16N±0°04×51°55E±0°06, h24km, mb4.0/9, MS3.2/1, Error ellipse: s-maj=8.9km s-min=3.9km az=146.5*
*TEH **03** 13:16:32.0, 28°41N×51°68E, h14km, ML3.8*
*DSN **03** 13:16:32.6±1.2, 27°96N×51°62E, h10km, ML3.8/6, Error ellipse: s-maj=23.0km s-min=9.8km az=27.0*
*OMAN **03** 13:16:35.2±1.1, 28°18N×51°86E, h20km, ml3.6/4, Error ellipse: s-maj=37.7km s-min=7.7km az=33.0*

ISC 03 13:16:32.1±0.8, 28°26N±0°08×51°62E±0°09, h24km, n42, σ1$00/46, mb3.8/9, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.21	88	ePg	Pn	13 16 54.3	+0.7
IKAZ	Kazeroun	1.53	7	ePg	Pn	13 16 58.7	+0.5
IKAZ				IAMB	IAmb	13 17 26.6	
	comp=Z,29μm,0.5s						
SHI	Shiraz	1.59	29	ePg	Pn	13 16 59.2	+0.3
SHI				IAMB	IAmb	13 17 24.6	
	comp=E,11μm,0.5s						
LMD1	Lamerd	1.65	123	ePn	Pb	13 17 03.8	+2.0
ISRV	Sarvestan	1.73	49	eP

IMEH	**Mehriz**	**4.07**	**39**	*e*Pn	**Pn**	**13 17 34.4**	**+1.4**
IMEH				IAMB	IAmb	13 17 36.3	
comp=Z,2μm,0.5s							
SHME	**Shamm**	**4.59**	**118**	P	**Pn**	**13 17 39.9**	**-0.1**
IZEF	**Zefreh**	**4.67**	**7**	*e*Pn	**Pn**	**13 17 41.8**	**+0.5**
IZEF				IAMB	IAmb	13 18 04.7	
comp=Z,400nm,0.8s							
NGRK	**Negar Kerman**	**4.69**	**72**	*e*Pn	**Pn**	**13 17 42.0**	**+0.3**
KHGB	**Koh Gabri**	**4.74**	**62**	*e*Pn	**Pn**	**13 17 42.8**	**+0.5**
BANOM	**Banah**	**4.78**	**118**	*i* P	**Pn**	**13 17 41.9**	**-0.7**
SNR=20							
BANOM				S	**Sn**	**13 18 38.1**	**+0.8**
BANOM	**Banah**	**4.78**	**118**	P	**Pn**	**13 17 43.0**	**+0.4**
SNR=20							
KRBR	**Kerman**	**4.82**	**68**	*e*Pn	**Pn**	**13 17 43.5**	**+0.1**
ASUD	**Al Ashush, Dub**	**4.91**	**137**	P	**Pn**	**13 17 43.8**	**-0.6**
MSFE	**Esma-Masafi**	**4.98**	**124**	*i* P	**Pn**	**13 17 46.6**	**+1.2**
SNR=7.9							
IKLH	**Kolahrood**	**5.05**	**360**	*e*Pn	**Pn**	**13 17 46.9**	**+0.4**
IKLH				IAMB	IAmb	13 18 07.5	
comp=Z,389nm,0.6s							
MDH	**Madha**	**5.12**	**124**	P	**Pn**	**13 17 48.5**	**+1.2**
MDH				S	**Sn**	**13 18 44.6**	**-1.0**
UOSS	**Minazif**	**5.26**	**128**	P	**Pn**	**13 17 48.0**	**-1.3**
HATD	**Hatta, Dubai**	**5.29**	**129**	P	**Pn**	**13 17 49.7**	**0.0**
ASHO	**Ashiyiah**	**5.34**	**131**	*i* P	**Pn**	**13 17 50.4**	**+0.1**
SNR=7.7							
ASHO				S	**Sn**	**13 18 50.0**	**-1.1**
ASHO	**Ashiyiah**	**5.34**	**131**	P	**Pn**	**13 17 50.9**	**+0.6**
SNR=7.8							
ASHO				S	**Sn**	**13 18 52.1**	**+1.0**
SOHO	**SOHO**	**6.03**	**132**	P	**Pn**	**13 18 00.3**	**+0.5**
SOHO				S	**Sn**	**13 19 07.3**	**-0.7**
GHVR	**GHOM**	**6.21**	**358**	*e*Pn	**Pn**	**13 18 02.1**	**-0.2**
WSAR	**Wadi Sarin**	**8.06**	**127**	Pn	**Pn**	**13 18 27.2**	**-0.4**
comp=Z,1.1nm,0.3s,baz=327,slow=9.2,SNR=12							
WSAR				Sn	**Sn**	**13 19 54.5**	**-3.6**
comp=Z,0.3nm,0.3s,baz=180,slow=20,SNR=2.2							
GEYT	**Alibeck**	**11.08**	**28**	LR	LR	13 23 50.6	
comp=Z,29nm,18.7s,baz=35,slow=40							
BRTR	**Keskin Array B**	**18.75**	**312**	P	**Pn**	**13 20 50.8**	**+0.8**
comp=Z,0.2nm,0.3s,baz=140,slow=14,SNR=7.4							
BVAR	**Borovoye Array**	**28.38**	**24**	P	**P**	**13 22 24.1**	**-0.2**
comp=Z,0.4nm,0.5s,baz=242,slow=8.2,SNR=3.9							
KURBB	**Kurchatov Arra**	**30.22**	**35**	P	**P**	**13 22 40.4**	**-0.3**
comp=Z,0.2nm,0.4s,baz=236,slow=9.0,SNR=4.4							
MKAR	**Makanchi Array**	**30.29**	**44**	P	**P**	**13 22 40.4**	**-0.9**
comp=Z,0.5nm,0.8s,baz=249,slow=9.2,SNR=3.1							
ZALV	**Zalesovo Beam**	**35.30**	**34**	LR	LR	13 40 51.8	
comp=Z,41nm,18.2s,baz=70,slow=42							
FINES	**FINESS Array B**	**37.30**	**340**	P	**P**	**13 23 41.5**	**-0.4**
comp=Z,1.3nm,0.4s,baz=143,slow=9.7,SNR=12							
NB2	**NORSAR Subarra**	**42.41**	**332**	P	**P**	**13 24 23.1**	**-1.4**
comp=Z,1.6nm,0.7s,baz=124,slow=8.6							
NOA	**NORSAR Array B**	**42.41**	**332**	P	**P**	**13 24 23.6**	**-0.9**
comp=Z,0.9nm,0.7s,baz=127,slow=9.1,SNR=4.2							
TORD	**Torodi Ar. Bea**	**48.72**	**263**	P	**P**	**13 25 15.3**	**+0.3**
comp=Z,0.7nm,0.7s,baz=72,slow=6.4,SNR=4.4							
YKA	**Yellowknife Ar**	**88.89**	**354**	P	**P**	**13 29 24.5**	**+0.4**
comp=Z,0.5nm,0.7s,baz=14,slow=4.5,SNR=3.2							
WRA	**Warramunga Arr**	**93.13**	**111**	P	**P**	**13 29 44.0**	**-0.5**
comp=Z,135nm,0.3s,baz=318,slow=3.6,SNR=1.1							
ASAR	**Alice Springs**	**94.55**	**114**	P	**P**	**13 29 49.9**	**-1.1**
comp=Z,0.3nm,0.5s,baz=305,slow=4.6,SNR=12							

JMA 03 13:35:36.3±0.1, 24°.68N×123°.33E, h16km±3km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.36**	**233**	P	Pg	13 35 43.7	-0.1
YOJ				S	Sg	13 35 48.9	0.0
JYNG	**Yonagunijimaku**	**0.42**	**237**	P	Pg	13 35 44.7	-0.1
JYNG				S	Sg	13 35 50.6	+0.1
IRIF	**Iriomote-Funau**	**0.50**	**133**	P	Pg	13 35 46.1	-0.2
IRIF				*e*S	Sg	13 35 52.6	-0.4
HATJ	**Hateruma jima**	**0.76**	**145**	P	Pg	13 35 50.7	-0.4
HATJ				*e*S	Sg	13 36 00.2	-0.9
JKRS	**Kuro-shima**	**0.76**	**125**	P	Pg	13 35 50.8	-0.3
JKRS				*e*S	Sb	13 36 01.3	+0.1
JIJ	**Ishigaki jima**	**0.81**	**113**	P	Pb	13 35 51.3	-0.6
JIJ				S	Sb	13 36 01.6	-0.9
JISG	**Ishigakijimahi**	**0.90**	**96**	P	Pb	13 35 53.2	-0.3
JISG				S	Sb	13 36 04.8	-0.4
JTJ	**Tarama**	**1.25**	**92**	P	Pn	13 35 58.9	-0.2
JTJ				*e*S	Sb	13 36 14.5	-0.8

TAP 03 13:36:06.1, 24°.90N×122°.42E, h18km±1km, ML2.5, 1C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.41**	**286**	P	Pg	13 36 14.7	+0.1
baz=285							
TWB1				S	Sb	13 36 20.7	-0.1
baz=285							
EOS1	**EOS1**	**0.44**	**218**	P	Pb	13 36 15.5	+0.1
baz=217							
EOS1				S	Sb	13 36 22.9	+1.3
baz=217							
NTC	**Toucheng**	**0.54**	**266**	P	Pb	13 36 17.3	+0.2
baz=265							
NTC				*e*S	Sb	13 36 25.7	+1.1
baz=265							
TIPB	**Shuangxi**	**0.55**	**278**	P	Pb	13 36 17.6	+0.4
baz=277							
TIPB				S	Sb	13 36 25.9	+1.0
baz=277							
TWC	**Suao**	**0.59**	**241**	⇑P	Pg	13 36 17.6	-0.3
baz=240							
TWC				*e*S	Sb	13 36 27.4	+1.2
baz=240							
NWF	**Wu-fen Shan**	**0.61**	**287**	P	Pb	13 36 18.9	+0.6
baz=286							
NWF				S	Sb	13 36 27.9	+1.3
baz=286							
WFSB	**Wu-fen Shan**	**0.61**	**287**	P	Pb	13 36 18.9	+0.7
baz=286							
WFSB				*e*S	Sn	13 36 28.0	-1.3
baz=286							
YOJ	**Yonaguni jima**	**0.69**	**129**	*e*P	Pb	13 36 18.4	-1.3
baz=126							
TWE	**Neicheng**	**0.71**	**256**	P	Pb	13 36 19.7	-0.3
baz=255							
TWE				*e*S	Sn	13 36 31.1	-0.7
baz=255							
SLBB	**Yuanshan**	**0.73**	**259**	P	Pg	13 36 21.0	+0.5
baz=258							
SLBB				S	Sn	13 36 32.4	0.0
baz=258							
ENA	**Nanau**	**0.78**	**233**	P	Pb	13 36 21.2	0.0
baz=232							
YM07	**YM07**	**0.78**	**291**	P	Pn	13 36 22.0	-0.3
baz=290							
PCYT	**Pengchaiyu**	**0.80**	**336**	*e*P	Pg	13 36 21.8	+0.1
baz=336							
YM08	**YM08**	**0.81**	**291**	P	Pn	13 36 22.4	-0.4
baz=290							
YM08				S	Sn	13 36 33.8	-0.6
baz=290							
YM01	**YM01**	**0.81**	**288**	*e*P	Pg	13 36 22.3	+0.3
baz=287							
YM01				*e*S	Sn	13 36 33.8	-0.7
baz=287							
YM11	**YM11**	**0.81**	**289**	*e*P	Pn	13 36 22.8	-0.1
baz=289							
YM11				*e*S	Sg	13 36 33.6	+0.7
baz=289							
ENTT	**Nioudou**	**0.82**	**252**	P	Pg	13 36 22.2	0.0
baz=251							
YM10	**YM10**	**0.82**	**288**	*e*P	Pg	13 36 22.4	+0.1
baz=288							
YM10				*e*S	Sb	13 36 33.0	+0.2
baz=288							
TWY	**Chenhua**	**0.84**	**297**	*e*P	Pg	13 36 22.8	+0.3
baz=296							
TWY				*e*S	Sg	13 36 34.2	+0.7
baz=296							
NWLT	**Wulai**	**0.84**	**262**	*e*P	Pg	13 36 22.8	+0.2
baz=261							
TATO	**Taipei**	**0.85**	**275**	*e*P	Pb	13 36 22.4	0.0
baz=275							
TATO				*e*S	Sg	13 36 34.5	+0.5
baz=275							
ANP	**Anpu**	**0.87**	**290**	*e*P	Pg	13 36 23.1	0.0
baz=289							
ANP				*e*S	Sn	13 36 35.6	-0.3
baz=289							
NDT	**Datong Townshi**	**0.88**	**251**	P	Pn	13 36 23.5	-0.1
baz=250							
NDT				*e*S	Sn	13 36 35.5	-0.5
baz=250							
YHNB	**Yeheng**	**0.98**	**257**	*e*P	Pg	13 36 25.2	+0.1
baz=256							
NSK	**Sanguang**	**0.99**	**257**	*e*P	Pb	13 36 25.0	+0.1
baz=256							
NACB	**Ninganchiao**	**1.04**	**227**	*e*P	Pb	13 36 25.2	-0.5
baz=226							
NACB				*e*S	Sg	13 36 39.9	-0.1
baz=226							
NNSB	**Datong**	**1.05**	**244**	*e*P	Pn	13 36 26.3	+0.1
baz=243							
NNSB				*e*S	Sn	13 36 40.7	+0.1
baz=243							
NNS	**Nan Shan**	**1.06**	**245**	*e*P	Pb	13 36 25.4	-0.6
baz=244							
NNS				*e*S	Sg	13 36 40.4	-0.2
baz=244							
ETLH	**Xiulin Townshi**	**1.10**	**231**	*e*P	Pn	13 36 26.9	+0.1
baz=231							
ETLH				*e*S	Sg	13 36 42.2	+0.4
baz=231							
TWD	**Chiawan**	**1.11**	**223**	*e*P	Pn	13 36 27.0	+0.2
baz=222							
WHF	**Hehuan Shan**	**1.29**	**235**	*e*P	Pb	13 36 30.2	0.0
baz=234							
WHF				*e*S	Sn	13 36 47.3	+0.4
baz=234							
LIOB	**Emei**	**1.30**	**259**	*e*P	Pb	13 36 30.1	-0.1
baz=258							
NSTT	**Nanjuang**	**1.32**	**259**	*e*P	Pg	13 36 32.4	+0.8
baz=258							
CHGB	**Renai**	**1.41**	**234**	*e*P	Pg	13 36 33.0	-0.4
baz=233							
CHGB				*e*S	Sb	13 36 49.7	-0.1
baz=233							
OWD	**Renai**	**1.47**	**231**	*e*P	Pb	13 36 33.2	+0.1
baz=230							
VWDT	**VWDT**	**1.63**	**226**	*e*P	Pg	13 36 36.7	-0.9
baz=225							

KRSC 03 13:37:14.2±1.2, 52°.03N×160°.88E, h13km±25km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.19**	**334**	*e*P	Pn	13 37 36.3	-0.2
SPN				*e*S	Sb	13 37 50.0	-1.9
NLC	**Nalytchevo**	**1.48**	**321**	*e*P	Pb	13 37 41.1	-0.4
NLC				*e*S	Sg	13 38 01.4	-0.3
RUS	**Russkaya**	**1.51**	**287**	*e*P	Pn	13 37 40.9	0.0
DALK	**Dalny**	**1.64**	**309**	*e*P	Pn	13 37 43.1	+0.4
DALK				*e*S	Sb	13 38 04.5	-0.3
PET	**Petropavlovsk**	**1.69**	**307**	*e*P	Pn	13 37 44.0	+0.7
PET				*e*S	Sg	13 38 07.3	-1.0
MTVR	**Mutnovka**	**1.72**	**286**	*e*P	Pn	13 37 44.4	+0.5
MTVR				*e*S	Sn	13 38 06.0	+0.2
UGLR	**Uglovaya**	**1.72**	**314**	*e*P	Pb	13 37 45.4	-0.3
SDLR	**Sedlovina**	**1.74**	**317**	*e*P	Pn	13 37 45.0	+0.7
KDTR	**Khodutka, Kamc**	**1.75**	**264**	*e*P	Pn	13 37 44.8	+0.6
SMAR	**Somma**	**1.77**	**315**	*e*P	Pn	13 37 45.3	+0.6
AVH	**Avacha**	**1.80**	**314**	*e*P	Pb	13 37 46.1	-0.9
KRER	**Koryakskii**	**1.82**	**314**	*e*P	Pb	13 37 46.6	-0.8
KOK	**Koryaka**	**1.86**	**314**	*e*P	Pb	13 37 48.6	+0.5
KRMR	**Karymshinskiy**	**1.86**	**297**	*e*P	Pn	13 37 46.4	+0.6
KRMR				*e*S	Sb	13 38 10.5	-0.7
ASAK	**Asacha**	**1.86**	**282**	*e*P	Pb	13 37 47.4	-0.7
KRX	**Arik**	**1.90**	**315**	*e*P	Pn	13 37 47.1	+0.7
GNL	**Ganaly**	**2.44**	**314**	*e*P	Pb	13 37 55.9	-2.1
GNL				*e*S	Sb	13 38 26.3	-1.7
APC	**Apacha**	**2.44**	**293**	*e*P	Pb	13 37 56.1	-1.9
MKZ	**Mys Kozlova**	**2.58**	**11**	*e*P	Pn	13 37 57.3	+1.6

MEX 03 13:45:23.7±0.4, 14°.60N×94°.35W, h54km±42km, MD3.9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.55**	**45**	*i* P	Pn	13 45 47.5	-1.5
PCIG				*i* S	Sn	13 46 06.0	-2.0
THIG		**2.04**	**81**	*i* P	Pn	13 45 54.1	-1.6
THIG				*i* S	Sn	13 46 18.3	-1.7
HUIG	**Huatulco**	**2.06**	**305**	*e*P	Pn	13 45 54.8	-1.1
HUIG				*i* S	Sn	13 46 18.3	-2.1
TGIG		**2.47**	**28**	*i* P	Pn	13 46 00.4	-1.2
TGIG				*i* S	Sn	13 46 30.1	-0.6
CCIG	**Comitan**	**2.71**	**52**	*i* P	Pn	13 46 05.6	+0.5

ISK ***03*** *14:11:27.7, 39°.93N×33°.08E, h16km, ML2.1/5*
ISCJB ***03*** *14:11:29.0±0.9, 39°.94N±0°.06×33°.01E±0°.05, h19km±8km, Error ellipse: s-maj=10.5km s-min=6.7km az=175.2*
DDA ***03*** *14:11:28.0, 39°.97N×33°.03E, h7km±2km, ML2.6*
ISC 03 14:11:28.6±1.1, 39°.92N±0°.06×33°.03E±0°.04, h17km±8km, n10, σ1°13/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.19**	**256**	PG	**Pb**	**14 11 33.2**	**-0.5**
ANTO				SG	**Sg**	**14 11 37.3**	**+0.7**
LOD	**Lodumlu**	**0.21**	**263**	PG	**Pb**	**14 11 33.6**	**-0.5**
LOD				SG	**Sg**	**14 11 37.4**	**+0.3**
AFSR	**Afar-Bala (An**	**0.47**	**177**	PG	**Pg**	**14 11 37.9**	**-0.2**
DELI	**KIRIKKALE**	**0.69**	**83**	*i* P	**Pb**	**14 11 42.1**	**-0.1**
DELI				*i* S	**Sn**	**14 11 52.6**	**-1.5**
DELI				IAML_P			
comp=Z,700nm,0.2s							
KKUL	**Konya-Kulu**	**0.75**	**187**	*i* P	**Pb**	**14 11 43.4**	**+0.1**
KKUL				*i* S	**Sn**	**14 11 55.6**	**+0.1**
KKUL				IAML_P			
comp=Z,346nm,0.2s							
KULU	**Kulu**	**0.87**	**182**	PG	**Pg**	**14 11 45.4**	**-0.2**
KIRS	**Kırehir-Merke**	**1.04**	**139**	*i* P	**Pg**	**14 11 48.2**	**-0.5**
KIRS				*i* S	**Sg**	**14 12 01.8**	**-0.5**
KIRS				IAML_P			
comp=Z,833nm,0.3s							
CDAG	**Cicekdag**	**1.07**	**105**	*i* P	**Pn**	**14 11 48.9**	**0.0**
CDAG				*i* S	**Sn**	**14 12 06.9**	**+3.3**
CDAG				IAML_P			
comp=Z,731nm,0.1s							
YAYX	**Yaylak**	**1.15**	**148**	PN	**Pb**	**14 11 49.6**	**-0.5**
AUMIH	**MIHALICIK**	**1.19**	**268**	*i* P	**Pg**	**14 11 51.6**	**-0.1**

ISCJB ***03*** *14:15:08.0±0.4, 27°.77N±0°.05×127°.67E±0°.06, h154km±4km, mb3.9/9, Error ellipse: s-maj=10.4km s-min=6.0km az=33.4*
IDC ***03*** *14:15:08.8±0.6, 27°.82N×127°.75E, h146km±6km, mb3.4/8, mb1 3.5/10, mb1mx3.2/42, mbtmp3.8/10, Error ellipse: s-maj=21.3km s-min=11.8km az=80.0*
JMA ***03*** *14:15:09.4±0.2, 27°.87N×127°.51E, h127km±5km, M3.7*
ISC 03 14:15:08.9±0.8, 27°.79N±0°.06×127°.62E±0°.07, h146km±7km, n26, σ0°91/38, mb3.7/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.81**	**158**	P	**Pn**	**14 15 31.9**	**+0.1**
JOKE	**Okinoerabujima**	**0.95**	**117**	P	**Pn**	**14 15 33.0**	**+0.1**
JOKE				S	**Sn**	**14 15 50.8**	**-0.3**
JYRO	**Yoronjima**	**1.06**	**136**	P	**Pn**	**14 15 34.0**	**+0.2**
JYRO				*e*S	**Sn**	**14 15 52.4**	**-0.4**
JOW	**Kunigami**	**1.12**	**149**	P	**Pn**	**14 15 34.8**	**+0.3**
47nm,0.3s,baz=128,slow=13,SNR=644							
JOW				S	**Sn**	**14 15 53.4**	**-0.5**
24nm,0.3s,baz=232,slow=26,SNR=18							
JOW	**Kunigami**	**1.12**	**149**	P	**Pn**	**14 15 34.7**	**+0.3**
JOW				*e*S	**Sn**	**14 15 53.9**	**+0.1**
JTK	**Tokunoshima**	**1.18**	**90**	P	**Pn**	**14 15 35.0**	**+0.1**
JTK				S	**Sn**	**14 15 54.1**	**-0.6**
JAGN	**Aguni-jima**	**1.25**	**196**	P	**Pn**	**14 15 35.2**	**-0.4**
JAGN				*e*S	**Sn**	**14 15 54.8**	**-1.1**
JNTH	**Nagotoyohara**	**1.32**	**164**	P	**Pn**	**14 15 36.8**	**+0.5**
JAMN	**Amaminishikomi**	**1.45**	**72**	P	**Pn**	**14 15 37.5**	**0.0**
JAMN				*e*S	**Sn**	**14 15 59.1**	**-0.4**
JKE	**Kume jima 2**	**1.64**	**207**	P	**Pn**	**14 15 39.3**	**-0.4**
JJT3	**Tamagusuku3**	**1.65**	**175**	P	**Pn**	**14 15 40.7**	**+0.9**
JJT3				S	**Sn**	**14 16 04.1**	**+0.6**
JAM	**Amami Oshima**	**1.86**	**70**	P	**Pn**	**14 15 42.3**	**+0.2**
JAM				*e*S	**Sn**	**14 16 07.1**	**-0.5**
JZK	**Kikaishima**	**2.14**	**75**	P	**Pn**	**14 15 46.6**	**+1.2**
JZK				*e*S	**Sn**	**14 16 14.9**	**+1.3**
JYAK	**Yakushimahirau**	**3.51**	**45**	*e*S	**Sn**	**14 16 42.7**	**-1.7**
JMZ	**Minamidaito 2**	**3.77**	**121**	P	**Pn**	**14 16 06.3**	**+0.3**
JMZ				S	**Sn**	**14 16 48.8**	**-1.5**
JNU	**Nakatsue**	**6.01**	**27**	P	**Pn**	**14 16 36.4**	**+0.7**
0.6nm,0.3s,baz=235,slow=6.0,SNR=7.1							
KSRS	**Korea Array**	**9.64**	**1**	P	**Pn**	**14 17 25.0**	**+1.0**
baz=181,slow=14,SNR=8.4							
SONM	**Songino Array**	**25.95**	**326**	P	**P**	**14 20 28.7**	**+0.9**
1.6nm,0.4s,baz=133,slow=10.0,SNR=6.9							
CMAR	**Chiang Mai Arr**	**27.91**	**257**	P	**P**	**14 20 48.2**	**+2.9**
0.4nm,0.4s,baz=72,slow=5.8,SNR=3.4							
MKAR	**Makanchi Array**	**40.10**	**311**	P	**P**	**14 22 28.8**	**-1.3**
0.4nm,0.4s,baz=94,slow=12,SNR=6.6							
MKAR				PcP	**PcP**	**14 24 31.4**	**-0.3**
0.3nm,0.6s,baz=96,slow=5.8,SNR=2.8							
KURBB	**Kurchatov Arra**	**43.36**	**315**	P	**P**	**14 22 55.3**	**-1.1**
0.5nm,0.4s,baz=103,slow=8.9,SNR=6.5							
WRA	**Warramunga Arr**	**47.90**	**171**	P	**P**	**14 23 32.1**	**-0.3**
128nm,0.3s,baz=1.7,slow=8.6,SNR=1.1							
ASAR	**Alice Springs**	**51.52**	**173**	P	**P**	**14 24 00.3**	**+0.6**
0.9nm,0.6s,baz=0.2,slow=15,SNR=38							
STKA	**Stephens Creek**	**60.81**	**166**	P	**P**	**14 25 05.1**	**-0.4**
1.4nm,0.6s,baz=2.2,slow=8.6,SNR=4.0							
ILAR	**Eielson Array**	**63.33**	**29**	P	**P**	**14 25 20.9**	**-1.0**
0.3nm,0.7s,baz=242,slow=3.9,SNR=5.9							
YKA	**Yellowknife Ar**	**77.34**	**25**	P	**P**	**14 26 46.9**	**-0.1**
0.7nm,0.4s,baz=304,slow=5.6,SNR=7.0							

ISCJB ***03*** *14:31:25.8±0.5, 24°.89N±0°.02×122°.46E±0°.02, h7km±3km, Error ellipse: s-maj=3.8km s-min=2.6km az=29.6*
JMA ***03*** *14:31:25.7±0.2, 24°.86N×122°.44E, h1km±3km*
TAP ***03*** *14:31:26.1, 24°.91N×122°.42E, h16km, ML2.8, C*
ISC 03 14:31:25.7±1.1, 24°.89N±0°.03×122°.44E±0°.02, h9km±9km, n54, σ0°36/97, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.43**	**286**	*i* P	**Pb**	**14 31 35.0**	**-0.5**
baz=284							
TWB1				*i* S	**Sb**	**14 31 41.0**	**-1.1**
baz=284							
EOS1	**EOS1**	**0.44**	**220**	P	**Pb**	**14 31 35.6**	**-0.1**
baz=217							
EOS1				*e*S	**Sb**	**14 31 43.1**	**+0.7**
baz=217							
NTC	**Toucheng**	**0.56**	**267**	*e*P	**Pb**	**14 31 37.4**	**-0.3**
baz=276							
NTC				*e*S	**Sb**	**14 31 44.9**	**-0.9**
baz=276							
TIPB	**Shuangxi**	**0.56**	**279**	P	**Pb**	**14 31 37.7**	**-0.1**
baz=276							
TIPB				S	**Sb**	**14 31 45.4**	**-0.7**
baz=276							
TWC	**Suao**	**0.61**	**243**	*i* P	**Pg**	**14 31 37.6**	**+0.2**
baz=240							
TWC				S	**Sg**	**14 31 45.9**	**+0.5**
baz=240							
NWF	**Wu-fen Shan**	**0.63**	**287**	*i* P	**Pb**	**14 31 38.9**	**0.0**
baz=285							
NWF				S	**Sb**	**14 31 48.1**	**+0.2**
baz=285							
WFSB	**Wu-fen Shan**	**0.63**	**287**	*e*P	**Pb**	**14 31 39.0**	**+0.1**
baz=285							
WFSB				*e*S	**Sb**	**14 31 47.5**	**-0.3**
baz=285							
JYNG	**Yonagunijimaku**	**0.63**	**133**	P	**Pg**	**14 31 37.9**	**-0.1**
JYNG				*e*S	**Sg**	**14 31 46.3**	**+0.1**
YOJ	**Yonaguni jima**	**0.67**	**129**	*e*P	**Pg**	**14 31 38.5**	**-0.2**
baz=119							
YOJ				*e*S	**Sg**	**14 31 47.3**	**-0.2**
baz=119							
YOJ	**Yonaguni jima**	**0.67**	**129**	P	**Pg**	**14 31 38.5**	**-0.2**
YOJ				*e*S	**Sg**	**14 31 47.4**	**0.0**
TWE	**Neicheng**	**0.72**	**257**	P	**Pg**	**14 31 40.0**	**+0.3**
baz=246							
TWE				S	**Sb**	**14 31 49.9**	**-0.7**
baz=246							
SLBB	**Yuanshan**	**0.74**	**260**	P	**Pb**	**14 31 40.9**	**0.0**
baz=250							
SLBB				S	**Sb**	**14 31 51.4**	**+0.1**
baz=250							
TWA	**Mucha**	**0.78**	**277**	P	**Pb**	**14 31 41.6**	**+0.1**
baz=275							
TWA				S	**Sb**	**14 31 51.9**	**-0.5**
baz=275							
ENA	**Nanau**	**0.79**	**234**	P	**Pb**	**14 31 41.3**	**-0.3**
baz=232							
ENA				S	**Sb**	**14 31 52.1**	**-0.2**
baz=232							
YM07	**YM07**	**0.80**	**291**	*e*P	**Pg**	**14 31 41.1**	**0.0**
baz=290							
PCYT	**Pengchaiyu**	**0.81**	**336**	*e*P	**Pg**	**14 31 41.1**	**-0.3**
baz=336							
PCYT				*e*S	**Sn**	**14 31 54.8**	**-0.8**
baz=336							
YM08	**YM08**	**0.83**	**291**	*e*P	**Pg**	**14 31 42.0**	**+0.3**
baz=290							
YM08				*e*S	**Sb**	**14 31 54.1**	**+0.5**
baz=290							
YM01	**YM01**	**0.83**	**288**	*e*P	**Pg**	**14 31 41.9**	**+0.2**
baz=287							
YM01				*e*S	**Sb**	**14 31 53.8**	**0.0**
baz=287							
ENTT	**Nioudou**	**0.83**	**253**	P	**Pb**	**14 31 42.5**	**+0.1**
baz=251							
ENTT				S	**Sb**	**14 31 53.6**	**-0.1**
baz=251							
YM11	**YM11**	**0.83**	**289**	*e*P	**Pb**	**14 31 42.2**	**-0.2**
baz=274							
YM11				*e*S	**Sb**	**14 31 53.8**	**0.0**
baz=274							
NHDH	**Xindian Distri**	**0.83**	**275**	*e*P	**Pb**	**14 31 42.3**	**-0.1**
baz=273							
NHDH				*e*S	**Sb**	**14 31 54.0**	**+0.2**
baz=273							
YM05	**YM05**	**0.84**	**289**	*e*P	**Pb**	**14 31 42.6**	**0.0**
baz=274							
YM05				*e*S	**Sb**	**14 31 54.0**

NACB				*e*S	**Sb**	**14 32 00.1**	**+0.1**
	baz=237						
NNSB	**Datong**	**1.07 245**		*e*P	**Pg**	**14 31 46.3**	**0.0**
	baz=243						
NNSB				*e*S	**Sb**	**14 32 00.7**	**+0.1**
	baz=243						
NNS	**Nan Shan**	**1.07 246**		P	**Pb**	**14 31 46.8**	**+0.3**
	baz=243						
NNS				*e*S	**Sb**	**14 32 01.3**	**+0.6**
	baz=243						
ETLH	**Xiulin Townshi**	**1.11 232**		*e*P	**Pg**	**14 31 46.8**	**-0.2**
	baz=230						
ETLH				*e*S	**Sn**	**14 32 02.4**	**-0.7**
	baz=230						
TWD	**Chiawan**	**1.11 224**		*e*P	**Pg**	**14 31 47.0**	**-0.2**
	baz=230						
TWD				*e*S	**Sb**	**14 32 02.4**	**+0.5**
	baz=230						
IRIF	**Iriomote-Funau**	**1.30 115**		P	**Pg**	**14 31 51.0**	**+0.4**
WHF	**Hehuan Shan**	**1.30 236**		*i* P	**Pg**	**14 31 51.0**	**+0.2**
	baz=233						
WHF				S	**Sg**	**14 32 07.5**	**-0.2**
	baz=233						
LIOB	**Emei**	**1.32 260**		*e*P	**Pn**	**14 31 50.5**	**+0.1**
	baz=257						
LIOB				*e*S	**Sn**	**14 32 08.7**	**+0.5**
	baz=257						
TDCB	**Techi**	**1.33 242**		*e*P	**Pg**	**14 31 51.3**	**+0.1**
	baz=231						
TDCB				*e*S	**Sg**	**14 32 08.4**	**-0.1**
	baz=231						
NSTT	**Nanjuang**	**1.33 259**		*e*P	**Pg**	**14 31 52.1**	**+0.7**
	baz=257						
NSTT				*e*S	**Sg**	**14 32 08.7**	**0.0**
	baz=257						
ESL	**Shilin**	**1.41 221**		*e*P	**Pb**	**14 31 52.2**	**0.0**
	baz=219						
CHGB	**Renai**	**1.42 235**		*e*P	**Pb**	**14 31 52.5**	**-0.1**
	baz=233						
CHGB				*e*S	**Sg**	**14 32 11.3**	**-0.1**
	baz=233						
OWD	**Renai**	**1.48 231**		*e*P	**Pn**	**14 31 53.1**	**+0.3**
	baz=230						
OWD				*e*S	**Sg**	**14 32 12.9**	**-0.5**
	baz=230						
DPDB	**Guoxing**	**1.62 239**		*e*P	**Pb**	**14 31 55.9**	**0.0**
	baz=237						
VWDT	**VWDT**	**1.64 227**		*e*P	**Pb**	**14 31 55.8**	**-0.3**
	baz=207						
VWDT				*e*S	**Sb**	**14 32 17.3**	**+0.4**
	baz=207						
HGSD	**Ruisui**	**1.67 214**		*e*P	**Pn**	**14 31 55.1**	**-0.1**
	baz=199						
HGSD				*e*S	**Sb**	**14 32 17.5**	**-0.4**
	baz=199						
EHY	**Hungye**	**1.71 217**		*e*P	**Pn**	**14 31 56.2**	**+0.4**
	baz=215						
JISG	**Ishigakijimahi**	**1.73 100**		*e*S	**Sn**	**14 32 19.0**	**+0.8**
SSLB	**Suanglung**	**1.74 231**		*e*P	**Pb**	**14 31 57.8**	**-0.2**
	baz=213						
YULB	**Yu-li**	**1.82 215**		*e*P	**Pb**	**14 31 58.6**	**-0.7**
	baz=214						
WHYT	**Xinyi Township**	**1.87 231**		*e*P	**Pb**	**14 31 59.5**	**-0.7**
	baz=230						

NNC 03 14:41:17.3±2.9, 38°.97N×71°.36E, h0km, mb3.9, mpv3.5, 6C-4D, Error ellipse: s-maj=27.0km s-min=17.2km az=4.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.18 351**		⇑Pn	Pn	14 42 23.1	+0.7
	4.8nm,0.4s,baz=174,slow=12,SNR=46						
KK31				⇑Lg	Lg	14 43 29.2	
	12nm,0.9s,baz=180,slow=22,SNR=4.4						
AAK	**Ala-Archa**	**4.37**	**32**	⇑Pn	Pn	14 42 25.2	0.0
	9.0nm,0.8s						
AAK				⇑Lg	Lg	14 43 38.4	
	14nm,1.1s						
TKM2	**Tokmak 2**	**5.09**	**38**	⇑Pn	Pn	14 42 34.1	-0.9
	4.3nm,0.7s						
TKM2				⇓Lg	Lg	14 43 58.0	
	7.0nm,0.8s						
AB31	**Akbulak array**	**13.14 325**		⇓Pn	Pn	14 44 24.4	-0.7
	1.1nm,0.7s,baz=138,slow=14,SNR=9.2						
AB31				⇓Sn	Sn	14 46 55.3	+3.4
	1.2nm,0.8s						
AKTO	**Aktyubinsk**	**14.85 325**		⇑Pn	Pn	14 44 50.0	+1.5
	2.3nm,0.7s						
AKTO				⇓Sn	Sn	14 47 30.3	-3.4
	0.7nm,0.7s						

NIED ***03*** *14:43:00, 45°.50N×151°.10E, h38km, Mw4.0 Best double couple: M0 9.84000×10^14 NP1:φ=237.00000°, δ=40.00000°, λ=147.00000°. NP2:φ=353.00000°, δ=69.00000°, λ=55.00000°.*
ISCJB ***03*** *14:43:50.7±0.6, 45°.26N±0°.08×151°.19E±0°.08, h42km, mb3.7/13, MS3.4/2, Error ellipse: s-maj=13.2km s-min=4.0km az=145.7*
JMA ***03*** *14:43:50.3±0.8, 45°.52N×151°.12E, h30km, M4.4*
SKHL ***03*** *14:43:52.4±0.6, 45°.33N×151°.18E, h51km±2km, mb4.2/5*
MOS ***03*** *14:43:53.2±1.2, 45°.52N×150°.90E, h51km, mb4.4/1, Error ellipse: s-maj=14.7km s-min=8.6km az=46.9*
IDC ***03*** *14:43:54.9±2.3, 45°.45N×150°.83E, h48km±21km, mb3.5/12, mb1 3.6/18, mb1mx3.5/56, mbtmp3.7/18, ML3.4/3, MS3.2/6, Ms1 3.2/6, ms1mx2.8/31, Error ellipse: s-maj=26.4km s-min=14.5km az=142.0*

ISC 03 14:43:52.7±0.7, 45°.20N±0°.09×151°.18E±0°.08, h42km, n61, σ1§61/66, mb3.7/13, 3C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.34 272**		*c i*PN	**Pn**	**14 44 29.0**	**+0.4**
KUR				*e*S	**Sn**	**14 44 56.6**	**+0.5**
KUR				pmax	pmax		
	comp=N,101nm,0.3s						
KUR				pmax	pmax		
	comp=Z,134nm,0.3s						
KUR				pmax	pmax		
	comp=E,46nm,0.2s						
KUR				smax	smax		
	comp=N,267nm,0.3s						
KUR				smax	smax		
	comp=E,332nm,0.5s						
KUR	**Kuril'sk**	**2.34 272**		*i* P	**Pn**	**14 44 29.0**	**+0.4**
KUR				AMB	AMB	14 44 36.0	
	comp=E,134nm,0.3s						
KUR				*i* S	**Sn**	**14 44 56.6**	**+0.5**
KUR				A	A	14 45 01.4	
	comp=E,267nm,0.4s						
KUR				A	A	14 45 01.4	
	comp=E,332nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.97 255**		⇑*i*PN	**Pn**	**14 44 53.0**	**+2.0**
YUK				*e*S	**Sn**	**14 45 38.8**	**+2.6**
YUK				pmax	pmax		
	comp=N,123nm,0.5s						
YUK				pmax	pmax		
	comp=Z,157nm,0.5s						
YUK				pmax	pmax		
	comp=E,64nm,0.2s						
YUK				smax	smax		
	comp=E,170nm,0.6s						
YUK				smax	smax		
	comp=N,332nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**3.97 255**		*i* P	**Pn**	**14 44 53.0**	**+2.0**
YUK				AMB	AMB	14 45 00.0	
	comp=N,16nm,0.4s						
YUK				*e*S	**Sn**	**14 45 38.0**	**+1.8**
YUK				A	A	14 45 51.0	
	comp=N,160nm,0.4s						
YUK				A	A	14 45 51.0	
	comp=N,170nm,0.4s						
LAGR	**Lagunnoye**	**4.02 255**		⇑*i*PN	**Pn**	**14 44 53.5**	**+1.9**
LAGR				*e*S	**Sn**	**14 45 39.9**	**+2.6**
LAGR				pmax	pmax		
	comp=Z,147nm,0.4s						
LAGR				smax	smax		
	comp=N,312nm,0.4s						
LAGR				smax	smax		
	comp=E,567nm,0.6s						
LAGR	**Lagunnoye**	**4.02 255**		*i* P	**Pn**	**14 44 53.5**	**+1.9**
LAGR				AMB	AMB	14 44 58.0	
	comp=E,15nm,0.5s						
LAGR				*e*S	**Sn**	**14 45 39.0**	**+1.7**
LAGR				A	A	14 45 50.0	
	comp=E,150nm,0.6s						
LAGR				A	A	14 45 50.0	
	comp=E,140nm,0.6s						
GRPR	**Tuman**	**4.04 255**		*e*PN	**Pn**	**14 44 53.8**	**+1.8**
GRPR				*e*S	**Sn**	**14 45 40.5**	**+2.4**
GRPR				pmax	pmax		
	comp=Z,108nm,0.4s						
GRPR				smax	smax		
	comp=N,122nm,0.3s						
GRPR				smax	smax		
	comp=E,330nm,0.6s						
GRPR	**Tuman**	**4.04 255**		*e*P	**Pn**	**14 44 53.0**	**+1.0**
GRPR				AMB	AMB	14 45 00.0	
	comp=E,11nm,0.4s						
GRPR				*e*S	**Sn**	**14 45 40.0**	**+1.9**
GRPR				A	A	14 45 52.0	
	comp=E,122nm,0.4s						
GRPR				A	A	14 45 52.0	
	comp=E,160nm,0.4s						
GLVR	**Golovnino**	**4.31 252**		*e*PN	**Pn**	**14 44 57.3**	**+1.7**
GLVR				*e*S	**Sn**	**14 45 46.7**	**+2.2**
GLVR				pmax	pmax		
	comp=Z,137nm,0.6s						
GLVR				smax	smax		
	comp=N,125nm,0.2s						
GLVR				smax	smax		
	comp=E,273nm,0.5s						
GLVR	**Golovnino**	**4.31 252**		*e*P	**Pn**	**14 44 57.0**	**+1.4**
GLVR				AMB	AMB	14 45 02.0	
	comp=E,14nm,0.5s						
GLVR				*e*S	**Sn**	**14 45 46.0**	**+1.5**
GLVR				A	A	14 45 52.0	
	comp=E,125nm,0.5s						
GLVR				A	A	14 45 52.0	
	comp=E,140nm,0.5s						
NEM2	**Nemuro 2**	**4.31 247**		P	**Pn**	**14 44 54.3**	**-1.3**
NEM2				*e*S	**Sn**	**14 45 42.4**	**-2.2**
JRA	**Rausu**	**4.51 256**		P	**Pn**	**14 44 59.3**	**+1.0**
JNK	**Nakash**	**4.90 253**		P	**Pn**	**14 45 04.0**	**+0.2**
JAK	**Akkeshi**	**5.16 247**		P	**Pn**	**14 45 06.3**	**-1.0**
JTKR	**Abashiri--Toko**	**5.34 259**		P	**Pn**	**14 45 10.7**	**+1.0**
JAR	**Ashorobuto**	**5.65 253**		P	**Pn**	**14 45 14.8**	**+0.7**
JMP	**Maruseppu**	**5.71 261**		P	**Pn**	**14 45 16.1**	**+1.2**
YSS	**Yuzh-Sakhalins**	**6.12 290**		PN	Pn	14 45 32.0	+12
YSS	**Yuzh-Sakhalins**	**6.12 290**		*e*rx	rx	14 45 32.0	
JKK2	**Kamakawa 2**	**6.17 261**		P	**Pn**	**14 45 22.7**	**+1.5**
JCH	**Churui**	**6.21 248**		P	**Pn**	**14 45 20.7**	**-1.0**
JKA	**Kamikawa-asahi**	**6.21 263**		*e*P	**Pn**	**14 45 21.9**	**+0.1**
ASAJ	**Asahikawa**	**6.22 263**		P	**Pn**	**14 45 21.9**	**+0.1**
	comp=E,1.7nm,0.3s,baz=63,slow=23,SNR=6.2						
ASAJ				LR	LR	14 47 40.3	
	comp=E,125nm,21.8s,baz=136,slow=38						
SKR	**Severo-Kuril's**	**6.41**	**29**	*e*PN	**Pn**	**14 45 21.9**	**-2.5**
SKR				*e*S	**Sn**	**14 46 38.2**	**+1.9**
SKR				smax	smax		
	comp=N,40nm,0.8s						
SKR				smax	smax		
	comp=E,55nm,0.7s						
SKR	**Severo-Kuril's**	**6.41**	**29**	*e*P	**Pn**	**14 45 23.9**	**-0.5**
SKR				*e*S	**Sn**	**14 46 34.0**	**-2.3**
SKR				A	A	14 47 03.0	
	comp=E,40nm,0.6s						
SKR				A	A	14 47 03.0	
	comp=E,55nm,0.6s						
JEM	**Erimo**	**6.63 244**		*e*S	**Sn**	**14 46 37.7**	**-4.1**
JNBK	**Urakawa-nobuka**	**6.76 247**		P	**Pn**	**14 45 27.5**	**-1.8**
JBT2	**Biratori 2**	**6.80 252**		P	**Pn**	**14 45 29.1**	**-0.7**
JKB	**Kayabe**	**8.08 249**		P	**Pn**	**14 45 46.3**	**-1.0**
JYM2	**Yakumo 2**	**8.42 252**		P	**Pn**	**14 45 52.4**	**+0.4**
JANG	**Nango**	**8.58 239**		P	**Pn**	**14 45 52.4**	**-1.9**
JANG				*e*S	Sn	14 47 23.4	-6.4
PETK	**Petropavlovsk-**	**8.99**	**26**	P	**Pn**	**14 45 59.7**	**-0.2**
	comp=E,0.1nm,0.3s,baz=204,slow=12,SNR=3.1						
MJAR	**Matsushiro Arr**	**13.07 233**		P	**Pn**	**14 46 57.4**	**+1.8**
	comp=E,0.1nm,0.3s,baz=30,slow=10,SNR=5.6						
USRK	**Ussuriysk Ar.**	**13.69 273**		P	**Pn**	**14 47 02.1**	**-1.9**
	comp=E,0.1nm,0.3s,baz=47,slow=13,SNR=3.5						
USRK				LR	LR	14 52 10.1	
	comp=E,101nm,20.4s,baz=170,slow=37						
KLR	**Kul'dur**	**13.80 294**		LR	LR	14 52 29.2	
	comp=E,82nm,19.1s,baz=102,slow=38						
EKMR	**Ekimchan**	**14.27 310**		*e*rx	rx	14 47 13.5	
BMKR	**Bomnak**	**17.17 312**		*e*rx	rx	14 47 52.0	
SEY	**Seymchan**	**17.79**	**2**	P	**P**	**14 47 56.0**	**-1.1**
	comp=E,0.1nm,0.3s,baz=152,slow=17,SNR=4.3						
SEY	**Seymchan**	**17.79**	**2**	P	**P**	**14 47 56.0**	**-1.1**
KROS	**Kirovskiy**	**18.07 309**		*e*P	**P**	**14 47 58.0**	**-2.3**
KROS				AMB	AMB	14 48 03.0	
	comp=E,4.0nm,0.4s						
KSRS	**Korea Array**	**19.06 254**		P	**Pn**	**14 48 12.7**	**+0.3**
	baz=64,slow=11,SNR=3.3						
KSRS				LR	LR	14 56 25.3	
	comp=E,48nm,18.1s,slow=40						
H11N2	**WAKE ISLAND Hy**	**28.54 148**		T	T	15 20 42.3	
	baz=336,slow=76,SNR=37						
H11N1	**WAKE ISLAND Hy**	**28.56 148**		T	T	15 20 25.7	
	baz=336,slow=76,SNR=32						
H11N3	**WAKE ISLAND Hy**	**28.56 148**		T	T	15 20 35.1	
	baz=336,slow=76,SNR=41						
H11S1	**WAKE ISLAND Hy**	**29.59 149**		T	T	15 22 42.7	
	baz=338,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy**	**29.60 149**		T	T	15 22 47.1	
	baz=338,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	**29.61 149**		T	T	15 22 44.0	
	baz=338,slow=76,SNR=21						
ILAR	**Eielson Array**	**38.60**	**37**	P	**P**	**14 51 11.6**	**+0.4**
	comp=E,0.3nm,0.6s,baz=257,slow=7.0,SNR=3.4						
INK	**Inuvik**	**43.68**	**31**	P	**P**	**14 51 53.7**	**+0.9**
	comp=E,0.5nm,0.5s,baz=307,slow=7.1,SNR=3.3						
MKAR	**Makanchi Array**	**46.47 298**		P	**P**	**14 52 14.5**	**-0.8**
	comp=E,0.8nm,0.6s,baz=76,slow=8.6,SNR=6.2						
MKAR				PcP	**PcP**	**14 53 49.8**	**+0.5**
	comp=E,0.4nm,0.6s,baz=43,slow=2.6,SNR=3.4						
MKAR				LR	LR	15 12 54.2	
	comp=E,65nm,18.2s,baz=116,slow=38						
CMAR	**Chiang Mai Arr**	**50.69 256**		P	**P**	**14 52 47.6**	**-0.4**
	comp=E,0.3nm,0.4s,baz=36,slow=7.0,SNR=2.9						
YKA	**Yellowknife Ar**	**52.97**	**35**	P	**P**	**14 53 06.6**	**+2.1**
	comp=E,0.1nm,0.4s,baz=294,slow=6.9,SNR=3.0						
FINES	**FINESS Array B**	**64.86 334**		P	**P**	**14 54 25.2**	**-1.6**
	comp=E,0.9nm,0.6s,baz=46,slow=11,SNR=4.6						
GEYT	**Alibeck**	**66.23 300**		P	**P**	**14 54 36.3**	**+0.1**
	comp=E,1.0nm,0.4s,baz=96,slow=1.4,SNR=3.1						
NB2	**NORSAR Subarra**	**69.25 340**		P	**P**	**14 54 53.9**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**69.25 340**		P	**P**	**14 54 54.2**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=28,slow=6.5,SNR=6.2						
NOA				LR	LR	15 29 37.5	
	comp=Z,9.7nm,18.4s,baz=290,slow=40						
ASAR	**Alice Springs**	**70.32 197**		P	**P**	**14 55 03.9**	**+2.1**
	comp=Z,0.6nm,0.8s,baz=13,slow=7.3,SNR=5.8						
ASAR				pP	**pwP**	**14 55 17.3**	**-2.3**
	comp=Z,0.7nm,0.7s,baz=10,slow=5.0,SNR=6.4						
KBZ	**Khabaz**	**70.95 313**		P	**P**	**14 55 05.2**	**-0.3**
	comp=Z,4.8nm,0.8s,baz=77,slow=3.4,SNR=6.8						
AKASG	**Malin Array Be**	**72.07 325**		P	**P**	**14 55 11.0**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=34,slow=6.5,SNR=4.0						
GERES	**GERESS Array B**	**79.24 333**		P	**P**	**14 55 53.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=30,slow=8.0,SNR=4.1						
TXAR	**Lajitas Array**	**79.44**	**59**	P	**P**	**14 55 57.5**	**+2.8**
	comp=Z,0.2nm,0.5s,baz=289,slow=3.8,SNR=3.9						
TXAR				pP	**sP**	**14 56 08.8**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=300,slow=4.3,SNR=7.7						

SNET ***03*** *14:48:25.3±2.4, 12°.76N×90°.24W, h14km±17km, ML3.4*
ISCJB ***03*** *14:48:26.4±0.9, 12°.69N±0°.07×90°.20W±0°.05, h29km, mb3.9/4, MS3.2/3, Error ellipse: s-maj=10.4km s-min=5.7km az=27.0*
IDC ***03*** *14:48:26.5±1.6, 13°.76N×89°.35W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.8/37, mbtmp3.8/7, ML3.2/2, MS3.3/3, Ms1 3.2/3, ms1mx2.8/30, Error ellipse: s-maj=96.6km s-min=19.5km az=43.0*
GCG ***03*** *14:48:28.7±0.3, 12°.94N×90°.10W, h13km±4km, MD3.9*

ISC 03 14:48:27.8±0.9, 12°.83N±0°.08×90°.14W±0°.04, h29km, n25, σ2§00/27, mb3.9/4, MS3.2/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	**1.11**	**27**	*e*P	**Pb**	**14 48 47.5**	**-1.2**
CEVE				*e*S	**Sb**	**14 49 06.9**	**+4.1**
CEVE				IAML		14 49 12.7	
	comp=Z,2μm,0.5s						
SBLS	**San Blas**	**1.12**	**27**	*e*P	**Pb**	**14 48 47.5**	**-1.2**
SNJE	**San Jose**	**1.16**	**27**	*e*P	**Pb**	**14 48 48.0**	**-1.3**
RTR	**El Retiro**	**1.16**	**24**	*e*P	**Pb**	**14 48 48.5**	**-1.0**
MOYG	**Moyuta, Jutiap**	**1.21**	**3**	*e*P	**Pb**	**14 48 48.7**	**-1.5**
LFU	**La Fuente**	**1.35**	**47**	*e*P	**Pb**	**14 48 51.4**	**-1.2**
PAVA	**Las Pavas**	**1.46**	**53**	*e*P	**Pb**	**14 48 53.1**	**-1.4**
PAVA				IAML		14 49 20.4	
	comp=Z,757nm,0.4s						
PCG	**Pacaya**	**1.62 344**		*e*P	**Pb**	**14 48 56.1**	**-1.1**
TECA	**Tecapa**	**1.73**	**67**	*e*P	**Pb**	**14 48 57.0**	**-2.0**
FUG	**Fuego 3**	**1.75 337**		*e*P	**Pb**	**14 48 57.6**	**-1.7**
FUG				*e*S	**Sb**	**14 49 18.3**	**-2.7**
NBG	**Las Nubes**	**1.76 353**		*e*P	**Pb**	**14 48 58.0**	**-1.6**
VICT	**Victoria**	**1.84**	**52**	*e*P	**Pb**	**14 48 58.1**	**-2.8**
VICT				*e*S	**Sb**	**14 49 25.8**	**+2.1**
VICT				IAML		14 49 30.4	
	comp=Z,156nm,0.6s						
PACA	**Pacayal**	**1.88**	**70**	*e*P	**Pn**	**14 48 58.9**	**+0.8**
LCND	**La Caada**	**2.24**	**78**	*e*P	**Pn**	**14 49 03.9**	**+0.9**
LCND				*e*S	**Sb**	**14 49 31.2**	**-3.8**
STG3	**Santiaguito 3,**	**2.33 324**		*e*S	**Sb**	**14 49 35.4**	**-2.3**
JTS	**Las Juntas de**	**5.67 116**		Pn	**Pn**	**14 49 50.6**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=180,slow=20,SNR=4.8						
CMIG	**Matias Romero**	**6.24 313**		Pn	**Pn**	**14 50 00.1**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=129,slow=10,SNR=10						
CMIG				Sn	Sb	14 51 19.0	-11
	comp=Z,0.6nm,0.3s,baz=350,slow=16,SNR=4.9						
TXAR	**Lajitas Array**	**20.68 325**		P	**P**	**14 53 06.2**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=145,slow=10,SNR=22						
PDAR	**Pinedale Array**	**34.24 334**		LR	LR	15 11 40.7	
	comp=Z,29nm,18.4s,baz=182,slow=41						
NVAR	**Mina Array Bea**	**35.72 321**		P	**P**	**14 55 25.8**	**+1.6**
	comp=Z,1.4nm,0.8s,baz=148,slow=8.9,SNR=7.5						
NVAR				LR	LR	15 11 42.5	
	comp=Z,43nm,20.5s,baz=360,slow=39						
ULM	**Lac du Bonnet**	**37.61 354**		LR	LR	15 14 01.5	
	comp=Z,57nm,18.8s,baz=246,slow=42						
BDFB	**Brasilia**	**50.37 123**		P	**P**	**14 57 24.9**	**+2.1**
	comp=Z,1.4nm,0.3s,baz=266,slow=13,SNR=2.5						
YKA	**Yellowknife Ar**	**52.58 346**		P	**P**	**14 57 36.7**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=153,slow=7.5,SNR=8.0						
ILAR	**Eielson Array**	**64.62 337**		P	**P**	**14 59 01.2**	**-1.2**
	comp=Z,0.6nm,1.0s,baz=128,slow=2.9,SNR=4.5						
CMAR	**Chiang Mai Arr**	**147.65 344**		PKPbc	**PKPbc**	**15 08 10.5**	**0.0**
	comp=Z,0.6nm,0.8s,baz=354,slow=4.5,SNR=3.9						

JMA ***03*** *14:52:13.2±0.9, 45°.57N×151°.38E, h30km, M4.1*
ISCJB ***03*** *14:52:14.2±1.0, 45°.0N±0°.1×151°.4E±0°.1, h36km, mb3.4/2, Error ellipse: s-maj=19.2km s-min=6.2km az=150.8*
IDC ***03*** *14:52:14.4±1.9, 45°.28N×150°.96E, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.3/38, mbtmp3.5/4, ML3.4/1, MS2.6/1, Ms1 2.6/1, ms1mx2.1/35, Error ellipse: s-maj=45.3km s-min=35.1km az=118.0*
SKHL ***03*** *14:52:16.5±0.2, 45°.37N×151°.38E, h50km±7km, mb4.3/5*
MOS ***03*** *14:52:19.9±0.4, 45°.54N×150°.82E, h66km, mb4.2/1, Error ellipse: s-maj=33.7km s-min=14.4km az=147.5*

ISC 03 14:52:18.0±1.2, 45°.2N±0°.1×151°.27E±0°.10, h36km, n28, σ1§42/42, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.41 273**		*c i*PN	**Pn**	**14 52 54.1**	**-0.7**
KUR				*i* S	**Sn**	**14 53 22.1**	**-0.9**
KUR				pmax	pmax		
	comp=Z,54nm,0.4s						
KUR				pmax	pmax		
	comp=E,34nm,0.2s						
KUR				pmax	pmax		
	comp=N,27nm,0.3s						
KUR				smax	smax		
	comp=E,87nm,0.3s						
KUR				smax	smax		
	comp=N,167nm,0.5s						
KUR	**Kuril'sk**	**2.41 273**		*i* P	**Pn**	**14 52 54.0**	**-0.7**
KUR				AMB	AMB	14 53 04.0	
	comp=N,27nm,0.4s						
KUR				AMB	AMB	14 53 04.0	
	comp=N,34nm,0.4s						
KUR				AMB	AMB	14 53 04.0	
	comp=N,54nm,0.4s						
KUR				*i* S	**Sn**	**14 53 22.0**	**-0.9**
KUR				A	A	14 53 27.0	
	comp=N,167nm,0.4s						
KUR				A	A	14 53 27.0	
	comp=N,187nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.02 256**		*e*PN	**Pn**	**14 53 17.9**	**+0.9**
YUK				*e*S	**Sn**	**14 54 04.1**	**+1.2**
YUK				pmax	pmax		
	comp=Z,80nm,0.3s						
YUK				smax	smax		
	comp=N,124nm,0.5s						
YUK				smax	smax		
	comp=E,79nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.02 256**		*e*P	**Pn**	**14 53 18.8**	**+1.8**
YUK				AMB	AMB	14 53 27.0	
	comp=E,60nm,0.4s						
YUK				*e*S	**Sn**	**14 54 04.0**	**+1.2**
YUK				A	A	14 54 12.0	
	comp=E,124nm,0.5s						
YUK				A	A	14 54 12.0	
	comp=E,279nm,0.5s						
LAGR	**Lagunnoye**	**4.07 256**		⇑*i*PN	**Pn**	**14 53 18.8**	**+1.2**
LAGR				*e*S	**Sn**	**14 54 05.8**	**+1.9**
LAGR				pmax	pmax		
	comp=Z,120nm,0.6s						
LAGR				smax	smax		
	comp=N,273nm,0.6s						
LAGR				smax	smax		
	comp=E,238nm,0.6s						
LAGR	**Lagunnoye**	**4.07 256**		*i* P	**Pn**	**14 53 18.0**	**+0.4**
LAGR				AMB	AMB	14 53 24.0	
	comp=E,12nm,0.4s						
LAGR				*e*S	**Sn**	**14 54 05.0**	**+1.1**
LAGR				A	A	14 54 16.0	
	comp=E,273nm,0.6s						
LAGR				A	A	14 54 16.0	
	comp=E,238nm,0.6s						
GRPR	**Tuman**	**4.10 255**		*e*PN	**Pn**	**14 53 19.1**	**+1.0**
GRPR				*e*S	**Sn**	**14 54 06.2**	**+1.5**
GRPR				pmax	pmax		
	comp=Z,53nm,0.4s						
GRPR				smax	smax		
	comp=E,83nm,0.5s						
GRPR				smax	smax		
	comp=N,87nm,0.4s						
GRPR	**Tuman**	**4.10 255**		*e*P	**Pn**	**14 53 19.0**	**+1.0**
GRPR				AMB	AMB	14 53 20.0	
	comp=N,33nm,0.4s						
GRPR				*e*S	**Sn**	**14 54 06.0**	**+1.3**
GRPR				A	A	14 54 10.0	
	comp=N,87nm,0.5s						
GRPR				A	A	14

ASAJ				LR	LR	14 56 15.6	
	comp=E,54nm,19.4s,baz=324,slow=40						
JNBK	**Urakawa-nobuka**	**6.81**	**248**	P	**Pn**	**14 53 53.3**	**-1.9**
JBT2	**Biratori 2**	**6.85**	**253**	P	**Pn**	**14 53 54.9**	**-0.9**
JNB	**Noboribetsu**	**7.87**	**254**	P	**Pn**	**14 54 10.0**	**+0.2**
JKB	**Kayabe**	**8.13**	**250**	P	**Pn**	**14 54 11.8**	**-1.5**
PETK	**Petropavlovsk-**	**9.00**	**26**	Pn	**Pn**	**14 54 26.7**	**+1.5**
	comp=E,0.1nm,0.3s,baz=206,slow=16,SNR=2.4						
PET	**Petropavlovsk**	**9.23**	**29**	*e*P	**Pn**	**14 54 26.7**	**-1.7**
MKAR	**Makanchi Array**	**46.54**	**298**	P	**P**	**15 00 40.4**	**-1.4**
	comp=E,0.3nm,0.5s,baz=81,slow=6.3,SNR=3.6						
ASAR	**Alice Springs**	**70.30**	**197**	P	**P**	**15 03 29.8**	**+2.1**
	comp=E,0.5nm,1.1s,baz=10,slow=5.7,SNR=4.1						

*INMG **03** 14:56:24.6±1.3, 32°.35N×7°.84W, h15km±8km, ML2.2, Error ellipse: s-maj=6.7km s-min=5.3km az=98.0*

MDD 03 14:56:26.8±3.5, 32°.78N×7°.40W, h0km, mb3.8/1, Error ellipse: s-maj=40.2km s-min=23.8km az=87.0, PRXIMO, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**4.48**	**355**	*e*Pn	Pn	14 57 36.7	+0.8
PBDV	**Barranco-do-Ve**	**4.48**	**355**	P	Pn	14 57 36.7	+0.8
PFVI	**Vila Bisbo**	**4.50**	**345**	*e*Pn	Pn	14 57 37.0	+0.8
PVAQ	**Vaqueiros**	**4.62**	**357**	*e*Pn	Pn	14 57 38.2	+0.3
PVAQ				*e*Sn	Sn	14 58 35.2	+2.9
PVAQ				A	A	14 58 37.1	
	2.5nm,0.7s						
PVAQ	**Vaqueiros**	**4.62**	**357**	P	Pn	14 57 38.2	+0.3
PVAQ				S	Sn	14 58 35.2	+2.9
	2.5nm,0.7s						
MORF	**Marmelete**	**4.63**	**348**	*e*Pn	Pn	14 57 38.6	+0.5
MORF				*e*Sn	Sn	14 58 33.9	+1.3
MORF				A	A	14 58 37.3	
	1.6nm,0.2s						
MORF	**Marmelete**	**4.63**	**348**	P	Pn	14 57 38.6	+0.5
MORF				S	Sn	14 58 33.9	+1.3
	1.6nm,0.2s						
EGRO	**El Granado**	**4.75**	**359**	P	Pn	14 57 40.4	+0.9
	1.4nm,0.2s,SNR=7.9						
EGRO				S	Sn	14 58 36.3	+1.0
	0.3nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**4.87**	**354**	*e*Pn	Pn	14 57 41.6	+0.3
PCVE				*e*Sn	Sn	14 58 40.5	+2.1
PCVE	**Castro Verde**	**4.87**	**354**	P	Pn	14 57 41.6	+0.3
PCVE				S	Sn	14 58 40.5	+2.1
EMIN	**Mina Concepcio**	**5.01**	**7**	P	Pn	14 57 43.8	+0.6
	0.6nm,0.3s,SNR=7.9						
EMIN				S	Sn	14 58 43.1	+1.2
	2.0nm,0.3s,SNR=7.9						
MESJ	**Messejana**	**5.09**	**353**	*e*Pn	Pn	14 57 45.0	+0.7
MESJ	**Messejana**	**5.09**	**353**	P	Pn	14 57 45.0	+0.7
PNCL	**Nicolau / Gran**	**5.40**	**350**	*e*Pn	Pn	14 57 48.7	+0.1
PNCL				*e*Sn	Sn	14 58 52.3	+0.9
PNCL				A	A	14 58 57.1	
	1.2nm,0.6s						
PNCL	**Nicolau / Gran**	**5.40**	**350**	P	Pn	14 57 48.7	+0.1
PNCL				S	Sn	14 58 52.3	+0.9
	1.2nm,0.6s						
ECAB	**El Cabril**	**5.53**	**16**	P	Pn	14 57 52.2	+1.8
	0.5nm,0.3s,SNR=7.9						
ECAB				S	Sn	14 58 56.2	+1.6
	0.7nm,0.3s,SNR=7.9						
PMRV	**Marv??o**	**6.64**	**0**	*e*Pn	Pn	14 58 06.2	+0.6
PMRV	**Marv??o**	**6.64**	**0**	P	Pn	14 58 06.2	+0.6

KRSC 03 15:15:42.8±1.1, 48°.61N×156°.00E, h16km±16km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.07**	**2**	*e*P	Pn	15 16 18.0	+1.2
SKR				*e*S	Sb	15 16 44.4	-1.0
ALID	**Alaid**	**2.28**	**353**	*e*P	Pn	15 16 19.6	-0.2
PAU	**Pauzhetka**	**2.90**	**10**	*e*S	Sb	15 17 06.2	-3.2
KDTR	**Khodutka, Kamc**	**3.47**	**22**	*e*P	Pn	15 16 39.5	+3.5
KDTR				*e*S	Sn	15 17 20.9	+4.3
ASAK	**Asacha**	**3.96**	**17**	*e*P	Pb	15 16 47.8	-4.4
MTVR	**Mutnovka**	**4.12**	**19**	*e*S	Sn	15 17 37.4	+4.5
RUS	**Russkaya**	**4.15**	**22**	*e*P	Pn	15 16 49.1	+3.8
RUS				*e*S	Sn	15 17 37.9	+4.5
PET	**Petropavlovsk**	**4.73**	**20**	*e*S	Sn	15 17 52.4	+4.7
DALK	**Dalny**	**4.75**	**21**	*e*P	Pn	15 16 58.3	+4.6
DALK				*e*S	Sn	15 17 54.0	+5.6
AVH	**Avacha**	**4.97**	**19**	*e*P	Pn	15 17 01.3	+4.6
KRER	**Koryakskii**	**5.01**	**19**	*e*P	Pn	15 17 01.8	+4.4
SDLR	**Sedlovina**	**5.01**	**20**	*e*P	Pn	15 17 01.7	+4.3
KRX	**Arik**	**5.04**	**18**	*e*P	Pn	15 17 02.9	+5.2
SPN	**Mys Shipunski**	**5.16**	**28**	*e*P	Pn	15 17 03.6	+4.3

*BJI **03** 15:30:55.6±0.0, 5°.72S×102°.52E, h43km, mb5.0/64, mB5.0/43, Ms4.7/49, Ms7 4.6/47*
*IDC **03** 15:30:57.5±0.4, 4°.92S×102°.36E, h0km, mb4.8/33, mb1 4.8/36, mb1mx4.8/46, mbtmp4.8/36, ML5.0/3, MS4.2/28, Ms1 4.2/28, ms1mx4.1/32, Error ellipse: s-maj=13.8km s-min=9.6km az=59.0*
*MOS **03** 15:31:00.6±1.2, 4°.86S×102°.42E, h33km, mb5.3/58, Error ellipse: s-maj=8.1km s-min=4.8km az=109.6*
*DJA **03** 15:31:01.8±0.2, 5°.S±2°.×10°.2E±°., h45km±2km, M4.9/60, mb5.2/60, mB5.4/32, MLv5.5/27, Mw(mB)4.8/32, Mwp5.8/1*
*ISCJB **03** 15:31:02.7±0.4, 4°.97S±0°.03×102°.40E±0°.03, h53km±3km, mb5.1/142, MS4.3/43, Error ellipse: s-maj=5.3km s-min=2.6km az=135.7*
*NEIC **03** 15:31:02.9±0.6, 4°.94S×102°.38E, h41km±4km, mb5.1/68, Error ellipse: s-maj=6.2km s-min=3.1km az=48.0*
*GCMT **03** 15:31:04.9±0.4, 4°.98S±0°.03×102°.33E±0°.04, h15km±1km, MW5.1/61, Moment Tensor Solution. s29,c37; s61,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.13±.10; $M_{\theta\theta}$-0.16±.07; $M_{\phi\phi}$-0.97±.09; $M_{r\theta}$3.37±.59; $M_{r\phi}$0.48±.07; $M_{\theta\phi}$-3.76±.57; Best double couple: $M_0$5.18200×10^{16} NP1:ϕ_s350.00000°, δ84.00000°, λ86.00000°. NP2: ϕ_s=139.00000°, δ7.00000°, λ121.00000°. Principal axes: T 5.1980, Plg51.0000°, Azm44.0000°; N -0.0350, Plg4.0000°, Azm139.0000°; P -5.1670, Plg39.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **03** 15:31:05.0, 5°.03S×102°.07E, h75km, mb5.1*

ISC 03 15:31:03.1±0.4, 4°.99S±0°.04×102°.35E±0°.04, h43km±3km, h43km:pP-P, n506, σ1§48/510, mb5.1/153, MS4.3/43, 31C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.87**	**44**	*e*Pn	**Pn**	**15 31 19.2**	**+0.3**
MNAI	**Manna**	**0.87**	**44**	P	**Pn**	**15 31 19.2**	**+0.3**
LHSI	**Lahat**	**1.64**	**46**	P	**Pn**	**15 31 30.8**	**+1.3**
LHSI				S	**Sn**	**15 31 52.7**	**+3.3**
LWLI	**Liwa**	**1.71**	**91**	P	**Pn**	**15 31 30.1**	**-0.4**
MDSI	**Maura Dua**	**1.89**	**75**	P	**Pn**	**15 31 33.4**	**+0.5**
MDSI				S	**Sn**	**15 32 00.1**	**+4.6**
KASI	**Kota Agung**	**2.21**	**104**	P	**Pn**	**15 31 36.9**	**-0.4**
KASI				S	**Sn**	**15 32 05.6**	**+2.3**
KLI	**Kotabumi**	**2.50**	**87**	P	**Pn**	**15 31 43.2**	**+1.9**
KLI				S	**Sn**	**15 32 15.4**	**+4.8**
BLSI	**Bandar Lampung**	**2.91**	**98**	P	**Pn**	**15 31 48.6**	**+1.6**
BLSI				S	**Sn**	**15 32 22.0**	**+1.3**
KRJI	**Kerinci**	**3.01**	**343**	P	**Pn**	**15 31 50.0**	**+1.6**
KRJI				S	**Sn**	**15 32 26.0**	**+2.7**
PMBI	**Palembang**	**3.17**	**50**	P	**Pn**	**15 31 53.1**	**+2.6**
PPSI	**Pulau Pagai**	**3.21**	**313**	P	**Pn**	**15 31 51.8**	**+0.7**
JMBI	**JAMBI**	**3.57**	**21**	P	**Pn**	**15 31 58.0**	**+2.0**
JMBI				S	**Sn**	**15 32 40.1**	**+3.1**
CGJI	**Cibinong**	**3.70**	**116**	P	**Pn**	**15 31 57.6**	**-0.2**
CGJI				S	**Sn**	**15 32 37.0**	**-3.2**
SBJI	**Serang**	**3.93**	**107**	P	**Pn**	**15 32 01.6**	**+0.6**
SDSI	**Sungai Dareh**	**4.13**	**347**	P	**Pn**	**15 32 05.0**	**+1.3**
PDSI	**Padang**	**4.46**	**335**	P	**Pn**	**15 32 09.0**	**+0.7**
PDSI				S	**Sn**	**15 32 59.1**	**0.0**
RGRI	**Rengat**	**4.61**	**360**	P	**Pn**	**15 32 11.5**	**+1.2**
SKJI	**Sukabumi**	**4.64**	**116**	P	**Pn**	**15 32 10.9**	**+0.1**
CBJI	**Citeko**	**4.70**	**108**	P	**Pn**	**15 32 15.5**	**+3.9**
PPBI	**Pangkal Pinang**	**4.71**	**54**	P	**Pn**	**15 32 13.8**	**+2.1**
SISI	**Saibi**	**4.88**	**318**	P	**Pn**	**15 32 14.1**	**+0.1**
SISI				S	**Sn**	**15 33 09.5**	**+0.3**
PPI	**Padang Panjang**	**4.90**	**337**	P	**Pn**	**15 32 14.4**	**+0.1**
DSRI	**Dabo**	**5.00**	**27**	P	**Pn**	**15 32 17.7**	**+2.0**
BKNI	**Bangkinang**	**5.43**	**346**	*e*Pn	**Pn**	**15 32 21.8**	**+0.1**
BKNI	**Bangkinang**	**5.43**	**346**	P	**Pn**	**15 32 22.4**	**+0.7**
LEM	**Lembang**	**5.55**	**110**	Pn	**Pn**	**15 32 23.4**	**0.0**
	58nm,0.3s,baz=351,slow=22,SNR=33						
LEM				Sn	**Sn**	**15 33 29.4**	**+3.4**
	19nm,0.3s,baz=0.0,slow=20,SNR=2.2						
LEM				LR	LR	15 35 00.5	
	comp=Z,3μm,19.8s,baz=266,slow=44						
LEM	**Lembang**	**5.55**	**110**	P	**Pn**	**15 32 26.4**	**+3.0**
LEM	**Lembang**	**5.55**	**110**	P	**Pn**	**15 32 24.8**	**+1.4**
TPI	**Tanjungpandan**	**5.74**	**68**	P	**Pn**	**15 32 28.1**	**+2.3**
	65nm,0.9s,1μm46μm1.2nm						
CISI	**Cisompet, Garu**	**6.00**	**115**	*e*Pn	**Pn**	**15 32 29.1**	**-0.5**
CISI	**Cisompet, Garu**	**6.00**	**115**	P	**Pn**	**15 32 29.3**	**-0.2**
JCJI	**Jatiwangi**	**6.08**	**105**	P	Pn	15 32 38.5	+8.0
TPRI	**Tanjung Pinang**	**6.25**	**20**	P	**Pn**	**15 32 35.3**	**+2.4**
XMIS	**Christmas Isla**	**6.37**	**149**	*e*Pn	Pn	15 32 27.9	-6.6
MNSI	**Mandailing Nat**	**6.37**	**334**	P	**Pn**	**15 32 35.0**	**+0.5**
MYKOM	**Kota Tinggi**	**6.89**	**13**	*e*Pn	**Pn**	**15 32 43.4**	**+1.7**
MYKOM	**Kota Tinggi**	**6.89**	**13**	P	**Pn**	**15 32 44.0**	**+2.3**
GSI	**Gunungsitoli**	**7.86**	**323**	*e*Pn	**Pn**	**15 32 53.0**	**-1.9**
GSI	**Gunungsitoli**	**7.86**	**323**	P	**Pn**	**15 32 53.0**	**-1.9**
SMRI	**Semarang**	**8.30**	**105**	*e*Pn	**Pn**	**15 33 00.8**	**-0.3**
SMRI	**Semarang**	**8.30**	**105**	P	Pn	15 32 54.2	-6.9
YOGI	**Yogyakarta**	**8.38**	**110**	P	**Pn**	**15 33 02.8**	**+0.7**
PSI	**Prapat**	**8.46**	**336**	Pn	**Pn**	**15 33 01.0**	**-2.3**
	9.6nm,0.3s,baz=160,slow=9.7,SNR=18						
PSI				LR	LR	15 36 43.5	
	comp=Z,2μm,19.2s,baz=140,slow=42						
PSI	**Prapat**	**8.46**	**336**	*e*Pn	**Pn**	**15 32 59.6**	**-3.7**
UGM	**Wanagama**	**8.63**	**110**	*e*Pn	**Pn**	**15 33 06.3**	**+0.8**
UGM	**Wanagama**	**8.63**	**110**	P	**Pn**	**15 33 06.1**	**+0.6**
WOJI	**Wonogiri, Jawa**	**8.98**	**109**	P	**Pn**	**15 33 09.4**	**-0.9**
IPM	**Ipoh**	**9.49**	**352**	P	**Pn**	**15 33 20.0**	**+2.6**
SNSI	**Sinabang, Aceh**	**9.49**	**321**	P	**Pn**	**15 33 15.9**	**-1.5**
KCSI	**Kotacane, Aceh**	**9.61**	**331**	P	**Pn**	**15 33 18.1**	**-0.8**
TPTI		**9.68**	**328**	P	**Pn**	**15 33 19.3**	**-0.6**
PWJI	**Pagerwojo**	**9.87**	**108**	P	**Pn**	**15 33 22.8**	**+0.3**
KSM	**Kuching**	**10.22**	**51**	*e*Pn	**Pn**	**15 33 26.5**	**-0.8**
KSM	**Kuching**	**10.22**	**51**	P	Pn	15 33 34.0	+6.7
GRJI	**Gresik**	**10.26**	**101**	P	**Pn**	**15 33 29.3**	**+1.5**
KULM	**Kulim**	**10.35**	**351**	*e*Pn	**Pn**	**15 33 29.1**	**0.0**
MLSI	**Meulaboh, Aceh**	**10.94**	**327**	P	**Pn**	**15 33 36.2**	**-1.0**
LHMI	**Lhok Sumawe**	**11.49**	**332**	*e*Pn	**Pn**	**15 33 42.9**	**-1.9**
LHMI	**Lhok Sumawe**	**11.49**	**332**	P	**Pn**	**15 33 47.0**	**+2.3**
KMMI	**Kalianget**	**11.73**	**101**	P	**Pn**	**15 33 49.5**	**+1.4**
JAGI	**Jajag, Banyuwa**	**12.22**	**107**	*e*Pn	**Pn**	**15 33 53.2**	**-1.5**
JAGI	**Jajag, Banyuwa**	**12.22**	**107**	P	**Pn**	**15 33 53.8**	**-0.9**
SBUM	**Sibu**	**12.32**	**53**	P	Pn	15 34 01.0	+4.9
TRTT	**Trang**	**13.01**	**348**	P	**P**	**15 34 12.0**	**-3.0**
SRBI	**Singaraja**	**13.15**	**104**	P	**Pn**	**15 34 06.1**	**-1.2**
MTKI	**Muara Teweh, K**	**13.16**	**73**	P	**P**	**15 34 19.2**	**+2.6**
KRAB	**Krabi**	**13.49**	**347**	P	**Pn**	**15 34 14.4**	**+2.4**
	286μm,0.6s						
BKB	**Balikpapan**	**14.99**	**76**	P	**P**	**15 34 37.8**	**+0.8**
PLAI	**Plampang**	**15.78**	**105**	P	**Pn**	**15 34 37.9**	**-4.6**
KAPI	**Kappang**	**17.34**	**91**	P	**Pn**	**15 35 01.8**	**-0.3**
	5.8nm,0.3s,baz=252,slow=8.5,SNR=5.3						
KAPI				LR	LR	15 42 21.6	
	comp=Z,983nm,19.0s,baz=268,slow=40						
KAPI	**Kappang**	**17.34**	**91**	*e*Pn	**Pn**	**15 35 01.0**	**-1.2**
	48nm,1.1s						
SPSI	**Sidrap Palu**	**17.40**	**87**	P	**Pn**	**15 35 03.0**	**+0.1**
WBSI	**Waikabubak, Su**	**17.52**	**106**	P	**Pn**	**15 34 59.1**	**-5.4**
TTSI	**Tana Toraja**	**17.53**	**84**	P	**P**	**15 35 05.5**	**+0.3**
KKM	**Kota Kinabalu**	**17.66**	**52**	*e*Pn	**Pn**	**15 35 05.9**	**-0.2**
	50nm,0.9s						
KKM	**Kota Kinabalu**	**17.66**	**52**	P	**P**	**15 35 08.0**	**+1.3**
BKSI	**Bulukumba**	**17.71**	**92**	P	**Pn**	**15 35 05.4**	**-1.3**
BNSI	**Bone**	**17.71**	**89**	P	**P**	**15 35 07.3**	**+0.1**
DLV	**T Lat**	**17.89**	**20**	*e*Pn	**Pn**	**15 35 07.6**	**-1.5**
	30nm,0.9s						
MPSI	**Mapaga**	**18.31**	**74**	P	**Pn**	**15 35 15.5**	**+1.4**
WSI	**Waingapu**	**18.40**	**106**	P	Pn	15 35 26.3	+11
SRAK	**Srakaew**	**18.88**	**359**	P	**Pn**	**15 35 21.0**	**+0.1**
	532μm,0.6s						
EDFI	**Ende, Flores**	**19.56**	**102**	P	**P**	**15 35 25.0**	**-2.7**
APSI	**Ampana**	**19.69**	**79**	P	**Pn**	**15 35 30.3**	**-0.4**
MMRI	**Maumere**	**20.08**	**101**	*e*P	**P**	**15 35 31.6**	**-1.6**
	72nm,0.7s						
MMRI	**Maumere**	**20.08**	**101**	P	**P**	**15 35 31.5**	**-1.6**
KDI	**Kendari**	**20.23**	**88**	P	**P**	**15 35 35.3**	**+0.4**
MRSI	**Marisa**	**20.31**	**75**	P	**P**	**15 35 35.6**	**-0.1**
CHAI	**Chaiyaphum**	**20.75**	**359**	P	**P**	**15 35 41.6**	**+1.2**
	88μm,0.7s,832μm						
LUWI	**Luwuk**	**20.76**	**80**	*e*P	**P**	**15 35 39.1**	**-1.5**
	186nm,1.0s						
LUWI	**Luwuk**	**20.76**	**80**	P	**P**	**15 35 39.3**	**-1.3**
KHON	**Khomkaen**	**21.19**	**1**	P	**P**	**15 35 46.1**	**+1.0**
	168μm,1.2s						
PBKT	**Sadao Pong**	**21.46**	**356**	P	**P**	**15 35 48.5**	**+0.5**
	20nm,0.8s,829nm						
BATI	**Baumata**	**21.75**	**105**	P	**P**	**15 35 50.6**	**-0.6**
	72nm,0.4s,baz=308,slow=1.2,SNR=20						
BATI				S	**S**	**15 39 44.5**	**-5.2**
	52nm,0.9s,baz=273,slow=9.0,SNR=3.7						
BATI				LR	LR	15 45 44.5	
	comp=Z,648nm,21.1s,baz=295,slow=41						
BATI	**Baumata**	**21.75**	**105**	P	**P**	**15 35 51.3**	**+0.1**
SKNT	**Sakolnakorn**	**21.88**	**4**	P	**P**	**15 35 53.1**	**+0.6**
	32nm,0.6s						
PANO	**Nakornpanom**	**22.10**	**6**	P	**P**	**15 35 55.5**	**+0.6**
	1.1nm,1.1s,143nm						
SOEI	**Soe**	**22.24**	**104**	*e*P	**P**	**15 35 55.0**	**-1.6**
	102nm,0.8s						
SOEI	**Soe**	**22.24**	**104**	P	**P**	**15 35 55.5**	**-1.1**
KMSI	**Cibinong**	**22.30**	**76**	P	P	15 36 08.5	+11
UTTA	**Uttaradit**	**22.65**	**356**	P	**P**	**15 36 01.7**	**+0.9**
	41μm,0.6s,472μm						
PHRA	**Phrae**	**23.43**	**355**	P	**P**	**15 36 09.4**	**+0.8**
	6.6nm,1.0s						
LAMP	**Lampang**	**23.51**	**354**	P	**P**	**15 36 10.8**	**+1.4**
	51μm,0.7s,540μm						
CM31	**Chiang Mai Arr**	**23.53**	**352**	*e*P	**P**	**15 36 09.2**	**-0.5**
	61nm,1.0s						
CMAR	**Chiang Mai Arr**	**23.53**	**352**	P	**P**	**15 36 09.5**	**-0.2**
	33nm,0.9s,baz=185,slow=8.6,SNR=68						
CMAR				LR	LR	15 46 06.6	
	comp=Z,423nm,19.8s,baz=184,slow=39						
CMMT	**Chiang Mai**	**23.88**	**352**	P	**P**	**15 36 13.5**	**+0.6**
	17nm,1.3s						
CHTO	**Chiang Mai**	**23.89**	**352**	*e*P	**P**	**15 36 12.2**	**-0.7**
	24nm,0.8s						
CHTO	**Chiang Mai**	**23.89**	**352**	*e*P	**P**	**15 36 12.3**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,24nm,0.8s						
PAYA	**Payao**	**24.31**	**354**	P	**P**	**15 36 18.1**	**+1.2**
	comp=Z,78μm,0.7s,comp=Z,607μm						
SGSI	**Sangihe**	**24.71**	**70**	P	**P**	**15 36 21.9**	**+1.3**
PALK	**Pallekele**	**24.80**	**299**	LR	LR	15 45 27.6	
	comp=Z,777nm,18.9s,baz=116,slow=35						
QIZ	**Qiongzhong**	**24.98**	**17**	P	**P**	**15 36 24.6**	**+1.7**
QIZ				sP	**sP**	**15 36 38.8**	**-0.3**
QIZ				S	S	15 40 54.9	+11
QIZ				pmax	pmax		
	comp=Z,67nm,0.9s						
QIZ				LR	LR		
	comp=Z,790nm,16.1s						
QIZ				LR	LR		
	comp=Z,220nm,16.5s						
QIZ				LR	LR		
	comp=Z,800nm,16.5s						
QIZ	**Qiongzhong**	**24.98**	**17**	*e*P	**P**	**15 36 21.9**	**-1.0**
	comp=Z,59nm,0.8s						
CTBH	**Cotabato--PC H**	**24.99**	**61**	↑*i*P	**P**	**15 36 24.7**	**+1.6**
TNTI	**Ternate**	**25.64**	**78**	*e*P	**P**	**15 36 27.4**	**-1.6**
	comp=Z,32nm,0.9s						
TNTI	**Ternate**	**25.64**	**78**	P	**P**	**15 36 26.5**	**-2.5**
DAV	**Davao City (W)**	**26.09**	**63**	LR	LR	15 47 50.3	
	comp=Z,646nm,19.6s,baz=208,slow=39						
SLVN	**Son La**	**26.20**	**3**	*e*P	**P**	**15 36 32.5**	**-1.6**
	comp=Z,16nm,0.9s						
FITZ	**Fitzroy Crossi**	**26.23**	**122**	P	**P**	**15 36 34.0**	**-0.3**
	comp=Z,9.1nm,0.9s,baz=282,slow=7.9,SNR=11						
FITZ				LR	LR	15 47 52.5	
	comp=Z,332nm,19.6s,baz=298,slow=39						
FITZ	**Fitzroy Crossi**	**26.23**	**122**	*e*P	**P**	**15 36 34.0**	**-0.3**
	comp=Z,36nm,1.0s						
FITZ	**Fitzroy Crossi**	**26.23**	**122**	P	**P**	**15 36 35.0**	**+0.7**
	baz=26,SNR=11						
TGY	**Tagaytay City**	**26.45**	**44**	LR	LR	15 47 33.5	
	comp=Z,668nm,21.3s,baz=244,slow=38						
MORW	**Morawa**	**27.24**	**153**	P	**P**	**15 36 43.8**	**+0.5**
	baz=27,SNR=3.7						
KNRA	**Kununurra**	**28.04**	**114**	P	**P**	**15 36 50.2**	**-0.4**
	baz=28,SNR=6.7						
BRDH	**Bariadhala**	**29.42**	**340**	LR	LR	15 50 41.8	
	comp=Z,605nm,21.6s,baz=166,slow=40						
MTN	**Manton Dam**	**29.46**	**107**	*e*P	**P**	**15 37 03.1**	**-0.2**
	comp=Z,78nm,1.4s						
MTN	**Manton Dam**	**29.46**	**107**	P	**P**	**15 37 03.6**	**+0.3**
	baz=29,SNR=16						
H08S2	**Diego Garcia H**	**29.79**	**263**	T	T	16 08 00.4	
	baz=87,slow=75,SNR=308						
H08S3	**Diego Garcia H**	**29.80**	**263**	T	T	16 08 01.1	
	baz=87,slow=75,SNR=2519						
H08S1	**Diego Carcia H**	**29.81**	**263**	T	T	16 08 01.9	
	baz=87,slow=75,SNR=644						
MUN	**Mundaring**	**29.83**	**156**	P	**P**	**15 37 07.0**	**+0.7**
	baz=30,SNR=5.1						
FAKI	**Fak Fak**	**29.90**	**87**	*e*P	**P**	**15 37 05.8**	**-1.4**
	comp=Z,24nm,0.8s						
KMI	**Kunming**	**29.93**	**1**	P	P	15 37 18.4	+11
KMI				pP	sP	15 37 28.7	+5.0
KMI				S	S	15 42 15.8	+13
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
KMI				LR	LR		
	comp=N,960nm,16.2s						
KMI				LR	LR		
	comp=E,160nm,19.0s						
KMI				LR	LR		
	comp=Z,1μm,15.2s						
KDU	**Kakadu**	**30.71**	**106**	P	**P**	**15 37 12.7**	**-1.6**
	baz=31,SNR=13						
NWAO	**Narrogin (SRO)**	**31.08**	**155**	P	**P**	**15 37 17.9**	**+0.5**
	comp=Z,18nm,1.0s,baz=337,slow=8.4,SNR=6.1						
NWAO	**Narrogin (SRO)**	**31.08**	**155**	*e*P	**P**	**15 37 17.9**	**+0.5**
	comp=Z,50nm,1.3s						
NWAO	**Narrogin (SRO)**	**31.08**	**155**	P	**P**	**15 37 18.1**	**+0.8**
	baz=31						
GYA	**Guiyang**	**31.54**	**7**	P	**P**	**15 37 21.6**	**+0.1**
GYA				pP	pwP	15 37 33.8	-0.9
GYA				sP	sP	15 37 38.9	+1.3
GYA				S	**S**	**15 42 24.1**	**-3.2**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
GYA				LR	LR		
	comp=Z,940nm,14.4s						
GYA				LR	LR		
	comp=Z,440nm,14.4s						
GYA				LR	LR		
	comp=Z,1μm,13.5s						
H01W3	**Cape Leeuwin H**	**31.69**	**161**	T	T	16 10 14.4	
	baz=338,slow=76,SNR=152						
H01W2	**Cape Leeuwin H**	**31.70**	**161**	T	T	16 10 15.5	
	baz=338,slow=76,SNR=147						
H01W1	**Cape Leeuwin H**	**31.70**	**161**	T	T	16 10 15.7	
	baz=338,slow=76,SNR=185						
WRKA	**Warakurna**	**31.90**	**131**	P	**P**	**15 37 25.9**	**+1.1**
	baz=32,SNR=12						
KMBL	**Kambalda**	**32.02**	**147**	P	**P**	**15 37 26.3**	**+0.7**
	baz=32,SNR=5.5						
SHL	**Shillong**	**32.02**	**342**	*e*P	**P**	**15 37 24.5**	**-1.4**
	comp=Z,55nm,1.1s						
SHL	**Shillong**	**32.02**	**342**	*e*P	**P**	**15 37 24.5**	**-1.4**
SHL				pmax	pmax		
	comp=Z,55nm,1.1s						
SHL	**Shillong**	**32.02**	**342**	*e*P	**P**	**15 37 26.5**	**+0.6**
WC1	**Warramunga Arr**	**34.49**	**118**	P	**P**	**15 37 47.5**	**+0.1**
	baz=34						
WRA	**Warramunga Arr**	**34.49**	**118**	P	**P**	**15 37 47.5**	**+0.1**
	comp=Z,89nm,0.3s,baz=290,slow=12,SNR=3.6						
WR1	**Warramunga Arr**	**34.49**	**118**	*e*P	**P**	**15 37 47.5**	**+0.1**
WRAB	**Tennant Creek**	**34.50**	**118**	*e*P	**P**	**15 37 46.8**	**-0.7**
	comp=Z,37nm,0.8s						
WRAB	**Tennant Creek**	**34.50**	**118**	*e*P	**P**	**15 37 46.8**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,37nm,0.8s						
WB2	**Warramunga Arr**	**34.51**	**118**	*e*P	**P**

NJ2 LR LR
comp=Z,540nm,14.1s
NJ2 LR LR
comp=Z,1μm,24.9s
JOW Kunigami 40.37 37 P **P 15 38 37.8 +0.8**
comp=Z,0.8nm,0.6s,baz=174,slow=12,SNR=6.4
LZH Lanzhou 40.88 2 *e*P **P 15 38 42.4 +1.1**
LZH pP sP 15 38 55.1 -2.5
LZH sP pP 15 38 59.4 +6.7
LZH SS SS 15 47 52.2 -0.6
LZH pmax pmax
comp=Z,35nm,1.2s
LZH pmax pmax
comp=Z,170nm,6.0s
LZH LR LR
comp=Z,1μm,13.4s
LZH LR LR
comp=Z,420nm,13.6s
LZH LR LR
comp=Z,1μm,16.7s
COEN Coen 41.19 105 P **P 15 38 43.3 -0.6**
baz=41,SNR=5.7
NDI New Delhi 41.30 326 *e*P **P 15 38 45.0 +0.3**
BBOO Buckleboo 41.89 136 *e*P **P 15 38 49.5 0.0**
comp=Z,43nm,1.5s
BBOO Buckleboo 41.89 136 P **P 15 38 49.9 +0.5**
baz=42,SNR=20
GTA Gaotai 44.23 357 P **P 15 39 08.9 +0.5**
GTA pP pP 15 39 18.0 -2.0
GTA sP sP 15 39 22.2 -2.6
GTA S **S 15 45 39.3 +0.1**
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA pmax pmax
comp=Z,81nm,4.4s
GTA LR LR
comp=Z,730nm,17.2s
GTA LR LR
comp=Z,300nm,18.2s
GTA LR LR
comp=Z,1μm,17.2s
HTT Hallett 44.24 134 P **P 15 39 09.8 +1.2**
baz=44,SNR=15
PMG Port Moresby 44.65 98 *e*P **P 15 39 10.9 -1.1**
comp=Z,48nm,0.8s
PMG Port Moresby 44.65 98*ce*P **P 15 39 10.7 -1.3**
PMG pmax pmax
comp=Z,143nm,1.0s
CTA Charters Tower 45.24 113 P **P 15 39 17.4 +0.7**
baz=45
CTAO Charters Tower 45.24 113 *e*P **P 15 39 16.7 0.0**
comp=Z,50nm,1.3s
CTAO Charters Tower 45.24 113 *e*P **P 15 39 16.7 0.0**
CTAO pmax pmax
comp=Z,50nm,1.3s
STKA Stephens Creek 45.43 131 P **P 15 39 19.2 +1.2**
comp=Z,21nm,0.8s,baz=305,slow=7.8,SNR=64
STKA LR LR 16 00 25.4
comp=Z,274nm,19.4s,baz=289,slow=39
STKA Stephens Creek 45.43 131 *e*P **P 15 39 18.5 +0.5**
comp=Z,6.5nm,1.0s
STKA Stephens Creek 45.43 131 P **P 15 39 19.1 +1.1**
baz=46,SNR=45
STKA Stephens Creek 45.43 131 *e*P **P 15 39 18.5 +0.5**
STKA pmax pmax
comp=Z,7.0nm,1.0s
BTO Baotou 45.91 8 *e*P **P 15 39 22.4 +0.7**
BTO S **S 15 46 01.1 -2.2**
HHC Hu-ho-hao-te 46.39 10 *e*P **P 15 39 27.7 +2.2**
HHC pP sP 15 39 41.0 -0.9
HHC S **S 15 46 17.5 +7.3**
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,170nm,4.6s
HHC LR LR
comp=Z,810nm,17.7s
HHC LR LR
comp=Z,270nm,12.9s
HHC LR LR
comp=Z,840nm,19.9s
BJT Baijiatuau 46.55 15 *e*P **P 15 39 26.8 +0.2**
comp=Z,14nm,0.4s
BJT Baijiatuau 46.55 15 *e*P **P 15 39 26.8 +0.2**
BJT pmax pmax
comp=Z,14nm,0.4s
JNU Nakatsue 46.56 34 P **P 15 39 26.7 -0.2**
comp=Z,22nm,0.8s,baz=306,slow=3.2,SNR=12
JNU Nakatsue 46.56 34 *e*P **P 15 39 26.7 -0.2**
comp=Z,20nm,0.8s
BJI Beijing 46.58 15 P **P 15 39 26.9 +0.1**
BJI S **S 15 46 12.6 0.0**
BJI pmax pmax
comp=Z,6.0nm,0.6s
BJI LR LR
comp=Z,320nm,17.7s
BJI LR LR
comp=Z,120nm,14.7s
BJI LR LR
comp=Z,350nm,18.5s
NIL Nilore 47.27 326 *e*P **P 15 39 32.5 +0.1**
comp=Z,49nm,0.8s
NIL Nilore 47.27 326 *e*P **P 15 39 32.5 +0.1**
NIL pmax pmax
comp=Z,49nm,0.8s
TJN Taejon 47.34 28 *i*P **P 15 39 32.1 -0.7**
CMSA Cobar Meteorol 48.43 128 P **P 15 39 42.5 +1.1**
baz=48,SNR=24
KS15 Wonju Array Si 48.45 27 *e*P **P 15 39 41.4 0.0**
comp=Z,7.7nm,0.8s
KSAR Wonju Array Be 48.45 27 P **P 15 39 42.0 +0.7**
KSAR Wonju Array Be 48.45 27 P **P 15 39 42.1 +0.7**
KSRS Korea Array 48.48 27 P **P 15 39 42.0 +0.4**
comp=Z,5.5nm,0.6s,baz=227,slow=6.9,SNR=33
WMQ Urumqi 50.35 346 *e*P **P 15 39 57.6 +1.7**
WMQ pP pwP 15 40 09.1 -0.5
WMQ sP sP 15 40 12.4 +0.1
WMQ pmax pmax
comp=Z,110nm,0.9s
WMQ pmax pmax
comp=Z,170nm,4.3s
WMQ LR LR
comp=Z,510nm,28.9s
WMQ LR LR
comp=Z,390nm,26.9s
WMQ LR LR
comp=Z,420nm,22.9s
WMQ Urumqi 50.35 346 *e*P **P 15 39 55.8 -0.1**
comp=Z,53nm,0.8s
WMQ Urumqi 50.35 346 *e*P **P 15 39 55.8 -0.1**
WMQ pmax pmax
comp=Z,53nm,0.8s
KSH Kashi 50.53 334 P **P 15 39 57.0 -0.4**
KSH sP sP 15 40 14.7 +0.8
KSH S **S 15 47 02.4 -6.3**
KSH pmax pmax
comp=Z,23nm,0.5s
KSH pmax pmax
comp=Z,190nm,4.8s
KSH LR LR
comp=Z,950nm,10.7s
KSH LR LR
comp=Z,660nm,14.2s
KSH LR LR
comp=Z,370nm,14.0s
EIDS Eidsvold 50.86 119 *e*P **P 15 39 59.9 -0.1**
comp=Z,38nm,1.4s
TARG Taragay, Kyrgy 51.60 337 *e*P **P 15 40 04.8 -1.0**
comp=Z,14nm,0.8s
PDGK Podgornoye 52.35 339 P **P 15 40 11.1 +0.2**
PDGK pmax pmax
comp=Z,36nm,0.7s
CAN Canberra 52.49 131 P **P 15 40 13.7 +1.6**
CAN pmax pmax
comp=Z,42nm,1.6s
SONA0 Songino Array 52.72 3 *e*PcP **PcP 15 41 22.3 -0.6**
SONM Songino Array 52.72 3 P **P 15 40 14.7 +1.1**
comp=Z,29nm,0.6s,baz=183,slow=9.1,SNR=90
SONM PcP **PcP 15 41 22.3 -0.6**
comp=Z,2.5nm,0.5s,baz=183,slow=5.1,SNR=2.5
SONM LR LR 16 05 25.9
comp=Z,252nm,18.1s,baz=228,slow=39
ULN Ulaanbaatar 52.79 4 *e*P **P 15 40 14.2 +0.1**
comp=Z,28nm,1.1s
ULN Ulaanbaatar 52.79 4*ce*P **P 15 40 13.1 -1.1**
ULN pmax pmax
comp=Z,30nm,1.3s
CN2 Changchun 52.84 21 *e*P **P 15 40 13.6 -0.8**
CN2 *es*P sP 15 40 34.3 +3.3
CN2 *e*S **S 15 47 38.4 -1.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,180nm,21.0s
CN2 LR LR
comp=Z,110nm,21.0s
CN2 LR LR
comp=Z,230nm,23.0s
KZA Kyzart 52.94 335 P **P 15 40 15.8 0.0**
SNR=12
MAJO Matsushiro 53.20 36 *e*P **P 15 40 15.0 -2.2**
comp=Z,32nm,1.6s
MAJO Matsushiro 53.20 36 *e*P **P 15 40 15.0 -2.2**
MAJO pmax pmax
comp=Z,32nm,1.6s
MAT Matsushiro 53.20 36 P **P 15 40 15.1 -2.1**
MAT S **S 15 47 42.4 -2.9**
MJAR Matsushiro Arr 53.20 36 P **P 15 40 16.1 -1.1**
comp=Z,3.4nm,0.6s,baz=205,slow=8.0,SNR=23
MJAR LR LR 16 03 39.8
comp=Z,87nm,19.9s,baz=240,slow=37
MJB9 Matsu-Tunnel 53.20 36 *e*P **P 15 40 15.3 -1.9**
comp=Z,35nm,1.6s
ARSB Arslanbob 53.33 333 *e*P **P 15 40 18.5 +0.2**
comp=Z,37nm,1.0s
UCH Uchtor 53.38 334 P **P 15 40 19.6 +0.6**
SNR=17
TKM2 Tokmak 2 53.49 336 P **P 15 40 20.1 +0.6**
SNR=61
KBK Karagaybulak 53.54 335 P **P 15 40 24.5 +4.6**
SNR=12
AML Almayashu 53.66 334 P **P 15 40 21.9 +1.0**
SNR=16
AAK Ala-Archa 53.72 335 P **P 15 40 21.2 0.0**
comp=Z,2.9nm,0.5s,baz=191,slow=5.2,SNR=3.9
AAK Ala-Archa 53.72 335*ce*P **P 15 40 21.1 0.0**
AAK pmax pmax
comp=Z,4.0nm,0.6s
EKS2 Erkin-Say 54.05 334 P **P 15 40 24.4 +1.0**
SNR=20
USP Ospenovka 54.23 335 P **P 15 40 25.1 +0.4**
SNR=7,7
MK31 Makanchi Array 54.53 343 *e*P **P 15 40 26.6 -0.2**
comp=Z,23nm,0.8s
MK31 Makanchi Array 54.53 343 *e*P **P 15 40 26.3 -0.5**
MK31 pmax pmax
comp=Z,30nm,0.8s
MK32 Makanchi Array 54.53 343 *e*P **P 15 40 26.5 -0.3**
MKAR Makanchi Array 54.53 343 P **P 15 40 26.5 -0.3**
comp=Z,13nm,0.6s,baz=158,slow=7.7,SNR=44
MKAR LR LR 16 08 27.1
comp=Z,177nm,20.1s,baz=146,slow=41
MKAR Makanchi Array 54.53 343 *i*P **P 15 40 25.3 -1.5**
MKAR pmax pmax
comp=Z,13nm,0.6s
MAKZ Makanchi 54.63 343 *e*P **P 15 40 27.1 -0.4**
comp=Z,14nm,0.9s
MAKZ Makanchi 54.63 343 P **P 15 40 26.6 -0.9**
MAKZ pmax pmax
comp=Z,16nm,1.0s
MDJ Mudanjiang 55.10 23 P **P 15 40 31.5 +0.6**
MDJ pmax pmax
comp=Z,9.0nm,0.8s
MDJ pmax pmax
comp=Z,70nm,3.8s
ZAK Zakamensk 55.15 1 *e*P P 15 40 26.4 -4.9
ZAK pmax pmax
comp=Z,9.0nm,1.0s
OPO Ambohidratompo 55.45 251 P **P 15 40 35.4 +1.3**
comp=Z,9.8nm,0.7s,baz=79,slow=4.4,SNR=9.0
USA0B Ussuriysk Arra 55.75 25 *e*P **P 15 40 35.0 -0.6**
comp=Z,25nm,0.9s
USRK Ussuriysk Ar. 55.75 25 P **P 15 40 35.2 -0.3**
comp=Z,17nm,0.7s,baz=219,slow=5.7,SNR=60
USRK LR LR 16 07 14.8
comp=Z,220nm,18.8s,baz=214,slow=39
KK31 Karatay Array 55.87 332 *e*P **P 15 40 35.3 -1.2**
comp=Z,4.5nm,0.8s
KK31 Karatay Array 55.87 332 *e*P **P 15 40 35.3 -1.2**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 55.87 332 *e*P **P 15 40 35.3 -1.2**
comp=Z,4.5nm,0.8s
KKAR Karatay Array 55.87 332 *e*P **P 15 40 35.3 -1.2**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
DGZ Jazzator, Alta 55.98 348*d i*P **P 15 40 37.5 +0.2**
DGZ pmax pmax
comp=Z,11nm,0.9s
MOY Mondy 56.44 359 *e*P **P 15 40 41.6 +1.1**
MOY pmax pmax
comp=Z,29nm,1.8s
TLY Talaya 56.46 1 *e*P **P 15 40 41.7 +1.2**
TLY pmax pmax
comp=Z,43nm,0.9s
TLY MLR MLR
comp=Z,499nm,14.0s
HNR Honiara 57.26 98 *e*P **P 15 40 45.6 -1.3**
comp=Z,78nm,0.8s
HNR Honiara 57.26 98 *e*P **P 15 40 45.6 -1.3**
HNR pmax pmax
comp=Z,79nm,0.8s
CIT Chita 57.59 8 *e*P **P 15 40 49.8 +1.3**
CIT *e* 15 41 02.4
KURBB Kurchatov Arra 59.07 343 P **P 15 40 59.0 +0.1**
comp=Z,6.4nm,0.7s,baz=160,slow=6.7,SNR=42
KURK Kurchatov 59.12 343 *e*P **P 15 40 58.8 -0.4**
comp=Z,33nm,0.8s
KURK Kurchatov 59.12 343 *e*P **P 15 40 58.8 -0.4**
KURK pmax pmax
comp=Z,33nm,0.8s
GEYT Alibeck 59.23 320 P **P 15 41 01.3 +1.0**
comp=Z,6.9nm,0.8s,baz=148,slow=8.6,SNR=14
GEYT LR LR 16 07 35.9
comp=Z,87nm,21.2s,baz=200,slow=37
ERM Erimo 59.71 34 *i*P **P 15 41 01.3 -2.1**
ERM pmax pmax
comp=Z,15nm,1.2s
KLR Kul'dur 59.75 22 P **P 15 41 03.0 -0.5**
comp=Z,6.0nm,0.5s,baz=225,slow=5.4,SNR=24
KLR Kul'dur 59.75 22*c i*P **P 15 41 02.9 -0.7**
KLR pmax pmax
comp=Z,9.0nm,1.0s
ZAA0 Zalesovo Array 60.53 348 *e*P **P 15 41 08.5 -0.3**
comp=Z,44nm,0.8s
ZALV Zalesovo Beam 60.53 348 P **P 15 41 08.8 -0.1**
comp=Z,19nm,0.4s,baz=177,slow=5.7,SNR=53
ZALV LR LR 16 10 51.6
comp=Z,425nm,19.1s,baz=70,slow=40
ZAA1 Zalesovo Array 60.54 348 *e*P **P 15 41 08.8 -0.1**
ASAJ Asahikawa 60.80 32 P **P 15 41 10.6 -0.3**
comp=Z,10nm,0.4s,baz=240,slow=7.4,SNR=27
NVS Novosibirsk 61.70 348 *e*P **P 15 41 16.4 -0.3**
NVS *e* 15 41 28.6
NVS *e*S **S 15 49 33.6 -2.6**
NVS pmax pmax
comp=Z,16nm,1.7s
NVS pmax pmax
comp=N,6.0nm,1.2s
NVS pmax pmax
comp=E,4.0nm,1.1s
NVS smax smax
comp=N,8.0nm,1.2s
NVS smax smax
comp=E,19nm,1.6s
ZEA Zeya 62.13 16 *e*P **P 15 41 19.8 +0.1**
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
ZEA MLR MLR
comp=E,200nm,18.0s
YUK Yuzh-Kuril'sk 62.53 34 *e*P P 15 41 14.6 -7.9
YUK MLR MLR
comp=Z,314nm,17.0s
GRNR Gornyy 62.78 24 *e*P **P 15 41 25.7 +1.6**
GRNR pmax pmax
comp=Z,13nm,1.0s
YSS Yuzh-Sakhalins 62.82 30 *e*P **P 15 41 23.7 -0.6**
comp=Z,51nm,1.0s
YSS Yuzh-Sakhalins 62.82 30⇓*i*P **P 15 41 24.5 +0.1**
YSS *e* 15 41 36.8
YSS pmax pmax
comp=Z,20nm,0.7s
BOD Bodaibo 63.30 7⇓*i*P **P 15 41 27.1 -0.3**
BOD pmax pmax
comp=Z,27nm,1.5s
BVAR Borovoye Array 63.78 339 P **P 15 41 30.4 -0.2**
comp=Z,12nm,0.4s,baz=147,slow=9.3,SNR=54
BRVK Borovoye 63.85 339 *e*P **P 15 41 30.3 -0.7**
comp=Z,18nm,0.6s
BRVK Borovoye 63.85 339 *e*P **P 15 41 30.3 -0.7**
BRVK pmax pmax
comp=Z,18nm,0.6s
DZM Mont Dzumac 64.15 112 *e*LR LR 16 00 38.8
comp=Z,266nm,23.8s
KMBO Kilima Mbogo 65.09 271 LR LR 16 04 47.1
comp=Z,168nm,22.0s,baz=94,slow=31
KMBO Kilima Mbogo 65.09 271 *e*P **P 15 41 38.6 -1.7**
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 65.09 271 *e*P **P 15 41 38.7 -1.7**
KMBO pmax pmax
comp=Z,6.0nm,0.9s
AB31 Akbulak array 65.37 331 *i*P **P 15 41 41.1 0.0**
AB31 pmax pmax
comp=Z,18nm,0.7s
ABKAR Akbulak array 65.37 331 *e*P **P 15 41 40.7 -0.4**
comp=Z,27nm,0.8s
TYV Tymovskoe 65.50 27 *e*P **P 15 41 38.0 -3.9**
TYV pmax pmax
comp=Z,8.0nm,1.0s
AKTO Aktyubinsk 67.08 331 P **P 15 41 52.2 +0.1**
comp=Z,2.3nm,0.3s,baz=117,slow=13,SNR=5.3
AKTO Aktyubinsk 67.08 331 P **P 15 41 52.0 -0.1**
AKTO pmax pmax
comp=Z,17nm,1.2s
AKT Akhty 67.88 319 *e*P **P 15 41 59.6 +2.1**
AKT *e* 15 42 27.6
AKT pmax pmax
comp=Z,59nm,1.0s
MAW Mawson 68.01 195 P **P 15 41 58.5 +0.9**
comp=Z,3.7nm,0.8s,baz=26,slow=4.2,SNR=10.0
MAW LR LR 16 06 50.2
comp=Z,428nm,18.9s,baz=34,slow=32
MAW Mawson 68.01 195 *e*P **P 15 41 58.2 +0.6**
comp=Z,10nm,1.9s
MAW Mawson 68.01 195 P **P 15 41 58.7 +1.1**
baz=68,SNR=9.3
MAW Mawson 68.01 195 *e*P **P 15 41 58.2 +0.6**
MAW pmax pmax
comp=Z,11nm,1.9s
GNI Garni 69.29 316 *i*P **P 15 42 07.3 +1.0**
GNI pmax pmax
comp=Z,19nm,1.1s
GROC Groznyy 69.96 320 *e*P **P 15 42 11.0 +0.8**
GROC *e* 15 42 30.6
GROC *e*S **S 15 51 18.2 +0.8**
GROC pmax pmax
comp=Z,55nm,0.9s
YAK Yakutsk 70.05 13 *e*P **P 15 42 09.3 -1.0**
comp=Z,68nm,0.7s
YAK Yakutsk 70.05 13 *e*P **P 15 42 09.1 -1.2**
YAK *e* 15 42 26.0
YAK *e**PP **PcP 15 42 34.2 +2.0**
YAK *e*S **S 15 51 13.8 -3.9**
YAK *e**SS **SKiKP 15 51 57.5 +4.5**
YAK *e* 15 52 05.1
YAK *e*SS **SS 15 55 46.9 -1.2**
SVE Sverdlovsk 70.32 337 *e*P **P 15 42 12.7 +0.6**
SVE pmax pmax
comp=Z,58nm,1.1s
ARU Arti 70.86 336 P **P 15 42 15.5 +0.1**
comp=Z,2.9nm,0.5s,baz=280,slow=19,SNR=7.8
ARU Arti 70.86 336 *e*P **P 15 42 15.0 -0.4**
comp=Z,75nm,1.4s
ARU Arti 70.86 336*c i*P **P 15 42 15.7 +0.3**
ARU *PP **pP 15 42 27.3 -0.2**
ARU 15 44 50.1
ARU S **S 15 51 29.4 +2.0**
ARU SS **SS 15 55 56.9 -3.9**
ARU pmax pmax
comp=Z,18nm,1.4s
ZEI Tsey 71.01 318 *e*P **P 15 42 20.0 +3.1**
ZEI pmax pmax
comp=Z,13nm,0.6s
NCK Nalchik 71.53 319 *i*P **P 15 42 18.5 -1.2**
NCK pmax pmax
comp=Z,12nm,0.9s
MBAR Mbarara 71.63 271 *e*P **P 15 42 23.3 +2.1**
comp=Z,9.0nm,0.9s
MBAR Mbarara 71.63 271 *i*P **P 15 42 22.2 +1.1**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
NEY Neytrino 71.99 318 *i*P **P 15 42 21.3 -1.4**
NEY pmax pmax
comp=Z,2.0nm,1.0s
SKR Severo-Kuril's 72.06 33*ce*P **P 15 42 22.4 -0.3**
KBZ Khabaz 72.08 319 P **P 15 42 23.5 +0.5**
comp=Z,6.1nm,1.0s,baz=102,slow=3.6,SNR=6.6
KBZ LR LR 16 19 20.8
comp=Z,44nm,19.1s,baz=100,slow=40
KIV Kislovodsk 72.32 319 *e*P **P 15 42 25.5 +0.9**
KIV pmax pmax
comp=Z,37nm,1.1s
GOF Gofitskoye 72.57 320⇑*e*P **pP 15 42 38.9 +0.9**
GOF pmax pmax
comp=Z,39nm,0.9s
PETK Petropavlovsk- 74.18 31 P **P 15 42 34.5 -0.8**
comp=Z,9.1nm,0.7s,baz=212,slow=3.1,SNR=21
PETK LR LR 16 15 25.1
comp=Z,70nm,20.7s,baz=208,slow=36
PEA1 Petropavlovsk- 74.18 31 *e*P **P 15 42 34.5 -0.8**
BKZ Black Stump Fm 74.58 129 *e*P **P 15 42 38.2 +0.2**
comp=Z,25nm,0.7s
PET Petropavlovsk 74.63 31 *e*P **P 15 42 37.1 -0.7**
comp=Z,37nm,0.6s
PET Petropavlovsk 74.63 31 *e*P **P 15 42 37.1 -0.7**
PET pmax pmax
comp=Z,37nm,0.6s
MA2 Magadan 74.80 23 *e*P **P 15 42 38.2 -0.5**
comp=Z,25nm,1.0s
MA2 Magadan 74.80 23*ce*P **P 15 42 38.2 -0.5**
MA2 pmax pmax
comp=Z,32nm,1.3s
NRIK Noril'sk 74.86 355 P **P 15 42 37.6 -1.3**
comp=Z,3.4nm,0.3s,baz=139,slow=4.9,SNR=10
NRIK LR LR 16 19 40.2
comp=Z,198nm,19.3s,baz=200,slow=39
SYO Syowa Base 75.83 199⇓*e*P **P 15 42 44.0 -0.4**
VRH Novokhopyorsk 76.09 326 *e*P **P 15 42 46.0 -0.3**
BOSA Boshof 76.30 242 P **P 15 42 48.6 +0.5**
comp=Z,7.7nm,1.0s,baz=42,slow=3.9,SNR=4.4
BR101 Keskin Array S 77.05 312 *e*P **P 15 42 52.4 +0.2**
BR131 Keskin Array S 77.05 312 *e*P **P 15 42 51.6 -0.6**
comp=Z,16nm,0.6s
BRTR Keskin Array B 77.05 312 P **P 15 42 52.4 +0.2**
comp=Z,4.3nm,0.8s,baz=136,slow=7.3,SNR=18
BRTR LR LR 16 19 16.2
comp=Z,126nm,19.0s,baz=108,slow=38
SEY Seymchan 77.53 21*ce*P **P 15 42 54.1 0.0**
VSR Storozhevoye 77.55 325 *e*P **P 15 42 53.9 -0.6**
LPSR Galich'ya Gora 78.26 326 *e*P **P 15 42 58.9 +0.5**
SIM Simferopol' 78.37 318 *e*P **pP 15 43 12.5 +1.1**
SIM pmax pmax
comp=Z,30nm,0.8s
TIXI Tiksi 78.43 8 *e*P **P 15 42 57.5 -1.4**
comp=Z,46nm,1.5s
TIXI Tiksi 78.43 8 *e*P **P 15 42 57.5 -1.4**
TIXI pmax pmax
comp=Z,46nm,1.5s
VNDA Vanda 78.80 169 P **P 15 43 01.6 +0.6**
comp=Z,5.2nm,1.0s,baz=314,slow=5.3,SNR=14
VNDA LR LR 16 14 26.9
comp=Z,144nm,18.0s,baz=308,slow=33
VNDA Vanda 78.80 169 *e*P **P 15 43 00.6 -0.4**
comp=Z,9.5nm,1.1s
VNDA Vanda 78.80 169 *e*P **P 15 43 00.6 -0.4**
VNDA pmax pmax
comp=Z,10.0nm,1.1s
PRGR Permogore 79.33 336 *e*P **P 15 43 02.7 -1.3**
PRGR *e**PP **pP 15 43 15.2 -1.1**
PRGR pmax pmax
comp=Z,39nm,0.7s

SBA Scott Base 79.89 169 *e*P **P 15 43 06.8 -0.1**
comp=Z,5.8nm,0.8s
SBA Scott Base 79.89 169 *e*P **P 15 43 06.8 -0.1**
SBA pmax pmax
comp=Z,6.0nm,0.8s
MOS Moscow 80.25 329 *e*P pP 15 43 21.8 +0.4
YLV Yalova 80.43 312 ⇑*i*P **P 15 43 11.3 +0.6**
YLV Yalova 80.43 312 P **P 15 43 11.2 +0.6**
OBN Obninsk 80.55 328 *i*P **P 15 43 08.5 -2.3**
OBN *i* 15 43 16.3
OBN *i* 15 46 18.7
OBN pmax pmax
comp=Z,5.0nm,0.9s
KLMR Klimovskoe 81.52 334 *e*P **P 15 43 13.4 -2.5**
KLMR *e* 15 46 20.8
KLMR pmax pmax
comp=Z,19nm,0.9s
TIRR Tirgusor 82.11 316 ⇑*i*P **P 15 43 20.7 +1.4**
TIRR Tirgusor 82.11 316 P **P 15 43 20.2 +0.9**
TIRR pmax pmax
comp=Z,52nm,1.0s
TLB Topalu 82.40 316 ⇑*i*P **P 15 43 23.1 +2.2**
CFR Carcaliu 82.49 317 ⇑*i*P **P 15 43 23.6 +2.3**
HARR Harsova 82.51 316 ⇑*i*P **P 15 43 23.1 +1.7**
PRD Provadia 82.51 315 *e*P pP 15 43 35.9 +2.1
AKASG Malin Array Be 83.26 322 P **P 15 43 25.8 +0.6**
comp=Z,0.7nm,0.3s,baz=81,slow=5.7,SNR=6.5
AKBB Malin Array Si 83.26 322 *e*P **P 15 43 25.3 +0.2**
comp=Z,9.1nm,0.8s
KIEV Kiev 83.27 322 *e*P **P 15 43 25.1 -0.1**
comp=Z,8.5nm,0.8s
KIEV Kiev 83.27 322 *e*P **P 15 43 25.1 -0.1**
KIEV pmax pmax
comp=Z,8.0nm,0.8s
TMCR Tamitsa 83.59 337 *e*P **P 15 43 28.6 +2.1**
TMCR pmax pmax
comp=Z,18nm,0.6s
VRI Vrincioaia 83.62 317 ⇑*i*P **P 15 43 29.3 +2.1**
VRI Vrincioaia 83.62 317 P **P 15 43 28.9 +1.7**
VRI pmax pmax
comp=Z,58nm,1.0s
PLOR Plostina 83.67 317 ⇑*i*P **P 15 43 30.1 +2.6**
TESR Tescani 83.83 318 ⇑*i*P **P 15 43 30.0 +1.8**
MLR Muntele Rosu 84.06 317 *e*P **P 15 43 29.1 -0.5**
comp=Z,51nm,1.1s
MLR Muntele Rosu 84.06 317 ⇑*i*P **P 15 43 31.0 +1.4**
MLR Muntele Rosu 84.06 317 *e*P **P 15 43 29.1 -0.5**
MLR pmax pmax
comp=Z,51nm,1.1s
RZN Rozhen 84.11 313 *e*P pP 15 43 43.2 +0.9
PRAR RASCA 84.31 318 ⇑*i*P **P 15 43 33.6 +2.9**
VOIR 84.67 316 ⇑*i*P **P 15 43 34.6 +2.0**
PGB Panagyurishte 84.69 313 *e*P pP 15 43 45.3 +0.2
QSPA South Pole Qui 85.00 180 *e*P **P 15 43 33.9 0.0**
comp=Z,13nm,1.3s
BURAR Bucovina Array 85.03 319 ⇑*i*P **P 15 43 37.0 +2.6**
BILL Bilibino 85.14 20 *e*P **P 15 43 33.2 -1.1**
comp=Z,6.0nm,1.0s
BILL Bilibino 85.14 20 *c i*P **P 15 43 32.7 -1.7**
BILL pmax pmax
comp=Z,6.0nm,1.1s
KKB Krupnik 85.34 313 *e*P P 15 43 42.7 +6.7
VTS Vitosha 85.37 313 ⇑*i*P **P 15 43 37.5 +1.2**
VTS Vitosha 85.37 313 *e*P pP 15 43 48.4 -0.3
IDID Didziasalis 85.94 326 *e*P **P 15 43 39.6 +1.0**
IDID IAmb IAmb 15 43 53.3
comp=Z,7.8nm,0.6s
GZR Gura Zlata 86.23 316 ⇑*i*P **P 15 43 42.5 +2.1**
IIGN Ignalina 86.24 326 *e*P **P 15 43 41.6 +1.5**
IIGN IAmb IAmb 15 43 55.6
comp=Z,17nm,1.0s
LVV L'vov 86.28 321 *e*P pP 15 43 54.0 +1.2
ISAL Salakas 86.35 326 *e*P **P 15 43 41.8 +1.2**
ISAL IAmb IAmb 15 43 56.0
comp=Z,9.3nm,0.9s
VSU Vasula 86.75 329 *i*P **P 15 43 42.5 0.0**
VSU pmax pmax
comp=Z,17nm,0.8s
VSU Vasula 86.75 329 *e*P **P 15 43 43.2 +0.7**
VSU IAmb IAmb 15 43 56.7
comp=Z,65nm,0.9s
MDVR Moldovita 86.86 315 ⇓*i*P **P 15 43 45.4 +2.0**
BZS Buzias 87.07 316 ⇓*i*P **P 15 43 46.9 +2.5**
KOLS Kolonicke sedl 87.23 319 *e*P **P 15 43 47.2 +2.1**
KOLS Kolonicke sedl 87.23 319 *e*P **P 15 43 47.2 +2.1**
PABE Paberze 87.53 326 *e*P **P 15 43 46.0 -0.3**
PABE IAmb IAmb 15 44 01.4
comp=Z,40nm,0.8s
SUW Suwalki 87.66 325 *e*P pP 15 44 00.1 +0.7
SUW Suwalki 87.66 325 *e*P pP 15 44 00.1 +0.7
FIA0 FINESS Array S 87.83 332 *e*P **P 15 43 48.5 +0.8**
FIA0 FINESS Array S 87.83 332 *e*P **P 15 43 48.5 +0.8**
FINES FINESS Array B 87.83 332 P **P 15 43 48.5 +0.8**
comp=Z,1.7nm,0.5s,baz=107,slow=4.8,SNR=12
FINES LR LR 16 29 22.2
comp=Z,80nm,18.4s,baz=83,slow=40
KIWB Kanaga Island 88.04 38 *e*P **P 15 43 47.5 -1.4**
SUF Sumiainen 88.11 333 P **P 15 43 49.9 +0.9**
SUF pmax pmax
comp=Z,16nm,0.8s
PDG Podgorica 88.24 313 ⇑*i*P **P 15 43 51.5 +1.5**
NIE Niedzica 88.59 320 *e*P pP 15 44 06.2 +2.2
PSZ Piszkesteto 88.62 318 ⇑*i*P **P 15 43 53.5 +1.7**
OJC Ojcow 89.03 320 *e*P pP 15 44 08.0 +1.9
VYHS Vyhne 89.40 319 *e*P **P 15 43 57.0 +1.6**
VYHS Vyhne 89.40 319 *e*P **P 15 43 57.0 +1.6**
SNAA Sanae 90.04 198 P **P 15 43 59.4 +1.4**
SNAA Sanae 90.04 198 *e*P **P 15 43 58.8 +0.8**
comp=Z,13nm,1.1s
SNAA Sanae 90.04 198 *e*P **P 15 43 58.8 +0.8**
SNAA pmax pmax
comp=Z,13nm,1.1s
BLY Banja Luka 90.04 315 ⇑*i*P **P 15 44 00.6 +2.1**
ARCES ARCESS Array B 90.06 340 P **P 15 43 59.7 +1.7**
comp=Z,1.4nm,0.5s,baz=116,slow=2.8,SNR=7.6
JAVC Velka Javorina 90.22 319 *e*pP pP 15 44 13.5 +1.8
MORC Moravsky Berou 90.42 320 *e*P **P 15 43 59.5 -0.7**
comp=Z,10nm,0.9s
MORC Moravsky Berou 90.42 320 ⇑*i*P **P 15 44 02.1 +1.9**
MORC Moravsky Berou 90.42 320 *e*P **P 15 43 59.5 -0.7**
MORC pmax pmax
comp=Z,10.0nm,0.9s
MORC Moravsky Berou 90.42 320 *e*pP pP 15 44 13.9 +1.3
VRAC Vranov 90.97 319 *e*pP pP 15 44 16.0 +0.8
KRUC Moravsky 91.08 319 *e*pP pP 15 44 16.6 +1.0
CONA Conrad Observa 91.31 318 *e*PcP **P 15 44 06.0 +1.6**
comp=Z,0.8nm,0.4s
CONA *e*pP **pP 15 44 17.6 +0.8**
comp=Z,4.3nm,1.2s
KSP Ksiaz 91.33 321 *e*P pP 15 44 18.5 +1.7
ARSA Arzberg 91.47 317 *i* PcP **PcP 15 44 07.2 +1.2**
comp=Z,2.5nm,0.8s
ARSA *e*pP **pwP 15 44 19.1 -0.7**
comp=Z,10nm,0.8s
VNA2 Neumayer--Watz 91.67 198 P **P 15 44 06.8 +1.2**
baz=79,slow=4.2
SOKA Soboth 91.75 317 *e*PcP **P 15 44 08.4 +1.9**
comp=Z,3.6nm,1.1s
SOKA *e*pP **pwP 15 44 20.3 -0.8**
comp=Z,11nm,0.9s
VNA1 Neumayer--Stat 92.04 198 P **P 15 44 09.1 +1.9**
OBKA Obir 92.06 316 *e*pP pP 15 44 21.7 +1.3
comp=Z,6.5nm,0.9s
VNA3 Neumayer Olymp 92.24 197 P **P 15 44 09.4 +1.2**
MYKA Terra Mystica 92.70 316 *e*PcP **P 15 44 12.3 +1.4**
comp=Z,4.2nm,1.4s
MYKA *e*pP **pP 15 44 24.0 +0.7**
comp=Z,9.6nm,1.4s
BRG Berggiesshubel 92.82 321 *e*P pP 15 44 25.3 +1.7
comp=Z,12nm,1.4s
GERES GERESS Array B 92.82 319 P **P 15 44 12.1 +0.7**
comp=Z,0.5nm,0.5s,baz=225,slow=13,SNR=4.3
KBA Koelnbreinsper 92.93 317 *e*PcP **P 15 44 12.9 +0.8**
comp=Z,1.8nm,1.1s
KBA *e*pP **pP 15 44 25.1 +0.6**
comp=Z,2.5nm,0.7s
CLL Collm 93.44 321 *e*P **P 15 44 12.0 -2.1**
CLL ⇑*i*pP **pP 15 44 27.4 +0.9**
comp=Z,19nm,1.7s
CLL *e*S **S 15 55 25.0 +6.1**
CLL LmV 16 34 00.0
comp=Z,100nm,21.2s
CLL Collm 93.44 321 ⇑*i*P **P 15 44 12.0 -2.1**
CLL *i* *PP **pP 15 44 27.4 +0.9**
CLL *e*S **S 15 55 25.0 +6.1**
SQTA Sankt Quirin 94.40 317 *e*PcP **P 15 44 19.2 +0.4**
comp=Z,2.3nm,0.6s
SQTA *e*pP **pP 15 44 31.4 +0.2**
comp=Z,4.5nm,0.5s
NB2 NORSAR Subarra 94.88 331 P pP 15 44 33.8 +0.9
comp=Z,0.9nm,0.8s,baz=95,slow=5.3
NOA NORSAR Array B 94.88 331 LR LR 16 30 59.8
comp=Z,65nm,21.7s,baz=50,slow=38
KEST Kesra 95.31 305 LR LR 16 30 01.2
comp=Z,52nm,18.9s,baz=323,slow=37
TOLK Toolik Lake Re 101.16 21 P **Pdif 15 44 48.3 -0.3**
baz=285
TCOL CIGO, UAF Yank 102.83 24 P **Pdif 15 44 56.4 +0.3**
baz=286
ILAR Eielson Array 103.26 24 PP **PKiKP 15 49 15.1 -2.0**
comp=Z,0.5nm,0.8s,baz=283,slow=6.3,SNR=5.3
PPT2 Papeete2 105.60 110 *e*LR LR 16 20 04.8
comp=Z,140nm,23.0s
EPYK Eagle Plains 106.58 21 P **PKiKP 15 49 23.3 +0.1**
baz=297
YKA Yellowknife Ar 116.49 18 PKP **PKiKP 15 49 42.5 +0.5**
comp=Z,0.2nm,0.6s,baz=303,slow=2.7,SNR=3.1
YKB5 Yellowknife Ar 116.49 18 *e*PKPdf **PKiKP 15 49 42.5 +0.5**
B05A Bryant 122.65 34 P **PKiKP 15 49 55.3 +0.8**
baz=304
E04D Cinebar 123.32 36 P **PKiKP 15 49 56.8 +1.0**
baz=303
I03D Drain, OR 124.34 39 P **PKiKP 15 50 00.7 +2.7**
baz=300
I04A Tendick Farm, 124.88 38 P **PKiKP 15 49 59.9 +0.8**
baz=301
J04D Umpqua Nationa 125.35 39 P **PKPdf 15 49 59.9 0.0**
baz=301
L04D Klamath Falls 125.75 40 P **PKiKP 15 50 01.5 +0.4**
baz=300
M02C Callahan 125.81 41 P **PKiKP 15 50 02.2 +1.1**
baz=299
J05D Fort Rock, OR 125.87 38 P **PKiKP 15 50 02.3 +1.1**
baz=302
M04C Macdoel 126.27 40 P **PKiKP 15 50 02.2 +0.1**
baz=301
MSO Missoula 127.89 31 P **PKPdf 15 50 04.3 -0.2**
baz=312
HLID Hailey 129.75 34 P **PKPdf 15 50 08.6 +0.3**
baz=309
NV01 Mina Array Sit 130.32 42 *e*PKPdf **PKiKP 15 50 12.0 +1.6**
NVAR Mina Array Bea 130.32 42 PKP **PKiKP 15 50 12.0 +1.6**
comp=Z,0.6nm,0.6s,baz=306,slow=2.1,SNR=3.2
CWC Cottonwood Cre 131.50 44 P **PKiKP 15 50 12.5 -0.3**
baz=300
MPMC Manual Prospec 132.10 44 P **PKiKP 15 50 14.2 +0.2**
baz=301
TPNV Topopah Spring 132.49 43 P **PKiKP 15 50 15.3 +0.6**
baz=303
DUG Dugway, Tooele 132.79 37 P **PKiKP 15 50 16.7 +1.4**
baz=309
PD31 Pinedale Array 132.94 32 *e*PKPdf **PKiKP 15 50 16.0 +0.4**
PDAR Pinedale Array 132.94 32 PKP **PKiKP 15 50 16.0 +0.4**
comp=Z,0.2nm,0.5s,baz=16,slow=7.8,SNR=2.5
PDAR SKPbc **SKPab 15 53 43.4 +3.0**
comp=Z,1.2nm,0.8s,baz=294,slow=1.5,SNR=4.3
GSC Goldstone, Bar 132.97 45 P **PKPdf 15 50 14.8 +0.3**
baz=301
PFO Pinyon Flats O 134.06 47 P **PKPdf 15 50 15.5 -1.1**
baz=300
BELC Belle Mtn. Jos 134.20 46 P **PKPdf 15 50 17.1 +0.2**
baz=301
RSSD Black Hills 134.64 27 P **PKPdf 15 50 18.1 +0.5**
baz=322
BC3 Big Chuckawall 134.76 46 P **PKiKP 15 50 19.1 -0.3**
baz=301
EYMN Ely 135.58 13 P **PKiKP 15 50 21.5 +1.0**
baz=340
E39A Mellen 137.27 13 P **PKiKP 15 50 24.1 +0.1**
baz=341
F38A Pierce - Schro 137.35 15 P **PKiKP 15 50 24.0 -0.2**
baz=339
E40A Wakefield 137.36 13 P **PKiKP 15 50 24.2 +0.1**
baz=342
F40A Park Falls 137.81 13 P **PKPdf 15 50 22.9 -0.3**
baz=341
W18A Petrified Fore 137.85 40 P **PKPdf 15 50 23.7 -0.1**
baz=308
S22A 4UR Ranch, Cre 137.92 35 P **PKPdf 15 50 22.1 -1.9**
baz=314
ECSD EROS Data Cent 137.94 21 P **PKPdf 15 50 22.5 -1.0**
baz=331
G39A Holcombe 138.16 14 P **PKPdf 15 50 23.4 -0.4**
baz=340
E46A Sault Ste Mari 138.38 7 P **PKPdf 15 50 24.1 0.0**
baz=350
CPUP Villa Florida 143.16 211 PKP **PKPdf 15 50 33.6 +0.3**
comp=Z,2.2nm,0.9s,baz=151,slow=6.5,SNR=3.3
BDFB Brasilia 144.21 235 PKP **PKPdf 15 50 34.7 -0.9**
comp=Z,4.1nm,0.6s,baz=70,slow=1.8,SNR=6.5
WMOK Wichita Mounta 144.52 31 *e*PKPdf **PKPab 15 50 33.6 -0.3**
WMOK Wichita Mounta 144.52 31 *e*PKIKP **PKPab 15 50 33.6 -0.3**
CCM Cathedral Cave 144.83 19 *e*PKPdf **PKPab 15 50 34.4 -0.5**
CCM Cathedral Cave 144.83 19 *e*PKIKP **PKPab 15 50 34.4 -0.5**
O56A Blue Knob Stat 144.86 1 *e*PKPdf **PKPab 15 50 34.7 -0.3**
TUL1 Leonard 144.98 26 *e*PKPbc **PKPab 15 50 35.2 -0.3**
OLIL Olney 145.09 14 *e*PKPbc **PKPbc 15 50 35.4 -0.4**
FVM French Village 145.15 18 *e*PKPbc **PKPbc 15 50 35.5 -0.5**
FVM French Village 145.15 18 *e*PKIKP **PKPbc 15 50 35.5 -0.5**
MCWV Mont Chateau 145.43 3 *e*PKPbc **PKPbc 15 50 36.7 -0.2**
HHAR Hobbs 145.44 24 *e*PKPbc **PKPbc 15 50 36.1 -0.9**
TX31 Lajitas Ar. Si 145.47 43 *e*PKPdf **PKPab 15 50 38.4 +0.7**
LTX Lajitas 145.47 43 *e*PKPdf **PKPab 15 50 38.5 +0.8**
LTX Lajitas 145.47 43 *e*PKIKP **PKPab 15 50 38.5 +0.8**
TXAR Lajitas Array 145.47 43 PKPbc **PKPab 15 50 38.5 +0.8**
comp=Z,21nm,0.5s,baz=301,slow=0.9,SNR=406
ABTX Abilene, Hawle 145.68 34 *e*PKPdf **PKPab 15 50 38.2 -0.1**
Q51A Peebles 145.72 8 *e*PKPdf **PKPab 15 50 38.1 -0.1**
SDMD Soldier's Deli 145.72 359 *e*PKPdf **PKPbc 15 50 37.8 0.0**
SIUC Southern Illin 145.75 16 *e*PKPdf **PKPab 15 50 38.3 0.0**
Q54A Coxs Mills 146.03 4 *e*PKPdf **PKPbc 15 50 38.5 -0.3**
PBMO Poplar Bluff 146.26 19 *e*PKPdf **PKPbc 15 50 39.7 +0.2**
R53A Hurricane 146.58 6 *e*PKPdf **PKPbc 15 50 40.3 -0.1**
T47A Sharon Grove 146.99 14 *e*PKPbc **PKPbc 15 50 42.1 +0.5**
JCT Junction City 147.16 37 *e*PKPbc **PKPbc 15 50 42.6 +0.2**
JCT Junction City 147.16 37 *e*PKP2 **PKPbc 15 50 42.6 +0.2**
WVT Waverly 147.62 15 *e*PKPbc **PKPbc 15 50 43.4 0.0**
WVT Waverly 147.62 15 *e*PKP2 **PKPbc 15 50 43.4 0.0**
CLTN Cedars of Leba 148.03 13 *e*PKPbc **PKPbc 15 50 44.2 -0.3**
T59A Double "B" Far 148.16 360 *e*PKPbc **PKPbc 15 50 44.7 -0.1**
V48A Smith Brothers 148.25 14 *e*PKPbc **PKPbc 15 50 44.8 -0.3**
PLAL Pickwick Lake 148.63 17 *e*PKPbc **PKPbc 15 50 45.6 -0.5**
V52A Sevierville 148.81 9 *e*PKPbc **PKPbc 15 50 45.7 -0.9**
CPCT Cooper Cave 149.03 11 *e*PKPbc **PKPbc 15 50 46.8 -0.3**
V53A Saluda 149.09 8 *e*PKPbc **PKPbc 15 50 47.0 -0.4**
Y49A Blount Mountai 150.14 15 *e*PKPbc **PKPbc 15 50 49.5 -0.5**
LNIG Linares 151.18 44 *e*PKPbc **PKPbc 15 50 51.5 -1.1**
LPAZ La Paz 156.86 204 PKP **PKPdf 15 50 56.4 +0.7**
comp=Z,1.1nm,0.9s,baz=25,slow=2.6,SNR=3.6

ISK ***03*** *15:45:21.6, 38.°12N×38.°24E, h5km, ML2.1/4*
ISCJB ***03*** *15:45:22.8±0.5, 38.°12N±0.°03×38.°25E±0.°04, h9km, Error ellipse: s-maj=5.4km s-min=4.1km az=138.0*
DDA ***03*** *15:45:22.2, 38.°14N×38.°20E, h7km±3km, ML2.6*
ISC 03 15:45:22.4±0.9, 38.°15N±0.°03×38.°22E±0.°03, h9km, n15, σ0s49/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.28**	**302**	*i* P	**Pb**	**15 45 28.9**	**-0.8**
AKCD				*i* S	**Sb**	**15 45 34.9**	**+0.3**
ELZG	**Elazig**	**0.69**	**60**	*i* P	**Pb**	**15 45 36.6**	**-0.1**
ELZG				*i* S	**Sb**	**15 45 46.8**	**+0.2**
DARE	**Darende-Malaty**	**0.72**	**306**	PG	**Pg**	**15 45 36.1**	**-0.2**
HEKM	**Malatya_Hekimh**	**0.76**	**344**	*i* P	**Pb**	**15 45 38.2**	**+0.3**
HEKM				*i* S	**Sn**	**15 45 51.9**	**+0.7**
HEKM				IAML_P			
comp=Z,1μm,0.2s							
URFA	**Urfa**	**0.85**	**146**	PG	**Pg**	**15 45 37.9**	**-0.9**
URFA				SG	**Sg**	**15 45 49.4**	**-0.4**
ELBS	**KAHRAMANMARAS**	**0.88**	**282**	*i* P	**Pb**	**15 45 39.8**	**-0.1**
ELBS				IAML_P			
comp=Z,355nm,0.2s							
SVRC	**Sivrice-ELAZID**	**0.89**	**75**	PG	**Pg**	**15 45 38.9**	**-0.5**
GZT	**Gaziantep**	**0.95**	**214**	*i* P	**Pn**	**15 45 42.3**	**+0.3**
KEMA	**Kemaliye**	**1.14**	**11**	*i* P	**Pn**	**15 45 44.5**	**-0.1**
KEMA				IAML_P			
comp=Z,277nm,0.1s							
SANL	**SANLIURFA_Merk**	**1.15**	**148**	*i* P	**Pn**	**15 45 45.0**	**+0.3**
KMRS	**Kahramanmaras**	**1.23**	**239**	PN	**Pb**	**15 45 45.4**	**-0.4**
GAZ	**Gaziantep**	**1.26**	**220**	PN	**Pg**	**15 45 46.2**	**-0.4**
SURC	**SANLIURFA_SURC**	**1.30**	**166**	*i* P	**Pg**	**15 45 48.1**	**+0.7**
SURC				IAML_P			
comp=Z,355nm,0.3s							
CUKAN	**kangal_SIVAS**	**1.31**	**333**	*i* P	**Pn**	**15 45 47.1**	**+0.1**
MAZI	**Mazidag**	**1.89**	**111**	PN	**Pn**	**15 45 55.5**	**+0.5**

JMA ***03*** *15:45:31.1±0.2, 25.°00N×122.°89E, h16km±3km, M1.9*
ISCJB ***03*** *15:45:32.2±0.5, 24.°91N±0.°03×122.°89E±0.°02, h17km±3km, Error ellipse: s-maj=5.1km s-min=3.0km az=16.0*
TAP ***03*** *15:45:32.2, 24.°88N×122.°83E, h11km±1km, ML2.9, D*
ISC 03 15:45:31.0±1.3, 24.°97N±0.°04×122.°89E±0.°03, h12km±9km, n56, σ0s77/93, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.51**	**168**	P	**Pg**	**15 45 41.8**	**+0.7**
YOJ				S	**Sb**	**15 45 49.1**	**-0.2**
baz=159							
YOJ	**Yonaguni jima**	**0.51**	**168**	P	**Pg**	**15 45 41.7**	**+0.6**
YOJ				*e*S	**Sb**	**15 45 49.4**	**+0.1**
JYNG	**Yonagunijimaku**	**0.52**	**174**	P	**Pg**	**15 45 41.7**	**+0.6**
JYNG				S	**Sb**	**15 45 49.1**	**-0.2**
EOS1	**EOS1**	**0.81**	**239**	P	**Pb**	**15 45 47.1**	**+0.2**
baz=242							
EOS1				S	**Sb**	**15 45 57.0**	**-0.7**
baz=242							
TWB1	**Santiao Chiao**	**0.82**	**273**	*e*P	**Pg**	**15 45 47.1**	**+0.3**
baz=279							
TIPB	**Shuangxi**	**0.96**	**271**	*e*P	**Pb**	**15 45 49.4**	**-0.3**
baz=275							
NTC	**Toucheng**	**0.97**	**264**	*e*P	**Pn**	**15 45 51.1**	**+0.7**
baz=268							
IRIF	**Iriomote-Funau**	**0.99**	**129**	P	**Pb**	**15 45 49.7**	**-0.4**
PCYT	**Pengchaiyu**	**0.99**	**312**	*e*P	**Pn**	**15 45 51.1**	**+0.4**
baz=317							
PCYT				S	**Sn**	**15 46 06.0**	**+1.3**
baz=317							
TWC	**Suao**	**1.01**	**250**	*e*P	**Pg**	**15 45 50.6**	**+0.2**
baz=252							
TWC				*e*S	**Sb**	**15 46 02.0**	**-1.6**
baz=252							
NWF	**Wu-fen Shan**	**1.01**	**276**	*e*P	**Pb**	**15 45 50.7**	**+0.2**
baz=281							
NWF				*e*S	**Sn**	**15 46 04.5**	**-0.7**
baz=281							
TWE	**Neicheng**	**1.14**	**258**	*e*P	**Pb**	**15 45 52.4**	**-0.2**
baz=261							
TWE				S	**Sg**	**15 46 07.4**	**-0.3**
baz=261							
YM07	**YM07**	**1.17**	**281**	*e*P	**Pb**	**15 45 53.3**	**+0.1**
baz=284							
YM07				*e*S	**Sn**	**15 46 09.2**	**+0.1**
baz=284							
ENA	**Nanau**	**1.17**	**243**	*e*P	**Pb**	**15 45 52.2**	**-1.0**
baz=245							
ENA				*e*S	**Sb**	**15 46 06.2**	**-2.1**
baz=245							
TWA	**Mucha**	**1.19**	**271**	*e*P	**Pg**	**15 45 54.2**	**+0.4**
baz=274							
TWA				*e*S	**Sn**	**15 46 09.4**	**-0.1**
baz=274							
YM11	**YM11**	**1.21**	**280**	*e*P	**Pn**	**15 45 53.3**	**-0.5**
baz=283							
YM01	**YM01**	**1.21**	**279**	*e*P	**Pb**	**15 45 54.2**	**+0.3**
baz=282							
HATJ	**Hateruma jima**	**1.23**	**137**	P	**Pn**	**15 45 53.9**	**-0.1**
ENTT	**Nioudou**	**1.25**	**255**	*e*P	**Pg**	**15 45 55.0**	**+0.1**
baz=257							
ENTT				S	**Sb**	**15 46 10.3**	**-0.2**
baz=257							
JKRS	**Kuro-shima**	**1.25**	**125**	P	**Pn**	**15 45 53.9**	**-0.4**
JKRS				*e*S	**Sb**	**15 46 09.7**	**-0.9**
NWLT	**Wulai**	**1.27**	**262**	*e*P	**Pn**	**15 45 54.4**	**-0.2**
baz=265							
JIJ	**Ishigaki jima**	**1.29**	**117**	P	**Pn**	**15 45 54.5**	**-0.3**
NDT	**Datong Townshi**	**1.30**	**254**	*e*P	**Pg**	**15 45 56.1**	**0.0**
baz=256							
NDT				S	**Sg**	**15 46 12.6**	**-0.4**
baz=256							
JISG	**Ishigakijimahi**	**1.35**	**106**	P	**Pn**	**15 45 55.8**	**+0.2**
YHNB	**Yeheng**	**1.41**	**258**	*e*P	**Pb**	**15 45 57.0**	**-0.3**
baz=260							
YHNB				*e*S	**Sg**	**15 46 15.7**	**-0.6**
baz=260							
NACB	**Ninganchiao**	**1.42**	**236**	*e*P	**Pn**	**15 45 56.8**	**+0.2**
baz=237							
NACB				*e*S	**Sn**	**15 46 14.1**	**-1.1**
baz=237							
NSK	**Sanguang**	**1.42**	**259**	*e*P	**Pb**	**15 45 57.9**	**+0.5**
baz=261							
NSK				S	**Sg**	**15 46 16.1**	**-0.7**
baz=261							
NNSB	**Datong**	**1.47**	**249**	*e*P	**Pn**	**15 45 57.4**	**0.0**
baz=251							
NNSB				*e*S	**Sb**	**15 46 16.6**	**-0.4**
baz=251							
TWD	**Chiawan**	**1.47**	**233**	*e*P	**Pn**	**15 45 57.7**	**+0.4**
baz=234							
TWD				S	**Sn**	**15 46 16.0**	**-0.5**
baz=234							
NNS	**Nan Shan**	**1.48**	**250**	P	**Pb**	**15 45 58.5**	**0.0**
baz=251							
NNS				S	**Sb**	**15 46 16.9**	**-0.2**
baz=251							
ETLH	**Xiulin Townshi**	**1.49**	**240**	*e*P	**Pb**	**15 45 58.2**	**-0.4**
baz=241							
ETLH				*e*S	**Sn**	**15 46 16.3**	**-0.7**
baz=241							
WHF	**Hehuan Shan**	**1.69**	**241**	P	**Pb**	**15 46 01.5**	**-0.8**
baz=242							
WHF				S	**Sn**	**15 46 22.2**	**-0.2**
baz=242							
TWT	**Tachien**	**1.71**	**246**	*e*P	**Pb**	**15 46 02.3**	**-0.2**
baz=247							
TWT				S	**Sb**	**15 46 23.7**	**-0.3**
baz=247							
TDCB	**Techi**	**1.73**	**246**	*e*S	**Sb**	**15 46 23.9**	**-0.6**
baz=247							
LIOB	**Emei**	**1.73**	**260**	*e*P	**Pb**	**15 46 02.5**	**-0.3**
baz=261							
LIOB				*e*S	**Sn**	**15 46 23.3**	**+0.3**
baz=261							
NSTT	**Nanjuang**	**1.75**	**259**	*e*P	**Pb**	**15 46 02.5**	**-0.5**
baz=261							
NSTT				*e*S	**Sn**	**15 46 23.4**	**+0.1**
baz=261							
ESL	**Shilin**	**1.75**	**229**	P	**Pn**	**15 46 00.9**	**-0.3**
baz=229							
ESL				S	**Sn**	**15 46 23.0**	**-0.4**
baz=229							
CHGB	**Renai**	**1.80**	**240**	*e*P	**Pn**	**15 46 03.0**	**+0.9**
baz=241							
CHGB				*e*S	**Sn**	**15 46 25.4**	**+0.4**
baz=241							
OWD	**Renai**	**1.86**	**238**	*e*P	**Pn**	**15 46 03.3**	**+0.6**
baz=238							
OWD				*e*S	**Sn**	**15 46 26.7**	**+0.5**
baz=238							
HGSD	**Ruisui**	**1.98**	**223**	*e*P	**Pn**	**15 46 03.7**	**-0.7**
baz=222							
HGSD				*e*S	**Sn**	**15 46 29.6**	**+0.4**
baz=222							
VWDT	**VWDT**	**2.00**	**233**	*e*P	**Pn**	**15 46 05.0**	**+0.4**
baz=233							
VWDT				*e*S	**Sn**	**15 46 29.7**	**+0.2**
baz=233							
TWQ1	**Liyutan**	**2.02**	**253**	*e*P	**Pn**	**15 46 06.3**	**+1.4**
baz=254							
TWQ1				*e*S	**Sn**	**15 46 30.2**	**+0.1**
baz=254							
EHY	**Hungye**	**2.04**	**225**	*e*P	**Pn**	**15 46 05.8**	**+0.6**
baz=224							
EHY				S	**Sn**	**15 46 30.0**	**-0.5**
baz=224							
SSLB	**Suanglung**	**2.12**	**237**	*e*P	**Pn**	**15 46 06.4**	**+0.1**
baz=237							
YULB	**Yu-li**	**2.14**	**223**	*e*P	**Pn**	**15 46 06.6**	**+0.1**
baz=223							
YULB				*e*S	**Sn**	**15 46 32.8**	**-0.1**
baz=223							
WHYT	**Xinyi Township**	**2.25**	**236**	*e*P	**Pn**	**15 46 09.2**	**+1.2**
baz=236							

YUS	**Yu-Shan**	**2.30 231**	P	**Pn**	**15 46 09.4**	**+0.3**
	baz=230					
CHN5	**Tsauling**	**2.44 236**	*e*P	**Pn**	**15 46 12.1**	**+1.5**
	baz=236					
ELDTW	**Lidau**	**2.46 224**	*e*P	**Pn**	**15 46 10.9**	**-0.1**
	baz=224					
CHN4	**Tsaushan**	**2.64 233**	*e*P	**Pn**	**15 46 15.1**	**+1.7**
	baz=233					
CHN4			*e*S	**Sn**	**15 46 46.1**	**+0.7**
	baz=233					
TPUB	**Ta-pu**	**2.65 232**	*e*P	**Pn**	**15 46 15.1**	**+1.6**
	baz=231					
TPUB			*e*S	**Sn**	**15 46 46.6**	**+1.1**
	baz=231					
STYT	**Tauyuan**	**2.65 228**	*e*P	**Pn**	**15 46 14.9**	**+1.3**
	baz=227					
WTP	**Ta-pu**	**2.69 231**	P	**Pn**	**15 46 15.7**	**+1.6**
	baz=231					
TWK	**Hsinying**	**2.77 233**	*e*P	**Pn**	**15 46 16.9**	**+1.7**
	baz=232					
TWK			*e*S	**Sn**	**15 46 49.5**	**+0.8**
	baz=232					
SLGT	**Liugui**	**2.84 227**	*e*P	**Pn**	**15 46 18.0**	**+1.8**
	baz=226					
SLGT			*e*S	**Sn**	**15 46 51.3**	**+1.0**
	baz=226					
MASBT	**Mashibuluo**	**3.12 222**	*e*P	**Pn**	**15 46 22.1**	**+2.0**
	baz=221					

*JMA **03** 16:03:46.4±0.2,25°.00N×122°.88E,h17km±3km,M2.1*
*TAP **03** 16:03:46.6,24°.92N×122°.83E,h3km,ML2.9,D*
*ISCJB **03** 16:03:47.4±0.5,24°.95N±0°.03×122°.94E±0°.02,h21km±3km,*
Error ellipse: s-maj=4.9km s-min=3.4km az=25.3

ISC 03 16:03:45.9±1.3,24°.97N±0°.04×122.89E±0°.03,h7km±10km, n59,σ0°83/98,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.52 168**		*e*P	**Pb**	**16 03 57.1**	**-0.2**
	baz=160						
YOJ				*e*S	**Sb**	**16 04 05.1**	**0.0**
	baz=160						
YOJ	**Yonaguni jima**	**0.52 168**		P	**Pb**	**16 03 57.1**	**-0.2**
YOJ				*e*S	**Sb**	**16 04 04.5**	**-0.6**
JYNG	**Yonagunijimaku**	**0.52 175**		P	**Pg**	**16 03 57.0**	**+1.0**
JYNG				*e*S	**Sb**	**16 04 04.6**	**-0.5**
EOS1	**EOS1**	**0.81 239**		*e*P	**Pb**	**16 04 02.7**	**+0.4**
	baz=240						
EOS1				*e*S	**Sb**	**16 04 12.5**	**-1.0**
	baz=240						
TWB1	**Santiao Chiao**	**0.82 273**		*e*P	**Pb**	**16 04 02.7**	**+0.2**
	baz=276						
TIPB	**Shuangxi**	**0.97 270**		P	**Pb**	**16 04 04.8**	**-0.3**
	baz=273						
NTC	**Toucheng**	**0.97 263**		*e*P	**Pn**	**16 04 05.8**	**-0.2**
	baz=266						
PCYT	**Pengchaiyu**	**0.99 311**		P	**Pn**	**16 04 06.8**	**+0.5**
	baz=316						
PCYT				S	**Sn**	**16 04 21.0**	**+0.5**
	baz=316						
IRIF	**Iriomote-Funau**	**0.99 130**		P	**Pg**	**16 04 05.3**	**+0.3**
NWF	**Wu-fen Shan**	**1.01 276**		*e*P	**Pn**	**16 04 06.2**	**-0.4**
	baz=279						
WFSB	**Wu-fen Shan**	**1.01 276**		*e*P	**Pn**	**16 04 06.1**	**-0.5**
	baz=279						
TWC	**Suao**	**1.01 249**		P	**Pn**	**16 04 06.1**	**-0.5**
	baz=250						
TWC				S	**Sn**	**16 04 19.6**	**-1.4**
	baz=250						
TWE	**Neicheng**	**1.14 258**		P	**Pb**	**16 04 07.5**	**-0.4**
	baz=259						
TWE				S	**Sn**	**16 04 23.6**	**-0.7**
	baz=259						
YM07	**YM07**	**1.17 280**		*e*P	**Pn**	**16 04 08.7**	**-0.1**
	baz=283						
YM07				*e*S	**Sn**	**16 04 25.5**	**+0.5**
	baz=283						
YM08	**YM08**	**1.20 281**		*e*P	**Pg**	**16 04 09.3**	**+0.4**
	baz=283						
TWY	**Chenhua**	**1.21 285**		*e*P	**Pg**	**16 04 09.5**	**+0.4**
	baz=287						
TWY				*e*S	**Sn**	**16 04 27.2**	**+1.3**
	baz=287						
YM11	**YM11**	**1.21 279**		*e*S	**Sn**	**16 04 26.1**	**0.0**
	baz=282						
YM01	**YM01**	**1.21 278**		*e*P	**Pb**	**16 04 09.0**	**-0.2**
	baz=281						
YM01				*e*S	**Sn**	**16 04 26.9**	**+0.9**
	baz=281						
HATJ	**Hateruma jima**	**1.23 137**		P	**Pn**	**16 04 09.4**	**-0.2**
NHDH	**Xindian Distri**	**1.24 250**		*e*S	**Sn**	**16 04 27.9**	**+1.2**
	baz=272						
ENTT	**Nioudou**	**1.25 255**		P	**Pg**	**16 04 09.9**	**0.0**
	baz=256						
ENTT				S	**Sn**	**16 04 27.1**	**+0.2**
	baz=256						
JKRS	**Kuro-shima**	**1.25 126**		P	**Pn**	**16 04 09.4**	**-0.4**
NWLT	**Wulai**	**1.28 262**		*e*P	**Pb**	**16 04 10.0**	**-0.3**
	baz=263						
NWLT				*e*S	**Sn**	**16 04 29.1**	**+1.5**
	baz=263						
JIJ	**Ishigaki jima**	**1.29 118**		P	**Pn**	**16 04 09.5**	**-0.8**
NDT	**Datong Townshi**	**1.31 254**		*e*P	**Pb**	**16 04 10.7**	**-0.1**
	baz=255						
NDT				*e*S	**Sg**	**16 04 28.5**	**+0.6**
	baz=255						
JISG	**Ishigakijimahi**	**1.34 106**		P	**Pn**	**16 04 10.9**	**-0.2**
YHNB	**Yeheng**	**1.41 258**		*e*P	**Pn**	**16 04 11.7**	**-0.4**
	baz=259						
YHNB				*e*S	**Sg**	**16 04 30.8**	**-0.5**
	baz=259						
NACB	**Ninganchiao**	**1.43 236**		*e*P	**Pb**	**16 04 12.5**	**-0.3**
	baz=236						
NSK	**Sanguang**	**1.43 258**		*e*P	**Pg**	**16 04 13.1**	**-0.2**
	baz=259						
NSK				S	**Sg**	**16 04 32.0**	**+0.2**
	baz=259						
NNSB	**Datong**	**1.48 249**		*e*P	**Pg**	**16 04 14.3**	**+0.1**
	baz=249						
NNS	**Nan Shan**	**1.48 249**		P	**Pg**	**16 04 14.2**	**-0.2**
	baz=250						
NNS				S	**Sg**	**16 04 32.6**	**-0.9**
	baz=250						
ETLH	**Xiulin Townshi**	**1.49 240**		*e*P	**Pb**	**16 04 13.5**	**-0.6**
	baz=240						
ETLH				*e*S	**Sg**	**16 04 33.5**	**-0.5**
	baz=240						
WHF	**Hehuan Shan**	**1.70 241**		P	**Pn**	**16 04 16.7**	**+0.4**
	baz=241						
WHF				S	**Sb**	**16 04 38.5**	**-0.9**
	baz=241						
LIOB	**Emei**	**1.74 260**		*e*P	**Pb**	**16 04 18.4**	**+0.2**
	baz=260						
LIOB				*e*S	**Sb**	**16 04 39.3**	**-0.9**
	baz=260						
NSTT	**Nanjuang**	**1.75 259**		*e*P	**Pb**	**16 04 17.9**	**-0.5**
	baz=260						
NSTT				*e*S	**Sb**	**16 04 40.4**	**-0.3**
	baz=260						
CHGB	**Renai**	**1.81 240**		*e*P	**Pb**	**16 04 18.6**	**-0.9**
	baz=240						
CHGB				*e*S	**Sb**	**16 04 41.5**	**-0.9**
	baz=240						
EGFH	**Guangfu**	**1.86 226**		*e*P	**Pn**	**16 04 18.4**	**+0.1**
	baz=225						
EGFH				*e*S	**Sn**	**16 04 41.7**	**-0.3**
	baz=225						
OWD	**Renai**	**1.86 237**		*e*P	**Pn**	**16 04 18.4**	**0.0**
	baz=237						
OWD				*e*S	**Sb**	**16 04 42.4**	**-1.6**
	baz=237						
HGSD	**Ruisui**	**1.99 223**		*e*P	**Pn**	**16 04 19.2**	**-0.8**
	baz=222						
HGSD				*e*S	**Sn**	**16 04 45.2**	**0.0**
	baz=222						
VWDT	**VWDT**	**2.01 233**		*e*P	**Pn**	**16 04 20.5**	**+0.3**
	baz=233						
VWDT				*e*S	**Sn**	**16 04 45.8**	**+0.2**
	baz=233						
DPDB	**Guoxing**	**2.02 243**		*e*P	**Pn**	**16 04 20.2**	**-0.3**
	baz=243						
EHY	**Hungye**	**2.05 225**		*e*P	**Pn**	**16 04 20.2**	**-0.6**
	baz=224						
EHY				*e*S	**Sn**	**16 04 46.6**	**0.0**
	baz=224						
YULB	**Yu-li**	**2.14 223**		*e*P	**Pn**	**16 04 21.4**	**-0.7**
	baz=222						
YULB				*e*S	**Sn**	**16 04 48.2**	**-0.8**
	baz=222						
WHYT	**Xinyi Township**	**2.25 236**		*e*P	**Pn**	**16 04 24.9**	**+1.2**
	baz=236						
WHYT				*e*S	**Sn**	**16 04 51.5**	**-0.2**
	baz=236						
YUS	**Yu-Shan**	**2.31 231**		*e*P	**Pn**	**16 04 25.1**	**+0.3**
	baz=230						
ALS	**Alishan**	**2.40 233**		P	**Pn**	**16 04 26.7**	**+0.8**
	baz=232						
ALS				S	**Sn**	**16 04 56.4**	**+0.7**
	baz=232						
CHN5	**Tsauling**	**2.44 236**		P	**Pn**	**16 04 27.9**	**+1.6**
	baz=236						
CHN5				*e*S	**Sn**	**16 04 56.8**	**+0.3**
	baz=236						
ELDTW	**Lidau**	**2.47 224**		*e*P	**Pn**	**16 04 26.3**	**-0.4**
	baz=223						
ELDTW				*e*S	**Sn**	**16 04 57.4**	**+0.2**
	baz=223						
CHN4	**Tsaushan**	**2.65 233**		P	**Pn**	**16 04 31.0**	**+1.9**
	baz=232						
CHN4				*e*S	**Sn**	**16 05 02.3**	**+0.8**
	baz=232						
TPUB	**Ta-pu**	**2.65 232**		*e*P	**Pn**	**16 04 30.2**	**+1.0**
	baz=231						
STYT	**Tauyuan**	**2.66 228**		*e*S	**Sn**	**16 05 01.7**	**-0.1**
	baz=227						
WTP	**Ta-pu**	**2.70 231**		P	**Pn**	**16 04 31.4**	**+1.6**
	baz=230						
WTP				*e*S	**Sn**	**16 05 02.9**	**+0.1**
	baz=230						
TWK	**Hsinying**	**2.78 233**		*e*P	**Pn**	**16 04 31.8**	**+0.9**
	baz=232						
TWK				*e*S	**Sn**	**16 05 05.7**	**+1.0**
	baz=232						
CHN1	**Nanshi**	**2.80 231**		*e*P	**Pn**	**16 04 32.8**	**+1.6**
	baz=230						
CHN1				*e*S	**Sn**	**16 05 06.1**	**+0.9**
	baz=230						
SLGT	**Liugui**	**2.85 227**		*e*P	**Pn**	**16 04 32.8**	**+1.0**
	baz=226						
SLGT				*e*S	**Sn**	**16 05 07.6**	**+1.2**
	baz=226						
SSD	**Sandimen**	**3.03 223**		*e*P	**Pn**	**16 04 36.4**	**+2.0**
	baz=222						
MASBT	**Mashibuluo**	**3.13 222**		*e*P	**Pn**	**16 04 37.5**	**+1.8**
	baz=221						
MASBT				*e*S	**Sn**	**16 05 14.3**	**+0.9**
	baz=221						
EAST	**Anshuo**	**3.19 216**		*e*P	**Pn**	**16 04 38.5**	**+2.0**
	baz=215						
EAST				*e*S	**Sn**	**16 05 15.7**	**+0.9**
	baz=215						
SCZT	**Fangliau**	**3.32 219**		*e*P	**Pn**	**16 04 40.3**	**+2.0**
	baz=218						
SCZT				*e*S	**Sn**	**16 05 18.3**	**+0.2**
	baz=218						

IDC 03 16:09:38.2±351.0,54°.56N×111°.47W,h0km,Error ellipse: s-maj=165.6km s-min=133.6km az=39.0,Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I56US	**NEWPORT INFRAS**	**7.23 212**		*i*		17 00 40.0	
	baz=27,slow=327,SNR=3.1						
I10CA	**LAC DU BONNET**	**10.40 109**		*i*		17 13 30.0	
	baz=296,slow=330,SNR=0.8						
I53US	**FAIRBANKS INFR**	**20.73 314**		*i*		18 15 10.0	
	baz=102,slow=328,SNR=1.2						

IDC 03 16:20:08.4±7.3,22°.30N×143°.71E,h264km±76km,mb3.0/4, mb1 3.0/5,mb1mx2.7/41,mbtmp3.6/5,Error ellipse: s-maj=85.7km s-min=17.0km az=81.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**14.97 343**		P	P	16 23 25.1	-2.0
	0.1nm,0.3s,baz=164,slow=8.8,SNR=5.3						
KSRS	**Korea Array**	**20.34 321**		P	P	16 24 25.4	+0.4
	0.6nm,0.5s,baz=145,slow=8.8,SNR=6.6						
KLR	**Kul'dur**	**28.50 343**		P	P	16 25 39.6	+0.2
	0.7nm,0.3s,baz=155,slow=18,SNR=2.9						
WRA	**Warramunga Arr**	**42.97 193**		P	P	16 27 42.2	+0.2
	76nm,0.3s,baz=2.4,slow=5.9,SNR=4.7						
ASAR	**Alice Springs**	**46.68 192**		P	P	16 28 10.6	-0.5
	0.2nm,0.8s,baz=11,slow=7.0,SNR=6.3						
KURBB	**Kurchatov Arra**	**57.42 317**		P	P	16 29 29.6	0.0
	0.5nm,0.4s,baz=92,slow=7.3,SNR=7.4						

*ISCJB **03** 16:25:07.4±0.5,33°.11N±0°.03×104°.16E±0°.05,h9km, mb3.8/6,MS3.1/4,Error ellipse: s-maj=6.4km s-min=4.7km az=5.4*
*IDC **03** 16:25:08.7±1.9,33°.16N×104°.20E,h0km,mb3.9/6, mb1 3.9/9,mb1mx3.5/53,mbtmp3.8/9,ML3.7/3,MS2.9/7, Ms1 2.9/7,ms1mx2.7/47,Error ellipse: s-maj=39.9km s-min=29.3km az=18.0*
*BJI **03** 16:25:09.7±0.0,33°.03N×104°.00E,h26km,mb4.1/1, ML4.0/19,Ms3.7/13,Ms7 3.5/12*

ISC 03 16:25:08.5±0.6,33°.08N±0°.03×104°.12E±0°.05,h9km,n18, σ1°96/25,mb3.9/6,MS2.9/4,2C,Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.18 188**		⇑*i*Pn	**Pb**	**16 25 47.1**	**-1.1**
CD2				Pg	**Pg**	**16 25 50.0**	**-0.4**
CD2				Sn	**Sb**	**16 26 16.6**	**+1.2**
CD2				Sg	**Sg**	**16 26 19.2**	**+0.6**
CD2				smax	smax		
	comp=N,1μm,0.8s						
CD2				smax	smax		
	comp=E,1μm,1.0s						
LZH	**Lanzhou**	**3.01 356**		Pg	**Pg**	**16 26 05.3**	**-1.0**
LZH				Sn	**Sb**	**16 26 37.6**	**-1.8**
LZH				Sg	**Sg**	**16 26 45.0**	**-0.3**
LZH				smax	smax		
	comp=N,830nm,0.8s						
LZH				smax	smax		
	comp=E,1μm,0.8s						
LZH				LR	LR		
	comp=E,680nm,4.3s						
LZH				LR	LR		
	comp=Z,590nm,6.0s						
XAN	**Xi'an**	**4.12 75**		Pn	**Pn**	**16 26 14.1**	**+2.4**
XAN				Pg	**Pg**	**16 26 25.8**	**-1.7**
XAN				Sn	**Sn**	**16 27 03.0**	**+2.9**
XAN				Sg	**Sg**	**16 27 21.3**	**+0.4**
XAN				smax	smax		
	comp=N,300nm,1.0s						
XAN				smax	smax		
	comp=E,350nm,0.8s						
XAN				LR	LR		
	comp=N,430nm,5.2s						
XAN				LR	LR		
	comp=E,380nm,4.2s						
XAN				LR	LR		
	comp=Z,530nm,6.1s						
GTA	**Gaotai**	**7.21 332**		Pn	**Pn**	**16 26 55.4**	**+1.1**
GTA				smax	smax		
	comp=N,11nm,0.9s						
GTA				smax	smax		
	comp=E,11nm,1.0s						
GTA				LR	LR		
	comp=N,270nm,12.4s						
GTA				LR	LR		
	comp=E,340nm,13.1s						
GTA				LR	LR		
	comp=Z,180nm,11.0s						
BTO	**Baotou**	**8.88 30**		*e*P	**Pg**	**16 27 53.8**	**-4.6**
BTO				S	Sg	16 29 39.0	-14
BTO				LR	LR		
	comp=N,68μm,0.9s						
BTO				LR	LR		
	comp=E,55μm,0.9s						
BTO				LR	LR		
	comp=Z,70μm,1.0s						
WHN	**Wuhan**	**9.06 103**		⇑P	**Pn**	**16 27 21.6**	**+2.1**
WHN				S	**Sn**	**16 28 58.2**	**-3.5**
WHN				LR	LR		
	comp=Z,360nm,6.8s						
WHN				LR	LR		
	comp=Z,380nm,4.7s						
WHN				LR	LR		
	comp=Z,410nm,7.3s						
SONM	**Songino Array**	**14.84 6**		Pn	**Pn**	**16 28 39.1**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=198,slow=7.8,SNR=4.8						
SONM				LR	LR	16 34 26.2	
	comp=Z,42nm,21.6s,baz=214,slow=38						
BRDH	**Bariadhala**	**15.12 230**		LR	LR	16 35 34.1	
	comp=Z,74nm,18.9s,baz=172,slow=41						
CMAR	**Chiang Mai Arr**	**15.28 199**		Pn	**P**	**16 28 47.6**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=18,slow=12,SNR=3.7						
CMAR				LR	LR	16 34 39.9	
	comp=Z,31nm,18.5s,baz=185,slow=37						
WMQ	**Urumqi**	**16.72 315**		*e*P	**Pn**	**16 29 00.3**	**-2.7**
WMQ				LR	LR		
	comp=Z,360nm,11.3s						
WMQ				LR	LR		
	comp=Z,290nm,13.5s						
WMQ				LR	LR		
	comp=Z,220nm,18.9s						
KSRS	**Korea Array**	**19.90 71**		P	**P**	**16 29 40.0**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=255,slow=9.6,SNR=6.8						
KSRS				LR	LR	16 38 13.0	
	comp=Z,24nm,21.0s,baz=168,slow=40						
MKAR	**Makanchi Array**	**21.54 316**		P	**P**	**16 29 59.4**	**+1.3**
	comp=Z,3.1nm,0.9s,baz=116,slow=11,SNR=10						
MKAR				LR	LR	16 38 10.9	
	comp=Z,48nm,18.2s,baz=108,slow=36						
ZALV	**Zalesovo Beam**	**24.97 332**		P	**P**	**16 30 32.6**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=128,slow=9.6,SNR=6.7						
ZALV				LR	LR	16 41 11.8	
	comp=Z,28nm,18.6s,baz=66,slow=39						
KURBB	**Kurchatov Arra**	**25.70 321**		P	**P**	**16 30 40.2**	**+1.3**
	comp=Z,2.3nm,0.9s,baz=125,slow=11,SNR=12						
MJAR	**Matsushiro Arr**	**28.12 73**		LR	LR	16 42 24.5	
	comp=Z,19nm,18.7s,baz=280,slow=37						
NRIK	**Noril'sk**	**37.49 350**		P	**P**	**16 32 23.9**	**+1.7**
	comp=Z,1.7nm,0.4s,baz=118,slow=7.1,SNR=4.1						
FINES	**FINESS Array B**	**55.95 325**		P	**P**	**16 34 47.6**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=72,slow=8.9,SNR=2.8						
FINES				LR	LR	16 58 33.4	
	comp=Z,158nm,18.1s,baz=358,slow=36						
YKA	**Yellowknife Ar**	**79.81 17**		P	**P**	**16 37 18.1**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=329,slow=5.1,SNR=6.9						

*IDC **03** 16:29:38.1±2.3,6°.54S×148°.47E,h0km,mb3.9/4, mb1 4.0/6,mb1mx3.5/35,mbtmp3.8/6,ML1.7/1,MS3.2/1, Ms1 3.2/1,ms1mx2.5/27,Error ellipse: s-maj=65.7km s-min=23.4km az=101.0*
*NEIC **03** 16:29:40.3±0.5,6°.49S×148°.22E,h10km,mb4.1/2,Error ellipse: s-maj=18.6km s-min=8.1km az=126.0*
*ISCJB **03** 16:29:42.1±0.8,6°.6S±0°.1×148°.4E±0°.2,h46km,mb3.7/5, MS3.0/1,Error ellipse: s-maj=25.9km s-min=10.6km az=37.6*

ISC 03 16:29:44.2±0.9,6°.5S±0°.1×148°.4E±0°.2,h46km,n15, σ1°19/16,mb3.9/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.10 202**		Pn	**Pn**	**16 30 29.1**	**-1.5**
	7.6nm,0.3s,baz=356,slow=4.8,SNR=30						
PMG				Sn	**Sn**	**16 31 08.5**	**+2.0**
	19nm,0.3s,baz=205,slow=23,SNR=16						
RABL	**Rabaul**	**4.44 59**		*e*Pn	**Pn**	**16 30 48.3**	**-0.8**
COEN	**Coen**	**8.98 214**		*e*Pn	**Pn**	**16 31 50.2**	**-1.2**
WB2	**Warramunga Arr**	**19.05 224**		*e*P	**P**	**16 34 01.8**	**-1.0**
	38nm,1.8s						
WR1	**Warramunga Arr**	**19.06 224**		*e*P	**P**	**16 34 01.7**	**-1.2**
WRA	**Warramunga Arr**	**19.06 224**		P	**P**	**16 34 01.7**	**-1.3**
	baz=54,slow=11,SNR=1.5						
AS31	**Alice Springs**	**21.99 218**		*e*P	**P**	**16 34 33.5**	**-1.1**
	1.8nm,0.4s						
ASAR	**Alice Springs**	**21.99 218**		P	**P**	**16 34 33.8**	**-0.8**
	3.1nm,0.5s,baz=56,slow=9.3,SNR=117						
ASAR				LR	LR	16 42 35.3	
	comp=Z,59nm,18.6s,baz=288,slow=35						
FITZ	**Fitzroy Crossi**	**24.96 241**		P	**P**	**16 35 04.2**	**+0.6**
	4.8nm,0.7s,baz=57,slow=6.4,SNR=12						
FITZ	**Fitzroy Crossi**	**24.96 241**		*e*P	**P**	**16 35 03.0**	**-0.6**
STKA	**Stephens Creek**	**26.00 193**		P	**P**	**16 35 14.5**	**+1.6**
	1.5nm,0.7s,baz=4.0,slow=12,SNR=3.7						
MK32	**Makanchi Array**	**78.76 320**		*e*P	**P**	**16 41 42.7**	**+0.6**
MKAR	**Makanchi Array**	**78.76 320**		P	**P**	**16 41 42.7**	**+0.6**
	0.1nm,0.4s,baz=108,slow=6.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**146.53 284**		PKPbc	**PKPab**	**16 49 22.9**	**+0.3**
	0.6nm,0.6s,baz=80,slow=3.0,SNR=3.9						
TOA1	**Torodi Ar. Sit**	**146.53 284**		*e*PKPdf	**PKPab**	**16 49 22.9**	**+0.2**

MEX 03 16:47:05.9±0.7,16°.17N×98°.30W,h2km,MD3.7,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.28 37**		*i* P	Pg	16 47 10.4	-0.8
PNIG				*e*S	Sg	16 47 15.2	+0.4
TLIG	**Tlapa**	**1.41 350**		*e*P	Pn	16 47 28.8	-3.8
TLIG				*e*S	Sg	16 47 47.1	-4.0
CAIG	**El Cayaco**	**2.08 295**		*i* P	Pn	16 47 35.8	-6.0
CAIG				*i* S	Sn	16 48 05.7	-2.5
HUIG	**Huatulco**	**2.15 100**		*e*P	Pn	16 47 41.4	-1.3

*NAO **03** 16:48:27.7±1.6,74°.73N×9°.37E,ML4.4*
*BJI **03** 16:48:27.8±0.0,75°.06N×8°.98E,h7km,mb4.5/29, mB4.8/18,Ms4.6/14,Ms7 4.3/13*
*MOS **03** 16:48:27.9±1.0,74°.82N×8°.59E,h10km,mb4.6/38,Error ellipse: s-maj=22.9km s-min=4.2km az=94.3*
*IDC **03** 16:48:27.7±0.5,74°.70N×8°.32E,h0km,mb3.9/24, mb1 4.0/31,mb1mx4.0/57,mbtmp3.9/31,ML3.3/5,MS3.7/35, Ms1 3.7/35,ms1mx3.6/43,Error ellipse: s-maj=11.8km s-min=9.1km az=66.0*
*ISCJB **03** 16:48:28.1±0.2,74°.81N±0°.02×8°.9E±0°.1,h10km,mb4.4/96, MS3.7/36,Error ellipse: s-maj=4.9km s-min=2.9km az=173.1*
*NEIC **03** 16:48:29.3±0.2,74°.74N×8°.30E,h10km,mb4.5/44,Error ellipse: s-maj=5.6km s-min=3.7km az=70.0*
*BER **03** 16:48:29.3±3.3,74°.75N×8°.84E,h10km,ML2.9, ML4.4(NAO),Confirmed Earthquake*
*GCMT **03** 16:48:30.3±0.4,74°.95N±0°.05×8°.60E±0°.09,h14km±1km, MW4.8/68,Moment Tensor Solution. s6,c7; s68,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.41±.16; $M_{\theta\theta}$0.06±.08; $M_{\phi\phi}$1.35±.11; $M_{r\theta}$0.88±.26; $M_{\phi\phi}$-0.10±.06; $M_{\phi r}$-0.86±.22; Best double couple: $M_0$1.83000×10^{16} NP1:ϕ_s332.00000°,δ66.00000°,λ-109.00000°. NP2: ϕ_s192.00000°,δ30.00000°,λ-54.00000°. Principal axes: T 1.6750, Plg19.0000°, Azm76.0000°; N 0.3090, Plg17.0000°, Azm340.0000°; P -1.9860, Plg64.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IEPN **03** 16:48:34.0,74°.48N×9°.53E,h15km*

ISC 03 16:48:29.1±0.3,74°.83N±0°.04×8°.54E±0°.04,h10km,n291, σ2°12/299,mb4.4/104,MS3.7/36,15C-9D,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**2.77 35**		*e*P	**Pn**	**16 49 12.4**	**-1.1**
HSPB				*e*S	**Sn**	**16 49 41.3**	**-5.5**
HSPB				IAML		16 49 43.0	
	comp=Z,59nm,0.3s						
HSP	**Hornsund**	**2.78 35**		Pn	**Pn**	**16 49 12.6**	**-0.9**
HSP				Sn	**Sn**	**16 49 41.3**	**-5.7**
BJO1	**Bjornoya**	**2.80 92**		Pn	**Pn**	**16 49 11.2**	**-2.6**
BJO1				Sn	**Sn**	**16 49 40.8**	**-6.7**
BJO	**Bjornoya**	**2.85 91**		*e*P	**Pn**	**16 49 11.3**	**-3.1**
BJO				*e*S	**Sn**	**16 49 40.5**	**-8.2**
BJO				IAML		16 49 46.4	
	comp=Z,144nm,0.4s						
BRBA	**Barentsburg A**	**3.51 20**		Pn	**Pn**	**16 49 23.2**	**-0.3**
BRBA				Sn	**Sn**	**16 50 03.7**	**-1.4**
BRBA	**Barentsburg A**	**3.51 20**		Pn	**Pn**	**16 49 23.2**	**-0.3**
BRBA				Sn	**Sn**	**16 50 03.7**	**-1.4**
SPA0	**Spitsbergen Ar**	**3.83 25**		*e*Pn	**Pn**	**16 49 28.3**	**+0.3**
SPA0	**Spitsbergen Ar**	**3.83 25**		Pn	**Pn**	**16 49 28.2**	**+0.3**
	baz=194,slow=16						
SPA0				Sn	**Sn**	**16 50 09.

SPA0 Sn **Sn** **16 50 09.5 -3.5**
baz=202,slow=22
SPITS Spitsbergen Ar 3.83 25 Pn **Pn** **16 49 28.4 +0.3**
baz=208,slow=17,SNR=1123
SPITS Sn **Sn** **16 50 09.5 -3.5**
baz=202,slow=10,SNR=1.8
SPITS LR LR 16 50 57.0
comp=Z,827nm,20.0s,baz=205,slow=38
KBS Kingsbay 4.19 9 *e*Pn **Pn** **16 49 32.0 -0.9**
KBS Kingsbay 4.19 9 Pn **Pn** **16 49 32.0 -0.9**
KBS Sn **Sn** **16 50 18.1 -3.7**
KBS Kingsbay 4.19 9 *e*P **Pn** **16 49 32.0 -0.9**
KBS Kingsbay 4.19 9 *e*P **Pn** **16 49 31.9 -1.0**
KBS *e*S **Sn** **16 50 18.3 -3.6**
HOPEN Hopen 4.42 60 Pn **Pn** **16 49 34.8 -1.2**
HOPEN Hopen 4.42 60 *e*P **Pn** **16 49 34.7 -1.2**
HOPEN Pn **Pn** **16 49 34.8 -1.2**
HOPEN *e*S **Sn** **16 50 21.5 -5.9**
HOPEN IAML 16 50 23.6
comp=Z,92nm,0.2s
HAMF Hammerfest 6.15 126 *e*P **Pn** **16 49 55.8 -3.9**
HAMF *e*S Sn 16 50 58.8 -11
HAMF IAML 16 51 03.0
comp=Z,25nm,0.5s
JNE Jan Mayen East 6.26 240 *e*P **Pn** **16 49 59.0 -2.3**
JNW Jan Mayen West 6.26 241 *e*P **Pn** **16 49 58.7 -2.6**
JMIC Jan Mayen 6.31 241 Pn **Pn** **16 49 58.5 -3.5**
comp=Z,15nm,0.3s,baz=91,slow=3.0,SNR=11
JMIC LR LR 16 51 48.4
comp=Z,942nm,19.0s,baz=66,slow=32
JMIC Jan Mayen 6.31 241 Pn **Pn** **16 49 58.9 -3.1**
JMIC Jan Mayen 6.31 241 Pn **Pn** **16 49 58.9 -3.1**
JMIC *e*P **Pn** **16 49 59.6 -2.4**
JMI Jan Mayen 6.41 241 *e*P **Pn** **16 50 01.1 -2.1**
LOF Lofoten 6.92 164 *e*P **Pn** **16 50 08.0 -2.2**
DAG Danmarks Havn 6.92 299 *i* P **Pn** **16 50 06.9 -3.4**
DAG Danmarks Havn 6.92 299 *i* P **Pn** **16 50 06.9 -3.4**
DAG *i* S Sn 16 51 16.6 -12
KIF Kilpisjarvi 6.97 141 Pn **Pn** **16 50 08.5 -2.4**
KIF Kilpisjarvi 6.97 141 *e*P **Pn** **16 50 10.3 -0.7**
STEI Steigen 7.25 160 *e*P **Pn** **16 50 13.4 -1.4**
KTK1 Kautokeino 7.39 135 *e*P Pn 16 50 11.9 -4.9
ARA0 ARCESS Array S 7.41 127 Pn **Pn** **16 50 13.7 -3.3**
baz=325,slow=11
ARA0 Sn Sn 16 51 29.7 -11
baz=330,slow=28
ARA0 ARCESS Array S 7.41 127 Pn **Pn** **16 50 13.7 -3.3**
baz=325,slow=11
ARA0 Sn Sn 16 51 29.7 -11
baz=330,slow=28
ARCES ARCESS Array B 7.41 127 Pn **Pn** **16 50 13.7 -3.3**
comp=Z,1.9nm,0.3s,baz=329,slow=11,SNR=39
ARCES Sn Sn 16 51 30.0 -11
comp=Z,4.3nm,0.3s,baz=333,slow=19,SNR=7.8
ARCES LR LR 16 53 17.7
comp=Z,509nm,21.0s,baz=315,slow=39
ARE0 ARCESS Array S 7.41 127 *e*Pn **Pn** **16 50 16.1 -1.0**
ARE0 ARCESS Array S 7.41 127 *e*P **Pn** **16 50 14.1 -2.9**
KEV Kevo 7.55 123 *e*P **Pn** **16 50 17.2 -1.8**
KEV Kevo 7.55 123 *e*P **Pn** **16 50 15.9 -3.1**
KEV Pn **Pn** **16 50 17.3 -1.8**
HEF Hetta 7.99 136 *e*P **Pn** **16 50 22.7 -2.4**
KONS Konsvik 8.51 168 *e*P **Pn** **16 50 31.0 -1.1**
MOR8 Moi Rana 8.91 164 *e*P **Pn** **16 50 35.9 -1.8**
ZFI2 Zemlya Franca- 9.94 36⇓*i*P **Pn** **16 50 50.8 -0.8**
ZFI2 *e*S **Sn** **16 52 35.2 -7.7**
SCO Scoresbysund 9.98 260 *e*Pn **Pn** **16 50 48.2 -4.2**
SCO Scoresbysund 9.98 260 *i* P **Pn** **16 50 48.1 -4.2**
SCO Scoresbysund 9.98 260 *i* P **Pn** **16 50 48.1 -4.2**
SCO *i* S Sn 16 52 29.1 -15
APA0 Apatity Array 10.60 120 Pn **Pn** **16 50 57.4 -3.3**
APA0 Apatity Array 10.60 120 Pn **Pn** **16 50 57.4 -3.3**
APA Apatity 10.72 120⇓*i*P **Pn** **16 51 02.2 -0.2**
APA *i* S **Sn** **16 53 02.0 -0.3**
APA pmax pmax
comp=Z,7.0nm,1.0s
APA MLR MLR
comp=Z,300nm,15.0s
LVZ Lovozero 10.75 117 *e*Pn **Pn** **16 50 58.9 -3.9**
LVZ Lovozero 10.75 117 *e*P **Pn** **16 50 58.9 -3.9**
MSF Maaselka 11.20 132 P **Pn** **16 51 10.0 +1.0**
SUMG Summit 13.10 283 *e*Pn **Pn** **16 51 33.1 -2.0**
SUMG Summit 13.10 283 *e*P **Pn** **16 51 33.1 -2.0**
NB200 NORSAR Array S 13.89 175 *e*Pn **Pn** **16 51 44.4 -1.3**
NOA NORSAR Array B 13.89 175 Pn **Pn** **16 51 44.4 -1.3**
comp=Z,0.0nm,0.3s,baz=353,slow=13,SNR=3.1
NOA LR LR 16 56 34.2
comp=Z,135nm,19.8s,baz=355,slow=35
NC602 NORSAR Array S 14.20 174 *e*P **P** **16 51 54.6 -2.8**
BORG Borgarnes 14.21 240 LR LR 16 55 31.9
comp=Z,303nm,20.6s,baz=6.1,slow=30
TMCR Tamitsa 14.62 121 *e*P **Pn** **16 51 54.5 -1.1**
TMCR *e* 16 54 36.5
TMCR pmax pmax
comp=Z,38nm,1.2s
TMCR Tamitsa 14.62 121 *e*P **Pn** **16 51 54.2 -1.5**
comp=Z,75nm,1.9s
FIA0 FINESS Array S 14.83 146 *e*Pn **Pn** **16 51 55.3 -3.2**
FIA0 FINESS Array S 14.83 146 P **Pn** **16 51 55.3 -3.2**
baz=349,slow=16
FIA0 FINESS Array S 14.83 146 *e*P **Pn** **16 51 55.3 -3.2**
FIA0 FINESS Array S 14.83 146 P **Pn** **16 51 55.3 -3.2**
baz=349,slow=16
FINES FINESS Array B 14.83 146 Pn **Pn** **16 51 55.3 -3.2**
comp=Z,0.5nm,0.3s,baz=352,slow=12,SNR=16
HFS Hagfors 14.88 170 Pn **Pn** **16 51 58.3 -0.9**
comp=Z,0.1nm,0.3s,baz=13,slow=13,SNR=2.7
HFS LR LR 16 57 07.2
comp=Z,157nm,21.9s,baz=352,slow=35
KONO Kongsberg 15.26 178 *c*e*P* **Pn** **16 52 05.8 +1.7**
KONO pmax pmax
comp=Z,29nm,1.7s
LSH Leshukonskoye 15.86 109 *e*P **Pn** **16 52 07.4 -4.5**
comp=Z,26nm,0.7s
LSH *e*S Sn 16 54 47.9 -20
AMDE Amderma 16.39 81 *e*P **Pn** **16 52 15.1 -3.6**
comp=Z,9.7nm,0.7s
AMDE *e*S Sn 16 55 03.5 -17
VSU Vasula 17.79 148 *i* P **Pn** **16 52 36.4 +0.1**
VSU Vasula 17.79 148 *e*P **Pn** **16 52 36.4 +0.1**
VSU IAmb IAmb 16 52 44.5
comp=Z,118nm,0.9s
KLMR Klimovskoe 17.87 125 *e*P **Pn** **16 52 35.8 -1.5**
KLMR pmax pmax
comp=Z,63nm,1.4s
KLMR Klimovskoe 17.87 125 *e*P **Pn** **16 52 35.9 -1.5**
KLMR *e*S Sn 16 55 37.0 -19
PRGR Permogore 18.57 115 *e*P **P** **16 52 41.5 -4.2**
PRGR pmax pmax
comp=Z,49nm,0.7s
SFJD Kangerlussuaq 19.93 278 LR LR 16 59 45.8
comp=Z,345nm,19.5s,baz=38,slow=34
EKA Eskdalemuir Ar 20.11 200 P **P** **16 52 59.9 -2.6**
baz=6.7,slow=10,SNR=12
ISAL Salakas 20.52 151 *e*P **P** **16 53 06.6 -0.4**
ISAL IAmb IAmb 16 53 12.6
comp=Z,5.7nm,0.9s
IIGN Ignalina 20.74 151 *e*P **P** **16 53 09.1 -0.4**
IIGN IAmb IAmb 16 53 16.7
comp=Z,9.4nm,1.0s
KLNR Kaliningrad 20.82 161 *i* P **P** **16 53 10.4 +0.1**
NACGM Naroch 21.25 150 *e* **P** **16 53 17.0 +2.1**
SUW Suwalki 21.70 156 *e*P **P** **16 53 20.3 +0.6**
comp=Z,85nm,1.2s
SUW Suwalki 21.70 156 *e*P **P** **16 53 20.3 +0.6**
SUW pmax pmax
comp=Z,85nm,1.2s
MICGM Minsk 21.79 149⇓*e*P **P** **16 53 27.0 +6.3**
MICGM PM 16 53 28.0
comp=Z,0.1nm,1.0s
MICGM PM 16 53 28.0
comp=N,0.2nm,1.0s
MNK Minsk 21.79 149 *e*P **P** **16 53 27.0 +6.3**
MNK pmax pmax
comp=Z,140nm,1.0s
KIRV Kirov 22.17 115 P **P** **16 53 23.9 -0.7**
comp=Z,9.5nm,0.6s,baz=325,slow=4.7,SNR=12
KIRV LR LR 17 02 15.0
comp=Z,286nm,20.5s,baz=209,slow=37
KIRV Kirov 22.17 115 P **P** **16 53 24.0 -0.7**
MOS Moscow 22.22 133 *e*P **P** **16 53 23.5 -1.7**
MOS *e* 16 53 56.3
MOS pmax pmax
comp=Z,200nm,1.3s
MOS pmax pmax
comp=Z,150nm,1.2s
OBN Obninsk 22.61 135 LR LR 17 02 50.4
comp=Z,63nm,18.2s,baz=356,slow=38
OBN Obninsk 22.61 135 *e*P **P** **16 53 32.1 +2.7**
comp=Z,368nm,2.0s
OBN Obninsk 22.61 135 *d i*P **P** **16 53 32.7 +3.3**
OBN *i* S **S** **16 57 32.7 -4.0**
OBN pmax pmax
comp=Z,55nm,1.1s
OBN MLR MLR
comp=Z,192nm,17.0s
NRIK Noril'sk 23.12 63 P **P** **16 53 35.2 +0.6**
comp=Z,3.2nm,0.7s,baz=303,slow=3.1,SNR=4.6
CLL Collm 23.68 173 *e*P **P** **16 53 41.0 +0.6**
comp=Z,17nm,1.4s
CLL Collm 23.68 173 *i* P **P** **16 53 40.2 -0.2**
comp=Z,15nm,1.4s
CLL *e*(sP) **pwP** **16 53 46.0 -0.5**
CLL *e* 16 53 51.0
CLL *e*S **S** **16 58 00.0 +5.1**
CLL Lm MLR 17 03 00.0
comp=Z,100nm,18.2s
CLL Collm 23.68 173 *e*P **P** **16 53 41.0 +0.6**
CLL pmax pmax
comp=Z,17nm,1.4s
RES Resolute Bay 23.97 320 LR LR 17 02 47.7
comp=Z,74nm,20.8s,baz=328,slow=36
BRG Berggiesshubel 24.15 172 *e*P **P** **16 53 44.4 -0.5**
comp=Z,16nm,1.8s
BRG Berggiesshubel 24.15 172 *e*P **P** **16 53 44.4 -0.5**
BRG pmax pmax
comp=Z,16nm,1.8s
KSP Ksiaz 24.29 168 P **P** **16 53 47.6 +1.5**
KSP pmax pmax
comp=Z,10.0nm,1.1s
MOX Moxa 24.31 175 P **P** **16 53 47.2 +0.9**
MOX pmax pmax
comp=Z,16nm,0.9s
CHVC Chvalec 24.53 168 *e*P **P** **16 53 48.4 0.0**
NKC Novy Kostel 24.74 174 *e*P **P** **16 53 51.1 +0.8**
NKC *e* 16 53 57.4
NKC Novy Kostel 24.74 174 *e*P **P** **16 53 51.1 +0.8**
NKC *ex* x 16 53 57.4
PRU Pruhonice 25.06 171 *e*P **P** **16 53 53.8 +0.7**
PRU *e* 16 54 00.2
PRU Pruhonice 25.06 171 *e*P **P** **16 53 53.8 +0.7**
PRU *ex* x 16 54 00.2
KRLC Kraliky 25.08 167 *e*P **P** **16 53 57.2 +3.8**
KRLC Kraliky 25.08 167 *e*P **P** **16 53 57.2 +3.8**
GOPC GO Pecny, Ondr 25.14 170 *e*P **P** **16 53 56.2 +2.3**
GOPC GO Pecny, Ondr 25.14 170 *e*P **P** **16 53 56.2 +2.3**
OJC Ojcow 25.14 163 *e*P **P** **16 53 53.3 -0.6**
comp=Z,31nm,1.5s
OJC Ojcow 25.14 163 *e*P **P** **16 53 53.3 -0.6**
OJC pmax pmax
comp=Z,31nm,1.5s
GRA1 Grafenberg Arr 25.25 176 *e*P **P** **16 53 55.0 +0.1**
comp=Z,15nm,0.8s
GRFO Grafenberg 25.26 176 *e*P **P** **16 53 55.2 +0.3**
comp=Z,15nm,0.9s
WLF Walferdange 25.28 184 *e*P **P** **16 53 54.1 -1.0**
comp=Z,68nm,1.0s
WLF Walferdange 25.28 184 *e*P **P** **16 53 54.1 -1.0**
WLF pmax pmax
comp=Z,68nm,1.0s
OKC Ostrava-Krasne 25.41 165 *e*P **P** **16 53 58.1 +1.9**
OKC Ostrava-Krasne 25.41 165 *e*P **P** **16 53 58.1 +1.9**
MORC Moravsky Berou 25.43 166 *e*P **P** **16 53 55.5 -1.0**
comp=Z,13nm,1.2s
MORC Moravsky Berou 25.43 166⇓*i*P **P** **16 53 56.2 -0.3**
MORC Moravsky Berou 25.43 166 *e*P **P** **16 53 55.5 -1.0**
MORC pmax pmax
comp=Z,13nm,1.2s
MORC Moravsky Berou 25.43 166 *e*P **P** **16 53 55.5 -1.0**
LPSR Galich'ya Gora 25.44 134 *e*P **P** **16 53 57.2 +0.7**
LPSR pmax pmax
comp=Z,70nm,1.0s
AKASG Malin Array Be 25.68 149 P **P** **16 53 58.3 -0.5**
comp=Z,2.1nm,0.6s,baz=349,slow=9.5,SNR=12
AKASG LR LR 17 04 39.2
comp=Z,62nm,19.1s,baz=15,slow=38
AKBB Malin Array Si 25.68 149 *e*P **P** **16 53 58.1 -0.6**
comp=Z,16nm,1.0s
AKBB Malin Array Si 25.68 149 *e*P **P** **16 53 58.1 -0.6**
AKBB pmax pmax
comp=Z,16nm,1.0s
KIEV Kiev 25.69 149 *e*P **P** **16 53 58.3 -0.5**
comp=Z,15nm,1.0s
KIEV Kiev 25.69 149 *i* P **P** **16 53 58.4 -0.4**
KIEV pmax pmax
comp=Z,9.0nm,0.9s
VRAC Vranov 25.84 168 P **P** **16 54 00.1 0.0**
comp=Z,4.6nm,0.4s,baz=354,slow=8.1,SNR=11
VRAC Vranov 25.84 168⇑*i*P **P** **16 53 59.6 -0.6**
VRAC Vranov 25.84 168 *e*P **P** **16 53 59.4 -0.8**
KHC Kasperske Hory 25.88 172 *i* P **P** **16 54 00.2 -0.4**
KHC pmax pmax
comp=Z,6.0nm,1.0s
KHC Kasperske Hory 25.88 172 *e*P **P** **16 54 00.7 +0.1**
KHC AMS AMS 17 04 50.0
comp=Z,100nm,17.0s
KWP Kalwaria Pacla 25.98 159 *e*P **P** **16 54 01.7 +0.2**
comp=Z,190nm,1.0s
KWP Kalwaria Pacla 25.98 159 *e*P **P** **16 54 01.7 +0.2**
KRUC Moravsky 26.07 168 *e*P **P** **16 54 02.0 -0.3**
GEC2 GERESS Array S 26.17 172 *e*P **P** **16 54 03.3 0.0**
comp=Z,9.2nm,1.0s
GEC2 GERESS Array S 26.17 172 *e*P **P** **16 54 03.3 0.0**
GEC2 pmax pmax
comp=Z,9.0nm,1.0s
GERES GERESS Array B 26.17 172 P **P** **16 54 03.1 -0.2**
comp=Z,5.1nm,1.0s,baz=9.9,slow=8.5,SNR=16
LANS Liptovska Anna 26.18 164 *e*P **P** **16 54 04.1 +0.8**
LANS Liptovska Anna 26.18 164 *e*P **P** **16 54 04.1 +0.8**
ARU Arti 26.34 106 P **P** **16 54 05.7 +1.0**
comp=Z,0.8nm,0.4s,baz=308,slow=6.1,SNR=7.2
ARU LR LR 17 05 08.1
comp=Z,412nm,19.2s,baz=332,slow=38
ARU Arti 26.34 106 *e*P **P** **16 54 04.8 +0.1**
ARU Arti 26.34 106 *d i*P **P** **16 54 06.1 +1.4**
ARU 16 54 47.4
ARU PPP PPP 16 54 56.3
ARU S **S** **16 58 42.3 +5.1**
ARU SS **SnSn** **16 59 45.3 +8.4**
ARU pmax pmax
comp=Z,15nm,1.3s
SVE Sverdlovsk 26.52 104 *e*P P 16 54 13.6 +7.4
SVE pmax pmax
comp=Z,20nm,1.5s
BFO Black Forest 26.59 180 *e*P **P** **16 54 08.1 +1.0**
comp=Z,13nm,0.9s
BFO Black Forest 26.59 180 *e*P **P** **16 54 08.1 +1.0**
BFO pmax pmax
comp=Z,13nm,0.9s
KOLS Kolonicke sedl 26.63 160 *e*P **P** **16 54 08.0 +0.7**
KOLS pmax pmax
comp=Z,8.0nm,1.0s
KOLS Kolonicke sedl 26.63 160 *e*P **P** **16 54 08.0 +0.7**
ECH Echery 26.71 182 *e*P **P** **16 54 08.4 +0.3**
comp=Z,11nm,1.1s
ECH Echery 26.71 182 *e*P **P** **16 54 08.4 +0.3**
ECH pmax pmax
comp=Z,11nm,1.1s
VYHS Vyhne 26.79 165 *e*P **P** **16 54 09.2 +0.4**
VYHS pmax pmax
comp=Z,4.0nm,1.2s
VYHS Vyhne 26.79 165 *e*P **P** **16 54 09.2 +0.4**
VSR Storozhevoye 26.81 135 *e*P **P** **16 54 09.8 +0.9**
VSR pmax pmax
comp=Z,10.0nm,1.2s
MODS Modra-Piesok 26.81 167 *e*P **P** **16 54 09.1 +0.1**
MODS pmax pmax
comp=Z,12nm,1.1s
MODS Modra-Piesok 26.81 167 *e*P **P** **16 54 09.1 +0.1**
ZST Bratislava 26.98 167 *e*P **P** **16 54 11.2 +0.8**
ZST Bratislava 26.98 167 *e*P **P** **16 54 11.2 +0.8**
FRB Frobisher Bay 27.10 288 LR LR 17 04 08.3
comp=Z,222nm,21.4s,baz=17,slow=35
CONA Conrad Observa 27.18 169 *e*pP **P** **16 54 13.1 +0.7**
comp=Z,11nm,1.2s
MOA Molln 27.18 172 *e*pP **P** **16 54 13.0 +0.7**
comp=Z,5.5nm,0.8s
VRH Novokhopyorsk 27.31 131 *e*P **P** **16 54 14.5 +1.1**
VRH pmax pmax
comp=Z,30nm,1.3s
MOTA Moosalm 27.60 176 *e*pP **P** **16 54 17.8 +1.6**
comp=Z,6.5nm,0.8s
WATA Walderalm 27.62 176 *e*pP **P** **16 54 16.9 +0.5**
comp=Z,3.7nm,0.5s
KBA Koelnbreinsper 27.92 173 *e*pP **P** **16 54 20.8 +1.6**
comp=Z,5.1nm,0.9s
DAVOX Davos/Dischmat 28.15 178 LR LR 17 06 52.3
comp=Z,65nm,18.1s,baz=270,slow=39
BUR08 Bucovina Ar. S 28.20 156 *e*P **P** **16 54 21.4 -0.1**
comp=Z,11nm,1.4s
BURAR Bucovina Array 28.23 156⇑*i*P **P** **16 54 22.5 +0.7**
MYKA Terra Mystica 28.38 173 *e*pP **P** **16 54 24.2 +1.1**
comp=Z,1.7nm,0.6s
SOKA Soboth 28.39 171 *e*pP **P** **16 54 23.9 +0.7**
comp=Z,4.4nm,1.2s
OBKA Obir 28.54 171 *e*pP **P** **16 54 25.8 +1.3**
comp=Z,6.9nm,0.9s
BIZ Bicaz 29.00 155⇑*i*P **P** **16 54 30.2 +1.7**
TIXI Tiksi 29.20 34 P **P** **16 54 31.5 +1.5**
comp=Z,2.6nm,0.8s,baz=333,slow=7.3,SNR=7.1
TIXI LR LR 17 08 17.5
comp=Z,44nm,18.3s,baz=334,slow=40
TESR Tescani 29.48 154⇑*i*P **P** **16 54 33.9 +1.1**
PLOR Plostina 30.13 154⇑*i*P **P** **16 54 40.8 +2.2**
PLOR Plostina 30.13 154 ⇑P **P** **16 54 40.8 +2.2**
GZR Gura Zlata 30.19 160⇑*i*P **P** **16 54 39.2 +0.1**
GZR Gura Zlata 30.19 160 ⇑P **P** **16 54 39.2 +0.1**
VOIR 30.36 157⇑*i*P **P** **16 54 41.9 +1.2**
VOIR 30.36 157 ⇑P **P** **16 54 41.9 +1.2**
MLR Muntele Rosu 30.41 155 LR LR 17 07 17.6
comp=Z,62nm,20.9s,baz=310,slow=37
MLR Muntele Rosu 30.41 155⇑*i*P **P** **16 54 42.4 +1.3**
MLR Muntele Rosu 30.41 155 ⇑P **P** **16 54 42.4 +1.3**
MDVR Moldovita 30.70 161⇑*i*P **P** **16 54 44.5 +0.9**
CFR Carcaliu 30.97 153⇓*i*P **P** **16 54 50.0 +4.1**
CFR Carcaliu 30.97 153 ⇓P **P** **16 54 50.0 +4.1**
AKTO Aktyubinsk 31.67 112 P **P** **16 54 53.1 +1.0**
comp=Z,2.0nm,0.8s,baz=221,slow=24,SNR=5.9
AKTO LR LR 17 08 16.9
comp=Z,236nm,19.0s,baz=352,slow=38
BRVK Borovoye 32.39 97 *i* P **P** **16 55 00.4 +2.0**
BRVK pmax pmax
comp=Z,6.0nm,1.6s
BVAR Borovoye Array 32.45 97 P **P** **16 55 00.3 +1.4**
comp=Z,0.7nm,0.6s,baz=336,slow=6.8,SNR=5.5
VTS Vitosha 32.98 160 *e*P **P** **16 55 03.3 -0.5**
comp=Z,3.3nm,0.9s
VTS Vitosha 32.98 160⇓*i*P **P** **16 55 03.9 +0.1**
VTS Vitosha 32.98 160 *e*P **P** **16 55 03.3 -0.5**
VTS pmax pmax
comp=Z,3.0nm,0.9s
ABKAR Akbulak array 33.23 111 *e*P **P** **16 55 04.6 -1.2**
comp=Z,11nm,0.9s
NVS Novosibirsk 34.19 83 *e*P **P** **16 55 15.8 +1.8**
NVS *e* 16 56 34.7
NVS pmax pmax
comp=Z,15nm,1.6s
NVS pmax pmax
comp=N,12nm,1.7s
SCHQ Schefferville 34.38 278 LR LR 17 07 48.6
comp=N,272nm,20.6s,baz=49,slow=34
KIV Kislovodsk 34.45 134 *e*P **P** **16 55 17.2 +0.7**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,218nm,16.0s
KVAR Kislovodsk Arr 34.45 134 LR LR 17 09 47.9
comp=Z,154nm,21.3s,baz=253,slow=37
FNA Florina 34.65 163 *e*P **P** **16 55 18.0 -0.2**
comp=Z,9.8nm,0.8s
FNA Florina 34.65 163 *e*P **P** **16 55 18.0 -0.2**
FNA pmax pmax
comp=Z,10.0nm,0.8s
KBZ Khabaz 34.70 134 P **P** **16 55 19.2 +0.6**
comp=Z,0.7nm,0.5s,baz=47,slow=15,SNR=2.4
KBZ LR LR 17 09 51.8
comp=Z,165nm,21.5s,baz=342,slow=37
NCK Nalchik 35.06 133 *i* P **P** **16 55 23.1 +1.4**
NCK pmax pmax
comp=Z,8.0nm,0.9s
INK Inuvik 35.08 337 *e*P **P** **16 55 22.6 +1.1**
comp=Z,4.4nm,1.1s
INK Inuvik 35.08 337 *e*P **P** **16 55 22.6 +1.1**
INK pmax pmax
comp=Z,4.0nm,1.1s
NEY Neytrino 35.13 134 *i* P **P** **16 55 24.7 +2.2**
NEY pmax pmax
comp=Z,2.0nm,1.2s
ZAA1 Zalesovo Array 35.40 82 *e*P **P** **16 55 25.4 +0.9**
ZALV Zalesovo Beam 35.41 82 P **P** **16 55 25.4 +0.8**
comp=Z,1.0nm,0.6s,baz=332,slow=8.6,SNR=4.2
ZALV LR LR 17 12 56.7
comp=Z,159nm,19.2s,baz=248,slow=41
ESDC Sonseca Array 35.72 197 P **P** **16 55 27.4 -0.1**
comp=Z,0.1nm,0.3s,baz=3.0,slow=8.9,SNR=5.7
TOLK Toolik Lake Re 36.09 347 *e*P **P** **16 55 31.6 +1.3**
comp=Z,13nm,1.5s
BILL Bilibino 36.66 14 *e*P **P** **16 55 36.0 +0.9**
comp=Z,13nm,1.6s
BILL Bilibino 36.66 14 *i* P **P** **16 55 35.9 +0.8**
BILL *i* 16 55 42.2
BILL pmax pmax
comp=Z,3.0nm,1.0s
KURK Kurchatov 36.71 91 *e*P **P** **16 55 36.6 +0.9**
comp=Z,26nm,1.7s
KURK Kurchatov 36.71 91 *e*P **P** **16 55 36.6 +0.9**
KURK pmax pmax
comp=Z,26nm,1.7s
KURBB Kurchatov Arra 36.77 91 P **P** **16 55 37.4 +1.2**
comp=Z,1.4nm,0.8s,baz=335,slow=7.3,SNR=13
TBLG Delisi 36.98 133 *e*P **P** **16 55 40.3 +2.1**
comp=Z,13nm,0.9s
TBLG Delisi 36.98 133 P **P** **16 55 40.3 +2.1**
TBLG pmax pmax
comp=Z,13nm,0.9s
BR101 Keskin Array S 37.06 147 *e*P **P** **16 55 39.9 +0.9**
BR131 Keskin Array S 37.06 147 *e*P **P** **16 55 40.6 +1.6**
comp=Z,5.2nm,0.8s
BRTR Keskin Array B 37.06 147 P **P** **16 55 39.9 +0.9**
comp=Z,2.0nm,0.9s,baz=349,slow=5.0,SNR=8.7
EPYK Eagle Plains 37.28 338 *e*P **P** **16 55 41.5 +1.0**
comp=Z,11nm,0.4s
COLD Coldfoot 37.53 347 *e*P **P** **16 55 44.1 +1.6**
comp=Z,5.0nm,1.0s
YKA Yellowknife Ar 38.04 321 P **P** **16 55 47.0 +0.2**
comp=Z,0.5nm,0.7s,baz=16,slow=7.9,SNR=6.2
YKA PcP **PcP** **16 58 02.7 +0.9**
comp=Z,0.2nm,0.3s,baz=18,slow=3.1,SNR=5.0
YKA LR LR 17 12 33.5
comp=Z,5.8nm,18.7s,baz=13,slow=38
YKB5 Yellowknife Ar 38.04 321 *e*P **P** **16 55 47.0 +0.2**
YKB5 *e*PcP **PcP** **16 58 02.7 +0.9**
YAK Yakutsk 38.13 41 *i* P **P** **16 55 46.9 -0.7**
YAK pmax pmax
comp=Z,15nm,1.3s
GNI Garni 38.51 133 LR LR 17 12 42.9
comp=Z,113nm,19.6s,baz=345,slow=38
GNI Garni 38.51 133 *i* P **P** **16 55 54.3 +3.0**
GNI pmax pmax
comp=Z,28nm,1.2s
PRP Porcupine Dome 38.90 343 *e*P **P** **16 55 56.7 +2.4**
comp=Z,5.1nm,0.9s
BOD Bodaibo 38.98 55 *e*P **P** **16 55 55.2 +0.4**
BOD pmax pmax
comp=Z,7.0nm,1.6s
EGAK Eagle 39.26 340 *e*P **P** **16 55 58.2 +1.1**
comp=Z,11nm,1.4s
COLA College 39.71 344 *i* P **P** **16 56 00.8 +0.1**
COLA pmax pmax
comp=Z,5.0nm,1.0s
ILAR Eielson Array 39.74 344 P **P** **16 56 03.0 +1.9**
comp=Z,3.6nm,0.8s,baz=2.5,slow=6.9,SNR=38
ILAR Eielson Array 39.74 344 P **P** **16 56 03.0 +1.9**
ILB Eielson Array 39.74 344 *e*P **P** **16 56 01.7 +0.7**
comp=Z,6.7nm,0.9s
CCB Clear Creek Bu 39.93 344 *e*P **P** **16 56 04.4 +1.8**
comp=Z,4.7nm,0.9s
DGZ Jazzator, Alta 39.95 83 *i* P **P** **16 56 04.6 +1.4**
DGZ pmax pmax
comp=Z,2.0nm,1.4s
HDA Harding Lake 40.10 344 *e*P **P** **16 56 05.9 +1.8**
comp=Z,5.4nm,1.0s
WRH Wood River Hil 40.12 345 *e*P **P** **16 56 06.3 +2.0**
comp=Z,7.6nm,1.1s
SEY Seymchan 40.48 25 *i* P **P** **16 56 07.9 +0.7**

DOT Dot Lake 40.63 342 *eP* **P 16 56 10.8 +2.4**
comp=Z,6.6nm,0.9s
MAKZ Makanchi 41.18 90 *eP* **P 16 56 14.2 +1.0**
comp=Z,9.9nm,1.5s
MAKZ Makanchi 41.18 90 *eP* **P 16 56 14.2 +1.0**
MAKZ pmax pmax
comp=Z,10.0nm,1.5s
MK31 Makanchi Array 41.27 89 *eP* **P 16 56 14.4 +0.4**
comp=Z,4.1nm,1.0s
MK31 Makanchi Array 41.27 89 *eP* **P 16 56 14.4 +0.4**
MK31 pmax pmax
comp=Z,4.0nm,1.0s
MK32 Makanchi Array 41.27 89 *eP* **P 16 56 15.2 +1.2**
MKAR Makanchi Array 41.27 89 P **P 16 56 15.2 +1.2**
comp=Z,1.2nm,0.6s,baz=6.8,slow=6.9,SNR=9.9
MKAR LR LR 17 16 39.0
comp=Z,77nm,19.2s,baz=325,slow=41
MENT Mentasta 41.30 341 *eP* **P 16 56 16.1 +2.0**
comp=Z,9.3nm,1.2s
CAST Castle Rocks 41.43 347 *eP* **P 16 56 17.0 +2.0**
comp=Z,15nm,1.2s
DHY Denali Highway 41.45 344 *eP* **P 16 56 17.5 +2.1**
comp=Z,13nm,1.1s
KK31 Karatay Array 41.63 103 *eP* **P 16 56 17.7 +0.8**
comp=Z,17nm,1.4s
KK31 Karatay Array 41.63 103 *eP* **P 16 56 17.7 +0.8**
KK31 pmax pmax
comp=Z,17nm,1.4s
KKAR Karatay Array 41.63 103 *eP* **P 16 56 17.5 +0.6**
comp=Z,17nm,1.4s
KKAR Karatay Array 41.63 103 *eP* **P 16 56 17.5 +0.6**
KKAR pmax pmax
comp=Z,17nm,1.4s
AAK Ala-Archa 43.09 99 *i P* **P 16 56 30.7 +1.7**
AAK pmax pmax
comp=Z,5.0nm,1.3s
GEYT Alibeck 43.49 119 P **P 16 56 33.0 +0.9**
comp=Z,2.3nm,0.7s,baz=318,slow=8.6,SNR=4.1
GEYT PcP **PcP 16 58 21.8 +1.9**
comp=Z,2.1nm,0.9s,baz=317,slow=6.1,SNR=3.7
GEYT LR LR 17 16 56.9
comp=Z,190nm,18.8s,baz=345,slow=39
TARG Taragay, Kyrgy 44.80 97 *eP* **P 16 56 46.2 +3.1**
comp=Z,36nm,2.0s
WMQ Urumqi 45.45 86 *eP* **P 16 56 49.4 +1.6**
WMQ pP pwP 16 56 54.1 +0.3
WMQ pmax pmax
comp=Z,37nm,0.7s
WMQ pmax pmax
comp=Z,170nm,4.7s
WMQ LR LR
comp=Z,670nm,29.5s
WMQ LR LR
comp=Z,570nm,27.9s
WMQ LR LR
comp=Z,560nm,20.3s
ZEA Zeya 45.50 47 *eP* **P 16 56 50.0 +2.1**
ZEA pmax pmax
comp=Z,28nm,1.4s
ULM Lac du Bonnet 45.77 300 LR LR 17 16 12.6
comp=Z,128nm,20.3s,baz=44,slow=36
SONA0 Songino Array 46.48 67 *eP* **P 16 56 55.2 -0.7**
SONM Songino Array 46.48 67 P **P 16 56 55.2 -0.7**
comp=Z,0.5nm,0.5s,baz=338,slow=6.4,SNR=2.3
SONM LR LR 17 20 05.4
comp=Z,45nm,18.2s,baz=140,slow=41
ULN Ulaanbaatar 46.61 66 *ceP* **P 16 56 56.3 -0.6**
ULN pmax pmax
comp=Z,4.0nm,1.7s
EYMN Ely 46.90 295 *eP* **P 16 56 58.4 -0.6**
comp=Z,5.6nm,1.0s
HIA Hailar 48.20 55 *i P* **P 16 57 09.6 +0.5**
HIA pmax pmax
comp=Z,25nm,1.0s
KLR Kul'dur 50.66 45 LR LR 17 21 09.0
comp=Z,160nm,18.4s,baz=350,slow=39
PETK Petropavlovsk- 50.70 24 LR LR 17 18 35.3
comp=Z,39nm,18.2s,baz=339,slow=36
GTA Gaotai 52.74 77 *eP* **P 16 57 45.4 +1.7**
GTA pP pwP 16 57 50.9 +1.3
GTA sP sP 16 57 54.0 +7.1
GTA pmax pmax
comp=Z,2.0nm,1.3s
GTA pmax pmax
comp=Z,33nm,5.0s
GTA LR LR
comp=Z,130nm,18.9s
GTA LR LR
comp=Z,120nm,17.9s
GTA LR LR
comp=Z,190nm,19.6s
HHC Hu-ho-hao-te 54.30 66 *eP* **P 16 57 56.7 +1.6**
HHC S **S 17 05 35.0 +2.5**
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,61nm,7.8s
HHC LR LR
comp=Z,120nm,14.1s
HHC LR LR
comp=Z,190nm,12.4s
HHC LR LR
comp=Z,180nm,16.1s
USRK Ussuriysk Ar. 55.54 47 LR LR 17 24 50.0
comp=Z,81nm,18.1s,baz=320,slow=39
PD31 Pinedale Array 55.85 308 *eP* **P 16 58 06.3 -0.1**
comp=Z,8.1nm,1.9s
PDAR Pinedale Array 55.85 308 P **P 16 58 06.3 -0.1**
comp=Z,0.2nm,0.3s,baz=27,slow=6.5,SNR=2.4
PDAR LR LR 17 22 42.3
comp=Z,120nm,18.6s,baz=46,slow=37
LZH Lanzhou 56.91 74 *eP* **P 16 58 13.0 -0.9**
LZH pP pP 16 58 16.1 -0.2
LZH *e*PP **PP 17 00 20.8 +0.8**
LZH pmax pmax
comp=Z,20nm,1.1s
LZH pmax pmax
comp=Z,65nm,7.8s
LZH LR LR
comp=Z,250nm,16.2s
LZH LR LR
comp=Z,250nm,16.5s
LZH LR LR
comp=Z,350nm,18.4s
ASAJ Asahikawa 57.50 38 LR LR 17 26 27.9
comp=Z,54nm,18.8s,baz=28,slow=40
KSRS Korea Array 61.23 52 P **P 16 58 44.3 +0.7**
comp=Z,0.5nm,0.6s,baz=339,slow=6.0,SNR=3.1
KSRS LR LR 17 30 11.2
comp=Z,38nm,18.4s,baz=340,slow=41
KS15 Wonju Array Si 61.23 52 *eP* **P 16 58 44.3 +0.7**
comp=Z,6.0nm,0.8s
KSAR Wonju Array Be 61.23 52 P **P 16 58 44.3 +0.7**
KSAR Wonju Array Be 61.23 52 P **P 16 58 44.3 +0.7**
NV01 Mina Array Sit 61.76 314 *eP* **P 16 58 48.1 +0.6**
NVAR Mina Array Bea 61.76 314 P **P 16 58 48.1 +0.6**
comp=Z,0.2nm,0.5s,baz=58,slow=5.8,SNR=4.1
TOA1 Torodi Ar. Sit 61.78 188 *eP* **P 16 58 46.1 -1.5**
TOA0 Torodi Ar. Sit 61.79 188 *eP* **P 16 58 47.1 -0.5**
comp=Z,9.7nm,1.1s
TORD Torodi Ar. Bea 61.79 188 P **P 16 58 46.1 -1.6**
comp=Z,3.6nm,1.1s,baz=348,slow=3.5,SNR=9.1
MJAR Matsushiro Arr 64.12 44 LR LR 17 28 42.8
comp=Z,58nm,19.4s,baz=355,slow=38
NJ2 Nanjing 64.42 62 *eP* **P 16 59 04.8 -0.1**
NJ2 pmax pmax
comp=Z,12nm,0.5s
KMI Kunming 67.06 79 P **P 16 59 23.9 +1.6**
KMI pmax pmax
comp=Z,6.0nm,0.7s
TXAR Lajitas Array 67.46 299 P **P 16 59 24.5 -0.2**
comp=Z,0.3nm,0.6s,baz=359,slow=4.5,SNR=3.0
TXAR LR LR 17 29 40.2
comp=Z,167nm,18.2s,baz=0.0,slow=37
CMAR Chiang Mai Arr 72.43 85 LR LR 17 36 24.2
comp=Z,72nm,20.0s,baz=195,slow=40
MSEY Mahe Island 84.19 133 *i P* **P 17 00 59.2 -1.1**
AS31 Alice Springs 121.65 61 *e*PKPdf **PKPdf 17 07 21.3 -1.0**
ASAR Alice Springs 121.66 61 PKP **PKPdf 17 07 21.3 -1.0**
comp=Z,0.7nm,0.6s,baz=5.6,slow=1.5,SNR=18
VNA1 Neumayer--Stat 145.64 190 PKPdf **PKPab 17 08 06.6 +0.6**
baz=75,slow=8.2
VNA2 Neumayer--Watz 145.88 189 PKPdf **PKPdf 17 08 05.9 +0.1**
baz=359,slow=5.3
VNA3 Neumayer Olymp 146.29 190 PKPdf **PKPbc 17 08 07.7 0.0**
baz=75,slow=8.2
MAW Mawson 146.33 146 PKPbc **PKPbc 17 08 07.4 -0.4**
comp=Z,3.3nm,0.8s,baz=302,slow=9.0,SNR=8.0
MAW Mawson 146.33 146 *e*PKPdf **PKPab 17 08 09.2 +0.5**
MAW Mawson 146.33 146 *e*PKP2 **PKPab 17 08 09.2 +0.5**
SNAA Sanae 146.46 186 PKPdf **PKPbc 17 08 08.3 +0.1**
baz=75,slow=8.2

KRSC ***03*** *17:02:31.6±2.2,52°.74N×161°.76E,h49km±25km,ML4.3*
IDC ***03*** *17:02:31.9±0.6,52°.92N×161°.39E,h0km,mb4.2/29,*
mb1 4.3/33,mb1mx4.3/44,mbtmp4.2/33,ML3.9/4,MS3.2/5,
Ms1 3.2/5,ms1mx2.7/44,Error ellipse: s-maj=14.3km
s-min=11.1km az=155.0
ISCJB ***03*** *17:02:35.3±0.5,52°.84N±0°.03×161°.55E±0°.04,h39km±4km,*
mb4.4/98,MS3.5/5,Error ellipse: s-maj=5.9km
s-min=3.1km az=148.3
BJI ***03*** *17:02:35.8±0.0,53°.00N×161°.30E,h41km,mb4.4/17,*
mB4.6/12,Ms4.0/5,Ms7 3.8/5
MOS ***03*** *17:02:36.1±0.9,52°.90N×161°.41E,h48km,mb4.7/35,Error*
ellipse: s-maj=5.8km s-min=3.9km az=93.6
NEIC ***03*** *17:02:37.8±1.1,52°.95N×161°.34E,h41km±4km,mb4.6/63,*
Error ellipse: s-maj=14.7km s-min=13.3km az=130.0
ISC 03 17:02:35.0±1.2,52°.81N±0°.04×161°.60E±0°.04,h25km±8km,
n262,σ1§12/278,mb4.5/98,MS3.5/5,13C-8D,Off east
coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.00**	**287**	*eP*		**Pn**		**17 02 51.8**	**-1.5**
SPN				*e*S		**Sn**		**17 03 05.5**	**-1.1**
SPN	**Mys Shipunski**	**1.00**	**287**	PN		**Pn**		**17 02 51.8**	**-1.5**
SPN				S		**Sn**		**17 03 05.5**	**-1.1**
NLC	**Nalytchevo**	**1.41**	**286**	*eP*		**Pn**		**17 02 58.5**	**-0.5**
NLC	**Nalytchevo**	**1.41**	**286**	PN		**Pn**		**17 02 58.5**	**-0.5**
SDLR	**Sedlovina**	**1.71**	**287**	*eP*		**Pn**		**17 03 03.1**	**-0.1**
SDLR				*e*S		**Sn**		**17 03 24.2**	**0.0**
SDLR	**Sedlovina**	**1.71**	**287**	PN		**Pn**		**17 03 03.1**	**-0.1**
SDLR				S		**Sn**		**17 03 24.2**	**0.0**
UGLR	**Uglovaya**	**1.72**	**284**	*eP*		**Pn**		**17 03 03.3**	**-0.2**
UGLR	**Uglovaya**	**1.72**	**284**	PN		**Pn**		**17 03 03.3**	**-0.2**
DALK	**Dalny**	**1.74**	**278**	*eP*		**Pn**		**17 03 02.9**	**-0.6**
DALK				*e*S		**Sn**		**17 03 25.0**	**+0.2**
DALK	**Dalny**	**1.74**	**278**	PN		**Pn**		**17 03 02.9**	**-0.6**
DALK				S		**Sn**		**17 03 25.0**	**+0.2**
SMAR	**Somma**	**1.75**	**286**	*eP*		**Pn**		**17 03 03.4**	**-0.5**
SMAR				*e*S		**Sn**		**17 03 25.3**	**-0.2**
SMAR	**Somma**	**1.75**	**286**	PN		**Pn**		**17 03 03.4**	**-0.5**
SMAR				S		**Sn**		**17 03 25.3**	**-0.2**
MKZ	**Mys Kozlova**	**1.75**	**2**	*eP*		**Pn**		**17 03 02.2**	**-1.5**
MKZ				*e*S		**Sn**		**17 03 23.3**	**-1.8**
MKZ	**Mys Kozlova**	**1.75**	**2**	PN		**Pn**		**17 03 02.2**	**-1.5**
MKZ				S		**Sn**		**17 03 23.3**	**-1.8**
AVH	**Avacha**	**1.79**	**286**	*eP*		**Pn**		**17 03 04.5**	**+0.2**
AVH	**Avacha**	**1.79**	**286**	PN		**Pn**		**17 03 04.5**	**+0.2**
KRER	**Koryakskii**	**1.79**	**287**	*eP*		**Pn**		**17 03 04.6**	**+0.2**
KRER	**Koryakskii**	**1.79**	**287**	PN		**Pn**		**17 03 04.6**	**+0.2**
PET	**Petropavlovsk**	**1.80**	**278**	*e*Pn		**Pn**		**17 03 03.8**	**-0.5**
PET	**Petropavlovsk**	**1.80**	**278**	*eP*		**Pn**		**17 03 03.8**	**-0.5**
PET				*e*S		**Sn**		**17 03 27.0**	**+0.7**
PET	**Petropavlovsk**	**1.80**	**278**	*i eP*		**Pn**		**17 03 03.9**	**-0.5**
PET				*e*S		**Sn**		**17 03 27.5**	**+1.2**
PET				pmax		pmax			
	comp=Z,400nm,1.2s								
PET				pmax		pmax			
	comp=Z,366nm,0.7s								
PET				smax		smax			
	comp=E,2μm,0.8s								
PET				smax		smax			
	comp=N,1μm,0.8s								
KOK	**Koryaka**	**1.85**	**286**	*eP*		**Pn**		**17 03 05.4**	**+0.2**
KOK	**Koryaka**	**1.85**	**286**	PN		**Pn**		**17 03 05.4**	**+0.2**
KRX	**Arik**	**1.86**	**288**	*eP*		**Pn**		**17 03 05.3**	**-0.1**
KRX	**Arik**	**1.86**	**288**	PN		**Pn**		**17 03 05.3**	**-0.1**
RUS	**Russkaya**	**1.92**	**260**	*eP*		**Pn**		**17 03 05.9**	**-0.1**
RUS				*e*S		**Sn**		**17 03 29.8**	**+0.5**
RUS	**Russkaya**	**1.92**	**260**	PN		**Pn**		**17 03 05.9**	**-0.1**
RUS				S		**Sn**		**17 03 29.8**	**+0.5**
KRMR	**Karymshinskiy**	**2.10**	**272**	*eP*		**Pn**		**17 03 08.4**	**-0.2**
KRMR	**Karymshinskiy**	**2.10**	**272**	PN		**Pn**		**17 03 08.4**	**-0.2**
MTVR	**Mutnovka**	**2.11**	**262**	*eP*		**Pn**		**17 03 08.6**	**-0.2**
MTVR				*e*S		**Sn**		**17 03 34.4**	**+0.2**
MTVR	**Mutnovka**	**2.11**	**262**	PN		**Pn**		**17 03 08.6**	**-0.2**
MTVR				S		**Sn**		**17 03 34.4**	**+0.2**
GRL	**Gorelyy**	**2.16**	**265**	*eP*		**Pn**		**17 03 09.0**	**-0.5**
GRL	**Gorelyy**	**2.16**	**265**	PN		**Pn**		**17 03 09.0**	**-0.5**
ASAK	**Asacha**	**2.30**	**261**	*eP*		**Pn**		**17 03 11.7**	**+0.4**
ASAK				*e*S		**Sn**		**17 03 39.3**	**+0.5**
ASAK	**Asacha**	**2.30**	**261**	PN		**Pn**		**17 03 11.7**	**+0.4**
ASAK				S		**Sn**		**17 03 39.3**	**+0.5**
GNL	**Ganaly**	**2.37**	**293**	*eP*		**Pn**		**17 03 13.0**	**+0.7**
GNL	**Ganaly**	**2.37**	**293**	PN		**Pn**		**17 03 13.0**	**+0.7**
PEA0B	**Petropavlovsk-**	**2.38**	**279**	*e*Pn		**Pn**		**17 03 12.8**	**+0.5**
PETK	**Petropavlovsk-**	**2.38**	**279**	Pn		**Pn**		**17 03 12.3**	**0.0**
	comp=N,48nm,0.3s,baz=94,slow=18,SNR=783								
PETK				Sn		**Sn**		**17 03 42.0**	**+1.3**
	comp=N,38nm,0.3s,baz=92,slow=17,SNR=6.7								
PETK				LR		LR		17 03 44.1	
	comp=N,78nm,18.1s,baz=90,slow=32								
KDTR	**Khodutka, Kamc**	**2.38**	**246**	*eP*		**Pn**		**17 03 11.6**	**-0.8**
KDTR				*e*S		**Sn**		**17 03 39.5**	**-1.3**
KDTR	**Khodutka, Kamc**	**2.38**	**246**	PN		**Pn**		**17 03 11.6**	**-0.8**
KDTR				S		**Sn**		**17 03 39.5**	**-1.3**
KZV	**Kizimen**	**2.43**	**342**	*eP**		**Pn**		**17 03 13.0**	**-0.2**
KZV				*e*S		**Sn**		**17 03 42.3**	**+0.1**
KZV	**Kizimen**	**2.43**	**342**	PN		**Pn**		**17 03 13.0**	**-0.2**
KZV				S		**Sn**		**17 03 42.3**	**+0.1**
TUMD	**Tumrok D**	**2.50**	**344**	*eP*		**Pn**		**17 03 14.1**	**+0.1**
TUMR	**Tumrok**	**2.62**	**341**	*eP*		**Pn**		**17 03 16.3**	**+0.5**
TUMR	**Tumrok**	**2.62**	**341**	PN		**Pn**		**17 03 14.1**	**-1.7**
APC	**Apacha**	**2.69**	**274**	*eP*		**Pn**		**17 03 17.9**	**+1.2**
APC	**Apacha**	**2.69**	**274**	PN		**Pn**		**17 03 17.9**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**3.18**	**351**	*eP*		**Pb**		**17 03 31.8**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**3.18**	**351**	PN		**Pb**		**17 03 31.8**	**+1.0**
PAU	**Pauzhetka**	**3.24**	**247**	*eP*		**Pn**		**17 03 24.1**	**-0.1**
PAU	**Pauzhetka**	**3.24**	**247**	PN		**Pn**		**17 03 24.1**	**-0.1**
LGNR	**Loginova**	**3.32**	**351**	*eP*		**Pn**		**17 03 26.2**	**+0.6**
LGNR	**Loginova**	**3.32**	**351**	PN		**Pn**		**17 03 26.2**	**+0.6**
CIRR	**Tsirk**	**3.35**	**352**	*eP*		**Pn**		**17 03 26.1**	**+0.3**
CIRR	**Tsirk**	**3.35**	**352**	PN		**Pn**		**17 03 26.1**	**+0.3**
KOZ	**Kozyrevsk**	**3.41**	**343**	*eP*		**Pn**		**17 03 26.6**	**+0.1**
KOZ	**Kozyrevsk**	**3.41**	**343**	PN		**Pn**		**17 03 26.6**	**+0.1**
KRSR	**Krestovskiy**	**3.47**	**350**	*eP*		**Pn**		**17 03 28.1**	**+0.7**
KRSR	**Krestovskiy**	**3.47**	**350**	PN		**Pn**		**17 03 28.1**	**+0.7**
KBTR	**Krutoberegovo**	**3.48**	**11**	*eP*		**Pn**		**17 03 27.0**	**-0.4**
KBTR	**Krutoberegovo**	**3.48**	**11**	PN		**Pn**		**17 03 27.0**	**-0.4**
KBG	**Krutoberegovo**	**3.51**	**10**	*eP*		**Pn**		**17 03 27.7**	**-0.2**
KBG	**Krutoberegovo**	**3.51**	**10**	PN		**Pn**		**17 03 27.7**	**-0.2**
BKI	**Bering**	**3.52**	**45**	*eP*		**Pn**		**17 03 26.5**	**-1.5**
BKI				*e*S		**Sn**		**17 04 04.9**	**-3.9**
BKI	**Bering**	**3.52**	**45**	PN		**Pn**		**17 03 26.5**	**-1.5**
ESO	**Esso**	**3.55**	**333**	*eP*		**Pn**		**17 03 28.1**	**-0.4**
ESO	**Esso**	**3.55**	**333**	PN		**Pn**		**17 03 28.1**	**-0.4**
KLY	**Klyuchi**	**3.55**	**351**	*eP*		**Pn**		**17 03 29.0**	**+0.6**
KLY	**Klyuchi**	**3.55**	**351**	PN		**Pn**		**17 03 29.0**	**+0.6**
SRDR	**Sredinnyy**	**3.68**	**343**	*eP*		**Pn**		**17 03 32.1**	**+1.8**
SRDR	**Sredinnyy**	**3.68**	**343**	PN		**Pn**		**17 03 32.1**	**+1.8**
BDR	**Baidarnaya**	**3.77**	**357**	*eP*		**Pn**		**17 03 32.7**	**+1.1**
BDR	**Baidarnaya**	**3.77**	**357**	PN		**Pn**		**17 03 32.7**	**+1.1**
SMKR	**Semkarok**	**3.78**	**359**	*eP*		**Pn**		**17 03 33.5**	**+1.8**
SMKR	**Semkarok**	**3.78**	**359**	PN		**Pn**		**17 03 33.5**	**+1.8**
SRKR	**Sorokina**	**3.86**	**356**	*eP*		**Pn**		**17 03 34.3**	**+1.6**
SRKR	**Sorokina**	**3.86**	**356**	PN		**Pn**		**17 03 34.3**	**+1.6**
SKR	**Severo-Kuril's**	**4.02**	**240**	*eP*		**Pn**		**17 03 34.1**	**-0.7**
SKR	**Severo-Kuril's**	**4.02**	**240**	*e*PN		**Pn**		**17 03 34.2**	**-0.6**
SKR				pmax		pmax			
	comp=Z,64nm,0.5s								
SKR				pmax		pmax			
	comp=Z,200nm,2.7s								
SKR				MLR		MLR			
	comp=Z,400nm,13.0s								
SKR				MLR		MLR			
	comp=Z,600nm,11.0s								
ALID	**Alaid**	**4.22**	**245**	*eP*		**Pn**		**17 03 37.7**	**-0.2**
ALID	**Alaid**	**4.22**	**245**	PN		**Pn**		**17 03 37.7**	**-0.2**
OSSR	**Ossora**	**6.51**	**7**	*eP*		**Pn**		**17 04 08.4**	**-0.6**
OSSR	**Ossora**	**6.51**	**7**	PN		**Pn**		**17 04 08.4**	**-0.6**
SMY	**Shemya**	**7.59**	**86**	*e*Pn		**Pn**		**17 04 23.4**	**-0.4**
SMY	**Shemya**	**7.59**	**86**	*e*PN		**Pn**		**17 04 23.4**	**-0.4**
TILK	**Tilichiki**	**8.05**	**16**	*eP*		**Pn**		**17 04 30.1**	**-0.1**
TILK	**Tilichiki**	**8.05**	**16**	PN		**Pn**		**17 04 30.1**	**-0.1**
MA2	**Magadan**	**9.07**	**323**	Pn		**Pn**		**17 04 43.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=150,slow=11,SNR=3.7								
MA2	**Magadan**	**9.07**	**323**	*i* PN		**Pn**		**17 04 43.6**	**-0.5**
MA2				pmax		pmax			
	comp=Z,5.0nm,1.0s								
ASAJ	**Asahikawa**	**15.28**	**243**	Pn		**Pn**		**17 06 08.2**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=81,slow=15,SNR=12								
ASAJ				Sn		**Sn**		**17 08 56.1**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=337,slow=15,SNR=2.6								
BILL	**Bilibino**	**15.44**	**7**	*e*Pn		**Pn**		**17 06 11.0**	**+0.2**
	comp=Z,7.2nm,0.8s								
BILL	**Bilibino**	**15.44**	**7**	*i P*		**Pn**		**17 06 11.5**	**+0.7**
BILL				pmax		pmax			
	comp=Z,6.0nm,0.9s								
BILL				MLR		MLR			
	comp=Z,184nm,16.0s								
GRNR	**Gornyy**	**15.69**	**273**	*eP*		**P**		**17 06 21.0**	**+3.0**
GRNR				pmax		pmax			
	comp=Z,15nm,1.0s								
ERM	**Erimo**	**16.45**	**236**	*i* P		**Pn**		**17 06 21.6**	**-2.3**
KLR	**Kul'dur**	**19.05**	**271**	P		**P**		**17 06 54.6**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=56,slow=11,SNR=12								
KLR	**Kul'dur**	**19.05**	**271**	*i* P		**P**		**17 06 55.2**	**+0.2**
KLR				pmax		pmax			
	comp=Z,4.0nm,0.9s								
YAK	**Yakutsk**	**19.31**	**311**	*eP*		**P**		**17 06 55.6**	**-2.2**
	comp=Z,86nm,0.6s								
YAK	**Yakutsk**	**19.31**	**311**	*eP*		**P**		**17 06 54.7**	**-3.1**
YAK				*e*S		**Sn**		**17 10 31.3**	**-3.2**
ZEA	**Zeya**	**20.45**	**286**	*eP*		**P**		**17 07 08.9**	**-1.4**
ANM	**Nome**	**20.52**	**42**	*eP*		Pn		17 07 12.5	-0.8
	comp=Z,12nm,1.0s								
ANM	**Nome**	**20.52**	**42**	*eP*		Pn		17 07 12.5	-0.8
ANM				pmax		pmax			
	comp=Z,12nm,1.0s								
USRK	**Ussuriysk Ar.**	**21.30**	**258**	P		**P**		**17 07 18.8**	**-0.8**
	comp=Z,2.9nm,0.7s,baz=75,slow=13,SNR=6.8								
MJB9	**Matsu-Tunnel**	**23.10**	**235**	*eP*		**P**		**17 07 39.0**	**+0.2**
	comp=Z,28nm,0.9s								
MAJO	**Matsushiro**	**23.11**	**235**	*eP*		**P**		**17 07 38.9**	**+0.1**
	comp=Z,29nm,0.9s								
MAJO	**Matsushiro**	**23.11**	**235**	*i* P		**P**		**17 07 38.7**	**-0.1**
MAJO				pmax		pmax			
	comp=Z,32nm,1.0s								
MAT	**Matsushiro**	**23.11**	**235**	P		**P**		**17 07 39.0**	**+0.2**
MJAR	**Matsushiro Arr**	**23.11**	**235**	P		**P**		**17 07 39.2**	**+0.4**
	comp=Z,5.8nm,0.8s,baz=26,slow=8.1,SNR=23								
TIXI	**Tiksi**	**23.72**	**335**	P		**P**		**17 07 43.3**	**-1.2**
	comp=Z,4.8nm,0.7s,baz=122,slow=9.2,SNR=18								
TIXI	**Tiksi**	**23.72**	**335**	*eP*		**P**		**17 07 43.2**	**-1.3**
	comp=Z,6.3nm,0.6s								
TIXI	**Tiksi**	**23.72**	**335**	*ceP*		**P**		**17 07 43.0**	**-1.5**
TIXI				pmax		pmax			
	comp=Z,6.0nm,0.8s								
CAST	**Castle Rocks**	**26.06**	**48**	*eP*		**P**		**17 08 06.9**	**+0.9**
	comp=Z,22nm,1.8s								
HIA	**Hailar**	**26.28**	**279**	*eP*		**P**		**17 08 06.8**	**-1.3**
	comp=Z,15nm,0.6s								
HIA	**Hailar**	**26.28**	**279**	*i* P		**P**		**17 08 05.0**	**-3.2**
HIA				pmax		pmax			
	comp=Z,53nm,0.9s								
MLY	**Manley**	**26.74**	**44**	*eP*		**P**		**17 08 12.6**	**+0.5**
	comp=Z,5.1nm,0.9s								
BOD	**Bodaibo**	**27.08**	**300**	*eP*		**P**		**17 08 13.1**	**-2.1**
BOD				pmax		pmax			
	comp=Z,9.0nm,1.6s								
KNK	**Knik Glacier**	**27.80**	**52**	*eP*		**P**		**17 08 21.8**	**+0.1**
	comp=Z,18nm,1.0s								
SML	**Sawmill**	**27.82**	**51**	*eP*		**P**		**17 08 22.1**	**+0.2**
	comp=Z,16nm,1.0s								
SML	**Sawmill**	**27.82**	**51**	*eP*		**P**		**17 08 22.1**	**+0.2**
SML				pmax		pmax			
	comp=Z,16nm,1.0s								
WRH	**Wood River Hil**	**27.85**	**46**	*eP*		**P**		**17 08 22.9**	**+0.9**
	comp=Z,7.8nm,1.0s								
COLA	**College**	**27.96**	**45**	*i* P		**P**		**17 08 22.2**	**-0.8**
COLA				pmax		pmax			
	comp=Z,7.0nm,1.0s								
KSRS	**Korea Array**	**27.97**	**250**	P		**P**		**17 08 23.8**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=41,slow=10.0,SNR=6.1								
CCB	**Clear Creek Bu**	**27.97**	**45**	*eP*		**P**		**17 08 23.7**	**+0.6**
	comp=Z,20nm,1.6s								
SCM	**Sheep Creek Mo**	**28.30**	**51**	*eP*		**P**		**17 08 26.7**	**+0.6**
	comp=Z,23nm,1.2s								
SCM	**Sheep Creek Mo**	**28.30**	**51**	*eP*		**P**		**17 08 26.7**	**+0.6**
SCM				pmax		pmax			
	comp=Z,23nm,1.2s								
HDA	**Harding Lake**	**28.34**	**46**	*eP*		**P**		**17 08 27.0**	**+0.5**
	comp=Z,5.4nm,0.6s								
ILAR	**Eielson Array**	**28.37**	**45**	P		**P**		**17 08 26.9**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=259,slow=8.1,SNR=13								
ILB	**Eielson Array**	**28.37**	**45**	*eP*		**P**		**17 08 26.9**	**+0.2**
	comp=Z,3.5nm,0.8s								
PRP	**Porcupine Dome**	**28.95**	**43**	*eP*		**P**		**17 08 32.7**	**+0.7**
	comp=Z,7.7nm,0.8s								
DOT	**Dot Lake**	**29.65**	**47**	*eP*		**P**		**17 08 37.8**	**-0.3**
	comp=Z,2.5nm,0.7s								
EGAK	**Eagle**	**30.82**	**45**	*eP*		**P**		**17 08 48.4**	**+0.1**
	comp=Z,8.9nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**33.27**	**171**	T		T		17 44 53.1	
	baz=353,slow=76,SNR=9.2								
H11N3	**WAKE ISLAND Hy**	**33.29**	**171**	T		T		17 45 02.2	
	baz=353,slow=76,SNR=3.2								
H11N1	**WAKE ISLAND Hy**	**33.29**	**171**	T		T		17 44 46.9	
	baz=353,slow=76,SNR=4.5								
INK	**Inuvik**	**33.54**	**38**	P		**P**		**17 09 12.1**	**0.0**
	comp=Z,1.4nm,0.7s,baz=268,slow=6.7,SNR=6.0								
ULN	**Ulaanbaatar**	**34.45**	**284**	*ceP*		**P**		**17 09 16.4**	**-4.1**
ULN				pmax		pmax			
	comp=Z,3.0nm,1.7s								
TLY	**Talaya**	**34.67**	**292**	*i* P		**P**		**17 09 21.3**	**-0.9**
SONM	**Songino Array**	**34.85**	**284**	P		**P**		**17 09 22.8**

comp=Z,5.4nm,0.7s
BRVK Borovoye 51.30 309 *i* P **P 17 11 35.2 -1.3**
BRVK pmax pmax
comp=Z,1.0nm,0.9s
MOD Modoc Plateau 51.52 69 *eP* **P 17 11 40.0 +1.5**
comp=Z,5.8nm,1.0s
ARCES ARCESS Array B 53.84 342 P **P 17 11 55.3 +0.3**
comp=Z,2.5nm,0.6s,baz=141,slow=4.7,SNR=10
BOZ Bozeman (W) 53.85 60 *eP* **P 17 11 56.8 +1.1**
comp=Z,12nm,1.6s
BOZ Bozeman (W) 53.85 60 *eP* **P 17 11 56.8 +1.1**
BOZ pmax pmax
comp=Z,12nm,1.6s
SLVN Son La 53.85 257 *eP* **P 17 11 56.0 +0.1**
comp=Z,7.4nm,1.3s
SUMG Summit 54.13 7 *eP* **P 17 11 58.2 +0.6**
comp=Z,10nm,0.9s
SUMG Summit 54.13 7 *eP* **P 17 11 58.2 +0.6**
SUMG pmax pmax
comp=Z,10.0nm,0.9s
ARU Arti 54.22 318 P **P 17 11 57.5 -0.6**
comp=Z,1.2nm,0.6s,baz=58,slow=1.8,SNR=6.8
ARU Arti 54.22 318 *eP* **P 17 11 57.4 -0.6**
comp=Z,11nm,1.4s
ARU Arti 54.22 318 *d i*P **P 17 11 57.1 -0.9**
ARU S S 17 19 41.4 +8.1
ARU pmax pmax
comp=Z,8.0nm,1.4s
YHB Horse Butte 54.64 61 *eP* **P 17 12 03.1 +1.6**
comp=Z,29nm,0.3s
KVN Kaiserville 54.67 70 *eP* **P 17 12 03.8 +2.0**
comp=Z,4.7nm,0.9s
KVN Kaiserville 54.67 70 *eP* **P 17 12 03.8 +2.0**
KVN pmax pmax
comp=Z,5.0nm,0.9s
YHH Holmes Hill 54.80 61 *eP* **P 17 12 04.1 +1.3**
comp=Z,3.1nm,0.8s
NVAR Mina Array Bea 54.98 71 P **P 17 12 06.3 +2.2**
comp=Z,2.7nm,0.7s,baz=298,slow=7.4,SNR=17
ELK Elko 55.14 67 *eP* **P 17 12 06.7 +1.5**
comp=Z,2.1nm,0.8s
ELK Elko 55.14 67 *eP* **P 17 12 06.7 +1.5**
ELK pmax pmax
comp=Z,2.0nm,0.8s
RLMT Red Lodge 55.41 59 *eP* **P 17 12 08.7 +1.6**
comp=Z,23nm,1.4s
AAK Ala-Archa 56.02 297 *ceP* **P 17 12 10.2 -1.2**
AAK pmax pmax
comp=Z,5.0nm,1.7s
KIRV Kirov 56.16 324 P **P 17 12 11.8 -0.1**
comp=Z,4.4nm,0.6s,baz=70,slow=12,SNR=3.6
R11A Troy Canyon, C 56.58 69 *eP* **P 17 12 17.3 +1.7**
comp=Z,2.0nm,0.9s
PD31 Pinedale Array 56.86 62 *eP* **P 17 12 18.1 +0.5**
comp=Z,4.3nm,0.9s
PDAR Pinedale Array 56.86 62 P **P 17 12 19.1 +1.6**
comp=Z,2.8nm,0.7s,baz=302,slow=2.8,SNR=22
DUG Dugway, Tooele 56.86 66 *eP* **P 17 12 19.3 +1.9**
comp=Z,4.9nm,0.9s
DUG Dugway, Tooele 56.86 66 *eP* **P 17 12 19.3 +1.9**
DUG pmax pmax
comp=Z,5.0nm,0.9s
TPNV Topopah Spring 57.18 71 *eP* **P 17 12 21.4 +1.7**
comp=Z,4.6nm,1.0s
TPNV Topopah Spring 57.18 71 *eP* **P 17 12 21.5 +1.7**
TPNV pmax pmax
comp=Z,5.0nm,1.0s
KSH Kashi 57.35 294 *eP* **P 17 12 25.2 +4.3**
KLMR Klimovskoe 57.65 331 *eP* **P 17 12 21.2 -1.3**
KLMR pmax pmax
comp=Z,8.0nm,0.8s
KK31 Karatay Array 57.82 300 *eP* **P 17 12 23.2 -0.8**
comp=Z,3.8nm,0.7s
KK31 Karatay Array 57.82 300 *eP* **P 17 12 23.2 -0.8**
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 57.82 300 *eP* **P 17 12 23.1 -0.9**
comp=Z,3.8nm,0.7s
KKAR Karatay Array 57.82 300 *eP* **P 17 12 23.1 -0.9**
KKAR pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 58.20 336 P **P 17 12 27.4 +1.1**
JOF pmax pmax
comp=Z,19nm,1.0s
ABKAR Akbulak array 58.67 311 *eP* **P 17 12 29.9 +0.1**
comp=Z,3.4nm,0.8s
AKTO Aktyubinsk 58.68 313 P **P 17 12 30.1 +0.2**
comp=Z,1.7nm,0.5s,baz=68,slow=9.4,SNR=5.3
CHTO Chiang Mai 58.74 260 *eP* **P 17 12 30.7 0.0**
comp=Z,3.6nm,0.8s
CHTO Chiang Mai 58.74 260 *eP* **P 17 12 30.7 0.0**
CHTO pmax pmax
comp=Z,4.0nm,0.8s
RSSD Black Hills 58.80 57 *eP* **P 17 12 32.4 +1.3**
comp=Z,11nm,0.8s
RSSD Black Hills 58.80 57 *eP* **P 17 12 32.4 +1.3**
RSSD pmax pmax
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 59.02 260 P **P 17 12 34.0 +1.4**
comp=Z,2.1nm,0.9s,baz=26,slow=7.8,SNR=10
BTK Batken 59.80 297 *eP* **P 17 12 37.7 -0.2**
comp=Z,9.1nm,0.8s
BTK Batken 59.80 297 *eP* **P 17 12 37.7 -0.2**
BTK pmax pmax
comp=Z,9.0nm,0.8s
PV22 Blue Mesa, Par 60.25 65 *eP* **P 17 12 42.6 +1.4**
comp=Z,4.2nm,0.9s
PV16 Nyswonger Mesa 60.34 65 *eP* **P 17 12 43.5 +1.7**
comp=Z,9.5nm,1.2s
PV18 Skein Mesa, Pa 60.39 65 *eP* **P 17 12 43.4 +1.3**
comp=Z,7.5nm,1.0s
PV05 Paradox Valley 60.40 65 *eP* **P 17 12 43.8 +1.6**
comp=Z,8.1nm,0.7s
PV13 Radium Mtn., P 60.50 65 *eP* **P 17 12 44.6 +1.7**
comp=Z,7.4nm,0.9s
FINES FINESS Array B 60.74 337 P **P 17 12 44.3 +0.5**
comp=Z,1.7nm,0.5s,baz=31,slow=8.7,SNR=17
FINES LR LR 17 42 52.2
comp=Z,30nm,18.1s,baz=37,slow=40
FINES FINESS Array B 60.74 337 *i* P **P 17 12 44.2 +0.4**
FINES pmax pmax
comp=Z,2.0nm,0.5s
SMCO Snowmass 60.77 63 *eP* **P 17 12 46.6 +1.6**
comp=Z,5.2nm,0.8s
ISCO Idaho Springs 61.06 62 *eP* **P 17 12 48.6 +1.8**
comp=Z,5.1nm,1.1s
ISCO Idaho Springs 61.06 62 *eP* **P 17 12 48.6 +1.8**
ISCO pmax pmax
comp=Z,5.0nm,1.1s
S22A 4UR Ranch, Cre 61.88 64 *eP* **P 17 12 54.4 +2.0**
comp=Z,9.4nm,1.4s
OBN Obninsk 63.24 328 *i* P **P 17 13 00.3 -0.4**
OBN pmax pmax
comp=Z,7.0nm,1.1s
OBN MLR MLR
comp=Z,63nm,15.0s
NB2 NORSAR Subarra 64.06 344 P **P 17 13 05.8 -0.3**
comp=Z,1.5nm,0.7s,baz=20,slow=6.9
NOA NORSAR Array B 64.06 344 P **P 17 13 06.3 +0.2**
comp=Z,2.3nm,0.7s,baz=20,slow=6.6,SNR=10
ANMO Albuquerque 64.14 66 *ceP* **P 17 13 07.3 +0.1**
ANMO pmax pmax
comp=Z,6.0nm,2.5s
MNTX Cornudas Mount 67.15 67 *eP* **P 17 13 27.9 +1.4**
comp=Z,5.8nm,1.2s
N41A Harden Midland 67.84 52 *eP* **P 17 13 30.3 -0.4**
GEYT Alibeck 68.00 304 P **P 17 13 31.9 +0.1**
comp=Z,6.0nm,0.7s,baz=0.0,slow=4.4,SNR=17
GYA0B ALIBECK ARRAY 68.00 304 *eP* **P 17 13 31.2 -0.6**
comp=Z,6.0nm,0.7s
WMOK Wichita Mounta 68.45 61 *eP* **P 17 13 35.5 +0.9**
comp=Z,4.7nm,0.8s
WMOK Wichita Mounta 68.45 61 *eP* **P 17 13 35.6 +0.9**
WMOK pmax pmax
comp=Z,5.0nm,0.8s
AKASG Malin Array Be 69.32 330 P **P 17 13 39.6 -0.2**
comp=Z,4.7nm,0.6s,baz=30,slow=6.5,SNR=12
AKASG Malin Array Be 69.32 330 *i* P **P 17 13 39.5 -0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 69.32 330 *eP* **P 17 13 39.5 -0.2**
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 69.32 330 *eP* **P 17 13 39.5 -0.2**
AKBB pmax pmax
comp=Z,4.0nm,0.7s
KIEV Kiev 69.33 330 *eP* **P 17 13 39.4 -0.4**
comp=Z,3.9nm,0.6s
KIEV Kiev 69.33 330 *eP* **P 17 13 39.4 -0.4**
KIEV pmax pmax
comp=Z,4.0nm,0.6s
TX31 Lajitas Ar. Si 69.90 68 *eP* **P 17 13 45.4 +1.6**
comp=Z,6.2nm,1.2s
TXAR Lajitas Array 69.90 68 P **P 17 13 44.7 +0.9**
comp=Z,1.8nm,0.6s,baz=323,slow=6.9,SNR=21
KVAR Kislovodsk Arr 70.26 318 LR LR 17 48 00.3
comp=Z,15nm,18.1s,baz=278,slow=39
GNI Garni 72.53 314 *i* P **P 17 14 00.0 +0.3**
GNI pmax pmax
comp=Z,32nm,1.0s
KOLS Kolonicke sedl 72.91 333 *eP* **P 17 14 02.0 +0.4**
KOLS Kolonicke sedl 72.91 333 *eP* **P 17 14 02.0 +0.4**
CLL Collm 72.94 340 *i* P **P 17 14 02.1 +0.5**
comp=Z,7.0nm,1.2s
CLL *e* 17 14 06.0
CLL *i* pP **pwP 17 14 14.1 0.0**
CLL Collm 72.94 340 *i* P **P 17 14 02.1 +0.5**
CLL pmax pmax
comp=Z,7.0nm,1.2s
BUR08 Bucovina Ar. S 73.25 331 *eP* **P 17 14 04.2 +0.5**
comp=Z,4.3nm,0.8s
BURAR Bucovina Array 73.27 331 ||*i*P **P 17 14 04.3 +0.5**
BURAR Bucovina Array 73.27 331 ||P **P 17 14 04.4 +0.6**
TRPA Tarpa 73.57 333 ||*i*P **P 17 14 06.6 +1.2**
BIZ Bicaz 73.61 330 ||*i*P **P 17 14 06.5 +0.8**
TESR Tescani 73.83 329 ||*i*P **P 17 14 07.3 +0.3**
ARCR ARCALIA 74.00 331 ||*i*P P 17 14 18.0 +10
VRI Vrincioaia 74.38 329 ||*i*P P 17 14 14.8 +4.6
VRI Vrincioaia 74.38 329 ||P P 17 14 14.8 +4.6
GERES GERESS Array B 75.11 339 P **P 17 14 14.6 +0.1**
comp=Z,0.3nm,0.5s,baz=37,slow=3.9,SNR=3.4
VOIR 75.28 330 ||*i*P **P 17 14 16.7 +1.1**
VOIR 75.28 330 ||P **P 17 14 16.7 +1.1**
SULR 75.59 329 ||*i*P P 17 14 08.4 -8.8
GZR Gura Zlata 76.00 331 ||*i*P **P 17 14 20.3 +0.7**
GZR Gura Zlata 76.00 331 ||P **P 17 14 20.3 +0.7**
WRA Warramunga Arr 76.22 206 P **P 17 14 21.0 0.0**
comp=Z,1.9nm,0.9s,baz=5.6,slow=3.4,SNR=2.7
WRA Warramunga Arr 76.22 206 P **P 17 14 21.0 0.0**
SOKA Soboth 76.85 337 *eP* **P 17 14 25.1 +0.7**
comp=Z,3.2nm,1.0s
KBA Koelnbreinsper 76.86 338 *i* P **P 17 14 26.7 +2.0**
comp=Z,5.7nm,0.8s
ABTA Abfaltersbach 77.36 339 *i* P **P 17 14 29.3 +2.0**
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 77.41 321 P **P 17 14 28.4 +0.6**
comp=Z,1.2nm,0.7s,baz=68,slow=3.7,SNR=5.5
PDG Podgorica 79.72 333 ||*i*P **P 17 14 40.6 +0.3**
ASAR Alice Springs 79.89 206 P **P 17 14 42.0 +0.7**
comp=Z,1.7nm,0.7s,baz=17,slow=5.1,SNR=42
MMAI Mount Meron Ar 82.54 317 LR LR 17 55 18.2
comp=Z,17nm,18.7s,baz=130,slow=38
STKA Stephens Creek 86.12 197 P **P 17 15 13.7 +0.4**
comp=Z,1.8nm,0.8s,baz=6.8,slow=5.1,SNR=3.8
ESDC Sonseca Array 87.04 349 P **P 17 15 18.1 0.0**
comp=Z,0.9nm,0.7s,baz=13,slow=4.9,SNR=6.5

*IDC **03** 17:19:18.8±1.0, 3°.15N×147°.20E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.1/38, mbtmp4.2/13, ML4.4/1, MS3.4/8, Ms1 3.4/8, ms1mx3.0/36, Error ellipse: s-maj=32.9km s-min=15.8km az=107.0*
*ISCJB **03** 17:19:21.6±0.5, 3°.10N±0°.06×147°.3E±0°.1, h33km, mb4.5/22, MS3.5/5, Error ellipse: s-maj=15.8km s-min=8.5km az=7.8*
*NEIC **03** 17:19:21.7±1.3, 3°.11N×147°.19E, h20km±6km, mb4.7/7, Error ellipse: s-maj=23.5km s-min=5.0km az=99.0*
ISC 03 17:19:23.5±0.6, 3°.08N±0°.09×147°.22E±0°.10, h35km, n37, σ1°16/34, mb4.3/22, MS3.5/5, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**5.09**	**178**	*e*Pn		**Pn**	**17 20 37.1**	**-0.2**
JAY	**Jayapura**	**8.56**	**230**	Pn		**Pn**	**17 21 22.6**	**-2.4**
	4.0nm,0.3s,baz=131,slow=1.7,SNR=33							
JAY				Sn		Sn	17 22 54.4	-6.1
	0.3nm,0.3s,baz=214,slow=18,SNR=1.7							
JAY				LR		LR	17 24 10.2	
	comp=Z,322nm,20.1s,baz=6.5,slow=34							
GUMO	**Guam**	**10.70**	**348**	LR		LR	17 24 55.8	
	comp=Z,85nm,20.4s,baz=169,slow=32							
PATS	**Pohnpei**	**11.67**	**71**	*e*Pn		**Pn**	**17 22 05.5**	**-2.1**
HNR	**Honiara**	**17.75**	**135**	LR		LR	17 29 53.9	
	comp=Z,78nm,19.6s,baz=6.0,slow=36							
LUWI	**Luwuk**	**24.78**	**261**	*e*P		**P**	**17 24 39.8**	**-2.6**
	23nm,0.8s							
WR1	**Warramunga Arr**	**26.14**	**208**	*e*P		**P**	**17 24 55.7**	**+1.1**
WRA	**Warramunga Arr**	**26.14**	**208**	P		**P**	**17 24 55.7**	**+1.1**
	2.4nm,0.5s,baz=32,slow=9.4,SNR=14							
AS31	**Alice Springs**	**29.57**	**205**	*e*P		**P**	**17 25 26.6**	**+1.2**
	1.7nm,1.2s							
ASAR	**Alice Springs**	**29.58**	**205**	P		**P**	**17 25 26.6**	**+1.3**
	1.9nm,0.7s,baz=32,slow=7.1,SNR=22							
ASAR				LR		LR	17 37 33.5	
	comp=Z,156nm,18.0s,baz=44,slow=37							
FITZ	**Fitzroy Crossi**	**29.91**	**225**	P		**P**	**17 25 28.4**	**0.0**
	4.4nm,0.9s,baz=40,slow=9.5,SNR=3.1							
FITZ				LR		LR	17 37 19.9	
	comp=Z,64nm,20.4s,baz=16,slow=36							
JNU	**Nakatsue**	**33.58**	**335**	P		**P**	**17 25 59.3**	**-1.2**
	7.7nm,0.9s,baz=166,slow=2.1,SNR=5.5							
KSRS	**Korea Array**	**38.53**	**335**	P		**P**	**17 26 42.6**	**0.0**
	1.1nm,0.6s,baz=150,slow=8.3,SNR=7.4							
PANO	**Nakornpanom**	**44.08**	**292**	P		**P**	**17 27 31.5**	**+2.8**
	0.2nm,1.2s							
CHAI	**Chaiyaphum**	**46.28**	**289**	P		**P**	**17 27 47.5**	**+1.4**
	13μm,0.7s							
NANT	**Nan**	**48.09**	**293**	P		**P**	**17 28 01.2**	**+1.0**
	12μm,0.8s							
CMAR	**Chiang Mai Arr**	**49.64**	**292**	P		**P**	**17 28 13.2**	**+1.1**
	2.6nm,0.7s,baz=110,slow=5.4,SNR=18							
CMAR				LR		LR	17 47 00.3	
	comp=Z,26nm,21.0s,baz=295,slow=34							
PETK	**Petropavlovsk-**	**50.62**	**8**	P		**P**	**17 28 19.3**	**+0.3**
	3.5nm,1.0s,baz=142,slow=5.6,SNR=3.9							
PEA1	**Petropavlovsk-**	**50.62**	**8**	*e*P		**P**	**17 28 19.3**	**+0.3**
ULN	**Ulaanbaatar**	**56.41**	**329**	*e*P		**P**	**17 29 02.1**	**+0.3**
	13nm,1.5s							
SONA0	**Songino Array**	**56.74**	**328**	*e*P		**P**	**17 29 03.7**	**-0.3**
SONM	**Songino Array**	**56.74**	**328**	P		**P**	**17 29 03.7**	**-0.3**
	2.5nm,0.8s,baz=126,slow=6.0,SNR=8.4							
YAK	**Yakutsk**	**60.27**	**351**	*e*P		**P**	**17 29 28.5**	**+0.3**
	3.8nm,0.5s							
MK32	**Makanchi Array**	**70.76**	**319**	*e*P		**P**	**17 30 37.1**	**+0.7**
MKAR	**Makanchi Array**	**70.76**	**319**	P		**P**	**17 30 37.1**	**+0.7**
	1.1nm,0.6s,baz=96,slow=7.3,SNR=14							
MKAR				LR		LR	18 00 06.4	
	comp=Z,36nm,21.3s,baz=128,slow=35							
MAKZ	**Makanchi**	**70.97**	**319**	*e*P		**P**	**17 30 37.6**	**-0.1**
	3.0nm,0.7s							
ZALV	**Zalesovo Beam**	**71.55**	**326**	P		**P**	**17 30 40.7**	**-0.3**
	1.2nm,0.6s,baz=102,slow=4.9,SNR=6.3							
ZAA1	**Zalesovo Array**	**71.55**	**326**	*e*P		**P**	**17 30 40.7**	**-0.3**
KURK	**Kurchatov**	**74.17**	**322**	*e*P		**P**	**17 30 56.2**	**-0.3**
	8.6nm,0.9s							
ILAR	**Eielson Array**	**77.12**	**24**	P		**P**	**17 31 13.0**	**-0.2**
	1.1nm,0.7s,baz=251,slow=5.7,SNR=12							
ILB	**Eielson Array**	**77.12**	**24**	*e*P		**P**	**17 31 12.9**	**-0.2**
KK31	**Karatay Array**	**78.20**	**313**	*e*P		**P**	**17 31 20.1**	**+0.4**
KKAR	**Karatay Array**	**78.20**	**313**	*e*P		**P**	**17 31 20.1**	**+0.4**
	4.2nm,1.2s							
YKA	**Yellowknife Ar**	**91.07**	**27**	P		**P**	**17 32 25.3**	**+1.1**
	0.4nm,0.6s,baz=280,slow=5.5,SNR=7.2							
YKB5	**Yellowknife Ar**	**91.07**	**27**	*e*P		**P**	**17 32 25.3**	**+1.1**
PDAR	**Pinedale Array**	**97.59**	**46**	LR		LR	18 11 05.5	
	comp=Z,17nm,19.0s,baz=260,slow=32							
LPAZ	**La Paz**	**142.85**	**113**	PKP		**PKPdf**	**17 38 56.3**	**+1.1**
	0.7nm,0.6s,baz=305,slow=4.2,SNR=4.1							

MEX 03 17:25:57.9±1.1, 19°.19N×104°.08W, h23km±26km, MD4.0, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EZ5V		**0.53**	**57**	*i* P		Pb	17 26 07.2	-1.6
EZ5V				*e*S		Sb	17 26 14.6	-1.7
CJM	**Chamela**	**0.97**	**289**	*i* P		Pb	17 26 12.7	-3.3
CJM				*e*S		Sb	17 26 24.8	-3.5
MMIG	**Aquila**	**1.13**	**142**	*e*P		Pn	17 26 15.0	-3.3
MMIG				*e*S		Sb	17 26 30.1	-2.9
ARIG	**Puente Sto Nin**	**3.65**	**104**	*e*P		Pn	17 26 56.9	+4.0

*ISCJB **03** 17:28:08.8±0.9, 63°.13S±0°.10×167°.9E±0°.5, h10km, mb4.2/3, MS3.7/6, Error ellipse: s-maj=34.8km s-min=13.8km az=179.0*
*IDC **03** 17:28:08.9±1.1, 63°.18S×167°.87E, h0km, mb4.3/3, mb1 4.4/5, mb1mx4.1/20, mbtmp4.4/5, ML3.8/2, MS3.8/6, Ms1 3.8/6, ms1mx3.6/14, Error ellipse: s-maj=44.7km s-min=23.3km az=79.0*
ISC 03 17:28:10.4±1.0, 63°.1S±0°.1×167°.9E±0°.3, h10km, n23, σ0°59/8, mb3.9/3, MS3.7/6, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**14.60**	**185**	Pn		**Pn**	**17 31 37.5**	**+0.8**
	0.1nm,0.3s,baz=17,slow=16,SNR=21							
VNDA				LR		LR	17 36 07.1	
	comp=Z,563nm,21.3s,baz=16,slow=33							
RPZ	**Rata Peaks**	**19.52**	**7**	P		**Pn**	**17 32 39.3**	**+0.3**
	2.1nm,0.3s,baz=307,slow=3.6,SNR=11							
RPZ				LR		LR	17 38 43.5	
	comp=Z,470nm,20.3s,baz=192,slow=32							
URZ	**Urewera**	**25.51**	**17**	LR		LR	17 43 10.3	
	comp=Z,155nm,19.5s,baz=184,slow=35							
STKA	**Stephens Creek**	**35.42**	**319**	LR		LR	17 47 22.9	
	comp=Z,202nm,19.1s,baz=181,slow=32							
MAW	**Mawson**	**38.96**	**216**	P		**P**	**17 35 35.3**	**-0.6**
	1.8nm,0.9s,baz=123,slow=12,SNR=3.7							
MAW				LR		LR	17 51 20.4	
	comp=Z,67nm,18.2s,baz=128,slow=36							
DZM	**Mont Dzumac**	**41.03**	**358**	*e*LR		LR	17 47 14.7	
	comp=Z,195nm,24.1s							
H01W1	**Cape Leeuwin H**	**43.26**	**285**	T		T	18 22 55.9	
	baz=147,slow=76,SNR=150							
H01W2	**Cape Leeuwin H**	**43.26**	**285**	T		T	18 22 56.1	
	baz=147,slow=76,SNR=140							
H01W3	**Cape Leeuwin H**	**43.27**	**285**	T		T	18 22 57.1	
	baz=147,slow=76,SNR=140							
ASAR	**Alice Springs**	**45.48**	**314**	P		**P**	**17 36 29.7**	**+0.1**
	1.7nm,1.0s,baz=153,slow=6.9,SNR=12							
ASAR				LR		LR	17 54 47.1	
	comp=Z,84nm,19.2s,baz=1.0,slow=35							
PMSA	**Palmer Station**	**46.80**	**152**	P		**P**	**17 36 38.9**	**-0.5**
	22nm,0.8s,baz=180,slow=9.1,SNR=3.2							
TBI	**Tubuai**	**48.83**	**56**	*e*T		T	18 28 31.7	
	43nm,0.4s							
PAE	**Paea**	**53.98**	**53**	*e*T		T	18 34 59.4	
	6.2nm,0.3s							
TVO	**Taravao**	**53.99**	**53**	*e*T		T	18 34 58.8	
	3.1nm,0.3s							
PPT2	**Papeete2**	**54.05**	**53**	*e*LR		LR	17 53 03.4	
	comp=Z,83nm,22.5s							
PPT2	**Papeete2**	**54.05**	**53**	*e*T		T	18 35 04.3	
	12nm,0.3s							
RKT	**Rikitea**	**54.91**	**71**	*e*T		T	18 35 57.3	
	18nm,0.3s							
H08S2	**Diego Garcia H**	**85.68**	**262**	T		T	19 16 21.0	
	baz=152,slow=76,SNR=111							
H08S1	**Diego Carcia H**	**85.69**	**262**	T		T	19 16 16.5	
	baz=152,slow=76,SNR=50							
H08S3	**Diego Garcia H**	**85.70**	**262**	T		T	19 16 17.4	
	baz=152,slow=76,SNR=127							
ILAR	**Eielson Array**	**131.87**	**24**	PKP		**PKPdf**	**17 47 21.9**	**-0.2**
	0.6nm,0.9s,baz=219,slow=3.4,SNR=4.1							
KURBB	**Kurchatov Arra**	**133.10**	**299**	PKP		**PKPdf**	**17 47 25.2**	**+0.4**
	0.1nm,0.4s,baz=130,slow=1.4,SNR=2.5							
BRTR	**Keskin Array B**	**144.25**	**251**	PKP		**PKPab**	**17 47 43.5**	**-0.2**
	2.4nm,1.1s,baz=110,slow=3.3,SNR=5.4							

TAP 03 17:33:26.8, 24°.83N×122°.04E, h9km, ML2.0, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.19**	**345**	P		Pg	17 33 31.1	+0.3
	baz=339							
TWB1				S		Sg	17 33 34.2	+0.8
	baz=339							
NTC	**Toucheng**	**0.19**	**278**	P		Pg	17 33 31.5	+0.7
	baz=277							
NTC				S		Sg	17 33 35.0	+1.4
	baz=277							
TIPB	**Shuangxi**	**0.24**	**306**	P		Pg	17 33 32.4	+0.6
	baz=295							
TIPB				*e*S		Sg	17 33 36.0	+0.9
	baz=295							
TWC	**Suao**	**0.28**	**219**	*e*P		Pg	17 33 32.5	0.0
	baz=227							
TWC				*e*S		Sg	17 33 35.8	-0.4
	baz=227							
EOS1	**EOS1**	**0.29**	**164**	*e*P		Pg	17 33 33.2	+0.6
	baz=153							
EOS1				*e*S		Sg	17 33 37.7	+1.2
	baz=153							
NWF	**Wu-fen Shan**	**0.34**	**316**	*e*P		Pg	17 33 34.2	+0.6
	baz=306							
NWF				*e*S		Sb	17 33 40.0	-0.6
	baz=306							
WFSB	**Wu-fen Shan**	**0.34**	**316**	*e*P		Pb	17 33 35.3	+0.3
	baz=306							
WFSB				*e*S		Sb	17 33 39.8	-0.7
	baz=306							
TWE	**Neicheng**	**0.35**	**253**	P		Pg	17 33 34.2	+0.3
	baz=252							
TWE				*e*S		Sb	17 33 40.3	-0.7
	baz=252							
TWA	**Mucha**	**0.44**	**290**	*e*P		Pb	17 33 36.5	-0.3
	baz=280							
ENTT	**Nioudou**	**0.47**	**247**	P		Pg	17 33 36.5	+0.5
	baz=247							
ENTT				*e*S		Sb	17 33 44.0	-0.3
	baz=247							
ENA	**Nanau**	**0.48**	**214**	*e*P		Pb	17 33 37.0	-0.5
	baz=221							
ENA				*e*S		Sg	17 33 43.4	+0.9
	baz=221							
NWLT	**Wulai**	**0.49**	**264**	*e*P		Pg	17 33 37.0	+0.5
	baz=264							
NWLT				*e*S		Sg	17 33 43.6	+0.8
	baz=264							
NDT	**Datong Townshi**	**0.53**	**245**	P		Pg	17 33 37.7	+0.5
	baz=246							
NDT				*e*S		Sg	17 33 45.0	+0.9
	baz=246							
YHNB	**Yeheng**	**0.62**	**256**	*e*P		Pg	17 33 39.3	+0.4
	baz=256							
YHNB				*e*S		Sg	17 33 47.7	+0.5
	baz=256							
NSK	**Sanguang**	**0.64**	**256**	P		Pg	17 33 39.5	+0.3
	baz=256							
NSK				*e*S		Sb	17 33 48.4	-0.8
	baz=256							
NNSB	**Datong**	**0.72**	**237**	P		Pg	17 33 40.9	+0.2
	baz=238							
NNSB				*e*S		Sb	17 33 51.0	-0.6
	baz=238							
NNS	**Nan Shan**	**0.72**	**238**	P		Pg	17 33 41.1	+0.3
	baz=238							
NNS				*e*S		Sb	17 33 51.5	-0.1
	baz=238							
NACB	**Ninganchiao**	**0.77**	**212**	P		Pg	17 33 42.0	+0.3
	baz=206							
NACB				*e*S		Sg	17 33 52.2	+0.6
	baz=206							
ETLH	**Xiulin Townshi**	**0.80**	**220**	*e*P		Pb	17 33 42.8	-0.2
	baz=231							
ETLH				*e*S		Sg	17 33 53.3	+0.6
	baz=231							
TWD	**Chiawan**	**0.85**	**209**	*e*P		Pb	17 33 43.6	-0.1
	baz=203							
TWD				*e*S		Sb	17 33 54.9	-0.3
	baz=203							
LIOB	**Emei**	**0.95**	**259**	*e*P		Pn	17 33 46.6	+0.3
	baz=260							
LIOB				*e*S		Sn	17 33 59.5	-0.5
	baz=260							
NSTT	**Nanjuang**	**0.96**	**258**	*e*P		Pn	17 33 46.5	-0.1
	baz=259							
NSTT				*e*S		Sn	17 33 59.7	-0.6
	baz=259							
WHF	**Hehuan Shan**	**0.98**	**226**	*e*P		Pb	17 33 46.3	+0.1
	baz=228							
WHF				S		Sb	17 33 59.6	+0.2
	baz=228							
CHGB	**Renai**	**1.10**	**226**	*e*P		Pb	17 33 48.1	-0.1
	baz=229							
CHGB				S		Sn	17 34 03.7	-0.3
	baz=229							

ESL	Shilin	1.15 209	eP	Pb	17 33 48.8	-0.1
	baz=220					
ESL			eS	Sb	17 34 04.4	+0.5
	baz=220					
OWD	Renai	1.17 222	eP	Pb	17 33 49.4	0.0
	baz=226					
OWD			eS	Sb	17 34 04.7	0.0
	baz=226					
VWDT	VWDT	1.35 218	eP	Pb	17 33 52.2	0.0
	baz=230					
VWDT			eS	Sg	17 34 10.1	-0.2
	baz=230					

TAP 03 17:33:35.3, 25.°15N×121.°66E, h12km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YM07	YM07	0.05 310		eP	Pg	17 33 37.9	+0.3
	baz=310						
YM07	YM07	0.05 310		P	Pg	17 33 38.0	+0.4
	baz=309						
YM07				eS	Sg	17 33 39.9	+0.7
	baz=309						
YM08	YM08	0.08 304		eP	Pg	17 33 38.2	+0.4
	baz=301						
YM08	YM08	0.08 304		P	Pg	17 33 38.4	+0.5
	baz=303						
YM08				S	Sg	17 33 40.5	+0.7
	baz=303						
YM11	YM11	0.08 285		eP	Pg	17 33 38.5	+0.5
	baz=299						
YM11	YM11	0.08 285		P	Pg	17 33 38.5	+0.5
	baz=284						
YM11				eS	Sg	17 33 40.5	+0.6
	baz=284						
YM01	YM01	0.08 271		eP	Pg	17 33 38.4	+0.4
	baz=304						
YM01	YM01	0.08 271		P	Pg	17 33 38.4	+0.5
	baz=270						
YM01				eS	Sg	17 33 40.6	+0.8
	baz=270						
YM05	YM05	0.09 282		eP	Pg	17 33 38.1	+0.1
	baz=298						
YM05	YM05	0.09 282		P	Pg	17 33 38.6	+0.5
	baz=282						
YM05				eS	Sg	17 33 40.9	+0.8
	baz=282						
YM10	YM10	0.09 277		eP	Pg	17 33 38.5	+0.4
	baz=305						
YM10	YM10	0.09 277		P	Pg	17 33 38.5	+0.5
	baz=276						
YM10				eS	Sg	17 33 41.2	+1.1
	baz=276						
YM04	YM04	0.11 274		eP	Pg	17 33 38.6	+0.3
	baz=303						
YM04	YM04	0.11 274		eP	Pg	17 33 38.9	+0.6
	baz=274						
YM04				S	Sg	17 33 41.3	+0.8
	baz=274						
YM03	YM03	0.11 287		eP	Pg	17 33 38.2	-0.2
	baz=298						
YM03	YM03	0.11 287		eP	Pg	17 33 38.4	0.0
	baz=287						
YM03				S	Sg	17 33 41.5	+0.9
	baz=287						
ANP	Anpu	0.13 288		eP	Pg	17 33 38.9	+0.3
	baz=287						
ANP				eS	Sg	17 33 42.2	+1.2
	baz=287						
TWA	Mucha	0.18 203		eP	Pg	17 33 39.4	+0.1
	baz=200						
TWA				eS	Sg	17 33 43.6	+1.5
	baz=200						
TWA	Mucha	0.18 203		eS	Sg	17 33 43.2	+1.2
	baz=280						
TWS1	Kuangyinshan	0.22 259		eP	Pb	17 33 41.0	-0.4
	baz=258						
TATO	Taipei	0.23 223		eP	Pb	17 33 41.0	-0.5
	baz=220						
NTC	Toucheng	0.33 152		eP	Pb	17 33 42.6	-0.6
	baz=152						

*ISCJB **03** 17:39:44.6±0.5, 27.°57N±0.°04×61.°83E±0.°06, h35km, mb3.7/14, Error ellipse: s-maj=8.0km s-min=4.4km az=29.0*
*TEH **03** 17:39:44.6, 27.°64N×61.°74E, h10km, ML3.6*
*IDC **03** 17:39:47.1±3.1, 27.°71N×61.°60E, h46km±33km, mb3.5/13, mb1 3.7/15, mb1mx3.5/39, mbtmp3.8/15, ML3.7/2, Error ellipse: s-maj=21.4km s-min=18.1km az=144.0*
*OMAN **03** 17:39:57.2±0.6, 27.°05N×61.°15E, h29km±27km, ml3.6/10, Error ellipse: s-maj=38.5km s-min=6.1km az=230.0*

ISC 03 17:39:45.6±0.7, 27.°53N±0.°06×61.°65E±0.°07, h35km, n49, σ2°69/54, mb3.8/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZD1	Zahaedan-tmp	2.07 341		ePn	Pn	17 40 21.2	+3.2
CHBR	Chabahar	2.19 209		ePn	Pn	17 40 24.8	+5.4
ZHSF	Zahedan	2.21 340		ePg	Pn	17 40 23.0	+3.0
NIAN	Nian	4.27 272		ePn	Pn	17 40 54.0	+5.9
NIAN				IAMB	IAmb	17 41 43.7	
	comp=Z,0.0nm,0.2s						
CHMN	Cheshme madani	4.29 304		ePn	Pn	17 40 52.5	+3.8
CHMN				IAMB	IAmb	17 40 52.7	
	comp=Z,0.0nm,0.3s						
BANOM	Banah	5.04 253		P	Pn	17 41 03.0	+4.3
	SNR=20						
BANOM				S	Sn	17 41 59.1	+3.3
WSAR	Wadi Sarin	5.06 213		P	Pn	17 41 02.1	+3.0
	comp=Z,1.3nm,0.3s,baz=98,slow=7.8,SNR=27						
WSAR				S	Sn	17 41 53.6	-2.7
	comp=Z,10.0nm,0.3s,baz=354,slow=21,SNR=21						
WSAR	Wadi Sarin	5.06 213		P	Pn	17 41 02.1	+3.0
	SNR=36						
WSAR				S	Sn	17 41 54.1	-2.2
MDH	Madha	5.28 246		P	Pn	17 41 05.7	+3.7
MDH				S	Sn	17 41 59.5	-2.2
KHGB	Koh Gabri	5.35 303		IAMB	IAmb	17 41 08.9	
	comp=Z,0.0nm,0.4s						
KHGB				ePn	Pn	17 41 07.4	+4.3
IKOO	Kooshah	5.39 336		IAMB	IAmb	17 41 07.5	
	comp=Z,485nm,0.2s						
IKOO				ePn	Pn	17 41 05.9	+2.1
IDAH	Dahanechah	5.42 344		ePn	Pn	17 41 07.2	+3.1
WBK	Wadi Bani Khal	5.46 207		P	Pn	17 41 07.3	+2.7
	SNR=8.8						
WBK				S	Sn	17 42 04.5	-1.7
SMDO	Samad	5.51 217		P	Pn	17 41 10.0	+4.7
UOSS	Minazif	5.52 243		P	Pn	17 41 08.0	+2.7
	SNR=12						
HOQ	Hoqain	5.54 226		P	Pn	17 41 08.6	+3.0
HOQ				S	Sn	17 42 05.7	-2.5
HATD	Hatta, Dubai	5.64 243		P	Pn	17 41 10.7	+3.8
HATD				S	Sn	17 42 07.1	-3.4
SOHO	SOHO	5.71 235		P	Pn	17 41 11.0	+3.1
	SNR=51						
SOHO				S	Sn	17 42 09.3	-3.0
JLN	Jalan Bani Buh	5.72 201		P	Pn	17 41 11.0	+2.9
	SNR=6.9						
JLN				S	Sn	17 42 11.7	-0.9
ASHO	Ashiyiah	5.76 242		P	Pn	17 41 12.7	+4.0
	SNR=15						
IMON	Monand	5.90 344		ePn	Pn	17 41 13.1	+2.4
ITEG	Tejag	5.91 336		ePn	Pn	17 41 13.1	+2.3
JMDO	Jabal Madar	6.06 213		P	Pn	17 41 17.1	+4.4
SHRT	Shahrakht	6.21 349		ePn	Pn	17 41 16.5	+1.7
ARQ	Araqi	6.23 229		P	Pn	17 41 20.5	+5.4
BSY	Bisya	6.24 221		P	Pn	17 41 21.4	+6.2
TABS	Tabas	7.24 329		ePn	Pn	17 41 30.9	+1.9
GHIR	Ghir-Karzin	7.70 278		ePn	Pn	17 41 38.4	+3.1
ISRV	Sarvestan	7.74 286		ePn	Pn	17 41 39.1	+3.1
IPAY	Payeh	9.18 346		ePn	Pn	17 41 58.8	+3.1
IAKL	Akhelmad	9.38 346		ePn	Pn	17 42 02.0	+3.5
THW	Thamme Wali	10.19 57		P	Pn	17 42 10.4	+1.0
AAK	Ala-Archa	18.35 31		P	P	17 43 56.6	-0.6
	comp=Z,0.6nm,0.3s,baz=201,slow=8.5,SNR=5.3						
KBZ	Khabaz	22.14 322		P	P	17 44 38.0	-0.1
	comp=Z,2.9nm,0.9s,baz=115,slow=7.4,SNR=3.9						
AKTO	Aktyubinsk	23.05 354		P	P	17 44 46.0	-1.7
	comp=Z,1.0nm,0.5s,baz=177,slow=9.5,SNR=3.8						
MKAR	Makanchi Array	25.18 35		P	P	17 45 07.2	-0.5
	comp=Z,0.2nm,0.4s,baz=224,slow=9.9,SNR=4.6						
BRTR	Keskin Array B	26.19 305		P	P	17 45 15.9	-1.2
	comp=Z,0.3nm,0.5s,baz=129,slow=12,SNR=3.7						
BVAR	Borovoye Array	26.29 12		P	P	17 45 16.6	-1.0
	comp=Z,1.7nm,0.4s,baz=198,slow=9.8,SNR=16						
KURBB	Kurchatov Array	26.41 25		P	P	17 45 17.7	-1.0
	comp=Z,0.8nm,0.7s,baz=221,slow=8.9,SNR=8.6						
ZALV	Zalesovo Beam	31.42 27		P	P	17 46 02.6	-0.6
	comp=Z,0.5nm,0.3s,baz=231,slow=11,SNR=3.2						
AKASG	Malin Array Be	33.75 322		P	P	17 46 22.0	-1.7
	comp=Z,1.1nm,0.4s,baz=122,slow=8.5,SNR=4.9						
FINES	FINESS Array B	41.39 335		P	P	17 47 26.7	-1.4
	comp=Z,1.6nm,0.5s,baz=133,slow=8.6,SNR=18						
GERES	GERESS Array B	42.43 313		P	P	17 47 36.2	-0.8
	comp=Z,0.8nm,0.7s,baz=112,slow=10,SNR=6.2						
ARCES	ARCESS Array B	46.96 344		P	P	17 48 11.6	-1.0
	comp=Z,0.8nm,0.3s,baz=146,slow=10,SNR=8.9						
NB2	NORSAR Subarra	47.40 329		P	P	17 48 14.7	-1.5
	comp=Z,0.5nm,0.4s,baz=122,slow=8.6						
NOA	NORSAR Array B	47.40 329		P	P	17 48 14.5	-1.7
	comp=Z,0.8nm,0.6s,baz=118,slow=7.5,SNR=4.7						
TORD	Torodi Ar. Bea	57.52 268		P	P	17 49 32.2	+0.4
	comp=Z,0.4nm,0.5s,baz=59,slow=7.0,SNR=5.9						
TORD				pP	sP	17 49 49.5	+2.3
	comp=Z,0.4nm,0.4s,baz=59,slow=6.9,SNR=4.7						
ASAR	Alice Springs	86.29 119		P	P	17 52 24.9	+0.7
	comp=Z,0.3nm,0.5s,baz=303,slow=4.8,SNR=11						
YKA	Yellowknife Ar	90.25 358		pP	pP	17 53 00.2	+6.3
	comp=Z,0.3nm,0.6s,baz=350,slow=5.2,SNR=4.0						

IDC 03 17:41:06.8±80.0, 24.°79S×176.°81W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/21, mbtmp3.7/3, Error ellipse: s-maj=1467.0km s-min=182.2km az=90.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.12 249		P	P	17 48 18.8	-0.4
	0.6nm,0.5s,baz=100,slow=11,SNR=3.5						
ASAR	Alice Springs	44.77 261		P	P	17 49 22.3	-0.2
	0.5nm,0.5s,baz=95,slow=8.2,SNR=18						
WRA	Warramunga Arr	45.25 266		P	P	17 49 26.6	+0.2
	0.8nm,0.6s,baz=89,slow=7.7,SNR=6.3						

*ISCJB **03** 18:03:45.8±0.7, 31.°12S±0.°05×138.°64E±0.°06, h10km, Error ellipse: s-maj=8.0km s-min=6.9km az=156.9*
*IDC **03** 18:03:48.7±3.8, 30.°86S×138.°92E, h0km, mb1 3.8/2, mb1mx3.4/20, mbtmp3.5/2, ML3.0/3, Error ellipse: s-maj=78.9km s-min=16.0km az=39.0*
*AUST **03** 18:03:48.1±0.0, 31.°26S×138.°66E, h10km, Error ellipse: s-maj=0.3km s-min=0.1km az=339.0*

ISC 03 18:03:46.9±0.9, 31.°21S±0.°06×138.°69E±0.°05, h10km, n8, σ2°44/15, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	Hallett	2.23 175		P	Pn	18 04 25.5	+1.6
	baz=2.2						
HTT				S	Sn	18 04 52.1	+0.5
	baz=2.2						
STKA	Stephens Creek	2.57 106		Pn	Pn	18 04 30.6	+2.1
	0.6nm,0.3s,baz=288,slow=13,SNR=17						
STKA				Lg	Lg	18 05 08.0	
	3.9nm,0.3s,baz=184,slow=22,SNR=6.6						
STKA	Stephens Creek	2.57 106		P	Pn	18 04 30.7	+2.1
	baz=2.6						
STKA				S	Sb	18 05 04.3	-0.4
	baz=2.6						
BBOO	Buckleboo	2.75 234		P	Pn	18 04 32.6	+1.6
	baz=2.7						
BBOO				S	Sn	18 05 05.0	+0.7
	baz=2.7						
CMSA	Cobar Meteorol	6.00 95		P	Pn	18 05 18.2	+2.5
	baz=6.0						
CMSA				S	Sn	18 06 23.7	-0.8
	baz=6.0						
ARPS	Mount Arapiles	6.14 156		P	Pn	18 05 18.3	+0.7
	baz=6.1						
ARPS				S	Sn	18 06 22.5	-5.3
	baz=6.1						
ASAR	Alice Springs	8.63 329		Pn	Pn	18 05 53.2	+1.4
	0.1nm,0.3s,baz=148,slow=13,SNR=16						
ASAR				Sn	Sn	18 07 26.8	-2.5
	0.3nm,0.3s,baz=151,slow=22,SNR=8.7						
WRA	Warramunga Arr	11.88 340		Pn	Pn	18 06 36.9	+0.5
	0.3nm,0.3s,baz=159,slow=12,SNR=13						
WRA				Sn	Sn	18 08 45.5	-3.5
	0.1nm,0.3s,baz=114,slow=22,SNR=3.4						

*KRNET **03** 18:24:05.0±0.1, 42.°41N×70.°33E, h25km, mb4.1*
*IDC **03** 18:24:04.7±1.2, 42.°32N×70.°46E, h0km, mb3.6/3, mb1 3.8/10, mb1mx3.5/57, mbtmp3.8/10, ML3.6/7, MS2.4/1, Ms1 2.4/1, ms1mx2.0/47, Error ellipse: s-maj=15.7km s-min=9.9km az=2.0*
*SOME **03** 18:24:05.5, 42.°40N×70.°48E, h10km*
*NNC **03** 18:24:06.1±0.9, 42.°42N×70.°42E, h6km±5km, mb4.4, mpv4.1, Error ellipse: s-maj=6.2km s-min=3.1km az=23.0*

ISC 03 18:24:04.4±1.1, 42.°41N±0.°02×70.°48E±0.°02, h1km±8km, n108, σ2°38/168, mb3.9/4, 31C-32D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	0.42 232		eP	Pg	18 24 12.7	+0.2
	baz=19						
IUG				eS	Sg	18 24 17.7	-0.3
	baz=19						
IUG	Iuzhnay	0.42 232		eP	Pg	18 24 12.7	+0.2
	333nm,0.2s						
IUG				eS	Sg	18 24 17.6	-0.3
	3μm,0.3s						
CHM	Chimkent	0.66 263		eP	Pg	18 24 17.0	+0.1
	1μm,0.3s						
CHM				eS	Sg	18 24 26.6	+1.2
	3μm,0.4s						
KK31	Karatay Array	0.70 2		⇑P	Pb	18 24 20.1	+0.7
	24nm,0.4s,baz=186,slow=18,SNR=2129						
KK31				⇑S	Sb	18 24 30.0	+0.5
	68nm,0.3s,baz=187,slow=31,SNR=37						
BRLS	Borolday	0.78 323		eP	Pg	18 24 18.6	-0.8
	baz=30						
BRLS				eS	Sg	18 24 27.8	-1.8
	baz=30						
BRLS	Borolday	0.78 323		eP	Pg	18 24 18.6	-0.8
	22nm,0.2s						
BRLS				eS	Sg	18 24 27.7	-1.8
	555nm,0.2s						
ARK	Arkit	1.26 118		⇓iP	Pb	18 24 29.3	+0.3
	baz=17						
ARK				⇓iS	Sn	18 24 47.8	+0.9
	baz=17						
TAS	Tashkent	1.40 220		⇑iP	Pn	18 24 29.8	-1.2
	baz=16						
TAS				⇑iS	Sb	18 24 46.4	-3.2
	baz=16						
MRKS	Merke	2.06 80		Pg	Pb	18 24 43.8	+1.2
	119nm,0.5s						
MRKS				Lg	Lg	18 25 12.1	
	306nm,0.4s						
MRKS	Merke	2.06 80		eP	Pb	18 24 43.8	+1.2
	baz=80						
MRKS				eS	Sg	18 25 12.1	+1.6
	baz=80						
MRKS	Merke	2.06 80		eP	Pb	18 24 43.8	+1.2
	119nm,0.5s						
MRKS				eS	Sg	18 25 12.1	+1.6
	431nm,0.3s						
ARSB	Arslanbob	2.16 119		⇓iP	Pb	18 24 44.5	+0.1
	baz=18						
ARSB				⇓iS	Sb	18 25 12.7	+1.0
	baz=18						
BTK	Batken	2.36 174		⇑iP	Pn	18 24 45.6	+1.3
	baz=71						
BTK				⇑iS	Sn	18 25 14.6	+0.7
	baz=71						
AML	Almayashu	2.40 95		P	Pb	18 24 49.8	+1.1
	SNR=180						
AML	Almayashu	2.40 95		⇓eP	Pb	18 24 49.5	+0.9
	baz=95						
AML				⇓iS	Sb	18 25 20.2	+1.3
	baz=95						
EKS2	Erkin-Say	2.45 83		P	Pb	18 24 50.2	+0.9
	SNR=58						
EKS2	Erkin-Say	2.45 83		⇓iP	Pb	18 24 50.2	+0.9
	baz=83						
EKS2				⇓iS	Sb	18 25 21.6	+1.5
	baz=83						
ARLS	Aral	2.91 99		⇑iP	Pb	18 24 56.2	-1.0
	baz=99						
ARLS				⇑iS	Sb	18 25 31.7	-1.6
	baz=99						
AAK	Ala-Archa	2.98 84		Pn	Pb	18 24 56.5	-1.8
	24nm,0.3s,baz=216,slow=4.7,SNR=78						
AAK				Lg	Lg	18 25 39.7	
	21nm,0.3s,baz=350,slow=21,SNR=20						
AAK				LR	LR	18 26 09.1	
	comp=Z,55nm,18.4s,baz=236,slow=41						
AAK	Ala-Archa	2.98 84		P	Pb	18 24 57.6	-0.8
	SNR=64						
AAK	Ala-Archa	2.98 84		⇑Pn	Pb	18 24 57.5	-0.8
	24nm,0.3s						
AAK				⇑Lg	Lg	18 25 40.2	
	36nm,0.4s						
AAK	Ala-Archa	2.98 84		⇑iP	Pb	18 24 57.5	-0.8
	baz=84						
AAK				⇑iS	Sb	18 25 34.6	-0.6
	baz=84						
UCH	Uchtor	3.00 92		P	Pb	18 24 59.5	+0.7
	SNR=105						
UCH	Uchtor	3.00 92		⇓iP	Pb	18 24 57.6	-1.2
	baz=92						
UCH				⇓iS	Sb	18 25 35.0	-1.1
	baz=92						
USP	Ospenovka	3.08 72		P	Pb	18 24 58.6	-1.4
	SNR=36						
USP	Ospenovka	3.08 72		⇑iP	Pb	18 24 58.1	-1.9
	baz=73						
USP				⇑iS	Sb	18 25 37.2	-0.9
	baz=73						
DRK	Karamyk	3.09 161		⇓iP	Pn	18 24 56.6	+2.1
	baz=59						
DRK				⇓iS	Sn	18 25 33.2	+1.0
	baz=59						
FRU1	Bishkek	3.09 81		⇓eP	Pb	18 24 58.8	-1.4
	baz=81						
FRU1				⇓iS	Sb	18 25 37.4	-1.0
	baz=81						
CHMS	Chumysh	3.21 78		P	Pb	18 24 59.9	-2.2
	SNR=9.6						
CHMS	Chumysh	3.21 78		⇑iP	Pb	18 24 59.9	-2.2
	baz=78						
CHMS				⇑iS	Sb	18 25 39.7	-1.9
	baz=78						
KBK	Karagaybulak	3.31 84		P	Pb	18 25 02.2	-1.8
	SNR=23						
KBK	Karagaybulak	3.31 84		⇑iP	Pb	18 25 02.2	-1.8
	baz=84						
KBK				⇑eS	Sb	18 25 42.2	-2.7
	baz=84						
KZA	Kyzart	3.56 94		P	Pb	18 25 06.2	-2.1
	SNR=33						
KZA	Kyzart	3.56 94		⇓iP	Pb	18 25 05.2	-3.1
	baz=94						
KZA				⇓iS	Sb	18 25 48.2	-4.0
	baz=94						
BTLS	Baital	3.69 43		eP	Pb	18 25 10.9	+0.6
	baz=44						
BTLS				eS	Sb	18 25 57.8	+2.2
	baz=44						
BTLS	Baital	3.69 43		eP	Pb	18 25 10.9	+0.6
	17nm,0.2s						
BTLS				eS	Sb	18 25 57.9	+2.2
	25nm,0.6s						
TKM2	Tokmak 2	3.81 81		P	Pn	18 25 08.1	+3.7
	SNR=12						
TKM2	Tokmak 2	3.81 81		⇓Pn	Pn	18 25 08.2	+3.9
	11nm,0.3s						
TKM2				⇓Lg	Lg	18 26 05.5	
	49nm,0.5s						
TKM2	Tokmak 2	3.81 81		⇓eP	Pb	18 25 08.9	-3.6
	baz=81						
TKM2				⇓eS	Sb	18 25 54.6	-4.6
	baz=81						
DGS	Degeres	3.98 76		Pg	Pb	18 25 18.1	+2.7
	86nm,0.5s						
DGS				Lg	Lg	18 26 10.1	
	127nm,0.6s						
DGS	Degeres	3.98 76		eP	Pb	18 25 18.5	+3.1
	baz=76						
DGS				eS	Sg	18 26 11.0	-1.4
	baz=76						
DGS	Degeres	3.98 76		eP	Pb	18 25 18.4	+3.1
	86nm,0.5s						
DGS				eS	Sg	18 26 10.9	-1.4
	127nm,0.6s						
BOOM	Boomskoye usch	4.04 87		⇓eP	Pn	18 25 12.0	+4.5
	baz=87						
BOOM				⇓iS	Sn	18 25 59.9	+4.3
	baz=87						
KST	Kastek	4.09 79		Pg	Pb	18 25 20.5	+3.2
	30nm,0.4s						
KST				Lg	Lg	18 26 15.3	
	59nm,0.7s						
KST	Kastek	4.09 79		eP	Pb	18 25 20.2	+2.9
	baz=79						
KST				eS	Sg	18 26 14.5	-1.3
	baz=79						
KST	Kastek	4.09 79		eP	Pb	18 25 20.2	+2.9
	14nm,0.3s						
KST				eS	Sg	18 26 14.5	-1.3
	203nm,0.6s						
ULHL	Ulahol	4.28 90		⇑eP	Pn	18 25 15.1	+4.3
	baz=90						
ULHL				⇑iS	Sn	18 26 05.2	+3.8
	baz=90						
MTBS	Maitube	4.44 79		Pg	Pb	18 25 26.3	+3.1
	7.4nm,0.7s						
MTBS				Lg	Lg	18 26 24.3	
	28nm,0.6s						
MTBS	Maitube	4.44 79		eP	Pb	18 25 26.4	+3.2
	baz=79						
MTBS				eS	Sg	18 26 24.7	-2.3
	baz=79						
MTBS	Maitube	4.44 79		eP	Pb	18 25 26.4	+3.2
	7.4nm,0.7s						
MTBS				eS	Sg	18 26 24.8	-2.3
	99nm,0.5s						
KUU	Kurty	4.54 69		Pg	Pg	18 25 29.3	-2.0
	8.3nm,0.5s						
KUU				Lg	Lg	18 26 30.3	
	140nm,0.7s						
KUU	Kurty	4.54 69		eP	Pg	18 25 30.0	-1.4
	baz=69						
KUU				eS	Sg	18 26 30.5	+0.4
	baz=69						
KUU	Kurty	4.54 69		eP	Pg	18 25 30.0	-1.4
	8.3nm,0.5s						
KUU				eS	Sg	18 26 30.5	+0.4
	194nm,0.6s						
KTBS	Karatobe	4.73 72		Pg	Pb	18 25 31.9	+3.8
	8.3nm,0.6s						
KTBS				Lg	Lg	18 26 33.6	
	130nm,0.7s						
KTBS	Karatobe	4.73 72		eP	Pb	18 25 32.0	+3.9
	baz=72						
KTBS				eS	Sg	18 26 34.1	-2.2
	baz=72						
KTBS	Karatobe	4.73 72		eP	Pb	18 25 32.0	+3.9
	8.3nm,0.6s						
KTBS				eS	Sg	18 26 34.1	-2.2
	184nm,0.6s						
AAA	Alma-Ata	4.80 78		Pg	Pg	18 25 37.0	+0.6
	37nm,0.4s						
AAA				Lg	Lg	18 26 43.1	
	108nm,0.7s						
AAA	Alma-Ata	4.80 78		eP	Pg	18 25 33.6	-2.8
	baz=78						
AAA				eS	Sg	18 26 37.2	-1.5
	baz=78						
AAA	Alma-Ata	4.80 78		eP	Pg	18 25 33.6	-2.8
	17nm,0.4s						
AAA				eS	Sg	18 26 37.1	-1.5
	108nm,0.7s						
TNSS	Tian-Shan	4.81 80		Pg	Pg	18 25 33.8	-2.7
	19nm,0.4s						
TNSS				Lg	Lg	18 26 37.7	
	47nm,0.5s						
TNSS	Tian-Shan	4.81 80		eP	Pg	18 25 33.8	-2.7
	baz=80						
TNSS				eS	Sg	18 26 37.7	-1.2
	baz=80						
TNSS	Tian-Shan	4.81 80		eP	Pg	18 25 33.8	-2.7
	19nm,0.4s						
TNSS				eS	Sg	18 26 37.6	-1.2
	122nm,0.5s						

MDOK Medeo 4.89 79 Pg Pb 18 25 34.8 +3.8
30nm,0.7s
MDOK Lg Lg 18 26 39.0
42nm,1.1s
MDOK Medeo 4.89 79 eP Pb 18 25 34.3 +3.4
baz=79
MDOK eS Sg 18 26 38.4 -3.2
baz=79
MDOK Medeo 4.89 79 eP Pb 18 25 34.3 +3.4
30nm,0.7s
MDOK eS Sg 18 26 38.4 -3.2
121nm,0.7s
KOTS Kotyrbulak 4.95 78 Pg Pb 18 25 35.8 +3.9
19nm,0.4s
KOTS Lg Lg 18 26 40.4
38nm,0.7s
KOTS Kotyrbulak 4.95 78 eP Pg 18 25 37.1 -2.1
baz=78
KOTS eS Sg 18 26 42.8 -0.5
baz=78
KOTS Kotyrbulak 4.95 78 eP Pg 18 25 37.1 -2.1
8.7nm,0.4s
KOTS eS Sg 18 26 42.9 -0.5
105nm,0.6s
ARXS Arharly 5.66 69 eP Pg 18 25 49.2 -3.6
8.3nm,0.6s
ARXS eS Sg 18 27 03.7 -2.4
80nm,0.9s
KURS Kuram 5.75 77 Pg Pg 18 25 53.6 -0.9
16nm,0.6s
KURS Lg Lg 18 27 11.2
18nm,0.8s
KURS Kuram 5.75 77 eP Pg 18 25 53.7 -0.8
baz=77
KURS eS Sg 18 27 11.0 +2.0
baz=77
KURS Kuram 5.75 77 eP Pg 18 25 53.7 -0.8
16nm,0.6s
KURS eS Sg 18 27 11.0 +2.0
29nm,0.7s
SATY Saty 5.88 81 Pg Pg 18 25 53.3 -3.6
22nm,0.7s
SATY Lg Lg 18 27 10.7
23nm,1.3s
SATY Saty 5.88 81 eP Pg 18 25 54.9 -2.1
22nm,0.7s
SATY eS Sg 18 27 13.0 -0.1
51nm,0.5s
OTUK Ortayu 5.98 12 ⇓Pn Pn 18 25 36.9 +2.8
7.4nm,0.5s
OTUK ⇑Sn Sn 18 26 44.8 +1.7
18nm,0.4s
OTUK ⇑Lg Lg 18 27 18.2
29nm,0.7s
KPKS Kokpek 6.12 77 eP Pb 18 25 57.3 +5.6
baz=78
KPKS eS Sg 18 27 17.2 -3.6
baz=78
KPKS Kokpek 6.12 77 eP Pg 18 25 57.3 -4.2
35nm,0.7s
KPKS eS Sg 18 27 17.3 -3.6
64nm,0.6s
TDK Taldyqorghan 6.30 63 Pg Pb 18 25 59.3 +4.4
23nm,0.7s
TDK Lg Lg 18 27 20.8
91nm,0.6s
TDK Taldyqorghan 6.30 63 eP Pg 18 26 02.4 -2.7
23nm,0.7s
TDK eS Sg 18 27 26.8 0.0
210nm,1.1s
UZB Uzynbulak 6.33 80 eP Pg 18 26 01.9 -3.8
baz=81
UZB eS Sg 18 27 24.8 -2.9
baz=81
UZB Uzynbulak 6.33 80 eP Pg 18 26 01.9 -3.8
6.0nm,0.7s
UZB eS Sg 18 27 24.8 -2.9
28nm,0.8s
SHLS Shalkode 6.65 80 eP Pg 18 26 15.9 +4.1
baz=81
SHLS eS Sg 18 27 49.0 +11
baz=81
SHLS Shalkode 6.65 80 eP Pg 18 26 15.9 +4.1
12nm,0.5s
SHLS eS Sg 18 27 49.0 +11
35nm,0.7s
PDGK Podgornoye 6.69 79 ⇓Pg Pb 18 26 07.1 +5.6
8.4nm,0.7s
PDGK ⇓Lg Lg 18 27 43.5
31nm,0.6s
KAPS Kapalarasan 7.03 63 Pg Pb 18 26 13.8 +6.4
2.4nm,0.5s
KAPS Lg Lg 18 27 45.9
20nm,0.8s
KAPS Kapalarasan 7.03 63 eP Pb 18 26 13.9 +6.6
2.4nm,0.5s
KAPS eS Sg 18 27 45.8 -4.5
40nm,0.8s
DJR Jarkent 7.05 71 Pg Pg 18 26 14.7 -4.8
4.0nm,0.5s
DJR Lg Lg 18 27 47.6
5.9nm,0.9s
DJR Jarkent 7.05 71 eP Pg 18 26 15.2 -4.3
4.0nm,0.5s
DJR eS Sg 18 27 48.0 -2.9
23nm,0.6s
CHCP Chirah Chowk 9.00 165 P Pn 18 26 17.6 +2.1
MAKZ Makanchi 9.31 58 ⇓Pn Pn 18 26 21.1 +1.5
1.9nm,0.8s
MAKZ ⇓Sn Sn 18 28 06.7 +1.9
1.8nm,0.5s
MAKZ ⇓Lg Lg 18 29 03.8
16nm,1.1s
MK31 Makanchi Array 9.50 58 ⇑Pn Pn 18 26 24.4 +2.1
1.2nm,0.5s,baz=244,slow=16,SNR=63
MK31 ⇑Sn Sn 18 28 12.6 +3.0
1.8nm,0.5s,baz=247,slow=23,SNR=4.1
MK31 ⇑Lg Lg 18 29 10.6
6.8nm,0.7s,baz=230,slow=28,SNR=3.8
MKAR Makanchi Array 9.50 58 Pn Pn 18 26 24.3 +2.1
1.4nm,0.3s,baz=235,slow=13,SNR=56
MKAR Sn Sn 18 28 10.8 +1.2
0.5nm,0.3s,baz=242,slow=24,SNR=5.8
MKAR Lg Lg 18 29 08.1
0.9nm,0.3s,baz=245,slow=26,SNR=4.0
THW Thamme Wali 9.65 174 P Pn 18 26 25.8 +1.5
KURBB Kurchatov Arra 9.91 31 Pn Pn 18 26 27.6 -0.3
0.2nm,0.3s,baz=227,slow=13,SNR=18
KURBB Sn Sn 18 28 18.6 -1.1
0.2nm,0.3s,baz=134,slow=24,SNR=5.4
KURBB Lg Lg 18 29 22.1
0.2nm,0.3s,baz=212,slow=27,SNR=5.2
KURBB Kurchatov Arra 9.91 31 ⇓Pn Pn 18 26 27.5 -0.3
1.0nm,0.4s
KURBB ⇓Lg Lg 18 29 19.9
24nm,0.6s
KURK Kurchatov 10.02 31 ⇑Pn Pn 18 26 29.8 +0.4
1.7nm,1.0s
KURK ⇑Lg Lg 18 29 22.8
24nm,0.9s
AB31 Akbulak array 10.04 317 ⇑Pn Pn 18 26 29.0 -0.6
0.2nm,0.3s,baz=127,slow=14,SNR=25
AB31 ⇑Sn Sn 18 28 20.2 -2.7
3.0nm,0.7s,baz=124,slow=26,SNR=6.1
GEYT Alibeck 10.46 249 Pn Pn 18 26 34.7 -0.8
0.8nm,0.3s,baz=59,slow=18,SNR=6.5
GEYT Sn Sn 18 28 26.0 -7.3
0.9nm,0.3s,baz=68,slow=24,SNR=5.7
BVAR Borovoye Array 10.63 360 Pn Pn 18 26 38.5 +0.9
1.1nm,0.3s,baz=169,slow=14,SNR=16
BVAR Sn Sn 18 28 33.4 -3.8
1.5nm,0.3s,baz=171,slow=22,SNR=8.5
BRVK Borovoye 10.66 359 ⇑Pn Pn 18 26 36.7 -1.4
1.5nm,0.5s
BRVK ⇓Sn Sn 18 28 36.6 -1.4
2.3nm,0.4s
AKTO Aktyubinsk 11.75 317 Pn Pn 18 26 54.6 +1.5
0.2nm,0.3s,baz=122,slow=13,SNR=3.0
AKTO Aktyubinsk 11.75 317 ⇓Pn Pn 18 26 53.6 +0.5
3.0nm,1.1s
AKTO ⇑Sn Sn 18 29 01.9 -2.9
1.6nm,0.5s
ZALV Zalesovo Beam 14.96 35 Pn Pn 18 27 38.3 +1.5
0.3nm,0.3s,baz=258,slow=12,SNR=6.8
ZALV Sn Sn 18 30 18.9 -4.1
0.3nm,0.3s,baz=227,slow=26,SNR=6.2
ARU Arti 16.00 335 Lg Lg 18 32 39.8
0.0nm,0.3s,baz=104,slow=17,SNR=3.9

FINES FINESS Array B 32.49 321 P P 18 30 36.4 +0.4
0.6nm,0.6s,baz=106,slow=13,SNR=3.0
ARCES ARCESS Array B 35.59 335 P P 18 31 04.0 +1.1
5.6nm,0.3s,baz=124,slow=8.8,SNR=5.1
INK Inuvik 68.15 9 P P 18 35 06.8 +1.3
0.5nm,0.5s,baz=277,slow=1.9,SNR=3.8
YKA Yellowknife Ar 75.37 2 P P 18 35 49.7 +0.7
0.2nm,0.5s,baz=352,slow=6.0,SNR=3.8

*BJI **03** 18:24:59.3±0.0, 10°.16N×127°.01E, h10km, mb4.6/43, mB4.8/26, Ms4.3/18, Ms7 4.0/14*
*IDC **03** 18:25:03.1±0.4, 10°.63N×126°.82E, h0km, mb4.5/27, mb1 4.6/30, mb1mx4.5/46, mbtmp4.5/30, ML3.5/4, MS3.5/18, Ms1 3.6/18, ms1mx3.4/38, Error ellipse: s-maj=19.8km s-min=9.7km az=85.0*
*ISCJB **03** 18:25:03.8±1.2, 10°.66N±0°.02×126°.92E±0°.03, h15km±9km, mb4.8/99, MS3.6/18, Error ellipse: s-maj=4.4km s-min=3.6km az=161.1*
*MAN **03** 18:25:04.3, 10°.74N×126°.98E, h80km, MS4.8*
*MOS **03** 18:25:04.8±1.1, 10°.65N×126°.89E, h25km, mb5.1/41, Error ellipse: s-maj=11.2km s-min=5.5km az=109.3*
*DJA **03** 18:25:06.4±2.5, 11°N±10°×12°7E±°, h26km±17km, M5.0/21, mB5.3/9, mb4.9/21, MLv5.3/2, Mw(mB)4.8/9*
*NEIC **03** 18:25:08.2±1.2, 10°.61N×126°.78E, h32km±4km, mb4.9/54, Error ellipse: s-maj=18.2km s-min=13.1km az=80.0*
*KLM **03** 18:25:52.0, 10°.21N×124°.04E, h225km, mb5.0*
ISC 03 18:25:06.7±1.4,**10°.68N**±0°.03×**126°.89E**±0°.05,**h23**km±9km, **n245**,σ1$**48**/252,**mb4.8**/99,**MS3.5**/18,**11C-5D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	ISC	Res
SCPH	**Surigao**	**1.64**	**237**	⇓iP		Pb	18 25 41.1		+4.8
SCPH				i	S	**Sb**	**18 26 01.0**		**+4.4**
BESP	**Borongan**	**1.69**	**303**	eP		**Pn**	**18 25 32.1**		**-2.7**
BESP				eS		**Sb**	**18 25 56.7**		**-1.4**
PLP	**Palo**	**1.94**	**285**	⇑eP		**Pn**	**18 25 36.6**		**-1.6**
PLP				eS		**Sn**	**18 26 00.0**		**-1.8**
MSLP	**Maasin**	**2.07**	**255**	eP		**Pn**	**18 25 38.5**		**-1.6**
MSLP				eS		**Sb**	**18 26 06.0**		**-2.9**
BUTP	**Butuan**	**2.11**	**216**	eP		**Pn**	**18 25 39.4**		**-1.2**
BUTP				eS		**Sn**	**18 26 05.4**		**-0.7**
OCLP	**Ormoc**	**2.27**	**280**	eP		**Pn**	**18 25 43.1**		**+0.3**
OCLP				eS		**Sb**	**18 26 16.8**		**+2.1**
CNP	**Catarman**	**2.84**	**310**	eP		**Pn**	**18 25 49.0**		**-1.6**
CNP				eS		**Sn**	**18 26 22.3**		**-1.8**
LLP	**Lapu-Lapu**	**2.90**	**263**	⇑eP		**Pn**	**18 25 51.0**		**-0.5**
LLP				eS		**Sn**	**18 26 26.7**		**+1.1**
CGP	**Cagayan de Oro**	**3.10**	**225**	⇓eP		**Pn**	**18 25 51.8**		**-2.4**
TBP	**Tagbilaran**	**3.14**	**252**	eP		**Pn**	**18 25 55.0**		**+0.2**
BUKP	**Musuan**	**3.32**	**213**	eP		**Pn**	**18 25 57.1**		**-0.2**
BUKP				eS		**Sn**	**18 26 36.5**		**+0.5**
MATI	**Mati**	**3.76**	**190**	eP		**Pn**	**18 26 00.1**		**-3.3**
MATI				eS		**Sb**	**18 26 57.5**		**-0.2**
DAV	**Davao City (W)**	**3.81**	**200**	Pn		**Pn**	**18 26 02.7**		**-1.4**
	21nm,0.3s,baz=28,slow=15,SNR=1.7								
DAV				Sn		**Sn**	**18 26 42.8**		**-5.4**
	86nm,0.3s,baz=290,slow=14,SNR=4.4								
SNPH	**Sibulan**	**3.84**	**250**	⇓eP		**Pn**	**18 26 05.2**		**+0.8**
SNPH				i	S	**Sn**	**18 26 48.4**		**-0.4**
DCPH	**Dipolog City**	**4.06**	**239**	⇑eP		Pn	18 26 11.5		+4.0
DCPH				eS		**Sn**	**18 26 57.3**		**+3.0**
GUIM	**Jordan**	**4.23**	**270**	eP		**Pn**	**18 26 08.9**		**-0.8**
GUIM				eS		**Sn**	**18 26 56.6**		**-1.8**
CTBH	**Cotabato--PC H**	**4.32**	**217**	⇓iP		**Pn**	**18 26 13.2**		**+2.3**
PAGZ	**Pagadian**	**4.46**	**231**	eP		**Pn**	**18 26 12.1**		**-0.9**
DDMP	**Don Marcelino,**	**4.69**	**194**	eP		**Pn**	**18 26 15.7**		**-0.5**
DDMP				eS		**Sn**	**18 27 11.6**		**+1.7**
SKMP	**Bagumbayan, Su**	**4.74**	**209**	eP		**Pn**	**18 26 16.7**		**-0.1**
OTRP	**Odiongan**	**5.05**	**290**	eP		**Pn**	**18 26 20.1**		**-1.0**
IPIL	**Ipil**	**5.14**	**236**	eP		**Pn**	**18 26 23.5**		**+1.2**
IPIL				eS		**Pb**	**18 26 33.4**		**-2.6**
TGY	**Tagaytay City**	**6.74**	**301**	LR		LR	18 29 23.4		
	comp=Z,516nm,20.1s,baz=131,slow=39								
SGSI	**Sangihe**	**7.08**	**191**	P		**Pn**	**18 26 50.5**		**+1.5**
PALU	**Palau**	**8.19**	**113**	P		Pn	18 26 57.9		-6.4
	baz=7.1,SNR=10								
TNTI	**Ternate**	**9.86**	**177**	ePn		**Pn**	**18 27 26.1**		**-1.0**
TNTI	**Ternate**	**9.86**	**177**	P		**Pn**	**18 27 25.5**		**-1.6**
KMSI	**Cibinong**	**10.45**	**196**	P		**Pn**	**18 27 37.1**		**+1.9**
MRSI	**Marisa**	**11.27**	**206**	P		Pn	18 27 53.5		+7.1
SWI	**Sorong**	**12.26**	**159**	P		Pn	18 27 51.9		-8.1
LUWI	**Luwuk**	**12.35**	**200**	ePn		**Pn**	**18 28 02.0**		**+0.8**
LUWI	**Luwuk**	**12.35**	**200**	P		**Pn**	**18 28 00.4**		**-0.8**
MPSI	**Mapaga**	**12.40**	**215**	P		P	18 28 07.2		-6.6
SGKI	**Sangatta, Kali**	**14.47**	**220**	P		**Pn**	**18 28 29.5**		**-0.7**
TTSI	**Tana Toraja**	**15.34**	**208**	P		**Pn**	**18 28 41.3**		**-0.6**
BKB	**Balikpapan**	**15.48**	**221**	P		**P**	**18 28 49.5**		**+1.6**
SRPI	**Serui, Papua**	**15.56**	**143**	P		**Pn**	**18 28 43.1**		**-1.6**
JOW	**Kunigami**	**16.12**	**4**	Pn		**Pn**	**18 28 54.0**		**+2.1**
	0.1nm,0.3s,baz=150,slow=8.1,SNR=3.0								
SPSI	**Sidrap Palu**	**16.18**	**206**	P		**Pn**	**18 28 52.6**		**-0.2**
	32nm,0.9s,379nm								
BNSI	**Bone**	**16.43**	**205**	P		**P**	**18 28 56.9**		**-1.6**
	44nm,1.0s								
MTKI	**Muara Teweh, K**	**16.60**	**227**	P		**P**	**18 29 01.2**		**+0.8**
SBUM	**Sibu**	**16.70**	**242**	ePn		**Pn**	**18 28 58.9**		**-0.5**
	9.8nm,0.9s								
SBUM	**Sibu**	**16.70**	**242**	P		**P**	**18 29 01.0**		**-0.5**
KAPI	**Kappang**	**17.14**	**205**	P		**Pn**	**18 29 03.9**		**-0.9**
	1.2nm,0.3s,baz=21,slow=6.8,SNR=9.4								
KAPI				LR		LR	18 35 41.8		
	comp=Z,95nm,20.2s,baz=337,slow=37								
KAPI	**Kappang**	**17.14**	**205**	ePn		**Pn**	**18 29 04.2**		**-0.6**
	16nm,0.8s								
KAPI	**Kappang**	**17.14**	**205**	eP		**Pn**	**18 29 04.2**		**-0.6**
KAPI				pmax		pmax			
	comp=Z,16nm,0.8s								
BKSI	**Bulukumba**	**17.27**	**203**	P		**Pn**	**18 29 05.7**		**-0.7**
GUMO	**Guam**	**17.81**	**79**	LR		LR	18 35 40.8		
	comp=Z,218nm,18.9s,baz=238,slow=36								
GENI	**Genyem**	**18.67**	**134**	P		**P**	**18 29 23.4**		**+0.1**
KSM	**Kuching**	**18.84**	**242**	eP		**Pn**	**18 29 26.3**		**+0.5**
	comp=Z,48nm,1.0s								
KSM	**Kuching**	**18.84**	**242**	P		**Pn**	**18 29 28.0**		**+2.2**
JAY	**Jayapura**	**19.00**	**133**	P		**P**	**18 29 28.0**		**+1.1**
	comp=Z,0.2nm,0.3s,baz=303,slow=20,SNR=4.2								
JAY				LR		LR	18 36 51.6		
	comp=Z,208nm,18.3s,baz=354,slow=37								
MMRI	**Maumere**	**19.74**	**194**	eP		**P**	**18 29 34.8**		**-0.2**
	comp=Z,102nm,1.1s								
MMRI	**Maumere**	**19.74**	**194**	P		**Pn**	**18 29 35.7**		**-0.9**
	comp=Z,84nm,0.8s,comp=Z,5um								
EDFI	**Ende, Flores**	**19.98**	**195**	P		**Pn**	**18 29 38.4**		**-1.2**
SOEI	**Soe**	**20.47**	**187**	eP		Pn	18 29 43.8		-1.5
	comp=Z,83nm,0.9s								
SOEI	**Soe**	**20.47**	**187**	P		**P**	**18 29 41.5**		**-1.6**
BATI	**Baumata**	**21.00**	**189**	P		**P**	**18 29 48.0**		**-0.7**
	comp=Z,80nm,0.6s,baz=97,slow=0.3,SNR=16								
BATI	**Baumata**	**21.00**	**189**	eP		**P**	**18 29 48.0**		**-0.7**
BATI				eP		**P**	**18 29 48.0**		**-0.7**
BATI	**Baumata**	**21.00**	**189**	P		**P**	**18 29 47.7**		**-1.0**
NJ2	**Nanjing**	**22.53**	**342**	eP		**P**	**18 30 10.5**		**+5.5**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.9s								
PANO	**Nakornpanom**	**22.55**	**289**	P		P	18 30 16.1		+11
JNU	**Nakatsue**	**22.64**	**9**	LR		LR	18 39 56.7		
	comp=Z,76nm,18.8s,baz=192,slow=39								
WHN	**Wuhan**	**22.95**	**331**	⇓P		**P**	**18 30 09.8**		**+0.4**
WHN				S		**S**	**18 34 11.7**		**-6.6**
WHN				pmax		pmax			
	comp=Z,38nm,0.9s								
WHN				pmax		pmax			
	comp=Z,250nm,6.9s								
WHN				LR		LR			
	comp=Z,310nm,8.8s								
WHN				LR		LR			
	comp=Z,140nm,5.1s								
WHN				LR		LR			
	comp=Z,340nm,20.1s								
SKNT	**Sakolnakorn**	**23.09**	**288**	P		**P**	**18 30 13.0**		**+1.9**
	comp=Z,10nm,0.9s								
MTN	**Manton Dam**	**23.75**	**170**	eP		**P**	**18 30 16.1**		**-1.4**
	comp=Z,198nm,1.5s								
MTN	**Manton Dam**	**23.75**	**170**	P		**P**	**18 30 16.2**		**-1.3**
	baz=23,SNR=5.6								
KDU	**Kakadu**	**23.87**	**166**	P		**P**	**18 30 16.9**		**-1.6**
	baz=23,SNR=23								
SLVN	**Son La**	**24.47**	**298**	eP		**P**	**18 30 22.1**		**-2.1**
	comp=Z,17nm,1.5s								
MYKOM	**Kota Tinggi**	**24.52**	**250**	eP		**P**	**18 30 25.1**		**+0.3**
	comp=Z,165nm,1.9s								
MYKOM	**Kota Tinggi**	**24.52**	**250**	P		**P**	**18 30 25.0**		**+0.3**
CHAI	**Chaiyaphum**	**24.77**	**285**	P		**P**	**18 30 27.8**		**+0.8**
	comp=Z,19μm,0.8s								
ENH	**Enshi**	**25.34**	**323**	eP		**P**	**18 30 32.3**		**+0.2**
	comp=Z,34nm,1.0s								
TJN	**Taejon**	**25.59**	**1**	ceP		**P**	**18 30 34.7**		**+0.6**
PBKT	**Sadao Pong**	**25.85**	**286**	P		P	18 30 48.9		+12
LEM	**Lembang**	**25.90**	**229**	P		**P**	**18 30 38.0**		**+0.7**
	comp=Z,17nm,0.7s,baz=329,slow=19,SNR=5.6								
LEM				LR		LR	18 42 28.0		
	comp=Z,102nm,20.5s,baz=178,slow=40								
LEM	**Lembang**	**25.90**	**229**	eP		**P**	**18 30 38.0**		**+0.7**
IPM	**Ipoh**	**26.35**	**258**	eP		**P**	**18 30 41.2**		**-0.2**
	comp=Z,43nm,1.5s								
IPM	**Ipoh**	**26.35**	**258**	P		**P**	**18 30 41.0**		**-0.4**
KSRS	**Korea Array**	**26.67**	**2**	P		**P**	**18 30 45.0**		**+1.1**
	comp=Z,2.7nm,0.9s,baz=174,slow=11,SNR=12								
KSRS				LR		LR	18 42 50.7		
	comp=Z,116nm,18.9s,baz=171,slow=40								
PHET	**Kaeng Krachan**	**26.77**	**277**	P		**P**	**18 30 49.8**		**+4.7**
	comp=Z,37μm,1.1s								
PAYA	**Payao**	**27.45**	**292**	P		**P**	**18 30 56.5**		**+5.3**
	comp=Z,13μm,0.7s								
MAJO	**Matsushiro**	**27.71**	**20**	iP		**P**	**18 30 51.7**		**-1.6**
MAJO				pmax		pmax			
	comp=Z,6.0nm,1.2s								
MJAR	**Matsushiro Arr**	**27.71**	**20**	P		**P**	**18 30 52.9**		**-0.4**
	comp=Z,3.6nm,1.1s,baz=201,slow=8.9,SNR=7.3								
MJAR				LR		LR	18 42 11.5		
	comp=Z,80nm,18.3s,baz=200,slow=37								
CMAR	**Chiang Mai Arr**	**28.10**	**289**	P		**P**	**18 30 55.5**		**-1.5**
	comp=Z,1.5nm,0.8s,baz=103,slow=7.0,SNR=13								
CMAR				PcP		**PcP**	**18 34 12.1**		**+0.8**
	comp=Z,0.8nm,1.0s,baz=88,slow=1.7,SNR=4.7								
CMAR				LR		LR	18 42 44.7		
	comp=Z,74nm,18.5s,baz=142,slow=38								
XAN	**Xi'an**	**28.48**	**328**	P		**P**	**18 31 00.4**		**+0.1**
XAN				pP		pP	18 31 08.3		+3.3
XAN				pmax		pmax			
	comp=Z,8.0nm,1.2s								
XAN	**Xi'an**	**28.48**	**328**	eP		**P**	**18 31 00.4**		**+0.1**
	comp=Z,16nm,1.1s								
XAN	**Xi'an**	**28.48**	**328**	eP		**P**	**18 31 00.4**		**+0.1**
XAN				pmax		pmax			
	comp=Z,16nm,1.1s								
FITZ	**Fitzroy Crossi**	**28.62**	**182**	P		**P**	**18 31 00.5**		**-1.0**
	comp=Z,3.3nm,0.5s,baz=28,slow=5.9,SNR=5.2								
PSI	**Prapat**	**28.83**	**256**	LR		LR	18 44 55.9		
	comp=Z,166nm,18.9s,baz=154,slow=41								
WR1	**Warramunga Arr**	**31.30**	**166**	eP		**P**	**18 31 23.2**		**-2.1**
WR1				ePcP		**PcP**	**18 34 19.0**		**-0.3**
WRA	**Warramunga Arr**	**31.30**	**166**	P		**P**	**18 31 23.2**		**-2.1**
	comp=Z,6.7nm,1.1s,baz=348,slow=12,SNR=8.5								
WRA				PcP		**PcP**	**18 34 19.0**		**-0.3**
	comp=Z,1.6nm,0.5s,baz=300,slow=2.6,SNR=7.5								
QIS	**Mount Isa**	**33.47**	**158**	P		**P**	**18 31 43.6**		**-0.7**
	baz=32,SNR=16								
USRK	**Ussuriysk Ar.**	**33.69**	**7**	P		**P**	**18 31 46.1**		**+0.2**
	comp=Z,4.3nm,0.9s,baz=189,slow=7.1,SNR=8.8								
MDJ	**Mudanjiang**	**33.89**	**3**	P		**P**	**18 31 49.7**		**+2.0**
MDJ				pmax		pmax			
	comp=Z,12nm,0.9s								
MDJ				pmax		pmax			
	comp=Z,67nm,4.9s								
AS31	**Alice Springs**	**34.82**	**169**	eP		**P**	**18 31 54.5**		**-1.5**
	comp=Z,2.2nm,0.7s								
ASAR	**Alice Springs**	**34.82**	**169**	P		**P**	**18 31 54.7**		**-1.3**
	comp=Z,2.8nm,0.5s,baz=351,slow=6.7,SNR=92								
ASAR				PcP		**PcP**	**18 34 29.0**		**-0.1**
	comp=Z,1.8nm,0.5s,baz=341,slow=2.5,SNR=14								
WRKA	**Warakurna**	**35.53**	**178**	P		**P**	**18 32 01.2**		**-0.9**
	baz=35,SNR=22								
BRDH	**Bariadhala**	**35.71**	**294**	LR		LR	18 48 19.1		
	comp=Z,89nm,19.2s,baz=150,slow=39								
SHL	**Shillong**	**36.27**	**299**	eP		**P**	**18 32 06.4**		**-2.4**
	comp=Z,23nm,1.0s								
SHL	**Shillong**	**36.27**	**299**	eP		**P**	**18 32 06.4**		**-2.4**
SHL				pmax		pmax			
	comp=Z,23nm,1.0s								
SHL	**Shillong**	**36.27**	**299**	eP		**P**	**18 32 08.5**		**-0.3**
GTA	**Gaotai**	**37.40**	**325**	P		**P**	**18 32 18.8**		**+0.7**
GTA				pP		sP	18 32 30.3		+4.9
GTA				PcP		**PcP**	**18 34 37.1**		**+0.4**
GTA				ScP		**ScP**	**18 38 25.2**		**+2.5**
GTA				pmax		pmax			
	comp=Z,18nm,1.4s								
GTA				pmax		pmax			
	comp=Z,98nm,4.1s								
GTA				LR		LR			
	comp=Z,76nm,16.8s								
GTA				LR		LR			
	comp=Z,63nm,17.2s								
LSA	**Lhasa**	**38.29**	**305**	P		**P**	**18 32 26.0**		**-0.1**
LSA	**Lhasa**	**38.29**	**305**	eP		**P**	**18 32 25.2**		**-0.9**
	comp=Z,9.8nm,1.2s								
LSA	**Lhasa**	**38.29**	**305**	eP		**P**	**18 32 25.2**		**-0.9**
LSA				pmax		pmax			
	comp=Z,10.0nm,1.2s								
KLR	**Kul'dur**	**38.64**	**5**	iP		**P**	**18 32 29.4**		**+1.2**
KLR				pmax		pmax			
	comp=Z,10.0nm,1.3s								
ULN	**Ulaanbaatar**	**40.65**	**339**	eP		**P**	**18 32 45.9**		**+0.7**
	comp=Z,7.7nm,1.2s								
ULN	**Ulaanbaatar**	**40.65**	**339**	ceP		**P**	**18 32 44.9**		**-0.3**
ULN				pmax		pmax			
	comp=Z,16nm,2.5s								
SONA0	**Songino Array**	**40.85**	**339**	eP		**P**	**18 32 47.4**		**+0.5**
SONM	**Songino Array**	**40.85**	**339**	P		**P**	**18 32 47.4**		**+0.5**
	comp=Z,1.8nm,0.8s,baz=157,slow=8.0,SNR=9.5								
MORW	**Morawa**	**40.88**	**195**	P		**P**	**18 32 49.2**		**+2.1**
	baz=40,SNR=4.4								
FORT	**Forrest**	**41.24**	**178**	eP		**P**	**18 32 49.2**		**-0.7**
	comp=Z,28nm,0.8s								
FORT	**Forrest**	**41.24**	**178**	P		**P**	**18 32 49.3**		**-0.7**
	baz=40,SNR=10								
ZEA	**Zeya**	**42.95**	**0**	eP		**P**	**18 33 04.0**		**+0.3**
ZEA				pmax		pmax			
	comp=N,24nm,1.0s								
ZEA				pmax		pmax			
	comp=Z,28nm,1.4s								
ZEA				MLR		MLR			
	comp=Z,100nm,16.0s								
BBOO	**Buckleboo**	**44.12**	**169**	eP		**P**	**18 33 13.0**		**-0.4**
	comp=Z,45nm,0.8s								
BBOO	**Buckleboo**	**44.12**	**169**	P		**P**	**18 33 12.9**		**-0.5**
	baz=43,SNR=4.9								
STKA	**Stephens Creek**	**44.60**	**162**	P		**P**	**18 33 16.7**		**-0.5**
	comp=Z,7.5nm,0.8s,baz=338,slow=8.5,SNR=25								
STKA	**Stephens Creek**	**44.60**	**162**	eP		**P**	**18 33 16.5**		**-0.7**
	comp=Z,14nm,1.8s								
STKA	**Stephens Creek**	**44.60**	**162**	P		**P**	**18 33 16.7**		**-0.5**
	baz=44,SNR=16								
STKA	**Stephens Creek**	**44.60**	**162**	eP		**P**	**18 33 16.5**		**-0.7**
STKA				pmax		pmax			
	comp=Z,14nm,1.8s								
TLY	**Talaya**	**45.06**	**340**	iP		**P**	**18 33 22.4**		**+1.7**
HTT	**Hallett**	**45.34**	**166**	P		**P**	**18 33 23.1**		**0.0**
	baz=44,SNR=5.0								
CMSA	**Cobar Meteorol**	**45.68**	**157**	P		**P**	**18 33 25.7**		**-0.2**
	baz=45,SNR=9.7								
MOY	**Mondy**	**45.99**	**338**	eP		**P**	**18 33 29.8**		**+1.6**
BOD	**Bodaibo**	**48.06**	**351**	eP		**P**	**18 33

MK31	**Makanchi Array**	**52.07 322**	*e*P	**P**	**18 34 15.9 +1.1**
MK31			pmax	pmax	
comp=Z,15nm,1.0s					
MK32	**Makanchi Array**	**52.07 322**	*e*P	**P**	**18 34 16.1 +1.2**
MKAR	**Makanchi Array**	**52.07 322**	P	**P**	**18 34 16.1 +1.2**
comp=Z,6.0nm,0.7s,baz=121,slow=7.6,SNR=32					
MKAR			LR	LR	18 59 54.4
comp=Z,45nm,18.1s,baz=122,slow=40					
MAKZ	**Makanchi**	**52.27 322**	*e*P	**P**	**18 34 16.9 +0.6**
comp=Z,27nm,1.2s					
MAKZ	**Makanchi**	**52.27 322**	*e*P	**P**	**18 34 16.9 +0.6**
MAKZ			pmax	pmax	
comp=Z,27nm,1.2s					
PDGK	**Podgornoye**	**52.31 317**	P	**P**	**18 34 18.6 +1.8**
PDGK			pmax	pmax	
comp=Z,19nm,1.0s					
KSH	**Kashi**	**53.41 312**	P	**P**	**18 34 27.7 +2.7**
KSH			PP	**PP**	**18 36 30.4 +4.9**
KSH			S	**S**	**18 41 50.5 -5.7**
KSH			pmax	pmax	
comp=Z,33nm,1.1s					
KSH			pmax	pmax	
comp=Z,170nm,5.8s					
KSH			LR	LR	
comp=Z,290nm,8.5s					
KSH			LR	LR	
comp=Z,300nm,8.9s					
KSH			LR	LR	
comp=Z,140nm,12.3s					
NIL	**Nilore**	**54.01 304**	*e*P	**P**	**18 34 28.8 -0.6**
comp=Z,20nm,1.1s					
NIL	**Nilore**	**54.01 304**	*e*P	**P**	**18 34 28.8 -0.6**
NIL			pmax	pmax	
comp=Z,20nm,1.1s					
ZAA0	**Zalesovo Array**	**54.56 331**	*e*P	**P**	**18 34 32.9 -0.1**
comp=Z,3.1nm,0.8s					
ZALV	**Zalesovo Beam**	**54.56 331**	P	**P**	**18 34 32.6 -0.3**
comp=Z,2.2nm,0.6s,baz=125,slow=5.4,SNR=7.3					
ZALV			LR	LR	19 00 52.6
comp=Z,31nm,18.5s,baz=75,slow=39					
ZAA1	**Zalesovo Array**	**54.57 331**	*e*P	**P**	**18 34 32.6 -0.3**
SEY	**Seymchan**	**55.28 14**	*ce*P	**P**	**18 34 36.3 -1.6**
AAK	**Ala-Archa**	**55.47 315**	*e*P	**P**	**18 34 41.7 +1.8**
comp=Z,21nm,1.8s					
AAK	**Ala-Archa**	**55.47 315**	*e*P	**P**	**18 34 41.7 +1.8**
AAK			pmax	pmax	
comp=Z,21nm,1.8s					
NVS	**Novosibirsk**	**55.84 331**	*e*P	**P**	**18 34 42.1 0.0**
NVS			pmax	pmax	
comp=Z,29nm,2.1s					
NVS			pmax	pmax	
comp=N,11nm,1.9s					
NVS			pmax	pmax	
comp=E,6.0nm,1.2s					
KURK	**Kurchatov**	**56.08 325**	*e*P	**P**	**18 34 44.6 +0.7**
comp=E,30nm,1.0s					
KURK	**Kurchatov**	**56.08 325**	*ce*P	**P**	**18 34 44.4 +0.5**
KURK			pmax	pmax	
comp=Z,42nm,1.3s					
ARSB	**Arslanbob**	**56.13 313**	*e*P	**P**	**18 34 42.8 -1.9**
comp=Z,24nm,1.4s					
KK31	**Karatay Array**	**58.40 314**	*e*P	**P**	**18 35 00.7 +0.1**
comp=Z,15nm,1.1s					
KK31	**Karatay Array**	**58.40 314**	*e*P	**P**	**18 35 00.7 +0.1**
KK31			pmax	pmax	
comp=Z,15nm,1.1s					
KKAR	**Karatay Array**	**58.40 314**	*e*P	**P**	**18 35 00.7 +0.2**
comp=Z,15nm,1.1s					
KKAR	**Karatay Array**	**58.40 314**	*e*P	**P**	**18 35 00.7 +0.2**
KKAR			pmax	pmax	
comp=Z,15nm,1.1s					
OTUK	**Ortayu**	**58.80 320**	P	**P**	**18 35 04.6 +1.4**
OTUK			pmax	pmax	
comp=Z,9.0nm,1.2s					
TIXI	**Tiksi**	**60.94 1**	*e*P	**P**	**18 35 17.3 -0.1**
comp=Z,12nm,1.3s					
TIXI	**Tiksi**	**60.94 1**	*ce*P	**P**	**18 35 16.6 -0.8**
TIXI			pmax	pmax	
comp=Z,14nm,1.7s					
BRVK	**Borovoye**	**61.75 325**	*e*P	**P**	**18 35 23.8 +0.5**
comp=Z,28nm,1.4s					
BRVK	**Borovoye**	**61.75 325**	*e*P	**P**	**18 35 23.8 +0.5**
BRVK			pmax	pmax	
comp=Z,28nm,1.4s					
BILL	**Bilibino**	**62.85 16**	*e*P	**P**	**18 35 31.2 +0.8**
comp=Z,22nm,1.6s					
BILL	**Bilibino**	**62.85 16**	*i* P	**P**	**18 35 28.7 -1.7**
BILL			*i*		18 36 01.6
BILL			pmax	pmax	
comp=Z,8.0nm,1.4s					
NRIK	**Noril'sk**	**63.77 345**	P	**P**	**18 35 36.5 0.0**
comp=Z,5.8nm,0.7s,baz=132,slow=5.5,SNR=8.8					
GEYT	**Alibeck**	**66.79 307**	PcP	**PcP**	**18 36 26.0 +0.6**
comp=Z,2.2nm,0.9s,baz=57,slow=5.7,SNR=4.3					
ABKAR	**Akbulak array**	**66.97 319**	*e*P	**P**	**18 35 57.1 -0.4**
comp=Z,10.0nm,1.0s					
SVE	**Sverdlovsk**	**68.20 327**	*e*P	**P**	**18 36 06.0 +0.9**
SVE			pmax	pmax	
comp=Z,13nm,0.9s					
ARU	**Arti**	**69.22 326**	P	**P**	**18 36 11.0 -0.6**
comp=Z,1.8nm,0.6s,baz=102,slow=7.8,SNR=7.8					
ARU	**Arti**	**69.22 326**	*e*P	**P**	**18 36 10.7 -0.8**
comp=Z,6.8nm,0.8s					
ARU	**Arti**	**69.22 326**	*c i*P	**P**	**18 36 11.1 -0.4**
ARU					18 38 43.3
ARU			S	**S**	**18 45 17.4 +1.2**
ARU			pmax	pmax	
comp=Z,9.0nm,0.9s					
KIRV	**Kirov**	**74.42 328**	P	**P**	**18 36 43.0 +0.3**
comp=Z,4.2nm,0.5s,baz=353,slow=20,SNR=6.1					
KIRV	**Kirov**	**74.42 328**	P	**P**	**18 36 43.0 +0.3**
CAST	**Castle Rocks**	**76.50 27**	*e*P	**P**	**18 36 55.8 +1.1**
comp=Z,14nm,1.4s					
PRGR	**Permogore**	**76.52 331**	*e*P	**P**	**18 36 52.3 -2.4**
PRGR			pmax	pmax	
comp=Z,6.0nm,0.9s					
MLY	**Manley**	**77.17 26**	*e*P	**P**	**18 36 59.6 +1.2**
comp=Z,17nm,1.4s					
CASY	**Casey**	**77.69 187**	*e*P	**P**	**18 37 01.2 +0.1**
comp=Z,9.7nm,0.7s					
ZEI	**Tsey**	**77.70 312**	*e*P	**P**	**18 37 02.4 +0.3**
ZEI			pmax	pmax	
comp=Z,15nm,1.1s					
TOLK	**Toolik Lake Re**	**77.77 22**	*e*P	**P**	**18 37 03.4 +1.7**
comp=Z,14nm,1.4s					
MCK	**McKinley**	**77.92 27**	*e*P	**P**	**18 37 03.3 +0.7**
comp=Z,16nm,1.1s					
MCK	**McKinley**	**77.92 27**	*e*P	**P**	**18 37 03.3 +0.7**
MCK			pmax	pmax	
comp=Z,16nm,1.1s					
CCB	**Clear Creek Bu**	**78.42 26**	*e*P	**P**	**18 37 05.1 -0.1**
comp=Z,11nm,1.4s					
KIV	**Kislovodsk**	**78.52 313**	*e*P	**P**	**18 37 06.5 +0.1**
KIV			pmax	pmax	
comp=Z,21nm,1.0s					
VRH	**Novokhopyorsk**	**78.74 320**	*e*P	**P**	**18 37 06.8 -0.5**
VRH			pmax	pmax	
comp=Z,10.0nm,0.9s					
HDA	**Harding Lake**	**78.79 26**	*e*P	**P**	**18 37 07.1 -0.2**
comp=Z,11nm,1.3s					
ILAR	**Eielson Array**	**78.81 26**	P	**P**	**18 37 07.7 +0.2**
comp=Z,0.6nm,0.6s,baz=235,slow=4.7,SNR=8.1					
RIDG	**Independent Ri**	**79.74 27**	*e*P	**P**	**18 37 13.4 +0.8**
comp=Z,15nm,1.2s					
SCRK	**Sand Creek**	**80.10 27**	*e*P	**P**	**18 37 15.2 +0.5**
comp=Z,14nm,1.6s					
VSR	**Storozhevoye**	**80.34 320**	*e*P	**P**	**18 37 15.5 -0.5**
VSR			pmax	pmax	
comp=Z,10.0nm,1.3s					
LPSR	**Galich'ya Gora**	**80.37 322**	*e*P	**P**	**18 37 15.8 -0.4**
LPSR			pmax	pmax	
comp=Z,20nm,1.1s					
MOS	**Moscow**	**80.85 325**	*e*P	**P**	**18 37 17.8 -0.9**
OBN	**Obninsk**	**81.52 324**	*i* P	**P**	**18 37 20.0 -2.2**
OBN			*i*		18 37 30.2
OBN			pmax	pmax	
comp=Z,12nm,1.1s					
DAWY	**Dawson**	**82.11 26**	*e*P	**P**	**18 37 26.0 +0.8**
comp=Z,8.8nm,1.3s					
HYT	**Haines Junctio**	**83.48 29**	*e*P	**P**	**18 37 34.1 +1.5**
comp=Z,11nm,1.2s					
INK	**Inuvik**	**83.68 22**	P	**P**	**18 37 34.0 +0.7**
comp=Z,3.2nm,1.1s,baz=296,slow=4.4,SNR=5.3					
INK	**Inuvik**	**83.68 22**	*e*P	**P**	**18 37 34.0 +0.7**
comp=Z,7.9nm,1.4s					
INK	**Inuvik**	**83.68 22**	*e*P	**P**	**18 37 34.0 +0.7**
INK			pmax	pmax	
comp=Z,8.0nm,1.4s					
ARCES	**ARCESS Array B**	**84.02 340**	P	**P**	**18 37 35.5 +0.5**
comp=Z,7.1nm,0.3s,baz=99,slow=7.5,SNR=7.3					
SIM	**Simferopol'**	**84.50 315**	*e*P	**P**	**18 37 35.8 -2.1**
SIM			pmax	pmax	
comp=Z,17nm,1.1s					
WHY	**Whitehorse**	**84.78 29**	*e*P	**P**	**18 37 41.1 +1.9**
comp=Z,11nm,1.0s					
SKAG	**Skagway**	**84.82 31**	*e*P	**P**	**18 37 40.5 +1.3**
comp=Z,25nm,1.5s					
BESE	**Bessie Mountai**	**85.25 31**	*e*P	**P**	**18 37 42.6 +1.1**
comp=Z,7.6nm,0.7s					
BR101	**Keskin Array S**	**85.74 309**	*e*P	**P**	**18 37 44.3 -0.2**
BR131	**Keskin Array S**	**85.74 309**	*e*P	**P**	**18 37 44.5 0.0**
comp=Z,3.4nm,0.8s					
BRTR	**Keskin Array B**	**85.74 309**	P	**P**	**18 37 44.3 -0.2**
comp=Z,1.9nm,0.7s,baz=104,slow=4.2,SNR=11					
BRTR			LR	LR	19 20 14.2
comp=Z,16nm,19.0s,baz=94,slow=39					
FIA0	**FINESS Array S**	**85.82 332**	*e*P	**P**	**18 37 44.2 0.0**
FIA0	**FINESS Array S**	**85.82 332**	*e*P	**P**	**18 37 44.2 0.0**
FINES	**FINESS Array B**	**85.82 332**	P	**P**	**18 37 44.2 0.0**
comp=Z,2.6nm,0.4s,baz=80,slow=4.3,SNR=41					
VSU	**Vasula**	**86.24 329**	*ce*P	**P**	**18 37 44.6 -1.7**
VSU			pmax	pmax	
comp=Z,71nm,1.7s					
AKASG	**Malin Array Be**	**86.63 321**	P	**P**	**18 37 48.0 -0.3**
comp=Z,1.4nm,0.5s,baz=61,slow=5.5,SNR=18					
AKBB	**Malin Array Si**	**86.63 321**	*e*P	**P**	**18 37 48.1 -0.3**
comp=Z,17nm,1.3s					
AKBB	**Malin Array Si**	**86.63 321**	*e*P	**P**	**18 37 48.1 -0.3**
AKBB			pmax	pmax	
comp=Z,17nm,1.3s					
KIEV	**Kiev**	**86.64 321**	*i* P	**P**	**18 37 46.7 -1.7**
KIEV			pmax	pmax	
comp=Z,11nm,1.3s					
PPT	**Papeete**	**87.11 108**	LR	LR	19 13 42.3
comp=Z,51nm,19.9s,baz=342,slow=34					
PMOR	**Pomariorio Ree**	**88.18 106**	*e*T	T	18 38 48.4
comp=Z,6.8nm,0.3s					
VAH	**Vaihoa**	**88.47 106**	*e*T	T	18 38 40.0
comp=Z,133nm,0.3s					
KMBO	**Kilima Mbogo**	**89.85 269**	LR	LR	19 18 05.9
comp=Z,50nm,18.5s,baz=92,slow=36					
BUR08	**Bucovina Ar. S**	**89.94 319**	*e*P	**P**	**18 38 03.9 -0.5**
comp=Z,17nm,1.8s					
VNDA	**Vanda**	**90.26 173**	P	**P**	**18 38 05.1 +0.2**
comp=Z,3.2nm,1.0s,baz=315,slow=6.1,SNR=17					
VNDA	**Vanda**	**90.26 173**	*e*P	**P**	**18 38 05.1 +0.2**
comp=Z,22nm,1.8s					
VNDA	**Vanda**	**90.26 173**	*e*P	**P**	**18 38 05.1 +0.2**
VNDA			pmax	pmax	
comp=Z,22nm,1.8s					
MAW	**Mawson**	**90.29 200**	P	**P**	**18 38 05.1 -0.2**
comp=Z,4.8nm,1.0s,baz=68,slow=6.5,SNR=8.5					
MAW	**Mawson**	**90.29 200**	*e*P	**P**	**18 38 05.0 -0.2**
comp=Z,4.3nm,1.5s					
MAW	**Mawson**	**90.29 200**	*e*P	**P**	**18 38 05.0 -0.2**
MAW			pmax	pmax	
comp=Z,4.0nm,1.5s					
RES	**Resolute Bay**	**90.99 10**	*e*P	**P**	**18 38 08.8 +0.3**
comp=Z,7.5nm,0.9s					
RES	**Resolute Bay**	**90.99 10**	*e*P	**P**	**18 38 08.8 +0.3**
RES			pmax	pmax	
comp=Z,8.0nm,0.9s					
UZH	**Uzhgorod**	**91.52 320**	*e*P	P	18 38 01.2 -10
UZH			*i*		18 38 12.3
NB2	**NORSAR Subarra**	**92.66 334**	P	**P**	**18 38 15.4 -1.2**
comp=Z,2.4nm,0.9s,baz=65,slow=4.6					
NB200	**NORSAR Array S**	**92.66 334**	*e*P	**P**	**18 38 15.2 -1.4**
NOA	**NORSAR Array B**	**92.66 334**	P	**P**	**18 38 15.2 -1.4**
comp=Z,0.9nm,0.7s,baz=64,slow=4.8,SNR=4.6					
NOA			LR	LR	19 25 14.0
comp=Z,22nm,18.5s,baz=90,slow=39					
YKA	**Yellowknife Ar**	**93.14 24**	P	**P**	**18 38 19.4 +0.7**
comp=Z,1.1nm,0.8s,baz=297,slow=4.5,SNR=14					
YKB5	**Yellowknife Ar**	**93.14 24**	*e*P	**P**	**18 38 19.4 +0.7**
VYHS	**Vyhne**	**93.73 321**	*e*P	**P**	**18 38 23.2 +1.4**
VYHS	**Vyhne**	**93.73 321**	*e*P	**P**	**18 38 23.2 +1.4**
CLL	**Collm**	**96.11 325**	*e*P	**P**	**18 38 32.0 -0.6**
comp=Z,7.0nm,1.3s					
CLL	**Collm**	**96.11 325**	*e*P	**P**	**18 38 32.0 -0.6**
CLL			pmax	pmax	
comp=Z,7.0nm,1.3s					
GBRS	**Gornja Briga**	**97.40 319**	*i* P	Pdif	18 38 38.9 +0.2
ROBS	**Robic**	**97.94 320**	*i* P	**P**	**18 38 40.5 -0.5**
TOA1	**Torodi Ar. Sit**	**120.68 292**	*e*PKPdf	**PKPdf**	**18 43 57.5 -0.2**
TORD	**Torodi Ar. Bea**	**120.68 292**	PKP	**PKPdf**	**18 43 57.5 -0.2**
comp=Z,0.9nm,0.9s,baz=328,slow=2.3,SNR=3.6					
PLCA	**Paso Flores**	**146.33 156**	PKPbc	**PKPab**	**18 44 47.0 +0.2**
comp=Z,4.6nm,0.6s,baz=249,slow=5.7,SNR=13					
PLCA	**Paso Flores**	**146.33 156**	PKP2	**PKPab**	**18 44 47.0 +0.2**
TRQA	**Tornquist**	**151.60 165**	*e*PKPbc	**PKPbc**	**18 44 59.6 +0.1**
TRQA	**Tornquist**	**151.60 165**	*e*PKIKP	**PKPbc**	**18 44 59.6 +0.1**

IDC ***03*** *18:52:17.9±0.9, 23°.84N×122°.51E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/33, mbtmp3.7/9, ML2.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/40, Error ellipse: s-maj=33.4km s-min=18.4km az=66.0*

ISCJB ***03*** *18:52:20.1±0.6, 23°.72N±0°.02×122°.55E±0°.01, h7km±4km, mb3.6/8, Error ellipse: s-maj=2.9km s-min=2.0km az=148.9*

TAP ***03*** *18:52:21.8, 23°.80N×122°.56E, h26km±1km, ML3.8, D*

JMA ***03*** *18:52:21.5±0.2, 23°.77N×122°.50E, h21km±4km, M3.3*

ISC 03 18:52:19.7±1.0, 23°.73N±0°.02×122°.52E±0°.02, h13km±7km, n132, σ0°86/200, mb3.7/8, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.82**	**28**	P	P	**Pb**	**18 52 36.4**	**+0.5**
JYNG					*e*S	**Sg**	**18 52 46.1**	**-0.3**
ENLB	**Shoufeng**	**0.85**	**282**	*e*P	P	**Pn**	**18 52 37.5**	**+0.1**
baz=276								
ENLB					S	**Sn**	**18 52 49.2**	**-0.6**
baz=276								
YOJ	**Yonaguni jima**	**0.86**	**32**	↓P	P	**Pn**	**18 52 37.2**	**-0.4**
baz=38								
YOJ					S	**Sg**	**18 52 47.0**	**-0.6**
baz=38								
YOJ	**Yonaguni jima**	**0.86**	**32**	P	P	**Pn**	**18 52 37.2**	**-0.4**
YOJ					*e*S	**Sg**	**18 52 47.4**	**-0.3**
HWA	**Hwalien**	**0.87**	**287**	*e*P	P	**Pn**	**18 52 38.1**	**+0.4**
baz=268								
HWA					*e*S	**Sn**	**18 52 49.8**	**-0.4**
baz=268								
EOS1	**EOS1**	**0.89**	**337**	P	P	**Pn**	**18 52 38.2**	**+0.3**
baz=331								
EOS1					*e*S	**Sn**	**18 52 50.9**	**+0.2**
baz=331								
TWD	**Chiawan**	**0.91**	**293**	P	P	**Pn**	**18 52 38.1**	**-0.2**
baz=273								
TWD					*e*S	**Sb**	**18 52 49.7**	**+0.2**
baz=273								
NACB	**Ninganchiao**	**0.95**	**298**	*e*P	P	**Pn**	**18 52 38.6**	**-0.2**
baz=280								
ENA	**Nanau**	**0.99**	**315**	P	P	**Pn**	**18 52 39.8**	**+0.4**
baz=310								
ESL	**Shilin**	**0.99**	**275**	P	P	**Pg**	**18 52 39.2**	**+0.3**
baz=270								
ESL					*e*S	**Sg**	**18 52 51.8**	**-0.1**
baz=270								
EGFH	**Guangfu**	**1.00**	**267**	*e*P	P	**Pn**	**18 52 39.9**	**+0.5**
baz=262								
EGFH					*e*S	**Sn**	**18 52 53.1**	**-0.2**
baz=262								
HGSD	**Ruisui**	**1.03**	**257**	*e*P	P	**Pn**	**18 52 40.2**	**+0.3**
baz=253								
HGSD					*e*S	**Sg**	**18 52 53.5**	**+0.6**
baz=253								
ETLH	**Xiulin Townshi**	**1.06**	**297**	*e*P	P	**Pn**	**18 52 40.5**	**+0.1**
baz=291								
ETLH					*e*S	**Sn**	**18 52 54.9**	**-0.2**
baz=291								
TWC	**Suao**	**1.07**	**325**	*e*P	P	**Pn**	**18 52 40.5**	**+0.1**
baz=320								
TWC					*e*S	**Sn**	**18 52 55.6**	**+0.4**
baz=320								
EHY	**Hungye**	**1.12**	**259**	P	P	**Pg**	**18 52 41.8**	**+0.6**
baz=254								
EHY					*e*S	**Sn**	**18 52 56.6**	**+0.3**
baz=254								
YULB	**Yu-li**	**1.17**	**254**	*e*P	P	**Pg**	**18 52 42.9**	**+0.7**
baz=250								
YULB					*e*S	**Sn**	**18 52 58.1**	**+0.5**
baz=250								
WHF	**Hehuan Shan**	**1.22**	**290**	P	P	**Pn**	**18 52 43.0**	**+0.2**
baz=272								
CHKT	**Chengkung**	**1.23**	**240**	P	P	**Pb**	**18 52 43.0**	**+0.3**
baz=237								
CHKT					*e*S	**Sb**	**18 52 58.0**	**-0.5**
baz=237								
HATJ	**Hateruma jima**	**1.23**	**74**	P	P	**Pg**	**18 52 43.7**	**+0.4**
HATJ					S	**Sg**	**18 52 59.6**	**+0.3**
NNSB	**Datong**	**1.25**	**304**	*e*P	P	**Pg**	**18 52 43.6**	**-0.1**
baz=289								
ENTT	**Nioudou**	**1.26**	**317**	P	P	**Pg**	**18 52 43.8**	**0.0**
baz=296								
ENTT					*e*S	**Sg**	**18 53 02.4**	**+2.1**
baz=296								
TWE	**Neicheng**	**1.26**	**322**	P	P	**Pg**	**18 52 44.0**	**+0.1**
baz=318								
VWDT	**VWDT**	**1.26**	**272**	*e*P	P	**Pg**	**18 52 44.0**	**+0.1**
baz=266								
VWDT					*e*S	**Sb**	**18 52 59.7**	**+0.3**
baz=266								
NNS	**Nan Shan**	**1.26**	**305**	P	P	**Pg**	**18 52 44.1**	**+0.1**
baz=289								
NDT	**Datong Townshi**	**1.27**	**314**	*e*P	P	**Pg**	**18 52 44.2**	**+0.2**
baz=307								
NDT					*e*S	**Sg**	**18 53 01.5**	**+1.0**
baz=307								
IRIF	**Iriomote-Funau**	**1.27**	**61**	P	P	**Pg**	**18 52 44.3**	**+0.3**
IRIF					*e*S	**Sg**	**18 53 00.6**	**+0.1**
CHGB	**Renai**	**1.27**	**285**	*e*P	P	**Pg**	**18 52 44.0**	**-0.2**
baz=270								
CHGB					*e*S	**Sg**	**18 53 00.8**	**+0.1**
baz=270								
TWT	**Tachien**	**1.33**	**293**	*e*P	P	**Pg**	**18 52 45.5**	**+0.1**
baz=277								
TDCB	**Techi**	**1.35**	**293**	*e*P	P	**Pg**	**18 52 45.4**	**-0.2**
baz=278								
TWB1	**Santiao Chiao**	**1.36**	**340**	*e*P	P	**Pb**	**18 52 45.1**	**0.0**
baz=335								
TIPB	**Shuangxi**	**1.39**	**333**	*e*P	P	**Pb**	**18 52 45.6**	**0.0**
baz=327								
TIPB					*e*S	**Sg**	**18 53 05.6**	**+1.0**
baz=327								
YHNB	**Yeheng**	**1.40**	**312**	*e*P	P	**Pb**	**18 52 46.0**	**+0.2**
baz=307								
SSLB	**Suanglung**	**1.43**	**273**	*e*P	P	**Pb**	**18 52 46.3**	**+0.1**
baz=267								
SSLB					*e*S	**Sn**	**18 53 03.6**	**-0.6**
baz=267								
JKRS	**Kuro-shima**	**1.46**	**69**	P	P	**Pb**	**18 52 47.3**	**+0.6**
JKRS					*e*S	**Sb**	**18 53 05.8**	**+0.6**
ELDTW	**Lidau**	**1.48**	**249**	*e*P	P	**Pb**	**18 52 47.0**	**-0.1**
baz=245								
ELDTW					*e*S	**Sn**	**18 53 04.9**	**-0.5**
baz=245								
DPDB	**Guoxing**	**1.49**	**282**	*e*P	P	**Pb**	**18 52 47.6**	**+0.4**
baz=278								
SMLT	**Sun Moon Lake**	**1.49**	**276**	*e*P	P	**Pb**	**18 52 47.6**	**+0.3**
baz=271								
SMLT					*e*S	**Sg**	**18 53 07.1**	**-0.5**
baz=271								
TWA	**Mucha**	**1.51**	**326**	*e*P	P	**Pb**	**18 52 47.9**	**+0.3**
baz=319								
TWA					*e*S	**Sg**	**18 53 08.3**	**0.0**
baz=319								
WHYT	**Xinyi Township**	**1.52**	**269**	*e*P	P	**Pg**	**18 52 48.7**	**-0.3**
baz=258								
NHDH	**Xindian Distri**	**1.53**	**324**	*e*P	P	**Pg**	**18 52 48.7**	**-0.3**
baz=335								
TYC	**Yuchr**	**1.53**	**277**	*e*P	P	**Pb**	**18 52 48.1**	**+0.2**
baz=272								
TYC					*e*S	**Sb**	**18 53 07.8**	**+0.6**
baz=272								
WHP	**Taichung City**	**1.54**	**291**	*e*P	P	**Pg**	**18 52 50.0**	**+0.7**
baz=277								
TATO	**Taipei**	**1.56**	**323**	*e*P	P	**Pb**	**18 52 48.7**	**+0.3**
baz=316								
TATO					*e*S	**Sg**	**18 53 10.1**	**+0.3**
baz=316								
ALS	**Alishan**	**1.58**	**263**	*e*P	P	**Pb**	**18 52 49.6**	**+0.6**
baz=258								
ALS					*e*S	**Sb**	**18 53 09.3**	**+0.3**
baz=258								
TTN	**Taitung**	**1.59**	**233**	*e*P	P	**Pb**	**18 52 49.7**	**+0.8**
baz=231								
TTN					*e*S	**Sb**	**18 53 09.4**	**+0.5**
baz=231								
TAP	**Taipei**	**1.60**	**325**	*e*P	P	**Pg**	**18 52 50.0**	**-0.4**
baz=338								
TWGBT	**Beinan**	**1.60**	**236**	*e*P	P	**Pb**	**18 52 48.7**	**-0.4**
baz=224								
TWGBT					*e*S	**Sn**	**18 53 08.6**	**+0.4**
baz=224								
TWG	**Pinlang**	**1.60**	**236**	*e*P	P	**Pn**	**18 52 48.8**	**+1.0**
baz=224								
TWG					*e*S	**Sn**	**18 53 08.7**	**+0.3**
baz=224								
WLTB	**Daxi**	**1.61**	**315**	*e*P	P	**Pg**	**18 52 50.0**	**-0.6**
baz=309								
JIJ	**Ishigaki jima**	**1.62**	**67**	P	P	**Pn**	**18 52 48.7**	**+0.7**
JIJ					*e*S	**Sn**	**18 53 09.3**	**+0.6**
WJS	**Zhushan**	**1.64**	**274**	*e*P	P	**Pg**	**18 52 51.2**	**0.0**
baz=258								
WJS					*e*S	**Sg**	**18 53 13.5**	**+1.0**
baz=258								
LIOB	**Emei**	**1.65**	**304**	*e*P	P	**Pg**	**18 52 50.9**	**-0.5**
baz=299								
NSTT	**Nanjuang**	**1.65**	**303**	*e*P	P	**Pg**	**18 52 50.7**	**-0.7**
baz=285								
NSTT					*e*S	**Sb**	**18 53 11.3**	**+0.5**
baz=285								
YM01	**YM01**	**1.66**	**329**	*e*P	P	**Pb**	**18 52 50.3**	**+0.2**
baz=323								
YM07	**YM07**	**1.66**	**331**	*e*P	P	**Pb**	**18 52 50.5**	**+0.4**
baz=325								
YM10	**YM10**	**1.67**	**329**	*e*P	P	**Pb**	**18 52 50.4**	**+0.1**
baz=323								
YM11	**YM11**	**1.67**	**329**	*e*P	P	**Pb**	**18 52 50.4**	**0.0**
baz=324								
YM05	**YM05**	**1.67**	**329**	*e*P	P	**Pn**	**18 52 49.4**	**+0.6**
baz=324								
YM04	**YM04**	**1.68**	**328**	*e*P	P	**Pn**	**18 52 49.5**	**+0.7**
baz=340								
YM08	**YM08**	**1.68**	**330**	*e*P	P	**Pb**	**18 52 50.3**	**-0.3**
baz=325								
WNT	**Mingjian**	**1.68**	**276**	*e*P	P	**Pg**	**18 52 51.6**	**-0.5**
baz=269								
WNT					*e*S	**Sg**	**18 53 13.2**	**-0.7**
baz=269								
CHN5	**Tsauling**	**1.69**	**266**	*e*P	P	**Pb**	**18 52 51.5**	**+0.8**
baz=261								
CHN5					*e*S	**Sb**	**18 53 12.9**	**+1.0**
baz=261								
TWS1	**Kuangyinshan**	**1.69**	**324**	*e*P	P	**

WGK				*e*S		**Sg**	**18 53 16.6 -0.7**
	baz=263						
CHN4	**Tsaushan**	**1.80**	**258**	*e*P		**Pg**	**18 52 53.6 -0.6**
	baz=254						
CHN4				*e*S		**Sg**	**18 53 17.2 -0.5**
	baz=254						
WTP	**Ta-pu**	**1.81**	**255**	*e*P		**Pb**	**18 52 53.2 +0.5**
	baz=251						
WTP				*e*S		**Sb**	**18 53 16.7 +1.4**
	baz=251						
WDLH	**Douliu**	**1.81**	**269**	*e*P		**Pb**	**18 52 53.0 +0.3**
	baz=263						
WDLH				*e*S		**Sb**	**18 53 16.3 +0.9**
	baz=263						
WDJ	**Dajia District**	**1.82**	**290**	*e*P		**Pb**	**18 52 53.7 +0.7**
	baz=283						
WDJ				*e*S		**Sb**	**18 53 16.4 +0.7**
	baz=283						
ECL	**Taimali**	**1.82**	**232**	*e*P		**Pn**	**18 52 51.5 +0.7**
	baz=241						
ECL				*e*S		**Sn**	**18 53 13.4 -0.3**
	baz=241						
WCHH	**Zhanghua**	**1.82**	**282**	*e*P		**Pg**	**18 52 54.0 -0.8**
	baz=277						
JISG	**Ishigakijimahi**	**1.85**	**62**	P		**Pn**	**18 52 51.7 +0.5**
JISG				*e*S		**Sb**	**18 53 15.8 -0.7**
SLGT	**Liugui**	**1.86**	**247**	*e*S		**Sb**	**18 53 18.6 +1.7**
	baz=238						
CHN2	**Minshiung**	**1.88**	**265**	*e*S		**Sg**	**18 53 19.9 -0.3**
	baz=259						
SGST	**Jiashian**	**1.89**	**251**	*e*P		**Pb**	**18 52 54.9 +0.8**
	baz=246						
SGST				*e*S		**Sg**	**18 53 19.3 -1.1**
	baz=246						
LAY	**Lan-yu**	**1.90**	**208**	*e*P		**Pn**	**18 52 52.1 +0.2**
	baz=208						
LAY				*e*S		**Sn**	**18 53 16.4 +0.7**
	baz=208						
CHN1	**Nanshi**	**1.90**	**254**	*e*P		**Pb**	**18 52 55.0 +0.8**
	baz=250						
CHN1				*e*S		**Sg**	**18 53 20.1 -0.8**
	baz=250						
TWK	**Hsinying**	**1.92**	**257**	*e*P		**Pb**	**18 52 54.9 +0.3**
	baz=251						
TWK				*e*S		**Sg**	**18 53 20.3 -1.0**
	baz=251						
SNST	**Tainan City**	**1.92**	**255**	*e*P		**Pb**	**18 52 55.6 +1.0**
	baz=251						
SNST				*e*S		**Sg**	**18 53 20.6 -0.8**
	baz=251						
PCYT	**Pengchaiyu**	**1.94**	**348**	*e*P		**Pn**	**18 52 53.4 +1.0**
	baz=344						
RLNB	**Erlin**	**1.98**	**275**	*e*P		**Pb**	**18 52 56.3 +0.7**
	baz=258						
RLNB				*e*S		**Sb**	**18 53 21.4 +1.2**
	baz=258						
SSD	**Sandimen**	**1.99**	**241**	*e*P		**Pb**	**18 52 54.9 -0.9**
	baz=233						
EAST	**Anshuo**	**2.04**	**229**	*e*P		**Pn**	**18 52 55.0 +1.3**
	baz=238						
WTCT	**Ta-ch'eng**	**2.05**	**274**	*e*P		**Pb**	**18 52 57.3 +0.5**
	baz=258						
WTCT				*e*S		**Sg**	**18 53 24.1 -1.5**
	baz=258						
MASBT	**Mashibuluo**	**2.06**	**238**	*e*P		**Pb**	**18 52 55.9 -1.0**
	baz=229						
WSF	**Szhu**	**2.10**	**268**	*e*P		**Pb**	**18 52 58.0 +0.3**
	baz=261						
WSF				*e*S		**Sb**	**18 53 24.0 +0.3**
	baz=261						
SGLT	**Jiouru**	**2.11**	**242**	*e*P		**Pb**	**18 52 58.0 +0.2**
	baz=235						
TWM1	**Shoushan**	**2.12**	**245**	*e*P		**Pg**	**18 53 00.4 0.0**
	baz=244						
CHN8	**Yiju**	**2.15**	**260**	*e*P		**Pb**	**18 52 58.5 0.0**
	baz=254						
CHN8				*e*S		**Sb**	**18 53 25.8 +0.8**
	baz=254						
JTJ	**Tarama**	**2.20**	**65**	P		**Pn**	**18 52 57.6 +1.7**
SCZT	**Fangliau**	**2.21**	**233**	*e*P		**Pb**	**18 52 58.6 -0.8**
	baz=225						
TSEB	**Hengchuen, Pin**	**2.35**	**220**	*e*S		**Sb**	**18 53 30.0 -0.8**
	baz=229						
HEN	**Hengchun**	**2.37**	**224**	*e*P		**Pb**	**18 53 01.4 -0.9**
	baz=223						
HEN				*e*S		**Sn**	**18 53 29.2 +2.0**
	baz=223						
TWKBT	**Hengchun**	**2.37**	**222**	*e*P		**Pb**	**18 53 01.2 -1.1**
	baz=222						
TWKBT				*e*S		**Sb**	**18 53 31.1 -0.4**
	baz=222						
TWK1	**Hengchun**	**2.37**	**222**	*e*P		**Pn**	**18 53 00.4 +2.1**
	baz=222						
TWK1				*e*S		**Sb**	**18 53 30.3 -1.3**
	baz=222						
WLCH	**Liuqiu**	**2.40**	**236**	*e*P		**Pg**	**18 53 04.5 -1.1**
	baz=228						
TWP	**Hsiaoliuchiu**	**2.41**	**236**	*e*P		**Pb**	**18 53 02.9 -0.1**
	baz=228						
TWP				*e*S		**Sg**	**18 53 35.6 -1.6**
	baz=228						
WDGT	**Dungji**	**2.66**	**261**	*e*P		**Pn**	**18 53 04.8 +2.5**
	baz=254						
WDGT				*e*S		**Sn**	**18 53 36.2 +1.8**
	baz=254						
JIRB	**Irabujima**	**2.66**	**65**	P		**Pn**	**18 53 03.9 +1.6**
PHUB	**P'eng-hu**	**2.71**	**266**	*e*P		**Pn**	**18 53 05.1 +2.2**
	baz=249						
PHUB				*e*S		**Sn**	**18 53 36.0 +0.4**
	baz=249						
PNG	**Penghu**	**2.72**	**267**	*e*P		**Pn**	**18 53 05.5 +2.4**
	baz=250						
PNG				*e*S		**Sn**	**18 53 37.6 +1.8**
	baz=250						
VCHM	**Qimei**	**2.88**	**260**	*e*P		**Pn**	**18 53 07.7 +2.4**
	baz=253						
VCHM				*e*S		**Sn**	**18 53 41.1 +1.3**
	baz=253						
PTTC	**Pingtan**	**3.06**	**306**	*e*P		**Pn**	**18 53 08.5 +0.8**
	baz=300						
VWUC	**VWUC**	**3.07**	**295**	*e*P		**Pn**	**18 53 09.0 +1.1**
	baz=289						
MATB	**Ma-tsu**	**3.36**	**317**	*e*P		**Pn**	**18 53 12.2 +0.3**
	baz=311						
PTMZ	**Houxiangcun**	**3.36**	**294**	*e*P		**Pn**	**18 53 12.9 +1.0**
	baz=288						
LYJJ	**Jianjiangzhen**	**3.76**	**319**	*e*P		**Pn**	**18 53 18.3 +0.9**
	baz=314						
KNM	**Kinmen**	**3.79**	**281**	*e*P		**Pn**	**18 53 21.0 +3.1**
	baz=275						
XPSS	**Dashiqiu**	**3.82**	**327**	*e*P		**Pn**	**18 53 19.1 +0.8**
	baz=334						
KNMB	**Chin-men Tao**	**3.84**	**282**	*e*P		**Pn**	**18 53 19.9 +1.4**
	baz=276						
MHZQ	**Yeshan**	**3.95**	**307**	*e*P		**Pn**	**18 53 20.4 +0.3**
	baz=301						
AXDP	**Jialang**	**4.31**	**287**	*e*P		**Pn**	**18 53 26.2 +1.3**
	baz=280						
ZPLA	**Ao Xicun**	**4.37**	**274**	*e*P		**Pn**	**18 53 27.6 +1.8**
	baz=262						
ZPLA				*e*S		**Sn**	**18 54 16.1 -0.4**
	baz=262						
JOW	**Kunigami**	**6.06**	**58**	Pn		**Pn**	**18 53 48.6 -0.5**
	0.2nm,0.3s,baz=162,slow=9.6,SNR=4.9						
KSRS	**Korea Array**	**14.45**	**17**	Pn		**Pn**	**18 55 41.9 -2.1**
	0.1nm,0.3s,baz=195,slow=12,SNR=3.0						
KSRS					LR	LR	19 01 27.8
	comp=Z,74nm,18.3s,baz=188,slow=38						
SONM	**Songino Array**	**27.27**	**336**	P		**P**	**18 58 02.6 -1.3**
	0.9nm,0.7s,baz=156,slow=11,SNR=3.3						
MKAR	**Makanchi Array**	**39.51**	**316**	P		**P**	**18 59 50.2 +0.1**
	0.8nm,0.5s,baz=103,slow=10,SNR=12						
ZALV	**Zalesovo Beam**	**41.29**	**327**	P		**P**	**19 00 02.6 -2.1**
	0.5nm,0.5s,baz=124,slow=7.7,SNR=2.9						
WRA	**Warramunga Arr**	**44.91**	**164**	P		**P**	**19 00 34.1 -0.2**
	1.0nm,0.9s,baz=351,slow=7.7,SNR=2.6						
ASAR	**Alice Springs**	**48.39**	**166**	P		**P**	**19 01 03.5 +1.9**
	0.4nm,0.8s,baz=349,slow=7.6,SNR=6.8						
FINES	**FINESS Array B**	**72.45**	**330**	P		**P**	**19 03 45.7 +0.1**
	1.7nm,0.9s,baz=68,slow=8.0,SNR=3.2						
BRTR	**Keskin Array B**	**74.42**	**307**	P		**P**	**19 03 58.5 +0.6**
	0.7nm,0.9s,baz=52,slow=9.3,SNR=2.8						
YKA	**Yellowknife Ar**	**82.91**	**23**	P		**P**	**19 04 44.0 +0.1**
	0.3nm,0.6s,baz=318,slow=5.3,SNR=4.4						

IDC ***03*** *18:56:37.8±1.5,24°.18N×122°.06E,h0km,mb3.5/3, mb1 3.7/4,mb1mx3.3/33,mbtmp3.5/4,ML3.3/1,MS2.9/1,*

Ms1 2.9/1,ms1mx2.3/32,Error ellipse: s-maj=73.7km s-min=26.6km az=69.0
JMA ***03*** *18:56:37.0±0.2,25°.02N×122°.87E,h14km±3km,M2.5*
ISCJB ***03*** *18:56:38.0±0.5,24°.94N±0°.03×122°.89E±0°.02,h15km±4km, mb3.5/3,MS2.8/1,Error ellipse: s-maj=5.0km s-min=3.4km az=21.0*
TAP ***03*** *18:56:38.0,24°.89N×122°.80E,h8km±1km,ML3.1,D*
ISC 03 18:56:37.4±1.2,24°.90N±0°.04×122°.85E±0°.03,h12km±9km, n79,σ1§03/98,mb3.4/3,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.46**	**169**	P	**Pb**	**18 56 47.8**	**+0.3**
JYNG				*e*S	**Sb**	**18 56 55.7**	**+1.5**
YOJ	**Yonaguni jima**	**0.46**	**162**	⇑P	**Pb**	**18 56 47.9**	**+0.4**
	baz=156						
YOJ				S	**Sb**	**18 56 55.1**	**+0.7**
	baz=156						
YOJ	**Yonaguni jima**	**0.46**	**162**	P	**Pb**	**18 56 47.9**	**+0.4**
YOJ				*e*S	**Sb**	**18 56 55.6**	**+1.2**
EOS1	**EOS1**	**0.74**	**242**	*e*P	**Pn**	**18 56 53.3**	**-0.4**
	baz=241						
EOS1				S	**Sb**	**18 57 03.0**	**+0.5**
	baz=241						
TWB1	**Santiao Chiao**	**0.79**	**278**	P	**Pb**	**18 56 53.1**	**0.0**
	baz=279						
TWB1				*e*S	**Sb**	**18 57 03.4**	**-0.3**
	baz=279						
NTC	**Toucheng**	**0.93**	**267**	*e*P	**Pn**	**18 56 57.3**	**+1.0**
	baz=267						
TIPB	**Shuangxi**	**0.93**	**274**	P	**Pb**	**18 56 55.0**	**-0.6**
	baz=275						
TWC	**Suao**	**0.96**	**252**	*e*P	**Pn**	**18 56 56.6**	**-0.1**
	baz=252						
TWC				*e*S	**Sb**	**18 57 07.5**	**-1.1**
	baz=252						
IRIF	**Iriomote-Funau**	**0.98**	**125**	P	**Pg**	**18 56 56.3**	**0.0**
NWF	**Wu-fen Shan**	**0.98**	**280**	*e*P	**Pg**	**18 56 56.5**	**+0.1**
	baz=281						
WFSB	**Wu-fen Shan**	**0.98**	**280**	*e*P	**Pg**	**18 56 56.4**	**0.0**
	baz=281						
PCYT	**Pengchaiyu**	**1.01**	**316**	P	**Pn**	**18 56 57.6**	**+0.2**
	baz=318						
PCYT				S	**Sn**	**18 57 11.8**	**+0.2**
	baz=318						
TWE	**Neicheng**	**1.09**	**261**	*e*P	**Pb**	**18 56 58.1**	**-0.1**
	baz=260						
TWE				*e*S	**Sn**	**18 57 14.1**	**+0.6**
	baz=260						
ENA	**Nanau**	**1.11**	**245**	*e*P	**Pb**	**18 56 58.4**	**-0.2**
	baz=244						
ENA				*e*S	**Sb**	**18 57 12.7**	**-0.5**
	baz=244						
YM07	**YM07**	**1.15**	**284**	*e*P	**Pb**	**18 56 59.1**	**-0.2**
	baz=285						
TWA	**Mucha**	**1.15**	**274**	*e*P	**Pg**	**18 56 59.7**	**+0.1**
	baz=274						
YM08	**YM08**	**1.18**	**284**	*e*P	**Pn**	**18 56 59.5**	**-0.3**
	baz=285						
YM01	**YM01**	**1.19**	**282**	*e*P	**Pn**	**18 56 58.5**	**-1.4**
	baz=283						
YM11	**YM11**	**1.19**	**283**	*e*P	**Pg**	**18 57 00.5**	**+0.2**
	baz=284						
YM05	**YM05**	**1.19**	**283**	*e*P	**Pg**	**18 57 00.8**	**+0.3**
	baz=283						
ENTT	**Nioudou**	**1.20**	**258**	*e*P	**Pg**	**18 57 01.0**	**+0.5**
	baz=257						
ENTT				*e*S	**Sg**	**18 57 16.7**	**+0.7**
	baz=257						
YM10	**YM10**	**1.20**	**282**	*e*P	**Pn**	**18 56 59.8**	**-0.3**
	baz=283						
NHDH	**Xindian Distri**	**1.20**	**273**	*e*P	**Pb**	**18 57 00.1**	**0.0**
	baz=273						
HATJ	**Hateruma jima**	**1.21**	**134**	P	**Pn**	**18 56 59.6**	**-0.6**
YM04	**YM04**	**1.22**	**282**	*e*P	**Pg**	**18 57 00.6**	**-0.2**
	baz=283						
NWLT	**Wulai**	**1.23**	**264**	*e*P	**Pb**	**18 57 00.7**	**0.0**
	baz=264						
TATO	**Taipei**	**1.24**	**274**	*e*P	**Pb**	**18 57 00.8**	**0.0**
	baz=274						
JKRS	**Kuro-shima**	**1.25**	**122**	P	**Pb**	**18 57 00.7**	**-0.2**
NDT	**Datong Townshi**	**1.25**	**256**	*e*P	**Pg**	**18 57 02.2**	**+0.7**
	baz=256						
NDT				*e*S	**Sg**	**18 57 18.3**	**+0.4**
	baz=256						
JIJ	**Ishigaki jima**	**1.29**	**114**	P	**Pn**	**18 57 00.9**	**-0.4**
NACB	**Ninganchiao**	**1.35**	**238**	*e*P	**Pg**	**18 57 03.2**	**-0.3**
	baz=237						
NACB				*e*S	**Sn**	**18 57 19.7**	**-0.4**
	baz=237						
YHNB	**Yeheng**	**1.36**	**260**	P	**Pb**	**18 57 03.1**	**+0.2**
	baz=260						
YHNB				*e*S	**Sg**	**18 57 21.5**	**+0.2**
	baz=260						
JISG	**Ishigakijimahi**	**1.36**	**103**	P	**Pn**	**18 57 01.5**	**-0.8**
NSK	**Sanguang**	**1.38**	**261**	*e*P	**Pg**	**18 57 03.7**	**-0.2**
	baz=260						
NSK				*e*S	**Sg**	**18 57 21.9**	**+0.1**
	baz=260						
TWD	**Chiawan**	**1.41**	**235**	*e*P	**Pg**	**18 57 04.1**	**-0.3**
	baz=233						
TWD				*e*S	**Sg**	**18 57 22.7**	**0.0**
	baz=233						
NNSB	**Datong**	**1.42**	**251**	*e*P	**Pg**	**18 57 04.5**	**-0.2**
	baz=250						
NNSB				*e*S	**Sb**	**18 57 22.4**	**+0.4**
	baz=250						
NNS	**Nan Shan**	**1.42**	**251**	*e*P	**Pb**	**18 57 04.2**	**+0.2**
	baz=250						
NNS				*e*S	**Sg**	**18 57 23.0**	**-0.2**
	baz=250						
ETLH	**Xiulin Townshi**	**1.43**	**241**	*e*P	**Pg**	**18 57 04.8**	**-0.1**
	baz=240						
ETLH				*e*S	**Sg**	**18 57 23.3**	**-0.1**
	baz=240						
WHF	**Hehuan Shan**	**1.63**	**243**	*e*P	**Pb**	**18 57 07.6**	**-0.1**
	baz=242						
WHF				*e*S	**Sb**	**18 57 28.2**	**-0.2**
	baz=242						
TWT	**Tachien**	**1.66**	**247**	*e*P	**Pb**	**18 57 08.0**	**0.0**
	baz=246						
TDCB	**Techi**	**1.67**	**248**	*e*P	**Pb**	**18 57 07.8**	**-0.5**
	baz=247						
ESL	**Shilin**	**1.69**	**230**	*e*P	**Pn**	**18 57 06.8**	**0.0**
	baz=229						
LIOB	**Emei**	**1.69**	**262**	*e*P	**Pg**	**18 57 09.3**	**-0.5**
	baz=261						
NSTT	**Nanjuang**	**1.70**	**261**	*e*P	**Pb**	**18 57 09.1**	**+0.4**
	baz=261						
NSTT				*e*S	**Sb**	**18 57 30.4**	**+0.3**
	baz=261						
CHGB	**Renai**	**1.74**	**242**	*e*P	**Pb**	**18 57 09.5**	**0.0**
	baz=240						
CHGB				*e*S	**Sb**	**18 57 31.6**	**+0.1**
	baz=240						
EGFH	**Guangfu**	**1.79**	**227**	*e*P	**Pn**	**18 57 07.4**	**-0.8**
	baz=225						
OWD	**Renai**	**1.79**	**239**	*e*P	**Pb**	**18 57 09.2**	**-1.1**
	baz=237						
WHP	**Taichung City**	**1.84**	**251**	*e*P	**Pg**	**18 57 12.5**	**-0.3**
	baz=250						
HGSD	**Ruisui**	**1.92**	**223**	*e*P	**Pn**	**18 57 10.8**	**+0.9**
	baz=222						
VWDT	**VWDT**	**1.93**	**234**	*e*P	**Pb**	**18 57 11.3**	**-1.3**
	baz=233						
EHY	**Hungye**	**1.97**	**225**	*e*P	**Pn**	**18 57 10.6**	**-0.1**
	baz=224						
SMLT	**Sun Moon Lake**	**2.05**	**241**	*e*P	**Pb**	**18 57 13.7**	**-1.0**
	baz=239						
SSLB	**Suanglung**	**2.06**	**238**	*e*P	**Pb**	**18 57 13.5**	**-1.2**
	baz=236						
YULB	**Yu-li**	**2.07**	**224**	*e*P	**Pn**	**18 57 12.0**	**0.0**
	baz=222						
TYC	**Yuchr**	**2.07**	**242**	*e*P	**Pb**	**18 57 14.4**	**-0.6**
	baz=240						
WHYT	**Xinyi Township**	**2.18**	**237**	*e*P	**Pb**	**18 57 15.1**	**-1.8**
	baz=236						
WJS	**Zhushan**	**2.21**	**241**	*e*P	**Pb**	**18 57 17.3**	**-0.1**
	baz=240						
YUS	**Yu-Shan**	**2.23**	**231**	*e*P	**Pn**	**18 57 15.7**	**+1.0**
	baz=230						
ALS	**Alishan**	**2.33**	**234**	*e*P	**Pn**	**18 57 17.1**	**+1.3**
	baz=232						
CHN5	**Tsauling**	**2.37**	**237**	*e*P	**Pb**	**18 57 18.4**	**-1.8**
	baz=236						
ELDTW	**Lidau**	**2.39**	**225**	*e*P	**Pn**	**18 57 17.1**	**+0.5**
	baz=223						
CHN4	**Tsaushan**	**2.58**	**234**	*e*P	**Pb**	**18 57 21.6**	**-2.0**
	baz=232						
STYT	**Tauyuan**	**2.58**	**228**	*e*P	**Pb**	**18 57 21.4**	**-2.3**
	baz=227						
TPUB	**Ta-pu**	**2.58**	**232**	*e*P	**Pb**	**18 57 21.6**	**-2.1**
	baz=231						
WTP	**Ta-pu**	**2.63**	**232**	*e*P	**Pb**	**18 57 22.1**	**-2.4**
	baz=230						
TWK	**Hsinying**	**2.71**	**233**	*e*P	**Pb**	**18 57 23.2**	**-2.6**
	baz=232						
SLGT	**Liugui**	**2.77**	**227**	*e*P	**Pn**	**18 57 23.5**	**+1.8**
	baz=226						
SSD	**Sandimen**	**2.96**	**224**	*e*P	**Pn**	**18 57 27.0**	**+2.7**
	baz=222						
MASBT	**Mashibuluo**	**3.05**	**222**	*e*P	**Pn**	**18 57 28.0**	**+2.4**
	baz=221						
EAST	**Anshuo**	**3.11**	**217**	*e*P	**Pn**	**18 57 28.6**	**+2.2**
	baz=215						
XPSS	**Dashiqiu**	**3.13**	**311**	*e*P	**Pn**	**18 57 27.1**	**+0.5**
	baz=310						
LYJJ	**Jianjiangzhen**	**3.23**	**301**	*e*P	**Pn**	**18 57 29.3**	**+1.3**
	baz=301						
TWKBT	**Hengchun**	**3.49**	**213**	*e*P	**Pn**	**18 57 33.2**	**+1.6**
	baz=211						
TWK1	**Hengchun**	**3.49**	**213**	*e*P	**Pn**	**18 57 33.9**	**+2.3**
	baz=211						
KSRS	**Korea Array**	**13.24**	**18**	Pn		P	18 59 59.8 +4.6
	0.1nm,0.3s,baz=246,slow=20,SNR=4.6						
ASAJ	**Asahikawa**	**25.03**	**35**	LR		LR	19 11 40.7
	comp=Z,29nm,20.2s,baz=204,slow=35						
MKAR	**Makanchi Array**	**38.90**	**315**	P		**P**	**19 04 04.8 +1.9**
	0.5nm,0.9s,baz=97,slow=9.9,SNR=3.5						
WRA	**Warramunga Arr**	**45.96**	**165**	P		**P**	**19 04 58.4 -2.1**
	1.4nm,0.8s,baz=347,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**49.46**	**167**	P		**P**	**19 05 26.1 -1.6**
	0.4nm,1.0s,baz=348,slow=7.1,SNR=2.8						

ISCJB ***03*** *19:04:08.5±0.3,33°.25N±0°.01×115°.63W±0°.02,h6km±3km, mb4.3/2,Error ellipse: s-maj=2.7km s-min=2.1km az=138.8*
ANF ***03*** *19:04:09.4±0.1,33°.23N×115°.63W,h15km,ML4.0/37, Error ellipse: s-maj=1.4km s-min=1.0km az=137.0*
ECX ***03*** *19:04:10.9±0.8,33°.23N×115°.64W,h4km,MD3.9,ML4.0, Fault plane solution: NP1φs138.33000°,δ90.00000°, λ30.00000°.*
SCEDC ***03*** *19:04:10.2,33°.23N×115°.63W,h2km*
PAS ***03*** *19:04:10.1,33°.23N×115°.63W,h2km,MW4.0, MB4.4(NEIC)*
NEIC ***03*** *19:04:10.1±0.0,33°.23N×115°.63W,h2km,mb4.4/2, MW4.0(PAS),After PAS.*
NEIC Felt at Blythe, Calipatria and Niland.
IDC ***03*** *19:04:12.5±2.5,33°.31N×115°.27W,h0km,mb1 3.9/3, mb1mx3.4/33,mbtmp3.4/3,ML4.0/2,Error ellipse: s-maj=38.9km s-min=11.5km az=44.0*
ISC 03 19:04:09.6±1.0,33°.21N±0°.02×115°.63W±0°.02,h14km±8km, n135,σ1§35/152,6C-9D,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWSC	**Sam W. Stewart**	**0.30**	**209**	P	**Pb**	**19 04 16.6**	**-0.2**
	baz=27,SNR=1000						
SWSC				S	**Sb**	**19 04 20.8**	**-0.9**
	baz=27						
SWSC	**Sam W. Stewart**	**0.30**	**209**	⇓*e*P	**Pb**	**19 04 16.6**	**-0.2**
DREC	**Desert Rsrch C**	**0.43**	**160**	*e*P	**Pb**	**19 04 19.6**	**+0.5**
CRR	**Carrizo Plain**	**0.43**	**222**	⇓*i*P	**Pb**	**19 04 19.1**	**0.0**
WESC	**Westside Schoo**	**0.46**	**191**	⇓*e*P	**Pb**	**19 04 19.9**	**+0.4**
BC3	**Big Chuckawall**	**0.47**	**18**	P	**Pg**	**19 04 18.9**	**0.0**
	baz=199,SNR=1000						
BC3				S	**Sg**	**19 04 25.1**	**-0.1**
	baz=199						
ERPC	**Ernies Place**	**0.47**	**184**	⇓*i*P	**Pb**	**19 04 20.3**	**+0.7**
COA	**Coachella**	**0.55**	**129**	⇑*i*P	**Pg**	**19 04 21.1**	**+0.8**
SGL	**Mount Signal**	**0.57**	**188**	⇓*i*P	**Pb**	**19 04 21.2**	**-0.2**
YUH	**Yuha Desert**	**0.62**	**204**	⇓*i*P	**Pb**	**19 04 22.1**	**-0.1**
GLA	**Glamis**	**0.69**	**103**	*e*Pg	**Pg**	**19 04 22.9**	**-0.2**
GLA	**Glamis**	**0.69**	**103**	P	**Pg**	**19 04 23.1**	**0.0**
	baz=285,SNR=1000						
GLA				S	**Sg**	**19 04 32.6**	**+0.4**
	baz=285						
GLA	**Glamis**	**0.69**	**103**	⇑*e*P	**Pg**	**19 04 23.1**	**0.0**
IKP	**In-Ko-Pah, Jac**	**0.69**	**216**	P	**Pb**	**19 04 23.5**	**0.0**
	baz=35,SNR=441						
IKP				S	**Sb**	**19 04 33.2**	**+0.2**
	baz=35						
IKP	**In-Ko-Pah, Jac**	**0.69**	**216**	*e*P	**Pb**	**19 04 23.5**	**0.0**
IKP				*e*S	**Sb**	**19 04 33.2**	**+0.2**
RMX	**La Rumorosa**	**0.72**	**212**	*e*P	**Pb**	**19 04 24.5**	**+0.5**
RMX				*e*S	**Sn**	**19 04 34.9**	**-1.5**
RMX				⇑*e*		19 04 36.3	
RMX				IAML		19 04 36.3	
	comp=E,7μm,0.6s						
RMX				⇓*e*		19 04 36.3	
MONP2	**Monument Peak**	**0.74**	**245**	P	**Pb**	**19 04 24.2**	**-0.2**
	baz=63,SNR=668						
MONP2				S	**Sb**	**19 04 34.6**	**+0.1**
	baz=63						
MONP2	**Monument Peak**	**0.74**	**245**	⇑*e*P	**Pb**	**19 04 24.2**	**-0.2**
PFO	**Pinyon Flats O**	**0.80**	**300**	*e*Pg	**Pg**	**19 04 24.6**	**-0.6**
PFO	**Pinyon Flats O**	**0.80**	**300**	P	**Pg**	**19 04 24.8**	**-0.4**
	baz=118,SNR=486						
PFO				S	**Sb**	**19 04 36.0**	**-0.2**
	baz=118						
CPBX	**Cerro Prieto**	**0.84**	**161**	*e*P	**Pb**	**19 04 24.0**	**-2.0**
CPBX				*e*S	**Sg**	**19 04 37.0**	**+0.2**
CPBX				⇓*e*		19 04 47.4	
CPBX				IAML		19 04 47.4	
	comp=N,11μm,0.5s						
CPBX				IAML		19 04 54.7	
	comp=E,13μm,0.5s						
CPBX				⇑*e*		19 04 54.7	
BELC	**Belle Mtn. Jos**	**0.85**	**339**	P	**Pg**	**19 04 25.7**	**-0.3**
	baz=158,SNR=894						
BELC				S	**Sb**	**19 04 37.2**	**-0.3**
	baz=158						
IRM	**Iron Mountain**	**1.02**	**23**	P	**Pb**	**19 04 28.9**	**-0.3**
	baz=204,SNR=1000						
IRM				S	**Sg**	**19 04 43.0**	**+0.2**
	baz=204						
BAR	**Barrett**	**1.03**	**239**	*e*Pg	**Pb**	**19 04 28.3**	**-0.9**
BAR	**Barrett**	**1.03**	**239**	⇑*e*P	**Pb**	**19 04 28.6**	**-0.7**
BAR				*e*S	**Sn**	**19 04 42.8**	**-1.1**
Y12C	**Blythe**	**1.07**	**59**	*e*Pg	**Pb**	**19 04 28.8**	**-1.1**
Y12C	**Blythe**	**1.07**	**59**	P	**Pb**	**19 04 29.6**	**-0.3**
	baz=241,SNR=641						
Y12C				S	**Sb**	**19 04 44.1**	**+0.4**
	baz=241						
EML	**El Monte Cty P**	**1.07**	**253**	*e*P	**Pb**	**19 04 29.1**	**-0.9**
SDRC	**San Diego

	baz=174						
MWC	Mount Wilson	2.26	297	*e*Pn	Pn	19 04 48.1	+1.2
FMP	Fort Macarthur	2.29	283	Pg	Pg	19 04 52.8	-0.7
	baz=102						
GSC	Goldstone, Bar	2.30	335	*e*Pn	Pn	19 04 46.4	-0.9
GSC	Goldstone, Bar	2.30	335	Pg	Pg	19 04 53.2	-0.6
	baz=154,SNR=270						
Y14A	Wickenburg	2.31	71	*e*Pn	Pn	19 04 46.8	-0.5
PASC	Pasadena Art C	2.34	295	*e*Pn	Pn	19 04 48.4	+0.7
CIS	Catalina Islan	2.34	275	Pb	Pb	19 04 52.1	+0.4
	baz=93						
W13A	Hualapai Mount	2.37	37	*e*Pn	Pn	19 04 48.4	0.0
SCI2	San Clemente I	2.46	265	P	Pn	19 04 48.8	-0.6
	baz=83						
DECC	Green Verdugo	2.48	295	Pb	Pb	19 04 54.3	+0.3
	baz=114						
DECC				Sb	Sg	19 05 27.5	-1.9
	baz=114						
EDW2	Edwards Air Fo	2.58	311	Pb	Pb	19 04 56.0	+0.3
	baz=129						
EDW2				Sb	Sg	19 05 29.9	-2.5
	baz=129						
214A	Organ Pipe Nat	2.69	117	P	Pn	19 04 51.8	-0.7
	baz=299,SNR=25						
SHOC	Shoshone, Teco	2.73	349	Pg	Pg	19 05 01.3	-0.7
	baz=168						
LRMC	Laurel Mtn Rad	2.83	324	Pg	Pg	19 05 03.5	-0.3
	baz=142						
OSI	Osito Audit: C	2.93	299	*e*Pn	Pn	19 04 57.9	+2.1
MPMC	Manual Prospec	3.23	332	P	Pn	19 04 59.2	-0.9
	baz=151,SNR=21						
SNCC	San Nicolas Is	3.27	272	*e*Pn	Pn	19 05 01.0	+0.5
SHPR	Sheep Range	3.31	7	*e*Pn	Pn	19 05 02.0	+0.8
ISA	Isabella, Lake	3.39	317	*e*Pn	Pn	19 05 01.4	-0.8
FURC	Furnace Creek,	3.40	343	Pg	Pg	19 05 14.5	-0.3
	baz=162						
SCZ2	Santa Cruz Isl	3.44	284	Pg	Pg	19 05 15.2	-0.3
	baz=102						
DAC	Darwin (Calif)	3.46	333	*e*Pn	Pn	19 05 04.3	+1.0
X16A	Lo Mia Camp, P	3.69	70	*e*Pn	Pn	19 05 06.6	+0.2
TPNV	Topopah Spring	3.76	352	*e*Pn	Pn	19 05 09.0	+1.5
TPNV	Topopah Spring	3.76	352	P	Pn	19 05 07.8	+0.3
	baz=172,SNR=9.6						
CWC	Cottonwood Cre	3.80	329	Pg	Pg	19 05 21.8	-0.6
	baz=147						
PKM	Mcpherson Peak	3.86	297	Pg	Pg	19 05 23.2	-0.4
	baz=114						
TUC	Tucson	4.18	101	*e*Pn	Pn	19 05 13.2	+0.2
TUC				*e*Pn	Pb	19 05 13.7	-9.3
TUC				*e*Sn	Sb	19 06 08.3	-5.0
TUC	Tucson	4.18	101	P	Pn	19 05 13.2	+0.2
	baz=284						
WUAZ	Wupatki	4.20	56	*e*Pn	Pn	19 05 14.7	+1.2
WUAZ	Wupatki	4.20	56	P	Pn	19 05 15.1	+1.7
	baz=238,SNR=15						
U15A	North Rim	4.22	40	*e*Pn	Pn	19 05 14.5	+0.7
LCMT	Little Creek M	4.26	27	*e*Pn	Pn	19 05 15.3	+1.0
KNB	Kanab	4.44	30	*e*Pn	Pn	19 05 18.0	+1.3
CCUT	Cedar City	4.71	22	*e*Pn	Pn	19 05 21.7	+1.2
SZCU	Shurtz Canyon	4.84	25	*e*Pn	Pn	19 05 24.2	+1.9
X18A	Snowflake	4.90	73	*e*Pn	Pn	19 05 24.0	+0.9
PKCU	Pink Cliffs	5.02	32	*e*Pn	Pn	19 05 25.4	+0.6
R11A	Troy Canyon, C	5.13	0	*e*Pn	Pn	19 05 26.4	+0.2
R11A	Troy Canyon, C	5.13	0	Pg	Pg	19 05 46.7	-1.1
	baz=180						
OMMB	Old Mammoth Mi	5.18	329	*e*Pn	Pn	19 05 28.0	+0.9
MDPB	Devils Postpil	5.23	328	*e*Pn	Pn	19 05 29.6	+1.8
W18A	Petrified Fore	5.24	67	*e*Pn	Pn	19 05 29.4	+1.6
W18A	Petrified Fore	5.24	67	Pg	Pg	19 05 47.9	-2.1
	baz=250,SNR=6.0						
PSUT	Pine Spring	5.50	15	*e*Pn	Pn	19 05 32.9	+1.5
MTPU	Mount Pierson	5.57	29	*e*Pn	Pn	19 05 33.2	+0.7
NVAR	Mina Array Bea	5.64	338	Pn	Pn	19 05 38.9	+5.6
	baz=157,slow=15,SNR=0.7						
NVAR				Pg	Pb	19 05 49.9	+1.9
	baz=158,slow=17,SNR=2.0						
NVAR				Lg	Lg	19 07 07.0	
	baz=155,slow=32,SNR=1.6						
319A	Douglas	5.68	107	*e*Pn	Pn	19 05 33.6	-0.1
RYN	Ryan	5.89	337	*e*Pg	Pb	19 05 53.8	+1.6
TCRU	Three Creeks R	5.97	25	*e*Pn	Pn	19 05 38.5	+0.7
MSU	Marysvale	5.98	27	*e*Pn	Pn	19 05 38.0	0.0
KVN	Kaiserville	6.16	342	*e*Pn	Pn	19 05 41.2	+0.8
121A	Cookes Peak, D	6.63	94	P	Pn	19 05 46.4	-0.4
	baz=278						
PNTR	Pine Nut	6.69	332	*e*Pn	Pn	19 05 48.9	+1.3
MVCO	Mesa Verde	7.07	54	*e*Pn	Pn	19 05 55.1	+2.2
LAZ	Ladron	7.16	78	*e*Pn	Pn	19 05 56.8	+2.6
SRU	San Rafael Swe	7.19	34	*e*Pn	Pn	19 05 55.1	+0.7
PV05	Paradox Valley	7.20	46	*e*Pn	Pn	19 05 56.5	+1.8
LENM	Lemitar	7.27	80	*e*Pn	Pn	19 05 57.0	+1.3
DUG	Dugway, Tooele	7.33	17	*e*Pg	Pg	19 06 28.0	-1.8
P17A	Butcher Ranch,	7.39	31	*e*Pn	Pn	19 05 59.0	+1.8
PV17	East Wray Mesa	7.41	45	*e*Pn	Pn	19 06 00.4	+2.8
PV13	Radium Mtn., P	7.42	46	*e*Pn	Pn	19 05 57.8	+0.1
PV19	Morning Glory	7.42	45	*e*Pn	Pn	19 05 59.8	+2.1
PV14	Lion Creek, Pa	7.43	44	*e*Pn	Pn	19 06 00.1	+2.2
PV20	West Nyswonger	7.45	45	*e*Pn	Pn	19 05 58.5	+0.4
PV09	Paradox Valley	7.46	43	*e*Pn	Pn	19 06 01.3	+3.0
PV16	Nyswonger Mesa	7.46	45	*e*Pn	Pn	19 05 59.0	+0.7
PV11	David Mesa, Pa	7.47	45	*e*Pn	Pn	19 06 01.1	+2.7
PV23	Carpenter Ridg	7.50	44	*e*Pn	Pn	19 06 00.6	+1.8
PV02	Paradox Valley	7.50	46	*e*Pn	Pn	19 06 02.5	+3.7
PV04	Paradox Valley	7.52	45	*e*Pn	Pn	19 06 03.5	+4.5
ELK	Elko	7.53	2	*e*Pn	Pn	19 05 57.3	-1.8
PV01	Paradox Valley	7.55	47	*e*Pn	Pn	19 06 00.6	+1.0
BNM	Barren Site	7.56	80	*e*Pn	Pn	19 06 01.2	+1.6
PV21	Cone Mtn., Par	7.59	43	*e*Pn	Pn	19 06 03.4	+3.3
PV22	Blue Mesa, Par	7.68	44	*e*Pn	Pn	19 06 02.5	+1.2
PV07	Paradox Valley	7.70	45	*e*Pn	Pn	19 06 02.5	+1.0
ANMO	Albuquerque	7.80	75	*e*Pn	Pn	19 06 07.5	+4.6
BGU	Big Grassy Mou	7.97	14	*e*Pn	Pn	19 06 10.1	+4.8
JLU	Jordanelle	8.10	23	*e*Pn	Pn	19 06 07.9	+0.9
MNTX	Cornudas Mount	8.79	97	*e*Pn	Pn	19 06 16.1	-0.2
SMCO	Snowmass	9.18	47	*e*Pn	Pn	19 06 27.2	+5.2
AHID	Auburn Hatcher	10.18	19	*e*Pn	Pn	19 06 36.5	+0.9
PD31	Pinedale Array	10.67	25	*e*Pn	Pn	19 06 43.4	+1.1
PDAR	Pinedale Array	10.67	25	Pn	Pn	19 06 47.9	+5.6
	comp=E,0.2nm,0.3s,baz=189,slow=11,SNR=22						
LTX	Lajitas	10.94	108	*e*Pn	Pn	19 06 48.0	+2.2
TXAR	Lajitas Array	10.94	108	Pn	Pn	19 06 48.0	+2.2
	comp=E,0.2nm,0.3s,baz=282,slow=14,SNR=3.2						
TXAR				Lg	Lg	19 09 47.9	
	baz=279,slow=26,SNR=3.1						
AGMN	Agassiz Nation	21.15	39	*e*P	P	19 08 55.7	+1.5
	comp=E,7.6nm,1.0s						
V53A	Saluda	27.11	76	*e*P	P	19 09 53.0	+0.8
	comp=E,10nm,0.6s						

IDC ***03*** *19:06:23.2±1.1, 9°.95N×122°.88E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/38, mbtmp3.8/6, MS3.2/6, Ms1 3.3/6, ms1mx2.9/35, Error ellipse: s-maj=67.3km s-min=18.7km az=63.0*

ISCJB ***03*** *19:06:27.6±0.7, 10°.01N±0°.03×122°.64E±0°.03, h26km±6km, mb3.8/6, MS3.2/5, Error ellipse: s-maj=6.4km s-min=3.9km az=138.0*

MAN ***03*** *19:06:27.2, 9°.96N×122°.62E, h26km, MS3.9*

MAN INTENSITY III - CAUAYAN NEGROS OCCIDENTAL; INTENSITY II - SIPALAY AND ILOG NEGROS OCCIDENTAL.

ISC 03 19:06:26.6±1.2,**9°.98N**±0°.03×**122°.68E**±0°.03,**h16**km±8km, **n45**,σ1º**28**/52,**mb3.9**/6,**MS3.0**/5,**6C-1D**,**Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	0.65	353	*e*P	Pb	19 06 39.3	-0.3
GUIM				*e*S	Sb	19 06 48.0	-0.5
SNPH	Sibulan	0.84	139	⇑*i*P	Pn	19 06 44.0	+0.2
SNPH				*i* S	Sn	19 06 55.9	+0.1
JAP	San Jose, Anti	1.05	317	⇑*e*P	Pg	19 06 47.5	+0.5
JAP				*e*S	Sg	19 07 21.6	+21
TBP	Tagbilaran	1.20	103	*e*P	Pg	19 06 49.7	-0.2
LLP	Lapu-Lapu	1.31	75	⇑*e*P	Pb	19 06 51.0	0.0
LLP				*i* S	Sg	19 07 08.8	-0.3
DCPH	Dipolog City	1.54	154	⇑*e*P	Pg	19 06 57.9	+1.7
DCPH				*e*S	Sg	19 07 16.3	+0.1
CUYO	Cuyo Island	1.85	298	*e*P	Pn	19 06 57.7	0.0
CUYO				*e*S	Sn	19 07 19.1	-1.6
MSLP	Maasin	2.16	86	*e*P	Pb	19 07 03.6	-1.7
MSLP				*e*S	Sg	19 07 35.1	-0.9
OCLP	Ormoc	2.18	60	*e*P	Pn	19 07 02.9	+0.7
PAGZ	Pagadian	2.23	162	*e*P	Pn	19 07 03.4	+0.6
PAGZ				*e*S	Sg	19 07 36.4	-1.9
OTRP	Odiongan	2.46	345	*e*P	Pn	19 07 06.7	+0.6
OTRP				*e*S	Sn	19 07 37.2	+1.4
CGP	Cagayan de Oro	2.50	127	⇓*e*P	Pn	19 07 06.5	-0.2
MMPH	Masbate	2.54	21	*e*P	Pb	19 07 09.9	-2.0
MMPH				*i* S	Sb	19 07 45.7	+2.7
PLP	Palo	2.56	62	⇑*i*P	Pn	19 07 08.5	+1.2
SJMP	San Jose	2.90	328	*e*P	Pn	19 07 12.7	+0.5
SJMP				*e*S	Sn	19 07 46.3	-0.4
BUKP	Musuan	3.15	131	*e*P	Pn	19 07 16.3	+0.8
CTBH	Cotabato--PC H	3.15	150	⇑*i*P	Pn	19 07 16.1	+0.6
BUSP	Coron	3.16	310	*e*P	Pn	19 07 15.8	+0.2
BUSP				*e*S	Sn	19 07 51.8	-1.3
BESP	Borongan	3.16	59	*e*P	Pn	19 07 14.3	-1.4
CNP	Catarman	3.19	38	*e*P	Pn	19 07 17.6	+1.5
CNP				*e*S	Sn	19 07 52.5	-1.3
ENPP	El Nido	3.42	291	*e*P	Pn	19 07 19.4	+0.1
PVCP	Virac	3.88	22	*e*P	Pn	19 07 27.8	+2.2
SKMP	Bagumbayan, Su	3.90	152	*e*P	Pn	19 07 29.8	+3.9
LUBP	Lubang	4.43	328	*e*P	Pn	19 07 34.8	+1.6
TGY	Tagaytay City	4.44	338	LR	LR	19 09 39.2	
	comp=Z,201nm,19.3s,baz=156,slow=43						
GUMO	Guam	22.02	78	LR	LR	19 20 38.0	
	comp=Z,20nm,18.3s,baz=232,slow=39						
CMAR	Chiang Mai Arr	24.48	293	P	P	19 11 46.1	+0.9
	1.2nm,1.0s,baz=110,slow=8.0,SNR=6.4						
CMAR				LR	LR	19 20 12.7	
	comp=Z,44nm,20.2s,baz=190,slow=34						
PSI	Prapat	24.64	255	LR	LR	19 22 53.9	
	comp=Z,163nm,18.7s,baz=206,slow=40						
WRA	Warramunga Arr	31.87	159	P	P	19 12 49.1	-2.1
	0.6nm,0.3s,baz=340,slow=12,SNR=9.3						
ASAR	Alice Springs	35.19	162	P	P	19 13 18.9	-1.3
	0.6nm,0.4s,baz=339,slow=7.2,SNR=20						
RAMN	Ramite	37.98	301	*e*P	P	19 13 45.3	+1.1
	14nm,0.9s						
JIRN	Jiri	38.56	302	*e*P	P	19 13 50.5	+1.2
GUN	Gumba	38.90	302	*e*P	P	19 13 53.4	+1.3
	35nm,0.8s						
PKI	Pulchoki	39.18	302	*e*P	P	19 13 55.1	+0.7
	12nm,0.8s						
PKIN	Phulchoki	39.19	302	*e*P	P	19 13 55.1	+0.6
	5.4nm,0.5s						
KKN	Kakani	39.36	302	*e*P	P	19 13 56.6	+0.8
DMN	Daman	39.45	302	*e*P	P	19 13 57.5	+0.9
SONM	Songino Array	40.16	343	P	P	19 14 02.3	+0.2
	0.6nm,0.6s,baz=155,slow=7.5,SNR=2.5						
KOLN	Koldanda	40.76	301	*e*P	P	19 14 08.5	+1.0
	15nm,0.7s						
DANN	Dangsing	40.81	302	*e*P	P	19 14 08.6	+0.6
	14nm,0.5s						
PYUN	Piuthan	41.38	301	*e*P	P	19 14 13.7	+1.2
	36nm,0.9s						
MKAR	Makanchi Array	50.16	325	P	P	19 15 21.9	+0.4
	1.2nm,0.7s,baz=131,slow=8.9,SNR=13						
PETK	Petropavlovsk-	51.42	26	LR	LR	19 37 40.7	
	comp=Z,16nm,21.8s,baz=135,slow=37						
RAR	Rarotonga	82.17	113	LR	LR	19 54 13.1	
	comp=Z,44nm,18.3s,baz=186,slow=35						
FINES	FINESS Array B	84.46	331	P	P	19 18 57.4	-1.0
	1.3nm,0.8s,baz=79,slow=7.2,SNR=3.1						

MEX 03 19:33:27.8±0.6,**16°.34N**×**97°.92W**,**h2**km,**MD3.9**,**Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.20	286	*i* P	Pg	19 33 31.3	-0.4
PNIG				*i* S	Sg	19 33 34.6	+0.2
TLIG	Tlapa	1.37	333	*i* P	Pg	19 33 50.8	-3.3
TLIG				*i* S	Sg	19 34 07.9	-3.9
HUIG	Huatulco	1.83	108	*e*P	Pn	19 33 56.7	-3.6
CMIG	Matias Romero	3.01	75	*e*P	Pn	19 34 13.1	-3.4

IDC 03 19:37:21.1±20.0,**25°.25S**×**179°.32E**,**h591**km±250km, **mb3.1**/5,**mb1 3.3**/5,**mb1mx2.9**/24,**mbtmp4.1**/5,**Error ellipse: s-maj=119.5km s-min=79.0km az=136.0**,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	30.89	273	P	P	19 42 51.5	+0.3
	2.1nm,0.3s,baz=94,slow=11,SNR=8.5						
STKA	Stephens Creek	33.66	250	P	P	19 43 13.8	-0.6
	0.5nm,0.4s,baz=94,slow=13,SNR=3.2						
ASAR	Alice Springs	41.22	262	P	P	19 44 16.0	0.0
	1.3nm,0.4s,baz=96,slow=7.7,SNR=86						
WRA	Warramunga Arr	41.72	268	P	P	19 44 19.5	-0.4
	2.8nm,0.3s,baz=100,slow=8.5,SNR=32						
NVAR	Mina Array Bea	86.15	44	P	P	19 49 00.8	0.0
	0.1nm,0.3s,baz=225,slow=8.9,SNR=3.6						

ISCJB ***03*** *19:44:07.9±0.6, 29°.12S±0°.04×148°.75E±0°.05, h10km, Error ellipse: s-maj=7.0km s-min=5.8km az=142.1*

AUST ***03*** *19:44:08.8±0.1, 29°.05S×148°.94E, h5km, Error ellipse: s-maj=0.1km s-min=0.1km az=269.0*

IDC ***03*** *19:44:10.4±9.3, 28°.85S×148°.66E, h0km, mb1 3.8/3, mb1mx3.4/24, mbtmp3.6/3, ML3.5/3, Error ellipse: s-maj=109.3km s-min=45.1km az=122.0*

ISC 03 19:44:08.5±0.9,**28°.93S**±0°.06×**148°.77E**±0°.05,**h10**km,**n10**, σ3º**02**/17,**Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMQ	Roma	2.43	360	P	Pb	19 44 52.2	-0.1
	baz=2.6						
RMQ				S	Sb	19 45 23.5	+1.1
	baz=2.6						
ARMA	Armidale	2.90	122	P	Pn	19 44 54.2	-0.7
	baz=2.7						
ARMA				S	Sn	19 45 27.6	-2.2
	baz=2.7						
CMSA	Cobar Meteorol	3.72	225	P	Pn	19 45 09.3	+3.3
	baz=3.7						
EIDS	Eidsvold	4.10	31	P	Pn	19 45 13.7	+2.5
	baz=4.1						
MGCD	Mangrove Creek	4.72	155	P	Pn	19 45 19.6	-0.1
	baz=4.6						
MGCD				S	Sn	19 46 12.1	-2.4
	baz=4.6						
STKA	Stephens Creek	6.86	243	Pn	Pn	19 45 51.9	+2.8
	0.6nm,0.3s,baz=71,slow=15,SNR=10.0						
STKA				Sn	Sn	19 47 06.9	-0.4
	1.2nm,0.3s,baz=149,slow=20,SNR=6.5						
STKA				Lg	Lg	19 47 46.5	
	0.8nm,0.3s,baz=120,slow=20,SNR=2.3						
STKA	Stephens Creek	6.86	243	P	Pn	19 45 52.2	+3.1
	baz=6.9						
STKA				S	Sn	19 47 06.1	-1.2
	baz=6.9						
BBOO	Buckleboo	11.58	247	P	Pn	19 46 55.5	+1.6
	baz=12						
ASAR	Alice Springs	14.32	288	Pn	Pn	19 47 32.5	+1.1
	0.1nm,0.3s,baz=112,slow=14,SNR=7.5						
ASAR				Sn	Sn	19 50 04.8	-5.5
	0.1nm,0.3s,baz=111,slow=24,SNR=6.5						
WRA	Warramunga Arr	15.88	301	Pn	Pn	19 47 53.8	+1.6
	0.2nm,0.3s,baz=130,slow=12,SNR=7.6						
WRA				Sn	Sn	19 50 41.9	-6.5
	0.3nm,0.3s,baz=131,slow=23,SNR=8.3						

ISCJB ***03*** *20:00:34.1±0.6, 12°.9N±0°.1×88°.39W±0°.06, h76km±13km, Error ellipse: s-maj=19.3km s-min=4.4km az=24.5*

SNET ***03*** *20:00:34.9±0.9, 12°.86N×88°.43W, h58km±8km, ML4.1*

UCR ***03*** *20:00:34.6±1.1, 12°.86N×88°.42W, h62km±9km, MD4.1, ML4.0*

ISC 03 20:00:35.2±1.5,**12°.87N**±0°.09×**88°.40W**±0°.05,**h66**km±15km, **n51**,σ0º**47**/66,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCY	Lacayo	0.56	11	*e*P	Pn	20 00 48.1	-0.3
LCY	Lacayo	0.56	11	*e*P	Pn	20 00 48.1	-0.3
VSM	San Miguel	0.57	13	*e*P	Pn	20 00 48.4	-0.3
VSM	San Miguel	0.57	13	*e*P	Pn	20 00 48.4	-0.3
BLLM	Bellamira	0.59	16	*e*P	Pn	20 00 48.3	-0.4
BLLM	Bellamira	0.59	16	*e*P	Pn	20 00 48.3	-0.4
PACA	Pacayal	0.60	7	*e*P	Pn	20 00 48.6	-0.3
PACA				*e*S	Sn	20 00 58.9	0.0
PACA				IAML		20 01 01.1	
	comp=Z,17μm,0.2s						
PACA	Pacayal	0.60	7	*e*P	Pn	20 00 48.6	-0.3
PACA				*e*S	Sn	20 00 58.9	0.0
PACA				IAML		20 01 01.1	
	comp=Z,17μm,0.2s						
TECA	Tecapa	0.63	351	*e*P	Pn	20 00 48.7	-0.5
TECA	Tecapa	0.63	351	*e*P	Pn	20 00 48.7	-0.5
LCND	La Caada	0.66	49	*e*P	Pn	20 00 49.0	-0.4
LCND				*e*S	Sn	20 00 60.0	+0.1
LCND				IAML		20 01 07.3	
	comp=Z,3μm,0.4s						
LCND	La Caada	0.66	49	*e*P	Pn	20 00 49.0	-0.4
LCND				*e*S	Sn	20 00 60.0	+0.1
LCND				IAML		20 01 07.3	
	comp=Z,3μm,0.4s						
CNCH	Conchagua	0.69	54	*e*P	Pn	20 00 49.4	-0.4
CNCH				*e*S	Sn	20 01 01.1	+0.5
CNCH				IAML		20 01 03.1	
	comp=Z,32μm,0.6s						
CNCH	Conchagua	0.69	54	*e*P	Pn	20 00 49.0	-0.7
CNCH				*e*P		20 00 49.5	
CNCH				*e*S	Sn	20 01 01.1	+0.5
CNCH				IAML		20 01 03.1	
	comp=Z,32μm,0.6s						
CSGN	Cosiguina Volc	0.83	82	*e*P	Pn	20 00 51.9	+0.5
CSGN				*e*S	Sn	20 01 04.5	+1.1
CSGN	Cosiguina Volc	0.83	82	*e*P	Pn	20 00 51.9	+0.5
SNVI	San Vicente	0.85	330	*e*P	Pn	20 00 51.4	-0.4
SNVI	San Vicente	0.85	330	*e*P	Pn	20 00 51.2	-0.6
CAHU	Cacacuatique	0.92	12	*e*P	Pn	20 00 52.3	-0.3
CAHU	Cacacuatique	0.92	12	*e*P	Pn	20 00 52.4	-0.2
LFRS	El Faro	0.99	320	*e*P	Pn	20 00 52.9	-0.5
PAVA	Las Pavas	0.99	328	*e*P	Pn	20 00 53.0	-0.4
PAVA				*e*S	Sn	20 01 07.5	+0.5
PAVA	Las Pavas	0.99	328	*e*P	Pn	20 00 53.0	-0.4
PAVA				*e*S	Sn	20 01 07.5	+0.5
LBRS	Las Brisas	1.07	324	*e*P	Pn	20 00 54.2	-0.2
VICT	Victoria	1.11	348	*e*P	Pn	20 00 54.6	-0.4
VICT				*e*S	Sn	20 01 09.9	+0.2
VICT	Victoria	1.11	348	*e*P	Pn	20 00 54.6	-0.4
VICT				*e*S	Sn	20 01 09.9	+0.2
LFU	La Fuente	1.12	322	*e*P	Pn	20 00 55.1	0.0
LFU	La Fuente	1.12	322	*e*P	Pn	20 00 55.1	0.0
SNET	Serv Nac Est T	1.15	315	*e*P	Pn	20 00 54.7	-0.7
SNET				*e*S	Sn	20 01 10.2	-0.4
BOQS	Boqueron	1.21	315	*e*P	Pn	20 00 56.2	-0.2
BOQS				*e*S	Sn	20 01 12.1	-0.2
CRIN	San Cristobal	1.33	97	*e*P	Pn	20 00 58.2	+0.3
CEVE	Cerro Verde	1.52	309	*e*P	Pn	20 01 00.5	-0.1
CEVE				IAML		20 01 24.5	
	comp=Z,2μm,0.5s						
CEVE	Cerro Verde	1.52	309	*e*P	Pn	20 01 00.5	-0.1
CEVE				IAML		20 01 24.5	
	comp=Z,2μm,0.5s						
SBLS	San Blas	1.53	309	*e*P	Pn	20 01 00.7	0.0
SBLS				*e*S	Sn	20 01 20.7	+0.9
SBLS	San Blas	1.53	309	*e*P	Pn	20 01 00.7	0.0
SBLS				*e*S	Sn	20 01 20.7	+0.9
SNJE	San Jose	1.54	310	*e*P	Pn	20 01 00.4	-0.2
SNJE	San Jose	1.54	310	*e*P	Pn	20 01 00.4	-0.2
RTR	El Retiro	1.58	310	*e*P	Pn	20 01 01.4	+0.1
RTR	El Retiro	1.58	310	*e*P	Pn	20 01 01.4	+0.1
TGUH	Tegucigalpa,Un	1.61	43	*e*P	Pn	20 01 01.5	0.0
CNGN	Cerro Negro	1.70	102	*e*P	Pn	20 01 01.3	-1.5
MTO3	Montecristo	1.78	329	*e*P	Pn	20 01 03.9	-0.1
MTO3	Montecristo	1.78	329	*e*P	Pn	20 01 03.9	-0.1
MOMN	Momotombo	1.88	104	*e*P	Pn	20 01 04.5	-0.6
MOMN	Momotombo	1.88	104	*e*P	Pn	20 01 04.5	-0.6
COPN	Copaltepe	1.90	111	*e*P	Pn	20 01 04.7	-0.7
ESTN	Estel	2.00	83	*e*P	Pn	20 01 06.5	-0.3
APYN	Apoyeque	2.10	107	*e*P	Pn	20 01 07.9	-0.2
APYN	Apoyeque	2.10	107	*e*P	Pn	20 01 07.9	-0.2
MATN	Matagalpa	2.42	88	*e*P	Pn	20 01 11.9	-0.6
ACON	Acoyapa	3.28	105	*e*P	Pn	20 01 23.5	-0.6

NIED ***03*** *20:01:00, 38°.60N×141°.90E, h50km, Mw4.3 Best double couple: M0 3.14000×10^15 NP1:φs205.00000°, δ26.00000°, λ90.00000°. NP2:φs25.00000°, δ64.00000°, λ90.00000°.*

BJI ***03*** *20:01:19.8±0.0, 38°.48N×142°.20E, h53km, mb4.6/50, mB4.7/29, Ms4.4/13, Ms7 4.1/7*

MOS ***03*** *20:01:22.5±1.0, 38°.70N×141°.84E, h48km, mb4.8/23, Error ellipse: s-maj=8.6km s-min=5.1km az=95.1*

ISCJB ***03*** *20:01:22.9±0.4, 38°.64N±0°.03×141°.90E±0°.04, h54km±2km, mb4.4/70, Error ellipse: s-maj=5.9km s-min=3.6km az=32.3*

JMA ***03*** *20:01:23.9, 38°.62N×141°.90E, h48km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs32.00000°, δ74.00000°, λ96.00000°. NP2:φs190.00

comp=N,71nm,19.3s,baz=48,slow=43
GRPR Tuman 6.08 27 *e*P **Pn 20 02 50.7 -0.1**
GRPR *e*S **Sn 20 03 54.6 -4.4**
GRPR pmax pmax
comp=N,82nm,0.2s
GRPR pmax pmax
comp=Z,118nm,0.2s
GRPR pmax pmax
comp=E,90nm,0.3s
GRPR smax smax
comp=E,514nm,0.4s
GRPR smax smax
comp=N,456nm,0.3s
LAGR Lagunnoye 6.14 27 *e*P **Pn 20 02 52.0 +0.4**
LAGR *e*S **Sn 20 03 57.2 -3.3**
LAGR pmax pmax
comp=N,143nm,0.3s
LAGR pmax pmax
comp=E,125nm,0.3s
LAGR pmax pmax
comp=Z,214nm,0.3s
LAGR smax smax
comp=N,634nm,0.3s
LAGR smax smax
comp=E,934nm,0.5s
YUK Yuzh-Kuril'sk 6.15 28 *e*P **Pn 20 02 51.9 +0.1**
YUK *i* S **Sn 20 03 56.9 -3.8**
YUK pmax pmax
comp=N,26nm,0.2s
YUK pmax pmax
comp=E,27nm,0.2s
YUK pmax pmax
comp=Z,170nm,0.2s
YUK smax smax
comp=E,335nm,0.2s
YUK smax smax
comp=N,728nm,0.6s
TEY Ternei 7.52 330⇑ *e*P Pn 20 03 16.8 +6.2
TEY pmax pmax
comp=N,60nm,0.7s
TEY pmax pmax
comp=E,40nm,0.7s
TEY pmax pmax
comp=Z,70nm,0.7s
KUR Kuril'sk 7.93 32 *e*P **Pn 20 03 16.6 +0.4**
KUR *i* S **Sn 20 04 41.0 -3.6**
KUR pmax pmax
comp=Z,37nm,0.4s
KUR pmax pmax
comp=N,12nm,0.1s
KUR pmax pmax
comp=E,12nm,0.1s
YSS Yuzh-Sakhalins 8.33 4 *e*P **Pn 20 03 23.2 +1.5**
YSS pmax pmax
comp=Z,20nm,1.2s
USRK Ussuriysk Ar. 9.30 310 P **Pn 20 03 36.0 +1.0**
comp=Z,0.7nm,0.3s,baz=118,slow=14,SNR=8.4
USRK LR LR 20 07 02.4
comp=Z,182nm,20.8s,baz=133,slow=36
USRK Ussuriysk Ar. 9.30 310 P **Pn 20 03 36.0 +1.0**
USA0B Ussuriysk Arra 9.30 310 *e*Pn **Pn 20 03 35.3 +0.3**
JNU Nakatsue 10.52 242 P **Pn 20 03 53.2 +1.4**
comp=Z,0.5nm,0.3s,baz=81,slow=4.5,SNR=11
JNU LR LR 20 08 14.9
comp=Z,166nm,19.8s,baz=12,slow=39
JNU Nakatsue 10.52 242 *e*Pn **Pn 20 03 52.2 +0.5**
MDJ Mudanjiang 10.99 307 P **Pn 20 04 02.8 +4.7**
MDJ S **Sn 20 06 01.8 +2.2**
MDJ pmax pmax
comp=Z,13nm,1.1s
MDJ pmax pmax
comp=Z,68nm,5.8s
KSRS Korea Array 11.11 268 P **Pn 20 04 03.0 +3.3**
comp=Z,0.3nm,0.3s,baz=83,slow=14,SNR=14
KSRS LR LR 20 07 56.6
comp=Z,128nm,19.8s,baz=78,slow=36
KS15 Wonju Array Si 11.14 268 *e*Pn **Pn 20 03 59.9 -0.4**
KLR Kul'dur 12.86 329 P **Pn 20 04 24.2 +0.6**
comp=Z,0.1nm,0.3s,baz=162,slow=13,SNR=3.9
KLR LR LR 20 09 18.2
comp=Z,140nm,19.5s,baz=96,slow=37
CN2 Changchun 13.43 298 *e*P **Pn 20 04 32.4 +1.0**
CN2 *e*pP P 20 04 42.0 +2.4
CN2 *e*S **Sn 20 06 58.2 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
PETK Petropavlovsk- 18.10 32 LR LR 20 12 54.1
comp=Z,39nm,18.7s,baz=223,slow=38
ZEA Zeya 18.14 331 *e*P **P 20 05 30.1 -1.6**
ZEA pmax pmax
comp=N,21nm,0.8s
ZEA pmax pmax
comp=E,21nm,0.8s
ZEA pmax pmax
comp=Z,30nm,0.9s
NJ2 Nanjing 19.91 258 *e*P **P 20 05 50.9 -0.4**
NJ2 pmax pmax
comp=Z,13nm,0.7s
MA2 Magadan 21.70 12 P **P 20 06 11.3 +1.0**
comp=Z,7.5nm,0.7s,baz=195,slow=9.6,SNR=7.7
MA2 LR LR 20 14 56.8
comp=Z,26nm,18.2s,baz=108,slow=37
MA2 Magadan 21.70 12 *e*P **P 20 06 11.6 +1.3**
comp=Z,9.8nm,0.9s
MA2 Magadan 21.70 12*ce*P **P 20 06 11.4 +1.1**
MA2 pmax pmax
comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 23.40 285 *e*P **P 20 06 27.3 -1.0**
HHC pmax pmax
comp=Z,21nm,1.1s
HHC pmax pmax
comp=Z,110nm,7.9s
WHN Wuhan 24.04 259 ⇓P **P 20 06 33.7 -0.5**
WHN S **S 20 10 42.6 -5.6**
WHN pmax pmax
comp=Z,28nm,0.5s
WHN pmax pmax
comp=Z,170nm,4.6s
YAK Yakutsk 24.60 346 *e*P **P 20 06 38.5 -0.6**
comp=Z,17nm,1.0s
YAK Yakutsk 24.60 346 *e*P **P 20 06 38.3 -0.7**
YAK *e**PP **pP 20 06 48.6 -2.6**
YAK *e*S **S 20 10 55.6 -1.1**
YAK *e**SS **sS 20 11 11.9 -5.1**
YAK *e*SSS SSS 20 11 55.0
SEY Seymchan 25.14 11 P **P 20 06 45.0 +1.1**
comp=Z,7.4nm,0.8s,baz=204,slow=7.0,SNR=29
BOD Bodaibo 26.41 326 *e*P **P 20 06 54.6 -0.9**
BOD pmax pmax
comp=Z,4.0nm,1.4s
ULN Ulaanbaatar 26.83 301 *e*P **P 20 06 59.3 -0.3**
comp=Z,4.3nm,1.0s
ULN Ulaanbaatar 26.83 301*ce*P **P 20 06 57.1 -2.5**
ULN pmax pmax
comp=Z,6.0nm,1.3s
XAN Xi'an 26.90 270 P **P 20 06 59.6 -0.6**
XAN pmax pmax
comp=Z,2.0nm,0.5s
SONA0 Songino Array 27.26 301 *e*P **P 20 07 03.1 -0.4**
SONM Songino Array 27.26 301 P **P 20 07 03.1 -0.4**
comp=Z,1.5nm,0.7s,baz=115,slow=9.3,SNR=6.8
ENH Enshi 27.91 262 *e*P **P 20 07 08.5 -0.9**
comp=Z,25nm,0.8s
H11N2 WAKE ISLAND Hy 28.66 124 T T 20 37 44.7
baz=317,slow=75,SNR=1734
H11N1 WAKE ISLAND Hy 28.67 124 T T 20 37 40.9
baz=317,slow=75,SNR=1973
H11N3 WAKE ISLAND Hy 28.68 124 T T 20 37 41.3
baz=317,slow=75,SNR=2081
H11S1 WAKE ISLAND Hy 29.43 126 T T 20 38 35.5
baz=318,slow=76,SNR=351
H11S3 WAKE ISLAND Hy 29.43 126 T T 20 38 32.6
baz=318,slow=76,SNR=536
H11S2 WAKE ISLAND Hy 29.45 126 T T 20 38 34.9
baz=318,slow=76,SNR=273
TLY Talaya 29.62 309 *e*P **P 20 07 23.7 -0.5**
comp=Z,5.6nm,0.8s
TLY Talaya 29.62 309 *e*P **P 20 07 24.3 +0.1**
TLY pmax pmax
comp=Z,20nm,1.1s
ZAK Zakamensk 29.62 306 *e*P **P 20 07 20.1 -4.3**
ZAK pmax pmax
comp=Z,5.0nm,0.9s
LZH Lanzhou 30.24 277 *e*P **P 20 07 32.1 +2.0**
LZH pP sP 20 07 45.7 -2.2
LZH sP pP 20 07 52.0 +10
LZH *e*PP **PnPn 20 08 31.2 +2.2**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,67nm,4.9s
LZH LR LR
comp=Z,320nm,12.8s
LZH LR LR
comp=Z,320nm,13.0s
LZH LR LR
comp=Z,430nm,16.2s
MOY Mondy 31.24 308 *e*P **P 20 07 39.0 +0.3**
CD2 Chengdu 32.11 268 P **P 20 07 45.8 -0.7**
CD2 pmax pmax
comp=Z,30nm,0.5s
BILL Bilibino 32.37 17 *i* P **P 20 07 47.6 -0.7**
BILL *i* 20 07 57.5
BILL pmax pmax
comp=Z,3.0nm,1.0s
GTA Gaotai 32.51 285 P **P 20 07 49.1 -0.9**
GTA pP pP 20 08 02.9 +0.5
GTA sP sP 20 08 07.2 -0.7
GTA pmax pmax
comp=Z,2.0nm,1.2s
GTA pmax pmax
comp=Z,61nm,4.2s
GTA LR LR
comp=Z,63nm,15.1s
GTA LR LR
comp=Z,110nm,15.5s
TIXI Tiksi 33.75 353 P **P 20 07 59.4 -0.8**
comp=Z,1.6nm,0.6s,baz=137,slow=5.8,SNR=7.0
TIXI Tiksi 33.75 353 *e*P **P 20 07 59.5 -0.7**
comp=Z,3.1nm,1.1s
TIXI Tiksi 33.75 353*ce*P **P 20 07 58.5 -1.7**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
KMI Kunming 35.63 259 P **P 20 08 18.4 +1.1**
KMI pmax pmax
comp=Z,30nm,0.5s
DGZ Jazzator, Alta 39.80 304*c i* P **P 20 08 51.4 -0.8**
DGZ pmax pmax
comp=Z,18nm,0.9s
WMQ Urumqi 40.50 295 *e*P **P 20 08 58.8 +0.9**
WMQ LR LR
comp=Z,410nm,32.9s
WMQ LR LR
comp=Z,480nm,39.0s
WMQ LR LR
comp=Z,250nm,25.1s
ZAA0 Zalesovo Array 41.15 311 *e*P **P 20 09 02.9 -0.1**
comp=Z,9.9nm,0.9s
ZAA1 Zalesovo Array 41.15 311 *e*P **P 20 09 02.7 -0.3**
ZAA1 *e*PcP **PcP 20 11 01.1 -0.4**
ZALV Zalesovo Beam 41.15 311 P **P 20 09 02.7 -0.3**
comp=Z,4.6nm,0.5s,baz=89,slow=7.0,SNR=25
ZALV PcP **PcP 20 11 01.1 -0.4**
comp=Z,1.7nm,0.4s,baz=89,slow=3.1,SNR=6.0
ZALV LR LR 20 27 02.3
comp=Z,57nm,18.2s,baz=248,slow=37
ZALV Zalesovo Beam 41.15 311 *i* P **P 20 09 03.2 +0.2**
ZALV pmax pmax
comp=Z,5.0nm,0.5s
NVS Novosibirsk 42.04 312 *e*P **P 20 09 08.9 -1.4**
NVS pmax pmax
comp=E,9.0nm,1.1s
NVS pmax pmax
comp=Z,10.0nm,1.1s
CMMT Chiang Mai 42.10 254 P P 20 09 20.5 +9.3
comp=Z,2.7nm,0.6s
CMAR Chiang Mai Arr 42.32 254 P **P 20 09 12.4 -0.6**
comp=Z,0.5nm,0.4s,baz=42,slow=8.6,SNR=5.2
CMAR Chiang Mai Arr 42.32 254 *i* P **P 20 09 13.0 0.0**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
MK31 Makanchi Array 43.63 301 *e*P **P 20 09 23.2 -0.1**
comp=Z,8.1nm,1.0s
MK31 Makanchi Array 43.63 301 *e*P **P 20 09 23.2 -0.1**
MK31 pmax pmax
comp=Z,8.0nm,1.0s
MK32 Makanchi Array 43.63 301 *e*P **P 20 09 23.1 -0.3**
MKAR Makanchi Array 43.63 301 P **P 20 09 23.1 -0.3**
comp=Z,5.8nm,0.9s,baz=86,slow=9.4,SNR=38
MKAR Makanchi Array 43.63 301 *i* P **P 20 09 23.3 0.0**
MKAR pmax pmax
comp=Z,6.0nm,0.9s
MAKZ Makanchi 43.84 301 *e*P **P 20 09 24.9 -0.1**
comp=Z,8.0nm,1.0s
MAKZ Makanchi 43.84 301 *e*P **P 20 09 24.9 -0.1**
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 45.28 307 *e*P **P 20 09 36.0 -0.4**
comp=Z,31nm,0.9s
KURK Kurchatov 45.28 307*ce*P **P 20 09 35.8 -0.6**
KURK pmax pmax
comp=Z,36nm,1.0s
KURBB Kurchatov Arra 45.35 307 P **P 20 09 36.8 -0.1**
comp=Z,22nm,0.6s,baz=82,slow=8.3,SNR=209
KURBB PcP **PcP 20 11 15.1 -0.6**
comp=Z,1.2nm,0.8s,baz=79,slow=3.9,SNR=3.4
PDGK Podgornoye 46.40 297 P **P 20 09 46.3 +0.8**
PDGK pmax pmax
comp=Z,5.0nm,1.1s
ODAN Odare 46.74 272 *e*P **P 20 09 48.6 +0.1**
JIRN Jiri 47.30 274 *e*P **P 20 09 53.1 +0.1**
RAMN Ramite 47.31 273 *e*P **P 20 09 53.0 0.0**
comp=Z,35nm,0.8s
GUN Gumba 47.42 274 *e*P **P 20 09 53.9 0.0**
comp=Z,26nm,0.7s
ILAR Eielson Array 47.92 33 P **P 20 09 58.0 +1.1**
comp=Z,1.0nm,0.6s,baz=276,slow=5.6,SNR=5.3
ILAR Eielson Array 47.92 33 P **P 20 09 58.0 +1.1**
KKN Kakani 47.95 275 *e*P **P 20 09 57.8 0.0**
comp=Z,22nm,0.8s
PKI Pulchoki 47.95 274 *e*P **P 20 09 57.6 -0.4**
comp=Z,8.6nm,0.7s
PKIN Phulchoki 47.96 274 *e*P **P 20 09 57.6 -0.4**
comp=Z,5.9nm,0.7s
TARG Taragay, Kyrgy 48.07 295 *e*P **P 20 09 59.6 +0.7**
comp=Z,6.0nm,0.8s
DMN Daman 48.17 275 *e*P **P 20 09 59.0 -0.6**
DIV Divide 48.75 38 *e*P **P 20 10 04.0 +0.6**
comp=Z,8.1nm,0.8s
DANN Dangsing 48.87 276 *e*P **P 20 10 05.3 +0.3**
comp=Z,36nm,0.8s
BOOM Boomskoye usch 49.14 297 *e*P **P 20 10 07.3 +0.6**
comp=Z,4.4nm,0.8s
BOOM Boomskoye usch 49.14 297 *e*P **P 20 10 07.4 +0.6**
BOOM pmax pmax
comp=Z,4.0nm,0.8s
KOLN Koldanda 49.27 276 *e*P **P 20 10 07.5 -0.5**
comp=Z,5.2nm,0.6s
PYUN Piuthan 49.59 276 *e*P **P 20 10 10.3 -0.1**
OTUK Ortayu 49.83 305 P **P 20 10 11.9 +0.1**
OTUK pmax pmax
comp=Z,7.0nm,1.3s
BRVK Borovoye 49.86 311 *e*P **P 20 10 11.9 0.0**
comp=Z,4.4nm,0.8s
BRVK Borovoye 49.86 311 *e*P **P 20 10 11.9 0.0**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
ARSB Arslanbob 51.61 296 *e*P **P 20 10 25.7 +0.2**
comp=Z,5.7nm,0.8s
EPYK Eagle Plains 51.93 30 *e*P **P 20 10 29.3 +1.9**
comp=Z,4.7nm,0.9s
KK31 Karatay Array 52.69 299 *e*P **P 20 10 33.0 -0.2**
comp=Z,5.3nm,0.8s
KK31 Karatay Array 52.69 299 *e*P **P 20 10 33.0 -0.2**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 52.69 299 *e*P **P 20 10 33.0 -0.2**
comp=Z,5.3nm,0.8s
KKAR Karatay Array 52.69 299 *e*P **P 20 10 33.0 -0.2**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 52.77 28 P **P 20 10 34.5 +1.1**
comp=Z,1.1nm,0.5s,baz=312,slow=7.0,SNR=8.6
INK sP **sP 20 10 53.6 +1.9**
comp=Z,0.9nm,0.5s,baz=276,slow=11,SNR=3.8
INK Inuvik 52.77 28 *e*P **P 20 10 34.5 +1.1**
comp=Z,12nm,1.8s
INK Inuvik 52.77 28 *e*P **P 20 10 34.5 +1.1**
INK pmax pmax
comp=Z,12nm,1.8s
SVE Sverdlovsk 54.22 318 *e*P **P 20 10 44.8 +0.6**
SVE pmax pmax
comp=Z,17nm,1.0s
NIL Nilore 54.51 287 *e*P **P 20 10 46.6 -0.2**
comp=Z,18nm,1.3s
NIL Nilore 54.51 287 *e*P **P 20 10 46.6 -0.2**
NIL pmax pmax
comp=Z,18nm,1.3s
ARU Arti 55.44 318 *e*P **P 20 10 53.0 0.0**
comp=Z,9.3nm,0.9s
ARU Arti 55.44 318*ce*P **P 20 10 52.7 -0.3**
ARU pmax pmax
comp=Z,6.0nm,1.0s
ABKAR Akbulak array 57.23 309 *e*P **P 20 11 05.4 -0.5**
comp=Z,4.7nm,0.6s
WR1 Warramunga Arr 58.71 188 *e*P **P 20 11 15.6 -0.9**
WR1 *e*pP **pP 20 11 29.3 -0.3**
WRA Warramunga Arr 58.71 188 P **P 20 11 15.6 -0.9**
comp=Z,1.2nm,0.6s,baz=1.1,slow=6.3,SNR=6.4
WRA pP **pP 20 11 29.3 -0.3**
comp=Z,1.5nm,0.5s,baz=358,slow=7.8,SNR=3.5
RES Resolute Bay 60.94 15 P **P 20 11 31.1 -0.1**
comp=Z,1.4nm,0.7s,baz=288,slow=11,SNR=3.9
YKA Yellowknife Ar 62.22 31 P **P 20 11 40.5 +0.5**
comp=Z,0.6nm,0.7s,baz=300,slow=7.0,SNR=5.6
YKB5 Yellowknife Ar 62.22 31 *e*P **P 20 11 40.5 +0.5**
ASAR Alice Springs 62.44 188 P **P 20 11 41.0 -0.9**
comp=Z,0.8nm,0.7s,baz=1.4,slow=4.8,SNR=9.8
ASAR pP **pP 20 11 56.0 +0.9**
comp=Z,1.7nm,0.7s,baz=13,slow=12,SNR=9.5
ASAR Alice Springs 62.44 188 P **P 20 11 41.0 -0.9**
ASAR *PP **pP 20 11 56.0 +0.9**
GEYT Alibeck 63.42 298 P **P 20 11 48.5 +0.1**
comp=Z,2.2nm,0.7s,baz=48,slow=2.2,SNR=5.3
FIA0 FINESS Array S 67.58 332 *e*P **P 20 12 14.2 -0.7**
FIA0 FINESS Array S 67.58 332 *e*P **P 20 12 14.2 -0.7**
FINES FINESS Array B 67.58 332 P **P 20 12 14.2 -0.7**
comp=Z,3.8nm,0.8s,baz=69,slow=6.3,SNR=10
KIV Kislovodsk 70.17 311 *e*P **P 20 12 31.3 -0.1**
comp=Z,11nm,0.9s
KIV Kislovodsk 70.17 311 *e*P **P 20 12 32.1 +0.7**
KIV pmax pmax
comp=Z,38nm,1.0s
KBZ Khabaz 70.17 310 P **P 20 12 31.9 +0.7**
comp=Z,4.8nm,0.9s,baz=11,slow=4.8,SNR=8.4
FFC Flin Flon 72.14 33 *i* P **P 20 12 44.9 +2.0**
NB2 NORSAR Subarra 72.86 337 P **P 20 12 47.1 -0.1**
comp=Z,4.4nm,0.8s,baz=39,slow=6.2
NB200 NORSAR Array S 72.86 337 *e*P **P 20 12 47.3 +0.1**
NOA NORSAR Array B 72.86 337 P **P 20 12 47.3 +0.1**
comp=Z,2.8nm,0.8s,baz=39,slow=6.0,SNR=9.6
HLID Hailey 72.98 48 *e*P **P 20 12 50.9 +2.4**
comp=Z,3.3nm,0.5s
AKASG Malin Array Be 73.28 322 P **P 20 12 49.4 -0.4**
comp=Z,1.8nm,0.5s,baz=48,slow=6.4,SNR=8.1
AKBB Malin Array Si 73.28 322 *e*P **P 20 12 49.5 -0.3**
comp=Z,3.3nm,0.7s
AKBB Malin Array Si 73.28 322 *e*P **P 20 12 49.5 -0.3**
AKBB pmax pmax
comp=Z,3.0nm,0.7s
NV01 Mina Array Sit 73.70 54 *e*P **P 20 12 53.8 +0.9**
NVAR Mina Array Bea 73.70 54 P **P 20 12 53.8 +0.9**
comp=Z,0.3nm,0.5s,baz=276,slow=8.1,SNR=2.5
BUR08 Bucovina Ar. S 77.29 322 *e*P **P 20 13 13.5 +0.4**
comp=Z,18nm,1.9s
KOLS Kolonicke sedl 77.76 324 *e*P **P 20 13 16.4 +0.9**
KOLS Kolonicke sedl 77.76 324 *e*P **P 20 13 16.4 +0.9**
BR101 Keskin Array S 78.09 312 *e*P **P 20 13 17.6 -0.2**
BRTR Keskin Array B 78.09 312 P **P 20 13 17.6 -0.2**
comp=Z,0.5nm,0.4s,baz=130,slow=2.4,SNR=6.9
LANS Liptovska Anna 78.87 326 *e*P **P 20 13 23.0 +1.3**
LANS Liptovska Anna 78.87 326 *e*P **P 20 13 23.0 +1.3**
DPC Dobruska-Polom 79.31 328 *e*P **P 20 13 24.5 +0.4**
DPC Dobruska-Polom 79.31 328 *e*P **P 20 13 24.5 +0.4**
VYHS Vyhne 79.64 325 *e*P **P 20 13 26.6 +0.7**
VYHS Vyhne 79.64 325 *e*P **P 20 13 26.5 +0.7**
CLL Collm 79.91 330 *e*P **P 20 13 27.2 +0.1**
comp=Z,5.5nm,0.8s
CLL Collm 79.91 330 *i* P **P 20 13 27.3 +0.1**
comp=Z,6.0nm,0.9s
CLL Collm 79.91 330 *i* P **P 20 13 27.3 +0.1**
CLL pmax pmax
comp=Z,6.0nm,0.9s
GOPC GO Pecny, Ondr 80.28 328 *e*P **P 20 13 28.7 -0.6**
GOPC GO Pecny, Ondr 80.28 328 *e*P **P 20 13 28.7 -0.6**
PRU Pruhonice 80.33 329 *e*P **P 20 13 29.7 +0.2**
PRU Pruhonice 80.33 329 *e*P **P 20 13 29.7 +0.2**
KHC Kasperske Hory 81.39 329 *e*P **P 20 13 33.9 -1.4**
KHC Kasperske Hory 81.39 329 *e*P **P 20 13 33.9 -1.4**
GERES GERESS Array B 81.56 328 P **P 20 13 36.2 -0.1**
comp=Z,4.0nm,1.1s,baz=14,slow=7.2,SNR=6.4
SOKA Soboth 82.69 326 *i* P **P 20 13 42.3 +0.1**
comp=Z,4.9nm,1.0s
KBA Koelnbreinsper 83.10 327 *i* P **P 20 13 45.0 +0.6**
comp=Z,3.8nm,0.8s
MOTA Moosalm 83.81 329 *i* P **P 20 13 48.6 +0.5**
comp=Z,1.5nm,0.6s
RETA Reutte 83.84 329 *i* P **P 20 13 48.4 +0.3**
comp=Z,5.5nm,0.9s
TTG Podgorica 83.97 321 *e*P **P 20 13 48.4 -0.3**
comp=Z,7.8nm,1.0s
TTG Podgorica 83.97 321 *e*P **P 20 13 48.4 -0.3**
TTG pmax pmax
comp=Z,8.0nm,1.0s
BFO Black Forest 84.10 331 *i* P **P 20 13 50.6 +1.2**
FETA Feichten 84.22 329 *i* P **P 20 13 50.3 +0.1**
comp=Z,2.7nm,0.8s
FUORN Ofenpass-Fuorn 84.74 329 *e*P **P 20 13 53.1 +0.2**
comp=Z,6.9nm,0.8s
LTX Lajitas 88.82 53 *e*P **P 20 14 13.8 +0.9**
LTX *e*pP **pP 20 14 28.1 +1.4**
LTX Lajitas 88.82 53 *e*P **P 20 14 13.8 +0.9**
LTX *e**PP **pP 20 14 28.1 +1.4**
TXAR Lajitas Array 88.82 53 P **P 20 14 13.8 +0.9**
comp=Z,0.4nm,0.7s,baz=298,slow=2.7,SNR=4.4
TXAR pP **pP 20 14 28.1 +1.4**
comp=Z,0.5nm,0.7s,baz=293,slow=2.9,SNR=4.5
LPAZ La Paz 145.51 58 PKPbc **PKPab 20 20 58.4 +0.3**
comp=Z,1.5nm,0.7s,baz=20,slow=5.4,SNR=7.1

NIED ***03*** *20:27:00,45°.30N×151°.20E,h26km,Mw4.7 Best double couple: M₀1.49000×10¹⁶ NP1:φ₀=239.00000°,δ34.00000°, λ146.00000°. NP2:φ₀=359.00000°,δ72.00000°,λ61.00000°.*
SKHL ***03*** *20:27:17.7±0.6,45°.05N×151°.48E,h48km±8km,mb5.0/2, Ms4.5/7*
ISCJB ***03*** *20:27:18.4±0.5,45°.22N±0°.03×151°.13E±0°.03,h37km±3km, mb4.8/218,MS4.4/58,Error ellipse: s-maj=5.0km s-min=2.8km az=146.1*
JMA ***03*** *20:27:18.1±0.5,45°.35N×151°.25E,h30km,M5.1*
BJI ***03*** *20:27:20.2±0.0,45°.31N×151°.05E,h56km,mb4.8/67, mB5.0/48,Ms4.6/66,Ms7 4.4/61*
MOS ***03*** *20:27:21.1±1.0,45°.36N×150°.98E,h56km,mb5.1/77, MS4.4/16,Error ellipse: s-maj=6.1km s-min=4.3km az=111.0*
IDC ***03*** *20:27:21.6±0.6,45°.45N×150°.98E,h46km±6km,mb4.2/24, mb1 4.3/31,mb1mx4.3/47,mbtmp4.4/31,MS4.1/29, Ms1 4.1/29,ms1mx4.0/39,Error ellipse: s-maj=13.4km s-min=9.6km az=134.0*
NEIC ***03*** *20:27:22.3±1.5,45°.38N×151°.02E,h52km±5km,mb4.9/131, Error ellipse: s-maj=18.4km s-min=12.7km az=148.0*
GCMT ***03*** *20:27:23.3±0.5,45°.38N±0°.03×151°.30E±0°.04,h31km±1km, MW4.9/55,Moment Tensor Solution. s24,c31; s55,c71; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}1.88±.16; $M_{\theta\theta}$-1.01±.10; $M_{\phi\phi}$-0.86±.09; $M_{r\theta}$0.77±.13; $M_{r\phi}$-1.37±.07; $M_{\theta\phi}$1.09±.10; Best double couple: $M_0$2.48900×10¹⁶ NP1:φ₀=39.00000°,δ61.00000°,λ82.00000°. NP2: φ₀=236.00000°,δ30.00000°,λ104.00000°. Principal axes: T 2.2890, Plg72.0000°, Azm290.0000°; N 0.4020, Plg7.0000°, Azm43.0000°; P -2.6880, Plg16.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 20:27:20.8±0.5,45°.21N±0°.05×151°.09E±0°.04,h46km±4km, h46km:pP-P,n551,σ1§58/583,mb4.8/218,MS4.5/59, 40C-12D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.28**	**272**	*d i* PN	**Pn**	**20 27 56.2**	**+0.3**
KUR				*i* S	**Sn**	**20 28 24.7**	**+1.9**

KUR pmax pmax
comp=E,162nm,0.2s
KUR pmax pmax
comp=Z,704nm,0.2s
KUR pmax pmax
comp=N,314nm,0.3s
KUR smax smax
comp=N,7μm,1.4s
KUR smax smax
comp=E,5μm,2.1s
KUR smax smax
comp=N,2μm,0.3s
KUR smax smax
comp=E,1μm,0.3s
KUR MLR MLR
comp=Z,8μm,13.0s
KUR Kuril'sk 2.28 272 *i* P **Pn 20 27 56.5 +0.6**
KUR AMB AMB 20 28 00.0
comp=Z,565nm,0.2s
KUR AMB AMB 20 28 00.0
comp=Z,474nm,0.2s
KUR AMB AMB 20 28 00.0
comp=Z,783nm,0.2s
KUR *i* S **Sn 20 28 25.2 +2.4**
KUR A A 20 28 29.0
comp=Z,2μm,0.4s
KUR A A 20 28 29.0
comp=Z,2μm,0.4s
KUR AMS AMS 20 29 08.0
comp=Z,12μm,13.0s
KUR AMS AMS 20 29 08.0
comp=Z,10μm,13.0s
KUR AMS AMS 20 29 08.0
comp=Z,10μm,13.0s
YUK Yuzh-Kuril'sk 3.92 254 *e*PN **Pn 20 28 19.4 +1.0**
YUK *i* S **Sn 20 29 06.2 +3.1**
YUK pmax pmax
comp=N,127nm,0.2s
YUK pmax pmax
comp=Z,929nm,0.2s
YUK pmax pmax
comp=E,285nm,0.3s
YUK smax smax
comp=N,1μm,0.4s
YUK smax smax
comp=E,1μm,0.5s
YUK MLR MLR
comp=N,3μm,14.0s
YUK MLR MLR
comp=E,2μm,17.0s
YUK Yuzh-Kuril'sk 3.92 254 *e*P **Pn 20 28 19.0 +0.6**
YUK AMB AMB 20 28 21.0
comp=E,127nm,0.2s
YUK AMB AMB 20 28 21.0
comp=E,285nm,0.2s
YUK AMB AMB 20 28 21.0
comp=E,929nm,0.2s
YUK *i* S **Sn 20 29 05.4 +2.3**
YUK A A 20 29 12.0
comp=E,1μm,0.5s
YUK A A 20 29 12.0
comp=E,1μm,0.5s
YUK AMS AMS 20 29 52.0
comp=E,7μm,17.0s
YUK AMS AMS 20 29 52.0
comp=E,9μm,17.0s
YUK AMS AMS 20 29 52.0
comp=E,6μm,17.0s
LAGR Lagunnoye 3.96 255 *e*PN **Pn 20 28 21.4 +2.4**
LAGR *e*S **Sn 20 29 09.8 +5.6**
LAGR pmax pmax
comp=N,296nm,0.2s
LAGR pmax pmax
comp=E,272nm,0.2s
LAGR pmax pmax
comp=Z,610nm,0.2s
LAGR smax smax
comp=N,3μm,0.5s
LAGR smax smax
comp=E,2μm,0.4s
LAGR Lagunnoye 3.96 255 *e*P **Pn 20 28 21.0 +2.0**
LAGR AMB AMB 20 28 24.0
comp=E,296nm,0.2s
LAGR AMB AMB 20 28 24.0
comp=E,272nm,0.2s
LAGR AMB AMB 20 28 24.0
comp=E,610nm,0.2s
LAGR *e*S **Sn 20 29 09.0 +4.8**
LAGR A A 20 29 20.0
comp=E,3μm,0.5s
LAGR A A 20 29 20.0
comp=E,2μm,0.5s
GRPR Tuman 3.99 254 *e*PN **Pn 20 28 20.6 +1.2**
GRPR *e*S **Sn 20 29 08.3 +3.4**
GRPR pmax pmax
comp=Z,484nm,0.3s
GRPR pmax pmax
comp=N,422nm,0.2s
GRPR pmax pmax
comp=E,176nm,0.2s
GRPR smax smax
comp=N,1μm,0.3s
GRPR smax smax
comp=E,723nm,0.5s
GRPR Tuman 3.99 254 *e*P **Pn 20 28 20.0 +0.6**
GRPR AMB AMB 20 28 23.0
comp=E,422nm,0.2s
GRPR AMB AMB 20 28 23.0
comp=E,176nm,0.2s
GRPR AMB AMB 20 28 23.0
comp=E,484nm,0.2s
GRPR *e*S **Sn 20 29 08.0 +3.1**
GRPR A A 20 29 17.0
comp=E,1μm,0.5s
GRPR A A 20 29 17.0
comp=E,723nm,0.5s
GLVR Golovnino 4.25 252 *e*PN **Pn 20 28 23.9 +0.9**
GLVR *e*S **Sn 20 29 14.2 +2.8**
GLVR pmax pmax
comp=N,89nm,0.2s
GLVR pmax pmax
comp=E,170nm,0.2s
GLVR pmax pmax
comp=Z,960nm,0.2s
GLVR smax smax
comp=E,996nm,0.3s
GLVR smax smax
comp=N,1μm,0.4s
GLVR Golovnino 4.25 252 *e*P **Pn 20 28 24.0 +0.9**
GLVR AMB AMB 20 28 26.0
comp=N,89nm,0.2s
GLVR AMB AMB 20 28 26.0
comp=N,170nm,0.2s
GLVR AMB AMB 20 28 26.0
comp=N,960nm,0.2s
GLVR *e*S **Sn 20 29 13.6 +2.2**
GLVR A A 20 29 22.0
comp=N,1μm,0.4s
GLVR A A 20 29 22.0
comp=N,996nm,0.4s
NEM2 Nemuro 2 4.26 246 P **Pn 20 28 22.3 -0.8**
NEM2 *e*S **Sn 20 29 10.1 -1.5**
JRA Rausu 4.45 255 P **Pn 20 28 27.2 +1.4**
JRA *e*S **Sn 20 29 20.3 +4.0**
JNK Nakash 4.85 253 P **Pn 20 28 31.6 +0.4**
JNK *e*S **Sn 20 29 30.0 +3.9**
JAK Akkeshi 5.11 247 P **Pn 20 28 33.8 -1.0**
JAK *e*S **Sn 20 29 29.8 -2.7**
JTKR Abashiri--Toko 5.28 259 P **Pn 20 28 38.4 +1.3**
JAR Ashorobuto 5.60 253 P **Pn 20 28 42.3 +0.8**
JMP Maruseppu 5.65 260 P **Pn 20 28 43.8 +1.5**
JOB Onbets 5.72 249 P **Pn 20 28 42.9 -0.2**
JOB *e*S **Sn 20 29 46.8 -0.6**
YSS Yuzh-Sakhalins 6.06 290 *e*Pn **Pn 20 28 48.5 +0.8**
YSS Yuzh-Sakhalins 6.06 290 ‖ *i*PN **Pn 20 28 49.7 +2.0**
YSS *e*S **Sn 20 29 58.5 +2.8**
YSS pmax pmax
comp=Z,40nm,1.2s
YSS smax smax
comp=E,60nm,1.0s
YSS MLR MLR
comp=Z,3μm,15.0s
YSS MLR MLR
comp=E,2μm,14.0s
YSS Yuzh-Sakhalins 6.06 290 *i* P **Pn 20 28 49.7 +2.0**
YSS AMB AMB 20 28 50.8
comp=E,400nm,1.0s
YSS *e*S **Sn 20 29 58.5 +2.8**
YSS AMS AMS 20 31 09.0
comp=E,1μm,15.0s
YSS AMS AMS 20 31 09.0
comp=E,2μm,15.0s
YSS AMS AMS 20 31 09.0
comp=E,3μm,15.0s
JKK2 Kamakawa 2 6.11 260 P **Pn 20 28 50.3 +1.7**
JKA Kamikawa-asahi 6.16 263 *e*P **Pn 20 28 50.7 +1.6**
ASAJ Asahikawa 6.16 263 P **Pn 20 28 50.7 +1.5**
comp=E,10.0nm,0.3s,baz=80,slow=15,SNR=52
ASAJ S **Sn 20 30 02.8 +4.6**
comp=E,0.5nm,0.3s,baz=86,slow=19,SNR=1.4
ASAJ LR LR 20 31 19.2
comp=E,3μm,21.3s,baz=88,slow=39
ASAJ Asahikawa 6.16 263 P **Pn 20 28 51.5 +2.3**
JCH Churui 6.16 248 P **Pn 20 28 48.6 -0.6**
JCH *e*S **Sn 20 29 56.7 -1.6**
SKR Severo-Kuril's 6.43 30 *e*PN **Pn 20 28 51.5 -1.3**
SKR pmax pmax
comp=Z,100nm,3.5s
SKR pmax pmax
comp=Z,384nm,0.8s
SKR pmax pmax
comp=Z,400nm,2.2s
SKR MLR MLR
comp=Z,3μm,16.0s
SKR Severo-Kuril's 6.43 30 *e*P **Pn 20 28 51.5 -1.3**
SKR AMB AMB 20 28 57.1
comp=Z,380nm,0.8s
SKR AMB AMB 20 28 58.5
comp=Z,96nm,3.0s
SKR *e*S **Sn 20 30 00.7 -4.1**
SKR A A 20 30 42.3
comp=Z,564nm,0.7s
SKR A A 20 30 42.3
comp=Z,554nm,0.7s
SKR AMS AMS 20 31 25.2
comp=Z,3μm,16.0s
JFR Furan 6.45 254 P **Pn 20 28 54.5 +1.4**
JFR *e*S **Sn 20 30 10.5 +5.2**
JWK2 Keihoku 6.49 274 P **Pn 20 28 57.7 +4.0**
JAB Ashibetsu 6.58 258 P **Pn 20 28 57.8 +2.8**
JEM Erimo 6.59 244 P **Pn 20 28 55.6 +0.6**
ERM Erimo 6.59 244 *e*Pn **Pn 20 28 56.0 +0.9**
ERM Erimo 6.59 244 *e*PN **Pn 20 28 56.0 +0.9**
JNBK Urakawa-nobuka 6.71 247 P **Pn 20 28 55.9 -0.9**
JBT2 Biratori 2 6.75 252 P **Pn 20 28 57.1 -0.2**
UGL Uglegorsk 7.27 305 *e*PN **Pn 20 29 06.6 +2.3**
UGL pmax pmax
comp=Z,62nm,0.5s
UGL MLR MLR
comp=Z,2μm,15.0s
UGL MLR MLR
comp=N,2μm,12.0s
UGL MLR MLR
comp=E,1μm,13.0s
UGL Uglegorsk 7.27 305 *e*P **Pn 20 29 07.0 +2.7**
UGL AMB AMB 20 29 08.0
comp=E,62nm,0.5s
UGL *e*S **Sn 20 30 30.2 +4.8**
UGL AMS AMS 20 33 15.0
comp=E,2μm,13.0s
UGL AMS AMS 20 33 15.0
comp=E,1μm,13.0s
UGL AMS AMS 20 33 15.0
comp=E,2μm,13.0s
JEW Eniwo 7.34 255 P **Pn 20 29 07.4 +2.0**
JNB Noboribetsu 7.77 253 P **Pn 20 29 11.9 +0.7**
JNB *e*S **Sn 20 30 36.0 -1.8**
TYV Tymovskoe 7.99 318 *e*PN **Pn 20 29 15.5 +1.2**
TYV *e*S **Sn 20 30 43.8 +0.6**
TYV pmax pmax
comp=Z,21nm,1.1s
TYV pmax pmax
comp=Z,200nm,2.7s
TYV smax smax
comp=E,20nm,1.3s
TYV MLR MLR
comp=Z,3μm,15.0s
TYV Tymovskoe 7.99 318 *e*P **Pn 20 29 16.5 +2.2**
TYV AMB AMB 20 29 17.0
comp=Z,200nm,3.0s
TYV *e*S **Sn 20 30 45.0 +1.8**
TYV AMS AMS 20 32 35.0
comp=Z,3μm,14.0s
JKB Kayabe 8.03 249 P **Pn 20 29 14.2 -0.6**
JKB *e*S **Sn 20 30 39.9 -4.3**
JYM2 Yakumo 2 8.37 252 P **Pn 20 29 19.1 -0.3**
JANG Nango 8.54 239 P **Pn 20 29 18.9 -2.9**
JANG *e*S Sn 20 30 48.6 -8.2
JTM Tenmabayashi 8.57 242 P **Pn 20 29 21.4 -0.9**
JTM *e*S **Sn 20 30 52.2 -5.4**
JSR Shiriuchi 8.60 248 P **Pn 20 29 22.9 +0.2**
JTH Tanohata 8.61 235 P **Pn 20 29 20.2 -2.6**
JTH *e*S Sn 20 30 48.9 -10
JOSM Okushiri--Mats 8.99 254 P **Pn 20 29 28.1 +0.2**
PEA0B Petropavlovsk- 9.01 26 *e*Pn **Pn 20 29 26.6 -1.5**
PETK Petropavlovsk- 9.01 26 P **Pn 20 29 26.4 -1.7**
comp=Z,1.3nm,0.3s,baz=178,slow=11,SNR=18
PETK S **Sn 20 31 11.0 +2.9**
baz=203,slow=22,SNR=1.7
PETK LR LR 20 33 07.2
comp=Z,1μm,18.1s,baz=217,slow=39
PEA1 Petropavlovsk- 9.01 26 *e*Pn **Pn 20 29 26.4 -1.7**
PEA1 *e*Sn **Sn 20 31 11.0 +2.8**
PET Petropavlovsk 9.25 30 *e*PN **Pn 20 29 29.3 -2.2**
PET MLR MLR
comp=Z,1μm,17.0s
PET MLR MLR
comp=Z,1μm,15.0s
PET Petropavlovsk 9.25 30 *e*P **Pn 20 29 30.2 -1.3**
PET AMS AMS 20 33 14.5
comp=Z,1μm,15.0s
OFUJ Ofunato 9.30 232 P **Pn 20 29 29.9 -2.3**
OFUJ *e*S Sn 20 31 06.3 -9.1
JRG Rokugo 9.68 237 P **Pn 20 29 35.7 -1.8**
JRG *e*S **Sn 20 31 18.4 -6.4**
OKH Okha 9.89 330 *de*PN Pn 20 29 43.4 +3.2
OKH pmax pmax
comp=Z,100nm,11.1s
OKH MLR MLR
comp=Z,2μm,14.0s
OKH Okha 9.89 330 *e*P **Pn 20 29 43.0 +2.8**
OKH *e*S **Sn 20 31 33.4 +3.7**
OKH AMS AMS 20 34 54.0
comp=Z,2μm,14.0s
JIO Ouri 9.92 230 P **Pn 20 29 38.1 -2.6**
TEY Ternei 10.25 274 ‖ *e*PN Pn 20 29 51.6 +6.5
TEY *e*S **Sn 20 31 44.6 +6.1**
TEY pmax pmax
comp=E,60nm,1.4s
TEY pmax pmax
comp=Z,60nm,1.2s
TEY MLR MLR
comp=E,1μm,14.0s
TEY MLR MLR
comp=N,900nm,20.0s
TEY MLR MLR
comp=Z,1μm,13.0s
TEY Ternei 10.25 274 *e*P **Pn 20 29 48.6 +3.5**
TEY AMB AMB 20 29 52.9
comp=Z,60nm,1.0s
TEY AMS AMS 20 34 48.2
comp=Z,900nm,17.0s
TEY AMS AMS 20 34 48.2
comp=Z,1μm,17.0s
NKL Nikolayevsk 10.46 323 *e*P **Pn 20 29 49.0 +1.0**
NKL AMB AMB 20 29 51.0
comp=Z,130nm,2.0s
NKL AMB AMB 20 29 51.0
comp=Z,230nm,2.0s
NKL AMS AMS 20 34 14.0
comp=Z,1μm,14.0s
JYA Atsumi 10.75 236 P **Pn 20 29 51.7 -0.4**
GRNR Gornyy 11.29 305 *e*PN Pn 20 30 04.8 +5.4
GRNR pmax pmax
comp=Z,30nm,1.1s
GRNR Gornyy 11.29 305 *e*P **Pn 20 30 00.5 +1.1**
GRNR AMB AMB 20 30 07.6
comp=Z,30nm,1.0s
JFY Yanaizu 11.57 232 P **Pn 20 30 02.2 -1.2**
MAJO Matsushiro 13.03 233 *e*Pn **Pn 20 30 21.6 -1.6**
MAJO Matsushiro 13.03 233 *e*PN **Pn 20 30 21.6 -1.6**
MAT Matsushiro 13.03 233 P **Pn 20 30 21.5 -1.7**
MAT S **Sn 20 32 51.2 +4.5**
MJAR Matsushiro Arr 13.03 233 P **Pn 20 30 22.8 -0.5**
comp=Z,0.1nm,0.3s,baz=37,slow=9.2,SNR=22
MJAR LR LR 20 35 54.6
comp=Z,578nm,21.6s,baz=50,slow=39
MJB9 Matsu-Tunnel 13.03 233 *e*Pn **Pn 20 30 21.3 -1.9**
USA0B Ussuriysk Arra 13.63 273 *e*Pn **Pn 20 30 28.8 -2.5**
USRK Ussuriysk Ar. 13.63 273 P **Pn 20 30 30.9 -0.4**
comp=Z,0.9nm,0.3s,baz=79,slow=12,SNR=15
USRK LR LR 20 35 48.6
comp=Z,988nm,18.7s,baz=72,slow=37
KLR Kul'dur 13.74 294 P **Pn 20 30 34.3 +1.5**
comp=Z,0.3nm,0.3s,baz=100,slow=14,SNR=19
EKMR Ekimchan 14.21 310 *e*P **Pn 20 30 38.8 -0.4**
EKMR AMB AMB 20 30 52.0
comp=Z,21nm,1.0s
MA2 Magadan 14.39 359 P **Pn 20 30 38.8 -2.7**
comp=Z,2.0nm,0.3s,baz=178,slow=16,SNR=4.0
MA2 Magadan 14.39 359 *e*Pn **Pn 20 30 37.6 -3.9**
MA2 Magadan 14.39 359 *ce*P **Pn 20 30 41.7 +0.2**
MA2 pmax pmax
comp=Z,37nm,1.7s
MA2 Magadan 14.39 359 *e*P **Pn 20 30 41.7 +0.2**
INU Inuyama 14.56 232 *e*Pn **Pn 20 30 42.2 -1.7**
MDJ Mudanjiang 15.24 275 P **Pn 20 30 53.1 +0.2**
MDJ S **S 20 33 47.5 -7.8**
MDJ pmax pmax
comp=Z,11nm,1.0s
MDJ LR LR
comp=Z,930nm,17.8s
MDJ LR LR
comp=Z,980nm,18.0s
MDJ LR LR
comp=Z,2μm,17.8s
BMKR Bomnak 17.12 312 *e*P **Pn 20 31 15.0 -1.5**
BMKR AMB AMB 20 31 32.0
comp=Z,15nm,0.5s
ZEA Zeya 17.62 307 *e*P **Pn 20 31 21.2 -1.5**
ZEA pmax pmax
comp=E,65nm,1.4s
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=Z,71nm,1.2s
ZEA MLR MLR
comp=E,1μm,15.0s
ZEA MLR MLR
comp=Z,2μm,15.0s
ZEA MLR MLR
comp=N,800nm,13.0s
ZEA Zeya 17.62 307 *e*P **Pn 20 31 21.2 -1.5**
ZEA AMB AMB 20 31 25.8
comp=N,71nm,1.0s
ZEA AMS AMS 20 38 47.0
comp=N,800nm,14.0s
ZEA AMS AMS 20 38 47.0
comp=N,1μm,14.0s
ZEA AMS AMS 20 38 47.0
comp=N,2μm,14.0s
SEY Seymchan 17.77 2 P **P 20 31 23.3 -1.5**
comp=N,0.2nm,0.3s,baz=172,slow=9.7,SNR=10
SEY Seymchan 17.77 2 *ce*P **P 20 31 23.8 -1.0**
SEY Seymchan 17.77 2 *e*P **P 20 31 23.8 -1.0**
KROS Kirovskiy 18.01 309 *e*P **P 20 31 27.5 -0.1**
KROS AMB AMB 20 31 31.5
comp=N,7.0nm,0.5s
CN2 Changchun 18.33 275 *e*P **P 20 31 29.6 -1.5**
CN2 *es*P sP 20 31 45.3 -1.6
CN2 *e*S **Sn 20 34 48.0 -7.1**
CN2 pmax pmax
comp=N,10.0nm,0.6s
CN2 pmax pmax
comp=N,200nm,3.0s
CN2 LR LR
comp=N,940nm,19.0s
CN2 LR LR
comp=N,590nm,19.0s
CN2 LR LR
comp=N,970nm,19.0s
KSRS Korea Array 19.01 254 P **P 20 31 38.7 +0.1**
comp=N,0.4nm,0.3s,baz=67,slow=11,SNR=21
KSRS LR LR 20 39 01.9
comp=N,504nm,18.9s,baz=60,slow=37
KS15 Wonju Array Si 19.04 254 *e*P **P 20 31 38.4 -0.6**
comp=N,7.6nm,0.8s
JNU Nakatsue 19.72 239 P **P 20 31 47.6 +1.1**
comp=N,0.4nm,0.3s,baz=32,slow=7.5,SNR=7.9
TJN Taejon 19.96 252 *ce*P **P 20 31 49.9 +0.9**
SNY Shenyang 20.20 270 ‖ P **P 20 31 51.8 +0.2**
SNY LR LR
comp=N,510nm,13.2s
SNY LR LR
comp=N,970nm,15.0s
SNY LR LR
comp=N,1μm,16.0s
YAK Yakutsk 20.92 331 *e*P **P 20 31 57.2 -2.0**
comp=N,66nm,0.9s
YAK Yakutsk 20.92 331 *e*P **P 20 31 58.5 -0.7**
YAK *e* 20 32 16.1
YAK *e*PPP PPP 20 32 19.7
YAK *e*S Sn 20 35 50.6 -6.6
YAK *e*SS **SnSn 20 36 04.1 -8.3**
YAK *e*SSS SSS 20 36 22.2
YAK Yakutsk 20.92 331 *e*P **P 20 31 58.5 -0.7**
ADK Adak 22.22 61 *e*P **P 20 32 13.0 -0.2**
comp=N,47nm,1.2s
ADK Adak 22.22 61 *e*P **P 20 32 13.0 -0.2**
ADK pmax pmax
comp=Z,47nm,1.2s
DL2 Dalian 22.69 264 P **P 20 32 20.2 +1.9**
DL2 sP **sP 20 32 36.2 +2.0**
DL2 pmax pmax
comp=Z,45nm,1.3s
DL2 pmax pmax
comp=Z,210nm,6.9s
DL2 LR LR
comp=Z,360nm,17.1s
DL2 LR LR
comp=Z,260nm,19.7s
DL2 LR LR
comp=Z,350nm,24.5s
BILL Bilibino 24.21 14 *i* P **P 20 32 32.9 +0.1**
BILL *i* 20 33 01.8
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,1μm,16.0s
BILL Bilibino 24.21 14 *e*P **P 20 32 32.9 +0.1**
JOW Kunigami 25.87 233 P **P 20 32 49.1 +0.9**
comp=Z,0.7nm,0.6s,baz=101,slow=15,SNR=4.5
BOD Bodaibo 25.93 312 *e*P **P 20 32 45.9 -2.6**
BJI Beijing 26.07 271 P **P 20 32 50.0 +0.1**
BJI S **S 20 37 23.0 +5.2**
BJI pmax pmax
comp=Z,4.0nm,1.0s
BJI LR LR
comp=Z,180nm,13.0s
BJI LR LR
comp=Z,360nm,15.5s
BJI LR LR
comp=Z,240nm,22.7s
BJT Baijiatuau 26.09 271 *e*P **P 20 32 49.8 -0.2**
comp=Z,20nm,1.1s
BJT Baijiatuau 26.09 271 *e*P **P 20 32 49.8 -0.2**
BJT pmax pmax
comp=Z,20nm,1.1s
NJ2 Nanjing 28.20 253 *e*P **P 20 33 10.2 +1.1**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
NJ2 LR LR
comp=Z,520nm,14.6s
NJ2 LR LR
comp=Z,800nm,15.2s
NJ2 LR LR
comp=Z,1μm,16.8s
TIXI Tiksi 28.57 345 P **P 20 33 08.6 -3.4**
comp=Z,2.0nm,0.4s,baz=146,slow=5.7,SNR=14
TIXI Tiksi 28.57 345 *e*P **P 20 33 09.9 -2.1**
comp=Z,4.7nm,1.2s
TIXI Tiksi 28.57 345 *e*P **P 20 33 09.9 -2.1**
TIXI pmax pmax
comp=Z,5.0nm,1.2s
H11N2 WAKE ISLAND Hy 28.59 148 T T 21 04 55.1
baz=337
H11N1 WAKE ISLAND Hy 28.60 148 T T 21 04 56.2

baz=337,slow=74
H11N3 WAKE ISLAND Hy 28.61 148 T T 21 04 56.4
baz=337,slow=74
HHC Hu-ho-hao-te 29.02 276 *e*P **P** **20 33 17.3 +0.9**
HHC pP pP 20 33 30.7 +3.0
HHC S **S** **20 38 06.4 +1.9**
HHC sS sS 20 38 30.2 +7.8
HHC pmax pmax
comp=Z,45nm,1.1s
HHC pmax pmax
comp=Z,110nm,4.9s
HHC LR LR
comp=Z,730nm,17.7s
HHC LR LR
comp=Z,1μm,14.9s
HHC LR LR
comp=Z,2μm,15.2s
H11S1 WAKE ISLAND Hy 29.63 149 T T 21 05 33.3
baz=337,slow=76,SNR=590
H11S3 WAKE ISLAND Hy 29.64 149 T T 21 05 25.0
baz=337,slow=76,SNR=508
H11S2 WAKE ISLAND Hy 29.65 149 T T 21 05 26.5
baz=337,slow=76,SNR=502
ULN Ulaanbaatar 30.11 291 *c*e**P** **P** **20 33 26.0 0.0**
ULN pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 30.11 291 *e*P **P** **20 33 26.0 0.0**
BTO Baotou 30.20 276 *e*P **P** **20 33 26.8 0.0**
BTO S S 20 38 13.5 -9.4
SONA0 Songino Array 30.55 291 *e*P **P** **20 33 29.3 -0.5**
SONM Songino Array 30.55 291 P **P** **20 33 29.3 -0.5**
comp=Z,1.6nm,0.5s,baz=78,slow=7.2,SNR=11
SONM LR LR 20 46 50.9
comp=Z,800nm,18.7s,baz=76,slow=38
TLY Talaya 31.66 299 *i* P **P** **20 33 39.4 -0.2**
TLY Talaya 31.66 299 *e*P **P** **20 33 39.4 -0.2**
ZAK Zakamensk 32.08 297 *e*P **P** **20 33 39.2 -4.1**
ZAK *e* 20 36 26.6
ZAK pmax pmax
comp=Z,3.0nm,1.3s
WHN Wuhan 32.18 256 ⇑P **P** **20 33 44.5 +0.2**
WHN S **S** **20 38 46.2 -7.7**
WHN pmax pmax
comp=Z,23nm,0.4s
WHN pmax pmax
comp=Z,200nm,2.8s
WHN LR LR
comp=Z,900nm,20.2s
WHN LR LR
comp=Z,1μm,17.0s
WHN LR LR
comp=Z,1μm,17.7s
XAN Xi'an 33.99 266 P **P** **20 34 00.4 +0.3**
XAN pP pP 20 34 09.6 -2.0
XAN pmax pmax
comp=Z,9.0nm,1.2s
XAN pmax pmax
comp=Z,100nm,5.8s
XAN LR LR
comp=Z,370nm,15.2s
XAN LR LR
comp=Z,140nm,13.9s
XAN LR LR
comp=Z,320nm,16.3s
XAN Xi'an 33.99 266 *e*P **P** **20 34 00.0 -0.1**
comp=Z,17nm,1.3s
XAN Xi'an 33.99 266 *e*P **P** **20 34 00.0 -0.1**
XAN pmax pmax
comp=Z,17nm,1.3s
ENH Enshi 35.70 260 *e*P **P** **20 34 14.9 +0.1**
comp=Z,22nm,1.1s
CAST Castle Rocks 36.32 39 *e*P **P** **20 34 20.4 +0.7**
comp=Z,7.3nm,0.9s
LZH Lanzhou 36.54 272 *e*P **P** **20 34 23.3 +1.2**
LZH pP sP 20 34 36.9 -1.8
LZH sP pP 20 34 42.8 +9.2
LZH PP **PP** **20 35 44.7 -1.0**
LZH pmax pmax
comp=Z,57nm,1.1s
LZH pmax pmax
comp=Z,120nm,4.6s
LZH LR LR
comp=Z,340nm,15.2s
LZH LR LR
comp=Z,410nm,14.6s
LZH LR LR
comp=Z,410nm,17.9s
MLY Manley 36.99 37 *e*P **P** **20 34 26.2 +0.7**
comp=Z,7.7nm,0.9s
TOLK Toolik Lake Re 37.79 31 *e*P **P** **20 34 32.3 +0.1**
comp=Z,7.4nm,0.8s
GTA Gaotai 37.83 280 ⇑P **P** **20 34 33.5 +0.5**
GTA pP pwP 20 34 48.5 +0.9
GTA sP sP 20 34 55.8 +6.1
GTA sS sS 20 40 40.9 +1.8
GTA pmax pmax
comp=Z,16nm,1.1s
GTA LR LR
comp=Z,250nm,15.1s
GTA LR LR
comp=Z,410nm,13.7s
GTA LR LR
comp=Z,550nm,14.1s
KNK Knik Glacier 38.02 43 *e*P **P** **20 34 34.5 +0.4**
comp=Z,22nm,1.0s
SML Sawmill 38.05 42 *e*P **P** **20 34 34.6 +0.1**
comp=Z,40nm,1.0s
SML Sawmill 38.05 42 *e*P **P** **20 34 34.6 +0.1**
SML pmax pmax
comp=Z,40nm,1.0s
WRH Wood River Hil 38.11 38 *e*P **P** **20 34 35.8 +1.0**
comp=Z,11nm,1.2s
COLA College 38.21 37 *i* P **P** **20 34 35.8 +0.1**
COLA pmax pmax
comp=Z,14nm,0.9s
CCB Clear Creek Bu 38.23 38 *e*P **P** **20 34 36.6 +0.8**
comp=Z,6.3nm,1.1s
DHY Denali Highway 38.45 40 *e*P **P** **20 34 37.7 -0.2**
comp=Z,14nm,1.2s
SCM Sheep Creek Mo 38.53 42 *e*P **P** **20 34 38.8 +0.3**
comp=Z,48nm,1.5s
SCM Sheep Creek Mo 38.53 42 *e*P **P** **20 34 38.8 +0.3**
SCM pmax pmax
comp=Z,49nm,1.5s
HDA Harding Lake 38.60 38 *e*P **P** **20 34 39.0 0.0**
comp=Z,6.1nm,0.7s
ILAR Eielson Array 38.63 37 P **P** **20 34 38.7 -0.5**
comp=Z,5.6nm,1.0s,baz=262,slow=6.9,SNR=36
ILAR LR LR 20 52 25.7
comp=Z,208nm,19.2s,baz=284,slow=39
ILB Eielson Array 38.63 37 *e*P **P** **20 34 38.9 -0.3**
comp=Z,22nm,1.5s
PRP Porcupine Dome 39.20 36 *e*P **P** **20 34 44.7 +0.5**
comp=Z,8.7nm,1.0s
FYU Fort Yukon 39.31 34 *e*P **P** **20 34 44.7 -0.2**
comp=Z,29nm,1.2s
PAX Paxson 39.32 40 *e*P **P** **20 34 46.6 +1.5**
comp=Z,6.8nm,1.1s
PAX Paxson 39.32 40 *e*P **P** **20 34 46.6 +1.5**
PAX pmax pmax
comp=Z,7.0nm,1.1s
DIV Divide 39.33 43 *e*P **P** **20 34 45.9 +0.7**
comp=Z,14nm,0.9s
CD2 Chengdu 39.35 265 P **P** **20 34 45.2 -0.5**
CD2 pmax pmax
comp=Z,60nm,0.6s
CD2 LR LR
comp=Z,370nm,15.3s
CD2 LR LR
comp=Z,310nm,12.7s
CD2 LR LR
comp=Z,350nm,16.9s
NRIK Noril'sk 39.37 330 LR LR 20 51 40.2
comp=Z,283nm,19.2s,baz=60,slow=37
RIDG Independent Ri 39.55 39 *e*P **P** **20 34 47.0 -0.1**
comp=Z,16nm,1.1s
SCRK Sand Creek 39.92 39 *e*P **P** **20 34 49.4 -0.7**
comp=Z,18nm,1.6s
MENT Mentasta 40.12 40 *e*P **P** **20 34 52.4 +0.7**
comp=Z,5.7nm,0.9s
BALM Baldy 40.99 43 *e*P **P** **20 35 00.1 +1.0**
comp=Z,16nm,1.0s
BALM Baldy 40.99 43 *e*P **P** **20 35 00.1 +1.0**
BALM pmax pmax
comp=Z,17nm,1.0s
EGAK Eagle 41.08 37 *e*P **P** **20 34 59.3 -0.2**
comp=Z,18nm,1.0s
DAWY Dawson 41.92 38 *e*P **P** **20 35 07.0 +0.5**
comp=Z,12nm,1.5s
DGZ Jazzator, Alta 42.13 300 *i* P **P** **20 35 07.6 -1.0**
DGZ pmax pmax
comp=Z,2.0nm,1.0s
ZAA1 Zalesovo Array 42.38 307 *e*PcP **PcP** **20 37 02.5 -0.4**
ZALV Zalesovo Beam 42.38 307 P **P** **20 35 09.0 -1.4**
comp=Z,0.6nm,0.4s,baz=63,slow=9.3,SNR=3.4
ZALV PcP **PcP** **20 37 02.5 -0.4**
comp=Z,3.4nm,0.8s,baz=52,slow=2.4,SNR=8.7
ZALV LR LR 20 53 47.1
comp=Z,395nm,20.7s,baz=70,slow=38
EPYK Eagle Plains 42.73 34 *e*P **P** **20 35 14.0 +0.9**
comp=Z,19nm,0.9s
NVS Novosibirsk 43.02 308 *e*P **P** **20 35 16.3 +0.8**
HYT Haines Junctio 43.36 43 *e*P **P** **20 35 19.9 +1.6**
comp=Z,32nm,1.1s
KMI Kunming 43.58 259 P **P** **20 35 21.8 +1.2**
KMI pP pP 20 35 34.1 +1.9
KMI sP sP 20 35 41.1 +3.8
KMI pmax pmax
comp=Z,14nm,1.0s
KMI LR LR
comp=Z,210nm,15.6s
KMI LR LR
comp=Z,170nm,20.6s
KMI LR LR
comp=Z,210nm,13.0s
INK Inuvik 43.70 31 P **P** **20 35 20.9 +0.2**
comp=Z,11nm,0.9s,baz=278,slow=6.9,SNR=36
INK Inuvik 43.70 31 *e*P **P** **20 35 21.2 +0.5**
comp=Z,12nm,0.9s
INK Inuvik 43.70 31 *e*P **P** **20 35 21.3 +0.5**
INK pmax pmax
comp=Z,12nm,0.9s
WMQ Urumqi 44.18 292 *e*P **P** **20 35 28.2 +3.1**
WMQ pP sP 20 35 40.6 -1.3
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,37nm,4.1s
WMQ LR LR
comp=Z,760nm,16.1s
WMQ LR LR
comp=Z,430nm,16.1s
WMQ LR LR
comp=Z,930nm,21.7s
WHY Whitehorse 44.65 42 *e*P **P** **20 35 30.4 +1.8**
comp=Z,14nm,1.0s
MK31 Makanchi Array 46.41 298 *e*P **P** **20 35 41.5 -1.1**
comp=Z,7.6nm,0.9s
MK31 Makanchi Array 46.41 298 *e*P **P** **20 35 41.5 -1.1**
MK31 pmax pmax
comp=Z,8.0nm,0.9s
MK32 Makanchi Array 46.41 298 *e*PcP **PcP** **20 37 15.8 -1.0**
MKAR Makanchi Array 46.41 298 P **P** **20 35 41.5 -1.1**
comp=Z,7.0nm,0.9s,baz=72,slow=7.1,SNR=37
MKAR PcP **PcP** **20 37 15.8 -1.0**
comp=Z,1.4nm,0.8s,baz=66,slow=3.0,SNR=3.2
MKAR LR LR 20 56 13.9
comp=Z,753nm,19.6s,baz=66,slow=38
MAKZ Makanchi 46.59 298 *e*P **P** **20 35 43.4 -0.7**
comp=Z,7.1nm,0.9s
MAKZ Makanchi 46.59 298 *e*P **P** **20 35 43.4 -0.7**
MAKZ pmax pmax
comp=Z,7.0nm,0.9s
KURK Kurchatov 47.05 304 *e*P **P** **20 35 45.6 -2.0**
comp=Z,8.2nm,1.0s
KURK Kurchatov 47.05 304 ⇓*i*P **P** **20 35 45.0 -2.5**
KURK pmax pmax
comp=Z,9.0nm,1.1s
DLBC Dease Lake 47.68 44 P **P** **20 35 53.2 +0.8**
comp=Z,3.3nm,0.9s,baz=299,slow=7.2,SNR=4.0
SKNT Sakolnakorn 48.27 250 P **P** **20 35 59.3 +1.9**
comp=Z,10.0nm,1.2s
JAY Jayapura 48.41 194 LR LR 20 59 23.4
comp=Z,66nm,18.2s,baz=356,slow=40
LSA Lhasa 48.95 273 P **P** **20 36 04.9 +1.8**
LSA pmax pmax
comp=Z,57nm,0.9s
LSA Lhasa 48.95 273 *e*P **P** **20 36 04.8 +1.8**
comp=Z,23nm,1.1s
LSA Lhasa 48.95 273 *i* P **P** **20 36 04.6 +1.5**
SNR=11
LSA Lhasa 48.95 273 *e*P **P** **20 36 04.8 +1.8**
LSA pmax pmax
comp=Z,23nm,1.1s
PAYA Payao 49.38 256 P **P** **20 36 09.2 +3.3**
comp=Z,13μm,0.8s
KHON Khomkaen 49.50 250 P **P** **20 36 10.3 +3.5**
comp=Z,19μm,0.5s
PHRA Phrae 49.73 255 P **P** **20 36 10.8 +2.3**
comp=Z,1.4nm,1.2s
PDGK Podgornoye 49.73 295 P **P** **20 36 08.9 +0.5**
PDGK pmax pmax
comp=Z,6.0nm,0.9s
CHAI Chaiyaphum 50.37 251 P **P** **20 36 15.4 +2.0**
comp=Z,14μm,0.9s
CMMT Chiang Mai 50.39 256 P **P** **20 36 15.0 +1.5**
comp=Z,6.3nm,1.2s
CHTO Chiang Mai 50.39 256 *e*P **P** **20 36 14.8 +1.2**
comp=Z,8.4nm,0.9s
CHTO Chiang Mai 50.39 256 *e*P **P** **20 36 14.8 +1.2**
CHTO pmax pmax
comp=Z,8.0nm,0.9s
CM31 Chiang Mai Arr 50.63 256 *e*PcP **PcP** **20 37 33.5 +1.0**
CMAR Chiang Mai Arr 50.63 256 P **P** **20 36 16.6 +1.2**
comp=Z,1.8nm,0.8s,baz=40,slow=7.6,SNR=16
CMAR PcP **PcP** **20 37 33.5 +1.0**
comp=Z,1.7nm,0.9s,baz=27,slow=4.2,SNR=6.0
CMAR LR LR 21 00 39.0
comp=Z,227nm,19.4s,baz=54,slow=40
BRVK Borovoye 50.80 310 *e*P **P** **20 36 16.0 -0.2**
comp=Z,4.4nm,0.9s
BRVK Borovoye 50.80 310 *i* P **P** **20 36 14.4 -1.8**
BRVK pmax pmax
comp=Z,3.0nm,1.0s
SHL Shillong 50.92 268 *e*P **P** **20 36 17.9 +0.2**
comp=Z,27nm,0.9s
SHL Shillong 50.92 268 *e*P **P** **20 36 17.9 +0.2**
SHL pmax pmax
comp=Z,27nm,0.9s
TARG Taragay, Kyrgy 51.60 294 *e*P **P** **20 36 24.2 +1.3**
comp=Z,9.2nm,0.9s
OTUK Ortayu 51.81 303 P **P** **20 36 24.7 +0.8**
OTUK pmax pmax
comp=Z,3.0nm,0.9s
ULHL Ulahol 52.34 295 P **P** **20 36 28.9 +0.8**
SNR=11
BOOM Boomskoye usch 52.41 296 *e*P **P** **20 36 29.6 +1.0**
BOOM Boomskoye usch 52.41 296 *e*P **P** **20 36 29.6 +1.0**
TKM2 Tokmak 2 52.41 296 P **P** **20 36 29.4 +0.7**
SNR=12
RES Resolute Bay 52.73 18 P **P** **20 36 29.6 -0.7**
comp=Z,3.7nm,0.6s,baz=333,slow=3.6,SNR=7.8
RES Resolute Bay 52.73 18 *e*P **P** **20 36 29.8 -0.5**
comp=Z,6.0nm,0.8s
RES Resolute Bay 52.73 18 *e*P **P** **20 36 29.8 -0.5**
RES pmax pmax
comp=Z,6.0nm,0.8s
USP Ospenovka 52.93 297 P **P** **20 36 33.4 +1.1**
SNR=13
KBK Karagaybulak 52.96 296 P **P** **20 36 33.3 +0.6**
SNR=9.3
YKW3 Yellowknife Ar 52.96 35 *e*P **P** **20 36 32.8 +0.6**
comp=Z,7.5nm,1.1s
YKA Yellowknife Ar 52.99 35 P **P** **20 36 32.7 +0.3**
comp=Z,4.4nm,1.0s,baz=299,slow=7.4,SNR=25
YKA LR LR 21 00 44.9
comp=Z,14nm,20.8s,baz=308,slow=38
KZA Kyzart 53.06 295 P **P** **20 36 34.9 +1.2**
SNR=20
AAK Ala-Archa 53.25 296 P **P** **20 36 35.5 +0.7**
SNR=6.6
AAK Ala-Archa 53.25 296 *e*P **P** **20 36 34.9 0.0**
comp=Z,10nm,0.9s
AAK Ala-Archa 53.25 296 *i* P **P** **20 36 35.1 +0.2**
SNR=7.4
AAK Ala-Archa 53.25 296 *c*e**P** **P** **20 36 35.5 +0.7**
AAK pmax pmax
comp=Z,10.0nm,0.8s
AAK Ala-Archa 53.25 296 *e*P **P** **20 36 35.5 +0.7**
ODAN Odare 53.30 273 *e*P **P** **20 36 36.4 +0.9**
JIRN Jiri 53.66 274 *e*P **P** **20 36 39.3 +1.0**
comp=Z,59nm,0.6s
EKS2 Erkin-Say 53.70 297 P **P** **20 36 39.0 +1.0**
SNR=8.0
GUN Gumba 53.73 275 *e*P **P** **20 36 39.4 +0.7**
comp=Z,85nm,1.0s
RAMN Ramite 53.80 273 *e*P **P** **20 36 39.9 +0.7**
comp=Z,40nm,0.5s
KSH Kashi 53.94 292 P **P** **20 36 44.0 +4.2**
KSH PP **PP** **20 38 46.0 +4.9**
KSH S **S** **20 44 17.1 +5.1**
KSH SS **SS** **20 47 57.1 +3.9**
KSH pmax pmax
comp=Z,41nm,1.1s
KSH pmax pmax
comp=Z,270nm,5.9s
KSH LR LR
comp=Z,2μm,13.4s
KSH LR LR
comp=Z,2μm,19.9s
KSH LR LR
comp=Z,1μm,18.6s
SVE Sverdlovsk 54.00 317 *e*P **P** **20 36 39.6 -0.3**
SVE Sverdlovsk 54.00 317 *e*P **P** **20 36 39.6 -0.3**
AML Almayashu 54.02 296 P **P** **20 36 41.4 +0.6**
SNR=5.0
KKN Kakani 54.22 275 *e*P **P** **20 36 43.0 +0.8**
PKI Pulchoki 54.27 275 *e*P **P** **20 36 43.2 +0.6**
comp=Z,14nm,0.5s
PKIN Phulchoki 54.27 275 *e*P **P** **20 36 43.2 +0.6**
comp=Z,32nm,1.1s
DMN Daman 54.46 275 *e*P **P** **20 36 44.9 +1.0**
comp=Z,90nm,1.1s
GKN Gorkha 54.55 276 *e*P **P** **20 36 45.3 +0.8**
ARSB Arslanbob 54.90 296 *e*P **P** **20 36 48.0 +1.1**
comp=Z,24nm,1.0s
DANN Dangsing 54.95 277 *e*P **P** **20 36 48.8 +1.2**
comp=Z,36nm,0.5s
ARU Arti 55.19 317 *e*P **P** **20 36 46.7 -1.8**
comp=Z,4.9nm,0.8s
ARU Arti 55.19 317 *c i*P **P** **20 36 45.7 -2.8**
ARU S **S** **20 44 26.9 -1.3**
ARU SS **SS** **20 48 10.2 -1.8**
ARU pmax pmax
comp=Z,4.0nm,0.8s
ARU MLR MLR
comp=Z,322nm,20.0s
KOLN Koldanda 55.42 276 *e*P **P** **20 36 51.8 +1.0**
comp=Z,7.9nm,0.3s
KK31 Karatay Array 55.51 299 *e*P **P** **20 36 50.7 -0.3**
comp=Z,11nm,1.1s
KK31 Karatay Array 55.51 299 *e*P **P** **20 36 50.7 -0.3**
KK31 pmax pmax
comp=Z,11nm,1.1s
KKAR Karatay Array 55.51 299 *e*P **P** **20 36 50.8 -0.2**
comp=Z,11nm,1.1s
KKAR Karatay Array 55.51 299 *e*P **P** **20 36 50.8 -0.2**
KKAR pmax pmax
comp=Z,11nm,1.1s
PYUN Piuthan 55.65 277 *e*P **P** **20 36 53.4 +1.0**
comp=Z,29nm,0.6s
TULEG Thule 55.90 10 *e*P **P** **20 36 51.5 -1.8**
comp=Z,29nm,1.3s
BTK Batken 56.97 296 *e*P **P** **20 37 02.0 +0.4**
comp=Z,18nm,1.0s
BTK Batken 56.97 296 *e*P **P** **20 37 02.0 +0.4**
BTK pmax pmax
comp=Z,18nm,1.0s
PRGR Permogore 57.90 327 *e*P **P** **20 37 06.0 -1.6**
PRGR pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 58.12 357 *i* P **P** **20 37 07.6 -1.4**
DAG pmax pmax
comp=Z,13nm,1.0s
DAG Danmarks Havn 58.12 357 *i* P **P** **20 37 07.6 -1.4**
comp=Z,13nm,1.0s
APA Apatity 58.19 336 ⇑*i*P P 20 37 15.1 +5.5
APA pmax pmax
comp=Z,4.0nm,1.0s
APA MLR MLR
comp=Z,200nm,15.0s
ABKAR Akbulak array 58.33 310 *e*P **P** **20 37 10.2 -0.6**
comp=Z,3.9nm,0.4s
ARCES ARCESS Array B 58.84 340 P **P** **20 37 12.7 -1.4**
comp=Z,8.5nm,0.3s,baz=27,slow=8.2,SNR=4.1
ARCES LR LR 21 07 34.2
comp=Z,196nm,18.6s,baz=350,slow=41
KULLO Kullorsuaq 59.00 9 *i* P **P** **20 37 14.4 -0.7**
KULLO pmax pmax
comp=Z,30nm,1.1s
KULLO Kullorsuaq 59.00 9 *i* P **P** **20 37 14.4 -0.7**
comp=Z,30nm,1.1s
TMCR Tamitsa 59.03 332 *e*P **P** **20 37 14.7 -0.8**
TMCR pmax pmax
comp=Z,9.0nm,0.7s
NIL Nilore 59.05 288 *e*P **P** **20 37 17.3 +1.1**
comp=Z,73nm,1.0s
NIL Nilore 59.05 288 *e*P **P** **20 37 17.3 +1.1**
NIL pmax pmax
comp=Z,73nm,1.0s
KLMR Klimovskoe 60.69 329 *e*P **P** **20 37 23.2 -3.7**
KLMR pmax pmax
comp=Z,8.0nm,1.4s
KBL Kabul 61.32 291 *e*P **P** **20 37 30.9 -1.0**
comp=Z,31nm,0.9s
KBL Kabul 61.32 291 *e*P **P** **20 37 30.9 -1.0**
KBL pmax pmax
comp=Z,31nm,0.9s
MSO Missoula 61.82 51 *e*P **P** **20 37 35.7 +0.7**
comp=Z,8.5nm,1.2s
SUMG Summit 62.32 3 *e*P **P** **20 37 38.3 0.0**
comp=Z,53nm,1.1s
SUMG Summit 62.32 3 *e*P **P** **20 37 38.3 0.0**
SUMG pmax pmax
comp=Z,53nm,1.1s
SUMG Summit 62.32 3 ⇑*i*P **P** **20 37 38.3 0.0**
comp=Z,104nm,1.0s
FFC Flin Flon 62.82 39 *e*P **P** **20 37 41.9 +0.5**
comp=Z,11nm,0.9s
FFC Flin Flon 62.82 39 *e*P **P** **20 37 41.9 +0.5**
FFC pmax pmax
comp=Z,11nm,0.9s
FCC Fort Churchill 63.31 32 *e*P **P** **20 37 44.3 -0.2**
comp=Z,10nm,0.9s
FCC Fort Churchill 63.31 32 *e*P **P** **20 37 44.3 -0.2**
FCC pmax pmax
comp=Z,11nm,0.9s
EGMT Eagleton 63.33 48 *e*P **P** **20 37 45.5 +0.5**
comp=Z,8.6nm,0.9s
BOZ Bozeman (W) 63.84 51 *e*P **P** **20 37 48.4 -0.1**
comp=Z,7.4nm,0.6s
BOZ Bozeman (W) 63.84 51 *e*P **P** **20 37 48.4 -0.1**
BOZ pmax pmax
comp=Z,7.0nm,0.6s
NVAR Mina Array Bea 64.41 61 LR LR 21 03 48.3
comp=Z,55nm,20.4s,baz=350,slow=34
SCO Scoresbysund 64.51 357 *e*P **P** **20 37 52.3 +0.1**
comp=Z,17nm,1.1s
SCO Scoresbysund 64.51 357 *e*P **P** **20 37 52.3 +0.1**
SCO pmax pmax
comp=Z,17nm,1.1s
SCO Scoresbysund 64.51 357 ⇓*i*P **P** **20 37 52.6 +0.4**
comp=Z,13nm,1.0s
FINES FINESS Array B 64.82 334 P **P** **20 37 52.8 -1.6**
comp=Z,3.7nm,0.6s,baz=40,slow=7.3,SNR=21
FINES LR LR 21 08 46.3
comp=Z,285nm,19.4s,baz=34,slow=38
LOHW Long Hollow 65.67 52 *e*P **P** **20 38 01.7 +1.2**
comp=Z,7.5nm,1.3s
REDW Red Top Meadow 65.69 52 *e*P **P** **20 38 02.5 +1.9**
comp=Z,10.0nm,1.2s
OBN Obninsk 65.77 325 *i* P **P** **20 38 00.1 -0.5**
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN Obninsk 65.77 325 *e*P **P** **20 38 00.1 -0.5**
R11A Troy Canyon, C 66.12 59 *e*P **P** **20 38 04.1 +0.7**
comp=Z,11nm,1.8s
GEYT Alibeck 66.17 300 P **P** **20 38 03.7 +0.1**
comp=Z,10nm,0.9s,baz=8.7,slow=2.0,SNR=22
GEYT LR LR 21 09 24.6
comp=Z,106nm,19.9s,baz=60,slow=38
GYA0B ALIBECK ARRAY 66.17 300 *e*P **P** **20 38 04.2 +0.6**
comp=Z,22nm,1.2s
VRH Novokhopyorsk 66.28 320 *e*P **P** **20 38 02.7 -1.2**
VRH pmax pmax
comp=Z,8.0nm,0.6s
LPSR Galich'ya Gora 66.55 322 *e*P **P** **20 38 06.0 +0.3**
LPSR pmax pmax
comp=Z,10.0nm,1.9s
WR1 Warramunga Arr 66.61 197 *e*pP pP 20 38 21.1 +3.3
WRA Warramunga Arr 66.61 197 P **P** **20 38 07.4 +1.0**

comp=Z,5.5nm,0.8s,baz=4.0,slow=7.0,SNR=11
WRA pP **pP** **20 38 21.2 +3.3**
BW06 Boulder Array 66.80 52 *e*P **P** **20 38 08.7 +1.0**
comp=Z,12nm,1.5s
PDAR Pinedale Array 66.80 52 P **P** **20 38 08.0 +0.2**
comp=Z,1.7nm,0.9s,baz=276,slow=2.8,SNR=11
PDAR LR LR 21 03 27.4
comp=Z,49nm,22.0s,baz=332,slow=32
VSU Vasula 66.92 332 *i* P **P** **20 38 06.3 -1.6**
VSU pmax pmax
comp=Z,31nm,1.2s
VSR Storozhevoye 67.42 321 *e*P **P** **20 38 10.1 -1.1**
VSR pmax pmax
comp=Z,10.0nm,1.3s
VORD Divnogorie 67.54 321 *e*P **P** **20 38 09.4 -2.6**
VORD pmax pmax
comp=Z,6.0nm,0.4s
MSU Marysvale 68.06 57 *e*P **P** **20 38 17.3 +1.5**
MSU Marysvale 68.06 57 *e*P **P** **20 38 17.3 +1.5**
MTPU Mount Pierson 68.36 58 *e*P **P** **20 38 19.0 +1.1**
comp=Z,26nm,2.0s
Q16A Castle Valley 68.39 56 *e*P **P** **20 38 18.3 +0.5**
comp=Z,41nm,1.0s
LCMT Little Creek M 68.40 59 *e*P **P** **20 38 18.4 +0.6**
comp=Z,3.6nm,0.9s
DZM Mont Dzumac 68.41 165 *e*LR LR 20 59 05.7
comp=Z,252nm,24.0s
ULM Lac du Bonnet 68.60 39 P **P** **20 38 18.3 -0.4**
comp=Z,1.8nm,0.4s,baz=322,slow=9.4,SNR=2.9
ULM LR LR 21 10 52.9
comp=Z,60nm,18.7s,baz=21,slow=38
RSSD Black Hills 68.89 48 *e*P **P** **20 38 21.0 +0.1**
comp=Z,6.3nm,0.9s
RSSD Black Hills 68.89 48 *e*P **P** **20 38 21.0 +0.1**
RSSD pmax pmax
comp=Z,6.0nm,0.9s
MAK Makhachkala 69.00 310 *e*P **P** **20 38 21.0 -0.2**
MAK *e* 20 40 53.1
MAK *e*S **S** **20 47 24.0 +1.5**
MAK pmax pmax
comp=Z,43nm,1.1s
MAK MLR MLR
comp=Z,204nm,16.0s
NC303 NORSAR Array S 69.02 340 *e*P **P** **20 38 19.5 -1.6**
comp=Z,75nm,1.4s
NC405 NORSAR Array S 69.03 340 *e*P **P** **20 38 20.8 -0.4**
comp=Z,41nm,1.1s
NC204 NORSAR Array S 69.11 341 *e*P **P** **20 38 20.4 -1.4**
comp=Z,41nm,1.2s
NB201 NORSAR Array S 69.19 340 *e*P **P** **20 38 21.6 -0.6**
comp=Z,85nm,1.4s
NB2 NORSAR Subarra 69.22 340 P **P** **20 38 21.3 -1.1**
comp=Z,3.2nm,0.6s,baz=28,slow=6.5
NOA NORSAR Array B 69.22 340 P **P** **20 38 21.7 -0.7**
comp=Z,6.2nm,0.6s,baz=28,slow=6.4,SNR=20
NOA LR LR 21 13 23.4
comp=Z,151nm,18.6s,baz=20,slow=40
NBO00 NORSAR Array S 69.33 341 *e*P **P** **20 38 22.9 -0.1**
comp=Z,44nm,1.2s
U15A North Rim 69.36 59 *e*P **P** **20 38 24.9 +0.9**
comp=Z,4.9nm,1.1s
PV09 Paradox Valley 69.86 55 *e*P **P** **20 38 25.6 -1.4**
AKT Akhty 69.88 309 *e*P **P** **20 38 27.2 +0.3**
AKT *e* 20 38 48.6
AKT pmax pmax
comp=Z,35nm,0.9s
GOF Gofitskoye 69.89 314⇓*i*P **P** **20 38 27.7 +0.9**
GOF pmax pmax
comp=Z,77nm,1.0s
PV23 Carpenter Ridg 69.96 55 *e*P **P** **20 38 28.5 +0.8**
comp=Z,9.1nm,0.7s
PV14 Lion Creek, Pa 70.00 55 *e*P **P** **20 38 28.6 +0.7**
comp=Z,9.7nm,0.8s
AGMN Agassiz Nation 70.01 41 *e*P **P** **20 38 26.6 -0.8**
comp=Z,7.1nm,0.8s
PV18 Skein Mesa, Pa 70.16 56 *e*P **P** **20 38 29.4 +0.6**
comp=Z,6.8nm,0.7s
AS31 Alice Springs 70.32 197 *e*P **P** **20 38 31.5 +2.0**
comp=Z,1.4nm,0.8s
AS31 *e*pP **pwP** **20 38 46.0 -1.9**
ASAR Alice Springs 70.32 197 P **P** **20 38 31.4 +1.9**
comp=Z,4.7nm,0.8s,baz=16,slow=6.2,SNR=36
ASAR pP **pwP** **20 38 46.0 -1.9**
comp=Z,6.2nm,1.0s,baz=9.4,slow=5.2,SNR=8.0
ASAR LR LR 21 08 20.6
comp=Z,41nm,20.3s,baz=12,slow=35
KIV Kislovodsk 70.85 313 *e*P **P** **20 38 33.1 +0.4**
comp=Z,28nm,1.1s
KIV Kislovodsk 70.85 313⇑*i*P **P** **20 38 33.7 +1.0**
KIV Kislovodsk 70.85 313 *i* P **P** **20 38 33.3 +0.5**
SNR=9.2
KIV Kislovodsk 70.85 313 *e*P **P** **20 38 32.9 +0.2**
KIV pmax pmax
comp=Z,73nm,1.1s
KIV MLR MLR
comp=Z,844nm,17.0s
KIV Kislovodsk 70.85 313 *e*P **P** **20 38 32.9 +0.2**
KBZ Khabaz 70.90 313 P **P** **20 38 33.9 +1.0**
comp=Z,26nm,0.9s,baz=40,slow=1.2,SNR=32
KBZ LR LR 21 13 29.3
comp=Z,620nm,20.0s,baz=46,slow=39
ZEI Tsey 71.04 312 *e*P **P** **20 38 33.3 -0.7**
ZEI pmax pmax
comp=Z,20nm,1.0s
ZEI Tsey 71.04 312 *e*P **P** **20 38 33.3 -0.7**
X16A Lo Mia Camp, P 71.21 60 *e*P **P** **20 38 34.8 -0.4**
comp=Z,5.5nm,1.2s
NEY Neytrino 71.33 313 *i* P **P** **20 38 36.6 +0.8**
NEY pmax pmax
comp=Z,3.0nm,1.0s
TBLG Delisi 71.33 311 *e*P **P** **20 38 36.5 +0.9**
comp=Z,68nm,1.2s
TBLG Delisi 71.33 311 *e*P **P** **20 38 36.5 +0.9**
TBLG pmax pmax
comp=Z,69nm,1.2s
SUW Suwalki 71.66 331 *e*P **P** **20 38 36.1 -1.2**
SUW Suwalki 71.66 331 *e*P **P** **20 38 36.1 -1.2**
AKASG Malin Array Be 72.03 325 P **P** **20 38 38.1 -1.4**
comp=Z,2.6nm,0.4s,baz=37,slow=6.7,SNR=23
AKASG LR LR 21 12 56.4
comp=Z,288nm,18.8s,baz=30,slow=38
AKBB Malin Array Si 72.03 325 *e*P **P** **20 38 38.9 -0.7**
AKBB Malin Array Si 72.03 325 *e*P **P** **20 38 38.9 -0.7**
KIEV Kiev 72.04 325 *e*P **P** **20 38 38.9 -0.7**
comp=Z,25nm,1.3s
KIEV Kiev 72.04 325 *e*P **P** **20 38 38.9 -0.7**
KIEV pmax pmax
comp=Z,25nm,1.3s
OGNE Ogallala 72.16 50 *e*P **P** **20 38 39.0 -1.7**
comp=Z,24nm,0.9s
AKH Akhalkalaki 72.22 311 *e*P **P** **20 38 42.2 +1.0**
comp=Z,19nm,1.1s
AKH Akhalkalaki 72.22 311⇑*i*P **P** **20 38 42.6 +1.4**
AKH Akhalkalaki 72.22 311 *e*P **P** **20 38 42.2 +1.0**
AKH pmax pmax
comp=Z,19nm,1.1s
EYMN Ely 72.25 39 *e*P **P** **20 38 40.6 -0.4**
comp=Z,15nm,1.2s
GNI Garni 72.44 310 *e*P **P** **20 38 43.5 +1.1**
comp=Z,35nm,1.2s
GNI Garni 72.44 310 *i* P **P** **20 38 44.1 +1.6**
SNR=5.5
GNI Garni 72.44 310*c i*P **P** **20 38 44.3 +1.9**
GNI pmax pmax
comp=Z,55nm,1.1s
ECSD EROS Data Cent 72.97 45 *e*P **P** **20 38 45.2 -0.1**
comp=Z,10nm,0.9s
ANMO Albuquerque 73.85 57 *i* P **P** **20 38 52.5 +1.6**
ANMO pmax pmax
comp=Z,1.0nm,1.1s
SIM Simferopol' 74.32 319 *e*P **P** **20 38 53.9 +0.7**
SIM pmax pmax
comp=Z,18nm,1.1s
LVV L'vov 74.75 328 *e*P **P** **20 38 55.4 -0.3**
LVV MLR MLR
comp=E,100nm,18.0s
LVV MLR MLR
comp=N,200nm,19.0s
LVV MLR MLR
comp=Z,300nm,19.0s
KIS Kishinev 75.09 323 *e*P **P** **20 38 57.0 -0.6**
KIS *e*L L 21 13 14.0
KIS LRM MLR 21 14 50.0
comp=Z,600nm,17.0s
KIS Kishinev 75.09 323 *e*P **P** **20 38 57.0 -0.6**
KIS MLR MLR
comp=Z,600nm,17.0s
KIS MLR MLR
comp=N,500nm,17.0s
SCHQ Schefferville 75.26 22 LR LR 21 14 40.6
comp=N,99nm,20.8s,baz=340,slow=38
KWP Kalwaria Pacla 75.40 328 *e*P **P** **20 38 59.3 -0.1**
KWP Kalwaria Pacla 75.40 328 *e*P **P** **20 38 59.7 +0.3**
comp=N,530nm,1.1s
KWP Kalwaria Pacla 75.40 328 *e*P **P** **20 38 59.7 +0.3**
SIRT Sirnak 75.58 309 *e*P **P** **20 38 59.6 -1.2**
comp=N,51nm,1.1s
OJC Ojcow 75.97 330 *e*P **P** **20 39 01.4 -1.3**
OJC Ojcow 75.97 330 *e*P **P** **20 39 02.4 -0.2**
comp=N,26nm,1.0s
OJC Ojcow 75.97 330 *e*P **P** **20 39 02.4 -0.2**
OJC pmax pmax
comp=Z,26nm,1.0s
UOSS Minazif 76.00 291 P **P** **20 39 02.7 -0.6**
G43A Wallace 76.00 39 *e*P **P** **20 39 03.0 +0.2**
comp=Z,10.0nm,0.9s
BUR08 Bucovina Ar. S 76.06 326 *e*P **P** **20 39 03.3 0.0**
comp=Z,12nm,0.6s
BURAR Bucovina Array 76.08 326⇓*i*P **P** **20 39 03.8 +0.4**
HATD Hatta, Dubai 76.13 291 P **P** **20 39 04.8 +0.9**
KOLS Kolonicke sedl 76.14 328 *e*P **P** **20 39 03.9 +0.3**
KOLS pmax pmax
comp=Z,18nm,1.1s
KOLS Kolonicke sedl 76.14 328 *e*P **P** **20 39 03.9 +0.3**
BIZ Bicaz 76.26 325⇑*i*P **P** **20 39 04.9 +0.5**
ASHO Ashiyiah 76.27 291 P **P** **20 39 06.0 +1.2**
UZH Uzhgorod 76.38 328 *e*P **P** **20 39 04.3 -0.7**
UZH *i* 20 39 12.0
TESR Tescani 76.38 324⇑*i*P **P** **20 39 05.0 0.0**
NIE Niedzica 76.46 329 *e*P **P** **20 39 05.8 +0.3**
NIE Niedzica 76.46 329 *e*P **P** **20 39 05.8 +0.3**
TLCR 76.52 322⇓*i*P **P** **20 39 05.5 -0.3**
FAQ Al Faqa, Dubai 76.54 291 P **P** **20 39 06.3 0.0**
KSP Ksiaz 76.63 332 *e*P **P** **20 39 06.2 -0.2**
KSP Ksiaz 76.63 332 *e*P **P** **20 39 06.2 -0.2**
TRPA Tarpa 76.70 327⇑*i*P **P** **20 39 07.4 +0.6**
TRPA Tarpa 76.70 327⇑EP **P** **20 39 07.0 +0.3**
MNTX Cornudas Mount 76.76 58 *e*P **P** **20 39 07.9 +0.5**
comp=Z,6.2nm,1.3s
ASUD Al Ashush, Dub 76.79 292 P **P** **20 39 08.6 +0.9**
ODBI Odobesti 76.81 323⇑*i*P **P** **20 39 09.3 +1.8**
CFR Carcaliu 76.82 322⇓*i*P **P** **20 39 07.2 -0.3**
L40A Anamosa 76.84 43 *e*P **P** **20 39 07.4 -0.4**
comp=Z,9.8nm,0.9s
OKC Ostrava-Krasne 76.87 331 *e*P **P** **20 39 08.1 +0.4**
OKC MLR MLR
comp=Z,200nm,15.7s
OKC Ostrava-Krasne 76.87 331 *e*P **P** **20 39 08.1 +0.4**
OKC AMS AMS 21 21 30.0
comp=Z,200nm,15.7s
VRI Vrincioaia 76.87 324⇑*i*P **P** **20 39 09.0 +1.2**
VRI Vrincioaia 76.87 324 P **P** **20 39 10.0 +2.2**
VRI pmax pmax
comp=Z,13nm,1.1s
OSTC Ostas 76.90 332 *e*P **P** **20 39 08.1 +0.2**
OSTC AMS AMS 21 16 50.0
comp=Z,200nm,13.7s
PLOR Plostina 76.91 324⇑*i*P **P** **20 39 08.9 +0.8**
CHVC Chvalec 76.93 332 *e*P **P** **20 39 08.3 +0.2**
CHVC AMS AMS 21 16 50.0
comp=Z,300nm,14.0s
LANS Liptovska Anna 76.98 330 *e*P **P** **20 39 09.4 +1.0**
LANS Liptovska Anna 76.98 330 *e*P **P** **20 39 09.4 +1.0**
UPC Upice 77.01 332 *e*P **P** **20 39 08.9 +0.4**
UPC MLR MLR
comp=Z,300nm,20.3s
UPC Upice 77.01 332 *e*P **P** **20 39 08.9 +0.4**
UPC AMS AMS 21 16 40.0
comp=Z,300nm,20.3s
DPC Dobruska-Polom 77.04 332 *e*P **P** **20 39 09.1 +0.3**
DPC MLR MLR
comp=Z,200nm,14.0s
DPC Dobruska-Polom 77.04 332 *e*P **P** **20 39 09.1 +0.3**
DPC AMS AMS 21 16 40.0
comp=Z,200nm,14.0s
OZUR 77.07 324⇑*i*P **P** **20 39 09.8 +0.8**
MORC Moravsky Berou 77.12 331 *e*P **P** **20 39 09.4 +0.2**
comp=Z,33nm,1.1s
MORC Moravsky Berou 77.12 331⇑*i*P **P** **20 39 09.5 +0.2**
MORC Moravsky Berou 77.12 331 *e*P **P** **20 39 09.0 -0.2**
KRLC Kraliky 77.13 332 *e*P **P** **20 39 10.1 +0.9**
KRLC Kraliky 77.13 332 *e*P **P** **20 39 10.1 +0.9**
KECS Kecovo 77.18 329 *e*P **P** **20 39 10.1 +0.6**
KECS pmax pmax
comp=Z,41nm,1.1s
KECS Kecovo 77.18 329 *e*P **P** **20 39 10.1 +0.6**
STKA Stephens Creek 77.21 188 P **P** **20 39 11.9 +2.3**
comp=Z,1.7nm,0.8s,baz=59,slow=12,SNR=2.6
STKA LR LR 21 12 46.6
comp=Z,67nm,20.9s,baz=22,slow=35
CLL Collm 77.27 335 *e*P **P** **20 39 09.4 -0.5**
comp=Z,24nm,1.0s
CLL Collm 77.27 335⇑*i*P **P** **20 39 09.5 -0.4**
comp=Z,30nm,1.0s
CLL *e*SS SS 20 54 24.0 +31
CLL *e*SSSS 20 59 24.0
CLL LmV 21 16 00.0
comp=N,200nm,19.9s
CLL LmV 21 16 00.0
comp=E,100nm,21.4s
CLL LmV 21 16 00.0
comp=Z,300nm,20.3s
CLL LmH 21 17 00.0
comp=N,200nm,19.8s
CLL LmH 21 17 00.0
comp=E,200nm,19.3s
CLL Collm 77.27 335⇑*i*P **P** **20 39 09.5 -0.4**
CLL pmax pmax
comp=Z,30nm,1.0s
TIRR Tirgusor 77.27 322⇑*i*P **P** **20 39 09.7 -0.3**
TIRR Tirgusor 77.27 322 P **P** **20 39 11.1 +1.1**
TIRR pmax pmax
comp=Z,36nm,1.1s
TLB Topalu 77.33 322⇓*i*P **P** **20 39 10.5 +0.1**
BRG Berggiesshubel 77.36 334 *e*P **P** **20 39 10.6 +0.2**
comp=Z,14nm,1.2s
comp=N,158nm,17.1s
comp=E,110nm,16.4s
comp=Z,305nm,17.3s
BRG Berggiesshubel 77.36 334 *e*P **P** **20 39 10.6 +0.2**
BRG pmax pmax
comp=Z,14nm,1.2s
BRG MLR MLR
comp=N,158nm,17.1s
BRG MLR MLR
comp=E,110nm,16.4s
BRG MLR MLR
comp=Z,305nm,17.3s
PVCC Panska Ves 77.46 333 *e*P **P** **20 39 11.3 +0.3**
PVCC Panska Ves 77.46 333 *e*P **P** **20 39 11.3 +0.3**
MLR Muntele Rosu 77.50 324 *e*P **P** **20 39 11.7 +0.2**
comp=Z,27nm,1.2s
MLR Muntele Rosu 77.50 324⇑*i*P **P** **20 39 12.3 +0.8**
MLR Muntele Rosu 77.50 324 *e*P **P** **20 39 11.7 +0.2**
MLR pmax pmax
comp=Z,27nm,1.2s
ESK Eskdalemuir 77.51 345 *i* P **P** **20 39 11.9 +0.7**
DRGR 77.74 327⇑*i*P **P** **20 39 12.9 +0.2**
DRGR 77.74 327 P **P** **20 39 13.6 +0.9**
DRGR pmax pmax
comp=Z,32nm,1.6s
VYHS Vyhne 77.76 330 *e*P **P** **20 39 13.0 +0.2**
VYHS pmax pmax
comp=Z,10.0nm,1.1s
VYHS Vyhne 77.76 330 *e*P **P** **20 39 13.0 +0.2**
ICOR Ion Corvin 77.81 322⇑*i*P **P** **20 39 14.0 +1.0**
VRAC Vranov 77.85 331⇑*i*P **P** **20 39 13.0 -0.2**
VRAC Vranov 77.85 331 *e*P **P** **20 39 13.0 -0.2**
JAVC Velka Javorina 77.86 331 *e*P **P** **20 39 14.1 +0.7**
PSZ Piszkesteto 77.86 329 *e*P **P** **20 39 13.2 -0.2**
comp=Z,20nm,1.1s
PSZ Piszkesteto 77.86 329⇑*i*P **P** **20 39 13.4 0.0**
PSZ Piszkesteto 77.86 329 *e*P **P** **20 39 13.2 -0.2**
PSZ pmax pmax
comp=Z,21nm,1.1s
PSZ Piszkesteto 77.86 329⇑EP **P** **20 39 13.1 -0.4**
VOIR 77.91 324⇓*i*P **P** **20 39 14.5 +0.8**
GOPC GO Pecny, Ondr 77.92 333 *e*P **P** **20 39 13.9 +0.3**
GOPC MLR MLR
comp=Z,200nm,16.2s
GOPC GO Pecny, Ondr 77.92 333 *e*P **P** **20 39 13.9 +0.3**
GOPC AMS AMS 21 17 10.0
comp=Z,200nm,16.2s
PRU Pruhonice 77.94 333 *e*P **P** **20 39 13.6 -0.1**
PRU MLR MLR
comp=Z,300nm,18.3s
PRU Pruhonice 77.94 333 *e*P **P** **20 39 13.6 -0.1**
PRU AMS AMS 21 17 00.0
comp=Z,300nm,18.3s
SULR 78.02 323⇑*i*P **P** **20 39 14.1 -0.1**
N41A Harden Midland 78.06 43 *e*P **P** **20 39 14.5 -0.1**
comp=Z,22nm,0.7s
KRUC Moravsky 78.12 331 *e*P **P** **20 39 14.5 -0.3**
ARR Arges 78.14 325⇑*i*P **P** **20 39 16.0 +1.0**
TREC Trest 78.23 332 AMS AMS 21 16 50.0
comp=Z,300nm,18.1s
MOX Moxa 78.27 335 P **P** **20 39 16.2 +0.7**
MOX pmax pmax
comp=Z,12nm,1.1s
NKC Novy Kostel 78.38 334 *e*P **P** **20 39 16.2 0.0**
NKC MLR MLR
comp=Z,400nm,21.2s
NKC Novy Kostel 78.38 334 *e*P **P** **20 39 16.2 0.0**
NKC AMS AMS 21 17 50.0
comp=Z,400nm,21.2s
MODS Modra-Piesok 78.41 331 *e*P **P** **20 39 16.2 -0.2**
MODS pmax pmax
comp=Z,30nm,1.1s
MODS Modra-Piesok 78.41 331 *e*P **P** **20 39 16.2 -0.2**
BR131 Keskin Array S 78.53 316 *e*P **P** **20 39 17.0 -0.4**
comp=Z,11nm,1.1s
BRTR Keskin Array B 78.53 316 P **P** **20 39 17.6 +0.3**
comp=Z,7.1nm,1.1s,baz=60,slow=3.4,SNR=16
BRTR LR LR 21 19 12.2
comp=Z,132nm,19.3s,baz=59,slow=40
BRTR Keskin Array B 78.53 316 *i* P **P** **20 39 18.0 +0.7**
BRTR pmax pmax
comp=Z,7.0nm,1.1s
SIRR Siria 78.58 327⇑*i*P **P** **20 39 18.3 +1.0**
ZST Bratislava 78.62 331 *e*P **P** **20 39 17.4 -0.1**
ZST Bratislava 78.62 331 *e*P **P** **20 39 17.3 -0.2**
ANTO Ankara 78.83 316 *e*P **P** **20 39 20.0 +1.1**
comp=Z,22nm,1.1s
GZR Gura Zlata 78.86 326⇑*i*P **P** **20 39 18.9 -0.1**
KHC Kasperske Hory 78.99 333 *e*P **P** **20 39 19.9 +0.3**
comp=Z,14nm,1.2s
KHC Kasperske Hory 78.99 333 *e*P **P** **20 39 19.9 +0.3**
KHC pmax pmax
comp=Z,14nm,1.2s
KHC Kasperske Hory 78.99 333 *e*P **P** **20 39 20.1 +0.5**
KHC *e*pP **pP** **20 39 31.5 -0.7**
KHC AMS AMS 21 17 40.0
comp=Z,400nm,17.4s
BZS Buzias 79.14 327⇑*i*P **P** **20 39 20.9 +0.5**
GEC2 GERESS Array S 79.20 333 *e*P **P** **20 39 20.7 -0.1**
comp=Z,16nm,1.3s
GEC2 GERESS Array S 79.20 333 *e*P **P** **20 39 20.7 -0.1**
GEC2 pmax pmax
comp=Z,16nm,1.3s
GERES GERESS Array B 79.20 333 P **P** **20 39 20.4 -0.4**
comp=Z,2.4nm,0.6s,baz=35,slow=4.9,SNR=24
GERES LR LR 21 18 01.4
comp=Z,182nm,18.2s,baz=34,slow=38
GRA1 Grafenberg Arr 79.23 335 *e*P **P** **20 39 21.3 +0.4**
comp=Z,29nm,1.1s
GRF Grafenberg Arr 79.23 335 *e*P **P** **20 39 21.3 +0.4**
GRF pmax pmax
comp=Z,29nm,1.1s
GRFO Grafenberg 79.23 335 *e*P **P** **20 39 21.2 +0.4**
comp=Z,22nm,1.0s
GRFO Grafenberg 79.23 335 *e*P **P** **20 39 21.2 +0.4**
GRFO pmax pmax
comp=Z,22nm,1.0s
SOP Sopron 79.25 331 EP **P** **20 39 21.1 +0.1**
CONA Conrad Observa 79.28 331 *i* P **P** **20 39 21.9 +0.7**
comp=Z,19nm,1.3s,SNR=12
HERR Herculane 79.43 326⇓*i*P **P** **20 39 21.6 -0.4**
LTX Lajitas 79.48 59 *e*pP pP 20 39 36.0 +1.4
TX31 Lajitas Ar. Si 79.48 59 *e*P **P** **20 39 22.8 +0.1**
comp=Z,7.7nm,1.1s
TXAR Lajitas Array 79.48 59 P **P** **20 39 22.9 +0.2**
comp=Z,0.7nm,0.6s,baz=298,slow=3.8,SNR=7.7
TXAR pP **pP** **20 39 36.0 +1.4**
comp=Z,2.5nm,0.6s,baz=294,slow=3.4,SNR=11
MDVR Moldovita 79.79 326⇑*i*P **P** **20 39 23.6 -0.4**
MEM Membach 79.87 338 P **P** **20 39 24.2 -0.1**
comp=Z,16nm,1.2s
MOA Molln 79.89 332 *e*P **P** **20 39 24.6 +0.1**
comp=Z,6.3nm,1.0s
CCM Cathedral Cave 79.91 45 *e*P **P** **20 39 25.2 +0.5**
comp=Z,15nm,0.9s
CCM Cathedral Cave 79.91 45 *e*P **P** **20 39 25.2 +0.5**
CCM pmax pmax
comp=Z,15nm,0.9s
ARSA Arzberg 79.98 331 *e*P **P** **20 39 25.2 +0.2**
comp=Z,11nm,1.4s
BEHE Becsehely 80.22 330 EP **P** **20 39 26.0 -0.2**
BCLA Clavier 80.23 339 P **P** **20 39 25.9 -0.3**
comp=Z,9.6nm,1.3s
BGES Gesves 80.31 339 P **P** **20 39 26.1 -0.5**
comp=Z,11nm,1.1s
SNF Seneffe 80.41 339 P **P** **20 39 26.6 -0.5**
BMRD Maredsous 80.47 339 P **P** **20 39 27.7 +0.2**
comp=Z,17nm,1.5s
SOKA Soboth 80.65 331 *i* P **P** **20 39 28.7 +0.1**
comp=Z,19nm,1.2s,SNR=13
GROS Grobnik 80.67 331 *i* P **P** **20 39 28.3 -0.5**
DOU Dourbes 80.71 339 P **P** **20 39 28.6 -0.2**
comp=Z,9.9nm,1.5s
KBA Koelnbreinsper 80.86 332 *i* P **P** **20 39 30.2 +0.2**
comp=Z,22nm,1.2s,SNR=15
OBKA Obir 80.96 331 *e*P **P** **20 39 29.4 -0.9**
comp=Z,6.7nm,1.3s
VTS Vitosha 80.97 324 *e*P **P** **20 39 30.7 +0.2**
comp=Z,37nm,1.1s
VTS Vitosha 80.97 324⇑*i*P **P** **20 39 31.1 +0.6**
VTS Vitosha 80.97 324 *e*P **P** **20 39 30.7 +0.2**
VTS pmax pmax
comp=Z,37nm,1.1s
VTS Vitosha 80.97 324 *e*P **P** **20 39 30.9 +0.4**
MYKA Terra Mystica 81.16 332 *e*P **P** **20 39 30.8 -0.5**
comp=Z,5.6nm,1.1s
ALN Alexandroupoli 81.16 321 *e*P **P** **20 39 31.7 +0.4**
comp=Z,9.1nm,1.0s
ALN Alexandroupoli 81.16 321 *e*P **P** **20 39 31.7 +0.4**
ALN pmax pmax
comp=Z,9.0nm,1.0s
WATA Walderalm 81.21 333 *i* P **P** **20 39 31.9 +0.2**
comp=Z,5.7nm,0.6s,SNR=9.2
CRES Cresnjev 81.24 330 *i* P **P** **20 39 31.3 -0.4**
WTTA Wattenberg 81.25 333 *i* P **P** **20 39 32.4 +0.4**
comp=Z,12nm,0.8s,SNR=8.3
BFO Black Forest 81.30 336 *e*P **P** **20 39 31.8 -0.2**
comp=Z,15nm,1.1s
BFO Black Forest 81.30 336 *e*P **P** **20 39 31.8 -0.2**
BFO pmax pmax
comp=Z,15nm,1.1s
RETA Reutte 81.33 334 *e*P **P** **20 39 32.4 +0.2**
comp=Z,14nm,1.2s,SNR=5.8
MOTA Moosalm 81.35 334 *i* P **P** **20 39 32.5 +0.1**
comp=Z,15nm,1.0s,SNR=11
PMOR Pomariorio Ree 81.43 121 *e*T T 22 09 36.2
comp=Z,5.8nm,0.2s
SQTA Sankt Quirin 81.43 334 *i* P **P** **20 39 33.2 +0.3**
comp=Z,20nm,1.4s,SNR=8.9
ABTA Abfaltersbach 81.43 333 *e*P **P** **20 39 33.1 +0.3**
comp=Z,7.0nm,1.4s
MMB Musomiste 81.61 323 *e*P **P** **20 39 34.2 +0.4**
W41B Gary Mavity, V 81.61 48 *e*P **P** **20 39 34.5 +0.6**
comp=Z,53nm,1.8s
KKB Krupnik 81.65 324 *e*P **P** **20 39 34.7 +0.7**
TAOE Nuku Hiva Isla 81.67 111 *e*LR LR 21 05 07.4
comp=Z,288nm,26.0s
GBRS Gornja Briga 81.72 331 *i* P **P** **20 39 33.7 -0.6**
ECH Echery 81.74 337 *e*P **P** **20 39 34.1 -0.2**
comp=Z,10nm,1.0s
ECH Echery 81.74 337 *e*P **P** **20 39 34.1 -0.2**
ECH pmax pmax
comp=Z,10.0nm,1.0s
PARMO Parma 81.74 45 *e*P **P** **20 39 35.0 +0.5**
comp=Z,45nm,0.7s
FETA Feichten 81.75 334 *i* P **P** **20 39 34.8 +0.2**
comp=Z,9.6nm,1.3s
DAVA Damuels 81.78 334 *i* P **P** **20 39 34.8 +0.1**
comp=Z,10nm,1.2s
FUORN Ofenpass-Fuorn 82.25 334 *e*P **P** **20 39 37.8 +0.4**

comp=Z,18nm,1.3s
PPT Papeete 82.43 124 LR LR 21 14 32.1
comp=Z,204nm,18.5s,baz=344,slow=34
PPT2 Papeete2 82.45 124 eLR LR 21 05 34.0
comp=Z,333nm,23.2s
TUE Stuetta 82.67 334 eP **P 20 39 38.5 -0.9**
comp=Z,10.0nm,1.0s
TTG Podgorica 82.74 326 eP **P 20 39 39.0 -0.6**
comp=Z,20nm,1.1s
TTG Podgorica 82.74 326 eP **P 20 39 39.0 -0.6**
TTG pmax pmax
comp=Z,20nm,1.1s
FNA Florina 83.27 324 eP **P 20 39 42.0 -0.5**
comp=Z,13nm,1.1s
FNA Florina 83.27 324 eP **P 20 39 42.0 -0.5**
FNA pmax pmax
comp=Z,13nm,1.1s
SSF Saint Saulge 83.78 338 eP **P 20 39 44.7 -0.2**
SSF pmax pmax
comp=Z,47nm,1.9s
S51A Beattyville 83.93 41 eP **P 20 39 46.0 +0.2**
comp=Z,34nm,0.8s
LPG La Plagne 84.33 336 eP **P 20 39 48.3 +0.2**
LPG pmax pmax
comp=Z,4.0nm,0.8s
TZTN Tazewell 84.84 41 eP **P 20 39 51.5 +1.0**
comp=Z,82nm,0.9s
AQU L'Aquila 84.99 330 eP **P 20 39 51.8 +0.6**
comp=Z,18nm,1.2s
AQU L'Aquila 84.99 330 eP **P 20 39 51.8 +0.6**
AQU pmax pmax
comp=Z,19nm,1.2s
MFF Saint Martin d 85.12 341 eP **P 20 39 50.9 -0.8**
MFF pmax pmax
comp=Z,21nm,1.4s
SSB Saint Sauveur 85.15 337 eP **P 20 39 52.5 +0.5**
comp=Z,25nm,1.4s
SSB Saint Sauveur 85.15 337 eP **P 20 39 52.5 +0.5**
SSB pmax pmax
comp=Z,25nm,1.4s
CAF Calviac 86.14 339 eP **P 20 39 57.6 +0.7**
CAF pmax pmax
comp=Z,12nm,1.0s
Z50A Ashland 86.35 45 eP **P 20 39 57.8 -0.2**
comp=Z,13nm,0.8s
LFF La Frestale 86.47 339 eP **P 20 39 59.0 +0.6**
LFF pmax pmax
comp=Z,6.0nm,0.8s
V56A Mocksville 86.84 40 eP **P 20 40 01.8 +1.4**
comp=Z,21nm,0.7s
KEST Kesra 92.31 330 LR LR 21 27 19.2
comp=Z,169nm,18.2s,baz=305,slow=39
ESDC Sonseca Array 92.57 341 P **P 20 40 26.7 -0.6**
comp=Z,0.7nm,0.8s,baz=2.8,slow=4.3,SNR=5.1
ESDC LR LR 21 27 56.8
comp=Z,61nm,19.9s,baz=115,slow=39
TOA1 Torodi Ar. Sit 115.64 327 ePKPdf **PKiKP 20 45 56.3 -2.0**
TORD Torodi Ar. Bea 115.64 327 PKP **PKiKP 20 45 56.3 -2.0**
comp=Z,0.9nm,1.0s,baz=16,slow=2.5,SNR=3.9
BDFB Brasilia 146.41 35 PKPbc **PKPbc 20 46 57.1 0.0**
comp=Z,6.3nm,0.8s,baz=29,slow=1.7,SNR=8.6
PLCA Paso Flores 149.45 97 PKPbc **PKiKP 20 47 05.2 -0.3**
comp=Z,2.9nm,0.8s,baz=22,slow=5.4,SNR=5.6
CPUP Villa Florida 150.45 60 PKPbc **PKiKP 20 47 07.7 -0.3**
comp=Z,2.8nm,0.7s,baz=304,slow=4.6,SNR=6.1
SNAA Sanae 150.68 196 PKPdf **PKPbc 20 47 06.9 +0.4**
SNAA Sanae 150.68 196 ePKPbc **PKPbc 20 47 07.0 +0.5**
SNAA Sanae 150.68 196 ePKIKP **PKPbc 20 47 07.0 +0.5**
VNA2 Neumayer--Watz 152.16 195 PKPdf **PKiKP 20 47 10.9 +0.7**
baz=110,slow=1.4
VNA3 Neumayer Olymp 152.28 193 PKPdf **PKPbc 20 47 09.9 -0.2**

*IDC **03** 20:41:10.3±0.9, 17°.90N×120°.57E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.7/43, mbtmp3.9/9, MS3.3/2, Ms1 3.3/2, ms1mx2.8/38, Error ellipse: s-maj=36.5km s-min=12.9km az=72.0*
*ISCJB **03** 20:41:14.0±1.3, 18°.14N±0°.03×120°.19E±0°.06, h16km±1km, mb4.1/10, MS3.5/1, Error ellipse: s-maj=9.3km s-min=5.6km az=171.4*
*MAN **03** 20:41:13.8, 18°.12N×120°.10E, h15km, MS3.6*
*NEIC **03** 20:41:16.3±0.7, 17°.98N×120°.65E, h45km±6km, mb4.3/3, Error ellipse: s-maj=32.8km s-min=15.2km az=92.0*
ISC 03 20:41:11.7±1.6,**17°.95N**±0°.04×**120°.27E**±0°.06,**h8**km±10km, **n28**,σ1§**46**/33,**mb4.2**/10,**Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.52**	**125**	*e*P	**Pn**	**20 41 27.8**	**+2.3**
ABRA				*e*S	**Sn**	**20 41 35.9**	**+1.5**
APYP	**Conner**	**0.93**	**95**	*e*P	**Pn**	**20 41 32.6**	**+1.5**
APYP				*e*S	**Sn**	**20 41 45.9**	**+1.2**
SGCP	**Mt. Cagua**	**1.71**	**80**	*e*P	**Pg**	**20 41 44.8**	**+0.2**
SGCP				*e*S	**Sg**	**20 42 06.6**	**-0.2**
SMPP	**San Manuel, Pa**	**1.83**	**168**	*e*P	**Pg**	**20 41 47.1**	**+0.2**
SMPP				*e*S	**Sg**	**20 42 12.9**	**+2.2**
SCZP	**Santa Cruz**	**2.19**	**189**	*e*P	**Pb**	**20 41 52.3**	**+0.7**
SCZP				*e*S	**Sb**	**20 42 20.4**	**+1.4**
BALP	**Baler**	**2.53**	**150**	*e*P	**Pg**	**20 41 58.9**	**-1.3**
BALP				*e*S	**Sg**	**20 42 33.6**	**+0.6**
POLP	**Polilio Island**	**3.58**	**153**	*e*P	**Pb**	**20 42 13.8**	**-1.6**
TGY	**Tagaytay City**	**3.88**	**170**	Pg	**Pb**	**20 42 19.3**	**-1.2**
	75nm,0.3s,baz=274,slow=8.7,SNR=4.5						
TGY				Lg	Lg	20 43 10.6	
	33nm,0.3s,baz=24,slow=18,SNR=2.3						
TGY				LR	LR	20 44 13.1	
	comp=Z,222nm,18.1s,baz=342,slow=48						
LUBP	**Lubang**	**4.19**	**180**	*e*P	**Pb**	**20 42 26.3**	**+0.5**
LUBP				*e*S	**Sg**	**20 43 24.1**	**-2.4**
TPUB	**Ta-pu**	**5.33**	**4**	*e*Pn	**Pn**	**20 42 32.7**	**+0.9**
YULB	**Yu-li**	**5.50**	**10**	*e*Pn	**Pn**	**20 42 35.6**	**+1.6**
SSLB	**Suanglung**	**5.84**	**6**	*e*Pn	**Pn**	**20 42 39.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**20.27**	**275**	P	Pn	20 45 51.4	+1.5
	1.0nm,0.3s,baz=96,slow=8.8,SNR=6.0						
KSRS	**Korea Array**	**20.56**	**18**	P	**P**	**20 45 50.6**	**-0.3**
	0.9nm,0.5s,baz=197,slow=11,SNR=4.8						
BRDH	**Bariadhala**	**27.23**	**285**	LR	LR	20 58 29.7	
	comp=Z,128nm,20.7s,baz=140,slow=38						
WR1	**Warramunga Arr**	**40.11**	**159**	*e*P	**P**	**20 48 45.7**	**-2.5**
WRA	**Warramunga Arr**	**40.11**	**159**	P	**P**	**20 48 45.7**	**-2.5**
	0.9nm,0.6s,baz=344,slow=10,SNR=9.0						
MK32	**Makanchi Array**	**42.43**	**321**	*e*P	**P**	**20 49 08.5**	**+1.4**
MKAR	**Makanchi Array**	**42.43**	**321**	P	**P**	**20 49 08.5**	**+1.4**
	0.9nm,0.3s,baz=108,slow=9.3,SNR=29						
AS31	**Alice Springs**	**43.45**	**162**	*e*P	**P**	**20 49 15.2**	**-0.3**
	1.8nm,0.4s						
ASAR	**Alice Springs**	**43.45**	**162**	P	**P**	**20 49 14.5**	**-1.0**
	2.0nm,0.4s,baz=338,slow=7.1,SNR=47						
ZALV	**Zalesovo Beam**	**45.13**	**331**	P	**P**	**20 49 29.3**	**+0.7**
	0.9nm,0.5s,baz=129,slow=6.5,SNR=3.7						
ZAA1	**Zalesovo Array**	**45.14**	**331**	*e*P	**P**	**20 49 29.3**	**+0.7**
KURK	**Kurchatov**	**46.48**	**324**	*e*P	**P**	**20 49 40.5**	**+1.2**
	2.1nm,0.8s						
KURBB	**Kurchatov Arra**	**46.48**	**324**	P	**P**	**20 49 40.5**	**+1.2**
	2.1nm,0.7s,baz=122,slow=8.1,SNR=24						
STKA	**Stephens Creek**	**53.60**	**157**	P	**P**	**20 50 32.9**	**-0.7**
	0.6nm,0.5s,baz=344,slow=10,SNR=4.1						
NRIK	**Norilʼsk**	**55.20**	**346**	P	**P**	**20 50 45.2**	**+0.5**
	1.1nm,0.4s,baz=136,slow=8.4,SNR=4.0						
GHO	**Glory Hole Cre**	**74.74**	**30**	*e*P	**P**	**20 52 50.0**	**-2.2**
	13nm,0.8s						

*IDC **03** 20:54:13.6±1.5, 7°.78N×126°.20E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/32, mbtmp3.9/5, MS3.0/2, Ms1 3.0/2, ms1mx2.6/35, Error ellipse: s-maj=27.4km s-min=13.7km az=138.0*
*MAN **03** 20:54:15.9, 7°.21N×124°.81E, h2km, MS4.1*
ISC 03 20:54:16.5±1.1,**7°.27N**±0°.03×**124°.80E**±0°.03,**h9**km±9km, **n22**,σ2§**03**/32,**mb3.8**/5,**3C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.55**	**265**	⇓*i*P	**Pb**	**20 54 27.9**	**-0.5**
CTBH				*i* S	**Sb**	**20 54 37.0**	**+0.6**
BUKP	**Musuan**	**0.66**	**23**	*e*P	**Pg**	**20 54 28.9**	**-0.3**
BUKP				*e*S	**Sb**	**20 54 39.0**	**-0.4**
DMPH	**Davao City--Mi**	**0.73**	**105**	⇓*e*P	**Pg**	**20 54 30.2**	**-0.3**
DMPH				*e*S	**Sb**	**20 54 41.7**	**+0.2**
SKMP	**Bagumbayan, Su**	**0.79**	**199**	*e*P	**Pg**	**20 54 30.9**	**-0.9**
SKMP				*e*S	**Sb**	**20 54 43.3**	**0.0**
DAV	**Davao City (W)**	**0.80**	**105**	Pg	**Pg**	**20 54 31.7**	**-0.2**
	445nm,0.3s,baz=311,slow=2.1,SNR=29						
DAV				Lg	Lg	20 54 44.7	
	348nm,0.3s,baz=315,slow=19,SNR=27						
CGP	**Cagayan de Oro**	**1.18**	**355**	⇑*i*P	**Pg**	**20 54 36.1**	**-3.1**
CGP				*i* S	**Sg**	**20 54 51.6**	**-2.8**
DDMP	**Don Marcelino,**	**1.47**	**142**	*e*P	**Pn**	**20 54 42.7**	**-0.6**
DDMP				*e*S	**Sg**	**20 55 06.0**	**+2.0**
MATI	**Mati**	**1.48**	**103**	*e*P	**Pn**	**20 54 42.2**	**-1.2**
MATI				*e*S	**Sg**	**20 55 04.1**	**-0.2**
PAGZ	**Pagadian**	**1.52**	**292**	*e*P	**Pn**	**20 54 43.2**	**-0.7**
PAGZ				*e*S	**Sg**	**20 55 06.5**	**+1.1**
BUTP	**Butuan**	**1.87**	**26**	*e*P	**Pb**	**20 54 50.3**	**-0.5**
BUTP				*e*S	**Sg**	**20 55 23.6**	**+6.9**
DCPH	**Dipolog City**	**1.94**	**312**	⇑*e*P	Pg	20 55 01.1	+7.4
DCPH				*e*S	**Sg**	**20 55 22.1**	**+3.3**
SNPH	**Sibulan**	**2.57**	**323**	*e*P	**Pg**	**20 55 05.7**	**-0.2**
MSLP	**Maasin**	**2.84**	**1**	*e*P	**Pn**	**20 55 03.0**	**+0.9**
MSLP				*e*S	**Sb**	**20 55 43.3**	**+0.9**
LLP	**Lapu-Lapu**	**3.13**	**345**	⇑*i*P	**Pn**	**20 55 08.0**	**+1.9**
LLP				*e*S	**Sb**	**20 55 49.6**	**-1.2**
OCLP	**Ormoc**	**3.76**	**357**	*e*P	**Pb**	**20 55 20.8**	**-2.3**
OCLP				*e*S	**Sb**	**20 56 07.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**25.22**	**178**	P	**P**	**20 59 45.9**	**+3.0**
	3.3nm,0.8s,baz=18,slow=6.4,SNR=3.7						
WRA	**Warramunga Arr**	**28.63**	**161**	P	**P**	**21 00 12.1**	**-1.5**
	1.2nm,0.7s,baz=343,slow=11,SNR=3.8						
JHJ	**Hachijo jima 2**	**29.23**	**26**	LR	LR	21 12 43.1	
	comp=Z,37nm,18.1s,baz=144,slow=39						
MJAR	**Matsushiro Arr**	**31.60**	**21**	LR	LR	21 11 33.5	
	comp=Z,23nm,20.6s,baz=80,slow=34						
ASAR	**Alice Springs**	**32.01**	**164**	P	**P**	**21 00 42.0**	**-1.5**
	0.6nm,0.6s,baz=342,slow=6.7,SNR=9.9						
STKA	**Stephens Creek**	**42.11**	**158**	P	**P**	**21 02 08.5**	**-0.6**
	1.6nm,0.6s,baz=334,slow=9.4,SNR=11						
MKAR	**Makanchi Array**	**53.57**	**325**	P	**P**	**21 03 39.3**	**+1.4**
	0.4nm,0.6s,baz=126,slow=8.9,SNR=3.6						

MEX 03 21:00:56.2±0.4,**17°.40N**×**94°.94W**,**h141**km±5km,**MD3.7, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.32**	**170**	*i* P	Pn	21 01 14.5	-1.2
CMIG				*i* S	Sn	21 01 28.1	-2.4
TGIG		**1.85**	**109**	*i* P	Pn	21 01 28.0	-1.1
TGIG				*e*S	Sn	21 01 51.6	-2.5
HUIG	**Huatulco**	**1.97**	**215**	*i* P	Pn	21 01 28.6	-1.9
HUIG				*i* S	Sn	21 01 55.2	-1.6
PCIG		**2.36**	**135**	*e*P	Pn	21 01 33.0	-2.1
PCIG				*i* S	Sn	21 02 03.2	-1.9

MEX 03 21:10:16.1±0.5,**16°.19N**×**98°.34W**,**h2**km,**MD3.6,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.28**	**45**	*i* P	Pg	21 10 21.3	-0.3
PNIG				*i* S	Sg	21 10 25.7	+0.4
TLIG	**Tlapa**	**1.38**	**351**	*i* P	Pn	21 10 38.9	-3.7
TLIG				*i* S	Sg	21 10 56.4	-4.1

*IDC **03** 21:11:01.9±2.2, 32°.02N×49°.53E, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.3/29, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=72.6km s-min=26.1km az=157.0*
*TEH **03** 21:11:02.8, 32°.15N×49°.45E, h12km, ML3.4*
*ISCJB **03** 21:11:03.5±0.5, 32°.10N±0°.05×49°.44E±0°.04, h10km, mb3.5/2, Error ellipse: s-maj=7.0km s-min=4.5km az=14.7*
ISC 03 21:11:03.3±0.8,**32°.16N**±0°.05×**49°.45E**±0°.03,**h10**km,**n35**, σ1§**41**/34,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.55**	**265**	*e*Pg	**Pg**	**21 11 13.6**	**-0.4**
JHBN	**Jahan bin**	**1.03**	**86**	*e*Pg	**Pg**	**21 11 22.8**	**-0.5**
AHWZ	**Ahwaz**	**1.07**	**220**	*e*Pg	**Pn**	**21 11 24.8**	**+0.4**
ZNGN	**Zangian**	**1.19**	**91**	*e*Pg	**Pb**	**21 11 25.1**	**-1.1**
IPIR	**Pirpir**	**1.33**	**66**	*e*Pg	**Pg**	**21 11 28.3**	**-0.6**
IPIR				IAMB	IAmb	21 11 51.8	
	comp=E,10μm,0.6s						
ROKH	**ROKH**	**1.36**	**82**	*e*Pg	**Pg**	**21 11 29.1**	**-0.3**
IBRJ	**Brojen**	**1.56**	**99**	IAMB	IAmb	21 11 36.3	
	comp=Z,2μm,0.4s						
IKMR	**Kamar-syah**	**1.63**	**327**	*e*Pn	**Pb**	**21 11 33.5**	**+0.1**
KHMZ	**Khomeyn**	**1.64**	**15**	*e*Pn	**Pg**	**21 11 34.6**	**-0.1**
IKFM	**Kafar-mosalman**	**1.92**	**316**	*e*Pn	**Pb**	**21 11 37.5**	**-0.9**
IDOB	**Doab**	**1.95**	**327**	*e*Pn	**Pb**	**21 11 37.5**	**-1.5**
IKLH	**Kolahrood**	**2.14**	**57**	*e*Pn	**Pb**	**21 11 41.5**	**-0.8**
IKLH				IAMB	IAmb	21 12 17.9	
	comp=Z,3μm,0.5s						
HSAM	**Samen**	**2.17**	**341**	*e*Pn	**Pb**	**21 11 41.8**	**-1.0**
IGAR	**Gharneh**	**2.21**	**83**	*e*Pn	**Pb**	**21 11 42.7**	**-0.8**
IGAR				IAMB	IAmb	21 12 17.3	
	comp=Z,2μm,0.5s						
ASAO	**Ashtian**	**2.43**	**11**	*e*Pn	**Pb**	**21 11 45.9**	**-1.5**
IRAM	**Ramesheh**	**2.52**	**97**	*e*Pn	**Pn**	**21 11 45.7**	**+1.2**
IZEF	**Zefreh**	**2.54**	**72**	*e*Pn	**Pb**	**21 11 47.7**	**-1.5**
IKOM	**Komasi**	**2.59**	**322**	*e*Pn	**Pn**	**21 11 46.7**	**+1.3**
IBZA	**Bozab**	**2.66**	**330**	*e*Pn	**Pn**	**21 11 48.4**	**+1.9**
HAGD	**Aghdareh**	**2.67**	**355**	*e*Pn	**Pn**	**21 11 48.6**	**+2.0**
GHVR	**GHOM**	**2.79**	**33**	*e*Pn	**Pb**	**21 11 50.7**	**-2.6**
NASN	**Na'in**	**2.91**	**76**	*e*Pn	**Pn**	**21 11 52.2**	**+2.2**
IQOM	**Qom**	**3.00**	**26**	*e*Pn	**Pn**	**21 11 53.5**	**+2.3**
IKAZ	**Kazeroun**	**3.14**	**138**	*e*Pn	**Pn**	**21 11 55.4**	**+2.3**
ISFB	**Sefidab**	**3.21**	**46**	*e*Pn	**Pn**	**21 11 55.8**	**+2.0**
IVIS	**Veis**	**3.21**	**318**	*e*Pn	**Pn**	**21 11 54.5**	**+0.5**
IGHG	**Ghaleghazi**	**3.24**	**313**	*e*Pn	**Pn**	**21 11 56.4**	**+1.9**
IGHG				IAMB	IAmb	21 12 55.1	
	comp=Z,938nm,0.4s						
ILIN	**Lien**	**3.45**	**324**	*e*Pn	**Pn**	**21 11 58.2**	**+0.9**
QABG	**Abgarm-Qazvin**	**3.54**	**2**	*e*Pn	**Pn**	**21 12 00.4**	**+1.8**
IDHR	**Dehrash**	**3.60**	**316**	*e*Pn	**Pn**	**21 11 59.7**	**+0.3**
IPAR	**Pars**	**3.86**	**126**	*e*Pn	**Pn**	**21 12 03.6**	**+0.6**
GEYT	**Alibeck**	**9.15**	**49**	Pn	**Pn**	**21 13 17.6**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=237,slow=13,SNR=3.3						
BRTR	**Keskin Array B**	**14.85**	**305**	Pn	**P**	**21 14 38.9**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=131,slow=13,SNR=9.8						
MKAR	**Makanchi Array**	**29.02**	**50**	P	**P**	**21 17 02.9**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=253,slow=9.5,SNR=4.9						
TORD	**Torodi Ar. Bea**	**47.53**	**258**	P	**P**	**21 19 39.4**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=52,slow=8.0,SNR=3.2						

*NEIC **03** 21:15:43.6±0.0, 15°.23N×93°.32W, h82km, mb4.2/1, MD3.9(MEX), After MEX.*
MEX 03 21:15:43.5±0.4,**15°.22N**×**93°.34W**,**h82**km±5km,**MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.50**	**13**	*e*Pn	Pn	21 15 56.1	-1.4
PCIG				*e*Sn	Sn	21 16 06.0	-1.7
PCIG		**0.50**	**13**	*e*P	Pn	21 15 56.1	-1.4
PCIG				*i* S	Sn	21 16 06.0	-1.7
CCIG	**Comitan**	**1.56**	**47**	*e*Pn	Pn	21 16 09.2	-0.7
CCIG				*e*Pn	Pn	21 16 10.3	+0.4
CCIG				*e*Sn	Sn	21 16 26.9	-3.0
CCIG	**Comitan**	**1.56**	**47**	*i* P	Pn	21 16 09.2	-0.7
CCIG				*i* S	Sn	21 16 27.7	-2.2
TGIG		**1.56**	**7**	*e*Pn	Pn	21 16 08.5	-1.3
TGIG				*e*Sn	Sn	21 16 27.1	-2.6
TGIG		**1.56**	**7**	*e*P	Pn	21 16 08.5	-1.3
TGIG				*i* S	Sn	21 16 27.1	-2.6
TEIG	**Tepich**	**6.93**	**43**	*e*Pn	Pn	21 17 20.1	-2.3
TEIG				*e*Sn	Sn	21 18 33.9	-5.9
FSCY	**Frank Sound, G**	**12.30**	**69**	*e*Pn	Pn	21 18 27.5	-8.1
NATX	**Nacogdoches**	**16.51**	**356**	*e*Pn	Pn	21 19 26.9	-3.1
	12nm,0.6s						

*ATH **03** 21:21:00.7, 38°.90N×27°.68E, h92km±10km, ML3.3/3, Error ellipse: s-maj=13.4km s-min=2.2km az=267.0*
*ISK **03** 21:21:00.9, 38°.99N×27°.59E, h8km, ML3.4/45*
*ISCJB **03** 21:21:01.5±0.3, 38°.98N±0°.02×27°.61E±0°.02, h8km±3km, Error ellipse: s-maj=2.8km s-min=2.5km az=173.7*
*DDA **03** 21:21:01.0, 38°.98N×27°.62E, h7km±3km, ML3.5*
*THE **03** 21:21:02.5, 38°.98N×27°.70E, h14km±2km, ML3.2/4, Error ellipse: s-maj=2.7km s-min=0.6km az=78.0*
ISC 03 21:21:01.2±0.9,**38°.98N**±0°.02×**27°.67E**±0°.02,**h11**km±6km, **n110**,σ1§**16**/124,**9C-2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.15**	**131**	*i* P	**Pb**	**21 21 06.3**	**+0.3**
AKHS				IAML_P			
	comp=Z,69μm,0.1s						
AKS	**Akhisar**	**0.15**	**132**	PG	**Pb**	**21 21 05.6**	**-0.4**
AKS				SG	**Sb**	**21 21 09.0**	**+1.8**
GOMA	**Golmarmara-Man**	**0.34**	**144**	PG	**Pb**	**21 21 09.2**	**+0.1**
GOMA				SG	**Sb**	**21 21 14.7**	**+0.2**
STEP	**BALIKESIR_Sava**	**0.40**	**6**	*i* P	**Pb**	**21 21 10.4**	**+0.1**
STEP				*i* S	**Sb**	**21 21 16.6**	**+0.2**
ZEDA	**zmir-Bergama**	**0.46**	**268**	*i* P	**Pb**	**21 21 10.9**	**-0.3**
ZEDA				*i* S	**Sg**	**21 21 16.9**	**+0.6**
ZEDA				IAML_P			
	comp=Z,44μm,0.1s						
BALB	**Balikesir**	**0.68**	**14**	PG	**Pb**	**21 21 14.9**	**-0.1**
FOCM	**Foa**	**0.78**	**250**	PG	**Pg**	**21 21 15.2**	**-1.0**
AYVA	**Ayvalik**	**0.83**	**294**	*i* P	**Pg**	**21 21 17.0**	**-0.1**
AYVA				*i* S	**Sg**	**21 21 27.5**	**-0.4**
AYVA				IAML_P			
	comp=Z,3μm,0.2s						
MANT	**Manisa**	**0.85**	**125**	*i* P	**Pn**	**21 21 19.6**	**+0.3**
MANT				IAML_P			
	comp=Z,12μm,0.2s						
DURS	**Dursunbey**	**0.88**	**45**	*i* P	**Pn**	**21 21 18.8**	**-0.8**
DURS				*i* S	**Sn**	**21 21 32.1**	**-0.3**
DURS				IAML_P			
	comp=Z,8μm,0.2s						
KULA	**Kula-Manisa**	**0.91**	**121**	PG	**Pn**	**21 21 19.6**	**-0.3**
KULA	**Kula-Manisa**	**0.91**	**121**	P	**Pn**	**21 21 19.2**	**-0.7**
KULA				S	**Sn**	**21 21 31.5**	**-1.4**
KRBN	**Karaburun**	**0.95**	**246**	PG	**Pb**	**21 21 18.9**	**-0.7**
SMAA	**Simav-Kutahya**	**1.03**	**83**	PN	**Pn**	**21 21 22.4**	**+0.8**
URLA	**Izmir**	**1.04**	**234**	PG	**Pb**	**21 21 20.4**	**-0.8**
URLA	**Izmir**	**1.04**	**234**	*i* P	**Pb**	**21 21 20.8**	**-0.4**
URLA				IAML_P			
	comp=Z,9μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**1.05**	**170**	PG	**Pn**	**21 21 21.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.06**	**1**	PG	**Pn**	**21 21 21.7**	**-0.3**
GMLD	**Gumuldur**	**1.08**	**213**	PG	**Pn**	**21 21 21.7**	**-0.4**
USAK	**Uak-Merkez**	**1.09**	**104**	*i* P	**Pn**	**21 21 23.6**	**+1.2**
USAK				*i* S	**Sn**	**21 21 39.0**	**+1.6**
USAK				IAML_P			
	comp=Z,3μm,0.2s						
DGB	**zmir**	**1.11**	**214**	*i* P	**Pg**	**21 21 22.6**	**0.0**
DGB				*i* S	**Sb**	**21 21 36.6**	**-0.2**
PRK	**Paraskevi**	**1.12**	**284**	P	**Pg**	**21 21 23.4**	**+0.7**
PRK				S	**Sn**	**21 21 38.5**	**+0.5**
	comp=Z,1μm,0.5s						
PRK	**Paraskevi**	**1.12**	**284**	P	**Pg**	**21 21 23.2**	**+0.6**
PRK				S	**Sn**	**21 21 39.6**	**+1.6**
BAYC	**CANAKKALE_Bayr**	**1.15**	**312**	*i* P	**Pg**	**21 21 23.8**	**+0.5**
BAYC				*i* S	**Sn**	**21 21 39.3**	**+0.3**
BAYC				IAML_P			
	comp=Z,7μm,0.2s						
ZEY	**zmir**	**1.17**	**231**	*i* P	**Pn**	**21 21 23.2**	**-0.3**
SHAP	**Saphane-Kutahy**	**1.21**	**88**	PN	**Pg**	**21 21 25.8**	**+1.3**
CESE	**eme**	**1.25**	**239**	PN	**Pn**	**21 21 24.4**	**-0.1**
GPNR	**Gulpinar-Canak**	**1.28**	**292**	PN	**Pn**	**21 21 24.7**	**-0.2**
KNL	**Balıkesir**	**1.29**	**355**	*i* P	**Pg**	**21 21 25.9**	**-0.2**
GCAM	**G?zelcaml?**	**1.32**	**195**	PN	**Pb**	**21 21 26.1**	**+0.2**
GCAM	**G?zelcaml?**	**1.32**	**195**	*i* P	**Pg**	**21 21 26.3**	**-0.3**
GCAM				IAML_P			
	comp=Z,7μm,0.3s						
AYDN	**Tasoluk**	**1.33**	**173**	*i* P	**Pg**	**21 21 26.4**	**-0.3**
AYDN				IAML_P			
	comp=Z,8μm,0.2s						
EZN	**Ezine**	**1.34**	**310**	PN	**Pb**	**21 21 25.8**	**-0.5**
EZN	**Ezine**	**1.34**	**310**	P	**Pn**	**21 21 25.6**	**-0.1**
EZN				S	**Sg**	**21 21 44.2**	**-0.1**
EZN	**Ezine**	**1.34**	**310**	⇑*i*P	**Pb**	**21 21 25.7**	**-0.5**
EZN	**Ezine**	**1.34**	**310**	S	**Sn**	**21 21 40.8**	**-2.7**
GEDZ	**Gediz**	**1.36**	**87**	PN	**Pg**	**21 21 27.9**	**+0.6**
EDC	**Edincik**	**1.37**	**6**	PN	**Pg**	**21 21 27.3**	**-0.2**
KCTX	**Karacabey (Bur**	**1.39**	**22**	PN	**Pb**	**21 21 27.1**	**0.0**
CHOS	**Chios island**	**1.39**	**245**	PN	**Pn**	**21 21 26.7**	**+0.1**
CHOS	**Chios island**	**1.39**	**245**	P	**Pn**	**21 21 26.3**	**-0.3**
CHOS				S	**Sg**	**21 21 46.2**	**+0.2**
	comp=Z,1μm,0.3s						
CHOS	**Chios island**	**1.39**	**245**	P	**Pn**	**21 21 26.0**	**-0.6**
CHOS				AML	AML	21 21 47.1	
	comp=E,3010μm,0.3s						
CHOS				AML	AML	21 21 49.5	
	comp=N,1683μm,0.3s						
GDZ	**Gediz**	**1.42**	**85**	*i* P	**Pg**	**21 21 29.4**	**+1.1**
ORLT	**Orhaneli**	**1.43**	**41**	PN	**Pg**	**21 21 28.3**	**-0.3**
SIGR	**SIGRI**	**1.43**	**280**	PN	**Pn**	**21 21 26.6**	**-0.4**
SIGR	**SIGRI**	**1.43**	**280**	P	**Pn**	**21 21 26.4**	**-0.6**
SIGR				S	**Sb**	**21 21 46.3**	**+0.4**
	comp=N,442nm,0.4s						
SIGR	**SIGRI**	**1.43**	**280**	P	**Pn**	**21 21 26.1**	**-0.9**
SIGR				AML	AML	21 21 50.0	
	comp=E,828μm,0.4s						
SIGR				AML	AML	21 21 50.

VRI	**Vrincioaia**	**6.92 355**⇑	*i* P	Pn	21 22 47.8	+5.4
MDVR	**Moldovita**	**7.30 324**⇑	*i* P	**Pn**	**21 22 50.4**	**+2.7**
BZS	**Buzias**	**8.00 328**⇑	*i* P	**Pn**	**21 23 01.1**	**+3.8**

IDC 03 21:40:52.1±8.9, 6°.81S×156°.19E, h151km±74km, mb3.5/5, mb1 3.7/6, mb1mx3.3/36, mbtmp4.0/6, Error ellipse: s-maj=46.5km s-min=29.9km az=27.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**18.12**	**148**	P	P	21 44 52.7	-0.1
	0.8nm,0.3s,baz=17,slow=19,SNR=7.5						
WRA	**Warramunga Arr**	**24.90**	**236**	P	P	21 46 00.7	-0.6
	0.8nm,0.4s,baz=64,slow=10,SNR=9.8						
H11S3	**WAKE ISLAND Hy**	**27.19**	**22**	T	T	22 15 01.9	
	baz=202,slow=75,SNR=23						
ASAR	**Alice Springs**	**27.19**	**230**	P	P	21 46 22.5	+0.7
	0.6nm,0.3s,baz=59,slow=9.5,SNR=14						
ASAR				PcP	PcP	21 49 37.9	-0.5
	0.3nm,0.6s,baz=66,slow=2.3,SNR=3.6						
H11S2	**WAKE ISLAND Hy**	**27.19**	**22**	T	T	22 15 01.1	
	baz=202,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**27.21**	**22**	T	T	22 15 04.9	
	baz=202,slow=75,SNR=7.6						
H11N1	**WAKE ISLAND Hy**	**28.38**	**22**	T	T	22 16 42.1	
	baz=202						
H11N3	**WAKE ISLAND Hy**	**28.39**	**22**	T	T	22 16 40.7	
	baz=202						
H11N2	**WAKE ISLAND Hy**	**28.40**	**22**	T	T	22 17 00.3	
	baz=202						
VNDA	**Vanda**	**70.74**	**179**	P	P	21 51 51.4	+0.1
	0.7nm,0.6s,baz=349,slow=5.8,SNR=6.8						
MKAR	**Makanchi Array**	**84.05**	**318**	P	P	21 53 06.2	+0.3
	0.3nm,0.7s,baz=117,slow=5.5,SNR=3.8						
MKAR				pP	pP	21 53 42.1	-1.5
	0.5nm,0.8s,baz=101,slow=6.0,SNR=3.7						
MAW	**Mawson**	**85.03**	**203**	P	P	21 53 09.9	-0.4
	2.2nm,0.7s,baz=98,slow=7.1,SNR=7.5						

*ISCJB **03** 21:51:26.9±0.6, 41°.10N±0°.04×112°.85W±0°.05, h0km, Error ellipse: s-maj=7.0km s-min=4.0km az=140.2*
*NEIC **03** 21:51:27.3±0.6, 41°.11N×112°.87W, h0km, ML1.5, Error ellipse: s-maj=6.5km s-min=4.8km az=130.0, Suspected Mining explosion.*
NEIC 77 km [48 miles] W of Ogden.
*IDC **03** 21:51:28.4±1.9, 41°.09N×112°.92W, h0km, mb1 2.8/1, mb1mx2.7/37, mbtmp2.3/1, ML3.3/1, Error ellipse: s-maj=53.2km s-min=6.2km az=159.0*
ISC 03 21:51:25.8±1.0, 41°.16N±0°.04×112°.88W±0°.04, h0km, n16, σ0§61/18, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.26**	**206**	*e*Pg	**Pg**	**21 51 31.9**	**+1.0**
BGU				*e*Sg	**Sg**	**21 51 33.4**	**-0.8**
SPUT	**South Promonto**	**0.35**	**66**	*e*Pg	**Pb**	**21 51 35.1**	**0.0**
SPUT				*e*Sg	**Sb**	**21 51 39.7**	**-1.7**
HVU	**Hansel Valley**	**0.62**	**7**	*e*Pg	**Pb**	**21 51 40.0**	**+0.3**
DUG	**Dugway, Tooele**	**0.97**	**177**	*e*Pg	**Pb**	**21 51 45.7**	**+0.1**
CTU	**Camp Tracy**	**0.98**	**118**	*e*Pg	**Pb**	**21 51 46.0**	**+0.2**
CTU				*e*Sg	**Sg**	**21 51 57.7**	**+0.6**
HWUT	**Hardware Ranch**	**1.08**	**65**	*e*Pg	**Pn**	**21 51 48.6**	**+0.1**
HWUT				*e*Sg	**Sg**	**21 52 01.0**	**+0.3**
TCUT	**Toone Canyon**	**1.11**	**92**	*e*Pg	**Pn**	**21 51 49.0**	**+0.1**
JLU	**Jordanelle**	**1.22**	**117**	*e*Pg	**Pg**	**21 51 49.5**	**+0.3**
NLU	**North Lily Min**	**1.35**	**153**	*e*Pg	**Pg**	**21 51 52.0**	**+0.3**
MPU	**Maple Canyon**	**1.49**	**140**	*e*Pn	**Pn**	**21 51 53.7**	**-0.4**
ELK	**Elko**	**1.84**	**258**	Pn	**Pb**	**21 52 00.3**	**-0.1**
	1.0nm,0.3s,baz=72,slow=12,SNR=12						
ELK				Lg	Lg	21 52 24.8	
	1.8nm,0.3s,baz=300,slow=13,SNR=9.4						
ELK	**Elko**	**1.84**	**258**	*e*Pn	**Pb**	**21 52 00.2**	**-0.3**
PSUT	**Pine Spring**	**2.73**	**196**	*e*Pn	**Pn**	**21 52 11.3**	**+0.1**
PDAR	**Pinedale Array**	**2.95**	**56**	Pn	**Pb**	**21 52 19.4**	**0.0**
	0.5nm,0.3s,baz=231,slow=12,SNR=8.5						
PDAR				Lg	Lg	21 53 02.8	
	0.7nm,0.3s,baz=228,slow=25,SNR=6.0						
I56US	**NEWPORT INFRAS**	**7.71**	**338**	*i*		22 35 50.0	
	baz=157,slow=318,SNR=4.1						
I57US	**PINON FLAT INF**	**8.06**	**202**	*i*		22 42 30.0	
	baz=21,slow=320,SNR=1.1						

*IDC **03** 22:15:09.7±3.6, 51°.79N×160°.60E, h0km, mb3.5/2, mb1 3.4/3, mb1mx3.2/30, mbtmp3.4/3, ML2.3/1, Error ellipse: s-maj=107.2km s-min=48.9km az=27.0*
*KRSC **03** 22:15:12.9±1.3, 52°.03N×160°.75E, h55km±20km, ML3.7*
ISC 03 22:15:11.0±2.7, 51°.97N±0°.09×160°.6E±0°.1, h5km±14km, n21, σ0§77/27, Off east of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.19**	**342**	*e*P	**Pn**	**22 15 33.0**	**-1.3**
SPN				*e*S	**Sb**	**22 15 49.5**	**-0.2**
RUS	**Russkaya**	**1.39**	**290**	*e*P	**Pg**	**22 15 38.1**	**+0.6**
RUS				*e*S	**Sg**	**22 15 55.8**	**+0.3**
NLC	**Nalytchevo**	**1.44**	**327**	*e*P	**Pn**	**22 15 37.8**	**+0.1**
NLC				*e*S	**Sn**	**22 15 56.0**	**-0.9**
DALK	**Dalny**	**1.56**	**313**	*e*P	**Pn**	**22 15 39.2**	**-0.2**
MTVR	**Mutnovka**	**1.59**	**290**	*e*P	**Pg**	**22 15 41.6**	**+0.1**
MTVR				*e*S	**Sg**	**22 16 02.3**	**+0.2**
KDTR	**Khodutka, Kamc**	**1.59**	**265**	*e*P	**Pg**	**22 15 41.7**	**+0.2**
KDTR				*e*S	**Sg**	**22 16 01.9**	**-0.3**
PET	**Petropavlovsk**	**1.60**	**312**	*e*P	**Pb**	**22 15 41.2**	**+0.1**
UGLR	**Uglovaya**	**1.66**	**319**	*e*P	**Pb**	**22 15 42.2**	**+0.1**
SDLR	**Sedlovina**	**1.69**	**321**	*e*P	**Pn**	**22 15 42.0**	**+0.7**
SMAR	**Somma**	**1.71**	**320**	*e*P	**Pb**	**22 15 42.8**	**-0.2**
AVH	**Avacha**	**1.73**	**319**	*e*P	**Pb**	**22 15 43.1**	**-0.3**
KRMR	**Karymshinskiy**	**1.76**	**300**	*e*P	**Pb**	**22 15 43.6**	**-0.1**
KRER	**Koryakskii**	**1.76**	**320**	*e*P	**Pb**	**22 15 43.5**	**-0.4**
KRX	**Arik**	**1.84**	**320**	*e*P	**Pn**	**22 15 44.2**	**+0.8**
PETK	**Petropavlovsk-**	**2.12**	**303**	Pn	**Pb**	**22 15 48.5**	**-1.5**
	4.0nm,0.3s,baz=104,slow=14,SNR=95						
PETK				Sn	**Sn**	**22 16 15.3**	**+1.3**
	5.3nm,0.3s,baz=108,slow=18,SNR=6.1						
APC	**Apacha**	**2.33**	**295**	*e*P	**Pb**	**22 15 52.7**	**-0.8**
GNL	**Ganaly**	**2.38**	**318**	*e*P	**Pb**	**22 15 52.7**	**-1.6**
KZV	**Kizimen**	**3.15**	**356**	*e*P	**Pn**	**22 16 02.2**	**+0.8**
TUMR	**Tumrok**	**3.33**	**355**	*e*P	**Pn**	**22 16 04.7**	**+0.9**
MKAR	**Makanchi Array**	**48.95**	**297**	P	**P**	**22 23 57.6**	**-0.4**
	0.2nm,0.5s,baz=47,slow=6.5,SNR=2.8						
FINES	**FINESS Array B**	**61.28**	**337**	P	**P**	**22 25 27.1**	**+0.4**
	0.5nm,0.4s,baz=33,slow=8.6,SNR=4.1						

*AZER **03** 22:18:17.9±0.8, 43°.17N×44°.69E, h19km±49km, ml3.1/11, Error ellipse: s-maj=109.5km s-min=9.8km az=322.0*
*DRS **03** 22:18:18.9±0.0, 43°.11N×44°.94E, h15km, ML2.5/1*
*TIF **03** 22:18:19.7, 43°.06N×45°.28E, h4km±1km*
*NORS **03** 22:18:20.1±0.0, 42°.91N×45°.23E, h7km, MPVA3.8*
*MOS **03** 22:18:20.8±0.0, 42°.97N×45°.22E, h12km, MPVA3.8*
ISC 03 22:18:22.9±0.9, 42°.96N±0°.02×45°.24E±0°.01, h14km±7km, n109, σ1§46/196, 1C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMGR	**Komgaron**	**0.29**	**290**	*e*PG	**Pg**	**22 18 27.6**	**-1.4**
KMGR				*e*S	**Sb**	**22 18 33.7**	**-0.9**
KMGR	**Komgaron**	**0.29**	**290**	*e*Pg	**Pg**	**22 18 27.6**	**-1.4**
KMGR				*e*Sg	**Sb**	**22 18 33.7**	**-0.9**
VLKR	**Vladikavkaz**	**0.42**	**282**	*e*PG	**Pg**	**22 18 30.2**	**-1.1**
VLKR				*e*S	**Sb**	**22 18 37.9**	**-0.4**
VLKR	**Vladikavkaz**	**0.42**	**282**	*e*Pg	**Pg**	**22 18 30.0**	**-1.4**
VLKR				*e*Pg	**Pg**	**22 18 30.2**	**-1.1**
VLKR				*e*Sg	**Sb**	**22 18 37.9**	**-0.4**
VLKR				*e*Sg	**Sb**	**22 18 37.9**	**-0.4**
GROC	**Groznyy**	**0.48**	**59**	*e*PG	**Pg**	**22 18 31.9**	**-0.4**
GROC				*e*S	**Sn**	**22 18 40.9**	**-2.5**
GROC	**Groznyy**	**0.48**	**59**	*e*Pg	**Pg**	**22 18 31.9**	**-0.4**
GROC				*e*Sg	**Sn**	**22 18 40.9**	**-2.5**
DVE	**Vedeno**	**0.65**	**90**	*e*PG	**Pg**	**22 18 34.9**	**-0.8**
DVE				*e*S	**Sb**	**22 18 45.8**	**+0.8**
DVE	**Vedeno**	**0.65**	**90**	*e*Pg	**Pg**	**22 18 34.9**	**-0.8**
DVE				*e*Sg	**Sb**	**22 18 45.8**	**+0.8**
BTKR	**Batakoyurt**	**0.65**	**309**	*e*PG	**Pg**	**22 18 35.0**	**-0.7**
BTKR				*e*S	**Sn**	**22 18 49.8**	**+1.9**
BTKR	**Batakoyurt**	**0.65**	**309**	*e*Pg	**Pg**	**22 18 35.0**	**-0.7**
BTKR				*e*Sg	**Sn**	**22 18 49.8**	**+1.9**
LACR	**Lac**	**0.70**	**259**	*e*PG	**Pg**	**22 18 35.3**	**-1.3**
LACR				*e*S	**Sb**	**22 18 46.8**	**+0.2**
LACR	**Lac**	**0.70**	**259**	*e*Pg	**Pg**	**22 18 35.5**	**-1.1**
LACR				*e*Sg	**Sb**	**22 18 46.7**	**+0.2**
ARNR	**Ardon**	**0.73**	**288**	*e*PG	**Pn**	**22 18 37.7**	**-1.1**
ARNR				*e*S	**Sn**	**22 18 50.6**	**+0.8**
ARNR	**Ardon**	**0.73**	**288**	*e*Pg	**Pn**	**22 18 37.6**	**-1.1**
ARNR				*e*Sg	**Sn**	**22 18 48.6**	**-1.2**
GUDG	**Gudauri**	**0.75**	**229**	P	**Pg**	**22 18 36.8**	**-0.7**
GUDG				S	**Sb**	**22 18 48.3**	**+0.4**
GUDG	**Gudauri**	**0.75**	**229**	*e*PG	**Pg**	**22 18 36.8**	**-0.7**
GUDG				*e*S	**Sb**	**22 18 48.3**	**+0.4**
BTLR	**Botlikh**	**0.78**	**112**	*e*PG	**Pg**	**22 18 37.8**	**-0.3**
BTLR				*e*S	**Sn**	**22 18 49.9**	**-1.2**
BTLR	**Botlikh**	**0.78**	**112**	*e*Pg	**Pg**	**22 18 37.8**	**-0.3**
	50nm,0.7s						
BTLR				⇓*e*Sg	**Sn**	**22 18 49.9**	**-1.2**
	195nm,0.6s						
TRKR	**Terskaya**	**0.85**	**334**	*e*PG	**Pg**	**22 18 39.0**	**-0.3**
TRKR				*e*S	**Sn**	**22 18 52.5**	**-0.1**
TRKR	**Terskaya**	**0.85**	**334**	*e*Pg	**Pg**	**22 18 39.0**	**-0.3**
TRKR				*e*Sg	**Sn**	**22 18 53.4**	**+0.8**
KORR	**Kora**	**0.87**	**279**	*e*PG	**Pn**	**22 18 41.2**	**+0.5**
KORR				*e*S	**Sn**	**22 18 56.4**	**+3.3**
KORR	**Kora**	**0.87**	**279**	*e*Pg	**Pn**	**22 18 41.1**	**+0.5**
KORR				*e*Sg	**Sn**	**22 18 56.4**	**+3.3**
STDR	**Stavd-Durt**	**0.95**	**296**	*e*PG	**Pn**	**22 18 42.2**	**+0.4**
STDR				*e*S	**Sn**	**22 18 55.9**	**+0.8**
STDR	**Stavd-Durt**	**0.95**	**296**	*e*Pg	**Pn**	**22 18 42.1**	**+0.4**
STDR				*e*Sg	**Sn**	**22 18 55.9**	**+0.8**
ZEI	**Tsey**	**1.00**	**261**	PG	**Pb**	**22 18 41.2**	**-0.8**
ZEI				S	**Sn**	**22 18 56.2**	**-0.4**
ZEI	**Tsey**	**1.00**	**261**	*e*Pg	**Pb**	**22 18 41.2**	**-0.8**
ZEI				*e*Sg	**Sn**	**22 18 56.2**	**-0.4**
PRTR	**Priterechnaya**	**1.05**	**319**	*e*PG	**Pg**	**22 18 42.7**	**-0.5**
PRTR				*e*S	**Sn**	**22 19 01.1**	**+3.4**
PRTR	**Priterechnaya**	**1.05**	**319**	*e*Pg	**Pg**	**22 18 42.7**	**-0.5**
PRTR				*e*Sg	**Sn**	**22 19 01.1**	**+3.4**
LSNR	**Lesken**	**1.08**	**288**	*e*PG	**Pg**	**22 18 43.3**	**-0.5**
LSNR				*e*S	**Sn**	**22 19 00.7**	**+2.3**
LSNR	**Lesken**	**1.08**	**288**	*e*Pg	**Pg**	**22 18 43.3**	**-0.5**
LSNR				*e*Sg	**Sn**	**22 19 00.7**	**+2.3**
XNZR	**Khunzakh**	**1.16**	**111**	*e*PG	**Pg**	**22 18 45.0**	**-0.3**
XNZR				*e*S	**Sg**	**22 19 02.9**	**+2.5**
XNZR	**Khunzakh**	**1.16**	**111**	*e*Pg	**Pg**	**22 18 44.9**	**-0.4**
XNZR				*e*Sg	**Sg**	**22 19 01.8**	**+1.4**
UNCR	**Uncukul**	**1.17**	**102**	*e*PG	**Pg**	**22 18 45.0**	**-0.5**
UNCR				*e*S	**Sg**	**22 19 03.0**	**+2.2**
UNCR				pmax	pmax		
	comp=Z,116nm,0.3s						
UNCR	**Uncukul**	**1.17**	**102**	*e*Pg	**Pg**	**22 18 45.0**	**-0.5**
	comp=Z,116nm,0.3s						
UNCR				*e*Sg	**Sg**	**22 19 03.0**	**+2.2**
	comp=Z,314nm,0.6s						
DIGR	**Digorskoe uzhe**	**1.22**	**268**	*e*PG	**Pb**	**22 18 45.4**	**-0.4**
DIGR				*e*S	**Sg**	**22 19 02.7**	**+0.4**
DIGR	**Digorskoe uzhe**	**1.22**	**268**	*e*Pg	**Pb**	**22 18 45.4**	**-0.4**
DIGR				*e*Sg	**Sg**	**22 19 02.7**	**+0.4**
KRNR	**Karanay**	**1.23**	**96**	*i* PG	**Pb**	**22 18 45.5**	**-0.5**
KRNR				*i* S	**Sg**	**22 19 03.8**	**+1.0**
KRNR				pmax	pmax		
	comp=Z,26nm,0.2s						
KRNR	**Karanay**	**1.23**	**96**	*i* Pg	**Pb**	**22 18 45.5**	**-0.5**
	comp=Z,26nm,0.2s						
KRNR				*i* Sg	**Sg**	**22 19 03.8**	**+1.0**
	comp=Z,109nm,0.3s						
SEAG	**Tbilisi Sea**	**1.24**	**195**	P	**Pb**	**22 18 46.0**	**-0.1**
SEAG				S	**Sg**	**22 19 05.2**	**+2.4**
SEAG	**Tbilisi Sea**	**1.24**	**195**	*e*PG	**Pb**	**22 18 45.9**	**-0.1**
SEAG				*e*S	**Sg**	**22 19 05.2**	**+2.4**
TBLG	**Delisi**	**1.28**	**197**	P	**Pb**	**22 18 46.9**	**0.0**
TBLG				S	**Sg**	**22 19 06.8**	**+2.5**
TBLG	**Delisi**	**1.28**	**197**	*e*PG	**Pb**	**22 18 46.8**	**0.0**
TBLG				*e*S	**Sg**	**22 19 06.7**	**+2.5**
TBLG	**Delisi**	**1.28**	**197**	*i* P	**Pg**	**22 18 47.1**	**-0.4**
TBLG				IAML_P			
	comp=Z,3μm,0.2s						
TBLG	**Delisi**	**1.28**	**197**	*e*Pg	**Pb**	**22 18 46.9**	**0.0**
TBLG				*e*Sg	**Sg**	**22 19 06.8**	**+2.5**
NCK	**Nalchik**	**1.31**	**295**	*e*PG	**Pg**	**22 18 47.5**	**-0.7**
NCK				*e*S	**Sg**	**22 19 07.3**	**+2.0**
NCK	**Nalchik**	**1.31**	**295**	*e*Pg	**Pg**	**22 18 47.5**	**-0.7**
NCK				*e*Sg	**Sg**	**22 19 07.3**	**+2.0**
BTNK	**Botanikuri**	**1.32**	**194**	P	**Pb**	**22 18 47.4**	**0.0**
BTNK				S	**Sg**	**22 19 07.7**	**+2.3**
BTNK	**Botanikuri**	**1.32**	**194**	*e*PG	**Pb**	**22 18 47.4**	**0.0**
BTNK				*e*S	**Sg**	**22 19 07.7**	**+2.3**
BTNK	**Botanikuri**	**1.32**	**194**	*i* P	**Pb**	**22 18 47.5**	**0.0**
BTNK				IAML_P			
	comp=Z,3μm,0.2s						
LGD	**Lagodekhi**	**1.35**	**146**	P	**Pb**	**22 18 47.8**	**-0.1**
LGD	**Lagodekhi**	**1.35**	**146**	*e*PG	**Pb**	**22 18 47.8**	**-0.1**
LGD	**Lagodekhi**	**1.35**	**146**	*e*Pg	**Pb**	**22 18 47.8**	**-0.1**
ONI	**Oni**	**1.36**	**255**	P	**Pb**	**22 18 47.7**	**-0.5**
ONI				S	**Sg**	**22 19 07.6**	**+0.6**
ONI	**Oni**	**1.36**	**255**	*e*PG	**Pb**	**22 18 47.7**	**-0.5**
ONI				*e*S	**Sg**	**22 19 07.5**	**+0.6**
ONI	**Oni**	**1.36**	**255**	*e*Pg	**Pb**	**22 18 47.7**	**-0.5**
ONI				*e*Sg	**Sg**	**22 19 07.6**	**+0.6**
BUJR	**Buynaksk**	**1.38**	**95**	*e*PG	**Pb**	**22 18 48.5**	**0.0**
BUJR				*e*S	**Sg**	**22 19 09.5**	**+2.0**
BUJR				pmax	pmax		
	comp=Z,47nm,0.2s						
BUJR	**Buynaksk**	**1.38**	**95**	*e*Pg	**Pb**	**22 18 48.5**	**0.0**
	comp=Z,47nm,0.2s						
BUJR				*e*Sg	**Sg**	**22 19 09.5**	**+2.0**
	comp=Z,137nm,0.3s						
GNBR	**Gunib**	**1.40**	**114**	*e*PG	**Pb**	**22 18 48.7**	**-0.1**
GNBR				*e*S	**Sg**	**22 19 09.2**	**+1.3**
GNBR				pmax	pmax		
	comp=Z,93nm,0.4s						
GNBR	**Gunib**	**1.40**	**114**	*e*Pg	**Pg**	**22 18 48.9**	**-0.8**
	comp=Z,93nm,0.4s						
GNBR				*e*Sg	**Sg**	**22 19 09.4**	**+1.5**
	comp=Z,244nm,0.6s						
KBTC	**Kuba-Taba**	**1.58**	**303**	*e*PG	**Pb**	**22 18 51.4**	**-0.6**
KBTC				*e*S	**Sg**	**22 19 12.7**	**-1.2**
KBTC	**Kuba-Taba**	**1.58**	**303**	*e*Pg	**Pb**	**22 18 51.4**	**-0.6**
KBTC				*e*Sg	**Sg**	**22 19 12.7**	**-1.2**
DDFL	**Dedoflistskaro**	**1.65**	**156**	P	**Pb**	**22 18 52.2**	**-0.9**
DDFL				S	**Sg**	**22 19 20.4**	**+4.4**
DDFL	**Dedoflistskaro**	**1.65**	**156**	*e*PN	**Pb**	**22 18 52.2**	**-0.9**
DDFL				*e*S	**Sg**	**22 19 20.4**	**+4.4**
MAK	**Makhachkala**	**1.67**	**89**	*e*PN	**Pb**	**22 18 53.6**	**+0.3**
MAK				*e*		22 19 22.0	
MAK				pmax	pmax		
	comp=Z,60nm,0.3s						
MAK				smax	smax		
	comp=E,194nm,0.4s						
MAK				smax	smax		
	comp=E,232nm,0.4s						
MAK	**Makhachkala**	**1.67**	**89**	*e*Pg	**Pn**	**22 18 51.3**	**-0.3**
MAK				*e*Sg	**Sg**	**22 19 19.1**	**+2.6**
ZKTA	**Zakatala**	**1.67**	**142**	P	**Pb**	**22 18 53.6**	**+0.2**
	SNR=7.4						
ZKTA				S	**Sg**	**22 19 21.6**	**+4.9**
KZRT	**Kazreti**	**1.69**	**202**	P	**Pb**	**22 18 53.2**	**-0.6**
KZRT				S	**Sg**	**22 19 18.1**	**+0.8**
KZRT	**Kazreti**	**1.69**	**202**	*e*PN	**Pb**	**22 18 53.2**	**-0.6**
KZRT				*e*S	**Sg**	**22 19 18.1**	**+0.8**
TKB	**Tkibuli**	**1.76**	**251**	P	**Pg**	**22 18 56.0**	**-0.7**
TKB				S	**Sg**	**22 19 21.7**	**+2.1**
TKB	**Tkibuli**	**1.76**	**251**	*e*PN	**Pg**	**22 18 56.0**	**-0.7**
TKB				*e*S	**Sg**	**22 19 21.7**	**+2.1**
NEY	**Neytrino**	**1.86**	**280**⇓	*e*PN	**Pn**	**22 18 54.3**	**-0.2**
NEY	**Neytrino**	**1.86**	**280**	*e*Pg	**Pn**	**22 18 54.6**	**+0.1**
NEY				*e*Sg	**Sb**	**22 19 20.3**	**+0.2**
QZX	**Qazax, Azerbai**	**1.90**	**177**	P	**Pn**	**22 18 55.5**	**+0.5**
	SNR=12						
QZX				S	**Sg**	**22 19 24.8**	**+0.7**
PYA1	**Pyatigorsk**	**1.91**	**306**	*e*PN	**Pn**	**22 18 54.8**	**-0.2**
PYA1	**Pyatigorsk**	**1.91**	**306**	*e*Pg	**Pn**	**22 18 54.7**	**-0.3**
PYA1				*e*Sg	**Sb**	**22 19 19.9**	**-1.2**
URKR	**Urkarakh**	**1.94**	**113**⇓	*e*PN	**Pb**	**22 18 57.8**	**-0.3**
URKR				*e*		22 19 27.1	
URKR	**Urkarakh**	**1.94**	**113**	*e*Pg	**Pg**	**22 18 59.8**	**-0.4**
URKR				*e*Sg	**Sg**	**22 19 27.8**	**+2.5**
AKH	**Akhalkalaki**	**2.02**	**221**	P	**Pb**	**22 18 59.4**	**-0.1**
AKH				S	**Sg**	**22 19 27.6**	**-0.3**
AKH	**Akhalkalaki**	**2.02**	**221**	*e*PN	**Pb**	**22 18 59.3**	**-0.1**
AKH				*e*S	**Sg**	**22 19 27.6**	**-0.3**
AKH	**Akhalkalaki**	**2.02**	**221**	*e*Pg	**Pb**	**22 18 59.4**	**-0.1**
AKH				*e*Sg	**Sg**	**22 19 27.6**	**-0.3**
SHA1	**Shidzhatmaz**	**2.04**	**293**	*e*PN	**Pb**	**22 18 58.0**	**-1.8**
SHA1				*e*S	**Sb**	**22 19 26.0**	**+1.0**
SHA1	**Shidzhatmaz**	**2.04**	**293**	*e*Pg	**Pn**	**22 18 57.5**	**+0.5**
SHA1				*e*Sg	**Sb**	**22 19 26.0**	**+1.0**
BGD	**Bogdanovka**	**2.09**	**216**	P	**Pb**	**22 19 00.3**	**-0.3**
BGD				S	**Sg**	**22 19 29.4**	**-0.6**
BGD	**Bogdanovka**	**2.09**	**216**	*e*PN	**Pb**	**22 19 00.3**	**-0.3**
BGD				*e*S	**Sg**	**22 19 29.4**	**-0.6**
KIV0	**Kislovodsk Arr**	**2.10**	**299**	*e*Pg	**Pn**	**22 18 56.8**	**-1.0**
KIV0				*e*Sg	**Sn**	**22 19 24.0**	**+0.3**
KIV	**Kislovodsk**	**2.11**	**299**	*e*PN	**Pn**	**22 18 56.8**	**-1.0**
KIV	**Kislovodsk**	**2.11**	**299**	*e*Pg	**Pn**	**22 18 57.3**	**-0.5**
GDB	**GEDABAY**	**2.27**	**170**	P	**Pb**	**22 19 02.4**	**-1.3**
	SNR=4.1						
GDB				S	**Sg**	**22 19 34.6**	**-1.3**
EPOS	**Posof**	**2.36**	**233**	*i* P	**Pb**	**22 19 03.8**	**-1.6**
AKT	**Akhty**	**2.37**	**128**	*e*PN	**Pb**	**22 19 04.5**	**-0.9**
AKT				*e*		22 19 08.4	
AKT				*e*		22 19 10.7	
AKT				*e*S	**Sg**	**22 19 38.7**	**-0.4**
AKT				*e*		22 19 45.3	
AKT				pmax	pmax		
	comp=Z,28nm,0.3s						
AKT				smax	smax		
	comp=E,43nm,0.3s						
AKT				smax	smax		
	comp=E,31nm,0.3s						
AKT				smax	smax		
	comp=N,42nm,0.5s						
AKT	**Akhty**	**2.37**	**128**	*e*Pn	**Pb**	**22 19 04.5**	**-0.9**
	comp=N,28nm,0.4s						
AKT				*e*Sn	**Sb**	**22 19 35.3**	**+0.8**
	comp=N,43nm,0.3s						
GANJ	**Ganja**	**2.45**	**160**	PN	**Pb**	**22 19 04.5**	**-2.2**
GANJ	**Ganja**	**2.45**	**160**	P	**Pb**	**22 19 04.6**	**-2.2**
	SNR=8.5						
GANJ				S	**Sg**	**22 19 39.8**	**-1.8**
EAK	**Akyaka**	**2.58**	**209**	*i* P	**Pb**	**22 19 07.7**	**-1.3**
EAK				*i* S	**Sb**	**22 19 43.0**	**+2.5**
EAK				IAML_P			
	comp=Z,667nm,0.5s						
GOF	**Gofitskoye**	**2.63**	**324**⇑	*e*PN	**Pn**	**22 19 05.0**	**+0.2**
GOF				*e*S	**Sg**	**22 19 49.9**	**+2.6**
GOF				pmax	pmax		
	comp=Z,21nm,1.0s						
GOF				smax	smax		
	comp=E,43nm,0.7s						
QSAR	**Qusar**	**2.67**	**122**	P	**Pb**	**22 19 09.1**	**-1.4**
QSAR				S	**Sg**	**22 19 47.1**	**-1.6**
XNQ	**Khinaliq**	**2.80**	**129**	P	**Pb**	**22 19 10.5**	**-2.3**
XNQ				S	**Sg**	**22 19 51.4**	**-1.6**
GNI	**Garni**	**2.83**	**188**	*i* Pn	**Pn**	**22 19 08.2**	**+0.4**
GNI	**Garni**	**2.83**	**188**	*e*Pn	**Pn**	**22 19 08.2**	**+0.4**
QUBA	**Quba, Azerbaij**	**2.90**	**122**	P	**Pb**	**22 19 12.5**	**-2.0**
QUBA				S	**Sg**	**22 19 54.2**	**-2.0**
BRDA	**Brd**	**3.06**	**151**	P	**Pb**	**22 19 14.3**	**-2.9**
BRDA				S	**Sb**	**22 19 56.8**	**+2.5**
IML	**Ismayilli**	**3.09**	**134**	S	**Sg**	**22 19 58.7**	**-3.4**
IGDI	**IGDIR**	**3.21**	**196**	*i* P	**Pb**	**22 19 19.2**	**-0.4**
IGDI				IAML_P			
	comp=Z,23nm,0.3s						
HYR	**Heyderabad**	**3.25**	**185**	S	**Sb**	**22 19 56.5**	**-3.4**
ATGJ	**Altiaghaj**	**3.47**	**126**	P	**Pb**	**22 19 20.7**	**-3.4**
KLNR	**Kaliningrad**	**20.07**	**314**	*i* P	Pn	22 22 57.0	-0.3
KLNR				pmax	pmax		
	comp=Z,31nm,1.1s						
KURK	**K

ARCR	ARCALIA	0.71 280	⇑	iP	Pg	22 34 27.2	-0.3
OZUR		0.91 162	⇑	iP	Pb	22 34 31.9	-0.2
OZUR				i S	Sn	22 34 45.7	-1.1
OZUR		0.91 162	⇑	iP	Pb	22 34 31.9	-0.2
TESR	Tescani	0.98 117	⇓	iP	Pn	22 34 34.4	+0.1
TESR				i S	Sn	22 34 48.2	-0.4
TESR	Tescani	0.98 117	⇓	iP	Pn	22 34 34.4	+0.1
MDB	Medias	1.07 220	⇑	iP	Pn	22 34 35.4	-0.1
MDB				i S	Sn	22 34 51.7	+0.9
MDB	Medias	1.07 220	⇑	iP	Pn	22 34 35.4	-0.1
CJR	Cluj-Napoca	1.25 259	⇑	iP	Pn	22 34 37.4	-0.6
CJR				i S	Sn	22 34 54.5	-0.7
CJR	Cluj-Napoca	1.25 259	⇑	iP	Pn	22 34 37.4	-0.6
RAKU	Rahkiv	1.35 323	⇓	iPg	Pg	22 34 40.5	+0.9
RAKU				Pm		22 34 41.8	
RAKU				i Sg	Sg	22 35 00.4	+3.3
RAKU				Sm		22 35 11.3	
NSLU	Nyzhne Selyshc	1.39 334	⇑	iPn	Pg	22 34 47.6	+7.2
NSLU				Pm		22 34 49.5	
NSLU				i Sn	Sg	22 35 12.4	+14
NSLU				Sm		22 35 16.7	
PLOR	Plostina	1.42 141	⇓	iP	Pg	22 34 42.1	+1.1
PLOR	Plostina	1.42 141	⇓	iP	Pg	22 34 42.1	+1.1
VRI	Vrincioaia	1.44 139	⇑	iP	Pb	22 34 40.6	-0.5
VRI				i S	Sg	22 35 01.7	+1.7
VRI	Vrincioaia	1.44 139	⇑	iP	Pb	22 34 40.6	-0.5
BMR	Baia Mare	1.47 300	⇑	iP	Pb	22 34 41.7	+0.1
BMR				i S	Sg	22 35 02.0	+1.1
BMR	Baia Mare	1.47 300	⇑	iP	Pb	22 34 41.7	+0.1
IAS	Iasi	1.51 80	⇑	iP	Pg	22 34 43.5	+0.8
IAS				i S	Sg	22 35 02.0	-0.3
IAS	Iasi	1.51 80	⇑	iP	Pg	22 34 43.5	+0.8
MLR	Muntele Rosu	1.52 165	⇑	iP	Pb	22 34 42.2	-0.4
MLR				i S	Sg	22 35 05.3	+2.5
MLR	Muntele Rosu	1.52 165	⇑	iP	Pb	22 34 42.2	-0.4
VOIR		1.54 189	⇓	iP	Pn	22 34 42.1	0.0
VOIR		1.54 189	⇓	iP	Pn	22 34 42.1	0.0
ARR	Arges	1.68 198	⇓	iP	Pb	22 34 44.7	-0.5
ARR				i S	Sg	22 35 07.7	0.0
ARR	Arges	1.68 198	⇓	iP	Pb	22 34 44.7	-0.5
KMPD	K-Podol'skiy	1.76 24	⇑	iPn	Pb	22 34 46.1	-0.5
KMPD				i Sn	Sg	22 35 10.7	+0.3
DRGR		1.84 266	⇑	iP	Pb	22 34 46.8	-1.2
DRGR				i S	Sb	22 35 10.7	-0.6
DRGR		1.84 266	⇑	iP	Pb	22 34 46.8	-1.2
LOT	Lotru	1.88 217	⇑	iP	Pn	22 34 46.7	-0.1
LOT				i S	Sg	22 35 13.7	-0.6
LOT	Lotru	1.88 217	⇑	iP	Pn	22 34 46.7	-0.1
KORU	Korolevo	1.94 309	i	Pn	Pb	22 34 50.0	+0.4
KORU				Pm		22 34 52.0	
KORU				i Sn	Sg	22 35 16.2	+0.2
KORU				Sm		22 35 30.4	
TRSU	Trosnyk	2.00 305	i	Pn	Pb	22 34 50.6	0.0
TRSU				i Sn	Sg	22 35 17.5	-0.4
MEZ	Mezhgor'ye	2.00 322	i	Pn	Pn	22 34 49.2	+0.9
MEZ				i Sn	Sg	22 35 17.5	-0.6
DEV	Deva	2.02 239	⇓	iP	Pb	22 34 50.5	-0.6
DEV				i S	Sb	22 35 17.4	+0.8
DEV	Deva	2.02 239	⇓	iP	Pb	22 34 50.5	-0.6
TUDR		2.10 130	⇑	iP	Pb	22 34 51.4	-0.9
TUDR		2.10 130	⇑	iP	Pb	22 34 51.4	-0.9
BRIU	Brid	2.11 312	i	Pn	Pb	22 34 53.0	+0.5
BRIU				Pm		22 34 55.9	
BRIU				eSn	Sg	22 35 20.4	-1.1
BRIU				Sm		22 35 33.4	
NDNU	Novodnistrovsk	2.11 39	i	Pn	Pb	22 34 50.9	-1.7
NDNU				i Sn	Sb	22 35 19.2	+0.1
BERU	Beregovo	2.25 306	ePn		Pb	22 34 55.0	+0.1
BERU				i Sn	Sb	22 35 24.1	+1.2
TRPA	Tarpa	2.25 302	⇓	iP	Pn	22 34 52.0	+0.3
TRPA	Tarpa	2.25 302	⇓	iP	Pn	22 34 52.0	+0.3
TRPA	Tarpa	2.25 302	EPn		Pn	22 34 51.1	-0.6
TRPA				Sn	Sb	22 35 24.0	+1.0
MILM	Milestii Mici	2.35 90	⇑	iP	Pn	22 34 52.8	-0.3
MILM				i S	Sb	22 35 23.9	-2.1
MILM	Milestii Mici	2.35 90	⇑	iP	Pn	22 34 52.8	-0.3
MILM	Milestii Mici	2.35 90	Sn		Sb	22 35 23.9	-2.1
MUKU	Mukachevo	2.35 310	i	Pn	Pb	22 34 55.8	-0.9
MUKU				i Sn	Sb	22 35 26.7	+0.7
GZR	Gura Zlata	2.40 230	⇓	iP	Pb	22 34 55.3	-2.1
GZR				i S	Sb	22 35 25.1	-2.2
GZR	Gura Zlata	2.40 230	⇓	iP	Pb	22 34 55.3	-2.1
CFR	Carcaliu	2.62 132	⇑	iP	Pn	22 34 57.8	+1.0
CFR	Carcaliu	2.62 132	⇑	iP	Pn	22 34 57.8	+1.0
SHIU	Shidnytsya	2.64 330	ePn		Pb	22 34 59.7	-1.8
SIRR	Siria	2.66 256	⇓	iP	Pn	22 34 58.5	+1.2
SIRR	Siria	2.66 256	⇓	iP	Pn	22 34 58.5	+1.2
STZU	Stuzhytsa	2.77 319	ePn		Pb	22 35 01.7	-2.1
STZU				Pm		22 35 07.4	
STZU				eSn	Sb	22 35 36.7	-1.2
STZU				Sm		22 35 59.7	
HERR	Herculane	2.94 226	⇓	iP	Pn	22 35 02.8	+1.7
HERR				i S	Sb	22 35 39.5	-3.3
HERR	Herculane	2.94 226	⇓	iP	Pn	22 35 02.8	+1.7
BZS	Buzias	2.94 244	⇓	iP	Pn	22 35 02.0	+0.9
BZS				i S	Sn	22 35 38.2	+1.5
BZS	Buzias	2.94 244	⇓	iP	Pn	22 35 02.0	+0.9
MDVR	Moldovita	3.36 231	i	S	Sn	22 35 49.1	+1.7
MDVR	Moldovita	3.36 231	S		Sn	22 35 49.1	+1.7

*SJA **03** 22:56:39.1±1.2,20°.86S×67°.49W,h196km±11km,ML3.2, MW3.2*
*ISCJB **03** 22:56:40.2±0.5,20°.92S±0°.03×67°.61W±0°.04,h189km±5km, mb3.2/3,Error ellipse: s-maj=6.5km s-min=4.2km az=151.3*
*GUC **03** 22:56:41.8±0.7,20°.89S×67°.86W,h211km±5km,ML3.9*
*IDC **03** 22:56:44.9±8.4,20°.52S×67°.29W,h206km±56km,mb2.9/3, mb1 3.3/4,mb1mx3.0/22,mbtmp3.5/4,MS2.6/2,Ms1 2.7/2, ms1mx2.6/5,Error ellipse: s-maj=98.4km s-min=31.3km az=22.0*

ISC 03 22:56:40.8±0.9,20°.91S±0°.04×67°.58W±0°.04,h186km±8km, n39,σ1º13/66,mb3.2/3,9C-16D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	1.66 297	⇓	eP	Pn	22 57 15.7	+0.5
PB08				eS	Sn	22 57 42.6	+0.8
PB08	IPOC Station P	1.66 297	⇑	iP	Pn	22 57 15.6	+0.4
PB08				i S	Sn	22 57 42.0	+0.2
PB08				IAML		22 57 45.7	
	comp=E,225nm,0.3s						
PB09	IPOC Station P	1.78 240		eP	Pn	22 57 17.6	+1.5
PB09	IPOC Station P	1.78 240	⇑	iP	Pn	22 57 16.6	+0.5
PB09				i S	Sn	22 57 43.8	+0.2
PB09				IAML		22 57 46.9	
	comp=N,193nm,0.1s						
PB01	IPOC Station P	1.78 266		eP	Pn	22 57 16.0	-0.1
PB01				i S	Sn	22 57 42.0	-1.5
PB01				IAML		22 57 44.7	
	comp=N,373nm,0.1s						
GO01	Chusmiza	1.96 309	⇑	iP	Pn	22 57 18.4	+0.1
GO01				eS	Sn	22 57 47.5	+0.2
LVC	Limon Verde	2.09 216	⇓	eP	Pn	22 57 20.3	+0.7
LVC			⇓	eS	Sn	22 57 50.8	+0.9
PB02	IPOC Station P	2.20 259	⇓	eP	Pn	22 57 20.6	+0.1
PB02	IPOC Station P	2.20 259		eP	Pn	22 57 20.3	-0.2
PB02				eS	Sn	22 57 49.2	-2.1
PB02				IAML		22 57 51.5	
	comp=N,1μm,0.1s						
PB11	IPOC Station P	2.26 300	⇓	eP	Pn	22 57 21.0	-0.3
PB11				eS	Sn	22 57 51.0	-1.6
PB11	IPOC Station P	2.26 300	⇑	iP	Pn	22 57 21.0	-0.3
PB11				i S	Sn	22 57 51.1	-1.6
PB11				IAML		22 57 54.0	
	comp=N,496nm,0.5s						
PB07	IPOC Station P	2.29 249	⇓	eP	Pn	22 57 22.2	+0.5
PB07				eS	Sn	22 57 52.6	-0.8
PB07	IPOC Station P	2.29 249		eP	Pn	22 57 21.4	-0.3
PB07				i S	Sn	22 57 51.9	-1.5
PB07				IAML		22 57 53.0	
	comp=N,733nm,0.3s						
YJA	Yavi	2.30 123		eP	Pn	22 57 22.0	0.0
YJA				IAML		22 57 23.5	
	comp=Z,40nm,0.3s						
YJA			⇓	eS	Sn	22 57 52.6	-1.4
PB03	IPOC Station P	2.31 240		eP	Pn	22 57 22.3	+0.5
PB03	IPOC Station P	2.31 240		eP	Pn	22 57 21.8	-0.1
PB03				i S	Sn	22 57 52.5	-1.4
PB03				IAML		22 57 54.5	
	comp=E,529nm,0.1s						
PB06	IPOC Station P	2.57 226	⇓	eP	Pn	22 57 25.7	+1.0
PB06	IPOC Station P	2.57 226	⇑	iP	Pn	22 57 25.0	+0.2
PB06				i S	Sn	22 57 58.9	-0.2
PB06				IAML		22 58 00.1	
	comp=N,243nm,0.1s						
MNMC	Minye Minye	2.59 313	⇑	iP	Pn	22 57 25.4	+0.2
MNMC				i S	Sn	22 57 59.2	-0.6
MNMCX	Minye Minye	2.59 313	⇓	eP	Pn	22 57 25.9	+0.7
MNMCX			⇓	eS	Sn	22 58 00.5	+0.8
PSGC	Pisagua	2.72 298	⇑	iP	Pn	22 57 25.3	-1.2
PSGC				i S	Sn	22 57 59.5	-2.6
PSGC				IAML		22 58 01.4	
	comp=N,179nm,0.1s						
PSGCX	Pisagua	2.72 298		eP	Pn	22 57 26.0	-0.5
PSGCX			⇓	eS	Sn	22 58 01.1	-1.0
PB04	IPOC Station P	2.77 239	⇓	eP	Pn	22 57 27.7	+0.5
PB04	IPOC Station P	2.77 239		eP	Pn	22 57 27.1	-0.1
PB04				i S	Sn	22 58 01.4	-2.0
PB04				IAML		22 58 03.7	
	comp=N,462nm,0.1s						
PB15	IPOC Station P	2.88 217		eP	Pn	22 57 29.5	+1.1
PB15				eS	Sn	22 58 06.2	+0.5
PB15	IPOC Station P	2.88 217	⇑	iP	Pn	22 57 28.9	+0.5
PB15				i S	Sn	22 58 05.9	+0.2
HJA	Humahuaca	3.05 139	⇓	eP	Pn	22 57 31.4	+0.7
HJA				eS	Sn	22 58 08.7	-0.9
HJA				IAML		22 58 13.2	
	comp=Z,99nm,0.5s						
PB05	IPOC Station P	3.10 231		eP	Pn	22 57 31.2	+0.1
PB05	IPOC Station P	3.10 231	⇓	eP	Pn	22 57 31.1	+0.1
PB05				eS	Sn	22 58 08.3	-2.1
PB05				IAML		22 58 12.0	
	comp=N,175nm,0.4s						
PB16	IPOC Station P	3.14 324		eP	Pn	22 57 33.1	+1.1
PB16			⇓	eS	Sn	22 58 13.8	+1.9
PB16	IPOC Station P	3.14 324	⇑	iP	Pn	22 57 33.0	+1.0
PB16				eS	Sn	22 58 12.2	+0.2
PB12	IPOC Station P	3.45 311		eP	Pn	22 57 34.0	-1.3
PB12	IPOC Station P	3.45 311		eP	Pn	22 57 33.9	-1.5
PB12				i S	Sn	22 58 15.1	-2.9
PB12				IAML		22 58 19.9	
	comp=E,200nm,0.6s						
AZAP	Zapla	4.03 145	⇓	eP	Pn	22 57 42.1	-0.6
AZAP				eS	Sn	22 58 28.7	-2.6
LPAZ	La Paz	4.63 353		P	Pn	22 57 51.1	+0.4
	comp=E,1.4nm,0.3s,baz=164,slow=7.2,SNR=53						
LPAZ				S	Sn	22 58 43.5	-2.1
	comp=E,0.6nm,0.3s,baz=66,slow=20,SNR=8.3						
LPAZ				LR	LR	23 00 08.2	
	comp=E,64nm,20.8s,baz=90,slow=48						
CPUP	Villa Florida	10.84 122		LR	LR	23 03 39.0	
	comp=E,46nm,19.6s,slow=38						
TXAR	Lajitas Array	60.87 324		P	P	23 06 34.7	+0.8
	comp=E,0.1nm,0.5s,baz=150,slow=7.9,SNR=2.7						
TORD	Torodi Ar. Bea	75.99 70		P	P	23 08 07.6	-0.3
	comp=E,0.3nm,0.7s,baz=236,slow=6.1,SNR=3.2						
YKA	Yellowknife Ar	91.05 340		P	P	23 09 24.4	+0.9
	comp=E,0.5nm,0.6s,baz=132,slow=4.7,SNR=4.2						

*ISCJB **03** 23:59:38.7±0.5,24°.93N±0°.03×122°.49E±0°.02,h5km±3km, Error ellipse: s-maj=4.9km s-min=3.2km az=29.3*
*TAP **03** 23:59:38.5,24°.94N×122°.47E,h15km,ML3.1,C*
*JMA **03** 23:59:39.2±0.1,24°.90N×122°.47E,h11km,M2.2*

ISC 03 23:59:38.2±1.2,24°.92N±0°.03×122°.50E±0°.03,h15km±9km, n43,σ0º50/77,3C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiago Chiao	0.48 281		P	Pb	23 59 48.3	+0.1
	baz=278						
TWB1				S	Sb	23 59 54.8	-0.3
	baz=278						
EOS1	EOS1	0.50 223		P	Pb	23 59 49.2	+0.5
	baz=218						
EOS1				eS	Sb	23 59 56.8	+1.1
	baz=218						
EGS		0.52 262		eP	Pb	23 59 48.9	-0.2
	baz=247						
EGS				eS	Sb	23 59 56.4	-0.1
	baz=247						
JYNG	Yonagunijimaku	0.61 139		P	Pb	23 59 51.2	+0.6
JYNG				eS	Sb	23 59 59.6	+0.5
NTC	Toucheng	0.61 264		P	Pb	23 59 50.7	+0.1
	baz=273						
NTC				eS	Sg	23 59 57.8	-0.6
	baz=273						
YOJ	Yonaguni jima	0.65 134		eP	Pb	23 59 51.5	+0.3
	baz=124						
YOJ				eS	Sb	00 00 00.7	+0.7
	baz=124						
YOJ	Yonaguni jima	0.65 134		P	Pn	23 59 51.9	-0.9
YOJ				S	Sb	00 00 00.6	+0.6
TWC	Suao	0.67 243		P	Pg	23 59 51.0	-0.3
	baz=239						
TWC				eS	Sb	00 00 00.9	+0.2
	baz=239						
NWF	Wu-fen Shan	0.67 283		i P	Pb	23 59 52.1	+0.4
	baz=281						
NWF				i S	Sb	00 00 01.4	+0.5
	baz=281						
WFSB	Wu-fen Shan	0.67 283		P	Pb	23 59 52.1	+0.4
	baz=281						
WFSB				S	Sb	00 00 01.3	+0.6
	baz=281						
TWE	Neicheng	0.78 256		P	Pb	23 59 53.6	0.0
	baz=242						
TWE				eS	Sg	00 00 03.9	+0.1
	baz=242						
PCYT	Pengchaiyu	0.81 331	⇑	iP	Pb	23 59 54.0	+0.1
	baz=332						
TWA	Mucha	0.84 275		eS	Sb	00 00 05.7	+0.2
	baz=272						
YM07	YM07	0.84 288	⇑	iP	Pn	23 59 54.9	-0.7
	baz=286						
YM07				eS	Sb	00 00 06.0	+0.3
	baz=286						
ENA	Nanau	0.85 235		P	Pb	23 59 54.5	-0.1
	baz=231						
ENA				eS	Sn	00 00 07.1	-0.6
	baz=231						
YM08	YM08	0.87 288		eP	Pn	23 59 55.7	-0.3
	baz=287						
YM01	YM01	0.88 285		eP	Pg	23 59 55.3	0.0
	baz=268						
YM01				eS	Sg	00 00 06.7	0.0
	baz=268						
YM11	YM11	0.88 287		eP	Pn	23 59 55.9	-0.2
	baz=285						
YM10	YM10	0.89 286		P	Pn	23 59 56.2	0.0
	baz=284						
NHDH	Xindian Distri	0.89 273		P	Pn	23 59 55.9	-0.3
	baz=271						
NHDH				eS	Sn	00 00 08.2	-0.6
	baz=271						
TWY	Chenhua	0.89 294		P	Pn	23 59 56.2	0.0
	baz=292						
TWY				S	Sn	00 00 08.7	-0.2
	baz=292						
ENTT	Nioudou	0.90 252	⇑	iP	Pg	23 59 55.6	0.0
	baz=249						
ENTT				S	Sn	00 00 08.8	-0.2
	baz=249						
NWLT	Wulai	0.92 261		P	Pg	23 59 56.1	+0.1
	baz=259						
NWLT				eS	Sb	00 00 07.3	-0.6
	baz=259						
NDT	Datong Townshi	0.95 251		i P	Pn	23 59 57.1	0.0
	baz=230						
NDT				eS	Sg	00 00 09.5	+0.3
	baz=230						
YHNB	Yeheng	1.05 257		P	Pg	23 59 58.9	+0.3
	baz=269						
YHNB				eS	Sg	00 00 12.6	+0.2
	baz=269						
NSK	Sanguang	1.07 257		P	Pb	23 59 58.3	-0.1
	baz=270						
NSK				eS	Sg	00 00 12.6	-0.2
	baz=270						
NACB	Ninganchiao	1.11 228		P	Pn	23 59 59.2	0.0
	baz=238						
NACB				S	Sb	00 00 13.3	-0.1
	baz=238						
NNSB	Datong	1.13 245		P	Pg	23 59 59.8	-0.3
	baz=230						
NNSB				S	Sb	00 00 14.1	+0.1
	baz=230						
NNS	Nan Shan	1.13 245		P	Pg	23 59 59.9	-0.2
	baz=242						
NNS				eS	Sb	00 00 14.5	+0.4
	baz=242						
ETLH	Xiulin Townshi	1.17 233		P	Pg	00 00 00.4	-0.4
	baz=230						
ETLH				eS	Sn	00 00 16.0	+0.2
	baz=230						
TWD	Chiawan	1.17 225		i P	Pg	00 00 00.5	-0.3
	baz=231						
TWD				eS	Sg	00 00 16.2	0.0
	baz=231						
WHF	Hehuan Shan	1.36 236		P	Pb	00 00 03.6	-0.1
	baz=233						
WHF				eS	Sb	00 00 21.6	+0.5
	baz=233						
TDCB	Techi	1.39 242		eP	Pg	00 00 04.9	-0.1
	baz=239						
TDCB				eS	Sg	00 00 23.7	+0.5
	baz=239						
NSTT	Nanjuang	1.40 259		eP	Pg	00 00 06.0	+0.9
	baz=256						
NSTT				eS	Sg	00 00 24.1	+0.9
	baz=256						
CHGB	Renai	1.48 235		eP	Pg	00 00 06.5	-0.2
	baz=232						
CHGB				eS	Sb	00 00 25.0	+0.7
	baz=232						
OWD	Renai	1.54 232	⇓	iP	Pb	00 00 06.6	0.0
	baz=229						
OWD				eS	Sg	00 00 27.5	-0.5
	baz=229						
WHP	Taichung City	1.55 246		eS	Sb	00 00 27.1	+0.8
	baz=244						
DPDB	Guoxing	1.69 239		eP	Pg	00 00 10.2	-0.4
	baz=237						
VWDT	VWDT	1.70 227		eP	Pg	00 00 10.0	-0.8
	baz=206						
VWDT				eS	Sb	00 00 31.4	+1.1
	baz=206						
SMLT	Sun Moon Lake	1.79 235		eP	Pg	00 00 12.2	-0.4
	baz=233						
SSLB	Suanglung	1.81 232		eP	Pg	00 00 11.9	-1.0
	baz=240						
SSLB				eS	Sb	00 00 34.3	+0.8
	baz=240						
TYC	Yuchr	1.81 236		eP	Pb	00 00 11.9	+0.9
	baz=234						
TYC				eS	Sb	00 00 34.8	+1.3
	baz=234						
YULB	Yu-li	1.88 216		eP	Pb	00 00 11.8	-0.4
	baz=214						

*IDC **04** 00:06:48.1±1.6,63°.62N×147°.95W,h0km,mb3.4/3, mb1 3.7/4,mb1mx3.4/35,mbtmp3.4/4,ML3.1/1,Error ellipse: s-maj=32.7km s-min=14.0km az=96.0*
*NEIC **04** 00:06:49.4±0.0,63°.54N×147°.33W,h2km,ML3.0(AEIC), After AEIC.*

ISC 04 00:06:48.7±1.2,63°.55N±0°.02×147°.34W±0°.02,h2km±9km, n59,σ1º29/70,mb3.6/3,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DHY	Denali Highway	0.48 182		ePg	Pg	00 06 58.3	+0.4
DHY				eSg	Sg	00 07 02.2	-1.9
RND	Reindeer	0.70 258		ePg	Pg	00 07 02.7	+0.7
RND				eSg	Sg	00 07 11.0	-0.1
PS10	TAPS Pump St10	0.72 100		ePg	Pg	00 07 02.8	+0.3
PS10				eSg	Sg	00 07 12.2	+0.5
MCK	McKinley	0.73 285		ePg	Pb	00 07 03.8	-0.4
HDA	Harding Lake	0.88 11		ePg	Pb	00 07 06.5	-0.1
HDA				eSg	Sg	00 07 17.8	+1.0
WRH	Wood River Hil	0.98 341		ePg	Pb	00 07 08.4	0.0
WRH				eSg	Sb	00 07 21.1	-0.6
PS08	TAPS Pump Stn8	1.02 13		ePg	Pb	00 07 09.1	0.0
PS08				eSn	Sb	00 07 24.2	+1.4
PAX	Paxson	1.03 124		ePg	Pg	00 07 07.5	-0.9
CCB	Clear Creek Bu	1.12 350		ePg	Pb	00 07 10.8	+0.1
BWN	Browne	1.13 304		ePg	Pg	00 07 10.0	-0.3
BWN				ePg	Pb	00 07 10.2	-0.7
BWN				eSg	Sg	00 07 24.0	-0.9
RIDG	Independent Ri	1.13 79		ePg	Pg	00 07 10.3	-0.1
RIDG				eSg	Sg	00 07 24.6	-0.3
ILAR	Eielson Array	1.24 9		Pg	Pg	00 07 12.6	+0.2
	52nm,0.3s,baz=189,slow=16,SNR=788						
ILAR				Lg	Lg	00 07 28.5	
	46nm,0.3s,baz=187,slow=28,SNR=33						
ILB	Eielson Array	1.24 9		ePg	Pg	00 07 12.6	+0.2
COLA	College	1.34 351		ePn	Pn	00 07 14.8	+0.3
MDM	Murphy Dome	1.46 345		ePn	Pg	00 07 16.8	0.0
DOT	Dot Lake	1.47 85		ePn	Pn	00 07 16.1	-0.1
HARP	HAARP	1.53 138		ePn	Pn	00 07 17.1	+0.2
SCRK	Sand Creek	1.55 73		ePn	Pn	00 07 17.1	-0.3
BPAW	Bear Paw Mtn.	1.71 290		ePn	Pn	00 07 19.3	-0.2
PS11	TAPS Pump St11	1.71 149		ePn	Pn	00 07 20.7	+1.2
SCM	Sheep Creek Mo	1.73 180		ePn	Pn	00 07 19.7	-0.1
MENT	Mentasta	1.75 109		ePn	Pn	00 07 20.7	+0.6
PS07	TAPS Pump Stn7	1.81 347		ePn	Pn	00 07 21.2	+0.4
SML	Sawmill	1.81 195		ePn	Pn	00 07 20.9	0.0
GHO	Glory Hole Cre	1.93 203		ePn	Pn	00 07 22.5	-0.1
MLY	Manley	2.10 317		ePn	Pn	00 07 24.6	-0.3
PRP	Porcupine Dome	2.12 21		ePn	Pn	00 07 25.4	+0.1
CAST	Castle Rocks	2.13 268		ePn	Pn	00 07 25.5	+0.2
PMR	Palmer	2.14 204		ePn	Pn	00 07 25.9	+0.6
KNK	Knik Glacier	2.21 194		ePn	Pn	00 07 27.6	+1.2
CHUM	Lake Minchumin	2.24 281		ePn	Pn	00 07 27.0	+0.3
DIV	Divide	2.54 163		ePn	Pn	00 07 32.3	+1.3
BCA3	Beaver Creek A	2.55 99		ePn	Pn	00 07 30.8	-0.4
SUA	Susitna One	2.63 219		ePn	Pn	00 07 33.4	+1.2
GLI	Glacier Island	2.69 177		ePn	Pn	00 07 34.6	+1.7
RC01	Rabbit Creek A	2.71 205		ePn	Pn	00 07 34.6	+1.3
EYAK	Cordova Ski Ar	3.11 165		ePn	Pn	00 07 39.8	+1.1
FYU	Fort Yukon	3.15 15		ePn	Pn	00 07 40.1	+0.9
SLKM	Skilak Lake	3.34 205		ePn	Pn	00 07 42.9	+1.0
BALM	Baldy	3.44 135		ePn	Pn	00 07 46.2	+2.9
HMT	Hamilton	3.54 154		ePn	Pb	00 07 49.5	-2.5
DAWY	Dawson	3.56 78		ePn	Pn	00 07 45.1	+0.2
IM3	Indian Mountai	3.67 314		ePn	Pn	00 07 46.5	+0.1
COLD	Coldfoot	3.88 343		ePn	Pn	00 07 48.2	-1.0
TT01	Tatalina	3.98 265		ePn	Pn	00 07 51.2	+0.5
TT01				ePn	Pn	00 07 51.2	+0.5
RSO	Redoubt South	4.02 222		ePn	Pn	00 07 50.9	-0.4
RDWB	Redoubt West	4.02 223		ePn	Pn	00 07 51.8	+0.4
BM3	Burnt Mountain	4.04 15		ePn	Pn	00 07 52.0	+0.4

SVB	**Belmont**	**2.90**	**24**	*eP*	Pn	00 17 47.9	-0.6
SVB				*eS*	Sn	00 18 21.9	-0.8
SVCV	**St. Vincent, C**	**2.95**	**26**	*eP*	Pn	00 17 48.8	-0.3
SVCV				*eS*	Sn	00 18 23.0	-0.8
SVV	**Soufriere Volc**	**2.96**	**25**	*eP*	Pn	00 17 48.9	-0.3
SVV				*eS*	Sn	00 18 22.4	-1.7
SSV	**Crater Summit**	**2.98**	**25**	*eP*	Pn	00 17 48.9	-0.6
SSV				*eS*	Sn	00 18 22.9	-1.8
SFAN	**Fancy Village**	**3.04**	**25**	*eP*	Pn	00 17 49.9	-0.3
SFAN				*eS*	Sn	00 18 25.3	-0.7
MCLT	**Moule a Chique**	**3.43**	**26**	*eP*	Pn	00 17 55.7	+0.2
MCLT				*eS*	Sn	00 18 33.2	-2.1
SLDE	**Delcer**	**3.46**	**24**	*eP*	Pn	00 17 55.7	-0.2
SLDE				*eS*	Sn	00 18 34.9	-1.3
SLB	**Belfond**	**3.49**	**24**	*eP*	Pn	00 17 56.8	+0.4
SLPA	**Patience**	**3.56**	**25**	*eP*	Pn	00 17 57.5	+0.2
SLPA				*eS*	Sn	00 18 36.7	-1.9
SLBI	**Saint Lucia, B**	**3.69**	**23**	*eP*	Pn	00 17 59.1	+0.1
SLBI				*eS*	Sn	00 18 39.0	-2.7
SLW	**Petit Monier**	**3.71**	**24**	*eP*	Pn	00 17 59.3	+0.1
SLW				*eS*	Sn	00 18 39.1	-2.9
BBGH	**Gun Hill**	**3.81**	**48**	*eS*	Sn	00 18 41.9	-2.6
BIM	**Bigot**	**4.12**	**19**	*eP*	Pn	00 18 05.3	+0.5
MPOM	**Morne Pois Mar**	**4.12**	**22**	*eP*	Pn	00 18 05.7	+0.9
TRMF	**Trois Ilets**	**4.14**	**20**	*eP*	Pn	00 18 05.4	+0.4
ZAM	**Aeronautique**	**4.18**	**20**	*eP*	Pn	00 18 06.2	+0.6
LPMF	**Morne Lapointe**	**4.21**	**20**	*eP*	Pn	00 18 06.3	+0.4
MVM	**Montagne Vaucl**	**4.21**	**21**	*eP*	Pn	00 18 07.2	+1.1
FDF	**Fort de France**	**4.30**	**17**	*eP*	Pn	00 18 06.4	-0.8
FDF	**Fort de France**	**4.30**	**17**	*eS*	Sn	00 18 53.7	-2.6
PML	**Morne Lenard**	**4.33**	**17**	*eP*	Pn	00 18 08.7	+1.1
GBMF	**Grand Be**	**4.35**	**17**	*eP*	Pn	00 18 08.4	+0.4
PCM	**Pelee Case Pet**	**4.36**	**16**	*eP*	Pn	00 18 08.2	+0.2
CXM	**Morne La Croix**	**4.36**	**17**	*eP*	Pn	00 18 08.2	0.0
BAMF	**Morne Balai**	**4.37**	**17**	*eP*	Pn	00 18 07.7	-0.6
MDN	**Morne-Daniel**	**4.79**	**13**	*eP*	Pn	00 18 14.4	+0.6
MDN	**Morne-Daniel**	**4.79**	**13**	*eS*	Sn	00 19 05.8	-2.5
DLPL	**La Plaine**	**4.84**	**14**	*eP*	Pn	00 18 14.8	+0.2
DLPL	**La Plaine**	**4.84**	**14**	*eS*	Sn	00 19 06.7	-2.8
BBL	**Barber's Block**	**4.98**	**11**	*eP*	Pn	00 18 17.1	+0.7
BBL	**Barber's Block**	**4.98**	**11**	*eS*	Sn	00 19 09.0	-3.9
DWS	**Wesley**	**5.05**	**13**	*eP*	Pn	00 18 17.5	+0.1
DWS	**Wesley**	**5.05**	**13**	*eS*	Sn	00 19 11.6	-3.0
TBG	**Guadaloupe-3**	**5.27**	**9**	*eP*	Pn	00 18 20.3	0.0
TBG	**Guadaloupe-3**	**5.27**	**9**	*eS*	Sn	00 19 16.7	-3.1

RSNC 04 00:25:46.7±0.9, 6°82N×73°15W, h144km±4km, ML3.3, Mw3.5, 1C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**188**	⇑*eP*	Pn	00 26 06.4	-0.3
BARC				*eS*	Sn	00 26 21.0	-0.8
BARC				*i*		00 26 22.9	
	comp=Z,327nm,0.2s						
BRRC	**Barranca, Sant**	**0.63**	**297**	⇓*iP*	Pn	00 26 08.2	+0.1
BRRC				*eS*	Sn	00 26 24.6	+0.3
BRRC				*i*		00 26 28.3	
	comp=Z,283nm,0.2s						
RUSC	**La Rusia**	**0.92**	**176**	⇓*eP*	Pn	00 26 10.3	-0.5
RUSC				*eS*	Sn	00 26 28.8	-0.4
RUSC				*i*		00 26 30.4	
	comp=N,249nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.33**	**258**	*eP*	Pn	00 26 12.8	-1.3
PTBC				*eS*	Sn	00 26 33.9	-0.9
PTBC				*i*		00 26 41.2	
	comp=Z,193nm,0.4s						
TAMC	**Tame, Arauca**	**1.40**	**106**	⇓*iP*	Pn	00 26 14.8	0.0
TAMC				*eS*	Sn	00 26 35.0	-1.3
TAMC				*i*		00 26 37.1	
	comp=N,318nm,0.4s						
OCAC	**Ocana**	**1.42**	**353**	*eP*	Pn	00 26 14.5	-0.7
OCAC				*eS*	Sn	00 26 36.2	-0.7
OCAC				*i*		00 26 41.3	
	comp=N,683nm,0.3s						
YOPC	**Yopal, Colombi**	**1.63**	**153**	⇓*eP*	Pn	00 26 17.1	-0.2
YOPC				*eS*	Sn	00 26 41.0	+0.3
YOPC				*i*		00 26 43.1	
	comp=Z,80nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.82**	**292**	*eP*	Pn	00 26 19.0	-0.4
ZARC				*eS*	Sn	00 26 43.6	-0.8
ZARC				*i*		00 26 48.9	
	comp=Z,132nm,0.4s						
NORC	**Norcasia**	**2.12**	**234**	*eP*	Pn	00 26 22.3	-0.6
NORC				*eS*	Sn	00 26 50.3	-0.4
NORC				*i*		00 26 53.0	
	comp=N,284nm,0.2s						
SMLC	**San Martn de**	**2.17**	**335**	*eP*	Pn	00 26 22.8	-0.7
SMLC				*eS*	Sn	00 26 50.1	-1.8
SMLC				*i*		00 26 58.5	
	comp=N,470nm,0.1s						
CHIC	**Chingaza**	**2.25**	**195**	*eP*	Pn	00 26 24.6	-0.3
CHIC				*eS*	Sn	00 26 53.9	-0.3
CHIC				*i*		00 26 58.8	
	comp=Z,81nm,0.3s						
HELC	**Santa Helena**	**2.44**	**255**	*eP*	Pn	00 26 27.0	-0.2
HELC				*eS*	Sn	00 26 58.3	0.0
HELC				*i*		00 27 04.7	
	comp=N,129nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.71**	**234**	*eP*	Pn	00 26 30.3	-0.3
GUY2C				*eS*	Sn	00 27 06.5	+2.1
GUY2C				*i*		00 27 13.4	
	comp=N,116nm,0.7s						
VILC	**Villavicencio,**	**2.74**	**191**	*eP*	Pn	00 26 30.4	-0.4
VILC				*eS*	Sn	00 27 03.8	-0.9
VILC				*i*		00 27 09.9	
	comp=N,371nm,0.6s						
RREF	**El Recreo**	**2.90**	**229**	*eP*	Pn	00 26 33.6	+0.4
RREF				*eS*	Sn	00 27 11.6	+2.7
RREF				*i*		00 27 18.1	
	comp=Z,107nm,0.4s						
CODC	**Agustn Codazz**	**3.11**	**355**	*eP*	Pn	00 26 34.3	-1.0
CODC				*eS*	Sn	00 27 11.7	-1.1
CODC				*i*		00 27 17.1	
	comp=E,48nm,0.6s						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*eP*	Pn	00 26 36.4	-0.2
ARGC				*eS*	Sn	00 27 15.1	-0.1
ARGC				*i*		00 27 23.7	
	comp=N,66nm,0.4s						
PRAC	**Prado**	**3.54**	**209**	*eP*	Pn	00 26 39.6	-1.2
PRAC				*eS*	Sn	00 27 21.6	-1.1
PRAC				*i*		00 27 26.8	
	comp=N,62nm,0.3s						
SMRC	**Santa Marta, M**	**4.45**	**346**	*eP*	Pn	00 26 50.6	-2.1
SMRC				*eS*	Sn	00 27 39.4	-4.7

IDC 04 00:49:11.2±16.0, 23°75S×177°97W, h170km±119km, mb3.5/5, mb1 3.7/6, mb1mx3.5/24, mbtmp4.0/6, Error ellipse: s-maj=113.2km s-min=25.4km az=46.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.06**	**195**	P	Pn	00 52 34.6	-0.8
	1.8nm,0.3s,baz=26,slow=10,SNR=7.0						
URZ				S	Sn	00 55 19.7	-3.6
	0.9nm,0.3s,baz=90,slow=2.0,SNR=2.6						
STKA	**Stephens Creek**	**36.50**	**248**	P	P	00 55 59.7	-0.5
	1.0nm,0.3s,baz=100,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**43.89**	**260**	P	P	00 57 01.8	+0.6
	1.0nm,0.7s,baz=93,slow=8.6,SNR=7.6						
ASAR				PcP	PcP	00 58 41.5	-2.8
	0.3nm,0.5s,baz=92,slow=4.6,SNR=4.4						
WRA	**Warramunga Arr**	**44.27**	**265**	P	P	00 57 04.3	+0.1
	1.9nm,0.5s,baz=108,slow=8.9,SNR=17						
VNDA	**Vanda**	**54.70**	**185**	P	P	00 58 23.2	+1.0
	0.2nm,0.5s,baz=30,slow=3.8,SNR=3.7						
MAW	**Mawson**	**78.53**	**200**	P	P	01 00 53.0	-0.2
	2.0nm,0.7s,baz=120,slow=4.4,SNR=7.9						

KRSC 04 00:56:57.0±1.7, 52°87N×156°94E, h328km±14km, ML3.5, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**0.14**	**67**	*eP*	Pn	00 57 39.5	+1.3
GNL	**Ganaly**	**1.02**	**36**	*eP*	Pn	00 57 42.1	+1.6
GNL				*eS*	S	00 58 15.2	-0.2
RUS	**Russkaya**	**1.05**	**114**	*eS*	S	00 58 16.3	+0.9
SDLR	**Sedlovina**	**1.24**	**70**	*eS*	S	00 58 18.2	+0.9
KDTR	**Khodutka, Kamc**	**1.27**	**146**	*eS*	S	00 58 16.6	-0.8
NLC	**Nalytchevo**	**1.48**	**77**	*eS*	S	00 58 20.6	+1.2
SPN	**Mys Shipunski**	**1.88**	**82**	*eP*	Pn	00 57 47.8	+2.5
SPN				*eS*	S	00 58 23.0	-1.0
KBTR	**Krutoberegovo**	**4.79**	**43**	*eP*	Pn	00 58 15.9	+2.8
KBTR				*eS*	S	00 59 11.3	-3.2

*IDC **04** 01:10:51.5±0.7, 18°29S×174°70W, h0km, mb4.2/12, mb1 4.5/12, mb1mx4.3/25, mbtmp4.2/12, MS3.2/4, Ms1 3.2/4, ms1mx2.9/30, Error ellipse: s-maj=28.0km s-min=18.7km az=139.0*
*ISCJB **04** 01:10:55.9±0.3, 18°32S±0°08×174°81W±0°09, h35km, mb4.5/31, MS3.2/3, Error ellipse: s-maj=14.3km s-min=8.7km az=44.5*
*NEIC **04** 01:10:58.7±2.8, 18°34S×174°72W, h43km±6km, mb4.6/25, Error ellipse: s-maj=23.5km s-min=18.0km az=122.0*
ISC 04 01:10:57.7±0.5, 18°4S±0°1×174°7W±0°1, h35km, n77, σ1°34/61, mb4.5/31, MS3.2/3, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.32**	**104**	LR	LR	01 18 26.4	
	comp=Z,62nm,20.7s,baz=282,slow=32						
DZM	**Mont Dzumac**	**18.08**	**255**	LR	LR	01 20 30.2	
	comp=Z,91nm,21.1s,baz=40,slow=32						
BKZ	**Black Stump Fm**	**22.09**	**198**	*eP*	**P**	**01 15 49.1**	**-0.7**
	1.2nm,0.5s						
PAE	**Paea**	**23.88**	**92**	*eT*	T	01 40 23.6	
	57nm,0.2s						
PPT2	**Papeete2**	**23.89**	**92**	*eLR*	LR	01 21 39.6	
	comp=Z,100nm,26.0s						
PPT2	**Papeete2**	**23.89**	**92**	*eT*	T	01 40 25.4	
	29nm,0.2s						
PPT	**Papeete**	**23.89**	**92**	LR	LR	01 23 09.3	
	comp=Z,65nm,18.5s,baz=295,slow=31						
TBI	**Tubuai**	**24.07**	**106**	*eT*	T	01 40 40.1	
	18nm,0.3s						
TVO	**Taravao**	**24.18**	**93**	*eT*	T	01 40 35.4	
	8.3nm,0.3s						
MEH	**Mehetia**	**25.30**	**93**	*eT*	T	01 42 13.8	
	26nm,0.2s						
PMOR	**Pomariorio Ree**	**25.87**	**87**	*eT*	T	01 42 52.2	
	11nm,0.3s						
HNR	**Honiara**	**26.15**	**286**	LR	LR	01 24 51.4	
	comp=Z,71nm,20.4s,baz=98,slow=32						
EIDS	**Eidsvold**	**32.46**	**252**	*eP*	**P**	**01 17 26.6**	**+1.6**
	17nm,1.0s						
TAOE	**Nuku Hiva Isla**	**34.82**	**79**	*eT*	T	01 54 02.0	
	63nm,0.2s						
RKT	**Rikitea**	**37.36**	**104**	*eT*	T	01 57 15.3	
	3.3nm,0.3s						
STKA	**Stephens Creek**	**41.53**	**242**	P	**P**	**01 18 40.6**	**-1.4**
	6.8nm,1.0s,baz=72,slow=11,SNR=7.8						
STKA	**Stephens Creek**	**41.53**	**242**	*eP*	**P**	**01 18 42.1**	**+0.1**
	1.8nm,1.0s						
H11N3	**WAKE ISLAND Hy**	**41.94**	**334**	T	T	02 03 44.0	
	baz=151,slow=76,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**41.95**	**334**	T	T	02 03 44.6	
	baz=151,slow=76,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**41.96**	**334**	T	T	02 03 45.2	
	baz=151,slow=76,SNR=6.3						
BBOO	**Buckleboo**	**46.30**	**242**	*eP*	**P**	**01 19 17.7**	**-2.5**
WB2	**Warramunga Arr**	**48.02**	**259**	*eP*	**P**	**01 19 32.7**	**-1.1**
	6.8nm,0.8s						
WR1	**Warramunga Arr**	**48.03**	**259**	*eP*	**P**	**01 19 32.2**	**-1.7**
WRA	**Warramunga Arr**	**48.03**	**259**	P	**P**	**01 19 32.2**	**-1.7**
	4.5nm,0.7s,baz=91,slow=8.4,SNR=10						
AS31	**Alice Springs**	**48.07**	**254**	*eP*	**P**	**01 19 34.2**	**0.0**
	3.3nm,0.9s						
ASAR	**Alice Springs**	**48.07**	**254**	P	**P**	**01 19 34.0**	**-0.3**
	11nm,0.9s,baz=84,slow=8.6,SNR=50						
SBA	**Scott Base**	**60.20**	**184**	*eP*	**P**	**01 21 04.0**	**+2.3**
	6.7nm,0.9s						
VNDA	**Vanda**	**60.31**	**186**	P	**P**	**01 21 02.3**	**-0.2**
	2.5nm,0.9s,baz=10,slow=6.4,SNR=9.5						
VNDA	**Vanda**	**60.31**	**186**	*eP*	**P**	**01 21 03.5**	**+1.0**
	5.1nm,1.3s						
QSPA	**South Pole Qui**	**71.68**	**180**	*eP*	**P**	**01 22 16.3**	**+0.3**
	12nm,0.8s						
KSM	**Kuching**	**76.25**	**276**	*eP*	**P**	**01 22 45.2**	**+1.8**
	17nm,1.0s						
NV01	**Mina Array Sit**	**77.35**	**42**	*eP*	**P**	**01 22 47.7**	**-1.6**
NVAR	**Mina Array Bea**	**77.35**	**42**	P	**P**	**01 22 47.7**	**-1.7**
	0.2nm,0.3s,baz=227,slow=7.9,SNR=5.6						
KSRS	**Korea Array**	**77.44**	**317**	P	**P**	**01 22 49.1**	**-0.4**
	3.8nm,1.0s,baz=133,slow=6.4,SNR=12						
KS15	**Wonju Array Si**	**77.45**	**317**	*eP*	**P**	**01 22 49.1**	**-0.5**
	15nm,1.4s						
WVOR	**Wild Horse Val**	**79.52**	**39**	*eP*	**P**	**01 23 01.9**	**+0.9**
	11nm,1.5s						
HLID	**Hailey**	**82.70**	**40**	*eP*	**P**	**01 23 18.1**	**+0.1**
	5.8nm,1.3s						
LTX	**Lajitas**	**83.28**	**56**	*eP*	**P**	**01 23 21.4**	**+0.1**
TXAR	**Lajitas Array**	**83.28**	**56**	P	**P**	**01 23 21.4**	**+0.1**
	0.6nm,0.9s,baz=227,slow=8.4,SNR=5.8						
MAW	**Mawson**	**84.59**	**199**	P	**P**	**01 23 26.6**	**-0.6**
	3.0nm,1.1s,baz=113,slow=7.7,SNR=3.4						
MAW	**Mawson**	**84.59**	**199**	*eP*	**P**	**01 23 26.6**	**-0.6**
	1.2nm,1.3s						
S22A	**4UR Ranch, Cre**	**84.68**	**48**	*eP*	**P**	**01 23 29.3**	**+0.8**
	4.4nm,1.3s						
DLMT	**Dillon**	**84.77**	**39**	*eP*	**P**	**01 23 29.0**	**+0.5**
	3.2nm,0.9s						
FXWY	**Fox Creek**	**84.81**	**41**	*eP*	**P**	**01 23 28.7**	**-0.2**
	2.9nm,1.1s						
WRH	**Wood River Hil**	**85.09**	**11**	*eP*	**P**	**01 23 29.0**	**-0.5**
	8.2nm,1.2s						
PD31	**Pinedale Array**	**85.29**	**42**	*eP*	**P**	**01 23 30.1**	**-1.2**
	3.3nm,1.4s						
PDAR	**Pinedale Array**	**85.29**	**42**	P	**P**	**01 23 30.1**	**-1.2**
	0.7nm,0.9s,baz=306,slow=5.3,SNR=4.6						
CCB	**Clear Creek Bu**	**85.30**	**11**	*eP*	**P**	**01 23 29.5**	**-1.1**
	4.1nm,1.0s						
BOZ	**Bozeman (W)**	**85.47**	**39**	*eP*	**P**	**01 23 32.5**	**+0.4**
	3.3nm,1.0s						
ILAR	**Eielson Array**	**85.59**	**12**	P	**P**	**01 23 30.1**	**-1.9**
	1.2nm,1.1s,baz=216,slow=5.6,SNR=6.9						
ILB	**Eielson Array**	**85.59**	**12**	*eP*	**P**	**01 23 30.1**	**-1.9**
	6.9nm,1.4s						
EGMT	**Eagleton**	**87.83**	**37**	*eP*	**P**	**01 23 46.4**	**+2.9**
	5.6nm,0.3s						
SNAA	**Sanae**	**90.01**	**177**	P	**P**	**01 23 52.3**	**-1.1**
SNAA	**Sanae**	**90.01**	**177**	*eP*	**P**	**01 23 52.6**	**-0.8**
	5.4nm,1.0s						
VNA3	**Neumayer Olymp**	**90.02**	**175**	P	**P**	**01 23 52.4**	**-1.0**
VNA2	**Neumayer--Watz**	**90.50**	**176**	P	**P**	**01 23 55.6**	**0.0**
	baz=190,slow=3.1						
VNA1	**Neumayer--Stat**	**90.70**	**176**	P	**P**	**01 23 56.4**	**-0.1**
CM31	**Chiang Mai Arr**	**92.38**	**289**	*eP*	**P**	**01 24 04.1**	**-1.2**
	6.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**92.38**	**289**	P	**P**	**01 24 04.1**	**-1.2**
	1.2nm,0.4s,baz=107,slow=3.9,SNR=8.6						
YKA	**Yellowknife Ar**	**93.30**	**24**	P	**P**	**01 24 07.3**	**-1.2**
	0.4nm,0.8s,baz=243,slow=3.8,SNR=4.0						
YKB5	**Yellowknife Ar**	**93.30**	**24**	*eP*	**P**	**01 24 07.3**	**-1.2**
NIL	**Nilore**	**118.06**	**299**	*ePdif*	**Pdif**	**01 26 00.8**	**+0.9**
CLL	**Collm**	**146.58**	**351**	*i PKPbc*	**PKPdf**	**01 30 35.3**	**+1.4**
	comp=Z,7.0nm,1.2s						
BRG	**Berggiesshubel**	**146.85**	**350**	*ePKP*	**PKiKP**	**01 30 44.4**	**+5.5**
	comp=Z,4.3nm,1.1s						
BR101	**Keskin Array S**	**147.58**	**317**	*ePKPdf*	**PKPdf**	**01 30 37.2**	**+1.0**
BRTR	**Keskin Array B**	**147.58**	**317**	*PKPbc*	**PKPdf**	**01 30 37.2**	**+1.0**
	comp=Z,4.2nm,1.2s,baz=72,slow=4.0,SNR=5.1						
GERES	**GERESS Array B**	**148.85**	**349**	*PKPbc*	**PKPbc**	**01 30 42.0**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=72,slow=4.3,SNR=4.7						
CONA	**Conrad Observa**	**149.29**	**346**	*ePKiKP*	**PKPbc**	**01 30 44.1**	**+1.2**
	comp=Z,3.5nm,1.1s						
RETA	**Reutte**	**150.62**	**352**	*i PKiKP*	**PKPbc**	**01 30 46.7**	**+0.5**
	comp=Z,3.6nm,0.9s						
WATA	**Walderalm**	**150.66**	**351**	*i PKiKP*	**PKPbc**	**01 30 47.4**	**+1.0**
	comp=Z,1.4nm,0.6s						
MOTA	**Moosalm**	**150.72**	**352**	*ePKiKP*	**PKPbc**	**01 30 46.4**	**0.0**
	comp=Z,2.2nm,0.8s						
SQTA	**Sankt Quirin**	**150.83**	**352**	*ePKiKP*	**PKPbc**	**01 30 46.6**	**-0.1**
	comp=Z,2.4nm,0.9s						
DAVA	**Dauels**	**150.92**	**354**	*i PKiKP*	**PKPbc**	**01 30 47.2**	**+0.2**
	comp=Z,5.1nm,0.9s						
FETA	**Feichten**	**151.09**	**352**	*ePKiKP*	**PKPbc**	**01 30 47.6**	**+0.2**
	comp=Z,4.3nm,1.0s						
ABTA	**Abfaltersbach**	**151.09**	**350**	*ePKPbc*	**PKPbc**	**01 30 46.8**	**-0.5**
	comp=Z,5.1nm,1.2s						
TORD	**Torodi Ar. Bea**	**173.74**	**146**	PKPab	**PKPab**	**01 32 33.5**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=191,slow=2.3,SNR=2.6						
TOA1	**Torodi Ar. Sit**	**173.75**	**146**	*ePKPab*	**PKPab**	**01 32 33.5**	**-0.8**

UCR 04 01:12:18.6±1.7, 9°01N×84°21W, h32km±4km, MD3.5, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDDO	**Dominical**	**0.42**	**54**	⇓*iP*	Pb	01 12 27.7	-0.1
EDDO				*eS*	Sn	01 12 35.1	+0.1
EDPN	**Palmar Norte**	**0.74**	**93**	*eP*	Pn	01 12 32.4	-0.4
EDPN				*eS*	Sn	01 12 43.1	+0.1
DRK0	**Durika**	**0.98**	**75**	*eP*	Pn	01 12 36.2	-0.1
DRK0				*eS*	Sb	01 12 50.2	+0.2
HDC	**Heredia**	**0.99**	**5**	*eP*	Pn	01 12 36.7	+0.3
HDC				*eS*	Sn	01 12 49.2	-0.2
JTS	**Las Juntas de**	**1.47**	**330**	*eP*	Pn	01 12 42.4	-0.6
JTS				*eS*	Sn	01 13 01.8	+0.6
BRU2	**Volcan**	**1.51**	**98**	*eP*	Pn	01 12 44.0	+0.4
BRU2				*eS*	Sn	01 13 03.0	+0.8
ARE1	**Arenal 1**	**1.53**	**341**	*eP*	Pn	01 12 44.5	+0.8
TBS2		**1.54**	**98**	*eP*	Pn	01 12 44.7	+0.7
TBS2				*eS*	Sb	01 13 04.6	-1.4
DVD	**David**	**1.82**	**108**	*eS*	Sn	01 13 10.7	+0.9

*IDC **04** 01:20:26.9±3.3, 35°11N×142°15E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/29, mbtmp3.4/4, ML2.3/1, Error ellipse: s-maj=98.0km s-min=29.9km az=53.0*
*ISCJB **04** 01:20:28.8±1.2, 35°08N±0°05×142°17E±0°10, h29km, mb3.5/3, Error ellipse: s-maj=11.6km s-min=7.1km az=0.5*
*JMA **04** 01:20:28.2±0.3, 35°03N×142°27E, h56km, M3.2*
ISC 04 01:20:30.6±1.5, 35°06N±0°06×142°2E±0°1, h29km, n16, σ0°95/21, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.04**	**247**	P	**Pn**	**01 20 47.9**	**-0.9**
BSO1				S	**Sn**	**01 21 02.8**	**+0.7**
CHOJ	**Chosi**	**1.23**	**302**	P	**Pn**	**01 20 51.3**	**-0.5**
BSO3	**Boso 3**	**1.37**	**260**	P	**Pn**	**01 20 53.2**	**-0.3**
BSO4	**Boso 4**	**1.49**	**268**	P	**Pn**	**01 20 55.1**	**-0.2**
JKUC	**kamogawauchiur**	**1.60**	**274**	P	**Pn**	**01 20 56.5**	**-0.4**
JOD2	**Odawara 2**	**2.52**	**275**	P	**Pn**	**01 21 08.6**	**-0.9**
JAG	**Ashikaga**	**2.58**	**303**	P	**Pn**	**01 21 10.4**	**0.0**
JHJ2	**Mitsune**	**2.74**	**226**	P	**Pn**	**01 21 11.8**	**-0.8**
JHJ2				*eS*	**Sn**	**01 21 43.1**	**-1.7**
JRY	**Ryogami san**	**2.81**	**291**	P	**Pn**	**01 21 13.4**	**-0.2**
JFT	**Otama**	**2.85**	**330**	P	**Pn**	**01 21 13.5**	**-0.7**
JFT				S	**Sn**	**01 21 45.8**	**-1.8**
JYN	**Shimob**	**2.98**	**279**	P	**Pn**	**01 21 15.4**	**-0.6**
MJAR	**Matsushiro Arr**	**3.53**	**296**	Pn	**Pn**	**01 21 22.8**	**-0.7**
	0.3nm,0.3s,baz=111,slow=9.1,SNR=8.1						
MJAR				Sn	**Sn**	**01 22 03.8**	**-0.4**
	0.2nm,0.3s,baz=166,slow=15,SNR=4.9						
MAT	**Matsushiro**	**3.53**	**296**	P	**Pn**	**01 21 22.7**	**-0.7**
MAT				*eS*	**Sn**	**01 22 05.2**	**+1.0**
SONM	**Songino Array**	**29.41**	**307**	P	**P**	**01 26 32.9**	**+1.4**
	0.6nm,0.8s,baz=110,slow=8.4,SNR=2.2						
MKAR	**Makanchi Array**	**45.69**	**304**	P	**P**	**01 28 47.9**	**-0.8**
	0.2nm,0.6s,baz=95,slow=7.7,SNR=2.4						
WRA	**Warramunga Arr**	**55.20**	**189**	P	**P**	**01 30 01.8**	**+1.0**
	0.9nm,0.8s,baz=8.8,slow=7.6,SNR=2.4						

*ISCJB **04** 01:22:35.7±0.5, 32°37N±0°03×115°35W±0°03, h12km±4km, Error ellipse: s-maj=4.7km s-min=4.4km az=146.9*
*SCEDC **04** 01:22:35.6, 32°31N×115°31W, h11km*
*ECX **04** 01:22:36.6±0.7, 32°33N×115°33W, h2km, MD2.7, ML2.9*
*ANF **04** 01:22:36.4±0.7, 32°43N×115°35W, h25km±4km, ML2.5/8, Error ellipse: s-maj=7.1km s-min=2.6km az=167.0*
ISC 04 01:22:35.0±0.9, 32°37N±0°03×115°31W±0°03, h15km±6km, n27, σ0°59/37, 4C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.05**	**6**	*eP*	**Pg**	**01 22 38.1**	**+0.2**
CPBX				*eS*	**Sg**	**01 22 39.6**	**-0.2**
CPBX				IAML		01 22 40.8	
	comp=N,16μm,0.2s						
CPBX				IAML		01 22 42.8	
	comp=E,20μm,0.3s						
DREC	**Desert Rsrch C**	**0.45**	**345**	*eP*	**Pb**	**01 22 46.0**	**+1.3**
WESC	**Westside Schoo**	**0.53**	**318**	*eP*	**Pb**	**01 22 46.9**	**+0.9**
YUH	**Yuha Desert**	**0.59**	**298**	⇓*iP*	**Pg**	**01 22 47.2**	**+0.5**
**RMX

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.38**	**211**	S	**Sn**	**01 27 07.8**	**+1.8**
GLKZ	**Green Lake**	**4.62**	**11**	P	**Pn**	**01 26 19.8**	**+0.3**
GLKZ				S	**Sn**	**01 27 12.6**	**+0.7**
HAZ	**Te Kaha**	**4.77**	**214**	P	**Pn**	**01 26 22.7**	**+1.0**
HAZ				S	**Sn**	**01 27 17.2**	**+1.5**
PUZ	**Puketiti**	**4.84**	**208**	P	**Pn**	**01 26 22.9**	**+0.3**
PUZ				S	**Sn**	**01 27 15.1**	**-2.3**
RUGZ	**Raukumara Rang**	**4.99**	**213**	P	**Pn**	**01 26 26.2**	**+1.4**
RUGZ				S	**Sn**	**01 27 22.7**	**+1.4**
TWGZ	**Tauwhareparae**	**5.04**	**209**	P	**Pn**	**01 26 26.2**	**+0.9**
TWGZ				S	**Sn**	**01 27 22.7**	**+0.4**
TKGZ	**Te Karaka**	**5.32**	**209**	P	**Pn**	**01 26 30.3**	**+1.2**
TKGZ				S	**Sn**	**01 27 27.8**	**-1.3**
MWZ	**Matawai**	**5.36**	**212**	P	**Pn**	**01 26 29.8**	**0.0**
MWZ				S	**Sn**	**01 27 29.9**	**-0.3**
URZ	**Urewera**	**5.49**	**215**	Pn	**Pn**	**01 26 31.6**	**+0.1**
	3.1nm,0.3s,baz=75,slow=12,SNR=19						
URZ	**Urewera**	**5.49**	**215**	P	**Pn**	**01 26 31.8**	**+0.3**
URZ				S	**Sn**	**01 27 32.5**	**-0.9**
RIGZ	**Rimuhau**	**5.58**	**208**	P	**Pn**	**01 26 32.7**	**-0.1**
RIGZ				S	**Sn**	**01 27 35.3**	**-0.3**
SNGZ	**Shannon Statio**	**5.82**	**211**	P	**Pn**	**01 26 37.7**	**+1.7**
SNGZ				S	**Sn**	**01 27 40.8**	**-0.6**
MUGZ	**Murupara**	**5.83**	**216**	P	**Pn**	**01 26 37.1**	**+1.0**
KNZ	**Kokohu**	**5.89**	**207**	P	**Pn**	**01 26 36.1**	**-0.9**
ASAR	**Alice Springs**	**42.30**	**271**	P	**P**	**01 33 00.3**	**-1.2**
	0.9nm,0.7s,baz=113,slow=7.6,SNR=4.5						
WRA	**Warramunga Arr**	**43.59**	**276**	P	**P**	**01 33 11.0**	**-1.0**
	1.2nm,0.6s,baz=113,slow=7.8,SNR=8.2						
FINES	**FINESS Array B**	**148.05**	**337**	PKPbc	**PKPbc**	**01 44 52.1**	**+0.4**
	1.0nm,0.5s,baz=48,slow=5.5,SNR=8.7						

MAN 04 01:32:09.1, 7.39N×124.85E, h19km, mb4.7, ML3.6, MS3.5, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.53**	**24**	*e*P	Pn	01 32 21.0	-0.8
BUKP				*e*S	Sn	01 32 31.0	+0.8
CTBH	**Cotabato--PC H**	**0.62**	**254**	⇓*i*P	Pb	01 32 20.4	-0.8
CTBH				*i* S	Sb	01 32 29.0	-0.5
DMPH	**Davao City--Mi**	**0.72**	**115**	⇑*e*P	Pn	01 32 28.8	+4.5
DMPH				*e*S	Sn	01 32 36.3	+1.5
SKMP	**Bagumbayan, Su**	**0.91**	**199**	*e*P	Pb	01 32 24.0	-2.4
SKMP				*e*S	Sb	01 32 33.7	-4.4
CGP	**Cagayan de Oro**	**1.07**	**352**	⇑*e*P	Pb	01 32 28.1	-0.9
CGP				*e*S	Sn	01 32 43.1	-0.3
PAGZ	**Pagadian**	**1.52**	**288**	*e*P	Pn	01 32 35.6	+0.3
PAGZ				*e*S	Sb	01 32 55.5	-0.1
DDMP	**Don Marcelino,**	**1.54**	**146**	*e*P	Pn	01 32 35.2	-0.3
DDMP				*e*S	Sg	01 33 00.2	+1.4

IDC 04 01:39:13.3±2.8, 3.73S×127.03E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.4/33, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=365.3km s-min=26.8km az=65.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.62**	**157**	P	Pn	01 43 19.4	-1.0
	0.2nm,0.3s,baz=331,slow=13,SNR=7.8						
ASAR	**Alice Springs**	**20.90**	**162**	P	P	01 43 58.1	+0.6
	1.1nm,0.7s,baz=347,slow=12,SNR=10						
MKAR	**Makanchi Array**	**63.89**	**327**	P	P	01 49 47.9	-0.1
	0.3nm,0.7s,baz=120,slow=5.7,SNR=2.9						

*SJA **04** 01:46:59.1±1.1, 21.09S×67.62W, h205km±10km, ML3.4, MW3.3*
*ISCJB **04** 01:47:00.4±0.7, 21.10S±0.04×67.70W±0.05, h193km±9km, mb2.9/1, Error ellipse: s-maj=7.9km s-min=5.6km az=159.2*
*GUC **04** 01:47:02.0±0.7, 21.08S×67.85W, h202km±7km, ML3.9*
*IDC **04** 01:47:06.2±6.0, 20.19S×65.63W, h155km±69km, mb3.0/1, mb1 3.0/3, mb1mx2.8/28, mbtmp3.4/3, Error ellipse: s-maj=322.7km s-min=21.4km az=54.0*

ISC 04 01:46:59.7±1.1, 21.10S±0.04×67.68W±0.05, h203km±10km, n32, σ0°81/50, 2C-15D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.61**	**244**	⇓*e*P	**Pn**	**01 47 35.6**	**+0.8**
PB09				*e*S	**S**	**01 48 02.4**	**+0.7**
PB09	**IPOC Station P**	**1.61**	**244**	⇓*i*P	**Pn**	**01 47 35.9**	**+1.1**
PB09				*e*S	**S**	**01 48 01.5**	**-0.1**
PB08	**IPOC Station P**	**1.68**	**304**	⇓*e*P	**Pn**	**01 47 36.4**	**+0.7**
PB08	**IPOC Station P**	**1.68**	**304**	⇓*i*P	**Pn**	**01 47 36.4**	**+0.7**
PB08				*e*S	**S**	**01 48 02.3**	**-0.7**
PB01	**IPOC Station P**	**1.69**	**272**	⇑*i*P	**Pn**	**01 47 35.7**	**+0.3**
PB01				*e*S	**S**	**01 48 01.5**	**-1.2**
PB01				IAML		01 48 04.1	
	comp=E,528nm,0.1s						
GO01	**Chusmiza**	**2.01**	**315**	⇓*i*P	**Pn**	**01 47 39.5**	**+0.5**
GO01				*e*S	**S**	**01 48 08.9**	**-0.1**
PB02	**IPOC Station P**	**2.08**	**263**	⇓*e*P	**Pn**	**01 47 39.8**	**+0.5**
PB02				*e*S	**S**	**01 48 09.8**	**+0.3**
PB02	**IPOC Station P**	**2.08**	**263**	⇓*i*P	**Pn**	**01 47 39.8**	**+0.5**
PB02				*e*S	**S**	**01 48 08.4**	**-1.1**
PB02				IAML		01 48 10.9	
	comp=E,742nm,0.2s						
PB03	**IPOC Station P**	**2.15**	**243**	⇓*e*P	**Pn**	**01 47 40.8**	**+0.7**
PB03				⇓*e*S	**S**	**01 48 10.1**	**-0.9**
PB03	**IPOC Station P**	**2.15**	**243**	*e*P	**Pn**	**01 47 40.6**	**+0.5**
PB03				*e*S	**S**	**01 48 10.1**	**-0.9**
PB07	**IPOC Station P**	**2.15**	**253**	⇓*e*P	**Pn**	**01 47 40.8**	**+0.7**
PB07	**IPOC Station P**	**2.15**	**253**	⇑*i*P	**Pn**	**01 47 40.8**	**+0.7**
PB07				*e*S	**S**	**01 48 09.8**	**-1.1**
PB07				IAML		01 48 10.3	
	comp=N,852nm,0.3s						
PB11	**IPOC Station P**	**2.28**	**305**	⇓*e*P	**Pn**	**01 47 41.9**	**+0.3**
PB11	**IPOC Station P**	**2.28**	**305**	⇓*i*P	**Pn**	**01 47 41.8**	**+0.3**
PB11				*e*S	**S**	**01 48 12.5**	**-1.0**
PB11				IAML		01 48 15.4	
	comp=N,792nm,0.2s						
YJA	**Yavi**	**2.29**	**118**	*e*P	**Pn**	**01 47 41.8**	**-0.1**
YJA				⇓*e*S	**S**	**01 48 13.7**	**-0.4**
YJA				IAML		01 48 15.5	
	comp=Z,110nm,1.0s						
PB06	**IPOC Station P**	**2.38**	**227**	*e*P	**Pn**	**01 47 43.6**	**+1.1**
PB06				*e*S	**S**	**01 48 14.7**	**-0.6**
PB06	**IPOC Station P**	**2.38**	**227**	*e*P	**Pn**	**01 47 43.3**	**+0.8**
PB06				*e*S	**S**	**01 48 14.8**	**-0.5**
PB06				IAML		01 48 16.0	
	comp=E,265nm,0.4s						
PB04	**IPOC Station P**	**2.60**	**241**	*e*P	**Pn**	**01 47 45.6**	**+0.6**
MNMC	**Minye Minye**	**2.66**	**317**	⇓*i*P	**Pn**	**01 47 46.6**	**+0.8**
MNMC				*e*S	**S**	**01 48 20.7**	**-0.5**
MNMCX	**Minye Minye**	**2.66**	**317**	*e*P	**Pn**	**01 47 46.8**	**+1.0**
PB15	**IPOC Station P**	**2.68**	**218**	*e*P	**Pn**	**01 47 46.4**	**+0.5**
PB15				⇓*e*S	**S**	**01 48 22.2**	**+0.8**
PB15	**IPOC Station P**	**2.68**	**218**	*e*P	**Pn**	**01 47 46.7**	**+0.8**
PB15				*i* S	**S**	**01 48 21.4**	**0.0**
PSGC	**Pisagua**	**2.73**	**303**	*e*P	**Pn**	**01 47 46.5**	**0.0**
PSGC				*e*S	**S**	**01 48 20.7**	**-1.7**
PSGC				IAML		01 48 23.6	
	comp=N,129nm,0.3s						
PSGCX	**Pisagua**	**2.73**	**303**	*e*P	**Pn**	**01 47 46.5**	**0.0**
PB05	**IPOC Station P**	**2.92**	**233**	*e*P	**Pn**	**01 47 49.3**	**+0.7**
HJA	**Humahuaca**	**2.98**	**135**	*e*P	**Pn**	**01 47 50.1**	**+0.6**
HJA				IAML		01 48 28.6	
	comp=Z,78nm,0.3s						
PB16	**IPOC Station P**	**3.24**	**328**	*e*P	**Pn**	**01 47 54.6**	**+1.7**
PB12	**IPOC Station P**	**3.51**	**314**	*e*P	**Pn**	**01 47 55.0**	**-0.7**
AZAP	**Zapla**	**3.94**	**143**	*e*P	**Pn**	**01 48 00.6**	**-0.4**
LPAZ	**La Paz**	**4.80**	**355**	P	**Pn**	**01 48 14.0**	**+1.7**
	comp=Z,2.3nm,0.3s,baz=140,slow=5.5,SNR=85						
LPAZ				S	**S**	**01 49 08.4**	**-0.6**
	baz=197,slow=11,SNR=2.8						
CPUP	**Villa Florida**	**10.82**	**121**	P	Pn	01 49 23.3	-6.1
	comp=Z,0.0nm,0.3s,baz=314,slow=17,SNR=1.6						
TORD	**Torodi Ar. Bea**	**76.14**	**70**	P	**P**	**01 58 25.6**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=242,slow=7.1,SNR=4.3						

*IDC **04** 01:56:52.0±0.7, 37.93N×23.86E, h0km, mb4.0/13, mb1 4.1/19, mb1mx3.9/41, mbtmp4.0/19, ML4.0/6, MS3.1/6, Ms1 3.1/6, ms1mx2.8/47, Error ellipse: s-maj=15.2km s-min=12.0km az=90.0*
*ATH **04** 01:56:53.9, 37.98N×24.01E, h24km, ML4.3/37, Error ellipse: s-maj=0.9km s-min=0.7km az=294.0*
*NEIC **04** 01:56:53.8±0.0, 37.96N×23.96E, h21km, mb4.3/17, MW4.0, ML4.3(THE), ML4.4(ATH) Best double couple: NP1:φ=298.00000°, δ58.00000°, λ-89.00000°. NP2: φ=116.00000°, δ32.00000°, λ-92.00000°. Principal axes: T 1.2200, Plg13.0000°, Azm27.0000°; N -0.3100, Plg1.0000°, Azm118.0000°; P -0.9100, Plg77.0000°, Azm212.0000°; After ATH.*
NEIC Felt [IV] at Dimos Vrilission and [III] at Athens. Also felt at Afidnes, Drosia, Erythres, Glifadha, Glyka Nera, Kifisia, Koropi, Limenas Rafinas, Marousi, Moskhaton, Nikaia, Palatani, Pallini, Pefki, Peiraias and Voula.
*ISK **04** 01:56:53.0, 38.04N×23.95E, h6km, ML4.0/21*
*PDG **04** 01:56:54.5±0.8, 38.02N×24.00E, h14km±1km, ML3.9/11, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*THE **04** 01:56:54.9, 37.96N×23.97E, h11km, ML4.3/20, Error ellipse: s-maj=0.9km s-min=0.6km az=309.0*
*ISCJB **04** 01:56:54.8±0.2, 38.03N±0.01×23.99E±0.01, h23km±1km, mb4.2/29, Error ellipse: s-maj=1.9km s-min=1.6km az=30.2*
*BEO **04** 01:56:56.9±2.3, 37.94N×24.23E, h44km±5km, ML3.8/6*
*DDA **04** 01:57:00.1, 38.38N×24.61E, h20km±1km, ML4.1*

ISC 04 01:56:54.5±0.6, 37.96N±0.01×23.97E±0.01, h14km±3km, n390, σ1°29/489, mb4.2/29, 37C-19D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.12**	**317**	*e*Pg	**Pg**	**01 56 58.0**	**0.0**
PTL	**Penteli**	**0.12**	**317**	P	**Pg**	**01 56 58.1**	**0.0**
PTL				S	**Sg**	**01 57 00.0**	**-0.3**
PTL	**Penteli**	**0.12**	**317**	P	**Pg**	**01 56 58.1**	**0.0**
PTL				S	**Sg**	**01 57 00.2**	**-0.2**
PTL				AML	AML	01 57 00.2	
PTL				AML	AML	01 57 00.7	
DION	**Dionisos Attik**	**0.12**	**347**	P	**Pg**	**01 56 58.1**	**+0.1**
DION				S	**Sg**	**01 57 00.2**	**-0.2**
DION	**Dionisos Attik**	**0.12**	**347**	P	**Pg**	**01 56 58.1**	**+0.1**
DION				S	**Sg**	**01 57 00.1**	**-0.2**
DION				AML	AML	01 57 00.5	
DION				AML	AML	01 57 00.6	
ATHU	**Athens Univers**	**0.14**	**272**	*e*Pg	**Pg**	**01 56 58.4**	**+0.1**
ATHU				*e*Sg	**Sg**	**01 57 00.5**	**-0.3**
ATHU	**Athens Univers**	**0.14**	**272**	P	**Pg**	**01 56 58.4**	**+0.1**
ATHU				S	**Sg**	**01 57 00.6**	**-0.3**
ATHU	**Athens Univers**	**0.14**	**272**	P	**Pg**	**01 56 58.4**	**+0.1**
ATHU				S	**Sg**	**01 57 00.5**	**-0.3**
ATHU				AML	AML	01 57 00.8	
ATHU				AML	AML	01 57 00.8	
VLY	**Voula,Athens**	**0.17**	**232**	*e*Pg	**Pb**	**01 56 59.1**	**-0.4**
VLY				*e*Sg	**Sg**	**01 57 01.7**	**+0.2**
VLY	**Voula,Athens**	**0.17**	**232**	P	**Pb**	**01 56 59.1**	**-0.4**
VLY				S	**Sg**	**01 57 01.7**	**+0.2**
VLY	**Voula,Athens**	**0.17**	**232**	P	**Pb**	**01 56 59.1**	**-0.4**
VLY				S	**Sg**	**01 57 01.7**	**+0.2**
VLY				AML	AML	01 57 01.9	
VLY				AML	AML	01 57 03.8	
ATH	**Athens Observa**	**0.20**	**273**	P	**Pb**	**01 56 59.5**	**-0.4**
ATH				S	**Sg**	**01 57 02.4**	**+0.3**
ATH	**Athens Observa**	**0.20**	**273**	P	**Pb**	**01 56 59.5**	**-0.4**
ATH				S	**Sg**	**01 57 02.5**	**+0.4**
ATH				AML	AML	01 57 03.0	
ATH				AML	AML	01 57 03.8	
EREA	**Eretria**	**0.46**	**356**	P	**Pb**	**01 57 04.2**	**-0.2**
EREA				S	**Sb**	**01 57 10.6**	**-0.5**
EREA	**Eretria**	**0.46**	**356**	P	**Pb**	**01 57 04.2**	**-0.2**
EREA				S	**Sb**	**01 57 10.5**	**-0.5**
EREA				AML	AML	01 57 10.8	
EREA				AML	AML	01 57 13.8	
	comp=N,95646μm,0.2s						
YDRA	**Hydra**	**0.73**	**213**	P	**Pg**	**01 57 08.6**	**-0.1**
YDRA				S	**Sn**	**01 57 20.0**	**-1.2**
YDRA				AML	AML	01 57 22.2	
YDRA				AML	AML	01 57 22.3	
DID	**Didima**	**0.74**	**232**	*e*Pn	**Pg**	**01 57 08.9**	**+0.1**
DID				*e*Sn	**Sb**	**01 57 19.7**	**+0.7**
DID	**Didima**	**0.74**	**232**	P	**Pg**	**01 57 08.9**	**+0.1**
DID				S	**Sb**	**01 57 19.7**	**+0.7**
DID	**Didima**	**0.74**	**232**	P	**Pg**	**01 57 09.0**	**+0.1**
DID				S	**Sb**	**01 57 19.7**	**+0.7**
DID				AML	AML	01 57 23.0	
	comp=E,72489μm,0.3s						
DID				AML	AML	01 57 23.4	
EPID	**Epidavros**	**0.76**	**243**	P	**Pb**	**01 57 09.7**	**+0.3**
EPID				S	**Sn**	**01 57 20.9**	**-1.1**
LOUT	**Loutraki**	**0.79**	**272**	P	**Pb**	**01 57 10.0**	**+0.1**
LOUT				S	**Sb**	**01 57 20.8**	**+0.4**
LOUT	**Loutraki**	**0.79**	**272**	P	**Pb**	**01 57 10.3**	**+0.3**
LOUT				S	**Sb**	**01 57 21.0**	**+0.6**
LOUT				AML	AML	01 57 23.3	
	comp=E,6630μm,0.3s						
LOUT				AML	AML	01 57 24.2	
	comp=N,5875μm,0.5s						
LTK	**Loutraki**	**0.79**	**275**	P	**Pb**	**01 57 10.5**	**+0.4**
LTK				S	**Sn**	**01 57 21.7**	**-1.2**
LTK				AML	AML	01 57 23.6	
	comp=E,39698μm,0.3s						
LTK				AML	AML	01 57 23.6	
	comp=N,22221μm,0.3s						
MRKA	**Markates**	**0.80**	**338**	P	**Pg**	**01 57 10.1**	**0.0**
MRKA				S	**Sb**	**01 57 21.0**	**+0.1**
MRKA	**Markates**	**0.80**	**338**	P	**Pg**	**01 57 10.0**	**0.0**
MRKA				S	**Sg**	**01 57 20.7**	**0.0**
MRKA				AML	AML	01 57 23.2	
	comp=E,59610μm,0.3s						
MRKA				AML	AML	01 57 24.4	
	comp=N,43830μm,0.3s						
PROD	**Prodromos**	**0.89**	**290**	P	**Pg**	**01 57 11.8**	**0.0**
PROD				S	**Sn**	**01 57 25.2**	**-0.1**
PROD	**Prodromos**	**0.89**	**290**	P	**Pg**	**01 57 12.0**	**+0.2**
PROD				S	**Sn**	**01 57 25.1**	**-0.3**
PROD				AML	AML	01 57 25.7	
	comp=E,59860μm,0.3s						
PROD				AML	AML	01 57 26.4	
	comp=N,64762μm,0.6s						
SERI	**Serifos**	**0.90**	**153**	P	**Pg**	**01 57 12.2**	**+0.3**
SERI				S	**Sb**	**01 57 23.5**	**-0.2**
SERI	**Serifos**	**0.90**	**153**	P	**Pb**	**01 57 11.9**	**+0.1**
SERI				AML	AML	01 57 24.1	
	comp=E,68011μm,0.6s						
SERI				AML	AML	01 57 24.1	
	comp=N,51787μm,0.4s						
SKY	**Skiros Island**	**1.02**	**26**	*e*Pn	**Pb**	**01 57 13.8**	**-0.2**
SKY				*e*Sg	**Sg**	**01 57 27.8**	**+0.1**
SKY	**Skiros Island**	**1.02**	**26**	P	**Pb**	**01 57 13.8**	**-0.2**
SKY				S	**Sg**	**01 57 27.8**	**+0.1**
SKY	**Skiros Island**	**1.02**	**26**	P	**Pb**	**01 57 13.9**	**-0.1**
SKY				AML	AML	01 57 28.0	
	comp=N,38376μm,0.7s						
SKY				AML	AML	01 57 28.5	
	comp=E,36647μm,0.3s						
LKR	**Lokris**	**1.03**	**312**	P	**Pb**	**01 57 13.7**	**-0.4**
LKR				S	**Sg**	**01 57 27.6**	**-0.1**
LKR				AML	AML	01 57 29.6	
	comp=N,40540μm,0.2s						
LKR				AML	AML	01 57 29.8	
	comp=E,40056μm,0.2s						
TNSA	**Tinos**	**1.04**	**114**	P	**Pn**	**01 57 14.8**	**+0.2**
TNSA				AML	AML	01 57 30.1	
	comp=E,13026μm,0.3s						
TNSA				AML	AML	01 57 31.5	
	comp=N,11760μm,0.4s						
ATAL	**Atalanti**	**1.04**	**315**	*e*Pn	**Pb**	**01 57 13.9**	**-0.4**
ATAL	**Atalanti**	**1.04**	**315**	P	**Pb**	**01 57 13.9**	**-0.4**
ATAL				S	**Sn**	**01 57 28.8**	**-0.2**
ATAL				AML	AML	01 57 29.7	
	comp=N,18723μm,0.4s						
ATAL				AML	AML	01 57 32.3	
	comp=E,16498μm,0.5s						
SMIA	**Simia**	**1.09**	**327**	P	**Pg**	**01 57 15.6**	**0.0**
SMIA				S	**Sn**	**01 57 30.4**	**+0.1**
SMIA				AML	AML	01 57 38.4	
	comp=E,68526μm,0.5s						
SMIA				AML	AML	01 57 41.1	
	comp=N,64629μm,0.7s						
ALNA	**Alonissos**	**1.19**	**356**	P	**Pn**	**01 57 16.6**	**-0.1**
ALNA				AML	AML	01 57 34.6	
	comp=E,25904μm,0.5s						
ALNA				AML	AML	01 57 40.3	
	comp=N,28827μm,0.7s						
DSF	**Desfina**	**1.22**	**292**	*e*Pn	**Pb**	**01 57 17.2**	**-0.2**
DSF				*e*Sg	**Sg**	**01 57 33.7**	**-0.3**
DSF	**Desfina**	**1.22**	**292**	P	**Pb**	**01 57 17.2**	**-0.2**
DSF				S	**Sg**	**01 57 33.7**	**-0.3**
DSF	**Desfina**	**1.22**	**292**	P	**Pb**	**01 57 17.2**	**-0.2**
DSF				AML	AML	01 57 35.6	
	comp=N,13971μm,0.3s						
DSF				AML	AML	01 57 39.4	
	comp=E,15363μm,0.3s						
MHLA	**Plaka, Milos I**	**1.27**	**163**	P	**Pn**	**01 57 17.8**	**0.0**
MHLA				AML	AML	01 57 36.7	
	comp=E,16475μm,0.5s						
MHLA				AML	AML	01 57 40.1	
	comp=N,21681μm,0.7s						
DLFA	**Delphi**	**1.27**	**294**	P	**Pn**	**01 57 17.8**	**-0.1**
DLFA				AML	AML	01 57 34.7	
	comp=E,8050μm,0.4s						
DLFA				AML	AML	01 57 41.0	
	comp=N,9261μm,0.4s						
GUR	**Goura**	**1.28**	**269**	*e*Pn	**Pn**	**01 57 18.2**	**+0.1**
GUR				*e*Sn	**Sg**	**01 57 35.9**	**-0.2**
GUR	**Goura**	**1.28**	**269**	P	**Pn**	**01 57 18.2**	**+0.1**
GUR				S	**Sg**	**01 57 35.9**	**-0.2**
GUR	**Goura**	**1.28**	**269**	P	**Pb**	**01 57 18.3**	**-0.2**
GUR				S	**Sg**	**01 57 35.8**	**-0.2**
GUR				AML	AML	01 57 37.0	
	comp=E,16136μm,0.4s						
GUR				AML	AML	01 57 43.4	
	comp=N,19331μm,0.3s						
AXAR	**Agios Charalam**	**1.30**	**308**	*e*Pn	**Pg**	**01 57 20.9**	**+1.2**
MHLO	**Agia Marina, M**	**1.32**	**165**	P	**Pn**	**01 57 18.8**	**+0.4**
MHLO				S	**Sb**	**01 57 35.8**	**+0.1**
MHLO	**Agia Marina, M**	**1.32**	**165**	P	**Pn**	**01 57 18.7**	**+0.4**
MHLO				AML	AML	01 57 40.8	
	comp=E,39345μm,0.4s						
MHLO				AML	AML	01 57 48.0	
	comp=N,32907μm,0.5s						
PSRA	**Psara**	**1.38**	**65**	P	**Pn**	**01 57 19.7**	**+0.3**
PSRA				AML	AML	01 57 41.3	
	comp=N,13557μm,0.6s						
PSRA				AML	AML	01 57 43.5	
	comp=E,17359μm,0.4s						
VLX	**Vlachokerasia**	**1.39**	**245**	*e*Pn	**Pb**	**01 57 20.2**	**-0.1**
VLX				*e*Sn	**Sg**	**01 57 38.7**	**-0.7**
VLX	**Vlachokerasia**	**1.39**	**245**	P	**Pb**	**01 57 20.2**	**-0.1**
VLX				S	**Sg**	**01 57 38.7**	**-0.7**
VLX	**Vlachokerasia**	**1.39**	**245**	P	**Pb**	**01 57 20.2**	**-0.1**
VLX				S	**Sg**	**01 57 38.8**	**-0.6**
VLX				AML	AML	01 57 42.7	
	comp=E,28289μm,0.6s						
VLX				AML	AML	01 57 45.2	
	comp=N,20861μm,0.6s						
TRIP	**Tripoli**	**1.41**	**253**	P	**Pb**	**01 57 20.4**	**-0.3**
TRIP				S	**Sb**	**01 57 38.9**	**+0.3**
TRIP	**Tripoli**	**1.41**	**253**	P	**Pb**	**01 57 20.4**	**-0.3**
TRIP				S	**Sg**	**01 57 39.2**	**-0.9**
TRIP				AML	AML	01 57 42.5	
	comp=N,10502μm,0.6s						
TRIP				AML	AML	01 57 42.8	
	comp=E,16137μm,0.5s						
KLV	**Kalavryta, Ach**	**1.44**	**274**	P	**Pn**	**01 57 20.4**	**+0.2**
KLV				S	**Sb**	**01 57 39.7**	**+0.4**
KLV				AML	AML	01 57 42.0	
	comp=E,2915μm,0.7s						
KLV				AML	AML	01 57 48.3	
	comp=N,4315μm,0.5s						
NEO	**Neokhori**	**1.46**	**337**	P	**Pn**	**01 57 20.5**	**0.0**
NEO				AML	AML	01 57 44.5	
	comp=E,24867μm,0.3s						
NEO				AML	AML	01 57 45.7	
	comp=N,28160μm,0.3s						
MNVA	**Monemvasia**	**1.47**	**211**	P	**Pn**	**01 57 21.0**	**+0.4**
MNVA				AML	AML	01 57 47.2	
	comp=N,15166μm,1.0s						
MNVA				AML	AML	01 57 47.7	
	comp=E,18152μm,0.7s						
VLI	**Veliai**	**1.49**	**214**	*e*Pn	**Pn**	**01 57 20.9**	**+0.1**
VLI				*e*Sn	**Sn**	**01 57 39.6**	**-0.4**
VLI	**Veliai**	**1.49**	**214**	P	**Pn**	**01 57 20.9**	**+0.1**
VLI				S	**Sn**	**01 57 39.6**	**-0.4**
VLI	**Veliai**	**1.49**	**214**	P	**Pn**	**01 57 21.0**	**+0.1**
VLI				AML	AML	01 57 46.2	
	comp=N,21169μm,0.6s						
VLI				AML	AML	01 57 48.8	
	comp=E,11780μm,0.6s						
KALE	**Kalithea**	**1.50**	**287**	*e*Pn	**Pn**	**01 57 21.3**	**+0.3**
KALE	**Kalithea**	**1.50**	**287**	P	**Pn**	**01 57 21.4**	**+0.3**
KALE				AML	AML	01 57 48.8	
	comp=E,7124μm,0.5s						
KALE				AML	AML	01 57 50.0	
	comp=N,8155μm,0.4s						
XOR	**Xorichti**	**1.53**	**337**	P	**Pn**	**01 57 21.3**	**-0.1**
APE	**Apeiranthos**	**1.53**	**125**	PN	**Pn**	**01 57 21.4**	**0.0**
APE				SN	**Sg**	**01 57 43.5**	**-0.3**
APE	**Apeiranthos**	**1.53**	**125**	*e*Pn	**Pn**	**01 57 21.4**	**0.0**
APE				*e*Sn	**Sg**	**01 57 43.2**	**-0.6**
APE	**Apeiranthos**	**1.53**	**125**	P	**Pn**	**01 57 21.4**	**0.0**
APE				S	**Sg**	**01 57 43.2**	**-0.6**
APE	**Apeiranthos**	**1.53**	**125**	⇓*i*P	**Pn**	**01 57 21.4**	**0.0**
APE	**Apeiranthos**	**1.53**	**125**	S	**Sb**	**01 57 42.7**	**+0.8**
APE	**Apeiranthos**	**1.53**	**125**	P	**Pn**	**01 57 21.5**	**0.0**
TRIZ	**Trizonia**	**1.55**	**286**	P	**Pb**	**01 57 22.2**	**-0.7**
TRIZ				S	**Sb**	**01 57 42.3**	**-0.1**
SERG	**Sergoula**	**1.57**	**287**	P	**Pn**	**01 57 22.5**	**+0.5**
LAKA	**Lakka**	**1.59**	**281**	*e*Pn	**Pb**	**01 57 23.2**	**-0.5**
LAKA	**Lakka**	**1.59**	**281**	P	**Pb**	**01 57 23.2**	**-0.5**
LAKA				AML	AML	01 57 58.0	
	comp=N,1618μm,0.6s						
LAKA				AML	AML	01 58 00.8	
	comp=E,2341μm,0.5s						
IOSP	**Ios island**	**1.62**	**139**	P	**Pn**	**01 57 22.7**	**0.0**
FYTO	**

SANT	Santorini	1.98	143⇑	*i* P	Pn	01 57 28.1	+0.4
SANT	Santorini	1.98	143	S	Sg	01 57 58.9	+0.5
SANT	Santorini	1.98	143	P	Pn	01 57 27.9	+0.2
ZEY	zmir	2.02	81⇓	*i* P	Pn	01 57 28.0	-0.1
ZEY				*i* S	Sg	01 57 59.8	+0.3
PVO	Paravola	2.03	290	P	Pb	01 57 30.0	-1.2
AXS	Araxos	2.06	277	P	Pn	01 57 29.4	+0.8
PYL	PYLOS	2.07	240	*e*Pn	Pb	01 57 31.2	-0.6
PYL	PYLOS	2.07	240	P	Pb	01 57 30.5	-1.3
URLA	Izmir	2.11	78	PN	Pn	01 57 29.8	+0.4
URLA	Izmir	2.11	78	*i* P	Pn	01 57 29.8	+0.4
URLA				*i* S	Sg	01 58 02.1	-0.2
MES2	Methoni	2.13	238	P	Pb	01 57 31.5	-1.3
KRBN	Karaburun	2.13	72	PN	Pn	01 57 30.0	+0.4
LIA	Limnos Island	2.15	26	P	Pn	01 57 29.1	-0.8
ANAF	Anafi Island	2.15	137	P	Pn	01 57 30.4	+0.4
ANKY	Antikythira Is	2.16	195	*e*Pn	Pn	01 57 30.8	+0.8
ANKY	Antikythira Is	2.16	195	P	Pn	01 57 30.0	0.0
ANKY				AML	AML	01 58 04.6	
	comp=N,5856μm,0.6s						
ANKY				AML	AML	01 58 07.7	
	comp=E,6312μm,0.5s						
VTN	Vitineika	2.20	270	P	Pb	01 57 32.4	-1.6
THL	Klokotos Trika	2.21	317	*e*Pn	Pn	01 57 31.4	+0.7
THL	Klokotos Trika	2.21	317	P	Pn	01 57 31.2	+0.5
PRK	Paraskevi	2.21	54	P	Pn	01 57 31.0	+0.2
GPNR	Gulpinar-Canak	2.26	48	PN	Pn	01 57 31.5	+0.1
PDO	Prodromos	2.28	287	P	Pb	01 57 33.9	-1.6
SMG	Samos	2.29	95	P	Pn	01 57 31.9	+0.2
FOCM	Foa	2.30	70	PN	Pn	01 57 32.5	+0.6
DGB	zmir	2.30	87	*i* P	Pn	01 57 32.2	+0.2
DGB				*i* S	Sn	01 57 58.4	-1.7
GMLD	Gumuldur	2.33	86	PN	Pn	01 57 33.2	+0.8
OUR	Ouranopolis	2.37	0	*e*Pn	Pn	01 57 32.8	-0.1
OUR	Ouranopolis	2.37	0	P	Pn	01 57 32.6	-0.3
LIT	Litokhoron	2.43	332	*e*Pn	Pn	01 57 34.1	+0.4
PLG	Polygyros	2.44	351	P	Pn	01 57 33.7	-0.3
BOZC	Bozcaada	2.48	40	PN	Pn	01 57 33.6	-0.9
BOZC	Bozcaada	2.48	40	*i* P	Pn	01 57 34.1	-0.4
BOZC				*i* S	Sn	01 58 02.4	-2.2
IMMV	Iera Moni Meta	2.50	180	PN	Pn	01 57 36.4	+1.7
IMMV	Iera Moni Meta	2.50	180	P	Pn	01 57 35.3	+0.6
KFL	Anninata	2.52	274	P	Pb	01 57 38.0	-1.4
AYVA	Ayvalik	2.52	57	*i* P	Pn	01 57 34.1	-0.9
AYVA				*i* S	Sg	01 58 14.8	-0.8
VAM	Vamos	2.56	176	P	Pn	01 57 36.0	+0.5
GCAM	G?zelcaml?	2.60	95	PN	Pn	01 57 37.0	+0.9
GCAM	G?zelcaml?	2.60	95	*i* P	Pn	01 57 37.0	+0.9
GCAM				*i* S	Sn	01 58 06.3	-1.1
GCAM				IAML_P			
	comp=Z,1μm,0.1s						
EZN	Ezine	2.62	44	PN	Pn	01 57 36.4	+0.1
EZN	Ezine	2.62	44	*e*Pn	Pn	01 57 36.9	+0.6
EZN	Ezine	2.62	44	⇓*i* P	Pn	01 57 35.9	-0.4
ZEDA	zmir-Bergama	2.64	67	*i* P	Pn	01 57 36.8	+0.1
ZEDA				*i* S	Sg	01 58 18.2	-1.1
DIDI	Didim-Aydin	2.66	102	PN	Pn	01 57 38.4	+1.5
VLS	Valsamata	2.67	276	P	Pn	01 57 39.0	+1.9
BAYC	CANAKKALE_Bayr	2.69	48	*i* P	Pn	01 57 36.3	-1.0
BAYC				*i* S	Sg	01 58 19.4	-1.4
GOKC	Gokceada-Canak	2.70	34	PN	Pn	01 57 37.5	0.0
FSK	Fiskardo	2.73	282	P	Pn	01 57 39.6	+1.7
LKD2	Lefkada island	2.73	289	P	Pb	01 57 41.1	-2.0
TSLK	Tsoukalades, L	2.74	289	P	Pn	01 57 39.5	+1.4
IDI	Anoyia	2.77	164	Pn	Pn	01 57 38.9	+0.5
	comp=Z,31nm,0.3s,baz=323,slow=3.3,SNR=88						
IDI				Sn	Sn	01 58 10.9	-0.9
	comp=Z,59nm,0.3s,baz=298,slow=18,SNR=9.3						
IDI				LR	LR	01 58 50.7	
	comp=Z,251nm,20.3s,baz=76,slow=43						
SMTH	Samothraki Isl	2.79	25	*e*Pn	Pn	01 57 37.5	-1.1
SMTH	Samothraki Isl	2.79	25	P	Pn	01 57 37.2	-1.4
BODT	Bodrum	2.81	108	PN	Pn	01 57 39.8	+0.9
BODT	Bodrum	2.81	108	*e*Pn	Pn	01 57 39.8	+0.9
MEV	Metsovon	2.81	311	*e*Pn	Pb	01 57 40.4	-0.1
SOH	Sokhos	2.90	351	P	Pn	01 57 40.6	+0.4
KZN	Kozani	2.90	325	P	Pn	01 57 41.3	+1.0
NPS	Neapolis	3.00	153	P	Pn	01 57 41.6	0.0
LAST	Lasithi	3.05	156	P	Pn	01 57 43.0	+0.7
KAVA	Kavala	3.06	8	*e*Pn	Pn	01 57 41.9	-0.5
AYDB	Zeytinkoy-Aydi	3.10	89	PN	Pn	01 57 44.2	+1.1
GELI	Tayfur-Gelibol	3.12	38	PN	Pn	01 57 42.9	-0.3
GVD	Gavdhos	3.12	178	PN	Pn	01 57 45.3	+2.1
GVD	Gavdhos	3.12	178	*e*Pg	Pb	01 57 46.9	-2.8
DAT	Datca	3.13	112	PN	Pn	01 57 45.2	+1.7
DAT	Datca	3.13	112	*i* P	Pn	01 57 44.1	+0.7
DAT				*i* S	Sg	01 58 38.4	+3.3
SRS	Serrai	3.17	355	*e*Pn	Pn	01 57 43.8	-0.1
SRS				*e*Sn	Sn	01 58 19.8	-1.6
LPK	Lapseki	3.24	41	PN	Pn	01 57 45.1	+0.2
IGT	Igoumenitsa	3.25	300	*e*Pn	Pn	01 57 47.4	+2.5
IGT				*e*Sn	Sn	01 58 26.3	+2.9
IGT	Igoumenitsa	3.25	300	*e*Pn	Pn	01 57 47.5	+2.5
ALN	Alexandroupoli	3.34	28	*e*Pn	Pn	01 57 45.4	-0.9
BALY	Balya	3.36	57	*i* P	Pn	01 57 47.5	+0.9
BALY				*i* S	Sg	01 58 42.1	-0.3
ZKR	Zakros	3.37	147	PN	Pn	01 57 48.8	+2.1
ZKR	Zakros	3.37	147	*e*Pg	Pb	01 57 51.5	-2.5
RDO	Rodhopi	3.40	20	*e*Pn	Pn	01 57 46.4	-0.7
FNA	Florina	3.46	325	*e*Pn	Pn	01 57 49.5	+1.5
FNA	Florina	3.46	325	*e*Pn	Pn	01 57 48.0	0.0
FNA				*e*Sn	Sn	01 58 30.4	+1.6
BALB	Balikesir	3.49	60	PN	Pn	01 57 49.2	+0.9
BALB	Balikesir	3.49	60	*e*Pn	Pn	01 57 50.1	+1.8
BBRN	Bozburun-Marma	3.50	110	PN	Pn	01 57 50.3	+1.8
KARP	Karpathos	3.52	132	PN	Pn	01 57 50.9	+2.1
KARP	Karpathos	3.52	132	*e*Pn	Pn	01 57 46.5	-2.2
KARP				*e*Sn	Sn	01 58 30.0	-0.1
VAY	Valandovo	3.52	343	*e*Pn	Pn	01 57 50.4	+1.7
VAY	Valandovo	3.52	343	*e*Pn	Pn	01 57 50.5	+1.7
VAY	Valandovo	3.52	343	*i* Pn	Pn	01 57 50.0	+1.2
GONE	Gonen-Balikesi	3.57	53	PN	Pn	01 57 50.1	+0.7
KEK	Kerkira	3.69	300	*e*Pn	Pn	01 57 53.9	+2.7
KULA	Kula-Manisa	3.74	80	PN	Pn	01 57 53.2	+1.4
ARG	Arkhangelos	3.75	116	PN	Pn	01 57 54.1	+2.2
TURN	Turunc	3.85	105	PN	Pn	01 57 51.1	-2.1
TURN	Turunc	3.85	105	*i* P	Pn	01 57 51.1	-2.1
TURN				IAML_P			
	comp=Z,2μm,0.3s						
EDC	Edincik	3.85	51	PN	Pn	01 57 54.3	+1.0
DALY	Dalyan (Mula)	3.90	106	PN	Pn	01 57 55.8	+1.8
TAVA	DENIZLI_Tavas	3.95	96	*i* P	Pn	01 57 57.0	+2.2
STIP	Stip	3.97	340	*i* Pn	Pn	01 57 55.8	+0.8
KRUS	Krusevo	4.00	329	*i* Pn	Pn	01 57 57.1	+1.7
USAK	Uak-Merkez	4.04	78	*i* P	Pn	01 57 56.3	+0.3
KCTX	Karacabey (Bur	4.12	55	PN	Pn	01 57 57.7	+0.7
PLD	Plovdiv	4.18	8	*e*Pn	Pn	01 57 57.9	+0.1
FETY	Fethiye	4.29	106	PN	Pn	01 58 03.0	+3.7
FETY	Fethiye	4.29	106	*e*Pn	Pn	01 58 01.5	+2.2
FETY	Fethiye	4.29	106	*i* P	Pn	01 58 03.3	+3.9
FETY				IAML_P			
	comp=Z,7μm,0.4s						
SKO	Skopje	4.45	335	*e*Pn	Pn	01 58 03.0	+1.4
ULDT	Uludag	4.58	60	*i* P	Pn	01 58 04.6	+1.2
PHP	Peshkopia	4.60	325	*e*Pn	Pn	01 58 06.2	+2.5
TIR	Tirane	4.63	318	*e*Pn	Pn	01 58 06.8	+2.7
TIR	Tirane	4.63	318	*e*Pn	Pn	01 58 06.7	+2.7
VTS	Vitosha	4.69	353	*e*Pn	Pn	01 58 05.5	+0.6
VTS	Vitosha	4.69	353	*e*Pn	Pn	01 58 05.2	+0.3
VTS				*e*Sn	Sn	01 58 53.9	-5.2
VTS	Vitosha	4.69	353⇑	*i* P	Pn	01 58 05.7	+0.8
BRDR	BURDUR-Merkez	4.83	91	*i* P	Pn	01 58 09.3	+2.4
JMB	Yambol	4.92	23	*e*Pn	Pn	01 58 07.4	-0.6
YLV	Yalova	4.94	57⇑	*i* P	Pn	01 58 07.3	-1.0
KLYT	Kilyos	5.12	48⇑	*i* P	Pn	01 58 10.5	-0.1
BARS	Barje	5.12	342	*e*Pn	Pn	01 58 11.6	+0.9
BARS	Barje	5.12	342	*e*Pn	Pn	01 58 11.3	+0.6
ISP	Isparta	5.19	90	*e*Pn	Pn	01 58 08.2	-3.6
ULC	Ulcinj	5.40	319⇑	*i* Pn	Pn	01 58 16.1	+1.5
ULC				*e*Sn	Sn	01 59 16.6	+0.1
ULC	Ulcinj	5.40	319	*e*Pn	Pn	01 58 17.1	+2.5
ZAPS	Zavoj	5.40	350	*e*Pn	Pn	01 58 16.1	+1.5
SILT	Sile	5.42	52⇑	*i* P	Pn	01 58 15.4	+0.6
PVY	Plav	5.55	328	⇓*i* Pn	Pn	01 58 18.2	+1.4
PVY				*e*Sn	Sn	01 59 20.2	-0.2
PVY	Plav	5.55	328	*e*Pn	Pn	01 58 19.4	+2.6
DRME	Dracevica, Mon	5.59	320⇑	*i* Pn	Pn	01 58 18.9	+1.7
DRME				*e*Sn	Sn	01 59 21.9	+0.7
DRME	Dracevica, Mon	5.59	320⇑	*i* Pn	Pn	01 58 18.8	+1.6
SELS	Selova	5.68	338	*e*Pn	Pn	01 58 19.1	+0.6
SELS	Selova	5.68	338	*e*Pn	Pn	01 58 20.1	+1.6
PDG	Podgorica	5.74	323	*e*Pn	Pn	01 58 21.2	+2.0
PDG				*e*Sn	Sn	01 59 24.0	-0.8
PDG	Podgorica	5.74	323⇓	*i* P	Pn	01 58 20.6	+1.4
PDG	Podgorica	5.74	323⇑	*i* Pn	Pn	01 58 21.0	+1.8
TTG	Podgorica	5.74	323⇓	*i* Pn	Pn	01 58 20.8	+1.6
TTG				*e*Sn	Sn	01 59 25.3	+0.5
TTG	Podgorica	5.74	323	*e*Pn	Pn	01 58 21.1	+2.0
TIP	Timpagrande	5.78	284	*e*Pn	Pn	01 58 20.9	+1.1
TIP	Timpagrande	5.78	284	⇓*i* P	Pn	01 58 21.4	+1.6
TIP	Timpagrande	5.78	284	S	Sn	01 59 25.8	-0.1
IVA	Berane	5.81	329⇑	*i* Pn	Pn	01 58 21.9	+1.7
IVA				*e*Sn	Sn	01 59 26.2	-0.4
BUM	Brajici-Budva	5.82	320⇓	*i* Pn	Pn	01 58 21.9	+1.5
BUM				*e*Sn	Sn	01 59 27.4	+0.4
BUM	Brajici-Budva	5.82	320	*e*Pn	Pn	01 58 22.7	+2.3
FASA	Fasano	5.86	301	*e*Pn	Pn	01 58 22.3	+1.4
BOVS	Bovan	5.92	344	*e*Pn	Pn	01 58 22.1	+0.4
MASS	Massafra	5.93	299	*e*Pn	Pn	01 58 22.6	+0.8
MASS				Sn	Sn	01 59 27.9	-1.6
KOME	Kolasin	5.95	327⇓	*i* Pn	Pn	01 58 23.6	+1.4
KOME				*e*Sn	Sn	01 59 30.2	+0.1
CEME	Cevo	5.99	321⇑	*i* Pn	Pn	01 58 24.0	+1.3
CEME				*e*Sn	Sn	01 59 30.9	-0.2
ZAGS	Zajecar	5.99	348	*e*Pn	Pn	01 58 23.0	+0.3
VLAD	Vladila	6.04	3⇑	*i* P	Pn	01 58 24.1	+0.8
SJES	Sjenica	6.10	331	*e*Pn	Pn	01 58 26.5	+2.2
HCY	Herceg Novi	6.13	319⇑	*i* Pn	Pn	01 58 25.4	+0.8
HCY				*e*Sn	Sn	01 59 34.9	+0.3
HCY	Herceg Novi	6.13	319	*e*Pn	Pn	01 58 25.4	+0.8
NKME	Niksic	6.14	323⇓	*i* Pn	Pn	01 58 25.9	+1.1
NKME				*e*Sn	Sn	01 59 34.5	-0.3
NKY	Niksic	6.16	323⇑	*i* Pn	Pn	01 58 26.2	+1.1
NKY				*e*Sn	Sn	01 59 34.9	-0.4
MATE	Matera	6.24	298⇑	*i* Pn	Pn	01 58 26.9	+0.8
BAI	Bari	6.32	302	*e*Pn	Pn	01 58 27.5	+0.4
BAI				Sn	Sn	01 59 36.0	-3.0
SG1	Sgolgore (BA)	6.33	299	*e*Pn	Pn	01 58 28.1	+0.7
SG1				Sn	Sn	01 59 37.4	-2.1
CRAR	CRAIOVA	6.36	359⇑	*i* P	Pn	01 58 28.0	+0.3
CEL	Celeste	6.37	275	*e*Pn	Pn	01 58 30.2	+2.2
PLE	Pljevlja	6.39	328⇓	*i* Pn	Pn	01 58 29.4	+1.1
PLE				*e*Sn	Sn	01 59 40.5	-0.6
TREB	Trebinje	6.40	320	*e*Pn	Pn	01 58 28.9	+0.6
TREB				*e*Sn	Sn	01 59 40.1	-1.0
TREB	Trebinje	6.40	320	*e*Pn	Pn	01 58 28.7	+0.4
GRUS	Gruza	6.41	338	*e*Pn	Pn	01 58 29.3	+0.8
BRY	Bratogost	6.44	322⇓	*i* Pn	Pn	01 58 30.5	+1.5
BRY				*e*Sn	Sn	01 59 42.0	-0.3
BRY	Bratogost	6.44	322	*e*Pn	Pn	01 58 30.4	+1.5
UPM	Unac-Piva	6.50	325⇓	*i* Pn	Pn	01 58 30.9	+1.1
UPM				*e*Sn	Sn	01 59 42.9	-0.9
UPM	Unac-Piva	6.50	325	*e*Pn	Pn	01 58 32.1	+2.2
HUMR	Humele	6.61	6⇓	*i* P	Pn	01 58 31.1	0.0
KUBS	Kucevo	6.67	346	*e*Pn	Pn	01 58 31.7	-0.3
ICOR	Ion Corvin	6.80	24⇑	*i* P	Pn	01 58 34.0	+0.3
TRUS	Trudelj	6.81	338	*e*Pn	Pn	01 58 35.2	+1.3
DIVS	Divibare	6.83	335	*e*Pn	Pn	01 58 35.8	+1.6
DIVS	Divibare	6.83	335⇑	*i* Pn	Pn	01 58 36.0	+1.8
STON	Ston	6.85	318	*e*Pn	Pn	01 58 34.6	+0.2
STON				*e*Sn	Sn	01 59 49.5	-2.6
STON	Ston	6.85	318	*e*Pn	Pn	01 58 34.1	-0.3
STON				Sn	Sn	01 59 48.7	-3.4
STON	Ston	6.85	318	*e*Pn	Pn	01 58 33.8	-0.6
HERR	Herculane	7.01	351⇑	*i* P	Pn	01 58 36.4	-0.3
MDVR	Moldovita	7.02	347⇑	*i* P	Pn	01 58 37.3	+0.4
HAPS	Han Pijesak,Bl	7.20	330	*e*Pn	Pn	01 58 40.0	+0.6
HAPS				*e*Sn	Sn	01 59 57.8	-3.1
HAPS	Han Pijesak,Bl	7.20	330	*e*Pn	Pn	01 58 39.8	+0.4
TLB	Topalu	7.29	24⇑	*i* P	Pn	01 58 40.3	-0.2
TIRR	Tirgusor	7.30	26	*e*Pn	Pn	01 58 40.3	-0.4
TIRR	Tirgusor	7.30	26⇓	*i* P	Pn	01 58 40.1	-0.6
HARR	Harsova	7.35	23⇑	*i* P	Pn	01 58 41.0	-0.4
ISR	Istrita	7.41	14⇑	*i* P	Pn	01 58 43.5	+1.3
ARR	Arges	7.42	4⇓	*i* P	Pn	01 58 42.7	+0.4
GZR	Gura Zlata	7.48	354⇑	*i* P	Pn	01 58 42.9	-0.3
LOT	Lotru	7.48	359⇑	*i* P	Pn	01 58 43.8	+0.5
VOIR		7.51	6⇑	*i* P	Pn	01 58 43.9	+0.2
VAE	Valguarnera	7.59	269	Pn	Pn	01 58 48.1	+3.4
	comp=Z,1.3nm,0.3s,baz=90,slow=20,SNR=4.7						
VAE				Sn	Sn	02 00 06.8	-3.7
	comp=Z,3.9nm,0.3s,baz=98,slow=19,SNR=4.6						
MLR	Muntele Rosu	7.67	10	Pn	Pn	01 58 46.8	+1.0
	comp=Z,1.9nm,0.3s,baz=213,slow=5.8,SNR=40						
MLR				LR	LR	02 02 22.5	
	comp=Z,126nm,21.7s,baz=312,slow=43						
MLR	Muntele Rosu	7.67	10	*e*Pn	Pn	01 58 46.0	+0.2
MLR	Muntele Rosu	7.67	10⇓	*i* P	Pn	01 58 47.2	+1.4
BR131	Keskin Array S	7.75	74	*e*Pn	Pn	01 58 51.0	+4.0
FRGS	Fruska Gora	7.83	338	*e*Pn	Pn	01 58 49.9	+1.9
BZS	Buzias	7.85	348⇓	*i* P	Pn	01 58 48.1	-0.1
CFR	Carcaliu	7.86	22⇑	*i* P	Pn	01 58 47.7	-0.6
DOB	Doboj	8.07	329	*e*Pn	Pn	01 58 51.0	-0.3
PLOR	Plostina	8.13	13⇑	*i* P	Pn	01 58 53.1	+1.0
VRI	Vrincioaia	8.16	14⇑	*i* P	Pn	01 58 54.0	+1.5
OZUR		8.24	9⇓	*i* P	Pn	01 58 53.0	-0.6
MGRS	Mrkonjic Grad	8.28	323	*e*Pn	Pn	01 58 55.2	+1.1
BLY	Banja Luka	8.48	325	*e*Pn	Pn	01 58 57.3	+0.4
BLY	Banja Luka	8.48	325⇑	*i* P	Pn	01 58 57.4	+0.5
BLY	Banja Luka	8.48	325	*e*Pn	Pn	01 58 58.2	+1.3
CLTB	Caltabellotta	8.52	271	*e*Pn	Pn	01 58 59.2	+1.6
CJR	Cluj-Napoca	8.75	358⇑	*i* P	Pn	01 59 00.6	0.0
TESR	Tescani	8.77	12⇑	*i* P	Pn	01 59 02.2	+1.4
DRGR		8.87	354⇑	*i* P	Pn	01 59 02.7	+0.4
UDBI	Udbina	9.01	319	*i* Pn	Pn	01 59 04.4	+0.3
UDBI				Sn	Sn	02 00 42.5	-2.8
BIZ	Bicaz	9.11	9⇑	*i* P	Pn	01 59 05.9	+0.4
ARCR	ARCALIA	9.12	2⇑	*i* P	Pn	01 59 07.0	+1.3
AQU	L'Aquila	9.20	302	*e*Pn	Pn	01 59 11.6	+4.8
AQU				*e*Sn	Sn	02 00 49.3	-0.8
AQU	L'Aquila	9.20	302	*e*Pn	Pn	01 59 11.9	+5.1
NVLJ	Novalja	9.50	317	*e*Pn	Pn	01 59 09.9	-0.9
NVLJ				Sn	Sn	02 00 51.4	-5.9
MILM	Milestii Mici	9.64	20⇑	*i* P	Pn	01 59 13.1	+0.4
BURAR	Bucovina Array	9.69	5⇑	*i* P	Pn	01 59 15.0	+1.5
BUR08	Bucovina Ar. S	9.72	5	*e*Pn	Pn	01 59 15.0	+1.1
OZLJ	Ozalj	9.93	323	*e*Pn	Pn	01 59 18.6	+1.9
BOJS	Bojanci	9.96	322	*i* Pn	Pn	01 59 19.4	+2.4
BOJS				*i* Sn	Sn	02 01 05.7	-2.8
BEHE	Becsehely	10.03	330	EPn	Pn	01 59 21.0	+2.9
CRES	Cresnjev	10.09	324	*e*Pn	Pn	01 59 16.9	-2.1
TRPA	Tarpa	10.22	355	EPn	Pn	01 59 23.1	+2.5
CEY	Cerknica	10.53	321	*e*Pn	Pn	01 59 23.6	-1.4
MMAI	Mount Meron Ar	10.55	114	Pn	Pn	01 59 24.7	-0.5
	comp=Z,1.0nm,0.3s,baz=300,slow=12,SNR=6.5						
LJU	Ljubljana	10.70	322	*e*Pn	Pn	01 59 26.2	-1.0
JAVS	Javornik	10.82	320	*i* Pn	Pn	01 59 28.7	-0.3
JAVS				*i* Sn	Sn	02 01 23.0	-6.8
PERS	Pernice	10.86	326	*i* Pn	Pn	01 59 29.0	-0.5
PERS				*i* Sn	Sn	02 01 25.7	-5.1
SOKA	Soboth	10.93	326	*e*Pn	Pn	01 59 30.1	-0.4
	comp=Z,2.4nm,0.5s						
OBKA	Obir	11.02	324	*e*Pn	Pn	01 59 32.4	+0.6
	comp=Z,1.5nm,0.4s						
KOLS	Kolonicke sedl	11.04	354	*e*	Pn	01 59 38.0	+6.2
ARSA	Arzberg	11.17	329	*i* Pn	Pn	01 59 34.2	+0.5
	comp=Z,3.5nm,0.5s						
KBA	Koelnbreinsper	12.01	323	*e*Pn	Pn	01 59 45.2	-0.1
	comp=Z,0.7nm,0.3s						
EIL	Elat	12.31	129	Pn	Pn	01 59 47.9	-1.5
	comp=Z,0.9nm,0.3s,baz=314,slow=8.9,SNR=5.9						
WTTA	Wattenberg	12.98	320	*e*Pn	Pn	01 59 59.2	+0.6
	comp=Z,0.8nm,0.2s						
WATA	Walderalm	13.06	320	*e*Pn	Pn	02 00 00.2	+0.5
	comp=Z,0.9nm,0.3s						
SQTA	Sankt Quirin	13.17	319	*i* Pn	Pn	02 00 01.1	0.0
	comp=Z,2.6nm,0.5s						
GEC2	GERESS Array S	13.18	329	*e*Pn	Pn	02 00 01.6	+0.4
GERES	GERESS Array B	13.18	329	Pn	Pn	02 00 01.6	+0.4
	comp=Z,0.1nm,0.3s,baz=139,slow=11,SNR=2.4						
GERES				LR	LR	02 05 18.8	
	comp=Z,42nm,18.1s,baz=164,slow=38						
AKASG	Malin Array Be	13.28	15	Pn	Pn	02 00 01.2	-1.2
	comp=Z,0.5nm,0.3s,baz=206,slow=12,SNR=3.3						
AKBB	Malin Array Si	13.28	15	*e*Pn	Pn	02 00 01.2	-1.2
MOTA	Moosalm	13.31	319	*e*Pn	Pn	02 00 03.4	+0.4
	comp=Z,0.4nm,0.2s						
CLL	Collm	15.43	333	*e*Pn	P	02 00 36.2	+0.1
	comp=Z,6.8nm,0.8s						
CLL	Collm	15.43	333	*i* sP	P	02 00 37.9	+1.8
	comp=Z,7.0nm,0.9s						
CLL				*i* PP	pP	02 00 40.4	+0.1
SUW	Suwalki	16.06	358	*e*Pn	Pn	02 00 37.2	-2.5
	comp=Z,38nm,1.0s						
ESDC	Sonseca Array	21.80	283	P	P	02 01 45.8	-0.3
	comp=Z,0.8nm,0.4s,baz=78,slow=11,SNR=21						
ESLA	Sonseca Array	21.80	283	*e*P	P	02 01 44.5	-1.6
	comp=Z,6.3nm,1.1s						
TAM	Tamanrasset	21.89	232	*e*P	P	02 01 48.3	+1.1
	comp=Z,4.0nm,1.1s						
PAB	San Pablo	22.11	283	*e*P	P	02 01 48.4	-1.0
	comp=Z,8.4nm,1.1s						
HFS	Hagfors	23.14	347	P	P	02 01 59.3	-0.6
	comp=Z,1.4nm,0.6s,baz=157,slow=16,SNR=4.0						
FIA0	FINESS Array S	23.54	3	*e*P	P	02 02 02.7	-1.3
FINES	FINESS Array B	23.54	3	P	P	02 02 02.7	-1.3
	comp=Z,1.8nm,0.9s,baz=181,slow=12,SNR=3.6						
FINES				LR	LR	02 12 33.2	
	comp=Z,80nm,19.0s,baz=136,slow=40						
NAO01	NORSAR Array S	24.34	344	*e*P	P	02 02 11.4	-0.2
	comp=Z,67nm,1.6s						
NC405	NORSAR Array S	24.42	346	*e*P	P	02 02 13.3	+1.0
	comp=Z,84nm,1.9s						
NB2	NORSAR Subarra	24.45	345	P	P	02 02 15.8	+3.2
	comp=Z,2.2nm,0.9s,baz=160,slow=10						
NB200	NORSAR Array S	24.45	345	*e*P	P	02 02 11.9	-0.7
NOA	NORSAR Array B	24.45	345	P	P	02 02 11.9	-0.7
	comp=Z,0.5nm,0.6s,baz=149,slow=9.5,SNR=5.5						
NOA				LR	LR	02 12 37.9	
	comp=Z,22nm,18.1s,baz=165,slow=39						
NBO00	NORSAR Array S	24.53	344	*e*P	P	02 02 13.7	+0.3
	comp=Z,32nm,1.3s						
PVAQ	Vaqueiros	25.02	279	*e*P	P	02 02 16.7	-1.3
	comp=Z,13nm,1.2s						
EKA	Eskdalemuir Ar	25.22	322	P	P	02 02 18.9	-0.6
	comp=Z,6.9nm,0.9s,baz=118,slow=9.8,SNR=21						
ESK	Eskdalemuir	25.23	322	*e*P	P	02 02 21.3	+1.6
	comp=Z,9.5nm,0.9s						
DSB	Dublin	25.90	316

CLLI	**Llivia**	**6.28 336**	P	**Pn**	**02 09 07.0**	**+1.8**
	0.3nm,0.2s,SNR=7.9					
CLLI			S	**Sn**	**02 10 15.9**	**-0.7**
	0.3nm,0.2s,SNR=7.9					
PGF	**Pioggiola**	**6.40 25**	*e*Pn	**Pn**	**02 09 10.1**	**+3.4**
PGF			*e*Sn	**Sn**	**02 10 17.9**	**-1.5**
	2.0nm,0.2s					
PGF	**Pioggiola**	**6.40 25**	P	**Pn**	**02 09 10.1**	**+3.4**
PGF			S	**Sn**	**02 10 17.9**	**-1.5**
	1.0nm,0.2s					
SESP	**Santiago Espad**	**6.47 284**	P	**Pn**	**02 09 08.7**	**+1.0**
	1.1nm,0.2s,SNR=7.9					
CSOR	**Sort**	**6.50 331**	P	**Pn**	**02 09 09.8**	**+1.8**
	0.5nm,0.2s,SNR=7.9					
CSOR			S	**Sn**	**02 10 19.2**	**-2.5**
	0.5nm,0.2s,SNR=4.0					
LMR	**La Mourre**	**6.61 7**	*e*Pn	**Pn**	**02 09 10.2**	**+0.7**
LMR			*e*Sn	**Sn**	**02 10 21.8**	**-2.5**
	1.8nm,0.2s					
LMR	**La Mourre**	**6.61 7**	P	**Pn**	**02 09 10.2**	**+0.7**
LMR			S	**Sn**	**02 10 21.8**	**-2.5**
	0.9nm,0.2s					
EQES	**Quesada**	**6.84 281**	P	**Pn**	**02 09 13.4**	**+0.7**
	0.5nm,0.3s,SNR=7.9					
EQES			S	**Sn**	**02 10 27.4**	**-2.8**
	0.1nm,0.2s,SNR=7.9					
FRF	**La Foret Royal**	**6.85 8**	*e*Pn	**Pn**	**02 09 13.6**	**+0.8**
FRF			*e*Sn	**Sn**	**02 10 27.5**	**-2.7**
	1.9nm,0.3s					
FRF			*e*Sg	**Sg**	**02 11 09.5**	**-3.4**
	1.3nm,0.2s					
FRF	**La Foret Royal**	**6.85 8**	P	**Pn**	**02 09 13.6**	**+0.8**
FRF			S	**Sn**	**02 10 27.5**	**-2.7**
	0.9nm,0.3s					
SMRF	**Simiane la Rot**	**7.20 1**	*e*Pn	**Pn**	**02 09 20.9**	**+3.3**
SMRF	**Simiane la Rot**	**7.20 1**	P	**Pn**	**02 09 20.9**	**+3.3**
SBF	**Sospel**	**7.25 12**	*e*Pn	**Pn**	**02 09 20.4**	**+2.0**
SBF			*e*Sn	**Sn**	**02 10 37.2**	**-3.1**
	1.1nm,0.2s					
SBF	**Sospel**	**7.25 12**	P	**Pn**	**02 09 20.4**	**+2.0**
SBF			S	**Sn**	**02 10 37.2**	**-3.1**
	0.6nm,0.2s					

NIED ***04*** *02:22:00, 45˚.30N×151˚.50E, h26km, Mw5.3 Best double couple: M0=9.35000×10^16 NP1:φs=233.00000°, δ34.00000°, λ146.00000°. NP2:φs=352.00000°, δ72.00000°, λ61.00000°.*
JMA ***04*** *02:22:54.4±0.6, 45˚.34N×151˚.52E, h30km, M5.4*
SKHL ***04*** *02:22:56.5±0.4, 45˚.03N×151˚.48E, h53km±4km, mbh5.5/2, Ms5.3/1*
BJI ***04*** *02:22:57.4±0.0, 45˚.36N×151˚.04E, h39km, mb5.3/76, mB5.2/64, Ms5.3/85, Ms7 5.1/82*
ISCJB ***04*** *02:22:58.1±0.3, 45˚.35N±0˚.02×150˚.98E±0˚.02, h37km±3km, mb5.1/479, MS5.3/50, Error ellipse: s-maj=3.7km s-min=1.9km az=159.7*
MOS ***04*** *02:22:59.1±1.0, 45˚.42N×150˚.93E, h44km, mb5.4/103, MS5.3/22, Error ellipse: s-maj=5.2km s-min=3.6km az=103.3*
IDC ***04*** *02:23:00.8±0.4, 45˚.45N×150˚.93E, h44km±3km, mb4.6/33, mb1 4.7/41, mb1mx4.7/49, mbtmp4.8/41, ML4.5/6, Error ellipse: s-maj=11.3km s-min=7.9km az=139.0*
NEIC ***04*** *02:23:01.2±1.9, 45˚.41N×150˚.91E, h47km±3km, mb5.1/384, Error ellipse: s-maj=9.5km s-min=7.2km az=118.0*
GCMT ***04*** *02:23:07.2±0.2, 45˚.39N±0˚.01×151˚.15E±0˚.01, h29km, MW5.3/111, Moment Tensor Solution. s88,c154; s111,c208; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.86±.02; Mθθ-0.38±.01; Mφφ-0.47±.01; Mrθ0.28±.03; Mφφ-0.55±.01; Mφr0.66±.03; Best double couple: M0=1.16800×10^17 NP1:φs=30.00000°, δ64.00000°, λ78.00000°. NP2:φs=236.00000°, δ28.00000°, λ114.00000°.*
Principal axes: T 1.1290, Plg68.0000°, Azm276.0000°; N 0.0770, Plg11.0000°, Azm35.0000°; P -1.2070, Plg18.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 04 02:23:00.4±0.3, 45˚.27N±0˚.03×151˚.05E±0˚.03, h47km±2km, h47km:pP-P, n1569, σ1s40/1688, mb5.1/508, MS5.3/51, 137C-20D, Kuril Islands

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.25 270**	*d* iPN	**Pn**	**02 23 33.9**	**-1.2**
KUR			*i* S	**Sn**	**02 24 02.8**	**+1.2**
KUR			pmax	pmax		
	comp=Z,3μm,0.4s					
KUR			pmax	pmax		
	comp=N,1μm,0.3s					
KUR			pmax	pmax		
	comp=E,578nm,0.2s					
KUR			smax	smax		
	comp=N,34μm,2.1s					
KUR			smax	smax		
	comp=E,27μm,2.2s					
KUR			smax	smax		
	comp=N,13μm,0.8s					
KUR			smax	smax		
	comp=E,6μm,0.5s					
KUR	**Kuril'sk**	**2.25 270**	*i* P	**Pn**	**02 23 34.8**	**-0.3**
KUR			AMB	AMB	02 23 43.8	
	comp=E,4μm,0.4s					
KUR			*i* S	**Sn**	**02 24 03.5**	**+1.9**
KUR			A	A	02 24 09.0	
	comp=E,24μm,0.5s					
KUR			A	A	02 24 09.0	
	comp=E,10μm,0.5s					
KUR			AMS	AMS	02 24 40.1	
	comp=E,51μm,12.0s					
KUR			AMS	AMS	02 24 40.1	
	comp=E,66μm,12.0s					
KUR			AMS	AMS	02 24 40.1	
	comp=E,51μm,12.0s					
YUK	**Yuzh-Kuril'sk**	**3.90 253**	*c* iPN	**Pn**	**02 23 57.3**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**3.90 253**	*i* P	**Pn**	**02 23 57.5**	**-0.3**
YUK			AMB	AMB	02 24 05.0	
	comp=E,5μm,0.3s					
YUK			*i* S	**Sn**	**02 24 43.0**	**+0.7**
YUK			A	A	02 24 59.0	
	comp=E,11μm,0.6s					
YUK			A	A	02 24 59.0	
	comp=E,9μm,0.6s					
YUK			AMS	AMS	02 25 40.0	
	comp=E,28μm,14.0s					
YUK			AMS	AMS	02 25 40.0	
	comp=E,32μm,14.0s					
YUK			AMS	AMS	02 25 40.0	
	comp=E,18μm,14.0s					
LAGR	**Lagunnoye**	**3.95 254**	*c* iPN	**Pn**	**02 23 59.2**	**+0.8**
LAGR			*i* S	**Sn**	**02 24 46.3**	**+2.9**
LAGR			pmax	pmax		
	comp=N,3μm,0.4s					
LAGR			pmax	pmax		
	comp=Z,2μm,0.4s					
LAGR			pmax	pmax		
	comp=E,2μm,0.5s					
LAGR			smax	smax		
	comp=E,20μm,0.6s					
LAGR			smax	smax		
	comp=N,10μm,0.4s					
LAGR	**Lagunnoye**	**3.95 254**	*i* P	**Pn**	**02 23 58.4**	**0.0**
LAGR			AMB	AMB	02 24 08.0	
	comp=N,3μm,0.5s					
LAGR			AMB	AMB	02 24 08.0	
	comp=N,2μm,0.5s					
LAGR			AMB	AMB	02 24 08.0	
	comp=N,2μm,0.5s					
LAGR			*i* S	**Sn**	**02 24 45.3**	**+1.9**
LAGR			A	A	02 25 00.0	
	comp=N,10μm,0.6s					
LAGR			A	A	02 25 00.0	
	comp=N,20μm,0.6s					
GRPR	**Tuman**	**3.98 253⇑**	*i* iPN	**Pn**	**02 23 58.2**	**-0.7**
GRPR			*e*S	**Sn**	**02 24 44.6**	**+0.4**
GRPR			pmax	pmax		
	comp=E,906nm,0.3s					
GRPR			pmax	pmax		
	comp=Z,3μm,0.3s					
GRPR			pmax	pmax		
	comp=N,947nm,0.4s					
GRPR			smax	smax		
	comp=E,6μm,0.5s					
GRPR			smax	smax		
	comp=N,2μm,0.6s					
GRPR	**Tuman**	**3.98 253**	*i* P	**Pn**	**02 23 58.0**	**-0.9**
GRPR			AMB	AMB	02 24 08.0	
	comp=N,947nm,0.4s					
GRPR			AMB	AMB	02 24 08.0	
	comp=N,906nm,0.4s					
GRPR			AMB	AMB	02 24 08.0	
	comp=N,3μm,0.4s					
GRPR			*e*S	**Sn**	**02 24 44.0**	**-0.2**
GRPR			A	A	02 24 55.0	
	comp=N,2μm,0.6s					
GRPR			A	A	02 24 55.0	
	comp=N,6μm,0.6s					
GRPR			AMS	AMS	02 25 40.1	
	comp=N,35μm,14.0s					
GLVR	**Golovnino**	**4.24 251**	*e*PN	**Pn**	**02 24 03.0**	**+0.5**
GLVR			*i* S	**Sn**	**02 24 53.2**	**+2.5**
GLVR			pmax	pmax		
	comp=Z,3μm,0.4s					
GLVR			pmax	pmax		
	comp=N,291nm,0.1s					
GLVR			pmax	pmax		
	comp=E,398nm,0.3s					
GLVR			smax	smax		
	comp=N,7μm,0.4s					
GLVR			smax	smax		
	comp=E,6μm,0.4s					
GLVR	**Golovnino**	**4.24 251**	*e*P	**Pn**	**02 24 02.7**	**+0.2**
GLVR			AMB	AMB	02 24 04.0	
	comp=E,291nm,0.4s					
GLVR			AMB	AMB	02 24 04.0	
	comp=E,398nm,0.4s					
GLVR			AMB	AMB	02 24 04.0	
	comp=E,3μm,0.4s					
GLVR			*i* S	**Sn**	**02 24 52.2**	**+1.5**
GLVR			A	A	02 25 03.0	
	comp=E,7μm,0.4s					
GLVR			A	A	02 25 03.0	
	comp=E,6μm,0.4s					
NEM2	**Nemuro 2**	**4.26 245**	P	**Pn**	**02 24 00.9**	**-1.8**
NEM2			*e*S	**Sn**	**02 24 49.6**	**-1.5**
JRA	**Rausu**	**4.44 255**	P	**Pn**	**02 24 05.9**	**+0.7**
JNK	**Nakash**	**4.84 252**	P	**Pn**	**02 24 10.7**	**0.0**
JNK			*e*S	**Sn**	**02 25 06.0**	**+0.6**
JAK	**Akkeshi**	**5.11 246**	P	**Pn**	**02 24 12.7**	**-1.6**
JAK			*e*S	**Sn**	**02 25 11.2**	**-0.8**
JTKR	**Abashiri--Toko**	**5.26 258**	P	**Pn**	**02 24 17.2**	**+0.8**
JAR	**Ashorobuto**	**5.59 252**	P	**Pn**	**02 24 21.2**	**+0.3**
JAR			*e*S	**Sn**	**02 25 24.8**	**+1.0**
JMP	**Maruseppu**	**5.63 260**	P	**Pn**	**02 24 22.6**	**+1.0**
JOB	**Onbets**	**5.71 248**	P	**Pn**	**02 24 21.7**	**-0.9**
JOB			*e*S	**Sn**	**02 25 25.7**	**-1.1**
JSE	**Soyaes**	**6.00 270**	P	**Pn**	**02 24 28.2**	**+1.6**
YSS	**Yuzh-Sakhalins**	**6.01 289**	*e*Pn	**Pn**	**02 24 27.7**	**+1.0**
YSS			*e*Sn	**Sn**	**02 25 28.7**	**-5.3**
YSS	**Yuzh-Sakhalins**	**6.01 289**	*oe*PN	**Pn**	**02 24 28.0**	**+1.3**
YSS			*e*S	**Sn**	**02 25 37.3**	**+3.2**
YSS			pmax	pmax		
	comp=Z,150nm,0.6s					
YSS			pmax	pmax		
	comp=Z,300nm,7.0s					
YSS			pmax	pmax		
	comp=E,500nm,5.9s					
YSS			MLR	MLR		
	comp=E,17μm,16.0s					
YSS			MLR	MLR		
	comp=Z,18μm,16.0s					
YSS	**Yuzh-Sakhalins**	**6.01 289**	*e*P	**Pn**	**02 24 28.3**	**+1.6**
YSS			AMB	AMB	02 24 33.0	
	comp=Z,150nm,0.6s					
YSS			*e*rx	rx	02 24 59.3	
YSS			*e*S	**Sn**	**02 25 37.3**	**+3.2**
YSS			AMS	AMS	02 26 49.0	
	comp=Z,17μm,16.0s					
YSS			AMS	AMS	02 26 49.0	
	comp=Z,18μm,16.0s					
JKK2	**Kamakawa 2**	**6.09 260**	P	**Pn**	**02 24 29.3**	**+1.4**
JKA	**Kamikawa-asahi**	**6.13 262**	*e*P	**Pn**	**02 24 29.7**	**+1.3**
ASAJ	**Asahikawa**	**6.13 262**	P	**Pn**	**02 24 29.7**	**+1.2**
	comp=Z,60nm,0.3s,baz=82,slow=12,SNR=49					
ASAJ	**Asahikawa**	**6.13 262**	P	**Pn**	**02 24 30.2**	**+1.7**
JCH	**Churui**	**6.15 247**	P	**Pn**	**02 24 27.1**	**-1.6**
JCH			*e*S	**Sn**	**02 25 36.9**	**-0.8**
SKR	**Severo-Kuril's**	**6.39 30**	*e*PN	**Pn**	**02 24 30.8**	**-1.1**
SKR			*e*S	**Sn**	**02 25 46.1**	**+2.6**
SKR			pmax	pmax		
	comp=Z,613nm,0.6s					
SKR			smax	smax		
	comp=N,1μm,0.8s					
SKR			smax	smax		
	comp=E,3μm,0.9s					
SKR			MLR	MLR		
	comp=Z,15μm,16.0s					
SKR	**Severo-Kuril's**	**6.39 30**	*e*P	**Pn**	**02 24 30.0**	**-1.9**
SKR			AMB	AMB	02 24 36.0	
	comp=Z,613nm,0.6s					
SKR			*e*S	**Sn**	**02 25 39.1**	**-4.4**
SKR			A	A	02 26 22.0	
	comp=Z,1μm,0.9s					
SKR			A	A	02 26 22.0	
	comp=Z,3μm,0.9s					
SKR			AMS	AMS	02 27 05.0	
	comp=Z,13μm,16.0s					
SKR			AMS	AMS	02 27 05.0	
	comp=Z,18μm,16.0s					
SKR			AMS	AMS	02 27 05.0	
	comp=Z,15μm,16.0s					
JFR	**Furan**	**6.43 254**	P	**Pn**	**02 24 33.2**	**+0.7**
JWK2	**Keihoku**	**6.46 274**	P	**Pn**	**02 24 36.1**	**+3.3**
JAB	**Ashibetsu**	**6.57 257**	P	**Pn**	**02 24 36.6**	**+2.2**
ERM	**Erimo**	**6.58 243**	*e*Pn	**Pn**	**02 24 34.9**	**+0.3**
ERM			*e*Sn	**Sn**	**02 25 47.1**	**-1.2**
ERM	**Erimo**	**6.58 243**	*e*PN	**Pn**	**02 24 34.9**	**+0.3**
JSS	**Shosan**	**6.60 266**	P	**Pn**	**02 24 38.3**	**+3.5**
JNBK	**Urakawa-nobuka**	**6.71 246**	P	**Pn**	**02 24 34.7**	**-1.6**
JNBK			*e*S	**Sn**	**02 25 50.4**	**-1.0**
JBT2	**Biratori 2**	**6.74 251**	P	**Pn**	**02 24 36.0**	**-0.7**
UGL	**Uglegorsk**	**7.21 305**	*e*PN	**Pn**	**02 24 42.9**	**-0.2**
UGL			S	**Sn**	**02 26 09.6**	**+6.1**
UGL			pmax	pmax		
	comp=Z,162nm,0.6s					
UGL			MLR	MLR		
	comp=E,4μm,11.0s					
UGL			MLR	MLR		
	comp=Z,6μm,12.0s					
JEW	**Eniwo**	**7.33 254**	P	**Pn**	**02 24 45.3**	**+0.5**
JNB	**Noboribetsu**	**7.76 252**	P	**Pn**	**02 24 50.1**	**-0.6**
JNB			*e*S	**Sn**	**02 26 13.9**	**-3.2**
JSK	**Shakotan**	**7.82 260**	P	**Pn**	**02 24 53.9**	**+2.3**
TYV	**Tymovskoe**	**7.93 318**	*e*PN	**Pn**	**02 24 54.3**	**+1.3**
TYV			*e*S	**Sn**	**02 26 27.2**	**+6.0**
TYV			pmax	pmax		
	comp=Z,91nm,0.4s					
TYV			smax	smax		
	comp=E,221nm,0.9s					
TYV			MLR	MLR		
	comp=Z,12μm,16.0s					
TYV	**Tymovskoe**	**7.93 318**	*e*P	**Pn**	**02 24 54.3**	**+1.3**
TYV			AMB	AMB	02 24 56.5	
	comp=Z,910nm,0.4s					
TYV			*e*S	**Sn**	**02 26 23.2**	**+2.0**
TYV			A	A	02 26 27.7	
	comp=Z,220nm,0.9s					
TYV			AMS	AMS	02 26 58.8	
	comp=Z,12μm,16.0s					
TYV			AMS	AMS	02 26 58.8	
	comp=Z,17μm,16.0s					
JKB	**Kayabe**	**8.02 249**	P	**Pn**	**02 24 52.7**	**-1.6**
JKB			*e*S	**Sn**	**02 26 18.7**	**-4.8**
JYM2	**Yakumo 2**	**8.36 252**	P	**Pn**	**02 24 59.0**	**+0.1**
JSH	**Shimam**	**8.36 256**	P	**Pn**	**02 24 59.4**	**+0.4**
JANG	**Nango**	**8.54 238**	P	**Pn**	**02 24 57.1**	**-4.4**
JANG			*e*S	Sn	02 26 27.1	-9.4
JTM	**Tenmabayashi**	**8.57 242**	P	**Pn**	**02 24 59.5**	**-2.4**
JTM			*e*S	**Sn**	**02 26 31.6**	**-5.6**
JSR	**Shiriuchi**	**8.60 248**	P	**Pn**	**02 25 00.6**	**-1.6**
JSR			*e*S	**Sn**	**02 26 33.0**	**-4.7**
JTH	**Tanohata**	**8.62 235**	*e*S	**Sn**	**02 26 29.3**	**-8.9**
PEA0B	**Petropavlovsk-**	**8.97 27**	*e*Pn	**Pn**	**02 25 08.0**	**+0.7**
PEA0B			*e*Sn	**Sn**	**02 26 44.9**	**-1.8**
PETK	**Petropavlovsk-**	**8.97 27**	P	**Pn**	**02 25 05.9**	**-1.3**
	comp=Z,3.3nm,0.3s,baz=174,slow=9.9,SNR=60					
PETK			S	**Sn**	**02 26 45.9**	**-0.8**
	baz=161,slow=18,SNR=1.5					
PEA1	**Petropavlovsk-**	**8.97 27**	*e*Pn	**Pn**	**02 25 05.9**	**-1.4**
PEA1			*e*Sn	**Sn**	**02 26 45.9**	**-0.9**
JOSM	**Okushiri--Mats**	**8.97 253**	P	**Pn**	**02 25 06.5**	**-0.8**
PET	**Petropavlovsk**	**9.21 30**	*e*Pn	**Pn**	**02 25 07.3**	**-3.3**
PET			*e*Sn	**Sn**	**02 26 49.6**	**-3.2**
PET	**Petropavlovsk**	**9.21 30**	*e*PN	**Pn**	**02 25 12.2**	**+1.6**
PET			pmax	pmax		
	comp=Z,57nm,0.7s					
PET			MLR	MLR		
	comp=Z,8μm,19.0s					
PET			MLR	MLR		
	comp=Z,7μm,18.0s					
PET	**Petropavlovsk**	**9.21 30**	*e*P	**Pn**	**02 25 09.0**	**-1.6**
PET			AMB	AMB	02 25 20.0	
	comp=Z,57nm,0.7s					
PET			AMS	AMS	02 28 52.7	
	comp=Z,7μm,18.0s					
OFUJ	**Ofunato**	**9.31 232**	*e*S	**Sn**	**02 26 46.8**	**-8.5**
JRG	**Rokugo**	**9.69 236**	*e*S	**Sn**	**02 26 58.7**	**-5.8**
OKH	**Okha**	**9.82 330**	*c* iPN	**Pn**	**02 25 21.9**	**+3.0**
OKH			pmax	pmax		
	comp=Z,400nm,15.2s					
OKH			MLR	MLR		
	comp=Z,7μm,15.0s					
OKH	**Okha**	**9.82 330**	*i* P	**Pn**	**02 25 21.4**	**+2.5**
OKH			*i* S	**Sn**	**02 27 10.2**	**+2.6**
OKH			AMS	AMS	02 28 40.8	
	comp=Z,6μm,15.0s					
OKH			AMS	AMS	02 28 40.8	
	comp=Z,8μm,15.0s					
OKH			AMS	AMS	02 28 40.8	
	comp=Z,7μm,15.0s					
TEY	**Ternei**	**10.21 274⇓**	*e*PN	**Pn**	**02 25 28.0**	**+3.8**
TEY			*e*S	**Sn**	**02 27 20.9**	**+3.7**
TEY			pmax	pmax		
	comp=N,10.0nm,0.8s					
TEY			pmax	pmax		
	comp=Z,30nm,0.7s					
TEY			pmax	pmax		
	comp=E,30nm,0.7s					
TEY			MLR	MLR		
	comp=E,8μm,18.0s					
TEY			MLR	MLR		
	comp=N,6μm,17.0s					
TEY			MLR	MLR		
	comp=Z,9μm,17.0s					
TEY	**Ternei**	**10.21 274**	*e*P	**Pn**	**02 25 26.3**	**+2.1**
TEY			AMB	AMB	02 25 28.6	
	comp=Z,1.0nm,0.7s					
TEY			AMB	AMB	02 25 28.6	
	comp=Z,3.0nm,0.7s					
TEY			*e*S	**Sn**	**02 27 17.6**	**+0.4**
TEY			AMS	AMS	02 29 30.1	
	comp=Z,6μm,17.0s					
TEY			AMS	AMS	02 29 30.1	
	comp=Z,8μm,17.0s					
TEY			AMS	AMS	02 29 30.1	
	comp=Z,9μm,17.0s					
NKL	**Nikolayevsk**	**10.39 323**	*e*P	**Pn**	**02 25 27.0**	**+0.4**
NKL			AMB	AMB	02 25 29.6	
	comp=Z,73nm,0.7s					
NKL			AMB	AMB	02 25 32.0	
	comp=Z,700nm,9.0s					
NKL			AMB	AMB	02 25 32.0	
	comp=Z,800nm,9.0s					
NKL			AMS	AMS	02 29 54.0	
	comp=Z,6μm,15.0s					
NKL			AMS	AMS	02 29 54.0	
	comp=Z,5μm,15.0s					
GRNR	**Gornyy**	**11.23 305**	*e*PN	**Pn**	**02 25 41.7**	**+3.6**
GRNR			pmax	pmax		
	comp=Z,230nm,1.0s					
GRNR	**Gornyy**	**11.23 305**	*e*P	**Pn**	**02 25 41.7**	**+3.6**
GRNR			AMB	AMB	02 34 44.7	
	comp=Z,230nm,1.0s					
MAJO	**Matsushiro**	**13.04 232**	*e*Pn	**Pn**	**02 26 00.3**	**-2.7**
MAJO			*e*Sn	**Sn**	**02 28 19.8**	**-6.7**
MAJO	**Matsushiro**	**13.04 232**	*e*PN	**Pn**	**02 26 00.3**	**-2.7**
MJAR	**Matsushiro Arr**	**13.04 232**	P	**Pn**	**02 26 00.0**	**-2.9**
	comp=Z,0.6nm,0.3s,baz=51,slow=9.9,SNR=22					
MJB9	**Matsu-Tunnel**	**13.04 233**	*e*Pn	**Pn**	**02 26 00.7**	**-2.2**
MJB9			*e*Sn	**Sn**	**02 28 21.9**	**-4.6**
USA0B	**Ussuriysk Arra**	**13.60 272**	*e*Pn	**Pn**	**02 26 10.3**	**-0.2**
USA0B			*e*Sn	**Sn**	**02 28 32.9**	**-7.0**
USRK	**Ussuriysk Ar.**	**13.60 272**	P	**Pn**	**02 26 10.2**	**-0.2**
	comp=Z,4.0nm,0.3s,baz=86,slow=11,SNR=43					
KLR	**Kul'dur**	**13.69 294**	P	**Pn**	**02 26 11.5**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=100,slow=15,SNR=9.0					
KLR	**Kul'dur**	**13.69 294**	*c* iP	**Pn**	**02 26 12.5**	**+0.8**
KLR	**Kul'dur**	**13.69 294**	*e*P	**Pn**	**02 26 12.5**	**+0.8**
VLA	**Vladivostok**	**13.92 268**	*e*P	**Pn**	**02 26 14.4**	**-0.4**
VLA	**Vladivostok**	**13.92 268**	*e*P	**Pn**	**02 26 14.4**	**-0.4**
EKMR	**Ekimchan**	**14.15 310**	*e*P	**Pn**	**02 26 17.9**	**-0.1**
EKMR			AMB	AMB	02 26 49.5	
	comp=Z,4.0nm,0.6s					
MA2	**Magadan**	**14.33 359**	P	**Pn**	**02 26 19.9**	**-0.4**
	comp=Z,5.4nm,0.3s,baz=194,slow=10,SNR=17					
MA2	**Magadan**	**14.33 359**	*e*Pn	**Pn**	**02 26 19.6**	**-0.6**
MA2	**Magadan**	**14.33 359**	*i* P	**Pn**	**02 26 19.5**	**-0.8**
MA2	**Magadan**	**14.33 359**	*e*P	**Pn**	**02 26 19.5**	**-0.8**
INU	**Inuyama**	**14.57 232**	*e*Pn	**Pn**	**02 26 20.6**	**-3.0**
MSHR	**Mys Shultsa**	**14.58 266**	*i* P	**Pn**	**02 26 21.8**	**-1.9**
JHJ	**Hachijo jima 2**	**14.93 220**	P	**Pn**	**02 26 26.0**	**-2.4**
	comp=Z,6.1nm,0.3s,baz=108,slow=20,SNR=2.3					
JHJ			S	Sn	02 28 58.2	-14
	comp=Z,14nm,0.3s,baz=102,slow=20,SNR=3.7					
MDJ	**Mudanjiang**	**15.21 275**	P	**Pn**	**02 26 32.7**	**+0.8**
MDJ			pP	P	02 26 40.9	+4.8
MDJ			sP	pP	02 26 47.6	+0.8
MDJ			S	**Sn**	**02 29 18.1**	**-1.0**
MDJ			sS	S	02 29 30.6	-3.4
MDJ			pmax	pmax		
	comp=Z,58nm,0.8s					
MDJ			pmax	pmax		
	comp=Z,94nm,4.0s					
MDJ			LR	LR		
	comp=Z,8μm,17.8s					
MDJ			LR	LR		
	comp=Z,8μm,19.2s					
MDJ			LR	LR		
	comp=Z,14μm,18.5s					
MDJ	**Mudanjiang**	**15.21 275**	*e*P	**Pn**	**02 26 33.2**	**+1.3**
	comp=Z,43nm,0.8s					
SMY	**Shemya**	**16.82 55**	*e*P	**P**	**02 26 53.7**	**-0.1**
	comp=Z,151nm,1.5s					
SMY	**Shemya**	**16.82 55**	*e*P	**P**	**02 26 53.7**	**-0.1**
SMY			pmax	pmax		
	comp=Z,151nm,1.5s					
BMKR	**Bomnak**	**17.05 312**	*e*P	**Pn**	**02 26 53.8**	**-1.4**
BMKR			AMB	AMB	02 27 21.8	
	comp=Z,65nm,0.5s					
ZEA	**Zeya**	**17.56 307**	*e*P	**Pn**	**02 27 00.5**	**-1.0**
ZEA			*e*S	**Sn**	**02 30 18.0**	**+2.1**
ZEA			pmax	pmax		
	comp=Z,1μm,8.0s					
ZEA			pmax	pmax		
	comp=E,1μm,7.0s					
ZEA			pmax	pmax		
	comp=N,500nm,6.0s					
ZEA			pmax	pmax		
	comp=E,71nm,1.0s					
ZEA			pmax	pmax		
	comp=N,86nm,1.2s					
ZEA			pmax	pmax		
	comp=Z,140nm,1.2s					
ZEA			smax	smax		
	comp=N,400nm,11.0s					
ZEA			MLR	MLR		
	comp=E,6μm,16.0s					
ZEA			MLR	MLR		
	comp=Z,10μm,16.0s					
ZEA			MLR	MLR		
	comp=N,4μm,15.0s					
ZEA	**Zeya**	**17.56 307**	*e*P	**Pn**	**02 27 00.5**	**-1.0**
ZEA			AMB	AMB	02 27 05.0	
	comp=N,500nm,7.0s					
ZEA			AMB	AMB	02 27 05.0	
	comp=N,1μm,7.0s					
ZEA			AMB	AMB	02 27 05.0	
	comp=N,1μm,7.0s					
ZEA			AMB	AMB	02 27 06.6	
	comp=N,86nm,1.0s					
ZEA			AMB	AMB	02 27 06.6	
	comp=N,71nm,1.0s					
ZEA			AMB	AMB	02 27 06.6	
	comp=N,140nm,1.0s					
ZEA			AMS	AMS	02 34 19.0	

comp=N,4μm,16.0s
ZEA AMS AMS 02 34 19.0
comp=N,6μm,16.0s
ZEA AMS AMS 02 34 19.0
comp=N,10μm,16.0s
SEY Seymchan 17.71 2 P **Pn 02 27 01.6 -1.8**
comp=N,0.5nm,0.3s,baz=189,slow=11,SNR=8.0
SEY Seymchan 17.71 2 *i* P **Pn 02 27 00.5 -2.8**
SEY Seymchan 17.71 2 *e*P **Pn 02 27 00.5 -2.8**
KROS Kirovskiy 17.95 309 *e*P **Pn 02 27 05.8 -0.5**
KROS AMB AMB 02 27 12.0
comp=N,23nm,0.4s
KROS AMB AMB 02 27 12.0
comp=N,38nm,0.4s
KROS AMB AMB 02 27 12.0
comp=N,64nm,0.4s
CN2 Changchun 18.29 275 *e*P **P 02 27 08.8 -1.4**
CN2 *e*sP sP 02 27 24.5 -2.4
CN2 *e*S **Sn 02 30 27.2 -6.6**
CN2 pmax pmax
comp=N,200nm,4.0s
CN2 LR LR
comp=N,7μm,19.0s
CN2 LR LR
comp=N,5μm,19.0s
CN2 LR LR
comp=N,6μm,19.0s
KSRS Korea Array 18.99 254 P **P 02 27 17.3 -0.7**
comp=N,2.2nm,0.3s,baz=58,slow=12,SNR=63
KSRS PcP **PcP 02 31 43.0 +1.4**
comp=N,0.4nm,0.3s,baz=11,slow=1.8,SNR=4.1
KS15 Wonju Array Si 19.02 254 *e*P **Pn 02 27 19.4 -0.1**
comp=N,29nm,0.8s
KS15 *e*PcP **PcP 02 31 43.0 +1.4**
JNU Nakatsue 19.73 239 P **P 02 27 26.5 +0.5**
comp=N,1.8nm,0.3s,baz=31,slow=9.7,SNR=18
JNU Nakatsue 19.73 239 *e*P **Pn 02 27 27.1 -0.7**
comp=N,67nm,1.1s
TJN Taejon 19.95 252*c i*P **P 02 27 28.3 -0.1**
SNY Shenyang 20.17 270 ⇑P **P 02 30 27.4 -0.3**
SNY S Sn 02 31 19.5 +0.6
SNY pmax pmax
comp=N,44nm,0.8s
SNY pmax pmax
comp=N,890nm,3.5s
SNY LR LR
comp=N,3μm,15.2s
SNY LR LR
comp=N,5μm,15.7s
SNY LR LR
comp=N,9μm,16.2s
YAK Yakutsk 20.86 331 *e*P **P 02 27 37.1 -0.8**
comp=N,201nm,0.8s
YAK Yakutsk 20.86 331 *e*P **P 02 27 37.7 -0.3**
YAK *e* 02 28 02.6
YAK *e*S **S 02 31 26.2 -1.4**
YAK *e**SS **sS 02 31 40.7 -3.5**
YAK *e*SS **SnSn 02 31 54.0 +3.7**
YAK Yakutsk 20.86 331 *e*P **P 02 27 37.7 -0.3**
HIA Hailar 21.53 292 *e*P **P 02 27 42.9 -2.5**
comp=N,22nm,0.8s
HIA Hailar 21.53 292 *e*P **P 02 27 42.9 -2.5**
HIA pmax pmax
comp=Z,22nm,0.8s
ADK Adak 22.22 61 *e*P **P 02 27 52.5 -0.2**
comp=Z,78nm,1.4s
ADK Adak 22.22 61 *e*P **P 02 27 52.5 -0.2**
ADK pmax pmax
comp=Z,78nm,1.4s
GSTR Great Sitkin T 22.62 61 *e*P **P 02 27 56.1 -0.9**
DL2 Dalian 22.66 264⇑*i*P **P 02 27 56.5 -1.0**
DL2 sP **sP 02 28 14.1 +0.3**
DL2 S **S 02 32 03.0 +0.8**
DL2 pmax pmax
comp=Z,58nm,0.7s
DL2 pmax pmax
comp=Z,520nm,3.8s
DL2 LR LR
comp=Z,1μm,19.8s
DL2 LR LR
comp=Z,1μm,21.4s
DL2 LR LR
comp=Z,2μm,23.1s
ATKA Atka Island 23.77 60 *e*P **P 02 28 06.7 -1.7**
comp=Z,71nm,1.2s
BILL Bilibino 24.16 14 *e*P **P 02 28 09.8 -2.0**
comp=Z,11nm,0.7s
BILL Bilibino 24.16 14 *i* P **P 02 28 10.0 -1.8**
BILL *i* 02 28 41.3
BILL *i* S **S 02 32 23.7 -2.6**
BILL pmax pmax
comp=Z,10.0nm,0.9s
BILL MLR MLR
comp=Z,6μm,18.0s
BILL Bilibino 24.16 14 *e*P **P 02 28 10.0 -1.8**
BOD Bodaibo 25.87 312 *e*P **P 02 28 24.6 -2.8**
JOW Kunigami 25.89 232 *e*P **P 02 28 25.5 -2.3**
comp=Z,16nm,0.9s
BJT Baijiatuau 26.05 271 *e*P **P 02 28 30.7 +1.5**
comp=Z,39nm,0.7s
BJT Baijiatuau 26.05 271 *e*P **P 02 28 30.7 +1.5**
BJT pmax pmax
comp=Z,39nm,0.7s
TIA Tai'an 27.08 262 P **P 02 28 38.9 +0.4**
TIA S **S 02 33 16.8 +3.6**
TIA pmax pmax
comp=Z,16nm,1.4s
TIA pmax pmax
comp=Z,350nm,4.9s
TIA LR LR
comp=Z,2μm,17.1s
TIA LR LR
comp=Z,1μm,14.7s
TIA LR LR
comp=Z,1μm,15.7s
NJ2 Nanjing 28.19 253 *e*P **P 02 28 49.2 +0.8**
NJ2 sS **sS 02 33 50.4 +0.6**
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,290nm,3.5s
NJ2 LR LR
comp=Z,3μm,19.0s
NJ2 LR LR
comp=Z,4μm,16.8s
NJ2 LR LR
comp=Z,6μm,17.4s
TIXI Tiksi 28.51 345 P **P 02 28 48.2 -2.6**
comp=Z,12nm,0.5s,baz=144,slow=8.3,SNR=24
TIXI Tiksi 28.51 345 *e*P **P 02 28 47.4 -3.5**
comp=Z,16nm,0.5s
TIXI Tiksi 28.51 345*ce*P **P 02 28 48.3 -2.6**
TIXI pmax pmax
comp=Z,14nm,0.7s
H11N2 WAKE ISLAND Hy 28.66 148 T T 02 59 32.7
baz=333,SNR=2741
H11N1 WAKE ISLAND Hy 28.67 148 T T 02 59 32.7
baz=333,slow=74,SNR=2509
H11N3 WAKE ISLAND Hy 28.67 148 T T 02 59 35.0
baz=333,slow=74,SNR=3263
HHC Hu-ho-hao-te 28.98 275 *e*P **P 02 28 55.8 +0.3**
HHC S **S 02 33 40.0 -3.2**
HHC pmax pmax
comp=Z,74nm,0.9s
HHC pmax pmax
comp=Z,390nm,5.7s
HHC LR LR
comp=Z,2μm,14.2s
HHC LR LR
comp=Z,7μm,16.1s
HHC LR LR
comp=Z,10μm,16.1s
TIY Taiyuan 29.67 269 *e*P **P 02 29 03.0 +1.4**
TIY S **S 02 33 54.7 +0.7**
TIY sS **sS 02 34 16.1 +2.9**
TIY pmax pmax
comp=Z,46nm,0.9s
TIY pmax pmax
comp=Z,280nm,4.3s
TIY LR LR
comp=Z,1μm,17.2s
TIY LR LR
comp=Z,1μm,15.7s
TIY LR LR
comp=Z,2μm,19.0s
H11S1 WAKE ISLAND Hy 29.70 149 T T 03 00 55.4
baz=340,slow=76,SNR=2284
H11S3 WAKE ISLAND Hy 29.71 149 T T 03 00 52.5
baz=340
H11S2 WAKE ISLAND Hy 29.72 149 T T 03 00 54.2
baz=340,slow=76,SNR=1939
ULN Ulaanbaatar 30.05 291 *e*P **P 02 29 04.5 -0.5**
comp=Z,18nm,1.0s
ULN Ulaanbaatar 30.05 291 *e*P **P 02 29 04.5 -0.5**
ULN pmax pmax
comp=Z,18nm,1.0s
ULN Ulaanbaatar 30.05 291 P **P 02 29 04.3 -0.7**
SNR=6.5
ULN Ulaanbaatar 30.05 291 *e*P **P 02 29 04.5 -0.5**
BTO Baotou 30.16 276 *e*P **P 02 29 06.0 0.0**
SONA0 Songino Array 30.49 291 *e*P **P 02 29 07.8 -1.1**
SONA0 *e*PcP **PcP 02 32 07.9 +1.0**
SONM Songino Array 30.49 291 P **P 02 29 07.8 -1.1**
comp=Z,3.0nm,0.4s,baz=81,slow=7.4,SNR=16
SONM PcP **PcP 02 32 07.9 +1.0**
comp=Z,3.0nm,0.8s,baz=74,slow=1.9,SNR=2.7
ANM Nome 30.73 36 *e*P **P 02 29 07.6 -3.0**
comp=Z,9.6nm,0.9s
ANM Nome 30.73 36 *e*P **P 02 29 07.6 -3.0**
ANM pmax pmax
comp=Z,10.0nm,0.9s
TLY Talaya 31.61 299 *e*P **P 02 29 19.1 +0.6**
comp=Z,6.3nm,0.7s
TLY Talaya 31.61 299 *e*P **P 02 29 19.1 +0.6**
TLY pmax pmax
comp=Z,6.0nm,0.7s
TLY Talaya 31.61 299 *e*P **P 02 29 18.4 -0.1**
ZAK Zakamensk 32.03 297 *e*P P 02 29 16.0 -6.3
ZAK pmax pmax
comp=Z,12nm,1.4s
WHN Wuhan 32.17 256 ⇓P **P 02 29 23.4 -0.2**
WHN S **S 02 34 31.9 -1.1**
WHN pmax pmax
comp=Z,110nm,0.8s
WHN pmax pmax
comp=Z,470nm,4.2s
WHN LR LR
comp=Z,5μm,22.3s
WHN LR LR
comp=Z,7μm,18.0s
WHN LR LR
comp=Z,8μm,17.9s
SSLB Suanglung 32.47 239 *e*P **P 02 29 26.3 -0.1**
comp=Z,12nm,1.1s
YULB Yu-li 32.56 238 *e*P P 02 29 32.0 +4.9
comp=Z,16nm,0.8s
TPUB Ta-pu 33.03 239 *e*P **P 02 29 31.9 +0.6**
comp=Z,50nm,0.8s
QZH Quanzhou 33.09 243⇑*i*P **P 02 29 32.7 +1.1**
QZH sP **sP 02 29 49.0 +0.9**
QZH S **S 02 34 50.7 +3.4**
QZH sS **sS 02 35 07.9 +1.3**
QZH pmax pmax
comp=Z,470nm,2.9s
QZH LR LR
comp=Z,330nm,17.5s
QZH LR LR
comp=Z,1μm,18.9s
QZH LR LR
comp=Z,1μm,18.9s
TWG Pinlang 33.13 238 *e*P **P 02 29 31.6 -0.5**
comp=Z,136nm,0.9s
MOY Mondy 33.24 299 *e*P **P 02 29 35.4 +2.5**
MOY pmax pmax
comp=Z,15nm,2.1s
KNMB Chin-men Tao 33.56 243 *e*P **P 02 29 35.9 +0.1**
comp=Z,44nm,0.8s
XAN Xi'an 33.96 266 P **P 02 29 39.1 -0.2**
XAN S **S 02 35 01.6 +0.7**
XAN pmax pmax
comp=Z,14nm,0.8s
XAN pmax pmax
comp=Z,280nm,5.1s
XAN LR LR
comp=Z,2μm,15.7s
XAN LR LR
comp=Z,1μm,17.6s
XAN LR LR
comp=Z,2μm,18.4s
XAN Xi'an 33.96 266 *e*P **P 02 29 39.4 +0.1**
comp=Z,20nm,0.9s
XAN Xi'an 33.96 266 *e*P **P 02 29 39.4 +0.1**
XAN pmax pmax
comp=Z,20nm,0.9s
SVW2 Sparrevohn 34.55 43 *e*P **P 02 29 44.5 +0.5**
comp=Z,22nm,1.4s
ENH Enshi 35.68 260 *e*P **P 02 29 53.2 -0.9**
comp=Z,43nm,1.0s
KDAK Kodiak Island 36.16 49 *e*P **P 02 29 56.8 -1.0**
comp=Z,31nm,0.9s
KDAK Kodiak Island 36.16 49 *e*P **P 02 29 56.8 -1.0**
KDAK pmax pmax
comp=Z,31nm,0.9s
CAST Castle Rocks 36.29 40 *e*P **P 02 29 59.7 +0.7**
comp=Z,12nm,0.8s
LZH Lanzhou 36.50 272 ⇑P **P 02 30 02.2 +0.9**
LZH pP pP 02 30 14.3 +1.1
LZH sP sP 02 30 19.7 +1.1
LZH PP **PP 02 31 24.1 -0.7**
LZH S **S 02 35 40.1 -0.1**
LZH sS sS 02 36 00.2 +0.6
LZH SS **SS 02 38 07.0 -14**
LZH pmax pmax
comp=Z,160nm,1.0s
LZH pmax pmax
comp=Z,500nm,5.4s
LZH LR LR
comp=Z,2μm,12.5s
LZH LR LR
comp=Z,2μm,13.6s
LZH LR LR
comp=Z,3μm,16.8s
BPAW Bear Paw Mtn. 36.81 38 *e*P **P 02 30 03.2 -0.2**
comp=Z,8.2nm,0.8s
BRLK Bradley Lake 36.89 46 *e*P **P 02 30 02.9 -1.3**
comp=Z,17nm,0.8s
SUA Susitna One 36.89 43 *e*P **P 02 30 04.5 +0.2**
comp=Z,14nm,1.0s
MLY Manley 36.96 37 *e*P **P 02 30 05.1 +0.4**
comp=Z,12nm,0.8s
COLD Coldfoot 37.36 33 *e*P **P 02 30 07.8 -0.2**
comp=Z,7.1nm,1.2s
RC01 Rabbit Creek A 37.39 43 *e*P **P 02 30 06.8 -1.5**
comp=Z,19nm,1.1s
BWN Browne 37.48 38 *e*P **P 02 30 10.2 +1.1**
comp=Z,66nm,1.0s
SEW Seward 37.59 45 *e*P **P 02 30 09.4 -0.6**
comp=Z,24nm,1.0s
PMR Palmer 37.66 43 *e*P **P 02 30 11.6 +1.0**
comp=Z,9.6nm,0.8s
MCK McKinley 37.71 39 *e*P **P 02 30 11.2 +0.3**
comp=Z,19nm,0.8s
RND Reindeer 37.74 40 *e*P **P 02 30 10.2 -1.2**
comp=Z,22nm,1.0s
RND Reindeer 37.74 40 *e*P **P 02 30 10.2 -1.2**
RND pmax pmax
comp=Z,22nm,1.0s
TOLK Toolik Lake Re 37.76 31 *e*P **P 02 30 11.7 +0.3**
comp=Z,15nm,0.8s
TOLK Toolik Lake Re 37.76 31 P **P 02 30 11.3 -0.1**
baz=263
GTA Gaotai 37.79 280 P **P 02 30 12.5 +0.4**
GTA pP pP 02 30 25.0 +0.9
GTA sP sP 02 30 30.2 +0.8
GTA S **S 02 36 00.4 +0.8**
GTA sS sS 02 36 19.4 +0.4
GTA SS **SnSn 02 38 36.5 -6.4**
GTA pmax pmax
comp=Z,27nm,0.8s
GTA pmax pmax
comp=Z,290nm,10.0s
GTA LR LR
comp=Z,1μm,18.9s
GTA LR LR
comp=Z,2μm,17.2s
GTA LR LR
comp=Z,3μm,17.5s
KNK Knik Glacier 37.99 43 *e*P **P 02 30 14.1 +0.6**
comp=Z,27nm,0.9s
MDM Murphy Dome 38.03 37 *e*P **P 02 30 13.6 0.0**
comp=Z,12nm,1.0s
SML Sawmill 38.03 42 *e*P **P 02 30 14.1 +0.3**
comp=Z,48nm,0.8s
SML Sawmill 38.03 42 *e*P **P 02 30 14.1 +0.3**
SML pmax pmax
comp=Z,48nm,0.8s
WRH Wood River Hil 38.08 38 *e*P **P 02 30 14.4 +0.4**
comp=Z,13nm,0.9s
TCOL CIGO, UAF Yank 38.18 37 P **P 02 30 15.2 +0.3**
baz=270
COLA College 38.19 37 *e*P **P 02 30 15.8 +0.9**
comp=Z,31nm,0.9s
COLA College 38.19 37 *e*P **P 02 30 15.8 +0.9**
COLA pmax pmax
comp=Z,31nm,0.9s
CCB Clear Creek Bu 38.20 38 *e*P **P 02 30 15.4 +0.3**
comp=Z,7.2nm,0.8s
POKR Poker Plat Res 38.37 37 P **P 02 30 16.3 -0.2**
baz=270
DHY Denali Highway 38.42 40 *e*P **P 02 30 16.9 -0.3**
comp=Z,14nm,0.9s
SCM Sheep Creek Mo 38.51 42 *e*P **P 02 30 18.7 +0.9**
comp=Z,18nm,1.0s
SCM Sheep Creek Mo 38.51 42 *e*P **P 02 30 18.7 +0.9**
SCM pmax pmax
comp=Z,18nm,1.0s
HDA Harding Lake 38.58 38 *e*P **P 02 30 17.5 -0.7**
comp=Z,13nm,0.6s
HDA Harding Lake 38.58 38 P **P 02 30 17.5 -0.7**
baz=271
ILAR Eielson Array 38.60 37 P **P 02 30 17.9 -0.5**
comp=Z,6.7nm,0.8s,baz=259,slow=8.8,SNR=34
ILAR Eielson Array 38.60 37 P **P 02 30 18.0 -0.5**
ILB Eielson Array 38.60 37 *e*P **P 02 30 18.3 -0.1**
comp=Z,16nm,1.1s
GLI Glacier Island 38.69 44 *e*P **P 02 30 19.5 +0.3**
comp=Z,19nm,0.9s
PRP Porcupine Dome 39.17 36 *e*P **P 02 30 24.2 +0.8**
comp=Z,7.7nm,0.6s
FYU Fort Yukon 39.28 34 *e*P **P 02 30 25.1 +1.0**
comp=Z,21nm,0.9s
PAX Paxson 39.29 40 *e*P **P 02 30 26.5 +2.1**
PAX Paxson 39.29 40 *e*P **P 02 30 26.5 +2.1**
NRIK Noril'sk 39.30 330 P **P 02 30 23.5 -0.7**
comp=Z,2.9nm,0.5s,baz=109,slow=9.7,SNR=5.4
CD2 Chengdu 39.32 265⇑*i*P **P 02 30 24.0 -0.9**
CD2 sP sP 02 30 41.4 -1.1
CD2 PP **PP 02 31 57.2 +1.5**
CD2 PcP **PcP 02 32 32.5 -0.3**
CD2 S **S 02 36 21.0 -1.7**
CD2 sS sS 02 36 41.7 -0.5
CD2 pmax pmax
comp=Z,200nm,0.9s
CD2 pmax pmax
comp=Z,440nm,5.4s
CD2 LR LR
comp=Z,2μm,17.9s
CD2 LR LR
comp=Z,2μm,15.8s
CD2 LR LR
comp=Z,2μm,16.9s
RIDG Independent Ri 39.53 39 *e*P **P 02 30 26.5 +0.3**
comp=Z,18nm,1.0s
DOT Dot Lake 39.88 39 *e*P **P 02 30 28.4 -0.8**
comp=Z,10nm,0.8s
SCRK Sand Creek 39.89 39 *e*P **P 02 30 28.7 -0.7**
comp=Z,8.4nm,0.8s
GYA Guiyang 39.99 257⇑*i*P **P 02 30 30.2 -0.4**
GYA pP pP 02 30 42.8 +0.3
GYA sP sP 02 30 47.6 -0.1
GYA PP **PnPn 02 32 06.2 -0.6**
GYA S **S 02 36 30.9 -2.0**
GYA sS sS 02 36 51.0 -1.4
GYA SS **SS 02 39 21.2 -10**
GYA pmax pmax
comp=Z,50nm,0.8s
GYA pmax pmax
comp=Z,220nm,8.2s
GYA LR LR
comp=Z,1μm,17.5s
GYA LR LR
comp=Z,2μm,17.5s
GYA LR LR
comp=Z,3μm,16.5s
MENT Mentasta 40.09 40 *e*P **P 02 30 32.1 +1.1**
comp=Z,11nm,0.6s
CRQM Cirque 40.63 43 *e*P **P 02 30 37.1 +1.5**
comp=Z,71nm,0.9s
BALM Baldy 40.97 43 *e*P **P 02 30 39.9 +1.6**
comp=Z,32nm,1.2s
BALM Baldy 40.97 43 *e*P **P 02 30 39.9 +1.6**
BALM pmax pmax
comp=Z,32nm,1.2s
EGAK Eagle 41.05 37 *e*P **P 02 30 38.5 -0.3**
comp=Z,17nm,0.9s
CTGM Chitina Glacie 41.47 43 *e*P **P 02 30 42.5 0.0**
comp=Z,44nm,0.8s
DAWY Dawson 41.89 38 *e*P **P 02 30 46.3 +0.5**
comp=Z,6.8nm,0.9s
DGZ Jazzator, Alta 42.08 300 *i* P **P 02 30 47.9 +0.3**
DGZ pmax pmax
comp=Z,3.0nm,0.8s
ZAA1 Zalesovo Array 42.32 307 *e*P **P 02 30 47.9 -1.4**
ZAA1 *e*PcP **PcP 02 32 42.5 +0.4**
ZAA0 Zalesovo Array 42.32 307 *e*P **P 02 30 48.0 -1.3**
comp=Z,3.6nm,0.6s
ZALV Zalesovo Beam 42.32 307 P **P 02 30 47.9 -1.4**
comp=Z,3.8nm,0.4s,baz=65,slow=6.8,SNR=7.5
ZALV PcP **PcP 02 32 42.5 +0.4**
comp=Z,12nm,0.8s,baz=64,slow=1.8,SNR=8.1
EPYK Eagle Plains 42.70 34 *e*P **P 02 30 53.0 +0.8**
comp=Z,37nm,1.1s
EPYK Eagle Plains 42.70 34 P **P 02 30 53.1 +0.8**
baz=278
QIZ Qiongzhong 42.94 246 P **P 02 30 54.3 -0.4**
QIZ sP **sP 02 31 12.4 +0.3**
QIZ S **S 02 37 17.7 +1.2**
QIZ sS **sS 02 37 38.3 +2.1**
QIZ pmax pmax
comp=Z,230nm,4.5s
QIZ LR LR
comp=Z,2μm,21.6s
QIZ LR LR
comp=Z,2μm,21.1s
QIZ LR LR
comp=Z,2μm,21.6s
NVS Novosibirsk 42.96 308 *e*P **P 02 30 52.5 -1.9**
NVS *i* 02 32 46.0
NVS pmax pmax
comp=Z,2.0nm,0.3s
HYT Haines Junctio 43.34 43 *e*P **P 02 30 59.6 +2.0**
comp=Z,44nm,1.0s
INK Inuvik 43.67 31 P **P 02 31 00.6 +0.6**
comp=Z,16nm,0.8s,baz=283,slow=7.0,SNR=62
INK Inuvik 43.67 31 *e*P **P 02 31 00.5 +0.5**
comp=Z,17nm,0.8s
INK Inuvik 43.67 31 *e*P **P 02 31 00.5 +0.5**
INK pmax pmax
comp=Z,17nm,0.8s
WMQ Urumqi 44.13 292 *e*P **P 02 31 04.8 +0.7**
WMQ S **S 02 37 39.1 +5.6**
WMQ ScS **ScS 02 40 57.9 -0.4**
WMQ pmax pmax
comp=Z,54nm,0.7s
WMQ LR LR
comp=Z,5μm,17.9s
WMQ LR LR
comp=Z,3μm,18.9s
WMQ LR LR
comp=Z,6μm,19.9s
WHY Whitehorse 44.63 42 *e*P **P 02 31 09.7 +1.8**
comp=Z,14nm,0.9s
SKAG Skagway 44.73 44 *e*P **P 02 31 09.1 +0.6**
comp=Z,22nm,1.2s
BESE Bessie Mountai 45.21 45 *e*P **P 02 31 11.3 -1.2**
comp=Z,15nm,1.0s
SLVN Son La 45.26 254 *e*P **P 02 31 14.2 +0.8**
comp=Z,11nm,0.7s
JIS Juneau Island 45.54 46 *e*P **P 02 31 17.0 +2.0**
comp=Z,16nm,0.8s
MK31 Makanchi Array 46.35 298 *e*P **P 02 31 20.5 -1.1**
comp=Z,17nm,0.7s
MK31 Makanchi Array 46.35 298 *i* P **P 02 31 21.0 -0.6**
MK31 pmax pmax
comp=Z,23nm,0.6s
MK32 Makanchi Array 46.35 298 *e*P **P 02 31 21.1 -0.5**
MK32 *e*PcP **PcP 02 32 56.5 +0.5**
MKAR Makanchi Array 46.35 298 P **P 02 31 21.1 -0.5**
comp=Z,12nm,0.6s,baz=77,slow=8.0,SNR=112

MKAR PcP **PcP** 02 32 56.5 +0.5
comp=Z,7.7nm,0.7s,baz=239,slow=3.5,SNR=4.2
MAKZ Makanchi 46.54 298 *e*P **P** 02 31 22.2 -0.9
comp=Z,19nm,0.8s
MAKZ Makanchi 46.54 298 P **P** 02 31 22.4 -0.7
MAKZ pmax pmax
comp=Z,28nm,0.8s
KURK Kurchatov 46.99 304 *e*P **P** 02 31 24.8 -1.7
comp=Z,18nm,0.9s
KURK Kurchatov 46.99 304 *ce*P **P** 02 31 24.8 -1.7
KURK pmax pmax
comp=Z,16nm,0.8s
KURK Kurchatov 46.99 304 P **P** 02 31 24.9 -1.7
SNR=6.4
KURK Kurchatov 46.99 304 *e*P **P** 02 31 24.8 -1.7
DLBC Dease Lake 47.66 44 P **P** 02 31 32.5 +0.8
comp=Z,7.1nm,0.7s,baz=312,slow=9.9,SNR=9.0
DLBC Dease Lake 47.66 44 *e*P **P** 02 31 33.6 +1.9
comp=Z,9.7nm,0.8s
PANO Nakornpanom 47.72 249 P **P** 02 31 34.9 +2.3
comp=Z,0.6nm,1.4s,comp=Z,39nm
SKNT Sakolnakorn 48.26 250 P **P** 02 31 37.9 +1.1
comp=Z,47nm,0.9s
JAY Jayapura 48.46 194 P **P** 02 31 39.7 +1.4
LSA Lhasa 48.91 273 P **P** 02 31 43.8 +1.6
LSA S **S** 02 38 40.1 -3.0
LSA pmax pmax
comp=Z,110nm,0.8s
LSA LR LR
comp=Z,2μm,19.4s
LSA LR LR
comp=Z,2μm,19.5s
LSA LR LR
comp=Z,2μm,18.8s
LSA Lhasa 48.91 273 *e*P **P** 02 31 43.9 +1.6
comp=Z,49nm,0.9s
LSA Lhasa 48.91 273 *i*P **P** 02 31 43.4 +1.1
SNR=10
LSA Lhasa 48.91 273 *e*P **P** 02 31 43.9 +1.7
LSA pmax pmax
comp=Z,49nm,0.9s
DLV T Lat 49.11 241 *e*P **P** 02 31 45.3 +1.7
comp=Z,33nm,0.9s
PAYA Payao 49.36 256 P **P** 02 31 47.0 +1.8
comp=Z,110μm,0.8s
KHON Khomkaen 49.49 250 P **P** 02 31 48.6 +2.5
comp=Z,107μm,1.0s
PDGK Podgornoye 49.67 295 P **P** 02 31 47.0 -0.5
PDGK pmax pmax
comp=Z,34nm,0.9s
PHRA Phrae 49.71 255 P **P** 02 31 48.7 +0.9
comp=Z,8.5nm,0.8s
LAMP Lampang 50.10 255 P **P** 02 31 52.5 +1.7
comp=Z,80μm,0.8s
CMMT Chiang Mai 50.37 256 P **P** 02 31 53.9 +1.0
comp=Z,29nm,0.9s,comp=Z,328nm
CHTO Chiang Mai 50.37 256 *e*P **P** 02 31 53.6 +0.7
comp=Z,35nm,1.1s
CHTO Chiang Mai 50.37 256 *e*P **P** 02 31 53.6 +0.7
CHTO pmax pmax
comp=Z,35nm,1.1s
CHTO Chiang Mai 50.37 256 P **P** 02 31 53.5 +0.7
SNR=5.4
PBKT Sadao Pong 50.56 252 P **P** 02 31 58.5 +4.2
comp=Z,11nm,0.9s
CM31 Chiang Mai Arr 50.62 256 *e*P **P** 02 31 55.4 +0.6
comp=Z,12nm,0.6s
CM31 *e*pP **pP** 02 32 07.7 +0.7
CM31 *e*PcP **PcP** 02 33 12.8 +1.1
CMAR Chiang Mai Arr 50.62 256 P **P** 02 31 55.4 +0.6
comp=Z,9.6nm,0.8s,baz=40,slow=7.2,SNR=29
CMAR pP **pP** 02 32 07.7 +0.7
comp=Z,8.6nm,0.7s,baz=40,slow=7.2,SNR=6.8
CMAR PcP **PcP** 02 33 13.8 +2.1
comp=Z,4.6nm,0.7s,baz=27,slow=2.0,SNR=4.5
BRVK Borovoye 50.73 310 *e*P **P** 02 31 54.3 -0.9
comp=Z,12nm,0.8s
BRVK Borovoye 50.73 310 P **P** 02 31 53.8 -1.4
BRVK pmax pmax
comp=Z,15nm,0.8s
BRVK Borovoye 50.73 310 P **P** 02 31 54.2 -0.9
SNR=5.7
BRVK P **P** 02 31 54.2 -0.9
SNR=5.7
FAKI Fak Fak 50.82 205 P **P** 02 31 57.9 +1.7
SHL Shillong 50.89 268 *e*P **P** 02 31 56.8 -0.1
comp=Z,119nm,0.7s
SHL Shillong 50.89 268 *e*P **P** 02 31 56.8 -0.1
SHL pmax pmax
comp=Z,119nm,0.7s
MRSI Marisa 51.48 218 P **P** 02 32 01.7 +0.5
TARG Taragay, Kyrgy 51.54 294 *e*P **P** 02 32 02.8 +0.9
comp=Z,37nm,0.9s
UMPA Umpang Tak 52.24 254 P **P** 02 32 11.0 +4.1
comp=Z,83μm,0.9s
BOOM Boomskoye usch 52.35 295 *e*P **P** 02 32 08.3 +0.6
comp=Z,58nm,1.3s
BOOM Boomskoye usch 52.35 295 *e*P **P** 02 32 08.3 +0.6
BOOM pmax pmax
comp=Z,58nm,1.3s
MPSI Mapaga 52.52 221 P **P** 02 32 09.3 +0.4
RES Resolute Bay 52.69 18 P **P** 02 32 09.2 -0.2
comp=Z,6.8nm,0.5s,baz=3.1,slow=11,SNR=40
RES Resolute Bay 52.69 18 *e*P **P** 02 32 09.3 -0.1
comp=Z,17nm,0.6s
RES Resolute Bay 52.69 18 *e*P **P** 02 32 09.3 -0.1
RES pmax pmax
comp=Z,17nm,0.6s
APSI Ampana 52.85 218 P **P** 02 32 12.2 +0.9
YKW3 Yellowknife Ar 52.93 35 *e*P **P** 02 32 11.5 +0.2
comp=Z,12nm,0.8s
YKA Yellowknife Ar 52.97 35 P **P** 02 32 11.6 0.0
comp=Z,4.7nm,0.8s,baz=298,slow=6.8,SNR=26
YKA pP **pP** 02 32 23.0 -1.0
comp=Z,10nm,0.7s,baz=297,slow=6.9,SNR=21
YKB5 Yellowknife Ar 52.97 35 *e*P **P** 02 32 11.7 0.0
AAK Ala-Archa 53.20 296 *e*P **P** 02 32 14.6 +0.7
comp=Z,36nm,0.8s
AAK Ala-Archa 53.20 296 *i*P **P** 02 32 14.0 +0.1
SNR=25
AAK Ala-Archa 53.20 296 *ce*P **P** 02 32 13.7 -0.2
AAK pmax pmax
comp=Z,37nm,0.8s
AAK Ala-Archa 53.20 296 P **P** 02 32 14.9 +1.0
SNR=18
AAK P **P** 02 32 14.9 +1.0
SNR=18
AAK Ala-Archa 53.20 296 *e*P **P** 02 32 13.7 -0.2
ODAN Odare 53.27 273 *e*P **P** 02 32 15.2 +0.6
comp=Z,164nm,0.9s
JIRN Jiri 53.62 274 *e*P **P** 02 32 18.2 +0.8
comp=Z,297nm,0.7s
GUN Gumba 53.69 275 *e*P **P** 02 32 18.5 +0.6
comp=Z,230nm,0.7s
RAMN Ramite 53.77 273 *e*P **P** 02 32 18.8 +0.5
comp=Z,271nm,0.7s
HOPEN Hopen 53.79 346 *e*P **P** 02 32 14.2 -3.3
KSH Kashi 53.88 292 SS **SKiKP** 02 43 27.3 -0.3
KSH pmax pmax
comp=Z,130nm,1.0s
KSH pmax pmax
comp=Z,560nm,3.7s
KSH LR LR
comp=N,5μm,18.6s
KSH LR LR
comp=E,8μm,21.7s
KSH LR LR
comp=Z,9μm,21.9s
KSH Kashi 53.88 292 P **P** 02 32 23.1 +4.2
KSH S **S** 02 39 56.4 +5.7
KSH SS **SS** 02 43 36.4 +4.7
KSH pmax pmax
comp=Z,100nm,1.0s
KSH pmax pmax
comp=Z,690nm,7.6s
KSH LR LR
comp=Z,6μm,16.8s
KSH LR LR
comp=Z,6μm,17.6s
KSH LR LR
comp=Z,10μm,19.5s
SVE Sverdlovsk 53.94 317 *e*P **P** 02 32 18.6 -0.2
SVE pmax pmax
comp=Z,35nm,0.9s
SVE MLR MLR
comp=Z,2μm,19.0s
SVE Sverdlovsk 53.94 317 *e*P **P** 02 32 18.6 -0.2

PHET Kaeng Krachan 54.09 250 P **P** 02 32 23.2 +2.8
comp=Z,99μm,0.9s
KKN Kakani 54.19 275 *e*P **P** 02 32 22.0 +0.6
comp=Z,260nm,0.9s
PKI Pulchoki 54.23 275 *e*P **P** 02 32 22.1 +0.3
comp=Z,93nm,0.7s
PKIN Phulchoki 54.23 275 *e*P **P** 02 32 22.0 +0.2
comp=Z,63nm,0.6s
DMN Daman 54.42 275 *e*P **P** 02 32 23.9 +0.8
comp=Z,199nm,0.8s
ARSB Arslanbob 54.85 296 *e*P **P** 02 32 26.8 +0.8
comp=Z,85nm,0.9s
DANN Dangsing 54.91 276 *e*P **P** 02 32 27.7 +1.0
comp=Z,212nm,0.4s
ARU Arti 55.13 317 *e*P **P** 02 32 26.3 -1.2
comp=Z,23nm,0.7s
ARU Arti 55.13 317 *d i*P **P** 02 32 25.3 -2.2
ARU 02 33 25.0
ARU 02 34 26.7
ARU S **S** 02 40 07.0 +0.4
ARU 02 42 03.5
ARU pmax pmax
comp=Z,12nm,0.7s
ARU MLR MLR
comp=Z,2μm,20.0s
LLLB Lillooet 55.34 51 *e*P **P** 02 32 31.3 +2.2
comp=Z,6.0nm,0.9s
KOLN Koldanda 55.38 276 *e*P **P** 02 32 30.7 +0.7
comp=Z,50nm,0.3s
KK31 Karatay Array 55.45 299 *e*P **P** 02 32 30.2 +0.1
comp=Z,21nm,0.8s
KK31 Karatay Array 55.45 299 *e*P **P** 02 32 30.2 +0.1
KK31 pmax pmax
comp=Z,21nm,0.8s
KKAR Karatay Array 55.45 299 *e*P **P** 02 32 30.2 +0.1
comp=Z,21nm,0.8s
KKAR Karatay Array 55.45 299 *e*P **P** 02 32 30.2 +0.1
KKAR pmax pmax
comp=Z,21nm,0.8s
PYUN Piuthan 55.61 277 *e*P **P** 02 32 32.4 +0.8
comp=Z,218nm,0.9s
TULEG Thule 55.85 10 *e*P **P** 02 32 30.8 -1.6
comp=Z,21nm,0.9s
D03D Eldon 56.27 54 P **P** 02 32 38.0 +2.2
baz=302
SPSI Sidrap Palu 56.40 218 P **P** 02 32 36.0 -1.0
KSM Kuching 56.43 232 *e*P **P** 02 32 38.3 +0.9
comp=Z,21nm,0.9s
KSM Kuching 56.43 232 P **P** 02 32 39.0 +1.7
B05A Bryant 56.45 53 P **P** 02 32 36.9 -0.2
baz=302
BNSI Bone 56.64 218 P **P** 02 32 38.9 +0.2
E04D Cinebar 57.10 55 P **P** 02 32 46.5 +4.8
baz=303
PRGR Permogore 57.83 327 *e*P **P** 02 32 45.1 -1.5
PRGR *e* 02 33 04.2
PRGR pmax pmax
comp=Z,31nm,0.7s
B08A Colville Reser 57.95 52 *e*P **P** 02 32 48.9 +1.2
comp=Z,8.6nm,1.1s
DAG Danmarks Havn 58.06 357⇑ *i*P **P** 02 32 46.8 -1.2
DAG *i* 02 33 07.4
DAG pmax pmax
comp=Z,27nm,1.1s
DAG MLR MLR
comp=Z,740nm,19.0s
DAG Danmarks Havn 58.06 357⇑ *i*P **P** 02 32 46.8 -1.2
comp=Z,21nm,1.1s
DAG *i* 02 33 07.4
comp=Z,700nm,19.0s
APA Apatity 58.12 336⇑ *i*P **P** 02 32 46.8 -1.7
APA pmax pmax
comp=Z,5.0nm,0.8s
I03D Drain, OR 58.22 58 P **P** 02 32 50.5 +0.9
baz=304
AB31 Akbulak array 58.26 310 *i*P **P** 02 32 49.9 +0.1
AB31 pmax pmax
comp=Z,14nm,0.5s
ABKAR Akbulak array 58.26 310 *e*P **P** 02 32 48.3 -1.6
comp=Z,21nm,0.5s
H04A Detroit Lake 58.35 57 *e*P **P** 02 32 53.1 +2.4
comp=Z,13nm,1.0s
G05D Wamic, OR 58.55 56 P **P** 02 32 52.9 +1.0
baz=304
ARCES ARCESS Array B 58.77 340 P **P** 02 32 51.1 -2.0
comp=Z,7.1nm,0.3s,baz=30,slow=8.5,SNR=10
KULLO Kullorsuaq 58.94 9 *i*P **P** 02 32 52.8 -1.4
KULLO *i* 02 33 13.6
KULLO pmax pmax
comp=Z,27nm,0.7s
KULLO MLR MLR
comp=Z,2μm,20.0s
KULLO Kullorsuaq 58.94 9 *i*P **P** 02 32 52.8 -1.4
comp=Z,27nm,0.7s
KULLO *i* 02 33 13.6
comp=Z,2μm,20.0s
TMCR Tamitsa 58.97 332 *e*P **P** 02 32 52.7 -1.8
TMCR pmax pmax
comp=Z,20nm,0.6s
NIL Nilore 59.00 288 *e*P **P** 02 32 55.5 +0.2
comp=Z,191nm,0.8s
NIL Nilore 59.00 288 *e*P **P** 02 32 55.5 +0.2
NIL pmax pmax
comp=Z,191nm,0.8s
KULM Kulim 59.13 243 *e*P **P** 02 32 57.8 +1.5
comp=Z,30nm,0.7s
NEW Newport 59.22 51 P **P** 02 32 58.3 +1.7
comp=Z,6.6nm,1.1s,baz=336,slow=3.9,SNR=6.8
NEW Newport 59.22 51 *e*P **P** 02 33 00.8 +4.2
comp=Z,8.4nm,1.1s
NEW Newport 59.22 51 P **P** 02 32 57.8 +1.2
baz=305
IPM Ipoh 59.52 242 P **P** 02 33 00.0 +1.0
PINE Pine Mountain 59.60 57 *e*P **P** 02 33 01.9 +2.4
comp=Z,8.0nm,0.7s
L04D Klamath Falls 59.69 59 P **P** 02 33 01.3 +1.3
baz=306
KTK1 Kautokeino 59.70 341 *e*P **P** 02 32 58.6 -0.8
J05D Fort Rock, OR 59.72 58 P **P** 02 33 00.7 +0.5
baz=306
YBH Yreka Blue Hor 59.72 60 P **P** 02 33 00.5 +0.3
comp=Z,2.5nm,1.0s,baz=313,slow=18,SNR=3.2
SOEI Soe 59.86 211 P **P** 02 33 01.8 +0.5
G08A Pilot Rock 59.89 55 *e*P **P** 02 33 02.6 +1.2
comp=Z,3.9nm,1.0s
MYKOM Kota Tinggi 59.90 238 *e*P **P** 02 33 03.6 +2.0
comp=Z,21nm,1.0s
EDFI Ende, Flores 59.91 214 P **P** 02 33 03.7 +2.0
TRO Tromso 60.17 343 *e*P **P** 02 33 03.2 +0.6
WALA Waterton Lakes 60.49 49 *e*P **P** 02 33 06.2 +0.8
comp=Z,8.1nm,0.8s
O02D Mt. Diablo Mer 60.58 61 P **P** 02 33 07.7 +1.6
baz=306
KLMR Klimovskoe 60.62 328 *e*P **P** 02 33 04.2 -1.7
KLMR pmax pmax
comp=Z,10.0nm,0.6s
MOD Modoc Plateau 61.08 58 *e*P **P** 02 33 10.3 +0.7
comp=Z,5.9nm,0.9s
BMO Blue Mountains 61.10 54 *e*P **P** 02 33 10.2 +0.6
comp=Z,7.1nm,1.4s
BMO Blue Mountains 61.10 54 *e*P **P** 02 33 10.2 +0.6
BMO pmax pmax
comp=Z,7.0nm,1.4s
O03E Paynes Creek 61.12 61 P **P** 02 33 10.8 +1.0
baz=307
KBL Kabul 61.27 291 *e*P **P** 02 33 10.2 -0.8
comp=Z,92nm,0.8s
KBL Kabul 61.27 291 *e*P **P** 02 33 10.2 -0.8
KBL pmax pmax
comp=Z,92nm,0.8s
J08A Circle Bar Ran 61.31 56 *e*P **P** 02 33 12.6 +1.6
comp=Z,5.2nm,0.9s
PLID Pearl Lake 61.70 53 *e*P **P** 02 33 15.2 +1.4
comp=Z,18nm,1.3s
WVOR Wild Horse Val 61.76 57 *e*P **P** 02 33 15.9 +1.8
comp=Z,5.8nm,0.8s
WVOR Wild Horse Val 61.76 57 *e*P **P** 02 33 15.9 +1.8
WVOR pmax pmax
comp=Z,6.0nm,0.8s
MSO Missoula 61.81 51 *e*P **P** 02 33 15.8 +1.5
comp=Z,23nm,1.4s
MSO Missoula 61.81 51 P **P** 02 33 13.3 -1.0
baz=307
JOF Joensuu 62.01 333 P **P** 02 33 16.3 +1.0
JOF pmax pmax
comp=Z,29nm,2.0s
PSI Prapat 62.14 243 *e*P **P** 02 33 17.6 +0.7

comp=Z,23nm,1.0s
PSI Prapat 62.14 243 *e*P **P** 02 33 17.6 +0.7
PSI pmax pmax
comp=Z,23nm,1.0s
BEKR Beckworth 62.26 60 *e*P **P** 02 33 19.4 +1.8
comp=Z,5.6nm,0.8s
SUMG Summit 62.27 3 *e*P **P** 02 33 17.0 -0.3
comp=Z,79nm,0.8s
SUMG Summit 62.27 3⇑ *i*P **P** 02 33 17.3 0.0
SUMG *i* 02 33 38.1
SUMG pmax pmax
comp=Z,160nm,0.8s
SUMG MLR MLR
comp=Z,5μm,22.0s
SUMG Summit 62.27 3⇑ *i*P **P** 02 33 17.3 0.0
comp=Z,161nm,0.8s
SUMG *i* 02 33 38.1
comp=Z,5μm,22.0s
STEI Steigen 62.34 343 *e*P **P** 02 33 16.4 -0.9
LOF Lofoten 62.52 343 *e*P **P** 02 33 18.0 -0.6
FFC Flin Flon 62.79 39 *e*P **P** 02 33 20.9 +0.2
comp=Z,21nm,0.9s
FFC Flin Flon 62.79 39 *e*P **P** 02 33 20.9 +0.2
FFC pmax pmax
comp=Z,21nm,0.9s
PAHR Pah Rah Range 62.95 60 *e*P **P** 02 33 23.7 +1.6
comp=Z,5.2nm,0.8s
PNTR Pine Nut 63.20 61 *e*P **P** 02 33 24.9 +1.0
comp=Z,12nm,0.9s
FCC Fort Churchill 63.28 32 *e*P **P** 02 33 23.6 -0.2
comp=Z,20nm,0.6s
FCC Fort Churchill 63.28 32 *e*P **P** 02 33 23.6 -0.2
FCC pmax pmax
comp=Z,20nm,0.6s
EGMT Eagleton 63.32 48 *e*P **P** 02 33 25.5 +1.1
comp=Z,19nm,1.1s
EGMT Eagleton 63.32 48 P **P** 02 33 24.4 +0.1
baz=309
CMB Columbia Colle 63.36 62 *e*P **P** 02 33 27.5 +2.8
comp=Z,7.2nm,1.0s
YERR Yerington 63.48 61 *e*P **P** 02 33 27.5 +1.8
comp=Z,14nm,1.0s
HLID Hailey 63.53 54 *e*P **P** 02 33 27.5 +1.6
comp=Z,5.2nm,1.2s
HLID Hailey 63.53 54 P **P** 02 33 26.9 +0.9
baz=308
MCMT McKenzie Canyo 63.63 52 *e*P **P** 02 33 27.2 +0.5
WAKR Walker 63.66 61 *e*P **P** 02 33 29.3 +2.4
comp=Z,6.9nm,0.9s
SUF Sumiainen 63.75 335 P **P** 02 33 28.1 +1.3
SUF pmax pmax
comp=Z,30nm,1.1s
BMN Battle Mountai 63.82 58 *e*P **P** 02 33 27.1 -0.8
comp=Z,14nm,1.3s
BMN Battle Mountai 63.82 58 *e*P **P** 02 33 27.1 -0.8
BMN pmax pmax
comp=Z,14nm,1.3s
BOZ Bozeman (W) 63.83 51 *e*P **P** 02 33 29.9 +2.0
comp=Z,7.3nm,0.8s
BOZ Bozeman (W) 63.83 51 P **P** 02 33 28.3 +0.5
baz=309
MOR8 Moi Rana 63.99 342 *e*P **P** 02 33 26.5 -1.9
KONS Konsvik 63.99 343 *e*P **P** 02 33 28.8 +0.5
KVN Kaiserville 64.14 60 *e*P **P** 02 33 31.4 +1.4
comp=Z,16nm,1.3s
RYN Ryan 64.14 60 *e*P **P** 02 33 30.9 +0.9
comp=Z,5.5nm,0.7s
NV01 Mina Array Sit 64.40 61 *e*P **P** 02 33 33.0 +1.1
NVAR Mina Array Bea 64.40 61 P **P** 02 33 33.0 +1.1
comp=Z,3.4nm,0.7s,baz=286,slow=6.9,SNR=18
NVAR pP **pP** 02 33 45.5 +1.5
comp=Z,6.2nm,0.7s,baz=296,slow=6.2,SNR=13
QLMT Earthquake Lak 64.42 51 *e*P **P** 02 33 33.3 +1.5
SCO Scoresbysund 64.45 357 *e*P **P** 02 33 31.2 0.0
comp=Z,19nm,0.9s
SCO Scoresbysund 64.45 357 *i*P **P** 02 33 31.2 0.0
SCO *i* 02 33 51.8
SCO pmax pmax
comp=Z,18nm,0.9s
SCO Scoresbysund 64.45 357 *i*P **P** 02 33 31.2 0.0
comp=Z,18nm,0.9s
SCO *i* 02 33 51.8
NV11 Mina Array Sit 64.49 60 *e*P **P** 02 33 32.3 0.0
comp=Z,0.5nm,1.2s
YHB Horse Butte 64.60 51 *e*P **P** 02 33 33.8 +0.8
comp=Z,10nm,1.1s
ILULI Ilulissat 64.66 9 *e*P **P** 02 33 32.0 -0.6
comp=Z,18nm,0.7s
ILULI Ilulissat 64.66 9 *i*P **P** 02 33 31.7 -1.0
ILULI pmax pmax
comp=Z,18nm,0.8s
ILULI Ilulissat 64.66 9 *i*P **P** 02 33 31.7 -1.0
comp=Z,18nm,0.8s
FIA1 FINESS Array S 64.75 334 *e*P **P** 02 33 31.9 -1.5
comp=Z,20nm,0.8s
FIA0 FINESS Array S 64.75 334 *e*P **P** 02 33 31.8 -1.6
FIA0 FINESS Array S 64.75 334 *e*P **P** 02 33 31.8 -1.6
FINES FINESS Array B 64.75 334 P **P** 02 33 31.8 -1.6
comp=Z,17nm,0.6s,baz=39,slow=6.7,SNR=49
YHH Holmes Hill 64.77 51 *e*P **P** 02 33 36.1 +2.0
comp=Z,6.1nm,1.1s
GCMT Greycliff 64.77 50 *e*P **P** 02 33 36.5 +2.5
ELK Elko 64.81 57 *e*P **P** 02 33 36.1 +1.7
comp=Z,3.0nm,0.9s
ELK Elko 64.81 57 *e*P **P** 02 33 36.2 +1.7
ELK pmax pmax
comp=Z,3.0nm,0.9s
IMW Indian Meadow 65.28 52 *e*P **P** 02 33 37.5 -0.1
comp=Z,13nm,1.2s
FXWY Fox Creek 65.40 52 *e*P **P** 02 33 41.0 +2.8
comp=Z,6.3nm,1.0s
RLMT Red Lodge 65.42 50 *e*P **P** 02 33 40.2 +1.9
comp=Z,19nm,1.3s
RLMT Red Lodge 65.42 50 P **P** 02 33 40.0 +1.7
baz=310
MOOW Moose Ponds 65.49 52 *e*P **P** 02 33 41.5 +2.7
comp=Z,11nm,1.1s
TPAW Teton Pass 65.54 52 *e*P **P** 02 33 41.0 +1.9
comp=Z,16nm,1.0s
HYB Hyderabad 65.58 270 *i*P **P** 02 33 39.0 -0.5
LOHW Long Hollow 65.65 52 *e*P **P** 02 33 42.5 +2.7
comp=Z,8.3nm,1.0s
SNOW Snow King Moun 65.67 52 *e*P **P** 02 33 43.0 +3.1
comp=Z,10nm,1.0s
OBN Obninsk 65.70 325 *i*P **P** 02 33 38.9 -0.7
OBN *i* 02 33 58.8
OBN *i* 02 34 08.9
OBN pmax pmax
comp=Z,12nm,0.8s
OBN MLR MLR
comp=Z,1μm,18.0s
OBN Obninsk 65.70 325 *e*P **P** 02 33 38.9 -0.7
CWC Cottonwood Cre 65.79 62 P **P** 02 33 41.2 +0.4
baz=310
GRAC Grapevine Rang 65.88 61 P **P** 02 33 41.8 +0.6
baz=310
NSS Namsos 65.94 342 *e*P **P** 02 33 39.9 -1.1
LAO LASA Array 66.02 47 *e*P **P** 02 33 44.3 +2.4
comp=Z,18nm,0.8s
LAO LASA Array 66.02 47 P **P** 02 33 42.2 +0.3
baz=311
ISA Isabella, Lake 66.03 63 P **P** 02 33 42.4 +0.2
baz=310
SPUT South Promonto 66.08 55 *e*P **P** 02 33 44.3 +1.7
comp=Z,16nm,1.5s
R11A Troy Canyon, C 66.11 59 *e*P **P** 02 33 43.9 +1.0
comp=Z,4.6nm,0.9s
R11A Troy Canyon, C 66.11 59 P **P** 02 33 43.2 +0.3
baz=310
GEYT Alibeck 66.12 300 P **P** 02 33 43.0 +0.3
comp=Z,47nm,0.8s,baz=7.8,slow=3.3,SNR=54
GYA0B ALIBECK ARRAY 66.12 300 *e*P **P** 02 33 43.1 +0.4
comp=Z,48nm,0.8s
VRH Novokhopyorsk 66.21 320 *e*P **P** 02 33 42.0 -1.0
VRH pmax pmax
comp=Z,10.0nm,0.6s
VRH MLR MLR
comp=Z,3μm,18.0s
HWUT Hardware Ranch 66.40 54 *e*P **P** 02 33 44.2 -0.4
comp=Z,4.6nm,1.0s
MPMC Manual Prospec 66.40 62 P **P** 02 33 45.5 +0.8
baz=310
LPSR Galich'ya Gora 66.49 322 *e*P **P** 02 33 43.9 -0.8
LPSR pmax pmax
comp=Z,20nm,0.8s
LPSR MLR MLR
comp=Z,4μm,18.0s

FURC	Furnace Creek,	66.53	61	P		P	02 33 45.5 +0.3
	baz=310						
DUG	Dugway, Tooele	66.59	56	*e*P		P	02 33 45.6 -0.1
	comp=Z,16nm,1.4s						
DUG	Dugway, Tooele	66.59	56	P		P	02 33 45.1 -0.7
	baz=310						
TPNV	Topopah Spring	66.60	61	*e*P		P	02 33 47.4 +1.5
	comp=Z,14nm,1.2s						
TPNV	Topopah Spring	66.60	61	P		P	02 33 45.6 -0.3
	baz=310						
WRAB	Tennant Creek	66.65	197	*e*P		P	02 33 45.6 -0.4
	comp=Z,27nm,0.8s						
WRAB				*e*pP		sP	02 34 01.7 -1.3
WRAB	Tennant Creek	66.65	197	*e*P		P	02 33 45.6 -0.4
WRAB				*e**PP		sP	02 34 01.7 -1.3
WRAB				pmax	pmax		
	comp=Z,27nm,0.8s						
WR1	Warramunga Arr	66.66	197	*e*P		P	02 33 47.0 +0.8
WR1				*e*pP		sP	02 34 01.1 -2.0
WRA	Warramunga Arr	66.66	197	P		P	02 33 47.0 +0.8
	comp=Z,21nm,0.8s,baz=7.6,slow=6.8,SNR=38						
WRA				pP		sP	02 34 01.1 -2.0
	comp=Z,29nm,0.8s,baz=7.7,slow=6.8,SNR=15						
BW06	Boulder Array	66.78	52	*e*P		P	02 33 48.4 +1.3
	comp=Z,8.7nm,0.9s						
BW06	Boulder Array	66.78	52	P		P	02 33 47.7 +0.6
	baz=311						
PD31	Pinedale Array	66.78	52	*e*P		P	02 33 48.6 +1.5
	comp=Z,8.6nm,1.0s						
PDAR	Pinedale Array	66.78	52	P		P	02 33 48.2 +1.1
	comp=Z,4.4nm,0.8s,baz=294,slow=1.5,SNR=24						
EDW2	Edwards Air Fo	66.83	63	P		P	02 33 48.1 +0.8
	baz=310						
SFJD	Kangerlussuaq	66.85	9	*e*P		P	02 33 46.2 -0.6
	comp=Z,18nm,1.0s						
SFJD	Kangerlussuaq	66.85	9	*i* P		P	02 33 45.9 -0.8
SFJD	Kangerlussuaq	66.85	9	*i* P		P	02 33 45.9 -0.8
VSU	Vasula	66.85	332	*ce*P		P	02 33 46.3 -0.6
VSU				pmax	pmax		
	comp=Z,56nm,1.3s						
VSU	Vasula	66.85	332	*e*P		P	02 33 46.2 -0.6
VSU				IAmb	IAmb		02 34 08.1
	comp=Z,70nm,0.9s						
FRB	Frobisher Bay	66.91	18	P		P	02 33 46.2 -0.9
	comp=Z,11nm,0.3s,baz=320,slow=6.8,SNR=89						
PSUT	Pine Spring	67.04	58	*e*P		P	02 33 49.4 +0.6
	comp=Z,7.3nm,1.3s						
NLU	North Lily Min	67.17	56	*e*P		P	02 33 51.6 +1.9
	comp=Z,8.6nm,1.0s						
SHOC	Shoshone, Teco	67.26	62	P		P	02 33 49.8 -0.1
	baz=310						
GSC	Goldstone, Bar	67.31	62	P		P	02 33 50.9 +0.6
	baz=310						
VSR	Storozhevoye	67.36	321	*e*P		P	02 33 49.6 -0.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VSR				MLR	MLR		
	comp=Z,3μm,19.0s						
TBLU	Trondheim	67.42	342	*e*P		P	02 33 48.5 -2.0
BFSC	Mount Baldy Ra	67.46	64	P		P	02 33 51.4 0.0
	baz=310						
VORD	Divnogorie	67.48	321	*e*P		P	02 33 50.1 -0.9
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SHPR	Sheep Range	67.56	60	*e*P		P	02 33 54.2 +2.2
	comp=Z,7.4nm,1.2s						
TUQ	Turquoise Moun	67.77	62	P		P	02 33 54.4 +1.0
	baz=311						
CCUT	Cedar City	67.97	59	*e*P		P	02 33 56.3 +1.6
	comp=Z,8.8nm,1.3s						
SZCU	Shurtz Canyon	68.11	58	*e*P		P	02 33 57.5 +2.0
	comp=Z,5.4nm,1.0s						
P17A	Butcher Ranch,	68.27	56	*e*P		P	02 33 57.7 +1.2
	comp=Z,19nm,1.3s						
MTPU	Mount Pierson	68.36	58	*e*P		P	02 33 57.4 +0.2
	comp=Z,7.2nm,1.3s						
GMRC	Granite Mounta	68.36	62	P		P	02 33 57.7 +0.7
	baz=311						
LCMT	Little Creek M	68.39	59	*e*P		P	02 33 58.4 +1.1
	comp=Z,5.9nm,0.8s						
DZM	Mont Dzumac	68.47	165	*e*P		P	02 34 00.2 +2.6
	comp=Z,83nm,1.4s						
DZM	Mont Dzumac	68.47	165	*e*LR		LR	02 54 47.2
	comp=Z,1μm,23.6s						
K22A	Casper	68.54	51	*e*P		P	02 33 59.7 +1.6
	comp=Z,21nm,1.3s						
K22A	Casper	68.54	51	P		P	02 33 58.6 +0.5
	baz=312						
MDND	Maddock	68.54	43	P		P	02 33 58.5 +0.7
	baz=315						
ULM	Lac du Bonnet	68.58	39	P		P	02 33 56.9 -1.1
	comp=Z,5.1nm,0.6s,baz=308,slow=7.1,SNR=5.5						
ULM				pP		pP	02 34 09.4 -0.9
	comp=Z,4.9nm,0.7s,baz=309,slow=6.9,SNR=3.2						
ULM	Lac du Bonnet	68.58	39	*e*P		P	02 33 57.1 -0.9
	comp=Z,9.9nm,1.0s						
ULM				*ep*P		pP	02 34 09.4 -0.9
ULM	Lac du Bonnet	68.58	39	*e*P		P	02 33 57.1 -0.9
ULM				*e**PP		pP	02 34 09.4 -0.9
ULM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MOL	Molde	68.61	343	*e*P		P	02 33 57.3 -0.6
SRU	San Rafael Swe	68.63	56	*e*P		P	02 33 59.3 +0.5
	comp=Z,13nm,1.1s						
SRU	San Rafael Swe	68.63	56	*e*P		P	02 33 59.3 +0.5
SRU				pmax	pmax		
	comp=Z,13nm,1.1s						
KNB	Kanab	68.65	59	*e*P		P	02 34 00.5 +1.6
	comp=Z,14nm,1.1s						
KNB	Kanab	68.65	59	*e*P		P	02 34 00.5 +1.6
KNB				pmax	pmax		
	comp=Z,14nm,1.1s						
DOMB	Dombas	68.75	342	*e*P		P	02 33 57.9 -1.0
RSSD	Black Hills	68.88	48	*e*P		P	02 34 00.5 +0.2
	comp=Z,26nm,1.4s						
RSSD	Black Hills	68.88	48	*e*P		P	02 34 00.5 +0.2
RSSD				pmax	pmax		
	comp=Z,27nm,1.4s						
RSSD	Black Hills	68.88	48	P		P	02 34 00.4 +0.2
	baz=313						
MAK	Makhachkala	68.93	310	*e*P		P	02 34 01.4 +1.1
MAK				*e*S		S	02 43 05.4 +4.4
MAK				pmax	pmax		
	comp=Z,109nm,0.9s						
MAK				MLR	MLR		
	comp=Z,1μm,18.0s						
NC303	NORSAR Array S	68.95	340	*e*P		P	02 33 59.6 -0.5
	comp=Z,50nm,1.3s						
NC303	NORSAR Array S	68.95	340	*e*P		P	02 33 59.5 -0.6
NC405	NORSAR Array S	68.97	340	*e*P		P	02 33 59.9 -0.3
	comp=Z,53nm,0.8s						
NC204	NORSAR Array S	69.05	341	*e*P		P	02 34 00.3 -0.5
	comp=Z,64nm,1.1s						
AKN	Aaknes	69.08	343	*e*P		P	02 34 00.7 -0.2
MONP2	Monument Peak	69.11	64	P		P	02 34 02.7 +0.9
	baz=311						
NB201	NORSAR Array S	69.12	340	*e*P		P	02 34 00.9 -0.3
	comp=Z,108nm,1.3s						
NB2	NORSAR Subarra	69.15	340	P		P	02 34 00.6 -0.7
	comp=Z,7.2nm,0.5s,baz=27,slow=6.5						
NB200	NORSAR Array S	69.15	340	*e*P		P	02 34 00.7 -0.7
NOA	NORSAR Array B	69.15	340	P		P	02 34 00.7 -0.7
	comp=Z,15nm,0.6s,baz=28,slow=6.3,SNR=63						
BC3	Big Chuckawall	69.23	63	P		P	02 34 03.8 +1.3
	baz=311						
NBO00	NORSAR Array S	69.26	341	*e*P		P	02 34 01.6 -0.5
	comp=Z,37nm,1.0s						
O20A	White River Ci	69.27	54	*e*P		P	02 34 04.5 +1.8
	comp=Z,6.0nm,0.9s						
O20A	White River Ci	69.27	54	P		P	02 34 03.4 +0.7
	baz=312						
IDID	Didziasalis	69.30	330	*e*P		P	02 34 01.6 -0.8
IDID				IAmb	IAmb		02 34 24.8
	comp=Z,17nm,0.9s						
ISAL	Salakas	69.32	330	*e*P		P	02 34 02.0 -0.4
ISAL				IAmb	IAmb		02 34 24.0
	comp=Z,18nm,1.0s						
NC602	NORSAR Array S	69.34	340	*e*P		P	02 34 01.7 -0.8
	comp=Z,37nm,1.0s						
U15A	North Rim	69.35	59	*e*P		P	02 34 05.0 +1.6
	comp=Z,8.0nm,0.9s						
NAO01	NORSAR Array S	69.40	340	*e*P		P	02 34 02.4 -0.5
	comp=Z,54nm,0.9s						
IIGN	Ignalina	69.46	330	*e*P		P	02 34 02.9 -0.4
IIGN				IAmb	IAmb		02 34 25.9
	comp=Z,17nm,0.7s						
MICGM	Minsk	69.52	329	*e*		P	02 34 05.0 +1.3
MICGM				*e*			02 34 25.0
MICGM				*e*LR	LR		03 02 26.0
MICGM				LRM	MLR		03 07 48.0
	comp=Z,3.6nm,18.0s						
MNK	Minsk	69.52	329	*e*P		P	02 34 05.0 +1.3
MNK				*e*			02 34 25.0
MNK				MLR	MLR		
	comp=Z,4μm,18.0s						
NACGM	Naroch	69.61	329	*e*		P	02 34 04.0 -0.2
NACGM				*e*LQ	LQ		02 59 20.0
NACGM				*e*LR	LR		03 04 20.0
PDMCI	Parker Dam,Lak	69.62	62	P		P	02 34 05.6 +0.9
	baz=312						
GROC	Groznyy	69.69	311	*e*P		P	02 34 03.4 -1.5
GROC				*e*			02 34 25.7
GROC				*e*			02 36 45.1
GROC				*e*S		S	02 43 08.4 -1.5
GROC				pmax	pmax		
	comp=Z,28nm,0.7s						
Y12C	Blythe	69.75	62	P		P	02 34 07.1 +1.6
	baz=312						
AKT	Akhty	69.82	309	⇑*i*P		P	02 34 06.4 +0.5
AKT				*e*			02 34 26.5
AKT				pmax	pmax		
	comp=Z,78nm,0.7s						
GOF	Gofitskoye	69.83	314	⇑*i*P		P	02 34 06.2 +0.4
GOF				pmax	pmax		
	comp=Z,152nm,0.7s						
PV21	Cone Mtn., Par	69.90	55	*e*P		P	02 34 05.2 -1.5
	comp=Z,7.9nm,0.9s						
AGMN	Agassiz Nation	69.99	41	*e*P		P	02 34 05.6 -1.2
	comp=Z,26nm,1.2s						
AGMN	Agassiz Nation	69.99	41	P		P	02 34 05.9 -0.9
	baz=316						
PV22	Blue Mesa, Par	70.03	55	*e*P		P	02 34 09.7 +2.3
	comp=Z,15nm,1.3s						
PHWY	Pilot Hill	70.03	51	*e*P		P	02 34 08.4 +0.9
	comp=Z,7.4nm,0.8s						
N23A	Red Feather La	70.04	52	P		P	02 34 07.6 0.0
	baz=313						
PV20	West Nyswonger	70.05	55	*e*P		P	02 34 10.2 +2.7
	comp=Z,25nm,1.4s						
PV04	Paradox Valley	70.05	55	*e*P		P	02 34 09.9 +2.3
	comp=Z,16nm,1.2s						
PV19	Morning Glory	70.06	56	*e*P		P	02 34 11.3 +3.7
	comp=Z,35nm,1.5s						
PV17	East Wray Mesa	70.10	56	*e*P		P	02 34 06.8 -1.1
	comp=Z,32nm,1.3s						
PV16	Nyswonger Mesa	70.10	55	*e*P		P	02 34 10.3 +2.4
	comp=Z,30nm,1.5s						
PABE	Paberze	70.12	331	*e*P		P	02 34 05.8 -1.6
PABE				IAmb	IAmb		02 34 28.6
	comp=Z,55nm,0.9s						
PV11	David Mesa, Pa	70.14	55	*e*P		P	02 34 11.8 +3.8
	comp=Z,38nm,1.4s						
PV18	Skein Mesa, Pa	70.15	56	*e*P		P	02 34 10.8 +2.6
	comp=Z,17nm,1.3s						
PV05	Paradox Valley	70.15	56	*e*P		P	02 34 09.4 +1.2
	comp=Z,9.5nm,0.7s						
HYA	Hoyanger	70.16	343	*e*P		P	02 34 07.5 0.0
PV12	Saucer Basin,	70.16	55	*e*P		P	02 34 10.6 +2.3
	comp=Z,30nm,1.4s						
PV07	Paradox Valley	70.17	55	*e*P		P	02 34 09.4 +1.1
	comp=Z,7.1nm,1.0s						
PV03	Paradox Valley	70.18	55	*e*P		P	02 34 09.6 +1.2
	comp=Z,20nm,1.4s						
OSL	Oslo	70.23	340	*e*P		P	02 34 08.2 +0.2
PV13	Radium Mtn., P	70.26	56	*e*P		P	02 34 08.8 0.0
	comp=Z,22nm,1.3s						
AS31	Alice Springs	70.36	197	*e*P		P	02 34 10.7 +1.5
	comp=Z,4.4nm,0.8s						
ASAR	Alice Springs	70.36	197	P		P	02 34 10.4 +1.2
	comp=Z,16nm,0.8s,baz=14,slow=6.0,SNR=86						
ASAR				pP		sP	02 34 24.2 -2.0
	comp=Z,19nm,0.8s,baz=13,slow=6.0,SNR=17						
PBUR	Paburg	70.38	332	*e*P		P	02 34 07.2 -1.7
PBUR				IAmb	IAmb		02 34 30.0
	comp=Z,72nm,0.8s						
PV01	Paradox Valley	70.42	55	*e*P		P	02 34 12.1 +2.2
	comp=Z,5.7nm,1.0s						
WUAZ	Wupatki	70.51	59	*e*P		P	02 34 14.9 +4.6
	comp=Z,5.0nm,0.9s						
WUAZ	Wupatki	70.51	59	P		P	02 34 10.9 +0.6
	baz=312						
SUE	Sulen	70.55	343	*e*P		P	02 34 09.5 -0.4
Y14A	Wickenburg	70.57	61	*e*P		P	02 34 11.7 +1.1
	comp=Z,5.7nm,0.7s						
KONO	Kongsberg	70.76	340	*e*P		P	02 34 11.0 -0.2
	comp=Z,15nm,0.8s						
KONO	Kongsberg	70.76	340	*ce*P		P	02 34 09.1 -2.1
KONO				pmax	pmax		
	comp=Z,34nm,1.7s						
KONO	Kongsberg	70.76	340	*e*P		P	02 34 11.0 -0.2
KIV	Kislovodsk	70.78	313	*e*P		P	02 34 12.5 +0.7
	comp=Z,66nm,0.9s						
KIV	Kislovodsk	70.78	313	⇑*i*P		P	02 34 12.6 +0.8
KIV	Kislovodsk	70.78	313	*i* P		P	02 34 12.1 +0.3
	SNR=17						
KIV	Kislovodsk	70.78	313	*e*P		P	02 34 10.6 -1.2
KIV				pmax	pmax		
	comp=Z,211nm,1.0s						
KIV				MLR	MLR		
	comp=Z,6μm,18.0s						
KIV	Kislovodsk	70.78	313	P		P	02 34 12.4 +0.7
	SNR=11						
KIV				P		P	02 34 12.4 +0.7
	SNR=11						
KIV	Kislovodsk	70.78	313	*e*P		P	02 34 10.6 -1.2
KBZ	Khabaz	70.83	313	P		P	02 34 12.7 +0.7
	comp=Z,91nm,0.9s,baz=48,slow=3.9,SNR=87						
ZEI	Tsey	70.97	312	*e*P		P	02 34 09.5 -3.6
ZEI				pmax	pmax		
	comp=Z,41nm,0.8s						
ISCO	Idaho Springs	70.98	52	P		P	02 34 14.0 +0.7
	baz=314						
ASK	Askoy	70.99	343	*e*P		P	02 34 12.1 -0.5
BER	Bergen	71.05	343	*e*P		P	02 34 13.1 +0.1
PALK	Pallekele	71.06	261	P		P	02 34 13.9 +0.2
	comp=Z,11nm,0.8s,baz=105,slow=0.5,SNR=3.4						
PALK	Pallekele	71.06	261	*e*P		P	02 34 13.9 +0.2
	comp=Z,57nm,1.3s						
PALK	Pallekele	71.06	261	P		P	02 34 14.5 +0.7
MVCO	Mesa Verde	71.09	56	*e*P		P	02 34 15.1 +1.1
	comp=Z,11nm,1.2s						
MVCO	Mesa Verde	71.09	56	P		P	02 34 14.3 +0.4
	baz=313						
ODD1	Odda	71.20	342	*e*P		P	02 34 14.6 +0.7
X16A	Lo Mia Camp, P	71.21	60	*e*P		P	02 34 16.7 +2.0
	comp=Z,5.0nm,0.6s						
TBLG	Delisi	71.27	311	*e*P		P	02 34 15.7 +1.0
	comp=Z,92nm,0.8s						
TBLG	Delisi	71.27	311	*e*P		P	02 34 15.7 +1.0
TBLG				pmax	pmax		
	comp=Z,92nm,0.8s						
BLS5	Blasjo	71.68	342	*e*P		P	02 34 18.6 +1.8
S22A	4UR Ranch, Cre	71.69	55	P		P	02 34 18.9 +1.2
	baz=314						
AKASG	Malin Array Be	71.96	325	P		P	02 34 17.8 -0.8
	comp=Z,14nm,0.4s,baz=35,slow=6.5,SNR=39						
AKBB	Malin Array Si	71.96	325	*e*P		P	02 34 17.9 -0.7
	comp=Z,23nm,0.6s						
AKBB	Malin Array Si	71.96	325	*e*P		P	02 34 17.9 -0.7
AKBB				pmax	pmax		
	comp=Z,23nm,0.6s						
KIEV	Kiev	71.97	325	⇑*i*P		P	02 34 18.0 -0.7
KIEV	Kiev	71.97	325	*i* P		P	02 34 17.3 -1.3
	SNR=14						
KIEV	Kiev	71.97	325	*c i*P		P	02 34 17.4 -1.3
KIEV				pmax	pmax		
	comp=Z,19nm,0.8s						
214A	Organ Pipe Nat	72.02	63	P		P	02 34 19.8 +0.5
	baz=313						
KMY	Karmoy	72.13	342	*e*P		P	02 34 20.1 +0.6
OGNE	Ogallala	72.15	50	*e*P		P	02 34 20.9 +0.8
	comp=Z,58nm,0.8s						
OGNE	Ogallala	72.15	50	P		P	02 34 19.9 -0.2
	baz=315						
AKH	Akhalkalaki	72.16	311	*e*P		P	02 34 21.8 +1.6
	comp=Z,34nm,0.8s						
AKH	Akhalkalaki	72.16	311	⇑*i*P		P	02 34 21.4 +1.2
AKH	Akhalkalaki	72.16	311	*e*P		P	02 34 21.8 +1.6
AKH				pmax	pmax		
	comp=Z,34nm,0.8s						
EYMN	Ely	72.22	39	*e*P		P	02 34 19.8 -0.5
	comp=Z,21nm,1.0s						
EYMN	Ely	72.22	39	P		P	02 34 19.7 -0.5
	baz=319						
STAV	Stavanger	72.29	342	*e*P		P	02 34 18.8 -1.6
GNI	Garni	72.37	309	*e*P		P	02 34 23.5 +2.0
	comp=Z,50nm,0.8s						
GNI	Garni	72.37	309	*i* P		P	02 34 22.8 +1.3
	SNR=6.7						
GNI	Garni	72.37	309	*ce*P		P	02 34 21.7 +0.2
GNI				pmax	pmax		
	comp=Z,125nm,0.9s						
GNI	Garni	72.37	309	P		P	02 34 20.9 -0.6
	SNR=12						
GNI				P		P	02 34 20.9 -0.6
	SNR=12						
SDCO	Great Sand Dun	72.46	54	*e*P		P	02 34 24.2 +2.0
	comp=Z,5.9nm,1.2s						
SDCO	Great Sand Dun	72.46	54	P		P	02 34 22.3 +0.1
	baz=314						
LRW	Lerwick	72.52	346	*e*P		P	02 34 21.4 -0.4
LRW				IAmb	IAmb		02 34 26.9
	comp=Z,21nm,0.9s						
ANN	Anapa	72.79	317	*e*P		P	02 34 21.6 -2.0
ANN				pmax	pmax		
	comp=Z,96nm,1.1s						
KARS	Kars	72.93	311	*e*P		P	02 34 26.6 +1.9
KARS	Kars	72.93	311	*e*P		P	02 34 26.7 +1.9
ECSD	EROS Data Cent	72.95	45	*e*P		P	02 34 24.6 -0.1
	comp=Z,35nm,1.1s						
ECSD	EROS Data Cent	72.95	45	P		P	02 34 24.3 -0.4
	baz=317						
BATM	Batumi	72.97	312	⇑*i*P		P	02 34 25.1 +0.2
BATM	Batumi	72.97	312	P		P	02 34 25.0 +0.2
TUC	Tucson	73.04	61	*e*P		P	02 34 27.2 +1.7
	comp=Z,3.7nm,0.9s						
TUC	Tucson	73.04	61	*e*P		P	02 34 27.2 +1.7
TUC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TUC	Tucson	73.04	61	P		P	02 34 25.3 -0.2
	baz=313						
BCA	Borcka	73.12	312	⇓*i*P		P	02 34 26.2 +0.5
ARTV	Artvin	73.15	312	*i* P		P	02 34 27.3 +1.1
ARTV				IAML_P			
	comp=Z,406nm,0.3s						
DBOC	Borcka	73.17	312	*i* P		P	02 34 26.2 +0.2
DBOC				IAML_P			
	comp=Z,2μm,0.8s						
E38A	The Farm, Brul	73.21	40	*e*P		P	02 34 25.5 -0.7
	comp=Z,62nm,1.5s						
E38A	The Farm, Brul	73.21	40	P		P	02 34 25.1 -1.1
	baz=319						
DAGI	Agillar	73.23	312	*i* P		P	02 34 27.7 +1.2
DAGI				IAML_P			
	comp=Z,369nm,0.8s						
BSD	Bornholm Skovb	73.32	335	*e*P		P	02 34 26.6 0.0
BSD				pmax	pmax		
	comp=Z,49nm,1.0s						
BSD				MLR	MLR		
	comp=Z,2μm,20.0s						
BSD	Bornholm Skovb	73.32	335	*i* P		P	02 34 26.6 0.0
	comp=Z,49nm,1.0s						
	comp=Z,2μm,20.0s						
DBAD	Bademkaya	73.39	312	*i* P		P	02 34 28.1 +0.6
DBAD				IAML_P			
	comp=Z,985nm,0.8s						
T25A	Trinidad	73.50	54	P		P	02 34 28.3 0.0
	baz=315						
COP	Copenhagen	73.53	337	*e*P		P	02 34 27.0 -0.8
COP				MLR	MLR		
	comp=Z,1μm,20.0s						
COP	Copenhagen	73.53	337	*i* P		P	02 34 27.0 -0.8
	comp=Z,1μm,20.0s						
F38A	Pierce - Schro	73.55	40	P		P	02 34 27.7 -0.5
	baz=319						
SPMN	Marine on St.	73.68	41	*e*P		P	02 34 28.9 0.0
	comp=Z,15nm,0.9s						
SPMN	Marine on St.	73.68	41	P		P	02 34 28.3 -0.6
	baz=319						
MUD	Monsted U'grnd	73.71	339	*i* P		P	02 34 29.2 +0.4
MUD				pmax	pmax		
	comp=Z,15nm,0.9s						
MUD				MLR	MLR		
	comp=Z,1μm,17.0s						
MUD	Monsted U'grnd	73.71	339	*i* P		P	02 34 29.2 +0.4
	comp=Z,15nm,0.9s						
	comp=Z,1μm,17.0s						
EATA	Eleskirt	73.79	311	*i* P		P	02 34 32.4 +2.3
EATA				IAML_P			
	comp=Z,1μm,0.5s						
LAZ	Ladron	73.82	57	*e*P		P	02 34 34.1 +3.9
E39A	Mellen	73.83	39	P		P	02 34 28.5 -1.3
	baz=320						
ANMO	Albuquerque	73.84	57	*e*P		P	02 34 31.8 +1.4
	comp=Z,7.7nm,1.2s						
ANMO	Albuquerque	73.84	57	*i* P		P	02 34 29.2 -1.1
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HOMI	Horasan	73.98	311	*i* P		P	02 34 32.5 +1.5
HOMI				IAML_P			
	comp=Z,893nm,0.5s						
F39A	Loretta	74.02	40	P		P	02 34 28.9 -2.0
	baz=320						
E40A	Wakefield	74.07	39	P		P	02 34 30.9 -0.3
	baz=320						
G38A	Ridgeland	74.16	41	P		P	02 34 30.5 -1.2
	baz=320						
D41A	Chassel	74.18	38	*e*P		P	02 34 31.9 +0.1
	comp=Z,33nm,1.0s						
D41A	Chassel	74.18	38	P		P	02 34 31.1 -0.7
	baz=321						
GKP	Gorka Klasztor	74.19	333	*e*P		P	02 34 31.6 -0.1
GKP				*e*			02 34 52.5
GKP	Gorka Klasztor	74.19	333	*e*P		P	02 34 31.6 -0.1
GKP				*e*			02 34 52.5
BEL	Belsk	74.21	331	*e*P		P	02 34 32.5 +0.6
BEL				*e*			02 34 53.3
BEL	Belsk	74.21	331	*e*P		P	02 34 32.5 +0.6
BEL				*e*			02 34 53.3
AKDA	Akdag	74.22	311	*i* P		P	02 34 34.8 +2.3
SIM	Simferopol'	74.25	319	*ce*P		P	02 34 31.4 -0.9
SIM				*e*S		S	02 44 01.0 -1.2
SIM				pmax	pmax		
	comp=Z,57nm,0.9s						
SIM				MLR	MLR		
	comp=Z,2μm,17.0s						
KRIK	Erzurum-spir	74.28	312	*i* P		P	02 34 34.8 +2.0
KRIK				IAML_P			
	comp=Z,495nm,0.7s						
BNM	Barren Site	74.30	57	*e*P		P	02 34 35.8 +2.8
H38A	Maiden Rock	74.33	41	P		P	02 34 31.9 -0.8
	baz=319						
F40A	Park Falls	74.38	39	P		P	02 34 32.5 -0.5
	baz=320						
G39A	Holcombe	74.39	40	P		P	02 34 32.6 -0.5
	baz=320						
E41A	Kenton	74.47	38	P		P	02 34 33.2 -0.3
	baz=321						
BIGH	Upper Bighouse	74.54	347	*e*P		P	02 34 33.2 -0.5
BIGH				IAmb	IAmb		02 34 34.8
	comp=Z,25nm,1.0s						
MLA1	Latheron	74.62	346	*e*P		P	02 34 33.9 -0.3
COWI	Conover	74.67	39	*e*P		P	02 34 34.4 -0.3
	comp=Z,11nm,1.1

E42A	Champion	74.95	38	P		P	02 34 35.8 -0.6
	baz=322						
F41A	Three Lakes	74.97	39	P		P	02 34 35.5 -0.9
	baz=321						
KIS	Kishinev	75.02	323	eP		P	02 34 35.0 -1.7
	comp=Z,170nm,2.0s						
KIS				eS		S	02 44 07.0 -3.8
KIS				eLQ		LQ	02 59 40.0
	comp=Z,800nm,19.0s						
KIS				LRM		MLR	03 10 28.0
	comp=Z,4µm,18.0s						
KIS	Kishinev	75.02	323	eP		P	02 34 35.0 -1.7
KIS				eS		S	02 44 07.0 -3.8
KIS				e			02 45 04.0
KIS				pmax		pmax	
	comp=Z,170nm,2.0s						
KIS				MLR		MLR	
	comp=Z,4µm,18.0s						
KIS				MLR		MLR	
	comp=N,3µm,17.0s						
MUSM	Mu-Merkez	75.14	310	i P		P	02 34 39.2 +1.5
MUSM				IAML_P			
	comp=Z,339nm,0.8s						
BNGL	BINGOL	75.17	311	i P		P	02 34 39.7 +1.7
BANOM	Banah	75.21	292	i P		P	02 34 38.5 +0.3
	SNR=7.1						
BANOM	Banah	75.21	292	P		P	02 34 37.1 -1.1
BANOM				P		P	02 34 37.1 -1.1
BANOM				P		P	02 34 38.1 0.0
BANOM				P		P	02 34 38.1 0.0
BANOM				P		P	02 34 39.0 +0.9
BANOM				P		P	02 34 39.0 +0.9
SCHQ	Schefferville	75.22	22	P		P	02 34 37.8 +0.1
	comp=Z,11nm,0.7s,baz=352,slow=6.5,SNR=6.6						
SCHQ	Schefferville	75.22	22	eP		P	02 34 38.1 +0.4
	comp=Z,22nm,1.1s						
SHME	Shamm	75.23	292	i P		P	02 34 38.1 -0.2
	SNR=7.8						
H40A	Chili	75.25	40	P		P	02 34 37.6 -0.5
	baz=320						
MCD	Coleburn Disti	75.29	346	eP		P	02 34 37.6 -0.4
KELT	Kelkit	75.30	313	i P		P	02 34 40.2 +1.5
KELT				IAML_P			
	comp=Z,379nm,0.9s						
I39A	Houston	75.31	42	P		P	02 34 37.8 -0.6
	baz=320						
KWP	Kalwaria Pacla	75.34	328	eP		P	02 34 39.0 +0.5
KWP				e			02 35 00.1
KWP	Kalwaria Pacla	75.34	328	eP		P	02 34 38.2 -0.3
	comp=Z,880nm,0.9s						
KWP	Kalwaria Pacla	75.34	328	eP		P	02 34 38.2 -0.3
E43A	Lone Tree Farm	75.39	37	eP		P	02 34 40.4 +1.6
	comp=Z,14nm,0.9s						
E43A	Lone Tree Farm	75.39	37	P		P	02 34 38.5 -0.3
	baz=322						
IAS	Iasi	75.39	324	⇑i P		P	02 34 38.6 -0.2
IAS	Iasi	75.39	324	⇑P		P	02 34 38.6 -0.2
ORDU	Ordu-Boztepe	75.39	314	i P		P	02 34 40.3 +1.3
ORDU				IAML_P			
	comp=Z,771nm,0.4s						
RRR	Rubha Reidh	75.44	347	eP		P	02 34 37.8 -1.1
RRH	Rhenigidale	75.52	348	eP		P	02 34 38.7 -0.6
SIRT	Sirnak	75.52	309	eP		P	02 34 41.0 +1.2
	comp=Z,98nm,0.9s						
H41A	Junction City	75.59	40	P		P	02 34 38.6 -1.4
	baz=321						
MDO	Dochfour	75.61	347	eP		P	02 34 39.5 -0.4
G42A	Mountain	75.66	39	eP		P	02 34 40.2 -0.1
	comp=Z,12nm,1.0s						
G42A	Mountain	75.66	39	P		P	02 34 39.5 -0.9
	baz=321						
MSFE	Esma-Masafi	75.69	292	P		P	02 34 41.1 +0.2
I40A	Norwalk	75.70	41	P		P	02 34 40.4 -0.3
	baz=320						
KAC	Achnashellach	75.71	347	eP		P	02 34 39.9 -0.6
MNCY	Minicoy	75.74	267	ex		P	02 34 46.3 +5.0
F43A	Flat Rock, Esc	75.75	38	P		P	02 34 40.2 -0.7
	baz=322						
DRUM	Mains of Drumt	75.80	345	eP		P	02 34 40.3 -0.6
DRUM				IAmb		IAmb	02 34 44.0
	comp=Z,14nm,0.6s						
OJC	Ojcow	75.90	330	eP		P	02 34 41.9 +0.2
OJC				e			02 35 03.0
OJC	Ojcow	75.90	330	eP		P	02 34 41.0 -0.7
	comp=Z,47nm,0.7s						
OJC	Ojcow	75.90	330	eP		P	02 34 41.0 -0.7
OJC				pmax		pmax	
	comp=Z,47nm,0.7s						
KPL	Plockton	75.92	347	eP		P	02 34 41.1 -0.5
KPL				IAmb		IAmb	02 34 42.9
	comp=Z,38nm,0.9s						
I41A	Arkdale	75.92	41	eP		P	02 34 41.7 -0.2
	comp=Z,10nm,0.9s						
I41A	Arkdale	75.92	41	P		P	02 34 41.3 -0.6
	baz=321						
RUE	Ruedersdorf	75.94	335	eP		P	02 34 40.9 -0.9
RUE				IAmb		IAmb	02 35 03.7
	comp=Z,86nm,0.8s						
UOSS	Minazif	75.94	291	eP		P	02 34 42.6 +0.3
	comp=Z,29nm,0.9s						
UOSS	Minazif	75.94	291	i P		P	02 34 42.4 +0.1
	SNR=7.7						
F44A	Big Bay de Noc	75.95	37	P		P	02 34 42.1 0.0
	baz=322						
HANI	Diyarbakir_Han	75.96	311	i P		P	02 34 43.6 +1.3
HANI				IAML_P			
	comp=Z,111nm,0.4s						
G43A	Wallace	75.97	38	eP		P	02 34 42.2 +0.1
	comp=Z,26nm,0.9s						
G43A	Wallace	75.97	38	P		P	02 34 42.2 +0.1
	baz=322						
SCIA	State Center	75.98	44	eP		P	02 34 42.7 +0.5
	comp=Z,50nm,0.6s						
SCIA	State Center	75.98	44	P		P	02 34 42.3 0.0
	baz=319						
BUR08	Bucovina Ar. S	75.99	326	eP		P	02 34 42.2 -0.1
	comp=Z,76nm,0.6s						
BURAR	Bucovina Array	76.01	326	⇓i P		P	02 34 42.7 +0.2
BURAR	Bucovina Array	76.01	326	⇓P		P	02 34 42.7 +0.2
STHS	Stebnicka Huta	76.05	329	eP		P	02 34 43.6 +1.0
STHS	Stebnicka Huta	76.05	329	eP		P	02 34 43.6 +1.0
KOLS	Kolonicke sedl	76.07	328	eP		P	02 34 42.8 +0.1
KOLS				pmax		pmax	
	comp=Z,36nm,0.8s						
KOLS	Kolonicke sedl	76.07	328	eP		P	02 34 42.8 +0.1
HATD	Hatta, Dubai	76.07	291	i P		P	02 34 43.8 +0.7
	SNR=6.4						
HATD	Hatta, Dubai	76.07	291	P		P	02 34 43.0 -0.1
HATD				P		P	02 34 43.0 -0.1
BIR	Birlad	76.10	323	⇑i P		P	02 34 43.8 +0.9
BIR	Birlad	76.10	323	⇑P		P	02 34 43.8 +0.9
E45A	Wooded Hills,	76.18	36	P		P	02 34 44.1 +0.8
	baz=323						
BIZ	Bicaz	76.20	325	⇑i P		P	02 34 43.6 +0.2
DIKM	Dikmen	76.20	316	⇑i P		P	02 34 44.1 +0.6
ASHO	Ashiyiah	76.22	291	P		P	02 34 44.4 +0.4
ASHO	Ashiyiah	76.22	291	P		P	02 34 43.6 -0.4
ASHO				P		P	02 34 43.6 -0.4
D46A	Sault St. Mari	76.22	35	P		P	02 34 43.2 -0.4
	baz=324						
CUZAR	Zara_SIVAS	76.25	313	i P		P	02 34 44.4 +0.4
NAZ	Nazwa, Dubai	76.27	292	P		P	02 34 44.2 0.0
NAZ	Nazwa, Dubai	76.27	292	P		P	02 34 43.4 -0.8
NAZ				P		P	02 34 43.4 -0.8
SOHO	SOHO	76.28	290	P		P	02 34 44.4 +0.2
SOHO				P		P	02 34 44.4 +0.2
MATQ	Matagami	76.31	30	P		P	02 34 42.8 -1.2
	baz=327						
UZH	Uzhgorod	76.31	328	eP		P	02 34 42.4 -1.6
UZH				e			02 34 52.3
UZH				e			02 34 58.5
UZH				eS		S	02 44 19.6 -5.4
TESR	Tescani	76.31	324	⇑i P		P	02 34 44.0 -0.1
KEMA	Kemaliye	76.34	312	i P		P	02 34 45.3 +0.8
J41A	Loganville	76.39	41	P		P	02 34 43.9 -0.6
	baz=321						
NIE	Niedzica	76.39	329	eP		P	02 34 45.0 +0.5
NIE				e			02 35 06.3
NIE	Niedzica	76.39	329	eP		P	02 34 45.0 +0.5
NIE				e			02 35 06.3
ELO	Logie Almond	76.43	346	eP		P	02 34 44.3 -0.3
TLCR		76.45	322	⇑i P		P	02 34 44.9 +0.1
TLCR		76.45	322	⇑P		P	02 34 44.9 +0.1
D47A	Chapleau	76.47	35	P		P	02 34 44.2 -0.8
	baz=324						
GIUM	Giurgiulesti	76.47	323	⇑i P		P	02 34 44.6 -0.4
FAQ	Al Faqa, Dubai	76.48	291	P		P	02 34 45.2 -0.2
FAQ	Al Faqa, Dubai	76.48	291	P		P	02 34 44.4 -1.0
I42A	Draeger Farm,	76.49	40	eP		P	02 34 45.2 +0.1
	comp=Z,14nm,1.0s						
I42A	Draeger Farm,	76.49	40	P		P	02 34 44.5 -0.7
	baz=321						
INVG	Invergeldie, C	76.53	346	eP		P	02 34 44.6 -0.5
INVG				IAmb		IAmb	02 34 46.5
	comp=Z,21nm,0.9s						
E46A	Sault Ste Mari	76.53	36	eP		P	02 34 45.2 -0.1
	comp=Z,19nm,1.0s						
E46A	Sault Ste Mari	76.53	36	P		P	02 34 44.8 -0.6
	baz=324						
H43A	Windswept, Lux	76.55	39	P		P	02 34 45.0 -0.5
	baz=322						
KSP	Ksiaz	76.56	332	eP		P	02 34 45.3 -0.1
KSP				e			02 35 06.6
KSP	Ksiaz	76.56	332	eP		P	02 34 45.3 -0.1
KSP				e			02 35 06.6
F45A	CMU Biological	76.57	37	P		P	02 34 44.8 -0.7
	baz=323						
EBH	Black Hill	76.61	346	eP		P	02 34 45.1 -0.4
JFWS	Jewell Farm	76.63	41	eP		P	02 34 48.2 +2.3
	comp=Z,13nm,1.2s						
JFWS	Jewell Farm	76.63	41	eP		P	02 34 48.3 +2.3
JFWS				pmax		pmax	
	comp=Z,13nm,1.2s						
JFWS	Jewell Farm	76.63	41	P		P	02 34 46.1 +0.1
	baz=321						
TRPA	Tarpa	76.63	327	⇑i P		P	02 34 46.3 +0.5
TRPA	Tarpa	76.63	327	⇑IP		P	02 34 46.0 +0.2
BMR	Baia Mare	76.64	327	⇑i P		P	02 34 46.3 +0.4
BMR	Baia Mare	76.64	327	⇑P		P	02 34 46.4 +0.5
ELZG	Elazig	76.65	312	i P		P	02 34 49.0 +2.6
ELZG				IAML_P			
	comp=Z,68nm,0.1s						
AMTX	Amarillo	76.66	54	eP		P	02 34 47.9 +1.6
	comp=Z,18nm,0.8s						
AMTX	Amarillo	76.66	54	P		P	02 34 46.9 +0.5
	baz=316						
MSTX	Muleshoe	76.69	55	eP		P	02 34 49.3 +2.7
	comp=Z,12nm,1.0s						
MSTX	Muleshoe	76.69	55	P		P	02 34 46.4 -0.2
	baz=316						
PETR	Petresti	76.70	323	⇑i P		P	02 34 47.4 +1.1
ASUD	Al Ashush, Dub	76.74	292	P		P	02 34 46.9 +0.1
ASUD	Al Ashush, Dub	76.74	292	P		P	02 34 46.4 -0.5
ASUD				P		P	02 34 46.4 -0.5
ODBI	Odobesti	76.74	323	⇑i P		P	02 34 47.9 +1.4
CFR	Carcaliu	76.75	322	⇑i P		P	02 34 46.5 0.0
CFR	Carcaliu	76.75	322	⇑P		P	02 34 46.5 0.0
MNTX	Cornudas Mount	76.76	58	eP		P	02 34 48.1 +1.2
	comp=Z,7.6nm,1.3s						
MNTX	Cornudas Mount	76.76	58	P		P	02 34 46.7 -0.2
	baz=316						
ESY	Stoneypath	76.76	345	eP		P	02 34 46.0 -0.4
ARCR	ARCALIA	76.78	326	⇑i P		P	02 34 47.6 +0.9
OKC	Ostrava-Krasne	76.80	331	eP		P	02 34 46.8 +0.1
OKC				MLR		MLR	
	comp=Z,1µm,15.1s						
OKC	Ostrava-Krasne	76.80	331	eP		P	02 34 46.8 +0.1
OKC				AMS		AMS	03 17 10.0
	comp=Z,1µm,15.1s						
VRI	Vrincioaia	76.80	324	⇑i P		P	02 34 47.0 +0.1
VRI	Vrincioaia	76.80	324	⇑P		P	02 34 47.0 +0.1
EAB	Aberfoyle	76.81	346	eP		P	02 34 46.4 -0.3
F46A	Macinaw City C	76.82	36	P		P	02 34 45.9 -1.1
	baz=323						
L40A	Anamosa	76.82	43	eP		P	02 34 46.9 -0.2
	comp=Z,31nm,1.2s						
L40A	Anamosa	76.82	43	P		P	02 34 46.8 -0.2
	baz=320						
OSTC	Ostas	76.83	332	eP		P	02 34 47.2 +0.2
J42A	Columbus	76.84	41	P		P	02 34 45.9 -1.2
	baz=321						
CUKAN	kangal_SIVAS	76.84	313	i P		P	02 34 48.2 +0.8
PLOR	Plostina	76.84	324	⇓i P		P	02 34 47.4 +0.2
PLOR	Plostina	76.84	324	⇓P		P	02 34 47.4 +0.2
CHVC	Chvalec	76.86	332	eP		P	02 34 47.0 -0.1
CHVC				AMS		AMS	03 12 20.0
	comp=Z,2µm,19.4s						
E47A	Iron Bridge	76.88	35	P		P	02 34 46.2 -1.1
	baz=324						
HEKM	Malatya_Hekimh	76.91	313	i P		P	02 34 49.1 +1.3
HEKM				IAML_P			
	comp=Z,40nm,0.1s						
LAWE	Loch Awe, Argy	76.91	347	eP		P	02 34 46.9 -0.4
LAWE				IAmb		IAmb	02 34 48.4
	comp=Z,25nm,0.8s						
LANS	Liptovska Anna	76.92	330	eP		P	02 34 48.3 +0.8
LANS	Liptovska Anna	76.92	330	eP		P	02 34 48.3 +0.8
UPC	Upice	76.94	332	eP		P	02 34 47.6 0.0
UPC				MLR		MLR	
	comp=Z,2µm,20.0s						
UPC	Upice	76.94	332	eP		P	02 34 47.6 0.0
UPC				AMS		AMS	03 12 30.0
	comp=Z,2µm,20.0s						
DPC	Dobruska-Polom	76.97	332	eP		P	02 34 47.9 +0.1
DPC				eS		S	02 44 34.5 +2.2
DPC				MLR		MLR	
	comp=Z,1µm,19.2s						
DPC	Dobruska-Polom	76.97	332	eP		P	02 34 47.9 +0.1
DPC				eS		S	02 44 34.5 +2.2
DPC				AMS		AMS	03 12 20.0
	comp=Z,1µm,19.2s						
EBL	Broad Law	76.98	345	eP		P	02 34 47.3 -0.4
EAU	Auchinoon	76.98	346	eP		P	02 34 47.0 -0.7
D49A	Beulah Townshi	76.99	34	P		P	02 34 47.4 -0.4
	baz=325						
OZUR		77.00	324	⇑i P		P	02 34 48.8 +0.7
G45A	Suttons Bay	77.02	37	eP		P	02 34 48.4 +0.3
	comp=Z,33nm,1.0s						
G45A	Suttons Bay	77.02	37	P		P	02 34 47.8 -0.3
	baz=323						
MORC	Moravsky Berou	77.06	331	eP		P	02 34 48.4 +0.1
	comp=Z,53nm,0.9s						
MORC	Moravsky Berou	77.06	331	⇑i P		P	02 34 48.6 +0.3
MORC	Moravsky Berou	77.06	331	eP		P	02 34 48.4 +0.1
MORC				pmax		pmax	
	comp=Z,53nm,0.9s						
MORC	Moravsky Berou	77.06	331	eP		P	02 34 48.2 -0.1
KRLC	Kraliky	77.06	332	eP		P	02 34 48.3 0.0
KRLC	Kraliky	77.06	332	eP		P	02 34 48.3 0.0
GRER		77.08	323	⇑i P		P	02 34 49.1 +0.7
KECS	Kecovo	77.11	329	eP		P	02 34 48.7 +0.2
KECS				pmax		pmax	
	comp=Z,84nm,0.8s						
KECS	Kecovo	77.11	329	eP		P	02 34 48.7 +0.2
LSQQ	Lebel-sur-Quev	77.13	30	P		P	02 34 47.8 -0.9
	baz=328						
G46A	Petoskey	77.14	37	P		P	02 34 48.4 -0.3
	baz=323						
K42A	Prairie Point,	77.15	41	P		P	02 34 48.5 -0.4
	baz=321						
H45A	Beulah	77.19	38	P		P	02 34 47.8 -1.3
	baz=323						
PGBU	Glenifferbraes	77.19	346	eP		P	02 34 48.2 -0.6
PGBU				IAmb		IAmb	02 34 50.3
	comp=Z,46nm,0.9s						
CLL	Collm	77.20	335	eP		P	02 34 48.4 -0.5
	comp=Z,51nm,0.8s						
CLL	Collm	77.20	335	eP		P	02 34 48.0 -1.0
	comp=Z,62nm,0.9s						
CLL				eS		S	02 44 38.0 +3.5
CLL				e(SS)			02 50 12.0
CLL				Lm		MLR	03 11 00.0
	comp=N,2µm,20.1s						
CLL				Lm		MLR	03 11 00.0
	comp=E,300nm,20.7s						
CLL				Lm		MLR	03 11 00.0
	comp=Z,2µm,20.6s						
CLL	Collm	77.20	335	eP		P	02 34 48.0 -1.0
CLL				eS		S	02 44 38.0 +3.5
CLL				pmax		pmax	
	comp=Z,62nm,0.9s						
CLL				MLR		MLR	
	comp=Z,2µm,20.6s						
TIRR	Tirgusor	77.20	322	eP		P	02 34 49.0 0.0
	comp=Z,74nm,0.9s						
TIRR	Tirgusor	77.20	322	⇑i P		P	02 34 49.2 +0.1
TIRR	Tirgusor	77.20	322	eP		P	02 34 49.1 0.0
TIRR				pmax		pmax	
	comp=Z,74nm,0.9s						
HARR	Harsova	77.23	322	⇓i P		P	02 34 49.5 +0.3
HARR	Harsova	77.23	322	⇓P		P	02 34 49.5 +0.3
CUALT	Altinyayla-SIV	77.24	313	i P		P	02 34 51.9 +2.3
TLB	Topalu	77.26	322	⇑i P		P	02 34 49.6 +0.2
TLB	Topalu	77.26	322	⇑P		P	02 34 49.6 +0.2
STKA	Stephens Creek	77.26	188	P		P	02 34 51.2 +1.9
	comp=Z,3.0nm,0.8s,baz=331,slow=8.1,SNR=6.8						
STKA	Stephens Creek	77.26	188	eP		P	02 34 51.2 +1.9
	comp=Z,1.5nm,1.0s						
BRG	Berggiesshubel	77.29	334	i P		P	02 34 48.8 -0.7
	comp=Z,18nm,0.8s						
BRG				S		S	02 44 36.0 +0.5
BRG				SS		SS	02 49 38.0 +5.0
	comp=N,846nm,17.8s						
	comp=E,816nm,16.5s						
	comp=Z,2µm,16.7s						
BRG	Berggiesshubel	77.29	334	i P		P	02 34 48.8 -0.7
BRG				S		S	02 44 36.0 +0.5
BRG				SS		SS	02 49 38.0 +5.0
BRG				pmax		pmax	
	comp=Z,18nm,0.9s						
BRG				MLR		MLR	
	comp=N,846nm,17.8s						
BRG				MLR		MLR	
	comp=E,816nm,16.5s						
BRG				MLR		MLR	
	comp=Z,2µm,16.7s						
CHGQ	Chibougamau	77.30	28	P		P	02 34 48.7 -0.9
	baz=329						
E48A	Lockeyer	77.31	35	P		P	02 34 48.6 -1.2
	baz=325						
AKCD	Akcadag	77.36	312	i P		P	02 34 51.8 +1.5
AKCD				IAML_P			
	comp=Z,520nm,0.6s						
CJR	Cluj-Napoca	77.39	326	⇑i P		P	02 34 50.9 +0.7
CJR	Cluj-Napoca	77.39	326	⇑P		P	02 34 50.9 +0.7
PVCC	Panska Ves	77.39	333	eP		P	02 34 50.0 -0.1
PVCC				MLR		MLR	
	comp=Z,2µm,17.9s						
PVCC	Panska Ves	77.39	333	eP		P	02 34 50.0 -0.1
PVCC				AMS		AMS	03 12 40.0
	comp=Z,2µm,17.9s						
EFOR	EFORIE	77.40	321	⇑i P		P	02 34 50.4 +0.2
ILGA	Ilgaz	77.41	316	eP		P	02 34 52.1 +1.5
	comp=Z,75nm,1.2s						
MFTR	Murfatlar	77.42	322	⇑i P		P	02 34 50.5 +0.2
MLR	Muntele Rosu	77.43	324	eP		P	02 34 50.5 0.0
	comp=Z,33nm,0.8s						
MLR	Muntele Rosu	77.43	324	⇑i P		P	02 34 50.7 +0.2
MLR	Muntele Rosu	77.43	324	⇑P		P	02 34 50.7 +0.2
ESK	Eskdalemuir	77.44	345	eP		P	02 34 50.0 -0.2
	comp=Z,18nm,0.9s						
ESK	Eskdalemuir	77.44	345	eP		P	02 34 50.1 -0.2
ESK				IAmb		IAmb	02 34 54.9
	comp=Z,16nm,0.8s						
ESK	Eskdalemuir	77.44	345	eP		P	02 34 50.0 -0.2
ESK				pmax		pmax	
	comp=Z,19nm,0.9s						
ISR	Istrita	77.48	323	⇑i P		P	02 34 51.4 +0.7
ISR	Istrita	77.48	323	⇑P		P	02 34 51.4 +0.7
MHTO	MHTO	77.49	287	P		P	02 34 52.1 +1.0
	SNR=12						
MHTO				P		P	02 34 52.1 +1.0
	SNR=12						
MDB	Medias	77.54	325	⇓i P		P	02 34 52.7 +1.7
MDB	Medias	77.54	325	⇓P		P	02 34 52.7 +1.7
AMRR	Amara	77.55	323	⇑i P		P	02 34 51.7 +0.7
AMRR	Amara	77.55	323	⇑P		P	02 34 51.7 +0.7
N40A	Mertquake, Sal	77.55	44	P		P	02 34 50.6 -0.5
	baz=320						
L42A	Oliver, Polo	77.61	42	eP		P	02 34 51.5 +0.1
	comp=Z,13nm,0.8s						
L42A	Oliver, Polo	77.61	42	P		P	02 34 50.6 -0.8
	baz=321						
H46A	Fife Lake	77.62	38	P		P	02 34 51.3 -0.1
	baz=323						
GLMI	Grayling	77.64	37	eP		P	02 34 52.2 +0.6
	comp=Z,51nm,0.8s						
GLMI	Grayling	77.64	37	P		P	02 34 51.4 -0.2
	baz=324						
BHH	Howats Hill	77.66	345	eP		P	02 34 51.4 0.0
D50A	G1974 Best Tow	77.66	33	P		P	02 34 51.4 -0.2
	baz=326						
F48A	Evansville	77.66	35	P		P	02 34 50.9 -0.7
	baz=325						
DRGR		77.67	327	⇑i P		P	02 34 51.8 0.0
DRGR		77.67	327	P		P	02 34 51.6 -0.2
DRGR				pmax		pmax	
	comp=Z,140nm,1.1s						
EDMD	Edmundbyers	77.67	344	eP		P	02 34 51.1 -0.5
EDMD				IAmb		IAmb	02 34 54.9
	comp=Z,27nm,0.9s						
M41A	Milan	77.68	43	P		P	02 34 50.9 -0.9
	baz=321						
K43A	Burlington	77.68	40	eP		P	02 34 52.9 +1.0
	comp=Z,17nm,1.0s						
K43A	Burlington	77.68	40	P		P	02 34 51.2 -0.6
	baz=322						
G47A	Hillman	77.68	36	P		P	02 34 51.1 -0.7
	baz=324						
VYHS	Vyhne	77.69	330	eP		P	02 34 52.1 +0.3
VYHS				e			02 35 13.1
VYHS				pmax		pmax	
	comp=Z,20nm,1.1s						
VYHS	Vyhne	77.69	330	eP		P	02 34 52.1 +0.3
VYHS				esP		sP	02 35 13.1 +3.4
ICOR	Ion Corvin	77.74	322	⇑i P		P	02 34 52.8 +0.7
SECR		77.74	324	⇑i P		P	02 34 52.7 +0.5
VLDQ	Val d'Or	77.76	31	eP		P	02 34 50.9 -1.2
	comp=Z,13nm,0.8s						
VRAC	Vranov	77.78	331	⇑i P		P	02 34 52.8 +0.5
VRAC	Vranov	77.78	331	⇑P		P	02 34 52.9 +0.6
VRAC	Vranov	77.78	331	eP		P	02 34 52.5 +0.2
VRAC				e			02 35 13.4
JAVC	Velka Javorina	77.79	331	eP		P	02 34 53.4 +1.0
JAVC				e			02 35 14.3
PSZ	Piszkesteto	77.80	329	eP		P	02 34 52.9 +0.4
	comp=Z,33nm,0.8s						
PSZ	Piszkesteto	77.80	329	⇑i P		P	02 34 53.0 +0.5
PSZ	Piszkesteto	77.80	329	eP		P	02 34 52.9 +0.4
PSZ				pmax		pmax	
	comp=Z,33nm,0.8s						
PSZ	Piszkesteto	77.80	329	⇑IP		P	02 34 52.1 -0.4
GDLE	Glaisdale, N Y	77.84	344	eP		P	02 34 51.9 -0.6
GDLE				IAmb		IAmb	02 34 56.3
	comp=Z,29nm,0.8s						
VOIR		77.84	324	⇑i P		P	02 34 53.4 +0.6
VOIR		77.84	324	⇑P		P	02 34 53.4 +0.6
GOPC	GO Pecny, Ondr	77.85	333	eP		P	02 34 52.6 -0.1
GOPC				eS		S	02 44 41.1 -0.7
GOPC				MLR		MLR	
	comp=Z,1µm,18.5s						
GOPC	GO Pecny, Ondr	77.85	333	eP		P	02 34 52.6 -0.1
GOPC				eS		S	02 44 41.1 -0.7
GOPC				AMS		AMS	03 12 40.0
	comp=Z,1µm,18.5s						
PRU	Pruhonice	77.87	333	eP		P	02 34 52.7 0.0
PRU				eS		S	02 44 43.3 +1.5
PRU				MLR		MLR	
	comp=Z,2µm,18.2s						
PRU	Pruhonice	77.87	333	eP		P	02 34 52.7 0.0
PRU				eS		S

CLGH	Cloghs, Cushen	78.16	347	eP	P	02 34 53.8 -0.4
CLGH				IAmb	IAmb	02 34 55.6
	comp=Z,29nm,0.9s					
TREC	Trest	78.16	332	eP	P	02 34 54.5 +0.1
TREC				e		02 35 15.4
TREC				MLR	MLR	
	comp=Z,2µm,21.2s					
TREC	Trest	78.16	332	eP	P	02 34 54.5 +0.1
TREC				esP	sP	02 35 15.4 +3.1
TREC				AMS	AMS	03 12 10.0
	comp=Z,2µm,21.2s					
MOX	Moxa	78.20	335	P	P	02 34 54.6 0.0
MOX				pmax	pmax	
	comp=Z,50nm,1.1s					
H48A	Harrisville	78.28	36	P	P	02 34 54.6 -0.5
	baz=324					
NKC	Novy Kostel	78.31	334	eP	P	02 34 55.1 -0.1
NKC				MLR	MLR	
	comp=Z,2µm,18.1s					
NKC	Novy Kostel	78.31	334	eP	P	02 34 55.1 -0.1
NKC				AMS	AMS	03 13 30.0
	comp=Z,2µm,18.1s					
E51A	G1948 Merrick	78.32	33	P	P	02 34 54.3 -1.0
	baz=326					
DEV	Deva	78.34	326	⇑iP	P	02 34 56.0 +0.6
DEV	Deva	78.34	326	⇑P	P	02 34 56.0 +0.6
MODS	Modra-Piesok	78.34	331	eP	P	02 34 55.2 -0.2
MODS				e		02 35 16.1
MODS				pmax	pmax	
	comp=Z,42nm,0.9s					
MODS	Modra-Piesok	78.34	331	eP	P	02 34 55.2 -0.2
MODS				esP	sP	02 35 16.1 +2.8
LOT	Lotru	78.35	325	⇓iP	P	02 34 55.3 -0.4
D52A	ZEK Kipawa Sen	78.36	32	P	P	02 34 54.5 -1.0
	baz=327					
WTSB	Winterswijk	78.36	338	eP	P	02 34 54.9 -0.5
	comp=Z,43nm,0.6s					
WTSB				epP	sP	02 35 15.7 +2.5
GOLR		78.36	324	⇑iP	P	02 34 55.8 +0.2
J46A	Howard City	78.38	38	P	P	02 34 55.9 +0.3
	baz=323					
M43A	Waltham Townsh	78.38	42	P	P	02 34 54.8 -1.0
	baz=322					
WMOK	Wichita Mounta	78.40	52	eP	P	02 34 56.6 +0.6
	comp=Z,9.5nm,0.8s					
WMOK	Wichita Mounta	78.40	52	eP	P	02 34 56.6 +0.6
WMOK				pmax	pmax	
	comp=Z,10.0nm,0.8s					
WMOK	Wichita Mounta	78.40	52	P	P	02 34 55.8 -0.2
	baz=318					
HPK	Haverah Park	78.43	344	eP	P	02 34 55.9 +0.1
HPK				IAmb	IAmb	02 35 00.1
	comp=Z,85nm,0.7s					
SGRR	Singureni	78.44	323	⇓iP	P	02 34 55.2 -0.8
SRO	Srobarova	78.46	330	eP	P	02 34 56.8 +0.8
SRO	Srobarova	78.46	330	eP	P	02 34 56.8 +0.8
BR101	Keskin Array S	78.46	316	eP	P	02 34 56.6 +0.2
BR131	Keskin Array S	78.46	316	eP	P	02 34 57.0 +0.6
	comp=Z,19nm,0.9s					
BR131	Keskin Array S	78.46	316	P	P	02 34 57.3 +0.9
	SNR=11					
BRTR	Keskin Array B	78.46	316	P	P	02 34 56.6 +0.2
	comp=Z,14nm,0.8s,baz=76,slow=3.9,SNR=49					
SRO2	Moca	78.47	330	eP	P	02 34 57.7 +1.6
SRO2	Moca	78.47	330	eP	P	02 34 57.7 +1.6
SIRR	Siria	78.51	327	⇓iP	P	02 34 56.8 +0.4
D53A	Lac Vacive, Po	78.54	32	eP	P	02 34 55.9 -0.6
	comp=Z,16nm,1.0s					
D53A	Lac Vacive, Po	78.54	32	P	P	02 34 55.7 -0.8
	baz=327					
ZST	Bratislava	78.56	331	eP	P	02 34 56.7 +0.1
ZST	Bratislava	78.56	331	eP	P	02 34 56.7 +0.1
HUMR	Humele	78.61	324	⇑iP	P	02 34 56.5 -0.4
PRD	Provadia	78.64	322	eP	P	02 34 57.6 +0.5
N43A	Stutzman Famil	78.67	42	P	P	02 34 57.7 +0.4
	baz=322					
IOMK	Kirk Michael	78.69	346	eP	P	02 34 56.8 -0.4
IOMK				IAmb	IAmb	02 34 58.4
	comp=Z,57nm,0.9s					
ANTO	Ankara	78.76	316	eP	P	02 34 59.1 +1.1
	comp=Z,40nm,0.8s					
ANTO	Ankara	78.76	316	⇑iP	P	02 34 58.6 +0.6
ANTO	Ankara	78.76	316	⇑P	P	02 34 58.6 +0.6
ANTO	Ankara	78.76	316	P	P	02 35 01.2 +3.2
	SNR=6.0					
ANTO				P	P	02 35 01.2 +3.2
	SNR=6.0					
BR231	Keskin MP Arra	78.79	316	eP	P	02 34 59.2 +1.1
	comp=Z,36nm,0.8s					
GZR	Gura Zlata	78.80	326	⇑iP	P	02 34 57.8 -0.3
GZR	Gura Zlata	78.80	326	⇑P	P	02 34 57.8 -0.3
WIM	Isle of Man	78.82	346	eP	P	02 34 57.5 -0.4
J47A	Sunmer	78.83	38	eP	P	02 34 58.9 +0.7
	comp=Z,34nm,1.1s					
J47A	Sunmer	78.83	38	P	P	02 34 58.2 +0.1
	baz=324					
M44A	Midewin, Midew	78.84	41	eP	P	02 34 58.4 +0.1
	comp=Z,39nm,1.1s					
M44A	Midewin, Midew	78.84	41	P	P	02 34 57.1 -1.2
	baz=322					
E52A	Mattawa	78.84	33	P	P	02 34 57.0 -1.2
	baz=327					
CSKK	Cskako	78.86	329	EP	P	02 34 58.0 -0.2
D54A	Lac Fusel, La	78.86	31	P	P	02 34 57.8 -0.5
	baz=328					
HDIL	Hopedale	78.91	42	eP	P	02 34 58.3 -0.4
	comp=Z,44nm,0.8s					
HDIL	Hopedale	78.91	42	P	P	02 34 57.9 -0.8
	baz=322					
KHC	Kasperske Hory	78.92	333	eP	P	02 34 58.5 -0.2
	comp=Z,20nm,0.7s					
KHC	Kasperske Hory	78.92	333	eP	P	02 34 58.9 +0.3
KHC				eS	S	02 44 53.9 +0.6
KHC				MLR	MLR	
	comp=Z,3µm,18.0s					
KHC	Kasperske Hory	78.92	333	eP	P	02 34 58.9 +0.3
KHC				ex	x	02 35 35.5
KHC				eS	S	02 44 53.9 +0.6
KHC				AMS	AMS	03 13 30.0
	comp=Z,3µm,18.0s					
GMM	Mts of Mourne	78.95	346	eP	P	02 34 58.0 -0.5
LBWR	Ladybower, Pea	78.98	344	eP	P	02 34 58.9 +0.1
LBWR				IAmb	IAmb	02 35 00.9
	comp=Z,72nm,0.9s					
BZS	Buzias	79.07	326	⇑iP	P	02 34 59.2 -0.2
BZS	Buzias	79.07	326	⇑P	P	02 34 59.2 -0.2
WACR	West Acre	79.13	342	eP	P	02 35 00.2 +0.6
WACR				IAmb	IAmb	02 35 01.3
	comp=Z,114nm,1.0s					
GEC2	GERESS Array S	79.13	333	eP	P	02 34 59.8 -0.1
	comp=Z,20nm,0.7s					
GERES	GERESS Array B	79.13	333	P	P	02 34 59.6 -0.3
	comp=Z,15nm,0.7s,baz=32,slow=5.4,SNR=72					
E53A	Dumoine, Ponti	79.14	32	P	P	02 34 58.4 -1.4
	baz=328					
L46A	Eue Claire	79.15	40	P	P	02 34 59.5 -0.5
	baz=323					
GRA1	Grafenberg Arr	79.16	335	eP	P	02 34 59.7 -0.2
	comp=Z,51nm,0.7s					
GRF	Grafenberg Arr	79.16	335	eP	P	02 34 59.7 -0.2
GRF				pmax	pmax	
	comp=Z,51nm,0.7s					
GRFO	Grafenberg	79.16	335	eP	P	02 34 59.8 -0.1
	comp=Z,44nm,0.7s					
GRFO	Grafenberg	79.16	335	eP	P	02 34 59.8 -0.1
GRFO				pmax	pmax	
	comp=Z,44nm,0.7s					
TUL1	Leonard	79.16	49	eP	P	02 35 04.4 +4.3
	comp=Z,21nm,1.2s					
SOP	Sopron	79.19	331	⇑IP	P	02 35 00.1 0.0
K47A	Vermontville	79.20	39	P	P	02 34 59.6 -0.7
	baz=324					
CONA	Conrad Observa	79.21	331	iP	P	02 35 00.8 +0.5
	comp=Z,20nm,0.8s,SNR=21					
J48A	Bridge Port	79.22	37	P	P	02 35 00.8 +0.4
	baz=324					
SILT	Sile	79.26	319	⇑iP	P	02 35 00.7 +0.2
N44A	Piper City	79.27	42	P	P	02 34 59.6 -1.0
	baz=322					
E54A	Lac Daplat, Po	79.27	32	P	P	02 34 59.7 -0.8
	baz=328					
VLAD	Vladila	79.28	324	⇑iP	P	02 35 01.8 +1.2
ALGO	Algonquin Park	79.35	32	P	P	02 34 59.8 -1.2
	baz=327					
HERR	Herculane	79.36	326	⇓iP	P	02 35 00.7 -0.4
BANR	Banloc	79.45	327	⇑iP	P	02 35 01.3 -0.2
KLYT	Kilyos	79.46	319	⇑iP	P	02 35 00.0 -1.6
ABTX	Abilene, Hawle	79.46	54	eP	P	02 35 05.7 +3.8
	comp=Z,15nm,1.3s					
ABTX	Abilene, Hawle	79.46	54	P	P	02 35 03.1 +1.2
	baz=318					
WME	Myndd Eilian	79.47	345	eP	P	02 35 00.6 -0.9
LTX	Lajitas	79.48	59	eP	P	02 35 02.8 +0.7
LTX	Lajitas	79.48	59	eP	P	02 35 02.8 +0.7
TX31	Lajitas Ar. Si	79.48	59	eP	P	02 35 02.5 +0.4
	comp=Z,9.3nm,0.6s					
TXAR	Lajitas Array	79.48	59	P	P	02 35 02.8 +0.7
	comp=Z,2.8nm,0.5s,baz=298,slow=4.1,SNR=44					
TXAR				pP	pP	02 35 15.2 +0.3
	comp=Z,9.1nm,0.5s,baz=303,slow=4.2,SNR=27					
TXAR				PKKPbc	PKKPbc	02 53 50.9 +2.5
	comp=Z,0.2nm,0.5s,baz=134,slow=5.4,SNR=4.7					
K48A	Perry	79.48	38	P	P	02 35 02.9 +1.2
	baz=324					
P43A	Skaggs, Pawnee	79.51	43	P	P	02 35 02.4 +0.4
	baz=322					
N45A	Kentland	79.52	41	P	P	02 35 01.9 0.0
	baz=322					
CWF	Charnwood Fore	79.52	343	eP	P	02 35 01.5 -0.2
CWF				IAmb	IAmb	02 35 05.8
	comp=Z,17nm,0.7s					
BASO	Ashfield	79.53	36	P	P	02 35 02.4 +0.4
	baz=325					
M46A	Old House Fiel	79.61	40	P	P	02 35 03.1 +0.7
	baz=323					
O44A	Mansfield	79.62	42	P	P	02 35 01.6 -1.0
	baz=322					
PUNG	Punghina	79.66	325	⇑iP	P	02 35 02.2 -0.4
L47A	Sherwood	79.67	39	P	P	02 35 01.8 -1.0
	baz=324					
HGN	Heimansgroeve	79.68	338	eP	P	02 35 02.3 -0.3
	comp=Z,38nm,0.6s					
HGN				eS	S	02 45 10.5 +9.4
BEBN	Eben Emael	79.72	338	P	P	02 35 02.6 -0.2
MDVR	Moldovita	79.73	326	⇑iP	P	02 35 02.7 -0.4
H52A	Wyevale	79.73	34	P	P	02 35 02.9 -0.2
	baz=326					
FOEL	Foel Wylfa	79.75	344	eP	P	02 35 02.9 -0.2
FOEL				IAmb	IAmb	02 35 07.7
	comp=Z,29nm,0.7s					
K49A	Clarkson	79.78	38	P	P	02 35 03.4 0.0
	baz=324					
MEM	Membach	79.80	338	P	P	02 35 02.5 -0.8
MEM	Membach	79.80	338	P	P	02 35 03.0 -0.3
	comp=Z,40nm,0.9s					
MOA	Molln	79.82	332	iP	P	02 35 04.3 +0.8
	comp=Z,16nm,0.8s,SNR=10					
G53A	Haliburton	79.83	33	P	P	02 35 02.8 -0.8
	baz=327					
N46A	Monticello	79.84	41	P	P	02 35 03.1 -0.6
	baz=323					
PHSR	Pinarhisar	79.85	321	⇑iP	P	02 35 04.2 +0.5
YLV	Yalova	79.85	319	⇑iP	P	02 35 02.9 -1.0
YLV	Yalova	79.85	319	⇑P	P	02 35 02.9 -1.0
HHAR	Hobbs	79.86	48	eP	P	02 35 03.6 -0.4
	comp=Z,12nm,0.8s					
LLW	Llanuwychllyn	79.88	345	eP	P	02 35 03.6 -0.1
BLCH	La Chartreuse	79.88	338	P	P	02 35 03.8 0.0
	comp=Z,52nm,1.1s					
O45A	Potomac	79.89	42	P	P	02 35 03.6 -0.4
	baz=322					
CCM	Cathedral Cave	79.89	45	eP	P	02 35 03.6 -0.5
	comp=Z,27nm,0.9s					
CCM	Cathedral Cave	79.89	45	eP	P	02 35 03.6 -0.5
CCM				pmax	pmax	
	comp=Z,27nm,0.9s					
CCM	Cathedral Cave	79.89	45	P	P	02 35 03.4 -0.7
	baz=321					
ARSA	Arzberg	79.92	331	iP	P	02 35 04.1 +0.1
	comp=Z,16nm,1.3s,SNR=8.3					
BSTI	Sart Tilman	79.94	338	P	P	02 35 04.3 +0.2
	comp=Z,10nm,0.6s					
SLM	Saint Louis	79.94	44	eP	P	02 35 05.2 +0.9
	comp=Z,25nm,0.8s					
SLM	Saint Louis	79.94	44	eP	P	02 35 05.2 +0.9
SLM				pmax	pmax	
	comp=Z,25nm,0.8s					
I51A	Listowel	79.97	35	P	P	02 35 03.4 -0.9
	baz=326					
DSB	Dublin	79.97	346	eP	P	02 35 04.4 +0.2
	comp=Z,23nm,0.9s					
LATQ	La Tuque	80.02	29	P	P	02 35 04.8 +0.3
	baz=330					
EDRB	Edirne	80.02	321	P	P	02 35 05.3 +0.6
BHOU	Houvegnez	80.04	338	P	P	02 35 04.8 +0.1
L48A	N Adams	80.04	39	P	P	02 35 04.1 -0.7
	baz=324					
UCC	Uccle	80.05	339	eP	P	02 35 05.2 +0.6
	comp=Z,16nm,0.9s					
UCC	Uccle	80.05	339	P	P	02 35 04.1 -0.5
SFIN	Lafayette	80.08	41	eP	P	02 35 04.8 -0.2
	comp=Z,21nm,1.0s					
SFIN	Lafayette	80.08	41	P	P	02 35 04.4 -0.6
	baz=323					
MPEP	Malo Peshtene	80.08	324	P	P	02 35 04.9 -0.1
F55A	Otter Lake	80.09	31	P	P	02 35 04.7 -0.3
	baz=328					
FRGS	Fruska Gora	80.15	327	⇑iP	P	02 35 04.6 -0.8
BEHE	Becsehely	80.15	330	eP	P	02 35 05.0 -0.3
BEHE	Becsehely	80.15	330	⇑IP	P	02 35 05.0 -0.3
BCLA	Clavier	80.16	339	P	P	02 35 05.2 0.0
	comp=Z,28nm,0.7s					
BANO	Bancroft	80.18	33	P	P	02 35 04.5 -1.0
	baz=328					
L49A	Milan	80.19	38	P	P	02 35 05.8 +0.2
	baz=324					
LKLB	Kalborn	80.24	338	P	P	02 35 06.6 +0.9
BGES	Gesves	80.25	339	P	P	02 35 05.5 -0.2
	comp=Z,28nm,0.8s					
N47A	Urbana	80.33	40	P	P	02 35 05.7 -0.7
	baz=324					
SNF	Seneffe	80.34	339	P	P	02 35 06.0 -0.2
	comp=Z,27nm,0.8s					
FVM	French Village	80.36	45	eP	P	02 35 07.1 +0.5
	comp=Z,29nm,1.1s					
FVM	French Village	80.36	45	eP	P	02 35 07.1 +0.5
FVM				pmax	pmax	
	comp=Z,29nm,1.1s					
U40A	Yellville	80.38	47	P	P	02 35 06.2 -0.6
	baz=320					
BMRD	Maredsous	80.40	339	P	P	02 35 06.5 -0.1
	comp=Z,41nm,0.8s					
G55A	Calabogie	80.45	32	P	P	02 35 06.1 -0.8
	baz=328					
P45A	Graceland, Par	80.45	42	P	P	02 35 06.7 -0.3
	baz=322					
PLVO	Plevna	80.49	32	eP	P	02 35 07.0 -0.2
	comp=Z,12nm,0.9s					
PLVO	Plevna	80.49	32	P	P	02 35 06.3 -0.8
	baz=328					
BBOU	Bougnies	80.53	339	P	P	02 35 07.3 0.0
	comp=Z,73nm,1.0s					
MCH1	Michaelchurch	80.56	344	eP	P	02 35 07.3 -0.1
MCH1				IAmb	IAmb	02 35 11.3
	comp=Z,40nm,0.9s					
SOKA	Soboth	80.58	331	iP	P	02 35 07.6 -0.1
	comp=Z,25nm,0.8s,SNR=37					
PERS	Pernice	80.59	331	iP	P	02 35 07.9 +0.2
STRD	Stroud	80.61	344	eP	P	02 35 07.7 +0.1
STRD				IAmb	IAmb	02 35 09.8
	comp=Z,94nm,0.9s					
M49A	Liberty Center	80.62	39	P	P	02 35 07.2 -0.7
	baz=324					
O47A	Sheridan	80.62	41	P	P	02 35 07.5 -0.5
	baz=323					
PKRO	Pickering	80.62	34	P	P	02 35 07.4 -0.4
	baz=327					
WLF	Walferdange	80.63	338	eP	P	02 35 09.4 +1.6
	comp=Z,92nm,1.0s					
WLF	Walferdange	80.63	338	eP	P	02 35 09.4 +1.6
WLF				pmax	pmax	
	comp=Z,92nm,1.0s					
WLF	Walferdange	80.63	338	P	P	02 35 08.8 +1.0
P46A	Rosedale	80.63	42	P	P	02 35 07.7 -0.3
	baz=323					
DOU	Dourbes	80.64	339	P	P	02 35 07.6 -0.2
N48A	Decatur	80.64	40	P	P	02 35 07.6 -0.4
	baz=324					
K51A	Iona Station	80.66	36	P	P	02 35 08.2 +0.1
	baz=326					
L50A	Kingsville	80.66	38	P	P	02 35 07.4 -0.7
	baz=325					
MONM	Monmouth	80.67	344	eP	P	02 35 08.1 +0.1
MONM				IAmb	IAmb	02 35 09.7
	comp=Z,76nm,1.0s					
ORIO	Orleans, Innes	80.72	31	P	P	02 35 07.2 -1.1
	baz=329					
DELO	Deloro Mine	80.73	33	P	P	02 35 07.7 -0.7
	baz=328					
Q45A	Warren Harvey,	80.75	43	P	P	02 35 08.4 -0.2
	baz=322					
W39A	Magazine	80.77	49	eP	P	02 35 08.7 -0.1
	comp=Z,9.8nm,0.8s					
W39A	Magazine	80.77	49	P	P	02 35 08.2 -0.7
	baz=320					
SWN1	Swindon	80.78	343	eP	P	02 35 08.9 +0.4
SWN1				IAmb	IAmb	02 35 12.8
	comp=Z,120nm,0.8s					
KBA	Koelnbreinsper	80.80	332	iP	P	02 35 09.2 +0.2
	comp=Z,27nm,0.8s,SNR=38					
DRWO	Darlington Wes	80.84	34	P	P	02 35 08.7 -0.3
	baz=327					
WOL	Wolverton	80.85	343	eP	P	02 35 08.7 -0.3
WOL				IAmb	IAmb	02 35 13.7
	comp=Z,92nm,0.7s					
H55A	Tweed	80.86	33	P	P	02 35 08.3 -0.9
	baz=328					
OBKA	Obir	80.89	331	iP	P	02 35 09.8 +0.4
	comp=Z,15nm,0.8s,SNR=8.6					
VTS	Vitosha	80.90	324	eP	P	02 35 09.6 +0.1
	comp=Z,72nm,1.0s					
VTS	Vitosha	80.90	324	P	P	02 35 09.7 +0.1
VTS	Vitosha	80.90	324	⇓iP	P	02 35 10.1 +0.5
VTS	Vitosha	80.90	324	eP	P	02 35 09.6 +0.1
VTS				pmax	pmax	
	comp=Z,73nm,1.0s					
OLIL	Olney	80.91	43	eP	P	02 35 10.8 +1.3
	comp=Z,24nm,1.0s					
K52A	Tillsonburg	80.94	36	P	P	02 35 09.7 +0.1
	baz=326					
JCT	Junction City	80.94	56	eP	P	02 35 11.5 +1.6
	comp=Z,36nm,1.5s					
JCT	Junction City	80.94	56	P	P	02 35 10.6 +0.7
	baz=318					
I55A	Frankford	80.96	33	P	P	02 35 08.7 -1.0
	baz=328					
DIVS	Divibare	80.97	327	⇑iP	P	02 35 09.0 -0.9
N49A	Columbus Grove	80.97	39	eP	P	02 35 09.8 -0.1
	comp=Z,36nm,1.3s					
N49A	Columbus Grove	80.97	39	P	P	02 35 09.5 -0.3
	baz=324					
PLIO	Pelee Island,	80.98	38	P	P	02 35 10.3 +0.5
	baz=325					
ZAG	Zagreb	80.98	330	eP	P	02 35 09.2 -0.6
TYNO	Tyneside	81.03	35	P	P	02 35 10.1 +0.1
	baz=327					
O48A	Farmland	81.07	40	P	P	02 35 09.9 -0.5
	baz=324					
MYKA	Terra Mystica	81.09	332	iP	P	02 35 09.8 -0.6
	comp=Z,7.8nm,0.6s,SNR=8.0					
ALN	Alexandroupoli	81.10	321	eP	P	02 35 10.9 +0.4
	comp=Z,19nm,0.9s					
ALN	Alexandroupoli	81.10	321	P	P	02 35 10.2 -0.2
FCAR	Ozark Folk Cen	81.11	47	eP	P	02 35 10.2 -0.4
	comp=Z,22nm,0.7s					
RDO	Rodhopi	81.12	322	P	P	02 35 10.9 +0.3
WATA	Walderalm	81.14	333	iP	P	02 35 10.7 0.0
	comp=Z,20nm,0.5s,SNR=30					
S44A	Carbondale	81.16	44	P	P	02 35 10.6 -0.3
	baz=322					
SIUC	Southern Illin	81.16	44	eP	P	02 35 11.0 +0.1
	comp=Z,33nm,0.8s					
R45A	Skylar, Fairfi	81.17	43	P	P	02 35 11.2 +0.4
	baz=322					
CRES	Cresnjev	81.17	330	⇑iP	P	02 35 10.0 -0.8
WHTX	Lake Whitney,	81.17	53	eP	P	02 35 11.9 +0.9
	comp=Z,14nm,0.8s					
WHTX	Lake Whitney,	81.17	53	P	P	02 35 11.1 0.0
	baz=319					
P47A	Martinsville	81.17	41	P	P	02 35 10.5 -0.4
	baz=323					
H56A	Elgin	81.18	32	P	P	02 35 10.4 -0.4
	baz=329					
WTTA	Wattenberg	81.18	333	iP	P	02 35 11.4 +0.3
	comp=Z,45nm,0.9s,SNR=18					
BFO	Black Forest	81.23	336	eP	P	02 35 10.6 -0.5
	comp=Z,24nm,0.8s					
BFO	Black Forest	81.23	336	eP	P	02 35 10.6 -0.5
BFO				pmax	pmax	
	comp=Z,24nm,0.8s					
RETA	Reutte	81.26	334	iP	P	02 35 11.4 +0.1
	comp=Z,18nm,1.0s,SNR=11					
BALB	Balikesir	81.28	319	eP	P	02 35 11.9 +0.4
	comp=Z,102nm,0.8s					
MOTA	Moosalm	81.28	334	iP	P	02 35 11.5 0.0
	comp=Z,32nm,0.9s,SNR=38					
PBMO	Poplar Bluff	81.29	46	eP	P	02 35 11.4 -0.1
	comp=Z,59nm,1.4s					
LJU	Ljubljana	81.30	331	⇑iP	P	02 35 10.6 -0.9
OZLJ	Ozalj	81.35	330	P	P	02 35 11.0 -0.7
SQTA	Sankt Quirin	81.36	334	iP	P	02 35 12.0 +0.1
	comp=Z,26nm,0.9s,SNR=17					
ABTA	Abfaltersbach	81.36	333	iP	P	02 35 11.1 -0.8
	comp=Z,11nm,0.9s,SNR=8.4					
J54A	Appleton	81.37	34	eP	P	02 35 11.4 -0.4
	comp=Z,21nm,0.8s					
J54A	Appleton	81.37	34	P	P	02 35 10.9 -0.9
	baz=327					
MIAR	Mount Ida	81.38	49	eP	P	02 35 12.3 +0.2
	comp=Z,25nm,0.8s					
MIAR	Mount Ida	81.38	49	eP	P	02 35 12.3 +0.2
MIAR				pmax	pmax	
	comp=Z,25nm,0.8s					
MIAR	Mount Ida	81.38	49	P	P	02 35 12.1 0.0
	baz=320					
HAPS	Han Pijesak,Bl	81.38	327	eP	P	02 35 10.6 -1.5
VISS	Visnje	81.41	331	iP	P	02 35 11.5 -0.6
ISP	Isparta	81.47	316	eP	P	02 35 15.0 +2.4
	comp=Z,36nm,0.8s					
BLY	Banja Luka	81.48	329	eP	P	02 35 11.7 -0.7
	comp=Z,10nm,0.7s					
BLY	Banja Luka	81.48	329	⇑iP	P	02 35 11.8 -0.7
BLY	Banja Luka	81.48	329	⇑iP	P	02 35 11.6 -0.8
PMOR	Pomariorio Ree	81.48	121	eT	T	04 05 06.7
	comp=Z,25nm,0.2s					
WHAR	Wooly Hollow	81.49	48	eP	P	02 35 12.9 +0.2
	comp=Z,38nm,1.1s					
O49A	Covington	81.50	40	eP	P	02 35 12.6 0.0
	comp=Z,22nm,1.1s					
O49A	Covington	81.50	40	P	P	02 35 11.9 -0.7
	baz=324					
M51A	Elyria	81.51	38	P	P	02 35 12.2 -0.5
	baz=325					
BOJS	Bojanci	81.52	330	iP	P	02 35 12.3 -0.4
MEDO	Medina	81.54	34	P	P	02 35 13.0 +0.2
	baz=327					
Q47A	Bedord North L	81.54	42	P	P	02 35 12.8 0.0
	baz=323					
N50A	Nevada	81.55	39	P	P	02 35 13.4 +0.6
	baz=325					
P48A	Milroy	81.59	41	eP	P	02 35 13.7 +0.6
	comp=Z,46nm,1.4s					
P48A	Milroy	81.59	41	P	P	02 35 12.9 -0.2
	baz=324					
JAVS	Javornik	81.59	331	iP	P	02 35 11.7 -1.4
W41B	Gary Mavity, V	81.60	48	P	P	02 35 13.1 -0.1
	baz=321					
R46A	Gibon Southern	81.60	43	P	P	02 35 12.9 -0.2
	baz=323					
CEY	Cerknica	81.60	331	⇑iP	P	02 35 12.2 -0.9
ECH	Echery	81.67	337	eP	P	02 35 13.0 -0.4
	comp=Z,28nm,0.9s					
ECH	Echery	81.67	337	eP	P	02 35 13.0 -0.4
ECH				pmax	pmax	
	comp=Z,28nm,0.9s					
NVR	Nevrokopi	81.68	323	P	P	02 35 13.6 0.0
FETA	Feichten	81.69	334	iP	P	02 35 13.8 +0.2
	comp=Z,17nm,1.0s,SNR=8.9					
M52A	Chester

comp=Z,34nm,1.2s
N51A Ashland 81.77 38 P P 02 35 14.4 +0.4
baz=325
LONY Lake Ozonia 81.78 31 P P 02 35 13.1 -1.0
baz=330
ERPA Erie 81.79 36 P P 02 35 14.5 +0.3
baz=327
MGRS Mrkonjic Grad 81.80 329 ||iP P 02 35 14.8 +0.6
L53A Girard 81.81 36 P P 02 35 14.3 0.0
baz=326
X40A Basin Creek Fa 81.82 49 eP P 02 35 15.4 +1.0
comp=Z,10nm,0.9s
X40A Basin Creek Fa 81.82 49 P P 02 35 14.8 +0.4
baz=320
EZN Ezine 81.84 320 P P 02 35 14.4 0.0
EZN Ezine 81.84 320⇑iP P 02 35 13.9 -0.5
EZN Ezine 81.84 320⇑P P 02 35 13.9 -0.5
O50A Cable 81.85 39 P P 02 35 14.6 +0.1
baz=325
P49A Miami Univ. Ec 81.85 40 P P 02 35 13.9 -0.6
baz=324
PLE Pljevlja 81.86 327⇑iP P 02 35 13.7 -0.9
Q48A North Vernon 81.87 41 P P 02 35 14.6 0.0
baz=324
MANT Manisa 81.88 318 eP P 02 35 16.2 +1.3
comp=Z,77nm,0.9s
K54A Basiliko Farm, 81.91 35 P P 02 35 14.0 -0.7
baz=327
S46A Don Dixon Farm 81.92 43 P P 02 35 14.7 -0.1
baz=323
L54A Sinclairville 81.97 35 P P 02 35 14.7 -0.4
baz=327
SRS Serrai 81.99 323 P P 02 35 14.4 -0.8
MOQ Mont Orford 82.00 29 eP P 02 35 15.4 +0.1
R47A Wooly Knot Far 82.00 42 P P 02 35 15.1 -0.2
baz=323
IVA Berane 82.05 326⇑iP P 02 35 15.2 -0.4
K55A Perry 82.06 34 P P 02 35 15.0 -0.6
baz=328
ACSO Alum Creek Sta 82.06 39 eP P 02 35 15.7 +0.1
comp=Z,17nm,0.9s
ACSO Alum Creek Sta 82.06 39 P P 02 35 15.5 -0.1
baz=325
M53A Wl Miller and 82.07 37 P P 02 35 15.5 -0.1
baz=326
STIP Stip 82.10 324 iPn P 02 35 14.8 -1.0
ALLY Alegheny Colle 82.12 36 eP P 02 35 17.4 +1.6
MMNY Mt. Morris Dam 82.12 34 eP P 02 35 16.2 +0.4
comp=Z,22nm,0.9s
UPM Unac-Piva 82.15 327⇑iP P 02 35 15.3 -0.9
UPM Unac-Piva 82.15 327 eP P 02 35 15.1 -1.1
WCI Wyandotte Cave 82.17 42 eP P 02 35 16.8 +0.6
comp=Z,24nm,0.9s
WCI Wyandotte Cave 82.17 42 eP P 02 35 16.8 +0.6
WCI pmax pmax
comp=Z,24nm,0.9s
WCI Wyandotte Cave 82.17 42 P P 02 35 16.2 +0.1
baz=323
SKO Skopje 82.18 325 iPn P 02 35 16.9 +0.8
UDBI Udbina 82.19 329 P P 02 35 15.2 -1.0
FUORN Ofenpass-Fuorn 82.19 334 eP P 02 35 16.9 +0.4
comp=Z,23nm,0.8s
Q49A Aurora 82.20 41 P P 02 35 16.5 +0.2
baz=324
P50A Jamestown 82.21 40 P P 02 35 15.8 -0.6
baz=325
KOME Kolasin 82.21 326⇑iP P 02 35 15.7 -0.7
R48A Northridge Ran 82.23 42 P P 02 35 16.5 0.0
baz=324
KNT Kendrikon 82.24 323 P P 02 35 16.5 0.0
VAY Valandovo 82.25 323 P P 02 35 16.8 +0.3
VAY Valandovo 82.25 323 iPn P 02 35 16.8 +0.3
PVY Plav 82.25 326⇑iP P 02 35 16.1 -0.6
WLAR White Oak Lake 82.28 49 eP P 02 35 17.7 +0.9
comp=Z,28nm,0.7s
CSS Mathiatis 82.29 313 eP P 02 35 16.6 -0.2
comp=Z,31nm,0.7s
LIA Limnos Island 82.29 321 P P 02 35 16.2 -0.6
T46A Princeton 82.34 44 P P 02 35 17.6 +0.5
baz=323
L55A Hinsdale 82.37 35 P P 02 35 17.2 0.0
baz=328
S47A Hartford 82.40 43 P P 02 35 18.0 +0.7
baz=323
M54A Oil Creek Stat 82.43 36 eP P 02 35 18.4 +0.8
comp=Z,24nm,1.1s
M54A Oil Creek Stat 82.43 36 P P 02 35 17.5 0.0
baz=327
NKY Niksic 82.45 327⇑iP P 02 35 16.5 -1.2
NVLJ Novalja 82.47 330 P P 02 35 15.8 -1.8
NKME Niksic 82.50 327⇑iP P 02 35 16.7 -1.2
PPT2 Papeete2 82.51 124 eS S 02 45 34.2 +2.9
comp=Z,124nm,23.5s
PPT2 Papeete2 82.51 124 eLR LR 03 01 12.2
comp=Z,2µm,22.8s,baz=322
PPT2 Papeete2 82.51 124 eT T 04 06 24.0
comp=Z,4.6nm,0.3s
N53A Lisbon 82.52 37 eP P 02 35 18.0 0.0
comp=Z,30nm,1.2s
N53A Lisbon 82.52 37 P P 02 35 18.2 +0.2
baz=326
BRY Bratogost 82.55 327⇑iP P 02 35 16.8 -1.5
BRY Bratogost 82.55 327 eP P 02 35 16.8 -1.5
TUE Stuetta 82.60 334 eP P 02 35 18.6 +0.1
comp=Z,28nm,0.8s
GRG Griva 82.62 323 P P 02 35 17.9 -0.6
P51A Williamsport 82.64 39 eP P 02 35 18.8 +0.1
comp=Z,20nm,1.0s
P51A Williamsport 82.64 39 P P 02 35 18.3 -0.3
baz=325
R49A Shelbyville 82.64 41 P P 02 35 19.5 +0.8
baz=324
THE Thessaloniki 82.65 323 P P 02 35 09.8 -8.8
PLG Polygyros 82.66 322 P P 02 35 18.0 -0.8
O52A Adamsville 82.66 38 eP P 02 35 19.5 +0.7
comp=Z,34nm,1.4s
O52A Adamsville 82.66 38 P P 02 35 18.6 -0.1
baz=326
PDG Podgorica 82.67 326⇑iP P 02 35 18.2 -0.5
PDG Podgorica 82.67 326⇑iP P 02 35 17.8 -0.9
TTG Podgorica 82.67 326⇑iP P 02 35 18.0 -0.7
TTG Podgorica 82.67 326 eP P 02 35 17.6 -1.1
comp=Z,37nm,0.7s
TTG Podgorica 82.67 326 eP P 02 35 17.6 -1.1
TTG pmax pmax
comp=Z,37nm,0.7s
CEME Cevo 82.70 326⇑iP P 02 35 17.7 -1.3
S48A Wiedeman Farm, 82.74 42 P P 02 35 19.0 -0.2
baz=324
N54A Moraine State 82.75 36 eP P 02 35 19.6 +0.4
comp=Z,33nm,1.1s
N54A Moraine State 82.75 36 P P 02 35 19.4 +0.2
baz=327
KRUS Krusevo 82.76 324 iPn P 02 35 19.4 +0.1
T47A Sharon Grove 82.77 43 eP P 02 35 19.8 +0.4
comp=Z,24nm,0.9s
T47A Sharon Grove 82.77 43 P P 02 35 19.4 +0.1
baz=323
TREB Trebinje 82.78 327 eP P 02 35 18.2 -1.1
CCAR Cane Creek 82.81 48 eP P 02 35 21.2 +1.6
comp=Z,23nm,0.7s
X43A Marvell 82.82 47 P P 02 35 20.0 +0.4
baz=321
PHP Peshkopia 82.83 325 P P 02 35 18.8 -0.8
M55A Ridgway 82.84 35 P P 02 35 19.6 0.0
baz=327
Q51A Peebles 82.89 40 eP P 02 35 20.6 +0.7
comp=Z,26nm,1.0s
Q51A Peebles 82.89 40 P P 02 35 20.2 +0.2
baz=325
STON Ston 82.89 327 P P 02 35 18.2 -1.6
STON Ston 82.89 327⇑iP P 02 35 18.0 -1.8
DRME Dracevica, Mon 82.90 326⇑iP P 02 35 19.5 -0.5
DRME Dracevica, Mon 82.90 326⇑iP P 02 35 19.4 -0.5
BUM Brajici-Budva 82.92 326⇑iP P 02 35 19.0 -1.1
PAIG Paliouri 82.93 322 P P 02 35 18.9 -1.2
HCY Herceg Novi 82.95 327⇑iP P 02 35 18.8 -1.4
HCY Herceg Novi 82.95 327 eP P 02 35 18.5 -1.7
S49A Springfield 83.00 42 P P 02 35 20.1 -0.4
baz=324
T48A Bowling Green 83.01 43 P P 02 35 20.3 -0.3
baz=323
R50A Paris 83.04 41 eP P 02 35 22.2 +1.5
comp=Z,20nm,1.3s
R50A Paris 83.04 41 P P 02 35 20.8 +0.1
baz=324
M56A Emporium 83.06 35 P P 02 35 20.7 -0.1
baz=328
ULC Ulcinj 83.07 326⇑iP P 02 35 20.8 0.0
WVT Waverly 83.09 44 eP P 02 35 21.2 +0.2
comp=Z,16nm,0.9s
WVT Waverly 83.09 44 eP P 02 35 21.2 +0.2
WVT pmax pmax
comp=Z,16nm,0.9s
WVT Waverly 83.09 44 P P 02 35 21.3 +0.2
baz=323
U47A Clarksville 83.11 44 P P 02 35 21.1 0.0
baz=323
CHOS Chios island 83.13 320 P P 02 35 20.4 -0.9
CLF Chambon-Foret 83.14 339 eP P 02 35 21.3 +0.3
comp=Z,27nm,0.9s
ACCN Adirondack Com 83.17 31 eP P 02 35 21.6 +0.3
comp=Z,9.9nm,0.9s
FNA Florina 83.20 324 eP P 02 35 20.8 -0.7
comp=Z,23nm,1.0s
FNA Florina 83.20 324 P P 02 35 19.9 -1.6
FNA Florina 83.20 324 eP P 02 35 20.8 -0.7
FNA pmax pmax
comp=Z,23nm,1.0s
V46A Holladay 83.21 45 P P 02 35 21.9 +0.2
baz=323
O54A Avella 83.24 37 P P 02 35 21.8 +0.1
baz=326
SENIN Lac Senin/Sane 83.31 336 eP P 02 35 22.6 +0.3
comp=Z,13nm,0.8s
N55A Marion Center 83.32 36 eP P 02 35 22.6 +0.4
comp=Z,27nm,1.1s
N55A Marion Center 83.32 36 P P 02 35 22.0 -0.2
baz=327
BINY Binghamton 83.32 33 P P 02 35 22.0 -0.1
baz=329
TIR Tirane 83.34 325 eP P 02 35 22.1 0.0
comp=Z,44nm,0.8s
TIR Tirane 83.34 325⇑iP P 02 35 21.6 -0.6
TIR Tirane 83.34 325 eP P 02 35 22.2 0.0
TIR pmax pmax
comp=Z,44nm,0.8s
R51A Hillsboro 83.37 40 P P 02 35 22.4 0.0
baz=325
P53A Whipple 83.38 38 eP P 02 35 25.9 +3.5
comp=Z,17nm,1.1s
P53A Whipple 83.38 38 P P 02 35 22.4 0.0
baz=326
U48A Cassie Pea, Po 83.42 43 P P 02 35 22.7 0.0
baz=323
T49A Edmonton 83.43 42 eP P 02 35 23.1 +0.3
comp=Z,25nm,1.3s
T49A Edmonton 83.43 42 P P 02 35 22.7 0.0
baz=324
V47A Nunnelly 83.49 44 P P 02 35 23.0 0.0
baz=323
N56A West Decatur 83.49 35 P P 02 35 22.5 -0.6
baz=328
S50A Richmond 83.50 41 P P 02 35 22.8 -0.3
baz=324
OXF Oxford 83.58 46 eP P 02 35 23.7 +0.2
comp=Z,41nm,1.0s
OXF Oxford 83.58 46 eP P 02 35 23.7 +0.2
OXF pmax pmax
comp=Z,41nm,1.0s
OXF Oxford 83.58 46 P P 02 35 23.6 +0.2
baz=322
W46A Michie 83.61 45 P P 02 35 23.4 -0.2
baz=323
NEST Nestorio 83.64 324 P P 02 35 23.1 -0.8
NWAO Narrogin (SRO) 83.67 208 P P 02 35 24.1 +0.4
comp=Z,10.0nm,1.0s,baz=68,slow=5.4,SNR=3.2
O55A Ligonier 83.67 36 P P 02 35 23.8 -0.1
baz=327
SSF Saint Saulge 83.72 338 eP P 02 35 24.4 +0.4
SSF pmax pmax
comp=Z,16nm,0.8s
R52A Catlettsburg 83.77 40 P P 02 35 24.6 +0.2
baz=325
U49A Red Boiling Sp 83.79 43 P P 02 35 24.4 -0.2
baz=324
PENT Pentalofos 83.79 324 P P 02 35 23.9 -0.8
T50A Nancy 83.83 42 P P 02 35 24.7 -0.1
baz=324
Q53A Leroy 83.83 39 P P 02 35 24.8 0.0
baz=326
CLTN Cedars of Leba 83.86 43 eP P 02 35 25.3 +0.4
comp=Z,12nm,0.9s
PLAL Pickwick Lake 83.88 45 eP P 02 35 24.6 -0.5
comp=Z,14nm,1.0s
LMN Caledonia Moun 83.89 24 eP P 02 35 25.1 +0.2
comp=Z,32nm,1.4s
SSPA Standing Stone 83.89 35 P P 02 35 25.0 -0.1
baz=328
V48A Smith Brothers 83.90 44 eP P 02 35 25.2 +0.1
comp=Z,12nm,0.8s
V48A Smith Brothers 83.90 44 P P 02 35 24.9 -0.3
baz=323
S51A Beattyville 83.90 41 eP P 02 35 25.1 0.0
comp=Z,14nm,1.0s
S51A Beattyville 83.90 41 P P 02 35 24.9 -0.2
baz=325
W47A Westpoint 83.91 45 P P 02 35 25.1 -0.1
baz=323
O56A Blue Knob Stat 83.92 36 eP P 02 35 25.4 +0.1
comp=Z,18nm,1.0s
O56A Blue Knob Stat 83.92 36 P P 02 35 25.1 -0.2
baz=328
N57A Milroy 83.93 35 P P 02 35 24.8 -0.4
baz=328
KSPA Keystone Colle 83.96 33 eP P 02 35 25.9 +0.5
comp=Z,8.0nm,0.7s
MRKA Markates 83.98 321 P P 02 35 24.3 -1.2
P55A Reedsville 84.03 37 P P 02 35 26.1 +0.2
baz=327
Q54A Coxs Mills 84.03 38 eP P 02 35 26.1 +0.4
comp=Z,17nm,0.9s
Q54A Coxs Mills 84.03 38 P P 02 35 25.9 +0.1
baz=326
ATAL Atalanti 84.23 322 P P 02 35 25.4 -1.4
LPL La Plagne 84.25 336 eP P 02 35 27.8 +0.8
LPL pmax pmax
comp=Z,29nm,0.9s
AGG Agios Georgios 84.26 322 eP P 02 35 27.3 +0.3
comp=Z,12nm,0.9s
AGG Agios Georgios 84.26 322 eP P 02 35 27.3 +0.3
AGG pmax pmax
comp=Z,12nm,0.9s
LKR Lokris 84.28 322 P P 02 35 25.5 -1.5
T51A Gray 84.29 41 P P 02 35 26.9 -0.2
baz=325
U50A Jamestown 84.31 42 P P 02 35 27.2 -0.1
baz=324
W48A Pulaski 84.33 44 P P 02 35 27.0 -0.4
baz=323
V49A McMinnville 84.33 43 P P 02 35 27.1 -0.2
baz=324
VLC Villacollemand 84.35 333 eP P 02 35 27.8 +0.5
comp=Z,16nm,0.7s
Q55A Buckhannon 84.35 38 P P 02 35 27.6 +0.1
baz=327
O57A Amberson 84.36 35 P P 02 35 27.3 -0.1
baz=328
X47A Russelville 84.36 45 P P 02 35 27.4 -0.1
baz=323
P56A Dayton Farm, R 84.45 36 P P 02 35 28.2 +0.3
baz=327
N59A State Game Lan 84.50 34 eP P 02 35 29.1 +1.0
comp=Z,15nm,0.9s
N59A State Game Lan 84.50 34 P P 02 35 28.8 +0.6
baz=329
T52A Hallie 84.61 41 P P 02 35 29.6 +0.8
baz=325
R54A Victor 84.63 39 P P 02 35 28.6 -0.3
baz=326
W49A Belvidere 84.67 44 P P 02 35 28.9 -0.2
baz=324
BNI Bardonecchia 84.68 335 eP P 02 35 29.6 +0.4
comp=Z,9.3nm,0.7s
BNI Bardonecchia 84.68 335 eP P 02 35 29.6 +0.4
BNI pmax pmax
comp=Z,9.0nm,0.7s
Q56A Snyder Ridge, 84.69 37 P P 02 35 29.6 +0.4
baz=327
HRV Adam Dziewonsk 84.70 30 P P 02 35 29.9 +0.8
baz=332
PAGS Pennsylvania G 84.71 35 eP P 02 35 30.2 +1.1
comp=Z,14nm,1.0s
BAI Bari 84.72 327 ePn P 02 35 29.7 +0.5
U51A La Follette 84.73 42 P P 02 35 29.3 -0.1
baz=325
SWET Sewanee 84.75 44 eP P 02 35 29.5 -0.1
comp=Z,23nm,0.8s
TCF Toulx Ste Croi 84.77 339 eP P 02 35 30.2 +0.8
TCF pmax pmax
comp=Z,15nm,0.7s
V50A Pikevile 84.79 43 P P 02 35 29.5 -0.2
baz=324
P57A Homestead Farm 84.81 36 P P 02 35 29.9 +0.2
baz=328
TZTN Tazewell 84.81 41 eP P 02 35 30.1 +0.3
comp=Z,33nm,1.4s
TZTN Tazewell 84.81 41 P P 02 35 29.8 -0.1
baz=325
X48A Hartselle 84.82 45 eP P 02 35 29.5 -0.4
comp=Z,9.3nm,0.8s
X48A Hartselle 84.82 45 P P 02 35 29.2 -0.6
baz=323
O59A Robesonia 84.86 34 P P 02 35 30.1 +0.1
baz=329
AQU L'Aquila 84.92 330 eP P 02 35 30.8 +0.5
comp=Z,38nm,1.0s
AQU L'Aquila 84.92 330 eP P 02 35 30.8 +0.5
AQU pmax pmax
comp=Z,38nm,1.0s
AQU L'Aquila 84.92 330⇑iP P 02 35 30.3 0.0
T53A Wise 84.92 40 P P 02 35 30.3 -0.1
baz=326
U52A Thorn Hill 85.02 41 P P 02 35 30.8 -0.1
baz=325
Q57A Strasburg 85.03 36 P P 02 35 31.1 +0.3
baz=328
SG1 Sgolgore (BA) 85.03 327 ePn P 02 35 31.0 +0.2
V51A Loudon 85.04 42 eP P 02 35 31.6 +0.7
comp=Z,15nm,0.8s
V51A Loudon 85.04 42 P P 02 35 31.1 +0.2
baz=325
MFF Saint Martin d 85.05 341 eP P 02 35 30.6 -0.2
MFF pmax pmax
comp=Z,13nm,0.8s
MVL Millersville 85.06 35 eP P 02 35 31.5 +0.6
comp=Z,11nm,0.9s
W50A Signal Mountai 85.07 43 eP P 02 35 30.9 -0.2
comp=Z,15nm,0.8s
W50A Signal Mountai 85.07 43 P P 02 35 30.7 -0.5
baz=324
SSB Saint Sauveur 85.08 337 eP P 02 35 31.4 +0.4
comp=Z,39nm,1.4s
SSB Saint Sauveur 85.08 337 eP P 02 35 31.4 +0.4
SSB pmax pmax
comp=Z,39nm,1.4s
X49A Woodville 85.12 44 P P 02 35 30.7 -0.7
baz=324
PAL Palisades 85.14 32 P P 02 35 31.2 -0.1
baz=330
O60A Telford 85.16 34 P P 02 35 30.4 -1.0
baz=329
BRNJ Basking Ridge 85.17 33 eP P 02 35 31.7 +0.2
comp=Z,20nm,0.8s
MATE Matera 85.18 327⇑iP P 02 35 31.1 -0.4
S55A Lewisburg 85.18 39 P P 02 35 31.6 -0.1
baz=327
Y48A Jasper 85.18 45 P P 02 35 31.4 -0.2
baz=323
CPCT Cooper Cave 85.25 43 eP P 02 35 32.5 +0.5
comp=Z,12nm,0.8s
T54A Tazewell 85.30 40 P P 02 35 32.5 +0.3
baz=326
P59A Jarrettsville 85.35 35 P P 02 35 32.6 +0.2
baz=329
V52A Sevierville 85.36 42 eP P 02 35 32.9 +0.3
comp=Z,31nm,1.3s
V52A Sevierville 85.36 42 P P 02 35 33.0 +0.3
baz=325
W51A Cleveland 85.36 43 P P 02 35 32.7 +0.1
baz=324
U53A Fall Branch 85.41 41 P P 02 35 33.2 +0.4
baz=326
DRO Drossia 85.42 322 P P 02 35 32.2 -0.6
RLS Riolos of Patr 85.44 322 P P 02 35 32.6 -0.3
X50B Fort Payne 85.50 44 P P 02 35 32.8 -0.5
baz=324
P60A Greenville 85.50 34 P P 02 35 33.2 +0.1
baz=329
R57A Stanardsville 85.60 37 P P 02 35 34.2 +0.5
baz=328
Y49A Blount Mountai 85.61 45 eP P 02 35 33.2 -0.6
comp=Z,16nm,0.9s
Y49A Blount Mountai 85.61 45 P P 02 35 33.5 -0.3
baz=324
147A Livingston 85.61 47 eP P 02 35 34.8 +1.0
comp=Z,39nm,0.8s
147A Livingston 85.61 47 P P 02 35 34.1 +0.3
baz=323
U54A Nelsons Funny 85.63 40 eP P 02 35 35.0 +1.0
comp=Z,25nm,1.3s
U54A Nelsons Funny 85.63 40 P P 02 35 34.1 +0.2
baz=326
S56A Natural Bridge 85.67 38 P P 02 35 34.3 +0.2
baz=327
O61A Allentown 85.68 33 P P 02 35 33.9 -0.1
baz=330
BLA Blacksburg 85.69 39 eP P 02 35 34.9 +0.7
comp=Z,26nm,1.0s
BLA Blacksburg 85.69 39 eP P 02 35 34.9 +0.7
BLA pmax pmax
comp=Z,26nm,1.0s
BLA Blacksburg 85.69 39 P P 02 35 34.3 +0.1
baz=327
VLS Valsamata 85.71 323 P P 02 35 32.6 -1.7
X51A Calhoun 85.80 43 P P 02 35 35.3 +0.6
baz=324
W52A Murphy 85.82 42 P P 02 35 35.1 +0.2
baz=325
R58A Rapidan 85.82 37 P P 02 35 34.7 0.0
baz=328
S57A Dark Hollow, R 85.87 37 eP P 02 35 36.2 +1.2
comp=Z,10.0nm,0.9s
S57A Dark Hollow, R 85.87 37 P P 02 35 35.1 +0.1
baz=327
V53A Saluda 85.87 41 eP P 02 35 35.8 +0.6
comp=Z,8.1nm,0.9s
V53A Saluda 85.87 41 P P 02 35 35.4 +0.2
baz=325
Q59A Harwood 85.90 35 P P 02 35 35.2 0.0
baz=329
Y50A Piedmont 85.91 44 P P 02 35 35.4 +0.1
baz=324
LRAL Lakeview Retre 85.97 46 eP P 02 35 35.7 +0.1
comp=Z,9.8nm,1.3s
LRAL Lakeview Retre 85.97 46 P P 02 35 35.3 -0.3
baz=323
ITM Ithomi 85.97 322 eP P 02 35 34.8 -0.8
comp=Z,34nm,0.7s
148A Greensboro 85.99 46 P P 02 35 35.7 +0.1
baz=323
U55A TA2, Sparta 85.99 40 P P 02 35 36.3 +0.5
baz=326
T56A Rocky Mt 86.01 39 P P 02 35 35.0 -0.8
baz=327
CAF Calviac 86.07 338 eP P 02 35 35.5 -0.5
CAF pmax pmax
comp=Z,22nm,0.8s
Z49A Columbiana 86.08 45 P P 02 35 36.0 -0.2
baz=324
W53A Cullowhee 86.12 42 P P 02 35 36.5 +0.1
baz=325
R58B Mineral 86.15 37 P P 02 35 36.8 +0.4
baz=328
CBN Corbin Frederi 86.16 36 P P 02 35 37.3 +0.9
baz=328
V54A Nebo 86.18 41 P P 02 35 36.5 -0.2
baz=326
X52A Dahlonega 86.23 43 P P 02 35 36.9 0.0
baz=325
Y51A Rockmart 86.24 44 P P 02 35 36.4 -0.6
baz=324
R59A King George, V 86.27 36 P P 02 35 37.0 +0.1
baz=328
Z50A Ashland 86.33 45 eP P 02 35 37.0 -0.4
comp=Z,33nm,0.8s
Z50A Ashland 86.33 45 P P 02 35 37.0 -0.4
baz=324
T57A Hurt 86.38 38 eP P 02 35 37.7 +0.2
comp=Z,18nm,1.0s
T57A Hurt 86.38 38 P P 02 35 37.4 -0.1

baz=327
S58A Poland Farm, P 86.38 37 P **P 02 35 37.0 -0.5**
baz=328
LFF La Frestale 86.40 339 *e*P **P 02 35 36.7 -0.8**
LFF pmax pmax
comp=Z,19nm,0.8s
U56A King 86.42 39 P **P 02 35 37.6 -0.2**
baz=327
149A Jones 86.42 46 P **P 02 35 37.7 -0.1**
baz=324
TIP Timpagrande 86.43 326 *e*P **P 02 35 39.6 +1.8**
comp=Z,15nm,0.9s
S59A Mechanicsville 86.57 36 P **P 02 35 38.2 -0.3**
baz=328
X53A Estanollee 86.59 42 P **P 02 35 38.8 +0.2**
baz=325
W54A Cherokee Point 86.64 41 P **P 02 35 39.2 +0.3**
baz=326
Z51A Franklin 86.65 44 P **P 02 35 38.5 -0.4**
baz=324
T58A Grand View Acr 86.73 38 P **P 02 35 39.1 -0.2**
baz=328
249A Camden 86.75 46 P **P 02 35 40.2 +0.7**
baz=323
Y52A Lilburn 86.75 43 *e*P **P 02 35 40.6 +1.2**
comp=Z,11nm,0.9s
Y52A Lilburn 86.75 43 P **P 02 35 39.3 -0.1**
baz=325
150A Eclectic 86.80 45 P **P 02 35 39.5 -0.2**
baz=324
V56A Mocksville 86.82 40 P **P 02 35 39.6 -0.1**
baz=327
S60A Water View 86.89 36 P **P 02 35 40.3 +0.3**
baz=329
KMSC Kings Mountain 86.99 41 *e*P **P 02 35 41.0 +0.4**
comp=Z,17nm,1.1s
KMSC Kings Mountain 86.99 41 P **P 02 35 41.0 +0.4**
baz=326
Y53A Monroe 86.99 43 P **P 02 35 40.9 +0.3**
baz=325
X54A Belton 87.00 42 P **P 02 35 40.9 +0.3**
baz=326
PAULI Pauline 87.03 41 *e*P **P 02 35 42.1 +1.4**
comp=Z,36nm,1.5s
TBI Tubuai 87.11 128 *e*S **S 02 46 18.1 +1.5**
comp=Z,288nm,27.2s
TBI Tubuai 87.11 128 *e*LR LR 03 03 09.4
comp=Z,2μm,24.2s,baz=320
TBI Tubuai 87.11 128 *e*T T 04 12 08.9
comp=Z,20nm,0.3s
Z52A Williamson 87.13 44 P **P 02 35 41.3 0.0**
baz=325
250A Grady 87.18 46 *e*P **P 02 35 42.6 +1.1**
comp=Z,65nm,1.0s
250A Grady 87.18 46 P **P 02 35 42.1 +0.5**
baz=324
U58A Oxford 87.19 38 P **P 02 35 41.2 -0.3**
baz=328
151A Opelika 87.21 45 P **P 02 35 41.6 -0.1**
baz=324
HODGE Hodges 87.31 42 *e*P **P 02 35 43.4 +1.2**
comp=Z,20nm,1.2s
W56A Indian Trail 87.34 40 P **P 02 35 42.8 +0.6**
baz=327
152A Waverly Hall 87.40 44 *e*P **P 02 35 42.5 0.0**
comp=Z,12nm,0.9s
152A Waverly Hall 87.40 44 P **P 02 35 42.3 -0.3**
baz=324
X55A Gracelyn & Ava 87.41 41 P **P 02 35 42.7 +0.1**
baz=326
GOGA Godfrey 87.41 43 *e*P **P 02 35 44.1 +1.5**
comp=Z,14nm,1.4s
GOGA Godfrey 87.41 43 *e*P **P 02 35 44.1 +1.5**
GOGA pmax pmax
comp=Z,14nm,1.4s
GOGA Godfrey 87.41 43 P **P 02 35 42.7 +0.1**
baz=325
Y54A Tignall 87.41 42 P **P 02 35 43.1 +0.5**
baz=326
Z53A Monticello 87.46 43 P **P 02 35 42.8 0.0**
baz=325
251A Midway 87.52 45 P **P 02 35 43.5 +0.3**
baz=324
X56A White Oak 87.67 41 P **P 02 35 44.0 +0.2**
baz=326
449A Pace 87.67 47 P **P 02 35 45.0 +1.1**
baz=323
JSC Jenkinsville 87.73 41 *e*P **P 02 35 44.9 +0.8**
comp=Z,19nm,1.3s
JSC Jenkinsville 87.73 41 *e*P **P 02 35 44.9 +0.8**
JSC pmax pmax
comp=Z,19nm,1.3s
Y55A Saluda 87.74 42 P **P 02 35 44.7 +0.5**
baz=326
BIRD Birdtown, Kers 87.80 40 *e*P **P 02 35 45.5 +1.1**
comp=Z,23nm,1.2s
Z54A Sparta 87.85 43 P **P 02 35 45.4 +0.7**
baz=326
V59A Middlesex 87.85 38 P **P 02 35 45.0 +0.4**
baz=328
252A Lumpkin 87.94 45 P **P 02 35 45.7 +0.5**
baz=325
450A Crestview 87.96 47 P **P 02 35 46.3 +1.0**
baz=324
W58A Raeford 88.04 39 P **P 02 35 46.0 +0.4**
baz=327
X57A Johnson Farm, 88.12 40 P **P 02 35 46.5 +0.5**
baz=327
253A Americus 88.18 44 *e*P **P 02 35 47.7 +1.4**
comp=Z,42nm,0.9s
253A Americus 88.18 44 P **P 02 35 46.2 -0.1**
baz=325
154A Montrose 88.23 43 *e*P **P 02 35 48.1 +1.6**
comp=Z,54nm,0.9s
154A Montrose 88.23 43 P **P 02 35 46.4 -0.1**
baz=325
352A Blakely 88.26 45 *e*P **P 02 35 47.5 +0.8**
comp=Z,36nm,0.9s
352A Blakely 88.26 45 P **P 02 35 47.1 +0.4**
baz=324
Z56A Williston 88.47 42 P **P 02 35 47.8 +0.1**
baz=326
254A Abbeville 88.69 44 P **P 02 35 49.2 +0.5**
baz=325
353A Camilla 88.72 45 P **P 02 35 49.5 +0.7**
baz=325
TIGA Tifton 88.95 44 *e*P **P 02 35 51.2 +1.2**
comp=Z,28nm,0.8s
TIGA Tifton 88.95 44 P **P 02 35 50.7 +0.8**
baz=325
255A Hazlehurst 89.10 43 P **P 02 35 51.5 +0.8**
baz=326
PGAV Gavieira, Arco 91.20 345 *e*P **P 02 36 00.3 -0.1**
PGAV Gavieira, Arco 91.20 345 *e*S **S 02 46 51.3 -3.7**
PGAV Gavieira, Arco 91.20 345 *e*LR LR 03 09 30.2
comp=Z,536nm,18.0s
PCAB Cabril 91.40 344 *e*P **P 02 36 01.4 +0.1**
POLO Lamas de Olo 91.68 344 *e*P **P 02 36 02.2 -0.4**
MVO Moncorvo 91.73 344 *e*pP pP 02 36 22.1 +6.0
MVO Moncorvo 91.73 344 *e*LR LR 03 09 58.8
comp=Z,680nm,22.0s
PVRL Vila Real 91.76 344 *e*P **P 02 36 02.0 -0.9**
KEST Kesra 92.25 330 P **P 02 36 05.2 -0.1**
comp=Z,8.8nm,0.9s,baz=337,slow=5.6,SNR=9.0
KEST Kesra 92.25 330 *e*P **P 02 36 06.2 +0.9**
comp=Z,13nm,1.0s
PVIS Viseu 92.34 344 *e*P **P 02 36 03.5 -2.1**
ESDC Sonseca Array 92.50 341 P **P 02 36 06.7 +0.3**
comp=Z,2.2nm,0.7s,baz=13,slow=4.3,SNR=21
MTE Manteigas 92.57 344 *e*P **P 02 36 05.5 -1.2**
MTE Manteigas 92.57 344 *e*S **S 02 47 01.3 -6.1**
MTE Manteigas 92.57 344 *e*LR LR 03 08 40.8
comp=Z,930nm,20.0s
PCAS Casmilo, Conde 93.09 344 *e*P **P 02 36 08.2 -0.9**
PCAS Casmilo, Conde 93.09 344 *e*S S 02 47 00.8 -11
PCBR Castelo Branco 93.10 344 *e*P **P 02 36 08.3 -0.8**
PMRV Marv??o 93.48 343 *e*P **P 02 36 14.8 +3.9**
PMRV Marv??o 93.48 343 *e*LR LR 03 09 56.5
comp=Z,910nm,20.0s
PTOM Tomar 93.50 344 *e*pP pP 02 36 31.0 +7.1
PMTG Montargil 93.99 344 *e*P **P 02 36 13.3 +0.1**
PMTG Montargil 93.99 344 *e*S **S 02 47 15.3 -4.4**
PMAFR Mafra 94.30 345 *e*S **S 02 47 26.6 +4.1**
PBEJ Beja 94.93 343 *e*P **P 02 36 18.3 +0.8**
PNCL Nicolau / Gran 94.98 344 *e*P **P 02 36 18.0 +0.3**
PNCL Nicolau / Gran 94.98 344 *e*S S 02 47 15.5 -13
MESJ Messejana 95.18 344 *e*P **P 02 36 18.1 -0.6**

MESJ AMb AMB 02 36 27.2
comp=Z,14nm,1.8s
MESJ Messejana 95.18 344 *e*P **P 02 36 18.3 -0.4**
MESJ Messejana 95.18 344 *e*P **P 02 36 18.0 -0.6**
PVAQ Vaqueiros 95.50 343 *e*S S 02 47 19.9 -13
PVAQ Vaqueiros 95.50 343 *e*LR LR 03 09 29.3
comp=Z,536nm,18.0s
PTEO Sao Teotonio 95.56 344 *e*P **P 02 36 20.8 +0.4**
PBDV Barranco-do-Ve 95.70 343 *e*S **S 02 47 29.8 -4.9**
MORF Marmelete 95.78 344 *e*P **P 02 36 20.6 -0.9**
MORF AMb AMB 02 36 28.5
comp=Z,27nm,2.6s
MORF Marmelete 95.78 344 *e*pP pP 02 36 42.1 +7.6
MORF Marmelete 95.78 344 *e*P **P 02 36 20.6 -0.9**
TOA1 Torodi Ar. Sit 115.57 327 *e*PKPdf **PKiKP 02 41 36.4 -1.2**
TORD Torodi Ar. Bea 115.58 327 PKP **PKiKP 02 41 36.4 -1.2**
comp=Z,0.5nm,0.3s,baz=18,slow=2.5,SNR=16
TORD PKKP **PKKPdf 02 52 28.9 -3.5**
comp=Z,0.4nm,0.5s,baz=200,slow=4.7,SNR=6.0
VNDA Vanda 122.70 177 PKP **PKPdf 02 41 49.3 0.0**
comp=Z,1.0nm,0.8s,baz=296,slow=4.0,SNR=5.8
VNDA PKKPbc **PKKPbc 02 51 44.4 +0.6**
comp=Z,1.2nm,0.9s,baz=211,slow=1.9,SNR=6.7
DBIC Dimbokro 123.96 331 PKP **PKPdf 02 41 53.0 -0.7**
comp=Z,5.6nm,0.9s,baz=103,slow=9.0,SNR=4.3
DBIC pPKP **pPKPdf 02 42 07.2 +0.3**
comp=Z,3.3nm,0.6s,baz=62,slow=1.7,SNR=2.3
MAW Mawson 130.20 210 PKP **PKPdf 02 42 04.2 +0.4**
comp=Z,1.9nm,0.8s,baz=344,slow=4.8,SNR=5.7
BOSA Boshof 134.46 272 PKP **PKPdf 02 42 13.8 +0.4**
comp=Z,2.5nm,0.8s,baz=45,slow=2.9,SNR=3.6
QSPA South Pole Qui 135.01 180 *e*PKPdf **PKiKP 02 42 14.3 -0.3**
LPAZ La Paz 136.31 61 PKhKP PKPpre 02 42 09.9
comp=Z,0.9nm,0.8s,baz=354,slow=7.7,SNR=4.0
LPAZ PKP **PKPdf 02 42 17.6 -0.2**
comp=Z,3.1nm,0.8s,baz=315,slow=5.8,SNR=10
SYO Syowa Base 138.90 211 *e*PKPdf **PKPdf 02 42 18.3 -1.8**
SYO Syowa Base 138.90 211 *e*PKiKP **PKiKP 02 42 25.6 +3.3**
SYO Syowa Base 138.90 211 *e*pPKPdf pPKPdf 02 42 36.2 +3.2
BDFB Brasilia 146.38 35 *e*PKPbc **PKPbc 02 42 36.7 +0.3**
comp=Z,16nm,0.8s,baz=297,slow=1.7,SNR=25
BDFB Brasilia 146.38 35 *e*PKPbc **PKPbc 02 42 36.7 +0.3**
BDFB *e*PKPdf **PKPab 02 42 36.8 -0.4**
PLCA Paso Flores 149.49 96 PKPbc **PKPbc 02 42 43.9 -0.1**
comp=Z,7.8nm,0.7s,baz=280,slow=3.2,SNR=15
PLCA Paso Flores 149.49 96 *e*PKPbc **PKiKP 02 42 44.6 -0.5**
CPUP Villa Florida 150.45 60 PKPbc **PKPbc 02 42 46.5 -0.1**
comp=Z,8.4nm,0.8s,baz=337,slow=2.8,SNR=23
SNAA Sanae 150.73 197 PKPbc **PKPbc 02 42 45.9 -0.1**
SNAA Sanae 150.73 197 *e*PKPbc **PKPbc 02 42 46.0 -0.1**
SNAA Sanae 150.73 197 *e*PKIKP **PKPbc 02 42 46.0 -0.1**
VNA2 Neumayer--Watz 152.21 195 PKPbc **PKiKP 02 42 49.6 0.0**
baz=138,slow=1.8
VNA3 Neumayer Olymp 152.33 193 PKPbc **PKPbc 02 42 49.5 -0.2**
VNA1 Neumayer--Stat 152.60 195 PKPbc **PKiKP 02 42 50.5 +0.1**

ISCJB ***04*** *02:23:18.4±0.9, 45°.34N±0°.04×151°.09E±0°.05, h39km±8km, mb5.3/129, MS4.4/1, Error ellipse: s-maj=7.9km s-min=4.2km az=148.5*
NEIC ***04*** *02:23:20.5±1.9, 45°.35N×151°.13E, h44km±5km, mb5.3/124, Error ellipse: s-maj=14.6km s-min=9.5km az=139.0*
IDC ***04*** *02:23:21.4±0.6, 45°.44N×151°.14E, h47km±6km, mb4.9/22, mb1 5.1/29, mb1mx4.9/43, mbtmp5.2/29, MS4.9/1, Ms1 4.9/1, ms1mx4.2/5, Error ellipse: s-maj=14.4km s-min=10.7km az=128.0*
ISC 04 02:23:20.6±0.5, 45°.32N±0°.06×151°.14E±0°.06, h46km±4km, h45km:pP-P, n313, σ0.997/329, mb5.3/148, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**6.20**	**262**	P	**Pn**	**02 24 50.9**	**+1.3**
	51nm,0.3s,baz=86,slow=13,SNR=11						
ASAJ	**Asahikawa**	**6.20**	**262**	*e*Pn	**Pn**	**02 24 50.9**	**+1.3**
PET	**Petropavlovsk**	**9.14**	**30**	*e*Pn	**Pn**	**02 25 29.4**	**-0.3**
MAJO	**Matsushiro**	**13.12**	**233**	*e*Pn	**Pn**	**02 26 24.0**	**-0.2**
MJAR	**Matsushiro Arr**	**13.12**	**233**	P	**Pn**	**02 26 25.7**	**+1.5**
	0.6nm,0.3s,baz=34,slow=10,SNR=10						
MJAR				LR	LR	02 32 06.0	
	comp=Z,6μm,21.0s,baz=50,slow=40						
MJB9	**Matsu-Tunnel**	**13.12**	**233**	*e*Pn	**Pn**	**02 26 24.3**	**+0.1**
USA0B	**Ussuriysk Arra**	**13.66**	**272**	*e*Pn	**Pn**	**02 26 30.6**	**-0.8**
USRK	**Ussuriysk Ar.**	**13.66**	**272**	P	**Pn**	**02 26 31.5**	**0.0**
	3.5nm,0.3s,baz=95,slow=13,SNR=6.3						
MA2	**Magadan**	**14.28**	**359**	P	**Pn**	**02 26 38.8**	**-1.0**
	8.4nm,0.3s,baz=182,slow=11,SNR=9.3						
MA2	**Magadan**	**14.28**	**359**	*e*Pn	**Pn**	**02 26 38.8**	**-1.0**
JHJ2	**Mitsune**	**15.00**	**220**	*e*Pn	**Pn**	**02 26 50.4**	**+0.9**
	208nm,0.9s						
JHJ	**Hachijo jima 2**	**15.01**	**220**	P	**P**	**02 26 52.5**	**-1.7**
	17nm,0.3s,baz=0.0,slow=13,SNR=5.2						
MDJ	**Mudanjiang**	**15.27**	**275**	*e*Pn	**Pn**	**02 26 52.3**	**-0.6**
	131nm,0.8s						
SMY	**Shemya**	**16.73**	**55**	*e*Pn	**Pn**	**02 27 10.4**	**-1.1**
	173nm,1.2s						
SEY	**Seymchan**	**17.66**	**2**	P	**P**	**02 27 23.3**	**0.0**
	1.6nm,0.3s,baz=177,slow=10,SNR=9.6						
KSRS	**Korea Array**	**19.07**	**254**	P	**Pn**	**02 27 40.0**	**-0.1**
	2.1nm,0.3s,baz=63,slow=11,SNR=13						
KSRS				PcP	**PcP**	**02 32 03.4**	**+1.3**
	0.2nm,0.3s,baz=358,slow=0.8,SNR=7.2						
KS15	**Wonju Array Si**	**19.10**	**254**	*e*P	**P**	**02 27 38.3**	**-1.1**
	47nm,0.8s						
KS15				*e*PcP	**PcP**	**02 32 03.4**	**+1.3**
JNU	**Nakatsue**	**19.81**	**239**	*e*P	**P**	**02 27 45.7**	**-1.5**
	154nm,1.0s						
YAK	**Yakutsk**	**20.84**	**331**	*e*P	**P**	**02 27 58.8**	**+0.7**
	265nm,0.9s						
ADK	**Adak**	**22.14**	**61**	*e*P	**P**	**02 28 12.6**	**+0.5**
	120nm,1.1s						
GSTR	**Great Sitkin T**	**22.54**	**61**	*e*P	**P**	**02 28 17.0**	**+0.5**
ATKA	**Atka Island**	**23.69**	**61**	*e*P	**P**	**02 28 26.6**	**-1.3**
	72nm,0.9s						
BILL	**Bilibino**	**24.10**	**14**	*e*P	**P**	**02 28 32.3**	**+0.8**
	49nm,1.3s						
JOW	**Kunigami**	**25.97**	**232**	P	**P**	**02 28 49.8**	**+1.0**
	6.1nm,0.9s,baz=104,slow=16,SNR=7.6						
JOW	**Kunigami**	**25.97**	**232**	*e*P	**P**	**02 28 48.3**	**-0.5**
	22nm,0.8s						
BJT	**Baijiatuau**	**26.12**	**271**	*e*P	**P**	**02 28 49.0**	**-1.0**
	96nm,1.0s						
SPIA	**Saint Paul Isl**	**26.54**	**50**	*e*P	**P**	**02 28 54.7**	**+1.0**
	245nm,1.2s						
SSE	**Sheshan**	**27.30**	**249**	P	**P**	**02 29 06.2**	**+5.4**
SSE				S	S	02 33 03.7	-33
SSE				pmax	pmax		
	comp=Z,41nm,0.7s						
SSE				pmax	pmax		
	comp=Z,300nm,9.4s						
SSE				LR	LR		
	comp=N,680nm,22.0s						
SSE				LR	LR		
	comp=E,800nm,21.7s						
SSE	**Sheshan**	**27.30**	**249**	*e*P	**P**	**02 29 01.4**	**+0.6**
	comp=E,80nm,0.7s						
TIXI	**Tiksi**	**28.48**	**345**	P	**P**	**02 29 10.8**	**-0.1**
	comp=E,15nm,0.5s,baz=141,slow=9.1,SNR=14						
TIXI	**Tiksi**	**28.48**	**345**	*e*P	**P**	**02 29 08.9**	**-2.0**
	comp=E,17nm,0.5s						
ULN	**Ulaanbaatar**	**30.09**	**291**	*e*P	**P**	**02 29 24.8**	**-0.9**
	comp=E,36nm,1.2s						
SONA0	**Songino Array**	**30.54**	**291**	*e*P	**P**	**02 29 30.6**	**+1.1**
SONA0				*e*PcP	**PcP**	**02 32 26.8**	**-0.6**
SONM	**Songino Array**	**30.54**	**291**	P	**P**	**02 29 30.6**	**+1.1**
	comp=E,23nm,1.0s,baz=79,slow=9.9,SNR=6.2						
SONM				PcP	**PcP**	**02 32 26.8**	**-0.6**
	comp=E,5.9nm,0.9s,baz=114,slow=0.8,SNR=3.8						
ANM	**Nome**	**30.65**	**36**	*e*P	**P**	**02 29 30.0**	**-0.2**
	comp=E,15nm,1.0s						
TLY	**Talaya**	**31.64**	**299**	*e*P	**P**	**02 29 38.1**	**-1.0**
	comp=E,8.5nm,0.7s						
TPUB	**Ta-pu**	**33.11**	**239**	*e*P	**P**	**02 29 52.1**	**-0.1**
	comp=E,77nm,0.9s						
KNMB	**Chin-men Tao**	**33.64**	**243**	*e*P	**P**	**02 29 55.4**	**-1.4**
	comp=E,163nm,1.3s						
XAN	**Xi'an**	**34.03**	**266**	*e*P	**P**	**02 29 58.6**	**-1.6**
	comp=E,27nm,0.8s						
ENH	**Enshi**	**35.76**	**260**	*e*P	**P**	**02 30 14.2**	**-0.8**
	comp=E,93nm,1.0s						
RSO	**Redoubt South**	**35.85**	**45**	*e*P	**P**	**02 30 15.7**	**-0.1**
LZH	**Lanzhou**	**36.56**	**272**	⇑P	**P**	**02 30 23.4**	**+1.3**
LZH				pP	sP	02 30 36.7	-1.9
LZH				sP	pP	02 30 41.3	+7.8
LZH				PP	**PnPn**	**02 31 47.6**	**+1.8**

LZH pmax pmax
comp=Z,59nm,1.3s
LZH pmax pmax
comp=Z,140nm,5.2s
BPAW Bear Paw Mtn. 36.73 38 *e*P **P 02 30 24.1 +1.1**
comp=Z,21nm,0.8s
BRLK Bradley Lake 36.81 46 *e*P **P 02 30 24.1 +0.3**
comp=Z,24nm,0.7s
TOLK Toolik Lake Re 37.68 31 *e*P **P 02 30 31.1 +0.1**
comp=Z,21nm,0.6s
WRH Wood River Hil 38.00 38 *e*P **P 02 30 34.5 +0.8**
comp=Z,23nm,0.8s
ILAR Eielson Array 38.52 37 P **P 02 30 38.1 0.0**
comp=Z,26nm,1.0s,baz=268,slow=7.5,SNR=12
ILB Eielson Array 38.52 37 *e*P **P 02 30 38.1 0.0**
comp=Z,21nm,0.8s
DIV Divide 39.23 43 *e*P **P 02 30 45.3 +1.2**
comp=Z,29nm,0.8s
NRIK Noril'sk 39.29 330 P **P 02 30 42.7 -1.7**
comp=Z,6.6nm,0.5s,baz=97,slow=4.3,SNR=9.1
DOT Dot Lake 39.80 39 *e*P **P 02 30 48.5 -0.4**
comp=Z,13nm,0.9s
SCRK Sand Creek 39.81 39 *e*P **P 02 30 49.6 +0.6**
comp=Z,14nm,0.7s
ZAA1 Zalesovo Array 42.34 307 *e*PcP **PcP 02 33 02.1 -0.3**
ZALV Zalesovo Beam 42.34 307 PcP **PcP 02 33 02.1 -0.3**
comp=Z,22nm,0.8s,baz=71,slow=2.6,SNR=8.7
EPYK Eagle Plains 42.63 35 *e*P **P 02 31 13.3 +1.4**
comp=Z,71nm,1.0s
INK Inuvik 43.59 31 P **P 02 31 20.2 +0.6**
comp=Z,45nm,1.0s,baz=281,slow=9.9,SNR=15
INK Inuvik 43.59 31 *e*P **P 02 31 21.1 +1.5**
comp=Z,39nm,0.9s
MK31 Makanchi Array 46.38 298 *e*P **P 02 31 41.2 -1.0**
comp=Z,27nm,0.7s
MK32 Makanchi Array 46.38 298 *e*P **P 02 31 42.5 +0.4**
MK32 *e*PcP **PcP 02 33 16.9 +0.4**
MKAR Makanchi Array 46.38 298 P **P 02 31 42.5 +0.4**
comp=Z,26nm,0.7s,baz=74,slow=8.9,SNR=10
MKAR PcP **PcP 02 33 16.9 +0.4**
comp=Z,10nm,0.6s,baz=77,slow=2.4,SNR=5.4
MAKZ Makanchi 46.57 298 *e*P **P 02 31 43.8 +0.2**
comp=Z,31nm,0.8s
KURK Kurchatov 47.02 304 *e*P **P 02 31 45.7 -1.3**
comp=Z,38nm,1.0s
LKP Lekhapani 47.07 267 *e*P **P 02 31 48.6 +0.8**
ZIRO ZIRO 48.36 269 *e*P **P 02 31 58.1 +0.1**
MOKO MOKOCHONG 48.63 267 *e*P **P 02 32 01.1 +1.0**
LSA Lhasa 48.98 273 *e*P **P 02 32 04.7 +1.7**
comp=Z,95nm,0.9s
KOHI KOHIMA 49.29 267 *e*P **P 02 32 04.2 -0.8**
TEZP TEZPUR 49.66 269 *e*P **P 02 32 08.4 +0.7**
IMP Imphal 49.96 266 *e*P **P 02 32 10.2 +0.1**
CHTO Chiang Mai 50.45 256 *e*P **P 02 32 13.7 0.0**
comp=Z,39nm,0.8s
CM31 Chiang Mai Arr 50.69 256 *e*P **P 02 32 16.8 +1.2**
comp=Z,23nm,0.8s
CM31 *e*PcP **PcP 02 33 30.2 -2.2**
CMAR Chiang Mai Arr 50.69 256 P **P 02 32 16.8 +1.2**
comp=Z,13nm,0.8s,baz=45,slow=7.4,SNR=8.6
CMAR PcP **PcP 02 33 34.1 +1.7**
comp=Z,8.2nm,0.8s,baz=19,slow=1.9,SNR=6.3
BRVK Borovoye 50.75 310 *e*P **P 02 32 17.2 +1.6**
comp=Z,15nm,0.8s
SILR SILCHAR 50.80 267 *e*P **P 02 32 17.7 +1.4**
FAKI Fak Fak 50.89 205 *e*P **P 02 32 17.2 +0.2**
comp=Z,46nm,1.0s
SHL Shillong 50.95 268 *e*P **P 02 32 17.8 +0.1**
comp=Z,172nm,0.7s
SHL Shillong 50.95 268 *e*P **P 02 32 17.6 -0.1**
SAIH SAIHA 52.13 264 *e*P **P 02 32 26.4 0.0**
GTK Tadong 52.19 272 *e*P **P 02 32 25.3 -1.6**
RES Resolute Bay 52.62 18 P **P 02 32 29.4 +0.1**
comp=Z,21nm,0.7s,baz=335,slow=8.6,SNR=9.6
RES Resolute Bay 52.62 18 *e*P **P 02 32 29.3 +0.1**
comp=Z,41nm,1.0s
YKW3 Yellowknife Ar 52.85 35 *e*P **P 02 32 32.2 +1.1**
comp=Z,18nm,0.9s
KSH Kashi 53.92 292 P **P 02 32 43.7 +4.2**
KSH pP PP 02 34 36.5 -4.3
KSH PP PP 02 34 56.8 +16
KSH S S 02 39 31.7 -40
BOK Bokaro 56.30 271 *e*P **P 02 32 54.7 -1.9**
DDI Dehra Dun 57.76 282 *e*P **P 02 33 06.5 -0.5**
DHRM DHARAMSHALA 57.81 285 *e*P **P 02 33 07.7 +0.2**
SMLA Simla 57.88 283 *e*P **P 02 33 08.2 +0.5**
DGPR DIGLIPUR 58.50 256 *e*P **P 02 33 12.2 0.0**
ARCES ARCESS Array B 58.74 340 P **P 02 33 13.2 0.0**
comp=Z,8.5nm,0.3s,baz=54,slow=4.6,SNR=5.2
ARCES PcP **PcP 02 34 03.3 +0.8**
comp=Z,15nm,0.9s,baz=29,slow=5.7,SNR=5.0
IPM Ipoh 59.60 242 *e*P **P 02 33 20.2 +0.4**
comp=Z,24nm,0.8s
YBH Yreka Blue Hor 59.64 60 P **P 02 33 19.7 -0.3**
comp=Z,4.2nm,0.8s,baz=45,slow=6.8,SNR=6.1
KTK1 Kautokeino 59.67 341 *e*P **P 02 33 19.8 +0.2**
TRO Tromso 60.14 343 *e*P **P 02 33 22.9 +0.1**
I07A Izee 60.20 56 *e*P **P 02 33 20.2 -3.6**
comp=Z,4.8nm,0.8s
MTN Manton Dam 60.66 203 *e*P **P 02 33 23.7 -3.2**
comp=Z,76nm,1.1s
PSI Prapat 62.22 243 *e*P **P 02 33 37.7 0.0**
comp=Z,24nm,0.8s
LOF Lofoten 62.49 343 *e*P **P 02 33 37.7 -1.0**
BHPL Bhopal 62.61 276 *e*P **P 02 33 40.2 -0.1**
FFC Flin Flon 62.72 39 *e*P **P 02 33 41.0 +0.6**
comp=Z,37nm,0.9s
NGP Nagpur 62.82 273 *e*P **P 02 33 41.5 -0.1**
BKNI Bangkinang 62.84 240 *e*P **P 02 33 43.3 +1.6**
comp=Z,195nm,0.9s
FCC Fort Churchill 63.21 32 *e*P **P 02 33 44.0 +0.4**
comp=Z,28nm,0.8s
EGMT Eagleton 63.24 48 *e*P **P 02 33 45.1 +1.0**
comp=Z,28nm,1.0s
MOR8 Moi Rana 63.96 342 *e*P **P 02 33 47.5 -0.9**
SCO Scoresbysund 64.40 357 *e*P **P 02 33 51.1 -0.1**
comp=Z,45nm,1.0s
SCO *e*pP **pP 02 34 01.4 -2.1**
GCMT Greycliff 64.69 50 *e*P **P 02 33 54.9 +1.1**
FIA1 FINESS Array S 64.73 334 *e*P **P 02 33 52.6 -1.0**
comp=Z,30nm,0.8s
FIA0 FINESS Array S 64.74 334 *e*P **P 02 33 52.7 -0.8**
FINES FINESS Array B 64.74 334 P **P 02 33 52.7 -0.8**
comp=Z,22nm,0.6s,baz=56,slow=7.6,SNR=8.1
SNOW Snow King Moun 65.58 52 *e*P **P 02 34 00.8 +1.0**
comp=Z,26nm,1.4s
NSS Namsos 65.91 342 *e*P **P 02 34 01.1 0.0**
LAO LASA Array 65.93 47 *e*P **P 02 34 03.2 +1.5**
comp=Z,31nm,1.0s
GEYT Alibeck 66.15 300 P **P 02 34 03.6 +0.5**
comp=Z,62nm,0.8s,baz=28,slow=3.5,SNR=12
GYA0B ALIBECK ARRAY 66.15 300 *e*P **P 02 34 03.3 +0.1**
comp=Z,74nm,0.8s
WRAB Tennant Creek 66.72 197 *e*P **P 02 34 07.3 +0.5**
WRAB *e*pP **pP 02 34 18.5 +0.1**
WRAB *e*pwP **sP 02 34 21.9 -1.0**
WR1 Warramunga Arr 66.73 197 *e*P **P 02 34 07.4 +0.5**
WRA Warramunga Arr 66.73 197 P **P 02 34 07.4 +0.5**
comp=Z,40nm,0.8s,baz=5.5,slow=6.1,SNR=12
WRA pP **pP 02 34 20.7 +2.3**
comp=Z,41nm,0.7s,baz=3.1,slow=6.2,SNR=7.5
FRB Frobisher Bay 66.84 18 P **P 02 34 07.0 -0.1**
comp=Z,46nm,0.8s,baz=340,slow=6.6,SNR=12
FRB Frobisher Bay 66.84 18 *e*P **P 02 34 07.0 -0.1**
JLU Jordanelle 67.04 55 *e*P **P 02 34 11.0 +1.9**
comp=Z,10nm,1.2s
TBLU Trondheim 67.40 342 *e*P **P 02 34 09.8 -0.8**
MDRS Chennai 67.40 266 *e*P **P 02 34 10.9 -0.5**
BHJ Bhuj 68.02 281 *e*P **P 02 34 15.0 -0.1**
POO Poona 68.21 275 *e*P **P 02 34 16.1 -0.4**
MTPU Mount Pierson 68.28 58 *e*P **P 02 34 16.7 -0.3**
comp=Z,8.6nm,1.1s
ULM Lac du Bonnet 68.50 39 P **P 02 34 18.3 +0.5**
comp=Z,11nm,0.8s,baz=308,slow=5.3,SNR=4.7
ULM Lac du Bonnet 68.50 39 *e*P **P 02 34 17.4 -0.4**
comp=Z,11nm,0.7s
MOL Molde 68.58 343 *e*P **P 02 34 18.2 +0.1**
DOMB Dombas 68.73 342 *e*P **P 02 34 19.1 0.0**
NC303 NORSAR Array S 68.92 340 *e*P **P 02 34 19.9 -0.3**
comp=Z,131nm,1.4s
NC204 NORSAR Array S 69.02 341 *e*P **P 02 34 20.8 -0.1**
comp=Z,93nm,0.9s
AKN Aaknes 69.05 343 *e*P **P 02 34 21.4 +0.4**
NB200 NORSAR Array S 69.12 340 *e*P **P 02 34 21.5 0.0**
NOA NORSAR Array B 69.12 340 P **P 02 34 21.5 0.0**
comp=Z,29nm,0.7s,baz=28,slow=6.4,SNR=12

NAO01 **NORSAR Array S** 69.37 340 *eP* P 02 34 22.9 -0.1
PV23 **Carpenter Ridg** 69.87 55 *eP* P 02 34 26.5 -0.4
comp=Z,11nm,0.7s
AGMN **Agassiz Nation** 69.91 41 *eP* P 02 34 26.6 0.0
comp=Z,32nm,1.1s
HYA **Hoyanger** 70.13 343 *eP* P 02 34 28.2 +0.5
GOA **Goa** 70.28 272 *eP* P 02 34 29.4 +0.2
GOA IAmb IAmb 02 34 29.8
comp=Z,38nm,0.9s
AS31 **Alice Springs** 70.43 197 *eP* P 02 34 30.6 +0.7
comp=Z,9.9nm,0.7s
ASAR **Alice Springs** 70.43 197 P P 02 34 31.6 +1.7
comp=Z,25nm,0.8s,baz=14,slow=6.2,SNR=17
ASAR pP sP 02 34 46.1 -0.5
comp=Z,36nm,0.7s,baz=9.2,slow=5.2,SNR=9.1
SUE **Sulen** 70.52 343 *eP* P 02 34 30.5 +0.4
KONO **Kongsberg** 70.73 340 *eP* P 02 34 31.1 -0.3
comp=Z,57nm,1.3s
KONO **Kongsberg** 70.73 340 *eP* P 02 34 30.5 -0.9
KIV **Kislovodsk** 70.80 313 *eP* P 02 34 31.1 -1.0
comp=Z,101nm,0.8s
KIV **Kislovodsk** 70.80 313 *e* P 02 34 31.2 -1.0
KBZ **Khabaz** 70.85 313 P P 02 34 33.6 +1.3
comp=Z,119nm,0.9s,baz=75,slow=3.2,SNR=11
KBZ **Khabaz** 70.85 313 *eP* P 02 34 33.6 +1.3
ASK **Askoy** 70.96 343 *eP* P 02 34 33.3 +0.6
BER **Bergen** 71.02 343 *eP* P 02 34 33.6 +0.5
PALK **Pallekele** 71.13 261 *eP* P 02 34 34.4 -0.1
comp=Z,38nm,1.0s
ODD1 **Odda** 71.17 342 *eP* P 02 34 34.5 +0.4
TBLG **Delisi** 71.28 311 *eP* P 02 34 36.1 +1.0
comp=Z,196nm,0.8s
SUW **Suwalki** 71.58 331 *eP* P 02 34 36.6 +0.1
comp=Z,88nm,1.0s
BLS5 **Blasjo** 71.65 342 *eP* P 02 34 37.4 +0.5
AKASG **Malin Array Be** 71.95 325 P P 02 34 38.5 -0.4
comp=Z,21nm,0.5s,baz=34,slow=6.7,SNR=8.7
AKBB **Malin Array Si** 71.95 325 *eP* P 02 34 37.8 -1.1
comp=Z,40nm,0.8s
KIEV **Kiev** 71.97 325 *eP* P 02 34 38.2 -0.8
comp=Z,39nm,0.8s
KMY **Karmoy** 72.11 342 *eP* P 02 34 40.3 +0.7
EYMN **Ely** 72.14 39 *eP* P 02 34 40.2 +0.1
comp=Z,47nm,1.3s
HOMB **Homborsund** 72.22 340 *eP* P 02 34 40.5 +0.2
STAV **Stavanger** 72.26 342 *eP* P 02 34 41.0 +0.5
ECSD **EROS Data Cent** 72.87 45 *eP* P 02 34 44.2 -0.3
comp=Z,50nm,1.1s
TUC **Tucson** 72.96 61 *eP* P 02 34 45.3 0.0
comp=Z,7.4nm,1.1s
LENM **Lemitar** 74.00 58 *eP* P 02 34 49.2 -2.3
LVV **L'vov** 74.68 328 *e* P 02 34 55.6 +0.6
KIS **Kishinev** 75.02 323 *i* pP P 02 34 56.5 -0.5
KIS **Kishinev** 75.02 323 *i* *P P 02 34 56.5 -0.5
SCHQ **Schefferville** 75.15 22 P P 02 34 57.4 -0.3
comp=Z,27nm,0.8s,baz=359,slow=6.6,SNR=8.7
SCHQ **Schefferville** 75.15 22 *eP* P 02 34 57.4 -0.3
comp=Z,29nm,0.7s
E43A **Lone Tree Farm** 75.31 37 *eP* P 02 34 58.1 -0.6
comp=Z,13nm,0.8s
KWP **Kalwaria Pacla** 75.33 328 *eP* P 02 34 59.1 +0.4
comp=Z,2μm,1.1s
SIRT **Sirnak** 75.54 309 *eP* P 02 35 00.8 +0.6
comp=Z,265nm,1.1s
BUR08 **Bucovina Ar. S** 75.99 326 *eP* P 02 35 02.8 +0.1
comp=Z,80nm,0.7s
L40A **Anamosa** 76.74 43 *eP* P 02 35 06.2 -0.7
comp=Z,30nm,0.9s
OKC **Ostrava-Krasne** 76.78 331 *es*P P 02 35 07.6 +0.6
OKC **Ostrava-Krasne** 76.78 331 *e* P 02 35 07.6 +0.6
OSTC **Ostas** 76.82 332 *ex* P 02 35 09.9 +2.7
CHVC **Chvalec** 76.84 332 *ex* P 02 35 07.8 +0.4
LANS **Liptovska Anna** 76.91 330 *es*P P 02 35 09.2 +1.4
LANS **Liptovska Anna** 76.91 330 *e* P 02 35 09.2 +1.4
UPC **Upice** 76.93 332 *es*P P 02 35 08.3 +0.5
UPC **Upice** 76.93 332 *e* P 02 35 08.3 +0.5
G45A **Suttons Bay** 76.94 38 *eP* P 02 35 09.1 +1.1
comp=Z,42nm,0.8s
DPC **Dobruska-Polom** 76.96 332 *es*P P 02 35 09.0 +0.9
DPC **Dobruska-Polom** 76.96 332 *e* P 02 35 09.0 +0.9
MORC **Moravsky Berou** 77.04 331 *eP* P 02 35 08.7 +0.2
comp=Z,102nm,0.9s
MORC **Moravsky Berou** 77.04 331 *e* P 02 35 09.1 +0.6
KRLC **Kraliky** 77.04 332 *es*P P 02 35 09.2 +0.7
KRLC **Kraliky** 77.04 332 *e* P 02 35 09.2 +0.7
KECS **Kecovo** 77.10 329 *es*P P 02 35 09.7 +0.9
KECS **Kecovo** 77.10 329 *e* P 02 35 09.7 +0.9
CLL **Collm** 77.18 335 *eP* P 02 35 09.0 -0.1
comp=Z,113nm,1.0s
CLL **Collm** 77.18 335 ⇑*iP* P 02 35 09.3 +0.1
comp=Z,131nm,1.1s
CLL **Collm** 77.18 335 *i* P 02 35 09.3 +0.1
BRG **Berggiesshubel** 77.27 334 *i* P 02 35 09.8 +0.1
BRG **Berggiesshubel** 77.27 334 *i* P 02 35 09.8 +0.1
comp=Z,62nm,1.4s
STKA **Stephens Creek** 77.32 188 pP pP 02 35 26.0 +4.0
comp=Z,5.3nm,0.7s,baz=350,slow=2.5,SNR=3.4
PVCC **Panska Ves** 77.37 333 *es*P P 02 35 10.6 +0.3
PVCC **Panska Ves** 77.37 333 *e* P 02 35 10.6 +0.3
ESK **Eskdalemuir** 77.41 345 *eP* P 02 35 10.6 +0.2
comp=Z,35nm,1.0s
L42A **Oliver, Polo** 77.53 42 *eP* P 02 35 11.7 +0.4
comp=Z,23nm,1.0s
K43A **Burlington** 77.60 41 *eP* P 02 35 12.2 +0.4
comp=Z,22nm,0.9s
VLDQ **Val d'Or** 77.68 31 *eP* P 02 35 10.8 -1.3
comp=Z,56nm,1.2s
GOPC **GO Pecny, Ondr** 77.84 333 *es*P P 02 35 13.4 +0.5
GOPC **GO Pecny, Ondr** 77.84 333 *e* P 02 35 13.4 +0.5
PRU **Pruhonice** 77.85 333 *es*P P 02 35 13.6 +0.6
PRU **Pruhonice** 77.85 333 *e* P 02 35 13.6 +0.6
N41A **Harden Midland** 77.96 43 *eP* P 02 35 14.8 +1.1
comp=Z,55nm,0.7s
NKC **Novy Kostel** 78.29 334 *e* P 02 35 15.8 +0.4
NKC **Novy Kostel** 78.29 334 *es*P P 02 35 15.8 +0.4
SRO **Srobarova** 78.45 330 *es*P P 02 35 17.8 +1.5
SRO **Srobarova** 78.45 330 *e* P 02 35 17.8 +1.5
BR101 **Keskin Array S** 78.47 316 *eP* P 02 35 16.9 +0.1
BRTR **Keskin Array B** 78.47 316 P P 02 35 16.9 +0.1
comp=Z,28nm,0.9s,baz=23,slow=4.0,SNR=12
ZST **Bratislava** 78.55 331 *e* P 02 35 17.4 +0.6
ZST **Bratislava** 78.55 331 *es*P P 02 35 17.4 +0.6
M44A **Midewin, Midew** 78.77 41 *eP* P 02 35 18.0 -0.1
comp=Z,29nm,0.8s
BR231 **Keskin MP Arra** 78.80 316 *eP* P 02 35 20.1 +1.5
comp=Z,81nm,0.9s
KHC **Kasperske Hory** 78.91 333 *eP* P 02 35 19.4 +0.5
comp=Z,37nm,0.9s
KHC **Kasperske Hory** 78.91 333 *e* P 02 35 19.8 +0.9
KHC **Kasperske Hory** 78.91 333 *es*P P 02 35 19.8 +0.9
GEC2 **GERESS Array S** 79.12 333 *eP* P 02 35 20.2 +0.1
comp=Z,32nm,0.9s
GERES **GERESS Array B** 79.12 333 P P 02 35 20.2 +0.1
comp=Z,17nm,0.6s,baz=34,slow=5.0,SNR=9.4
CONA **Conrad Observa** 79.20 331 *i* S P 02 35 21.7 +1.1
comp=Z,43nm,0.7s
TXAR **Lajitas Array** 79.40 59 pP pP 02 35 35.7 +1.6
comp=Z,12nm,0.5s,baz=300,slow=3.7,SNR=6.9
TXAR PKKPbc PKKPbc 02 54 10.8 +1.9
comp=Z,0.6nm,0.7s,baz=134,slow=5.4,SNR=5.9
HGN **Heimansgroeve** 79.66 338 *ep*P P 02 35 23.2 +0.3
BEBN **Eben Emael** 79.69 339 x P 02 35 23.5 +0.4
MEM **Membach** 79.78 338 x P 02 35 24.1 +0.5
MOA **Molln** 79.80 332 *eS* P 02 35 24.4 +0.6
comp=Z,24nm,0.8s
CCM **Cathedral Cave** 79.81 45 *eP* P 02 35 24.1 +0.1
comp=Z,40nm,0.8s
BLCH **La Chartreuse** 79.86 339 x P 02 35 24.7 +0.8
SLM **Saint Louis** 79.86 44 *eP* P 02 35 25.4 +1.1
comp=Z,47nm,0.8s
ARSA **Arzberg** 79.90 331 *i* S P 02 35 25.1 +0.7
comp=Z,30nm,1.1s
BSTI **Sart Tilman** 79.92 339 x P 02 35 25.2 +0.9
BHOU **Houvegnez** 80.01 338 x P 02 35 25.6 +0.8
UCC **Uccle** 80.03 339 *eP* P 02 35 24.9 +0.1
comp=Z,33nm,0.9s
UCC **Uccle** 80.03 339 x P 02 35 25.0 +0.2
BCLA **Clavier** 80.14 339 x P 02 35 25.6 +0.1
LKLB **Kalborn** 80.22 338 x P 02 35 26.8 +0.9
BGES **Gesves** 80.22 339 x P 02 35 26.6 +0.7
SNF **Seneffe** 80.31 339 x P 02 35 27.1 +0.7
BMRD **Maredsous** 80.38 339 x P 02 35 27.1 +0.3
BBOU **Bougnies** 80.51 339 x P 02 35 28.6 +1.2
STU **Stuttgart** 80.56 336 *eP* P 02 35 28.2 +0.4
comp=Z,60nm,1.0s

SOKA **Soboth** 80.57 331 *eS* P 02 35 28.4 +0.5
comp=Z,46nm,0.9s
WLF **Walferdange** 80.60 338 x P 02 35 28.4 +0.4
DOU **Dourbes** 80.61 339 x P 02 35 28.5 +0.5
KBA **Koelnbreinsper** 80.78 332 *i* S P 02 35 30.1 +0.9
comp=Z,50nm,0.8s
OBKA **Obir** 80.88 331 *i* S P 02 35 29.9 +0.3
comp=Z,19nm,0.8s
MYKA **Terra Mystica** 81.08 332 *eS* P 02 35 30.5 -0.2
comp=Z,22nm,1.1s
SIUC **Southern Illin** 81.08 44 *eP* P 02 35 30.9 +0.1
comp=Z,66nm,0.9s
WATA **Walderalm** 81.12 333 *i* S P 02 35 31.7 +0.7
comp=Z,92nm,1.1s
WTTA **Wattenberg** 81.17 333 *i* S P 02 35 32.2 +0.9
comp=Z,66nm,0.9s
BFO **Black Forest** 81.21 336 *eP* P 02 35 31.4 +0.1
comp=Z,54nm,1.0s
RETA **Reutte** 81.24 334 *i* S P 02 35 32.2 +0.7
comp=Z,33nm,1.0s
MOTA **Moosalm** 81.26 334 *eS* P 02 35 32.4 +0.7
comp=Z,52nm,0.9s
J54A **Appleton** 81.30 34 *eP* P 02 35 31.8 0.0
comp=Z,39nm,0.9s
SQTA **Sankt Quirin** 81.34 334 *i* S P 02 35 32.9 +0.7
comp=Z,50nm,1.0s
ABTA **Abfaltersbach** 81.34 333 *i* pP P 02 35 31.9 -0.2
ABTA **Abfaltersbach** 81.34 333 *eS* P 02 35 31.9 -0.2
comp=Z,30nm,1.1s
P48A **Milroy** 81.51 41 *eP* P 02 35 33.8 +0.8
comp=Z,29nm,1.1s
M52A **Chesterland** 81.62 37 *eP* P 02 35 33.9 +0.3
comp=Z,58nm,1.1s
USIN **University of** 81.64 43 *eP* P 02 35 33.0 -0.7
comp=Z,43nm,0.9s
FETA **Feichten** 81.67 334 *i* S P 02 35 32.4 -1.5
comp=Z,29nm,1.0s
DAVA **Damuels** 81.69 334 *i* S P 02 35 34.5 +0.5
comp=Z,28nm,0.8s
LONY **Lake Ozonia** 81.70 31 *eP* P 02 35 33.0 -0.9
comp=Z,17nm,0.9s
MANT **Manisa** 81.89 318 *eP* P 02 35 34.5 -0.8
comp=Z,165nm,1.0s
UTMT **University of** 82.34 45 *eP* P 02 35 37.8 +0.4
comp=Z,81nm,0.8s
M54A **Oil Creek Stat** 82.36 36 *eP* P 02 35 37.8 +0.3
comp=Z,29nm,0.9s
NCB **Newcomb** 82.39 31 *eP* P 02 35 36.9 -0.7
comp=Z,19nm,1.1s
FNA **Florina** 83.19 324 *eP* P 02 35 41.2 -0.7
comp=Z,49nm,1.1s
BINY **Binghamton** 83.25 33 *eP* P 02 35 40.7 -1.4
comp=Z,23nm,1.0s
NWAO **Narrogin (SRO)** 83.74 208 pP pP 02 35 58.8 +2.2
comp=Z,14nm,0.7s,baz=40,slow=1.4,SNR=3.7
V48A **Smith Brothers** 83.82 44 *eP* P 02 35 44.5 -0.6
comp=Z,21nm,0.7s
N59A **State Game Lan** 84.43 34 *eP* P 02 35 47.2 -0.9
comp=Z,29nm,0.9s
SWET **Sewanee** 84.67 44 *eP* P 02 35 48.6 -0.8
comp=Z,44nm,0.8s
BRNJ **Basking Ridge** 85.09 33 *eP* P 02 35 51.7 +0.3
comp=Z,29nm,0.8s
PSUB **Penn St. - Bra** 85.40 34 *eP* P 02 35 53.0 +0.1
comp=Z,20nm,0.9s
Y49A **Blount Mountai** 85.53 45 *eP* P 02 35 53.0 -0.7
comp=Z,19nm,0.8s
TIP **Timpagrande** 86.42 326 *eP* P 02 35 57.4 -0.7
comp=Z,77nm,1.4s
PGAV **Gavieira, Arco** 91.17 345 *ep*P P 02 36 22.3 +1.7
POLO **Lamas de Olo** 91.65 344 *ep*P P 02 36 22.4 -0.4
PVRL **Vila Real** 91.73 344 *ep*P P 02 36 22.8 -0.3
PVIS **Viseu** 92.31 344 *ep*P P 02 36 25.5 -0.3
ESDC **Sonseca Array** 92.48 341 P P 02 36 26.0 -0.6
comp=Z,4.7nm,0.8s,baz=13,slow=4.1,SNR=9.3
ESDC **Sonseca Array** 92.48 341 *eP* P 02 36 26.0 -0.6
MTE **Manteigas** 92.54 344 *eP* P 02 36 25.7 -1.2
comp=Z,14nm,0.9s
MTE **Manteigas** 92.54 344 *ep*P P 02 36 26.6 -0.3
PAB **San Pablo** 92.69 341 *eP* P 02 36 28.4 +0.7
comp=Z,6.3nm,1.0s
PCAS **Casmilo, Conde** 93.06 344 *ep*P P 02 36 28.8 -0.4
PCBR **Castelo Branco** 93.07 344 *ep*P P 02 36 29.3 0.0
PMTG **Montargil** 93.96 344 *ep*P P 02 36 32.9 -0.5
PBEJ **Beja** 94.90 344 *ep*P P 02 36 39.3 +1.6
PNCL **Nicolau / Gran** 94.95 344 *ep*P P 02 36 38.0 +0.1
MESJ **Messejana** 95.15 344 *ep*P P 02 36 38.5 -0.3
PCVE **Castro Verde** 95.31 344 *ep*P P 02 36 33.7 -5.9
PTEO **Sao Teotonio** 95.53 344 *ep*P P 02 36 40.2 -0.4
TOA1 **Torodi Ar. Sit** 115.52 327 *e*PKPdf **PKiKP** 02 41 57.9 0.0
TORD **Torodi Ar. Bea** 115.57 327 PKP **PKiKP** 02 41 57.9 0.0
comp=Z,2.2nm,0.9s,baz=17,slow=1.6,SNR=5.4
TORD PKKP **PKKPdf** 02 52 49.0 -3.7
comp=Z,1.2nm,1.0s,baz=219,slow=4.0,SNR=4.9
VNDA **Vanda** 122.75 177 PKP **PKPdf** 02 42 08.7 -1.0
comp=Z,2.5nm,1.0s,baz=317,slow=3.8,SNR=6.2
VNDA PKKPbc **PKKPbc** 02 52 03.5 -0.4
comp=Z,2.3nm,0.9s,baz=242,slow=2.3,SNR=8.6
VNDA **Vanda** 122.75 177 *e*PKPdf **PKPdf** 02 42 08.7 -1.0
DBIC **Dimbokro** 123.94 331 PKP **PKPdf** 02 42 14.2 +0.2
comp=Z,8.9nm,0.8s,baz=105,slow=1.4,SNR=4.8
DBIC **Dimbokro** 123.94 331 *e*PKPdf **PKPdf** 02 42 14.2 +0.2
MAW **Mawson** 130.27 210 PKP **PKiKP** 02 42 25.6 +0.5
comp=Z,3.3nm,0.8s,baz=82,slow=4.5,SNR=7.1
MAW **Mawson** 130.27 210 *e*PKPdf **PKPdf** 02 42 23.6 -0.7
LPAZ **La Paz** 136.23 61 PKP **PKPdf** 02 42 38.6 +0.7
comp=Z,3.8nm,0.7s,baz=24,slow=5.4,SNR=6.7
LPAZ **La Paz** 136.23 61 *e*PKPdf **PKPdf** 02 42 37.3 -0.6
BDFB **Brasilia** 146.30 35 PKPbc **PKPbc** 02 42 56.5 0.0
comp=Z,28nm,0.9s,baz=310,slow=5.2,SNR=10
BDFB **Brasilia** 146.30 35 *e*PKPbc **PKPbc** 02 42 56.5 0.0
PLCA **Paso Flores** 149.43 96 PKPbc **PKPbc** 02 43 04.3 +0.1
comp=Z,9.9nm,0.7s,baz=290,slow=4.7,SNR=7.7
PLCA pPKPbc **pPKPbc** 02 43 18.3 +1.6
comp=Z,12nm,0.7s,baz=236,slow=3.2,SNR=3.7
PLCA **Paso Flores** 149.43 96 *e*PKPbc **PKPbc** 02 43 04.3 +0.1
CPUP **Villa Florida** 150.37 60 PKPbc **PKiKP** 02 43 07.5 -0.1
comp=Z,13nm,0.7s,baz=310,slow=1.2,SNR=10

MAN 04 02:24:16.2, 7°.43N×124°.73E, h32km, mb4.3, ML3.1, MS2.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.52**	**247**	⇑*iP*	Pn	02 24 28.0	+0.6
CTBH				*i* S	Sn	02 24 36.2	+1.0
BUKP	**Musuan**	**0.56**	**36**	*eP*	Pn	02 24 28.6	+0.6
BUKP				*e*S	Sn	02 24 36.9	+0.7
DMPH	**Davao City--Mi**	**0.84**	**114**	⇑*eP*	Sn	02 24 44.5	+1.2
DDMP	**Don Marcelino,**	**1.64**	**143**	*eP*	Pn	02 24 42.9	0.0

SOME ***04*** *02:33:13.5, 41°.12N×73°.27E, h5km*
KRNET ***04*** *02:33:14.6±0.1, 41°.08N×73°.33E, h20km, mb3.3*
NNC ***04*** *02:33:14.4±1.4, 41°.12N×73°.29E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=11.0km s-min=6.8km az=168.0*
ISCJB ***04*** *02:33:16.0±0.5, 41°.11N±0°.03×73°.27E±0°.03, h10km, Error ellipse: s-maj=4.9km s-min=3.0km az=149.7*
KNET ***04*** *02:33:15.0±0.4, 41°.13N×73°.32E, h21km±2km, ml2.9, Error ellipse: s-maj=3.3km s-min=2.8km az=106.0*
ISC 04 02:33:14.9±0.8, 41°.10N±0°.03×73°.19E±0°.02, h10km, n54, σ1§46/95, 32C-22D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.27**	**324**	⇓*iP*	Pb	02 33 21.8	-0.2
ARSB				⇓*iS*	Sb	02 33 27.3	+0.5
AML	**Almayashu**	**1.09**	**20**	⇑P	Pg	02 33 34.9	-1.0
AML				⇓S	Sg	02 33 49.8	-0.4
AML	**Almayashu**	**1.09**	**20**	⇑*iP*	Pg	02 33 35.0	-1.0
AML				⇑*iS*	Sg	02 33 49.6	-0.6
ARK	**Arkit**	**1.16**	**307**	⇑*iP*	Pg	02 33 37.1	-0.1
ARK				⇑*iS*	Sn	02 33 54.2	+1.0
UCH	**Uchtor**	**1.50**	**41**	⇑P	Pn	02 33 41.4	-0.8
UCH				⇑S	Sn	02 34 01.4	-0.7

UCH	**Uchtor**	**1.50**	**41**	⇑*iP*	Pn	02 33 41.4	-0.8
UCH				⇑*iS*	Sn	02 34 00.5	-1.6
EKS2	**Erkin-Say**	**1.62**	**15**	⇑P	Pb	02 33 44.1	-0.9
EKS2				⇑S	Sb	02 34 05.5	+0.1
EKS2	**Erkin-Say**	**1.62**	**15**	⇓*iP*	Pb	02 33 44.0	-0.9
EKS2				⇓*iS*	Sb	02 34 05.4	0.0
MRKS	**Merke**	**1.64**	**1**	P	Pb	02 33 44.4	-0.9
MRKS				S	Sb	02 34 06.9	+0.8
MRKS	**Merke**	**1.64**	**1**	⇑*iP*	Pb	02 33 44.4	-0.9
MRKS				*e*S	Sb	02 34 06.9	+0.8
AAK	**Ala-Archa**	**1.81**	**32**	⇑P	Pb	02 33 47.0	-1.3
AAK				⇑S	Sb	02 34 11.1	-0.1
AAK	**Ala-Archa**	**1.81**	**32**	⇑P	Pn	02 33 46.4	0.0
AAK				⇓S	Sb	02 34 10.8	-0.4
AAK	**Ala-Archa**	**1.81**	**32**	⇑*iP*	Pb	02 33 47.1	-1.2
AAK				⇑*iS*	Sb	02 34 10.6	-0.6
KZA	**Kyzart**	**1.82**	**57**	⇓P	Pn	02 33 46.7	0.0
KZA				⇑S	Sb	02 34 10.8	-0.9
KZA	**Kyzart**	**1.82**	**57**	⇓*iP*	Pn	02 33 46.7	0.0
KZA				⇓*iS*	Sn	02 34 10.0	-0.1
DRK	**Karamyk**	**1.94**	**214**	⇓*iP*	Pb	02 33 49.8	-0.8
DRK				⇓*iS*	Sg	02 34 15.7	-1.7
FRU1	**Bishkek**	**2.01**	**32**	⇓*eP*	Pn	02 33 49.8	+0.8
FRU1				⇓*iS*	Sb	02 34 15.7	-1.1
KBK	**Karagaybulak**	**2.03**	**40**	⇑P	Pb	02 33 50.3	-1.7
KBK				⇑S	Sb	02 34 17.5	+0.1
KBK	**Karagaybulak**	**2.03**	**40**	⇓*iP*	Pb	02 33 50.2	-1.8
KBK				⇓*iS*	Sb	02 34 15.9	-1.5
BTK	**Batken**	**2.09**	**241**	⇑*iP*	Pb	02 33 52.6	-0.4
BTK				⇑*iS*	Sg	02 34 20.0	-2.1
CHMS	**Chumysh**	**2.22**	**31**	⇑P	Pn	02 33 52.2	+0.3
CHMS	**Chumysh**	**2.22**	**31**	⇓*iP*	Pb	02 33 53.0	-2.2
CHMS				⇓*iS*	Sn	02 34 20.6	+1.2
DZA	**Taraz**	**2.26**	**323**	*eP*	Pb	02 33 54.2	-1.7
DZA				*e*S	Sb	02 34 23.6	-0.4
USP	**Ospenovka**	**2.37**	**24**	⇓*iP*	Pn	02 33 54.6	+0.7
USP				⇓*iS*	Sn	02 34 24.8	+1.8
BOOM	**Boomskoye usch**	**2.48**	**55**	⇓*iP*	Pn	02 33 55.8	+0.3
BOOM				⇓*iS*	Sn	02 34 26.5	+0.6
TKM2	**Tokmak 2**	**2.55**	**44**	⇑P	Pn	02 33 56.9	+0.3
TKM2	**Tokmak 2**	**2.55**	**44**	⇑Pn	Pn	02 33 56.8	+0.3
TKM2				⇑Lg	Lg	02 34 34.3	
TKM2	**Tokmak 2**	**2.55**	**44**	⇑*iP*	Pn	02 33 56.9	+0.3
TKM2				⇑*iS*	Sn	02 34 28.2	+0.5
ULHL	**Ulahol**	**2.55**	**62**	⇑*iP*	Pn	02 33 56.7	+0.1
ULHL				⇑*iS*	Sn	02 34 28.0	+0.2
IUG	**Iuzhnay**	**2.59**	**295**	*eP*	Pb	02 34 02.5	+0.9
IUG				*e*S	Sg	02 34 37.5	-0.6
KK31	**Karatay Array**	**2.82**	**316**	⇑Pn	Pn	02 34 00.4	+0.3
KK31				⇓Pg	Pb	02 34 05.3	-0.2
KK31				⇑Lg	Lg	02 34 42.7	
KST	**Kastek**	**2.83**	**46**	*eP*	Pn	02 34 02.3	+2.0
KST				*e*S	Sb	02 34 37.4	-2.9
DGS	**Degeres**	**2.87**	**41**	Pg	Pb	02 34 04.9	-1.4
DGS				Lg	Lg	02 34 41.2	
DGS	**Degeres**	**2.87**	**41**	*eP*	Pb	02 34 06.0	-0.3
DGS				*e*S	Sb	02 34 43.0	+1.5
CHM	**Chimkent**	**2.95**	**295**	*eP*	Pb	02 34 08.8	+1.2
CHM				*e*S	Sg	02 34 48.4	-1.2
MTBS	**Maitube**	**3.14**	**49**	Pg	Pb	02 34 10.7	-0.3
MTBS				Lg	Lg	02 34 51.1	
MTBS	**Maitube**	**3.14**	**49**	*eP*	Pb	02 34 10.7	-0.3
MTBS				*e*S	Sb	02 34 51.1	+1.7
TNSS	**Tian-Shan**	**3.40**	**54**	Pg	Pb	02 34 15.7	+0.3
TNSS				Lg	Lg	02 35 00.3	
TNSS	**Tian-Shan**	**3.40**	**54**	*eP*	Pb	02 34 15.7	+0.3
TNSS				*e*S	Sg	02 35 00.3	-3.7
KOTS	**Kotyrbulak**	**3.61**	**53**	Pg	Pb	02 34 20.1	+1.3
KOTS				Lg	Lg	02 35 07.3	
KOTS	**Kotyrbulak**	**3.61**	**53**	*eP*	Pb	02 34 18.3	-0.6
KOTS				*e*S	Sb	02 35 04.4	+1.6
KUU	**Kurty**	**3.63**	**39**	Pg	Pb	02 34 19.3	+0.2
KUU				Lg	Lg	02 35 05.9	
KUU	**Kurty**	**3.63**	**39**	*eP*	Pb	02 34 19.3	+0.2
KUU				*e*S	Sb	02 35 05.9	+2.7
KTBS	**Karatobe**	**3.67**	**44**	Pg	Pb	02 34 20.4	+0.5
KTBS				Lg	Lg	02 35 07.7	
KTBS	**Karatobe**	**3.67**	**44**	*eP*	Pb	02 34 20.4	+0.5
KTBS				*e*S	Sb	02 35 07.7	+3.3
BTLS	**Baital**	**3.98**	**9**	*eP*	Pb	02 34 25.9	+0.7
BTLS				*e*S	Sb	02 35 17.5	+4.1
SATY	**Saty**	**4.34**	**62**	Pg	Pb	02 34 31.5	+0.1
SATY				Lg	Lg	02 35 27.0	
SATY	**Saty**	**4.34**	**62**	*eP*	Pb	02 34 31.5	+0.1

SATY				*e*S	**Sb**	**02 35 27.0**	**+3.1**
	18nm,0.7s						
ARXS	**Arharly**	**4.62**	**46**	Pg	**Pb**	**02 34 36.8**	**+0.7**
	3.1nm,0.3s						
ARXS				Lg	Lg	02 35 35.8	
	18nm,0.5s						
ARXS	**Arharly**	**4.62**	**46**	*e*P	**Pb**	**02 34 36.8**	**+0.7**
	3.1nm,0.3s						
ARXS				*e*S	**Sb**	**02 35 35.8**	**+4.0**
	18nm,0.5s						
KPKS	**Kokpek**	**4.71**	**58**	*e*P	**Pb**	**02 34 38.1**	**+0.5**
	6.3nm,0.4s						
KPKS				*e*S	**Sb**	**02 35 39.2**	**+4.9**
	15nm,0.5s						
UZB	**Uzynbulak**	**4.79**	**63**	Pg	**Pb**	**02 34 39.4**	**+0.4**
	4.2nm,0.5s						
UZB				Lg	Lg	02 35 40.7	
	10nm,0.4s						
UZB	**Uzynbulak**	**4.79**	**63**	*e*P	**Pb**	**02 34 39.4**	**+0.4**
	3.2nm,0.6s						
UZB				*e*S	**Sb**	**02 35 40.7**	**+3.9**
	14nm,0.4s						
PDGK	**Podgornoye**	**5.18**	**62**	Pg	**Pb**	**02 34 46.2**	**+0.6**
	2.4nm,0.6s						
PDGK				Lg	Lg	02 35 52.2	
	5.1nm,0.6s						

*BJI **04** 02:39:04.2±0.0, 24.°31N×98.°05E, h12km, ML3.6/5*
*IDC **04** 02:39:08.6±5.2, 23.°99N×97.°34E, h34km±50km, mb3.7/5, mb1 3.8/6, mb1mx3.4/37, mbtmp3.8/6, ML4.0/1, Error ellipse: s-maj=71.5km s-min=23.8km az=66.0*

ISC 04 02:39:05.4±0.9, 24.°22N±0.°05×98.°06E±0.°08, h10km, n16, σ3=90/18, mb3.8/5, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.35**	**77**	Pg	**Pb**	**02 40 22.1**	**0.0**
KMI				Sg	**Sg**	**02 41 21.8**	**-3.4**
KMI				smax	smax		
	comp=N,140nm,0.8s						
KMI				smax	smax		
	comp=E,77nm,1.0s						
PAYA	**Payao**	**5.12**	**160**	P	**Pg**	**02 40 46.7**	**+3.2**
	60μm,0.5s,787μm						
PAYA	**Payao**	**5.12**	**160**	P	**Sg**	**02 41 51.7**	**+1.8**
CMMT	**Chiang Mai**	**5.45**	**171**	P	**Pg**	**02 40 48.1**	**-1.6**
	6.5nm,0.5s,291nm						
CMMT	**Chiang Mai**	**5.45**	**171**	P	**Sg**	**02 41 57.9**	**-2.4**
CMAR	**Chiang Mai Arr**	**5.79**	**172**	Pn	**Pn**	**02 40 32.1**	**+0.6**
	1.0nm,0.3s,baz=347,slow=12,SNR=4.3						
CMAR				Pg	**Pg**	**02 40 53.6**	**-2.8**
	1.3nm,0.3s,baz=343,slow=17,SNR=9.2						
CMAR				Lg	Lg	02 42 09.1	
	3.4nm,0.3s,baz=349,slow=28,SNR=12						
LAMP	**Lampang**	**5.86**	**165**	P	**Sg**	**02 42 12.5**	**-1.0**
NANT	**Nan**	**5.93**	**155**	P	**Sg**	**02 42 08.4**	**-7.4**
PHRA	**Phrae**	**6.04**	**160**	P	**Pg**	**02 41 04.8**	**+3.6**
PHRA	**Phrae**	**6.04**	**160**	P	**Sg**	**02 42 20.4**	**+0.9**
WMQ	**Urumqi**	**21.32**	**339**	*e*P	**P**	**02 43 50.9**	**-1.6**
SONM	**Songino Array**	**24.48**	**14**	P	**P**	**02 44 28.9**	**+4.2**
	1.1nm,0.6s,baz=208,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**25.83**	**335**	P	**P**	**02 44 36.5**	**-0.3**
	0.8nm,0.6s,baz=143,slow=9.9,SNR=7.4						
ZALV	**Zalesovo Beam**	**31.31**	**345**	P	**P**	**02 45 24.8**	**-0.8**
	0.5nm,0.4s,baz=163,slow=10,SNR=2.8						
WRA	**Warramunga Arr**	**56.35**	**138**	P	**P**	**02 48 48.0**	**+1.0**
	2.6nm,1.0s,baz=338,slow=6.3,SNR=2.8						
FINES	**FINESS Array B**	**60.43**	**328**	P	**P**	**02 49 13.7**	**-1.2**
	1.1nm,0.8s,baz=103,slow=10,SNR=2.6						

TAP 04 02:58:33.0, 24.°64N×121.°73E, h3km, ML2.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWE	**Neicheng**	**0.10**	**327**	P	Pg	02 58 36.0	+1.0
	baz=333						
TWE				S	Sg	02 58 37.4	+1.1
	baz=333						
TWC	**Suao**	**0.12**	**105**	*e*P	Pg	02 58 36.2	+0.9
	baz=103						
TWC				S	Sg	02 58 39.0	+2.2
	baz=103						
ILA	**Ilan**	**0.13**	**9**	P	Pg	02 58 36.5	+1.0
	baz=12						
ILA				S	Sg	02 58 39.1	+1.8
	baz=12						
SLBB	**Yuanshan**	**0.14**	**324**	P	Pg	02 58 37.0	+1.2
	baz=324						
SLBB				*e*S	Sg	02 58 39.3	+1.7
	baz=324						
ENTT	**Nioudou**	**0.15**	**270**	*e*P	Pg	02 58 37.0	+1.2
	baz=269						
ENTT				*e*S	Sg	02 58 39.5	+1.7
	baz=269						
NDT	**Datong Townshi**	**0.20**	**259**	*e*P	Pg	02 58 37.9	+1.1
	baz=259						
NDT				*e*S	Sg	02 58 41.0	+1.6
	baz=259						
ENA	**Nanau**	**0.21**	**176**	*e*P	Pg	02 58 38.1	+1.1
	baz=174						
ENA				*e*S	Sg	02 58 41.4	+1.5
	baz=174						
NTC	**Toucheng**	**0.23**	**24**	*e*P	Pg	02 58 38.5	+0.9
	baz=23						
NTC				*e*S	Sg	02 58 42.9	+2.3
	baz=23						
NWLT	**Wulai**	**0.24**	**304**	P	Pg	02 58 39.0	+1.3
	baz=304						
YHNB	**Yeheng**	**0.32**	**276**	*e*P	Pg	02 58 40.2	+1.1
	baz=275						
YHNB				*e*S	Sb	02 58 46.0	-1.0
	baz=275						
NSK	**Sanguang**	**0.34**	**276**	*e*P	Pb	02 58 40.6	-1.1
	baz=276						
NSK				*e*S	Sb	02 58 46.3	-1.2
	baz=276						
TIPB	**Shuangxi**	**0.34**	**15**	*e*P	Pb	02 58 41.1	-0.6
	baz=15						
TIPB				*e*S	Sb	02 58 47.1	-0.5
	baz=15						
NHDH	**Xindian Distri**	**0.37**	**331**	*e*P	Pb	02 58 41.4	-0.8
	baz=330						
NHDH				*e*S	Sb	02 58 47.9	-0.5
	baz=330						
NNSB	**Datong**	**0.38**	**236**	*e*P	Pg	02 58 41.2	+1.0
	baz=236						
NNSB				*e*S	Sb	02 58 47.8	-0.9
	baz=236						
EOS1	**EOS1**	**0.38**	**104**	*e*P	Pg	02 58 41.2	+1.0
	baz=103						
EOS1				*e*S	Sb	02 58 48.0	-0.4
	baz=103						
NNS	**Nan Shan**	**0.38**	**238**	*e*P	Pb	02 58 41.7	-0.7
	baz=237						
NNS				*e*S	Sb	02 58 48.1	-0.6
	baz=237						
TATO	**Taipei**	**0.40**	**327**	*e*P	Pb	02 58 42.1	-0.5
	baz=328						
TATO				*e*S	Sb	02 58 48.6	-0.5
	baz=328						
NWF	**Wu-fen Shan**	**0.43**	**7**	*e*P	Pb	02 58 42.6	-0.7
	baz=6.0						
NWF				*e*S	Sg	02 58 48.1	+1.1
	baz=6.0						
WFSB	**Wu-fen Shan**	**0.43**	**7**	*e*P	Pb	02 58 42.6	-0.6
	baz=6.0						
WFSB				*e*S	Sg	02 58 48.1	+1.2
	baz=6.0						
NACB	**Ninganchiao**	**0.48**	**195**	*e*P	Pb	02 58 43.8	-0.2
	baz=194						
NACB				*e*S	Sb	02 58 51.2	-0.3
	baz=194						
ETLH	**Xiulin Townshi**	**0.48**	**207**	*e*P	Pb	02 58 44.0	-0.2
	baz=207						
ETLH				*e*S	Sb	02 58 51.8	+0.1
	baz=207						
YM01	**YM01**	**0.53**	**344**	*e*P	Pb	02 58 44.7	-0.2
	baz=344						
YM01				*e*S	Sb	02 58 53.2	+0.4
	baz=344						
YM10	**YM10**	**0.54**	**344**	*e*P	Pb	02 58 44.8	-0.2
	baz=343						
YM10				*e*S	Sb	02 58 53.9	+0.7
	baz=343						
YM04	**YM04**	**0.54**	**341**	*e*P	Pb	02 58 45.1	-0.1
	baz=341						
YM05	**YM05**	**0.54**	**344**	*e*P	Pb	02 58 45.0	-0.2
	baz=344						
YM07	**YM07**	**0.54**	**350**	*e*P	Pb	02 58 44.7	-0.5
	baz=349						
YM07				*e*S	Sb	02 58 53.9	+0.5
	baz=349						
YM08	**YM08**	**0.56**	**347**	*e*P	Pb	02 58 45.0	-0.5
	baz=347						
YM08				*e*S	Sb	02 58 54.3	+0.4
	baz=347						
YM03	**YM03**	**0.56**	**343**	*e*P	Pb	02 58 45.3	-0.2
	baz=342						
YM03				*e*S	Sb	02 58 54.6	+0.6
	baz=342						
TWD	**Chiawan**	**0.57**	**192**	*e*P	Pb	02 58 45.5	-0.1
	baz=191						
TWD				*e*S	Sb	02 58 54.4	+0.3
	baz=191						
ANP	**Anpu**	**0.58**	**341**	*e*P	Pb	02 58 45.6	-0.1
	baz=341						
ANP				*e*S	Sb	02 58 54.8	+0.4
	baz=341						
TDCB	**Techi**	**0.64**	**234**	*e*P	Pb	02 58 47.0	0.0
	baz=233						
TDCB				*e*S	Sb	02 58 57.1	+0.7
	baz=233						
LIOB	**Emei**	**0.65**	**271**	*e*P	Pb	02 58 47.0	+0.1
	baz=270						
LIOB				*e*S	Sb	02 58 57.3	+0.9
	baz=270						
WHF	**Hehuan Shan**	**0.65**	**221**	*e*P	Pb	02 58 46.9	-0.2
	baz=220						
WHF				*e*S	Sb	02 58 57.4	+0.7
	baz=220						
SBCB	**Hsinchu**	**0.69**	**283**	*e*P	Pb	02 58 47.9	+0.3
	baz=282						
SBCB				*e*S	Sb	02 58 58.8	+1.2
	baz=282						
ENLB	**Shoufeng**	**0.74**	**189**	*e*P	Pb	02 58 48.7	+0.2
	baz=188						
ENLB				*e*S	Sn	02 59 01.2	-0.9
	baz=188						
CHGB	**Renai**	**0.77**	**221**	*e*S	Sb	02 59 01.0	+1.1
	baz=221						
OWD	**Renai**	**0.85**	**216**	*e*P	Pb	02 58 50.8	+0.4
	baz=216						
OWD				*e*S	Sb	02 59 03.4	+1.2
	baz=216						
PTSB	**Yuanli**	**0.95**	**259**	*e*P	Pb	02 58 52.6	+0.5
	baz=258						
PTSB				*e*S	Sn	02 59 06.3	-0.9
	baz=258						
VWDT	**VWDT**	**1.03**	**211**	*e*P	Pb	02 58 53.7	+0.3
	baz=211						
VWDT				*e*S	Sn	02 59 09.1	-0.1
	baz=211						
PCYT	**Pengchaiyu**	**1.03**	**18**	*e*P	Pb	02 58 53.3	-0.3
	baz=18						
PCYT				*e*S	Sb	02 59 08.0	+0.5
	baz=18						
YOJ	**Yonaguni jima**	**1.18**	**98**	*e*P	Pg	02 58 55.8	+0.1
	baz=98						
YOJ				*e*S	Sb	02 59 11.9	+0.1
	baz=98						
YULB	**Yu-li**	**1.30**	**198**	*e*P	Pb	02 58 58.5	+0.4
	baz=197						
YULB				*e*S	Sn	02 59 15.7	-0.3
	baz=197						
ALS	**Alishan**	**1.40**	**217**	*e*P	Pb	02 59 00.1	+0.2
	baz=216						
ALS				*e*S	Sn	02 59 19.5	+0.7
	baz=216						
CHN5	**Tsauling**	**1.41**	**223**	*e*P	Pn	02 58 59.7	+0.1
	baz=222						
CHN5				*e*S	Sn	02 59 19.5	+0.8
	baz=222						
MHZQ	**Yeshan**	**2.84**	**301**	*e*P	Pn	02 59 19.4	+0.2
	baz=300						
MHZQ				*e*S	Sn	02 59 54.4	+0.5
	baz=300						
KNMB	**Chin-men Tao**	**3.04**	**267**	*e*P	Pn	02 59 22.9	+0.9
	baz=266						
KNMB				*e*S	Sn	02 59 59.0	0.0
	baz=266						

TAP 04 02:58:36.9, 24.°63N×121.°73E, h7km, ML2.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWE	**Neicheng**	**0.11**	**327**	*e*P	Pg	02 58 39.8	+0.5
	baz=333						
TWE				*e*S	Sg	02 58 41.9	+0.9
	baz=333						
TWC	**Suao**	**0.11**	**101**	P	Pg	02 58 40.4	+1.0
	baz=101						
TWC				*e*S	Sg	02 58 42.7	+1.7
	baz=101						
ILA	**Ilan**	**0.14**	**7**	*e*P	Pg	02 58 40.4	+0.7
	baz=10.0						
ILA				*e*S	Sg	02 58 43.1	+1.3
	baz=10.0						
SLBB	**Yuanshan**	**0.15**	**325**	*e*P	Pg	02 58 41.0	+1.0
	baz=324						
SLBB				*e*S	Sg	02 58 43.6	+1.3
	baz=324						
ENTT	**Nioudou**	**0.15**	**273**	*e*P	Pg	02 58 40.7	+0.7
	baz=272						
ENTT				*e*S	Sg	02 58 43.5	+1.3
	baz=272						
ENA	**Nanau**	**0.20**	**177**	*e*P	Pg	02 58 42.4	+1.5
	baz=175						
ENA				*e*S	Sg	02 58 45.7	+2.0
	baz=175						
NWLT	**Wulai**	**0.25**	**305**	*e*P	Pb	02 58 43.1	-0.6
	baz=305						
NWLT				*e*S	Sb	02 58 47.4	-1.0
	baz=305						
NWLT	**Wulai**	**0.25**	**305**	*e*S	Pb	02 58 43.1	-0.7
	baz=304						
YHNB	**Yeheng**	**0.33**	**277**	*e*P	Pb	02 58 44.6	-0.4
	baz=276						
YHNB				*e*S	Sb	02 58 49.9	-0.5
	baz=276						
NSK	**Sanguang**	**0.34**	**278**	*e*P	Pb	02 58 44.9	-0.4
	baz=277						
NSK				*e*S	Sb	02 58 50.0	-1.0
	baz=277						
TIPB	**Shuangxi**	**0.35**	**14**	*e*P	Pb	02 58 44.8	-0.6
	baz=14						
EOS1	**EOS1**	**0.37**	**103**	*e*P	Pb	02 58 45.8	0.0
	baz=102						
EOS1				*e*S	Sb	02 58 51.6	-0.1
	baz=102						
NNSB	**Datong**	**0.38**	**238**	*e*P	Pb	02 58 45.6	-0.3
	baz=237						
NNSB				*e*S	Sb	02 58 51.6	-0.3
	baz=237						
NWF	**Wu-fen Shan**	**0.44**	**6**	*e*P	Pb	02 58 46.4	-0.6
	baz=6.0						
NWF				*e*S	Sb	02 58 53.6	-0.2
	baz=6.0						
WFSB	**Wu-fen Shan**	**0.44**	**6**	*e*P	Pb	02 58 46.5	-0.5
	baz=6.0						
WFSB				*e*S	Sb	02 58 52.5	-1.2
	baz=6.0						
TAP	**Taipei**	**0.46**	**333**	*e*S	Sb	02 58 54.1	0.0
	baz=334						
YM05	**YM05**	**0.55**	**344**	*e*S	Sb	02 58 57.5	+0.5
	baz=344						
CHGB	**Renai**	**0.76**	**222**	*e*P	Pb	02 58 52.9	+0.3
	baz=221						
CHGB				*e*S	Sb	02 59 03.6	+0.4
	baz=221						
VWDT	**VWDT**	**1.03**	**212**	*e*P	Pg	02 58 56.6	0.0
	baz=211						
VWDT				*e*S	Sb	02 59 11.3	+0.7
	baz=211						
YULB	**Yu-li**	**1.29**	**198**	*e*P	Pn	02 59 01.2	-0.2
	baz=197						
YULB				*e*S	Sn	02 59 19.4	+0.5
	baz=197						

DDA 04 02:59:22.2, 37.°89N×29.°05E, h7km±2km, ML2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVA	**DENIZLI_Tavas**	**0.44**	**195**	*i* P	Pb	02 59 31.9	-0.4
TAVA				*i* S	Sb	02 59 38.2	-0.9
TAVA				IAML_P			
	comp=Z,377nm,0.2s						
KHAL	**Karahalli**	**0.59**	**36**	*i* P	Pg	02 59 34.2	+0.6
KHAL				IAML_P			
	comp=Z,538nm,0.2s						
MANT	**Manisa**	**0.72**	**327**	*i* P	Pb	02 59 36.9	-0.2
MANT				IAML_P			
	comp=Z,243nm,0.1s						
USAK	**Uak-Merkez**	**0.82**	**358**	*i* P	Pg	02 59 38.5	+0.4
USAK				IAML_P			
	comp=Z,422nm,0.1s						

ISK 04 02:59:25.7, 36.°42N×28.°92E, h28km, ML2.0/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.25**	**31**	PG	Pb	02 59 32.6	+0.3
FETY				SG	Sb	02 59 37.9	+1.1
DALY	**Dalyan (Mula)**	**0.45**	**331**	PG	Pn	02 59 35.9	-0.4
DALY				SG	Sn	02 59 43.2	-0.3
DALY	**Dalyan (Mula)**	**0.45**	**331**	*i* P	Pn	02 59 36.5	+0.2
TURN	**Turunc**	**0.52**	**330**	PG	Pn	02 59 39.3	+2.1
AKAS	**Kas**	**0.58**	**109**	PG	Pn	02 59 37.9	-0.4
AKAS				SG	Sn	02 59 47.5	+0.5
ELL	**Elmali**	**0.86**	**67**	PG	Pb	02 59 42.1	0.0
ELL				SG	Sn	02 59 54.2	+0.5
DAT	**Datca**	**1.13**	**286**	PN	Pb	02 59 46.3	-0.3

*ISCJB **04** 03:12:59.0±0.6, 24.°88N±0.°04×122.°47E±0.°03, h6km±5km, Error ellipse: s-maj=6.6km s-min=3.4km az=24.3*
*JMA **04** 03:12:59.2±0.2, 24.°82N×122.°46E, h0km, M2.1*
*TAP **04** 03:12:59.9, 24.°86N×122.°36E, h4km±1km, ML2.9, D*

ISC 04 03:12:58.6±1.1, 24.°91N±0.°05×122.°48E±0.°03, h15km±11km, n33, σ0=28/42, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.46**	**283**	P	**Pb**	**03 13 08.2**	**-0.3**
	baz=293						
TWB1				S	**Sg**	**03 13 14.2**	**+0.2**
	baz=293						
EOS1	**EOS1**	**0.48**	**222**	*e*P	**Pb**	**03 13 08.9**	**+0.2**
	baz=213						
EOS1				*e*S	**Sg**	**03 13 14.9**	**+0.3**
	baz=213						
TIPB	**Shuangxi**	**0.60**	**276**	*e*P	**Pb**	**03 13 10.9**	**+0.1**
	baz=282						
TIPB				*e*S	**Sb**	**03 13 19.0**	**-0.1**
	baz=282						
JYNG	**Yonagunijimaku**	**0.62**	**137**	P	**Pg**	**03 13 10.7**	**-0.1**
JYNG				*e*S	**Sb**	**03 13 19.7**	**0.0**
TWC	**Suao**	**0.65**	**243**	P	**Pg**	**03 13 11.0**	**-0.3**
	baz=240						
TWC				S	**Sg**	**03 13 19.8**	**-0.1**
	baz=240						
NWF	**Wu-fen Shan**	**0.66**	**284**	P	**Pb**	**03 13 12.3**	**+0.5**
	baz=291						
NWF				S	**Sb**	**03 13 21.5**	**+0.6**
	baz=291						
WFSB	**Wu-fen Shan**	**0.66**	**284**	*e*P	**Pb**	**03 13 12.2**	**+0.4**
	baz=291						
YOJ	**Yonaguni jima**	**0.66**	**133**	P	**Pb**	**03 13 11.7**	**-0.1**
YOJ				*e*S	**Sg**	**03 13 20.3**	**+0.1**
TWE	**Neicheng**	**0.76**	**256**	*e*P	**Pb**	**03 13 13.7**	**0.0**
	baz=256						
SLBB	**Yuanshan**	**0.78**	**259**	*e*P	**Pb**	**03 13 14.5**	**+0.5**
	baz=260						
PCYT	**Pengchaiyu**	**0.81**	**333**	*e*P	**Pn**	**03 13 15.2**	**-0.4**
	baz=341						
YM07	**YM07**	**0.82**	**289**	*e*P	**Pn**	**03 13 15.4**	**-0.3**
	baz=295						
ENA	**Nanau**	**0.82**	**235**	P	**Pg**	**03 13 14.4**	**-0.2**
	baz=231						
ENA				*e*S	**Sg**	**03 13 25.5**	**0.0**
	baz=231						
YM08	**YM08**	**0.85**	**289**	*e*P	**Pn**	**03 13 15.8**	**-0.4**
	baz=295						
YM01	**YM01**	**0.86**	**286**	*e*P	**Pn**	**03 13 16.2**	**-0.1**
	baz=291						
YM11	**YM11**	**0.86**	**288**	*e*P	**Pn**	**03 13 16.0**	**-0.3**
	baz=293						
YM05	**YM05**	**0.87**	**287**	*e*P	**Pn**	**03 13 16.1**	**-0.3**
	baz=292						
YM10	**YM10**	**0.87**	**287**	*e*P	**Pn**	**03 13 16.4**	**0.0**
	baz=292						
ENTT	**Nioudou**	**0.87**	**252**	*e*P	**Pb**	**03 13 15.3**	**-0.3**
	baz=252						
TWY	**Chenhua**	**0.88**	**295**	*e*P	**Pn**	**03 13 16.6**	**+0.1**
	baz=301						
NWLT	**Wulai**	**0.90**	**262**	*e*P	**Pn**	**03 13 16.5**	**-0.3**
	baz=263						
NDT	**Datong Townshi**	**0.93**	**251**	*e*P	**Pn**	**03 13 17.0**	**-0.3**
	baz=251						
YHNB	**Yeheng**	**1.03**	**257**	*e*P	**Pg**	**03 13 18.6**	**0.0**
	baz=257						
NACB	**Ninganchiao**	**1.09**	**228**	*e*P	**Pn**	**03 13 19.3**	**-0.1**
	baz=225						
NNSB	**Datong**	**1.11**	**245**	*e*P	**Pb**	**03 13 19.6**	**0.0**
	baz=244						
NNS	**Nan Shan**	**1.11**	**245**	*e*P	**Pb**	**03 13 19.6**	**0.0**
	baz=244						
ETLH	**Xiulin Townshi**	**1.15**	**233**	*e*P	**Pn**	**03 13 20.5**	**+0.2**
	baz=230						
IRIF	**Iriomote-Funau**	**1.27**	**116**	P	**Pg**	**03 13 23.5**	**+0.3**
IRIF				*e*S	**Sg**	**03 13 39.5**	**-0.2**
WHF	**Hehuan Shan**	**1.34**	**236**	*e*P	**Pg**	**03 13 24.3**	**-0.3**
	baz=234						
TDCB	**Techi**	**1.37**	**242**	*e*P	**Pg**	**03 13 25.0**	**0.0**
	baz=240						
CHGB	**Renai**	**1.46**	**235**	*e*P	**Pb**	**03 13 25.9**	**+0.3**
	baz=233						
OWD	**Renai**	**1.52**	**232**	*e*P	**Pb**	**03 13 26.7**	**0.0**
	baz=230						
VWDT	**VWDT**	**1.68**	**227**	*e*P	**Pb**	**03 13 29.6**	**+0.3**
	baz=225						

MEX 04 03:13:27.8±0.3, 16.°25N×98.°10W, h24km±5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**350**	*i* P	Pb	03 13 31.7	-1.2
PNIG				*i* S	Sb	03 13 34.8	-1.4
TLIG	**Tlapa**	**1.39**	**341**	*i* P	Pn	03 13 48.6	-3.2
TLIG				*i* S	Sn	03 14 05.5	-3.8

MEX 04 03:18:06.3±0.5, 17.°40N×94.°73W, h161km±4km, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.34**	**206**	*e*P	Pn	03 18 27.3	-1.1
CMIG				*i* S	Sn	03 18 42.7	-2.6
HUIG	**Huatulco**	**2.09**	**219**	*e*P	Pn	03 18 41.5	-1.7
HUIG				*i* S	Sn	03 19 09.8	-1.9
TPIG	**Tehuac#an**	**2.71**	**292**	*i* P	Pn	03 18 52.7	+2.0
TPIG				*e*S	Sn	03 19 25.6	+0.6

MAN 04 03:37:58.0, 7.°70N×124.°45E, h32km, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.51**	**203**	⇑*i*P	Pn	03 38 09.2	+0.1
CTBH				*i* S	Sn	03 38 18.4	+1.7

*NIED **04** 04:09:00, 36.°80N×140.°60E, h11km, Mw3.6 Best double couple: M0=2.58000×10^14 NP1:φs=356.00000°, δ=21.00000°, λ=-102.00000°. NP2:φs=189.00000°, δ=69.00000°, λ=-86.00000°.*
*ISCJB **04** 04:09:40.5±0.6, 36.°73N±0.°03×140.°64E±0.°06, h12km±3km, mb3.7/7, MS3.9/1, Error ellipse: s-maj=8.2km s-min=4.3km az=19.4*
*IDC **04** 04:09:40.0±0.9, 36.°62N×140.°71E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.7/50, mbtmp3.8/9, ML3.2/2, MS3.8/1, Ms1 3.7/1, ms1mx2.6/38, Error ellipse: s-maj=21.3km*

s-min=20.0km az=166.0
JMA ***04*** *04:09:41.1, 36.°76N×140.°57E, h10km±1km, M3.7*
Broadband fault plane solution: P waves. NP1: ϕs=207.00000°, δ58.00000°, λ-97.00000°. NP2: ϕs=40.00000°, δ33.00000°, λ-79.00000°. Principal axes: T Plg13.0000°, Azm302.0000°; N Plg6.0000°, Azm211.0000°; P Plg76.0000°, Azm97.0000°;
JMA Felt II J1.

ISC 04 04:09:41.5±1.0, 36.°75N±0.°03×140.°57E±0.°04, h8km±7km, n27, σ1ϑ05/27, mb3.9/7, 8C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.14**	**181**	⇑P		**Pg**	**04 09 44.3**	**-0.2**
JHO				S		**Sg**	**04 09 46.9**	**+0.3**
JFFD	**Fukushimafurud**	**0.34**	**359**	⇑P		**Pg**	**04 09 47.7**	**-0.6**
JFFD				S		**Sg**	**04 09 52.4**	**-0.4**
ONAJ	**Iwakimizuishiy**	**0.40**	**27**	⇑P		**Pg**	**04 09 48.8**	**-0.5**
JSB	**Shiboa**	**0.57**	**293**	⇑P		**Pg**	**04 09 52.5**	**0.0**
JYT	**Yasato**	**0.60**	**210**	P		**Pg**	**04 09 52.6**	**-0.5**
JYT				eS		**Sg**	**04 10 00.9**	**-0.1**
JFK	**Kawauchi**	**0.66**	**21**	⇑P		**Pg**	**04 09 53.5**	**-0.8**
JFK				S		**Sg**	**04 10 02.8**	**-0.2**
JFT	**Otama**	**0.79**	**346**	⇑P		**Pg**	**04 09 56.0**	**-0.7**
JFY	**Yanaizu**	**0.95**	**314**	⇑P		**Pg**	**04 09 58.8**	**-1.1**
JAG	**Ashikaga**	**0.96**	**251**	⇑P		**Pg**	**04 09 58.5**	**-1.4**
MJAR	**Matsushiro Arr**	**1.91**	**265**	Pn		**Pn**	**04 10 14.3**	**-0.1**
	14nm,0.3s,baz=82,slow=15,SNR=447							
MJAR				Sn		**Sn**	**04 10 38.5**	**-0.1**
	13nm,0.3s,baz=86,slow=27,SNR=13							
MJAR				LR		LR	04 11 08.8	
	comp=Z,82nm,19.1s,baz=305,slow=45							
MAT	**Matsushiro**	**1.91**	**265**	P		**Pn**	**04 10 14.5**	**+0.1**
MAT				S		**Sb**	**04 10 39.8**	**-0.9**
JHJ	**Hachijo jima 2**	**3.68**	**190**	Pn		**Pn**	**04 10 38.0**	**-0.6**
	9.4nm,0.3s,baz=18,slow=6.4,SNR=3.2							
JHJ				Sn		**Sn**	**04 11 20.7**	**-1.4**
	8.5nm,0.3s,baz=90,slow=20,SNR=2.5							
KSRS	**Korea Array**	**10.13**	**278**	Pn		**Pn**	**04 12 10.4**	**+3.3**
	0.1nm,0.3s,baz=86,slow=15,SNR=3.1							
H11N2	**WAKE ISLAND Hy**	**28.59**	**119**	T		T	04 45 22.9	
	baz=313,slow=75,SNR=166							
H11N1	**WAKE ISLAND Hy**	**28.60**	**119**	T		T	04 45 23.2	
	baz=313,slow=75,SNR=197							
H11N3	**WAKE ISLAND Hy**	**28.61**	**119**	T		T	04 45 24.3	
	baz=313,slow=75,SNR=198							
H11S1	**WAKE ISLAND Hy**	**29.28**	**121**	T		T	04 46 13.4	
	baz=314,slow=76,SNR=168							
H11S3	**WAKE ISLAND Hy**	**29.28**	**121**	T		T	04 46 10.7	
	baz=314,slow=76,SNR=137							
H11S2	**WAKE ISLAND Hy**	**29.30**	**121**	T		T	04 46 12.8	
	baz=314,slow=76,SNR=105							
ZALV	**Zalesovo Beam**	**41.61**	**313**	P		**P**	**04 17 31.0**	**+1.2**
	0.8nm,0.3s,baz=100,slow=7.9,SNR=1.7							
MKAR	**Makanchi Array**	**43.70**	**302**	P		**P**	**04 17 48.3**	**+1.4**
	0.2nm,0.5s,baz=76,slow=9.1,SNR=2.5							
KURBB	**Kurchatov Arra**	**45.65**	**308**	P		**P**	**04 18 02.5**	**+0.2**
	0.8nm,0.5s,baz=84,slow=7.9,SNR=5.3							
WRA	**Warramunga Arr**	**56.69**	**187**	P		**P**	**04 19 24.0**	**-1.5**
	0.7nm,0.5s,baz=6.2,slow=8.6,SNR=4.1							
STKA	**Stephens Creek**	**68.28**	**179**	LR		LR	04 48 34.8	
	comp=Z,72nm,21.2s,baz=187,slow=34							
NVAR	**Mina Array Bea**	**75.70**	**53**	P		**P**	**04 21 27.8**	**+0.1**
	0.8nm,0.6s,baz=288,slow=5.1,SNR=9.0							
PDAR	**Pinedale Array**	**78.35**	**45**	P		**P**	**04 21 42.5**	**-0.1**
	0.4nm,0.5s,baz=276,slow=0.8,SNR=5.7							
TXAR	**Lajitas Array**	**90.83**	**52**	P		**P**	**04 22 45.7**	**-0.1**
	0.3nm,0.5s,baz=314,slow=3.7,SNR=7.3							

ISK ***04*** *04:12:27.1, 38.°63N×37.°33E, h5km, ML4.0/28*
DDA ***04*** *04:12:27.1, 38.°62N×37.°38E, h16km±1km, ML4.3*
IDC ***04*** *04:12:28.3±1.5, 38.°77N×37.°29E, h0km, mb3.6/4, mb1 3.7/8, mb1mx3.5/42, mbtmp3.7/8, ML3.0/3, Error ellipse: s-maj=30.8km s-min=10.3km az=178.0*

ISC 04 04:12:28.4±1.1, 38.°62N±0.°02×37.°37E±0.°02, h1km±8km, n74, σ1ϑ00/110, mb3.6/4, 17C-10D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.10**	**117**	PG		**Pg**	**04 12 30.3**	**-0.1**
DARE				SG		**Sg**	**04 12 32.4**	**+0.6**
CUGUR	**Gurin_SVAS**	**0.13**	**325**	⇓iP		**Pg**	**04 12 31.5**	**+0.5**
CUGUR				*i* S		**Sg**	**04 12 34.0**	**+1.4**
ELBS	**KAHRAMANMARAS**	**0.34**	**212**	⇑iP		**Pg**	**04 12 34.4**	**-0.6**
ELBS				*i* S		**Sg**	**04 12 40.8**	**+1.3**
ELBS				IAML_P				
	comp=Z,78μm,0.2s							
HEKM	**Malatya_Hekimh**	**0.53**	**60**	⇑iP		**Pg**	**04 12 38.9**	**+0.2**
HEKM				*i* S		**Sb**	**04 12 47.7**	**-1.2**
HEKM				IAML_P				
	comp=Z,174μm,0.3s							
AKCD	**Akcadag**	**0.54**	**126**	⇑iP		**Pg**	**04 12 38.2**	**-0.6**
AKCD				*i* S		**Sg**	**04 12 46.0**	**+0.2**
CUKAN	**kangal_SIVAS**	**0.70**	**6**	⇓iP		**Pg**	**04 12 41.2**	**-0.7**
CUKAN				*i* S		**Sg**	**04 12 51.2**	**+0.1**
CUALT	**Altinyayla-SIV**	**0.81**	**324**	⇑iP		**Pg**	**04 12 43.2**	**-0.8**
CUALT				*i* S		**Sb**	**04 12 56.3**	**-0.6**
KEMA	**Kemaliye**	**1.09**	**53**	⇑iP		**Pg**	**04 12 47.3**	**-2.1**
KEMA				*i* S		**Sg**	**04 13 03.8**	**+0.2**
KMRS	**Kahramanmaras**	**1.17**	**198**	PN		**Pg**	**04 12 49.7**	**-1.1**
KMRS				SN		**Sb**	**04 13 07.6**	**+0.6**
CUSAR	**Sarkisla-SIVAS**	**1.18**	**313**	⇑iP		**Pg**	**04 12 50.5**	**-0.6**
CUSAR				*i* S		**Sn**	**04 13 08.6**	**-0.5**
SAIM	**ADANA**	**1.20**	**238**	⇓iP		**Pg**	**04 12 49.5**	**-1.8**
SAIM				*i* S		**Sg**	**04 13 06.5**	**-0.3**
SAIM				IAML_P				
	comp=Z,19μm,0.2s							
BNN	**Bunyan**	**1.21**	**282**	PN		**Pg**	**04 12 50.2**	**-1.4**
SCER	**sogukcermik**	**1.26**	**352**	*i* P		**Pn**	**04 12 52.9**	**-0.3**
SCER				*i* S		**Sn**	**04 13 12.0**	**+1.2**
GZT	**Gaziantep**	**1.27**	**173**	⇓iP		**Pg**	**04 12 52.1**	**-0.6**
GZT				*i* S		**Sn**	**04 13 12.5**	**+1.4**
ELZG	**Elazig**	**1.27**	**95**	⇑iP		**Pg**	**04 12 50.5**	**-2.3**
ELZG				*i* S		**Sg**	**04 13 09.8**	**+0.4**
ELZG				IAML_P				
	comp=Z,24μm,0.3s							
AYKD	**Aykdinkavak**	**1.28**	**200**	⇑iP		**Pg**	**04 12 52.4**	**-0.6**
AYKD				*i* S		**Sg**	**04 13 10.2**	**+0.7**
AYKD				IAML_P				
	comp=Z,28μm,0.3s							
CUZAR	**Zara_SIVAS**	**1.31**	**14**	⇑iP		**Pg**	**04 12 53.1**	**-0.4**
CUZAR				*i* S		**Sn**	**04 13 14.3**	**+2.3**
ANDN	**Andirin**	**1.31**	**218**	⇑iP		**Pg**	**04 12 52.7**	**-0.8**
ANDN				*i* S		**Sg**	**04 13 11.0**	**+0.5**
HCB	**Kahramanmara**	**1.32**	**196**	⇓iP		**Pg**	**04 12 52.8**	**-0.9**
HCB				*i* S		**Sn**	**04 13 12.8**	**+0.5**
SVSK	**Karacayir**	**1.33**	**348**	PN		**Pg**	**04 12 53.6**	**-0.3**
SVSK				SN		**Sn**	**04 13 12.7**	**+0.4**
REFA	**Refahiye_ERZN**	**1.34**	**54**	⇓iP		Pn	04 12 59.4	+5.1
REFA				*i* S		Sn	04 13 23.2	+10
ATAB	**Bozova**	**1.36**	**147**	*i* P		**Pn**	**04 12 54.5**	**0.0**
ATAB				*i* S		**Sn**	**04 13 14.2**	**+1.0**
GUNE	**Kayseri**	**1.39**	**282**	⇑iP		**Pn**	**04 12 54.4**	**-0.6**
GUNE				*i* S		**Sn**	**04 13 19.0**	**+4.9**
GAZ	**Gaziantep**	**1.45**	**185**	PN		**Pn**	**04 12 55.7**	**-0.1**
KAMA	**Osmaniye**	**1.53**	**201**	⇓iP		**Pn**	**04 12 57.0**	**0.0**
KAMA				*i* S		**Sn**	**04 13 17.2**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.54**	**98**	PN		**Pn**	**04 12 57.2**	**+0.1**
URFA	**Urfa**	**1.64**	**135**	PN		**Pn**	**04 12 58.9**	**+0.4**
YAHY	**KAYSERI_Yahyal**	**1.66**	**252**	⇑iP		**Pn**	**04 12 58.0**	**-0.7**
YAHY				*i* S		**Sn**	**04 13 21.2**	**+0.5**
KOZT	**Kozan**	**1.66**	**227**	PN		**Pn**	**04 12 58.3**	**-0.4**
SUSE	**Susehri**	**1.72**	**22**	⇓iP		**Pn**	**04 12 59.5**	**0.0**
SUSE				*i* S		**Sg**	**04 13 26.4**	**+2.9**
TNCL	**Tunceli-Merkez**	**1.77**	**73**	⇑iP		**Pn**	**04 12 59.9**	**-0.3**
TNCL				*i* S		**Sg**	**04 13 24.8**	**-0.5**
RSDY	**Resadiye-TOKAT**	**1.78**	**359**	PN		**Pn**	**04 12 59.9**	**-0.4**
TOKT	**Tokat**	**1.81**	**340**	PN		**Pn**	**04 13 00.5**	**-0.3**
TOKT				SN		**Sn**	**04 13 24.6**	**+0.1**
TOKA	**Tokat**	**1.84**	**338**	⇑iP		**Pn**	**04 13 01.3**	**+0.2**
TOKA				*i* S		**Sb**	**04 13 25.7**	**-0.6**
KUZU	**Kuzuini**	**1.85**	**187**	⇓iP		**Pn**	**04 13 01.6**	**+0.2**
KUZU				*i* S		**Sg**	**04 13 29.8**	**+1.8**
SIRC	**Yozgat**	**1.87**	**293**	⇑iP		**Pn**	**04 13 01.3**	**-0.3**
SIRC				*i* S		**Sg**	**04 13 28.3**	**-0.2**
YOZ	**Yozgat**	**1.89**	**303**	PN		**Pn**	**04 13 01.5**	**-0.4**
AKO	**Adana**	**1.91**	**233**	*i* P		**Pn**	**04 13 02.4**	**+0.4**
AKO				*i* S		**Sg**	**04 13 29.9**	**+0.3**
SANL	**SANLIURFA_Merk**	**1.93**	**138**	⇑iP		**Pn**	**04 13 02.7**	**+0.4**
SANL				*i* S		**Sb**	**04 13 30.1**	**+1.0**
AVNS	**Nevsehir-Avano**	**1.98**	**276**	⇑iP		**Pn**	**04 13 03.0**	**-0.1**
AVNS				*i* S		**Sg**	**04 13 35.6**	**+3.6**
SURC	**SANLIURFA_SURC**	**2.00**	**150**	*e*P		**Pn**	**04 13 03.2**	**0.0**
SURC				*i* S		**Sg**	**04 13 33.1**	**+0.5**
CEYT	**Ceyhan**	**2.05**	**219**	PN		**Pn**	**04 13 03.9**	**-0.1**
ERZN	**Erzincan**	**2.07**	**61**	PN		**Pn**	**04 13 04.7**	**+0.3**
ERBA	**Erbaa**	**2.11**	**347**	*i* P		**Pn**	**04 13 05.7**	**+0.8**
ERBA				*i* S		**Sb**	**04 13 33.1**	**-1.2**
EUZM	**Uzumlu**	**2.11**	**58**	*i* P		**Pb**	**04 13 07.6**	**+0.1**
EUZM				*i* S		**Sg**	**04 13 36.2**	**-0.2**
KELT	**Kelkit**	**2.12**	**43**	⇓*i*P		**Pn**	**04 13 05.5**	**+0.4**
KELT				*i* S		**Sb**	**04 13 35.0**	**+0.5**
NIG	**Nigde**	**2.22**	**258**	PN		**Pn**	**04 13 05.9**	**-0.7**
YURE	**YÜREGIR**	**2.25**	**218**	PN		**Pn**	**04 13 06.9**	**+0.1**
KARA	**Karaisali**	**2.27**	**234**	PN		**Pn**	**04 13 07.7**	**+0.6**
DYBB	**Diyarbakir**	**2.28**	**106**	PN		**Pn**	**04 13 07.9**	**+0.7**
TAHT	**Tahtakopru-Hat**	**2.43**	**203**	PN		**Pn**	**04 13 09.7**	**+0.5**
KRTD	**Karatas-Adana**	**2.55**	**218**	PN		**Pn**	**04 13 11.1**	**+0.3**
KRTS	**Karatas**	**2.58**	**218**	PN		**Pn**	**04 13 11.2**	**-0.1**
YEDI	**Yedisu-Bingol**	**2.61**	**71**	PN		**Pn**	**04 13 12.4**	**+0.6**
BNGB	**Bingl**	**2.62**	**81**	PN		**Pn**	**04 13 12.8**	**+0.9**
CORM	**Corum**	**2.63**	**307**	PN		**Pn**	**04 13 12.1**	**0.0**
KVT	**Kavak**	**2.66**	**338**	PN		**Pn**	**04 13 12.3**	**-0.1**
MAZI	**Mazidag**	**2.69**	**114**	PN		**Pn**	**04 13 13.6**	**+0.7**
BAYT	**Aydıntepe-Bayb**	**2.79**	**50**	PN		**Pn**	**04 13 14.7**	**+0.5**
YAYX	**Yaylak**	**2.80**	**278**	PN		**Pn**	**04 13 14.3**	**0.0**
MERS	**Mersin**	**2.85**	**233**	PN		**Pn**	**04 13 15.1**	**0.0**
KARO	**Karliova-Bingo**	**2.95**	**75**	PN		**Pn**	**04 13 16.8**	**+0.2**
SERE	**Sereflikochisa**	**2.99**	**277**	PN		**Pn**	**04 13 17.2**	**+0.2**
KTUT	**Trabzon**	**3.00**	**37**	PN		**Pn**	**04 13 17.9**	**+0.8**
SVAN	**Silvan-Diyarba**	**3.05**	**98**	PN		**Pn**	**04 13 18.5**	**+0.8**
SULT	**Sultanhani-AKS**	**3.05**	**263**	PN		**Pn**	**04 13 17.9**	**0.0**
BRTR	**Keskin Array B**	**3.10**	**292**	Pn		**Pn**	**04 13 18.3**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=133,slow=12,SNR=180							
BRTR				Pg		**Pb**	**04 13 24.1**	**-0.3**
	comp=Z,14nm,0.3s,baz=117,slow=17,SNR=80							
BRTR				Lg	Lg		04 14 02.5	
	comp=Z,5.2nm,0.3s,baz=128,slow=28,SNR=4.3							
KBZ	**Khabaz**	**6.59**	**37**	Pn		**Pn**	**04 14 07.8**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=256,slow=12,SNR=1.7							
GEYT	**Alibeck**	**16.31**	**86**	Pn		**Pn**	**04 16 19.8**	**+1.2**
	comp=Z,2.1nm,0.3s,baz=253,slow=13,SNR=5.2							
AKTO	**Aktyubinsk**	**18.80**	**44**	P		**P**	**04 16 47.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=237,slow=11,SNR=6.0							
FINES	**FINESS Array B**	**23.90**	**347**	P		**P**	**04 17 41.8**	**-1.5**
	comp=Z,1.6nm,0.8s,baz=140,slow=11,SNR=3.4							
KURBB	**Kurchatov Arra**	**31.26**	**54**	P		**P**	**04 18 49.4**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=272,slow=9.0,SNR=8.6							
MKAR	**Makanchi Array**	**33.62**	**61**	P		**P**	**04 19 10.0**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=282,slow=7.4,SNR=4.1							
TORD	**Torodi Ar. Bea**	**40.50**	**241**	P		**P**	**04 20 08.9**	**0.0**
	comp=Z,0.6nm,0.8s,baz=66,slow=6.0,SNR=3.9							

ISCJB ***04*** *04:16:11.0±0.5, 24.°86N±0.°03×122.°42E±0.°02, h8km±3km, Error ellipse: s-maj=4.9km s-min=3.2km az=26.7*
TAP ***04*** *04:16:10.8, 24.°89N×122.°41E, h16km, ML3.0, C*
JMA ***04*** *04:16:11.1±0.3, 24.°82N×122.°41E, h1km±3km, M2.4*

ISC 04 04:16:11.2±1.0, 24.°85N±0.°03×122.°41E±0.°02, h10km±11km, n35, σ0ϑ34/58, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.39**	**220**	P		**Pb**	**04 16 19.9**	**-0.2**
	baz=217							
EOS1				*e*S		**Sb**	**04 16 26.4**	**+0.2**
	baz=217							
TWB1	**Santiao Chiao**	**0.41**	**293**	P		**Pg**	**04 16 19.1**	**-0.1**
	baz=287							
TWB1				*e*S		**Sg**	**04 16 24.6**	**-0.1**
	baz=287							
EGS		**0.43**	**269**	P		**Pb**	**04 16 20.2**	**-0.7**
	baz=264							
NTC	**Toucheng**	**0.52**	**271**	P		**Pg**	**04 16 21.6**	**+0.2**
	baz=267							
TIPB	**Shuangxi**	**0.54**	**283**	*e*P		**Pb**	**04 16 22.3**	**-0.5**
	baz=278							
TIPB				*e*S		**Sg**	**04 16 29.4**	**+0.6**
	baz=278							
TWC	**Suao**	**0.56**	**245**	*e*P		**Pg**	**04 16 22.1**	**0.0**
	baz=241							
TWC				*e*S		**Sg**	**04 16 30.1**	**+0.6**
	baz=241							
NWF	**Wu-fen Shan**	**0.61**	**291**	P		**Pg**	**04 16 23.2**	**+0.2**
	baz=287							
NWF				*e*S		**Sb**	**04 16 32.1**	**-0.4**
	baz=287							
WFSB	**Wu-fen Shan**	**0.61**	**291**	*i* P		**Pb**	**04 16 23.4**	**-0.4**
	baz=287							
WFSB				*e*S		**Sg**	**04 16 31.6**	**+0.7**
	baz=287							
JYNG	**Yonaguni jima**	**0.63**	**129**	P		**Pg**	**04 16 23.5**	**+0.1**
JYNG				*e*S		**Sg**	**04 16 31.9**	**+0.2**
YOJ	**Yonaguni jima**	**0.67**	**125**	P		**Pg**	**04 16 24.1**	**-0.2**
	baz=117							
YOJ				*e*S		**Sg**	**04 16 33.0**	**0.0**
	baz=117							
YOJ	**Yonaguni jima**	**0.67**	**125**	P		**Pg**	**04 16 24.0**	**-0.2**
YOJ				*e*S		**Sg**	**04 16 32.9**	**-0.2**
TWE	**Neicheng**	**0.68**	**259**	P		**Pg**	**04 16 24.4**	**0.0**
	baz=247							
TWE				*e*S		**Sb**	**04 16 34.5**	**-0.1**
	baz=247							
SLBB	**Yuanshan**	**0.70**	**262**	P		**Pb**	**04 16 25.4**	**-0.1**
	baz=251							
ENA	**Nanau**	**0.74**	**235**	P		**Pg**	**04 16 25.5**	**+0.1**
	baz=232							
ENA				*e*S		**Sg**	**04 16 34.5**	**-0.5**
	baz=232							
YM07	**YM07**	**0.78**	**295**	P		**Pg**	**04 16 26.1**	**-0.2**
	baz=291							
YM07				*e*S		**Sg**	**04 16 36.7**	**+0.2**
	baz=291							
ENTT	**Nioudou**	**0.79**	**255**	P		**Pb**	**04 16 26.7**	**-0.3**
	baz=252							
ENTT				S		**Sb**	**04 16 37.6**	**-0.1**
	baz=252							
YM01	**YM01**	**0.81**	**291**	P		**Pb**	**04 16 27.4**	**0.0**
	baz=288							
YM01				*e*S		**Sb**	**04 16 38.2**	**-0.2**
	baz=288							
NWLT	**Wulai**	**0.82**	**265**	P		**Pg**	**04 16 27.2**	**+0.2**
	baz=263							
YM10	**YM10**	**0.82**	**292**	*e*P		**Pg**	**04 16 26.3**	**-0.8**
	baz=289							
PCYT	**Pengchaiyu**	**0.83**	**339**	P		**Pb**	**04 16 27.3**	**-0.4**
	baz=330							
TWY	**Chenhua**	**0.84**	**300**	P		**Pb**	**04 16 28.0**	**+0.1**
	baz=297							
TWY				*e*S		**Sb**	**04 16 39.4**	**+0.1**
	baz=297							
NDT	**Datong Townshi**	**0.85**	**253**	P		**Pb**	**04 16 27.8**	**-0.1**
	baz=250							
NDT				*e*S		**Sb**	**04 16 39.3**	**-0.1**
	baz=250							
YHNB	**Yeheng**	**0.95**	**259**	P		**Pg**	**04 16 29.3**	**-0.2**
	baz=268							
NSK	**Sanguang**	**0.97**	**260**	P		**Pg**	**04 16 29.7**	**-0.1**
	baz=266							
NSK				*e*S		**Sb**	**04 16 42.7**	**-0.2**
	baz=266							
NACB	**Ninganchiao**	**1.00**	**228**	*e*P		**Pg**	**04 16 30.0**	**-0.4**
	baz=236							
NACB				*e*S		**Sg**	**04 16 42.6**	**-0.8**
	baz=236							
NNSB	**Datong**	**1.02**	**246**	*e*P		**Pg**	**04 16 30.4**	**-0.4**
	baz=232							
NNSB				*e*S		**Sg**	**04 16 43.8**	**-0.4**
	baz=232							
NNS	**Nan Shan**	**1.02**	**247**	P		**Pb**	**04 16 31.1**	**+0.1**
	baz=233							
NNS				*e*S		**Sg**	**04 16 44.3**	**+0.1**
	baz=233							
ETLH	**Xiulin Townshi**	**1.06**	**233**	P		**Pg**	**04 16 31.1**	**-0.4**
	baz=231							
ETLH				*e*S		**Sg**	**04 16 45.1**	**-0.2**
	baz=231							
WHF	**Hehuan Shan**	**1.25**	**236**	P		**Pg**	**04 16 35.0**	**-0.3**
	baz=234							
IRIF	**Iriomote-Funau**	**1.31**	**113**	P		**Pb**	**04 16 35.8**	**-0.1**
CHGB	**Renai**	**1.37**	**235**	P		**Pg**	**04 16 37.2**	**-0.3**
	baz=233							
CHGB				*e*S		**Sb**	**04 16 54.6**	**-0.1**
	baz=233							
OWD	**Renai**	**1.43**	**232**	P		**Pn**	**04 16 37.6**	**+0.3**
	baz=230							
WHP	**Taichung City**	**1.45**	**247**	*e*P		**Pg**	**04 16 39.3**	**+0.3**
	baz=246							
VWDT	**VWDT**	**1.59**	**227**	P		**Pn**	**04 16 39.8**	**+0.5**
	baz=207							
VWDT				*e*S		**Sb**	**04 17 01.0**	**+0.3**
	baz=207							
TYC	**Yuchr**	**1.70**	**237**	*e*P		**Pb**	**04 16 42.6**	**+0.1**
	baz=235							

SOME ***04*** *04:17:47.3, 37.°70N×71.°88E, h80km*
NNC ***04*** *04:17:53.6±3.5, 36.°88N×70.°98E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=27.4km s-min=19.9km az=168.0*
IDC ***04*** *04:17:56.2±9.5, 36.°52N×71.°56E, h127km±66km, mb3.4/2, mb1 3.4/7, mb1mx3.1/52, mbtmp3.8/7, Error ellipse: s-maj=85.1km s-min=54.1km az=158.0*

ISC 04 04:17:56.2±2.0, 36.°7N±0.°1×71.°1E±0.°1, h100km, n21, σ1ϑ67/30, 6C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**5.50**	**352**	*e*P		**Pn**	**04 19 16.3**	**+0.5**
	2.3nm,0.1s							
IUG				*e*S		**Sn**	**04 20 19.9**	**+2.2**
	64nm,0.5s							
AML	**Almayashu**	**5.79**	**20**	P		**Pn**	**04 19 20.2**	**+0.3**
	SNR=48							
UCH	**Uchtor**	**6.12**	**25**	P		**Pn**	**04 19 24.6**	**0.0**
	SNR=8.0							
DZA	**Taraz**	**6.18**	**2**	*e*P		**Pn**	**04 19 21.1**	**-3.9**
	74nm,0.1s							
DZA				*e*S		**Sn**	**04 20 28.2**	**-6.1**
	237nm,0.1s							
MRKS	**Merke**	**6.26**	**15**	*e*P		**Pn**	**04 19 26.4**	**+0.3**
	11nm,0.5s							
MRKS				*e*S		**Sn**	**04 20 37.1**	**+0.9**
	15nm,0.5s							
EKS2	**Erkin-Say**	**6.30**	**18**	P		**Pn**	**04 19 27.2**	**+0.5**
	SNR=5.8							
KK31	**Karatay Array**	**6.41**	**356**	⇓P		**Pn**	**04 19 28.9**	**+0.9**
	2.5nm,0.3s,baz=177,slow=12,SNR=84							
KK31				⇑S		**Sn**	**04 20 41.2**	**+1.5**
	6.1nm,0.3s,baz=325,slow=43,SNR=4.5							
AAK	**Ala-Archa**	**6.49**	**23**	P		**Pn**	**04 19 29.7**	**+0.5**
	2.5nm,0.3s,baz=191,slow=8.7,SNR=9.6							
AAK				S		**Sn**	**04 20 43.3**	**+1.5**
	1.6nm,0.3s,baz=338,slow=23,SNR=11							
AAK	**Ala-Archa**	**6.49**	**23**	⇑P		**Pn**	**04 19 29.2**	**-0.1**
	4.7nm,0.6s							
AAK				⇓S		**Sn**	**04 20 42.8**	**+1.0**
	14nm,0.7s							
USP	**Ospenovka**	**7.06**	**21**	P		**Pn**	**04 19 36.8**	**-0.2**
	SNR=7.6							
TKM2	**Tokmak 2**	**7.12**	**28**	P		**Pn**	**04 19 37.7**	**-0.1**
	SNR=8.3							
TKM2	**Tokmak 2**	**7.12**	**28**	⇓P		**Pn**	**04 19 37.1**	**-0.7**
	4.0nm,0.5s							
TKM2				⇑S		**Sn**	**04 20 58.1**	**+0.9**
	3.6nm,0.9s							
KURBB	**Kurchatov Arra**	**14.91**	**19**	P		**Pn**	**04 21 22.2**	**+0.6**
	0.1nm,0.3s,baz=206,slow=11,SNR=6.2							
AB31	**Akbulak array**	**14.94**	**331**	⇑P		**Pn**	**04 21 21.1**	**-0.9**
	0.2nm,0.3s,baz=143,slow=12,SNR=15							
AB31				S		**Sn**	**04 24 06.4**	**-0.3**
	1.5nm,0.6s,baz=146,slow=23,SNR=7.0							
BVAR	**Borovoye Array**	**16.33**	**359**	P		**Pn**	**04 21 40.0**	**+0.7**
	0.5nm,0.3s,baz=163,slow=11,SNR=3.9							
AKTO	**Aktyubinsk**	**16.64**	**330**	P		**P**	**04 21 45.5**	**+1.6**
	0.4nm,0.3s,baz=134,slow=12,SNR=4.2							
AKTO	**Aktyubinsk**	**16.64**	**330**	⇑P		**P**	**04 21 44.5**	**+0.6**
	1.1nm,0.5s							
AKTO				⇑S		**Sn**	**04 24 48.2**	**+0.5**
	1.6nm,0.7s							
ZALV	**Zalesovo Beam**	**19.70**	**25**	P		**P**	**04 22 15.6**	**-1.9**

LAGR				pmax	pmax	
	comp=N,805nm,0.4s					
LAGR				pmax	pmax	
	comp=Z,1μm,0.4s					
LAGR				pmax	pmax	
	comp=E,544nm,0.3s					
LAGR				smax	smax	
	comp=N,4μm,0.5s					
LAGR				smax	smax	
	comp=E,5μm,0.6s					
LAGR	**Lagunnoye**	**4.00 256**	*e*P	**Pn**	**04 58 54.0 +1.8**	
LAGR			AMB	AMB	04 59 06.0	
	comp=E,128nm,0.4s					
LAGR			*e*S	**Sn**	**04 59 41.0 +3.2**	
LAGR			A	A	04 59 55.0	
	comp=E,4μm,0.6s					
LAGR			A	A	04 59 55.0	
	comp=E,5μm,0.6s					
GRPR	**Tuman**	**4.03 255**	⇑*i*PN	**Pn**	**04 58 54.5 +1.8**	
GRPR			*i* S	**Sn**	**04 59 42.3 +3.7**	
GRPR			pmax	pmax		
	comp=N,504nm,0.4s					
GRPR			pmax	pmax		
	comp=Z,771nm,0.4s					
GRPR			pmax	pmax		
	comp=E,462nm,0.3s					
GRPR			smax	smax		
	comp=N,2μm,0.3s					
GRPR			smax	smax		
	comp=E,444nm,0.3s					
GRPR	**Tuman**	**4.03 255**	*i* P	**Pn**	**04 58 54.0 +1.3**	
GRPR			AMB	AMB	04 59 02.0	
	comp=E,77nm,0.4s					
GRPR			*i* S	**Sn**	**04 59 42.0 +3.4**	
GRPR			A	A	04 59 51.0	
	comp=E,2μm,0.3s					
GRPR			A	A	04 59 51.0	
	comp=E,444nm,0.3s					
GLVR	**Golovnino**	**4.28 253**	*e*PN	**Pn**	**04 58 57.9 +1.7**	
GLVR			*e*S	**Sn**	**04 59 48.5 +3.6**	
GLVR			pmax	pmax		
	comp=E,267nm,0.5s					
GLVR			pmax	pmax		
	comp=Z,1μm,0.5s					
GLVR			pmax	pmax		
	comp=N,284nm,0.4s					
GLVR			smax	smax		
	comp=E,1μm,0.5s					
GLVR			smax	smax		
	comp=N,3μm,0.4s					
GLVR	**Golovnino**	**4.28 253**	*e*P	**Pn**	**04 58 57.0 +0.8**	
GLVR			AMB	AMB	04 59 00.0	
	comp=N,267nm,0.5s					
GLVR			AMB	AMB	04 59 00.0	
	comp=N,133nm,0.5s					
GLVR			*e*S	**Sn**	**04 59 48.0 +3.1**	
GLVR			A	A	04 59 59.0	
	comp=N,3μm,0.5s					
GLVR			A	A	04 59 59.0	
	comp=N,1μm,0.5s					
NEM2	**Nemuro 2**	**4.28 247**	P	**Pn**	**04 58 56.4 +0.2**	
NEM2			*e*S	**Sn**	**04 59 44.5 -0.4**	
JRA	**Rausu**	**4.49 257**	P	**Pn**	**04 59 01.3 +2.3**	
JRA			*e*S	**Sn**	**04 59 55.3 +5.3**	
JNK	**Nakash**	**4.88 254**	P	**Pn**	**04 59 06.0 +1.6**	
JNK			*e*S	**Sn**	**05 00 01.7 +2.1**	
JAK	**Akkeshi**	**5.13 248**	P	**Pn**	**04 59 08.1 +0.2**	
JAK			*e*S	**Sn**	**05 00 05.2 -0.6**	
JTKR	**Abashiri--Toko**	**5.32 260**	P	**Pn**	**04 59 12.9 +2.5**	
JAR	**Ashorobuto**	**5.63 254**	P	**Pn**	**04 59 16.2 +1.5**	
JMP	**Maruseppu**	**5.70 261**	P	**Pn**	**04 59 18.2 +2.6**	
JOB	**Onbets**	**5.74 250**	P	**Pn**	**04 59 17.2 +1.0**	
JOB			*e*S	**Sn**	**05 00 21.3 +0.4**	
YSS	**Yuzh-Sakhalins**	**6.13 290**	*e*Pn	**Pn**	**04 59 23.5 +1.9**	
YSS			*e*Sn	**Sn**	**05 00 29.4 -1.1**	
YSS	**Yuzh-Sakhalins**	**6.13 290**	*e*PN	**Pn**	**04 59 23.1 +1.5**	
YSS			*e*S	**Sn**	**05 00 31.9 +1.4**	
YSS			pmax	pmax		
	comp=Z,40nm,0.6s					
YSS			pmax	pmax		
	comp=Z,200nm,6.2s					
YSS			smax	smax		
	comp=E,60nm,0.6s					
YSS			MLR	MLR		
	comp=Z,1μm,17.0s					
YSS			MLR	MLR		
	comp=E,1μm,15.0s					
YSS	**Yuzh-Sakhalins**	**6.13 290**	*e*P	**Pn**	**04 59 24.1 +2.5**	
YSS			AMB	AMB	04 59 24.9	
	comp=E,40nm,0.6s					
YSS			*e*S	**Sn**	**05 00 32.9 +2.4**	
YSS			AMS	AMS	05 01 35.0	
	comp=E,1μm,17.0s					
YSS			AMS	AMS	05 01 35.0	
	comp=E,1μm,17.0s					
JKK2	**Kamakawa 2**	**6.16 261**	P	**Pn**	**04 59 24.7 +2.8**	
JCH	**Churui**	**6.18 249**	P	**Pn**	**04 59 22.5 +0.2**	
JCH			*e*S	**Sn**	**05 00 31.4 -0.3**	
JKA	**Kamikawa-asahi**	**6.20 264**	*e*P	**Pn**	**04 59 25.6 +3.0**	
ASAJ	**Asahikawa**	**6.21 264**	P	**Pn**	**04 59 25.6 +3.0**	
	comp=E,8.4nm,0.3s,baz=99,slow=14,SNR=25					
ASAJ			LR	LR	05 02 02.9	
	comp=E,1μm,18.0s,baz=66,slow=40					
ASAJ	**Asahikawa**	**6.21 264**	P	**Pn**	**04 59 25.6 +3.0**	
SKR	**Severo-Kuril's**	**6.47 29**	*e*PN	**Pn**	**04 59 27.2 +1.0**	
SKR			pmax	pmax		
	comp=Z,185nm,0.7s					
SKR			MLR	MLR		
	comp=Z,1μm,15.0s					
SKR	**Severo-Kuril's**	**6.47 29**	*e*P	**Pn**	**04 59 25.6 -0.6**	
SKR			AMB	AMB	04 59 33.0	
	comp=Z,185nm,0.7s					
SKR			*e*S	**Sn**	**05 00 35.0 -3.6**	
SKR			A	A	05 01 17.0	
	comp=Z,377nm,0.9s					
SKR			A	A	05 01 17.0	
	comp=Z,121nm,0.9s					
SKR			AMS	AMS	05 01 57.0	
	comp=Z,990nm,15.0s					
SKR			AMS	AMS	05 01 57.0	
	comp=Z,1μm,15.0s					
SKR			AMS	AMS	05 01 57.0	
	comp=Z,1μm,15.0s					
JWK2	**Keihoku**	**6.55 275**	P	**Pn**	**04 59 31.6 +4.2**	
JEM	**Erimo**	**6.60 245**	P	**Pn**	**04 59 30.2 +2.1**	
ERM	**Erimo**	**6.60 245**	*e*Pn	**Pn**	**04 59 30.6 +2.5**	
ERM			*e*Sn	**Sn**	**05 00 44.5 +2.4**	
ERM	**Erimo**	**6.60 245**	*e*PN	**Pn**	**04 59 30.6 +2.5**	
JAB	**Ashibetsu**	**6.62 259**	P	**Pn**	**04 59 31.5 +3.1**	
JNBK	**Urakawa-nobuka**	**6.74 248**	P	**Pn**	**04 59 29.7 -0.2**	
JBT2	**Biratori 2**	**6.78 253**	P	**Pn**	**04 59 31.5 +1.0**	
UGL	**Uglegorsk**	**7.36 306**	*e*P	**Pn**	**04 59 40.5 +2.1**	
UGL			AMB	AMB	04 59 42.0	
	comp=Z,90nm,1.0s					
JKB	**Kayabe**	**8.05 250**	P	**Pn**	**04 59 48.3 +0.4**	
JKB			*e*S	**Sn**	**05 01 13.0 -4.7**	
TYV	**Tymovskoe**	**8.09 318**	*e*PN	**Pn**	**04 59 49.6 +1.2**	
TYV			*e*S	**Sn**	**05 01 22.4 +3.9**	
TYV			pmax	pmax		
	comp=Z,27nm,0.6s					
TYV			smax	smax		
	comp=E,37nm,0.9s					
TYV			MLR	MLR		
	comp=Z,700nm,14.0s					
TYV	**Tymovskoe**	**8.09 318**	*e*P	**Pn**	**04 59 50.0 +1.6**	
TYV			AMB	AMB	04 59 50.7	
	comp=Z,27nm,0.6s					
TYV			*e*S	**Sn**	**05 01 20.4 +1.9**	
TYV			AMS	AMS	05 04 21.0	
	comp=Z,700nm,14.0s					
JYM2	**Yakumo 2**	**8.40 253**	P	**Pn**	**04 59 53.3 +0.6**	
JANG	**Nango**	**8.55 240**	P	**Pn**	**04 59 52.9 -1.9**	
JANG			*e*S	**Sn**	**05 01 22.6 -7.4**	
JTM	**Tenmabayashi**	**8.59 243**	P	**Pn**	**04 59 54.7 -0.6**	
JTM			*e*S	**Sn**	**05 01 25.1 -5.8**	
JTH	**Tanohata**	**8.61 236**	P	**Pn**	**04 59 53.3 -2.3**	
JTH			*e*S	Sn	05 01 22.5 -9.0	
JSR	**Shiriuchi**	**8.63 249**	P	**Pn**	**04 59 56.2 +0.4**	
JOSM	**Okushiri--Mats**	**9.02 254**	P	**Pn**	**05 00 01.9 +0.7**	
PEA0B	**Petropavlovsk-**	**9.05 26**	*e*Pn	**Pn**	**05 00 05.2 +3.6**	
PETK	**Petropavlovsk-**	**9.05 26**	P	**Pn**	**05 00 02.0 +0.5**	
	comp=Z,1.7nm,0.3s,baz=217,slow=16,SNR=11					
PEA1	**Petropavlovsk-**	**9.05 26**	*e*Pn	**Pn**	**05 00 02.0 +0.4**	
OFUJ	**Ofunato**	**9.30 233**	P	**Pn**	**05 00 03.8 -1.2**	
OFUJ			*e*S	**Sn**	**05 01 40.9 -7.4**	
JRG	**Rokugo**	**9.69 237**	P	**Pn**	**05 00 09.4 -1.0**	
JRG			*e*S	**Sn**	**05 01 53.3 -4.6**	
JIO	**Ouri**	**9.91 231**	P	**Pn**	**05 00 11.9 -1.6**	
OKH	**Okha**	**9.98 330**	*e*P	**Pn**	**05 00 16.5 +2.2**	
OKH			*e*S	**Sn**	**05 02 10.2 +5.2**	
OKH			AMS	AMS	05 05 28.4	
	comp=Z,600nm,14.0s					
TEY	**Ternei**	**10.31 275**	⇑*e*PN	Pn	05 00 24.8 +6.0	
TEY			pmax	pmax		
	comp=Z,40nm,0.8s					
TEY			pmax	pmax		
	comp=E,20nm,1.4s					
TEY	**Ternei**	**10.31 275**	*e*P	**Pn**	**05 00 22.8 +4.0**	
TEY			AMB	AMB	05 00 26.5	
	comp=E,40nm,0.8s					
NKL	**Nikolayevsk**	**10.55 323**	*e*P	**Pn**	**05 00 23.0 +0.9**	
NKL			AMB	AMB	05 00 25.0	
	comp=E,63nm,1.0s					
NKL			AMB	AMB	05 00 25.0	
	comp=E,20nm,1.0s					
JYA	**Atsumi**	**10.75 237**	P	**Pn**	**05 00 24.1 -0.9**	
GRNR	**Gornyy**	**11.38 305**	*e*P	**Pn**	**05 00 34.5 +1.1**	
MAJO	**Matsushiro**	**13.03 233**	*e*Pn	**Pn**	**05 00 57.1 +1.0**	
MAJO	**Matsushiro**	**13.03 233**	*e*PN	**Pn**	**05 00 57.1 +1.0**	
MAT	**Matsushiro**	**13.03 233**	P	**Pn**	**05 00 56.8 +0.7**	
MJAR	**Matsushiro Arr**	**13.03 233**	P	**Pn**	**05 00 58.8 +2.7**	
	comp=E,0.2nm,0.3s,baz=38,slow=9.1,SNR=16					
MJAR			LR	LR	05 06 29.6	
	comp=E,232nm,21.5s,baz=50,slow=39					
MJB9	**Matsu-Tunnel**	**13.03 233**	*e*Pn	**Pn**	**05 00 57.2 +1.1**	
USRK	**Ussuriysk Ar.**	**13.69 273**	P	**Pn**	**05 01 05.5 +0.4**	
	comp=E,1.0nm,0.3s,baz=91,slow=9.1,SNR=13					
USRK			LR	LR	05 06 23.1	
	comp=E,461nm,19.1s,baz=70,slow=37					
USA0B	**Ussuriysk Arra**	**13.69 273**	*e*Pn	**Pn**	**05 01 06.7 +1.6**	
KLR	**Kul'dur**	**13.82 294**	P	**Pn**	**05 01 08.8 +1.9**	
	comp=E,0.4nm,0.3s,baz=98,slow=15,SNR=14					
KLR			LR	LR	05 06 50.4	
	comp=E,589nm,18.0s,baz=90,slow=39					
KLR	**Kul'dur**	**13.82 294**	*e*P	**Pn**	**05 01 07.2 +0.4**	
EKMR	**Ekimchan**	**14.31 310**	*e*P	**Pn**	**05 01 13.5 +0.1**	
EKMR			AMB	AMB	05 01 26.6	
	comp=E,8.0nm,0.7s					
MA2	**Magadan**	**14.46 359**	P	**Pn**	**05 01 14.2 -1.3**	
	comp=E,2.7nm,0.3s,baz=211,slow=12,SNR=5.6					
INU	**Inuyama**	**14.55 233**	*e*Pn	**P**	**05 01 22.1 -0.8**	
JHJ	**Hachijo jima 2**	**14.88 220**	LR	LR	05 09 51.3	
	comp=E,55nm,19.0s,baz=88,slow=48					
MDJ	**Mudanjiang**	**15.31 276**	P	**Pn**	**05 01 27.0 +0.2**	
MDJ			pP	pP	05 01 36.1 -3.1	
MDJ			sP	sP	05 01 45.6 +2.5	
MDJ			S	**Sn**	**05 04 14.8 -0.3**	
MDJ			sS	S	05 04 28.3 -2.4	
MDJ			pmax	pmax		
	comp=E,9.0nm,0.6s					
MDJ			pmax	pmax		
	comp=E,54nm,3.0s					
MDJ			LR	LR		
	comp=E,440nm,17.8s					
MDJ			LR	LR		
	comp=E,470nm,17.1s					
MDJ			LR	LR		
	comp=E,790nm,16.4s					
MDJ	**Mudanjiang**	**15.31 276**	*e*Pn	**Pn**	**05 01 27.5 +0.6**	
	comp=E,38nm,1.0s					
BMKR	**Bomnak**	**17.21 312**	*e*P	**Pn**	**05 01 50.7 -0.3**	
BMKR			AMB	AMB	05 01 57.0	
	comp=E,16nm,0.4s					
ZEA	**Zeya**	**17.71 308**	*e*P	**Pn**	**05 01 55.6 -1.6**	
ZEA			pmax	pmax		
	comp=Z,36nm,1.2s					
ZEA			MLR	MLR		
	comp=E,400nm,14.0s					
ZEA			MLR	MLR		
	comp=Z,500nm,14.0s					
ZEA	**Zeya**	**17.71 308**	*e*P	**Pn**	**05 01 55.6 -1.6**	
ZEA			AMB	AMB	05 01 59.8	
	comp=Z,36nm,1.0s					
ZEA			AMS	AMS	05 10 18.0	
	comp=Z,400nm,14.0s					
ZEA			AMS	AMS	05 10 18.0	
	comp=Z,500nm,14.0s					
SEY	**Seymchan**	**17.85 2**	P	**Pn**	**05 01 57.1 -1.7**	
	comp=Z,0.2nm,0.3s,baz=160,slow=7.5,SNR=4.8					
KROS	**Kirovskiy**	**18.11 310**	*e*P	**P**	**05 02 02.8 +0.7**	
KROS			AMB	AMB	05 02 05.7	
	comp=Z,4.0nm,0.4s					
KROS			AMB	AMB	05 02 05.7	
	comp=Z,6.0nm,0.4s					
KROS			AMB	AMB	05 02 05.7	
	comp=Z,11nm,0.4s					
CN2	**Changchun**	**18.39 275**	*e*P	**P**	**05 02 04.2 -1.1**	
CN2			*es*P	sP	05 02 23.9 +6.6	
CN2			*e*S	**Sn**	**05 05 22.0 -7.8**	
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=Z,440nm,19.0s					
CN2			LR	LR		
	comp=Z,240nm,19.0s					
CN2			LR	LR		
	comp=Z,380nm,19.0s					
KSRS	**Korea Array**	**19.04 254**	P	**Pn**	**05 02 14.0 +0.6**	
	comp=Z,0.5nm,0.3s,baz=62,slow=11,SNR=24					
KSRS			LR	LR	05 08 53.0	
	comp=Z,205nm,21.6s,baz=64,slow=34					
KS15	**Wonju Array Si**	**19.07 254**	*e*P	**Pn**	**05 02 14.5 +0.6**	
	comp=Z,12nm,0.9s					
JNU	**Nakatsue**	**19.73 240**	P	**Pn**	**05 02 22.4 +0.6**	
	comp=Z,0.7nm,0.3s,baz=17,slow=9.9,SNR=6.9					
JNU	**Nakatsue**	**19.73 240**	*e*P	**Pn**	**05 02 21.9 +0.1**	
	comp=Z,24nm,1.0s					
TJN	**Taejon**	**19.99 252**	*i* P	**Pn**	**05 02 24.1 -0.7**	
YAK	**Yakutsk**	**21.02 331**	*e*P	**P**	**05 02 33.1 -0.6**	
	comp=Z,65nm,0.8s					
YAK	**Yakutsk**	**21.02 331**	*e*P	**P**	**05 02 33.2 -0.6**	
YAK			*e**PP	**pwP**	**05 02 44.9 -0.8**	
YAK			*e*S	**S**	**05 06 20.6 -5.0**	
YAK			*e**SS	sS	05 06 50.7 +13	
YAK	**Yakutsk**	**21.02 331**	*e*P	**P**	**05 02 33.2 -0.6**	
HIA	**Hailar**	**21.66 292**	*e*P	**P**	**05 02 37.7 -3.2**	
	comp=Z,14nm,1.0s					
HIA	**Hailar**	**21.66 292**	*e*P	**P**	**05 02 37.7 -3.2**	
HIA			pmax	pmax		
	comp=Z,14nm,1.0s					
ATKA	**Atka Island**	**23.76 60**	*e*P	**P**	**05 03 01.8 -0.6**	
	comp=Z,20nm,1.0s					
BILL	**Bilibino**	**24.28 14**	*i* P	**P**	**05 03 06.6 -0.5**	
BILL			*i*		05 03 38.2	
BILL			pmax	pmax		
	comp=Z,4.0nm,1.1s					
BILL			MLR	MLR		
	comp=Z,366nm,16.0s					
BILL	**Bilibino**	**24.28 14**	*e*P	**P**	**05 03 06.6 -0.5**	
JOW	**Kunigami**	**25.87 233**	P	**P**	**05 03 23.9 +2.0**	
	comp=Z,0.8nm,0.8s,baz=110,slow=15,SNR=3.4					
JOW	**Kunigami**	**25.87 233**	*e*P	**P**	**05 03 23.9 +2.0**	
	comp=Z,11nm,1.0s					
BOD	**Bodaibo**	**26.03 313**	*e*P	**P**	**05 03 18.1 -5.0**	
BOD			*e*		05 04 04.5	
BJT	**Baijiatuau**	**26.14 271**	*e*P	**P**	**05 03 25.0 +0.7**	
	comp=Z,12nm,0.7s					
BJT	**Baijiatuau**	**26.14 271**	*e*P	**P**	**05 03 25.0 +0.7**	
BJT			pmax	pmax		
	comp=Z,12nm,0.7s					
TIA	**Tai'an**	**27.15 263**	P	**P**	**05 03 36.3 +2.8**	
TIA			pmax	pmax		
	comp=Z,11nm,0.6s					
NJ2	**Nanjing**	**28.24 254**	*e*P	**P**	**05 03 44.1 +1.0**	
NJ2			pmax	pmax		
	comp=Z,13nm,0.6s					
H11N2	**WAKE ISLAND Hy**	**28.49 148**	T	T	05 35 28.2	
	baz=337,slow=76,SNR=419					
H11N1	**WAKE ISLAND Hy**	**28.51 148**	T	T	05 35 30.0	
	baz=337,slow=76,SNR=528					
H11N3	**WAKE ISLAND Hy**	**28.51 148**	T	T	05 35 30.4	
	baz=337,slow=76,SNR=444					
TIXI	**Tiksi**	**28.66 345**	P	**P**	**05 03 43.8 -2.8**	
	comp=Z,3.2nm,0.4s,baz=133,slow=6.8,SNR=9.1					
TIXI	**Tiksi**	**28.66 345**	*e*P	**P**	**05 03 43.4 -3.1**	
	comp=Z,3.0nm,0.5s					
TIXI	**Tiksi**	**28.66 345**	*i* P	**P**	**05 03 47.0 +0.5**	
TIXI			pmax	pmax		
	comp=Z,3.0nm,0.5s					
HHC	**Hu-ho-hao-te**	**29.08 276**	*e*P	**P**	**05 03 51.4 +0.7**	
HHC			S	**S**	**05 08 36.1 -3.9**	
HHC			pmax	pmax		
	comp=Z,48nm,0.7s					
HHC			pmax	pmax		
	comp=Z,120nm,5.7s					
HHC			LR	LR		
	comp=Z,190nm,14.2s					
HHC			LR	LR		
	comp=Z,540nm,15.1s					
HHC			LR	LR		
	comp=Z,990nm,16.1s					
H11S1	**WAKE ISLAND Hy**	**29.54 149**	T	T	05 36 04.1	
	baz=337,slow=76,SNR=333					
H11S3	**WAKE ISLAND Hy**	**29.55 149**	T	T	05 35 57.6	
	baz=337,slow=76,SNR=350					
H11S2	**WAKE ISLAND Hy**	**29.56 149**	T	T	05 35 46.0	
	baz=337,slow=76,SNR=332					
ULN	**Ulaanbaatar**	**30.18 291**	*ce*P	**P**	**05 04 00.8 +0.3**	
ULN			pmax	pmax		
	comp=Z,7.0nm,1.0s					
ULN	**Ulaanbaatar**	**30.18 291**	*e*P	**P**	**05 04 00.8 +0.3**	
SONA0	**Songino Array**	**30.62 291**	*e*P	**P**	**05 04 04.6 +0.2**	
SONM	**Songino Array**	**30.62 291**	P	**P**	**05 04 04.6 +0.2**	
	comp=Z,3.4nm,0.9s,baz=82,slow=8.4,SNR=9.9					
SONM			LR	LR	05 17 25.5	
	comp=Z,324nm,18.2s,baz=86,slow=38					
TLY	**Talaya**	**31.75 299**	*i* P	**P**	**05 04 13.9 -0.2**	
TLY	**Talaya**	**31.75 299**	*e*P	**P**	**05 04 13.9 -0.2**	
ZAK	**Zakamensk**	**32.17 297**	*e*P	P	05 04 12.4 -5.4	
ZAK			*e*		05 07 02.3	
ZAK			pmax	pmax		
	comp=Z,2.0nm,1.4s					
TPUB	**Ta-pu**	**33.04 239**	*e*P	**P**	**05 04 25.2 -0.4**	
	comp=Z,17nm,1.0s					
XAN	**Xi'an**	**34.04 266**	P	**P**	**05 04 34.5 +0.2**	
XAN			pP	pwP	05 04 48.0 -1.0	
XAN			pmax	pmax		
	comp=Z,9.0nm,0.8s					
XAN	**Xi'an**	**34.04 266**	*e*P	**P**	**05 04 33.8 -0.5**	
	comp=Z,7.8nm,0.8s					
XAN	**Xi'an**	**34.04 266**	*e*P	**P**	**05 04 33.8 -0.5**	
XAN			pmax	pmax		
	comp=Z,8.0nm,0.8s					
HOM	**Homer**	**36.55 46**	*e*P	**P**	**05 04 55.9 +0.4**	
	comp=Z,84nm,1.0s					
LZH	**Lanzhou**	**36.60 273**	*e*P	**P**	**05 04 57.7 +1.3**	
LZH			pP	pwP	05 05 13.0 +1.7	
LZH			sP	sP	05 05 20.1 +11	
LZH			*e*PP	**PP**	**05 06 23.9 +4.0**	
LZH			pmax	pmax		
	comp=Z,35nm,1.1s					
LZH			pmax	pmax		
	comp=Z,82nm,5.3s					
LZH			LR	LR		
	comp=Z,330nm,13.0s					
LZH			LR	LR		
	comp=Z,350nm,13.2s					
LZH			LR	LR		
	comp=Z,410nm,16.5s					
CNPM	**China Poot**	**36.76 46**	*e*P	**P**	**05 04 56.9 -0.5**	
	comp=Z,15nm,1.2s					
BPAW	**Bear Paw Mtn.**	**36.86 38**	*e*P	**P**	**05 04 58.3 +0.2**	
	comp=Z,3.7nm,1.0s					
MLY	**Manley**	**37.02 37**	*e*P	**P**	**05 04 59.6 +0.1**	
	comp=Z,3.3nm,0.8s					
COLD	**Coldfoot**	**37.43 33**	*e*P	**P**	**05 05 02.8 0.0**	
	comp=Z,1.6nm,0.8s					
TOLK	**Toolik Lake Re**	**37.83 31**	*e*P	**P**	**05 05 06.6 +0.3**	
	comp=Z,4.6nm,0.8s					
GTA	**Gaotai**	**37.90 280**	*e*P	**P**	**05 05 08.0 +0.6**	
GTA			pP	sP	05 05 19.9 +0.2	
GTA			sP	pwP	05 05 25.2 +2.8	
GTA			pmax	pmax		
	comp=Z,17nm,0.8s					
GTA			pmax	pmax		
	comp=Z,89nm,8.6s					
GTA			LR	LR		
	comp=Z,110nm,13.7s					
GTA			LR	LR		
	comp=Z,180nm,14.4s					
GTA			LR	LR		
	comp=Z,240nm,12.7s					
SML	**Sawmill**	**38.07 42**	*e*P	**P**	**05 05 09.1 +0.6**	
	comp=Z,13nm,0.7s					
SML	**Sawmill**	**38.07 42**	*e*P	**P**	**05 05 09.1 +0.6**	
SML			pmax	pmax		
	comp=Z,13nm,0.7s					
WRH	**Wood River Hil**	**38.13 38**	*e*P	**P**	**05 05 08.6 -0.3**	
	comp=Z,4.1nm,0.9s					
COLA	**College**	**38.24 37**	*i* P	**P**	**05 05 08.9 -0.8**	
COLA			pmax	pmax		
	comp=Z,7.0nm,1.1s					
CCB	**Clear Creek Bu**	**38.26 37**	*e*P	**P**	**05 05 10.3 +0.4**	
	comp=Z,2.6nm,0.9s					
HDA	**Harding Lake**	**38.63 38**	*e*P	**P**	**05 05 13.4 +0.3**	
	comp=Z,5.1nm,0.6s					
ILAR	**Eielson Array**	**38.65 37**	P	**P**	**05 05 13.2 0.0**	
	comp=Z,1.9nm,0.7s,baz=257,slow=7.3,SNR=19					
ILAR			LR	LR	05 22 59.0	
	comp=Z,78nm,18.8s,baz=271,slow=39					
ILB	**Eielson Array**	**38.65 37**	*e*P	**P**	**05 05 13.2 0.0**	
	comp=Z,1.9nm,0.7s					
PRP	**Porcupine Dome**	**39.23 36**	*e*P	**P**	**05 05 18.2 0.0**	
	comp=Z,3.5nm,1.0s					
FYU	**Fort Yukon**	**39.34 34**	*e*P	**P**	**05 05 20.6 +1.6**	
	comp=Z,5.5nm,0.9s					
CD2	**Chengdu**	**39.40 266**	P	**P**	**05 05 18.8 -1.1**	
CD2			pmax	pmax		
	comp=Z,70nm,0.7s					
CD2			LR	LR		
	comp=Z,180nm,15.8s					
NRIK	**Noril'sk**	**39.46 330**	LR	LR	05 22 13.7	
	comp=Z,102nm,19.8s,baz=206,slow=37					
DOT	**Dot Lake**	**39.93 39**	*e*P	**P**	**05 05 23.7 -0.2**	
	comp=Z,2.5nm,0.7s					
SCRK	**Sand Creek**	**39.94 38**	*e*P	**P**	**05 05 24.1 0.0**	
	comp=Z,2.6nm,0.6s					
GYA	**Guiyang**	**40.05 258**	P	**P**	**05 05 25.5 +0.1**	
GYA			pmax	pmax		
	comp=Z,10.0nm,0.8s					
EGAK	**Eagle**	**41.10 37**	*e*P	**P**	**05 05 33.5 -0.1**	
DGZ	**Jazzator, Alta**	**42.22 300**	*i* P	**P**	**05 05 43.6 +0.5**	
DGZ			pmax	pmax		
	comp=Z,2.0nm,0.9s					
ZALV	**Zalesovo Beam**	**42.47 307**	PcP	**PcP**	**05 07 37.3 +0.1**	
	comp=Z,1.2nm,0.3s,baz=90,slow=3.6,SNR=4.3					
ZALV			LR	LR	05 24 21.9	
	comp=Z,184nm,20.3s,baz=70,slow=38					
EPYK	**Eagle Plains**	**42.77 34**	*e*P	**P**	**05 05 48.1 +1.0**	
	comp=Z,9.1nm,0.9s					
HYT	**Haines Junctio**	**43.38 43**	*e*P	**P**	**05 05 53.8 +1.5**	
	comp=Z,9.0nm,0.9s					
INK	**Inuvik**	**43.74 31**	P	**P**	**05 05 55.3 +0.4**	
	comp=Z,2.0nm,0.5s,baz=297,slow=8.3,SNR=13					
INK	**Inuvik**	**43.74 31**	*e*P	**P**	**05 05 53.6 -1.3**	
	comp=Z,6.8nm,0.9s					
INK	**Inuvik**	**43.74 31**	*e*P	**P**	**05 05 53.6 -1.3**	
INK			pmax	pmax		
	comp=Z,7.0nm,0.9s					
WMQ	**Urumqi**	**44.26 292**	*e*P	**P**	**05 06 01.0 +1.5**	
WMQ			LR	LR		
	comp=Z,510nm,16.3s					
WMQ			LR	LR		
	comp=Z,250nm,17.9s					
WMQ			LR	LR		
	comp=Z,490nm,27.5s					
SLVN	**Son La**	**45.31 254**	*e*P	**P**	**05 06 09.6 +1.4**	
	comp=Z,4.1nm,0.9s					
MK31	**Makanchi Array**	**46.49 298**	*e*P	**P**	**05 06 16.4 -0.7**	
	comp=Z,6.0nm,0.8s					
MK31	**Makanchi Array**	**46.49 298**	*e*P	**P**	**05 06 16.4 -0.7**	
MK31			pmax	pmax		
	comp=Z,6.0nm,0.8s					
MK32	**Makanchi Array**	**46.49 298**	*e*P	**P**	**05 06 16.6 -0.5**	
MK32			*e*PcP

comp=Z,6.0nm,0.8s
KURK Kurchatov 47.14 304 *e*P **P 05 06 20.2 -1.9**
comp=Z,8.0nm,1.0s
KURK Kurchatov 47.14 304 *e*P **P 05 06 20.2 -1.9**
KURK pmax pmax
comp=Z,8.0nm,1.0s
DLBC Dease Lake 47.69 44 P **P 05 06 27.5 +1.1**
comp=Z,1.0nm,0.5s,baz=300,slow=8.1,SNR=2.1
DLBC Dease Lake 47.69 44 *e*P **P 05 06 27.5 +1.1**
comp=Z,4.9nm,1.1s
SKNT Sakolnakorn 48.30 250 P **P 05 06 33.8 +2.4**
comp=Z,11nm,0.9s
LSA Lhasa 49.01 273 P **P 05 06 39.0 +1.6**
LSA pmax pmax
comp=Z,49nm,0.8s
LSA Lhasa 49.01 273 *e*P **P 05 06 39.0 +1.6**
comp=Z,13nm,0.8s
LSA Lhasa 49.01 273 *e*P **P 05 06 39.0 +1.6**
LSA pmax pmax
comp=Z,13nm,0.8s
PAYA Payao 49.41 256 P **P 05 06 43.4 +3.4**
comp=Z,18µm,0.9s
PHRA Phrae 49.76 255 P **P 05 06 45.5 +2.9**
comp=Z,1.3nm,0.8s
PDGK Podgornoye 49.81 295 P **P 05 06 43.1 +0.2**
PDGK pmax pmax
comp=Z,6.0nm,0.8s
CHAI Chaiyaphum 50.40 251 P **P 05 06 49.6 +2.1**
comp=Z,17um,1.2s
CMMT Chiang Mai 50.42 256 P **P 05 06 49.7 +2.0**
comp=Z,5.7nm,0.8s
CM31 Chiang Mai Arr 50.67 256 *e*P **P 05 06 50.7 +1.2**
comp=Z,6.5nm,0.9s
CMAR Chiang Mai Arr 50.67 256 P **P 05 06 50.7 +1.2**
comp=Z,1.5nm,0.3s,baz=40,slow=8.1,SNR=10
CMAR LR LR 05 31 23.3
comp=Z,87nm,18.5s,baz=55,slow=40
CMAR Chiang Mai Arr 50.67 256 *i*P **P 05 06 51.0 +1.5**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
BRVK Borovoye 50.89 310 *e*P **P 05 06 50.8 +0.1**
comp=Z,2.6nm,0.8s
BRVK Borovoye 50.89 310 *i*P **P 05 06 49.6 -1.1**
BRVK pmax pmax
comp=Z,3.0nm,1.0s
ULHL Ulahol 52.42 295 P **P 05 07 03.5 +0.8**
SNR=27
TKM2 Tokmak 2 52.49 296 P **P 05 07 04.1 +0.9**
SNR=7.4
RES Resolute Bay 52.79 18 P **P 05 07 04.3 -0.3**
comp=Z,3.3nm,0.7s,baz=326,slow=8.8,SNR=14
RES Resolute Bay 52.79 18 *e*P **P 05 07 04.5 -0.1**
comp=Z,4.5nm,0.9s
RES Resolute Bay 52.79 18 *e*P **P 05 07 04.5 -0.1**
RES pmax pmax
comp=Z,5.0nm,0.9s
USP Ospenovka 53.01 297 P **P 05 07 07.6 +0.8**
SNR=6.6
YKA Yellowknife Ar 53.02 35 P **P 05 07 06.8 +0.3**
comp=Z,1.9nm,0.9s,baz=300,slow=7.0,SNR=13
YKA LR LR 05 30 32.5
comp=Z,6.4nm,20.4s,baz=298,slow=37
YKB5 Yellowknife Ar 53.02 35 *e*P **P 05 07 06.8 +0.3**
KZA Kyzart 53.14 296 P **P 05 07 09.8 +1.6**
SNR=12
AAK Ala-Archa 53.34 296 LR LR 05 31 18.3
comp=Z,172nm,18.1s,baz=41,slow=38
AAK Ala-Archa 53.34 296 P **P 05 07 10.0 +0.7**
SNR=6.3
AAK Ala-Archa 53.34 296 *e*P **P 05 07 10.0 +0.7**
comp=Z,7.8nm,0.7s
AAK Ala-Archa 53.34 296 *ce*P **P 05 07 09.2 -0.1**
AAK pmax pmax
comp=Z,8.0nm,0.7s
AAK Ala-Archa 53.34 296 *e*P **P 05 07 09.2 -0.1**
JIRN Jiri 53.72 274 *e*P **P 05 07 13.6 +1.0**
comp=Z,68nm,0.7s
EKS2 Erkin-Say 53.78 297 P **P 05 07 13.4 +0.8**
SNR=9.1
GUN Gumba 53.79 275 *e*P **P 05 07 13.8 +0.8**
comp=Z,23nm,0.4s
RAMN Ramite 53.86 273 *e*P **P 05 07 14.2 +0.7**
comp=Z,48nm,0.5s
SPITS Spitsbergen Ar 53.96 350 LR LR 05 32 07.1
comp=Z,53nm,18.5s,baz=95,slow=38
KSH Kashi 54.02 292 P **P 05 07 18.6 +4.3**
KSH pP pwP 05 07 30.5 +2.0
KSH PP **PP 05 09 22.4 +6.8**
KSH S **S 05 14 48.0 +0.1**
KSH ScS **ScS 05 17 01.3 +0.4**
KSH pmax pmax
comp=Z,38nm,1.1s
KSH pmax pmax
comp=Z,210nm,6.3s
KSH LR LR
comp=Z,360nm,10.8s
KSH LR LR
comp=Z,390nm,6.5s
KSH LR LR
comp=Z,580nm,19.3s
AML Almayashu 54.11 296 P **P 05 07 16.2 +1.0**
SNR=7.3
KKN Kakani 54.28 275 *e*P **P 05 07 17.9 +1.4**
PKI Pulchoki 54.33 275 *e*P **P 05 07 17.6 +0.7**
comp=Z,48nm,1.1s
PKIN Phulchoki 54.33 275 *e*P **P 05 07 17.3 +0.4**
DMN Daman 54.52 275 *e*P **P 05 07 19.3 +1.1**
comp=Z,50nm,0.8s
DANN Dangsing 55.02 277 *e*P **P 05 07 23.1 +1.2**
comp=Z,24nm,0.3s
ARU Arti 55.29 318 LR LR 05 32 45.2
comp=Z,300nm,19.9s,baz=62,slow=38
ARU Arti 55.29 318 *c i*P **P 05 07 20.6 -2.5**
ARU 05 08 22.9
ARU S **S 05 15 01.2 -3.0**
ARU pmax pmax
comp=Z,5.0nm,0.7s
KK31 Karatay Array 55.59 299 *e*P **P 05 07 24.7 -0.8**
comp=Z,5.8nm,0.8s
KK31 Karatay Array 55.59 299 *e*P **P 05 07 24.7 -0.8**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 55.59 299 *e*P **P 05 07 24.6 -0.9**
comp=Z,5.8nm,0.8s
KKAR Karatay Array 55.59 299 *e*P **P 05 07 24.6 -0.9**
KKAR pmax pmax
comp=Z,6.0nm,0.8s
TULEG Thule 55.96 10 *e*P **P 05 07 25.9 -1.7**
comp=Z,8.6nm,1.0s
LTY Liberty 57.81 54 *e*P **P 05 07 40.6 -0.7**
comp=Z,7.3nm,0.6s
PRGR Permogore 57.99 327 *e*P P 05 07 37.3 -4.9
PRGR pmax pmax
comp=Z,5.0nm,0.6s
DAG Danmarks Havn 58.20 357⇑*i*P **P 05 07 42.0 -1.4**
DAG Danmarks Havn 58.20 357⇑*i*P **P 05 07 42.0 -1.4**
ABKAR Akbulak array 58.42 310 *e*P **P 05 07 44.7 -0.7**
comp=Z,4.4nm,0.6s
ARCES ARCESS Array B 58.93 341 P **P 05 07 47.7 -0.9**
comp=Z,7.6nm,0.3s,baz=29,slow=9.4,SNR=4.2
NIL Nilore 59.12 288 *e*P **P 05 07 51.6 +1.0**
comp=Z,56nm,0.9s
NIL Nilore 59.12 288 *e*P **P 05 07 51.6 +1.0**
NIL pmax pmax
comp=Z,56nm,0.9s
TMCR Tamitsa 59.13 332 *e*P **P 05 07 49.7 -0.3**
TMCR pmax pmax
comp=Z,18nm,1.0s
KLMR Klimovskoe 60.78 329 *e*P **P 05 07 58.7 -2.7**
KLMR pmax pmax
comp=Z,9.0nm,1.5s
KBL Kabul 61.40 291 *e*P **P 05 08 06.1 -0.3**
comp=Z,27nm,0.9s
KBL Kabul 61.40 291 *e*P **P 05 08 06.1 -0.3**
KBL pmax pmax
comp=Z,27nm,0.9s
SUMG Summit 62.40 3 *e*P **P 05 08 12.4 -0.3**
comp=Z,32nm,1.0s
SUMG Summit 62.40 3⇑*i*P **P 05 08 12.5 -0.2**
SUMG pmax pmax
comp=Z,70nm,0.9s
SUMG Summit 62.40 3⇑*i*P **P 05 08 12.5 -0.2**
comp=Z,70nm,0.9s
FFC Flin Flon 62.84 39 *e*P **P 05 08 16.0 +0.5**
comp=Z,7.1nm,1.0s
FFC Flin Flon 62.84 39 *e*P **P 05 08 16.0 +0.5**
FFC pmax pmax
comp=Z,7.0nm,1.0s
FCC Fort Churchill 63.35 32 *e*P **P 05 08 17.6 -1.1**
comp=Z,6.0nm,0.8s
FCC Fort Churchill 63.35 32 *e*P **P 05 08 17.6 -1.1**
FCC pmax pmax
comp=Z,6.0nm,0.8s
NV01 Mina Array Sit 64.39 61 *e*P **P 05 08 27.5 +1.3**
NVAR Mina Array Bea 64.39 61 P **P 05 08 27.5 +1.3**
comp=Z,0.6nm,0.6s,baz=285,slow=6.6,SNR=4.4
SCO Scoresbysund 64.59 357 *i*P **P 05 08 26.7 +0.1**
SCO pmax pmax
comp=Z,6.0nm,0.8s
SCO Scoresbysund 64.59 357 *i*P **P 05 08 26.7 +0.1**
comp=Z,5.6nm,0.8s
FIA0 FINESS Array S 64.91 334 *e*P **P 05 08 27.4 -1.5**
FIA0 FINESS Array S 64.91 334 *e*P **P 05 08 27.4 -1.5**
FINES FINESS Array B 64.91 334 P **P 05 08 27.4 -1.5**
comp=Z,6.2nm,0.6s,baz=37,slow=7.3,SNR=22
FINES FINESS Array B 64.91 334 *i*P **P 05 08 27.6 -1.3**
FINES pmax pmax
comp=Z,6.0nm,0.6s
OBN Obninsk 65.87 325 *i*P **P 05 08 33.2 -1.9**
OBN *i* 05 08 41.6
OBN *i* 05 09 07.8
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,73nm,17.0s
GEYT Alibeck 66.26 300 P **P 05 08 37.7 -0.4**
comp=Z,11nm,0.7s,baz=20,slow=4.6,SNR=16
GEYT LR LR 05 39 28.5
comp=Z,64nm,18.5s,baz=105,slow=38
WR1 Warramunga Arr 66.56 197 *e*P **P 05 08 41.5 +1.6**
WRA Warramunga Arr 66.56 197 P **P 05 08 41.5 +1.6**
comp=Z,131nm,0.3s,baz=19,slow=7.9,SNR=1.6
PD31 Pinedale Array 66.80 52 *e*P **P 05 08 42.8 +1.1**
comp=Z,1.4nm,0.9s
PDAR Pinedale Array 66.80 52 P **P 05 08 42.8 +1.1**
comp=Z,0.8nm,0.8s,baz=90,slow=0.3,SNR=5.7
VSR Storozhevoye 67.52 321 *e*P **P 05 08 43.9 -1.9**
VSR pmax pmax
comp=Z,8.0nm,0.5s
VORD Divnogorie 67.64 321 *e*P **P 05 08 43.5 -3.0**
VORD pmax pmax
comp=Z,5.0nm,0.4s
ULM Lac du Bonnet 68.63 39 LR LR 05 41 50.8
comp=Z,18nm,18.4s,baz=356,slow=38
NC405 NORSAR Array S 69.12 340 *e*P **P 05 08 55.1 -0.5**
comp=Z,22nm,0.8s
NC204 NORSAR Array S 69.20 341 *e*P **P 05 08 55.7 -0.6**
comp=Z,19nm,0.9s
NB201 NORSAR Array S 69.28 340 *e*P **P 05 08 56.1 -0.6**
comp=Z,28nm,1.0s
NB2 NORSAR Subarra 69.31 340 P **P 05 08 55.6 -1.3**
comp=Z,6.3nm,0.7s,baz=28,slow=6.5
NB200 NORSAR Array S 69.31 340 *e*P **P 05 08 56.0 -0.8**
NOA NORSAR Array B 69.31 340 P **P 05 08 56.0 -0.8**
comp=Z,4.5nm,0.6s,baz=28,slow=6.4,SNR=22
NOA LR LR 05 43 57.5
comp=Z,55nm,18.4s,baz=5.0,slow=40
AKT Akhty 69.97 309 *e*P **P 05 09 01.3 -0.1**
AKT *e* 05 09 23.8
AKT pmax pmax
comp=Z,34nm,0.9s
AS31 Alice Springs 70.26 197 *e*P **P 05 09 05.5 +2.4**
comp=Z,1.9nm,0.9s
ASAR Alice Springs 70.26 197 P **P 05 09 05.5 +2.4**
comp=Z,3.8nm,0.8s,baz=15,slow=6.5,SNR=27
KIV Kislovodsk 70.94 314 *e*P **P 05 09 07.0 -0.2**
comp=Z,23nm,0.9s
KIV Kislovodsk 70.94 314⇑*i*P **P 05 09 07.0 -0.2**
KIV Kislovodsk 70.94 314 *e*P **P 05 09 07.4 +0.1**
KIV pmax pmax
comp=Z,74nm,1.0s
KIV MLR MLR
comp=Z,350nm,17.0s
KIV Kislovodsk 70.94 314 *e*P **P 05 09 07.4 +0.1**
KBZ Khabaz 70.99 313 P **P 05 09 07.8 +0.4**
comp=Z,24nm,0.9s,baz=48,slow=3.8,SNR=29
KBZ LR LR 05 44 43.3
comp=Z,228nm,18.4s,baz=43,slow=40
ZEI Tsey 71.13 312 *e*P **P 05 09 07.6 -1.0**
ZEI pmax pmax
comp=Z,12nm,0.7s
ZEI Tsey 71.13 312 *e*P **P 05 09 07.6 -1.0**
NEY Neytrino 71.42 313 *i*P **P 05 09 10.8 +0.5**
NEY pmax pmax
comp=Z,2.0nm,1.0s
TBLG Delisi 71.42 311 *e*P **P 05 09 10.0 -0.1**
comp=Z,37nm,0.8s
TBLG Delisi 71.42 311 *e*P **P 05 09 10.0 -0.1**
TBLG pmax pmax
comp=Z,37nm,0.8s
AKASG Malin Array Be 72.12 325 P **P 05 09 13.0 -1.1**
comp=Z,4.1nm,0.4s,baz=39,slow=6.2,SNR=14
AKASG LR LR 05 43 30.9
comp=Z,114nm,18.8s,baz=40,slow=38
AKBB Malin Array Si 72.12 325 *e*P **P 05 09 13.1 -1.0**
comp=Z,9.2nm,0.8s
AKBB Malin Array Si 72.12 325 *e*P **P 05 09 13.1 -1.0**
AKBB pmax pmax
comp=Z,9.0nm,0.8s
KIEV Kiev 72.13 325⇑*i*P **P 05 09 12.8 -1.3**
KIEV Kiev 72.13 325⇑*i*P **P 05 09 12.8 -1.3**
AKH Akhalkalaki 72.31 311 *e*P **P 05 09 16.4 +0.7**
comp=Z,13nm,0.9s
AKH Akhalkalaki 72.31 311⇑*i*P **P 05 09 16.9 +1.2**
AKH Akhalkalaki 72.31 311 *e*P **P 05 09 16.4 +0.7**
AKH pmax pmax
comp=Z,13nm,0.9s
GNI Garni 72.53 310 *i*P **P 05 09 17.9 +1.0**
GNI pmax pmax
comp=Z,40nm,1.1s
BATM Batumi 73.13 312⇓*i*P **P 05 09 20.1 -0.2**
BATM Batumi 73.13 312 P **P 05 09 20.0 -0.2**
ANMO Albuquerque 73.84 57 *i*P **P 05 09 24.3 -0.5**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
LVV L'vov 74.85 328 *e*P **P 05 09 30.4 +0.2**
SCHQ Schefferville 75.31 22 LR LR 05 46 47.1
comp=Z,25nm,20.2s,baz=5.5,slow=39
KWP Kalwaria Pacla 75.50 328 *e*P **P 05 09 33.9 0.0**
KWP Kalwaria Pacla 75.50 328 *e*P **P 05 09 33.8 -0.1**
comp=Z,338nm,1.0s
KWP Kalwaria Pacla 75.50 328 *e*P **P 05 09 33.8 -0.1**
OJC Ojcow 76.06 330 *e*P **P 05 09 36.6 -0.5**
OJC Ojcow 76.06 330 *e*P **P 05 09 37.0 -0.1**
comp=Z,23nm,0.9s
OJC Ojcow 76.06 330 *e*P **P 05 09 37.0 -0.1**
OJC pmax pmax
comp=Z,23nm,0.9s
BUR08 Bucovina Ar. S 76.16 326 *e*P **P 05 09 37.3 -0.5**
comp=Z,16nm,0.8s
BURAR Bucovina Array 76.17 326⇑*i*P **P 05 09 37.5 -0.4**
BURAR Bucovina Array 76.17 326⇑P **P 05 09 37.5 -0.4**
KOLS Kolonicke sedl 76.23 328 *e*P **P 05 09 38.1 0.0**
KOLS pmax pmax
comp=Z,13nm,1.1s
KOLS Kolonicke sedl 76.23 328 *e*P **P 05 09 38.1 0.0**
DIKM Dikmen 76.36 316⇑*i*P **P 05 09 39.8 +0.9**
BIZ Bicaz 76.36 325⇑*i*P **P 05 09 38.7 -0.2**
UZH Uzhgorod 76.48 328 *e*P **P 05 09 38.6 -0.9**
UZH *i* 05 09 48.5
TESR Tescani 76.48 324⇑*i*P **P 05 09 39.1 -0.4**
NIE Niedzica 76.56 329 *e*P **P 05 09 40.8 +0.8**
NIE Niedzica 76.56 329 *e*P **P 05 09 40.8 +0.8**
TLCR 76.61 322⇑*i*P **P 05 09 40.6 +0.3**
TLCR 76.61 322⇑P **P 05 09 40.6 +0.3**
KSP Ksiaz 76.72 333 *e*P **P 05 09 41.1 +0.2**
KSP Ksiaz 76.72 333 *e*P **P 05 09 41.1 +0.2**
TRPA Tarpa 76.80 327⇑*i*P **P 05 09 41.4 +0.1**
TRPA Tarpa 76.80 327⇑EP **P 05 09 41.0 -0.2**
CFR Carcaliu 76.91 323⇑*i*P **P 05 09 41.7 -0.3**
CFR Carcaliu 76.91 323⇑P **P 05 09 41.7 -0.3**
ARCR ARCALIA 76.94 326⇑*i*P **P 05 09 42.4 +0.2**
OKC Ostrava-Krasne 76.96 331 *e*P **P 05 09 42.8 +0.6**
OKC Ostrava-Krasne 76.96 331 *e*P **P 05 09 42.8 +0.6**
VRI Vrincioaia 76.96 324⇑*i*P **P 05 09 41.6 -0.7**
VRI Vrincioaia 76.96 324⇑P **P 05 09 41.6 -0.7**
CHVC Chvalec 77.02 333 *e*P **P 05 09 42.5 -0.1**
LANS Liptovska Anna 77.08 330 *e*P **P 05 09 43.6 +0.7**
LANS Liptovska Anna 77.08 330 *e*P **P 05 09 43.6 +0.7**
UPC Upice 77.10 332 *e*P **P 05 09 43.1 +0.1**
UPC Upice 77.10 332 *e*P **P 05 09 43.1 +0.1**
DPC Dobruska-Polom 77.14 332 *e*P **P 05 09 43.3 0.0**
DPC Dobruska-Polom 77.14 332 *e*P **P 05 09 43.3 0.0**
MORC Moravsky Berou 77.22 331 *e*P **P 05 09 43.5 -0.2**
comp=Z,17nm,0.9s
MORC Moravsky Berou 77.22 331⇑*i*P **P 05 09 43.8 +0.1**
MORC Moravsky Berou 77.22 331 *e*P **P 05 09 43.5 -0.2**
MORC pmax pmax
comp=Z,17nm,0.9s
MORC Moravsky Berou 77.22 331 *e*P **P 05 09 43.6 -0.1**
CLL Collm 77.36 335 *e*P **P 05 09 43.8 -0.6**
comp=Z,24nm,1.0s
CLL Collm 77.36 335⇑*i*P **P 05 09 43.7 -0.6**
comp=Z,23nm,1.0s
CLL L L 05 46 00.0
comp=Z,100nm,19.5s
CLL Collm 77.36 335 *e*P **P 05 09 43.8 -0.6**
CLL pmax pmax
comp=Z,24nm,1.0s
TIRR Tirgusor 77.36 322⇑*i*P **P 05 09 43.8 -0.7**
TIRR Tirgusor 77.36 322⇑P **P 05 09 43.9 -0.6**
TLB Topalu 77.42 322⇑*i*P **P 05 09 44.7 -0.2**
TLB Topalu 77.42 322⇑P **P 05 09 44.7 -0.2**
BRG Berggiesshubel 77.45 334 *e*P **P 05 09 44.4 -0.5**
comp=Z,5.7nm,0.9s
BRG Berggiesshubel 77.45 334 *e*P **P 05 09 44.4 -0.5**
BRG pmax pmax
comp=Z,6.0nm,0.9s
PVCC Panska Ves 77.55 333 *e*P **P 05 09 45.5 0.0**
PVCC Panska Ves 77.55 333 *e*P **P 05 09 45.5 0.0**
MLR Muntele Rosu 77.59 324 *e*P **P 05 09 46.1 +0.1**
comp=Z,17nm,1.0s
MLR Muntele Rosu 77.59 324⇓*i*P **P 05 09 46.0 +0.1**
MLR Muntele Rosu 77.59 324 *e*P **P 05 09 46.1 +0.1**
MLR pmax pmax
comp=Z,17nm,1.0s
ESK Eskdalemuir 77.59 345 *i*P **P 05 09 46.0 +0.4**
DRGR 77.83 327⇑*i*P **P 05 09 47.0 -0.2**
DRGR 77.83 327⇑P **P 05 09 47.0 -0.2**
VYHS Vyhne 77.86 330 *e*P **P 05 09 47.4 +0.1**
VYHS pmax pmax
comp=Z,7.0nm,1.1s
VYHS Vyhne 77.86 330 *e*P **P 05 09 47.4 +0.1**
VRAC Vranov 77.94 332⇑*i*P **P 05 09 48.3 +0.6**
VRAC Vranov 77.94 332⇑P **P 05 09 48.3 +0.6**
VRAC Vranov 77.94 332 *e*P **P 05 09 47.8 +0.1**
JAVC Velka Javorina 77.96 331 *e*P **P 05 09 48.7 +0.8**
PSZ Piszkesteto 77.96 329 *e*P **P 05 09 48.5 +0.6**
comp=Z,14nm,1.1s
PSZ Piszkesteto 77.96 329⇑*i*P **P 05 09 48.3 +0.4**
PSZ Piszkesteto 77.96 329 *e*P **P 05 09 48.5 +0.6**
PSZ pmax pmax
comp=Z,14nm,1.1s
PSZ Piszkesteto 77.96 329⇑EP **P 05 09 47.1 -0.8**
VOIR 78.00 324⇑*i*P **P 05 09 48.5 +0.3**
VOIR 78.00 324⇑P **P 05 09 48.5 +0.3**
GOPC GO Pecny, Ondr 78.01 333 *e*P **P 05 09 47.8 -0.3**
GOPC GO Pecny, Ondr 78.01 333 *e*P **P 05 09 47.8 -0.3**
PRU Pruhonice 78.03 333 *e*P **P 05 09 47.7 -0.5**
PRU MLR MLR
comp=Z,200nm,21.5s
PRU Pruhonice 78.03 333 *e*P **P 05 09 47.7 -0.5**
PRU AMS AMS 05 47 50.0
comp=Z,200nm,21.5s
N41A Harden Midland 78.08 43 *e*P **P 05 09 48.6 0.0**
comp=Z,9.3nm,0.6s
KRUC Moravsky 78.22 332 *e*P **P 05 09 49.1 -0.1**
ARR Arges 78.23 325⇑*i*P **P 05 09 50.8 +1.3**
TREC Trest 78.32 332 *e*P **P 05 09 51.8 +2.0**
TREC Trest 78.32 332 *e*P **P 05 09 51.8 +2.0**
NKC Novy Kostel 78.47 334 *e*P **P 05 09 50.2 -0.4**
NKC Novy Kostel 78.47 334 *e*P **P 05 09 50.2 -0.4**
MODS Modra-Piesok 78.51 331 *e*P **P 05 09 51.0 +0.1**
MODS pmax pmax
comp=Z,19nm,1.1s
MODS Modra-Piesok 78.51 331 *e*P **P 05 09 51.0 +0.1**
BR101 Keskin Array S 78.62 316 *e*P **P 05 09 51.9 +0.1**
BR131 Keskin Array S 78.62 316 *e*P **P 05 09 50.9 -0.9**
comp=Z,6.6nm,1.0s
BRTR Keskin Array B 78.62 316 P **P 05 09 51.9 +0.1**
comp=Z,4.6nm,0.9s,baz=79,slow=3.8,SNR=17
BRTR LR LR 05 49 37.1
comp=Z,58nm,18.9s,baz=80,slow=40
BRTR Keskin Array B 78.62 316 *i*P **P 05 09 52.2 +0.4**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
ZST Bratislava 78.72 331 *e*P **P 05 09 51.9 -0.1**
ZST Bratislava 78.72 331 *e*P **P 05 09 51.9 -0.1**
HDIL Hopedale 78.95 42 *e*P **P 05 09 52.8 -0.7**
comp=Z,14nm,0.8s
GZR Gura Zlata 78.96 326⇑*i*P **P 05 09 53.1 -0.4**
GZR Gura Zlata 78.96 326⇑P **P 05 09 53.1 -0.4**
CSKK Cskako 79.02 330 EP **P 05 09 55.0 +1.3**
KHC Kasperske Hory 79.08 333 *e*P **P 05 09 54.3 +0.2**
comp=Z,6.0nm,0.8s
KHC Kasperske Hory 79.08 333 *e*P **P 05 09 54.3 +0.2**
KHC MLR MLR
comp=Z,200nm,18.7s
KHC Kasperske Hory 79.08 333 *e*P **P 05 09 54.3 +0.2**
KHC AMS AMS 05 48 10.0
comp=Z,200nm,18.7s
BZS Buzias 79.23 327⇑*i*P **P 05 09 54.4 -0.5**
BZS Buzias 79.23 327⇑P **P 05 09 54.4 -0.5**
GEC2 GERESS Array S 79.30 333 *e*P **P 05 09 55.4 +0.1**
comp=Z,7.0nm,1.0s
GEC2 GERESS Array S 79.30 333 *e*P **P 05 09 55.4 +0.1**
GEC2 pmax pmax
comp=Z,7.0nm,1.0s
GERES GERESS Array B 79.30 333 P **P 05 09 55.0 -0.3**
comp=Z,3.5nm,0.7s,baz=32,slow=5.3,SNR=23
GERES LR LR 05 47 60.0
comp=Z,35nm,18.6s,baz=15,slow=38
GERES GERESS Array B 79.30 333 P **P 05 09 55.0 -0.3**
CONA Conrad Observa 79.38 331 *i*P **P 05 09 56.1 +0.4**
comp=Z,8.1nm,0.7s,SNR=6.8
LTX Lajitas 79.47 59 *e*P **P 05 09 57.4 +0.8**
LTX Lajitas 79.47 59 *e*P **P 05 09 57.4 +0.8**
TX31 Lajitas Ar. Si 79.47 59 *e*P **P 05 09 57.7 +1.1**
comp=Z,4.1nm,1.1s
TXAR Lajitas Array 79.47 59 P **P 05 09 57.4 +0.8**
comp=Z,0.6nm,0.7s,baz=293,slow=3.9,SNR=11
HERR Herculane 79.53 326⇑*i*P **P 05 09 56.3 -0.2**
MDVR Moldovita 79.89 326⇑*i*P **P 05 09 58.1 -0.4**
CCM Cathedral Cave 79.93 45 *e*P **P 05 09 58.9 +0.1**
comp=Z,8.2nm,1.1s
CCM Cathedral Cave 79.93 45 *e*P **P 05 09 58.9 +0.1**
CCM pmax pmax
comp=Z,8.0nm,1.1s
MEM Membach 79.96 338 P **P 05 09 58.5 -0.3**
comp=Z,13nm,0.9s
MOA Molln 79.98 332 *i*P **P 05 09 58.6 -0.3**
comp=Z,3.9nm,0.8s
PHSR Pinarhisar 80.01 321⇑*i*P **P 05 09 59.2 0.0**
BCLA Clavier 80.32 339 P **P 05 10 00.4 -0.3**
BMRD Maredsous 80.56 339 P **P 05 10 01.8 -0.2**
SOKA Soboth 80.74 331 *e*P **P 05 10 02.8 -0.3**
comp=Z,13nm,1.2s,SNR=8.1
JCT Junction City 80.95 56 *e*P **P 05 10 04.2 -0.2**
comp=Z,4.7nm,0.8s
JCT Junction City 80.95 56 *e*P **P 05 10 04.2 -0.2**
JCT pmax pmax
comp=Z,5.0nm,0.8s
KBA Koelnbreinsper 80.96 332 *e*P **P 05 10 04.6 +0.2**
comp=Z,15nm,0.8s,SNR=12
VTS Vitosha 81.06 324 *e*P **P 05 10 04.7 -0.3**
comp=Z,22nm,1.0s
VTS Vitosha 81.06 324⇑*i*P **P 05 10 05.1 +0.1**
VTS Vitosha 81.06 324⇑P **P 05 10 05.1 +0.1**
ALN Alexandroupoli 81.26 321 *e*P **P 05 10 05.9 +0.1**
comp=Z,4.4nm,0.9s
WATA Walderalm 81.30 334 *e*P **P 05 10 06.1 -0.1**
comp=Z,5.4nm,0.5s
PMOR Pomariorio Ree 81.34 121 *e*T T 06 39 59.4
comp=Z,7.7nm,0.2s
WTTA Wattenberg 81.34 333 *e*P **P 05 10 06.4 -0.1**
comp=Z,4.2nm,0.4s,SNR=5.1
BFO Black Forest 81.39 336 *e*P **P 05 10 05.7 -0.8**
comp=Z,9.0nm,1.0s
BFO Black Forest 81.39 336 *e*P **P 05 10 05.7 -0.8**
BFO pmax pmax
comp=Z,9.0nm,1.0s
MIAR Mount Ida 81.40 49 *e*P **P 05 10 06.3 -0.4**
comp=Z,8.3nm,1.0s
MIAR Mount Ida 81.40 49 *e*P **P 05 10 06.3 -0.4**
MIAR pmax pmax
comp=Z,8.0nm,1.0s
RETA Reutte 81.42 334 *i*P **P 05 10 06.6 -0.1**

comp=Z,9.6nm,1.1s
MOTA Moosalm 81.44 334 *i* P **P 05 10 06.8 -0.1**
comp=Z,13nm,1.0s
SQTA Sankt Quirin 81.52 334 *e*P **P 05 10 07.4 +0.1**
comp=Z,11nm,0.9s
ABTA Abfaltersbach 81.52 333 *i* P **P 05 10 07.3 0.0**
comp=Z,3.0nm,0.7s
ECH Echery 81.83 337 *e*P **P 05 10 08.0 -0.8**
comp=Z,6.5nm,0.9s
ECH Echery 81.83 337 *e*P **P 05 10 08.0 -0.8**
ECH pmax pmax
comp=Z,7.0nm,0.9s
FETA Feichten 81.85 334 *i* P **P 05 10 09.2 +0.1**
comp=Z,4.3nm,0.9s
DAVA Damuels 81.87 335 *i* P **P 05 10 09.0 -0.2**
comp=Z,10nm,1.4s
PPT Papeete 82.34 124 LR LR 05 43 40.9
comp=Z,90nm,20.4s,baz=330,slow=33
PPT2 Papeete2 82.36 124 *e*LR LR 05 36 12.0
comp=Z,131nm,23.5s
PDG Podgorica 82.83 326⇑ *i*P **P 05 10 12.5 -1.6**
SSF Saint Saulge 83.88 338 *e*P **P 05 10 18.9 -0.5**
SSF pmax pmax
comp=Z,6.0nm,1.0s
LPL La Plagne 84.41 336 *e*P **P 05 10 23.1 +0.7**
LPL pmax pmax
comp=Z,7.0nm,1.0s
MFF Saint Martin d 85.21 341 *e*P **P 05 10 26.2 +0.1**
MFF pmax pmax
comp=Z,5.0nm,0.6s
CAF Calviac 86.23 339 *e*P **P 05 10 30.8 -0.5**
CAF pmax pmax
comp=Z,9.0nm,0.9s
TBI Tubuai 86.96 128 *e*T T 06 46 59.7
comp=Z,3.9nm,0.2s
ESDC Sonseca Array 92.66 341 P **P 05 11 01.4 -0.3**
comp=Z,0.1nm,0.3s,baz=3.8,slow=4.1,SNR=4.3
TOA1 Torodi Ar. Sit 115.74 327 *e*PKPdf **PKPdf 05 16 33.4 +0.9**
TORD Torodi Ar. Bea 115.74 327 PKP **PKPdf 05 16 33.4 +0.9**
comp=Z,0.2nm,0.5s,baz=20,slow=3.9,SNR=2.5
BDFB Brasilia 146.44 35 PKPbc **PKPbc 05 17 30.9 -0.3**
comp=Z,3.7nm,0.8s,baz=315,slow=2.9,SNR=5.4
CPUP Villa Florida 150.44 60 PKPbc **PKPbc 05 17 41.9 +0.6**
comp=Z,1.9nm,0.8s,baz=354,slow=4.4,SNR=4.9
SNAA Sanae 150.62 196 PKPbc **PKPbc 05 17 41.1 +0.7**
VNA2 Neumayer--Watz 152.10 195 PKPbc **PKiKP 05 17 44.7 +0.6**
VNA3 Neumayer Olymp 152.22 193 PKPbc **PKiKP 05 17 44.7 +0.3**
VNA1 Neumayer--Stat 152.49 195 PKPbc **PKPbc 05 17 45.0 +0.4**

MAN 04 04:58:23.5, 7°.25N×124°.81E, *h*42km, *mb*4.2, *ML*3.0, *MS*2.7, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.56**	**267**	⇓*i*P	Pn	04 58 37.2	+2.2
CTBH				*i* S	Sn	04 58 45.6	+2.4
BUKP	**Musuan**	**0.67**	**22**	*e*P	Pn	04 58 37.1	+0.5
BUKP				*e*S	Sn	04 58 49.0	+2.9
DMPH	**Davao City--Mi**	**0.72**	**104**⇑	*e*P	Pn	04 58 38.1	+0.9
CGP	**Cagayan de Oro**	**1.20**	**355**⇑	*i*P	Pn	04 58 44.9	+1.0
CGP				*i* S	Sn	04 58 59.5	+0.6

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*SJA **04** 05:01:24.5±0.7, 34°.80S×73°.07W, h33km, ML4.9, MW4.3*
*GUC **04** 05:01:34.8±0.7, 34°.87S×71°.90W, h64km±6km, ML4.8*
*NEIC **04** 05:01:36.7±2.0, 34°.68S×71°.80W, h44km±6km, mb4.7/34, ML4.8(GUC), Error ellipse: s-maj=22.7km s-min=8.8km az=101.0*
NEIC Felt [V] at Pichilemu; [IV] at Constitucion, Duao, Iloca, Pelarco, Rio Claro, San Javier and Talca; [III] at Cauquenes, Colbun, Curico, Litueche, Longavi, Maule and Paredones; [II] at Rancagua, San Bernardo, San Fernando and Santa Cruz.
*IDC **04** 05:01:36.7±0.6, 34°.65S×71°.56W, h41km±5km, mb4.1/12, mb1 4.2/16, mb1mx4.1/26, mbtmp4.3/16, ML4.4/4, MS3.6/6, Ms1 3.5/6, ms1mx3.3/22, Error ellipse: s-maj=21.4km s-min=12.6km az=86.0*
*ISCJB **04** 05:01:36.5±0.6, 34°.70S±0°.03×71°.80W±0°.06, h65km±4km, mb4.4/22, Error ellipse: s-maj=8.3km s-min=5.1km az=6.9*
*VAO **04** 05:01:39.4±0.3, 34°.63S×71°.52W, h61km, mb4.7*
ISC 04 05:01:35.9±0.5, 34°.71S±0°.05×71°.87W±0°.07, h38km±1km, h38km:pP-P, n125, σ1§53/133, mb4.6/23, 3C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.31**	**189**	*e*Pn	**Pn**	**05 01 45.1**	**+0.9**
GO05				*e*Sn	**Sn**	**05 01 51.2**	**0.0**
GO05	**Huala**	**0.31**	**189**	*e*P	**Pn**	**05 01 44.7**	**+0.5**
GO05				*i* S	**Sn**	**05 01 51.0**	**-0.1**
GO05				IAML		05 01 52.1	
comp=N,47μm,0.2s							
ANTU	**Antumapu**	**1.53**	**42**	*i* S	**Sn**	**05 02 22.7**	**+3.4**
LMEL	**Las Melosas**	**1.62**	**59**	*e*P	**Pn**	**05 02 03.1**	**+1.0**
LMEL				*i* S	**Sn**	**05 02 24.3**	**+2.4**
LMEL				IAML		05 02 30.3	
comp=N,17μm,0.7s							
CLCH	**Cerro Calan**	**1.71**	**41**	*e*P	**Pn**	**05 02 04.5**	**+1.3**
CLCH				*i* S	**Sn**	**05 02 26.9**	**+2.9**
CLCH				IAML		05 02 31.3	
comp=N,17μm,0.6s							
PEL	**Peldehue**	**1.84**	**33**	*e*Pn	**Pn**	**05 02 06.7**	**+1.6**
PEL				*e*Sn	**Sn**	**05 02 29.9**	**+2.8**
PEL	**Peldehue**	**1.84**	**33**	*e*P	**Pn**	**05 02 07.2**	**+2.1**
PEL	**Peldehue**	**1.84**	**33**	*e*P	**Pn**	**05 02 06.2**	**+1.2**
PEL				*i* S	**Sn**	**05 02 30.4**	**+3.3**
ROC1	**El Roble**	**1.87**	**23**	*e*Pn	**Pn**	**05 02 07.1**	**+1.5**
ROC1				*e*Sn	**Sn**	**05 02 28.8**	**+0.8**
ROC1	**El Roble**	**1.87**	**23**	*e*P	**Pn**	**05 02 07.0**	**+1.5**
ROC1				*e*S	Sn	05 02 36.1	+8.1
ROCH	**El Roble**	**1.87**	**23**	*e*P	**Pn**	**05 02 07.0**	**+1.4**
FCH	**Farellones**	**1.90**	**44**	*e*P	**Pn**	**05 02 07.1**	**+1.0**
FCH				*i* S	**Sn**	**05 02 32.1**	**+3.2**
FCH				IAML		05 02 37.6	
comp=N,11μm,0.2s							
EDS3	**Malargue**	**2.28**	**118**	*e*P	Pn	05 02 15.1	+3.9
AAGR	**Agrelo**	**3.00**	**58**	*e*P	Pn	05 02 25.0	+4.0
AVIZ	**Vizcacheras**	**3.04**	**67**	*e*P	Pn	05 02 24.6	+3.0
ARCO	**CERRO ARCO**	**3.07**	**54**	*e*P	**Pn**	**05 02 25.0**	**+2.9**
ARCO				IAML		05 03 14.2	
comp=Z,1μm,0.4s							
UTNM	**Universidad Te**	**3.09**	**55**	*e*P	Pn	05 02 27.9	+5.7
AUSP	**Uspallata**	**3.23**	**41**	*e*P	**Pn**	**05 02 27.4**	**+3.0**
ASAL	**Salagasta**	**3.30**	**51**	*e*P	Pn	05 02 28.9	+3.9
SJA	**San Juan**	**4.21**	**42**	*e*P	**Pn**	**05 02 35.7**	**-1.9**
SJA				*e*S	Sn	05 03 15.0	-11
SJA				IAML		05 03 22.2	
comp=Z,484nm,0.6s							
CFA	**Coronel Fontan**	**4.34**	**46**	P	**Pn**	**05 02 40.7**	**+1.3**
comp=Z,19nm,0.3s,baz=221,slow=14,SNR=285							
CFA				LR	LR	05 04 34.6	
comp=Z,680nm,21.8s,baz=272,slow=43							
RTLL	**Cerro Villicun**	**4.41**	**41**	*e*P	**Pn**	**05 02 41.8**	**+1.4**
RTLL				*e*S	Sn	05 03 41.4	+11
RTLL				IAML		05 03 46.1	
comp=Z,514nm,0.5s							
ACAN	**Cantantal**	**4.60**	**59**	*e*P	**Pn**	**05 02 44.9**	**+1.9**
GO04	**Tololo Observa**	**4.61**	**12**	*e*Pn	**Pn**	**05 02 44.0**	**+0.7**
GO04				*e*Sn	**Sn**	**05 03 35.1**	**-0.5**
GO04	**Tololo Observa**	**4.61**	**12**	*e*P	**Pn**	**05 02 44.2**	**+0.9**
AMOG	**MOGNA**	**4.71**	**38**	*e*P	**Pn**	**05 02 46.0**	**+1.5**
ACCO	**Cerro Coronel**	**4.74**	**31**⇓	*e*P	**Pn**	**05 02 46.7**	**+1.6**
AROD	**Rodeo**	**4.96**	**25**	*e*P	**Pn**	**05 02 50.6**	**+2.5**
ACDV	**Cuesta del Vie**	**5.08**	**28**	*e*P	**Pn**	**05 02 51.6**	**+1.9**
LCO	**Las Campanas**	**5.76**	**10**	*e*Pn	**Pn**	**05 02 59.1**	**0.0**
LCO				*e*Sn	**Sn**	**05 04 03.0**	**-1.1**
LCO	**Las Campanas**	**5.76**	**10**	*e*P	**Pn**	**05 02 59.2**	**0.0**
PLCA	**Paso Flores**	**6.11**	**171**	P	**Pn**	**05 03 06.0**	**+2.4**
comp=Z,3.8nm,0.3s,baz=6.7,slow=14,SNR=65							
PLCA				LR	LR	05 05 33.8	
comp=Z,302nm,20.6s,baz=14,slow=39							
PLCA	**Paso Flores**	**6.11**	**171**	*e*Pn	**Pn**	**05 03 06.2**	**+2.5**
PLCA	**Paso Flores**	**6.11**	**171**	*e*P	**Pn**	**05 03 06.2**	**+2.5**
VCA	**Vinchina**	**6.72**	**29**	*e*P	**Pn**	**05 03 12.5**	**+0.4**
VCA				IAML		05 04 48.8	
comp=Z,344nm,0.6s							
TCA	**Tanti**	**6.97**	**63**⇓	*e*P	**Pn**	**05 03 15.8**	**+0.2**
TCA				IAML		05 03 19.9	
comp=Z,102nm,0.5s							
GO03	**Copiap**	**7.23**	**12**	*e*Pn	**Pn**	**05 03 18.4**	**-0.7**
GO03				*e*Sn	**Sn**	**05 04 41.6**	**+1.7**
CYA	**Choya**	**8.11**	**41**	*e*P	**Pn**	**05 03 28.5**	**-2.6**
CYA				IAML		05 05 30.2	
comp=Z,97nm,0.8s							
GO07	**Milladeo Hill,**	**8.51**	**189**	*e*Pn	**Pn**	**05 03 36.6**	**+0.1**
TRQA	**Tornquist**	**8.65**	**116**	*e*Pn	**Pn**	**05 03 39.8**	**+1.4**
TRQA	**Tornquist**	**8.65**	**116**	*e*P	**Pn**	**05 03 39.3**	**+0.8**
AHML	**Horco Molle**	**9.69**	**37**	*e*P	**Pn**	**05 03 48.3**	**-4.5**
AHML				IAML		05 05 52.0	
comp=Z,16nm,0.6s							
GO02	**Mina Guanaco**	**9.71**	**12**	*e*Pn	**Pn**	**05 03 50.8**	**-2.6**
FSA	**Cafayete**	**9.96**	**32**	*e*P	**Pn**	**05 03 54.3**	**-2.3**
FSA				IAML		05 06 00.2	
comp=Z,20nm,0.7s							
LVC	**Limon Verde**	**12.33**	**13**	P	**Pn**	**05 04 29.8**	**+0.6**
comp=Z,0.5nm,0.3s,baz=196,slow=9.3,SNR=4.0							
LVC				LR	LR	05 09 17.9	
comp=Z,213nm,20.8s,baz=214,slow=38							
HJA	**Humahuaca**	**12.77**	**28**	*e*P	**Pn**	**05 04 32.0**	**-3.3**
HJA				IAML		05 04 49.6	
comp=Z,4.2nm,0.5s							
PB01	**IPOC Station P**	**13.77**	**9**	*e*Pn	**Pn**	**05 04 50.1**	**+1.4**
PB11	**IPOC Station P**	**15.02**	**8**	*e*Pn	**Pn**	**05 05 05.1**	**-0.4**
CPUP	**Villa Florida**	**15.04**	**60**	P	**Pn**	**05 05 04.3**	**-1.5**
comp=Z,0.2nm,0.3s,baz=233,slow=11,SNR=5.8							
CPUP				LR	LR	05 11 26.2	
comp=Z,321nm,19.3s,baz=232,slow=40							
CPUP	**Villa Florida**	**15.04**	**60**	*e*P	**Pn**	**05 05 04.7**	**-1.0**
GO01	**Chusmiza**	**15.17**	**10**	*e*Pn	**Pn**	**05 05 08.0**	**+0.2**
comp=Z,14nm,1.1s							
ITAB	**Concordia**	**18.48**	**72**	*e*P	**P**	**05 05 47.2**	**-1.4**
CNLB	**Canela**	**18.61**	**79**	*e*P	**P**	**05 05 47.9**	**-2.2**
LPAZ	**La Paz**	**18.65**	**11**	P	**Pn**	**05 05 52.0**	**+0.3**
comp=Z,1.3nm,0.3s,baz=167,slow=11,SNR=29							
LPAZ	**La Paz**	**18.65**	**11**	*e*P	**Pn**	**05 05 52.2**	**+0.6**
comp=Z,11nm,0.9s							
LPAZ	**La Paz**	**18.65**	**11**	*e*P	**Pn**	**05 05 51.8**	**+0.2**
PTGB	**Pitanga**	**19.84**	**65**	*e*P	**P**	**05 06 02.2**	**-1.4**
AQDB	**Aquidauana**	**20.12**	**49**	*e*P	**P**	**05 06 06.1**	**-0.5**
USHA	**Ushuaia**	**20.27**	**174**	P	**P**	**05 06 09.4**	**+1.5**
comp=Z,3.0nm,0.5s,baz=2.9,slow=9.7,SNR=4.8							
SIV	**San Ignacio**	**21.01**	**30**	P	**P**	**05 06 15.6**	**-0.7**
comp=Z,26nm,0.9s,baz=218,slow=9.3,SNR=103							
FRTB	**Fartura**	**22.50**	**66**	*e*P	**P**	**05 06 31.3**	**-1.0**
C2SB	**Chapadao do Su**	**23.19**	**52**	*e*P	**P**	**05 06 39.2**	**-0.1**
SPB	**Sao Paulo**	**23.98**	**69**	*e*P	**P**	**05 06 45.2**	**-1.7**
ITRB	**Iturama**	**24.20**	**57**	*e*P	**P**	**05 06 47.5**	**-1.5**
RCLB	**Rio Claro- Sao**	**24.56**	**67**	*e*P	**P**	**05 06 51.1**	**-1.2**
BB19B	**Bebedouro**	**24.63**	**63**	*e*P	**P**	**05 06 51.5**	**-1.4**
PARB	**Paraibuna**	**25.52**	**71**	*e*P	**P**	**05 06 59.6**	**-1.4**
BSCB	**Bom Sucesso**	**27.47**	**67**	*e*P	**P**	**05 07 17.3**	**-1.4**
CLDB	**Colider**	**27.89**	**36**	*e*P	**P**	**05 07 21.4**	**-0.9**
BDFB	**Brasilia**	**28.62**	**54**	P	**P**	**05 07 26.9**	**-2.1**
comp=Z,3.3nm,0.7s,baz=236,slow=7.4,SNR=5.0							
BDFB				LR	LR	05 18 57.8	
comp=Z,123nm,19.4s,baz=270,slow=37							
MCI6	**Montes Claros**	**30.71**	**62**	*e*P	**P**	**05 07 44.8**	**-2.6**
MCI9	**Montes Claros**	**30.78**	**61**	*e*P	**P**	**05 07 45.8**	**-2.2**
MCI8	**Montes Claros**	**30.79**	**61**	*e*P	**P**	**05 07 46.3**	**-1.8**
SJMB	**Sao Joao De Ma**	**31.55**	**68**	*e*P	**P**	**05 07 54.2**	**-0.5**
JANB	**Januaria**	**31.57**	**59**	*e*P	**P**	**05 07 53.0**	**-2.0**
BSFB	**Barra de Sao F**	**31.73**	**68**	*e*P	**P**	**05 07 55.8**	**-0.5**
SMTB	**Santa Maria do**	**34.02**	**47**	*e*P	**P**	**05 08 14.9**	**-1.4**
OTAV	**Otavalo**	**35.30**	**349**	*e*P	**P**	**05 08 29.2**	**+1.3**
PTGA	**Pitinga**	**35.58**	**21**	*e*P	**P**	**05 08 29.0**	**-0.8**
comp=Z,18nm,0.7s							
PTGA	**Pitinga**	**35.58**	**21**	*e*P	**P**	**05 08 29.0**	**-0.8**
SDV	**Santo Domingo**	**43.37**	**2**	*e*P	**P**	**05 09 34.6**	**-0.3**
comp=Z,7.2nm,0.8s							
SDV	**Santo Domingo**	**43.37**	**2**	*e*P	**P**	**05 09 34.2**	**-0.7**
RCBR	**Riachuelo**	**43.90**	**57**	*e*P	**P**	**05 09 38.4**	**-0.7**
VNA3	**Neumayer Olymp**	**48.65**	**158**	P	**P**	**05 10 15.6**	**-0.1**
VNA1	**Neumayer--Stat**	**48.97**	**157**	P	**P**	**05 10 21.2**	**+3.1**
VNA2	**Neumayer--Watz**	**49.31**	**157**	P	**P**	**05 10 20.6**	**-0.1**
baz=285,slow=8.9							
SNAA	**Sanae**	**50.88**	**158**	P	**P**	**05 10 32.5**	**-0.1**
SNAA	**Sanae**	**50.88**	**158**	P	**P**	**05 10 32.7**	**+0.1**
comp=Z,2.7nm,0.8s,baz=270,slow=7.0,SNR=47							
SNAA	**Sanae**	**50.88**	**158**	*e*P	**P**	**05 10 32.8**	**+0.1**
comp=Z,5.4nm,0.9s							
QSPA	**South Pole Qui**	**55.53**	**180**	*e*P	**P**	**05 11 07.4**	**+0.4**
comp=Z,11nm,0.9s							
VNDA	**Vanda**	**63.44**	**191**	P	**P**	**05 12 02.7**	**+1.5**
comp=Z,0.6nm,1.0s,baz=108,slow=6.4,SNR=2.1							
SYO	**Syowa Base**	**65.16**	**158**⇑	*i*P	**P**	**05 12 10.8**	**-1.7**
SYO	**Syowa Base**	**65.16**	**158**⇑	*e*pP	pP	05 12 20.8	-3.2
SYO	**Syowa Base**	**65.16**	**158**⇑	*e*sP	sP	05 12 24.7	-3.8
LTX	**Lajitas**	**70.42**	**331**	*e*pP	pP	05 12 59.2	+1.5
TX31	**Lajitas Ar. Si**	**70.42**	**331**	*e*P	**P**	**05 12 47.2**	**+1.0**
comp=Z,1.4nm,0.8s							
TXAR	**Lajitas Array**	**70.42**	**331**	P	**P**	**05 12 47.3**	**+1.1**
comp=Z,1.0nm,0.6s,baz=158,slow=8.7,SNR=28							
TXAR				pP	**pP**	**05 12 59.2**	**+1.5**
comp=Z,1.8nm,0.6s,baz=158,slow=8.9,SNR=13							
W50A	**Signal Mountai**	**70.67**	**348**	*e*P	**P**	**05 12 47.2**	**-0.3**
comp=Z,12nm,0.7s							
WVT	**Waverly**	**72.03**	**346**	*e*P	**P**	**05 12 55.8**	**+0.1**
comp=Z,20nm,0.7s							
MAW	**Mawson**	**72.46**	**163**	P	**P**	**05 12 58.2**	**+0.2**
comp=Z,4.0nm,0.8s,baz=202,slow=7.1,SNR=12							
MAW				pP	**pP**	**05 13 10.4**	**+0.9**
comp=Z,5.2nm,0.7s,baz=206,slow=6.5,SNR=7.6							
MAW	**Mawson**	**72.46**	**163**	*e*P	**P**	**05 12 58.6**	**+0.6**
comp=Z,1.3nm,0.8s							
CCM	**Cathedral Cave**	**74.60**	**344**	*e*P	**P**	**05 13 10.9**	**+0.1**
comp=Z,10nm,0.7s							
LIC	**Lamto**	**74.87**	**71**	*e*P	**P**	**05 13 11.9**	**-1.0**
comp=Z,85nm,1.8s							
TIC	**Toumodi**	**75.13**	**71**	*e*P	**P**	**05 13 13.3**	**-1.2**
KIC	**Kosan Boka**	**75.17**	**71**	*e*P	**P**	**05 13 13.7**	**-1.0**
comp=Z,29nm,0.8s							
DBIC	**Dimbokro**	**75.28**	**71**	P	**P**	**05 13 14.2**	**-1.1**
comp=Z,13nm,1.0s,baz=201,slow=6.8,SNR=8.5							
DBIC				LR	LR	05 43 32.1	
comp=Z,40nm,20.0s,baz=160,slow=34							
DBIC	**Dimbokro**	**75.28**	**71**	*e*P	**P**	**05 13 14.2**	**-1.1**
comp=Z,14nm,0.9s							
BOSA	**Boshof**	**79.62**	**118**	P	**P**	**05 13 38.8**	**-0.8**
comp=Z,12nm,0.8s,baz=244,slow=3.3,SNR=16							
LBTB	**Lobatse**	**81.88**	**115**	*e*P	**P**	**05 13 51.5**	**-0.3**
comp=Z,10.0nm,0.8s							
TOA0	**Torodi Ar. Sit**	**84.32**	**70**	*e*P	**P**	**05 14 03.8**	**-0.4**
comp=Z,7.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**84.32**	**70**	P	**P**	**05 14 02.8**	**-1.5**
comp=Z,4.7nm,0.9s,baz=289,slow=4.6,SNR=18							
TORD				pP	**pP**	**05 14 15.6**	**-0.4**
comp=Z,2.8nm,0.9s,baz=237,slow=4.5,SNR=4.8							
TOA1	**Torodi Ar. Sit**	**84.32**	**70**	*e*P	**P**	**05 14 02.8**	**-1.5**
TOA1				*e*pP	**pP**	**05 14 15.6**	**-0.4**
PDAR	**Pinedale Array**	**84.45**	**333**	P	**P**	**05 14 04.7**	**+0.1**
comp=Z,0.7nm,0.7s,baz=148,slow=5.0,SNR=7.4							
NV01	**Mina Array Sit**	**84.54**	**325**	*e*pP	pP	05 14 18.4	+1.5
NVAR	**Mina Array Bea**	**84.54**	**325**	P	**P**	**05 14 05.9**	**+0.8**
comp=Z,0.7nm,0.7s,baz=152,slow=5.8,SNR=4.9							
NVAR				pP	**pP**	**05 14 18.4**	**+1.5**
comp=Z,0.3nm,0.3s,baz=149,slow=4.9,SNR=2.1							
YHH	**Holmes Hill**	**86.67**	**333**	*e*P	**P**	**05 14 16.2**	**+0.6**
comp=Z,2.8nm,0.9s							
BVAR	**Borovoye Array**	**147.70**	**44**	PKPbc	**PKPbc**	**05 21 15.9**	**0.0**
comp=Z,1.8nm,0.6s,baz=318,slow=2.0,SNR=9.4							
ARSB	**Arslanbob**	**151.67**	**66**	*e*PKPbc	**PKPbc**	**05 21 26.6**	**+0.3**
AAK	**Ala-Archa**	**152.71**	**63**	PKPbc	**PKPbc**	**05 21 28.4**	**-0.1**
comp=Z,2.4nm,0.4s,baz=212,slow=2.4,SNR=8.3							
AAK	**Ala-Archa**	**152.71**	**63**	*e*PKPbc	**PKPbc**	**05 21 29.1**	**+0.5**
KURBB	**Kurchatov Arra**	**153.28**	**44**	PKPbc	**PKPbc**	**05 21 28.8**	**-0.5**
comp=Z,0.4nm,0.4s,baz=302,slow=2.7,SNR=4.2							
KSH	**Kashi**	**153.99**	**70**	*e*PKPbc	**PKPdf**	**05 21 24.4**	**+1.0**
MK32	**Makanchi Array**	**157.11**	**50**	*e*PKPab	**PKPab**	**05 21 56.7**	**-1.2**
MKAR	**Makanchi Array**	**157.11**	**50**	PKPab	**PKPab**	**05 21 56.7**	**-1.3**
comp=Z,1.3nm,0.8s,baz=292,slow=3.8,SNR=8.4							
LZH	**Lanzhou**	**176.24**	**67**	*e*PKP	**PKPdf**	**05 21 42.5**	**+0.3**
LZH				pPKP	pPKPdf	05 21 54.1	-0.4
LZH				sPKP		05 21 57.0	
LZH				PKP	**PKPab**	**05 23 24.7**	**+2.0**
LZH				LR	LR		
comp=N,100nm,17.9s							
LZH				LR	LR		
comp=E,110nm,18.3s							
LZH				LR	LR		
comp=Z,170nm,20.2s							

ATH 04 05:08:40.5, 38°.23N×22°.12E, *h*12km±5km, *ML*0.3/2, Error ellipse: s-maj=6.2km s-min=1.1km az=277.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.11**	**274**	P	Pg	05 08 43.7	+0.1
LAKA				AML	AML	05 08 45.5	
comp=E,32μm,0.2s							
LAKA				S	Sg	05 08 45.6	-0.2
LAKA				AML	AML	05 08 47.8	
comp=N,25μm,0.2s							
TRIZ	**Trizonia**	**0.14**	**344**	P	Pg	05 08 43.8	-0.1
TRIZ				S	Sg	05 08 46.3	0.0
KALE	**Kalithea**	**0.16**	**5**	P	Pg	05 08 44.4	+0.1
KALE				S	Sg	05 08 47.0	0.0
SERG	**Sergoula**	**0.19**	**344**	P	Pg	05 08 44.6	-0.1
SERG				S	Sg	05 08 47.8	+0.1
SERG				AML	AML	05 08 48.1	
comp=N,42μm,0.2s							
SERG				AML	AML	05 08 48.5	
comp=E,42μm,0.3s							
KLV	**Kalavryta, Ach**	**0.19**	**173**	P	Pg	05 08 44.7	0.0
KLV				S	Sg	05 08 47.7	+0.1

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*IDC **04** 05:17:26.8±1.4, 60°.53S×26°.49W, h0km, mb4.6/3, mb1 4.6/4, mb1mx4.0/28, mbtmp4.5/4, ML4.3/1, MS3.1/2, Ms1 3.1/2, ms1mx2.9/16, Error ellipse: s-maj=52.6km s-min=33.4km az=31.0*
*ISCJB **04** 05:17:28.7±0.5, 60°.69S±0°.09×26°.4W±0°.2, h28km, mb4.5/15, MS3.1/1, Error ellipse: s-maj=18.0km s-min=7.8km az=139.4*
*NEIC **04** 05:17:34.1±1.1, 60°.31S×26°.45W, h44km±4km, mb4.5/15, Error ellipse: s-maj=22.9km s-min=17.4km az=45.0*
ISC 04 05:17:31.5±0.6, 60°.4S±0°.1×26°.2W±0°.1, h28km, n37, σ1§56/32, mb4.5/15, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.60**	**152**	P	**Pn**	**05 20 26.7**	**-1.9**
VNA3	**Neumayer Olymp**	**12.73**	**155**	P	**Pn**	**05 20 26.8**	**-3.5**
VNA2	**Neumayer--Watz**	**13.00**	**152**	P	**Pn**	**05 20 31.4**	**-2.6**
baz=310,slow=14							
SNAA	**Sanae**	**14.59**	**150**	P	**Pn**	**05 20 52.8**	**-3.0**
SNAA	**Sanae**	**14.59**	**150**	Pn	**Pn**	**05 20 53.3**	**-2.5**
1.4nm,0.3s,baz=307,slow=14,SNR=69							
SNAA				Sn	Sn	05 23 24.8	-11
0.1nm,0.3s,baz=270,slow=19,SNR=3.2							
SNAA				LR	LR	05 25 15.7	
comp=Z,55nm,19.2s,baz=306,slow=32							
PMSA	**Palmer Station**	**17.75**	**240**	*e*Pn	**P**	**05 21 38.6**	**+1.8**
30nm,0.9s							
MAW	**Mawson**	**36.38**	**140**	*e*P	**P**	**05 24 34.9**	**+2.2**
GO05	**Huala**	**38.72**	**290**	*e*P	**P**	**05 24 51.6**	**-1.3**
9.5nm,1.0s							
PEL	**Peldehue**	**39.70**	**293**	*e*P	**P**	**05 25 00.7**	**-0.4**
10nm,0.9s							
CPUP	**Villa Florida**	**40.17**	**314**	P	**P**	**05 25 03.8**	**-1.2**
1.5nm,0.3s,baz=149,slow=5.8,SNR=14							
CPUP				LR	LR	05 42 07.4	
comp=Z,28nm,19.3s,baz=200,slow=37							
CPUP	**Villa Florida**	**40.17**	**314**	*e*P	**P**	**05 25 04.2**	**-0.8**
2.2nm,0.6s							
SBA	**Scott Base**	**41.74**	**184**	*e*P	**P**	**05 25 19.9**	**+2.5**
7.4nm,0.9s							
VNDA	**Vanda**	**42.22**	**183**	*e*P	**P**	**05 25 23.2**	**+2.0**
GO04	**Tololo Observa**	**42.26**	**295**	*e*P	**P**	**05 25 21.9**	**-0.5**
8.8nm,0.9s							
LCO	**Las Campanas**	**43.21**	**296**	*e*P	**P**	**05 25 29.2**	**-0.9**
4.9nm,1.0s							
LVC	**Limon Verde**	**48.03**	**303**	*e*P	**P**	**05 26 07.2**	**-1.2**
3.2nm,0.8s							
PB01	**IPOC Station P**	**49.66**	**303**	*e*P	**P**	**05 26 19.9**	**-0.7**
6.0nm,1.0s							
GO01	**Chusmiza**	**50.77**	**304**	*e*P	**P**	**05 26 29.0**	**-0.5**
3.9nm,0.6s							
PB11	**IPOC Station P**	**50.87**	**303**	*e*P	**P**	**05 26 28.8**	**-1.1**
3.4nm,0.7s							
MNMC	**Minye Minye**	**51.41**	**304**	*e*P	**P**	**05 26 33.5**	**-0.6**
14nm,0.5s							
TSUM	**Tsumeb**	**51.52**	**57**	*e*P	**P**	**05 26 35.1**	**+0.4**
1.9nm,0.9s							
H10S2	**ASCENSION HYDR**	**52.08**	**15**	T	T	06 23 34.1	
baz=187,slow=75,SNR=6.3		

KSRS Korea Array 57.04 328 P P 05 27 28.3 -0.5
0.3nm,0.3s,baz=141,slow=6.2,SNR=3.2
KSRS pP **pwP** 05 27 45.6 -1.3
0.5nm,0.3s,baz=148,slow=7.4,SNR=2.2
KS15 Wonju Array Si 57.05 328 *e*P **P 05 27 28.3 -0.6**
VNDA Vanda 67.22 180 P **P 05 28 36.8 +0.3**
0.9nm,0.6s,baz=343,slow=6.3,SNR=11
CMAR Chiang Mai Arr 68.11 295 P **P 05 28 43.0 -0.2**
0.7nm,0.3s,baz=136,slow=6.1,SNR=4.2
SONA0 Songino Array 75.70 325 *e*P **P 05 29 28.0 -0.2**
SONM Songino Array 75.70 325 P **P 05 29 28.0 -0.2**
2.8nm,0.7s,baz=136,slow=5.1,SNR=9.1
SONM pP **pP 05 29 45.4 +0.7**
5.1nm,0.6s,baz=139,slow=6.1,SNR=11
KNK Knik Glacier 81.42 22 *e*pP pP 05 30 23.9 +7.8
CAST Castle Rocks 81.52 19 *e*P **P 05 29 60.0 +0.3**
3.7nm,0.7s
SML Sawmill 81.72 22 *e*pP pP 05 30 25.8 +8.1
SCM Sheep Creek Mo 82.10 22 *e*P **P 05 30 06.1 +3.2**
13nm,0.7s
ILAR Eielson Array 84.13 20 P **P 05 30 12.9 -0.2**
0.6nm,0.5s,baz=244,slow=5.1,SNR=8.9
ILAR pP **pP 05 30 30.5 +0.4**
0.9nm,0.9s,baz=240,slow=4.3,SNR=4.4
FYU Fort Yukon 85.79 19 *e*P **P 05 30 21.9 +0.5**
6.6nm,0.6s
EPYK Eagle Plains 88.51 21 *e*P **P 05 30 36.2 +1.6**
4.5nm,0.8s
NV01 Mina Array Sit 88.65 51 *e*P **P 05 30 36.4 +0.1**
NVAR Mina Array Bea 88.65 51 P **P 05 30 36.4 +0.1**
0.7nm,0.7s,baz=240,slow=8.3,SNR=4.3
MK32 Makanchi Array 90.22 318 *e*P **P 05 30 42.0 -1.1**
MKAR Makanchi Array 90.22 318 P **P 05 30 42.0 -1.1**
1.0nm,0.4s,baz=93,slow=6.5,SNR=12
KURBB Kurchatov Arra 93.53 321 P **P 05 30 56.4 -1.8**
0.5nm,0.7s,baz=106,slow=3.7,SNR=5.4
NRIK Noril'sk 94.02 340 LR LR 06 11 46.1
comp=Z,31nm,21.3s,baz=138,slow=34
PV01 Paradox Valley 96.11 52 *e*P **P 05 31 11.2 +0.5**
2.8nm,0.7s
YKA Yellowknife Ar 96.17 28 P **P 05 31 09.6 -0.5**
0.6nm,0.7s,baz=253,slow=2.5,SNR=5.8
YKB5 Yellowknife Ar 96.17 28 *e*P **P 05 31 09.6 -0.5**
FIA0 FINESS Array S 119.55 337 *e*PKPdf **PKPdf 05 36 30.9 -0.7**
FINES FINESS Array B 119.55 337 PKP **PKPdf 05 36 30.9 -0.7**
1.0nm,0.7s,baz=270,slow=1.4,SNR=2.5

*ISCJB **04** 05:24:07.7±0.6, 5°.3S±0°.1×151°.5E±0°.1, h57km, mb4.3/12, MS3.2/2, Error ellipse: s-maj=26.0km s-min=6.0km az=37.5*
*NEIC **04** 05:24:08.8±1.5, 5°.34S×151°.61E, h63km±8km, mb4.1/5, Error ellipse: s-maj=29.9km s-min=13.1km az=117.0*
*IDC **04** 05:24:10.7±4.8, 5°.36S×151°.55E, h78km±41km, mb3.8/7, mb1 4.0/8, mb1mx3.6/40, mbtmp4.1/8, ML2.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=33.6km s-min=23.3km az=109.0*
ISC 04 05:24:08.3±0.8, 5°.3S±0°.1×151°.6E±0°.2, h57km, n26, σ1§36/27, mb4.2/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.25**	**29**	*e*Pn	**Pn**	**05 24 30.5**	**+0.9**
RABL				*e*Sn	**Sn**	**05 24 48.3**	**+2.9**
PMG	**Port Moresby**	**5.98**	**227**	P	**Pn**	**05 25 36.1**	**+1.8**
5.6nm,0.3s,baz=29,slow=10,SNR=4.2							
PMG				S	**Sn**	**05 26 43.3**	**+1.8**
24nm,0.3s,baz=252,slow=8.0,SNR=9.3							
PMG	**Port Moresby**	**5.98**	**227**	*e*Pn	**Pn**	**05 25 35.2**	**+0.9**
PMG				*e*		05 25 36.1	
PMG				*e*Sn	**Sn**	**05 26 43.5**	**+2.0**
WRAB	**Tennant Creek**	**22.18**	**227**	*e*P	**P**	**05 28 59.6**	**-0.4**
12nm,0.8s							
WB2	**Warramunga Arr**	**22.19**	**227**	*e*P	**P**	**05 28 59.4**	**-0.7**
11nm,0.6s							
WR1	**Warramunga Arr**	**22.20**	**227**	*e*P	**P**	**05 29 00.8**	**+0.7**
WRA	**Warramunga Arr**	**22.20**	**227**	P	**P**	**05 29 00.8**	**+0.7**
134nm,0.3s,baz=54,slow=10,SNR=5.0							
AS31	**Alice Springs**	**24.96**	**221**	*e*P	**P**	**05 29 27.4**	**+0.7**
1.8nm,0.6s							
ASAR	**Alice Springs**	**24.96**	**221**	P	**P**	**05 29 26.8**	**+0.1**
5.5nm,0.7s,baz=54,slow=9.1,SNR=41							
FITZ	**Fitzroy Crossi**	**28.34**	**241**	P	**P**	**05 29 56.8**	**-0.4**
6.0nm,0.6s,baz=40,slow=2.9,SNR=15							
FITZ	**Fitzroy Crossi**	**28.34**	**241**	*e*P	**P**	**05 29 56.8**	**-0.4**
5.2nm,0.8s							
JHJ	**Hachijo jima 2**	**39.79**	**344**	LR	LR	05 45 06.5	
comp=Z,50nm,19.4s,baz=64,slow=32							
MJAR	**Matsushiro Arr**	**43.44**	**344**	LR	LR	05 48 08.8	
comp=Z,18nm,20.8s,baz=235,slow=33							
SONA0	**Songino Array**	**66.08**	**328**	*e*P	**P**	**05 34 50.1**	**+0.6**
SONM	**Songino Array**	**66.08**	**328**	P	**P**	**05 34 50.1**	**+0.6**
0.9nm,0.5s,baz=132,slow=4.1,SNR=3.4							
VNDA	**Vanda**	**72.40**	**178**	P	**P**	**05 35 27.4**	**-0.6**
0.4nm,0.8s,baz=343,slow=3.2,SNR=3.1							
MK32	**Makanchi Array**	**79.87**	**319**	*e*P	**P**	**05 36 11.6**	**+0.5**
MKAR	**Makanchi Array**	**79.87**	**319**	P	**P**	**05 36 11.6**	**+0.5**
1.3nm,1.0s,baz=110,slow=6.6,SNR=6.2							
ILAR	**Eielson Array**	**83.07**	**22**	P	**P**	**05 36 27.1**	**-0.4**
0.3nm,0.7s,baz=248,slow=5.6,SNR=6.4							
NV01	**Mina Array Sit**	**93.36**	**52**	*e*P	**P**	**05 37 18.7**	**+0.8**
NVAR	**Mina Array Bea**	**93.36**	**52**	P	**P**	**05 37 18.7**	**+0.8**
1.8nm,0.8s,baz=253,slow=6.1,SNR=12							
UOSS	**Minazif**	**97.04**	**294**	*e*P	**P**	**05 37 30.5**	**-4.2**
16nm,0.9s							
PDAR	**Pinedale Array**	**100.09**	**48**	P	**Pdif**	**05 37 47.8**	**-0.5**
0.6nm,0.9s,baz=259,slow=3.9,SNR=4.0							
TORD	**Torodi Ar. Bea**	**149.26**	**287**	PKPbc	**PKPbc**	**05 43 51.1**	**-0.6**
1.7nm,0.6s,baz=69,slow=2.4,SNR=10							
TOA1	**Torodi Ar. Sit**	**149.27**	**287**	*e*PKPbc	**PKPbc**	**05 43 51.1**	**-0.6**
BDFB	**Brasilia**	**151.58**	**137**	PKPbc	**PKPbc**	**05 43 56.9**	**-0.5**
2.2nm,0.7s,baz=225,slow=2.9,SNR=4.4							

*ISCJB **04** 05:31:29.5±0.5, 18°.28S±0°.04×69°.87W±0°.07, h116km±3km, mb3.8/7, Error ellipse: s-maj=11.0km s-min=5.8km az=12.2*
*SJA **04** 05:31:29.5±1.0, 18°.28S×69°.95W, h108km±5km, ML3.2, MW3.2*
*GUC **04** 05:31:30.6±0.8, 18°.24S×69°.85W, h93km±4km, ML3.9*
*IDC **04** 05:31:31.9±1.3, 18°.34S×69°.51W, h121km±11km, mb3.5/7, mb1 3.7/12, mb1mx3.5/31, mbtmp4.0/12, MS2.7/1, Ms1 2.7/1, ms1mx2.4/17, Error ellipse: s-maj=20.7km s-min=9.0km az=99.0*
ISC 04 05:31:29.8±0.7, 18°.26S±0°.04×69°.84W±0°.07, h104km±5km, n42, σ1§49/53, mb3.7/7, 2C-12D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.33**	**103**	*e*P	**Pn**	**05 31 46.2**	**+0.5**
PB16				*e*S	**Sn**	**05 31 57.8**	**+0.3**
PB16	**IPOC Station P**	**0.33**	**103**	⇓*i*P	**Pn**	**05 31 46.1**	**+0.4**
PB16				*e*S	**Sn**	**05 31 57.6**	**+0.1**
PB12	**IPOC Station P**	**0.58**	**233**	*e*P	**Pn**	**05 31 46.8**	**+0.1**
PB12				*e*S	**Sn**	**05 32 00.0**	**+0.7**
PB12	**IPOC Station P**	**0.58**	**233**	⇑*i*P	**Pn**	**05 31 46.8**	**+0.1**
PB12				*e*S	**Sn**	**05 31 59.2**	**-0.2**
PB12				IAML		05 32 00.3	
comp=N,7μm,0.1s							
MNMC	**Minye Minye**	**0.90**	**165**	⇓*i*P	**Pn**	**05 31 50.9**	**+1.1**
MNMC				*e*S	**Sn**	**05 32 05.3**	**+0.5**
MNMC				IAML		05 32 08.7	
comp=E,8μm,0.2s							
MNMCX	**Minye Minye**	**0.90**	**165**	*e*P	**Pn**	**05 31 51.0**	**+1.2**
MNMCX				⇓*e*S	**Sn**	**05 32 06.6**	**+1.9**
PSGC	**Pisagua**	**1.35**	**191**	⇓*i*P	**Pn**	**05 31 55.1**	**+0.4**
PSGC				*e*S	**Sn**	**05 32 13.3**	**-0.1**
PSGC				IAML		05 32 20.4	
comp=N,2μm,0.2s							
PSGCX	**Pisagua**	**1.35**	**191**	*e*P	**Pn**	**05 31 55.3**	**+0.6**
PSGCX				⇓*e*S	**Sn**	**05 32 14.1**	**+0.7**
PB11	**IPOC Station P**	**1.50**	**173**	*e*P	**Pn**	**05 31 57.7**	**+1.2**
PB11				⇓*e*S	**Sn**	**05 32 17.4**	**+0.7**
PB11	**IPOC Station P**	**1.50**	**173**	⇑*i*P	**Pn**	**05 31 57.8**	**+1.2**
PB11				*e*S	**Sn**	**05 32 18.1**	**+1.4**
PB11				IAML		05 32 22.8	
comp=E,1μm,0.1s							
GO01	**Chusmiza**	**1.53**	**156**	⇓*i*P	**Pn**	**05 31 59.0**	**+1.9**
GO01				*e*S	**Sn**	**05 32 20.8**	**+3.0**
GO01				IAML		05 32 25.2	
comp=N,2μm,0.2s							
PB08	**IPOC Station P**	**1.98**	**161**	*i*P	**Pn**	**05 32 04.5**	**+1.8**
PB08				⇓*e*S	**Sn**	**05 32 29.8**	**+2.1**

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PB08	**IPOC Station P**	**1.98**	**161**	⇓*i*P	**Pn**	**05 32 04.5**	**+1.8**
PB08				*e*S	**Sn**	**05 32 30.1**	**+2.4**
PB08				IAML		05 32 32.8	
comp=E,800nm,0.1s							
LPAZ	**La Paz**	**2.56**	**40**	P	**Pn**	**05 32 12.5**	**+2.1**
comp=E,5.6nm,0.3s,baz=235,slow=3.7,SNR=249							
LPAZ				S	**Sn**	**05 32 42.3**	**+0.9**
comp=E,6.7nm,0.3s,baz=58,slow=22,SNR=6.6							
LPAZ	**La Paz**	**2.56**	**40**	*i*P	**Pn**	**05 32 12.7**	**+2.3**
PB02	**IPOC Station P**	**3.04**	**181**	*i*P	**Pn**	**05 32 16.8**	**+0.5**
PB07	**IPOC Station P**	**3.45**	**181**	*i*P	**Pn**	**05 32 22.9**	**+1.1**
PB09	**IPOC Station P**	**3.56**	**171**	*i*P	**Pn**	**05 32 24.9**	**+1.6**
PB03	**IPOC Station P**	**3.77**	**179**	*i*P	**Pn**	**05 32 26.6**	**+0.4**
PB04	**IPOC Station P**	**4.06**	**184**	⇓*i*P	**Pn**	**05 32 30.3**	**+0.2**
LVC	**Limon Verde**	**4.42**	**169**	P	**Pn**	**05 32 36.6**	**+1.6**
comp=E,12nm,0.3s,baz=358,slow=7.4,SNR=252							
LVC				S	**Sn**	**05 33 24.3**	**-1.3**
comp=E,5.9nm,0.3s,baz=56,slow=23,SNR=12							
PB06	**IPOC Station P**	**4.43**	**177**	*i*P	**Pn**	**05 32 35.0**	**-0.1**
PB05	**IPOC Station P**	**4.58**	**184**	⇓*i*P	**Pn**	**05 32 36.6**	**-0.4**
PB15	**IPOC Station P**	**4.94**	**176**	⇓*i*P	**Pn**	**05 32 42.6**	**+0.7**
PB15				*e*S	**Sn**	**05 33 37.2**	**-0.8**
YJA	**Yavi**	**5.63**	**134**	IAML		05 32 57.2	
comp=Z,4.2nm,0.7s							
HJA	**Humahuaca**	**6.44**	**141**	*e*P	**Pn**	**05 33 04.7**	**+2.2**
HJA				IAML		05 33 07.7	
comp=Z,11nm,0.5s							
SIV	**San Ignacio**	**8.69**	**76**	P	**Pn**	**05 33 30.8**	**-1.9**
comp=Z,4.2nm,0.3s,baz=277,slow=10,SNR=77							
NNA	**Nana**	**9.19**	**312**	LR	LR	05 37 28.9	
comp=Z,40nm,18.3s,baz=168,slow=38							
CFA	**Coronel Fontan**	**13.37**	**174**	P	**Pn**	**05 34 31.9**	**-3.5**
comp=Z,1.7nm,0.3s,baz=356,slow=12,SNR=21							
CPUP	**Villa Florida**	**14.09**	**127**	P	**Pn**	**05 34 42.8**	**-2.0**
comp=Z,0.1nm,0.3s,baz=312,slow=15,SNR=2.4							
PTGA	**Pitinga**	**19.94**	**30**	P	**P**	**05 35 52.0**	**-1.8**
comp=Z,4.4nm,0.3s,baz=212,slow=19,SNR=22							
BDFB	**Brasilia**	**21.04**	**86**	P	**P**	**05 36 03.5**	**-2.2**
comp=Z,2.5nm,0.6s,baz=268,slow=11,SNR=3.4							
PLCA	**Paso Flores**	**22.40**	**181**	P	**P**	**05 36 20.8**	**+0.9**
comp=Z,3.0nm,0.9s,baz=26,slow=11,SNR=4.3							
TXAR	**Lajitas Array**	**57.48**	**325**	P	**P**	**05 41 09.5**	**+1.0**
comp=Z,0.2nm,0.8s,baz=158,slow=7.4,SNR=3.0							
DBIC	**Dimbokro**	**68.70**	**75**	P	**P**	**05 42 21.1**	**-1.8**
comp=Z,5.3nm,0.8s,baz=222,slow=5.4,SNR=5.7							
NVAR	**Mina Array Bea**	**72.41**	**322**	P	**P**	**05 42 47.5**	**+2.3**
comp=Z,0.3nm,0.5s,baz=161,slow=9.4,SNR=4.4							
TORD	**Torodi Ar. Bea**	**77.13**	**71**	P	**P**	**05 43 11.2**	**-1.4**
comp=Z,1.4nm,0.5s,baz=259,slow=6.0,SNR=18							
YKA	**Yellowknife Ar**	**87.86**	**341**	P	**P**	**05 44 08.3**	**+1.1**
comp=Z,0.7nm,0.5s,baz=132,slow=4.7,SNR=10							
H11S2	**WAKE ISLAND Hyd**	**26.53**	**280**	T	T	08 09 46.6	
baz=100,slow=74,SNR=6.0							
H11S1	**WAKE ISLAND Hyd**	**26.54**	**280**	T	T	08 09 51.0	
baz=100,slow=74,SNR=3.2							
H11S3	**WAKE ISLAND Hyd**	**26.55**	**280**	T	T	08 09 58.5	
baz=100,slow=74,SNR=4.0							
KLR	**Kul'dur**	**144.53**	**335**	PKP	**PKPdf**	**05 50 54.0**	**0.0**
comp=Z,0.7nm,0.4s,baz=40,slow=1.5,SNR=3.2							

MEX 04 05:50:48.3±0.9, 18°.75N×104°.55W, h16km±13km, MD3.8, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.88**	**328**	*e*P	Pb	05 51 01.6	-3.6
CJM				*i*S	Sb	05 51 13.2	-3.5
EZ5V		**1.15**	**51**	*e*P	Pb	05 51 06.7	-3.3
EZ5V				*e*S	Sb	05 51 20.1	-4.7
MMIG	**Aquila**	**1.23**	**112**	*i*P	Pn	05 51 07.3	-3.5
MMIG				*e*S	Sb	05 51 21.9	-4.9
ANIG	**Ahuacatlan**	**2.29**	**1**	*e*P	Pn	05 51 24.7	-0.8
ANIG				*i*S	Sn	05 51 53.2	-0.3

KRSC 04 06:12:53.6±1.5, 52°.38N×160°.79E, h24km±20km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.86**	**327**	*e*P	Pb	06 13 09.7	-0.2
SPN				*e*S	Sb	06 13 20.0	-1.0
RUS	**Russkaya**	**1.40**	**273**	*e*P	Pb	06 13 18.9	-0.1
RUS				*e*S	Sb	06 13 36.6	+0.2
DALK	**Dalny**	**1.40**	**299**	*e*P	Pb	06 13 18.9	-0.2
DALK				*e*S	Sb	06 13 36.4	-0.1
PET	**Petropavlovsk**	**1.46**	**297**	*e*P	Pb	06 13 19.5	-0.4
UGLR	**Uglovaya**	**1.46**	**306**	*e*P	Pb	06 13 20.9	+0.8
UGLR				*e*S	Sb	06 13 40.1	+1.9
SDLR	**Sedlovina**	**1.47**	**309**	*e*P	Pb	06 13 19.6	-0.7
SMAR	**Somma**	**1.50**	**307**	*e*P	Pb	06 13 21.0	+0.1
AVH	**Avacha**	**1.53**	**306**	*e*P	Pb	06 13 20.9	-0.4
KRER	**Koryakskii**	**1.55**	**308**	*e*P	Pb	06 13 21.5	-0.2
KOK	**Koryaka**	**1.60**	**306**	*e*P	Pb	06 13 22.3	-0.2
MTVR	**Mutnovka**	**1.60**	**275**	*e*P	Pb	06 13 22.1	-0.4
MTVR				*e*S	Sb	06 13 42.2	-0.2
KRX	**Arik**	**1.63**	**308**	*e*P	Pn	06 13 21.9	+1.0
KRMR	**Karymshinskiy**	**1.69**	**287**	*e*P	Pb	06 13 22.8	-1.1
KRMR				*e*S	Sb	06 13 44.0	-0.7
KDTR	**Khodutka, Kamc**	**1.77**	**252**	*e*P	Pn	06 13 23.9	+1.2
KDTR				*e*S	Sn	06 13 44.9	+0.5
GNL	**Ganaly**	**2.17**	**309**	*e*P	Pb	06 13 30.7	-1.5
GNL				*e*S	Sn	06 13 56.6	+2.1
MKZ	**Mys Kozlova**	**2.25**	**14**	*e*P	Pn	06 13 31.2	+1.9
MKZ				*e*S	Sn	06 13 56.6	+0.2
KZV	**Kizimen**	**2.76**	**354**	*e*P	Pb	06 13 39.9	-2.3
KZV				*e*S	Sb	06 14 12.6	-3.0
TUMD	**Tumrok D**	**2.84**	**355**	*e*P	Pb	06 13 41.0	-2.6

MEX 04 06:25:52.5±0.3, 16°.81N×100°.16W, h2km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.26**	**336**	*e*P	Pg	06 25 57.3	-0.2
CAIG				*e*S	Sg	06 26 01.2	+0.3
ACP2	**Acapulco**	**0.27**	**76**	*i*P	Pg	06 25 57.6	0.0
ACP2				*i*S	Sg	06 26 01.9	+0.8
ARIG	**Puente Sto Nin**	**1.47**	**353**	*e*P	Pn	06 26 16.3	-3.9
ARIG				*i*S	Sb	06 26 34.7	-5.2
PLIG	**Platanillo**	**1.69**	**21**	*e*P	Pn	06 26 19.1	-4.1
PLIG				*e*S	Sn	06 26 40.1	-5.4
TLIG	**Tlapa**	**1.69**	**64**	*e*P	Pn	06 26 22.1	-1.1
TLIG				*e*S	Sg	06 26 47.9	+1.0

*NIED **04** 06:26:00, 45°.30N×151°.20E, h26km, Mw4.3 Best double couple: M∂3.54000×1015 NP1:ϕ∂244.00000°, δ36.00000°, λ168.00000°. NP2:ϕ∂344.00000°, δ83.00000°, λ54.00000°.*
*ISCJB **04** 06:26:53.8±0.3, 45°.23N±0°.03×151°.08E±0°.04, h35km, mb4.6/82, MS4.0/14, Error ellipse: s-maj=5.5km s-min=2.5km az=147.5*
*JMA **04** 06:26:54.0±0.6, 45°.31N×151°.23E, h30km, M5.1*
*MOS **04** 06:26:55.0±0.9, 45°.27N×151°.10E, h46km, mb4.9/26, MS3.5/4, Error ellipse: s-maj=6.8km s-min=5.2km az=107.3*
*SKHL **04** 06:26:55.2±0.6, 45°.19N×151°.24E, h47km±7km, mb4.9/11, Ms4.1/1*
*BJI **04** 06:26:56.1±0.0, 45°.27N×151°.10E, h62km, mb4.9/45, mB4.7/29, Ms4.2/24, Ms7 4.0/23*
*IDC **04** 06:26:57.5±2.3, 45°.39N×150°.93E, h52km±19km, mb4.0/21, mb1 4.1/29, mb1mx4.0/51, mbtmp4.2/29, ML3.9/6, MS3.6/14, Ms1 3.6/14, ms1mx3.3/42, Error ellipse: s-maj=15.5km s-min=10.4km az=143.0*
*NEIC **04** 06:26:57.8±1.7, 45°.31N×150°.98E, h54km±4km, mb4.6/42, Error ellipse: s-maj=18.1km s-min=13.8km az=134.0*
ISC 04 06:26:55.2±0.4, 45°.17N±0°.05×151°.12E±0°.05, h35km, n303, σ1§61/330, mb4.6/82, MS4.0/15, 40C-11D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.30**	**273**	*d*iPN	**Pn**	**06 27 31.6**	**+1.1**
KUR				*e*S	**Sn**	**06 27 58.2**	**+0.6**
KUR				pmax	pmax		
comp=E,153nm,0.2s							
KUR				pmax	pmax		
comp=Z,1μm,0.2s							
KUR				pmax	pmax		
comp=N,543nm,0.3s							
KUR				smax	smax		
comp=N,4μm,1.6s							
KUR				smax	smax		
comp=E,2μm,0.8s							
KUR				smax	smax		
comp=N,2μm,0.3s							
KUR				smax	smax		
comp=E,950nm,0.4s							
KUR	**Kuril'sk**	**2.30**	**273**	*i*P	**Pn**	**06 27 31.6**	**+1.1**
KUR				AMB	AMB	06 27 32.5	
comp=E,113nm,0.3s							
KUR				*e*S	**Sn**	**06 27 58.3**	**+0.6**
KUR				A	A	06 28 04.7	
comp=E,2μm,0.5s							
KUR				A	A	06 28 04.7	
comp=E,2μm,0.5s							
KUR				AMS	AMS	06 28 36.9	
comp=E,2μm,12.0s							
YUK	**Yuzh-Kuril'sk**	**3.92**	**255**	⇑*i*PN	**Pn**	**06 27 54.6**	**+1.7**
YUK				*i*S	**Sn**	**06 28 40.5**	**+2.9**
YUK				pmax	pmax		
comp=Z,1μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**3.92**	**255**	*i*P	**Pn**	**06 27 54.5**	**+1.7**
YUK				AMB	AMB	06 27 56.9	
comp=Z,66nm,0.4s							
YUK				*i*S	**Sn**	**06 28 38.7**	**+1.1**
YUK				A	A	06 28 52.0	
comp=Z,1μm,0.5s							
YUK				A	A	06 28 52.0	
comp=Z,160nm,0.5s							
YUK				AMS	AMS	06 29 27.0	
comp=Z,2μm,14.0s							
LAGR	**Lagunnoye**	**3.97**	**256**	*e*PN	**Pn**	**06 27 56.1**	**+2.6**
LAGR				*e*S	**Sn**	**06 28 41.9**	**+3.2**
LAGR				pmax	pmax		
comp=E,579nm,0.4s							
LAGR				pmax	pmax		
comp=Z,1μm,0.4s							
LAGR				pmax	pmax		
comp=N,380nm,0.2s							
LAGR				smax	smax		
comp=N,3μm,0.5s							
LAGR				smax	smax		
comp=E,1μm,0.7s							
LAGR	**Lagunnoye**	**3.97**	**256**	*e*P	**Pn**	**06 27 55.5**	**+2.0**
LAGR				AMB	AMB	06 28 11.0	
comp=E,102nm,0.4s							
LAGR				*e*S	**Sn**	**06 28 40.9**	**+2.2**
LAGR				A	A	06 28 58.0	
comp=E,284nm,0.5s							
LAGR				A	A	06 28 58.0	
comp=E,1μm,0.5s							
GRPR	**Tuman**	**4.00**	**255**	⇑*i*PN	**Pn**	**06 27 55.7**	**+1.8**
GRPR				*i*S	**Sn**	**06 28 41.1**	**+1.6**
GRPR				pmax	pmax		
comp=E,198nm,0.3s							
GRPR				pmax	pmax		
comp=Z,544nm,0.3s							
GRPR				pmax	pmax		
comp=N,191nm,0.4s							
GRPR				smax	smax		
comp=E,674nm,0.4s							
GRPR				smax	smax		
comp=N,1μm,0.5s							
GRPR	**Tuman**	**4.00**	**255**	*i*P	**Pn**	**06 27 55.0**	**+1.1**
GRPR				AMB	AMB	06 28 01.0	
comp=N,54nm,0.3s							
GRPR				*i*S	**Sn**	**06 28 40.4**	**+0.9**
GRPR				A	A	06 28 54.0	
comp=N,127nm,0.5s							
GRPR				A	A	06 28 54.0	
comp=N,674nm,0.5s							
GLVR	**Golovnino**	**4.26**	**252**	⇑*i*PN	**Pn**	**06 27 59.1**	**+1.6**
GLVR				*e*S	**Sn**	**06 28 47.3**	**+1.4**
GLVR				pmax	pmax		
comp=Z,800nm,0.5s							
GLVR				pmax	pmax		
comp=N,184nm,0.4s							
GLVR				pmax	pmax		
comp=E,223nm,0.4s							
GLVR				smax	smax		
comp=N,718nm,0.4s							
GLVR				smax	smax		
comp=E,1μm,0.5s							
GLVR	**Golovnino**	**4.26**	**252**	*i*P	**Pn**	**06 27 59.0**	**+1.6**
GLVR				AMB	AMB	06 28 01.0	
comp=E,80nm,0.4s							
GLVR				*e*S	**Sn**	**06 28 47.0**	**+1.1**
GLVR				A	A	06 29 02.0	
comp=E,718nm,0.4s							
GLVR				A	A	06 29 02.0	
comp=E,115nm,0.4s							
NEM2	**Nemuro 2**	**4.26**	**247**	P	**Pn**	**06 27 57.9**	**+0.4**
NEM2				*e*S	**Sn**	**06 28 45.4**	**-0.6**
JRA	**Rausu**	**4.46**	**256**	P	**Pn**	**06 28 02.8**	**+2.6**
JNK	**Nakash**	**4.85**	**253**	P	**Pn**	**06 28 07.6**	**+1.9**
JNK				*e*S	**Sn**	**06 29 01.9**	**+1.3**
JAK	**Akkeshi**	**5.11**	**247**	P	**Pn**	**06 28 09.6**	**+0.4**
JAK				*e*S	**Sn**	**06 29 05.3**	**-1.6**
JTKR	**Abashiri--Toko**	**5.29**	**259**	P	**Pn**	**06 28 14.2**	**+2.6**
JAR	**Ashorobuto**	**5.60**	**253**	P	**Pn**	**06 28 18.0**	**+2.0**
JAR				*e*S	**Sn**	**06 29 20.3**	**+1.2**
JMP	**Maruseppu**	**5.66**	**261**	P	**Pn**	**06 28 19.7**	**+2.9**
JOB	**Onbets**	**5.72**	**249**	P	**Pn**	**06 28 18.4**	**+0.9**
JOB				*e*S	**Sn**	**06 29 21.3**	**-0.6**
YSS	**Yuzh-Sakhalins**	**6.09**	**290**	*e*Pn	**Pn**	**06 28 23.4**	**+0.8**
YSS	**Yuzh-Sakhalins**	**6.09**	**290**	*e*PN	**Pn**	**06 28 24.8**	**+2.2**
YSS				pmax	pmax		
comp=Z,40nm,0.6s							
YSS				MLR	MLR		
comp=Z,800nm,15.0s							
YSS				MLR	MLR		
comp=E,700nm,17.0s							
YSS	**Yuzh-Sakhalins**	**6.09**	**290**	*e*P	**Pn**	**06 28 24.8**	**+2.2**
YSS				AMB	AMB	06 28 28.6	
comp=E,40nm,0.6s							
YSS				*e*S	**Sn**	**06 29 30.2**	**-0.7**
YSS				AMS	AMS	06 30 36.0	
comp=E,800nm,15.0s							
JKK2	**Kamakawa 2**	**6.12**	**261**	P	**

TYV AMB AMB 06 28 51.8
comp=Z,160nm,0.6s
TYV eS Sn **06 30 18.7 -0.1**
TYV A A 06 30 20.3
comp=Z,11nm,0.3s
TYV AMS AMS 06 33 51.0
comp=Z,1μm,14.0s
JYM2 Yakumo 2 8.37 252 P Pn **06 28 54.7 +0.8**
JANG Nango 8.54 239 P Pn **06 28 54.6 -1.6**
JANG eS Sn **06 30 24.1 -7.1**
JTM Tenmabayashi 8.57 243 P Pn **06 28 56.5 -0.2**
JTM eS Sn **06 30 25.8 -6.3**
JTH Tanohata 8.60 236 P Pn **06 28 55.2 -1.9**
JTH eS Sn **06 30 24.7 -8.1**
JSR Shiriuchi 8.60 249 P Pn **06 28 56.7 -0.4**
PETK Petropavlovsk- 9.04 26 P Pn **06 29 01.8 -1.2**
comp=Z,1.4nm,0.3s,baz=216,slow=17,SNR=4.5
PETK LR LR 06 32 42.5
comp=Z,220nm,18.3s,baz=221,slow=39
PEA1 Petropavlovsk- 9.04 26 ePn Pn **06 29 01.8 -1.3**
OFUJ Ofunato 9.29 232 eS Sn 06 30 40.8 -8.9
JRG Rokugo 9.67 237 P Pn **06 29 11.4 -0.4**
JIO Ouri 9.91 231 P Pn **06 29 13.9 -1.1**
JIO eS Sn **06 30 57.5 -7.3**
OKH Okha 9.94 330 eP Pn **06 29 12.4 -2.9**
OKH AMS AMS 06 34 28.7
comp=Z,300nm,13.0s
NKL Nikolayevsk 10.50 323 eP Pn **06 29 23.6 +0.6**
NKL AMB AMB 06 29 26.2
comp=Z,51nm,1.0s
GRNR Gornyy 11.32 305 eP Pn **06 29 35.5 +1.1**
MAJO Matsushiro 13.02 233 ePn Pn **06 29 57.9 +0.3**
MAJO Matsushiro 13.02 233 ePN Pn **06 29 57.9 +0.3**
MAT Matsushiro 13.02 233 P Pn **06 29 57.7 +0.1**
MJAR Matsushiro Arr 13.02 233 P Pn **06 29 57.0 -0.6**
comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=6.6
MJAR LR LR 06 35 30.1
comp=Z,179nm,21.5s,baz=60,slow=39
MJB9 Matsu-Tunnel 13.02 233 ePn Pn **06 29 58.0 +0.4**
USA0B Ussuriysk Arra 13.65 273 ePn Pn **06 30 06.5 +0.4**
USRK Ussuriysk Ar. 13.65 273 P Pn **06 30 05.8 -0.3**
comp=Z,0.7nm,0.3s,baz=85,slow=13,SNR=13
KLR Kul'dur 13.77 294 P Pn **06 30 07.8 0.0**
baz=125,slow=12,SNR=5.6
KLR LR LR 06 35 40.7
comp=Z,333nm,18.7s,baz=112,slow=38
KLR Kul'dur 13.77 294 ⇓iP Pn **06 30 09.8 +2.0**
EKMR Ekimchan 14.25 310 eP Pn **06 30 13.4 -0.9**
EKMR AMB AMB 06 30 24.5
comp=Z,12nm,1.0s
MA2 Magadan 14.43 359 P Pn **06 30 15.7 -1.0**
comp=Z,1.5nm,0.3s,baz=200,slow=22,SNR=5.1
MA2 LR LR 06 35 34.7
comp=Z,131nm,19.8s,baz=156,slow=36
MDJ Mudanjiang 15.27 276 P Pn **06 30 29.2 +1.3**
MDJ pmax pmax
comp=Z,26nm,0.9s
MDJ LR LR
comp=Z,280nm,16.4s
MDJ LR LR
comp=Z,310nm,16.4s
MDJ LR LR
comp=Z,410nm,18.5s
MDJ Mudanjiang 15.27 276 ePn Pn **06 30 29.2 +1.3**
comp=Z,18nm,0.8s
BMKR Bomnak 17.16 312 eP Pn **06 30 50.0 -1.9**
BMKR AMB AMB 06 30 57.0
comp=Z,10.0nm,0.4s
ZEA Zeya 17.66 308 eP Pn **06 30 56.6 -1.6**
ZEA pmax pmax
comp=Z,28nm,0.8s
ZEA MLR MLR
comp=E,300nm,14.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
ZEA Zeya 17.66 308 eP Pn **06 30 56.6 -1.6**
ZEA AMB AMB 06 31 01.5
comp=Z,28nm,0.8s
ZEA AMS AMS 06 38 29.0
comp=Z,300nm,14.0s
ZEA AMS AMS 06 38 29.0
comp=Z,500nm,14.0s
SEY Seymchan 17.81 2 P Pn **06 30 58.4 -1.6**
comp=Z,0.6nm,0.3s,baz=184,slow=12,SNR=5.4
SEY Seymchan 17.81 2 eP Pn **06 30 59.6 -0.4**
KROS Kirovskiy 18.05 310 eP P **06 31 02.9 -0.3**
KROS AMB AMB 06 31 06.0
comp=Z,4.0nm,0.3s
KROS AMB AMB 06 31 06.0
comp=Z,6.0nm,0.3s
KROS AMB AMB 06 31 06.0
comp=Z,12nm,0.3s
CN2 Changchun 18.35 275 eP P **06 31 06.1 -0.4**
CN2 esP sP 06 31 25.8 +6.9
CN2 eS Sn **06 34 23.9 -6.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,160nm,19.0s
CN2 LR LR
comp=Z,250nm,19.0s
CN2 LR LR
comp=Z,300nm,18.0s
KSRS Korea Array 19.01 254 P P **06 31 14.2 +0.4**
comp=Z,0.5nm,0.3s,baz=61,slow=11,SNR=15
KSRS LR LR 06 38 36.8
comp=Z,120nm,18.3s,baz=68,slow=37
KS15 Wonju Array Si 19.04 254 eP P **06 31 14.2 0.0**
comp=Z,8.2nm,0.9s
JNU Nakatsue 19.72 239 P P **06 31 22.2 +0.6**
comp=Z,0.3nm,0.3s,baz=22,slow=17,SNR=2.9
JNU LR LR 06 40 24.5
comp=Z,110nm,18.2s,baz=18,slow=41
JNU Nakatsue 19.72 239 eP Pn **06 31 23.6 +0.4**
comp=Z,15nm,1.0s
TJN Taejon 19.96 252⇑eP Pn **06 31 26.2 +0.1**
YAK Yakutsk 20.97 331 eP P **06 31 34.7 -0.2**
YAK e 06 31 55.1
YAK eS S **06 35 25.1 -1.2**
YAK e*SS sS **06 35 36.4 -2.7**
YAK eSS SnSn **06 35 49.6 +1.5**
YAK Yakutsk 20.97 331 eP P **06 31 34.9 0.0**
BILL Bilibino 24.25 14 i P P **06 32 08.3 -0.2**
BILL i 06 32 24.7
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL MLR MLR
comp=Z,201nm,17.0s
BILL Bilibino 24.25 14 eP P **06 32 08.9 +0.4**
BOD Bodaibo 25.98 312 eP P **06 32 21.2 -3.0**
NJ2 Nanjing 28.21 254 eP P **06 32 45.6 +1.1**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
H11N2 WAKE ISLAND Hy 28.54 148 T T 07 03 19.9
baz=337,slow=75,SNR=354
H11N1 WAKE ISLAND Hy 28.56 148 T T 07 03 32.2
baz=337,slow=75,SNR=269
H11N3 WAKE ISLAND Hy 28.56 148 T T 07 03 39.0
baz=337,slow=75,SNR=263
TIXI Tiksi 28.62 345 P P **06 32 45.9 -1.9**
comp=Z,2.1nm,0.5s,baz=145,slow=8.0,SNR=6.1
TIXI Tiksi 28.62 345⇑eP P **06 32 47.5 -0.2**
TIXI pmax pmax
comp=Z,1.0nm,0.7s
TIXI Tiksi 28.62 345 eP P **06 32 47.5 -0.2**
HHC Hu-ho-hao-te 29.04 276 eP P **06 32 53.4 +1.4**
HHC S S **06 37 37.8 -3.2**
HHC pmax pmax
comp=Z,23nm,0.9s
HHC pmax pmax
comp=Z,85nm,5.7s
HHC LR LR
comp=Z,99nm,13.3s
HHC LR LR
comp=Z,370nm,16.1s
HHC LR LR
comp=Z,470nm,16.1s
ULN Ulaanbaatar 30.14 291⇑eP P **06 33 03.8 +2.1**
ULN pmax pmax
comp=Z,5.0nm,1.3s
ULN Ulaanbaatar 30.14 291 eP P **06 33 03.8 +2.1**
SONA0 Songino Array 30.58 291 eP P **06 33 05.5 0.0**
SONM Songino Array 30.58 291 P P **06 33 05.5 0.0**
comp=Z,1.4nm,0.5s,baz=57,slow=5.3,SNR=3.8
SONM LR LR 06 46 24.9
comp=Z,164nm,18.3s,baz=80,slow=38
TLY Talaya 31.70 299⇓eP P **06 33 16.3 +1.0**
TLY Talaya 31.70 299 eP P **06 33 16.3 +1.0**
LZH Lanzhou 36.56 273 eP P **06 33 59.0 +1.3**
LZH pP pwP 06 34 15.3 +4.2
LZH sP sP 06 34 21.7 +11
LZH ePP PP **06 35 24.2 +3.1**
LZH pmax pmax
comp=Z,25nm,1.1s
LZH pmax pmax
comp=Z,72nm,5.2s
LZH LR LR
comp=Z,320nm,12.9s
LZH LR LR
comp=Z,340nm,13.2s
LZH LR LR
comp=Z,410nm,16.3s
GTA Gaotai 37.86 280 eP P **06 34 09.2 +0.6**
GTA pP pwP 06 34 24.6 +2.4
GTA sP sP 06 34 31.3 +10
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,60nm,8.6s
GTA LR LR
comp=Z,100nm,14.4s
GTA LR LR
comp=Z,97nm,14.8s
GTA LR LR
comp=Z,150nm,14.1s
COLA College 38.24 37 deP P **06 34 12.5 +1.2**
COLA pmax pmax
comp=Z,4.0nm,0.9s
ILAR Eielson Array 38.65 37 P P **06 34 14.3 -0.5**
comp=Z,1.3nm,0.8s,baz=261,slow=7.1,SNR=12
ILB Eielson Array 38.65 37 eP P **06 34 14.3 -0.5**
comp=Z,2.6nm,1.1s
NRIK Noril'sk 39.41 330 LR LR 06 51 24.0
comp=Z,71nm,19.6s,baz=32,slow=38
EGAK Eagle 41.10 37 eP P **06 34 35.4 +0.3**
comp=Z,2.4nm,0.8s
DGZ Jazzator, Alta 42.17 300⇑eP P **06 34 45.7 +1.4**
DGZ pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 42.42 307 LR LR 06 53 21.1
comp=Z,85nm,21.1s,baz=70,slow=38
EPYK Eagle Plains 42.76 34 eP P **06 34 50.3 +1.5**
comp=Z,5.5nm,0.8s
HYT Haines Junctio 43.38 43 eP P **06 34 54.9 +1.0**
comp=Z,7.4nm,1.0s
INK Inuvik 43.73 31 P P **06 34 57.0 +0.7**
comp=Z,3.0nm,0.8s,baz=294,slow=11,SNR=8.0
INK Inuvik 43.73 31 eP P **06 34 57.1 +0.7**
comp=Z,4.6nm,1.0s
WMQ Urumqi 44.21 292 eP P **06 35 01.9 +1.1**
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ pmax pmax
comp=Z,75nm,3.9s
WMQ LR LR
comp=Z,2μm,39.5s
WMQ LR LR
comp=Z,2μm,37.7s
WMQ LR LR
comp=Z,210nm,21.5s
MK31 Makanchi Array 46.44 298 eP P **06 35 17.4 -0.9**
comp=Z,3.7nm,0.6s
MK31 Makanchi Array 46.44 298 eP P **06 35 17.5 -0.9**
MK31 pmax pmax
comp=Z,4.0nm,0.6s
MK32 Makanchi Array 46.44 298 ePcP PcP **06 36 52.9 +0.3**
MKAR Makanchi Array 46.44 298 P P **06 35 17.3 -1.0**
comp=Z,3.8nm,0.7s,baz=74,slow=7.8,SNR=31
MKAR PcP PcP **06 36 52.9 +0.3**
comp=Z,1.5nm,0.6s,baz=56,slow=2.1,SNR=6.1
MAKZ Makanchi 46.63 298 eP P **06 35 19.4 -0.4**
comp=Z,3.9nm,0.7s
MAKZ Makanchi 46.63 298 eP P **06 35 19.4 -0.4**
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 47.09 304 eP P **06 35 22.2 -1.1**
comp=Z,3.8nm,0.6s
KURK Kurchatov 47.09 304⇓iP P **06 35 23.0 -0.3**
KURK pmax pmax
comp=Z,6.0nm,1.2s
KURK Kurchatov 47.09 304 eP P **06 35 23.0 -0.3**
SKNT Sakolnakorn 48.27 250 P P **06 35 35.4 +2.5**
PHRA Phrae 49.73 255 P P **06 35 48.3 +4.3**
comp=Z,1.2nm,0.8s
PDGK Podgornoye 49.76 295 P P **06 35 44.3 +0.1**
CMAR Chiang Mai Arr 50.64 256 P P **06 35 51.6 +0.7**
comp=Z,2.0nm,0.5s,baz=38,slow=6.9,SNR=5.3
BRVK Borovoye 50.83 310 deP P **06 35 53.0 +1.0**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
BRVK Borovoye 50.83 310 eP P **06 35 53.4 +1.4**
SHL Shillong 50.94 268 eP P **06 35 53.3 0.0**
comp=Z,23nm,0.7s
SHL Shillong 50.94 268 eP P **06 35 53.3 0.0**
SHL pmax pmax
comp=Z,23nm,0.7s
SHL Shillong 50.94 268⇑iP P **06 35 54.0 +0.7**
TARG Taragay, Kyrgy 51.63 294 eP P **06 35 56.5 -2.2**
comp=Z,5.5nm,0.8s
ULHL Ulahol 52.38 295 P P **06 36 04.6 +0.7**
SNR=15
TKM2 Tokmak 2 52.45 296 P P **06 36 05.3 +0.8**
SNR=5.3
RES Resolute Bay 52.77 18 P P **06 36 05.6 -0.5**
comp=Z,1.1nm,0.4s,baz=350,slow=11,SNR=11
USP Osenovka 52.96 297 P P **06 36 08.8 +0.8**
SNR=7.5
KBK Karagaybulak 52.99 296 P P 06 36 00.1 -8.3
SNR=6.3
YKA Yellowknife Ar 53.02 35 P P **06 36 08.5 +0.5**
comp=Z,0.7nm,0.5s,baz=300,slow=7.4,SNR=5.0
KZA Kyzart 53.09 295 P P **06 36 11.0 +1.5**
SNR=14
AAK Ala-Archa 53.29 296 P P **06 36 07.7 -2.9**
baz=50,slow=15
AAK Ala-Archa 53.29 296 eP P **06 36 07.3 -3.2**
comp=Z,6.6nm,0.8s
AAK Ala-Archa 53.29 296 deP P **06 36 11.2 +0.6**
AAK pmax pmax
comp=Z,14nm,1.7s
AAK Ala-Archa 53.29 296 eP P **06 36 11.2 +0.6**
JIRN Jiri 53.68 274 eP P **06 36 14.8 +0.9**
comp=Z,41nm,0.5s
EKS2 Erkin-Say 53.73 297 P P **06 36 14.4 +0.6**
SNR=7.0
GUN Gumba 53.75 275 eP P **06 36 15.1 +0.7**
comp=Z,22nm,0.4s
RAMN Ramite 53.82 273 eP P **06 36 15.5 +0.7**
comp=Z,59nm,0.6s
KSH Kashi 53.97 292 P P **06 36 19.8 +4.2**
KSH sP sP 06 36 38.4 +10
KSH PP PP **06 38 24.1 +7.3**
KSH S S **06 43 48.7 -0.2**
KSH ScS ScS **06 45 59.8 -2.4**
KSH pmax pmax
comp=Z,16nm,0.5s
KSH pmax pmax
comp=Z,230nm,4.5s
KSH LR LR
comp=Z,640nm,11.3s
KSH LR LR
comp=Z,370nm,7.4s
KSH LR LR
comp=Z,280nm,16.0s
KKN Kakani 54.24 275 eP P **06 36 19.1 +1.3**
comp=Z,37nm,0.7s
PKI Pulchoki 54.29 275 eP P **06 36 18.8 +0.5**
PKIN Phulchoki 54.29 275 eP P **06 36 18.7 +0.5**
comp=Z,14nm,0.6s
DMN Daman 54.48 275 eP P **06 36 20.5 +0.9**
comp=Z,19nm,0.5s
ARSB Arslanbob 54.94 296 eP P **06 36 21.4 -1.2**
comp=Z,15nm,0.9s
DANN Dangsing 54.98 277 eP P **06 36 24.4 +1.2**
comp=Z,26nm,0.4s
ARU Arti 55.24 318 P P **06 36 21.2 -3.1**
comp=Z,0.9nm,0.4s,baz=100,slow=18,SNR=2.5
ARU Arti 55.24 318 P P **06 36 22.8 -1.5**
KK31 Karatay Array 55.54 299 eP P **06 36 26.4 -0.4**
comp=Z,4.7nm,0.8s
KK31 Karatay Array 55.54 299 eP P **06 36 26.4 -0.4**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 55.54 299 eP P **06 36 26.5 -0.3**
comp=Z,4.7nm,0.8s
KKAR Karatay Array 55.54 299 eP P **06 36 26.5 -0.3**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KAPI Kappang 57.29 218 P P **06 36 39.0 -0.4**
baz=59,slow=18
KAPI Kappang 57.29 218 P P **06 36 39.0 -0.4**
PRGR Permogore 57.94 327 eP P **06 36 43.0 -0.4**
PRGR pmax pmax
comp=Z,8.0nm,0.6s
AKTO Aktyubinsk 58.74 312 P P **06 36 47.0 -2.2**
comp=Z,1.2nm,0.6s,baz=105,slow=6.8,SNR=6.2
AKTO Aktyubinsk 58.74 312 P P **06 36 47.0 -2.2**
ARCES ARCESS Array B 58.88 340 P P **06 36 48.3 -1.6**
comp=Z,12nm,0.4s,baz=38,slow=12,SNR=3.0
NIL Nilore 59.08 288 eP P **06 36 52.2 +0.3**
comp=Z,43nm,0.8s
NIL Nilore 59.08 288 eP P **06 36 52.2 +0.3**
NIL pmax pmax
comp=Z,43nm,0.8s
KBL Kabul 61.35 291 eP P **06 37 07.3 -0.3**
comp=Z,20nm,0.7s
KBL Kabul 61.35 291 eP P **06 37 07.3 -0.3**
KBL pmax pmax
comp=Z,20nm,0.7s
SUMG Summit 62.36 3 eP P **06 37 14.0 -0.1**
comp=Z,19nm,0.8s
SUMG Summit 62.36 3 iP P **06 37 13.7 -0.4**
SUMG pmax pmax
comp=Z,51nm,0.9s
SUMG Summit 62.36 3 iP P **06 37 13.7 -0.4**
comp=Z,51nm,0.9s
FFC Flin Flon 62.84 39 eP P **06 37 17.9 +0.8**
comp=Z,6.0nm,1.1s
FFC Flin Flon 62.84 39 eP P **06 37 17.9 +0.8**
FFC pmax pmax
comp=Z,6.0nm,1.1s
FCC Fort Churchill 63.34 32 eP P **06 37 19.5 -0.7**
comp=Z,3.4nm,0.6s
FCC Fort Churchill 63.34 32 eP P **06 37 19.5 -0.7**
FCC pmax pmax
comp=Z,3.0nm,0.6s
NVAR Mina Array Bea 64.41 61 P P **06 37 28.3 +0.3**
comp=Z,0.3nm,0.7s,baz=302,slow=7.2,SNR=2.0
SCO Scoresbysund 64.55 357 eP P **06 37 26.9 -1.1**
SCO pmax pmax
comp=Z,5.0nm,0.8s
SCO Scoresbysund 64.55 357 iP P **06 37 26.9 -1.1**
comp=Z,4.8nm,0.8s
FINES FINESS Array B 64.87 334 P P **06 37 27.5 -2.7**
comp=Z,3.2nm,0.7s,baz=31,slow=8.4,SNR=15
LKWY Lake 65.18 51 eP P **06 37 34.1 +1.2**
comp=Z,8.2nm,1.0s
LKWY Lake 65.18 51 eP P **06 37 34.1 +1.2**
LKWY pmax pmax
comp=Z,8.0nm,1.0s
OBN Obninsk 65.81 325 iP P **06 37 35.8 -0.6**
OBN pmax pmax
comp=Z,6.0nm,0.8s
OBN Obninsk 65.81 325 eP P **06 37 35.8 -0.6**
GEYT Alibeck 66.21 300 P P **06 37 39.0 -0.3**
comp=Z,7.8nm,0.6s,baz=28,slow=3.5,SNR=12
WR1 Warramunga Arr 66.58 197 eP P **06 37 42.5 +0.8**
WRA Warramunga Arr 66.58 197 P P **06 37 42.5 +0.8**
comp=Z,126nm,0.3s,baz=16,slow=6.3,SNR=2.0
PDAR Pinedale Array 66.81 52 P P **06 37 43.6 +0.3**
comp=Z,1.2nm,0.9s,baz=267,slow=3.0,SNR=8.0
NB2 NORSAR Subarra 69.26 340 P P **06 37 56.9 -1.3**
comp=Z,1.9nm,0.6s,baz=28,slow=6.2
NOA NORSAR Array B 69.26 340 P P **06 37 57.0 -1.2**
comp=Z,3.4nm,0.6s,baz=28,slow=6.4,SNR=11
NOA LR LR 07 12 58.2
comp=Z,34nm,18.7s,baz=95,slow=40
AKT Akhty 69.92 309 eP P **06 38 02.9 +0.2**
AKT e 06 38 25.1
AKT e 06 40 37.3
AKT pmax pmax
comp=Z,17nm,0.7s
ASAR Alice Springs 70.28 197 P P **06 38 06.7 +1.9**
comp=Z,2.7nm,0.8s,baz=13,slow=6.1,SNR=19
KIV Kislovodsk 70.89 314 eP P **06 38 10.0 +1.4**
KIV pmax pmax
comp=Z,67nm,1.1s
KIV MLR MLR
comp=Z,194nm,18.0s
KIV Kislovodsk 70.89 314 eP P **06 38 10.0 +1.4**
KBZ Khabaz 70.94 313 P P **06 38 09.1 +0.4**
comp=Z,15nm,0.8s,baz=37,slow=4.7,SNR=24
KBZ LR LR 07 13 04.0
comp=Z,150nm,20.3s,baz=40,slow=39
ZEI Tsey 71.08 312 eP P **06 38 08.3 -1.6**
ZEI pmax pmax
comp=Z,7.0nm,0.6s
ZEI Tsey 71.08 312 eP P **06 38 08.3 -1.6**
TBLG Delisi 71.37 311 eP P **06 38 11.9 +0.5**
comp=Z,23nm,0.7s
TBLG Delisi 71.37 311 eP P **06 38 11.9 +0.5**
TBLG pmax pmax
comp=Z,23nm,0.7s
AKASG Malin Array Be 72.07 325 P P **06 38 13.5 -1.9**
comp=Z,2.4nm,0.5s,baz=36,slow=6.5,SNR=9.1
AKASG LR LR 07 11 39.3
comp=Z,60nm,20.1s,baz=40,slow=37
AKBB Malin Array Si 72.07 325 eP P **06 38 13.5 -1.9**
comp=Z,5.6nm,0.8s
AKBB Malin Array Si 72.07 325 eP P **06 38 13.5 -1.9**
AKBB pmax pmax
comp=Z,6.0nm,0.8s
KIEV Kiev 72.08 325⇑iP P **06 38 14.6 -0.9**
KIEV Kiev 72.08 325⇑P P **06 38 14.6 -0.9**
AKH Akhalkalaki 72.26 311⇓iP P **06 38 18.5 +1.5**
AKH Akhalkalaki 72.26 311 P P **06 38 18.4 +1.5**
GNI Garni 72.48 310⇓iP P **06 38 20.0 +1.8**
GNI pmax pmax
comp=Z,104nm,1.3s
ECSD EROS Data Cent 72.98 45 eP P **06 38 20.8 -0.2**
comp=Z,2.7nm,0.8s
KWP Kalwaria Pacla 75.45 328 eP P **06 38 35.4 +0.1**
KWP Kalwaria Pacla 75.45 328 eP P **06 38 35.4 +0.1**
OJC Ojcow 76.01 330 eP P **06 38 37.8 +0.2**
OJC Ojcow 76.01 330 eP P **06 38 37.6 -0.9**
comp=Z,16nm,1.0s
OJC Ojcow 76.01 330 eP P **06 38 37.6 -0.9**
OJC pmax pmax
comp=Z,17nm,1.0s
BURAR Bucovina Array 76.12 326⇑iP P **06 38 39.0 -0.3**
BURAR Bucovina Array 76.12 326⇑P P **06 38 39.0 -0.3**
KOLS Kolonicke sedl 76.19 328 eP P **06 38 39.3 -0.2**
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS Kolonicke sedl 76.19 328 eP P **06 38 39.3 -0.2**
BIZ Bicaz 76.31 325⇓iP P **06 38 40.3 +0.1**
TESR Tescani 76.43 324⇑iP P **06 38 40.4 -0.5**
NIE Niedzica 76.51 329 eP P **06 38 41.7 +0.4**
NIE Niedzica 76.51 329 eP P **06 38 41.7 +0.4**
KSP Ksiaz 76.67 332 eP P **06 38 42.3 +0.1**
KSP Ksiaz 76.67 332 eP P **06 38 42.3 +0.1**
TRPA Tarpa 76.75 327⇑iP P **06 38 42.8 +0.2**
CFR Carcaliu 76.86 322⇑iP P **06 38 43.0 -0.3**
CFR Carcaliu 76.86 322⇑P P **06 38 43.0 -0.3**
VRI Vrincioaia 76.91 324⇑iP P **06 38 43.7 +0.1**
VRI Vrincioaia 76.91 324⇑P P **06 38 43.7 +0.1**
UPC Upice 77.06 332 eP P **06 38 44.1 -0.2**
UPC Upice 77.06 332 eP P **06 38 44.1 -0.2**
DPC Dobruska-Polom 77.09 332 eP P **06 38 44.7 +0.1**
DPC Dobruska-Polom 77.09 332 eP P **06 38 44.7 +0.1**
OZUR 77.12 324⇑iP P **06 38 45.4 +0.6**
MORC Moravsky Berou 77.17 331⇑iP P **06 38 44.7 -0.4**
MORC Moravsky Berou 77.17 331⇑P P **06 38 44.7 -0.4**
MORC Moravsky Berou 77.17 331 eP P **06 38 44.9 -0.2**
KRLC Kraliky 77.17 332 eP P **06 38 44.9 -0.2**
KRLC Kraliky 77.17 332 eP P **06 38 44.9 -0.2**
KECS Kecovo 77.22 329 eP P **06 38 45.3 0.0**
KECS pmax pmax
comp=Z,29nm,0.8s
KECS Kecovo 77.22 329 eP P **06 38 45.3 0.0**
CLL Collm 77.31 335⇑iP P **06 38 45.0 -0.7**
comp=Z,17nm,1.0s
CLL e 06 38 51.0
CLL L L 07 15 00.0
comp=Z,100nm,19.5s
CLL Collm 77.31 335⇑iP P **06 38 45.0 -0.7**
CLL pmax pmax

comp=Z,17nm,1.0s
TLB Topalu 77.37 322 ⇑*i*P **P 06 38 46.0 -0.2**
TLB Topalu 77.37 322 ⇑P **P 06 38 46.0 -0.2**
BRG Berggiesshubel 77.40 334 *e*P **P 06 38 45.6 -0.7**
comp=Z,3.9nm,0.9s
BRG Berggiesshubel 77.40 334 *e*P **P 06 38 45.6 -0.7**
BRG pmax pmax
comp=Z,4.0nm,0.9s
MLR Muntele Rosu 77.54 324 *e*P **P 06 38 47.8 +0.5**
comp=Z,8.1nm,0.9s
MLR Muntele Rosu 77.54 324 ⇑*i*P **P 06 38 47.9 +0.5**
MLR Muntele Rosu 77.54 324 *e*P **P 06 38 47.8 +0.5**
MLR pmax pmax
comp=Z,8.0nm,0.9s
ISR Istrita 77.59 323 ⇑*i*P **P 06 38 48.0 +0.5**
ISR Istrita 77.59 323 ⇑P **P 06 38 48.0 +0.5**
VYHS Vyhne 77.81 330 *e*P **P 06 38 48.7 +0.1**
VYHS pmax pmax
comp=Z,6.0nm,1.2s
VYHS Vyhne 77.81 330 *e*P **P 06 38 48.7 +0.1**
ICOR Ion Corvin 77.85 322 ⇑*i*P **P 06 38 49.6 +0.7**
VRAC Vranov 77.89 331 ⇑*i*P **P 06 38 49.3 +0.2**
VRAC Vranov 77.89 331 ⇑P **P 06 38 49.3 +0.2**
VRAC Vranov 77.89 331 *e*P **P 06 38 49.1 0.0**
JAVC Velka Javorina 77.91 331 *e*P **P 06 38 50.1 +0.9**
VOIR 77.95 324 ⇑*i*P **P 06 38 49.9 +0.3**
VOIR 77.95 324 ⇑P **P 06 38 49.9 +0.3**
GOPC GO Pecny, Ondr 77.97 333 *e*P **P 06 38 49.2 -0.3**
GOPC GO Pecny, Ondr 77.97 333 *e*P **P 06 38 49.2 -0.3**
PRU Pruhonice 77.98 333 *e*P **P 06 38 49.2 -0.3**
PRU Pruhonice 77.98 333 *e*P **P 06 38 49.2 -0.3**
KRUC Moravsky 78.17 331 *e*P **P 06 38 50.5 -0.1**
ARR Arges 78.18 325 ⇑*i*P **P 06 38 50.3 -0.5**
NKC Novy Kostel 78.42 334 *e*P **P 06 38 51.5 -0.5**
NKC Novy Kostel 78.42 334 *e*P **P 06 38 51.5 -0.5**
MODS Modra-Piesok 78.46 331 *e*P **P 06 38 51.7 -0.5**
MODS pmax pmax
comp=Z,10.0nm,0.9s
MODS Modra-Piesok 78.46 331 *e*P **P 06 38 51.7 -0.5**
BR131 Keskin Array S 78.57 316 *e*P **P 06 38 52.4 -0.7**
comp=Z,3.5nm,0.8s
BRTR Keskin Array B 78.57 316 P **P 06 38 53.3 +0.2**
comp=Z,3.4nm,0.8s,baz=73,slow=5.3,SNR=13
GZR Gura Zlata 78.91 326 ⇑*i*P **P 06 38 54.4 -0.4**
GZR Gura Zlata 78.91 326 ⇑P **P 06 38 54.4 -0.4**
KHC Kasperske Hory 79.04 333 *de*P **P 06 38 55.7 +0.3**
KHC pmax pmax
comp=Z,27nm,1.0s
KHC Kasperske Hory 79.04 333 *e*P **P 06 38 55.5 +0.1**
BZS Buzias 79.18 327 ⇑*i*P **P 06 38 56.4 +0.2**
BZS Buzias 79.18 327 ⇑P **P 06 38 56.4 +0.2**
GERES GERESS Array B 79.25 333 P **P 06 38 56.2 -0.4**
comp=Z,2.9nm,0.6s,baz=28,slow=6.0,SNR=18
CONA Conrad Observa 79.33 331 *e*P **P 06 38 57.5 +0.4**
comp=Z,6.3nm,0.6s
TXAR Lajitas Array 79.49 59 P **P 06 38 59.1 +0.8**
comp=Z,0.7nm,0.6s,baz=302,slow=4.5,SNR=12
MEM Membach 79.92 338 P **P 06 38 59.8 -0.3**
ARSA Arzberg 80.03 331 *e*P **P 06 39 00.7 -0.1**
comp=Z,3.7nm,0.9s
BBOU Bougnies 80.64 339 P **P 06 39 04.3 +0.3**
SOKA Soboth 80.69 331 *i* P **P 06 39 04.4 -0.1**
comp=Z,5.6nm,0.7s
KBA Koelnbreinsper 80.91 332 *i* P **P 06 39 06.0 +0.3**
comp=Z,9.4nm,0.7s
VTS Vitosha 81.01 324 *e*P **P 06 39 05.6 -0.8**
comp=Z,15nm,0.8s
VTS Vitosha 81.01 324 ⇓*i*P **P 06 39 06.9 +0.6**
VTS Vitosha 81.01 324 *e*P **P 06 39 05.6 -0.8**
VTS pmax pmax
comp=Z,15nm,0.8s
MYKA Terra Mystica 81.20 332 *e*P **P 06 39 07.2 0.0**
comp=Z,2.2nm,0.6s
WTTA Wattenberg 81.30 333 *e*P **P 06 39 08.0 +0.2**
comp=Z,12nm,0.8s
BFO Black Forest 81.34 336 *i* P **P 06 39 08.5 +0.7**
RETA Reutte 81.37 334 *i* P **P 06 39 08.1 0.0**
comp=Z,4.4nm,0.6s
MOTA Moosalm 81.39 334 *e*P **P 06 39 08.2 0.0**
comp=Z,8.5nm,0.9s
SQTA Sankt Quirin 81.47 334 *e*P **P 06 39 08.7 0.0**
comp=Z,5.5nm,0.5s
DAVA Damuels 81.82 334 *i* P **P 06 39 10.5 -0.1**
comp=Z,4.7nm,0.9s
PPT Papeete 82.39 124 LR LR 07 11 00.6
comp=Z,80nm,20.6s,baz=167,slow=32
CMLA Cha da Macela 97.39 357 *i* P **P 06 40 24.7 -0.2**
BDFB Brasilia 146.43 35 PKPbc **PKPdf 06 46 32.1 +0.6**
comp=Z,2.6nm,0.8s,baz=329,slow=7.9,SNR=6.0
PLCA Paso Flores 149.43 97 PKPbc **PKPbc 06 46 40.6 +0.5**
comp=Z,2.0nm,0.8s,baz=276,slow=6.4,SNR=4.7
CPUP Villa Florida 150.46 60 PKPbc **PKPbc 06 46 42.3 -0.7**
comp=Z,3.1nm,1.0s,baz=190,slow=1.7,SNR=5.9
SNAA Sanae 150.65 196 PKPbc **PKiKP 06 46 43.1 +0.3**
VNA2 Neumayer--Watz 152.12 195 PKPbc **PKiKP 06 46 46.6 +0.9**
VNA3 Neumayer Olymp 152.24 193 PKPbc **PKiKP 06 46 46.6 +0.6**
VNA1 Neumayer--Stat 152.51 195 PKPbc **PKiKP 06 46 47.3 +0.8**

*ISCJB **04** 06:28:34.5±0.8, 33°.3S±0°.2×77°.9E±0°.2, h10km, mb4.0/8, MS3.9/10, Error ellipse: s-maj=30.0km s-min=22.9km az=155.2*
*IDC **04** 06:28:34.5±1.0, 33°.26S×77°.76E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/41, mbtmp4.0/8, MS3.9/10, Ms1 3.9/10, ms1mx3.6/33, Error ellipse: s-maj=37.0km s-min=28.7km az=63.0*
ISC 04 06:28:36.1±1.0, 33°.3S±0°.2×77°.8E±0°.2, h10km, n22, σ0§82/9, mb4.0/8, MS3.9/10, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**25.96**	**348**	T	T	07 01 05.3	
	baz=170,slow=76,SNR=583						
H08S1	**Diego Carcia H**	**25.96**	**348**	T	T	07 01 18.1	
	baz=170,slow=76,SNR=760						
H08S3	**Diego Garcia H**	**25.98**	**348**	T	T	07 01 06.7	
	baz=170,slow=76,SNR=870						
H01W2	**Cape Leeuwin H**	**30.06**	**103**	T	T	07 06 11.4	
	baz=263,slow=74,SNR=28						
H01W3	**Cape Leeuwin H**	**30.06**	**103**	T	T	07 06 09.7	
	baz=263,slow=74,SNR=26						
H01W1	**Cape Leeuwin H**	**30.07**	**103**	T	T	07 06 16.6	
	baz=263,slow=74,SNR=29						
NWAO	**Narrogin (SRO)**	**32.92**	**100**	LR	LR	06 45 04.1	
	comp=Z,265nm,21.2s,baz=312,slow=30						
MAW	**Mawson**	**35.46**	**190**	LR	LR	06 46 35.2	
	comp=Z,105nm,21.2s,baz=24,slow=30						
BOSA	**Boshof**	**44.90**	**261**	LR	LR	06 51 15.4	
	comp=Z,171nm,22.0s,baz=98,slow=30						
FITZ	**Fitzroy Crossi**	**45.32**	**83**	LR	LR	06 52 04.7	
	comp=Z,114nm,21.1s,baz=292,slow=31						
KMBO	**Kilima Mbogo**	**49.65**	**302**	LR	LR	06 54 15.8	
	comp=Z,44nm,20.9s,baz=92,slow=31						
ASAR	**Alice Springs**	**49.76**	**94**	P	**P**	**06 37 29.6 +0.6**	
	1.5nm,1.0s,baz=240,slow=6.2,SNR=5.9						
ASAR				LR	LR	06 55 16.6	
	comp=Z,152nm,21.7s,baz=270,slow=32						
STKA	**Stephens Creek**	**53.03**	**107**	LR	LR	06 57 18.8	
	comp=Z,121nm,19.6s,baz=229,slow=32						
CMAR	**Chiang Mai Arr**	**55.26**	**25**	P	**P**	**06 38 10.1 +0.4**	
	1.5nm,0.6s,baz=204,slow=7.7,SNR=4.9						
VNDA	**Vanda**	**56.52**	**165**	P	**P**	**06 38 17.8 -0.2**	
	0.7nm,0.8s,baz=291,slow=7.2,SNR=4.1						
VNDA				LR	LR	07 00 16.2	
	comp=Z,94nm,18.5s,baz=279,slow=34						
MKAR	**Makanchi Array**	**79.79**	**3**	P	**P**	**06 40 44.1 -0.1**	
	0.8nm,0.8s,baz=175,slow=7.2,SNR=5.8						
BRTR	**Keskin Array B**	**83.33**	**327**	P	**P**	**06 41 03.5 +0.2**	
	1.1nm,0.9s,baz=163,slow=5.4,SNR=3.3						
SONM	**Songino Array**	**84.72**	**19**	P	**P**	**06 41 09.0 -1.2**	
	0.7nm,0.6s,baz=181,slow=5.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**85.82**	**289**	P	**P**	**06 41 16.8 +0.5**	
	1.1nm,0.8s,baz=131,slow=6.1,SNR=6.1						
TORD				LR	LR	07 18 33.1	
	comp=Z,104nm,18.0s,baz=345,slow=35						
ZALV	**Zalesovo Beam**	**87.07**	**4**	P	**P**	**06 41 22.1 +0.6**	
	1.6nm,0.6s,baz=193,slow=5.8,SNR=5.9						
DBIC	**Dimbokro**	**87.49**	**280**	LR	LR	07 16 28.9	
	comp=Z,101nm,21.3s,baz=103,slow=33						
YKA	**Yellowknife Ar**	**149.71**	**11**	PKPbc	**PKPbc**	**06 48 24.2 -1.1**	
	1.0nm,0.7s,baz=336,slow=3.1,SNR=9.6						

ROM 04 06:37:05.2±0.0, 39°.250N±0°.003×16°.457E±0°.002, h20km, ML1.2/4, Error ellipse: s-maj=0.3km s-min=0.2km az=189.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CELI	**Celico**	**0.16**	**15**	P	Pb	06 37 09.9	-0.8
CELI				S	Sb	06 37 13.4	-1.2
CELI				AML	AML		
	comp=E,114μm,1.0s						
CELI				AML	AML		
	comp=N,123μm,0.2s						
CELI				AML	AML		
	comp=E,114μm,1.0s						
CELI				AML	AML		
	comp=N,123μm,0.2s						
CAR1	**CAROLEI**	**0.19**	**271**	P	Pb	06 37 10.3	-0.4
CAR1				S	Sb	06 37 14.1	-0.5
CAR1				AML	AML		
	comp=E,228μm,0.4s						
CAR1				AML	AML		
	comp=N,302μm,0.3s						
CAR1				AML	AML		
	comp=N,302μm,0.3s						
CAR1				AML	AML		
	comp=E,228μm,0.4s						
TIP	**Timpagrande**	**0.24**	**107**	P	Pb	06 37 11.2	0.0
TIP				S	Sb	06 37 15.4	+0.1
TIP				AML	AML		
	comp=E,31μm,0.4s						
TIP				AML	AML		
	comp=N,24μm,0.7s						
TIP				AML	AML		
	comp=N,24μm,0.7s						
TIP				AML	AML		
	comp=E,31μm,0.4s						
SERS	**Sersale**	**0.28**	**140**	P	Pb	06 37 11.8	+0.1
SERS				S	Sb	06 37 16.4	+0.2
SERS				AML	AML		
	comp=E,64μm,1.2s						
SERS				AML	AML		
	comp=N,49μm,0.4s						
SERS				AML	AML		
	comp=N,49μm,0.4s						
SERS				AML	AML		
	comp=E,64μm,1.2s						
T0702	**Acquaformosa (**	**0.55**	**329**	P	Pb	06 37 16.1	-0.2

*IDC **04** 06:40:23.8±0.5, 10°.74S×113°.84E, h0km, mb4.4/18, mb1 4.5/20, mb1mx4.4/30, mbtmp4.5/20, ML4.6/2, MS3.7/6, Ms1 3.7/6, ms1mx3.3/42, Error ellipse: s-maj=19.5km s-min=12.1km az=69.0*
*BJI **04** 06:40:24.3±0.0, 10°.90S×113°.80E, h15km, mb4.8/32, mB4.9/27, Ms4.7/10, Ms7 4.3/6*
*ISCJB **04** 06:40:25.7±1.2, 10°.85S±0°.03×113°.83E±0°.03, h24km±8km, mb4.7/48, MS4.0/7, Error ellipse: s-maj=5.5km s-min=4.0km az=43.8*
*MOS **04** 06:40:27.2±0.8, 10°.70S×113°.95E, h32km, mb5.0/18, Error ellipse: s-maj=11.9km s-min=7.2km az=109.8*
*NEIC **04** 06:40:27.5±2.1, 10°.85S×113°.84E, h24km±4km, mb4.6/24, Error ellipse: s-maj=14.4km s-min=11.4km az=51.0*
*DJA **04** 06:40:29.0±0.7, 11°.5±2°.×11°.4E±°, h22km±6km, M4.8/25, mB5.2/9, mb4.9/25, MLv5.1/15, Mw(mB)4.6/9*
ISC 04 06:40:26.5±2.4, 10°.87S±0°.05×113°.80E±0°.05, h16km±14km, n180, σ1§41/186, mb4.8/48, MS3.9/7, 9C-6D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**2.41**	**8**	*e*Pn	**Pn**	**06 41 05.4**	**+0.1**
JAGI	**Jajag, Banyuwa**	**2.41**	**8**	P	**Pn**	**06 41 05.4**	**+0.1**
JAGI				S	**Sn**	**06 41 34.1**	**-0.4**
DNP	**Denpasar**	**2.59**	**33**	P	**Pn**	**06 41 08.0**	**+0.3**
DNP				S	**Sn**	**06 41 37.6**	**-1.2**
SRBI	**Singaraja**	**3.10**	**27**	P	**Pn**	**06 41 15.4**	**+0.6**
SRBI				S	**Sn**	**06 41 51.4**	**-0.1**
PWJI	**Pagerwojo**	**3.45**	**325**	P	**Pn**	**06 41 19.4**	**-0.2**
PWJI				S	**Sn**	**06 41 58.6**	**-1.5**
KMMI	**Kalianget**	**3.80**	**3**	P	**Pn**	**06 41 25.4**	**+1.0**
WOJI	**Wonogiri, Jawa**	**4.14**	**316**	P	**Pn**	**06 41 30.5**	**+1.4**
WOJI				S	**Sn**	**06 42 15.0**	**-2.2**
GRJI	**Gresik**	**4.14**	**342**	P	**Pn**	**06 41 29.8**	**+0.7**
UGM	**Wanagama**	**4.37**	**312**	*e*Pn	**Pn**	**06 41 33.0**	**+0.7**
UGM				*e*Sn	**Sn**	**06 42 20.1**	**-2.8**
UGM	**Wanagama**	**4.37**	**312**	P	**Pn**	**06 41 34.6**	**+2.3**
PLAI	**Plampang**	**4.41**	**63**	P	**Pn**	**06 41 32.7**	**-0.2**
SMRI	**Semarang**	**5.04**	**319**	*e*Pn	**Pn**	**06 41 38.9**	**-2.6**
SMRI				*e*Sn	**Sn**	**06 42 39.0**	**-0.5**
WBSI	**Waikabubak, Su**	**5.64**	**78**	P	**Pn**	**06 41 50.4**	**+0.7**
CISI	**Cisompet, Garu**	**6.76**	**299**	*e*Pn	**Pn**	**06 42 05.2**	**0.0**
CISI				*e*Sn	**Sn**	**06 43 18.4**	**-3.6**
CISI	**Cisompet, Garu**	**6.76**	**299**	P	**Pn**	**06 42 06.9**	**+1.7**
LEM	**Lembang**	**7.31**	**303**	Pn	**Pn**	**06 42 14.7**	**+1.9**
	5.5nm,0.3s,baz=120,slow=16,SNR=3.2						
XMIS	**Christmas Isla**	**8.02**	**272**	*e*Pn	**Pn**	**06 42 20.9**	**-1.6**
XMIS				*e*Sn	Sn	06 43 39.8	-13
EDFI	**Ende, Flores**	**8.06**	**76**	P	**Pn**	**06 42 23.3**	**+0.3**
	51nm,0.6s,2μm						
BSSI	**Bau Bau, Buton**	**8.12**	**55**	P	**Pn**	**06 42 24.9**	**+1.2**
KAPI	**Kappang**	**8.28**	**46**	Pn	**Pn**	**06 42 25.2**	**-0.8**
	4.1nm,0.3s,baz=193,slow=5.7,SNR=17						
KAPI				Sn	**Sn**	**06 43 54.2**	**-5.1**
	2.9nm,0.3s,baz=232,slow=19,SNR=10						
KAPI				LR	LR	06 46 29.9	
	comp=Z,326nm,18.1s,baz=201,slow=45						
BKSI	**Bulukumba**	**8.34**	**49**	P	**Pn**	**06 42 27.1**	**+0.3**
MMRI	**Maumere**	**8.61**	**76**	P	Pn	06 42 45.5	+15
BNSI	**Bone**	**8.97**	**45**	P	**Pn**	**06 42 35.4**	**0.0**
CGJI	**Cibinong**	**9.06**	**297**	P	**Pn**	**06 42 37.3**	**+0.6**
BATI	**Baumata**	**9.72**	**87**	Pn	**Pn**	**06 42 44.4**	**-1.4**
	10nm,0.3s,baz=293,slow=5.0,SNR=4.0						
BATI				Sn	Sn	06 44 25.8	-9.0
	22nm,0.3s,baz=318,slow=16,SNR=9.8						
BATI	**Baumata**	**9.72**	**87**	*e*Pn	**Pn**	**06 42 44.4**	**-1.4**
BATI				*e*Pn	**Pn**	**06 42 44.4**	**-1.4**
BATI				*e*Sn	Sn	06 44 25.8	-9.0
BATI	**Baumata**	**9.72**	**87**	P	**Pn**	**06 42 45.5**	**-0.3**
TTSI	**Tana Toraja**	**9.80**	**38**	P	**Pn**	**06 42 46.8**	**-0.1**
SOEI	**Soe**	**10.36**	**85**	P	**Pn**	**06 42 55.0**	**+0.3**
MDSI	**Maura Dua**	**11.45**	**303**	P	**Pn**	**06 43 11.8**	**+2.3**
GIRL	**Giralia**	**11.71**	**178**	P	**Pn**	**06 43 10.8**	**-2.3**
	baz=12,SNR=12						
PSA00	**Pilbara Seismi**	**12.12**	**152**	*e*Pn	**Pn**	**06 43 14.2**	**-4.4**
FITZ	**Fitzroy Crossi**	**13.53**	**123**	Pn	**Pn**	**06 43 34.9**	**-2.9**
	0.5nm,0.3s,baz=300,slow=8.6,SNR=9.3						
FITZ				Sn	Sn	06 45 53.5	-14
	1.1nm,0.3s,baz=342,slow=20,SNR=4.1						
FITZ	**Fitzroy Crossi**	**13.53**	**123**	P	**Pn**	**06 43 35.1**	**-2.7**
	baz=14,SNR=6.5						
MRSI	**Marisa**	**13.88**	**36**	P	**Pn**	**06 43 43.4**	**+0.7**
SDSI	**Sungai Dareh**	**15.77**	**308**	P	**P**	**06 44 10.7**	**-1.2**
MTN	**Manton Dam**	**17.08**	**98**	*e*Pn	**Pn**	**06 44 23.6**	**-1.1**
	20nm,1.1s						
MTN	**Manton Dam**	**17.08**	**98**	P	**Pn**	**06 44 23.6**	**-1.1**
	baz=17,SNR=3.7						
MORW	**Morawa**	**18.23**	**174**	*e*Pn	**Pn**	**06 44 36.7**	**-2.2**
	16nm,0.7s						
MORW	**Morawa**	**18.23**	**174**	P	**Pn**	**06 44 36.3**	**-2.6**
	baz=18,SNR=7.3						
WRKA	**Warakurna**	**19.69**	**138**	P	**Pn**	**06 44 56.6**	**-0.1**
	baz=20,SNR=8.1						
FAKI	**Fak Fak**	**19.93**	**68**	*e*P	**P**	**06 44 55.4**	**-2.5**
	32nm,0.7s						
KULM	**Kulim**	**20.72**	**320**	*e*P	**P**	**06 45 07.0**	**+0.6**
	18nm,0.7s						
DAV	**Davao City (W)**	**21.34**	**34**	LR	LR	06 55 06.8	
	comp=Z,114nm,18.1s,baz=205,slow=42						
KMBL	**Kambalda**	**21.73**	**161**	P	**P**	**06 45 16.8**	**-0.4**
	baz=22,SNR=6.1						
WRA	**Warramunga Arr**	**21.74**	**117**	P	**P**	**06 45 17.4**	**0.0**
	83nm,0.3s,baz=285,slow=13,SNR=2.3						
WR1	**Warramunga Arr**	**21.74**	**117**	*e*P	**P**	**06 45 17.4**	**0.0**
WRAB	**Tennant Creek**	**21.74**	**117**	*e*P	**P**	**06 45 18.5**	**+1.1**
	17nm,0.7s						
WRAB	**Tennant Creek**	**21.74**	**117**	*e*P	**P**	**06 45 18.5**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,17nm,0.7s						
WB2	**Warramunga Arr**	**21.75**	**117**	*e*P	**P**	**06 45 17.8**	**+0.3**
	comp=Z,18nm,0.7s						
WB2	**Warramunga Arr**	**21.75**	**117**	P	**P**	**06 45 18.2**	**+0.7**
	baz=22						
NWAO	**Narrogin (SRO)**	**22.18**	**172**	P	**P**	**06 45 22.3**	**+0.3**
	comp=Z,11nm,0.9s,baz=337,slow=13,SNR=3.7						
NWAO				PcP	**PcP**	**06 49 19.6**	**+1.0**
	comp=Z,9.1nm,0.5s,baz=323,slow=5.1,SNR=5.6						
NWAO				LR	LR	06 54 25.3	
	comp=Z,64nm,18.4s,baz=334,slow=38						
AS31	**Alice Springs**	**22.99**	**126**	*e*P	**P**	**06 45 31.2**	**+0.4**
	comp=Z,4.1nm,0.6s						
ASAR	**Alice Springs**	**22.99**	**126**	P	**P**	**06 45 30.8**	**0.0**
	comp=Z,9.0nm,0.6s,baz=302,slow=9.0,SNR=91						
ASAR				PcP	**PcP**	**06 49 21.4**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=327,slow=1.6,SNR=6.0						
FORT	**Forrest**	**23.83**	**148**	*e*P	**P**	**06 45 39.1**	**+0.2**
	comp=Z,81nm,0.7s						
FORT	**Forrest**	**23.83**	**148**	P	**P**	**06 45 38.8**	**-0.1**
	baz=24,SNR=26						
QIS	**Mount Isa**	**26.61**	**114**	P	**P**	**06 46 03.3**	**-1.1**
	baz=27,SNR=4.4						
CMAR	**Chiang Mai Arr**	**32.62**	**333**	P	**P**	**06 46 57.9**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=166,slow=7.9,SNR=7.7						
STKA	**Stephens Creek**	**33.10**	**133**	P	**P**	**06 47 02.2**	**+0.4**
	comp=Z,9.5nm,0.8s,baz=312,slow=8.9,SNR=16						
STKA				PcP	**PcP**	**06 49 45.7**	**+0.6**
	comp=Z,4.4nm,0.8s,baz=298,slow=6.0,SNR=3.4						
STKA	**Stephens Creek**	**33.10**	**133**	P	**P**	**06 47 02.4**	**+0.5**
	baz=33,SNR=11						
STKA	**Stephens Creek**	**33.10**	**133**	*e*P	**P**	**06 47 02.3**	**+0.5**
STKA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KMI	**Kunming**	**37.37**	**343**	P	**P**	**06 47 42.0**	**+3.2**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				pmax	pmax		
	comp=Z,87nm,3.9s						
H08S2	**Diego Garcia H**	**40.87**	**271**	T	T	07 31 28.8	
	baz=96,slow=75,SNR=61						
H08S3	**Diego Garcia H**	**40.88**	**271**	T	T	07 31 38.5	
	baz=96,slow=75,SNR=57						
H08S1	**Diego Carcia H**	**40.89**	**271**	T	T	07 31 41.9	
	baz=96,slow=75,SNR=68						
SHL	**Shillong**	**42.04**	**330**	*e*P	**P**	**06 48 17.8**	**0.0**
	comp=Z,9.4nm,0.8s						
SHL	**Shillong**	**42.04**	**330**	*e*P	**P**	**06 48 17.8**	**0.0**
SHL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHL	**Shillong**	**42.04**	**330**	*e*P	**P**	**06 48 17.0**	**-0.7**
NJ2	**Nanjing**	**42.95**	**6**	*e*P	**P**	**06 48 26.9**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
XAN	**Xi'an**	**44.90**	**354**	P	**P**	**06 48 41.6**	**+1.1**
XAN				pP	pwP	06 48 50.0	-0.9
ODAN	**Odare**	**45.44**	**326**	*e*P	**P**	**06 48 45.1**	**0.0**
	comp=Z,31nm,0.8s						
RAMN	**Ramite**	**45.94**	**325**	*e*P	**P**	**06 48 48.9**	**-0.2**
	comp=Z,17nm,0.8s						
JIRN	**Jiri**	**46.72**	**326**	*e*P	**P**	**06 48 55.4**	**0.0**
	comp=Z,59nm,0.8s						
GUN	**Gumba**	**47.09**	**326**	*e*P	**P**	**06 48 58.3**	**0.0**
	comp=Z,28nm,0.7s						
PKI	**Pulchoki**	**47.09**	**325**	*e*P	**P**	**06 48 57.6**	**-0.7**
PKIN	**Phulchoki**	**47.10**	**325**	*e*P	**P**	**06 48 57.6**	**-0.7**
	comp=Z,7.0nm,0.5s						
DMN	**Daman**	**47.29**	**325**	*e*P	**P**	**06 48 59.5**	**-0.2**
	comp=Z,22nm,0.6s						
LZH	**Lanzhou**	**47.64**	**349**	*e*P	**P**	**06 49 05.6**	**+3.4**
LZH				pP	pwP	06 49 10.7	-1.8
LZH				sP	sP	06 49 13.5	+6.5
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,79nm,6.0s						
LZH				LR	LR		
	comp=Z,350nm,14.0s						
LZH				LR	LR		
	comp=Z,370nm,14.2s						
LZH				LR	LR		
	comp=Z,450nm,17.0s						
DANN	**Dangsing**	**48.63**	**324**	*e*P	**P**	**06 49 09.6**	**-0.5**
	comp=Z,31nm,0.6s						
KSRS	**Korea Array**	**49.86**	**15**	P	**P**	**06 49 17.5**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=203,slow=7.3,SNR=3.2						
HHC	**Hu-ho-hao-te**	**51.50**	**358**	*e*P	**P**	**06 49 34.6**	**+3.1**
HHC				pmax	pmax		
	comp=Z,38nm,0.8s						
HHC				pmax	pmax		
	comp=Z,88nm,6.6s						
MAJO	**Matsushiro**	**52.46**	**25**	*e*P	**P**	**06 49 36.3**	**-2.4**
MAJO	**Matsushiro**	**52.46**	**25**	‖*e*P	**P**	**06 49 35.7**	**-2.9**
MAJO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MJAR	**Matsushiro Arr**	**52.46**	**25**	P	**P**	**06 49 36.3**	**-2.4**
	comp=Z,1.0nm,0.5s,baz=194,slow=9.9,SNR=4.1						
USRK	**Ussuriysk Ar.**	**57.25**	**15**	P	**P**	**06 50 11.7**	**-1.4**
	comp=Z,2.7nm,0.7s,baz=247,slow=23,SNR=5.3						
ULN	**Ulaanbaatar**	**58.78**	**355**	*e*P	**P**	**06 50 23.5**	**-0.5**
	comp=Z,4.9nm,0.6s						
ULN	**Ulaanbaatar**	**58.78**	**355**	*e*P	**P**	**06 50 23.5**	**-0.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SONA0	**Songino Array**	**58.81**	**354**	*e*P	**P**	**06 50 23.5**	**-0.7**
SONA0				*e*PcP	**PcP**	**06 51 14.2**	**+0.5**
SONM	**Songino Array**	**58.81**	**354**	P	**P**	**06 50 23.5**	**-0.7**
	comp=Z,4.5nm,0.7s,baz=175,slow=8.8,SNR=19						
SONM				PcP	**PcP**	**06 51 14.2**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=159,slow=5.6,SNR=2.3						
RPZ	**Rata Peaks**	**59.05**	**135**	LR	LR	07 15 58.0	
	comp=Z,178nm,18.4s,baz=329,slow=36						
WMQ	**Urumqi**	**59.39**	**338**	*e*P	**P**	**06 50 28.8**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,9.0nm,3.6s						
WMQ				LR	LR		
	comp=Z,640nm,11.9s						
WMQ				LR	LR		
	comp=Z,590nm,14.9s						
KSH	**Kashi**	**61.22**	**327**	*e*P	**P**	**06 50 44.8**	**+3.9**
KLR	**Kul'dur**	**61.90**	**13**	‖*e*P	**P**	**06 50 45.2**	**+0.1**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PDGK	**Podgornoye**	**62.36**	**332**	P	**P**	**06 50 49.1**	**+0.6**
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TLY	**Talaya**	**62.91**	**353**	‖*e*P	**P**	**06 50 51.7**	**-0.2**
BOOM	**Boomskoye usch**	**63.42**	**329**	*e*P	**P**	**06 50

BOD	**Bodaibo**	**68.45**	**0**	*e*P	**P**	**06 51 27.0**	**-0.4**
BOD				*e*		06 51 40.1	
KURK	**Kurchatov**	**68.55**	**337**	*e*P	**P**	**06 51 28.1**	**-0.1**
	comp=Z,9.6nm,0.7s						
KURK	**Kurchatov**	**68.55**	**337**	*e*P	**P**	**06 51 28.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZALV	**Zalesovo Beam**	**69.10**	**342**	P	**P**	**06 51 30.1**	**-1.4**
	comp=Z,6.4nm,0.5s,baz=146,slow=4.6,SNR=11						
NVS	**Novosibirsk**	**70.34**	**342**	*e*P	**P**	**06 51 38.6**	**-0.6**
VNDA	**Vanda**	**70.99**	**170**	P	**P**	**06 51 42.6**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=304,slow=5.7,SNR=17						
VNDA				LR	LR	07 21 00.6	
	comp=Z,64nm,18.3s,baz=266,slow=34						
VNDA	**Vanda**	**70.99**	**170**	*e*PcP	**P**	**06 51 43.9**	**+1.0**
	comp=Z,2.4nm,0.9s						
VNDA	**Vanda**	**70.99**	**170⇑**	*e*P	**P**	**06 51 43.9**	**+1.0**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GEYT	**Alibeck**	**71.14**	**316**	P	**P**	**06 51 43.5**	**-1.1**
	comp=Z,4.8nm,0.7s,baz=120,slow=8.8,SNR=7.4						
YAK	**Yakutsk**	**73.73**	**8**	*e*P	**P**	**06 51 59.3**	**-0.1**
YAK				pmax	pmax		
	comp=Z,62nm,1.0s						
PETK	**Petropavlovsk-**	**73.91**	**26**	P	**P**	**06 51 58.7**	**-1.9**
	comp=Z,2.6nm,0.7s,baz=201,slow=2.5,SNR=4.7						
PEA1	**Petropavlovsk-**	**73.91**	**26**	*e*P	**P**	**06 51 58.7**	**-1.9**
SYO	**Syowa Base**	**74.27**	**201⇓**	*i*P	**P**	**06 52 01.4**	**-1.1**
KMBO	**Kilima Mbogo**	**76.58**	**271**	P	**P**	**06 52 17.8**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=54,slow=9.1,SNR=5.3						
KMBO	**Kilima Mbogo**	**76.58**	**271**	*e*P	**P**	**06 52 18.8**	**+1.6**
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
QSPA	**South Pole Qui**	**79.14**	**180**	*e*P	**P**	**06 52 29.5**	**-0.8**
	comp=Z,9.2nm,1.1s						
SEY	**Seymchan**	**79.36**	**17⇓**	*e*P	**P**	**06 52 31.1**	**-0.1**
ARU	**Arti**	**81.06**	**332**	*c i*P	**P**	**06 52 40.9**	**+0.3**
ARU						06 55 40.6	
ARU				S	**S**	**07 02 52.0**	**+2.7**
ARU				SS	**SS**	**07 07 56.7**	**-7.7**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GNI	**Garni**	**81.44**	**314⇑**	*e*P	**P**	**06 52 42.2**	**-1.0**
GNI				pmax	pmax		
	comp=Z,22nm,1.0s						
NRIK	**Noril'sk**	**82.10**	**351**	P	**P**	**06 52 45.2**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=165,slow=7.4,SNR=3.2						
TIXI	**Tiksi**	**82.95**	**5**	*e*P	**P**	**06 52 49.0**	**-1.2**
	comp=Z,8.4nm,0.8s						
TIXI	**Tiksi**	**82.95**	**5**	*c e*P	**P**	**06 52 49.4**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZEI	**Tsey**	**83.01**	**316**	*e*P	**P**	**06 52 51.9**	**+0.5**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BOSA	**Boshof**	**83.61**	**242**	LR	LR	07 23 48.3	
	comp=Z,33nm,18.5s,baz=100,slow=31						
KBZ	**Khabaz**	**84.04**	**316**	P	**P**	**06 52 56.2**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=158,slow=5.4,SNR=4.5						
KIV	**Kislovodsk**	**84.26**	**317**	*e*P	**P**	**06 52 55.7**	**-2.0**
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
VRH	**Novokhopyorsk**	**87.45**	**323**	*e*P	**P**	**06 53 13.2**	**+0.1**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SNAA	**Sanae**	**87.80**	**196**	P	**P**	**06 53 15.4**	**+0.7**
SNAA	**Sanae**	**87.80**	**196**	*e*P	**P**	**06 53 15.1**	**+0.4**
	comp=Z,8.6nm,0.8s						
SNAA	**Sanae**	**87.80**	**196**	*e*P	**P**	**06 53 15.1**	**+0.4**
SNAA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VORD	**Divnogorie**	**88.81**	**322**	*e*P	**P**	**06 53 19.0**	**-0.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**88.97**	**323**	*e*P	**P**	**06 53 19.9**	**-0.5**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
BR101	**Keskin Array S**	**89.42**	**311**	*e*P	**P**	**06 53 22.9**	**-0.1**
BRTR	**Keskin Array B**	**89.42**	**311**	P	**P**	**06 53 22.9**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=120,slow=7.2,SNR=7.4						
BRTR	**Keskin Array B**	**89.42**	**311**	*c e*P	**P**	**06 53 23.5**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNA2	**Neumayer--Watz**	**89.44**	**196**	P	**P**	**06 53 23.6**	**+1.3**
	baz=106,slow=4.0						
VNA1	**Neumayer--Stat**	**89.83**	**196**	P	**P**	**06 53 24.6**	**+0.5**
VNA3	**Neumayer Olymp**	**89.88**	**196**	P	**P**	**06 53 24.8**	**+0.4**
MOS	**Moscow**	**91.25**	**327**	*e*P	P	06 53 42.3	+11
MOS				*e*		06 53 50.6	
TORD	**Torodi Ar. Bea**	**113.73**	**280**	PKiKP	**PKiKP**	**06 59 05.1**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=145,slow=3.3,SNR=3.3						
YKA	**Yellowknife Ar**	**117.95**	**23**	PKP	**PKPdf**	**06 59 11.5**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=311,slow=2.1,SNR=8.5						
YKB5	**Yellowknife Ar**	**117.95**	**23**	*e*PKPdf	**PKPdf**	**06 59 11.6**	**-0.5**
NV01	**Mina Array Sit**	**126.15**	**50**	*e*PKPdf	**PKPdf**	**06 59 29.5**	**+0.7**
NVAR	**Mina Array Bea**	**126.15**	**50**	PKP	**PKPdf**	**06 59 29.5**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=241,slow=3.1,SNR=3.6						
TXAR	**Lajitas Array**	**140.54**	**57**	PKhKP	PKPpre	06 59 48.7	
	comp=Z,0.3nm,0.7s,baz=250,slow=2.7,SNR=5.8						
JCT	**Junction City**	**143.22**	**53**	*e*PKPbc	PKPbc	06 59 58.3	+0.7
JCT	**Junction City**	**143.22**	**53**	*e*PKIKP	PKPbc	06 59 58.3	+0.7
WHTX	**Lake Whitney,**	**144.32**	**49**	*e*PKPdf	PKPbc	07 00 02.0	+1.2
CCM	**Cathedral Cave**	**144.84**	**35**	*e*PKPdf	**PKPab**	**07 00 02.4**	**+0.2**
CCM	**Cathedral Cave**	**144.84**	**35**	*e*PKIKP	**PKPab**	**07 00 02.4**	**+0.2**
MIAR	**Mount Ida**	**145.67**	**42**	*e*PKPdf	**PKPdf**	**07 00 05.2**	**+0.6**
MIAR	**Mount Ida**	**145.67**	**42**	*e*PKIKP	**PKPdf**	**07 00 05.3**	**+0.6**
WCI	**Wyandotte Cave**	**147.35**	**30**	*e*PKPbc	**PKPbc**	**07 00 10.0**	**+0.2**
WCI	**Wyandotte Cave**	**147.35**	**30**	*e*PKP2	**PKPbc**	**07 00 10.0**	**+0.2**
BDFB	**Brasilia**	**148.09**	**215**	PKPbc	**PKPbc**	**07 00 12.4**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=180,slow=8.0,SNR=3.6						
WVT	**Waverly**	**148.13**	**34**	*e*PKPbc	**PKPbc**	**07 00 12.4**	**+0.4**
OXF	**Oxford**	**148.34**	**38**	*e*PKPbc	**PKPbc**	**07 00 11.5**	**-1.1**
P53A	**Whipple**	**148.46**	**23**	*e*PKPbc	**PKPbc**	**07 00 13.2**	**+0.4**
PLAL	**Pickwick Lake**	**148.81**	**36**	*e*PKPbc	**PKPbc**	**07 00 13.8**	**0.0**
PB11	**IPOC Station P**	**149.37**	**174**	*e*PKPbc	**PKPbc**	**07 00 16.3**	**+0.4**
MNMC	**Minye Minye**	**150.00**	**174**	*e*PKPbc	**PKiKP**	**07 00 18.7**	**+0.2**
V52A	**Sevierville**	**150.56**	**30**	*e*PKPbc	**PKPbc**	**07 00 17.6**	**-0.5**
LRAL	**Lakeview Retre**	**150.81**	**38**	*e*PKPbc	**PKPbc**	**07 00 19.4**	**+0.7**
V53A	**Saluda**	**151.07**	**29**	*e*PKPbc	**PKiKP**	**07 00 20.4**	**+0.4**
LPAZ	**La Paz**	**152.95**	**176**	PKPbc	**PKiKP**	**07 00 25.7**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=225,slow=2.5,SNR=11						
LPAZ				PKPab	**PKPab**	**07 00 36.6**	**+0.9**
	comp=Z,6.2nm,0.7s,baz=190,slow=5.9,SNR=21						

ISCJB ***04*** *06:44:05.4±0.6, 24°.91N±0°.02×122°.46E±0°.02, h11km±3km, Error ellipse: s-maj=4.5km s-min=3.2km az=33.9*
JMA ***04*** *06:44:05.7, 24°.92N×122°.50E, h30km±5km, M1.9*
TAP ***04*** *06:44:06.5, 24°.90N×122°.43E, h13km, ML2.9, C*
ISC 04 06:44:04.8±1.2, 24°.92N±0°.04×122°.48E±0°.03, h25km±11km, n45, σ0°55/85, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.46**	**282**	*i*P	**Pb**	**06 44 14.3**	**-0.1**
	baz=285						
TWB1				*i*S	**Sb**	**06 44 20.1**	**-0.7**
	baz=285						
EOS1	**EOS1**	**0.49**	**222**	P	**Pb**	**06 44 15.2**	**+0.4**
	baz=217						
EOS1				S	**Sb**	**06 44 22.1**	**+0.5**
	baz=217						
EGS		**0.51**	**262**	*e*P	**Pb**	**06 44 14.3**	**-0.9**
	baz=262						
EGS				*e*S	**Sb**	**06 44 21.6**	**-0.5**
	baz=262						
TIPB	**Shuangxi**	**0.60**	**276**	P	**Pb**	**06 44 17.1**	**+0.4**
	baz=277						
TIPB				S	**Sb**	**06 44 25.2**	**+0.4**
	baz=277						
JYNG	**Yonagunijimaku**	**0.62**	**138**	P	**Pn**	**06 44 17.7**	**-0.4**
JYNG				*e*S	**Sn**	**06 44 26.3**	**-1.0**
TWC	**Suao**	**0.65**	**242**	*i*P	**Pb**	**06 44 17.3**	**-0.3**
	baz=240						
TWC				*i*S	**Sb**	**06 44 25.9**	**-0.4**
	baz=240						
NWF	**Wu-fen Shan**	**0.66**	**284**	P	**Pb**	**06 44 18.0**	**+0.3**
	baz=286						
NWF				S	**Sb**	**06 44 27.2**	**+0.7**
	baz=286						
WFSB	**Wu-fen Shan**	**0.66**	**284**	P	**Pn**	**06 44 18.1**	**-0.4**
	baz=286						
WFSB				S	**Sb**	**06 44 27.2**	**+0.7**
	baz=286						
YOJ	**Yonaguni jima**	**0.66**	**133**	*e*P	**Pn**	**06 44 18.1**	**-0.4**
	baz=129						
YOJ				*e*S	**Sb**	**06 44 26.8**	**+0.4**
	baz=129						
YOJ	**Yonaguni jima**	**0.66**	**133**	P	**Pn**	**06 44 18.2**	**-0.4**
YOJ				*e*S	**Sb**	**06 44 26.9**	**+0.4**
TWE	**Neicheng**	**0.77**	**256**	P	**Pn**	**06 44 19.8**	**-0.2**
	baz=254						
TWE				S	**Sb**	**06 44 29.3**	**-0.2**
	baz=254						
PCYT	**Pengchaiyu**	**0.80**	**332**	*e*P	**Pn**	**06 44 21.4**	**+0.8**
	baz=336						
YM07	**YM07**	**0.82**	**289**	*e*P	**Pn**	**06 44 21.1**	**+0.2**
	baz=290						
YM07				*e*S	**Sn**	**06 44 31.8**	**-0.5**
	baz=290						
ENA	**Nanau**	**0.83**	**234**	*i*P	**Pb**	**06 44 20.6**	**-0.1**
	baz=232						
ENA				*i*S	**Sb**	**06 44 31.1**	**-0.3**
	baz=232						
YM08	**YM08**	**0.85**	**289**	*e*P	**Pb**	**06 44 21.0**	**-0.1**
	baz=290						
YM08				*e*S	**Sn**	**06 44 32.7**	**-0.4**
	baz=290						
YM01	**YM01**	**0.86**	**286**	P	**Pb**	**06 44 21.3**	**+0.1**
	baz=287						
YM01				*e*S	**Sn**	**06 44 33.0**	**-0.2**
	baz=287						
YM05	**YM05**	**0.87**	**287**	*e*P	**Pn**	**06 44 20.8**	**-0.8**
	baz=288						
NHDH	**Xindian Distri**	**0.87**	**273**	*e*P	**Pn**	**06 44 21.3**	**-0.2**
	baz=274						
NHDH				*e*S	**Sn**	**06 44 32.9**	**-0.5**
	baz=274						
YM10	**YM10**	**0.87**	**286**	P	**Pb**	**06 44 21.6**	**+0.2**
	baz=287						
YM10				*e*S	**Sn**	**06 44 33.3**	**-0.2**
	baz=287						
ENTT	**Nioudou**	**0.88**	**252**	P	**Pb**	**06 44 22.0**	**+0.6**
	baz=251						
ENTT				S	**Sb**	**06 44 33.0**	**+0.2**
	baz=251						
TWY	**Chenhua**	**0.88**	**294**	*e*P	**Pn**	**06 44 21.3**	**-0.3**
	baz=296						
TWY				*e*S	**Sn**	**06 44 33.7**	**+0.1**
	baz=296						
YM04	**YM04**	**0.89**	**286**	*e*P	**Pb**	**06 44 22.4**	**+0.7**
	baz=287						
YM04				*e*S	**Sb**	**06 44 32.9**	**-0.3**
	baz=287						
NWLT	**Wulai**	**0.90**	**261**	P	**Pn**	**06 44 21.5**	**-0.5**
	baz=261						
NWLT				*e*S	**Sb**	**06 44 33.0**	**-0.5**
	baz=261						
TATO	**Taipei**	**0.91**	**274**	*e*P	**Pn**	**06 44 21.3**	**-0.7**
	baz=274						
TATO				*e*S	**Sb**	**06 44 33.7**	**+0.2**
	baz=274						
NDT	**Datong Townshi**	**0.94**	**251**	P	**Pb**	**06 44 22.7**	**+0.3**
	baz=250						
NDT				S	**Sb**	**06 44 34.3**	**-0.2**
	baz=250						
YHNB	**Yeheng**	**1.04**	**257**	P	**Pb**	**06 44 24.8**	**+0.6**
	baz=256						
YHNB				S	**Sn**	**06 44 36.7**	**-0.9**
	baz=256						
NSK	**Sanguang**	**1.05**	**257**	*i*P	**Pb**	**06 44 24.7**	**+0.3**
	baz=256						
NSK				*i*S	**Sn**	**06 44 37.0**	**-0.9**
	baz=256						
NACB	**Ninganchiao**	**1.09**	**228**	P	**Pb**	**06 44 25.1**	**0.0**
	baz=226						
NACB				S	**Sb**	**06 44 39.4**	**+0.4**
	baz=226						
NNSB	**Datong**	**1.11**	**244**	P	**Pb**	**06 44 25.6**	**+0.1**
	baz=243						
NNSB				S	**Sb**	**06 44 39.4**	**-0.2**
	baz=243						
NNS	**Nan Shan**	**1.11**	**245**	*i*P	**Pb**	**06 44 25.9**	**+0.3**
	baz=244						
NNS				*i*S	**Sb**	**06 44 39.5**	**-0.2**
	baz=244						
ETLH	**Xiulin Townshi**	**1.15**	**233**	*e*P	**Pb**	**06 44 26.4**	**+0.2**
	baz=231						
ETLH				*e*S	**Sb**	**06 44 40.6**	**-0.1**
	baz=231						
TWD	**Chiawan**	**1.16**	**224**	*e*P	**Pb**	**06 44 26.3**	**+0.1**
	baz=222						
TWD				*e*S	**Sb**	**06 44 41.3**	**+0.5**
	baz=222						
WHF	**Hehuan Shan**	**1.35**	**236**	P	**Pb**	**06 44 30.1**	**+0.4**
	baz=234						
WHF				S	**Sb**	**06 44 46.8**	**+0.1**
	baz=234						
TDCB	**Techi**	**1.38**	**242**	*e*P	**Pb**	**06 44 30.8**	**+0.8**
	baz=240						
TDCB				*e*S	**Sb**	**06 44 47.2**	**0.0**
	baz=240						
NSTT	**Nanjuang**	**1.38**	**258**	*e*P	**Pb**	**06 44 30.5**	**+0.6**
	baz=258						
NSTT				*e*S	**Sb**	**06 44 48.7**	**+1.6**
	baz=258						
CHGB	**Renai**	**1.47**	**235**	*e*P	**Pb**	**06 44 31.7**	**+0.2**
	baz=233						
CHGB				*e*S	**Sb**	**06 44 49.9**	**0.0**
	baz=233						
OWD	**Renai**	**1.53**	**232**	P	**Pb**	**06 44 32.8**	**+0.2**
	baz=230						
OWD				S	**Sb**	**06 44 51.8**	**+0.2**
	baz=230						
WHP	**Taichung City**	**1.54**	**246**	*e*P	**Pb**	**06 44 33.0**	**+0.3**
	baz=245						
WHP				*e*S	**Sb**	**06 44 52.2**	**+0.4**
	baz=245						
DPDB	**Guoxing**	**1.67**	**239**	*e*P	**Pb**	**06 44 35.2**	**+0.2**
	baz=237						
DPDB				*e*S	**Sb**	**06 44 55.2**	**-0.3**
	baz=237						
VWDT	**VWDT**	**1.68**	**227**	*e*P	**Pb**	**06 44 35.2**	**+0.1**
	baz=225						
VWDT				*e*S	**Sb**	**06 44 56.1**	**+0.2**
	baz=225						
HGSD	**Ruisui**	**1.71**	**215**	*e*P	**Pb**	**06 44 36.0**	**+0.3**
	baz=213						
SMLT	**Sun Moon Lake**	**1.77**	**235**	*e*P	**Pb**	**06 44 37.6**	**+0.9**
	baz=233						
SSLB	**Suanglung**	**1.79**	**231**	*e*P	**Pb**	**06 44 38.0**	**+1.0**
	baz=230						
SSLB				*e*S	**Sb**	**06 45 00.9**	**+1.9**
	baz=230						
TYC	**Yuchr**	**1.79**	**236**	*e*P	**Pb**	**06 44 37.1**	**+0.1**
	baz=235						
TYC				*e*S	**Sb**	**06 44 59.1**	**+0.1**
	baz=235						
YULB	**Yu-li**	**1.86**	**216**	*e*P	**Pn**	**06 44 36.5**	**+1.3**
	baz=214						

NIED ***04*** *07:07:00, 45°.40N×151°.10E, h23km, Mw4.1 Best double couple: M0 1.56000×10^15 NP1:φ=229.00000°, δ=39.00000°, λ=156.00000°. NP2:φ=338.00000°, δ=75.00000°, λ=54.00000°.*
ISCJB ***04*** *07:07:05.7±0.5, 45°.09N±0°.07×151°.21E±0°.06, h35km, mb4.0/19, Error ellipse: s-maj=11.0km s-min=3.3km az=149.4*
JMA ***04*** *07:07:06.5±0.5, 45°.43N×151°.14E, h30km, M4.8*
SKHL ***04*** *07:07:08.0±0.8, 44°.83N×151°.32E, h69km±8km, mb4.3/7*
MOS ***04*** *07:07:08.7±1.0, 45°.36N×150°.94E, h53km, mb4.6/1, Error ellipse: s-maj=12.0km s-min=8.6km az=52.9*
IDC ***04*** *07:07:10.6±2.5, 45°.44N×150°.84E, h52km±22km, mb3.7/18, mb1 3.9/23, mb1mx3.8/53, mbtmp4.0/23, ML3.7/3, Error ellipse: s-maj=17.9km s-min=12.8km az=146.0*
ISC 04 07:07:07.1±0.6, 44°.94N±0°.08×151°.24E±0°.06, h35km, n93, σ1.895/106, mb4.1/19, 14C-4D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.40**	**278**	*d i*PN	**Pn**	**07 07 43.8**	**-0.1**
KUR				*e*S	**Sn**	**07 08 10.6**	**-1.5**
KUR				pmax	pmax		
	comp=N,214nm,0.4s						
KUR				pmax	pmax		
	comp=Z,401nm,0.4s						
KUR				pmax	pmax		
	comp=E,85nm,0.3s						
KUR				smax	smax		
	comp=N,1μm,0.3s						
KUR				smax	smax		
	comp=E,537nm,0.6s						
KUR	**Kuril'sk**	**2.40**	**278**	*i*P	**Pn**	**07 07 44.9**	**+1.0**
KUR				AMB	AMB	07 07 46.0	
	comp=E,44nm,0.4s						
KUR				*i*S	**Sn**	**07 08 12.0**	**-0.1**
KUR				A	A	07 08 14.4	
	comp=E,140nm,0.4s						
KUR				A	A	07 08 14.4	
	comp=E,360nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.95**	**259**	*e*P	**Pn**	**07 08 07.5**	**+2.3**
YUK				AMB	AMB	07 08 10.0	
	comp=E,29nm,0.4s						
YUK				*e*S	**Sn**	**07 08 52.1**	**+1.8**
YUK				A	A	07 08 56.0	
	comp=E,170nm,0.6s						
YUK				A	A	07 08 56.0	
	comp=E,360nm,0.6s						
LAGR	**Lagunnoye**	**4.00**	**259**	*e*PN	**Pn**	**07 08 09.7**	**+3.9**
LAGR				*e*S	**Sn**	**07 08 56.4**	**+5.0**
LAGR				pmax	pmax		
	comp=Z,349nm,0.6s						
LAGR				smax	smax		
	comp=N,757nm,0.4s						
LAGR				smax	smax		
	comp=E,306nm,0.3s						
LAGR	**Lagunnoye**	**4.00**	**259**	*e*P	**Pn**	**07 08 08.7**	**+2.9**
LAGR				AMB	AMB	07 08 15.0	
	comp=E,35nm,0.6s						
LAGR				*e*S	**Sn**	**07 08 53.4**	**+2.0**
LAGR				A	A	07 09 02.0	
	comp=E,170nm,0.4s						
LAGR				A	A	07 09 02.0	
	comp=E,150nm,0.4s						
GRPR	**Tuman**	**4.03**	**258**	*e*PN	**Pn**	**07 08 09.2**	**+3.0**
GRPR				*e*S	**Sn**	**07 08 55.4**	**+3.3**
GRPR				smax	smax		
	comp=N,466nm,0.3s						
GRPR				smax	smax		
	comp=E,425nm,0.4s						
GRPR	**Tuman**	**4.03**	**258**	*e*P	**Pn**	**07 08 08.8**	**+2.6**
GRPR				*e*S	**Sn**	**07 08 54.4**	**+2.3**
GRPR				A	A	07 09 00.0	
	comp=E,230nm,0.4s						
GRPR				A	A	07 09 00.0	
	comp=E,210nm,0.4s						
NEM2	**Nemuro 2**	**4.26**	**250**	P	**Pn**	**07 08 10.0**	**+0.6**
NEM2				*e*S	**Sn**	**07 08 56.5**	**-1.3**
GLVR	**Golovnino**	**4.27**	**256**	*e*PN	**Pn**	**07 08 11.4**	**+1.8**
GLVR				*e*S	**Sn**	**07 08 59.5**	**+1.3**
GLVR				pmax	pmax		
	comp=Z,358nm,0.6s						
GLVR				smax	smax		
	comp=N,438nm,0.3s						
GLVR				smax	smax		
	comp=E,142nm,0.2s						
GLVR	**Golovnino**	**4.27**	**256**	*e*P	**Pn**	**07 08 11.0**	**+1.4**
GLVR				AMB	AMB	07 08 13.0	
	comp=E,36nm,0.6s						
GLVR				*e*S	**Sn**	**07 08 59.0**	**+0.8**
GLVR				A	A	07 09 06.0	
	comp=E,110nm,0.3s						
GLVR				A	A	07 09 06.0	
	comp=E,142nm,0.3s						
JRA	**Rausu**	**4.49**	**259**	P	**Pn**	**07 08 14.9**	**+2.3**
JNK	**Nakash**	**4.87**	**256**	P	**Pn**	**07 08 19.8**	**+1.9**
JAK	**Akkeshi**	**5.11**	**250**	P	**Pn**	**07 08 21.7**	**+0.7**
JAK				*e*S	**Sn**	**07 09 17.7**	**-1.0**
JTKR	**Abashiri--Toko**	**5.33**	**262**	P	**Pn**	**07 08 26.4**	**+2.2**
JAR	**Ashorobuto**	**5.62**	**256**	P	**Pn**	**07 08 30.4**	**+2.3**
JAR				*e*S	**Sn**	**07 09 32.1**	**+0.6**
JMP	**Maruseppu**	**5.71**	**263**	P	**Pn**	**07 08 32.0**	**+2.6**
JOB	**Onbets**	**5.72**	**252**	P	**Pn**	**07 08 30.9**	**+1.4**
JOB				*e*S	**Sn**	**07 09 33.4**	**-0.5**
JCH	**Churui**	**6.16**	**251**	P	**Pn**	**07 08 36.6**	**+1.1**
JCH				*e*S	**Sn**	**07 09 43.9**	**-0.7**
JKK2	**Kamakawa 2**	**6.17**	**263**	P	**Pn**	**07 08 38.4**	**+2.7**
JKA	**Kamikawa-asahi**	**6.23**	**265**	*e*P	**Pn**	**07 08 38.6**	**+2.1**
ASAJ	**Asahikawa**	**6.23**	**265**	P	**Pn**	**07 08 38.5**	**+2.0**
	comp=E,3.2nm,0.3s,baz=82,slow=21,SNR=9.9						
ASAJ				S	**Sn**	**07 09 49.5**	**+3.0**
	comp=E,1.4nm,0.3s,baz=105,slow=16,SNR=1.4						
YSS	**Yuzh-Sakhalins**	**6.25**	**292**	*e*PN	Pn	07 08 44.6	+7.9
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,18.0s						
YSS	**Yuzh-Sakhalins**	**6.25**	**292**	*e*P	Pn	07 08 40.0	+3.3
YSS				AMB	AMB	07 08 47.8	
	comp=N,30nm,0.6s						
SKR	**Severo-Kuril's**	**6.62**	**28**	*e*PN	**Pn**	**07 08 44.0**	**+2.3**
SKR				pmax	pmax		
	comp=Z,61nm,0.8s						
SKR				MLR	MLR		
	comp=Z,300nm,12.0s						
SKR	**Severo-Kuril's**	**6.62**	**28**	*e*P	**Pn**	**07 08 44.0**	**+2.3**
SKR				AMB	AMB	07 08 47.0	
	comp=Z,61nm,0.8s						
SKR				*e*S	**Sn**	**07 09 56.7**	**+0.9**
SKR				A	A	07 10 25.0	
	comp=Z,45nm,0.7s						
SKR				A	A	07 10 25.0	
	comp=Z,102nm,0.7s						
JNBK	**Urakawa-nobuka**	**6.71**	**250**	P	**Pn**	**07 08 43.6**	**+0.5**
JBT2	**Biratori 2**	**6.77**	**254**	P	**Pn**	**07 08 44.0**	**+0.1**
JKB	**Kayabe**	**8.03**	**251**	P	**Pn**	**07 08 57.8**	**-3.4**
JKB				*e*S	**Sn**	**07 10 25.5**	**-5.2**
JANG	**Nango**	**8.49**	**241**	P	**Pn**	**07 09 06.7**	**-0.9**
JANG				*e*S	**Sn**	**07 10 35.6**	**-6.5**
JTM	**Tenmabayashi**	**8.54**	**244**	P	**Pn**	**07 09 08.9**	**+0.7**
PETK	**Petropavlovsk-**	**9.20**	**25**	P	**Pn**	**07 09 16.1**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=177,slow=15,SNR=2.6						
MJAR	**Matsushiro Arr**	**12.95**	**234**	P	**Pn**	**07 10 12.4**	**+3.8**
	comp=Z,0.1nm,0.3s,baz=22,slow=13,SNR=3.4						
USRK	**Ussuriysk Ar.**	**13.74**	**274**	P	**Pn**	**07 10 19.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=73,slow=11,SNR=4.1						
EKMR	**Ekimchan**	**14.46**	**311**	*e*P	**Pn**	**07 10 29.5**	**+0.4**
EKMR				AMB	AMB	07 10 49.5	
	comp=Z,4.0nm,0.8s						
KSRS	**Korea Array**	**19.03**	**

ULM	**Lac du Bonnet**	**68.75**	**39**	P	**P**	**07 18 07.1**	**0.0**
	comp=Z,1.8nm,0.4s,baz=338,slow=5.4,SNR=2.7						
NB2	**NORSAR Subarra**	**69.50**	**340**	P	**P**	**07 18 09.0**	**-2.6**
	comp=Z,0.9nm,0.6s,baz=28,slow=6.2						
NOA	**NORSAR Array B**	**69.50**	**340**	P	**P**	**07 18 09.7**	**-2.0**
	comp=Z,1.8nm,0.6s,baz=31,slow=6.3,SNR=5.6						
ASAR	**Alice Springs**	**70.09**	**197**	P	**P**	**07 18 19.8**	**+4.2**
	comp=Z,1.0nm,0.8s,baz=12,slow=5.4,SNR=7.3						
KBZ	**Khabaz**	**71.16**	**313**	P	**P**	**07 18 20.8**	**-1.2**
	comp=Z,6.3nm,0.8s,baz=36,slow=3.1,SNR=8.6						
AKASG	**Malin Array Be**	**72.30**	**326**	P	**P**	**07 18 26.7**	**-2.0**
	comp=Z,1.2nm,0.5s,baz=35,slow=6.2,SNR=4.7						
BURAR	**Bucovina Array**	**76.36**	**326**	⇑*i*P	**P**	**07 18 51.1**	**-1.4**
BURAR	**Bucovina Array**	**76.36**	**326**	⇑P	**P**	**07 18 51.1**	**-1.4**
TESR	**Tescani**	**76.66**	**324**	⇑*i*P	**P**	**07 18 52.8**	**-1.3**
TRPA	**Tarpa**	**76.98**	**328**	⇑*i*P	**P**	**07 18 54.8**	**-1.1**
MORC	**Moravsky Berou**	**77.41**	**331**	⇑*i*P	**P**	**07 18 57.4**	**-0.9**
MORC	**Moravsky Berou**	**77.41**	**331**	⇑P	**P**	**07 18 57.4**	**-0.9**
MORC	**Moravsky Berou**	**77.41**	**331**	*e*P	**P**	**07 18 57.1**	**-1.2**
TLB	**Topalu**	**77.60**	**322**	⇑*i*P	**P**	**07 18 58.8**	**-0.6**
TLB	**Topalu**	**77.60**	**322**	⇑P	**P**	**07 18 58.8**	**-0.6**
MLR	**Muntele Rosu**	**77.77**	**324**	⇑*i*P	**P**	**07 19 00.4**	**-0.1**
MLR	**Muntele Rosu**	**77.77**	**324**	⇑P	**P**	**07 19 00.4**	**-0.1**
VRAC	**Vranov**	**78.13**	**332**	*e*P	**P**	**07 19 01.5**	**-0.8**
JAVC	**Velka Javorina**	**78.14**	**331**	*e*P	**P**	**07 19 02.3**	**-0.2**
VOIR		**78.19**	**325**	⇑*i*P	**P**	**07 19 02.6**	**-0.2**
VOIR		**78.19**	**325**	⇑P	**P**	**07 19 02.6**	**-0.2**
KRUC	**Moravsky**	**78.41**	**332**	*e*P	**P**	**07 19 02.7**	**-1.1**
ARR	**Arges**	**78.41**	**325**	⇓*i*P	**P**	**07 19 05.5**	**+1.5**
BRTR	**Keskin Array B**	**78.79**	**316**	P	**P**	**07 19 04.4**	**-1.9**
	comp=Z,1.4nm,0.8s,baz=64,slow=5.6,SNR=5.2						
GZR	**Gura Zlata**	**79.14**	**326**	⇓*i*P	**P**	**07 19 07.0**	**-1.0**
GZR	**Gura Zlata**	**79.14**	**326**	⇓P	**P**	**07 19 07.0**	**-1.0**
GERES	**GERESS Array B**	**79.49**	**333**	P	**P**	**07 19 08.7**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=34,slow=5.0,SNR=8.1						
TXAR	**Lajitas Array**	**79.53**	**59**	P	**P**	**07 19 12.3**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=281,slow=3.5,SNR=5.7						
VTS	**Vitosha**	**81.24**	**324**	⇑*i*P	**P**	**07 19 18.1**	**-1.4**
VTS	**Vitosha**	**81.24**	**324**	⇑P	**P**	**07 19 18.1**	**-1.4**
BDFB	**Brasilia**	**146.57**	**35**	PKPbc	**PKPbc**	**07 26 45.5**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=146,slow=7.3,SNR=2.7						
PLCA	**Paso Flores**	**149.32**	**97**	PKPbc	**PKiKP**	**07 26 53.8**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=270,slow=5.1,SNR=2.8						
PLCA				PKPab	**sPKPdf**	**07 26 59.6**	**-0.2**
	comp=Z,2.3nm,1.2s,baz=353,slow=8.1,SNR=1.9						
SNAA	**Sanae**	**150.45**	**196**	PKPdf	**PKiKP**	**07 26 55.0**	**+0.7**
CPUP	**Villa Florida**	**150.50**	**61**	PKPbc	**PKiKP**	**07 26 56.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=34,slow=7.3,SNR=3.4						
VNA2	**Neumayer--Watz**	**151.92**	**195**	PKPdf	**PKiKP**	**07 26 58.8**	**+1.5**
VNA3	**Neumayer Olymp**	**152.04**	**193**	PKPdf	**PKiKP**	**07 26 58.6**	**+1.1**

NIED ***04*** *07:12:00,45°.40N×151°.40E,h26km,Mw5.0 Best double couple: M₀3.76000×10¹⁶ NP1:φs244.00000°,δ35.00000°, λ161.00000°. NP2:φs350.00000°,δ79.00000°,λ56.00000°.*
SKHL ***04*** *07:12:21.5±0.5,45°.00N×151°.61E,h51km±3km,mb5.5/1, mbh5.1/1,Ms4.9/5*
JMA ***04*** *07:12:21.5±0.7,45°.38N×151°.41E,h30km,M5.1*
ISCJB ***04*** *07:12:23.4±0.4,45°.30N±0°.02×151°.08E±0°.02,h34km±3km, mb5.0/318,MS4.7/68,Error ellipse: s-maj=4.4km s-min=2.3km az=154.4*
MOS ***04*** *07:12:24.7±0.8,45°.35N×151°.06E,h44km,mb5.3/84, MS4.8/20,Error ellipse: s-maj=5.5km s-min=4.0km az=105.8*
BJI ***04*** *07:12:25.7±0.0,45°.33N×150°.85E,h49km,mb5.1/75, mB5.0/57,Ms4.9/80,Ms7 4.7/74*
NEIC ***04*** *07:12:26.3±1.0,45°.36N×151°.05E,h44km±5km,mb4.9/233, Error ellipse: s-maj=14.7km s-min=10.9km az=139.0*
GCMT ***04*** *07:12:27.3±0.3,45°.39N±0°.02×151°.28E±0°.03,h30km, MW5.1/84,Moment Tensor Solution. s57,c69; s84,c116; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.18±.24; Mθθ-2.06±.17; Mφφ-2.13±.17; Mrθ1.73±.26; Mφθ-3.99±.13; Mφr2.89±.24; Best double couple: M₀6.17700×10¹⁶ NP1:φs33.00000°,δ62.00000°,λ77.00000°. NP2: φs241.00000°,δ30.00000°,λ114.00000°. Principal axes: T 5.3090, Plg70.0000°, Azm275.0000°; N 1.7250, Plg12.0000°, Azm40.0000°; P -7.0440, Plg16.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***04*** *07:12:27.3±2.2,45°.40N×151°.01E,h54km±18km,mb4.4/30, mb1 4.5/38,mb1mx4.5/47,mbtmp4.7/38,ML4.1/7,MS4.5/34, Ms1 4.5/34,ms1mx4.4/39 Error ellipse: s-maj=12.8km s-min=8.6km az=138.0*
ISC 04 07:12:26.1±0.5,**45°.25N**±0°.04×**151°.15E**±0°.03,**h47**km±3km, **h47**km:**pP-P,n778,**σ1**s37**/837,**mb5.0**/318,**MS4.7**/68, **59C-32D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.32**	**271**	*c i*PN	**Pn**	**07 13 01.0**	**-0.8**
KUR				*e*S	**Sn**	**07 13 28.8**	**-0.3**
KUR	comp=Z,2μm,0.4s			pmax	pmax		
KUR	comp=N,572nm,0.3s			pmax	pmax		
KUR	comp=E,604nm,0.3s			pmax	pmax		
KUR	comp=N,5μm,0.7s			smax	smax		
KUR	comp=E,1μm,0.8s			smax	smax		
KUR	comp=N,13μm,1.4s			smax	smax		
KUR	comp=E,8μm,1.6s			MLR	MLR		
KUR	comp=Z,26μm,14.0s			MLR	MLR		
KUR	comp=E,21μm,10.0s						
KUR	**Kuril'sk**	**2.32**	**271**	*i* P	**Pn**	**07 13 00.9**	**-0.8**
KUR				AMB	AMB	07 13 09.5	
KUR	comp=E,7μm,0.4s			AMB	AMB	07 13 09.5	
KUR	comp=E,687nm,0.4s			AMB	AMB	07 13 09.5	
KUR	comp=E,2μm,0.4s			*i* S	**Sn**	**07 13 30.2**	**+1.1**
KUR				A	A	07 13 36.7	
KUR	comp=E,5μm,0.6s			A	A	07 13 36.7	
KUR	comp=E,2μm,0.6s			A	A	07 13 36.7	
KUR	comp=E,1μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.97**	**254**	⇑*i*PN	**Pn**	**07 13 24.9**	**+0.5**
YUK				*i* S	**Sn**	**07 14 14.1**	**+4.5**
YUK	comp=Z,2μm,0.3s			pmax	pmax		
YUK	**Yuzh-Kuril'sk**	**3.97**	**254**	*i* P	**Pn**	**07 13 24.0**	**-0.4**
YUK				AMB	AMB	07 13 29.0	
YUK	comp=Z,767nm,0.6s			AMB	AMB	07 13 29.0	
YUK	comp=Z,1μm,0.6s			AMB	AMB	07 13 29.0	
YUK	comp=Z,1μm,0.6s			*e*S	**Sn**	**07 14 10.5**	**+0.9**
YUK				A	A	07 14 20.0	
YUK	comp=Z,2μm,0.6s			A	A	07 14 20.0	
YUK	comp=Z,5μm,0.6s			AMS	AMS	07 15 05.0	
YUK	comp=Z,3μm,11.0s						
LAGR	**Lagunnoye**	**4.01**	**255**	⇑*i*PN	**Pn**	**07 13 25.4**	**+0.4**
LAGR				*e*S	**Sn**	**07 14 13.3**	**+2.6**
LAGR	comp=Z,959nm,0.6s			pmax	pmax		
LAGR	comp=E,646nm,0.7s			pmax	pmax		
LAGR	comp=N,714nm,0.5s			pmax	pmax		
LAGR	comp=E,2μm,0.4s			smax	smax		
LAGR	comp=N,5μm,0.5s			smax	smax		
LAGR	**Lagunnoye**	**4.01**	**255**	*i* P	**Pn**	**07 13 25.0**	**0.0**
LAGR				AMB	AMB	07 13 29.0	
LAGR	comp=N,714nm,0.7s			AMB	AMB	07 13 29.0	
LAGR	comp=N,646nm,0.7s			AMB	AMB	07 13 29.0	
LAGR	comp=N,959nm,0.7s						
LAGR				*e*S	**Sn**	**07 14 13.0**	**+2.3**
LAGR				A	A	07 14 20.0	
LAGR	comp=N,5μm,0.5s			A	A	07 14 20.0	
LAGR	comp=N,2μm,0.5s						
GRPR	**Tuman**	**4.04**	**254**	⇑*i*PN	**Pn**	**07 13 25.5**	**+0.1**
GRPR				*e*S	**Sn**	**07 14 13.5**	**+2.1**
GRPR	comp=Z,907nm,0.4s			pmax	pmax		
GRPR	comp=N,719nm,0.5s			pmax	pmax		
GRPR	comp=E,739nm,0.6s			pmax	pmax		
GRPR	comp=N,2μm,0.5s			smax	smax		
GRPR	comp=E,1μm,0.3s			smax	smax		
GRPR	**Tuman**	**4.04**	**254**	*i* P	**Pn**	**07 13 25.0**	**-0.4**
GRPR				AMB	AMB	07 13 32.0	
GRPR	comp=E,719nm,0.6s			AMB	AMB	07 13 32.0	
GRPR	comp=E,739nm,0.6s			AMB	AMB	07 13 32.0	
GRPR	comp=E,907nm,0.6s			*e*S	**Sn**	**07 14 13.0**	**+1.6**
GRPR				A	A	07 14 19.0	
GRPR	comp=E,2μm,0.5s			A	A	07 14 19.0	
GRPR	comp=E,1μm,0.5s			AMS	AMS	07 15 13.6	
GRPR	comp=E,1μm,11.0s						
GLVR	**Golovnino**	**4.30**	**251**	*e*PN	**Pn**	**07 13 28.3**	**-0.7**
GLVR				*e*S	**Sn**	**07 14 18.6**	**+0.7**
GLVR	comp=Z,2μm,0.5s			pmax	pmax		
GLVR	comp=N,274nm,0.3s			pmax	pmax		
GLVR	comp=E,304nm,0.3s			pmax	pmax		
GLVR	comp=E,861nm,0.2s			smax	smax		
GLVR	comp=N,2μm,0.5s			smax	smax		
GLVR	**Golovnino**	**4.30**	**251**	*e*P	**Pn**	**07 13 28.0**	**-1.0**
GLVR				AMB	AMB	07 13 32.0	
GLVR	comp=N,274nm,0.5s			AMB	AMB	07 13 32.0	
GLVR	comp=N,304nm,0.5s			AMB	AMB	07 13 32.0	
GLVR	comp=N,2μm,0.5s			*e*S	**Sn**	**07 14 18.0**	**+0.1**
GLVR				A	A	07 14 23.0	
GLVR	comp=N,2μm,0.5s			A	A	07 14 23.0	
GLVR	comp=N,861nm,0.5s						
NEM2	**Nemuro 2**	**4.32**	**246**	P	**Pn**	**07 13 27.3**	**-1.9**
NEM2				*e*S	**Sn**	**07 14 15.7**	**-2.5**
JRA	**Rausu**	**4.50**	**255**	P	**Pn**	**07 13 32.3**	**+0.6**
JNK	**Nakash**	**4.90**	**252**	P	**Pn**	**07 13 36.9**	**-0.3**
JAK	**Akkeshi**	**5.17**	**246**	P	**Pn**	**07 13 38.7**	**-2.1**
JAK				*e*S	**Sn**	**07 14 38.3**	**-0.8**
JTKR	**Abashiri--Toko**	**5.33**	**259**	P	**Pn**	**07 13 43.4**	**+0.4**
JAR	**Ashorobuto**	**5.65**	**252**	P	**Pn**	**07 13 47.3**	**-0.2**
JAR				*e*S	**Sn**	**07 14 49.9**	**-1.1**
JMP	**Maruseppu**	**5.70**	**260**	P	**Pn**	**07 13 49.1**	**+0.9**
JOB	**Onbets**	**5.77**	**249**	P	**Pn**	**07 13 47.7**	**-1.4**
JOB				*e*S	**Sn**	**07 14 52.2**	**-1.8**
JSE	**Soyaes**	**6.07**	**270**	P	**Pn**	**07 13 54.7**	**+1.5**
YSS	**Yuzh-Sakhalins**	**6.08**	**289**	*e*Pn	**Pn**	**07 13 53.5**	**+0.1**
YSS	**Yuzh-Sakhalins**	**6.08**	**289**	*αe*PN	**Pn**	**07 13 54.4**	**+1.0**
YSS				*e*S	**Sn**	**07 15 02.5**	**+0.9**
YSS	comp=Z,60nm,0.5s			pmax	pmax		
YSS	comp=Z,200nm,6.2s			pmax	pmax		
YSS	comp=E,7μm,17.0s			MLR	MLR		
YSS	comp=Z,7μm,17.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**6.08**	**289**	*e*P	**Pn**	**07 13 55.0**	**+1.6**
YSS				AMB	AMB	07 13 59.1	
YSS	comp=Z,60nm,0.5s			AMB	AMB	07 13 59.2	
YSS	comp=Z,200nm,6.2s			AMS	AMS	07 16 16.0	
YSS	comp=Z,7μm,17.0s			AMS	AMS	07 16 16.0	
YSS	comp=Z,7μm,17.0s						
JKK2	**Kamakawa 2**	**6.16**	**260**	P	**Pn**	**07 13 55.7**	**+1.2**
JKA	**Kamikawa-asahi**	**6.20**	**262**	*e*P	**Pn**	**07 13 56.7**	**+1.6**
ASAJ	**Asahikawa**	**6.20**	**262**	P	**Pn**	**07 13 56.7**	**+1.6**
ASAJ	comp=Z,15nm,0.3s,baz=93,slow=16,SNR=34			S	**Sn**	**07 15 10.1**	**+5.4**
ASAJ	baz=102,slow=14,SNR=1.6			LR	LR	07 16 34.7	
ASAJ	comp=Z,7μm,18.2s,baz=88,slow=40						
ASAJ	**Asahikawa**	**6.20**	**262**	P	**Pn**	**07 13 56.6**	**+1.5**
JCH	**Churui**	**6.21**	**248**	P	**Pn**	**07 13 54.0**	**-1.2**
JCH				*e*S	**Sn**	**07 15 02.4**	**-2.4**
SKR	**Severo-Kuril's**	**6.38**	**30**	*e*PN	**Pn**	**07 13 56.6**	**-0.8**
SKR	comp=Z,624nm,0.7s			pmax	pmax		
SKR	comp=Z,5μm,14.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**6.38**	**30**	*e*P	**Pn**	**07 13 56.0**	**-1.4**
SKR				AMB	AMB	07 14 06.0	
SKR	comp=Z,624nm,0.7s			*e*S	**Sn**	**07 15 04.0**	**-4.8**
SKR				A	A	07 15 39.0	
SKR	comp=Z,711nm,0.8s			A	A	07 15 39.0	
SKR	comp=Z,307nm,0.8s			AMS	AMS	07 16 30.0	
SKR	comp=Z,5μm,14.0s						
JFR	**Furan**	**6.50**	**254**	P	**Pn**	**07 13 59.4**	**+0.3**
JWK2	**Keihoku**	**6.53**	**274**	P	**Pn**	**07 14 02.6**	**+3.1**
JAB	**Ashibetsu**	**6.63**	**258**	P	**Pn**	**07 14 02.6**	**+1.6**
JEM	**Erimo**	**6.64**	**244**	P	**Pn**	**07 14 01.0**	**-0.1**
ERM	**Erimo**	**6.64**	**244**	*e*Pn	**Pn**	**07 14 01.1**	**0.0**
ERM				*e*Sn	**Sn**	**07 15 16.1**	**+0.8**
ERM	**Erimo**	**6.64**	**244**	*e*PN	**Pn**	**07 14 01.1**	**0.0**
JSS	**Shosan**	**6.67**	**266**	P	**Pn**	**07 14 00.5**	**-0.9**
JNBK	**Urakawa-nobuka**	**6.77**	**247**	P	**Pn**	**07 14 00.8**	**-2.0**
JBT2	**Biratori 2**	**6.80**	**252**	P	**Pn**	**07 14 02.1**	**-1.2**
UGL	**Uglegorsk**	**7.28**	**305**	*e*PN	**Pn**	**07 14 12.6**	**+2.8**
UGL				*e*S	**Sn**	**07 15 31.4**	**+0.4**
UGL	comp=Z,194nm,0.8s			pmax	pmax		
UGL	comp=N,127nm,1.1s			smax	smax		
UGL	comp=Z,4μm,16.0s			MLR	MLR		
UGL	comp=E,3μm,13.0s			MLR	MLR		
JEW	**Eniwo**	**7.39**	**254**	P	**Pn**	**07 14 11.8**	**+0.4**
JNB	**Noboribetsu**	**7.82**	**253**	P	**Pn**	**07 14 15.8**	**-1.4**
JNB				*e*S	**Sn**	**07 15 42.1**	**-2.2**
TYV	**Tymovskoe**	**7.99**	**318**	*e*PN	**Pn**	**07 14 19.7**	**+0.2**
TYV				*e*S	**Sn**	**07 15 50.2**	**+1.7**
TYV	comp=Z,60nm,0.8s			pmax	pmax		
TYV	comp=E,22nm,1.7s			smax	smax		
TYV	comp=E,6μm,16.0s			MLR	MLR		
TYV	comp=Z,8μm,16.0s			MLR	MLR		
TYV	**Tymovskoe**	**7.99**	**318**	*e*P	**Pn**	**07 14 19.7**	**+0.2**
TYV				AMB	AMB	07 14 21.7	
TYV	comp=Z,59nm,0.8s			*e*S	**Sn**	**07 15 50.2**	**+1.7**
TYV				A	A	07 15 50.9	
TYV	comp=Z,210nm,1.7s			AMS	AMS	07 17 25.6	
TYV	comp=Z,6μm,17.0s			AMS	AMS	07 17 25.6	
TYV	comp=Z,8μm,17.0s						
JKB	**Kayabe**	**8.08**	**249**	P	**Pn**	**07 14 18.8**	**-2.0**
JKB				*e*S	**Sn**	**07 15 43.2**	**-7.5**
JYM2	**Yakumo 2**	**8.42**	**252**	P	**Pn**	**07 14 23.7**	**-1.7**
JSH	**Shimam**	**8.43**	**256**	P	**Pn**	**07 14 26.8**	**+1.3**
JANG	**Nango**	**8.60**	**239**	*e*S	Sn	07 15 53.3	-10
JTM	**Tenmabayashi**	**8.63**	**242**	P	**Pn**	**07 14 25.7**	**-2.6**
JTM				*e*S	**Sn**	**07 15 58.6**	**-5.6**
JSR	**Shiriuchi**	**8.65**	**248**	P	**Pn**	**07 14 26.6**	**-2.1**
JSR				*e*S	**Sn**	**07 15 58.0**	**-6.8**
PEA0B	**Petropavlovsk-**	**8.95**	**26**	*e*Pn	**Pn**	**07 14 31.6**	**-1.1**
PETK	**Petropavlovsk-**	**8.95**	**26**	P	**Pn**	**07 14 31.5**	**-1.2**
PETK	comp=Z,1.6nm,0.3s,baz=195,slow=11,SNR=22			LR	LR	07 18 11.2	
PETK	comp=Z,2μm,18.9s,baz=214,slow=39						
PEA1	**Petropavlovsk-**	**8.96**	**26**	*e*Pn	**Pn**	**07 14 31.5**	**-1.3**
JOSM	**Okushiri--Mats**	**9.04**	**254**	P	**Pn**	**07 14 32.6**	**-1.3**
PET	**Petropavlovsk**	**9.20**	**30**	*e*Pn	**Pn**	**07 14 35.9**	**-0.1**
PET				*e*Sn	**Sn**	**07 16 13.4**	**-4.6**
PET	**Petropavlovsk**	**9.20**	**30**	*e*PN	**Pn**	**07 14 34.3**	**-1.7**
PET	comp=Z,2μm,17.0s			MLR	MLR		
PET	comp=Z,2μm,15.0s			MLR	MLR		
PET	**Petropavlovsk**	**9.20**	**30**	*e*P	**Pn**	**07 14 34.3**	**-1.7**
PET	comp=Z,2μm,15.0s			AMS	AMS	07 18 17.3	
OFUJ	**Ofunato**	**9.36**	**232**	P	**Pn**	**07 14 34.3**	**-4.0**
JRG	**Rokugo**	**9.74**	**237**	P	**Pn**	**07 14 40.2**	**-3.3**
OKH	**Okha**	**9.88**	**330**	*e*rx	rx	07 14 47.1	
OKH				AMS	AMS	07 20 00.2	
JIO	**Ouri**	**9.97**	**231**	P	**Pn**	**07 14 43.3**	**-3.4**
NKL	**Nikolayevsk**	**10.45**	**323**	*e*P	**Pn**	**07 14 54.0**	**+0.8**
NKL	comp=Z,500nm,9.0s			AMB	AMB	07 14 56.0	
NKL	comp=Z,600nm,9.0s			AMB	AMB	07 14 56.0	
NKL	comp=Z,170nm,1.0s			AMB	AMB	07 14 56.6	
NKL	comp=Z,420nm,1.0s			AMB	AMB	07 14 56.6	
NKL	comp=Z,3μm,15.0s			AMS	AMS	07 19 20.0	
NKL	comp=Z,2μm,15.0s			AMS	AMS	07 19 20.0	
JYA	**Atsumi**	**10.80**	**236**	P	**Pn**	**07 14 54.9**	**-3.2**
GRNR	**Gornyy**	**11.30**	**305**	*e*PN	Pn	07 15 10.2	+5.4
GRNR	comp=Z,25nm,1.0s			pmax	pmax		
GRNR	**Gornyy**	**11.30**	**305**	*e*P	**Pn**	**07 15 06.2**	**+1.4**
GRNR	comp=Z,25nm,1.0s			AMB	AMB	07 15 10.8	
JFY	**Yanaizu**	**11.63**	**232**	P	**Pn**	**07 15 07.6**	**-1.8**
MAJO	**Matsushiro**	**13.08**	**233**	*e*Pn	**Pn**	**07 15 26.7**	**-2.6**
MAJO	**Matsushiro**	**13.08**	**233**	*e*PN	**Pn**	**07 15 26.7**	**-2.6**
MAT	**Matsushiro**	**13.08**	**233**	P	**Pn**	**07 15 26.8**	**-2.5**
MJAR	**Matsushiro Arr**	**13.08**	**233**	P	**Pn**	**07 15 26.2**	**-3.1**
MJAR	comp=Z,0.3nm,0.3s,baz=29,slow=14,SNR=19			LR	LR	07 21 00.9	
MJAR	comp=Z,1μm,21.2s,baz=45,slow=39						
USA0B	**Ussuriysk Arra**	**13.67**	**272**	*e*Pn	**Pn**	**07 15 36.1**	**-1.1**
USRK	**Ussuriysk Ar.**	**13.67**	**272**	P	**Pn**	**07 15 35.9**	**-1.3**
USRK	comp=Z,1.9nm,0.3s,baz=83,slow=12,SNR=32			LR	LR	07 20 55.1	
USRK	comp=Z,3μm,18.8s,baz=73,slow=37						
KLR	**Kul'dur**	**13.76**	**294**	P	**Pn**	**07 15 39.1**	**+0.7**
KLR	comp=Z,0.1nm,0.3s,baz=96,slow=15,SNR=15			S	**Sn**	**07 18 13.7**	**+4.1**
KLR	baz=128,slow=9.5,SNR=1.9			LR	LR	07 21 22.2	
KLR	comp=Z,4μm,18.0s,baz=97,slow=39						
VLA	**Vladivostok**	**13.99**	**268**	*e*P	**Pn**	**07 15 40.7**	**-0.8**
VLA	**Vladivostok**	**13.99**	**268**	*e*P	**Pn**	**07 15 40.7**	**-0.8**
EKMR	**Ekimchan**	**14.22**	**310**	*e*P	**Pn**	**07 15 44.1**	**-0.5**
EKMR	comp=Z,40nm,0.9s			AMB	AMB	07 15 58.0	
MA2	**Magadan**	**14.35**	**359**	P	**Pn**	**07 15 45.0**	**-1.3**
MA2	comp=Z,3.4nm,0.3s,baz=168,slow=11,SNR=12			LR	LR	07 21 43.1	
MA2	comp=Z,2μm,18.3s,baz=178,slow=39						
MA2	**Magadan**	**14.35**	**359**	*e*Pn	**Pn**	**07 15 45.1**	**-1.1**
MA2	**Magadan**	**14.35**	**359**	*e*P	**Pn**	**07 15 45.1**	**-1.1**
MA2	**Magadan**	**14.35**	**359**	*e*P	**Pn**	**07 15 45.1**	**-1.1**
INU	**Inuyama**	**14.61**	**232**	*e*Pn	**Pn**	**07 15 47.7**	**-2.2**
MSHR	**Mys Shultsa**	**14.65**	**267**	*e*eP	**Pn**	**07 15 49.0**	**-1.4**
JHJ	**Hachijo jima 2**	**14.96**	**220**	S	Sn	07 18 25.4	-14
JHJ	comp=Z,5.6nm,0.3s,baz=60,slow=20,SNR=2.8			LR	LR	07 24 58.6	
JHJ	comp=Z,414nm,18.0s,baz=92,slow=50						
MDJ	**Mudanjiang**	**15.28**	**275**	P	**Pn**	**07 15 57.8**	**-0.8**
MDJ				pP	P	07 16 06.8	+4.1
MDJ				sP	pP	07 16 16.3	+3.2
MDJ				S	**Sn**	**07 18 44.0**	**-2.6**
MDJ				sS	S	07 18 59.0	-2.3
MDJ	comp=Z,65nm,1.0s			pmax	pmax		
MDJ	comp=Z,64nm,3.0s			pmax	pmax		
MDJ	comp=Z,2μm,17.8s			LR	LR		
MDJ	comp=Z,3μm,17.8s			LR	LR		
MDJ	comp=Z,5μm,15.7s			LR	LR		
MDJ	**Mudanjiang**	**15.28**	**275**	*e*Pn	**Pn**	**07 15 57.4**	**-1.2**
SMY	**Shemya**	**16.77**	**55**	*e*Pn	**Pn**	**07 16 17.2**	**-0.1**
SMY	comp=Z,116nm,1.1s			pmax	pmax		
SMY	**Shemya**	**16.77**	**55**	*e*P	**Pn**	**07 16 17.3**	**-0.1**
SMY	comp=Z,116nm,1.1s			pmax	pmax		
BMKR	**Bomnak**	**17.12**	**312**	*e*P	**Pn**	**07 16 20.0**	**-1.8**
BMKR	comp=Z,29nm,0.4s			AMB	AMB	07 16 28.0	
ZEA	**Zeya**	**17.63**	**307**	*e*P	**Pn**	**07 16 26.2**	**-1.9**
ZEA				*e*S	**S**	**07 19 46.0**	**-3.0**
ZEA	comp=E,72nm,1.2s			pmax	pmax		
ZEA	comp=Z,85nm,1.2s			pmax	pmax		
ZEA	comp=N,59nm,1.0s			pmax	pmax		
ZEA	comp=Z,800nm,8.0s			smax	smax		
ZEA	comp=N,300nm,11.0s			MLR	MLR		
ZEA	comp=E,3μm,15.0s			MLR	MLR		
ZEA	comp=Z,4μm,15.0s			MLR	MLR		
ZEA	comp=N,2μm,13.0s						
ZEA	**Zeya**	**17.63**	**307**	*e*P	**Pn**	**07 16 26.2**	**-1.9**
ZEA				AMB	AMB	07 16 31.2	
ZEA	comp=N,59nm,0.9s			AMB	AMB	07 16 31.2	
ZEA	comp=N,72nm,0.9s			AMB	AMB	07 16 31.2	
ZEA	comp=N,85nm,0.9s			AMB	AMB	07 16 42.0	
ZEA	comp=N,800nm,8.0s			AMS	AMS	07 23 54.0	
ZEA	comp=N,2μm,14.0s			AMS	AMS	07 23 54.0	
ZEA	comp=N,3μm,14.0s			AMS	AMS	07 23 54.0	
ZEA	comp=N,4μm,14.0s						
SEY	**Seymchan**	**17.73**	**2**	P	**Pn**	**07 16 27.6**	**-1.6**
SEY	**Seymchan**	**17.73**	**2**	⇑*e*P	**Pn**	**07 16 28.3**	**-1.0**
SEY	**Seymchan**	**17.73**	**2**	*e*P	**Pn**	**07 16 28.3**	**-1.0**
KROS	**Kirovskiy**	**18.02**	**309**	*e*P	**P**	**07 16 32.8**	**-0.1**
KROS	comp=N,9.0nm,0.4s			AMB	AMB	07 16 36.8	
KROS	comp=N,17nm,0.4s			AMB	AMB	07 16 36.8	
KROS	comp=N,22nm,0.4s			AMB	AMB	07 16 36.8	
CN2	**Changchun**	**18.36**	**275**	*e*P	**P**	**07 16 35.5**	**-1.2**
CN2				*es*P	sP	07 16 51.2	-1.8
CN2				*e*S	**Sn**	**07 19 53.9**	**-7.4**
CN2	comp=N,40nm,0.7s			pmax	pmax		
CN2	comp=N,200nm,4.0s			pmax	pmax		
CN2	comp=N,1μm,12.0s			LR	LR		
CN2	comp=N,2μm,12.0s			LR	LR		
CN2	comp=N,2μm,12.0s			LR	LR		
KSRS	**Korea Array**	**19.06**	**254**	P	**P**	**07 16 43.1**	**-1.3**
KSRS	comp=N,1.0nm,0.3s,baz=61,slow=11,SNR=38			PcP	**PcP**	**07 21 06.9**	**-0.6**

comp=N,0.1nm,0.3s,baz=17,slow=0.9,SNR=5.1
KSRS LR LR 07 24 08.5
comp=N,1μm,18.9s,baz=60,slow=37
KS15 Wonju Array Si 19.09 254 *e*P **P 07 16 43.9 -0.8**
comp=N,25nm,0.9s
JNU Nakatsue 19.78 239 P **P 07 16 53.1 +0.8**
comp=N,1.6nm,0.3s,baz=34,slow=7.1,SNR=16
JNU S **S 07 20 32.9 +0.3**
comp=N,0.2nm,0.3s,baz=53,slow=20,SNR=1.6
JNU LR LR 07 25 14.0
comp=N,1μm,21.2s,baz=28,slow=39
JNU Nakatsue 19.78 239 *e*P **P 07 16 52.7 +0.3**
comp=N,66nm,1.0s
TJN Taejon 20.01 252*c i*P **P 07 16 55.0 +0.2**
YAK Yakutsk 20.91 331 *e*P **P 07 17 03.7 -0.5**
comp=N,109nm,0.6s
YAK Yakutsk 20.91 331 *e*P **P 07 17 04.1 -0.2**
YAK *e* 07 17 21.8
YAK *e**SS **sS 07 21 13.4 +2.6**
YAK *e*SS **SnSn 07 21 24.6 +7.2**
YAK *e*SSS SSS 07 21 42.0
YAK Yakutsk 20.91 331 *e*P **P 07 17 04.1 -0.2**
HIA Hailar 21.61 292 *e*P **P 07 17 09.2 -2.8**
comp=N,28nm,1.1s
HIA Hailar 21.61 292*de*P **P 07 17 09.1 -2.8**
HIA pmax pmax
comp=Z,67nm,1.0s
KIWB Kanaga Island 21.87 61 *e*P **P 07 17 14.0 -0.7**
ADK Adak 22.16 61 *e*P **P 07 17 17.6 -0.2**
comp=Z,130nm,1.3s
ADK Adak 22.16 61 *e*P **P 07 17 17.6 -0.2**
ADK pmax pmax
comp=Z,130nm,1.3s
GSTR Great Sitkin T 22.57 61 *e*P **P 07 17 22.8 +0.6**
DL2 Dalian 22.73 264 P **P 07 17 21.3 -2.7**
DL2 S **S 07 21 26.5 -2.7**
DL2 pmax pmax
comp=Z,44nm,1.3s
DL2 pmax pmax
comp=Z,270nm,5.6s
DL2 LR LR
comp=Z,440nm,13.1s
DL2 LR LR
comp=Z,570nm,14.5s
DL2 LR LR
comp=Z,860nm,23.3s
BILL Bilibino 24.17 14 *e*P **P 07 17 37.5 0.0**
comp=Z,8.2nm,0.5s
BILL Bilibino 24.17 14 *i*P **P 07 17 37.6 0.0**
BILL *i* 07 18 09.8
BILL pmax pmax
comp=Z,30nm,2.5s
BILL MLR MLR
comp=Z,2μm,16.0s
BILL Bilibino 24.17 14 *e*P **P 07 17 37.6 0.0**
JOW Kunigami 25.93 233 P **P 07 17 55.1 +1.2**
comp=Z,2.2nm,1.0s,baz=78,slow=20,SNR=4.6
JOW Kunigami 25.93 233 *e*P **P 07 17 54.2 +0.3**
comp=Z,22nm,1.3s
BOD Bodaibo 25.94 312 *e*P **P 07 17 50.9 -2.8**
TIA Tai'an 27.15 263 P **P 07 18 04.7 -0.2**
TIA pmax pmax
comp=Z,14nm,1.3s
TIA pmax pmax
comp=Z,160nm,3.3s
TIA LR LR
comp=Z,710nm,14.7s
TIA LR LR
comp=Z,570nm,15.1s
TIA LR LR
comp=Z,520nm,14.7s
SSE Sheshan 27.29 249 P **P 07 18 07.6 +1.5**
SSE S **S 07 22 42.0 -0.2**
SSE pmax pmax
comp=Z,31nm,0.8s
SSE pmax pmax
comp=Z,120nm,3.8s
SSE LR LR
comp=Z,170nm,17.1s
SSE LR LR
comp=Z,530nm,17.4s
NJ2 Nanjing 28.25 253 *e*P **P 07 18 15.0 +0.3**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=Z,2μm,15.7s
NJ2 LR LR
comp=Z,2μm,15.7s
NJ2 LR LR
comp=Z,3μm,16.1s
TIXI Tiksi 28.55 345 P **P 07 18 16.4 -0.5**
comp=Z,2.3nm,0.3s,baz=135,slow=10,SNR=4.1
TIXI PcP **PcP 07 21 24.8 -2.3**
comp=Z,2.3nm,0.6s,baz=53,slow=2.7,SNR=2.8
TIXI Tiksi 28.55 345⇑*e*P **P 07 18 15.5 -1.4**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
H11N2 WAKE ISLAND Hy 28.60 148 T T 07 49 01.3
baz=337,slow=75,SNR=126
H11N1 WAKE ISLAND Hy 28.61 148 T T 07 49 04.8
baz=337,slow=75,SNR=107
H11N3 WAKE ISLAND Hy 28.61 148 T T 07 49 15.7
baz=337,slow=75,SNR=143
HHC Hu-ho-hao-te 29.05 275 *e*P **P 07 18 22.2 +0.3**
HHC sP sP 07 18 40.9 +2.1
HHC pmax pmax
comp=Z,76nm,1.0s
HHC pmax pmax
comp=Z,320nm,5.7s
HHC LR LR
comp=Z,770nm,13.3s
HHC LR LR
comp=Z,3μm,15.1s
HHC LR LR
comp=Z,5μm,16.1s
H11S1 WAKE ISLAND Hy 29.64 149 T T 07 50 29.5
baz=337,slow=76,SNR=48
H11S3 WAKE ISLAND Hy 29.65 149 T T 07 50 28.9
baz=337,slow=76,SNR=135
H11S2 WAKE ISLAND Hy 29.66 149 T T 07 50 34.8
baz=337,slow=76,SNR=38
TIY Taiyuan 29.74 269 *e*P **P 07 18 29.1 +1.1**
TIY S **S 07 23 26.9 +6.0**
TIY sS **sS 07 23 44.1 +4.2**
TIY pmax pmax
comp=Z,130nm,5.3s
TIY LR LR
comp=Z,420nm,13.8s
TIY LR LR
comp=Z,710nm,16.1s
TIY LR LR
comp=Z,760nm,16.8s
ULN Ulaanbaatar 30.13 291 *e*P **P 07 18 31.0 -0.4**
comp=Z,9.7nm,0.7s
ULN Ulaanbaatar 30.13 291⇓*e*P **P 07 18 31.5 +0.1**
ULN pmax pmax
comp=Z,14nm,1.0s
ULN Ulaanbaatar 30.13 291 P **P 07 18 29.9 -1.5**
SNR=8.8
ULN Ulaanbaatar 30.13 291 *e*P **P 07 18 31.5 +0.1**
BTO Baotou 30.23 276 *e*P **P 07 18 30.8 -1.5**
BTO S **S 07 23 21.2 -7.4**
SONA0 Songino Array 30.57 291 *e*P **P 07 18 34.4 -0.9**
SONM Songino Array 30.57 291 P **P 07 18 34.4 -0.9**
comp=Z,7.1nm,1.0s,baz=78,slow=6.1,SNR=13
SONM PcP **PcP 07 21 32.6 -0.3**
comp=Z,2.1nm,0.9s,baz=82,slow=3.1,SNR=3.4
SONM LR LR 07 31 57.1
comp=Z,2μm,18.5s,baz=82,slow=38
TLY Talaya 31.68 299 *e*P **P 07 18 44.1 -0.8**
comp=Z,5.3nm,1.1s
TLY Talaya 31.68 299 *e*P **P 07 18 44.1 -0.8**
TLY pmax pmax
comp=Z,5.0nm,1.1s
TLY Talaya 31.68 299 *e*P **P 07 18 44.0 -0.8**
ZAK Zakamensk 32.10 297 *e*P **P 07 18 44.0 -4.7**
ZAK pmax pmax
comp=Z,5.0nm,1.4s
YULB Yu-li 32.61 238 *e*P **P 07 18 53.4 +0.1**
comp=Z,9.9nm,0.9s
TPUB Ta-pu 33.09 239 *e*P **P 07 18 57.1 -0.3**
comp=Z,23nm,0.8s
QZH Quanzhou 33.14 243 *e*P **P 07 18 59.3 +1.4**
QZH S **S 07 24 17.2 +3.2**
QZH sS **sS 07 24 35.9 +2.9**
QZH LR LR
comp=Z,530nm,16.6s
QZH LR LR
comp=Z,460nm,14.7s
QZH LR LR
comp=Z,420nm,17.1s
XAN Xi'an 34.03 266 P **P 07 19 05.4 -0.2**
XAN pP pP 07 19 16.9 -0.1
XAN pmax pmax
comp=Z,20nm,1.4s
XAN pmax pmax
comp=Z,180nm,5.2s
XAN LR LR
comp=Z,880nm,14.5s
XAN LR LR
comp=Z,480nm,13.9s
XAN LR LR
comp=Z,850nm,17.8s
XAN Xi'an 34.03 266 *e*P **P 07 19 05.0 -0.6**
comp=Z,15nm,0.8s
XAN Xi'an 34.03 266 *e*P **P 07 19 05.0 -0.6**
XAN pmax pmax
comp=Z,15nm,0.8s
SVW2 Sparrevohn 34.52 43 *e*P **P 07 19 10.5 +1.0**
comp=Z,9.1nm,1.0s
ENH Enshi 35.75 260 *e*P **P 07 19 19.9 -0.6**
comp=Z,28nm,0.9s
RSO Redoubt South 35.90 45 *e*P **P 07 19 22.4 +0.8**
KDAK Kodiak Island 36.11 49 *i*P **P 07 19 24.5 +1.3**
SPU Mount Spurr 36.23 43 *e*P **P 07 19 24.6 +0.4**
CAST Castle Rocks 36.26 40 *e*P **P 07 19 25.3 +0.8**
comp=Z,8.3nm,0.9s
LZH Lanzhou 36.58 272⇑P **P 07 19 28.6 +1.0**
LZH pP pP 07 19 40.3 +0.8
LZH sP sP 07 19 45.5 +0.8
LZH PP **PnPn 07 20 52.3 +0.8**
LZH *e*S **S 07 25 05.4 -1.7**
LZH sS sS 07 25 26.9 +0.7
LZH SS **SnSn 07 27 35.3 -4.2**
LZH pmax pmax
comp=Z,93nm,1.3s
LZH pmax pmax
comp=Z,380nm,5.2s
LZH LR LR
comp=Z,660nm,14.1s
LZH LR LR
comp=Z,960nm,14.6s
LZH LR LR
comp=Z,1μm,17.9s
BPAW Bear Paw Mtn. 36.78 38 *e*P **P 07 19 29.3 +0.4**
comp=Z,9.0nm,0.8s
MLY Manley 36.94 37 *e*P **P 07 19 30.6 +0.4**
comp=Z,7.3nm,0.8s
COLD Coldfoot 37.34 33 *e*P **P 07 19 34.5 +1.0**
comp=Z,3.7nm,1.0s
PMR Palmer 37.63 43 *e*P **P 07 19 36.7 +0.7**
comp=Z,8.2nm,0.8s
MCK McKinley 37.68 39 *e*P **P 07 19 36.4 -0.1**
comp=Z,49nm,1.6s
MCK McKinley 37.68 39 *e*P **P 07 19 36.4 -0.1**
MCK pmax pmax
comp=Z,49nm,1.6s
TOLK Toolik Lake Re 37.74 31 *e*P **P 07 19 37.2 +0.3**
comp=Z,9.8nm,0.7s
GTA Gaotai 37.87 280 P **P 07 19 38.9 +0.4**
GTA pP pP 07 19 50.9 +0.6
GTA sP sP 07 19 56.7 +1.2
GTA S **S 07 25 25.6 -0.9**
GTA sS sS 07 25 45.2 -0.5
GTA pmax pmax
comp=Z,33nm,1.0s
GTA pmax pmax
comp=Z,230nm,7.9s
GTA LR LR
comp=Z,500nm,13.7s
GTA LR LR
comp=Z,1μm,13.4s
GTA LR LR
comp=Z,1μm,13.1s
KNK Knik Glacier 37.96 43 *e*P **P 07 19 39.4 +0.5**
comp=Z,45nm,1.3s
SML Sawmill 38.00 42 *e*P **P 07 19 39.4 +0.2**
comp=Z,35nm,0.7s
SML Sawmill 38.00 42 *e*P **P 07 19 39.4 +0.2**
SML pmax pmax
comp=Z,35nm,0.7s
WRH Wood River Hil 38.05 38 *e*P **P 07 19 39.8 +0.2**
comp=Z,32nm,1.4s
COLA College 38.16 37 *e*P **P 07 19 40.8 +0.3**
comp=Z,17nm,0.6s
COLA College 38.16 37*c i*P **P 07 19 41.0 +0.6**
COLA pmax pmax
comp=Z,19nm,1.3s
CCB Clear Creek Bu 38.18 38 *e*P **P 07 19 40.9 +0.3**
comp=Z,20nm,1.5s
DHY Denali Highway 38.39 40 *e*P **P 07 19 42.5 -0.2**
comp=Z,60nm,1.6s
SCM Sheep Creek Mo 38.47 42 *e*P **P 07 19 43.8 +0.5**
comp=Z,50nm,1.5s
SCM Sheep Creek Mo 38.47 42 *e*P **P 07 19 43.8 +0.5**
SCM pmax pmax
comp=Z,50nm,1.5s
HDA Harding Lake 38.55 38 *e*P **P 07 19 43.8 +0.1**
comp=Z,13nm,0.6s
ILAR Eielson Array 38.57 37 P **P 07 19 43.9 -0.1**
comp=Z,4.1nm,0.5s,baz=261,slow=7.7,SNR=70
ILAR PcP **PcP 07 21 54.5 -1.0**
comp=Z,0.9nm,0.8s,baz=260,slow=3.3,SNR=3.0
ILAR LR LR 07 36 50.0
comp=Z,462nm,21.0s,baz=278,slow=38
ILB Eielson Array 38.57 37 *e*P **P 07 19 43.9 -0.1**
comp=Z,28nm,1.5s
PRP Porcupine Dome 39.14 36 *e*P **P 07 19 49.4 +0.5**
comp=Z,22nm,1.4s
FYU Fort Yukon 39.26 34 *e*P **P 07 19 50.4 +0.7**
comp=Z,48nm,1.3s
DIV Divide 39.28 43 *e*P **P 07 19 50.5 +0.6**
comp=Z,12nm,0.8s
NRIK Noril'sk 39.35 330 P **P 07 19 49.4 -1.0**
comp=Z,3.7nm,0.5s,baz=106,slow=7.9,SNR=8.7
NRIK LR LR 07 37 04.3
comp=Z,591nm,18.0s,baz=88,slow=38
CD2 Chengdu 39.39 265⇑*i*P **P 07 19 49.6 -1.7**
CD2 pP pP 07 20 02.5 -0.4
CD2 PP **PP 07 21 20.4 -1.8**
CD2 S **S 07 25 45.0 -4.5**
CD2 sS sS 07 26 07.1 -1.7
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 pmax pmax
comp=Z,250nm,5.7s
CD2 LR LR
comp=Z,320nm,14.8s
CD2 LR LR
comp=Z,250nm,15.8s
CD2 LR LR
comp=Z,380nm,20.1s
RIDG Independent Ri 39.50 39 *e*P **P 07 19 51.8 +0.1**
comp=Z,32nm,1.4s
DOT Dot Lake 39.85 39 *e*P **P 07 19 54.4 -0.3**
comp=Z,5.2nm,0.8s
SCRK Sand Creek 39.86 39 *e*P **P 07 19 54.9 0.0**
comp=Z,31nm,1.5s
GYA Guiyang 40.05 257⇑*i*P **P 07 19 56.7 -0.2**
GYA pP pP 07 20 08.9 +0.3
GYA PP **PnPn 07 21 32.8 -0.5**
GYA S **S 07 25 58.6 -1.1**
GYA sS sS 07 26 18.5 -0.5
GYA pmax pmax
comp=Z,30nm,0.9s
GYA pmax pmax
comp=Z,120nm,8.1s
GYA LR LR
comp=Z,500nm,17.4s
GYA LR LR
comp=Z,750nm,18.4s
GYA LR LR
comp=Z,1μm,17.4s
MENT Mentasta 40.06 40 *e*P **P 07 19 57.2 +0.8**
comp=Z,7.7nm,0.8s
EGAK Eagle 41.02 37 *e*P **P 07 20 04.3 0.0**
comp=Z,41nm,1.4s
CTGM Chitina Glacie 41.44 43 *e*P **P 07 20 08.7 +0.7**
comp=Z,24nm,0.8s
DAWY Dawson 41.87 38 *e*P **P 07 20 11.5 +0.3**
comp=Z,4.6nm,0.9s
DGZ Jazzator, Alta 42.15 300⇑*e*P **P 07 20 14.4 +0.5**
DGZ pmax pmax
comp=Z,5.0nm,1.0s
ZAA0 Zalesovo Array 42.39 307 *e*P **P 07 20 15.0 -0.6**
comp=Z,2.4nm,0.6s
ZALV Zalesovo Beam 42.39 307 P **P 07 20 14.2 -1.4**
comp=Z,1.0nm,0.3s,baz=90,slow=7.5,SNR=2.9
ZALV PcP **PcP 07 22 08.1 +0.1**
comp=Z,6.0nm,0.6s,baz=83,slow=3.0,SNR=8.7
ZALV LR LR 07 38 53.5
comp=Z,984nm,20.5s,baz=70,slow=38
EPYK Eagle Plains 42.68 34 *e*P **P 07 20 18.5 +0.6**
comp=Z,32nm,1.1s
QIZ Qiongzhong 43.00 246 P **P 07 20 21.8 +0.9**
QIZ PP **PP 07 22 02.1 +0.8**
QIZ S **S 07 26 43.3 +0.2**
QIZ sS **sS 07 27 02.2 -0.3**
QIZ LR LR
comp=Z,580nm,20.1s
QIZ LR LR
comp=Z,690nm,20.1s
QIZ LR LR
comp=Z,690nm,17.2s
HYT Haines Junctio 43.30 43 *e*P **P 07 20 24.4 +1.4**
comp=Z,57nm,1.3s
KMI Kunming 43.62 259 P **P 07 20 26.5 +0.3**
KMI pP pP 07 20 39.7 +1.7
KMI sP sP 07 20 45.4 +2.3
KMI PP **PcP 07 22 11.5 -1.4**
KMI S **S 07 26 51.9 -0.7**
KMI sS sS 07 27 11.0 -1.1
KMI pmax pmax
comp=Z,29nm,0.6s
KMI pmax pmax
comp=Z,160nm,4.1s
KMI LR LR
comp=Z,550nm,14.9s
KMI LR LR
comp=Z,370nm,17.6s
KMI LR LR
comp=Z,610nm,17.1s
INK Inuvik 43.65 31 P **P 07 20 25.6 +0.1**
comp=Z,9.8nm,0.8s,baz=273,slow=5.9,SNR=15
INK Inuvik 43.65 31 *e*P **P 07 20 25.9 +0.4**
comp=Z,26nm,1.3s
INK Inuvik 43.65 31 *e*P **P 07 20 25.9 +0.4**
INK pmax pmax
comp=Z,26nm,1.3s
WMQ Urumqi 44.20 292 *e*P **P 07 20 31.1 +0.7**
WMQ sP sP 07 20 49.2 +1.4
WMQ pmax pmax
comp=Z,30nm,0.7s
WMQ pmax pmax
comp=Z,180nm,4.3s
WMQ LR LR
comp=Z,2μm,18.5s
WMQ LR LR
comp=Z,1μm,18.5s
WMQ LR LR
comp=Z,2μm,24.5s
WMQ Urumqi 44.20 292 *e*P **P 07 20 30.5 +0.1**
comp=Z,25nm,1.1s
WMQ Urumqi 44.20 292 *e*P **P 07 20 30.5 +0.1**
WMQ pmax pmax
comp=Z,25nm,1.1s
WHY Whitehorse 44.59 42 *e*P **P 07 20 35.0 +1.6**
comp=Z,15nm,1.0s
SLVN Son La 45.33 254 *e*P **P 07 20 39.8 +0.2**
comp=Z,10nm,1.1s
MK31 Makanchi Array 46.42 298 *e*P **P 07 20 46.9 -1.1**
comp=Z,12nm,0.8s
MK31 Makanchi Array 46.42 298 *i*P **P 07 20 46.9 -1.1**
MK31 pmax pmax
comp=Z,13nm,0.7s
MK32 Makanchi Array 46.42 298 *e*P **P 07 20 46.3 -1.7**
MKAR Makanchi Array 46.42 298 P **P 07 20 46.3 -1.7**
comp=Z,9.4nm,0.7s,baz=76,slow=7.0,SNR=74
MKAR PcP **PcP 07 22 21.4 -0.6**
comp=Z,3.4nm,0.6s,baz=61,slow=3.7,SNR=4.1
MKAR LR LR 07 41 20.2
comp=Z,2μm,19.3s,baz=66,slow=38
MKAR Makanchi Array 46.42 298 *i*P **P 07 20 46.4 -1.5**
MKAR pmax pmax
comp=Z,9.0nm,0.7s
MAKZ Makanchi 46.61 298 *e*P **P 07 20 48.5 -0.9**
comp=Z,11nm,0.8s
MAKZ Makanchi 46.61 298 *e*P **P 07 20 48.5 -0.9**
MAKZ pmax pmax
comp=Z,11nm,0.8s
KURK Kurchatov 47.06 304 *e*P **P 07 20 51.4 -1.4**
comp=Z,13nm,0.9s
KURK Kurchatov 47.06 304 *e*P **P 07 20 51.4 -1.4**
KURK pmax pmax
comp=Z,13nm,0.9s
KURK Kurchatov 47.06 304 P **P 07 20 50.9 -1.9**
SNR=7.3
KURK Kurchatov 47.06 304 *e*P **P 07 20 51.4 -1.4**
KURBB Kurchatov Arra 47.15 304 P **P 07 20 51.2 -2.3**
comp=Z,12nm,0.9s,baz=71,slow=8.2,SNR=51
DLBC Dease Lake 47.62 44 *e*P **P 07 20 58.2 +1.0**
comp=Z,9.3nm,0.9s
PANO Nakornpanom 47.78 250 P **P 07 21 02.6 +3.8**
comp=Z,0.3nm,2.1s
SKNT Sakolnakorn 48.32 250 P **P 07 21 04.0 +1.0**
comp=Z,21nm,1.5s
LSA Lhasa 48.99 273 P **P 07 21 09.9 +1.3**
LSA Lhasa 48.99 273 *e*P **P 07 21 09.6 +1.0**
comp=Z,30nm,0.9s
LSA Lhasa 48.99 273 P **P 07 21 10.3 +1.8**
LSA Lhasa 48.99 273 *e*P **P 07 21 09.6 +1.0**
LSA pmax pmax
comp=Z,30nm,0.9s
DLV T Lat 49.17 241 *e*P **P 07 21 09.9 +0.2**
comp=Z,19nm,0.9s
RABL Rabaul 49.23 179 *e*P **P 07 21 12.1 +2.2**
comp=Z,37nm,0.4s
PAYA Payao 49.43 256 P **P 07 21 13.1 +1.6**
comp=Z,33μm,0.8s
KHON Khomkaen 49.55 250 P **P 07 21 15.3 +2.9**
PDGK Podgornoye 49.75 295 P **P 07 21 12.3 -1.5**
PDGK pmax pmax
comp=Z,16nm,0.9s
PHRA Phrae 49.77 255 P **P 07 21 15.1 +1.0**
comp=Z,2.9nm,1.2s
LAMP Lampang 50.17 255 P **P 07 21 19.1 +2.0**
CHAI Chaiyaphum 50.42 251 P **P 07 21 19.9 +0.9**
comp=Z,25μm,1.0s,comp=Z,540μm
CMMT Chiang Mai 50.44 256 P **P 07 21 20.1 +1.0**
comp=Z,10nm,1.0s
CHTO Chiang Mai 50.44 256 *e*P **P 07 21 19.1 0.0**
comp=Z,14nm,0.9s
CHTO Chiang Mai 50.44 256 *e*P **P 07 21 19.1 0.0**
CHTO pmax pmax
comp=Z,14nm,0.9s
CHTO Chiang Mai 50.44 256 P **P 07 21 18.3 -0.8**
CHTO P **P 07 21 18.3 -0.8**
PBKT Sadao Pong 50.62 252 P **P 07 21 22.9 +2.4**
comp=Z,3.8nm,0.8s,comp=Z,783nm
CM31 Chiang Mai Arr 50.68 256 *e*P **P 07 21 21.1 +0.1**
comp=Z,8.7nm,0.8s
CMAR Chiang Mai Arr 50.68 256 P **P 07 21 21.5 +0.5**
comp=Z,2.9nm,0.6s,baz=40,slow=8.2,SNR=21
CMAR LR LR 07 44 37.5
comp=Z,521nm,18.1s,baz=47,slow=38
BVAR Borovoye Array 50.76 310 P **P 07 21 19.6 -1.5**
comp=Z,2.0nm,0.5s,baz=49,slow=6.7,SNR=9.7
BVAR PcP **PcP 07 22 37.5 0.0**
comp=Z,3.7nm,0.6s,baz=92,slow=3.2,SNR=6.3
BRVK Borovoye 50.80 310 *e*P **P 07 21 20.4 -1.0**
comp=Z,4.3nm,0.9s
BRVK Borovoye 50.80 310⇑*e*P **P 07 21 20.1 -1.3**
BRVK pmax pmax
comp=Z,5.0nm,1.1s
BRVK Borovoye 50.80 310 P **P 07 21 19.2 -2.2**
BRVK P **P 07 21 19.2 -2.2**
BRVK Borovoye 50.80 310 *e*P **P 07 21 20.1 -1.3**
SHL Shillong 50.96 268 *e*P **P 07 21 23.0 -0.2**
comp=Z,73nm,0.7s
SHL Shillong 50.96 268 *e*P **P 07 21 23.0 -0.2**
SHL pmax pmax
comp=Z,73nm,0.7s
SHL Shillong 50.96 268⇑*i*P P 07 21 28.0 +4.8
MRSI Marisa 51.51 219 P **P 07 21 30.6 +3.5**
TARG Taragay, Kyrgy 51.62 294 *e*P **P 07 21 28.6 +0.4**
comp=Z,26nm,1.1s
ULHL Ulahol 52.36 295 P **P 07 21 34.1 +0.6**
SNR=42
BOOM Boomskoye usch 52.43 296 *e*P **P 07 21 34.5 +0.6**

comp=Z,70nm,1.4s
BOOM Boomskoye usch 52.43 296 *e*P **P 07 21 34.6 +0.6**
BOOM pmax pmax
comp=Z,70nm,1.4s
TKM2 Tokmak 2 52.43 296 P **P 07 21 35.1 +1.0**
SNR=16
TKM2 Tokmak 2 52.43 296 P **P 07 21 34.0 0.0**
TKM2 pmax pmax
comp=Z,17nm,1.0s
LUWI Luwuk 52.51 217 *e*P **P 07 21 34.1 -0.5**
comp=Z,28nm,1.0s
LUWI Luwuk 52.51 217 P **P 07 21 38.2 +3.6**
MPSI Mapaga 52.55 221 P **P 07 21 35.3 +0.4**
RES Resolute Bay 52.69 18 P **P 07 21 34.5 -0.7**
comp=Z,8.4nm,0.8s,baz=349,slow=12,SNR=29
RES Resolute Bay 52.69 18 *e*P **P 07 21 34.8 -0.3**
comp=Z,9.4nm,0.8s
RES Resolute Bay 52.69 18 *e*P **P 07 21 34.8 -0.3**
RES pmax pmax
comp=Z,9.0nm,0.8s
APSI Ampana 52.88 218 P **P 07 21 38.2 +0.9**
YKW3 Yellowknife Ar 52.90 35 *e*P **P 07 21 37.1 +0.2**
comp=Z,11nm,1.2s
YKA Yellowknife Ar 52.94 35 P **P 07 21 37.5 +0.3**
comp=Z,2.4nm,0.6s,baz=300,slow=7.5,SNR=28
YKA PcP **PcP 07 22 44.1 -1.3**
comp=Z,1.3nm,0.7s,baz=296,slow=6.8,SNR=2.6
YKA LR LR 07 45 49.1
comp=Z,29nm,20.6s,baz=299,slow=38
YKB5 Yellowknife Ar 52.94 35 *e*P **P 07 21 37.5 +0.3**
BRDH Bariadhala 52.96 266 LR LR 07 47 01.1
comp=Z,143nm,18.7s,baz=44,slow=39
KBK Karagaybulak 52.98 296 P **P 07 21 38.7 +0.7**
SNR=12
KZA Kyzart 53.08 295 P **P 07 21 40.4 +1.3**
SNR=34
AAK Ala-Archa 53.27 296 P **P 07 21 40.8 +0.6**
comp=Z,14nm,0.8s,baz=98,slow=3.3,SNR=27
AAK Ala-Archa 53.27 296 P **P 07 21 40.8 +0.6**
SNR=10
AAK Ala-Archa 53.27 296 *e*P **P 07 21 40.0 -0.2**
comp=Z,21nm,0.9s
AAK Ala-Archa 53.27 296 *i* P **P 07 21 40.0 -0.2**
SNR=10
AAK Ala-Archa 53.27 296 P **P 07 21 40.5 +0.4**
AAK pmax pmax
comp=Z,23nm,0.9s
AAK Ala-Archa 53.27 296 P **P 07 21 40.1 0.0**
AAK P **P 07 21 40.1 0.0**
SNR=9.2
AAK Ala-Archa 53.27 296 *e*P **P 07 21 40.6 +0.4**
ODAN Odare 53.34 273 *e*P **P 07 21 41.5 +0.6**
comp=Z,57nm,0.9s
JIRN Jiri 53.70 274 *e*P **P 07 21 44.5 +0.8**
comp=Z,138nm,0.7s
EKS2 Erkin-Say 53.71 297 P **P 07 21 43.8 +0.5**
SNR=21
GUN Gumba 53.77 275 *e*P **P 07 21 44.6 +0.4**
comp=Z,132nm,0.9s
RAMN Ramite 53.84 273 *e*P **P 07 21 45.2 +0.6**
comp=Z,116nm,0.6s
KSH Kashi 53.96 292 P **P 07 21 49.1 +3.9**
KSH sP sP 07 22 12.1 +10
KSH PcP **PcP 07 22 52.3 +2.3**
KSH S **S 07 29 20.4 +2.9**
KSH SS **SS 07 33 00.4 +1.7**
KSH pmax pmax
comp=Z,110nm,1.3s
KSH pmax pmax
comp=Z,470nm,8.3s
KSH LR LR
comp=Z,2μm,16.1s
KSH LR LR
comp=Z,2μm,16.6s
KSH LR LR
comp=Z,3μm,18.3s
SVE Sverdlovsk 54.00 317 *e*P **P 07 21 43.1 -1.9**
SVE pmax pmax
comp=Z,11nm,0.6s
SVE MLR MLR
comp=Z,457nm,17.0s
AML Almayashu 54.04 296 P **P 07 21 47.3 +1.2**
SNR=7.2
PHET Kaeng Krachan 54.15 250 P P 07 21 51.8 +5.2
comp=Z,19μm,0.8s
KKN Kakani 54.26 275 *e*P **P 07 21 48.4 +0.8**
comp=Z,107nm,0.8s
PKI Pulchoki 54.30 275 *e*P **P 07 21 48.4 +0.3**
comp=Z,130nm,1.2s
PKIN Phulchoki 54.31 275 *e*P **P 07 21 48.4 +0.4**
comp=Z,87nm,1.2s
DMN Daman 54.49 275 *e*P **P 07 21 50.2 +0.8**
comp=Z,132nm,1.0s
SBUM Sibu 54.62 230 P **P 07 21 50.0 0.0**
ARSB Arslanbob 54.92 296 *e*P **P 07 21 52.7 +0.5**
comp=Z,46nm,0.9s
DANN Dangsing 54.99 277 *e*P **P 07 21 54.1 +1.1**
comp=Z,97nm,0.6s
ARU Arti 55.19 317 *e*P **P 07 21 52.2 -1.5**
comp=Z,10nm,0.6s
ARU Arti 55.19 317 *c i*P **P 07 21 51.2 -2.5**
ARU 07 22 51.3
ARU S **S 07 29 30.8 -2.5**
ARU SS **SS 07 33 13.0 -4.1**
ARU pmax pmax
comp=Z,8.0nm,0.7s
ARU MLR MLR
comp=Z,688nm,20.0s
LLLB Lilloet 55.29 51 *e*P **P 07 21 54.8 +0.2**
comp=Z,4.2nm,0.7s
KK31 Karatay Array 55.52 299 *e*P **P 07 21 55.9 -0.4**
comp=Z,14nm,0.8s
KK31 Karatay Array 55.52 299 *i* P **P 07 21 55.9 -0.4**
KK31 pmax pmax
comp=Z,9.0nm,0.7s
TULEG Thule 55.85 10 *e*P **P 07 21 57.2 -1.0**
comp=Z,20nm,1.1s
KSM Kuching 56.48 232 P **P 07 22 05.0 +1.6**
BTK Batken 56.99 296 *e*P **P 07 22 07.0 +0.1**
comp=Z,35nm,0.9s
BTK Batken 56.99 296 *e*P **P 07 22 07.0 +0.1**
BTK pmax pmax
comp=Z,35nm,0.9s
KAPI Kappang 57.37 218 P **P 07 22 10.7 +1.0**
comp=Z,2.5nm,0.3s,baz=339,slow=13,SNR=3.6
SKLT Songkhla 57.77 245 P **P 07 22 15.2 +2.7**
comp=Z,17nm,1.2s
PRGR Permogore 57.88 327 *e*P **P 07 22 10.3 -2.4**
PRGR *e**PP **sP 07 22 31.7 +1.7**
PRGR pmax pmax
comp=Z,16nm,0.8s
B08A Colville Reser 57.90 52 *e*P **P 07 22 14.0 +0.9**
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 58.08 357⇑ *i*P **P 07 22 13.1 -0.8**
DAG pmax pmax
comp=Z,120nm,1.4s
DAG Danmarks Havn 58.08 357⇑ *i*P **P 07 22 13.1 -0.8**
comp=Z,51nm,1.4s
AB31 Akbulak array 58.33 310 *i* P **P 07 22 15.4 -0.7**
AB31 pmax pmax
comp=Z,6.0nm,0.5s
ABKAR Akbulak array 58.33 310 *e*P **P 07 22 15.4 -0.7**
comp=Z,9.6nm,0.6s
C09A Chrisman Ranch 58.80 52 *e*P **P 07 22 20.1 +0.7**
comp=Z,5.0nm,0.8s
ARCES ARCESS Array B 58.81 340 P **P 07 22 18.3 -0.8**
comp=Z,1.6nm,0.6s,baz=34,slow=12,SNR=7.7
ARCES LR LR 07 52 40.3
comp=Z,398nm,18.6s,baz=48,slow=41
TMCR Tamitsa 59.02 332 *e*P **P 07 22 19.5 -1.1**
NIL Nilore 59.08 288 *e*P **P 07 22 22.4 +0.9**
comp=Z,120nm,0.9s
NIL Nilore 59.08 288 *e*P **P 07 22 22.4 +0.9**
NIL pmax pmax
comp=Z,120nm,0.9s
KULM Kulim 59.19 243 *e*P **P 07 22 23.5 +1.1**
comp=Z,22nm,0.9s
KULM Kulim 59.19 243 P **P 07 22 24.0 +1.6**
PINE Pine Mountain 59.55 57 *e*P **P 07 22 26.4 +1.5**
comp=Z,11nm,0.9s
KTK1 Kautokeino 59.74 341 *e*P **P 07 22 25.0 -0.5**
MYKOM Kota Tinggi 59.95 238 *e*P **P 07 22 29.0 +1.3**
comp=Z,23nm,1.2s
MYKOM Kota Tinggi 59.95 238 P **P 07 22 30.0 +2.4**
TRO Tromso 60.21 343 *e*P **P 07 22 26.5 -2.2**
WALA Waterton Lakes 60.45 49 *e*P **P 07 22 31.7 +0.8**
comp=Z,24nm,1.6s
MTN Manton Dam 60.60 203 *e*P **P 07 22 33.4 +1.4**
comp=Z,66nm,1.4s
KLMR Klimovskoe 60.68 329 *e*P **P 07 22 28.9 -3.1**
KLMR pmax pmax
comp=Z,8.0nm,0.9s
MOD Modoc Plateau 61.03 59 *e*P **P 07 22 36.2 +1.3**
comp=Z,10nm,1.1s
J08A Circle Bar Ran 61.26 56 *e*P **P 07 22 37.1 +0.7**
comp=Z,8.8nm,1.0s
KBL Kabul 61.34 291 *e*P **P 07 22 36.5 -0.7**
comp=Z,55nm,0.8s
KBL Kabul 61.34 291 *e*P **P 07 22 36.5 -0.7**
KBL pmax pmax
comp=Z,55nm,0.8s
PLID Pearl Lake 61.66 54 *e*P **P 07 22 40.2 +1.0**
comp=Z,12nm,1.0s
MSO Missoula 61.76 51 *e*P **P 07 22 40.4 +0.6**
comp=Z,7.8nm,0.9s
JOF Joensuu 62.06 333 P **P 07 22 43.2 +1.9**
JOF pmax pmax
comp=Z,15nm,1.0s
SUMG Summit 62.28 3 *e*P **P 07 22 43.4 +0.2**
comp=Z,55nm,0.9s
SUMG Summit 62.28 3 *e*P **P 07 22 43.4 +0.2**
SUMG pmax pmax
comp=Z,55nm,0.9s
SUMG Summit 62.28 3⇑ *i*P **P 07 22 43.5 +0.3**
comp=Z,160nm,1.0s
FFC Flin Flon 62.76 39 *e*P **P 07 22 46.8 +0.6**
comp=Z,16nm,1.1s
FFC Flin Flon 62.76 39 *i* P **P 07 22 46.8 +0.6**
BKNI Bangkinang 62.81 240 *e*P **P 07 22 47.9 +0.9**
comp=Z,66nm,0.6s
PAHR Pah Rah Range 62.90 60 *e*P **P 07 22 48.8 +1.2**
comp=Z,9.2nm,1.2s
VCNR Virginia City 62.99 61 *e*P **P 07 22 49.3 +1.1**
comp=Z,6.3nm,1.0s
PNTR Pine Nut 63.15 61 *e*P **P 07 22 50.6 +1.4**
comp=Z,11nm,0.9s
FCC Fort Churchill 63.26 32 *e*P **P 07 22 49.5 +0.1**
comp=Z,12nm,0.7s
FCC Fort Churchill 63.26 32 *e*P **P 07 22 49.5 +0.1**
FCC pmax pmax
comp=Z,12nm,0.7s
EGMT Eagleton 63.28 48 *e*P **P 07 22 50.5 +0.7**
comp=Z,14nm,1.1s
YERR Yerington 63.43 61 *e*P **P 07 22 52.2 +1.1**
comp=Z,16nm,1.3s
HLID Hailey 63.49 54 *e*P **P 07 22 52.0 +0.6**
comp=Z,4.0nm,1.0s
SDSI Sungai Dareh 63.57 238 P **P 07 22 53.7 +1.7**
comp=Z,24nm,1.2s,comp=Z,2μm
PWJI Pagerwojo 63.71 224 P **P 07 22 54.5 +1.6**
BMN Battle Mountai 63.77 58 *e*P **P 07 22 54.4 +1.1**
comp=Z,4.6nm,0.8s
BMN Battle Mountai 63.77 58 *e*P **P 07 22 54.4 +1.1**
BMN pmax pmax
comp=Z,5.0nm,0.8s
BOZ Bozeman (W) 63.79 51 *e*P **P 07 22 54.2 +0.9**
comp=Z,8.2nm,0.9s
BOZ Bozeman (W) 63.79 51 *e*P **P 07 22 54.2 +0.9**
BOZ pmax pmax
comp=Z,8.0nm,0.9s
SUF Sumiainen 63.80 335 P **P 07 22 53.5 +0.6**
SUF pmax pmax
comp=Z,19nm,2.0s
MOR8 Moi Rana 64.03 342 *e*P **P 07 22 52.5 -1.9**
KVN Kaiserville 64.09 60 *e*P **P 07 22 56.0 +0.6**
comp=Z,9.1nm,1.1s
KVN Kaiserville 64.09 60 *e*P **P 07 22 56.0 +0.6**
KVN pmax pmax
comp=Z,9.0nm,1.1s
RYN Ryan 64.09 61 *e*P **P 07 22 56.3 +0.9**
comp=Z,5.0nm,1.0s
NVAR Mina Array Bea 64.35 61 P **P 07 22 58.1 +0.9**
comp=Z,2.1nm,0.8s,baz=283,slow=6.8,SNR=11
NVAR LR LR 07 48 29.9
comp=Z,118nm,20.7s,baz=328,slow=34
NV01 Mina Array Sit 64.35 61 *e*P **P 07 22 58.1 +0.9**
SCO Scoresbysund 64.47 357 *e*P **P 07 22 56.9 -0.3**
comp=Z,14nm,0.9s
SCO Scoresbysund 64.47 357 *e*P **P 07 22 56.9 -0.3**
SCO pmax pmax
comp=Z,14nm,0.9s
SCO Scoresbysund 64.47 357⇑ *i*P **P 07 22 57.1 0.0**
comp=Z,11nm,0.8s
YHH Holmes Hill 64.72 51 *e*P **P 07 23 00.1 +0.4**
comp=Z,3.9nm,1.0s
FIA1 FINESS Array S 64.80 334 *e*P **P 07 22 58.7 -0.8**
comp=Z,18nm,0.7s
FINES FINESS Array B 64.80 334 P **P 07 22 58.2 -1.2**
comp=Z,13nm,0.6s,baz=43,slow=8.6,SNR=46
FINES LR LR 07 53 51.5
comp=Z,591nm,19.4s,baz=34,slow=38
FINES FINESS Array B 64.80 334 *i* P **P 07 22 58.4 -1.1**
FINES pmax pmax
comp=Z,13nm,0.6s
H17A Grant Village 65.12 51 *e*P **P 07 23 04.1 +1.9**
comp=Z,5.3nm,0.9s
FXWY Fox Creek 65.36 52 *e*P **P 07 23 04.0 +0.3**
comp=Z,2.3nm,0.8s
MOOW Moose Ponds 65.44 52 *e*P **P 07 23 05.2 +0.9**
comp=Z,7.4nm,1.1s
TPAW Teton Pass 65.49 52 *e*P **P 07 23 05.7 +1.0**
comp=Z,5.7nm,0.7s
LOHW Long Hollow 65.61 52 *e*P **P 07 23 06.4 +1.1**
comp=Z,9.7nm,1.4s
REDW Red Top Meadow 65.63 52 *e*P **P 07 23 06.5 +1.1**
comp=Z,13nm,1.3s
OBN Obninsk 65.76 325 *i* P **P 07 23 05.6 -0.1**
OBN *i* 07 23 25.7
OBN *i* 07 23 35.6
OBN *i* 07 25 30.0
OBN pmax pmax
comp=Z,7.0nm,0.7s
OBN MLR MLR
comp=Z,486nm,17.0s
OBN Obninsk 65.76 325 *e*P **P 07 23 05.6 -0.1**
NSS Namsos 65.98 342 *e*P **P 07 23 06.2 -0.8**
R11A Troy Canyon, C 66.06 59 *e*P **P 07 23 08.7 +0.4**
comp=Z,3.7nm,1.0s
GEYT Alibeck 66.19 300 P **P 07 23 09.1 +0.2**
comp=Z,20nm,0.7s,baz=11,slow=3.0,SNR=37
GEYT LR LR 07 54 18.7
comp=Z,257nm,19.4s,baz=55,slow=38
GYA0B ALIBECK ARRAY 66.19 300 *e*P **P 07 23 09.2 +0.3**
comp=Z,24nm,0.8s
VRH Novokhopyorsk 66.27 320 *e*P **P 07 23 07.8 -1.3**
VRH pmax pmax
comp=Z,10.0nm,0.4s
DUG Dugway, Tooele 66.54 56 *e*P **P 07 23 12.0 +0.7**
comp=Z,8.1nm,1.1s
TPNV Topopah Spring 66.55 61 *e*P **P 07 23 11.9 +0.5**
comp=Z,12nm,1.4s
TPNV Topopah Spring 66.55 61 *e*P **P 07 23 11.9 +0.5**
TPNV pmax pmax
comp=Z,12nm,1.4s
LPSR Galich'ya Gora 66.55 322 *e*P **P 07 23 10.8 0.0**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
LPSR MLR MLR
comp=Z,1μm,17.0s
WRAB Tennant Creek 66.65 197 *e*P **P 07 23 12.7 +0.9**
comp=Z,40nm,1.5s
WRAB Tennant Creek 66.65 197 *e*P **P 07 23 12.7 +0.9**
WRAB pmax pmax
comp=Z,39nm,1.5s
WB2 Warramunga Arr 66.66 197 *e*P **P 07 23 12.6 +0.7**
comp=Z,14nm,0.8s
WR1 Warramunga Arr 66.66 197 *e*P **P 07 23 12.3 +0.4**
WRA Warramunga Arr 66.66 197 P **P 07 23 12.3 +0.4**
comp=Z,11nm,0.9s,baz=13,slow=7.7,SNR=26
BW06 Boulder Array 66.74 52 *e*P **P 07 23 13.7 +1.1**
comp=Z,5.9nm,1.0s
PD31 Pinedale Array 66.74 52 *e*P **P 07 23 13.0 +0.4**
comp=Z,14nm,1.6s
PDAR Pinedale Array 66.74 52 P **P 07 23 12.9 +0.4**
comp=Z,1.3nm,0.6s,baz=306,slow=1.2,SNR=10.0
PDAR LR LR 07 48 30.8
comp=Z,104nm,21.8s,baz=338,slow=32
SFJD Kangerlussuaq 66.86 9 *i* P **P 07 23 11.9 -0.7**
SFJD pmax pmax
comp=Z,7.0nm,0.8s
SFJD Kangerlussuaq 66.86 9 *i* P **P 07 23 11.9 -0.7**
comp=Z,7.4nm,0.8s
VSU Vasula 66.90 332⇑ *e*P **P 07 23 12.8 -0.2**
VSU pmax pmax
comp=Z,42nm,1.3s
VSU Vasula 66.90 332 *e*P **P 07 23 11.8 -1.1**
VSR Storozhevoye 67.42 321 *e*P **P 07 23 15.5 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR MLR MLR
comp=Z,1μm,19.0s
SHPR Sheep Range 67.50 60 *e*P **P 07 23 18.8 +1.3**
comp=Z,6.6nm,1.1s
CCUT Cedar City 67.92 59 *e*P **P 07 23 20.9 +0.8**
comp=Z,8.2nm,1.3s
MTPU Mount Pierson 68.31 58 *e*P **P 07 23 23.7 +1.0**
comp=Z,12nm,1.5s
LCMT Little Creek M 68.34 59 *e*P **P 07 23 23.3 +0.7**
comp=Z,6.5nm,0.9s
DZM Mont Dzumac 68.43 165 *e*LR LR 07 44 12.1
comp=Z,463nm,23.6s
ULM Lac du Bonnet 68.55 39 LR LR 07 56 06.5
comp=Z,148nm,18.2s,baz=356,slow=38
SRU San Rafael Swe 68.58 56 *e*P **P 07 23 25.0 +0.8**
comp=Z,14nm,1.4s
KNB Kanab 68.59 59 *e*P **P 07 23 24.9 +0.6**
comp=Z,6.6nm,0.9s
KNB Kanab 68.59 59 *e*P **P 07 23 24.9 +0.6**
KNB pmax pmax
comp=Z,7.0nm,0.9s
MOL Molde 68.65 343 *e*P **P 07 23 22.9 -1.1**
DOMB Dombas 68.80 342 *e*P **P 07 23 24.5 -0.4**
RSSD Black Hills 68.84 48 *e*P **P 07 23 25.7 0.0**
comp=Z,10.0nm,1.1s
RSSD Black Hills 68.84 48 *e*P **P 07 23 25.7 0.0**
RSSD pmax pmax
comp=Z,10.0nm,1.1s
NC303 NORSAR Array S 68.99 340 *e*P **P 07 23 25.7 -0.4**
comp=Z,29nm,0.8s
MAK Makhachkala 69.00 310 *e*P **P 07 23 29.3 +2.8**
MAK *e* 07 26 00.4
MAK *e*S **S 07 32 34.3 +6.7**
MAK *e*SS **SS 07 36 56.0 +2.9**
MAK pmax pmax
comp=Z,251nm,1.5s
MAK MLR MLR
comp=Z,514nm,18.0s
AKN Aaknes 69.12 343 *e*P **P 07 23 27.0 +0.1**
NB201 NORSAR Array S 69.17 340 *e*P **P 07 23 26.7 -0.5**
comp=Z,219nm,1.5s
NB201 NORSAR Array S 69.17 340 *e*P **P 07 23 27.1 -0.1**
IZAR Zarasai 69.19 330 *e*P **P 07 23 26.1 -1.2**
NB2 NORSAR Subarra 69.19 340 P **P 07 23 26.5 -0.9**
comp=Z,21nm,0.8s,baz=28,slow=6.5
NB2 NORSAR Subarra 69.19 340 P **P 07 23 26.5 -0.9**
baz=28,slow=6.5
NB200 NORSAR Array S 69.19 340 *e*P **P 07 23 26.9 -0.6**
NOA NORSAR Array B 69.19 340 P **P 07 23 26.9 -0.6**
comp=Z,14nm,0.7s,baz=28,slow=6.4,SNR=60
NOA LR LR 07 58 38.3
comp=Z,366nm,18.7s,baz=20,slow=40
U15A North Rim 69.30 59 *e*P **P 07 23 29.3 +0.5**
comp=Z,7.4nm,0.9s
IDID Didziasalis 69.36 330 *e*P **P 07 23 27.1 -1.3**
ISAL Salakas 69.37 330 *e*P **P 07 23 27.4 -1.1**
NAO01 NORSAR Array S 69.44 340 *e*P **P 07 23 28.0 -0.9**
IIGN Ignalina 69.51 330 *e*P **P 07 23 28.4 -1.0**
GROC Groznyy 69.75 311 *e*P **P 07 23 30.8 -0.3**
GROC *e* 07 23 53.5
GROC pmax pmax
comp=Z,22nm,0.6s
AKT Akhty 69.89 309 *e*P **P 07 23 32.9 +0.8**
AKT *e* 07 23 55.1
AKT pmax pmax
comp=Z,61nm,0.8s
GOF Gofitskoye 69.90 314⇑ *i*P **P 07 23 32.4 +0.4**
GOF pmax pmax
comp=Z,99nm,0.6s
AGMN Agassiz Nation 69.96 41 *e*P **P 07 23 32.3 0.0**
comp=Z,22nm,1.4s
N23A Red Feather La 70.00 52 *e*P **P 07 23 34.0 +1.0**
comp=Z,7.1nm,1.0s
PV17 East Wray Mesa 70.05 56 *e*P **P 07 23 33.8 +0.5**
comp=Z,6.9nm,0.7s
PABE Paberze 70.17 331 *e*P **P 07 23 31.7 -1.7**
HYA Hoyanger 70.20 343 *e*P **P 07 23 33.4 -0.1**
AS31 Alice Springs 70.36 197 *e*P **P 07 23 36.1 +1.2**
comp=Z,2.3nm,0.6s
ASAR Alice Springs 70.37 197 P **P 07 23 36.4 +1.4**
comp=Z,8.5nm,0.8s,baz=9.9,slow=5.3,SNR=80
ASAR LR LR 07 53 15.7
comp=Z,100nm,20.8s,baz=24,slow=35
PV01 Paradox Valley 70.37 55 *e*P **P 07 23 36.0 +0.7**
comp=Z,4.8nm,1.0s
Y14A Wickenburg 70.52 61 *e*P **P 07 23 36.8 +0.8**
comp=Z,5.2nm,1.0s
SMCO Snowmass 70.59 54 *e*P **P 07 23 37.3 +0.5**
comp=Z,3.5nm,0.8s
SUE Sulen 70.59 343 *e*P **P 07 23 35.2 -0.7**
KIV Kislovodsk 70.85 314 *e*P **P 07 23 38.0 0.0**
comp=Z,47nm,0.8s
KIV Kislovodsk 70.85 314⇓ *i*P **P 07 23 38.9 +0.9**
KIV Kislovodsk 70.85 314 *i* P **P 07 23 38.9 +0.9**
SNR=6.9
KIV Kislovodsk 70.85 314 *e*P **P 07 23 38.4 +0.5**
KIV pmax pmax
comp=Z,202nm,1.1s
KIV MLR MLR
comp=Z,2μm,17.0s
KIV Kislovodsk 70.85 314 P **P 07 23 39.1 +1.1**
SNR=7.9
KIV P **P 07 23 39.1 +1.1**
SNR=7.9
KIV Kislovodsk 70.85 314 *e*P **P 07 23 38.4 +0.5**
KBZ Khabaz 70.90 313 P **P 07 23 38.1 +0.1**
comp=Z,47nm,0.8s,baz=59,slow=3.7,SNR=58
KBZ LR LR 07 59 15.2
comp=Z,1μm,18.9s,baz=48,slow=40
ISCO Idaho Springs 70.93 53 *e*P **P 07 23 39.6 +0.8**
comp=Z,3.6nm,0.9s
ISCO Idaho Springs 70.93 53 *e*P **P 07 23 39.6 +0.8**
ISCO pmax pmax
comp=Z,4.0nm,0.9s
STRU Stroemstad 70.96 339 *e*P **P 07 23 37.9 -0.2**
ASK Askoy 71.03 343 *e*P **P 07 23 38.6 +0.1**
MVCO Mesa Verde 71.04 56 *e*P **P 07 23 40.2 +0.8**
comp=Z,8.9nm,1.3s
ZEI Tsey 71.04 312 *e*P **P 07 23 36.7 -2.6**
ZEI pmax pmax
comp=Z,30nm,1.0s
BER Bergen 71.09 343 *e*P **P 07 23 39.2 +0.3**
X16A Lo Mia Camp, P 71.16 60 *e*P **P 07 23 40.9 +0.9**
comp=Z,5.7nm,0.9s
ODD1 Odda 71.24 342 *e*P **P 07 23 40.0 +0.1**
NEY Neytrino 71.33 313⇑ *e*P **P 07 23 39.2 -1.8**
NEY pmax pmax
comp=Z,3.0nm,0.8s
TBLG Delisi 71.34 311 *e*P **P 07 23 41.1 +0.3**
comp=Z,70nm,0.8s
TBLG Delisi 71.34 311 *e*P **P 07 23 41.1 +0.3**
TBLG pmax pmax
comp=Z,71nm,0.8s
S22A 4UR Ranch, Cre 71.65 55 *e*P **P 07 23 43.9 +0.8**
comp=Z,6.6nm,1.3s
BLS5 Blasjo 71.72 342 *e*P **P 07 23 42.9 0.0**
AKASG Malin Array Be 72.02 325 P **P 07 23 43.9 -0.8**
comp=Z,15nm,0.6s,baz=35,slow=6.3,SNR=40
AKASG LR LR 07 58 02.0
comp=Z,706nm,18.8s,baz=30,slow=38
AKBB Malin Array Si 72.02 325 *e*P **P 07 23 44.1 -0.6**
comp=Z,48nm,1.4s
AKBB Malin Array Si 72.02 325 *e*P **P 07 23 44.1 -0.6**
AKBB pmax pmax
comp=Z,48nm,1.4s
KIEV Kiev 72.03 325 *e*P **P 07 23 43.8 -1.0**
comp=Z,46nm,1.4s
KIEV Kiev 72.03 325⇑ *i*P **P 07 23 44.2 -0.6**
KIEV Kiev 72.03 325 *i* P **P 07 23 44.0 -0.8**
SNR=12
KIEV Kiev 72.03 325 *e*P **P 07 23 43.8 -1.0**
KIEV pmax pmax
comp=Z,46nm,1.4s
OGNE Ogallala 72.10 50 *e*P **P 07 23 46.2 +0.6**
comp=Z,25nm,1.0s
KMY Karmoy 72.18 342 *e*P **P 07 23 46.1 +0.6**
EYMN Ely 72.19 39 *e*P **P 07 23 45.7 -0.2**
comp=Z,9.8nm,0.9s
AKH Akhalkalaki 72.23 311 *e*P **P 07 23 47.0 +0.6**
comp=Z,30nm,0.9s

AKH	**Akhalkalaki**	72.23	311	⇓*i*P		**P**	**07 23 47.8 +1.4**
AKH	**Akhalkalaki**	72.23	311	*e*P		**P**	**07 23 47.0 +0.6**
AKH				pmax	pmax		
	comp=Z,31nm,0.9s						
STAV	**Stavanger**	72.33	342	*e*P		**P**	**07 23 46.6 +0.2**
GNI	**Garni**	72.44	310	*e*P		**P**	**07 23 47.8 +0.1**
	comp=Z,102nm,1.5s						
GNI	**Garni**	72.44	310	P		**P**	**07 23 46.3 -1.4**
GNI	**Garni**	72.44	310	*e*P		**P**	**07 23 47.8 +0.1**
GNI				pmax	pmax		
	comp=Z,102nm,1.5s						
GNI	**Garni**	72.44	310	P		**P**	**07 23 49.7 +2.0**
	SNR=7.9						
GNI				P		**P**	**07 23 49.7 +2.0**
	SNR=7.9						
ANN	**Anapa**	72.86	317	*e*P		**P**	**07 23 49.0 -0.8**
ANN				pmax	pmax		
	comp=Z,98nm,1.2s						
ECSD	**EROS Data Cent**	72.91	45	*e*P		**P**	**07 23 50.4 +0.2**
	comp=Z,33nm,1.5s						
TUC	**Tucson**	72.98	61	*e*P		**P**	**07 23 51.3 +0.4**
	comp=Z,5.5nm,1.2s						
TUC	**Tucson**	72.98	61	*e*P		**P**	**07 23 51.3 +0.4**
TUC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KARS	**Kars**	73.00	311	*e*P		**P**	**07 23 51.8 +0.9**
E38A	**The Farm, Brul**	73.18	40	*e*P		**P**	**07 23 51.6 -0.1**
	comp=Z,13nm,0.7s						
BCA	**Borcka**	73.19	312	⇓*i*P		**P**	**07 23 52.0 +0.1**
T25A	**Trinidad**	73.45	54	*e*P		**P**	**07 23 54.2 +0.5**
	comp=Z,23nm,1.6s						
SPMN	**Marine on St.**	73.64	41	*e*P		**P**	**07 23 54.4 -0.1**
	comp=Z,21nm,1.4s						
ANMO	**Albuquerque**	73.79	57	*e*P		**P**	**07 23 55.8 0.0**
	comp=Z,3.1nm,1.0s						
ANMO	**Albuquerque**	73.79	57	*e*P		**P**	**07 23 55.8 0.0**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
D41A	**Chassel**	74.16	38	*e*P		**P**	**07 23 57.2 -0.2**
	comp=Z,19nm,1.1s						
BEL	**Belsk**	74.26	331	*e*P		**P**	**07 23 58.7 +0.8**
BEL	**Belsk**	74.26	331	*e*P		**P**	**07 23 58.7 +0.8**
SIM	**Simferopol'**	74.31	319	*de*P		**P**	**07 23 58.8 +0.4**
SIM				pmax	pmax		
	comp=Z,27nm,0.9s						
SIM				MLR	MLR		
	comp=Z,500nm,16.0s						
319A	**Douglas**	74.56	61	*e*P		**P**	**07 24 00.7 +0.5**
	comp=Z,14nm,0.9s						
COWI	**Conover**	74.65	39	*e*P		**P**	**07 24 00.1 -0.2**
	comp=Z,4.7nm,0.8s						
LVV	**L'vov**	74.74	328	*e*P		**P**	**07 24 00.6 -0.2**
G40A	**Rib Lake**	74.81	40	*e*P		**P**	**07 24 01.1 -0.2**
	comp=Z,4.7nm,0.6s						
KIS	**Kishinev**	75.08	323	*e*P		**P**	**07 24 03.0 +0.2**
	comp=Z,180nm,1.3s						
KIS				LRM	MLR		07 59 56.0
	comp=Z,2μm,17.0s						
KIS	**Kishinev**	75.08	323	*e*P		**P**	**07 24 03.0 +0.2**
KIS				*e*			07 24 19.0
KIS				pmax	pmax		
	comp=Z,180nm,1.3s						
KIS				MLR	MLR		
	comp=Z,2μm,17.0s						
SCHQ	**Schefferville**	75.21	22	P		**P**	**07 24 02.7 -0.7**
	comp=Z,6.7nm,0.5s,baz=340,slow=8.0,SNR=4.0						
SCHQ				LR	LR		07 59 56.6
	comp=Z,212nm,20.7s,baz=340,slow=38						
SCHQ	**Schefferville**	75.21	22	*e*P		**P**	**07 24 03.4 -0.1**
	comp=Z,31nm,1.4s						
BANOM	**Banah**	75.29	292	P		**P**	**07 24 04.7 +0.3**
BANOM	**Banah**	75.29	292	P		**P**	**07 24 04.4 0.0**
BANOM				P		**P**	**07 24 04.4 0.0**
SHME	**Shamm**	75.31	292	P		**P**	**07 24 04.8 +0.4**
KWP	**Kalwaria Pacla**	75.39	328	*e*P		**P**	**07 24 05.1 +0.5**
KWP	**Kalwaria Pacla**	75.39	328	*e*P		**P**	**07 24 04.4 -0.1**
	comp=Z,1μm,1.3s						
KWP	**Kalwaria Pacla**	75.39	328	*e*P		**P**	**07 24 04.4 -0.1**
H41A	**Junction City**	75.56	40	*e*P		**P**	**07 24 05.4 -0.2**
	comp=Z,8.4nm,0.6s						
MSFE	**Esma-Masafi**	75.77	292	P		**P**	**07 24 07.7 +0.6**
G43A	**Wallace**	75.94	39	*e*P		**P**	**07 24 07.8 +0.1**
	comp=Z,13nm,0.8s						
OJC	**Ojcow**	75.96	330	*e*P		**P**	**07 24 08.0 +0.2**
OJC	**Ojcow**	75.96	330	*e*P		**P**	**07 24 07.7 0.0**
	comp=Z,81nm,1.3s						
OJC	**Ojcow**	75.96	330	*e*P		**P**	**07 24 07.7 0.0**
OJC				pmax	pmax		
	comp=Z,81nm,1.3s						
UOSS	**Minazif**	76.02	291	P		**P**	**07 24 08.8 +0.3**
UOSS	**Minazif**	76.02	291	P		**P**	**07 24 07.4 -1.1**
BUR08	**Bucovina Ar. S**	76.05	326	*e*P		**P**	**07 24 08.2 -0.2**
	comp=Z,38nm,0.6s						
BURAR	**Bucovina Array**	76.07	326	⇑*i*P		**P**	**07 24 08.7 +0.1**
BURAR	**Bucovina Array**	76.07	326	⇑P		**P**	**07 24 08.7 +0.1**
KOLS	**Kolonicke sedl**	76.13	328	*e*P		**P**	**07 24 09.0 +0.2**
KOLS				pmax	pmax		
	comp=Z,29nm,1.1s						
KOLS	**Kolonicke sedl**	76.13	328	*e*P		**P**	**07 24 09.0 +0.2**
HATD	**Hatta, Dubai**	76.15	291	P		**P**	**07 24 09.9 +0.6**
BIZ	**Bicaz**	76.26	325	⇓*i*P		**P**	**07 24 09.6 +0.1**
DIKM	**Dikmen**	76.26	316	⇑*i*P		**P**	**07 24 10.4 +0.8**
ASHO	**Ashiyiah**	76.30	291	P		**P**	**07 24 10.7 +0.5**
UZH	**Uzhgorod**	76.37	328	⇓*i*P		**P**	**07 24 10.0 -0.1**
UZH				*e*			07 24 20.0
UZH				*e*			07 27 08.9
UZH				*e*S		**S**	**07 33 52.7 +1.3**
UZH				*e*SS		**SS**	**07 38 47.4 +2.3**
UZH				MLR	MLR		
	comp=Z,100nm,18.0s						
TESR	**Tescani**	76.38	324	⇓*i*P		**P**	**07 24 09.9 -0.3**
NIE	**Niedzica**	76.45	329	*e*P		**P**	**07 24 11.4 +0.9**
NIE	**Niedzica**	76.45	329	*e*P		**P**	**07 24 11.5 +0.9**
TLCR		76.51	322	⇑*i*P		**P**	**07 24 11.4 +0.5**
TLCR		76.51	322	⇑P		**P**	**07 24 11.4 +0.5**
FAQ	**Al Faqa, Dubai**	76.56	291	P		**P**	**07 24 12.0 +0.4**
KSP	**Ksiaz**	76.61	332	*e*P		**P**	**07 24 11.5 0.0**
KSP	**Ksiaz**	76.61	332	*e*P		**P**	**07 24 11.5 0.0**
TRPA	**Tarpa**	76.69	327	⇓*i*P		**P**	**07 24 12.3 +0.4**
TRPA	**Tarpa**	76.69	327	⇑EP		**P**	**07 24 12.1 +0.2**
MNTX	**Cornudas Mount**	76.71	58	*e*P		**P**	**07 24 12.9 +0.5**
	comp=Z,12nm,1.5s						
PETR	**Petresti**	76.76	323	⇑*i*P		**P**	**07 24 13.6 +1.3**
L40A	**Anamosa**	76.79	43	*e*P		**P**	**07 24 12.3 -0.3**
	comp=Z,8.0nm,0.8s						
CFR	**Carcaliu**	76.81	322	⇑*i*P		**P**	**07 24 12.5 -0.1**
CFR	**Carcaliu**	76.81	322	⇑P		**P**	**07 24 12.5 -0.1**
ASUD	**Al Ashush, Dub**	76.81	292	P		**P**	**07 24 13.9 +0.9**
ARCR	**ARCALIA**	76.84	326	⇓*i*P		**P**	**07 24 13.7 +0.9**
OKC	**Ostrava-Krasne**	76.85	331	*e*P		**P**	**07 24 13.0 +0.2**
OKC				*e*			07 24 17.7
OKC				MLR	MLR		
	comp=Z,400nm,19.8s						
OKC	**Ostrava-Krasne**	76.85	331	*e*P		**P**	**07 24 13.0 +0.2**
OKC				*ex*	x		07 24 17.7
OKC				AMS	AMS		08 05 50.0
	comp=Z,400nm,19.8s						
VRI	**Vrincioaia**	76.86	324	⇓*i*P		**P**	**07 24 12.9 -0.1**
VRI	**Vrincioaia**	76.86	324	⇓P		**P**	**07 24 12.9 -0.1**
PLOR	**Plostina**	76.90	324	⇑*i*P		**P**	**07 24 13.4 +0.2**
PLOR	**Plostina**	76.90	324	⇑P		**P**	**07 24 13.5 +0.2**
CHVC	**Chvalec**	76.91	332	*e*P		**P**	**07 24 13.4 +0.2**
CHVC				AMS	AMS		08 02 00.0
	comp=Z,600nm,21.0s						
LANS	**Liptovska Anna**	76.97	330	*e*P		**P**	**07 24 14.7 +1.1**
LANS	**Liptovska Anna**	76.97	330	*e*P		**P**	**07 24 14.7 +1.1**
UPC	**Upice**	77.00	332	*e*P		**P**	**07 24 13.8 +0.2**
UPC				*e*			07 24 19.2
UPC				MLR	MLR		
	comp=Z,600nm,16.9s						
UPC	**Upice**	77.00	332	*e*P		**P**	**07 24 13.8 +0.2**
UPC				*ex*	x		07 24 19.2
UPC				AMS	AMS		08 01 50.0
	comp=Z,600nm,16.9s						
G45A	**Suttons Bay**	77.00	38	*e*P		**P**	**07 24 13.8 +0.1**
	comp=Z,22nm,1.1s						
DPC	**Dobruska-Polom**	77.03	332	*e*P		**P**	**07 24 14.0 +0.1**
DPC				*e*			07 24 19.1
DPC				MLR	MLR		
	comp=Z,500nm,20.5s						
DPC	**Dobruska-Polom**	77.03	332	*e*P		**P**	**07 24 14.0 +0.1**
DPC				*ex*	x		07 24 19.1
DPC				AMS	AMS		08 00 40.0
	comp=Z,500nm,20.5s						
MORC	**Moravsky Berou**	77.11	331	*e*P		**P**	**07 24 14.4 +0.1**
	comp=Z,45nm,1.0s						
MORC	**Moravsky Berou**	77.11	331	⇓*i*P		**P**	**07 24 14.6 +0.3**
MORC	**Moravsky Berou**	77.11	331	*e*P		**P**	**07 24 14.5 +0.1**
MORC				pmax	pmax		
	comp=Z,45nm,1.0s						
MORC	**Moravsky Berou**	77.11	331	*e*P		**P**	**07 24 14.6 +0.3**
KRLC	**Kraliky**	77.11	332	*e*P		**P**	**07 24 14.5 +0.2**
KRLC	**Kraliky**	77.11	332	*e*P		**P**	**07 24 14.5 +0.2**
KECS	**Kecovo**	77.16	329	*e*P		**P**	**07 24 15.0 +0.4**
KECS				pmax	pmax		
	comp=Z,64nm,0.9s						
KECS	**Kecovo**	77.16	329	*e*P		**P**	**07 24 15.0 +0.4**
CLL	**Collm**	77.25	335	*e*P		**P**	**07 24 14.5 -0.5**
	comp=Z,58nm,1.1s						
CLL	**Collm**	77.25	335	*i* P		**P**	**07 24 14.7 -0.3**
	comp=Z,65nm,1.2s						
CLL				*i*			07 24 19.3
CLL				Lm	MLR		08 01 00.0
	comp=N,500nm,19.8s						
CLL				Lm	MLR		08 01 00.0
	comp=E,200nm,18.0s						
CLL				Lm	MLR		08 01 00.0
	comp=Z,600nm,20.3s						
CLL	**Collm**	77.25	335	*i* P		**P**	**07 24 14.7 -0.3**
CLL				pmax	pmax		
	comp=Z,65nm,1.2s						
CLL				MLR	MLR		
	comp=Z,600nm,20.3s						
STKA	**Stephens Creek**	77.25	188	P		**P**	**07 24 16.3 +1.3**
	comp=Z,2.2nm,0.8s,baz=340,slow=3.8,SNR=4.3						
STKA				LR	LR		07 57 40.6
	comp=Z,124nm,21.4s,baz=21,slow=35						
STKA	**Stephens Creek**	77.25	188	*e*P		**P**	**07 24 17.1 +2.0**
	comp=Z,3.0nm,1.4s						
TIRR	**Tirgusor**	77.26	322	*e*P		**P**	**07 24 15.1 -0.1**
	comp=Z,59nm,1.1s						
TIRR	**Tirgusor**	77.26	322	⇓*i*P		**P**	**07 24 14.9 -0.3**
TIRR	**Tirgusor**	77.26	322	*e*P		**P**	**07 24 15.1 -0.1**
TIRR				pmax	pmax		
	comp=Z,59nm,1.1s						
HARR	**Harsova**	77.29	322	⇑*i*P		**P**	**07 24 15.6 +0.3**
HARR	**Harsova**	77.29	322	⇑P		**P**	**07 24 15.6 +0.3**
TLB	**Topalu**	77.32	322	⇓*i*P		**P**	**07 24 15.4 -0.1**
TLB	**Topalu**	77.32	322	⇓P		**P**	**07 24 15.4 -0.1**
BRG	**Berggiesshubel**	77.34	334	*e*P		**P**	**07 24 15.2 -0.3**
	comp=Z,16nm,0.9s						
BRG				S		**S**	**07 34 09.0 +7.1**
	comp=N,365nm,17.4s						
	comp=E,317nm,14.6s						
	comp=Z,702nm,16.9s						
BRG	**Berggiesshubel**	77.34	334	*e*P		**P**	**07 24 15.2 -0.3**
BRG				S		**S**	**07 34 09.0 +7.1**
BRG				pmax	pmax		
	comp=Z,16nm,0.9s						
BRG				MLR	MLR		
	comp=N,365nm,17.4s						
BRG				MLR	MLR		
	comp=E,317nm,14.6s						
BRG				MLR	MLR		
	comp=Z,702nm,16.9s						
PVCC	**Panska Ves**	77.44	333	*e*P		**P**	**07 24 16.2 +0.1**
PVCC				MLR	MLR		
	comp=Z,800nm,17.6s						
PVCC	**Panska Ves**	77.44	333	*e*P		**P**	**07 24 16.2 +0.1**
PVCC				AMS	AMS		08 02 00.0
	comp=Z,800nm,17.6s						
CJR	**Cluj-Napoca**	77.44	326	⇑*i*P		**P**	**07 24 17.0 +0.7**
CJR	**Cluj-Napoca**	77.44	326	⇑P		**P**	**07 24 17.0 +0.7**
ILGA	**Ilgaz**	77.47	317	*e*P		**P**	**07 24 17.5 +0.8**
	comp=Z,141nm,1.5s						
ESK	**Eskdalemuir**	77.48	345	*e*P		**P**	**07 24 16.1 -0.1**
	comp=Z,12nm,0.8s						
ESK	**Eskdalemuir**	77.48	345	*e*P		**P**	**07 24 16.1 -0.1**
ESK				pmax	pmax		
	comp=Z,12nm,0.8s						
MLR	**Muntele Rosu**	77.49	324	*e*P		**P**	**07 24 16.6 0.0**
	comp=Z,24nm,0.8s						
MLR	**Muntele Rosu**	77.49	324	⇓*i*P		**P**	**07 24 16.7 0.0**
MLR	**Muntele Rosu**	77.49	324	*e*P		**P**	**07 24 16.6 0.0**
MLR				pmax	pmax		
	comp=Z,24nm,0.8s						
ISR	**Istrita**	77.54	323	⇑*i*P		**P**	**07 24 17.6 +0.8**
ISR	**Istrita**	77.54	323	⇑P		**P**	**07 24 17.6 +0.8**
L42A	**Oliver, Polo**	77.57	42	*e*P		**P**	**07 24 16.6 -0.4**
	comp=Z,8.8nm,0.8s						
GLMI	**Grayling**	77.61	37	*e*P		**P**	**07 24 17.3 +0.1**
	comp=Z,38nm,0.9s						
DRGR		77.73	327	⇑*i*P		**P**	**07 24 17.9 0.0**
DRGR		77.73	327	⇑P		**P**	**07 24 17.9 0.0**
VLDQ	**Val d'Or**	77.74	31	*e*P		**P**	**07 24 16.7 -1.1**
	comp=Z,27nm,1.3s						
VYHS	**Vyhne**	77.75	330	*e*P		**P**	**07 24 18.3 +0.4**
VYHS				pmax	pmax		
	comp=Z,22nm,1.3s						
VYHS	**Vyhne**	77.75	330	*e*P		**P**	**07 24 18.3 +0.4**
ICOR	**Ion Corvin**	77.80	322	⇑*i*P		**P**	**07 24 18.9 +0.7**
VRAC	**Vranov**	77.83	332	⇓*i*P		**P**	**07 24 18.7 +0.4**
VRAC	**Vranov**	77.83	332	⇓P		**P**	**07 24 18.7 +0.4**
VRAC	**Vranov**	77.83	332	*e*P		**P**	**07 24 18.8 +0.4**
JAVC	**Velka Javorina**	77.85	331	*e*P		**P**	**07 24 19.8 +1.3**
PSZ	**Piszkesteto**	77.85	329	*e*P		**P**	**07 24 18.6 +0.1**
	comp=Z,43nm,1.2s						
PSZ	**Piszkesteto**	77.85	329	⇓*i*P		**P**	**07 24 19.1 +0.6**
PSZ	**Piszkesteto**	77.85	329	*e*P		**P**	**07 24 18.6 +0.1**
PSZ				pmax	pmax		
	comp=Z,43nm,1.2s						
PSZ	**Piszkesteto**	77.85	329	⇑EP		**P**	**07 24 18.1 -0.5**
VOIR		77.90	324	⇓*i*P		**P**	**07 24 19.3 +0.4**
VOIR		77.90	324	⇓P		**P**	**07 24 19.3 +0.4**
GOPC	**GO Pecny, Ondr**	77.91	333	*e*P		**P**	**07 24 18.8 +0.1**
GOPC				*e*			07 24 23.2
GOPC				MLR	MLR		
	comp=Z,500nm,16.3s						
GOPC	**GO Pecny, Ondr**	77.91	333	*e*P		**P**	**07 24 18.8 +0.1**
GOPC				*ex*	x		07 24 23.2
GOPC				AMS	AMS		08 04 00.0
	comp=Z,500nm,16.3s						
PRU	**Pruhonice**	77.92	333	*e*P		**P**	**07 24 18.8 0.0**
PRU				*e*			07 24 23.8
PRU				MLR	MLR		
	comp=Z,700nm,17.4s						
PRU	**Pruhonice**	77.92	333	*e*P		**P**	**07 24 18.8 0.0**
PRU				*ex*	x		07 24 23.8
PRU				AMS	AMS		08 02 20.0
	comp=Z,700nm,17.4s						
N41A	**Harden Midland**	78.01	43	*e*P		**P**	**07 24 19.5 0.0**
	comp=Z,29nm,0.6s						
SULR		78.01	323	⇓*i*P		**P**	**07 24 19.7 +0.3**
KRUC	**Moravsky**	78.11	331	*e*P		**P**	**07 24 20.2 +0.3**
ARR	**Arges**	78.13	325	⇓*i*P		**P**	**07 24 20.8 +0.7**
TREC	**Trest**	78.21	332	*e*P		**P**	**07 24 21.0 +0.5**
TREC				MLR	MLR		
	comp=Z,700nm,21.4s						
TREC	**Trest**	78.21	332	*e*P		**P**	**07 24 21.0 +0.5**
TREC				AMS	AMS		08 01 10.0
	comp=Z,700nm,21.4s						
NKC	**Novy Kostel**	78.36	334	*e*P		**P**	**07 24 21.2 -0.1**
NKC				*e*			07 24 31.0
NKC				MLR	MLR		
	comp=Z,700nm,16.8s						
NKC	**Novy Kostel**	78.36	334	*e*P		**P**	**07 24 21.2 -0.1**
NKC				*ex*	x		07 24 31.0
NKC				AMS	AMS		08 03 00.0
	comp=Z,700nm,16.8s						
MODS	**Modra-Piesok**	78.40	331	*e*P		**P**	**07 24 21.3 -0.2**
MODS				pmax	pmax		
	comp=Z,55nm,1.3s						
MODS	**Modra-Piesok**	78.40	331	*e*P		**P**	**07 24 21.3 -0.2**
WTSB	**Winterswijk**	78.41	338	*e*P		**P**	**07 24 21.1 -0.3**
	comp=Z,58nm,0.8s						
LOT	**Lotru**	78.41	325	⇑*i*P		**P**	**07 24 21.5 -0.3**
BR131	**Keskin Array S**	78.53	316	*e*P		**P**	**07 24 22.5 0.0**
	comp=Z,18nm,1.1s						
BR131	**Keskin Array S**	78.53	316	P		**P**	**07 24 23.1 +0.6**
	SNR=7.6						
BR131				P		**P**	**07 24 23.3 +0.8**
	SNR=6.1						
BRTR	**Keskin Array B**	78.53	316	P		**P**	**07 24 22.8 +0.3**
	comp=Z,9.6nm,0.9s,baz=60,slow=3.3,SNR=28						
BRTR				LR	LR		08 04 08.6
	comp=Z,333nm,19.2s,baz=57,slow=40						
SIRR	**Siria**	78.57	327	⇓*i*P		**P**	**07 24 22.1 -0.4**
ZST	**Bratislava**	78.61	331	*e*P		**P**	**07 24 22.8 +0.2**
ZST	**Bratislava**	78.61	331	*e*P		**P**	**07 24 22.8 +0.2**
J47A	**Sunmer**	78.80	38	*e*P		**P**	**07 24 24.0 +0.3**
	comp=Z,46nm,1.5s						
M44A	**Midewin, Midew**	78.81	41	*e*P		**P**	**07 24 23.3 -0.5**
	comp=Z,20nm,1.0s						
ANTO	**Ankara**	78.83	316	*e*P		**P**	**07 24 24.5 +0.4**
	comp=Z,71nm,1.4s						
ANTO	**Ankara**	78.83	316	⇑*i*P		**P**	**07 24 25.0 +0.9**
ANTO	**Ankara**	78.83	316	*e*P		**P**	**07 24 24.5 +0.4**
ANTO				pmax	pmax		
	comp=Z,71nm,1.4s						
GZR	**Gura Zlata**	78.86	326	⇓*i*P		**P**	**07 24 23.8 -0.3**
GZR	**Gura Zlata**	78.86	326	⇓P		**P**	**07 24 23.8 -0.3**
HDIL	**Hopedale**	78.87	42	*e*P		**P**	**07 24 24.3 +0.1**
	comp=Z,33nm,0.6s						
CSKK	**Cskako**	78.91	330	EP		**P**	**07 24 24.0 -0.3**
KHC	**Kasperske Hory**	78.97	333	*e*P		**P**	**07 24 25.0 +0.3**
	comp=Z,12nm,0.8s						
KHC	**Kasperske Hory**	78.97	333	*e*P		**P**	**07 24 25.0 +0.3**
KHC				pmax	pmax		
	comp=Z,12nm,0.8s						
KHC	**Kasperske Hory**	78.97	333	*e*P		**P**	**07 24 24.9 +0.3**
KHC				*ex*	x		07 24 29.7
KHC				AMS	AMS		08 03 00.0
	comp=Z,1μm,16.4s						
BZS	**Buzias**	79.13	327	⇑*i*P		**P**	**07 24 25.1 -0.4**
BZS	**Buzias**	79.13	327	⇑P		**P**	**07 24 25.1 -0.4**
GEC2	**GERESS Array S**	79.19	333	*e*P		**P**	**07 24 25.9 0.0**
	comp=Z,30nm,1.4s						
GEC2	**GERESS Array S**	79.19	333	*e*P		**P**	**07 24 25.9 0.0**
GEC2				pmax	pmax		
	comp=Z,30nm,1.4s						
GERES	**GERESS Array B**	79.19	333	P		**P**	**07 24 25.5 -0.4**
	comp=Z,7.3nm,0.7s,baz=33,slow=5.1,SNR=44						
GERES				LR	LR		08 03 07.0
	comp=Z,422nm,18.3s,baz=31,slow=38						
GRFO	**Grafenberg**	79.21	335	*e*P		**P**	**07 24 26.2 +0.3**
	comp=Z,106nm,1.5s						
GRFO	**Grafenberg**	79.21	335	*e*P		**P**	**07 24 26.2 +0.3**
GRFO				pmax	pmax		
	comp=Z,106nm,1.5s						
SOP	**Sopron**	79.24	331	⇑EP		**P**	**07 24 26.1 0.0**
CONA	**Conrad Observa**	79.27	331	*e*P		**P**	**07 24 27.0 +0.6**
	comp=Z,19nm,0.8s,SNR=18						
HERR	**Herculane**	79.42	326	⇑*i*P		**P**	**07 24 26.8 -0.3**
TX31	**Lajitas Ar. Si**	79.43	59	*e*P		**P**	**07 24 28.0 +0.4**
	comp=Z,13nm,1.4s						
TXAR	**Lajitas Array**	79.43	59	P		**P**	**07 24 27.8 +0.2**
	comp=Z,1.8nm,0.6s,baz=298,slow=4.4,SNR=35						
TIH	**Tihany**	79.44	329	EP		P	07 24 16.0 -11
KLYT	**Kilyos**	79.52	319	⇑*i*P		**P**	**07 24 27.1 -0.6**
HGN	**Heimansgroeve**	79.73	338	*e*P		**P**	**07 24 28.5 -0.1**
	comp=Z,36nm,0.8s						
MDVR	**Moldovita**	79.78	326	⇓*i*P		**P**	**07 24 28.3 -0.9**
MEM	**Membach**	79.85	338	P		**P**	**07 24 29.4 +0.1**
CCM	**Cathedral Cave**	79.86	45	*e*P		**P**	**07 24 29.4 -0.2**
	comp=Z,22nm,1.3s						
CCM	**Cathedral Cave**	79.86	45	*e*P		**P**	**07 24 29.4 -0.2**
CCM				pmax	pmax		
	comp=Z,22nm,1.3s						
MOA	**Molln**	79.87	332	*e*P		**P**	**07 24 29.8 +0.2**
	comp=Z,10nm,0.9s						
PHSR	**Pinarhisar**	79.91	321	⇑*i*P		**P**	**07 24 30.5 +0.7**
ARSA	**Arzberg**	79.97	331	*e*P		**P**	**07 24 30.3 +0.2**
	comp=Z,15nm,1.2s						
DSB	**Dublin**	80.01	347	*e*P		**P**	**07 24 30.1 -0.1**
	comp=Z,22nm,1.2s						
MPEP	**Malo Peshtene**	80.14	324	P		**P**	**07 24 31.1 0.0**
BCLA	**Clavier**	80.21	339	P		**P**	**07 24 30.5 -0.7**
BEHE	**Becsehely**	80.21	330	EP		**P**	**07 24 31.0 -0.3**
BGES	**Gesves**	80.29	339	P		**P**	**07 24 31.7 0.0**
FVM	**French Village**	80.32	45	*e*P		**P**	**07 24 32.1 0.0**
	comp=Z,9.2nm,0.6s						
FVM	**French Village**	80.32	45	*e*P		**P**	**07 24 32.1 0.0**
FVM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SNF	**Seneffe**	80.38	339	P		**P**	**07 24 32.2 +0.1**
P45A	**Graceland, Par**	80.42	42	*e*P		**P**	**07 24 32.5 -0.1**
	comp=Z,14nm,0.6s						
DIM	**Dimitrovgrad**	80.45	322	*e*P		**P**	**07 24 33.5 +0.8**
BMRD	**Maredsous**	80.45	339	P		**P**	**07 24 32.4 -0.1**
	comp=Z,27nm,1.5s						
PGB	**Panagyurishte**	80.63	323	*e*P		**P**	**07 24 34.1 +0.3**
SOKA	**Soboth**	80.63	331	*e*P		**P**	**07 24 33.8 +0.1**
	comp=Z,19nm,1.0s,SNR=19						
PERS	**Pernice**	80.64	331	*i* P		**P**	**07 24 33.4 -0.4**
DOU	**Dourbes**	80.68	339	P		**P**	**07 24 33.3 -0.5**
W39A	**Magazine**	80.73	49	*e*P		**P**	**07 24 34.4 0.0**
	comp=Z,11nm,1.1s						
KBA	**Koelnbreinsper**	80.85	332	*e*P		**P**	**07 24 35.2 +0.2**
	comp=Z,41nm,1.2s,SNR=27						
OLIL	**Olney**	80.87	43	*e*P		**P**	**07 24 35.0 0.0**
	comp=Z,9.7nm,0.7s						
OBKA	**Obir**	80.94	331	*e*P		**P**	**07 24 35.2 -0.2**
	comp=Z,7.6nm,0.7s						
VTS	**Vitosha**	80.96	324	*e*P		**P**	**07 24 35.9 +0.2**

PPT	Papeete	82.42	124	LR	LR	08 00 02.5	
	comp=Z,405nm,18.7s,baz=318,slow=35						
PPT2	Papeete2	82.43	124	eS	S	07 35 00.6	+4.2
	comp=Z,82nm,23.8s						
PPT2	Papeete2	82.43	124	eLR	LR	07 50 38.0	
	comp=Z,799nm,22.8s,baz=322						
N53A	Lisbon	82.50	37	eP	P	07 24 43.9	+0.3
	comp=Z,27nm,1.4s						
NVLJ	Novalja	82.53	330	P	P	07 24 41.3	-2.3
P51A	Williamsport	82.61	39	eP	P	07 24 44.1	-0.1
	comp=Z,8.7nm,0.8s						
O52A	Adamsville	82.64	38	eP	P	07 24 44.3	0.0
	comp=Z,16nm,1.2s						
TUE	Stuetta	82.65	334	eP	P	07 24 44.4	-0.2
	comp=Z,13nm,0.9s						
N54A	Moraine State	82.73	36	eP	P	07 24 45.0	+0.2
	comp=Z,16nm,0.9s						
PDG	Podgorica	82.73	326	⇑iP	P	07 24 43.9	-0.8
TTG	Podgorica	82.73	326	eP	P	07 24 44.1	-0.6
	comp=Z,46nm,1.3s						
TTG	Podgorica	82.73	326	eP	P	07 24 44.1	-0.6
TTG				pmax	pmax		
	comp=Z,46nm,1.3s						
T47A	Sharon Grove	82.73	43	eP	P	07 24 45.1	+0.2
	comp=Z,31nm,1.4s						
Q51A	Peebles	82.86	40	eP	P	07 24 45.9	+0.4
	comp=Z,34nm,1.5s						
WVT	Waverly	83.06	44	eP	P	07 24 46.5	-0.1
	comp=Z,5.3nm,0.8s						
WVT	Waverly	83.06	44	eP	P	07 24 46.5	-0.1
WVT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLF	Chambon-Foret	83.19	340	eP	P	07 24 46.7	-0.3
	comp=Z,55nm,1.3s						
FNA	Florina	83.26	324	eP	P	07 24 47.2	-0.4
	comp=Z,24nm,1.3s						
FNA	Florina	83.26	324	eP	P	07 24 47.2	-0.4
FNA				pmax	pmax		
	comp=Z,24nm,1.3s						
N55A	Marion Center	83.30	36	eP	P	07 24 47.9	+0.1
	comp=Z,19nm,1.3s						
SENIN	Lac Senin/Sane	83.36	336	eP	P	07 24 48.5	+0.2
	comp=Z,11nm,1.0s						
T49A	Edmonton	83.39	42	eP	P	07 24 48.6	+0.3
	comp=Z,5.7nm,0.6s						
SSF	Saint Saulge	83.76	338	eP	P	07 24 50.8	+0.8
SSF				pmax	pmax		
	comp=Z,15nm,1.0s						
PLAL	Pickwick Lake	83.84	45	eP	P	07 24 50.6	0.0
	comp=Z,4.6nm,0.6s						
V48A	Smith Brothers	83.86	44	eP	P	07 24 50.7	0.0
	comp=Z,7.2nm,0.6s						
LPL	La Plagne	84.30	336	eP	P	07 24 53.3	+0.3
LPL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BNI	Bardonecchia	84.73	336	eP	P	07 24 54.8	-0.3
	comp=Z,15nm,1.4s						
BNI	Bardonecchia	84.73	336	eP	P	07 24 54.8	-0.3
BNI				pmax	pmax		
	comp=Z,15nm,1.4s						
MFF	Saint Martin d	85.10	341	eP	P	07 24 56.7	0.0
MFF				pmax	pmax		
	comp=Z,15nm,0.8s						
SSB	Saint Sauveur	85.13	337	eP	P	07 24 57.3	+0.3
	comp=Z,16nm,0.9s						
SSB	Saint Sauveur	85.13	337	eP	P	07 24 57.3	+0.3
SSB				pmax	pmax		
	comp=Z,16nm,0.9s						
MATE	Matera	85.24	327	⇓iP	P	07 24 56.9	-0.6
147A	Livingston	85.57	47	eP	P	07 24 59.9	+0.6
	comp=Z,28nm,1.0s						
W52A	Murphy	85.78	42	eP	P	07 25 00.7	+0.3
	comp=Z,20nm,1.6s						
ITM	Ithomi	86.03	322	eP	P	07 25 00.7	-0.9
	comp=Z,23nm,1.0s						
CAF	Calviac	86.12	339	eP	P	07 25 02.2	+0.3
CAF				pmax	pmax		
	comp=Z,17nm,0.9s						
Z50A	Ashland	86.30	45	eP	P	07 25 02.9	-0.1
	comp=Z,12nm,0.7s						
LFF	La Frestale	86.44	339	eP	P	07 25 04.2	+0.8
LFF				pmax	pmax		
	comp=Z,13nm,0.6s						
TBI	Tubuai	87.04	128	eLR	LR	07 52 51.8	
	comp=Z,514nm,24.5s,baz=321						
TBI	Tubuai	87.04	128	eT	T	09 01 27.3	
	comp=Z,4.6nm,0.3s						
KEST	Kesra	92.30	330	P	P	07 25 30.3	-1.0
	comp=Z,6.6nm,0.9s,baz=24,slow=4.0,SNR=5.4						
KEST				LR	LR	08 12 24.3	
	comp=Z,359nm,18.4s,baz=339,slow=39						
KEST	Kesra	92.30	330	eP	P	07 25 31.4	+0.1
	comp=Z,12nm,1.0s						
ESDC	Sonseca Array	92.55	341	P	P	07 25 30.6	-1.8
	comp=Z,0.9nm,0.7s,baz=17,slow=3.8,SNR=6.7						
ESDC				LR	LR	08 13 00.9	
	comp=Z,205nm,18.8s,baz=25,slow=39						
MDT	Midelt	99.24	339	LR	LR	08 16 13.4	
	comp=Z,171nm,20.6s,baz=32,slow=39						
TOA1	Torodi Ar. Sit	115.63	327	ePKPdf	PKiKP	07 31 02.5	-0.9
TORD	Torodi Ar. Bea	115.64	327	PKP	PKiKP	07 31 02.5	-0.9
	comp=Z,0.6nm,0.8s,baz=8.0,slow=2.3,SNR=6.4						
VNDA	Vanda	122.68	177	PKP	PKiKP	07 31 15.2	0.0
	comp=Z,0.6nm,0.7s,baz=333,slow=7.8,SNR=3.5						
DBIC	Dimbokro	124.01	331	PKP	PKPdf	07 31 19.0	-0.6
	comp=Z,2.9nm,0.6s,baz=359,slow=1.9,SNR=4.3						
MAW	Mawson	130.22	210	PKP	PKiKP	07 31 30.3	-0.1
	comp=Z,1.2nm,0.6s,baz=72,slow=4.1,SNR=3.7						
LPAZ	La Paz	136.25	62	PKP	PKPdf	07 31 43.0	-0.4
	comp=Z,0.6nm,0.6s,baz=0.0,slow=5.1,SNR=3.9						
BDFB	Brasilia	146.35	35	PKPbc	PKPbc	07 32 02.5	+0.4
	comp=Z,5.9nm,0.6s,baz=324,slow=3.5,SNR=14						
BDFB	Brasilia	146.35	35	ePKPdf	PKPbc	07 32 02.2	+0.2
BDFB	Brasilia	146.35	35	ePKP2	PKPbc	07 32 02.3	+0.2
PLCA	Paso Flores	149.41	96	PKPbc	PKiKP	07 32 10.3	-0.4
	comp=Z,4.8nm,0.7s,baz=300,slow=2.8,SNR=11						
PLCA	Paso Flores	149.41	96	ePKPbc	PKPbc	07 32 09.8	+0.2
PLCA	Paso Flores	149.41	96	ePKP2	PKPbc	07 32 09.8	+0.2
CPUP	Villa Florida	150.40	60	PKPbc	PKPbc	07 32 12.5	+0.2
	comp=Z,3.4nm,0.6s,baz=330,slow=2.1,SNR=13						
SNAA	Sanae	150.73	196	PKPbc	PKPbc	07 32 12.0	+0.2
SNAA	Sanae	150.73	196	ePKPbc	PKiKP	07 32 12.3	-0.1
SNAA	Sanae	150.73	196	ePKIKP	PKiKP	07 32 12.3	-0.1
VNA2	Neumayer--Watz	152.21	195	PKPbc	PKiKP	07 32 15.6	+0.2
VNA3	Neumayer Olymp	152.32	193	PKPbc	PKPbc	07 32 15.4	0.0
VNA1	Neumayer--Stat	152.59	195	PKPbc	PKPbc	07 32 15.8	-0.1

NIED ***04*** *07:45:00,35.70N×141.00E,h11km,Mw3.9 Best double couple: M₀7.05000×10¹⁴ NP1:φs346.00000°,δ41.00000°, λ-104.00000°. NP2:φs184.00000°,δ50.00000°, λ-78.00000°.*

ISCJB ***04*** *07:45:44.1±0.9,35.76N±0.05×141.03E±0.08,h10km, mb3.5/3,Error ellipse: s-maj=9.0km s-min=6.5km az=167.5*

JMA ***04*** *07:45:46.2±0.2,35.69N×140.90E,h12km±1km,M3.7*

JMA Felt II J1.

IDC ***04*** *07:45:46.6±6.4,36.23N×140.83E,h0km,mb3.5/3, mb1 3.6/4,mb1mx3.4/40,mbtmp3.4/4,ML2.4/1,MS2.9/1, Ms1 2.9/1,ms1mx2.5/32,Error ellipse: s-maj=153.8km s-min=32.0km az=167.0*

ISC 04 07:45:44.7±1.1,35.72N±0.05×140.99E±0.07,h10km,n15, σ0.71/17,mb3.5/3,2C-1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.11	260	⇓P	Pg	07 45 48.3	+0.8
CHOJ				S	Sg	07 45 49.9	+0.5
JIHU	Itakohorinouch	0.45	303	P	Pg	07 45 54.9	+1.3
JSMT	Sammumatsuo	0.45	260	P	Pg	07 45 54.0	+0.5
JCN	Nagara	0.71	245	P	Pb	07 45 59.2	0.0
JYT	Yasato	0.82	308	⇑P	Pg	07 46 00.6	0.0
JYT				eS	Sg	07 46 10.7	-0.6
BSO4	Boso 4	0.91	216	P	Pb	07 46 02.7	+0.3
JHO	Hitachi	0.95	339	P	Pg	07 46 03.3	+0.3
BSO3	Boso 3	1.00	203	⇑P	Pg	07 46 04.1	+0.2
BSO1	Boso 1	1.07	181	P	Pb	07 46 04.4	-0.5
MJAR	Matsushiro Arr	2.40	291	Pn	Pn	07 46 24.0	0.0
	1.2nm,0.3s,baz=99,slow=8.2,SNR=32						
MAT	Matsushiro	2.40	291	P	Pn	07 46 23.9	-0.2
MAT				S	Sn	07 46 52.1	-1.5
KSRS	Korea Array	10.65	283	LR	LR	07 51 59.8	
	comp=Z,62nm,18.6s,baz=80,slow=36						
ZALV	Zalesovo Beam	42.56	313	P	P	07 53 40.1	-0.3
	0.6nm,0.3s,baz=108,slow=9.3,SNR=2.3						
MKAR	Makanchi Array	44.54	303	P	P	07 53 56.1	-0.5
	0.4nm,0.8s,baz=100,slow=7.9,SNR=3.6						
ILAR	Eielson Array	50.78	32	P	P	07 54 45.6	+0.9
	0.4nm,0.7s,baz=283,slow=5.4,SNR=4.7						

ISCJB ***04*** *08:06:01.8±0.3,39.63N±0.02×29.44E±0.03,h0km,Error ellipse: s-maj=3.2km s-min=2.6km az=5.3*

DDA ***04*** *08:06:01.2,39.65N×29.42E,h7km±3km,ML2.7*

ISK ***04*** *08:06:02.0,39.62N×29.41E,h11km,ML2.1/15, Suspected Mining explosion.*

ISC 04 08:06:01.6±0.8,39.63N±0.02×29.44E±0.02,h0km,n27, σ0.52/40,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUBOZ	BOZOYUK	0.54	59	iP	Pg	08 06 10.2	-1.7
AUBOZ				iS	Sg	08 06 19.5	+0.7
GDZ	Gediz	0.55	176	iP	Pg	08 06 12.1	+0.1
GDZ				iS	Sb	08 06 22.0	-0.5
ULDT	Uludag	0.56	336	iP	Pg	08 06 12.2	-0.1
ULDT				iS	Sg	08 06 20.4	+0.9
DURS	Dursunbey	0.74	268	iP	Pg	08 06 15.7	-0.2
BORA	Eskisehir	0.82	72	iP	Pg	08 06 17.5	+0.2
BORA				iS	Sb	08 06 29.6	-0.9
BORA				IAML_P			
	comp=Z,1μm,0.1s						
ADVT	Abdulvahap	0.83	16	PG	Pb	08 06 18.9	0.0
ADVT				SG	Sb	08 06 31.3	+0.6
MDNY	Mudanya-Bursa	0.85	330	PG	Pb	08 06 19.0	-0.2
MDNY				SG	Sb	08 06 31.4	+0.3
YLV	Yalova	0.93	357	PG	Pb	08 06 20.7	0.0
YLV				SG	Sb	08 06 34.3	+0.6
USAK	Uak-Merkez	0.97	200	iP	Pb	08 06 21.2	-0.2
USAK				iS	Sb	08 06 34.2	-0.6
SRCK	Saricakaya, Es	1.00	66	PG	Pb	08 06 22.2	+0.3
SRCK	Saricakaya, Es	1.00	66	iP	Pg	08 06 20.4	-0.4
SRCK				iS	Sb	08 06 35.9	+0.2
ARMT	Armutlu	1.03	335	PG	Pb	08 06 22.2	-0.1
ARMT				SG	Sb	08 06 37.1	+0.7
KCTX	Karacabey (Bur	1.04	308	PG	Pb	08 06 22.7	+0.2
KCTX				SG	Sn	08 06 37.7	-1.1
ESKT	Eskisehir	1.10	95	PN	Pb	08 06 23.8	+0.2
GULT	Gulveren	1.15	46	PN	Pb	08 06 24.6	+0.2
HRT	Hereke	1.20	8	PN	Pb	08 06 25.3	+0.1
BALB	Balikesir	1.20	271	PN	Pb	08 06 25.1	-0.1
BUY	Buyukada	1.24	349	PN	Pb	08 06 25.9	0.0
KHAL	Karahalli	1.26	178	iP	Pn	08 06 26.9	+0.3
KHAL				iS	Sn	08 06 45.1	+0.8
KULA	Kula-Manisa	1.27	209	PN	Pg	08 06 25.9	0.0
MANT	Manisa	1.33	211	iP	Pg	08 06 26.8	-0.3
MANT				iS	Sb	08 06 45.3	0.0
EDC	Edincik	1.40	301	PN	Pg	08 06 28.1	-0.4
GONE	Gonen-Balikesi	1.41	288	PN	Pn	08 06 28.0	-0.5
ISK	Istanbul-Kandi	1.46	349	PN	Pn	08 06 29.1	-0.1
SILT	Sile	1.53	6	PN	Pn	08 06 30.1	0.0
SVRH	Sivrihisar-ESK	1.63	96	PN	Pn	08 06 31.6	0.0
KIZT	Kizilcal	2.04	111	PN	Pn	08 06 37.4	+0.1

MEX 04 08:10:14.4±0.3,16.22N×98.16W,h12km±2km,MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	11	iP	Pg	08 10 18.0	-0.5
PNIG				iS	Sg	08 10 20.8	-0.5
TLIG	Tlapa	1.39	344	eP	Pn	08 10 35.9	-3.9
TLIG				eS	Sn	08 10 52.9	-5.2

ISCJB ***04*** *08:29:04.7±0.1,15.12S±0.02×71.82W±0.06,h124km, mb4.5/49,Error ellipse: s-maj=8.3km s-min=2.1km az=159.3*

NEIC ***04*** *08:29:06.0±1.2,14.99S×71.77W,h109km±9km,mb4.7/51, Error ellipse: s-maj=22.5km s-min=16.5km az=74.0*

IDC ***04*** *08:29:05.7±1.8,14.94S×71.65W,h105km±18km,mb3.7/7, mb1 4.0/14,mb1mx3.8/37,mbtmp4.2/14,Error ellipse: s-maj=25.7km s-min=14.1km az=37.0*

ISC 04 08:29:06.3±0.4,15.23S±0.05×72.02W±0.07,h124km, n292,σ1.25/312,mb4.4/49,Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	IPOC Station P	3.74	155	iS	Sn	08 30 47.8	+1.8
LPAZ	La Paz	3.89	106	P	Pn	08 30 06.3	+1.3
	27nm,0.3s,baz=335,slow=8.8,SNR=543						
PB16	IPOC Station P	3.92	143	iS	Sn	08 30 55.5	+4.5
MNMC	Minye Minye	4.52	150	ePn	Pn	08 30 14.5	+1.4
MNMC				eSn	Sn	08 31 05.8	+0.8
PSGCX	Pisagua	4.71	158	iS	Sn	08 31 07.8	-1.5
PB11	IPOC Station P	5.04	154	ePn	Pn	08 30 20.5	+0.5
GO01	Chusmiza	5.17	149	ePn	Pn	08 30 24.3	+2.2
GO01				eSn	Sn	08 31 22.9	+1.9
PB08	IPOC Station P	5.60	151	iP	Pn	08 30 28.9	+1.2
PB08				iS	Sn	08 31 30.4	-0.7
NNA	Nana	5.69	304	P	Pn	08 30 29.4	+0.7
	21nm,0.3s,baz=134,slow=11,SNR=32						
NNA				S	Sn	08 31 30.3	-2.6
	11nm,0.3s,baz=35,slow=16,SNR=6.7						
NNA	Nana	5.69	304	ePn	Pn	08 30 29.2	+0.5
NNA				eSn	Sn	08 31 31.6	-1.3
PB01	IPOC Station P	6.27	158	ePn	Pn	08 30 36.4	0.0
PB01				eSn	Sn	08 31 44.4	-2.4
PB02	IPOC Station P	6.39	162	iP	Pn	08 30 38.3	+0.2
PB02				iS	Sn	08 31 46.3	-3.5
PB07	IPOC Station P	6.78	163	iP	Pn	08 30 43.8	+0.4
PB07				iS	Sn	08 31 56.1	-3.1
PB09	IPOC Station P	7.05	158	iP	Pn	08 30 47.9	+0.9
PB09				iS	Sn	08 32 04.7	-1.1
PB03	IPOC Station P	7.12	163	iP	Pn	08 30 48.2	+0.2
PB03				iS	Sn	08 32 03.8	-3.7
PB04	IPOC Station P	7.29	166	ePn	Pn	08 30 50.2	-0.1
PB04				eSn	Sn	08 32 10.6	-1.0
PB04	IPOC Station P	7.29	166	iP	Pn	08 30 50.2	-0.1
PB04				iS	Sn	08 32 08.4	-3.3
PB05	IPOC Station P	7.78	168	iP	Pn	08 30 56.2	-0.6
PB05				iS	Sn	08 32 21.9	-1.6
LVC	Limon Verde	7.91	159	P	Pn	08 30 59.8	+1.0
	4.2nm,0.3s,baz=339,slow=9.5,SNR=11						
LVC				S	Sn	08 32 24.3	-2.7
	12nm,0.3s,baz=129,slow=21,SNR=19						
LVC	Limon Verde	7.91	159	ePn	Pn	08 30 59.5	+0.6
LVC				eSn	Sn	08 32 25.1	-1.9
LVC	Limon Verde	7.91	159	iP	Pn	08 30 59.6	+0.6
LVC				iS	Sn	08 32 25.0	-2.0
PB15	IPOC Station P	8.30	164	iP	Pn	08 31 03.9	0.0
PB15				iS	Sn	08 32 33.8	-2.4
PB10	IPOC Station P	8.36	171	ePn	Pn	08 31 04.9	+0.3
PB10				eSn	Sn	08 32 35.6	-1.8
PB10	IPOC Station P	8.36	171	iP	Pn	08 31 02.8	-1.9
PB10				iS	Sn	08 32 30.2	-7.1
YJA	Yavi	9.26	139	iP	Pn	08 31 17.3	+0.2
YJA				IAML		08 31 18.6	
	comp=Z,3.4nm,0.4s						
YJA				iS	Sn	08 32 59.9	+0.2
HJA	Humahuaca	10.10	143	iP	Pn	08 31 28.3	0.0
HJA				IAML		08 31 30.6	
	comp=Z,55nm,0.6s						
HJA				iS	Sn	08 33 16.9	-3.1
GO02	Mina Guanaco	10.14	167	ePn	Pn	08 31 29.6	+0.7
GO02				eSn	Sn	08 33 20.8	-0.3
ATAH	Atahualpa	10.19	321	P	Pn	08 31 29.2	-0.4
	comp=Z,0.6nm,0.3s,baz=128,slow=5.6,SNR=4.9						
SIV	San Ignacio	10.57	96	P	Pn	08 31 31.4	-3.1
	comp=Z,2.7nm,0.3s,baz=288,slow=10,SNR=78						
OTAV	Otavalo	16.63	337	ePn	Pn	08 32 51.4	-1.2
	comp=Z,7.2nm,1.4s						
CFA	Coronel Fontan	16.67	169	P	P	08 32 55.6	+2.8
	comp=Z,0.4nm,0.3s,baz=338,slow=12,SNR=4.8						
CPUP	Villa Florida	17.61	131	P	Pn	08 33 03.6	-0.3
	comp=Z,0.6nm,0.3s,baz=309,slow=11,SNR=18						
CPUP	Villa Florida	17.61	131	eP	Pn	08 33 03.8	-0.1
	comp=Z,8.2nm,0.8s						
POPC	Popayan, Colom	18.24	345	eP	P	08 33 09.4	-1.1
PTGA	Pitinga	18.68	41	P	P	08 33 12.2	-2.8
	comp=Z,5.5nm,0.3s,baz=316,slow=22,SNR=34						
PTGA	Pitinga	18.68	41	eP	P	08 33 12.2	-2.8
	comp=Z,18nm,0.5s						
PRAC	Prado	19.03	351	eP	Pn	08 33 23.3	+2.4
PLMC	San Jos del P	20.44	348	eP	Pn	08 33 36.0	-1.5
YOPC	Yopal, Colombi	20.45	359	eP	Pn	08 33 36.0	-1.6
GUY2C	Guyana, Caldas	20.59	350	eP	Pn	08 33 37.9	-1.6
NORC	Norcasia	20.85	352	eP	P	08 33 39.3	+0.8
HELC	Santa Helena	21.56	350	eP	P	08 33 45.9	-0.5
PTBC	PUERTO BERRIO,	21.76	353	eP	P	08 33 45.2	-2.9
SOLC	Bahia Solano	21.97	346	eP	P	08 33 52.6	+2.2
BDFB	Brasilia	23.14	94	P	P	08 34 00.4	-1.7
	comp=Z,2.3nm,0.5s,baz=263,slow=11,SNR=5.8						
BDFB	Brasilia	23.14	94	eP	P	08 34 00.3	-1.7
	comp=Z,3.0nm,0.6s						
SMLC	San Martn de	23.96	355	eP	P	08 34 05.8	-3.4
SDV	Santo Domingo	23.99	3	P	P	08 34 08.1	-1.7
	comp=Z,4.6nm,0.4s,baz=207,slow=9.7,SNR=10						
SDV	Santo Domingo	23.99	3	eP	P	08 34 08.4	-1.4
	comp=Z,12nm,0.8s						
SDV	Santo Domingo	23.99	3	eP	P	08 34 07.2	-2.6
SVB	Belmont	30.25	21	eP	P	08 35 03.5	-2.2
	comp=Z,83nm,0.5s						
FDF	Fort de France	31.64	20	eP	P	08 35 14.8	-3.1
	comp=Z,140nm,1.3s						
060A	Indiantown	42.78	349	P	P	08 36 53.3	+1.6
	baz=168						
859A	Kempfer Cattle	43.88	349	P	P	08 37 01.6	+1.1
	baz=167						
DWPF	Disney Wildern	44.03	348	P	P	08 37 02.9	+1.2
	baz=166						
LNIG	Linares	48.03	326	eP	P	08 37 33.9	+0.8
	comp=Z,3.6nm,0.8s						
NHSC	New Hope	48.69	351	eP	P	08 37 38.5	+0.6
	comp=Z,49nm,0.8s						
NHSC	New Hope	48.69	351	P	P	08 37 38.9	+0.9
	baz=169						
154A	Montrose	48.74	348	P	P	08 37 38.6	+0.2
	baz=165						
251A	Midway	48.77	345	P	P	08 37 39.1	+0.5
	baz=162						
Z57A	Bowman	48.96	350	P	P	08 37 41.3	+1.3
	baz=168						
152A	Waverly Hall	49.15	346	P	P	08 37 41.6	0.0
	baz=163						
Y58A	Scranton	49.40	352	P	P	08 37 43.6	+0.3
	baz=170						
150A	Eclectic	49.41	344	P	P	08 37 43.1	-0.4
	baz=162						
Z52A	Williamson	49.58	346	P	P	08 37 45.2	+0.4
	baz=164						
GOGA	Godfrey	49.58	347	P	P	08 37 45.5	+0.7
	baz=165						
149A	Jones	49.61	344	P	P	08 37 46.4	+1.4
	baz=161						
Y57A	Sumter	49.61	351	P	P	08 37 45.5	+0.5
	baz=169						
Y55A	Saluda	49.78	349	P	P	08 37 47.3	+1.0
	baz=167						
X59A	McDuffie Farm,	49.91	353	P	P	08 37 47.7	+0.4
	baz=171						
X58A	Rowland	49.99	352	P	P	08 37 48.4	+0.5
	baz=170						
X55A	Gracelyn & Ava	50.26	350	P	P	08 37 50.3	+0.4
	baz=168						
W60A	Pink Hill	50.29	354	P	P	08 37 50.5	+0.4
	baz=172						
Y51A	Rockmart	50.41	346	P	P	08 37 51.0	-0.1
	baz=163						
W58A	Raeford	50.44	352	P	P	08 37 51.3	+0.1
	baz=171,SNR=12						
X54A	Belton	50.47	349	P	P	08 37 51.9	+0.4
	baz=167						
Y50A	Piedmont	50.56	345	P	P	08 37 52.7	+0.5
	baz=162						
X53A	Estanollee	50.60	348	P	P	08 37 53.0	+0.5
	baz=166						
W57A	Gilead	50.67	352	P	P	08 37 53.3	+0.3
	baz=170						
Y49A	Blount Mountai	50.70	344	P	P	08 37 53.7	+0.5
	baz=162						
W56A	Indian Trail	50.74	351	P	P	08 37 53.6	+0.1
	baz=169						
KMSC	Kings Mountain	50.86	350	P	P	08 37 55.1	+0.6
	baz=168						
V61A	Roper	50.92	355	P	P	08 37 55.7	+0.9
	baz=174						
W54A	Cherokee Point	50.96	349	P	P	08 37 56.1	+0.9
	baz=167						
V59A	Middlesex	51.05	353	P	P	08 37 56.1	+0.3
	baz=172						
X50B	Fort Payne	51.09	346	P	P	08 37 56.3	+0.2
	baz=163						
V58A	Windy Hill, Pi	51.18	353	P	P	08 37 57.1	+0.3
	baz=171						
W53A	Cullowhee	51.22	348	P	P	08 37 57.5	+0.2
	baz=166						
X49A	Woodville	51.30	345	P	P	08 37 57.6	-0.2
	baz=162						
V57A	Coltrane Farms	51.36	352	P	P	08 37 58.2	+0.1
	baz=170						
V56A	Mocksville	51.39	351	eP	P	08 37 58.6	+0.3
	comp=Z,16nm,1.0s						
V56A	Mocksville	51.39	351	P	P	08 37 59.1	+0.8
	baz=169						
X48A	Hartselle	51.43	344	P	P	08 37 58.0	-0.7
	baz=161						
V54A	Nebo	51.59	350	P	P	08 38 00.1	+0.2
	baz=167						
W50A	Signal Mountai	51.71	346	P	P	08 38 02.0	+1.1
	baz=163						
X47A	Russelville	51.71	343	P	P	08 37 60.0	-0.8
	baz=160						
U57A	Blanch	51.84	352	P	P	08 38 01.5	-0.1
	baz=171						
U56A	King	51.90	351	P	P	08 38 03.0	+0.9
	baz=169						
V52A	Sevierville	51.96	348	eP	P	08 38 02.6	0.0
	comp=Z,6.0nm,1.0s						
V52A				epP	pP	08 38 29.5	-3.4
W48A	Pulaski	52.05	344	P	P	08 38 02.4	-0.9
	baz=161						
V51A	Loudon	52.08	347	P	P	08 38 02.7	-0.7
	baz=165						
V50A	Pikeville	52.11	346	P	P	08 38 03.5	-0.3
	baz=164						
U55A	TA2, Sparta	52.15	351	P	P	08 38 04.2	+0.1
	baz=169						
T59A	Double "B" Far	52.18	354	P	P	08 38 03.7	-0.5
	baz=173						
T58A	Grand View Acr	52.25

comp=Z,6.9nm,0.7s

T49A	Edmonton	53.59 347	P	P	08 38 14.3	-0.3
R57A	Stanardsville	53.59 354	P	P	08 38 15.1	+0.6
W41B	Gary Mavity, V	53.67 339	P	P	08 38 15.5	+0.3
R55A	Marlinton	53.76 352	P	P	08 38 16.5	+0.6
R54A	Victor	53.79 351	P	P	08 38 16.4	+0.3
T48A	Bowling Green	53.79 346	P	P	08 38 16.3	+0.2
TXAR	Lajitas Array	53.82 325	P	P	08 38 17.6	+1.1
	comp=Z,0.7nm,0.6s,baz=150,slow=9.2,SNR=10					
S50A	Richmond	53.90 348	P	P	08 38 16.4	-0.4
R53A	Hurricane	54.08 350	P	P	08 38 18.3	+0.2
S49A	Springfield	54.18 347	P	P	08 38 18.1	-0.7
S48A	Wiedeman Farm,	54.23 346	P	P	08 38 18.9	-0.4
Q57A	Strasburg	54.30 354	P	P	08 38 20.0	+0.2
S47A	Hartford	54.37 345	P	P	08 38 19.4	-0.8
ABTX	Abilene, Hawle	54.43 331	eP	P	08 38 21.2	+0.4
	comp=Z,8.3nm,0.6s					
ABTX	Abilene, Hawle	54.43 331	P	P	08 38 21.6	+0.7
Q55A	Buckhannon	54.46 352	P	P	08 38 21.7	+0.8
	baz=170,SNR=5.1					
Q53A	Leroy	54.53 351	P	P	08 38 21.7	+0.3
Q54A	Coxs Mills	54.55 352	eP	P	08 38 21.6	+0.1
	comp=Z,7.4nm,0.6s					
Q54A	Coxs Mills	54.55 352	P	P	08 38 22.0	+0.5
S46A	Don Dixon Farm	54.66 345	P	P	08 38 21.9	-0.4
P56A	Dayton Farm, R	54.81 354	P	P	08 38 24.0	+0.6
P55A	Reedsville	54.93 353	P	P	08 38 25.0	+0.7
R47A	Wooly Knot Far	54.95 346	P	P	08 38 23.7	-0.7
S44A	Carbondale	55.08 343	P	P	08 38 24.9	-0.4
MCWV	Mont Chateau	55.08 353	eP	P	08 38 25.5	+0.1
	comp=Z,11nm,0.8s					
MCWV	Mont Chateau	55.08 353	P	P	08 38 25.6	+0.3
SIUC	Southern Illin	55.09 343	eP	P	08 38 25.1	-0.2
	comp=Z,13nm,0.6s					
P53A	Whipple	55.12 351	P	P	08 38 26.2	+0.6
Q48A	North Vernon	55.38 347	P	P	08 38 26.5	-1.0
R45A	Skylar, Fairfi	55.38 344	P	P	08 38 27.0	-0.5
P52A	Corning	55.38 351	P	P	08 38 27.2	-0.3
O56A	Blue Knob Stat	55.54 354	P	P	08 38 29.1	+0.4
O55A	Ligonier	55.56 353	P	P	08 38 29.4	+0.6
P50A	Jamestown	55.65 349	P	P	08 38 28.7	-0.6
FVM	French Village	55.68 342	eP	P	08 38 30.3	+0.6
	comp=Z,12nm,1.1s					
SSPA	Standing Stone	55.84 355	P	P	08 38 31.6	+0.8
O53A	New Philadelph	55.85 351	P	P	08 38 31.6	+0.8
N55A	Marion Center	56.09 354	eP	P	08 38 33.2	+0.6
	comp=Z,26nm,0.8s					
N55A	Marion Center	56.09 354	P	P	08 38 33.2	+0.6
	baz=172,SNR=11					
N53A	Lisbon	56.34 352	P	P	08 38 35.1	+0.8
N54A	Moraine State	56.39 353	eP	P	08 38 34.8	+0.2
	comp=Z,17nm,1.0s					
N54A	Moraine State	56.39 353	P	P	08 38 35.3	+0.7
	baz=170,SNR=5.4					
O48A	Farmland	56.53 348	P	P	08 38 35.3	-0.4
MNTX	Cornudas Mount	56.58 326	P	P	08 38 37.0	+0.7
N51A	Ashland	56.68 351	P	P	08 38 36.8	+0.1
M55A	Ridgway	56.75 354	P	P	08 38 37.3	+0.1
	baz=172,SNR=5.7					
BRYW	Bryant College	56.86 0	eP	P	08 38 37.9	-0.1
	comp=Z,48nm,1.3s					
M54A	Oil Creek Stat	56.89 353	eP	P	08 38 38.4	+0.3
	comp=Z,18nm,0.8s					
M54A	Oil Creek Stat	56.89 353	P	P	08 38 38.5	+0.3
	baz=171,SNR=5.5					
M53A	Wl Miller and	56.94 352	P	P	08 38 39.2	+0.6
P43A	Skaggs, Pawnee	56.97 344	P	P	08 38 38.4	-0.3
N49A	Columbus Grove	56.99 349	P	P	08 38 38.6	-0.2
MSTX	Muleshoe	57.02 330	P	P	08 38 40.4	+1.0
ALLY	Alegheny Colle	57.08 353	eP	P	08 38 39.8	+0.3
	comp=Z,29nm,0.7s					
O45A	Potomac	57.09 346	P	P	08 38 38.2	-1.4
N47A	Urbana	57.24 348	P	P	08 38 39.9	-0.7
BINY	Binghamton	57.25 356	P	P	08 38 40.4	-0.3
L53A	Girard	57.40 353	P	P	08 38 42.1	+0.4
	baz=170,SNR=6.4					
L55A	Hinsdale	57.43 354	P	P	08 38 41.5	-0.5
N46A	Monticello	57.48 347	P	P	08 38 41.4	-0.9
	baz=163					
ERPA	Erie	57.53 353	eP	P	08 38 42.7	+0.1
	comp=Z,33nm,0.6s					
ERPA	Erie	57.53 353	P	P	08 38 42.8	+0.1
	baz=171,SNR=6.8					
L54A	Sinclairville	57.57 354	P	P	08 38 43.4	+0.5
	baz=171,SNR=9.2					
K54A	Basiliko Farm,	57.87 354	P	P	08 38 45.6	+0.5
	baz=172					
TYNO	Tyneside	58.48 353	P	P	08 38 49.4	+0.2
	baz=171					
M43A	Waltham Townsh	58.52 345	P	P	08 38 48.3	-1.2
	baz=160					
STCO	Saint Catharin	58.52 354	P	P	08 38 49.7	+0.2
	baz=172					
J52A	Paris	58.69 353	P	P	08 38 50.9	+0.2
	baz=170					
M41A	Milan	58.87 344	P	P	08 38 51.2	-0.7
	baz=159					
DRWO	Darlington Wes	59.13 354	P	P	08 38 53.5	-0.2
	baz=172					
WLVO	Wesleyville	59.15 355	P	P	08 38 53.6	-0.2
	baz=172					
L43A	Garden Prairie	59.17 346	P	P	08 38 53.4	-0.7
	baz=161					
PKRO	Pickering	59.25 354	P	P	08 38 54.6	+0.1
	baz=172,SNR=5.8					
I51A	Listowel	59.31 352	P	P	08 38 55.1	+0.1
	baz=170					
BWLO	Walkerton	59.64 352	P	P	08 38 57.1	-0.1
	baz=170					
ANMO	Albuquerque	59.66 327	eP	P	08 38 58.4	+0.6
	comp=Z,2.9nm,1.3s					
ANMO	Albuquerque	59.66 327	P	P	08 38 57.6	-0.2
	baz=140					
TASM	ASL Pad, Albuq	59.66 327	P	P	08 38 57.8	-0.1
	baz=140					
TASM	ASL Pad, Albuq	59.66 327	P	P	08 38 58.0	+0.2
	baz=140					
DELO	Deloro Mine	59.67 355	P	P	08 38 57.1	-0.3
	baz=174					
BRCO	Bruce Peninsul	59.80 352	P	P	08 38 58.2	-0.2
	baz=169					
K42A	Prairie Point,	59.88 345	P	P	08 38 58.5	-0.4
	baz=160					
H52A	Wyevale	60.01 354	P	P	08 38 59.8	+0.1
	baz=171					
SADO	Sadowa	60.06 354	eP	P	08 38 59.6	-0.5
	comp=Z,13nm,0.8s					
JFWS	Jewell Farm	60.23 345	P	P	08 39 01.1	-0.2
	baz=159					
G55A	Calabogie	60.34 356	P	P	08 39 01.9	-0.1
	baz=174					
G53A	Haliburton	60.36 355	P	P	08 39 02.0	-0.1
	baz=172					
H46A	Fife Lake	60.68 349	P	P	08 39 03.4	-0.9
	baz=165					
BUKO	Buck Lake	60.75 354	P	P	08 39 04.7	-0.1
	baz=172,SNR=9.3					
KLBO	Killbear Provi	60.75 353	P	P	08 39 04.6	-0.1
	baz=171					
J40A	Soldiers Grove	60.81 344	P	P	08 39 04.3	-0.9
	baz=159					
F52A	Sundridge	61.09 354	P	P	08 39 07.2	+0.1
	baz=172					
ALGO	Algonquin Park	61.13 355	P	P	08 39 07.2	-0.2
	baz=173					
H42A	Shiocton	61.32 347	P	P	08 39 08.5	-0.2
	baz=162					
SDCO	Great Sand Dun	61.37 330	eP	P	08 39 10.5	+1.0
	comp=Z,4.0nm,0.6s					
SDCO	Great Sand Dun	61.37 330	P	P	08 39 11.3	+1.8
	baz=142					
I39A	Houston	61.44 344	P	P	08 39 09.1	-0.4
	baz=158					
F48A	Evansville	61.52 352	P	P	08 39 10.1	+0.2
	baz=168					
E53A	Dumoine, Ponti	61.52 356	P	P	08 39 09.9	-0.1
	baz=174					
E54A	Lac Daplat, Po	61.55 356	P	P	08 39 10.0	-0.1
	baz=174					
E51A	G1948 Merrick	61.84 354	P	P	08 39 12.2	+0.2
	baz=172					
F45A	CMU Biological	61.84 349	P	P	08 39 11.1	-1.0
	baz=165					
D52A	ZEK Kipawa Sen	62.18 355	P	P	08 39 13.8	-0.5
	baz=173					
D53A	Lac Vacive, Po	62.23 356	P	P	08 39 14.7	+0.1
	baz=174					
D54A	Lac Fusel, La	62.23 356	P	P	08 39 14.0	-0.7
	baz=175					
OGNE	Ogallala	62.43 335	P	P	08 39 16.0	-0.3
	baz=147					
D50A	G1974 Best Tow	62.50 354	P	P	08 39 15.7	-0.8
	baz=171					
E43A	Lone Tree Farm	62.78 348	eP	P	08 39 18.2	-0.2
	comp=Z,4.7nm,0.8s					
E43A	Lone Tree Farm	62.78 348	P	P	08 39 17.4	-0.9
	baz=163					
ECSD	EROS Data Cent	62.84 340	P	P	08 39 18.7	-0.1
	baz=153					
F40A	Park Falls	63.02 346	P	P	08 39 19.7	-0.3
	baz=160					
PV01	Paradox Valley	63.19 328	eP	P	08 39 22.9	+1.3
	comp=Z,2.6nm,0.7s					
SMCO	Snowmass	63.21 330	eP	P	08 39 22.8	+1.0
	comp=Z,2.5nm,0.8s					
F39A	Loretta	63.21 345	P	P	08 39 21.1	-0.2
	baz=159					
VLDQ	Val d'Or	63.23 356	eP	P	08 39 21.6	+0.3
	comp=Z,6.8nm,1.0s					
E40A	Wakefield	63.47 346	P	P	08 39 22.9	0.0
	baz=160					
E39A	Mellen	63.55 346	P	P	08 39 23.2	-0.2
	baz=160					
D41A	Chassel	63.76 347	P	P	08 39 24.9	+0.1
	baz=162					
LSQQ	Lebel-sur-Quev	64.15 356	P	P	08 39 26.7	-0.6
	baz=174					
O20A	White River Ci	64.57 330	P	P	08 39 31.8	+1.3
	baz=141					
CHGQ	Chibougamau	64.88 358	P	P	08 39 31.5	-0.6
	baz=177					
MATQ	Matagami	64.89 356	P	P	08 39 31.2	-0.9
	baz=174					
EYMN	Ely	65.25 346	P	P	08 39 34.5	0.0
	baz=159					
MSU	Marysvale	65.36 326	eP	P	08 39 37.1	+1.4
TMUT	Trail Mountain	65.42 327	eP	P	08 39 37.6	+1.4
	comp=Z,3.3nm,1.3s					
DRLN	Deer Lake	65.47 10	eP	P	08 39 34.6	-1.3
	comp=Z,53nm,1.5s					
K22A	Casper	65.75 333	P	P	08 39 38.9	+0.9
	baz=143					
GSC	Goldstone, Bar	65.78 321	P	P	08 39 38.2	-0.1
	baz=132					
RSSD	Black Hills	65.89 335	P	P	08 39 40.2	+1.2
	baz=146					
EDW2	Edwards Air Fo	66.24 320	P	P	08 39 42.1	+0.9
	baz=130					
TPNV	Topopah Spring	66.55 322	P	P	08 39 45.6	+2.3
	baz=132					
FURC	Furnace Creek,	66.59 322	P	P	08 39 46.0	+2.7
	baz=132					
MPMC	Manual Prospec	66.70 321	P	P	08 39 45.4	+1.1
	baz=131					
AGMN	Agassiz Nation	66.71 343	eP	P	08 39 44.0	+0.2
	comp=Z,4.1nm,0.7s					
AGMN	Agassiz Nation	66.71 343	P	P	08 39 44.0	+0.2
	baz=155					
DUG	Dugway, Tooele	66.92 327	P	P	08 39 47.2	+1.7
	baz=136					
R11A	Troy Canyon, C	67.13 324	eP	P	08 39 49.0	+2.0
	comp=Z,0.3nm,1.0s					
R11A	Troy Canyon, C	67.13 324	P	P	08 39 49.4	+2.5
	baz=134					
BW06	Boulder Array	67.23 331	P	P	08 39 49.0	+1.4
	baz=140					
PDAR	Pinedale Array	67.23 331	P	P	08 39 48.5	+1.0
	comp=Z,0.5nm,0.7s,baz=124,slow=7.9,SNR=5.9					
CWC	Cottonwood Cre	67.31 321	P	P	08 39 49.9	+1.8
	baz=131					
REDW	Red Top Meadow	68.29 331	eP	P	08 39 55.1	+0.9
	comp=Z,1.4nm,1.0s					
SNOW	Snow King Moun	68.32 331	eP	P	08 39 55.4	+1.0
	comp=Z,1.6nm,0.6s					
FXWY	Fox Creek	68.58 331	eP	P	08 39 57.2	+1.2
	comp=Z,1.0nm,0.6s					
IMW	Indian Meadow	68.74 331	eP	P	08 39 58.1	+1.1
	comp=Z,1.8nm,0.6s					
NVAR	Mina Array Bea	68.75 322	P	P	08 39 59.3	+2.1
	comp=Z,1.0nm,0.9s,baz=151,slow=7.1,SNR=6.2					
FLWY	Flagg Ranch	68.77 331	eP	P	08 39 58.5	+1.3
	comp=Z,4.1nm,0.9s					
SNAA	Sanae	69.14 162	eP	P	08 40 01.1	+2.2
	comp=Z,4.9nm,1.5s					
HLID	Hailey	70.18 329	P	P	08 40 07.4	+1.6
	baz=136					
BOZ	Bozeman (W)	70.35 332	eP	P	08 40 07.8	+1.1
BOZ	Bozeman (W)	70.35 332	P	P	08 40 08.4	+1.7
	baz=139					
EGMT	Eagleton	71.39 334	P	P	08 40 13.9	+1.0
	baz=141					
N02D	Trinity Center	72.99 322	P	P	08 40 24.2	+1.6
	baz=128					
M04C	Macdoel	72.99 323	P	P	08 40 24.2	+1.6
	baz=129					
YBH	Yreka Blue Hor	73.46 323	eP	P	08 40 25.8	+0.5
	comp=Z,7.1nm,1.4s					
FCC	Fort Churchill	75.91 348	eP	P	08 40 38.9	+0.1
	comp=Z,2.3nm,0.9s					
TORD	Torodi Ar. Bea	78.18 73	P	P	08 40 50.6	-2.0
	comp=Z,0.7nm,0.4s,baz=257,slow=5.0,SNR=13					
YKA	Yellowknife Ar	84.33 342	P	P	08 41 24.3	+0.3
	comp=Z,2.4nm,0.6s,baz=134,slow=5.1,SNR=40					
YKW3	Yellowknife Ar	84.38 342	eP	P	08 41 24.9	+0.6
	comp=Z,2.6nm,0.7s					
SUMG	Summit	90.37 10	eP	P	08 41 54.3	+0.9
	comp=Z,6.5nm,0.7s					
SUMG	Summit	90.37 10	i P	P	08 41 53.9	+0.5
	comp=Z,19nm,0.9s					
KURBB	Kurchatov Arra	137.44 28	PKP	PKPdf	08 48 15.1	-0.2
	comp=Z,0.2nm,0.3s,baz=324,slow=4.6,SNR=2.8					
MKAR	Makanchi Array	141.93 29	PKhKP	PKPpre	08 48 20.6	
	comp=Z,0.6nm,0.8s,baz=318,slow=4.1,SNR=3.5					
MJAR	Matsushiro Arr	145.74 314	PKPbc	PKPab	08 48 32.5	+0.8
	comp=Z,1.0nm,0.5s,baz=79,slow=2.0,SNR=6.2					
SONM	Songino Array	147.46 2	PKPbc	PKiKP	08 48 37.7	-0.3
	comp=Z,1.8nm,0.6s,baz=298,slow=1.3,SNR=7.6					
KSRS	Korea Array	151.67 325	PKPbc	PKiKP	08 48 48.8	+1.9
	comp=Z,2.0nm,0.7s,baz=0.1,slow=2.1,SNR=9.9					
LZH	Lanzhou	158.90 9	ePKP	PKPdf	08 48 52.6	+2.5
LZH			pPKP	pPKPdf	08 49 23.1	-2.2
LZH			PKP	PKPab	08 49 30.7	+4.1
LZH			sPKP		08 49 37.2	

NIED **04** *08:33:00,37°.20N×141°.50E,h44km,Mw4.7 Best double couple: M₀1.19000×10¹⁶ NP1:φ₀205.00000°,δ20.00000°, λ93.00000°. NP2:φ₀22.00000°,δ70.00000°,λ89.00000°.*

BJI **04** *08:33:16.1±0.0,37.01N×141.71E,h39km,mb5.0/65, mB4.9/43,Ms4.2/39,Ms7 4.2/27*

MOS **04** *08:33:19.3±0.9,37.26N×141.36E,h37km,mb5.2/81,Error ellipse: s-maj=6.0km s-min=3.9km az=104.7*

JMA **04** *08:33:21.2±0.1,37.18N×141.38E,h48km±1km,M4.7 Broadband fault plane solution: P waves. NP1: φ₀11.00000°,δ65.00000°,λ83.00000°. NP2:φ₀206.00000°, δ26.00000°,λ104.00000°. Principal axes: T Plg69.0000°, Azm268.0000°; N Plg6.0000°, Azm14.0000°; P Plg20.0000°, Azm106.0000°;*

JMA Felt IV J1.

IDC **04** *08:33:21.8±0.3,37.19N×141.32E,h46km±2km,mb4.5/38, mb1 4.6/46,mb1mx4.5/61,mbtmp4.7/46,MS3.7/29, Ms1 3.7/29,ms1mx3.7/37 Error ellipse: s-maj=9.1km s-min=7.3km az=119.0*

ISCJB **04** *08:33:21.1±0.3,37.22N±0.02×141.31E±0.02,h51km±2km, mb4.9/251,MS4.0/37,Error ellipse: s-maj=3.8km s-min=2.7km az=145.3*

NEIC **04** *08:33:22.2±1.4,37.21N×141.41E,h48km±4km,mb4.9/186, Error ellipse: s-maj=10.6km s-min=2.5km az=62.0*

NEIC Recorded [4 JMA] in Fukushima.

ISC 04 08:33:21.4±0.3,37.20N±0.03×141.43E±0.04,h45km±2km, h45km;pP-P,n811,σ1⁰09/764,mb4.9/255,MS4.0/37, 48C-21D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.47	291	⇓P	Pn	08 33 31.5	-0.6
JFK				S	Sn	08 33 38.5	-1.1
ONAJ	Iwakimizuishiy	0.51	259	⇓P	Pn	08 33 32.0	-0.6
ONAJ				S	Sn	08 33 39.4	-1.1
JFFD	Fukushimafurud	0.70	261	⇓P	Pn	08 33 34.4	-0.6
JFFD				S	Sn	08 33 43.5	-1.3
JMM	Marumori	0.83	323	⇓P	Pn	08 33 36.5	-0.3
JMM				S	Sn	08 33 47.3	-0.7
JHO	Hitachi	0.90	230	⇓P	Pn	08 33 36.5	-1.2
JHO				S	Sn	08 33 47.5	-2.1
JFT	Otama	0.93	291	⇓P	Pn	08 33 38.3	+0.3
JFT				S	Sn	08 33 50.4	+0.2
JIO	Ouri	1.25	357	⇓P	Pn	08 33 42.3	-0.2
JIO				S	Sn	08 33 57.0	-1.2
JOU	Okura	1.31	333	⇓P	Pn	08 33 43.4	+0.1
JOU				S	Sn	08 34 00.4	+0.7
JFY	Yanaizu	1.39	279	P	Pn	08 33 44.4	+0.1
JYS	Shiratake	1.48	314	⇓P	Pn	08 33 46.1	+0.4
JYS				eS	Sn	08 34 05.4	+1.5
I30JP	ISUMI INFRASON	2.09	206	*i*		08 42 10.0	
	baz=16,slow=325,SNR=2.2						
MJAR	Matsushiro Arr	2.66	257	P	Pn	08 34 02.5	+0.7
	29nm,0.3s,baz=78,slow=16,SNR=481						
MJAR				S	Sn	08 34 35.2	+2.3
	19nm,0.3s,baz=77,slow=31,SNR=4.8						
MJAR				LR	LR	08 35 21.6	
	comp=Z,3μm,18.9s,baz=75,slow=47						
MAJO	Matsushiro	2.66	257	*e*Pn	Pn	08 34 02.9	+1.1
MAJO				*e*Sn	Sn	08 34 35.2	+2.3
MAJO	Matsushiro	2.66	257	*d i*P	Pn	08 34 02.9	+1.1
MAT	Matsushiro	2.66	257	P	Pn	08 34 02.9	+1.1
MAT				S	Sn	08 34 37.4	+4.5
MJB9	Matsu-Tunnel	2.66	257	*e*Pn	Pn	08 34 02.9	+1.1
INU	Inuyama	4.01	244	*e*Pn	Pn	08 34 21.5	+1.1
JHJ2	Mitsune	4.29	198	*e*Pn	Pn	08 34 24.3	+0.2
JHJ2				*e*Sn	Sn	08 35 13.3	+0.5
JHJ	Hachijo jima 2	4.29	199	P	Pn	08 34 24.1	0.0
	157nm,0.3s,baz=331,slow=13,SNR=44						
JHJ				S	Sn	08 35 10.7	-2.2
	103nm,0.3s,baz=52,slow=22,SNR=3.6						
JHJ				LR	LR	08 36 20.6	
	comp=Z,560nm,21.3s,baz=46,slow=42						
ERM	Erimo	4.99	15	*e*Pn	Pn	08 34 33.1	-0.6
ERM				*e*Sn	Sn	08 35 30.8	+0.6
ERM	Erimo	4.99	15	*e*P	Pn	08 34 33.1	-0.6
ERM				*e*		08 35 30.8	
ASAJ	Asahikawa	6.97	7	P	Pn	08 35 00.1	-0.7
	20nm,0.3s,baz=231,slow=10,SNR=64						
ASAJ				S	Sn	08 36 18.2	-0.6
	7.0nm,0.3s,baz=225,slow=20,SNR=3.2						
GLVR	Golovnino	7.24	24	*e*P	Pn	08 35 03.3	-1.2
GLVR				*e*S	Sn	08 36 20.7	-4.7
GLVR				pmax	pmax		
	comp=Z,181nm,0.6s						
GRPR	Tuman	7.55	25	*d i*P	Pn	08 35 06.5	-2.3
GRPR				*e*S	Sn	08 36 26.3	-6.7
GRPR				pmax	pmax		
	comp=Z,139nm,0.4s						
LAGR	Lagunnoye	7.61	24	*e*P	Pn	08 35 08.2	-1.4
LAGR				*e*S	Sn	08 36 29.3	-5.2
LAGR				pmax	pmax		
	comp=Z,285nm,0.4s						
YUK	Yuzh-Kuril'sk	7.62	25⇑	*e*P	Pn	08 35 09.2	-0.5
TEY	Ternei	8.63	337⇓	*e*P	Pn	08 35 26.4	+2.8
TEY				pmax	pmax		
	comp=N,20nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,20nm,0.6s						
KUR	Kuril'sk	9.38	29	P	Pn	08 35 31.4	-2.4
KUR				*i* S	Sn	08 37 13.2	-4.6
KUR				pmax	pmax		
	comp=Z,67nm,0.4s						
KUR				smax	smax		
	comp=N,176nm,0.4s						
KUR				smax	smax		
	comp=E,151nm,0.7s						
VLA	Vladivostok	9.39	312⇑	*e*P	Pn	08 35 34.7	+0.6
JNU	Nakatsue	9.54	248	P	Pn	08 35 37.2	+0.9
	comp=E,1.4nm,0.3s,baz=79,slow=7.9,SNR=13						
JNU				LR	LR	08 39 43.2	
	comp=E,416nm,20.5s,baz=64,slow=40						
JNU	Nakatsue	9.54	248	*e*Pn	Pn	08 35 37.4	+1.1
YSS	Yuzh-Sakhalins	9.80	5	*e*Pn	Pn	08 35 39.8	+0.2
YSS	Yuzh-Sakhalins	9.80	5⇑	*e*P	Pn	08 35 40.1	+0.5
YSS				*e*S	Sn	08 37 27.0	-1.2
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
USA0B	Ussuriysk Arra	10.01	317	*e*Pn	Pn	08 35 43.4	+0.9
USRK	Ussuriysk Ar.	10.01	317	P	Pn	08 35 43.6	+1.1
	comp=Z,2.4nm,0.3s,baz=130,slow=13,SNR=81						
USRK				LR	LR	08 39 20.2	
	comp=Z,728nm,19.7s,baz=123,slow=36						
KSRS	Korea Array	10.76	275	P	Pn	08 35 53.8	+1.0
	comp=Z,1.4nm,0.3s,baz=89,slow=13,SNR=49						
KSRS				LR	LR	08 39 46.4	
	comp=Z,635nm,19.8s,baz=94,slow=36						
MDJ	Mudanjiang	11.61	313	P	Pn	08 36 09.4	+4.9
MDJ				S	Sn	08 38 11.3	-1.4
MDJ				pmax	pmax		
	comp=Z,44nm,0.9s						
MDJ	Mudanjiang	11.61	313	*e*Pn	Pn	08 36 07.8	+3.4
TYV	Tymovskoe	13.69	3	*e*P	Pn	08 36 31.0	-1.7
TYV				pmax	pmax		
	comp=Z,11nm,0.6s						
CN2	Changchun	13.82	303	*e*P	Pn	08 36 35.4	+0.8
CN2				*e*sP	P	08 36 47.6	+5.7
CN2				*e*S	Sn	08 39 08.4	+1.9
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
KLR	Kul'dur	13.93	333	P	Pn	08 36 35.0	-0.9
	comp=Z,1.0nm,0.3s,baz=158,slow=14,SNR=13						
KLR				LR	LR	08 41 46.3	
	comp=Z,309nm,20.2s,baz=164,slow=36						
KLR	Kul'dur	13.93	333	*c*eP	Pn	08 36 36.0	0.0
DL2	Dalian	15.69	282	P	Pn	08 37 00.4	+1.1
DL2				S	Sn	08 39 55.3	+3.3
DL2				pmax	pmax		
	comp=Z,29nm,0.8s						
DL2				pmax	pmax		
	comp=Z,210nm,5.4s						
DL2				LR	LR		
	comp=Z,230nm,15.6s						
DL2				LR	LR		
	comp=Z,370nm,19.2s						
OKH	Okha	16.39	3	*de*P	P	08 37 20.0	+10

OKH MLR MLR
comp=Z,200nm,17.0s
ZEA Zeya 19.24 334 *e*P **P 08 37 41.5 -0.2**
ZEA pmax pmax
comp=Z,40nm,0.4s
NJ2 Nanjing 19.26 261 *e*P **P 08 37 42.0 -0.1**
NJ2 pmax pmax
comp=Z,23nm,0.5s
TIA Tai'an 19.50 274 P **P 08 37 43.4 -1.4**
TIA pmax pmax
comp=Z,7.0nm,0.8s
PEA0B Petropavlovsk- 19.54 30 *e*P **P 08 37 45.2 +0.2**
comp=Z,24nm,1.4s
PETK Petropavlovsk- 19.54 30 P **P 08 37 45.3 +0.2**
comp=Z,0.3nm,0.3s,baz=198,slow=9.9,SNR=8.7
PETK LR LR 08 44 56.6
comp=Z,84nm,21.4s,baz=223,slow=36
PEA1 Petropavlovsk- 19.54 30 *e*P **P 08 37 45.3 +0.2**
HIA Hailar 19.80 314 *e*P **P 08 37 46.6 -1.3**
comp=Z,13nm,0.8s
HIA Hailar 19.80 314 *e*P **P 08 37 46.6 -1.3**
HIA pmax pmax
comp=Z,13nm,0.8s
BJI Beijing 19.91 286⇑*e*P **P 08 37 49.4 +0.2**
BJI pP **pP 08 37 57.4 -2.6**
BJI sP **sP 08 38 00.8 -4.9**
BJI pmax pmax
comp=Z,23nm,0.9s
BJT Baijiatuau 19.92 286 *e*P **P 08 37 48.3 -1.0**
comp=Z,38nm,0.9s
BJT Baijiatuau 19.92 286 *e*P **P 08 37 48.3 -1.0**
BJT pmax pmax
comp=Z,38nm,0.9s
YHNB Yeheng 21.20 240 *e*P **P 08 38 00.8 -2.5**
comp=Z,56nm,1.3s
NACB Ninganchiao 21.38 238 *e*P **P 08 38 02.4 -2.7**
comp=Z,20nm,1.0s
YULB Yu-li 22.11 237 *e*P **P 08 38 09.4 -3.6**
comp=Z,14nm,1.0s
TPUB Ta-pu 22.62 238 *e*P **P 08 38 15.3 -3.2**
comp=Z,57nm,1.3s
MA2 Magadan 23.19 12 P **P 08 38 24.0 0.0**
comp=Z,23nm,0.7s,baz=197,slow=8.2,SNR=18
MA2 LR LR 08 47 07.8
comp=Z,98nm,21.4s,baz=142,slow=36
MA2 Magadan 23.19 12 *e*P **P 08 38 23.2 -0.8**
comp=Z,32nm,0.8s
MA2 Magadan 23.19 12*c i*P **P 08 38 24.4 +0.4**
MA2 pmax pmax
comp=Z,22nm,0.8s
WHN Wuhan 23.39 262 ⇑P **P 08 38 26.2 0.0**
WHN S **S 08 42 31.5 -4.5**
WHN pmax pmax
comp=Z,51nm,0.5s
WHN pmax pmax
comp=Z,290nm,3.7s
WHN LR LR
comp=Z,1μm,20.4s
WHN LR LR
comp=Z,670nm,18.5s
WHN LR LR
comp=Z,940nm,21.5s
HHC Hu-ho-hao-te 23.43 288 *e*P **P 08 38 25.7 -0.9**
HHC pmax pmax
comp=Z,24nm,0.7s
HHC pmax pmax
comp=Z,79nm,5.7s
GUMO Guam 23.71 172 LR LR 08 46 17.4
comp=Z,76nm,20.8s,baz=54,slow=33
YAK Yakutsk 25.91 347 *e*P **P 08 38 47.1 -1.8**
comp=Z,50nm,0.6s
YAK Yakutsk 25.91 347 *e*P **P 08 38 47.5 -1.4**
YAK *e**PP **sP 08 39 06.5 +0.4**
YAK *e*S **S 08 43 11.3 -4.4**
XAN Xi'an 26.54 273 P **P 08 38 54.2 -0.8**
XAN pP pP 08 39 07.0 +0.2
XAN pmax pmax
comp=Z,14nm,0.8s
XAN Xi'an 26.54 273 *e*P **P 08 38 53.9 -1.1**
comp=Z,36nm,0.5s
XAN Xi'an 26.54 273 *e*P **P 08 38 53.9 -1.1**
XAN pmax pmax
comp=Z,35nm,0.5s
ULN Ulaanbaatar 27.27 304 *e*P **P 08 39 00.7 -0.9**
comp=Z,16nm,0.9s
ULN Ulaanbaatar 27.27 304*c i*P **P 08 39 01.7 +0.1**
ULN pmax pmax
comp=Z,19nm,1.0s
ENH Enshi 27.36 265 *e*P **P 08 39 01.0 -1.3**
comp=Z,41nm,0.6s
BOD Bodaibo 27.40 328 *e*P **P 08 39 02.0 -0.4**
SONA0 Songino Array 27.70 304 *e*P **P 08 39 04.6 -0.8**
SONM Songino Array 27.70 304 P **P 08 39 04.6 -0.8**
comp=Z,14nm,0.6s,baz=103,slow=8.8,SNR=90
SONM pP **pP 08 39 17.5 +0.2**
comp=Z,6.3nm,0.6s,baz=100,slow=9.1,SNR=4.7
SONM LR LR 08 50 21.6
comp=Z,172nm,19.9s,baz=122,slow=37
H11N2 WAKE ISLAND Hy 28.22 121 T T 09 09 23.8
baz=314,slow=74,SNR=1070
H11N1 WAKE ISLAND Hy 28.23 121 T T 09 09 30.2
baz=314,slow=74,SNR=1441
H11N3 WAKE ISLAND Hy 28.24 121 T T 09 09 30.9
baz=314,slow=74,SNR=1659
H11S1 WAKE ISLAND Hy 28.94 123 T T 09 10 14.4
baz=316,slow=76,SNR=628
H11S3 WAKE ISLAND Hy 28.94 123 T T 09 10 14.6
baz=316,slow=76,SNR=544
H11S2 WAKE ISLAND Hy 28.96 123 T T 09 10 15.7
baz=316,slow=76,SNR=635
LZH Lanzhou 30.05 279 *e*P **P 08 39 26.5 +0.1**
LZH pP pP 08 39 38.1 -0.2
LZH sP sP 08 39 42.3 -1.4
LZH *e*PP **PnPn 08 40 24.4 -0.1**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,92nm,5.0s
LZH LR LR
comp=Z,250nm,12.7s
LZH LR LR
comp=Z,400nm,13.0s
LZH LR LR
comp=Z,460nm,16.2s
ZAK Zakamensk 30.18 308 *e*P P 08 39 22.3 -5.0
ZAK pmax pmax
comp=Z,10.0nm,1.0s
TLY Talaya 30.23 311 *e*P **P 08 39 27.2 -0.5**
comp=Z,12nm,0.7s
TLY Talaya 30.23 311 *e*P **P 08 39 27.2 -0.5**
TLY pmax pmax
comp=Z,12nm,0.7s
GYA Guiyang 31.26 260⇑*i*P **P 08 39 35.8 -1.3**
GYA pP pP 08 39 43.4 -5.6
GYA PP **PnPn 08 40 40.7 +0.4**
GYA S **S 08 44 39.6 -1.1**
GYA SS **SnSn 08 46 27.0 +0.7**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=Z,140nm,18.9s
GYA LR LR
comp=Z,180nm,17.9s
CD2 Chengdu 31.68 270 P **P 08 39 39.0 -1.7**
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 LR LR
comp=Z,320nm,14.8s
CD2 LR LR
comp=Z,250nm,15.8s
CD2 LR LR
comp=Z,380nm,20.1s
MOY Mondy 31.84 310 *e*P **P 08 39 42.1 +0.2**
MOY pmax pmax
comp=Z,10.0nm,1.2s
GTA Gaotai 32.52 287 *e*P **P 08 39 47.4 -0.7**
GTA pP pP 08 39 57.1 -3.0
GTA sP sP 08 40 01.0 -4.4
GTA PcP **PcP 08 42 35.1 +1.1**
GTA S **S 08 45 00.8 +0.5**
GTA sS sS 08 45 17.3 -3.0
GTA pmax pmax
comp=Z,5.0nm,0.6s
GTA pmax pmax
comp=Z,61nm,7.6s
GTA LR LR
comp=Z,110nm,15.8s
GTA LR LR
comp=Z,140nm,17.9s
ADK Adak 32.77 50 *e*P **P 08 39 50.0 +0.1**
comp=Z,18nm,1.3s
ADK Adak 32.77 50 *e*P **P 08 39 50.0 +0.1**
ADK pmax pmax
comp=Z,18nm,1.3s
QIZ Qiongzhong 33.01 245 *e*P **P 08 39 52.5 +0.2**
comp=Z,10nm,0.8s
DAV Davao City (W) 33.28 210 LR LR 08 52 22.6
comp=Z,67nm,20.6s,baz=22,slow=34
BILL Bilibino 33.87 16 *e*P **P 08 39 59.0 -0.4**
comp=Z,7.0nm,1.1s
BILL Bilibino 33.87 16 *i*P **P 08 39 58.9 -0.4**
BILL *i* 08 41 08.9
BILL *i* 08 42 37.8
BILL pmax pmax
comp=Z,5.0nm,1.0s
BILL MLR MLR
comp=Z,237nm,23.0s
KMI Kunming 35.00 261 P **P 08 40 10.1 +0.3**
KMI pP pP 08 40 20.6 -1.3
KMI sP sP 08 40 24.8 -2.4
KMI pmax pmax
comp=Z,70nm,0.7s
KMI pmax pmax
comp=Z,71nm,3.9s
KMI LR LR
comp=Z,180nm,12.8s
KMI LR LR
comp=Z,270nm,16.9s
KMI LR LR
comp=Z,290nm,13.9s
KMI Kunming 35.00 261 *e*P **P 08 40 08.7 -1.1**
comp=Z,60nm,0.9s
KMI Kunming 35.00 261 *e*P **P 08 40 08.7 -1.1**
KMI pmax pmax
comp=Z,60nm,0.9s
TIXI Tiksi 35.13 353 P **P 08 40 09.2 -1.0**
comp=Z,3.4nm,0.4s,baz=147,slow=4.5,SNR=7.6
TIXI Tiksi 35.13 353 *e*P **P 08 40 09.2 -1.0**
comp=Z,5.8nm,0.5s
TIXI Tiksi 35.13 353⇑*i*P **P 08 40 09.4 -0.7**
TIXI pmax pmax
comp=Z,2.0nm,0.6s
SLVN Son La 36.08 255 *e*P **P 08 40 18.3 -0.7**
comp=Z,26nm,1.5s
PANO Nakornpanom 38.04 248 P **P 08 40 36.3 +0.8**
comp=Z,0.5nm,1.1s
SKNT Sakolnakorn 38.62 249 P **P 08 40 40.8 +0.4**
comp=Z,36nm,1.0s
DLV T Lat 38.78 238 *e*P **P 08 40 41.7 -0.3**
comp=Z,38nm,0.9s
KHON Khomkaen 39.88 249 P **P 08 40 51.4 +0.5**
comp=Z,64μm,0.8s
DGZ Jazzator, Alta 40.30 306*c i*P **P 08 40 55.3 +1.0**
DGZ pmax pmax
comp=Z,68nm,0.9s
PHRA Phrae 40.53 254 P **P 08 40 56.7 +0.3**
comp=Z,2.7nm,1.1s
MRSI Marisa 40.74 211 P P 08 41 03.1 +5.1
CHAI Chaiyaphum 40.77 249 P **P 08 40 58.2 -0.1**
comp=Z,49μm,0.8s,comp=Z,585μm
WMQ Urumqi 40.77 297 *e*P **P 08 40 59.2 +1.0**
WMQ pP pP 08 41 03.8 -6.6
WMQ sP sP 08 41 09.5 -6.2
WMQ pmax pmax
comp=Z,54nm,0.9s
WMQ pmax pmax
comp=Z,45nm,3.6s
WMQ LR LR
comp=Z,400nm,20.7s
WMQ LR LR
comp=Z,250nm,21.9s
WMQ LR LR
comp=Z,350nm,27.9s
WMQ Urumqi 40.77 297 *e*P **P 08 40 57.9 -0.3**
comp=Z,38nm,0.9s
WMQ Urumqi 40.77 297 *e*P **P 08 40 57.9 -0.3**
WMQ pmax pmax
comp=Z,38nm,0.9s
FAKI Fak Fak 40.82 194 *e*P **P 08 40 58.1 -0.5**
comp=Z,18nm,0.9s
MOKO MOKOCHONG 40.97 269 *e*P **P 08 40 59.8 -0.2**
LAMP Lampang 40.98 255 P **P 08 41 01.4 +1.4**
comp=Z,31μm,0.7s
PBKT Sadao Pong 41.12 251 P **P 08 41 01.4 +0.2**
comp=Z,13nm,0.8s
CMMT Chiang Mai 41.34 256 P **P 08 41 03.9 +0.9**
comp=Z,4.7nm,0.9s
CHTO Chiang Mai 41.34 256 *e*P **P 08 41 02.3 -0.7**
comp=Z,28nm,1.6s
CHTO Chiang Mai 41.34 256 *e*P **P 08 41 02.3 -0.7**
CHTO pmax pmax
comp=Z,27nm,1.6s
CM31 Chiang Mai Arr 41.55 255 *e*P **P 08 41 05.1 +0.4**
comp=Z,34nm,1.4s
CMAR Chiang Mai Arr 41.55 255 P **P 08 41 04.3 -0.4**
comp=Z,6.2nm,0.6s,baz=47,slow=5.8,SNR=27
CMAR PcP **PcP 08 43 02.8 +1.3**
comp=Z,1.5nm,0.4s,baz=49,slow=3.0,SNR=5.9
CMAR LR LR 09 00 16.5
comp=Z,156nm,18.1s,baz=86,slow=39
KOHI KOHIMA 41.57 268 *e*P **P 08 41 01.8 -3.3**
ZAA1 Zalesovo Array 41.81 312 *e*P **P 08 41 06.1 -0.3**
ZALV Zalesovo Beam 41.81 312 P **P 08 41 06.1 -0.3**
comp=Z,39nm,0.8s,baz=91,slow=6.8,SNR=82
ZALV PcP **PcP 08 43 00.6 -1.2**
comp=Z,5.1nm,0.7s,baz=72,slow=4.8,SNR=3.7
ZALV LR LR 08 59 10.0
comp=Z,166nm,18.5s,baz=70,slow=37
ZALV Zalesovo Beam 41.81 312 *i*P **P 08 41 06.6 +0.2**
ZALV pmax pmax
comp=Z,39nm,0.8s
IMP Imphal 42.12 267 *e*P **P 08 41 07.8 -1.6**
IMP IAmb IAmb 08 41 08.2
comp=Z,14nm,0.2s
LSA Lhasa 42.20 275 *e*P **P 08 41 10.7 +0.1**
comp=Z,13nm,0.8s
LSA Lhasa 42.20 275 P **P 08 41 12.1 +1.6**
LSA Lhasa 42.20 275 *e*P **P 08 41 10.7 +0.1**
LSA pmax pmax
comp=Z,13nm,0.8s
TEZP TEZPUR 42.21 270 *e*P **P 08 41 09.5 -0.5**
NVS Novosibirsk 42.73 314⇑*i*P **P 08 41 14.6 +0.7**
NVS pmax pmax
comp=Z,28nm,0.6s
NVS pmax pmax
comp=N,3.0nm,0.4s
NVS pmax pmax
comp=E,18nm,0.5s
UMPA Umpang Tak 42.95 253 P **P 08 41 18.5 +2.4**
comp=E,40μm,0.7s
NRIK Noril'sk 43.12 335 P **P 08 41 16.3 -0.6**
comp=E,2.6nm,0.3s,baz=107,slow=8.7,SNR=9.0
NRIK LR LR 09 00 19.7
comp=E,73nm,18.1s,baz=62,slow=38
GUWA GUWAHATI 43.28 270 *e*P **P 08 41 18.1 -0.6**
GUWA IAmb IAmb 08 41 18.4
comp=Z,19nm,0.5s
RDOG Red Dog Mine 43.35 27 *e*P **P 08 41 19.5 +0.7**
comp=Z,27nm,1.3s
SHL Shillong 43.42 269 *e*P **P 08 41 19.0 -1.1**
comp=Z,19nm,1.0s
SHL Shillong 43.42 269 *e*P **P 08 41 19.0 -1.1**
SHL pmax pmax
comp=Z,19nm,1.0s
SHL Shillong 43.42 269 *e*P **P 08 41 19.2 -0.9**
SHL IAmb IAmb 08 41 19.5
comp=Z,10nm,0.3s
SBUM Sibu 43.79 225 *e*P **P 08 41 22.8 -0.1**
comp=Z,8.5nm,1.4s
SAIH SAIHA 44.04 265 *e*P **P 08 41 24.1 -0.9**
MK31 Makanchi Array 44.04 302 *i*P **P 08 41 24.6 0.0**
MK31 pmax pmax
comp=Z,17nm,0.7s
MK32 Makanchi Array 44.04 302 *e*P **P 08 41 24.4 -0.3**
MKAR Makanchi Array 44.04 302 P **P 08 41 24.4 -0.3**
comp=Z,15nm,0.7s,baz=88,slow=9.9,SNR=140
MKAR LR LR 09 00 52.6
comp=Z,102nm,18.2s,baz=98,slow=38
MKAR Makanchi Array 44.04 302 *i*P **P 08 41 24.6 0.0**
MKAR pmax pmax
comp=Z,16nm,0.7s
MAKZ Makanchi 44.25 302 *e*P **P 08 41 26.1 -0.2**
comp=Z,15nm,0.8s
MAKZ Makanchi 44.25 302 P **P 08 41 26.2 -0.1**
MAKZ pmax pmax
comp=Z,13nm,0.7s
PHET Kaeng Krachan 44.43 248 P **P 08 41 28.9 +0.9**
comp=Z,109μm,0.7s
AGT Agartala 44.73 267 *e*P **P 08 41 31.4 +1.0**
SVW2 Sparrevohn 45.38 37 *e*P **P 08 41 35.9 +0.8**
comp=Z,9.8nm,0.8s
KSM Kuching 45.67 226 *e*P **P 08 41 37.8 -0.1**
comp=Z,18nm,0.9s
KURK Kurchatov 45.84 308 *e*P **P 08 41 38.5 -0.3**
comp=Z,68nm,0.9s
KURK Kurchatov 45.84 308 *e*P **P 08 41 38.5 -0.3**
KURK pmax pmax
comp=Z,67nm,0.9s
KURBB Kurchatov Arra 45.91 308 P **P 08 41 39.1 -0.2**
comp=Z,43nm,0.7s,baz=84,slow=8.1,SNR=416
KURBB pP **pP 08 41 51.4 -0.4**
comp=Z,13nm,0.5s,baz=82,slow=7.6,SNR=5.0
ODAN Odare 46.41 273 *e*P **P 08 41 44.1 +0.2**
comp=Z,26nm,0.4s
KAPI Kappang 46.61 210 P **P 08 41 45.1 0.0**
comp=Z,11nm,0.3s,baz=33,slow=9.0,SNR=9.1
KAPI Kappang 46.61 210 *e*P **P 08 41 44.7 -0.5**
comp=Z,27nm,1.1s
KAPI Kappang 46.61 210 *e*P **P 08 41 44.7 -0.5**
KAPI pmax pmax
comp=Z,27nm,1.1s
OHAK Old Harbor 46.63 43 *e*P **P 08 41 45.1 +0.2**
comp=Z,74nm,1.6s
PDGK Podgornoye 46.71 298 P **P 08 41 45.7 -0.2**
PDGK pmax pmax
comp=Z,25nm,1.2s
RSO Redoubt South 46.77 38 *e*P **P 08 41 47.2 +0.9**
KDAK Kodiak Island 46.97 42 *e*P **P 08 41 48.0 +0.4**
comp=Z,38nm,0.8s
KDAK Kodiak Island 46.97 42 *e*P **P 08 41 48.0 +0.4**
KDAK pmax pmax
comp=Z,38nm,0.8s
RAMN Ramite 47.00 274 *e*P **P 08 41 48.7 +0.1**
comp=Z,116nm,0.7s
JIRN Jiri 47.01 275 *e*P **P 08 41 49.3 +0.5**
comp=Z,39nm,0.3s
GUN Gumba 47.15 276 *e*P **P 08 41 50.0 +0.2**
comp=Z,104nm,0.5s
PKI Pulchoki 47.67 275 *e*P **P 08 41 53.7 -0.2**
comp=Z,34nm,0.6s
KKN Kakani 47.68 276 *e*P **P 08 41 54.1 +0.3**
comp=Z,71nm,0.7s
PKIN Phulchoki 47.68 275 *e*P **P 08 41 53.5 -0.4**
comp=Z,22nm,0.6s
MLY Manley 47.70 32 *e*P **P 08 41 53.3 0.0**
comp=Z,9.3nm,0.9s
TRTT Trang 47.78 243 P **P 08 41 56.4 +2.0**
comp=Z,26nm,1.0s
TOLK Toolik Lake Re 48.32 27 *e*P **P 08 41 59.0 +1.1**
comp=Z,7.2nm,0.8s
TOLK Toolik Lake Re 48.32 27 P **P 08 41 59.4 +1.5**
baz=266,SNR=7.0
TARG Taragay, Kyrgy 48.34 296 *e*P **P 08 41 58.9 0.0**
comp=Z,25nm,0.7s
PMR Palmer 48.49 37 *e*P **P 08 41 60.0 +0.7**
PMR *e*pP **pP 08 42 13.2 +1.5**
PMR Palmer 48.49 37 *e*P **P 08 42 00.0 +0.7**
PMR *e**PP **pP 08 42 13.2 +1.5**
MCK McKinley 48.49 34 *e*P **P 08 42 00.0 +0.7**
MCK *e*pP **pP 08 42 13.3 +1.6**
MCK McKinley 48.49 34 *e*P **P 08 42 00.0 +0.7**
MCK *e**PP **pP 08 42 13.4 +1.6**
GHO Glory Hole Cre 48.58 36 *e*P **P 08 42 01.1 +1.0**
comp=Z,20nm,0.8s
DANN Dangsing 48.64 277 *e*P **P 08 42 01.7 +0.4**
comp=Z,259nm,0.7s
KNK Knik Glacier 48.82 37 *e*P **P 08 42 02.7 +0.8**
comp=Z,11nm,0.7s
WRH Wood River Hil 48.84 33 *e*P **P 08 42 03.1 +1.1**
comp=Z,5.3nm,0.7s
TCOL CIGO, UAF Yank 48.93 32 P **P 08 42 03.7 +1.1**
baz=271
COLA College 48.93 32 *e*P **P 08 42 03.2 +0.6**
comp=Z,8.0nm,0.7s
COLA College 48.93 32 *e*P **P 08 42 03.2 +0.6**
COLA pmax pmax
comp=Z,8.0nm,0.7s
CCB Clear Creek Bu 48.96 33 *e*P **P 08 42 04.0 +1.2**
comp=Z,3.7nm,0.5s
KOLN Koldanda 49.02 277 *e*P **P 08 42 04.3 +0.2**
comp=Z,50nm,0.6s
POKR Poker Plat Res 49.10 32 P **P 08 42 05.8 +1.8**
baz=272
DHY Denali Highway 49.22 35 *e*P **P 08 42 05.6 +0.5**
comp=Z,6.1nm,1.0s
IPM Ipoh 49.23 239 *e*P **P 08 42 05.1 -0.6**
comp=Z,21nm,1.0s
DGPR DIGLIPUR 49.33 254 *e*P **P 08 42 03.4 -2.9**
HDA Harding Lake 49.34 33 P **P 08 42 06.3 +0.5**
baz=273
ILAR Eielson Array 49.35 32 P **P 08 42 06.5 +0.7**
comp=Z,9.2nm,0.7s,baz=262,slow=5.6,SNR=113
ILAR pP **pP 08 42 19.4 +1.1**
comp=Z,9.2nm,0.8s,baz=263,slow=5.8,SNR=18
ILB Eielson Array 49.35 32 *e*P **P 08 42 06.2 +0.3**
ILB *e*pP **pP 08 42 19.6 +1.3**
PYUN Piuthan 49.36 277 *e*P **P 08 42 07.0 +0.3**
comp=Z,186nm,0.9s
BOOM Boomskoye usch 49.44 298 *e*P **P 08 42 07.0 -0.1**
comp=Z,14nm,0.8s
BOOM Boomskoye usch 49.44 298 *e*P **P 08 42 07.0 -0.1**
BOOM pmax pmax
comp=Z,14nm,0.8s
TKM2 Tokmak 2 49.56 298 P **P 08 42 08.5 +0.4**
SNR=24
TKM2 Tokmak 2 49.56 298 P **P 08 42 08.3 +0.2**
TKM2 pmax pmax
comp=Z,14nm,0.6s
PRP Porcupine Dome 49.89 31 *e*P **P 08 42 10.7 +0.6**
comp=Z,8.0nm,0.8s
FYU Fort Yukon 49.96 30 *e*P **P 08 42 11.9 +1.4**
comp=Z,10nm,0.9s
KZA Kyzart 50.06 297 P **P 08 42 13.3 +1.2**
SNR=14
KBK Karagaybulak 50.09 298 P **P 08 42 12.7 +0.6**
SNR=9.5
USP Ospenovka 50.23 299 P **P 08 42 13.1 +0.2**
SNR=7.0
OTUK Ortayu 50.34 306 P **P 08 42 12.9 -0.7**
OTUK pmax pmax
comp=Z,34nm,0.9s
KSH Kashi 50.35 294 P **P 08 42 17.9 +3.9**
KSH PcP **PcP 08 43 34.5 +2.4**
KSH S **S 08 49 28.3 +4.4**
KSH ScS **ScS 08 51 59.4 -1.9**
KSH SS **SS 08 53 00.0 +2.4**
KSH pmax pmax
comp=Z,31nm,1.1s
KSH pmax pmax
comp=Z,250nm,6.4s
KSH LR LR
comp=Z,1μm,16.0s
KSH LR LR
comp=Z,890nm,16.4s
KSH LR LR
comp=Z,630nm,18.3s
AAK Ala-Archa 50.42 298 P **P 08 42 14.6 +0.1**
comp=Z,4.7nm,0.5s,baz=95,slow=5.3,SNR=12
AAK Ala-Archa 50.42 298 *e*P **P 08 42 14.5 0.0**
comp=Z,7.8nm,0.9s
AAK Ala-Archa 50.42 298 *i*P **P 08 42 14.6 +0.1**
SNR=5.9
AAK Ala-Archa 50.42 298*c i*P **P 08 42 14.5 0.0**
AAK pmax pmax
comp=Z,8.0nm,1.0s
BVAR Borovoye Array 50.47 312 P **P 08 42 14.5 0.0**
comp=Z,12nm,0.6s,baz=74,slow=6.8,SNR=58
BVAR pP **pP 08 42 26.5 -0.6**
comp=Z,5.8nm,0.5s,baz=87,slow=8.3,SNR=5.8
BVAR PcP **PcP 08 43 32.2 +0.1**
comp=Z,5.8nm,0.7s,baz=72,slow=4.8,SNR=4.8
BRVK Borovoye 50.52 312 *e*P **P 08 42 14.8 -0.2**
comp=Z,25nm,0.8s
BRVK Borovoye 50.52 312 P **P 08 42 15.1 +0.2**
BRVK pmax pmax
comp=Z,25nm,0.9s
UCH Uchtor 50.53 298 P **P 08 42 16.7 +1.0**
SNR=7.7

DOT	**Dot Lake**	50.66	34	*e*P		**P**	**08 42 16.2 +0.3**
	comp=Z,7.1nm,0.6s						
SCRK	**Sand Creek**	50.66	33	*e*P		**P**	**08 42 16.8 +0.8**
	comp=Z,9.3nm,0.7s						
BWNR	**Bhubaneshwar**	50.89	267	*ex*		P	08 42 11.8 -6.3
COEN	**Coen**	50.91	178	*e*P		**P**	**08 42 19.0 +0.9**
	comp=Z,18nm,1.1s						
EKS2	**Erkin-Say**	50.92	298	P		**P**	**08 42 18.7 +0.5**
	SNR=6.6						
AML	**Almayashu**	51.14	298	P		**P**	**08 42 21.3 +1.1**
	SNR=18						
EGAK	**Eagle**	51.80	32	*e*P		**P**	**08 42 25.0 +0.7**
	comp=Z,5.1nm,0.6s						
PSI	**Prapat**	51.89	239	P		**P**	**08 42 25.6 -0.2**
	comp=Z,6.7nm,0.4s,baz=28,slow=14,SNR=4.6						
ARSB	**Arslanbob**	51.91	297	*e*P		**P**	**08 42 25.7 +0.1**
	comp=Z,31nm,1.0s						
DDI	**Dehra Dun**	52.27	282	*e*P		**P**	**08 42 28.9 +0.4**
SMLA	**Simla**	52.62	284	*e*P		**P**	**08 42 30.6 -0.3**
DAWY	**Dawson**	52.66	33	*e*P		**P**	**08 42 31.7 +1.0**
	comp=Z,3.3nm,0.8s						
DHRM	**DHARAMSHALA**	52.82	285	*ex*		P	08 42 26.7 -5.9
KK31	**Karatay Array**	53.05	300	*e*P		**P**	**08 42 33.5 -0.5**
	comp=Z,25nm,1.1s						
KK31	**Karatay Array**	53.05	300	*i* P		**P**	**08 42 33.9 -0.1**
KK31				pmax		pmax	
	comp=Z,18nm,1.0s						
EPYK	**Eagle Plains**	53.38	30	*e*P		**P**	**08 42 37.0 +1.0**
	comp=Z,32nm,0.7s						
EPYK	**Eagle Plains**	53.38	30	P		**P**	**08 42 37.8 +1.8**
	baz=280						
BTK	**Batken**	53.89	296	*e*P		**P**	**08 42 39.9 -0.3**
	comp=Z,12nm,1.0s						
BTK	**Batken**	53.89	296	*e*P		**P**	**08 42 39.9 -0.3**
BTK				pmax		pmax	
	comp=Z,12nm,1.0s						
GSI	**Gunungsitoli**	53.89	239	*e*P		**P**	**08 42 39.7 -0.7**
	comp=Z,64nm,0.7s						
HYT	**Haines Junctio**	54.16	37	*e*P		**P**	**08 42 43.2 +1.3**
	comp=Z,25nm,1.3s						
INK	**Inuvik**	54.24	27	P		**P**	**08 42 42.4 +0.2**
	comp=Z,4.4nm,0.5s,baz=274,slow=6.4,SNR=16						
INK	**Inuvik**	54.24	27	*e*P		**P**	**08 42 42.7 +0.5**
	comp=Z,8.1nm,0.6s						
INK	**Inuvik**	54.24	27	*e*P		**P**	**08 42 42.7 +0.5**
INK				pmax		pmax	
	comp=Z,8.0nm,0.6s						
NIL	**Nilore**	54.57	288	*e*P		**P**	**08 42 45.1 -0.1**
	comp=Z,30nm,0.6s						
NIL	**Nilore**	54.57	288	*e*P		**P**	**08 42 45.1 -0.1**
NIL				pmax		pmax	
	comp=Z,30nm,0.6s						
SVE	**Sverdlovsk**	55.03	319‖	*e*P		**P**	**08 42 48.5 +0.4**
SVE				pmax		pmax	
	comp=Z,51nm,1.0s						
SVE				MLR		MLR	
	comp=Z,215nm,17.0s						
WHY	**Whitehorse**	55.45	36	*e*P		**P**	**08 42 52.5 +1.2**
	comp=Z,7.3nm,0.8s						
NGP	**Nagpur**	55.84	272	*e*P		**P**	**08 42 53.6 -0.9**
ARU	**Arti**	56.24	318	P		**P**	**08 42 56.7 -0.2**
	comp=Z,7.9nm,0.3s,baz=73,slow=3.8,SNR=43						
ARU	**Arti**	56.24	318	*e*P		**P**	**08 42 56.5 -0.3**
	comp=Z,41nm,0.8s						
ARU	**Arti**	56.24	318	*d i*P		**P**	**08 42 56.8 0.0**
ARU							08 44 59.8
ARU				S		**S**	**08 50 46.5 +3.4**
ARU				SS		**SS**	**08 54 27.9 -1.7**
ARU				pmax		pmax	
	comp=Z,60nm,1.0s						
FITZ	**Fitzroy Crossi**	56.98	198	*e*P		**P**	**08 43 02.9 +0.6**
	comp=Z,26nm,1.5s						
WRAB	**Tennant Creek**	57.21	188	*e*P		**P**	**08 43 03.5 -0.6**
	comp=Z,20nm,1.3s						
WRAB	**Tennant Creek**	57.21	188	*e*P		**P**	**08 43 03.5 -0.6**
WRAB				pmax		pmax	
	comp=Z,20nm,1.3s						
KBL	**Kabul**	57.37	291	*e*P		**P**	**08 43 04.8 -0.6**
	comp=Z,28nm,1.0s						
KBL	**Kabul**	57.37	291	*e*P		**P**	**08 43 04.8 -0.6**
KBL				pmax		pmax	
	comp=Z,28nm,1.0s						
AB31	**Akbulak array**	57.84	310	*i* P		**P**	**08 43 07.7 -0.5**
AB31				pmax		pmax	
	comp=Z,18nm,0.6s						
ABKAR	**Akbulak array**	57.84	310	*e*P		**P**	**08 43 07.9 -0.4**
	comp=Z,28nm,0.6s						
DLBC	**Dease Lake**	58.49	38	*e*P		**P**	**08 43 14.1 +1.3**
	comp=Z,12nm,0.9s						
AKTO	**Aktyubinsk**	58.57	312	P		**P**	**08 43 13.1 -0.3**
	comp=Z,16nm,0.8s,baz=77,slow=8.0,SNR=28						
AKTO				LR		LR	09 09 37.6
	comp=Z,118nm,19.1s,baz=68,slow=37						
KIRV	**Kirov**	60.12	323	P		**P**	**08 43 23.9 +0.1**
	comp=Z,43nm,0.5s,baz=65,slow=3.1,SNR=20						
KIRV	**Kirov**	60.12	323	P		**P**	**08 43 24.0 +0.1**
PRGR	**Permogore**	60.63	327	*e*P		**P**	**08 43 25.4 -1.9**
PRGR				pmax		pmax	
	comp=Z,16nm,0.6s						
AS31	**Alice Springs**	60.95	188	*e*P		**P**	**08 43 29.8 -0.1**
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	60.95	188	P		**P**	**08 43 29.4 -0.5**
	comp=Z,3.6nm,0.8s,baz=11,slow=6.2,SNR=26						
ASAR				pP		**pP**	**08 43 42.5 -0.1**
	comp=Z,4.2nm,0.7s,baz=17,slow=7.8,SNR=13						
ASAR				LR		LR	09 08 11.2
	comp=Z,57nm,19.9s,slow=34						
PSAD1	**Pilbara Seismi**	61.79	203	*e*P		**P**	**08 43 36.0 +0.4**
	comp=Z,47nm,1.3s						
LVZ	**Lovozero**	61.96	336	*e*P		**P**	**08 43 36.6 +0.3**
	comp=Z,94nm,1.5s						
LVZ	**Lovozero**	61.96	336	*e*P		**P**	**08 43 36.6 +0.3**
LVZ				pmax		pmax	
	comp=Z,94nm,1.5s						
BHJ	**Bhuj**	62.22	279	*e*P		**P**	**08 43 39.5 +0.8**
RES	**Resolute Bay**	62.44	14	P		**P**	**08 43 39.5 +0.2**
	comp=Z,4.1nm,0.6s,baz=299,slow=3.5,SNR=18						
RES				pP		**pP**	**08 43 53.1 +1.0**
	comp=Z,6.7nm,0.7s,baz=317,slow=6.2,SNR=6.8						
RES	**Resolute Bay**	62.44	14	*e*P		**P**	**08 43 39.7 +0.4**
	comp=Z,7.3nm,0.7s						
RES	**Resolute Bay**	62.44	14	*e*P		**P**	**08 43 39.7 +0.4**
RES				pmax		pmax	
	comp=Z,7.0nm,0.7s						
TMCR	**Tamitsa**	62.61	331	*e*P		**P**	**08 43 39.8 -0.7**
EIDS	**Eidsvold**	62.89	170	*e*P		**P**	**08 43 43.6 +0.7**
	comp=Z,31nm,1.6s						
GOA	**Goa**	63.05	269	*e*P		**P**	**08 43 44.1 -0.1**
KLMR	**Klimovskoe**	63.62	328	*e*P		**P**	**08 43 45.8 -1.5**
KLMR				*e*			08 46 06.3
KLMR				pmax		pmax	
	comp=Z,14nm,0.7s						
YKA	**Yellowknife Ar**	63.66	30	P		**P**	**08 43 47.8 +0.3**
	comp=Z,2.3nm,0.7s,baz=303,slow=6.7,SNR=24						
YKA				pP		**pP**	**08 44 01.6 +1.2**
	comp=Z,4.5nm,0.6s,baz=302,slow=6.5,SNR=24						
YKB5	**Yellowknife Ar**	63.66	30	*e*P		**P**	**08 43 47.9 +0.3**
GEYT	**Alibeck**	63.76	299	P		**P**	**08 43 48.9 +0.1**
	comp=Z,14nm,0.9s,baz=48,slow=2.2,SNR=19						
GYA0B	**ALIBECK ARRAY**	63.76	299	*e*P		**P**	**08 43 48.9 +0.1**
	comp=Z,14nm,0.8s						
ARCES	**ARCESS Array B**	63.85	339	P		**P**	**08 43 49.3 +0.5**
	comp=Z,2.9nm,0.5s,baz=57,slow=8.1,SNR=20						
ARCES				LR		LR	09 14 01.6
	comp=Z,95nm,20.0s,baz=94,slow=38						
DAG	**Danmarks Havn**	65.61	355	*i* P		**P**	**08 43 59.8 -0.3**
DAG				*i*			08 44 12.8
DAG				pmax		pmax	
	comp=Z,5.0nm,0.8s						
DAG	**Danmarks Havn**	65.61	355	*i* P		**P**	**08 43 59.8 -0.3**
	comp=Z,6.5nm,0.8s						
DAG				*i*			08 44 12.8
LLLB	**Lillooet**	66.13	44	*e*P		**P**	**08 44 05.4 +1.5**
LLLB				*e*pP		**pP**	**08 44 18.5 +1.7**
D03D	**Eldon**	66.98	47	P		**P**	**08 44 11.4 +2.1**
	baz=300						
MOS	**Moscow**	67.12	323	*e*P		P	08 44 16.6 +6.5
B05A	**Bryant**	67.19	46	pP		pP	08 44 25.0 +1.4
	baz=301						
VRH	**Novokhopyorsk**	67.46	318	*e*P		**P**	**08 44 10.9 -1.4**
VRH				pmax		pmax	
	comp=Z,30nm,0.6s						
E04D	**Cinebar**	67.79	48	P		**P**	**08 44 16.9 +2.4**
	baz=301						
OBN	**Obninsk**	67.97	323	*i* P		**P**	**08 44 13.8 -1.6**
OBN				*i*			08 44 23.8
OBN				*i*			08 44 42.3
OBN				*i*			08 46 45.8
OBN				pmax		pmax	
	comp=Z,11nm,0.9s						
OBN				MLR		MLR	
	comp=Z,94nm,17.0s						
LPSR	**Galich'ya Gora**	68.18	320	*e*P		**P**	**08 44 15.8 -1.0**
LPSR				pmax		pmax	
	comp=Z,20nm,0.7s						
FIA0	**FINESS Array S**	68.67	332	*e*P		**P**	**08 44 19.6 -0.1**
FIA0	**FINESS Array S**	68.67	332	*e*P		**P**	**08 44 19.6 -0.1**
FINES	**FINESS Array B**	68.67	332	P		**P**	**08 44 19.6 -0.1**
	comp=Z,9.7nm,0.7s,baz=57,slow=7.0,SNR=33						
FINES				pP		**pP**	**08 44 32.4 -0.3**
	comp=Z,19nm,0.9s,baz=52,slow=7.5,SNR=11						
FINES				LR		LR	09 16 49.9
	comp=Z,125nm,18.8s,baz=56,slow=38						
FINES	**FINESS Array B**	68.67	332	*i* P		**P**	**08 44 19.8 +0.1**
FINES				pmax		pmax	
	comp=Z,10.0nm,0.7s						
STKA	**Stephens Creek**	68.72	180	P		**P**	**08 44 20.1 -0.1**
	comp=Z,6.8nm,0.7s,baz=340,slow=6.8,SNR=25						
STKA				pP		**pP**	**08 44 34.3 +1.1**
	comp=Z,4.8nm,0.7s,baz=300,slow=7.2,SNR=5.5						
STKA	**Stephens Creek**	68.72	180	*e*P		**P**	**08 44 20.6 +0.4**
	comp=Z,1.6nm,0.7s						
STKA	**Stephens Creek**	68.72	180	*e*P		**P**	**08 44 20.7 +0.4**
STKA				pmax		pmax	
	comp=Z,2.0nm,0.7s						
H04D	**Lebanon**	68.74	50	pP		pP	08 44 35.3 +1.8
	baz=302						
FORT	**Forrest**	68.77	192	*e*P		**P**	**08 44 20.8 +0.2**
	comp=Z,37nm,0.6s						
I03D	**Drain, OR**	68.80	51	pP		pP	08 44 35.8 +2.0
	baz=302						
VSR	**Storozhevoye**	68.81	319	*e*P		**P**	**08 44 19.8 -1.0**
VSR				pmax		pmax	
	comp=Z,10.0nm,0.5s						
VORD	**Divnogorie**	68.89	318	*e*P		**P**	**08 44 19.3 -1.9**
VORD				pmax		pmax	
	comp=Z,9.0nm,0.9s						
AKT	**Akhty**	68.99	307	*e*P		**P**	**08 44 21.8 -0.4**
AKT				*e*			08 44 45.6
AKT				pmax		pmax	
	comp=Z,23nm,1.0s						
H04A	**Detroit Lake**	68.99	49	*e*P		**P**	**08 44 22.4 +0.3**
	comp=Z,13nm,0.8s						
G05D	**Wamic, OR**	69.22	49	P		**P**	**08 44 24.9 +1.4**
	baz=302						
I04A	**Tendick Farm,**	69.32	50	P		**P**	**08 44 24.9 +0.7**
	baz=302						
L02E	**Cave Junction**	69.44	52	P		**P**	**08 44 26.1 +1.1**
	baz=302						
C09A	**Chrisman Ranch**	69.61	45	*e*P		**P**	**08 44 27.2 +1.4**
	comp=Z,7.7nm,0.7s						
I05D	**Terrebonne, OR**	69.69	49	P		**P**	**08 44 27.6 +1.2**
	baz=302						
J04D	**Umpqua Nationa**	69.80	51	P		**P**	**08 44 28.2 +0.9**
	baz=302						
NEW	**Newport**	70.00	44	P		**P**	**08 44 28.0 -0.3**
	comp=Z,1.3nm,0.5s,baz=315,slow=7.1,SNR=3.8						
NEW				pP		**pP**	**08 44 42.5 +1.3**
	comp=Z,5.2nm,0.7s,baz=288,slow=4.6,SNR=7.6						
NEW	**Newport**	70.00	44	*e*P		**P**	**08 44 28.8 +0.5**
	comp=Z,5.9nm,0.8s						
NEW	**Newport**	70.00	44	*e*P		**P**	**08 44 28.8 +0.5**
NEW				pmax		pmax	
	comp=Z,6.0nm,0.8s						
NEW	**Newport**	70.00	44	P		**P**	**08 44 29.4 +1.2**
	baz=304						
PINE	**Pine Mountain**	70.22	50	*e*P		**P**	**08 44 31.0 +1.1**
	comp=Z,30nm,0.8s						
L04D	**Klamath Falls**	70.23	52	P		**P**	**08 44 31.3 +1.4**
	baz=303						
YBH	**Yreka Blue Hor**	70.23	52	P		**P**	**08 44 30.4 +0.5**
	comp=Z,0.9nm,0.7s,baz=286,slow=15,SNR=4.0						
YBH				pP		**pP**	**08 44 43.8 +1.0**
	comp=Z,3.4nm,0.8s,baz=37,slow=5.1,SNR=3.6						
VSU	**Vasula**	70.32	330	*de*P		**P**	**08 44 30.2 +0.3**
VSU				pmax		pmax	
	comp=Z,48nm,1.3s						
J05D	**Fort Rock, OR**	70.32	50	P		**P**	**08 44 32.3 +1.9**
	baz=303						
M02C	**Callahan**	70.33	53	P		**P**	**08 44 32.3 +1.9**
	baz=303						
SUMG	**Summit**	70.52	360	*e*P		**P**	**08 44 32.1 +0.6**
	comp=Z,18nm,1.0s						
SUMG	**Summit**	70.52	360	*i* P		**P**	**08 44 32.9 +1.5**
SUMG				*i*			08 44 46.2
SUMG				pmax		pmax	
	comp=Z,14nm,0.9s						
SUMG	**Summit**	70.52	360	*i* P		**P**	**08 44 32.9 +1.5**
	comp=Z,14nm,0.9s						
SUMG				*i*			08 44 46.2
N02D	**Trinity Center**	70.65	53	P		**P**	**08 44 33.7 +1.3**
	baz=303						
ZEI	**Tsey**	70.70	309	*e*P		**P**	**08 44 30.0 -2.8**
ZEI				pmax		pmax	
	comp=Z,4.0nm,0.4s						
M04C	**Macdoel**	70.76	52	P		**P**	**08 44 34.9 +1.8**
	baz=303						
KBZ	**Khabaz**	70.80	311	P		**P**	**08 44 33.8 +0.7**
	comp=Z,12nm,0.9s,baz=64,slow=4.7,SNR=15						
KBZ				LR		LR	09 20 24.7
	comp=Z,73nm,18.3s,baz=107,slow=40						
KIV	**Kislovodsk**	70.81	311	*e*P		**P**	**08 44 33.9 +0.6**
	comp=Z,30nm,1.0s						
KIV	**Kislovodsk**	70.81	311	⇑*i*P		**P**	**08 44 33.6 +0.3**
KIV	**Kislovodsk**	70.81	311	P		**P**	**08 44 33.8 +0.5**
KIV	**Kislovodsk**	70.81	311	*e*P		**P**	**08 44 34.2 +0.9**
KIV				pmax		pmax	
	comp=Z,90nm,1.0s						
KIV				MLR		MLR	
	comp=Z,166nm,18.0s						
K05A	**Summer Lake**	70.83	51	*e*P		**P**	**08 44 35.2 +1.5**
	comp=Z,22nm,0.8s						
WSAR	**Wadi Sarin**	70.83	285	P		**P**	**08 44 34.2 +0.5**
	baz=58,slow=13						
O02D	**Mt. Diablo Mer**	71.02	54	P		**P**	**08 44 36.5 +1.9**
	baz=303						
BANOM	**Banah**	71.17	289	P		**P**	**08 44 36.0 +0.3**
SHME	**Shamm**	71.22	289	*i* P		**P**	**08 44 36.3 +0.3**
	SNR=9.7						
WALA	**Waterton Lakes**	71.31	42	*e*P		**P**	**08 44 37.2 +0.9**
	comp=Z,11nm,0.8s						
MSFE	**Esma-Masafi**	71.58	288	P		**P**	**08 44 38.6 +0.4**
O03E	**Paynes Creek**	71.59	53	P		**P**	**08 44 39.0 +0.8**
	baz=303						
GNI	**Garni**	71.61	307	P		**P**	**08 44 39.4 +1.0**
	comp=Z,6.7nm,0.6s,baz=78,slow=11,SNR=3.3						
GNI	**Garni**	71.61	307	*de*P		**P**	**08 44 39.3 +1.0**
GNI				pmax		pmax	
	comp=Z,62nm,1.9s						
AKH	**Akhalkalaki**	71.71	308	⇑*i*P		**P**	**08 44 39.2 +0.3**
AKH	**Akhalkalaki**	71.71	308	P		**P**	**08 44 39.1 +0.2**
UOSS	**Minazif**	71.77	288	*e*P		**P**	**08 44 38.8 -0.5**
	comp=Z,17nm,0.6s						
UOSS	**Minazif**	71.77	288	P		**P**	**08 44 39.5 +0.2**
BMO	**Blue Mountains**	71.81	47	*e*P		**P**	**08 44 40.1 +0.7**
	comp=Z,8.6nm,0.8s						
BMO	**Blue Mountains**	71.81	47	*e*P		**P**	**08 44 40.1 +0.7**
BMO				pmax		pmax	
	comp=Z,9.0nm,0.8s						
HATD	**Hatta, Dubai**	71.89	288	*i* P		**P**	**08 44 40.4 +0.4**
	SNR=6.9						
J08A	**Circle Bar Ran**	71.96	49	*e*P		**P**	**08 44 41.5 +1.2**
	comp=Z,11nm,0.8s						
ASHO	**Ashiyiah**	72.02	288	P		**P**	**08 44 40.9 0.0**
FAQ	**Al Faqa, Dubai**	72.34	288	P		**P**	**08 44 42.6 -0.1**
MSO	**Missoula**	72.59	44	P		**P**	**08 44 45.0 +0.9**
	baz=306						
ASUD	**Al Ashush, Dub**	72.61	288	*i* P		**P**	**08 44 44.5 +0.2**
	SNR=9.1						
BEKR	**Beckworth**	72.75	53	*e*P		**P**	**08 44 45.4 +0.2**
	comp=Z,9.0nm,0.9s						
NWAO	**Narrogin (SRO)**	73.33	201	*e*P		**P**	**08 44 48.5 +0.4**
	comp=Z,25nm,1.3s						
NWAO	**Narrogin (SRO)**	73.33	201	*e*P		**P**	**08 44 48.5 +0.4**
NWAO				pmax		pmax	
	comp=Z,25nm,1.3s						
PAHR	**Pah Rah Range**	73.46	53	*e*P		**P**	**08 44 50.2 +0.9**
	comp=Z,6.6nm,0.9s						
FFC	**Flin Flon**	73.56	33	*e*P		**P**	**08 44 49.9 +0.5**
	comp=Z,12nm,0.8s						
FFC	**Flin Flon**	73.56	33	*e*P		**P**	**08 44 49.9 +0.5**
FFC				pmax		pmax	
	comp=Z,12nm,0.8s						
CMB	**Columbia Colle**	73.77	54	*e*P		**P**	**08 44 51.5 +0.5**
	comp=Z,25nm,1.6s						
HRY	**Holter Researc**	73.83	43	*e*P		**P**	**08 44 51.8 +0.5**
FCC	**Fort Churchill**	73.85	27	*e*P		**P**	**08 44 51.3 +0.3**
	comp=Z,9.1nm,0.8s						
FCC	**Fort Churchill**	73.85	27	*e*P		**P**	**08 44 51.3 +0.3**
FCC				pmax		pmax	
	comp=Z,9.0nm,0.8s						
YERR	**Yerington**	73.96	53	*e*P		**P**	**08 44 53.9 +1.6**
	comp=Z,1.1nm,0.9s						
NB2	**NORSAR Subarra**	74.04	337	P		**P**	**08 44 51.9 -0.3**
	comp=Z,11nm,0.8s,baz=40,slow=6.2						
NB200	**NORSAR Array S**	74.04	337	*e*P		**P**	**08 44 52.2 +0.1**
NOA	**NORSAR Array B**	74.04	337	P		**P**	**08 44 52.2 +0.1**
	comp=Z,8.3nm,0.9s,baz=39,slow=5.9,SNR=18						
NOA				pP		**pP**	**08 45 05.0 -0.3**
	comp=Z,7.1nm,0.8s,baz=39,slow=5.9,SNR=11						
NOA				LR		LR	09 20 46.3
	comp=Z,90nm,19.5s,baz=40,slow=38						
EGMT	**Eagleton**	74.14	41	*e*P		**P**	**08 44 53.9 +0.9**
	comp=Z,16nm,0.8s						
EGMT	**Eagleton**	74.14	41	P		**P**	**08 44 54.0 +0.9**
	baz=308,SNR=5.5						
AKASG	**Malin Array Be**	74.17	322	P		**P**	**08 44 52.8 -0.3**
	comp=Z,15nm,0.5s,baz=47,slow=6.3,SNR=52						
AKASG				pP		**pP**	**08 45 05.4 -0.7**
	comp=Z,6.3nm,0.6s,baz=46,slow=6.9,SNR=3.9						
AKASG				sP		**sP**	**08 45 11.0 -0.2**
	comp=Z,6.3nm,0.6s,baz=47,slow=6.2,SNR=3.4						
AKASG				LR		LR	09 20 32.1
	comp=Z,92nm,18.4s,baz=65,slow=38						
AKBB	**Malin Array Si**	74.17	322	*e*P		**P**	**08 44 52.7 -0.4**
	comp=Z,20nm,0.5s						
AKBB	**Malin Array Si**	74.17	322	*e*P		**P**	**08 44 52.7 -0.4**
AKBB				pmax		pmax	
	comp=Z,20nm,0.5s						
KIEV	**Kiev**	74.19	322	*e*P		**P**	**08 44 52.8 -0.3**
	comp=Z,20nm,0.5s						
KIEV	**Kiev**	74.19	322	⇑*i*P		**P**	**08 44 52.8 -0.3**
KIEV	**Kiev**	74.19	322	*i* P		**P**	**08 44 52.9 -0.2**
	SNR=17						
KIEV	**Kiev**	74.19	322	⇑P		**P**	**08 44 52.8 -0.3**
DLMT	**Dillon**	74.22	45	*e*P		**P**	**08 44 55.0 +1.3**
	comp=Z,18nm,0.8s						
HLID	**Hailey**	74.25	47	*e*P		**P**	**08 44 55.3 +1.3**
	comp=Z,5.7nm,0.9s						
HLID	**Hailey**	74.25	47	P		**P**	**08 44 54.9 +1.0**
	baz=307						
BOZ	**Bozeman (W)**	74.62	44	*e*P		**P**	**08 44 56.8 +0.8**
	comp=Z,12nm,0.8s						
BOZ	**Bozeman (W)**	74.62	44	*e*P		**P**	**08 44 56.8 +0.8**
BOZ				pmax		pmax	
	comp=Z,13nm,0.8s						
BOZ	**Bozeman (W)**	74.62	44	P		**P**	**08 44 56.9 +0.9**
	baz=308						
RYN	**Ryan**	74.63	53	*e*P		**P**	**08 44 57.4 +1.2**
	comp=Z,5.7nm,0.9s						
KVN	**Kaiserville**	74.65	53	*e*P		**P**	**08 44 57.5 +1.2**
	comp=Z,9.5nm,0.9s						
KVN	**Kaiserville**	74.65	53	*e*P		**P**	**08 44 57.5 +1.2**
KVN				pmax		pmax	
	comp=Z,10.0nm,0.9s						
NV01	**Mina Array Sit**	74.88	53	*e*P		**P**	**08 44 59.1 +1.4**
NVAR	**Mina Array Bea**	74.88	53	P		**P**	**08 44 59.1 +1.4**
	comp=Z,2.9nm,0.8s,baz=293,slow=5.5,SNR=21						
NVAR				pP		**PcP**	**08 45 12.4 +0.9**
	comp=Z,8.1nm,0.8s,baz=285,slow=5.9,SNR=23						
NVAR				LR		LR	09 09 46.4
	comp=Z,23nm,21.3s,baz=276,slow=29						
MLAC	**Mammoth, Mammo**	75.00	54	P		**P**	**08 44 59.1 +0.6**
	baz=306						
ELK	**Elko**	75.44	50	P		**P**	**08 45 02.4 +1.5**
	comp=Z,0.7nm,0.4s,baz=351,slow=5.4,SNR=6.3						
ELK				pP		**pP**	**08 45 16.1 +2.1**
	comp=Z,2.8nm,0.7s,baz=330,slow=5.0,SNR=9.0						
YHH	**Holmes Hill**	75.55	44	*e*P		**P**	**08 45 02.8 +1.2**
	comp=Z,6.0nm,0.8s						
YMR	**Madison River**	75.56	45	*e*P		**P**	**08 45 02.9 +1.4**
	comp=Z,11nm,0.8s						
GCMT	**Greycliff**	75.58	43	*e*P		**P**	**08 45 02.9 +1.4**
VES	**Vestal, Richgr**	75.88	56	P		**P**	**08 45 04.4 +1.2**
	baz=306						
YPP	**Pitchstone Pla**	75.89	45	*e*P		**P**	**08 45 04.6 +1.0**
	comp=Z,6.5nm,0.7s						
LKWY	**Lake**	75.94	44	*e*P		**P**	**08 45 05.4 +1.7**
	comp=Z,7.2nm,0.8s						
LKWY	**Lake**	75.94	44	*e*P		**P**	**08 45 05.4 +1.7**
LKWY				pmax		pmax	
	comp=Z,7.0nm,0.8s						
H17A	**Grant Village**	75.94	45	*e*P		**P**	**08 45 05.8 +2.0**
	comp=Z,18nm,0.8s						
H17A	**Grant Village**	75.94	45	P		**P**	**08 45 06.6 +2.8**
	baz=309,SNR=5.8						
PKM	**Mcpherson Peak**	75.95	57	P		**P**	**08 45 05.5 +1.7**
	baz=306						
IMW	**Indian Meadow**	76.05	45	*e*P		**P**	**08 45 06.0 +1.6**
	comp=Z,12nm,0.8s						
FXWY	**Fox Creek**	76.16	45	*e*P		**P**	**08 45 06.4 +1.4**
	comp=Z,10.0nm,1.0s						
CWC	**Cottonwood Cre**	76.19	55	P		**P**	**08 45 06.6 +1.4**
	baz=306						
RLMT	**Red Lodge**	76.22	43	*e*P		**P**	**08 45 06.7 +1.5**
	comp=Z,26nm,1.6s						
RLMT	**Red Lodge**	76.22	43	P		**P**	**08 45 06.8 +1.6**
	baz=309						
MOOW	**Moose Ponds**	76.25	45	*e*P		**P**	**08 45 06.6 +1.2**
	comp=Z,8.6nm,1.0s						
HVU	**Hansel Valley**	76.29

BFSC Mount Baldy Ra 77.77 56 pP pP 08 45 28.3 +1.1
baz=307
ILGA Ilgaz 77.87 313 *e*P **P 08 45 15.0 +0.4**
comp=Z,13nm,0.8s
SHPR Sheep Range 78.03 53 *e*P **P 08 45 16.4 +0.9**
comp=Z,7.2nm,0.9s
MPU Maple Canyon 78.06 49 *e*P **P 08 45 16.1 +0.5**
comp=Z,9.8nm,0.8s
BUR08 Bucovina Ar. S 78.18 322 *e*P **P 08 45 15.9 -0.2**
comp=Z,7.1nm,0.8s
BURAR Bucovina Array 78.19 322 ⇓*i*P **P 08 45 16.3 +0.2**
BURAR Bucovina Array 78.19 322 ⇓P **P 08 45 16.3 +0.2**
TUQ Turquoise Moun 78.19 54 pP pP 08 45 31.1 +1.6
baz=307
BIZ Bicaz 78.20 321 ⇑*i*P **P 08 45 16.5 +0.4**
TESR Tescani 78.21 320 ⇑*i*P **P 08 45 16.3 +0.2**
BBRC Big Bear Solar 78.24 56 pP pP 08 45 31.0 +1.1
baz=307
HEC Hector,Ludlow 78.29 55 pP pP 08 45 31.5 +1.5
baz=307
CFR Carcaliu 78.33 318 ⇑*i*P **P 08 45 16.4 -0.4**
CFR Carcaliu 78.33 318 ⇑P **P 08 45 16.4 -0.4**
MURC Murrieta 78.46 57 pP pP 08 45 32.3 +1.4
baz=307
CCUT Cedar City 78.53 51 *e*P **P 08 45 18.8 +0.4**
comp=Z,6.3nm,1.0s
VRI Vrincioaia 78.61 320 ⇑*i*P **P 08 45 19.1 +0.8**
VRI Vrincioaia 78.61 320 ⇑P **P 08 45 19.1 +0.8**
MSU Marysvale 78.67 50 *e*P **P 08 45 20.5 +1.4**
KOLS Kolonicke sedl 78.69 324 *e*P **P 08 45 19.6 +0.8**
KOLS pmax pmax
comp=Z,10.0nm,1.2s
KOLS Kolonicke sedl 78.69 324 *e*P **P 08 45 19.5 +0.8**
BR131 Keskin Array S 78.75 312 *e*P **P 08 45 19.6 +0.2**
BRTR Keskin Array B 78.75 312 P **P 08 45 19.2 -0.2**
comp=Z,2.8nm,0.7s,baz=99,slow=3.6,SNR=13
BRTR LR LR 09 25 20.8
comp=Z,29nm,18.0s,baz=74,slow=40
GMRC Granite Mounta 78.76 55 P **P 08 45 20.9 +1.4**
baz=308
HARR Harsova 78.76 318 ⇑*i*P **P 08 45 19.6 +0.4**
HARR Harsova 78.76 318 ⇑P **P 08 45 19.6 +0.4**
TLB Topalu 78.77 318 ⇑*i*P **P 08 45 19.9 +0.7**
TLB Topalu 78.77 318 ⇑P **P 08 45 19.9 +0.7**
OJC Ojcow 78.91 326 *e*P **P 08 45 20.5 +0.6**
OJC Ojcow 78.91 326 *e*P **P 08 45 20.3 +0.4**
comp=Z,29nm,1.2s
OJC Ojcow 78.91 326 *e*P **P 08 45 20.3 +0.4**
OJC pmax pmax
comp=Z,29nm,1.2s
OZUR 78.94 320 ⇑*i*P **P 08 45 21.4 +1.2**
P17A Butcher Ranch, 78.94 49 *e*P **P 08 45 22.0 +1.5**
comp=Z,13nm,0.8s
LCMT Little Creek M 78.94 52 *e*P **P 08 45 21.3 +0.8**
comp=Z,8.9nm,1.0s
PFO Pinyon Flats O 78.94 56 P **P 08 45 21.1 +0.6**
baz=307
MTPU Mount Pierson 78.96 51 *e*P **P 08 45 22.4 +1.6**
comp=Z,8.3nm,0.8s
ARCR ARCALIA 78.98 322 ⇑*i*P **P 08 45 21.6 +1.3**
BELC Belle Mtn. Jos 79.01 56 pP pP 08 45 34.8 +0.7
baz=308
TRPA Tarpa 79.13 323 ⇓*i*P **P 08 45 22.1 +1.0**
TRPA Tarpa 79.13 323 ⇑EP **P 08 45 21.1 0.0**
KNB Kanab 79.20 52 *e*P **P 08 45 23.4 +1.4**
comp=Z,14nm,1.1s
NIE Niedzica 79.26 325 *e*P **P 08 45 22.9 +1.0**
NIE Niedzica 79.26 325 *e*P **P 08 45 22.9 +1.0**
MLR Muntele Rosu 79.27 320 *e*P **P 08 45 22.1 0.0**
comp=Z,20nm,1.5s
MLR Muntele Rosu 79.27 320 ⇑*i*P **P 08 45 22.4 +0.3**
MLR Muntele Rosu 79.27 320 *e*P **P 08 45 22.1 0.0**
MLR pmax pmax
comp=Z,20nm,1.5s
SRU San Rafael Swe 79.30 49 *e*P **P 08 45 23.4 +0.9**
comp=Z,11nm,0.7s
SRU San Rafael Swe 79.30 49 *e*P **P 08 45 23.4 +0.9**
SRU pmax pmax
comp=Z,11nm,0.7s
K22A Casper 79.33 44 P **P 08 45 23.4 +0.8**
baz=311
ULM Lac du Bonnet 79.36 33 P **P 08 45 22.7 +0.4**
comp=Z,4.0nm,0.7s,baz=332,slow=2.4,SNR=3.4
ULM LR LR 09 22 28.6
comp=Z,20nm,19.6s,baz=340,slow=37
MONP2 Monument Peak 79.40 57 P **P 08 45 24.1 +0.9**
baz=308
IRM Iron Mountain 79.47 55 P **P 08 45 24.4 +1.0**
baz=308
BC3 Big Chuckawall 79.58 56 pP pP 08 45 39.0 +1.9
baz=308
RSSD Black Hills 79.70 42 *e*P **P 08 45 25.0 +0.4**
comp=Z,8.4nm,1.0s
RSSD Black Hills 79.70 42 *e*P **P 08 45 25.0 +0.4**
RSSD pmax pmax
comp=Z,8.0nm,1.0s
RSSD Black Hills 79.70 42 P **P 08 45 24.8 +0.2**
baz=312
IKP In-Ko-Pah, Jac 79.76 57 P **P 08 45 25.7 +0.8**
baz=308
VOIR 79.76 320 ⇑*i*P **P 08 45 25.2 +0.5**
VOIR 79.76 320 ⇑P **P 08 45 25.2 +0.5**
SWSC Sam W. Stewart 79.78 56 P **P 08 45 25.6 +0.7**
baz=308
LANS Liptovska Anna 79.83 326 *e*P **P 08 45 25.9 +0.9**
LANS Liptovska Anna 79.83 326 *e*P **P 08 45 25.9 +0.9**
U15A North Rim 79.90 52 *e*P **P 08 45 27.5 +1.6**
comp=Z,8.8nm,0.9s
KSP Ksiaz 79.97 328 *e*P **P 08 45 26.4 +0.8**
KSP Ksiaz 79.97 328 *e*P **P 08 45 26.4 +0.8**
O20A White River Ci 79.99 47 P **P 08 45 26.8 +0.6**
baz=311
ARR Arges 80.02 320 ⇑*i*P **P 08 45 27.5 +1.4**
PDMCI Parker Dam,Lak 80.04 54 P **P 08 45 27.3 +1.0**
baz=308
Y12C Blythe 80.13 55 pP pP 08 45 42.0 +2.0
baz=308
MORC Moravsky Berou 80.23 327 *e*P **P 08 45 27.4 +0.3**
comp=Z,11nm,1.0s
MORC Moravsky Berou 80.23 327 ⇑*i*P **P 08 45 27.8 +0.7**
MORC Moravsky Berou 80.23 327 *e*P **P 08 45 27.4 +0.3**
MORC pmax pmax
comp=Z,11nm,1.0s
MORC Moravsky Berou 80.23 327 *e*P **P 08 45 27.5 +0.3**
MORC *e* 08 45 40.2
CHVC Chvalec 80.26 328 *e*P **P 08 45 27.7 +0.5**
DPC Dobruska-Polom 80.32 328 *e*P **P 08 45 28.4 +0.8**
DPC Dobruska-Polom 80.32 328 *e*P **P 08 45 28.4 +0.8**
GLA Glamis 80.36 56 pP pP 08 45 42.9 +1.6
baz=308
PSZ Piszkesteto 80.53 324 *e*P **P 08 45 29.3 +0.5**
comp=Z,14nm,1.0s
PSZ Piszkesteto 80.53 324 ⇑*i*P **P 08 45 29.5 +0.7**
PSZ Piszkesteto 80.53 324 *e*P **P 08 45 29.3 +0.5**
PSZ pmax pmax
comp=Z,14nm,1.0s
PSZ Piszkesteto 80.53 324 ⇑EP **P 08 45 29.0 +0.2**
VYHS Vyhne 80.59 325 *e*P **P 08 45 29.6 +0.5**
VYHS pmax pmax
comp=Z,4.0nm,1.0s
VYHS Vyhne 80.59 325 *e*P **P 08 45 29.6 +0.5**
AGMN Agassiz Nation 80.80 35 *e*P **P 08 45 30.1 0.0**
comp=Z,9.3nm,0.8s
AGMN Agassiz Nation 80.80 35 P **P 08 45 30.2 0.0**
baz=317
N23A Red Feather La 80.81 45 *e*P **P 08 45 31.8 +1.1**
comp=Z,12nm,0.9s
N23A Red Feather La 80.81 45 P **P 08 45 31.4 +0.7**
baz=312
JAVC Velka Javorina 80.85 326 *e*P **P 08 45 32.0 +1.5**
JAVC *e* 08 45 45.2
PV07 Paradox Valley 80.85 48 *e*P **P 08 45 31.6 +0.7**
comp=Z,10nm,1.3s
GZR Gura Zlata 80.94 321 ⇑*i*P **P 08 45 30.7 -0.4**
GZR Gura Zlata 80.94 321 ⇑P **P 08 45 30.7 -0.4**
CLL Collm 80.96 330 *i*P **P 08 45 30.9 0.0**
comp=Z,15nm,0.9s
CLL *e*PcP **PcP 08 45 37.0 -0.3**
CLL *i*pP **pP 08 45 43.6 -0.6**
CLL Collm 80.96 330 *i*P **P 08 45 30.9 0.0**
CLL pmax pmax
comp=Z,15nm,0.9s
VRAC Vranov 80.99 327 ⇑*i*P **P 08 45 30.8 -0.4**
VRAC Vranov 80.99 327 ⇑P **P 08 45 30.8 -0.4**
VRAC Vranov 80.99 327 *e*P **P 08 45 31.5 +0.3**
VRAC *e* 08 45 44.3
Y14A Wickenburg 81.00 54 *e*P **P 08 45 32.5 +0.9**
comp=Z,5.8nm,0.9s
WUAZ Wupatki 81.05 52 *e*P **P 08 45 33.2 +1.3**
comp=Z,10nm,1.0s
WUAZ Wupatki 81.05 52 P **P 08 45 33.0 +1.0**
baz=310
PV01 Paradox Valley 81.09 49 *e*P **P 08 45 32.7 +0.5**
comp=Z,14nm,1.2s
KRUC Moravsky 81.26 327 *e*P **P 08 45 33.0 +0.4**
KRUC *e* 08 45 45.7
GOPC GO Pecny, Ondr 81.30 328 *e*P **P 08 45 33.3 +0.5**
GOPC MLR MLR
comp=Z,200nm,8.6s
GOPC GO Pecny, Ondr 81.30 328 *e*P **P 08 45 33.3 +0.5**
GOPC AMS AMS 09 24 10.0
comp=Z,200nm,8.6s
PRU Pruhonice 81.35 329 AMS AMS 09 24 30.0
comp=Z,200nm,16.7s
SMCO Snowmass 81.36 47 *e*P **P 08 45 34.6 +0.8**
comp=Z,5.2nm,0.8s
BZS Buzias 81.36 322 ⇑*i*P **P 08 45 33.1 -0.1**
BZS Buzias 81.36 322 ⇑P **P 08 45 33.1 -0.1**
MODS Modra-Piesok 81.39 326 *e*P **P 08 45 33.0 -0.3**
MODS pmax pmax
comp=Z,13nm,1.1s
MODS Modra-Piesok 81.39 326 *e*P **P 08 45 33.0 -0.3**
HERR Herculane 81.49 321 ⇑*i*P **P 08 45 33.8 -0.1**
X16A Lo Mia Camp, P 81.71 53 *e*P **P 08 45 37.0 +1.5**
comp=Z,6.1nm,0.9s
ISCO Idaho Springs 81.73 46 *e*P **P 08 45 36.5 +0.8**
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 81.73 46 *e*P **P 08 45 36.5 +0.8**
ISCO pmax pmax
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 81.73 46 P **P 08 45 36.5 +0.8**
baz=312
MVCO Mesa Verde 81.74 49 *e*P **P 08 45 36.8 +1.1**
comp=Z,7.7nm,0.8s
MVCO Mesa Verde 81.74 49 P **P 08 45 36.5 +0.8**
baz=311
MDVR Moldovita 81.91 321 ⇑*i*P **P 08 45 36.2 0.0**
SUSD Miller 82.10 39 pP pP 08 45 51.2 +0.8
baz=316
W18A Petrified Fore 82.33 52 pP pP 08 45 52.6 +0.6
baz=310
CONA Conrad Observa 82.35 326 *i*P **P 08 45 39.1 +0.7**
comp=Z,9.3nm,1.0s
S22A 4UR Ranch, Cre 82.39 48 *e*P **P 08 45 40.0 +0.9**
comp=Z,6.1nm,0.8s
S22A 4UR Ranch, Cre 82.39 48 P **P 08 45 40.8 +1.7**
baz=312,SNR=5.9
KHC Kasperske Hory 82.41 328 *e*P **P 08 45 39.0 +0.3**
comp=Z,5.2nm,1.0s
KHC Kasperske Hory 82.41 328 *c i*P **P 08 45 38.8 +0.1**
KHC pmax pmax
comp=Z,23nm,1.0s
KHC Kasperske Hory 82.41 328 *e*P **P 08 45 39.1 +0.4**
Q24A Divide 82.56 46 pP pP 08 45 53.9 +0.6
baz=312
GERES GERESS Array B 82.58 328 P **P 08 45 39.6 0.0**
comp=Z,3.5nm,0.5s,baz=31,slow=6.2,SNR=20
GERES pP **pP 08 45 52.6 -0.3**
comp=Z,2.2nm,0.6s,baz=53,slow=5.2,SNR=4.5
GERES LR LR 09 27 13.4
comp=Z,61nm,18.2s,baz=64,slow=39
VTS Vitosha 82.66 319 *e*P **P 08 45 40.7 +0.4**
comp=Z,7.6nm,0.8s
VTS Vitosha 82.66 319 ⇑*i*P **P 08 45 41.3 +1.0**
VTS Vitosha 82.66 319 *e*P **P 08 45 40.7 +0.4**
VTS pmax pmax
comp=Z,8.0nm,0.8s
EYMN Ely 82.99 33 *e*P **P 08 45 42.0 +0.3**
comp=Z,12nm,0.9s
EYMN Ely 82.99 33 P **P 08 45 41.6 -0.1**
baz=320,SNR=9.3
ARSA Arzberg 83.01 326 *i*P **P 08 45 42.1 +0.3**
comp=Z,4.4nm,0.6s
MOA Molln 83.10 327 *i*PcP **P 08 45 43.7 +1.4**
comp=Z,7.8nm,1.2s
SDCO Great Sand Dun 83.17 47 *e*P **P 08 45 44.0 +0.7**
comp=Z,5.1nm,0.9s
SDCO Great Sand Dun 83.17 47 P **P 08 45 43.9 +0.7**
baz=312
TUC Tucson 83.47 54 P **P 08 45 45.8 +1.3**
baz=310
PERS Pernice 83.66 326 *i*P **P 08 45 45.2 0.0**
SOKA Soboth 83.66 326 *e*P **P 08 45 45.4 +0.1**
comp=Z,12nm,1.0s,SNR=8.4
ECSD EROS Data Cent 83.78 38 *e*P **P 08 45 46.1 +0.2**
comp=Z,10nm,0.9s
ECSD EROS Data Cent 83.78 38 P **P 08 45 46.0 +0.2**
baz=317
KSCO Kaye Shedlock' 83.96 45 pP pP 08 46 01.1 +0.8
baz=314
E38A The Farm, Brul 84.00 34 *e*P **P 08 45 46.8 -0.1**
comp=Z,16nm,0.7s
E38A The Farm, Brul 84.00 34 P **P 08 45 46.7 -0.1**
baz=320,SNR=6.1
C40A Isle Royale Na 84.01 32 P **P 08 45 47.0 +0.1**
baz=322
KBA Koelnbreinsper 84.10 327 *e*PcP **P 08 45 48.2 +0.6**
comp=Z,5.8nm,0.7s,SNR=5.6
F37A Hinrichs Farm, 84.19 35 P **P 08 45 48.3 +0.5**
baz=320
T25A Trinidad 84.22 47 *e*P **P 08 45 48.9 +0.4**
comp=Z,13nm,0.8s
T25A Trinidad 84.22 47 P **P 08 45 49.7 +1.3**
baz=313,SNR=5.7
PMOR Pomariorio Ree 84.24 114 *e*T T 10 18 32.2
comp=Z,26nm,0.2s
MYKA Terra Mystica 84.31 327 *e*P **P 08 45 48.0 -0.6**
comp=Z,3.9nm,0.5s
F38A Pierce - Schro 84.35 34 P **P 08 45 49.2 +0.5**
baz=320,SNR=8.7
VISS Visnje 84.42 326 *i*P **P 08 45 49.0 0.0**
BOJS Bojanci 84.46 325 *i*P **P 08 45 49.1 -0.2**
TASM ASL Pad, Albuq 84.47 50 P **P 08 45 51.0 +1.2**
baz=312,SNR=6.4
TASM ASL Pad, Albuq 84.47 50 P **P 08 45 50.9 +1.2**
baz=312,SNR=6.8
ANMO Albuquerque 84.47 50 *e*P **P 08 45 50.4 +0.6**
comp=Z,12nm,1.3s
ANMO Albuquerque 84.47 50 *e*P **P 08 45 50.4 +0.6**
ANMO pmax pmax
comp=Z,12nm,1.3s
ANMO Albuquerque 84.47 50 P **P 08 45 50.1 +0.4**
baz=312
SPMN Marine on St. 84.49 35 P **P 08 45 49.8 +0.4**
baz=320
E39A Mellen 84.61 33 P **P 08 45 50.0 0.0**
baz=321,SNR=5.9
BGNE Belgrade 84.69 41 P **P 08 45 51.1 +0.6**
baz=316
JAVS Javornik 84.70 326 *e*P **P 08 45 49.0 -1.5**
PPT Papeete 84.70 117 LR LR 09 14 21.3
comp=Z,58nm,21.3s,baz=294,slow=29
ABTA Abfaltersbach 84.71 327 *e*P **P 08 45 50.4 -0.2**
comp=Z,9.6nm,1.3s
PPT2 Papeete2 84.71 117 *e*LR LR 09 12 01.0
comp=Z,169nm,28.0s
PPT2 Papeete2 84.71 117 *e*T T 10 19 11.0
comp=Z,3.4nm,0.2s
F39A Loretta 84.81 34 P **P 08 45 51.1 +0.1**
baz=321
MOTA Moosalm 84.84 329 *e*P **P 08 45 51.5 +0.2**
comp=Z,2.5nm,0.5s
PDG Podgorica 84.84 321 ⇑*i*P **P 08 45 50.4 -0.8**
TTG Podgorica 84.84 321 *e*P **P 08 45 51.1 -0.1**
comp=Z,39nm,1.2s
TTG Podgorica 84.84 321 *e*P **P 08 45 51.1 -0.1**
TTG pmax pmax
comp=Z,39nm,1.2s
E40A Wakefield 84.84 33 P **P 08 45 51.8 +0.6**
baz=321,SNR=10
BMRD Maredsous 84.86 334 P **P 08 45 51.0 -0.1**
RETA Reutte 84.86 329 *i*P **P 08 45 51.6 +0.3**
comp=Z,8.3nm,0.7s
SQTA Sankt Quirin 84.89 328 *i*P **P 08 45 51.5 0.0**
comp=Z,5.5nm,0.9s
D41A Chassel 84.93 32 P **P 08 45 51.7 +0.1**
baz=322
FNA Florina 84.95 319 *e*P **P 08 45 51.2 -0.6**
comp=Z,8.9nm,1.1s
FNA Florina 84.95 319 *e*P **P 08 45 51.2 -0.6**
FNA pmax pmax
comp=Z,9.0nm,1.1s
G38A Ridgeland 84.96 35 P **P 08 45 51.8 0.0**
baz=320
F40A Park Falls 85.16 33 P **P 08 45 53.0 +0.2**
baz=321
BFO Black Forest 85.17 331 *e*P **P 08 45 53.0 +0.2**
comp=Z,16nm,0.9s
BFO Black Forest 85.17 331 *e*P **P 08 45 53.0 +0.2**
BFO pmax pmax
comp=Z,16nm,0.9s
G39A Holcombe 85.18 34 P **P 08 45 52.9 0.0**
baz=321
E41A Kenton 85.23 32 P **P 08 45 53.2 +0.1**
baz=322,SNR=6.5
FETA Feichten 85.25 329 *i*P **P 08 45 53.1 -0.3**
comp=Z,6.3nm,0.9s
121A Cookes Peak, D 85.25 52 P **P 08 45 54.6 +0.9**
baz=312
APE Apeiranthos 85.27 314 *d i*P **P 08 45 52.3 -1.3**
APE pmax pmax
comp=Z,12nm,0.9s
KARP Karpathos 85.36 312 *e*P **P 08 45 54.0 0.0**
comp=Z,90nm,1.4s
DAVA Damuels 85.39 329 *e*P **P 08 45 53.7 -0.3**
comp=Z,9.7nm,0.7s,SNR=5.7
COWI Conover 85.44 33 *e*P **P 08 45 54.3 +0.1**
comp=Z,7.3nm,0.8s
H39A Augusta 85.60 35 P **P 08 45 55.2 +0.2**
baz=320
G40A Rib Lake 85.63 34 *e*P **P 08 45 55.1 -0.1**
G40A *e*pP **pP 08 46 09.1 +0.7**
G40A Rib Lake 85.63 34 P **P 08 45 55.4 +0.2**
baz=321,SNR=5.6
E42A Champion 85.70 32 P **P 08 45 55.8 +0.3**
baz=323,SNR=5.1
ECH Echery 85.71 331 *e*P **P 08 45 55.2 -0.3**
comp=Z,9.5nm,0.8s
ECH Echery 85.71 331 *e*P **P 08 45 55.2 -0.3**
ECH pmax pmax
comp=Z,10.0nm,0.8s
F41A Three Lakes 85.74 33 P **P 08 45 56.0 +0.3**
baz=322,SNR=6.0
FUORN Ofenpass-Fuorn 85.76 329 *e*P **P 08 45 56.3 +0.2**
comp=Z,13nm,0.6s
FUORN *e*pP **pP 08 46 09.9 +0.5**
H40A Chili 86.05 34 P **P 08 45 57.2 0.0**
baz=321
I39A Houston 86.12 35 P **P 08 45 57.7 +0.1**
baz=320
E43A Lone Tree Farm 86.13 31 *e*P **P 08 45 57.8 +0.2**
E43A *e*pP **pP 08 46 11.8 +0.9**
E43A Lone Tree Farm 86.13 31 P **P 08 45 57.5 0.0**
baz=323
F42A Maple Grove Fa 86.14 32 pP pP 08 46 11.3 +0.3
baz=323
TUE Stuetta 86.26 329 *e*P **P 08 45 58.8 +0.3**
comp=Z,12nm,1.3s
E44A Grand Marais A 86.37 31 P **P 08 45 59.3 +0.6**
baz=324
H41A Junction City 86.38 34 P **P 08 45 58.7 -0.1**
baz=322
G42A Mountain 86.43 33 P **P 08 45 59.1 +0.1**
baz=322
F43A Flat Rock, Esc 86.49 32 P **P 08 45 59.8 +0.5**
baz=323
I40A Norwalk 86.51 35 P **P 08 45 59.3 -0.2**
baz=321
F44A Big Bay de Noc 86.69 31 P **P 08 46 00.5 +0.2**
baz=324
I41A Arkdale 86.72 34 *e*P **P 08 46 00.7 +0.2**
I41A *e*pP **pP 08 46 14.8 +1.0**
I41A Arkdale 86.72 34 P **P 08 46 01.0 +0.5**
baz=322
G43A Wallace 86.73 32 P **P 08 46 00.8 +0.2**
baz=323
MATQ Matagami 86.78 24 pP pP 08 46 14.4 +0.4
baz=330
J40A Soldiers Grove 86.84 35 P **P 08 46 00.7 -0.5**
baz=321
IDI Anoyia 86.88 313 P **P 08 46 01.8 +0.3**
comp=Z,5.2nm,0.4s,baz=25,slow=4.9,SNR=5.3
E45A Wooded Hills, 86.89 30 pP pP 08 46 15.2 +0.6
baz=325
D46A Sault St. Mari 86.90 29 P **P 08 46 01.3 0.0**
baz=325
H42A Shiocton 86.96 33 P **P 08 46 01.8 +0.1**
baz=322
D47A Chapleau 87.13 29 P **P 08 46 02.0 -0.4**
baz=326
KSU1 Kansas State U 87.18 41 pP pP 08 46 16.8 +0.6
baz=317
J41A Loganville 87.20 35 P **P 08 46 02.7 -0.1**
baz=321
E46A Sault Ste Mari 87.23 30 P **P 08 46 03.1 +0.2**
baz=325
ITM Ithomi 87.24 316 *e*P **P 08 46 02.2 -1.0**
comp=Z,15nm,0.6s
I42A Draeger Farm, 87.28 34 *e*P **P 08 46 04.3 +1.0**
I42A *e*pP **pP 08 46 17.4 +0.8**
I42A Draeger Farm, 87.28 34 P **P 08 46 03.7 +0.5**
baz=322
F45A CMU Biological 87.30 31 P **P 08 46 03.7 +0.5**
baz=324
MNTX Cornudas Mount 87.32 52 P **P 08 46 04.5 +0.8**
baz=313
H43A Windswept, Lux 87.32 33 pP pP 08 46 17.5 +0.8
baz=323
MSTX Muleshoe 87.36 49 pP pP 08 46 18.8 +1.4
baz=314
AMTX Amarillo 87.38 47 P **P 08 46 04.7 +0.7**
baz=315
JFWS Jewell Farm 87.44 35 P **P 08 46 04.0 0.0**
baz=321
F46A Macinaw City C 87.53 30 P **P 08 46 04.6 +0.2**
baz=325
E47A Iron Bridge 87.56 29 P **P 08 46 04.9 +0.4**
baz=326
LSQQ Lebel-sur-Quev 87.60 24 P **P 08 46 04.8 +0.2**
baz=330
J42A Columbus 87.64 34 pP pP 08 46 19.1 +0.8
baz=322
L40A Anamosa 87.65 36 P **P 08 46 05.4 +0.4**
baz=321
CHGQ Chibougamau 87.67 22 P **P 08 46 05.1 +0.1**
baz=332
G45A Suttons Bay 87.76 31 *e*P **P 08 46 06.2 +0.7**
comp=Z,15nm,0.8s
G45A Suttons Bay 87.76 31 P **P 08 46 05.9 +0.4**
baz=324
G46A Petoskey 87.86 31 P **P 08 46 06.4 +0.4**
baz=325
J43A Natural Harves 87.90 34 P **P 08 46 06.6 +0.3**
baz=322
H45A Beulah 87.94 32 P **P 08 46 06.7 +0.3**
baz=324
K42A Prairie Point, 87.96 35 P **P 08 46 06.6 +0.1**
baz=322
E48A Lockeyer 87.97 28 pP pP 08 46 20.1 +0.2
baz=327
SSF Saint Saulge 88.04 333 *e*P **P 08 46 07.4 +0.6**
SSF pmax pmax
comp=Z,6.0nm,0.9s
D50A G1974 Best Tow 88.25 27 pP pP 08 46 21.5 +0.3
baz=328
I45A Fountain 88.33 32 P **P 08 46 09.6 +1.4**
baz=324
F48A Evansville 88.33 29 pP pP 08 46 22.2 +0.6
baz=326
H46A Fife Lake 88.36 31 P **P 08 46 09.1 +0.8**
baz=325
GLMI Grayling 88.37 31 *e*P **P 08 46 09.2 +0.8**
GLMI *e*pP **pP 08 46 23.3 +1.6**
GLMI Grayling 88.37 31 P **P 08 46 08.8 +0.4**
baz=325
N40A Mertquake, Sal 88.38 37 pP pP 08 46 22.3 +0.4
baz=320
G47A Hillman 88.39 30 pP pP 08 46 22.5 +0.7
baz=326
L42A Oliver, Polo 88.42 35 P **P 08 46 08.9 +0.2**
baz=322
K43A Burlington 88.48 34 pP pP 08 46 22.6 +0.3
baz=323
M41A Milan 88.50 36 pP pP 08 46 23.1 +0.6
baz=321
E50A Wahnapitae 88.55 28 pP pP 08 46 23.3 +0.7
baz=328
TBI Tubuai 88.60 121 *e*LR LR 09 13 54.4
comp=Z,144nm,27.5s
TBI Tubuai 88.60 121 *e*T T 10 24 04.3

comp=Z,47nm,0.3s
F49A Sandfield 88.61 29 pP pP 08 46 23.4 +0.4
baz=327
L43A Garden Prairie 88.70 35 pP pP 08 46 23.7 +0.3
baz=322
H47A Mio 88.72 31 pP pP 08 46 24.9 +1.5
baz=325
I46A Reed City 88.74 32 pP pP 08 46 24.5 +0.9
baz=324
N41A Harden Midland 88.87 37 pP pP 08 46 24.8 +0.6
baz=321
E51A G1948 Merrick 88.91 27 P **P** **08 46 10.3 -0.7**
baz=329
D52A ZEK Kipawa Sen 88.92 26 P **P** **08 46 10.5 -0.4**
baz=329
H48A Harrisville 88.99 30 pP pP 08 46 25.4 +0.7
baz=326
I47A Gladwin 89.07 31 pP pP 08 46 25.9 +0.8
baz=325
D53A Lac Vacive, Po 89.08 26 P **P** **08 46 11.8 +0.1**
baz=330
L44A Lake County Fo 89.08 34 P **P** **08 46 12.8 +1.0**
baz=323
J46A Howard City 89.14 32 P **P** **08 46 12.9 +0.9**
baz=324
WMOK Wichita Mounta 89.16 46 pP pP 08 46 27.0 +1.2
baz=316
M43A Waltham Townsh 89.19 35 P **P** **08 46 12.8 +0.5**
baz=322
I48A Sherman Twp 89.26 31 pP pP 08 46 27.4 +1.4
baz=326
D54A Lac Fusel, La 89.37 25 P **P** **08 46 13.0 -0.1**
baz=331
E52A Mattawa 89.42 27 pP pP 08 46 27.1 +0.4
baz=329
J47A Sumner 89.58 32 pP pP 08 46 28.5 +1.0
baz=325
F52A Sundridge 89.60 27 P **P** **08 46 14.2 0.0**
baz=329
K46A Dorr 89.62 33 pP pP 08 46 28.6 +0.9
baz=324
KLBO Killbear Provi 89.65 28 pP pP 08 46 28.4 +0.7
baz=328
M44A Midewin, Midew 89.65 35 pP pP 08 46 28.6 +0.7
baz=323
E53A Dumoine, Ponti 89.69 26 pP pP 08 46 28.6 +0.6
baz=330
HDIL Hopedale 89.73 36 pP pP 08 46 28.9 +0.6
baz=322
E54A Lac Daplat, Po 89.81 26 pP pP 08 46 29.1 +0.6
baz=330
BMRO Meriville Lake 89.91 29 pP pP 08 46 30.2 +1.2
baz=327
ALGO Algonquin Park 89.92 26 pP pP 08 46 29.7 +0.6
baz=330
J48A Bridge Port 89.96 31 pP pP 08 46 30.8 +1.6
baz=326
K47A Vermontville 89.97 32 pP pP 08 46 30.0 +0.7
baz=325
TUL1 Leonard 89.97 43 P **P** **08 46 16.6 +0.5**
baz=318
TX31 Lajitas Ar. Si 90.01 52 *e*P **P** **08 46 17.3 +0.8**
TX31 epP **pP** **08 46 31.6 +1.7**
TXAR Lajitas Array 90.01 52 P **P** **08 46 17.4 +0.9**
comp=Z,1.8nm,0.8s,baz=298,slow=3.0,SNR=25
TXAR pP **pP** **08 46 30.3 +0.4**
comp=Z,3.3nm,0.5s,baz=288,slow=2.2,SNR=23
TXAR LR LR 09 20 34.1
comp=Z,27nm,22.0s,baz=0.0,slow=31
N44A Piper City 90.08 35 pP pP 08 46 30.6 +0.7
baz=323
ABTX Abilene, Hawle 90.17 48 *e*P **P** **08 46 17.9 +0.8**
ABTX epP **pP** **08 46 31.9 +1.4**
J49A Marlette 90.18 31 pP pP 08 46 31.8 +1.6
baz=326
BASO Ashfield 90.22 30 pP pP 08 46 32.2 +1.7
baz=327
K48A Perry 90.23 32 pP pP 08 46 31.7 +1.1
baz=325
N45A Kentland 90.33 35 pP pP 08 46 31.9 +0.9
baz=323
P43A Skaggs, Pawnee 90.34 37 pP pP 08 46 31.7 +0.6
baz=322
BWLO Walkerton 90.34 29 pP pP 08 46 32.4 +1.3
baz=327
H52A Wyevale 90.38 28 pP pP 08 46 32.0 +0.9
baz=328
CAF Calviac 90.39 332 *e*P **P** **08 46 18.1 +0.2**
CAF pmax pmax
comp=Z,10.0nm,1.1s
PEMO Pembroke 90.45 26 pP pP 08 46 31.4 -0.1
baz=330
N46A Monticello 90.64 34 pP pP 08 46 32.9 +0.5
baz=324
I51A Listowel 90.65 29 pP pP 08 46 32.4 -0.1
baz=328
O45A Potomac 90.70 35 P **P** **08 46 19.7 +0.3**
baz=323
CCM Cathedral Cave 90.73 39 P **P** **08 46 19.9 +0.3**
baz=321
M47A Cromwell 90.76 33 pP pP 08 46 33.7 +0.7
baz=324
BANO Bancroft 90.77 27 P **P** **08 46 19.9 +0.2**
baz=330
L48A N Adams 90.80 32 pP pP 08 46 34.3 +1.1
baz=325
LFF La Frestale 90.86 333 *e*P **P** **08 46 21.0 +1.0**
LFF pmax pmax
comp=Z,3.0nm,0.4s
SFIN Lafayette 90.89 35 pP pP 08 46 34.6 +0.9
baz=323
G55A Calabogie 91.00 26 pP pP 08 46 34.8 +0.7
baz=330
PLVO Plevna 91.06 26 pP pP 08 46 35.2 +0.8
baz=330
N47A Urbana 91.12 34 P **P** **08 46 21.8 +0.5**
baz=324
U40A Yellville 91.20 41 P **P** **08 46 21.9 0.0**
baz=320,SNR=7.0
ORIO Orleans, Innes 91.24 25 pP pP 08 46 36.1 +1.0
baz=331
P45A Graceland, Par 91.27 36 P **P** **08 46 21.8 -0.3**
baz=323
M49A Liberty Center 91.38 32 pP pP 08 46 36.2 +0.3
baz=326
O47A Sheridan 91.42 34 pP pP 08 46 36.1 0.0
baz=324
N48A Decatur 91.43 33 P **P** **08 46 23.1 +0.3**
baz=325
H55A Tweed 91.45 27 pP pP 08 46 36.5 +0.4
baz=330
W39A Magazine 91.59 42 P **P** **08 46 24.1 +0.5**
baz=319
JCT Junction City 91.60 49 pP pP 08 46 37.5 +0.3
baz=316
O48A Farmland 91.86 34 pP pP 08 46 39.1 +0.9
baz=325
WHTX Lake Whitney, 91.91 47 *e*P **P** **08 46 26.1 +0.9**
WHTX epP **pP** **08 46 40.0 +1.5**
WHTX Lake Whitney, 91.91 47 P **P** **08 46 25.8 +0.7**
baz=317
MIAR Mount Ida 92.19 43 *e*P **P** **08 46 27.2 +0.8**
MIAR *e*pP **pP** **08 46 41.0 +1.2**
MIAR Mount Ida 92.19 43 *e*P **P** **08 46 27.2 +0.8**
MIAR *e**PP **pP** **08 46 41.0 +1.2**
MIAR Mount Ida 92.19 43 P **P** **08 46 26.8 +0.4**
baz=319
O49A Covington 92.28 33 pP pP 08 46 40.2 +0.1
baz=325
W41B Gary Mavity, V 92.42 41 P **P** **08 46 27.6 +0.1**
baz=320
ERPA Erie 92.48 30 pP pP 08 46 41.2 +0.2
baz=328
O50A Cable 92.63 33 pP pP 08 46 42.1 +0.4
baz=326
X40A Basin Creek Fa 92.63 42 pP pP 08 46 42.6 +0.7
baz=320
P49A Miami Univ. Ec 92.65 34 pP pP 08 46 42.6 +0.7
baz=325
ACSO Alum Creek Sta 92.83 32 pP pP 08 46 43.7 +1.1
baz=326
WCI Wyandotte Cave 92.99 36 pP pP 08 46 43.9 +0.5
baz=324
T46A Princeton 93.17 37 pP pP 08 46 44.8 +0.6
baz=323
P51A Williamsport 93.42 33 pP pP 08 46 46.0 +0.6
baz=326
S48A Wiedeman Farm, 93.56 36 pP pP 08 46 46.2 +0.2
baz=324
O53A New Philadelph 93.56 31 pP pP 08 46 46.4 +0.3
baz=327
T47A Sharon Grove 93.60 37 pP pP 08 46 46.9 +0.6
baz=323
Q51A Peebles 93.67 33 pP pP 08 46 47.1 +0.6
baz=326
M56A Emporium 93.72 29 pP pP 08 46 47.4 +0.6
baz=329
S49A Springfield 93.81 35 P **P** **08 46 33.8 0.0**
baz=324
R50A Paris 93.84 34 pP pP 08 46 48.4 +1.1
baz=325
WVT Waverly 93.93 38 pP pP 08 46 48.8 +1.0
baz=323
O54A Avella 93.96 31 pP pP 08 46 48.7 +0.8
baz=328
N55A Marion Center 94.01 30 pP pP 08 46 48.7 +0.6
baz=329
V46A Holladay 94.05 38 pP pP 08 46 48.8 +0.4
baz=323
S50A Richmond 94.31 35 pP pP 08 46 50.0 +0.5
baz=325
V47A Nunnelly 94.32 38 P **P** **08 46 36.0 -0.2**
baz=323
Q53A Leroy 94.60 32 pP pP 08 46 51.6 +0.8
baz=327
U49A Red Boiling Sp 94.61 36 pP pP 08 46 51.3 +0.4
baz=324
O56A Blue Knob Stat 94.62 30 pP pP 08 46 51.5 +0.6
baz=329
T50A Nancy 94.64 35 pP pP 08 46 51.5 +0.5
baz=325
Q54A Coxs Mills 94.78 32 pP pP 08 46 51.4 -0.3
baz=328
KEST Kesra 94.90 323 LR LR 09 34 51.1
comp=Z,91nm,18.1s,baz=302,slow=39
V49A McMinnville 95.16 37 pP pP 08 46 53.5 +0.1
baz=324
W48A Pulaski 95.16 38 P **P** **08 46 38.7 -1.4**
baz=323
TZTN Tazewell 95.62 35 pP pP 08 46 56.2 +0.6
baz=326
S58A Poland Farm, P 97.10 31 pP pP 08 47 02.1 -0.1
baz=329
Z50A Ashland 97.17 38 pP pP 08 47 02.6 -0.1
baz=324
VNDA Vanda 115.14 175 PKP **PKiKP** **08 51 56.1 -0.2**
comp=Z,0.5nm,0.8s,baz=308,slow=6.5,SNR=3.7
TOA1 Torodi Ar. Sit 117.22 315 *e*PKPdf **PKPdf** **08 52 01.4 -0.8**
TORD Torodi Ar. Bea 117.22 315 PKP **PKPdf** **08 52 01.4 -0.8**
comp=Z,0.6nm,0.4s,baz=24,slow=2.5,SNR=12
MATP Matopo 120.04 266 PKP **PKPdf** **08 52 07.5 -0.2**
comp=Z,1.7nm,0.7s,baz=29,slow=1.7,SNR=7.0
LBTB Lobatse 124.67 263 PKP **PKPdf** **08 52 14.3 -2.0**
comp=Z,5.9nm,0.8s,baz=96,slow=1.4,SNR=5.6
SDV Santo Domingo 125.19 40 *e*PKPdf **PKPdf** **08 52 17.6 -0.3**
DBIC Dimbokro 126.18 317 PKP **PKPdf** **08 52 18.2 -1.2**
comp=Z,3.9nm,0.7s,baz=21,slow=6.5,SNR=4.6
QSPA South Pole Qui 126.94 180 *e*PKPdf **PKPdf** **08 52 19.6 +0.2**
LPAZ La Paz 146.60 59 PKPbc **PKPbc** **08 52 59.7 +0.5**
comp=Z,8.2nm,0.5s,baz=350,slow=2.4,SNR=94
LPAZ pPKPbc pPKPab 08 53 13.6 -0.3
comp=Z,11nm,0.5s,baz=271,slow=1.9,SNR=13
LPAZ La Paz 146.60 59 *e*PKPdf **PKPbc** **08 52 58.9 -0.3**
LPAZ La Paz 146.60 59 *e*PKP2 **PKPbc** **08 52 58.9 -0.3**
MNMC Minye Minye 147.47 65 *e*PKPdf **PKPbc** **08 53 00.2 -1.0**
PB11 IPOC Station P 147.82 66 *e*PKPbc **PKPbc** **08 53 02.9 +0.9**
GO01 Chusmiza 148.10 65 *e*PKPbc **PKPbc** **08 53 03.5 +0.4**
LVC Limon Verde 150.11 69 *e*PKPbc **PKPbc** **08 53 07.6 -0.3**
LVC Limon Verde 150.11 69 *e*PKIKP **PKPbc** **08 53 07.6 -0.3**

ATH 04 08:43:29.4, 38.24N×22.09E, h15km±6km, ML0.6/1, Error ellipse: s-maj=7.0km s-min=1.6km az=272.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.09**	**270**	P	Pg	08 43 32.8	+0.1
LAKA				S	Sg	08 43 34.7	0.0
LAKA				AML	AML	08 43 35.5	
comp=E,64μm,0.2s							
LAKA				AML	AML	08 43 35.6	
comp=N,88μm,0.3s							
KALE	**Kalithea**	**0.16**	**14**	P	Pb	08 43 33.9	-0.3
KALE				S	Sg	08 43 36.2	0.0
SERG	**Sergoula**	**0.17**	**351**	P	Pg	08 43 33.2	-0.6
SERG				S	Sg	08 43 36.4	-0.3
KLV	**Kalavryta, Ach**	**0.20**	**166**	P	Pg	08 43 34.0	-0.1
KLV				S	Sg	08 43 37.0	-0.2

*SKO **04** 08:57:58.0, 41.06N×20.12E, h3km, M2.1, ML2.8*
*ATH **04** 08:57:57.5, 41.13N×20.22E, h18km±1km, ML2.4/8, Error ellipse: s-maj=1.8km s-min=1.1km az=26.0*
*BEO **04** 08:57:57.8±0.5, 41.02N×20.12E, h9km±3km, ML2.5/11*
*THE **04** 08:57:59.0, 41.13N×20.29E, h0km±2km, ML2.5/3, Error ellipse: s-maj=2.3km s-min=0.8km az=343.0*
*TIR **04** 08:58:00.1, 41.14N×20.33E, h11km, Md2.7/4*
*PDG **04** 08:58:00.0±0.7, 41.19N×20.16E, h9km±1km, ML2.9/10, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*

ISC 04 08:57:57.8±1.1, 41.12N±0.02×20.18E±0.02, h0km±10km, n88, σ0.93/132, 5C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**315**	P	**Pg**	**08 58 04.7**	**+0.6**
OHR	**Ohrid**	**0.47**	**90**	*i* Pg	**Pg**	**08 58 07.2**	**+0.5**
OHR				*i* Sg	**Sg**	**08 58 14.8**	**+1.9**
OHR				*e*Lg	Lg	08 58 14.9	
comp=N,766nm,0.5s							
OHR				*e*Lg	Lg	08 58 15.1	
comp=E,884nm,0.6s							
PHP	**Peshkopia**	**0.60**	**19**	P	**Pg**	**08 58 09.7**	**+0.4**
PHP	**Peshkopia**	**0.60**	**19**	P	**Pg**	**08 58 09.6**	**+0.2**
PHP				S	**Sb**	**08 58 18.9**	**-1.4**
PHP	**Peshkopia**	**0.60**	**19**	*i* PG	**Pg**	**08 58 09.5**	**+0.2**
PHP				*i* SG	**Sg**	**08 58 18.0**	**+0.9**
KRUS	**Krusevo**	**0.85**	**72**	*i* Pg	**Pg**	**08 58 13.8**	**-0.2**
KRUS				*i* Sg	**Sb**	**08 58 26.7**	**-0.7**
KRUS				*e*Lg	Lg	08 58 26.8	
comp=N,167nm,0.6s							
KRUS				*e*Lg	Lg	08 58 27.9	
comp=E,200nm,0.3s							
NEST	**Nestorio**	**0.96**	**136**	P	**Pg**	**08 58 15.4**	**-0.8**
NEST	**Nestorio**	**0.96**	**136**	P	**Pg**	**08 58 15.6**	**-0.6**
NEST				S	**Sb**	**08 58 30.5**	**-0.2**
NEST	**Nestorio**	**0.96**	**136**	P	**Pg**	**08 58 15.6**	**-0.6**
NEST				S	**Sg**	**08 58 29.0**	**+0.3**
NEST				AML	AML	08 58 40.5	
comp=E,344μm,0.3s							
NEST				AML	AML	08 58 42.2	
comp=N,544μm,0.8s							
FNA	**Florina**	**0.97**	**110**	*e*Pg	**Pg**	**08 58 15.6**	**-0.7**
FNA				*e*Sg	**Sg**	**08 58 29.9**	**+1.1**
FNA	**Florina**	**0.97**	**110**	P	**Pg**	**08 58 15.5**	**-0.7**
FNA	**Florina**	**0.97**	**110**	P	**Pg**	**08 58 15.5**	**-0.7**
FNA				S	**Sg**	**08 58 28.9**	**+0.1**
FNA	**Florina**	**0.97**	**110**	*i* Pg	**Pg**	**08 58 15.8**	**-0.5**
FNA				*i* Sg	**Sg**	**08 30.1**	**+1.3**
FNA	**Florina**	**0.97**	**110**	*i* PG	**Pg**	**08 58 15.6**	**-0.7**
FNA				*i* SG	**Sg**	**08 28.7**	**-0.1**
FNA	**Florina**	**0.97**	**110**	P	**Pg**	**08 58 15.7**	**-0.5**
FNA				S	**Sg**	**08 58 28.5**	**-0.3**
FNA				AML	AML	08 58 32.6	
comp=E,902μm,0.3s							
FNA				AML	AML	08 58 39.5	
comp=N,1006μm,0.3s							
ULC	**Ulcinj**	**1.10**	**321**	*i* Pg	**Pg**	**08 58 18.2**	**-0.6**
ULC				*e*Sg	**Sn**	**08 58 35.1**	**-1.2**
ULC	**Ulcinj**	**1.10**	**321**	*i* Pg	**Pg**	**08 58 18.0**	**-0.8**
PENT	**Pentalofos**	**1.17**	**141**	P	**Pg**	**08 58 19.5**	**-0.7**
PENT				S	**Sg**	**08 58 35.8**	**+0.3**
PENT				AML	AML	08 58 47.7	
comp=N,308μm,0.6s							
PENT				AML	AML	08 58 49.3	
comp=E,271μm,0.5s							
SRN	**Sarande**	**1.24**	**186**	P	**Pn**	**08 58 23.2**	**+0.9**
SRN	**Sarande**	**1.24**	**186**	*i* PN	**Pn**	**08 58 23.4**	**+1.1**
SRN				*i* SN	**Sn**	**08 58 43.4**	**+3.7**
BCI	**Bajram Curri**	**1.25**	**356**	*i* PN	**Pn**	**08 58 22.2**	**-0.3**
BCI				*i* SN	**Sn**	**08 58 40.5**	**+0.4**
SKO	**Skopje**	**1.28**	**47**	*e*Pg	**Pg**	**08 58 22.1**	**-0.1**
SKO				*e*Sg	**Sn**	**08 58 40.8**	**+0.1**
SKO	**Skopje**	**1.28**	**47**	P	**Pg**	**08 58 22.6**	**+0.3**
SKO				S	**Sn**	**08 58 40.6**	**-0.1**
SKO	**Skopje**	**1.28**	**47**	*i* Pg	**Pg**	**08 58 22.6**	**+0.3**
SKO				*i* Sg	**Sn**	**08 58 40.7**	**-0.1**
SKO				*e*Lg	Lg	08 58 42.4	
comp=E,16nm,0.7s							
SKO				*e*Lg	Lg	08 58 43.0	
comp=N,19nm,0.3s							
DRME	**Dracevica, Mon**	**1.30**	**326**	⇑ *i* Pg	**Pg**	**08 58 22.2**	**-0.5**
DRME				*e*Sg	**Sn**	**08 58 42.9**	**+1.6**
KASA	**Kassiopi**	**1.38**	**188**	P	**Pg**	**08 58 24.2**	**0.0**
KEK	**Kerkira**	**1.43**	**192**	P	**Pg**	**08 58 25.6**	**+0.5**
KEK				S	**Sn**	**08 58 46.4**	**+2.0**
KEK	**Kerkira**	**1.43**	**192**	P	**Pg**	**08 58 25.5**	**+0.4**
KEK				AML	AML	08 58 50.1	
comp=N,191μm,0.5s							
KEK				AML	AML	08 58 55.8	
comp=E,300μm,0.4s							
KZN	**Kozani**	**1.46**	**123**	P	**Pn**	**08 58 25.6**	**+0.2**
KZN	**Kozani**	**1.46**	**123**	P	**Pn**	**08 58 25.1**	**-0.3**
KZN				AML	AML	08 58 52.2	
comp=E,322μm,0.4s							
KZN				AML	AML	08 58 53.6	
comp=N,258μm,0.4s							
KPRO	**Kipourio**	**1.47**	**142**	P	**Pn**	**08 58 24.2**	**-1.3**
KPRO	**Kipourio**	**1.47**	**142**	P	**Pn**	**08 58 24.6**	**-0.9**
KPRO	**Kipourio**	**1.47**	**142**	P	**Pn**	**08 58 24.4**	**-1.2**
KPRO				AML	AML	08 58 55.0	
comp=N,256μm,0.6s							
KPRO				AML	AML	08 59 02.5	
comp=E,371μm,0.8s							
PDG	**Podgorica**	**1.48**	**333**	*e*Pn	**Pn**	**08 58 25.0**	**-0.7**
PDG				*e*Sg	**Sn**	**08 58 47.8**	**+2.1**
PDG	**Podgorica**	**1.48**	**333**	*i* Pn	**Pn**	**08 58 25.2**	**-0.5**
TTG	**Podgorica**	**1.48**	**333**	⇑ *i* Pg	**Pb**	**08 58 25.9**	**-0.3**
TTG				*e*Sg	**Sn**	**08 58 48.1**	**+2.4**
PVY	**Plav**	**1.49**	**354**	⇑ *i* Pg	**Pn**	**08 58 25.6**	**-0.2**
PVY				*e*Sg	**Sn**	**08 58 47.9**	**+1.9**
BUM	**Brajici-Budva**	**1.52**	**321**	⇓ *i* Pg	**Pb**	**08 58 26.7**	**-0.2**
BUM				*e*Sg	**Sg**	**08 58 50.0**	**+3.2**
JAN	**Janina**	**1.54**	**160**	P	**Pn**	**08 58 25.8**	**-0.8**
MEV	**Metsovon**	**1.55**	**148**	P	**Pn**	**08 58 25.8**	**-0.9**
STIP	**Stip**	**1.62**	**68**	*i* Pn	**Pg**	**08 58 31.2**	**+2.4**
SCTE	**Santa Cesarea**	**1.67**	**232**	P	**Pb**	**08 58 28.5**	**-0.8**
GRG	**Griva**	**1.69**	**95**	P	**Pn**	**08 58 27.8**	**-0.7**
GRG	**Griva**	**1.69**	**95**	P	**Pn**	**08 58 28.2**	**-0.3**
GRG	**Griva**	**1.69**	**95**	*i* Pn	**Pn**	**08 58 28.4**	**-0.2**
GRG	**Griva**	**1.69**	**95**	P	**Pn**	**08 58 28.3**	**-0.2**
CEME	**Cevo**	**1.71**	**327**	⇓ *i* Pn	**Pb**	**08 58 30.1**	**0.0**
CEME				*e*Sn	**Sg**	**08 58 54.5**	**+1.7**
BEY	**Berane**	**1.77**	**353**	*i* Pn	**Pb**	**08 58 30.6**	**-0.5**
IVA	**Berane**	**1.77**	**353**	⇓ *i* Pn	**Pb**	**08 58 30.9**	**-0.2**
IVA				*e*Sn	**Sg**	**08 58 54.9**	**+0.3**
KOME	**Kolasin**	**1.80**	**344**	⇑ *i* Pn	**Pb**	**08 58 31.1**	**-0.6**
KOME				*e*Sn	**Sg**	**08 58 56.0**	**+0.3**
VAY	**Valandovo**	**1.82**	**83**	*i* Pn	**Pn**	**08 58 30.7**	**+0.4**
VAY				*i* Sg	**Sg**	**08 58 57.2**	**+1.1**
VAY				*e*Lg	Lg	08 58 58.7	
comp=E,25nm,0.5s							
VAY				*e*Lg	Lg	08 58 59.2	
comp=N,40nm,0.5s							
HCY	**Herceg Novi**	**1.83**	**317**	⇓ *i* Pn	**Pb**	**08 58 31.4**	**-0.7**
HCY				*e*Sn	**Sg**	**08 58 56.9**	**+0.3**
NKME	**Niksic**	**1.89**	**331**	⇓ *i* Pn	**Pb**	**08 58 32.7**	**-0.4**
NKME				*e*Sn	**Sg**	**08 58 57.8**	**-0.6**
NKY	**Niksic**	**1.91**	**333**	⇓ *i* Pn	**Pb**	**08 58 33.0**	**-0.6**
NKY				*e*Sn	**Sg**	**08 58 58.5**	**+0.7**
KNT	**Kendrikon**	**2.06**	**88**	*i* Pn	**Pn**	**08 58 33.4**	**-0.1**
KNT	**Kendrikon**	**2.06**	**88**	P	**Pn**	**08 58 33.3**	**-0.3**
KNT				AML	AML	08 59 06.5	
comp=E,61μm,0.4s							
KNT				AML	AML	08 59 06.6	
comp=N,116μm,0.5s							
THL	**Klokotos Trika**	**2.09**	**137**	P	**Pn**	**08 58 34.7**	**+0.7**
THL				S	**Sn**	**08 59 01.3**	**+0.6**
THL	**Klokotos Trika**	**2.09**	**137**	P	**Pn**	**08 58 34.5**	**+0.5**
THL				AML	AML	08 59 06.4	
comp=N,97μm,0.6s							
THL				AML	AML	08 59 09.8	
comp=E,82μm,0.4s							
BARS	**Barje**	**2.09**	**35**	*e*Pn	**Pn**	**08 58 33.8**	**-0.3**
TREB	**Trebinje**	**2.10**	**320**	*e*Pn	**Pn**	**08 58 33.7**	**-0.5**
TREB				*e*Sn	**Sn**	**08 59 00.3**	**-0.7**
SJES	**Sjenica**	**2.15**	**356**	*e*Pn	**Pn**	**08 58 35.4**	**+0.5**
SJES				*e*Sn	**Sn**	**08 59 03.3**	**+0.9**
BRY	**Bratogost**	**2.16**	**326**	*e*Pn	**Pb**	**08 58 36.6**	**-1.2**
BRY				*e*Sn	**Sb**	**08 59 04.8**	**-0.4**
BOSS	**Bosilegrad**	**2.21**	**51**	*e*Pn	**Pn**	**08 58 36.3**	**+0.7**
BOSS				*e*Sn	**Sn**	**08 59 04.2**	**+0.6**
SELS	**Selova**	**2.22**	**18**	*e*Pn	**Pn**	**08 58 36.7**	**+0.9**
HORT	**Hortiatis**	**2.28**	**102**	P	**Pn**	**08 58 36.7**	**+0.1**
PLE	**Pljevlja**	**2.29**	**345**	⇓ *i* Pn	**Pb**	**08 58 38.7**	**-1.3**
PLE				*e*Sn	**Sb**	**08 59 07.5**	**-1.4**
UPM	**Unac-Piva**	**2.29**	**336**	⇑ *i* Pn	**Pb**	**08 58 38.7**	**-1.4**
UPM				*e*Sn	**Sb**	**08 59 07.8**	**-1.2**
KKB	**Krupnik**	**2.31**	**70**	*i* Pn	**Pn**	**08 58 37.9**	**+0.9**
TSLK	**Tsoukalades, L**	**2.32**	**171**	P	**Pn**	**08 58 37.1**	**0.0**
LKD2	**Lefkada island**	**2.35**	**171**	P	**Pn**	**08 58 38.1**	**+0.5**
LKD2				S	**Sb**	**08 59 08.9**	**-1.7**
LKD2	**Lefkada island**	**2.35**	**171**	P	**Pn**	**08 58 37.8**	**+0.2**
EVGI	**Lefkada island**	**2.52**	**171**	P	**Pn**	**08 58 39.6**	**-0.3**
STON	**Ston**	**2.55**	**314**	*e*Pn	**Pn**	**08 58 39.9**	**-0.4**
STON				*e*Sn	**Sn**	**08 59 11.9**	**0.0**
STON	**Ston**	**2.55**	**314**	*e*Pn	**Pn**	**08 58 40.1**	**-0.2**
SRS	**Serrai**	**2.58**	**89**	*e*Pn	**Pn**	**08 58 40.0**	**-0.8**
SRS				*e*Sn	**Sn**	**08 59 12.2**	**-0.6**
AGG	**Agios Georgios**	**2.67**	**141**	P	**Pn**	**08 58 42.6**	**+0.7**
FSK	**Fiskardo**	**2.67**	**173**	P	**Pn**	**08 58 41.8**	**-0.1**
PVO	**Paravola**	**2.70**	**157**	P	**Pn**	**08 58 43.5**	**+1.0**
VTS	**Vitosha**	**2.73**	**56**	*e*Pn	**Pn**	**08 58 43.4**	**+0.4**
VTS				*e*Sn	**Sn**	**08 59 17.4**	**+0.6**
BOVS	**Bovan**	**2.76**	**24**	*e*Pn	**Pn**	**08 58 43.5**	**+0.3**
BOVS				*e*Sn	**Sn**	**08 59 17.6**	**+0.3**
GRUS	**Gruza**	**2.80**	**8**	*e*Pn	**Pn**	**08 58 43.9**	**+0.1**
ZAPS	**Zavoj**	**2.83**	**39**	*e*Pn	**Pn**	**08 58 44.4**	**+0.2**
ZAPS				*e*Sn	**Sn**	**08 59 20.0**	**+1.1**
ANX	**Ano Chora**	**2.85**	**151**	P	**Pn**	**08 58 45.5**	**+0.9**
VLS	**Valsamata**	**2.95**	**174**	P	**Pn**	**08 58 44.9**	**-0.9**
KFL	**Anninata**	**3.04**	**171**	P	**Pn**	**08 58 47.2**	**+0.2**
KALE	**Kalithea**	**3.11**	**150**	P	**Pn**	**08 58 48.1**	**-0.1**
LAKA	**Lakka**	**3.19**	**154**	P	**Pn**	**08 58 48.9**	**-0.3**
NVLJ	**Novalja**	**5.20**	**313**	*e*Pn	**Pn**	**08 59 17.2**	**+0.4**

*SGS **04** 09:02:20, 27.52N×34.60E, h11km, Ml3.3*
*IDC **04** 09:02:22.8±1.6, 27.84N×34.57E, h0km, mb3.7/6, mb1 3.7/9, mb1mx3.5/42, mbtmp3.6/9, ML3.1/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/38, Error ellipse: s-maj=29.2km s-min=18.9km az=101.0*
*GII **04** 09:02:27.9±0.0, 28.15N×34.94E, h5km, MD3.4/2*

ISC 04 09:02:24.8±2.1, 27.78N±0.09×34.77E±0.09, h16km±10km, n35, σ1.39/39, mb3.8/8, MS3.1/3, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSHS		**0.52**	**2**	P	**Pg**	**09 02 35.2**	**0.0**
RSHS				S	**Sn**	**09 02 45.4**	**-0.8**
KRABS	**KRABS**	**0.53**	**53**	P	**Pg**	**09 02 35.2**	**-0.3**
KRABS				S	**Sn**	**09 02 46.9**	**+0.4**
MWLHS	**Almuwaylih**	**0.66**	**92**	P	**Pg**	**09 02 35.4**	**-2.3**
MWLHS				S	**Sg**	**09 02 47.1**	**+0.6**
BDAS	**Al Bad'**	**0.71**	**24**	P	**Pg**	**09 02 38.1**	**-0.6**
HAQS	**Haql**	**1.27**	**6**	P	**Pn**	**09 02 46.3**	**-1.8**
HQLS		**1.54**	**9**	P	**Pn**	**09 02 51.4**	**-0.3**
EIL	**Elat**	**1.89**	**5**	Pg	**Pn**	**09 02 55.9**	**-0.6**
5.2nm,0.3s,baz=168,slow=9.2,SNR=21							
EIL				Lg	Lg	09 03 21.1	
13nm,0.3s,baz=7.1,slow=8.1,SNR=13							
EIL	**Elat**	**1.89**	**5**	Pn	**Pn**	**09 02 55.5**	**-1.0**
EIL				Sn	**Sn**	**09 03 17.3**	**-2.8**
EIL	**Elat**	**1.89**	**5**	P	**Pb**	**09 02 59.7**	**+0.7**
194nm,0.7s							
AQBJ	**Aqaba**	**1.96**	**7**	P	**Pn**	**09 02 57.1**	**-0.3**
476nm,0.6s							
MBRI	**Mt Berech**	**2.01**	**4**	Pn	**Pn**	**09 02 57.7**	**-0.6**
MBRI				Sn	**Sn**	**09 03 20.9**	**-2.3**
HRFI	**Mount Harif**	**2.26**	**6**	Pn	**Pn**	**09 03 00.6**	**-1.0**
HRFI	**Mount Harif**	**2.26**	**6**	P	**Pn**	**09 03 03.2**	**+1.6**
136nm,0.8s							
KRMI	**Paran Flat**	**2.33**	**359**	Pn	**Pn**	**09 03 02.2**	**-0.4**
PRNI	**Paran**	**2.57**	**4**	Pn	**Pn**	**09 03 05.7**	**-0.2**

PRNI				Sn	Sn	09 03 33.4	-3.5
HSNJ	Maan	2.60	18	P	Pn	09 03 06.7	+0.4
423nm,0.7s							
JDRJ	Daraweish	3.04	15	P	Pn	09 03 13.4	+0.9
179nm,0.9s							
LISJ	El Lisan	3.50	10	P	Pn	09 03 19.5	+0.9
38nm,0.6s							
GHAJ	Ghor Haditha	3.58	11	Pn	Pn	09 03 18.9	-0.8
YTIR	Yattir	3.58	5	Pn	Pn	09 03 19.7	-0.2
DSI	Dead Sea	3.82	8	Pn	Pn	09 03 23.2	+0.2
WALJ	Wala	3.88	13	P	Pn	09 03 24.9	+1.1
77nm,0.9s							
ASF	Jabal al Asfar	4.75	22	Pn	Pn	09 03 36.6	+0.7
0.5nm,0.3s,baz=0.0,slow=16,SNR=3.4							
ASF				Lg	Lg	09 04 55.2	
1.1nm,0.3s,baz=354,slow=5.6,SNR=3.4							
MMAI	Mount Meron Ar	5.25	6	Pn	Pn	09 03 43.6	+0.9
2.2nm,0.3s,baz=173,slow=15,SNR=4.8							
MMAI				LR	LR	09 06 01.7	
comp=Z,182nm,19.1s,baz=200,slow=42							
BRTR	Keskin Array B	11.95	356	Pn	Pn	09 05 16.2	+1.5
0.1nm,0.3s,baz=176,slow=10.0,SNR=2.3							
GEYT	Alibeck	22.02	57	P	P	09 07 20.4	+1.8
1.4nm,0.3s,baz=218,slow=14,SNR=2.9							
GEYT				LR	LR	09 17 59.7	
comp=Z,62nm,18.4s,baz=50,slow=42							
AKASG	Malin Array Be	23.28	351	P	P	09 07 30.4	-1.3
0.4nm,0.3s,baz=159,slow=8.6,SNR=6.9							
GERES	GERESS Array B	26.59	328	P	P	09 08 01.8	-0.6
0.4nm,0.3s,baz=134,slow=7.0,SNR=4.8							
DAVOX	Davos/Dischmat	27.24	321	LR	LR	09 20 38.9	
comp=Z,38nm,21.8s,baz=76,slow=40							
BRG	Berggiesshubel	27.95	331	e(P)	P	09 08 17.8	+3.3
3.6nm,1.0s							
TORD	Torodi Ar. Bea	34.10	251	LR	LR	09 23 20.9	
comp=Z,86nm,19.3s,baz=315,slow=37							
FINES	FINESS Array B	34.16	353	P	P	09 09 08.4	-0.6
1.3nm,0.7s,baz=146,slow=13,SNR=4.3							
KURBB	Kurchatov Arra	40.09	43	P	P	09 10 00.8	+1.3
1.6nm,0.8s,baz=257,slow=8.5,SNR=4.3							
MKAR	Makanchi Array	41.58	50	P	P	09 10 12.3	+0.3
0.4nm,0.7s,baz=251,slow=4.4,SNR=4.5							
ARCES	ARCESS Array B	42.14	355	P	P	09 10 15.5	-0.6
1.8nm,0.6s,baz=165,slow=7.5,SNR=5.9							

MAN 04 09:13:16.8, 6°.73N×124°.40E, h17km, mb4.0, ML2.7, MS2.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	0.26	146	eP	Pb	09 13 23.7	+0.8
SKMP				eS	Sb	09 13 28.4	+1.4
CTBH	Cotabato--PC H	0.51	343	⇑iP	Pb	09 13 27.6	+0.3
CTBH				i S	Sb	09 13 34.3	-0.1
BUKP	Musuan	1.32	30	eP	Pn	09 13 39.3	-1.1
BUKP				eS	Sb	09 13 58.4	+0.6
PAGZ	Pagadian	1.50	318	eP	Pn	09 13 41.8	-1.1
PAGZ				eS	Sb	09 14 03.1	+0.1

MAN 04 09:40:53.3, 7°.62N×124°.69E, h42km, mb3.7, ML2.5, MS2.0, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.45	54	eP	Pn	09 41 05.5	+1.9
BUKP				eS	Sn	09 41 15.6	+4.8
CTBH	Cotabato--PC H	0.59	229	⇓iP	Pn	09 41 06.9	+1.5
CTBH				i S	Sn	09 41 14.3	+0.4
CGP	Cagayan de Oro	0.83	0	⇑eP	Pn	09 41 09.1	+0.4
CGP				eS	Sn	09 41 29.6	+10
SKMP	Bagumbayan, Su	1.10	188	eP	Pn	09 41 10.2	-2.1
SKMP				eS	Sn	09 41 21.7	-4.6
DDMP	Don Marcelino,	1.81	146	eP	Pn	09 41 23.0	+0.9
DDMP				eS	Sn	09 41 44.6	+0.8

*IDC **04** 09:45:35.0±3.1, 53°.60N×87°.87E, h0km, mb1 3.3/2, mb1mx3.0/45, mbtmp3.3/2, ML2.9/2, Error ellipse: s-maj=26.8km s-min=15.5km az=64.0*

KRAR 04 09:45:32.4±0.1, 53°.62N×87°.77E, M2.5, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.78	282	i		09 57 39.1	
baz=97,slow=333,SNR=2.2							
ZALV	Zalesovo Beam	1.78	282	Pg	Pg	09 46 08.7	+2.2
4.4nm,0.3s,baz=100,slow=14,SNR=32							
ZALV				Lg	Lg	09 46 33.6	
4.3nm,0.3s,baz=102,slow=24,SNR=8.0							
KURBB	Kurchatov Arra	6.43	246	Pn	Pn	09 47 11.6	+3.3
0.2nm,0.3s,baz=62,slow=14,SNR=17							
KURBB				Lg	Lg	09 49 01.1	
0.1nm,0.3s,baz=65,slow=33,SNR=10							
MKAR	Makanchi Array	7.68	209	Pn	Pn	09 47 30.1	+4.7
0.2nm,0.3s,baz=30,slow=14,SNR=4.4							
MKAR				Sn	Sn	09 48 55.8	+2.6
0.2nm,0.3s,baz=32,slow=22,SNR=5.7							
MKAR				Lg	Lg	09 49 36.9	
0.1nm,0.3s,baz=35,slow=30,SNR=4.0							

*IDC **04** 09:51:46.5±0.8, 10°.51N×145°.77E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.0/41, mbtmp4.1/14, ML5.1/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/38, Error ellipse: s-maj=26.9km s-min=15.9km az=85.0*
*ISCJB **04** 09:51:47.9±0.4, 10°.49N±0°.04×145°.65E±0°.10, h20km, mb4.2/28, MS3.2/3, Error ellipse: s-maj=14.0km s-min=5.3km az=3.5*
*NEIC **04** 09:51:51.5±1.7, 10°.46N×145°.64E, h32km±4km, mb4.5/15, Error ellipse: s-maj=21.5km s-min=14.9km az=100.0*

ISC 04 09:51:49.3±0.6, 10°.48N±0°.06×145°.77E±0°.10, h20km, n48, σ1§13/47, mb4.4/28, MS3.0/3, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.22	344	Pn	Pn	09 52 37.4	-1.3
237nm,0.3s,baz=80,slow=4.0,SNR=153							
GUMO				Sn	Sn	09 53 13.9	-2.6
262nm,0.3s,baz=201,slow=22,SNR=13							
GUMO				LR	LR	09 53 46.0	
comp=Z,297nm,20.9s,baz=192,slow=38							
GUMO	Guam	3.22	344	ePn	Pn	09 52 37.4	-1.3
GUMO				eSn	Sn	09 53 14.5	-2.0
ANA2	Anatahan	5.83	359	ePn	Pn	09 53 16.2	+1.5
ANA2				eSn	Sn	09 54 21.4	+0.3
SARN	Sarigan	6.19	0	ePn	Pn	09 53 20.1	+0.5
SARN				eSn	Sn	09 54 27.9	-1.9
PATS	Pohnpei	12.91	105	ePn	Pn	09 54 49.4	-2.4
JAY	Jayapura	13.86	202	LR	LR	09 59 16.2	
comp=Z,84nm,18.2s,baz=284,slow=32							
H11N1	WAKE ISLAND Hy	22.34	63	T	T	10 19 51.2	
baz=248,slow=74,SNR=119							
H11N2	WAKE ISLAND Hy	22.35	63	T	T	10 20 14.8	
baz=248,slow=74,SNR=38							
H11N3	WAKE ISLAND Hy	22.36	63	T	T	10 19 52.6	
baz=248,slow=74,SNR=139							
JOW	Kunigami	23.18	317	P	P	09 56 55.3	+0.5
0.3nm,0.3s,baz=144,slow=18,SNR=4.0							
JHJ	Hachijo jima 2	23.20	347	P	P	09 56 53.2	-1.8
41nm,0.7s,baz=63,slow=14,SNR=2.8							
HNR	Honiara	24.29	144	LR	LR	10 04 57.4	
comp=Z,50nm,20.4s,baz=292,slow=32							
LUWI	Luwuk	25.59	245	eP	P	09 57 16.9	-0.5
18nm,0.8s							
JNU	Nakatsue	26.38	331	P	P	09 57 25.0	+0.5
12nm,0.9s,baz=67,slow=11,SNR=5.0							
JNU	Nakatsue	26.38	331	eP	P	09 57 24.5	+0.1
17nm,1.1s							
MJAR	Matsushiro Arr	26.84	346	P	P	09 57 27.1	-1.5
1.7nm,0.5s,baz=169,slow=10,SNR=8.8							
MJAR				LR	LR	10 08 37.7	
comp=Z,43nm,18.5s,baz=170,slow=38							
MAJO	Matsushiro	26.84	346	eP	P	09 57 28.0	-0.5
6.3nm,0.7s							
MJB9	Matsu-Tunnel	26.84	346	eP	P	09 57 28.6	0.0
6.4nm,0.7s							
SSLB	Suanglung	27.10	302	eP	P	09 57 31.6	+0.5
16nm,0.9s							
MTN	Manton Dam	27.35	212	eP	P	09 57 32.5	-0.8
4.9nm,1.0s							
KSRS	Korea Array	31.30	332	P	P	09 58 08.8	+0.7
2.3nm,0.6s,baz=139,slow=9.4,SNR=15							
WRAB	Tennant Creek	32.24	200	eP	P	09 58 16.2	-0.5
WB2	Warramunga Arr	32.25	200	eP	P	09 58 17.1	+0.5
17nm,1.3s							
WR1	Warramunga Arr	32.26	200	eP	P	09 58 16.9	+0.1
WRA	Warramunga Arr	32.26	200	P	P	09 58 16.9	+0.1
1.9nm,0.6s,baz=8.5,slow=12,SNR=11							
ASAR	Alice Springs	35.86	199	P	P	09 58 48.1	0.0
0.9nm,0.7s,baz=19,slow=6.8,SNR=11							
KLR	Kul'dur	40.36	346	P	P	09 59 26.0	+0.4
1.8nm,0.7s,baz=190,slow=10,SNR=5.8							
BBOO	Buckleboo	44.03	192	eP	P	09 59 54.3	-1.4
28nm,1.5s							
FORT	Forrest	44.41	202	eP	P	09 59 58.8	+0.1
11nm,0.6s							
CMAR	Chiang Mai Arr	45.93	286	P	P	10 00 11.4	+0.3
0.7nm,0.3s,baz=101,slow=4.7,SNR=5.0							
SONA0	Songino Array	49.78	326	eP	P	10 00 42.4	+1.6
SONM	Songino Array	49.78	326	P	P	10 00 42.4	+1.6
2.5nm,0.7s,baz=142,slow=9.0,SNR=12							
SONM				LR	LR	10 20 04.7	
comp=Z,46nm,21.1s,baz=179,slow=34							
ADK	Adak	51.31	29	eP	P	10 00 53.1	+1.1
4.5nm,0.7s							
TLY	Talaya	53.45	329	eP	P	10 01 06.9	-1.1
4.9nm,0.8s							
MK32	Makanchi Array	64.34	317	eP	P	10 02 23.3	-0.5
MKAR	Makanchi Array	64.34	317	P	P	10 02 23.3	-0.5
1.2nm,0.7s,baz=92,slow=9.5,SNR=7.3							
MAKZ	Makanchi	64.56	317	eP	P	10 02 26.7	+1.5
2.5nm,0.6s							
ZALV	Zalesovo Beam	64.66	325	P	P	10 02 26.0	+0.4
1.3nm,0.5s,baz=128,slow=8.4,SNR=2.9							
ZAA1	Zalesovo Array	64.66	325	eP	P	10 02 26.0	+0.4
KURK	Kurchatov	67.53	321	eP	P	10 02 44.9	+0.8
3.3nm,0.6s							
ILAR	Eielson Array	71.00	25	P	P	10 03 04.7	-0.7
0.5nm,0.5s,baz=249,slow=6.1,SNR=10							
ILB	Eielson Array	71.00	25	eP	P	10 03 05.1	-0.3
1.8nm,0.8s							
DOT	Dot Lake	71.91	26	eP	P	10 03 11.8	+0.9
2.3nm,1.0s							
YKA	Yellowknife Ar	85.20	27	P	P	10 04 25.0	+0.9
0.2nm,0.5s,baz=285,slow=5.8,SNR=3.6							
YKB5	Yellowknife Ar	85.20	27	eP	P	10 04 25.0	+0.9
NV01	Mina Array Sit	88.16	51	eP	P	10 04 41.0	+1.5
NVAR	Mina Array Bea	88.16	51	P	P	10 04 41.0	+1.5
0.3nm,0.5s,baz=255,slow=8.1,SNR=4.1							
LPAZ	La Paz	146.54	104	PKPbc	PKPab	10 11 32.2	+0.1
0.5nm,0.4s,baz=45,slow=2.9,SNR=4.2							

*IDC **04** 09:55:04.3±1.3, 8°.44S×163°.66E, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.8/36, mbtmp3.8/11, ML3.9/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/37, Error ellipse: s-maj=45.0km s-min=19.1km az=147.0*
*NEIC **04** 09:55:05.5±2.4, 8°.55S×163°.59E, h10km±1km, mb4.5/8, Error ellipse: s-maj=19.5km s-min=14.0km az=127.0*
*ISCJB **04** 09:55:07.4±0.5, 8°.55S±0°.09×163°.54E±0°.07, h33km, mb4.0/17, MS3.4/2, Error ellipse: s-maj=14.4km s-min=8.8km az=152.2*

ISC 04 09:55:09.1±0.7, 8°.5S±0°.1×163°.66E±0°.08, h35km, n37, σ1§40/29, mb4.0/17, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.77	256	eP	Pn	09 56 09.0	+4.2
HNR	Honiara	3.77	256	Pn	Pn	09 56 04.5	-0.3
8.4nm,0.3s,baz=142,slow=14,SNR=2.5							
HNR				Sn	Sn	09 56 50.8	+2.7
48nm,0.3s,baz=212,slow=19,SNR=4.2							
HNR	Honiara	3.77	256	ePn	Pn	09 56 04.5	-0.3
HNR				eSn	Sn	09 56 46.3	-1.8
RABL	Rabaul	12.20	290	ePn	Pn	09 57 59.8	-0.8
DZM	Mont Dzumac	13.74	169	LR	LR	10 02 53.4	
comp=Z,139nm,18.5s,baz=36,slow=34							
PMG	Port Moresby	16.32	266	LR	LR	10 04 40.7	
comp=Z,192nm,18.0s,baz=150,slow=35							
H11S2	WAKE ISLAND Hy	27.01	6	T	T	10 29 19.0	
baz=188,slow=76,SNR=53							
H11S3	WAKE ISLAND Hy	27.01	6	T	T	10 29 43.0	
baz=188,slow=76,SNR=32							
H11S1	WAKE ISLAND Hy	27.03	6	T	T	10 29 20.3	
baz=188,slow=76,SNR=35							
H11N1	WAKE ISLAND Hy	28.24	6	T	T	10 31 07.8	
baz=188,slow=76,SNR=6.0							
H11N3	WAKE ISLAND Hy	28.25	6	T	T	10 30 57.8	
baz=188,slow=76,SNR=4.5							
H11N2	WAKE ISLAND Hy	28.26	6	T	T	10 31 09.0	
baz=188,slow=76,SNR=6.6							
WRAB	Tennant Creek	30.53	245	eP	P	10 01 17.0	-2.4
3.3nm,0.9s							
WB2	Warramunga Arr	30.53	245	eP	P	10 01 17.1	-2.4
5.9nm,1.1s							
WR1	Warramunga Arr	30.54	245	eP	P	10 01 19.9	+0.3
WRA	Warramunga Arr	30.54	245	P	P	10 01 19.9	+0.3
1.4nm,0.8s,baz=76,slow=8.9,SNR=4.0							
AS31	Alice Springs	32.21	239	eP	P	10 01 33.8	-0.4
0.6nm,1.0s							
ASAR	Alice Springs	32.21	239	P	P	10 01 35.0	+0.8
0.6nm,1.0s,baz=72,slow=9.8,SNR=3.2							
BKZ	Black Stump Fm	32.62	161	eP	P	10 01 37.2	-0.4
9.2nm,1.1s							
BBOO	Buckleboo	35.16	223	eP	P	10 01 59.9	+0.1
9.4nm,1.1s							
DAV	Davao City (W)	40.99	291	LR	LR	10 19 20.3	
comp=Z,43nm,19.2s,baz=105,slow=36							
PSA00	Pilbara Seismi	44.09	248	eP	P	10 03 13.0	-1.3
8.4nm,1.1s							
KKM	Kota Kinabalu	49.46	285	eP	P	10 03 56.0	-0.5
14nm,1.0s							
ASAJ	Asahikawa	55.76	342	P	P	10 04 43.2	+0.8
2.7nm,0.6s,baz=332,slow=18,SNR=2.5							
PETK	Petropavlovsk-	61.60	356	LR	LR	10 27 56.1	
comp=Z,26nm,19.9s,baz=178,slow=32							
CMAR	Chiang Mai Arr	69.22	293	P	P	10 06 13.8	+0.8
0.5nm,0.3s,baz=102,slow=8.4,SNR=2.8							
SONA0	Songino Array	75.43	324	eP	P	10 06 49.8	+0.2
SONM	Songino Array	75.43	324	P	P	10 06 49.8	+0.2
0.3nm,0.3s,baz=123,slow=5.3,SNR=2.9							
QSPA	South Pole Qui	81.47	180	eP	P	10 07 23.0	+0.4
ILAR	Eielson Array	81.81	19	P	P	10 07 23.7	-0.5
0.4nm,0.6s,baz=257,slow=5.0,SNR=4.9							
NV01	Mina Array Sit	86.00	50	eP	P	10 07 47.9	+1.4
NVAR	Mina Array Bea	86.00	50	P	P	10 07 47.9	+1.4
1.2nm,1.1s,baz=241,slow=8.9,SNR=4.0							
MK32	Makanchi Array	90.28	317	eP	P	10 08 05.6	-0.8
MKAR	Makanchi Array	90.28	317	P	P	10 08 05.6	-0.8
0.4nm,0.6s,baz=69,slow=7.9,SNR=2.7							
PDAR	Pinedale Array	93.37	47	P	P	10 08 21.6	+0.5
0.5nm,0.8s,baz=349,slow=1.5,SNR=3.7							
YKA	Yellowknife Ar	93.69	27	P	P	10 08 21.5	-0.3
0.2nm,0.6s,baz=257,slow=5.6,SNR=3.1							
YKB5	Yellowknife Ar	93.69	27	eP	P	10 08 21.5	-0.3

*ISCJB **04** 10:33:00.8±0.4, 17°.69S±0°.03×69°.59W±0°.05, h161km±3km, mb4.1/13, Error ellipse: s-maj=8.1km s-min=5.1km az=2.7*
*SJA **04** 10:33:00.2±1.2, 17°.66S×69°.74W, h164km±5km, ML4.2, MW4.8*
*GUC **04** 10:33:02.3±0.6, 17°.78S×69°.70W, h151km±4km, ML4.2*
*IDC **04** 10:33:02.8±0.7, 17°.64S×69°.38W, h159km±5km, mb3.6/11, mb1 3.8/16, mb1mx3.7/29, mbtmp4.1/16, Error ellipse: s-maj=12.4km s-min=11.1km az=127.0*

ISC 04 10:33:01.7±0.5, 17°.67S±0°.04×69°.52W±0°.06, h153km±4km, n51, σ1§63/81, mb3.8/13, 1C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.66	179	iP	Pn	10 33 25.8	+0.8
PB16				i S	Sn	10 33 43.7	+0.9
PB16	IPOC Station P	0.66	179	eP	Pn	10 33 25.7	+0.8
PB16				i S	Sn	10 33 43.7	+0.9
PB12	IPOC Station P	1.21	219	iP	Pn	10 33 28.0	-0.7
PB12				i S	Sn	10 33 48.2	-1.3
PB12	IPOC Station P	1.21	219	eP	Pn	10 33 27.9	-0.9
PB12				i S	Sn	10 33 47.8	-1.6
PB12				IAML		10 33 48.8	
comp=N,4μm,0.1s							
MNMCX	Minye Minye	1.45	183	iP	Pn	10 33 32.0	+0.7
MNMCX				i S	Sn	10 33 54.8	+0.7
MNMC	Minye Minye	1.45	183	eP	Pn	10 33 31.6	+0.3
MNMC				eS	Sn	10 33 54.0	-0.1
MNMC				IAML		10 34 02.3	
comp=E,4μm,0.5s							
LPAZ	La Paz	1.92	44	P	Pn	10 33 37.4	+0.7
comp=E,238nm,0.3s,baz=241,slow=6.0,SNR=6121							
LPAZ				LR	LR	10 33 54.4	
comp=E,34nm,21.4s,baz=254,slow=29							
LPAZ				S	Sn	10 34 03.2	-0.3
comp=E,18nm,0.3s,baz=345,slow=20,SNR=2.8							
LPAZ	La Paz	1.92	44	iP	Pn	10 33 37.5	+0.7
PSGC	Pisagua	2.00	196	eP	Pn	10 33 36.7	-0.4
PSGC				i S	Sn	10 34 02.6	-1.8
PSGCX	Pisagua	2.00	196	iP	Pn	10 33 36.9	-0.3
PSGCX				i S	Sn	10 34 02.5	-1.9
GO01	Chusmiza	2.01	171	⇓iP	Pn	10 33 39.1	+1.4
GO01				eS	Sn	10 34 06.4	+1.1
PB11	IPOC Station P	2.08	183	iP	Pn	10 33 38.7	+0.6
PB11				i S	Sn	10 34 06.4	+0.1
PB11	IPOC Station P	2.08	183	eP	Pn	10 33 38.6	+0.5
PB11				i S	Sn	10 34 06.0	-0.2
PB08	IPOC Station P	2.48	172	iP	Pn	10 33 44.6	+1.4
PB08				i S	Sn	10 34 16.0	+0.9
PB08	IPOC Station P	2.48	172	eP	Pn	10 33 44.5	+1.4
PB08				i S	Sn	10 34 16.1	+0.9
PB08				IAML		10 34 19.9	
comp=N,871nm,0.8s							
PB01	IPOC Station P	3.35	179	⇑iP	Pn	10 33 53.9	+0.1
PB01				i S	Sn	10 34 32.2	-2.0
PB02	IPOC Station P	3.65	185	iP	Pn	10 33 57.7	+0.2
PB02				i S	Sn	10 34 39.3	-1.7
PB03	IPOC Station P	4.36	183	iP	Pn	10 34 07.0	+0.1
PB03				i S	Sn	10 34 55.3	-2.4
PB04	IPOC Station P	4.67	187	iP	Pn	10 34 10.5	-0.6
PB04				i S	Sn	10 35 01.2	-3.9
LVC	Limon Verde	4.95	173	P	Pn	10 34 14.6	-0.2
comp=N,13nm,0.3s,baz=44,slow=12,SNR=88							
LVC				S	Sn	10 35 10.1	-1.7
comp=N,47nm,0.3s,baz=357,slow=9.9,SNR=51							
PB06	IPOC Station P	5.01	181	iP	Pn	10 34 15.1	-0.4
PB06				i S	Sn	10 35 08.7	-4.3
PB15	IPOC Station P	5.51	180	iP	Pn	10 34 21.6	-0.5
PB15				i S	Sn	10 35 22.0	-2.9
YJA	Yavi	5.86	141	iP	Pn	10 34 28.4	+1.4
YJA				i S	Sn	10 35 35.8	+2.2
PB10	IPOC Station P	5.89	189	iP	Pn	10 34 25.4	-1.6
PB10				i S	Sn	10 35 29.5	-4.3
HJA	Humahuaca	6.72	146	iP	Pn	10 34 39.7	+1.3
HJA				IAML		10 34 43.2	
comp=Z,50nm,0.4s							
HJA				i S	Sn	10 35 54.1	-0.2
AZAP	Zapla	7.73	148	iP	Pn	10 34 50.8	-1.0
AZAP				i S	Sn	10 36 14.2	-4.1
AZAP				IAML		10 36 19.9	
comp=Z,15nm,0.4s							
SIV	San Ignacio	8.26	80	P	Pn	10 34 56.6	-2.1
comp=Z,10nm,0.3s,baz=280,slow=9.4,SNR=104							
SIV				S	Sn	10 36 25.5	-5.2
comp=Z,1.6nm,0.3s,baz=348,slow=23,SNR=6.7							
NNA	Nana	9.06	308	P	Pn	10 35 07.0	-2.3
comp=Z,2.1nm,0.3s,baz=102,slow=9.3,SNR=6.0							
NNA				S	Sn	10 36 40.0	-10
comp=Z,4.0nm,0.3s,baz=55,slow=22,SNR=6.1							
CFA	Coronel Fontan	13.92	175	P	Pn	10 36 11.7	-0.8
comp=Z,0.8nm,0.3s,baz=356,slow=14,SNR=11							
CPUP	Villa Florida	14.21	129	P	Pn	10 36 14.8	-1.3
comp=Z,0.1nm,0.3s,baz=287,slow=9.8,SNR=3.2							
PTGA	Pitinga	19.28	30	P	P	10 37 13.3	-1.5
comp=Z,3.0nm,0.3s,baz=309,slow=23,SNR=24							
BDFB	Brasilia	20.70	88	P	P	10 37 29.3	-1.0
comp=Z,4.7nm,0.4s,baz=272,slow=4.1,SNR=8.9							
PLCA	Paso Flores	23.00	182	P	P	10 37 53.7	+0.5
comp=Z,2.8nm,0.8s,baz=20,slow=12,SNR=7.3							
MDP	Montagnes des	28.10	38	P	P	10 38 38.2	-1.2
comp=Z,9.5nm,0.9s,baz=222,slow=8.3,SNR=4.1							
CMIG	Matias Romero	42.62	323	P	P	10 40 43.9	+0.7
comp=Z,1.5nm,0.7s,baz=157,slow=9.9,SNR=4.0							
TXAR	Lajitas Array	57.19	324	P	P	10 42 33.0	+0.1
comp=Z,0.3nm,0.5s,baz=152,slow=9.1,SNR=7.3							
TXAR				pP	pP	10 43 10.2	0.0
comp=Z,0.2nm,0.6s,baz=144,slow=7.8,SNR=2.2							
VNA3	Neumayer Olymp	63.87	162	P	P	10 43 19.3	+1.7
VNA1	Neumayer--Stat	64.07	161	P	P	10 43 21.0	+2.1
VNA2	Neumayer--Watz	64.44	161	P	P	10 43 23.1	+1.8
baz=303,slow=6.9							
SNAA	Sanae	66.07	161	P	P	10 43 33.5	+1.6
LIC	Lamto	67.94	76	eP	P	10 43 44.1	-0.4
comp=Z,54nm,1.0s							
TIC	Toumodi	68.10	75	eP	P	10 43 45.1	-0.5
KIC	Kosan Boka	68.25	75	eP	P	10 43 46.2	-0.3
comp=Z,38nm,0.7s							
DBIC	Dimbokro	68.26	75	P	P	10 43 46.3	-0.2
comp=Z,20nm,0.6s,baz=222,slow=6.0,SNR=25							
PDAR	Pinedale Array	70.53	330	P	P	10 44 00.2	0.0
comp=Z,0.2nm,0.7s,baz=140,slow=13,SNR=2.7							
PDAR				pP	pP	10 44 39.6	+0.9
comp=Z,0.2nm,0.6s,baz=112,slow=4.0,SNR=2.0							
NVAR	Mina Array Bea	72.14	322	P	P	10 44 11.2	+1.3
comp=Z,0.4nm,0.7s,baz=148,slow=5.9,SNR=4.4							
TORD	Torodi Ar. Bea	76.65	71	P	P	10 44 35.2	-1.0
comp=Z,7.8nm,0.6s,baz=253,slow=5.1,SNR=49							
TORD				pP	pP	10 45 16.8	+1.6
comp=Z,2.5nm,0.9s,baz=269,slow=4.9,SNR=2.7							
ESDC	Sonse

KSRS Korea Array 19.01 256 P Pn 10 39 59.4 +1.6
0.1nm,0.3s,baz=57,slow=12,SNR=4.0
H11N2 WAKE ISLAND Hy 27.93 147 T T 11 12 16.8
baz=337,slow=75,SNR=36
H11N1 WAKE ISLAND Hy 27.95 147 T T 11 12 18.9
baz=337,slow=75,SNR=16
H11N3 WAKE ISLAND Hy 27.95 147 T T 11 12 22.6
baz=337,slow=75,SNR=20
H11S1 WAKE ISLAND Hy 28.97 149 T T 11 13 36.2
baz=342
H11S3 WAKE ISLAND Hy 28.98 149 T T 11 13 39.4
baz=342,slow=74
H11S2 WAKE ISLAND Hy 28.99 149 T T 11 13 35.0
baz=342,slow=74
MKAR Makanchi Array 46.88 298 P **P** **10 44 02.5 -1.5**
0.4nm,0.5s,baz=74,slow=7.4,SNR=3.6
YKA Yellowknife Ar 53.44 35 P **P** **10 44 54.9 +1.6**
0.1nm,0.5s,baz=300,slow=6.5,SNR=2.6
FINES FINESS Array B 65.50 334 P **P** **10 46 13.7 -2.7**
0.5nm,0.6s,baz=55,slow=10,SNR=2.8
ASAR Alice Springs 69.73 197 P P 10 46 51.5 +8.0
0.6nm,0.9s,baz=14,slow=7.8,SNR=4.0

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*IDC **04** 10:39:38.6±1.8, 41°.77N×48°.38E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/31, mbtmp3.5/4, ML2.5/1, MS2.5/1, Ms1 2.5/1, ms1mx2.0/32, Error ellipse: s-maj=40.4km s-min=22.6km az=5.0*
*AZER **04** 10:39:43.9±0.2, 42°.03N×48°.23E, h32km, ml3.1/19, Error ellipse: s-maj=3.4km s-min=1.5km az=41.0*
*DRS **04** 10:39:44.4±0.0, 41°.95N×48°.40E, h18km, ML3.2/4*
*NORS **04** 10:39:45.4±0.0, 42°.00N×48°.09E, h22km, MPVA4.3*
*ISCJB **04** 10:39:46.6±0.3, 42°.05N±0°.02×48°.20E±0°.03, h24km±2km, mb3.6/7, Error ellipse: s-maj=4.0km s-min=2.2km az=147.4*
ISC 04 10:39:46.5±0.9,**42°.05N**±0°.02×**48°.26E**±0°.03,**h35**km±3km,
n85,σ1§59/143,**mb3.5/7**,**9C-12D**,**Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRN	**Derbent**	**0.06**	**113**	⇑*i*PG	**Pb**	**10 39 51.1**	**-1.2**
DRN				*e*S	**Sb**	**10 39 56.0**	**-0.2**
DRN				pmax	pmax		
	comp=Z,2μm,0.5s						
DRN	**Derbent**	**0.06**	**113**	*e*Pg	**Pb**	**10 39 51.1**	**-1.2**
	comp=Z,2μm,0.5s						
DRN				⇓*i*Sg	**Sb**	**10 39 56.4**	**+0.1**
	comp=Z,4μm,0.6s						
KSMR	**Kasumkent**	**0.46**	**192**	*e*PG	**Pb**	**10 39 55.5**	**-1.1**
KSMR				*e*S	**Sn**	**10 40 04.0**	**+0.3**
KSMR				pmax	pmax		
	comp=Z,472nm,0.1s						
KSMR	**Kasumkent**	**0.46**	**192**	*e*Pg	**Pb**	**10 39 55.5**	**-1.1**
	comp=Z,472nm,0.1s						
KSMR				*e*Sg	**Sn**	**10 40 04.0**	**+0.3**
	comp=Z,2μm,0.2s						
URKR	**Urkarakh**	**0.48**	**284**	⇓*e*PG	**Pb**	**10 39 55.0**	**-2.0**
URKR				*e*		10 40 03.0	
URKR	**Urkarakh**	**0.48**	**284**	*e*Pg	**Pb**	**10 39 55.0**	**-2.0**
URKR				*e*Sg	**Sb**	**10 40 03.0**	**-1.2**
QSAR	**Qusar**	**0.54**	**180**	P	**Pb**	**10 39 56.4**	**-1.4**
	SNR=88						
QSAR				S	**Sb**	**10 40 05.3**	**-0.2**
SGKR	**Sergokala**	**0.60**	**313**	*e*PG	**Pb**	**10 39 57.5**	**-1.4**
SGKR				*i* S	**Sn**	**10 40 07.0**	**-0.2**
SGKR				pmax	pmax		
	comp=Z,544nm,0.2s						
SGKR	**Sergokala**	**0.60**	**313**	*e*Pg	**Pb**	**10 39 57.5**	**-1.4**
SGKR				*i* Sg	**Sn**	**10 40 07.0**	**-0.2**
AKT	**Akhty**	**0.70**	**215**	⇓*i*PG	**Pn**	**10 39 58.5**	**-1.5**
AKT				*e*S	**Sb**	**10 40 08.4**	**-1.5**
AKT	**Akhty**	**0.70**	**215**	*i* Pg	**Pn**	**10 39 58.4**	**-1.5**
	comp=Z,545nm,0.2s						
AKT				⇓*i*Sg	**Sb**	**10 40 08.4**	**-1.5**
	comp=Z,3μm,0.3s						
QUBA	**Quba, Azerbaij**	**0.72**	**166**	P	**Pn**	**10 39 58.1**	**-2.1**
	SNR=16						
QUBA				S	**Sb**	**10 40 09.5**	**-0.9**
KMKR	**Kumukh**	**0.87**	**276**	*e*PG	**Pn**	**10 40 01.0**	**-1.4**
KMKR				*e*S	**Sb**	**10 40 14.5**	**-0.3**
KMKR				pmax	pmax		
	comp=Z,110nm,0.3s						
KMKR	**Kumukh**	**0.87**	**276**	*e*Pg	**Pn**	**10 40 01.0**	**-1.4**
KMKR				*e*Sg	**Sb**	**10 40 14.5**	**-0.3**
XNQ	**Khinaliq**	**0.88**	**186**	P	**Pn**	**10 40 02.5**	**-0.2**
	SNR=92						
XNQ				S	**Sn**	**10 40 14.4**	**+0.1**
GNBR	**Gunib**	**1.02**	**290**	⇑*e*PG	**Pn**	**10 40 03.5**	**-0.8**
GNBR				*e*		10 40 18.1	
GNBR				pmax	pmax		
	comp=Z,133nm,0.6s						
GNBR				smax	smax		
	comp=N,516nm,0.7s						
GNBR	**Gunib**	**1.02**	**290**	*e*Pg	**Pn**	**10 40 03.6**	**-0.8**
	comp=N,125nm,0.7s						
GNBR				⇓*e*Sg	**Sb**	**10 40 18.2**	**-0.8**
	comp=N,883nm,0.2s						
MAK	**Makhachkala**	**1.07**	**329**	*e*PG	**Pb**	**10 40 06.4**	**-0.1**
MAK				*e*		10 40 20.3	
MAK				pmax	pmax		
	comp=Z,90nm,0.4s						
MAK				smax	smax		
	comp=N,629nm,0.4s						
MAK				smax	smax		
	comp=N,838nm,0.5s						
MAK	**Makhachkala**	**1.07**	**329**	*e*Pg	**Pb**	**10 40 05.4**	**-1.1**
MAK				*e*Sg	**Sb**	**10 40 19.9**	**-0.2**
SIZA	**Siyzn**	**1.09**	**154**	P	**Pn**	**10 40 04.9**	**-0.4**
	SNR=7.0						
SIZA				S	**Sb**	**10 40 20.9**	**0.0**
ARKR	**Arakani**	**1.09**	**301**	*e*PG	**Pn**	**10 40 04.8**	**-0.5**
ARKR				*e*S	**Sb**	**10 40 20.0**	**-0.9**
ARKR				pmax	pmax		
	comp=Z,105nm,0.3s						
ARKR	**Arakani**	**1.09**	**301**	*e*Pg	**Pn**	**10 40 04.8**	**-0.5**
ARKR				*e*Sg	**Sb**	**10 40 20.0**	**-0.9**
BUJR	**Buynaksk**	**1.15**	**313**	PG	**Pn**	**10 40 06.5**	**+0.4**
BUJR				*e*S	**Sn**	**10 40 20.5**	**-0.2**
BUJR				pmax	pmax		
	comp=Z,81nm,0.2s						
BUJR	**Buynaksk**	**1.15**	**313**	*e*Pg	**Pn**	**10 40 06.5**	**+0.4**
BUJR				*e*Sg	**Sn**	**10 40 20.5**	**-0.2**
QBL	**Gabala**	**1.15**	**196**	P	**Pb**	**10 40 07.2**	**-0.8**
	SNR=7.3						
QBL				S	**Sb**	**10 40 22.1**	**-0.5**
SEKA	**Sheki**	**1.16**	**224**	PG	**Pn**	**10 40 05.9**	**-0.4**
SEKA	**Sheki**	**1.16**	**224**	P	**Pn**	**10 40 06.0**	**-0.4**
	SNR=53						
SEKA				S	**Sn**	**10 40 19.8**	**-1.2**
XNZR	**Khunzakh**	**1.25**	**293**	*e*PG	**Pb**	**10 40 08.6**	**-1.1**
XNZR				*e*S	**Sb**	**10 40 24.8**	**-0.9**
XNZR	**Khunzakh**	**1.25**	**293**	*e*Pg	**Pn**	**10 40 08.0**	**+0.3**
XNZR				*e*Sg	**Sb**	**10 40 24.7**	**-1.0**
IML	**Ismayilli**	**1.26**	**183**	P	**Pn**	**10 40 07.9**	**+0.2**
	SNR=3.7						
IML				S	**Sb**	**10 40 26.1**	**+0.4**
KRNR	**Karanay**	**1.27**	**308**	*i* PG	**Pn**	**10 40 08.0**	**+0.2**
KRNR				*i* S	**Sb**	**10 40 25.0**	**-1.0**
KRNR				pmax	pmax		
	comp=Z,26nm,0.2s						
KRNR	**Karanay**	**1.27**	**308**	*i* Pg	**Pn**	**10 40 08.0**	**+0.2**
KRNR				*i* Sg	**Sb**	**10 40 25.0**	**-1.0**
UNCR	**Uncukul**	**1.27**	**302**	*e*PG	**Pn**	**10 40 08.5**	**+0.7**
UNCR				*e*S	**Sb**	**10 40 26.5**	**+0.5**
UNCR				pmax	pmax		
	comp=Z,48nm,0.3s						
UNCR	**Uncukul**	**1.27**	**302**	*e*Pg	**Pn**	**10 40 08.5**	**+0.7**
UNCR				*e*Sg	**Sb**	**10 40 26.5**	**+0.5**
PQL	**Pirkuli**	**1.29**	**169**	P	**Pb**	**10 40 09.3**	**-1.0**
PQL				S	**Sb**	**10 40 27.0**	**+0.4**
ZKTA	**Zakatala**	**1.29**	**252**	P	**Pn**	**10 40 09.0**	**+0.9**
	SNR=11						
ZKTA				S	**Sb**	**10 40 26.9**	**+0.3**
ATGJ	**Altiaghaj**	**1.29**	**157**	P	**Pn**	**10 40 08.8**	**+0.6**
	SNR=9.4						
ATGJ				S	**Sb**	**10 40 27.6**	**+0.8**
LGD	**Lagodekhi**	**1.52**	**262**	P	**Pn**	**10 40 11.4**	**+0.2**
LGD				S	**Sb**	**10 40 35.0**	**+1.9**
LGD	**Lagodekhi**	**1.52**	**262**	*e*PG	**Pn**	**10 40 11.4**	**+0.2**
LGD				*e*S	**Sb**	**10 40 35.0**	**+1.9**
LGD	**Lagodekhi**	**1.52**	**262**	*e*Pg	**Pn**	**10 40 11.4**	**+0.2**
LGD				*e*Sg	**Sb**	**10 40 35.0**	**+1.9**
MNGR	**Mingechevir, A**	**1.55**	**215**	PG	**Pn**	**10 40 12.4**	**+0.8**
MNGR	**Mingechevir, A**	**1.55**	**215**	P	**Pn**	**10 40 12.5**	**+0.8**
MNGR				S	**Sb**	**10 40 33.1**	**-0.9**
DLMR	**Dylym**	**1.58**	**311**	PG	**Pb**	**10 40 14.0**	**-1.1**
DLMR				*e*S	**Sb**	**10 40 35.0**	**+0.3**
DLMR				pmax	pmax		
	comp=Z,69nm,0.1s						
DLMR	**Dylym**	**1.58**	**311**	*e*Pg	**Pb**	**10 40 14.0**	**-1.1**
DLMR				*e*Sg	**Sb**	**10 40 35.0**	**+0.3**
GBS	**Qobustan**	**1.60**	**161**	P	**Pn**	**10 40 12.5**	**+0.1**
GBS				S	**Sb**	**10 40 35.5**	**+0.1**
BTLR	**Botlikh**	**1.63**	**293**	*e*PG	**Pb**	**10 40 14.2**	**-1.8**
BTLR				*e*S	**Sb**	**10 40 35.5**	**-0.8**
BTLR	**Botlikh**	**1.63**	**293**	*e*Pg	**Pn**	**10 40 13.5**	**+0.7**
	comp=Z,32nm,0.6s						
BTLR				⇑*e*Sg	**Sb**	**10 40 35.4**	**-0.9**
	comp=Z,195nm,0.5s						
DDFL	**Dedoflistskaro**	**1.71**	**250**	P	**Pn**	**10 40 13.2**	**-0.7**
DDFL	**Dedoflistskaro**	**1.71**	**250**	PN	**Pn**	**10 40 13.2**	**-0.7**
DVE	**Vedeno**	**1.82**	**301**	⇓*e*PN	**Pb**	**10 40 17.0**	**-2.2**
DVE				*e*S	**Sb**	**10 40 41.5**	**-0.1**
DVE				pmax	pmax		
	comp=Z,59nm,0.3s						
DVE	**Vedeno**	**1.82**	**301**	*e*Pg	**Pn**	**10 40 16.9**	**+1.5**
DVE				*e*Sg	**Sn**	**10 40 39.0**	**+1.7**
ZRD	**Zardab**	**1.82**	**194**	P	**Pn**	**10 40 15.6**	**+0.3**
ZRD				S	**Sb**	**10 40 41.0**	**-0.7**
NDR	**Nardaran**	**1.96**	**138**	S	**Sb**	**10 40 44.1**	**-1.6**
BRDA	**Brd**	**1.97**	**205**	P	**Pn**	**10 40 18.2**	**+1.0**
BRDA				S	**Sb**	**10 40 43.5**	**-2.2**
GANJ	**Ganja**	**2.03**	**227**	PN	**Pn**	**10 40 18.0**	**-0.2**
GANJ	**Ganja**	**2.03**	**227**	P	**Pn**	**10 40 18.0**	**-0.2**
	SNR=18						
GANJ				S	**Sn**	**10 40 43.2**	**+0.9**
GROC	**Groznyy**	**2.15**	**303**	*e*PN	**Pn**	**10 40 20.5**	**+0.6**
GROC				pmax	pmax		
	comp=Z,43nm,0.3s						
GDB	**GEDABAY**	**2.31**	**236**	P	**Pn**	**10 40 22.0**	**-0.2**
	SNR=30						
GDB				S	**Sn**	**10 40 50.8**	**+1.3**
QZX	**Qazax, Azerbai**	**2.38**	**246**	P	**Pn**	**10 40 23.5**	**+0.4**
	SNR=20						
QZX				S	**Sn**	**10 40 53.8**	**+2.6**
TBLG	**Delisi**	**2.65**	**264**	P	**Pb**	**10 40 30.9**	**-2.3**
TBLG				S	**Sn**	**10 40 59.2**	**+1.6**
TBLG	**Delisi**	**2.65**	**264**	*e*PN	**Pb**	**10 40 30.9**	**-2.3**
TBLG				*e*S	**Sn**	**10 40 59.2**	**+1.6**
TBLG	**Delisi**	**2.65**	**264**	*e*Pn	**Pb**	**10 40 30.9**	**-2.3**
TBLG				*e*Sn	**Sn**	**10 40 59.2**	**+1.6**
KZRT	**Kazreti**	**2.97**	**258**	P	**Pn**	**10 40 31.2**	**+0.1**
KZRT				S	**Sn**	**10 41 06.5**	**+1.0**
KZRT	**Kazreti**	**2.97**	**258**	*e*PN	**Pn**	**10 40 31.2**	**+0.1**
KZRT				*e*S	**Sn**	**10 41 06.5**	**+1.0**
LACR	**Lac**	**3.03**	**286**	*e*PN	**Pn**	**10 40 34.1**	**+2.0**
LACR				*e*S	**Sn**	**10 41 09.4**	**+2.1**
LACR	**Lac**	**3.03**	**286**	*e*Pn	**Pn**	**10 40 34.1**	**+2.0**
LACR				*e*Sn	**Sn**	**10 41 08.4**	**+1.1**
KORR	**Kora**	**3.26**	**290**	*e*PN	**Pn**	**10 40 35.8**	**+0.6**
KORR				*e*S	**Sn**	**10 41 13.3**	**+0.5**
KORR	**Kora**	**3.26**	**290**	*e*Pn	**Pn**	**10 40 35.8**	**+0.6**
KORR				*e*Sn	**Sn**	**10 41 13.3**	**+0.5**
GNI	**Garni**	**3.27**	**236**	⇓*e*PN	**Pn**	**10 40 36.9**	**+1.5**
GNI	**Garni**	**3.27**	**236**	*e*Pn	**Pn**	**10 40 36.9**	**+1.5**
LRK	**Lerik**	**3.41**	**179**	S	**Sn**	**10 41 19.9**	**+3.3**
KBZ	**Khabaz**	**4.28**	**295**	Pn	**Pn**	**10 40 50.8**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=68,slow=19,SNR=3.5						
KBZ				Sn	**Sn**	**10 41 37.3**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=342,slow=19,SNR=2.8						
GEYT	**Alibeck**	**8.61**	**115**	LR	LR	10 45 38.9	
	comp=Z,32nm,21.8s,baz=175,slow=43						
AKTO	**Aktyubinsk**	**10.76**	**35**	⇑P	**Pn**	**10 42 14.4**	**-3.5**
	comp=Z,2.8nm,1.0s						
AKTO				⇓S	Sn	10 44 05.8	-11
	comp=Z,1.6nm,0.6s						
AB31	**Akbulak array**	**10.89**	**45**	⇓P	**Pn**	**10 42 16.2**	**-3.5**
	comp=Z,0.3nm,0.4s,baz=235,slow=13,SNR=16						
AB31				⇓S	**Sn**	**10 44 12.3**	**-8.0**
	comp=Z,0.5nm,0.5s,baz=231,slow=25,SNR=4.1						
BRVK	**Borovoye**	**18.42**	**46**	⇑*e*P	**Pn**	**10 44 01.3**	**+2.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.9s						
AAK	**Ala-Archa**	**19.38**	**79**	⇑*e*P	**Pn**	**10 44 13.9**	**+3.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
VSU	**Vasula**	**21.27**	**328**	⇑*e*P	**P**	**10 44 33.5**	**+4.0**
VSU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURK	**Kurchatov**	**22.53**	**57**	⇓*e*P	**P**	**10 44 48.0**	**+4.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**23.56**	**333**	P	**P**	**10 44 51.3**	**-2.2**
	comp=Z,1.0nm,0.7s,baz=125,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	**24.64**	**67**	P	**P**	**10 45 01.9**	**-1.7**
	comp=Z,0.9nm,0.6s,baz=271,slow=8.0,SNR=6.2						
KHC	**Kasperske Hory**	**25.11**	**298**	⇑*e*P	**P**	**10 45 09.8**	**+1.9**
KHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DGZ	**Jazzator, Alta**	**28.06**	**61**	⇑*e*P	P	10 45 40.1	+5.5
ULN	**Ulaanbaatar**	**41.13**	**61**	⇓*e*P	**P**	**10 47 31.5**	**+4.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**49.49**	**249**	P	**P**	**10 48 30.0**	**-3.5**
	comp=Z,0.7nm,1.0s,baz=48,slow=7.2,SNR=2.7						

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*ISCJB **04** 10:50:09.9±0.5, 32°.44N±0°.03×35°.87E±0°.09, h10km, Error ellipse: s-maj=10.6km s-min=4.2km az=10.6*
*JSO **04** 10:50:09.1±0.4, 32°N±4°×3°6E±°, h10km, M2.5/8, Mjma2.6/8, ML1.9/5, MLv2.7/8*
*NSSC **04** 10:50:09.1±0.4, 32°.43N×35°.85E, h6km±7km, ML1.9*
ISC 04 10:50:09.5±1.0,**32°.45N**±0°.03×**35°.86E**±0°.06,**h10**km,**n12**,
σ0§40/15,**Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHMJ	**Saham**	**0.29**	**344**	P	**Pg**	**10 50 15.7**	**+0.4**
MMLI	**Mount Malkishu**	**0.37**	**268**	P	**Pb**	**10 50 17.8**	**-0.4**
HSUJ	**Al Zarqa**	**0.45**	**141**	P	**Pg**	**10 50 18.3**	**+0.1**
WALJ	**Wala**	**0.89**	**183**	P	**Pg**	**10 50 26.5**	**-0.1**
BRBR	**Barbar**	**0.96**	**5**	*e*P	**Pg**	**10 50 27.8**	**-0.2**
BRBR				*e*S	**Sb**	**10 50 41.4**	**+0.1**
BRBR				AML	AML	10 50 50.2	
	comp=N,45nm,0.6s						
BRBR				AML	AML	10 50 52.9	
	comp=E,26nm,0.4s						
TOTH	**TOTAH**	**1.03**	**28**	*e*P	**Pn**	**10 50 29.4**	**-0.6**
TOTH				*e*S	**Sb**	**10 50 43.3**	**+0.4**
TOTH				AML	AML	10 50 50.5	
	comp=E,31nm,0.4s						
TOTH				AML	AML	10 51 02.4	
	comp=N,23nm,0.8s						
RCY	**Rachaya**	**1.04**	**359**	*e*P	**Pg**	**10 50 29.3**	**-0.2**
QASN	**Qassioun**	**1.13**	**18**	*e*P	**Pb**	**10 50 30.9**	**-0.4**
QASN				*e*S	**Sb**	**10 50 46.3**	**+0.2**
QASN				AML	AML	10 50 50.4	
	comp=E,52nm,0.3s						
QASN				AML	AML	10 50 52.7	
	comp=N,61nm,0.4s						
GHAJ	**Ghor Haditha**	**1.17**	**192**	P	**Pb**	**10 50 31.5**	**-0.3**
LISJ	**El Lisan**	**1.25**	**195**	P	**Pg**	**10 50 33.3**	**-0.2**
JDRJ	**Daraweish**	**1.73**	**186**	P	**Pn**	**10 50 40.4**	**+0.7**
HWQ	**Hawqa**	**1.82**	**2**	*e*P	**Pb**	**10 50 43.5**	**+0.5**

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*NIED **04** 10:52:00.35°.90N×140°.00E, h65km, Mw3.7 Best double couple: M0=4.26000×10^14 NP1:φs=132.00000°, δ22.00000°, λ2.00000°. NP2:φs=39.00000°, δ89.00000°, λ112.00000°.*
*ISCJB **04** 10:52:51.5±0.4, 35°.80N±0°.03×140°.02E±0°.05, h66km±4km, mb3.6/11, Error ellipse: s-maj=6.6km s-min=4.8km az=168.5*
*JMA **04** 10:52:52.5±0.1, 35°.86N×140°.01E, h61km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs=43.00000°, δ82.00000°, λ113.00000°. NP2: φs=151.00000°, δ24.00000°, λ20.00000°. Principal axes: T Plg48.0000°, Azm337.0000°; N Plg23.0000°, Azm220.0000°; P Plg33.0000°, Azm114.0000°;*
JMA Felt II J1.
*IDC **04** 10:52:52.1±1.5, 35°.74N×140°.05E, h58km±15km, mb3.4/11, mb1 3.7/14, mb1mx3.5/34, mbtmp3.7/14, MS2.1/1, Ms1 2.1/1, ms1mx2.0/33 Error ellipse: s-maj=18.8km s-min=6.5km az=65.0*

ISC 04 10:52:52.5±0.8,**35°.85N**±0°.04×**140°.02E**±0°.05,**h60**km±7km,
n32,σ1§19/41,**mb3.8**/11,**2C-6D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.27**	**233**	⇑P	**Pn**	**10 53 03.5**	**+1.2**
JYT	**Yasato**	**0.40**	**20**	⇓P	**Pn**	**10 53 03.6**	**+0.1**
JYT				S	**Sn**	**10 53 11.8**	**+0.4**
JAG	**Ashikaga**	**0.74**	**321**	⇓P	**Pn**	**10 53 07.2**	**0.0**
JAG				S	**Sn**	**10 53 17.9**	**-0.1**
JRY	**Ryogami san**	**0.93**	**281**	⇓P	**Pn**	**10 53 09.8**	**+0.2**
JOD2	**Odawara 2**	**0.96**	**233**	⇓P	**Pn**	**10 53 09.6**	**-0.5**
JOD2				S	**Sn**	**10 53 21.6**	**-1.4**
JKT	**Katashina**	**1.11**	**326**	⇓P	**Pn**	**10 53 12.0**	**-0.1**
JKT				S	**Sn**	**10 53 26.8**	**+0.2**
BSO3	**Boso 3**	**1.12**	**159**	⇑P	**Pn**	**10 53 11.3**	**-0.5**
BSO3				S	**Sn**	**10 53 27.1**	**+0.9**
JIM2	**Oshima 3**	**1.23**	**203**	P	**Pn**	**10 53 12.3**	**-1.3**
JIM2				S	**Sn**	**10 53 27.5**	**-1.8**
JYN	**Shimob**	**1.25**	**254**	⇓P	**Pn**	**10 53 13.9**	**-0.1**
JYN				S	**Sn**	**10 53 29.1**	**-0.9**
JFNN	**Fujinakano**	**1.27**	**240**	P	**Pn**	**10 53 13.9**	**-0.2**
JFNN				S	**Sn**	**10 53 28.9**	**-1.4**
BSO1	**Boso 1**	**1.43**	**147**	P	**Pn**	**10 53 15.0**	**-0.7**
MJAR	**Matsushiro Arr**	**1.62**	**296**	P	**Pn**	**10 53 19.0**	**+0.1**
	12nm,0.3s,baz=100,slow=15,SNR=506						
MJAR				S	**Sn**	**10 53 39.4**	**+0.6**
	6.0nm,0.3s,baz=129,slow=17,SNR=12						
MAT	**Matsushiro**	**1.62**	**296**	P	**Pn**	**10 53 19.4**	**+0.5**
MAT				S	**Sn**	**10 53 38.6**	**-0.2**
JHJ	**Hachijo jima 2**	**2.73**	**184**	P	**Pn**	**10 53 33.1**	**-0.8**
	55nm,0.3s,baz=323,slow=23,SNR=131						
JHJ				S	**Sn**	**10 54 03.1**	**-2.7**
	209nm,0.3s,baz=80,slow=22,SNR=17						
JHJ				LR	LR	10 54 18.6	
	comp=Z,36nm,18.4s,baz=60,slow=33						
JNU	**Nakatsue**	**8.03**	**253**	P	**Pn**	**10 54 46.9**	**+0.4**
	0.3nm,0.3s,baz=56,slow=14,SNR=5.3						
ASAJ	**Asahikawa**	**8.49**	**13**	P	**Pn**	**10 54 51.9**	**-0.8**
	0.8nm,0.3s,baz=212,slow=12,SNR=6.9						
ASAJ				S	**Sn**	**10 56 23.2**	**-3.8**
	0.2nm,0.3s,baz=127,slow=20,SNR=2.2						
KSRS	**Korea Array**	**9.86**	**283**	P	**Pn**	**10 55 14.6**	**+3.2**
	0.3nm,0.3s,baz=102,slow=15,SNR=5.5						
H11N2	**WAKE ISLAND Hy 28.56 117**	T		T		11 28 25.6	
	baz=308,slow=75,SNR=9.5						
H11N1	**WAKE ISLAND Hy 28.56 117**	T		T		11 28 39.5	
	baz=308,slow=75,SNR=5.2						
H11N3	**WAKE ISLAND Hy 28.57 117**	T		T		11 28 41.6	
	baz=308,slow=75,SNR=10						
ZALV	**Zalesovo Beam**	**41.90**	**313**	P	**P**	**11 00 37.1**	**+0.2**
	1.5nm,0.4s,baz=103,slow=7.8,SNR=2.1						
MKAR	**Makanchi Array**	**43.81**	**303**	P	**P**	**11 00 52.4**	**0.0**
	1.5nm,0.8s,baz=87,slow=9.8,SNR=5.6						
ILAR	**Eielson Array**	**51.09**	**32**	P	**P**	**11 01 49.4**	**+0.8**
	0.7nm,0.7s,baz=271,slow=6.6,SNR=9.8						
WRA	**Warramunga Arr**	**55.75**	**186**	P	**P**	**11 02 21.6**	**-1.6**
	1.2nm,0.6s,baz=353,slow=6.2,SNR=16						
ASAR	**Alice Springs**	**59.47**	**187**	P	**P**	**11 02 49.7**	**+0.3**
	0.2nm,0.6s,baz=20,slow=12,SNR=4.6						
YKA	**Yellowknife Ar**	**65.39**	**29**	P	**P**	**11 03 28.9**	**+0.5**
	0.2nm,0.7s,baz=303,slow=5.8,SNR=2.9						
FINES	**FINESS Array B**	**69.34**	**332**	P	**P**	**11 03 53.0**	**-0.3**
	1.2nm,0.7s,baz=28,slow=6.3,SNR=4.0						
NOA	**NORSAR Array B**	**74.84**	**337**	P	**P**	**11 04 26.0**	**-0.3**
	0.5nm,0.4s,baz=41,slow=5.9,SNR=3.4						
NVAR	**Mina Array Bea**	**76.60**	**52**	P	**P**	**11 04 37.8**	**+0.8**
	0.3nm,0.7s,baz=285,slow=4.6,SNR=3.4						
PDAR	**Pinedale Array**	**79.30**	**45**	P	**P**	**11 04 51.6**	**-0.3**
	0.4nm,0.7s,baz=242,slow=3.2,SNR=4.7						
TXAR	**Lajitas Array**	**91.73**	**52**	P	**P**	**11 05 54.5**	**+0.6**
	0.2nm,0.6s,baz=346,slow=2.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**117.35**	**313**	PKP	**PKPdf**	**11 11 30.9**	**-1.0**
	0.2nm,0.5s,baz=5.7,slow=2.9,SNR=3.4						

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*ARO **04** 10:56:36.8, 9°N±96°×4°0E±8°8, h15km±99km, Ml3.7*
*AAE **04** 10:56:41.7±3.5, 9°.48N×39°.87E, h15km±10km*
*EAF **04** 10:56:41.7±4.2, 9°.48N×39°.87E, h15km±12km*
ISC 04 10:56:37.8±1.5,**9°.48N**±0°.05×**39°.99E**±0°.04,**h1**km±12km,
n21,σ0§98/36,**Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKE	**Ethiopia-Afar**	**0.27**	**294**	*i* P	**Pb**	**10 56 44.8**	**-0.9**
ANKE				*e*S	**Sb**	**10 56 50.4**	**-0.6**
ANKE	**Ethiopia-Afar**	**0.27**	**294**	*i* P	**Pb**	**10 56 44.9**	**-0.9**
ANKE				*i* S	**Sb**	**10 56 50.1**	**-0.8**
ANKE	**Ethiopia-Afar**	**0.27**	**294**	*i* P	**Pb**	**10 56 44.8**	**-0.9**
ANKE				*e*S	**Sb**	**10 56 50.4**	**-0.6**
AAE	**Adis Abeba**	**1.28**	**250**	*i* P	**Pb**	**10 57 02.6**	**-0.3**
AAE				*e*P	**Pb**	**10 57 02.6**	**-0.3**
AAE				*e*S	**Sg**	**10 57 18.4**	**-0.7**
AAE	**Adis Abeba**	**1.28**	**250**	*i* P	**Pb**	**10 57 02.6**	**-

Principal axes: T 2.7430, Plg70.0000°, Azm289.0000°; N 0.1020, Plg7.0000°, Azm39.0000°; P -2.8440, Plg18.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

ISC 04 11:00:10.3±0.4, 45°27'N±0'.03×151°00'E±0'.03, h34km±1km, h32km:pP-P, n2104, σ1942/1934, mb5.4/513, MS5.2/607, 169C-30D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.22**	**270**	*d iPN*	**Pn**	**11 00 45.0**	**+0.4**
KUR				*eS*	**Sb**	**11 01 14.4**	**-2.3**
KUR				pmax	pmax		
	comp=Z,6μm,2.2s						
KUR				pmax	pmax		
	comp=N,1μm,0.6s						
KUR				pmax	pmax		
	comp=E,1μm,0.6s						
KUR				pmax	pmax		
	comp=Z,4μm,0.6s						
KUR				smax	smax		
	comp=N,72μm,1.8s						
KUR				smax	smax		
	comp=E,25μm,2.0s						
KUR				smax	smax		
	comp=N,12μm,0.6s						
KUR				smax	smax		
	comp=E,6μm,0.9s						
KUR				MLR	MLR		
	comp=Z,89μm,14.0s						
KUR	**Kuril'sk**	**2.22**	**270**	*i* P	**Pn**	**11 00 46.0**	**+1.4**
KUR				AMB	AMB	11 00 47.9	
	comp=Z,2μm,0.3s						
KUR				*e*S	**Sb**	**11 01 14.2**	**-2.5**
KUR				A	A	11 01 19.9	
	comp=Z,10μm,0.5s						
KUR				A	A	11 01 19.9	
	comp=Z,6μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.87**	**253**	⇑*i*PN	**Pn**	**11 01 08.7**	**+1.4**
YUK				*i* S	**Sn**	**11 01 56.9**	**+5.3**
YUK				pmax	pmax		
	comp=Z,3μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.87**	**253**	*i* P	**Pn**	**11 01 08.0**	**+0.7**
YUK				AMB	AMB	11 01 17.0	
	comp=Z,739nm,0.5s						
YUK				AMB	AMB	11 01 17.0	
	comp=Z,2μm,0.5s						
YUK				AMB	AMB	11 01 17.0	
	comp=Z,2μm,0.5s						
YUK				*i* S	**Sn**	**11 01 53.2**	**+1.6**
YUK				A	A	11 02 00.0	
	comp=Z,4μm,0.6s						
YUK				A	A	11 02 00.0	
	comp=Z,6μm,0.6s						
LAGR	**Lagunnoye**	**3.92**	**254**	*d iPN*	**Pn**	**11 01 08.8**	**+0.9**
LAGR				*e*S	**Sn**	**11 01 56.5**	**+3.9**
LAGR				pmax	pmax		
	comp=Z,2μm,0.7s						
LAGR				pmax	pmax		
	comp=N,495nm,0.6s						
LAGR				pmax	pmax		
	comp=E,2μm,0.5s						
LAGR				smax	smax		
	comp=E,6μm,0.5s						
LAGR				smax	smax		
	comp=N,6μm,0.6s						
LAGR	**Lagunnoye**	**3.92**	**254**	*i* P	**Pn**	**11 01 09.1**	**+1.2**
LAGR				AMB	AMB	11 01 13.0	
	comp=N,495nm,0.7s						
LAGR				AMB	AMB	11 01 13.0	
	comp=N,2μm,0.7s						
LAGR				AMB	AMB	11 01 13.0	
	comp=N,2μm,0.7s						
LAGR				*e*S	**Sn**	**11 01 56.3**	**+3.6**
LAGR				A	A	11 02 03.0	
	comp=N,6μm,0.6s						
LAGR				A	A	11 02 03.0	
	comp=N,6μm,0.6s						
GRPR	**Tuman**	**3.95**	**253**	⇑*i*PN	**Pn**	**11 01 09.2**	**+0.8**
GRPR				*e*S	**Sn**	**11 01 57.3**	**+3.9**
GRPR				pmax	pmax		
	comp=Z,3μm,0.4s						
GRPR				pmax	pmax		
	comp=N,1μm,0.3s						
GRPR				pmax	pmax		
	comp=E,444nm,0.3s						
GRPR				smax	smax		
	comp=N,3μm,0.4s						
GRPR				smax	smax		
	comp=E,3μm,0.4s						
GRPR	**Tuman**	**3.95**	**253**	*i* P	**Pn**	**11 01 09.0**	**+0.6**
GRPR				AMB	AMB	11 01 19.0	
	comp=E,1μm,0.3s						
GRPR				AMB	AMB	11 01 19.0	
	comp=E,444nm,0.3s						
GRPR				AMB	AMB	11 01 19.0	
	comp=E,3μm,0.3s						
GRPR				*e*S	**Sn**	**11 01 57.0**	**+3.6**
GRPR				A	A	11 02 01.0	
	comp=E,3μm,0.4s						
GRPR				A	A	11 02 01.0	
	comp=E,3μm,0.4s						
GLVR	**Golovnino**	**4.21**	**251**	*e*PN	**Pn**	**11 01 13.2**	**+1.2**
GLVR				*e*S	**Sn**	**11 02 04.2**	**+4.3**
GLVR				pmax	pmax		
	comp=Z,3μm,0.5s						
GLVR				pmax	pmax		
	comp=N,391nm,0.3s						
GLVR				pmax	pmax		
	comp=E,173nm,0.3s						
GLVR				smax	smax		
	comp=N,5μm,0.3s						
GLVR				smax	smax		
	comp=E,885nm,0.3s						
GLVR	**Golovnino**	**4.21**	**251**	*e*P	**Pn**	**11 01 12.8**	**+0.8**
GLVR				AMB	AMB	11 01 15.0	
	comp=E,391nm,0.3s						
GLVR				AMB	AMB	11 01 15.0	
	comp=E,173nm,0.3s						
GLVR				AMB	AMB	11 01 15.0	
	comp=E,3μm,0.3s						
GLVR				*e*S	**Sn**	**11 02 03.3**	**+3.4**
GLVR				A	A	11 02 08.0	
	comp=E,5μm,0.3s						
GLVR				A	A	11 02 08.0	
	comp=E,885nm,0.3s						
NEM2	**Nemuro 2**	**4.23**	**245**	⇑P	**Pn**	**11 01 12.1**	**-0.1**
NEM2				*e*S	**Sn**	**11 01 59.0**	**-1.4**
JRA	**Rausu**	**4.41**	**254**	⇑P	**Pn**	**11 01 16.9**	**+2.2**
JNK	**Nakash**	**4.81**	**252**	P	**Pn**	**11 01 21.8**	**+1.6**
JNK				*e*S	**Sn**	**11 02 16.5**	**+1.9**
JAK	**Akkeshi**	**5.08**	**246**	⇑P	**Pn**	**11 01 23.9**	**0.0**
JAK				*e*S	**Sn**	**11 02 19.8**	**-1.5**
JTKR	**Abashiri--Toko**	**5.23**	**258**	⇑P	**Pn**	**11 01 28.4**	**+2.4**
JAR	**Ashorobuto**	**5.56**	**252**	⇑P	**Pn**	**11 01 32.5**	**+2.0**
JAR				*e*S	**Sn**	**11 02 35.9**	**+2.8**
JMP	**Maruseppu**	**5.60**	**260**	⇑P	**Pn**	**11 01 33.9**	**+2.8**
JOB	**Onbets**	**5.68**	**248**	⇑P	**Pn**	**11 01 33.1**	**+0.9**
JOB				*e*S	**Sn**	**11 02 34.9**	**-1.2**
JSE	**Soyaes**	**5.97**	**270**	⇑P	**Pn**	**11 01 39.4**	**+3.3**
YSS	**Yuzh-Sakhalins**	**5.98**	**289**	*e*Pn	**Pn**	**11 01 38.6**	**+2.4**
YSS				*e*Sn	**Sn**	**11 02 35.2**	**-8.2**
YSS	**Yuzh-Sakhalins**	**5.98**	**289**	*de*PN	**Pn**	**11 01 38.2**	**+2.0**
YSS				*e*S	**Sn**	**11 02 47.8**	**+4.4**
YSS				MLR	MLR		
	comp=Z,23μm,14.0s						
YSS	**Yuzh-Sakhalins**	**5.98**	**289**	*e*P	**Pn**	**11 01 39.5**	**+3.3**
YSS				AMB	AMB	11 01 49.1	
	comp=Z,290nm,1.0s						
YSS				AMB	AMB	11 01 49.5	
	comp=Z,2μm,6.0s						
YSS				*e*S	**Sn**	**11 02 48.0**	**+4.6**
YSS				AMS	AMS	11 03 51.0	
	comp=Z,20nm,18.0s						
YSS				AMS	AMS	11 03 51.0	
	comp=Z,27μm,18.0s						
YSS				AMS	AMS	11 03 51.0	
	comp=Z,39μm,18.0s						
JKK2	**Kamakawa 2**	**6.06**	**260**	⇑P	**Pn**	**11 01 40.5**	**+3.1**
JKA	**Kamikawa-asahi**	**6.10**	**262**	*e*P	**Pn**	**11 01 40.5**	**+2.5**
ASAJ	**Asahikawa**	**6.10**	**262**	P	**Pn**	**11 01 40.5**	**+2.5**
	comp=Z,31nm,0.3s,baz=67,slow=19,SNR=190						
ASAJ				LR	LR	11 04 09.2	
	comp=Z,35μm,21.3s,baz=90,slow=39						
ASAJ	**Asahikawa**	**6.10**	**262**	P	**Pn**	**11 01 41.3**	**+3.3**
JCH	**Churui**	**6.12**	**247**	P	**Pn**	**11 01 38.2**	**0.0**
JCH				*e*S	**Sn**	**11 02 46.0**	**-1.0**
JFR	**Furan**	**6.40**	**254**	P	**Pn**	**11 01 44.0**	**+1.9**
JFR				*e*S	Sn	11 03 03.6	+10
SKR	**Severo-Kuril's**	**6.41**	**31**	*e*PN	**Pn**	**11 01 42.6**	**+0.5**
SKR				pmax	pmax		
	comp=Z,933nm,0.8s						
SKR				MLR	MLR		
	comp=Z,26μm,16.0s						
SKR	**Severo-Kuril's**	**6.41**	**31**	*e*P	**Pn**	**11 01 42.0**	**-0.1**
SKR				AMB	AMB	11 01 49.0	
	comp=Z,933nm,0.8s						
SKR				*e*S	**Sn**	**11 02 53.6**	**-0.4**
SKR				A	A	11 03 35.0	
	comp=Z,2μm,0.9s						
SKR				A	A	11 03 35.0	
	comp=Z,284nm,0.9s						
JWK2	**Keihoku**	**6.42**	**274**	P	**Pn**	**11 01 47.0**	**+4.6**
JAB	**Ashibetsu**	**6.54**	**257**	P	**Pn**	**11 01 47.3**	**+3.4**
ERM	**Erimo**	**6.56**	**243**	*e*Pn	**Pn**	**11 01 45.7**	**+1.5**
ERM	**Erimo**	**6.56**	**243**	⇓*e*PN	**Pn**	**11 01 45.1**	**+0.9**
JEM	**Erimo**	**6.56**	**243**	P	**Pn**	**11 01 44.4**	**+0.2**
JSS	**Shosan**	**6.56**	**266**	P	**Pn**	**11 01 48.5**	**+4.2**
JNBK	**Urakawa-nobuka**	**6.68**	**246**	P	**Pn**	**11 01 45.3**	**-0.6**
JNBK				*e*S	**Sn**	**11 02 57.4**	**-3.3**
JBT2	**Biratori 2**	**6.71**	**251**	⇑P	**Pn**	**11 01 47.0**	**+0.7**
JHR	**Hokuryu**	**6.81**	**260**	P	**Pn**	**11 01 51.8**	**+4.1**
UGL	**Uglegorsk**	**7.18**	**305**	*e*PN	**Pn**	**11 01 56.0**	**+3.2**
UGL				pmax	pmax		
	comp=Z,2μm,3.6s						
UGL				pmax	pmax		
	comp=Z,696nm,1.1s						
UGL				MLR	MLR		
	comp=Z,17μm,13.0s						
UGL				MLR	MLR		
	comp=N,17μm,14.0s						
JEW	**Eniwo**	**7.30**	**254**	P	**Pn**	**11 01 56.4**	**+2.0**
PAU	**Pauzhetka**	**7.31**	**30**	*e*P	**Pn**	**11 01 56.0**	**+1.6**
JNB	**Noboribetsu**	**7.73**	**252**	P	**Pn**	**11 02 01.2**	**+0.9**
JNB				*e*S	**Sn**	**11 03 25.5**	**-1.0**
TYV	**Tymovskoe**	**7.91**	**318**	*e*PN	**Pn**	**11 02 05.4**	**+2.7**
TYV				*e*S	**Sn**	**11 03 37.8**	**+6.9**
TYV				pmax	pmax		
	comp=Z,171nm,1.3s						
TYV				pmax	pmax		
	comp=Z,2μm,2.8s						
TYV				smax	smax		
	comp=N,155nm,1.2s						
TYV				MLR	MLR		
	comp=Z,26μm,14.0s						
TYV	**Tymovskoe**	**7.91**	**318**	*e*P	**Pn**	**11 02 05.9**	**+3.2**
TYV				AMB	AMB	11 02 07.7	
	comp=Z,171nm,1.0s						
TYV				AMB	AMB	11 02 08.5	
	comp=Z,2μm,3.0s						
TYV				*e*S	**Sn**	**11 03 37.8**	**+6.9**
TYV				A	A	11 03 39.8	
	comp=Z,155nm,1.0s						
TYV				A	A	11 05 13.6	
	comp=Z,26μm,13.0s						
JKB	**Kayabe**	**7.99**	**248**	P	**Pn**	**11 02 03.4**	**-0.5**
JKB				*e*S	**Sn**	**11 03 28.6**	**-4.4**
JYM2	**Yakumo 2**	**8.32**	**251**	P	**Pn**	**11 02 08.4**	**-0.1**
JSH	**Shimam**	**8.33**	**255**	*e*S	**Sn**	**11 03 45.1**	**+3.7**
JANG	**Nango**	**8.52**	**238**	P	**Pn**	**11 02 08.5**	**-2.6**
JANG				*e*S	**Sn**	**11 03 38.1**	**-7.9**
JTM	**Tenmabayashi**	**8.54**	**242**	⇓P	**Pn**	**11 02 10.5**	**-1.0**
JTM				*e*S	**Sn**	**11 03 40.8**	**-5.8**
JSR	**Shiriuchi**	**8.56**	**248**	P	**Pn**	**11 02 11.6**	**-0.2**
JTH	**Tanohata**	**8.59**	**235**	P	**Pn**	**11 02 09.0**	**-3.1**
JTH				*e*S	Sn	11 03 38.7	-9.0
JOSM	**Okushiri--Mats**	**8.94**	**253**	P	**Pn**	**11 02 17.4**	**+0.5**
PEA0B	**Petropavlovsk-**	**8.98**	**27**	*e*Pn	**Pn**	**11 02 18.0**	**+0.6**
PETK	**Petropavlovsk-**	**8.98**	**27**	P	**Pn**	**11 02 17.2**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=171,slow=12,SNR=39						
PETK				LR	LR	11 05 57.8	
	comp=Z,11μm,18.5s,baz=218,slow=39						
PEA1	**Petropavlovsk-**	**8.99**	**27**	*e*Pn	**Pn**	**11 02 17.2**	**-0.3**
PET	**Petropavlovsk**	**9.23**	**30**	*e*Pn	**Pn**	**11 02 20.6**	**-0.2**
PET	**Petropavlovsk**	**9.23**	**30**	*d iPN*	**Pn**	**11 02 25.4**	**+4.6**
PET				pmax	pmax		
	comp=Z,400nm,3.2s						
PET				pmax	pmax		
	comp=Z,51nm,0.7s						
PET				pmax	pmax		
	comp=Z,500nm,12.7s						
PET				MLR	MLR		
	comp=Z,11μm,17.0s						
PET				MLR	MLR		
	comp=Z,10μm,12.0s						
PET	**Petropavlovsk**	**9.23**	**30**	*e*P	**Pn**	**11 02 21.8**	**+1.0**
PET				AMB	AMB	11 02 25.8	
	comp=Z,50nm,0.7s						
PET				AMB	AMB	11 02 27.0	
	comp=Z,380nm,3.0s						
PET				AMS	AMS	11 05 57.6	
	comp=Z,10μm,12.0s						
OFUJ	**Ofunato**	**9.29**	**231**	P	**Pn**	**11 02 18.7**	**-2.9**
OFUJ				*e*S	**Sn**	**11 03 56.0**	**-8.8**
JRG	**Rokugo**	**9.66**	**236**	P	**Pn**	**11 02 25.0**	**-1.8**
JRG				*e*S	**Sn**	**11 04 06.6**	**-7.5**
OKH	**Okha**	**9.81**	**331**	*c iPN*	**Pn**	**11 02 32.9**	**+4.2**
OKH				pmax	pmax		
	comp=Z,900nm,15.3s						
OKH				MLR	MLR		
	comp=Z,18μm,13.0s						
OKH	**Okha**	**9.81**	**331**	*i* P	**Pn**	**11 02 32.0**	**+3.3**
OKH				AMB	AMB	11 02 38.0	
	comp=Z,900nm,15.0s						
OKH				A	A	11 05 02.0	
	comp=Z,5μm,12.0s						
OKH				A	A	11 05 02.0	
	comp=Z,2μm,12.0s						
OKH				AMS	AMS	11 07 51.0	
	comp=Z,18μm,13.0s						
JIO	**Ouri**	**9.91**	**230**	P	**Pn**	**11 02 27.3**	**-2.8**
JIO				*e*S	**Sn**	**11 04 11.6**	**-8.5**
TEY	**Ternei**	**10.18**	**274**	⇑*e*PN	**Pn**	**11 02 37.7**	**+3.9**
TEY				pmax	pmax		
	comp=Z,80nm,1.6s						
TEY				MLR	MLR		
	comp=E,14μm,13.0s						
TEY				MLR	MLR		
	comp=N,5μm,14.0s						
TEY				MLR	MLR		
	comp=Z,14μm,14.0s						
TEY	**Ternei**	**10.18**	**274**	*e*P	**Pn**	**11 02 37.0**	**+3.2**
TEY				AMB	AMB	11 02 38.9	
	comp=Z,8.0nm,1.0s						
TEY				*e*rx	rx	11 02 40.2	
TEY				*e*S	**Sn**	**11 04 30.4**	**+3.7**
TEY				AMS	AMS	11 07 25.1	
	comp=Z,5μm,13.0s						
TEY				AMS	AMS	11 07 25.1	
	comp=Z,14μm,13.0s						
TEY				AMS	AMS	11 07 25.1	
	comp=Z,14μm,13.0s						
NKL	**Nikolayevsk**	**10.37**	**323**	*e*P	**Pn**	**11 02 39.0**	**+2.6**
NKL				AMB	AMB	11 02 41.0	
	comp=Z,2μm,10.0s						
NKL				AMB	AMB	11 02 41.0	
	comp=Z,2μm,10.0s						
NKL				AMB	AMB	11 02 41.8	
	comp=Z,470nm,1.0s						
NKL				AMB	AMB	11 02 41.8	
	comp=Z,1μm,1.0s						
NKL				AMS	AMS	11 07 03.0	
	comp=Z,13μm,14.0s						
NKL				AMS	AMS	11 07 03.0	
	comp=Z,6μm,14.0s						
JYA	**Atsumi**	**10.73**	**235**	P	**Pn**	**11 02 39.7**	**-1.7**
JFK	**Kawauchi**	**10.96**	**227**	P	**Pn**	**11 02 42.3**	**-2.4**
JFK				*e*S	Sn	11 04 35.7	-10
GRNR	**Gornyy**	**11.20**	**305**	⇑*i*PN	Pn	11 02 54.0	+6.2
GRNR				pmax	pmax		
	comp=E,260nm,1.4s						
GRNR				pmax	pmax		
	comp=Z,180nm,1.4s						
GRNR	**Gornyy**	**11.20**	**305**	*e*P	**Pn**	**11 02 50.0**	**+2.2**
GRNR				AMB	AMB	11 02 55.7	
	comp=Z,260nm,1.0s						
GRNR				AMB	AMB	11 02 55.7	
	comp=Z,180nm,1.0s						
JFY	**Yanaizu**	**11.56**	**231**	P	**Pn**	**11 02 52.2**	**-0.6**
MAJO	**Matsushiro**	**13.01**	**232**	*e*Pn	**Pn**	**11 03 10.7**	**-2.0**
MAJO				*e*Sn	**Sn**	**11 05 31.3**	**-4.9**
MAJO	**Matsushiro**	**13.01**	**232**	*ce*PN	**Pn**	**11 03 13.4**	**+0.7**
MAT	**Matsushiro**	**13.01**	**232**	P	**Pn**	**11 03 10.7**	**-2.0**
MAT				S	**Sn**	**11 05 38.2**	**+2.0**
MJAR	**Matsushiro Arr**	**13.01**	**232**	P	**Pn**	**11 03 11.0**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=27,slow=13,SNR=44						
MJB9	**Matsu-Tunnel**	**13.01**	**232**	*e*Pn	**Pn**	**11 03 10.8**	**-1.8**
USA0B	**Ussuriysk Arra**	**13.56**	**272**	*e*Pn	**Pn**	**11 03 21.2**	**+1.1**
USRK	**Ussuriysk Ar.**	**13.56**	**272**	P	**Pn**	**11 03 21.1**	**+1.0**
	comp=Z,2.8nm,0.3s,baz=81,slow=14,SNR=77						
USRK				LR	LR	11 08 38.7	
	comp=Z,13μm,18.9s,baz=72,slow=38						
KLR	**Kul'dur**	**13.66**	**294**	P	**Pn**	**11 03 24.2**	**+2.9**
	comp=Z,0.3nm,0.3s,baz=96,slow=13,SNR=64						
KLR				LR	LR	11 08 57.1	
	comp=Z,17μm,19.2s,baz=94,slow=39						
KLR	**Kul'dur**	**13.66**	**294**	*c iP*	**Pn**	**11 03 24.0**	**+2.6**
VLA	**Vladivostok**	**13.89**	**268**	*d iP*	**Pn**	**11 03 24.5**	**0.0**
VLA	**Vladivostok**	**13.89**	**268**	*e*P	**Pn**	**11 03 24.5**	**0.0**
EKMR	**Ekimchan**	**14.13**	**310**	*e*P	**Pn**	**11 03 28.6**	**+0.8**
EKMR				AMB	AMB	11 03 48.0	
	comp=Z,55nm,1.0s						
EKMR				AMB	AMB	11 03 48.0	
	comp=Z,120nm,1.0s						
EKMR				AMB	AMB	11 03 48.0	
	comp=Z,140nm,1.0s						
MA2	**Magadan**	**14.33**	**360**	P	**Pn**	**11 03 30.9**	**+0.4**
	comp=Z,5.0nm,0.3s,baz=184,slow=10,SNR=24						
MA2	**Magadan**	**14.33**	**360**	*e*Pn	**Pn**	**11 03 29.0**	**-1.5**
MA2	**Magadan**	**14.33**	**360**	*de*P	**Pn**	**11 03 31.2**	**+0.7**
MA2				pmax	pmax		
	comp=Z,209nm,1.7s						
MA2	**Magadan**	**14.33**	**360**	*e*P	**Pn**	**11 03 31.2**	**+0.7**
INU	**Inuyama**	**14.54**	**232**	*e*Pn	**Pn**	**11 03 31.0**	**-2.5**
MSHR	**Mys Shultsa**	**14.55**	**266**	*c iP*	**Pn**	**11 03 33.2**	**-0.4**
JHJ2	**Mitsune**	**14.90**	**219**	*e*Pn	**Pn**	**11 03 36.0**	**-2.4**
JHJ	**Hachijo jima 2**	**14.91**	**219**	P	**Pn**	**11 03 39.1**	**+0.6**
	comp=Z,10nm,0.3s,baz=266,slow=10,SNR=3.9						
JHJ				S	Sn	11 06 12.9	-10
	comp=Z,33nm,0.3s,baz=74,slow=22,SNR=6.7						
JHJ				LR	LR	11 10 36.3	
	comp=Z,1μm,19.2s,baz=45,slow=42						
MDJ	**Mudanjiang**	**15.18**	**275**	P	**Pn**	**11 03 41.4**	**-0.5**
MDJ				pP	P	11 03 46.4	-0.2
MDJ				sP	pP	11 03 49.6	-5.4
MDJ				S	**Sn**	**11 06 26.7**	**-2.0**
MDJ				pmax	pmax		
	comp=Z,200nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,1μm,3.1s						
MDJ				LR	LR		
	comp=Z,11μm,17.8s						
MDJ				LR	LR		
	comp=Z,14μm,17.8s						
MDJ				LR	LR		
	comp=Z,23μm,17.8s						
MDJ	**Mudanjiang**	**15.18**	**275**	*e*Pn	**Pn**	**11 03 41.6**	**-0.3**
	comp=Z,186nm,1.0s						
SMY	**Shemya**	**16.84**	**55**	*e*Pn	**Pn**	**11 04 03.2**	**+0.1**
	comp=Z,424nm,1.3s						
SMY	**Shemya**	**16.84**	**55**	*e*P	**Pn**	**11 04 03.3**	**+0.1**
SMY				pmax	pmax		
	comp=Z,425nm,1.3s						
BMKR	**Bomnak**	**17.03**	**312**	*e*P	**Pn**	**11 04 04.3**	**-1.2**
BMKR				AMB	AMB	11 04 12.0	
	comp=Z,50nm,0.5s						
ZEA	**Zeya**	**17.53**	**307**	*e*P	**Pn**	**11 04 11.8**	**0.0**
ZEA				*e*S	**S**	**11 07 30.0**	**-2.9**
ZEA				pmax	pmax		
	comp=Z,1μm,8.0s						
ZEA				pmax	pmax		
	comp=N,800nm,6.0s						
ZEA				pmax	pmax		
	comp=E,1μm,6.0s						
ZEA				pmax	pmax		
	comp=N,190nm,1.4s						
ZEA				pmax	pmax		
	comp=E,300nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,410nm,1.4s						
ZEA				smax	smax		
	comp=N,1μm,11.0s						
ZEA				MLR	MLR		
	comp=Z,21μm,15.0s						
ZEA				MLR	MLR		
	comp=E,13μm,16.0s						
ZEA				MLR	MLR		
	comp=N,10μm,13.0s						
ZEA	**Zeya**	**17.53**	**307**	*e*P	**Pn**	**11 04 10.5**	**-1.3**
ZEA				AMB	AMB	11 04 16.0	
	comp=N,800nm,7.0s						
ZEA				AMB	AMB	11 04 16.0	
	comp=N,1μm,7.0s						
ZEA				AMB	AMB	11 04 16.0	
	comp=N,1μm,7.0s						
ZEA				AMB	AMB	11 04 16.6	
	comp=N,190nm,1.0s						
ZEA				AMB	AMB	11 04 16.6	
	comp=N,300nm,1.0s						
ZEA				AMB	AMB	11 04 16.6	
	comp=N,410nm,1.0s						
ZEA				*e*S	**Sn**	**11 07 17.0**	**-8.8**
ZEA				A	A	11 07 36.0	
	comp=N,1μm,11.0s						
ZEA				AMS	AMS	11 11 37.0	
	comp=N,10μm,15.0s						
ZEA				AMS	AMS	11 11 37.0	
	comp=N,13μm,15.0s						
ZEA				AMS	AMS	11 11 37.0	
	comp=N,21μm,15.0s						
SEY	**Seymchan**	**17.72**	**2**	P	**Pn**	**11 04 12.5**	**-1.5**
	comp=N,0.4nm,0.3s,baz=175,slow=10,0,SNR=14						
SEY				LR	LR	11 11 37.6	
	comp=N,9μm,19.2s,baz=180,slow=39						
KROS	**Kirovskiy**	**17.93**	**309**	*e*P	**Pn**	**11 04 16.5**	**-0.1**
KROS				AMB	AMB	11 04 24.8	
	comp=N,19nm,0.4s						
KROS				AMB	AMB	11 04 24.8	
	comp=N,42nm,0.4s						
KROS				AMB	AMB	11 04 24.8	
	comp=N,65nm,0.4s						
CN2	**Changchun**	**18.26**	**274**	*e*P	**P**	**11 04 20.0**	**-0.7**
CN2				*es*P	sP	11 04 32.5	+0.8
CN2				*e*S	**Sn**	**11 07 38.8**	**-4.7**
CN2				pmax	pmax		
	comp=N,200nm,6.0s						
CN2				LR	LR		
	comp=N,9μm,13.0s						
CN2				LR	LR		
	comp=N,7μm,13.0s						
CN2				LR	LR		
	comp=N,9μm,12.0s						
KSRS	**Korea Array**	**18.96**	**254**	P	**P**	**11 04 27.6**	**-0.9**
	comp=N,0.6nm,0.3s,baz=61,slow=10,SNR=58						
KSRS				PcP	**PcP**	**11 08 54.7**	**+1.7**
	baz=65,slow=0.5,SNR=4.6						
KSRS				LR	LR	11 11 51.8	
	comp=N,7μm,19.0s,baz=60,slow=37						
KS15	**Wonju Array Si**	**18.99**	**254**	*e*P	**P**	**11 04 28.2**	**-0.6**
	comp=N,88nm,1.1s						
JNU	**Nakatsue**	**19.70**	**239**	P	**Pn**	**11 04 37.9**	**-0.3**
	comp=N,1.4nm,0.3s,baz=52,slow=9.6,SNR=28						
JNU				LR	LR	11 13 08.8	
	comp=N,2μm,20.2s,baz=30,slow=39						
JNU	**Nakatsue**	**19.70**	**239**	*e*P	**Pn**	**11 04 38.0**	**-0.3**
	comp=N,588nm,1.3s						
TJN	**Taejon**	**19.92**	**252**	*c iP*	**P**	**11 04 39.7**	**+0.8**
SNY	**Shenyang**	**20.14**	**270**	⇑P	**P**	**11 04 41.4**	**+0.2**
SNY				S	**S**	**11 08 22.1**	**-3.3**
SNY				pmax	pmax		
	comp=N,230nm,1.4s						
SNY				LR	LR		
	comp=N,7μm,15.1s						
SNY				LR	LR		
	comp=N,10μm,14.3s						
SNY				LR	LR		
	comp=N,14μm,15.2s						
YAK	**Yakutsk**	**20.84**	**331**	*e*P	**P**	**11 04 48.4**	**-0.3**
	comp=N,3μm,1.4s						
YAK				LR	LR		
	comp=Z,27μm,21.0s						
YAK	**Yakutsk

YAK				*e**SS		**pS**	**11 08 52.8 -0.5**
YAK				*e*SS		**SnSn**	**11 09 03.8 +3.6**
YAK				*e*			11 16 06.6
YAK	**Yakutsk**	**20.84**	**331**	*e*P		**P**	**11 04 48.9 +0.2**
HIA	**Hailar**	**21.50**	**292**	*e*P		**P**	**11 04 52.7 -3.3**
	comp=Z,53nm,1.1s						
HIA				LR		LR	
	comp=Z,13μm,18.0s						
HIA	**Hailar**	**21.50**	**292**	*e*P		**P**	**11 04 52.7 -3.3**
HIA				pmax		pmax	
	comp=Z,53nm,1.1s						
HIA				MLR		MLR	
	comp=Z,13μm,18.0s						
KIWB	**Kanaga Island**	**21.96**	**61**	*e*P		**P**	**11 05 00.2 -0.6**
ADK	**Adak**	**22.25**	**61**	*e*P		**P**	**11 05 03.3 -0.6**
	comp=Z,233nm,1.1s						
ADK				LR		LR	
	comp=Z,5μm,19.0s						
ADK	**Adak**	**22.25**	**61**	*e*P		**P**	**11 05 03.3 -0.6**
ADK				pmax		pmax	
	comp=Z,233nm,1.1s						
ADK				MLR		MLR	
	comp=Z,5μm,19.0s						
DL2	**Dalian**	**22.63**	**264⇑**	*i*P		**P**	**11 05 07.6 -0.5**
DL2				S		**S**	**11 09 15.9 +2.3**
DL2				pmax		pmax	
	comp=Z,190nm,1.3s						
DL2				pmax		pmax	
	comp=Z,870nm,4.7s						
DL2				LR		LR	
	comp=Z,2μm,18.6s						
DL2				LR		LR	
	comp=Z,3μm,23.3s						
DL2				LR		LR	
	comp=Z,4μm,22.7s						
GSTR	**Great Sitkin T**	**22.65**	**61**	*e*P		**P**	**11 05 07.8 -0.4**
ATKA	**Atka Island**	**23.80**	**60**	*e*P		**P**	**11 05 19.9 +0.3**
	comp=Z,192nm,1.3s						
ATKA				LR		LR	
	comp=Z,6μm,22.0s						
BILL	**Bilibino**	**24.17**	**14**	*e*P		**P**	**11 05 23.1 +0.1**
	comp=Z,86nm,1.5s						
BILL				LR		LR	
	comp=Z,12μm,20.0s						
BILL	**Bilibino**	**24.17**	**14**	*d i*P		**P**	**11 05 23.1 +0.1**
BILL				*i*			11 05 43.1
BILL				*i* S		**S**	**11 09 37.4 -1.1**
BILL				pmax		pmax	
	comp=Z,33nm,1.2s						
BILL				MLR		MLR	
	comp=Z,11μm,16.0s						
BILL	**Bilibino**	**24.17**	**14**	*e*P		**P**	**11 05 23.1 +0.1**
BOD	**Bodaibo**	**25.85**	**312**	*e*P		**P**	**11 05 34.8 -3.5**
BOD				*e*			11 06 22.4
JOW	**Kunigami**	**25.86**	**232**	P		**P**	**11 05 39.4 +0.7**
	comp=Z,6.4nm,1.1s,baz=105,slow=16,SNR=16						
JOW	**Kunigami**	**25.86**	**232**	*e*P		**P**	**11 05 39.1 +0.5**
	comp=Z,61nm,1.2s						
BJT	**Baijiatuau**	**26.02**	**271**	*e*P		**P**	**11 05 40.2 +0.2**
	comp=Z,293nm,1.5s						
BJT				LR		LR	
	comp=Z,6μm,18.0s						
BJT	**Baijiatuau**	**26.02**	**271**	*e*P		**P**	**11 05 40.2 +0.2**
BJT				pmax		pmax	
	comp=Z,293nm,1.5s						
BJT				MLR		MLR	
	comp=Z,6μm,18.0s						
TIA	**Tai'an**	**27.05**	**262**	P		**P**	**11 05 49.8 +0.4**
TIA				S		**S**	**11 10 27.0 +2.1**
TIA				pmax		pmax	
	comp=Z,940nm,4.9s						
TIA				LR		LR	
	comp=Z,3μm,14.7s						
TIA				LR		LR	
	comp=Z,2μm,14.7s						
TIA				LR		LR	
	comp=Z,2μm,17.3s						
NIKH	**Nikolski High**	**27.08**	**59**	PFAKE			11 06 00.0 +11
NIKH				LR		LR	
	comp=Z,2μm,20.0s						
SSE	**Sheshan**	**27.20**	**249**	P		**P**	**11 05 51.3 +0.7**
SSE				S		**S**	**11 10 28.6 +1.5**
SSE				pmax		pmax	
	comp=Z,86nm,1.1s						
SSE				pmax		pmax	
	comp=Z,690nm,7.2s						
SSE				LR		LR	
	comp=Z,930nm,17.4s						
SSE				LR		LR	
	comp=Z,2μm,17.9s						
SSE	**Sheshan**	**27.20**	**249**	*e*P		**P**	**11 05 51.5 +0.9**
	comp=Z,237nm,1.1s						
SSE				LR		LR	
	comp=Z,7μm,18.0s						
GAMB	**Gambell**	**27.88**	**35**	PFAKE			11 06 10.0 +14
GAMB				LR		LR	
	comp=Z,4μm,19.0s						
NJ2	**Nanjing**	**28.16**	**253**	*e*P		**P**	**11 05 59.6 +0.3**
NJ2				pP		**pP**	**11 06 05.7 -2.4**
NJ2				S		**S**	**11 10 47.5 +5.2**
NJ2				sS		**sS**	**11 10 56.5 -1.7**
NJ2				pmax		pmax	
	comp=Z,58nm,1.3s						
NJ2				pmax		pmax	
	comp=Z,460nm,3.7s						
NJ2				LR		LR	
	comp=Z,8μm,16.8s						
NJ2				LR		LR	
	comp=Z,8μm,15.2s						
NJ2				LR		LR	
	comp=Z,10μm,16.3s						
UNV	**Unalaska Valle**	**28.49**	**57**	PFAKE			11 06 10.0 +8.0
UNV				LR		LR	
	comp=Z,2μm,22.0s						
TIXI	**Tiksi**	**28.50**	**346**	P		**P**	**11 05 59.6 -2.3**
	comp=Z,8.5nm,0.5s,baz=138,slow=9.5,SNR=7.4						
TIXI				LR		LR	11 17 45.0
	comp=Z,3μm,19.4s,baz=150,slow=37						
TIXI	**Tiksi**	**28.50**	**346**	*e*P		**P**	**11 05 58.2 -3.7**
	comp=Z,11nm,0.6s						
TIXI				LR		LR	
	comp=Z,3μm,20.0s						
TIXI	**Tiksi**	**28.50**	**346⇓**	*e*P		**P**	**11 06 01.2 -0.7**
TIXI				pmax		pmax	
	comp=Z,9.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.67**	**147**	T		T	11 36 52.0
	baz=340,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.68**	**148**	T		T	11 36 53.5
	baz=340,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.69**	**147**	T		T	11 36 53.2
	baz=340,slow=75						
AKUT	**Akutan**	**28.92**	**56**	PFAKE			11 06 20.0 +14
AKUT				LR		LR	
	comp=Z,2μm,19.0s						
HHC	**Hu-ho-hao-te**	**28.95**	**275**	*e*P		**P**	**11 06 07.2 +0.8**
HHC				pP		pP	11 06 16.8 +1.3
HHC				S		**S**	**11 10 58.0 +3.2**
HHC				sS		sS	11 11 09.9 -1.0
HHC				pmax		pmax	
	comp=Z,200nm,1.3s						
HHC				pmax		pmax	
	comp=Z,1μm,4.9s						
HHC				LR		LR	
	comp=Z,6μm,15.8s						
HHC				LR		LR	
	comp=Z,13μm,15.5s						
HHC				LR		LR	
	comp=Z,20μm,15.8s						
WAKE	**Wake Island**	**28.99**	**148**	PFAKE			11 06 20.0 +13
WAKE				LR		LR	
	comp=Z,3μm,21.0s						
ANA2	**Anatahan**	**29.18**	**190**	PFAKE			11 06 20.0 +12
ANA2				LR		LR	
	comp=Z,2μm,20.0s						
TIY	**Taiyuan**	**29.64**	**269**	*e*P		**P**	**11 06 13.9 +1.4**
TIY				S		**S**	**11 11 07.0 +1.3**
TIY				sS		**pS**	**11 11 17.7 +1.4**
TIY				ScS		**ScS**	**11 16 53.8 +3.4**
TIY				pmax		pmax	
	comp=Z,97nm,1.3s						
TIY				LR		LR	
	comp=Z,2μm,13.6s						
TIY				LR		LR	
	comp=Z,3μm,16.2s						
TIY				LR		LR	
	comp=Z,4μm,16.7s						
H11S1	**WAKE ISLAND Hy**	**29.71**	**149**	T		T	11 38 15.7
	baz=341,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.72**	**149**	T		T	11 38 12.6
	baz=341,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.73**	**149**	T		T	11 38 12.2
	baz=341,slow=76						
ULN	**Ulaanbaatar**	**30.02**	**291**	*e*P		**P**	**11 06 15.3 -0.6**
	comp=Z,34nm,1.0s						
ULN				LR		LR	
	comp=Z,7μm,18.0s						
ULN	**Ulaanbaatar**	**30.02**	**291**	*e*P		**P**	**11 06 15.3 -0.6**
ULN				pmax		pmax	
	comp=Z,34nm,1.0s						
ULN				MLR		MLR	
	comp=Z,7μm,18.0s						
ULN	**Ulaanbaatar**	**30.02**	**291**	P		**P**	**11 06 17.8 +2.0**
	SNR=20						
ULN				P		**P**	**11 06 17.8 +2.0**
	SNR=20						
ULN				P		**P**	**11 06 17.8 +2.0**
	SNR=20						
ULN	**Ulaanbaatar**	**30.02**	**291**	*e*P		**P**	**11 06 16.0 +0.1**
BTO	**Baotou**	**30.13**	**276**	*e*P		**P**	**11 06 16.9 +0.1**
FALS	**False Pass**	**30.29**	**55**	PFAKE			11 06 30.0 +12
FALS				LR		LR	
	comp=Z,4μm,21.0s						
SONA0	**Songino Array**	**30.46**	**291**	*e*P		**P**	**11 06 19.4 -0.3**
SONM	**Songino Array**	**30.46**	**291**	P		**P**	**11 06 19.4 -0.3**
	comp=Z,23nm,1.0s,baz=73,slow=8.0,SNR=30						
SONM				LR		LR	11 19 31.6
	comp=Z,7μm,19.1s,baz=86,slow=38						
YOJ	**Yonaguni jima**	**30.71**	**237**	*e*P		**P**	**11 06 21.9 0.0**
	comp=Z,102nm,1.3s						
YOJ				LR		LR	
	comp=Z,4μm,20.0s						
YOJ	**Yonaguni jima**	**30.71**	**237**	*e*P		**P**	**11 06 21.9 0.0**
YOJ				pmax		pmax	
	comp=Z,102nm,1.3s						
YOJ				MLR		MLR	
	comp=Z,4μm,20.0s						
ANM	**Nome**	**30.75**	**36**	*e*P		**P**	**11 06 22.1 +0.2**
	comp=Z,49nm,1.3s						
ANM				LR		LR	
	comp=Z,4μm,20.0s						
TATO	**Taipei**	**31.24**	**240**	PFAKE			11 06 40.0 +13
TATO				LR		LR	
	comp=Z,7μm,20.0s						
YHNB	**Yeheng**	**31.53**	**239**	PFAKE			11 06 40.0 +11
YHNB				LR		LR	
	comp=Z,9μm,20.0s						
TLY	**Talaya**	**31.58**	**299**	*e*P		**P**	**11 06 29.4 0.0**
	comp=Z,32nm,1.4s						
TLY				LR		LR	
	comp=Z,11μm,18.0s						
TLY	**Talaya**	**31.58**	**299**	*e*P		**P**	**11 06 27.6 -1.8**
TLY				pmax		pmax	
	comp=Z,56nm,1.5s						
TLY				MLR		MLR	
	comp=Z,30μm,19.0s						
TLY	**Talaya**	**31.58**	**299**	P		**P**	**11 06 25.8 -3.6**
	SNR=7.7						
TLY				P		**P**	**11 06 25.8 -3.6**
	SNR=7.7						
TLY				P		**P**	**11 06 25.8 -3.6**
	SNR=7.7						
NACB	**Ninganchiao**	**31.77**	**238**	PFAKE			11 06 40.0 +8.7
NACB				LR		LR	
	comp=Z,6μm,20.0s						
SDPT	**Sand Point**	**31.97**	**54**	PFAKE			11 06 40.0 +7.3
SDPT				LR		LR	
	comp=Z,3μm,22.0s						
ZAK	**Zakamensk**	**32.00**	**297**	*e*P		P	11 06 27.7 -5.5
ZAK				pmax		pmax	
	comp=Z,26nm,1.5s						
GUMO	**Guam**	**32.00**	**191**	PFAKE			11 06 50.0 +17
GUMO				LR		LR	
	comp=Z,3μm,19.0s						
WHN	**Wuhan**	**32.14**	**256**	⇑P		**P**	**11 06 34.7 +0.3**
WHN				S		**S**	**11 11 36.4 -8.2**
WHN				pmax		pmax	
	comp=Z,120nm,0.9s						
WHN				pmax		pmax	
	comp=Z,1μm,4.4s						
WHN				LR		LR	
	comp=Z,8μm,20.4s						
WHN				LR		LR	
	comp=Z,13μm,17.1s						
WHN				LR		LR	
	comp=Z,13μm,17.6s						
SSLB	**Suanglung**	**32.45**	**239**	*e*P		**P**	**11 06 38.8 +1.5**
	comp=Z,29nm,0.9s						
SSLB				LR		LR	
	comp=Z,8μm,20.0s						
YULB	**Yu-li**	**32.54**	**238**	*e*P		**P**	**11 06 36.5 -1.5**
	comp=Z,24nm,0.9s						
YULB				LR		LR	
	comp=Z,4μm,18.0s						
RDOG	**Red Dog Mine**	**32.84**	**30**	*e*P		**P**	**11 06 40.1 -0.1**
	comp=Z,18nm,0.9s						
RDOG				LR		LR	
	comp=Z,1μm,21.0s						
TPUB	**Ta-pu**	**33.01**	**239**	*e*P		**P**	**11 06 42.0 -0.2**
	comp=Z,174nm,1.0s						
TPUB				LR		LR	
	comp=Z,6μm,21.0s						
QZH	**Quanzhou**	**33.06**	**243⇑**	*i*P		**P**	**11 06 43.8 +1.3**
QZH				pP		**sP**	**11 06 54.0 -0.9**
QZH				S		**S**	**11 12 00.9 +1.9**
QZH				pmax		pmax	
	comp=Z,91nm,1.5s						
QZH				LR		LR	
	comp=Z,2μm,18.0s						
QZH				LR		LR	
	comp=Z,2μm,18.9s						
QZH				LR		LR	
	comp=Z,2μm,19.4s						
TWG	**Pinlang**	**33.10**	**237**	*e*P		**P**	**11 06 43.0 0.0**
	comp=Z,728nm,1.1s						
TWG				LR		LR	
	comp=Z,9μm,20.0s						
MOY	**Mondy**	**33.22**	**299**	*e*P		**P**	**11 06 43.8 0.0**
MOY				pmax		pmax	
	comp=Z,42nm,2.2s						
KNMB	**Chin-men Tao**	**33.53**	**243**	*e*P		**P**	**11 06 47.7 +1.1**
	comp=Z,293nm,1.3s						
KNMB				LR		LR	
	comp=Z,2μm,20.0s						
XAN	**Xi'an**	**33.93**	**266**	P		**P**	**11 06 50.4 +0.3**
XAN				S		S	11 12 22.2 +10
XAN				pmax		pmax	
	comp=Z,62nm,1.4s						
XAN				pmax		pmax	
	comp=Z,630nm,3.5s						
XAN				LR		LR	
	comp=Z,2μm,17.5s						
XAN				LR		LR	
	comp=Z,3μm,18.0s						
XAN				LR		LR	
	comp=Z,4μm,17.2s						
XAN	**Xi'an**	**33.93**	**266**	*e*P		**P**	**11 06 50.1 -0.1**
	comp=Z,151nm,1.5s						
XAN				LR		LR	
	comp=Z,5μm,18.0s						
XAN	**Xi'an**	**33.93**	**266**	*e*P		**P**	**11 06 50.1 -0.1**
XAN				pmax		pmax	
	comp=Z,151nm,1.5s						
XAN				MLR		MLR	
	comp=Z,5μm,18.0s						
SVW2	**Sparrevohn**	**34.58**	**43**	*e*P		**P**	**11 06 56.5 +1.1**
	comp=Z,29nm,1.3s						
SVW2				LR		LR	
	comp=Z,1μm,21.0s						
SII	**Sitkinak Islan**	**35.42**	**51**	PFAKE			11 07 10.0 +7.3
SII				LR		LR	
	comp=Z,4μm,20.0s						
ENH	**Enshi**	**35.65**	**260**	*e*P		**P**	**11 07 04.5 -0.5**
	comp=Z,226nm,1.4s						
ENH				LR		LR	
	comp=Z,3μm,18.0s						
OHAK	**Old Harbor**	**35.85**	**50**	*e*P		**P**	**11 07 06.9 +0.5**
	comp=Z,76nm,1.1s						
OHAK				LR		LR	
	comp=Z,4μm,21.0s						
RSO	**Redoubt South**	**35.96**	**45**	*e*P		**P**	**11 07 07.5 0.0**
KDAK	**Kodiak Island**	**36.18**	**49**	*e*P		**P**	**11 07 09.3 +0.2**
	comp=Z,123nm,1.1s						
KDAK				LR		LR	
	comp=Z,4μm,22.0s						
KDAK	**Kodiak Island**	**36.18**	**49**	*e*P		**P**	**11 07 09.3 +0.2**
KDAK				pmax		pmax	
	comp=Z,123nm,1.1s						
KDAK				MLR		MLR	
	comp=Z,4μm,22.0s						
SPU	**Mount Spurr**	**36.29**	**43**	*e*P		**P**	**11 07 09.7 -0.4**
CAST	**Castle Rocks**	**36.31**	**40**	*e*P		**P**	**11 07 08.3 -2.0**
	comp=Z,20nm,0.9s						
CAST				LR		LR	
	comp=Z,2μm,19.0s						
LZH	**Lanzhou**	**36.47**	**272⇑**	P		**P**	**11 07 13.4 +1.3**
LZH				pP		pP	11 07 20.1 -1.4
LZH				sP		pwP	11 07 22.5 -1.7
LZH				PP		**PP**	**11 08 36.3 +1.0**
LZH				S		**S**	**11 12 52.5 +0.6**
LZH				sS		pS	11 13 03.6 +0.8
LZH				pmax		pmax	
	comp=Z,320nm,1.1s						
LZH				pmax		pmax	
	comp=Z,1μm,5.7s						
LZH				LR		LR	
	comp=Z,4μm,14.6s						
LZH				LR		LR	
	comp=Z,5μm,14.3s						
LZH				LR		LR	
	comp=Z,6μm,17.0s						
HOM	**Homer**	**36.54**	**46**	*e*P		**P**	**11 07 12.3 +0.1**
	comp=Z,187nm,1.2s						
HOM				LR		LR	
	comp=Z,2μm,20.0s						
CNPM	**China Poot**	**36.76**	**46**	*e*P		**P**	**11 07 13.5 -0.6**
	comp=Z,107nm,1.5s						
CNPM				LR		LR	
	comp=Z,2μm,20.0s						
BPAW	**Bear Paw Mtn.**	**36.83**	**38**	*e*P		**P**	**11 07 14.3 -0.4**
	comp=Z,48nm,1.4s						
BPAW				LR		LR	
	comp=Z,4μm,18.0s						
SUA	**Susitna One**	**36.92**	**43**	*e*P		**P**	**11 07 15.6 +0.1**
	comp=Z,32nm,0.9s						
SUA				LR		LR	
	comp=Z,2μm,21.0s						
BRLK	**Bradley Lake**	**36.92**	**46**	*e*P		**P**	**11 07 14.9 -0.6**
	comp=Z,54nm,1.4s						
BRLK				LR		LR	
	comp=Z,2μm,20.0s						
MLY	**Manley**	**36.98**	**37**	*e*P		**P**	**11 07 15.7 -0.3**
	comp=Z,40nm,1.2s						
MLY				LR		LR	
	comp=Z,3μm,19.0s						
COLD	**Coldfoot**	**37.38**	**33**	*e*P		**P**	**11 07 19.4 +0.1**
	comp=Z,16nm,1.1s						
COLD				LR		LR	
	comp=Z,1μm,20.0s						
RC01	**Rabbit Creek A**	**37.42**	**43**	*e*P		**P**	**11 07 18.8 -0.8**
	comp=Z,26nm,1.0s						
RC01				LR		LR	
	comp=Z,2μm,21.0s						
BWN	**Browne**	**37.50**	**38**	*e*P		**P**	**11 07 21.8 +1.5**
	comp=Z,179nm,1.1s						
BWN				LR		LR	
	comp=Z,4μm,18.0s						
SEW	**Seward**	**37.62**	**45**	*e*P		**P**	**11 07 21.7 +0.4**
	comp=Z,74nm,1.4s						
SEW				LR		LR	
	comp=Z,2μm,21.0s						
PMR	**Palmer**	**37.69**	**43**	*e*P		**P**	**11 07 21.7 -0.2**
	comp=Z,31nm,1.1s						
PMR				LR		LR	
	comp=Z,2μm,20.0s						
MCK	**McKinley**	**37.73**	**39**	*e*P		**P**	**11 07 21.6 -0.7**
	comp=Z,63nm,1.2s						
MCK				LR		LR	
	comp=Z,3μm,21.0s						
MCK	**McKinley**	**37.73**	**39**	*e*P		**P**	**11 07 21.6 -0.7**
MCK				pmax		pmax	
	comp=Z,63nm,1.2s						
MCK				MLR		MLR	
	comp=Z,3μm,21.0s						
GZH	**Guangzhou**	**37.73**	**247**	P		**P**	**11 07 18.8 -3.9**
GZH				S		**S**	**11 13 07.9 -3.0**
GZH				LR		LR	
	comp=Z,6μm,17.5s						
GZH				LR		LR	
	comp=Z,3μm,16.7s						
GTA	**Gaotai**	**37.76**	**280**	⇑P		**P**	**11 07 23.8 +0.8**
GTA				pP		pP	11 07 30.7 -1.6
GTA				sP		sP	11 07 34.7 -0.1
GTA				S		**S**	**11 13 10.3 -1.0**
GTA				sS		ScP	11 13 23.3 -0.7
GTA				SS		**SnSn**	**11 15 47.9 -4.8**
GTA				pmax		pmax	
	comp=Z,100nm,1.3s						
GTA				pmax		pmax	
	comp=Z,890nm,8.6s						
GTA				LR		LR	
	comp=Z,2μm,14.1s						
GTA				LR		LR	
	comp=Z,5μm,14.1s						
GTA				LR		LR	
	comp=Z,7μm,13.7s						
RND	**Reindeer**	**37.77**	**40**	*e*P		**P**	**11 07 22.2 -0.5**
	comp=Z,64nm,1.2s						
RND				LR		LR	
	comp=Z,2μm,19.0s						
RND	**Reindeer**	**37.77**	**40**	*e*P		**P**	**11 07 22.2 -0.5**
RND				pmax		pmax	
	comp=Z,64nm,1.2s						
RND				MLR		MLR	
	comp=Z,2μm,19.0s						
TOLK	**Toolik Lake Re**	**37.77**	**31**	*e*P		**P**	**11 07 23.1 +0.4**
	comp=Z,28nm,0.8s						
TOLK				LR		LR	
	comp=Z,2μm,18.0s						
TOLK	**Toolik Lake Re**	**37.77**	**31**	P		**P**	**11 07 23.0 +0.4**
	baz=263,SNR=27						
GHO	**Glory Hole Cre**	**37.77**	**42**	*e*P		**P**	**11 07 22.5 -0.3**
	comp=Z,27nm,0.9s						
GHO				LR		LR	
	comp=Z,2μm,21.0s						
HKPS	**Hong Kong Po S**	**37.80**	**245**	*e*P		**P**	**11 07 24.2 +0.9**
	comp=Z,272nm,1.4s						
HKPS				LR		LR	
	comp=Z,4μm,19.0s						
KNK	**Knik Glacier**	**38.02**	**43**	*e*P		**P**	**11 07 24.9 +0.1**
	comp=Z,79nm,1.1s						
KNK				LR		LR	
	comp=Z,3μm,20.0s						
MDM	**Murphy Dome**	**38.05**	**37**	*e*P		**P**	**11 07 25.1 +0.1**
	comp=Z,26nm,0.9s						
SML	**Sawmill**	**38.05**	**42**	*e*P		**P**	**11 07 24.5 -0.6**
	comp=Z,105nm,1.0s						
SML				LR		LR	
	comp=Z,2μm,20.0s						
SML	**Sawmill**	**38.05**	**42**	*e*P		**P**	**11 07 24.5 -0.6**
SML				pmax		pmax	
	comp=Z,105nm,1.0s						
SML				MLR		MLR	
	comp=Z,2μm,20.0s						
WRH	**Wood River Hil**	**38.10**	**38**	*e*P		**P**	**11 07 24.5 -0.9**
	comp=Z,62nm,1.3s						
WRH				LR		LR	
	comp=Z,4μm,19.0s						
TCOL	**CIGO, UAF Yank**	**38.20**	**37**	P		**P**	**11 07 26.8 +0.6**
	baz=270,SNR=13						
COLA	**College**	**38.21**	**37**	*e*P		**P**	**11 07 26.6 +0.4**
	comp=Z,55nm,0.9s						
COLA				LR		LR	
	comp=Z,2μm,19.0s						
COLA	**College**	**38.21**	**37**	*e*P		**P**	**11 07 26.6 +0.4**
COLA				pmax		pmax	
	comp=Z,55nm,0.9s						
COLA				MLR		MLR	
	comp=Z,2μm,19.0s						
CCB	**Clear Creek Bu**	**38.23**	**38**	*e*P		**P**	**11 07 26.3 -0.2**
	comp=Z,23nm,1.0s						
CCB				LR		LR	
	comp=Z,3μm,19.0s						
POKR	**Poker Plat Res**	**38.39**	**37**	P		**P**	**11 07 28.6 +0.8**
	baz=270,SNR=25						
DHY	**Denali Highway**	**38.44**	**40**	*e*P		**P**	**11 07 28.4 -0.1**
	comp=Z,27nm,0.8s						
DHY				LR		LR	
	comp=Z,3μm,20.0s						
SCM	**Sheep Creek Mo**	**38.53**	**42**	*e*P		**P**	**11 07 28.7 -0.4**
	comp=Z,34nm,1.0s						

SCM				LR	LR		
	comp=Z,2μm,20.0s						
SCM	**Sheep Creek Mo**	**38.53**	**42**	*e*P	**P**	**11 07 28.7**	**-0.4**
SCM				pmax	pmax		
	comp=Z,34nm,1.0s						
SCM				MLR	MLR		
	comp=Z,2μm,20.0s						
HDA	**Harding Lake**	**38.60**	**38**	*e*P	**P**	**11 07 28.7**	**-0.9**
	comp=Z,21nm,0.8s						
HDA				LR	LR		
	comp=Z,4μm,20.0s						
HDA	**Harding Lake**	**38.60**	**38**	P	**P**	**11 07 29.0**	**-0.6**
	baz=271,SNR=18						
ILAR	**Eielson Array**	**38.62**	**37**	P	**P**	**11 07 29.5**	**-0.3**
	comp=Z,18nm,0.9s,baz=261,slow=6.1,SNR=78						
ILAR				LR	LR	11 25 16.9	
	comp=Z,2μm,19.6s,baz=276,slow=39						
ILB	**Eielson Array**	**38.62**	**37**	*e*P	**P**	**11 07 29.2**	**-0.6**
	comp=Z,83nm,1.5s						
GLI	**Glacier Island**	**38.72**	**44**	*e*P	**P**	**11 07 30.7**	**+0.1**
	comp=Z,43nm,0.9s						
GLI				LR	LR		
	comp=Z,2μm,21.0s						
PATS	**Pohnpei**	**38.81**	**168**	*e*P	**P**	**11 07 33.3**	**+1.5**
	comp=Z,231nm,1.3s						
PATS				LR	LR		
	comp=Z,2μm,20.0s						
KWAJ	**Kwajalein Atol**	**39.06**	**153**	PFAKE		11 07 50.0	+16
KWAJ				LR	LR		
	comp=Z,5μm,18.0s						
PRP	**Porcupine Dome**	**39.19**	**36**	*e*P	**P**	**11 07 35.1**	**+0.5**
	comp=Z,38nm,1.2s						
PRP				LR	LR		
	comp=Z,2μm,20.0s						
NRIK	**Noril'sk**	**39.28**	**330**	P	**P**	**11 07 33.0**	**-2.2**
	comp=Z,8.6nm,0.5s,baz=109,slow=7.3,SNR=23						
NRIK				LR	LR	11 24 49.6	
	comp=Z,3μm,19.0s,baz=88,slow=38						
CD2	**Chengdu**	**39.29**	**265**	⇑*i*P	**P**	**11 07 34.6**	**-1.2**
CD2				sP	sP	11 07 50.6	+2.5
CD2				PP	**PP**	**11 09 07.6**	**+1.4**
CD2				PcP	**PcP**	**11 09 46.5**	**+2.4**
CD2				S	**S**	**11 13 25.6**	**-8.8**
CD2				sS	sS	11 13 50.5	-0.3
CD2				pmax	pmax		
	comp=Z,300nm,1.1s						
CD2				pmax	pmax		
	comp=Z,1μm,7.0s						
CD2				LR	LR		
	comp=Z,4μm,14.8s						
CD2				LR	LR		
	comp=Z,3μm,15.8s						
CD2				LR	LR		
	comp=Z,4μm,17.9s						
FYU	**Fort Yukon**	**39.30**	**34**	*e*P	**P**	**11 07 34.9**	**-0.5**
	comp=Z,111nm,1.2s						
PAX	**Paxson**	**39.31**	**40**	*e*P	**P**	**11 07 36.2**	**+0.5**
	comp=Z,23nm,1.1s						
PAX				LR	LR		
	comp=Z,3μm,19.0s						
PAX	**Paxson**	**39.31**	**40**	*e*P	**P**	**11 07 36.2**	**+0.5**
PAX				pmax	pmax		
	comp=Z,23nm,1.1s						
PAX				MLR	MLR		
	comp=Z,3μm,19.0s						
DIV	**Divide**	**39.33**	**43**	*e*P	**P**	**11 07 36.0**	**+0.1**
	comp=Z,36nm,0.9s						
DIV				LR	LR		
	comp=Z,2μm,19.0s						
EYAK	**Cordova Ski Ar**	**39.41**	**44**	PFAKE		11 07 50.0	+14
EYAK				LR	LR		
	comp=Z,3μm,19.0s						
HARP	**HAARP**	**39.50**	**41**	*e*P	**P**	**11 07 38.2**	**+1.0**
	comp=Z,58nm,1.0s						
HARP				LR	LR		
	comp=Z,2μm,20.0s						
RIDG	**Independent Ri**	**39.55**	**39**	*e*P	**P**	**11 07 37.1**	**-0.5**
	comp=Z,41nm,0.9s						
RIDG				LR	LR		
	comp=Z,4μm,19.0s						
DOT	**Dot Lake**	**39.90**	**39**	*e*P	**P**	**11 07 40.1**	**-0.5**
	comp=Z,35nm,1.2s						
DOT				LR	LR		
	comp=Z,3μm,18.0s						
SCRK	**Sand Creek**	**39.91**	**39**	*e*P	**P**	**11 07 41.0**	**+0.3**
	comp=Z,22nm,1.1s						
SCRK				LR	LR		
	comp=Z,3μm,19.0s						
GYA	**Guiyang**	**39.96**	**257**	⇑*i*P	**P**	**11 07 41.4**	**-0.1**
GYA				pP	pP	11 07 48.5	-2.1
GYA				PP	**PnPn**	**11 09 18.4**	**+1.3**
GYA				PcP	**PcP**	**11 09 43.6**	**-2.8**
GYA				ScP	**ScP**	**11 13 31.4**	**-1.2**
GYA				S	**S**	**11 13 44.3**	**-0.3**
GYA				sS	sS	11 13 58.9	-1.4
GYA				ScS	**ScS**	**11 17 41.2**	**-4.8**
GYA				pmax	pmax		
	comp=Z,70nm,1.0s						
GYA				pmax	pmax		
	comp=Z,420nm,8.3s						
GYA				LR	LR		
	comp=Z,3μm,18.4s						
GYA				LR	LR		
	comp=Z,4μm,16.7s						
GYA				LR	LR		
	comp=Z,5μm,16.9s						
MENT	**Mentasta**	**40.12**	**40**	*e*P	**P**	**11 07 42.8**	**+0.5**
	comp=Z,17nm,1.0s						
MENT				LR	LR		
	comp=Z,3μm,18.0s						
TGY	**Tagaytay City**	**40.15**	**229**	P	**P**	**11 07 44.8**	**+1.8**
	comp=Z,112nm,0.3s,baz=343,slow=6.7,SNR=6.0						
HMT	**Hamilton**	**40.17**	**44**	*e*P	**P**	**11 07 42.3**	**-0.5**
	comp=Z,88nm,1.1s						
HMT				LR	LR		
	comp=Z,3μm,22.0s						
BALM	**Baldy**	**41.00**	**43**	*e*P	**P**	**11 07 50.9**	**+1.2**
	comp=Z,72nm,1.1s						
BALM				LR	LR		
	comp=Z,1μm,22.0s						
BALM	**Baldy**	**41.00**	**43**	*e*P	**P**	**11 07 50.9**	**+1.2**
BALM				pmax	pmax		
	comp=Z,72nm,1.1s						
BALM				MLR	MLR		
	comp=Z,1μm,22.0s						
EGAK	**Eagle**	**41.07**	**37**	*e*P	**P**	**11 07 50.1**	**0.0**
	comp=Z,56nm,1.1s						
EGAK				LR	LR		
	comp=Z,3μm,21.0s						
CTGM	**Chitina Glacie**	**41.49**	**43**	*e*P	**P**	**11 07 53.9**	**0.0**
	comp=Z,126nm,1.0s						
CTGM				LR	LR		
	comp=Z,2μm,19.0s						
DAWY	**Dawson**	**41.91**	**38**	*e*P	**P**	**11 07 56.9**	**-0.2**
	comp=Z,12nm,0.9s						
DAWY				LR	LR		
	comp=Z,3μm,19.0s						
DGZ	**Jazzator, Alta**	**42.05**	**300**	*d i*P	**P**	**11 07 57.9**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ZAA1	**Zalesovo Array**	**42.30**	**307**	*e*P	**P**	**11 07 58.6**	**-1.7**
ZAA1				*e*PcP	**PcP**	**11 09 53.9**	**+0.5**
ZAA0	**Zalesovo Array**	**42.30**	**307**	*e*P	**P**	**11 07 58.6**	**-1.6**
	comp=Z,15nm,1.3s						
ZAA0				LR	LR		
	comp=Z,4μm,19.0s						
ZALV	**Zalesovo Beam**	**42.30**	**307**	P	**P**	**11 07 58.6**	**-1.7**
	comp=Z,3.9nm,0.4s,baz=68,slow=8.2,SNR=6.0						
ZALV				PcP	**PcP**	**11 09 53.9**	**+0.5**
	comp=Z,12nm,0.5s,baz=66,slow=3.5,SNR=6.5						
ZALV				LR	LR	11 26 37.5	
	comp=Z,4μm,19.7s,baz=71,slow=38						
BCPM	**Bancas Point**	**42.51**	**44**	PFAKE		11 08 10.0	+8.0
BCPM				LR	LR		
	comp=Z,2μm,20.0s						
EPYK	**Eagle Plains**	**42.72**	**34**	*e*P	**P**	**11 08 04.4**	**+0.7**
	comp=Z,72nm,0.9s						
EPYK	**Eagle Plains**	**42.72**	**34**	P	**P**	**11 08 04.6**	**+1.0**
	baz=278,SNR=35						
QIZ	**Qiongzhong**	**42.91**	**246**	P	**P**	**11 08 06.7**	**+1.1**
QIZ				S	**S**	**11 14 30.6**	**+2.4**
QIZ				ScS	**ScS**	**11 18 03.2**	**-0.6**
QIZ				pmax	pmax		
	comp=Z,30nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,500nm,4.1s						
QIZ				LR	LR		
	comp=Z,3μm,22.1s						
QIZ				LR	LR		
	comp=Z,3μm,21.6s						
QIZ				LR	LR		
	comp=Z,4μm,17.7s						
QIZ	**Qiongzhong**	**42.91**	**246**	*e*P	**P**	**11 08 07.0**	**+1.4**
	comp=Z,87nm,1.4s						
QIZ				LR	LR		
	comp=Z,5μm,19.0s						
NVS	**Novosibirsk**	**42.94**	**308**	*e*P	**P**	**11 08 04.1**	**-1.3**
NVS				*i*		11 09 54.8	
NVS				*e*		11 18 02.0	
NVS				pmax	pmax		
	comp=Z,19nm,1.2s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.5s						
KMI	**Kunming**	**43.52**	**259**	P	**P**	**11 08 11.5**	**+0.7**
KMI				pP	pP	11 08 16.6	-3.3
KMI				sP	sP	11 08 21.6	-1.4
KMI				PP	**PP**	**11 09 53.9**	**+1.6**
KMI				S	**S**	**11 14 38.5**	**+0.9**
KMI				sS	pS	11 14 48.7	-0.2
KMI				SS	**SS**	**11 17 45.4**	**-7.2**
KMI				pmax	pmax		
	comp=E,100nm,1.3s						
KMI				pmax	pmax		
	comp=E,970nm,3.9s						
KMI				LR	LR		
	comp=E,2μm,18.1s						
KMI				LR	LR		
	comp=E,2μm,18.7s						
KMI				LR	LR		
	comp=E,3μm,16.9s						
KMI	**Kunming**	**43.52**	**259**	*e*P	**P**	**11 08 11.1**	**+0.3**
	comp=E,196nm,1.4s						
KMI				LR	LR		
	comp=Z,3μm,18.0s						
INK	**Inuvik**	**43.68**	**31**	P	**P**	**11 08 11.7**	**+0.4**
	comp=Z,18nm,0.8s,baz=276,slow=6.7,SNR=30						
INK	**Inuvik**	**43.68**	**31**	*e*P	**P**	**11 08 10.9**	**-0.4**
	comp=Z,45nm,1.0s						
INK				LR	LR		
	comp=Z,2μm,20.0s						
INK	**Inuvik**	**43.68**	**31**	*e*P	**P**	**11 08 10.9**	**-0.4**
INK				pmax	pmax		
	comp=Z,45nm,1.0s						
INK				MLR	MLR		
	comp=Z,2μm,20.0s						
DAV	**Davao City (W)**	**43.98**	**218**	⇑*i*P	**P**	**11 08 14.1**	**-0.2**
WMQ	**Urumqi**	**44.10**	**292**	P	**P**	**11 08 16.0**	**+0.9**
WMQ				pP	pP	11 08 21.1	-3.4
WMQ				sP	sP	11 08 24.4	-2.7
WMQ				PcP	**PcP**	**11 10 02.8**	**+3.0**
WMQ				S	**S**	**11 14 46.4**	**+1.1**
WMQ				sS	sS	11 15 00.1	-1.6
WMQ				pmax	pmax		
	comp=Z,30nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1μm,4.3s						
WMQ				LR	LR		
	comp=Z,6μm,19.5s						
WMQ				LR	LR		
	comp=Z,5μm,17.5s						
WMQ				LR	LR		
	comp=Z,10μm,23.1s						
WMQ	**Urumqi**	**44.10**	**292**	*e*P	**P**	**11 08 13.8**	**-1.2**
	comp=Z,36nm,0.8s						
WMQ				LR	LR		
	comp=Z,6μm,20.0s						
WMQ	**Urumqi**	**44.10**	**292**	*e*P	**P**	**11 08 13.8**	**-1.2**
WMQ				pmax	pmax		
	comp=Z,36nm,0.8s						
WMQ				MLR	MLR		
	comp=Z,6μm,20.0s						
CTBH	**Cotabato--PC H**	**44.44**	**220**	⇑*i*P	**P**	**11 08 19.7**	**+1.8**
WHY	**Whitehorse**	**44.65**	**42**	*e*P	**P**	**11 08 20.1**	**+0.8**
	comp=Z,49nm,1.0s						
WHY				LR	LR		
	comp=Z,2μm,19.0s						
SKAG	**Skagway**	**44.75**	**44**	*e*P	**P**	**11 08 19.3**	**-0.6**
	comp=Z,27nm,1.0s						
SLVN	**Son La**	**45.23**	**254**	*e*P	**P**	**11 08 24.3**	**0.0**
	comp=Z,38nm,1.1s						
SLVN				LR	LR		
	comp=Z,3μm,18.0s						
BESE	**Bessie Mountai**	**45.23**	**45**	*e*P	**P**	**11 08 23.4**	**-0.5**
	comp=Z,35nm,1.0s						
BESE				LR	LR		
	comp=Z,2μm,20.0s						
SIT	**Sitka**	**45.45**	**47**	*e*P	**P**	**11 08 26.4**	**+0.9**
	comp=Z,80nm,1.4s						
SIT	**Sitka**	**45.45**	**47**	*e*P	**P**	**11 08 26.4**	**+0.9**
SIT				pmax	pmax		
	comp=Z,80nm,1.4s						
JIS	**Juneau Island**	**45.56**	**46**	*e*P	**P**	**11 08 27.7**	**+1.3**
	comp=Z,63nm,1.1s						
JIS				LR	LR		
	comp=Z,2μm,20.0s						
MK31	**Makanchi Array**	**46.32**	**298**	*e*P	**P**	**11 08 31.8**	**-0.8**
	comp=Z,46nm,0.9s						
MK31	**Makanchi Array**	**46.32**	**298**	*e*P	**P**	**11 08 31.8**	**-0.8**
MK31				pmax	pmax		
	comp=Z,46nm,0.9s						
MK32	**Makanchi Array**	**46.32**	**298**	*e*P	**P**	**11 08 31.6**	**-1.0**
MK32				*e*PcP	**PcP**	**11 10 07.8**	**+0.4**
MKAR	**Makanchi Array**	**46.32**	**298**	P	**P**	**11 08 31.6**	**-1.0**
	comp=Z,41nm,0.9s,baz=73,slow=6.8,SNR=63						
MKAR				PcP	**PcP**	**11 10 07.8**	**+0.4**
	comp=Z,6.5nm,0.5s,baz=93,slow=1.3,SNR=5.6						
MAKZ	**Makanchi**	**46.51**	**298**	*e*P	**P**	**11 08 32.7**	**-1.4**
	comp=Z,38nm,0.8s						
MAKZ				LR	LR		
	comp=Z,9μm,18.0s						
MAKZ	**Makanchi**	**46.51**	**298**	*e*P	**P**	**11 08 32.7**	**-1.4**
MAKZ				pmax	pmax		
	comp=Z,39nm,0.8s						
MAKZ				MLR	MLR		
	comp=Z,9μm,18.0s						
KURK	**Kurchatov**	**46.97**	**304**	*e*P	**P**	**11 08 35.1**	**-2.4**
	comp=Z,49nm,1.0s						
KURK				LR	LR		
	comp=Z,2μm,18.0s						
KURK	**Kurchatov**	**46.97**	**304**	*e*P	**P**	**11 08 35.1**	**-2.4**
KURK				pmax	pmax		
	comp=Z,49nm,1.0s						
KURK				MLR	MLR		
	comp=Z,2μm,18.0s						
KURK	**Kurchatov**	**46.97**	**304**	P	**P**	**11 08 35.3**	**-2.2**
	SNR=27						
KURK				P	**P**	**11 08 35.3**	**-2.2**
	SNR=27						
LKP	**Lekhapani**	**46.98**	**267**	*e*P	**P**	**11 08 39.3**	**+1.4**
SGSI	**Sangihe**	**47.05**	**216**	P	**P**	**11 08 37.4**	**-1.1**
KURBB	**Kurchatov Arra**	**47.05**	**304**	P	**P**	**11 08 36.5**	**-1.7**
	comp=Z,50nm,1.1s,baz=69,slow=8.3,SNR=61						
MANU	**Manus Island**	**47.22**	**185**	PFAKE		11 08 50.0	+10
MANU				LR	LR		
	comp=Z,2μm,19.0s						
DIBR	**DIBRUGARH**	**47.55**	**268**	*e*P	**P**	**11 08 43.9**	**+1.5**
DLBC	**Dease Lake**	**47.68**	**44**	*P*	**P**	**11 08 44.7**	**+1.6**
	comp=Z,10nm,0.9s,baz=253,slow=19,SNR=3.3						
DLBC	**Dease Lake**	**47.68**	**44**	*e*P	**P**	**11 08 44.2**	**+1.2**
	comp=Z,33nm,0.9s						
DLBC				LR	LR		
	comp=Z,1μm,20.0s						
PANO	**Nakornpanom**	**47.69**	**249**	P	**P**	**11 08 45.0**	**+1.5**
	comp=Z,1.0nm,2.2s,comp=Z,37nm						
TARA	**Tarawa**	**47.81**	**150**	PFAKE		11 09 00.0	+16
TARA				LR	LR		
	comp=Z,4μm,20.0s						
SKNT	**Sakolnakorn**	**48.23**	**250**	P	**P**	**11 08 48.7**	**+1.0**
	comp=Z,82nm,1.3s						
ZIRO	**ZIRO**	**48.27**	**269**	*e*P	**P**	**11 08 47.9**	**-0.2**
DIB	**Dawson Inlet,**	**48.34**	**52**	PFAKE		11 09 00.0	+12
DIB				LR	LR		
	comp=Z,1μm,19.0s						
JAY	**Jayapura**	**48.45**	**194**	P	**P**	**11 08 51.6**	**+2.2**
	comp=Z,17nm,1.1s,baz=101,slow=4.2,SNR=3.8						
JAY	**Jayapura**	**48.45**	**194**	P	**P**	**11 08 49.4**	**0.0**
JORH	**JORHAT**	**48.46**	**268**	*e*P	**P**	**11 08 49.9**	**+0.5**
MOKO	**MOKOCHONG**	**48.53**	**267**	*e*P	**P**	**11 08 51.1**	**+0.9**
GENI	**Genyem**	**48.62**	**194**	P	**P**	**11 08 49.9**	**-0.8**
SRPI	**Serui, Papua**	**48.74**	**200**	P	**P**	**11 08 50.4**	**-1.2**
LSA	**Lhasa**	**48.88**	**273**	P	**P**	**11 08 55.1**	**+1.9**
LSA				S	**S**	**11 15 59.1**	**+4.2**
LSA				pmax	pmax		
	comp=Z,390nm,1.1s						
LSA				LR	LR		
	comp=Z,6μm,19.8s						
LSA				LR	LR		
	comp=Z,8μm,20.1s						
LSA				LR	LR		
	comp=Z,13μm,22.4s						
LSA	**Lhasa**	**48.88**	**273**	*e*P	**P**	**11 08 54.8**	**+1.6**
	comp=Z,234nm,1.4s						
LSA				LR	LR		
	comp=Z,3μm,18.0s						
LSA	**Lhasa**	**48.88**	**273**	*i* P	**P**	**11 08 54.9**	**+1.7**
	SNR=16						
LSA	**Lhasa**	**48.88**	**273**	*e*P	**P**	**11 08 54.8**	**+1.6**
LSA				pmax	pmax		
	comp=Z,234nm,1.4s						
LSA				MLR	MLR		
	comp=Z,3μm,18.0s						
TNTI	**Ternate**	**48.98**	**212**	*e*P	**P**	**11 08 52.4**	**-1.0**
	comp=Z,43nm,1.2s						
TNTI	**Ternate**	**48.98**	**212**	P	**P**	**11 08 52.1**	**-1.4**
	comp=Z,44nm,1.7s,comp=Z,1μm						
DLV	**T Lat**	**49.08**	**241**	*e*P	**P**	**11 08 54.5**	**0.0**
	comp=Z,119nm,1.1s						
DLV				LR	LR		
	comp=Z,800nm,18.0s						
SWI	**Sorong**	**49.16**	**207**	P	**P**	**11 08 55.0**	**+0.2**
KOHI	**KOHIMA**	**49.19**	**267**	*e*P	**P**	**11 08 53.9**	**-1.3**
RABL	**Rabaul**	**49.25**	**178**	*e*P	**P**	**11 08 55.8**	**+0.3**
	comp=Z,129nm,1.4s						
RABL				LR	LR		
	comp=Z,3μm,18.0s						
KKM	**Kota Kinabalu**	**49.40**	**228**	PFAKE		11 09 10.0	+13
KKM				LR	LR		
	comp=Z,2μm,21.0s						
KHON	**Khomkaen**	**49.46**	**250**	P	**P**	**11 08 58.5**	**+1.4**
	comp=Z,151μm,0.9s						
TEZP	**TEZPUR**	**49.56**	**269**	*e*P	**P**	**11 08 57.0**	**-0.9**
TAWA	**Tawang**	**49.63**	**270**	*e*P	**P**	**11 08 58.8**	**-0.1**
PDGK	**Podgornoye**	**49.65**	**295**	P	**P**	**11 08 58.5**	**0.0**
PDGK				pmax	pmax		
	comp=Z,99nm,1.5s						
PHRA	**Phrae**	**49.68**	**255**	P	**P**	**11 09 00.0**	**+1.2**
	comp=Z,6.9nm,1.0s						
IMP	**Imphal**	**49.86**	**266**	*e*P	**P**	**11 09 00.3**	**0.0**
IMP				IAmb	IAmb	11 09 02.0	
	comp=Z,36nm,0.6s						
LAMP	**Lampang**	**50.07**	**255**	P	**P**	**11 09 03.2**	**+1.4**
	comp=Z,109μm,0.9s,comp=Z,742μm						
CHAI	**Chaiyaphum**	**50.33**	**251**	P	**P**	**11 09 04.4**	**+0.6**
	comp=Z,59μm,0.8s						
CMMT	**Chiang Mai**	**50.34**	**256**	P	**P**	**11 09 04.8**	**+0.9**
	comp=Z,34nm,1.4s,comp=Z,656nm						
CHTO	**Chiang Mai**	**50.34**	**256**	*e*P	**P**	**11 09 04.8**	**+1.0**
	comp=Z,54nm,1.0s						
CHTO				LR	LR		
	comp=Z,3μm,18.0s						
CHTO	**Chiang Mai**	**50.34**	**256**	P	**P**	**11 09 05.2**	**+1.3**
	SNR=18						
CHTO				P	**P**	**11 09 05.2**	**+1.3**
	SNR=18						
CHTO				P	**P**	**11 09 05.2**	**+1.3**
	SNR=18						
PBKT	**Sadao Pong**	**50.53**	**252**	P	**P**	**11 09 06.3**	**+1.0**
	comp=Z,14nm,1.3s,comp=Z,471nm						
CM31	**Chiang Mai Arr**	**50.59**	**256**	*e*P	**P**	**11 09 06.8**	**+1.1**
	comp=Z,46nm,1.1s						
CM31	**Chiang Mai Arr**	**50.59**	**256**	P	**P**	**11 09 07.2**	**+1.5**
	SNR=11						
CMAR	**Chiang Mai Arr**	**50.59**	**256**	P	**P**	**11 09 06.9**	**+1.2**
	comp=Z,9.5nm,0.9s,baz=34,slow=8.2,SNR=52						
CMAR				LR	LR	11 32 38.4	
	comp=Z,2μm,18.7s,baz=44,slow=38						
GUWA	**GUWAHATI**	**50.61**	**269**	*e*P	**P**	**11 09 05.8**	**+0.1**
SILR	**SILCHAR**	**50.70**	**267**	*e*P	**P**	**11 09 08.8**	**+2.3**
BRVK	**Borovoye**	**50.71**	**310**	*e*P	**P**	**11 09 03.4**	**-2.8**
	comp=Z,14nm,0.9s						
BRVK				LR	LR		
	comp=Z,4μm,20.0s						
BRVK	**Borovoye**	**50.71**	**310**	P	**P**	**11 09 04.9**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,29nm,1.1s						
BRVK	**Borovoye**	**50.71**	**310**	P	**P**	**11 09 04.3**	**-1.9**
	SNR=11						
BRVK				P	**P**	**11 09 04.3**	**-1.9**
	SNR=11						
MWH	**Moku'aweowe**	**50.80**	**102**	PFAKE		11 09 20.0	+12
MWH				LR	LR		
	comp=Z,3μm,19.0s						
FAKI	**Fak Fak**	**50.80**	**204**	*e*P	**P**	**11 09 07.3**	**0.0**
	comp=Z,130nm,1.1s						
FAKI				LR	LR		
	comp=Z,1μm,20.0s						
FAKI	**Fak Fak**	**50.80**	**204**	P	**P**	**11 09 07.0**	**-0.3**
SHL	**Shillong**	**50.86**	**268**	*e*P	**P**	**11 09 08.1**	**+0.2**
	comp=Z,173nm,0.9s						
SHL				LR	LR		
	comp=Z,2μm,19.0s						
SHL	**Shillong**	**50.86**	**268**	*e*P	**P**	**11 09 08.1**	**+0.2**
SHL				pmax	pmax		
	comp=Z,173nm,0.9s						
SHL				MLR	MLR		
	comp=Z,2μm,19.0s						
SHL	**Shillong**	**50.86**	**268**	⇑*i*P	**P**	**11 09 07.0**	**-0.9**
SHL				*e*P	pP	11 09 08.1	-9.5
SHL				*i* S	**S**	**11 16 25.0**	**+3.0**
KHU	**Kahuku**	**50.95**	**102**	PFAKE		11 09 20.0	+11
KHU				LR	LR		
	comp=Z,3μm,18.0s						
UWE	**Uwekahuna**	**51.06**	**102**	PFAKE		11 09 20.0	+11
UWE				LR	LR		
	comp=Z,4μm,19.0s						
WRMHI	**West Rim**	**51.06**	**102**	PFAKE		11 09 20.0	+11
WRMHI				LR	LR		
	comp=Z,3μm,21.0s						
UWB	**Uwekahuna B**	**51.06**	**102**	PFAKE		11 09 20.0	+11
UWB				LR	LR		
	comp=Z,2μm,20.0s						
KKO	**Keanakako`i**	**51.09**	**102**	PFAKE		11 09 20.0	+10
KKO				LR	LR		
	comp=Z,4μm,18.0s						
PUH	**Pauahi**	**51.14**	**102**	PFAKE		11 09 20.0	+10
PUH				LR	LR		
	comp=Z,3μm,18.0s						
BBB	**Bella Bella**	**51.18**	**51**	*e*P	**P**	**11 09 08.6**	**-1.1**
	comp=Z,60nm,1.4s						
BBB				LR	LR		
	comp=Z,600nm,21.0s						
JCUZ	**Jacuzzi**	**51.21**	**102**	PFAKE		11 09 20.0	+9.5
JCUZ				LR	LR		
	comp=Z,2μm,20.0s						
AAA	**Alma-Ata**	**51.35**	**296**	*e*P	**P**	**11 09 13.1**	**+1.8**
AAA				pmax	pmax		
	comp=Z,300nm,4.3s						
AAA				MLR	MLR		
	comp=Z,2μm,17.0s						
MRSI	**Marisa**	**51.46**	**218**	P	**P**	**11 09 11.4**	**-0.8**
TARG	**Taragay, Kyrgy**	**51.52**	**294**	*e*P	**P**	**11 09 13.8**	**+0.9**
	comp=Z,75nm,1.1s						
TARG				LR	LR		
	comp=Z,6μm,18.0s						
OTUK	**Ortayu**	**51.73**	**303**	P	**P**	**11 09 13.2**	**-0.8**
OTUK				pmax	pmax		
	comp=Z,21nm,1.0s						
DHUB	**DHUBRI**	**51.91**	**270**	*e*P	**P**	**11 09 15.4**	**-0.1**
SAIH	**SAIHA**	**52.03**	**264**	*e*P	**P**	**11 09 16.9**	**+0.2**
GTK	**Tadong**	**52.10**	**272**	*e*P	**P**	**11 09 18.6**	**+1.4**
GTK				IAmb	IAmb	11 09 19.3	
	comp=Z,75nm,0.8s						
UMPA	**Umpang Tak**	**52.21**	**254**	P	**P**	**11 09 21.0**	**+3.1**
	comp=Z,63μm,0.9s						
ULHL	**Ulahol**	**52.26**	**295**	P	**P**	**11 09 19.3**	**+1.1**
	SNR=16						
BOOM	**Boomskoye usch**	**52.33**	**295**	*e*P	**P**	**11 09 19.4**	**+0.7**
	comp=Z,204nm,1.4s						
BOOM				LR	LR		
	comp=Z,5μm,19.0s						
BOOM	**Boomskoye usch**	**52.33**	**295**	*e*P	**P**	**11 09 19.4**	**+0.7**
BOOM				pmax	pmax		
	comp=Z,204nm,1.4s						
BOOM				MLR	MLR		
	comp=Z,5μm,19.0s						
TKM2	**Tokmak 2**	**52.33**	**296**	P	**P**	**11 09 19.7**	**+0.9**
	SNR=66						
TKM2	**Tokmak 2**	**52.33**	**296**	P	**P**	**11 09 19.0**	**+0.2**
TKM2				pmax

LUWI	**Luwuk**	**52.47 217**	PFAKE		11 09 30.0 +10
LUWI			LR	LR	
	comp=Z,700nm,21.0s				
MPSI	**Mapaga**	**52.50 221**	P	**P**	**11 09 19.8 -0.2**
RES	**Resolute Bay**	**52.70 18**	P	**P**	**11 09 20.5 -0.2**
	comp=Z,20nm,1.0s,baz=337,slow=10,SNR=35				
RES	**Resolute Bay**	**52.70 18**	*eP*	**P**	**11 09 20.7 0.0**
	comp=Z,29nm,0.8s				
RES			LR	LR	
	comp=Z,2μm,20.0s				
RES	**Resolute Bay**	**52.70 18**	*eP*	**P**	**11 09 20.7 0.0**
RES			pmax	pmax	
	comp=Z,29nm,0.8s				
RES			MLR	MLR	
	comp=Z,2μm,20.0s				
CHMS	**Chumysh**	**52.82 297**	P	**P**	**11 09 22.8 +0.6**
	SNR=14				
APSI	**Ampana**	**52.83 218**	P	**P**	**11 09 21.8 -0.6**
USP	**Ospenovka**	**52.85 297**	P	**P**	**11 09 23.1 +0.8**
	SNR=52				
KBK	**Karagaybulak**	**52.87 296**	P	**P**	**11 09 23.7 +1.0**
	SNR=41				
YKW3	**Yellowknife Ar**	**52.95 35**	*eP*	**P**	**11 09 23.3 +0.5**
	comp=Z,21nm,0.9s				
KZA	**Kyzart**	**52.98 295**	P	**P**	**11 09 24.9 +1.0**
	SNR=96				
YKA	**Yellowknife Ar**	**52.98 35**	P	**P**	**11 09 23.3 +0.3**
	comp=Z,13nm,0.9s,baz=299,slow=7.3,SNR=73				
YKA			PKP2bc		11 39 50.6
	comp=Z,0.8nm,1.0s,baz=110,slow=1.6,SNR=4.2				
YKB5	**Yellowknife Ar**	**52.98 35**	*eP*	**P**	**11 09 23.3 +0.3**
FRU1	**Bishkek**	**53.00 296**	*eP*	**P**	**11 09 24.7 +1.2**
	comp=Z,75nm,1.0s				
FRU1			LR	LR	
	comp=Z,6μm,18.0s				
FRU1	**Bishkek**	**53.00 296**	*eP*	**P**	**11 09 24.7 +1.2**
FRU1			pmax	pmax	
	comp=Z,75nm,1.0s				
FRU1			MLR	MLR	
	comp=Z,6μm,18.0s				
AAK	**Ala-Archa**	**53.17 296**	P	**P**	**11 09 25.7 +0.8**
	SNR=26				
AAK	**Ala-Archa**	**53.17 296**	*eP*	**P**	**11 09 25.1 +0.2**
	comp=Z,40nm,0.9s				
AAK			LR	LR	
	comp=Z,4μm,21.0s				
AAK	**Ala-Archa**	**53.17 296**	*i* P	**P**	**11 09 25.1 +0.2**
	SNR=30				
AAK	**Ala-Archa**	**53.17 296**	*eP*	**P**	**11 09 25.1 +0.2**
AAK			pmax	pmax	
	comp=Z,40nm,0.9s				
AAK			MLR	MLR	
	comp=Z,4μm,21.0s				
AAK	**Ala-Archa**	**53.17 296**	P	**P**	**11 09 23.3 -1.6**
	SNR=36				
AAK			P	**P**	**11 09 23.3 -1.6**
	SNR=36				
AAK	**Ala-Archa**	**53.17 296**	*eP*	**P**	**11 09 25.1 +0.2**
ODAN	**Odare**	**53.23 273**	*eP*	**P**	**11 09 26.5 +0.8**
	comp=Z,352nm,1.2s				
UCH	**Uchtor**	**53.37 296**	P	**P**	**11 09 27.7 +1.0**
	SNR=16				
JIRN	**Jiri**	**53.59 274**	*eP*	**P**	**11 09 29.6 +1.1**
	comp=Z,2μm,1.5s				
EKS2	**Erkin-Say**	**53.61 297**	P	**P**	**11 09 28.5 +0.4**
	SNR=35				
GUN	**Gumba**	**53.66 275**	*eP*	**P**	**11 09 29.8 +0.9**
	comp=Z,635nm,1.2s				
KBS	**Kingsbay**	**53.73 351**	PFAKE		11 09 40.0 +12
KBS			LR	LR	
	comp=Z,2μm,18.0s				
KBS	**Kingsbay**	**53.73 351⇓**	*eP*	**P**	**11 09 28.1 -0.2**
KBS			pmax	pmax	
	comp=Z,200nm,1.2s				
RAMN	**Ramite**	**53.74 273**	*eP*	**P**	**11 09 30.2 +0.8**
	comp=Z,940nm,1.2s				
KSH	**Kashi**	**53.85 292**	P	**P**	**11 09 34.4 +4.5**
KSH			sP	pwP	11 09 43.4 -0.1
KSH			PP	**PP**	**11 11 37.2 +6.2**
KSH			S	**S**	**11 17 07.1 +4.5**
KSH			ScS	**ScS**	**11 19 19.4 +2.8**
KSH			SS	**SS**	**11 20 49.0 +5.6**
KSH			pmax	pmax	
	comp=Z,490nm,1.4s				
KSH			pmax	pmax	
	comp=Z,2μm,6.0s				
KSH			LR	LR	
	comp=Z,2μm,15.1s				
KSH			LR	LR	
	comp=Z,1μm,13.1s				
KSH			LR	LR	
	comp=Z,12μm,22.7s				
SVE	**Sverdlovsk**	**53.91 317⇑**	*eP*	**P**	**11 09 28.5 -1.4**
SVE			pmax	pmax	
	comp=Z,50nm,1.5s				
SVE			MLR	MLR	
	comp=Z,3μm,19.0s				
AML	**Almayashu**	**53.94 296**	P	**P**	**11 09 32.1 +1.2**
	SNR=18				
PHET	**Kaeng Krachan**	**54.06 250**	P	**P**	**11 09 33.6 +2.1**
	comp=Z,86μm,1.1s,comp=Z,764μm				
KKN	**Kakani**	**54.16 275**	*eP*	**P**	**11 09 33.3 +0.9**
	comp=Z,577nm,1.2s				
PKI	**Pulchoki**	**54.20 275**	*eP*	**P**	**11 09 33.5 +0.7**
	comp=Z,842nm,1.5s				
PKIN	**Phulchoki**	**54.20 275**	*eP*	**P**	**11 09 33.4 +0.6**
	comp=Z,601nm,1.6s				
DMN	**Daman**	**54.39 275**	*eP*	**P**	**11 09 35.2 +1.1**
	comp=Z,918nm,1.4s				
PMG	**Port Moresby**	**54.53 185**	PFAKE		11 09 50.0 +15
PMG			LR	LR	
	comp=Z,1μm,20.0s				
SBUM	**Sibu**	**54.55 230**	*eP*	**P**	**11 09 36.0 +1.0**
	comp=Z,16nm,1.4s				
SBUM			LR	LR	
	comp=Z,600nm,21.0s				
SBUM	**Sibu**	**54.55 230**	P	**P**	**11 09 36.0 +1.0**
DANN	**Dangsing**	**54.88 276**	*eP*	**P**	**11 09 39.0 +1.2**
	comp=Z,186nm,0.6s				
HNR	**Honiara**	**55.04 169**	PFAKE		11 09 50.0 +11
HNR			LR	LR	
	comp=Z,2μm,18.0s				
ARU	**Arti**	**55.11 317**	*eP*	**P**	**11 09 36.0 -2.5**
	comp=Z,27nm,0.9s				
ARU			LR	LR	
	comp=Z,3μm,18.0s				
ARU	**Arti**	**55.11 317**	*c i* P	**P**	**11 09 36.3 -2.3**
ARU			*PP	**sP**	**11 09 50.6 -0.2**
ARU					11 10 37.1
ARU			S	**S**	**11 17 17.5 -1.2**
ARU					11 19 19.7
ARU			SS	**SS**	**11 21 03.4 +1.2**
ARU			pmax	pmax	
	comp=Z,46nm,1.4s				
ARU			MLR	MLR	
	comp=Z,4μm,16.0s				
KOLN	**Koldanda**	**55.35 276**	*eP*	**P**	**11 09 42.1 +1.1**
LLLB	**Lillooet**	**55.36 51**	*eP*	**P**	**11 09 41.0 +0.4**
	comp=Z,22nm,1.0s				
LLLB			LR	LR	
	comp=Z,1μm,18.0s				
KK31	**Karatay Array**	**55.42 299**	*eP*	**P**	**11 09 40.9 -0.3**
	comp=Z,119nm,1.4s				
KK31	**Karatay Array**	**55.42 299**	*i* P	**P**	**11 09 40.7 -0.4**
KK31			pmax	pmax	
	comp=Z,12nm,0.7s				
KKAR	**Karatay Array**	**55.42 299**	*eP*	**P**	**11 09 40.6 -0.5**
	comp=Z,119nm,1.4s				
KKAR	**Karatay Array**	**55.42 299**	*eP*	**P**	**11 09 40.6 -0.5**
KKAR			pmax	pmax	
	comp=Z,119nm,1.4s				
PGC	**Sidney**	**55.50 53**	*eP*	**P**	**11 09 43.5 +2.0**
	comp=Z,26nm,1.4s				
PGC			LR	LR	
	comp=Z,1μm,18.0s				
PYUN	**Piuthan**	**55.58 277**	*eP*	**P**	**11 09 43.7 +1.1**
TULEG	**Thule**	**55.85 10**	*eP*	**P**	**11 09 41.9 -1.8**
	comp=Z,222nm,1.5s				
TULEG			LR	LR	
	comp=Z,2μm,19.0s				
A04D	**Lummi Island**	**55.89 53**	P	**P**	**11 09 45.1 +0.9**
	baz=302				
NLWA	**Neilton Lookou**	**55.92 55**	*eP*	**P**	**11 09 48.1 +3.4**
	comp=Z,41nm,1.2s				
NLWA			LR	LR	
	comp=Z,1μm,21.0s				
BOK	**Bokaro**	**56.20 271**	*eP*	**P**	**11 09 48.0 +1.0**

D03D	**Eldon**	**56.30 54**	P	**P**	**11 09 48.2 +1.0**
	baz=302				
KSM	**Kuching**	**56.41 231**	*eP*	**P**	**11 09 48.3 -0.1**
	comp=Z,73nm,1.3s				
KSM			LR	LR	
	comp=Z,800nm,20.0s				
KSM	**Kuching**	**56.41 231**	P	**P**	**11 09 50.0 +1.6**
B05A	**Bryant**	**56.47 53**	P	**P**	**11 09 48.9 +0.4**
	baz=302				
D04E	**Lakebay**	**56.67 55**	P	**P**	**11 09 50.5 +0.6**
	baz=303				
B06A	**Marblemount**	**56.68 53**	*eP*	**P**	**11 09 50.8 +0.8**
	comp=Z,46nm,1.3s				
B06A			LR	LR	
	comp=Z,800nm,20.0s				
BTK	**Batken**	**56.89 295**	*eP*	**P**	**11 09 51.8 +0.1**
	comp=Z,147nm,1.1s				
BTK			LR	LR	
	comp=Z,5μm,18.0s				
BTK	**Batken**	**56.89 295**	*eP*	**P**	**11 09 51.8 +0.1**
BTK			pmax	pmax	
	comp=Z,147nm,1.1s				
BTK			MLR	MLR	
	comp=Z,5μm,18.0s				
D05A	**Enumclaw**	**57.11 54**	*eP*	**P**	**11 09 54.2 +1.2**
	comp=Z,45nm,1.2s				
D05A			LR	LR	
	comp=Z,600nm,21.0s				
E04D	**Cinebar**	**57.12 55**	P	**P**	**11 09 54.6 +1.4**
	baz=303				
F04D	**Rainier, OR**	**57.12 56**	P	**P**	**11 09 54.0 +0.9**
	baz=303				
KAPI	**Kappang**	**57.32 218**	PFAKE		11 10 10.0 +15
KAPI			LR	LR	
	comp=Z,900nm,21.0s				
KAPI	**Kappang**	**57.32 218**	P	**P**	**11 09 56.1 +1.2**
	SNR=13				
KAPI			P	**P**	**11 09 56.1 +1.2**
	SNR=13				
G03D	**McMinnville, O**	**57.45 57**	P	**P**	**11 09 56.7 +1.2**
	baz=304				
LON	**Longmire**	**57.46 55**	*eP*	**P**	**11 09 55.4 -0.2**
	comp=Z,5.4nm,1.0s				
LON			LR	LR	
	comp=Z,700nm,22.0s				
LON	**Longmire**	**57.46 55**	*eP*	**P**	**11 09 55.4 -0.2**
LON			pmax	pmax	
	comp=Z,5.0nm,1.0s				
LON			MLR	MLR	
	comp=Z,700nm,22.0s				
LVZ	**Lovozero**	**57.53 336**	PFAKE		11 10 10.0 +14
LVZ			LR	LR	
	comp=Z,3μm,18.0s				
DDI	**Dehra Dun**	**57.67 282**	*ex*	**P**	**11 09 56.2 -1.1**
DDI			*eP*	pP	11 09 58.3 -8.7
SKLT	**Songkhla**	**57.68 245**	P	**P**	**11 09 59.8 +2.3**
	comp=Z,38nm,1.3s,comp=Z,679nm				
I02D	**Swisshome**	**57.72 58**	P	**P**	**11 09 58.8 +1.5**
	baz=304				
DHRM	**DHARAMSHALA**	**57.73 285**	*eP*	**P**	**11 09 58.2 +0.3**
COR	**Corvallis**	**57.77 57**	PFAKE		11 10 10.0 +12
COR			LR	LR	
	comp=Z,2μm,22.0s				
TRTT	**Trang**	**57.78 246**	P	**P**	**11 10 00.2 +2.1**
	comp=Z,42nm,1.7s				
SMLA	**Simla**	**57.80 283**	*eP*	**P**	**11 09 58.4 +0.2**
PRGR	**Permogore**	**57.81 327**	*eP*	**P**	**11 09 55.0 -2.7**
PRGR			pmax	pmax	
	comp=Z,24nm,0.7s				
B08A	**Colville Reser**	**57.97 52**	*eP*	**P**	**11 09 58.6 -0.5**
	comp=Z,42nm,1.4s				
B08A			LR	LR	
	comp=Z,1μm,19.0s				
DAG	**Danmarks Havn**	**58.06 357⇑**	*i* P	**P**	**11 09 58.4 -0.9**
DAG			pmax	pmax	
	comp=Z,250nm,1.3s				
DAG			MLR	MLR	
	comp=Z,1μm,16.0s				
DAG	**Danmarks Havn**	**58.06 357⇑**	*i* P	**P**	**11 09 58.4 -0.9**
	comp=Z,129nm,1.3s				
	comp=Z,1μm,16.0s				
APA	**Apatity**	**58.11 336⇑**	*i* P	P	11 10 08.4 +8.7
APA			*i* S	S	11 18 08.0 +10
APA			*i*		11 19 50.0
APA			pmax	pmax	
	comp=Z,10.0nm,0.7s				
F05D	**White Salmon**	**58.14 55**	P	**P**	**11 10 01.8 +1.5**
	baz=304				
H04D	**Lebanon**	**58.15 57**	P	**P**	**11 10 02.1 +1.7**
	baz=304				
KNTN	**Kanton**	**58.18 135**	PFAKE		11 10 10.0 +9.1
KNTN			LR	LR	
	comp=Z,3μm,18.0s				
J01E	**Myrtle Point**	**58.19 59**	P	**P**	**11 10 02.4 +1.7**
	baz=304				
KEV	**Kevo**	**58.24 340**	PFAKE		11 10 10.0 +9.4
KEV			LR	LR	
	comp=Z,2μm,20.0s				
AB31	**Akbulak array**	**58.24 310**	*i* P	**P**	**11 10 00.5 -0.5**
AB31			pmax	pmax	
	comp=Z,10.0nm,0.5s				
ABKAR	**Akbulak array**	**58.24 310**	*eP*	**P**	**11 09 59.6 -1.4**
	comp=Z,19nm,0.6s				
I03D	**Drain, OR**	**58.24 58**	P	**P**	**11 10 02.5 +1.5**
	baz=304				
H04A	**Detroit Lake**	**58.38 57**	*eP*	**P**	**11 10 03.0 +1.0**
	comp=Z,78nm,1.4s				
H04A			LR	LR	
	comp=Z,1μm,22.0s				
DGPR	**DIGLIPUR**	**58.39 256**	*eP*	**P**	**11 10 03.1 +0.7**
BWNR	**Bhubaneshwar**	**58.52 268**	*ex*	P	11 09 57.4 -5.8
G05D	**Wamic, OR**	**58.58 56**	P	**P**	**11 10 04.8 +1.4**
	baz=304				
K02D	**Willamette Mer**	**58.62 59**	P	**P**	**11 10 05.5 +1.7**
	baz=305				
I04A	**Tendick Farm,**	**58.75 58**	P	**P**	**11 10 05.9 +1.3**
	baz=305				
ARCES	**ARCESS Array B**	**58.76 340**	P	**P**	**11 10 03.4 -0.9**
	comp=Z,8.8nm,0.3s,baz=47,slow=5.3,SNR=10.0				
C09A	**Chrisman Ranch**	**58.87 52**	*eP*	**P**	**11 10 04.8 -0.6**
	comp=Z,17nm,1.0s				
C09A			LR	LR	
	comp=Z,2μm,18.0s				
D08A	**Wollman Farm,**	**58.93 53**	*eP*	**P**	**11 10 05.5 -0.4**
	comp=Z,27nm,1.4s				
D08A			LR	LR	
	comp=Z,1μm,19.0s				
KULLO	**Kullorsuaq**	**58.95 8⇑**	*i* P	**P**	**11 10 04.4 -1.1**
KULLO			pmax	pmax	
	comp=Z,71nm,1.0s				
KULLO			MLR	MLR	
	comp=Z,3μm,20.0s				
KULLO	**Kullorsuaq**	**58.95 8⇑**	*i* P	**P**	**11 10 04.4 -1.1**
	comp=Z,71nm,1.0s				
KULLO			*i*		11 11 50.7
	comp=Z,3μm,20.0s				
TMCR	**Tamitsa**	**58.95 332**	*eP*	**P**	**11 10 05.7 +0.1**
L02E	**Cave Junction**	**58.96 60**	P	**P**	**11 10 07.6 +1.5**
	baz=305				
HAWA	**Hanford**	**58.96 54**	*eP*	**P**	**11 10 06.2 +0.2**
	comp=Z,58nm,1.5s				
HAWA			LR	LR	
	comp=Z,800nm,21.0s				
NIL	**Nilore**	**58.97 288**	*eP*	**P**	**11 10 07.5 +1.2**
	comp=Z,632nm,1.3s				
NIL			LR	LR	
	comp=Z,900nm,18.0s				
NIL	**Nilore**	**58.97 288**	*eP*	**P**	**11 10 07.5 +1.2**
NIL			MLR	MLR	
	comp=Z,900nm,18.0s				
G06A	**Carlson Farm,**	**58.98 56**	*eP*	**P**	**11 10 06.4 +0.1**
	comp=Z,41nm,1.4s				
G06A			LR	LR	
	comp=Z,900nm,21.0s				
F07A	**Phinny Hill Vi**	**59.02 55**	*eP*	**P**	**11 10 07.4 +1.0**
	comp=Z,32nm,0.9s				
F07A			LR	LR	
	comp=Z,1μm,22.0s				
I05D	**Terrebonne, OR**	**59.08 57**	P	**P**	**11 10 08.3 +1.4**
	baz=305				
HUMO	**Hull Mountain**	**59.10 59**	PFAKE		11 10 20.0 +13
HUMO			LR	LR	
	comp=Z,1μm,22.0s				
KULM	**Kulim**	**59.10 243**	*eP*	**P**	**11 10 08.1 +0.7**
	comp=Z,177nm,1.4s				
KULM			LR	LR	
	comp=Z,1μm,20.0s				

KULM	**Kulim**	**59.10 243**	P	**P**	**11 10 09.0 +1.6**
E08A	**Dider Farm, El**	**59.17 54**	*eP*	**P**	**11 10 07.4 -0.1**
	comp=Z,16nm,0.9s				
E08A			LR	LR	
	comp=Z,800nm,20.0s				
NEW	**Newport**	**59.24 51**	*eP*	**P**	**11 10 07.9 -0.1**
	comp=Z,23nm,1.2s				
NEW			LR	LR	
	comp=Z,700nm,20.0s				
NEW	**Newport**	**59.24 51**	*eP*	**P**	**11 10 07.9 -0.1**
NEW			pmax	pmax	
	comp=Z,23nm,1.2s				
NEW			MLR	MLR	
	comp=Z,700nm,20.0s				
NEW	**Newport**	**59.24 51**	P	**P**	**11 10 08.6 +0.5**
	baz=305,SNR=6.8				
J04D	**Umpqua Nationa**	**59.24 58**	P	**P**	**11 10 09.2 +0.9**
	baz=305				
NDI	**New Delhi**	**59.25 281**	*eP*	**P**	**11 10 07.5 -0.8**
COEN	**Coen**	**59.37 189**	*eP*	**P**	**11 10 12.2 +3.2**
	comp=Z,34nm,1.0s				
COEN			LR	LR	
	comp=Z,1μm,22.0s				
IPM	**Ipoh**	**59.49 242**	*eP*	**P**	**11 10 10.6 +0.5**
	comp=Z,89nm,1.4s				
IPM			LR	LR	
	comp=Z,1μm,18.0s				
IPM	**Ipoh**	**59.49 242**	P	**P**	**11 10 11.0 +0.9**
MMRI	**Maumere**	**59.57 213**	*eP*	**P**	**11 10 10.4 -0.1**
	comp=Z,51nm,1.1s				
PBA	**Port Blair**	**59.60 255**	PFAKE		11 10 20.0 +9.2
PBA			LR	LR	
	comp=Z,2μm,19.0s				
PINE	**Pine Mountain**	**59.62 57**	*eP*	**P**	**11 10 12.5 +1.6**
	comp=Z,28nm,1.1s				
PINE			LR	LR	
	comp=Z,2μm,22.0s				
E09A	**Wood Farm, Sta**	**59.68 53**	*eP*	**P**	**11 10 10.3 -0.6**
	comp=Z,32nm,1.2s				
E09A			LR	LR	
	comp=Z,1μm,18.0s				
KTK1	**Kautokeino**	**59.69 341**	*eP*	**P**	**11 10 09.6 -1.1**
L04D	**Klamath Falls**	**59.72 59**	P	**P**	**11 10 12.5 +1.0**
	baz=306				
J05D	**Fort Rock, OR**	**59.74 58**	P	**P**	**11 10 12.9 +1.3**
	baz=306				
YBH	**Yreka Blue Hor**	**59.75 60**	*eP*	**P**	**11 10 13.2 +1.6**
	comp=Z,13nm,1.0s				
YBH			LR	LR	
	comp=Z,1μm,20.0s				
YBH	**Yreka Blue Hor**	**59.75 60**	*eP*	**P**	**11 10 13.2 +1.6**
YBH			pmax	pmax	
	comp=Z,13nm,1.0s				
YBH			MLR	MLR	
	comp=Z,1μm,20.0s				
K04D	**Chiloquin, OR**	**59.81 59**	P	**P**	**11 10 13.0 +0.9**
	baz=306				
SOEI	**Soe**	**59.84 211**	*eP*	**P**	**11 10 12.0 -0.5**
	comp=Z,110nm,1.3s				
M02C	**Callahan**	**59.86 60**	P	**P**	**11 10 13.4 +1.0**
	baz=306				
MYKOM	**Kota Tinggi**	**59.87 238**	*eP*	**P**	**11 10 14.0 +1.4**
	comp=Z,64nm,1.1s				
MYKOM			LR	LR	
	comp=Z,1μm,20.0s				
MYKOM	**Kota Tinggi**	**59.87 238**	P	**P**	**11 10 15.0 +2.4**
G08A	**Pilot Rock**	**59.92 55**	*eP*	**P**	**11 10 12.2 -0.6**
	comp=Z,23nm,1.3s				
G08A			LR	LR	
	comp=Z,600nm,20.0s				
TRO	**Tromso**	**60.16 343**	*eP*	**P**	**11 10 12.9 -1.0**
N02D	**Trinity Center**	**60.19 61**	P	**P**	**11 10 16.0 +1.3**
	baz=306				
M04C	**Macdoel**	**60.25 59**	P	**P**	**11 10 16.2 +1.1**
	baz=306				
K05A	**Summer Lake**	**60.27 58**	*eP*	**P**	**11 10 15.5 +0.1**
	comp=Z,32nm,1.1s				
K05A			LR	LR	
	comp=Z,1μm,21.0s				
I07A	**Izee**	**60.30 56**	*eP*	**P**	**11 10 13.5 -2.0**
I07A			LR	LR	
	comp=Z,1μm,22.0s				
KCPM	**Cahto Peak**	**60.40 62**	*eP*	**P**	**11 10 16.2 0.0**
	comp=Z,45nm,1.1s				
F10A	**Beach Ranch, E**	**60.51 53**	*eP*	**P**	**11 10 16.8 0.0**
	comp=Z,27nm,1.5s				
F10A			LR	LR	
	comp=Z,1μm,20.0s				
WALA	**Waterton Lakes**	**60.52 49**	*eP*	**P**	**11 10 17.3 +0.5**
	comp=Z,29nm,1.1s				
WALA			LR	LR	
	comp=Z,2μm,18.0s				
WDC	**Whiskeytown Da**	**60.52 61**	*eP*	**P**	**11 10 18.4 +1.5**
	comp=Z,29nm,1.2s				
WDC			LR	LR	
	comp=Z,700nm,20.0s				
WDC	**Whiskeytown Da**	**60.52 61**	*eP*	**P**	**11 10 18.4 +1.5**
WDC			pmax	pmax	
	comp=Z,29nm,1.2s				
WDC			MLR	MLR	
	comp=Z,700nm,20.0s				
MTN	**Manton Dam**	**60.57 202**	*eP*	**P**	**11 10 18.5 +1.2**
	comp=Z,229nm,1.1s				
KLMR	**Klimovskoe**	**60.61 328**	*eP*	**P**	**11 10 15.0 -2.1**
KLMR			pmax	pmax	
	comp=Z,37nm,1.3s				
O02D	**Mt. Diablo Mer**	**60.61 61**	P	**P**	**11 10 18.6 +1.0**
	baz=306				
MOD	**Modoc Plateau**	**61.11 58**	*eP*	**P**	**11 10 21.6 +0.6**
	comp=Z,34nm,1.3s				
MOD			LR	LR	
	comp=Z,1μm,21.0s				
BMO	**Blue Mountains**	**61.13 54**	*eP*	**P**	**11 10 21.8 +0.8**
	comp=Z,9.4nm,1.0s				
BMO			LR	LR	
	comp=Z,1μm,22.0s				
O03E	**Paynes Creek**	**61.15 61**	P	**P**	**11 10 21.8 +0.6**
	baz=307				
KBL	**Kabul**	**61.24 291**	*eP*	**P**	**11 10 21.6 -0.5**
	comp=Z,328nm,1.4s				
KBL			LR	LR	
	comp=Z,6μm,20.0s				
KBL	**Kabul**	**61.24 291**	*eP*	**P**	**11 10 21.6 -0.5**
KBL			pmax	pmax	
	comp=Z,329nm,1.4s				
KBL			MLR	MLR	
	comp=Z,6μm,20.0s				
J08A	**Circle Bar Ran**	**61.33 56**	*eP*	**P**	**11 10 24.2 +1.7**
	comp=Z,16nm,1.0s				
J08A			LR	LR	
	comp=Z,1μm,22.0s				
GDXM	**Geysers**	**61.41 63**	PFAKE		11 10 40.0 +17
GDXM			LR	LR	
	comp=Z,1μm,20.0s				
PLID	**Pearl Lake**	**61.73 53**	*eP*	**P**	**11 10 25.2 -0.1**
	comp=Z,32nm,1.1s				
ORV	**Oroville**	**61.77 61**	*eP*	**P**	**11 10 24.7 -0.7**
	comp=Z,17nm,1.2s				
ORV	**Oroville**	**61.77 61**	*eP*	**P**	**11 10 24.7 -0.7**
ORV			pmax	pmax	
	comp=Z,17nm,1.2s				
WVOR	**Wild Horse Val**	**61.79 57**	*eP*	**P**	**11 10 26.3 +0.7**
	comp=Z,20nm,1.0s				
WVOR			LR	LR	
	comp=Z,1μm,21.0s				
WVOR	**Wild Horse Val**	**61.79 57**	*eP*	**P**	**11 10 26.3 +0.7**
WVOR			pmax	pmax	
	comp=Z,19nm,1.0s				
WVOR			MLR	MLR	
	comp=Z,1μm,21.0s				
MSO	**Missoula**	**61.83 51**	*eP*	**P**	**11 10 26.1 +0.4**
	comp=Z,32nm,1.1s				
MSO			LR	LR	
	comp=Z,600nm,18.0s				
MSO	**Missoula**	**61.83 51**	P	**P**	**11 10 26.1 +0.4**
	baz=307,SNR=20				
JOF	**Joensuu**	**62.00 333**	P	**P**	**11 10 26.0 -0.5**
JOF			pmax	pmax	
	comp=Z,36nm,1.3s				
PSI	**Prapat**	**62.11 243**	P	**P**	**11 10 28.7 +0.7**
	comp=Z,39nm,1.0s,baz=350,slow=5.8,SNR=9.8				
PSI	**Prapat**	**62.11 243**	*eP*	**P**	**11 10 28.7 +0.7**
	comp=Z,47nm,1.0s				
PSI			LR	LR	
	comp=Z,1μm,20.0s				
SUMG	**Summit**	**62.27 3**	*eP*	**P**	**11 10 28.4 -0.2**
	comp=Z,255nm,1.2s				

SUMG LR LR
comp=Z,3μm,19.0s
SUMG Summit 62.27 3 eP P 11 10 28.4 -0.2
SUMG pmax pmax
comp=Z,255nm,1.2s
SUMG MLR MLR
comp=Z,3μm,19.0s
SUMG Summit 62.27 3⇑ iP P 11 10 28.9 +0.3
comp=Z,8μm,18.0s
BEKR Beckworth 62.29 60 eP P 11 10 29.2 +0.2
comp=Z,15nm,1.0s
BEKR LR LR
comp=Z,700nm,22.0s
STEI Steigen 62.33 343 eP P 11 10 27.7 -0.9
AFDM Forest Hills D 62.47 62 eP P 11 10 32.1 +2.0
comp=Z,25nm,1.2s
LOF Lofoten 62.51 343 eP P 11 10 29.6 -0.2
BHPL Bhopal 62.52 276 eP P 11 10 30.8 +0.1
BKNI Bangkinang 62.73 239 eP P 11 10 33.5 +1.6
comp=Z,239nm,1.0s
BKNI LR LR
comp=Z,800nm,20.0s
NGP Nagpur 62.73 273 eP P 11 10 31.8 -0.2
FFC Flin Flon 62.81 39 eP P 11 10 32.6 +0.5
comp=Z,54nm,1.2s
FFC LR LR
comp=Z,1μm,19.0s
FFC Flin Flon 62.81 39 eP P 11 10 32.6 +0.5
FFC pmax pmax
comp=Z,54nm,1.2s
FFC MLR MLR
comp=Z,1μm,19.0s
RUBR Rubicon Trail 62.91 61 eP P 11 10 33.9 +0.7
comp=Z,16nm,1.0s
JAGI Jajag, Banyuwa 62.91 222 eP P 11 10 35.1 +1.9
comp=Z,23nm,1.0s
PAHR Pah Rah Range 62.98 60 eP P 11 10 35.2 +1.5
comp=Z,19nm,1.0s
PAHR LR LR
comp=Z,1μm,22.0s
HRY Holter Researc 63.05 50 eP P 11 10 34.1 +0.2
VCNR Virginia City 63.07 60 eP P 11 10 35.5 +1.2
comp=Z,21nm,0.9s
VCNR LR LR
comp=Z,900nm,19.0s
PNTR Pine Nut 63.23 61 eP P 11 10 36.7 +1.3
comp=Z,20nm,1.0s
LRM Limekiln Ridge 63.27 51 eP P 11 10 34.1 -1.4
FCC Fort Churchill 63.30 32 eP P 11 10 35.1 -0.1
comp=Z,32nm,0.8s
FCC LR LR
comp=Z,1μm,20.0s
FCC Fort Churchill 63.30 32 eP P 11 10 35.1 -0.1
FCC pmax pmax
comp=Z,32nm,0.8s
FCC MLR MLR
comp=Z,1μm,20.0s
EGMT Eagleton 63.34 48 eP P 11 10 36.3 +0.5
comp=Z,48nm,1.3s
EGMT LR LR
comp=Z,1μm,18.0s
EGMT Eagleton 63.34 48 P P 11 10 36.1 +0.4
baz=309,SNR=17
CMB Columbia Colle 63.39 62 eP P 11 10 36.2 +0.1
comp=Z,18nm,1.3s
CMB Columbia Colle 63.39 62 eP P 11 10 36.3 +0.1
CMB pmax pmax
comp=Z,18nm,1.3s
DLMT Dillon 63.47 52 eP P 11 10 37.2 +0.4
comp=Z,25nm,1.3s
DLMT LR LR
comp=Z,500nm,20.0s
SMRI Semarang 63.51 226 eP P 11 10 37.4 +0.3
comp=Z,220nm,1.2s
YERR Yerington 63.51 61 eP P 11 10 38.3 +1.1
comp=Z,29nm,1.1s
YERR LR LR
comp=Z,700nm,20.0s
HLID Hailey 63.56 54 eP P 11 10 38.5 +1.1
comp=Z,17nm,1.3s
HLID LR LR
comp=Z,1μm,22.0s
HLID Hailey 63.56 54 P P 11 10 38.1 +0.7
baz=308,SNR=14
MCMT McKenzie Canyo 63.66 52 eP P 11 10 39.0 +0.8
WAKR Walker 63.69 61 eP P 11 10 38.6 +0.3
comp=Z,22nm,1.3s
SUF Sumiainen 63.74 335 P P 11 10 37.9 -0.1
SUF pmax pmax
comp=Z,36nm,2.6s
BMN Battle Mountai 63.85 58 eP P 11 10 39.9 +0.6
comp=Z,17nm,0.9s
BMN LR LR
comp=Z,900nm,19.0s
BMN Battle Mountai 63.85 58 eP P 11 10 39.9 +0.6
BMN pmax pmax
comp=Z,17nm,0.9s
BMN MLR MLR
comp=Z,900nm,19.0s
BOZ Bozeman (W) 63.85 51 eP P 11 10 39.4 +0.1
comp=Z,34nm,1.4s
BOZ LR LR
comp=Z,1μm,19.0s
BOZ Bozeman (W) 63.85 51 eP P 11 10 39.4 +0.1
BOZ pmax pmax
comp=Z,34nm,1.4s
BOZ MLR MLR
comp=Z,1μm,19.0s
BOZ Bozeman (W) 63.85 51 P P 11 10 40.0 +0.6
baz=309,SNR=34
MOR8 Moi Rana 63.98 342 eP P 11 10 37.8 -1.8
GSI Gunungsitoli 64.11 243 eP P 11 10 41.8 +0.7
comp=Z,70nm,1.0s
KVN Kaiserville 64.17 60 eP P 11 10 42.0 +0.4
comp=Z,36nm,1.3s
KVN LR LR
comp=Z,900nm,22.0s
RYN Ryan 64.17 60 eP P 11 10 42.5 +1.0
comp=Z,20nm,1.1s
RYN LR LR
comp=Z,700nm,18.0s
NV01 Mina Array Sit 64.43 61 eP P 11 10 44.7 +1.4
NVAR Mina Array Bea 64.43 61 P P 11 10 44.7 +1.4
comp=Z,5.0nm,0.8s,baz=295,slow=6.2,SNR=24
NVAR LR LR 11 36 28.9
comp=Z,532nm,20.9s,baz=314,slow=34
NVAR PKP2bc 11 39 31.5
comp=Z,0.1nm,0.3s,baz=150,slow=2.0,SNR=3.6
SCO Scoresbysund 64.45 357 eP P 11 10 41.8 -0.7
comp=Z,123nm,1.5s
SCO LR LR
comp=Z,1μm,18.0s
SCO Scoresbysund 64.45 357 eP P 11 10 41.8 -0.7
SCO pmax pmax
comp=Z,123nm,1.5s
SCO MLR MLR
comp=Z,1μm,18.0s
SCO Scoresbysund 64.45 357⇑ iP P 11 10 42.3 -0.2
comp=Z,1μm,16.0s
QLMT Earthquake Lak 64.45 51 eP P 11 10 43.6 +0.3
MDPB Devils Postpil 64.45 62 eP P 11 10 42.7 -0.8
comp=Z,22nm,1.3s
MDPB LR LR
comp=Z,800nm,21.0s
NV11 Mina Array Sit 64.52 60 eP P 11 10 44.8 +1.0
comp=Z,3.3nm,1.4s
NV11 LR LR
comp=Z,100nm,18.0s
MLAC Mammoth, Mammo 64.60 62 P P 11 10 45.4 +1.0
baz=309
YHB Horse Butte 64.63 51 eP P 11 10 45.3 +0.9
comp=Z,23nm,1.1s
ILULI Ilulissat 64.67 9 PFAKE 11 11 00.0 +16
ILULI LR LR
comp=Z,2μm,21.0s
ILULI Ilulissat 64.67 9 eP P 11 10 43.4 -0.6
ILULI MLR MLR
comp=Z,2μm,16.0s
ILULI Ilulissat 64.67 9 i P P 11 10 43.4 -0.6
comp=Z,2μm,16.0s
FIA1 FINESS Array S 64.74 334 eP P 11 10 42.4 -2.2
comp=Z,50nm,1.1s
FIA0 FINESS Array S 64.74 334 eP P 11 10 43.5 -1.1
FIA0 FINESS Array S 64.74 334 eP P 11 10 43.5 -1.1
FINES FINESS Array B 64.74 334 P P 11 10 43.5 -1.1
comp=Z,17nm,0.6s,baz=32,slow=7.2,SNR=69
LEM Lembang 64.79 229 P P 11 10 45.8 +0.2
comp=Z,46nm,0.9s,baz=112,slow=8.3,SNR=7.8
LEM Lembang 64.79 229 P P 11 10 46.4 +0.7
LEM pmax pmax
comp=Z,60nm,1.1s
YHH Holmes Hill 64.79 51 eP P 11 10 46.3 +0.6
comp=Z,20nm,1.2s
GCMT Greycliff 64.80 50 eP P 11 10 45.7 +0.3
YMR Madison River 64.81 51 eP P 11 10 46.0 +0.3
comp=Z,23nm,1.2s
MOS Moscow 64.82 325 eP P 11 10 43.1 -2.1
MOS e 11 11 17.1
MOS eS S 11 19 20.1 -3.3
MOS pmax pmax
comp=Z,51nm,1.0s
MOS MLR MLR
comp=Z,2μm,17.0s
ELK Elko 64.84 57 eP P 11 10 46.8 +0.9
comp=Z,18nm,1.4s
ELK LR LR
comp=Z,1μm,22.0s
ELK Elko 64.84 57 eP P 11 10 46.8 +0.9
ELK pmax pmax
comp=Z,19nm,1.4s
ELK MLR MLR
comp=Z,1μm,22.0s
PAGB Antelope Grade 64.90 64 eP P 11 10 46.5 +0.4
comp=Z,33nm,1.2s
YFT Old Faithful 65.02 51 eP P 11 10 48.7 +1.7
comp=Z,40nm,1.4s
YPP Pitstone Pla 65.15 52 eP P 11 10 49.8 +1.9
comp=Z,28nm,1.4s
LKWY Lake 65.18 51 eP P 11 10 49.8 +1.6
comp=Z,29nm,1.4s
LKWY LR LR
comp=Z,2μm,19.0s
LKWY Lake 65.18 51 eP P 11 10 49.8 +1.6
LKWY pmax pmax
comp=Z,29nm,1.4s
LKWY MLR MLR
comp=Z,2μm,19.0s
CTAO Charters Tower 65.19 185 PFAKE 11 11 00.0 +12
CTAO LR LR
comp=Z,900nm,20.0s
H17A Grant Village 65.19 51 eP P 11 10 49.2 +1.0
comp=Z,45nm,1.4s
H17A LR LR
comp=Z,1μm,20.0s
H17A Grant Village 65.19 51 P P 11 10 50.4 +2.2
baz=310,SNR=5.3
IMW Indian Meadow 65.31 52 eP P 11 10 49.9 +0.9
comp=Z,43nm,1.4s
IMW LR LR
comp=Z,500nm,20.0s
SMMC Simmler 65.32 64 P P 11 10 50.9 +2.0
baz=309
FLWY Flagg Ranch 65.33 52 eP P 11 10 50.0 +1.0
comp=Z,25nm,1.4s
TIN Tinemaha, Big 65.34 62 P P 11 10 50.8 +1.7
baz=309
FXWY Fox Creek 65.43 52 eP P 11 10 50.8 +1.1
comp=Z,44nm,1.4s
RLMT Red Lodge 65.44 50 eP P 11 10 50.1 +0.3
comp=Z,58nm,1.5s
RLMT LR LR
comp=Z,900nm,21.0s
RLMT Red Lodge 65.44 50 P P 11 10 50.6 +0.9
baz=310,SNR=18
MOOW Moose Ponds 65.51 52 eP P 11 10 51.4 +1.2
comp=Z,36nm,1.4s
MOOW LR LR
comp=Z,600nm,18.0s
HYB Hyderabad 65.55 270 i P P 11 10 50.5 -0.1
TPAW Teton Pass 65.56 52 eP P 11 10 52.1 +1.5
comp=Z,65nm,1.3s
TPAW LR LR
comp=Z,800nm,22.0s
VES Vestal, Richgr 65.56 63 P P 11 10 51.4 +1.0
baz=309
HVU Hansel Valley 65.62 55 eP P 11 10 51.8 +0.9
comp=Z,15nm,1.1s
HVU Hansel Valley 65.62 55 eP P 11 10 51.8 +0.9
HVU pmax pmax
comp=Z,15nm,1.1s
LOHW Long Hollow 65.68 52 eP P 11 10 53.0 +1.7
comp=Z,60nm,1.5s
LOHW LR LR
comp=Z,500nm,18.0s
OBN Obninsk 65.69 325 eP P 11 10 49.9 -0.9
comp=Z,26nm,0.8s
OBN LR LR
comp=Z,2μm,19.0s
OBN Obninsk 65.69 325⇑ iP P 11 10 49.9 -0.9
OBN i 11 11 00.7
OBN i 11 11 22.3
OBN pmax pmax
comp=Z,33nm,1.0s
OBN MLR MLR
comp=Z,2μm,16.0s
OBN Obninsk 65.69 325 eP P 11 10 49.9 -0.9
SNOW Snow King Moun 65.69 52 eP P 11 10 52.8 +1.4
comp=Z,36nm,1.3s
SNOW LR LR
comp=Z,800nm,21.0s
REDW Red Top Meadow 65.70 52 eP P 11 10 52.6 +1.1
comp=Z,53nm,1.2s
REDW LR LR
comp=Z,700nm,21.0s
PKM Mcpherson Peak 65.70 64 P P 11 10 52.9 +1.3
baz=310
CWC Cottonwood Cre 65.82 62 P P 11 10 53.0 +0.7
baz=310
DGMT Dagmar 65.89 45 eP P 11 10 52.8 +0.4
comp=Z,37nm,1.0s
DGMT LR LR
comp=Z,1μm,20.0s
DGMT Dagmar 65.89 45 P P 11 10 52.9 +0.5
baz=312
GRAC Grapevine Rang 65.91 61 P P 11 10 53.9 +1.2
baz=310,SNR=16
NSS Namsos 65.93 342 eP P 11 10 51.5 -0.7
AHID Auburn Hatcher 65.95 53 eP P 11 10 53.0 -0.1
comp=Z,29nm,1.4s
AHID LR LR
comp=Z,800nm,19.0s
BGU Big Grassy Mou 66.02 56 eP P 11 10 54.3 +0.8
comp=Z,14nm,1.3s
LAO LASA Array 66.04 47 eP P 11 10 53.0 -0.3
comp=Z,38nm,1.0s
LAO LR LR
comp=Z,900nm,20.0s
LAO LASA Array 66.04 47 P P 11 10 54.0 +0.7
baz=311
SBC Santa Barbara 66.05 65 P P 11 10 54.3 +0.7
baz=310
ISA Isabella, Lake 66.06 63 eP P 11 10 54.1 +0.4
comp=Z,16nm,1.4s
ISA Isabella, Lake 66.06 63 eP P 11 10 54.1 +0.4
ISA pmax pmax
comp=Z,16nm,1.4s
ISA Isabella, Lake 66.06 63 P P 11 10 54.8 +1.1
baz=310
GEYT Alibeck 66.09 300 P P 11 10 54.2 +0.4
comp=Z,40nm,0.8s,baz=40,slow=2.5,SNR=61
GYA0B ALIBECK ARRAY 66.09 300 eP P 11 10 54.1 +0.3
comp=Z,64nm,0.9s
GYA0B LR LR
comp=Z,1μm,18.0s
SPUT South Promonto 66.11 55 eP P 11 10 54.6 +0.5
comp=Z,28nm,1.2s
R11A Troy Canyon, C 66.14 59 eP P 11 10 54.2 -0.2
comp=Z,26nm,1.3s
R11A LR LR
comp=Z,900nm,21.0s
R11A Troy Canyon, C 66.14 59 P P 11 10 55.0 +0.7
baz=310,SNR=26
ARVC Arvin 66.18 64 P P 11 10 55.8 +1.4
baz=310
VRH Novokhopyorsk 66.19 320 eP P 11 10 53.0 -1.1
VRH pmax pmax
comp=Z,30nm,0.6s
VRH MLR MLR
comp=Z,5μm,18.0s
DAC Darwin (Calif) 66.22 62 eP P 11 10 56.1 +1.2
comp=Z,20nm,1.5s
SCZ2 Santa Cruz Isl 66.38 65 P P 11 10 57.0 +1.3
baz=310
HWUT Hardware Ranch 66.43 54 eP P 11 10 55.6 -0.5
comp=Z,15nm,1.1s
HWUT LR LR
comp=Z,800nm,19.0s
MPMC Manual Prospec 66.43 62 P P 11 10 56.8 +0.6
baz=310,SNR=10
LPSR Galich'ya Gora 66.47 322 eP P 11 10 54.8 -1.1
LPSR pmax pmax
comp=Z,10.0nm,0.7s
LPSR MLR MLR
comp=Z,6μm,17.0s
FURC Furnace Creek, 66.56 61 P P 11 10 57.5 +0.8
baz=310,SNR=18
OSI Osito Audit: C 66.57 64 P P 11 10 58.6 +1.6
baz=310
DUG Dugway, Tooele 66.61 56 eP P 11 10 57.8 +0.5
comp=Z,30nm,1.3s
DUG LR LR
comp=Z,700nm,20.0s
DUG Dugway, Tooele 66.61 56 P P 11 10 58.3 +1.0
baz=310,SNR=14
TPNV Topopah Spring 66.63 61 eP P 11 10 55.7 -1.7
comp=Z,40nm,1.2s
TPNV Topopah Spring 66.63 61 eP P 11 10 55.7 -1.7
TPNV pmax pmax
comp=Z,40nm,1.2s
TPNV Topopah Spring 66.63 61 P P 11 10 58.4 +1.0
baz=310,SNR=26
WC1 Warramunga Arr 66.63 197 PFAKE 11 11 10.0 +13
WC1 LR LR
comp=Z,600nm,20.0s
WRAB Tennant Creek 66.64 197 eP P 11 10 57.5 +0.2
comp=Z,143nm,0.9s
WRAB LR LR
comp=Z,1μm,22.0s
WRAB Tennant Creek 66.64 197 eP P 11 10 57.5 +0.2
WRAB pmax pmax
comp=Z,143nm,0.9s
WRAB MLR MLR
comp=Z,1μm,22.0s
WB2 Warramunga Arr 66.65 197 eP P 11 10 57.2 -0.2
comp=Z,166nm,1.0s
WB2 LR LR
comp=Z,1μm,22.0s
WR1 Warramunga Arr 66.65 197 eP P 11 10 57.5 +0.1
WRA Warramunga Arr 66.65 197 P P 11 10 57.5 +0.1
comp=Z,45nm,0.9s,baz=8.8,slow=7.1,SNR=65
WC4 Warramunga Arr 66.67 197 PFAKE 11 11 10.0 +13
WC4 LR LR
comp=Z,300nm,22.0s
BLG Laguna Peak, P 66.67 65 P P 11 10 57.6 0.0
baz=310
LRMC Laurel Mtn Rad 66.68 63 P P 11 10 58.5 +0.8
baz=310
BW06 Boulder Array 66.81 52 eP P 11 10 58.8 +0.2
comp=Z,30nm,1.4s
BW06 LR LR
comp=Z,900nm,19.0s
BW06 Boulder Array 66.81 52 P P 11 10 58.8 +0.2
baz=311,SNR=24
PD31 Pinedale Array 66.81 52 eP P 11 10 58.8 +0.2
comp=Z,27nm,1.4s
PDAR Pinedale Array 66.81 52 P P 11 10 59.4 +0.8
comp=Z,5.3nm,0.9s,baz=318,slow=2.0,SNR=43
PDAR LR LR 11 36 19.0
comp=Z,559nm,21.9s,baz=340,slow=32
PDAR PKP2bc 11 39 26.3
comp=Z,0.9nm,1.0s,baz=132,slow=3.9,SNR=4.4
TCUT Toone Canyon 66.83 55 eP P 11 10 59.6 +0.8
comp=Z,60nm,1.3s
VSU Vasula 66.83 332⇓ eP P 11 10 57.8 -0.3
VSU pmax pmax
comp=Z,124nm,1.3s
VSU Vasula 66.83 332 eP P 11 10 56.1 -2.0
VSU IAmb IAmb 11 11 02.9
comp=Z,74nm,1.0s
SFJD Kangerlussuaq 66.85 9 eP P 11 10 57.7 -0.4
comp=Z,26nm,0.9s
SFJD LR LR
comp=Z,1μm,21.0s
SFJD Kangerlussuaq 66.85 9 eP P 11 10 57.7 -0.4
SFJD pmax pmax
comp=Z,26nm,0.9s
SFJD MLR MLR
comp=Z,1μm,21.0s
SFJD Kangerlussuaq 66.85 9 i P P 11 10 57.6 -0.5
comp=Z,1μm,18.0s
EDW2 Edwards Air Fo 66.86 63 P P 11 10 59.4 +0.6
baz=310
CTU Camp Tracy 66.91 55 eP P 11 10 58.6 -0.6
comp=Z,20nm,1.2s
SNCC San Nicolas Is 66.93 66 P P 11 11 00.4 +1.2
baz=310
PSUT Pine Spring 67.07 58 eP P 11 11 00.7 +0.5
comp=Z,17nm,1.2s
FITZ Fitzroy Crossi 67.15 206 eP P 11 11 01.6 +1.1
comp=Z,38nm,0.9s
NLU North Lily Min 67.20 56 eP P 11 11 02.4 +1.3
comp=Z,20nm,1.1s
MWC Mount Wilson 67.24 64 eP P 11 11 01.8 +0.4
comp=Z,17nm,1.0s
MWC Mount Wilson 67.24 64 eP P 11 11 01.8 +0.4
MWC pmax pmax
comp=Z,17nm,1.0s
SHOC Shoshone, Teco 67.28 62 P P 11 11 02.2 +0.8
baz=310
MDRS Chennai 67.30 266 eP P 11 11 02.9 +1.2
VSR Storozhevoye 67.34 321 eP P 11 11 00.8 -0.7
VSR pmax pmax
comp=Z,30nm,0.7s
VSR MLR MLR
comp=Z,5μm,19.0s
GSC Goldstone, Bar 67.34 62 eP P 11 11 02.7 +0.8
comp=Z,22nm,1.4s
GSC Goldstone, Bar 67.34 62 eP P 11 11 02.7 +0.8
GSC pmax pmax
comp=Z,22nm,1.4s
GSC Goldstone, Bar 67.34 62 P P 11 11 02.6 +0.7
baz=310
MPU Maple Canyon 67.42 56 eP P 11 11 02.8 +0.3
comp=Z,25nm,1.2s
VORD Divnogorie 67.46 320 eP P 11 11 01.6 -0.6
VORD pmax pmax
comp=Z,40nm,1.4s
BFSC Mount Baldy Ra 67.49 64 P P 11 11 03.3 +0.4
baz=310
RRX Edison Barstow 67.49 63 P P 11 11 03.1 +0.4
baz=310
CIS Catalina Islan 67.54 65 P P 11 11 04.0 +0.8
baz=310
SHPR Sheep Range 67.58 60 eP P 11 11 04.5 +1.0
comp=Z,44nm,1.5s
SHPR LR LR
comp=Z,700nm,20.0s
TUQ Turquoise Moun 67.80 62 P P 11 11 05.3 +0.5
baz=311
TCRU Three Creeks R 67.86 57 eP P 11 11 05.9 +0.6
comp=Z,14nm,1.0s
BHJ Bhuj 67.94 281 eP P 11 11 06.7 +1.0
BBRC Big Bear Solar 67.94 63 P P 11 11 06.8 +1.0
baz=311
HEC Hector,Ludlow 67.94 62 P P 11 11 06.2 +0.6
baz=311,SNR=8.2
MSU Marysvale 68.08 57 eP P 11 11 06.7 0.0
MSU Marysvale 68.08 57 eP P 11 11 06.7 0.0
POO Poona 68.12 275 eP P 11 11 07.2 +0.2
MURC Murrieta 68.19 64 P P 11 11 08.7 +1.5
baz=311
P17A Butcher Ranch, 68.29 56 eP P 11 11 08.5 +0.6
comp=Z,24nm,1.2s
MTPU Mount Pierson 68.38 57 eP P 11 11 09.6 +0.8
comp=Z,11nm,0.9s
GMRC Granite Mounta 68.39 62 P P 11 11 09.3 +0.8
baz=311
LCMT Little Creek M 68.42 59 eP P 11 11 09.6 +0.8
comp=Z,22nm,1.0s
DZM Mont Dzumac 68.48 165 eP P 11 11 10.0 +1.1
comp=Z,168nm,1.4s
DZM eS S 11 20 11.6 +3.2
comp=Z,2μm,27.1s
DZM Mont Dzumac 68.48 165 eLR LR 11 31 57.8
K22A Casper 68.56 51 PFAKE 11 11 20.0 +10
K22A LR LR
comp=Z,800nm,19.0s
K22A Casper 68.56 51 P P 11 11 09.6 +0.1
baz=312,SNR=11
MDND Maddock 68.57 43 PFAKE 11 11 20.0 +11
MDND LR LR
comp=Z,1μm,20.0s

MDND	Maddock	68.57	43	P	P	11 11 09.4	+0.1
	baz=314						
ULM	Lac du Bonnet	68.60	39	P	P	11 11 08.4	-1.0
	comp=Z,5.4nm,0.6s,baz=322,slow=7.5,SNR=8.3						
ULM	Lac du Bonnet	68.60	39	PFAKE		11 11 20.0	+11
ULM				LR	LR		
	comp=Z,900nm,18.0s						
MOL	Molde	68.60	343	*e*P	P	11 11 09.2	0.0
PFO	Pinyon Flats O	68.65	64	*e*P	P	11 11 09.5	-0.7
	comp=Z,20nm,1.3s						
PFO	Pinyon Flats O	68.65	64	*e*P	P	11 11 09.5	-0.7
PFO				pmax	pmax		
	comp=Z,20nm,1.3s						
PFO	Pinyon Flats O	68.65	64	P	P	11 11 10.9	+0.7
	baz=311						
KNB	Kanab	68.67	59	*e*P	P	11 11 11.3	+0.9
	comp=Z,34nm,1.1s						
BELC	Belle Mtn. Jos	68.69	63	P	P	11 11 10.8	+0.4
	baz=311						
PKCU	Pink Cliffs	68.70	58	*e*P	P	11 11 10.8	+0.1
	comp=Z,22nm,1.2s						
109C	Camp Elliot, M	68.71	64	P	P	11 11 10.9	+0.5
	baz=311						
CPE	Camp Elliot	68.71	64	*e*P	P	11 11 10.8	+0.4
	comp=Z,20nm,1.1s						
DOMB	Dombas	68.75	342	*e*P	P	11 11 09.3	-0.9
RWWY	Rawlins	68.83	52	*e*P	P	11 11 11.7	+0.4
	comp=Z,22nm,1.0s						
RWWY				LR	LR		
	comp=Z,1μm,22.0s						
RSSD	Black Hills	68.90	48	*e*P	P	11 11 10.6	-1.1
	comp=Z,31nm,1.1s						
RSSD				LR	LR		
	comp=Z,1μm,19.0s						
RSSD	Black Hills	68.90	48	*e*P	P	11 11 10.6	-1.1
RSSD				pmax	pmax		
	comp=Z,31nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,1μm,19.0s						
RSSD	Black Hills	68.90	48	P	P	11 11 11.7	-0.1
	baz=313						
MAK	Makhachkala	68.91	310	*e*P	P	11 11 10.6	-0.9
MAK				*e*S	S	11 20 14.5	+1.3
MAK				*e*SS	SS	11 24 43.6	+5.5
MAK				pmax	pmax		
	comp=Z,322nm,1.1s						
MAK				MLR	MLR		
	comp=Z,3μm,17.0s						
NC303	NORSAR Array S	68.94	340	*e*P	P	11 11 10.8	-0.5
	comp=Z,72nm,0.8s						
SLIT	Slitere, Latvi	68.94	333	*e*P	P	11 11 07.5	-3.8
SLIT				IAmb	IAmb	11 11 13.2	
	comp=Z,255nm,0.7s						
AKN	Aaknes	69.07	343	*e*P	P	11 11 12.1	-0.1
IRM	Iron Mountain	69.12	62	P	P	11 11 13.3	+0.4
	baz=311						
BAR	Barrett	69.12	64	*e*P	P	11 11 12.7	-0.4
	comp=Z,22nm,1.4s						
NB2	NORSAR Subarra	69.14	340	P	P	11 11 11.8	-0.9
	comp=Z,202nm,1.7s,baz=28,slow=6.5						
NB2	NORSAR Subarra	69.14	340	P	P	11 11 11.8	-0.9
	baz=28,slow=6.5						
NB200	NORSAR Array S	69.14	340	*e*P	P	11 11 12.2	-0.5
NOA	NORSAR Array B	69.14	340	P	P	11 11 12.2	-0.5
	comp=Z,32nm,0.6s,baz=28,slow=6.4,SNR=88						
MONP2	Monument Peak	69.14	64	P	P	11 11 14.0	+0.6
	baz=311						
ANGG	Ammassalik, Gr	69.25	4	PFAKE		11 11 20.0	+6.9
ANGG				LR	LR		
	comp=Z,2μm,18.0s						
NBO00	NORSAR Array S	69.25	341	*e*P	P	11 11 11.5	-1.8
	comp=Z,166nm,1.2s						
NBO00	NORSAR Array S	69.25	341	*e*P	P	11 11 13.3	0.0
BC3	Big Chuckawall	69.26	63	P	P	11 11 14.1	+0.1
	baz=311						
IDID	Didziasalis	69.29	330	*e*P	P	11 11 14.8	+1.3
O20A	White River Ci	69.29	54	PFAKE		11 11 30.0	+16
O20A				LR	LR		
	comp=Z,800nm,20.0s						
O20A	White River Ci	69.29	54	P	P	11 11 14.4	+0.2
	baz=312,SNR=7.0						
ISAL	Salakas	69.30	330	*e*P	P	11 11 13.0	-0.7
ISAL				IAmb	IAmb	11 11 14.9	
	comp=Z,41nm,1.3s						
U15A	North Rim	69.38	59	PFAKE		11 11 30.0	+15
U15A				LR	LR		
	comp=Z,900nm,21.0s						
NAO01	NORSAR Array S	69.39	340	*e*P	P	11 11 12.4	-1.8
	comp=Z,244nm,1.4s						
IIGN	Ignalina	69.44	330	*e*P	P	11 11 14.2	-0.3
IIGN				IAmb	IAmb	11 11 15.8	
	comp=Z,63nm,1.5s						
IKP	In-Ko-Pah, Jac	69.50	64	P	P	11 11 15.9	+0.5
	baz=311						
SWSC	Sam W. Stewart	69.50	64	P	P	11 11 15.8	+0.5
	baz=311						
MICGM	Minsk	69.51	329⇑	*e*P	P	11 11 14.0	-0.9
MICGM				PM		11 11 15.0	
	comp=Z,0.3nm,1.4s						
MICGM				*ep*P	pwP	11 11 33.0	+5.0
MICGM				*e*S	S	11 20 14.0	-5.9
MICGM				*e*LQ	LQ	11 35 34.0	
MICGM				*e*LR	LR	11 40 24.0	
MICGM				LRM	MLR	11 44 48.0	
	comp=Z,8.1nm,18.0s						
MICGM				LRM	MLR	11 44 52.0	
	comp=E,2.7nm,18.0s						
MNK	Minsk	69.51	329	*e*P	P	11 11 14.0	-0.9
MNK				*e*S	S	11 20 14.0	-5.9
MNK				pmax	pmax		
	comp=Z,260nm,1.4s						
MNK				MLR	MLR		
	comp=Z,8μm,18.0s						
NACGM	Naroch	69.59	329	*e*	P	11 11 14.0	-1.5
NACGM				*e*LQ	LQ	11 35 36.0	
NACGM				*e*LR	LR	11 38 56.0	
NACGM				LRM	MLR	11 44 21.0	
	comp=Z,5.6nm,18.0s						
PDMCI	Parker Dam,Lak	69.65	62	P	P	11 11 16.5	+0.3
	baz=312,SNR=7.9						
GROC	Groznyy	69.66	311	*e*P	P	11 11 13.1	-3.0
GROC				*e*		11 11 36.6	
GROC				*e*		11 13 49.4	
GROC				*e*S	S	11 20 24.0	+1.9
GROC				pmax	pmax		
	comp=Z,58nm,0.7s						
Y12C	Blythe	69.78	62	P	P	11 11 17.1	+0.1
	baz=312						
AKT	Akhty	69.79	309	*e*P	P	11 11 17.9	+0.8
AKT				*e*		11 11 39.5	
AKT				pmax	pmax		
	comp=Z,196nm,1.0s						
GOF	Gofitskoye	69.81	314⇑	*e*P	P	11 11 14.8	-2.2
GOF				pmax	pmax		
	comp=Z,439nm,1.4s						
PV09	Paradox Valley	69.88	55	*e*P	P	11 11 18.0	0.0
PV21	Cone Mtn., Par	69.93	55	*e*P	P	11 11 18.4	+0.3
	comp=Z,48nm,1.4s						
PV21				LR	LR		
	comp=Z,900nm,21.0s						
AGMN	Agassiz Nation	70.01	41	*e*P	P	11 11 17.4	-0.8
	comp=Z,55nm,1.3s						
AGMN				LR	LR		
	comp=Z,800nm,20.0s						
AGMN	Agassiz Nation	70.01	41	P	P	11 11 17.6	-0.6
	baz=316,SNR=13						
GLA	Glamis	70.05	63	P	P	11 11 19.3	+0.5
	baz=312						
PV22	Blue Mesa, Par	70.05	55	*e*P	P	11 11 19.1	+0.2
	comp=Z,39nm,1.2s						
PV22				LR	LR		
	comp=Z,900nm,20.0s						
PHWY	Pilot Hill	70.06	51	*e*P	P	11 11 18.8	-0.2
	comp=Z,16nm,1.3s						
PHWY				LR	LR		
	comp=Z,600nm,20.0s						
N23A	Red Feather La	70.07	52	PFAKE		11 11 30.0	+11
N23A				LR	LR		
	comp=Z,1μm,20.0s						
N23A	Red Feather La	70.07	52	P	P	11 11 19.8	+0.8
	baz=313,SNR=12						
PV20	West Nyswonger	70.08	55	PFAKE		11 11 30.0	+11
PV20				LR	LR		
	comp=Z,1μm,20.0s						
PV19	Morning Glory	70.09	55	PFAKE		11 11 30.0	+11
PV19				LR	LR		
	comp=Z,1μm,20.0s						
PABE	Paberze	70.10	331	*e*P	P	11 11 16.6	-2.0
PABE				IAmb	IAmb	11 11 19.6	
	comp=Z,222nm,1.5s						
PV16	Nyswonger Mesa	70.13	55	PFAKE		11 11 30.0	+11
PV16				LR	LR		
	comp=Z,1μm,21.0s						
HYA	Hoyanger	70.15	343	*e*P	P	11 11 18.9	+0.1
PV11	David Mesa, Pa	70.16	55	PFAKE		11 11 30.0	+10
PV11				LR	LR		
	comp=Z,1μm,21.0s						
PV18	Skein Mesa, Pa	70.18	55	PFAKE		11 11 30.0	+10
PV18				LR	LR		
	comp=Z,1μm,21.0s						
GOA	Goa	70.18	272	*e*P	P	11 11 19.1	-0.5
SEKA	Sheki	70.27	309	P	P	11 11 19.9	-0.1
EIDS	Eidsvold	70.30	180	PFAKE		11 11 30.0	+10
EIDS				LR	LR		
	comp=Z,1μm,20.0s						
ASAR	Alice Springs	70.35	197	P	P	11 11 21.8	+1.3
	comp=Z,29nm,0.8s,baz=14,slow=5.8,SNR=128						
ASAR				PKP2bc		11 39 17.4	
	comp=Z,1.5nm,1.2s,baz=121,slow=3.6,SNR=5.1						
PBUR	Paburg	70.36	332	*e*P	P	11 11 16.8	-3.4
PBUR				IAmb	IAmb	11 11 22.0	
	comp=Z,74nm,0.6s						
PV01	Paradox Valley	70.45	55	PFAKE		11 11 30.0	+8.6
PV01				LR	LR		
	comp=Z,1μm,20.0s						
WUAZ	Wupatki	70.54	59	*e*P	P	11 11 22.3	+0.4
WUAZ				LR	LR		
	comp=Z,28nm,1.3s						
WUAZ				LR	LR		
	comp=Z,700nm,20.0s						
WUAZ	Wupatki	70.54	59	P	P	11 11 23.0	+1.1
	baz=312,SNR=16						
SUE	Sulen	70.54	343	*e*P	P	11 11 21.2	0.0
MNGR	Mingechevir, A	70.63	309	P	P	11 11 22.1	0.0
SMCO	Snowmass	70.66	54	*e*P	P	11 11 22.9	0.0
	comp=Z,23nm,1.3s						
KONO	Kongsberg	70.75	340	*e*P	P	11 11 20.6	-1.8
	comp=Z,96nm,1.5s						
KONO				LR	LR		
	comp=Z,2μm,19.0s						
KONO	Kongsberg	70.75	340	*c i*P	P	11 11 21.9	-0.6
KONO				pmax	pmax		
	comp=Z,114nm,2.5s						
KONO	Kongsberg	70.75	340	*e*P	P	11 11 22.3	-0.2
KIV	Kislovodsk	70.76	313	*e*P	P	11 11 20.3	-2.7
	comp=Z,388nm,1.5s						
KIV				LR	LR		
	comp=Z,4μm,18.0s						
KIV	Kislovodsk	70.76	313⇑	*i*P	P	11 11 24.1	+1.1
KIV	Kislovodsk	70.76	313	*i* P	P	11 11 23.4	+0.5
	SNR=20						
KIV	Kislovodsk	70.76	313	*e*P	P	11 11 23.3	+0.3
KIV				*e*		11 11 43.2	
KIV				pmax	pmax		
	comp=Z,396nm,1.0s						
KIV				MLR	MLR		
	comp=Z,11μm,18.0s						
KIV	Kislovodsk	70.76	313	P	P	11 11 22.6	-0.4
	SNR=26						
KIV				P	P	11 11 22.6	-0.4
	SNR=26						
KIV	Kislovodsk	70.76	313	*e*P	P	11 11 23.3	+0.3
KBZ	Khabaz	70.81	313	P	P	11 11 24.1	+1.0
	comp=Z,102nm,0.9s,baz=56,slow=4.5,SNR=94						
113A	Mohawk Valley,	70.90	63	*e*P	P	11 11 23.6	-0.2
	comp=Z,17nm,1.4s						
113A				LR	LR		
	comp=Z,600nm,20.0s						
ZEI	Tsey	70.95	312	*e*P	P	11 11 20.2	-4.1
ZEI				pmax	pmax		
	comp=Z,118nm,1.4s						
ASK	Askoy	70.98	343	*e*P	P	11 11 23.9	+0.1
ISCO	Idaho Springs	71.00	52	*e*P	P	11 11 24.7	-0.1
	comp=Z,20nm,1.1s						
ISCO				LR	LR		
	comp=Z,1μm,22.0s						
ISCO	Idaho Springs	71.00	52	*e*P	P	11 11 24.7	-0.1
ISCO				pmax	pmax		
	comp=Z,20nm,1.1s						
ISCO				MLR	MLR		
	comp=Z,1μm,22.0s						
ISCO	Idaho Springs	71.00	52	P	P	11 11 25.5	+0.7
	baz=314,SNR=14						
PALK	Pallekele	71.02	261	*e*P	P	11 11 25.4	+0.5
	comp=Z,88nm,1.4s						
PALK				LR	LR		
	comp=Z,2μm,20.0s						
PALK	Pallekele	71.02	261	*e*P	P	11 11 25.4	+0.5
PALK				pmax	pmax		
	comp=Z,88nm,1.4s						
PALK				MLR	MLR		
	comp=Z,2μm,20.0s						
BER	Bergen	71.04	343	*e*P	P	11 11 24.4	+0.2
LKRN	Lenkeran, Azer	71.09	306	P	P	11 11 25.6	+0.7
MVCO	Mesa Verde	71.11	56	*e*P	P	11 11 26.1	+0.7
	comp=Z,40nm,1.4s						
MVCO				LR	LR		
	comp=Z,900nm,20.0s						
MVCO	Mesa Verde	71.11	56	P	P	11 11 25.7	+0.2
	baz=313,SNR=9.2						
GANJ	Ganja	71.14	309	P	P	11 11 25.3	0.0
ODD1	Odda	71.19	342	*e*P	P	11 11 15.9	-9.3
X16A	Lo Mia Camp, P	71.24	60	PFAKE		11 11 40.0	+14
X16A				LR	LR		
	comp=Z,800nm,21.0s						
NEY	Neytrino	71.24	313	*d i*P	P	11 11 27.2	+1.2
NEY				pmax	pmax		
	comp=Z,16nm,1.1s						
TBLG	Delisi	71.25	311	*e*P	P	11 11 26.3	+0.4
	comp=Z,682nm,1.5s						
TBLG	Delisi	71.25	311	*e*P	P	11 11 26.3	+0.4
SUSD	Miller	71.29	45	P	P	11 11 25.3	-0.8
	baz=316						
SUW	Suwalki	71.58	331	PFAKE		11 11 40.0	+12
SUW				LR	LR		
	comp=Z,2μm,18.0s						
BLS5	Blasjo	71.67	342	*e*P	P	11 11 28.3	+0.2
S22A	4UR Ranch, Cre	71.72	55	PFAKE		11 11 40.0	+11
S22A				LR	LR		
	comp=Z,500nm,19.0s						
S22A	4UR Ranch, Cre	71.72	55	P	P	11 11 29.9	+0.7
	baz=314,SNR=18						
W18A	Petrified Fore	71.80	58	PFAKE		11 11 40.0	+10
W18A				LR	LR		
	comp=Z,700nm,21.0s						
W18A	Petrified Fore	71.80	58	P	P	11 11 30.5	+0.9
	baz=313						
Q24A	Divide	71.84	53	PFAKE		11 11 40.0	+10
Q24A				LR	LR		
	comp=Z,900nm,20.0s						
Q24A	Divide	71.84	53	P	P	11 11 30.1	+0.2
	baz=314						
AKASG	Malin Array Be	71.94	325	P	P	11 11 29.1	-0.7
	comp=Z,23nm,0.5s,baz=36,slow=6.6,SNR=89						
AKBB	Malin Array Si	71.94	325	*e*P	P	11 11 28.5	-1.3
	comp=Z,183nm,1.5s						
AKBB	Malin Array Si	71.94	325	*e*P	P	11 11 28.5	-1.3
AKBB				pmax	pmax		
	comp=Z,183nm,1.5s						
KIEV	Kiev	71.95	325	PFAKE		11 11 40.0	+10
KIEV				LR	LR		
	comp=Z,4μm,19.0s						
KIEV	Kiev	71.95	325⇑	*i*P	P	11 11 29.5	-0.4
KIEV	Kiev	71.95	325	*i* P	P	11 11 29.3	-0.6
	SNR=32						
KIEV	Kiev	71.95	325	*c i*P	P	11 11 28.8	-1.1
KIEV				pmax	pmax		
	comp=Z,61nm,1.0s						
214A	Organ Pipe Nat	72.04	63	P	P	11 11 31.5	+0.7
	baz=313						
KLNR	Kaliningrad	72.09	332	*de*P	P	11 11 30.3	-0.3
KLNR				pmax	pmax		
	comp=Z,209nm,1.1s						
AKH	Akhalkalaki	72.14	311	*e*P	P	11 11 31.8	+0.4
	comp=Z,68nm,1.0s						
AKH				LR	LR		
	comp=Z,2μm,19.0s						
AKH	Akhalkalaki	72.14	311⇓	*i*P	P	11 11 32.6	+1.2
AKH	Akhalkalaki	72.14	311	*e*P	P	11 11 31.8	+0.4
AKH				pmax	pmax		
	comp=Z,69nm,1.0s						
AKH				MLR	MLR		
	comp=Z,2μm,19.0s						
OGNE	Ogallala	72.17	50	*e*P	P	11 11 30.1	-1.4
	comp=Z,68nm,0.8s						
OGNE				LR	LR		
	comp=Z,1μm,20.0s						
OGNE	Ogallala	72.17	50	P	P	11 11 31.7	+0.2
	baz=315,SNR=17						
HOMB	Homborsund	72.24	340	*e*P	P	11 11 26.8	-4.6
EYMN	Ely	72.25	39	PFAKE		11 11 40.0	+8.3
EYMN				LR	LR		
	comp=Z,1μm,19.0s						
EYMN	Ely	72.25	39	P	P	11 11 31.2	-0.5
	baz=319,SNR=26						
STAV	Stavanger	72.28	342	*e*P	P	11 11 32.1	+0.4
PSAD2	Pilbara Seismi	72.32	210	PFAKE		11 11 50.0	+18
PSAD2				LR	LR		
	comp=Z,800nm,21.0s						
GNI	Garni	72.35	309	*e*P	P	11 11 34.1	+1.4
	comp=Z,305nm,1.4s						
GNI				LR	LR		
	comp=Z,2μm,19.0s						
GNI	Garni	72.35	309	*i* P	P	11 11 34.2	+1.4
	SNR=18						
GNI	Garni	72.35	309	*e*P	P	11 11 34.1	+1.4
GNI				pmax	pmax		
	comp=Z,305nm,1.4s						
GNI				MLR	MLR		
	comp=Z,2μm,19.0s						
GNI	Garni	72.35	309	P	P	11 11 34.0	+1.3
	SNR=44						
SDCO	Great Sand Dun	72.48	54	PFAKE		11 11 50.0	+16
SDCO				LR	LR		
	comp=Z,900nm,20.0s						
SDCO	Great Sand Dun	72.48	54	P	P	11 11 34.1	+0.4
	baz=314,SNR=11						
LRW	Lerwick	72.51	346	*e*P	P	11 11 32.5	-0.6
LRW				IAmb	IAmb	11 11 34.0	
	comp=Z,144nm,1.5s						
SOC	Sochi	72.53	315	*e*P	P	11 11 32.0	-1.5
SOC				*e**SP	PcP	11 11 50.9	-0.1
SOC				*e*		11 14 16.2	
SOC				*e*S	S	11 20 53.9	-1.5
SOC				*e*		11 21 33.3	
SOC				*e*SS	SS	11 25 32.9	-0.7
SOC				*e*SSS	SSS	11 28 49.7	
NAX	Nakhchivan	72.62	308	P	P	11 11 35.2	+1.0
IVI	Ivigtut	72.74	10	PFAKE		11 11 50.0	+16
IVI				LR	LR		
	comp=Z,2μm,20.0s						
ANN	Anapa	72.77	317	*c i*P	P	11 11 34.3	-0.6
ANN				*e**PP	sP	11 11 48.2	+0.7
ANN				*e*S	S	11 20 58.8	+0.8
ANN				pmax	pmax		
	comp=Z,60nm,0.9s						
TRD	Trivandrum	72.78	265	*e*P	P	11 11 35.8	+0.5
ECSD	EROS Data Cent	72.97	45	PFAKE		11 11 50.0	+14
ECSD				LR	LR		
	comp=Z,1μm,22.0s						
ECSD	EROS Data Cent	72.97	45	P	P	11 11 35.7	-0.4
	baz=317,SNR=35						
TUC	Tucson	73.07	61	*e*P	P	11 11 37.8	+0.8
	comp=Z,16nm,1.3s						
TUC	Tucson	73.07	61	*e*P	P	11 11 37.8	+0.8
TUC				pmax	pmax		
	comp=Z,16nm,1.3s						
TUC	Tucson	73.07	61	P	P	11 11 37.4	+0.5
	baz=313						
BCA	Borcka	73.10	312⇑	*i*P	P	11 11 37.5	+0.6
KSCO	Kaye Shedlock'	73.21	51	PFAKE		11 11 50.0	+12
KSCO				LR	LR		
	comp=Z,900nm,22.0s						
KSCO	Kaye Shedlock'	73.21	51	P	P	11 11 37.7	-0.1
	baz=315						
E38A	The Farm, Brul	73.23	40	PFAKE		11 11 50.0	+12
E38A				LR	LR		
	comp=Z,900nm,19.0s						
E38A	The Farm, Brul	73.23	40	P	P	11 11 36.9	-0.7
	baz=319,SNR=14						
C40A	Isle Royale Na	73.29	38	PFAKE		11 11 50.0	+12
C40A				LR	LR		
	comp=Z,1μm,18.0s						
C40A	Isle Royale Na	73.29	38	P	P	11 11 37.0	-0.9
	baz=320						
BSD	Bornholm Skovb	73.31	335⇑	*i*P	P	11 11 37.0	-0.8
BSD				MLR	MLR		
	comp=Z,3μm,20.0s						
BSD	Bornholm Skovb	73.31	335⇑	*i*P	P	11 11 37.0	-0.8
BSD				*i*		11 13 22.2	
	comp=Z,3μm,20.0s						
F37A	Hinrichs Farm,	73.41	41	P	P	11 11 37.9	-0.7
	baz=319						
COP	Copenhagen	73.52	337	*i* P	P	11 11 38.5	-0.6
COP				pmax	pmax		
	comp=Z,100nm,1.2s						
COP				MLR	MLR		
	comp=Z,2μm,19.0s						
COP	Copenhagen	73.52	337	*i* P	P	11 11 38.5	-0.6
	comp=Z,101nm,1.2s						
	comp=Z,2μm,19.0s						
T25A	Trinidad	73.53	54	PFAKE		11 11 50.0	+10
T25A				LR	LR		
	comp=Z,900nm,22.0s						
T25A	Trinidad	73.53	54	P	P	11 11 39.9	+0.1
	baz=315,SNR=9.9						
F38A	Pierce - Schro	73.57	40	P	P	11 11 39.5	-0.1
	baz=319,SNR=19						
MUD	Monsted U'grnd	73.70	339⇑	*i*P	P	11 11 40.0	-0.1
MUD				MLR	MLR		
	comp=Z,2μm,17.0s						
MUD	Monsted U'grnd	73.70	339⇑	*i*P	P	11 11 40.0	-0.1
	comp=Z,2μm,17.0s						
SPMN	Marine on St.	73.70	41	*e*P	P	11 11 40.2	-0.2
	comp=Z,58nm,1.4s						
SPMN				LR	LR		
	comp=Z,1μm,22.0s						
SPMN	Marine on St.	73.70	41	P	P	11 11 40.0	-0.4
	baz=319						
LAZ	Ladron	73.84	57	*e*P	P	11 11 42.8	+1.1
E39A	Mellen	73.85	39	P	P	11 11 40.6	-0.7
	baz=320,SNR=16						
TASM	ASL Pad, Albuq	73.87	57	P	P	11 11 42.7	+0.8
	baz=314,SNR=14						
TASM	ASL Pad, Albuq	73.87	57	P	P	11 11 42.5	+0.7
	baz=314,SNR=14						
ANMO	Albuquerque	73.87	57	*e*P	P	11 11 42.5	+0.7
	comp=Z,19nm,1.4s						
ANMO				LR	LR		
	comp=Z,1μm,22.0s						
ANMO	Albuquerque	73.87	57	*e*P	P	11 11 42.5	+0.7
ANMO				pmax	pmax		
	comp=Z,19nm,1.4s						
ANMO				MLR	MLR		
	comp=Z,1μm,22.0s						
ANMO	Albuquerque	73.87	57	P	P	11 11 42.0	+0.2
	baz=314						
BGNE	Belgrade	73.89	47	PFAKE		11 11 50.0	+8.4
BGNE				LR	LR		
	comp=Z,1μm,21.0s						
BGNE	Belgrade	73.89	47	P	P	11 11 40.9	-0.6
	baz=317						
F39A	Loretta	74.04	40	P	P	11 11 41.7	-0.6
	baz=320,SNR=16						
E40A	Wakefield	74.09	39	P	P	11 11 42.7	0.0
	baz=320,SNR=35						
GKP	Gorka Klasztor	74.17	333	*e*P	P	11 11 42.5	-0.5
GKP	Gorka Klasztor	74.17	333	*e*P	P	11 11 42.5	-0.5
G38A	Ridgeland	74.18	41	P	P	11 11 42.2	-1.0
	baz=319,SNR=8.5						
BEL	Belsk	74.19	330	*e*P	P	11 11 42.9	-0.2
BEL	Belsk	74.19	330	*e*P	P	11 11 42.9	-0.2
Y22D	IRIS PASSCAL I	74.20	58	PFAKE		11 12 00.0	+16
Y22D				LR	LR		
	comp=Z,1μm,22.0s						
D41A	Chassel	74.20	38	PFAKE		11 12 00.0	+17
D41A				LR	LR		
	comp=Z,1μm,20.0s						
D41A	Chassel	74.20	38	P	P	11 11 43.2	-0.1
	baz=321,SNR=9.7						
SIM	Simferopol'	74.23	319	*ce*P	P	11 11 43.6	+0.1
SIM				*e*S	S	11 21 12.0	-2.5
SIM				pmax	pmax		
	comp=Z,69nm,1.1s						
SIM				MLR	MLR		
	comp=Z,3μm,16.0s						
RGN	Rugen	74.26	336	PFAKE		11 11 50.0	+6.6
RGN				LR	LR		
	comp=Z,4μm,20.0s						

RGN	Rugen	74.26	336	eP	P	11 11 42.1	-1.3
RGN				IAmb	IAmb	11 11 45.5	
comp=Z,86nm,0.9s							
BNM	Barren Site	74.32	57	eP	P	11 11 45.5	+1.0
H38A	Maiden Rock	74.36	41	P	P	11 11 43.8	-0.4
baz=319							
F40A	Park Falls	74.40	39	P	P	11 11 43.6	-0.8
baz=320,SNR=16							
G39A	Holcombe	74.41	40	P	P	11 11 43.7	-0.8
baz=320,SNR=7.8							
E41A	Kenton	74.49	38	P	P	11 11 44.6	-0.4
baz=321,SNR=17							
BIGH	Upper Bighouse	74.53	347⇑	eP	P	11 11 44.5	-0.4
BIGH				IAmb	IAmb	11 11 45.9	
comp=Z,97nm,1.2s							
MLA1	Latheron	74.62	346⇑	eP	P	11 11 45.3	-0.2
LVV	L'vov	74.67	328	d iP	P	11 11 45.8	-0.2
LVV				eS	SKiKP	11 21 13.5	+5.2
LVV				pmax	pmax		
comp=Z,400nm,1.4s							
COWI	Conover	74.70	39	PFAKE		11 12 00.0	+14
COWI				LR	LR		
comp=Z,800nm,20.0s							
SEVA	Sevastopol	74.75	319⇑	iP	P	11 11 46.7	+0.2
121A	Cookes Peak, D	74.75	59	P	P	11 11 48.0	+1.0
baz=314,SNR=11							
H39A	Augusta	74.82	41	P	P	11 11 46.1	-0.8
baz=320							
G40A	Rib Lake	74.86	40	PFAKE		11 12 00.0	+13
G40A				LR	LR		
comp=Z,900nm,19.0s							
G40A	Rib Lake	74.86	40	P	P	11 11 46.6	-0.6
baz=320							
RSC	Scourie	74.87	347⇑	eP	P	11 11 46.4	-0.5
CBKS	Cedar Bluff	74.93	50	PFAKE		11 12 00.0	+12
CBKS				LR	LR		
comp=Z,1μm,20.0s							
CBKS	Cedar Bluff	74.93	50	P	P	11 11 46.5	-1.2
baz=317							
E42A	Champion	74.98	38	P	P	11 11 47.5	-0.3
baz=321,SNR=14							
F41A	Three Lakes	74.99	39	PFAKE		11 12 00.0	+12
F41A				LR	LR		
comp=Z,900nm,19.0s							
F41A	Three Lakes	74.99	39	P	P	11 11 47.5	-0.4
baz=321,SNR=15							
KIS	Kishinev	75.00	323⇑	iP	P	11 11 47.0	-0.9
comp=Z,320nm,1.5s							
KIS				M	M	11 13 35.0	
comp=Z,290nm,1.2s							
KIS	Kishinev	75.00	323	eP	P	11 11 47.0	-0.9
KIS				e		11 12 09.0	
KIS				e		11 14 45.0	
KIS				eS	S	11 21 21.0	-2.1
KIS				ePS	PnS	11 22 10.0	+9.3
KIS				pmax	pmax		
comp=Z,320nm,1.5s							
KIS				MLR	MLR		
comp=Z,6μm,18.0s							
KIS	Kishinev	75.00	323	eS	S	11 21 21.0	-2.1
KIS				eScS	SKSac	11 21 40.0	-14
BANOM	Banah	75.18	292	P	P	11 11 50.6	+1.2
SHME	Shamm	75.20	292	i P	P	11 11 49.5	0.0
SNR=7.6							
HSIG		75.22	64	PFAKE		11 12 00.0	+11
HSIG				LR	LR		
comp=Z,700nm,22.0s							
SCHQ	Schefferville	75.23	22	P	P	11 11 49.3	+0.1
comp=Z,25nm,1.0s,baz=343,slow=6.3,SNR=9.5							
SCHQ				LR	LR	11 47 21.7	
comp=Z,1μm,21.1s,baz=346,slow=38							
SCHQ	Schefferville	75.23	22	eP	P	11 11 49.3	+0.1
comp=Z,30nm,0.9s							
SCHQ				LR	LR		
comp=Z,2μm,21.0s							
H40A	Chili	75.27	40	P	P	11 11 48.7	-0.8
baz=320,SNR=7.6							
MCD	Coleburn Disti	75.29	346⇑	eP	P	11 11 48.8	-0.6
KWP	Kalwaria Pacla	75.32	328	eP	P	11 11 50.1	+0.4
KWP	Kalwaria Pacla	75.32	328	PFAKE		11 12 00.0	+10
KWP				LR	LR		
comp=Z,40μm,20.0s							
KWP	Kalwaria Pacla	75.32	328	eP	P	11 11 50.1	+0.4
ARMA	Armidale	75.33	179	PFAKE		11 12 00.0	+10
ARMA				LR	LR		
comp=Z,2μm,20.0s							
I39A	Houston	75.33	42	PFAKE		11 12 00.0	+10
I39A				LR	LR		
comp=Z,1μm,22.0s							
I39A	Houston	75.33	42	P	P	11 11 49.0	-0.9
baz=320,SNR=10							
G41A	Antigo	75.36	39	P	P	11 11 49.5	-0.6
baz=321							
F42A	Maple Grove Fa	75.40	38	P	P	11 11 49.4	-0.9
baz=321							
E43A	Lone Tree Farm	75.41	37	PFAKE		11 12 00.0	+10
E43A				LR	LR		
comp=Z,1μm,19.0s							
E43A	Lone Tree Farm	75.41	37	P	P	11 11 49.8	-0.5
baz=322,SNR=10							
RRR	Rubha Reidh	75.44	347⇑	eP	P	11 11 49.5	-0.7
RRH	Rhenigidale	75.51	348⇑	eP	P	11 11 50.3	-0.3
SRIG	Santa Rosalia	75.56	66	PFAKE		11 12 00.0	+8.6
SRIG				LR	LR		
comp=Z,1μm,20.0s							
MDO	Dochfour	75.61	347⇑	eP	P	11 11 50.6	-0.6
H41A	Junction City	75.61	40	PFAKE		11 12 00.0	+8.5
H41A				LR	LR		
comp=Z,800nm,21.0s							
H41A	Junction City	75.61	40	P	P	11 11 50.9	-0.6
baz=321,SNR=8.3							
BIDO	Bidbid	75.61	289	P	P	11 11 52.6	+0.8
SNR=6.6							
BIDO				P	P	11 11 52.6	+0.8
SNR=6.6							
MSFE	Esma-Masafi	75.66	291	P	P	11 11 52.3	+0.2
E44A	Grand Marais A	75.68	37	PFAKE		11 12 00.0	+8.2
E44A				LR	LR		
comp=Z,1μm,21.0s							
E44A	Grand Marais A	75.68	37	P	P	11 11 51.3	-0.5
baz=323							
G42A	Mountain	75.68	39	PFAKE		11 12 00.0	+8.2
G42A				LR	LR		
comp=Z,800nm,19.0s							
G42A	Mountain	75.68	39	P	P	11 11 51.3	-0.5
baz=321,SNR=7.5							
JLN	Jalan Bani Buh	75.69	287	P	P	11 11 55.0	+2.7
SNR=8.2							
KAC	Achnashellach	75.70	347⇑	eP	P	11 11 51.4	-0.4
I40A	Norwalk	75.73	41	P	P	11 11 51.6	-0.6
baz=320							
F43A	Flat Rock, Esc	75.77	38	P	P	11 11 51.8	-0.5
baz=322,SNR=11							
DRUM	Mains of Drumt	75.79	345	eP	P	11 11 51.8	-0.5
DRUM				IAmb	IAmb	11 11 53.1	
comp=Z,50nm,1.0s							
OJC	Ojcow	75.89	330	eP	P	11 11 52.3	-0.6
OJC	Ojcow	75.89	330	eP	P	11 11 52.3	-0.6
KPL	Plockton	75.91	347⇑	eP	P	11 11 52.7	-0.2
KPL				IAmb	IAmb	11 11 53.8	
comp=Z,184nm,1.4s							
UOSS	Minazif	75.92	291	eP	P	11 11 53.6	+0.1
comp=Z,100nm,1.3s							
UOSS				LR	LR		
comp=Z,2μm,21.0s							
UOSS	Minazif	75.92	291	i P	P	11 11 53.6	+0.1
SNR=11							
UOSS	Minazif	75.92	291	P	P	11 11 54.0	+0.5
SNR=8.8							
UOSS				P	P	11 11 54.0	+0.5
SNR=8.8							
RUE	Ruedersdorf	75.92	335	eP	P	11 11 52.0	-1.0
RUE				IAmb	IAmb	11 11 54.8	
comp=Z,287nm,1.5s							
I41A	Arkdale	75.94	40	eP	P	11 11 53.4	0.0
comp=Z,22nm,0.9s							
I41A				LR	LR		
comp=Z,700nm,22.0s							
I41A	Arkdale	75.94	40	P	P	11 11 52.7	-0.7
baz=321							
F44A	Big Bay de Noc	75.98	37	P	P	11 11 53.0	-0.6
baz=322,SNR=12							
BUR08	Bucovina Ar. S	75.98	326	eP	P	11 11 53.8	+0.2
comp=Z,53nm,0.7s							
G43A	Wallace	75.99	38	PFAKE		11 12 10.0	+16
G43A				LR	LR		
comp=Z,700nm,19.0s							
G43A	Wallace	75.99	38	P	P	11 11 53.1	-0.5
baz=322,SNR=13							
BURAR	Bucovina Array	75.99	326⇑	iP	P	11 11 53.5	-0.2
BURAR	Bucovina Array	75.99	326	⇑P	P	11 11 53.5	-0.2
SCIA	State Center	76.00	44	eP	P	11 11 53.7	-0.1
comp=Z,67nm,0.8s							
SCIA				LR	LR		
comp=Z,1μm,22.0s							
SCIA	State Center	76.00	44	P	P	11 11 53.1	-0.6
baz=319							
STHS	Stebnicka Huta	76.04	329	eP	P	11 11 54.3	+0.4
STHS				pmax	pmax		
comp=Z,207nm,1.3s							
STHS	Stebnicka Huta	76.04	329	eP	P	11 11 54.3	+0.4
HATD	Hatta, Dubai	76.05	291	P	P	11 11 54.8	+0.5
HATD	Hatta, Dubai	76.05	291	P	P	11 11 54.9	+0.7
SNR=12							
HATD				P	P	11 11 54.9	+0.7
SNR=12							
J40A	Soldiers Grove	76.05	41	P	P	11 11 53.0	-1.0
baz=320							
KOLS	Kolonicke sedl	76.06	328	eP	P	11 11 54.2	+0.2
KOLS				pmax	pmax		
comp=Z,123nm,1.3s							
KOLS	Kolonicke sedl	76.06	328	eP	P	11 11 54.2	+0.2
DIKM	Dikmen	76.18	316⇑	iP	P	11 11 55.8	+1.1
BIZ	Bicaz	76.18	325⇓	iP	P	11 11 55.1	+0.4
ASHO	Ashiyiah	76.19	291	i P	P	11 11 55.5	+0.3
SNR=16							
ASHO	Ashiyiah	76.19	291	P	P	11 11 55.8	+0.6
SNR=13							
ASHO				P	P	11 11 55.8	+0.6
SNR=13							
E45A	Wooded Hills,	76.20	36	P	P	11 11 54.1	-0.7
baz=323,SNR=5.3							
H42A	Shiocton	76.20	39	PFAKE		11 12 10.0	+15
H42A				LR	LR		
comp=Z,1μm,19.0s							
H42A	Shiocton	76.20	39	P	P	11 11 53.8	-1.0
baz=321							
D46A	Sault St. Mari	76.24	35	P	P	11 11 53.7	-1.4
baz=324,SNR=8.6							
NAZ	Nazwa, Dubai	76.24	292	i P	P	11 11 55.6	+0.2
SNR=5.3							
NAZ	Nazwa, Dubai	76.24	292	P	P	11 11 55.6	+0.2
SNR=6.9							
NAZ				P	P	11 11 55.6	+0.2
SNR=6.9							
SOHO	SOHO	76.25	290	P	P	11 11 56.1	+0.7
SNR=9.4							
SOHO				P	P	11 11 56.1	+0.7
SNR=9.4							
TESR	Tescani	76.30	324⇑	iP	P	11 11 55.2	-0.2
UZH	Uzhgorod	76.30	328⇓	iP	P	11 11 55.3	0.0
UZH				i		11 12 08.4	
UZH				e		11 14 55.8	
UZH				eS	S	11 21 37.2	-0.1
UZH				eSS	SS	11 26 35.4	+5.0
UZH				MLR	MLR		
comp=Z,800nm,18.0s							
MATQ	Matagami	76.33	30	P	P	11 11 54.4	-1.0
baz=327,SNR=9.8							
KSU1	Kansas State U	76.38	48	PFAKE		11 12 10.0	+14
KSU1				LR	LR		
comp=Z,1μm,18.0s							
KSU1	Kansas State U	76.38	48	P	P	11 11 54.3	-1.7
baz=318							
NIE	Niedzica	76.38	329	eP	P	11 11 56.1	+0.3
NIE	Niedzica	76.38	329	eP	P	11 11 56.1	+0.3
J41A	Loganville	76.41	41	P	P	11 11 55.2	-0.9
baz=321,SNR=5.1							
TLCR		76.43	322⇑	iP	P	11 11 56.8	+0.7
TLCR		76.43	322	⇑P	P	11 11 56.8	+0.7
FAQ	Al Faqa, Dubai	76.46	291	i P	P	11 11 56.7	+0.1
SNR=7.8							
FAQ	Al Faqa, Dubai	76.46	291	P	P	11 11 57.0	+0.4
SNR=6.1							
I42A	Draeger Farm,	76.51	40	PFAKE		11 12 10.0	+13
I42A				LR	LR		
comp=Z,900nm,21.0s							
I42A	Draeger Farm,	76.51	40	P	P	11 11 55.8	-0.8
baz=321,SNR=5.1							
INVG	Invergeldie, C	76.52	346	eP	P	11 11 56.0	-0.5
INVG				IAmb	IAmb	11 11 57.0	
comp=Z,84nm,1.5s							
KSP	Ksiaz	76.55	332	eP	P	11 11 56.7	0.0
KSP	Ksiaz	76.55	332	eP	P	11 11 56.7	0.0
E46A	Sault Ste Mari	76.55	36	PFAKE		11 12 10.0	+13
E46A				LR	LR		
comp=Z,800nm,20.0s							
E46A	Sault Ste Mari	76.55	36	P	P	11 11 55.8	-1.0
baz=324,SNR=8.7							
RAC	Raciborz	76.56	331	eP	P	11 11 57.3	+0.6
H43A	Windswept, Lux	76.57	39	PFAKE		11 12 10.0	+13
H43A				LR	LR		
comp=Z,1μm,19.0s							
H43A	Windswept, Lux	76.57	39	P	P	11 11 56.2	-0.7
baz=322							
F45A	CMU Biological	76.59	37	P	P	11 11 56.6	-0.5
baz=323,SNR=7.8							
EBH	Black Hill	76.60	346⇑	eP	P	11 11 56.5	-0.4
TRPA	Tarpa	76.62	327⇑	iP	P	11 11 57.7	+0.6
TRPA	Tarpa	76.62	327	⇑IP	P	11 11 57.1	0.0
JFWS	Jewell Farm	76.65	41	eP	P	11 11 55.9	-1.5
comp=Z,22nm,1.3s							
JFWS				LR	LR		
comp=Z,1μm,22.0s							
JFWS	Jewell Farm	76.65	41	eP	P	11 11 55.9	-1.5
JFWS				pmax	pmax		
comp=Z,21nm,1.3s							
JFWS				MLR	MLR		
comp=Z,1μm,22.0s							
JFWS	Jewell Farm	76.65	41	P	P	11 11 56.3	-1.1
baz=321							
AMTX	Amarillo	76.68	54	eP	P	11 11 58.4	+0.5
comp=Z,40nm,1.0s							
AMTX				LR	LR		
comp=Z,500nm,19.0s							
AMTX	Amarillo	76.68	54	P	P	11 11 57.9	0.0
baz=316							
PETR	Petresti	76.69	323⇓	iP	P	11 11 58.3	+0.8
ASUD	Al Ashush, Dub	76.71	291	i P	P	11 11 58.6	+0.6
SNR=6.2							
MSTX	Muleshoe	76.71	55	eP	P	11 11 58.6	+0.6
comp=Z,43nm,1.3s							
MSTX				LR	LR		
comp=Z,1μm,22.0s							
MSTX	Muleshoe	76.71	55	P	P	11 11 57.2	-0.8
baz=316							
ODBI	Odobesti	76.73	323⇑	iP	P	11 11 58.7	+0.9
CFR	Carcaliu	76.73	322⇑	iP	P	11 11 57.9	+0.1
CFR	Carcaliu	76.73	322	⇑P	P	11 11 57.9	+0.1
ESY	Stoneypath	76.76	345⇑	eP	P	11 11 57.5	-0.3
BSY	Bisya	76.77	289	P	P	11 11 59.6	+1.2
SNR=5.7							
VRI	Vrincioaia	76.78	324⇑	iP	P	11 11 58.4	+0.3
VRI	Vrincioaia	76.78	324	⇑P	P	11 11 58.4	+0.3
OKC	Ostrava-Krasne	76.78	331	eP	P	11 11 58.4	+0.4
OKC				e		11 12 07.9	
OKC				MLR	MLR		
comp=Z,2μm,15.8s							
OKC	Ostrava-Krasne	76.78	331	eP	P	11 11 58.4	+0.4
OKC				epP	pP	11 12 07.9	0.0
OKC				AMS	AMS	11 54 10.0	
comp=Z,2μm,15.8s							
MNTX	Cornudas Mount	76.79	58	PFAKE		11 12 10.0	+12
MNTX				LR	LR		
comp=Z,500nm,20.0s							
MNTX	Cornudas Mount	76.79	58	P	P	11 11 58.8	+0.4
baz=315,SNR=16							
EAB	Aberfoyle	76.80	346⇑	eP	P	11 11 57.8	-0.2
ALNE	Al Ain	76.83	291	i P	P	11 11 58.9	+0.2
SNR=9.0							
PLOR	Plostina	76.83	324⇑	iP	P	11 11 58.8	+0.4
PLOR	Plostina	76.83	324	⇑P	P	11 11 58.8	+0.4
F46A	Macinaw City C	76.84	36	P	P	11 11 57.5	-0.9
baz=323							
L40A	Anamosa	76.84	43	PFAKE		11 12 10.0	+11
L40A				LR	LR		
comp=Z,800nm,20.0s							
L40A	Anamosa	76.84	43	P	P	11 11 57.6	-0.9
baz=320,SNR=6.7							
CHVC	Chvalec	76.85	332	eP	P	11 11 58.6	+0.2
CHVC				AMS	AMS	11 49 40.0	
comp=Z,3μm,18.1s							
J42A	Columbus	76.86	41	P	P	11 11 57.8	-0.8
baz=321							
LANS	Liptovska Anna	76.90	330	eP	P	11 11 59.9	+1.1
LANS	Liptovska Anna	76.90	330	eP	P	11 11 59.9	+1.1
E47A	Iron Bridge	76.90	35	P	P	11 11 57.7	-1.1
baz=324,SNR=6.8							
LAWE	Loch Awe, Argy	76.91	347	eP	P	11 11 58.4	-0.2
LAWE				IAmb	IAmb	11 11 59.5	
comp=Z,98nm,1.2s							
UPC	Upice	76.93	332	eP	P	11 11 59.1	+0.2
UPC				eS	sS	11 21 58.9	+0.4
UPC				MLR	MLR		
comp=Z,3μm,19.7s							
UPC	Upice	76.93	332	eP	P	11 11 59.1	+0.2
UPC				eXS	sS	11 21 58.9	+0.4
UPC				AMS	AMS	11 49 40.0	
comp=Z,3μm,19.7s							
DPC	Dobruska-Polom	76.96	332	eP	P	11 11 59.5	+0.4
DPC				eS	sS	11 21 55.6	-3.4
DPC				MLR	MLR		
comp=Z,3μm,16.4s							
DPC	Dobruska-Polom	76.96	332	eP	P	11 11 59.5	+0.4
DPC				eXS	sS	11 21 55.6	-3.4
DPC				AMS	AMS	11 54 10.0	
comp=Z,3μm,16.4s							
EBL	Broad Law	76.97	345⇑	eP	P	11 11 58.6	-0.4
EAU	Auchinoon	76.97	346	eP	P	11 11 58.9	-0.1
D49A	Beulah Townshi	77.00	34	P	P	11 11 57.8	-1.5
baz=325							
MORC	Moravsky Berou	77.04	331	eP	P	11 12 00.0	+0.5
comp=Z,298nm,1.4s							
MORC				LR	LR		
comp=Z,2μm,19.0s							
MORC	Moravsky Berou	77.04	331⇑	iP	P	11 11 59.9	+0.3
MORC	Moravsky Berou	77.04	331	⇑P	P	11 11 59.9	+0.3
MORC	Moravsky Berou	77.04	331	eP	P	11 11 59.8	+0.2
G45A	Suttons Bay	77.04	37	PFAKE		11 12 10.0	+10
G45A				LR	LR		
comp=Z,1μm,19.0s							
G45A	Suttons Bay	77.04	37	P	P	11 11 59.1	-0.4
baz=323							
KRLC	Kraliky	77.05	332	eP	P	11 11 59.9	+0.3
KRLC	Kraliky	77.05	332	eP	P	11 11 59.9	+0.3
KECS	Kecovo	77.09	329	eP	P	11 12 00.3	+0.5
KECS				pmax	pmax		
comp=Z,194nm,1.2s							
KECS	Kecovo	77.09	329	eP	P	11 12 00.3	+0.5
U32A	Winter Ranch,	77.10	51	PFAKE		11 12 10.0	+10
U32A				LR	LR		
comp=Z,1μm,19.0s							
J43A	Natural Harves	77.13	40	P	P	11 11 59.3	-0.8
baz=322							
LSQQ	Lebel-sur-Quev	77.15	30	P	P	11 11 59.4	-0.7
baz=328							
G46A	Petoskey	77.16	37	P	P	11 12 00.1	-0.2
baz=323							
K42A	Prairie Point,	77.17	41	P	P	11 11 59.4	-0.9
baz=321,SNR=5.8							
TIRR	Tirgusor	77.18	322	eP	P	11 11 59.8	-0.6
comp=Z,277nm,1.2s							
TIRR				LR	LR		
comp=Z,13μm,19.0s							
TIRR	Tirgusor	77.18	322⇑	iP	P	11 12 00.6	+0.3
TIRR	Tirgusor	77.18	322	eP	P	11 11 59.8	-0.6
TIRR				pmax	pmax		
comp=Z,277nm,1.2s							
CLL	Collm	77.19	334	eP	P	11 11 59.9	-0.3
comp=Z,277nm,1.4s							
CLL				LR	LR		
comp=Z,3μm,19.0s							
CLL	Collm	77.19	334⇑	iP	P	11 12 00.0	-0.3
comp=Z,216nm,1.3s							
CLL				i		11 12 04.2	
CLL				ePcP	PcP	11 12 11.0	+0.1
CLL				i		11 12 21.0	
CLL				eS	S	11 21 51.0	+4.1
CLL				ePS	PnS	11 22 30.0	+1.5
CLL				eSS	SS	11 26 48.0	+4.4
CLL				Lm	MLR	11 48 00.0	
comp=Z,3μm,20.6s							
CLL	Collm	77.19	334⇑	iP	P	11 12 00.0	-0.3
CLL				eS	S	11 21 51.0	+4.1
CLL				pmax	pmax		
comp=Z,216nm,1.3s							
CLL				MLR	MLR		
comp=Z,3μm,20.6s							
PGBU	Glenifferbraes	77.19	346	eP	P	11 11 59.1	-1.0
PGBU				IAmb	IAmb	11 12 01.4	
comp=Z,224nm,1.3s							
HARR	Harsova	77.21	322⇑	iP	P	11 12 00.8	+0.3
HARR	Harsova	77.21	322	⇑P	P	11 12 00.8	+0.3
TLB	Topalu	77.24	322⇑	iP	P	11 12 00.9	+0.2
TLB	Topalu	77.24	322	⇑P	P	11 12 00.9	+0.2
STKA	Stephens Creek	77.26	188	P	P	11 12 02.5	+1.9
comp=Z,10nm,0.9s,baz=349,slow=9.0,SNR=14							
STKA				LR	LR	11 45 05.6	
comp=Z,786nm,21.3s,baz=5.2,slow=35							
STKA	Stephens Creek	77.26	188	eP	P	11 12 01.9	+1.3
comp=Z,7.6nm,1.1s							
STKA				LR	LR		
comp=Z,200nm,22.0s							
STKA	Stephens Creek	77.26	188	eP	P	11 12 02.0	+1.3
STKA				pmax	pmax		
comp=Z,8.0nm,1.1s							
STKA				MLR	MLR		
comp=Z,200nm,22.0s							
BRG	Berggiesshubel	77.27	334⇑	iP	P	11 12 00.5	-0.3
comp=Z,81nm,1.2s							
BRG	Berggiesshubel	77.27	334⇑	iP	P	11 12 00.5	-0.3
BRG				pmax	pmax		
comp=Z,81nm,1.2s							
BRG	Berggiesshubel	77.27	334	PP	PP	11 14 48.0	-6.3
BRG				S	S	11 21 45.0	-2.9
BRG				SS	SS	11 26 42.0	-3.0
CHGQ	Chibougamau	77.32	28	P	P	11 12 00.4	-0.6
baz=329,SNR=20							
E48A	Lockeyer	77.33	35	P	P	11 11 60.0	-1.2
baz=325,SNR=6.5							
CJR	Cluj-Napoca	77.37	326⇓	iP	P	11 12 02.4	+0.9
CJR	Cluj-Napoca	77.37	326	⇓P	P	11 12 02.4	+0.9
PVCC	Panska Ves	77.38	333	eP	P	11 12 01.6	+0.3
PVCC				MLR	MLR		
comp=Z,4μm,18.3s							
PVCC	Panska Ves	77.38	333	eP	P	11 12 01.6	+0.3
PVCC				AMS	AMS	11 49 20.0	
comp=Z,4μm,18.3s							
ILGA	Ilgaz	77.38	316	PFAKE		11 12 10.0	+8.1
ILGA				LR	LR		
comp=Z,1μm,19.0s							
MLR	Muntele Rosu	77.41	324	PFAKE		11 12 10.0	+8.2
MLR				LR	LR		
comp=Z,3μm,18.0s							
MLR	Muntele Rosu	77.41	324	iP	P	11 12 02.3	+0.5
MLR	Muntele Rosu	77.41	324	⇓P	P	11 12 02.3	+0.5
ESK	Eskdalemuir	77.44	345	eP	P	11 12 01.5	-0.1
comp=Z,119nm,1.4s							
ESK	Eskdalemuir	77.44	345⇑	eP	P	11 12 01.2	-0.3
ESK				IAmb	IAmb	11 12 02.6	
comp=Z,113nm,1.4s							
ESK	Eskdalemuir	77.44	345	eP	P	11 12 01.5	-0.1
ESK				pmax	pmax		
comp=Z,119nm,1.4s							
MHTO	MHTO	77.46	287	P	P	11 12 03.4	+1.2
SNR=14							
MHTO				P	P	11 12 03.4	+1.2
SNR=14							
ISR	Istrita	77.46	323⇑	iP	P	11 12 02.2	+0.2
ISR	Istrita	77.46	323	⇑P	P	11 12 02.2	+0.2
N40A	Mertquake, Sal	77.57	44	P	P	11 12 02.0	-0.6
baz=320							
I45A	Fountain	77.59	38	eP	P	11 12 01.7	-1.0
comp=Z,45nm,0.6s							
I45A				LR	LR		
comp=Z,800nm,18.0s							
I45A	Fountain	77.59	38	P	P	11 12 02.4	-0.3
baz=323							
L42A	Oliver, Polo	77.63	42	eP	P	11 12 00.4	-2.5
comp=Z,36nm,1.3s							
L42A				LR	LR		
comp=Z,1μm,22.0s							
L42A	Oliver, Polo	77.63	42	P	P	11 12 01.7	-1.2
baz=321							
H46A	Fife Lake	77.64	37	P	P	11 12 02.3	-0.6
baz=323							
BHH	Howats Hill	77.65

DRGR		**77.66**	**326**	P	**P**	**11 12 03.1**	**0.0**
DRGR				pmax	pmax		
	comp=Z,154nm,1.7s						
GLMI	**Grayling**	**77.66**	**37**	PFAKE		11 12 10.0	+6.9
GLMI				LR	LR		
	comp=Z,1μm,19.0s						
GLMI	**Grayling**	**77.66**	**37**	P	**P**	**11 12 02.9**	**-0.2**
	baz=324						
EDMD	**Edmundbyers**	**77.67**	**344⇑**	*e*P	**P**	**11 12 02.5**	**-0.4**
EDMD				IAmb	IAmb	11 12 03.8	
	comp=Z,331nm,2.1s						
D50A	**G1974 Best Tow**	**77.68**	**33**	P	**P**	**11 12 01.9**	**-1.2**
	baz=326						
VYHS	**Vyhne**	**77.68**	**330**	*e*P	**P**	**11 12 03.6**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,96nm,1.4s						
VYHS	**Vyhne**	**77.68**	**330**	*e*P	**P**	**11 12 03.6**	**+0.5**
F48A	**Evansville**	**77.68**	**35**	P	**P**	**11 12 02.2**	**-0.9**
	baz=325,SNR=6.2						
M41A	**Milan**	**77.70**	**43**	P	**P**	**11 12 02.1**	**-1.2**
	baz=321						
G47A	**Hillman**	**77.70**	**36**	P	**P**	**11 12 02.4**	**-0.9**
	baz=324						
K43A	**Burlington**	**77.70**	**40**	PFAKE		11 12 20.0	+17
K43A				LR	LR		
	comp=Z,600nm,21.0s						
K43A	**Burlington**	**77.70**	**40**	P	**P**	**11 12 02.5**	**-0.8**
	baz=322						
ICOR	**Ion Corvin**	**77.72**	**322⇓**	*i*P	**P**	**11 12 03.9**	**+0.5**
VRAC	**Vranov**	**77.77**	**331⇑**	*i*P	**P**	**11 12 04.1**	**+0.5**
VRAC	**Vranov**	**77.77**	**331**	⇑P	**P**	**11 12 04.1**	**+0.5**
VRAC	**Vranov**	**77.77**	**331**	*e*P	**P**	**11 12 04.1**	**+0.5**
VLDQ	**Val d'Or**	**77.78**	**31**	*e*P	**P**	**11 12 02.0**	**-1.6**
	comp=Z,66nm,1.3s						
VLDQ				LR	LR		
	comp=Z,1μm,20.0s						
JAVC	**Velka Javorina**	**77.78**	**331**	*e*P	**P**	**11 12 05.0**	**+1.3**
PSZ	**Piszkesteto**	**77.78**	**329**	PFAKE		11 12 20.0	+16
PSZ				LR	LR		
	comp=Z,4μm,19.0s						
PSZ	**Piszkesteto**	**77.78**	**329**	⇑*i*P	**P**	**11 12 04.2**	**+0.4**
PSZ	**Piszkesteto**	**77.78**	**329**	⇑P	**P**	**11 12 04.2**	**+0.4**
PSZ	**Piszkesteto**	**77.78**	**329**	⇑IP	**P**	**11 12 04.0**	**+0.3**
GDLE	**Glaisdale, N Y**	**77.83**	**344**	*e*P	**P**	**11 12 03.4**	**-0.4**
GDLE				IAmb	IAmb	11 12 04.5	
	comp=Z,64nm,0.9s						
GOPC	**GO Pecny, Ondr**	**77.84**	**333**	*e*P	**P**	**11 12 04.1**	**+0.1**
GOPC				*e*S	**S**	**11 21 54.8**	**+0.7**
GOPC				MLR	MLR		
	comp=Z,2μm,17.6s						
GOPC	**GO Pecny, Ondr**	**77.84**	**333**	*e*P	**P**	**11 12 04.1**	**+0.1**
GOPC				*ex*	x	11 12 30.0	
GOPC				*e*S	**S**	**11 21 54.8**	**+0.7**
GOPC				AMS	AMS	11 49 40.0	
	comp=Z,2μm,17.6s						
PRU	**Pruhonice**	**77.85**	**333**	*e*P	**P**	**11 12 04.2**	**+0.2**
PRU				*e*S	**S**	**11 22 02.5**	**+8.3**
PRU				MLR	MLR		
	comp=Z,3μm,16.3s						
PRU	**Pruhonice**	**77.85**	**333**	*e*P	**P**	**11 12 04.2**	**+0.2**
PRU				*e*S	**S**	**11 22 02.5**	**+8.3**
PRU				AMS	AMS	11 50 10.0	
	comp=Z,3μm,16.3s						
PSN	**Preselentsi**	**77.90**	**321**	*e*P	**P**	**11 12 05.2**	**+0.8**
L43A	**Garden Prairie**	**77.92**	**41**	P	**P**	**11 12 03.4**	**-1.1**
	baz=322						
SULR		**77.93**	**323**	⇓*i*P	**P**	**11 12 04.7**	**+0.2**
E50A	**Wahnapitae**	**77.94**	**34**	P	**P**	**11 12 03.4**	**-1.2**
	baz=326						
F49A	**Sandfield**	**77.97**	**35**	P	**P**	**11 12 04.0**	**-0.8**
	baz=325						
BBO1	**Bothel**	**78.00**	**345⇑**	*e*P	**P**	**11 12 04.8**	**+0.1**
J45A	**Montague**	**78.00**	**39**	PFAKE		11 12 20.0	+15
J45A				LR	LR		
	comp=Z,600nm,19.0s						
J45A	**Montague**	**78.00**	**39**	P	**P**	**11 12 04.4**	**-0.6**
	baz=323						
I46A	**Reed City**	**78.01**	**38**	P	**P**	**11 12 04.6**	**-0.4**
	baz=323						
H47A	**Mio**	**78.02**	**37**	P	**P**	**11 12 04.4**	**-0.6**
	baz=324						
KRUC	**Moravsky**	**78.04**	**331**	*e*P	**P**	**11 12 05.4**	**+0.3**
ARR	**Arges**	**78.05**	**325**	⇓*i*P	**P**	**11 12 06.3**	**+1.0**
N41A	**Harden Midland**	**78.06**	**43**	P	**P**	**11 12 04.8**	**-0.5**
	baz=321,SNR=8.8						
KESW	**Keswick, Cumbr**	**78.11**	**345⇑**	*e*P	**P**	**11 12 05.4**	**+0.1**
KESW				IAmb	IAmb	11 12 06.6	
	comp=Z,310nm,1.4s						
GAL1	**Galloway**	**78.13**	**346⇑**	*e*P	**P**	**11 12 05.2**	**-0.3**
GAL1				IAmb	IAmb	11 12 06.4	
	comp=Z,49nm,1.2s						
TREC	**Trest**	**78.15**	**332**	*e*P	**P**	**11 12 06.1**	**+0.4**
TREC	**Trest**	**78.15**	**332**	*e*P	**P**	**11 12 06.1**	**+0.4**
CLGH	**Cloghs, Cushen**	**78.16**	**347⇑**	*e*P	**P**	**11 12 05.4**	**-0.1**
CLGH				IAmb	IAmb	11 12 06.7	
	comp=Z,120nm,1.3s						
MOX	**Moxa**	**78.19**	**335**	P	**P**	**11 12 05.7**	**-0.2**
MOX				pmax	pmax		
	comp=Z,72nm,1.6s						
NKC	**Novy Kostel**	**78.30**	**334**	*e*P	**P**	**11 12 06.3**	**-0.2**
NKC				MLR	MLR		
	comp=Z,4μm,18.1s						
NKC	**Novy Kostel**	**78.30**	**334**	*e*P	**P**	**11 12 06.3**	**-0.2**
NKC				AMS	AMS	11 50 40.0	
	comp=Z,4μm,18.1s						
H48A	**Harrisville**	**78.31**	**36**	PFAKE		11 12 20.0	+13
H48A				LR	LR		
	comp=Z,1μm,20.0s						
H48A	**Harrisville**	**78.31**	**36**	P	**P**	**11 12 05.7**	**-0.9**
	baz=324						
L44A	**Lake County Fo**	**78.31**	**41**	P	**P**	**11 12 05.9**	**-0.8**
	baz=322						
MODS	**Modra-Piesok**	**78.33**	**331**	*e*P	**P**	**11 12 06.7**	**0.0**
MODS				pmax	pmax		
	comp=Z,204nm,1.3s						
MODS	**Modra-Piesok**	**78.33**	**331**	*e*P	**P**	**11 12 06.7**	**0.0**
E51A	**G1948 Merrick**	**78.34**	**33**	P	**P**	**11 12 05.7**	**-1.1**
	baz=326,SNR=7.6						
WTSB	**Winterswijk**	**78.35**	**338**	*e*P	**P**	**11 12 06.3**	**-0.4**
	comp=Z,117nm,0.8s						
I47A	**Gladwin**	**78.35**	**37**	PFAKE		11 12 20.0	+13
I47A				LR	LR		
	comp=Z,1μm,19.0s						
I47A	**Gladwin**	**78.35**	**37**	P	**P**	**11 12 06.3**	**-0.6**
	baz=324						
D52A	**ZEK Kipawa Sen**	**78.38**	**32**	P	**P**	**11 12 05.9**	**-1.1**
	baz=327,SNR=5.2						
J46A	**Howard City**	**78.40**	**38**	P	**P**	**11 12 06.6**	**-0.6**
	baz=323						
M43A	**Waltham Townsh**	**78.40**	**42**	P	**P**	**11 12 06.7**	**-0.5**
	baz=322						
WMOK	**Wichita Mounta**	**78.42**	**52**	*e*P	**P**	**11 12 07.1**	**-0.4**
	comp=Z,20nm,1.0s						
WMOK				LR	LR		
	comp=Z,1μm,21.0s						
WMOK	**Wichita Mounta**	**78.42**	**52**	*e*P	**P**	**11 12 07.1**	**-0.4**
WMOK				pmax	pmax		
	comp=Z,19nm,1.0s						
WMOK				MLR	MLR		
	comp=Z,1μm,21.0s						
WMOK	**Wichita Mounta**	**78.42**	**52**	P	**P**	**11 12 07.4**	**-0.1**
	baz=318,SNR=7.7						
HPK	**Haverah Park**	**78.43**	**344⇑**	*e*P	**P**	**11 12 07.0**	**-0.1**
HPK				IAmb	IAmb	11 12 08.3	
	comp=Z,446nm,1.5s						
BR101	**Keskin Array S**	**78.44**	**316**	*e*P	**P**	**11 12 08.0**	**+0.4**
BR131	**Keskin Array S**	**78.44**	**316**	*e*P	**P**	**11 12 08.0**	**+0.4**
	comp=Z,120nm,1.4s						
BR131	**Keskin Array S**	**78.44**	**316**	P	**P**	**11 12 08.2**	**+0.6**
	SNR=30						
BRTR	**Keskin Array B**	**78.44**	**316**	P	**P**	**11 12 08.0**	**+0.4**
	comp=Z,38nm,1.1s,baz=64,slow=2.9,SNR=85						
SRO	**Srobarova**	**78.44**	**330**	*e*P	**P**	**11 12 08.4**	**+1.1**
SRO	**Srobarova**	**78.44**	**330**	*e*P	**P**	**11 12 08.4**	**+1.1**
SIRR	**Siria**	**78.50**	**327⇑**	*i*P	**P**	**11 12 08.0**	**+0.3**
ZST	**Bratislava**	**78.54**	**331**	*e*P	**P**	**11 12 07.9**	**0.0**
ZST	**Bratislava**	**78.54**	**331**	*e*P	**P**	**11 12 07.9**	**0.0**
D53A	**Lac Vacive, Po**	**78.56**	**32**	PFAKE		11 12 20.0	+12
D53A				LR	LR		
	comp=Z,700nm,21.0s						
D53A	**Lac Vacive, Po**	**78.56**	**32**	P	**P**	**11 12 07.0**	**-1.0**
	baz=327						
I48A	**Sherman Twp**	**78.56**	**37**	P	**P**	**11 12 07.9**	**-0.2**
	baz=324						
TOBO	**Tobermory, Bru**	**78.62**	**35**	P	**P**	**11 12 07.6**	**-0.7**
	baz=325						
IOMK	**Kirk Michael**	**78.68**	**346⇑**	*e*P	**P**	**11 12 08.2**	**-0.3**
IOMK				IAmb	IAmb	11 12 09.5	
	comp=Z,276nm,1.4s						
N43A	**Stutzman Famil**	**78.69**	**42**	P	**P**	**11 12 08.3**	**-0.5**
	baz=322,SNR=10						
ANTO	**Ankara**	**78.74**	**316**	*e*P	**P**	**11 12 09.8**	**+0.6**
ANTO	comp=Z,205nm,1.4s						
				LR	LR		
	comp=Z,2μm,20.0s						
ANTO	**Ankara**	**78.74**	**316**	⇓*i*P	**P**	**11 12 10.0**	**+0.8**
ANTO	**Ankara**	**78.74**	**316**	⇓P	**P**	**11 12 10.0**	**+0.8**
ANTO	**Ankara**	**78.74**	**316**	P	**P**	**11 12 10.4**	**+1.2**
	SNR=21						
ANTO				P	**P**	**11 12 10.4**	**+1.2**
	SNR=21						
GZR	**Gura Zlata**	**78.78**	**326⇑**	*i*P	**P**	**11 12 09.3**	**0.0**
GZR	**Gura Zlata**	**78.78**	**326**	⇑P	**P**	**11 12 09.3**	**0.0**
WIM	**Isle of Man**	**78.81**	**346⇑**	*e*P	**P**	**11 12 09.1**	**-0.1**
CSKK	**Cskako**	**78.84**	**329**	EP	**P**	**11 12 10.0**	**+0.5**
J47A	**Sunmer**	**78.85**	**38**	PFAKE		11 12 20.0	+10
J47A				LR	LR		
	comp=Z,1μm,20.0s						
J47A	**Sunmer**	**78.85**	**38**	P	**P**	**11 12 09.1**	**-0.5**
	baz=324						
E52A	**Mattawa**	**78.86**	**33**	P	**P**	**11 12 08.5**	**-1.1**
	baz=327						
K46A	**Dorr**	**78.86**	**39**	P	**P**	**11 12 08.8**	**-0.9**
	baz=323						
M44A	**Midewin, Midew**	**78.87**	**41**	PFAKE		11 12 20.0	+10
M44A				LR	LR		
	comp=Z,1μm,21.0s						
M44A	**Midewin, Midew**	**78.87**	**41**	P	**P**	**11 12 09.1**	**-0.6**
	baz=322,SNR=6.9						
D54A	**Lac Fusel, La**	**78.88**	**31**	P	**P**	**11 12 08.5**	**-1.3**
	baz=328,SNR=6.5						
KHC	**Kasperske Hory**	**78.91**	**333**	*e*P	**P**	**11 12 09.8**	**-0.2**
	comp=Z,103nm,1.4s						
KHC				LR	LR		
	comp=Z,2μm,18.0s						
KHC	**Kasperske Hory**	**78.91**	**333**	*e*P	**P**	**11 12 09.9**	**0.0**
KHC				*e*		11 12 14.9	
KHC				*e*S	**S**	**11 22 04.6**	**-1.1**
KHC				MLR	MLR		
	comp=Z,4μm,17.0s						
KHC	**Kasperske Hory**	**78.91**	**333**	*e*P	**P**	**11 12 09.9**	**0.0**
KHC				*ex*	x	11 12 14.9	
KHC				*e*S	**S**	**11 22 04.6**	**-1.1**
KHC				AMS	AMS	11 50 50.0	
	comp=Z,4μm,17.0s						
HDIL	**Hopedale**	**78.93**	**42**	*e*P	**P**	**11 12 09.9**	**-0.2**
	comp=Z,82nm,0.9s						
HDIL				LR	LR		
	comp=Z,900nm,19.0s						
HDIL	**Hopedale**	**78.93**	**42**	P	**P**	**11 12 09.7**	**-0.4**
	baz=322,SNR=11						
GMM	**Mts of Mourne**	**78.94**	**346⇑**	*e*P	**P**	**11 12 09.5**	**-0.4**
LBWR	**Ladybower, Pea**	**78.97**	**344⇑**	*e*P	**P**	**11 12 10.2**	**0.0**
LBWR				IAmb	IAmb	11 12 11.4	
	comp=Z,390nm,1.3s						
F52A	**Sundridge**	**79.02**	**33**	P	**P**	**11 12 09.4**	**-1.1**
	baz=327						
KLBO	**Killbear Provi**	**79.03**	**34**	P	**P**	**11 12 09.7**	**-0.8**
	baz=326						
MZR	**Muzera**	**79.05**	**291**	*i*P	**P**	**11 12 11.8**	**+0.7**
	SNR=8.2						
BZS	**Buzias**	**79.05**	**326⇑**	*i*P	**P**	**11 12 10.3**	**-0.4**
BZS	**Buzias**	**79.05**	**326**	⇑P	**P**	**11 12 10.3**	**-0.4**
GEC2	**GERESS Array S**	**79.12**	**333**	*e*P	**P**	**11 12 11.2**	**0.0**
	comp=Z,98nm,1.4s						
GEC2				LR	LR		
	comp=Z,3μm,19.0s						
GERES	**GERESS Array B**	**79.12**	**333**	P	**P**	**11 12 11.0**	**-0.1**
	comp=Z,11nm,0.7s,baz=42,slow=4.2,SNR=48						
WACR	**West Acre**	**79.12**	**342⇑**	*e*P	**P**	**11 12 10.6**	**-0.4**
WACR				IAmb	IAmb	11 12 12.2	
	comp=Z,388nm,1.2s						
I49A	**Point Hope**	**79.13**	**36**	*e*P	**P**	**11 12 10.3**	**-0.8**
	comp=Z,39nm,1.0s						
I49A				LR	LR		
	comp=Z,1μm,21.0s						
I49A	**Point Hope**	**79.13**	**36**	P	**P**	**11 12 10.6**	**-0.6**
	baz=325						
GRA1	**Grafenberg Arr**	**79.15**	**335**	PFAKE		11 12 20.0	+8.8
GRA1				LR	LR		
	comp=Z,3μm,20.0s						
GRFO	**Grafenberg**	**79.15**	**335**	*e*P	**P**	**11 12 10.5**	**-0.7**
	comp=Z,318nm,1.5s						
GRFO				LR	LR		
	comp=Z,3μm,19.0s						
GRFO	**Grafenberg**	**79.15**	**335**	*e*P	**P**	**11 12 10.5**	**-0.7**
GRFO				pmax	pmax		
	comp=Z,318nm,1.5s						
GRFO				MLR	MLR		
	comp=Z,3μm,19.0s						
E53A	**Dumoine, Ponti**	**79.16**	**32**	P	**P**	**11 12 10.1**	**-1.2**
	baz=328						
L46A	**Eue Claire**	**79.17**	**40**	*e*P	**P**	**11 12 10.9**	**-0.5**
	comp=Z,106nm,0.3s						
L46A				LR	LR		
	comp=Z,1μm,19.0s						
L46A	**Eue Claire**	**79.17**	**40**	P	**P**	**11 12 11.1**	**-0.4**
	baz=323						
TUL1	**Leonard**	**79.19**	**49**	*e*P	**P**	**11 12 11.5**	**-0.1**
	comp=Z,50nm,1.2s						
TUL1				LR	LR		
	comp=Z,800nm,19.0s						
TUL1	**Leonard**	**79.19**	**49**	P	**P**	**11 12 11.3**	**-0.3**
	baz=319						
CONA	**Conrad Observa**	**79.20**	**331**	*i*P	**P**	**11 12 12.2**	**+0.6**
	comp=Z,125nm,1.3s,SNR=57						
K47A	**Vermontville**	**79.22**	**38**	P	**P**	**11 12 11.0**	**-0.7**
	baz=324						
M45A	**Boilermakers S**	**79.23**	**41**	P	**P**	**11 12 11.0**	**-0.7**
	baz=322						
SILT	**Sile**	**79.24**	**319⇑**	*i*P	**P**	**11 12 12.3**	**+0.5**
J48A	**Bridge Port**	**79.25**	**37**	*e*P	**P**	**11 12 12.2**	**+0.4**
	comp=Z,50nm,1.1s						
J48A				LR	LR		
	comp=Z,1μm,19.0s						
J48A	**Bridge Port**	**79.25**	**37**	P	**P**	**11 12 11.6**	**-0.2**
	baz=324						
BMRO	**Meriville Lake**	**79.26**	**35**	P	**P**	**11 12 11.4**	**-0.4**
	baz=326						
BUKO	**Buck Lake**	**79.28**	**34**	P	**P**	**11 12 11.1**	**-0.9**
	baz=327						
E54A	**Lac Daplat, Po**	**79.29**	**32**	P	**P**	**11 12 10.9**	**-1.1**
	baz=328,SNR=5.5						
N44A	**Piper City**	**79.29**	**42**	P	**P**	**11 12 11.5**	**-0.6**
	baz=322						
HERR	**Herculane**	**79.35**	**326⇑**	*i*P	**P**	**11 12 12.1**	**-0.2**
STNC	**Stoke**	**79.36**	**344⇑**	*e*P	**P**	**11 12 12.6**	**+0.4**
STNC				IAmb	IAmb	11 12 13.9	
	comp=Z,170nm,1.3s						
TIH	**Tihany**	**79.37**	**329**	EP	**P**	**11 12 12.0**	**-0.4**
ALGO	**Algonquin Park**	**79.37**	**32**	P	**P**	**11 12 11.3**	**-1.1**
	baz=327						
BRCO	**Bruce Peninsul**	**79.46**	**35**	P	**P**	**11 12 12.6**	**-0.3**
	baz=326						
WME	**Myndd Eilian**	**79.46**	**345⇑**	*e*P	**P**	**11 12 12.4**	**-0.3**
J49A	**Marlette**	**79.47**	**37**	P	**P**	**11 12 12.9**	**-0.2**
	baz=325						
BMOL	**Mol**	**79.48**	**339**	P	**P**	**11 12 13.3**	**+0.4**
	comp=Z,98nm,1.4s						
ABTX	**Abilene, Hawle**	**79.49**	**54**	*e*P	**P**	**11 12 13.1**	**-0.2**
	comp=Z,41nm,1.4s						
ABTX				LR	LR		
	comp=Z,600nm,20.0s						
ABTX	**Abilene, Hawle**	**79.49**	**54**	P	**P**	**11 12 13.5**	**+0.1**
	baz=318						
WPS	**Cemaes, Angles**	**79.50**	**345**	*e*P	**P**	**11 12 12.3**	**-0.6**
WPS				IAmb	IAmb	11 12 13.0	
	comp=Z,61nm,1.3s						
K48A	**Perry**	**79.50**	**38**	P	**P**	**11 12 12.9**	**-0.3**
	baz=324						
LTX	**Lajitas**	**79.51**	**59**	*e*P	**P**	**11 12 13.8**	**+0.2**
LTX	**Lajitas**	**79.51**	**59**	*e*P	**P**	**11 12 13.8**	**+0.2**
TX31	**Lajitas Ar. Si**	**79.51**	**59**	*e*P	**P**	**11 12 13.8**	**+0.2**
	comp=Z,14nm,0.9s						
TXAR	**Lajitas Array**	**79.51**	**59**	P	**P**	**11 12 13.8**	**+0.1**
	comp=Z,5.6nm,0.8s,baz=300,slow=3.5,SNR=43						
TXAR				PKKPbc	**PKKPbc**	**11 31 02.3**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=144,slow=6.5,SNR=4.1						
TXAR				PKPPKP	P'P'df	11 39 32.8	+23
	comp=Z,0.7nm,1.1s,baz=152,slow=5.8,SNR=3.6						
PVL	**Pavlikeni**	**79.51**	**323**	*e*P	**P**	**11 12 13.8**	**+0.6**
CWF	**Charnwood Fore**	**79.52**	**343⇑**	*e*P	**P**	**11 12 12.5**	**-0.6**
CWF				IAmb	IAmb	11 12 14.3	
	comp=Z,286nm,1.7s						
P43A	**Skaggs, Pawnee**	**79.53**	**43**	P	**P**	**11 12 12.9**	**-0.6**
	baz=322						
N45A	**Kentland**	**79.54**	**41**	P	**P**	**11 12 13.1**	**-0.4**
	baz=322,SNR=6.5						
BASO	**Ashfield**	**79.55**	**36**	P	**P**	**11 12 13.4**	**0.0**
	baz=325						
SLBS	**Sierra La Lagu**	**79.57**	**67**	PFAKE		11 12 30.0	+16
SLBS				LR	LR		
	comp=Z,800nm,21.0s						
JMB	**Yambol**	**79.57**	**322**	*e*P	**P**	**11 12 14.0**	**+0.4**
ISK	**Istanbul-Kandi**	**79.58**	**319**	P	**P**	**11 12 13.4**	**-0.3**
WLF1	**Llynfaes**	**79.58**	**345⇑**	*e*P	**P**	**11 12 12.8**	**-0.6**
WLF1				IAmb	IAmb	11 12 14.4	
	comp=Z,243nm,1.5s						
M46A	**Old House Fiel**	**79.63**	**40**	PFAKE		11 12 30.0	+16
M46A				LR	LR		
	comp=Z,900nm,19.0s						
M46A	**Old House Fiel**	**79.63**	**40**	P	**P**	**11 12 13.0**	**-0.9**
	baz=323						
O44A	**Mansfield**	**79.64**	**42**	P	**P**	**11 12 13.2**	**-0.9**
	baz=322						
YRC	**Rhoscolyn**	**79.65**	**345⇑**	*e*P	**P**	**11 12 13.2**	**-0.6**
HGN	**Heimansgroeve**	**79.67**	**338**	*e*P	**P**	**11 12 14.0**	**0.0**
	comp=Z,396nm,1.5s						
BWLO	**Walkerton**	**79.68**	**35**	P	**P**	**11 12 13.9**	**-0.3**
	baz=326						
L47A	**Sherwood**	**79.69**	**39**	P	**P**	**11 12 13.6**	**-0.7**
	baz=324						
BEBN	**Eben Emael**	**79.71**	**338**	P	**P**	**11 12 13.8**	**-0.3**
MDVR	**Moldovita**	**79.71**	**326⇑**	*i*P	**P**	**11 12 14.1**	**-0.3**
FOEL	**Foel Wylfa**	**79.74**	**344⇑**	*e*P	**P**	**11 12 14.5**	**+0.1**
FOEL				IAmb	IAmb	11 12 15.8	
	comp=Z,230nm,1.4s						
H52A	**Wyevale**	**79.75**	**34**	P	**P**	**11 12 13.7**	**-0.8**
	baz=326						
MEM	**Membach**	**79.79**	**338**	P	**P**	**11 12 14.0**	**-0.6**
	comp=Z,88nm,1.4s						
MEM	**Membach**	**79.79**	**338**	P	**P**	**11 12 14.6**	**-0.1**
K49A	**Clarkson**	**79.80**	**37**	P	**P**	**11 12 14.7**	**-0.2**
	baz=324						
MOA	**Molln**	**79.81**	**332**	*i* P	**P**	**11 12 15.1**	**+0.2**
	comp=Z,41nm,1.4s,SNR=16						
G53A	**Haliburton**	**79.85**	**33**	P	**P**	**11 12 14.2**	**-0.9**
	baz=327,SNR=8.4						
N46A	**Monticello**	**79.86**	**41**	P	**P**	**11 12 14.6**	**-0.6**
	baz=323						
LLW	**Llanuwychllyn**	**79.87**	**345⇑**	*e*P	**P**	**11 12 14.9**	**-0.1**
BLCH	**La Chartreuse**	**79.87**	**338**	P	**P**	**11 12 15.2**	**+0.1**
	comp=Z,167nm,1.4s						
RAR	**Rarotonga**	**79.89**	**134**	LR	LR	11 42 10.4	
	comp=Z,1μm,20.1s,baz=302,slow=31						
ARSA	**Arzberg**	**79.90**	**331**	*i* P	**P**	**11 12 15.7**	**+0.4**
	comp=Z,71nm,1.4s,SNR=26						
O45A	**Potomac**	**79.91**	**42**	P	**P**	**11 12 15.2**	**-0.3**
	baz=322						
CCM	**Cathedral Cave**	**79.92**	**45**	*e*P	**P**	**11 12 15.2**	**-0.4**
	comp=Z,43nm,0.9s						
CCM				LR	LR		
	comp=Z,900nm,20.0s						
CCM	**Cathedral Cave**	**79.92**	**45**	*e*P	**P**	**11 12 15.2**	**-0.4**
CCM				pmax	pmax		
	comp=Z,43nm,0.9s						
CCM				MLR	MLR		
	comp=Z,900nm,20.0s						
CCM	**Cathedral Cave**	**79.92**	**45**	P	**P**	**11 12 15.0**	**-0.5**
	baz=321						
BSTI	**Sart Tilman**	**79.93**	**338**	P	**P**	**11 12 15.5**	**+0.1**
SADO	**Sadowa**	**79.94**	**34**	PFAKE		11 12 30.0	+14
SADO				LR	LR		
	comp=Z,800nm,20.0s						
DSB	**Dublin**	**79.97**	**346**	*e*P	**P**	**11 12 15.5**	**0.0**
	comp=Z,110nm,1.3s						
SLM	**Saint Louis**	**79.97**	**44**	*e*P	**P**	**11 12 15.8**	**0.0**
	comp=Z,48nm,0.9s						
SLM	**Saint Louis**	**79.97**	**44**	*e*P	**P**	**11 12 15.8**	**0.0**
SLM				pmax	pmax		
	comp=Z,49nm,0.9s						
I51A	**Listowel**	**79.99**	**35**	P	**P**	**11 12 15.5**	**-0.3**
	baz=326						
HPIG		**80.00**	**62**	PFAKE		11 12 30.0	+14
HPIG				LR	LR		
	comp=Z,800nm,22.0s						
M47A	**Cromwell**	**80.00**	**40**	P	**P**	**11 12 15.2**	**-0.8**
	baz=323						
EDRB	**Edirne**	**80.00**	**321**	P	**P**	**11 12 16.1**	**+0.2**
BHOU	**Houvegnez**	**80.03**	**338**	P	**P**	**11 12 15.3**	**-0.7**
LATQ	**La Tuque**	**80.03**	**29**	P	**P**	**11 12 15.5**	**-0.5**
	baz=330						
UCC	**Uccle**	**80.04**	**339**	PFAKE		11 12 30.0	+14
UCC				LR	LR		
	comp=Z,2μm,22.0s						
UCC	**Uccle**	**80.04**	**339**	P	**P**	**11 12 15.6**	**-0.4**
L48A	**N Adams**	**80.06**	**39**	P	**P**	**11 12 16.0**	**-0.3**
	baz=324						
MPEP	**Malo Peshtene**	**80.06**	**324**	P	**P**	**11 12 16.3**	**0.0**
SFIN	**Lafayette**	**80.10**	**41**	PFAKE		11 12 30.0	+13
SFIN				LR	LR		
	comp=Z,1μm,22.0s						
SFIN	**Lafayette**	**80.10**	**41**	P	**P**	**11 12 16.1**	**-0.5**
	baz=323,SNR=7.5						
AAM	**Ann Arbor**	**80.11**	**38**	PFAKE		11 12 30.0	+14
AAM				LR	LR		
	comp=Z,1μm,19.0s						
AAM	**Ann Arbor**	**80.11**	**38**	P	**P**	**11 12 16.2**	**-0.3**
	baz=324						
F55A	**Otter Lake**	**80.11**	**31**	P	**P**	**11 12 14.8**	**-1.7**
	baz=328						
I52A	**Shelburne**	**80.11**	**35**	P	**P**	**11 12 15.8**	**-0.8**
	baz=326						
FRGS	**Fruska Gora**	**80.14**	**327⇑**	*i*P	**P**	**11 12 16.2**	**-0.4**
BEHE	**Becsehely**	**80.14**	**330⇑**	*i*P	**P**	**11 12 16.2**	**-0.4**
BEHE	**Becsehely**	**80.14**	**330**	⇑IP	**P**	**11 12 16.1**

PLVO	Plevna	80.51	32	P	P	11 12 17.9	-0.8
	baz=328						
BBOU	Bougnies	80.52	339	P	P	11 12 19.0	+0.4
BBOU				x	x	11 12 22.9	
ACTO	Acton	80.54	35	P	P	11 12 18.4	-0.5
	baz=326						
PGB	Panagyurishte	80.55	323	eP	P	11 12 19.2	+0.2
I53A	Kortright Cn E	80.55	35	P	P	11 12 17.9	-1.0
	baz=327						
MCH1	Michaelchurch	80.55	344⇑	eP	P	11 12 18.7	0.0
MCH1				IAmb	IAmb	11 12 20.0	
	comp=Z,171nm,1.3s						
SOKA	Soboth	80.56	331	i P	P	11 12 19.1	+0.1
	comp=Z,132nm,1.3s,SNR=57						
STU	Stuttgart	80.57	336	eP	P	11 12 19.1	+0.2
	comp=Z,162nm,1.4s						
STU				LR	LR		
	comp=Z,1μm,19.0s						
STU	Stuttgart	80.57	336	eP	P	11 12 19.1	+0.2
STU				pmax	pmax		
	comp=Z,162nm,1.4s						
STU				MLR	MLR		
	comp=Z,1μm,19.0s						
PERS	Pernice	80.57	331	i P	P	11 12 19.0	0.0
STRD	Stroud	80.60	343⇑	eP	P	11 12 18.7	-0.2
STRD				IAmb	IAmb	11 12 20.3	
	comp=Z,360nm,1.2s						
WLF	Walferdange	80.62	338	PFAKE		11 12 30.0	+11
WLF				LR	LR		
	comp=Z,11μm,20.0s						
WLF	Walferdange	80.62	338	P	P	11 12 20.0	+0.9
	comp=Z,71nm,2.1s						
DOU	Dourbes	80.63	339	P	P	11 12 19.0	-0.2
	comp=Z,53nm,1.8s						
M49A	Liberty Center	80.64	39	P	P	11 12 18.9	-0.5
	baz=324						
PKRO	Pickering	80.64	34	P	P	11 12 19.0	-0.3
	baz=327						
O47A	Sheridan	80.64	41	P	P	11 12 18.5	-0.9
	baz=323						
P46A	Rosedale	80.66	42	P	P	11 12 19.2	-0.3
	baz=323,SNR=16						
MONM	Monmouth	80.67	344⇑	eP	P	11 12 19.6	+0.3
MONM				IAmb	IAmb	11 12 20.8	
	comp=Z,172nm,1.1s						
N48A	Decatur	80.67	40	P	P	11 12 18.8	-0.8
	baz=324,SNR=5.8						
J52A	Paris	80.68	35	P	P	11 12 18.9	-0.7
	baz=326						
K51A	Iona Station	80.68	36	P	P	11 12 19.1	-0.4
	baz=326						
L50A	Kingsville	80.68	38	P	P	11 12 19.3	-0.3
	baz=325						
ORIO	Orleans, Innes	80.74	31	P	P	11 12 18.6	-1.3
	baz=329						
DELO	Deloro Mine	80.75	33	PFAKE		11 12 30.0	+10
DELO				LR	LR		
	comp=Z,900nm,20.0s						
DELO	Deloro Mine	80.75	33	P	P	11 12 18.9	-1.0
	baz=328						
SWN1	Swindon	80.78	343	eP	P	11 12 20.4	+0.5
SWN1				IAmb	IAmb	11 12 21.5	
	comp=Z,250nm,1.0s						
Q45A	Warren Harvey,	80.78	43	P	P	11 12 20.0	-0.2
	baz=322,SNR=8.9						
KBA	Koelnbreinsper	80.78	332	i P	P	11 12 20.5	+0.2
	comp=Z,154nm,1.4s,SNR=58						
OLDB	Oldbury-Upon-S	80.79	344	eP	P	11 12 19.4	-0.5
W39A	Magazine	80.80	49	eP	P	11 12 19.9	-0.4
	comp=Z,47nm,1.3s						
W39A				LR	LR		
	comp=Z,800nm,20.0s						
W39A	Magazine	80.80	49	P	P	11 12 19.7	-0.7
	baz=320,SNR=9.7						
TORO	Toronto--Lesli	80.83	35	P	P	11 12 20.0	-0.3
	baz=327						
WOL	Wolverton	80.84	343⇑	eP	P	11 12 20.0	-0.3
WOL				IAmb	IAmb	11 12 21.4	
	comp=Z,89nm,0.8s						
DRWO	Darlington Wes	80.86	34	P	P	11 12 20.3	-0.2
	baz=327						
DRCO	St. Marys Ceme	80.86	34	P	P	11 12 20.3	-0.2
	baz=327						
OBKA	Obir	80.88	331	i P	P	11 12 20.5	-0.1
	comp=Z,31nm,1.3s,SNR=13						
VTS	Vitosha	80.88	324	eP	P	11 12 21.1	+0.2
	comp=Z,372nm,1.4s						
VTS				LR	LR		
	comp=Z,3μm,20.0s						
VTS	Vitosha	80.88	324	P	P	11 12 20.7	-0.2
VTS	Vitosha	80.88	324⇑	iP	P	11 12 21.2	+0.3
VTS	Vitosha	80.88	324	eP	P	11 12 21.1	+0.2
VTS				pmax	pmax		
	comp=Z,372nm,1.4s						
VTS				MLR	MLR		
	comp=Z,3μm,20.0s						
VTS	Vitosha	80.88	324	eP	P	11 12 21.1	+0.2
H55A	Tweed	80.88	33	P	P	11 12 19.8	-0.8
	baz=328,SNR=5.0						
RSBS	Rosebush, Pemb	80.92	345⇑	eP	P	11 12 20.5	-0.2
RSBS				IAmb	IAmb	11 12 21.8	
	comp=Z,48nm,1.3s						
HMNX	Herstmonceux	80.93	342⇑	eP	P	11 12 21.4	+0.7
HMNX				IAmb	IAmb	11 12 22.8	
	comp=Z,320nm,1.1s						
OLIL	Olney	80.93	43	eP	P	11 12 21.2	+0.2
	comp=Z,68nm,1.3s						
OLIL				LR	LR		
	comp=Z,1μm,19.0s						
WLVO	Wesleyville	80.94	34	P	P	11 12 20.2	-0.7
	baz=327						
DIVS	Divibare	80.96	327⇑	iP	P	11 12 20.6	-0.6
K52A	Tillsonburg	80.96	36	P	P	11 12 21.2	+0.1
	baz=326						
JCT	Junction City	80.97	56	eP	P	11 12 21.3	-0.1
	comp=Z,55nm,1.3s						
JCT				LR	LR		
	comp=Z,900nm,21.0s						
JCT	Junction City	80.97	56	eP	P	11 12 21.3	-0.1
JCT				pmax	pmax		
	comp=Z,55nm,1.3s						
JCT				MLR	MLR		
	comp=Z,900nm,21.0s						
JCT	Junction City	80.97	56	P	P	11 12 21.4	0.0
	baz=318,SNR=8.8						
I55A	Frankford	80.97	33	P	P	11 12 19.9	-1.2
	baz=328						
N49A	Columbus Grove	80.99	39	eP	P	11 12 20.1	-1.1
	comp=Z,35nm,1.0s						
N49A				LR	LR		
	comp=Z,1μm,19.0s						
N49A	Columbus Grove	80.99	39	P	P	11 12 20.6	-0.6
	baz=324						
PLIO	Pelee Island,	81.00	38	P	P	11 12 21.0	-0.3
	baz=325						
TYNO	Tyneside	81.05	35	P	P	11 12 21.2	-0.3
	baz=326						
Q46A	CEJHS Indians,	81.06	42	P	P	11 12 20.8	-0.8
	baz=323						
ALN	Alexandroupoli	81.08	321	PFAKE		11 12 30.0	+8.3
ALN				LR	LR		
	comp=Z,2μm,19.0s						
ALN	Alexandroupoli	81.08	321	P	P	11 12 21.4	-0.3
MYKA	Terra Mystica	81.08	332	i P	P	11 12 21.3	-0.4
	comp=Z,58nm,1.3s,SNR=18						
O48A	Farmland	81.09	40	P	P	11 12 21.2	-0.7
	baz=324,SNR=9.9						
RDO	Rodhopi	81.10	321	P	P	11 12 21.9	+0.1
M50A	Fremont	81.11	38	PFAKE		11 12 30.0	+8.1
M50A				LR	LR		
	comp=Z,1μm,18.0s						
M50A	Fremont	81.11	38	P	P	11 12 20.8	-1.0
	baz=325						
WATA	Walderalm	81.13	333	i P	P	11 12 22.0	-0.1
	comp=Z,129nm,1.4s,SNR=15						
CRES	Cresnjev	81.16	330⇑	iP	P	11 12 21.6	-0.5
WTTA	Wattenberg	81.17	333	i P	P	11 12 22.7	+0.4
	comp=Z,173nm,1.4s,SNR=36						
S44A	Carbondale	81.19	44	P	P	11 12 22.2	-0.1
	baz=322,SNR=17						
SIUC	Southern Illin	81.19	44	eP	P	11 12 22.2	-0.1
	comp=Z,67nm,0.9s						
SIUC				LR	LR		
	comp=Z,1μm,21.0s						
R45A	Skylar, Fairfi	81.19	43	P	P	11 12 21.9	-0.4
	baz=322						
H56A	Elgin	81.20	32	P	P	11 12 21.1	-1.1
	baz=328						
P47A	Martinsville	81.20	41	P	P	11 12 21.7	-0.7
	baz=323						
WHTX	Lake Whitney,	81.20	53	eP	P	11 12 21.7	-0.8
	comp=Z,48nm,1.0s						
WHTX				LR	LR		
	comp=Z,1μm,22.0s						
WHTX	Lake Whitney,	81.20	53	P	P	11 12 22.4	-0.1
	baz=319						
BFO	Black Forest	81.22	336	eP	P	11 12 21.9	-0.4
	comp=Z,105nm,1.3s						
BFO				LR	LR		
	comp=Z,1μm,18.0s						
BFO	Black Forest	81.22	336	eP	P	11 12 22.0	-0.4
BFO				pmax	pmax		
	comp=Z,105nm,1.3s						
BFO				MLR	MLR		
	comp=Z,1μm,18.0s						
STCO	Saint Catharin	81.23	35	P	P	11 12 22.1	-0.4
	baz=327						
RETA	Reutte	81.25	334	i P	P	11 12 22.7	+0.1
	comp=Z,88nm,1.3s,SNR=29						
BALB	Balikesir	81.26	319	eP	P	11 12 23.0	+0.3
	comp=Z,377nm,1.2s						
BALB				LR	LR		
	comp=Z,5μm,19.0s						
MOTA	Moosalm	81.27	334	i P	P	11 12 23.1	+0.2
	comp=Z,143nm,1.3s,SNR=19						
LJU	Ljubljana	81.29	331⇑	iP	P	11 12 22.0	-0.8
PBMO	Poplar Bluff	81.31	46	eP	P	11 12 22.4	-0.6
	comp=Z,53nm,1.0s						
PBMO				LR	LR		
	comp=Z,800nm,20.0s						
BLO	Bloomington	81.33	42	PFAKE		11 12 30.0	+6.9
BLO				LR	LR		
	comp=Z,1μm,22.0s						
OZLJ	Ozalj	81.34	330	P	P	11 12 22.5	-0.4
SQTA	Sankt Quirin	81.34	334	i P	P	11 12 23.5	+0.3
	comp=Z,140nm,1.4s,SNR=30						
ABTA	Abfaltersbach	81.35	333	i P	P	11 12 22.5	-0.6
	comp=Z,47nm,1.2s,SNR=13						
HAPS	Han Pijesak,Bl	81.37	327	eP	P	11 12 22.1	-1.3
VISS	Visnje	81.39	331	eP	P	11 12 22.4	-0.9
J54A	Appleton	81.39	34	eP	P	11 12 22.5	-0.9
	comp=Z,38nm,1.0s						
J54A				LR	LR		
	comp=Z,1μm,22.0s						
J54A	Appleton	81.39	34	P	P	11 12 22.8	-0.6
	baz=327						
MIAR	Mount Ida	81.40	49	PFAKE		11 12 40.0	+16
MIAR				LR	LR		
	comp=Z,900nm,21.0s						
MIAR	Mount Ida	81.40	49	P	P	11 12 23.4	-0.1
	baz=320,SNR=21						
ISP	Isparta	81.45	316	eP	P	11 12 23.6	-0.3
	comp=Z,20nm,0.8s						
ISP				LR	LR		
	comp=Z,2μm,20.0s						
ISP	Isparta	81.45	316	P	P	11 12 23.1	-0.8
ISP	Isparta	81.45	316	eP	P	11 12 23.6	-0.3
ISP				pmax	pmax		
	comp=Z,21nm,0.8s						
ISP				MLR	MLR		
	comp=Z,2μm,20.0s						
BLY	Banja Luka	81.47	329	PFAKE		11 12 30.0	+6.3
BLY				LR	LR		
	comp=Z,4μm,20.0s						
BLY	Banja Luka	81.47	329⇑	iP	P	11 12 23.0	-0.7
PECO	Prince Edward	81.48	33	P	P	11 12 22.5	-1.2
	baz=328						
BOJS	Bojanci	81.51	330	i P	P	11 12 23.5	-0.4
PMOR	Pomariorio Ree	81.51	121	eT	T	12 42 16.7	
	comp=Z,14nm,0.2s						
O49A	Covington	81.52	40	PFAKE		11 12 40.0	+16
O49A				LR	LR		
	comp=Z,900nm,20.0s						
O49A	Covington	81.52	40	P	P	11 12 23.6	-0.5
	baz=324						
M51A	Elyria	81.53	38	P	P	11 12 22.6	-1.6
	baz=325						
MEDO	Medina	81.56	34	PFAKE		11 12 40.0	+16
MEDO				LR	LR		
	comp=Z,1μm,22.0s						
MEDO	Medina	81.56	34	P	P	11 12 23.5	-0.7
	baz=327						
Q47A	Bedord North L	81.56	42	P	P	11 12 24.2	-0.1
	baz=323,SNR=11						
KKB	Krupnik	81.57	323	eP	P	11 12 24.6	+0.3
N50A	Nevada	81.57	38	P	P	11 12 24.3	-0.1
	baz=325,SNR=5.5						
JAVS	Javornik	81.58	331	i P	P	11 12 23.2	-1.2
CEY	Cerknica	81.59	331⇑	iP	P	11 12 23.7	-0.7
P48A	Milroy	81.61	41	P	P	11 12 23.9	-0.7
	baz=324,SNR=6.7						
W41B	Gary Mavity, V	81.62	48	PFAKE		11 12 40.0	+15
W41B				LR	LR		
	comp=Z,1μm,18.0s						
W41B	Gary Mavity, V	81.62	48	P	P	11 12 24.2	-0.5
	baz=321,SNR=14						
R46A	Gibon Southern	81.62	43	P	P	11 12 24.4	-0.3
	baz=323						
SMTH	Samothraki Isl	81.65	321	P	P	11 12 24.2	-0.6
ECH	Echery	81.66	336	PFAKE		11 12 40.0	+15
ECH				LR	LR		
	comp=Z,1μm,21.0s						
NVR	Nevrokopi	81.66	323	P	P	11 12 25.1	+0.2
KAVA	Kavala	81.67	322	P	P	11 12 24.8	-0.1
FETA	Feichten	81.67	334	i P	P	11 12 25.2	+0.2
	comp=Z,63nm,1.4s,SNR=28						
DAVA	Damuels	81.70	334	i P	P	11 12 25.2	+0.1
	comp=Z,81nm,1.4s,SNR=26						
M52A	Chesterland	81.72	37	PFAKE		11 12 40.0	+15
M52A				LR	LR		
	comp=Z,900nm,20.0s						
M52A	Chesterland	81.72	37	P	P	11 12 24.8	-0.3
	baz=326						
J55A	Hilton	81.72	34	PFAKE		11 12 40.0	+15
J55A				LR	LR		
	comp=Z,1μm,20.0s						
J55A	Hilton	81.72	34	P	P	11 12 24.4	-0.7
	baz=328						
USIN	University of	81.75	43	PFAKE		11 12 40.0	+15
USIN				LR	LR		
	comp=Z,1μm,22.0s						
MGRS	Mrkonjic Grad	81.79	329	eP	P	11 12 25.8	+0.3
N51A	Ashland	81.79	38	PFAKE		11 12 40.0	+14
N51A				LR	LR		
	comp=Z,900nm,19.0s						
N51A	Ashland	81.79	38	P	P	11 12 25.0	-0.5
	baz=325						
KULA	Kula-Manisa	81.79	318	P	P	11 12 25.6	-0.1
HTL	Hartland	81.79	345⇑	eP	P	11 12 25.5	+0.2
HTL				IAmb	IAmb	11 12 26.8	
	comp=Z,240nm,1.5s						
LONY	Lake Ozonia	81.79	31	PFAKE		11 12 40.0	+15
LONY				LR	LR		
	comp=Z,500nm,19.0s						
LONY	Lake Ozonia	81.79	31	P	P	11 12 24.4	-1.1
	baz=330						
ERPA	Erie	81.81	36	eP	P	11 12 25.8	+0.2
	comp=Z,111nm,1.3s						
ERPA				LR	LR		
	comp=Z,1μm,19.0s						
ERPA	Erie	81.81	36	P	P	11 12 24.9	-0.7
	baz=326						
EZN	Ezine	81.82	320	P	P	11 12 25.6	0.0
EZN	Ezine	81.82	320⇑	iP	P	11 12 25.7	+0.1
EZN	Ezine	81.82	320⇑	P	P	11 12 25.7	+0.1
L53A	Girard	81.83	36	P	P	11 12 25.7	0.0
	baz=326,SNR=7.6						
PLE	Pljevlja	81.84	327⇑	iP	P	11 12 24.9	-1.0
X40A	Basin Creek Fa	81.84	49	eP	P	11 12 25.0	-0.9
	comp=Z,57nm,1.3s						
X40A				LR	LR		
	comp=Z,900nm,19.0s						
X40A	Basin Creek Fa	81.84	49	P	P	11 12 25.4	-0.5
	baz=320,SNR=8.3						
MANT	Manisa	81.86	318	eP	P	11 12 25.7	-0.5
	comp=Z,581nm,1.5s						
MANT				LR	LR		
	comp=Z,5μm,20.0s						
O50A	Cable	81.87	39	P	P	11 12 25.4	-0.5
	baz=325						
P49A	Miami Univ. Ec	81.88	40	P	P	11 12 25.5	-0.5
	baz=324,SNR=7.9						
UALR	University of	81.88	48	eP	P	11 12 24.4	-1.7
	comp=Z,26nm,1.3s						
UALR				LR	LR		
	comp=Z,1μm,19.0s						
Q48A	North Vernon	81.89	41	P	P	11 12 25.6	-0.5
	baz=324						
THAS	Thassos island	81.90	322	P	P	11 12 25.6	-0.5
K54A	Basiliko Farm,	81.93	35	P	P	11 12 25.8	-0.4
	baz=327,SNR=6.3						
RIY	Rijeka	81.93	331⇑	iP	P	11 12 25.2	-0.9
S46A	Don Dixon Farm	81.94	43	P	P	11 12 26.1	-0.2
	baz=323,SNR=7.1						
FRNY	Flat Rock	81.97	30	PFAKE		11 12 40.0	+14
FRNY				LR	LR		
	comp=Z,600nm,20.0s						
PVMO	Portageville	81.97	45	PFAKE		11 12 40.0	+14
PVMO				LR	LR		
	comp=Z,1μm,19.0s						
SRS	Serrai	81.97	323	P	P	11 12 25.9	-0.6
L54A	Sinclairville	81.99	35	P	P	11 12 26.1	-0.5
	baz=327						
T45A	Paducah	82.02	44	PFAKE		11 12 40.0	+13
T45A				LR	LR		
	comp=Z,900nm,20.0s						
T45A	Paducah	82.02	44	P	P	11 12 26.5	-0.3
	baz=322						
435B	Jarrell	82.03	54	PFAKE		11 12 40.0	+13
435B				LR	LR		
	comp=Z,600nm,20.0s						
435B	Jarrell	82.03	54	P	P	11 12 26.6	-0.3
	baz=319						
R47A	Wooly Knot Far	82.03	42	P	P	11 12 26.7	-0.1
	baz=323,SNR=12						
IVA	Berane	82.03	326⇑	iP	P	11 12 26.8	0.0
K55A	Perry	82.08	34	P	P	11 12 26.4	-0.6
	baz=328,SNR=6.6						
STIP	Stip	82.08	324	i P	P	11 12 26.2	-0.9
ACSO	Alum Creek Sta	82.09	39	eP	P	11 12 26.5	-0.5
	comp=Z,72nm,1.4s						
ACSO				LR	LR		
	comp=Z,1μm,20.0s						
ACSO	Alum Creek Sta	82.09	39	P	P	11 12 26.7	-0.4
	baz=325						
M53A	WI Miller and	82.09	37	P	P	11 12 26.9	-0.2
	baz=326,SNR=5.8						
UPM	Unac-Piva	82.14	327⇑	iP	P	11 12 26.5	-1.0
MMNY	Mt. Morris Dam	82.14	34	PFAKE		11 12 40.0	+13
MMNY				LR	LR		
	comp=Z,800nm,20.0s						
SKO	Skopje	82.16	325	P	P	11 12 27.4	0.0
SKO	Skopje	82.16	325	i P	P	11 12 27.8	+0.4
UDBI	Udbina	82.17	329	P	P	11 12 26.4	-1.1
FUORN	Ofenpass-Fuorn	82.17	334	eP	P	11 12 28.2	+0.4
	comp=Z,148nm,1.4s						
FUORN				LR	LR		
	comp=Z,4μm,20.0s						
N52A	McGinn's Farm,	82.17	38	P	P	11 12 26.6	-0.9
	baz=326						
WCI	Wyandotte Cave	82.19	42	eP	P	11 12 27.6	0.0
	comp=Z,44nm,1.0s						
WCI				LR	LR		
	comp=Z,1μm,20.0s						
WCI	Wyandotte Cave	82.19	42	eP	P	11 12 27.7	0.0
WCI				pmax	pmax		
	comp=Z,44nm,1.0s						
WCI				MLR	MLR		
	comp=Z,1μm,20.0s						
WCI	Wyandotte Cave	82.19	42	P	P	11 12 27.5	-0.2
	baz=323						
KOME	Kolasin	82.20	326⇑	iP	P	11 12 27.2	-0.5
PQI	Presque Isle	82.20	26	PFAKE		11 12 40.0	+12
PQI				LR	LR		
	comp=Z,1μm,20.0s						
Q49A	Aurora	82.22	41	P	P	11 12 27.4	-0.3
	baz=324						
KNT	Kendrikon	82.23	323	P	P	11 12 27.6	-0.2
P50A	Jamestown	82.23	40	P	P	11 12 27.5	-0.3
	baz=325,SNR=6.9						
VAY	Valandovo	82.23	323	P	P	11 12 27.8	0.0
VAY	Valandovo	82.23	323	i P	P	11 12 28.0	+0.2
PVY	Plav	82.24	326⇑	iP	P	11 12 27.3	-0.7
R48A	Northridge Ran	82.25	42	P	P	11 12 27.6	-0.3
	baz=324						
CSS	Mathiatis	82.27	313	eP	P	11 12 27.7	-0.4
	comp=Z,56nm,1.1s						
CSS	Mathiatis	82.27	313	P	P	11 12 28.2	+0.1
LIA	Limnos Island	82.27	321	P	P	11 12 27.4	-0.6
PRK	Paraskevi	82.31	320	P	P	11 12 28.8	+0.5
SOH	Sokhos	82.31	323	P	P	11 12 27.6	-0.7
T46A	Princeton	82.37	44	P	P	11 12 28.8	+0.2
	baz=323,SNR=22						
L55A	Hinsdale	82.39	35	P	P	11 12 28.0	-0.6
	baz=327						
S47A	Hartford	82.42	43	P	P	11 12 28.2	-0.7
	baz=323						
NKY	Niksic	82.43	327⇑	iP	P	11 12 28.2	-0.8
M54A	Oil Creek Stat	82.45	36	PFAKE		11 12 40.0	+11
M54A				LR	LR		
	comp=Z,1μm,19.0s						
M54A	Oil Creek Stat	82.45	36	P	P	11 12 28.5	-0.5
	baz=327,SNR=7.0						
NCB	Newcomb	82.48	31	PFAKE		11 12 40.0	+11
NCB				LR	LR		
	comp=Z,500nm,20.0s						
NKME	Niksic	82.49	327⇑	iP	P	11 12 28.2	-1.0
SIGR	SIGRI	82.53	320	P	P	11 12 29.2	-0.2
PPT2	Papeete2	82.53	124	eS	S	11 22 44.3	+0.2
	comp=Z,1μm,29.0s						
PPT2	Papeete2	82.53	124	eLR	LR	11 38 21.7	
	comp=Z,5μm,24.5s,baz=322						
PPT2	Papeete2	82.53	124	eT	T	12 43 35.8	
	comp=Z,3.7nm,0.3s						
BRY	Bratogost	82.53	327⇑	iP	P	11 12 28.3	-1.2
N53A	Lisbon	82.54	37	eP	P	11 12 29.4	-0.1
	comp=Z,71nm,1.1s						
N53A				LR	LR		
	comp=Z,900nm,22.0s						
N53A	Lisbon	82.54	37	P	P	11 12 29.3	-0.2
	baz=326,SNR=6.5						
TUE	Stuetta	82.59	334	eP	P	11 12 29.9	+0.1
	comp=Z,129nm,1.5s						
TUE				LR	LR		
	comp=Z,2μm,21.0s						
GRG	Griva	82.61	323	P	P	11 12 29.4	-0.4
HORT	Hortiatis	82.61	323	P	P	11 12 28.9	-1.0
DRLN	Deer Lake	82.62	18	PFAKE		11 12 40.0	+10
DRLN				LR	LR		
	comp=Z,2μm,21.0s						
THE	Thessaloniki	82.64	323	P	P	11 12 29.1	-0.8
PDG	Podgorica	82.65	326⇑	iP	P	11 12 29.5	-0.5
PDG	Podgorica	82.65	326⇑	iP	P	11 12 29.5	-0.5
TTG	Podgorica	82.65	326⇑	iP	P	11 12 29.4	-0.5
TTG	Podgorica	82.65	326	eP	P	11 12 29.4	-0.5
	comp=Z,151nm,1.3s						
TTG				LR	LR		
	comp=Z,3μm,20.0s						
TTG	Podgorica	82.65	326	eP	P	11 12 29.4	-0.5
TTG				pmax	pmax		
	comp=Z,151nm,1.3s						
TTG				MLR	MLR		
	comp=Z,3μm,20.0s						
P51A	Williamsport	82.66	39	PFAKE		11 12 40.0	+10
P51A				LR	LR		
	comp=Z,900nm,20.0s						
P51A	Williamsport	82.66	39	P	P	11 12 29.5	-0.6
	baz=325						
R49A	Shelbyville	82.67	41	P	P	11 12 29.8	-0.3
	baz=324						
O52A	Adamsville	82.68	38	PFAKE		11 12 40.0	+10
O52A				LR	LR		
	comp=Z,900nm,20.0s						
O52A	Adamsville	82.68	38	P	P	11 12 29.9	-0.3
	baz=326,SNR=5.7						
CEME	Cevo	82.69	326⇑	iP	P	11 12 29.3	-1.0
VT1	Waterbury	82.70	30	PFAKE		11 12 40.0	+10
VT1				LR	LR		
	comp=Z,1μm,19.0s						
CCA1	Carnmenellis	82.71	345⇑	eP	P	11 12 30.1	0.0
CCA1				IAmb	IAmb	11 12 31.4	
	comp=Z,357nm,1.7s						
KRUS	Krusevo	82.74	324	i P	P	11 12 30.4	-0.2
S48A	Wiedeman Farm,	82.76	42	P	P	11 12 30.3	-0.3
	baz=324						
TREB	Trebinje	82.76	327	eP	P	11 12 26.1	-4.5
U46A	Springville	82.77	44	P	P	11 12 30.3	-0.4
	baz=323						
Q50A	Georgetown	82.77	40	P	P	11 12 30.2	-0.5
	baz=325						

N54A	**Moraine State**	**82.77**	**36**	PFAKE		11 12 40.0	+9.3
N54A				LR	LR		
comp=Z,900nm,19.0s							
N54A	**Moraine State**	**82.77**	**36**	P	**P**	**11 12 30.4**	**-0.3**
baz=327,SNR=7.7							
T47A	**Sharon Grove**	**82.79**	**43**	PFAKE		11 12 40.0	+9.2
T47A				LR	LR		
comp=Z,1μm,21.0s							
T47A	**Sharon Grove**	**82.79**	**43**	P	**P**	**11 12 30.9**	**+0.1**
baz=323,SNR=15							
833A	**Chaparral WMA,**	**82.80**	**57**	PFAKE		11 12 40.0	+9.0
833A				LR	LR		
comp=Z,900nm,19.0s							
833A	**Chaparral WMA,**	**82.80**	**57**	P	**P**	**11 12 31.1**	**+0.1**
baz=318							
Z41A	**Richland Creek**	**82.80**	**49**	PFAKE		11 12 40.0	+9.1
Z41A				LR	LR		
comp=Z,900nm,19.0s							
Z41A	**Richland Creek**	**82.80**	**49**	P	**P**	**11 12 31.0**	**+0.1**
baz=321							
PHP	**Peshkopia**	**82.81**	**325**	P	**P**	**11 12 30.1**	**-0.8**
X43A	**Marvell**	**82.84**	**47**	PFAKE		11 12 40.0	+8.9
X43A				LR	LR		
comp=Z,900nm,19.0s							
X43A	**Marvell**	**82.84**	**47**	P	**P**	**11 12 30.9**	**-0.2**
baz=321							
O53A	**New Philadelph**	**82.84**	**38**	P	**P**	**11 12 29.8**	**-1.2**
baz=326							
M55A	**Ridgway**	**82.86**	**35**	P	**P**	**11 12 31.0**	**-0.1**
baz=327,SNR=8.5							
MET	**Memphis--Engin**	**82.86**	**46**	PFAKE		11 12 40.0	+8.8
MET				LR	LR		
comp=Z,700nm,20.0s							
STON	**Ston**	**82.88**	**327**	P	**P**	**11 12 29.4**	**-1.7**
DRME	**Dracevica, Mon**	**82.89**	**326⇑**	*iP*	**P**	**11 12 30.8**	**-0.4**
BUM	**Brajici-Budva**	**82.91**	**326⇑**	*iP*	**P**	**11 12 30.5**	**-0.9**
Q51A	**Peebles**	**82.91**	**40**	PFAKE		11 12 40.0	+8.6
Q51A				LR	LR		
comp=Z,1μm,21.0s							
Q51A	**Peebles**	**82.91**	**40**	P	**P**	**11 12 31.1**	**-0.3**
baz=325,SNR=7.4							
PAIG	**Paliouri**	**82.91**	**322**	P	**P**	**11 12 30.8**	**-0.6**
NATX	**Nacogdoches**	**82.93**	**51**	PFAKE		11 12 40.0	+8.4
NATX				LR	LR		
comp=Z,800nm,22.0s							
NATX	**Nacogdoches**	**82.93**	**51**	P	**P**	**11 12 31.9**	**+0.3**
baz=320							
HCY	**Herceg Novi**	**82.94**	**327⇑**	*iP*	**P**	**11 12 30.4**	**-1.1**
HCY	**Herceg Novi**	**82.94**	**327**	*eP*	**P**	**11 12 29.9**	**-1.6**
P52A	**Corning**	**82.95**	**39**	P	**P**	**11 12 30.9**	**-0.7**
baz=326							
S49A	**Springfield**	**83.02**	**42**	P	**P**	**11 12 32.0**	**0.0**
baz=324,SNR=9.3							
T48A	**Bowling Green**	**83.04**	**43**	P	**P**	**11 12 31.6**	**-0.4**
baz=323							
PKME	**Peaks-Kenny Pk**	**83.05**	**27**	PFAKE		11 12 40.0	+8.0
PKME				LR	LR		
comp=Z,1μm,20.0s							
PKME	**Peaks-Kenny Pk**	**83.05**	**27**	P	**P**	**11 12 30.4**	**-1.6**
baz=333							
ULC	**Ulcinj**	**83.05**	**326⇑**	*iP*	**P**	**11 12 31.4**	**-0.7**
JSA	**Saint Aubin**	**83.05**	**343⇑**	*eP*	**P**	**11 12 31.9**	**0.0**
JSA				IAmb	IAmb	11 12 33.2	
comp=Z,222nm,1.3s							
R50A	**Paris**	**83.06**	**41**	P	**P**	**11 12 32.0**	**-0.2**
baz=324							
LBNH	**Lisbon**	**83.07**	**30**	PFAKE		11 12 40.0	+7.9
LBNH				LR	LR		
comp=Z,1μm,19.0s							
LBNH	**Lisbon**	**83.07**	**30**	P	**P**	**11 12 31.9**	**-0.3**
baz=331							
M56A	**Emporium**	**83.08**	**35**	P	**P**	**11 12 31.7**	**-0.6**
baz=328							
CHOS	**Chios island**	**83.11**	**320**	P	**P**	**11 12 32.1**	**-0.4**
WVT	**Waverly**	**83.12**	**44**	*eP*	**P**	**11 12 32.6**	**+0.1**
comp=Z,25nm,0.9s							
WVT				LR	LR		
comp=Z,1μm,22.0s							
WVT	**Waverly**	**83.12**	**44**	*eP*	**P**	**11 12 32.6**	**+0.1**
WVT				pmax	pmax		
comp=Z,25nm,0.9s							
WVT				MLR	MLR		
comp=Z,1μm,22.0s							
WVT	**Waverly**	**83.12**	**44**	P	**P**	**11 12 32.2**	**-0.3**
baz=323							
CLF	**Chambon-Foret**	**83.13**	**339**	*eP*	**P**	**11 12 32.5**	**+0.2**
comp=Z,310nm,1.4s							
CLF				LR	LR		
comp=Z,2μm,18.0s							
U47A	**Clarksville**	**83.14**	**44**	P	**P**	**11 12 32.5**	**-0.1**
baz=323,SNR=7.4							
OHR	**Ohrid**	**83.14**	**324**	*iP*	**P**	**11 12 32.2**	**-0.4**
FNA	**Florina**	**83.18**	**324**	*eP*	**P**	**11 12 30.6**	**-2.2**
comp=Z,79nm,1.3s							
FNA				LR	LR		
comp=Z,4μm,18.0s							
FNA	**Florina**	**83.18**	**324**	P	**P**	**11 12 32.0**	**-0.8**
FNA	**Florina**	**83.18**	**324**	*eP*	**P**	**11 12 30.6**	**-2.2**
FNA				pmax	pmax		
comp=Z,79nm,1.3s							
FNA				MLR	MLR		
comp=Z,4μm,18.0s							
ACCN	**Adirondack Com**	**83.19**	**31**	PFAKE		11 12 40.0	+7.2
ACCN				LR	LR		
comp=Z,1μm,21.0s							
V46A	**Holladay**	**83.24**	**45**	P	**P**	**11 12 32.8**	**-0.3**
baz=323,SNR=11							
O54A	**Avella**	**83.26**	**37**	P	**P**	**11 12 33.2**	**0.0**
baz=326,SNR=5.9							
LIT	**Litokhoron**	**83.28**	**323**	P	**P**	**11 12 32.1**	**-1.2**
SMG	**Samos**	**83.30**	**319**	P	**P**	**11 12 32.8**	**-0.6**
SENIN	**Lac Senin/Sane**	**83.30**	**336**	PFAKE		11 12 40.0	+6.4
SENIN				LR	LR		
comp=Z,1μm,20.0s							
BINY	**Binghamton**	**83.34**	**33**	PFAKE		11 12 40.0	+6.4
BINY				LR	LR		
comp=Z,800nm,19.0s							
BINY	**Binghamton**	**83.34**	**33**	P	**P**	**11 12 33.0**	**-0.6**
baz=329							
N55A	**Marion Center**	**83.34**	**36**	PFAKE		11 12 50.0	+16
N55A				LR	LR		
comp=Z,900nm,20.0s							
N55A	**Marion Center**	**83.34**	**36**	P	**P**	**11 12 33.4**	**-0.2**
baz=327,SNR=6.2							
SKY	**Skiros Island**	**83.39**	**321**	P	**P**	**11 12 33.4**	**-0.5**
R51A	**Hillsboro**	**83.39**	**40**	P	**P**	**11 12 33.9**	**+0.1**
baz=325,SNR=9.5							
P53A	**Whipple**	**83.40**	**38**	PFAKE		11 12 50.0	+16
P53A				LR	LR		
comp=Z,900nm,19.0s							
P53A	**Whipple**	**83.40**	**38**	P	**P**	**11 12 33.4**	**-0.5**
baz=326							
HNH	**Hanover**	**83.41**	**30**	PFAKE		11 12 50.0	+16
HNH				LR	LR		
comp=Z,1μm,19.0s							
KZN	**Kozani**	**83.41**	**323**	P	**P**	**11 12 32.8**	**-1.3**
Q52A	**Bidwell**	**83.44**	**39**	P	**P**	**11 12 33.5**	**-0.6**
baz=326							
U48A	**Cassie Pea, Po**	**83.44**	**43**	P	**P**	**11 12 34.0**	**-0.2**
baz=323,SNR=10							
T49A	**Edmonton**	**83.45**	**42**	PFAKE		11 12 50.0	+16
T49A				LR	LR		
comp=Z,1μm,20.0s							
T49A	**Edmonton**	**83.45**	**42**	P	**P**	**11 12 34.1**	**-0.1**
baz=324,SNR=9.5							
N56A	**West Decatur**	**83.51**	**35**	P	**P**	**11 12 34.3**	**-0.2**
baz=328							
V47A	**Nunnelly**	**83.51**	**44**	P	**P**	**11 12 34.4**	**-0.1**
baz=323,SNR=13							
S50A	**Richmond**	**83.52**	**41**	P	**P**	**11 12 34.5**	**-0.1**
baz=324,SNR=6.0							
WVL	**Waterville**	**83.55**	**28**	PFAKE		11 12 50.0	+15
WVL				LR	LR		
comp=Z,1μm,20.0s							
XOR	**Xorichti**	**83.59**	**322**	P	**P**	**11 12 33.5**	**-1.4**
BODT	**Bodrum**	**83.59**	**318**	P	**P**	**11 12 34.2**	**-0.8**
OXF	**Oxford**	**83.60**	**46**	PFAKE		11 12 50.0	+15
OXF				LR	LR		
comp=Z,1μm,20.0s							
OXF	**Oxford**	**83.60**	**46**	P	**P**	**11 12 34.7**	**-0.3**
baz=322,SNR=5.0							
NEO	**Neokhori**	**83.62**	**322**	P	**P**	**11 12 34.0**	**-1.1**
NEST	**Nestorio**	**83.62**	**324**	P	**P**	**11 12 34.9**	**-0.3**
W46A	**Michie**	**83.63**	**45**	P	**P**	**11 12 34.5**	**-0.6**
baz=323							
HKT	**Hockley**	**83.65**	**53**	*eP*	**P**	**11 12 35.7**	**+0.5**
comp=Z,18nm,1.5s							
HKT				LR	LR		
comp=Z,1μm,20.0s							
NWAO	**Narrogin (SRO)**	**83.65**	**208**	P	**P**	**11 12 35.6**	**+0.6**
comp=Z,24nm,1.1s,baz=141,slow=1.6,SNR=4.3							
NWAO	**Narrogin (SRO)**	**83.65**	**208**	*eP*	**P**	**11 12 35.6**	**+0.6**
comp=Z,47nm,1.1s							
NWAO				*eP*	**P**	**11 12 35.6**	**+0.6**
FYTO	**Fytoko, Volos**	**83.66**	**322**	P	**P**	**11 12 34.6**	**-0.6**
O55A	**Ligonier**	**83.69**	**36**	P	**P**	**11 12 35.1**	**-0.3**
baz=327							
SSF	**Saint Saulge**	**83.71**	**338**	*eP*	**P**	**11 12 34.7**	**-0.7**
SSF				pmax	pmax		
comp=Z,165nm,1.7s							
TRY	**Troy**	**83.76**	**31**	PFAKE		11 12 50.0	+14
TRY				LR	LR		
comp=Z,1μm,19.0s							
R52A	**Catlettsburg**	**83.79**	**40**	P	**P**	**11 12 35.3**	**-0.6**
baz=325							
U49A	**Red Boiling Sp**	**83.81**	**43**	P	**P**	**11 12 35.9**	**-0.2**
baz=324,SNR=14							
FFD	**Franklin Falls**	**83.84**	**30**	*eP*	**P**	**11 12 36.5**	**+0.4**
comp=Z,65nm,1.2s							
FFD				LR	LR		
comp=Z,1μm,20.0s							
T50A	**Nancy**	**83.85**	**42**	P	**P**	**11 12 36.0**	**-0.3**
baz=324,SNR=12							
Q53A	**Leroy**	**83.86**	**39**	P	**P**	**11 12 36.2**	**-0.1**
baz=326,SNR=8.6							
KPRO	**Kipourio**	**83.88**	**323**	P	**P**	**11 12 35.6**	**-0.9**
LMN	**Caledonia Moun**	**83.91**	**24**	*eP*	**P**	**11 12 36.2**	**-0.2**
comp=Z,37nm,1.1s							
PLAL	**Pickwick Lake**	**83.91**	**45**	*eP*	**P**	**11 12 36.1**	**-0.5**
comp=Z,15nm,0.8s							
PLAL				LR	LR		
comp=Z,1μm,21.0s							
SSPA	**Standing Stone**	**83.91**	**35**	PFAKE		11 12 50.0	+13
SSPA				LR	LR		
comp=Z,800nm,19.0s							
SSPA	**Standing Stone**	**83.91**	**35**	P	**P**	**11 12 36.6**	**+0.1**
baz=328							
MCWV	**Mont Chateau**	**83.92**	**37**	PFAKE		11 12 50.0	+13
MCWV				LR	LR		
comp=Z,400nm,18.0s							
MCWV	**Mont Chateau**	**83.92**	**37**	P	**P**	**11 12 36.6**	**0.0**
baz=327							
V48A	**Smith Brothers**	**83.92**	**44**	*eP*	**P**	**11 12 36.5**	**-0.2**
comp=Z,22nm,1.0s							
V48A				LR	LR		
comp=Z,1μm,22.0s							
V48A	**Smith Brothers**	**83.92**	**44**	P	**P**	**11 12 36.4**	**-0.2**
baz=323,SNR=9.2							
S51A	**Beattyville**	**83.92**	**41**	*eP*	**P**	**11 12 36.5**	**-0.2**
comp=Z,24nm,1.0s							
S51A				LR	LR		
comp=Z,600nm,21.0s							
S51A	**Beattyville**	**83.92**	**41**	P	**P**	**11 12 36.2**	**-0.5**
baz=325							
THL	**Klokotos Trika**	**83.93**	**323**	P	**P**	**11 12 34.3**	**-2.3**
W47A	**Westpoint**	**83.93**	**45**	P	**P**	**11 12 36.5**	**-0.2**
baz=323,SNR=8.7							
O56A	**Blue Knob Stat**	**83.94**	**36**	PFAKE		11 12 50.0	+13
O56A				LR	LR		
comp=Z,1μm,19.0s							
O56A	**Blue Knob Stat**	**83.94**	**36**	P	**P**	**11 12 36.1**	**-0.6**
baz=328							
N57A	**Milroy**	**83.95**	**35**	P	**P**	**11 12 36.3**	**-0.4**
baz=328,SNR=7.9							
MRKA	**Markates**	**83.96**	**321**	P	**P**	**11 12 35.6**	**-1.2**
KSPA	**Keystone Colle**	**83.97**	**33**	PFAKE		11 12 50.0	+13
KSPA				LR	LR		
comp=Z,800nm,20.0s							
SMIA	**Simia**	**83.98**	**322**	P	**P**	**11 12 36.1**	**-0.8**
X46A	**Booneville**	**83.99**	**46**	P	**P**	**11 12 36.1**	**-0.9**
baz=322							
EREA	**Eretria**	**84.04**	**321**	P	**P**	**11 12 36.3**	**-0.9**
P55A	**Reedsville**	**84.05**	**37**	P	**P**	**11 12 37.5**	**+0.2**
baz=327,SNR=7.0							
Q54A	**Coxs Mills**	**84.06**	**38**	PFAKE		11 12 50.0	+13
Q54A				LR	LR		
comp=Z,900nm,18.0s							
Q54A	**Coxs Mills**	**84.06**	**38**	P	**P**	**11 12 37.5**	**+0.2**
baz=326,SNR=6.6							
R53A	**Hurricane**	**84.10**	**39**	PFAKE		11 12 50.0	+12
R53A				LR	LR		
comp=Z,1μm,20.0s							
R53A	**Hurricane**	**84.10**	**39**	P	**P**	**11 12 37.3**	**-0.2**
baz=326							
S52A	**Salyersville**	**84.13**	**40**	P	**P**	**11 12 37.7**	**0.0**
baz=325							
EMMW	**East Machias**	**84.13**	**26**	PFAKE		11 12 50.0	+12
EMMW				LR	LR		
comp=Z,1μm,21.0s							
ATAL	**Atalanti**	**84.22**	**322**	P	**P**	**11 12 36.9**	**-1.2**
LPL	**La Plagne**	**84.23**	**336**	*eP*	**P**	**11 12 38.1**	**-0.3**
LPL				pmax	pmax		
comp=Z,43nm,1.0s							
AGG	**Agios Georgios**	**84.24**	**322**	*eP*	**P**	**11 12 36.9**	**-1.4**
comp=Z,21nm,0.9s							
AGG				LR	LR		
comp=Z,3μm,19.0s							
AGG	**Agios Georgios**	**84.24**	**322**	P	**P**	**11 12 36.3**	**-2.0**
AGG	**Agios Georgios**	**84.24**	**322**	*eP*	**P**	**11 12 36.9**	**-1.4**
AGG				pmax	pmax		
comp=Z,21nm,0.9s							
AGG				MLR	MLR		
comp=Z,3μm,19.0s							
LKR	**Lokris**	**84.26**	**322**	P	**P**	**11 12 37.1**	**-1.2**
T51A	**Gray**	**84.31**	**41**	P	**P**	**11 12 38.3**	**-0.3**
baz=325,SNR=5.2							
DION	**Dionisos Attik**	**84.32**	**321**	P	**P**	**11 12 37.1**	**-1.6**
VLC	**Villacollemand**	**84.33**	**333**	*eP*	**P**	**11 12 36.8**	**-1.8**
comp=Z,114nm,1.4s							
VLC				LR	LR		
comp=Z,3μm,20.0s							
U50A	**Jamestown**	**84.33**	**42**	P	**P**	**11 12 38.6**	**-0.2**
baz=324,SNR=12							
JAN	**Janina**	**84.34**	**324**	P	**P**	**11 12 38.5**	**-0.3**
W48A	**Pulaski**	**84.35**	**44**	P	**P**	**11 12 38.7**	**-0.1**
baz=323,SNR=19							
V49A	**McMinnville**	**84.35**	**43**	P	**P**	**11 12 38.6**	**-0.2**
baz=324,SNR=7.4							
Q55A	**Buckhannon**	**84.37**	**38**	P	**P**	**11 12 38.7**	**-0.2**
baz=327							
O57A	**Amberson**	**84.38**	**35**	P	**P**	**11 12 38.7**	**-0.2**
baz=328,SNR=7.8							
PTL	**Penteli**	**84.38**	**321**	P	**P**	**11 12 37.4**	**-1.6**
X47A	**Russelville**	**84.38**	**45**	P	**P**	**11 12 38.4**	**-0.6**
baz=323,SNR=6.6							
AMGA	**Amorgos Island**	**84.45**	**319**	P	**P**	**11 12 37.5**	**-1.8**
P56A	**Dayton Farm, R**	**84.47**	**36**	P	**P**	**11 12 39.6**	**+0.2**
baz=327,SNR=9.2							
ATHU	**Athens Univers**	**84.48**	**321**	P	**P**	**11 12 37.8**	**-1.7**
ATH	**Athens Observa**	**84.50**	**321**	P	**P**	**11 12 37.9**	**-1.7**
N59A	**State Game Lan**	**84.52**	**34**	PFAKE		11 12 50.0	+10
N59A				LR	LR		
comp=Z,800nm,20.0s							
N59A	**State Game Lan**	**84.52**	**34**	P	**P**	**11 12 37.7**	**-1.9**
baz=329							
VILL	**Vilia**	**84.53**	**321**	P	**P**	**11 12 37.7**	**-2.0**
EVR	**Evrytania**	**84.56**	**323**	P	**P**	**11 12 38.7**	**-1.3**
S53A	**Williamson**	**84.56**	**40**	P	**P**	**11 12 39.4**	**-0.5**
baz=326							
VLY	**Voula,Athens**	**84.57**	**321**	P	**P**	**11 12 38.1**	**-1.8**
QUA2	**Belchertown**	**84.63**	**31**	PFAKE		11 12 50.0	+10
QUA2				LR	LR		
comp=Z,1μm,22.0s							
T52A	**Hallie**	**84.64**	**41**	PFAKE		11 12 50.0	+10
T52A				LR	LR		
comp=Z,900nm,22.0s							
T52A	**Hallie**	**84.64**	**41**	P	**P**	**11 12 40.1**	**-0.2**
baz=325							
R54A	**Victor**	**84.65**	**39**	P	**P**	**11 12 40.2**	**-0.2**
baz=326							
IGT	**Igoumenitsa**	**84.66**	**324**	P	**P**	**11 12 39.4**	**-1.0**
DSF	**Desfina**	**84.67**	**322**	P	**P**	**11 12 38.8**	**-1.7**
BNI	**Bardonecchia**	**84.67**	**335**	PFAKE		11 12 50.0	+10
BNI				LR	LR		
comp=Z,2μm,22.0s							
W49A	**Belvidere**	**84.69**	**44**	P	**P**	**11 12 40.3**	**-0.3**
baz=324,SNR=9.0							
HRV	**Adam Dziewonsk**	**84.72**	**30**	PFAKE		11 12 50.0	+9.5
HRV				LR	LR		
comp=Z,1μm,19.0s							
HRV	**Adam Dziewonsk**	**84.72**	**30**	P	**P**	**11 12 40.3**	**-0.2**
baz=332							
PAGS	**Pennsylvania G**	**84.73**	**35**	PFAKE		11 12 50.0	+9.3
PAGS				LR	LR		
comp=Z,900nm,20.0s							
KEK	**Kerkira**	**84.73**	**324**	P	**P**	**11 12 39.6**	**-1.1**
U51A	**La Follette**	**84.75**	**42**	P	**P**	**11 12 40.5**	**-0.4**
baz=325							
ANX	**Ano Chora**	**84.78**	**322**	P	**P**	**11 12 39.9**	**-1.2**
V50A	**Pikevile**	**84.81**	**43**	P	**P**	**11 12 40.8**	**-0.3**
baz=324,SNR=9.0							
VBMS	**Vicksburg**	**84.82**	**48**	PFAKE		11 12 50.0	+8.8
VBMS				LR	LR		
comp=Z,800nm,18.0s							
VBMS	**Vicksburg**	**84.82**	**48**	P	**P**	**11 12 40.8**	**-0.4**
baz=322							
S54A	**Dingess, Beckl**	**84.82**	**39**	P	**P**	**11 12 41.0**	**-0.3**
baz=326							
SERI	**Serifos**	**84.83**	**320**	P	**P**	**11 12 38.6**	**-2.6**
ODNJ	**Ogdensburg**	**84.83**	**33**	PFAKE		11 12 50.0	+8.9
ODNJ				LR	LR		
comp=Z,800nm,20.0s							
P57A	**Homestead Farm**	**84.83**	**36**	P	**P**	**11 12 41.3**	**+0.1**
baz=328							
TZTN	**Tazewell**	**84.84**	**41**	*eP*	**P**	**11 12 41.3**	**0.0**
comp=Z,27nm,0.9s							
TZTN				LR	LR		
comp=Z,1μm,22.0s							
TZTN	**Tazewell**	**84.84**	**41**	P	**P**	**11 12 40.7**	**-0.6**
baz=325							
X48A	**Hartselle**	**84.84**	**45**	PFAKE		11 12 50.0	+8.7
X48A				LR	LR		
comp=Z,900nm,21.0s							
X48A	**Hartselle**	**84.84**	**45**	P	**P**	**11 12 40.4**	**-0.9**
baz=323							
KALE	**Kalithea**	**84.85**	**322**	P	**P**	**11 12 39.9**	**-1.5**
SERG	**Sergoula**	**84.87**	**322**	P	**P**	**11 12 40.0**	**-1.4**
O59A	**Robesonia**	**84.87**	**34**	P	**P**	**11 12 41.0**	**-0.5**
baz=329							
TRIZ	**Trizonia**	**84.90**	**322**	P	**P**	**11 12 40.1**	**-1.4**
WES	**Weston**	**84.91**	**30**	PFAKE		11 12 50.0	+8.5
WES				LR	LR		
comp=Z,1μm,20.0s							
AQU	**L'Aquila**	**84.91**	**330**	*eP*	**P**	**11 12 42.0**	**+0.4**
comp=Z,96nm,1.1s							
AQU				LR	LR		
comp=Z,2μm,18.0s							
AQU	**L'Aquila**	**84.91**	**330**	*eP*	**P**	**11 12 42.0**	**+0.4**
AQU				pmax	pmax		
comp=Z,96nm,1.1s							
AQU				MLR	MLR		
comp=Z,2μm,18.0s							
AQU	**L'Aquila**	**84.91**	**330⇑**	*iP*	**P**	**11 12 41.7**	**+0.1**
EFP	**Efpalio**	**84.92**	**322**	P	**P**	**11 12 40.9**	**-0.8**
PVO	**Paravola**	**84.93**	**323**	P	**P**	**11 12 40.7**	**-1.0**
ZAIG	**Zacatecas**	**84.94**	**63**	PFAKE		11 12 50.0	+7.6
ZAIG				LR	LR		
comp=Z,1μm,20.0s							
T53A	**Wise**	**84.95**	**40**	P	**P**	**11 12 41.7**	**-0.2**
baz=326							
LUPA	**Lehigh Univers**	**84.95**	**34**	PFAKE		11 12 50.0	+8.2
LUPA				LR	LR		
comp=Z,100nm,20.0s							
BCX	**Boston College**	**85.00**	**30**	PFAKE		11 12 50.0	+8.0
BCX				LR	LR		
comp=Z,2μm,19.0s							
SANT	**Santorini**	**85.02**	**319**	PFAKE		11 12 50.0	+7.7
SANT				LR	LR		
comp=Z,1μm,19.0s							
MFF	**Saint Martin d**	**85.04**	**340**	*eP*	**P**	**11 12 42.0**	**-0.1**
MFF				pmax	pmax		
comp=Z,179nm,1.6s							
U52A	**Thorn Hill**	**85.05**	**41**	P	**P**	**11 12 42.4**	**0.0**
baz=325,SNR=14							
Q57A	**Strasburg**	**85.05**	**36**	P	**P**	**11 12 41.6**	**-0.7**
baz=328							
LAKA	**Lakka**	**85.05**	**322**	P	**P**	**11 12 41.7**	**-0.6**
V51A	**Loudon**	**85.06**	**42**	PFAKE		11 12 50.0	+7.6
V51A				LR	LR		
comp=Z,1μm,19.0s							
V51A	**Loudon**	**85.06**	**42**	P	**P**	**11 12 42.1**	**-0.3**
baz=325							
SSB	**Saint Sauveur**	**85.07**	**337**	*eP*	**P**	**11 12 42.6**	**+0.2**
comp=Z,182nm,1.5s							
SSB				LR	LR		
comp=Z,1μm,20.0s							
SSB	**Saint Sauveur**	**85.07**	**337**	*eP*	**P**	**11 12 42.6**	**+0.2**
SSB				pmax	pmax		
comp=Z,182nm,1.5s							
SSB				MLR	MLR		
comp=Z,1μm,20.0s							
W50A	**Signal Mountai**	**85.09**	**43**	PFAKE		11 12 50.0	+7.4
W50A				LR	LR		
comp=Z,900nm,20.0s							
W50A	**Signal Mountai**	**85.09**	**43**	P	**P**	**11 12 42.2**	**-0.5**
baz=324							
DID	**Didima**	**85.10**	**321**	P	**P**	**11 12 39.8**	**-2.8**
KLV	**Kalavryta, Ach**	**85.14**	**322**	P	**P**	**11 12 41.1**	**-1.7**
GUR	**Goura**	**85.14**	**322**	P	**P**	**11 12 41.5**	**-1.4**
X49A	**Woodville**	**85.15**	**44**	P	**P**	**11 12 42.5**	**-0.4**
baz=324,SNR=13							
LKD2	**Lefkada island**	**85.15**	**323**	P	**P**	**11 12 41.4**	**-1.5**
PAL	**Palisades**	**85.16**	**32**	P	**P**	**11 12 42.2**	**-0.6**
baz=330							
O60A	**Telford**	**85.18**	**34**	P	**P**	**11 12 42.2**	**-0.7**
baz=329							
BRNJ	**Basking Ridge**	**85.19**	**33**	PFAKE		11 12 50.0	+7.1
BRNJ				LR	LR		
comp=Z,1μm,18.0s							
S55A	**Lewisburg**	**85.20**	**38**	P	**P**	**11 12 42.6**	**-0.6**
baz=326							
Y48A	**Jasper**	**85.21**	**45**	P	**P**	**11 12 42.0**	**-1.2**
baz=323							
BRYW	**Bryant College**	**85.24**	**30**	PFAKE		11 12 50.0	+6.8
BRYW				LR	LR		
comp=Z,900nm,19.0s							
YLE	**Yale**	**85.26**	**32**	PFAKE		11 12 50.0	+6.7
YLE				LR	LR		
comp=Z,1μm,18.0s							
LNIG	**Linares**	**85.29**	**59**	*eP*	**P**	**11 12 42.8**	**-1.0**
comp=Z,21nm,1.3s							
LNIG				LR	LR		
comp=Z,500nm,20.0s							
T54A	**Tazewell**	**85.32**	**40**	P	**P**	**11 12 43.7**	**-0.1**
baz=326,SNR=6.3							
CPNY	**Central Park**	**85.33**	**33**	PFAKE		11 12 50.0	+6.4
CPNY				LR	LR		
comp=Z,1μm,20.0s							
HAL	**Halifax**	**85.36**	**24**	PFAKE		11 13 00.0	+16
HAL				LR	LR		
comp=Z,900nm,20.0s							
P59A	**Jarrettsville**	**85.37**	**35**	P	**P**	**11 12 43.7**	**-0.2**
baz=329							
SDMD	**Soldier's Deli**	**85.38**	**35**	PFAKE		11 13 00.0	+16
SDMD				LR	LR		
comp=Z,500nm,20.0s							
V52A	**Sevierville**	**85.39**	**42**	*eP*	**P**	**11 12 43.3**	**-0.7**
comp=Z,31nm,0.9s							
V52A				LR	LR		
comp=Z,1μm,22.0s							
V52A	**Sevierville**	**85.39**	**42**	P	**P**	**11 12 44.1

U54A	Nelsons Funny	85.65	40	P	P	11 12 45.3	-0.2
	baz=326						
KFL	Anninata	85.67	323	P	P	11 12 44.5	-0.9
S56A	Natural Bridge	85.69	38	P	P	11 12 45.5	0.0
	baz=327						
VLS	Valsamata	85.70	323	P	P	11 12 44.4	-1.2
BLA	Blacksburg	85.71	39	PFAKE		11 13 00.0	+14
BLA				LR	LR		
	comp=Z,800nm,18.0s						
BLA	Blacksburg	85.71	39	P	P	11 12 45.2	-0.4
	baz=327						
AMT	Artemida-Makis	85.75	322	P	P	11 12 44.7	-1.2
X51A	Calhoun	85.82	43	PFAKE		11 13 00.0	+14
X51A				LR	LR		
	comp=Z,1μm,22.0s						
R58A	Rapidan	85.84	37	P	P	11 12 46.1	-0.1
	baz=328						
W52A	Murphy	85.84	42	PFAKE		11 13 00.0	+14
W52A				LR	LR		
	comp=Z,1μm,19.0s						
W52A	Murphy	85.84	42	P	P	11 12 46.3	-0.1
	baz=325						
S57A	Dark Hollow, R	85.89	37	PFAKE		11 13 00.0	+14
S57A				LR	LR		
	comp=Z,1μm,19.0s						
S57A	Dark Hollow, R	85.89	37	P	P	11 12 46.4	-0.1
	baz=327						
V53A	Saluda	85.89	41	PFAKE		11 13 00.0	+13
V53A				LR	LR		
	comp=Z,1μm,22.0s						
V53A	Saluda	85.89	41	P	P	11 12 46.2	-0.4
	baz=325						
Q59A	Harwood	85.92	35	P	P	11 12 46.3	-0.3
	baz=329						
Y50A	Piedmont	85.94	44	P	P	11 12 46.4	-0.4
	baz=324						
ITM	Ithomi	85.95	322	PFAKE		11 13 00.0	+13
ITM				LR	LR		
	comp=Z,2μm,21.0s						
ITM	Ithomi	85.95	322	P	P	11 12 45.7	-1.2
P61A	Hammonton	85.97	34	P	P	11 12 46.3	-0.5
	baz=330						
LRAL	Lakeview Retre	85.99	46	eP	P	11 12 45.5	-1.6
LRAL				LR	LR		
	comp=Z,700nm,20.0s						
LRAL	Lakeview Retre	85.99	46	P	P	11 12 46.7	-0.3
	baz=323						
LAST	Lasithi	86.00	318	P	P	11 12 46.2	-1.0
148A	Greensboro	86.01	46	P	P	11 12 46.7	-0.5
	baz=323						
U55A	TA2, Sparta	86.02	40	P	P	11 12 46.9	-0.3
	baz=326						
T56A	Rocky Mt	86.03	39	P	P	11 12 46.9	-0.4
	baz=327						
CAF	Calviac	86.06	338	eP	P	11 12 47.3	0.0
CAF				pmax	pmax		
	comp=Z,224nm,1.6s						
Z49A	Columbiana	86.10	45	P	P	11 12 46.9	-0.8
	baz=324						
W53A	Cullowhee	86.14	42	P	P	11 12 47.8	-0.1
	baz=325,SNR=9.9						
R58B	Mineral	86.17	37	PFAKE		11 13 00.0	+12
R58B				LR	LR		
	comp=Z,1μm,22.0s						
R58B	Mineral	86.17	37	P	P	11 12 47.8	-0.1
	baz=328						
CBN	Corbin Frederi	86.18	36	PFAKE		11 13 00.0	+12
CBN				LR	LR		
	comp=Z,1μm,22.0s						
CBN	Corbin Frederi	86.18	36	P	P	11 12 47.7	-0.2
	baz=328						
V54A	Nebo	86.20	41	P	P	11 12 47.8	-0.4
	baz=326						
X52A	Dahlonega	86.25	43	P	P	11 12 48.2	-0.2
	baz=325						
Y51A	Rockmart	86.26	44	P	P	11 12 47.9	-0.5
	baz=324,SNR=11						
R59A	King George, V	86.29	36	P	P	11 12 48.2	-0.2
	baz=328						
Z50A	Ashland	86.36	45	PFAKE		11 13 00.0	+11
Z50A				LR	LR		
	comp=Z,800nm,21.0s						
Z50A	Ashland	86.36	45	P	P	11 12 48.6	-0.3
	baz=324,SNR=32						
LFF	La Frestale	86.39	339	eP	P	11 12 49.0	+0.2
LFF				pmax	pmax		
	comp=Z,176nm,0.8s						
S58A	Poland Farm, P	86.40	37	PFAKE		11 13 00.0	+11
S58A				LR	LR		
	comp=Z,1μm,19.0s						
S58A	Poland Farm, P	86.40	37	P	P	11 12 48.6	-0.4
	baz=328						
T57A	Hurt	86.40	38	PFAKE		11 13 00.0	+11
T57A				LR	LR		
	comp=Z,1μm,18.0s						
T57A	Hurt	86.40	38	P	P	11 12 48.8	-0.2
	baz=327						
TIP	Timpagrande	86.41	326	PFAKE		11 13 00.0	+11
TIP				LR	LR		
	comp=Z,2μm,19.0s						
TIP	Timpagrande	86.41	326	P	P	11 12 48.2	-1.0
U56A	King	86.44	39	P	P	11 12 48.6	-0.6
	baz=327						
149A	Jones	86.45	46	P	P	11 12 49.3	-0.1
	baz=324,SNR=11						
R60A	Leonardtown, M	86.46	36	P	P	11 12 49.4	+0.2
	baz=329						
V55A	Taylorsville	86.48	40	P	P	11 12 48.8	-0.6
	baz=326						
S59A	Mechanicsville	86.59	36	P	P	11 12 49.4	-0.6
	baz=328						
X53A	Estanollee	86.62	42	P	P	11 12 50.4	+0.3
	baz=325,SNR=7.5						
W54A	Cherokee Point	86.66	41	P	P	11 12 49.8	-0.6
	baz=326						
Z51A	Franklin	86.68	44	P	P	11 12 49.7	-0.8
	baz=324						
T58A	Grand View Acr	86.75	38	P	P	11 12 50.5	-0.2
	baz=328						
Y52A	Lilburn	86.77	43	PFAKE		11 13 00.0	+9.1
Y52A				LR	LR		
	comp=Z,1μm,22.0s						
Y52A	Lilburn	86.77	43	P	P	11 12 50.8	-0.2
	baz=325						
249A	Camden	86.78	46	P	P	11 12 51.6	+0.7
	baz=323,SNR=8.1						
150A	Eclectic	86.83	45	P	P	11 12 50.9	-0.3
	baz=324,SNR=10						
U57A	Blanch	86.83	38	P	P	11 12 51.2	0.0
	baz=327,SNR=6.4						
V56A	Mocksville	86.84	40	PFAKE		11 13 00.0	+8.8
V56A				LR	LR		
	comp=Z,1μm,21.0s						
V56A	Mocksville	86.84	40	P	P	11 12 50.9	-0.3
	baz=327						
S60A	Water View	86.91	36	P	P	11 12 51.7	+0.3
	baz=329						
KMSC	Kings Mountain	87.01	41	eP	P	11 12 51.3	-0.8
	comp=Z,46nm,1.3s						
KMSC				LR	LR		
	comp=Z,1μm,20.0s						
KMSC	Kings Mountain	87.01	41	P	P	11 12 51.6	-0.5
	baz=326						
Y53A	Monroe	87.01	43	P	P	11 12 51.7	-0.4
	baz=325						
X54A	Belton	87.02	42	P	P	11 12 52.1	0.0
	baz=326,SNR=6.3						
V57A	Coltrane Farms	87.10	39	P	P	11 12 52.5	0.0
	baz=327						
TBI	Tubuai	87.13	128	eS	S	11 23 25.9	-3.5
	comp=Z,791nm,29.2s						
TBI	Tubuai	87.13	128	eLR	LR	11 40 34.7	
	comp=Z,3μm,25.5s,baz=317						
TBI	Tubuai	87.13	128	eT	T	12 49 20.4	
	comp=Z,13nm,0.3s						
T59A	Double "B" Far	87.15	37	PFAKE		11 13 00.0	+7.3
T59A				LR	LR		
	comp=Z,1μm,20.0s						
T59A	Double "B" Far	87.15	37	P	P	11 12 52.8	+0.2
	baz=328						
Z52A	Williamson	87.15	44	P	P	11 12 52.6	-0.1
	baz=325						
250A	Grady	87.21	46	eP	P	11 12 52.9	-0.2
250A				LR	LR		
	comp=Z,800nm,21.0s						
250A	Grady	87.21	46	P	P	11 12 53.2	+0.1
	baz=324,SNR=6.0						
U58A	Oxford	87.21	38	P	P	11 12 53.0	0.0
	baz=328,SNR=7.3						
349A	Repton	87.24	47	P	P	11 12 53.3	+0.1
	baz=323						
151A	Opelika	87.24	45	P	P	11 12 52.6	-0.6
	baz=324,SNR=5.4						
T60A	Surry	87.35	36	PFAKE		11 13 10.0	+16
T60A				LR	LR		
	comp=Z,1μm,20.0s						
W56A	Indian Trail	87.36	40	P	P	11 12 53.6	-0.2
	baz=327						
152A	Waverly Hall	87.42	44	eP	P	11 12 53.1	-1.0
	comp=Z,21nm,0.9s						
152A				LR	LR		
	comp=Z,900nm,21.0s						
152A	Waverly Hall	87.42	44	P	P	11 12 53.6	-0.5
	baz=324						
X55A	Gracelyn & Ava	87.43	41	P	P	11 12 54.0	-0.1
	baz=326,SNR=6.9						
GOGA	Godfrey	87.43	43	PFAKE		11 13 10.0	+16
GOGA				LR	LR		
	comp=Z,1μm,22.0s						
GOGA	Godfrey	87.43	43	P	P	11 12 53.8	-0.3
	baz=325						
Y54A	Tignall	87.43	42	P	P	11 12 54.4	+0.3
	baz=326,SNR=17						
BRAL	Brewton	87.45	47	PFAKE		11 13 10.0	+16
BRAL				LR	LR		
	comp=Z,1μm,20.0s						
BRAL	Brewton	87.45	47	P	P	11 12 54.7	+0.5
	baz=323						
V58A	Windy Hill, Pi	87.47	39	P	P	11 12 53.6	-0.6
	baz=327						
Z53A	Monticello	87.49	43	P	P	11 12 54.3	-0.1
	baz=325,SNR=5.6						
251A	Midway	87.55	45	P	P	11 12 54.3	-0.4
	baz=324,SNR=6.6						
CEL	Celeste	87.55	326	PFAKE		11 13 10.0	+15
CEL				LR	LR		
	comp=Z,2μm,20.0s						
U59A	Littleton	87.57	37	eP	P	11 12 54.8	+0.1
	comp=Z,40nm,1.4s						
U59A				LR	LR		
	comp=Z,900nm,20.0s						
U59A	Littleton	87.57	37	P	P	11 12 54.5	-0.2
	baz=328						
W57A	Gilead	87.61	40	eP	P	11 12 53.4	-1.5
	comp=Z,70nm,1.4s						
W57A				LR	LR		
	comp=Z,800nm,20.0s						
W57A	Gilead	87.61	40	P	P	11 12 54.5	-0.4
	baz=327						
350A	Dozier	87.62	46	P	P	11 12 54.9	-0.2
	baz=324						
X56A	White Oak	87.69	41	P	P	11 12 55.2	-0.2
	baz=326						
449A	Pace	87.70	47	P	P	11 12 55.3	-0.2
	baz=323						
U60A	Pendleton	87.74	37	P	P	11 12 55.3	-0.2
	baz=328						
Y55A	Saluda	87.76	42	P	P	11 12 55.9	+0.2
	baz=326,SNR=7.7						
Z54A	Sparta	87.87	43	P	P	11 12 56.4	+0.1
	baz=325,SNR=7.7						
153A	Fort Valley	87.87	44	P	P	11 12 56.0	-0.2
	baz=325						
V59A	Middlesex	87.88	38	P	P	11 12 56.2	+0.1
	baz=328						
252A	Lumpkin	87.96	45	P	P	11 12 56.2	-0.5
	baz=324						
450A	Crestview	87.98	47	P	P	11 12 57.1	+0.4
	baz=324						
W58A	Raeford	88.06	39	P	P	11 12 56.6	-0.4
	baz=327						
X57A	Johnson Farm,	88.14	40	P	P	11 12 57.3	-0.2
	baz=327						
Y56A	Pelion	88.14	41	P	P	11 12 56.9	-0.5
	baz=326						
U61A	Possum Corner	88.16	37	PFAKE		11 13 10.0	+12
U61A				LR	LR		
	comp=Z,1μm,22.0s						
U61A	Possum Corner	88.16	37	P	P	11 12 57.3	-0.2
	baz=329						
253A	Americus	88.21	44	PFAKE		11 13 10.0	+12
253A				LR	LR		
	comp=Z,1μm,21.0s						
253A	Americus	88.21	44	P	P	11 12 57.3	-0.5
	baz=325						
Z55A	Blythe	88.22	42	P	P	11 12 57.9	0.0
	baz=326						
154A	Montrose	88.26	43	PFAKE		11 13 10.0	+12
154A				LR	LR		
	comp=Z,900nm,20.0s						
154A	Montrose	88.26	43	P	P	11 12 57.9	-0.1
	baz=325						
352A	Blakely	88.28	45	PFAKE		11 13 10.0	+12
352A				LR	LR		
	comp=Z,700nm,19.0s						
352A	Blakely	88.28	45	P	P	11 12 57.7	-0.5
	baz=324						
W59A	Clinton	88.29	39	P	P	11 12 58.0	-0.2
	baz=328						
V60A	Jim Taylor Roa	88.30	37	PFAKE		11 13 10.0	+12
V60A				LR	LR		
	comp=Z,900nm,19.0s						
V60A	Jim Taylor Roa	88.30	37	P	P	11 12 58.0	-0.2
	baz=328						
Y57A	Sumter	88.38	40	PFAKE		11 13 10.0	+11
Y57A				LR	LR		
	comp=Z,1μm,19.0s						
Y57A	Sumter	88.38	40	P	P	11 12 57.8	-0.8
	baz=327						
X58A	Rowland	88.41	39	PFAKE		11 13 10.0	+11
X58A				LR	LR		
	comp=Z,700nm,18.0s						
X58A	Rowland	88.41	39	P	P	11 12 58.8	+0.1
	baz=327						
CNNC	Cliffs of the	88.47	38	PFAKE		11 13 10.0	+11
CNNC				LR	LR		
	comp=Z,800nm,18.0s						
CNNC	Cliffs of the	88.47	38	P	P	11 12 58.5	-0.5
	baz=328						
Z56A	Williston	88.50	42	PFAKE		11 13 10.0	+11
Z56A				LR	LR		
	comp=Z,1μm,22.0s						
Z56A	Williston	88.50	42	P	P	11 12 59.2	0.0
	baz=326						
155A	Kite	88.56	43	P	P	11 12 60.0	+0.5
	baz=326,SNR=5.6						
V61A	Roper	88.57	37	PFAKE		11 13 10.0	+11
V61A				LR	LR		
	comp=Z,1μm,20.0s						
V61A	Roper	88.57	37	P	P	11 12 59.1	-0.3
	baz=329						
452A	Marianna	88.66	46	P	P	11 12 59.8	-0.2
	baz=324						
W60A	Pink Hill	88.70	38	P	P	11 13 00.1	-0.1
	baz=328						
254A	Abbeville	88.71	44	P	P	11 13 00.6	+0.4
	baz=325,SNR=5.7						
X59A	McDuffie Farm,	88.72	39	P	P	11 12 59.8	-0.4
	baz=328						
353A	Camilla	88.74	45	P	P	11 13 00.9	+0.5
	baz=325,SNR=7.9						
Y58A	Scranton	88.80	40	PFAKE		11 13 10.0	+9.4
Y58A				LR	LR		
	comp=Z,1μm,21.0s						
Y58A	Scranton	88.80	40	P	P	11 13 00.6	0.0
	baz=327						
Z57A	Bowman	88.83	41	P	P	11 13 00.9	+0.1
	baz=327						
TIGA	Tifton	88.98	44	PFAKE		11 13 10.0	+8.5
TIGA				LR	LR		
	comp=Z,900nm,20.0s						
TIGA	Tifton	88.98	44	P	P	11 13 01.9	+0.4
	baz=325						
X60A	Albert Glenn T	88.99	39	P	P	11 13 01.4	-0.1
	baz=328						
156A	Sylvania	88.99	42	P	P	11 13 01.9	+0.4
	baz=326						
V62A	Hyde County Ai	89.03	37	P	P	11 13 02.3	+0.7
	baz=329						
453A	Whigham	89.09	45	PFAKE		11 13 10.0	+8.0
453A				LR	LR		
	comp=Z,800nm,21.0s						
453A	Whigham	89.09	45	P	P	11 13 02.5	+0.5
	baz=325						
255A	Hazlehurst	89.12	43	PFAKE		11 13 10.0	+7.9
255A				LR	LR		
	comp=Z,900nm,19.0s						
255A	Hazlehurst	89.12	43	P	P	11 13 02.6	+0.4
	baz=326						
CLTB	Caltabellotta	89.17	328	PFAKE		11 13 10.0	+7.6
CLTB				LR	LR		
	comp=Z,3μm,19.0s						
552A	Lynn Haven	89.19	46	P	P	11 13 02.5	+0.1
	baz=324						
157A	Early Branch	89.21	42	P	P	11 13 02.9	+0.4
	baz=326						
Z58A	St. Stephen	89.21	40	P	P	11 13 02.6	+0.1
	baz=327						
NHSC	New Hope	89.23	41	PFAKE		11 13 10.0	+7.4
NHSC				LR	LR		
	comp=Z,1μm,20.0s						
256A	Glennville	89.36	43	P	P	11 13 03.3	0.0
	baz=326						
Y60A	Bolivia	89.37	39	PFAKE		11 13 10.0	+6.8
Y60A				LR	LR		
	comp=Z,1μm,19.0s						
355A	Pearson	89.42	44	P	P	11 13 04.1	+0.6
	baz=326						
Z59A	Georgetown, SC	89.53	40	P	P	11 13 04.5	+0.5
	baz=327						
158A	Hollywood	89.53	41	P	P	11 13 04.8	+0.8
	baz=327						
454A	Quitman	89.55	45	P	P	11 13 04.6	+0.4
	baz=325						
257A	Skidaway Islan	89.78	42	PFAKE		11 13 20.0	+15
257A				LR	LR		
	comp=Z,1μm,19.0s						
257A	Skidaway Islan	89.78	42	P	P	11 13 05.5	+0.3
	baz=326						
356A	Blackshear	89.78	43	P	P	11 13 05.7	+0.4
	baz=326						
455A	Stateville	89.83	44	P	P	11 13 05.5	0.0
	baz=325						
357A	Townsend	90.01	43	P	P	11 13 06.7	+0.4
	baz=326						
554A	Perry	90.04	45	P	P	11 13 06.5	+0.1
	baz=325						
WDD	Wied Dalam	90.19	326	PFAKE		11 13 20.0	+13
WDD				LR	LR		
	comp=Z,2μm,20.0s						
456A	Hilliard	90.33	43	PFAKE		11 13 20.0	+12
456A				LR	LR		
	comp=Z,1μm,20.0s						
456A	Hilliard	90.33	43	P	P	11 13 08.1	+0.3
	baz=326						
555A	McAlpin	90.36	44	PFAKE		11 13 20.0	+12
555A				LR	LR		
	comp=Z,700nm,20.0s						
457A	Yulee	90.64	43	P	P	11 13 09.9	+0.7
	baz=326						
655A	Horseshoe Beac	90.72	45	P	P	11 13 10.9	+1.2
	baz=325						
556A	Lake Butler	90.74	44	P	P	11 13 10.4	+0.7
	baz=326						
LVIG	Laguna Verde	91.02	60	PFAKE		11 13 20.0	+8.8
LVIG				LR	LR		
	comp=Z,400nm,19.0s						
PBRG	Braganca	91.05	344	eP	P	11 13 10.3	-0.8
	comp=Z,28nm,1.5s						
DAMY	Dhamar	91.06	292	eP	P	11 13 10.8	-0.9
DAMY				LR	LR		
	comp=Z,60nm,1.3s						
557A	Orange Park	91.06	44	P	P	11 13 10.4	-0.8
	baz=326						
656A	Willston	91.19	45	PFAKE		11 13 20.0	+8.2
656A				LR	LR		
	comp=Z,800nm,20.0s						
656A	Willston	91.19	45	P	P	11 13 11.9	+0.1
	baz=326						
PGAV	Gavieira, Arco	91.19	345	eP	P	11 13 11.2	-0.6
	comp=Z,49nm,1.8s						
PGAV	Gavieira, Arco	91.19	345	eLR	LR	11 45 32.6	
	comp=Z,897nm,18.0s						
657A	Interlachen	91.34	44	P	P	11 13 13.0	+0.4
	baz=326						
PCAB	Cabril	91.39	344	eP	P	11 13 12.0	-0.6
	comp=Z,40nm,1.5s						
POLO	Lamas de Olo	91.67	344	eP	P	11 13 12.6	-1.4
	comp=Z,22nm,1.2s						
MVO	Moncorvo	91.73	344	eP	P	11 13 12.7	-1.5
	comp=Z,32nm,0.9s						
MVO	Moncorvo	91.73	344	eS	S	11 24 07.1	-5.3
MVO	Moncorvo	91.73	344	eLR	LR	11 46 12.4	
	comp=Z,1μm,22.0s						
658A	Bunnell	91.78	44	PFAKE		11 13 30.0	+15
658A				LR	LR		
	comp=Z,900nm,19.0s						
658A	Bunnell	91.78	44	P	P	11 13 15.0	+0.4
	baz=326						
KEST	Kesra	92.23	330	P	P	11 13 16.4	-0.3
	comp=Z,16nm,1.1s,baz=306,slow=1.0,SNR=8.2						
KEST	Kesra	92.23	330	eP	P	11 13 15.8	-0.9
	comp=Z,46nm,1.4s						
KEST				LR	LR		
	comp=Z,2μm,18.0s						
PVIS	Viseu	92.33	344	eP	P	11 13 15.7	-1.3
	comp=Z,28nm,1.6s						
ESDC	Sonseca Array	92.50	341	P	P	11 13 16.4	-1.3
	comp=Z,4.6nm,1.0s,baz=13,slow=3.6,SNR=16						
ESLA	Sonseca Array	92.50	341	eP	P	11 13 17.1	-0.7
	comp=Z,11nm,1.1s						
ESLA				LR	LR		
	comp=Z,1μm,18.0s						
MTE	Manteigas	92.57	344	eP	P	11 13 17.6	-0.5
	comp=Z,25nm,1.0s						
MTE	Manteigas	92.57	344	eS	S	11 24 11.5	-8.4
MTE	Manteigas	92.57	344	eLR	LR	11 46 28.6	
	comp=Z,2μm,20.0s						
MTE	Manteigas	92.57	344	eP	P	11 13 16.2	-1.9
	comp=Z,15nm,1.1s						
MTE				LR	LR		
	comp=Z,2μm,21.0s						
PAB	San Pablo	92.71	341	eP	P	11 13 15.8	-3.0
	comp=Z,7.1nm,1.0s						
PAB				LR	LR		
	comp=Z,1μm,18.0s						
PAB	San Pablo	92.71	341	eP	P	11 13 15.8	-3.0
PAB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PAB				MLR	MLR		
	comp=Z,1μm,18.0s						
957A	Wimauma	92.74	45	PFAKE		11 13 30.0	+11
957A				LR	LR		
	comp=Z,800nm,20.0s						
DWPF	Disney Wildern	92.77	45	PFAKE		11 13 30.0	+11
DWPF				LR	LR		
	comp=Z,900nm,20.0s						
COI	Coimbra	92.92	344	PFAKE		11 13 30.0	+10
COI				LR	LR		
	comp=Z,1μm,21.0s						
PCAS	Casmilo, Conde	93.09	344	eS	S	11 24 11.1	-13
PCBR	Castelo Branco	93.09	344	eP	P	11 13 19.7	-0.7
PMRV	Marv??o	93.47	343	eP	P	11 13 21.5	-0.7
PMRV	Marv??o	93.47	343	eLR	LR	11 46 45.8	
	comp=Z,2μm,20.0s						
CART	Cartagena	93.74	338	PFAKE		11 13 30.0	+6.6
CART				LR	LR		
	comp=Z,900nm,18.0s						
059A	Moore Haven	93.86	45	PFAKE		11 13 40.0	+16
059A				LR	LR		
	comp=Z,800nm,21.0s						
PMTG	Montargil	93.99	344	eP	P	11 13 23.3	-1.3
PMTG	Montargil	93.99	344	eS	S	11 24 21.0	-11
060A	Indiantown	94.19	44	PFAKE		11 13 40.0	+14
060A				LR	LR		
	comp=Z,800nm,20.0s						
059Z	Ave Maria	94.23	46	P	P	11 13 26.1	+0.2
	baz=326						
ATD	Arta Tunnel	94.30	291	PFAKE		11 13 40.0	+14
ATD				LR	LR		
	comp=Z,800nm,18.0s						
060Z	West Palm Beac	94.62	45	P	P	11 13 27.9	+0.3
	baz=327						
061Z	Ochoppi	94.89	45	PFAKE		11 13 40.0	+11
061Z				LR	LR		
	comp=Z,800nm,21.0s						
PBEJ	Beja	94.92	343	eP	P	11 13 29.5	+0.6
	comp=Z,22nm,2.0s						
PNCL	Nicolau / Gran	94.97	344	eP	P	11 13 27.8	-1.3
PNCL	Nicolau / Gran	94.97	344	eS	S	11 24 25.1	-16

MESJ	**Messejana**	**95.17 344**	*e*P	**P**	**11 13 29.4**	**-0.7**
MESJ			AMb	AMB	11 13 30.4	
	comp=Z,31nm,1.2s					
MESJ	**Messejana**	**95.17 344**	*e*P	**P**	**11 13 29.4**	**-0.7**
	comp=Z,31nm,1.4s					
MESJ	**Messejana**	**95.17 344**	*e*P	**P**	**11 13 29.3**	**-0.7**
PCVE	**Castro Verde**	**95.34 343**	*e*P	**P**	**11 13 30.2**	**-0.6**
PVAQ	**Vaqueiros**	**95.49 343**	*e*S	S	11 24 26.0	-19
PVAQ	**Vaqueiros**	**95.49 343**	*e*LR	LR	11 47 18.1	
	comp=Z,917nm,20.0s					
PVAQ	**Vaqueiros**	**95.49 343**	PFAKE		11 13 40.0	+8.5
PVAQ			LR	LR		
	comp=Z,1μm,18.0s					
MORF	**Marmelete**	**95.77 344**	*e*P	**P**	**11 13 32.3**	**-0.5**
MORF			AMb	AMB	11 13 34.9	
	comp=Z,34nm,1.2s					
MORF	**Marmelete**	**95.77 344**	*e*P	**P**	**11 13 32.4**	**-0.5**
MORF	**Marmelete**	**95.77 344**	*e*S	**P**	**11 13 32.3**	**-0.5**
PFVI	**Vila Bisbo**	**95.98 344**	*e*P	**P**	**11 13 33.3**	**-0.4**
PFVI	**Vila Bisbo**	**95.98 344**	*e*S	**S**	**11 24 50.2**	**+0.5**
PFVI	**Vila Bisbo**	**95.98 344**	PFAKE		11 13 40.0	+6.3
PFVI			LR	LR		
	comp=Z,2μm,19.0s					
BBSR	**BB Station**	**96.20 30**	PFAKE		11 13 50.0	+15
BBSR			LR	LR		
	comp=Z,900nm,20.0s					
CCIG	**Comitan**	**96.26 60**	PFAKE		11 13 50.0	+14
CCIG			LR	LR		
	comp=Z,900nm,22.0s					
FURI	**Furi**	**98.99 292**	PFAKE		11 14 00.0	+12
FURI			LR	LR		
	comp=Z,2μm,20.0s					
TGUH	**Tegucigalpa,Un**	**100.92 57**	PFAKE		11 14 10.0	+14
TGUH			LR	LR		
	comp=Z,400nm,20.0s					
ESTN	**Estel**	**102.21 57**	PFAKE		11 14 10.0	+7.9
ESTN			LR	LR		
	comp=Z,400nm,22.0s					
GTBY	**Guantanamo Bay**	**102.75 44**	PFAKE		11 14 20.0	+16
GTBY			LR	LR		
	comp=Z,600nm,21.0s					
ESPN	**Las Esperanzas**	**104.14 56**	PFAKE		11 14 20.0	+9.4
ESPN			LR	LR		
	comp=Z,200nm,21.0s					
TAM	**Tamanrasset**	**105.32 327**	PFAKE		11 18 40.0	+10
TAM			LR	LR		
	comp=Z,700nm,18.0s					
SDDR	**Presa de Saban**	**105.39 41**	PFAKE		11 18 40.0	+10
SDDR			LR	LR		
	comp=Z,600nm,20.0s					
KMBO	**Kilima Mbogo**	**107.35 287**	PFAKE		11 18 50.0	+16
KMBO			LR	LR		
	comp=Z,900nm,18.0s					
NAI	**Nairobi**	**107.76 287**	PFAKE		11 18 50.0	+16
NAI			LR	LR		
	comp=Z,700nm,20.0s					
SJG	**San Juan**	**108.45 37**	PFAKE		11 18 50.0	+15
SJG			LR	LR		
	comp=Z,600nm,20.0s					
ICMP	**Isla Caja de M**	**108.49 38**	PFAKE		11 18 50.0	+15
ICMP			LR	LR		
	comp=Z,600nm,21.0s					
SMRT	**St. Maarten**	**109.78 35**	PFAKE		11 18 50.0	+12
SMRT			LR	LR		
	comp=Z,500nm,20.0s					
SKI	**Saint Kitts**	**110.56 35**	PFAKE		11 18 50.0	+11
SKI			LR	LR		
	comp=Z,1μm,21.0s					
SDV	**Santo Domingo**	**114.38 46**	PFAKE		11 19 00.0	+13
SDV			LR	LR		
	comp=Z,600nm,21.0s					
TOC1	**Torodi Ar. Sit**	**115.54 327**	PFAKE		11 19 00.0	+11
TOC1			LR	LR		
	comp=Z,1μm,21.0s					
TOC2	**Torodi Ar. Sit**	**115.54 327**	PFAKE		11 19 00.0	+11
TOC2			LR	LR		
	comp=Z,1μm,21.0s					
TOB2	**Torodi Ar. Sit**	**115.55 327**	PFAKE		11 19 00.0	+11
TOB2			LR	LR		
	comp=Z,8μm,18.0s					
TOC7	**Torodi Ar. Sit**	**115.55 327**	PFAKE		11 19 00.0	+11
TOC7			LR	LR		
	comp=Z,1μm,21.0s					
TOA1	**Torodi Ar. Sit**	**115.56 327**	*e*PKPdf	**PKiKP**	**11 18 47.7**	**-1.3**
TOA1			LR	LR		
	comp=Z,900nm,20.0s					
TOA2	**Torodi Ar. Sit**	**115.56 327**	PFAKE		11 19 00.0	+11
TOA2			LR	LR		
	comp=Z,1μm,21.0s					
TOA0	**Torodi Ar. Sit**	**115.56 327**	PFAKE		11 19 00.0	+11
TOA0			LR	LR		
	comp=Z,1μm,21.0s					
TOB5	**Torodi Ar. Sit**	**115.56 327**	PFAKE		11 19 00.0	+11
TOB5			LR	LR		
	comp=Z,1μm,21.0s					
TOC3	**Torodi Ar. Sit**	**115.56 327**	PFAKE		11 19 00.0	+11
TOC3			LR	LR		
	comp=Z,1μm,21.0s					
TORD	**Torodi Ar. Bea**	**115.56 327**	PKP	**PKiKP**	**11 18 47.7**	**-1.3**
	comp=Z,3.2nm,1.0s,baz=6.7,slow=2.7,SNR=9.0					
TORD			PKKP	**PKKPdf**	**11 29 38.3**	**-5.5**
	comp=Z,2.9nm,1.1s,baz=189,slow=5.9,SNR=5.6					
TOA3	**Torodi Ar. Sit**	**115.57 327**	PFAKE		11 19 00.0	+11
TOA3			LR	LR		
	comp=Z,900nm,20.0s					
TOB3	**Torodi Ar. Sit**	**115.57 327**	PFAKE		11 19 00.0	+11
TOB3			LR	LR		
	comp=Z,1μm,21.0s					
TOB4	**Torodi Ar. Sit**	**115.57 327**	PFAKE		11 19 00.0	+11
TOB4			LR	LR		
	comp=Z,900nm,20.0s					
TOC4	**Torodi Ar. Sit**	**115.58 327**	PFAKE		11 19 00.0	+11
TOC4			LR	LR		
	comp=Z,1μm,21.0s					
TOC5	**Torodi Ar. Sit**	**115.59 327**	PFAKE		11 19 00.0	+11
TOC5			LR	LR		
	comp=Z,1μm,21.0s					
SACV	**Santiago Islan**	**119.85 354**	PFAKE		11 19 10.0	+13
SACV			LR	LR		
	comp=Z,500nm,21.0s					
VNDA	**Vanda**	**122.70 177**	PKP	**PKPdf**	**11 19 00.9**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=306,slow=4.8,SNR=11					
VNDA	**Vanda**	**122.70 177**	*e*PKPdf	**PKiKP**	**11 19 01.9**	**+0.9**
VNDA	**Vanda**	**122.70 177**	*e*PKIKP	**PKiKP**	**11 19 01.9**	**+0.9**
SBA	**Scott Base**	**123.23 176**	*e*PKPdf	**PKiKP**	**11 19 03.0**	**+1.0**
SBA	**Scott Base**	**123.23 176**	*e*PKIKP	**PKiKP**	**11 19 03.0**	**+1.0**
DBIC	**Dimbokro**	**123.94 331**	PKP	**PKPdf**	**11 19 04.7**	**-0.5**
	comp=Z,14nm,1.1s,baz=211,slow=3.6,SNR=5.4					
DBIC	**Dimbokro**	**123.94 331**	*e*PKPdf	**PKPdf**	**11 19 05.0**	**-0.1**
DBIC	**Dimbokro**	**123.94 331**	*e*PKIKP	**PKPdf**	**11 19 05.1**	**-0.1**
TIC	**Toumodi**	**124.02 331**	*e*PKP1	**PKPdf**	**11 19 04.1**	**-1.2**
KIC	**Kosan Boka**	**124.19 330**	*e*PKP1	**PKPdf**	**11 19 04.8**	**-0.9**
	comp=Z,84nm,1.4s					
LIC	**Lamto**	**124.42 331**	*e*PKP1	**PKPdf**	**11 19 05.4**	**-0.7**
	comp=Z,49nm,1.2s					
PTGA	**Pitinga**	**127.91 41**	*e*PKPdf	**PKPdf**	**11 19 12.6**	**-0.1**
PTGA			LR	LR		
	comp=Z,500nm,19.0s					
MAW	**Mawson**	**130.18 210**	PKP	**PKiKP**	**11 19 16.5**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=61,slow=5.6,SNR=7.2					
MAW	**Mawson**	**130.18 210**	*e*PKPdf	**PKPdf**	**11 19 15.5**	**+0.2**
MAW	**Mawson**	**130.18 210**	*e*PKIKP	**PKPdf**	**11 19 15.5**	**+0.2**
BOSA	**Boshof**	**134.43 272**	PKP	**PKiKP**	**11 19 25.7**	**-0.4**
	comp=Z,4.6nm,0.8s,baz=97,slow=1.3,SNR=3.9					
QSPA	**South Pole Qui**	**135.01 180**	*e*PKPdf	**PKPdf**	**11 19 25.0**	**+0.5**
LPAZ	**La Paz**	**136.34 61**	PKP	**PKPdf**	**11 19 30.1**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=344,slow=3.2,SNR=8.0					
LPAZ	**La Paz**	**136.34 61**	*e*PKPdf	**PKPdf**	**11 19 28.0**	**-1.2**
LPAZ	**La Paz**	**136.34 61**	*e*PKIKP	**PKPdf**	**11 19 28.0**	**-1.2**
MNMC	**Minye Minye**	**137.53 66**	*e*PKPdf	**PKPdf**	**11 19 26.8**	**-4.2**
SYO	**Syowa Base**	**138.88 211**	*e*P	PKPdf	11 19 21.0	-11
SYO	**Syowa Base**	**138.88 211**	*e*P	**PKPdf**	**11 19 26.0**	**-5.5**
RCBR	**Riachuelo**	**140.25 11**	PFAKE		11 19 50.0	+12
RCBR			LR	LR		
	comp=Z,17μm,18.0s					
LVC	**Limon Verde**	**140.46 69**	PFAKE		11 19 50.0	+11
LVC			LR	LR		
	comp=Z,1μm,22.0s					
ASCN	**Ascension**	**140.70 337**	PFAKE		11 19 50.0	+11
ASCN			LR	LR		
	comp=Z,43μm,22.0s					
BDFB	**Brasilia**	**146.40 35**	PKPbc	**PKPbc**	**11 19 47.4**	**-0.4**
	comp=Z,30nm,1.1s,baz=4.8,slow=3.3,SNR=19					
BDFB	**Brasilia**	**146.40 35**	*e*PKPdf	**PKPbc**	**11 19 47.4**	**-0.4**
BDFB			*e*PKPdf	**PKPbc**	**11 19 47.5**	**-0.4**
PLCA	**Paso Flores**	**149.52 96**	PKPbc	**PKPbc**	**11 19 55.8**	**+0.2**
	comp=Z,11nm,0.8s,baz=260,slow=1.7,SNR=14					
PLCA	**Paso Flores**	**149.52 96**	*e*PKP2	**PKPbc**	**11 19 55.9**	**+0.3**
CPUP	**Villa Florida**	**150.48 60**	PKPbc	**PKPbc**	**11 19 58.1**	**-0.1**
	comp=Z,14nm,0.9s,baz=347,slow=3.1,SNR=14					
SNAA	**Sanae**	**150.72 197**	PKPbc	**PKPbc**	**11 19 57.5**	**0.0**
SNAA	**Sanae**	**150.72 197**	*e*PKPbc	**PKPbc**	**11 19 57.3**	**-0.2**
SNAA	**Sanae**	**150.72 197**	*e*PKIKP	**PKPbc**	**11 19 57.3**	**-0.2**
GO09	**Cerro Castillo**	**150.87 118**	*e*PKPbc	**PKPbc**	**11 19 58.6**	**+0.2**
GO09			*e*PKPab	**sPKPdf**	**11 20 07.1**	**+0.7**
VNA2	**Neumayer--Watz**	**152.20 195**	PKPbc	**PKiKP**	**11 20 01.2**	**+0.1**
VNA3	**Neumayer Olymp**	**152.32 193**	PKPbc	**PKPbc**	**11 20 01.1**	**0.0**
VNA1	**Neumayer--Stat**	**152.59 195**	PKPbc	**PKiKP**	**11 20 01.9**	**0.0**
EFI	**East Falkland**	**159.78 119**	PFAKE		11 20 20.0	+15
EFI			LR	LR		
	comp=Z,2μm,19.0s					

BJI ***04*** *11:01:53.4±0.0, 45°.22N×151°.41E, h35km, mb5.6/49, mB5.5/35, Ms5.6/28, Ms7 5.4/27*
JMA ***04*** *11:01:56.3±0.7, 45°.54N×151°.12E, h30km, M5.7*
SKHL ***04*** *11:01:56.3±0.4, 45°.03N×151°.46E, h52km±7km, mb5.8/12*
ISCJB ***04*** *11:01:57.3±0.4, 45°.29N±0°.03×151°.09E±0°.02, h48km±3km, mb5.3/300, Error ellipse: s-maj=4.9km s-min=2.2km az=155.7*
NEIC ***04*** *11:01:57.5±1.8, 45°.28N×151°.07E, h35km±1km, mb5.3/240, Error ellipse: s-maj=14.1km s-min=10.5km az=136.0*
MOS ***04*** *11:01:58.2±0.8, 45°.38N×151°.01E, h53km, mb5.7/67, Error ellipse: s-maj=6.7km s-min=4.8km az=90.4*
IDC ***04*** *11:02:00.7±2.3, 45°.42N×150°.97E, h57km±19km, mb4.8/31, mb1 5.0/39, mb1mx4.9/47, mbtmp5.1/39, ML4.5/7, Error ellipse: s-maj=13.8km s-min=9.5km az=131.0*
GCMT ***04*** *11:02:01.5±0.3, 45°.38N±0°.02×151°.36E±0°.02, h30km±1km, MW5.3/94, Moment Tensor Solution. s51,c66; s94,c166; Duration: 1s2 Moment tensor: Scale 10^17^Nm; M_{rr}0.89±.06; $M_{\theta\theta}$-0.38±.03; $M_{\phi\phi}$-0.50±.04; $M_{r\theta}$0.36±.05; $M_{\theta\phi}$-0.70±.02; $M_{\phi r}$0.76±.05; Best double couple: $M_0$1.32600×10^17^ NP1:ϕ_s30.00000°, δ65.00000°, λ77.00000°. NP2:ϕ_s239.00000°, δ28.00000°, λ116.00000°. Principal axes: T 1.2210, Plg67.0000°, Azm276.0000°; N 0.2100, Plg12.0000°, Azm35.0000°; P -1.4310, Plg19.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 11:01:57.6±0.3, 45°.16N±0°.05×151°.12E±0°.04, h40km±3km, n1115, σ1s13/1143, mb5.4/302, 17C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.30**	**273**	*e*PN	**Pn**	**11 02 34.2**	**+1.2**
KUR				*i* S	**Sn**	**11 03 02.0**	**+2.0**
KUR				pmax	pmax		
	comp=Z,3μm,0.5s						
KUR				smax	smax		
	comp=N,11μm,0.7s						
KUR				smax	smax		
	comp=E,8μm,0.4s						
KUR	**Kuril'sk**	**2.30**	**273**	*i* P	**Pn**	**11 02 34.2**	**+1.2**
KUR				AMB	AMB	11 02 34.7	
	comp=E,270nm,0.3s						
KUR				AMB	AMB	11 02 34.7	
	comp=E,3μm,0.3s						
KUR				*i* S	**Sn**	**11 03 02.0**	**+2.0**
KUR				A	A	11 03 06.1	
	comp=E,12μm,0.7s						
KUR				A	A	11 03 06.1	
	comp=E,4μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**3.92**	**255**	*e*P	**Pn**	**11 02 57.3**	**+2.1**
YUK				AMB	AMB	11 03 01.4	
	comp=E,2μm,0.6s						
YUK				*e*S	**Sn**	**11 03 42.8**	**+2.8**
YUK				A	A	11 03 55.7	
	comp=E,4μm,0.7s						
YUK				A	A	11 03 55.7	
	comp=E,1μm,0.7s						
LAGR	**Lagunnoye**	**3.96**	**256**	*e*PN	**Pn**	**11 02 57.7**	**+1.8**
LAGR				*i* S	**Sn**	**11 03 43.6**	**+2.5**
LAGR				pmax	pmax		
	comp=E,6μm,0.6s						
LAGR				pmax	pmax		
	comp=Z,5μm,0.6s						
LAGR				pmax	pmax		
	comp=N,3μm,0.4s						
LAGR				smax	smax		
	comp=E,12μm,0.5s						
LAGR				smax	smax		
	comp=N,12μm,0.7s						
LAGR	**Lagunnoye**	**3.96**	**256**	*e*P	**Pn**	**11 02 57.7**	**+1.8**
LAGR				AMB	AMB	11 03 05.1	
	comp=N,3μm,0.6s						
LAGR				*i* S	**Sn**	**11 03 43.6**	**+2.5**
LAGR				A	A	11 03 56.8	
	comp=N,12μm,0.6s						
LAGR				A	A	11 03 56.8	
	comp=N,12μm,0.6s						
GRPR	**Tuman**	**3.99**	**255**	*e*PN	**Pn**	**11 02 58.4**	**+2.1**
GRPR				*i* S	**Sn**	**11 03 44.8**	**+3.0**
GRPR				pmax	pmax		
	comp=E,739nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,3μm,0.4s						
GRPR				pmax	pmax		
	comp=N,644nm,0.2s						
GRPR				smax	smax		
	comp=E,5μm,0.6s						
GRPR				smax	smax		
	comp=N,4μm,0.4s						
GRPR	**Tuman**	**3.99**	**255**	*e*P	**Pn**	**11 02 58.4**	**+2.1**
GRPR				AMB	AMB	11 03 00.1	
	comp=N,3μm,0.4s						
GRPR				*i* S	**Sn**	**11 03 44.8**	**+3.0**
GRPR				A	A	11 03 55.1	
	comp=N,4μm,0.6s						
GRPR				A	A	11 03 55.1	
	comp=N,5μm,0.6s						
GLVR	**Golovnino**	**4.25**	**252**	*e*PN	**Pn**	**11 03 01.8**	**+2.0**
GLVR				*e*S	**Sn**	**11 03 50.9**	**+2.7**
GLVR				pmax	pmax		
	comp=E,2μm,0.4s						
GLVR				pmax	pmax		
	comp=Z,4μm,0.4s						
GLVR				pmax	pmax		
	comp=N,728nm,0.3s						
GLVR				smax	smax		
	comp=N,3μm,0.5s						
GLVR				smax	smax		
	comp=E,1μm,0.3s						
GLVR	**Golovnino**	**4.25**	**252**	*e*P	**Pn**	**11 03 01.8**	**+2.0**
GLVR				AMB	AMB	11 03 03.1	
	comp=E,3μm,0.4s						
GLVR				*e*S	**Sn**	**11 03 50.9**	**+2.7**
GLVR				A	A	11 03 57.9	
	comp=E,3μm,0.5s						
GLVR				A	A	11 03 57.9	
	comp=E,1μm,0.5s						
NEM2	**Nemuro 2**	**4.26**	**247**	P	**Pn**	**11 03 00.6**	**+0.7**
NEM2				*e*S	**Sn**	**11 03 47.7**	**-0.6**
JRA	**Rausu**	**4.46**	**256**	P	**Pn**	**11 03 04.9**	**+2.3**
JRA				*e*S	**Sn**	**11 03 56.2**	**+3.0**
JNK	**Nakash**	**4.85**	**253**	P	**Pn**	**11 03 09.7**	**+1.7**
JNK				*e*S	**Sn**	**11 04 04.8**	**+1.9**
JAK	**Akkeshi**	**5.11**	**247**	*e*S	**Sn**	**11 04 08.7**	**-0.5**
JTKR	**Abashiri--Toko**	**5.29**	**260**	P	**Pn**	**11 03 16.3**	**+2.3**
JAR	**Ashorobuto**	**5.60**	**253**	P	**Pn**	**11 03 20.7**	**+2.4**
JAR				*e*S	**Sn**	**11 04 25.5**	**+4.1**
JOB	**Onbets**	**5.71**	**249**	*e*S	**Sn**	**11 04 25.7**	**+1.5**
YSS	**Yuzh-Sakhalins**	**6.09**	**290**	*e*Pn	**Pn**	**11 03 26.8**	**+1.7**
YSS	**Yuzh-Sakhalins**	**6.09**	**290**	*e*PN	**Pn**	**11 03 29.3**	**+4.2**
YSS				pmax	pmax		
	comp=Z,290nm,0.7s						
YSS	**Yuzh-Sakhalins**	**6.09**	**290**	*e*P	**Pn**	**11 03 29.2**	**+4.2**
YSS				AMB	AMB	11 03 31.7	
	comp=Z,290nm,0.7s						
JCH	**Churui**	**6.15**	**248**	P	**Pn**	**11 03 27.6**	**+1.7**
JCH				*e*S	**Sn**	**11 04 34.9**	**-0.1**
ASAJ	**Asahikawa**	**6.17**	**263**	P	**Pn**	**11 03 29.0**	**+2.9**
	comp=Z,42nm,0.3s,baz=20,slow=15,SNR=4.9						
ASAJ	**Asahikawa**	**6.17**	**263**	PN	**Pn**	**11 03 29.0**	**+2.9**
SKR	**Severo-Kuril's**	**6.46**	**30**	*e*PN	Pn	11 03 47.6	+17
SKR				*e*S	**Sn**	**11 04 43.0**	**+0.4**
SKR				smax	smax		
	comp=N,3μm,0.7s						
SKR				smax	smax		
	comp=E,2μm,0.9s						
ERM	**Erimo**	**6.58**	**244**	*e*Pn	**Pn**	**11 03 28.7**	**-3.1**
ERM	**Erimo**	**6.58**	**244**	*e*PN	**Pn**	**11 03 28.7**	**-3.1**
UGL	**Uglegorsk**	**7.31**	**306**	*e*P	**Pn**	**11 03 44.5**	**+2.7**
UGL				AMB	AMB	11 03 50.0	
	comp=E,150nm,0.6s						
PAU	**Pauzhetka**	**7.36**	**29**	*e*P	**Pn**	**11 03 42.1**	**-0.4**
JNB	**Noboribetsu**	**7.77**	**253**	*e*S	**Sn**	**11 05 12.7**	**-2.0**
JKB	**Kayabe**	**8.03**	**249**	*e*S	**Sn**	**11 05 15.3**	**-5.7**
JANG	**Nango**	**8.53**	**239**	*e*S	**Sn**	**11 05 26.0**	**-7.4**
JTM	**Tenmabayashi**	**8.56**	**243**	*e*S	**Sn**	**11 05 29.6**	**-4.7**
JTH	**Tanohata**	**8.59**	**236**	*e*S	**Sn**	**11 05 28.4**	**-6.6**
PEA0B	**Petropavlovsk-**	**9.04**	**26**	*e*Pn	**Pn**	**11 04 02.4**	**-3.1**
PETK	**Petropavlovsk-**	**9.04**	**26**	P	**Pn**	**11 04 06.4**	**+0.9**
	comp=E,4.7nm,0.3s,baz=192,slow=12,SNR=4.0						
PEA1	**Petropavlovsk-**	**9.05**	**26**	*e*Pn	**Pn**	**11 04 06.4**	**+0.8**
PEA1				*e*Sn	Sn	11 05 57.9	+12
OFUJ	**Ofunato**	**9.28**	**232**	*e*S	**Sn**	**11 05 45.0**	**-6.9**
PET	**Petropavlovsk**	**9.29**	**29**	*e*Pn	Pn	11 04 03.7	-5.1
PET				*e*Sn	**Sn**	**11 05 52.1**	**+0.2**
PET	**Petropavlovsk**	**9.29**	**29**	*e*PN	Pn	11 04 03.7	-5.1
PET	**Petropavlovsk**	**9.29**	**29**	*e*P	**Pn**	**11 04 09.3**	**+0.5**
OKH	**Okha**	**9.94**	**331**	*e*P	Pn	11 04 22.0	+4.2
OKH				AMB	AMB	11 04 23.1	
	comp=E,78nm,0.8s						
NKL	**Nikolayevsk**	**10.51**	**323**	*e*P	Pn	11 04 30.0	+4.5
NKL				AMB	AMB	11 04 37.0	
	comp=E,107nm,1.0s						
JFK	**Kawauchi**	**10.95**	**228**	*e*S	**Sn**	**11 06 25.9**	**-7.0**
GRNR	**Gornyy**	**11.33**	**305**	*e*P	**Pn**	**11 04 40.0**	**+3.2**
GRNR				AMB	AMB	11 04 49.5	
	comp=E,104nm,1.0s						
MJAR	**Matsushiro Arr**	**13.01**	**233**	P	**Pn**	**11 04 58.8**	**-1.1**
	comp=E,0.5nm,0.3s,baz=24,slow=13,SNR=4.2						
MJB9	**Matsu-Tunnel**	**13.01**	**233**	*e*Pn	**Pn**	**11 04 60.0**	**+0.1**
MAJO	**Matsushiro**	**13.01**	**233**	*e*Pn	**Pn**	**11 04 60.0**	**+0.1**
MAJO	**Matsushiro**	**13.01**	**233**	*e*PN	**Pn**	**11 05 00.0**	**+0.1**
MAT	**Matsushiro**	**13.01**	**233**	P	**Pn**	**11 05 00.3**	**+0.4**
USA0B	**Ussuriysk Arra**	**13.65**	**273**	*e*Pn	**Pn**	**11 05 09.4**	**+0.9**
USRK	**Ussuriysk Ar.**	**13.65**	**273**	P	**Pn**	**11 05 09.5**	**+1.1**
	comp=E,3.4nm,0.3s,baz=83,slow=12,SNR=9.3						
KLR	**Kul'dur**	**13.78**	**294**	P	**Pn**	**11 05 15.0**	**-3.0**
	comp=E,0.6nm,0.3s,baz=101,slow=16,SNR=4.8						
KLR	**Kul'dur**	**13.78**	**294**	*e*P	**P**	**11 05 15.0**	**-3.0**
EKMR	**Ekimchan**	**14.26**	**310**	*e*P	**Pn**	**11 05 18.0**	**+1.2**
EKMR				AMB	AMB	11 05 24.0	
	comp=E,105nm,1.0s						
MA2	**Magadan**	**14.44**	**359**	P	**Pn**	**11 05 17.8**	**-1.3**
	comp=E,8.6nm,0.3s,baz=189,slow=11,SNR=11						
MA2	**Magadan**	**14.44**	**359**	*e*Pn	**Pn**	**11 05 17.6**	**-1.5**
MA2	**Magadan**	**14.44**	**359**	*e*P	**Pn**	**11 05 17.6**	**-1.5**
INU	**Inuyama**	**14.54**	**232**	*e*Pn	**Pn**	**11 05 20.8**	**+0.2**
JHJ2	**Mitsune**	**14.87**	**220**	*e*Pn	**Pn**	**11 05 26.6**	**+1.5**
JHJ	**Hachijo jima 2**	**14.88**	**220**	P	**P**	**11 05 29.4**	**-0.9**
	comp=E,7.0nm,0.3s,baz=202,slow=5.4,SNR=2.8						
JHJ				S	**Sn**	**11 08 02.4**	**-6.2**
	comp=E,19nm,0.3s,baz=72,slow=20,SNR=4.8						
MDJ	**Mudanjiang**	**15.27**	**276**	P	**Pn**	**11 05 31.9**	**+1.7**
MDJ				pmax	pmax		
	comp=E,200nm,1.1s						
MDJ				pmax	pmax		
	comp=E,1μm,10.0s						
MDJ	**Mudanjiang**	**15.27**	**276**	*e*Pn	**Pn**	**11 05 30.2**	**0.0**
	comp=E,179nm,1.0s						
SMY	**Shemya**	**16.84**	**55**	*e*Pn	**P**	**11 05 52.4**	**+0.5**
	comp=E,49nm,0.7s						
SMY	**Shemya**	**16.84**	**55**	*e*P	**P**	**11 05 52.4**	**+0.5**
SMY				pmax	pmax		
	comp=Z,49nm,0.7s						
BMKR	**Bomnak**	**17.16**	**312**	*e*P	**Pn**	**11 05 54.0**	**-0.2**
BMKR				AMB	AMB	11 06 00.5	
	comp=Z,100nm,1.0s						
ZEA	**Zeya**	**17.66**	**308**	*e*P	**P**	**11 06 00.5**	**-0.5**
ZEA				AMB	AMB	11 06 04.0	
	comp=Z,174nm,1.0s						
SEY	**Seymchan**	**17.82**	**2**	P	**Pn**	**11 06 01.2**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=172,slow=15,SNR=2.1						
KROS	**Kirovskiy**	**18.06**	**310**	*e*P	**P**	**11 06 06.0**	**+0.6**
KROS				AMB	AMB	11 06 09.0	
	comp=Z,195nm,1.0s						
CN2	**Changchun**	**18.35**	**275**	*e*P	**P**	**11 06 07.6**	**-1.0**
CN2				*e*S	**Sn**	**11 09 33.9**	**+1.2**
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
CN2				LR	LR		
	comp=Z,3μm,15.0s						
KSRS	**Korea Array**	**19.01**	**254**	P	**Pn**	**11 06 17.0**	**+0.2**
	comp=Z,2.1nm,0.3s,baz=59,slow=11,SNR=8.7						
KSRS				PcP	**PcP**	**11 10 41.4**	**+1.6**
	baz=5.1,slow=0.4,SNR=4.4						
KS15	**Wonju Array Si**	**19.04**	**254**	*e*P	**P**	**11 06 15.7**	**-0.5**
	comp=Z,65nm,1.0s						
KS15				*e*S	**Sn**	**11 09 46.8**	**-2.6**
JNU	**Nakatsue**	**19.71**	**239**	P	**Pn**	**11 06 25.6**	**+0.3**
	comp=Z,3.1nm,0.3s,baz=256,slow=4.2,SNR=6.7						
JNU	**Nakatsue**	**19.71**	**239**	*e*P	**P**	**11 06 24.5**	**+0.8**
	comp=Z,65nm,1.0s						
JNU				*e*S	**Sn**	**11 10 06.6**	**+0.8**
YAK	**Yakutsk**	**20.98**	**331**	*e*P	**P**	**11 06 34.6**	**-2.4**
	comp=Z,162nm,0.8s						
YAK				*e*S	**S**	**11 10 30.8**	**+2.5**
YAK	**Yakutsk**	**20.98**	**331**	*e*P	Pn	11 06 40.4	+0.6
YAK				*e*		11 07 01.2	

comp=Z,490nm,5.7s
HHC LR LR
comp=Z,6µm,16.0s
HHC LR LR
comp=Z,13µm,15.5s
HHC LR LR
comp=Z,20µm,15.7s
H11S1 WAKE ISLAND Hy 29.58 149 T T 11 39 54.1
baz=338,slow=76
H11S3 WAKE ISLAND Hy 29.59 149 T T 11 40 00.9
baz=338,slow=76
H11S2 WAKE ISLAND Hy 29.60 149 T T 11 39 54.9
baz=338,slow=76
SONA0 Songino Array 30.58 291 *e*P **P 11 08 07.6 +0.1**
SONM Songino Array 30.58 291 P **P 11 08 07.6 +0.1**
comp=Z,42nm,1.2s,baz=85,slow=7.3,SNR=6.2
SSLB Suanglung 32.46 239 *e*P **P 11 08 25.6 +1.5**
comp=Z,12nm,0.9s
YULB Yu-li 32.55 238 *e*P **P 11 08 24.9 0.0**
comp=Z,22nm,1.1s
RDOG Red Dog Mine 32.89 30 *e*P **P 11 08 26.2 -1.2**
comp=Z,16nm,0.9s
TPUB Ta-pu 33.02 239 *e*P **P 11 08 30.1 +1.1**
comp=Z,73nm,1.0s
QZH Quanzhou 33.08 243⇑ *i*P **P 11 08 31.1 +1.6**
QZH *e*S **S 11 13 46.5 +0.8**
QZH pmax pmax
comp=Z,520nm,2.5s
TWG Pinlang 33.11 238 *e*P **P 11 08 30.4 +0.6**
comp=Z,143nm,0.7s
KNMB Chin-men Tao 33.55 243 *e*P **P 11 08 35.7 +2.1**
comp=Z,84nm,1.0s
XAN Xi'an 34.00 266 *e*P **P 11 08 39.0 +1.4**
comp=Z,60nm,1.1s
XAN Xi'an 34.00 266 *e*P **P 11 08 39.0 +1.4**
XAN pmax pmax
comp=Z,60nm,1.1s
SVW2 Sparrevohn 34.60 43 *e*P **P 11 08 43.3 +0.8**
comp=Z,9.5nm,0.8s
ENH Enshi 35.71 260 *e*P **P 11 08 52.4 +0.1**
comp=Z,68nm,1.0s
OHAK Old Harbor 35.86 50 *e*P **P 11 08 53.5 +0.3**
comp=Z,54nm,1.2s
RSO Redoubt South 35.98 44 *e*P **P 11 08 55.3 +0.8**
KDAK Kodiak Island 36.19 49 *e*P **P 11 08 55.9 -0.1**
comp=Z,56nm,1.0s
KDAK Kodiak Island 36.19 49 *e*P **P 11 08 55.9 -0.1**
KDAK pmax pmax
comp=Z,56nm,1.0s
CAST Castle Rocks 36.35 39 *e*P **P 11 08 58.0 +0.7**
comp=Z,26nm,0.9s
LZH Lanzhou 36.56 273⇑ P **P 11 09 00.8 +1.1**
LZH pP pP 11 09 11.0 +1.0
LZH sP sP 11 09 15.8 +1.6
LZH PP **PnPn 11 10 20.6 -2.5**
LZH pmax pmax
comp=Z,280nm,1.3s
LZH pmax pmax
comp=Z,610nm,6.5s
LZH LR LR
comp=Z,3µm,12.5s
LZH LR LR
comp=Z,3µm,13.6s
LZH LR LR
comp=Z,3µm,16.3s
HOM Homer 36.56 46 *e*P **P 11 08 59.9 +0.7**
comp=Z,63nm,0.9s
CNPM China Poot 36.77 46 *e*P **P 11 09 01.1 0.0**
comp=Z,39nm,1.0s
BPAW Bear Paw Mtn. 36.87 38 *e*P **P 11 09 02.4 +0.6**
comp=Z,33nm,1.1s
BRLK Bradley Lake 36.94 46 *e*P **P 11 09 02.3 -0.2**
comp=Z,22nm,0.9s
SUA Susitna One 36.94 43 *e*P **P 11 09 01.9 -0.7**
comp=Z,21nm,1.0s
MLY Manley 37.02 37 *e*P **P 11 09 03.7 +0.6**
comp=Z,28nm,1.0s
COLD Coldfoot 37.43 33 *e*P **P 11 09 06.9 +0.4**
comp=Z,12nm,0.9s
RC01 Rabbit Creek A 37.44 43 *e*P **P 11 09 06.5 -0.2**
comp=Z,25nm,0.8s
BWN Browne 37.53 38 *e*P **P 11 09 08.9 +1.4**
comp=Z,177nm,1.2s
SEW Seward 37.64 45 *e*P **P 11 09 08.9 +0.6**
comp=Z,36nm,1.1s
PMR Palmer 37.71 42 *e*P **P 11 09 07.9 -1.0**
PMR Palmer 37.71 42 *e*P **P 11 09 07.9 -1.0**
PMR pmax pmax
comp=Z,28nm,1.0s
MCK McKinley 37.76 39 *e*P **P 11 09 08.1 -1.3**
comp=Z,29nm,0.8s
MCK McKinley 37.76 39 *e*P **P 11 09 08.1 -1.3**
MCK pmax pmax
comp=Z,29nm,0.8s
GZH Guangzhou 37.77 247 P **P 11 09 06.1 -3.7**
RND Reindeer 37.80 40 *e*P **P 11 09 08.9 -0.8**
comp=Z,42nm,1.0s
RND Reindeer 37.80 40 *e*P **P 11 09 09.0 -0.8**
RND pmax pmax
comp=Z,42nm,1.0s
GHO Glory Hole Cre 37.80 42 *e*P **P 11 09 09.7 -0.2**
comp=Z,28nm,1.1s
HKPS Hong Kong Po S 37.82 245 *e*P **P 11 09 11.1 +0.7**
comp=Z,74nm,1.1s
TOLK Toolik Lake Re 37.83 31 *e*P **P 11 09 09.4 -0.5**
comp=Z,28nm,0.8s
TOLK Toolik Lake Re 37.83 31 P **P 11 09 09.4 -0.5**
baz=263
GTA Gaotai 37.86 280 *e*P **P 11 09 11.3 +0.7**
GTA pP pP 11 09 20.5 -0.4
GTA sP sP 11 09 24.9 -0.2
GTA PcP **PcP 11 11 28.1 +1.8**
GTA pmax pmax
comp=Z,81nm,1.0s
GTA pmax pmax
comp=Z,520nm,8.2s
GTA LR LR
comp=Z,2µm,14.1s
GTA LR LR
comp=Z,5µm,13.4s
GTA LR LR
comp=Z,7µm,13.4s
KNK Knik Glacier 38.04 43 *e*P **P 11 09 11.6 -0.2**
comp=Z,72nm,1.0s
SML Sawmill 38.08 42 *e*P **P 11 09 12.4 +0.3**
comp=Z,99nm,0.8s
SML Sawmill 38.08 42 *e*P **P 11 09 12.4 +0.3**
SML pmax pmax
comp=Z,99nm,0.8s
MDM Murphy Dome 38.09 37 *e*P **P 11 09 12.6 +0.5**
comp=Z,14nm,0.8s
WRH Wood River Hil 38.14 38 *e*P **P 11 09 12.6 0.0**
comp=Z,15nm,0.6s
TCOL CIGO, UAF Yank 38.24 37 P **P 11 09 13.3 -0.1**
baz=269
COLA College 38.24 37 *e*P **P 11 09 13.8 +0.4**
comp=Z,43nm,0.8s
COLA College 38.24 37 *e*P **P 11 09 13.8 +0.4**
COLA pmax pmax
comp=Z,43nm,0.8s
CCB Clear Creek Bu 38.26 37 *e*P **P 11 09 13.8 +0.3**
comp=Z,12nm,0.8s
POKR Poker Plat Res 38.43 37 P **P 11 09 15.2 +0.2**
baz=270
DHY Denali Highway 38.48 40 *e*P **P 11 09 15.5 -0.1**
comp=Z,22nm,0.9s
SCM Sheep Creek Mo 38.56 42 *e*P **P 11 09 16.3 +0.1**
comp=Z,36nm,0.8s
SCM Sheep Creek Mo 38.56 42 *e*P **P 11 09 16.3 +0.1**
SCM pmax pmax
comp=Z,36nm,0.8s
HDA Harding Lake 38.63 38 *e*P **P 11 09 16.1 -0.6**
comp=Z,25nm,0.6s
HDA Harding Lake 38.63 38 P **P 11 09 15.1 -1.6**
baz=271
ILAR Eielson Array 38.66 37 P **P 11 09 16.8 -0.1**
comp=Z,15nm,0.9s,baz=263,slow=7.2,SNR=11
ILB Eielson Array 38.66 37 *e*P **P 11 09 15.9 -1.0**
comp=Z,26nm,1.1s
GLI Glacier Island 38.74 44 *e*P **P 11 09 17.9 +0.3**
comp=Z,27nm,0.8s
PRP Porcupine Dome 39.23 36 *e*P **P 11 09 22.3 +0.4**
comp=Z,34nm,1.1s
FYU Fort Yukon 39.35 34 *e*P **P 11 09 23.5 +1.0**
comp=Z,75nm,1.1s
PAX Paxson 39.35 40 *e*P **P 11 09 23.1 +0.3**
comp=Z,31nm,1.1s
PAX Paxson 39.35 40 *e*P **P 11 09 23.1 +0.3**
PAX pmax pmax
comp=Z,31nm,1.1s
DIV Divide 39.36 43 *e*P **P 11 09 23.1 +0.3**
comp=Z,26nm,0.8s
CD2 Chengdu 39.36 265⇑ *i*P **P 11 09 23.5 +0.3**
CD2 pmax pmax
comp=Z,240nm,1.1s
NRIK Noril'sk 39.42 330 P **P 11 09 21.9 -1.3**
comp=Z,9.3nm,0.6s,baz=88,slow=13,SNR=4.0
EYAK Cordova Ski Ar 39.43 44 *e*P **P 11 09 23.8 +0.4**
comp=Z,24nm,1.2s
RIDG Independent Ri 39.58 39 *e*P **P 11 09 24.1 -0.6**
comp=Z,43nm,1.2s
DOT Dot Lake 39.94 39 *e*P **P 11 09 26.6 -1.0**
comp=Z,8.6nm,0.7s
SCRK Sand Creek 39.95 38 *e*P **P 11 09 26.3 -1.5**
comp=Z,9.9nm,0.6s
MENT Mentasta 40.15 40 *e*P **P 11 09 30.6 +1.2**
comp=Z,17nm,0.8s
BALM Baldy 41.02 43 *e*P **P 11 09 37.3 +0.6**
comp=Z,49nm,1.0s
BALM Baldy 41.02 43 *e*P **P 11 09 37.3 +0.6**
BALM pmax pmax
comp=Z,49nm,1.0s
EGAK Eagle 41.11 37 *e*P **P 11 09 36.9 -0.3**
comp=Z,26nm,0.8s
CTGM Chitina Glacie 41.52 43 *e*P **P 11 09 42.1 +1.3**
comp=Z,74nm,0.9s
DAWY Dawson 41.95 38 *e*P **P 11 09 44.7 +0.5**
comp=Z,2.1nm,0.6s
ZAA1 Zalesovo Array 42.42 307 *e*PcP **PcP 11 11 40.8 +0.3**
ZALV Zalesovo Beam 42.43 307 PcP **PcP 11 11 40.8 +0.3**
comp=Z,16nm,0.8s,baz=68,slow=2.5,SNR=4.8
EPYK Eagle Plains 42.77 34 *e*P **P 11 09 51.6 +0.8**
comp=Z,108nm,1.1s
EPYK Eagle Plains 42.77 34 P **P 11 09 51.4 +0.6**
baz=278
QIZ Qiongzhong 42.94 246 P **P 11 09 54.5 +1.8**
QIZ S **S 11 16 11.9 -3.1**
QIZ pmax pmax
comp=Z,27nm,1.1s
QIZ pmax pmax
comp=Z,350nm,6.6s
HYT Haines Junctio 43.38 43 *e*P **P 11 09 56.8 +0.8**
comp=Z,97nm,1.2s
KMI Kunming 43.58 259 P **P 11 09 58.6 +0.5**
KMI pP pP 11 10 09.3 +1.3
KMI sP pwP 11 10 13.6 -0.1
KMI PP **PP 11 11 42.3 +2.5**
KMI S **S 11 16 24.4 -0.4**
KMI sS sS 11 16 43.6 +2.6
KMI SS **SS 11 19 30.8 -10**
KMI pmax pmax
comp=Z,44nm,1.1s
KMI pmax pmax
comp=Z,590nm,5.0s
KMI LR LR
comp=Z,3µm,15.3s
KMI LR LR
comp=Z,2µm,15.7s
KMI LR LR
comp=Z,3µm,15.1s
INK Inuvik 43.74 31 P **P 11 09 58.7 +0.3**
comp=Z,28nm,0.8s,baz=319,slow=4.5,SNR=7.2
INK Inuvik 43.74 31 *e*P **P 11 09 58.4 -0.1**
comp=Z,32nm,0.9s
INK Inuvik 43.74 31 *e*P **P 11 09 58.4 -0.1**
INK pmax pmax
comp=Z,32nm,0.9s
WMQ Urumqi 44.21 292 *e*P **P 11 10 03.6 +0.8**
WMQ pmax pmax
comp=Z,58nm,1.1s
WMQ pmax pmax
comp=Z,390nm,3.7s
WMQ LR LR
comp=Z,7µm,18.1s
WMQ LR LR
comp=Z,5µm,17.5s
WMQ LR LR
comp=Z,9µm,21.7s
JIS Juneau Island 45.58 45 *e*P **P 11 10 15.0 +1.7**
comp=Z,25nm,0.9s
MK31 Makanchi Array 46.44 298 *e*P **P 11 10 20.3 -0.1**
comp=Z,36nm,0.8s
MK31 Makanchi Array 46.44 298 *e*P **P 11 10 20.3 -0.1**
MK31 pmax pmax
comp=Z,36nm,0.8s
MK32 Makanchi Array 46.44 298 *e*P **P 11 10 20.3 -0.1**
MK32 *e*PcP **PcP 11 11 54.8 +0.4**
MKAR Makanchi Array 46.44 298 P **P 11 10 20.3 -0.1**
comp=Z,26nm,0.7s,baz=82,slow=9.1,SNR=6.4
MKAR PcP **PcP 11 11 54.8 +0.4**
comp=Z,15nm,0.8s,baz=72,slow=2.7,SNR=4.6
MAKZ Makanchi 46.63 298 *e*P **P 11 10 20.9 -0.9**
comp=Z,29nm,0.8s
MAKZ Makanchi 46.63 298 *e*P **P 11 10 20.9 -0.9**
MAKZ pmax pmax
comp=Z,29nm,0.8s
KURK Kurchatov 47.09 304 *e*P **P 11 10 24.2 -1.1**
comp=Z,54nm,1.0s
KURK Kurchatov 47.09 304 *e*P **P 11 10 24.2 -1.1**
KURK pmax pmax
comp=Z,54nm,1.0s
KURBB Kurchatov Arra 47.18 304 P **P 11 10 25.0 -1.0**
comp=Z,29nm,0.9s,baz=75,slow=8.4,SNR=8.6
DLBC Dease Lake 47.70 44 P **P 11 10 31.9 +1.8**
comp=Z,9.0nm,0.9s,baz=273,slow=9.1,SNR=3.2
ZIRO ZIRO 48.35 269 *e*P **P 11 10 36.3 +0.8**
JORH JORHAT 48.54 268 *e*P **P 11 10 36.8 0.0**
MOKO MOKOCHONG 48.61 267 *e*P **P 11 10 38.1 +0.5**
LSA Lhasa 48.97 273 *e*P **P 11 10 41.7 +1.1**
comp=Z,93nm,1.0s
LSA Lhasa 48.97 273 *i* P **P 11 10 42.1 +1.4**
SNR=9.1
LSA Lhasa 48.97 273 *e*P **P 11 10 41.7 +1.1**
LSA pmax pmax
comp=Z,93nm,1.0s
LSA Lhasa 48.97 273 *e*P **P 11 10 39.4 -1.2**
DLV T Lat 49.10 241 *e*P **P 11 10 42.5 +1.1**
comp=Z,51nm,1.0s
KOHI KOHIMA 49.27 267 *e*P **P 11 10 39.6 -3.0**
TEZP TEZPUR 49.64 269 *e*P **P 11 10 45.7 +0.5**
IMP Imphal 49.94 266 *e*P **P 11 10 48.0 +0.4**
IMP IAmb IAmb 11 10 49.9
comp=Z,22nm,0.4s
CHTO Chiang Mai 50.39 256 *e*P **P 11 10 51.6 +0.6**
comp=Z,31nm,0.8s
CHTO Chiang Mai 50.39 256 *e*P **P 11 10 51.6 +0.6**
CHTO pmax pmax
comp=Z,31nm,0.8s
CMAR Chiang Mai Arr 50.64 256 P **P 11 10 53.9 +1.0**
comp=Z,12nm,0.8s,baz=39,slow=7.7,SNR=7.3
CMAR PcP **PcP 11 12 11.7 +1.7**
comp=Z,7.0nm,0.8s,baz=9.7,slow=3.6,SNR=4.9
GUWA GUWAHATI 50.68 269 *e*P **P 11 10 53.8 +0.7**
FAKI Fak Fak 50.74 205 *e*P **P 11 10 54.2 +0.6**
comp=Z,31nm,0.9s
SHL Shillong 50.93 268 *e*P **P 11 10 55.6 +0.3**
comp=Z,169nm,0.7s
SHL Shillong 50.93 268 *e*P **P 11 10 55.6 +0.3**
SHL pmax pmax
comp=Z,169nm,0.7s
SHL Shillong 50.93 268 *e*P **P 11 10 55.3 +0.1**
SHL Shillong 50.93 268 *i* x **P 11 10 55.0 -0.3**
TARG Taragay, Kyrgy 51.63 294 *e*P **P 11 11 01.5 +0.9**
comp=Z,56nm,1.0s
DHUB DHUBRI 51.99 270 *e*P **P 11 11 03.2 +0.3**
SAIH SAIHA 52.10 264 *e*P **P 11 11 03.1 -0.8**
BOOM Boomskoye usch 52.45 296 *e*P **P 11 11 06.2 -0.1**
comp=Z,101nm,1.1s
BOOM Boomskoye usch 52.45 296 *e*P **P 11 11 06.2 -0.1**
BOOM pmax pmax
comp=Z,101nm,1.1s
RES Resolute Bay 52.78 18 P **P 11 11 07.4 -0.6**
comp=Z,18nm,0.7s,baz=349,slow=11,SNR=8.6
RES Resolute Bay 52.78 18 *e*P **P 11 11 08.1 0.0**
comp=Z,27nm,0.9s
RES Resolute Bay 52.78 18 *e*P **P 11 11 08.1 0.0**
RES pmax pmax
comp=Z,27nm,0.9s
YKA Yellowknife Ar 53.03 35 P **P 11 11 10.3 +0.3**
comp=Z,14nm,0.9s,baz=300,slow=6.8,SNR=5.3
YKB5 Yellowknife Ar 53.03 35 *e*P **P 11 11 10.3 +0.3**
AAK Ala-Archa 53.29 296 *e*P **P 11 11 12.7 +0.1**
comp=Z,48nm,0.9s
AAK Ala-Archa 53.29 296 P **P 11 11 12.6 +0.1**
AAK Ala-Archa 53.29 296 *e*P **P 11 11 12.7 +0.1**
AAK pmax pmax
comp=Z,48nm,0.9s
AAK Ala-Archa 53.29 296 *e*P **P 11 11 12.7 +0.1**
ODAN Odare 53.32 273 *e*P **P 11 11 13.7 +0.7**
comp=Z,76nm,0.6s
JIRN Jiri 53.68 274 *e*P **P 11 11 16.9 +1.0**
comp=Z,218nm,0.6s
GUN Gumba 53.75 275 *e*P **P 11 11 17.5 +1.2**
comp=Z,257nm,0.7s
RAMN Ramite 53.82 273 *e*P **P 11 11 17.5 +0.8**
comp=Z,642nm,1.0s
KBS Kingsbay 53.85 351 *e*P **P 11 11 15.3 -0.6**
comp=Z,31nm,1.1s
KBS Kingsbay 53.85 351 *e*P **P 11 11 15.3 -0.6**
KBS pmax pmax
comp=Z,31nm,1.1s
KSH Kashi 53.97 292 P **P 11 11 21.9 +4.4**
KSH pP pP 11 11 27.1 -0.9
KSH PP PP 11 13 28.4 +10
KSH S S 11 19 01.1 +11
KSH ScS **ScS 11 21 06.2 +2.6**
KSH SS SS 11 22 43.6 +12
KSH pmax pmax
comp=Z,240nm,1.2s
KSH pmax pmax
comp=Z,690nm,5.1s
KSH LR LR
comp=Z,10µm,18.3s
KSH LR LR
comp=Z,14µm,19.4s
KKN Kakani 54.24 275 *e*P **P 11 11 21.1 +1.3**
comp=Z,272nm,0.9s
PKI Pulchoki 54.28 275 *e*P **P 11 11 20.8 +0.6**
comp=Z,215nm,1.1s
PKIN Phulchoki 54.29 275 *e*P **P 11 11 20.6 +0.4**
comp=Z,208nm,1.2s
DMN Daman 54.48 275 *e*P **P 11 11 22.4 +0.9**
comp=Z,230nm,0.8s
DANN Dangsing 54.98 277 *e*P **P 11 11 26.3 +1.1**
comp=Z,182nm,0.5s
ARU Arti 55.24 318 *e*P **P 11 11 24.8 -1.5**
comp=Z,35nm,0.8s
ARU Arti 55.24 318 *e*P **P 11 11 24.8 -1.5**
ARU pmax pmax
comp=Z,35nm,0.8s
LLLB Lillooet 55.37 51 *e*P **P 11 11 28.2 +0.9**
comp=Z,19nm,1.1s
KOLN Koldanda 55.44 276 *e*P **P 11 11 29.4 +1.0**
comp=Z,312nm,1.1s
PGC Sidney 55.51 53 *e*P **P 11 11 28.2 -0.1**
comp=Z,11nm,1.0s
KK31 Karatay Array 55.54 299 *e*P **P 11 11 28.1 -0.7**
comp=Z,48nm,1.0s
KK31 Karatay Array 55.54 299 *e*P **P 11 11 28.1 -0.7**
KK31 pmax pmax
comp=Z,48nm,1.0s
KKAR Karatay Array 55.54 299 *e*P **P 11 11 28.2 -0.6**
comp=Z,48nm,1.0s
KKAR Karatay Array 55.54 299 *e*P **P 11 11 28.2 -0.6**
KKAR pmax pmax
comp=Z,48nm,1.0s
PYUN Piuthan 55.67 277 *e*P **P 11 11 31.0 +0.9**
comp=Z,526nm,1.1s
A04D Lummi Island 55.89 53 P **P 11 11 31.7 +0.7**
baz=302
NLWA Neilton Lookou 55.92 55 *e*P **P 11 11 32.5 +1.0**
comp=Z,15nm,1.1s
TULEG Thule 55.95 10 *e*P **P 11 11 30.0 -1.1**
comp=Z,24nm,0.7s
BOK Bokaro 56.29 271 *e*P **P 11 11 35.3 +1.0**
BOK IAmb IAmb 11 11 36.4
comp=Z,35nm,0.9s
D03D Eldon 56.30 54 P **P 11 11 34.6 +0.6**
baz=302
BTK Batken 57.01 296 *e*P **P 11 11 38.0 -1.3**
comp=Z,108nm,1.1s
BTK Batken 57.01 296 *e*P **P 11 11 38.0 -1.3**
BTK pmax pmax
comp=Z,108nm,1.1s
G03D McMinnville, O 57.45 57 P **P 11 11 41.7 -0.5**
baz=303
I02D Swisshome 57.71 58 P **P 11 11 43.6 -0.4**
baz=304
DDI Dehra Dun 57.77 282 *e*P **P 11 11 45.8 +0.9**
DHRM DHARAMSHALA 57.84 285 *e*P **P 11 11 43.3 -2.1**
SMLA Simla 57.91 283 *e*P **P 11 11 45.6 0.0**
F05D White Salmon 58.13 55 P **P 11 11 46.8 -0.2**
baz=304
H04D Lebanon 58.14 57 P **P 11 11 46.8 -0.3**
baz=304
J01E Myrtle Point 58.18 59 P **P 11 11 47.3 -0.1**
baz=304
I03D Drain, OR 58.23 58 P **P 11 11 47.4 -0.3**
baz=304
APA Apatity 58.24 336⇑ *i*P **P 11 11 47.7 +0.3**
APA pmax pmax
comp=Z,7.0nm,1.0s
ABKAR Akbulak array 58.37 310 *e*P **P 11 11 48.1 -0.5**
comp=Z,19nm,0.5s
DGPR DIGLIPUR 58.44 256 *e*P **P 11 11 50.2 +0.7**
BWNR Bhubaneshwar 58.59 268 *ex* P 11 11 43.8 -6.7
ARCES ARCESS Array B 58.89 340 P **P 11 11 50.5 -1.4**
comp=Z,9.3nm,0.9s,baz=88,slow=6.4,SNR=5.0
ARCES PcP **PcP 11 12 41.0 +0.2**
comp=Z,12nm,0.9s,baz=87,slow=5.5,SNR=3.7
NIL Nilore 59.08 288 *e*P **P 11 11 53.5 -0.3**
comp=Z,349nm,0.9s
NIL Nilore 59.08 288 *e*P **P 11 11 53.5 -0.3**
NIL pmax pmax
comp=Z,349nm,0.9s
KULM Kulim 59.12 243 *e*P **P 11 11 56.1 +1.9**
comp=Z,61nm,1.0s
NDI New Delhi 59.35 281 *e*P **P 11 11 55.0 -0.7**
NDI New Delhi 59.35 281 *ex* **P 11 11 55.0 -0.7**
IPM Ipoh 59.51 243 *e*P **P 11 11 58.1 +1.2**
comp=Z,25nm,0.9s
G08A Pilot Rock 59.92 55 *e*P **P 11 12 02.5 +3.0**
comp=Z,1.5nm,0.6s
J08A Circle Bar Ran 61.33 56 *e*P **P 11 12 10.2 +1.1**
comp=Z,9.4nm,1.0s
KBL Kabul 61.35 291 *e*P **P 11 12 09.0 -0.6**
comp=Z,170nm,1.0s
KBL Kabul 61.35 291 *e*P **P 11 12 09.0 -0.6**
KBL pmax pmax
comp=Z,171nm,1.0s
WVOR Wild Horse Val 61.78 57 *e*P **P 11 12 12.6 +0.3**
comp=Z,8.6nm,0.9s
WVOR Wild Horse Val 61.78 57 *e*P **P 11 12 12.6 +0.3**
WVOR pmax pmax
comp=Z,9.0nm,0.9s
MSO Missoula 61.84 51 *e*P **P 11 12 13.7 +1.1**
comp=Z,22nm,1.1s
PSI Prapat 62.13 243 P **P 11 12 16.4 +1.5**
comp=Z,18nm,0.7s,baz=360,slow=1.4,SNR=4.2
PSI Prapat 62.13 243 *e*P **P 11 12 16.3 +1.5**
comp=Z,41nm,1.1s
JOF Joensuu 62.13 333 P **P 11 12 12.2 -1.9**
JOF pmax pmax
comp=Z,40nm,0.7s
BEKR Beckworth 62.27 60 *e*P **P 11 12 16.9 +1.2**
comp=Z,6.6nm,0.9s
SUMG Summit 62.37 3 *e*P **P 11 12 15.7 -0.4**
comp=Z,194nm,0.9s
SUMG Summit 62.37 3 *e*P **P 11 12 15.7 -0.4**
SUMG pmax pmax
comp=Z,195nm,0.9s
SUMG Summit 62.37 3 *i* **P 11 12 15.2 -0.9**
BHPL Bhopal 62.61 276 *e*P **P 11 12 17.4 -0.6**
NGP Nagpur 62.82 273 *e*P **P 11 12 19.3 0.0**
FFC Flin Flon 62.85 39 *e*P **P 11 12 19.5 +0.5**
comp=Z,42nm,1.0s
FFC Flin Flon 62.85 39 *e*P **P 11 12 19.5 +0.5**
FFC pmax pmax
comp=Z,41nm,1.0s
PAHR Pah Rah Range 62.97 60 *e*P **P 11 12 21.7 +1.4**
comp=Z,16nm,1.2s
VCNR Virginia City 63.05 61 *e*P **P 11 12 21.8 +0.8**
comp=Z,11nm,1.0s
PNTR Pine Nut 63.21 61 *e*P **P 11 12 22.0 0.0**
comp=Z,10.0nm,0.9s
FCC Fort Churchill 63.35 32 *e*P **P 11 12 21.6 -0.6**
comp=Z,29nm,0.7s
FCC Fort Churchill 63.35 32 *e*P **P 11 12 21.7 -0.6**
FCC pmax pmax

comp=Z,29nm,0.7s
EGMT Eagleton 63.35 48 *e*P **P 11 12 22.9 +0.3**
comp=Z,23nm,1.0s
EGMT Eagleton 63.35 48 P **P 11 12 22.6 0.0**
baz=309
CMB Columbia Colle 63.37 62 *e*P **P 11 12 24.3 +1.5**
comp=Z,5.7nm,0.9s
CMB Columbia Colle 63.37 62 *e*P **P 11 12 24.3 +1.5**
CMB pmax pmax
comp=Z,6.0nm,0.9s
MCMT McKenzie Canyo 63.66 52 *e*P **P 11 12 23.8 -1.1**
BMN Battle Mountai 63.84 58 *e*P **P 11 12 26.8 +0.8**
comp=Z,13nm,1.0s
BMN Battle Mountai 63.84 58 *e*P **P 11 12 26.8 +0.8**
BMN pmax pmax
comp=Z,13nm,1.0s
BOZ Bozeman (W) 63.86 51 *e*P **P 11 12 26.1 0.0**
BOZ Bozeman (W) 63.86 51 *e*P **P 11 12 26.1 0.0**
SUF Sumiainen 63.87 335 P **P 11 12 24.7 -0.9**
SUF pmax pmax
comp=Z,34nm,1.1s
GSI Gunungsitoli 64.13 243 *e*P **P 11 12 28.3 +0.3**
comp=Z,34nm,1.0s
KVN Kaiserville 64.16 60 *e*P **P 11 12 29.0 +0.8**
comp=Z,14nm,1.1s
KVN Kaiserville 64.16 60 *e*P **P 11 12 29.0 +0.8**
KVN pmax pmax
comp=Z,14nm,1.1s
RYN Ryan 64.16 60 *e*P **P 11 12 29.9 +1.7**
comp=Z,4.6nm,0.8s
NV01 Mina Array Sit 64.42 61 *e*P **P 11 12 30.9 +1.0**
NVAR Mina Array Bea 64.42 61 P **P 11 12 30.9 +1.0**
comp=Z,5.7nm,0.9s,baz=284,slow=7.3,SNR=2.4
SCO Scoresbysund 64.56 357 *e*P **P 11 12 30.1 +0.1**
comp=Z,49nm,0.9s
ILULI Ilulissat 64.76 9 *e*P **P 11 12 29.8 -1.6**
comp=Z,29nm,0.8s
ILULI Ilulissat 64.76 9 *e*P **P 11 12 29.8 -1.6**
ILULI pmax pmax
comp=Z,29nm,0.8s
GCMT Greycliff 64.81 50 *e*P **P 11 12 32.4 +0.2**
FIA1 FINESS Array S 64.87 334 *e*P **P 11 12 30.4 -1.8**
comp=Z,69nm,1.1s
FIA0 FINESS Array S 64.87 334 *e*P **P 11 12 30.8 -1.4**
FIA0 FINESS Array S 64.87 334 *e*P **P 11 12 30.8 -1.4**
FINES FINESS Array B 64.87 334 P **P 11 12 30.8 -1.4**
comp=Z,31nm,0.7s,baz=32,slow=8.1,SNR=10.0
YPP Pitchstone Pla 65.15 52 *e*P **P 11 12 35.2 +0.5**
comp=Z,8.8nm,1.2s
SMMC Simmler 65.30 64 P **P 11 12 35.8 +0.3**
baz=309
RLMT Red Lodge 65.45 50 *e*P **P 11 12 36.7 +0.1**
comp=Z,12nm,1.1s
MOOW Moose Ponds 65.52 52 *e*P **P 11 12 35.7 -1.3**
comp=Z,6.6nm,1.1s
PKM Mcpherson Peak 65.68 64 P **P 11 12 39.0 +0.8**
baz=309
REDW Red Top Meadow 65.70 52 *e*P **P 11 12 39.5 +1.2**
comp=Z,16nm,1.1s
GRAC Grapevine Rang 65.89 61 P **P 11 12 40.1 +0.8**
baz=310
DGMT Dagmar 65.91 45 P **P 11 12 39.2 0.0**
baz=312
LAO LASA Array 66.05 47 P **P 11 12 39.6 -0.6**
baz=311
GEYT Alibeck 66.21 300 P **P 11 12 41.6 +0.3**
comp=Z,69nm,0.8s,baz=7.1,slow=3.6,SNR=9.3
GYA0B ALIBECK ARRAY 66.21 300 *e*P **P 11 12 40.0 -1.3**
comp=Z,79nm,0.9s
MPMC Manual Prospec 66.41 62 P **P 11 12 43.3 +0.5**
baz=310
FURC Furnace Creek, 66.54 61 P **P 11 12 43.7 +0.3**
baz=310
WRAB Tennant Creek 66.56 197 *e*P **P 11 12 45.3 +1.8**
comp=Z,41nm,0.9s
WB2 Warramunga Arr 66.57 197 *e*P **P 11 12 45.4 +1.9**
comp=Z,44nm,0.9s
WR1 Warramunga Arr 66.57 197 *e*P **P 11 12 45.2 +1.6**
WRA Warramunga Arr 66.57 197 P **P 11 12 45.2 +1.6**
comp=Z,32nm,0.8s,baz=7.7,slow=6.8,SNR=9.8
WC3 Warramunga Arr 66.58 197 *e*P **P 11 12 45.3 +1.7**
comp=Z,40nm,0.9s
BW06 Boulder Array 66.81 52 *e*P **P 11 12 44.8 -0.6**
comp=Z,10nm,1.0s
BW06 Boulder Array 66.81 52 P **P 11 12 45.2 -0.1**
baz=311
PD31 Pinedale Array 66.81 52 *e*P **P 11 12 46.2 +0.9**
comp=Z,9.7nm,1.0s
PDAR Pinedale Array 66.81 52 P **P 11 12 46.1 +0.7**
comp=Z,3.7nm,0.8s,baz=314,slow=1.7,SNR=4.8
EDW2 Edwards Air Fo 66.84 63 P **P 11 12 46.0 +0.6**
baz=310
SFJD Kangerlussuaq 66.95 9 *e*P **P 11 12 44.7 -0.7**
comp=Z,27nm,0.9s
SFJD Kangerlussuaq 66.95 9 *e*P **P 11 12 44.7 -0.7**
SFJD pmax pmax
comp=Z,27nm,0.9s
SFJD Kangerlussuaq 66.95 9 *i* **P 11 12 44.4 -1.0**
MDRS Chennai 67.38 266 *e*P **P 11 12 50.0 +1.1**
TUQ Turquoise Moun 67.78 62 P **P 11 12 51.2 -0.3**
baz=310
BBRC Big Bear Solar 67.92 63 P **P 11 12 52.5 +0.1**
baz=310
HEC Hector,Ludlow 67.92 62 P **P 11 12 52.4 +0.1**
baz=311
MURC Murrieta 68.17 64 P **P 11 12 53.8 0.0**
baz=311
POO Poona 68.21 275 *e*P **P 11 12 54.2 -0.1**
MDND Maddock 68.59 43 P **P 11 12 55.6 -0.6**
baz=314
PFO Pinyon Flats O 68.63 64 P **P 11 12 56.9 +0.1**
baz=311
ULM Lac du Bonnet 68.63 39 P **P 11 12 55.6 -0.8**
comp=Z,9.1nm,0.7s,baz=309,slow=7.3,SNR=4.2
BELC Belle Mtn. Jos 68.67 63 P **P 11 12 57.1 +0.1**
baz=311
109C Camp Elliot, M 68.69 65 P **P 11 12 57.1 +0.1**
baz=311
RSSD Black Hills 68.92 48 P **P 11 12 58.3 -0.2**
baz=313
NC303 NORSAR Array S 69.07 340 *e*P **P 11 12 57.8 -1.1**
comp=Z,56nm,0.8s
NB201 NORSAR Array S 69.24 340 *e*P **P 11 12 59.0 -1.0**
comp=Z,134nm,0.8s
NB2 NORSAR Subarra 69.27 340 P **P 11 12 58.8 -1.4**
comp=Z,47nm,0.8s,baz=28,slow=6.5
NB2 NORSAR Subarra 69.27 340 P **P 11 12 58.8 -1.4**
baz=28,slow=6.5
NB200 NORSAR Array S 69.27 340 *e*P **P 11 12 59.2 -1.0**
NOA NORSAR Array B 69.27 340 P **P 11 12 59.2 -1.0**
comp=Z,31nm,0.6s,baz=30,slow=6.6,SNR=11
NBO00 NORSAR Array S 69.38 341 *e*P **P 11 12 59.7 -1.1**
comp=Z,110nm,1.0s
NC602 NORSAR Array S 69.46 340 *e*P **P 11 12 59.0 -2.3**
comp=Z,74nm,1.0s
IKP In-Ko-Pah, Jac 69.48 64 P **P 11 13 03.6 +1.6**
baz=311
SWSC Sam W. Stewart 69.48 64 P **P 11 13 01.6 -0.3**
baz=311
NAO01 NORSAR Array S 69.52 340 *e*P **P 11 13 00.3 -1.4**
comp=Z,109nm,1.0s
PDMCI Parker Dam,Lak 69.63 62 P **P 11 13 03.5 +0.7**
baz=312
MICGM Minsk 69.64 329 *e*PP **P 11 13 02.0 -0.5**
Y12C Blythe 69.76 62 P **P 11 13 04.0 +0.4**
baz=312
AKT Akhty 69.92 309 *e*P **P 11 13 04.7 0.0**
AKT *e* 11 13 26.7
AKT pmax pmax
comp=Z,256nm,1.2s
GOF Gofitskoye 69.94 314⇑ *i*P **P 11 13 04.4 -0.1**
GOF pmax pmax
comp=Z,273nm,0.8s
AGMN Agassiz Nation 70.04 41 *e*P **P 11 13 04.5 -0.6**
comp=Z,30nm,1.1s
AGMN Agassiz Nation 70.04 41 P **P 11 13 04.6 -0.5**
baz=316
GOA Goa 70.27 272 *e*P **P 11 13 07.3 +0.4**
AS31 Alice Springs 70.27 197 *e*P **P 11 13 08.8 +2.1**
comp=Z,5.4nm,0.6s
ASAR Alice Springs 70.27 197 P **P 11 13 09.3 +2.6**
comp=Z,22nm,0.8s,baz=13,slow=6.4,SNR=12
Y14A Wickenburg 70.58 61 *e*P **P 11 13 08.7 0.0**
comp=Z,15nm,1.1s
KIV Kislovodsk 70.90 314 *e*P **P 11 13 09.4 -1.1**
comp=Z,135nm,1.0s
KIV Kislovodsk 70.90 314 *i* P **P 11 13 10.9 +0.4**
SNR=8.7
KIV Kislovodsk 70.90 314 *e*P **P 11 13 10.4 -0.1**
KIV pmax pmax
comp=Z,463nm,1.1s
KIV Kislovodsk 70.90 314 *e*P **P 11 13 11.3 +0.8**
KBZ Khabaz 70.95 313 P **P 11 13 11.4 +0.8**
comp=Z,146nm,0.9s,baz=63,slow=4.7,SNR=8.9
ZEI Tsey 71.08 312 *e*P **P 11 13 10.8 -1.0**
ZEI pmax pmax
comp=Z,64nm,0.9s
PALK Pallekele 71.09 261 P **P 11 13 12.5 +0.6**
comp=Z,24nm,0.9s,baz=298,slow=1.3,SNR=4.6
PALK Pallekele 71.09 261 *e*P **P 11 13 12.2 +0.2**
comp=Z,23nm,0.8s
PALK Pallekele 71.09 261 *e*P **P 11 13 12.2 +0.2**
PALK pmax pmax
comp=Z,23nm,0.8s
MVCO Mesa Verde 71.11 56 P **P 11 13 12.6 +0.5**
baz=313
TBLG Delisi 71.38 311 *e*P **P 11 13 13.6 +0.2**
comp=Z,253nm,1.0s
SUW Suwalki 71.71 331 *e*P **P 11 13 13.6 -1.5**
comp=Z,87nm,1.0s
SUW Suwalki 71.71 331 *e*P **P 11 13 13.6 -1.5**
SUW pmax pmax
comp=Z,87nm,1.0s
Q24A Divide 71.84 53 P **P 11 13 16.4 -0.2**
baz=314
214A Organ Pipe Nat 72.02 63 P **P 11 13 18.1 +0.7**
baz=313
AKASG Malin Array Be 72.08 325 P **P 11 13 16.2 -1.2**
comp=Z,18nm,0.5s,baz=39,slow=6.2,SNR=12
AKBB Malin Array Si 72.08 325 *e*P **P 11 13 15.9 -1.4**
comp=Z,87nm,1.0s
AKBB Malin Array Si 72.08 325 *e*P **P 11 13 15.9 -1.4**
AKBB pmax pmax
comp=Z,87nm,1.0s
KIEV Kiev 72.09 325 *e*P **P 11 13 15.8 -1.6**
comp=Z,92nm,1.1s
KIEV Kiev 72.09 325 P **P 11 13 16.0 -1.5**
KIEV Kiev 72.09 325 *e*P **P 11 13 15.8 -1.6**
KIEV pmax pmax
comp=Z,92nm,1.1s
OGNE Ogallala 72.18 50 *e*P **P 11 13 18.4 +0.1**
comp=Z,52nm,0.8s
OGNE Ogallala 72.18 50 P **P 11 13 18.4 +0.1**
baz=315
AKH Akhalkalaki 72.27 311 *e*P **P 11 13 20.0 +1.1**
comp=Z,79nm,1.0s
AKH Akhalkalaki 72.27 311 *e*P **P 11 13 20.0 +1.1**
AKH pmax pmax
comp=Z,79nm,1.0s
EYMN Ely 72.28 39 P **P 11 13 18.0 -0.7**
baz=319
GNI Garni 72.48 310 P **P 11 13 21.6 +1.4**
SDCO Great Sand Dun 72.48 54 P **P 11 13 20.7 +0.3**
baz=314
TRD Trivandrum 72.85 265 *e*P **P 11 13 22.9 +0.4**
ECSD EROS Data Cent 72.99 45 *e*P **P 11 13 22.4 -0.6**
comp=Z,20nm,0.8s
ECSD EROS Data Cent 72.99 45 P **P 11 13 22.4 -0.6**
baz=317
TUC Tucson 73.05 61 P **P 11 13 23.7 +0.1**
baz=313
KSCO Kaye Shedlock' 73.22 51 P **P 11 13 23.7 -0.9**
baz=315
E38A The Farm, Brul 73.26 40 *e*P **P 11 13 23.7 -0.8**
comp=Z,30nm,0.8s
E38A The Farm, Brul 73.26 40 P **P 11 13 23.8 -0.8**
baz=319,SNR=6.2
C40A Isle Royale Na 73.33 38 P **P 11 13 23.9 -1.0**
baz=320
F37A Hinrichs Farm, 73.44 41 P **P 11 13 24.6 -0.9**
baz=319
T25A Trinidad 73.53 54 P **P 11 13 26.5 0.0**
baz=315
F38A Pierce - Schro 73.60 40 P **P 11 13 26.2 -0.3**
baz=319
SPMN Marine on St. 73.73 41 *e*P **P 11 13 26.6 -0.7**
comp=Z,31nm,1.1s
SPMN Marine on St. 73.73 41 P **P 11 13 26.7 -0.5**
baz=319
TASM ASL Pad, Albuq 73.86 57 P **P 11 13 28.6 +0.1**
baz=314
TASM ASL Pad, Albuq 73.86 57 P **P 11 13 28.8 +0.3**
baz=314
ANMO Albuquerque 73.86 57 P **P 11 13 28.6 +0.1**
baz=314
E39A Mellen 73.89 39 P **P 11 13 27.4 -0.8**
baz=320,SNR=5.9
BGNE Belgrade 73.90 47 P **P 11 13 28.2 -0.2**
baz=317
F39A Loretta 74.07 40 P **P 11 13 28.7 -0.6**
baz=320
E40A Wakefield 74.13 39 P **P 11 13 29.5 -0.1**
baz=320,SNR=7.8
G38A Ridgeland 74.21 41 P **P 11 13 28.7 -1.4**
baz=319
D41A Chassel 74.24 38 *e*P **P 11 13 30.2 0.0**
comp=Z,52nm,1.1s
D41A Chassel 74.24 38 P **P 11 13 29.6 -0.6**
baz=321
GKP Gorka Klasztor 74.31 333 *e*P **P 11 13 29.7 -0.7**
GKP Gorka Klasztor 74.31 333 *e*P **P 11 13 29.7 -0.7**
BEL Belsk 74.33 331 *e*P **P 11 13 30.2 -0.4**
BEL Belsk 74.33 331 *e*P **P 11 13 30.2 -0.4**
SIM Simferopol' 74.36 319⇑ *e*P **P 11 13 30.4 -0.6**
SIM pmax pmax
comp=Z,84nm,0.9s
H38A Maiden Rock 74.39 41 P **P 11 13 30.7 -0.4**
baz=319
F40A Park Falls 74.43 39 P **P 11 13 30.5 -0.8**
baz=320
G39A Holcombe 74.44 40 P **P 11 13 30.7 -0.7**
baz=320
E41A Kenton 74.53 38 P **P 11 13 31.2 -0.7**
baz=321
COWI Conover 74.73 39 *e*P **P 11 13 32.4 -0.7**
comp=Z,15nm,1.0s
121A Cookes Peak, D 74.74 59 P **P 11 13 32.9 -0.7**
baz=314
LVV L'vov 74.81 328 *e*P **P 11 13 32.6 -0.9**
H39A Augusta 74.85 41 P **P 11 13 32.9 -0.9**
baz=320
G40A Rib Lake 74.89 40 P **P 11 13 33.4 -0.7**
baz=320,SNR=15
CBKS Cedar Bluff 74.94 50 P **P 11 13 33.6 -0.9**
baz=316
E42A Champion 75.01 38 P **P 11 13 34.2 -0.5**
baz=321,SNR=5.2
F41A Three Lakes 75.03 39 P **P 11 13 34.2 -0.6**
baz=321,SNR=6.1
KIS Kishinev 75.14 323 *e*PP PP 11 16 28.0 +4.7
KIS Kishinev 75.14 323 *e*PPP **PP 11 16 28.0 +4.7**
BANOM Banah 75.30 292 P **P 11 13 37.5 +0.8**
H40A Chili 75.30 40 P **P 11 13 35.8 -0.7**
baz=320
SCHQ Schefferville 75.31 22 P **P 11 13 36.0 -0.2**
comp=Z,26nm,0.8s,baz=348,slow=9.7,SNR=7.6
SCHQ Schefferville 75.31 22 *e*P **P 11 13 36.3 0.0**
SHME Shamm 75.32 292 *i* P **P 11 13 36.7 -0.1**
SNR=5.8
I39A Houston 75.36 42 P **P 11 13 35.7 -1.1**
baz=320
G41A Antigo 75.40 39 P **P 11 13 36.3 -0.7**
baz=321
F42A Maple Grove Fa 75.44 38 P **P 11 13 36.6 -0.6**
baz=321
E43A Lone Tree Farm 75.45 37 *e*P **P 11 13 36.5 -0.7**
comp=Z,26nm,1.1s
E43A Lone Tree Farm 75.45 37 P **P 11 13 36.5 -0.7**
baz=322
KWP Kalwaria Pacla 75.46 328 *e*P **P 11 13 37.1 -0.1**
KWP Kalwaria Pacla 75.46 328 *e*P **P 11 13 36.8 -0.4**
comp=Z,2μm,1.0s
KWP Kalwaria Pacla 75.46 328 *e*P **P 11 13 36.8 -0.4**
H41A Junction City 75.64 40 *e*P **P 11 13 37.7 -0.7**
comp=Z,20nm,0.9s
H41A Junction City 75.64 40 P **P 11 13 37.6 -0.7**
baz=321,SNR=5.9
G42A Mountain 75.71 39 P **P 11 13 38.2 -0.6**
baz=321
E44A Grand Marais A 75.72 37 P **P 11 13 38.4 -0.3**
baz=322
I40A Norwalk 75.76 41 P **P 11 13 38.3 -0.8**
baz=320
MSFE Esma-Masafi 75.78 292 P **P 11 13 39.5 0.0**
F43A Flat Rock, Esc 75.80 38 P **P 11 13 38.7 -0.6**
baz=322,SNR=5.3
I41A Arkdale 75.97 41 P **P 11 13 39.4 -0.9**
baz=321
F44A Big Bay de Noc 76.01 37 P **P 11 13 39.8 -0.6**
baz=322
OJC Ojcow 76.02 330 *e*P **P 11 13 40.1 -0.3**
OJC Ojcow 76.02 330 *e*P **P 11 13 40.2 -0.2**
comp=Z,164nm,1.1s
OJC Ojcow 76.02 330 *e*P **P 11 13 40.2 -0.2**
OJC pmax pmax
comp=Z,164nm,1.1s
SCIA State Center 76.02 44 *e*P **P 11 13 40.7 +0.1**
comp=Z,51nm,0.8s
SCIA State Center 76.02 44 P **P 11 13 40.0 -0.6**
baz=319
G43A Wallace 76.03 39 P **P 11 13 39.9 -0.6**
baz=322,SNR=9.0
UOSS Minazif 76.03 291 P **P 11 13 40.7 -0.2**
J40A Soldiers Grove 76.08 41 P **P 11 13 39.8 -1.1**
baz=320
HATD Hatta, Dubai 76.16 291 P **P 11 13 41.9 +0.2**
STHS Stebnicka Huta 76.17 329 *e*P **P 11 13 40.6 -0.7**
STHS pmax pmax
comp=Z,121nm,0.9s
STHS Stebnicka Huta 76.17 329 *e*P **P 11 13 40.6 -0.7**
KOLS Kolonicke sedl 76.19 328 *e*P **P 11 13 41.2 -0.2**
KOLS pmax pmax
comp=Z,83nm,1.1s
KOLS Kolonicke sedl 76.19 328 *e*P **P 11 13 41.2 -0.2**
H42A Shiocton 76.23 39 P **P 11 13 40.8 -0.9**
baz=321
E45A Wooded Hills, 76.24 36 P **P 11 13 41.1 -0.6**
baz=323
D46A Sault St. Mari 76.29 35 P **P 11 13 40.9 -1.1**
baz=324,SNR=6.8
ASHO Ashiyiah 76.31 291 P **P 11 13 43.1 +0.6**
MATQ Matagami 76.38 30 P **P 11 13 41.3 -1.1**
baz=327
UZH Uzhgorod 76.43 328 *e*P **P 11 13 40.5 -2.3**
UZH *e* 11 13 52.3
UZH *e* 11 14 01.0
J41A Loganville 76.44 41 P **P 11 13 42.2 -0.8**
baz=321
NIE Niedzica 76.51 329 *e*P **P 11 13 43.5 +0.2**
NIE Niedzica 76.51 329 *e*P **P 11 13 43.5 +0.2**
I42A Draeger Farm, 76.54 40 *e*P **P 11 13 42.4 -1.1**
comp=Z,23nm,1.0s
I42A Draeger Farm, 76.54 40 P **P 11 13 42.6 -0.9**
baz=321
E46A Sault Ste Mari 76.59 36 P **P 11 13 42.6 -1.1**
baz=323
H43A Windswept, Lux 76.61 39 *e*P **P 11 13 41.5 -2.3**
comp=Z,39nm,1.1s
H43A Windswept, Lux 76.61 39 P **P 11 13 42.9 -0.9**
baz=322
F45A CMU Biological 76.63 37 P **P 11 13 43.2 -0.7**
baz=323
JFWS Jewell Farm 76.68 42 P **P 11 13 43.1 -1.2**
baz=321
AMTX Amarillo 76.68 54 P **P 11 13 45.0 +0.4**
baz=316
KSP Ksiaz 76.68 332 *e*P **P 11 13 43.8 -0.4**
KSP Ksiaz 76.68 332 *e*P **P 11 13 43.8 -0.4**
RAC Raciborz 76.69 331 *e*P **P 11 13 44.5 +0.3**
MSTX Muleshoe 76.71 55 P **P 11 13 44.6 -0.1**
baz=316
MNTX Cornudas Mount 76.78 58 P **P 11 13 45.3 +0.2**
baz=315
L40A Anamosa 76.87 43 P **P 11 13 44.4 -0.9**
baz=320,SNR=5.4
F46A Macinaw City C 76.88 37 P **P 11 13 44.6 -0.8**
baz=323,SNR=7.0
J42A Columbus 76.89 41 P **P 11 13 44.4 -1.1**
baz=321
OKC Ostrava-Krasne 76.92 331 *e*P **P 11 13 45.3 -0.2**
OKC Ostrava-Krasne 76.92 331 *e*P **P 11 13 45.3 -0.2**
E47A Iron Bridge 76.95 35 P **P 11 13 44.5 -1.2**
baz=324,SNR=8.1
CHVC Chvalec 76.98 332 *e*P **P 11 13 45.3 -0.6**
LANS Liptovska Anna 77.04 330 *e*P **P 11 13 46.7 +0.5**
LANS Liptovska Anna 77.04 330 *e*P **P 11 13 46.7 +0.5**
D49A Beulah Townshi 77.05 34 P **P 11 13 45.1 -1.2**
baz=325,SNR=7.5
UPC Upice 77.06 332 *e*P **P 11 13 45.9 -0.4**
UPC *e* 11 13 53.7
UPC Upice 77.06 332 *e*P **P 11 13 45.9 -0.4**
UPC *e*pP **pP 11 13 53.7 -3.5**
G45A Suttons Bay 77.08 37 *e*P **P 11 13 45.8 -0.7**
comp=Z,41nm,0.8s
G45A Suttons Bay 77.08 37 P **P 11 13 45.7 -0.8**
baz=323
DPC Dobruska-Polom 77.10 332 *e*P **P 11 13 46.4 -0.2**
DPC Dobruska-Polom 77.10 332 *e*P **P 11 13 46.4 -0.2**
STKA Stephens Creek 77.16 188 P **P 11 13 50.4 +3.5**
comp=Z,8.2nm,1.0s,baz=322,slow=13,SNR=3.7
STKA Stephens Creek 77.16 188 *e*P **P 11 13 48.2 +1.4**
comp=Z,2.1nm,1.0s
STKA Stephens Creek 77.16 188 *e*P **P 11 13 48.2 +1.4**
J43A Natural Harves 77.16 40 P **P 11 13 45.9 -1.1**
baz=322
MORC Moravsky Berou 77.18 331 *e*P **P 11 13 46.6 -0.4**
comp=Z,131nm,1.0s
MORC Moravsky Berou 77.18 331 *e*P **P 11 13 46.8 -0.2**
KRLC Kraliky 77.18 332 *e*P **P 11 13 46.9 -0.1**
KRLC Kraliky 77.18 332 *e*P **P 11 13 46.9 -0.1**
G46A Petoskey 77.20 37 P **P 11 13 45.8 -1.4**
baz=323
LSQQ Lebel-sur-Quev 77.20 30 P **P 11 13 46.0 -1.1**
baz=328
K42A Prairie Point, 77.20 41 P **P 11 13 46.6 -0.6**
baz=321
KECS Kecovo 77.23 329 *e*P **P 11 13 47.1 -0.2**
KECS pmax pmax
comp=Z,188nm,1.0s
KECS Kecovo 77.23 329 *e*P **P 11 13 47.1 -0.2**
TIRR Tirgusor 77.32 322 *e*P **P 11 13 47.5 -0.2**
comp=Z,194nm,1.1s
TIRR Tirgusor 77.32 322 *e*P **P 11 13 47.6 -0.2**
TIRR pmax pmax
comp=Z,194nm,1.1s
CLL Collm 77.32 335 *e*P **P 11 13 46.3 -1.4**
comp=Z,138nm,1.0s
CLL Collm 77.32 335⇑ *i*P **P 11 13 46.9 -0.8**
comp=Z,150nm,1.1s
CLL Lm MLR 11 50 00.0
comp=N,3μm,18.7s
CLL Lm MLR 11 50 00.0
comp=E,1μm,18.5s
CLL Lm MLR 11 50 00.0
comp=Z,3μm,19.3s
CLL Collm 77.32 335 *e*P **P 11 13 46.3 -1.4**
CLL pmax pmax
comp=Z,138nm,1.0s
E48A Lockeyer 77.38 35 P **P 11 13 46.8 -1.3**
baz=325,SNR=5.6
CHGQ Chibougamau 77.38 28 P **P 11 13 47.2 -0.9**
baz=329,SNR=11
BRG Berggiesshubel 77.41 334 *i* P **P 11 13 47.5 -0.7**
comp=Z,68nm,1.2s
comp=N,2μm,16.7s
comp=E,2μm,16.5s
comp=Z,4μm,16.6s
BRG Berggiesshubel 77.41 334 *i* P **P 11 13 47.5 -0.7**
BRG pmax pmax
comp=Z,68nm,1.2s
BRG MLR MLR
comp=N,2μm,16.7s
BRG MLR MLR
comp=E,2μm,16.5s
BRG MLR MLR
comp=Z,4μm,16.6s
PVCC Panska Ves 77.51 333 *e*P **P 11 13 48.6 -0.2**
PVCC Panska Ves 77.51 333 *e*P **P 11 13 48.6 -0.2**
ILGA Ilgaz 77.52 317 *e*P **P 11 13 49.3 -0.1**
comp=Z,94nm,0.9s
ESK Eskdalemuir 77.56 345 *e*P **P 11 13 48.4 -0.6**
comp=Z,42nm,1.0s
ESK Eskdalemuir 77.56 345 *e*P **P 11 13 48.4 -0.6**
ESK pmax pmax
comp=Z,42nm,1.0s
N40A Mertquake, Sal 77.60 44 P **P 11 13 48.9 -0.5**
baz=320
I45A Fountain 77.63 38 P **P 11 13 49.2 -0.3**
baz=323
L42A Oliver, Polo 77.66 42 P **P 11 13 48.5 -1.3**

baz=321
H46A Fife Lake 77.68 38 P P 11 13 49.4 -0.4
baz=323,SNR=6.7
GLMI Grayling 77.70 37 P P 11 13 49.8 -0.2
baz=323
F48A Evansville 77.72 35 P P 11 13 49.0 -1.0
baz=324,SNR=6.7
M41A Milan 77.72 43 P P 11 13 49.4 -0.7
baz=321,SNR=5.4
D50A G1974 Best Tow 77.73 33 P P 11 13 48.8 -1.3
baz=326,SNR=5.2
K43A Burlington 77.73 41 eP P 11 13 49.4 -0.8
comp=Z,24nm,0.9s
K43A Burlington 77.73 41 P P 11 13 49.1 -1.1
baz=322
G47A Hillman 77.74 36 P P 11 13 49.7 -0.5
baz=324
DRGR 77.79 327 P P 11 13 50.0 -0.5
DRGR pmax pmax
comp=Z,143nm,1.1s
VYHS Vyhne 77.81 330 eP P 11 13 50.5 -0.1
VYHS pmax pmax
comp=Z,47nm,1.1s
VYHS Vyhne 77.81 330 eP P 11 13 50.5 -0.1
VLDQ Val d'Or 77.83 31 eP P 11 13 49.2 -1.4
comp=Z,36nm,0.9s
VRAC Vranov 77.90 331 eP P 11 13 51.1 +0.1
JAVC Velka Javorina 77.91 331 eP P 11 13 52.0 +0.8
PSZ Piszkesteto 77.92 329 eP P 11 13 51.3 +0.1
comp=Z,97nm,1.1s
PSZ Piszkesteto 77.92 329 eP P 11 13 51.3 +0.1
PSZ pmax pmax
comp=Z,97nm,1.1s
L43A Garden Prairie 77.95 41 P P 11 13 50.7 -0.7
baz=322
GOPC GO Pecny, Ondr 77.97 333 eP P 11 13 51.0 -0.4
GOPC GO Pecny, Ondr 77.97 333 eP P 11 13 51.0 -0.4
PRU Pruhonice 77.99 333 eP P 11 13 51.2 -0.3
PRU e 11 14 00.0
PRU Pruhonice 77.99 333 eP P 11 13 51.2 -0.3
PRU epP PcP 11 14 00.0 -1.1
E50A Wahnapitae 77.99 34 P P 11 13 50.3 -1.3
baz=326
F49A Sandfield 78.01 35 P P 11 13 50.6 -1.0
baz=325,SNR=6.7
I46A Reed City 78.05 38 P P 11 13 51.6 -0.4
baz=323
H47A Mio 78.06 37 P P 11 13 51.1 -0.9
baz=324
N41A Harden Midland 78.09 43 eP P 11 13 51.2 -1.0
comp=Z,62nm,0.8s
N41A Harden Midland 78.09 43 P P 11 13 51.7 -0.5
baz=321,SNR=6.2
KRUC Moravsky 78.18 331 eP P 11 13 52.5 -0.1
TREC Trest 78.28 332 eP P 11 13 53.0 -0.2
TREC e 11 14 01.8
TREC Trest 78.28 332 eP P 11 13 53.0 -0.2
TREC epP PcP 11 14 01.8 -0.6
MOX Moxa 78.32 335 P P 11 13 53.6 +0.3
MOX pmax pmax
comp=Z,54nm,1.2s
H48A Harrisville 78.34 36 eP P 11 13 53.1 -0.5
comp=Z,39nm,0.6s
H48A Harrisville 78.34 36 P P 11 13 52.7 -0.9
baz=324
E51A G1948 Merrick 78.39 33 P P 11 13 52.4 -1.3
baz=326,SNR=5.2
I47A Gladwin 78.39 37 eP P 11 13 53.6 -0.2
comp=Z,34nm,1.0s
I47A Gladwin 78.39 37 P P 11 13 53.4 -0.4
baz=324
WMOK Wichita Mounta 78.43 52 eP P 11 13 54.0 -0.3
comp=Z,5.4nm,0.8s
WMOK Wichita Mounta 78.43 52 eP P 11 13 54.0 -0.3
WMOK pmax pmax
comp=Z,5.0nm,0.8s
WMOK Wichita Mounta 78.43 52 P P 11 13 53.9 -0.3
baz=318
D52A ZEK Kipawa Sen 78.43 32 P P 11 13 52.9 -1.1
baz=327
M43A Waltham Townsh 78.43 42 P P 11 13 53.5 -0.6
baz=322
NKC Novy Kostel 78.43 334 eP P 11 13 53.5 -0.5
NKC Novy Kostel 78.43 334 eP P 11 13 53.5 -0.5
MODS Modra-Piesok 78.47 331 eP P 11 13 53.6 -0.6
MODS pmax pmax
comp=Z,117nm,1.1s
MODS Modra-Piesok 78.47 331 eP P 11 13 53.5 -0.6
WTSB Winterswijk 78.48 338 eP P 11 13 53.5 -0.6
comp=Z,124nm,0.7s
BR101 Keskin Array S 78.57 316 eP P 11 13 55.5 +0.4
BR131 Keskin Array S 78.57 316 eP P 11 13 55.1 0.0
comp=Z,50nm,1.0s
BRTR Keskin Array B 78.57 316 P P 11 13 55.5 +0.4
comp=Z,47nm,1.1s,baz=79,slow=4.6,SNR=11
SRO Srobarova 78.58 330 eP P 11 13 55.3 +0.6
SRO Srobarova 78.58 330 eP P 11 13 55.3 +0.6
I48A Sherman Twp 78.60 37 P P 11 13 54.5 -0.5
baz=324
D53A Lac Vacive, Po 78.61 32 eP P 11 13 54.4 -0.6
comp=Z,15nm,0.8s
D53A Lac Vacive, Po 78.61 32 P P 11 13 53.9 -1.1
baz=327
TOBO Tobermory, Bru 78.66 35 P P 11 13 54.2 -1.1
baz=325
ZST Bratislava 78.68 331 eP P 11 13 54.9 -0.4
ZST Bratislava 78.68 331 eP P 11 13 54.9 -0.4
N43A Stutzman Famil 78.72 42 P P 11 13 55.0 -0.7
baz=321,SNR=5.5
ANTO Ankara 78.88 316 eP P 11 13 56.2 -0.4
comp=Z,105nm,1.0s
ANTO Ankara 78.88 316 eP P 11 13 56.3 -0.4
ANTO pmax pmax
comp=Z,105nm,1.0s
J47A Sunmer 78.88 38 eP P 11 13 55.7 -0.9
comp=Z,53nm,1.0s
J47A Sunmer 78.88 38 P P 11 13 56.8 +0.2
baz=324
M44A Midewin, Midew 78.90 41 eP P 11 13 55.9 -0.7
comp=Z,38nm,0.9s
M44A Midewin, Midew 78.90 41 P P 11 13 55.8 -0.8
baz=322
K46A Dorr 78.90 39 P P 11 13 55.7 -0.9
baz=323
BR231 Keskin MP Arra 78.91 316 eP P 11 13 56.2 -0.7
comp=Z,113nm,1.0s
E52A Mattawa 78.91 33 P P 11 13 54.8 -1.8
baz=327
D54A Lac Fusel, La 78.93 31 P P 11 13 55.5 -1.2
baz=328
HDIL Hopedale 78.96 42 eP P 11 13 56.6 -0.4
comp=Z,80nm,0.8s
HDIL Hopedale 78.96 42 P P 11 13 56.5 -0.4
baz=321,SNR=6.2
KHC Kasperske Hory 79.04 333 eP P 11 13 57.5 +0.1
comp=Z,47nm,1.0s
KHC Kasperske Hory 79.04 333 eP P 11 13 57.5 +0.1
KHC pmax pmax
comp=Z,47nm,1.0s
KHC Kasperske Hory 79.04 333 eP P 11 13 57.3 -0.1
F52A Sundridge 79.06 33 P P 11 13 56.3 -1.2
baz=326
KLBO Killbear Provi 79.08 34 P P 11 13 56.5 -1.0
baz=326
I49A Point Hope 79.17 36 eP P 11 13 57.5 -0.6
comp=Z,36nm,0.8s
I49A Point Hope 79.17 36 P P 11 13 57.5 -0.6
baz=325
TUL1 Leonard 79.20 49 P P 11 13 57.9 -0.5
baz=319
L46A Eue Claire 79.21 40 P P 11 13 57.6 -0.8
baz=323
E53A Dumoine, Ponti 79.21 32 P P 11 13 56.9 -1.4
baz=327
GEC2 GERESS Array S 79.25 333 eP P 11 13 57.8 -0.8
comp=Z,27nm,0.7s
GEC2 GERESS Array S 79.25 333 eP P 11 13 57.8 -0.8
GEC2 pmax pmax
comp=Z,27nm,0.7s
GERES GERESS Array B 79.25 333 P P 11 13 58.0 -0.6
comp=Z,20nm,0.7s,baz=38,slow=5.9,SNR=15
K47A Vermontville 79.26 39 P P 11 13 58.2 -0.5
baz=324
M45A Boilermakers S 79.26 41 P P 11 13 57.9 -0.7
baz=322
GRA1 Grafenberg Arr 79.28 335 eP P 11 13 58.4 -0.2
comp=Z,138nm,1.1s
GRF Grafenberg Arr 79.28 335 eP P 11 13 58.4 -0.2
GRF pmax pmax
comp=Z,138nm,1.1s
GRFO Grafenberg 79.28 335 eP P 11 13 58.6 0.0
comp=Z,60nm,0.7s
GRFO Grafenberg 79.28 335 eP P 11 13 58.6 0.0
GRFO pmax pmax
comp=Z,60nm,0.7s
J48A Bridge Port 79.28 37 P P 11 14 00.4 +1.7
baz=324
BMRO Meriville Lake 79.30 35 P P 11 13 57.7 -1.1
baz=325
N44A Piper City 79.32 42 P P 11 13 58.3 -0.7
baz=322
BUKO Buck Lake 79.33 34 P P 11 13 57.8 -1.2
baz=326
CONA Conrad Observa 79.33 331 i P P 11 13 59.3 +0.3
comp=Z,49nm,0.8s,SNR=5.5
E54A Lac Daplat, Po 79.34 32 P P 11 13 57.8 -1.2
baz=328
ALGO Algonquin Park 79.42 32 P P 11 13 58.1 -1.3
baz=327
ABTX Abilene, Hawle 79.49 54 P P 11 13 59.5 -0.6
baz=317
LTX Lajitas 79.50 59 eP P 11 14 01.1 +0.9
LTX eP KPKPbc **PKKPbc 11 32 49.7 +3.2**
LTX Lajitas 79.50 59 eP P 11 14 01.2 +0.9
TXAR Lajitas Array 79.50 59 P P 11 14 01.2 +0.9
comp=Z,5.5nm,0.6s,baz=295,slow=3.2,SNR=7.2
TXAR PKKPbc **PKKPbc 11 32 49.7 +3.2**
comp=Z,0.5nm,0.8s,baz=132,slow=4.0,SNR=5.0
BRCO Bruce Peninsul 79.50 35 P P 11 13 59.2 -0.6
baz=325
K48A Perry 79.54 38 P P 11 13 59.2 -0.9
baz=324
P43A Skaggs, Pawnee 79.56 43 P P 11 13 59.5 -0.8
baz=321
N45A Kentland 79.57 41 P P 11 13 59.8 -0.5
baz=322
BASO Ashfield 79.60 36 P P 11 13 59.6 -0.9
baz=325
BMOL Mol 79.61 339 P P 11 14 00.2 -0.1
M46A Old House Fiel 79.66 40 P P 11 14 00.2 -0.6
baz=323
O44A Mansfield 79.67 42 P P 11 14 00.2 -0.7
baz=322
L47A Sherwood 79.73 39 P P 11 14 00.3 -0.9
baz=323
BWLO Walkerton 79.73 35 P P 11 14 00.5 -0.6
baz=326
H52A Wyevale 79.80 34 P P 11 14 00.7 -0.8
baz=326
HGN Heimansgroeve 79.80 338 eP P 11 14 00.9 -0.4
comp=Z,96nm,0.8s
BEBN Eben Emael 79.84 339 P P 11 14 01.2 -0.4
K49A Clarkson 79.84 38 P P 11 14 01.3 -0.5
baz=324
N46A Monticello 79.89 41 P P 11 14 01.1 -0.9
baz=323
G53A Haliburton 79.90 33 P P 11 14 01.1 -0.9
baz=327
MEM Membach 79.92 338 P P 11 14 01.6 -0.5
MEM Membach 79.92 338 P P 11 14 01.6 -0.5
CCM Cathedral Cave 79.94 45 P P 11 14 02.0 -0.4
baz=321
MOA Molln 79.94 332 eP P 11 14 02.0 -0.2
comp=Z,25nm,0.8s
O45A Potomac 79.94 42 P P 11 14 02.0 -0.4
baz=322,SNR=7.5
BLCH La Chartreuse 80.00 339 P P 11 14 02.4 -0.1
M47A Cromwell 80.03 40 P P 11 14 02.2 -0.6
baz=323
I51A Listowel 80.03 35 P P 11 14 02.4 -0.4
baz=326
ARSA Arzberg 80.03 331 eP P 11 14 02.7 -0.1
comp=Z,39nm,1.2s
BSTI Sart Tilman 80.06 339 P P 11 14 02.7 -0.1
DSB Dublin 80.09 346 eP P 11 14 02.6 -0.3
comp=Z,70nm,1.1s
L48A N Adams 80.09 39 P P 11 14 02.7 -0.5
baz=324
LATQ La Tuque 80.09 29 P P 11 14 02.1 -0.9
baz=330
SFIN Lafayette 80.13 41 eP P 11 14 03.1 -0.3
comp=Z,25nm,0.9s
SFIN Lafayette 80.13 41 P P 11 14 02.8 -0.6
baz=323
BHOU Houvegnez 80.16 338 P P 11 14 02.3 -1.1
F55A Otter Lake 80.16 32 P P 11 14 01.9 -1.5
baz=328
UCC Uccle 80.17 339 P P 11 14 02.6 -0.7
K50A Casco 80.21 37 eP P 11 14 02.0 -1.7
comp=Z,38nm,1.0s
K50A Casco 80.21 37 P P 11 14 02.7 -1.0
baz=325
BANO Bancroft 80.25 33 P P 11 14 03.0 -1.0
baz=327,SNR=5.2
L49A Milan 80.25 38 P P 11 14 03.4 -0.6
baz=324
FRGS Fruska Gora 80.27 327⇑ i P P 11 14 03.4 -0.7
BCLA Clavier 80.28 339 P P 11 14 03.6 -0.4
comp=Z,59nm,1.3s
M48A Edgerton 80.34 39 P P 11 14 03.8 -0.7
baz=324
LKLB Kalborn 80.36 338 P P 11 14 05.7 +1.3
BGES Gesves 80.37 339 P P 11 14 03.9 -0.6
BSKQ Steenkerk 80.38 339 P P 11 14 03.8 -0.7
N47A Urbana 80.38 40 P P 11 14 03.6 -1.1
baz=323
BRQR Ronquire 80.38 339 P P 11 14 04.2 -0.3
FVM French Village 80.40 45 eP P 11 14 04.3 -0.6
comp=Z,31nm,1.0s
FVM French Village 80.40 45 eP P 11 14 04.3 -0.6
FVM pmax pmax
comp=Z,31nm,1.0s
U40A Yellville 80.42 47 P P 11 14 04.3 -0.7
baz=320,SNR=6.5
SNF Seneffe 80.46 339 P P 11 14 04.3 -0.6
P45A Graceland, Par 80.50 42 eP P 11 14 04.9 -0.4
comp=Z,34nm,0.9s
P45A Graceland, Par 80.50 42 P P 11 14 04.7 -0.6
baz=322,SNR=6.6
G55A Calabogie 80.51 32 P P 11 14 04.1 -1.3
baz=328
BMRD Maredsous 80.53 339 P P 11 14 04.8 -0.4
comp=Z,73nm,1.2s
PLVO Plevna 80.56 32 P P 11 14 04.6 -1.0
baz=328,SNR=5.3
ACTO Acton 80.59 35 P P 11 14 05.0 -0.8
baz=326
I53A Kortright Cn E 80.60 35 P P 11 14 05.3 -0.5
baz=326
BBOU Bougnies 80.65 339 P P 11 14 06.0 0.0
M49A Liberty Center 80.67 39 P P 11 14 05.7 -0.5
baz=324
O47A Sheridan 80.67 41 P P 11 14 05.5 -0.8
baz=323
P46A Rosedale 80.68 42 P P 11 14 05.9 -0.4
baz=323,SNR=8.4
SOKA Soboth 80.70 331 i P P 11 14 06.0 -0.4
comp=Z,67nm,1.1s,SNR=6.9
N48A Decatur 80.70 40 P P 11 14 05.9 -0.5
baz=324,SNR=5.3
STU Stuttgart 80.70 336 eP P 11 14 05.8 -0.5
comp=Z,70nm,1.1s
STU Stuttgart 80.70 336 eP P 11 14 05.8 -0.5
STU pmax pmax
comp=Z,70nm,1.1s
PERS Pernice 80.71 331 i P P 11 14 06.0 -0.5
K51A Iona Station 80.72 36 P P 11 14 06.0 -0.5
baz=326
J52A Paris 80.72 35 P P 11 14 05.4 -1.1
baz=326
L50A Kingsville 80.72 38 P P 11 14 05.5 -1.0
baz=325
DOU Dourbes 80.76 339 P P 11 14 05.8 -0.7
comp=Z,21nm,1.2s
DELO Deloro Mine 80.79 33 eP P 11 14 05.9 -1.0
comp=Z,16nm,1.0s
DELO Deloro Mine 80.79 33 P P 11 14 05.7 -1.1
baz=328
ORIO Orleans, Innes 80.79 31 P P 11 14 05.5 -1.3
baz=329
Q45A Warren Harvey, 80.80 43 P P 11 14 06.8 -0.2
baz=322,SNR=5.5
W39A Magazine 80.81 49 P P 11 14 06.5 -0.6
baz=320
DRWO Darlington Wes 80.90 34 P P 11 14 06.8 -0.6
baz=327
DRCO St. Marys Ceme 80.91 34 P P 11 14 06.7 -0.8
baz=327
KBA Koelnbreinsper 80.92 332 i P P 11 14 07.6 -0.1
comp=Z,70nm,0.9s,SNR=6.8
H55A Tweed 80.93 33 P P 11 14 06.6 -1.0
baz=328,SNR=5.1
OLIL Olney 80.96 43 eP P 11 14 07.2 -0.6
comp=Z,25nm,0.8s
JCT Junction City 80.97 56 P P 11 14 07.8 -0.3
baz=318
WLVO Wesleyville 80.99 34 P P 11 14 07.0 -0.9
baz=327
K52A Tillsonburg 81.00 36 P P 11 14 07.3 -0.7
baz=326
OBKA Obir 81.01 331 eP P 11 14 07.5 -0.6
comp=Z,20nm,0.8s
VTS Vitosha 81.02 324 eP P 11 14 08.8 +0.5
comp=Z,189nm,1.1s
VTS Vitosha 81.02 324 eP P 11 14 08.8 +0.5
VTS pmax pmax
comp=Z,189nm,1.1s
I55A Frankford 81.02 33 P P 11 14 06.8 -1.2
baz=328
N49A Columbus Grove 81.03 39 P P 11 14 07.6 -0.5
baz=324
PLIO Pelee Island, 81.04 38 P P 11 14 07.5 -0.7
baz=325
Q46A CEJHS Indians, 81.08 42 P P 11 14 07.9 -0.6
baz=323
TYNO Tyneside 81.09 35 P P 11 14 07.6 -0.9
baz=326
DIVS Divibare 81.09 327⇑ i P P 11 14 07.5 -1.1
O48A Farmland 81.12 40 P P 11 14 08.0 -0.7
baz=324
M50A Fremont 81.14 38 P P 11 14 08.1 -0.7
baz=325
WHTX Lake Whitney, 81.20 53 P P 11 14 08.8 -0.4
baz=318
S44A Carbondale 81.21 44 P P 11 14 08.8 -0.3
baz=322,SNR=9.1
SIUC Southern Illin 81.21 44 eP P 11 14 09.4 +0.2
comp=Z,59nm,0.9s
MYKA Terra Mystica 81.21 332 eP P 11 14 08.1 -1.1
comp=Z,30nm,1.1s
ALN Alexandroupoli 81.21 321 eP P 11 14 09.4 +0.3
comp=Z,58nm,1.1s
R45A Skylar, Fairfi 81.22 43 P P 11 14 08.8 -0.4
baz=322
P47A Martinsville 81.23 41 P P 11 14 08.8 -0.5
baz=323
H56A Elgin 81.25 32 P P 11 14 08.2 -1.0
baz=328
WATA Walderalm 81.26 333 eP P 11 14 08.9 -0.6
comp=Z,35nm,0.6s,SNR=6.3
STCO Saint Catharin 81.28 35 P P 11 14 08.8 -0.6
baz=327
CRES Cresnjev 81.29 330⇑ i P P 11 14 08.5 -1.0
WTTA Wattenberg 81.31 333 eP P 11 14 09.7 0.0
comp=Z,95nm,1.1s,SNR=8.0
PBMO Poplar Bluff 81.33 46 eP P 11 14 10.1 +0.3
comp=Z,22nm,0.8s
BFO Black Forest 81.35 336 eP P 11 14 08.8 -1.0
comp=Z,56nm,1.0s
BFO Black Forest 81.35 336 eP P 11 14 08.8 -1.0
BFO pmax pmax
comp=Z,56nm,1.0s
RETA Reutte 81.38 334 eP P 11 14 09.8 -0.2
comp=Z,42nm,1.1s
MOTA Moosalm 81.40 334 eP P 11 14 10.0 -0.3
comp=Z,66nm,0.9s,SNR=8.7
MIAR Mount Ida 81.41 49 P P 11 14 10.2 -0.1
baz=320
LJU Ljubljana 81.42 331⇑ i P P 11 14 08.8 -1.4
J54A Appleton 81.44 34 eP P 11 14 10.1 -0.2
comp=Z,43nm,0.9s
J54A Appleton 81.44 34 P P 11 14 09.5 -0.8
baz=327
SQTA Sankt Quirin 81.48 334 eP P 11 14 10.4 -0.2
comp=Z,72nm,1.1s,SNR=6.2
ABTA Abfaltersbach 81.48 333 eP P 11 14 09.4 -1.1
comp=Z,33nm,1.1s
HAPS Han Pijesak,Bl 81.50 327 eP P 11 14 09.6 -1.2
PECO Prince Edward 81.53 33 P P 11 14 09.4 -1.3
baz=328
VISS Visnje 81.53 331 i P P 11 14 09.5 -1.2
O49A Covington 81.55 40 P P 11 14 10.1 -0.9
baz=324
M51A Elyria 81.57 38 P P 11 14 10.0 -1.0
baz=325
Q47A Bedord North L 81.59 42 P P 11 14 10.9 -0.3
baz=323,SNR=6.4
BLY Banja Luka 81.60 329⇑ i P P 11 14 10.2 -0.9
MEDO Medina 81.60 34 P P 11 14 10.5 -0.6
baz=327
N50A Nevada 81.61 39 P P 11 14 10.9 -0.3
baz=325
W41B Gary Mavity, V 81.64 48 eP P 11 14 11.3 -0.1
comp=Z,21nm,0.8s
W41B Gary Mavity, V 81.64 48 P P 11 14 10.9 -0.6
baz=320
P48A Milroy 81.64 41 P P 11 14 10.8 -0.6
baz=324
BOJS Bojanci 81.64 330 i P P 11 14 10.6 -0.7
R46A Gibon Southern 81.65 43 P P 11 14 11.1 -0.4
baz=323
JAVS Javornik 81.71 331 i P P 11 14 10.3 -1.6
CEY Cerknica 81.72 331⇑ i P P 11 14 10.6 -1.2
M52A Chesterland 81.76 37 P P 11 14 11.7 -0.4
baz=326
J55A Hilton 81.77 34 eP P 11 14 11.3 -0.8
comp=Z,43nm,0.9s
J55A Hilton 81.77 34 P P 11 14 11.4 -0.6
baz=328
USIN University of 81.77 43 eP P 11 14 12.6 +0.5
comp=Z,35nm,0.8s
ECH Echery 81.79 337 eP P 11 14 11.6 -0.5
comp=Z,50nm,1.0s
ECH Echery 81.79 337 eP P 11 14 11.6 -0.5
ECH pmax pmax
comp=Z,51nm,1.0s
FETA Feichten 81.81 334 eP P 11 14 12.2 -0.2
comp=Z,42nm,1.2s
N51A Ashland 81.83 38 P P 11 14 11.8 -0.6
baz=325
DAVA Damuels 81.83 334 eP P 11 14 12.0 -0.5
comp=Z,44nm,1.1s
LONY Lake Ozonia 81.85 31 P P 11 14 11.4 -1.1
baz=329
ERPA Erie 81.85 36 P P 11 14 11.8 -0.7
baz=326
X40A Basin Creek Fa 81.85 49 P P 11 14 12.4 -0.2
baz=320
L53A Girard 81.88 36 P P 11 14 12.3 -0.3
baz=326,SNR=7.0
P49A Miami Univ. Ec 81.91 40 P P 11 14 12.3 -0.5
baz=324
O50A Cable 81.91 39 P P 11 14 12.5 -0.4
baz=324,SNR=5.1
MGRS Mrkonjic Grad 81.92 329 eP P 11 14 12.8 -0.1
Q48A North Vernon 81.92 41 P P 11 14 12.7 -0.2
baz=324
S46A Don Dixon Farm 81.97 43 P P 11 14 12.9 -0.3
baz=322
K54A Basiliko Farm, 81.97 35 P P 11 14 12.6 -0.6
baz=327,SNR=6.3
435B Jarrell 82.03 54 P P 11 14 13.4 -0.2
baz=318
L54A Sinclairville 82.03 35 P P 11 14 13.1 -0.4
baz=327
R47A Wooly Knot Far 82.05 42 P P 11 14 13.3 -0.3
baz=323,SNR=6.4
RIY Rijeka 82.06 331⇑ i P P 11 14 12.1 -1.5
MOQ Mont Orford 82.08 29 eP P 11 14 12.8 -0.9
ACSO Alum Creek Sta 82.12 39 P P 11 14 13.4 -0.5
baz=325
K55A Perry 82.12 34 P P 11 14 13.3 -0.7
baz=328,SNR=7.1
M53A WI Miller and 82.13 37 P P 11 14 13.7 -0.3
baz=326
ALLY Alegheny Colle 82.18 36 eP P 11 14 13.7 -0.5
comp=Z,49nm,1.0s
MMNY Mt. Morris Dam 82.18 34 eP P 11 14 13.3 -0.9
comp=Z,38nm,0.9s
N52A McGinn's Farm, 82.21 38 P P 11 14 13.8 -0.7
baz=326
WCI Wyandotte Cave 82.22 42 eP P 11 14 13.2 -1.3

comp=Z,35nm,0.9s
WCI **Wyandotte Cave** 82.22 42 eP P 11 14 13.2 -1.3
WCI pmax pmax
comp=Z,35nm,0.9s
WCI **Wyandotte Cave** 82.22 42 P P 11 14 14.2 -0.3
baz=323
Q49A **Aurora** 82.25 41 P P 11 14 14.4 -0.3
baz=324
P50A **Jamestown** 82.26 40 P P 11 14 14.3 -0.4
baz=324
R48A **Northridge Ran** 82.28 42 P P 11 14 14.8 0.0
baz=323
FUORN **Ofenpass-Fuorn** 82.31 334 eP P 11 14 15.2 0.0
comp=Z,56nm,1.0s
T46A **Princeton** 82.39 44 P P 11 14 15.6 +0.2
baz=322,SNR=6.9
L55A **Hinsdale** 82.43 35 P P 11 14 14.9 -0.7
baz=327
S47A **Hartford** 82.44 43 P P 11 14 15.3 -0.4
baz=323
M54A **Oil Creek Stat** 82.49 36 eP P 11 14 15.2 -0.7
comp=Z,32nm,0.9s
M54A **Oil Creek Stat** 82.49 36 P P 11 14 15.2 -0.7
baz=327
NCB **Newcomb** 82.53 31 eP P 11 14 15.4 -0.7
comp=Z,21nm,0.9s
N53A **Lisbon** 82.58 37 P P 11 14 15.9 -0.5
baz=326
R49A **Shelbyville** 82.70 41 P P 11 14 16.8 -0.2
baz=324
P51A **Williamsport** 82.70 39 P P 11 14 16.5 -0.5
baz=325
O52A **Adamsville** 82.72 38 P P 11 14 15.5 -1.6
baz=326
TUE **Stuetta** 82.72 334 eP P 11 14 16.4 -0.9
comp=Z,54nm,1.1s
S48A **Wiedeman Farm,** 82.79 42 P P 11 14 17.2 -0.3
baz=323,SNR=5.1
PDG **Podgorica** 82.79 326⇑ iP P 11 14 16.4 -1.0
TTG **Podgorica** 82.79 326 eP P 11 14 15.8 -1.6
comp=Z,83nm,1.0s
TTG **Podgorica** 82.79 326 eP P 11 14 15.8 -1.6
TTG pmax pmax
comp=Z,83nm,1.0s
U46A **Springville** 82.79 44 P P 11 14 17.1 -0.4
baz=322
833A **Chaparral WMA,** 82.79 57 P P 11 14 17.7 0.0
baz=318
Q50A **Georgetown** 82.80 40 P P 11 14 17.1 -0.4
baz=324
Z41A **Richland Creek** 82.81 49 P P 11 14 17.6 -0.1
baz=320
N54A **Moraine State** 82.81 36 eP P 11 14 17.6 0.0
comp=Z,37nm,0.9s
N54A **Moraine State** 82.81 36 P P 11 14 17.2 -0.4
baz=326
T47A **Sharon Grove** 82.82 43 P P 11 14 17.7 +0.1
baz=323
X43A **Marvell** 82.86 47 P P 11 14 17.8 0.0
baz=321
O53A **New Philadelph** 82.88 38 P P 11 14 16.4 -1.5
baz=326
TREB **Trebinje** 82.90 327 eP P 11 14 16.1 -1.9
M55A **Ridgway** 82.90 35 P P 11 14 17.4 -0.7
baz=327
NATX **Nacogdoches** 82.94 52 P P 11 14 18.6 +0.2
baz=320
Q51A **Peebles** 82.94 40 P P 11 14 17.4 -0.9
baz=325
P52A **Corning** 82.99 39 P P 11 14 17.9 -0.6
baz=325
STON **Ston** 83.02 327⇑ iP P 11 14 16.3 -2.2
S49A **Springfield** 83.05 42 P P 11 14 18.7 -0.1
baz=324
T48A **Bowling Green** 83.06 43 P P 11 14 18.4 -0.5
baz=323
HCY **Herceg Novi** 83.07 327 eP P 11 14 17.2 -1.7
R50A **Paris** 83.10 41 P P 11 14 18.7 -0.4
baz=324
PKME **Peaks-Kenny Pk** 83.11 27 P P 11 14 18.7 -0.3
baz=333
M56A **Emporium** 83.12 35 P P 11 14 18.5 -0.7
baz=328
LBNH **Lisbon** 83.12 30 P P 11 14 18.3 -0.8
baz=331
WVT **Waverly** 83.14 44 eP P 11 14 18.7 -0.7
comp=Z,26nm,0.8s
WVT **Waverly** 83.14 44 eP P 11 14 18.7 -0.7
WVT pmax pmax
comp=Z,26nm,0.8s
WVT **Waverly** 83.14 44 P P 11 14 19.1 -0.3
baz=323
U47A **Clarksville** 83.16 44 P P 11 14 19.3 -0.2
baz=323
ACCN **Adirondack Com** 83.25 31 eP P 11 14 18.9 -0.9
comp=Z,18nm,0.9s
V46A **Holladay** 83.26 45 P P 11 14 19.6 -0.4
baz=322,SNR=5.8
CLF **Chambon-Foret** 83.26 340 eP P 11 14 19.6 -0.1
comp=Z,58nm,1.0s
O54A **Avella** 83.30 37 P P 11 14 19.9 -0.1
baz=326
FNA **Florina** 83.31 324 eP P 11 14 19.2 -1.0
comp=Z,58nm,1.1s
FNA **Florina** 83.31 324 eP P 11 14 19.2 -1.0
FNA pmax pmax
comp=Z,58nm,1.1s
N55A **Marion Center** 83.38 36 eP P 11 14 20.2 -0.4
comp=Z,39nm,1.1s
N55A **Marion Center** 83.38 36 P P 11 14 19.8 -0.8
baz=327
BINY **Binghamton** 83.39 33 P P 11 14 19.4 -1.2
baz=329
R51A **Hillsboro** 83.42 40 P P 11 14 20.4 -0.4
baz=325
SENIN **Lac Senin/Sane** 83.43 336 eP P 11 14 20.7 -0.2
comp=Z,28nm,0.9s
P53A **Whipple** 83.43 38 P P 11 14 20.2 -0.6
baz=326
U48A **Cassie Pea, Po** 83.47 43 P P 11 14 20.7 -0.3
baz=323
Q52A **Bidwell** 83.48 39 P P 11 14 20.3 -0.8
baz=325
T49A **Edmonton** 83.48 42 P P 11 14 20.9 -0.2
baz=324
V47A **Nunnelly** 83.53 44 P P 11 14 21.1 -0.3
baz=323,SNR=6.1
S50A **Richmond** 83.55 41 P P 11 14 21.2 -0.2
baz=324
N56A **West Decatur** 83.55 35 P P 11 14 20.9 -0.6
baz=328
NWAO **Narrogin (SRO)** 83.59 208 P P 11 14 22.8 +1.5
comp=Z,14nm,0.9s,baz=110,slow=1.4,SNR=3.5
OXF **Oxford** 83.62 46 P P 11 14 21.5 -0.3
baz=322
W46A **Michie** 83.65 45 P P 11 14 21.7 -0.3
baz=322
O55A **Ligonier** 83.73 36 P P 11 14 21.8 -0.5
baz=327
R52A **Catlettsburg** 83.82 40 P P 11 14 22.2 -0.6
baz=325
U49A **Red Boiling Sp** 83.83 43 P P 11 14 22.7 -0.2
baz=324,SNR=5.8
T50A **Nancy** 83.88 42 P P 11 14 22.9 -0.2
baz=324,SNR=5.6
Q53A **Leroy** 83.89 39 P P 11 14 22.9 -0.2
baz=326
PLAL **Pickwick Lake** 83.92 45 eP P 11 14 23.1 -0.3
comp=Z,15nm,0.8s
V48A **Smith Brothers** 83.95 44 eP P 11 14 23.2 -0.3
comp=Z,16nm,0.8s
V48A **Smith Brothers** 83.95 44 P P 11 14 22.9 -0.6
baz=323
W47A **Westpoint** 83.95 45 P P 11 14 23.3 -0.3
baz=323
S51A **Beattyville** 83.95 41 P P 11 14 22.9 -0.6
baz=325
SSPA **Standing Stone** 83.96 35 eP P 11 14 23.1 -0.3
MCWV **Mont Chateau** 83.96 37 P P 11 14 23.6 +0.1
baz=327
LMN **Caledonia Moun** 83.97 24 eP P 11 14 23.1 -0.3
comp=Z,32nm,1.0s
O56A **Blue Knob Stat** 83.99 36 eP P 11 14 22.9 -0.8
comp=Z,19nm,0.8s
O56A **Blue Knob Stat** 83.99 36 P P 11 14 23.2 -0.5
baz=327
N57A **Milroy** 83.99 35 P P 11 14 23.2 -0.5
baz=328,SNR=6.4

X46A **Booneville** 84.00 46 P P 11 14 23.1 -0.7
baz=322
P55A **Reedsville** 84.09 37 P P 11 14 24.2 0.0
baz=327,SNR=5.3
Q54A **Coxs Mills** 84.09 38 P P 11 14 24.3 +0.1
baz=326
R53A **Hurricane** 84.14 39 P P 11 14 24.1 -0.3
baz=326
T51A **Gray** 84.34 41 P P 11 14 25.1 -0.4
baz=325
U50A **Jamestown** 84.36 42 P P 11 14 25.4 -0.2
baz=324
W48A **Pulaski** 84.37 44 P P 11 14 25.4 -0.3
baz=323
V49A **McMinnville** 84.37 43 P P 11 14 25.4 -0.3
baz=324
X47A **Russelville** 84.40 45 P P 11 14 25.3 -0.6
baz=323
Q55A **Buckhannon** 84.41 38 P P 11 14 25.4 -0.4
baz=327
O57A **Amberson** 84.42 35 P P 11 14 25.3 -0.5
baz=328
P56A **Dayton Farm, R** 84.51 37 P P 11 14 26.3 +0.1
baz=327,SNR=7.0
N59A **State Game Lan** 84.57 34 P P 11 14 26.3 -0.2
baz=329
T52A **Hallie** 84.67 41 P P 11 14 27.2 +0.1
baz=325
R54A **Victor** 84.69 39 P P 11 14 27.0 -0.2
baz=326
W49A **Belvidere** 84.72 44 P P 11 14 27.0 -0.4
baz=324
HRV **Adam Dziewonsk** 84.77 30 P P 11 14 27.0 -0.5
baz=331
PAGS **Pennsylvania G** 84.78 35 eP P 11 14 27.4 -0.1
comp=Z,33nm,1.0s
U51A **La Follette** 84.78 42 P P 11 14 27.4 -0.4
baz=325
V50A **Pikevile** 84.84 43 P P 11 14 27.7 -0.3
baz=324
S54A **Dingess, Beckl** 84.86 39 P P 11 14 27.7 -0.5
baz=326
X48A **Hartselle** 84.86 45 eP P 11 14 27.9 -0.2
comp=Z,16nm,0.9s
X48A **Hartselle** 84.86 45 P P 11 14 27.2 -0.9
baz=323
TZTN **Tazewell** 84.87 41 P P 11 14 28.0 -0.1
baz=325
P57A **Homestead Farm** 84.88 36 P P 11 14 27.6 -0.5
baz=328
O59A **Robesonia** 84.92 34 P P 11 14 27.8 -0.5
baz=329
T53A **Wise** 84.98 40 P P 11 14 28.5 -0.2
baz=325
AQU **L'Aquila** 85.04 330⇑ iP P 11 14 28.8 -0.2
U52A **Thorn Hill** 85.07 41 P P 11 14 29.1 -0.1
baz=325,SNR=5.1
Q57A **Strasburg** 85.09 36 P P 11 14 28.8 -0.4
baz=328
V51A **Loudon** 85.09 42 P P 11 14 29.1 -0.2
baz=324,SNR=5.9
W50A **Signal Mountai** 85.11 43 P P 11 14 28.9 -0.6
baz=324
X49A **Woodville** 85.17 44 P P 11 14 29.3 -0.4
baz=324,SNR=7.9
SSB **Saint Sauveur** 85.20 337 eP P 11 14 29.6 -0.1
comp=Z,49nm,1.0s
SSB **Saint Sauveur** 85.20 337 eP P 11 14 29.6 -0.1
SSB pmax pmax
comp=Z,49nm,1.0s
PAL **Palisades** 85.21 32 P P 11 14 29.5 -0.2
baz=330
O60A **Telford** 85.22 34 P P 11 14 29.0 -0.8
baz=329
Y48A **Jasper** 85.23 45 P P 11 14 29.1 -0.8
baz=323,SNR=5.9
S55A **Lewisburg** 85.24 39 P P 11 14 29.8 -0.3
baz=326
T54A **Tazewell** 85.35 40 P P 11 14 30.3 -0.4
baz=326
W51A **Cleveland** 85.41 43 P P 11 14 30.4 -0.5
baz=324
V52A **Sevierville** 85.42 42 P P 11 14 30.7 -0.2
baz=325
P59A **Jarrettsville** 85.42 35 P P 11 14 30.2 -0.6
baz=329
U53A **Fall Branch** 85.46 41 P P 11 14 31.0 -0.2
baz=325
X50B **Fort Payne** 85.54 44 P P 11 14 31.1 -0.5
baz=324,SNR=6.6
P60A **Greenville** 85.57 34 P P 11 14 31.2 -0.4
baz=329
Y49A **Blount Mountai** 85.65 45 eP P 11 14 31.6 -0.5
comp=Z,14nm,0.8s
Y49A **Blount Mountai** 85.65 45 P P 11 14 31.6 -0.5
baz=324
T55A **Pulaski** 85.66 39 P P 11 14 31.8 -0.3
baz=326
R57A **Stanardsville** 85.66 37 P P 11 14 31.1 -1.0
baz=328,SNR=5.5
U54A **Nelsons Funny** 85.68 40 P P 11 14 32.1 -0.2
baz=326
S56A **Natural Bridge** 85.73 38 P P 11 14 32.2 -0.2
baz=327
BLA **Blacksburg** 85.74 39 eP P 11 14 31.7 -0.9
comp=Z,33nm,0.9s
BLA **Blacksburg** 85.74 39 eP P 11 14 31.7 -0.9
BLA pmax pmax
comp=Z,33nm,0.9s
BLA **Blacksburg** 85.74 39 P P 11 14 32.0 -0.6
baz=326
O61A **Allentown** 85.75 33 P P 11 14 32.0 -0.4
baz=330
X51A **Calhoun** 85.85 43 P P 11 14 32.7 -0.4
baz=324
W52A **Murphy** 85.87 42 P P 11 14 32.9 -0.2
baz=325
R58A **Rapidan** 85.88 37 P P 11 14 32.9 -0.2
baz=328
V53A **Saluda** 85.92 41 P P 11 14 33.3 -0.2
baz=325
S57A **Dark Hollow, R** 85.93 38 eP P 11 14 33.3 0.0
comp=Z,18nm,1.0s
S57A **Dark Hollow, R** 85.93 38 P P 11 14 33.4 0.0
baz=327
Y50A **Piedmont** 85.96 44 P P 11 14 33.0 -0.6
baz=324
Q59A **Harwood** 85.96 35 P P 11 14 33.2 -0.3
baz=326
LRAL **Lakeview Retre** 86.01 46 P P 11 14 33.4 -0.5
baz=323
148A **Greensboro** 86.03 46 P P 11 14 33.6 -0.4
baz=323
U55A **TA2, Sparta** 86.05 40 P P 11 14 33.9 -0.3
baz=326
T56A **Rocky Mt** 86.07 39 P P 11 14 33.6 -0.5
baz=327
Z49A **Columbiana** 86.12 45 P P 11 14 33.9 -0.5
baz=323
W53A **Cullowhee** 86.17 42 P P 11 14 34.5 -0.2
baz=325
R58B **Mineral** 86.21 37 P P 11 14 34.1 -0.7
baz=328
V54A **Nebo** 86.24 41 P P 11 14 34.4 -0.6
baz=326
X52A **Dahlonega** 86.28 43 P P 11 14 35.1 -0.1
baz=325
Y51A **Rockmart** 86.28 44 P P 11 14 34.7 -0.5
baz=324,SNR=7.4
R59A **King George, V** 86.33 36 P P 11 14 35.5 +0.1
baz=328
Z50A **Ashland** 86.38 45 P P 11 14 35.3 -0.4
baz=324,SNR=8.4
T57A **Hurt** 86.43 38 P P 11 14 35.8 -0.1
baz=327
S58A **Poland Farm, P** 86.44 37 P P 11 14 35.6 -0.3
baz=328
149A **Jones** 86.47 46 P P 11 14 36.1 0.0
baz=323,SNR=5.5
U56A **King** 86.48 39 P P 11 14 35.7 -0.4
baz=326
R60A **Leonardtown, M** 86.50 36 P P 11 14 36.2 0.0
baz=329
V55A **Taylorsville** 86.51 40 P P 11 14 36.2 -0.1
baz=326
TIP **Timpagrande** 86.55 326 eP P 11 14 35.7 -0.8
comp=Z,40nm,1.1s
S59A **Mechanicsville** 86.63 36 P P 11 14 36.8 -0.1

baz=328
X53A **Estanollee** 86.64 42 P P 11 14 37.2 +0.2
baz=325,SNR=5.8
W54A **Cherokee Point** 86.69 41 P P 11 14 37.1 -0.1
baz=326
Z51A **Franklin** 86.70 44 P P 11 14 36.9 -0.4
baz=324
T58A **Grand View Acr** 86.79 38 P P 11 14 37.5 -0.2
baz=328
249A **Camden** 86.79 46 P P 11 14 38.2 +0.5
baz=323,SNR=6.2
Y52A **Lilburn** 86.80 43 P P 11 14 37.7 -0.1
baz=325
150A **Eclectic** 86.85 45 P P 11 14 37.8 -0.2
baz=324
U57A **Blanch** 86.87 39 P P 11 14 37.9 -0.2
baz=327
V56A **Mocksville** 86.87 40 P P 11 14 37.6 -0.5
baz=326
Y53A **Monroe** 87.04 43 P P 11 14 38.4 -0.5
baz=325
KMSC **Kings Mountain** 87.04 41 P P 11 14 38.5 -0.5
baz=326
X54A **Belton** 87.05 42 P P 11 14 39.0 0.0
baz=326
V57A **Coltrane Farms** 87.13 39 P P 11 14 38.9 -0.4
baz=327
Z52A **Williamson** 87.17 44 P P 11 14 39.2 -0.4
baz=324
T59A **Double "B" Far** 87.19 37 P P 11 14 39.3 -0.3
baz=328
250A **Grady** 87.23 46 eP P 11 14 40.5 +0.6
comp=Z,69nm,1.0s
250A **Grady** 87.23 46 P P 11 14 39.8 -0.1
baz=324,SNR=5.4
U58A **Oxford** 87.25 38 P P 11 14 39.4 -0.5
baz=328
349A **Repton** 87.25 47 P P 11 14 40.3 +0.3
baz=323
151A **Opelika** 87.26 45 P P 11 14 39.6 -0.4
baz=324
S61A **Accomac** 87.37 35 P P 11 14 40.6 +0.1
baz=329
W56A **Indian Trail** 87.39 40 P P 11 14 40.2 -0.3
baz=326
152A **Waverly Hall** 87.45 44 eP P 11 14 41.1 +0.2
comp=Z,20nm,0.9s
152A **Waverly Hall** 87.45 44 P P 11 14 40.1 -0.8
baz=324,SNR=5.4
GOGA **Godfrey** 87.46 43 P P 11 14 40.7 -0.2
baz=325
X55A **Gracelyn & Ava** 87.46 41 P P 11 14 40.8 -0.1
baz=326
Y54A **Tignall** 87.46 42 P P 11 14 40.9 -0.1
baz=325,SNR=6.7
BRAL **Brewton** 87.47 47 P P 11 14 41.5 +0.4
baz=323
V58A **Windy Hill, Pi** 87.50 39 P P 11 14 40.8 -0.3
baz=327
Z53A **Monticello** 87.51 43 P P 11 14 41.1 -0.1
baz=325
251A **Midway** 87.57 45 P P 11 14 40.9 -0.5
baz=324
U59A **Littleton** 87.61 38 P P 11 14 41.3 -0.3
baz=328
350A **Dozier** 87.64 46 P P 11 14 42.1 +0.3
baz=324
W57A **Gilead** 87.64 40 P P 11 14 41.6 -0.2
baz=327
449A **Pace** 87.71 47 P P 11 14 42.1 -0.1
baz=323
X56A **White Oak** 87.72 41 P P 11 14 42.0 -0.2
baz=326
U60A **Pendleton** 87.78 37 P P 11 14 42.1 -0.3
baz=328
Y55A **Saluda** 87.79 42 P P 11 14 42.3 -0.2
baz=326
153A **Fort Valley** 87.90 44 P P 11 14 43.0 0.0
baz=325
Z54A **Sparta** 87.90 43 P P 11 14 43.0 0.0
baz=325
V59A **Middlesex** 87.91 38 P P 11 14 42.9 -0.1
baz=328
252A **Lumpkin** 87.98 45 P P 11 14 42.9 -0.5
baz=324
W58A **Raeford** 88.10 39 P P 11 14 43.6 -0.3
baz=327
X57A **Johnson Farm,** 88.17 40 P P 11 14 43.4 -0.9
baz=327
U61A **Possum Corner** 88.20 37 P P 11 14 43.6 -0.9
baz=329
253A **Americus** 88.23 44 P P 11 14 44.4 -0.2
baz=325
Z55A **Blythe** 88.25 42 P P 11 14 44.8 +0.1
baz=326
154A **Montrose** 88.28 43 eP P 11 14 45.1 +0.2
comp=Z,87nm,1.0s
154A **Montrose** 88.28 43 P P 11 14 44.9 0.0
baz=325
352A **Blakely** 88.30 45 P P 11 14 44.9 -0.1
baz=324,SNR=5.9
X58A **Rowland** 88.44 40 P P 11 14 45.7 +0.1
baz=327
Z56A **Williston** 88.53 42 P P 11 14 46.3 +0.3
baz=326
155A **Kite** 88.58 43 P P 11 14 46.7 +0.4
baz=326
V61A **Roper** 88.61 37 P P 11 14 46.3 0.0
baz=329
452A **Marianna** 88.68 46 P P 11 14 46.7 0.0
baz=324
254A **Abbeville** 88.73 44 P P 11 14 47.5 +0.5
baz=325
W60A **Pink Hill** 88.74 38 P P 11 14 46.8 -0.1
baz=328
353A **Camilla** 88.76 45 P P 11 14 47.4 +0.3
baz=325
Y58A **Scranton** 88.83 40 P P 11 14 47.0 -0.4
baz=327
Z57A **Bowman** 88.86 41 P P 11 14 47.7 +0.2
baz=326
TIGA **Tifton** 89.00 44 eP P 11 14 49.3 +1.0
comp=Z,51nm,0.9s
TIGA **Tifton** 89.00 44 P P 11 14 48.2 -0.1
baz=325,SNR=6.2
255A **Hazlehurst** 89.15 43 P P 11 14 48.9 0.0
baz=326
Z58A **St. Stephen** 89.24 41 P P 11 14 49.1 -0.3
baz=327
NHSC **New Hope** 89.26 41 P P 11 14 49.4 -0.1
baz=327
256A **Glennville** 89.39 43 P P 11 14 50.1 0.0
baz=326
Y60A **Bolivia** 89.40 39 P P 11 14 49.4 -0.7
baz=328
355A **Pearson** 89.44 44 P P 11 14 50.2 -0.1
baz=325
454A **Quitman** 89.57 45 P P 11 14 51.1 +0.2
baz=325
356A **Blackshear** 89.81 43 P P 11 14 52.3 +0.2
baz=326
455A **Stateville** 89.85 44 P P 11 14 52.5 +0.3
baz=325
456A **Hilliard** 90.35 44 P P 11 14 55.2 +0.6
baz=326
555A **McAlpin** 90.38 45 P P 11 14 55.0 +0.3
baz=325
556A **Lake Butler** 90.76 44 P P 11 14 57.4 +0.9
baz=326
PBRG **Braganca** 91.18 344 eP P 11 14 57.2 -1.1
PGAV **Gavieira, Arco** 91.32 345 eP P 11 14 58.0 -1.1
PCAB **Cabril** 91.52 345 eP P 11 14 58.8 -1.1
POLO **Lamas de Olo** 91.80 344 eP P 11 15 00.1 -1.2
comp=Z,15nm,1.2s
MVO **Moncorvo** 91.86 344 eP P 11 15 00.5 -1.0
comp=Z,28nm,1.2s
PVRL **Vila Real** 91.88 344 eP P 11 15 00.7 -0.9
758A **Lake Helen** 92.21 44 P P 11 15 03.6 +0.4
baz=326
KEST **Kesra** 92.37 330 P P 11 15 03.6 -0.4
comp=Z,11nm,0.9s,baz=336,slow=6.0,SNR=3.9
KEST **Kesra** 92.37 330 eP P 11 15 03.6 -0.4
comp=Z,16nm,0.9s
PVIS **Viseu** 92.46 344 eP P 11 15 02.6 -1.7
comp=Z,21nm,2.0s
ESDC **Sonseca Array** 92.62 341 P P 11 15 04.9 -0.2
comp=Z,4.4nm,0.8s,baz=13,slow=3.8,SNR=7.6
MTE **Manteigas** 92.69 344 eP P 11 15 04.0 -1.4

MTE	Manteigas	92.69	344	eP	P	11 15 04.3	-1.1
	comp=Z,16nm,1.0s						
PAB	San Pablo	92.84	341	eP	P	11 15 05.7	-0.4
	comp=Z,8.9nm,1.0s						
PAB	San Pablo	92.84	341	eP	P	11 15 05.7	-0.4
PAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PCAS	Casmilo, Conde	93.21	344	eP	P	11 15 06.6	-1.1
PCBR	Castelo Branco	93.22	344	eP	P	11 15 06.5	-1.2
PMRV	Marv??o	93.60	343	eP	P	11 15 08.4	-1.1
PMTG	Montargil	94.11	344	eP	P	11 15 10.3	-1.5
	comp=Z,20nm,1.2s						
PBEJ	Beja	95.05	343	eP	P	11 15 16.3	+0.1
PNCL	Nicolau / Gran	95.10	344	eP	P	11 15 15.2	-1.2
MESJ	Messejana	95.30	344	eP	P	11 15 16.1	-1.2
	comp=Z,45nm,1.4s						
PCVE	Castro Verde	95.47	344	eP	P	11 15 17.3	-0.8
PTEO	Sao Teotonio	95.68	344	eP	P	11 15 18.2	-0.8
MORF	Marmelete	95.90	344	eP	P	11 15 19.4	-0.7
	comp=Z,54nm,1.8s						
PFVI	Vila Bisbo	96.10	344	eP	P	11 15 20.1	-0.9
TOA1	Torodi Ar. Sit	115.69	327	ePKPdf	PKiKP	11 20 35.4	-0.6
TORD	Torodi Ar. Bea	115.70	327	PKP	PKiKP	11 20 35.4	-0.6
	comp=Z,2.8nm,1.0s,baz=11,slow=3.0,SNR=4.5						
VNDA	Vanda	122.59	177	ePKP	PKiKP	11 20 47.8	+0.4
	comp=Z,2.3nm,0.9s,baz=294,slow=2.9,SNR=3.2						
VNDA	Vanda	122.59	177	ePKPdf	PKPdf	11 20 47.5	+0.3
VNDA	Vanda	122.59	177	ePKIKP	PKPdf	11 20 47.5	+0.3
DBIC	Dimbokro	124.08	331	PKP	PKPdf	11 20 52.0	-0.1
	comp=Z,11nm,0.9s,baz=16,slow=3.9,SNR=5.2						
DBIC	Dimbokro	124.08	331	ePKPdf	PKPdf	11 20 51.3	-0.8
DBIC	Dimbokro	124.08	331	ePKIKP	PKPdf	11 20 51.3	-0.8
MAW	Mawson	130.13	210	PKP	PKiKP	11 21 03.0	+0.3
	comp=Z,2.5nm,0.8s,baz=349,slow=4.1,SNR=4.1						
MAW	Mawson	130.13	210	ePKPdf	PKiKP	11 21 02.5	-0.1
MAW	Mawson	130.13	210	ePKIKP	PKiKP	11 21 02.5	-0.1
LPAZ	La Paz	136.32	62	PKP	PKiKP	11 21 17.3	-0.2
	comp=Z,4.1nm,0.9s,baz=8.5,slow=11,SNR=4.3						
LPAZ	La Paz	136.32	62	ePKPdf	PKPdf	11 21 15.8	-0.1
LPAZ	La Paz	136.32	62	ePKIKP	PKPdf	11 21 15.8	-0.1
BDFB	Brasilia	146.44	35	PKPbc	PKPbc	11 21 34.9	+0.2
	comp=Z,27nm,0.9s,baz=262,slow=1.7,SNR=6.0						
PLCA	Paso Flores	149.43	97	PKPbc	PKiKP	11 21 43.0	-0.1
	comp=Z,6.2nm,0.7s,baz=287,slow=2.6,SNR=3.2						
PLCA	Paso Flores	149.43	97	ePKPbc	PKPbc	11 21 42.4	+0.4
PLCA	Paso Flores	149.43	97	ePKP2	PKPbc	11 21 42.4	+0.4
CPUP	Villa Florida	150.46	60	PKPbc	PKPbc	11 21 45.0	+0.2
	comp=Z,12nm,0.8s,baz=312,slow=2.0,SNR=5.4						
SNAA	Sanae	150.64	196	PKPbc	PKiKP	11 21 44.6	0.0
SNAA	Sanae	150.64	196	PKPbc	PKiKP	11 21 44.8	+0.2
	baz=273,slow=2.9						
SNAA	Sanae	150.64	196	ePKPbc	PKPbc	11 21 44.4	+0.4
SNAA				ePKPab	sPKPdf	11 21 53.4	+0.3
SNAA	Sanae	150.64	196	ePKIKP	PKPbc	11 21 44.4	+0.4
VNA2	Neumayer--Watz	152.11	195	PKPbc	PKiKP	11 21 48.3	+0.7
	baz=129,slow=1.6						
VNA3	Neumayer Olymp	152.23	193	PKPbc	PKiKP	11 21 48.3	+0.4
VNA1	Neumayer--Stat	152.50	195	PKPbc	PKiKP	11 21 49.1	+0.8

ROM 04 11:11:34.5±0.1, 39°.869N±0°.004×15°.973E±0°.008, h2km±1km, ML1.0/1, Error ellipse: s-maj=0.7km s-min=0.3km az=266.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMN	Mormanno	0.03	33	P	Pg	11 11 35.2	0.0
MMN				S	Sg	11 11 35.6	0.0
T0721	Laino Castello	0.07	3	P	Pg	11 11 36.2	+0.2
T0721				S	Sg	11 11 37.5	+0.6
T0701	Viggianello (P	0.16	43	P	Pg	11 11 37.9	+0.3
T0701				S	Sg	11 11 40.8	+1.0
T0702	Acquaformosa (	0.17	150	P	Pg	11 11 38.5	+0.7
T0702				S	Sg	11 11 42.0	+1.9
CUC	Castrocucco	0.17	316	P	Pg	11 11 38.3	+0.4
CUC				S	Sg	11 11 41.6	+1.4
SALB	San Lorenzo Be	0.29	88	P	Pg	11 11 40.7	+0.7
SALB				AML	AML		
	comp=E,49μm,0.3s						
SALB				AML	AML		
	comp=N,51μm,1.6s						
SALB				AML	AML		
	comp=E,49μm,0.3s						
SALB				AML	AML		
	comp=N,51μm,1.6s						
CET2	Cetraro	0.34	182	P	Pg	11 11 41.9	+0.9
CET2				S	Sg	11 11 47.2	+1.8

*ISCJB **04** 11:55:50.7±1.4, 33°.91N±0°.05×35°.74E±0°.09, h17km±13km, Error ellipse: s-maj=12.1km s-min=8.6km az=5.4*
*GRAL **04** 11:55:51.5±0.3, 33°.91N×35°.82E, h4km±9km, MD2.7*
*NSSC **04** 11:55:51.6±1.2, 33°.86N×35°.75E, h9km±27km, ML1.6*
ISC 04 11:55:51.1±1.3, 33°.91N±0°.05×35°.81E±0°.07, h9km±16km, n7, σ0°.33/13, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.12	266	eP	Pg	11 55 54.2	+0.1
BHL				eS	Sg	11 55 56.1	0.0
DQRL	Deir Qamar	0.28	223	eP	Pg	11 55 56.8	0.0
DQRL				eS	Sg	11 56 00.7	0.0
HWQ	Hawqa	0.38	18	eP	Pg	11 55 58.5	-0.2
RCY	Rachaya	0.42	176	eP	Pg	11 55 58.9	-0.4
RCY				eS	Sg	11 56 04.4	-0.4
BRBR	Barbar	0.52	166	eP	Pg	11 56 01.3	+0.1
BRBR				eS	Sg	11 56 07.7	-0.3
BRBR				AML	AML	11 56 14.1	
	comp=N,67nm,0.5s						
BRBR				AML	AML	11 56 15.7	
	comp=E,36nm,0.5s						
QASN	Qassioun	0.55	134	eP	Pb	11 56 02.7	-0.1
QASN				eS	Sg	11 56 09.3	+0.5
QASN				AML	AML	11 56 18.1	
	comp=N,102nm,0.4s						
QASN				AML	AML	11 56 20.5	
	comp=E,47nm,0.4s						
TOTH	TOTAH	0.76	136	eP	Pb	11 56 06.3	-0.2
TOTH				eS	Sb	11 56 17.4	+0.5
TOTH				AML	AML	11 56 23.5	
	comp=E,14nm,0.9s						
TOTH				AML	AML	11 56 29.2	
	comp=N,26nm,0.7s						

*IDC **04** 12:18:13.6±32.0, 10°.64N×122°.43E, h0km, mb3.8/2, mb1 3.9/2, mb1mx3.3/45, mbtmp3.8/2, MS3.4/2, Ms1 3.4/2, ms1mx2.9/39, Error ellipse: s-maj=567.6km s-min=216.6km az=155.0*
*MAN **04** 12:19:01.6, 6°.20N×126°.40E, h33km, mb4.7, ML3.6, MS3.4*
*ISCJB **04** 12:19:03.2±0.9, 6°.32N±0°.06×126°.30E±0°.08, h55km±11km, MS3.6/1, Error ellipse: s-maj=14.1km s-min=10.2km az=22.3*
ISC 04 12:19:04.3±1.1, 6°.35N±0°.05×126°.23E±0°.07, h52km±10km, n17, σ1°.98/23, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.57	244	eP	Pn	12 19 15.8	-0.6
DDMP				eS	Sn	12 19 25.4	+0.1
DDMP	Don Marcelino,	0.57	244	eP	Pn	12 19 15.9	-0.6
DDMP				eS	Sn	12 19 25.8	+0.5
MATI	Mati	0.59	3	eP	Pn	12 19 15.8	-1.0
MATI				eS	Sn	12 19 24.9	-0.9
MATI	Mati	0.59	3	eP	Pn	12 19 16.9	+0.1
MATI				eS	Sn	12 19 26.4	+0.7
DMPH	Davao City--Mi	1.02	316	⇑eP	Pn	12 19 23.8	+1.5
DMPH				eS	Sn	12 19 39.2	+3.6
SKMP	Bagumbayan, Su	1.68	276	eP	Pn	12 19 30.9	-0.3
SKMP				eS	Sn	12 19 46.8	-4.9
SKMP	Bagumbayan, Su	1.68	276	eP	Pn	12 19 30.9	-0.3
SKMP				eS	Sn	12 19 53.2	+1.5
BUKP	Musuan	1.91	323	eP	Pn	12 19 33.3	-1.1
BUKP				eS	Sn	12 19 53.6	-3.7
BUKP	Musuan	1.91	323	eP	Pn	12 19 33.5	-0.9
BUKP				eS	Sn	12 19 56.8	-0.4
CTBH	Cotabato--PC H	2.15	294	⇑iP	Pn	12 19 39.5	+1.8
CGP	Cagayan de Oro	2.58	324	eP	Pn	12 20 03.0	+19
PAGZ	Pagadian	3.19	298	eP	Pn	12 19 52.4	+0.4
FITZ	Fitzroy Crossi	24.30	181	LR	LR	12 36 28.9	
	comp=Z,52nm,19.5s,baz=270,slow=38						
WRA	Warramunga Arr	27.32	163	P	P	12 24 47.7	+3.2
	20nm,0.3s,baz=338,slow=12,SNR=2.0						
ASAR	Alice Springs	30.77	166	P	P	12 25 14.8	-0.1
	0.2nm,0.4s,baz=343,slow=7.1,SNR=16						
STKA	Stephens Creek	40.75	160	P	P	12 26 39.6	-0.7
	2.1nm,0.8s,baz=346,slow=9.5,SNR=3.6						
TIXI	Tiksi	65.24	1	LR	LR	12 54 34.9	
	comp=Z,45nm,20.9s,baz=248,slow=36						

*IDC **04** 12:23:22.8±1.8, 21°.04S×71°.61W, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.6/22, mbtmp3.6/6, ML3.3/3, Error ellipse: s-maj=41.5km s-min=28.8km az=32.0*
*ISCJB **04** 12:23:25.4±0.8, 20°.98S±0°.03×71°.53W±0°.06, h33km, mb3.7/3, Error ellipse: s-maj=8.1km s-min=4.9km az=171.5*
*GUC **04** 12:23:25.7±0.7, 20°.99S×71°.58W, h55km±19km, ML3.3*
ISC 04 12:23:27.4±1.2, 20°.98S±0°.05×71°.49W±0°.09, h35km, n19, σ1°.27/29, mb3.8/3, 1C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB02	IPOC Station P	1.53	103	eP	Pn	12 23 51.1	-1.2
PB02				iS	Sn	12 24 10.8	-0.3
PB07	IPOC Station P	1.67	117	⇑iP	Pn	12 23 53.1	-1.3
PB07				iS	Sn	12 24 13.6	-1.2
PB04	IPOC Station P	1.84	137	eP	Pn	12 23 55.0	-1.8
PB01	IPOC Station P	1.87	92	eP	Pn	12 23 56.5	-0.7
PB01				iS	Sn	12 24 19.6	0.0
PB01				IAML		12 24 25.5	
	comp=N,395nm,0.3s						
PSGC	Pisagua	1.88	43	eP	Pn	12 23 55.6	-1.6
PSGC				iS	Sn	12 24 18.2	-1.6
PB03	IPOC Station P	1.94	124	eP	Pn	12 23 56.8	-1.3
PB03				IAML		12 24 21.5	
	comp=E,332nm,0.2s						
PB11	IPOC Station P	2.10	55	eP	Pn	12 23 59.4	-1.0
PB11				iS	Sn	12 24 24.9	-0.5
PB08	IPOC Station P	2.34	70	eP	Pn	12 24 03.3	-0.5
PB08				iS	Sn	12 24 32.2	+0.6
PB06	IPOC Station P	2.48	134	eP	Pn	12 24 04.3	-1.2
PB06				IAML		12 24 37.8	
	comp=N,162nm,0.2s						
MNMC	Minye Minye	2.56	44	⇓iP	Pn	12 24 06.0	-0.8
MNMC				iS	Sn	12 24 36.4	-0.4
PB12	IPOC Station P	2.59	25	eP	Pn	12 24 05.1	-1.9
PB12				iS	Sn	12 24 34.5	-2.9
LVC	Limon Verde	2.90	125	Pn	Pn	12 24 11.9	+0.4
	comp=N,2.5nm,0.3s,baz=5.5,slow=5.4,SNR=40						
LVC				Sn	Sn	12 24 44.7	-0.5
	comp=N,27nm,0.3s,baz=28,slow=22,SNR=21						
PB15	IPOC Station P	2.91	140	eP	Pn	12 24 09.9	-1.5
PB15				iS	Sn	12 24 44.1	-1.2
LPAZ	La Paz	5.65	35	Pn	Pn	12 24 51.9	+2.4
	comp=N,0.7nm,0.3s,baz=208,slow=4.2,SNR=16						
SIV	San Ignacio	11.06	65	Pn	Pn	12 26 03.4	+0.1
	comp=N,0.2nm,0.3s,baz=277,slow=14,SNR=4.3						
PTGA	Pitinga	23.06	31	P	P	12 28 30.6	+0.6
	comp=N,1.0nm,0.3s,baz=201,slow=16,SNR=4.2						
TXAR	Lajitas Array	58.85	327	P	P	12 33 23.3	+0.5
	comp=N,0.2nm,0.7s,baz=150,slow=3.8,SNR=3.2						
TORD	Torodi Ar. Bea	79.46	72	P	P	12 35 31.6	+0.8
	comp=N,1.6nm,0.9s,baz=257,slow=4.1,SNR=5.5						
MKAR	Makanchi Array	146.58	33	PKPbc	PKPab	12 43 06.7	+0.4
	comp=N,0.5nm,0.6s,baz=315,slow=0.4,SNR=3.7						

*IDC **04** 12:28:19.7±1.4, 7°.08S×154°.66E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/32, mbtmp4.0/5, Error ellipse: s-maj=59.6km s-min=28.7km az=128.0*
*ISCJB **04** 12:28:24.4±0.8, 7°.06S±0°.08×154°.5E±0°.1, h39km, mb4.1/9, Error ellipse: s-maj=17.5km s-min=11.7km az=171.2*
*NEIC **04** 12:28:25.0±0.7, 7°.14S×154°.60E, h35km±2km, mb4.3/5, Error ellipse: s-maj=27.6km s-min=15.7km az=90.0*
ISC 04 12:28:25.0±1.0, 7°.1S±0°.1×154°.6E±0°.2, h39km, n15, σ1°.51/16, mb4.1/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.74	320	ePn	Pn	12 29 21.2	+1.0
RABL				eSn	Sn	12 30 00.5	-2.6
WRAB	Tennant Creek	23.41	235	eP	P	12 33 30.1	-0.6
	28nm,1.6s						
WB2	Warramunga Arr	23.41	235	eP	P	12 33 33.1	+2.4
	27nm,1.5s						
AS31	Alice Springs	25.80	228	eP	P	12 33 52.9	+0.2
	3.9nm,1.8s						
ASAR	Alice Springs	25.80	228	P	P	12 33 54.0	+1.3
	0.9nm,0.8s,baz=65,slow=8.7,SNR=5.6						
STKA	Stephens Creek	27.48	204	P	P	12 34 07.9	+0.2
	1.4nm,0.7s,baz=37,slow=10,SNR=2.8						
STKA	Stephens Creek	27.48	204	eP	P	12 34 07.7	0.0
	4.1nm,1.6s						
FITZ	Fitzroy Crossi	30.23	246	P	P	12 34 32.9	+0.6
	2.5nm,0.8s,baz=58,slow=9.5,SNR=3.6						
QSPA	South Pole Qui	82.89	180	eP	P	12 40 42.3	-3.3
	25nm,1.9s						
MK32	Makanchi Array	83.19	319	eP	P	12 40 48.3	+1.0
MKAR	Makanchi Array	83.19	319	P	P	12 40 48.3	+1.0
	1.7nm,0.9s,baz=112,slow=4.6,SNR=4.6						
NV01	Mina Array Sit	92.11	52	eP	P	12 41 31.3	+0.5
NVAR	Mina Array Bea	92.11	52	P	P	12 41 31.3	+0.5
	1.2nm,0.9s,baz=254,slow=6.5,SNR=5.8						
TORD	Torodi Ar. Bea	152.64	285	PKPbc	PKiKP	12 48 19.4	+0.6
	0.6nm,0.7s,baz=93,slow=3.7,SNR=4.1						
TOA1	Torodi Ar. Sit	152.64	285	ePKPbc	PKiKP	12 48 19.4	+0.6

MAN 04 12:28:59.0, 7°.41N×124°.74E, h4km, mb3.8, ML2.5, MS2.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.53	249	⇓iP	Pg	12 29 09.7	+0.5
CTBH				iS	Sb	12 29 18.9	+0.1
BUKP	Musuan	0.56	34	eP	Pg	12 29 10.2	+0.3
BUKP				eS	Sb	12 29 20.1	+0.2
CGP	Cagayan de Oro	1.04	357	eP	Pb	12 29 19.9	+0.3
CGP				eS	Sn	12 29 35.0	-0.3
PAGZ	Pagadian	1.42	288	eP	Pn	12 29 23.9	-1.7
PAGZ				eS	Sn	12 29 45.3	+0.5

*MAN **04** 12:30:27.8, 5°.65N×126°.71E, h117km, mb4.9, ML3.8, MS3.7*
*ISCJB **04** 12:30:28.1±1.1, 5°.75N±0°.09×126°.8E±0°.2, h121km±10km, mb4.0/8, Error ellipse: s-maj=28.7km s-min=12.7km az=161.3*
*IDC **04** 12:30:43.1±1.8, 5°.68N×126°.97E, h253km±16km, mb3.4/7, mb1 3.5/7, mb1mx3.1/33, mbtmp4.0/7, Error ellipse: s-maj=47.8km s-min=12.5km az=69.0*
ISC 04 12:30:28.8±1.2, 5°.68N±0°.09×126°.7E±0°.1, h115km±10km, n17, σ2°.19/23, mb4.0/8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.04	294	eP	Pn	12 30 49.9	-1.0
DDMP				eS	Sn	12 31 08.9	+1.5
MATI	Mati	1.32	342	eP	Pn	12 30 54.9	+1.0
MATI				eS	Sn	12 31 08.7	-4.2
DAV	Davao City (W)	1.75	322	P	Sn	12 31 26.0	+4.0
	39nm,0.3s,baz=293,slow=9.0,SNR=3.6						
DMPH	Davao City--Mi	1.81	320	⇑eP	Pn	12 30 60.0	+0.3
DMPH				eS	Sn	12 31 24.8	+1.6
SKMP	Bagumbayan, Su	2.27	292	eP	Pn	12 31 06.6	+1.1
SKMP				eS	Sn	12 31 29.2	-4.4
BUKP	Musuan	2.70	324	eP	Pn	12 31 11.1	-0.1
BUKP				eS	Sn	12 31 44.5	+0.8
CTBH	Cotabato--PC H	2.85	303	⇑iP	Pn	12 31 10.1	-2.9
PAGZ	Pagadian	3.91	304	eP	Pn	12 31 28.8	+1.8
FITZ	Fitzroy Crossi	23.65	182	P	P	12 35 31.9	+2.1
	2.1nm,0.7s,baz=4.5,slow=11,SNR=3.4						
WRA	Warramunga Arr	26.56	164	P	P	12 35 58.4	+2.2
	30nm,0.3s,baz=341,slow=13,SNR=2.7						
ASAR	Alice Springs	30.01	167	P	P	12 36 27.2	+0.3
	0.3nm,0.3s,baz=340,slow=7.1,SNR=15						
ASAR				PcP	PcP	12 39 24.6	-1.9
	0.4nm,0.8s,baz=351,slow=2.3,SNR=3.1						
STKA	Stephens Creek	39.97	160	P	P	12 37 51.5	-0.7
	2.0nm,0.7s,baz=318,slow=10,SNR=4.2						
MKAR	Makanchi Array	55.93	325	P	P	12 39 55.6	+0.6
	1.2nm,0.5s,baz=118,slow=7.4,SNR=12						
GEYT	Alibeck	69.64	308	P	P	12 41 26.7	+0.6
	1.4nm,0.4s,baz=182,slow=9.9,SNR=3.6						
ILAR	Eielson Array	83.38	26	P	P	12 42 41.0	-2.0
	0.7nm,0.7s,baz=246,slow=6.1,SNR=6.7						
BRTR	Keskin Array B	88.73	310	P	P	12 43 10.2	+0.2
	0.9nm,0.8s,baz=86,slow=7.8,SNR=3.8						
TORD	Torodi Ar. Bea	122.23	289	PKP	PKPdf	12 49 11.1	-0.1
	0.6nm,0.6s,baz=30,slow=2.0,SNR=3.6						

IDC 04 12:42:23.9±3.2, 18°.06S×166°.83E, h0km, mb3.9/3, mb1 3.9/4, mb1mx3.5/34, mbtmp3.9/4, ML3.2/1, MS3.4/1, Ms1 3.3/1, ms1mx2.7/21, Error ellipse: s-maj=71.3km s-min=31.6km az=89.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.00	185	Pn	Pn	12 43 25.7	-1.0
	1.4nm,0.3s,baz=131,slow=16,SNR=9.2						
DZM				Sn	Sn	12 44 16.2	+1.8
	4.1nm,0.3s,baz=138,slow=21,SNR=8.1						
STKA	Stephens Creek	26.61	234	P	P	12 48 05.3	+1.1
	1.8nm,0.7s,baz=59,slow=5.9,SNR=3.9						
STKA				LR	LR	12 57 58.6	
	comp=Z,77nm,19.2s,baz=228,slow=35						
ASAR	Alice Springs	31.23	254	P	P	12 48 44.6	-0.8
	0.9nm,0.8s,baz=80,slow=8.6,SNR=14						
SONM	Songino Array	84.92	324	P	P	12 55 01.1	+0.2
	0.4nm,0.5s,baz=113,slow=3.3,SNR=4.0						

*TEH **04** 12:48:10.7, 26°.75N×57°.99E, h27km, ML3.6*
*OMAN **04** 12:48:10.3±1.2, 26°.79N×57°.89E, h3km±40km, ml3.1/12, Error ellipse: s-maj=76.7km s-min=13.3km az=34.0*
ISC 04 12:48:08.0±1.2, 26°.50N±0°.04×58°.15E±0°.07, h10km, n28, σ1°.21/28, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	Jask	0.92	202	ePg	Pn	12 48 33.3	+6.3
JSK1				IAMB	IAmb	12 48 37.0	
	comp=Z,0.0nm,0.3s						
KHNJ	Kahnooj	1.49	345	ePg	Pn	12 48 35.0	+0.1
KHNJ				IAMB	IAmb	12 48 57.6	
	comp=Z,0.0nm,0.5s						
NIAN	Nian	1.57	312	ePg	Pn	12 48 36.3	+0.3
NIAN				IAMB	IAmb	12 48 58.0	
	comp=E,0.0nm,0.4s						
BANOM	Banah	1.76	251	P	Pb	12 48 39.7	-0.6
	SNR=131						
BANOM				S	Sb	12 49 03.0	+0.6
SHME	Shamm	1.86	256	ePn	Pb	12 48 41.5	-0.5
GENO	Geno	1.98	297	ePn	Pn	12 48 42.7	+1.0
GENO				IAMB	IAmb	12 49 12.3	
	comp=N,0.0nm,0.3s						
MDH	Madha	2.05	235	P	Pn	12 48 41.6	-0.9
MSFE	Esma-Masafi	2.12	238	ePn	Pg	12 48 47.8	-0.8
UOSS	Minazif	2.34	229	P	Pn	12 48 47.9	+1.4
UOSS	Minazif	2.34	229	ePn	Pb	12 48 48.9	-1.3
HATD	Hatta, Dubai	2.47	228	P	Pg	12 48 54.3	-1.0
HATD	Hatta, Dubai	2.47	228	ePn	Pg	12 48 54.2	-1.0
ASHO	Ashiyiah	2.61	227	P	Pb	12 48 55.5	+0.5
ASHO	Ashiyiah	2.61	227	ePn	Pb	12 48 56.0	+1.1
NAZ	Nazwa, Dubai	2.70	237	ePn	Pb	12 48 57.6	+1.2
SOHO	SOHO	2.77	212	P	Pn	12 48 54.3	+1.9
FAQ	Al Faqa, Dubai	2.89	233	P	Pb	12 48 59.4	-0.3
FAQ	Al Faqa, Dubai	2.89	233	ePn	Pg	12 49 02.9	-0.5
HOQ	Hoqain	3.00	195	P	Pb	12 48 59.5	-2.1
HOQ	Hoqain	3.00	195	ePn	Pb	12 49 01.8	+0.2
ASUD	Al Ashush, Dub	3.16	234	P	Pb	12 49 02.0	-2.2
WSAR	Wadi Sarin	3.28	172	P	Pb	12 49 05.4	-0.9
CHMN	Cheshme madani	3.39	351	IAMB	IAmb	12 47 00.3	
	comp=Z,0.0nm,1.0s						
CHMN				ePn	Pb	12 49 07.2	-1.1
SMDO	Samad	3.43	181	P	Pb	12 49 09.4	+0.5
ARQ	Araqi	3.48	205	P	Pb	12 49 09.5	-0.2
BSY	Bisya	3.84	193	P	Pb	12 49 15.2	-0.6
KHGB	Koh Gabri	4.13	340	ePn	Pn	12 49 13.8	+2.5
ISRV	Sarvestan	5.30	304	ePn	Pn	12 49 29.0	+1.5

*ISCJB **04** 13:10:27.8±0.8, 42°.24N±0°.04×76°.45E±0°.03, h6km±5km, Error ellipse: s-maj=6.4km s-min=3.2km az=155.3*
*SOME **04** 13:10:27.8, 42°.22N×76°.43E, h15km*
*KRNET **04** 13:10:27.6±0.1, 42°.22N×76°.43E, h21km, mb2.4*
*NNC **04** 13:10:28.1±0.6, 42°.31N×76°.46E, h0km, mb2.5, mpv2.7, Error ellipse: s-maj=3.9km s-min=1.8km az=168.0*
ISC 04 13:10:27.8±1.0, 42°.24N±0°.04×76°.43E±0°.02, h15km±7km, n36, σ0°.57/69, 17C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	0.14	272	⇓iP	Pg	13 10 31.6	-0.2
	baz=79						
ULHL				⇓iS	Sg	13 10 34.8	+0.4
	baz=79						
BOOM	Boomskoye usch	0.44	304	⇓iP	Pg	13 10 36.6	0.0
	baz=7.0						
BOOM				⇓iS	Sb	13 10 43.7	-0.1
	baz=7.0						
KST	Kastek	0.87	337	P	Pb	13 10 44.2	-0.5
	3.3nm,0.1s						
KST				S	Sb	13 10 55.5	-0.7
	5.0nm,0.2s						
KST	Kastek	0.87	337	eP	Pb	13 10 44.4	-0.3
	baz=37						
KST				eS	Sb	13 10 56.0	-0.3
	baz=37						
KST	Kastek	0.87	337	eP	Pb	13 10 44.4	-0.3
	3.7nm,0.2s						
KST				eS	Sb	13 10 55.9	-0.3
	4.5nm,0.2s						
TNSS	Tian-Shan	0.88	25	P	Pg	13 10 44.2	-0.7
	2.0nm,0.1s						
TNSS				S	Sg	13 10 55.8	-0.8
	5.7nm,0.1s						
TNSS	Tian-Shan	0.88	25	eP	Pg	13 10 44.2	-0.7
	baz=25

	baz=92							
KBK				⇑*i*S		**Sg**	**13 11 06.0**	**+0.3**
	baz=92							
UCH	**Uchtor**	**1.42**	**270**	⇑*i*P		**Pn**	**13 10 53.6**	**+0.1**
	baz=71							
UCH				⇑*i*S		**Sb**	**13 11 13.1**	**+0.7**
	baz=71							
KTBS	**Karatobe**	**1.48**	**7**	P		**Pb**	**13 10 55.2**	**+0.2**
	1.6nm,0.1s							
KTBS				S		**Sb**	**13 11 14.4**	**+0.8**
	10nm,0.2s							
KTBS	**Karatobe**	**1.48**	**7**	*e*P		**Pb**	**13 10 55.2**	**+0.2**
	baz=2.0							
KTBS				*e*S		**Sb**	**13 11 14.4**	**+0.8**
	baz=2.0							
KTBS	**Karatobe**	**1.48**	**7**	*e*P		**Pb**	**13 10 55.2**	**+0.2**
	1.6nm,0.1s							
KTBS				*e*S		**Sb**	**13 11 14.4**	**+0.8**
	10nm,0.2s							
AAK	**Ala-Archa**	**1.49**	**286**	⇑P		**Pb**	**13 10 55.9**	**+0.7**
	1.0nm,0.7s							
AAK				⇑S		**Sg**	**13 11 15.6**	**-0.1**
	1.1nm,0.4s							
ARLS	**Aral**	**1.61**	**257**	⇑*i*P		**Pn**	**13 10 56.4**	**+0.5**
	baz=58							
ARLS				⇑*i*S		**Sb**	**13 11 18.1**	**+0.5**
	baz=58							
SATY	**Saty**	**1.67**	**60**	P		**Pb**	**13 10 57.8**	**-0.4**
	4.9nm,0.1s							
SATY				S		**Sb**	**13 11 19.5**	**+0.3**
	16nm,0.1s							
SATY	**Saty**	**1.67**	**60**	*e*P		**Pb**	**13 10 57.9**	**-0.4**
	4.9nm,0.1s							
SATY				*e*S		**Sb**	**13 11 19.5**	**+0.3**
	16nm,0.1s							
EKS2	**Erkin-Say**	**2.01**	**283**	⇑*e*P		**Pb**	**13 11 02.8**	**-1.2**
	baz=83							
EKS2				⇑*i*S		**Sb**	**13 11 28.8**	**-0.1**
	baz=83							
AML	**Almayashu**	**2.04**	**268**	⇑*i*P		**Pn**	**13 11 03.0**	**+1.1**
	baz=68							
AML				⇑*i*S		**Sb**	**13 11 29.6**	**-0.4**
	baz=68							
UZB	**Uzynbulak**	**2.11**	**64**	Pg		**Pb**	**13 11 05.9**	**0.0**
	0.7nm,0.1s							
UZB				Lg		Lg	13 11 32.5	
	1.8nm,0.2s							
UZB	**Uzynbulak**	**2.11**	**64**	*e*P		**Pb**	**13 11 05.9**	**0.0**
	baz=63							
UZB				*e*S		**Sb**	**13 11 32.5**	**+0.5**
	baz=63							
UZB	**Uzynbulak**	**2.11**	**64**	*e*P		**Pb**	**13 11 05.9**	**0.0**
	0.7nm,0.1s							
UZB				*e*S		**Sb**	**13 11 32.5**	**+0.5**
	1.8nm,0.2s							
ARXS	**Arharly**	**2.22**	**27**	Pg		**Pb**	**13 11 07.6**	**0.0**
	1.0nm,0.4s							
ARXS				Lg		Lg	13 11 35.7	
	5.5nm,0.3s							
ARXS	**Arharly**	**2.22**	**27**	*e*P		**Pb**	**13 11 07.6**	**0.0**
	1.0nm,0.4s							
ARXS				*e*S		**Sb**	**13 11 35.7**	**+0.8**
	5.5nm,0.3s							
PDGK	**Podgornoye**	**2.50**	**63**	⇓Pg		**Pb**	**13 11 13.7**	**+1.3**
	1.7nm,0.9s							
PDGK				⇑Lg		Lg	13 11 43.1	
	1.6nm,0.6s							

TAP 04 13:14:06.6, 24.35N×121.72E, h13km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.08**	**15**	*i* P	Pg	13 14 09.6	+0.2
	baz=20						
ENA				*i* S	Sg	13 14 11.5	+0.2
	baz=20						
NACB	**Ninganchiao**	**0.21**	**213**	*e*P	Pg	13 14 10.8	-0.3
	baz=213						
NACB				*e*S	Sg	13 14 14.4	+0.1
	baz=213						
ETLH	**Xiulin Townshi**	**0.26**	**237**	*e*P	Pg	13 14 12.0	-0.1
	baz=236						
ETLH				*e*S	Sg	13 14 15.8	0.0
	baz=236						
TWD	**Chiawan**	**0.29**	**203**	*e*P	Pg	13 14 12.2	-0.4
	baz=201						
NDT	**Datong Townshi**	**0.31**	**324**	P	Pg	13 14 13.2	+0.2
	baz=323						
NDT				S	Sg	13 14 18.1	+0.7
	baz=323						
NNSB	**Datong**	**0.32**	**285**	P	Pb	13 14 13.7	-0.5
	baz=284						
NNSB				S	Sg	13 14 18.0	+0.5
	baz=284						
ENTT	**Nioudou**	**0.32**	**334**	*i* P	Pg	13 14 13.7	+0.4
	baz=335						
ENTT				*i* S	Sg	13 14 18.3	+0.7
	baz=335						
NNS	**Nan Shan**	**0.33**	**286**	*e*P	Pg	13 14 13.5	+0.1
	baz=286						
NNS				*e*S	Sg	13 14 18.2	+0.4
	baz=286						
EOS1	**EOS1**	**0.42**	**62**	*e*S	Sb	13 14 22.2	-0.1
	baz=56						
YHNB	**Yeheng**	**0.45**	**316**	*e*S	Sg	13 14 21.9	+0.4
	baz=316						
WHF	**Hehuan Shan**	**0.46**	**244**	*e*S	Sg	13 14 22.2	+0.1
	baz=243						
NSK	**Sanguang**	**0.46**	**315**	*e*S	Sg	13 14 22.0	0.0
	baz=315						
NWLT	**Wulai**	**0.47**	**335**	*e*S	Sg	13 14 22.2	0.0
	baz=341						
CHGB	**Renai**	**0.57**	**240**	*e*S	Sg	13 14 25.6	0.0
	baz=240						
OWD	**Renai**	**0.63**	**232**	*e*S	Sg	13 14 27.4	0.0
	baz=224						

JMA 04 13:14:13.6±0.3, 25.05N×123.52E, h24km, M1.2, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.74**	**165**	P	Pb	13 14 27.3	-0.5
YOJ	**Yonaguni jima**	**0.75**	**218**	P	Pb	13 14 27.8	-0.1
YOJ				*e*S	Sb	13 14 37.4	-0.3
JYNG	**Yonagunijimaku**	**0.79**	**221**	P	Pb	13 14 28.3	-0.4
JYNG				S	Sb	13 14 38.7	-0.3
JISG	**Ishigakijimahi**	**0.85**	**123**	P	Pb	13 14 29.4	-0.4
JISG				*e*S	Sn	13 14 41.6	-0.2
JIJ	**Ishigaki jima**	**0.89**	**140**	P	Pb	13 14 29.6	-0.7
JIJ				*e*S	Sb	13 14 41.3	-0.5
JKRS	**Kuro-shima**	**0.92**	**151**	P	Pb	13 14 30.7	-0.2
JKRS				S	Sb	13 14 43.0	+0.2

DJA 04 13:15:54.2±0.2, 8.S±4.×11.7E±.,h252km±3km, M4.2/17, mb4.2/11, mB4.8/1, MLv4.2/17, Mw(mB)4.0/1, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.24**	**132**	P	Pn	13 16 32.3	+1.4
PLAI				S	S	13 17 01.5	+1.7
JAGI	**Jajag, Banyuwa**	**2.70**	**260**	P	Pn	13 16 44.7	+1.0
JAGI				S	S	13 17 21.1	-1.7
KMMI	**Kalianget**	**3.00**	**288**	P	Pn	13 16 47.9	+1.1
WBSI	**Waikabubak, Su**	**3.00**	**123**	P	Pn	13 16 46.6	-0.3
WBSI				S	S	13 17 27.2	-1.4
GMJI	**Gumukmas**	**3.37**	**265**	P	Pn	13 16 50.6	-0.3
WSI	**Waingapu**	**3.80**	**116**	P	Pn	13 16 57.3	+1.5
WSI				S	S	13 17 44.3	-0.3
BASI	**Baing, Sumba**	**4.30**	**121**	P	Pn	13 17 02.1	+0.5
BNSI	**Bone**	**4.83**	**42**	P	Pn	13 17 08.8	+0.8
EDFI	**Ende, Flores**	**4.86**	**99**	P	Pn	13 17 07.4	-1.1
PWJI	**Pagerwojo**	**4.99**	**269**	P	Pn	13 17 09.2	-0.7
MMRI	**Maumere**	**5.38**	**97**	P	Pn	13 17 14.3	-0.4
WOJI	**Wonogiri, Jawa**	**5.86**	**271**	P	Pn	13 17 21.3	+0.6
UGM	**Wanagama**	**6.26**	**270**	P	Pn	13 17 25.8	+0.1
BATI	**Baumata**	**7.09**	**109**	P	Pn	13 17 36.0	-0.1
	19nm,1.0s						
SOEI	**Soe**	**7.54**	**104**	P	Pn	13 17 41.3	-0.6
KASI	**Kota Agung**	**12.50**	**281**	P	Pn	13 18 44.8	+0.7
MNAI	**Manna**	**14.27**	**284**	P	Pn	13 19 03.9	-1.8

JMA 04 13:35:15.4±0.2, 36.98N×143.91E, h55km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.35**	**305**	P	Pn	13 35 52.5	+0.9
JIKH				S	Sn	13 36 20.1	+0.9
JFK	**Kawauchi**	**2.46**	**280**	P	Pn	13 35 54.0	+1.0
JFK				S	Sn	13 36 22.8	+0.9
ONAJ	**Iwakimizuishiy**	**2.49**	**274**	P	Pn	13 35 54.4	+0.8
ONAJ				S	Sn	13 36 23.9	+1.1
JIO	**Ouri**	**2.51**	**307**	P	Pn	13 35 54.8	+1.1
JIO				*e*S	Sn	13 36 23.2	+0.1
JMM	**Marumori**	**2.63**	**291**	P	Pn	13 35 56.7	+1.3
JMM				*e*S	Sn	13 36 27.7	+1.5
JMK	**Ichinoseki**	**2.90**	**314**	P	Pn	13 36 00.1	+1.1
JMK				S	Sn	13 36 33.6	+1.0
JFT	**Otama**	**2.90**	**282**	P	Pn	13 36 01.2	+2.1
JFT				*e*S	Sn	13 36 35.0	+2.2
JOM	**Ohasama**	**3.23**	**321**	P	Pn	13 36 04.9	+1.3
JOM				S	Sn	13 36 41.3	+0.4
JYK	**Kaneyama**	**3.41**	**306**	P	Pn	13 36 07.9	+1.8
JYK				*e*S	Sn	13 36 47.7	+2.5
JAG	**Ashikaga**	**3.62**	**263**	P	Pn	13 36 10.3	+1.3
JAG				*e*S	Sn	13 36 50.8	+0.3
JRY	**Ryogami san**	**4.15**	**258**	P	Pn	13 36 17.3	+1.1
JRY				*e*S	Sn	13 37 03.5	0.0
JOD2	**Odawara 2**	**4.26**	**248**	P	Pn	13 36 19.5	+1.7
JOD2				S	Sn	13 37 07.2	+0.9
JOT	**Ohata**	**4.93**	**334**	P	Pn	13 36 27.4	+0.6
JOT				*e*S	Sn	13 37 22.0	-0.5
JKB	**Kayabe**	**5.38**	**336**	P	Pn	13 36 34.0	+0.9
JKB				*e*S	Sn	13 37 31.9	-1.8
JCH	**Churui**	**5.64**	**356**	P	Pn	13 36 35.7	-0.9
JCH				*e*S	Sn	13 37 35.6	-4.5
NEM2	**Nemuro 2**	**6.53**	**12**	P	Pn	13 36 45.5	-3.3
NEM2				*e*S	Sn	13 37 54.0	-7.8
JTKR	**Abashiri--Toko**	**6.98**	**360**	P	Pn	13 36 54.0	-1.0
JTKR				*e*S	Sn	13 38 07.8	-5.1

IDC 04 13:43:37.7±62.0, 19.57S×172.97W, h0km, mb3.8/2, mb1 3.9/2, mb1mx3.5/20, mbtmp3.8/2, Error ellipse: s-maj=1185.0km s-min=196.5km az=84.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.44**	**244**	P	P	13 51 34.0	-0.5
	2.6nm,1.1s,baz=90,slow=7.1,SNR=3.9						
ASAR	**Alice Springs**	**49.33**	**255**	P	P	13 52 28.4	-0.7
	0.6nm,0.6s,baz=104,slow=8.9,SNR=5.5						
WRA	**Warramunga Arr**	**49.41**	**260**	P	P	13 52 30.4	+0.7
	133nm,0.3s,baz=96,slow=7.0,SNR=1.5						

DJA 04 13:45:04.2±1.0, 0.S±4.×12.5E±., h14km±7km, M3.5/8, mb3.3/2, MLv3.5/8, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.27**	**311**	P	Pb	13 45 27.9	0.0
KMSI				S	Sb	13 45 43.5	-0.5
LUWI	**Luwuk**	**2.29**	**250**	P	Pn	13 45 42.1	+0.5
LUWI				S	Sn	13 46 11.4	+1.8
TNTI	**Ternate**	**2.65**	**67**	P	Pn	13 45 47.2	+0.7
TNTI				S	Sn	13 46 18.6	+0.2
MRSI	**Marisa**	**3.08**	**284**	P	Pn	13 45 49.9	-2.6
APSI	**Ampana**	**3.34**	**259**	P	Pn	13 45 57.3	+1.2
APSI				S	Sn	13 46 38.8	+3.2
SGSI	**Sangihe**	**3.98**	**9**	P	Pn	13 46 05.1	+0.3
SPSI	**Sidrap Palu**	**6.33**	**234**	P	Pn	13 46 35.6	-1.6

*IDC **04** 13:53:26.7±0.8, 28.46N×51.65E, h0km, mb4.1/18, mb1 4.2/22, mb1mx4.0/55, mbtmp4.1/22, ML3.7/3, MS3.1/5, Ms1 3.1/5, ms1mx2.7/55, Error ellipse: s-maj=18.7km s-min=15.1km az=173.0*
*TEH **04** 13:53:27.8, 28.50N×51.62E, h10km, ML4.1*
*NEIC **04** 13:53:28.0±0.0, 28.52N×51.64E, h9km, mb4.3/16, ML3.9(THR), MN4.0(TEH), After TEH.*
*ISCJB **04** 13:53:28.6±0.3, 28.44N±0.03×51.63E±0.04, h24km, mb4.2/32, MS3.1/2, Error ellipse: s-maj=5.5km s-min=2.8km az=148.4*
*DSN **04** 13:53:29.8±1.0, 28.69N×51.91E, h10km, ML4.3/8, Error ellipse: s-maj=19.0km s-min=6.3km az=19.0*
*OMAN **04** 13:53:32.2±1.0, 28.41N×51.61E, h59km±109km, ml4.2/5, Error ellipse: s-maj=47.2km s-min=20.6km az=41.0*

ISC 04 13:53:30.5±0.5, 28.51N±0.05×51.71E±0.05, h24km, n114, σ§10/121, mb4.2/32, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**1.15**	**101**	*e*Pg	**Pn**	**13 53 51.5**	**+0.3**
IKAZ	**Kazeroun**	**1.27**	**5**	*e*Pg	**Pn**	**13 53 52.9**	**-0.2**
IKAZ				IAMB	IAmb	13 54 21.7	
	comp=N,5μm,0.5s						
SHI	**Shiraz**	**1.33**	**32**	*e*Pg	**Pn**	**13 53 54.1**	**+0.3**
SHI				IAMB	IAmb	13 54 18.0	
	comp=Z,18μm,0.6s						
ISRV	**Sarvestan**	**1.51**	**54**	*e*Pn	**Pb**	**13 53 58.6**	**+0.6**
ISRV				IAMB	IAmb	13 54 27.7	
	comp=Z,34μm,0.5s						
JHRM	**Jahrom**	**1.65**	**90**	*e*Pn	**Pb**	**13 53 59.9**	**-0.4**
JHRM				IAMB	IAmb	13 54 36.1	
	comp=E,0.0nm,0.6s						
LMD1	**Lamerd**	**1.74**	**132**	*e*Pn	**Pb**	**13 54 01.5**	**-0.3**
IPAR	**Pars**	**1.77**	**41**	*e*Pg	**Pb**	**13 54 02.1**	**-0.4**
IPAR				IAMB	IAmb	13 54 41.0	
	comp=Z,11μm,0.8s						
IRAM	**Ramesheh**	**3.34**	**10**	*e*Pn	**Pn**	**13 54 22.2**	**+0.7**
IRAM				IAMB	IAmb	13 55 28.2	
	comp=Z,2μm,0.6s						
ISAD	**Sadrabad**	**3.80**	**26**	*e*Pn	**Pn**	**13 54 30.0**	**+2.1**
ISAD				IAMB	IAmb	13 55 40.8	
	comp=Z,1μm,0.8s						
IMEH	**Mehriz**	**3.82**	**41**	*e*Pn	**Pn**	**13 54 30.0**	**+1.9**
IMEH				IAMB	IAmb	13 54 33.5	
	comp=Z,3μm,0.4s						
IGAR	**Gharneh**	**3.89**	**4**	*e*Pn	**Pn**	**13 54 30.1**	**+1.0**
IPIR	**Pirpir**	**4.22**	**351**	*e*Pn	**Pn**	**13 54 34.6**	**+1.0**
IPIR				IAMB	IAmb	13 55 32.1	
	comp=Z,905nm,0.4s						
IBAF	**Bafgh**	**4.54**	**47**	*e*Pn	**Pn**	**13 54 39.9**	**+2.0**
KHGB	**Koh Gabri**	**4.56**	**65**	*e*Pn	**Pn**	**13 54 39.4**	**+1.2**
SHME	**Shamm**	**4.64**	**121**	P	**Pn**	**13 54 39.4**	**+0.2**
SHME				S	**Sn**	**13 55 33.8**	**+1.3**
SHME	**Shamm**	**4.64**	**121**	*e*Pn	**Pn**	**13 54 39.9**	**+0.6**
KRBR	**Kerman**	**4.65**	**70**	*e*Pn	**Pn**	**13 54 41.5**	**+1.9**
IKLH	**Kolahrood**	**4.79**	**359**	*e*Pn	**Pn**	**13 54 42.3**	**+0.8**
BANOM	**Banah**	**4.83**	**121**	*i* P	**Pn**	**13 54 42.0**	**+0.2**
	SNR=33						
NAZ	**Nazwa, Dubai**	**4.98**	**134**	*i* P	**Pn**	**13 54 45.3**	**+1.4**
	SNR=6.0						
NAZ	**Nazwa, Dubai**	**4.98**	**134**	P	**Pn**	**13 54 45.3**	**+1.4**
	SNR=15						
NAZ	**Nazwa, Dubai**	**4.98**	**134**	*e*Pn	**Pn**	**13 54 45.2**	**+1.4**
ASUD	**Al Ashush, Dub**	**5.05**	**139**	P	**Pn**	**13 54 46.3**	**+1.5**
ASUD	**Al Ashush, Dub**	**5.05**	**139**	P	**Pn**	**13 54 45.8**	**+1.1**
ASUD				S	**Sn**	**13 55 44.8**	**+2.5**
ASUD	**Al Ashush, Dub**	**5.05**	**139**	*e*Pn	**Pn**	**13 54 47.0**	**+2.2**
MSFE	**Esma-Masafi**	**5.06**	**127**	*i* P	**Pn**	**13 54 45.6**	**+0.6**
	SNR=6.7						
MSFE	**Esma-Masafi**	**5.06**	**127**	*e*Pn	**Pn**	**13 54 45.7**	**+0.6**
FAQ	**Al Faqa, Dubai**	**5.11**	**136**	P	**Pn**	**13 54 46.6**	**+0.9**
FAQ	**Al Faqa, Dubai**	**5.11**	**136**	P	**Pn**	**13 54 47.2**	**+1.5**
FAQ				S	**Sn**	**13 55 43.5**	**-0.4**
FAQ	**Al Faqa, Dubai**	**5.11**	**136**	*e*Pn	**Pn**	**13 54 47.8**	**+2.1**
MDH	**Madha**	**5.20**	**127**	P	**Pn**	**13 54 46.9**	**+0.1**
MDH				S	**Sn**	**13 55 45.4**	**-0.7**
CHMN	**Cheshme madani**	**5.27**	**74**	*e*Pn	**Pn**	**13 54 50.1**	**+1.9**
CHMN				IAMB	IAmb	13 55 55.3	
	comp=N,0.0nm,0.9s						
UOSS	**Minazif**	**5.36**	**130**	*e*Pn	**Pn**	**13 54 48.5**	**-0.6**
UOSS	**Minazif**	**5.36**	**130**	*i* P	**Pn**	**13 54 49.2**	**+0.1**
	SNR=12						
UOSS	**Minazif**	**5.36**	**130**	P	**Pn**	**13 54 49.3**	**+0.2**
	SNR=13						
UOSS	**Minazif**	**5.36**	**130**	*e*Pn	**Pn**	**13 54 49.4**	**+0.2**
HATD	**Hatta, Dubai**	**5.40**	**132**	*i* P	**Pn**	**13 54 50.4**	**+0.8**
	SNR=15						
HATD	**Hatta, Dubai**	**5.40**	**132**	P	**Pn**	**13 54 50.6**	**+1.0**
	SNR=15						
HATD	**Hatta, Dubai**	**5.40**	**132**	*e*Pn	**Pn**	**13 54 50.7**	**+1.1**
ASHO	**Ashiyiah**	**5.45**	**133**	*i* P	**Pn**	**13 54 50.8**	**+0.5**
	SNR=9.3						
ASHO	**Ashiyiah**	**5.45**	**133**	P	**Pn**	**13 54 50.8**	**+0.5**
	SNR=9.6						
ASHO				S	**Sn**	**13 55 52.3**	**0.0**
ASHO	**Ashiyiah**	**5.45**	**133**	*e*Pn	**Pn**	**13 54 51.0**	**+0.7**
MZR	**Muzera**	**5.71**	**163**	*e*Pn	**Pn**	**13 54 55.2**	**+1.3**
ALNE	**Al Ain**	**5.73**	**140**	*e*Pn	**Pn**	**13 54 55.4**	**+1.2**
SOHO	**SOHO**	**6.14**	**134**	P	**Pn**	**13 55 00.0**	**+0.2**
	SNR=13						
IKOM	**Komasi**	**6.69**	**329**	*e*Pn	**Pn**	**13 55 08.7**	**+1.2**
ARQ	**Araqi**	**6.73**	**139**	P	**Pn**	**13 55 08.3**	**+0.3**
HOQ	**Hoqain**	**7.03**	**133**	P	**Pn**	**13 55 12.7**	**+0.7**
HOQ	**Hoqain**	**7.03**	**133**	*e*Pn	**Pn**	**13 55 13.2**	**+1.1**
IDMV	**Damavand**	**7.05**	**2**	*e*Pn	**Pn**	**13 55 12.7**	**+0.2**
IANJ	**Anjilo**	**7.18**	**15**	*e*Pn	**Pn**	**13 55 14.7**	**+0.4**
BSY	**Bisya**	**7.58**	**138**	P	**Pn**	**13 55 20.2**	**+0.6**
	SNR=12						
SMDO	**Samad**	**7.88**	**132**	P	**Pn**	**13 55 25.0**	**+1.2**
	SNR=13						
WSAR	**Wadi Sarin**	**8.15**	**129**	Pn	**Pn**	**13 55 26.9**	**-0.5**
	comp=N,1.5nm,0.3s,baz=324,slow=9.7,SNR=13						
WSAR				Sn	**Sn**	**13 56 55.8**	**-3.0**
	comp=N,1.3nm,0.3s,baz=138,slow=23,SNR=8.0						
WSAR	**Wadi Sarin**	**8.15**	**129**	P	**Pn**	**13 55 26.6**	**-0.8**
JMDO	**Jabal Madar**	**8.41**	**135**	P	**Pn**	**13 55 30.5**	**-0.5**
WBK	**Wadi Bani Khal**	**8.80**	**130**	P	**Pn**	**13 55 34.7**	**-1.7**
SBZV	**Sabzevar**	**9.30**	**31**	*e*Pn	**Pn**	**13 55 44.6**	**+1.2**
MHTO	**MHTO**	**9.40**	**141**	P	**Pn**	**13 55 45.0**	**+0.4**
	SNR=7.7						
GEYT	**Alibeck**	**10.81**	**28**	Pn	**Pn**	**13 56 05.2**	**+1.3**
	baz=163,slow=5.6,SNR=3.3						
GEYT				LR	LR	14 00 45.2	
	comp=N,136nm,21.1s,baz=240,slow=40						
DMTO	**DMTO**	**11.15**	**164**	P	**Pn**	**13 56 08.0**	**-0.5**
	SNR=14						
GNI	**Garni**	**12.95**	**335**	LR	LR	14 02 13.9	
	comp=N,41nm,20.0s,baz=153,slow=41						
KBL	**Kabul**	**15.95**	**64**	*e*Pn	**Pn**	**13 57 13.9**	**+0.3**
	comp=N,12nm,1.4s						
KBZ	**Khabaz**	**16.75**	**337**	Pn	**P**	**13 57 24.5**	**-1.1**
	comp=N,0.2nm,0.3s,baz=126,slow=5.9,SNR=4.9						
CSS	**Mathiatis**	**16.89**	**297**	*e*Pn	**P**	**13 57 25.8**	**-1.4**
	comp=N,66nm,1.9s						
BR101	**Keskin Array S**	**18.64**	**312**	*e*P	**Pn**	**13 57 46.4**	**-0.7**
BR131	**Keskin Array S**	**18.64**	**312**	*e*P	**Pn**	**13 57 47.5**	**+0.4**
	comp=N,4.1nm,0.8s						
BRTR	**Keskin Array B**	**18.64**	**312**	P	**Pn**	**13 57 46.4**	**-0.7**
	comp=N,0.3nm,0.3s,baz=132,slow=12,SNR=13						
ATD	**Arta Tunnel**	**18.82**	**208**	LR	LR	14 04 47.1	
	comp=N,30nm,19.1s,baz=10,slow=36						
KK31	**Karatay Array**	**21.02**	**41**	*e*P	**P**	**13 58 12.1**	**-0.3**
	comp=N,10.0nm,0.8s						
KKAR	**Karatay Array**	**21.02**	**41**	*e*P	**P**	**13 58 12.1**	**-0.3**
	comp=N,10.0nm,0.8s						
ABKAR	**Akbulak array**	**21.66**	**15**	*e*P	**P**	**13 58 18.8**	**-0.4**
	comp=N,5.8nm,0.8s						
AKTO	**Aktyubinsk**	**22.41**	**11**	P	**P**	**13 58 28.1**	**+0.8**
	comp=N,2.5nm,0.7s,baz=184,slow=15,SNR=8.5						
AKTO				LR	LR	14 08 30.7	
	comp=N,55nm,19.3s,baz=164,slow=40						
AAK	**Ala-Archa**	**23.19**	**47**	P	**P**	**13 58 37.3**	**+1.6**
	comp=N,2.1nm,0.4s,baz=240,slow=7.1,SNR=5.6						
AAK				LR	LR	14 09 13.9	
	comp=N,98nm,19.8s,baz=264,slow=41						
AAK	**Ala-Archa**	**23.19**	**47**	*e*P	**P**	**13 58 37.0**	**+1.3**
	comp=N,4.7nm,1.0s						
IDI	**Anoyia**	**23.71**	**293**	P	**P**	**13 58 43.1**	**+2.4**
	comp=N,6.9nm,0.7s,baz=126,slow=18,SNR=3.1						
AKASG	**Malin Array Be**	**27.92**	**329**	P	**P**	**13 59 17.3**	**-1.4**
	comp=N,0.3nm,0.4s,baz=134,slow=6.6,SNR=2.7						
BRVK	**Borovoye**	**28.10**	**24**	*e*P	**P**	**13 59 20.5**	**+0.3**
	comp=N,3.3nm,0.8s						
BVAR	**Borovoye Array**	**28.11**	**24**	P	**P**	**13 59 21.3**	**+0.9**
	comp=N,3.2nm,0.8s,baz=232,slow=7.3,SNR=15						
BVAR				PcP	**PcP**	**14 02 34.6**	**+0.4**
	comp=N,0.6nm,0.6s,baz=202,slow=3.1,SNR=4.1						
KURBB	**Kurchatov Arra**	**29.97**	**35**	P	**P**	**13 59 37.8**	**+0.9**
	comp=N,1.8nm,0.7s,baz=236,slow=9.1,SNR=14						
MK32	**Makanchi Array**	**30.05**	**44**	*e*P	**P**	**13 59 38.6**	**+0.8**
MKAR	**Makanchi Array**	**30.05**	**44**	P	**P**	**13 59 38.6**	**+0.8**
	comp=N,1.2nm,0.7s,baz=229,slow=7.2,SNR=7.9						
MKAR				PcP	**PcP**	**14 02 38.8**	**-0.5**
	comp=N,0.5nm,0.6s,baz=224,slow=4.0,SNR=3.2						
KURK	**Kurchatov**	**30.07**	**35**	*e*P	**P**	**13 59 38.1**	**+0.3**
	comp=N,2.6nm,0.9s						
LANS	**Liptovska Anna**	**32.12**	**319**	*e*P	**P**	**13 59 58.7**	**+2.7**
WMQ	**Urumqi**	**32.53**	**52**	*e*P	**P**	**14 00 02.0**	**+2.3**
ZAA0	**Zalesovo Array**	**35.04**	**34**	*e*P	**P**	**14 00 21.0**	**-0.2**
	comp=N,3.7nm,0.6s						
ZALV	**Zalesovo Beam**	**35.04**	**34**	P	**P**	**14 00 21.6**	**+0.3**
	comp=N,2.9nm,0.4s,baz=238,slow=8.2,SNR=9.1						
ZAA1	**Zalesovo Array**	**35.04**	**34**	*e*P	**P**	**14 00 21.6**	**+0.3**
FIA0	**FINESS Array S**	**37.09**	**340**	*e*P	**P**	**14 00 38.5**	**-0.1**
FINES	**FINESS Array B**	**37.09**	**340**	P	**P**	**14 00 38.5**	**-0.1**
	comp=N,4.2nm,0.5s,baz=146,slow=9.2,SNR=24						
GTA	**Gaotai**	**40.93**	**62**	*e*P	**P**	**14 01 12.5**	**+1.2**
GTA				pP	pP	14 01 17.3	-1.5
GTA				sP	sP	14 01

CMIG Matias Romero 2.43 316 *e*P Pn 13 56 20.4 +0.2

ISCJB ***04*** *14:03:09.0±0.1, 17°.04N±0°.02×145°.85E±0°.02, h10km, mb5.6/391, MS5.2/622, Error ellipse: s-maj=2.8km s-min=2.0km az=149.9*
IDC ***04*** *14:03:08.4±0.4, 17°.03N×145°.84E, h0km, mb5.0/34, mb1 5.1/36, mb1mx5.0/40, mbtmp5.0/36, ML4.5/2, MS4.8/38, Ms1 4.8/38, ms1mx4.7/52, Error ellipse: s-maj=13.7km s-min=9.4km az=86.0*
BJI ***04*** *14:03:08.0±0.0, 17°.21N×146°.14E, h8km, mb5.4/80, mB5.5/74, Ms5.5/92, Ms7 5.2/69*
MOS ***04*** *14:03:10.4±1.0, 17°.02N×145°.73E, h25km, mb5.7/79, MS5.0/54, Error ellipse: s-maj=7.4km s-min=4.3km az=97.4*
NEIC ***04*** *14:03:10.7±0.7, 16°.98N×145°.83E, h16km±4km, mb5.8/296, MS5.1/298, MW5.4, Error ellipse: s-maj=2.7km s-min=2.3km az=135.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.71; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$1.21; $M_{r\theta}$-0.72; $M_{\theta\phi}$-0.59; $M_{\phi r}$0.02; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s128.00000°, δ65.00000°, λ-139.00000°. NP2:ϕ_s18.00000°, δ54.00000°, λ-32.00000°. Principal axes: T 1.4300, Plg7.0000°, Azm251.0000°; N -0.0400, Plg43.0000°, Azm154.0000°; P -1.3900, Plg46.0000°, Azm348.0000°;*
GCMT ***04*** *14:03:14.7±0.1, 16°.98N±0°.01×145°.75E±0°.01, h12km, MW5.5/129, Moment Tensor Solution. s91,c137; s129,c299; Duration: 1±3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.82±.02; $M_{\theta\theta}$-1.00±.02; $M_{\phi\phi}$1.82±.02; $M_{r\theta}$-0.84±.05; $M_{\theta\phi}$-1.09±.02; $M_{\phi r}$0.42±.05; Best double couple: $M_0$2.09500×10^{17} NP1:ϕ_s123.00000°, δ75.00000°, λ-144.00000°. NP2:ϕ_s22.00000°, δ56.00000°, λ-18.00000°. Principal axes: T 2.3420, Plg12.0000°, Azm249.0000°; N -0.4900, Plg52.0000°, Azm143.0000°; P -1.8480, Plg36.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 04 14:03:10.0±0.2, 17°.06N±0°.03×145°.89E±0°.04, h10km, n1228, σ1±52/913, mb5.7/399, MS5.2/623, 10C-20D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SARN	**Sarigan**	**0.38**	**197**	*e*Pg	**Pg**	**14 03 17.2**	**-0.3**
ANA2	**Anatahan**	**0.74**	**194**	*e*Pg	**Pg**	**14 03 23.3**	**-1.0**
GUMO	**Guam**	**3.59**	**196**	Pn	**Pn**	**14 04 04.8**	**-1.0**
	111nm,0.3s,baz=62,slow=1.3,SNR=47						
GUMO				Sn	**Sn**	**14 04 47.7**	**-0.6**
	156nm,0.3s,baz=156,slow=20,SNR=3.4						
GUMO				LR	LR	14 05 14.3	
	comp=Z,19μm,21.8s,baz=11,slow=36						
PATS	**Pohnpei**	**15.83**	**128**	*e*Pn	**Pn**	**14 06 50.7**	**-2.4**
	440nm,1.0s						
JHJ2	**Mitsune**	**16.90**	**342**	*e*Pn	**Pn**	**14 07 07.8**	**+1.2**
	3μm,2.0s						
JHJ	**Hachijo jima 2**	**16.91**	**342**	Pn	**Pn**	**14 07 05.9**	**-0.9**
	3.4nm,0.3s,baz=194,slow=8.3,SNR=3.6						
JHJ				LR	LR	14 13 13.6	
	comp=Z,4μm,19.5s,baz=174,slow=36						
JOW	**Kunigami**	**19.00**	**304**	P	**Pn**	**14 07 35.1**	**+2.5**
	1.3nm,0.3s,baz=135,slow=13,SNR=34						
JOW	**Kunigami**	**19.00**	**304**	*e*P	**Pn**	**14 07 33.7**	**+1.1**
	328nm,1.1s						
MANU	**Manus Island**	**19.04**	**175**	*e*P	**P**	**14 07 31.9**	**-0.5**
	306nm,1.3s						
WAKE	**Wake Island**	**19.85**	**80**	*e*P	**P**	**14 07 42.2**	**+0.9**
	510nm,1.3s						
H11S3	**WAKE ISLAND Hy**	**19.85**	**83**	T	T	14 28 08.7	
	baz=268,slow=75,SNR=4991						
INU	**Inuyama**	**19.86**	**338**	*e*P	**P**	**14 07 41.2**	**0.0**
	545nm,1.2s						
H11S1	**WAKE ISLAND Hy**	**19.87**	**83**	T	T	14 28 20.0	
	baz=268,slow=75,SNR=6376						
H11S2	**WAKE ISLAND Hy**	**19.87**	**83**	T	T	14 28 11.0	
	baz=268,slow=75,SNR=7399						
H11N1	**WAKE ISLAND Hy**	**20.10**	**79**	T	T	14 28 28.5	
	baz=265,slow=75						
H11N2	**WAKE ISLAND Hy**	**20.11**	**79**	T	T	14 28 29.1	
	baz=265,slow=75,SNR=9417						
JAY	**Jayapura**	**20.11**	**195**	P	Pn	14 07 45.1	-0.9
	198nm,0.8s,baz=353,slow=5.1,SNR=48						
JAY				LR	LR	14 14 51.7	
	comp=Z,6μm,18.6s,baz=14,slow=35						
JAY	**Jayapura**	**20.11**	**195**	P	**P**	**14 07 44.9**	**+0.7**
	2μm,0.9s,22μm						
H11N3	**WAKE ISLAND Hy**	**20.12**	**79**	T	T	14 28 29.9	
	baz=265,slow=75,SNR=9023						
GENI	**Genyem**	**20.33**	**197**	P	Pn	14 07 47.8	-0.7
MJAR	**Matsushiro Arr**	**20.56**	**342**	P	**P**	**14 07 50.1**	**+1.2**
	75nm,1.0s,baz=174,slow=12,SNR=150						
MJAR				LR	LR	14 15 10.5	
	comp=Z,3μm,19.2s,baz=160,slow=35						
MAJO	**Matsushiro**	**20.57**	**342**	*e*P	**P**	**14 07 48.3**	**-0.6**
	377nm,1.4s						
MAJO				LR	LR		
	comp=Z,4μm,18.0s						
MAJO	**Matsushiro**	**20.57**	**342**	*e*P	**P**	**14 07 48.3**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,377nm,1.4s						
MAJO				MLR	MLR		
	comp=Z,4μm,18.0s						
MAT	**Matsushiro**	**20.57**	**342**	P	**P**	**14 07 50.3**	**+1.3**
MAT				S	**S**	**14 11 33.2**	**-5.8**
MJB9	**Matsu-Tunnel**	**20.57**	**342**	*e*P	**P**	**14 07 48.3**	**-0.7**
	comp=Z,385nm,1.4s						
MJB9				LR	LR		
	comp=Z,4μm,19.0s						
JNU	**Nakatsue**	**20.95**	**323**	P	**P**	**14 07 54.4**	**+1.2**
	comp=Z,30nm,0.9s,baz=126,slow=6.0,SNR=15						
JNU				LR	LR	14 14 58.0	
	comp=Z,2μm,19.0s,baz=119,slow=34						
JNU	**Nakatsue**	**20.95**	**323**	*e*P	**P**	**14 07 52.7**	**-0.5**
	comp=Z,296nm,1.2s						
SRPI	**Serui, Papua**	**21.09**	**208**	P	**P**	**14 07 56.8**	**+2.1**
PLP	**Palo**	**21.11**	**257**	⇑*e*P	**P**	**14 07 57.4**	**+2.5**
WAMI	**Wamena**	**21.99**	**199**	P	**P**	**14 08 07.2**	**+2.8**
RABL	**Rabaul**	**22.01**	**163**	PFAKE		14 08 20.0	+15
RABL				LR	LR		
	comp=Z,6μm,21.0s						
DAV	**Davao City (W)**	**22.18**	**246**	P	**P**	**14 08 07.4**	**+0.8**
	comp=Z,110nm,0.4s,baz=57,slow=4.6,SNR=5.9						
DAV				LR	LR	14 14 38.3	
	comp=Z,6μm,21.4s,baz=75,slow=31						
DAV	**Davao City (W)**	**22.18**	**246**	⇑*e*P	**P**	**14 08 05.2**	**-1.4**
DAV	**Davao City (W)**	**22.18**	**246**	P	**P**	**14 08 09.7**	**+3.1**
	SNR=20						
CGP	**Cagayan de Oro**	**22.36**	**250**	⇓*e*P	**P**	**14 08 09.8**	**+1.4**
YOJ	**Yonaguni jima**	**22.61**	**293**	*e*P	**P**	**14 08 10.2**	**-0.8**
	comp=Z,368nm,1.2s						
YOJ	**Yonaguni jima**	**22.61**	**293**	*e*P	**P**	**14 08 10.2**	**-0.8**
YOJ				pmax	pmax		
	comp=Z,368nm,1.2s						
SWI	**Sorong**	**22.92**	**220**	P	**P**	**14 08 16.3**	**+1.9**
CTBH	**Cotabato--PC H**	**23.29**	**248**	⇑*i*P	**P**	**14 08 18.9**	**+0.7**
NACB	**Ninganchiao**	**23.80**	**291**	*e*P	**P**	**14 08 21.4**	**-1.7**
	comp=Z,104nm,1.0s						
NACB				LR	LR		
	comp=Z,3μm,20.0s						
YULB	**Yu-li**	**23.91**	**289**	*e*P	**P**	**14 08 23.6**	**-0.5**
	comp=Z,177nm,1.3s						
YULB				LR	LR		
	comp=Z,3μm,18.0s						
FAKI	**Fak Fak**	**23.99**	**215**	*e*P	**P**	**14 08 23.6**	**-1.4**
	comp=Z,1μm,1.8s						
FAKI				LR	LR		
	comp=Z,4μm,18.0s						
FAKI	**Fak Fak**	**23.99**	**215**	P	**P**	**14 08 24.3**	**-0.7**
SGSI	**Sangihe**	**24.00**	**239**	P	**P**	**14 08 31.4**	**+6.3**
TWG	**Pinlang**	**24.01**	**288**	*e*P	**P**	**14 08 24.2**	**-0.9**
	comp=Z,514nm,1.1s						
TATO	**Taipei**	**24.08**	**293**	*e*P	**P**	**14 08 25.2**	**-0.6**
	comp=Z,188nm,1.1s						
TATO				LR	LR		
	comp=Z,3μm,21.0s						
TATO	**Taipei**	**24.08**	**293**	P	**P**	**14 08 25.9**	**+0.1**
TATO				P	**P**	**14 08 25.9**	**+0.1**
YHNB	**Yeheng**	**24.10**	**292**	*e*P	**P**	**14 08 25.7**	**-0.4**
	comp=Z,222nm,1.0s						
YHNB				LR	LR		
	comp=Z,3μm,19.0s						
TGY	**Tagaytay City**	**24.21**	**267**	P	**P**	**14 08 29.1**	**+1.9**
	comp=Z,86nm,0.4s,baz=56,slow=9.4,SNR=5.6						
SSLB	**Suanglung**	**24.29**	**290**	*e*P	**P**	**14 08 27.9**	**+0.1**
	comp=Z,283nm,1.1s						
SSLB				LR	LR		
	comp=Z,4μm,19.0s						
TNTI	**Ternate**	**24.39**	**230**	*e*P	**P**	**14 08 28.1**	**-0.6**
	comp=Z,197nm,1.1s						
TNTI	**Ternate**	**24.39**	**230**	P	**P**	**14 08 28.7**	**0.0**
TPUB	**Ta-pu**	**24.49**	**289**	*e*P	**P**	**14 08 28.8**	**-0.9**
	comp=Z,113nm,1.1s						
TPUB				LR	LR		
	comp=Z,3μm,19.0s						
ERM	**Erimo**	**24.98**	**355**	*e*P	**P**	**14 08 33.2**	**-0.6**
	comp=Z,81nm,1.1s						
ERM				LR	LR		
	comp=Z,3μm,18.0s						
ERM	**Erimo**	**24.98**	**355**	*e*P	**P**	**14 08 33.2**	**-0.6**
ERM				pmax	pmax		
	comp=Z,81nm,1.1s						
ERM				MLR	MLR		
	comp=Z,3μm,18.0s						
TJN	**Taejon**	**25.29**	**323**	*de*P	**P**	**14 08 37.3**	**+0.6**
KSRS	**Korea Array**	**25.75**	**326**	P	**P**	**14 08 40.6**	**-0.2**
	comp=Z,115nm,1.1s,baz=142,slow=8.9,SNR=131						
KS15	**Wonju Array Si**	**25.77**	**326**	*e*P	**P**	**14 08 40.4**	**-0.5**
	comp=Z,489nm,1.4s						
KSAR	**Wonju Array Be**	**25.77**	**326**	P	**P**	**14 08 40.6**	**-0.3**
KSAR	**Wonju Array Be**	**25.77**	**326**	P	**P**	**14 08 40.7**	**-0.3**
PMG	**Port Moresby**	**26.33**	**177**	P	**P**	**14 08 45.4**	**-0.8**
	comp=Z,196nm,1.2s,baz=24,slow=6.5,SNR=17						
PMG				LR	LR	14 19 03.1	
	comp=Z,2μm,18.8s,baz=358,slow=36						
PMG	**Port Moresby**	**26.33**	**177**	*e*P	**P**	**14 08 44.4**	**-1.8**
	comp=Z,182nm,1.0s						
PMG	**Port Moresby**	**26.33**	**177**	*e*P	**P**	**14 08 44.4**	**-1.8**
PMG				pmax	pmax		
	comp=Z,182nm,1.0s						
SSE	**Sheshan**	**26.45**	**306**	P	**P**	**14 08 48.3**	**+1.0**
SSE				S	**S**	**14 13 21.2**	**+0.1**
SSE				pmax	pmax		
	comp=Z,55nm,1.0s						
SSE				pmax	pmax		
	comp=Z,790nm,7.6s						
SSE				LR	LR		
	comp=Z,980nm,20.6s						
SSE				LR	LR		
	comp=Z,2μm,20.3s						
SSE	**Sheshan**	**26.45**	**306**	PFAKE		14 09 00.0	+13
SSE				LR	LR		
	comp=Z,3μm,19.0s						
QZH	**Quanzhou**	**26.63**	**292**	⇓*i*P	**P**	**14 08 49.7**	**+0.8**
QZH				S	**S**	**14 13 23.4**	**-0.7**
QZH				pmax	pmax		
	comp=Z,800nm,7.3s						
QZH				LR	LR		
	comp=Z,1μm,9.2s						
QZH				LR	LR		
	comp=Z,1μm,9.7s						
BNDI	**Bandanaira**	**26.64**	**218**	P	**P**	**14 08 51.4**	**+2.4**
	comp=Z,559nm,1.5s						
KNMB	**Chin-men Tao**	**26.72**	**291**	PFAKE		14 09 00.0	+10
KNMB				LR	LR		
	comp=Z,2μm,21.0s						
KMSI	**Cibinong**	**27.09**	**235**	P	**P**	**14 08 54.0**	**+0.8**
	comp=Z,240nm,1.1s,comp=Z,3μm						
ASAJ	**Asahikawa**	**27.11**	**355**	P	**P**	**14 08 54.4**	**+1.3**
	comp=Z,21nm,0.7s,baz=209,slow=9.3,SNR=19						
KUR	**Kuril'sk**	**28.14**		*3d i*P	**P**	**14 09 03.0**	**+0.8**
KUR				*e*PPP	PPP	14 09 58.1	
KUR				*e*		14 12 20.5	
KUR				*e*S	**S**	**14 13 50.6**	**+3.3**
KUR				*e*SSS	SSS	14 15 35.0	
KUR				pmax	pmax		
	comp=Z,210nm,1.2s						
KUR				pmax	pmax		
	comp=N,41nm,1.3s						
KUR				pmax	pmax		
	comp=E,56nm,1.3s						
KUR				pmax	pmax		
	comp=Z,828nm,5.2s						
KUR				MLR	MLR		
	comp=Z,2μm,13.0s						
KUR				MLR	MLR		
	comp=N,2μm,12.0s						
KUR				MLR	MLR		
	comp=E,882nm,11.0s						
VLA	**Vladivostok**	**28.58**	**338**	⇓*e*P	**P**	**14 09 06.7**	**+0.5**
VLA				pmax	pmax		
	comp=Z,16nm,1.1s						
NJ2	**Nanjing**	**28.66**	**306**	*e*P	**P**	**14 09 08.5**	**+1.4**
NJ2				sP	**pwP**	**14 09 15.3**	**+2.7**
NJ2				S	**S**	**14 13 59.0**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,22nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,320nm,3.5s						
NJ2				LR	LR		
	comp=Z,4μm,13.0s						
NJ2				LR	LR		
	comp=Z,3μm,13.6s						
NJ2				LR	LR		
	comp=Z,4μm,16.8s						
SAUI	**Saumlaki**	**28.77**	**211**	PFAKE		14 09 20.0	+12
SAUI				LR	LR		
	comp=Z,4μm,21.0s						
MRSI	**Marisa**	**28.77**	**238**	P	**P**	**14 09 09.0**	**+0.8**
TEY	**Ternei**	**28.96**	**346**	⇓*e*P	P	14 09 14.4	+4.9
TEY				*e*S	**S**	**14 14 02.6**	**+2.3**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TEY				MLR	MLR		
	comp=N,2μm,13.0s						
TEY				MLR	MLR		
	comp=E,1μm,13.0s						
TEY				MLR	MLR		
	comp=Z,2μm,14.0s						
LUWI	**Luwuk**	**29.04**	**234**	*e*P	**P**	**14 09 08.8**	**-1.7**
	comp=Z,317nm,1.1s						
LUWI	**Luwuk**	**29.04**	**234**	P	**P**	**14 09 10.4**	**-0.2**
	comp=Z,276nm,1.1s,comp=Z,6μm						
USA0B	**Ussuriysk Arra**	**29.49**	**339**	PFAKE		14 09 30.0	+16
USA0B				LR	LR		
	comp=Z,2μm,20.0s						
USRK	**Ussuriysk Ar.**	**29.49**	**339**	P	**P**	**14 09 14.9**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=200,slow=16,SNR=3.8						
USRK				LR	LR	14 20 30.0	
	comp=Z,2μm,20.7s,baz=136,slow=35						
HNR	**Honiara**	**29.77**	**151**	LR	LR	14 20 38.7	
	comp=Z,3μm,19.7s,baz=330,slow=35						
APSI	**Ampana**	**29.84**	**236**	P	**P**	**14 09 17.4**	**-0.2**
	comp=Z,82nm,1.2s,comp=Z,1μm						
YSS	**Yuzh-Sakhalins**	**29.92**	**356**	*e*P	**P**	**14 09 17.2**	**-0.9**
	comp=Z,117nm,1.4s						
YSS				LR	LR		
	comp=Z,1μm,19.0s						
YSS	**Yuzh-Sakhalins**	**29.92**	**356**	⇓*e*P	**P**	**14 09 17.6**	**-0.4**
YSS				*e*		14 09 24.9	
YSS				*e**SP	**pwP**	**14 09 30.8**	**+7.2**
YSS				*e*		14 10 19.6	
YSS				*e*PPP	PPP	14 10 35.6	
YSS				*e*S	**S**	**14 14 12.8**	**-2.6**
YSS				*e*SS	**SS**	**14 16 14.4**	**-8.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
HKPS	**Hong Kong Po S**	**30.31**	**285**	PFAKE		14 09 30.0	+8.2
HKPS				LR	LR		
	comp=Z,2μm,22.0s						
DL2	**Dalian**	**30.37**	**321**	⇓*i*P	**P**	**14 09 23.2**	**+1.1**
DL2				S	**S**	**14 14 25.0**	**+2.4**
DL2				pmax	pmax		
	comp=Z,82nm,0.9s						
DL2				pmax	pmax		
	comp=Z,440nm,3.9s						
DL2				LR	LR		
	comp=Z,2μm,14.7s						
DL2				LR	LR		
	comp=Z,2μm,14.5s						
MPSI	**Mapaga**	**30.52**	**240**	P	**P**	**14 09 24.1**	**+0.4**
	comp=Z,37nm,2.3s,comp=Z,669nm						
MDJ	**Mudanjiang**	**30.71**	**337**	P	**P**	**14 09 28.4**	**+3.4**
MDJ				pP	pwP	14 09 33.6	+3.0
MDJ				sP	sP	14 09 35.9	+7.6
MDJ				PP	**PP**	**14 10 27.8**	**-6.6**
MDJ				S	**S**	**14 14 29.8**	**+2.0**
MDJ				sS	sS	14 14 38.4	+6.6
MDJ				pmax	pmax		
	comp=Z,410nm,6.7s						
MDJ				LR	LR		
	comp=Z,3μm,17.8s						
MDJ				LR	LR		
	comp=Z,2μm,15.7s						
MDJ				LR	LR		
	comp=Z,3μm,19.9s						
MDJ	**Mudanjiang**	**30.71**	**337**	PFAKE		14 09 40.0	+15
MDJ				LR	LR		
	comp=Z,3μm,20.0s						
TARA	**Tarawa**	**30.83**	**118**	PFAKE		14 09 40.0	+14
TARA				LR	LR		
	comp=Z,2μm,18.0s						
COEN	**Coen**	**30.94**	**185**	*e*P	**P**	**14 09 26.1**	**-1.2**
	comp=Z,115nm,1.6s						
COEN				LR	LR		
	comp=Z,3μm,21.0s						
KKM	**Kota Kinabalu**	**31.02**	**253**	PFAKE		14 09 40.0	+12
KKM				LR	LR		
	comp=Z,3μm,19.0s						
KKM	**Kota Kinabalu**	**31.02**	**253**	P	**P**	**14 09 31.0**	**+2.8**
KDI	**Kendari**	**31.06**	**230**	P	**P**	**14 09 29.4**	**+1.0**
	comp=Z,60nm,1.4s,comp=Z,904nm						
GZH	**Guangzhou**	**31.11**	**286**	P	**P**	**14 09 28.8**	**-0.1**
GZH				S	**S**	**14 14 33.4**	**-1.2**
GZH				pmax	pmax		
	comp=Z,550nm,5.4s						
GZH				LR	LR		
	comp=Z,1μm,12.9s						
GZH				LR	LR		
	comp=Z,1μm,12.7s						
SNY	**Shenyang**	**31.23**	**327**	⇑P	**P**	**14 09 31.8**	**+2.1**
SNY				pmax	pmax		
	comp=Z,29nm,0.8s						
SNY				pmax	pmax		
	comp=Z,360nm,5.9s						
SNY				LR	LR		
	comp=Z,4μm,14.9s						
SNY				LR	LR		
	comp=Z,5μm,16.9s						
SNY				LR	LR		
	comp=Z,3μm,20.1s						
WHN	**Wuhan**	**31.71**	**301**	⇑P	**P**	**14 09 35.9**	**+1.9**
WHN				S	**S**	**14 14 49.2**	**+5.4**
WHN				pmax	pmax		
	comp=Z,500nm,1.9s						
WHN				pmax	pmax		
	comp=Z,2μm,8.3s						
WHN				LR	LR		
	comp=Z,12μm,14.8s						
WHN				LR	LR		
	comp=Z,7μm,13.8s						
WHN				LR	LR		
	comp=Z,5μm,13.3s						
CN2	**Changchun**	**31.78**	**331**	*e*P	**P**	**14 09 36.2**	**+1.7**
CN2				PP	**PnPn**	**14 10 41.6**	**+2.9**
CN2				*e*S	**S**	**14 14 44.8**	**+0.2**
CN2				*e*SS	**SnSn**	**14 16 35.5**	**+3.7**
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
CN2				LR	LR		
	comp=Z,2μm,15.0s						
TIA	**Tai'an**	**31.83**	**312**	P	**P**	**14 09 36.6**	**+1.5**
TIA				S	**S**	**14 14 47.6**	**+2.0**
TIA				pmax	pmax		
	comp=Z,28nm,1.0s						
TIA				pmax	pmax		
	comp=Z,680nm,2.6s						
TIA				LR	LR		
	comp=Z,5μm,20.1s						
TIA				LR	LR		
	comp=Z,3μm,17.2s						
TTSI	**Tana Toraja**	**32.58**	**235**	P	**P**	**14 09 43.0**	**+1.1**
SGKI	**Sangatta, Kali**	**32.90**	**241**	P	**P**	**14 09 42.6**	**-2.1**
	comp=Z,65nm,0.7s,comp=Z,2μm						
MTN	**Manton Dam**	**33.10**	**207**	*e*P	**P**	**14 09 44.6**	**-1.7**
	comp=Z,281nm,1.6s						
MTN				LR	LR		
	comp=Z,2μm,20.0s						
SPSI	**Sidrap Palu**	**33.20**	**233**	P	**P**	**14 09 47.9**	**+0.6**
	comp=Z,71nm,1.1s						
BNSI	**Bone**	**33.22**	**232**	P	**P**	**14 09 48.2**	**+0.8**
	comp=Z,135nm,2.1s,comp=Z,2μm						
BKSI	**Bulukumba**	**33.81**	**231**	P	**P**	**14 09 53.2**	**+0.6**
	comp=Z,28nm,1.3s,comp=Z,473nm						
TYV	**Tymovskoe**	**33.82**	**356**	*e*P	**P**	**14 09 52.3**	**0.0**
TYV				*e*S	**S**	**14 15 17.3**	**+1.2**
TYV				pmax	pmax		
	comp=Z,600nm,4.8s						
TYV				pmax	pmax		
	comp=Z,23nm,2.0s						
TYV				smax	smax		
	comp=E,9.0nm,1.5s						
KAPI	**Kappang**	**33.89**	**232**	*e*P	**P**	**14 09 52.0**	**-1.3**
	comp=E,120nm,1.3s						
KAPI				LR	LR		
	comp=Z,1μm,21.0s						
KAPI	**Kappang**	**33.89**	**232**	*e*P	**P**	**14 09 52.0**	**-1.3**
KAPI				pmax	pmax		
	comp=Z,120nm,1.3s						
KAPI				MLR	MLR		
	comp=Z,1μm,21.0s						
KAPI	**Kappang**	**33.89**	**232**	P	**P**	**14 09 53.5**	**+0.2**
	SNR=13						
KAPI				P	**P**	**14 09 53.5**	**+0.2**
	SNR=13						
KLR	**Kul'dur**	**34.08**	**343**	P	**P**	**14 09 53.2**	**-1.4**
	comp=Z,7.4nm,0.7s,baz=160,slow=8.0,SNR=11						
KLR				LR	LR	14 23 10.7	
	comp=Z,657nm,21.6s,baz=154,slow=35						
BSSI	**Bau Bau, Buton**	**34.09**	**230**	P	**P**	**14 09 55.6**	**+0.6**
	comp=Z,94nm,1.8s,comp=Z,2μm						
SOEI	**Soe**	**34.16**	**220**	*e*P	**P**	**14 09 54.1**	**-1.7**
	comp=Z,310nm,1.3s						
SOEI				LR	LR		
	comp=Z,4μm,22.0s						
SOEI	**Soe**	**34.16**	**220**	P	**P**	**14 09 55.1**	**-0.7**
QIZ	**Qiongzhong**	**34.30**	**279**	P	**P**	**14 09 55.9**	**-0.9**
QIZ				PP	**PP**	**14 11 13.7**	**-0.8**
QIZ				S	**S**	**14 15 23.6**	**-0.7**
QIZ				LR	LR		
	comp=Z,2μm,18.1s						
QIZ				LR	LR		
	comp=Z,2μm,20.1s						
QIZ	**Qiongzhong**	**34.30**	**279**	*e*P	**P**	**14 09 55.7**	**-1.2**
	comp=Z,60nm,1.3s						
QIZ				LR	LR		
	comp=Z,2μm,21.0s						
BJT	**Baijiatuau**	**34.44**	**318**	*e*P	**P**	**14 09 58.7**	**+0.9**
	comp=Z,655nm,1.4s						
BJT				LR	LR		
	comp=Z,2μm,20.0s						
BJT	**Baijiatuau**	**34.44**	**318**	*e*P	**P**	**14 09 58.7**	**+0.9**
BJT				pmax	pmax		
	comp=Z,655nm,1.4s						
BJT				MLR	MLR		
	comp=Z,2μm,20.0s						
GRNR	**Gornyy**	**34.47**	**349**	*e*P	**P**	**14 10 00.8**	**+2.8**
GRNR				pmax	pmax		
	comp=Z,19nm,1.0s						
SKR	**Severo-Kuril's**	**34.53**	**11**	*e*P	**P**	**14 09 58.1**	**-0.3**
SKR				*e*S	**S**	**14 15 28.3**	**+1.2**
SKR				pmax	pmax		
	comp=Z,200nm,2.9s						
SKR				pmax	pmax		
	comp=Z,700nm,4.2s						
SKR				pmax	pmax		
	comp=Z,131nm,1.3s						
SKR				MLR	MLR		
	comp=Z,2μm,16.0s						
MMRI	**Maumere**	**34.63**	**224**	*e*P	**P**	**14 09 58.2**	**-1.5**
	comp=Z,303nm,1.1s						
MMRI				LR	LR		
	comp=Z,1μm,20.0s						
MMRI	**Maumere**	**34.63**	**224**	P	**P**	**14 09 59.0**	**-0.7**
BATI	**Baumata**	**34.89**	**221**	P	**P**	**14 10 00.3**	**-1.6**
	comp=Z,81nm,1.2s,comp=Z,1μm						
EDFI	**Ende, Flores**	**35.08**	**225**	P	**P**	**14 10 01.8**	**-1.9**
ENH	**Enshi**	**35.68**	**298**	*e*P	**P**	**14 10 09.2**	**+0.5**
	comp=Z,220nm,1.2s						
TIY	**Taiyuan**	**35.

TIY			PP	**PP**	**14 11 32.1 +0.5**
TIY			S	**S**	**14 15 50.3 +2.3**
TIY			ScS	**ScS**	**14 20 28.5 -0.7**
TIY			pmax	pmax	
	comp=Z,63nm,1.1s				
TIY			pmax	pmax	
	comp=Z,1μm,9.1s				
TIY			LR	LR	
	comp=Z,1μm,10.6s				
TIY			LR	LR	
	comp=Z,2μm,14.3s				
TIY			LR	LR	
	comp=Z,2μm,15.2s				
SBUM	**Sibu**	**36.13 250**	*e*P	**P**	**14 10 12.9 +0.2**
	comp=Z,28nm,1.1s				
SBUM			LR	LR	
	comp=Z,1μm,21.0s				
SBUM	**Sibu**	**36.13 250**	P	**P**	**14 10 15.0 +2.4**
DLV	**T Lat**	**36.53 267**	*e*P	**P**	**14 10 16.6 +0.3**
	comp=Z,83nm,1.5s				
DLV			LR	LR	
	comp=Z,3μm,19.0s				
BASI	**Baing, Sumba**	**36.89 225**	P	**P**	**14 10 17.9 -1.2**
	comp=Z,328nm,1.4s,comp=Z,5μm				
CTAO	**Charters Tower**	**36.92 179**	*e*P	**P**	**14 10 18.6 -0.6**
	comp=Z,245nm,1.6s				
CTAO			LR	LR	
	comp=Z,2μm,18.0s				
CTAO	**Charters Tower**	**36.92 179**	*e*P	**P**	**14 10 18.6 -0.6**
CTAO			pmax	pmax	
	comp=Z,245nm,1.6s				
CTAO			MLR	MLR	
	comp=Z,2μm,18.0s				
PEA0B	**Petropavlovsk-**	**37.14 12**	*e*P	**P**	**14 10 21.5 +0.7**
	comp=Z,86nm,1.1s				
PEA0B			LR	LR	
	comp=Z,2μm,21.0s				
PETK	**Petropavlovsk-**	**37.14 12**	P	**P**	**14 10 21.9 +1.2**
	comp=Z,10nm,0.8s,baz=180,slow=7.9,SNR=22				
PETK			LR	LR	14 24 25.7
	comp=Z,901nm,19.9s,baz=186,slow=34				
PETK	**Petropavlovsk-**	**37.14 12**	P	**P**	**14 10 22.0 +1.2**
PEA1	**Petropavlovsk-**	**37.15 12**	*e*P	**P**	**14 10 21.9 +1.1**
XAN	**Xi'an**	**37.15 304**	P	**P**	**14 10 22.5 +1.3**
XAN			PP	**PnPn**	**14 11 54.3 +8.1**
XAN			S	**S**	**14 16 09.3 +1.4**
XAN			pmax	pmax	
	comp=Z,55nm,1.3s				
XAN			pmax	pmax	
	comp=Z,990nm,3.8s				
XAN			LR	LR	
	comp=Z,6μm,20.7s				
XAN			LR	LR	
	comp=Z,3μm,19.3s				
XAN			LR	LR	
	comp=Z,3μm,18.4s				
XAN	**Xi'an**	**37.15 304**	*e*P	**P**	**14 10 21.0 -0.2**
	comp=Z,103nm,1.1s				
XAN			LR	LR	
	comp=Z,2μm,19.0s				
XAN	**Xi'an**	**37.15 304**	*e*P	**P**	**14 10 21.0 -0.2**
XAN			pmax	pmax	
	comp=Z,103nm,1.1s				
XAN			MLR	MLR	
	comp=Z,2μm,19.0s				
PET	**Petropavlovsk**	**37.26 13**	*e*P	**P**	**14 10 22.6 +0.8**
	comp=Z,123nm,1.3s				
PET			LR	LR	
	comp=Z,1μm,22.0s				
PET	**Petropavlovsk**	**37.26 13**	κ *i*P	**P**	**14 10 23.1 +1.4**
PET			*i* S	**S**	**14 16 10.3 +1.5**
PET			pmax	pmax	
	comp=Z,600nm,3.1s				
PET			pmax	pmax	
	comp=Z,81nm,1.6s				
PET			pmax	pmax	
	comp=Z,400nm,8.6s				
PET			MLR	MLR	
	comp=Z,1μm,16.0s				
PET			MLR	MLR	
	comp=Z,1μm,17.0s				
WBSI	**Waikabubak, Su**	**37.29 227**	P	**P**	**14 10 20.9 -1.6**
	comp=Z,90nm,1.4s,comp=Z,1μm				
GYA	**Guiyang**	**37.49 291**	⇓ *i*P	**P**	**14 10 26.5 +2.2**
GYA			pP	pwP	14 10 33.8 +4.5
GYA			S	**S**	**14 16 15.7 +2.3**
GYA			pmax	pmax	
	comp=Z,70nm,1.3s				
GYA			pmax	pmax	
	comp=Z,680nm,6.1s				
GYA			LR	LR	
	comp=Z,3μm,15.2s				
GYA			LR	LR	
	comp=Z,1μm,13.9s				
PLAI	**Plampang**	**37.88 229**	P	**P**	**14 10 24.9 -2.6**
HHC	**Hu-ho-hao-te**	**37.89 316**	*e*P	**P**	**14 10 29.1 +1.7**
HHC			PP	**PnPn**	**14 11 57.4 +2.2**
HHC			S	**S**	**14 16 16.3 -2.7**
HHC			SS	**SnSn**	**14 18 58.3 -1.7**
HHC			pmax	pmax	
	comp=Z,130nm,1.7s				
HHC			pmax	pmax	
	comp=Z,900nm,6.6s				
HHC			LR	LR	
	comp=Z,2μm,17.5s				
HHC			LR	LR	
	comp=Z,2μm,16.7s				
HHC			LR	LR	
	comp=Z,4μm,21.8s				
KSM	**Kuching**	**38.27 250**	*e*P	**P**	**14 10 30.1 -0.8**
	comp=Z,105nm,1.0s				
KSM			LR	LR	
	comp=Z,900nm,20.0s				
KSM	**Kuching**	**38.27 250**	P	**P**	**14 10 32.0 +1.2**
WC1	**Warramunga Arr**	**38.47 198**	PFAKE		14 10 40.0 +7.6
WC1			LR	LR	
	comp=Z,2μm,20.0s				
WRAB	**Tennant Creek**	**38.47 198**	*e*P	**P**	**14 10 30.9 -1.5**
	comp=Z,134nm,1.1s				
WRAB			LR	LR	
	comp=Z,3μm,21.0s				
WRAB	**Tennant Creek**	**38.47 198**	*e*P	**P**	**14 10 30.9 -1.5**
WRAB			pmax	pmax	
	comp=Z,133nm,1.1s				
WRAB			MLR	MLR	
	comp=Z,3μm,21.0s				
WB2	**Warramunga Arr**	**38.48 198**	*e*P	**P**	**14 10 30.6 -1.9**
	comp=Z,154nm,1.1s				
WB2			LR	LR	
	comp=Z,3μm,20.0s				
WR1	**Warramunga Arr**	**38.48 198**	*e*P	**P**	**14 10 30.9 -1.6**
WRA	**Warramunga Arr**	**38.48 198**	P	**P**	**14 10 30.9 -1.6**
	comp=Z,136nm,0.3s,baz=9.6,slow=7.2,SNR=4.0				
HIA	**Hailar**	**38.49 332**	PFAKE		14 10 40.0 +7.7
HIA			LR	LR	
	comp=Z,2μm,20.0s				
BTO	**Baotou**	**38.81 315**	*e*P	**P**	**14 10 37.4 +2.1**
SRBI	**Singaraja**	**39.30 233**	P	**P**	**14 10 39.9 +0.5**
ZEA	**Zeya**	**39.38 343**	*e*P	**P**	**14 10 37.6 -2.0**
ZEA			*e*PPP	PPP	14 12 40.0
ZEA			*e*S	**S**	**14 16 42.0 +1.1**
ZEA			pmax	pmax	
	comp=Z,28nm,1.2s				
ZEA			pmax	pmax	
	comp=Z,200nm,9.0s				
ZEA			smax	smax	
	comp=N,500nm,14.0s				
ZEA			MLR	MLR	
	comp=Z,3μm,16.0s				
ZEA			MLR	MLR	
	comp=E,900nm,14.0s				
ZEA			MLR	MLR	
	comp=N,2μm,16.0s				
PANO	**Nakornpanom**	**39.40 276**	P	**P**	**14 10 42.7 +2.4**
	comp=N,1.5nm,1.4s,comp=N,166nm				
KMMI	**Kalianget**	**39.63 235**	P	**P**	**14 10 44.5 +2.3**
	comp=N,96nm,1.1s,comp=N,1μm				
DNP	**Denpasar**	**39.68 232**	P	**P**	**14 10 43.2 +0.6**
	comp=N,296nm,1.4s				
SLVN	**Son La**	**39.80 283**	*e*P	**P**	**14 10 45.2 +1.5**
	comp=N,94nm,1.0s				
SLVN			LR	LR	
	comp=Z,2μm,22.0s				
SKNT	**Sakolnakorn**	**40.02 276**	P	**P**	**14 10 47.3 +1.8**
	comp=Z,55nm,1.3s				
FITZ	**Fitzroy Crossi**	**40.23 211**	*e*P	**P**	**14 10 46.1 -1.0**
	comp=Z,126nm,1.2s				
JAGI	**Jajag, Banyuwa**	**40.35 233**	*e*P	**P**	**14 10 47.4 -0.9**
	comp=Z,153nm,1.2s				
JAGI	**Jajag, Banyuwa**	**40.35 233**	P	**P**	**14 10 47.5 -0.7**
CD2	**Chengdu**	**40.65 298**	P	**P**	**14 10 48.7 -1.9**
CD2			PcP	**PcP**	**14 12 50.9 -1.6**
CD2			S	**S**	**14 16 58.4 -2.3**
CD2			sS	sS	14 17 12.7 +8.2
CD2			pmax	pmax	
	comp=Z,190nm,1.5s				
CD2			pmax	pmax	
	comp=Z,1μm,6.8s				
CD2			LR	LR	
	comp=Z,5μm,15.8s				
CD2			LR	LR	
	comp=Z,4μm,11.6s				
CD2			LR	LR	
	comp=Z,3μm,17.9s				
GRJI	**Gresik**	**40.73 237**	P	**P**	**14 10 52.8 +1.5**
	comp=Z,76nm,1.0s,comp=Z,1μm				
GMJI	**Gumukmas**	**40.78 234**	P	**P**	**14 10 51.3 -0.4**
KMI	**Kunming**	**40.91 289**	PFAKE		14 11 00.0 +6.9
KMI			LR	LR	
	comp=Z,2μm,18.0s				
KHON	**Khomkaen**	**41.20 275**	P	**P**	**14 10 57.1 +1.9**
	comp=Z,211μm,1.1s				
LZH	**Lanzhou**	**41.73 305**	⇓P	**P**	**14 11 01.9 +2.4**
LZH			pP	pwP	14 11 08.1 +2.9
LZH			sP	sP	14 11 10.3 +7.5
LZH			PP	**PnPn**	**14 12 42.2 +1.3**
LZH			S	**S**	**14 17 18.0 +1.2**
LZH			sS	sS	14 17 27.1 +6.4
LZH			SS	**SS**	**14 20 17.4 -5.0**
LZH			pmax	pmax	
	comp=Z,180nm,1.3s				
LZH			pmax	pmax	
	comp=Z,2μm,6.1s				
LZH			LR	LR	
	comp=Z,5μm,15.2s				
LZH			LR	LR	
	comp=Z,2μm,14.6s				
LZH			LR	LR	
	comp=Z,5μm,16.8s				
SMY	**Shemya**	**41.92 25**	PFAKE		14 11 10.0 +9.4
SMY			LR	LR	
	comp=Z,2μm,18.0s				
PWJI	**Pagerwojo**	**41.92 236**	P	**P**	**14 11 00.8 -0.3**
CHAI	**Chaiyaphum**	**42.05 275**	P	**P**	**14 11 03.6 +1.3**
	comp=Z,156μm,1.0s				
AS31	**Alice Springs**	**42.14 196**	*e*P	**P**	**14 11 00.9 -1.9**
	comp=Z,4.4nm,0.6s				
ASAR	**Alice Springs**	**42.14 196**	P	**P**	**14 11 01.1 -1.7**
	comp=Z,11nm,0.9s,baz=29,slow=8.4,SNR=35				
ASAR			LR	LR	14 28 59.6
	comp=Z,2μm,20.4s,baz=22,slow=37				
SMRI	**Semarang**	**42.45 239**	P	P	14 11 11.3 +5.8
EIDS	**Eidsvold**	**42.48 173**	*e*P	**P**	**14 11 04.3 -1.1**
	comp=Z,44nm,1.3s				
EIDS			LR	LR	
	comp=Z,2μm,21.0s				
WOJI	**Wonogiri, Jawa**	**42.51 237**	P	**P**	**14 11 05.7 -0.3**
TPI	**Tanjungpandan**	**42.57 246**	P	**P**	**14 11 06.3 -0.1**
	comp=Z,114nm,1.0s,comp=Z,3μm				
MA2	**Magadan**	**42.60 4**	P	**P**	**14 11 06.5 +0.4**
	comp=Z,10nm,0.7s,baz=149,slow=5.5,SNR=6.0				
MA2			LR	LR	14 26 32.6
	comp=Z,954nm,21.9s,baz=187,slow=33				
MA2	**Magadan**	**42.60 4**	*e*P	**P**	**14 11 06.3 +0.2**
	comp=Z,52nm,1.0s				
MA2	**Magadan**	**42.60 4**	⇑ *e*P	**P**	**14 11 06.9 +0.8**
MA2			pmax	pmax	
	comp=Z,106nm,2.5s				
UGM	**Wanagama**	**42.88 237**	P	**P**	**14 11 11.3 +2.3**
PBKT	**Sadao Pong**	**42.93 276**	P	**P**	**14 11 11.3 +1.9**
	comp=Z,50nm,1.2s,comp=Z,724nm				
UTTA	**Uttaradit**	**43.19 278**	P	**P**	**14 11 13.1 +1.6**
	comp=Z,91μm,1.1s,comp=Z,719μm				
PHRA	**Phrae**	**43.42 279**	P	**P**	**14 11 15.4 +2.1**
	comp=Z,8.9nm,1.3s,comp=Z,151nm				
PPBI	**Pangkal Pinang**	**43.62 248**	P	**P**	**14 11 15.0 0.0**
TPRI	**Tanjung Pinang**	**43.74 253**	P	**P**	**14 11 17.3 +1.3**
DZM	**Mont Dzumac**	**43.79 152**	*e*P	**P**	**14 11 17.8 +1.6**
	comp=Z,268nm,1.2s				
DZM			*e*S	**S**	**14 17 47.4 +0.3**
	comp=Z,661nm,27.9s				
DZM			*e*LR	LR	14 23 29.8
	comp=Z,4μm,24.8s				
DZM	**Mont Dzumac**	**43.79 152**	*e*P	**P**	**14 11 14.6 -1.6**
	comp=Z,134nm,1.2s				
LAMP	**Lampang**	**43.98 279**	P	**P**	**14 11 19.9 +2.0**
	comp=Z,102μm,1.0s,comp=Z,764μm				
MYKOM	**Kota Tinggi**	**44.02 254**	*e*P	**P**	**14 11 16.9 -1.3**
	comp=Z,57nm,0.9s				
MYKOM			LR	LR	
	comp=Z,2μm,20.0s				
MYKOM	**Kota Tinggi**	**44.02 254**	P	**P**	**14 11 21.0 +2.8**
ULN	**Ulaanbaatar**	**44.17 323**	*e*P	**P**	**14 11 17.5 -1.7**
	comp=Z,79nm,1.4s				
ULN			LR	LR	
	comp=Z,2μm,19.0s				
ULN	**Ulaanbaatar**	**44.17 323**	*e*P	**P**	**14 11 17.5 -1.7**
ULN			pmax	pmax	
	comp=Z,79nm,1.4s				
ULN			MLR	MLR	
	comp=Z,2μm,19.0s				
ULN	**Ulaanbaatar**	**44.17 323**	P	**P**	**14 11 19.7 +0.6**
	SNR=37				
ULN			P	**P**	**14 11 19.7 +0.6**
	SNR=37				
SONA0	**Songino Array**	**44.54 322**	*e*P	**P**	**14 11 22.2 +0.1**
SONM	**Songino Array**	**44.54 322**	P	**P**	**14 11 22.2 +0.1**
	comp=Z,16nm,1.0s,baz=131,slow=8.2,SNR=45				
SONM			LR	LR	14 30 10.6
	comp=Z,703nm,21.4s,baz=119,slow=36				
CMMT	**Chiang Mai**	**44.60 280**	P	**P**	**14 11 24.2 +1.4**
	comp=Z,23nm,1.0s,comp=Z,529nm				
CHTO	**Chiang Mai**	**44.60 280**	*e*P	**P**	**14 11 22.5 -0.3**
	comp=Z,48nm,1.1s				
CHTO			LR	LR	
	comp=Z,1μm,19.0s				
CHTO	**Chiang Mai**	**44.60 280**	P	**P**	**14 11 24.1 +1.3**
	SNR=16				
CM31	**Chiang Mai Arr**	**44.64 279**	*e*P	**P**	**14 11 24.4 +1.2**
	comp=Z,130nm,0.9s				
CM31	**Chiang Mai Arr**	**44.64 279**	P	**P**	**14 11 24.9 +1.8**
	SNR=54				
CMAR	**Chiang Mai Arr**	**44.64 279**	P	**P**	**14 11 24.6 +1.4**
	comp=Z,68nm,1.1s,baz=72,slow=6.5,SNR=170				
CMAR			LR	LR	14 30 46.4
	comp=Z,471nm,18.1s,baz=80,slow=37				
CMAR	**Chiang Mai Arr**	**44.64 279**	*i* P	**P**	**14 11 25.0 +1.9**
CMAR			pmax	pmax	
	comp=Z,68nm,1.0s				
PHET	**Kaeng Krachan**	**44.80 271**	P	**P**	**14 11 27.7 +3.2**
	comp=Z,69μm,0.8s,comp=Z,562μm				
CISI	**Cisompet, Garu**	**44.89 240**	*e*P	**P**	**14 11 22.3 -2.9**
	comp=Z,119nm,1.1s				
CISI	**Cisompet, Garu**	**44.89 240**	P	**P**	**14 11 28.0 +2.8**
UMPA	**Umpang Tak**	**44.99 276**	P	**P**	**14 11 28.7 +2.7**
	comp=Z,154μm,1.2s				
SRDT	**SRDT**	**45.03 273**	P	**P**	**14 11 29.0 +2.8**
	comp=Z,27nm,1.3s				
CBJI	**Citeko**	**45.10 242**	P	**P**	**14 11 29.7 +2.9**
SKLT	**Songkhla**	**45.24 263**	P	**P**	**14 11 30.4 +2.4**
	comp=Z,36nm,0.9s,comp=Z,739nm				
ADK	**Adak**	**45.60 32**	*e*P	**P**	**14 11 31.5 +1.3**
	comp=Z,376nm,1.4s				
ADK			LR	LR	
	comp=Z,900nm,19.0s				
ADK	**Adak**	**45.60 32**	*e*P	**P**	**14 11 31.5 +1.3**
ADK			pmax	pmax	
	comp=Z,376nm,1.4s				
ADK			MLR	MLR	
	comp=Z,900nm,19.0s				
JMBI	**JAMBI**	**45.61 250**	P	**P**	**14 11 33.8 +2.9**
	comp=Z,326nm,1.4s				
SKJI	**Sukabumi**	**45.65 242**	P	**P**	**14 11 33.9 +2.7**
	comp=Z,103nm,0.8s				
IPM	**Ipoh**	**45.69 259**	*e*P	**P**	**14 11 32.2 +0.7**
	comp=Z,59nm,1.1s				
IPM			LR	LR	
	comp=Z,3μm,21.0s				
GTA	**Gaotai**	**45.70 309**	⇓P	**P**	**14 11 33.4 +1.9**
GTA			pP	pwP	14 11 38.0 +0.9
GTA			sP	sP	14 11 40.9 +6.1
GTA			S	**S**	**14 18 16.0 +1.2**
GTA			sS	sS	14 18 25.8 +7.1
GTA			ScS	**ScS**	**14 21 28.5 +0.3**
GTA			SS	**SS**	**14 21 35.0 -3.9**
GTA			pmax	pmax	
	comp=Z,120nm,1.7s				
GTA			pmax	pmax	
	comp=Z,1μm,6.5s				
GTA			LR	LR	
	comp=Z,3μm,20.3s				
GTA			LR	LR	
	comp=Z,2μm,17.5s				
GTA			LR	LR	
	comp=Z,2μm,18.2s				
KULM	**Kulim**	**45.78 261**	*e*P	**P**	**14 11 32.6 +0.3**
	comp=Z,70nm,1.1s				
KULM			LR	LR	
	comp=Z,1μm,20.0s				
MBWA	**Marble Bar**	**45.84 215**	PFAKE		14 11 40.0 +7.5
MBWA			LR	LR	
	comp=Z,900nm,18.0s				
BLSI	**Bandar Lampung**	**45.93 245**	P	**P**	**14 11 34.8 +1.4**
	comp=Z,196nm,1.1s,comp=Z,3μm				
TRTT	**Trang**	**45.94 264**	P	**P**	**14 11 36.5 +3.0**
	comp=Z,64nm,1.4s				
PSAD1	**Pilbara Seismi**	**46.02 215**	PFAKE		14 11 40.0 +6.1
PSAD1			LR	LR	
	comp=Z,1μm,22.0s				
KLI	**Kotabumi**	**46.02 245**	P	**P**	**14 11 36.4 +2.3**
GSTR	**Great Sitkin T**	**46.03 32**	*e*P	**P**	**14 11 34.5 +0.8**
SEY	**Seymchan**	**46.05 4**	P	**P**	**14 11 34.0 +0.4**
	comp=Z,14nm,0.9s,baz=188,slow=16,SNR=11				
SEY	**Seymchan**	**46.05 4**	⇑ *e*P	**P**	**14 11 34.7 +1.1**
PSA00	**Pilbara Seismi**	**46.11 215**	*e*P	**P**	**14 11 33.4 -1.3**
	comp=Z,190nm,1.3s				
PSA00			LR	LR	
	comp=Z,1μm,19.0s				
PSAC3	**Pilbara Seismi**	**46.16 215**	PFAKE		14 11 50.0 +15
PSAC3			LR	LR	
	comp=Z,1μm,20.0s				
CGJI	**Cibinong**	**46.18 243**	P	**P**	**14 11 32.3 -3.0**
YAK	**Yakutsk**	**46.35 350**	*e*P	**P**	**14 11 33.8 -2.3**
	comp=Z,46nm,0.9s				
YAK			LR	LR	
	comp=Z,6μm,19.0s				
YAK	**Yakutsk**	**46.35 350**	*e*P	**P**	**14 11 34.1 -1.9**
YAK			*e**PP	**pwP**	**14 11 41.3 -0.4**
YAK			*e*S	**S**	**14 18 20.2 -3.0**
YAK			*e*SS	**SS**	**14 21 44.6 -4.1**
YAK			*e*SSS	SSS	14 22 43.6
MDSI	**Maura Dua**	**46.43 246**	P	**P**	**14 11 36.7 -0.6**
KASI	**Kota Agung**	**46.66 245**	P	**P**	**14 11 41.0 +1.9**
LHSI	**Lahat**	**46.70 248**	P	**P**	**14 11 41.2 +1.7**
LWLI	**Liwa**	**46.79 246**	P	**P**	**14 11 43.6 +3.3**
ATKA	**Atka Island**	**47.05 33**	*e*P	**P**	**14 11 41.8 +0.2**
	comp=Z,152nm,1.1s				
ATKA			LR	LR	
	comp=Z,1μm,18.0s				
BOD	**Bodaibo**	**47.08 337**	*e*P	**P**	**14 11 39.5 -2.3**
BKNI	**Bangkinang**	**47.18 254**	PFAKE		14 11 50.0 +6.8
BKNI			LR	LR	
	comp=Z,1μm,20.0s				
LKP	**Lekhapani**	**47.19 292**	*e*P	**P**	**14 11 44.0 +0.9**
PKDT	**Phuket**	**47.22 265**	P	P	14 11 52.7 +9.2
SDSI	**Sungai Dareh**	**47.32 252**	P	**P**	**14 11 44.5 +0.2**
ARMA	**Armidale**	**47.53 173**	*e*P	**P**	**14 11 45.0 -0.8**
	comp=Z,143nm,1.4s				
ARMA			LR	LR	
	comp=Z,2μm,21.0s				
IRK	**Irkutsk**	**47.96 327**	*e*P	**P**	**14 11 47.9 -0.9**
IRK			pmax	pmax	
	comp=Z,41nm,3.1s				
TLY	**Talaya**	**48.01 326**	PFAKE		14 12 00.0 +11
TLY			LR	LR	
	comp=Z,1μm,19.0s				
TLY	**Talaya**	**48.01 326**	*e*P	**P**	**14 11 49.5 +0.3**
TLY			*e*		14 13 37.2
TLY			*e*S	**S**	**14 18 41.0 -6.2**
TLY			pmax	pmax	
	comp=Z,66nm,1.9s				
TLY			MLR	MLR	
	comp=Z,2μm,17.0s				
TLY	**Talaya**	**48.01 326**	P	P	14 11 55.5 +6.3
	SNR=5.6				
PDSI	**Padang**	**48.20 253**	P	**P**	**14 11 50.5 -0.7**
PSI	**Prapat**	**48.23 258**	*e*P	**P**	**14 11 52.3 +0.7**
	comp=Z,77nm,0.9s				
PSI			LR	LR	
	comp=Z,3μm,22.0s				
PSI	**Prapat**	**48.23 258**	*e*P	**P**	**14 11 52.3 +0.7**
PSI			pmax	pmax	
	comp=Z,77nm,0.9s				
PSI			MLR	MLR	
	comp=Z,3μm,22.0s				
XMIS	**Christmas Isla**	**48.28 238**	*e*P	**P**	**14 11 48.9 -2.9**
	comp=Z,155nm,0.9s				
MOKO	**MOKOCHONG**	**48.36 290**	*e*P	**P**	**14 11 50.2 -2.2**
JORH	**JORHAT**	**48.60 291**	*e*P	**P**	**14 11 56.4 +2.3**
KOHI	**KOHIMA**	**48.73 289**	*e*P	**P**	**14 11 53.0 -2.3**
STKA	**Stephens Creek**	**48.83 185**	P	**P**	**14 11 54.8 -0.9**
	comp=Z,4.5nm,0.6s,baz=330,slow=7.4,SNR=10				
STKA			LR	LR	14 33 36.2
	comp=Z,2μm,18.4s,baz=354,slow=38				
STKA	**Stephens Creek**	**48.83 185**	*e*P	**P**	**14 11 55.0 -0.7**
	comp=Z,31nm,2.0s				
STKA	**Stephens Creek**	**48.83 185**	*e*P	**P**	**14 11 55.0 -0.7**
STKA			pmax	pmax	
	comp=Z,31nm,2.0s				
ZIRO	**ZIRO**	**48.97 292**	*e*P	**P**	**14 11 58.4 +1.2**
KCSI	**Kotacane, Aceh**	**49.07 260**	P	**P**	**14 11 58.1 +0.2**
LHMI	**Lhok Sumawe**	**49.30 262**	P	**P**	**14 12 01.7 +2.0**
MOY	**Mondy**	**49.45 325**	*e*P	**P**	**14 11 59.7 -0.7**
MOY			pmax	pmax	
	comp=Z,56nm,1.6s				
SISI	**Saibi**	**49.62 253**	P	**P**	**14 12 05.3 +3.3**
TPTI		**49.71 260**	P	**P**	**14 12 04.3 +1.5**
SAIH	**SAIHA**	**49.88 285**	*e*P	**P**	**14 12 04.7 +0.6**
TEZP	**TEZPUR**	**49.90 291**	*e*P	**P**	**14 12 05.0 +1.0**
GSI	**Gunungsitoli**	**50.02 257**	*e*P	**P**	**14 12 05.6 +0.5**
	comp=Z,468nm,0.9s				
GSI	**Gunungsitoli**	**50.02 257**	P	**P**	**14 12 06.1 +1.0**
NIKH	**Nikolski High**	**50.25 34**	*e*P	**P**	**14 12 06.9 +0.7**
	comp=Z,274nm,1.3s				
NIKH			LR	LR	
	comp=Z,1μm,20.0s				
BBOO	**Buckleboo**	**50.47 191**	*e*P	**P**	**14 12 06.7 -1.5**
	comp=Z,140nm,1.6s				
BBOO			LR	LR	
	comp=Z,2μm,19.0s				
FORT	**Forrest**	**50.56 200**	*e*P	**P**	**14 12 07.8 -1.1**
	comp=Z,389nm,1.5s				
FORT			LR	LR	
	comp=Z,2μm,21.0s				
TAWA	**Tawang**	**50.73 292**	*e*P	**P**	**14 12 11.9 +1.1**
SHL	**Shillong**	**50.74 289**	*e*P	**P**	**14 12 10.9 +0.2**
	comp=Z,136nm,1.1s				
SHL	**Shillong**	**50.74 289**	*e*P	**P**	**14 12 10.9 +0.2**
SHL			pmax	pmax	
	comp=Z,136nm,1.1s				
SHL	**Shillong**	**50.74 289**	*e*P	**P**	**14 12 11.5 +0.8**
SHL			⇑ *i*P	**P**	**14 12 12.0 +1.3**
SHL			IAmb	IAmb	14 12 13.3
	comp=Z,47nm,0.8s				
SHL			*i* S	**S**	**14 19 25.0 -1.6**
SNSI	**Sinabang, Aceh**	**50.80 259**	P	**P**	**14 12 11.9 +0.9**
GUWA	**GUWAHATI**	**50.90 290**	*e*P	**P**	**14 12 11.4 -0.2**
BRDH	**Bariadhala**	**51.10 286**	P	**P**	**14 12 12.6 -0.6**
	comp=Z,104nm,0.3s,baz=95,slow=7.1,SNR=4.9				
BELO	**BELONIA**	**51.24 286**	*e*P	**P**	**14 12 14.2 -0.1**
LSA	**Lhasa**	**51.38 295**	P	**P**	**14 12 18.5 +2.7**
LSA			S	**S**	**14 19 38.9 +3.0**
LSA			pmax	pmax	
	comp=Z,200nm,1.0s				
LSA			LR	LR	
	comp=Z,3μm,13.4s				
LSA			LR	LR	
	comp=Z,1μm,12.4s				
LSA			LR	LR	
	comp=Z,2μm,12.8s				
LSA	**Lhasa**	**51.38 295**	PFAKE		14 12 30.0 +14
LSA			LR	LR	
	comp=Z,800nm,20.0s				
LSA	**Lhasa**	**51.38 295**	P	**P**	**14 12 18.4 +2.6**
AGT	**Agartala**	**51.39 287**	*e*P	**P**	**14 12 14.6 -0.7**
PBA	**Port Blair**	**51.65 272**	PFAKE		14 12 30.0 +13
PBA			LR	LR	
	comp=Z,2μm,20.0s				

SPIA	**Saint Paul Isl**	**51.67**	**29**	*eP*	**P**	**14 12 18.2**	**+1.3**
	comp=Z,758nm,1.4s						
SPIA				LR	LR		
	comp=Z,3μm,22.0s						
UNV	**Unalaska Valle**	**51.90**	**34**	*eP*	**P**	**14 12 19.2**	**+0.5**
	comp=Z,134nm,1.0s						
UNV				LR	LR		
	comp=Z,1μm,21.0s						
CAN	**Canberra**	**52.18**	**177**	*eP*	**P**	**14 12 20.2**	**-0.7**
	comp=Z,218nm,1.4s						
CAN				LR	LR		
	comp=Z,2μm,22.0s						
CAN	**Canberra**	**52.18**	**177**	*eP*	**P**	**14 12 20.2**	**-0.7**
CAN				pmax	pmax		
	comp=Z,218nm,1.4s						
CAN				MLR	MLR		
	comp=Z,2μm,22.0s						
AKUT	**Akutan**	**52.41**	**34**	*eP*	**P**	**14 12 23.3**	**+0.8**
	comp=Z,211nm,1.0s						
AKUT				LR	LR		
	comp=Z,2μm,22.0s						
DHUB	**DHUBRI**	**52.43**	**290**	*eP*	**P**	**14 12 23.9**	**+0.9**
BILL	**Bilibino**	**52.59**	**9**	*eP*	**P**	**14 12 23.3**	**-0.3**
	comp=Z,66nm,1.0s						
BILL	**Bilibino**	**52.59**	**9**	*d iP*	**P**	**14 12 23.7**	**+0.1**
BILL				*i*		14 12 33.4	
BILL				*i*		14 13 32.8	
BILL				pmax	pmax		
	comp=Z,52nm,1.1s						
GTK	**Tadong**	**53.63**	**292**	*eP*	**P**	**14 12 32.9**	**+0.8**
FALS	**False Pass**	**53.96**	**34**	*eP*	**P**	**14 12 34.5**	**+0.6**
	comp=Z,168nm,0.9s						
FALS				LR	LR		
	comp=Z,2μm,22.0s						
MORW	**Morawa**	**54.17**	**213**	*eP*	**P**	**14 12 34.3**	**-1.4**
	comp=Z,249nm,1.6s						
TOO	**Toolangi**	**54.34**	**180**	*eP*	**P**	**14 12 37.0**	**+0.2**
	comp=Z,140nm,1.6s						
TOO				LR	LR		
	comp=Z,1μm,21.0s						
TOO	**Toolangi**	**54.34**	**180**	*eP*	**P**	**14 12 37.0**	**+0.2**
TOO				pmax	pmax		
	comp=Z,140nm,1.6s						
TOO				MLR	MLR		
	comp=Z,1μm,21.0s						
ODAN	**Odare**	**54.73**	**291**	*eP*	**P**	**14 12 41.5**	**+1.3**
	comp=Z,673nm,1.6s						
GAMB	**Gambell**	**54.90**	**21**	*eP*	**P**	**14 12 40.9**	**+0.4**
	comp=Z,82nm,1.0s						
RAMN	**Ramite**	**55.43**	**291**	*eP*	**P**	**14 12 46.4**	**+1.1**
	comp=Z,423nm,1.4s						
TIXI	**Tiksi**	**55.51**	**354**	P	**P**	**14 12 43.0**	**-1.8**
	comp=Z,2.6nm,0.7s,baz=163,slow=5.5,SNR=7.3						
TIXI	**Tiksi**	**55.51**	**354**	*eP*	**P**	**14 12 43.0**	**-1.8**
	comp=Z,18nm,0.4s						
TIXI				LR	LR		
	comp=Z,900nm,19.0s						
TIXI	**Tiksi**	**55.51**	**354⇓**	*eP*	**P**	**14 12 45.3**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ	**Urumqi**	**55.52**	**312**	P	**P**	**14 12 48.2**	**+2.7**
WMQ				pP	pwP	14 12 52.4	+1.2
WMQ				S	**S**	**14 20 30.4**	**-0.6**
WMQ				sS	sS	14 20 37.1	+2.2
WMQ				ScS	**ScS**	**14 22 32.5**	**-2.6**
WMQ				pmax	pmax		
	comp=Z,300nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,1μm,3.8s						
WMQ				LR	LR		
	comp=Z,4μm,18.5s						
WMQ				LR	LR		
	comp=Z,1μm,21.3s						
WMQ				LR	LR		
	comp=Z,2μm,20.5s						
WMQ	**Urumqi**	**55.52**	**312**	*eP*	**P**	**14 12 46.2**	**+0.7**
	comp=Z,494nm,1.4s						
WMQ				LR	LR		
	comp=Z,2μm,20.0s						
WRMHI	**West Rim**	**55.67**	**78**	PFAKE		14 13 00.0	+13
WRMHI				LR	LR		
	comp=Z,2μm,22.0s						
SBLHI	**Steaming Bluff**	**55.70**	**78**	PFAKE		14 13 00.0	+13
SBLHI				LR	LR		
	comp=Z,3μm,22.0s						
SDPT	**Sand Point**	**55.71**	**34**	*eP*	**P**	**14 12 47.9**	**+1.3**
	comp=Z,462nm,1.0s						
JIRN	**Jiri**	**55.76**	**292**	*eP*	**P**	**14 12 49.3**	**+1.5**
	comp=Z,406nm,1.0s						
GUN	**Gumba**	**56.02**	**292**	*eP*	**P**	**14 12 51.1**	**+1.4**
	comp=Z,409nm,1.1s						
BOK	**Bokaro**	**56.29**	**288**	*eP*	**P**	**14 12 52.5**	**+1.3**
BOK				IAmb	IAmb	14 12 54.7	
	comp=Z,75nm,0.6s						
PKI	**Pulchoki**	**56.46**	**292**	*eP*	**P**	**14 12 53.6**	**+0.8**
	comp=Z,537nm,1.7s						
PKIN	**Phulchoki**	**56.47**	**292**	*eP*	**P**	**14 12 53.5**	**+0.7**
	comp=Z,177nm,1.3s						
KKN	**Kakani**	**56.56**	**292**	*eP*	**P**	**14 12 54.5**	**+1.1**
	comp=Z,210nm,1.2s						
DMN	**Daman**	**56.72**	**292**	*eP*	**P**	**14 12 55.7**	**+1.1**
	comp=Z,275nm,1.2s						
BWNR	**Bhubaneshwar**	**56.75**	**283**	*ex*	P	14 12 49.0	-5.5
NWAO	**Narrogin (SRO)**	**56.76**	**209**	LR	LR	14 36 53.3	
	comp=Z,588nm,21.8s,baz=35,slow=36						
NWAO	**Narrogin (SRO)**	**56.76**	**209**	*eP*	**P**	**14 12 53.3**	**-1.0**
	comp=Z,102nm,1.5s						
NWAO	**Narrogin (SRO)**	**56.76**	**209**	*eP*	**P**	**14 12 53.3**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,102nm,1.5s						
DGZ	**Jazzator, Alta**	**56.86**	**319**	*d iP*	**P**	**14 12 56.2**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,19nm,0.8s						
GKN	**Gorkha**	**57.12**	**293**	*eP*	**P**	**14 12 58.5**	**+1.2**
	comp=Z,771nm,1.3s						
ANM	**Nome**	**57.62**	**23**	*eP*	**P**	**14 13 00.4**	**+0.4**
	comp=Z,76nm,1.1s						
ANM				LR	LR		
	comp=Z,1μm,20.0s						
ANM	**Nome**	**57.62**	**23**	*eP*	**P**	**14 13 00.4**	**+0.4**
ANM				pmax	pmax		
	comp=Z,76nm,1.1s						
ANM				MLR	MLR		
	comp=Z,1μm,20.0s						
DANN	**Dangsing**	**57.87**	**293**	*eP*	**P**	**14 13 04.1**	**+1.3**
	comp=Z,570nm,0.9s						
KOLN	**Koldanda**	**58.05**	**292**	*eP*	**P**	**14 13 05.1**	**+1.2**
	comp=Z,475nm,1.2s						
PYUN	**Piuthan**	**58.56**	**293**	*eP*	**P**	**14 13 08.4**	**+0.9**
	comp=Z,334nm,1.1s						
ZAA0	**Zalesovo Array**	**59.42**	**323**	*eP*	**P**	**14 13 11.4**	**-1.4**
	comp=Z,19nm,1.0s						
ZAA0				LR	LR		
	comp=Z,1μm,19.0s						
ZALV	**Zalesovo Beam**	**59.42**	**323**	P	**P**	**14 13 11.4**	**-1.3**
	comp=Z,13nm,0.9s,baz=100,slow=6.2,SNR=27						
ZALV				LR	LR	14 39 52.9	
	comp=Z,947nm,19.3s,baz=73,slow=37						
ZALV	**Zalesovo Beam**	**59.42**	**323**	*i P*	**P**	**14 13 14.0**	**+1.3**
ZALV				pmax	pmax		
	comp=Z,13nm,0.9s						
ZAA1	**Zalesovo Array**	**59.43**	**323**	*eP*	**P**	**14 13 11.4**	**-1.3**
SII	**Sitkinak Islan**	**59.45**	**34**	*eP*	**P**	**14 13 13.9**	**+1.0**
	comp=Z,256nm,0.8s						
TAU	**Tasmania Unive**	**59.69**	**179**	PFAKE		14 13 30.0	+15
TAU				LR	LR		
	comp=Z,3μm,19.0s						
MK31	**Makanchi Array**	**59.73**	**315**	*eP*	**P**	**14 13 15.0**	**0.0**
	comp=Z,34nm,1.1s						
MK31	**Makanchi Array**	**59.73**	**315**	*eP*	**P**	**14 13 15.0**	**0.0**
MK31				pmax	pmax		
	comp=Z,34nm,1.1s						
MK32	**Makanchi Array**	**59.73**	**315**	*eP*	**P**	**14 13 15.5**	**+0.5**
MKAR	**Makanchi Array**	**59.73**	**315**	P	**P**	**14 13 15.5**	**+0.5**
	comp=Z,26nm,0.9s,baz=94,slow=7.7,SNR=105						
MKAR				LR	LR	14 38 08.6	
	comp=Z,775nm,21.9s,baz=96,slow=35						
MAKZ	**Makanchi**	**59.95**	**315**	*eP*	**P**	**14 13 16.8**	**+0.3**
	comp=Z,41nm,0.9s						
MAKZ				LR	LR		
	comp=Z,1μm,20.0s						
MAKZ	**Makanchi**	**59.95**	**315**	*eP*	**P**	**14 13 16.8**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,41nm,0.9s						
MAKZ				MLR	MLR		
	comp=Z,1μm,20.0s						
OHAK	**Old Harbor**	**60.11**	**33**	*eP*	**P**	**14 13 18.8**	**+1.5**
	comp=Z,154nm,1.0s						
OHAK				LR	LR		
	comp=Z,2μm,19.0s						
SVW2	**Sparrevohn**	**60.16**	**29**	*eP*	**P**	**14 13 19.1**	**+1.4**
	comp=Z,85nm,1.2s						
SVW2				LR	LR		
	comp=Z,2μm,19.0s						
NVS	**Novosibirsk**	**60.53**	**324⇑**	*iP*	**P**	**14 13 20.0**	**-0.3**
NVS				pmax	pmax		
	comp=Z,41nm,1.4s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,14nm,0.7s						
KDAK	**Kodiak Island**	**60.62**	**33**	*eP*	**P**	**14 13 21.6**	**+0.7**
	comp=E,126nm,1.1s						
KDAK				LR	LR		
	comp=Z,1μm,20.0s						
KDAK	**Kodiak Island**	**60.62**	**33**	*eP*	**P**	**14 13 21.6**	**+0.7**
KDAK				pmax	pmax		
	comp=Z,126nm,1.1s						
KDAK				MLR	MLR		
	comp=Z,1μm,20.0s						
RSO	**Redoubt South**	**61.28**	**30**	*eP*	**P**	**14 13 25.9**	**+0.3**
PDGK	**Podgornoye**	**61.39**	**310**	P	**P**	**14 13 27.4**	**+0.8**
PDGK				pmax	pmax		
	comp=Z,115nm,1.2s						
HOM	**Homer**	**61.59**	**31**	*eP*	**P**	**14 13 28.3**	**+0.9**
	comp=Z,274nm,0.8s						
JBP	**Jabalpur**	**61.75**	**287**	*eP*	**P**	**14 13 29.5**	**+0.4**
JBP				*eS*	**S**	**14 21 53.9**	**+1.5**
CNPM	**China Poot**	**61.76**	**31**	*eP*	**P**	**14 13 29.0**	**+0.3**
	comp=Z,191nm,1.0s						
CNPM				LR	LR		
	comp=Z,1μm,20.0s						
BRLK	**Bradley Lake**	**61.99**	**31**	*eP*	**P**	**14 13 30.6**	**+0.4**
	comp=Z,115nm,1.0s						
BRLK				LR	LR		
	comp=Z,1μm,19.0s						
CAST	**Castle Rocks**	**62.46**	**27**	*eP*	**P**	**14 13 33.9**	**+0.6**
	comp=Z,74nm,0.9s						
CAST				LR	LR		
	comp=Z,2μm,20.0s						
SUA	**Susitna One**	**62.50**	**29**	*eP*	**P**	**14 13 34.2**	**+0.5**
	comp=Z,247nm,1.9s						
SUA				LR	LR		
	comp=Z,1μm,22.0s						
KURK	**Kurchatov**	**62.61**	**319**	*eP*	**P**	**14 13 33.5**	**-0.9**
	comp=Z,51nm,0.9s						
KURK				LR	LR		
	comp=Z,2μm,18.0s						
KURK	**Kurchatov**	**62.61**	**319**	*eP*	**P**	**14 13 33.5**	**-0.9**
KURK				pmax	pmax		
	comp=Z,51nm,0.9s						
KURK				MLR	MLR		
	comp=Z,2μm,18.0s						
KURK	**Kurchatov**	**62.61**	**319**	P	**P**	**14 13 33.4**	**-1.0**
	SNR=34						
KURK				P	**P**	**14 13 33.4**	**-1.0**
	SNR=34						
KURBB	**Kurchatov Arra**	**62.66**	**319**	P	**P**	**14 13 34.3**	**-0.5**
	comp=Z,47nm,0.8s,baz=99,slow=6.8,SNR=98						
DDI	**Dehra Dun**	**62.71**	**296**	*eP*	**P**	**14 13 37.0**	**+1.4**
DDI				IAmb	IAmb	14 13 39.1	
	comp=Z,110nm,1.0s						
SEW	**Seward**	**62.77**	**31**	*eP*	**P**	**14 13 36.2**	**+0.9**
	comp=Z,290nm,1.1s						
SEW				LR	LR		
	comp=Z,1μm,20.0s						
RC01	**Rabbit Creek A**	**62.88**	**29**	*eP*	**P**	**14 13 36.1**	**+0.1**
	comp=Z,120nm,1.1s						
RC01				LR	LR		
	comp=Z,1μm,22.0s						
NGP	**Nagpur**	**62.89**	**285**	*eP*	**P**	**14 13 36.0**	**-0.8**
NGP				IAmb	IAmb	14 13 38.5	
	comp=Z,125nm,1.5s						
BPAW	**Bear Paw Mtn.**	**63.13**	**26**	PFAKE		14 13 50.0	+12
BPAW				LR	LR		
	comp=Z,2μm,21.0s						
NRIK	**Noril'sk**	**63.20**	**340**	P	**P**	**14 13 36.4**	**-1.6**
	comp=Z,3.0nm,0.6s,baz=114,slow=7.4,SNR=10						
NRIK				LR	LR	14 42 47.3	
	comp=Z,837nm,18.5s,baz=115,slow=38						
MDRS	**Chennai**	**63.27**	**276**	*eP*	**P**	**14 13 38.6**	**-0.8**
MDRS				IAmb	IAmb	14 13 45.9	
	comp=Z,58nm,0.9s						
PMR	**Palmer**	**63.28**	**29**	*eP*	**P**	**14 13 39.2**	**+0.5**
	comp=Z,70nm,1.0s						
PMR				LR	LR		
	comp=Z,1μm,20.0s						
PMR	**Palmer**	**63.28**	**29**	*eP*	**P**	**14 13 39.2**	**+0.5**
PMR				pmax	pmax		
	comp=Z,70nm,1.0s						
PMR				MLR	MLR		
	comp=Z,1μm,20.0s						
SMLA	**Simla**	**63.41**	**297**	*eP*	**P**	**14 13 41.2**	**+1.1**
SMLA				IAmb	IAmb	14 13 42.3	
	comp=Z,110nm,1.0s						
GHO	**Glory Hole Cre**	**63.42**	**29**	*eP*	**P**	**14 13 39.7**	**-0.1**
	comp=Z,95nm,1.0s						
GHO				LR	LR		
	comp=Z,1μm,20.0s						
MLY	**Manley**	**63.51**	**25**	*eP*	**P**	**14 13 40.5**	**+0.2**
	comp=Z,52nm,0.8s						
MLY				LR	LR		
	comp=Z,1μm,19.0s						
KNK	**Knik Glacier**	**63.55**	**29**	*eP*	**P**	**14 13 40.5**	**-0.1**
	comp=Z,167nm,1.2s						
KNK				LR	LR		
	comp=Z,1μm,18.0s						
NDI	**New Delhi**	**63.59**	**294**	*eP*	**P**	**14 13 42.0**	**+0.6**
SML	**Sawmill**	**63.70**	**29**	*eP*	**P**	**14 13 41.8**	**+0.2**
	comp=Z,234nm,1.0s						
SML				LR	LR		
	comp=Z,1μm,20.0s						
SML	**Sawmill**	**63.70**	**29**	*eP*	**P**	**14 13 41.8**	**+0.2**
SML				pmax	pmax		
	comp=Z,234nm,1.0s						
SML				MLR	MLR		
	comp=Z,1μm,20.0s						
BWN	**Browne**	**63.80**	**26**	*eP*	**P**	**14 13 42.9**	**+0.8**
	comp=Z,265nm,1.1s						
BWN				LR	LR		
	comp=Z,1μm,20.0s						
RND	**Reindeer**	**63.86**	**27**	PFAKE		14 14 00.0	+17
RND				LR	LR		
	comp=Z,2μm,22.0s						
MCK	**McKinley**	**63.91**	**27**	*eP*	**P**	**14 13 42.7**	**-0.2**
	comp=Z,90nm,1.1s						
MCK				LR	LR		
	comp=Z,1μm,20.0s						
MCK	**McKinley**	**63.91**	**27**	*eP*	**P**	**14 13 42.7**	**-0.2**
MCK				pmax	pmax		
	comp=Z,90nm,1.1s						
MCK				MLR	MLR		
	comp=Z,1μm,20.0s						
KSH	**Kashi**	**63.97**	**306**	P	**P**	**14 13 47.9**	**+4.0**
KSH				pP	pwP	14 13 53.5	+4.6
KSH				PcP	**PcP**	**14 14 23.9**	**+4.5**
KSH				S	**S**	**14 22 23.3**	**+3.1**
KSH				SS	**SS**	**14 26 33.7**	**+5.1**
KSH				pmax	pmax		
	comp=Z,160nm,0.9s						
KSH				pmax	pmax		
	comp=Z,1μm,4.5s						
KSH				LR	LR		
	comp=Z,2μm,11.9s						
KSH				LR	LR		
	comp=Z,3μm,18.0s						
KSH				LR	LR		
	comp=Z,2μm,20.3s						
BOOM	**Boomskoye usch**	**63.98**	**309**	*eP*	**P**	**14 13 44.4**	**+0.5**
	comp=Z,53nm,0.9s						
HYB	**Hyderabad**	**63.99**	**281**	*i P*	**P**	**14 13 46.0**	**+1.8**
DHRM	**DHARAMSHALA**	**64.06**	**298**	*eP*	**P**	**14 13 45.3**	**+0.6**
DHRM				IAmb	IAmb	14 13 46.7	
	comp=Z,259nm,0.2s						
BHPL	**Bhopal**	**64.07**	**288**	*eP*	**P**	**14 13 44.8**	**+0.1**
BHPL				IAmb	IAmb	14 13 46.0	
	comp=Z,119nm,1.6s						
GLI	**Glacier Island**	**64.08**	**30**	*eP*	**P**	**14 13 44.0**	**-0.1**
	comp=Z,144nm,1.2s						
SCM	**Sheep Creek Mo**	**64.17**	**29**	*eP*	**P**	**14 13 44.8**	**+0.1**
	comp=Z,190nm,1.0s						
SCM				LR	LR		
	comp=Z,2μm,20.0s						
SCM	**Sheep Creek Mo**	**64.17**	**29**	*eP*	**P**	**14 13 44.8**	**+0.1**
SCM				pmax	pmax		
	comp=Z,190nm,1.0s						
SCM				MLR	MLR		
	comp=Z,1μm,20.0s						
TKM2	**Tokmak 2**	**64.23**	**310**	P	**P**	**14 13 48.1**	**+2.5**
	SNR=52						
TKM2	**Tokmak 2**	**64.23**	**310**	P	**P**	**14 13 46.7**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,80nm,1.2s						
COLD	**Coldfoot**	**64.38**	**23**	*eP*	**P**	**14 13 46.5**	**+0.6**
	comp=Z,18nm,1.0s						
DHY	**Denali Highway**	**64.43**	**28**	*eP*	**P**	**14 13 46.9**	**+0.4**
	comp=Z,116nm,1.5s						
DHY				LR	LR		
	comp=Z,1μm,21.0s						
WRH	**Wood River Hil**	**64.45**	**26**	*eP*	**P**	**14 13 46.0**	**-0.4**
	comp=Z,48nm,1.0s						
WRH				LR	LR		
	comp=Z,1μm,18.0s						
KZA	**Kyzart**	**64.49**	**309**	P	**P**	**14 13 50.2**	**+2.6**
	SNR=53						
MDM	**Murphy Dome**	**64.52**	**25**	*eP*	**P**	**14 13 46.8**	**-0.1**
	comp=Z,19nm,0.8s						
CCB	**Clear Creek Bu**	**64.61**	**26**	*eP*	**P**	**14 13 47.5**	**0.0**
	comp=Z,87nm,1.5s						
CCB				LR	LR		
	comp=Z,1μm,20.0s						
TCOL	**CIGO, UAF Yank**	**64.65**	**26**	P	**P**	**14 13 47.5**	**-0.1**
	baz=256						
COLA	**College**	**64.65**	**26**	*eP*	**P**	**14 13 47.3**	**-0.3**
	comp=Z,51nm,1.3s						
COLA				LR	LR		
	comp=Z,1μm,20.0s						
COLA	**College**	**64.65**	**26**	*eP*	**P**	**14 13 47.3**	**-0.3**
COLA				pmax	pmax		
	comp=Z,51nm,1.3s						
COLA				MLR	MLR		
	comp=Z,1μm,20.0s						
EYAK	**Cordova Ski Ar**	**64.67**	**31**	*eP*	**P**	**14 13 48.4**	**+0.5**
	comp=Z,84nm,1.0s						
EYAK				LR	LR		
	comp=Z,1μm,20.0s						
KBK	**Karagaybulak**	**64.71**	**310**	P	**P**	**14 13 51.0**	**+2.3**
	SNR=5.5						
DIV	**Divide**	**64.77**	**30**	*eP*	**P**	**14 13 48.5**	**-0.1**
	comp=Z,70nm,1.0s						
DIV				LR	LR		
	comp=Z,700nm,18.0s						
CHMS	**Chumysh**	**64.85**	**310**	P	**P**	**14 13 51.0**	**+1.5**
	SNR=21						
POKR	**Poker Plat Res**	**64.88**	**25**	P	**P**	**14 13 49.4**	**+0.1**
	baz=256						
HDA	**Harding Lake**	**64.92**	**26**	*eP*	**P**	**14 13 49.1**	**-0.4**
	comp=Z,30nm,0.9s						
HDA				LR	LR		
	comp=Z,1μm,19.0s						
HDA	**Harding Lake**	**64.92**	**26**	P	**P**	**14 13 48.7**	**-0.8**
	baz=257						
FRU1	**Bishkek**	**64.94**	**310**	*eP*	**P**	**14 13 50.8**	**+0.7**
	comp=Z,106nm,1.3s						
FRU1				LR	LR		
	comp=Z,1μm,20.0s						
ILAR	**Eielson Array**	**65.03**	**26**	P	**P**	**14 13 49.6**	**-0.5**
	comp=Z,20nm,0.8s,baz=256,slow=4.8,SNR=138						
ILAR				LR	LR	14 38 57.9	
	comp=Z,883nm,21.7s,baz=264,slow=33						
ILB	**Eielson Array**	**65.03**	**26**	*eP*	**P**	**14 13 49.5**	**-0.7**
	comp=Z,68nm,1.1s						
UCH	**Uchtor**	**65.03**	**309**	P	**P**	**14 13 53.5**	**+2.3**
	SNR=78						
TOLK	**Toolik Lake Re**	**65.04**	**21**	*eP*	**P**	**14 13 50.9**	**+0.7**
	comp=Z,90nm,1.1s						
TOLK				LR	LR		
	comp=Z,800nm,20.0s						
TOLK	**Toolik Lake Re**	**65.04**	**21**	P	**P**	**14 13 51.1**	**+0.8**
	baz=252						
AAK	**Ala-Archa**	**65.04**	**310**	P	**P**	**14 13 52.2**	**+1.3**
	comp=Z,16nm,0.9s,baz=100,slow=5.7,SNR=38						
AAK				LR	LR	14 42 45.0	
	comp=Z,1μm,19.2s,baz=78,slow=36						
AAK	**Ala-Archa**	**65.04**	**310**	P	**P**	**14 13 52.5**	**+1.6**
	SNR=16						
AAK	**Ala-Archa**	**65.04**	**310**	*eP*	**P**	**14 13 51.2**	**+0.4**
	comp=Z,65nm,1.3s						
AAK	**Ala-Archa**	**65.04**	**310**	*i P*	**P**	**14 13 52.3**	**+1.4**
	SNR=22						
AAK	**Ala-Archa**	**65.04**	**310**	P	**P**	**14 13 52.0**	**+1.1**
AAK				pmax	pmax		
	comp=Z,65nm,1.3s						
AAK	**Ala-Archa**	**65.04**	**310**	P	**P**	**14 13 52.7**	**+1.8**
	SNR=33						
AAK				P	**P**	**14 13 52.7**	**+1.8**
	SNR=33						
MQZ	**McQueen's Vall**	**65.25**	**159**	PFAKE		14 14 00.0	+8.3
MQZ				LR	LR		
	comp=Z,3μm,18.0s						
PAX	**Paxson**	**65.25**	**28**	*eP*	**P**	**14 13 52.5**	**+0.7**
	comp=Z,52nm,0.9s						
PAX				LR	LR		
	comp=Z,1μm,20.0s						
PAX	**Paxson**	**65.25**	**28**	*eP*	**P**	**14 13 52.5**	**+0.7**
PAX				pmax	pmax		
	comp=Z,53nm,0.9s						
PAX				MLR	MLR		
	comp=Z,1μm,20.0s						
HARP	**HAARP**	**65.29**	**29**	*eP*	**P**	**14 13 52.5**	**+0.6**
	comp=Z,149nm,0.8s						
HARP				LR	LR		
	comp=Z,1μm,20.0s						
BMRM	**Bremner River**	**65.30**	**30**	PFAKE		14 14 00.0	+8.0
BMRM				LR	LR		
	comp=Z,100nm,20.0s						
HMT	**Hamilton**	**65.36**	**31**	PFAKE		14 14 00.0	+7.6
HMT				LR	LR		
	comp=Z,2μm,22.0s						
EKS2	**Erkin-Say**	**65.57**	**310**	P	**P**	**14 13 55.5**	**+1.2**
	SNR=13						
AML	**Almayashu**	**65.64**	**309**	P	**P**	**14 13 57.6**	**+2.5**
	SNR=26						
PRP	**Porcupine Dome**	**65.75**	**25**	*eP*	**P**	**14 13 54.2**	**-0.9**
	comp=Z,24nm,1.2s						
PRP				LR	LR		
	comp=Z,1μm,21.0s						
DOT	**Dot Lake**	**66.01**	**27**	*eP*	**P**	**14 13 56.4**	**-0.2**
	comp=Z,45nm,0.9s						
DOT				LR	LR		
	comp=Z,2μm,21.0s						
MENT	**Mentasta**	**66.04**	**28**	*eP*	**P**	**14 13 56.8**	**+0.1**
	comp=Z,35nm,1.0s						
MENT				LR	LR		
	comp=Z,1μm,22.0s						
SCRK	**Sand Creek**	**66.10**	**27**	PFAKE		14 14 10.0	+13
SCRK				LR	LR		
	comp=Z,2μm,18.0s						
FYU	**Fort Yukon**	**66.10**	**24**	*eP*	**P**	**14 13 56.8**	**-0.2**
	comp=Z,299nm,1.4s						
FYU				LR	LR		
	comp=Z,1μm,20.0s						
BALM	**Baldy**	**66.39**	**30**	*eP*	**P**	**14 13 59.0**	**-0.2**
	comp=Z,56nm,1.0s						
BALM				LR	LR		
	comp=Z,800nm,20.0s						
BALM	**Baldy**	**66.39**	**30**	*eP*	**P**	**14 13 59.0**	**-0.2**
BALM				pmax	pmax		
	comp=Z,56nm,1.0s						
BALM				MLR	MLR		
	comp=Z,800nm,20.0s						
NIL	**Nilore**	**66.49**	**300**	*eP*	**P**	**14 14 00.6**	**+0.3**
	comp=Z,340nm,1.0s						
OTUK	**Ortayu**	**66.56**	**316**	P	**P**	**14 14 00.0**	**-0.3**
OTUK				pmax	pmax		
	comp=Z,50nm,1.5s						
CTGM	**Chitina Glacie**	**66.88**	**30**	*eP*	**P**	**14 14 02.9**	**+0.6**
	comp=Z,71nm,1.0s						
CTGM				LR	LR		
	comp=Z,900nm,21.0s						
EGAK	**Eagle**	**67.44**	**26**	*eP*	**P**	**14 14 05.5**	**-0.1**
	comp=Z,74nm,1.3s						
EGAK				LR	LR		
	comp=Z,700nm,19.0s						
TRD	**Trivandrum**	**67.48**	**272**	*eP*	**P**	**14 14 06.7**	**-0.1**
BCPM	**Bancas Point**	**67.61**	**32**	PFAKE		14 14 20.0	+13
BCPM				LR	LR		
	comp=Z,1μm,20.0s						
BTK	**Batken**	**67.91**	**307**	*eP*	**P**	**14 14 08.4**	**-0.8**
	comp=Z,78nm,1.4s				

BRVK				LR	LR		
	comp=Z,1μm,19.0s						
BRVK	**Borovoye**	**67.92**	**321**	*e*P	**P**	**14 14 07.9**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,36nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,1μm,19.0s						
BRVK	**Borovoye**	**67.92**	**321**	P	**P**	**14 14 08.4**	**-0.5**
BRVK	SNR=24			P	**P**	**14 14 08.4**	**-0.5**
	SNR=24						
KK31	**Karatay Array**	**67.95**	**310**	*e*P	**P**	**14 14 08.8**	**-0.5**
	comp=Z,75nm,1.0s						
KK31	**Karatay Array**	**67.95**	**310**	*i* P	**P**	**14 14 09.6**	**+0.3**
KK31				pmax	pmax		
	comp=Z,60nm,1.0s						
KKAR	**Karatay Array**	**67.95**	**310**	*e*P	**P**	**14 14 08.8**	**-0.5**
	comp=Z,75nm,1.0s						
KKAR	**Karatay Array**	**67.95**	**310**	*e*P	**P**	**14 14 08.8**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,75nm,1.0s						
DAWY	**Dawson**	**68.11**	**27**	*e*P	**P**	**14 14 10.7**	**+0.7**
	comp=Z,73nm,1.3s						
DAWY				LR	LR		
	comp=Z,2μm,21.0s						
POO	**Poona**	**68.17**	**284**	*e*P	**P**	**14 14 10.8**	**-0.3**
POO				IAmb	IAmb	14 14 12.4	
	comp=Z,71nm,0.8s						
HYT	**Haines Junctio**	**68.73**	**31**	*e*P	**P**	**14 14 15.4**	**+1.4**
	comp=Z,78nm,0.9s						
HYT				LR	LR		
	comp=Z,900nm,20.0s						
GOA	**Goa**	**68.82**	**280**	*e*P	**P**	**14 14 15.3**	**+0.3**
GOA				IAmb	IAmb	14 14 16.9	
	comp=Z,33nm,0.6s						
EPYK	**Eagle Plains**	**69.45**	**25**	*e*P	**P**	**14 14 18.5**	**+0.3**
	comp=Z,53nm,0.9s						
EPYK				LR	LR		
	comp=Z,1μm,20.0s						
EPYK	**Eagle Plains**	**69.45**	**25**	P	**P**	**14 14 19.2**	**+1.0**
	baz=266						
SIT	**Sitka**	**69.76**	**35**	PFAKE		14 14 30.0	+10
SIT				LR	LR		
	comp=Z,700nm,22.0s						
SKAG	**Skagway**	**69.77**	**32**	*e*P	**P**	**14 14 21.1**	**+0.8**
	comp=Z,144nm,1.6s						
SKAG				LR	LR		
	comp=Z,700nm,20.0s						
KBL	**Kabul**	**69.87**	**301**	*e*P	**P**	**14 14 21.5**	**-0.1**
	comp=Z,136nm,1.1s						
KBL				LR	LR		
	comp=Z,600nm,20.0s						
KBL	**Kabul**	**69.87**	**301**	*e*P	**P**	**14 14 21.5**	**-0.1**
KBL				pmax	pmax		
	comp=Z,136nm,1.1s						
KBL				MLR	MLR		
	comp=Z,600nm,20.0s						
BESE	**Bessie Mountai**	**70.01**	**33**	*e*P	**P**	**14 14 21.7**	**-0.2**
	comp=Z,118nm,1.5s						
BESE				LR	LR		
	comp=Z,800nm,20.0s						
WHY	**Whitehorse**	**70.01**	**31**	*e*P	**P**	**14 14 22.4**	**+0.5**
	comp=Z,105nm,1.4s						
WHY				LR	LR		
	comp=Z,800nm,19.0s						
JIS	**Juneau Island**	**70.26**	**34**	*e*P	**P**	**14 14 23.5**	**+0.3**
	comp=Z,66nm,1.2s						
JIS				LR	LR		
	comp=Z,700nm,19.0s						
INK	**Inuvik**	**70.80**	**23**	P	**P**	**14 14 26.6**	**+0.2**
	comp=Z,41nm,0.9s,baz=264,slow=6.6,SNR=44						
INK	**Inuvik**	**70.80**	**23**	*e*P	**P**	**14 14 26.0**	**-0.4**
	comp=Z,151nm,1.4s						
INK				LR	LR		
	comp=Z,1μm,20.0s						
INK	**Inuvik**	**70.80**	**23**	*e*P	**P**	**14 14 26.0**	**-0.4**
INK				pmax	pmax		
	comp=Z,151nm,1.4s						
INK				MLR	MLR		
	comp=Z,1μm,20.0s						
CRAG	**Craig**	**71.03**	**36**	PFAKE		14 14 40.0	+12
CRAG				LR	LR		
	comp=Z,1μm,20.0s						
BHJ	**Bhuj**	**71.11**	**289**	*e*P	**P**	**14 14 28.2**	**-0.9**
WRAK	**Wrangell Islan**	**71.42**	**35**	PFAKE		14 14 40.0	+10
WRAK				LR	LR		
	comp=Z,800nm,21.0s						
DIB	**Dawson Inlet,**	**71.54**	**39**	*e*P	**P**	**14 14 30.4**	**-0.7**
	comp=Z,75nm,1.1s						
DIB				LR	LR		
	comp=Z,700nm,20.0s						
PPT	**Papeete**	**72.25**	**115**	LR	LR	14 39 53.4	
	comp=Z,971nm,20.0s,baz=290,slow=30						
PPT2	**Papeete2**	**72.25**	**115**	*e*P	**P**	**14 14 39.1**	**+3.0**
	comp=Z,129nm,1.3s						
PPT2				*e*S	**S**	**14 23 57.9**	**-1.6**
	comp=Z,585nm,25.2s						
PPT2				*e*LQ	LQ	14 33 14.1	
	comp=Z,3μm,29.8s						
PPT2				*e*LR	LR	14 36 37.3	
	comp=Z,1μm,20.8s,baz=301						
DLBC	**Dease Lake**	**72.55**	**33**	*e*P	**P**	**14 14 36.6**	**-0.6**
	comp=Z,134nm,1.4s						
DLBC				LR	LR		
	comp=Z,800nm,22.0s						
PMOR	**Pomariorio Ree**	**72.67**	**112**	*e*P	**P**	**14 14 41.0**	**+2.5**
	comp=Z,272nm,1.2s						
VAH	**Vaihoa**	**73.00**	**112**	*e*P	**P**	**14 14 42.7**	**+2.2**
	comp=Z,188nm,1.3s						
SVE	**Sverdlovsk**	**73.32**	**325**	‖*e*P	**P**	**14 14 40.8**	**-0.9**
SVE				pmax	pmax		
	comp=Z,37nm,1.8s						
BBB	**Bella Bella**	**74.28**	**40**	PFAKE		14 15 00.0	+13
BBB				LR	LR		
	comp=Z,2μm,21.0s						
ARU	**Arti**	**74.50**	**325**	LR	LR	14 48 31.7	
	comp=Z,1μm,19.9s,baz=84,slow=37						
ARU	**Arti**	**74.50**	**325**	*e*P	**P**	**14 14 46.9**	**-1.8**
	comp=Z,24nm,1.1s						
ARU	**Arti**	**74.50**	**325**	*d i*P	**P**	**14 14 46.5**	**-2.1**
ARU						14 17 32.7	
ARU				PPP	PPP	14 19 19.6	
ARU				S	**S**	**14 24 20.1**	**-3.6**
ARU				SS	**SS**	**14 29 02.5**	**-7.3**
ARU				pmax	pmax		
	comp=Z,21nm,1.0s						
AB31	**Akbulak array**	**74.66**	**317**	*i* P	**P**	**14 14 48.3**	**-1.4**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ABKAR	**Akbulak array**	**74.66**	**317**	*e*P	**P**	**14 14 47.4**	**-2.3**
	comp=Z,12nm,1.0s						
TBI	**Tubuai**	**74.84**	**121**	*e*LQ	LQ	14 34 03.6	
	comp=Z,1μm,30.8s						
TBI				*e*LR	LR	14 37 45.3	
	comp=Z,755nm,23.8s,baz=300						
AKTO	**Aktyubinsk**	**75.71**	**319**	LR	LR	14 47 15.7	
	comp=Z,1μm,21.7s,baz=84,slow=35						
NLWA	**Neilton Lookou**	**77.80**	**44**	*e*P	**P**	**14 15 08.5**	**+0.8**
	comp=Z,205nm,1.8s						
NLWA				LR	LR		
	comp=Z,900nm,22.0s						
PGC	**Sidney**	**77.82**	**43**	*e*P	**P**	**14 15 07.9**	**+0.3**
	comp=Z,57nm,1.2s						
GEYT	**Alibeck**	**78.00**	**306**	P	**P**	**14 15 09.7**	**+0.6**
	comp=Z,24nm,1.0s,baz=101,slow=1.5,SNR=41						
GEYT				PP	**PP**	**14 18 04.5**	**-0.4**
	comp=Z,7.6nm,1.1s,baz=28,slow=6.5,SNR=2.5						
GYA0B	**ALIBECK ARRAY**	**78.00**	**306**	*e*P	**P**	**14 15 08.8**	**-0.2**
	comp=Z,106nm,1.5s						
GYA0B				LR	LR		
	comp=Z,1μm,20.0s						
A04D	**Lummi Island**	**78.29**	**43**	P	**P**	**14 15 12.1**	**+1.8**
	baz=282						
D03D	**Eldon**	**78.29**	**44**	P	**P**	**14 15 12.2**	**+1.9**
	baz=282						
LLLB	**Lillooet**	**78.40**	**41**	*e*P	**P**	**14 15 11.2**	**+0.2**
	comp=Z,52nm,1.2s						
LLLB				LR	LR		
	comp=Z,2μm,22.0s						
I02D	**Swisshome**	**78.51**	**47**	P	**P**	**14 15 12.4**	**+0.8**
	baz=283						
D04E	**Lakebay**	**78.58**	**44**	P	**P**	**14 15 14.4**	**+2.5**
	baz=283						
F04D	**Rainier, OR**	**78.66**	**45**	P	**P**	**14 15 14.7**	**+2.3**
	baz=283						
J01E	**Myrtle Point**	**78.66**	**48**	P	**P**	**14 15 14.7**	**+2.3**
	baz=283						
G03D	**McMinnville, O**	**78.68**	**46**	P	**P**	**14 15 12.5**	**0.0**
	baz=283						
B05A	**Bryant**	**78.78**	**43**	P	**P**	**14 15 15.2**	**+2.2**
	baz=283						
COR	**Corvallis**	**78.79**	**47**	PFAKE		14 15 20.0	+6.9
COR				LR	LR		
	comp=Z,1μm,19.0s						
E04D	**Cinebar**	**78.85**	**45**	P	**P**	**14 15 15.8**	**+2.3**
	baz=283						
KIRV	**Kirov**	**78.94**	**328**	LR	LR	14 51 10.5	
	comp=Z,719nm,20.7s,baz=57,slow=36						
K02D	**Willamette Mer**	**78.95**	**49**	P	**P**	**14 15 15.1**	**+0.9**
	baz=283						
I03D	**Drain, OR**	**78.96**	**48**	P	**P**	**14 15 16.2**	**+2.2**
	baz=283,SNR=6.3						
D05A	**Enumclaw**	**79.10**	**44**	*e*P	**P**	**14 15 14.6**	**-0.2**
	comp=Z,391nm,2.0s						
D05A				LR	LR		
	comp=Z,500nm,20.0s						
JCC	**Jacoby Creek,**	**79.11**	**51**	PFAKE		14 15 30.0	+15
JCC				LR	LR		
	comp=Z,2μm,19.0s						
L02E	**Cave Junction**	**79.12**	**49**	P	**P**	**14 15 15.9**	**+0.8**
	baz=283						
B06A	**Marblemount**	**79.12**	**43**	*e*P	**P**	**14 15 15.5**	**+0.6**
	comp=Z,53nm,1.1s						
B06A				LR	LR		
	comp=Z,1μm,20.0s						
H04D	**Lebanon**	**79.20**	**47**	P	**P**	**14 15 17.1**	**+1.7**
	baz=283,SNR=8.0						
LON	**Longmire**	**79.32**	**44**	*e*P	**P**	**14 15 15.8**	**-0.3**
	comp=Z,24nm,1.0s						
LON				LR	LR		
	comp=Z,800nm,20.0s						
LON	**Longmire**	**79.32**	**44**	*e*P	**P**	**14 15 15.8**	**-0.3**
LON				pmax	pmax		
	comp=Z,24nm,1.0s						
LON				MLR	MLR		
	comp=Z,800nm,20.0s						
YKW3	**Yellowknife Ar**	**79.32**	**28**	*e*P	**P**	**14 15 14.8**	**-0.8**
	comp=Z,33nm,0.9s						
YKW3				LR	LR		
	comp=Z,1μm,19.0s						
KHMM	**Horse Mountain**	**79.32**	**51**	PFAKE		14 15 30.0	+14
KHMM				LR	LR		
	comp=Z,2μm,21.0s						
YKA	**Yellowknife Ar**	**79.34**	**28**	P	**P**	**14 15 15.8**	**+0.1**
	comp=Z,17nm,0.8s,baz=288,slow=5.6,SNR=104						
YKB5	**Yellowknife Ar**	**79.34**	**28**	*e*P	**P**	**14 15 15.8**	**+0.1**
HUMO	**Hull Mountain**	**79.48**	**49**	*e*P	**P**	**14 15 16.7**	**-0.3**
	comp=Z,110nm,1.6s						
HUMO				LR	LR		
	comp=Z,1μm,22.0s						
KMRM	**Mail Ridge**	**79.49**	**51**	PFAKE		14 15 30.0	+13
KMRM				LR	LR		
	comp=Z,2μm,22.0s						
H04A	**Detroit Lake**	**79.54**	**46**	*e*P	**P**	**14 15 17.1**	**-0.2**
	comp=Z,97nm,1.3s						
H04A				LR	LR		
	comp=Z,1μm,21.0s						
I04A	**Tendick Farm,**	**79.59**	**47**	P	**P**	**14 15 19.0**	**+1.4**
	baz=284,SNR=14						
C06D	**Leavenworth**	**79.65**	**43**	P	**P**	**14 15 18.8**	**+1.0**
	baz=284						
KCPM	**Cahto Peak**	**79.70**	**52**	PFAKE		14 15 30.0	+12
KCPM				LR	LR		
	comp=Z,2μm,21.0s						
F05D	**White Salmon**	**79.76**	**45**	P	**P**	**14 15 19.4**	**+1.0**
	baz=284						
M02C	**Callahan**	**79.84**	**50**	P	**P**	**14 15 21.6**	**+2.5**
	baz=284,SNR=7.6						
YBH	**Yreka Blue Hor**	**79.87**	**49**	*e*P	**P**	**14 15 18.8**	**-0.4**
	comp=Z,127nm,1.7s						
YBH				LR	LR		
	comp=Z,1μm,21.0s						
YBH	**Yreka Blue Hor**	**79.87**	**49**	*e*P	**P**	**14 15 18.8**	**-0.4**
YBH				pmax	pmax		
	comp=Z,127nm,1.7s						
YBH				MLR	MLR		
	comp=Z,1μm,21.0s						
J04D	**Umpqua Nationa**	**79.94**	**48**	P	**P**	**14 15 21.3**	**+1.6**
	baz=284,SNR=17						
G05D	**Wamic, OR**	**80.01**	**46**	P	**P**	**14 15 21.4**	**+1.5**
	baz=284						
L04D	**Klamath Falls**	**80.05**	**49**	P	**P**	**14 15 22.0**	**+1.8**
	baz=284,SNR=6.8						
N02D	**Trinity Center**	**80.05**	**50**	P	**P**	**14 15 22.3**	**+2.1**
	baz=284,SNR=7.2						
O02D	**Mt. Diablo Mer**	**80.18**	**51**	P	**P**	**14 15 23.0**	**+2.1**
	baz=284						
I05D	**Terrebonne, OR**	**80.21**	**47**	P	**P**	**14 15 22.7**	**+1.7**
	baz=284,SNR=11						
HOPS	**Hopland Field**	**80.25**	**52**	PFAKE		14 15 30.0	+8.8
HOPS				LR	LR		
	comp=Z,1μm,20.0s						
WDC	**Whiskeytown Da**	**80.27**	**51**	*e*P	**P**	**14 15 22.1**	**+0.8**
	comp=Z,195nm,1.9s						
WDC				LR	LR		
	comp=Z,2μm,22.0s						
WDC	**Whiskeytown Da**	**80.27**	**51**	*e*P	**P**	**14 15 22.1**	**+0.8**
WDC				pmax	pmax		
	comp=Z,195nm,1.9s						
WDC				MLR	MLR		
	comp=Z,2μm,22.0s						
K04D	**Chiloquin, OR**	**80.34**	**48**	P	**P**	**14 15 23.4**	**+1.6**
	baz=284						
G06A	**Carlson Farm,**	**80.48**	**46**	*e*P	**P**	**14 15 22.8**	**+0.4**
	comp=Z,202nm,2.0s						
G06A				LR	LR		
	comp=Z,900nm,20.0s						
M04C	**Macdoel**	**80.49**	**49**	P	**P**	**14 15 24.6**	**+2.0**
	baz=284,SNR=11						
GDXM	**Geysers**	**80.51**	**52**	PFAKE		14 15 30.0	+7.3
GDXM				LR	LR		
	comp=Z,1μm,20.0s						
J05D	**Fort Rock, OR**	**80.55**	**48**	P	**P**	**14 15 25.1**	**+2.1**
	baz=284,SNR=40						
B08A	**Colville Reser**	**80.55**	**42**	*e*P	**P**	**14 15 23.1**	**+0.4**
	comp=Z,75nm,1.0s						
B08A				LR	LR		
	comp=Z,1μm,21.0s						
MCCM	**Marconi Confer**	**80.61**	**53**	PFAKE		14 15 30.0	+6.9
MCCM				LR	LR		
	comp=Z,1μm,20.0s						
PINE	**Pine Mountain**	**80.63**	**47**	*e*P	**P**	**14 15 23.6**	**+0.2**
	comp=Z,184nm,1.2s						
PINE				LR	LR		
	comp=Z,1μm,21.0s						
F07A	**Phinny Hill Vi**	**80.79**	**45**	*e*P	**P**	**14 15 23.9**	**-0.1**
	comp=Z,67nm,1.4s						
F07A				LR	LR		
	comp=Z,1μm,19.0s						
O03E	**Paynes Creek**	**80.88**	**51**	P	**P**	**14 15 26.2**	**+1.5**
	baz=285,SNR=18						
HAWA	**Hanford**	**80.93**	**44**	*e*P	**P**	**14 15 25.3**	**+0.6**
	comp=Z,64nm,1.2s						
HAWA				LR	LR		
	comp=Z,1μm,22.0s						
K05A	**Summer Lake**	**80.93**	**48**	*e*P	**P**	**14 15 26.1**	**+1.0**
	comp=Z,144nm,1.3s						
K05A				LR	LR		
	comp=Z,1μm,22.0s						
RES	**Resolute Bay**	**80.96**	**14**	*e*P	**P**	**14 15 24.3**	**0.0**
	comp=Z,29nm,1.0s						
RES	**Resolute Bay**	**80.96**	**14**	*e*P	**P**	**14 15 24.3**	**0.0**
RES				pmax	pmax		
	comp=Z,29nm,1.0s						
WSAR	**Wadi Sarin**	**81.00**	**292**	LR	LR	14 51 12.4	
	comp=Z,251nm,20.6s,baz=100,slow=36						
WSAR	**Wadi Sarin**	**81.00**	**292**	P	**P**	**14 15 26.2**	**+0.7**
	SNR=6.7						
D08A	**Wollman Farm,**	**81.16**	**44**	*e*P	**P**	**14 15 26.4**	**+0.5**
	comp=Z,101nm,1.3s						
D08A				LR	LR		
	comp=Z,1μm,20.0s						
E08A	**Dider Farm, El**	**81.22**	**44**	*e*P	**P**	**14 15 26.5**	**+0.3**
	comp=Z,115nm,1.4s						
E08A				LR	LR		
	comp=Z,1μm,21.0s						
ORV	**Oroville**	**81.30**	**51**	*e*P	**P**	**14 15 26.9**	**+0.1**
	comp=Z,86nm,1.3s						
ORV				LR	LR		
	comp=Z,600nm,20.0s						
ORV	**Oroville**	**81.30**	**51**	*e*P	**P**	**14 15 26.9**	**+0.1**
ORV				pmax	pmax		
	comp=Z,86nm,1.3s						
ORV				MLR	MLR		
	comp=Z,600nm,20.0s						
BIDO	**Bidbid**	**81.38**	**292**	P	**P**	**14 15 29.3**	**+1.7**
	SNR=12						
C09A	**Chrisman Ranch**	**81.38**	**43**	*e*P	**P**	**14 15 27.4**	**+0.3**
	comp=Z,78nm,1.2s						
C09A				LR	LR		
	comp=Z,800nm,20.0s						
I07A	**Izee**	**81.56**	**47**	*e*P	**P**	**14 15 28.5**	**+0.2**
	comp=Z,82nm,1.8s						
I07A				LR	LR		
	comp=Z,1μm,21.0s						
MOD	**Modoc Plateau**	**81.57**	**49**	*e*P	**P**	**14 15 28.9**	**+0.5**
	comp=Z,78nm,1.3s						
MOD				LR	LR		
	comp=Z,900nm,22.0s						
G08A	**Pilot Rock**	**81.61**	**45**	*e*P	**P**	**14 15 28.9**	**+0.4**
	comp=Z,69nm,1.5s						
G08A				LR	LR		
	comp=Z,900nm,21.0s						
E09A	**Wood Farm, Sta**	**81.82**	**44**	*e*P	**P**	**14 15 29.9**	**+0.5**
	comp=Z,88nm,1.3s						
E09A				LR	LR		
	comp=Z,1μm,19.0s						
AFDM	**Forest Hills D**	**81.85**	**52**	*e*P	**P**	**14 15 30.4**	**+0.6**
	comp=Z,60nm,1.2s						
AFDM				LR	LR		
	comp=Z,800nm,21.0s						
NEW	**Newport**	**82.00**	**42**	*e*P	**P**	**14 15 30.7**	**+0.3**
	comp=Z,74nm,1.1s						
NEW				LR	LR		
	comp=Z,1μm,20.0s						
NEW	**Newport**	**82.00**	**42**	*e*P	**P**	**14 15 30.7**	**+0.3**
NEW				pmax	pmax		
	comp=Z,74nm,1.1s						
NEW				MLR	MLR		
	comp=Z,1μm,20.0s						
NEW	**Newport**	**82.00**	**42**	P	**P**	**14 15 31.6**	**+1.1**
	baz=287,SNR=25						
SAO	**San Andreas Ge**	**82.06**	**54**	*e*P	**P**	**14 15 31.3**	**+0.4**
	comp=Z,44nm,1.1s						
SAO				LR	LR		
	comp=Z,1μm,18.0s						
SAO	**San Andreas Ge**	**82.06**	**54**	*e*P	**P**	**14 15 31.3**	**+0.4**
SAO				pmax	pmax		
	comp=Z,44nm,1.1s						
SAO				MLR	MLR		
	comp=Z,1μm,18.0s						
BEKR	**Beckworth**	**82.06**	**51**	*e*P	**P**	**14 15 31.7**	**+0.6**
	comp=Z,96nm,1.2s						
BEKR				LR	LR		
	comp=Z,2μm,22.0s						
MHTO	**MHTO**	**82.17**	**290**	P	**P**	**14 15 32.3**	**+0.5**
	SNR=9.0						
MHTO				P	**P**	**14 15 32.3**	**+0.5**
	SNR=9.0						
TMCR	**Tamitsa**	**82.32**	**335**	*e*P	**P**	**14 15 32.9**	**+1.2**
TMCR				pmax	pmax		
	comp=Z,37nm,1.1s						
BANOM	**Banah**	**82.36**	**295**	P	**P**	**14 15 33.4**	**+0.6**
RUBR	**Rubicon Trail**	**82.44**	**52**	PFAKE		14 15 40.0	+6.9
RUBR				LR	LR		
	comp=Z,1μm,22.0s						
SHME	**Shamm**	**82.47**	**295**	*i* P	**P**	**14 15 34.6**	**+1.3**
	SNR=9.6						
J08A	**Circle Bar Ran**	**82.47**	**47**	*e*P	**P**	**14 15 33.6**	**+0.5**
	comp=Z,88nm,1.3s						
J08A				LR	LR		
	comp=Z,1μm,22.0s						
CMB	**Columbia Colle**	**82.53**	**53**	PFAKE		14 15 40.0	+6.6
CMB				LR	LR		
	comp=Z,800nm,19.0s						
F10A	**Beach Ranch, E**	**82.58**	**44**	*e*P	**P**	**14 15 33.5**	**-0.1**
	comp=Z,59nm,1.4s						
F10A				LR	LR		
	comp=Z,1μm,21.0s						
WVOR	**Wild Horse Val**	**82.61**	**48**	*e*P	**P**	**14 15 34.1**	**+0.2**
	comp=Z,108nm,1.4s						
WVOR				LR	LR		
	comp=Z,2μm,22.0s						
WVOR	**Wild Horse Val**	**82.61**	**48**	*e*P	**P**	**14 15 34.1**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,109nm,1.4s						
WVOR				MLR	MLR		
	comp=Z,2μm,22.0s						
SOHO	**SOHO**	**82.63**	**293**	P	**P**	**14 15 36.0**	**+1.9**
	SNR=7.8						
SOHO				P	**P**	**14 15 36.0**	**+1.9**
	SNR=7.8						
MSFE	**Esma-Masafi**	**82.63**	**294**	*i* P	**P**	**14 15 35.9**	**+1.7**
	SNR=7.7						
UOSS	**Minazif**	**82.70**	**294**	P	**P**	**14 15 35.0**	**+0.5**
VCNR	**Virginia City**	**82.75**	**51**	PFAKE		14 15 50.0	+15
VCNR				LR	LR		
	comp=Z,1μm,22.0s						
HATD	**Hatta, Dubai**	**82.80**	**294**	*i* P	**P**	**14 15 35.1**	**+0.1**
	SNR=6.5						
PAHR	**Pah Rah Range**	**82.83**	**51**	*e*P	**P**	**14 15 35.7**	**+0.6**
	comp=Z,75nm,1.2s						
PAHR				LR	LR		
	comp=Z,1μm,22.0s						
DQM	**DQM**	**82.84**	**289**	P	**P**	**14 15 36.7**	**+1.5**
	SNR=5.0						
DQM				P	**P**	**14 15 36.7**	**+1.5**
	SNR=5.0						
PNTR	**Pine Nut**	**82.84**	**51**	*e*P	**P**	**14 15 36.3**	**+1.0**
	comp=Z,52nm,0.7s						
PNTR				LR	LR		
	comp=Z,700nm,20.0s						
BMO	**Blue Mountains**	**82.85**	**45**	*e*P	**P**	**14 15 35.8**	**+0.7**
	comp=Z,78nm,1.1s						
BMO				LR	LR		
	comp=Z,800nm,20.0s						
BMO	**Blue Mountains**	**82.85**	**45**	*e*P	**P**	**14 15 35.8**	**+0.7**
BMO				pmax	pmax		
	comp=Z,78nm,1.1s						
BMO				MLR	MLR		
	comp=Z,800nm,20.0s						
ASHO	**Ashiyiah**	**82.90**	**294**	P	**P**	**14 15 36.0**	**+0.5**
KLMR	**Klimovskoe**	**82.98**	**332**	*e*P	**P**	**14 15 34.5**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
WAKR	**Walker**	**83.12**	**52**	*e*P	**P**	**14 15 37.5**	**+0.9**
	comp=Z,160nm,1.8s						
WAKR				LR	LR		
	comp=Z,1μm,21.0s						
YERR	**Yerington**	**83.14**	**51**	*e*P	**P**	**14 15 37.4**	**+0.7**
	comp=Z,120nm,1.3s						
YERR				LR	LR		
	comp=Z,700nm,21.0s						
FAQ	**Al Faqa, Dubai**	**83.29**	**294**	*i* P	**P**	**14 15 38.1**	**+0.5**
	SNR=5.6						
ALNE	**Al Ain**	**83.34**	**293**	*i* P	**P**	**14 15 37.1**	**-0.7**
	SNR=8.2						
ASUD	**Al Ashush, Dub**	**83.56**	**294**	P	**P**	**14 15 39.1**	**+0.2**
SMMC	**Simmler**	**83.58**	**55**	P	**P**	**14 15 40.4**	**+1.5**
	baz=286						
MDPB	**Devils Postpil**	**83.64**	**53**	*e*P	**P**	**14 15 40.4**	**+0.9**
	comp=Z,36nm,1.2s						
MDPB				LR	LR		
	comp=Z,900nm,20.0s						
PLID	**Pearl Lake**	**83.67**	**45**	*e*P	**P**	**14 15 39.2**	**-0.2**
	comp=Z,33nm,1.0s						
PLID				LR	LR		
	comp=Z,900nm,20.0s						
OMMB	**Old Mammoth Mi**	**83.71**	**53**	PFAKE		14 15 50.0	+10
OMMB				LR	LR		
	comp=Z,900nm,20.0s						
RYN	**Ryan**	**83.78**	**52**	*e*P	**P**	**14 15 40.4**	**+0.4**
	comp=Z,42nm,1.0s						
RYN				LR	LR		
	comp=Z,800nm,22.0s						
VOG	**Valley Oaks Go**	**83.78**	**54**	P	**P**	**14 15 41.0**	**+1.2**
	baz=286						
MLAC	**Mammoth, Mammo**	**83.83**	**53**	P	**P**	**14 15 42.0**	**+1.6**
	baz=287						
PKM	**Mcpherson Peak**	**83.85**	**56**	P	**P**	**14 15 42.4**	**+1.9**
	baz=286						
KVN	**Kaiserville**	**83.97**	**51**	*e*P	**P**	**14 15 42.1**	**+1.1**
	comp=Z,69nm,1.1s						
KVN				LR	LR		
	comp=Z,900nm,21.0s						
NV01	**Mina Array Sit**	**84.00**	**52**	*e*P	**P**	**14 15 43.0**	**+1.8**
NVAR	**Mina Array Bea**	**84.00**	**52**	P	**P**	**14 15 43.0**	**+1.8**
	comp=Z,26nm,0.9s,baz=267,slow=6.1,SNR=136						
NVAR				LR	LR	14 46 45.1	
	comp=Z,753nm,20.7s,baz=292,slow=31						
SBC	**Santa Barbara**	**84.05**	**56**	P	**P**	**14 15 43.1**	**+1.8**
	baz=286						
ARCES	**ARCESS Array B**	**84

comp=Z,3.5nm,0.9s,baz=57,slow=7.4,SNR=6.6
ARCES LR LR 14 56 52.2
NV11 Mina Array Sit 84.11 52 *e*P **P 14 15 42.6 +1.0**
comp=Z,4.8nm,1.1s
NV11 LR LR
comp=Z,100nm,22.0s
VES Vestal, Richgr 84.15 54 P **P 14 15 42.5 +0.8**
baz=287
BMN Battle Mountai 84.21 50 *e*P **P 14 15 43.1 +0.9**
comp=Z,126nm,1.8s
BMN LR LR
comp=Z,1μm,21.0s
BMN Battle Mountai 84.21 50 *e*P **P 14 15 43.1 +0.9**
BMN pmax pmax
comp=Z,126nm,1.8s
BMN MLR MLR
comp=Z,1μm,21.0s
SCZ2 Santa Cruz Isl 84.24 56 P **P 14 15 42.3 0.0**
baz=287
TIN Tinemaha, Big 84.46 53 P **P 14 15 45.1 +1.6**
baz=287
MSO Missoula 84.49 43 *e*P **P 14 15 42.9 -0.5**
comp=Z,60nm,1.4s
MSO LR LR
comp=Z,1μm,22.0s
MSO Missoula 84.49 43 P **P 14 15 43.8 +0.4**
baz=289,SNR=12
MAK Makhachkala 84.52 313 *e*P **P 14 15 40.5 -2.9**
MAK *e* 14 18 56.6
MAK *e*S **S 14 26 02.4 -7.9**
MAK pmax pmax
comp=Z,18nm,0.3s
SNCC San Nicolas Is 84.54 57 P **P 14 15 45.0 +1.2**
baz=287
ARVC Arvin 84.55 55 P **P 14 15 44.9 +1.1**
baz=287
BLG Laguna Peak, P 84.66 56 P **P 14 15 45.7 +1.3**
baz=287
ISA Isabella, Lake 84.67 54 *e*P **P 14 15 44.4 -0.1**
comp=Z,17nm,1.1s
ISA LR LR
comp=Z,700nm,19.0s
ISA Isabella, Lake 84.67 54 *e*P **P 14 15 44.4 -0.1**
ISA pmax pmax
comp=Z,17nm,1.1s
ISA MLR MLR
comp=Z,700nm,19.0s
ISA Isabella, Lake 84.67 54 P **P 14 15 45.5 +1.0**
baz=287,SNR=12
CWC Cottonwood Cre 84.75 54 P **P 14 15 46.1 +1.1**
baz=287
OSI Osito Audit: C 84.79 56 P **P 14 15 46.2 +1.1**
baz=287
AKT Akhty 84.82 312 *e*P **P 14 15 44.2 -1.0**
AKT *e* 14 19 01.2
AKT pmax pmax
comp=Z,50nm,1.3s
GRAC Grapevine Rang 85.13 53 P **P 14 15 48.2 +1.5**
baz=288,SNR=7.7
DECC Green Verdugo 85.20 56 P **P 14 15 48.3 +1.1**
baz=287
HLID Hailey 85.23 46 *e*P **P 14 15 48.2 +0.9**
comp=Z,81nm,1.2s
HLID LR LR
comp=Z,1μm,21.0s
HLID Hailey 85.23 46 P **P 14 15 48.4 +1.2**
baz=289
EDW2 Edwards Air Fo 85.28 55 P **P 14 15 49.2 +1.7**
baz=287,SNR=23
MPMC Manual Prospec 85.32 54 P **P 14 15 49.3 +1.4**
baz=288,SNR=28
PASC Pasadena Art C 85.34 56 *e*P **P 14 15 48.3 +0.5**
comp=Z,46nm,1.2s
LRMC Laurel Mtn Rad 85.35 54 P **P 14 15 49.4 +1.5**
baz=288,SNR=16
CIS Catalina Islan 85.39 57 P **P 14 15 49.2 +1.1**
baz=287,SNR=6.7
MWC Mount Wilson 85.43 56 *e*P **P 14 15 48.9 +0.4**
comp=Z,78nm,1.3s
MWC Mount Wilson 85.43 56 *e*P **P 14 15 48.9 +0.4**
MWC pmax pmax
comp=Z,78nm,1.3s
ELK Elko 85.55 49 *e*P **P 14 15 50.1 +1.1**
comp=Z,78nm,1.1s
ELK LR LR
comp=Z,1μm,21.0s
ELK Elko 85.55 49 *e*P **P 14 15 50.1 +1.1**
ELK pmax pmax
comp=Z,78nm,1.1s
ELK MLR MLR
comp=Z,1μm,21.0s
GROC Groznyy 85.63 314 *e*P **P 14 15 47.0 -2.0**
GROC *e*S S 14 26 10.1 -11
GROC pmax pmax
comp=Z,64nm,1.4s
FURC Furnace Creek, 85.68 53 P **P 14 15 51.0 +1.6**
baz=288,SNR=12
BFSC Mount Baldy Ra 85.74 56 P **P 14 15 50.7 +0.8**
baz=288,SNR=9.1
DLMT Dillon 85.86 44 *e*P **P 14 15 50.0 -0.3**
comp=Z,227nm,1.9s
DLMT LR LR
comp=Z,800nm,22.0s
MCMT McKenzie Canyo 85.87 44 *e*P **P 14 15 50.9 +0.3**
HRY Holter Researc 85.89 42 *e*P **P 14 15 51.1 +0.7**
DAG Danmarks Havn 85.90 356 *e*P **P 14 15 50.6 +0.9**
DAG Danmarks Havn 85.90 356 *i*P **P 14 15 50.6 +0.9**
MOS Moscow 85.94 327 *e*P **P 14 15 49.9 -0.3**
MOS *e* 14 19 10.5
MOS MLR MLR
comp=Z,900nm,19.0s
TPNV Topopah Spring 86.00 53 *e*P **P 14 15 52.2 +1.0**
comp=Z,238nm,2.0s
TPNV LR LR
comp=Z,700nm,19.0s
TPNV Topopah Spring 86.00 53 P **P 14 15 52.7 +1.4**
baz=288,SNR=41
R11A Troy Canyon, C 86.06 51 *e*P **P 14 15 52.0 +0.5**
comp=Z,146nm,1.6s
R11A LR LR
comp=Z,700nm,22.0s
R11A Troy Canyon, C 86.06 51 P **P 14 15 53.1 +1.5**
baz=289,SNR=87
RRX Edison Barstow 86.06 55 P **P 14 15 52.4 +1.0**
baz=288
GSC Goldstone, Bar 86.08 54 *e*P **P 14 15 52.2 +0.6**
comp=Z,42nm,1.0s
GSC Goldstone, Bar 86.08 54 *e*P **P 14 15 52.2 +0.6**
GSC pmax pmax
comp=Z,42nm,1.0s
GSC Goldstone, Bar 86.08 54 P **P 14 15 53.2 +1.6**
baz=288,SNR=19
MURC Murrieta 86.30 56 P **P 14 15 53.1 +0.5**
baz=288
SHOC Shoshone, Teco 86.31 54 P **P 14 15 54.2 +1.6**
baz=288,SNR=6.0
BBRC Big Bear Solar 86.31 55 P **P 14 15 53.3 +0.4**
baz=288
BOZ Bozeman (W) 86.41 43 *e*P **P 14 15 53.5 +0.4**
comp=Z,67nm,1.3s
BOZ LR LR
comp=Z,700nm,22.0s
BOZ Bozeman (W) 86.41 43 *e*P **P 14 15 53.5 +0.4**
BOZ pmax pmax
comp=Z,67nm,1.3s
BOZ MLR MLR
comp=Z,700nm,22.0s
BOZ Bozeman (W) 86.41 43 P **P 14 15 54.0 +0.9**
baz=291,SNR=44
109C Camp Elliot, M 86.59 57 P **P 14 15 54.9 +0.9**
baz=288
CPE Camp Elliot 86.59 57 *e*P **P 14 15 53.8 -0.2**
comp=Z,51nm,1.1s
CPE LR LR
comp=Z,700nm,19.0s
HEC Hector,Ludlow 86.60 55 P **P 14 15 55.5 +1.4**
baz=288,SNR=6.6
TUQ Turquoise Moun 86.72 54 P **P 14 15 56.1 +1.3**
baz=289,SNR=12
EGMT Eagleton 86.73 41 *e*P **P 14 15 54.3 -0.2**
comp=Z,56nm,1.0s
EGMT LR LR
comp=Z,1μm,22.0s
EGMT Eagleton 86.73 41 P **P 14 15 55.3 +0.7**
baz=292
OBN Obninsk 86.74 327 LR LR 14 55 54.8
comp=Z,168nm,21.3s,baz=40,slow=36
OBN Obninsk 86.74 327 *i*P **P 14 15 52.7 -1.5**
OBN *i* 14 15 58.2
OBN pmax pmax
comp=Z,5.0nm,1.0s
QLMT Earthquake Lak 86.82 44 *e*P **P 14 15 55.8 +0.6**
PFO Pinyon Flats O 86.88 56 *e*P **P 14 15 55.7 +0.1**
comp=Z,61nm,1.3s
PFO Pinyon Flats O 86.88 56 *e*P **P 14 15 55.7 +0.1**
PFO pmax pmax
comp=Z,61nm,1.3s
PFO Pinyon Flats O 86.88 56 P **P 14 15 56.7 +1.1**
baz=288,SNR=14
VSR Storozhevoye 86.93 323 *e*P **P 14 15 52.9 -2.3**
VSR pmax pmax
comp=Z,7.0nm,0.9s
HVU Hansel Valley 86.96 47 *e*P **P 14 15 56.6 +0.8**
comp=Z,108nm,1.2s
HVU Hansel Valley 86.96 47 *e*P **P 14 15 56.6 +0.8**
HVU pmax pmax
comp=Z,108nm,1.2s
SHPR Sheep Range 86.97 53 *e*P **P 14 15 57.1 +1.1**
comp=Z,167nm,1.9s
SHPR LR LR
comp=Z,800nm,18.0s
BAR Barrett 87.00 57 *e*P **P 14 15 56.4 +0.3**
comp=Z,31nm,1.3s
YHB Horse Butte 87.00 44 *e*P **P 14 15 57.5 +1.4**
comp=Z,139nm,1.1s
BGU Big Grassy Mou 87.07 48 *e*P **P 14 15 57.3 +0.9**
comp=Z,146nm,2.0s
ZEI Tsey 87.07 314 *e*P **P 14 15 53.2 -3.2**
ZEI pmax pmax
comp=Z,13nm,0.9s
BELC Belle Mtn. Jos 87.12 55 P **P 14 15 57.7 +1.0**
baz=289,SNR=16
MONP2 Monument Peak 87.13 57 P **P 14 15 58.0 +1.1**
baz=288,SNR=16
GMRC Granite Mounta 87.14 55 P **P 14 15 58.2 +1.4**
baz=289,SNR=22
YHH Holmes Hill 87.22 44 *e*P **P 14 15 58.8 +1.5**
comp=Z,85nm,1.2s
PSUT Pine Spring 87.28 51 *e*P **P 14 15 58.6 +1.1**
comp=Z,63nm,0.9s
SPUT South Promonto 87.36 48 *e*P **P 14 15 57.7 -0.1**
comp=Z,74nm,1.1s
GNI Garni 87.39 311 PFAKE 14 16 10.0 +12
GNI LR LR
comp=Z,400nm,19.0s
GNI Garni 87.39 311 ǁ *e*P **P 14 15 58.8 +0.8**
GNI pmax pmax
comp=Z,16nm,1.4s
KBZ Khabaz 87.43 315 P **P 14 15 56.9 -0.9**
comp=Z,5.7nm,0.9s,baz=117,slow=6.8,SNR=7.9
KBZ LR LR 14 57 23.6
comp=Z,519nm,21.0s,baz=73,slow=37
YPP Pitchstone Pla 87.44 44 *e*P **P 14 15 58.6 +0.3**
comp=Z,45nm,1.5s
IKP In-Ko-Pah, Jac 87.46 57 P **P 14 15 59.4 +1.0**
baz=289,SNR=6.7
LDFC Landfair 87.47 54 *e*P **P 14 15 59.0 +0.6**
comp=Z,76nm,1.1s
LDFC LR LR
comp=Z,900nm,18.0s
DUG Dugway, Tooele 87.48 49 *e*P **P 14 15 59.3 +0.9**
comp=Z,267nm,1.6s
DUG LR LR
comp=Z,1μm,22.0s
DUG Dugway, Tooele 87.48 49 *e*P **P 14 15 59.3 +0.9**
DUG pmax pmax
comp=Z,267nm,1.6s
DUG MLR MLR
comp=Z,1μm,22.0s
DUG Dugway, Tooele 87.48 49 P **P 14 15 59.8 +1.5**
baz=290
IMW Indian Meadow 87.48 45 *e*P **P 14 15 59.2 +0.7**
comp=Z,50nm,1.0s
IMW LR LR
comp=Z,800nm,20.0s
KIV Kislovodsk 87.49 315 PFAKE 14 16 10.0 +12
KIV LR LR
comp=Z,600nm,19.0s
KIV Kislovodsk 87.49 315 *e*P **P 14 15 55.1 -3.2**
KIV *e* 14 26 21.0
KIV pmax pmax
comp=Z,24nm,1.0s
FXWY Fox Creek 87.52 45 *e*P **P 14 15 59.4 +0.8**
comp=Z,53nm,1.2s
H17A Grant Village 87.54 44 PFAKE 14 16 10.0 +11
H17A LR LR
comp=Z,1μm,19.0s
H17A Grant Village 87.54 44 P **P 14 16 01.7 +3.0**
baz=292,SNR=17
FLWY Flagg Ranch 87.57 45 PFAKE 14 16 10.0 +11
FLWY LR LR
comp=Z,600nm,21.0s
SWSC Sam W. Stewart 87.61 56 P **P 14 15 60.0 +1.0**
baz=289
TPAW Teton Pass 87.62 45 *e*P **P 14 15 59.7 +0.6**
comp=Z,44nm,1.1s
TPAW LR LR
comp=Z,600nm,22.0s
GCMT Greycliff 87.62 43 *e*P **P 14 15 59.0 +0.1**
BC3 Big Chuckawall 87.66 56 P **P 14 16 00.4 +1.1**
baz=289,SNR=8.8
MOOW Moose Ponds 87.67 45 *e*P **P 14 15 59.4 +0.1**
comp=Z,57nm,1.3s
MOOW LR LR
comp=Z,900nm,20.0s
NEY Neytrino 87.72 315 ǁ *e*P **P 14 15 59.5 0.0**
REDW Red Top Meadow 87.73 45 *e*P **P 14 15 59.9 +0.2**
comp=Z,98nm,1.5s
IRM Iron Mountain 87.74 55 P **P 14 16 01.0 +1.4**
baz=289,SNR=13
SNOW Snow King Moun 87.76 45 *e*P **P 14 16 00.2 +0.4**
comp=Z,30nm,1.1s
SNOW LR LR
comp=Z,800nm,22.0s
AHID Auburn Hatcher 87.78 46 *e*P **P 14 15 59.0 -0.8**
comp=Z,68nm,1.0s
AHID LR LR
comp=Z,500nm,20.0s
LOHW Long Hollow 87.81 45 *e*P **P 14 16 00.1 +0.1**
comp=Z,41nm,1.3s
LOHW LR LR
comp=Z,900nm,22.0s
AKH Akhalkalaki 87.84 313 *e*P **P 14 15 59.6 -0.6**
comp=Z,27nm,1.2s
AKH LR LR
comp=Z,900nm,19.0s
AKH Akhalkalaki 87.84 313 *e*P **P 14 15 59.6 -0.6**
AKH pmax pmax
comp=Z,27nm,1.2s
AKH MLR MLR
comp=Z,900nm,19.0s
HWUT Hardware Ranch 87.87 47 *e*P **P 14 16 00.5 +0.2**
comp=Z,52nm,1.0s
HWUT LR LR
comp=Z,900nm,21.0s
NEE2 Needles Airpor 87.95 54 P **P 14 16 01.7 +1.1**
baz=289
CCUT Cedar City 87.98 51 *e*P **P 14 16 01.9 +0.9**
comp=Z,96nm,1.4s
CTU Camp Tracy 88.07 48 *e*P **P 14 16 01.8 +0.6**
comp=Z,85nm,1.2s
NLU North Lily Min 88.09 49 *e*P **P 14 16 02.1 +0.7**
comp=Z,73nm,1.1s
RLMT Red Lodge 88.14 43 *e*P **P 14 16 02.1 +0.6**
comp=Z,131nm,1.8s
RLMT LR LR
comp=Z,500nm,20.0s
RLMT Red Lodge 88.14 43 P **P 14 16 03.1 +1.6**
baz=292,SNR=24
TCUT Toone Canyon 88.16 48 *e*P **P 14 16 02.3 +0.6**
comp=Z,66nm,1.0s
SZCU Shurtz Canyon 88.17 51 *e*P **P 14 16 02.7 +0.9**
comp=Z,148nm,1.8s
JLU Jordanelle 88.31 48 *e*P **P 14 16 03.1 +0.6**
comp=Z,123nm,1.2s
GLA Glamis 88.35 56 *e*P **P 14 16 03.2 +0.6**
comp=Z,28nm,0.9s
GLA LR LR
comp=Z,700nm,20.0s
GLA Glamis 88.35 56 P **P 14 16 04.3 +1.7**
baz=289,SNR=8.6
Y12C Blythe 88.36 55 *e*P **P 14 16 02.7 +0.2**
comp=Z,26nm,0.9s
Y12C Blythe 88.36 55 P **P 14 16 04.0 +1.5**
baz=289
FFC Flin Flon 88.37 33 *e*P **P 14 16 01.8 -0.3**
comp=Z,80nm,1.4s
FFC LR LR
comp=Z,600nm,21.0s
FFC Flin Flon 88.37 33 *i*P **P 14 16 02.1 0.0**
MPU Maple Canyon 88.39 49 *e*P **P 14 16 03.0 +0.3**
comp=Z,74nm,1.2s
W13A Hualapai Mount 88.41 54 *e*P **P 14 16 03.2 +0.2**
comp=Z,125nm,1.9s
FIA0 FINESS Array S 88.44 335 *e*P **P 14 16 01.2 -1.1**
FIA0 FINESS Array S 88.44 335 *e*P **P 14 16 01.2 -1.1**
FINES FINESS Array B 88.44 335 P **P 14 16 01.2 -1.1**
comp=Z,2.2nm,0.7s,baz=70,slow=6.3,SNR=6.3
FINES LR LR 14 59 35.5
comp=Z,577nm,18.6s,baz=59,slow=38
FINES FINESS Array B 88.44 335 *i*P **P 14 16 01.6 -0.7**
FINES pmax pmax
comp=Z,2.0nm,0.7s
PDMCI Parker Dam,Lak 88.48 55 P **P 14 16 04.6 +1.6**
baz=290,SNR=11
MSU Marysvale 88.53 50 *e*P **P 14 16 04.7 +1.2**
MSU Marysvale 88.53 50 *e*P **P 14 16 04.7 +1.2**
KNB Kanab 88.57 52 *e*P **P 14 16 05.2 +1.5**
comp=Z,206nm,1.4s
KNB Kanab 88.57 52 *e*P **P 14 16 05.2 +1.5**
KNB pmax pmax
comp=Z,206nm,1.4s
MTPU Mount Pierson 88.69 51 *e*P **P 14 16 05.5 +1.1**
comp=Z,124nm,1.9s
PKCU Pink Cliffs 88.80 51 *e*P **P 14 16 06.5 +1.5**
comp=Z,239nm,1.6s
BW06 Boulder Array 88.83 45 *e*P **P 14 16 04.6 -0.3**
comp=Z,82nm,2.0s
BW06 LR LR
comp=Z,500nm,21.0s
BW06 Boulder Array 88.83 45 P **P 14 16 05.3 +0.4**
baz=292,SNR=15
PD31 Pinedale Array 88.83 45 *e*P **P 14 16 04.6 -0.3**
comp=Z,75nm,2.0s
PDAR Pinedale Array 88.83 45 P **P 14 16 05.0 +0.1**
comp=Z,3.5nm,0.7s,baz=279,slow=3.9,SNR=24
PDAR PP **PP 14 19 35.6 +2.0**
comp=Z,1.7nm,1.0s,baz=255,slow=2.3,SNR=4.0
PDAR LR LR 14 49 00.9
comp=Z,396nm,21.5s,baz=312,slow=31
TMUT Trail Mountain 88.95 49 *e*P **P 14 16 05.9 +0.3**
comp=Z,45nm,1.1s
Q16A Castle Valley 89.12 50 *e*P **P 14 16 07.0 +0.8**
comp=Z,157nm,1.3s
U15A North Rim 89.17 52 *e*P **P 14 16 07.3 +0.7**
comp=Z,42nm,1.0s
U15A LR LR
comp=Z,700nm,22.0s
P17A Butcher Ranch, 89.23 49 *e*P **P 14 16 07.4 +0.7**
comp=Z,116nm,1.3s
113A Mohawk Valley, 89.29 56 *e*P **P 14 16 07.5 +0.6**
comp=Z,37nm,1.3s
LAO LASA Array 89.47 41 *e*P **P 14 16 07.9 +0.4**
comp=Z,45nm,1.0s
LAO LR LR
comp=Z,1μm,20.0s
LAO LASA Array 89.47 41 P **P 14 16 08.0 +0.4**
baz=294
Y14A Wickenburg 89.49 55 *e*P **P 14 16 07.4 -0.5**
comp=Z,36nm,1.0s
Y14A LR LR
comp=Z,600nm,20.0s
SRU San Rafael Swe 89.52 49 *e*P **P 14 16 08.1 0.0**
comp=Z,67nm,1.0s
SRU San Rafael Swe 89.52 49 *e*P **P 14 16 08.1 0.0**
SRU pmax pmax
comp=Z,67nm,1.0s
SOC Sochi 89.62 316 *e*P **P 14 16 08.1 -0.1**
SOC *e* 14 19 36.3
SOC *e*PPP PPP 14 21 34.6
SOC *e*S **SKSac 14 26 37.3 -1.7**
SOC *e*SS **SS 14 32 50.9 -4.1**
SOC MLR MLR
comp=Z,5μm,18.0s
DGMT Dagmar 89.95 39 PFAKE 14 16 20.0 +10
DGMT LR LR
comp=Z,1μm,20.0s
DGMT Dagmar 89.95 39 P **P 14 16 09.1 -0.6**
baz=296
FCC Fort Churchill 90.03 27 *e*P **P 14 16 08.9 -0.9**
comp=Z,73nm,1.7s
FCC LR LR
comp=Z,600nm,21.0s
FCC Fort Churchill 90.03 27 *e*P **P 14 16 08.9 -0.9**
FCC pmax pmax
comp=Z,73nm,1.7s
FCC MLR MLR
comp=Z,600nm,21.0s
WUAZ Wupatki 90.19 53 *e*P **P 14 16 12.3 +1.0**
comp=Z,56nm,1.0s
WUAZ LR LR
comp=Z,500nm,20.0s
WUAZ Wupatki 90.19 53 P **P 14 16 13.1 +1.8**
baz=291
214A Organ Pipe Nat 90.33 56 P **P 14 16 13.6 +1.8**
baz=290
SUMG Summit 90.53 1 *e*P **P 14 16 13.7 +1.3**
SUMG Summit 90.53 1 *i*P **P 14 16 13.7 +1.3**
X16A Lo Mia Camp, P 90.53 54 PFAKE 14 16 20.0 +7.1
X16A LR LR
comp=Z,500nm,20.0s
ANN Anapa 90.62 318 *e*P **P 14 16 11.6 -1.2**
ANN *e**PP **pwP 14 16 18.3 +0.3**
ANN *e* 14 26 41.3
ANN pmax pmax
comp=Z,54nm,0.9s
ANN MLR MLR
comp=Z,793nm,19.0s
ANN MLR MLR
comp=N,1μm,19.0s
ANN MLR MLR
comp=E,580nm,18.0s
PV09 Paradox Valley 90.75 49 *e*P **P 14 16 14.6 +0.6**
O20A White River Ci 90.76 48 *e*P **P 14 16 13.8 -0.1**
comp=E,69nm,1.0s
O20A LR LR
comp=Z,1μm,22.0s
O20A White River Ci 90.76 48 P **P 14 16 14.7 +0.9**
baz=293,SNR=23
PV21 Cone Mtn., Par 90.84 49 *e*P **P 14 16 15.0 +0.6**
comp=Z,90nm,1.1s
PV21 LR LR
comp=Z,900nm,20.0s
PV23 Carpenter Ridg 90.86 49 *e*P **P 14 16 14.9 +0.5**
comp=Z,109nm,0.9s
RWWY Rawlins 90.86 46 *e*P **P 14 16 14.6 +0.2**
comp=Z,139nm,1.4s
RWWY LR LR
comp=Z,800nm,22.0s
PV10 Paradox Valley 90.87 49 *e*P **P 14 16 14.7 +0.2**
comp=Z,216nm,1.4s
PV14 Lion Creek, Pa 90.88 49 *e*P **P 14 16 14.9 +0.4**
comp=Z,157nm,1.1s
PV14 LR LR
comp=Z,2μm,20.0s
PV19 Morning Glory 90.93 49 *e*P **P 14 16 15.2 +0.4**
comp=Z,366nm,1.6s
PV20 West Nyswonger 90.93 49 *e*P **P 14 16 14.9 +0.1**
comp=Z,123nm,1.1s
PV20 LR LR
comp=Z,1μm,20.0s
K22A Casper 90.94 45 *e*P **P 14 16 15.2 +0.6**
comp=Z,111nm,1.4s
K22A LR LR
comp=Z,600nm,20.0s
K22A Casper 90.94 45 P **P 14 16 15.2 +0.6**
baz=294,SNR=22
PV05 Paradox Valley 90.94 50 *e*P **P 14 16 15.3 +0.5**
comp=Z,65nm,1.1s
PV05 LR LR
comp=Z,2μm,22.0s
PV04 Paradox Valley 90.96 49 *e*P **P 14 16 15.3 +0.5**
comp=Z,129nm,1.2s
PV04 LR LR
comp=Z,1μm,20.0s
PV17 East Wray Mesa 90.96 49 *e*P **P 14 16 15.3 +0.4**
comp=Z,284nm,1.5s
PV16 Nyswonger Mesa 90.98 49 *e*P **P 14 16 15.4 +0.4**
comp=Z,304nm,1.7s
PV16 LR LR

comp=Z,1μm,20.0s
PV22 Blue Mesa, Par 90.99 49 *e*P **P 14 16 15.5 +0.5**
PV22 LR LR
comp=Z,102nm,1.4s
comp=Z,1μm,21.0s
PV18 Skein Mesa, Pa 91.01 49 *e*P **P 14 16 15.2 +0.1**
PV18 LR LR
comp=Z,80nm,1.1s
comp=Z,1μm,20.0s
PV11 David Mesa, Pa 91.02 49 *e*P **P 14 16 15.4 +0.2**
comp=Z,305nm,1.5s
PV03 Paradox Valley 91.05 49 *e*P **P 14 16 15.6 +0.3**
PV03 LR LR
comp=Z,235nm,1.7s
comp=Z,1μm,20.0s
PV12 Saucer Basin, 91.06 49 *e*P **P 14 16 15.9 +0.5**
comp=Z,321nm,1.6s
PV13 Radium Mtn., P 91.11 50 *e*P **P 14 16 16.0 +0.4**
comp=Z,68nm,1.1s
PV07 Paradox Valley 91.13 49 *e*P **P 14 16 16.2 +0.5**
comp=Z,54nm,1.2s
PV02 Paradox Valley 91.15 49 *e*P **P 14 16 16.2 +0.4**
comp=Z,67nm,1.1s
PV01 Paradox Valley 91.30 49 *e*P **P 14 16 16.9 +0.4**
comp=Z,66nm,1.2s
W18A Petrified Fore 91.58 53 *e*P **P 14 16 18.5 +0.7**
W18A LR LR
comp=Z,75nm,1.4s
comp=Z,600nm,21.0s
W18A Petrified Fore 91.58 53 P **P 14 16 19.2 +1.4**
baz=292
X18A Snowflake 91.64 53 *e*P **P 14 16 18.8 +0.8**
X18A LR LR
comp=Z,35nm,1.3s
comp=Z,700nm,19.0s
MVCO Mesa Verde 91.71 50 *e*P **P 14 16 18.8 +0.4**
MVCO LR LR
comp=Z,78nm,1.4s
comp=Z,900nm,22.0s
MVCO Mesa Verde 91.71 50 P **P 14 16 19.5 +1.1**
baz=293,SNR=13
TUC Tucson 91.81 56 *e*P **P 14 16 19.1 +0.3**
TUC LR LR
comp=Z,57nm,1.5s
comp=Z,800nm,20.0s
TUC Tucson 91.81 56 *e*P **P 14 16 19.1 +0.3**
TUC pmax pmax
comp=Z,57nm,1.5s
TUC MLR MLR
comp=Z,800nm,20.0s
TUC Tucson 91.81 56 P **P 14 16 20.6 +1.8**
baz=291
RSSD Black Hills 91.95 43 *e*P **P 14 16 19.1 -0.3**
RSSD LR LR
comp=Z,56nm,1.4s
comp=Z,700nm,21.0s
RSSD Black Hills 91.95 43 *e*P **P 14 16 19.1 -0.3**
RSSD pmax pmax
comp=Z,56nm,1.4s
RSSD MLR MLR
comp=Z,700nm,21.0s
RSSD Black Hills 91.95 43 P **P 14 16 19.5 +0.2**
baz=296
SMCO Snowmass 92.04 48 *e*P **P 14 16 20.3 +0.2**
SMCO LR LR
comp=Z,85nm,1.1s
comp=Z,1μm,22.0s
N23A Red Feather La 92.06 46 *e*P **P 14 16 20.7 +0.7**
N23A LR LR
comp=Z,264nm,1.4s
comp=Z,600nm,22.0s
N23A Red Feather La 92.06 46 P **P 14 16 21.7 +1.8**
baz=295,SNR=72
PHWY Pilot Hill 92.22 46 *e*P **P 14 16 20.8 +0.1**
PHWY LR LR
comp=Z,67nm,1.3s
comp=Z,600nm,21.0s
SRIG Santa Rosalia 92.40 61 PFAKE 14 16 30.0 +8.6
SRIG LR LR
comp=Z,2μm,21.0s
S22A 4UR Ranch, Cre 92.72 49 *e*P **P 14 16 23.3 +0.2**
S22A LR LR
comp=Z,100nm,1.5s
comp=Z,2μm,22.0s
S22A 4UR Ranch, Cre 92.72 49 P **P 14 16 24.6 +1.5**
baz=294,SNR=62
ISCO Idaho Springs 92.74 47 *e*P **P 14 16 23.8 +0.6**
ISCO LR LR
comp=Z,42nm,1.1s
comp=Z,900nm,20.0s
ISCO Idaho Springs 92.74 47 *e*P **P 14 16 23.8 +0.6**
ISCO pmax pmax
comp=Z,42nm,1.1s
ISCO MLR MLR
comp=Z,900nm,20.0s
ISCO Idaho Springs 92.74 47 P **P 14 16 24.7 +1.5**
baz=295,SNR=24
AKASG Malin Array Be 92.75 325 LR LR 15 00 20.8
comp=Z,514nm,18.8s,baz=75,slow=37
AKBB Malin Array Si 92.75 325 PFAKE 14 16 30.0 +7.4
AKBB LR LR
comp=Z,1μm,18.0s
KIEV Kiev 92.76 325 PFAKE 14 16 30.0 +7.4
KIEV LR LR
comp=Z,1μm,19.0s
HSIG 92.86 59 *e*P **P 14 16 24.2 +0.6**
HSIG LR LR
comp=Z,28nm,1.0s
comp=Z,800nm,19.0s
MDND Maddock 92.96 38 PFAKE 14 16 30.0 +6.3
MDND LR LR
comp=Z,2μm,20.0s
MDND Maddock 92.96 38 P **P 14 16 23.9 +0.2**
baz=299
319A Douglas 93.34 56 PFAKE 14 16 40.0 +14
319A LR LR
comp=Z,800nm,19.0s
Q24A Divide 93.42 48 *e*P **P 14 16 25.0 -1.3**
Q24A LR LR
comp=Z,60nm,1.5s
comp=Z,2μm,22.0s
Q24A Divide 93.42 48 P **P 14 16 27.1 +0.7**
baz=295,SNR=7.3
SDCO Great Sand Dun 93.68 49 *e*P **P 14 16 27.5 -0.1**
SDCO LR LR
comp=Z,1μm,21.0s
SDCO Great Sand Dun 93.68 49 P **P 14 16 28.5 +1.0**
baz=295,SNR=43
LAZ Ladron 93.83 52 *e*P **P 14 16 28.5 +0.3**
ULM Lac du Bonnet 93.84 35 P **P 14 16 27.4 -0.2**
comp=Z,5.7nm,0.8s,baz=296,slow=5.8,SNR=6.8
ULM Lac du Bonnet 93.84 35 *e*P **P 14 16 27.2 -0.4**
comp=Z,32nm,1.3s
ULM LR LR
comp=Z,800nm,20.0s
ULM Lac du Bonnet 93.84 35 *e*P **P 14 16 27.2 -0.4**
ULM pmax pmax
comp=Z,32nm,1.3s
ULM MLR MLR
comp=Z,800nm,20.0s
SUW Suwalki 94.00 330 PFAKE 14 16 40.0 +12
SUW LR LR
comp=Z,700nm,18.0s
LENM Lemitar 94.05 53 *e*P **P 14 16 28.8 -0.4**
121A Cookes Peak, D 94.07 54 P **P 14 16 31.2 +1.9**
baz=293,SNR=10
TASM ASL Pad, Albuq 94.12 52 P **P 14 16 31.0 +1.4**
baz=294,SNR=15
TASM ASL Pad, Albuq 94.12 52 P **P 14 16 30.8 +1.3**
baz=294,SNR=15
ANMO Albuquerque 94.13 52 *e*P **P 14 16 29.3 -0.3**
comp=Z,31nm,1.3s
ANMO Albuquerque 94.13 52 *e*P **P 14 16 29.3 -0.3**
ANMO pmax pmax
comp=Z,31nm,1.3s
ANMO Albuquerque 94.13 52 P **P 14 16 30.6 +1.1**
baz=294
Y22D IRIS PASSCAL I 94.13 53 PFAKE 14 16 40.0 +10
Y22D LR LR
comp=Z,500nm,19.0s
NOA NORSAR Array B 94.16 340 LR LR 15 03 59.8
comp=Z,486nm,18.4s,baz=40,slow=39
LPM Los Pinos Moun 94.25 52 *e*P **P 14 16 29.4 -0.8**
OGNE Ogallala 94.70 45 PFAKE 14 16 40.0 +8.1
OGNE LR LR
comp=Z,700nm,21.0s
OGNE Ogallala 94.70 45 P **P 14 16 31.5 -0.5**
baz=297

ILGA Ilgaz 94.72 315 PFAKE 14 16 40.0 +7.8
ILGA LR LR
comp=Z,400nm,20.0s
T25A Trinidad 94.72 49 *e*P **P 14 16 32.4 +0.2**
comp=Z,52nm,1.4s
T25A LR LR
comp=Z,1μm,22.0s
T25A Trinidad 94.72 49 P **P 14 16 33.3 +1.0**
baz=295,SNR=12
VNDA Vanda 94.85 177 P **P 14 16 30.6 -0.9**
comp=Z,1.3nm,1.0s,baz=326,slow=6.8,SNR=3.8
VNDA LR LR 15 00 17.9
comp=Z,274nm,18.0s,baz=346,slow=36
AGMN Agassiz Nation 94.89 36 *e*P **P 14 16 31.9 -0.6**
comp=Z,16nm,1.2s
AGMN LR LR
comp=Z,900nm,20.0s
AGMN Agassiz Nation 94.89 36 P **P 14 16 32.1 -0.4**
baz=302
SUSD Miller 95.03 41 P **P 14 16 32.1 -1.1**
baz=300
KSCO Kaye Shedlock' 95.17 47 PFAKE 14 16 50.0 +16
KSCO LR LR
comp=Z,500nm,20.0s
KSCO Kaye Shedlock' 95.17 47 P **P 14 16 34.6 +0.5**
baz=297
EPT El Paso 95.37 55 PFAKE 14 16 50.0 +15
EPT LR LR
comp=Z,500nm,20.0s
BR131 Keskin Array S 95.38 314 *e*P **P 14 16 32.4 -2.8**
comp=Z,6.9nm,0.6s
BRTR Keskin Array B 95.38 314 P **P 14 16 32.3 -2.8**
comp=Z,3.1nm,1.0s,baz=94,slow=3.7,SNR=9.6
BRTR LR LR 15 01 44.4
comp=Z,275nm,21.6s,baz=54,slow=37
BRTR Keskin Array B 95.38 314 *i*P **P 14 16 32.5 -2.6**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
SLBS Sierra La Lagu 95.63 63 PFAKE 14 16 50.0 +14
SLBS LR LR
comp=Z,2μm,22.0s
KONO Kongsberg 95.74 339 PFAKE 14 16 50.0 +14
KONO LR LR
comp=Z,800nm,21.0s
ANTO Ankara 95.89 315 PFAKE 14 16 50.0 +13
ANTO LR LR
comp=Z,500nm,20.0s
MNTX Cornudas Mount 96.27 54 *e*P **P 14 16 39.0 -0.2**
comp=Z,38nm,1.8s
MNTX LR LR
comp=Z,500nm,20.0s
MNTX Cornudas Mount 96.27 54 P **P 14 16 40.4 +1.2**
baz=294,SNR=10
TIRR Tirgusor 96.46 320 PFAKE 14 16 50.0 +10
TIRR LR LR
comp=Z,2μm,21.0s
KWP Kalwaria Pacla 96.83 327 PFAKE 14 16 50.0 +8.7
KWP LR LR
comp=Z,7μm,18.0s
ECSD EROS Data Cent 96.85 40 *e*P **P 14 16 40.9 -0.6**
comp=Z,22nm,1.5s
ECSD LR LR
comp=Z,700nm,20.0s
ECSD EROS Data Cent 96.85 40 P **P 14 16 40.6 -0.9**
baz=301
BGNE Belgrade 97.05 43 PFAKE 14 16 50.0 +7.4
BGNE LR LR
comp=Z,500nm,20.0s
BGNE Belgrade 97.05 43 P **P 14 16 41.4 -1.2**
baz=300
CBKS Cedar Bluff 97.26 46 *e*P **P 14 16 42.3 -1.2**
comp=Z,19nm,0.9s
CBKS LR LR
comp=Z,700nm,20.0s
CBKS Cedar Bluff 97.26 46 *e*P **P 14 16 42.3 -1.2**
CBKS pmax pmax
comp=Z,19nm,0.9s
CBKS MLR MLR
comp=Z,700nm,20.0s
CBKS Cedar Bluff 97.26 46 P **P 14 16 43.1 -0.4**
baz=299
MSTX Muleshoe 97.30 51 PFAKE 14 17 00.0 +16
MSTX LR LR
comp=Z,500nm,21.0s
MSTX Muleshoe 97.30 51 P **P 14 16 44.1 +0.1**
baz=296
MLR Muntele Rosu 97.39 322 PFAKE 14 17 00.0 +16
MLR LR LR
comp=Z,1μm,19.0s
EYMN Ely 97.51 35 PFAKE 14 17 00.0 +15
EYMN LR LR
comp=Z,700nm,20.0s
EYMN Ely 97.51 35 P **P 14 16 43.8 -0.7**
baz=306
AMTX Amarillo 97.70 50 *e*P **P 14 16 45.4 -0.3**
comp=Z,16nm,0.9s
AMTX LR LR
comp=Z,1μm,22.0s
AMTX Amarillo 97.70 50 P Pdif 14 16 46.3 +0.5
baz=297
CSS Mathiatis 97.77 310 PFAKE 14 17 00.0 +14
CSS LR LR
comp=Z,600nm,20.0s
HPIG 97.97 59 PFAKE 14 17 00.0 +13
HPIG LR LR
comp=Z,2μm,22.0s
RGN Rugen 98.05 334 PFAKE 14 17 00.0 +13
RGN LR LR
comp=Z,600nm,20.0s
E38A The Farm, Brul 98.26 36 PFAKE 14 17 00.0 +12
E38A LR LR
comp=Z,1μm,22.0s
E38A The Farm, Brul 98.26 36 P **P 14 16 47.0 -0.8**
baz=306
SPMN Marine on St. 98.33 38 PFAKE 14 17 00.0 +12
SPMN LR LR
comp=Z,2μm,20.0s
ISP Isparta 98.42 314 PFAKE 14 17 00.0 +11
ISP LR LR
comp=Z,400nm,20.0s
F38A Pierce - Schro 98.45 37 P **P 14 16 48.4 -0.2**
baz=305
TX31 Lajitas Ar. Si 98.60 56 *e*P **P 14 16 50.1 +0.2**
comp=Z,17nm,1.5s
LTX Lajitas 98.60 56 *e*P Pdif 14 16 51.0 +1.1
LTX Lajitas 98.60 56 *e*P Pdif 14 16 51.0 +1.1
TXAR Lajitas Array 98.60 56 P Pdif 14 16 51.0 +1.1
comp=Z,6.0nm,1.3s,baz=273,slow=2.3,SNR=14
TXAR PP PP 14 20 40.9 -9.4
comp=Z,0.4nm,0.7s,baz=285,slow=3.5,SNR=4.1
TXAR LR LR 14 54 49.0
comp=Z,643nm,21.3s,baz=0.0,slow=31
C40A Isle Royale Na 98.80 34 PFAKE 14 17 00.0 +10
C40A LR LR
comp=Z,800nm,20.0s
G38A Ridgeland 98.92 37 P **P 14 16 50.0 -0.7**
baz=305
U32A Winter Ranch, 98.94 48 PFAKE 14 17 00.0 +8.9
U32A LR LR
comp=Z,1μm,21.0s
H38A Maiden Rock 98.95 38 P **P 14 16 49.9 -1.1**
baz=305
E39A Mellen 98.95 36 P **P 14 16 49.7 -1.2**
baz=306
F39A Loretta 99.02 36 P **Pdif 14 16 50.0 -1.2**
baz=306
OKC Ostrava-Krasne 99.03 329 AMS AMS 15 03 50.0
comp=Z,1μm,16.2s
KSU1 Kansas State U 99.23 44 PFAKE 14 17 00.0 +7.6
KSU1 LR LR
comp=Z,600nm,20.0s
E40A Wakefield 99.28 35 P **Pdif 14 16 52.0 -0.4**
baz=307
PSZ Piszkesteto 99.35 327 PFAKE 14 17 00.0 +7.2
PSZ LR LR
comp=Z,900nm,18.0s
MORC Moravsky Berou 99.37 329 PFAKE 14 17 00.0 +7.2
MORC LR LR
comp=Z,900nm,18.0s
F40A Park Falls 99.47 36 P **Pdif 14 16 52.1 -1.1**
baz=307
VYHS Vyhne 99.54 327 *e*P **Pdif 14 16 56.2 +2.7**
VYHS Vyhne 99.54 327 *e*PDIF **Pdif 14 16 56.2 +2.7**
CHVC Chvalec 99.55 330 AMS AMS 15 05 50.0
comp=Z,900nm,18.8s
DPC Dobruska-Polom 99.58 330 AMS AMS 15 05 50.0
comp=Z,1μm,18.5s

UPC Upice 99.63 330 AMS AMS 15 05 50.0
comp=Z,1μm,20.7s
D41A Chassel 99.63 34 PFAKE 14 17 10.0 +16
D41A LR LR
comp=Z,700nm,20.0s
D41A Chassel 99.63 34 P **Pdif 14 16 52.4 -1.5**
baz=308
G40A Rib Lake 99.81 36 PFAKE 14 17 10.0 +15
G40A LR LR
comp=Z,1μm,22.0s
G40A Rib Lake 99.81 36 P **Pdif 14 16 54.4 -0.3**
baz=306
ALN Alexandroupoli 99.83 318 PFAKE 14 17 10.0 +15
ALN LR LR
comp=Z,300nm,22.0s
I39A Houston 99.86 38 PFAKE 14 17 10.0 +15
I39A LR LR
comp=Z,2μm,22.0s
I39A Houston 99.86 38 P **Pdif 14 16 54.7 -0.3**
baz=305
WMOK Wichita Mounta 99.88 49 PFAKE 14 17 10.0 +15
WMOK LR LR
comp=Z,600nm,20.0s
WMOK Wichita Mounta 99.88 49 P **Pdif 14 16 55.4 0.0**
baz=299
COWI Conover 99.91 35 PFAKE 14 17 10.0 +15
COWI LR LR
comp=Z,600nm,19.0s
SCIA State Center 99.94 41 PFAKE 14 17 10.0 +15
SCIA LR LR
comp=Z,800nm,20.0s
H40A Chili 100.08 37 P **Pdif 14 16 55.3 -0.7**
baz=306
F41A Three Lakes 100.14 36 PFAKE 14 17 10.0 +14
F41A LR LR
comp=Z,900nm,19.0s
F41A Three Lakes 100.14 36 P **Pdif 14 16 55.8 -0.5**
baz=307
ABTX Abilene, Hawle 100.24 51 PFAKE 14 17 10.0 +13
ABTX LR LR
comp=Z,500nm,21.0s
PVCC Panska Ves 100.29 331 AMS AMS 15 05 50.0
comp=Z,700nm,15.1s
CLL Collm 100.47 332 PFAKE 14 17 10.0 +12
CLL LR LR
comp=Z,800nm,18.0s
CLL Collm 100.47 332 *e*PP **PP 14 21 06.0 +2.6**
CLL *e*SS SS 14 35 36.0 +7.7
CLL Lm MLR 15 03 00.0
comp=N,500nm,20.5s
CLL Lm MLR 15 03 00.0
comp=E,800nm,18.1s
CLL Lm MLR 15 03 00.0
comp=Z,700nm,20.2s
H41A Junction City 100.51 37 PFAKE 14 17 10.0 +12
H41A LR LR
comp=Z,1μm,21.0s
GOPC GO Pecny, Ondr 100.61 330 AMS AMS 15 06 30.0
comp=Z,800nm,19.6s
VTS Vitosha 100.62 321 PFAKE 14 17 10.0 +11
VTS LR LR
comp=Z,500nm,22.0s
PRU Pruhonice 100.67 330 AMS AMS 15 10 00.0
comp=Z,700nm,15.1s
TREC Trest 100.69 330 AMS AMS 15 04 50.0
comp=Z,1μm,17.4s
I41A Arkdale 100.72 37 PFAKE 14 17 10.0 +11
I41A LR LR
comp=Z,2μm,22.0s
E43A Lone Tree Farm 100.91 34 PFAKE 14 17 10.0 +10
E43A LR LR
comp=Z,500nm,21.0s
L40A Anamosa 101.08 40 PFAKE 14 17 10.0 +10
L40A LR LR
comp=Z,800nm,21.0s
JCT Junction City 101.11 53 PFAKE 14 17 10.0 +9.1
JCT LR LR
comp=Z,600nm,20.0s
JFWS Jewell Farm 101.17 38 PFAKE 14 17 10.0 +9.1
JFWS LR LR
comp=Z,1μm,22.0s
H42A Shiocton 101.21 36 PFAKE 14 17 10.0 +9.0
H42A LR LR
comp=Z,1μm,21.0s
G43A Wallace 101.23 35 PFAKE 14 17 10.0 +8.9
G43A LR LR
comp=Z,900nm,19.0s
E44A Grand Marais A 101.32 34 PFAKE 14 17 10.0 +8.5
E44A LR LR
comp=Z,1μm,20.0s
I42A Draeger Farm, 101.37 37 PFAKE 14 17 10.0 +8.3
I42A LR LR
comp=Z,1μm,20.0s
TUL1 Leonard 101.42 47 PFAKE 14 17 10.0 +7.9
TUL1 LR LR
comp=Z,900nm,22.0s
NKC Novy Kostel 101.47 332 AMS AMS 15 08 00.0
comp=Z,900nm,18.4s
H43A Windswept, Lux 101.67 36 PFAKE 14 17 10.0 +7.0
H43A LR LR
comp=Z,1μm,20.0s
KHC Kasperske Hory 101.72 330 PFAKE 14 17 10.0 +6.8
KHC LR LR
comp=Z,300nm,18.0s
KHC Kasperske Hory 101.72 330 AMS AMS 15 08 30.0
comp=Z,800nm,16.8s
GEC2 GERESS Array S 101.86 330 PFAKE 14 17 10.0 +6.1
GEC2 LR LR
comp=Z,1μm,18.0s
L42A Oliver, Polo 102.05 39 PFAKE 14 17 20.0 +15
L42A LR LR
comp=Z,1μm,20.0s
N41A Harden Midland 102.08 41 PFAKE 14 17 20.0 +15
N41A LR LR
comp=Z,900nm,21.0s
WHTX Lake Whitney, 102.17 51 PFAKE 14 17 20.0 +14
WHTX LR LR
comp=Z,600nm,20.0s
ZAIG Zacatecas 102.23 61 PFAKE 14 17 20.0 +14
ZAIG LR LR
comp=Z,1μm,22.0s
E46A Sault Ste Mari 102.33 33 PFAKE 14 17 20.0 +14
E46A LR LR
comp=Z,1μm,22.0s
X37A Clayton 102.39 48 PFAKE 14 17 20.0 +14
X37A LR LR
comp=Z,1μm,20.0s
833A Chaparral WMA, 102.41 55 PFAKE 14 17 20.0 +13
833A LR LR
comp=Z,600nm,19.0s
GRA1 Grafenberg Arr 102.42 332 PFAKE 14 17 20.0 +14
GRA1 LR LR
comp=Z,900nm,20.0s
GRFO Grafenberg 102.42 332 PFAKE 14 17 20.0 +14
GRFO LR LR
comp=Z,900nm,19.0s
K43A Burlington 102.42 38 PFAKE 14 17 20.0 +14
K43A LR LR
comp=Z,2μm,22.0s
G45A Suttons Bay 102.48 35 PFAKE 14 17 20.0 +13
G45A LR LR
comp=Z,700nm,21.0s
435B Jarrell 102.66 52 PFAKE 14 17 20.0 +12
435B LR LR
comp=Z,800nm,20.0s
I45A Fountain 102.80 36 PFAKE 14 17 20.0 +12
I45A LR LR
comp=Z,900nm,20.0s
BLY Banja Luka 102.81 325 PFAKE 14 17 20.0 +12
BLY LR LR
comp=Z,900nm,21.0s
FNA Florina 102.82 320 PFAKE 14 17 20.0 +12
FNA LR LR
comp=Z,500nm,20.0s
MAW Mawson 102.99 203 PP **PP 14 21 17.5 -5.3**
comp=Z,3.2nm,1.0s,baz=77,slow=7.9,SNR=3.2
MAW Mawson 102.99 203 *e*PP **PP 14 21 21.4 -1.4**
MAW LR LR
comp=Z,100nm,19.0s
J45A Montague 103.09 36 PFAKE 14 17 20.0 +11
J45A LR LR
comp=Z,1μm,20.0s
TTG Podgorica 103.10 322 PFAKE 14 17 20.0 +11
TTG LR LR
comp=Z,500nm,19.0s
HDIL Hopedale 103.13 40 PFAKE 14 17 20.0 +10

HDIL LR LR
comp=Z,900nm,22.0s
GLMI Grayling 103.18 34 PFAKE 14 17 20.0 +10
GLMI LR LR
comp=Z,600nm,19.0s
W39A Magazine 103.19 47 PFAKE 14 17 20.0 +10
W39A LR LR
comp=Z,1μm,22.0s
AGG Agios Georgios 103.24 318 PFAKE 14 17 20.0 +10
AGG LR LR
comp=Z,400nm,21.0s
CCM Cathedral Cave 103.34 43 PFAKE 14 17 20.0 +9.4
CCM LR LR
comp=Z,600nm,19.0s
M44A Midewin, Midew 103.39 39 PFAKE 14 17 20.0 +9.2
M44A LR LR
comp=Z,800nm,21.0s
FURI Furi 103.59 284 PFAKE 14 17 20.0 +7.4
FURI LR LR
comp=Z,400nm,20.0s
MIAR Mount Ida 103.68 47 PFAKE 14 17 20.0 +7.8
MIAR LR LR
comp=Z,1μm,20.0s
I47A Gladwin 103.76 35 PFAKE 14 17 20.0 +7.6
I47A LR LR
comp=Z,800nm,20.0s
LNIG Linares 103.89 58 PFAKE 14 17 20.0 +6.6
LNIG LR LR
comp=Z,700nm,21.0s
H48A Harrisville 103.95 34 PFAKE 14 17 20.0 +6.8
H48A LR LR
comp=Z,800nm,21.0s
STU Stuttgart 104.00 332 PFAKE 14 17 20.0 +6.7
STU LR LR
comp=Z,500nm,19.0s
L46A Eue Claire 104.04 37 PFAKE 14 17 30.0 +16
L46A LR LR
comp=Z,2μm,21.0s
J47A Sunmer 104.10 36 PFAKE 14 17 30.0 +16
J47A LR LR
comp=Z,1μm,20.0s
WHAR Wooly Hollow 104.17 46 PFAKE 14 17 30.0 +16
WHAR LR LR
comp=Z,800nm,20.0s
X40A Basin Creek Fa 104.23 47 PFAKE 14 17 30.0 +15
X40A LR LR
comp=Z,1μm,22.0s
W41B Gary Mavity, V 104.26 46 PFAKE 14 17 30.0 +15
W41B LR LR
comp=Z,800nm,21.0s
NATX Nacogdoches 104.35 50 PFAKE 14 17 30.0 +15
NATX LR LR
comp=Z,800nm,20.0s
HKT Hockley 104.38 52 PFAKE 14 17 30.0 +15
HKT LR LR
comp=Z,800nm,19.0s
M46A Old House Fiel 104.38 38 PFAKE 14 17 30.0 +15
M46A LR LR
comp=Z,1μm,20.0s
UALR University of 104.42 46 PFAKE 14 17 30.0 +15
UALR LR LR
comp=Z,800nm,21.0s
WLAR White Oak Lake 104.46 48 PFAKE 14 17 30.0 +14
WLAR LR LR
comp=Z,1μm,22.0s
VLDQ Val d'Or 104.46 28 PFAKE 14 17 30.0 +15
VLDQ LR LR
comp=Z,1μm,22.0s
UCC Uccle 104.47 336 PFAKE 14 17 30.0 +15
UCC LR LR
comp=Z,800nm,20.0s
SFIN Lafayette 104.58 39 PFAKE 14 17 30.0 +14
SFIN LR LR
comp=Z,900nm,22.0s
PBMO Poplar Bluff 104.60 44 PFAKE 14 17 30.0 +14
PBMO LR LR
comp=Z,500nm,19.0s
J48A Bridge Port 104.63 35 PFAKE 14 21 40.0 +8.0
J48A LR LR
comp=Z,800nm,20.0s
WLF Walferdange 104.64 334 PFAKE 14 17 30.0 +14
WLF LR LR
comp=Z,3μm,20.0s
P45A Graceland, Par 104.70 40 PFAKE 14 17 30.0 +13
P45A LR LR
comp=Z,800nm,21.0s
BFO Black Forest 104.71 332 PFAKE 14 17 30.0 +13
BFO LR LR
comp=Z,500nm,22.0s
I49A Point Hope 104.73 34 PFAKE 14 17 30.0 +13
I49A LR LR
comp=Z,900nm,22.0s
SIUC Southern Illin 104.85 42 PFAKE 14 17 30.0 +13
SIUC LR LR
comp=Z,800nm,19.0s
Z41A Richland Creek 104.91 48 PFAKE 14 21 40.0 +7.2
Z41A LR LR
comp=Z,1μm,22.0s
OLIL Olney 104.96 41 PFAKE 14 21 40.0 +7.3
OLIL LR LR
comp=Z,900nm,21.0s
FUORN Ofenpass-Fuorn 105.07 330 PFAKE 14 21 40.0 +6.9
FUORN LR LR
comp=Z,900nm,18.0s
D53A Lac Vacive, Po 105.11 29 PFAKE 14 21 40.0 +7.2
D53A LR LR
comp=Z,600nm,19.0s
PARMO Parma 105.11 43 PFAKE 14 21 40.0 +6.9
PARMO LR LR
comp=Z,500nm,19.0s
HBAR Harrisburg 105.14 45 PFAKE 14 21 40.0 +6.8
HBAR LR LR
comp=Z,500nm,18.0s
CCAR Cane Creek 105.28 47 PFAKE 14 21 40.0 +6.5
CCAR LR LR
comp=Z,1μm,21.0s
M48A Edgerton 105.29 37 PFAKE 14 21 40.0 +6.7
M48A LR LR
comp=Z,2μm,21.0s
PVMO Portageville 105.29 44 PFAKE 14 21 40.0 +6.6
PVMO LR LR
comp=Z,500nm,19.0s
ECH Echery 105.31 333 PFAKE 14 21 40.0 +6.8
ECH LR LR
comp=Z,500nm,18.0s
GNAR Gosnell 105.33 44 PFAKE 14 21 40.0 +6.5
GNAR LR LR
comp=Z,700nm,20.0s
AAM Ann Arbor 105.36 36 PFAKE 14 21 40.0 +6.6
AAM LR LR
comp=Z,1μm,20.0s
X43A Marvell 105.56 46 PFAKE 14 21 50.0 +16
X43A LR LR
comp=Z,700nm,21.0s
TUE Stuetta 105.61 330 PFAKE 14 21 50.0 +16
TUE LR LR
comp=Z,900nm,20.0s
K50A Casco 105.62 35 PFAKE 14 21 50.0 +16
K50A LR LR
comp=Z,800nm,21.0s
T45A Paducah 105.62 43 PFAKE 14 21 50.0 +16
T45A LR LR
comp=Z,600nm,20.0s
BLO Bloomington 105.67 40 PFAKE 14 21 50.0 +16
BLO LR LR
comp=Z,1μm,22.0s
USIN University of 105.69 41 PFAKE 14 21 50.0 +16
USIN LR LR
comp=Z,800nm,18.0s
HALT Halls 105.81 44 PFAKE 14 21 50.0 +16
HALT LR LR
comp=Z,700nm,22.0s
N49A Columbus Grove 105.96 37 PFAKE 14 21 50.0 +15
N49A LR LR
comp=Z,2μm,22.0s
SADO Sadowa 106.07 32 PFAKE 14 21 50.0 +15
SADO LR LR
comp=Z,1μm,20.0s
M50A Fremont 106.29 36 PFAKE 14 21 50.0 +15
M50A LR LR
comp=Z,1μm,22.0s
O49A Covington 106.34 38 PFAKE 14 21 50.0 +15
O49A LR LR
comp=Z,2μm,22.0s
WCI Wyandotte Cave 106.39 40 PFAKE 14 21 50.0 +15
WCI LR LR
comp=Z,1μm,21.0s
AQU L'Aquila 106.45 325 PFAKE 14 21 50.0 +15
AQU LR LR
comp=Z,1μm,20.0s
OXF Oxford 106.57 45 PFAKE 14 21 50.0 +14
OXF LR LR
comp=Z,700nm,19.0s
TIP Timpagrande 106.61 321 PFAKE 14 21 50.0 +14
TIP LR LR
comp=Z,500nm,18.0s
T47A Sharon Grove 106.63 42 PFAKE 14 21 50.0 +14
T47A LR LR
comp=Z,800nm,19.0s
SENIN Lac Senin/Sane 106.65 331 PFAKE 14 21 50.0 +14
SENIN LR LR
comp=Z,900nm,19.0s
WVT Waverly 106.68 43 PFAKE 14 21 50.0 +14
WVT LR LR
comp=Z,800nm,20.0s
VLC Villacollemand 106.78 328 PFAKE 14 21 50.0 +14
VLC LR LR
comp=Z,600nm,20.0s
PLVO Plevna 106.89 30 PFAKE 14 21 50.0 +14
PLVO LR LR
comp=Z,600nm,20.0s
N51A Ashland 106.99 36 PFAKE 14 21 50.0 +14
N51A LR LR
comp=Z,1μm,20.0s
VBMS Vicksburg 107.09 48 PFAKE 14 21 50.0 +13
VBMS LR LR
comp=Z,1μm,22.0s
ACSO Alum Creek Sta 107.10 37 PFAKE 14 21 50.0 +13
ACSO LR LR
comp=Z,1μm,20.0s
M52A Chesterland 107.14 35 PFAKE 14 21 50.0 +13
M52A LR LR
comp=Z,1μm,21.0s
PLAL Pickwick Lake 107.19 44 PFAKE 14 21 50.0 +13
PLAL LR LR
comp=Z,600nm,19.0s
J54A Appleton 107.39 32 PFAKE 14 21 50.0 +13
J54A LR LR
comp=Z,900nm,20.0s
ERPA Erie 107.49 34 PFAKE 14 21 50.0 +13
ERPA LR LR
comp=Z,800nm,20.0s
P51A Williamsport 107.55 38 PFAKE 14 21 50.0 +12
P51A LR LR
comp=Z,1μm,22.0s
T49A Edmonton 107.56 41 PFAKE 14 21 50.0 +12
T49A LR LR
comp=Z,700nm,19.0s
MEDO Medina 107.56 32 PFAKE 14 21 50.0 +13
MEDO LR LR
comp=Z,900nm,20.0s
V48A Smith Brothers 107.57 43 PFAKE 14 21 50.0 +12
V48A LR LR
comp=Z,600nm,20.0s
Q51A Peebles 107.67 38 PFAKE 14 21 50.0 +12
Q51A LR LR
comp=Z,1μm,22.0s
ALLY Alegheny Colle 107.73 34 PFAKE 14 21 50.0 +12
ALLY LR LR
comp=Z,1μm,20.0s
J55A Hilton 107.81 32 PFAKE 14 21 50.0 +12
J55A LR LR
comp=Z,1μm,20.0s
TLIG Tlapa 107.82 65 PFAKE 14 21 50.0 +11
TLIG LR LR
comp=Z,900nm,21.0s
O52A Adamsville 107.83 37 PFAKE 14 21 50.0 +12
O52A LR LR
comp=Z,2μm,21.0s
BNI Bardonecchia 107.92 331 PFAKE 14 21 50.0 +12
BNI LR LR
comp=Z,1μm,18.0s
N53A Lisbon 107.93 36 PFAKE 14 21 50.0 +12
N53A LR LR
comp=Z,1μm,20.0s
M54A Oil Creek Stat 108.09 34 PFAKE 14 21 50.0 +11
M54A LR LR
comp=Z,900nm,19.0s
MMNY Mt. Morris Dam 108.15 32 PFAKE 14 21 50.0 +11
MMNY LR LR
comp=Z,600nm,20.0s
X48A Hartselle 108.19 44 PFAKE 14 21 50.0 +11
X48A LR LR
comp=Z,700nm,20.0s
N54A Moraine State 108.29 35 PFAKE 14 21 50.0 +11
N54A LR LR
comp=Z,1μm,21.0s
LONY Lake Ozonia 108.39 29 PFAKE 14 21 50.0 +11
LONY LR LR
comp=Z,500nm,22.0s
147A Livingston 108.40 46 PFAKE 14 21 50.0 +11
147A LR LR
comp=Z,501μm,19.0s
S51A Beattyville 108.42 40 PFAKE 14 21 50.0 +11
S51A LR LR
comp=Z,800nm,20.0s
P53A Whipple 108.51 37 PFAKE 14 21 50.0 +11
P53A LR LR
comp=Z,2μm,20.0s
NAI Nairobi 108.61 274 PFAKE 14 21 50.0 +10
NAI LR LR
comp=Z,500nm,20.0s
FRNY Flat Rock 108.69 29 PFAKE 14 21 50.0 +11
FRNY LR LR
comp=Z,600nm,21.0s
LVIG Laguna Verde 108.72 62 PFAKE 14 21 50.0 +10
LVIG LR LR
comp=Z,600nm,19.0s
SSB Saint Sauveur 108.72 332 PFAKE 14 21 50.0 +10
SSB LR LR
comp=Z,500nm,19.0s
W50A Signal Mountai 108.87 42 PFAKE 14 21 50.0 +10
W50A LR LR
comp=Z,700nm,21.0s
R53A Hurricane 108.95 38 PFAKE 14 21 50.0 +10
R53A LR LR
comp=Z,1μm,22.0s
N55A Marion Center 108.96 35 PFAKE 14 21 50.0 +10
N55A LR LR
comp=Z,1μm,20.0s
Y49A Blount Mountai 108.97 44 PFAKE 14 21 50.0 +10
Y49A LR LR
comp=Z,600nm,20.0s
NCB Newcomb 109.05 29 PFAKE 14 21 50.0 +10
NCB LR LR
comp=Z,400nm,18.0s
LRAL Lakeview Retre 109.06 45 PFAKE 14 21 50.0 +9.5
LRAL LR LR
comp=Z,700nm,21.0s
V51A Loudon 109.11 41 PFAKE 14 21 50.0 +9.4
V51A LR LR
comp=Z,800nm,21.0s
T52A Hallie 109.13 40 PFAKE 14 21 50.0 +9.4
T52A LR LR
comp=Z,1μm,20.0s
TZTN Tazewell 109.15 40 PFAKE 14 21 50.0 +9.4
TZTN LR LR
comp=Z,600nm,18.0s
Q54A Coxs Mills 109.17 37 PFAKE 14 21 50.0 +9.4
Q54A LR LR
comp=Z,2μm,22.0s
MCWV Mont Chateau 109.27 36 PFAKE 14 21 50.0 +9.2
MCWV LR LR
comp=Z,700nm,20.0s
VT1 Waterbury 109.45 28 PFAKE 14 21 50.0 +9.0
VT1 LR LR
comp=Z,500nm,20.0s
BINY Binghamton 109.52 32 PFAKE 14 21 50.0 +8.8
BINY LR LR
comp=Z,1μm,21.0s
O56A Blue Knob Stat 109.55 35 PFAKE 14 21 50.0 +8.7
O56A LR LR
comp=Z,1μm,20.0s
X51A Calhoun 109.56 43 PFAKE 14 21 50.0 +8.6
X51A LR LR
comp=Z,600nm,20.0s
V52A Sevierville 109.56 41 PFAKE 14 21 50.0 +8.6
V52A LR LR
comp=Z,600nm,20.0s
PQI Presque Isle 109.59 24 PFAKE 14 21 50.0 +8.9
PQI LR LR
comp=Z,800nm,21.0s
Z50A Ashland 109.65 44 PFAKE 14 21 50.0 +8.3
Z50A LR LR
comp=Z,600nm,20.0s
SSPA Standing Stone 109.66 34 PFAKE 14 21 50.0 +8.5
SSPA LR LR
comp=Z,899nm,22.0s
CLTB Caltabellotta 109.76 322 PFAKE 14 21 50.0 +8.1
CLTB LR LR
comp=Z,500nm,21.0s
W52A Murphy 109.83 42 PFAKE 14 21 50.0 +8.0
W52A LR LR
comp=Z,700nm,20.0s
LBNH Lisbon 109.90 28 PFAKE 14 21 50.0 +8.2
LBNH LR LR
comp=Z,600nm,21.0s
KSPA Keystone Colle 110.10 32 PFAKE 14 21 50.0 +7.7
KSPA LR LR
comp=Z,1μm,22.0s
BRAL Brewton 110.11 47 PFAKE 14 21 50.0 +7.4
BRAL LR LR
comp=Z,1μm,21.0s
HNH Hanover 110.15 29 PFAKE 14 21 50.0 +7.7
HNH LR LR
comp=Z,700nm,22.0s
V53A Saluda 110.16 41 PFAKE 14 21 50.0 +7.4
V53A LR LR
comp=Z,800nm,22.0s
250A Grady 110.18 46 PFAKE 14 21 50.0 +7.3
250A LR LR
comp=Z,600nm,21.0s
PKME Peaks-Kenny Pk 110.22 26 PFAKE 14 21 50.0 +7.6
PKME LR LR
comp=Z,700nm,21.0s
U54A Nelsons Funny 110.22 39 PFAKE 14 21 50.0 +7.3
U54A LR LR
comp=Z,700nm,20.0s
TRY Troy 110.26 30 PFAKE 14 21 50.0 +7.5
TRY LR LR
comp=Z,500nm,21.0s
Y52A Lilburn 110.51 43 PFAKE 14 21 50.0 +6.7
Y52A LR LR
comp=Z,500nm,20.0s
N59A State Game Lan 110.57 33 PFAKE 14 21 50.0 +6.8
N59A LR LR
comp=Z,800nm,20.0s
PAGS Pennsylvania G 110.57 34 PFAKE 14 21 50.0 +6.8
PAGS LR LR
comp=Z,1μm,22.0s
BLA Blacksburg 110.60 38 PFAKE 14 21 50.0 +6.6
BLA LR LR
comp=Z,1μm,22.0s
WVL Waterville 110.63 26 PFAKE 14 21 50.0 +6.9
WVL LR LR
comp=Z,800nm,20.0s
152A Waverly Hall 110.81 44 PFAKE 14 22 00.0 +16
152A LR LR
comp=Z,700nm,20.0s
LUPA Lehigh Univers 111.00 33 PFAKE 14 22 00.0 +16
LUPA LR LR
comp=Z,100nm,20.0s
ODNJ Ogdensburg 111.04 32 PFAKE 14 22 00.0 +16
ODNJ LR LR
comp=Z,800nm,21.0s
S57A Dark Hollow, R 111.08 37 PFAKE 14 22 00.0 +16
S57A LR LR
comp=Z,2μm,21.0s
SDMD Soldier's Deli 111.09 34 PFAKE 14 22 00.0 +16
SDMD LR LR
comp=Z,600nm,20.0s
KSCT Kent School, K 111.11 31 PFAKE 14 22 00.0 +16
KSCT LR LR
comp=Z,900nm,20.0s
GOGA Godfrey 111.18 43 PFAKE 14 22 00.0 +15
GOGA LR LR
comp=Z,600nm,21.0s
QUA2 Belchertown 111.23 30 PFAKE 14 22 00.0 +16
QUA2 LR LR
comp=Z,700nm,21.0s
GGN Saint George 111.33 24 PFAKE 14 22 00.0 +16
GGN LR LR
comp=Z,900nm,22.0s
BRNJ Basking Ridge 111.35 32 PFAKE 14 22 00.0 +15
BRNJ LR LR
comp=Z,800nm,22.0s
352A Blakely 111.39 45 PFAKE 14 22 00.0 +15
352A LR LR
comp=Z,500nm,19.0s
HRV Adam Dziewonsk 111.42 29 PFAKE 14 22 00.0 +15
HRV LR LR
comp=Z,600nm,22.0s
EMMW East Machias 111.42 25 PFAKE 14 22 00.0 +15
EMMW LR LR
comp=Z,500nm,20.0s
KMSC Kings Mountain 111.42 40 PFAKE 14 22 00.0 +15
KMSC LR LR
comp=Z,800nm,21.0s
T57A Hurt 111.43 38 PFAKE 14 22 00.0 +15
T57A LR LR
comp=Z,1μm,20.0s
PAL Palisades 111.44 31 PFAKE 14 22 00.0 +15
PAL LR LR
comp=Z,900nm,20.0s
PSUB Penn St. - Bra 111.46 33 PFAKE 14 22 00.0 +15
PSUB LR LR
comp=Z,900nm,22.0s
LMN Caledonia Moun 111.49 23 PFAKE 14 22 00.0 +15
LMN LR LR
comp=Z,1μm,20.0s
V56A Mocksville 111.50 39 PFAKE 14 22 00.0 +15
V56A LR LR
comp=Z,1μm,22.0s
R58B Mineral 111.55 36 PFAKE 14 22 00.0 +15
R58B LR LR
comp=Z,2μm,20.0s
253A Americus 111.58 44 PFAKE 14 22 00.0 +15
253A LR LR
comp=Z,600nm,20.0s
WES Weston 111.62 29 PFAKE 14 22 00.0 +15
WES LR LR
comp=Z,600nm,21.0s
SYO Syowa Base 111.64 202 *LeX* **PP 14 22 30.4 +4.4**
CBN Corbin Frederi 111.66 36 PFAKE 14 22 00.0 +15
CBN LR LR
comp=Z,2μm,20.0s
S58A Poland Farm, P 111.70 36 PFAKE 14 22 00.0 +15
S58A LR LR
comp=Z,2μm,21.0s
BRYW Bryant College 111.89 29 PFAKE 14 22 00.0 +14
BRYW LR LR
comp=Z,500nm,20.0s
154A Montrose 111.91 43 PFAKE 14 22 00.0 +14
154A LR LR
comp=Z,700nm,20.0s
453A Whigham 112.19 46 PFAKE 14 22 00.0 +14
453A LR LR
comp=Z,500nm,20.0s
W57A Gilead 112.24 39 PFAKE 14 22 00.0 +14
W57A LR LR
comp=Z,600nm,21.0s
TIGA Tifton 112.32 45 PFAKE 14 22 00.0 +13
TIGA LR LR
comp=Z,800nm,20.0s
T59A Double "B" Far 112.43 37 PFAKE 14 22 00.0 +13
T59A LR LR
comp=Z,2μm,21.0s
Z56A Williston 112.58 42 PFAKE 14 22 00.0 +13
Z56A LR LR
comp=Z,600nm,20.0s
U59A Littleton 112.72 37 PFAKE 14 22 00.0 +13
U59A LR LR
comp=Z,1μm,20.0s
Y57A Sumter 112.75 41 PFAKE 14 22 00.0 +13
Y57A LR LR
comp=Z,600nm,20.0s
255A Hazlehurst 112.76 44 PFAKE 14 22 00.0 +12
255A LR LR
comp=Z,600nm,19.0s
T60A Surry 112.77 36 PFAKE 14 22 00.0 +13
T60A LR LR
comp=Z,2μm,21.0s
X58A Rowland 113.04 40 PFAKE 14 22 00.0 +12
X58A LR LR
comp=Z,700nm,20.0s

Y58A Scranton 113.27 40 PFAKE 14 22 00.0 +12
Y58A LR LR
comp=Z,600nm,20.0s
KEST Kesra 113.29 322 PFAKE 14 22 00.0 +11
KEST LR LR
comp=Z,400nm,19.0s
CNNC Cliffs of the 113.44 38 PFAKE 14 22 00.0 +11
CNNC LR LR
comp=Z,1μm,21.0s
V60A Jim Taylor Roa 113.44 37 PFAKE 14 22 00.0 +11
V60A LR LR
comp=Z,1μm,21.0s
NHSC New Hope 113.48 41 PFAKE 14 22 00.0 +11
NHSC LR LR
comp=Z,800nm,20.0s
U61A Possum Corner 113.51 36 PFAKE 14 22 00.0 +11
U61A LR LR
comp=Z,2μm,21.0s
555A McAlpin 113.56 45 PFAKE 14 22 00.0 +11
555A LR LR
comp=Z,500nm,21.0s
MYIG Mrida 113.64 57 PFAKE 14 22 00.0 +11
MYIG LR LR
comp=Z,900nm,18.0s
257A Skidaway Islan 113.68 43 PFAKE 14 22 00.0 +11
257A LR LR
comp=Z,800nm,21.0s
456A Hilliard 113.82 44 PFAKE 14 22 00.0 +10
456A LR LR
comp=Z,700nm,20.0s
V61A Roper 113.82 37 PFAKE 14 22 00.0 +11
V61A LR LR
comp=Z,1μm,20.0s
CCIG Comitan 113.90 63 PFAKE 14 22 00.0 +10
CCIG LR LR
comp=Z,2μm,19.0s
Y60A Bolivia 114.09 39 PFAKE 14 22 00.0 +10
Y60A LR LR
comp=Z,1μm,22.0s
MBAR Mbarara 114.18 277 PFAKE 14 22 00.0 +9.0
MBAR LR LR
comp=Z,2μm,21.0s
656A Willston 114.31 46 PFAKE 14 22 00.0 +9.4
656A LR LR
comp=Z,700nm,21.0s
V62A Hyde County Ai 114.34 37 PFAKE 14 22 00.0 +10
V62A LR LR
comp=Z,1μm,20.0s
658A Bunnell 115.15 45 PFAKE 14 22 00.0 +7.8
658A LR LR
comp=Z,800nm,21.0s
TEIG Tepich 115.19 57 PFAKE 14 22 00.0 +7.5
TEIG LR LR
comp=Z,700nm,20.0s
957A Wimauma 115.57 47 PFAKE 14 22 00.0 +7.0
957A LR LR
comp=Z,1μm,21.0s
DWPF Disney Wildern 115.85 46 PFAKE 14 22 00.0 +6.4
DWPF LR LR
comp=Z,800nm,22.0s
059A Moore Haven 116.76 47 PFAKE 14 22 10.0 +15
059A LR LR
comp=Z,800nm,21.0s
ESDC Sonseca Array 116.94 334 PKKPab PKKPab 14 32 25.5 -1.6
comp=Z,0.2nm,0.3s,baz=206,slow=3.6,SNR=5.2
ESLA Sonseca Array 116.94 334 PFAKE 14 22 10.0 +15
ESLA LR LR
comp=Z,400nm,21.0s
PAB San Pablo 117.20 334 PFAKE 14 22 10.0 +14
PAB LR LR
comp=Z,500nm,21.0s
060A Indiantown 117.26 46 PFAKE 14 22 10.0 +14
060A LR LR
comp=Z,800nm,21.0s
CART Cartagena 117.35 331 PFAKE 14 22 10.0 +14
CART LR LR
comp=Z,300nm,20.0s
061Z Ochoppi 117.61 48 PFAKE 14 22 10.0 +13
061Z LR LR
comp=Z,1μm,20.0s
MTE Manteigas 117.72 337 PFAKE 14 22 10.0 +13
MTE LR LR
comp=Z,500nm,20.0s
COI Coimbra 118.20 338 PFAKE 14 22 10.0 +12
COI LR LR
comp=Z,600nm,19.0s
TGUH Tegucigalpa,Un 119.08 63 PFAKE 14 22 10.0 +10
TGUH LR LR
comp=Z,700nm,21.0s
PVAQ Vaqueiros 120.40 336 PFAKE 14 22 10.0 +7.8
PVAQ LR LR
comp=Z,500nm,20.0s
PFVI Vila Bisbo 121.06 337 PFAKE 14 22 10.0 +6.5
PFVI LR LR
comp=Z,500nm,19.0s
ACON Acoyapa 121.88 64 PFAKE 14 22 20.0 +14
ACON LR LR
comp=Z,300nm,18.0s
SNAA Sanae 122.36 191 PKPdf **PKPdf** **14 22 03.0 -1.9**
SNAA Sanae 122.36 191 PFAKE 14 22 20.0 +15
SNAA LR LR
comp=Z,500nm,20.0s
ESPN Las Esperanzas 122.52 63 PFAKE 14 22 20.0 +13
ESPN LR LR
comp=Z,100nm,22.0s
JTS Las Juntas de 122.86 65 PFAKE 14 22 20.0 +12
JTS LR LR
comp=Z,500nm,20.0s
HDC Heredia 123.73 65 PFAKE 14 22 20.0 +11
HDC LR LR
comp=Z,600nm,22.0s
VNA2 Neumayer--Watz 123.80 190 PKPdf **PKPdf** **14 22 06.2 -1.4**
VNA3 Neumayer Olymp 123.89 189 PKPdf **PKPdf** **14 22 06.1 -1.6**
VNA1 Neumayer--Stat 124.19 190 PKPdf **PKPdf** **14 22 07.4 -0.8**
TAM Tamanrasset 124.58 314 PFAKE 14 22 20.0 +9.0
TAM LR LR
comp=Z,300nm,21.0s
GTBY Guantanamo Bay 125.48 49 PFAKE 14 22 20.0 +7.3
GTBY LR LR
comp=Z,700nm,20.0s
SDDR Presa de Saban 128.82 47 PFAKE 14 22 30.0 +11
SDDR LR LR
comp=Z,600nm,20.0s
SDD Santo Domingo 130.13 47 PFAKE 14 22 30.0 +8.0
SDD LR LR
comp=Z,600nm,18.0s
MPR Mayaguez 132.20 44 PFAKE 14 22 40.0 +14
MPR LR LR
comp=Z,500nm,20.0s
CRPR Cabo Rojo, PR 132.36 45 PFAKE 14 22 40.0 +14
CRPR LR LR
comp=Z,700nm,22.0s
ICMP Isla Caja de M 132.84 44 PFAKE 14 22 40.0 +13
ICMP LR LR
comp=Z,300nm,18.0s
SJG San Juan 132.92 44 PFAKE 14 22 40.0 +12
SJG LR LR
comp=Z,500nm,20.0s
OTAV Otavalo 133.07 73 PFAKE 14 22 40.0 +11
OTAV LR LR
comp=Z,400nm,20.0s
HUMP Col San Antoni 133.10 43 PFAKE 14 22 40.0 +12
HUMP LR LR
comp=Z,800nm,22.0s
MTP Monte Pirata 133.33 43 PFAKE 14 22 40.0 +12
MTP LR LR
comp=Z,700nm,20.0s
STVI Saint Thomas 133.53 42 PFAKE 14 22 40.0 +11
STVI LR LR
comp=Z,600nm,22.0s
TOB2 Torodi Ar. Sit 133.60 308 PFAKE 14 22 40.0 +11
TOB2 LR LR
comp=Z,9μm,22.0s
TOA1 Torodi Ar. Sit 133.62 308 *e*PKPdf **PKPdf** **14 22 27.6 -0.2**
TORD Torodi Ar. Bea 133.62 308 PKP **PKPdf** **14 22 27.6 -0.2**
comp=Z,1.6nm,1.0s,baz=339,slow=1.4,SNR=5.4
TORD PP **PP** **14 24 50.0 -5.8**
comp=Z,1.8nm,1.0s,baz=128,slow=4.5,SNR=3.9
ROSC El Rosal 134.70 65 PFAKE 14 22 40.0 +8.1
ROSC LR LR
comp=Z,300nm,21.0s
SDV Santo Domingo 135.63 57 PKhKP PKPpre 14 22 24.8
comp=Z,4.8nm,0.7s,baz=26,slow=5.9,SNR=3.8
SDV Santo Domingo 135.63 57 *e*PKPpre PKPpre 14 22 24.8
SDV LR LR
comp=Z,400nm,22.0s
SKI Saint Kitts 135.69 41 PFAKE 14 22 40.0 +6.7
SKI LR LR
comp=Z,1μm,21.0s
ANWB Willy Bob 136.03 40 PFAKE 14 22 40.0 +6.1
ANWB LR LR
comp=Z,600nm,21.0s
NNA Nana 138.38 89 *i* PKIKP **PKiKP** **14 22 40.3 +1.4**
FDF Fort de France 138.64 42 PFAKE 14 22 50.0 +11
FDF LR LR
comp=Z,700nm,20.0s
PLCA Paso Flores 140.74 134 PKhKP PKPpre 14 22 35.4
comp=Z,2.6nm,0.9s,baz=284,slow=11,SNR=4.3
PEL Peldehue 143.43 123 *e*PKPdf PKPbc 14 22 42.9 +0.4
PEL Peldehue 143.43 123 *e*PKIKP PKPbc 14 22 42.9 +0.3
EDS3 Malargue 143.57 128 *e*P PKPbc 14 22 43.2 +0.2
GO04 Tololo Observa 144.10 118 *e*PKPdf **PKPab** **14 22 44.8 +0.3**
LCO Las Campanas 144.43 116 *e*PKPdf PKPbc 14 22 46.4 +0.4
LCO Las Campanas 144.43 116 *e*P PKPbc 14 22 46.7 +0.7
LCO Las Campanas 144.43 116 *e*PKIKP PKPbc 14 22 46.4 +0.4
AUSP Uspallata 144.74 122 *e*P **PKPdf** **14 22 48.3 +0.3**
ARCO CERRO ARCO 144.93 123 *e*P **PKPdf** **14 22 48.0 -0.2**
AAGR Agrelo 144.93 124 *e*P **PKPdf** **14 22 48.0 -0.1**
AVIZ Vizcacheras 145.05 124 *e*P **PKPdf** **14 22 48.6 +0.4**
ASAL Salagasta 145.08 123 *e*P **PKPdf** **14 22 48.6 +0.3**
GO03 Copiap 145.09 114 *e*PKPbc **PKPbc** **14 22 47.7 -0.2**
AROD Rodeo 145.22 119 *e*P **PKPdf** **14 22 49.3 +0.3**
ACCO Cerro Coronel 145.45 119 *e*P **PKPab** **14 22 49.9 +0.4**
ACDV Cuesta del Vie 145.51 119 *e*P **PKPdf** **14 22 49.3 0.0**
PB04 IPOC Station P 145.72 105 *e*PKPdf **PKPdf** **14 22 48.4 -1.5**
RTLL Cerro Villicun 145.74 121 *e*P **PKPdf** **14 22 49.6 +0.1**
AMOG MOGNA 145.84 120 *e*P **PKPab** **14 22 50.9 +0.3**
CFA Coronel Fontan 145.86 121 PKPbc **PKPbc** **14 22 50.2 0.0**
comp=Z,36nm,0.7s,baz=263,slow=2.9,SNR=48
PB11 IPOC Station P 146.20 100 *e*PKPdf **PKPdf** **14 22 48.6 -2.0**
MNMCX Minye Minye 146.24 99 *e*P **PKPab** **14 22 53.4 +0.7**
ACAN Cantantal 146.50 123 *e*P **PKPdf** **14 22 51.5 +0.8**
SACV Santiago Islan 146.53 341 PFAKE 14 23 00.0 +4.5
SACV LR LR
comp=Z,400nm,21.0s
VCA Vinchina 146.62 116 *e*P **PKPab** **14 22 53.7 -0.1**
LVC Limon Verde 146.85 105 PKPbc **PKPab** **14 22 55.2 +0.1**
comp=Z,28nm,0.8s,baz=274,slow=2.5,SNR=18
LPAZ La Paz 147.42 94 PKPbc **PKPdf** **14 22 54.6 +1.3**
comp=Z,70nm,1.0s,baz=340,slow=3.2,SNR=116
LPAZ La Paz 147.42 94 *e*PKPdf **PKPdf** **14 22 53.4 0.0**
LPAZ La Paz 147.42 94 *e*P **PKPbc** **14 22 56.9 +1.1**
LPAZ La Paz 147.42 94 *e*PKP2 **PKPdf** **14 22 53.4 0.0**
MRA San Martin 147.62 124 *e*P **PKPbc** **14 22 55.3 0.0**
CYA Choya 148.75 117 *e*P **PKPbc** **14 22 58.8 +0.5**
TCA Tanti 148.89 123 *e*P **PKPbc** **14 22 58.8 +0.1**
FSA Cafayete 149.09 112 *e*P **PKiKP** **14 23 00.4 -0.3**
AHML Horco Molle 149.53 114 *e*P **PKPbc** **14 23 00.1 -0.3**
PTGA Pitinga 149.81 60 PKPbc **PKPbc** **14 23 01.9 +0.5**
comp=Z,43nm,0.9s,baz=323,slow=1.8,SNR=54
PTGA Pitinga 149.81 60 *e*PKPbc **PKPbc** **14 22 59.8 -1.6**
PTGA LR LR
comp=Z,500nm,20.0s
YJA Yavi 150.01 105 *e*P **PKiKP** **14 23 03.3 +0.2**
HJA Humahuaca 150.02 107 *e*P **PKPbc** **14 23 02.6 +0.5**
AZAP Zapla 150.21 109 *e*P **PKiKP** **14 23 03.0 -0.2**
MDP Montagnes des 151.36 41 PKPbc **PKPbc** **14 23 05.2 +0.2**
comp=Z,12nm,0.9s,baz=239,slow=3.6,SNR=3.6
MDP PKPab **PKPab** **14 23 14.4 +1.4**
comp=Z,24nm,1.0s,baz=277,slow=4.0,SNR=4.8
SIV San Ignacio 154.13 92 PKPbc **PKPbc** **14 23 10.4 -0.8**
comp=Z,5.3nm,0.9s,baz=231,slow=1.5,SNR=18
CPUP Villa Florida 156.56 117 PKPab **PKPab** **14 23 35.9 +1.0**
comp=Z,7.1nm,0.8s,baz=254,slow=7.4,SNR=5.2
BDFB Brasilia 166.58 86 PKPab **PKPab** **14 24 20.4 +1.4**
comp=Z,14nm,1.0s,baz=248,slow=4.9,SNR=7.9

*NSSC **04** 14:11:25.0±0.8, 33°.82N×35°.60E, h3km±20km, ML1.5*
*ISCJB **04** 14:11:28.2±0.7, 33°.78N±0°.04×35°.74E±0°.07, h12km±7km, Error ellipse: s-maj=10.7km s-min=5.4km az=152.0*
*GRAL **04** 14:11:29.2±0.3, 33°.78N×35°.77E, h1km±16km, MD2.7*
ISC 04 14:11:27.1±1.2, 33°.83N±0°.07×35°.76E±0°.05, h14km±12km, n8, σ0°83/14, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.12**	**310**	*e*P	**Pb**	**14 11 32.1**	**+0.9**
BHL				*e*S	**Sb**	**14 11 34.3**	**+0.3**
DQRL	**Deir Qamar**	**0.20**	**232**	*e*P	**Pb**	**14 11 32.6**	**0.0**
DQRL				*e*S	**Sg**	**14 11 35.0**	**+0.1**
QRWL	**Qaraoun**	**0.29**	**193**	*e*P	**Pg**	**14 11 33.5**	**+0.3**
RCY	**Rachaya**	**0.34**	**169**	*e*P	**Pg**	**14 11 34.4**	**+0.3**
RCY				*e*S	**Sg**	**14 11 38.2**	**-0.6**
BRBR	**Barbar**	**0.45**	**159**	*e*P	**Pg**	**14 11 34.8**	**-1.3**
BRBR				*e*S	**Sg**	**14 11 42.1**	**0.0**
BRBR				AML	AML	14 11 45.7	
	comp=N,45nm,0.4s						
BRBR				AML	AML	14 11 48.1	
	comp=E,32nm,0.3s						
HWQ	**Hawqa**	**0.47**	**19**	*e*P	**Pn**	**14 11 38.5**	**-1.1**
QASN	**Qassioun**	**0.52**	**124**	*e*P	**Pg**	**14 11 37.3**	**-0.1**
QASN				*e*S	**Sb**	**14 11 46.1**	**+0.6**
QASN				AML	AML	14 11 50.9	
	comp=N,74nm,0.3s						
QASN				AML	AML	14 11 53.1	
	comp=E,44nm,0.3s						
TOTH	**TOTAH**	**0.73**	**130**	*e*P	**Pb**	**14 11 42.2**	**+0.6**
TOTH				*e*S	**Sb**	**14 11 52.8**	**+1.4**
TOTH				AML	AML	14 11 59.6	
	comp=N,7.6nm,0.5s						
TOTH				AML	AML	14 12 03.8	
	comp=E,11nm,0.4s						

*IDC **04** 14:18:22.1±1.5, 16°.73N×146°.23E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/43, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=44.4km s-min=24.6km az=93.0*
*ISCJB **04** 14:18:25.4±1.3, 16°.7N±0°.1×146°.1E±0°.3, h33km, mb3.5/5, Error ellipse: s-maj=37.4km s-min=16.5km az=5.9*
ISC 04 14:18:27.4±1.4, 16°.7N±0°.1×146°.2E±0°.3, h35km, n12, σ0°41/6, mb3.6/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.34**	**203**	Pn	**Pn**	**14 19 17.3**	**+0.2**
	5.7nm,0.3s,baz=40,slow=16,SNR=2.6						
H11S3	**WAKE ISLAND Hy 19.63**	**82**		T	T	14 43 23.6	
	baz=268,slow=75,SNR=127						
H11S1	**WAKE ISLAND Hy 19.64**	**82**		T	T	14 43 24.0	
	baz=268,slow=75,SNR=108						
H11S2	**WAKE ISLAND Hy 19.64**	**82**		T	T	14 43 25.0	
	baz=268,slow=75,SNR=109						
H11N1	**WAKE ISLAND Hy 19.90**	**78**		T	T	14 43 42.6	
	baz=265,slow=74,SNR=96						
H11N2	**WAKE ISLAND Hy 19.90**	**78**		T	T	14 43 43.1	
	baz=265,slow=74,SNR=74						
H11N3	**WAKE ISLAND Hy 19.91**	**78**		T	T	14 43 43.9	
	baz=265,slow=74,SNR=94						
ASAR	**Alice Springs**	**41.87**	**197**	P	**P**	**14 26 14.0**	**-0.4**
	0.2nm,0.7s,baz=21,slow=8.3,SNR=3.7						
CMAR	**Chiang Mai Arr**	**44.98**	**280**	P	**P**	**14 26 39.9**	**+0.2**
	0.8nm,0.4s,baz=80,slow=6.5,SNR=7.9						
MKAR	**Makanchi Array**	**60.19**	**315**	P	**P**	**14 28 31.5**	**-0.4**
	0.4nm,0.9s,baz=102,slow=6.2,SNR=3.2						
KURBB	**Kurchatov Arra**	**63.12**	**319**	P	**P**	**14 28 51.5**	**0.0**
	0.7nm,0.2s,baz=82,slow=5.0,SNR=3.7						
YKA	**Yellowknife Ar**	**79.54**	**28**	P	**P**	**14 30 30.6**	**+0.2**
	0.1nm,0.3s,baz=285,slow=5.2,SNR=3.6						

*ISCJB **04** 14:25:56.9±0.7, 50°.2S±0°.1×112°.8E±0°.4, h10km, mb4.6/5, Error ellipse: s-maj=38.5km s-min=12.3km az=23.1*
*IDC **04** 14:25:57.9±0.9, 50°.21S×112°.68E, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/37, mbtmp4.2/4, Error ellipse: s-maj=45.8km s-min=20.3km az=103.0*
*NEIC **04** 14:25:59.8±0.5, 50°.14S×112°.61E, h10km, mb4.7/1, Error ellipse: s-maj=30.6km s-min=13.1km az=107.0*
ISC 04 14:25:59.4±0.8, 50°.2S±0°.2×112°.7E±0°.3, h10km, n44, σ0°81/42, mb4.4/5, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.34**	**5**	T	T	14 45 22.6	
	baz=183,slow=74,SNR=84						
H01W1	**Cape Leeuwin H**	**15.35**	**5**	T	T	14 45 23.7	
	baz=183,slow=74,SNR=101						
H01W3	**Cape Leeuwin H**	**15.36**	**5**	T	T	14 45 24.4	
	baz=183,slow=74,SNR=95						
ASAR	**Alice Springs**	**31.25**	**40**	P	**P**	**14 32 19.9**	**+0.6**
	1.8nm,1.1s,baz=203,slow=11,SNR=8.0						
VNDA	**Vanda**	**32.94**	**162**	P	**P**	**14 32 33.3**	**-0.1**
	4.4nm,0.8s,baz=291,slow=8.7,SNR=28						
WR1	**Warramunga Arr**	**34.77**	**38**	*e*P	**P**	**14 32 48.0**	**-1.9**
WRA	**Warramunga Arr**	**34.77**	**38**	P	**P**	**14 32 48.0**	**-1.9**
	137nm,0.3s,baz=214,slow=8.9,SNR=1.5						
SNAA	**Sanae**	**50.25**	**202**	P	**P**	**14 34 54.6**	**-0.6**
SNAA	**Sanae**	**50.25**	**202**	P	**P**	**14 34 54.7**	**-0.5**
	5.9nm,0.9s,baz=136,slow=9.8,SNR=19						
SNAA	**Sanae**	**50.25**	**202**	*e*P	**P**	**14 34 54.3**	**-0.9**
	9.1nm,1.0s						
VNA2	**Neumayer--Watz**	**51.83**	**201**	P	**P**	**14 35 06.3**	**-0.7**
VNA3	**Neumayer Olymp**	**52.12**	**200**	P	**P**	**14 35 08.6**	**-0.6**
VNA1	**Neumayer--Stat**	**52.23**	**201**	P	**P**	**14 35 09.9**	**0.0**
CMAR	**Chiang Mai Arr**	**69.43**	**346**	P	**P**	**14 37 08.0**	**+0.4**
	1.8nm,1.0s,baz=190,slow=5.0,SNR=7.8						
WVOR	**Wild Horse Val**	**144.35**	**82**	*e*PKPdf	**PKPdf**	**14 45 34.7**	**-0.5**
LCMT	**Little Creek M**	**144.81**	**94**	*e*PKPbc	**PKPdf**	**14 45 36.5**	**+0.3**
J08A	**Circle Bar Ran**	**144.92**	**81**	*e*PKPbc	**PKPdf**	**14 45 36.5**	**+0.4**
CCUT	**Cedar City**	**145.05**	**93**	*e*PKPbc	**PKPdf**	**14 45 37.8**	**+1.1**
U15A	**North Rim**	**145.06**	**96**	*e*PKPbc	**PKPdf**	**14 45 37.6**	**+0.8**
KNB	**Kanab**	**145.08**	**95**	*e*PKPbc	**PKPdf**	**14 45 37.7**	**+1.0**
WUAZ	**Wupatki**	**145.09**	**98**	*e*PKPbc	**PKPdf**	**14 45 37.1**	**+0.4**
SZCU	**Shurtz Canyon**	**145.25**	**93**	*e*PKPdf	**PKPdf**	**14 45 38.7**	**+1.7**
PSUT	**Pine Spring**	**145.31**	**92**	*e*PKPdf	**PKPdf**	**14 45 37.8**	**+0.7**
X18A	**Snowflake**	**145.37**	**100**	*e*PKPdf	**PKPbc**	**14 45 37.2**	**0.0**
G08A	**Pilot Rock**	**145.53**	**78**	*e*PKPdf	**PKPab**	**14 45 37.8**	**+0.2**
LTX	**Lajitas**	**145.64**	**114**	*e*PKPdf	**PKPab**	**14 45 38.5**	**+0.1**
TX31	**Lajitas Ar. Si**	**145.64**	**114**	*e*PKPdf	**PKPab**	**14 45 38.3**	**-0.1**
TXAR	**Lajitas Array**	**145.64**	**114**	PKPbc	**PKPab**	**14 45 38.5**	**+0.1**
	0.7nm,0.8s,baz=197,slow=3.8,SNR=7.2						
ELK	**Elko**	**145.64**	**87**	*e*PKPdf	**PKPab**	**14 45 39.2**	**+0.9**
HAWA	**Hanford**	**145.66**	**76**	*e*PKPdf	**PKPdf**	**14 45 36.6**	**-0.5**
BMO	**Blue Mountains**	**146.37**	**79**	*e*PKPdf	**PKPdf**	**14 45 37.0**	**-1.5**
PV23	**Carpenter Ridg**	**148.36**	**96**	*e*PKPbc	**PKPbc**	**14 45 46.6**	**+0.8**
PV12	**Saucer Basin,**	**148.42**	**96**	*e*PKPdf	**PKPdf**	**14 45 43.4**	**+1.0**
FXWY	**Fox Creek**	**149.80**	**86**	*e*PKPbc	**PKiKP**	**14 45 50.6**	**+0.4**
LRM	**Limekiln Ridge**	**149.87**	**81**	*e*PKPbc	**PKiKP**	**14 45 50.2**	**0.0**
IMW	**Indian Meadow**	**149.98**	**85**	*e*PKPbc	**PKiKP**	**14 45 51.2**	**+0.6**
MOOW	**Moose Ponds**	**150.03**	**85**	*e*PKPdf	**PKPdf**	**14 45 46.4**	**+1.7**
MOOW				*e*PKPbc	**PKiKP**	**14 45 51.2**	**+0.6**
SDCO	**Great Sand Dun**	**150.18**	**100**	*e*PKPbc	**PKiKP**	**14 45 51.0**	**-0.2**
BOZ	**Bozeman (W)**	**150.29**	**82**	*e*PKPbc	**PKiKP**	**14 45 51.4**	**+0.4**
BW06	**Boulder Array**	**150.32**	**88**	*e*PKPbc	**PKPbc**	**14 45 50.2**	**-0.3**
PD31	**Pinedale Array**	**150.33**	**88**	*e*PKPbc	**PKiKP**	**14 45 51.1**	**-0.1**
PDAR	**Pinedale Array**	**150.33**	**88**	PKPbc	**PKPbc**	**14 45 50.8**	**+0.3**
	1.4nm,0.9s,baz=208,slow=2.5,SNR=8.7						
YKA	**Yellowknife Ar**	**151.78**	**46**	PKPbc	**PKPbc**	**14 45 52.9**	**+0.1**
	0.9nm,0.6s,baz=287,slow=1.7,SNR=8.8						
YKB5	**Yellowknife Ar**	**151.78**	**46**	*e*PKPbc	**PKPbc**	**14 45 52.9**	**+0.1**

*ISCJB **04** 14:27:32.3±0.6, 16°.91N±0°.06×146°.1E±0°.1, h10km, mb4.0/9, Error ellipse: s-maj=16.8km s-min=7.0km az=21.8*
*IDC **04** 14:27:32.5±0.8, 16°.88N×146°.06E, h0km, mb3.8/8, mb1 4.1/9, mb1mx3.7/57, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=27.8km s-min=16.4km az=107.0*
*NEIC **04** 14:27:35.0±1.6, 16°.87N×146°.01E, h16km±10km, mb4.4/1, Error ellipse: s-maj=19.8km s-min=11.0km az=100.0*
ISC 04 14:27:34.1±0.7, 16°.84N±0°.08×146°.1E±0°.1, h10km, n25, σ1°30/20, mb3.9/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**0.36**	**248**	*e*Pg	**Pg**	**14 27 40.7**	**-0.6**
ANA2	**Anatahan**	**0.64**	**219**	*e*Pg	**Pb**	**14 27 47.2**	**-0.3**
GUMO	**Guam**	**3.45**	**201**	Pn	**Pn**	**14 28 28.5**	**+0.5**
	8.3nm,0.3s,baz=176,slow=19,SNR=4.6						
GUMO				Sn	**Sn**	**14 29 09.9**	**+0.9**
	10nm,0.3s,baz=18,slow=20,SNR=2.8						
JOW	**Kunigami**	**19.31**	**304**	P	**Pn**	**14 32 03.7**	**+3.2**
	0.1nm,0.3s,baz=149,slow=12,SNR=3.5						
H11S3	**WAKE ISLAND Hy 19.66**	**82**		T	T	14 52 34.1	
	baz=268,slow=75,SNR=111						
H11S1	**WAKE ISLAND Hy 19.67**	**82**		T	T	14 52 34.2	
	baz=268,slow=75,SNR=96						
H11S2	**WAKE ISLAND Hy 19.68**	**82**		T	T	14 52 34.5	
	baz=268,slow=75,SNR=127						
H11N1	**WAKE ISLAND Hy 19.92**	**79**		T	T	14 52 50.1	
	baz=265,slow=75,SNR=25						
H11N2	**WAKE ISLAND Hy 19.93**	**79**		T	T	14 52 50.7	
	baz=265,slow=75,SNR=38						
H11N3	**WAKE ISLAND Hy 19.94**	**79**		T	T	14 52 54.2	
	baz=265,slow=75,SNR=180						
KSRS	**Korea Array**	**26.06**	**326**	P	**P**	**14 33 06.2**	**-1.6**
	0.5nm,0.5s,baz=148,slow=9.6,SNR=4.7						
KSAR	**Wonju Array Be**	**26.08**	**325**	P	**P**	**14 33 06.2**	**-1.7**
WR1	**Warramunga Arr**	**38.34**	**198**	*e*P	**P**	**14 34 54.2**	**-1.3**
WRA	**Warramunga Arr**	**38.34**	**198**	P	**P**	**14 34 54.2**	**-1.3**
	136nm,0.3s,baz=11,slow=9.3,SNR=1.5						
ASAR	**Alice Springs**	**41.99**	**197**	P	**P**	**14 35 25.4**	**-0.4**
	0.5nm,0.6s,baz=18,slow=13,SNR=9.1						
CMAR	**Chiang Mai Arr**	**44.90**	**279**	P	**P**	**14 35 49.6**	**+0.3**
	1.2nm,0.8s,baz=73,slow=6.8,SNR=8.6						
KURBB	**Kurchatov Arra**	**62.97**	**319**	P	**P**	**14 38 00.6**	**-0.4**
	0.4nm,0.3s,baz=97,slow=7.5,SNR=5.0						
ILAR	**Eielson Array**	**65.13**	**26**	P	**P**	**14 38 13.5**	**-1.5**
	0.4nm,0.5s,baz=248,slow=5.9,SNR=8.1						
INK	**Inuvik**	**70.92**	**23**	P	**P**	**14 38 51.5**	**+0.3**
	2.3nm,0.8s,baz=331,slow=6.9,SNR=3.4						
INK	**Inuvik**	**70.92**	**23**	*e*P	**P**	**14 38 50.4**	**-0.9**
	3.9nm,1.1s						
YKA	**Yellowknife Ar**	**79.43**	**28**	P	**P**	**14 39 40.2**	**-0.2**
	0.7nm,0.7s,baz=288,slow=5.5,SNR=6.3						
YKB5	**Yellowknife Ar**	**79.43**	**28**	*e*P	**P**	**14 39 40.2**	**-0.3**
NV01	**Mina Array Sit**	**83.96**	**52**	*e*P	**P**	**14 40 06.6**	**+1.5**
NVAR	**Mina Array Bea**	**83.96**	**52**	P	**P**	**14 40 06.6**	**+1.5**
	0.7nm,0.6s,baz=255,slow=7.1,SNR=6.7						
LPAZ	**La Paz**	**147.18**	**94**	PKPbc	**PKPbc**	**14 47 19.9**	**+0.6**
	1.1nm,0.6s,baz=284,slow=2.1,SNR=4.7						

JMA 04 14:29:00.4±0.3, 24°.79N×123°.27E, h34km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.45**	**221**	P	Pb	14 29 09.9	-0.4
JYNG				*e*S	Sb	14 29 16.8	-0.2
IRIF	**Iriomote-Funau**	**0.62**	**137**	P	Pn	14 29 12.4	-0.3
IRIF				*e*S	Sn	14 29 20.2	-1.2
JKRS	**Kuro-shima**	**0.87**	**129**	P	Pn	14 29 16.5	+0.3
JKRS				*e*S	Sn	14 29 26.1	-1.6

TAP 04 14:29:37.1, 23°.99N×121°.26E, h5km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OWD	**Renai**	**0.09**	**246**	*i* P	Pg	14 29 39.4	+0.2
	baz=247						
OWD				S	Sg	14 29 40.5	0.0
	baz=247						
CHGB	**Renai**	**0.11**	**310**	P	Pg	14 29 40.2	+0.6
	baz=311						
CHGB				*e*S	Sg	14 29 41.9	+0.8
	baz=311						
WHF	**Hehuan Shan**	**0.15**	**0**	*i* P	Pg	14 29 40.9	+0.5
	baz=3.0						
WHF				*i* S	Sg	14 29 43.2	+0.6
	baz=3.0						
ESL	**Shilin**	**0.23**	**139**	P	Pg	14 29 42.8	+1.1
	baz=136						
ESL				S	Sg	14 29 45.8	+1.0
	baz=136						
VWDT	**VWDT**	**0.26**	**206**	*i* P	Pg	14 29 42.5	+0.3
	baz=212						
VWDT				S	Sg	14 29 45.9	+0.2
	baz=212						
TDCB	**Techi**	**0.28**	**340**	*e*P	Pg	14 29 43.5	+0.8
	baz=341						
TDCB				*e*S	Sg	14 29 47.0	+0.6
	baz=341						
ETLH	**Xiulin Townshi**	**0.29**	**43**	*i* P	Pg	14 29 43.6	+0.7
	baz=33						
ETLH				S	Sg	14 29 47.5	+0.7
	baz=33						
DPDB	**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
	baz=72						
TWD				S	Sg	14 29 48.8	+1.4
	baz=72						
SSLB	**Suanglung**	**0.35**	**235**	P	Pg	14 29 44.3	+0.4
	baz=248						
SSLB				S	Sg	14 29 48.3	-0.2
	baz=248						
SMLT	**Sun Moon Lake**	**0.35**	**252**	*e*P	Pg	14 29 44.6	+0.6
	baz=253						
SMLT				S	Sg	14 29 49.3	+0.7
	baz=253						
EGFH	**Guangfu**	**0.35**	**155**	*e*P	Pg	14 29 44.9	+0.9
	baz=142						
EGFH				*e*S	Sg	14 29 49.0	+0.4
	baz=142						
NACB	**Ninganchiao**	**0.35**	**59**	*e*P	Pg	14 29 44.7	+0.7
	baz=58						
NACB				S	Sg	14 29 50.1	+1.5
	baz=58						
TYC	**Yuchr**	**0.38**	**257**	*e*P	Pg	14 29 44.9	+0.4
	baz=258						
TYC				S	Sg	14 29 49.9	+0.4
	baz=258						
WHP	**Taichung City**	**0.41**	**315**	*e*P	Pg	14 29 45.5	+0.4
	baz=315						
WHP				*e*S	Sb	14 29 52.3	-1.2
	baz=315						
NNSB	**Datong**	**0.45**	**14**	P	Pg	14 29 46.3	+0.5
	baz=14						
NNSB				S	Sg	14 29 53.1	+1.3
	baz=14						
NNS	**Nan Shan**	**0.46**	**13**	P	Pg	14 29 46.7	+0.7
	baz=13						
NNS				S	Sb	14 29 53.8	-1.1
	baz=13						
EHY	**Hungye**	**0.48**	**174**	P	Pg	14 29 47.1	+0.6
	baz=173						
EHY				S	Sg	14 29 53.8	+1.0
	baz=173						
HGSD	**Ruisui**	**0.52**	**163**	*e*P	Pg	14 29 47.5	+0.5
	baz=172						
HGSD				*e*S	Sb	14 29 55.6	-0.8
	baz=172						
YULB	**Yu-li**	**0.60**	**177**	P	Pg	14 29 48.8	+0.2
	baz=177						
YULB				S	Sg	14 29 56.6	+0.2
	baz=177						
ENA	**Nanau**	**0.62**	**45**	*e*P	Pb	14 29 50.0	-0.4
	baz=45						
ENA				*e*S	Sb	14 29 59.5	+0.2
	baz=45						
TWF1	**Yuli**	**0.64**	**177**	*e*P	Pg	14 29 49.8	+0.5
	baz=177						
TWF1				*e*S	Sb	14 29 59.3	-0.6
	baz=177						
CHN5	**Tsauling**	**0.66**	**234**	*e*P	Pb	14 29 50.9	-0.3
	baz=235						
CHN5				S	Sb	14 30 02.1	+1.4
	baz=235						
YHNB	**Yeheng**	**0.68**	**9**	*e*P	Pg	14 29 50.7	+0.4
	baz=359						

IDC ***04*** *14:35:22.9±0.8, 39°.75N×74°.70E, h0km, mb3.8/11, mb1 3.9/18, mb1mx3.7/62, mbtmp3.8/18, ML3.2/7, MS3.4/1, Ms1 3.4/1, ms1mx2.9/39, Error ellipse: s-maj=14.9km s-min=13.0km az=123.0*
KRNET ***04*** *14:35:25.7±0.1, 39°.98N×74°.75E, mb4.6*
BJI ***04*** *14:35:27.0±0.0, 39°.89N×74°.76E, h26km, mb4.1/14, mB4.2/1, ML4.3/7, Ms3.9/4, Ms7 3.9/5*
SOME ***04*** *14:35:27.0, 40°.07N×74°.78E, h15km, MS3.6*
MOS ***04*** *14:35:27.9±1.9, 39°.92N×74°.66E, h33km, mb4.7/12, Error ellipse: s-maj=8.5km s-min=5.0km az=91.1*
NNC ***04*** *14:35:29.7±1.0, 40°.19N×74°.71E, h0km, mb5.0, mpv4.7, Error ellipse: s-maj=8.7km s-min=5.3km az=162.0*
NEIC ***04*** *14:35:30.9±0.8, 40°.01N×74°.68E, h55km±8km, mb4.2/7, Error ellipse: s-maj=8.2km s-min=7.4km az=158.0*
ISC 04 14:35:25.4±1.2**, 39°.98N**±0°.03×**74°.99E**±0°.03**, h11**km±8km**, n195,**σ1°**92**/223**, mb4.2**/28**, 31C-35D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KSH	**Kashi**	**0.89**	**121**	Pg	**Pn**	**14 35 43.8**	**-0.1**
KSH				Sg	**Sb**	**14 35 53.0**	**-1.8**
KSH				smax	smax		
	comp=N,11μm,0.3s						
KSH				smax	smax		
	comp=E,7μm,0.3s						
ARLS	**Aral**	**1.95**	**345**	⇓*e*P	**Pb**	**14 36 00.7**	**-0.3**
	baz=51						
ARLS				⇓*i*S	**Sg**	**14 36 27.4**	**-0.6**
	baz=51						
ARSB	**Arslanbob**	**2.04**	**312**	⇑*i*P	**Pb**	**14 36 01.2**	**-1.3**
	baz=16						
ARSB				⇑*i*S	**Sb**	**14 36 27.6**	**-0.3**
	baz=16						
KZA	**Kyzart**	**2.10**	**5**	P	**Pg**	**14 36 05.5**	**-0.3**
	SNR=408						
KZA	**Kyzart**	**2.10**	**5**	⇓*i*P	**Pg**	**14 36 05.4**	**-0.4**
	baz=10.0						
KZA				⇓*i*S	**Sg**	**14 36 34.0**	**+0.9**
	baz=10.0						
UCH	**Uchtor**	**2.27**	**351**	P	**Pb**	**14 36 07.3**	**+0.5**
	SNR=2383						
UCH	**Uchtor**	**2.27**	**351**	⇓*i*P	**Pb**	**14 36 07.3**	**+0.5**
	baz=56						
UCH				⇓*i*S	**Sg**	**14 36 37.1**	**-1.5**
	baz=56						
AML	**Almayashu**	**2.36**	**336**	P	**Pb**	**14 36 07.3**	**-0.9**
	SNR=274						
AML	**Almayashu**	**2.36**	**336**	⇓*i*P	**Pb**	**14 36 07.0**	**-1.2**
	baz=40						
AML				⇓*i*S	**Sb**	**14 36 38.3**	**+0.8**
	baz=40						
ULHL	**Ulahol**	**2.45**	**22**	P	**Pg**	**14 36 13.1**	**+0.6**
	SNR=49						
ULHL	**Ulahol**	**2.45**	**22**	⇓*i*P	**Pb**	**14 36 10.8**	**+1.2**
	baz=26						
ULHL				⇓*i*S	**Sg**	**14 36 42.9**	**-1.3**
	baz=26						
DRK	**Karamyk**	**2.51**	**260**	⇓*i*P	**Pn**	**14 36 07.5**	**+1.1**
	baz=59						
DRK				⇓*i*S	**Sb**	**14 36 38.9**	**-2.8**
	baz=59						
BOOM	**Boomskoye usch**	**2.61**	**16**	*e*Pn	**Pb**	**14 36 12.8**	**+0.5**
BOOM	**Boomskoye usch**	**2.61**	**16**	*e*PN	**Pb**	**14 36 12.8**	**+0.5**
BOOM	**Boomskoye usch**	**2.61**	**16**	⇑*i*P	**Pb**	**14 36 11.9**	**-0.4**
	baz=19						
BOOM				⇑*i*S	**Sb**	**14 36 46.0**	**+1.6**
	baz=19						
KBK	**Karagaybulak**	**2.67**	**359**	P	**Pb**	**14 36 13.6**	**+0.1**
	SNR=235						
KBK	**Karagaybulak**	**2.67**	**359**	⇑*i*P	**Pb**	**14 36 13.0**	**-0.4**
	baz=3.0						
KBK				⇑*i*S	**Sb**	**14 36 47.0**	**+0.7**
	baz=3.0						
AAK	**Ala-Archa**	**2.68**	**352**	Pn	**Pb**	**14 36 13.1**	**-0.4**
	110nm,0.3s,baz=166,slow=8.7,SNR=370						
AAK				Lg	Lg	14 36 50.1	
	113nm,0.3s,baz=296,slow=21,SNR=14						
AAK	**Ala-Archa**	**2.68**	**352**	P	**Pb**	**14 36 13.4**	**-0.1**
	SNR=82						
AAK	**Ala-Archa**	**2.68**	**352**	⇑Pn	**Pb**	**14 36 13.3**	**-0.2**
	734nm,0.7s						
AAK				⇑Lg	Lg	14 36 49.7	
	1μm,0.9s						
AAK	**Ala-Archa**	**2.68**	**352**	*d*/*i*PN	**Pb**	**14 36 13.3**	**-0.2**
AAK				pmax	pmax		
	comp=Z,1μm,1.0s						
AAK	**Ala-Archa**	**2.68**	**352**	⇓*i*P	**Pb**	**14 36 12.8**	**-0.7**
	baz=56						
AAK				⇓*i*S	**Sb**	**14 36 46.9**	**+0.4**
	baz=56						
EKS2	**Erkin-Say**	**2.83**	**342**	P	**Pb**	**14 36 14.5**	**-1.6**
	SNR=132						
EKS2	**Erkin-Say**	**2.83**	**342**	⇓*i*P	**Pb**	**14 36 14.5**	**-1.6**
	baz=45						
EKS2				⇓*i*S	**Sb**	**14 36 49.7**	**-1.0**
	baz=45						
FRU1	**Bishkek**	**2.84**	**355**	*e*Pn	**Pb**	**14 36 15.8**	**-0.4**
FRU1	**Bishkek**	**2.84**	**355**	*e*PN	**Pb**	**14 36 15.8**	**-0.4**
FRU1	**Bishkek**	**2.84**	**355**	⇓*i*P	**Pb**	**14 36 15.1**	**-1.1**
	baz=58						
FRU1				⇓*i*S	**Sb**	**14 36 50.5**	**-0.5**
	baz=58						
ARK	**Arkit**	**2.93**	**309**	⇑*i*P	**Pn**	**14 36 13.5**	**+1.5**
	baz=12						
ARK				⇑*i*S	**Sb**	**14 36 49.3**	**-4.2**
	baz=12						
TKM2	**Tokmak 2**	**2.97**	**9**	P	**Pb**	**14 36 18.3**	**-0.2**
	SNR=110						
TKM2	**Tokmak 2**	**2.97**	**9**	⇓Pn	**Pb**	**14 36 18.0**	**-0.6**
	comp=Z,143nm,0.3s						
TKM2				⇑Lg	Lg	14 36 59.9	
	comp=Z,1μm,0.8s						
TKM2	**Tokmak 2**	**2.97**	**9**	*e*PN	**Pb**	**14 36 17.9**	**-0.6**
TKM2	**Tokmak 2**	**2.97**	**9**	⇓*e*P	**Pb**	**14 36 17.5**	**-1.0**
	baz=12						
TKM2				⇓*i*S	**Sb**	**14 36 54.4**	**-0.5**
	baz=12						
CHMS	**Chumysh**	**3.02**	**357**	P	**Pb**	**14 36 18.1**	**-1.1**
	SNR=40						
CHMS	**Chumysh**	**3.02**	**357**	⇑*i*P	**Pb**	**14 36 17.6**	**-1.6**
	baz=0.0						
CHMS				⇑*i*S	**Sb**	**14 36 55.0**	**-1.1**
	baz=0.0						
MRKS	**Merke**	**3.07**	**335**	Pg	**Pb**	**14 36 19.9**	**-0.1**
	comp=Z,423nm,0.4s						
MRKS				Lg	Lg	14 36 57.3	
	comp=Z,261nm,0.5s						
MRKS	**Merke**	**3.07**	**335**	*e*P	**Pb**	**14 36 20.6**	**+0.6**
	comp=Z,423nm,0.4s						
MRKS				*e*S	**Sb**	**14 36 59.7**	**+2.3**
	comp=Z,284nm,0.5s						
KST	**Kastek**	**3.15**	**13**	Pg	**Pb**	**14 36 23.2**	**+1.8**
	comp=Z,366nm,0.5s						
KST				Lg	Lg	14 37 03.0	
	comp=Z,911nm,0.6s						
KST	**Kastek**	**3.15**	**13**	*e*P	**Pb**	**14 36 23.2**	**+1.8**
	comp=Z,366nm,0.5s						
KST				*e*S	**Sg**	**14 37 03.0**	**-3.4**
	comp=Z,911nm,0.6s						
BTK	**Batken**	**3.21**	**273**	*e*Pn	**Pn**	**14 36 15.8**	**0.0**
BTK	**Batken**	**3.21**	**273**	*e*PN	**Pn**	**14 36 15.8**	**0.0**
BTK	**Batken**	**3.21**	**273**	⇑*i*P	**Pn**	**14 36 17.4**	**+1.6**
	baz=73						
BTK				⇑*i*S	**Sn**	**14 36 54.2**	**+0.2**
	baz=73						
IZV	**Izvestkoviy**	**3.29**	**21**	Pg	**Pg**	**14 36 28.2**	**-0.2**
	comp=Z,161nm,0.4s						
IZV				Lg	Lg	14 37 12.5	
	comp=Z,575nm,0.6s						
IZV	**Izvestkoviy**	**3.29**	**21**	*e*P	**Pg**	**14 36 28.2**	**-0.2**
	comp=Z,161nm,0.4s						
IZV				*e*S	**Sg**	**14 37 12.5**	**+1.5**
	comp=Z,575nm,0.6s						
USP	**Ospenovka**	**3.31**	**354**	P	**Pb**	**14 36 21.7**	**-2.3**
	SNR=30						
USP	**Ospenovka**	**3.31**	**354**	⇓*e*P	**Pb**	**14 36 21.3**	**-2.8**
	baz=57						
USP				⇓*i*S	**Sb**	**14 37 01.5**	**-2.8**
	baz=57						
DGS	**Degeres**	**3.31**	**10**	Pg	**Pg**	**14 36 27.4**	**-1.5**
	comp=Z,743nm,0.5s						
DGS				Lg	Lg	14 37 10.0	
	comp=Z,1μm,0.7s						
DGS	**Degeres**	**3.31**	**10**	*e*P	**Pg**	**14 36 27.4**	**-1.5**
	comp=Z,743nm,0.5s						
DGS				*e*S	**Sg**	**14 37 10.0**	**-1.8**
	comp=Z,1μm,0.7s						
MTBS	**Maitube**	**3.33**	**18**	Pg	**Pg**	**14 36 29.1**	**-0.1**
	comp=Z,201nm,0.4s						
MTBS				Lg	Lg	14 37 13.1	
	comp=Z,229nm,0.3s						
MTBS	**Maitube**	**3.33**	**18**	*e*P	**Pg**	**14 36 29.1**	**-0.1**
	comp=Z,201nm,0.4s						
MTBS				*e*S	**Sg**	**14 37 13.1**	**+0.8**
	comp=Z,229nm,0.3s						
TNSS	**Tian-Shan**	**3.39**	**25**	Pg	**Pg**	**14 36 30.4**	**0.0**
	comp=Z,303nm,0.5s						
TNSS				Lg	Lg	14 37 15.4	
	comp=Z,681nm,0.7s						
TNSS	**Tian-Shan**	**3.39**	**25**	*e*P	**Pg**	**14 36 30.4**	**0.0**
	comp=Z,303nm,0.5s						
TNSS				*e*S	**Sg**	**14 37 15.4**	**+1.1**
	comp=Z,681nm,0.7s						
AAA	**Alma-Ata**	**3.53**	**23**	*e*PN	**Pg**	**14 36 32.8**	**-0.3**
AAA				*e*S	**Sg**	**14 37 21.3**	**+2.4**
AAA				pmax	pmax		
	comp=Z,105nm,0.4s						
AAA				smax	smax		
	comp=N,388nm,0.9s						
AAA	**Alma-Ata**	**3.53**	**23**	*e*P	**Pg**	**14 36 33.3**	**+0.2**
	comp=N,158nm,0.3s						
AAA				*e*S	**Sg**	**14 37 21.4**	**+2.5**
	comp=N,445nm,0.7s						
KNDC	**Almaty**	**3.56**	**24**	⇑Pg	**Pg**	**14 36 33.1**	**-0.4**
	comp=N,215nm,0.6s						
KNDC				⇓Lg	Lg	14 37 21.5	
	comp=N,2μm,1.1s						
KOTS	**Kotyrbulak**	**3.62**	**25**	Pg	**Pg**	**14 36 34.2**	**-0.5**
	comp=N,147nm,0.4s						
KOTS				Lg	Lg	14 37 22.0	
	comp=N,508nm,0.6s						
KOTS	**Kotyrbulak**	**3.62**	**25**	*e*P	**Pg**	**14 36 34.2**	**-0.5**
	comp=N,147nm,0.4s						
KOTS				*e*S	**Sg**	**14 37 22.0**	**+0.3**
	comp=N,508nm,0.6s						
KTBS	**Karatobe**	**3.94**	**18**	Pg	**Pg**	**14 36 39.5**	**-1.3**
	comp=N,149nm,0.3s						
KTBS				Lg	Lg	14 37 31.0	
	comp=N,567nm,0.6s						
KTBS	**Karatobe**	**3.94**	**18**	*e*P	**Pg**	**14 36 39.5**	**-1.3**
	comp=N,149nm,0.3s						
KTBS				*e*S	**Sg**	**14 37 31.0**	**-0.8**
	comp=N,567nm,0.6s						
DZA	**Taraz**	**4.00**	**318**	Pg	**Pb**	**14 36 37.7**	**+1.7**
	comp=N,171nm,0.5s						
DZA				Lg	Lg	14 37 27.7	
	comp=N,689nm,0.5s						
DZA	**Taraz**	**4.00**	**318**	*e*P	**Pb**	**14 36 37.7**	**+1.7**
	comp=N,171nm,0.5s						
DZA				*e*S	**Sb**	**14 37 27.7**	**+3.3**
	comp=N,689nm,0.5s						
SATY	**Saty**	**4.00**	**39**	Pg	**Pg**	**14 36 41.6**	**-0.6**
	comp=N,219nm,0.5s						
SATY				Lg	Lg	14 37 34.6	
	comp=N,618nm,1.1s						
SATY	**Saty**	**4.00**	**39**	*e*P	**Pg**	**14 36 41.6**	**-0.6**
	comp=N,219nm,0.5s						
SATY				*e*S	**Sg**	**14 37 34.6**	**+0.7**
	comp=N,618nm,1.1s						
KUU	**Kurty**	**4.04**	**14**	Pg	**Pg**	**14 36 41.2**	**-1.5**
	comp=N,61nm,0.3s						
KUU				Lg	Lg	14 37 33.9	
	comp=N,465nm,0.7s						
KUU	**Kurty**	**4.04**	**14**	*e*P	**Pg**	**14 36 41.2**	**-1.5**
	comp=N,61nm,0.3s						
KUU				*e*S	**Sg**	**14 37 33.9**	**-1.1**
	comp=N,465nm,0.7s						
CHKK	**Chushkaly**	**4.15**	**20**	Pg	**Pg**	**14 36 43.2**	**-1.7**
	comp=N,53nm,0.3s						
CHKK				Lg	Lg	14 37 37.0	
	comp=N,258nm,0.7s						
CHKK	**Chushkaly**	**4.15**	**20**	*e*P	**Pg**	**14 36 43.2**	**-1.7**
	comp=N,53nm,0.3s						
CHKK				*e*S	**Sg**	**14 37 37.0**	**-1.5**
	comp=N,258nm,0.7s						
KURS	**Kuram**	**4.24**	**33**	Pg	**Pg**	**14 36 46.4**	**-0.1**
	comp=N,104nm,0.6s						
KURS				Lg	Lg	14 37 42.8	
	comp=N,129nm,0.8s						
KURS	**Kuram**	**4.24**	**33**	*e*P	**Pg**	**14 36 46.4**	**-0.1**
	comp=N,104nm,0.6s						
KURS				*e*S	**Sg**	**14 37 42.8**	**+1.4**
	comp=N,129nm,0.8s						
IUG	**Iuzhnay**	**4.33**	**302**	*e*P	**Pb**	**14 36 42.5**	**+1.0**
	comp=N,111nm,0.5s						
IUG				*e*S	**Sb**	**14 37 36.2**	**+2.3**
	comp=N,2μm,0.6s						
UZB	**Uzynbulak**	**4.38**	**42**	Pg	**Pg**	**14 36 47.5**	**-1.7**
	comp=N,35nm,0.4s						
UZB				Lg	Lg	14 37 44.8	
	comp=N,196nm,1.0s						
UZB	**Uzynbulak**	**4.38**	**42**	*e*P	**Pg**	**14 36 47.5**	**-1.7**
	comp=N,35nm,0.4s						
UZB				*e*S	**Sg**	**14 37 44.8**	**-1.1**
	comp=N,196nm,1.0s						
KPKS	**Kokpek**	**4.45**	**37**	*e*P	**Pg**	**14 36 49.1**	**-1.4**
	comp=N,130nm,0.3s						
KPKS				*e*S	**Sg**	**14 37 48.7**	**+0.6**
	comp=N,589nm,0.6s						
TAS	**Tashkent**	**4.54**	**289**	⇑*i*P	**Pn**	**14 36 35.8**	**+1.7**
	baz=90						
TAS				⇑*i*S	**Sn**	**14 37 26.7**	**-0.2**
	baz=90						
KK31	**Karatay Array**	**4.59**	**314**	*e*Pn	**Pn**	**14 36 35.0**	**+0.3**
KK31	**Karatay Array**	**4.59**	**314**	⇑Pn	**Pn**	**14 36 34.9**	**+0.3**
	comp=N,7.5nm,0.4s,baz=126,slow=13,SNR=279						
KK31				⇑Pg	**Pb**	**14 36 46.5**	**+0.6**
	comp=N,51nm,0.6s,baz=124,slow=14,SNR=66						
KK31				⇑Lg	Lg	14 37 47.4	
	comp=N,123nm,0.5s,baz=129,slow=26,SNR=6.5						
KK31	**Karatay Array**	**4.59**	**314**	*e*PN	**Pn**	**14 36 35.0**	**+0.3**
KKAR	**Karatay Array**	**4.59**	**314**	*e*Pn	**Pn**	**14 36 34.9**	**+0.2**
KKAR	**Karatay Array**	**4.59**	**314**	*e*PN	**Pn**	**14 36 34.9**	**+0.2**
CHM	**Chimkent**	**4.69**	**302**	*e*P	**Pb**	**14 36 50.1**	**+2.4**
	comp=N,147nm,0.1s						
CHM				*e*S	**Sb**	**14 37 49.0**	**+4.8**
	comp=N,2μm,0.6s						
ARXS	**Arharly**	**4.73**	**26**	Pg	**Pg**	**14 36 53.8**	**-2.1**
	comp=N,160nm,0.7s						
ARXS				Lg	Lg	14 37 55.8	
	comp=N,223nm,0.7s						
ARXS	**Arharly**	**4.73**	**26**	*e*P	**Pg**	**14 36 53.8**	**-2.1**
	comp=N,160nm,0.7s						
ARXS				*e*S	**Sg**	**14 37 55.8**	**-1.3**
	comp=N,223nm,0.7s						
PDGK	**Podgornoye**	**4.75**	**44**	Pg	**Pg**	**14 36 54.8**	**-1.5**
	comp=N,59nm,0.7s						
PDGK				Lg	Lg	14 37 58.2	
	comp=N,112nm,1.0s						
PDGK	**Podgornoye**	**4.75**	**44**	⇑Pn	Pn	14 36 42.1	+5.1
	comp=N,18nm,0.6s						
PDGK				⇓Pg	**Pg**	**14 36 56.3**	**-0.1**
	comp=N,119nm,0.7s						
PDGK				⇑Lg	Lg	14 38 01.4	
	comp=N,346nm,1.0s						
PDGK	**Podgornoye**	**4.75**	**44**	*e*PN	Pb	14 36 43.0	-5.7
PDGK	**Podgornoye**	**4.75**	**44**	⇓*e*P	Pb	14 36 42.8	-5.9
	baz=45						
PDGK				⇓*i*S	**Sb**	**14 37 39.6**	**-6.3**
	baz=45						
MNBS	**Baschi**	**4.82**	**31**	Pg	**Pg**	**14 36 56.8**	**-0.9**
	comp=N,62nm,0.4s						
MNBS				Lg	Lg	14 38 01.1	
	comp=N,134nm,0.8s						
MNBS	**Baschi**	**4.82**	**31**	*e*P	**Pg**	**14 36 56.8**	**-0.9**
	comp=N,62nm,0.4s						
MNBS				*e*S	**Sg**	**14 38 01.1**	**+1.0**
	comp=N,134nm,0.8s						
KTMS	**Ketmen**	**5.30**	**47**	Pg	**Pg**	**14 37 05.9**	**-1.0**
	comp=N,35nm,0.3s						
KTMS				Lg	Lg	14 38 16.7	
	comp=N,61nm,0.8s						
KTMS	**Ketmen**	**5.30**	**47**	*e*P	**Pg**	**14 37 05.9**	**-1.0**
	comp=N,35nm,0.3s						
KTMS				*e*S	**Sg**	**14 38 16.7**	**+1.2**
	comp=N,61nm,0.8s						
TDK	**Taldyqorghan**	**5.62**	**26**	Pg	**Pg**	**14 37 09.9**	**-3.1**
	comp=N,122nm,0.7s						
TDK				Lg	Lg	14 38 23.7	
	comp=N,328nm,0.7s						
TDK	**Taldyqorghan**	**5.62**	**26**	*e*P	**Pg**	**14 37 09.9**	**-3.1**
	comp=N,122nm,0.7s						
TDK				*e*S	**Sg**	**14 38 23.7**	**-2.0**
	comp=N,328nm,0.7s						
DJR	**Jarkent**	**5.62**	**38**	Pg	**Pg**	**14 37 11.0**	**-2.0**
	comp=N,55nm,0.5s						
DJR				Lg	Lg	14 38 24.9	
	comp=N,87nm,1.0s						
DJR	**Jarkent**	**5.62**	**38**	*e*P	**Pg**	**14 37 11.0**	**-2.0**
	comp=N,55nm,0.5s						
DJR				*e*S	**Sg**	**14 38 24.9**	**-1.0**
	comp=N,87nm,1.0s						
KAPS	**Kapalarasan**	**6.20**	**30**	*e*P	**Pg**	**14 37 20.5**	**-3.6**
	comp=N,25nm,0.4s						
KAPS				*e*S	**Sg**	**14 38 42.1**	**-2.3**
	comp=N,92nm,0.9s						
CHCP	**Chirah Chowk**	**6.46**	**193**	P	**Pn**	**14 37 03.5**	**+3.0**
NIL	**Nilore**	**6.47**	**193**	*e*Pn	**Pn**	**14 37 03.2**	**+2.7**
NIL	**Nilore**	**6.47**	**193**	*e*PN	**Pn**	**14 37 03.3**	**+2.7**
CEP	**Cherat**	**6.62**	**203**	P	**Pn**	**14 37 06.4**	**+3.6**
KBL	**Kabul**	**7.21**	**223**	*e*Pn	**Pn**	**14 37 11.1**	**+0.2**
KBL	**Kabul**	**7.21**	**223**	*e*PN	**Pn**	**14 37 11.1**	**+0.2**
THW	**Thamme Wali**	**7.63**	**201**	P	**Pn**	**14 37 19.8**	**+3.2**
OTUK	**Ortayu**	**8.48**	**348**	⇑Pn	**Pn**	**14 37 29.8**	**+1.7**
	comp=N,3.1nm,0.6s						
OTUK				⇑Lg	Lg	14 39 53.8	
	comp=N,91nm,0.7s						
OTUK	**Ortayu**	**8.48**	**348**	*e*P	**Pn**	**14 37 29.8**	**+1.7**
MAKZ	**Makanchi**	**8.51**	**34**	*e*Pn	Pn	14 37 34.9	+6.4
MAKZ	**Makanchi**	**8.51**	**34**	⇑Pn	Pn	14 37 34.6	+6.1
	comp=N,2.1nm,0.7s						
MAKZ				⇑Lg	Lg	14 39 59.0	
	comp=N,61nm,1.2s						
MAKZ	**Makanchi**	**8.51**	**34**	*e*P	Pn	14 37 34.9	+6.4
MK31	**Makanchi Array**	**8.63**	**36**	*e*Pn	Pn	14 37 36.1	+5.8
MK31	**Makanchi Array**	**8.63**	**36**	⇓Pn	Pn	14 37 36.1	+5.8
	comp=N,1.3nm,0.6s,baz=203,slow=14,SNR=14						
MK31				⇑Lg	Lg	14 40 06.2	
	comp=N,15nm,0.8s,baz=218,slow=25,SNR=4.5						
MK31	**Makanchi Array**	**8.63**	**36**	*e*P	Pn	14 37 36.1	+5.8
MK32	**Makanchi Array**	**8.63**	**36**	*e*Pn	Pn	14 37 35.4	+5.1
MKAR	**Makanchi Array**	**8.63**	**36**	Pn	Pn	14 37 35.4	+5.1
	comp=N,0.3nm,0.3s,baz=204,slow=14,SNR=12						
MKAR				Lg	Lg	14 40 00.9	
	comp=N,0.4nm,0.3s,baz=219,slow=27,SNR=3.9						
WMQ	**Urumqi**	**10.22**	**64**	*e*P	Pn	14 37 58.0	+6.0
WMQ				LR	LR		
	comp=N,690nm,11.7s						
WMQ				LR	LR		
	comp=N,1μm,19.5s						
KURBB	**Kurchatov Arra**	**10.93**	**12**	Pn	**Pn**	**14 38 03.2**	**+1.6**
	comp=N,0.1nm,0.3s,baz=201,slow=12,SNR=6.5						
KURBB				Sn	**Sn**	**14 40 06.5**	**+2.7**
	comp=N,0.2nm,0.3s,baz=165,slow=27,SNR=4.0						
KURBB				Lg	Lg	14 41 08.1	
	comp=N,0.2nm,0.3s,baz=199,slow=30,SNR=9.2						
KURBB	**Kurchatov Arra**	**10.93**	**12**	⇓Lg	Lg	14 41 14.4	
	comp=N,54nm,0.7s						
KURK	**Kurchatov**	**11.03**	**12**	⇓Lg	Lg	14 41 17.0	
	comp=N,73nm,1.0s						
KURK	**Kurchatov**	**11.03**	**12**	P	**Pn**	**14 38 03.2**	**+0.2**
KURK						14 40 06.5	
DGZ	**Jazzator, Alta**	**13.11**	**38**	⇓*e*P	P	14 38 36.3	-5.6
GEYT	**Alibeck**	**13.29**	**267**	Pn	Pn	14 38 29.0	-5.1
	comp=N,1.0nm,0.3s,baz=91,slow=11,SNR=9.6						
GYA0B	**ALIBECK ARRAY**	**13.29**	**267**	*e*Pn	Pn	14 38 28.7	-5.3
BVAR	**Borovoye Array**	**13.42**	**348**	Pn	**Pn**	**14 38 35.2**	**-0.5**
	comp=N,0.5nm,0.3s,baz=155,slow=13,SNR=7.6			

GTA	Gaotai	19.10	84	eP	Pn	14 39 52.0	+3.0
GTA				pP	sP	14 39 56.2	+1.9
GTA				sP	pP	14 39 59.7	+7.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SVE	Sverdlovsk	19.30	336	eP	Pn	14 39 54.0	+2.9
ARU	Arti	19.68	332	P	P	14 39 53.1	-1.2
	comp=Z,0.0nm,0.3s,baz=101,slow=19,SNR=4.0						
ARU	Arti	19.68	332	eP	P	14 39 53.1	-1.2
	comp=Z,4.1nm,0.8s						
ARU	Arti	19.68	332	P	P	14 39 53.7	-0.6
ARU				S	S	14 43 31.3	-4.7
ARU				MLR	MLR		
	comp=Z,640nm,18.0s						
SHL	Shillong	20.16	130	eP	Pn	14 40 05.1	+3.3
	comp=Z,19nm,0.4s						
SHL	Shillong	20.16	130	eP	Pn	14 40 05.1	+3.3
SHL				pmax	pmax		
	comp=Z,19nm,0.4s						
GROC	Groznyy	22.02	288	eP	P	14 40 20.3	+0.6
GROC				e		14 40 41.4	
GROC				eS	S	14 44 15.7	-6.8
GROC				pmax	pmax		
	comp=Z,39nm,0.7s						
LZH	Lanzhou	23.01	91	eP	P	14 40 35.7	+5.2
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,47nm,4.6s						
LZH				LR	LR		
	comp=Z,140nm,11.3s						
LZH				LR	LR		
	comp=Z,150nm,12.0s						
LZH				LR	LR		
	comp=Z,200nm,14.2s						
GNI	Garni	23.10	280	P	P	14 40 31.5	+0.2
	comp=Z,8.0nm,0.6s,baz=31,slow=19,SNR=4.3						
GNI				LR	LR	14 51 27.6	
	comp=Z,112nm,21.7s,baz=70,slow=42						
GNI	Garni	23.10	280	⇓eP	P	14 40 34.5	+3.1
GNI				pmax	pmax		
	comp=Z,142nm,1.3s						
ZEI	Tsey	23.43	287	eP	P	14 40 36.2	+1.5
ZEI				pmax	pmax		
	comp=Z,15nm,1.4s						
SONA0	Songino Array	23.82	60	eP	P	14 40 41.5	+3.0
SONM	Songino Array	23.82	60	P	P	14 40 41.5	+3.0
	comp=Z,0.7nm,0.7s,baz=256,slow=10,SNR=3.1						
KBZ	Khabaz	24.11	289	P	P	14 40 44.5	+3.5
	comp=Z,0.7nm,0.4s,baz=259,slow=16,SNR=2.4						
KIV	Kislovodsk	24.26	290	eP	P	14 40 46.4	+3.9
KIV				pmax	pmax		
	comp=Z,36nm,1.0s						
NEY	Neytrino	24.26	288	⇑eP	P	14 40 46.0	+3.3
NEY				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ULN	Ulaanbaatar	24.27	60	⇓eP	P	14 40 45.1	+2.5
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CD2	Chengdu	25.04	102	P	P	14 40 53.0	+3.4
VORD	Divnogorie	27.08	306	eP	P	14 41 08.4	+0.6
VORD				pmax	pmax		
	comp=Z,5.0nm,0.4s						
VSR	Storozhevoye	27.20	306	eP	P	14 41 10.9	+2.0
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LPSR	Galich'ya Gora	27.62	309	eP	P	14 41 14.6	+1.9
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC	Hu-ho-hao-te	27.73	76	eP	P	14 41 19.7	+5.7
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
BR101	Keskin Array S	31.55	283	eP	P	14 41 47.3	-0.5
BR131	Keskin Array S	31.55	283	eP	P	14 41 47.2	-0.5
	comp=Z,3.4nm,0.8s						
BRTR	Keskin Array B	31.55	283	P	P	14 41 47.3	-0.5
	comp=Z,3.0nm,0.7s,baz=88,slow=7.8,SNR=13						
BRTR	Keskin Array B	31.55	283	iP	P	14 41 48.5	+0.7
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	Malin Array Be	33.41	304	P	P	14 42 00.6	-3.2
	comp=Z,0.2nm,0.3s,baz=81,slow=7.6,SNR=4.2						
AKBB	Malin Array Si	33.41	304	eP	P	14 42 00.6	-3.2
	comp=Z,6.9nm,0.9s						
AKBB	Malin Array Si	33.41	304	eP	P	14 42 00.6	-3.2
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FIA0	FINESS Array S	36.50	322	eP	P	14 42 29.2	-1.0
FIA0	FINESS Array S	36.50	322	eP	P	14 42 29.3	-1.0
FINES	FINESS Array B	36.50	322	P	P	14 42 29.2	-1.0
	comp=Z,1.6nm,0.6s,baz=108,slow=12,SNR=5.2						
FINES	FINESS Array B	36.50	322	iP	P	14 42 36.7	+6.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	39.23	335	P	P	14 42 53.1	-0.1
	comp=Z,2.8nm,0.7s,baz=94,slow=6.2,SNR=5.8						
TIXI	Tiksi	41.37	23	P	P	14 43 12.9	+2.0
	comp=Z,1.1nm,0.8s,baz=35,slow=1.6,SNR=2.3						
NB2	NORSAR Subarra	43.59	321	P	P	14 43 27.8	-1.4
	comp=Z,0.9nm,0.7s,baz=90,slow=7.9						
NB200	NORSAR Array S	43.59	321	eP	P	14 43 28.0	-1.2
NOA	NORSAR Array B	43.59	321	P	P	14 43 28.0	-1.2
	comp=Z,1.0nm,0.7s,baz=91,slow=8.1,SNR=5.1						
NOA	NORSAR Array B	43.59	321	P	P	14 43 28.0	-1.2
GERES	GERESS Array B	43.59	303	P	P	14 43 29.4	-0.1
	comp=Z,1.2nm,0.6s,baz=61,slow=9.3,SNR=7.6						
KHC	Kasperske Hory	43.61	303	⇑eP	P	14 43 33.9	+4.4
KHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	Bilibino	54.09	28	iP	P	14 44 54.6	+5.0
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SKR	Severo-Kuril's	55.31	50	ceP	P	14 45 01.8	+3.1
TOA1	Torodi Ar. Sit	68.91	270	eP	P	14 46 29.7	-0.9
TORD	Torodi Ar. Bea	68.91	270	P	P	14 46 29.7	-0.9
	comp=Z,0.9nm,0.5s,baz=30,slow=6.3,SNR=6.7						
ILAR	Eielson Array	70.55	18	P	P	14 46 39.4	-0.5
	comp=Z,0.2nm,0.6s,baz=335,slow=4.0,SNR=3.3						
ILB	Eielson Array	70.55	18	eP	P	14 46 39.4	-0.5
	comp=Z,15nm,1.8s						
YKA	Yellowknife Ar	77.58	5	P	P	14 47 20.1	-0.9
	comp=Z,0.5nm,0.5s,baz=347,slow=5.8,SNR=6.2						
YKB5	Yellowknife Ar	77.58	5	eP	P	14 47 20.1	-0.9
WR1	Warramunga Arr	81.28	125	eP	P	14 47 41.9	+0.2
WRA	Warramunga Arr	81.28	125	P	P	14 47 41.9	+0.2
	comp=Z,134nm,0.3s,baz=320,slow=7.7,SNR=1.4						
AS31	Alice Springs	83.78	128	eP	P	14 47 53.8	-1.0
ASAR	Alice Springs	83.78	128	P	P	14 47 53.8	-1.0
	comp=Z,0.5nm,0.8s,baz=317,slow=5.0,SNR=8.3						

MAN 04 14:35:53.9, 11°.46N×125°.51E, h22km, mb4.4, ML3.3, MS3.1, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.16	333	eP	Pb	14 35 60.0	+0.7
BESP				eS	Sb	14 36 07.3	+4.3
BESP	Borongan	0.16	333	eP	Pb	14 36 00.0	+0.7
BESP				eS	Sb	14 36 06.3	+3.3
PLP	Palo	0.60	241	⇓eP	Pb	14 36 06.1	+0.3
PLP				iS	Sn	14 36 15.6	-0.6
OCLP	Ormoc	0.97	246	eP	Pb	14 36 12.0	-0.1
OCLP				eS	Sn	14 36 25.4	-0.1
CNP	Cataraman	1.34	322	eP	Pn	14 36 17.5	+0.2
CNP				eS	Sb	14 36 35.6	+0.6
CNP	Cataraman	1.34	322	eP	Pn	14 36 17.8	+0.5
CNP				eS	Sb	14 36 35.4	+0.4
MSLP	Maasin	1.46	206	eP	Pn	14 36 18.5	-0.5
MSLP				eS	Sb	14 36 39.4	+0.7
MSLP	Maasin	1.46	206	eP	Pn	14 36 18.8	-0.3
MSLP				eS	Sb	14 36 39.5	+0.9
SCPH	Surigao	1.67	181	eP	Pb	14 36 28.5	+4.6
SCPH				eS	Sb	14 36 48.7	+4.3

IDC 04 14:40:20.1±2.5, 16°.98N×146°.18E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.5/41, mbtmp3.6/5, Error ellipse: s-maj=74.3km s-min=31.8km az=175.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy 19.59	83		T	T	15 05 22.9	
	baz=269,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy 19.61	82		T	T	15 05 22.6	
	baz=269,slow=56,SNR=56						
H11S2	WAKE ISLAND Hy 19.61	83		T	T	15 05 22.0	
	baz=269,slow=75,SNR=61						
H11N1	WAKE ISLAND Hy 19.85	79		T	T	15 05 39.9	
	baz=265,slow=75,SNR=42						
H11N2	WAKE ISLAND Hy 19.86	79		T	T	15 05 41.2	
	baz=265,slow=75,SNR=41						
H11N3	WAKE ISLAND Hy 19.87	79		T	T	15 05 41.3	
	baz=265,slow=75,SNR=38						
KSRS	Korea Array	25.98	325	P	P	14 45 55.6	+1.1
	1.2nm,0.9s,baz=140,slow=8.5,SNR=3.8						
CMAR	Chiang Mai Arr	44.92	279	P	P	14 48 36.5	-0.6
	0.8nm,0.8s,baz=73,slow=6.7,SNR=5.7						
ILAR	Eielson Array	64.98	26	P	P	14 51 00.3	-1.3
	0.4nm,0.8s,baz=251,slow=5.6,SNR=4.7						
YKA	Yellowknife Ar	79.29	28	P	P	14 52 26.6	-0.7
	0.5nm,0.8s,baz=290,slow=5.2,SNR=4.1						
NVAR	Mina Array Bea	83.84	52	P	P	14 52 53.6	+1.4
	0.3nm,0.5s,baz=262,slow=5.4,SNR=3.2						

ISCJB 04 14:46:17.8±0.7, 57°.45S±0°.1×25°.5W±0°.3, h10km, mb4.1/5, MS4.4/1, Error ellipse: s-maj=23.2km s-min=9.3km az=147.6

IDC 04 14:46:18.0±0.8, 57°.30S×25°.11W, h0km, mb4.1/5, mb1 4.2/6, mb1mx4.0/25, mbtmp4.1/6, ML3.8/1, MS4.4/1, Ms1 4.5/1, ms1mx3.3/19, Error ellipse: s-maj=40.1km s-min=22.1km az=65.0

NEIC 04 14:46:19.1±0.4, 57°.36S×25°.28W, h10km, mb4.3/1, Error ellipse: s-maj=17.2km s-min=10.2km az=50.0

ISC 04 14:46:19.3±0.7, 57°.45±0°.1×25°.3W±0°.2, h10km, n28, σ0°.81/25, mb4.2/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.02	291	ePn	Pn	14 48 01.3	-0.7
VNA1	Neumayer--Stat	15.18	158	P	Pn	14 49 53.0	-0.4
VNA3	Neumayer Olymp	15.40	161	P	Pn	14 49 54.7	-1.6
VNA2	Neumayer--Watz	15.58	158	P	Pn	14 49 58.6	0.0
	baz=325,slow=13						
SNAA	Sanae	17.11	156	P	Pn	14 50 17.5	-0.7
SNAA	Sanae	17.11	156	P	Pn	14 50 17.8	-0.4
	0.3nm,0.3s,baz=359,slow=12,SNR=24						
SNAA				S	Sn	14 53 16.1	-12
	0.0nm,0.3s,baz=38,slow=19,SNR=2.4						
SNAA	Sanae	17.11	156	ePn	Pn	14 50 17.7	-0.5
	3.8nm,0.9s						
SNAA				S	Sn	14 53 16.1	-12
CPUP	Villa Florida	38.46	310	P	P	14 53 41.5	+0.4
	4.0nm,0.9s,baz=149,slow=4.9,SNR=6.0						
CPUP	Villa Florida	38.46	310	eP	P	14 53 41.4	+0.3
	8.1nm,1.1s						
VNDA	Vanda	45.30	182	P	P	14 54 37.4	+1.0
	0.8nm,0.6s,baz=194,slow=7.2,SNR=15						
VNDA	Vanda	45.30	182	eP	P	14 54 37.3	+0.8
H10S2	ASCENSION HYDR	48.99	14	T	T	15 48 02.8	
	baz=189,slow=74,SNR=7.9						
H10S3	ASCENSION HYDR	49.00	14	T	T	15 48 05.7	
	baz=189,slow=74,SNR=7.7						
H10S1	ASCENSION HYDR	49.01	14	T	T	15 48 18.0	
	baz=189,slow=74,SNR=8.0						
LPAZ	La Paz	51.99	304	P	P	14 55 29.9	+0.6
	1.5nm,0.4s,baz=167,slow=5.1,SNR=10						
LPAZ				LR	LR	15 16 21.4	
	comp=Z,414nm,21.1s,baz=293,slow=35						
LPAZ	La Paz	51.99	304	eP	P	14 55 29.5	+0.3
TORD	Torodi Ar. Bea	73.72	27	P	P	14 57 53.8	+0.7
	0.7nm,0.6s,baz=197,slow=3.9,SNR=4.7						
TOA1	Torodi Ar. Sit	73.72	27	eP	P	14 57 53.8	+0.6
STKA	Stephens Creek	90.42	169	P	P	14 59 21.9	+1.2
	1.0nm,0.7s,baz=217,slow=10,SNR=2.2						
FIA0	FINESS Array S	125.07	27	ePKPdf	PKPdf	15 05 17.8	-0.4
FINES	FINESS Array B	125.07	27	PKP	PKPdf	15 05 17.8	-0.4
	0.7nm,0.6s,baz=200,slow=2.8,SNR=4.3						
YKA	Yellowknife Ar	137.85	316	PKP	PKPdf	15 05 41.4	-0.8
	0.3nm,0.6s,baz=123,slow=2.3,SNR=3.4						
YKB5	Yellowknife Ar	137.85	316	ePKPdf	PKPdf	15 05 41.4	-0.8
SONA0	Songino Array	149.75	87	ePKPbc	PKPbc	15 06 07.0	-1.4
SONM	Songino Array	149.75	87	PKPbc	PKPbc	15 06 07.0	-1.4
	0.5nm,0.4s,baz=240,slow=2.9,SNR=3.5						
ILAR	Eielson Array	151.77	309	PKPbc	PKPbc	15 06 12.4	-0.1
	1.3nm,0.9s,baz=142,slow=2.0,SNR=16						
ILB	Eielson Array	151.77	309	ePKPbc	PKPbc	15 06 12.3	-0.2
TOLK	Toolik Lake Re	153.36	318	ePKPbc	PKPbc	15 06 16.1	+0.1

PRU 04 14:58:22.6±0.0, 50°.27N×12°.48E, h6km, West Bohemia Swarm

WBNET 04 14:58:23.2, 50°.24N×12°.45E, h8km, Ml0.2, 6C-10D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	Novy Kostel	0.01	171	ePG	Pg	14 58 24.3	-0.3
NKC	Novy Kostel	0.01	171	⇓P	Pg	14 58 24.5	-0.1
NKC	Novy Kostel	0.01	171	⇓P	Pg	14 58 25.4	+0.8
NKC				S	Sg	14 58 26.3	+0.8
NKC	Novy Kostel	0.01	171	eSG	Pg	14 58 25.4	+0.8
	comp=Z,18nm,0.2s						
NKC	Novy Kostel	0.01	171	S	Pg	14 58 25.4	+0.8
LBCW	Luby	0.03	319	⇓P	Pg	14 58 24.7	0.0
LBCW	Luby	0.03	319	⇓P	Pg	14 58 25.6	+0.9
LBCW	Luby	0.03	319	S	Pg	14 58 25.9	+1.1
VAC	Vackov	0.04	263	⇓P	Pg	14 58 24.8	-0.1
VAC	Vackov	0.04	263	⇓P	Pg	14 58 25.7	+0.8
VAC				S	Sg	14 58 26.8	+0.8
VAC	Vackov	0.04	263	S	Pg	14 58 25.8	+1.0
STCW	Studenec	0.05	69	⇑P	Pg	14 58 24.8	-0.1
STCW				S	Sg	14 58 25.8	-0.3
STCW	Studenec	0.05	69	S	Sg	14 58 26.8	+0.6
KVC	Kvetna	0.06	128	S	Sg	14 58 25.8	-0.4
KVC	Kvetna	0.06	128	S	Sg	14 58 26.7	+0.5
POCW	Potky	0.08	351	⇓P	Pg	14 58 25.3	0.0
POCW				S	Sg	14 58 26.8	0.0
POCW	Potky	0.08	351	⇓P	Pg	14 58 26.2	+0.9
POCW				S	Sg	14 58 27.7	+0.9
SKC	Skalna	0.09	217	⇑P	Pg	14 58 25.3	-0.1
SKC				S	Sg	14 58 26.8	-0.1
SKC	Skalna	0.09	217	S	Sg	14 58 27.7	+0.8
KRCW	Kraslice	0.11	31	⇑P	Pg	14 58 25.6	-0.1
KRCW				S	Sg	14 58 27.2	-0.2
KACW	Kaceov	0.11	155	⇑P	Pg	14 58 25.6	0.0
KACW				S	Sg	14 58 27.3	-0.1
KOCW	Kopaniny	0.14	280	⇓P	Pg	14 58 26.1	0.0
KOCW				S	Sg	14 58 28.2	-0.1
KOCW	Kopaniny	0.14	280	⇓P	Pg	14 58 27.1	+0.9
KOCW				S	Sg	14 58 29.1	+0.9
ZHC	Zelena Hora	0.19	207	⇑P	Pg	14 58 27.0	-0.1
ZHC				S	Sg	14 58 29.7	-0.1
ZHC	Zelena Hora	0.19	207	⇑P	Pg	14 58 27.9	+0.8
ZHC				S	Sg	14 58 30.6	+0.9

IDC 04 14:58:42.5±1.5, 14°.26N×91°.94W, h0km, mb4.0/6, mb1 4.3/8, mb1mx3.9/37, mbtmp3.9/8, ML3.8/2, MS3.7/1, Ms1 3.7/1, ms1mx3.1/29, Error ellipse: s-maj=104.0km s-min=19.7km az=50.0

ISCJB 04 14:58:43.6±1.2, 13°.92N±0°.05×92°.45W±0°.04, h26km±8km, mb4.3/35, MS3.5/1, Error ellipse: s-maj=10.5km s-min=3.9km az=31.2

GCG 04 14:58:45.9±1.1, 13°.76N×92°.29W, h22km±18km, MD4.3

UCR 04 14:58:46.7±1.5, 13°.88N×92°.13W, h1km±23km, MD4.0, ML4.2, mb4.4(NEIC)

NEIC 04 14:58:47.2±0.9, 13°.99N×92°.35W, h39km±7km, mb4.4/37, MD4.2(MEX), Error ellipse: s-maj=12.0km s-min=5.1km az=218.0

MEX 04 14:58:47.5±0.7, 14°.13N×92°.37W, h68km±20km, MD4.2

ISC 04 14:58:46.3±2.1, 14°.04N±0°.08×92°.39W±0°.07, h32km±13km, n93, σ1°.26/101, mb4.4/35, 2D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.88	8	ePn	Pn	14 59 01.8	-0.6
THIG		0.88	8	iP	Pn	14 59 01.8	-0.6
THIG				iS	Sb	14 59 13.5	-0.9
ERG	Entre ros, C	0.89	63	eP	Pb	14 59 03.5	+0.1
STG3	Santiaguito 3,	1.04	50	eP	Pn	14 59 04.7	-0.1
FUG	Fuego 3	1.56	75	⇓eP	Pn	14 59 11.9	-0.1
FUG	Fuego 3	1.56	75	⇓eP	Pn	14 59 11.9	-0.1
PCG	Pacaya	1.77	78	eP	Pn	14 59 15.3	+0.4
PCG	Pacaya	1.77	78	eP	Pn	14 59 15.3	+0.4
PCIG		1.84	334	eP	Pn	14 59 14.6	-1.1
PCIG				iS	Sn	14 59 35.2	-2.7
NBG	Las Nubes	2.06	74	eP	Pn	14 59 20.6	+1.7
NBG				eS	Sb	14 59 46.9	-1.6
NBG	Las Nubes	2.06	74	eP	Pn	14 59 20.6	+1.7
NBG				eS	Sb	14 59 46.9	-1.6
CCIG	Comitan	2.25	6	ePn	Pn	14 59 23.5	+2.1
MOYG	Moyuta, Jutiap	2.25	89	eP	Pn	14 59 21.5	+0.1
MOYG				eS	Sn	14 59 48.8	+0.6
SBLS	San Blas	2.70	94	eP	Pn	14 59 27.8	0.0
TGIG		2.81	346	eP	Pn	14 59 28.6	-0.6
TGIG				eS	Sn	15 00 00.2	-1.9
MRL	Marmol	2.82	68	eP	Pn	14 59 31.4	+2.0
MRL	Marmol	2.82	68	eP	Pn	14 59 31.4	+2.0
BOQS	Boqueron	3.04	95	eP	Pn	14 59 32.7	+0.3
SNET	Serv Nac Est T	3.09	96	eP	Pn	14 59 32.9	-0.1
SNET				eS	Sn	15 00 08.0	-0.9
SNVI	San Vicente	3.48	97	eP	Pn	14 59 31.9	-6.4
CMIG	Matias Romero	3.87	322	Pn	Pn	14 59 43.5	-0.2
	2.9nm,0.3s,baz=162,slow=13,SNR=36						
CMIG				Sn	Sn	15 00 31.8	+3.7
	17nm,0.3s,baz=146,slow=8.4,SNR=5.2						
CMIG	Matias Romero	3.87	322	eP	Pn	14 59 43.4	-0.2
HUIG	Huatulco	3.98	296	ePn	Pn	14 59 44.5	-0.6
HUIG	Huatulco	3.98	296	eP	Pn	14 59 44.5	-0.6
CSGN	Cosiguina Volc	4.82	102	ePn	Pn	14 59 57.2	+0.4
CSGN	Cosiguina Volc	4.82	102	eP	Pn	14 59 57.4	+0.6
CSGN				IAML		15 00 25.4	
	comp=N,648nm,0.4s						
TGUH	Tegucigalpa,Un	4.97	89	ePn	Pn	14 59 58.7	0.0
CRIN	San Cristobal	5.37	104	eP	Pn	15 00 04.1	-0.2
CNGN	Cerro Negro	5.75	105	eP	Pn	15 00 09.0	-0.6
MOMN	Momotombo	5.93	105	eP	Pn	15 00 12.2	+0.2
ESTN	Estel	5.93	98	ePn	Pn	15 00 11.2	-0.9
MATN	Matagalpa	6.39	99	eP	Pn	15 00 18.8	+0.4
LVIG	Laguna Verde	6.84	326	ePn	Pn	15 00 22.5	-2.0
TEIG	Tepich	7.30	32	ePn	Pn	15 00 31.2	+0.3
ACON	Acoyapa	7.33	105	ePn	Pn	15 00 32.0	+0.8
JTS	Las Juntas de	8.17	116	Pn	Pn	15 00 44.1	+1.3
	comp=N,0.4nm,0.3s,baz=248,slow=14,SNR=3.0						
JTS				Lg	Lg	15 02 40.2	
	comp=N,0.7nm,0.3s,baz=72,slow=20,SNR=4.9						
KVTX	Kingsville	14.39	340	ePn	Pn	15 02 08.8	+1.0
833A	Chaparral WMA,	15.63	337	ePn	Pn	15 02 25.5	+1.1
	comp=N,13nm,0.7s						
061Z	Ochoppi	15.96	41	ePn	Pn	15 02 30.5	+1.9
	comp=N,66nm,1.0s						
656A	Willston	17.78	29	ePn	P	15 02 53.2	+1.3
	comp=N,167nm,1.8s						
LTX	Lajitas	18.46	327	eP	P	15 03 00.2	+0.7
TXAR	Lajitas Array	18.46	327	P	P	15 03 00.2	+0.7
	comp=N,0.1nm,0.3s,baz=121,slow=6.7,SNR=14						
TX31	Lajitas Ar. Si	18.46	327	eP	P	15 02 58.8	-0.8
	comp=N,6.1nm,1.2s						
MIAR	Mount Ida	20.45	357	eP	P	15 03 22.2	+1.1
	comp=N,14nm,1.0s						
GDL2	Guadalupe Moun	21.14	331	eP	P	15 03 29.3	+0.5
Y52A	Lilburn	21.14	20	eP	P	15 03 30.6	+2.0
	comp=N,18nm,1.0s						
MNTX	Cornudas Mount	21.23	328	eP	P	15 03 30.7	+1.1
	comp=N,4.8nm,0.9s						
SWET	Sewanee	21.88	14	eP	P	15 03 35.6	-1.0
	comp=N,18nm,1.4s						
SDV	Santo Domingo	21.93	101	LR	LR	15 12 16.0	
	comp=N,189nm,20.4s,baz=271,slow=38						
AMTX	Amarillo	22.39	340	eP	P	15 03 42.0	-0.1
	comp=N,13nm,0.7s						
CLTN	Cedars of Leba	22.62	13	eP	P	15 03 43.0	-1.5
	comp=N,4.1nm,1.0s						
SIUC	Southern Illin	23.75	6	eP	P	15 03 54.8	-1.0
	comp=N,11nm,0.8s						
BNM	Barren Site	23.82	330	eP	P	15 03 59.2	+2.4
LENM	Lemitar	24.00	329	eP	P	15 04 01.1	+2.7
ANMO	Albuquerque	24.38	331	P	P	15 04 02.8	+0.9
	comp=N,1.3nm,0.6s,baz=136,slow=14,SNR=3.8						
ANMO	Albuquerque	24.38	331	eP	P	15 04 02.8	+0.9
	comp=N,2.8nm,1.0s						
T25A	Trinidad	25.38	337	eP	P	15 04 10.9	-0.1
	comp=N,6.6nm,1.1s						
MVCO	Mesa Verde	27.18	331	eP	P	15 04 28.7	+1.4
	comp=N,8.1nm,0.8s						
PV13	Radium Mtn., P	28.10	332	eP	P	15 04 36.1	+0.6
	comp=N,7.4nm,1.1s						
PV03	Paradox Valley	28.19	332	eP	P	15 04 37.5	+1.2
	comp=N,11nm,1.2s						
PV18	Skein Mesa, Pa	28.21	332	eP	P	15 04 36.4	-0.1
	comp=N,8.3nm,1.0s						
PV12	Saucer Basin,	28.22	332	eP	P	15 04 37.0	+0.4
	comp=N,11nm,1.0s						
PV07	Paradox Valley	28.25	332	eP	P	15 04 38.6	+1.8
	comp=N,9.1nm,1.2s						
PV17	East Wray Mesa	28.26	332	eP	P	15 04 38.3	+1.4
	comp=N,9.9nm,1.1s						
PV16	Nyswonger Mesa	28.27	332	eP	P	15 04 38.9	+1.9
	comp=N,12nm,1.3s						
PV04	Paradox Valley	28.33	332	eP	P	15 04 39.4	+1.9
	comp=N,13nm,1.1s						
PV22	Blue Mesa, Par	28.39	332	eP	P	15 04 40.1	+2.1
	comp=N,4.9nm,1.1s						
PV23	Carpenter Ridg	28.42	332	eP	P	15 04 39.9	+1.4
	comp=N,8.8nm,1.0s						
CCUT	Cedar City	29.94	325	eP	P	15 04 52.3	+0.5
	comp=N,2.1nm,1.0s						
PD31	Pinedale Array	32.23	336	eP	P	15 05 12.8	+0.8
	comp=N,4.3nm,1.6s						
PDAR	Pinedale Array	32.23	336	P	P	15 05 12.8	+0.8
	comp=N,0.5nm,0.7s,baz=138,slow=5.6,SNR=4.3						
HVU	Hansel Valley	32.81	331	eP

SKC	**Skalna**	**0.09 220**	⇓P	Pg	14 58 55.0	0.0
KRCW	**Kraslice**	**0.11 29**	⇑P	Pg	14 58 55.2	-0.1
KOCW	**Kopaniny**	**0.14 282**	⇓P	Pg	14 58 55.8	-0.1
KOCW			S	Sg	14 58 57.8	-0.1
ZHC	**Zelena Hora**	**0.19 208**	⇑P	Pg	14 58 56.6	0.0
ZHC			S	Sg	14 58 59.3	0.0

WBNET 04 14:58:54.1, 50°.24N×12°.45E, h7km, MI0.7, 2C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.01 181**		S	Sg	14 58 56.3	-0.1
LBCW	**Luby**	**0.04 319**		⇓P	Pg	14 58 55.6	0.0
VAC	**Vackov**	**0.05 265**		S	Sg	14 58 56.7	-0.1
STCW	**Studenec**	**0.05 66**		S	Sg	14 58 56.7	-0.3
KVC	**Kvetna**	**0.05 127**		S	Sg	14 58 56.7	-0.3
POCW	**Potky**	**0.08 351**		⇓P	Pg	14 58 56.2	0.0
POCW				S	Sg	14 58 57.6	0.0
POCW	**Potky**	**0.08 351**		S	Pg	14 58 56.4	+0.3
SKC	**Skalna**	**0.09 219**		⇑P	Pg	14 58 56.2	-0.1
SKC				S	Sg	14 58 57.7	-0.1
SKC	**Skalna**	**0.09 219**		S	Pg	14 58 56.4	+0.2
KRCW	**Kraslice**	**0.11 30**		⇓P	Pg	14 58 56.5	-0.1
KRCW				S	Sg	14 58 58.1	-0.2
KRCW	**Kraslice**	**0.11 30**		S	Pg	14 58 56.9	+0.3
KOCW	**Kopaniny**	**0.14 281**		⇓P	Pg	14 58 57.0	0.0
KOCW				S	Sg	14 58 59.0	-0.1
ZHC	**Zelena Hora**	**0.19 208**		⇑P	Pg	14 58 57.9	-0.1

WBNET 04 14:58:56.9, 50°.24N×12°.45E, h8km, MI0.8, 1C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.01 171**		⇓P	Pg	14 58 57.3	-1.0
NKC	**Novy Kostel**	**0.01 171**		⇓P	Pg	14 58 58.2	-0.1
NKC				S	Sg	14 58 59.1	-0.1
NKC	**Novy Kostel**	**0.01 171**		S	Pg	14 58 58.2	-0.1
LBCW	**Luby**	**0.03 319**		⇓P	Pg	14 58 57.5	-0.9
LBCW	**Luby**	**0.03 319**		⇓P	Pg	14 58 58.4	0.0
LBCW				S	Sg	14 58 59.6	+0.1
VAC	**Vackov**	**0.04 263**		S	Sg	14 58 58.6	-1.1
VAC	**Vackov**	**0.04 263**		⇓P	Pg	14 58 58.5	-0.1
VAC				S	Sg	14 58 59.6	-0.1
STCW	**Studenec**	**0.05 69**		S	Sg	14 58 58.6	-1.2
STCW	**Studenec**	**0.05 69**		S	Sg	14 58 59.6	-0.3
KVC	**Kvetna**	**0.06 128**		S	Sg	14 58 58.6	-1.3
KVC	**Kvetna**	**0.06 128**		S	Sg	14 58 59.5	-0.4
POCW	**Potky**	**0.08 351**		S	Sg	14 58 59.6	-0.9
POCW	**Potky**	**0.08 351**		⇓P	Pg	14 58 59.0	0.0
POCW				S	Sg	14 59 00.5	0.0
SKC	**Skalna**	**0.09 217**		S	Sg	14 58 59.6	-1.0
SKC	**Skalna**	**0.09 217**		S	Sg	14 59 00.5	-0.1
KRCW	**Kraslice**	**0.11 31**		S	Sg	14 59 00.9	-0.2
KACW	**Kaceov**	**0.11 155**		S	Sg	14 59 01.0	0.0
KOCW	**Kopaniny**	**0.14 280**		S	Sg	14 59 01.9	0.0
ZHC	**Zelena Hora**	**0.19 207**		⇑P	Pg	14 59 00.7	-0.1
ZHC				S	Sg	14 59 03.4	-0.1
ZHC	**Zelena Hora**	**0.19 207**		S	Pg	14 59 00.5	-0.3
LACW	**Lazy**	**0.22 149**		S	Sg	14 59 04.4	0.0

SJA 04 15:00:31.8±1.0, 31°.70S×69°.51W, h108km±7km, ML2.6, MW3.1, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**0.53 168**		*e*P	Pn	15 00 50.0	+1.0
AUSP				*e*S	Sn	15 01 03.1	+1.1
RTLL	**Cerro Villicun**	**0.96 67**		*e*P	Pn	15 00 53.4	+0.9
RTLL				*e*S	Sn	15 01 08.9	+0.8
RTLL				IAML		15 01 10.0	
	comp=Z,68nm,0.2s						
ASAL	**Salagasta**	**1.05 147**		*e*P	Pn	15 00 54.5	+1.0
ASAL				*e*S	Sn	15 01 11.2	+1.3
CFA	**Coronel Fontan**	**1.09 85**		*e*P	Pn	15 00 54.0	+0.1
CFA				*e*S	Sn	15 01 10.7	+0.2
AMOG	**MOGNA**	**1.16 49**		*e*P	Pn	15 00 55.5	+0.9
AMOG				*e*S	Sn	15 01 12.8	+0.9
ACCO	**Cerro Coronel**	**1.18 19**		*e*P	Pn	15 00 56.2	+1.1
ACCO				*e*S	Sn	15 01 14.9	+2.2
ARCO	**CERRO ARCO**	**1.24 157**		*e*P	Pn	15 00 56.9	+1.3
ARCO				*e*S	Sn	15 01 15.0	+1.4
ARCO				IAML		15 01 16.0	
	comp=Z,173nm,0.3s						
AAGR	**Agrelo**	**1.50 157**		*e*P	Pn	15 00 59.6	+1.0
AAGR				*e*S	Sn	15 01 20.3	+1.4
AROD	**Rodeo**	**1.53 1**		*e*P	Pn	15 01 00.8	+1.6
AROD				*e*S	Sn	15 01 22.6	+2.6
ACDV	**Cuesta del Vie**	**1.56 13**		*e*P	Pn	15 01 00.9	+1.4
ACDV				*e*S	Sn	15 01 22.8	+2.4
PEL	**Peldehue**	**1.75 214**		*e*P	Pn	15 01 02.5	+0.9
PEL				*e*S	Sn	15 01 26.1	+1.9
ROC1	**El Roble**	**1.80 225**		*e*P	Pn	15 01 02.9	+0.5
ROC1				*e*S	Sn	15 01 27.0	+1.3
AVIZ	**Vizcacheras**	**1.96 155**		*e*P	Pn	15 01 04.6	+0.4
AVIZ				*e*S	Sn	15 01 28.1	-0.9
ACAN	**Cantantal**	**2.06 107**		*e*P	Pn	15 01 05.6	+0.2
ACAN				*e*S	Sn	15 01 29.1	-2.1
LCO	**Las Campanas**	**2.87 339**		*e*P	Pn	15 01 16.9	+0.6
LCO				*e*S	Sn	15 01 51.2	+0.6
VCA	**Vinchina**	**3.17 21**		*e*P	Pn	15 01 23.8	+3.7
VCA				*e*S	Sn	15 01 58.3	+0.9
VCA				IAML		15 02 02.5	
	comp=Z,12nm,0.2s						
TCA	**Tanti**	**4.21 86**		*e*P	Pn	15 01 33.1	-1.0
TCA				*e*S	Sn	15 02 17.6	-4.8

GUC 04 15:00:42.9±0.7, 23°.34S×68°.11W, h165km±5km, ML3.4, 3C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.04 314**		*e*P	Pn	15 01 09.0	-0.9
LVC				*e*S	Sn	15 01 29.3	-1.1
LVC	**Limon Verde**	**1.04 314**		⇑*i*P	Pn	15 01 09.0	-0.9
LVC				*i* S	Sn	15 01 29.0	-1.5
PB15	**IPOC Station P**	**1.26 276**		*e*P	Pn	15 01 11.5	-0.1
PB15				*e*S	Sn	15 01 33.3	-0.3
PB15	**IPOC Station P**	**1.26 276**		*e*P	Pn	15 01 11.2	-0.3
PB15				*e*S	Sn	15 01 33.0	-0.5
PB06	**IPOC Station P**	**1.49 295**		*e*P	Pn	15 01 13.6	-0.2
PB06				*e*S	Sn	15 01 36.7	-0.7
PB06	**IPOC Station P**	**1.49 295**		*e*P	Pn	15 01 13.5	-0.2
PB06				*e*S	Sn	15 01 36.8	-0.5
PB06				IAML		15 01 38.6	
	comp=N,969nm,0.3s						
PB09	**IPOC Station P**	**1.86 326**		⇓*e*P	Pn	15 01 18.0	+0.4
PB09				*e*S	Sn	15 01 44.7	+0.3
PB09	**IPOC Station P**	**1.86 326**		*e*P	Pn	15 01 17.9	+0.3
PB09				*e*S	Sn	15 01 44.4	-0.1
PB09				IAML		15 01 46.9	
	comp=N,84nm,0.3s						
PB05	**IPOC Station P**	**1.99 284**		*e*P	Pn	15 01 18.9	-0.1
PB05				*e*S	Sn	15 01 46.3	-0.5
PB05	**IPOC Station P**	**1.99 284**		*e*P	Pn	15 01 18.7	-0.3
PB05				*e*S	Sn	15 01 45.6	-1.1
PB05				IAML		15 01 46.9	
	comp=E,217nm,0.2s						
PB03	**IPOC Station P**	**1.99 310**		*e*P	Pn	15 01 18.9	-0.2
PB03				*e*S	Sn	15 01 45.8	-1.2
PB03	**IPOC Station P**	**1.99 310**		*e*P	Pn	15 01 18.9	-0.1
PB03				*e*S	Sn	15 01 46.1	-0.9
PB03				IAML		15 01 48.4	
	comp=E,235nm,0.3s						
PB04	**IPOC Station P**	**2.13 298**		*e*P	Pn	15 01 20.7	0.0
PB04				*e*S	Sn	15 01 49.5	-0.3
PB04	**IPOC Station P**	**2.13 298**		⇑*i*P	Pn	15 01 20.8	+0.1
PB04				*i* S	Sn	15 01 49.4	-0.4
PB10	**IPOC Station P**	**2.25 265**		*e*P	Pn	15 01 23.1	+1.3
PB10				*e*S	Sn	15 01 51.0	-1.0
PB10	**IPOC Station P**	**2.25 265**		*e*P	Pn	15 01 22.1	+0.3
PB10				*i* S	Sn	15 01 51.1	-0.8
GO02	**Mina Guanaco**	**2.26 216**		⇑*i*P	Pn	15 01 21.4	-0.8
GO02				*i* S	Sn	15 01 51.1	-1.6
PB07	**IPOC Station P**	**2.30 314**		*e*P	Pn	15 01 22.5	-0.1
PB07	**IPOC Station P**	**2.30 314**		⇓*i*P	Pn	15 01 22.4	-0.2
PB07				*i* S	Sn	15 01 52.5	-0.8
PB14	**IPOC Station P**	**2.46 238**		*e*P	Pn	15 01 23.8	-0.7
PB14				*e*S	Sn	15 01 55.2	-1.6
HJA	**Humahuaca**	**2.48 87**		*e*P	Pn	15 01 22.3	-2.7
PB02	**IPOC Station P**	**2.61 320**		*e*P	Pn	15 01 25.7	-0.5
PB02				*e*S	Sn	15 02 02.1	+2.4
PB02	**IPOC Station P**	**2.61 320**		*e*P	Pn	15 01 25.8	-0.4
PB02				*e*S	Sn	15 01 58.8	-0.9
PB01	**IPOC Station P**	**2.62 331**		*e*P	Pn	15 01 25.7	-0.6
PB01				*e*S	Sn	15 01 60.0	0.0
PB01	**IPOC Station P**	**2.62 331**		⇓*i*P	Pn	15 01 25.6	-0.7
PB01				*i* S	Sn	15 01 59.3	-0.7
YJA	**Yavi**	**2.66 65**		*e*P	Pn	15 01 24.6	-2.6
AZAP	**Zapla**	**2.92 108**		*e*P	Pn	15 01 26.7	-3.4
PB08	**IPOC Station P**	**3.33 343**		*e*P	Pn	15 01 35.3	-0.1
PB11	**IPOC Station P**	**3.84 338**		*e*P	Pn	15 01 40.0	-1.8
PB11				*e*S	Sn	15 02 26.1	-1.5
PB11	**IPOC Station P**	**3.84 338**		*e*P	Pn	15 01 40.2	-1.6
PB11				*i* S	Sn	15 02 25.0	-2.6
PSGCX	**Pisagua**	**4.17 333**		*e*P	Pn	15 01 43.6	-2.4
PSGCX				*e*S	Sn	15 02 25.4	-10
PB12	**IPOC Station P**	**5.14 336**		*e*P	Pn	15 01 56.6	-1.9
PB12				*e*S	Sn	15 02 53.2	-4.6

*ISCJB **04** 15:01:00.2±1.0, 14°.34S±0°.07×167°.1E±0°.2, h150km, mb4.2/7, Error ellipse: s-maj=25.4km s-min=10.1km az=1.4*
*IDC **04** 15:01:02.1±4.6, 14°.39S×167°.16E, h155km±48km, mb3.6/7, mb1 3.7/8, mb1mx3.5/34, mbtmp4.1/8, Error ellipse: s-maj=39.1km s-min=21.1km az=144.0*
ISC 04 15:01:01.9±1.1, 14°.36S±0°.09×167°.2E±0°.2, h150km, n10, σ1 25/11, mb4.1/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.70 185**		P	**Pn**	**15 02 52.3**	**+1.0**
	3.8nm,0.3s,baz=322,slow=14,SNR=9.7						
DZM				S	**Sn**	**15 04 16.1**	**-1.1**
	1.9nm,0.3s,baz=311,slow=20,SNR=2.3						
CTA	**Charters Tower**	**20.74 251**		P	**P**	**15 05 31.5**	**+0.6**
	2.0nm,0.6s,baz=54,slow=8.7,SNR=3.5						
STKA	**Stephens Creek**	**29.14 229**		P	**P**	**15 06 50.0**	**+1.1**
	5.2nm,0.4s,baz=56,slow=9.6,SNR=34						
WRA	**Warramunga Arr**	**31.80 255**		P	**P**	**15 07 10.6**	**-1.9**
	135nm,0.3s,baz=102,slow=7.8,SNR=1.3						
ASAR	**Alice Springs**	**32.69 249**		P	**P**	**15 07 19.1**	**-1.1**
	0.8nm,0.3s,baz=74,slow=9.6,SNR=19						
ASAJ	**Asahikawa**	**62.36 340**		P	**P**	**15 11 09.1**	**+0.7**
	2.9nm,0.8s,baz=103,slow=3.3,SNR=5.1						
PETK	**Petropavlovsk-**	**67.69 354**		P	**P**	**15 11 43.4**	**+0.8**
	2.4nm,0.8s,baz=96,slow=4.5,SNR=5.4						
CMAR	**Chiang Mai Arr**	**74.69 294**		P	**P**	**15 12 25.7**	**+0.2**
	0.3nm,0.5s,baz=129,slow=7.1,SNR=2.9						
ILAR	**Eielson Array**	**86.22 18**		P	**P**	**15 13 24.4**	**-1.6**
	0.7nm,0.7s,baz=239,slow=5.1,SNR=18						
ARCES	**ARCESS Array B**	**119.87 345**		PKP	**PKPdf**	**15 19 33.9**	**+0.1**
	2.0nm,0.9s,baz=64,slow=2.8,SNR=5.4						

*NNC **04** 15:09:22.9±1.1, 44°.69N×81°.98E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=12.4km s-min=4.7km az=129.0*
*SOME **04** 15:09:23.2, 44°.62N×82°.08E, h15km*
*ISCJB **04** 15:09:24.7±1.1, 44°.66N±0°.06×82°.30E±0°.10, h10km, Error ellipse: s-maj=11.4km s-min=6.5km az=39.1*
ISC 04 15:09:21.9±1.3, 44°.69N±0°.05×82°.12E±0°.06, h10km, n23, σ1 95/36, 2C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.71 259**		*e*P	**Pg**	**15 09 54.6**	**0.0**
	13nm,0.3s						
DJR				*e*S	**Sg**	**15 10 17.3**	**+0.6**
	16nm,0.3s						
KTMS	**Ketmen**	**1.78 226**		*e*P	**Pg**	**15 09 55.8**	**-0.2**
	7.9nm,0.2s						
KTMS				*e*S	**Sg**	**15 10 19.4**	**+0.4**
	53nm,0.3s						
KAPS	**Kapalarasan**	**2.05 288**		*e*P	**Pg**	**15 10 00.5**	**-0.7**
	4.2nm,0.1s						
KAPS				*e*S	**Sg**	**15 10 27.7**	**-0.1**
	20nm,0.3s						
MK31	**Makanchi Array**	**2.11 3**		Pn	**Pb**	**15 10 00.2**	**0.0**
	11nm,0.2s,baz=183,slow=14,SNR=529						
MK31				⇓Lg	Lg	15 10 28.3	
	5.3nm,0.2s,baz=185,slow=26,SNR=15						
MAKZ	**Makanchi**	**2.12 357**		⇑Pn	**Pb**	**15 10 00.2**	**-0.2**
	11nm,0.5s						
MAKZ				⇑Lg	Lg	15 10 28.2	
	12nm,0.3s						
PDGK	**Podgornoye**	**2.33 235**		⇓Pg	**Pb**	**15 10 03.3**	**-0.8**
	1.6nm,0.3s						
PDGK				⇓Lg	Lg	15 10 36.0	
	33nm,0.4s						
TDK	**Taldyqorghan**	**2.66 278**		Pg	**Pb**	**15 10 11.2**	**+1.6**
	21nm,0.3s						
TDK				Lg	Lg	15 10 45.6	
	66nm,0.3s						
TDK	**Taldyqorghan**	**2.66 278**		*e*P	**Pb**	**15 10 11.2**	**+1.6**
	21nm,0.3s						
TDK				*e*S	**Sg**	**15 10 45.6**	**-1.7**
	66nm,0.3s						
UZB	**Uzynbulak**	**2.72 237**		Pg	**Pb**	**15 10 11.1**	**+0.5**
	2.6nm,0.5s						
UZB				Lg	Lg	15 10 44.7	
	11nm,0.2s						
UZB	**Uzynbulak**	**2.72 237**		*e*P	**Pb**	**15 10 10.7**	**0.0**
	2.6nm,0.5s						
UZB				*e*S	**Sb**	**15 10 44.7**	**+0.6**
	11nm,0.2s						
MNBS	**Baschi**	**2.74 259**		Pg	**Pb**	**15 10 12.3**	**+1.3**
	2.3nm,0.2s						
MNBS				Lg	Lg	15 10 48.1	
	36nm,0.3s						
MNBS	**Baschi**	**2.74 259**		*e*P	**Pb**	**15 10 12.3**	**+1.3**
	2.3nm,0.2s						
MNBS				*e*S	**Sg**	**15 10 48.1**	**-1.7**
	36nm,0.3s						
KPKS	**Kokpek**	**2.76 245**		*e*P	**Pb**	**15 10 11.4**	**0.0**
	6.8nm,0.2s						
KPKS				*e*S	**Sb**	**15 10 45.9**	**+0.6**
	54nm,0.3s						
ARXS	**Arharly**	**3.11 263**		Pg	**Pb**	**15 10 18.5**	**+1.2**
	2.5nm,0.4s						
ARXS				Lg	Lg	15 10 58.6	
	25nm,0.3s						
ARXS	**Arharly**	**3.11 263**		*e*P	**Pb**	**15 10 18.5**	**+1.2**
	2.5nm,0.4s						
ARXS				*e*S	**Sg**	**15 10 58.6**	**-3.2**
	25nm,0.3s						
SATY	**Saty**	**3.14 240**		Pg	**Pb**	**15 10 18.6**	**+0.7**
	3.8nm,0.3s						
SATY				Lg	Lg	15 10 59.1	
	14nm,0.3s						
SATY	**Saty**	**3.14 240**		*e*P	**Pb**	**15 10 18.6**	**+0.7**
	3.8nm,0.3s						
SATY				*e*S	**Sg**	**15 10 59.1**	**-3.6**
	14nm,0.3s						
ZSN	**Zaisan**	**3.36 34**		*e*P	**Pb**	**15 10 21.9**	**+0.4**
	1.1nm,0.2s						
ZSN				*e*S	**Sb**	**15 11 04.3**	**+1.9**
	2.4nm,0.4s						
KOTS	**Kotyrbulak**	**3.90 250**		*e*P	**Pg**	**15 10 36.1**	**-0.5**
	3.5nm,0.5s						
KOTS				*e*S	**Sg**	**15 11 29.4**	**+2.4**
	22nm,0.4s						
KTBS	**Karatobe**	**4.03 258**		*e*P	**Pb**	**15 10 35.5**	**+2.5**
	1.3nm,0.4s						
KTBS				*e*S	**Sg**	**15 11 27.4**	**-3.9**
	12nm,0.3s						
DGS	**Degeres**	**4.81 255**		Pg	**Pb**	**15 10 49.2**	**+3.0**
	1.2nm,0.5s						
DGS				Lg	Lg	15 11 50.9	
	5.5nm,0.5s						
DGS	**Degeres**	**4.81 255**		*e*P	**Pb**	**15 10 49.2**	**+3.0**
	1.2nm,0.5s						
DGS				*e*S	**Sg**	**15 11 50.9**	**-5.3**
	5.5nm,0.5s						
TKM2	**Tokmak 2**	**5.04 252**		⇓Pg	**Pb**	**15 10 52.3**	**+2.0**
	2.1nm,1.4s						
TKM2				⇓Lg	Lg	15 11 59.1	
	2.0nm,0.5s						

*IDC **04** 15:14:13.7±1.4, 27°.45N×98°.14E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.2/49, mbtmp3.4/4, ML3.6/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/27, Error ellipse: s-maj=115.0km s-min=22.6km az=65.0*
*ISCJB **04** 15:14:16.8±1.0, 26°.98N±0°.07×96°.45E±0°.07, h35km, mb3.3/3, MS3.5/1, Error ellipse: s-maj=10.9km s-min=8.7km az=26.3*
*NDI **04** 15:14:17.7±2.5, 26°.91N×96°.57E, h30km, ML3.7*
ISC 04 15:14:18.4±1.3, 26°.85N±0°.08×96°.48E±0°.09, h35km, n23, σ2 06/30, mb3.3/3, 1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOKO	**MOKOCHONG**	**1.84 254**		*e*P	**Pn**	**15 14 50.6**	**+2.9**
MOKO				*e*S	**Sn**	**15 15 13.1**	**+3.3**
MOKO				IAML		15 15 16.5	
	comp=E,807nm,0.4s						
MOKO				IAML		15 15 17.0	
	comp=N,955nm,0.2s						
JORH	**JORHAT**	**2.00 267**		*e*P	**Pn**	**15 14 51.1**	**+1.4**
JORH				*e*S	**Sn**	**15 15 14.4**	**+1.0**
JORH				IAML		15 15 17.1	
	comp=N,236nm,0.1s						
JORH				IAML		15 15 17.9	
	comp=E,312nm,0.2s						
KOHI	**KOHIMA**	**2.41 243**		*e*P	**Pn**	**15 14 57.1**	**+1.6**
KOHI				*e*S	**Sn**	**15 15 24.8**	**+0.9**
KOHI				IAML		15 15 34.9	
	comp=N,378nm,0.4s						
KOHI				IAML		15 15 39.0	
	comp=E,321nm,0.4s						
ZIRO	**ZIRO**	**2.44 287**		*e*P	**Pn**	**15 14 58.4**	**+2.4**
ZIRO				*e*S	**Sn**	**15 15 24.6**	**-0.1**
ZIRO				IAML		15 15 28.7	
	comp=E,2μm,0.3s						
ZIRO				IAML		15 15 30.5	
	comp=N,2μm,0.3s						
TEZP	**TEZPUR**	**3.30 267**		*e*P	**Pn**	**15 15 09.0**	**+1.4**
TAWA	**Tawang**	**4.18 281**		*e*P	**Pn**	**15 15 21.2**	**+1.2**
TAWA				*e*S	**Sn**	**15 16 05.2**	**-2.5**
TAWA				IAML		15 16 10.8	
	comp=E,390nm,0.1s						
TAWA				IAML		15 16 11.0	
	comp=N,381nm,0.1s						
SHL	**Shillong**	**4.33 254**		⇓*i*P	**Pn**	**15 15 22.0**	**+0.1**
SHL				*e*P		15 15 22.2	
SHL				*i* S	**Sn**	**15 16 10.0**	**-1.2**
SAIH	**SAIHA**	**5.38 217**		*e*P	**Pn**	**15 15 36.9**	**+0.5**
SAIH				*e*S	**Sn**	**15 16 34.5**	**-2.7**
SAIH				IAML		15 16 38.2	
	comp=N,78nm,0.5s						
SAIH				IAML		15 16 38.6	
	comp=E,73nm,0.4s						
ODAN	**Odare**	**8.12 272**		*e*P	**Pn**	**15 16 14.9**	**+0.8**
	comp=E,40nm,0.5s						
CMAR	**Chiang Mai Arr**	**8.66 164**		Pn	**Pn**	**15 16 24.7**	**+3.5**
	comp=E,0.2nm,0.3s,baz=335,slow=12,SNR=23						
RAMN	**Ramite**	**8.82 273**		*e*P	**Pn**	**15 16 24.4**	**+0.7**
	comp=E,45nm,0.4s						
JIRN	**Jiri**	**9.20 277**		*e*P	**Pn**	**15 16 28.5**	**-0.4**
	comp=E,52nm,0.3s						
JIRN				*e*S	**Sn**	**15 18 06.5**	**-4.9**
GUN	**Gumba**	**9.49 279**		*e*P	**Pn**	**15 16 32.9**	**0.0**
	comp=E,76nm,0.3s						
PKI	**Pulchoki**	**9.89 277**		*e*P	**Pn**	**15 16 37.9**	**-0.5**
	comp=E,26nm,0.2s						
PKIN	**Phulchoki**	**9.90 277**		*e*P	**Pn**	**15 16 38.1**	**-0.4**
	comp=E,22nm,0.2s						
KKN	**Kakani**	**10.01 278**		*e*P	**Pn**	**15 16 39.0**	**-0.9**
	comp=E,42nm,0.3s						
DMN	**Daman**	**10.16 277**		*e*P	**Pn**	**15 16 41.5**	**-0.5**
	comp=E,19nm,0.4s						
KOLN	**Koldanda**	**11.49 277**		*e*P	**Pn**	**15 16 58.6**	**-1.7**
	comp=E,16nm,0.2s						
PYUN	**Piuthan**	**12.05 279**		*e*P	**Pn**	**15 17 04.9**	**-2.9**
	comp=E,23nm,0.3s						
PYUN				*e*S	Sn	15 19 11.3	-10
MKAR	**Makanchi Array**	**22.85 334**		P	**P**	**15 19 21.2**	**+2.7**
	comp=E,0.9nm,0.8s,baz=138,slow=9.7,SNR=5.9						
KURBB	**Kurchatov Arra**	**27.41 335**		P	**P**	**15 20 01.1**	**+0.6**
	comp=E,0.2nm,0.5s,baz=150,slow=9.2,SNR=3.1						
USRK	**Ussuriysk Ar.**	**33.36 49**		LR	LR	15 34 51.9	
	comp=E,94nm,18.7s,baz=323,slow=39						
ASAR	**Alice Springs**	**61.89 141**		P	**P**	**15 24 32.1**	**-2.4**
	comp=E,0.3nm,0.4s,baz=324,slow=6.3,SNR=5.2						

ANF 04 15:20:09.1±0.2, 38°.06N×81°.69W, h1km±1km, ML2.5/46, Error ellipse: s-maj=1.3km s-min=1.0km az=43.0, West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R53A	**Hurricane**	**0.34 323**		P	Pg	15 20 16.4	+0.7
	baz=143,SNR=77						
R53A				S	Sg	15 20 21.3	+1.2
	baz=143						
S54A	**Dingess, Beckl**	**0.40 130**		P	Pg	15 20 17.2	+0.5
	baz=311,SNR=7.8						
S54A				S	Sg	15 20 22.1	+0.3
	baz=311						
S53A	**Williamson**	**0.51 223**		P	Pg	15 20 19.0	+0.2
	baz=42						
S53A				S	Sg	15 20 26.0	+0.6
	baz=42						
R54A	**Victor**	**0.57 77**		P	Pg	15 20 19.8	-0.2
	baz=258,SNR=12						
R54A				S	Sg	15 20 27.7	+0.4
	baz=258						
R52A	**Catlettsburg**	**0.80 291**		P	Pg	15 20 24.5	+0.1
	baz=110						
R52A				S	Sg	15 20 35.3	+0.4
	baz=110						
Q53A	**Leroy**	**0.81 9**		P	Pg	15 20 24.5	-0.2
	baz=189,SNR=20						
Q53A				S	Sg	15 20 35.8	+0.6
	baz=189						
S55A	**Lewisburg**	**0.98 106**		Pb	Pb	15 20 28.9	0.0
	baz=287						
S55A				S	Sg	15 20 40.9	+0.2
	baz=287						
Q52A	**Bidwell**	**1.01 334**		P	Pg	15 20 27.7	-0.7
	baz=153,SNR=14						
Q54A	**Coxs Mills**	**1.14 36**		P	Pg	15 20 30.8	-0.2
	baz=216,SNR=15						
S52A	**Salyersville**	**1.16 251**		P	Pg	15 20 30.

P51A			S	Sb	15 21 05.3	0.0
	baz=143					
U53A	**Fall Branch**	**1.83 203**	P	Pn	15 20 41.9	+0.1
	baz=22,SNR=12					
U53A			Sb	Sg	15 21 08.5	+0.5
	baz=22					
Q50A	**Georgetown**	**1.96 294**	P	Pn	15 20 43.6	+0.1
	baz=113,SNR=9.8					
U56A	**King**	**2.00 148**	Pb	Pb	15 20 46.2	-0.1
	baz=329					
U56A			Sb	Sg	15 21 13.2	-0.2
	baz=329					
P55A	**Reedsville**	**2.05 45**	P	Pn	15 20 44.7	-0.1
	baz=226					
O52A	**Adamsville**	**2.06 357**	P	Pn	15 20 45.2	+0.4
	baz=177					
O52A			Sb	Sg	15 21 14.7	-0.5
	baz=177					
R50A	**Paris**	**2.09 277**	P	Pn	15 20 45.2	0.0
	baz=95,SNR=7.0					
R50A			Sb	Sg	15 21 15.8	-0.4
	baz=95					
T51A	**Gray**	**2.10 239**	P	Pn	15 20 45.4	+0.1
	baz=58,SNR=9.0					
TZTN	**Tazewell**	**2.12 225**	P	Pn	15 20 45.8	+0.2
	baz=44,SNR=11					
TZTN			Sb	Sg	15 21 16.9	-0.1
	baz=44					
U52A	**Thorn Hill**	**2.13 219**	P	Pn	15 20 47.1	+1.3
	baz=38,SNR=12					
U52A			Sb	Sg	15 21 17.3	-0.3
	baz=38					
S50A	**Richmond**	**2.18 261**	P	Pn	15 20 46.8	+0.3
	baz=79,SNR=5.5					
S57A	**Dark Hollow, R**	**2.19 97**	P	Pn	15 20 47.4	+0.9
	baz=279,SNR=14					
T57A	**Hurt**	**2.21 118**	P	Pn	15 20 48.1	+1.2
	baz=300					
O53A	**New Philadelph**	**2.22 9**	P	Pn	15 20 47.8	+0.7
	baz=190,SNR=13					
O53A			S	Sn	15 21 16.3	+1.1
	baz=190					
V55A	**Taylorsville**	**2.23 170**	P	Pn	15 20 47.9	+0.7
	baz=350					
P50A	**Jamestown**	**2.26 314**	P	Pn	15 20 48.6	+1.0
	baz=133,SNR=9.0					
V54A	**Nebo**	**2.29 185**	P	Pn	15 20 48.8	+0.8
	baz=5.1					
V56A	**Mocksville**	**2.44 157**	P	Pn	15 20 51.4	+1.4
	baz=337					
U51A	**La Follette**	**2.50 229**	P	Pn	15 20 51.6	+0.7
	baz=47,SNR=7.4					
R57A	**Stanardsville**	**2.51 84**	P	Pn	15 20 52.1	+1.1
	baz=266					
V53A	**Saluda**	**2.55 201**	P	Pn	15 20 52.3	+0.7
	baz=20,SNR=13					
O50A	**Cable**	**2.57 325**	P	Pn	15 20 52.3	+0.5
	baz=144,SNR=8.9					
T50A	**Nancy**	**2.71 248**	P	Pn	15 20 54.2	+0.4
	baz=66					
MONP2	**Monument Peak**	**28.64 270**	P	P	15 26 07.9	+0.5
	baz=70,SNR=10					

*ISCJB **04** 15:24:49.0±0.3, 59°.82N±0°.03×22°.29E±0°.04, h0km, Error ellipse: s-maj=4.5km s-min=2.5km az=172.4*
*NAO **04** 15:24:49.6±0.8, 59°.76N×22°.34E, ML2.0*
*EST **04** 15:24:50.4±0.1, 59°.80N×22°.26E, h0km, ML2.0(HEL), Explosion*
*IDC **04** 15:24:50.7±2.1, 59°.84N×22°.44E, h0km, mb1 2.5/3, mb1mx2.4/40, mbtmp2.5/3, ML2.1/4, Error ellipse: s-maj=31.8km s-min=6.7km az=159.0*
*HEL **04** 15:24:50.4±0.2, 59°.80N×22°.26E, h0km, ML2.1, Explosion*
*BER **04** 15:24:50.9±4.1, 59°.84N×22°.32E, h0km, ML2.0(NAO), Suspected explosion*
*UPP **04** 15:24:51.4±1.1, 59°.84N×22°.10E, h0km, ML2.1, Suspected explosion*

ISC 04 15:24:49.5±0.7, 59°.86N±0°.03×22°.37E±0°.02, h0km, n41, σ1§31/65, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.08**	**70**	*e*P	**Pb**	**15 25 10.6**	**-0.4**
MEF				*e*S	**Sb**	**15 25 25.5**	**-0.1**
RAF	**Rauma**	**1.20**	**346**	*e*P	**Pg**	**15 25 12.6**	**+0.1**
RAF				*e*SB	**Sb**	**15 25 29.4**	**+0.1**
RAF				MSG		15 25 29.9	
	comp=Z,13nm,0.1s						
AAL	**Aland**	**1.24**	**286**	P	**Pg**	**15 25 12.0**	**-1.2**
AAL				S	**Sg**	**15 25 27.3**	**-1.8**
AAL	**Aland**	**1.24**	**286**	*e*P	**Pg**	**15 25 12.0**	**-1.2**
AAL				*e*S	**Sg**	**15 25 27.2**	**-1.9**
NUR	**Nurmijrvi**	**1.31**	**59**	*e*P	**Pg**	**15 25 14.1**	**-0.5**
NUR				*e*S	**Sn**	**15 25 32.7**	**-0.5**
MTSE	**Matsula**	**1.37**	**147**	*e*P	**Pg**	**15 25 14.6**	**-1.1**
MTSE				*e*SB	**Sg**	**15 25 32.7**	**-0.6**
PVF	**Pernaja**	**1.87**	**67**	*e*P	**Pb**	**15 25 24.6**	**+0.1**
PVF				*e*S	**Sg**	**15 25 49.8**	**+0.2**
PVF				MSG		15 25 52.0	
	comp=Z,11nm,0.1s						
ARBE	**Arbavere**	**1.88**	**102**	*e*P	**Pb**	**15 25 24.5**	**-0.2**
ARBE				*e*SG	**Sg**	**15 25 49.8**	**-0.1**
NRTU	**Norrtaelje**	**1.90**	**266**	P	**Pn**	**15 25 22.9**	**-0.2**
NRTU				S	**Sn**	**15 25 47.7**	**-0.1**
GRAU	**Graesoe**	**1.98**	**286**	P	**Pn**	**15 25 24.0**	**-0.2**
GRAU				S	**Sn**	**15 25 50.3**	**+0.7**
FORU	**Forsmark**	**2.16**	**286**	P	**Pn**	**15 25 27.6**	**+0.9**
FLYU	**Flymyra**	**2.27**	**279**	P	**Pn**	**15 25 28.9**	**+0.7**
NYNU	**Nynaeshamn**	**2.39**	**251**	P	**Pn**	**15 25 30.2**	**+0.3**
FIA0	**FINESS Array S**	**2.42**	**47**	Pn	**Pb**	**15 25 33.2**	**-0.5**
	baz=223,slow=14						
FIA0				Lg	Lg	15 26 05.5	
	baz=235,slow=28						
FIA0	**FINESS Array S**	**2.42**	**47**	Pn	**Pb**	**15 25 33.2**	**-0.5**
	baz=223,slow=14						
FIA0				Sg	**Sg**	**15 26 05.5**	**-1.7**
	baz=235,slow=28						
FIA0	**FINESS Array S**	**2.42**	**47**	*e*PB	**Pb**	**15 25 33.3**	**-0.5**
FIA0				*e*SB	**Sg**	**15 26 06.1**	**-1.0**
FIA0				MSG		15 26 07.4	
	comp=Z,6.1nm,0.1s						
FINES	**FINESS Array B**	**2.42**	**47**	Pn	**Pb**	**15 25 33.3**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=229,slow=14,SNR=74						
FINES				Lg	Lg	15 26 05.6	
	comp=Z,3.3nm,0.3s,baz=249,slow=30,SNR=30						
FIA1	**FINESS Array S**	**2.42**	**47**	*e*PB	**Pb**	**15 25 33.6**	**-0.2**
FIA1				*e*SB	**Sg**	**15 26 06.1**	**-1.0**
FIA1				MSG		15 26 07.4	
	comp=Z,5.5nm,0.1s						
FIBU	**Brunna**	**2.53**	**273**	P	**Pn**	**15 25 32.5**	**+0.7**
KEF	**Keuruu**	**2.61**	**27**	*e*PB	**Pb**	**15 25 37.3**	**+0.1**
KEF				*e*SB	**Sg**	**15 26 11.7**	**-1.7**
KEF				MSG		15 26 14.0	
	comp=Z,5.8nm,0.1s						
VSU	**Vasula**	**2.65**	**120**	Pn	**Pn**	**15 25 33.6**	**+0.2**
VSU				Lg	Lg	15 26 12.2	
VSU	**Vasula**	**2.65**	**120**	Pn	**Pn**	**15 25 33.6**	**+0.2**
VSU				Sg	**Sb**	**15 26 12.2**	**+1.5**
VSU	**Vasula**	**2.65**	**120**	*e*P	**Pn**	**15 25 33.6**	**+0.2**
OSTU	**Oestervaala**	**2.65**	**280**	P	**Pn**	**15 25 33.8**	**+0.4**
BACU	**Backbrunna**	**2.66**	**272**	P	**Pn**	**15 25 34.0**	**+0.6**
VJF	**Virojoki**	**2.68**	**73**	*e*P	**Pn**	**15 25 35.4**	**+1.7**
IGGU	**Iggoen**	**2.71**	**294**	P	**Pn**	**15 25 34.8**	**+0.6**
SUF	**Sumiainen**	**3.40**	**31**	*e*P	**Pn**	**15 25 46.5**	**+2.8**
HFS	**Hagfors**	**4.37**	**277**	Pn	**Pn**	**15 25 56.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=93,slow=14,SNR=8.6						
HFS				Pg	**Pb**	**15 26 07.3**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=93,slow=16,SNR=6.8						
HFS				Sn	**Sn**	**15 26 48.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=80,slow=25,SNR=4.3						
HFS				Lg	Lg	15 27 01.2	
	comp=Z,0.6nm,0.3s,baz=86,slow=39,SNR=7.2						
HFS	**Hagfors**	**4.37**	**277**	Pn	**Pn**	**15 25 57.0**	**0.0**
	baz=102,slow=10						
HFS				Sn	**Sn**	**15 26 47.4**	**-1.1**
	baz=84,slow=22						
HFS				Lg	Lg	15 27 02.5	
	baz=98,slow=37						
HFS	**Hagfors**	**4.37**	**277**	Pn	**Pn**	**15 25 57.0**	**0.0**
	baz=102,slow=10						
HFS				Sn	**Sn**	**15 26 47.4**	**-1.1**
	baz=84,slow=22						
HFS				Sg	**Sb**	**15 27 02.5**	**+2.4**
	baz=98,slow=37						

JOF	**Joensuu**	**5.28**	**51**	*e*P	**Pn**	**15 26 11.0**	**+1.5**
NRA0	**NORESS Array S**	**5.46**	**284**	Pn	**Pn**	**15 26 12.1**	**+0.1**
	baz=87,slow=11						
NRA0				Sn	**Sn**	**15 27 12.8**	**-2.6**
	baz=99,slow=22						
NRA0				Lg	Lg	15 27 37.8	
NRA0	**NORESS Array S**	**5.46**	**284**	Pn	**Pn**	**15 26 12.1**	**+0.1**
	baz=87,slow=11						
NRA0				Sn	**Sn**	**15 27 12.8**	**-2.6**
	baz=99,slow=22						
NRA0				Sg	**Sb**	**15 27 37.8**	**+6.3**
	baz=94,slow=28						
NB2	**NORSAR Subarra**	**5.65**	**287**	Pn	**Pn**	**15 26 14.7**	**+0.1**
	baz=95,slow=14						
NB2	**NORSAR Subarra**	**5.65**	**287**	Pn	**Pn**	**15 26 14.7**	**+0.1**
	baz=95,slow=14						
NOA	**NORSAR Array B**	**5.65**	**287**	Pn	**Pn**	**15 26 14.7**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=76,slow=7.8,SNR=3.2						
NOA				Sn	**Sn**	**15 27 21.6**	**+1.4**
	comp=Z,0.0nm,0.3s,baz=44,slow=26,SNR=2.2						
NOA				Lg	Lg	15 27 48.7	
	comp=Z,0.0nm,0.3s,baz=47,slow=26,SNR=2.9						
TOF	**Tornio**	**6.31**	**7**	*e*P	**Pn**	**15 26 25.4**	**+1.8**
ARA0	**ARCESS Array S**	**9.80**	**6**	Pn	**Pn**	**15 27 11.6**	**+0.1**
	baz=192,slow=16						
ARA0	**ARCESS Array S**	**9.80**	**6**	Pn	**Pn**	**15 27 11.6**	**+0.1**
	baz=192,slow=16						
ARCES	**ARCESS Array B**	**9.80**	**6**	Pn	**Pn**	**15 27 10.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=196,slow=12,SNR=5.1						

MAN 04 15:25:36.3, 7°.44N×124°.68E, h29km, mb4.4, ML3.2, MS3.0, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.48**	**243**	⇓*i*P	Pn	15 25 47.4	+0.1
BUKP	**Musuan**	**0.58**	**41**	*e*P	Pb	15 25 47.3	-0.7
BUKP				*e*S	Sn	15 25 58.4	+1.3
BUKP	**Musuan**	**0.58**	**41**	*e*P	Pn	15 25 48.6	0.0
BUKP				*e*S	Sn	15 25 58.4	+1.2
DMPH	**Davao City--Mi**	**0.90**	**113**	⇑*e*P	Pb	15 26 01.7	+8.4
DDMP	**Don Marcelino,**	**1.68**	**142**	*e*P	Pn	15 26 03.9	+0.2
DDMP				*e*S	Sb	15 26 31.4	+4.1
DDMP	**Don Marcelino,**	**1.68**	**142**	*e*P	Pn	15 26 04.2	+0.5
DDMP				*e*S	Sb	15 26 31.9	+4.6

MEX 04 15:28:07.4±0.3, 17°.93N×103°.14W, h2km, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.41**	**331**	*e*P	Pg	15 28 15.0	-0.3
MMIG				*e*S	Sg	15 28 20.9	+0.3
EZ5V		**1.61**	**344**	*e*P	Pn	15 28 33.6	-3.5
EZ5V				*i* S	Sn	15 28 53.7	-4.8

IDC 04 15:35:41.1±3.8, 22°.72S×131°.69E, h0km, mb1 3.5/2, mb1mx3.2/17, mbtmp3.5/2, ML3.9/3, Error ellipse: s-maj=31.7km s-min=17.8km az=72.0, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**2.24**	**115**	Pn	Pb	15 36 21.6	-0.9
	5.1nm,0.3s,baz=294,slow=13,SNR=134						
ASAR				Lg	Lg	15 36 50.9	
	16nm,0.3s,baz=304,slow=30,SNR=22						
WRA	**Warramunga Arr**	**3.70**	**42**	Pn	Pn	15 36 39.4	-0.3
	22nm,0.3s,baz=218,slow=16,SNR=1.6						
WRA				Pg	Pb	15 36 49.5	+2.0
	22nm,0.3s,baz=220,slow=16,SNR=1.7						
WRA				Sn	Sn	15 37 25.7	+1.6
	54nm,0.3s,baz=229,slow=22,SNR=1.9						
WRA				Lg	Lg	15 37 38.2	
	68nm,0.3s,baz=225,slow=28,SNR=2.2						
STKA	**Stephens Creek**	**12.67**	**138**	Pn	Pn	15 38 40.6	-2.0
	0.3nm,0.3s,baz=320,slow=12,SNR=9.4						
STKA				Sn	Sn	15 40 56.4	-8.1
	0.4nm,0.3s,baz=204,slow=4.3,SNR=5.4						

TRN 04 16:06:32.3, 10°.45N×62°.61W, h8km, MD3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**1.15**	**97**	*e*P	Pb	16 06 54.5	+0.1
TPP				*e*S	Sn	16 07 11.3	+0.6
TRN	**Trinidad (W)**	**1.21**	**81**	*e*P	Pb	16 06 55.0	-0.4
TRN				*e*S	Sn	16 07 12.5	+0.5
GRGR	**Grenville**	**1.92**	**29**	*e*P	Pn	16 07 06.0	+0.7
GRGR				*e*S	Sn	16 07 29.6	-0.1
GRHS	**Sauteurs**	**2.00**	**28**	*e*P	Pn	16 07 06.6	+0.1
GRHS				*e*S	Sn	16 07 31.7	0.0
GRSS	**Sisters**	**2.08**	**28**	*e*P	Pn	16 07 07.9	+0.4
GRSS				*e*S	Sb	16 07 35.4	-0.9
TOSP	**Speyside**	**2.21**	**67**	*e*P	Pn	16 07 10.3	+1.1
TOSP				*e*S	Sn	16 07 38.0	+1.2
FCV	**Fort Charlotte**	**3.00**	**26**	*e*P	Pn	16 07 20.5	+0.3
FCV				*e*S	Sn	16 07 55.9	-0.6
SVB	**Belmont**	**3.10**	**25**	*e*P	Pn	16 07 22.6	+1.0
SVB				*e*S	Sn	16 07 58.1	-0.9
SVCV	**St. Vincent, C**	**3.15**	**27**	*e*P	Pn	16 07 23.2	+1.0
SVCV				*e*S	Sn	16 07 59.3	-0.7
SVV	**Soufriere Volc**	**3.16**	**26**	*e*P	Pn	16 07 23.3	+0.9
SVV				*e*S	Sn	16 07 59.7	-0.6
SSV	**Crater Summit**	**3.18**	**26**	*e*	Pn	16 07 23.2	+0.5
MCLT	**Moule a Chique**	**3.63**	**27**	*e*P	Pn	16 07 29.8	+1.0
MCLT				*e*S	Sn	16 08 11.4	-0.4
SLB	**Belfond**	**3.69**	**24**	*e*P	Pn	16 07 30.2	+0.5
SLB				*e*S	Sn	16 08 13.2	-0.3
SLBI	**Saint Lucia, B**	**3.89**	**24**	*e*P	Pn	16 07 32.9	+0.5
SLBI	**Saint Lucia, B**	**3.89**	**24**	*e*S	Sn	16 08 18.3	-0.1
SLW	**Petit Monier**	**3.91**	**25**	*e*S	Sn	16 08 18.6	-0.2

*TIF **04** 16:08:00.1, 42°.36N×40°.98E, h26km±3km*
*DDA **04** 16:08:01.7, 42°.03N×40°.67E, h7km±5km, ML2.8*

ISC 04 16:07:59.1±5.1, 42°.5N±0°.1×40°.9E±0°.2, h21km±9km, n6, σ0§48/11, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	**Batumi**	**1.03**	**145**	P	**Pb**	**16 08 18.6**	**+0.4**
BATM				S	**Sn**	**16 08 32.0**	**-0.1**
DBOC	**Borcka**	**1.24**	**153**	*i* P	**Pb**	**16 08 21.8**	**-0.1**
DBOC				*i* S	**Sb**	**16 08 37.8**	**+0.4**
DBOC				IAML_P			
	comp=Z,619nm,0.1s						
DBAD	**Bademkaya**	**1.55**	**157**	*i* P	**Pb**	**16 08 27.0**	**-0.1**
DBAD				IAML_P			
	comp=Z,453nm,0.1s						
TKB	**Tkibuli**	**1.55**	**93**	P	**Pb**	**16 08 27.2**	**+0.1**
TKB				S	**Sb**	**16 08 46.0**	**-0.3**
DAGI	**Agillar**	**1.56**	**151**	*i* P	**Pb**	**16 08 27.7**	**+0.3**
DAGI				*i* S	**Sb**	**16 08 45.9**	**-0.9**
ONI	**Oni**	**1.89**	**85**	P	**Pb**	**16 08 32.7**	**-0.2**
ONI				S	**Sb**	**16 08 56.5**	**+0.4**

*SOME **04** 16:08:16.3, 40°.42N×78°.07E, h5km*
*KRNET **04** 16:08:18.2±0.1, 40°.52N×78°.17E, mb2.7*

ISC 04 16:08:22.7±2.1, 40°.7N±0°.1×78°.10E±0°.05, h10km, n19, σ1§48/38, 8C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.11**	**319**	⇑*i*P	**Pb**	**16 08 59.0**	**-2.2**
	baz=20						
ULHL				⇑*i*S	**Sb**	**16 09 28.7**	**+1.2**
	baz=20						
BOOM	**Boomskoye usch**	**2.44**	**319**	⇓*i*P	**Pn**	**16 09 03.3**	**+0.5**
	baz=20						
BOOM				⇓*i*S	**Sb**	**16 09 36.7**	**-0.3**
	baz=20						
TNSS	**Tian-Shan**	**2.52**	**340**	*e*P	**Pb**	**16 09 07.6**	**-0.8**
	7.9nm,0.4s						
TNSS				*e*S	**Sg**	**16 09 44.6**	**+0.8**
	6.9nm,0.3s						
KZA	**Kyzart**	**2.57**	**304**	⇑*i*P	**Pn**	**16 09 04.9**	**+0.1**
	baz=6.0						
KZA				⇑*i*S	**Sb**	**16 09 39.7**	**-1.2**
	baz=6.0						
UZB	**Uzynbulak**	**2.58**	**15**	*e*P	**Pb**	**16 09 08.4**	**-0.7**
	4.0nm,0.5s						
UZB				*e*S	**Sg**	**16 09 46.0**	**+0.6**
	4.7nm,0.5s						
IZV	**Izvestkoviy**	**2.62**	**335**	*e*P	**Pb**	**16 09 08.9**	**-1.0**
	6.3nm,0.6s						
IZV				*e*S	**Sg**	**16 09 46.7**	**-0.2**
	12nm,0.3s						
KOTS	**Kotyrbulak**	**2.67**	**344**	*e*P	**Pb**	**16 09 10.2**	**-0.5**
	3.4nm,0.3s						
KOTS				*e*S	**Sg**	**16 09 49.0**	**+0.4**
	17nm,0.6s						
KPKS	**Kokpek**	**2.83**	**9**	*e*P	**Pb**	**16 09 13.2**	**-0.3**
	18nm,0.3s						
KPKS				*e*S	**Sg**	**16 09 53.8**	**0.0**
	14nm,0.4s						
PDGK	**Podgornoye**	**2.86**	**21**	⇑*i*P	**Pn**	**16 09 09.0**	**+0.5**
	baz=19						
PDGK				⇑*i*S	**Sb**	**16 09 46.0**	**-3.0**
	baz=19						
KST	**Kastek**	**2.86**	**327**	*e*P	**Pb**	**16 09 12.8**	**-1.3**
	7.9nm,0.3s						
KST				*e*S	**Sg**	**16 09 53.1**	**-1.7**
	8.0nm,0.5s						
ARLS	**Aral**	**3.09**	**294**	⇑*e*P	**Pn**	**16 09 12.0**	**+0.3**
	baz=96						
ARLS				⇑*i*S	**Sn**	**16 09 51.1**	**+2.3**
	baz=96						
KBK	**Karagaybulak**	**3.09**	**311**	⇓*i*P	**Pn**	**16 09 12.5**	**+0.8**
	baz=12						
KBK				⇓*i*S	**Sb**	**16 09 51.9**	**-3.8**
	baz=12						
DGS	**Degeres**	**3.11**	**327**	*e*P	**Pb**	**16 09 17.0**	**-1.2**
	4.2nm,0.4s						
DGS				*e*S	**Sg**	**16 10 00.7**	**-1.8**
	9.9nm,0.6s						
UCH	**Uchtor**	**3.12**	**301**	⇓*i*P	**Pn**	**16 09 13.0**	**+0.6**
	baz=3.0						
UCH				⇓*i*S	**Sn**	**16 09 52.8**	**+2.9**
	baz=3.0						
KTBS	**Karatobe**	**3.22**	**341**	*e*P	**Pb**	**16 09 19.8**	**-0.3**
	2.0nm,0.4s						
KTBS				*e*S	**Sg**	**16 10 05.5**	**-0.7**
	5.4nm,0.5s						
KTMS	**Ketmen**	**3.25**	**30**	*e*P	**Pb**	**16 09 19.6**	**-1.0**
	1.1nm,0.2s						
KTMS				*e*S	**Sg**	**16 10 05.5**	**-1.5**
	5.4nm,0.5s						
AAK	**Ala-Archa**	**3.34**	**307**	⇓*e*P	**Pn**	**16 09 16.1**	**+0.9**
	baz=9.0						
AAK				⇓*i*S	**Sn**	**16 09 58.2**	**+3.1**
	baz=9.0						
MNBS	**Baschi**	**3.42**	**4**	*e*P	**Pb**	**16 09 24.5**	**+1.0**
	2.4nm,0.5s						
MNBS				*e*S	**Sg**	**16 10 13.7**	**+1.1**
	4.8nm,0.4s						
ARXS	**Arharly**	**3.55**	**357**	*e*P	**Pb**	**16 09 26.1**	**+0.4**
	2.3nm,0.5s						
ARXS				*e*S	**Sg**	**16 10 16.1**	**-0.7**
	8.8nm,0.7s						

JMA 04 16:15:22.1, 34°.92N×137°.32E, h37km, M2.8, 2C-1D Broadband fault plane solution: P waves. NP1: ϕ_s338.00000°, δ75.00000°, λ-115.00000°. NP2: ϕ_s220.00000°, δ29.00000°, λ-32.00000°. Principal axes: T Plg26.0000°, Azm88.0000°; N Plg24.0000°, Azm345.0000°; P Plg53.0000°, Azm218.0000°; Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSSY	**Shinshiroyabe**	**0.15**	**92**	P	Pn	16 15 28.3	-4.7
JSSY				S	Sn	16 15 32.9	-11
JAA	**Atsumi**	**0.32**	**207**	⇑P	Pn	16 15 30.4	+0.1
JAA				S	Sn	16 15 36.2	-1.0
TK04	**Tokai 4**	**0.70**	**139**	⇑P	Pn	16 15 35.6	+0.2
JIE	**Ise**	**0.73**	**224**	⇓P	Pn	16 15 35.8	-0.1
JIE				S	Sn	16 15 46.3	+0.5
SHZ3	**Shizuoka 3**	**0.74**	**78**	P	Pn	16 15 35.9	-0.2
TSUJ	**Tsu 2**	**0.77**	**254**	P	Pn	16 15 36.7	+0.3
TSUJ				S	Sn	16 15 47.3	+0.6
JYTA	**Yamagatataniai**	**0.82**	**325**	P	Pn	16 15 37.5	+0.3
JYTA				S	Sn	16 15 48.5	+0.3
TK02	**Tokai 2**	**1.04**	**159**	P	Pn	16 15 39.4	-0.5
TK02				S	Sn	16 15 52.4	-0.6
MAT	**Matsushiro**	**1.77**	**24**	P	Pn	16 15 51.9	+1.7
MAT				S	Sn	16 16 14.5	+3.0

*NEIC **04** 16:17:23.1±0.4, 24°.33S×66°.93W, h164km±3km, mb4.4/50, ML4.9(GUC) Error ellipse: s-maj=6.9km s-min=3.8km az=84.0*
*ISCJB **04** 16:17:23.6±0.2, 24°.30S±0°.02×67°.12W±0°.02, h183km±2km, mb4.3/58, Error ellipse: s-maj=3.7km s-min=2.5km az=148.0*
*SJA **04** 16:17:23.8±1.1, 24°.32S×67°.16W, h193km±7km, ML4.1, MW3.3, Fault plane solution: NP1:ϕ_s12.50000°, δ37.60000°, λ-81.30000°.*
*IDC **04** 16:17:24.5±0.9, 24°.22S×66°.95W, h174km±8km, mb3.8/11, mb1 4.0/18, mb1mx3.9/27, mbtmp4.3/18, Error ellipse: s-maj=14.1km s-min=11.4km az=50.0*
*VAO **04** 16:17:24.9±0.4, 24°.32S×67°.10W, h187km±5km, mb4.4*
*GUC **04** 16:17:25.8±0.6, 24°.25S×67°.48W, h220km±7km, ML5.0*

ISC 04 16:17:24.4±0.6, 24°.30S±0°.04×67°.18W±0°.03, h178km±5km, n191, σ1§55/242, mb4.3/58, 39C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.59**	**106**	⇑*i*P	**Pn**	**16 17 58.8**	**+1.6**
SLA				IAML		16 18 00.7	
	comp=Z,2μm,0.7s						
SLA				*i* S	**Sn**	**16 18 24.0**	**+1.4**
AZAP	**Zapla**	**1.93**	**88**	⇑*e*P	**Pn**	**16 18 01.7**	**+0.8**
AZAP				*e*S	**Sn**	**16 18 29.9**	**+0.8**
HJA	**Humahuaca**	**1.96**	**57**	⇑*e*P	**Pn**	**16 18 02.5**	**+1.2**
HJA				*i* S	**Sn**	**16 18 33.5**	**+3.7**
FSA	**Cafayete**	**2.11**	**149**	⇑*e*P	**Pn**	**16 18 03.8**	**+1.1**
FSA				IAML		16 18 04.6	
	comp=Z,133nm,0.3s						
FSA				*i* S	**Sn**	**16 18 32.8**	**+0.3**
LVC	**Limon Verde**	**2.31**	**316**	P	**Pn**	**16 18 07.0**	**+1.7**
	comp=Z,332nm,0.3s,baz=121,slow=7.9,SNR=1204						
LVC				S	**Sn**	**16 18 38.4**	**+1.6**
	comp=Z,210nm,0.3s,baz=310,slow=19,SNR=17						
LVC	**Limon Verde**	**2.31**	**316**	*e*Pn	**Pn**	**16 18 06.8**	**+1.6**
LVC				*e*Sn	**Sn**	**16 18 38.0**	**+1.2**
LVC	**Limon Verde**	**2.31**	**316**	⇑*e*P	**Pn**	**16 18 07.2**	**+2.0**
LVC				*e*S	**Sn**	**16 18 38.8**	**+1.9**
LVC	**Limon Verde**	**2.31**	**316**	⇑*i*P	**Pn**	**16 18 06.9**	**+1.7**
LVC				*e*S	**Sn**	**

PB09				eS		Sn	16 18 54.3 +0.2
PB09	**IPOC Station P**	**3.13**	**322**	⇑iP		**Pn**	**16 18 16.5 +1.7**
PB09				i S		Sn	16 18 54.6 +0.6
PB09				IAML			16 19 02.4
	comp=N,1μm,0.4s						
PB10	**IPOC Station P**	**3.18**	**284**	ePn		**Pn**	**16 18 16.3 +1.1**
PB10	**IPOC Station P**	**3.18**	**284**	⇑eP		**Pn**	**16 18 16.5 +1.3**
PB10				eS		Sn	16 18 54.9 +0.1
PB10	**IPOC Station P**	**3.18**	**284**	⇑iP		**Pn**	**16 18 16.3 +1.1**
PB10				i S		Sn	16 18 53.5 -1.3
PB03	**IPOC Station P**	**3.26**	**313**	⇑eP		**Pn**	**16 18 17.4 +1.1**
PB03				i S		Sn	16 18 56.0 -0.8
PB03	**IPOC Station P**	**3.26**	**313**	⇑iP		**Pn**	**16 18 17.1 +0.8**
PB03				i S		Sn	16 18 55.9 -0.8
PB03				IAML			16 18 59.2
	comp=E,2μm,0.3s						
PB04	**IPOC Station P**	**3.36**	**305**	ePn		**Pn**	**16 18 18.2 +0.6**
PB04	**IPOC Station P**	**3.36**	**305**	⇑eP		**Pn**	**16 18 18.5 +0.9**
PB04				eS		Sn	16 18 59.5 +0.5
PB04	**IPOC Station P**	**3.36**	**305**	⇑iP		**Pn**	**16 18 18.2 +0.6**
PB04				i S		Sn	16 18 57.7 -1.2
PB04				IAML			16 19 02.8
	comp=E,2μm,0.4s						
PB07	**IPOC Station P**	**3.57**	**315**	⇑eP		**Pn**	**16 18 21.1 +0.8**
PB07				eS		Sn	16 19 03.5 -0.4
PB07	**IPOC Station P**	**3.57**	**315**	⇑iP		**Pn**	**16 18 20.9 +0.6**
PB07				i S		Sn	16 19 02.8 -1.0
PB07				IAML			16 19 06.3
	comp=N,1μm,0.2s						
PB01	**IPOC Station P**	**3.88**	**326**	ePn		**Pn**	**16 18 24.1 +0.1**
PB01	**IPOC Station P**	**3.88**	**326**	⇑eP		**Pn**	**16 18 24.3 +0.2**
PB01				i S		Sn	16 19 09.0 -1.6
PB01	**IPOC Station P**	**3.88**	**326**	⇑iP		**Pn**	**16 18 24.2 +0.1**
PB01				i S		Sn	16 19 09.6 -1.1
PB01				IAML			16 19 13.4
	comp=E,704nm,0.2s						
PB02	**IPOC Station P**	**3.88**	**319**	eP		**Pn**	**16 18 24.4 +0.2**
PB02				eS		Sn	16 19 12.9 +2.1
PB02	**IPOC Station P**	**3.88**	**319**	⇑iP		**Pn**	**16 18 24.3 +0.2**
PB02				i S		Sn	16 19 09.6 -1.2
GO03	**Copiap**	**4.28**	**219**	ePn		**Pn**	**16 18 28.8 -0.3**
GO03	**Copiap**	**4.28**	**219**	⇑iP		**Pn**	**16 18 28.9 -0.2**
GO03				eS		Sn	16 19 18.6 -1.1
CYA	**Choya**	**4.30**	**164**	eP		**Pn**	**16 18 30.1 +0.7**
CYA				i S		Sn	16 19 19.7 -0.7
VCA	**Vinchina**	**4.51**	**191**	eP		**Pn**	**16 18 34.2 +2.1**
VCA				i S		Sn	16 19 27.1 +1.8
PB08	**IPOC Station P**	**4.53**	**336**	⇑eP		**Pn**	**16 18 33.6 +1.0**
PB08				eS		Sn	16 19 25.9 0.0
PB08	**IPOC Station P**	**4.53**	**336**	⇑iP		**Pn**	**16 18 33.3 +0.6**
PB08				i S		Sn	16 19 25.1 -0.9
GO01	**Chusmiza**	**4.97**	**338**	ePn		**Pn**	**16 18 38.7 +0.1**
GO01	**Chusmiza**	**4.97**	**338**	eP		**Pn**	**16 18 39.4 +0.9**
GO01				eS		Sn	16 19 36.7 +0.1
PB11	**IPOC Station P**	**5.07**	**333**	ePn		**Pn**	**16 18 38.2 -1.2**
PB11	**IPOC Station P**	**5.07**	**333**	eP		**Pn**	**16 18 38.4 -1.1**
PB11				eS		Sn	16 19 35.5 -2.7
ACLC	**CERRO LA CRUZ**	**5.11**	**178**	⇑eP		**Pn**	**16 18 40.7 +0.8**
ACLC				eS		Sn	16 19 37.4 -1.8
PSGCX	**Pisagua**	**5.42**	**329**	eP		**Pn**	**16 18 42.4 -1.6**
MNMC	**Minye Minye**	**5.61**	**336**	ePn		**Pn**	**16 18 46.4 -0.3**
MNMCX	**Minye Minye**	**5.61**	**336**	⇑eP		**Pn**	**16 18 46.2 -0.5**
MNMCX				i S		Sn	16 19 49.7 -1.6
LCO	**Las Campanas**	**5.65**	**213**	ePn		**Pn**	**16 18 45.8 -1.2**
LCO	**Las Campanas**	**5.65**	**213**	eP		**Pn**	**16 18 46.0 -1.0**
LCO				i S		Sn	16 19 44.0 -8.0
LCO	**Las Campanas**	**5.65**	**213**	eP		**Pn**	**16 18 46.0 -1.0**
APLL	**PUNTA DE LOS L**	**6.10**	**175**	⇑eP		**Pn**	**16 18 52.1 -0.6**
APLL				IAML			16 18 54.7
	comp=Z,59nm,0.2s						
APLL				eS		Sn	16 19 58.7 -3.6
PB12	**IPOC Station P**	**6.37**	**332**	eP		**Pn**	**16 18 55.0 -1.5**
PB12				eS		Sn	16 20 04.9 -4.0
GO04	**Tololo Observa**	**6.67**	**208**	ePn		**Pn**	**16 18 58.7 -1.8**
CFA	**Coronel Fontan**	**7.33**	**187**	P		**Pn**	**16 19 09.3 +0.4**
	comp=Z,4.2nm,0.3s,baz=242,slow=18,SNR=50						
CFA				S		Sn	16 20 28.1 -3.5
	comp=Z,9.8nm,0.3s,baz=108,slow=23,SNR=11						
CFA	**Coronel Fontan**	**7.33**	**187**	eP		**Pn**	**16 19 08.5 -0.5**
CFA				i S		Sn	16 20 29.5 -2.1
TCA	**Tanti**	**7.37**	**162**	⇓eP		**Pn**	**16 19 08.3 -1.2**
TCA				IAML			16 19 09.1
	comp=Z,47nm,0.3s						
TCA				i S		Sn	16 20 29.1 -3.5
ACAN	**Cantantal**	**7.94**	**180**	⇑eP		**Pn**	**16 19 15.8 -1.2**
ACAN				i S		Sn	16 20 40.5 -5.6
LPAZ	**La Paz**	**8.02**	**353**	P		**Pn**	**16 19 19.7 +1.0**
	comp=Z,3.9nm,0.3s,baz=150,slow=5.2,SNR=60						
LPAZ				S		Sn	16 20 44.6 -4.4
	comp=Z,0.6nm,0.3s,baz=30,slow=20,SNR=2.2						
LPAZ	**La Paz**	**8.02**	**353**	ePn		**Pn**	**16 19 19.2 +0.5**
LPAZ	**La Paz**	**8.02**	**353**	eP		**Pn**	**16 19 19.8 +1.1**
LPAZ	**La Paz**	**8.02**	**353**	eP		**Pn**	**16 19 19.5 +0.8**
ASAL	**Salagasta**	**8.39**	**190**	eP		**Pn**	**16 19 23.2 +0.3**
CPUP	**Villa Florida**	**9.14**	**105**	P		**Pn**	**16 19 31.4 -1.4**
	comp=Z,0.4nm,0.3s,baz=276,slow=12,SNR=17						
CPUP	**Villa Florida**	**9.14**	**105**	eP		**Pn**	**16 19 31.0 -1.8**
ROC1	**El Roble**	**9.27**	**200**	ePn		**Pn**	**16 19 34.0 -0.7**
SIV	**San Ignacio**	**10.06**	**36**	P		**Pn**	**16 19 42.4 -2.5**
	comp=Z,4.0nm,0.3s,baz=269,slow=9.2,SNR=73						
SIV				S		Sn	16 21 24.4 -13
	comp=Z,0.4nm,0.3s,baz=229,slow=14,SNR=4.7						
AQDB	**Aquidauana**	**11.29**	**73**	eP		**Pn**	**16 19 59.6 -1.2**
PTGB	**Pitanga**	**13.77**	**95**	eP		**P**	**16 20 34.0 -1.3**
TRQA	**Tornquist**	**14.41**	**163**	ePn		**Pn**	**16 20 38.4 -2.0**
FRTB	**Fartura**	**16.15**	**90**	eP		**P**	**16 21 01.2 -0.4**
ITRB	**Iturama**	**16.26**	**77**	eP		**Pn**	**16 21 02.9 -0.1**
TIJ01	**Guaruva-PR**	**16.54**	**97**	eP		**P**	**16 21 05.5 -0.4**
PLCA	**Paso Flores**	**16.63**	**189**	P		**Pn**	**16 21 07.7 +0.3**
	comp=Z,0.3nm,0.3s,baz=34,slow=14,SNR=6.1						
PLCA	**Paso Flores**	**16.63**	**189**	eP		**Pn**	**16 21 07.6 +0.2**
	comp=Z,6.3nm,0.6s						
PLCA	**Paso Flores**	**16.63**	**189**	eP		**Pn**	**16 21 07.8 +0.4**
CLDB	**Colider**	**17.19**	**41**	eP		**P**	**16 21 11.7 -1.4**
BB19B	**Bebedouro**	**17.51**	**83**	eP		**P**	**16 21 15.9 -0.7**
SPB	**Sao Paulo**	**18.07**	**92**	eP		**P**	**16 21 22.0 -0.6**
RCLB	**Rio Claro- Sao**	**18.14**	**88**	eP		**P**	**16 21 22.4 -1.1**
GO07	**Milladeo Hill,**	**19.51**	**194**	eP		**P**	**16 21 38.4 +0.4**
	comp=Z,164nm,0.4s						
PARB	**Paraibuna**	**19.75**	**92**	eP		**P**	**16 21 40.1 -0.8**
BDFB	**Brasilia**	**19.95**	**68**	P		**P**	**16 21 41.2 -2.0**
	comp=Z,2.1nm,0.3s,baz=240,slow=12,SNR=18						
PMNB	**Patos De Minas**	**20.14**	**77**	eP		**P**	**16 21 43.4 -1.7**
BSCB	**Bom Sucesso**	**20.94**	**85**	eP		**P**	**16 21 51.9 -1.7**
DUB01	**Friburgo-RJ**	**22.91**	**89**	eP		**P**	**16 22 12.0 -1.1**
MCI6	**Montes Claros**	**23.03**	**76**	eP		**P**	**16 22 12.2 -2.0**
MCI8	**Montes Claros**	**23.06**	**75**	eP		**P**	**16 22 12.4 -2.1**
MCI9	**Montes Claros**	**23.07**	**75**	eP		**P**	**16 22 12.7 -1.9**
CAM01	**Campos-RJ**	**23.61**	**89**	eP		**P**	**16 22 18.2 -1.2**
PTGA	**Pitinga**	**24.45**	**18**	P		**P**	**16 22 25.5 -1.6**
	comp=Z,2.0nm,0.5s,baz=210,slow=14,SNR=4.3						
PTGA	**Pitinga**	**24.45**	**18**	eP		**P**	**16 22 26.0 -1.1**
ALF01	**Guarapari-ES**	**24.71**	**87**	eP		**P**	**16 22 28.1 -1.3**
SJMB	**Sao Joao De Ma**	**24.80**	**82**	eP		**P**	**16 22 28.7 -1.6**
BSFB	**Barra de Sao F**	**25.07**	**83**	eP		**P**	**16 22 30.4 -2.2**
RIB01	**Linhares ES**	**25.34**	**84**	eP		**P**	**16 22 33.9 -1.2**
GO09	**Cerro Castillo**	**27.22**	**187**	eP		**P**	**16 22 50.3 -1.3**
	comp=Z,100nm,1.8s						
SDV	**Santo Domingo**	**33.16**	**354**	eP		**P**	**16 23 45.0 +0.6**
NBPA	**Parau_RN**	**34.27**	**62**	eP		**P**	**16 23 52.3 -1.5**
VNA3	**Neumayer Olymp**	**56.92**	**161**	P		**P**	**16 26 51.2 +0.6**
VNA3				S		S	16 34 45.6 +15
VNA1	**Neumayer--Stat**	**57.12**	**160**	P		**P**	**16 26 53.0 +1.1**
VNA1				S		**S**	**16 34 40.2 +7.6**
VNA2	**Neumayer--Watz**	**57.49**	**160**	P		**P**	**16 26 55.2 +0.7**
	baz=295,slow=6.4						
VNA2				S		S	16 34 53.1 +15
	baz=344,slow=18						
SNAA	**Sanae**	**59.12**	**161**	P		**P**	**16 27 06.4 +0.5**
SNAA	**Sanae**	**59.12**	**161**	eP		**P**	**16 27 06.1 +0.2**
	comp=Z,16nm,1.4s						
PAULI	**Pauline**	**60.41**	**346**	eP		**P**	**16 27 15.6 +0.6**
	comp=Z,130nm,0.8s						
X51A	**Calhoun**	**60.90**	**343**	eP		**P**	**16 27 18.4 0.0**
	comp=Z,15nm,0.8s						
SWET	**Sewanee**	**61.80**	**343**	eP		**P**	**16 27 24.3 -0.2**
	comp=Z,9.8nm,0.7s						
V48A	**Smith Brothers**	**62.54**	**342**	eP		**P**	**16 27 29.0 -0.3**
	comp=Z,5.4nm,0.7s						
CLTN	**Cedars of Leba**	**62.73**	**343**	eP		**P**	**16 27 30.8 +0.2**
	comp=Z,2.9nm,0.7s						
JCT	**Junction City**	**62.81**	**328**	eP		**P**	**16 27 31.7 +0.5**
	comp=Z,4.7nm,0.8s						
WVT	**Waverly**	**63.19**	**341**	eP		**P**	**16 27 33.0 -0.6**
	comp=Z,4.9nm,0.8s						
T47A	**Sharon Grove**	**63.79**	**342**	eP		**P**	**16 27 36.9 -0.6**
	comp=Z,7.9nm,0.9s						
LTX	**Lajitas**	**63.83**	**325**	eP		**P**	**16 27 38.9 +0.9**
TXAR	**Lajitas Array**	**63.83**	**325**	P		**P**	**16 27 38.9 +0.9**
	comp=Z,0.6nm,0.7s,baz=147,slow=7.5,SNR=5.2						
TX31	**Lajitas Ar. Si**	**63.83**	**325**	eP		**P**	**16 27 38.2 +0.2**
	comp=Z,7.6nm,1.8s						
W39A	**Magazine**	**64.32**	**336**	eP		**P**	**16 27 41.8 +0.8**
	comp=Z,5.3nm,0.6s						
QSPA	**South Pole Qui**	**65.90**	**180**	eP		**P**	**16 27 51.9 +0.9**
	comp=Z,5.9nm,0.6s						
CCM	**Cathedral Cave**	**66.02**	**339**	eP		**P**	**16 27 51.5 -0.3**
	comp=Z,4.4nm,0.6s						
M54A	**Oil Creek Stat**	**66.49**	**350**	eP		**P**	**16 27 55.5 +0.7**
	comp=Z,21nm,0.8s						
MNTX	**Cornudas Mount**	**66.60**	**325**	eP		**P**	**16 27 56.0 +0.3**
	comp=Z,15nm,1.9s						
DBIC	**Dimbokro**	**68.06**	**72**	P		**P**	**16 28 03.4 -1.8**
	comp=Z,1.4nm,0.4s,baz=222,slow=6.3,SNR=4.4						
DBIC	**Dimbokro**	**68.06**	**72**	eP		**P**	**16 28 03.3 -2.0**
	comp=Z,14nm,1.3s						
319A	**Douglas**	**68.47**	**322**	eP		**P**	**16 28 08.4 +0.8**
	comp=Z,5.2nm,0.6s						
K43A	**Burlington**	**69.47**	**344**	eP		**P**	**16 28 13.0 -0.3**
	comp=Z,15nm,0.8s						
ANMO	**Albuquerque**	**69.70**	**326**	eP		**P**	**16 28 15.8 +0.6**
	comp=Z,2.9nm,0.9s						
JFWS	**Jewell Farm**	**70.18**	**342**	eP		**P**	**16 28 17.8 +0.1**
	comp=Z,10nm,0.6s						
T25A	**Trinidad**	**70.45**	**329**	eP		**P**	**16 28 21.4 +1.6**
	comp=Z,3.7nm,0.6s						
SDCO	**Great Sand Dun**	**71.46**	**329**	eP		**P**	**16 28 27.1 +1.3**
	comp=Z,2.1nm,0.6s						
E46A	**Sault Ste Mari**	**72.03**	**348**	eP		**P**	**16 28 28.6 0.0**
	comp=Z,12nm,0.8s						
SYO	**Syowa Base**	**73.33**	**159**	⇑eP		**P**	**16 28 35.4 -0.8**
D41A	**Chassel**	**73.61**	**345**	eP		**P**	**16 28 38.3 +0.3**
	comp=Z,14nm,0.6s						
VNDA	**Vanda**	**74.38**	**190**	P		**P**	**16 28 44.0 +1.8**
	comp=Z,1.3nm,0.9s,baz=133,slow=4.6,SNR=5.9						
VNDA	**Vanda**	**74.38**	**190**	eP		**P**	**16 28 43.5 +1.3**
KNB	**Kanab**	**74.62**	**324**	eP		**P**	**16 28 46.4 +2.1**
	comp=Z,4.1nm,0.7s						
LCMT	**Little Creek M**	**74.84**	**323**	eP		**P**	**16 28 47.5 +2.0**
	comp=Z,2.1nm,0.7s						
SRU	**San Rafael Swe**	**74.98**	**326**	eP		**P**	**16 28 47.7 +1.3**
	comp=Z,4.6nm,0.7s						
MTPU	**Mount Pierson**	**75.03**	**325**	eP		**P**	**16 28 48.4 +1.4**
	comp=Z,3.6nm,0.7s						
CCUT	**Cedar City**	**75.30**	**324**	eP		**P**	**16 28 50.5 +2.3**
	comp=Z,4.4nm,0.7s						
MSU	**Marysvale**	**75.38**	**325**	eP		**P**	**16 28 50.6 +1.9**
PSUT	**Pine Spring**	**76.28**	**324**	eP		**P**	**16 28 55.9 +2.1**
	comp=Z,3.3nm,0.6s						
TPNV	**Topopah Spring**	**76.47**	**322**	eP		**P**	**16 28 56.9 +2.1**
	comp=Z,18nm,2.0s						
TOA0	**Torodi Ar. Sit**	**76.83**	**69**	eP		**P**	**16 28 56.0 -1.1**
	comp=Z,4.8nm,0.8s						
TOA1	**Torodi Ar. Sit**	**76.83**	**69**	eP		**P**	**16 28 56.3 -0.8**
TORD	**Torodi Ar. Bea**	**76.83**	**69**	P		**P**	**16 28 56.3 -0.8**
	comp=Z,4.1nm,0.8s,baz=251,slow=5.3,SNR=19						
R11A	**Troy Canyon, C**	**77.09**	**323**	eP		**P**	**16 29 00.1 +1.8**
	comp=Z,1.6nm,0.6s						
PD31	**Pinedale Array**	**77.32**	**329**	eP		**P**	**16 29 00.1 +0.6**
	comp=Z,7.1nm,1.9s						
PDAR	**Pinedale Array**	**77.32**	**329**	P		**P**	**16 29 00.8 +1.2**
	comp=Z,0.7nm,0.5s,baz=104,slow=6.3,SNR=7.1						
LOHW	**Long Hollow**	**78.46**	**329**	eP		**P**	**16 29 06.8 +1.0**
	comp=Z,2.3nm,0.7s						
OMMB	**Old Mammoth Mi**	**78.51**	**320**	eP		**P**	**16 29 07.7 +1.4**
	comp=Z,2.9nm,0.6s						
ELK	**Elko**	**78.62**	**325**	eP		**P**	**16 29 07.6 +0.8**
	comp=Z,1.3nm,0.6s						
NV01	**Mina Array Sit**	**78.67**	**321**	eP		**P**	**16 29 08.7 +1.6**
NVAR	**Mina Array Bea**	**78.67**	**321**	P		**P**	**16 29 08.7 +1.6**
	comp=Z,1.1nm,0.6s,baz=136,slow=5.8,SNR=8.5						
IMW	**Indian Meadow**	**78.83**	**329**	eP		**P**	**16 29 09.0 +1.1**
	comp=Z,1.9nm,0.8s						
KVN	**Kaiserville**	**78.98**	**322**	eP		**P**	**16 29 10.1 +1.3**
	comp=Z,4.0nm,0.6s						
RLMT	**Red Lodge**	**79.02**	**331**	eP		**P**	**16 29 10.2 +1.3**
	comp=Z,2.7nm,0.6s						
YHH	**Holmes Hill**	**79.48**	**330**	eP		**P**	**16 29 13.5 +2.1**
	comp=Z,3.4nm,0.7s						
PNTR	**Pine Nut**	**79.86**	**321**	eP		**P**	**16 29 15.1 +1.6**
	comp=Z,5.8nm,0.6s						
HLID	**Hailey**	**80.25**	**327**	eP		**P**	**16 29 16.9 +1.5**
	comp=Z,4.4nm,0.7s						
MCMT	**McKenzie Canyo**	**80.43**	**329**	eP		**P**	**16 29 18.3 +1.8**
BOSA	**Boshof**	**80.75**	**117**	P		**P**	**16 29 18.8 +0.2**
	comp=Z,4.5nm,0.4s,baz=258,slow=3.0,SNR=22						
MAW	**Mawson**	**81.20**	**163**	P		**P**	**16 29 20.9 +0.9**
	comp=Z,2.8nm,0.5s,baz=221,slow=6.7,SNR=24						
MAW	**Mawson**	**81.20**	**163**	eP		**P**	**16 29 20.4 +0.4**
	comp=Z,2.9nm,1.4s						
PLID	**Pearl Lake**	**82.14**	**327**	eP		**P**	**16 29 26.7 +1.2**
	comp=Z,4.5nm,0.6s						
J08A	**Circle Bar Ran**	**82.17**	**325**	eP		**P**	**16 29 27.1 +1.6**
	comp=Z,3.8nm,0.6s						
F10A	**Beach Ranch, E**	**83.38**	**327**	eP		**P**	**16 29 33.5 +1.9**
	comp=Z,3.6nm,0.8s						
C09A	**Chrisman Ranch**	**85.17**	**328**	eP		**P**	**16 29 41.4 +0.9**
	comp=Z,6.0nm,0.6s						
FCC	**Fort Churchill**	**85.71**	**346**	eP		**P**	**16 29 43.4 +0.6**
	comp=Z,7.4nm,0.6s						
ESDC	**Sonseca Array**	**86.73**	**44**	P		**P**	**16 29 48.4 0.0**
	comp=Z,0.3nm,0.4s,baz=264,slow=5.7,SNR=2.4						
YKA	**Yellowknife Ar**	**94.35**	**340**	P		**P**	**16 30 23.4 +0.2**
	comp=Z,1.2nm,0.5s,baz=130,slow=4.5,SNR=16						
YKB5	**Yellowknife Ar**	**94.35**	**340**	eP		**P**	**16 30 23.4 +0.2**
AS31	**Alice Springs**	**128.11**	**205**	ePKPdf		**PKPdf**	**16 36 09.8 -0.4**
ASAR	**Alice Springs**	**128.11**	**205**	PKP		**PKPdf**	**16 36 10.1 0.0**
	comp=Z,1.3nm,0.7s,baz=136,slow=1.6,SNR=23						
WR1	**Warramunga Arr**	**131.28**	**207**	ePKPdf		**PKPdf**	**16 36 16.4 +0.2**
WRA	**Warramunga Arr**	**131.28**	**207**	PKP		**PKPdf**	**16 36 16.4 +0.2**
	comp=Z,135nm,0.3s,baz=190,slow=2.1,SNR=1.1						
ZAA1	**Zalesovo Array**	**143.73**	**28**	ePKPdf	PKPbc		16 36 36.4 +0.4
ZAA0	**Zalesovo Array**	**143.74**	**28**	ePKPdf	PKPbc		16 36 36.2 +0.2
ZALV	**Zalesovo Beam**	**143.74**	**28**	PKP	PKPbc		16 36 36.4 +0.4
	comp=Z,3.0nm,0.5s,baz=301,slow=4.0,SNR=14						
NRN	**Naryn**	**144.99**	**52**	ePKPbc	**PKPab**		**16 36 40.8 0.0**
MAKZ	**Makanchi**	**146.67**	**40**	ePKPdf	**PKPdf**		**16 36 44.1 +0.8**
MK31	**Makanchi Array**	**146.86**	**40**	ePKPdf	**PKPdf**		**16 36 44.2 +0.7**
MK31				ePKPbc	**PKPbc**		**16 36 45.9 +0.2**
MK32	**Makanchi Array**	**146.86**	**40**	ePKPdf	**PKPdf**		**16 36 44.2 +0.7**
MKAR	**Makanchi Array**	**146.86**	**40**	PKPbc	**PKPdf**		**16 36 44.2 +0.7**
	comp=Z,4.2nm,0.6s,baz=332,slow=1.2,SNR=46						
KLR	**Kul'dur**	**151.02**	**334**	PKPbc	**PKPbc**		**16 36 56.3 +0.2**
	comp=Z,3.0nm,0.6s,baz=67,slow=4.1,SNR=4.5						
CM31	**Chiang Mai Arr**	**165.83**	**112**	ePKPab	**PKPab**		**16 38 08.3 -0.9**
CMAR	**Chiang Mai Arr**	**165.83**	**112**	PKPab	**PKPab**		**16 38 08.3 -0.9**
	comp=Z,0.7nm,0.7s,baz=262,slow=5.4,SNR=4.5						
LZH	**Lanzhou**	**165.93**	**31**	⇑PKP	**PKPdf**		**16 37 07.4 -1.1**
LZH				pPKP	pPKPdf		16 37 54.5 -2.2
LZH				sPKP			16 38 12.8
LZH				PKP	**sPKPdf**		**16 38 18.5 +3.4**
NJ2	**Nanjing**	**170.62**	**327**	eP	**PKPdf**		**16 37 12.0 +0.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						

NIED ***04*** *16:31:00,45.˙40N×151.˙20E,h26km,Mw4.4 Best double couple: M₀3.82000×10¹⁵ NP1:φ₀236.00000°,δ42.00000°, λ159.00000°. NP2:φ₀341.00000°,δ76.00000°,λ50.00000°.*
JMA ***04*** *16:31:46.8±0.4,45.˙40N×151.˙17E,h30km,M5.1*
ISCJB ***04*** *16:31:46.5±0.5,45.˙21N±0.˙03×151.˙10E±0.˙04,h36km±4km, mb4.6/118,MS3.8/22,Error ellipse: s-maj=6.2km s-min=3.3km az=143.5*
SKHL ***04*** *16:31:47.6±0.1,45.˙16N×151.˙26E,h53km±7km,mb5.2/13, Ms3.9/2*
BJI ***04*** *16:31:47.5±0.0,45.˙27N×151.˙03E,h46km,mb4.8/51, mB4.8/32,Ms4.2/23,Ms7 4.1/22*
MOS ***04*** *16:31:48.1±0.8,45.˙34N×151.˙04E,h46km,mb4.9/40, MS3.5/6,Error ellipse: s-maj=6.4km s-min=4.8km az=108.9*
NEIC ***04*** *16:31:49.4±0.5,45.˙33N×150.˙97E,h44km±4km,mb4.7/60, Error ellipse: s-maj=5.7km s-min=3.0km az=143.0*
IDC ***04*** *16:31:51.7±2.3,45.˙47N×150.˙92E,h59km±20km,mb4.0/22, mb1 4.2/30,mb1mx4.1/45,mbtmp4.3/30,ML3.9/7,MS3.6/20, Ms1 3.6/20,ms1mx3.5/35,Error ellipse: s-maj=14.6km s-min=10.6km az=137.0*

ISC 04 16:31:48.2±0.4,45.˙22N±0.˙05×151.˙09E±0.˙05,h34km±4km, n401,σ1°38/429,mb4.7/118,MS3.8/22,46C-23D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.27**	**271**	*d*	iPN	**Pn**	**16 32 24.1**	**+0.8**
KUR				*i*	S	**Sn**	**16 32 51.4**	**+1.2**
KUR					pmax	pmax		
	comp=N,794nm,0.2s							
KUR					pmax	pmax		
	comp=E,323nm,0.2s							
KUR					pmax	pmax		
	comp=Z,2μm,0.2s							
KUR					smax	smax		
	comp=N,3μm,0.3s							
KUR					smax	smax		
	comp=E,439nm,0.4s							
KUR	**Kuril'sk**	**2.27**	**271**	*i*	P	**Pn**	**16 32 23.7**	**+0.4**
KUR					AMB	AMB	16 32 25.2	
	comp=E,438nm,0.2s							
KUR					AMB	AMB	16 32 25.2	
	comp=E,169nm,0.2s							
KUR					AMB	AMB	16 32 25.2	
	comp=E,2μm,0.2s							
KUR				*i*	S	**Sn**	**16 32 50.7**	**+0.5**
KUR					A	A	16 32 56.4	
	comp=E,3μm,0.3s							
KUR					A	A	16 32 56.4	
	comp=E,1μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**3.92**	**254**	⇑*i*	PN	**Pn**	**16 32 47.0**	**+1.1**
YUK				*i*	S	**Sn**	**16 33 33.1**	**+2.5**
YUK					pmax	pmax		
	comp=Z,1μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**3.92**	**254**	*i*	P	**Pn**	**16 32 47.2**	**+1.3**
YUK					AMB	AMB	16 32 50.0	
	comp=Z,407nm,0.3s							
YUK					AMB	AMB	16 32 50.0	
	comp=Z,316nm,0.3s							
YUK					AMB	AMB	16 32 50.0	
	comp=Z,1μm,0.3s							
YUK				*i*	S	**Sn**	**16 33 32.0**	**+1.4**
YUK					A	A	16 33 32.0	
	comp=Z,2μm,0.5s							
YUK					A	A	16 33 32.0	
	comp=Z,404nm,0.5s							
LAGR	**Lagunnoye**	**3.96**	**255**	⇑*i*	PN	**Pn**	**16 32 47.6**	**+1.1**
LAGR				*i*	S	**Sn**	**16 33 35.8**	**+4.1**
LAGR					pmax	pmax		
	comp=N,484nm,0.2s							
LAGR					pmax	pmax		
	comp=Z,175nm,0.2s							
LAGR					pmax	pmax		
	comp=E,117nm,0.1s							
LAGR					smax	smax		
	comp=N,1μm,0.5s							
LAGR					smax	smax		
	comp=E,5μm,0.5s							
LAGR	**Lagunnoye**	**3.96**	**255**	*i*	P	**Pn**	**16 32 47.0**	**+0.5**
LAGR					AMB	AMB	16 32 50.0	
	comp=E,484nm,0.2s							
LAGR					AMB	AMB	16 32 50.0	
	comp=E,117nm,0.2s							
LAGR					AMB	AMB	16 32 50.0	
	comp=E,175nm,0.2s							
LAGR				*i*	S	**Sn**	**16 33 33.0**	**+1.3**
LAGR					A	A	16 33 50.0	
	comp=E,1μm,0.5s							
LAGR					A	A	16 33 50.0	
	comp=E,5μm,0.5s							
GRPR	**Tuman**	**3.99

JFR	**Furan**	**6.44 254**	P	**Pn**	**16 33 22.6 +2.0**
JWK2	**Keihoku**	**6.49 274**	P	**Pn**	**16 33 25.3 +4.1**
JAB	**Ashibetsu**	**6.58 258**	P	**Pn**	**16 33 25.4 +2.9**
JEM	**Erimo**	**6.59 244**	P	**Pn**	**16 33 23.8 +1.2**
ERM	**Erimo**	**6.59 244**	*e*Pn	**Pn**	**16 33 24.4 +1.8**
ERM	**Erimo**	**6.59 244⇑**	*e*PN	**Pn**	**16 33 24.4 +1.8**
ERM			pmax	pmax	
	comp=Z,117nm,0.7s				
JNBK	**Urakawa-nobuka**	**6.71 247**	P	**Pn**	**16 33 24.0 -0.3**
JNBK			*e*S	**Sn**	**16 34 38.8 -0.8**
JBT2	**Biratori 2**	**6.75 252**	P	**Pn**	**16 33 25.6 +0.8**
JBT2			*e*S	**Sn**	**16 34 42.7 +2.3**
UGL	**Uglegorsk**	**7.26 305**	*e*PN	**Pn**	**16 33 35.0 +3.2**
UGL			pmax	pmax	
	comp=Z,68nm,0.4s				
UGL	**Uglegorsk**	**7.26 305**	*e*P	**Pn**	**16 33 35.0 +3.2**
UGL			AMB	AMB	16 33 36.0
	comp=Z,68nm,0.4s				
JEW	**Eniwo**	**7.34 254**	P	**Pn**	**16 33 35.5 +2.5**
JEW			*e*S	**Sn**	**16 34 59.5 +4.4**
JNB	**Noboribetsu**	**7.77 253**	P	**Pn**	**16 33 39.2 +0.4**
TYV	**Tymovskoe**	**7.98 318**	*e*PN	**Pn**	**16 33 42.9 +1.2**
TYV			*e*S	**Sn**	**16 35 13.3 +2.6**
TYV			pmax	pmax	
	comp=Z,11nm,0.8s				
TYV			smax	smax	
	comp=N,15nm,0.8s				
TYV			MLR	MLR	
	comp=Z,1μm,19.0s				
TYV	**Tymovskoe**	**7.98 318**	*e*P	**Pn**	**16 33 42.0 +0.3**
TYV			AMB	AMB	16 33 43.0
	comp=Z,11nm,0.8s				
TYV			*e*S	**Sn**	**16 35 13.0 +2.3**
TYV			A	A	16 35 14.0
	comp=Z,15nm,0.8s				
TYV			AMS	AMS	16 37 28.0
	comp=Z,1μm,19.0s				
JKB	**Kayabe**	**8.03 249**	P	**Pn**	**16 33 42.3 0.0**
JKB			*e*S	**Sn**	**16 35 06.6 -5.2**
JYM2	**Yakumo 2**	**8.37 252**	P	**Pn**	**16 33 47.1 +0.1**
JANG	**Nango**	**8.54 239**	P	**Pn**	**16 33 46.7 -2.7**
JANG			*e*S	**Sn**	**16 35 17.0 -7.6**
JTM	**Tenmabayashi**	**8.57 242**	P	**Pn**	**16 33 48.7 -1.1**
JTM			*e*S	**Sn**	**16 35 18.8 -6.5**
JSR	**Shiriuchi**	**8.60 248**	P	**Pn**	**16 33 50.1 -0.1**
JSR			*e*S	**Sn**	**16 35 20.9 -5.1**
JTH	**Tanohata**	**8.61 235**	P	**Pn**	**16 33 47.7 -2.7**
JTH			*e*S	Sn	16 35 17.6 -8.6
JOSM	**Okushiri--Mats**	**8.98 254**	P	**Pn**	**16 33 55.5 0.0**
PEA0B	**Petropavlovsk-**	**9.00 26**	*e*Pn	**Pn**	**16 33 56.8 +1.1**
PETK	**Petropavlovsk-**	**9.00 26**	P	**Pn**	**16 33 56.3 +0.7**
	comp=Z,0.7nm,0.3s,baz=212,slow=11,SNR=11				
PETK			LR	LR	16 37 35.0
	comp=Z,249nm,18.0s,baz=222,slow=39				
PEA1	**Petropavlovsk-**	**9.00 26**	*e*Pn	**Pn**	**16 33 56.3 +0.6**
PET	**Petropavlovsk**	**9.24 30**	*e*Pn	**Pn**	**16 33 59.5 +0.5**
PET	**Petropavlovsk**	**9.24 30**	*e*PN	**Pn**	**16 34 01.3 +2.3**
PET			MLR	MLR	
	comp=Z,300nm,13.0s				
PET			MLR	MLR	
	comp=Z,200nm,12.0s				
PET	**Petropavlovsk**	**9.24 30**	*e*P	**Pn**	**16 34 00.3 +1.3**
OFUJ	**Ofunato**	**9.30 232**	P	**Pn**	**16 33 57.2 -2.6**
OFUJ			*e*S	Sn	16 35 34.5 -8.7
JRG	**Rokugo**	**9.68 237**	P	**Pn**	**16 34 03.3 -1.8**
OKH	**Okha**	**9.88 330**	*e*rx	rx	16 33 19.3
OKH			AMS	AMS	16 39 21.2
	comp=Z,300nm,13.0s				
JIO	**Ouri**	**9.92 230**	P	**Pn**	**16 34 06.1 -2.2**
JIO			*e*S	Sn	16 35 48.7 -10
TEY	**Ternei**	**10.24 274⇓**	*e*PN	Pn	16 34 18.4 +5.7
TEY			*e*		16 36 11.3
TEY			pmax	pmax	
	comp=Z,10.0nm,1.0s				
TEY			pmax	pmax	
	comp=E,20nm,1.2s				
TEY	**Ternei**	**10.24 274**	*e*P	**Pn**	**16 34 15.4 +2.7**
TEY			AMB	AMB	16 34 19.0
	comp=E,20nm,1.0s				
TEY			AMB	AMB	16 34 19.0
	comp=E,10.0nm,1.0s				
NKL	**Nikolayevsk**	**10.45 323**	*e*P	**Pn**	**16 34 16.5 +1.1**
NKL			AMB	AMB	16 34 19.0
	comp=E,43nm,1.0s				
JYA	**Atsumi**	**10.75 236**	P	**Pn**	**16 34 18.6 -1.1**
GRNR	**Gornyy**	**11.28 305**	*e*P	**Pn**	**16 34 30.0 +3.2**
JFY	**Yanaizu**	**11.58 232**	P	**Pn**	**16 34 30.3 -0.7**
MAJO	**Matsushiro**	**13.03 233**	*e*Pn	**Pn**	**16 34 49.6 -1.2**
MAJO	**Matsushiro**	**13.03 233⇓**	*e*PN	**Pn**	**16 34 50.0 -0.9**
MAT	**Matsushiro**	**13.03 233**	P	**Pn**	**16 34 50.5 -0.4**
MJAR	**Matsushiro Arr**	**13.03 233**	P	**Pn**	**16 34 49.8 -1.0**
	comp=E,0.1nm,0.3s,baz=29,slow=13,SNR=10.0				
MJB9	**Matsu-Tunnel**	**13.03 233**	*e*Pn	**Pn**	**16 34 49.6 -1.3**
USA0B	**Ussuriysk Arra**	**13.62 272**	*e*Pn	**Pn**	**16 34 59.1 +0.2**
USRK	**Ussuriysk Ar.**	**13.62 272**	P	**Pn**	**16 34 59.5 +0.7**
	comp=E,1.0nm,0.3s,baz=86,slow=13,SNR=16				
USRK			LR	LR	16 40 15.2
	comp=E,269nm,18.6s,baz=73,slow=37				
KLR	**Kul'dur**	**13.73 294**	P	**Pn**	**16 35 02.5 +2.2**
	comp=E,0.2nm,0.3s,baz=103,slow=16,SNR=13				
KLR	**Kul'dur**	**13.73 294**	*de*P	**Pn**	**16 35 02.7 +2.4**
EKMR	**Ekimchan**	**14.20 310**	*e*P	**Pn**	**16 35 06.9 +0.1**
EKMR			AMB	AMB	16 35 22.0
	comp=E,14nm,0.9s				
MA2	**Magadan**	**14.38 359**	P	**Pn**	**16 35 08.4 -0.7**
	comp=E,1.2nm,0.3s,baz=191,slow=10,SNR=9.0				
MA2	**Magadan**	**14.38 359**	*e*P	**Pn**	**16 35 08.5 -0.6**
MA2	**Magadan**	**14.38 359**	*e*P	**Pn**	**16 35 08.5 -0.6**
INU	**Inuyama**	**14.56 232**	*e*Pn	**Pn**	**16 35 11.2 -0.5**
MDJ	**Mudanjiang**	**15.24 275**	P	**Pn**	**16 35 21.2 +0.5**
MDJ			pP	pP	16 35 30.0 -3.2
MDJ			sP	pwP	16 35 38.0 +0.6
MDJ			S	**Sn**	**16 38 07.7 -0.6**
MDJ			sS	S	16 38 21.8 -2.4
MDJ			pmax	pmax	
	comp=E,9.0nm,0.6s				
MDJ			LR	LR	
	comp=E,270nm,17.9s				
MDJ			LR	LR	
	comp=E,280nm,16.3s				
MDJ			LR	LR	
	comp=E,490nm,17.3s				
MDJ	**Mudanjiang**	**15.24 275**	*e*Pn	**Pn**	**16 35 20.8 +0.1**
	comp=E,18nm,0.8s				
BMKR	**Bomnak**	**17.11 312**	*e*P	**Pn**	**16 35 43.0 -1.4**
BMKR			AMB	AMB	16 35 50.0
	comp=E,8.0nm,0.3s				
ZEA	**Zeya**	**17.61 307**	*e*P	**Pn**	**16 35 49.4 -1.3**
ZEA			pmax	pmax	
	comp=Z,23nm,1.0s				
ZEA			MLR	MLR	
	comp=N,300nm,14.0s				
ZEA			MLR	MLR	
	comp=E,200nm,14.0s				
ZEA			MLR	MLR	
	comp=Z,500nm,14.0s				
ZEA	**Zeya**	**17.61 307**	*e*P	**Pn**	**16 35 49.4 -1.3**
ZEA			AMB	AMB	16 35 53.6
	comp=Z,23nm,1.0s				
ZEA			AMS	AMS	16 43 20.7
	comp=Z,300nm,14.0s				
ZEA			AMS	AMS	16 43 20.7
	comp=Z,200nm,14.0s				
ZEA			AMS	AMS	16 43 20.7
	comp=Z,500nm,14.0s				
SEY	**Seymchan**	**17.76 2**	P	**Pn**	**16 35 51.0 -1.5**
	comp=Z,0.1nm,0.3s,baz=167,slow=14,SNR=4.1				
SEY	**Seymchan**	**17.76 2⇑**	*e*P	**Pn**	**16 35 52.4 -0.1**
SEY	**Seymchan**	**17.76 2**	*e*P	**Pn**	**16 35 52.4 -0.1**
KROS	**Kirovskiy**	**18.00 309**	*e*P	**P**	**16 35 56.0 +0.2**
KROS			AMB	AMB	16 35 57.8
	comp=Z,7.0nm,0.4s				
CN2	**Changchun**	**18.32 275**	*e*P	**P**	**16 35 58.0 -1.4**
CN2			*es*P	pwP	16 36 17.7 +6.3
CN2			*e*S	**Sn**	**16 39 15.8 -7.2**
CN2			pmax	pmax	
	comp=Z,10.0nm,0.6s				
CN2			pmax	pmax	
	comp=Z,200nm,3.0s				
CN2			LR	LR	
	comp=Z,120nm,16.0s				
CN2			LR	LR	
	comp=Z,230nm,16.0s				
CN2			LR	LR	
	comp=Z,290nm,15.0s				
KSRS	**Korea Array**	**19.00 254**	P	**Pn**	**16 36 08.1 +0.3**
	comp=Z,0.7nm,0.3s,baz=60,slow=11,SNR=19				
KSRS			LR	LR	16 44 29.6
	comp=Z,127nm,18.1s,baz=58,slow=40				
KS15	**Wonju Array Si**	**19.04 254**	*e*P	**P**	**16 36 07.4 +0.2**
	comp=Z,44nm,1.8s				
KSAR	**Wonju Array Be**	**19.04 254**	P	**Pn**	**16 36 08.1 -0.1**
KSAR	**Wonju Array Be**	**19.04 254**	P	**Pn**	**16 36 08.1 -0.1**
JNU	**Nakatsue**	**19.72 239**	P	**Pn**	**16 36 16.4 -0.2**
	comp=Z,0.6nm,0.3s,baz=265,slow=1.1,SNR=8.2				
JNU	**Nakatsue**	**19.72 239**	*e*P	**Pn**	**16 36 16.3 -0.2**
	comp=Z,37nm,1.3s				
TJN	**Taejon**	**19.96 252⇓**	*e*P	**Pn**	**16 36 18.4 -0.8**
YAK	**Yakutsk**	**20.91 331**	*e*P	**P**	**16 36 25.9 -1.5**
	comp=Z,130nm,0.7s				
YAK	**Yakutsk**	**20.91 331**	*e*P	**P**	**16 36 26.6 -0.8**
YAK			*e*		16 36 49.1
YAK			*e*S	**S**	**16 40 15.6 -2.8**
YAK			*e*SS	**SnSn**	**16 40 36.7 -3.2**
YAK			*e*SSS	SSS	16 40 50.0
YAK			*e*		16 47 45.4
BILL	**Bilibino**	**24.21 14**	*i* P	**P**	**16 37 00.5 -0.8**
BILL			*i*		16 40 36.7
BILL			pmax	pmax	
	comp=Z,3.0nm,1.0s				
BILL			MLR	MLR	
	comp=Z,410nm,19.0s				
BILL	**Bilibino**	**24.21 14**	*e*P	**P**	**16 37 01.6 +0.3**
BJI	**Beijing**	**26.07 271**	P	**P**	**16 37 18.3 -0.1**
BJI			pmax	pmax	
	comp=Z,6.0nm,1.0s				
BJT	**Baijiatuau**	**26.08 271**	*e*P	**P**	**16 37 18.2 -0.3**
	comp=Z,11nm,1.0s				
BJT	**Baijiatuau**	**26.08 271**	*e*P	**P**	**16 37 18.2 -0.3**
BJT			pmax	pmax	
	comp=Z,11nm,1.0s				
NJ2	**Nanjing**	**28.20 253**	*e*P	**P**	**16 37 37.0 -0.6**
NJ2			pmax	pmax	
	comp=Z,13nm,0.5s				
TIK	**Tiksi**	**28.55 345**	*e*P	**P**	**16 37 40.3 0.0**
TIXI	**Tiksi**	**28.57 345**	P	**P**	**16 37 37.4 -3.1**
	comp=Z,3.2nm,0.4s,baz=146,slow=7.8,SNR=21				
TIXI	**Tiksi**	**28.57 345**	*e*P	**P**	**16 37 40.3 -0.1**
	comp=Z,3.7nm,0.5s				
TIXI	**Tiksi**	**28.57 345**	*e*P	**P**	**16 37 40.3 -0.1**
TIXI			pmax	pmax	
	comp=Z,4.0nm,0.5s				
H11N2	**WAKE ISLAND Hy**	**28.60 148**	T	T	17 08 24.5
	baz=339,SNR=367				
H11N1	**WAKE ISLAND Hy**	**28.61 148**	T	T	17 08 27.1
	baz=339,slow=74,SNR=538				
H11N3	**WAKE ISLAND Hy**	**28.61 148**	T	T	17 08 26.5
	baz=339,slow=74,SNR=448				
HHC	**Hu-ho-hao-te**	**29.01 276**	*e*P	**P**	**16 37 46.7 +1.8**
HHC			S	**S**	**16 42 31.4 -2.5**
HHC			pmax	pmax	
	comp=Z,7.0nm,0.7s				
HHC			pmax	pmax	
	comp=Z,89nm,6.6s				
HHC			LR	LR	
	comp=Z,140nm,12.3s				
HHC			LR	LR	
	comp=Z,620nm,14.6s				
HHC			LR	LR	
	comp=Z,570nm,15.2s				
H11S1	**WAKE ISLAND Hy**	**29.64 149**	T	T	17 09 48.3
	baz=337,slow=76,SNR=677				
H11S3	**WAKE ISLAND Hy**	**29.65 149**	T	T	17 09 44.1
	baz=337,slow=76,SNR=485				
H11S2	**WAKE ISLAND Hy**	**29.66 149**	T	T	17 09 44.9
	baz=337,slow=76,SNR=649				
ULN	**Ulaanbaatar**	**30.10 291⇑**	*e*P	**P**	**16 37 54.3 -0.2**
ULN			pmax	pmax	
	comp=Z,5.0nm,1.3s				
ULN	**Ulaanbaatar**	**30.10 291**	*e*P	**P**	**16 37 54.3 -0.2**
SONA0	**Songino Array**	**30.54 291**	*e*P	**P**	**16 37 58.0 -0.4**
SONM	**Songino Array**	**30.54 291**	P	**P**	**16 37 58.0 -0.4**
	comp=Z,1.6nm,0.6s,baz=80,slow=8.2,SNR=7.4				
SONM			LR	LR	16 51 17.4
	comp=Z,186nm,18.1s,baz=66,slow=38				
WHN	**Wuhan**	**32.18 256**	⇑P		16 38 23.8 +11
WHN			pmax	pmax	
	comp=Z,22nm,0.5s				
XAN	**Xi'an**	**33.98 266**	P	**P**	**16 38 28.1 -0.5**
XAN			pP	pP	16 38 38.6 +1.2
XAN			pmax	pmax	
	comp=Z,4.0nm,0.6s				
CAST	**Castle Rocks**	**36.31 39**	*e*P	**P**	**16 38 48.9 +0.6**
	comp=Z,5.5nm,0.6s				
LZH	**Lanzhou**	**36.53 272**	*e*P	**P**	**16 38 50.9 +0.3**
LZH			pP	pwP	16 39 04.5 +0.5
LZH			sP	sP	16 39 10.8 +8.5
LZH			*e*PP	**PP**	**16 40 16.0 +2.0**
LZH			pmax	pmax	
	comp=Z,23nm,1.3s				
LZH			pmax	pmax	
	comp=Z,81nm,4.9s				
LZH			LR	LR	
	comp=Z,350nm,12.8s				
LZH			LR	LR	
	comp=Z,370nm,13.1s				
LZH			LR	LR	
	comp=Z,470nm,16.5s				
GTA	**Gaotai**	**37.83 280**	*e*P	**P**	**16 39 02.0 +0.5**
GTA			pP	pP	16 39 08.4 -1.9
GTA			pmax	pmax	
	comp=Z,10.0nm,1.0s				
GTA			pmax	pmax	
	comp=Z,44nm,5.8s				
GTA			LR	LR	
	comp=Z,78nm,15.1s				
GTA			LR	LR	
	comp=Z,170nm,13.4s				
GTA			LR	LR	
	comp=Z,120nm,12.0s				
COLA	**College**	**38.21 37⇓**	*e*P	**P**	**16 39 04.7 +0.4**
COLA			pmax	pmax	
	comp=Z,4.0nm,0.8s				
DHY	**Denali Highway**	**38.44 40**	*e*P	**P**	**16 39 05.9 -0.6**
	comp=Z,17nm,1.5s				
HDA	**Harding Lake**	**38.60 38**	*e*P	**P**	**16 39 06.8 -0.7**
	comp=Z,28nm,1.8s				
ILAR	**Eielson Array**	**38.62 37**	P	**P**	**16 39 07.5 -0.2**
	comp=Z,1.4nm,0.6s,baz=262,slow=7.9,SNR=14				
ILAR			LR	LR	16 56 24.8
	comp=Z,53nm,20.5s,baz=212,slow=38				
ILB	**Eielson Array**	**38.62 37**	*e*P	**P**	**16 39 07.4 -0.4**
	comp=Z,9.8nm,1.6s				
PRP	**Porcupine Dome**	**39.19 36**	*e*P	**P**	**16 39 12.7 0.0**
	comp=Z,2.9nm,0.8s				
CD2	**Chengdu**	**39.34 265**	P	**P**	**16 39 13.0 -1.3**
CD2			pmax	pmax	
	comp=Z,40nm,0.8s				
NRIK	**Noril'sk**	**39.36 330**	LR	LR	16 56 07.0
	comp=Z,50nm,20.2s,baz=32,slow=37				
DOT	**Dot Lake**	**39.90 39**	*e*P	**P**	**16 39 18.0 -0.5**
	comp=Z,5.5nm,1.3s				
CRQM	**Cirque**	**40.65 43**	*e*P	**P**	**16 39 24.4 -0.6**
CTGM	**Chitina Glacie**	**41.49 43**	*e*P	**P**	**16 39 31.4 -0.4**
	comp=Z,11nm,1.0s				
DGZ	**Jazzator, Alta**	**42.12 300⇑**	*e*P	**P**	**16 39 38.2 +1.1**
DGZ			pmax	pmax	
	comp=Z,1.0nm,0.6s				
ZAA1	**Zalesovo Array**	**42.37 307**	*e*P	**P**	**16 39 37.7 -1.1**
ZAA1			*e*PcP	**PcP**	**16 41 31.7 0.0**
ZALV	**Zalesovo Beam**	**42.37 307**	P	**P**	**16 39 37.7 -1.2**
	comp=Z,0.7nm,0.4s,baz=59,slow=6.9,SNR=3.4				
ZALV			PcP	**PcP**	**16 41 31.7 0.0**
	comp=Z,2.7nm,0.7s,baz=71,slow=2.2,SNR=8.9				
ZALV			LR	LR	16 58 13.9
	comp=Z,73nm,21.8s,baz=70,slow=38				
EPYK	**Eagle Plains**	**42.73 34**	*e*P	**P**	**16 39 41.4 -0.2**
	comp=Z,11nm,1.0s				
HYT	**Haines Junctio**	**43.35 43**	*e*P	**P**	**16 39 47.6 +0.7**
	comp=Z,15nm,1.1s				
KMI	**Kunming**	**43.57 259**	P	**P**	**16 39 49.9 +0.7**
KMI			pmax	pmax	
	comp=Z,11nm,0.6s				
KMI			pmax	pmax	
	comp=Z,82nm,5.4s				
INK	**Inuvik**	**43.70 31**	P	**P**	**16 39 49.6 +0.3**
	comp=Z,3.8nm,0.8s,baz=284,slow=11,SNR=5.4				
INK	**Inuvik**	**43.70 31**	*e*P	**P**	**16 39 49.5 +0.2**
	comp=Z,3.7nm,0.8s				
INK	**Inuvik**	**43.70 31**	*e*P	**P**	**16 39 49.5 +0.2**
INK			pmax	pmax	
	comp=Z,4.0nm,0.8s				
WMQ	**Urumqi**	**44.17 292**	*e*P	**P**	**16 39 54.9 +1.3**
WMQ			LR	LR	
	comp=Z,460nm,30.9s				
WMQ			LR	LR	
	comp=Z,500nm,28.1s				
WMQ			LR	LR	
	comp=Z,300nm,22.1s				
MK31	**Makanchi Array**	**46.40 298**	*e*P	**P**	**16 40 09.9 -1.3**
	comp=Z,12nm,1.4s				
MK31	**Makanchi Array**	**46.40 298**	*e*P	**P**	**16 40 09.9 -1.3**
MK31			pmax	pmax	
	comp=Z,12nm,1.4s				
MK32	**Makanchi Array**	**46.40 298**	*e*P	**P**	**16 40 10.1 -1.1**
MK32			*e*PcP	**PcP**	**16 41 45.5 -0.1**
MKAR	**Makanchi Array**	**46.40 298**	P	**P**	**16 40 10.1 -1.1**
	comp=Z,3.8nm,0.7s,baz=74,slow=8.1,SNR=25				
MKAR			PcP	**PcP**	**16 41 45.5 -0.1**
	comp=Z,1.4nm,0.6s,baz=54,slow=1.3,SNR=6.6				
MKAR			LR	LR	17 00 40.6
	comp=Z,164nm,19.7s,baz=70,slow=37				
MAKZ	**Makanchi**	**46.59 298**	*e*P	**P**	**16 40 11.7 -0.9**
	comp=Z,3.7nm,0.7s				
MAKZ	**Makanchi**	**46.59 298**	*e*P	**P**	**16 40 11.7 -0.9**
MAKZ			pmax	pmax	
	comp=Z,4.0nm,0.7s				
KURK	**Kurchatov**	**47.04 304**	*e*P	**P**	**16 40 14.5 -1.6**
	comp=Z,6.6nm,1.1s				
KURK	**Kurchatov**	**47.04 304**	*e*P	**P**	**16 40 14.5 -1.6**
KURK			pmax	pmax	
	comp=Z,7.0nm,1.1s				
KURK	**Kurchatov**	**47.04 304**	*e*P	**P**	**16 40 15.0 -1.1**
LSA	**Lhasa**	**48.95 273**	P	**P**	**16 40 33.0 +1.3**
LSA			pmax	pmax	
	comp=Z,38nm,0.7s				
LSA	**Lhasa**	**48.95 273**	*e*P	**P**	**16 40 31.9 +0.2**
	comp=Z,11nm,0.8s				
LSA	**Lhasa**	**48.95 273**	*e*P	**P**	**16 40 31.9 +0.2**
LSA			pmax	pmax	
	comp=Z,11nm,0.8s				
DLV	**T Lat**	**49.11 241**	*e*P	**P**	**16 40 33.5 +0.8**
PDGK	**Podgornoye**	**49.72 295**	P	**P**	**16 40 37.1 +0.1**
PDGK			pmax	pmax	
	comp=Z,6.0nm,1.0s				
LAMP	**Lampang**	**50.11 255**	P	**P**	**16 40 44.5 +4.4**
	comp=Z,11μm,0.8s				
CMMT	**Chiang Mai**	**50.38 256**	P	**P**	**16 40 43.1 +0.9**
	comp=Z,3.2nm,0.7s				
CHTO	**Chiang Mai**	**50.38 256**	*e*P	**P**	**16 40 42.8 +0.6**
	comp=Z,4.4nm,0.6s				
CHTO	**Chiang Mai**	**50.38 256**	*e*P	**P**	**16 40 42.8 +0.6**
CHTO			pmax	pmax	
	comp=Z,4.0nm,0.6s				
CM31	**Chiang Mai Arr**	**50.63 256**	*e*P	**P**	**16 40 44.4 +0.4**
	comp=Z,31nm,1.9s				
CMAR	**Chiang Mai Arr**	**50.63 256**	P	**P**	**16 40 44.9 +0.9**
	comp=Z,1.6nm,0.7s,baz=42,slow=7.2,SNR=15				
CMAR			PcP	**PcP**	**16 42 02.8 +1.5**
	comp=Z,1.1nm,0.7s,baz=16,slow=2.3,SNR=6.2				
CMAR			LR	LR	17 05 08.4
	comp=Z,51nm,19.2s,baz=40,slow=40				
BRVK	**Borovoye**	**50.78 310⇓**	*e*P	**P**	**16 40 45.6 +0.8**
BRVK			pmax	pmax	
	comp=Z,2.0nm,1.0s				
BRVK	**Borovoye**	**50.78 310**	*e*P	**P**	**16 40 45.6 +0.8**
SHL	**Shillong**	**50.91 268**	*e*P	**P**	**16 40 46.1 -0.2**
	comp=Z,26nm,0.9s				
SHL	**Shillong**	**50.91 268**	*e*P	**P**	**16 40 46.2 -0.2**
SHL			pmax	pmax	
	comp=Z,26nm,0.9s				
TKM2	**Tokmak 2**	**52.40 296**	P	**P**	**16 40 57.8 +0.5**
	SNR=5.3				
RES	**Resolute Bay**	**52.73 18**	P	**P**	**16 40 58.0 -0.9**
	comp=Z,2.3nm,0.6s,baz=322,slow=9.7,SNR=9.5				
RES			LR	LR	17 06 26.4
	comp=Z,53nm,18.9s,baz=22,slow=40				
RES	**Resolute Bay**	**52.73 18**	*e*P	**P**	**16 40 58.0 -0.9**
	comp=Z,8.4nm,1.3s				
USP	**Ospenovka**	**52.92 297**	P	**P**	**16 41 01.5 +0.6**
	SNR=7.0				
KBK	**Karagaybulak**	**52.95 296**	P	**P**	**16 41 01.8 +0.5**
	SNR=6.9				
YKA	**Yellowknife Ar**	**52.99 35**	P	**P**	**16 41 00.8 -0.3**
	comp=Z,1.4nm,0.8s,baz=300,slow=7.0,SNR=9.4				
YKB5	**Yellowknife Ar**	**52.99 35**	*e*P	**P**	**16 41 00.8 -0.3**
KZA	**Kyzart**	**53.05 295**	P	**P**	**16 41 03.6 +1.2**
	SNR=13				
AAK	**Ala-Archa**	**53.24 296**	*e*P	**P**	**16 41 03.2 -0.3**
	comp=Z,5.9nm,0.8s				
AAK	**Ala-Archa**	**53.24 296**	*de*P	**P**	**16 41 03.6 +0.1**
AAK			pmax	pmax	
	comp=Z,6.0nm,0.8s				
AAK	**Ala-Archa**	**53.24 296**	*e*P	**P**	**16 41 03.6 +0.1**
JIRN	**Jiri**	**53.66 274**	*e*P	**P**	**16 41 07.5 +0.6**
	comp=Z,38nm,0.4s				
EKS2	**Erkin-Say**	**53.69 297**	P	**P**	**16 41 07.2 +0.5**
	SNR=8.6				
GUN	**Gumba**	**53.72 275**	*e*P	**P**	**16 41 07.7 +0.3**
	comp=Z,47nm,0.7s				
RAMN	**Ramite**	**53.80 273**	*e*P	**P**	**16 41 08.0 +0.2**
	comp=Z,68nm,0.6s				
KSH	**Kashi**	**53.93 292**	*e*P	**P**	**16 41 12.8 +4.3**
KSH			pmax	pmax	
	comp=Z,17nm,0.9s				
KSH			pmax	pmax	
	comp=Z,170nm,5.0s				
KKN	**Kakani**	**54.22 275**	*e*P	**P**	**16 41 11.3 +0.5**
	comp=Z,36nm,0.7s				
PKI	**Pulchoki**	**54.26 275**	*e*P	**P**	**16 41 11.4 +0.1**
	comp=Z,18nm,0.7s				
PKIN	**Phulchoki**	**54.26 275**	*e*P	**P**	**16 41 11.4 +0.2**
	comp=Z,8.5nm,0.4s				
DMN	**Daman**	**54.45 275**	*e*P	**P**	**16 41 13.1 +0.5**
	comp=Z,17nm,0.4s				
GKN	**Gorkha**	**54.54 276**	*e*P	**P**	**16 41 13.6 +0.5**
	comp=Z,23nm,0.4s				
DANN	**Dangsing**	**54.95 277**	*e*P	**P**	**16 41 17.0 +0.8**
	comp=Z,36nm,0.5s				
ARU	**Arti**	**55.18 317**	*e*P	**P**	**16 41 15.8 -1.4**
	comp=Z,4.2nm,0.7s				
ARU	**Arti**	**55.18 317**	*d i*P	**P**	**16 41 17.6 +0.5**
ARU					16 42 14.8
ARU			S	**S**	**16 49 00.4 +2.7**
ARU			SS	**SS**	**16 52 41.0 -0.4**
ARU			pmax	pmax	
	comp=Z,4.0nm,0.7s				
ARU	**Arti**	**55.18 317**	*e*P	**P**	**16 41 17.6 +0.5**
KOLN	**Koldanda**	**55.41 276**	*e*P	**P**	**16 41 19.9 +0.5**
	comp=Z,20nm,0.5s				
KK31	**Karatay Array**	**55.50 299**	*e*P	**P**	**16 41 19.2 -0.4**
	comp=Z,3.4nm,0.8s				
KK31	**Karatay Array**	**55.50 299**	*e*P	**P**	**16 41 19.2 -0.4**
KK31			pmax	pmax	
	comp=Z,3.0nm,0.8s				
KKAR	**Karatay Array**	**55.50 299**	*e*P	**P**	**16 41 19.3 -0.3**
	comp=Z,3.4nm,0.8s				
KKAR	**Karatay Array**	**55.50 299**	*e*P	**P**	**16 41 19.3 -0.3**
KKAR			pmax	pmax	
	comp=Z,3.0nm,0.8s				
PYUN	**Piuthan**	**55.64 277**	*e*P	**P**	**16 41 21.6 +0.5**
	comp=Z,23nm,0.5s				
BTK	**Batken**	**56.96 296**	*e*P	**P**	**16 41 30.3 +0.1**
	comp=Z,8.2nm,0.8s				
BTK	**Batken**	**56.96 296**	*e*P	**P**	**16 41 30.3 +0.1**
BTK			pmax	pmax	
	comp=Z,8.0nm,0.8s				
ABKAR	**Akbulak array**	**58.32 310**	*e*P	**P**	**16 41 38.0 -1.5**
	comp=Z,3.7nm,0.5s				
ARCES	**ARCESS Array B**	**58.83 340**	P	**P**	**16 41 41.3 -1.4**
	comp=Z,7.2nm,0.3s,baz=44,slow=7.9,SNR=4.3				
ARCES			LR	LR	17 12 40.0
	comp=Z,40nm,18.6s,baz=39,slow=42				
NIL	**Nilore**	**59.04 288**	*e*P	**P**	**16 41 45.1 +0.3**
	comp=Z,48nm,0.8s				
NIL	**Nilore**	**59.04 288**	*e*P	**P**	**16 41 45.1 +0.3**
NIL			pmax	pmax	
	comp=Z,48nm,0.8s			

comp=Z,36nm,1.1s
FFC Flin Flon 62.82 39 *e*P **P 16 42 10.0 0.0**
comp=Z,5.7nm,0.9s
FFC Flin Flon 62.82 39 *e*P **P 16 42 10.0 0.0**
FFC pmax pmax
comp=Z,6.0nm,0.9s
FCC Fort Churchill 63.31 32 *e*P **P 16 42 12.8 -0.4**
comp=Z,4.4nm,0.8s
FCC Fort Churchill 63.31 32 *e*P **P 16 42 12.8 -0.4**
FCC pmax pmax
comp=Z,4.0nm,0.8s
DLMT Dillon 63.45 52 *e*P **P 16 42 14.1 -0.5**
comp=Z,3.7nm,0.5s
NV01 Mina Array Sit 64.41 61 *e*P **P 16 42 22.8 +1.7**
NVAR Mina Array Bea 64.41 61 P **P 16 42 22.8 +1.7**
comp=Z,0.5nm,0.6s,baz=282,slow=6.2,SNR=2.2
FIA0 FINESS Array S 64.81 334 *e*P **P 16 42 21.2 -1.9**
FIA0 FINESS Array S 64.81 334 *e*P **P 16 42 21.2 -1.9**
FINES FINESS Array B 64.81 334 P **P 16 42 21.2 -1.9**
comp=Z,3.6nm,0.7s,baz=33,slow=8.0,SNR=23
FINES LR LR 17 13 02.5
comp=Z,71nm,19.0s,baz=44,slow=38
GEYT Alibeck 66.17 300 P **P 16 42 32.2 -0.1**
comp=Z,7.5nm,0.6s,baz=38,slow=2.6,SNR=19
GYA0B ALIBECK ARRAY 66.17 300 *e*P **P 16 42 31.6 -0.7**
comp=Z,9.4nm,0.8s
WR1 Warramunga Arr 66.62 197 *e*P **P 16 42 35.7 +0.6**
WRA Warramunga Arr 66.62 197 P **P 16 42 35.7 +0.6**
comp=Z,131nm,0.3s,baz=6.4,slow=7.3,SNR=1.1
PD31 Pinedale Array 66.79 52 *e*P **P 16 42 37.0 +0.5**
comp=Z,10nm,2.0s
PDAR Pinedale Array 66.79 52 P **P 16 42 37.7 +1.2**
comp=Z,1.1nm,0.8s,baz=318,slow=2.0,SNR=5.5
NC405 NORSAR Array S 69.02 340 *e*P **P 16 42 48.7 -1.2**
comp=Z,108nm,2.0s
NB2 NORSAR Subarra 69.20 340 P **P 16 42 49.4 -1.6**
comp=Z,1.9nm,0.7s,baz=28,slow=6.2
NB200 NORSAR Array S 69.20 340 *e*P **P 16 42 49.8 -1.2**
NOA NORSAR Array B 69.20 340 P **P 16 42 49.8 -1.2**
comp=Z,3.8nm,0.6s,baz=29,slow=6.3,SNR=9.8
NOA LR LR 17 15 46.2
comp=Z,35nm,20.5s,baz=10.0,slow=38
AKT Akhty 69.87 309 *e*P **P 16 42 55.6 0.0**
AKT *e* 16 43 17.6
AKT pmax pmax
comp=Z,17nm,0.7s
AS31 Alice Springs 70.32 197 *e*P **P 16 42 58.4 +0.1**
comp=Z,1.2nm,0.9s
ASAR Alice Springs 70.33 197 P **P 16 43 00.2 +1.9**
comp=Z,2.6nm,0.8s,baz=14,slow=5.4,SNR=26
NCK Nalchik 70.69 313⇓*e*P **P 16 43 00.8 +0.3**
NCK pmax pmax
comp=Z,14nm,1.0s
KIV Kislovodsk 70.84 313 *e*P **P 16 43 01.4 0.0**
comp=Z,16nm,0.8s
KIV Kislovodsk 70.84 313⇓*i*P **P 16 43 01.6 +0.2**
KIV Kislovodsk 70.84 313 *e*P **P 16 43 02.2 +0.8**
KIV pmax pmax
comp=Z,48nm,1.0s
KIV MLR MLR
comp=Z,163nm,18.0s
KIV Kislovodsk 70.84 313 *e*P **P 16 43 02.2 +0.8**
KBZ Khabaz 70.89 313 P **P 16 43 00.8 -0.8**
comp=Z,17nm,0.8s,baz=75,slow=4.7,SNR=32
KBZ LR LR 17 17 55.9
comp=Z,154nm,19.6s,baz=36,slow=39
ZEI Tsey 71.03 312 *e*P **P 16 43 01.5 -1.2**
ZEI pmax pmax
comp=Z,6.0nm,0.5s
ZEI Tsey 71.03 312 *e*P **P 16 43 01.5 -1.2**
TBLG Delisi 71.32 311 *e*P **P 16 43 04.9 +0.6**
comp=Z,25nm,0.7s
TBLG Delisi 71.32 311 *e*P **P 16 43 04.9 +0.6**
TBLG pmax pmax
comp=Z,25nm,0.7s
AKASG Malin Array Be 72.02 325 P **P 16 43 06.4 -1.9**
comp=Z,3.4nm,0.6s,baz=36,slow=6.8,SNR=14
AKASG LR LR 17 17 13.8
comp=Z,59nm,19.3s,baz=80,slow=38
AKBB Malin Array Si 72.02 325 *e*P **P 16 43 06.5 -1.8**
AKBB Malin Array Si 72.02 325 *e*P **P 16 43 06.5 -1.8**
KIEV Kiev 72.03 325 *e*P **P 16 43 06.7 -1.7**
comp=Z,13nm,1.3s
KIEV Kiev 72.03 325⇓*i*P **P 16 43 06.9 -1.4**
KIEV Kiev 72.03 325 *e*P **P 16 43 06.7 -1.7**
KIEV pmax pmax
comp=Z,13nm,1.3s
AKH Akhalkalaki 72.21 311 *e*P **P 16 43 10.5 +0.7**
comp=Z,8.8nm,0.8s
AKH Akhalkalaki 72.21 311⇑*i*P **P 16 43 10.9 +1.0**
AKH Akhalkalaki 72.21 311 *e*P **P 16 43 10.5 +0.7**
AKH pmax pmax
comp=Z,9.0nm,0.8s
GNI Garni 72.43 310⇑*e*P **P 16 43 11.9 +0.8**
GNI pmax pmax
comp=Z,31nm,1.0s
BCA Borcka 73.17 312⇑*i*P **P 16 43 15.2 -0.2**
F41A Three Lakes 74.99 39 *e*P **P 16 43 25.4 -0.5**
comp=Z,9.5nm,0.7s
SCHQ Schefferville 75.26 22 LR LR 17 19 06.6
comp=Z,29nm,20.2s,baz=100,slow=38
OJC Ojcow 75.96 330 *e*P **P 16 43 31.3 0.0**
OJC Ojcow 75.96 330 *e*P **P 16 43 30.6 -0.7**
comp=Z,12nm,0.8s
OJC Ojcow 75.96 330 *e*P **P 16 43 30.6 -0.7**
OJC pmax pmax
comp=Z,12nm,0.8s
BUR08 Bucovina Ar. S 76.05 326 *e*P **P 16 43 31.5 -0.5**
comp=Z,12nm,0.6s
BURAR Bucovina Array 76.07 326⇓*i*P **P 16 43 31.7 -0.4**
BURAR Bucovina Array 76.07 326 ⇓P **P 16 43 31.7 -0.4**
KOLS Kolonicke sedl 76.13 328 *e*P **P 16 43 32.0 -0.4**
KOLS pmax pmax
comp=Z,9.0nm,1.0s
KOLS Kolonicke sedl 76.13 328 *e*P **P 16 43 32.0 -0.4**
BIZ Bicaz 76.25 325⇓*i*P **P 16 43 33.0 -0.1**
DIKM Dikmen 76.25 316⇑*i*P **P 16 43 32.7 -0.5**
TESR Tescani 76.37 324⇑*i*P **P 16 43 32.7 -1.1**
NIE Niedzica 76.45 329 *e*P **P 16 43 34.4 +0.2**
NIE Niedzica 76.45 329 *e*P **P 16 43 34.4 +0.2**
TLCR 76.51 322⇑*i*P **P 16 43 33.7 -0.8**
TLCR 76.51 322 ⇑P **P 16 43 33.7 -0.8**
KSP Ksiaz 76.62 332 *e*P **P 16 43 34.8 -0.3**
KSP Ksiaz 76.62 332 *e*P **P 16 43 34.8 -0.3**
TRPA Tarpa 76.69 327⇑*i*P **P 16 43 35.5 0.0**
PETR Petresti 76.76 323⇑*i*P **P 16 43 35.4 -0.5**
CFR Carcaliu 76.81 322⇓*i*P **P 16 43 35.8 -0.4**
CFR Carcaliu 76.81 322 ⇓P **P 16 43 35.8 -0.4**
OKC Ostrava-Krasne 76.86 331 *e*P **P 16 43 36.5 +0.1**
OKC Ostrava-Krasne 76.86 331 *e*P **P 16 43 36.5 +0.1**
VRI Vrincioaia 76.86 324⇑*i*P **P 16 43 35.2 -1.3**
VRI Vrincioaia 76.86 324 ⇑P **P 16 43 35.2 -1.3**
LANS Liptovska Anna 76.97 330 *e*P **P 16 43 37.6 +0.4**
LANS Liptovska Anna 76.97 330 *e*P **P 16 43 37.6 +0.4**
UPC Upice 77.00 332 *e*P **P 16 43 36.8 -0.4**
UPC Upice 77.00 332 *e*P **P 16 43 36.8 -0.4**
DPC Dobruska-Polom 77.03 332 *e*P **P 16 43 37.3 -0.2**
DPC Dobruska-Polom 77.03 332 *e*P **P 16 43 37.3 -0.2**
OZUR 77.06 324⇑*i*P **P 16 43 37.8 +0.1**
MORC Moravsky Berou 77.11 331 *e*P **P 16 43 37.3 -0.6**
comp=Z,12nm,0.8s
MORC Moravsky Berou 77.11 331⇑*i*P **P 16 43 37.9 0.0**
MORC Moravsky Berou 77.11 331 *e*P **P 16 43 37.3 -0.6**
MORC pmax pmax
comp=Z,12nm,0.8s
MORC Moravsky Berou 77.11 331 *e*P **P 16 43 37.5 -0.4**
STKA Stephens Creek 77.22 188 P **P 16 43 41.0 +2.5**
comp=Z,2.1nm,0.9s,baz=218,slow=3.0,SNR=3.0
STKA LR LR 17 24 41.1
comp=Z,28nm,18.0s,baz=36,slow=41
STKA Stephens Creek 77.22 188 P **P 16 43 41.0 +2.5**
CLL Collm 77.25 335 *e*P **P 16 43 37.4 -1.2**
comp=Z,18nm,1.0s
CLL Collm 77.25 335⇑*i*P **P 16 43 37.5 -1.1**
comp=Z,19nm,1.1s
CLL *i* 16 43 40.5
CLL Collm 77.25 335⇑*i*P **P 16 43 37.5 -1.1**
CLL pmax pmax
comp=Z,19nm,1.1s
TIRR Tirgusor 77.26 322⇑*i*P **P 16 43 37.8 -0.9**
TIRR Tirgusor 77.26 322 ⇑P **P 16 43 37.8 -0.9**
HARR Harsova 77.28 322⇑*i*P **P 16 43 37.5 -1.3**
HARR Harsova 77.28 322 ⇑P **P 16 43 37.6 -1.3**
TLB Topalu 77.32 322⇑*i*P **P 16 43 38.7 -0.4**
TLB Topalu 77.32 322 ⇑P **P 16 43 38.7 -0.4**

BRG Berggiesshubel 77.34 334 *e*P **P 16 43 38.1 -1.0**
comp=Z,4.2nm,0.8s
BRG Berggiesshubel 77.34 334 *e*P **P 16 43 38.1 -1.0**
BRG pmax pmax
comp=Z,4.0nm,0.8s
MLR Muntele Rosu 77.48 324 *e*P **P 16 43 39.2 -1.0**
comp=Z,8.9nm,0.8s
MLR Muntele Rosu 77.48 324⇑*i*P **P 16 43 40.2 0.0**
MLR Muntele Rosu 77.48 324 *e*P **P 16 43 39.2 -1.0**
MLR pmax pmax
comp=Z,9.0nm,0.8s
DRGR 77.73 327⇑*i*P **P 16 43 40.7 -0.8**
DRGR 77.73 327 ⇑P **P 16 43 40.7 -0.8**
VYHS Vyhne 77.75 330 *e*P **P 16 43 41.3 -0.2**
VYHS pmax pmax
comp=Z,6.0nm,1.3s
VYHS Vyhne 77.75 330 *e*P **P 16 43 41.3 -0.2**
ICOR Ion Corvin 77.80 322⇑*i*P **P 16 43 41.2 -0.6**
VRAC Vranov 77.84 331⇑*i*P **P 16 43 41.7 -0.2**
VRAC Vranov 77.84 331 ⇑P **P 16 43 41.7 -0.2**
VRAC Vranov 77.84 331 *e*P **P 16 43 41.7 -0.2**
JAVC Velka Javorina 77.85 331 *e*P **P 16 43 42.7 +0.6**
PSZ Piszkesteto 77.85 329 *e*P **P 16 43 41.0 -1.2**
comp=Z,12nm,1.0s
PSZ Piszkesteto 77.85 329⇑*i*P **P 16 43 41.0 -1.2**
PSZ Piszkesteto 77.85 329 ⇑P **P 16 43 41.0 -1.2**
VOIR 77.90 324⇓*i*P **P 16 43 42.7 +0.2**
VOIR 77.90 324 ⇓P **P 16 43 42.7 +0.2**
GOPC GO Pecny, Ondr 77.91 333 *e*P **P 16 43 41.6 -0.8**
GOPC GO Pecny, Ondr 77.91 333 *e*P **P 16 43 41.6 -0.8**
PRU Pruhonice 77.92 333 *e*P **P 16 43 42.1 -0.3**
PRU Pruhonice 77.92 333 *e*P **P 16 43 42.1 -0.3**
KRUC Moravsky 78.11 331 *e*P **P 16 43 43.1 -0.4**
ARR Arges 78.13 325⇑*i*P **P 16 43 43.5 -0.2**
TREC Trest 78.22 332 *e*P **P 16 43 43.4 -0.7**
TREC Trest 78.22 332 *e*P **P 16 43 43.4 -0.7**
MOX Moxa 78.25 335 P **P 16 43 44.4 +0.2**
MOX pmax pmax
comp=Z,9.0nm,1.0s
NKC Novy Kostel 78.37 334 *e*P **P 16 43 44.2 -0.7**
NKC Novy Kostel 78.37 334 *e*P **P 16 43 44.2 -0.7**
MODS Modra-Piesok 78.40 331 *e*P **P 16 43 44.5 -0.6**
MODS pmax pmax
comp=Z,13nm,1.0s
MODS Modra-Piesok 78.40 331 *e*P **P 16 43 44.5 -0.6**
BR101 Keskin Array S 78.52 316 *e*P **P 16 43 45.5 -0.6**
BR131 Keskin Array S 78.52 316 *e*P **P 16 43 45.6 -0.4**
comp=Z,4.3nm,0.8s
BRTR Keskin Array B 78.52 316 P **P 16 43 45.5 -0.6**
comp=Z,3.5nm,0.9s,baz=60,slow=4.9,SNR=15
SIRR Siria 78.57 327⇑*i*P **P 16 43 45.8 -0.3**
ZST Bratislava 78.61 331 *e*P **P 16 43 45.8 -0.4**
ZST Bratislava 78.61 331 *e*P **P 16 43 45.8 -0.4**
GZR Gura Zlata 78.86 326⇑*i*P **P 16 43 47.1 -0.6**
GZR Gura Zlata 78.86 326 ⇑P **P 16 43 47.1 -0.6**
KHC Kasperske Hory 78.98 333 *e*P **P 16 43 47.2 -1.1**
comp=Z,4.7nm,0.7s
KHC Kasperske Hory 78.98 333*de*P **P 16 43 48.2 -0.1**
KHC pmax pmax
comp=Z,26nm,1.0s
KHC Kasperske Hory 78.98 333 *e*P **P 16 43 48.0 -0.3**
BZS Buzias 79.13 327⇑*i*P **P 16 43 48.8 -0.3**
BZS Buzias 79.13 327 ⇑P **P 16 43 48.8 -0.3**
GEC2 GERESS Array S 79.19 333 *e*P **P 16 43 48.6 -0.9**
comp=Z,5.2nm,0.8s
GEC2 GERESS Array S 79.19 333 *e*P **P 16 43 48.6 -0.9**
GEC2 pmax pmax
comp=Z,5.0nm,0.8s
GERES GERESS Array B 79.19 333 P **P 16 43 48.8 -0.8**
comp=Z,3.8nm,0.7s,baz=35,slow=5.9,SNR=26
GERES LR LR 17 21 52.3
comp=Z,21nm,19.0s,baz=20,slow=38
CONA Conrad Observa 79.27 331 *e*P **P 16 43 50.1 +0.1**
comp=Z,7.3nm,0.6s,SNR=5.8
HERR Herculane 79.42 326⇑*i*P **P 16 43 49.2 -1.5**
LTX Lajitas 79.48 59 *e*P **P 16 43 51.7 +0.2**
LTX Lajitas 79.48 59 *e*P **P 16 43 51.7 +0.2**
TXAR Lajitas Array 79.48 59 P **P 16 43 51.7 +0.2**
comp=Z,0.8nm,0.6s,baz=296,slow=3.9,SNR=11
MDVR Moldovita 79.78 326⇑*i*P **P 16 43 51.8 -1.0**
MEM Membach 79.86 338 P **P 16 43 52.4 -0.5**
MEM Membach 79.86 338 P **P 16 43 52.5 -0.5**
comp=Z,11nm,0.9s
MOA Molln 79.88 332 *e*P **P 16 43 52.9 -0.3**
comp=Z,2.3nm,0.7s
PHSR Pinarhisar 79.90 321⇑*i*P **P 16 43 53.5 +0.1**
ARSA Arzberg 79.97 331 *e*P **P 16 43 53.6 -0.1**
comp=Z,2.4nm,0.6s
BCLA Clavier 80.22 339 P **P 16 43 54.4 -0.6**
BMRD Maredsous 80.46 339 P **P 16 43 55.7 -0.5**
comp=Z,10nm,0.8s
SOKA Soboth 80.64 331 *e*P **P 16 43 56.9 -0.4**
comp=Z,6.2nm,0.7s,SNR=8.2
DOU Dourbes 80.69 339 P **P 16 43 57.1 -0.4**
KBA Koelnbreinsper 80.85 332 *e*P **P 16 43 58.8 +0.1**
comp=Z,7.6nm,0.7s,SNR=9.5
OBKA Obir 80.95 331 *e*P **P 16 43 58.4 -0.7**
comp=Z,2.9nm,0.7s
VTS Vitosha 80.96 324 *e*P **P 16 43 58.7 -0.6**
comp=Z,16nm,0.8s
VTS Vitosha 80.96 324⇓*i*P **P 16 43 59.5 +0.2**
VTS Vitosha 80.96 324 *e*P **P 16 43 58.7 -0.6**
VTS pmax pmax
comp=Z,16nm,0.8s
MYKA Terra Mystica 81.15 332 *i* P **P 16 43 59.7 -0.4**
comp=Z,1.3nm,0.4s
ALN Alexandroupoli 81.15 321 *e*P **P 16 43 59.4 -0.7**
comp=Z,5.5nm,1.1s
WATA Walderalm 81.20 333 *e*P **P 16 43 59.9 -0.5**
comp=Z,5.0nm,0.5s
WTTA Wattenberg 81.24 333 *i* P **P 16 44 00.7 0.0**
comp=Z,6.0nm,0.5s,SNR=5.1
BFO Black Forest 81.29 336 *e*P **P 16 43 59.4 -1.4**
comp=Z,8.0nm,1.0s
BFO Black Forest 81.29 336 *e*P **P 16 43 59.4 -1.4**
BFO pmax pmax
comp=Z,8.0nm,1.0s
RETA Reutte 81.32 334 *e*P **P 16 44 00.7 -0.3**
comp=Z,5.0nm,0.8s
MOTA Moosalm 81.34 334 *i* P **P 16 44 01.4 +0.2**
comp=Z,9.9nm,0.9s
SQTA Sankt Quirin 81.42 334 *i* P **P 16 44 01.4 -0.2**
comp=Z,3.7nm,0.7s
ECH Echery 81.73 337 *e*P **P 16 44 01.4 -1.7**
comp=Z,5.6nm,0.8s
ECH Echery 81.73 337 *e*P **P 16 44 01.4 -1.7**
ECH pmax pmax
comp=Z,6.0nm,0.8s
FETA Feichten 81.74 334 *e*P **P 16 44 03.1 -0.3**
comp=Z,3.5nm,0.9s
DAVA Damuels 81.77 334 *i* P **P 16 44 03.1 -0.4**
comp=Z,5.3nm,0.9s
PPT Papeete 82.44 124 LR LR 17 13 04.5
comp=Z,45nm,22.0s,baz=284,slow=30
TUE Stuetta 82.66 334 *e*P **P 16 44 06.7 -1.5**
comp=Z,6.0nm,0.9s
PDG Podgorica 82.73 326⇑*i*P **P 16 44 07.3 -1.0**
SSF Saint Saulge 83.77 338 *e*P **P 16 44 12.8 -0.9**
SSF pmax pmax
comp=Z,8.0nm,1.2s
LPL La Plagne 84.30 336 *e*P **P 16 44 16.3 -0.4**
LPL pmax pmax
comp=Z,7.0nm,0.9s
CAF Calviac 86.13 339 *e*P **P 16 44 25.8 +0.2**
CAF pmax pmax
comp=Z,5.0nm,0.7s
Z50A Ashland 86.35 45 *e*P **P 16 44 26.6 -0.2**
comp=Z,13nm,1.2s
LFF La Frestale 86.45 339 *e*P **P 16 44 26.1 -1.0**
LFF pmax pmax
comp=Z,4.0nm,0.5s
PLCA Paso Flores 149.46 97 PKPbc **PKPbc 16 51 32.3 -1.1**
comp=Z,1.2nm,0.7s,baz=225,slow=4.3,SNR=2.7
CPUP Villa Florida 150.45 60 PKPbc **PKPbc 16 51 35.3 -0.9**
comp=Z,2.2nm,0.8s,baz=323,slow=4.0,SNR=5.5
SNAA Sanae 150.69 197 PKPdf **PKPbc 16 51 35.5 +0.1**
SNAA Sanae 150.69 197 PKPbc **PKiKP 16 51 35.8 -0.3**
comp=Z,3.5nm,0.8s,baz=187,slow=3.9,SNR=26
SNAA Sanae 150.69 197 *e*PKPbc **PKPbc 16 51 35.2 -0.1**
SNAA Sanae 150.69 197 *e*PKIKP **PKPbc 16 51 35.3 -0.1**
VNA2 Neumayer--Watz 152.16 195 PKPdf **PKiKP 16 51 39.1 +0.1**
baz=102,slow=1.0
VNA3 Neumayer Olymp 152.29 193 PKPdf **PKPbc 16 51 39.0 0.0**
VNA1 Neumayer--Stat 152.55 195 PKPdf **PKiKP 16 51 40.0 +0.2**

TAP 04 16:35:03.4, 23°.99N×121°.27E, h9km, ML1.9, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OWD	**Renai**	**0.09**	**250**	*e*P	Pg	16 35 06.3	+0.4
	baz=250						
OWD				*e*S	Sg	16 35 07.4	-0.3
	baz=250						
CHGB	**Renai**	**0.12**	**310**	*e*P	Pg	16 35 07.1	+0.8
	baz=309						
CHGB				*e*S	Sg	16 35 08.8	+0.5
	baz=309						
WHF	**Hehuan Shan**	**0.16**	**358**	⇑*i*P	Pg	16 35 07.9	+0.8
WHF				*i* S	Sg	16 35 10.2	+0.6
ESL	**Shilin**	**0.23**	**139**	P	Pg	16 35 09.8	+1.8
	baz=138						
ESL				*i* S	Sg	16 35 13.0	+1.9
	baz=138						
VWDT	**VWDT**	**0.26**	**207**	*e*P	Pg	16 35 09.4	+0.8
	baz=207						
VWDT				*e*S	Sg	16 35 12.9	+0.8
	baz=207						
TWT	**Tachien**	**0.28**	**342**	P	Pb	16 35 10.2	-0.6
	baz=339						
TWT				*e*S	Sb	16 35 14.7	-1.1
	baz=339						
TDCB	**Techi**	**0.28**	**339**	*e*P	Pb	16 35 10.3	-0.6
	baz=338						
TDCB				*e*S	Sg	16 35 13.8	+0.8
	baz=338						
ETLH	**Xiulin Townshi**	**0.29**	**41**	*e*P	Pb	16 35 10.6	-0.4
	baz=41						
ETLH				*e*S	Sg	16 35 14.5	+1.3
	baz=41						
HWA	**Hwalien**	**0.30**	**92**	*e*P	Pb	16 35 10.9	-0.2
	baz=91						
HWA				*e*S	Sb	16 35 15.9	-0.4
	baz=91						
TWD	**Chiawan**	**0.31**	**72**	P	Pb	16 35 11.3	+0.1
	baz=72						
TWD				*i* S	Sb	16 35 15.8	-0.7
	baz=72						
DPDB	**Guoxing**	**0.32**	**279**	P	Pb	16 35 11.1	-0.3
	baz=278						
DPDB				S	Sb	16 35 15.8	-0.9
	baz=278						
EGFH	**Guangfu**	**0.35**	**156**	P	Pb	16 35 11.8	0.0
	baz=155						
EGFH				S	Sb	16 35 16.4	-1.0
	baz=155						
NACB	**Ninganchiao**	**0.35**	**58**	*e*P	Pb	16 35 11.7	-0.2
	baz=57						
NACB				*e*S	Sb	16 35 16.9	-0.6
	baz=57						
SSLB	**Suanglung**	**0.35**	**236**	*e*P	Pb	16 35 11.2	-0.7
	baz=235						
SSLB				*e*S	Sg	16 35 14.9	-0.2
	baz=235						
SMLT	**Sun Moon Lake**	**0.36**	**253**	P	Pb	16 35 11.7	-0.3
	baz=252						
SMLT				S	Sb	16 35 16.6	-1.2
	baz=252						
TYC	**Yuchr**	**0.39**	**258**	P	Pb	16 35 12.2	-0.4
	baz=257						
TYC				S	Sg	16 35 17.0	+0.8
	baz=257						
WHP	**Taichung City**	**0.42**	**314**	*e*P	Pb	16 35 12.8	-0.3
	baz=314						
WHP				*e*S	Sb	16 35 19.0	-0.5
	baz=314						
NNSB	**Datong**	**0.45**	**13**	*e*P	Pb	16 35 13.1	-0.6
	baz=12						
NNSB				*e*S	Sb	16 35 20.0	-0.7
	baz=12						
NNS	**Nan Shan**	**0.46**	**12**	*i* P	Pb	16 35 13.3	-0.5
	baz=12						
NNS				S	Sb	16 35 20.1	-0.8
	baz=12						
EHY	**Hungye**	**0.48**	**175**	P	Pb	16 35 13.8	-0.3
	baz=173						
EHY				*e*S	Sb	16 35 21.3	0.0
	baz=173						
HGSD	**Ruisui**	**0.51**	**164**	*e*P	Pb	16 35 15.1	+0.5
	baz=164						
HGSD				*e*S	Sb	16 35 22.6	+0.4
	baz=164						
WNT	**Mingjian**	**0.55**	**259**	*e*P	Pb	16 35 15.3	0.0
	baz=258						
WNT				*e*S	Sb	16 35 23.9	+0.6
	baz=258						
YULB	**Yu-li**	**0.59**	**178**	*e*P	Pb	16 35 15.8	-0.2
	baz=177						
YULB				*e*S	Sb	16 35 23.9	-0.6
	baz=177						
ENA	**Nanau**	**0.61**	**44**	P	Pb	16 35 16.2	-0.2
	baz=44						
ENA				*e*S	Sb	16 35 24.8	-0.4
	baz=44						
TWF1	**Yuli**	**0.63**	**178**	P	Pb	16 35 16.3	-0.4
	baz=177						
TWF1				S	Sb	16 35 25.9	+0.2
	baz=177						
NDT	**Datong Townshi**	**0.65**	**20**	*e*P	Pb	16 35 16.7	-0.3
	baz=19						
NDT				*e*S	Sb	16 35 26.5	+0.2
	baz=19						
CHN5	**Tsauling**	**0.67**	**235**	*e*P	Pb	16 35 17.3	-0.1
	baz=234						
CHN5				*e*S	Sb	16 35 27.6	+0.9
	baz=234						
YHNB	**Yeheng**	**0.69**	**8**	*e*P	Pb	16 35 17.5	-0.2
	baz=7.0						
YHNB				*e*S	Sb	16 35 28.1	+0.7
	baz=7.0						
NSTT	**Nanjuang**	**0.69**	**339**	P	Pb	16 35 18.4	+0.7
	baz=339						
NSTT				S	Sb	16 35 28.7	+1.4
	baz=339						
NSK	**Sanguang**	**0.69**	**6**	P	Pb	16 35 17.7	-0.1
	baz=7.0						
NSK				S	Sb	16 35 28.3	+0.8
	baz=7.0						
LIOB	**Emei**	**0.70**	**340**	*e*P	Pb	16 35 18.1	+0.2
	baz=340						
LIOB				*e*S	Sb	16 35 28.2	+0.6
	baz=340						
ENTT	**Nioudou**	**0.70**	**22**	P	Pb	16 35 17.8	-0.2
	baz=22						
ENTT				*e*S	Sb	16 35 28.9	+1.1
	baz=22						
NWLT	**Wulai**	**0.81**	**15**	*e*P	Pb	16 35 20.2	+0.3
	baz=14						
NWLT				*e*S	Sb	16 35 31.9	+0.9
	baz=14						
TWE	**Neicheng**	**0.82**	**26**	*e*P	Pb	16 35 20.0	+0.1
	baz=27						
ELDTW	**Lidau**	**0.83**	**196**	P	Pb	16 35 20.0	-0.1
	baz=195						
ELDTW				*e*S	Sb	16 35 30.9	-0.5
	baz=195						
CHN4	**Tsaushan**	**0.89**	**225**	*e*P	Pn	16 35 22.2	+0.1
	baz=224						
CHN4				*e*S	Sn	16 35 34.5	-0.7
	baz=224						
TPUB	**Ta-pu**	**0.90**	**221**	*e*P	Pb	16 35 21.8	+0.5
	baz=220						
TPUB				*e*S	Sn	16 35 34.8	-0.8
	baz=220						
TIPB	**Shuangxi**	**1.10**	**27**	*e*P	Pn	16 35 25.4	+0.2
	baz=27						
YM05	**YM05**	**1.20**	**13**	*e*P	Pn	16 35 27.1	+0.5
	baz=12						

TAP 04 16:35:15.3, 24°.68N×122°.01E, h19km, ML1.7, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.16**	**245**	P	Pg	16 35 20.1	+0.3
	baz=40						
TWC	**Suao**	**0.16**	**245**	P	Pg	16 35 20.1	+0.3
	baz=242						
TWC				S	Sg	16 35 23.7	+0.9
	baz=242						
EOS1	**EOS1**	**0.17**	**139**	*e*P	Pg	16 35 20.5	+0.6
	baz=138						

EOS1			eS	Sg	16 35 24.0	+1.0
	baz=138					
EGS		**0.18 338**	P	Pg	16 35 20.6	+0.5
	baz=341					
EGS			S	Sg	16 35 24.4	+1.0
	baz=341					
NTC	**Toucheng**	**0.24 318**	eP	Pg	16 35 21.4	+0.4
	baz=317					
NTC			eS	Sg	16 35 25.5	+0.7
	baz=317					
ILA	**Ilan**	**0.25 291**	eP	Pg	16 35 21.7	+0.6
	baz=290					
ILA			eS	Sg	16 35 26.3	+1.1
	baz=290					
TWE	**Neicheng**	**0.31 278**	eP	Pb	16 35 22.3	0.0
	baz=277					
TWE			eS	Sb	16 35 27.7	+0.7
	baz=277					
TWB1	**Santiao Chiao**	**0.33 357**	P	Pb	16 35 23.1	+0.4
	baz=358					
TWB1			eS	Sb	16 35 28.2	+0.6
	baz=358					
TIPB	**Shuangxi**	**0.34 331**	eP	Pb	16 35 23.5	+0.6
	baz=330					
TIPB			eS	Sb	16 35 28.9	+1.0
	baz=330					
ENTT	**Nioudou**	**0.40 265**	eS	Sb	16 35 30.6	+0.8
	baz=264					
WFSB	**Wu-fen Shan**	**0.44 333**	eS	Sb	16 35 32.0	+1.1
	baz=332					

*SJA **04** 16:41:11.4±0.9, 24°.42S×66°.89W, h207km±41km, ML2.2, MW2.9*
*ISCJB **04** 16:41:12.1±1.1, 24°.20S±0°.05×67°.13W±0°.05, h175km±12km, Error ellipse: s-maj=10.1km s-min=5.2km az=33.8*
*GUC **04** 16:41:12.9±0.6, 24°.21S×67°.50W, h227km±9km, ML3.5*
ISC 04 16:41:09.8±2.6, 24°.26S±0°.07×67°.09W±0°.06, h204km±23km, n15, σ1§35/30, 7C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.51**	**108**	*i* P	**Pn**	**16 41 44.9**	**+0.8**
SLA				IAML		16 41 46.1	
	comp=Z,11nm,0.7s						
SLA				*i* S	**S**	**16 42 09.4**	**-1.0**
AZAP	**Zapla**	**1.84**	**89**	*i* P	**Pn**	**16 41 47.8**	**+0.5**
AZAP				IAML		16 41 48.8	
	comp=Z,38nm,0.3s						
AZAP				*i* S	**S**	**16 42 16.0**	**0.0**
FSA	**Cafayete**	**2.10**	**152**	*i* P	**Pn**	**16 41 50.5**	**+0.7**
FSA				IAML		16 41 50.7	
	comp=Z,4.5nm,0.3s						
FSA				eS	**S**	**16 42 18.4**	**-2.1**
LVC	**Limon Verde**	**2.35**	**314⇑**	*i*P	**Pn**	**16 41 54.3**	**+1.6**
LVC				*i* S	**S**	**16 42 25.3**	**-0.1**
PB15	**IPOC Station P**	**2.42**	**295⇑**	*i*P	**Pn**	**16 41 54.5**	**+1.2**
PB15				*i* S	**S**	**16 42 26.2**	**-0.4**
GO02	**Mina Guanaco**	**2.45**	**248**	eP	**Pn**	**16 41 54.9**	**+1.2**
GO02				eS	**S**	**16 42 27.5**	**+0.3**
PB06	**IPOC Station P**	**2.76**	**304⇑**	*i*P	**Pn**	**16 41 58.2**	**+1.2**
PB06				*i* S	**S**	**16 42 32.3**	**-1.0**
PB06				IAML		16 42 34.6	
	comp=E,95nm,0.3s						
PB09	**IPOC Station P**	**3.15**	**321⇓**	*i*P	**Pn**	**16 42 03.5**	**+1.8**
PB09				eS	**S**	**16 42 41.6**	**0.0**
PB05	**IPOC Station P**	**3.18**	**296⇓**	*i*P	**Pn**	**16 42 02.8**	**+0.8**
PB05				*i* S	**S**	**16 42 39.8**	**-2.3**
PB05				IAML		16 42 46.1	
	comp=E,32nm,0.5s						
PB03	**IPOC Station P**	**3.30**	**311⇑**	*i*P	**Pn**	**16 42 04.3**	**+0.9**
PB03				*i* S	**S**	**16 42 43.0**	**-1.6**
PB03				IAML		16 42 46.7	
	comp=E,61nm,0.2s						
PB04	**IPOC Station P**	**3.41**	**304**	eP	**Pn**	**16 42 05.3**	**+0.7**
PB04				*i* S	**S**	**16 42 45.1**	**-1.9**
PB04				IAML		16 42 47.2	
	comp=N,73nm,0.4s						
PB07	**IPOC Station P**	**3.61**	**314⇑**	*i*P	**Pn**	**16 42 07.9**	**+0.8**
PB07				*i* S	**S**	**16 42 49.2**	**-2.2**
PB07				IAML		16 42 51.0	
	comp=E,68nm,0.5s						
PB01	**IPOC Station P**	**3.90**	**325⇑**	*i*P	**Pn**	**16 42 11.1**	**+0.5**
PB01				*i* S	**S**	**16 42 55.7**	**-2.0**
PB01				IAML		16 42 56.5	
	comp=E,40nm,0.2s						
PB02	**IPOC Station P**	**3.91**	**318⇑**	*i*P	**Pn**	**16 42 11.2**	**+0.4**
PB02				*i* S	**S**	**16 42 56.2**	**-1.9**
PB08	**IPOC Station P**	**4.53**	**335**	*i* P	**Pn**	**16 42 20.1**	**+1.4**
PB08				*i* S	**S**	**16 43 12.2**	**-0.2**

*JMA **04** 16:54:44.4±0.2, 43°.80N×147°.22E, h36km, M3.5*
*SKHL **04** 16:54:45.6±0.9, 43°.94N×147°.19E, h57km±3km, mb4.3/4*
ISC 04 16:54:40.2±2.1, 43°.88N±0°.08×147°.33E±0°.08, h6km±12km, n15, σ1§29/26, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.07**	**279**	*i* P	**Pg**	**16 55 02.0**	**+1.3**
YUK				AMB	AMB	16 55 02.0	
	110nm,0.3s						
YUK				AMB	AMB	16 55 02.0	
	196nm,0.3s						
YUK				AMB	AMB	16 55 02.0	
	491nm,0.3s						
YUK				*i* S	**Sg**	**16 55 14.0**	**-0.6**
YUK				A	A	16 55 15.0	
	481nm,0.2s						
YUK				A	A	16 55 15.0	
	356nm,0.2s						
LAGR	**Lagunnoye**	**1.13**	**280**	*i* P	**Pg**	**16 55 03.0**	**+1.2**
LAGR				*i* S	**Sg**	**16 55 15.0**	**-1.4**
LAGR				A	A	16 55 16.0	
	247nm,0.1s						
GRPR	**Tuman**	**1.13**	**276**	eP	**Pg**	**16 55 02.0**	**+0.2**
GRPR				AMB	AMB	16 55 03.0	
	30nm,0.2s						
GRPR				AMB	AMB	16 55 03.0	
	71nm,0.2s						
GRPR				AMB	AMB	16 55 03.0	
	191nm,0.2s						
GRPR				*i* S	**Sg**	**16 55 15.0**	**-1.5**
GRPR				A	A	16 55 18.0	
	383nm,0.2s						
GRPR				A	A	16 55 18.0	
	541nm,0.2s						
NEM2	**Nemuro 2**	**1.26**	**247**	P	**Pg**	**16 55 04.8**	**+0.5**
NEM2				eS	**Sg**	**16 55 19.4**	**-1.2**
GLVR	**Golovnino**	**1.31**	**265**	eP	**Pg**	**16 55 06.0**	**+0.6**
GLVR				AMB	AMB	16 55 07.0	
	38nm,0.3s						
GLVR				*i* S	**Sg**	**16 55 21.0**	**-1.4**
GLVR				A	A	16 55 22.0	
	538nm,0.3s						
GLVR				A	A	16 55 22.0	
	181nm,0.3s						
KUR	**Kuril'sk**	**1.41**	**16**	*i* P	**Pn**	**16 55 07.3**	**+0.9**
KUR				AMB	AMB	16 55 07.9	
	25nm,0.2s						
KUR				*i* S	**Sg**	**16 55 23.5**	**-2.0**
KUR				A	A	16 55 24.0	
	175nm,0.2s						
KUR				A	A	16 55 24.0	
	205nm,0.2s						
JRA	**Rausu**	**1.59**	**273**	P	**Pn**	**16 55 10.0**	**+1.1**
JRA				eS	**Sn**	**16 55 29.2**	**-0.6**
JKHN	**Kushirohamanak**	**1.76**	**244**	P	**Pn**	**16 55 12.1**	**+0.8**
JNK	**Nakash**	**1.91**	**262**	P	**Pn**	**16 55 14.3**	**+1.0**
JAK	**Akkeshi**	**2.11**	**246**	P	**Pn**	**16 55 16.7**	**+0.7**
JAK				eS	**Sn**	**16 55 40.6**	**-1.9**
JTKR	**Abashiri--Toko**	**2.47**	**273**	P	**Pn**	**16 55 22.4**	**+1.4**
JAR	**Ashorobuto**	**2.65**	**259**	P	**Pn**	**16 55 25.1**	**+1.6**
JAR				eS	**Sn**	**16 55 55.4**	**-0.5**
JOB	**Onbets**	**2.72**	**250**	P	**Pn**	**16 55 25.8**	**+1.3**
JOB				eS	**Sn**	**16 55 56.3**	**-1.4**
JMP	**Maruseppu**	**2.87**	**274**	P	**Pn**	**16 55 28.1**	**+1.6**
JCH	**Churui**	**3.16**	**248**	P	**Pn**	**16 55 31.4**	**+0.9**
JCH				eS	**Sn**	**16 56 07.7**	**-0.8**

MAN 04 17:05:50.5, 13°.47N×120°.57E, h31km, mb3.8, ML2.5, MS2.0, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.37**	**85⇑**	*e*P	Pn	17 06 00.4	+0.5
PGP				*i* S	Sn	17 06 08.0	+1.9
LUBP	**Lubang**	**0.41**	**310**	*e*P	Pb	17 05 55.8	-3.9
LUBP				eS	Sb	17 05 59.6	-6.2
SJMP	**San Jose**	**1.14**	**152**	*e*P	Pb	17 06 15.4	+3.7
SJMP				eS	Sn	17 06 18.5	-6.4

DJA 04 17:08:11.7±0.4, 0°.N±3°.×12°.0E±°, h10km, M3.9/10, MLv3.9/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**0.32**	**63**	P	Pb	17 08 19.0	-0.6
MPSI				S	Sb	17 08 23.8	-1.1
SGKI	**Sangatta, Kali**	**2.13**	**250**	P	Pn	17 08 48.5	+1.1
APSI	**Ampana**	**2.31**	**118**	P	Pn	17 08 48.7	-1.2
APSI				S	Sn	17 09 19.7	+1.3
MRSI	**Marisa**	**2.35**	**83**	P	Pn	17 08 50.2	-0.2
MRSI				S	Sn	17 09 20.6	+1.3
TTSI	**Tana Toraja**	**3.22**	**176**	P	Pn	17 09 04.8	+2.4
LUWI	**Luwuk**	**3.39**	**111**	P	Pn	17 09 05.0	+0.3
SPSI	**Sidrap Palu**	**4.13**	**178**	P	Pn	17 09 16.1	+1.2
KMSI	**Cibinong**	**4.39**	**85**	P	Pn	17 09 19.1	+0.7
BNSI	**Bone**	**4.59**	**174**	P	Pn	17 09 22.3	+1.1

*NIED **04** 17:09:00, 38°.80N×142°.50E, h38km, Mw3.7 Best double couple: M0:3.63000×10^14 NP1:φs186.00000°, δ22.00000°, λ98.00000°. NP2:φs358.00000°, δ68.00000°, λ87.00000°.*
*ISCJB **04** 17:09:05.7±1.0, 38°.75N±0°.04×142°.45E±0°.08, h39km±9km, mb3.9/8, Error ellipse: s-maj=10.9km s-min=6.2km az=15.9*
*JMA **04** 17:09:05.8±0.1, 38°.80N×142°.43E, h33km±2km, M3.9*
JMA Felt II J1.
*IDC **04** 17:09:08.3±2.2, 38°.65N×142°.37E, h47km±21km, mb3.3/7, mb1 3.5/10, mb1mx3.3/37, mbtmp3.6/10, ML3.1/3, MS2.7/1, Ms1 2.7/1, ms1mx2.2/42, Error ellipse: s-maj=26.3km s-min=14.3km az=94.0*
ISC 04 17:09:05.3±2.9, 38°.76N±0°.04×142°.45E±0°.08, h23km±19km, n30, σ1§31/34, mb3.6/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.69**	**298**	P	**Pn**	**17 09 18.7**	**-1.0**
OFUJ				S	**Sb**	**17 09 27.4**	**-0.4**
JKMT	**Kesennumamotoy**	**0.77**	**275**	P	**Pn**	**17 09 20.0**	**-0.7**
JKMT				S	**Sb**	**17 09 29.6**	**-0.3**
JIO	**Ouri**	**0.91**	**251**	P	**Pn**	**17 09 22.2**	**-0.5**
JIO				S	**Sn**	**17 09 33.6**	**-1.5**
JMK	**Ichinoseki**	**0.98**	**282**	P	**Pn**	**17 09 23.3**	**-0.3**
JMK				S	**Sn**	**17 09 35.5**	**-1.3**
JOM	**Ohasama**	**1.15**	**309**	P	**Pn**	**17 09 25.7**	**-0.3**
JOM				S	**Sn**	**17 09 39.9**	**-1.1**
JTH	**Tanohata**	**1.27**	**339**	P	**Pn**	**17 09 26.3**	**-1.3**
JOU	**Okura**	**1.45**	**255**	P	**Pn**	**17 09 30.4**	**+0.2**
JOU				S	**Sn**	**17 09 48.7**	**+0.2**
JRG	**Rokugo**	**1.55**	**295**	P	**Pn**	**17 09 32.0**	**+0.5**
JRG				S	**Sn**	**17 09 52.0**	**+1.1**
JMM	**Marumori**	**1.58**	**236**	P	**Pn**	**17 09 31.6**	**-0.2**
JMM				eS	**Sn**	**17 09 51.0**	**-0.5**
JYK	**Kaneyama**	**1.64**	**276**	P	**Pn**	**17 09 33.0**	**+0.3**
JANG	**Nango**	**1.77**	**336**	P	**Pn**	**17 09 34.1**	**-0.4**
JANG				eS	**Sn**	**17 09 55.7**	**-0.6**
MAT	**Matsushiro**	**4.03**	**238**	P	**Pn**	**17 10 08.8**	**+3.2**
MAT				eS	**Sn**	**17 10 53.3**	**+1.3**
MJAR	**Matsushiro Arr**	**4.03**	**238**	P	**Pn**	**17 10 07.0**	**+1.5**
	0.6nm,0.3s,baz=34,slow=12,SNR=35						
MJAR				LR	LR	17 12 00.8	
	comp=Z,96nm,18.3s,baz=30,slow=44						
ASAJ	**Asahikawa**	**5.36**	**1**	P	**Pn**	**17 10 27.8**	**+3.9**
	0.5nm,0.3s,baz=199,slow=14,SNR=7.4						
JHJ	**Hachijo jima 2**	**6.03**	**202**	P	**Pn**	**17 10 32.9**	**-0.1**
	4.6nm,0.3s,baz=329,slow=22,SNR=6.4						
JHJ				S	**Sn**	**17 11 38.5**	**-2.7**
	4.5nm,0.3s,baz=73,slow=19,SNR=4.4						
KSRS	**Korea Array**	**11.52**	**268**	P	Pn	17 11 52.8	+4.5
	0.1nm,0.3s,baz=80,slow=14,SNR=3.9						
SONM	**Songino Array**	**27.55**	**301**	P	**P**	**17 14 51.1**	**+0.6**
	0.4nm,0.5s,baz=99,slow=7.7,SNR=3.5						
H11N2	**WAKE ISLAND Hy 28.39**	**125**		T	T	17 45 22.6	
	baz=316,slow=75,SNR=67						
H11N1	**WAKE ISLAND Hy 28.40**	**125**		T	T	17 45 23.4	
	baz=316,slow=75,SNR=61						
H11N3	**WAKE ISLAND Hy 28.41**	**125**		T	T	17 45 24.1	
	baz=316,slow=75,SNR=64						
H11S1	**WAKE ISLAND Hy 29.17**	**127**		T	T	17 46 21.1	
	baz=318,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy 29.17**	**127**		T	T	17 46 21.3	
	baz=318,slow=76,SNR=5.6						
H11S2	**WAKE ISLAND Hy 29.19**	**127**		T	T	17 46 21.9	
	baz=318,slow=76,SNR=3.9						
ZALV	**Zalesovo Beam**	**41.38**	**311**	P	**P**	**17 16 49.4**	**0.0**
	0.9nm,0.5s,baz=68,slow=6.9,SNR=5.8						
CMAR	**Chiang Mai Arr**	**42.74**	**254**	P	**P**	**17 17 00.6**	**-0.3**
	0.1nm,0.3s,baz=71,slow=6.8,SNR=3.0						
MKAR	**Makanchi Array**	**43.92**	**301**	P	**P**	**17 17 10.6**	**+0.4**
	0.6nm,0.5s,baz=83,slow=9.6,SNR=6.5						
ILAR	**Eielson Array**	**47.61**	**33**	P	**P**	**17 17 39.9**	**+1.0**
	0.3nm,0.6s,baz=267,slow=7.2,SNR=6.2						
WRA	**Warramunga Arr**	**58.88**	**189**	P	**P**	**17 19 01.5**	**-0.8**
	125nm,0.3s,baz=3.6,slow=7.1,SNR=1.1						
ASAR	**Alice Springs**	**62.61**	**189**	P	**P**	**17 19 27.8**	**+0.1**
	0.2nm,0.4s,baz=11,slow=9.1,SNR=8.1						
AKASG	**Malin Array Be**	**73.44**	**322**	P	**P**	**17 20 34.9**	**-0.6**
	0.5nm,0.4s,baz=45,slow=5.5,SNR=3.1						

MAN 04 17:23:53.2, 8°.59N×121°.74E, h38km, mb4.6, ML3.5, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**1.14**	**134**	*e*P	Pn	17 24 12.2	-0.5
IPIL				eS	Sn	17 24 25.2	-1.8
DCPH	**Dipolog City**	**1.59**	**90⇓**	*e*P	Pn	17 24 23.4	+4.5
DCPH				eS	Sn	17 24 42.3	+4.1
SNPH	**Sibulan**	**1.66**	**63**	*e*P	Pn	17 24 21.3	+1.4
SNPH				*i* S	Sn	17 24 40.5	+0.6
PAGZ	**Pagadian**	**1.78**	**114**	*e*P	Pn	17 24 22.7	+1.2
PAGZ				eS	Sn	17 24 42.7	-0.1
GUIM	**Jordan**	**2.19**	**22**	*e*P	Pn	17 24 28.6	+1.5
GUIM				eS	Sn	17 24 53.6	+0.6
CUYO	**Cuyo Island**	**2.36**	**342**	*e*P	Pn	17 24 31.3	+1.8
CUYO				eS	Sn	17 24 55.7	-1.5
ENPP	**El Nido**	**3.46**	**319**	*e*P	Pn	17 24 45.5	+0.8
ENPP				eS	Sn	17 25 23.8	-0.6
SJMP	**San Jose**	**3.90**	**351**	*e*P	Pn	17 24 52.1	+1.5

*ISCJB **04** 17:24:17.5±0.5, 19°.87N±0°.08×68°.06E±0°.08, h10km, mb4.1/29, Error ellipse: s-maj=11.1km s-min=10.4km az=39.4*
*IDC **04** 17:24:17.6±0.9, 19°.87N×68°.09E, h0km, mb3.8/12, mb1 3.9/13, mb1mx3.8/33, mbtmp3.8/13, ML3.5/1, Error ellipse: s-maj=25.3km s-min=18.1km az=39.0*
*NEIC **04** 17:24:20.2±1.2, 19°.88N×68°.09E, h15km±5km, mb4.1/18, Error ellipse: s-maj=24.6km s-min=18.8km az=198.0*
ISC 04 17:24:19.1±0.9, 19°.9N±0°.1×68°.0E±0°.1, h10km, n42, σ1§13/42, mb4.0/29, Arabian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**9.38**	**293**	Pn	**Pn**	**17 26 32.0**	**-2.3**
	4.3nm,0.3s,baz=122,slow=9.7,SNR=50						
WSAR				Sn	Sn	17 28 10.9	-9.1
	1.4nm,0.3s,baz=268,slow=23,SNR=7.1						
THW	**Thamme Wali**	**13.30**	**14**	P	**Pn**	**17 27 25.4**	**-2.6**
CEP	**Cherat**	**14.32**	**13**	P	**Pn**	**17 27 41.5**	**-0.6**
GEYT	**Alibeck**	**19.96**	**336**	P	**P**	**17 28 51.2**	**-0.3**
	0.1nm,0.3s,baz=172,slow=12,SNR=3.1						
BTK	**Batken**	**20.27**	**6**	*e*P	Pn	17 28 56.7	-0.1
	15nm,1.0s						
ARSB	**Arslanbob**	**21.80**	**10**	*e*P	**P**	**17 29 12.7**	**+1.2**
	4.7nm,0.6s						
NRN	**Naryn**	**22.54**	**16**	*e*P	**P**	**17 29 17.6**	**-2.0**
	3.7nm,1.1s						
KK31	**Karatay Array**	**23.26**	**5**	*e*P	**P**	**17 29 27.0**	**+0.2**
	2.6nm,0.8s						
KKAR	**Karatay Array**	**23.26**	**5**	*e*P	**P**	**17 29 27.0**	**+0.2**
	2.6nm,0.8s						
TARG	**Taragay, Kyrgy**	**23.32**	**19**	*e*P	**P**	**17 29 27.6**	**-0.1**
	5.1nm,1.2s						
AAK	**Ala-Archa**	**23.35**	**12**	P	**P**	**17 29 27.7**	**-0.1**
	4.4nm,0.8s,baz=185,slow=9.9,SNR=9.0						
AAK				PcP	**PcP**	**17 33 14.1**	**-0.6**
	5.9nm,0.3s,baz=196,slow=3.0,SNR=7.3						
AAK	**Ala-Archa**	**23.35**	**12**	*e*P	**P**	**17 29 28.5**	**+0.7**
	5.2nm,0.9s						
MAKZ	**Makanchi**	**29.19**	**20**	*e*P	**P**	**17 30 16.6**	**-4.2**
	7.1nm,1.8s						
MK32	**Makanchi Array**	**29.28**	**20**	*e*P	**P**	**17 30 20.2**	**-1.3**
MKAR	**Makanchi Array**	**29.28**	**20**	P	**P**	**17 30 20.2**	**-1.3**
	0.4nm,0.5s,baz=209,slow=11,SNR=4.5						
KURK	**Kurchatov**	**31.91**	**13**	*e*P	**P**	**17 30 43.9**	**-0.7**
	2.1nm,1.1s						
BR101	**Keskin Array S**	**35.51**	**311**	*e*P	**P**	**17 31 17.8**	**+1.4**
BRTR	**Keskin Array B**	**35.51**	**311**	P	**P**	**17 31 17.8**	**+1.4**
	0.8nm,0.7s,baz=127,slow=10.0,SNR=4.6						
ZAA0	**Zalesovo Array**	**36.38**	**17**	*e*P	**P**	**17 31 23.6**	**+0.3**
	4.1nm,1.4s						
ZALV	**Zalesovo Beam**	**36.38**	**17**	P	**P**	**17 31 23.6**	**+0.3**
	1.2nm,0.5s,baz=218,slow=9.5,SNR=6.1						
ZAA1	**Zalesovo Array**	**36.38**	**17**	*e*P	**P**	**17 31 23.6**	**+0.3**
SONA0	**Songino Array**	**41.68**	**39**	*e*P	**P**	**17 32 08.4**	**+0.4**
SONM	**Songino Array**	**41.68**	**39**	P	**P**	**17 32 08.4**	**+0.4**
	1.1nm,0.9s,baz=243,slow=6.5,SNR=4.6						
AKASG	**Malin Array Be**	**43.36**	**325**	P	**P**	**17 32 21.8**	**+0.4**
	1.1nm,0.6s,baz=125,slow=7.5,SNR=6.7						
AKBB	**Malin Array Si**	**43.36**	**325**	*e*P	**P**	**17 32 21.9**	**+0.5**
	3.6nm,0.8s						
KIEV	**Kiev**	**43.37**	**324**	*e*P	**P**	**17 32 21.8**	**+0.3**
	3.4nm,0.8s						
BUR08	**Bucovina Ar. S**	**44.31**	**319**	*e*P	**P**	**17 32 30.1**	**+0.8**
	11nm,1.8s						
FIA0	**FINESS Array S**	**50.76**	**335**	*e*P	**P**	**17 33 19.4**	**+0.3**
FINES	**FINESS Array B**	**50.76**	**335**	P	**P**	**17 33 19.4**	**+0.3**
	1.1nm,0.6s,baz=142,slow=9.6,SNR=4.6						
GERES	**GERESS Array B**	**51.97**	**317**	P	**P**	**17 33 28.6**	**+0.1**
	1.2nm,1.0s,baz=98,slow=8.2,SNR=4.8						
GRA1	**Grafenberg Arr**	**53.74**	**318**	*e*P	**P**	**17 33 42.2**	**+0.7**
	6.9nm,0.9s						
GRFO	**Grafenberg**	**53.74**	**318**	*e*P	**P**	**17 33 42.5**	**+1.0**
	5.5nm,0.6s						
TIXI	**Tiksi**	**62.24**	**18**	*e*P	**P**	**17 34 39.9**	**-0.8**
	6.2nm,1.7s						
TORD	**Torodi Ar. Bea**	**63.63**	**275**	P	**P**	**17 34 50.7**	**-0.2**
	0.3nm,0.5s,baz=101,slow=6.3,SNR=4.9						
TOA1	**Torodi Ar. Sit**	**63.63**	**275**	*e*P	**P**	**17 34 50.7**	**-0.2**
ESDC	**Sonseca Array**	**63.94**	**305**	P	**P**	**17 34 53.1**	**+0.5**
	0.4nm,0.5s,baz=65,slow=5.2,SNR=4.7						
WR1	**Warramunga Arr**	**76.03**	**117**	*e*P	**P**	**17 36 07.3**	**+0.2**
WRA	**Warramunga Arr**	**76.03**	**117**	P	**P**	**17 36 07.3**	**+0.2**
	146nm,0.3s,baz=306,slow=5.8,SNR=2.0						
WB2	**Warramunga Arr**	**76.04**	**117**	*e*P	**P**	**17 36 06.9**	**-0.3**
	33nm,1.8s						
ASAR	**Alice Springs**	**77.41**	**121**	P	**P**	**17 36 15.1**	**+0.2**
	1.8nm,0.8s,baz=301,slow=5.6,SNR=37						
AS31	**Alice Springs**	**77.41**	**121**	*e*P	**P**	**17 36 15.0**	**+0.1**
	1.0nm,0.6s						
ILAR	**Eielson Array**	**91.46**	**14**	P	**P**	**17 37 24.8**	**-0.7**
	0.3nm,0.6s,baz=334,slow=5.2,SNR=2.9						

*IDC **04** 17:34:44.7±0.5, 32°.57N×76°.52E, h0km, mb4.6/33, mb1 4.7/38, mb1mx4.6/50, mbtmp4.6/38, ML4.2/5, MS3.8/25, Ms1 3.8/25, ms1mx3.7/43, Error ellipse: s-maj=12.1km s-min=10.0km az=6.0*
*ISCJB **04** 17:34:45.4±0.1, 32°.66N±0°.02×76°.57E±0°.02, h14km, mb4.9/207, MS3.8/31, Error ellipse: s-maj=2.7km s-min=2.0km az=135.5*
*NNC **04** 17:34:46.6±1.4, 32°.85N×76°.63E, h0km, mb5.0, Error ellipse: s-maj=18.8km s-min=10.7km az=115.0*
*NDI **04** 17:34:47.4±2.3, 32°.65N×76°.56E, h9km±8km, ML4.7, mb4.9(NEIC)*
*MOS **04** 17:34:47.6±1.1, 32°.70N×76°.54E, h28km, mb5.0/70, MS4.0/5, Error ellipse: s-maj=5.4km s-min=3.4km az=109.5*
*BJI **04** 17:34:48.8±0.0, 32°.79N×76°.87E, h20km, mb4.7/47, mB4.6/38, ML4.7/2, Ms4.2/36, Ms7 4.1/27*
*NEIC **04** 17:34:50.8±2.0, 32°.67N×76°.60E, h41km±5km, mb4.9/149, Error ellipse: s-maj=12.7km s-min=6.2km az=176.0*
NEIC Felt at Dharmsala.
ISC 04 17:34:46.5±0.2, 32°.60N±0°.03×76°.58E±0°.03, h14km, n484, σ1§85/533, mb4.9/207, MS3.8/31, 36C-23D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**0.43**	**214**	*e*P	**Pg**	**17 34 55.9**	**+0.8**
DHRM				eS	**Sb**	**17 35 03.2**	**+0.9**
SMLA	**Simla**	**1.55**	**161**	*e*P	**Pg**	**17 35 17.3**	**+0.9**
SMLA				eS	**Sg**	**17 35 38.1**	**+1.5**
SMLA				IAML		17 35 40.9	
	comp=E,13μm,0.7s						
SMLA				IAML		17 35 40.9	
	comp=N,13μm,0.7s						
DDI	**Dehra Dun**	**2.60**	**151**	*e*P	**Pb**	**17 35 31.9**	**-1.0**
DDI				eS	**Sn**	**17 36 02.0**	**+2.4**
DDI				IAML		17 36 14.4	
	comp=N,5μm,0.2s						
DDI				IAML		17 36 15.2	
	comp=E,6μm,0.0s						
CHCP	**Chirah Chowk**	**2.98**	**292**	P	**Pn**	**17 35 36.4**	**+3.0**
NIL	**Nilore**	**2.98**	**291**	*e*Pn	**Pn**	**17 35 36.1**	**+2.7**
NIL	**Nilore**	**2.98**	**291**	*e*P	**Pn**	**17 35 36.2**	**+2.7**
JOSI	**Joshimath**	**3.26**	**128**	*e*P	**Pn**	**17 35 41.0**	**+3.6**
JOSI				eS	**Sn**	**17 36 17.1**	**+1.0**
JOSI				AML	AML	17 36 38.1	
	comp=E,5μm,0.5s						
JOSI				AML	AML	17 36 38.7	
	comp=N,5μm,0.8s						
NDI	**New Delhi**	**3.95**	**172**	*e*P	**Pn**	**17 35 48.5**	**+1.8**
NDI				eS	**Sn**	**17 36 33.0**	**+0.2**
THW	**Thamme Wali**	**4.08**	**274**	P	**Pn**	**17 35 50.4**	**+1.8**
CEP	**Cherat**	**4.10**	**289**	P	**Pn**	**17 35 51.0**	**+2.0**
CEP				S	**Sn**	**17 36 38.0**	**+1.2**
SONA	**Sohna**	**4.36**	**174**	*e*P	**Pn**	**17 35 55.3**	**+2.9**

ARSB Arslanbob 9.17 343 *e*Pn **Pn 17 36 58.8 +0.3**
GUN Gumba 9.30 118 *e*Pn **Pn 17 37 01.7 +1.2**
GUN *e*Sn **Sn 17 38 39.0 -6.1**
comp=N,92nm,0.4s
BHPL Bhopal 9.36 175 *e*P **Pn 17 37 01.4 +0.4**
BHPL *e*S **Sn 17 38 41.4 -4.7**
KZA Kyzart 9.52 354 P **Pn 17 37 05.0 +1.5**
SNR=36
JIRN Jiri 9.67 118 *e*Pn **Pn 17 37 06.6 +1.0**
JIRN *e*Sn **Sn 17 38 47.8 -6.4**
comp=N,191nm,0.3s
UCH Uchtor 9.75 351 P **Pn 17 37 08.1 +1.4**
SNR=131
AML Almayashu 9.78 347 P **Pn 17 37 08.3 +1.1**
SNR=64
JBP Jabalpur 9.87 161 *e*P **Pn 17 37 09.3 +1.3**
JBP *ex* x 17 39 00.6
BOOM Boomskoye usch 9.88 357 *e*Pn **Pn 17 37 10.8 +2.5**
BOOM Boomskoye usch 9.88 357 *e*P **Pn 17 37 10.8 +2.5**
KBK Karagaybulak 10.12 353 P **Pn 17 37 13.3 +1.8**
SNR=69
AAK Ala-Archa 10.15 351 Pn **Pn 17 37 13.9 +1.9**
comp=N,4.2nm,0.3s,baz=158,slow=9.6,SNR=48
AAK Sn **Sn 17 39 06.1 +0.4**
comp=N,2.1nm,0.3s,baz=337,slow=18,SNR=2.6
AAK LR LR 17 41 24.0
comp=N,1μm,18.8s,baz=162,slow=39
AAK Ala-Archa 10.15 351 P **Pn 17 37 13.8 +1.9**
SNR=22
AAK Ala-Archa 10.15 351 *e*Pn **Pn 17 37 13.6 +1.6**
AAK Ala-Archa 10.15 351 ⇑P **Pn 17 37 12.3 +0.3**
comp=N,37nm,0.7s
AAK ⇓S **Sn 17 39 03.9 -1.8**
comp=N,84nm,1.4s
AAK Ala-Archa 10.15 351 P **Pn 17 37 14.3 +2.3**
SNR=21
EKS2 Erkin-Say 10.28 348 P **Pn 17 37 15.4 +1.6**
SNR=35
FRU1 Bishkek 10.30 352 *e*Pn **Pn 17 37 16.3 +2.3**
FRU1 Bishkek 10.30 352 *e*P **Pn 17 37 16.3 +2.3**
TKM2 Tokmak 2 10.33 356 P **Pn 17 37 16.6 +2.1**
SNR=40
TKM2 Tokmak 2 10.33 356 ⇑P **Pn 17 37 13.9 -0.5**
comp=N,19nm,0.6s
TKM2 ⇓S **Sn 17 39 08.3 -1.8**
comp=N,21nm,0.8s
TKM2 Tokmak 2 10.33 356 P **Pn 17 37 15.5 +1.0**
TKM2 S **Sn 17 39 11.4 +1.3**
TKM2 pmax pmax
comp=Z,19nm,0.7s
TKM2 smax smax
comp=N,21nm,0.8s
RAMN Ramite 10.37 120 *e*Pn **Pn 17 37 16.4 +1.4**
RAMN *e*Sn **Sn 17 39 04.7 -6.5**
comp=N,145nm,0.4s
CHMS Chumysh 10.48 353 P **Pn 17 37 18.2 +1.8**
SNR=18
KNDC Almaty 10.60 2 ⇑P **Pn 17 37 17.8 -0.3**
comp=N,75nm,0.8s
KNDC ⇓S **Sn 17 39 14.3 -2.2**
comp=N,129nm,1.4s
USP Ospenovka 10.77 352 P **Pn 17 37 21.5 +1.2**
SNR=7.7
PDGK Podgornoye 10.95 11 ⇓P **Pn 17 37 21.6 -1.3**
comp=N,85nm,0.8s
PDGK ⇓S **Sn 17 39 23.1 -2.1**
comp=N,108nm,1.1s
PDGK Podgornoye 10.95 11 P **Pn 17 37 24.2 +1.3**
PDGK S **Sn 17 39 21.8 -3.4**
PDGK pmax pmax
comp=Z,85nm,0.8s
PDGK smax smax
comp=N,111nm,1.2s
ODAN Odare 11.00 119 *e*Pn **Pn 17 37 24.8 +1.1**
ODAN *e*Sn **Sn 17 39 19.3 -7.3**
comp=N,78nm,0.5s
BHJ Bhuj 11.14 215 *e*P **Pn 17 37 25.9 +0.5**
BHJ *e*S **Sn 17 39 22.2 -7.7**
BHJ IAML 17 41 09.8
comp=N,245nm,1.0s
KK31 Karatay Array 11.52 337 *e*Pn **Pn 17 37 29.9 -0.7**
KK31 Karatay Array 11.52 337 ⇑P **Pn 17 37 30.1 -0.5**
comp=N,24nm,0.7s,baz=145,slow=12,SNR=124
KK31 ⇑S **Sn 17 39 36.8 -2.3**
comp=N,94nm,0.9s,baz=155,slow=22,SNR=13
KK31 Karatay Array 11.52 337 P **Pn 17 37 30.1 -0.5**
KK31 *e*S **Sn 17 39 32.0 -7.1**
KK31 pmax pmax
comp=Z,24nm,0.7s
KK31 smax smax
comp=N,95nm,1.0s
KKAR Karatay Array 11.52 337 *e*Pn **Pn 17 37 29.8 -0.8**
KKAR Karatay Array 11.52 337 *e*P **Pn 17 37 29.8 -0.8**
NGP Nagpur 11.62 168 ⇑P **Pn 17 37 32.0 0.0**
NGP *e*S **Sn 17 39 34.9 -6.7**
BOK Bokaro 12.01 135 *e*P **Pn 17 37 36.6 -0.7**
BOK *ex* x 17 39 40.4
LSA Lhasa 12.81 99 P **Pn 17 37 49.7 +1.0**
LSA S **Sn 17 40 10.8 -0.5**
LSA LR LR
comp=N,2μm,8.4s
LSA LR LR
comp=N,910nm,9.0s
LSA LR LR
comp=N,1μm,10.5s
LSA Lhasa 12.81 99 *e*Pn **Pn 17 37 50.5 +1.8**
LSA *e*Sn Sn 17 40 02.8 -8.6
LSA Lhasa 12.81 99 *e*P **Pn 17 37 50.5 +1.8**
TAWA Tawang 14.14 107 *e*P **Pn 17 38 08.2 +1.5**
WMQ Urumqi 14.19 35 *e*P **Pn 17 38 06.7 -0.4**
WMQ pP P 17 38 13.0 -1.5
WMQ sP 17 38 17.4
WMQ pmax pmax
comp=N,42nm,0.7s
WMQ pmax pmax
comp=N,75nm,3.7s
WMQ LR LR
comp=N,530nm,8.3s
WMQ LR LR
comp=N,480nm,13.5s
WMQ LR LR
comp=N,1μm,18.7s
WMQ Urumqi 14.19 35 *e*Pn **Pn 17 38 04.2 -2.9**
WMQ Urumqi 14.19 35 *e*P **Pn 17 38 04.2 -2.9**
POO Poona 14.23 191 *e*P **Pn 17 38 08.0 +0.3**
POO *ex* x 17 40 36.0
MAKZ Makanchi 14.78 15 *e*Pn **Pn 17 38 13.5 -1.5**
MAKZ Makanchi 14.78 15 ⇑P **Pn 17 38 13.6 -1.5**
comp=N,17nm,0.7s
MAKZ ⇑S **Sn 17 40 55.6 -2.9**
comp=N,19nm,1.5s
MAKZ Makanchi 14.78 15 P **Pn 17 38 13.6 -1.5**
MAKZ S **Sn 17 40 55.6 -2.9**
MK31 Makanchi Array 14.83 15 *e*Pn **Pn 17 38 14.2 -1.7**
MK31 Makanchi Array 14.83 15 ⇓P **Pn 17 38 14.1 -1.7**
comp=N,3.8nm,0.4s,baz=194,slow=12,SNR=95
MK31 ⇑S **Sn 17 40 57.2 -2.6**
comp=N,38nm,1.1s,baz=189,slow=24,SNR=12
MK31 Makanchi Array 14.83 15 P **Pn 17 38 14.1 -1.7**
MK31 S **Sn 17 40 57.2 -2.6**
MKAR Makanchi Array 14.83 15 Pn **Pn 17 38 14.3 -1.5**
comp=N,2.2nm,0.3s,baz=205,slow=12,SNR=46
MKAR Sn **Sn 17 40 51.8 -8.0**
comp=N,1.7nm,0.3s,baz=186,slow=22,SNR=7.4
MKAR LR LR 17 44 38.8
comp=N,541nm,18.1s,baz=184,slow=40
SHL Shillong 15.10 114 *e*Pn **Pn 17 38 16.4 -3.2**
comp=N,37nm,1.1s
SHL *e*Sn Sn 17 40 49.6 -17
SHL Shillong 15.10 114 *e*P **Pn 17 38 16.4 -3.2**
SHL pmax pmax
comp=Z,37nm,1.1s
SHL Shillong 15.10 114 *ex* **Pn 17 38 16.5 -3.1**
SHL *e*S Sn 17 40 53.5 -13
HYB Hyderabad 15.23 173 *i* P **Pn 17 38 17.0 -4.2**
HYB *e*S **S 17 41 20.0 -6.5**
TEZP TEZPUR 15.31 109 *e*P **Pn 17 38 22.7 +0.5**
ZIRO ZIRO 15.78 104 *e*P **Pn 17 38 30.5 +1.9**
OTUK Ortayu 15.95 350 ⇑P **Pn 17 38 28.6 -1.9**
comp=Z,40nm,1.4s
OTUK Ortayu 15.95 350 P **Pn 17 38 28.6 -1.9**
GEYT Alibeck 15.98 295 Pn **Pn 17 38 29.2 -1.8**
comp=Z,0.4nm,0.3s,baz=101,slow=12,SNR=13
GYA0B ALIBECK ARRAY 15.98 295 *e*Pn **Pn 17 38 27.9 -3.1**
comp=Z,16nm,0.9s

KOHI KOHIMA 16.76 110 *ex* **Pn 17 38 38.3 -2.8**
MOKO MOKOCHONG 16.82 107 *ex* **Pn 17 38 38.8 -3.0**
GOA Goa 17.22 189 *e*P **P 17 38 49.8 +1.5**
KURBB Kurchatov Arra 18.06 4 P **Pn 17 38 55.5 -1.4**
comp=Z,0.6nm,0.3s,baz=192,slow=10,SNR=88
KURBB Kurchatov Arra 18.06 4 ⇓P **Pn 17 38 54.3 -2.7**
comp=Z,22nm,0.7s
KURK Kurchatov 18.16 4 *e*Pn **Pn 17 38 56.2 -1.9**
comp=Z,30nm,0.7s
KURK Kurchatov 18.16 4 ⇑P **Pn 17 38 55.7 -2.4**
comp=Z,22nm,0.6s
KURK Kurchatov 18.16 4 *de*P **Pn 17 38 56.5 -1.6**
KURK pmax pmax
comp=Z,31nm,0.7s
KURK Kurchatov 18.16 4 P **Pn 17 38 56.5 -1.6**
SNR=20
WSAR Wadi Sarin 18.38 244 P **P 17 39 01.0 0.0**
comp=Z,0.4nm,0.3s,baz=73,slow=13,SNR=4.7
WSAR LR LR 17 48 41.8
comp=Z,249nm,18.2s,baz=90,slow=46
DGZ Jazzator, Alta 18.90 22 *c*eP **P 17 39 07.2 +0.5**
UOSS Minazif 19.41 252 *e*P **Pn 17 39 16.6 +3.1**
comp=Z,9.1nm,0.9s
SOHO SOHO 19.53 250 P **Pn 17 39 15.8 +0.8**
GTA Gaotai 19.95 64 *e*P **P 17 39 20.2 +1.8**
GTA pP sP 17 39 27.3 +1.4
GTA sP pP 17 39 31.0 +7.4
GTA S **S 17 42 57.1 -5.5**
GTA sS Sn 17 43 06.7 +2.4
GTA pmax pmax
comp=Z,12nm,0.8s
GTA pmax pmax
comp=Z,110nm,7.6s
GTA LR LR
comp=Z,310nm,14.1s
GTA LR LR
comp=Z,370nm,12.4s
GTA LR LR
comp=Z,520nm,13.1s
AB31 Akbulak array 20.77 328 ⇑P **P 17 39 26.9 -0.1**
comp=Z,17nm,0.6s,baz=134,slow=11,SNR=188
AB31 Akbulak array 20.77 328 P **P 17 39 26.9 -0.1**
ABKAR Akbulak array 20.77 328 *e*P **P 17 39 26.9 -0.1**
comp=Z,26nm,0.6s
BVAR Borovoye Array 20.89 349 P **P 17 39 28.9 +0.6**
comp=Z,33nm,0.7s,baz=155,slow=11,SNR=171
BRVK Borovoye 20.94 349 *e*P **P 17 39 28.4 -0.4**
comp=Z,57nm,0.8s
BRVK Borovoye 20.94 349 ⇑P **P 17 39 28.3 -0.4**
comp=Z,71nm,0.9s
BRVK Borovoye 20.94 349 *c i*P **P 17 39 28.8 0.0**
BRVK pmax pmax
comp=Z,58nm,0.9s
BRVK Borovoye 20.94 349 P **P 17 39 29.3 +0.5**
SNR=26
ZAA0 Zalesovo Array 22.13 13 *e*P **P 17 39 40.5 -1.0**
comp=Z,34nm,0.8s
ZALV Zalesovo Beam 22.13 13 P **P 17 39 41.2 -0.3**
comp=Z,27nm,0.6s,baz=212,slow=11,SNR=49
ZALV LR LR 17 49 56.6
comp=Z,80nm,21.8s,baz=250,slow=41
ZALV Zalesovo Beam 22.13 13 *i* P **P 17 39 40.7 -0.8**
ZALV pmax pmax
comp=Z,27nm,0.6s
AKTO Aktyubinsk 22.49 328 P **P 17 39 45.5 +0.1**
comp=Z,29nm,0.5s,baz=127,slow=9.7,SNR=93
AKTO LR LR 17 49 26.2
comp=Z,353nm,19.4s,baz=140,slow=39
AKTO Aktyubinsk 22.49 328 ⇓P **P 17 39 45.3 -0.1**
comp=Z,91nm,1.2s
NVS Novosibirsk 22.72 10 ⇑*i*P **P 17 39 47.4 -0.4**
NVS *i* S **S 17 43 54.7 -1.1**
NVS pmax pmax
comp=Z,38nm,0.8s
NVS pmax pmax
comp=N,26nm,0.9s
NVS pmax pmax
comp=E,3.0nm,0.4s
NVS smax smax
comp=N,19nm,1.2s
NVS smax smax
comp=E,8.0nm,1.0s
LZH Lanzhou 22.75 74 ⇑P **P 17 39 49.6 +1.1**
LZH pP pP 17 39 55.8 +2.1
LZH sP sP 17 39 59.4 +3.3
LZH *e*S **S 17 43 51.8 -5.2**
LZH pmax pmax
comp=E,42nm,1.2s
LZH pmax pmax
comp=E,120nm,4.5s
LZH LR LR
comp=E,370nm,12.0s
LZH LR LR
comp=E,420nm,11.6s
LZH LR LR
comp=E,530nm,13.5s
CD2 Chengdu 23.15 87 P **P 17 39 52.1 -0.5**
CD2 pmax pmax
comp=E,80nm,0.9s
CD2 LR LR
comp=E,640nm,10.0s
CD2 LR LR
comp=E,590nm,11.6s
CD2 LR LR
comp=E,690nm,10.0s
KMI Kunming 24.05 101 P **P 17 40 02.9 +1.3**
KMI pP pP 17 40 08.4 +1.2
KMI sP sP 17 40 10.9 +1.4
KMI pmax pmax
comp=E,29nm,0.6s
KMI pmax pmax
comp=E,90nm,4.8s
KMI LR LR
comp=E,220nm,15.5s
KMI LR LR
comp=E,160nm,17.2s
KMI Kunming 24.05 101 *e*P **P 17 40 02.2 +0.6**
comp=E,23nm,0.7s
KMI Kunming 24.05 101 *e*P **P 17 40 02.2 +0.6**
KMI pmax pmax
comp=Z,23nm,0.7s
CHTO Chiang Mai 24.32 119 *e*P **P 17 40 04.5 +0.6**
comp=Z,19nm,0.9s
CHTO Chiang Mai 24.32 119 *e*P **P 17 40 04.5 +0.6**
CHTO pmax pmax
comp=Z,19nm,0.9s
CHTO Chiang Mai 24.32 119 P **P 17 40 04.8 +0.9**
SNR=5.1
CMMT Chiang Mai 24.32 119 P **P 17 40 04.8 +0.9**
comp=Z,13nm,0.9s
MNCI Minicoy 24.42 188 *e*P **P 17 40 07.5 +2.7**
comp=Z,744nm,1.8s
CM31 Chiang Mai Arr 24.54 120 *e*P **P 17 40 07.0 +1.1**
comp=Z,91nm,1.3s
CM31 Chiang Mai Arr 24.54 120 P **P 17 40 07.9 +2.0**
SNR=18
CMAR Chiang Mai Arr 24.54 120 P **P 17 40 06.7 +0.8**
comp=Z,19nm,0.9s,baz=305,slow=9.3,SNR=92
CMAR PcP **PcP 17 43 45.5 +1.4**
comp=Z,0.8nm,0.6s,baz=288,slow=3.9,SNR=6.4
CMAR LR LR 17 50 24.7
comp=Z,63nm,19.6s,baz=244,slow=38
CMAR Chiang Mai Arr 24.54 120 *i* P **P 17 40 07.3 +1.4**
CMAR pmax pmax
comp=Z,19nm,0.9s
AKT Akhty 24.59 299 *e*P **P 17 40 07.2 +0.9**
AKT *e* 17 40 36.4
AKT pmax pmax
comp=Z,28nm,1.2s
PAYA Payao 24.67 117 P **P 17 40 09.9 +2.8**
comp=Z,29μm,0.8s
LAMP Lampang 25.01 118 P **P 17 40 16.8 +6.7**
comp=Z,22μm,1.3s,comp=Z,270μm
PHRA Phrae 25.46 118 P **P 17 40 16.2 +1.9**
comp=Z,4.4nm,0.8s
PALK Pallekele 25.49 170 LR LR 17 50 13.4
comp=Z,278nm,20.6s,baz=293,slow=36
NANT Nan 25.64 117 P **P 17 40 19.6 +3.8**
comp=Z,36μm,0.9s,comp=Z,337μm
UMPA Umpang Tak 25.95 124 P P 17 40 28.0 +9.3
MOY Mondy 26.07 36 *e*P **P 17 40 22.1 +2.5**
UTTA Uttaradit 26.17 119 P **P 17 40 24.3 +3.6**
comp=Z,60μm,1.0s,comp=Z,427μm
GROC Groznyy 26.36 303 *e*P **P 17 40 22.3 +0.1**
GROC *e* 17 41 01.7
GROC *e* 17 43 47.6

GROC *e*S **S 17 44 48.2 -6.6**
GROC pmax pmax
comp=Z,26nm,0.6s
ZAK Zakamensk 26.53 40 *e*P **P 17 40 25.0 +1.2**
ZAK pmax pmax
comp=Z,8.0nm,0.9s
SVE Sverdlovsk 26.61 340 ⇑*i*P **P 17 40 25.2 +1.0**
SVE pmax pmax
comp=Z,15nm,1.0s
GNI Garni 26.62 296 P **P 17 40 26.2 +1.4**
comp=Z,12nm,0.9s,baz=116,slow=5.0,SNR=5.2
GNI LR LR 17 52 46.6
comp=Z,20nm,19.4s,baz=98,slow=41
GNI Garni 26.62 296 *e*P **P 17 40 25.5 +0.8**
comp=Z,66nm,0.9s
GNI Garni 26.62 296 *e*P **P 17 40 25.5 +0.8**
GNI pmax pmax
comp=Z,65nm,0.9s
GNI Garni 26.62 296 P **P 17 40 30.3 +5.6**
SNR=11
GNI P **P 17 40 30.3 +5.6**
SNR=11
SLVN Son La 26.74 108 *e*P **P 17 40 26.9 +1.0**
comp=Z,12nm,1.0s
GYA Guiyang 26.83 95 ⇑*i*P **P 17 40 27.1 +0.4**
GYA pP sP 17 40 34.8 +0.3
GYA PP **PnPn 17 41 08.9 +0.6**
GYA S **S 17 45 00.9 -1.8**
GYA SS **SnSn 17 46 15.7 +8.6**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,110nm,4.8s
GYA LR LR
comp=Z,310nm,14.4s
GYA LR LR
comp=Z,150nm,17.4s
ARU Arti 26.90 338 P **P 17 40 27.7 +0.8**
comp=Z,5.1nm,0.6s,baz=140,slow=5.2,SNR=30
ARU LR LR 17 51 47.0
comp=Z,1μm,18.7s,baz=136,slow=38
ARU Arti 26.90 338 *e*P **P 17 40 27.1 +0.2**
comp=Z,17nm,0.7s
ARU Arti 26.90 338 *c i*P **P 17 40 27.6 +0.8**
ARU 17 41 10.1
ARU S **S 17 45 05.6 +2.5**
ARU SS **SnSn 17 46 09.4 +1.3**
ARU pmax pmax
comp=Z,19nm,0.8s
ARU MLR MLR
comp=Z,549nm,16.0s
XAN Xi'an 27.00 78 P **P 17 40 28.9 +0.8**
XAN pmax pmax
comp=Z,14nm,1.2s
XAN pmax pmax
comp=Z,50nm,3.5s
XAN LR LR
comp=Z,310nm,15.3s
XAN LR LR
comp=Z,130nm,15.8s
XAN Xi'an 27.00 78 *e*P **P 17 40 28.6 +0.4**
comp=Z,18nm,1.0s
XAN Xi'an 27.00 78 *e*P **P 17 40 28.6 +0.4**
XAN pmax pmax
comp=Z,18nm,1.0s
SONA0 Songino Array 27.17 47 *e*PcP **PcP 17 43 50.3 +0.6**
SONM Songino Array 27.17 47 P **P 17 40 31.8 +2.3**
comp=Z,9.7nm,0.6s,baz=246,slow=9.6,SNR=60
SONM PcP **PcP 17 43 50.3 +0.6**
comp=Z,0.8nm,0.6s,baz=207,slow=1.6,SNR=3.5
SONM LR LR 17 52 33.4
comp=Z,187nm,18.0s,baz=252,slow=39
PBKT Sadao Pong 27.23 120 P **P 17 40 34.3 +4.1**
comp=Z,12nm,1.0s
SRDT SRDT 27.42 126 P P 17 40 39.3 +7.4
TLY Talaya 27.43 38 *e*P **P 17 40 32.1 +0.5**
comp=Z,4.7nm,1.0s
TLY Talaya 27.43 38 *e*P **P 17 40 32.2 +0.5**
TLY pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 27.59 48 *e*P **P 17 40 34.0 +0.6**
comp=Z,16nm,1.0s
ULN Ulaanbaatar 27.59 48 *c i*P **P 17 40 35.0 +1.6**
ULN pmax pmax
comp=Z,18nm,1.3s
ULN Ulaanbaatar 27.59 48 P **P 17 40 35.2 +1.8**
SNR=13
ZEI Tsey 27.63 301 *e*P **P 17 40 34.5 +0.6**
ZEI pmax pmax
comp=Z,17nm,1.4s
AKH Akhalkalaki 27.71 298 *e*P **P 17 40 35.8 +1.2**
comp=Z,19nm,0.8s
AKH Akhalkalaki 27.71 298 *e*P **P 17 40 35.8 +1.2**
AKH pmax pmax
comp=Z,19nm,0.8s
KARS Kars 27.93 296 *e*P **P 17 40 38.0 +1.5**
comp=Z,169nm,1.8s
KARS Kars 27.93 296 *e*P **P 17 40 38.0 +1.5**
KARS pmax pmax
comp=Z,169nm,1.8s
CHAI Chaiyaphum 28.40 120 P P 17 40 48.3 +7.6
KBZ Khabaz 28.53 303 P **P 17 40 42.3 +0.7**
comp=Z,2.3nm,0.8s,baz=137,slow=5.5,SNR=3.9
KBZ LR LR 17 54 22.0
comp=Z,48nm,19.7s,baz=118,slow=41
KIV Kislovodsk 28.73 303 *e*P **P 17 40 44.2 +0.7**
comp=Z,7.8nm,1.1s
KIV Kislovodsk 28.73 303 *e*P **P 17 40 42.4 -1.1**
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,180nm,15.0s
HHC Hu-ho-hao-te 29.07 64 *e*P **P 17 40 48.7 +2.1**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,59nm,5.7s
PANO Nakornpanom 29.60 115 P P 17 40 59.9 +8.5
VRH Novokhopyorsk 31.51 317 *e*P **P 17 41 06.1 -1.8**
VRH pmax pmax
comp=Z,20nm,1.1s
BJT Baijiatuau 32.54 65 *e*P **P 17 41 17.4 +0.3**
comp=Z,5.1nm,0.6s
BJT Baijiatuau 32.54 65 *e*P **P 17 41 17.4 +0.3**
BJT pmax pmax
comp=Z,5.0nm,0.6s
QIZ Qiongzhong 32.70 106 *e*P **P 17 41 20.3 +1.6**
comp=Z,49nm,1.8s
VSR Storozhevoye 33.01 315 ⇓*e*P **P 17 41 20.4 -0.7**
VSR pmax pmax
comp=Z,23nm,1.2s
LPSR Galich'ya Gora 33.64 318 *e*P **P 17 41 25.9 -0.6**
LPSR pmax pmax
comp=Z,20nm,1.2s
HKPS Hong Kong Po S 34.73 98 *e*P **P 17 41 38.5 +2.2**
comp=Z,96nm,1.5s
ILGA Ilgaz 35.04 296 *e*P **P 17 41 40.0 +0.8**
comp=Z,23nm,1.4s
BR131 Keskin Array S 35.13 294 *e*P **P 17 41 40.4 +0.7**
comp=Z,8.9nm,0.9s
BRTR Keskin Array B 35.13 294 P **P 17 41 40.7 +0.9**
comp=Z,4.8nm,0.8s,baz=100,slow=9.7,SNR=26
PRGR Permogore 35.23 335 *e*P **P 17 41 38.6 -1.6**
PRGR pmax pmax
comp=Z,22nm,0.9s
NJ2 Nanjing 35.55 79 *e*P **P 17 41 42.7 -0.6**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
BOD Bodaibo 35.73 34 *e*P **P 17 41 45.4 +0.8**
BOD *e* 17 41 54.3
ANTO Ankara 35.77 294 *e*P **P 17 41 46.6 +1.3**
comp=Z,7.8nm,0.6s
ANTO Ankara 35.77 294 *e*P **P 17 41 46.6 +1.3**
ANTO pmax pmax
comp=Z,8.0nm,0.6s
CSS Mathiatis 35.82 286 *e*P **P 17 41 47.4 +1.7**
comp=Z,27nm,1.1s
OBN Obninsk 35.87 321 *e*P **P 17 41 46.2 +0.4**
comp=Z,19nm,0.5s
OBN Obninsk 35.87 321 *i* P **P 17 41 46.2 +0.4**
OBN pmax pmax
comp=Z,11nm,0.8s
OBN MLR MLR
comp=Z,75nm,13.0s
IPM Ipoh 36.13 136 *e*P **P 17 41 48.5 +0.1**
comp=Z,48nm,2.0s

GSI **Gunungsitoli** 36.88 143 *e*P P 17 41 56.0 +1.3
comp=Z,32nm,0.8s
KLMR **Klimovskoe** 37.12 331 *e*P P 17 41 55.6 -0.8
KLMR pmax pmax
comp=Z,29nm,1.5s
NRIK **Noril'sk** 37.30 6 P P 17 41 59.1 +1.3
comp=Z,8.7nm,0.6s,baz=184,slow=7.8,SNR=20
NRIK LR LR 17 59 15.0
comp=Z,245nm,19.8s,baz=206,slow=39
AKASG **Malin Array Be** 38.97 312 P P 17 42 11.4 -0.7
comp=Z,3.7nm,0.6s,baz=80,slow=6.7,SNR=19
AKASG LR LR 18 01 17.5
comp=Z,70nm,19.1s,baz=275,slow=41
AKBB **Malin Array Si** 38.97 312 *e*P P 17 42 11.2 -0.9
comp=Z,6.0nm,0.6s
AKBB **Malin Array Si** 38.97 312 *e*P P 17 42 11.2 -0.9
AKBB pmax pmax
comp=Z,6.0nm,0.6s
KIEV **Kiev** 38.98 312 *e*P P 17 42 11.1 -1.0
comp=Z,5.8nm,0.6s
KIEV **Kiev** 38.98 312⇓*i*P P 17 42 11.8 -0.4
KIEV **Kiev** 38.98 312⇓*e*P P 17 42 11.2 -1.0
KIEV pmax pmax
comp=Z,5.0nm,0.7s
TMCR **Tamitsa** 39.53 335 *e*P P 17 42 17.3 +0.7
TMCR pmax pmax
comp=Z,34nm,0.5s
BALB **Balikesir** 39.57 294 *e*P P 17 42 18.8 +1.6
comp=Z,82nm,1.5s
VRI **Vrincioaia** 40.19 304⇑*i*P P 17 42 23.5 +1.1
VRI **Vrincioaia** 40.19 304 ⇑P P 17 42 23.5 +1.1
PLOR **Plostina** 40.25 304⇓*i*P P 17 42 24.4 +1.5
PLOR **Plostina** 40.25 304 ⇓P P 17 42 24.4 +1.5
TWG **Pinlang** 40.33 92 *e*P P 17 42 23.0 -0.8
comp=Z,66nm,1.0s
MLR **Muntele Rosu** 40.74 304 *e*P P 17 42 28.4 +1.4
comp=Z,19nm,0.8s
MLR **Muntele Rosu** 40.74 304⇓*i*P P 17 42 28.9 +1.9
MLR **Muntele Rosu** 40.74 304 ⇓P P 17 42 28.9 +1.9
ALN **Alexandroupoli** 40.85 297 *e*P P 17 42 27.4 -0.5
comp=Z,4.4nm,0.9s
ALN **Alexandroupoli** 40.85 297 *e*P P 17 42 27.4 -0.5
ALN pmax pmax
comp=Z,4.0nm,0.9s
BURAR **Bucovina Array** 41.28 307⇑*i*P P 17 42 32.5 +1.0
BURAR **Bucovina Array** 41.28 307 ⇑P P 17 42 32.5 +1.0
BUR08 **Bucovina Ar. S** 41.30 307 *e*P P 17 42 31.8 +0.2
comp=Z,5.4nm,1.0s
VOIR 41.37 303⇑*i*P P 17 42 33.1 +0.9
VOIR 41.37 303 ⇑P P 17 42 33.1 +0.9
ZEA **Zeya** 41.48 44 *e*P P 17 42 34.8 +1.9
ZEA pmax pmax
comp=Z,15nm,1.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
ZEA MLR MLR
comp=E,300nm,16.0s
JOF **Joensuu** 41.52 331 P P 17 42 34.2 +1.1
JOF pmax pmax
comp=Z,67nm,0.9s
TJN **Taejon** 41.64 70*d*i P P 17 42 34.3 -0.1
KS15 **Wonju Array Si** 41.87 69 *e*P P 17 42 35.8 -0.5
comp=Z,44nm,1.8s
KSRS **Korea Array** 41.90 69 P P 17 42 36.4 -0.1
comp=Z,3.3nm,0.9s,baz=273,slow=7.6,SNR=10
KSRS LR LR 18 02 14.2
comp=Z,200nm,18.0s,baz=268,slow=39
MDJ **Mudanjiang** 42.43 58 *e*P P 17 42 42.2 +1.4
comp=Z,14nm,1.0s
LVZ **Lovozero** 42.78 338 *e*P P 17 42 43.1 -0.1
comp=Z,231nm,2.0s
LVZ **Lovozero** 42.78 338 *e*P P 17 42 43.2 -0.1
LVZ pmax pmax
comp=Z,231nm,2.0s
VTS **Vitosha** 42.80 299 *e*P P 17 42 44.9 +0.9
comp=Z,8.2nm,0.8s
VTS **Vitosha** 42.80 299⇑*i*P P 17 42 45.3 +1.3
VTS **Vitosha** 42.80 299 *e*P P 17 42 44.9 +0.9
VTS pmax pmax
comp=Z,8.0nm,0.8s
DRGR 42.98 306 P P 17 42 46.9 +1.6
DRGR pmax pmax
comp=Z,8.0nm,0.8s
KWP **Kalwaria Pacla** 43.03 310 *e*P P 17 42 46.1 +0.5
comp=Z,114nm,0.9s
SUW **Suwalki** 43.12 316 *e*P P 17 42 45.9 -0.3
comp=Z,30nm,1.0s
SUW **Suwalki** 43.12 316 *e*P P 17 42 45.9 -0.3
SUW pmax pmax
comp=Z,30nm,1.0s
FIA1 **FINESS Array S** 43.26 327 *e*P P 17 42 48.0 +0.7
comp=Z,17nm,0.8s
FINES **FINESS Array B** 43.26 327 P P 17 42 48.1 +0.8
comp=Z,15nm,0.8s,baz=101,slow=9.9,SNR=41
FINES LR LR 18 01 50.0
comp=Z,233nm,19.3s,baz=105,slow=38
KOLS **Kolonicke sedl** 43.29 309 *e*P P 17 42 48.5 +0.8
KOLS **Kolonicke sedl** 43.29 309 *e*P P 17 42 48.5 +0.8
SUF **Sumiainen** 43.64 329 P P 17 42 51.3 +1.0
SUF pmax pmax
comp=Z,44nm,0.9s
STIP **Stip** 43.67 298 *i* P P 17 42 49.8 -1.0
SIRR **Siria** 43.72 305⇑*i*P P 17 42 52.7 +1.5
MDVR **Moldovita** 43.75 303⇓*i*P P 17 42 52.4 +0.9
BZS **Buzias** 43.77 304⇓*i*P P 17 42 52.6 +1.0
BZS **Buzias** 43.77 304 ⇓P P 17 42 52.6 +1.0
KLR **Kul'dur** 43.86 51 P P 17 42 53.6 +1.4
comp=Z,4.1nm,0.5s,baz=274,slow=8.4,SNR=18
KLR PcP PcP 17 44 39.1 +0.7
comp=Z,5.1nm,0.8s,baz=306,slow=4.5,SNR=7.8
KLR LR LR 18 02 38.8
comp=Z,100nm,18.0s,baz=256,slow=38
KLR **Kul'dur** 43.86 51*c* *i*P P 17 42 53.1 +0.8
KLR pmax pmax
comp=Z,3.0nm,0.8s
AGG **Agios Georgios** 43.91 294 *e*P P 17 42 52.7 -0.2
comp=Z,16nm,1.3s
AGG **Agios Georgios** 43.91 294 *e*P P 17 42 52.7 -0.2
AGG pmax pmax
comp=Z,16nm,1.3s
USRK **Ussuriysk Ar.** 44.17 58 P P 17 42 55.7 +0.9
comp=Z,2.2nm,0.8s,baz=266,slow=5.7,SNR=5.2
USRK LR LR 18 02 55.6
comp=Z,118nm,21.1s,baz=237,slow=38
KSM **Kuching** 44.32 127 *e*P P 17 42 57.4 +1.1
comp=Z,6.0nm,0.7s
FNA **Florina** 44.38 297 *e*P P 17 42 56.8 +0.1
comp=Z,5.7nm,0.7s
FNA **Florina** 44.38 297 *e*P P 17 42 56.8 +0.1
FNA pmax pmax
comp=Z,6.0nm,0.7s
ITM **Ithomi** 44.55 292 *e*P P 17 42 57.5 -0.5
comp=Z,32nm,1.3s
YAK **Yakutsk** 44.61 32 *e*P P 17 42 57.9 -0.1
comp=Z,68nm,0.9s
YAK **Yakutsk** 44.61 32 *e*P P 17 42 58.8 +0.7
YAK *e*SS S 17 49 31.6 -1.8
YAK *e**SS sS 17 49 52.6 +10
YAK *e*SS SS 17 52 52.6 -0.6
PSZ **Piszkesteto** 44.88 307 *e*P P 17 43 00.0 -0.5
comp=Z,5.0nm,0.9s
PSZ **Piszkesteto** 44.88 307 *e*P P 17 43 00.0 -0.5
PSZ pmax pmax
comp=Z,5.0nm,0.9s
OJC **Ojcow** 44.93 310 *e*P P 17 43 01.1 +0.3
comp=Z,4.1nm,0.8s
OJC **Ojcow** 44.93 310 *e*P P 17 43 01.1 +0.3
OJC pmax pmax
comp=Z,4.0nm,0.8s
JNU **Nakatsue** 45.17 74 P P 17 43 04.0 +1.0
comp=Z,14nm,0.6s,baz=266,slow=4.2,SNR=16
JNU **Nakatsue** 45.17 74 *e*P P 17 43 02.8 -0.2
comp=Z,22nm,0.9s
KKM **Kota Kinabalu** 45.37 117 *e*P P 17 43 06.6 +1.8
comp=Z,104nm,1.5s
VYHS **Vyhne** 45.57 308 *e*P P 17 43 07.2 +1.3
VYHS **Vyhne** 45.57 308 *e*P P 17 43 07.2 +1.3
TTG **Podgorica** 45.75 300 *e*P P 17 43 07.3 -0.1
comp=Z,14nm,1.2s
TTG **Podgorica** 45.75 300 *e*P P 17 43 07.3 -0.1
TTG pmax pmax
comp=Z,14nm,1.2s
KEV **Kevo** 46.11 338 *e*P P 17 43 09.0 -0.8
comp=Z,245nm,2.0s
KEV **Kevo** 46.11 338 *e*P P 17 43 09.0 -0.8
KEV pmax pmax
comp=Z,245nm,2.0s
KEV **Kevo** 46.11 338 *e*P P 17 43 10.4 +0.5
MORC **Moravsky Berou** 46.38 310 *e*P P 17 43 12.6 +0.3
comp=Z,5.7nm,0.9s
MORC **Moravsky Berou** 46.38 310⇓*i*P P 17 43 13.3 +0.9
MORC **Moravsky Berou** 46.38 310 *e*P P 17 43 12.6 +0.3
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC **Moravsky Berou** 46.38 310 *e*P P 17 43 12.7 +0.3
ARCES **ARCESS Array B** 46.49 338 P P 17 43 13.7 +0.9
comp=Z,18nm,0.6s,baz=113,slow=8.1,SNR=118
ARCES LR LR 18 04 21.6
comp=Z,236nm,19.5s,baz=122,slow=38
ARE0 **ARCESS Array S** 46.49 338 *e*P P 17 43 13.5 +0.6
comp=Z,2.3nm,0.9s
ARE0 **ARCESS Array S** 46.49 338 *e*P P 17 43 14.3 +1.4
HEF **Hetta** 46.64 336 *e*P P 17 43 15.1 +1.0
GRNR **Gornyy** 46.88 49 *e*P P 17 43 19.0 +2.8
BLY **Banja Luka** 46.97 303 *e*P P 17 43 17.7 +0.7
comp=Z,5.5nm,0.5s
KTK1 **Kautokeino** 47.02 337 *e*P P 17 43 17.8 +0.8
VRAC **Vranov** 47.02 309 *e*P P 17 43 18.2 +0.9
DPC **Dobruska-Polom** 47.16 311 *e*P P 17 43 19.1 +0.7
DPC *e* 17 43 27.0
DPC **Dobruska-Polom** 47.16 311 *e*P P 17 43 19.1 +0.7
DPC *ex* x 17 43 27.0
KRUC **Moravsky** 47.16 309 *e*P P 17 43 18.6 +0.2
UPC **Upice** 47.35 311 *e*P P 17 43 20.5 +0.6
UPC **Upice** 47.35 311 *e*P P 17 43 20.5 +0.6
HAMF **Hammerfest** 47.52 339 *e*P P 17 43 22.4 +1.5
CONA **Conrad Observa** 47.59 307 *e*P P 17 43 22.5 +0.7
comp=Z,8.4nm,1.0s
TREC **Trest** 47.74 309 *e*P P 17 43 31.3 +8.3
TIXI **Tiksi** 47.76 20 P P 17 43 23.6 +0.8
comp=Z,12nm,0.6s,baz=223,slow=4.6,SNR=37
TIXI **Tiksi** 47.76 20 *e*P P 17 43 23.0 +0.3
comp=Z,21nm,1.0s
TIXI *e*PcP PcP 17 44 50.8 -0.7
TIXI **Tiksi** 47.76 20⇓*e*P P 17 43 23.5 +0.8
TIXI pmax pmax
comp=Z,18nm,0.8s
KIF **Kilpisjarvi** 47.83 336 *e*P P 17 43 23.8 +0.5
ARSA **Arzberg** 47.87 306 *e*P P 17 43 25.2 +1.2
comp=Z,5.4nm,1.0s
PERS **Pernice** 48.21 306 *i* P P 17 43 27.0 +0.4
BOJS **Bojanci** 48.24 304 *i* P P 17 43 26.9 +0.1
SOKA **Soboth** 48.26 306 *e*P P 17 43 27.8 +0.7
comp=Z,6.7nm,0.7s
OBKA **Obir** 48.61 306 *e*P P 17 43 31.2 +1.4
comp=Z,8.7nm,1.3s
BRG **Berggiesshubel** 48.65 311 *e*P P 17 43 30.4 +0.5
comp=Z,5.1nm,0.8s
BRG *e* 17 43 38.2
comp=Z,5.2nm,0.8s
BRG **Berggiesshubel** 48.65 311 *e*P P 17 43 30.4 +0.5
BRG *e* 17 43 38.2
BRG pmax pmax
comp=Z,5.0nm,0.8s
MOA **Molln** 48.66 307 *e*P P 17 43 30.1 0.0
comp=Z,7.3nm,1.0s
TRO **Tromso** 48.67 337 *e*P P 17 43 30.3 +0.6
GEC2 **GERESS Array S** 48.95 309 *e*P P 17 43 30.3 -2.0
comp=Z,11nm,1.6s
GEC2 **GERESS Array S** 48.95 309 *e*P P 17 43 30.3 -2.0
GEC2 pmax pmax
comp=Z,11nm,1.6s
GERES **GERESS Array B** 48.95 309 P P 17 43 31.9 -0.4
comp=Z,0.7nm,0.6s,baz=79,slow=8.3,SNR=7.4
GERES LR LR 18 06 43.2
comp=Z,46nm,19.2s,baz=72,slow=39
KHC **Kasperske Hory** 49.00 309 *e*P P 17 43 32.1 -0.6
comp=Z,1.6nm,0.9s
KHC **Kasperske Hory** 49.00 309 *e*P P 17 43 32.1 -0.6
KHC pmax pmax
comp=Z,2.0nm,0.9s
KHC **Kasperske Hory** 49.00 309 *e*P P 17 43 33.7 +1.0
KHC *e*pP sP 17 43 42.4 +1.8
JAVS **Javornik** 49.02 305 *i* P P 17 43 33.1 +0.1
CLL **Collm** 49.22 312 *e*P P 17 43 33.2 -1.0
comp=Z,4.1nm,1.0s
CLL **Collm** 49.22 312 *i* P P 17 43 34.0 -0.2
CLL **Collm** 49.22 312 *e*P P 17 43 33.2 -1.0
CLL pmax pmax
comp=Z,4.0nm,1.0s
MYKA **Terra Mystica** 49.22 306 *e*P P 17 43 33.2 -1.3
comp=Z,1.2nm,0.6s
KBA **Koelnbreinsper** 49.37 306 *e*P P 17 43 35.6 -0.1
comp=Z,2.1nm,0.7s
MOR8 **Moi Rana** 49.44 332 *e*P P 17 43 35.1 -0.7
STEI **Steigen** 49.50 334 *e*P P 17 43 37.3 +1.2
INU **Inuyama** 49.51 69 *e*P P 17 43 36.4 -0.3
comp=Z,21nm,1.5s
CISI **Cisompet, Garu** 49.80 138 *e*P P 17 43 38.5 -0.6
comp=Z,195nm,1.8s
ABTA **Abfaltersbach** 49.97 306 *e*P P 17 43 40.3 +0.1
comp=Z,5.2nm,1.2s
NC405 **NORSAR Array S** 49.99 325 *e*P P 17 43 40.0 -0.1
comp=Z,28nm,0.9s
KMBO **Kilima Mbogo** 50.04 236 P P 17 43 41.1 -0.1
comp=Z,1.2nm,0.6s,baz=41,slow=9.8,SNR=2.6
KMBO LR LR 18 05 41.6
comp=Z,116nm,18.3s,baz=93,slow=37
KMBO **Kilima Mbogo** 50.04 236 *e*P P 17 43 41.8 +0.6
KMBO *e* 17 43 42.4
KMBO **Kilima Mbogo** 50.04 236 *e*P P 17 43 41.8 +0.6
NC602 **NORSAR Array S** 50.05 324 *e*P P 17 43 40.3 -0.2
comp=Z,130nm,1.9s
MJB9 **Matsu-Tunnel** 50.13 67 *e*P P 17 43 41.3 -0.2
comp=Z,11nm,0.8s
MAJO **Matsushiro** 50.14 67 *e*P P 17 43 41.3 -0.2
comp=Z,11nm,0.8s
MAJO **Matsushiro** 50.14 67*d* *i*P P 17 43 41.6 +0.1
MAJO pmax pmax
comp=Z,10.0nm,0.8s
MAT **Matsushiro** 50.14 67 P P 17 43 41.3 -0.2
MJAR **Matsushiro Arr** 50.14 67 P P 17 43 41.7 +0.1
comp=Z,7.1nm,0.8s,baz=286,slow=9.9,SNR=22
NC303 **NORSAR Array S** 50.17 325 *e*P P 17 43 41.7 +0.3
comp=Z,34nm,1.1s
NB201 **NORSAR Array S** 50.19 325 *e*P P 17 43 41.5 -0.1
comp=Z,142nm,2.0s
NB2 **NORSAR Subarra** 50.23 325 P P 17 43 41.6 -0.3
comp=Z,5.3nm,0.6s,baz=95,slow=7.9
NB2 **NORSAR Subarra** 50.23 325 P P 17 43 41.6 -0.3
baz=95,slow=7.9
NOA **NORSAR Array B** 50.23 325 P P 17 43 41.7 -0.3
comp=Z,6.3nm,0.8s,baz=96,slow=7.5,SNR=14
NOA LR LR 18 06 45.7
comp=Z,101nm,18.4s,baz=85,slow=38
NAO01 **NORSAR Array S** 50.38 325 *e*P P 17 43 41.5 -1.4
comp=Z,68nm,1.6s
NBO00 **NORSAR Array S** 50.44 325 *e*P P 17 43 42.7 -0.8
comp=Z,139nm,2.0s
NC204 **NORSAR Array S** 50.47 325 *e*P P 17 43 43.0 -0.7
comp=Z,31nm,1.1s
GRA1 **Grafenberg Arr** 50.48 310 *e*P P 17 43 42.8 -1.1
comp=Z,11nm,1.1s
GRF **Grafenberg Arr** 50.48 310 *e*P P 17 43 42.8 -1.1
GRF pmax pmax
comp=Z,11nm,1.1s
GRFO **Grafenberg** 50.48 310 *e*P P 17 43 43.0 -0.9
comp=Z,10nm,1.1s
GRFO **Grafenberg** 50.48 310 *e*P P 17 43 43.0 -0.9
GRFO pmax pmax
comp=Z,10.0nm,1.1s
WTTA **Wattenberg** 50.50 307 *e*P P 17 43 43.8 -0.5
comp=Z,1.2nm,0.4s
WATA **Walderalm** 50.53 307 *e*P P 17 43 43.4 -1.1
comp=Z,1.0nm,0.5s
SQTA **Sankt Quirin** 50.79 307 *e*P P 17 43 45.9 -0.5
comp=Z,1.7nm,0.5s
TYV **Tymovskoe** 50.82 48 *e*P P 17 43 48.1 +1.7
TYV pmax pmax
comp=Z,15nm,0.7s
MOTA **Moosalm** 50.85 307 *e*P P 17 43 46.5 -0.4
comp=Z,5.7nm,0.8s
KONO **Kongsberg** 50.98 323 *e*P P 17 43 47.1 -0.4
comp=Z,23nm,1.3s
KONO **Kongsberg** 50.98 323 *e*P P 17 43 47.1 -0.4
KONO pmax pmax
comp=Z,23nm,1.3s
RETA **Reutte** 51.06 307 *e*P P 17 43 48.3 0.0
comp=Z,3.5nm,0.6s
FETA **Feichten** 51.15 307 *e*P P 17 43 48.5 -0.6
comp=Z,4.7nm,1.1s
DOMB **Dombas** 51.31 326 *e*P P 17 43 50.7 +0.7
YSS **Yuzh-Sakhalins** 51.37 53 *e*P P 17 43 49.3 -1.3
comp=Z,17nm,0.9s
YSS **Yuzh-Sakhalins** 51.37 53 *e*P P 17 43 51.6 +1.0
YSS pmax pmax
comp=Z,10.0nm,0.6s
FUORN **Ofenpass-Fuorn** 51.52 306 *e*P P 17 43 50.7 -1.4
comp=Z,4.4nm,0.8s
DAVA **Damuels** 51.68 307 *e*P P 17 43 52.7 -0.4
comp=Z,7.7nm,0.7s
ASAJ **Asahikawa** 51.75 57 P P 17 43 54.0 +0.5
comp=Z,9.8nm,0.7s,baz=273,slow=5.9,SNR=18
ASAJ **Asahikawa** 51.75 57 P P 17 43 54.0 +0.5
BFO **Black Forest** 52.55 309 *e*P P 17 43 59.1 -0.3
comp=Z,15nm,1.7s
BFO **Black Forest** 52.55 309 *e*P P 17 43 59.1 -0.3
BFO pmax pmax
comp=Z,15nm,1.7s
ERM **Erimo** 52.58 59 *e*P P 17 44 00.4 +0.7
comp=Z,15nm,0.7s
ERM **Erimo** 52.58 59 *e*P P 17 44 00.4 +0.7
ERM pmax pmax
comp=Z,15nm,0.7s
KBS **Kingsbay** 53.41 347 *e*P P 17 44 04.4 -0.9
comp=Z,80nm,1.5s
KBS **Kingsbay** 53.41 347 *e*P P 17 44 04.4 -0.9
KBS pmax pmax
comp=Z,80nm,1.5s
SENIN **Lac Senin/Sane** 53.58 306 *e*P P 17 44 06.9 -0.4
comp=Z,9.3nm,0.9s
WLF **Walferdange** 53.75 311 *e*P P 17 44 08.1 -0.1
comp=Z,40nm,0.8s
WLF **Walferdange** 53.75 311 *e*P P 17 44 08.1 -0.1
WLF pmax pmax
comp=Z,40nm,0.8s
BNI **Bardonecchia** 54.28 305 *e*P P 17 44 11.6 -0.7
comp=Z,9.5nm,1.3s
BNI **Bardonecchia** 54.28 305 *e*P P 17 44 11.6 -0.7
BNI pmax pmax
comp=Z,10.0nm,1.3s
MBAR **Mbarara** 54.38 242 *e*P P 17 44 13.2 -0.3
comp=Z,4.9nm,0.7s
MBAR **Mbarara** 54.38 242 *e*P P 17 44 13.2 -0.3
MBAR pmax pmax
comp=Z,5.0nm,0.7s
MA2 **Magadan** 54.64 37 P P 17 44 15.5 +1.0
comp=Z,4.9nm,0.7s,baz=314,slow=8.9,SNR=4.8
MA2 LR LR 18 10 05.7
comp=Z,49nm,20.2s,baz=260,slow=39
MA2 **Magadan** 54.64 37 *e*P P 17 44 15.1 +0.5
comp=Z,35nm,1.5s
MA2 **Magadan** 54.64 37⇑*e*P P 17 44 15.1 +0.5
MA2 pmax pmax
comp=Z,31nm,2.5s
SEY **Seymchan** 55.14 33 P P 17 44 19.5 +1.4
comp=Z,14nm,0.7s,baz=270,slow=5.9,SNR=44
SSB **Saint Sauveur** 55.70 306 *e*P P 17 44 23.1 +0.6
comp=Z,4.6nm,0.9s
SSB **Saint Sauveur** 55.70 306 *e*P P 17 44 23.1 +0.6
SSB pmax pmax
comp=Z,5.0nm,0.9s
TNTI **Ternate** 57.26 113 *e*P P 17 44 34.4 +0.5
comp=Z,20nm,1.1s
ESK **Eskdalemuir** 58.29 319 *e*P P 17 44 40.3 -0.3
comp=Z,29nm,1.5s
ESK **Eskdalemuir** 58.29 319 *e*P P 17 44 40.3 -0.3
ESK pmax pmax
comp=Z,29nm,1.5s
PETK **Petropavlovsk-** 59.57 44 P P 17 44 50.2 +0.6
comp=Z,3.5nm,0.7s,baz=260,slow=2.0,SNR=9.8
DAG **Danmarks Havn** 59.73 345⇑*i*P P 17 44 50.9 +0.7
DAG pmax pmax
comp=Z,11nm,1.0s
DAG **Danmarks Havn** 59.73 345 *i*P P 17 44 50.9 +0.7
comp=Z,11nm,1.0s
BILL **Bilibino** 60.09 26 *e*P P 17 44 54.1 +1.2
comp=Z,14nm,0.9s
BILL **Bilibino** 60.09 26*c* *i*P P 17 44 54.8 +1.9
BILL *i* 17 45 04.8
BILL *i* 17 47 06.2
BILL pmax pmax
comp=Z,13nm,1.0s
SCO **Scoresbysund** 62.42 338 *e*P P 17 45 10.2 +1.6
comp=Z,36nm,1.5s
SCO **Scoresbysund** 62.42 338 *e*P P 17 45 10.2 +1.6
SCO pmax pmax
comp=Z,36nm,1.5s
SCO **Scoresbysund** 62.42 338 *i* P P 17 45 10.9 +2.3
comp=Z,8.4nm,0.7s
TAM **Tamanrasset** 62.65 281 *e*P P 17 45 10.8 -0.3
comp=Z,4.9nm,1.3s
TAM **Tamanrasset** 62.65 281 *e*P P 17 45 10.8 -0.3
TAM pmax pmax
comp=Z,5.0nm,1.3s
ESDC **Sonseca Array** 63.38 302 P P 17 45 15.1 -0.5
comp=Z,0.4nm,0.5s,baz=58,slow=6.8,SNR=5.7
ESLA **Sonseca Array** 63.38 302 *e*P P 17 45 14.4 -1.2
comp=Z,17nm,1.8s
BORG **Borgarnes** 64.24 332 *i* P P 17 45 18.0 -2.7
SUMG **Summit** 66.19 343 *e*P P 17 45 34.2 +0.4
comp=Z,22nm,0.9s
SUMG **Summit** 66.19 343 *i* P P 17 45 35.0 +1.2
SUMG pmax pmax
comp=Z,57nm,0.9s
SUMG **Summit** 66.19 343 *i* P P 17 45 35.0 +1.2
comp=Z,57nm,0.9s
SMY **Shemya** 68.99 40 *e*P P 17 45 51.4 +0.2
comp=Z,16nm,1.1s
SMY **Shemya** 68.99 40 *e*P P 17 45 51.4 +0.2
SMY pmax pmax
comp=Z,16nm,1.1s
ANGG **Ammassalik, Gr** 69.87 336 *e*P P 17 45 57.7 +1.2
comp=Z,48nm,1.4s
TOA0 **Torodi Ar. Sit** 70.39 273 *e*P P 17 45 59.3 -1.2
comp=Z,8.7nm,1.0s
TORD **Torodi Ar. Bea** 70.39 273 P P 17 45 59.4 -1.2
comp=Z,2.8nm,0.9s,baz=25,slow=7.6,SNR=12
TORD LR LR 18 20 01.4
comp=Z,61nm,18.1s,baz=290,slow=39
ILULI **Ilulissat** 71.54 343 *e*P P 17 46 06.7 +0.1
comp=Z,16nm,0.9s
ILULI **Ilulissat** 71.54 343 *e*P P 17 46 06.7 +0.1
ILULI pmax pmax
comp=Z,16nm,0.9s
ANM **Nome** 71.80 24 *e*P P 17 46 08.1 -0.2
comp=Z,34nm,1.6s
ANM **Nome** 71.80 24 *e*P P 17 46 08.1 -0.2
ANM pmax pmax
comp=Z,35nm,1.6s
SFJD **Kangerlussuaq** 72.99 341 *e*P P 17 46 15.2 0.0
comp=Z,7.2nm,0.8s
SFJD **Kangerlussuaq** 72.99 341 *e*P P 17 46 15.3 0.0
SFJD pmax pmax
comp=Z,7.0nm,0.8s
TOLK **Toolik Lake Re** 73.45 16 *e*P P 17 46 19.4 +1.3
comp=Z,15nm,0.8s
COLD **Coldfoot** 74.40 17 *e*P P 17 46 24.6 +1.0
comp=Z,7.0nm,1.0s
LBTB **Lobatse** 75.13 227 P P 17 46 28.8 +0.4
comp=Z,1.3nm,0.5s,baz=28,slow=4.8,SNR=4.2
LBTB **Lobatse** 75.13 227 *e*P P 17 46 28.9 +0.4
comp=Z,23nm,1.6s
LBTB **Lobatse** 75.13 227 *e*P P 17 46 28.9 +0.4
LBTB pmax pmax
comp=Z,23nm,1.6s
MLY **Manley** 75.95 19 *e*P P 17 46 33.2 +0.6
comp=Z,9.9nm,0.9s
WRA **Warramunga Arr** 76.01 125 P P 17 46 33.6 +0.1
comp=Z,140nm,0.3s,baz=316,slow=5.9,SNR=2.6
WB2 **Warramunga Arr** 76.02 125 *e*P P 17 46 33.9 +0.3
comp=Z,15nm,1.3s
FYU **Fort Yukon** 76.12 16 *e*P P 17 46 35.2 +1.7
comp=Z,27nm,1.2s
BPAW **Bear Paw Mtn.** 76.61 19 *e*P P 17 46 37.1 +0.8
comp=Z,7.8nm,0.9s
CAST **Castle Rocks** 76.81 20 *e*P P 17 46 38.8 +1.3
comp=Z,16nm,0.8s
COLA **College** 76.84 18*de*P P 17 46 38.9 +1.3
COLA pmax pmax
comp=Z,14nm,1.0s
PRP **Porcupine Dome** 76.91 17 *e*P P 17 46 39.1 +0.9
comp=Z,14nm,1.4s
INK **Inuvik** 76.92 11 P P 17 46 38.2 +0.2
comp=Z,9.7nm,0.8s,baz=13,slow=8.4,SNR=13
INK **Inuvik** 76.92 11 *e*P P 17 46 39.0 +1.1
comp=Z,15nm,1.0s
INK **Inuvik** 76.92 11 *e*P P 17 46 39.0 +1.1
INK pmax pmax

comp=Z,15nm,1.0s
CCB Clear Creek Bu 77.04 18 *e*P **P 17 46 38.7 0.0**
comp=Z,5.1nm,1.1s
WRH Wood River Hil 77.10 18 *e*P **P 17 46 38.7 -0.4**
comp=Z,5.4nm,0.9s
ILAR Eielson Array 77.17 18 P **P 17 46 39.9 +0.3**
comp=Z,4.8nm,0.9s,baz=312,slow=4.7,SNR=36
ILAR PP **PP 17 49 33.4 +0.8**
comp=Z,2.3nm,1.1s,baz=317,slow=7.0,SNR=4.3
ILB Eielson Array 77.17 18 *e*P **P 17 46 39.6 +0.1**
comp=Z,8.5nm,1.0s
HDA Harding Lake 77.45 18 *e*P **P 17 46 40.5 -0.6**
comp=Z,5.0nm,0.9s
SVW2 Sparrevohn 77.46 23 *e*P **P 17 46 42.9 +1.7**
comp=Z,8.0nm,1.0s
MCK McKinley 77.46 19 *e*P **P 17 46 41.1 -0.1**
comp=Z,33nm,1.9s
MCK McKinley 77.46 19 *e*P **P 17 46 41.1 -0.1**
MCK pmax pmax
comp=Z,33nm,1.9s
NIKH Nikolski High 77.59 34 *e*P **P 17 46 42.4 +0.4**
comp=Z,73nm,1.0s
RND Reindeer 77.74 19 *e*P **P 17 46 42.9 +0.1**
comp=Z,6.6nm,1.0s
RND Reindeer 77.74 19 *e*P **P 17 46 42.9 +0.1**
RND pmax pmax
comp=Z,7.0nm,1.0s
EPYK Eagle Plains 78.09 13 *e*P **P 17 46 45.0 +0.4**
comp=Z,6.2nm,0.8s
ASAR Alice Springs 78.24 128 P **P 17 46 46.4 +0.3**
comp=Z,2.2nm,0.9s,baz=320,slow=5.5,SNR=14
DHY Denali Highway 78.41 19 *e*P **P 17 46 46.5 -0.1**
comp=Z,4.9nm,0.8s
EGAK Eagle 78.55 16 *e*P **P 17 46 47.7 +0.6**
comp=Z,10.0nm,1.2s
SCRK Sand Creek 78.56 17 *e*P **P 17 46 48.1 +0.7**
comp=Z,14nm,1.4s
SUA Susitna One 78.72 21 *e*P **P 17 46 48.8 +0.5**
comp=Z,9.1nm,0.8s
DOT Dot Lake 78.81 17 *e*P **P 17 46 49.0 +0.3**
comp=Z,8.8nm,1.2s
PAX Paxson 79.01 18 *e*P **P 17 46 50.1 +0.3**
comp=Z,16nm,1.4s
PAX Paxson 79.01 18 P **P 17 46 50.1 +0.3**
PAX pmax pmax
comp=Z,16nm,1.4s
PMG Port Moresby 79.05 109⇑*e*P **P 17 46 51.4 +0.7**
SML Sawmill 79.16 20 *e*P **P 17 46 50.0 -0.6**
comp=Z,18nm,0.8s
SML Sawmill 79.16 20 *e*P **P 17 46 50.0 -0.6**
SML pmax pmax
comp=Z,18nm,0.8s
CMLA Cha da Macela 79.24 308 *e*P **P 17 46 50.3 -1.1**
comp=Z,807nm,2.0s
DBIC Dimbokro 79.24 271 LR LR 18 25 59.2
comp=Z,48nm,20.4s,slow=39
DBIC Dimbokro 79.24 271 *e*P **P 17 46 50.1 -1.7**
comp=Z,14nm,1.3s
DBIC Dimbokro 79.24 271 *e*P **P 17 46 50.1 -1.7**
DBIC pmax pmax
comp=Z,14nm,1.3s
RC01 Rabbit Creek A 79.31 21 *e*P **P 17 46 52.2 +0.8**
comp=Z,11nm,0.8s
MENT Mentasta 79.49 18 *e*P **P 17 46 53.5 +1.2**
comp=Z,88nm,0.2s
HARP HAARP 79.55 18 *e*P **P 17 46 54.1 +1.3**
comp=Z,45nm,0.9s
DAWY Dawson 79.56 15 *e*P **P 17 46 53.2 +0.5**
comp=Z,8.9nm,1.0s
FORT Forrest 79.67 137 *e*P **P 17 46 54.1 +0.4**
comp=Z,37nm,1.2s
KDAK Kodiak Island 80.96 24 *e*P **P 17 47 01.3 +1.0**
comp=Z,86nm,1.6s
KDAK Kodiak Island 80.96 24 *e*P **P 17 47 01.3 +1.0**
KDAK pmax pmax
comp=Z,86nm,1.6s
SII Sitkinak Islan 81.31 26 *e*P **P 17 47 02.4 +0.1**
comp=Z,369nm,1.9s
HMT Hamilton 81.51 19 *e*P **P 17 47 04.8 +1.6**
comp=Z,82nm,1.5s
MID Middleton Isla 81.67 21 *e*P **P 17 47 06.2 +2.2**
comp=Z,355nm,1.2s
MID Middleton Isla 81.67 21 *e*P **P 17 47 06.2 +2.2**
HYT Haines Junctio 82.82 16 *e*P **P 17 47 11.8 +1.5**
comp=Z,11nm,1.3s
CTAO Charters Tower 84.69 118 *e*P **P 17 47 20.7 +0.4**
comp=Z,78nm,1.9s
CTAO Charters Tower 84.69 118 *e*P **P 17 47 20.7 +0.4**
CTAO pmax pmax
comp=Z,78nm,1.9s
YKW3 Yellowknife Ar 84.74 5 *e*P **P 17 47 19.8 0.0**
comp=Z,14nm,0.8s
YKA Yellowknife Ar 84.81 5 P **P 17 47 20.6 +0.4**
comp=Z,9.7nm,0.6s,baz=345,slow=5.1,SNR=82
BBOO Buckleboo 85.88 133 *e*P **P 17 47 25.9 -0.1**
comp=Z,72nm,1.8s
SCHQ Schefferville 87.41 340 LR LR 18 26 29.1
comp=Z,91nm,21.2s,baz=304,slow=36
FCC Fort Churchill 88.65 355 *e*P **P 17 47 39.6 +0.6**
comp=Z,17nm,1.5s
FCC Fort Churchill 88.65 355 *e*P **P 17 47 39.6 +0.6**
FCC pmax pmax
comp=Z,17nm,1.5s
FFC Flin Flon 93.02 359 *e*P **P 17 47 59.9 +0.5**
comp=Z,8.4nm,0.9s
FFC Flin Flon 93.02 359 *e*P **P 17 47 59.9 +0.5**
FFC pmax pmax
comp=Z,8.0nm,0.9s
ULM Lac du Bonnet 97.24 355 LR LR 18 36 00.8
comp=Z,115nm,19.5s,baz=2.5,slow=38
PDAR Pinedale Array 104.78 5 PKiKP **PKiKP 17 53 08.4 +0.2**
comp=Z,0.3nm,0.4s,baz=113,slow=3.4,SNR=3.7
CBYP Canovanas 117.95 319 *e*PKPdf **PKPdf 17 53 32.1 -1.4**
LTX Lajitas 118.40 0 *e*PKPdf **PKPdf 17 53 35.0 +0.8**
LTX Lajitas 118.40 0 *e*PKiKP **PKPdf 17 53 35.0 +0.8**
TXAR Lajitas Array 118.40 0 PKP **PKPdf 17 53 35.0 +0.8**
comp=Z,0.4nm,0.5s,baz=167,slow=1.1,SNR=12
ATAH Atahualpa 145.60 312 PKPbc **PKPdf 17 54 25.0 -0.6**
comp=Z,9.3nm,0.7s,baz=0.0,slow=3.0,SNR=5.8
GO01 Chusmiza 146.84 284 *e*PKPdf **PKPbc 17 54 29.8 +0.3**
MNMC Minye Minye 146.89 286 *e*PKPdf **PKPdf 17 54 29.1 +1.6**
PB11 IPOC Station P 147.26 285 *e*PKPbc **PKPbc 17 54 30.6 +0.4**
CFA Coronel Fontan 150.26 262 PKPbc **PKPbc 17 54 38.0 +0.5**
comp=Z,3.4nm,0.6s,baz=27,slow=2.3,SNR=3.5
PLCA Paso Flores 152.54 243 PKPbc **PKPbc 17 54 43.5 +0.9**
comp=Z,1.9nm,0.6s,baz=18,slow=3.9,SNR=4.0

*IDC **04** 17:35:32.0±0.7,56°.01S×26°.76W,h0km,mb4.4/11,*
mb1 4.5/12,mb1mx4.3/31,mbtmp4.4/12,ML4.2/1,MS3.3/3,
Ms1 3.4/3,ms1mx3.1/18,Error ellipse: s-maj=28.6km
s-min=15.6km az=50.0
*ISCJB **04** 17:35:35.6±0.5,56°.05S±0°.07×26°.7W±0°.1,h35km,*
mb4.8/26,MS3.4/3,Error ellipse: s-maj=13.8km
s-min=5.8km az=143.5
*NEIC **04** 17:35:38.7±1.7,56°.03S×26°.76W,h44km±7km,mb4.9/23,*
Error ellipse: s-maj=22.3km s-min=11.3km az=220.0
ISC 04 17:35:37.6±0.6,56°.10S±0°.08×26°.80W±0°.09,h35km,n59,
σ1°52/56,mb4.8/26,MS3.3/3,South Sandwich Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.84**	**284**	*e*Pn	**Pn**	**17 37 02.8**	**+1.2**
HOPE				*e*Sn	**Sn**	**17 38 04.3**	**-2.9**
VNA1	**Neumayer--Stat**	**16.67**	**158**	P	**P**	**17 39 31.9**	**+1.8**
VNA1				S	**Sn**	**17 42 29.7**	**-2.0**
VNA3	**Neumayer Olymp**	**16.87**	**161**	P	**Pn**	**17 39 32.2**	**+1.6**
VNA3				S	**Sn**	**17 42 32.3**	**-4.3**
VNA2	**Neumayer--Watz**	**17.06**	**158**	P	**Pn**	**17 39 35.7**	**+2.7**
VNA2	baz=315,slow=13			S	**Sn**	**17 42 35.5**	**-5.8**
	baz=340,slow=10						
SNAA	**Sanae**	**18.61**	**156**	P	**P**	**17 39 52.3**	**+0.8**
SNAA	**Sanae**	**18.61**	**156**	P	**P**	**17 39 51.5**	**0.0**
	0.8nm,0.3s,baz=310,slow=11,SNR=44						
SNAA				S	Sn	17 43 08.6	-10
	0.1nm,0.3s,baz=322,slow=19,SNR=2.1						
SNAA	**Sanae**	**18.61**	**156**	*e*P	**P**	**17 39 51.5**	**0.0**
	6.7nm,0.8s						
SNAA				*e*Sn	Sn	17 43 08.6	-10
EFI	**East Falkland**	**18.85**	**270**	*e*P	**P**	**17 39 55.6**	**+1.3**
	169nm,1.8s						
PMSA	**Palmer Station**	**20.03**	**229**	*e*P	**P**	**17 40 08.7**	**+1.7**
	67nm,1.1s						
USHA	**Ushuaia**	**23.38**	**256**	P	**P**	**17 40 42.9**	**+0.2**
	4.4nm,0.8s,baz=260,slow=9.1,SNR=3.3						
GO09	**Cerro Castillo**	**27.00**	**261**	*e*P	**P**	**17 41 14.9**	**-1.0**
	32nm,1.4s						
TRQA	**Tornquist**	**29.54**	**293**	*e*P	**P**	**17 41 39.0**	**+0.3**
	24nm,1.4s						
QSPA	**South Pole Qui**	**34.15**	**180**	*e*P	**P**	**17 42 19.4**	**+0.5**
	14nm,1.1s						
CPUP	**Villa Florida**	**37.01**	**311**	P	**P**	**17 42 43.0**	**-0.6**
	6.4nm,0.7s,baz=160,slow=7.5,SNR=15						
CPUP				LR	LR	17 56 51.1	
	comp=Z,39nm,21.5s,baz=222,slow=35						
CPUP	**Villa Florida**	**37.01**	**311**	*e*P	**P**	**17 42 43.6**	**0.0**
	6.6nm,0.8s						
GO05	**Huala**	**37.10**	**285**	*e*P	**P**	**17 42 43.0**	**-1.4**
	68nm,1.6s						
CFA	**Coronel Fontan**	**37.78**	**293**	P	**P**	**17 42 48.8**	**-1.5**
	2.0nm,0.3s,baz=156,slow=7.0,SNR=6.7						
ROC1	**El Roble**	**38.16**	**288**	*e*P	**P**	**17 42 53.3**	**-0.4**
MAW	**Mawson**	**39.98**	**143**	P	**P**	**17 43 08.0**	**-0.1**
	1.4nm,0.4s,baz=196,slow=7.7,SNR=6.2						
MAW	**Mawson**	**39.98**	**143**	*e*P	**P**	**17 43 08.5**	**+0.4**
	3.9nm,1.6s						
GO04	**Tololo Observa**	**40.25**	**291**	*e*P	**P**	**17 43 11.2**	**0.0**
	75nm,1.5s						
LCO	**Las Campanas**	**41.13**	**293**	*e*P	**P**	**17 43 18.4**	**0.0**
	104nm,2.0s						
GO03	**Copiap**	**42.03**	**294**	*e*P	**P**	**17 43 24.9**	**-0.7**
	24nm,1.2s						
GO02	**Mina Guanaco**	**43.71**	**297**	*e*P	**P**	**17 43 39.6**	**+0.1**
	29nm,0.5s						
LVC	**Limon Verde**	**45.52**	**300**	P	**P**	**17 43 51.2**	**-2.7**
	5.5nm,0.4s,baz=227,slow=20,SNR=7.1						
LVC	**Limon Verde**	**45.52**	**300**	*e*P	**P**	**17 43 51.4**	**-2.5**
	7.8nm,0.7s						
PB10	**IPOC Station P**	**45.56**	**297**	*e*P	**P**	**17 43 53.6**	**-0.3**
	51nm,1.3s						
SBA	**Scott Base**	**46.04**	**184**	*e*P	**P**	**17 43 57.8**	**+0.7**
	23nm,1.8s						
VNDA	**Vanda**	**46.53**	**183**	P	**P**	**17 44 01.3**	**+0.4**
	6.8nm,0.7s,baz=186,slow=6.3,SNR=44						
VNDA	**Vanda**	**46.53**	**183**	*e*P	**P**	**17 44 01.7**	**+0.8**
	6.5nm,0.7s						
PB01	**IPOC Station P**	**47.12**	**300**	*e*P	**P**	**17 44 06.7**	**+0.4**
	11nm,0.7s						
SIV	**San Ignacio**	**47.77**	**313**	P	**P**	**17 44 10.6**	**-0.7**
	2.6nm,0.7s,baz=151,slow=7.0,SNR=16						
H10S2	**ASCENSION HYDR**	**47.99**	**16**	T	T	18 37 03.1	
	baz=189,slow=75,SNR=58						
H10S3	**ASCENSION HYDR**	**47.99**	**16**	T	T	18 37 02.7	
	baz=189,slow=75,SNR=56						
H10S1	**ASCENSION HYDR**	**48.01**	**16**	T	T	18 37 04.5	
	baz=189,slow=75,SNR=47						
GO01	**Chusmiza**	**48.16**	**301**	*e*P	**P**	**17 44 15.3**	**+0.5**
	9.6nm,0.8s						
PB11	**IPOC Station P**	**48.30**	**301**	*e*P	**P**	**17 44 15.6**	**+0.1**
	14nm,1.0s						
MNMC	**Minye Minye**	**48.81**	**301**	*e*P	**P**	**17 44 20.4**	**+0.8**
	16nm,0.4s						
H10N1	**ASCENSION HYDR**	**49.11**	**16**	T	T	18 38 24.8	
	baz=189,slow=75,SNR=19						
H10N3	**ASCENSION HYDR**	**49.11**	**16**	T	T	18 38 25.3	
	baz=189,slow=75,SNR=40						
H10N2	**ASCENSION HYDR**	**49.12**	**16**	T	T	18 38 23.9	
	baz=189,slow=75,SNR=33						
LPAZ	**La Paz**	**50.59**	**305**	P	**P**	**17 44 34.0**	**+0.5**
	4.5nm,0.5s,baz=148,slow=5.8,SNR=19						
LPAZ				LR	LR	18 06 42.1	
	comp=Z,31nm,20.5s,baz=147,slow=37						
LPAZ	**La Paz**	**50.59**	**305**	*e*P	**P**	**17 44 34.2**	**+0.7**
	8.1nm,1.0s						
PTGA	**Pitinga**	**61.35**	**321**	P	**P**	**17 45 48.4**	**-1.3**
	1.2nm,0.3s,baz=148,slow=12,SNR=4.7						
DBIC	**Dimbokro**	**65.12**	**24**	LR	LR	18 07 13.3	
	comp=Z,42nm,21.8s,slow=29						
TORD	**Torodi Ar. Bea**	**72.99**	**29**	P	**P**	**17 47 02.9**	**-0.6**
	1.4nm,0.7s,baz=200,slow=6.7,SNR=5.2						
TOA1	**Torodi Ar. Sit**	**73.00**	**29**	*e*P	**P**	**17 47 02.9**	**-0.6**
TAU	**Tasmania Unive**	**81.23**	**176**	*e*P	**P**	**17 47 51.1**	**+1.6**
	213nm,2.0s						
ASAR	**Alice Springs**	**98.87**	**162**	P	**P**	**17 49 12.7**	**-1.4**
	0.4nm,0.6s,baz=182,slow=3.7,SNR=4.9						
FIA0	**FINESS Array S**	**124.33**	**28**	*e*PKPdf	**PKPdf**	**17 54 30.8**	**-0.3**
FINES	**FINESS Array B**	**124.33**	**28**	PKP	**PKPdf**	**17 54 30.8**	**-0.3**
	0.5nm,0.5s,baz=237,slow=4.8,SNR=3.0						
YKA	**Yellowknife Ar**	**136.36**	**318**	PKP	**PKPdf**	**17 54 55.3**	**+1.4**
	0.2nm,0.3s,baz=128,slow=2.2,SNR=4.3						
YKB5	**Yellowknife Ar**	**136.36**	**318**	*e*PKPdf	**PKPdf**	**17 54 55.3**	**+1.4**
INK	**Inuvik**	**145.98**	**320**	PKPbc	**PKPdf**	**17 55 12.2**	**+1.2**
	1.3nm,0.4s,baz=59,slow=1.6,SNR=4.8						
EPYK	**Eagle Plains**	**146.61**	**316**	*e*PKPdf	**PKPdf**	**17 55 13.1**	**+0.9**
ILAR	**Eielson Array**	**150.31**	**312**	PKPbc	**PKPbc**	**17 55 23.4**	**-0.1**
	1.2nm,0.7s,baz=144,slow=1.5,SNR=10						
ILB	**Eielson Array**	**150.31**	**312**	*e*PKPbc	**PKPbc**	**17 55 23.9**	**+0.5**
SONA0	**Songino Array**	**150.51**	**86**	*e*PKPbc	**PKPbc**	**17 55 23.7**	**-0.9**
SONM	**Songino Array**	**150.51**	**86**	PKPbc	**PKPbc**	**17 55 23.7**	**-0.9**
	0.8nm,0.7s,baz=178,slow=3.7,SNR=4.4						

*SOME **04** 17:43:02.2,43°.78N×84°.58E,h15km*
*NNC **04** 17:43:02.6±6.4,43°.61N×84°.45E,h0km,mb3.3,mpv3.0,*
Error ellipse: s-maj=52.0km s-min=21.6km az=118.0
ISC 04 17:43:11.5±3.2,43°.4N±0°.1×84°.5E±0°.1,h32km,n7,
σ2°61/11,3C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.05**	**272**	*e*P	**Pn**	**17 43 58.1**	**+0.5**
	2.7nm,0.2s						
KTMS				*e*S	**Sb**	**17 44 38.8**	**-3.1**
	17nm,0.4s						
DJR	**Jarkent**	**3.56**	**287**	*e*P	**Pn**	**17 44 07.1**	**+2.6**
	1.6nm,0.1s						
DJR				*e*S	**Sb**	**17 44 54.3**	**-2.2**
	9.3nm,0.4s						
PDGK	**Podgornoye**	**3.68**	**271**	⇑Pg	**Pn**	**17 44 07.9**	**+1.7**
	4.4nm,0.9s						
PDGK				⇓Lg	Lg	17 44 58.8	
	4.6nm,0.6s						
MK31	**Makanchi Array**	**3.75**	**336**	⇑Pg	**Pn**	**17 44 07.6**	**+0.4**
	0.9nm,0.3s,baz=145,slow=17,SNR=25						
MK31				⇑Lg	Lg	17 44 54.2	
	0.9nm,0.2s,baz=141,slow=30,SNR=8.1						
MAKZ	**Makanchi**	**3.86**	**333**	⇓Pg	**Pn**	**17 44 09.8**	**+1.2**
	4.5nm,1.0s						
MAKZ				⇓Lg	Lg	17 44 56.9	
	3.9nm,0.6s						
UZB	**Uzynbulak**	**4.03**	**268**	*e*P	**Pb**	**17 44 19.2**	**-2.7**
	0.5nm,0.1s						
UZB				*e*S	**Sb**	**17 45 13.9**	**+3.7**
	2.0nm,0.2s						
KAPS	**Kapalarasan**	**4.17**	**299**	*e*P	**Pn**	**17 44 12.7**	**-0.2**
	0.5nm,0.1s						
KAPS				*e*S	**Sn**	**17 45 03.3**	**+2.8**
	3.2nm,0.3s						

*IDC **04** 17:43:15.1±1.9,34°.12S×179°.36W,h0km,mb3.9/2,*
mb1 4.1/3,mb1mx3.7/33,mbtmp4.0/3,ML4.1/1,Error
ellipse: s-maj=48.2km s-min=37.5km az=85.0
*ISCJB **04** 17:43:31.5±0.8,34°.77S±0°.04×179°.5E±0°.1,h100km,*
mb4.4/7,Error ellipse: s-maj=15.2km s-min=5.3km az=2.9
*WEL **04** 17:43:31.9±1.2,35°.S±16°×18°0E±3°0,h33km,M4.3/11,*
ML4.6/11,MLv4.3/11,Error ellipse: s-maj=0.0km
s-min=0.0km az=116.7
*NEIC **04** 17:43:39.0±2.4,35°.22S×178°.89E,h119km±11km,mb4.7/7,*
Error ellipse: s-maj=35.2km s-min=21.9km az=48.0
ISC 04 17:43:34.6±1.0,34°.83S±0°.08×179°.1E±0°.1,h100km,n50,
σ2°81/66,mb4.8/7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**3.31**	**192**	P	**Pn**	**17 44 23.2**	**-1.3**
PUZ				S	**Sn**	**17 45 05.7**	**+2.8**
RUGZ	**Raukumara Rang**	**3.33**	**200**	P	**Pn**	**17 44 25.0**	**0.0**
RUGZ				S	**Sn**	**17 45 07.1**	**+3.4**
TWGZ	**Tauwhareparae**	**3.46**	**195**	P	**Pn**	**17 44 25.7**	**-0.9**
TWGZ				S	**Sn**	**17 45 09.9**	**+3.2**
CNGZ	**Carnagh Statio**	**3.72**	**191**	P	**Pn**	**17 44 28.7**	**-1.3**
MWZ	**Matawai**	**3.72**	**199**	P	**Pn**	**17 44 29.5**	**-0.6**
MWZ				S	**Sn**	**17 45 17.0**	**+4.1**
TKGZ	**Te Karaka**	**3.74**	**195**	P	**Pn**	**17 44 30.1**	**-0.2**
TKGZ				S	**Sn**	**17 45 16.0**	**+2.7**
URZ	**Urewera**	**3.78**	**204**	**Pn**	**Pn**	**17 44 31.5**	**+0.7**
	6.8nm,0.3s,baz=274,slow=3.9,SNR=72						
URZ				Sn	**Sn**	**17 45 20.6**	**+6.4**
	7.0nm,0.3s,baz=275,slow=23,SNR=7.9						
URZ	**Urewera**	**3.78**	**204**	*e*Pn	**Pn**	**17 44 30.2**	**-0.6**
URZ				*e*Sn	**Sn**	**17 45 19.2**	**+4.9**
RIGZ	**Rimuhau**	**4.02**	**195**	P	**Pn**	**17 44 34.3**	**+0.3**
RIGZ				S	**Sn**	**17 45 21.4**	**+1.4**
SNGZ	**Shannon Statio**	**4.19**	**199**	P	**Pn**	**17 44 36.5**	**+0.1**
SNGZ				S	**Sn**	**17 45 27.0**	**+2.7**
RAHZ	**Arahi**	**4.39**	**201**	P	**Pn**	**17 44 40.1**	**+1.1**
RAHZ				S	**Sn**	**17 45 33.1**	**+4.1**
MTHZ	**Maungataniwha**	**4.41**	**204**	P	**Pn**	**17 44 40.2**	**+1.0**
MTHZ				S	**Sn**	**17 45 34.9**	**+5.4**
MHGZ	**Mahia Peninsul**	**4.42**	**192**	P	**Pn**	**17 44 40.1**	**+0.7**
MHGZ				S	**Sn**	**17 45 30.6**	**+0.8**
OUZ	**Omahuta**	**4.53**	**263**	*e*Pn	**Pn**	**17 44 42.8**	**+1.9**
NMHZ	**Naumai**	**4.64**	**203**	P	**Pn**	**17 44 43.9**	**+1.4**
ARHZ	**Aropaoanui**	**4.74**	**200**	P	**Pn**	**17 44 45.3**	**+1.6**
ARHZ				S	**Sn**	**17 45 41.2**	**+3.8**
BKZ	**Black Stump Fm**	**4.80**	**205**	*e*Pn	**Pn**	**17 44 44.1**	**-0.6**
MCHZ	**McNeill Hill**	**4.99**	**202**	P	**Pn**	**17 44 46.9**	**-0.3**
HIZ	**Hauiti**	**5.01**	**222**	*e*Pn	**Pn**	**17 44 47.4**	**-0.1**
FWVZ	**Far West T-bar**	**5.25**	**212**	P	**Pn**	**17 44 51.9**	**+1.0**
BFZ	**Birch Farm**	**6.26**	**200**	*e*Pn	**Pn**	**17 45 02.2**	**-2.3**
BFZ				*e*Sn	**Sn**	**17 46 11.3**	**-3.2**
SNZO	**South Karori**	**7.34**	**207**	*e*Pn	**Pn**	**17 45 17.2**	**-1.8**
SNZO				*e*Sn	**Sn**	**17 46 41.8**	**+1.1**
THZ	**Tophouse**	**8.46**	**213**	*e*Pn	**Pn**	**17 45 32.0**	**-2.4**
THZ				*e*Sn	**Sn**	**17 47 08.4**	**+0.3**
KHZ	**Kahutara**	**8.73**	**208**	*e*Pn	**Pn**	**17 45 33.9**	**-4.0**
KHZ				*e*Sn	**Sn**	**17 47 12.8**	**-1.8**
LTZ	**Lake Taylor**	**9.56**	**212**	*e*Pn	**Pn**	**17 45 45.1**	**-4.2**
CRLZ	**Canterbury Las**	**10.07**	**208**	*e*Pn	**Pn**	**17 45 52.7**	**-3.5**
OXZ	**Oxford**	**10.10**	**211**	*e*Pn	**Pn**	**17 45 51.9**	**-4.7**
OXZ				*e*Sn	**Sn**	**17 47 42.6**	**-5.3**
MQZ	**McQueen's Vall**	**10.17**	**207**	*e*Pn	**Pn**	**17 45 52.9**	**-4.7**
MQZ				*e*Sn	**Sn**	**17 47 43.4**	**-6.2**
RPZ	**Rata Peaks**	**10.84**	**213**	*e*Pn	Pn	17 46 01.5	-5.1
FOZ	**Fox Glacier**	**11.28**	**217**	*e*Pn	**Pn**	**17 46 08.8**	**-3.8**
LBZ	**Lake Benmore**	**11.75**	**213**	*e*Pn	**Pn**	**17 46 15.7**	**-3.2**
ODZ	**Otahua Downs**	**12.08**	**210**	*e*Pn	Pn	17 46 17.6	-5.7
WKZ	**Wanaka**	**12.63**	**215**	*e*Pn	**Pn**	**17 46 29.1**	**-1.4**
MLZ	**Mavora Lakes**	**13.46**	**215**	*e*Pn	**Pn**	**17 46 40.6**	**-0.8**
WHZ	**Wether Hill Ro**	**13.93**	**214**	*e*Pn	**Pn**	**17 46 45.9**	**-1.6**
ASAR	**Alice Springs**	**40.67**	**273**	P	**P**	**17 51 07.7**	**+2.3**
	0.9nm,0.5s,baz=114,slow=7.7,SNR=13						
ASAR				PcP	**PcP**	**17 53 01.5**	**-3.8**
	0.1nm,0.4s,baz=116,slow=4.2,SNR=3.8						
WB2	**Warramunga Arr**	**42.06**	**279**	*e*P	**P**	**17 51 18.2**	**+1.5**
	27nm,1.9s						
WR1	**Warramunga Arr**	**42.07**	**279**	*e*P	**P**	**17 51 18.2**	**+1.5**
WRA	**Warramunga Arr**	**42.07**	**279**	P	**P**	**17 51 18.2**	**+1.5**
	139nm,0.3s,baz=111,slow=8.2,SNR=1.6						
FORT	**Forrest**	**42.72**	**261**	*e*P	**P**	**17 51 24.3**	**+2.4**
	16nm,0.9s						
FITZ	**Fitzroy Crossi**	**50.10**	**275**	*e*P	**P**	**17 52 20.8**	**+1.1**
	21nm,1.6s						
QSPA	**South Pole Qui**	**55.29**	**180**	*e*P	**P**	**17 52 57.9**	**+0.4**
	23nm,1.9s						
MAW	**Mawson**	**67.31**	**202**	P	**P**	**17 54 18.3**	**+0.1**
	1.1nm,0.6s,baz=127,slow=8.0,SNR=6.6						
MAW	**Mawson**	**67.31**	**202**	*e*P	**P**	**17 54 18.6**	**+0.4**
	1.7nm,1.4s						
UGM	**Wanagama**	**67.95**	**276**	*e*P	**P**	**17 54 23.2**	**+0.1**
	729nm,1.8s						
SNAA	**Sanae**	**73.79**	**179**	*e*P	**P**	**17 54 55.8**	**-1.8**
	6.0nm,1.5s						
BEKR	**Beckworth**	**92.96**	**42**	*e*pP	pP	17 57 10.4	+8.0
PB11	**IPOC Station P**	**95.14**	**118**	*e*pP	pP	17 57 19.5	+6.3
BINY	**Binghamton**	**122.53**	**58**	*e*Pdif	**Pdif**	**17 58 54.4**	**+5.9**
FINES	**FINESS Array B**	**148.31**	**335**	PKPbc	**PKPdf**	**18 03 02.3**	**-2.5**
	0.9nm,0.5s,baz=45,slow=4.7,SNR=7.9						

WEL 04 17:52:46.9±0.8,31°S±14°×18°0E±3°8,h274km±23km,
M4.7/7,mB4.8/2,MLv4.7/7,Mw(mB)4.1/2,Error ellipse:
s-maj=0.1km s-min=0.0km az=109.3,Kermadec Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.83**	**42**	P	**Pn**	**17 53 37.6**	**-1.6**
GLKZ				S	S	17 54 21.8	+0.9
HAZ	**Te Kaha**	**6.58**	**195**	P	**Pn**	**17 54 23.9**	**+1.4**
HAZ				S	S	17 55 40.0	+0.6
PUZ	**Puketiti**	**6.79**	**191**	P	**Pn**	**17 54 25.8**	**+0.6**
PUZ				S	S	17 55 45.7	+1.3
RUGZ	**Raukumara Rang**	**6.80**	**195**	P	**Pn**	**17 54 26.7**	**+1.3**
TWGZ	**Tauwhareparae**	**6.94**	**193**	P	**Pn**	**17 54 28.8**	**+1.7**
TWGZ				S	S	17 55 50.7	+2.9
MWZ	**Matawai**	**7.19**	**195**	P	**Pn**	**17 54 29.6**	**-0.5**
MWZ				S	S	17 55 53.1	-0.3
CNGZ	**Carnagh Statio**	**7.20**	**191**	P	**Pn**	**17 54 30.9**	**+0.6**
URZ	**Urewera**	**7.22**	**198**	P	**Pn**	**17 54 29.1**	**-1.4**
TKGZ	**Te Karaka**	**7.22**	**193**	P	**Pn**	**17 54 29.0**	**-1.5**
TKGZ				S	S	17 55 54.3	+0.3
RIGZ	**Rimuhau**	**7.50**	**193**	P	**Pn**	**17 54 34.0**	**0.0**
MUGZ	**Murupara**	**7.51**	**199**	P	**Pn**	**17 54 34.1**	**-0.1**
HRRZ	**Handcock Road**	**7.58**	**202**	P	**Pn**	**17 54 36.5**	**+1.5**
SNGZ	**Shannon Statio**	**7.66**	**195**	P	**Pn**	**17 54 35.5**	**-0.4**
SNGZ				S	S	17 56 04.4	+0.4
KNZ	**Kokohu**	**7.82**	**193**	P	**Pn**	**17 54 37.2**	**-0.7**
RAHZ	**Arahi**	**7.84**	**196**	P	**Pn**	**17 54 38.2**	**-0.1**
MTHZ	**Maungataniwha**	**7.85**	**198**	P	**Pn**	**17 54 37.3**	**-1.0**
MTHZ				S	S	17 56 04.4	-4.0
MHGZ	**Mahia Penins

3.1nm,0.3s,baz=125,slow=23,SNR=8.8
DZM Mont Dzumac 11.11 178 *e*Pn **Pn 17 59 30.9 0.0**
ONTNC **Ouen Toro 11.34 178** *e*Pn **Pn 17 59 34.9 +0.9**
PINNC **Pines Island, 11.72 173** *e*Pn **Pn 17 59 40.5 +1.3**
FUNA **Funafuti 13.27 81** *e*Pn **Pn 18 00 00.8 +0.4**
TARA **Tarawa 14.02 30** *e*Pn **Pn 18 00 10.5 -0.2**
EIDS **Eidsvold 20.13 222** *e*P Pn 18 01 28.5 +0.9
20nm,1.4s
CTAO Charters Tower 21.04 242 *e*P **P 18 01 34.8 -0.6**
25nm,1.4s
NIUE Niue 24.65 112 *e*P **P 18 02 12.1 +0.1**
289nm,1.3s
BKZ Black Stump Fm 29.66 163 *e*P **P 18 02 56.8 -0.1**
65nm,1.6s
STKA Stephens Creek 30.68 223 P **P 18 03 06.4 +0.5**
1.5nm,0.7s,baz=5.7,slow=10,SNR=3.0
STKA Stephens Creek 30.68 223 *e*P **P 18 03 06.8 +0.9**
3.4nm,1.6s
BFZ Birch Farm 31.02 165 *e*P **P 18 03 08.8 +0.1**
119nm,1.3s
THZ Tophouse 31.33 170 *e*P **P 18 03 11.6 0.0**
81nm,1.6s
WB2 Warramunga Arr 31.71 250 *e*P **P 18 03 14.0 -1.1**
16nm,1.6s
WR1 Warramunga Arr 31.72 250 *e*P **P 18 03 14.2 -1.1**
WRA Warramunga Arr 31.72 250 P **P 18 03 14.2 -1.1**
143nm,0.3s,baz=81,slow=7.4,SNR=1.2
RPZ Rata Peaks 32.98 173 *e*P **P 18 03 25.2 -0.8**
62nm,1.7s
AS31 Alice Springs 33.03 243 *e*P **P 18 03 25.5 -1.2**
0.6nm,0.7s
ASAR Alice Springs 33.04 243 P **P 18 03 25.6 -1.2**
0.7nm,0.6s,baz=62,slow=10,SNR=13
ASAR PcP **PcP 18 06 10.2 +0.1**
0.6nm,0.7s,baz=73,slow=2.5,SNR=5.4
MQZ McQueen's Vall 33.19 171 *e*P **P 18 03 26.7 -1.0**
71nm,1.3s
LBZ Lake Benmore 33.55 175 *e*P **P 18 03 31.2 +0.3**
63nm,1.5s
WKZ Wanaka 33.90 176 *e*P **P 18 03 35.3 +1.4**
109nm,1.5s
WHZ Wether Hill Ro 34.90 178 *e*P **P 18 03 45.1 +2.5**
71nm,1.6s
BBOO Buckleboo 35.07 227 *e*P **P 18 03 44.2 -0.1**
17nm,1.2s
TAU Tasmania Unive 35.77 204 *e*P **P 18 03 49.9 -0.2**
39nm,1.4s
FITZ Fitzroy Crossi 39.61 255 *e*P **P 18 04 23.2 +0.3**
19nm,1.5s
PSAD1 Pilbara Seismi 45.37 251 *e*P **P 18 05 08.9 -0.9**
55nm,1.4s
MORW Morawa 49.87 241 *e*P **P 18 05 44.8 +0.2**
20nm,1.4s
MJAR Matsushiro Arr 53.95 332 P **P 18 06 13.8 -1.0**
0.7nm,0.6s,baz=158,slow=7.3,SNR=4.1
MAJO Matsushiro 53.95 332 *e*P **P 18 06 13.8 -1.0**
JNU Nakatsue 55.09 324 P **P 18 06 23.0 -0.2**
2.9nm,0.6s,baz=124,slow=1.5,SNR=5.3
JNU Nakatsue 55.09 324 *e*P **P 18 06 23.3 +0.1**
6.8nm,1.0s
KSRS Korea Array 59.88 325 P **P 18 06 57.4 +0.7**
0.7nm,0.6s,baz=134,slow=7.3,SNR=3.4
USRK Ussuriysk Ar. 62.92 333 P **P 18 07 18.1 +1.0**
2.3nm,0.8s,baz=203,slow=14,SNR=4.0
CASY Casey 66.58 201 *e*P **P 18 07 40.6 -0.2**
13nm,1.4s
VNDA Vanda 66.63 181 P **P 18 07 40.2 -0.7**
1.1nm,1.0s,baz=4.4,slow=5.4,SNR=3.9
VNDA Vanda 66.63 181 *e*P **P 18 07 41.5 +0.6**
CMAR Chiang Mai Arr 72.25 293 P **P 18 08 17.1 +0.4**
0.7nm,1.0s,baz=128,slow=4.0,SNR=3.7
SONA0 **Songino Array 78.68 324** *e*P **P 18 08 53.1 0.0**
SONM **Songino Array 78.68 324** P **P 18 08 53.1 0.0**
0.5nm,0.5s,baz=141,slow=4.5,SNR=4.7
QSPA South Pole Qui 79.09 180 *e*P **P 18 08 55.2 0.0**
3.3nm,1.0s
HDA Harding Lake 83.05 19 *e*P **P 18 09 16.3 +0.3**
2.9nm,0.8s
ILAR Eielson Array 83.32 18 P **P 18 09 17.8 +0.5**
0.7nm,0.5s,baz=238,slow=4.8,SNR=8.5
MAW Mawson 84.92 202 P **P 18 09 25.6 +0.1**
1.6nm,0.9s,baz=90,slow=3.0,SNR=3.5
MK32 Makanchi Array 93.56 317 *e*P **P 18 10 06.9 0.0**
MKAR Makanchi Array 93.56 317 P **P 18 10 06.9 0.0**
1.4nm,0.7s,baz=95,slow=6.1,SNR=10
ARCES ARCESS Array B 116.26 346 PKP **PKiKP 18 15 33.3 -0.3**
2.2nm,0.8s,baz=319,slow=2.6,SNR=3.9
KEST Kesra 147.43 323 PKPbc **PKPbc 18 16 34.8 -0.4**
3.6nm,0.7s,baz=71,slow=5.2,SNR=4.5
KEST Kesra 147.43 323 *e*PKPbc **PKPbc 18 16 35.4 +0.2**
ESDC Sonseca Array 149.99 344 PKPbc **PKPbc 18 16 41.3 -0.3**
0.5nm,0.4s,baz=20,slow=1.2,SNR=8.1
TORD Torodi Ar. Bea 164.44 280 PKP **PKPdf 18 16 54.1 -1.3**
0.9nm,1.1s,baz=329,slow=1.7,SNR=2.8
TOA1 Torodi Ar. Sit 164.45 280 *e*PKPdf **PKPdf 18 16 54.1 -1.3**

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*ISCJB **04** 18:08:35.4±0.2, 16°.81N±0°.03×146°.11E±0°.04, h10km, mb4.7/98, MS3.5/19, Error ellipse: s-maj=5.5km s-min=3.9km az=16.7*
*BJI **04** 18:08:35.8±0.0, 16°.80N×146°.10E, h5km, mb4.7/32, mB4.8/24, Ms4.5/13, Ms7 4.2/8*
*IDC **04** 18:08:35.1±0.6, 16°.84N×146°.23E, h0km, mb4.0/17, mb1 4.2/19, mb1mx4.0/39, mbtmp4.1/19, ML3.9/3, MS3.5/17, Ms1 3.5/17, ms1mx3.4/33, Error ellipse: s-maj=19.7km s-min=12.1km az=89.0*
*NEIC **04** 18:08:37.9±1.5, 16°.79N×146°.09E, h15km±4km, mb4.8/81, Error ellipse: s-maj=14.7km s-min=9.7km az=134.0*
ISC 04 18:08:37.2±0.4,**16°.77N**±0°.05×**146°.16E**±0°.07,**h10**km,**n133,** σ**1**§**24**/126,**mb4.8**/98,**MS3.4**/19,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**0.37**	**259**	*e*Pg	**Pg**	**18 08 43.8**	**-0.8**
ANA2	**Anatahan**	**0.60**	**225**	*e*Pg	**Pb**	**18 08 50.0**	**+0.1**
GUMO	**Guam**	**3.40**	**202**	Pn	**Pn**	**18 09 31.5**	**+1.1**
44nm,0.3s,baz=99,slow=2.2,SNR=17							
GUMO				Sn	**Sn**	**18 10 11.1**	**+0.3**
17nm,0.3s,baz=342,slow=20,SNR=3.7							
GUMO	**Guam**	**3.40**	**202**	*e*Pn	**Pn**	**18 09 31.2**	**+0.8**
PATS	**Pohnpei**	**15.45**	**128**	*e*Pn	**Pn**	**18 12 16.5**	**+1.1**
648nm,1.9s							
MANU	**Manus Island**	**18.73**	**176**	*e*P	**Pn**	**18 12 58.4**	**+1.7**
38nm,1.3s							
JOW	**Kunigami**	**19.37**	**304**	P	**Pn**	**18 13 04.4**	**+0.1**
0.2nm,0.3s,baz=139,slow=12,SNR=4.6							
JAY	**Jayapura**	**19.91**	**196**	P	**Pn**	**18 13 10.7**	**-0.1**
1.5nm,0.3s,baz=350,slow=5.2,SNR=16							
JAY				LR	LR	18 20 27.5	
comp=Z,143nm,18.1s,baz=9.0,slow=36							
INU	**Inuyama**	**20.22**	**338**	*e*P	**P**	**18 13 10.9**	**-1.5**
12nm,0.9s							
MJAR	**Matsushiro Arr**	**20.92**	**342**	P	**P**	**18 13 19.6**	**-0.4**
2.9nm,0.9s,baz=176,slow=12,SNR=8.6							
MJAR				LR	LR	18 20 34.7	
comp=Z,105nm,18.7s,baz=205,slow=34							
MAJO	**Matsushiro**	**20.92**	**342**	*e*P	**P**	**18 13 19.5**	**-0.5**
6.0nm,0.8s							
MAT	**Matsushiro**	**20.92**	**342**	P	**P**	**18 13 20.5**	**+0.5**
MJB9	**Matsu-Tunnel**	**20.92**	**342**	*e*P	**P**	**18 13 19.3**	**-0.7**
5.9nm,0.8s							
JNU	**Nakatsue**	**21.33**	**323**	P	**P**	**18 13 25.5**	**+1.0**
8.5nm,0.9s,baz=102,slow=10,SNR=7.6							
JNU				LR	LR	18 20 13.3	
comp=Z,64nm,18.9s,baz=170,slow=33							
JNU	**Nakatsue**	**21.33**	**323**	*e*P	**P**	**18 13 24.6**	**0.0**
14nm,1.0s							
RABL	**Rabaul**	**21.66**	**164**	*e*P	**P**	**18 13 28.2**	**+0.1**
48nm,1.3s							
DAV	**Davao City (W)**	**22.30**	**247**	LR	LR	18 20 34.6	
comp=Z,151nm,20.7s,baz=88,slow=32							
FAKI	**Fak Fak**	**23.91**	**216**	*e*P	**P**	**18 13 49.1**	**-2.3**
44nm,1.1s							
YULB	**Yu-li**	**24.24**	**290**	*e*P	**P**	**18 13 53.7**	**-0.9**
17nm,1.3s							
TATO	**Taipei**	**24.42**	**294**	*e*P	**P**	**18 13 58.6**	**+2.5**
144nm,1.5s							
YHNB	**Yeheng**	**24.45**	**293**	*e*P	**P**	**18 13 56.5**	**0.0**
112nm,1.9s							
TGY	**Tagaytay City**	**24.45**	**267**	LR	LR	18 22 36.7	
comp=Z,83nm,18.2s,baz=256,slow=34							
ERM	**Erimo**	**25.29**	**355**	*e*P	**P**	**18 14 02.9**	**-0.9**
29nm,1.4s							
PMG	**Port Moresby**	**26.03**	**178**	LR	LR	18 25 13.4	
comp=Z,107nm,18.4s,baz=18,slow=38							
PMG	**Port Moresby**	**26.03**	**178**	*e*P	**P**	**18 14 11.8**	**+1.0**
31nm,0.9s							
KSRS	**Korea Array**	**26.14**	**326**	P	**P**	**18 14 11.4**	**-0.2**
2.3nm,0.8s,baz=146,slow=9.2,SNR=15							
KSRS				LR	LR	18 23 22.3	
comp=Z,68nm,18.5s,baz=136,slow=34							
KS15	**Wonju Array Si**	**26.15**	**326**	*e*P	**P**	**18 14 12.6**	**+0.9**
27nm,1.4s							
ASAJ	**Asahikawa**	**27.43**	**354**	P	**P**	**18 14 20.6**	**-2.6**
1.5nm,0.6s,baz=144,slow=8.7,SNR=2.3							
NJ2	**Nanjing**	**29.04**	**307**	*e*P	**P**	**18 14 37.9**	**+0.3**
NJ2				pmax	pmax		
comp=Z,17nm,0.5s							
USRK	**Ussuriysk Ar.**	**29.85**	**339**	LR	LR	18 25 44.6	
comp=Z,93nm,20.1s,baz=147,slow=34							
CN2	**Changchun**	**32.15**	**331**	*e*P	**P**	**18 15 06.7**	**+1.7**
CN2				*es*P	pwP	18 15 13.7	+5.9
CN2				*e*S	**S**	**18 20 18.1**	**+0.4**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
CN2				pmax	pmax		
comp=Z,200nm,3.0s							
CN2				LR	LR		
comp=N,90nm,16.0s							
CN2				LR	LR		
comp=E,110nm,16.0s							
KAPI	**Kappang**	**33.91**	**233**	*e*P	**P**	**18 15 20.9**	**+0.2**
9.8nm,1.1s							
SOEI	**Soe**	**34.11**	**221**	*e*P	**P**	**18 15 22.3**	**-0.3**
28nm,1.0s							
MMRI	**Maumere**	**34.60**	**225**	*e*P	**P**	**18 15 25.7**	**-1.0**
70nm,1.7s							
BJT	**Baijiatuau**	**34.83**	**318**	*e*P	**P**	**18 15 27.9**	**-0.5**
27nm,1.8s							
ENH	**Enshi**	**36.04**	**299**	*e*P	**P**	**18 15 38.9**	**-0.1**
8.1nm,0.9s							
CTA	**Charters Tower**	**36.63**	**180**	P	**P**	**18 15 45.0**	**+1.0**
2.6nm,0.6s,baz=20,slow=12,SNR=4.1							
PETK	**Petropavlovsk-**	**37.37**	**11**	LR	LR	18 29 44.3	
comp=Z,49nm,19.4s,baz=175,slow=34							
XAN	**Xi'an**	**37.52**	**304**	P	**P**	**18 15 55.4**	**+3.8**
XAN				pmax	pmax		
comp=Z,4.0nm,0.9s							
XAN	**Xi'an**	**37.52**	**304**	*e*P	**P**	**18 15 52.3**	**+0.7**
6.5nm,1.1s							
HHC	**Hu-ho-hao-te**	**38.27**	**316**	*e*P	**P**	**18 15 57.9**	**0.0**
HHC				pmax	pmax		
comp=Z,19nm,0.9s							
HHC				pmax	pmax		
comp=Z,56nm,5.7s							
WRAB	**Tennant Creek**	**38.28**	**198**	*e*P	**P**	**18 15 57.1**	**-0.9**
12nm,1.3s							
WB2	**Warramunga Arr**	**38.28**	**198**	*e*P	**P**	**18 15 57.2**	**-0.9**
7.0nm,0.8s							
WRA	**Warramunga Arr**	**38.29**	**198**	P	**P**	**18 15 57.1**	**-1.0**
138nm,0.3s,baz=17,slow=9.6,SNR=1.3							
SLVN	**Son La**	**40.11**	**283**	*e*P	**P**	**18 16 13.2**	**-0.3**
5.5nm,1.0s							
JAGI	**Jajag, Banyuwa**	**40.39**	**234**	*e*P	**P**	**18 16 14.3**	**-1.5**
93nm,1.5s							
CD2	**Chengdu**	**41.01**	**298**	P	**P**	**18 16 24.9**	**+4.1**
CD2				pmax	pmax		
comp=Z,40nm,1.4s							
KMI	**Kunming**	**41.25**	**289**	P	**P**	**18 16 23.1**	**0.0**
KMI				pmax	pmax		
comp=Z,11nm,0.5s							
KMI				pmax	pmax		
comp=Z,120nm,6.2s							
KMI	**Kunming**	**41.25**	**289**	*e*P	**P**	**18 16 22.5**	**-0.6**
15nm,0.6s							
AS31	**Alice Springs**	**41.94**	**197**	*e*P	**P**	**18 16 27.9**	**-0.4**
1.0nm,0.6s							
ASAR	**Alice Springs**	**41.94**	**197**	P	**P**	**18 16 27.6**	**-0.8**
1.1nm,0.7s,baz=16,slow=11,SNR=22							
LZH	**Lanzhou**	**42.10**	**306**	*e*P	**P**	**18 16 30.2**	**+0.4**
LZH				pP	pwP	18 16 34.9	+2.3
LZH				sP	sP	18 16 37.3	+3.6
LZH				*e*PP	**PP**	**18 18 11.2**	**+4.0**
LZH				pmax	pmax		
comp=Z,25nm,1.3s							
LZH				pmax	pmax		
comp=Z,96nm,6.1s							
LZH				LR	LR		
comp=N,390nm,13.5s							
LZH				LR	LR		
comp=E,400nm,13.7s							
LZH				LR	LR		
comp=Z,510nm,16.9s							
CHAI	**Chaiyaphum**	**42.33**	**275**	P	**P**	**18 16 35.5**	**+3.7**
13μm,0.7s							
LEM	**Lembang**	**44.75**	**242**	LR	LR	18 39 16.0	
comp=Z,150nm,18.3s,baz=196,slow=41							
CHTO	**Chiang Mai**	**44.90**	**280**	*e*P	**P**	**18 16 52.0**	**-0.5**
6.6nm,1.4s							
SONA0	**Songino Array**	**44.92**	**322**	*e*P	**P**	**18 16 51.1**	**-1.3**
SONM	**Songino Array**	**44.92**	**322**	P	**P**	**18 16 51.1**	**-1.3**
0.3nm,0.5s,baz=128,slow=6.3,SNR=3.0							
SONM				LR	LR	18 36 48.9	
comp=Z,40nm,18.5s,baz=114,slow=38							
CM31	**Chiang Mai Arr**	**44.94**	**280**	*e*P	**P**	**18 16 51.0**	**-1.8**
6.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**44.94**	**280**	P	**P**	**18 16 51.3**	**-1.4**
2.0nm,0.8s,baz=76,slow=6.9,SNR=10							
CMAR				LR	LR	18 34 10.4	
comp=Z,20nm,21.8s,baz=240,slow=34							
ADK	**Adak**	**45.71**	**32**	*e*P	**P**	**18 16 58.8**	**+0.4**
18nm,1.4s							
KULM	**Kulim**	**45.99**	**261**	*e*P	**P**	**18 16 59.0**	**-2.2**
37nm,1.7s							
PSA00	**Pilbara Seismi**	**46.01**	**215**	*e*P	**P**	**18 17 00.8**	**-0.4**
164nm,1.8s							
ARMA	**Armidale**	**47.21**	**174**	*e*P	**P**	**18 17 11.9**	**+1.4**
49nm,1.7s							
PSI	**Prapat**	**48.42**	**259**	LR	LR	18 40 05.7	
comp=Z,150nm,18.3s,baz=84,slow=39							
PSI	**Prapat**	**48.42**	**259**	*e*P	**P**	**18 17 19.9**	**-0.4**
35nm,1.9s							
STKA	**Stephens Creek**	**48.57**	**185**	P	**P**	**18 17 19.9**	**-1.0**
2.1nm,0.8s,baz=1.8,slow=13,SNR=4.2							
STKA	**Stephens Creek**	**48.57**	**185**	*e*P	**P**	**18 17 20.4**	**-0.5**
6.0nm,1.9s							
GSI	**Gunungsitoli**	**50.20**	**257**	*e*P	**P**	**18 17 32.4**	**-1.3**
24nm,0.9s							
BBOO	**Buckleboo**	**50.24**	**191**	*e*P	**P**	**18 17 33.1**	**-0.5**
101nm,1.9s							
SHL	**Shillong**	**51.07**	**290**	*e*P	**P**	**18 17 39.8**	**-0.7**
7.5nm,1.0s							
LSA	**Lhasa**	**51.73**	**295**	P	**P**	**18 17 46.4**	**+0.8**
LSA	**Lhasa**	**51.73**	**295**	*e*P	**P**	**18 17 46.3**	**+0.6**
7.0nm,0.9s							
CAN	**Canberra**	**51.88**	**177**	*e*P	**P**	**18 17 46.9**	**+1.0**
25nm,1.4s							
UNV	**Unalaska Valle**	**52.00**	**34**	*e*P	**P**	**18 17 48.2**	**+1.6**
32nm,1.2s							
AKUT	**Akutan**	**52.51**	**33**	*e*P	**P**	**18 17 52.0**	**+1.6**
104nm,1.3s							
MORW	**Morawa**	**54.07**	**213**	*e*P	**P**	**18 18 01.1**	**-1.1**
24nm,1.4s							
SDPT	**Sand Point**	**55.81**	**34**	*e*P	**P**	**18 18 14.2**	**-0.3**
191nm,1.8s							
WMQ	**Urumqi**	**55.91**	**312**	*e*P	**P**	**18 18 19.5**	**+4.0**
WMQ				pmax	pmax		
comp=Z,15nm,1.3s							
WMQ				pmax	pmax		
comp=Z,150nm,5.1s							
WMQ				LR	LR		
comp=N,310nm,39.3s							
WMQ				LR	LR		
comp=E,420nm,39.1s							
WMQ				LR	LR		
comp=Z,120nm,39.0s							
SII	**Sitkinak Islan**	**59.55**	**34**	*e*P	**P**	**18 18 41.0**	**+0.2**
185nm,1.6s							
ZALV	**Zalesovo Beam**	**59.81**	**323**	P	**P**	**18 18 43.1**	**+0.5**
0.6nm,0.7s,baz=109,slow=8.2,SNR=3.7							
ZAA1	**Zalesovo Array**	**59.81**	**323**	*e*P	**P**	**18 18 43.1**	**+0.5**
MK31	**Makanchi Array**	**60.11**	**315**	*e*P	**P**	**18 18 44.6**	**-0.3**
3.0nm,1.1s							
MKAR	**Makanchi Array**	**60.11**	**315**	P	**P**	**18 18 45.3**	**+0.3**
1.8nm,0.8s,baz=95,slow=8.6,SNR=8.7							
SVW2	**Sparrevohn**	**60.30**	**28**	*e*P	**P**	**18 18 45.6**	**-0.3**
32nm,1.9s							
MAKZ	**Makanchi**	**60.33**	**315**	*e*P	**P**	**18 18 44.5**	**-1.9**
2.6nm,0.7s							
CAST	**Castle Rocks**	**62.61**	**27**	*e*P	**P**	**18 19 01.1**	**-0.4**
5.0nm,0.7s							
SUA	**Susitna One**	**62.63**	**29**	*e*P	**P**	**18 19 01.4**	**-0.4**
29nm,1.8s							
KURK	**Kurchatov**	**62.99**	**319**	*e*P	**P**	**18 19 02.6**	**-1.6**
2.6nm,0.8s							
BPAW	**Bear Paw Mtn.**	**63.28**	**26**	*e*P	**P**	**18 19 05.4**	**-0.6**
7.3nm,1.0s							
GHO	**Glory Hole Cre**	**63.55**	**29**	*e*P	**P**	**18 19 06.2**	**-1.7**
16nm,1.2s							
SML	**Sawmill**	**63.83**	**29**	*e*P	**P**	**18 19 07.6**	**-2.1**
13nm,1.0s							
RND	**Reindeer**	**64.00**	**27**	*e*P	**P**	**18 19 10.1**	**-0.7**
21nm,1.8s							
SCM	**Sheep Creek Mo**	**64.30**	**29**	*e*P	**P**	**18 19 12.6**	**-0.2**
90nm,2.0s							
KSH	**Kashi**	**64.34**	**306**	*e*P	P	18 19 19.5	+5.9
KSH				pmax	pmax		
comp=Z,13nm,1.0s							
KSH				pmax	pmax		
comp=Z,370nm,6.1s							
BOOM	**Boomskoye usch**	**64.35**	**309**	*e*P	**P**	**18 19 12.5**	**-1.1**
4.6nm,0.9s							
COLD	**Coldfoot**	**64.55**	**23**	*e*P	**P**	**18 19 14.3**	**+0.1**
6.9nm,1.5s							
DHY	**Denali Highway**	**64.57**	**28**	*e*P	**P**	**18 19 14.2**	**-0.5**
4.1nm,0.9s							
ILAR	**Eielson Array**	**65.18**	**26**	P	**P**	**18 19 16.1**	**-2.3**
0.8nm,0.5s,baz=250,slow=5.9,SNR=7.3							
ILAR				LR	LR	18 44 35.0	
comp=Z,33nm,21.3s,baz=240,slow=33							
PAX	**Paxson**	**65.39**	**28**	*e*P	**P**	**18 19 19.2**	**-0.7**
29nm,1.8s							
DOT	**Dot Lake**	**66.15**	**27**	*e*P	**P**	**18 19 23.5**	**-1.2**
20nm,1.7s							
FYU	**Fort Yukon**	**66.26**	**24**	*e*P	**P**	**18 19 25.5**	**+0.2**
38nm,1.8s							
ARSB	**Arslanbob**	**66.58**	**308**	*e*P	**P**	**18 19 27.1**	**-0.9**
7.6nm,0.9s							
NIL	**Nilore**	**66.86**	**300**	*e*P	**P**	**18 19 29.5**	**-0.3**
18nm,0.9s							
INK	**Inuvik**	**70.97**	**23**	P	**P**	**18 19 53.0**	**-1.6**
2.7nm,0.9s,baz=233,slow=5.1,SNR=2.8							
INK	**Inuvik**	**70.97**	**23**	*e*P	**P**	**18 19 53.5**	**-1.2**
4.4nm,0.9s							
GEYT	**Alibeck**	**78.38**	**306**	P	**P**	**18 20 37.1**	**-1.3**
1.4nm,0.9s,baz=29,slow=3.3,SNR=2.5							
YKA	**Yellowknife Ar**	**79.48**	**28**	P	**P**	**18 20 42.4**	**-1.3**
1.5nm,0.9s,baz=289,slow=5.6,SNR=6.9							
PINE	**Pine Mountain**	**80.64**	**47**	*e*P	**P**	**18 20 51.8**	**+1.1**
12nm,0.7s							
BMO	**Blue Mountains**	**82.88**	**45**	*e*P	**P**	**18 21 02.4**	**0.0**
2.8nm,0.9s							
PLID	**Pearl Lake**	**83.69**	**45**	*e*P	**P**	**18 21 05.8**	**-1.0**
13nm,1.5s							
KVN	**Kaiserville**	**83.95**	**51**	*e*P	**P**	**18 21 08.5**	**+0.3**
4.4nm,1.1s							
NVAR	**Mina Array Bea**	**83.98**	**52**	P	**P**	**18 21 08.6**	**+0.2**
1.2nm,0.5s,baz=269,slow=5.2,SNR=9.3							
NVAR				LR	LR	18 52 10.4	
comp=Z,30nm,19.4s,baz=182,slow=31							
HLID	**Hailey**	**85.25**	**46**	*e*P	**P**	**18 21 15.0**	**+0.4**
3.6nm,1.1s							
ELK	**Elko**	**85.55**	**49**	*e*P	**P**	**18 21 16.4**	**+0.1**
2.6nm,0.8s							
LRM	**Limekiln Ridge**	**85.83**	**43**	*e*P	**P**	**18 21 16.3**	**-1.2**
HRY	**Holter Researc**	**85.93**	**42**	*e*P	**P**	**18 21 18.1**	**+0.2**
BOZ	**Bozeman (W)**	**86.45**	**43**	*e*P	**P**	**18 21 20.6**	**0.0**
2.4nm,0.8s							
HVU	**Hansel Valley**	**86.97**	**47**	*e*P	**P**	**18 21 23.9**	**+0.8**
8.2nm,1.3s							
PSUT	**Pine Spring**	**87.27**	**51**	*e*P	**P**	**18 21 23.5**	**-1.3**
4.8nm,0.9s							
DUG	**Dugway, Tooele**	**87.48**	**49**	*e*P	**P**	**18 21 25.4**	**-0.2**
5.5nm,0.9s							
MOOW	**Moose Ponds**	**87.69**	**45**	*e*P	**P**	**18 21 26.0**	**-0.7**
5.7nm,1.5s							
PDAR	**Pinedale Array**	**88.86**	**46**	P	**P**	**18 21 31.6**	**-0.6**
0.2nm,0.4s,baz=336,slow=2.0,SNR=2.3							
PV21	**Cone Mtn., Par**	**90.84**	**49**	*e*P	**P**	**18 21 41.6**	**0.0**
3.9nm,0.7s							
PV23	**Carpenter Ridg**	**90.86**	**49**	*e*P	**P**	**18 21 41.7**	**0.0**
10nm,1.0s							
PV12	**Saucer Basin,**	**91.06**	**49**	*e*P	**P**	**18 21 42.1**	**-0.5**
5.5nm,0.8s							
PV01	**Paradox Valley**	**91.30**	**50**	*e*P	**P**	**18 21 43.3**	**-0.4**
3.6nm,0.9s							
SMCO	**Snowmass**	**92.04**	**48**	*e*P	**P**	**18 21 47.5**	**+0.2**
5.4nm,0.8s							
ISCO	**Idaho Springs**	**92.75**	**47**	*e*P	**P**	**18 21 51.0**	**+0.5**
4.7nm,1.3s							
ULM	**Lac du Bonnet**	**93.93**	**35**	LR	LR	18 59 09.2	
comp=Z,32nm,19.9s,baz=18,slow=32							
NOA	**NORSAR Array B**	**94.52**	**340**	LR	LR	19 06 04.0	
comp=Z,20nm,21.9s,baz=60,slow=36							
VYHS	**Vyhne**	**99.92**	**328**	*e*PDIF	**Pdif**	**18 22 21.7**	**-0.7**
LPAZ	**La Paz**	**147.15**	**94**	PKPbc	**PKPbc**	**18 28 22.8**	**+0.5**
2.4nm,0.7s,baz=290,slow=3.8,SNR=7.6							
LPAZ	**La Paz**	**147.15**	**94**	*e*PKPbc	**PKPbc**	**18 28 22.5**	**+0.2**

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*SOME **04** 18:16:17.0, 41°.87N×77°.35E, h5km*
*NNC **04** 18:16:17.4±0.8, 41°.90N×77°.31E, h0km, mb3.1, mpv3.0, Error ellipse: s-maj=5.4km s-min=3.2km az=179.0*
*KRNET **04** 18:16:19.1±0.1, 41°.89N×77°.24E, mb2.0*
ISC 04 18:16:16.9±1.5,**41°.88N**±0°.05×**77°.31E**±0°.03,**h2**km±11km, **n36,** σ**0**§**58**/65,**11C-5D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.08**	**246**	⇑*iP*	**Pb**	**18 16 38.9**	**+0.5**
baz=44							
NRN				⇑*iS*	**Sb**	**18 16 53.0**	**-0.1**
baz=44							
BOOM	**Boomskoye usch**	**1.19**	**302**	⇑*iP*	**Pg**	**18 16 40.0**	**+0.4**
baz=2.0							
BOOM				⇑*iS*	**Sg**	**18 16 55.4**	**+0.4**
baz=2.0							
TNSS	**Tian-Shan**	**1.19**	**347**	P	**Pg**	**18 16 39.5**	**-0.2**
9.0nm,0.1s							
TNSS				S	**Sg**	**18 16 55.5**	**+0.4**
18nm,0.2s							
TNSS	**Tian-Shan**	**1.19**	**347**	*e*P	**Pg**	**18 16 39.6**	**-0.2**
9.0nm,0.1s							
TNSS				*e*S	**Sg**	**18 16 55.5**	**+0.4**
18nm,0.2s							
IZV	**Izvestkoviy**	**1.27**	**336**	P	**Pg**	**18 16 40.9**	**-0.2**
10nm,0.2s							
IZV				S	**Sg**	**18 16 58.1**	**+0.5**

TKM2				⇑S		Sn	18 17 09.3 +0.5
	5.8nm,0.3s						
DGS	Degeres	1.77	321	P		Pb	18 16 49.9 -0.4
	1.7nm,0.1s						
DGS				S		Sb	18 17 13.3 +0.3
	26nm,0.5s						
DGS	Degeres	1.77	321	*e*P		Pb	18 16 49.9 -0.4
	1.7nm,0.1s						
DGS				*e*S		Sb	18 17 13.3 +0.3
	26nm,0.5s						
UZB	Uzynbulak	1.79	44	P		Pn	18 16 50.0 +1.0
	1.2nm,0.2s						
UZB				S		Sn	18 17 13.2 +0.7
	13nm,0.2s						
UZB	Uzynbulak	1.79	44	*e*P		Pn	18 16 50.0 +1.0
	1.2nm,0.2s						
UZB				*e*S		Sn	18 17 13.2 +0.7
	13nm,0.2s						
KPKS	Kokpek	1.88	32	*e*P		Pb	18 16 51.6 -0.5
	16nm,0.2s						
KPKS				*e*S		Sb	18 17 16.3 +0.2
	29nm,0.2s						
KTBS	Karatobe	1.89	346	P		Pb	18 16 52.0 -0.2
	2.3nm,0.2s						
KTBS				S		Sb	18 17 16.7 +0.4
	45nm,0.2s						
KTBS	Karatobe	1.89	346	*e*P		Pb	18 16 52.0 -0.2
	2.3nm,0.2s						
KTBS				*e*S		Sb	18 17 16.7 +0.4
	45nm,0.2s						
PDGK	Podgornoye	2.17	47	Pg		Pb	18 16 56.5 -0.5
	0.5nm,0.2s						
PDGK				Lg		Lg	18 17 24.6
	3.4nm,0.5s						
PDGK	Podgornoye	2.17	47	⇓Pg		Pb	18 16 56.1 -0.8
	0.8nm,0.6s						
PDGK				⇓Lg		Lg	18 17 24.5
	8.8nm,0.6s						
PDGK	Podgornoye	2.17	47	⇑*i*P		Pn	18 16 55.0 +0.8
	baz=48						
PDGK				⇑*i*S		Sn	18 17 21.1 -0.6
	baz=48						
AAK	Ala-Archa	2.22	291	⇓Pg		Pn	18 16 55.2 +0.2
	1.8nm,0.6s						
AAK				⇑Lg		Lg	18 17 27.1
	4.9nm,0.7s						
ARLS	Aral	2.23	271	⇓*i*P		Pn	18 16 55.0 -0.1
	baz=71						
ARLS				⇓*i*S		Sn	18 17 20.6 -2.7
	baz=71						
MNBS	Baschi	2.34	20	Pg		Pb	18 16 59.6 -0.3
	1.6nm,0.2s						
MNBS				Lg		Lg	18 17 29.8
	12nm,0.3s						
MNBS	Baschi	2.34	20	*e*P		Pb	18 16 59.6 -0.3
	1.6nm,0.2s						
MNBS				*e*S		Sb	18 17 29.8 +0.4
	12nm,0.3s						
ARXS	Arharly	2.37	9	Pg		Pb	18 17 00.1 -0.2
	1.4nm,0.2s						
ARXS				Lg		Lg	18 17 30.5
	22nm,0.4s						
ARXS	Arharly	2.37	9	*e*P		Pb	18 17 00.1 -0.2
	1.4nm,0.2s						
ARXS				*e*S		Sb	18 17 30.5 +0.5
	22nm,0.4s						
KTMS	Ketmen	2.74	54	Pg		Pb	18 17 06.5 -0.2
	0.5nm,0.1s						
KTMS				Lg		Lg	18 17 41.8
	10nm,0.4s						
KTMS	Ketmen	2.74	54	*e*P		Pb	18 17 06.5 -0.2
	0.5nm,0.1s						
KTMS				*e*S		Sb	18 17 41.8 +1.0
	10nm,0.4s						
DJR	Jarkent	3.05	36	Pg		Pb	18 17 11.3 -0.7
	0.5nm,0.2s						
DJR				Lg		Lg	18 17 49.9
	3.0nm,0.4s						
DJR	Jarkent	3.05	36	*e*P		Pb	18 17 11.3 -0.7
	0.5nm,0.2s						
DJR				*e*S		Sb	18 17 49.9 +0.1
	3.0nm,0.4s						

MAN 04 18:25:11.8, 10°.31N×122°.72E, h50km, mb4.1, ML2.9, MS2.5, 1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	0.35	337	*e*P		Pn	18 25 22.7 +1.4
GUIM				*e*S		Sn	18 25 31.7 +3.5
SNPH	Sibulan	1.08	152	⇓*i*P		Pn	18 25 32.1 +1.4
SNPH				*i* S		Sn	18 25 45.4 +0.8
CUYO	Cuyo Island	1.76	288	*e*P		Pn	18 25 41.3 +1.5
CUYO				*e*S		Sn	18 26 02.2 +1.1
ENPP	El Nido	3.36	286	*e*P		Pn	18 26 02.7 +0.9

ISCJB ***04*** *18:29:02.9±0.3, 24°.21S±0°.06×69°.98E±0°.05, h10km, mb4.7/89, MS4.0/18, Error ellipse: s-maj=8.6km s-min=6.3km az=16.4*

GCMT ***04*** *18:29:03.8±0.4, 24°.16S±0°.03×69°.78E±0°.04, h15km±1km, MW4.8/69, Moment Tensor Solution. s13,c14; s69,c95; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.82±.19; Mθθ=1.18±.12; Mφφ=0.64±.11; Mrθ=-0.99±.25; Mφθ=-1.09±.06; Mφr=0.28±.24; Best double couple: M=2.19100×10^16 NP1:φs=117.00000°, δ=59.00000°, λ=-102.00000°. NP2: φs=320.00000°, δ=33.00000°, λ=-70.00000°. Principal axes: T 2.2610, Plg=13.0000°, Azm=216.0000°; N -0.1380, Plg=11.0000°, Azm=123.0000°; P -2.1210, Plg=73.0000°, Azm=356.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***04*** *18:29:03.8±1.7, 24°.20S×69°.91E, h7km±3km, mb4.8/57 Error ellipse: s-maj=15.5km s-min=13.9km az=48.0*

IDC ***04*** *18:29:03.2±0.5, 24°.22S×69°.89E, h0km, mb4.2/20, mb1 4.3/20, mb1mx4.2/37, mbtmp4.2/20, MS4.0/18, Ms1 4.0/18, ms1mx3.8/26, Error ellipse: s-maj=17.2km s-min=14.2km az=33.0*

ISC 04 18:29:04.7±0.4, 24°.24S±0°.08×69°.86E±0°.07, h10km, n155, σ1§16/146, mb4.8/89, MS4.0/18, 3C-3D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	16.69	9	T	T	18 50 00.0	
	baz=189,slow=76						
H08S2	Diego Garcia H	16.69	9	T	T	18 49 59.9	
	baz=189,slow=76						
H08S3	Diego Garcia H	16.71	9	T	T	18 49 55.8	
	baz=189,slow=76						
OPO	Ambohidratompo	21.84	281	P	P	18 33 59.1 +1.4	
	7.7nm,1.1s,baz=126,slow=8.0,SNR=3.2						
MSEY	Mahe Island	23.88	322	*e*P	P	18 34 18.2 -0.4	
	42nm,1.0s						
SINGM	SINGM	34.32	279	*i* S	S	18 41 20.0 +0.3	
MATP	Matopo	38.35	267	P	P	18 36 25.6 -0.7	
	4.9nm,0.9s,baz=109,slow=8.8,SNR=6.8						
KCSI	Kotacane, Aceh	38.72	48	P	P	18 36 35.4 +6.2	
	11nm,1.6s,687nm						
BKNI	Bangkinang	38.86	56	P	P	18 36 34.7 +4.2	
	103nm,0.6s						
KMBO	Kilima Mbogo	39.03	301	P	P	18 36 33.1 +1.0	
	0.8nm,0.3s,baz=53,slow=8.6,SNR=3.1						
KMBO	Kilima Mbogo	39.03	301	*e*P	P	18 36 32.6 +0.4	
KMBO				*e*sP	P	18 36 33.6 +1.4	
NAI	Nairobi	39.29	301	*e*P	P	18 36 35.1 +0.8	
	25nm,0.5s						
RGRI	Rengat	39.41	58	P	P	18 36 36.8 +1.7	
LHMI	Lhok Sumawe	39.43	46	*e*P	P	18 36 36.3 +1.1	
	138nm,1.2s						
LHMI	Lhok Sumawe	39.43	46	P	P	18 36 35.5 +0.4	
	90nm,1.5s						
H01W2	Cape Leeuwin H	39.67	116	T	T	19 18 54.2	
	baz=273,slow=75,SNR=10						
H01W3	Cape Leeuwin H	39.67	116	T	T	19 18 50.4	
	baz=273,slow=75,SNR=15						
H01W1	Cape Leeuwin H	39.69	116	T	T	19 18 55.7	
	baz=273,slow=75,SNR=14						
BOSA	Boshof	40.01	254	LR	LR	18 50 57.7	
	comp=Z,360nm,18.7s,baz=95,slow=33						
LSZ	Lusaka	40.09	275	P	P	18 36 40.6 -0.3	
	3.1nm,0.9s,baz=128,slow=5.9,SNR=5.6						
LSZ	Lusaka	40.09	275	*e*P	P	18 36 41.1 +0.2	
LSZ				*e*pP	P	18 36 41.3 +0.4	
MAW	Mawson	43.59	184	P	P	18 37 09.1 +0.5	
	6.4nm,0.9s,baz=7.2,slow=9.3,SNR=18						
MAW				LR	LR	18 51 11.5	
	comp=Z,229nm,20.6s,baz=14,slow=30						
MAW	Mawson	43.59	184	*e*P	P	18 37 09.2 +0.5	
	1.6nm,0.9s						
WBSI	Waikabubak, Su	49.30	82	P	P	18 37 53.9 -0.4	
CM31	Chiang Mai Arr	51.04	36	*e*P	P	18 38 05.5 -1.8	
	20nm,1.3s						
CMAR	Chiang Mai Arr	51.04	36	P	P	18 38 07.3 0.0	
	2.2nm,1.0s,baz=228,slow=6.9,SNR=9.4						
CMAR				LR	LR	18 57 11.0	
	comp=Z,163nm,18.7s,baz=208,slow=33						
CHTO	Chiang Mai	51.33	36	*e*P	P	18 38 09.2 -0.3	
	8.8nm,1.3s						
EDFI	Ende, Flores	51.73	82	P	P	18 38 12.4 -0.4	
BNSI	Bone	52.18	76	P	P	18 38 16.8 +0.8	
MMRI	Maumere	52.27	82	*e*P	P	18 38 17.2 +0.5	
	62nm,1.2s						
MMRI	Maumere	52.27	82	P	P	18 38 17.2 +0.5	
	46nm,1.4s						
TTSI	Tana Toraja	52.56	74	P	P	18 38 22.3 +3.5	
SHL	Shillong	53.90	25	*e*P	P	18 38 28.3 -0.4	
	35nm,1.5s						
MPSI	Mapaga	54.27	71	P	P	18 38 29.0 -2.4	
	2.9nm,1.0s						
SLVN	Son La	56.11	39	*e*P	P	18 38 45.0 +0.4	
	12nm,1.2s						
LSA	Lhasa	57.40	22	*e*P	P	18 38 54.8 +0.8	
	18nm,1.8s						
ASAR	Alice Springs	58.05	104	P	P	18 38 58.5 +0.1	
	2.1nm,0.9s,baz=253,slow=6.2,SNR=16						
ASAR				LR	LR	19 00 29.3	
	comp=Z,127nm,20.3s,baz=284,slow=32						
AS31	Alice Springs	58.05	104	*e*P	P	18 38 57.6 -0.8	
	2.1nm,0.9s						
KBL	Kabul	58.46	359	*e*P	P	18 39 00.1 -1.0	
	18nm,1.3s						
WR1	Warramunga Arr	59.44	100	*e*P	P	18 39 07.3 -0.9	
WRA	Warramunga Arr	59.44	100	P	P	18 39 07.3 -0.9	
	139nm,0.3s,baz=248,slow=8.8,SNR=2.0						
WB2	Warramunga Arr	59.45	100	*e*P	P	18 39 07.6 -0.6	
	21nm,1.4s						
WRAB	Tennant Creek	59.46	100	*e*P	P	18 39 07.3 -1.0	
	17nm,1.3s						
TNTI	Ternate	61.00	75	*e*P	P	18 39 17.4 -1.4	
	7.4nm,0.8s						
TNTI	Ternate	61.00	75	P	P	18 39 21.3 +2.5	
SNAA	Sanae	61.76	200	*e*P	P	18 39 23.2 0.0	
	4.7nm,1.0s						
STKA	Stephens Creek	62.75	115	P	P	18 39 30.6 +0.2	
	4.8nm,1.0s,baz=314,slow=7.3,SNR=4.8						
STKA	Stephens Creek	62.75	115	*e*P	P	18 39 30.3 -0.1	
	3.7nm,1.3s						
GEYT	Alibeck	62.81	350	P	P	18 39 31.3 +0.8	
	1.1nm,1.0s,baz=248,slow=1.6,SNR=2.9						
GEYT				LR	LR	19 03 35.2	
	comp=Z,96nm,20.7s,baz=135,slow=33						
GYA0B	ALIBECK ARRAY	62.81	350	*e*P	P	18 39 30.6 0.0	
	11nm,1.5s						
BTK	Batken	63.97	1	*e*P	P	18 39 37.3 -0.9	
	21nm,1.6s						
ARSB	Arslanbob	65.29	3	*e*P	P	18 39 46.5 -0.4	
NRN	Naryn	65.58	5	*e*P	P	18 39 48.3 -0.7	
	6.3nm,1.3s						
QSPA	South Pole Qui	65.89	180	*e*P	P	18 39 50.2 -0.4	
	13nm,0.9s						
ENH	Enshi	66.20	37	*e*P	P	18 39 51.7 -1.2	
	35nm,1.5s						
BOOM	Boomskoye usch	66.63	5	*e*P	P	18 39 54.9 -0.6	
	7.6nm,1.3s						
AAK	Ala-Archa	66.68	4	*e*P	P	18 39 55.4 -0.4	
	10nm,1.4s						
VNDA	Vanda	66.95	166	P	P	18 39 57.3 +0.3	
	6.1nm,0.9s,baz=260,slow=7.2,SNR=25						
VNDA				LR	LR	19 06 30.4	
	comp=Z,71nm,18.2s,baz=261,slow=34						
VNDA	Vanda	66.95	166	*e*P	P	18 39 56.9 -0.1	
VNDA				*e*pP	P	18 39 57.0 0.0	
KK31	Karatay Array	67.01	1	*e*P	P	18 39 57.3 -0.4	
	10nm,1.2s						
KKAR	Karatay Array	67.01	1	*e*P	P	18 39 57.3 -0.4	
	10nm,1.2s						
SBA	Scott Base	67.93	167	*e*P	P	18 40 03.5 +0.3	
	10nm,1.1s						
GNI	Garni	68.20	339	*e*P	P	18 40 06.0 +0.6	
	18nm,1.3s						
XAN	Xi'an	68.83	34	*e*P	P	18 40 07.4 -2.0	
	19nm,1.5s						
TBLG	Delisi	69.64	340	*e*P	P	18 40 15.0 +0.8	
	5.7nm,0.8s						
WMQ	Urumqi	69.68	14	*e*P	P	18 40 15.2 +0.7	
	20nm,1.2s						
AKH	Akhalkalaki	69.74	339	*e*P	P	18 40 15.5 +0.4	
	8.8nm,1.2s						
MAKZ	Makanchi	71.56	9	*e*P	P	18 40 25.9 +0.1	
	7.0nm,1.3s						
MK31	Makanchi Array	71.58	9	*e*P	P	18 40 24.8 -1.2	
	9.5nm,1.5s						
MK32	Makanchi Array	71.58	9	*e*P	P	18 40 25.7 -0.3	
MKAR	Makanchi Array	71.58	9	P	P	18 40 25.7 -0.3	
	2.3nm,0.9s,baz=200,slow=9.0,SNR=9.2						
MKAR				LR	LR	19 10 30.8	
	comp=Z,91nm,19.8s,baz=182,slow=35						
KBZ	Khabaz	72.02	340	P	P	18 40 29.6 +0.9	
	5.6nm,1.0s,baz=211,slow=4.1,SNR=4.1						
KBZ				LR	LR	19 10 39.0	
	comp=Z,76nm,18.1s,baz=148,slow=35						
BRTR	Keskin Array B	72.05	331	P	P	18 40 29.8 +0.7	
	2.2nm,1.1s,baz=166,slow=6.4,SNR=9.3						
BR101	Keskin Array S	72.05	331	*e*P	P	18 40 29.8 +0.7	
BR131	Keskin Array S	72.05	331	*e*P	P	18 40 29.4 +0.2	
	10.0nm,1.5s						
KIV	Kislovodsk	72.29	340	*e*P	P	18 40 29.8 -0.6	
	7.0nm,0.8s						
ILGA	Ilgaz	73.11	332	*e*P	P	18 40 34.9 -0.7	
	25nm,1.6s						
ABKAR	Akbulak array	73.69	353	*e*P	P	18 40 37.2 -1.2	
	21nm,1.4s						
BALB	Balikesir	74.66	328	*e*P	P	18 40 42.9 -1.4	
	40nm,0.7s						
KURK	Kurchatov	75.02	6	*e*P	P	18 40 44.9 -1.3	
	8.7nm,1.1s						
TOA0	Torodi Ar. Sit	76.20	291	*e*P	P	18 40 52.6 -1.2	
	7.1nm,1.1s						
TORD	Torodi Ar. Bea	76.20	291	P	P	18 40 53.2 -0.5	
	2.8nm,1.0s,baz=102,slow=4.9,SNR=10						
TOA1	Torodi Ar. Sit	76.21	291	*e*P	P	18 40 53.2 -0.6	
BRVK	Borovoye	76.97	0	*e*P	P	18 40 55.9 -1.3	
	5.5nm,1.2s						
TAM	Tamanrasset	78.02	302	*e*P	P	18 41 04.1 +0.1	
	3.3nm,1.0s						
TIRR	Tirgusor	78.17	331	*e*P	P	18 41 04.5 +0.4	
	33nm,1.2s						
FNA	Florina	78.82	325	*e*P	P	18 41 07.3 -0.6	
	6.3nm,1.3s						
SONA0	Songino Array	78.90	24	*e*P	P	18 41 08.4 +0.2	
SONM	Songino Array	78.90	24	P	P	18 41 08.4 +0.2	
	2.3nm,1.0s,baz=197,slow=4.5,SNR=7.1						
SONM				LR	LR	19 14 34.3	
	comp=Z,170nm,21.7s,baz=250,slow=35						
ZAA0	Zalesovo Array	78.93	9	*e*P	P	18 41 07.2 -0.9	
	8.3nm,1.1s						
ZALV	Zalesovo Beam	78.93	9	P	P	18 41 07.4 -0.7	
	2.8nm,0.9s,baz=248,slow=4.0,SNR=8.2						
ZALV				LR	LR	19 15 55.1	
	comp=Z,58nm,18.7s,baz=250,slow=36						
ZAA1	Zalesovo Array	78.93	9	*e*P	P	18 41 07.4 -0.7	
DBIC	Dimbokro	78.93	282	LR	LR	19 14 49.3	
	comp=Z,95nm,18.2s,slow=35						
ULN	Ulaanbaatar	79.17	24	*e*P	P	18 41 08.3 -1.5	
	10nm,1.2s						
VTS	Vitosha	79.20	327	*e*P	P	18 41 08.2 -1.9	
	9.8nm,1.6s						
VRI	Vrincioaia	80.01	331	⇑*i*P	P	18 41 15.3 +1.1	
PLOR	Plostina	80.03	331	⇓*i*P	P	18 41 13.9 -0.5	
MLR	Muntele Rosu	80.07	330	*e*P	P	18 41 13.1 -1.6	
	16nm,1.2s						
MLR	Muntele Rosu	80.07	330	⇑*i*P	P	18 41 14.5 -0.2	
VOIR		80.44	330	⇓*i*P	P	18 41 17.1 +0.5	
ARU	Arti	80.92	354	*e*P	P	18 41 18.1 -0.7	
	30nm,1.6s						
KS15	Wonju Array Si	82.09	43	*e*P	P	18 41 24.4 -1.1	
	51nm,1.8s						
KSRS	Korea Array	82.12	43	P	P	18 41 24.7 -0.9	
	0.8nm,0.8s,baz=224,slow=8.8,SNR=4.2						
KSRS				LR	LR	19 17 17.3	
	comp=Z,38nm,19.4s,baz=226,slow=35						
BZS	Buzias	82.19	328	⇓*i*P	P	18 41 27.2 +1.4	
KEST	Kesra	82.63	314	LR	LR	19 17 08.2	
	comp=Z,54nm,19.7s,baz=261,slow=35						
AKASG	Malin Array Be	82.79	335	P	P	18 41 27.4 -1.4	
	3.3nm,0.9s,baz=138,slow=4.2,SNR=10						
AKBB	Malin Array Si	82.79	335	*e*P	P	18 41 27.6 -1.1	
	5.8nm,0.9s						
KIEV	Kiev	82.79	335	*e*P	P	18 41 27.5 -1.3	
	5.2nm,0.9s						
KIEV	Kiev	82.79	335	⇑*i*P	P	18 41 28.7 -0.1	
KOLS	Kolonicke sedl	84.31	331	*e*P	P	18 41 38.0 +1.3	
VYHS	Vyhne	85.58	329	*e*P	P	18 41 44.1 +1.0	
VYHS				*es*P	pwP	18 41 49.0 -0.2	
ARSA	Arzberg	86.34	326	*e*P	P	18 41 48.1 +1.2	
	2.1nm,0.8s						
OBKA	Obir	86.35	325	*e*P	P	18 41 47.2 +0.2	
	4.3nm,1.4s						
JAVC	Velka Javorina	86.38	328	*e*P	P	18 41 49.1 +2.0	
CONA	Conrad Observa	86.63	327	*e*P	P	18 41 49.3 +1.0	
	7.5nm,1.1s						
MYKA	Terra Mystica	86.90	325	*i* P	P	18 41 50.8 +1.1	
	3.5nm,0.9s						
MORC	Moravsky Berou	87.08	329	*e*P	P	18 41 51.4 +0.9	
KRUC	Moravsky	87.14	328	*e*P	P	18 41 51.4 +0.7	
KBA	Koelnbreinsper	87.35	325	*e*P	P	18 41 52.4 +0.4	
	2.8nm,0.9s						
MOA	Molln	87.38	326	*e*P	P	18 41 51.3 -0.6	
	12nm,1.4s						
ABTA	Abfaltersbach	87.57	325	*e*P	P	18 41 52.4 -0.6	
	7.3nm,1.3s						
MJAR	Matsushiro Arr	88.33	48	LR	LR	19 22 27.6	
	comp=Z,66nm,18.2s,baz=215,slow=36						
WTTA	Wattenberg	88.36	325	P	P	18 41 57.7 +0.8	
	9.9nm,1.6s						
WATA	Walderalm	88.44	325	P	P	18 41 57.0 -0.2	
	4.1nm,0.8s						
SQTA	Sankt Quirin	88.56	324	*e*P	P	18 41 58.6 +0.9	
	9.7nm,1.1s						
USRK	Ussurisyk Ar.	88.66	39	LR	LR	19 19 49.1	
	comp=Z,119nm,21.0s,baz=203,slow=34						
FETA	Feichten	88.70	324	*e*P	P	18 41 58.0 -0.5	
	11nm,1.3s						
MOTA	Moosalm	88.70	324	*e*P	P	18 41 59.4 +1.0	
	5.4nm,1.1s						
RETA	Reutte	88.97	324	*e*P	P	18 42 00.6 +1.0	
	6.5nm,1.3s						
TUE	Stuetta	89.11	323	*e*P	P	18 41 58.7 -1.8	
	6.3nm,0.9s						
DAVA	Damuels	89.32	324	*e*PcP	PcP	18 42 02.5 -0.3	
	5.1nm,0.8s						
BRG	Berggiesshubel	89.52	328	*e*P	P	18 42 03.0 +1.0	
	25nm,1.9s						
CLL	Collm	90.26	328	*e*P	P	18 42 06.0 +0.6	
FINES	FINESS Array B	92.37	341	LR	LR	19 24 20.1	
	comp=Z,43nm,18.4s,baz=122,slow=36						
ESDC	Sonseca Array	93.63	312	P	P	18 42 21.4 0.0	
	0.5nm,0.7s,baz=110,slow=5.2,SNR=3.4						
NRIK	Noril'sk	94.19	6	P	P	18 42 24.8 +1.6	
	2.1nm,0.5s,baz=169,slow=5.3,SNR=2.9						
NRIK				LR	LR	19 25 41.0	
	comp=Z,65nm,19.6s,baz=206,slow=36						
ARCES	ARCESS Array B	98.78	346	LR	LR	19 25 25.6	
	comp=Z,63nm,21.2s,baz=164,slow=34						
YKA	Yellowknife Ar	141.64	3	PKP	PKPdf	18 48 36.0 +0.2	
	0.7nm,0.8s,baz=343,slow=3.4,SNR=4.0						
YKA				PP	PP	18 51 44.7 +5.6	
	0.5nm,0.8s,baz=354,slow=6.1,SNR=4.4						
YKB5	Yellowknife Ar	141.64	3	*e*PKPdf	PKPdf	18 48 36.0 +0.2	
D53A	Lac Vacive, Po	145.54	320	*e*PKPdf	PKPdf	18 48 43.1 -0.1	
FFC	Flin Flon	148.95	351	*e*PKPbc	PKPbc	18 48 51.5 -1.0	
E46A	Sault Ste Mari	149.71	323	*e*PKPbc	PKPbc	18 48 53.5 -1.2	
C40A	Isle Royale Na	151.09	330	*e*PKPbc	PKPbc	18 48 56.0 -2.0	
E43A	Lone Tree Farm	151.13	326	*e*PKPbc	PKPbc	18 48 57.1 -1.0	
D41A	Chassel	151.44	328	*e*PKPbc	PKPbc	18 48 56.6 -2.2	
ULM	Lac du Bonnet	151.76	340	PKP	PKPdf	18 48 54.4 +1.3	
	2.0nm,0.4s,baz=207,slow=2.3,SNR=1.6						
EYMN	Ely	152.09	333	*e*PKPbc	PKPbc	18 48 59.8 -0.5	
COWI	Conover	152.40	327	*e*PKPbc	PKPbc	18 48 58.2 -2.9	
PD31	Pinedale Array	161.51	359	*e*PKPdf	PKPdf	18 49 04.9 -1.3	
PDAR	Pinedale Array	161.51	359	PKP	PKPdf	18 49 06.5 +0.3	
	0.4nm,0.5s,baz=70,slow=1.7,SNR=4.8						
NV01	Mina Array Sit	164.24	24	*e*PKPab	PKPab	18 50 01.8 -0.9	
NVAR	Mina Array Bea	164.24	24	PKPab	PKPab	18 50 01.8 -0.9	
	4.3nm,1.1s,baz=309,slow=4.4,SNR=3.6						
SMCO	Snowmass	164.86	351	*e*PKPdf	PKPdf	18 49 08.9 -0.8	
LTX	Lajitas	172.30	313	*e*PKPab	PKPab	18 50 38.7 +0.1	
TXAR	Lajitas Array	172.30	313	PKPab	PKPab	18 50 38.7 +0.1	
	0.5nm,0.8s,baz=90,slow=1.8,SNR=4.2						

TAP ***04*** *18:33:30.9, 24°.89N×122°.44E, h8km±1km, ML2.7, C*

ISCJB ***04*** *18:33:31.1±0.5, 24°.90N±0°.02×122°.48E±0°.02, h5km±3km, Error ellipse: s-maj=4.1km s-min=2.8km az=27.6*

JMA ***04*** *18:33:31.9±0.2, 24°.82N×122°.44E, h3km, M2.2*

ISC 04 18:33:31.6±1.1, 24°.87N±0°.03×122°.45E±0°.03, h7km±10km, n41, σ0§51/75, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.43	222	P	Pb	18 33 40.9	-0.5
	baz=219						
EOS1				S	Sb	18 33 48.5	+0.5
	baz=219						
TWB1	Santiao Chiao	0.44	289	P	Pg	18 33 40.3	+0.2
	baz=286						
TWB1				S	Sg	18 33 46.8	+0.9
	baz=286						
EGS		0.47	267	*e*P	Pg	18 33 40.5	-0.1
	baz=264						
EGS				*e*S	Sb	18 33 48.4	-0.8
	baz=264						
NTC	Toucheng	0.56	269	*e*P	Pb	18 33 43.2	-0.5
	baz=266						
TIPB	Shuangxi	0.57	281	*i* P	Pg	18 33 42.9	+0.3
	baz=278						
TIPB				*i* S	Sb	18 33 51.7	-0.6
	baz=278						
TWC	Suao	0.60	245	P	Pg	18 33 43.4	+0.2
	baz=242						
TWC				*e*S	Sb	18 33 51.8	-1.2
	baz=242						
JYNG	Yonagunijimaku	0.61	132	P	Pg	18 33 43.5	+0.1
JYNG				*e*S	Sg	18 33 51.2	-0.3
NWF	Wu-fen Shan	0.64	289	*e*P	Pg	18 33 43.2	-0.7
	baz=286						
NWF				S

YM01				S		Sg	18 33 59.2 +0.4
	baz=287						
YM11	**YM11**	**0.84 291**	*e*	P		**Pg**	**18 33 48.1 +0.2**
	baz=289						
YM05	**YM05**	**0.85 291**	*i*	P		**Pb**	**18 33 48.5 -0.2**
	baz=288						
YM05			*e*	S		**Sb**	**18 34 00.9 +0.5**
	baz=288						
YM10	**YM10**	**0.85 290**		P		**Pb**	**18 33 48.7 0.0**
	baz=288						
NWLT	**Wulai**	**0.86 264**	*e*	P		**Pg**	**18 33 47.5 -0.7**
	baz=262						
NWLT			*e*	S		**Sg**	**18 33 59.8 +0.4**
	baz=262						
YM04	**YM04**	**0.87 289**	*e*	P		**Pg**	**18 33 48.1 -0.3**
	baz=287						
YM03	**YM03**	**0.88 291**		P		**Pb**	**18 33 48.9 -0.3**
	baz=289						
YM03			*e*	S		**Sb**	**18 34 01.0 -0.1**
	baz=289						
NDT	**Datong Townshi**	**0.89 253**	*i*	P		**Pg**	**18 33 48.7 0.0**
	baz=251						
NDT			*e*	S		**Sb**	**18 34 02.2 +0.9**
	baz=251						
ANP	**Anpu**	**0.90 291**	*e*	P		**Pg**	**18 33 48.7 -0.2**
	baz=289						
ANP				S		**Sb**	**18 34 01.6 -0.1**
	baz=289						
YHNB	**Yeheng**	**0.99 259**		P		**Pg**	**18 33 50.2 -0.5**
	baz=257						
YHNB			*e*	S		**Sb**	**18 34 04.6 +0.1**
	baz=257						
NSK	**Sanguang**	**1.01 259**	*i*	P		**Pg**	**18 33 50.2 -0.8**
	baz=257						
NSK			*e*	S		**Sn**	**18 34 06.2 -0.4**
	baz=257						
NACB	**Ninganchiao**	**1.04 229**		P		**Pg**	**18 33 51.2 -0.3**
	baz=227						
NACB			*e*	S		**Sb**	**18 34 06.0 +0.3**
	baz=227						
NNSB	**Datong**	**1.06 246**		P		**Pg**	**18 33 51.6 -0.4**
	baz=244						
NNSB			*e*	S		**Sn**	**18 34 07.2 -0.8**
	baz=244						
NNS	**Nan Shan**	**1.06 247**	*e*	P		**Pn**	**18 33 53.6 +0.7**
	baz=244						
NNS				S		**Sb**	**18 34 07.2 +0.6**
	baz=244						
ETLH	**Xiulin Townshi**	**1.10 233**		P		**Pg**	**18 33 52.1 -0.6**
	baz=232						
ETLH			*e*	S		**Sb**	**18 34 07.6 +0.1**
	baz=232						
TWD	**Chiawan**	**1.10 225**	*e*	P		**Pn**	**18 33 53.3 0.0**
	baz=223						
TWD			*e*	S		**Sb**	**18 34 07.9 +0.4**
	baz=223						
IRIF	**Iriomote-Funau**	**1.28 114**		P		**Pg**	**18 33 56.4 +0.2**
IRIF			*e*	S		**Sn**	**18 34 13.5 +0.2**
WHF	**Hehuan Shan**	**1.29 236**		P		**Pg**	**18 33 55.6 -0.8**
	baz=235						
WHF			*e*	S		**Sb**	**18 34 13.4 -0.1**
	baz=235						
TDCB	**Techi**	**1.32 243**	*e*	P		**Pb**	**18 33 57.3 +0.5**
	baz=241						
TDCB			*e*	S		**Sn**	**18 34 15.7 +1.2**
	baz=241						
CHGB	**Renai**	**1.41 236**	*e*	P		**Pn**	**18 33 57.9 +0.1**
	baz=234						
CHGB			*e*	S		**Sn**	**18 34 17.4 +0.6**
	baz=234						
OWD	**Renai**	**1.47 232**		P		**Pn**	**18 33 58.6 0.0**
	baz=231						
OWD			*e*	S		**Sb**	**18 34 17.9 -0.4**
	baz=231						
TWF1	**Yuli**	**1.84 215**	*e*	P		**Pb**	**18 34 04.6 -0.9**
	baz=214						
CHN5	**Tsauling**	**2.05 232**	*e*	P		**Pn**	**18 34 06.8 +0.3**
	baz=231						

ISCJB ***04*** *18:34:10.1±0.5, 24°.91N±0°.02×122°.49E±0°.02, h5km±3km, Error ellipse: s-maj=3.9km s-min=2.6km az=33.6*
JMA ***04*** *18:34:10.4±0.1, 24°.86N×122°.45E, h2km, M2.8*
TAP ***04*** *18:34:10.1, 24°.91N×122°.46E, h10km, ML3.0, C*
ISC 04 18:34:10.4±1.1, 24°.90N±0°.03×122°.46E±0°.02, h7km±10km, n54, σ0°.49/100, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.44 285**		*i* P		**Pb**	**18 34 19.6 -0.9**
	baz=282						
TWB1				S		**Sb**	**18 34 26.0 -1.3**
	baz=282						
EOS1	**EOS1**	**0.46 221**		P		**Pb**	**18 34 20.5 -0.2**
	baz=219						
EOS1				S		**Sb**	**18 34 27.9 +0.2**
	baz=219						
EGS		**0.48 264**	*i*	P		**Pb**	**18 34 20.3 -0.9**
	baz=261						
EGS				S		**Sb**	**18 34 27.8 -0.6**
	baz=261						
NTC	**Toucheng**	**0.57 266**	*i*	P		**Pb**	**18 34 22.4 -0.3**
	baz=264						
NTC				S		**Sb**	**18 34 30.6 -0.4**
	baz=264						
TIPB	**Shuangxi**	**0.58 278**	*i*	P		**Pb**	**18 34 22.3 -0.6**
	baz=275						
TIPB			*e*	S		**Sb**	**18 34 30.7 -0.6**
	baz=275						
TWC	**Suao**	**0.62 243**		P		**Pg**	**18 34 22.7 +0.3**
	baz=240						
TWC			*e*	S		**Sg**	**18 34 30.9 +0.4**
	baz=240						
JYNG	**Yonagunijimaku**	**0.63 135**		P		**Pg**	**18 34 22.4 0.0**
JYNG			*e*	S		**Sg**	**18 34 30.4 -0.2**
NWF	**Wu-fen Shan**	**0.64 286**	*i*	P		**Pb**	**18 34 23.3 -0.6**
	baz=284						
NWF			*e*	S		**Sb**	**18 34 32.7 -0.3**
	baz=284						
WFSB	**Wu-fen Shan**	**0.64 286**		P		**Pb**	**18 34 23.5 -0.3**
	baz=284						
WFSB			*e*	S		**Sb**	**18 34 32.7 -0.3**
	baz=284						
YOJ	**Yonaguni jima**	**0.66 131**		P		**Pg**	**18 34 23.4 +0.3**
	baz=131						
YOJ			*e*	S		**Sg**	**18 34 32.4 +0.6**
	baz=131						
YOJ	**Yonaguni jima**	**0.66 131**		P		**Pg**	**18 34 23.1 0.0**
YOJ				S		**Sg**	**18 34 32.0 +0.2**
TWE	**Neicheng**	**0.74 257**		P		**Pb**	**18 34 24.9 -0.6**
	baz=254						
ENA	**Nanau**	**0.80 235**	*i*	P		**Pg**	**18 34 25.6 -0.1**
	baz=232						
ENA			*e*	S		**Sb**	**18 34 37.5 -0.2**
	baz=232						
PCYT	**Pengchaiyu**	**0.81 334**		P		**Pg**	**18 34 26.4 +0.4**
	baz=334						
PCYT				S		**Sb**	**18 34 38.1 +0.2**
	baz=334						
YM07	**YM07**	**0.81 290**		P		**Pg**	**18 34 26.1 +0.1**
	baz=288						
YM07			*e*	S		**Sb**	**18 34 37.9 0.0**
	baz=288						
YM08	**YM08**	**0.84 290**		P		**Pg**	**18 34 26.0 -0.5**
	baz=289						
YM08				S		**Sb**	**18 34 39.0 +0.2**
	baz=289						
YM01	**YM01**	**0.84 287**		P		**Pg**	**18 34 26.8 +0.2**
	baz=286						
YM01			*e*	S		**Sb**	**18 34 39.1 +0.2**
	baz=286						
YM11	**YM11**	**0.85 289**		P		**Pb**	**18 34 27.1 -0.3**
	baz=287						
YM11			*e*	S		**Sb**	**18 34 38.8 -0.3**
	baz=287						
NHDH	**Xindian Distri**	**0.85 275**		P		**Pb**	**18 34 27.1 -0.4**
	baz=273						
NHDH			*e*	S		**Sb**	**18 34 38.3 -0.7**
	baz=273						
ENTT	**Nioudou**	**0.85 253**	*i*	P		**Pb**	**18 34 27.3 -0.2**
	baz=251						
ENTT				S		**Sb**	**18 34 39.6 +0.5**
	baz=251						
YM05	**YM05**	**0.85 288**		P		**Pb**	**18 34 27.5 -0.1**
	baz=287						
YM05			*e*	S		**Sb**	**18 34 40.0 +0.7**
	baz=287						
YM10	**YM10**	**0.85 288**		P		**Pg**	**18 34 26.9 +0.1**
	baz=286						
YM10			*e*	S		**Sb**	**18 34 39.6 +0.4**
	baz=286						
TWY	**Chenhua**	**0.87 296**		P		**Pg**	**18 34 26.9 -0.1**
	baz=294						
TWY			*e*	S		**Sb**	**18 34 40.1 +0.6**
	baz=294						
YM04	**YM04**	**0.88 287**		P		**Pg**	**18 34 27.0 -0.2**
	baz=285						
NWLT	**Wulai**	**0.88 262**	*i*	P		**Pg**	**18 34 27.3 +0.1**
	baz=261						
NWLT			*e*	S		**Sb**	**18 34 40.2 +0.4**
	baz=261						
YM03	**YM03**	**0.88 289**		P		**Pb**	**18 34 27.8 -0.2**
	baz=287						
YM03			*e*	S		**Sb**	**18 34 40.4 +0.4**
	baz=287						
TATO	**Taipei**	**0.89 275**	*e*	P		**Pg**	**18 34 27.3 -0.1**
	baz=273						
TATO			*e*	S		**Sb**	**18 34 39.8 -0.2**
	baz=273						
ANP	**Anpu**	**0.90 289**		P		**Pg**	**18 34 27.1 -0.5**
	baz=287						
ANP			*e*	S		**Sb**	**18 34 40.1 -0.4**
	baz=287						
NDT	**Datong Townshi**	**0.91 251**	*i*	P		**Pb**	**18 34 28.3 -0.1**
	baz=250						
NDT			*e*	S		**Sb**	**18 34 41.6 +0.9**
	baz=250						
NTST	**Danshui**	**0.95 286**		P		**Pb**	**18 34 28.8 -0.4**
	baz=285						
TWS1	**Kuangyinshan**	**0.97 282**		P		**Pg**	**18 34 28.8 -0.1**
	baz=281						
TWS1			*e*	S		**Sn**	**18 34 43.5 -0.8**
	baz=281						
YHNB	**Yeheng**	**1.01 257**		P		**Pg**	**18 34 29.5 -0.3**
	baz=256						
YHNB			*e*	S		**Sb**	**18 34 44.1 +0.3**
	baz=256						
NSK	**Sanguang**	**1.02 258**		P		**Pb**	**18 34 30.2 -0.3**
	baz=256						
NSK			*e*	S		**Sb**	**18 34 44.2 +0.1**
	baz=256						
NACB	**Ninganchiao**	**1.07 228**		P		**Pg**	**18 34 30.5 -0.4**
	baz=226						
NACB			*e*	S		**Sb**	**18 34 44.8 -0.5**
	baz=226						
NNSB	**Datong**	**1.08 245**		P		**Pg**	**18 34 31.0 -0.2**
	baz=243						
NNSB			*e*	S		**Sb**	**18 34 46.3 +0.4**
	baz=243						
NNS	**Nan Shan**	**1.09 246**		P		**Pb**	**18 34 31.2 -0.4**
	baz=244						
NNS			*e*	S		**Sb**	**18 34 46.5 +0.5**
	baz=244						
ETLH	**Xiulin Townshi**	**1.12 233**		P		**Pb**	**18 34 32.0 -0.2**
	baz=231						
ETLH			*e*	S		**Sn**	**18 34 47.6 -0.8**
	baz=231						
TWD	**Chiawan**	**1.13 224**	*i*	P		**Pg**	**18 34 31.9 -0.2**
	baz=223						
TWD			*e*	S		**Sb**	**18 34 47.0 -0.1**
	baz=223						
IRIF	**Iriomote-Funau**	**1.28 116**		P		**Pg**	**18 34 35.1 +0.1**
IRIF			*e*	S		**Sg**	**18 34 51.4 -0.3**
WHF	**Hehuan Shan**	**1.32 236**	*i*	P		**Pg**	**18 34 35.4 -0.3**
	baz=234						
WHF			*e*	S		**Sb**	**18 34 52.8 -0.2**
	baz=234						
TWT	**Tachien**	**1.33 242**	*e*	P		**Pg**	**18 34 36.8 +0.8**
	baz=240						
LIOB	**Emei**	**1.34 260**	*e*	P		**Pg**	**18 34 35.7 -0.3**
	baz=258						
LIOB			*e*	S		**Sn**	**18 34 54.8 +1.4**
	baz=258						
TDCB	**Techi**	**1.35 242**	*e*	P		**Pg**	**18 34 36.7 +0.5**
	baz=240						
TDCB			*e*	S		**Sn**	**18 34 54.4 +0.5**
	baz=240						
NSTT	**Nanjuang**	**1.35 259**	*e*	P		**Pg**	**18 34 37.3 +1.0**
	baz=257						
NSTT			*e*	S		**Sn**	**18 34 55.3 +1.5**
	baz=257						
ESL	**Shilin**	**1.43 221**	*e*	P		**Pg**	**18 34 37.3 -0.4**
	baz=220						
ESL			*e*	S		**Sg**	**18 34 57.0 +0.8**
	baz=220						
CHGB	**Renai**	**1.44 235**	*e*	P		**Pg**	**18 34 37.6 -0.4**
	baz=233						
CHGB			*e*	S		**Sg**	**18 34 57.0 +0.4**
	baz=233						
OWD	**Renai**	**1.50 232**	*e*	P		**Pg**	**18 34 38.7 -0.5**
	baz=230						
OWD			*e*	S		**Sg**	**18 34 58.6 +0.1**
	baz=230						
WHP	**Taichung City**	**1.51 246**	*e*	P		**Pg**	**18 34 39.1 -0.2**
	baz=245						
WHP			*e*	S		**Sb**	**18 34 58.0 -0.1**
	baz=245						
EGFH	**Guangfu**	**1.54 218**	*e*	P		**Pb**	**18 34 39.3 +0.1**
	baz=217						
DPDB	**Guoxing**	**1.64 239**	*e*	P		**Pb**	**18 34 41.0 0.0**
	baz=237						
DPDB			*e*	S		**Sg**	**18 35 03.2 +0.1**
	baz=237						
SMLT	**Sun Moon Lake**	**1.74 235**	*e*	P		**Pb**	**18 34 42.5 -0.3**
	baz=233						
SSLB	**Suanglung**	**1.76 232**	*e*	P		**Pb**	**18 34 42.3 -0.7**
	baz=230						
TYC	**Yuchr**	**1.76 236**	*e*	P		**Pb**	**18 34 42.7 -0.3**
	baz=235						
YULB	**Yu-li**	**1.83 216**	*e*	P		**Pb**	**18 34 43.2 -1.0**
	baz=214						
YULB			*e*	S		**Sn**	**18 35 06.1 +0.3**
	baz=214						

MAN 04 18:43:23.6, 7°.31N×124°.95E, h27km, mb4.0, ML2.7, MS2.3, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.58**	**11**	*e* P		18 43 35.8	-0.3
BUKP				*e* S		18 43 46.4	+1.6
CTBH	**Cotabato--PC H**	**0.71**	**263**	⇓*i* P		18 43 37.6	-0.2
CTBH				*i* S		18 43 46.1	-0.6
CGP	**Cagayan de Oro**	**1.17**	**347**	⇓*e* P		18 43 45.9	+0.8
CGP				*e* S		18 44 00.2	+0.3
PAGZ	**Pagadian**	**1.65**	**289**	*e* P		18 43 50.6	-0.2
PAGZ				*e* S		18 44 11.8	+0.7

IDC 04 18:46:05.3±385.0, 22°.54S×68°.59W, h0km, Error ellipse: s-maj=179.4km s-min=128.6km az=9.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I08BO	**LAS PENAS INFR**	**6.29**	**1**	*i*		19 24 30.0	
	baz=181, slow=328, SNR=1.2						
I41PY	**VILLA FLORIDA**	**10.95**	**112**	*i*		19 52 00.0	
	baz=288, slow=308, SNR=4.0						
I09BR	**BRASILIA INFRA**	**20.61**	**74**	*i*		20 54 50.0	
	baz=248, slow=321, SNR=1.5						

MEX 04 18:56:33.8±1.0, 16°.40N×98°.72W, h2km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.57**	**91**	*i* P	Pg	18 56 43.8	-0.9
PNIG				*i* S	Sg	18 56 52.6	+0.5
TLIG	**Tlapa**	**1.16**	**7**	*e* P	Pg	18 56 53.8	-2.4
TLIG				*e* S	Sg	18 57 08.8	-2.4
CAIG	**El Cayaco**	**1.61**	**294**	*e* P	Pn	18 56 59.1	-4.2

JMA ***04*** *18:59:29.4±0.1, 23°.89N×121°.70E, h46km±1km, M2.9*
ISCJB ***04*** *18:59:30.7±0.2, 23°.93N±0°.01×121°.71E±0°.02, h45km±3km, Error ellipse: s-maj=2.7km s-min=1.6km az=34.4*
TAP ***04*** *18:59:30.6, 23°.96N×121°.66E, h39km, ML2.9, C*
ISC 04 18:59:31.3±1.0, 23°.95N±0°.02×121°.67E±0°.02, h34km±2km, n100, σ1°.14/183, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.06**	**296**	P	**Pb**	**18 59 37.8**	**+0.8**
	baz=291						
HWA				*e* S	**Sb**	**18 59 43.6**	**+2.8**
	baz=291						
ENLB	**Shoufeng**	**0.07**	**233**	P	**Pb**	**18 59 37.7**	**+0.7**
	baz=227						
ENLB				*e* S	**Sb**	**18 59 43.8**	**+2.8**
	baz=227						
TWD	**Chiawan**	**0.14**	**333**	*i* P	Pn	18 59 37.4	+2.1
	baz=336						
TWD				*e* S	**Sb**	**18 59 43.7**	**+2.0**
	baz=336						
NACB	**Ninganchiao**	**0.23**	**343**	P	**Pn**	**18 59 38.1**	**+0.3**
	baz=343						
NACB				*e* S	**Sb**	**18 59 45.0**	**+1.8**
	baz=343						
ESL	**Shilin**	**0.25**	**238**	P	**Pn**	**18 59 38.1**	**-0.2**
	baz=234						
ESL				*e* S	**Sb**	**18 59 44.8**	**+1.3**
	baz=234						
ETLH	**Xiulin Townshi**	**0.31**	**327**	P	**Pb**	**18 59 39.0**	**-0.4**
	baz=326						
ETLH				*e* S	**Sn**	**18 59 45.3**	**+1.1**
	baz=326						
EGFH	**Guangfu**	**0.35**	**218**	P	**Pb**	**18 59 39.6**	**-0.3**
	baz=217						
EGFH				*e* S	**Sn**	**18 59 46.8**	**+1.1**
	baz=217						
WHF	**Hehuan Shan**	**0.42**	**298**	*i* P	**Pb**	**18 59 40.3**	**-0.7**
	baz=297						
WHF				*i* S	**Sb**	**18 59 47.7**	**-0.1**
	baz=297						
OWD	**Renai**	**0.45**	**271**	P	**Pb**	**18 59 40.6**	**-0.7**
	baz=269						
OWD				*e* S	**Sb**	**18 59 48.1**	**-0.1**
	baz=269						
CHGB	**Renai**	**0.46**	**284**	P	**Pb**	**18 59 41.1**	**-0.5**
	baz=282						
CHGB				S	**Sb**	**18 59 48.5**	**-0.1**
	baz=282						
ENA	**Nanau**	**0.48**	**8**	*i* P	**Pb**	**18 59 41.1**	**-0.6**
	baz=9.0						
ENA				S	**Sb**	**18 59 49.8**	**+1.0**
	baz=9.0						
HGSD	**Ruisui**	**0.51**	**206**	P	**Pb**	**18 59 41.8**	**-0.3**
	baz=205						
HGSD				S	**Sb**	**18 59 50.6**	**+1.1**
	baz=205						
VWDT	**VWDT**	**0.52**	**248**	P	**Pn**	**18 59 42.0**	**-0.3**
	baz=247						
VWDT				S	**Sb**	**18 59 49.8**	**0.0**
	baz=247						
TWT	**Tachien**	**0.54**	**304**	*i* P	**Pn**	**18 59 42.6**	**-0.2**
	baz=302						
TWT				S	**Sb**	**18 59 50.9**	**+0.3**
	baz=302						
EHY	**Hungye**	**0.54**	**216**	*e* P	**Pn**	**18 59 42.4**	**-0.2**
	baz=214						
EHY				*e* S	**Sb**	**18 59 51.1**	**+0.7**
	baz=214						
NNSB	**Datong**	**0.54**	**331**	P	**Pn**	**18 59 41.9**	**-0.9**
	baz=331						
NNSB				*e* S	**Sb**	**18 59 50.4**	**-0.2**
	baz=331						
TDCB	**Techi**	**0.56**	**303**	P	**Pn**	**18 59 42.6**	**-0.3**
	baz=302						
TDCB				S	**Sb**	**18 59 50.7**	**-0.2**
	baz=302						
NNS	**Nan Shan**	**0.56**	**331**	*i* P	**Pn**	**18 59 42.1**	**-0.9**
	baz=331						
NNS				*e* S	**Sb**	**18 59 50.9**	**-0.1**
	baz=331						
YULB	**Yu-li**	**0.65**	**212**	*e* P	**Pn**	**18 59 42.2**	**-2.0**
	baz=210						
NDT	**Datong Townshi**	**0.67**	**348**	P	**Pn**	**18 59 43.6**	**-0.8**
	baz=347						
NDT				*e* S	**Sn**	**18 59 54.0**	**+0.3**
	baz=347						
SSLB	**Suanglung**	**0.67**	**256**	P	**Pn**	**18 59 43.6**	**-0.9**
	baz=255						
SSLB				*e* S	**Sn**	**18 59 52.8**	**-1.1**
	baz=255						
TWC	**Suao**	**0.68**	**14**	P	**Pn**	**18 59 44.2**	**-0.4**
	baz=15						
TWC				S	**Sn**	**18 59 55.4**	**+1.4**
	baz=15						
DPDB	**Guoxing**	**0.68**	**277**	P	**Pn**	**18 59 44.0**	**-0.7**
	baz=276						
DPDB				*e* S	**Sn**	**18 59 54.5**	**+0.3**
	baz=276						
TWF1	**Yuli**	**0.69**	**210**	*e* P	**Pn**	**18 59 42.3**	**-2.3**
	baz=208						
TWF1				*e* S	**Sn**	**18 59 54.6**	**+0.4**
	baz=208						
ENTT	**Nioudou**	**0.69**	**352**	*i* P	**Pn**	**18 59 43.8**	**-1.0**
	baz=353						
ENTT				*e* S	**Sn**	**18 59 54.6**	**+0.2**
	baz=353						
SMLT	**Sun Moon Lake**	**0.70**	**265**	P	**Pn**	**18 59 44.2**	**-0.8**
	baz=263						
SMLT				*e* S	**Sn**	**18 59 54.7**	**-0.2**
	baz=263						
EOS1	**EOS1**	**0.73**	**35**	P	**Pn**	**18 59 44.8**	**-0.4**
	baz=35						
EOS1				*e* S	**Sb**	**18 59 58.9**	**+3.4**
	baz=35						
WHP	**Taichung City**	**0.74**	**297**	P	**Pn**	**18 59 45.1**	**-0.4**
	baz=295						
WHP				*e* S	**Sn**	**18 59 55.5**	**0.0**
	baz=295						
TYC	**Yuchr**	**0.74**	**267**	*i* P	**Pn**	**18 59 44.7**	**-0.7**
	baz=265						
TYC				*e* S	**Sn**	**18 59 55.5**	**-0.1**
	baz=265						
YHNB	**Yeheng**	**0.77**	**340**	P	**Pn**	**18 59 45.1**	**-0.8**
	baz=339						
YHNB				S	**Sn**	**18 59 56.3**	**0.0**
	baz=339						
TWE	**Neicheng**	**0.77**	**360**	*i* P	**Pn**	**18 59 44.8**	**-1.0**
	baz=1.0						
TWE				*e* S	**Sn**	**18 59 57.1**	**+0.9**
	baz=1.0						
NSK	**Sanguang**	**0.78**	**339**	P	**Pn**	**18 59 45.4**	**-0.6**
	baz=339						
NSK				*e* S	**Sn**	**18 59 56.5**	**0.0**
	baz=339						
YUS	**Yu-Shan**	**0.80**	**235**	P	**Pn**	**18 59 45.6**	**-1.0**
	baz=234						
YUS				S	**Sn**	**18 59 56.6**	**-1.0**
	baz=234						
NWLT	**Wulai**	**0.84**	**350**	*e* P	**Pn**	**18 59 45.7**	**-1.1**
	baz=349						
NWLT				*e* S	**Sn**	**18 59 58.6**	**+0.6**
	baz=349						
WJS	**Zhushan**	**0.87**	**262**	*e* P	**Pn**	**18 59 47.6**	**+0.4**
	baz=261						
WJS				*e* S	**Sn**	**19 00 00.1**	**+1.4**
	baz=261						
CHKT	**Chengkung**	**0.89**	**198**	*e* P	**Pn**	**18 59 46.0**	**-1.5**
	baz=197						
CHKT				*e* S	**Sb**	**19 00 00.9**	**+0.9**
	baz=197						
ALS	**Alishan**	**0.90**	**241**	*i* P	**Pn**	**18 59 47.5**	**-0.4**
	baz=240						
ALS				*e* S	**Sn**	**18 59 59.7**	**-0.3**
	baz=240						
WNT	**Mingjian**	**0.90**	**266**	P	**Pn**	**18 59 47.6**	**0.0**
	baz=264						
WNT				S	**Sn**	**19 00 00.7**	**+1.2**
	baz=264						
TWQ1	**Liyutan**	**0.91**	**296**	*e* P	**Pn**	**18 59 48.0**	**+0.2**
	baz=295						
TWQ1				*e* S	**Sn**	**19 00 01.5**	**+1.8**
	baz=295						
NSTT	**Nanjuang**	**0.91**	**318**	*i* P	**Pn**	**18 59 47.9**	**+0.1**
	baz=318						
NSTT				*e* S	**Sn**	**19 00 01.6**	**+1.9**
	baz=318						
LIOB	**Emei**	**0.91**	**319**	*i* P	**Pn**	**18 59 47.9**	**+0.1**
	baz=319						
LIOB				*e* S	**Sn**	**19 00 00.1**	**+0.3**
	baz=319						
NTC	**Toucheng**	**0.91**	**9**	P	**Pn**	**18 59 47.8**	**0.0**
	baz=9.0						
NTC				S	**Sn**	**19 00 01.4**	**+1.7**
	baz=9.0						
TCU	**Taichung**	**0.93**	**282**	*i* P	**Pn**	**18 59 48.6**	**+0.6**
	baz=281						
TCU				*i* S	**Sn**	**19 00 01.7**	**+1.6**
	baz=281						

ELDTW	Lidau	0.96	218	eP	Pn	18 59 46.6	-2.0
	baz=217						
ELDTW				eS	Sn	19 00 00.4	-0.8
	baz=217						
CHN5	Tsauling	0.97	249	eP	Pn	18 59 48.8	+0.1
	baz=248						
CHN5				S	Sn	19 00 02.5	+1.1
	baz=248						
WLTB	Daxi	0.97	337	eS	Sn	19 00 02.3	+0.9
	baz=337						
NHDH	Xindian Distri	1.02	353	eS	Sn	19 00 04.0	+1.7
	baz=352						
WCHH	Zhanghua	1.02	277	S	Sn	19 00 04.0	+1.5
	baz=276						
TIPB	Shuangxi	1.03	8	P	Pn	18 59 49.4	0.0
	baz=8.0						
TIPB				eS	Sn	19 00 04.7	+2.0
	baz=8.0						
WGK	Gukeng	1.05	256	eS	Sn	19 00 04.4	+1.3
	baz=254						
WDLH	Douliu	1.07	256	eP	Pn	18 59 49.8	-0.1
	baz=255						
WDLH				S	Sn	19 00 04.6	+1.1
	baz=255						
TWB1	Santiao Chiao	1.09	15	P	Pn	18 59 50.8	+0.5
	baz=16						
TWB1				S	Sn	19 00 06.2	+1.9
	baz=16						
NWF	Wu-fen Shan	1.12	5	eP	Pn	18 59 50.9	+0.1
	baz=5.0						
NWF				eS	Sb	19 00 07.8	+1.1
	baz=5.0						
WFSB	Wu-fen Shan	1.12	5	P	Pn	18 59 50.7	0.0
	baz=5.0						
WFSB				eS	Sn	19 00 06.9	+1.9
	baz=5.0						
STYT	Tauyuan	1.15	227	P	Pn	18 59 50.8	-0.2
	baz=226						
STYT				eS	Sn	19 00 06.8	+1.2
	baz=226						
TPUB	Ta-pu	1.15	236	P	Pn	18 59 51.2	+0.1
	baz=235						
TPUB				S	Sn	19 00 06.4	+0.7
	baz=235						
CHN4	Tsaushan	1.15	239	i P	Pn	18 59 51.3	+0.2
	baz=238						
CHN4				S	Sn	19 00 07.0	+1.3
	baz=238						
WTP	Ta-pu	1.19	234	P	Pn	18 59 51.5	-0.2
	baz=233						
WTP				S	Sn	19 00 07.8	+1.0
	baz=233						
YM01	YM01	1.20	356	eP	Pn	18 59 51.9	+0.2
	baz=355						
RLNB	Erlin	1.20	267	eP	Pn	18 59 52.4	+0.7
	baz=266						
RLNB				S	Sn	19 00 08.2	+1.4
	baz=266						
YM04	YM04	1.21	354	eP	Pn	18 59 51.8	-0.1
	baz=354						
YM04				eS	Sn	19 00 08.7	+1.6
	baz=354						
YM10	YM10	1.21	355	P	Pn	18 59 51.8	-0.1
	baz=355						
YM10				eS	Sn	19 00 08.2	+1.1
	baz=355						
YM05	YM05	1.21	356	P	Pn	18 59 51.8	-0.2
	baz=355						
YM05				eS	Sn	19 00 07.5	+0.2
	baz=355						
YM11	YM11	1.21	356	eP	Pn	18 59 51.7	-0.3
	baz=356						
YM11				eS	Sn	19 00 08.4	+1.1
	baz=356						
YM07	YM07	1.22	358	P	Pn	18 59 52.4	+0.3
	baz=358						
YM07				eS	Sn	19 00 08.7	+1.2
	baz=358						
CHY	Chiayi	1.23	249	eS	Sn	19 00 09.5	+2.0
	baz=247						
YM03	YM03	1.23	355	eS	Sn	19 00 09.7	+2.0
	baz=354						
YM08	YM08	1.23	357	eS	Sn	19 00 08.6	+0.8
	baz=356						
TWGBT	Beinan	1.25	206	eP	Pn	18 59 51.5	-0.9
	baz=205						
TWGBT				eS	Sn	19 00 09.3	+1.2
	baz=205						
TWG	Pinlang	1.25	206	eP	Pn	18 59 52.2	-0.3
	baz=205						
TWG				eS	Sn	19 00 09.3	+1.1
	baz=205						
JYNG	Yonagunijimaku	1.27	67	P	Pn	18 59 51.9	-0.8
JYNG				S	Sn	19 00 07.8	-0.8
TWK	Hsinying	1.28	238	i P	Pn	18 59 52.9	0.0
	baz=237						
TWK				S	Sn	19 00 09.9	+1.0
	baz=237						
CHN1	Nanshi	1.29	234	eP	Pn	18 59 53.8	+0.8
	baz=233						
CHN1				S	Sn	19 00 10.3	+1.1
	baz=233						
SNST	Tainan City	1.30	236	P	Pn	18 59 53.3	+0.3
	baz=235						
SNST				eS	Sn	19 00 10.4	+1.2
	baz=235						
SGST	Jiashian	1.32	229	P	Pn	18 59 53.5	+0.1
	baz=228						
SGST				S	Sn	19 00 11.4	+1.5
	baz=228						
YOJ	Yonaguni jima	1.33	67	P	Pn	18 59 51.6	-1.9
YOJ				eS	Sn	19 00 08.4	-1.6
SLGT	Liugui	1.34	225	P	Pn	18 59 54.0	+0.3
	baz=224						
SLGT				S	Sn	19 00 11.8	+1.6
	baz=224						
WLGB	Puzi	1.34	250	eS	Sn	19 00 11.3	+1.0
	baz=249						
WSF	Szhu	1.36	257	eS	Sn	19 00 12.6	+1.8
	baz=256						
CHN8	Yiju	1.46	246	eS	Sn	19 00 14.7	+1.3
	baz=245						
ECL	Taimali	1.50	206	eP	Pn	18 59 56.4	+0.6
	baz=205						
ECL				eS	Sn	19 00 14.5	+0.3
	baz=205						
SSD	Sandimen	1.53	219	P	Pn	18 59 56.4	+0.1
	baz=217						
SSD				eS	Sn	19 00 16.2	+1.2
	baz=217						
MASBT	Mashibuluo	1.64	216	P	Pn	18 59 57.2	-0.6
	baz=215						
MASBT				eS	Sn	19 00 18.9	+1.2
	baz=215						
EAST	Anshuo	1.73	206	eP	Pn	18 59 59.6	+0.5
	baz=205						
EAST				eS	Sn	19 00 20.5	+0.5
	baz=205						
SSPT	Xinbi	1.77	215	eP	Pn	19 00 00.6	+0.9
	baz=214						
IRIF	Iriomote-Funau	1.92	78	P	Pn	19 00 00.2	-1.5
IRIF				eS	Sn	19 00 24.4	-0.3
WDGT	Dungji	1.96	250	eP	Pn	19 00 01.5	-0.7
	baz=249						
WDGT				eS	Sn	19 00 24.6	-1.1
	baz=249						
PHUB	P'eng-hu	1.97	258	P	Pn	19 00 02.1	-0.2
	baz=257						
PHUB				S	Sn	19 00 25.1	-0.7
	baz=257						
PNG	Penghu	1.97	259	P	Pn	19 00 01.4	-0.9
	baz=258						
PNG				eS	Sn	19 00 25.8	-0.1
	baz=258						
JKRS	Kuro-shima	2.16	82	S	Sn	19 00 30.1	-0.5
VCHM	Qimei	2.18	251	eS	Sn	19 00 30.9	-0.2
	baz=250						
VWUC	VWUC	2.27	298	eP	Pn	19 00 05.2	-1.3
	baz=297						
VWUC				eS	Sn	19 00 31.0	-2.4
	baz=297						
JIJ	Ishigaki jima	2.30	79	P	Pn	19 00 06.2	-0.7
JIJ				eS	Sn	19 00 32.9	-1.1
PTTC	Pingtan	2.31	312	eP	Pn	19 00 05.5	-1.6
	baz=311						
PTTC				eS	Sn	19 00 32.4	-2.0
	baz=311						
JISG	Ishigakijimahi	2.50	75	P	Pn	19 00 08.5	-1.1
JISG				eS	Sn	19 00 37.7	-1.1
PTMZ	Houxiangcun	2.56	296	eP	Pn	19 00 09.2	-1.3
	baz=294						
PTMZ				eS	Sn	19 00 37.4	-3.1
	baz=294						
MATB	Ma-tsu	2.69	325	eP	Pn	19 00 11.2	-1.1
	baz=324						
MATB				eS	Sn	19 00 41.9	-1.8
	baz=324						
JTJ	Tarama	2.85	75	P	Pn	19 00 13.6	-0.9
JTJ				S	Sn	19 00 46.6	-1.1
KNMB	Chin-men Tao	3.04	280	eP	Pn	19 00 16.1	-1.0
	baz=279						
KNMB				eS	Sn	19 00 49.2	-3.1
	baz=279						
MHZQ	Yeshan	3.21	312	eS	Sn	19 00 53.5	-3.0
	baz=311						

*KRNET **04** 19:03:01.0±0.1, 43°.13N×78°.42E, h17km, mb2.4*
*NNC **04** 19:03:01.0±0.3, 43°.16N×78°.45E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=3.2km s-min=1.7km az=178.0*
*SOME **04** 19:03:01.6, 43°.13N×78°.43E, h5km*

ISC 04 19:03:01.2±0.9, 43°.14N±0°.02×78°.43E±0°.02, h5km±7km, n41, σ0°60/79, 14C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SATY	Saty	0.08	192	P	Pg	Pg	19 03 03.3	+0.1
SATY				S	Sg	Sg	19 03 04.6	+0.1
SATY	Saty	0.08	192	eP	Pg	Pg	19 03 03.3	+0.1
	302nm,0.1s							
SATY				eS	Sg	Sg	19 03 04.4	-0.1
	2μm,0.1s							
KPKS	Kokpek	0.37	30	eP	Pg	Pg	19 03 08.6	+0.1
	baz=31							
KPKS				eS	Sg	Sg	19 03 14.0	+0.5
	baz=31							
KPKS	Kokpek	0.37	30	eP	Pg	Pg	19 03 08.6	+0.1
	16nm,0.1s							
KPKS				eS	Sg	Sg	19 03 14.0	+0.5
	30nm,0.1s							
KURS	Kuram	0.40	331	P	Pg	Pg	19 03 08.8	-0.1
	3.8nm,0.1s							
KURS				S	Sg	Sg	19 03 14.2	+0.1
	9.2nm,0.2s							
KURS	Kuram	0.40	331	eP	Pg	Pg	19 03 08.8	-0.1
	baz=33							
KURS				eS	Sg	Sg	19 03 14.2	+0.1
	baz=33							
KURS	Kuram	0.40	331	eP	Pg	Pg	19 03 08.8	-0.1
	3.8nm,0.1s							
KURS				eS	Sg	Sg	19 03 14.2	+0.1
	9.2nm,0.2s							
UZB	Uzynbulak	0.43	89	P	Pg	Pg	19 03 09.8	+0.1
	2.8nm,0.1s							
UZB				S	Sg	Sg	19 03 15.6	+0.2
	38nm,0.1s							
UZB	Uzynbulak	0.43	89	eP	Pg	Pg	19 03 09.8	+0.1
	baz=87							
UZB				eS	Sg	Sg	19 03 15.6	+0.2
	baz=87							
UZB	Uzynbulak	0.43	89	eP	Pg	Pg	19 03 09.8	+0.1
	2.8nm,0.1s							
UZB				eS	Sg	Sg	19 03 15.6	+0.2
	38nm,0.1s							
PDGK	Podgornoye	0.80	76	P	Pg	Pg	19 03 16.6	0.0
	0.4nm,0.1s							
PDGK				S	Sg	Sg	19 03 27.1	+0.2
	2.0nm,0.2s							
PDGK	Podgornoye	0.80	76	⇑P	Pg	Pg	19 03 16.2	-0.4
	0.7nm,0.4s							
PDGK				⇑S	Sg	Sg	19 03 26.6	-0.3
	1.1nm,0.3s							
PDGK	Podgornoye	0.80	76	⇓iP	Pg	Pg	19 03 16.1	-0.4
	baz=75							
PDGK				⇓iS	Sg	Sg	19 03 26.8	-0.1
	baz=75							
KOTS	Kotyrbulak	0.97	276	P	Pg	Pg	19 03 19.6	-0.2
	1.0nm,0.1s							
KOTS				S	Sg	Sg	19 03 32.6	+0.2
	4.7nm,0.4s							
KOTS	Kotyrbulak	0.97	276	eP	Pg	Pg	19 03 19.6	-0.2
	baz=76							
KOTS				eS	Sg	Sg	19 03 32.6	+0.2
	baz=76							
KOTS	Kotyrbulak	0.97	276	eP	Pg	Pg	19 03 19.6	-0.2
	1.0nm,0.1s							
KOTS				eS	Sg	Sg	19 03 32.6	+0.2
	4.7nm,0.4s							
TNSS	Tian-Shan	1.09	265	eP	Pg	Pg	19 03 21.7	-0.5
	baz=66							
TNSS				eS	Sg	Sg	19 03 36.1	-0.2
	baz=66							
TNSS	Tian-Shan	1.09	265	eP	Pg	Pg	19 03 21.7	-0.5
	0.8nm,0.1s							
TNSS				eS	Sg	Sg	19 03 36.1	-0.2
	1.5nm,0.1s							
ARXS	Arharly	1.16	338	P	Pg	Pg	19 03 22.6	-0.8
	1.3nm,0.1s							
ARXS				S	Sg	Sg	19 03 37.8	-0.7
	4.1nm,0.2s							
ARXS	Arharly	1.16	338	eP	Pg	Pg	19 03 22.6	-0.8
	1.3nm,0.1s							
ARXS				eS	Sg	Sg	19 03 37.8	-0.7
	4.1nm,0.2s							
CHKK	Chushkaly	1.27	305	eP	Pg	Pg	19 03 24.7	-0.9
	baz=6.0							
CHKK				eS	Sg	Sg	19 03 41.3	-0.7
	baz=6.0							
CHKK	Chushkaly	1.27	305	eP	Pg	Pg	19 03 24.7	-0.9
	1.6nm,0.1s							
CHKK				eS	Sg	Sg	19 03 41.2	-0.7
	7.9nm,0.2s							
KTBS	Karatobe	1.40	295	P	Pg	Pg	19 03 28.3	+0.3
	2.1nm,0.2s							
KTBS				S	Sn	Sn	19 03 47.6	+1.4
	16nm,0.2s							
KTBS	Karatobe	1.40	295	eP	Pg	Pg	19 03 28.3	+0.3
	baz=94							
KTBS				eS	Sn	Sn	19 03 47.6	+1.4
	baz=94							
KTBS	Karatobe	1.40	295	eP	Pg	Pg	19 03 28.3	+0.3
	2.1nm,0.2s							
KTBS				eS	Sn	Sn	19 03 47.6	+1.4
	16nm,0.2s							
KTMS	Ketmen	1.44	77	P	Pn	Pn	19 03 27.5	-0.6
KTMS				S	Sb	Sb	19 03 46.5	-0.7
KTMS	Ketmen	1.44	77	eP	Pn	Pn	19 03 27.5	-0.6
KTMS				eS	Sb	Sb	19 03 46.5	-0.7
TARG	Taragay, Kyrgy	1.48	198	⇑iP	Pn	Pn	19 03 28.3	-0.7
	baz=98							
TARG				⇑iS	Sb	Sb	19 03 47.7	-1.1
	baz=98							
DJR	Jarkent	1.55	39	P	Pb	Pb	19 03 30.1	-0.3
	3.9nm,0.1s							
DJR				S	Sb	Sb	19 03 50.4	+0.1
	8.5nm,0.2s							
DJR	Jarkent	1.55	39	eP	Pb	Pb	19 03 30.1	-0.3
	3.9nm,0.1s							
DJR				eS	Sb	Sb	19 03 50.4	+0.1
	8.5nm,0.2s							
ULHL	Ulahol	1.84	242	⇑eP	Pb	Pb	19 03 34.7	-0.9
	baz=42							
ULHL				⇑iS	Sb	Sb	19 03 58.5	-0.5
	baz=42							
BOOM	Boomskoye usch	1.94	251	⇑eP	Pb	Pb	19 03 36.3	-0.9
	baz=52							
BOOM				⇑iS	Sb	Sb	19 04 01.1	-0.7
	baz=52							
DGS	Degeres	1.95	274	Pg	Pb	Pb	19 03 37.6	+0.4
	1.1nm,0.3s							
DGS				Lg	Lg	Lg	19 04 03.3	
	4.1nm,0.3s							
DGS	Degeres	1.95	274	eP	Pb	Pb	19 03 37.6	+0.4
	baz=74							
DGS				eS	Sg	Sg	19 04 03.3	-0.4
	baz=74							
DGS	Degeres	1.95	274	eP	Pb	Pb	19 03 37.6	+0.4
	1.1nm,0.3s							
DGS				eS	Sg	Sg	19 04 03.3	-0.4
	4.1nm,0.3s							
TKM2	Tokmak 2	2.09	265	⇑Pg	Pb	Pb	19 03 39.6	-0.1
	0.8nm,0.7s							
TKM2				⇑Lg	Lg	Lg	19 04 07.5	
	1.7nm,0.5s							
TKM2	Tokmak 2	2.09	265	⇑eP	Pn	Pn	19 03 38.2	+1.1
	baz=65							
TKM2				⇑iS	Sb	Sb	19 04 05.1	-0.9
	baz=65							
KAPS	Kapalarasan	2.25	17	Pg	Pb	Pb	19 03 42.6	+0.3
	0.4nm,0.0s							
KAPS				Lg	Lg	Lg	19 04 12.0	
	5.4nm,0.2s							
KAPS	Kapalarasan	2.25	17	eP	Pb	Pb	19 03 42.6	+0.3
	0.4nm,0.0s							
KAPS				eS	Sg	Sg	19 04 12.0	-1.3
	5.4nm,0.2s							
NRN	Naryn	2.48	227	⇑eP	Pn	Pn	19 03 43.5	+0.9
	baz=28							
NRN				⇑iS	Sn	Sn	19 04 14.1	+0.7
	baz=28							
KZA	Kyzart	2.58	247	⇓iP	Pn	Pn	19 03 45.1	+1.1
	baz=47							
KZA				⇓iS	Sn	Sn	19 04 16.5	+0.6
	baz=47							

MEX 04 19:23:08.4±1.0, 18°.63N×104°.16W, h2km, MD3.7, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.84	114	iP	Pg	Pg	19 23 22.9	-1.7
MMIG				iS	Sg	Sg	19 23 34.8	-0.6
EZ5V		0.99	32	iP	Pg	Pg	19 23 26.0	-1.4
EZ5V				eS	Sg	Sg	19 23 39.3	-1.1
ARIG	Puente Sto Nin	3.63	95	eP	Pn	Pn	19 24 06.8	+1.1

*ISCJB **04** 19:24:11.0±0.5, 36°.02N±0°.03×139°.83E±0°.06, h91km±3km, mb4.0/9, Error ellipse: s-maj=8.3km s-min=5.5km az=14.4*
*JMA **04** 19:24:12.7±0.1, 36°.04N×139°.80E, h78km±1km, M3.4 Broadband fault plane solution: P waves. NP1: φs2.00000°, δ61.00000°, λ82.00000°. NP2:φs198.00000°, δ30.00000°, λ103.00000°. Principal axes: T Plg73.0000°, Azm254.0000°; N Plg7.0000°, Azm6.0000°; P Plg16.0000°, Azm98.0000°;*
JMA Felt II J1.
*IDC **04** 19:24:12.3±1.6, 36°.07N×139°.88E, h90km±13km, mb3.3/7, mb1 3.4/10, mb1mx3.2/46, mbtmp3.7/10, MS2.8/2, Ms1 2.8/2, ms1mx2.4/37 Error ellipse: s-maj=23.8km s-min=8.1km az=65.0*

ISC 04 19:24:12.0±0.8, 36°.03N±0°.04×139°.82E±0°.06, h84km±6km, n25, σ0°85/37, mb3.7/9, 4C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.36	57	⇑P	Pn	Pn	19 24 25.4	+0.4
JYT				S	Sn	Sn	19 24 35.0	+0.2
JAG	Ashikaga	0.49	323	⇑P	Pn	Pn	19 24 26.3	+0.3
JAG				S	Sn	Sn	19 24 36.2	-0.3
JRY	Ryogami san	0.74	269	⇓P	Pn	Pn	19 24 28.9	+0.5
JRY				S	Sn	Sn	19 24 40.9	+0.2
JKT	Katashina	0.87	328	⇓P	Pn	Pn	19 24 30.0	+0.2
JKT				S	Sn	Sn	19 24 43.2	0.0
JOD2	Odawara 2	0.97	218	⇓P	Pn	Pn	19 24 30.8	-0.1
JOD2				S	Sn	Sn	19 24 44.1	-1.0
JYN	Shimob	1.16	243	⇓P	Pn	Pn	19 24 33.6	+0.3
JYN				S	Sn	Sn	19 24 49.0	-0.3
JFNN	Fujinakano	1.24	228	P	Pn	Pn	19 24 34.5	+0.3
JFNN				S	Sn	Sn	19 24 50.7	-0.2
JHK	Hiroka	1.38	332	⇓P	Pn	Pn	19 24 36.2	+0.3
JHK				S	Sn	Sn	19 24 54.5	+0.6
JFY	Yanaizu	1.38	356	⇑P	Pn	Pn	19 24 36.5	+0.6
JFY				S	Sn	Sn	19 24 54.8	+0.9
MJAR	Matsushiro Arr	1.40	292	P	Pn	Pn	19 24 35.9	-0.2
	6.7nm,0.3s,baz=106,slow=18,SNR=437							
MJAR				S	Sn	Sn	19 24 55.1	+0.7
	4.7nm,0.3s,baz=131,slow=15,SNR=10							
MAT	Matsushiro	1.40	292	P	Pn	Pn	19 24 36.6	+0.4
MAT				S	Sn	Sn	19 24 55.5	+1.1
MAT	Matsushiro	1.40	292	P	Pn	Pn	19 24 36.6	+0.4
JFT	Otama	1.54	15	⇑P	Pn	Pn	19 24 39.0	+1.0
JHJ	Hachijo jima 2	2.90	181	P	Pn	Pn	19 24 56.7	+0.6
	64nm,0.3s,baz=328,slow=21,SNR=42							
JHJ				S	Sn	Sn	19 25 32.7	+2.7
	83nm,0.3s,baz=245,slow=20,SNR=7.8							
JNU	Nakatsue	7.92	251	P	Pn	Pn	19 26 05.4	+0.9
	0.5nm,0.3s,baz=339,slow=2.6,SNR=4.8							
JNU				LR	LR	LR	19 29 07.9	
	comp=Z,49nm,18.6s,baz=200,slow=37							
KSRS	Korea Array	9.65	282	P	Pn	Pn	19 26 30.6	+2.7
	0.2nm,0.3s,baz=94,slow=15,SNR=6.0							
KSRS				LR	LR	LR	19 30 19.7	
	comp=Z,56nm,19.1s,baz=251,slow=38							
TIXI	Tiksi	36.14	354	P	P	P	19 31 05.1	-0.5
	0.3nm,0.3s,baz=115,slow=5.2,SNR=1.1							
CMAR	Chiang Mai Arr	40.00	255	P	P	P	19 31 38.6	-0.1
	0.2nm,0.6s,baz=62,slow=6.7,SNR=3.6							
ZALV	Zalesovo Beam	41.65	313	P	P	P	19 31 51.8	0.0
	1.3nm,0.5s,baz=86,slow=6.4,SNR=5.4							
MKAR	Makanchi Array	43.57	303	P	P	P	19 32 07.4	-0.1
	0.6nm,0.6s,baz=85,slow=8.6,SNR=4.7							
WRA	Warramunga Arr	55.91	186	P	P	P	19 33 40.6	-0.6
	121nm,0.3s,baz=358,slow=8.7,SNR=1.2							
ASAR	Alice Springs	59.63	186	P	P	P	19 34 07.1	-0.1
	0.3nm,0.6s,baz=21,slow=11,SNR=11							
ARCES	ARCESS Array B	64.48	339	P	P	P	19 34 39.1	-0.1
	5.9nm,0.3s,baz=61,slow=8.4,SNR=3.1							
FINES	FINESS Array B	69.10	332	P	P	P	19 35 08.1	-0.5
	1.2nm,0.8s,baz=72,slow=13,SNR=4.0							
NVAR	Mina Array Bea	76.62	52	P	P	P	19 35 52.9	-0.8
	0.1nm,0.4s,baz=302,slow=5.2,SNR=2.0							

*ISCJB **04** 19:38:04.4±2.0, 27°.7S±0°.1×179°.7W±0°.4, h400km, mb3.6/3, Error ellipse: s-maj=45.7km s-min=13.7km az=179.1*
*IDC **04** 19:38:05.8±3.3, 27°.69S×179°.60W, h409km±32km, mb3.3/3, mb1 3.5/4, mb1mx3.1/27, mbtmp4.2/4, Error ellipse: s-maj=35.6km s-min=31.3km az=132.0*

ISC 04 19:38:05.9±1.5, 27°.7S±0°.1×179°.8W±0°.3, h400km, n6, σ1°24/8, mb3.6/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URZ	Urewera	10.83	193	P	Pn	Pn	19 40 33.6	+0.2
	2.3nm,0.3s,baz=0.0,slow=11,SNR=18							
URZ				S	S	S	19 42 33.0	-0.4
	1.3nm,0.3s,baz=251,slow=20,SNR=9.1							
ASAR	Alice Springs	41.75	265	P	P	P	19 45 18.7	+0.4
	0.9nm,0.4s,baz=90,slow=7.4,SNR=24							
ASAR				ScP	ScP	ScP	19 50 15.9	-1.5
	0.3nm,0.8s,baz=121,slow=4.7,SNR=4.1							
WRA	Warramunga Arr	42.49	270	P	P	P	19 45 24.1	0.0
	1.0nm,0.3s,baz=104,slow=9.0,SNR=19							
PETK	Petropavlovsk-	82.85	347	P	P	P	19 49 46.0	-0.4
	0.7nm,0.5s,baz=116,slow=6.6,SNR=3.2							
NOA	NORSAR Array B	145.87	350	PKPbc	PKPdf	PKPdf	19 56 56.3	-0.9
	1.0nm,0.8s,baz=16,slow=4.8,SNR=3.1							
AKASG	Malin Array Be	148.23	324	PKPbc	PKPdf	PKPdf	19 57 03.4	+2.0
	3.2nm,0.8s,baz=46,slow=4.1,SNR=5.9							

MEX 04 19:43:44.4±0.5, 15°.77N×93°.64W, h92km±5km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PCIG		0.41	99	eP	Pn	Pn	19 43 57.1	-1.6
PCIG				iS	Sn	Sn	19 44 07.7	-1.6
TGIG		1.12	26	eP	Pn	Pn	19 44 04.6	-1.1
TGIG				iS	Sn	Sn	19 44 19.8	-1.9
CCIG	Comitan	1.53	70	eP	Pn	Pn	19 44 09.7	-1.2
CCIG				eS	Sn	Sn	19 44 28.6	-2.3
THIG		1.58	123	eP	Pn	Pn	19 44 09.8	-1.5
THIG				iS	Sn	Sn	19 44 30.5	-1.1
CMIG	Matias Romero	1.77	318	eP	Pn	Pn	19 44 12.7	-1.1
CMIG				iS	Sn	Sn	19 44 34.2	-1.8

*ISCJB **04** 19:46:39.1±0.4, 33°.21N±0°.02×115°.56W±0°.02, h7km±3km, Error ellipse: s-maj=3.1km s-min=2.3km az=175.3*
*ANF **04** 19:46:39.8±0.1, 33°.23N×115°.57W, h15km, ML3.7/29, Error ellipse: s-maj=1.4km s-min=1.1km az=132.0*
*PAS **04** 19:46:40.7, 33°.21N×115°.56W, h2km, ML3.6*
*SCEDC **04** 19:46:40.7, 33°.21N×115°.56W, h2km*
*NEIC **04** 19:46:40.7±0.0, 33°.21N×115°.56W, h2km, ML3.6(PAS), After PAS.*

ISC 04 19:46:40.7±1.0, 33°.19N±0°.02×115°.57W±0°.02, h12km±9km, n101, σ1°.38/121, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWSC	**Sam W. Stewart** baz=38,SNR=418	**0.31**	**218**	P	**Pg**	**19 46 47.4**	**+0.4**
SWSC	baz=38			S	**Sg**	**19 46 51.9**	**+0.7**
BC3	**Big Chuckawall** baz=191,SNR=930	**0.47**	**12**	P	**Pg**	**19 46 49.6**	**-0.4**
BC3	baz=191			S	**Sg**	**19 46 55.8**	**-0.6**
GLA	**Glamis**	**0.64**	**102**	*e*Pg	**Pg**	**19 46 52.5**	**-0.6**
GLA				*e*Sg	**Sg**	**19 47 01.3**	**-0.3**
GLA	**Glamis** baz=285,SNR=438	**0.64**	**102**	P	**Pg**	**19 46 52.5**	**-0.6**
GLA	baz=285			S	**Sg**	**19 47 01.1**	**-0.5**
IKP	**In-Ko-Pah, Jac** baz=40,SNR=140	**0.70**	**220**	P	**Pg**	**19 46 54.4**	**0.0**
IKP	baz=40			S	**Sg**	**19 47 03.7**	**+0.1**
MONP2	**Monument Peak** baz=66,SNR=279	**0.78**	**248**	P	**Pg**	**19 46 55.4**	**-0.3**
MONP2	baz=66			S	**Sg**	**19 47 06.6**	**+0.7**
PFO	**Pinyon Flats O**	**0.85**	**300**	*e*Pg	**Pg**	**19 46 56.1**	**-1.1**
PFO				*e*Sg	**Sg**	**19 47 07.9**	**-0.5**
PFO	**Pinyon Flats O** baz=118,SNR=240	**0.85**	**300**	P	**Pg**	**19 46 56.2**	**-0.9**
PFO	baz=118			S	**Sg**	**19 47 08.0**	**-0.3**
BELC	**Belle Mtn. Jos** baz=155,SNR=304	**0.88**	**336**	P	**Pg**	**19 46 56.9**	**-0.9**
BELC	baz=155			S	**Sg**	**19 47 08.3**	**-1.1**
IRM	**Iron Mountain** baz=200,SNR=974	**1.03**	**20**	P	**Pg**	**19 46 59.3**	**-1.2**
IRM	baz=200			S	**Sg**	**19 47 12.8**	**-1.1**
Y12C	**Blythe**	**1.04**	**57**	*e*Pg	**Pg**	**19 46 59.0**	**-1.7**
Y12C				*e*Sg	**Sg**	**19 47 13.7**	**-0.5**
Y12C	**Blythe** baz=238,SNR=455	**1.04**	**57**	P	**Pg**	**19 46 59.1**	**-1.5**
Y12C	baz=238			S	**Sg**	**19 47 13.1**	**-1.1**
BAR	**Barrett**	**1.06**	**241**	*e*Pg	**Pg**	**19 46 59.6**	**-1.4**
109C	**Camp Elliot, M** baz=76,SNR=19	**1.32**	**257**	P	**Pg**	**19 47 03.6**	**-2.5**
109C	baz=76			S	**Sg**	**19 47 20.7**	**-2.6**
CPE	**Camp Elliot**	**1.32**	**257**	*e*Pg	**Pg**	**19 47 03.7**	**-2.4**
MURC	**Murrieta** baz=106,SNR=31	**1.42**	**287**	P	**Pn**	**19 47 04.9**	**-1.5**
MURC	baz=106			S	**Sg**	**19 47 23.3**	**-3.1**
BBRC	**Big Bear Solar** baz=132	**1.55**	**314**	Sg	**Sg**	**19 47 30.5**	**-0.1**
113A	**Mohawk Valley,**	**1.57**	**105**	*e*Pn	**Pn**	**19 47 06.6**	**-1.8**
GMRC	**Granite Mounta** baz=177,SNR=249	**1.59**	**357**	P	**Pn**	**19 47 07.1**	**-1.7**
GMRC	baz=177			Sg	**Sg**	**19 47 32.0**	**+0.1**
PDMCI	**Parker Dam,Lak** baz=227,SNR=118	**1.63**	**47**	P	**Pn**	**19 47 07.7**	**-1.4**
PDMCI	baz=227			Sb	**Sn**	**19 47 30.6**	**+0.6**
HEC	**Hector,Ludlow** baz=158,SNR=113	**1.75**	**339**	P	**Pn**	**19 47 09.0**	**-2.0**
HEC	baz=158			Sg	**Sg**	**19 47 37.3**	**+0.2**
NEE2	**Needles Airpor** baz=207	**1.76**	**26**	Pg	**Pb**	**19 47 13.5**	**+0.6**
LDFC	**Landfair**	**1.92**	**11**	*e*Pn	**Pn**	**19 47 14.3**	**+1.0**
BFSC	**Mount Baldy Ra** baz=120,SNR=21	**2.03**	**302**	P	**Pn**	**19 47 13.2**	**-1.6**
BFSC	baz=120			S	**Sn**	**19 47 38.9**	**-1.3**
RRX	**Edison Barstow** baz=144	**2.06**	**325**	S	**Sn**	**19 47 39.8**	**-0.8**
TUQ	**Turquoise Moun** baz=172,SNR=63	**2.26**	**353**	Pg	**Pb**	**19 47 22.5**	**+1.1**
TUQ	baz=172			S	**Sn**	**19 47 43.8**	**-2.1**
Y14A	**Wickenburg**	**2.27**	**70**	*e*Pn	**Pn**	**19 47 17.3**	**-0.7**
MWC	**Mount Wilson**	**2.31**	**297**	*e*Pn	**Pn**	**19 47 20.1**	**+1.3**
GSC	**Goldstone, Bar**	**2.34**	**334**	*e*Pn	**Pn**	**19 47 19.8**	**+0.8**
GSC	**Goldstone, Bar** baz=153,SNR=61	**2.34**	**334**	Pg	**Pb**	**19 47 24.4**	**+1.6**
GSC	baz=153			Sg	**Sg**	**19 47 56.6**	**+0.6**
W13A	**Hualapai Mount**	**2.36**	**36**	*e*Pn	**Pn**	**19 47 20.1**	**+0.7**
PASC	**Pasadena Art C**	**2.39**	**295**	*e*Pn	**Pn**	**19 47 19.1**	**-0.5**
EDW2	**Edwards Air Fo** baz=129,SNR=38	**2.62**	**311**	Pg	**Pb**	**19 47 29.6**	**+2.0**
EDW2	baz=129			Sb	**Sb**	**19 48 01.3**	**+1.4**
214A	**Organ Pipe Nat** baz=299	**2.63**	**117**	P	**Pn**	**19 47 21.5**	**-1.5**
SHOC	**Shoshone, Teco** baz=167,SNR=84	**2.76**	**348**	Pg	**Pb**	**19 47 31.9**	**+1.9**
LRMC	**Laurel Mtn Rad** baz=142	**2.88**	**323**	Sg	**Sg**	**19 48 13.4**	**+0.4**
OSI	**Osito Audit: C**	**2.98**	**299**	*e*Pn	**Pn**	**19 47 27.9**	**+0.1**
MPMC	**Manual Prospec** baz=150,SNR=12	**3.27**	**332**	P	**Pn**	**19 47 30.2**	**-1.6**
SHPR	**Sheep Range**	**3.32**	**6**	*e*Pn	**Pn**	**19 47 33.4**	**+0.7**
DAC	**Darwin (Calif)**	**3.50**	**332**	*e*Pn	**Pn**	**19 47 35.5**	**+0.4**
X16A	**Lo Mia Camp, P**	**3.65**	**69**	*e*Pn	**Pn**	**19 47 37.4**	**+0.3**
TPNV	**Topopah Spring**	**3.79**	**352**	*e*Pn	**Pn**	**19 47 39.6**	**+0.5**
TPNV	**Topopah Spring** baz=171	**3.79**	**352**	Pg	**Pg**	**19 47 52.0**	**-1.2**
TUC	**Tucson**	**4.13**	**101**	*e*Pn	**Pn**	**19 47 43.5**	**-0.1**
TUC	**Tucson** baz=284	**4.13**	**101**	P	**Pn**	**19 47 42.2**	**-1.4**
WUAZ	**Wupatki**	**4.17**	**55**	*e*Pn	**Pn**	**19 47 45.0**	**+0.6**
WUAZ	**Wupatki** baz=237	**4.17**	**55**	P	**Pn**	**19 47 42.8**	**-1.6**
U15A	**North Rim**	**4.21**	**39**	*e*Pn	**Pn**	**19 47 45.5**	**+0.6**
LCMT	**Little Creek M**	**4.26**	**26**	*e*Pn	**Pn**	**19 47 46.0**	**+0.5**
KNB	**Kanab**	**4.43**	**30**	*e*Pn	**Pn**	**19 47 48.6**	**+0.7**
PAGB	**Antelope Grade**	**4.62**	**305**	*e*Pn	**Pn**	**19 47 52.5**	**+2.1**
CCUT	**Cedar City**	**4.71**	**22**	*e*Pn	**Pn**	**19 47 52.3**	**+0.6**
SZCU	**Shurtz Canyon**	**4.84**	**24**	*e*Pn	**Pn**	**19 47 54.5**	**+1.0**
X18A	**Snowflake**	**4.86**	**73**	*e*Pn	**Pn**	**19 47 54.3**	**+0.5**
PKCU	**Pink Cliffs**	**5.01**	**31**	*e*Pn	**Pn**	**19 47 56.4**	**+0.5**
R11A	**Troy Canyon, C**	**5.15**	**360**	*e*Pn	**Pn**	**19 47 58.9**	**+1.2**
R11A	**Troy Canyon, C** baz=180	**5.15**	**360**	Pg	**Pg**	**19 48 17.4**	**-1.9**
W18A	**Petrified Fore**	**5.21**	**67**	*e*Pn	**Pn**	**19 47 59.5**	**+1.0**
OMMB	**Old Mammoth Mi**	**5.23**	**329**	*e*Pn	**Pn**	**19 47 59.6**	**+0.7**
MDPB	**Devils Postpil**	**5.28**	**328**	*e*Pn	**Pn**	**19 48 00.7**	**+1.1**
PSUT	**Pine Spring**	**5.51**	**14**	*e*Pn	**Pn**	**19 48 04.1**	**+1.4**
MTPU	**Mount Pierson**	**5.57**	**29**	*e*Pn	**Pn**	**19 48 03.3**	**-0.4**
RYN	**Ryan**	**5.93**	**337**	*e*Pn	**Pn**	**19 48 09.6**	**+1.1**
TCRU	**Three Creeks R**	**5.97**	**24**	*e*Pn	**Pn**	**19 48 09.1**	**0.0**
MSU	**Marysvale**	**5.98**	**26**	*e*Pn	**Pn**	**19 48 10.0**	**+0.8**
SAO	**San Andreas Ge**	**6.00**	**308**	*e*Pn	**Pn**	**19 48 10.5**	**+1.3**
WAKR	**Walker**	**6.16**	**330**	*e*Pn	**Pn**	**19 48 14.8**	**+3.2**
KVN	**Kaiserville**	**6.20**	**341**	*e*Pn	**Pn**	**19 48 15.2**	**+3.1**
CMB	**Columbia Colle**	**6.22**	**322**	*e*Pn	**Pn**	**19 48 15.8**	**+3.4**
YERR	**Yerington**	**6.50**	**334**	*e*Pn	**Pn**	**19 48 17.3**	**+1.0**
121A	**Cookes Peak, D** baz=278	**6.58**	**94**	P	**Pn**	**19 48 16.9**	**-0.6**
PNTR	**Pine Nut**	**6.73**	**332**	*e*Pn	**Pn**	**19 48 20.0**	**+0.5**
RUBR	**Rubicon Trail**	**6.92**	**329**	*e*Pn	**Pn**	**19 48 21.5**	**-0.6**
VCNR	**Virginia City**	**6.93**	**333**	*e*Pn	**Pn**	**19 48 21.8**	**-0.4**
MVCO	**Mesa Verde**	**7.04**	**53**	*e*Pn	**Pn**	**19 48 24.8**	**+1.0**
PV05	**Paradox Valley**	**7.18**	**45**	*e*Pn	**Pn**	**19 48 27.4**	**+1.8**
LENM	**Lemitar**	**7.23**	**80**	*e*Pn	**Pn**	**19 48 26.9**	**+0.6**
BMN	**Battle Mountai**	**7.35**	**350**	*e*Pn	**Pn**	**19 48 29.4**	**+1.5**
PV17	**East Wray Mesa**	**7.39**	**45**	*e*Pn	Pn	**19 48 34.1**	**+5.5**
PV13	**Radium Mtn., P**	**7.40**	**46**	*e*Pn	**Pn**	**19 48 28.9**	**+0.2**
PV19	**Morning Glory**	**7.40**	**44**	*e*Pn	**Pn**	**19 48 26.3**	**-2.4**
PV18	**Skein Mesa, Pa**	**7.40**	**45**	*e*Pn	**Pn**	**19 48 30.8**	**+2.2**
PV10	**Paradox Valley**	**7.41**	**44**	*e*Pn	**Pn**	**19 48 28.5**	**-0.3**
PV14	**Lion Creek, Pa**	**7.42**	**44**	*e*Pn	**Pn**	**19 48 31.6**	**+2.7**
PV20	**West Nyswonger**	**7.43**	**44**	*e*Pn	**Pn**	**19 48 30.2**	**+1.2**
PV16	**Nyswonger Mesa**	**7.44**	**45**	*e*Pn	**Pn**	**19 48 31.0**	**+1.7**
PV03	**Paradox Valley**	**7.44**	**45**	*e*Pn	**Pn**	**19 48 31.4**	**+2.2**
PV11	**David Mesa, Pa**	**7.46**	**45**	*e*Pn	**Pn**	**19 48 31.2**	**+1.7**
PV23	**Carpenter Ridg**	**7.48**	**44**	*e*Pn	**Pn**	**19 48 30.8**	**+1.0**
PV02	**Paradox Valley**	**7.48**	**46**	*e*Pn	**Pn**	**19 48 28.5**	**-1.3**
PV04	**Paradox Valley**	**7.50**	**44**	*e*Pn	**Pn**	**19 48 31.8**	**+1.8**
PV12	**Saucer Basin,**	**7.51**	**45**	*e*Pn	**Pn**	**19 48 30.2**	**0.0**
BNM	**Barren Site**	**7.52**	**80**	*e*Pn	**Pn**	**19 48 31.4**	**+1.1**
PV01	**Paradox Valley**	**7.53**	**47**	*e*Pn	**Pn**	**19 48 31.4**	**+0.9**
ELK	**Elko**	**7.54**	**2**	*e*Pn	**Pn**	**19 48 31.5**	**+0.8**
PV22	**Blue Mesa, Par**	**7.66**	**44**	*e*Pn	**Pn**	**19 48 33.0**	**+0.7**
PV07	**Paradox Valley**	**7.68**	**45**	*e*Pn	**Pn**	**19 48 35.6**	**+3.0**
BEKR	**Beckworth**	**7.70**	**331**	*e*Pn	**Pn**	**19 48 35.6**	**+2.9**
BEKR				*e*Lg	Lg	19 50 50.8	
ANMO	**Albuquerque**	**7.76**	**74**	*e*Pn	**Pn**	**19 48 35.1**	**+1.5**
BGU	**Big Grassy Mou**	**7.98**	**14**	*e*Pn	**Pn**	**19 48 36.9**	**+0.2**
S22A	**4UR Ranch, Cre**	**8.45**	**55**	*e*Pn	**Pn**	**19 48 44.2**	**+1.0**

*ISCJB **04** 19:59:17.8±0.2, 15°.93S±0°.04×174°.10W±0°.05, h115km, mb4.8/79, Error ellipse: s-maj=6.9km s-min=4.7km az=32.0*
*IDC **04** 19:59:19.7±7.7, 15°.83S×174°.13W, h115km±67km, mb4.1/13, mb1 4.3/13, mb1mx4.1/23, mbtmp4.4/13, Error ellipse: s-maj=22.0km s-min=16.9km az=120.0*
*NEIC **04** 19:59:22.4±1.9, 15°.95S×174°.00W, h144km±4km, mb4.9/75, Error ellipse: s-maj=15.5km s-min=12.5km az=143.0*

ISC 04 19:59:19.6±0.3, 15°.90S±0°.06×174°.09W±0°.07, h115km, n183, σ0°.98/181, mb4.8/79, 13C-12D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.08**	**129**	*e*Pn	**Pn**	**20 00 37.0**	**+3.5**
NIUE				*e*Sn	**Sn**	**20 01 30.5**	**-0.6**
KNTN	**Kanton**	**13.25**	**10**	*e*Pn	**P**	**20 02 31.0**	**+2.2**
KNTN				*e*Sn	**Sn**	**20 04 53.1**	**+3.8**
MARNC	**Mare, Loyalty** 201nm,1.0s	**17.82**	**249**	*e*P	**Pn**	**20 03 22.1**	**+1.7**
PINNC	**Pines Island,** 176nm,1.4s	**18.66**	**246**	*e*P	**Pn**	**20 03 33.0**	**+2.7**
DZM	**Mont Dzumac** 48nm,1.1s	**19.40**	**249**	*e*P	**Pn**	**20 03 40.4**	**+1.3**
OUZ	**Omahuta** 268nm,2.0s	**22.18**	**208**	*e*P	**P**	**20 04 08.0**	**+1.7**
PPTF	**Pamatai, Papee** 138nm,1.2s	**23.54**	**98**	*e*P	**P**	**20 04 18.2**	**-1.6**
URZ	**Urewera** 15nm,0.6s,baz=48,slow=2.8,SNR=11	**23.59**	**198**	P	**P**	**20 04 20.6**	**+0.8**
URZ	**Urewera** 85nm,1.5s	**23.59**	**198**	*e*P	**P**	**20 04 20.2**	**+0.3**
HIZ	**Hauiti** 291nm,1.7s	**24.54**	**201**	*e*P	**P**	**20 04 32.4**	**+3.9**
BKZ	**Black Stump Fm** 178nm,1.8s	**24.61**	**198**	*e*P	**P**	**20 04 28.4**	**-0.8**
BFZ	**Birch Farm** 179nm,1.3s	**26.08**	**197**	*e*P	**P**	**20 04 42.6**	**+0.1**
SNZO	**South Karori** 178nm,1.4s	**27.12**	**199**	*e*P	**P**	**20 04 50.2**	**-1.5**
THZ	**Tophouse** 128nm,1.7s	**28.11**	**201**	*e*P	**P**	**20 05 00.6**	**0.0**
KHZ	**Kahutara** 203nm,1.8s	**28.48**	**199**	*e*P	**P**	**20 05 04.2**	**+0.3**
LTZ	**Lake Taylor**	**29.23**	**201**	*e*P	**P**	**20 05 08.7**	**-1.9**
OXZ	**Oxford** 29nm,0.9s	**29.79**	**201**	*e*P	**P**	**20 05 15.1**	**-0.3**
MQZ	**McQueen's Vall** 129nm,1.5s	**29.93**	**199**	*e*P	**P**	**20 05 15.1**	**-1.6**
RPZ	**Rata Peaks** 10nm,0.7s,baz=96,slow=9.2,SNR=3.4	**30.48**	**202**	P	**P**	**20 05 21.6**	**+0.1**
RPZ	**Rata Peaks** 56nm,1.4s	**30.48**	**202**	*e*P	**P**	**20 05 21.6**	**+0.1**
FOZ	**Fox Glacier** 236nm,1.8s	**30.77**	**203**	*e*P	**P**	**20 05 23.5**	**-0.6**
LBZ	**Lake Benmore**	**31.37**	**202**	*e*P	**P**	**20 05 28.2**	**-1.1**
ODZ	**Otahua Downs** 30nm,1.4s	**31.78**	**201**	*e*P	**P**	**20 05 31.3**	**-1.7**
WKZ	**Wanaka** 82nm,1.5s	**32.17**	**203**	*e*P	**P**	**20 05 34.7**	**-1.8**
MLZ	**Mavora Lakes** 123nm,2.0s	**32.97**	**203**	*e*P	**P**	**20 05 43.8**	**+0.4**
DCZ	**Deep Cove** 69nm,1.8s	**33.43**	**204**	*e*P	**P**	**20 05 47.9**	**+0.6**
WHZ	**Wether Hill Ro** 33nm,0.9s	**33.48**	**203**	*e*P	**P**	**20 05 49.5**	**+1.7**
EIDS	**Eidsvold** 63nm,2.0s	**33.84**	**248**	*e*P	**P**	**20 05 51.1**	**-0.1**
ARMA	**Armidale** 16nm,1.0s	**34.52**	**239**	*e*P	**P**	**20 05 56.9**	**-0.2**
CTAO	**Charters Tower** 84nm,1.9s	**37.88**	**258**	*e*P	**P**	**20 06 26.4**	**+0.7**
CAN	**Canberra** 13nm,1.0s	**38.20**	**233**	*e*P	**P**	**20 06 28.1**	**-0.1**
HMH	**Humu'ula Sheep** 673nm,2.0s	**39.74**	**28**	*e*P	**P**	**20 06 38.2**	**-3.2**
OPA	**Opana** 103nm,1.0s	**40.54**	**23**	*e*P	**P**	**20 06 47.7**	**0.0**
COEN	**Coen** 19nm,1.0s	**41.29**	**267**	*e*P	**P**	**20 06 55.5**	**+1.5**
TOO	**Toolangi** 18nm,1.0s	**41.64**	**231**	*e*P	**P**	**20 06 56.1**	**-0.6**
STKA	**Stephens Creek** 13nm,0.8s,baz=87,slow=10,SNR=30	**43.21**	**240**	P	**P**	**20 07 09.2**	**-0.3**
STKA	1.7nm,0.8s,baz=74,slow=12,SNR=2.3			PcP	**PcP**	**20 08 56.6**	**-0.3**
STKA	**Stephens Creek** 5.5nm,1.1s	**43.21**	**240**	*e*P	**P**	**20 07 09.3**	**-0.2**
BBOO	**Buckleboo** 15nm,0.7s	**47.99**	**240**	*e*P	**P**	**20 07 46.5**	**-0.6**
WC3	**Warramunga Arr** 14nm,0.6s	**49.05**	**257**	*e*P	**P**	**20 07 54.5**	**-0.9**
WB2	**Warramunga Arr** 13nm,0.6s	**49.07**	**257**	*e*P	**P**	**20 07 54.5**	**-1.1**
WRAB	**Tennant Creek** 12nm,0.6s	**49.08**	**257**	*e*P	**P**	**20 07 53.4**	**-2.1**
WR1	**Warramunga Arr**	**49.08**	**257**	*e*P	**P**	**20 07 55.5**	**-0.2**
WRA	**Warramunga Arr** 8.6nm,0.6s,baz=87,slow=7.3,SNR=85	**49.08**	**257**	P	**P**	**20 07 55.5**	**-0.2**
AS31	**Alice Springs** 13nm,0.7s	**49.32**	**252**	*e*P	**P**	**20 07 56.8**	**-0.7**
ASAR	**Alice Springs** 64nm,0.7s,baz=86,slow=7.6,SNR=383	**49.33**	**252**	P	**P**	**20 07 57.0**	**-0.4**
MTN	**Manton Dam** 63nm,1.8s	**53.03**	**266**	*e*P	**P**	**20 08 25.0**	**-0.2**
FORT	**Forrest** 57nm,1.4s	**54.60**	**243**	*e*P	**P**	**20 08 35.5**	**-1.0**
FITZ	**Fitzroy Crossi** 21nm,1.4s	**57.46**	**258**	*e*P	**P**	**20 08 57.0**	**+0.1**
SOEI	**Soe** 23nm,0.7s	**60.24**	**268**	*e*P	**P**	**20 09 17.9**	**+1.5**
PSA00	**Pilbara Seismi** 32nm,0.8s	**62.43**	**254**	*e*P	**P**	**20 09 30.7**	**-0.2**
SBA	**Scott Base** 5.2nm,0.8s	**62.71**	**184**	*e*P	**P**	**20 09 34.2**	**+2.4**
VNDA	**Vanda** 3.9nm,0.8s,baz=1.7,slow=6.8,SNR=23	**62.82**	**186**	P	**P**	**20 09 33.8**	**+1.2**
VNDA	**Vanda** 4.9nm,0.9s	**62.82**	**186**	*e*P	**P**	**20 09 34.2**	**+1.7**
NWAO	**Narrogin (SRO)** 78nm,1.9s	**63.80**	**241**	*e*P	**P**	**20 09 39.4**	**-0.3**
MORW	**Morawa** 27nm,1.4s	**65.07**	**245**	*e*P	**P**	**20 09 48.0**	**-0.2**
ADK	**Adak** 3.8nm,0.8s	**67.53**	**358**	*e*P	**P**	**20 10 03.2**	**0.0**
CASY	**Casey** 21nm,1.6s	**69.68**	**205**	*e*P	**P**	**20 10 15.9**	**-0.6**
PEA0B	**Petropavlovsk-** 30nm,1.6s	**72.90**	**343**	*e*P	**P**	**20 10 36.4**	**+0.5**
PETK	**Petropavlovsk-** 5.0nm,0.7s,baz=122,slow=7.8,SNR=14	**72.90**	**343**	P	**P**	**20 10 36.1**	**+0.2**
PEA1	**Petropavlovsk-**	**72.90**	**343**	*e*P	**P**	**20 10 36.1**	**+0.2**
UGM	**Wanagama** 407nm,1.5s	**73.88**	**266**	*e*P	**P**	**20 10 42.0**	**-0.6**
QSPA	**South Pole Qui** 13nm,0.8s	**74.15**	**180**	*e*P	**P**	**20 10 44.1**	**+0.7**
NV01	**Mina Array Sit**	**75.14**	**42**	*e*P	**P**	**20 10 49.4**	**-0.3**
NVAR	**Mina Array Bea** 1.3nm,0.9s,baz=225,slow=8.8,SNR=5.9	**75.14**	**42**	P	**P**	**20 10 49.3**	**-0.3**
KDAK	**Kodiak Island** 72nm,1.7s	**75.54**	**12**	*e*P	**P**	**20 10 51.1**	**0.0**
SVW2	**Sparrevohn** 18nm,1.8s	**78.15**	**9**	*e*P	**P**	**20 11 05.2**	**-0.5**
SUA	**Susitna One** 9.4nm,0.8s	**79.31**	**11**	*e*P	**P**	**20 11 12.2**	**0.0**
GHO	**Glory Hole Cre** 10.0nm,0.8s	**79.94**	**12**	*e*P	**P**	**20 11 15.2**	**-0.4**
DIV	**Divide** 7.8nm,0.7s	**80.03**	**14**	*e*P	**P**	**20 11 15.2**	**-0.9**
LTX	**Lajitas**	**81.44**	**56**	*e*P	**P**	**20 11 24.8**	**+0.4**
TXAR	**Lajitas Array** 0.8nm,0.9s,baz=212,slow=4.4,SNR=5.1	**81.44**	**56**	P	**P**	**20 11 24.8**	**+0.4**
RND	**Reindeer** 7.2nm,0.8s	**81.45**	**11**	*e*P	**P**	**20 11 23.7**	**+0.1**
PV12	**Saucer Basin,** 35nm,1.0s	**81.47**	**46**	*e*P	**P**	**20 11 23.1**	**-1.4**
MCK	**McKinley** 12nm,0.8s	**81.73**	**11**	*e*P	**P**	**20 11 24.8**	**-0.2**
MCMT	**McKenzie Canyo**	**82.06**	**39**	*e*P	**P**	**20 11 27.7**	**+0.2**
RIDG	**Independent Ri** 5.1nm,0.9s	**82.55**	**13**	*e*P	**P**	**20 11 29.2**	**-0.1**
WRH	**Wood River Hil** 8.7nm,0.9s	**82.56**	**11**	*e*P	**P**	**20 11 28.8**	**-0.4**
DOT	**Dot Lake** 6.3nm,0.8s	**82.64**	**13**	*e*P	**P**	**20 11 29.0**	**-0.7**
HDA	**Harding Lake** 6.6nm,0.6s	**82.72**	**12**	*e*P	**P**	**20 11 29.8**	**-0.3**
IMW	**Indian Meadow** 2.7nm,0.8s	**82.76**	**41**	*e*P	**P**	**20 11 31.1**	**0.0**
CCB	**Clear Creek Bu** 9.3nm,0.6s	**82.77**	**11**	*e*P	**P**	**20 11 29.2**	**-1.1**
QLMT	**Earthquake Lak**	**82.92**	**40**	*e*P	**P**	**20 11 32.4**	**+0.5**
SCRK	**Sand Creek** 3.4nm,0.8s	**82.94**	**13**	*e*P	**P**	**20 11 31.3**	**-0.1**
COLA	**College** 15nm,0.9s	**82.97**	**11**	*e*P	**P**	**20 11 30.4**	**-0.9**
ILAR	**Eielson Array** 2.1nm,0.5s,baz=232,slow=6.1,SNR=28	**83.06**	**11**	P	**P**	**20 11 31.5**	**-0.3**
ILB	**Eielson Array** 15nm,1.5s	**83.06**	**11**	*e*P	**P**	**20 11 31.1**	**-0.7**
BW06	**Boulder Array** 2.5nm,0.9s	**83.08**	**42**	*e*P	**P**	**20 11 31.6**	**-1.1**
PD31	**Pinedale Array** 1.7nm,0.7s	**83.08**	**42**	*e*P	**P**	**20 11 31.4**	**-1.4**
PDAR	**Pinedale Array** 1.8nm,0.6s,baz=213,slow=2.8,SNR=15	**83.08**	**42**	P	**P**	**20 11 32.5**	**-0.3**
HRY	**Holter Researc**	**83.64**	**38**	*e*P	**P**	**20 11 35.4**	**0.0**
PRP	**Porcupine Dome** 9.1nm,0.9s	**83.99**	**12**	*e*P	**P**	**20 11 36.8**	**0.0**
EGAK	**Eagle** 3.7nm,0.8s	**84.25**	**14**	*e*P	**P**	**20 11 38.0**	**+0.1**
N23A	**Red Feather La** 13nm,1.6s	**84.61**	**45**	*e*P	**P**	**20 11 40.2**	**-0.4**
COLD	**Coldfoot** 3.0nm,1.1s	**84.73**	**9**	*e*P	**P**	**20 11 40.9**	**+0.6**
BILL	**Bilibino** 4.6nm,1.0s	**84.91**	**353**	*e*P	**P**	**20 11 40.9**	**-0.3**
MAW	**Mawson** 3.9nm,0.7s,baz=117,slow=6.6,SNR=10	**87.11**	**199**	P	**P**	**20 11 52.3**	**+0.2**
MAW	**Mawson** 2.5nm,1.3s	**87.11**	**199**	*e*P	**P**	**20 11 52.3**	**+0.2**
YKA	**Yellowknife Ar** 0.5nm,0.7s,baz=241,slow=2.9,SNR=3.6	**90.82**	**24**	P	**P**	**20 12 09.2**	**-0.3**
YKB5	**Yellowknife Ar**	**90.82**	**24**	*e*P	**P**	**20 12 09.2**	**-0.3**
CM31	**Chiang Mai Arr** 11nm,1.6s	**92.14**	**288**	*e*P	**P**	**20 12 16.0**	**-0.7**
CMAR	**Chiang Mai Arr** 1.3nm,0.9s,baz=105,slow=3.0,SNR=8.5	**92.14**	**288**	P	**P**	**20 12 16.9**	**+0.2**
MK32	**Makanchi Array**	**110.70**	**314**	*e*PKiKP	**PKiKP**	**20 17 37.2**	**-1.7**
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=144,slow=0.2,SNR=3.5	**110.70**	**314**	PKiKP	**PKiKP**	**20 17 37.2**	**-1.7**
ARCES	**ARCESS Array B** 3.0nm,0.8s,baz=15,slow=1.4,SNR=12	**125.00**	**352**	PKP	**PKPdf**	**20 18 04.7**	**-0.9**
FIA0	**FINESS Array S**	**132.28**	**347**	*e*PKPdf	**PKPdf**	**20 18 19.5**	**-0.1**
FINES	**FINESS Array B** 1.5nm,0.7s,baz=15,slow=2.2,SNR=5.7	**132.28**	**347**	PKP	**PKPdf**	**20 18 19.5**	**-0.1**
NB200	**NORSAR Array S**	**134.76**	**356**	*e*PKPdf	**PKPdf**	**20 18 24.8**	**+0.3**
NOA	**NORSAR Array B** 1.1nm,0.9s,baz=13,slow=4.0,SNR=3.1	**134.76**	**356**	PKP	**PKPdf**	**20 18 24.8**	**+0.3**
CLL	**Collm**	**144.22**	**352**	*e*PKPdf	**PKPab**	**20 18 39.0**	**-0.9**
CLL	**Collm** comp=Z,6.0nm,0.7s	**144.22**	**352**	*i* PKPdf	**PKPab**	**20 18 39.3**	**-0.6**
BRG	**Berggiesshubel** comp=Z,3.2nm,0.9s	**144.52**	**351**	*e*P	**PKPab**	**20 18 40.4**	**-0.6**
UPC	**Upice**	**144.53**	**349**	*e*PKP	**PKPab**	**20 18 40.8**	**-0.3**
BUR08	**Bucovina Ar. S**	**144.56**	**337**	*e*PKPdf	**PKPab**	**20 18 41.3**	**-0.1**
BURAR	**Bucovina Array**	**144.57**	**337**	⇑*i*P	PKPbc	20 18 41.6	-0.1
DPC	**Dobruska-Polom**	**144.62**	**348**	*e*PKP	**PKPab**	**20 18 41.5**	**0.0**
OKC	**Ostrava-Krasne**	**144.72**	**346**	*e*PKP	**PKPab**	**20 18 41.7**	**-0.1**
KMBO	**Kilima Mbogo** comp=Z,2.8nm,0.9s,baz=37,slow=4.8,SNR=5.7	**144.72**	**244**	PKP	PKPbc	20 18 43.6	+0.3
KMBO	**Kilima Mbogo**	**144.72**	**244**	*e*PKPbc	**PKPab**	**20 18 43.2**	**0.0**
PVCC	**Panska Ves**	**144.75**	**350**	*e*PKP	PKPbc	20 18 42.0	0.0
BIZ	**Bicaz**	**144.79**	**336**	⇓*i*P	**PKPab**	**20 18 41.9**	**-0.3**
MORC	**Moravsky Berou**	**144.91**	**347**	*e*PKPbc	PKPbc	20 18 42.0	-0.6
MORC	**Moravsky Berou**	**144.91**	**347**	⇓*i*P	PKPbc	20 18 42.3	-0.3
MORC	**Moravsky Berou**	**144.91**	**347**	*e*PKP	PKPbc	20 18 42.1	-0.5
TESR	**Tescani**	**144.92**	**335**	⇓*i*P	PKPbc	20 18 41.4	-1.3
TLCR		**145.01**	**331**	⇑*i*P	**PKPbc**	**20 18 42.8**	**-0.2**
TRPA	**Tarpa**	**145.06**	**340**	⇓*i*P	**PKPbc**	**20 18 42.8**	**-0.2**
PRU	**Pruhonice**	**145.28**	**350**	*e*PKP	**PKPbc**	**20 18 43.6**	**-0.1**
GOPC	**GO Pecny, Ondr**	**145.31**	**350**	*e*PKP	**PKPbc**	**20 18 43

SOME 04 20:03:51.0, 41.07N×76.90E, h20km
KRNET 04 20:03:52.0±0.1, 41.28N×76.85E, h14km, mb2.6
NNC 04 20:03:53.4±1.0, 41.25N×76.93E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=7.3km s-min=5.1km az=168.0
KNET 04 20:03:53.6±0.4, 41.30N×76.69E, h0km±2km, ml2.2, Error ellipse: s-maj=2.8km s-min=2.5km az=132.0
ISC 04 20:03:48.0±1.5, 41.09N±0.06×76.94E±0.03, h12km±11km, n50, σ0.73/84, 32C-16D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.79**	**296**	⇑	*i*	P	**Pb**	**20 04 04.5**	**+0.6**
NRN	baz=83			⇑	*i*	S	**Sg**	**20 04 14.3**	**+0.5**
TARG	**Taragay, Kyrgy**	**0.91**	**45**	⇓	*i*	P	**Pn**	**20 04 08.3**	**+1.3**
TARG	baz=57			⇓	*i*	S	**Sn**	**20 04 19.8**	**-0.5**
ULHL	**Ulahol**	**1.27**	**336**	⇓		P	**Pg**	**20 04 13.0**	**+0.5**
ULHL	5.5nm,0.1s,SNR=38			⇑		S	**Sn**	**20 04 28.3**	**-0.5**
ULHL	**Ulahol**	**1.27**	**336**	⇓	*i*	P	**Pg**	**20 04 12.4**	**-0.1**
ULHL	baz=35			⇓	*i*	S	**Sb**	**20 04 27.0**	**-1.4**
BOOM	**Boomskoye usch**	**1.59**	**332**	⇑	*i*	P	**Pb**	**20 04 18.1**	**+0.7**
BOOM	baz=31			⇑	*i*	S	**Sb**	**20 04 37.1**	**-0.4**
KZA	**Kyzart**	**1.61**	**308**	⇓		P	**Pg**	**20 04 19.3**	**+0.3**
KZA	14nm,0.3s,SNR=9.5			⇑		S	**Sb**	**20 04 39.3**	**+0.9**
KZA	**Kyzart**	**1.61**	**308**	⇑	*i*	P	**Pg**	**20 04 19.1**	**+0.1**
KZA	baz=4.0			⇑	*i*	S	**Sb**	**20 04 38.7**	**+0.4**
TNSS	**Tian-Shan**	**1.95**	**0**			P	**Pg**	**20 04 26.1**	**+0.7**
TNSS	14nm,0.2s					S	**Sg**	**20 04 51.3**	**+0.6**
TNSS	**Tian-Shan**	**1.95**	**0**		*e*	P	**Pg**	**20 04 26.1**	**+0.7**
TNSS	14nm,0.2s				*e*	S	**Sg**	**20 04 51.3**	**+0.6**
IZV	**Izvestkoviy**	**1.96**	**353**			Pg	**Pg**	**20 04 26.0**	**+0.3**
IZV	8.7nm,0.3s					Lg	Lg	20 04 51.4	
IZV	**Izvestkoviy**	**1.96**	**353**		*e*	P	**Pg**	**20 04 26.0**	**+0.3**
IZV	8.7nm,0.3s				*e*	S	**Sg**	**20 04 51.4**	**+0.3**
KST	**Kastek**	**2.09**	**340**			Pg	**Pg**	**20 04 27.9**	**-0.1**
KST	6.9nm,0.2s					Lg	Lg	20 04 54.5	
KST	**Kastek**	**2.09**	**340**		*e*	P	**Pg**	**20 04 27.9**	**-0.1**
KST	6.9nm,0.2s				*e*	S	**Sg**	**20 04 54.5**	**-0.6**
TKM2	**Tokmak 2**	**2.09**	**332**	⇑		P	**Pg**	**20 04 27.8**	**-0.3**
TKM2	3.8nm,0.2s,SNR=12			⇑		S	**Sg**	**20 04 54.6**	**-0.6**
TKM2	**Tokmak 2**	**2.09**	**332**	⇑		Pn	**Pg**	**20 04 28.3**	**+0.2**
TKM2	5.6nm,0.5s			⇑		Lg	Lg	20 04 55.2	
TKM2	**Tokmak 2**	**2.09**	**332**	⇓	*i*	P	**Pb**	**20 04 26.9**	**+1.0**
TKM2	baz=31			⇓	*i*	S	**Sb**	**20 04 52.7**	**+0.8**
ARLS	**Aral**	**2.12**	**292**	⇓	*i*	P	**Pg**	**20 04 28.5**	**-0.1**
ARLS	baz=88			⇓	*i*	S	**Sg**	**20 04 55.0**	**-1.0**
KNDC	**Almaty**	**2.13**	**0**	⇑		Pn	**Pg**	**20 04 29.2**	**+0.3**
KNDC	11nm,0.5s			⇓		Lg	Lg	20 04 57.5	
UCH	**Uchtor**	**2.15**	**303**	⇑		P	**Pg**	**20 04 29.4**	**+0.1**
UCH	4.3nm,0.2s,SNR=10.0			⇑		S	**Sg**	**20 04 56.8**	**-0.3**
UCH	**Uchtor**	**2.15**	**303**	⇑	*e*	P	**Pg**	**20 04 28.6**	**-0.6**
UCH	8.9nm,0.3s			⇑	*i*	S	**Sb**	**20 04 55.2**	**+1.4**
KOTS	**Kotyrbulak**	**2.15**	**3**			Pg	**Pg**	**20 04 29.5**	**+0.3**
KOTS	baz=99					Lg	Lg	20 04 57.6	
KOTS	**Kotyrbulak**	**2.15**	**3**		*e*	P	**Pg**	**20 04 29.5**	**+0.3**
KOTS	9.2nm,0.2s				*e*	S	**Sg**	**20 04 57.6**	**+0.5**
KBK	**Karagaybulak**	**2.16**	**317**	⇑		P	**Pg**	**20 04 29.9**	**+0.4**
KBK	4.7nm,0.2s,SNR=7.1			⇑		S	**Sg**	**20 04 56.7**	**-0.9**
KBK	**Karagaybulak**	**2.16**	**317**	⇓	*e*	P	**Pb**	**20 04 28.5**	**+1.3**
KBK	32nm,0.4s			⇓	*i*	S	**Sb**	**20 04 54.8**	**+0.8**
SATY	**Saty**	**2.25**	**28**			Pg	**Pg**	**20 04 31.7**	**+0.5**
SATY	9.9nm,0.3s					Lg	Lg	20 05 00.5	
SATY	**Saty**	**2.25**	**28**		*e*	P	**Pg**	**20 04 31.7**	**+0.5**
SATY	9.9nm,0.3s				*e*	S	**Sg**	**20 05 00.5**	**+0.2**
DGS	**Degeres**	**2.32**	**338**			Pg	**Pg**	**20 04 32.2**	**-0.3**
DGS	3.2nm,0.3s					Lg	Lg	20 05 01.7	
DGS	**Degeres**	**2.32**	**338**		*e*	P	**Pg**	**20 04 32.2**	**-0.3**
DGS	3.2nm,0.3s				*e*	S	**Sg**	**20 05 01.7**	**-1.0**
AAK	**Ala-Archa**	**2.40**	**311**	⇑		Pn	**Pg**	**20 04 33.9**	**0.0**
AAK	2.1nm,0.4s			⇓		Lg	Lg	20 05 02.8	
AAK	**Ala-Archa**	**2.40**	**311**	⇑	*i*	P	**Pb**	**20 04 31.8**	**+0.6**
AAK	baz=8.0			⇑	*i*	S	**Sb**	**20 05 00.3**	**-0.4**
FRU1	**Bishkek**	**2.44**	**316**	⇓	*i*	P	**Pb**	**20 04 32.0**	**+0.2**
FRU1	baz=14			⇓	*i*	S	**Sb**	**20 05 01.3**	**-0.5**
UZB	**Uzynbulak**	**2.57**	**36**			Pg	**Pg**	**20 04 37.3**	**0.0**
UZB	3.5nm,0.3s					Lg	Lg	20 05 11.1	
UZB	**Uzynbulak**	**2.57**	**36**		*e*	P	**Pg**	**20 04 37.3**	**0.0**
UZB	3.5nm,0.3s				*e*	S	**Sg**	**20 05 11.1**	**+0.4**
KTBS	**Karatobe**	**2.63**	**356**			Pg	**Pg**	**20 04 37.7**	**-0.7**
KTBS	6.0nm,0.4s					Lg	Lg	20 05 11.4	
KTBS	**Karatobe**	**2.63**	**356**		*e*	P	**Pg**	**20 04 37.7**	**-0.7**
KTBS	6.0nm,0.4s				*e*	S	**Sg**	**20 05 11.4**	**-1.1**
AML	**Almayashu**	**2.65**	**294**	⇑	*e*	P	**Pb**	**20 04 36.1**	**+0.5**
AML	baz=91			⇑	*i*	S	**Sb**	**20 05 07.9**	**-0.3**
KPKS	**Kokpek**	**2.71**	**28**		*e*	P	**Pg**	**20 04 39.5**	**-0.4**
KPKS	11nm,0.3s				*e*	S	**Sg**	**20 05 14.7**	**-0.2**
EKS2	**Erkin-Say**	**2.84**	**305**	⇑	*i*	P	**Pb**	**20 04 37.7**	**-1.0**
EKS2	baz=2.0			⇑	*i*	S	**Sb**	**20 05 11.5**	**-1.9**
PDGK	**Podgornoye**	**2.93**	**39**			Pg	**Pg**	**20 04 43.4**	**-0.8**
PDGK	1.8nm,0.6s					Lg	Lg	20 05 21.5	
	8.8nm,0.5s								
PDGK	**Podgornoye**	**2.93**	**39**	⇑		Pg	**Pg**	**20 04 44.7**	**+0.5**
PDGK	4.3nm,0.5s			⇑		Lg	Lg	20 05 21.6	
	12nm,0.4s								
PDGK	**Podgornoye**	**2.93**	**39**	⇑	*i*	P	**Pb**	**20 04 40.2**	**-0.1**
PDGK	baz=43			⇑	*e*	S	**Sb**	**20 05 15.2**	**-0.9**
	baz=43								
ARSB	**Arslanbob**	**3.00**	**276**	⇑	*i*	P	**Pb**	**20 04 41.3**	**-0.1**
ARSB	baz=72			⇑	*i*	S	**Sb**	**20 05 17.8**	**-0.2**
	baz=72								
MNBS	**Baschi**	**3.18**	**19**			Pg	**Pg**	**20 04 48.0**	**-0.9**
MNBS	2.6nm,0.3s					Lg	Lg	20 05 29.0	
	14nm,0.3s								
MNBS	**Baschi**	**3.18**	**19**		*e*	P	**Pg**	**20 04 48.0**	**-0.9**
MNBS	2.6nm,0.3s				*e*	S	**Sg**	**20 05 28.9**	**-1.1**
	14nm,0.3s								
ARXS	**Arharly**	**3.19**	**11**			Pg	**Pg**	**20 04 47.9**	**-1.3**
ARXS	2.8nm,0.3s					Lg	Lg	20 05 28.4	
	21nm,0.3s								
ARXS	**Arharly**	**3.19**	**11**		*e*	P	**Pg**	**20 04 47.9**	**-1.3**
ARXS	2.8nm,0.3s				*e*	S	**Sg**	**20 05 28.4**	**-2.1**
	21nm,0.3s								
MRKS	**Merke**	**3.23**	**302**			Pg	**Pg**	**20 04 49.2**	**-0.7**
MRKS	4.7nm,0.3s					Lg	Lg	20 05 31.1	
	8.9nm,0.5s								
MRKS	**Merke**	**3.23**	**302**		*e*	P	**Pg**	**20 04 49.0**	**-0.9**
MRKS	4.5nm,0.2s				*e*	S	**Sg**	**20 05 31.1**	**-0.7**
	8.9nm,0.5s								
KTMS	**Ketmen**	**3.46**	**46**			Pg	**Pg**	**20 04 53.7**	**-0.6**
KTMS	1.7nm,0.3s					Lg	Lg	20 05 38.7	
	12nm,0.5s								
KTMS	**Ketmen**	**3.46**	**46**		*e*	P	**Pg**	**20 04 53.7**	**-0.6**
KTMS	1.7nm,0.3s				*e*	S	**Sg**	**20 05 38.7**	**-0.4**
	12nm,0.5s								

MAN 04 20:05:48.1, 7.36N×124.76E, h8km, mb3.7, ML2.4, MS1.9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.53**	**255**	⇑	*i*	P	Pg	20 05 59.0	+0.6
CTBH					*i*	S	Sb	20 06 07.3	-0.2
BUKP	**Musuan**	**0.60**	**30**		*e*	P	Pg	20 05 59.8	+0.1
BUKP					*e*	S	Sb	20 06 09.8	+0.3
SKMP	**Bagumbayan, Su**	**0.86**	**195**		*e*	P	Pg	20 06 02.5	-2.2
CGP	**Cagayan de Oro**	**1.09**	**356**	⇑	*i*	P	Pg	20 06 08.8	-0.3
CGP					*i*	S	Sg	20 06 23.0	-0.3
PAGZ	**Pagadian**	**1.45**	**290**		*e*	P	Pn	20 06 13.5	-1.2
MATI	**Mati**	**1.54**	**105**		*e*	P	Pn	20 06 15.3	-0.6
DDMP	**Don Marcelino,**	**1.56**	**143**		*e*	P	Pn	20 06 15.8	-0.4
IPIL	**Ipil**	**2.21**	**281**		*e*	P	Pn	20 06 23.7	-1.5

GCG 04 20:08:25.3±0.5, 15.14N×90.72W, h34km±41km, MD3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.69**	**190**		*e*	P	Pb	20 08 39.2	-0.1
PCG	**Pacaya**	**0.75**	**172**		*e*	P	Pb	20 08 40.0	-0.1
PCG					*e*	S	Sb	20 08 52.0	+1.8
STG3	**Santiaguito 3,**	**0.93**	**243**		*e*	P	Pb	20 08 42.7	-0.4
STG3					*e*	S	Sb	20 08 55.8	+0.6

MAN 04 20:09:06.1, 7.32N×124.80E, h1km, mb4.8, ML3.7, MS3.6, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.61**	**25**		*e*	P	Pg	20 09 18.1	+0.2
BUKP					*e*	S	Sn	20 09 31.2	-1.4
DMPH	**Davao City--Mi**	**0.74**	**109**	⇑	*e*	P	Pg	20 09 17.9	-2.4
DMPH					*e*	S	Sb	20 09 33.8	+1.2
CGP	**Cagayan de Oro**	**1.13**	**355**	⇑	*i*	P	Pg	20 09 20.4	-7.4
CGP					*i*	S	Sg	20 09 42.0	-0.5
MATI	**Mati**	**1.49**	**104**		*e*	P	Pn	20 09 28.5	-5.6
MATI					*e*	S	Sn	20 09 55.5	+1.2
MATI	**Mati**	**1.49**	**104**		*e*	P	Pn	20 09 32.2	-1.9
MATI					*e*	S	Sb	20 09 52.7	-1.5
PAGZ	**Pagadian**	**1.50**	**290**		*e*	P	Pn	20 09 31.9	-2.3
PAGZ					*e*	S	Sb	20 09 52.4	-2.0
DDMP	**Don Marcelino,**	**1.51**	**143**		*e*	P	Pn	20 09 32.3	-2.1
DDMP					*e*	S	Sb	20 09 54.5	-0.2
DCPH	**Dipolog City**	**1.90**	**311**	⇑	*e*	P	Pg	20 09 46.8	+4.1
DCPH					*e*	S	Sg	20 10 12.3	+5.0
IPIL	**Ipil**	**2.26**	**282**		*e*	P	Pn	20 09 44.9	+0.2
IPIL					*e*	S	Sb	20 10 15.1	-1.1
SNPH	**Sibulan**	**2.53**	**322**		*e*	P	Pg	20 09 55.1	+0.3

IDC 04 20:29:30.7±5.5, 12.78S×74.41W, h72km±53km, mb3.4/3, mb1 3.6/4, mb1mx3.3/21, mbtmp3.6/4, ML3.1/1, MS3.5/1, Ms1 3.4/1, ms1mx2.7/11, Error ellipse: s-maj=52.4km s-min=34.3km az=65.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.01**	**121**			P	Pn	20 31 11.3	0.0
	0.2nm,0.3s,baz=305,slow=10,SNR=2.6								
BDFB	**Brasilia**	**25.74**	**100**			LR	LR	20 46 24.6	
	comp=Z,99nm,21.1s,baz=299,slow=39								
PLCA	**Paso Flores**	**28.05**	**174**			P	P	20 35 15.3	0.0
	2.5nm,0.9s,baz=0.0,slow=10,SNR=2.9								
TXAR	**Lajitas Array**	**50.50**	**326**			P	P	20 38 21.7	-0.1
	0.3nm,0.6s,baz=145,slow=8.9,SNR=3.8								
TORD	**Torodi Ar. Bea**	**79.72**	**74**			P	P	20 41 31.4	+0.1
	0.3nm,0.5s,baz=267,slow=4.1,SNR=3.0								

DJA 04 20:35:50.0±0.9, 9.5S±6.5×12.2E±.5, h10km, M2.6/4, MLv2.6/4, Savu Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.29**	**332**			P	Pb	20 35 57.7	+0.3
EDFI	**Ende, Flores**	**0.29**	**332**			P	Pb	20 35 57.4	0.0
EDFI						S	Sb	20 36 01.9	-0.5
MMRI	**Maumere**	**0.55**	**47**			P	Pb	20 36 01.3	-0.4
MMRI	**Maumere**	**0.55**	**47**			P	Pg	20 36 00.7	0.0
MMRI						S	Sg	20 36 08.7	+0.8

DJA 04 20:36:49.4±1.2, 1.5N±13.5×12.6E±.5, h47km±50km, M3.0/4, MLv3.0/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**114**			P	Pn	20 37 12.4	+1.2
TNTI						S	Sn	20 37 27.4	-0.2
KMSI	**Cibinong**	**2.31**	**252**			P	Pn	20 37 24.8	-0.1
KMSI						S	Sn	20 37 52.5	+0.4

MAN 04 20:42:26.2, 13.02N×120.54E, h34km, mb3.3, ML1.9, MS1.3, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.63**	**40**	⇓	*e*	P	Pn	20 42 37.4	-1.3
PGP					*i*	S	Sn	20 42 45.7	-1.9
LUBP	**Lubang**	**0.77**	**338**		*e*	P	Pn	20 42 40.0	-0.6
LUBP					*e*	S	Sb	20 42 51.9	+0.4
LUBP	**Lubang**	**0.77**	**338**		*e*	P	Pb	20 42 41.1	-0.1
LUBP					*e*	S	Sb	20 42 51.9	+0.4
SJMP	**San Jose**	**0.79**	**134**		*e*	P	Pb	20 42 41.5	-0.1
SJMP					*e*	S	Sb	20 42 52.5	+0.4
SJMP	**San Jose**	**0.79**	**134**		*e*	P	Pb	20 42 41.7	+0.1
SJMP					*e*	S	Sb	20 42 52.5	+0.5

ISCJB 04 20:58:35.6±0.4, 37.54N±0.03×35.70E±0.03, h5km±5km, Error ellipse: s-maj=4.8km s-min=3.6km az=158.1
ISK 04 20:58:35.0, 37.53N×35.70E, h5km, ML2.0/10
DDA 04 20:58:35.0, 37.58N×35.69E, h7km±3km, ML2.5
ISC 04 20:58:35.3±0.9, 37.55N±0.03×35.70E±0.03, h10km±8km, n18, σ0.51/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.12**	**124**			PG	**Pg**	**20 58 37.8**	**-0.4**
KOZT						SG	**Sg**	**20 58 40.1**	**-0.2**
AKO	**Adana**	**0.22**	**247**		*i*	P	**Pg**	**20 58 40.5**	**+0.6**
AKO					*i*	S	**Sg**	**20 58 43.5**	**+0.5**
AKO						IAML_P			
	comp=Z,4μm,0.1s								
ANDN	**Andirin**	**0.51**	**86**		*i*	P	**Pg**	**20 58 45.6**	**+0.3**
ANDN					*i*	S	**Sb**	**20 58 54.1**	**+0.1**
ANDN						IAML_P			
	comp=Z,2μm,0.3s								
SAIM	**ADANA**	**0.52**	**35**		*i*	P	**Pg**	**20 58 45.7**	**+0.1**
SAIM					*i*	S	**Sb**	**20 58 53.9**	**-0.4**
SAIM						IAML_P			
	comp=Z,2μm,0.1s								
CEYT	**Ceyhan**	**0.54**	**176**			PG	**Pg**	**20 58 46.0**	**+0.2**
CEYT						SG	**Sg**	**20 58 53.6**	**+0.7**
KARA	**Karaisali**	**0.59**	**241**			PG	**Pg**	**20 58 46.3**	**-0.5**
KARA						SG	**Sg**	**20 58 55.1**	**+0.6**
YAHY	**KAYSERI_Yahyal**	**0.61**	**334**		*i*	P	**Pg**	**20 58 47.2**	**0.0**
YAHY					*i*	S	**Sb**	**20 58 55.8**	**-0.9**
YAHY						IAML_P			
	comp=Z,627nm,0.1s								
YURE	**YUREGIR**	**0.72**	**184**			PG	**Pg**	**20 58 49.2**	**-0.1**
GULE	**Gulek**	**0.78**	**251**		*i*	P	**Pb**	**20 58 51.3**	**+0.2**
GULE						IAML_P			
	comp=Z,555nm,0.2s								
KAMA	**Osmaniye**	**0.85**	**115**		*i*	P	**Pb**	**20 58 52.2**	**0.0**
KAMA						IAML_P			
	comp=Z,272nm,0.1s								
DED	**Mersin**	**0.93**	**231**		*i*	P	**Pn**	**20 58 54.3**	**-0.1**
KMRS	**Kahramanmaras**	**0.95**	**92**			PG	**Pg**	**20 58 53.6**	**-0.1**
KMRS						SG	**Sb**	**20 59 07.6**	**+0.9**
MERS	**Mersin**	**1.16**	**235**			PN	**Pn**	**20 58 57.9**	**+0.2**
TAHT	**Tahtakopru-Hat**	**1.23**	**162**			PN	**Pg**	**20 58 58.7**	**-0.3**
BNN	**Bunyan**	**1.31**	**5**			PN	**Pg**	**20 59 00.9**	**+0.5**
KIZK	**Mersin**	**1.64**	**230**			PN	**Pb**	**20 59 05.5**	**-0.1**
DARE	**Darende-Malaty**	**1.74**	**53**			PN	**Pb**	**20 59 06.9**	**-0.5**
KEBE	**Keben-Mersin**	**1.94**	**236**			PN	**Pb**	**20 59 09.7**	**-1.0**

MAN 04 21:07:12.4, 9.08N×126.55E, h5km, mb4.9, ML3.8, MS3.7, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.91**	**192**	⇓	*e*	P	Pb	21 07 31.2	+0.6
BIPH					*e*	S	Sg	21 07 41.8	+0.1
BUTP	**Butuan**	**0.92**	**263**		*e*	P	Pg	21 07 30.2	+0.1
BUTP					*e*	S	Sg	21 07 42.4	+0.4
BUTP	**Butuan**	**0.92**	**263**		*e*	P	Pb	21 07 30.7	-0.2
BUTP					*e*	S	Sg	21 07 42.1	+0.1
SCPH	**Surigao**	**1.25**	**304**	⇑	*i*	P	Pn	21 07 44.7	+8.1
SCPH					*e*	S	Sn	21 07 58.5	+4.7
BUKP	**Musuan**	**1.89**	**231**		*e*	P	Pn	21 07 45.5	0.0
BUKP					*e*	S	Sn	21 08 10.4	+0.7
BUKP	**Musuan**	**1.89**	**231**		*e*	P	Pn	21 07 45.5	+0.1
BUKP					*e*	S	Sb	21 08 10.9	-0.5
CGP	**Cagayan de Oro**	**1.93**	**251**	⇑	*e*	P	Pn	21 07 46.3	+0.3
CGP					*e*	S	Sn	21 08 09.6	-1.0
MSLP	**Maasin**	**1.96**	**302**		*e*	P	Pb	21 07 48.2	-0.4
MSLP					*e*	S	Sn	21 08 11.5	+0.1
MSLP	**Maasin**	**1.96**	**302**		*e*	P	Pb	21 07 48.2	-0.4
MSLP					*e*	S	Sn	21 08 11.4	0.0
DMPH	**Davao City--Mi**	**2.24**	**207**		*e*	S	Sb	21 08 21.6	+0.2
TBP	**Tagbilaran**	**2.72**	**283**		*e*	P	Pn	21 07 55.4	-1.3
TBP					*e*	S	Sn	21 08 30.2	+0.2
BESP	**Borongan**	**2.73**	**337**		*e*	P	Pn	21 07 56.3	-0.6
BESP					*e*	S	Sb	21 08 36.0	+0.5
CNP	**Catarman**	**3.88**	**332**		*e*	P	Pn	21 08 13.9	+1.3
CNP					*e*	S	Sn	21 08 57.6	-1.0

ISCJB 04 21:07:36.5±0.8, 37.14N±0.05×71.8E±0.1, h33km, Error ellipse: s-maj=13.2km s-min=5.1km az=160.3
SOME 04 21:07:41.6, 38.55N×72.10E, h80km
NNC 04 21:07:45.7±8.1, 37.91N×71.38E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=63.7km s-min=40.3km az=172.0
ISC 04 21:07:37.6±1.3, 37.13N±0.09×71.5E±0.1, h35km, n16, σ2.74/22, 5C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.14**	**347**		*e*	P	Pn	21 08 57.5	+5.3
	3.8nm,0.1s								
IUG					*e*	S	**Sn**	**21 09 51.9**	**+1.5**
	40nm,0.3s								
MRKS	**Merke**	**5.76**	**13**		*e*	P	**Pn**	**21 09 04.4**	**+3.7**
	6.9nm,0.3s								
MRKS					*e*	S	**Sn**	**21 10 04.0**	**-1.5**
	18nm,0.5s								
AAK	**Ala-Archa**	**5.95**	**22**	⇑		P	**Pn**	**21 09 06.6**	**+3.2**
	2.6nm,0.3s								
AAK				⇓		S	**Sn**	**21 10 07.7**	**-2.7**
	9.4nm,0.7s								
KK31	**Karatay Array**	**6.02**	**353**	⇓		P	**Pn**	**21 09 07.6**	**+3.4**
	11nm,0.5s,baz=177,slow=13,SNR=90								
KK31				⇑		S	**Sn**	**21 10 09.4**	**-2.4**
	4.4nm,0.3s,baz=182,slow=23,SNR=4.5								
TKM2	**Tokmak 2**	**6.57**	**27**	⇑		P	**Pn**	**21 09 14.7**	**+2.8**
	1.1nm,0.3s								
TKM2				⇑		S	**Sn**	**21 10 22.7**	**-3.0**
	1.7nm,0.5s								
KST	**Kastek**	**6.81**	**29**		*e*	P	Pn	21 09 21.8	+6.6
	1.9nm,0.4s								
KST					*e*	S	**Sn**	**21 10 33.5**	**+1.9**
	1.5nm,0.5s								
PYUN	**Piuthan**	**13.19**	**130**		*e*	P	**Pn**	**21 10 42.0**	**-0.7**
	13nm,0.4s								
DANN	**Dangsing**	**13.50**	**127**		*e*	P	**Pn**	**21 10 46.6**	**-0.3**
	13nm,0.3s								
KOLN	**Koldanda**	**13.80**	**129**		*e*	P	**Pn**	**21 10 50.2**	**-0.8**
	7.3nm,0.3s								
AB31	**Akbulak array**	**14.75**	**329**			P	**Pn**	**21 11 04.7**	**+1.1**
	0.7nm,0.3s,baz=134,slow=14,SNR=52								
AB31				⇑		S	**Sn**	**21 13 40.9**	**-4.8**
	0.5nm,0.5s,baz=156,slow=23,SNR=3.6								
KKN	**Kakani**	**14.86**	**125**		*e*	P	**Pn**	**21 11 03.3**	**-2.1**
	2.6nm,0.2s								
DMN	**Daman**	**14.87**	**126**		*e*	P	**Pn**	**21 11 03.6**	**-2.0**
	7.7nm,0.3s								
PKIN	**Phulchoki**	**15.08**	**125**		*e*	P	**Pn**	**21 11 06.5**	**-1.9**
	3.8nm,0.2s								
PKI	**Pulchoki**	**15.10**	**125**		*e*	P	**Pn**	**21 11 06.8**	**-1.8**
	3.3nm,0.2s								
JIRN	**Jiri**	**15.55**	**123**		*e*	P	**Pn**	**21 11 11.6**	**-3.0**
	32nm,0.4s								
AKTO	**Aktyubinsk**	**16.46**	**328**	⇓		P	**Pn**	**21 11 27.9**	**+2.2**
	1.3nm,0.7s								
AKTO				⇓		S	**Sn**	**21 14 23.5**	**-3.7**
	3.1nm,1.3s								

NEIC 04 21:16:04.4±1.6, 34.06S×178.60W, h35km±4km, mb4.3/4, Error ellipse: s-maj=26.0km s-min=22.2km az=68.0
WEL 04 21:16:06.6±1.0, 34.5S±8.5×17.8W±1.5, h33km, M4.7/6, mB5.3/6, ML5.0/15, MLv4.7/5, Mw(mB)4.7/6, Error ellipse: s-maj=0.0km s-min=0.0km az=114.0
IDC 04 21:16:10.3±6.6, 34.01S×178.89W, h81km±54km, mb3.9/5, mb1 4.1/6, mb1mx3.6/44, mbtmp4.3/6, ML4.3/1, Error ellipse: s-maj=45.2km s-min=32.3km az=37.0
ISC 04 21:16:04.0±0.8, 33.89S±0.09×178.4W±0.1, h37km, n56, σ1.61/63, mb4.3/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.55**	**215**		*e*	Pn	**Pn**	**21 17 11.3**	**+1.0**
MXZ	**Matakaoa Point**	**4.55**	**215**			P	**Pn**	**21 17 11.

CNGZ	Carnagh Statio	5.36 210	P	Pn	21 17 22.0	+0.7
TKGZ	Te Karaka	5.47 213	P	Pn	21 17 25.3	+2.3
TKGZ			S	Sn	21 18 27.0	+2.3
MWZ	Matawai	5.54 216	P	Pn	21 17 23.6	-0.3
URZ	Urewera	5.69 219	P	Pn	21 17 26.0	0.0
9.8nm,0.3s,baz=259,slow=3.4,SNR=42						
URZ			S	Sn	21 18 29.6	-0.4
6.3nm,0.3s,baz=144,slow=17,SNR=1.9						
URZ	Urewera	5.69 219	ePn	Pn	21 17 26.9	+0.9
URZ	Urewera	5.69 219	P	Pn	21 17 26.5	+0.6
URZ			S	Sn	21 18 30.4	+0.4
MARZ	Manawahe	5.73 223	P	Pn	21 17 28.7	+2.2
RIGZ	Rimuhau	5.73 212	P	Pn	21 17 28.2	+1.7
PRGZ	Paritu Road	5.86 210	P	Pn	21 17 29.9	+1.6
SNGZ	Shannon Statio	5.98 214	P	Pn	21 17 31.4	+1.4
SNGZ			S	Sn	21 18 38.4	+1.1
RAHZ	Arahi	6.21 215	P	Pn	21 17 35.0	+1.8
RAHZ			S	Sn	21 18 42.2	-0.7
WHHZ	Waihua	6.27 213	P	Pn	21 17 36.0	+2.1
TOZ	Tahuroa Road	6.28 231	P	Pn	21 17 39.0	+4.9
BKZ	Black Stump Fm	6.69 217	ePn	Pn	21 17 40.5	+0.7
BKZ	Black Stump Fm	6.69 217	P	Pn	21 17 40.1	+0.4
OUZ	Omahuta	6.76 256	ePn	Pn	21 17 42.0	+1.4
BHHZ	Black Hill Sta	7.16 217	P	Pn	21 17 46.6	+0.5
HIZ	Hauiti	7.16 228	ePn	Pn	21 17 47.6	+1.5
MOVZ	Moawhango	7.25 219	P	Pn	21 17 48.1	+0.6
BFZ	Birch Farm	8.02 211	ePn	Pn	21 17 55.4	-2.6
THZ	Tophouse	10.45 219	ePn	Pn	21 18 28.4	-2.9
KHZ	Kahutara	10.63 214	ePn	Pn	21 18 30.2	-3.4
MQZ	McQueen's Vall	12.04 213	ePn	Pn	21 18 48.3	-4.6
ODZ	Otahua Downs	13.99 214	ePn	Pn	21 19 15.8	-3.8
MLZ	Mavora Lakes	15.46 218	ePn	Pn	21 19 37.0	-2.2
15nm,1.1s						
CTA	Charters Tower	34.20 285	P	P	21 22 45.4	-0.8
2.8nm,0.5s,baz=128,slow=11,SNR=3.9						
AS31	Alice Springs	42.72 271	eP	P	21 23 56.2	-1.5
0.8nm,0.7s						
ASAR	Alice Springs	42.73 271	P	P	21 23 56.2	-1.5
1.1nm,0.4s,baz=110,slow=7.2,SNR=16						
ASAR			PcP	PcP	21 25 47.7	-1.3
0.3nm,0.4s,baz=124,slow=3.5,SNR=3.2						
WB2	Warramunga Arr	44.02 276	eP	P	21 24 06.8	-1.4
5.7nm,0.6s						
WR1	Warramunga Arr	44.03 276	eP	P	21 24 06.9	-1.3
WRA	Warramunga Arr	44.03 276	P	P	21 24 06.9	-1.3
2.7nm,0.4s						
FITZ	Fitzroy Crossi	52.12 273	P	P	21 25 07.8	-3.0
2.2nm,0.9s,baz=136,slow=9.4,SNR=3.8						
FITZ	Fitzroy Crossi	52.12 273	eP	P	21 25 07.8	-3.0
6.8nm,1.1s						
PETK	Petropavlovsk-	89.11 346	P	P	21 28 57.0	+2.1
0.7nm,0.6s,baz=128,slow=9.3,SNR=2.6						
PEA1	Petropavlovsk-	89.11 346	eP	P	21 28 57.0	+2.1
ZALV	Zalesovo Beam	120.39 317	PKP	PKiKP	21 34 51.7	+0.8
0.4nm,0.4s,baz=113,slow=3.3,SNR=2.5						
ZAA1	Zalesovo Array	120.39 317	ePKPdf	PKiKP	21 34 51.6	+0.8
KURBB	Kurchatov Arra	123.22 312	PKP	PKPdf	21 34 56.6	+0.3
0.3nm,0.5s,baz=122,slow=1.7,SNR=3.8						
BVAR	Borovoye Array	128.63 314	PKP	PKPdf	21 35 06.8	+0.2
0.2nm,0.5s,baz=116,slow=3.4,SNR=3.7						
FIA0	FINESS Array S	148.28 338	ePKPbc	PKPbc	21 35 46.0	+0.6
FINES	FINESS Array B	148.28 338	PKPbc	PKPbc	21 35 46.0	+0.6
1.3nm,0.4s,baz=42,slow=4.4,SNR=26						
NB200	NORSAR Array S	152.13 350	ePKPbc	PKiKP	21 35 55.6	+0.6
NOA	NORSAR Array B	152.13 350	PKPbc	PKiKP	21 35 55.7	+0.6
0.8nm,0.7s,baz=13,slow=4.1,SNR=2.6						
AKASG	Malin Array Be	153.78 318	PKPbc	PKPbc	21 35 58.0	-0.6
0.2nm,0.2s,baz=48,slow=1.4,SNR=3.5						
AKBB	Malin Array Si	153.78 318	ePKPbc	PKPbc	21 35 58.0	-0.6
BR101	Keskin Array S	153.80 292	ePKPbc	PKiKP	21 35 59.8	+0.4
BRTR	Keskin Array B	153.80 292	PKPbc	PKiKP	21 35 59.8	+0.4
0.8nm,0.8s,baz=127,slow=3.9,SNR=5.4						
TORD	Torodi Ar. Bea	159.35 180	PKPab	PKPab	21 36 36.2	-0.2
0.8nm,1.0s,baz=242,slow=3.1,SNR=3.3						
TOA1	Torodi Ar. Sit	159.36 180	ePKPab	PKPab	21 36 36.2	-0.2

*ISCJB **04** 21:16:29.0±1.2, 33°.84S±0°.08×178°.8W±0°.2, h50km, mb4.2/7, MS3.8/3, Error ellipse: s-maj=27.7km s-min=9.0km az=16.1*
*NEIC **04** 21:16:30.9±2.4, 33°.79S×178°.83W, h49km±19km, mb4.1/2, Error ellipse: s-maj=22.9km s-min=15.0km az=223.0*
*IDC **04** 21:16:31.8±6.6, 33°.83S×178°.87W, h56km±53km, mb4.1/6, mb1 4.3/7, mb1mx3.8/44, mbtmp4.4/7, ML4.5/1, MS3.8/1, Ms1 3.8/1, ms1mx3.1/23, Error ellipse: s-maj=41.5km s-min=27.9km az=57.0*

ISC 04 21:16:30.8±0.9, 33°.8S±0°.1×178°.8W±0°.2, h50km, n33, σ1°26/30, mb4.5/7, MS3.8/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.42	211	ePn	Pn	21 17 36.5	+1.2
URZ	Urewera	5.53	215	P	Pn	21 17 50.5	-0.1
14nm,0.3s,baz=241,slow=17,SNR=6.8							
URZ				S	Sn	21 18 53.5	+0.6
9.3nm,0.3s,baz=158,slow=21,SNR=1.8							
BKZ	Black Stump Fm	6.55	214	ePn	Pn	21 18 03.4	-1.1
THZ	Tophouse	10.29	217	ePn	Pn	21 18 55.9	+0.1
KHZ	Kahutara	10.49	213	ePn	Pn	21 18 58.1	-0.3
RPZ	Rata Peaks	12.65	216	LR	LR	21 24 59.1	
comp=Z,432nm,20.7s,baz=41,slow=40							
RPZ	Rata Peaks	12.65	216	ePn	Pn	21 19 29.1	+1.2
DCZ	Deep Cove	15.86	219	ePn	Pn	21 20 05.3	-5.2
DZM	Mont Dzumac	17.47	308	eLR	LR	21 24 20.9	
comp=Z,905nm,22.8s							
TBI	Tubuai	27.73	76	eLR	LR	21 29 10.0	
comp=Z,211nm,26.2s							
PPT2	Papeete2	30.77	66	eLR	LR	21 30 27.0	
comp=Z,290nm,25.0s							
CTA	Charters Tower	33.82	285	P	P	21 23 09.4	+1.1
3.6nm,0.5s,baz=110,slow=9.2,SNR=5.7							
AS31	Alice Springs	42.34	271	eP	P	21 24 20.5	+0.3
1.1nm,0.6s							
ASAR	Alice Springs	42.34	271	P	P	21 24 20.3	+0.1
3.0nm,0.7s,baz=110,slow=7.1,SNR=9.5							
ASAR				PcP	PcP	21 26 11.8	-1.2
0.3nm,0.4s,baz=119,slow=3.7,SNR=3.9							
TAOE	Nuku Hiva Isla	43.36	64	eLR	LR	21 36 17.5	
comp=Z,207nm,27.9s							
WR1	Warramunga Arr	43.64	276	eP	P	21 24 30.5	-0.2
WRA	Warramunga Arr	43.64	276	P	P	21 24 30.5	-0.2
4.2nm,0.5s,baz=106,slow=8.3,SNR=13							
FITZ	Fitzroy Crossi	51.74	273	P	P	21 25 33.2	-0.2
2.7nm,0.6s,baz=151,slow=7.7,SNR=8.8							
MAW	Mawson	68.89	201	P	P	21 27 30.2	+0.4
2.7nm,1.0s,baz=78,slow=9.3,SNR=4.2							
PETK	Petropavlovsk-	88.93	346	P	P	21 29 18.9	-0.4
1.9nm,0.7s,baz=142,slow=7.4,SNR=4.1							
PEA1	Petropavlovsk-	88.93	346	eP	P	21 29 18.9	-0.5
KURBB	Kurchatov Arra	122.88	312	PKP	PKPdf	21 35 19.9	-0.9
1.0nm,0.8s,baz=114,slow=2.1,SNR=6.0							
BVAR	Borovoye Array	128.30	314	PKP	PKPdf	21 35 29.8	-1.4
0.5nm,0.5s,baz=143,slow=0.7,SNR=4.9							
FIA0	FINESS Array S	148.05	338	ePKPbc	PKPbc	21 36 09.8	-0.1
FINES	FINESS Array B	148.05	338	PKPbc	PKPbc	21 36 09.8	-0.1
3.0nm,0.4s,baz=20,slow=4.4,SNR=12							
NB2	NORSAR Subarra	151.98	350	PKP	PKPbc	21 36 19.8	+0.2
comp=Z,0.2nm,0.4s,baz=17,slow=2.6							
NB200	NORSAR Array S	151.98	350	ePKPbc	PKiKP	21 36 21.5	+1.5
NOA	NORSAR Array B	151.98	350	PKPbc	PKiKP	21 36 21.5	+1.5
comp=Z,1.0nm,0.8s,baz=13,slow=4.0,SNR=6.9							
BR101	Keskin Array S	153.42	292	ePKPbc	PKPbc	21 36 23.8	+0.2
BRTR	Keskin Array B	153.42	292	PKPbc	PKPbc	21 36 23.8	+0.2
comp=Z,1.6nm,0.8s,baz=133,slow=3.6,SNR=7.5							
AKASG	Malin Array Be	153.47	318	PKPbc	PKPbc	21 36 23.4	+0.2
comp=Z,1.1nm,0.5s,baz=55,slow=2.5,SNR=3.7							
TORD	Torodi Ar. Bea	159.43	181	PKPab	PKPab	21 37 02.3	+0.2
comp=Z,0.6nm,0.9s,baz=165,slow=4.0,SNR=3.0							
TOA1	Torodi Ar. Sit	159.44	181	ePKPab	PKPab	21 37 02.3	+0.2

IDC 04 21:29:56.6±4.6, 5°.85S×147°.62E, h216km±41km, mb3.5/2, mb1 3.7/4, mb1mx3.0/40, mbtmp4.0/4, Error ellipse: s-maj=78.5km s-min=44.2km az=124.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.56	187	P	Pn	21 30 54.4	+0.7
7.8nm,0.3s,baz=348,slow=9.3,SNR=12							
PMG				S	S	21 31 39.0	+0.5
14nm,0.3s,baz=19,slow=15,SNR=11							
WRA	Warramunga Arr	19.05	221	P	P	21 34 02.6	-0.3
1.4nm,0.3s,baz=49,slow=11,SNR=32							

ASAR	Alice Springs	22.09	215	P	P	21 34 35.2	+0.6
1.8nm,0.6s,baz=49,slow=8.5,SNR=25							
FITZ	Fitzroy Crossi	24.67	239	P	P	21 34 58.0	0.0
2.7nm,0.5s,baz=51,slow=10,SNR=11							
TORD	Torodi Ar. Bea	145.65	285	PKPbc	PKPdf	21 49 09.5	-0.8
0.2nm,0.8s,baz=64,slow=3.7,SNR=1.6							

*ISCJB **04** 21:31:29.5±0.5, 32°.70N±0°.03×76°.40E±0°.08, h14km, mb3.5/7, Error ellipse: s-maj=9.9km s-min=4.3km az=167.1*
*IDC **04** 21:31:29.8±1.3, 32°.75N×76°.25E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.3/43, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=26.8km s-min=23.4km az=39.0*
*NDI **04** 21:31:30.3±1.3, 32°.68N×76°.42E, h10km, ML3.2*

ISC 04 21:31:31.0±0.6, 32°.65N±0°.04×76°.48E±0°.08, h14km, n16, σ1°76/22, mb3.5/7, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	0.43	200	eP	Pg	21 31 38.2	-1.5
DHRM				eS	Sg	21 31 45.5	-0.1
DHRM				IAML		21 31 46.0	
comp=N,2μm,0.4s							
DHRM				IAML		21 31 46.6	
comp=E,3μm,0.2s							
SMLA	Simla	1.63	159	eP	Pn	21 31 59.8	+0.4
SMLA				eS	Sb	21 32 21.3	0.0
SMLA				IAML		21 32 23.5	
comp=N,544nm,0.2s							
SMLA				IAML		21 32 24.2	
comp=E,471nm,0.1s							
DDI	Dehra Dun	2.69	149	eS	Sn	21 32 47.3	+1.0
JOSI	Joshimath	3.36	128	eP	Pn	21 32 24.1	+0.8
JOSI				eS	Sn	21 33 02.9	-0.2
JOSI				IAML		21 33 20.4	
comp=E,163nm,0.6s							
JOSI				IAML		21 33 20.9	
comp=N,117nm,0.5s							
NDI	New Delhi	4.01	171	ex	Pg	21 32 46.5	-1.4
KUDL	Kundal	4.50	180	eP	Pn	21 32 39.6	+0.9
KUDL				eS	Sn	21 33 29.6	-1.2
KUDL				IAML		21 33 46.4	
comp=E,15nm,0.3s							
KUDL				IAML		21 33 47.4	
comp=N,15nm,0.5s							
AAK	Ala-Archa	10.09	352	Pn	Pn	21 33 59.3	+3.6
comp=N,0.4nm,0.3s,baz=170,slow=7.5,SNR=4.1							
AAK				Sn	Sn	21 35 49.5	+0.9
comp=N,0.2nm,0.3s,baz=221,slow=7.7,SNR=1.5							
MKAR	Makanchi Array	14.81	16	Pn	Pn	21 34 57.9	-2.0
comp=N,0.1nm,0.3s,baz=202,slow=11,SNR=6.0							
MKAR				Sn	Sn	21 37 39.5	-4.3
comp=N,0.1nm,0.3s,baz=192,slow=26,SNR=2.8							
BVAR	Borovoye Array	20.83	350	P	P	21 36 10.8	-1.3
comp=N,0.8nm,0.5s,baz=156,slow=11,SNR=6.5							
ZALV	Zalesovo Beam	22.10	13	P	P	21 36 25.9	+0.1
comp=N,0.9nm,0.5s,baz=216,slow=10,SNR=4.1							
AKTO	Aktyubinsk	22.40	328	P	P	21 36 28.3	-0.7
comp=N,1.1nm,0.5s,baz=124,slow=13,SNR=4.8							
CMAR	Chiang Mai Arr	24.64	120	P	P	21 36 54.2	+2.9
comp=N,1.1nm,0.9s,baz=304,slow=9.7,SNR=5.3							
SONM	Songino Array	27.20	47	P	P	21 37 16.2	+1.9
comp=N,0.3nm,0.4s,baz=260,slow=8.6,SNR=2.1							
FINES	FINESS Array B	43.17	327	P	P	21 39 30.6	-0.4
comp=N,0.5nm,0.5s,baz=111,slow=7.6,SNR=4.9							
ARCES	ARCESS Array B	46.41	338	P	P	21 39 56.4	-0.3
comp=N,1.4nm,0.7s,baz=111,slow=6.6,SNR=8.0							
TORD	Torodi Ar. Bea	70.30	273	P	P	21 42 43.9	-0.5
comp=N,0.7nm,1.2s,baz=43,slow=4.8,SNR=2.6							

RSNC 04 21:32:53.3±1.3, 6°.81N×73°.11W, h139km±5km, ML3.1, Mw3.5, 4C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.23	198	⇓iP	Pn	21 33 12.3	-0.3
BARC				i		21 33 12.8	
comp=Z,178nm,0.1s							
BARC				eS	Sn	21 33 26.7	-0.7
GIRC	Giron, Santand	0.28	343	⇑iP	Pn	21 33 12.4	-0.3
GIRC				eS	Sn	21 33 27.0	-0.5
BRRC	Barranca, Sant	0.67	297	⇑iP	Pn	21 33 14.1	-0.3
BRRC				i		21 33 14.5	
comp=Z,242nm,0.2s							
BRRC				eS	Sn	21 33 30.7	+0.2
RUSC	La Rusia	0.91	178	⇑iP	Pn	21 33 16.4	-0.4
RUSC				eS	Sn	21 33 34.2	-0.6
RUSC				i		21 33 35.9	
comp=E,156nm,0.5s							
GRMC	Gramalote, San	0.95	19	⇑iP	Pn	21 33 18.1	+1.2
GRMC				eS	Sn	21 33 37.0	+2.2
GRMC				i		21 33 39.5	
comp=Z,142nm,0.4s							
CAPV	Capacho	1.32	37	eP	Pn	21 33 20.3	-0.1
CAPV				eS	Sn	21 33 40.5	-0.5
PTBC	PUERTO BERRIO,	1.36	259	eP	Pn	21 33 18.6	-2.0
PTBC				eS	Sn	21 33 39.7	-1.7
PTBC				i		21 33 42.6	
comp=E,232nm,0.3s							
TAMC	Tame, Arauca	1.36	106	⇓iP	Pn	21 33 20.8	+0.1
TAMC				i		21 33 20.9	
comp=Z,95nm,0.2s							
TAMC				eS	Sn	21 33 41.6	+0.1
OCAC	Ocana	1.44	352	eP	Pn	21 33 20.4	-1.2
OCAC				eS	Sn	21 33 41.5	-1.7
OCAC				i		21 33 42.9	
comp=E,376nm,0.2s							
YOPC	Yopal, Colombi	1.60	154	eP	Pn	21 33 22.9	-0.4
YOPC				eS	Sn	21 33 45.2	-1.0
ZARC	Zaragoza, Cauc	1.86	292	eP	Pn	21 33 25.3	-0.9
ZARC				eS	Sn	21 33 50.7	-0.6
ZARC				i		21 33 56.8	
comp=E,455nm,0.2s							
AGZ	La Independenc	1.97	161	eP	Pn	21 33 26.5	-1.0
NORC	Norcasia	2.14	235	eP	Pn	21 33 28.9	-0.6
NORC				eS	Sn	21 33 56.4	-1.0
NORC				i		21 33 58.8	
comp=E,175nm,0.2s							
SMLC	San Martn de	2.20	334	eP	Pn	21 33 28.2	-2.0
SMLC				eS	Sn	21 33 56.2	-2.3
CHIC	Chingaza	2.25	196	eP	Pn	21 33 30.8	-0.4
CHIC				eS	Sn	21 34 00.4	0.0
CHIC				i		21 34 03.4	
comp=N,68nm,0.3s							
HELC	Santa Helena	2.48	256	eP	Pn	21 33 33.7	-0.3
HELC				eS	Sn	21 34 05.2	-0.1
HELC				i		21 34 11.7	
comp=N,57nm,0.3s							
UREC	San Jos de Ur	2.58	291	eP	Pn	21 33 36.7	+1.8
SOCV	Socops	2.67	57	⇓iP	Pn	21 33 34.9	-1.3
SOCV				eS	Sn	21 34 06.3	-2.9
GUY2C	Guyana, Caldas	2.74	235	eP	Pn	21 33 37.1	-0.3
GUY2C				eS	Sn	21 34 10.5	-0.7
GUY2C				i		21 34 18.4	
comp=N,62nm,0.6s							
VILC	Villavicencio,	2.74	192	eP	Pn	21 33 36.8	-0.3
VILC				eS	Sn	21 34 10.9	0.0
RREF	El Recreo	2.92	230	eP	Pn	21 33 38.9	-1.0
RREF				eS	Sn	21 34 15.4	-0.2
RREF				i		21 34 21.8	
comp=Z,38nm,0.3s							
CODC	Agustn Codazz	3.12	354	eP	Pn	21 33 39.8	-2.1
SDV	Santo Domingo	3.21	50	eP	Pn	21 33 42.0	-1.1
SDV				eS	Sn	21 34 19.0	-2.7
PRAC	Prado	3.54	210	eP	Pn	21 33 46.1	-1.3
PRAC				eS	Sn	21 34 27.7	-1.6
PRAC				i		21 34 36.5	
comp=E,43nm,0.3s							
VIRV	Villa del Rosa	3.74	11	eP	Pn	21 33 47.2	-2.7

WEL 04 21:51:11.6±0.4, 37°S±2°×17°6E±°, h5km, M3.4/19, ML3.6/13, MLv3.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=50.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZ	Kuaotunu	0.28	353	P	Pg	21 51 17.7	+0.6
KUZ				S	Sg	21 51 21.6	+0.8
MKAZ	Moumakai	0.49	261	P	Pg	21 51 21.4	+0.5
MKAZ				S	Sg	21 51 28.2	+0.9
WIAZ	Waiheke Island	0.56	295	P	Pg	21 51 22.8	+0.5
WIAZ				S	Sg	21 51 30.3	+0.8
ETAZ	East Tamaki Re	0.67	276	P	Pg	21 51 25.0	+0.4
ETAZ				S	Sg	21 51 34.1	+0.8
KBAZ	Karaka Road Bo	0.70	264	P	Pb	21 51 25.8	-0.5
KBAZ				S	Sg	21 51 34.8	+0.6
TOZ	Tahuroa Road	0.73	196	P	Pg	21 51 25.5	-0.2
TOZ				S	Sb	21 51 36.2	-1.0
MBAZ	Motutapu North	0.74	290	P	Pg	21 51 26.1	+0.3
MBAZ				S	Sg	21 51 36.3	+0.9
TGRZ	Tauranga	0.81	151	P	Pg	21 51 27.4	+0.3
TGRZ				S	Sg	21 51 38.1	+0.5
GRZ	Great Barrier	0.81	342	P	Pg	21 51 27.3	+0.2
GRZ				S	Sg	21 51 38.5	+0.7
EPAZ	Eden Park BICE	0.83	280	P	Pb	21 51 28.0	-0.5
EPAZ				S	Sb	21 51 39.2	-0.7
KMRZ	Kaimai	0.83	170	P	Pg	21 51 28.0	+0.4
KMRZ				S	Sb	21 51 39.3	-0.8
HBAZ	Herne Bay Bore	0.85	282	P	Pg	21 51 28.3	+0.4
HBAZ				S	Sg	21 51 39.6	+0.8
ABAZ	Army Bay	0.86	299	P	Pg	21 51 28.5	+0.5
ABAZ				S	Sb	21 51 40.2	-0.6
AWAZ	Awhitu Peninsu	0.90	267	P	Pb	21 51 29.3	-0.3
AWAZ				S	Sb	21 51 41.8	-0.1
WTAZ	Waiatarua	0.96	275	P	Pb	21 51 30.6	-0.1
RVAZ	Riverhead Bore	0.98	285	P	Pg	21 51 30.6	+0.2
RVAZ				S	Sb	21 51 44.1	-0.2
OPRZ	Ohinepanea	1.03	143	P	Pb	21 51 31.8	-0.1
KARZ	Kaharoa	1.06	159	P	Pg	21 51 31.3	-0.7
NGRZ	Ngongotaha	1.12	163	P	Pg	21 51 33.3	+0.1
OMRZ	Omania	1.18	156	P	Pg	21 51 34.2	-0.1
UTU	Utuhina	1.20	164	P	Pn	21 51 35.0	0.0
MARZ	Manawahe	1.20	143	P	Pn	21 51 35.2	+0.1
MKRZ	Makatiti	1.24	153	P	Pn	21 51 36.1	+0.3
TLZ	Tolley Road	1.31	188	P	Pn	21 51 36.2	-0.5
GRRZ	Galatos Road	1.35	168	P	Pn	21 51 36.6	-0.6
WCZ	Waipu Caves	1.58	313	P	Pn	21 51 38.6	-1.6
HIZ	Hauiti	1.65	206	P	Pn	21 51 39.6	-1.6
OUZ	Omahuta	2.52	315	P	Pn	21 51 52.0	-1.1

*ISCJB **04** 21:54:19.4±1.0, 28°.24S±0°.09×179°.9E±0°.2, h450km, mb3.7/6, Error ellipse: s-maj=22.1km s-min=12.1km az=169.5*
*IDC **04** 21:54:19.9±4.5, 28°.29S×179°.97W, h454km±45km, mb3.3/6, mb1 3.4/8, mb1mx3.2/34, mbtmp4.3/8, Error ellipse: s-maj=37.6km s-min=22.8km az=50.0*

ISC 04 21:54:19.8±0.9, 28°.35±0°.1×180°.0E±0°.2, h450km, n21, σ0°85/21, mb3.6/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	10.26	193	P	P	21 56 40.4	+0.8
4.5nm,0.3s,baz=309,slow=3.1,SNR=11							
URZ				S	S	21 58 33.8	-1.0
1.4nm,0.3s,baz=337,slow=9.6,SNR=3.3							
RPZ	Rata Peaks	17.01	203	P	P	21 57 51.1	-1.0
0.8nm,0.3s,baz=6.5,slow=10,SNR=3.8							
CTA	Charters Tower	31.72	277	P	P	22 00 05.8	+0.5
1.6nm,0.3s,baz=94,slow=8.9,SNR=3.9							
STKA	Stephens Creek	33.28	254	P	P	22 00 18.7	+0.2
0.8nm,0.3s,baz=100,slow=15,SNR=4.0							
ASAR	Alice Springs	41.47	265	P	P	22 01 26.4	+0.2
0.9nm,0.5s,baz=115,slow=7.2,SNR=8.4							
WRA	Warramunga Arr	42.25	271	P	P	22 01 32.2	-0.2
0.9nm,0.3s,baz=140,slow=52,SNR=4.1							
MAW	Mawson	73.68	201	P	P	22 05 06.5	+0.4
0.7nm,0.5s,baz=4.4,slow=14,SNR=1.7							
SNAA	Sanae	80.33	179	P	P	22 05 43.2	+0.6
VNA3	Neumayer Olymp	80.55	177	P	P	22 05 44.3	+0.6
VNA2	Neumayer--Watz	80.97	178	P	P	22 05 46.8	+0.9
baz=187,slow=4.7							
VNA1	Neumayer--Stat	81.20	177	P	P	22 05 47.9	+0.9
PETK	Petropavlovsk-	83.31	347	P	P	22 05 57.6	-0.2
2.1nm,0.6s,baz=119,slow=7.0,SNR=6.2							
MKAR	Makanchi Array	115.02	311	PKP	PKPdf	22 12 07.1	-1.5
0.2nm,0.4s,baz=117,slow=0.3,SNR=6.1							
ARU	Arti	130.30	322	PKP	PKPdf	22 12 37.6	+0.1
0.7nm,0.4s,baz=90,slow=10							
ARCES	ARCESS Array B	136.11	347	PKP	PKPdf	22 12 47.1	-1.0
7.9nm,0.3s,baz=38,slow=4.6,SNR=3.3							
FINES	FINESS Array B	142.52	340	PKhKP	PKPpre	22 12 55.6	
1.2nm,0.5s,baz=47,slow=3.0,SNR=12							
NB2	NORSAR Subarra	146.35	350	PKP	PKPdf	22 13 07.7	+1.1
comp=Z,1.1nm,0.5s,baz=25,slow=3.3							
NOA	NORSAR Array B	146.35	350	PKPbc	PKPdf	22 13 07.7	+1.1
comp=Z,1.3nm,0.5s,baz=14,slow=4.3,SNR=5.8							
AKASG	Malin Array Be	148.51	323	PKPbc	PKPbc	22 13 14.2	-0.4
comp=Z,3.8nm,0.4s,baz=42,slow=3.3,SNR=13							
BRTR	Keskin Array B	149.98	301	PKPbc	PKPbc	22 13 18.6	-0.2
comp=Z,0.4nm,0.4s,baz=252,slow=1.9,SNR=4.6							
TORD	Torodi Ar. Bea	164.88	187	PKPab	PKPab	22 14 29.7	-1.2
comp=Z,0.4nm,0.6s,baz

LOF	Lofoten	5.43	140	eP	Pn	22 14 00.6 +1.3
LOF				eS	Sn	22 15 01.3 -0.5
LOF				IAML		22 15 05.4
	comp=Z,11nm,0.5s					
TRO	Tromso	5.60	114	eP	Pn	22 14 02.9 +1.2
STEI	Steigen	5.95	136	eP	Pn	22 14 08.2 +1.8
STEI				eS	Sn	22 15 12.6 -1.8
SPA0	Spitsbergen Ar	6.44	23	Pn	Pn	22 14 12.6 -0.6
	baz=211,slow=16					
SPA0	Spitsbergen Ar	6.44	23	Pn	Pn	22 14 12.6 -0.6
	baz=211,slow=16					
SPITS	Spitsbergen Ar	6.44	23	Pn	Pn	22 14 12.8 -0.4
	baz=210,slow=16,SNR=30					
HAMF	Hammerfest	6.45	98	eP	Pn	22 14 13.2 -0.2
KIF	Kilpisjarvi	6.52	115	eP	Pn	22 14 15.8 +1.5
KBS	Kingsbay	6.70	13	Pn	Pn	22 14 14.2 -2.6
KBS	Kingsbay	6.70	13	eP	Pn	22 14 14.2 -2.6
KONS	Konsvik	6.81	148	eP	Pn	22 14 20.2 +1.8
KONS				eS	Sn	22 15 30.7 -5.1
SALU	Saltoluokta	7.12	129	eP	Pn	22 14 24.6 +2.1
KTK1	Kautokeino	7.19	110	eP	Pn	22 14 25.4 +1.9
MOR8	Moi Rana	7.33	145	eP	Pn	22 14 27.4 +1.9
DAG	Danmarks Havn	7.35	316	⇑iP	Pn	22 14 18.8 -6.9
DAG				i S	Sn	22 15 31.6 -17
ARA0	ARCESS Array S	7.55	103	Pn	Pn	22 14 29.0 +0.6
	baz=307,slow=11					
ARA0				Sn	Sn	22 15 52.6 -1.2
	baz=302,slow=22					
ARA0	ARCESS Array S	7.55	103	Pn	Pn	22 14 29.0 +0.6
	baz=307,slow=11					
ARA0				Sn	Sn	22 15 52.6 -1.2
	baz=302,slow=22					
ARCES	ARCESS Array B	7.55	103	Pn	Pn	22 14 29.0 +0.6
	comp=Z,1.5nm,0.3s,baz=310,slow=11,SNR=28					
ARCES				Sn	Sn	22 15 52.7 -1.1
	comp=Z,1.0nm,0.3s,baz=308,slow=18,SNR=3.3					
ARE0	ARCESS Array S	7.55	103	eP	Pn	22 14 29.0 +0.7
HEF	Hetta	7.70	113	eP	Pn	22 14 31.9 +1.4
KEV	Kevo	7.87	100	eP	Pn	22 14 33.1 +0.2
NSS	Namsos	8.52	157	eP	Pn	22 14 44.0 +2.3
AKN	Aaknes	10.45	173	Pn	Pn	22 15 09.7 +1.4
AKN	Aaknes	10.45	173	Pn	Pn	22 15 09.7 +1.4
AKN				eP	Pn	22 15 09.7 +1.4
NB2	NORSAR Subarra	11.86	163	Pn	Pn	22 15 29.4 +2.0
	baz=344,slow=14					
NB2	NORSAR Subarra	11.86	163	Pn	Pn	22 15 29.4 +2.0
	baz=344,slow=14					
NOA	NORSAR Array B	11.86	163	Pn	Pn	22 15 29.1 +1.7
	comp=Z,0.0nm,0.3s,baz=349,slow=14,SNR=3.9					
NOA				LR	LR	22 20 02.2
	comp=Z,68nm,19.1s,baz=350,slow=38					
NRA0	NORESS Array S	12.19	163	Pn	Pn	22 15 32.8 +0.9
	baz=338,slow=16					
NRA0	NORESS Array S	12.19	163	Pn	Pn	22 15 32.8 +0.9
	baz=338,slow=16					
HFS	Hagfors	12.99	158	Pn	Pn	22 15 43.9 +1.0
	comp=Z,0.4nm,0.3s,baz=347,slow=12,SNR=15					
HFS				Sn	Sn	22 18 01.4 -5.9
	comp=Z,0.2nm,0.3s,baz=353,slow=23,SNR=5.4					
HFS				LR	LR	22 20 27.3
	comp=Z,123nm,18.5s,baz=338,slow=36					
HFS	Hagfors	12.99	158	Pn	Pn	22 15 43.7 +0.8
	baz=347,slow=12					
HFS	Hagfors	12.99	158	Pn	Pn	22 15 43.7 +0.8
	baz=347,slow=12					
FIA0	FINESS Array S	13.91	132	Pn	Pn	22 15 56.2 +0.9
	baz=336,slow=12					
FIA0	FINESS Array S	13.91	132	Pn	Pn	22 15 56.2 +0.9
	baz=336,slow=12					
FINES	FINESS Array B	13.91	132	Pn	Pn	22 15 56.1 +0.8
	comp=Z,0.3nm,0.3s,baz=343,slow=12,SNR=19					
FINES				LR	LR	22 20 58.6
	comp=Z,214nm,18.6s,baz=322,slow=36					
LSH	Leshukonskoye	16.55	96	eP	Pn	22 16 26.5 -3.8
	comp=Z,39nm,2.3s					
EKA	Eskdalemuir Ar	17.54	194	P	Pn	22 16 42.2 -0.5
	baz=8.9,slow=11,SNR=6.6					
KLMR	Klimovskoe	17.85	112	eP	P	22 16 48.2 +1.0
AMDE	Amderma	18.16	70	eP	P	22 16 51.6 +1.0
	comp=Z,2.0nm,1.1s					
SFJD	Kangerlussuaq	19.09	281	LR	LR	22 23 24.9
	comp=Z,145nm,18.2s,baz=359,slow=34					
OBN	Obninsk	22.06	125	P	P	22 17 35.5 +2.5
	comp=Z,2.1nm,0.5s,baz=172,slow=13,SNR=3.2					
OBN				LR	LR	22 25 54.0
	comp=Z,46nm,19.8s,baz=348,slow=36					
KIRV	Kirov	22.56	104	LR	LR	22 26 18.6
	comp=Z,80nm,20.6s,baz=185,slow=36					
VRAC	Vranov	23.96	160	LR	LR	22 27 28.0
	comp=Z,62nm,18.7s,baz=348,slow=37					
GERES	GERESS Array B	24.15	164	P	P	22 17 56.0 +1.5
	comp=Z,0.4nm,0.6s,baz=354,slow=7.9,SNR=4.7					
AKASG	Malin Array Be	24.53	140	P	P	22 17 58.1 +0.4
	comp=Z,0.4nm,0.4s,baz=340,slow=9.6,SNR=5.3					
AKASG				LR	LR	22 27 31.4
	comp=Z,150nm,18.9s,baz=335,slow=36					
RES	Resolute Bay	24.99	322	LR	LR	22 27 48.3
	comp=Z,101nm,18.9s,baz=326,slow=36					
FRB	Frobisher Bay	26.65	289	LR	LR	22 28 03.0
	comp=Z,57nm,18.4s,baz=352,slow=35					
MLR	Muntele Rosu	28.97	147	LR	LR	22 30 18.2
	comp=Z,72nm,22.0s,baz=298,slow=37					
ESDC	Sonseca Array	33.18	192	P	P	22 19 16.2 +1.3
	comp=Z,0.2nm,0.5s,baz=3.8,slow=8.5,SNR=3.4					
KBZ	Khabaz	34.16	126	P	P	22 19 25.3 +2.0
	comp=Z,1.3nm,0.7s,baz=325,slow=12,SNR=3.4					
KBZ				LR	LR	22 33 25.6
	comp=Z,104nm,19.2s,baz=328,slow=36					
BRTR	Keskin Array B	35.94	140	P	P	22 19 40.6 +1.8
	comp=Z,0.2nm,0.4s,baz=344,slow=8.5,SNR=2.8					
BRTR				LR	LR	22 34 34.8
	comp=Z,28nm,19.7s,baz=56,slow=37					
ZALV	Zalesovo Beam	37.07	75	LR	LR	22 38 33.3
	comp=Z,11nm,20.9s,baz=68,slow=42					
YKA	Yellowknife Ar	39.03	320	P	P	22 20 06.0 +1.3
	comp=Z,0.4nm,0.6s,baz=32,slow=9.5,SNR=3.0					
YKA				LR	LR	22 35 46.6
	comp=Z,7.0nm,18.8s,baz=24,slow=36					
ILAR	Eielson Array	41.58	342	P	P	22 20 26.7 +1.0
	comp=Z,0.5nm,0.9s,baz=8.9,slow=6.4,SNR=4.0					
GEYT	Alibeck	43.60	112	LR	LR	22 39 32.6
	comp=Z,41nm,19.6s,baz=70,slow=37					
ULM	Lac du Bonnet	45.81	298	LR	LR	22 39 57.6
	comp=Z,83nm,18.1s,baz=27,slow=36					
PDAR	Pinedale Array	56.26	306	P	P	22 22 19.1 +0.3
	comp=Z,0.2nm,0.3s,baz=28,slow=4.1,SNR=2.8					
TORD	Torodi Ar. Bea	59.38	183	P	P	22 22 41.2 +0.6
	comp=Z,0.5nm,0.9s,baz=1.0,slow=8.6,SNR=3.1					
TXAR	Lajitas Array	67.43	296	P	P	22 23 33.4 -0.6
	comp=Z,0.3nm,0.6s,baz=57,slow=4.6,SNR=5.9					

*MAN **04** 22:13:47.7, 11°.48N×125°.75E, h18km, mb5.5, ML4.5, MS4.8*
MAN INTENSITY IV - LLORENTE EASTERN SAMAR; INTENSITY III - BORONGAN EASTERN SAMAR; INTENSITY II - MERCEDES ORAS DOLORES SAN POLICARPO EASTERN SAMAR; TACLOBAN CITY; INTENSITY I - PALO LEYTE.
*ISCJB **04** 22:13:49.3±0.5, 11°.48N±0°.02×125°.69E±0°.05, h53km±4km, mb4.2/40, MS3.4/14, Error ellipse: s-maj=7.9km s-min=4.0km az=173.0*
*NEIC **04** 22:13:51.6±2.9, 11°.42N×125°.62E, h60km±6km, mb4.4/34, Error ellipse: s-maj=19.0km s-min=13.8km az=82.0*
NEIC Felt [IV PIVS] at Llorente, [III PIVS] at Borongan and [II PIVS] at Dolores, Mercedes, Oras and San Policarpo. Also felt [II PIVS] at Tacloban and [I PIVS] at Palo, Leyte.
*IDC **04** 22:13:51.7±1.7, 11°.34N×125°.71E, h60km±14km, mb3.8/21, mb1 3.9/22, mb1mx3.8/41, mbtmp4.1/22, MS3.5/16, Ms1 3.5/16, ms1mx3.3/41, Error ellipse: s-maj=19.7km s-min=11.0km az=80.0*

ISC 04 22:13:50.6±0.7, 11°.42N±0°.03×125°.54E±0°.05, h49km±5km, n150, σ2.6 45/164, mb4.2/40, MS3.4/14, 6C-4D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.20	332	eP	Pn	22 13 58.0	-0.9
BESP				eS	Sn	22 14 04.0	-0.8
PLP	Palo	0.60	245	⇓eP	Pn	22 14 02.9	-0.3
PLP				i S	Sn	22 14 12.4	+0.3
OCLP	Ormoc	0.98	248	eP	Pn	22 14 08.7	+0.6
OCLP				eS	Sn	22 14 23.4	+2.5
OCLP	Ormoc	0.98	248	eP	Pn	22 14 09.0	+0.9
OCLP				eS	Sn	22 14 25.7	+4.7
OCLP	Ormoc	0.98	248	eP	Pn	22 14 09.0	+0.9
OCLP				eS	Sn	22 14 24.1	+3.2
CNP	Catarman	1.38	322	eP	Pn	22 14 13.5	0.0
CNP				eS	Sn	22 14 32.4	+1.8
CNP	Catarman	1.38	322	eP	Pn	22 14 13.9	+0.4
CNP				eS	Sn	22 14 32.6	+2.0
CNP	Catarman	1.38	322	eP	Pn	22 14 14.6	+1.1
MSLP	Maasin	1.44	208	eP	Pn	22 14 14.8	+0.5
MSLP				eS	Sn	22 14 35.8	+3.7
MSLP	Maasin	1.44	208	eP	Pn	22 14 15.5	+1.2
MSLP				eS	Sn	22 14 35.8	+3.7
MSLP	Maasin	1.44	208	eP	Pn	22 14 15.6	+1.2
MSLP				eS	Sn	22 14 35.8	+3.7
SCPH	Surigao	1.63	182	⇑iP	Pn	22 14 24.7	+7.8
SCPH				i S	Sn	22 14 42.9	+6.2
LLP	Lapu-Lapu	1.89	235	⇓eP	Pn	22 14 21.7	+1.2
LLP				eS	Sn	22 14 41.8	-1.4
MMPH	Masbate	2.09	297	⇑iP	Pn	22 14 25.9	+2.7
MMPH				i S	Sn	22 14 54.1	+6.0
TBP	Tagbilaran	2.38	224	eP	Pn	22 14 28.7	+1.5
BUTP	Butuan	2.44	178	eP	Pn	22 14 28.2	+0.2
BUTP				eS	Sn	22 15 02.3	+5.7
BUTP	Butuan	2.44	178	eP	Pn	22 14 28.2	+0.2
BUTP				eS	Sn	22 15 02.4	+5.7
BUTP	Butuan	2.44	178	eP	Pn	22 14 28.5	+0.5
BUTP				eS	Sn	22 15 02.4	+5.7
PVCP	Virac	2.55	328	eP	Pn	22 14 30.7	+1.2
PVCP				eS	Sn	22 15 07.5	+8.2
PVCP	Virac	2.55	328	eP	Pn	22 14 32.1	+2.6
PVCP				eS	Sn	22 15 07.7	+8.4
PVCP	Virac	2.55	328	eP	Pn	22 14 34.3	+4.8
PVCP				eS	Sn	22 15 09.2	+10
CGP	Cagayan de Oro	3.06	196	⇓eP	Pn	22 14 38.7	+2.1
CGP				eS	Sn	22 15 13.8	+1.8
SNPH	Sibulan	3.06	228	eP	Pn	22 14 36.2	-0.4
DCPH	Dipolog City	3.55	218	⇑eP	Pn	22 14 48.5	+5.2
DCPH				eS	Sn	22 15 29.8	+5.9
BUKP	Musuan	3.55	188	eP	Pn	22 14 44.1	+0.8
BUKP				eS	Sn	22 15 28.3	+4.2
BUKP	Musuan	3.55	188	eP	Pn	22 14 44.3	+1.0
BUKP				eS	Sn	22 15 27.7	+3.6
BUKP	Musuan	3.55	188	eP	Pn	22 14 44.4	+1.0
BUKP				eS	Sn	22 15 28.3	+4.2
OTRP	Odiongan	3.56	286	eP	Pn	22 14 44.7	+1.2
OTRP	Odiongan	3.56	286	eP	Pn	22 14 44.7	+1.2
OTRP	Odiongan	3.56	286	eP	Pn	22 14 45.4	+1.9
JAP	San Jose, Anti	3.59	260	⇑eP	Pn	22 14 49.9	+6.1
PAGZ	Pagadian	4.14	211	eP	Pn	22 14 51.6	+0.3
PAGZ	Pagadian	4.14	211	eP	Pn	22 14 53.6	+2.2
DAV	Davao City (W)	4.32	179	ePn	Pn	22 15 01.6	+7.7
CTBH	Cotabato--PC H	4.36	197	⇑iP	Pn	22 14 56.3	+1.9
SJMP	San Jose	4.44	284	eP	Pn	22 14 57.7	+2.2
SJMP				eS	Sn	22 15 23.6	-22
SJMP	San Jose	4.44	284	eP	Pn	22 14 57.9	+2.3
SJMP				eS	Sn	22 15 23.7	-22
SJMP	San Jose	4.44	284	eP	Pn	22 15 24.2	+29
SJMP				eS	Sn	22 15 40.6	-5.4
MATI	Mati	4.50	171	eP	Pn	22 14 57.0	+0.6
MATI				eS	Sn	22 16 00.3	+13
MATI	Mati	4.50	171	eP	Pn	22 14 57.0	+0.6
MATI				eS	Sn	22 15 46.2	-1.3
POLP	Polilio Island	4.80	314	eP	Pn	22 15 03.5	+3.1
POLP	Polilio Island	4.80	314	eP	Pn	22 15 03.8	+3.4
POLP				eS	Sn	22 16 05.2	+10
POLP	Polilio Island	4.80	314	eP	Pn	22 15 04.4	+3.9
POLP				eS	Sn	22 16 05.1	+10
PGP	Puerto Galera	4.93	295	⇓eP	Pn	22 15 16.7	+14
PGP				i S	Sn	22 15 28.6	-29
TGY	Tagaytay City	5.22	301	P	Pn	22 15 10.8	+4.5
	45nm,0.3s,baz=326,slow=11,SNR=6.9					
TGY				LR	LR	22 17 29.7
	comp=Z,1μm,20.1s,baz=128,slow=40					
LUBP	Lubang	5.65	295	eP	Pn	22 15 14.6	+2.5
LUBP				eS	Sn	22 15 29.9	-46
LUBP	Lubang	5.65	295	eP	Pn	22 15 18.1	+5.9
LUBP				eS	Sn	22 15 31.2	-45
LUBP	Lubang	5.65	295	eP	Pn	22 15 18.2	+6.1
LUBP				eS	Sn	22 15 31.6	-44
BALP	Baler	5.77	319	eP	Pn	22 15 13.9	+0.2
BALP				eS	Sn	22 16 12.2	-6.5
BALP	Baler	5.77	319	eP	Pn	22 15 14.1	+0.4
BALP				eS	Sn	22 16 13.1	-5.5
BALP	Baler	5.77	319	eP	Pn	22 15 14.2	+0.5
BALP				eS	Sn	22 16 12.1	-6.5
CAUP	Cauayan	6.56	327	eP	Pn	22 15 25.7	+1.1
CAUP				eS	Sn	22 16 37.3	-0.9
CAUP	Cauayan	6.56	327	eP	Pn	22 15 26.5	+1.9
SMPP	San Manuel, Pa	6.66	315	eP	Pn	22 15 27.2	+1.2
SMPP	San Manuel, Pa	6.66	315	eP	Pn	22 15 27.5	+1.5
SMPP	San Manuel, Pa	6.66	315	eP	Pn	22 15 28.0	+2.0
APYP	Conner	7.63	328	eP	Pn	22 15 33.6	-5.7
APYP				eS	Sn	22 17 04.1	-0.3
KKM	Kota Kinabalu	10.65	241	ePn	Pn	22 16 26.0	+5.3
YULB	Yu-li	12.57	342	ePn	Pn	22 16 51.7	+4.8
LUWI	Luwuk	12.68	193	ePn	Pn	22 16 51.6	+3.2
SBUM	Sibu	15.93	237	ePn	P	22 17 36.5	+1.9
	19nm,0.9s					
DLV	T Lat	16.71	273	ePn	P	22 17 42.8	-0.6
	9.0nm,1.1s					
KAPI	Kappang	17.31	200	P	P	22 17 50.7	+0.9
	1.6nm,0.3s,baz=37,slow=20,SNR=1.9					
KAPI	Kappang	17.31	200	ePn	Pn	22 17 44.6	-4.4
KSM	Kuching	18.06	238	eP	P	22 17 55.2	-2.9
	7.6nm,1.0s					
GUMO	Guam	19.00	81	LR	LR	22 24 10.6
	comp=Z,176nm,20.2s,baz=242,slow=33					
MMRI	Maumere	20.19	189	eP	P	22 18 18.7	-2.7
	21nm,1.0s					
JAY	Jayapura	20.48	132	LR	LR	22 25 39.4
	comp=Z,169nm,21.7s,baz=330,slow=35					
BATI	Baumata	21.57	185	P	P	22 18 36.7	+0.4
	20nm,0.8s,baz=30,slow=18,SNR=3.1					
BATI				LR	LR	22 29 03.5
	comp=Z,128nm,18.0s,baz=272,slow=42					
BATI	Baumata	21.57	185	eP	P	22 18 36.7	+0.4
JNU	Nakatsue	22.15	12	LR	LR	22 26 41.4
	comp=Z,51nm,19.6s,baz=180,slow=35					
MYKOM	Kota Tinggi	23.55	248	eP	P	22 18 58.2	+1.4
	13nm,1.0s					
MTN	Manton Dam	24.74	167	eP	P	22 19 07.0	-0.7
	5.8nm,0.8s					
NANT	Nan	25.05	290	P	P	22 19 12.2	+1.6
KULM	Kulim	25.35	258	eP	P	22 19 15.8	+2.4
	15nm,1.1s					
PHRA	Phrae	25.42	289	P	P	22 19 15.0	+1.1
	1.4nm,1.0s,524nm					
PHRA	Phrae	25.42	289	P	P	22 19 15.0	+1.1
LEM	Lembang	25.43	225	LR	LR	22 28 57.2
	comp=Z,151nm,20.9s,baz=10.0,slow=36					
KS15	Wonju Array Si	26.00	4	eP	P	22 19 18.7	-0.2
	3.3nm,0.9s					
KSRS	Korea Array	26.01	4	P	P	22 19 19.9	+1.0
	2.6nm,1.0s,baz=181,slow=10.0,SNR=10					
KSRS				LR	LR	22 29 00.8
	comp=Z,42nm,21.4s,baz=208,slow=35					
CM31	Chiang Mai Arr	26.61	288	eP	P	22 19 25.6	+0.9
	13nm,1.1s					
CM31				eScP	ScP	22 26 24.2	+0.1
CMAR	Chiang Mai Arr	26.61	288	P	P	22 19 25.8	+1.1
	4.8nm,0.9s,baz=99,slow=7.2,SNR=20					
CMAR				ScP	ScP	22 26 24.2	+0.1
	0.5nm,0.3s,baz=118,slow=2.4,SNR=4.1					
CMAR				LR	LR	22 29 21.5
	comp=Z,124nm,19.2s,baz=141,slow=35					
CHTO	Chiang Mai	26.68	289	eP	P	22 19 24.3	-1.0
	3.1nm,0.9s					
XAN	Xi'an	27.15	329	eP	P	22 19 27.1	-2.3
	4.4nm,0.5s					
MAJO	Matsushiro	27.50	22	eP	P	22 19 31.2	-1.3
MJAR	Matsushiro Arr	27.50	22	P	P	22 19 31.2	-1.3
	1.1nm,0.7s,baz=187,slow=8.8,SNR=5.1					
MJAR				LR	LR	22 28 50.7
	comp=Z,102nm,21.0s,baz=220,slow=33					
FITZ	Fitzroy Crossi	29.33	180	P	P	22 19 47.5	-1.4
	2.3nm,0.4s,baz=4.8,slow=8.9,SNR=15					
FITZ	Fitzroy Crossi	29.33	180	eP	P	22 19 47.5	-1.4
	7.1nm,1.0s					
GSI	Gunungsitoli	29.51	252	eP	P	22 19 50.0	-0.6
	14nm,1.0s					
BJT	Baijiatuau	29.67	345	eP	P	22 19 49.4	-2.3
	3.6nm,0.6s					
PMG	Port Moresby	29.84	133	LR	LR	22 32 12.5
	comp=Z,65nm,19.4s,baz=313,slow=37					
USRK	Ussuriysk Ar.	33.13	9	P	P	22 20 23.5	+1.4
	2.5nm,0.8s,baz=158,slow=7.8,SNR=5.6					
SHL	Shillong	34.76	299	eP	P	22 20 34.5	-2.3
	5.8nm,0.7s					
AS31	Alice Springs	35.82	167	eP	P	22 20 44.1	-1.5
	1.5nm,1.0s					
ASAR	Alice Springs	35.82	167	P	P	22 20 44.1	-1.5
	1.5nm,0.5s,baz=345,slow=7.4,SNR=14					
ASAR				PcP	PcP	22 23 11.6	-0.9
	1.2nm,0.9s,baz=345,slow=3.3,SNR=3.5					
ASAR				ScP	ScP	22 26 52.1	-2.6
	1.0nm,0.9s,baz=321,slow=2.4,SNR=6.1					
ASAR				LR	LR	22 37 00.5
	comp=Z,58nm,19.9s,baz=352,slow=39					
SONA0	Songino Array	39.70	340	eP	P	22 21 19.4	+1.1
SONA0				eScP	ScP	22 27 08.4	-0.7
SONM	Songino Array	39.70	340	P	P	22 21 19.3	+1.1
	0.6nm,0.6s,baz=141,slow=7.6,SNR=4.2					
SONM				ScP	ScP	22 27 08.4	-0.7
	0.6nm,0.8s,baz=149,slow=3.0,SNR=3.1					
SONM				LR	LR	22 38 23.5
	comp=Z,71nm,19.2s,baz=148,slow=37					
JIRN	Jiri	40.24	299	eP	P	22 21 23.7	+0.4
	23nm,0.5s					
H11S3	WAKE ISLAND Hy	40.30	75	T	T	23 04 32.8
	baz=273,slow=74,SNR=57					
H11S1	WAKE ISLAND Hy	40.32	75	T	T	23 04 28.2
	baz=273,slow=74,SNR=27					
H11S2	WAKE ISLAND Hy	40.32	75	T	T	23 04 30.1
	baz=273,slow=74,SNR=53					
GUN	Gumba	40.57	300	eP	P	22 21 26.6	+0.6
	27nm,0.8s					
H11N1	WAKE ISLAND Hy	40.60	73	T	T	23 04 48.8
	baz=265,slow=74,SNR=190					
H11N2	WAKE ISLAND Hy	40.60	73	T	T	23 04 48.3
	baz=265,slow=74,SNR=131					
H11N3	WAKE ISLAND Hy	40.61	73	T	T	23 04 55.1
	baz=265,slow=74,SNR=135					
PKI	Pulchoki	40.88	299	eP	P	22 21 28.5	-0.1
	6.4nm,0.6s					
PKIN	Phulchoki	40.89	299	eP	P	22 21 28.3	-0.3
	6.6nm,0.6s					
KKN	Kakani	41.05	299	eP	P	22 21 29.8	0.0
	18nm,0.9s					
KOLN	Koldanda	42.48	299	eP	P	22 21 41.8	+0.3
	17nm,0.9s					
DANN	Dangsing	42.49	300	eP	P	22 21 41.8	+0.1
	11nm,0.5s					
PYUN	Piuthan	43.09	299	eP	P	22 21 46.8	+0.4
	34nm,1.0s					
STKA	Stephens Creek	45.72	161	P	P	22 22 05.9	-1.1
	2.0nm,0.4s,baz=336,slow=6.9,SNR=8.1					
STKA				PP	PP	22 23 53.8	-1.2
	0.7nm,0.5s,baz=353,slow=7.4,SNR=2.8					
STKA	Stephens Creek	45.72	161	eP	P	22 22 05.9	-1.1
	0.8nm,0.8s					
PETK	Petropavlovsk-	48.90	25	P	P	22 22 31.6	0.0
	3.0nm,0.7s,baz=146,slow=2.9,SNR=7.4					
PETK				LR	LR	22 40 51.4
	comp=Z,51nm,21.8s,baz=220,slow=33					
PEA1	Petropavlovsk-	48.91	25	eP	P	22 22 31.6	0.0
MK32	Makanchi Array	50.68	323	eP	P	22 22 46.1	+0.9
MK32				eScP	ScP	22 27 52.8	-1.5
MKAR	Makanchi Array	50.68	323	P	P	22 22 46.1	+0.9
	0.6nm,0.4s,baz=119,slow=7.0,SNR=15					
MKAR				ScP	ScP	22 27 52.8	-1.5
	1.2nm,0.9s,baz=141,slow=4.8,SNR=6.5					
ZALV	Zalesovo Beam	53.28	331	P	P	22 23 04.7	+0.3
	0.8nm,0.7s,baz=79,slow=7.7,SNR=4.2					
ZAA1	Zalesovo Array	53.28	331	eP	P	22 23 04.7	+0.3
KURK	Kurchatov	54.72	325	eP	P	22 23 15.6	+0.7
	5.1nm,0.8s					
NRIK	Noril'sk	62.73	346	P	P	22 24 10.8	+0.6
	3.2nm,0.6s,baz=116,slow=6.7,SNR=5.1					
NRIK				LR	LR	22 54 35.0
	comp=Z,40nm,18.0s,baz=170,slow=39					
GEYT	Alibeck	65.28	307	P	P	22 24 29.3	+1.6
	1.6nm,0.8s,baz=101,slow=5.3,SNR=4.6					
ABKAR	Akbulak array	65.54	319	eP	P	22 24 30.0	+1.0
	3.7nm,1.1s					
ARU	Arti	67.87	327	P	P	22 24 46.4	+2.5
	0.6nm,0.5s,baz=99,slow=9.0,SNR=3.2					
ARU	Arti	67.87	327	eP	P	22 24 43.8	0.0
	2.3nm,0.6s					
TBLG	Delisi	75.65	310	eP	P	22 25 30.8	0.0
	6.1nm,0.7s					
KBZ	Khabaz	76.90	312	P	P	22 25 38.4	+0.6
	2.2nm,0.9s,baz=98,slow=9.9,SNR=3.4					
KBZ	Khabaz	76.90	312	eP	P	22 25 38.4	+0.6
KIV	Kislovodsk	77.04	313	eP	P	22 25 37.7	-1.1
	6.8nm,0.8s					
MCK	McKinley	77.87	27	eP	P	22 25 43.2	+0.2
	9.0nm,0.9s					
ILAR	Eielson Array	78.72	26	P	P	22 25 46.5	-1.1
	0.9nm,0.8s,baz=246,slow=6.3,SNR=6.4					
ILB	Eielson Array	78.72	26	eP	P	22 25 46.5	-1.1
	1.4nm,0.9s					
ARCES	ARCESS Array B	82.87	340	P	P	22 26 11.3	+1.7
	1.5nm,0.6s,baz=68,slow=5.7,SNR=5.0					
BR101	Keskin Array S	84.25	309	eP	P	22 26 17.1	-0.5
BRTR	Keskin Array B	84.25	309	P	P	22 26 17.1	-0.5
	0.5nm,0.7s,baz=76,slow=5.2,SNR=3.6

ARIG				*i* S	Sn	22 32 11.7	-1.6
CAIG	**El Cayaco**	**1.15**	**123**	*e*P	Pn	22 31 58.2	-2.5
CAIG				*i* S	Sn	22 32 12.0	-3.2
MEIG	**Mezcala**	**1.60**	**81**	*e*P	Pn	22 32 05.0	-1.9
MEIG				*i* S	Sn	22 32 24.2	-2.3
PLIG	**Platanillo**	**1.83**	**67**	*e*P	Pn	22 32 09.3	-0.9
PLIG				*i* S	Sn	22 32 30.8	-1.4
MMIG	**Aquila**	**2.06**	**288**	*i* P	Pn	22 32 11.4	-1.9
MMIG				*e*S	Sn	22 32 35.0	-2.7
TLIG	**Tlapa**	**2.59**	**92**	*e*P	Pn	22 32 17.4	-3.2
TLIG				*i* S	Sn	22 32 48.2	-2.8

ISCJB ***04*** *22:32:59.6±0.5, 37°.93N±0°.07×55°.39E±0°.05, h10km, Error ellipse: s-maj=10.8km s-min=3.4km az=25.2*
TEH ***04*** *22:32:59.5, 37°.89N×55°.51E, h10km, ML3.1*
AZER ***04*** *22:33:03.1±2.8, 37°.61N×55°.15E, h5km, ml3.2/2, Error ellipse: s-maj=39.1km s-min=21.0km az=32.0*

ISC 04 22:33:00.5±0.9, 37°.83N±0°.07×55°.49E±0°.05, h10km, n24, σ1§53/31, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**0.50**	**109**	*e*Pg	**Pg**	**22 33 09.9**	**-0.4**
IMND	**Minoodasht**	**0.57**	**187**	*e*Pg	**Pg**	**22 33 11.6**	**0.0**
IMND				IAMB	IAmb	22 33 23.2	
	comp=Z,0.0nm,0.2s						
BJRD	**Bojnurd**	**1.52**	**94**	*e*Pg	**Pb**	**22 33 27.8**	**-1.1**
SHRO	**Shahrood**	**1.88**	**167**	*e*Pn	**Pb**	**22 33 34.5**	**-0.5**
ISFR	**Sfrayin**	**2.14**	**110**	*e*Pn	**Pb**	**22 33 37.6**	**-1.9**
ISFR				IAMB	IAmb	22 34 17.4	
	comp=Z,2μm,0.5s						
SBZV	**Sabzevar**	**2.22**	**130**	*e*Pn	**Pb**	**22 33 39.0**	**-1.9**
SBZV				IAMB	IAmb	22 34 25.4	
	comp=Z,0.0nm,0.8s						
IEMG	**Emamgholi**	**2.54**	**98**	*e*Pn	**Pn**	**22 33 43.1**	**+1.0**
IEMG				IAMB	IAmb	22 34 22.4	
	comp=Z,936nm,0.4s						
ISHM	**Shahmirzad**	**2.68**	**222**	IAMB	IAmb	22 34 21.1	
	comp=Z,892nm,0.7s						
IAKL	**Akhelmad**	**2.88**	**114**	*e*Pn	**Pn**	**22 33 48.4**	**+1.7**
IAKL				IAMB	IAmb	22 34 34.7	
	comp=E,1μm,0.6s						
IFIR	**Firoozkooh**	**3.10**	**226**	*e*Pn	**Pn**	**22 33 52.4**	**+2.7**
IFIR				IAMB	IAmb	22 33 53.4	
	comp=Z,712nm,0.3s						
IPAY	**Payeh**	**3.12**	**115**	*e*Pn	**Pn**	**22 33 52.2**	**+2.2**
IPAY				IAMB	IAmb	22 34 44.0	
	comp=E,396nm,0.4s						
IDMV	**Damavand**	**3.57**	**232**	*e*Pn	**Pn**	**22 33 57.9**	**+1.6**
IGZV	**Ghazvin**	**4.45**	**253**	*e*Pn	**Pn**	**22 34 10.1**	**+1.8**
ASTR	**Astara**	**5.33**	**280**	P	**Pn**	**22 34 19.6**	**-0.5**
ASTR				S	**Sn**	**22 35 20.2**	**-1.3**
LKRN	**Lenkeran, Azer**	**5.36**	**282**	P	**Pn**	**22 34 20.8**	**+0.3**
LKRN				S	**Sn**	**22 35 20.1**	**-2.1**
ITEG	**Tejag**	**5.59**	**151**	*e*Pn	**Pn**	**22 34 25.9**	**+2.0**
LRK	**Lerik**	**5.69**	**280**	P	**Pn**	**22 34 24.5**	**-0.8**
LRK				S	**Sn**	**22 35 29.0**	**-1.7**
GLBA	**Clilabad**	**5.74**	**286**	P	**Pn**	**22 34 26.3**	**+0.5**
GLBA				S	**Sn**	**22 35 30.1**	**-1.6**
ATGJ	**Altiaghaj**	**5.91**	**303**	P	**Pn**	**22 34 30.9**	**+2.7**
ATGJ				S	**Sn**	**22 35 38.6**	**+2.4**
ISRB	**Sarab**	**6.20**	**272**	*e*Pn	**Pn**	**22 34 33.0**	**+0.8**
SEKA	**Sheki**	**7.25**	**300**	P	**Pn**	**22 34 47.3**	**+0.8**
SEKA				S	**Sn**	**22 36 09.5**	**+0.7**
ORD	**Ordubad**	**7.54**	**281**	P	**Pn**	**22 34 49.5**	**-1.1**
ORD				S	**Sn**	**22 36 16.8**	**+0.6**
GANJ	**Ganja**	**7.65**	**294**	S	**Sn**	**22 36 17.6**	**-1.2**
GDB	**GEDABAY**	**8.09**	**294**	P	**Pn**	**22 34 58.4**	**+0.3**
GDB				S	**Sn**	**22 36 29.0**	**-0.6**

MEX 04 22:38:57.8±0.3, 16°.21N×98°.10W, h7km±8km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**351**	*i* P	Pg	22 39 01.3	-0.3
PNIG				*i* S	Sg	22 39 04.1	0.0

INMG ***04*** *22:52:41.4±1.3, 36°.96N×13°.71W, h10km, ML2.2, Error ellipse: s-maj=7.0km s-min=5.8km az=76.0*
IGIL ***04*** *22:52:41.7, 37°.33N×13°.25W, h0km, ML2.2*
MDD ***04*** *22:52:42.7±1.9, 37°.34N×12°.93W, h0km, mb4.0/2, Error ellipse: s-maj=13.0km s-min=9.9km az=49.0, PRXIMO*

ISC 04 22:52:39.5±3.6, 37°.22N±0°.09×13°.3W±0°.2, h10km, n56, σ1§43/102, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.56**	**90**	*e*Pn	**Pn**	**22 53 35.6**	**+0.8**
PFVI				*e*Sn	**Sn**	**22 54 15.8**	**-1.2**
PFVI				A	A	22 54 18.4	
	3.4nm,0.1s						
PFVI	**Vila Bisbo**	**3.56**	**90**	P	**Pn**	**22 53 35.6**	**+0.8**
	3.8nm,0.1s,SNR=8.1						
PFVI				S	**Sn**	**22 54 15.8**	**-1.2**
	3.3nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.60**	**60**	*e*Pn	**Pn**	**22 53 37.2**	**+1.8**
PMAFR				*e*Sn	**Sn**	**22 54 18.8**	**+0.8**
PMAFR				A	A	22 54 28.9	
	9.3nm,0.7s						
PMAFR	**Mafra**	**3.60**	**60**	P	**Pn**	**22 53 37.2**	**+1.8**
	1.9nm,0.1s,SNR=6.2						
PMAFR				S	**Sn**	**22 54 16.5**	**-1.5**
	11nm,0.4s,SNR=7.9						
PTEO	**Sao Teotonio**	**3.65**	**83**	*e*Pn	**Pn**	**22 53 37.5**	**+1.5**
PTEO				*e*Sn	**Sn**	**22 54 18.1**	**-1.0**
PTEO				A	A	22 54 24.9	
	4.5nm,0.7s						
PTEO	**Sao Teotonio**	**3.65**	**83**	P	**Pn**	**22 53 37.5**	**+1.5**
PTEO				S	**Sn**	**22 54 18.1**	**-1.0**
	2.2nm,0.7s						
MORF	**Marmelete**	**3.70**	**87**	*e*P	**Pn**	**22 53 37.7**	**+0.9**
MORF				*e*S	**Sn**	**22 54 18.8**	**-1.6**
MORF				AML	AML	22 54 21.4	
	comp=N,7.1nm,0.3s						
MORF	**Marmelete**	**3.70**	**87**	*e*Pn	**Pn**	**22 53 37.7**	**+0.9**
MORF				*e*Sn	**Sn**	**22 54 19.7**	**-0.7**
MORF				A	A	22 54 24.8	
	comp=N,4.4nm,0.1s						
MORF	**Marmelete**	**3.70**	**87**	P	**Pn**	**22 53 37.7**	**+0.9**
MORF				S	**Sn**	**22 54 19.7**	**-0.7**
	comp=N,4.4nm,0.1s						
PNCL	**Nicolau / Gran**	**3.88**	**75**	*e*Pn	**Pn**	**22 53 40.3**	**+1.1**
PNCL				*e*Sn	**Sn**	**22 54 24.1**	**-0.7**
PNCL				A	A	22 54 29.1	
	comp=N,2.3nm,0.3s						
PNCL	**Nicolau / Gran**	**3.88**	**75**	P	**Pn**	**22 53 40.3**	**+1.1**
PNCL				S	**Sn**	**22 54 24.1**	**-0.7**
	comp=N,2.3nm,0.3s						
MESJ	**Messejana**	**4.07**	**80**	*e*P	**Pn**	**22 53 42.6**	**+0.7**
MESJ				*e*S	**Sn**	**22 54 27.6**	**-2.0**
MESJ				AML	AML	22 54 32.8	
	comp=N,3.8nm,0.4s						
MESJ	**Messejana**	**4.07**	**80**	*e*Pn	**Pn**	**22 53 43.0**	**+1.1**
MESJ				*e*Sn	**Sn**	**22 54 29.1**	**-0.5**
MESJ				A	A	22 54 39.6	
	comp=N,2.2nm,0.4s						
MESJ	**Messejana**	**4.07**	**80**	P	**Pn**	**22 53 43.0**	**+1.1**
MESJ				S	**Sn**	**22 54 27.6**	**-2.0**
	comp=N,3.8nm,0.4s						
PCVE	**Castro Verde**	**4.20**	**83**	*e*Pn	**Pn**	**22 53 44.5**	**+0.9**
PCVE				*e*Sn	**Sn**	**22 54 31.4**	**-1.2**
PCVE				A	A	22 54 37.9	
	comp=N,1.7nm,0.2s						
PCVE	**Castro Verde**	**4.20**	**83**	P	**Pn**	**22 53 44.5**	**+0.9**
PCVE				S	**Sn**	**22 54 31.4**	**-1.2**
	comp=N,1.7nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.27**	**88**	*e*Pn	**Pn**	**22 53 46.6**	**+2.0**
PBDV				*e*Sn	**Sn**	**22 54 33.3**	**-1.3**
PBDV				A	A	22 54 44.9	
	comp=N,2.6nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.27**	**88**	P	**Pn**	**22 53 46.6**	**+2.0**
PBDV				S	**Sn**	**22 54 33.3**	**-1.3**
	comp=N,2.6nm,0.4s						
EVO	**Evora**	**4.37**	**71**	*e*Pn	**Pn**	**22 53 47.6**	**+1.6**
EVO				*e*Sn	**Sn**	**22 54 36.3**	**-0.7**
EVO				A	A	22 54 39.2	
	comp=N,3.4nm,0.1s						
EVO	**Evora**	**4.37**	**71**	P	**Pn**	**22 53 47.6**	**+1.6**
EVO				S	**Sn**	**22 54 36.3**	**-0.7**
	comp=N,3.4nm,0.1s						
PBEJ	**Beja**	**4.38**	**78**	*e*Sn	**Sn**	**22 54 37.1**	**0.0**
PBEJ				A	A	22 54 41.5	
	comp=N,1.8nm,0.1s						
PBEJ	**Beja**	**4.38**	**78**	S	**Sn**	**22 54 37.1**	**0.0**
	comp=N,0.9nm,0.1s						
PMTG	**Montargil**	**4.40**	**64**	*e*Pn	**Pn**	**22 53 47.5**	**+1.2**
PMTG				*e*Sn	**Sn**	**22 54 38.3**	**+0.7**
PMTG				A	A	22 54 47.5	
	comp=N,1.1nm,0.3s						
PMTG	**Montargil**	**4.40**	**64**	P	**Pn**	**22 53 47.5**	**+1.2**
PMTG				S	**Sn**	**22 54 38.3**	**+0.7**
	comp=N,1.1nm,0.3s						
PVAQ	**Vaqueiros**	**4.44**	**86**	*e*Pn	**Pn**	**22 53 48.4**	**+1.5**
PVAQ				*e*Sn	**Sn**	**22 54 36.8**	**-1.9**
PVAQ				A	A	22 54 39.5	
	comp=N,2.6nm,0.1s						
PVAQ	**Vaqueiros**	**4.44**	**86**	P	**Pn**	**22 53 48.4**	**+1.5**
PVAQ				S	**Sn**	**22 54 36.8**	**-1.9**
	comp=N,2.6nm,0.1s						
PTOM	**Tomar**	**4.52**	**56**	*e*Sn	**Sn**	**22 54 41.5**	**+1.0**
PTOM				A	A	22 54 44.8	
	comp=N,2.9nm,0.1s						
PTOM	**Tomar**	**4.52**	**56**	S	**Sn**	**22 54 41.5**	**+1.0**
	comp=N,1.4nm,0.1s						
EGRO	**El Granado**	**4.63**	**84**	P	**Pn**	**22 53 50.7**	**+1.1**
	comp=N,0.7nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**22 54 40.6**	**-2.8**
	comp=N,0.5nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.70**	**51**	*e*Pn	**Pn**	**22 53 51.7**	**+1.2**
PCAS				*e*Sn	**Sn**	**22 54 45.8**	**+0.8**
PCAS	**Casmilo, Conde**	**4.70**	**51**	P	**Pn**	**22 53 51.7**	**+1.2**
PCAS				S	**Sn**	**22 54 45.8**	**+0.8**
PMRV	**Marv??o**	**5.13**	**63**	*e*Pn	**Pn**	**22 53 57.5**	**+1.0**
PMRV				*e*Sn	**Sn**	**22 54 55.5**	**-0.3**
PMRV				A	A	22 54 58.6	
	comp=N,1.5nm,0.3s						
PMRV	**Marv??o**	**5.13**	**63**	P	**Pn**	**22 53 57.5**	**+1.0**
PMRV				S	**Sn**	**22 54 55.5**	**-0.3**
	comp=N,1.5nm,0.3s						
EBAD	**Badajoz**	**5.19**	**71**	P	**Pn**	**22 53 58.7**	**+1.5**
	comp=N,0.6nm,0.1s,SNR=6.6						
EBAD				S	**Sn**	**22 54 55.2**	**-1.9**
	comp=N,0.7nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**5.25**	**58**	*e*Pn	**Pn**	**22 53 59.6**	**+1.5**
PCBR				*e*Sn	**Sn**	**22 54 59.2**	**+0.5**
PCBR				A	A	22 55 00.5	
	comp=N,0.9nm,0.4s						
PCBR	**Castelo Branco**	**5.25**	**58**	P	**Pn**	**22 53 59.6**	**+1.5**
PCBR				S	**Sn**	**22 54 59.2**	**+0.5**
	comp=N,0.4nm,0.4s						
EMIN	**Mina Concepcio**	**5.29**	**82**	P	**Pn**	**22 54 00.2**	**+1.6**
	comp=N,0.2nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**22 54 57.4**	**-2.1**
	comp=N,0.2nm,0.1s,SNR=5.6						
PVIS	**Viseu**	**5.46**	**49**	*e*Pn	**Pn**	**22 54 02.8**	**+1.8**
PVIS				*e*Sn	**Sn**	**22 55 03.6**	**-0.4**
PVIS				A	A	22 55 08.4	
	comp=N,2.8nm,0.6s						
PVIS	**Viseu**	**5.46**	**49**	P	**Pn**	**22 54 02.8**	**+1.8**
PVIS				S	**Sn**	**22 55 03.6**	**-0.4**
	comp=N,1.4nm,0.6s						
MTE	**Manteigas**	**5.50**	**53**	A	A	22 55 05.2	
	comp=N,2.3nm,0.5s						
MTE				*e*Sn	**Sn**	**22 55 05.7**	**+0.9**
MTE	**Manteigas**	**5.50**	**53**	S	**Sn**	**22 55 05.7**	**+0.9**
POLO	**Lamas de Olo**	**5.95**	**44**	*e*Pn	**Pn**	**22 54 08.5**	**+0.8**
POLO				*e*Sn	**Sn**	**22 55 14.7**	**-1.2**
POLO				A	A	22 55 17.4	
	comp=N,0.3nm,0.1s						
POLO	**Lamas de Olo**	**5.95**	**44**	P	**Pn**	**22 54 08.5**	**+0.8**
POLO				S	**Sn**	**22 55 14.7**	**-1.2**
	comp=N,0.3nm,0.1s						
ESPR	**Espera**	**5.95**	**91**	P	**Pn**	**22 54 09.2**	**+1.6**
	comp=N,0.7nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**22 55 14.9**	**-1.0**
	comp=N,0.1nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.12**	**38**	*e*Pn	**Pn**	**22 54 10.9**	**+0.8**
PGAV	**Gavieira, Arco**	**6.12**	**38**	P	**Pn**	**22 54 10.9**	**+0.8**
ELOB	**Lobios**	**6.15**	**39**	P	**Pn**	**22 54 10.9**	**+0.3**
	comp=N,0.2nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**22 55 17.2**	**-3.8**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.26**	**49**	*e*Pn	**Pn**	**22 54 12.8**	**+0.9**
MVO				*e*Sn	**Sn**	**22 55 22.5**	**-1.0**
MVO				A	A	22 55 25.3	
	comp=N,0.8nm,0.1s						
MVO	**Moncorvo**	**6.26**	**49**	P	**Pn**	**22 54 12.4**	**+0.4**
	comp=N,0.5nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**22 55 20.9**	**-2.6**
	comp=N,0.1nm,0.0s,SNR=7.9						
ECAB	**El Cabril**	**6.30**	**80**	P	**Pn**	**22 54 14.1**	**+1.6**
	comp=N,0.4nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**22 55 20.7**	**-3.9**
	comp=N,0.1nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**6.32**	**61**	P	**Pn**	**22 54 13.7**	**+0.9**
	comp=N,0.2nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**22 55 22.2**	**-2.7**
	comp=N,0.1nm,0.0s,SNR=7.9						
EMAZ	**Mazaricos**	**6.61**	**29**	P	**Pn**	**22 54 16.5**	**-0.2**
	comp=N,0.9nm,0.1s,SNR=7.9						
EMAZ				S	Sn	22 55 25.7	-6.5
	comp=N,0.8nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.83**	**46**	*e*Pn	**Pn**	**22 54 21.0**	**+1.3**
PBRG				*e*Sn	**Sn**	**22 55 36.2**	**-1.3**
PBRG	**Braganca**	**6.83**	**46**	P	**Pn**	**22 54 21.0**	**+1.3**
PBRG				S	**Sn**	**22 55 36.2**	**-1.3**
EAGO	**Agolada(Pontev**	**6.86**	**34**	P	**Pn**	**22 54 19.7**	**-0.5**
	comp=N,0.5nm,0.0s,SNR=7.9						
EAGO				S	Sn	22 55 31.4	-6.9
	comp=N,0.5nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.92**	**45**	P	**Pn**	**22 54 22.2**	**+1.2**
	comp=N,0.6nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**22 55 36.2**	**-3.6**

ISCJB ***04*** *22:54:35.1±1.4, 2°.8N±0°.2×89°.4E±0°.2, h10km, mb3.8/6, Error ellipse: s-maj=33.6km s-min=19.8km az=33.6*
IDC ***04*** *22:54:36.3±1.7, 2°.86N×89°.51E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.5/60, mbtmp3.9/7, ML3.7/1, Error ellipse: s-maj=59.5km s-min=25.1km az=56.0*

ISC 04 22:54:37.5±1.5, 2°.9N±0°.2×89°.4E±0°.2, h10km, n10, σ1§38/7, mb3.8/6, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**9.74**	**297**	Pn	**Pn**	**22 56 57.7**	**-0.2**
	0.7nm,0.3s,baz=115,slow=8.8,SNR=6.5						
H08S3	**Diego Garcia H**	**19.87**	**238**	T	T	23 20 25.8	
	baz=63,slow=75,SNR=7.3						
H08S2	**Diego Garcia H**	**19.88**	**238**	T	T	23 20 36.4	
	baz=63,slow=75,SNR=7.6						
H08S1	**Diego Carcia H**	**19.89**	**238**	T	T	23 20 39.0	
	baz=63,slow=75,SNR=9.5						
MKAR	**Makanchi Array**	**44.20**	**353**	P	**P**	**23 02 47.2**	**+0.5**
	0.5nm,0.8s,baz=168,slow=7.5,SNR=5.5						
SONM	**Songino Array**	**47.13**	**16**	P	**P**	**23 03 09.4**	**-0.7**
	1.7nm,0.6s,baz=190,slow=7.5,SNR=3.8						
KURBB	**Kurchatov Arra**	**48.48**	**351**	P	**P**	**23 03 19.2**	**-1.0**
	0.5nm,0.6s,baz=170,slow=7.3,SNR=2.9						
ZALV	**Zalesovo Beam**	**51.06**	**356**	P	**P**	**23 03 40.5**	**+0.6**
	0.6nm,0.5s,baz=164,slow=6.1,SNR=3.0						
BVAR	**Borovoye Array**	**52.42**	**346**	P	**P**	**23 03 52.5**	**+2.4**
	0.4nm,0.8s,baz=163,slow=10,SNR=3.0						
STKA	**Stephens Creek**	**60.31**	**129**	P	**P**	**23 04 46.8**	**0.0**
	4.9nm,0.8s,baz=300,slow=9.1,SNR=3.0						

ISCJB ***04*** *22:55:25.2±0.2, 4°.55S±0°.03×153°.01E±0°.03, h55km, mb5.1/104, MS4.4/13, Error ellipse: s-maj=4.6km s-min=3.6km az=161.5*
MOS ***04*** *22:55:25.4±1.4, 4°.45S×152°.94E, h49km, mb5.1/29, Error ellipse: s-maj=9.3km s-min=6.7km az=95.0*
BJI ***04*** *22:55:25.5±0.0, 4°.51S×153°.24E, h64km, mb5.0/55, mB5.0/40, Ms4.6/29, Ms7 4.4/27*
DJA ***04*** *22:55:27.4±1.4, 4°.S±6°×15°.3E±°, h73km±10km, M5.3/32, mB5.6/12, mb5.1/32, MLv5.7/1, Mw(mB)5.1/12*
GCMT ***04*** *22:55:28.0±0.2, 4°.77S±0°.01×152°.96E±0°.01, h60km±1km, MW5.1/95, Moment Tensor Solution. s87,c139; s95,c148; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr5.72±.15; Mθθ-6.08±.11; Mφφ0.36±.13; Mrθ2.16±.12; Mθφ-0.42±.12; Mφr0.45±.11; Best double couple:*
M0=6.31300×10^16 NP1:φ=83.00000°, δ=55.00000°, λ=86.00000°. NP2:φ=269.00000°, δ=35.00000°, λ=95.00000°. Principal axes: T 6.1270, Plg79.0000°, Azm339.0000°; N 0.3750, Plg3.0000°, Azm85.0000°; P -6.4990, Plg10.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
IDC ***04*** *22:55:28.8±1.5, 4°.59S×152°.91E, h73km±12km, mb4.4/35, mb1 4.5/39, mb1mx4.4/58, mbtmp4.7/39 Error ellipse: s-maj=10.9km s-min=8.1km az=91.0*
NEIC ***04*** *22:55:28.0±1.7, 4°.54S×152°.95E, h68km±5km, mb5.0/89, Error ellipse: s-maj=11.8km s-min=9.0km az=167.0*

ISC 04 22:55:26.7±0.3, 4°.59S±0°.04×152°.99E±0°.04, h55km, n309, σ1§56/309, mb5.0/103, MS4.5/14, 18C-4D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.92**	**296**	*e*Pn	**Pn**	**22 55 45.9**	**+2.4**
PMG	**Port Moresby**	**7.51**	**230**	P	**Pn**	**22 57 16.1**	**+2.4**
	8.9nm,0.3s,baz=21,slow=10.0,SNR=23						
PMG				S	**Sn**	**22 58 34.3**	**-3.2**
	11nm,0.3s,baz=75,slow=10,SNR=1.9						
PMG	**Port Moresby**	**7.51**	**230**	*e*Pn	**Pn**	**22 57 16.2**	**+2.6**
PMG				*e*Sn	**Sn**	**22 58 33.5**	**-3.9**
PMG	**Port Moresby**	**7.51**	**230**	*e*P	**Pn**	**22 57 16.3**	**+2.6**
PMG				*e*		22 58 33.5	
HNR	**Honiara**	**8.41**	**125**	*e*P	**Pn**	**22 57 27.0**	**+0.9**
HNR				*e*S	**Sn**	**22 59 02.0**	**+2.3**
HNR	**Honiara**	**8.41**	**125**	P	**Pn**	**22 57 28.1**	**+2.1**
	baz=208,slow=2.7,SNR=7.3						
HNR				S	**Sn**	**22 59 01.1**	**+1.4**
	21nm,0.3s,baz=1.2,slow=12,SNR=3.7						
HNR	**Honiara**	**8.41**	**125**	*e*Pn	**Pn**	**22 57 28.5**	**+2.4**
HNR	**Honiara**	**8.41**	**125**	*e*P	**Pn**	**22 57 28.5**	**+2.4**
JAY	**Jayapura**	**12.44**	**279**	P	**Pn**	**22 58 23.6**	**+2.5**
	0.2nm,0.3s,baz=91,slow=24,SNR=2.6						
JAY	**Jayapura**	**12.44**	**279**	P	**Pn**	**22 58 22.1**	**+1.0**
PATS	**Pohnpei**	**12.53**	**25**	*e*Pn	**Pn**	**22 58 21.8**	**-0.6**
GENI	**Genyem**	**12.95**	**278**	P	P	22 58 46.3	+9.2
COEN	**Coen**	**13.43**	**225**	*e*Pn	**Pn**	**22 58 36.4**	**+1.8**
COEN	**Coen**	**13.43**	**225**	P	**Pn**	**22 58 37.4**	**+2.8**
	baz=13,SNR=4.5						
CTA	**Charters Tower**	**16.74**	**203**	P	**P**	**22 59 20.1**	**+0.9**
	0.8nm,0.3s,baz=28,slow=13,SNR=15						
CTAO	**Charters Tower**	**16.74**	**203**	*e*Pn	**P**	**22 59 19.5**	**+0.3**
	53nm,1.0s						
CTAO	**Charters Tower**	**16.74**	**203**	*e*P	**P**	**22 59 19.5**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,53nm,1.0s						
GUMO	**Guam**	**19.78**	**336**	*e*P	**P**	**22 59 51.9**	**-0.7**
	comp=Z,256nm,1.1s						
GUMO	**Guam**	**19.78**	**336**	*e*P	**P**	**22 59 51.9**	**-0.7**
GUMO				pmax	pmax		
	comp=Z,255nm,1.1s						
QIS	**Mount Isa**	**20.53**	**218**	P	**P**	**23 00 01.9**	**+1.2**
	baz=20,SNR=15						
EIDS	**Eidsvold**	**20.74**	**185**	*e*P	**P**	**23 00 02.9**	**0.0**
	comp=Z,70nm,0.9s						
EIDS	**Eidsvold**	**20.74**	**185**	P	Pn	23 00 04.5	-1.3
	baz=21,SNR=7.2						
FAKI	**Fak Fak**	**20.76**	**274**	*e*P	**P**	**23 00 00.8**	**-2.5**
	comp=Z,54nm,1.1s						
FAKI	**Fak Fak**	**20.76**	**274**	P	**P**	**23 00 03.0**	**-0.3**
DZM	**Mont Dzumac**	**21.72**	**144**	*e*P	**P**	**23 00 14.5**	**+0.9**
	comp=Z,129nm,1.1s						
DZM				*e*S	**S**	**23 04 04.1**	**-7.1**
	comp=Z,1μm,28.9s						
DZM				*e*LR	LR	23 05 32.6	
	comp=Z,2μm,24.9s						
DZM	**Mont Dzumac**	**21.72**	**144**	P	**P**	**23 00 14.8**	**+1.2**
	comp=Z,26nm,0.5s,baz=226,slow=10,SNR=18						
DZM	**Mont Dzumac**	**21.72**	**144**	*e*P	**P**	**23 00 14.3**	**+0.7**
	comp=Z,125nm,0.8s						
KDU	**Kakadu**	**21.81**	**247**	P	**P**	**23 00 14.0**	**-0.5**
	baz=22,SNR=69						
ONTNC	**Ouen Toro**	**21.91**	**145**	*e*P	**P**	**23 00 16.7**	**+1.2**
	comp=Z,134nm,0.8s						
PALU	**Palau**	**21.95**	**303**	P	**P**	**23 00 17.9**	**+1.8**
	baz=22,SNR=9.1						
RMQ	**Roma**	**22.15**	**190**	P	**P**	**23 00 19.3**	**+1.3**
	baz=22,SNR=7.4						
MARNC	**Mare, Loyalty**	**22.25**	**140**	*e*P	**P**	**23 00 18.5**	**-0.6**
	comp=Z,338nm,1.0s						
SARN	**Sarigan**	**22.32**	**342**	*e*P	**P**	**23 00 17.4**	**-2.6**
	comp=Z,61nm,1.1s						
PINNC	**Pines Island,**	**22.73**	**143**	*e*P	**P**	**23 00 23.4**	**-0.9**
	comp=Z,86nm,1.0s						
MTN	**Manton Dam**	**23.09**	**248**	*e*P	**P**	**23 00 28.4**	**+0.3**
	comp=Z,58nm,0.7s						
MTN	**Manton Dam**	**23.09**	**248**	P	**P**	**23 00 28.3**	**+0.3**
	baz=23,SNR=20						
WRAB	**Tennant Creek**	**23.71**	**228**	*e*P	**P**	**23 00 34.0**	**+0.1**
	comp=Z,99nm,1.0s						
WRAB	**Tennant Creek**	**23.71**	**228**	*c i*P	**P**	**23 00 33.9**	**0.0**
WRAB				pmax	pmax		
	comp=Z,186nm,1.7s						
WB2	**Warramunga Arr**	**23.72**	**228**	*e*P	**P**	**

GIRL Giralia 41.53 241 P **P 23 03 09.9 +0.8**
baz=42,SNR=3.7
OXZ Oxford 42.10 159 *e*P **P 23 03 14.0 +0.6**
comp=Z,32nm,0.9s
RPZ Rata Peaks 42.10 160 P **P 23 03 14.5 +1.0**
comp=Z,29nm,0.8s,baz=127,slow=1.5,SNR=8.6
RPZ Rata Peaks 42.10 160 *e*P **P 23 03 14.4 +1.0**
comp=Z,38nm,1.0s
YHNB Yeheng 42.33 315 *e*P **P 23 03 14.6 -1.0**
comp=Z,20nm,1.0s
DCZ Deep Cove 42.55 165 *e*P **P 23 03 16.9 -0.1**
comp=Z,27nm,0.9s
KLBR Kellerberrin 42.59 227 P **P 23 03 17.6 0.0**
baz=43,SNR=5.5
MORW Morawa 42.62 231 *e*P **P 23 03 17.8 -0.2**
comp=Z,21nm,1.0s
MORW Morawa 42.62 231 P **P 23 03 17.7 -0.2**
baz=43,SNR=15
MLZ Mavora Lakes 42.71 164 *e*P **P 23 03 17.4 -1.0**
comp=Z,77nm,1.0s
BLDU Ballidu 42.86 229 P **P 23 03 20.1 +0.3**
baz=43,SNR=6.1
JNU Nakatsue 42.97 332 P **P 23 03 20.8 +0.2**
comp=Z,22nm,1.1s,baz=60,slow=1.5,SNR=6.3
JNU Nakatsue 42.97 332 *e*P **P 23 03 20.9 +0.3**
comp=Z,26nm,1.0s
KSM Kuching 43.07 277 *e*P **P 23 03 21.4 -0.3**
comp=Z,34nm,1.1s
KSM Kuching 43.07 277 P **P 23 03 23.0 +1.3**
CISI Cisompet, Garu 45.00 264 *e*P **P 23 03 34.7 -2.6**
comp=Z,51nm,0.9s
CISI Cisompet, Garu 45.00 264 P **P 23 03 35.2 -2.1**
PPBI Pangkal Pinang 46.83 271 P **P 23 03 51.8 +0.2**
CGJI Cibinong 47.10 265 P **P 23 03 51.1 -2.6**
TJN Taejon 47.28 332*c i*P **P 23 03 55.1 +0.4**
KSRS Korea Array 47.90 333 P **P 23 03 59.9 +0.3**
comp=Z,4.8nm,0.9s,baz=150,slow=8.1,SNR=18
KS15 Wonju Array Si 47.91 333 *e*P **P 23 03 59.9 +0.3**
comp=Z,6.0nm,0.8s
KASI Kota Agung 48.30 267 P **P 23 04 00.4 -2.7**
DSRI Dabo 48.53 273 P **P 23 04 04.7 -0.1**
MDSI Maura Dua 48.65 268 P **P 23 04 04.2 -1.6**
NJ2 Nanjing 48.80 321 *e*P **P 23 04 08.5 +1.9**
NJ2 pmax pmax
comp=Z,12nm,0.5s
ASAJ Asahikawa 49.38 350 P **P 23 04 09.3 -1.4**
comp=Z,28nm,1.2s,baz=318,slow=30,SNR=4.5
MYKOM Kota Tinggi 49.51 276 P **P 23 04 14.0 +1.7**
SDSI Sungai Dareh 51.62 272 P **P 23 04 27.7 -0.5**
USA0B Ussuriysk Arra 52.11 341 *e*P **P 23 04 30.4 -0.9**
comp=Z,19nm,1.1s
USRK Ussuriysk Ar. 52.11 341 P **P 23 04 29.4 -1.9**
comp=Z,5.4nm,0.8s,baz=159,slow=5.7,SNR=11
PANO Nakornpanom 52.43 296 P **P 23 04 35.8 +1.6**
comp=Z,0.5nm,0.9s
TIA Tai'an 52.66 323 P **P 23 04 35.6 0.0**
TIA pmax pmax
comp=Z,10.0nm,0.7s
SKNT Sakolnakorn 52.94 295 P **P 23 04 39.8 +1.8**
comp=Z,19nm,0.9s
KULM Kulim 53.19 280 *e*P **P 23 04 39.2 -0.6**
comp=Z,13nm,0.9s
MDJ Mudanjiang 53.29 339 P **P 23 04 40.4 +0.3**
MDJ pmax pmax
comp=Z,17nm,1.0s
SKLT Songkhla 53.55 282 P **P 23 04 44.8 +2.3**
comp=Z,13nm,1.4s
ENH Enshi 54.15 313 *e*P **P 23 04 46.5 -0.2**
comp=Z,13nm,1.0s
CN2 Changchun 54.19 336 *e*P **P 23 04 45.6 -1.0**
CN2 *es*P sP 23 05 08.5 +0.3
CN2 *e*S **S 23 12 17.7 -2.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,120nm,21.0s
CN2 LR LR
comp=Z,90nm,21.0s
CHAI Chaiyaphum 54.41 293 P **P 23 04 51.1 +2.3**
comp=Z,24μm,1.0s
GYA Guiyang 54.42 307⇑ *i*P **P 23 04 49.6 +0.8**
GYA pP pP 23 05 04.8 +0.9
GYA sP sP 23 05 12.0 +1.7
GYA S **S 23 12 22.7 -1.0**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,7.1s
GYA LR LR
comp=Z,170nm,18.4s
GYA LR LR
comp=Z,230nm,20.8s
GYA LR LR
comp=Z,300nm,21.6s
PSI Prapat 54.52 277 P **P 23 04 48.6 -1.2**
comp=Z,3.2nm,0.4s,baz=182,slow=6.2,SNR=4.4
SKR Severo-Kuril's 55.12 2 *e*P **P 23 04 51.0 -2.2**
SKR pmax pmax
comp=Z,400nm,5.2s
SKR pmax pmax
comp=Z,108nm,1.2s
PBKT Sadao Pong 55.55 294 P **P 23 04 58.6 +1.7**
comp=Z,9.6nm,1.1s
PHET Kaeng Krachan 55.78 289 P **P 23 05 01.5 +2.9**
comp=Z,33μm,1.0s
NANT Nan 56.49 296 P **P 23 05 05.1 +1.4**
comp=Z,33μm,1.0s,comp=Z,922μm
XAN Xi'an 56.60 316 P **P 23 05 04.3 0.0**
XAN pP sP 23 05 23.8 -1.9
XAN pmax pmax
comp=Z,12nm,1.5s
XAN pmax pmax
comp=Z,94nm,3.9s
XAN LR LR
comp=Z,190nm,21.0s
XAN LR LR
comp=Z,210nm,18.9s
XAN LR LR
comp=Z,260nm,23.0s
SRDT SRDT 56.63 290 P **P 23 05 07.1 +2.4**
comp=Z,24nm,1.1s
KLR Kul'dur 56.70 343 P **P 23 05 04.6 0.0**
comp=Z,9.7nm,0.8s,baz=143,slow=5.9,SNR=24
KLR Kul'dur 56.70 343*c i*P **P 23 05 04.7 +0.1**
KLR pmax pmax
comp=Z,21nm,1.2s
PHRA Phrae 56.81 295 P **P 23 05 07.9 +1.9**
comp=Z,3.3nm,1.2s
KMI Kunming 57.03 304 P **P 23 05 09.7 +2.0**
KMI pmax pmax
comp=Z,18nm,0.8s
KMI pmax pmax
comp=Z,66nm,4.0s
KMI LR LR
comp=Z,170nm,19.9s
KMI LR LR
comp=Z,250nm,19.5s
KMI LR LR
comp=Z,400nm,26.2s
UMPA Umpang Tak 57.38 292 P **P 23 05 13.7 +3.7**
comp=Z,37μm,1.1s
PAYA Payao 57.41 296 P **P 23 05 13.1 +2.9**
comp=Z,25μm,0.8s
PET Petropavlovsk 57.60 4 *e*P **P 23 05 12.2 +1.4**
PET pmax pmax
comp=Z,9.0nm,0.9s
PPT2 Papeete2 57.61 108 *e*S **S 23 13 03.2 -3.1**
comp=Z,127nm,26.8s
PPT2 *e*LR LR 23 22 06.6
comp=Z,150nm,23.8s
PEA0B Petropavlovsk- 57.62 3 *e*P **P 23 05 11.5 +0.5**
comp=Z,14nm,0.8s
PETK Petropavlovsk- 57.62 3 P **P 23 05 11.4 +0.4**
comp=Z,4.8nm,0.6s,baz=157,slow=6.1,SNR=12
PEA1 Petropavlovsk- 57.62 3 *e*P **P 23 05 11.4 +0.4**
CMAR Chiang Mai Arr 57.96 295 P **P 23 05 15.2 +1.2**
comp=Z,1.9nm,0.4s,baz=116,slow=5.5,SNR=25
CMAR Chiang Mai Arr 57.96 295*ce*P **P 23 05 15.3 +1.2**
CMAR pmax pmax
comp=Z,9.0nm,1.1s
CHTO Chiang Mai 58.07 295 *e*P **P 23 05 14.9 +0.1**
comp=Z,18nm,1.1s
CHTO Chiang Mai 58.07 295 *e*P **P 23 05 14.9 +0.1**
CHTO pmax pmax
comp=Z,18nm,1.1s

TBI Tubuai 58.47 115 *e*S **S 23 13 16.5 -0.7**
comp=Z,219nm,30.8s
TBI *e*LQ LQ 23 20 06.5
comp=Z,482nm,30.8s
TBI *e*LR LR 23 22 36.0
comp=Z,629nm,29.2s
CD2 Chengdu 58.75 310 P **P 23 05 19.2 -0.2**
CD2 pmax pmax
comp=Z,40nm,1.4s
CD2 LR LR
comp=Z,500nm,18.5s
CD2 LR LR
comp=Z,470nm,21.1s
HHC Hu-ho-hao-te 58.99 324 *e*P **P 23 05 24.5 +3.5**
HHC S **S 23 13 25.3 +1.7**
HHC pmax pmax
comp=Z,22nm,0.8s
HHC pmax pmax
comp=Z,110nm,6.6s
HHC LR LR
comp=Z,200nm,20.8s
HHC LR LR
comp=Z,610nm,18.0s
HHC LR LR
comp=Z,1μm,21.8s
BTO Baotou 59.75 323 *e*P **P 23 05 26.6 +0.4**
SMY Shemya 59.84 15 *e*P **P 23 05 26.3 -0.1**
comp=Z,21nm,1.1s
SMY Shemya 59.84 15 *e*P **P 23 05 26.3 -0.1**
SMY pmax pmax
comp=Z,21nm,1.1s
LZH Lanzhou 61.21 316⇑ P **P 23 05 37.6 +1.2**
LZH pP sP 23 05 55.4 -2.5
LZH sP pP 23 06 03.2 +12
LZH PP **PP 23 07 56.0 +4.2**
LZH sS sS 23 14 20.1 +2.8
LZH pmax pmax
comp=Z,32nm,1.4s
LZH pmax pmax
comp=Z,140nm,7.0s
LZH LR LR
comp=Z,200nm,15.2s
LZH LR LR
comp=Z,250nm,15.2s
LZH LR LR
comp=Z,370nm,17.8s
ADK Adak 61.90 21 *e*P **P 23 05 41.1 +0.6**
comp=Z,11nm,0.9s
ADK Adak 61.90 21 *e*P **P 23 05 41.1 +0.6**
ADK pmax pmax
comp=Z,11nm,0.9s
MA2 Magadan 63.99 359 P **P 23 05 55.6 +1.4**
comp=Z,5.5nm,0.5s,baz=89,slow=6.2,SNR=4.6
MA2 Magadan 63.99 359 *e*P **P 23 05 54.4 +0.2**
comp=Z,27nm,0.8s
MA2 Magadan 63.99 359*de*P **P 23 05 54.3 +0.1**
MA2 pmax pmax
comp=Z,50nm,2.5s
GTA Gaotai 65.63 317 *e*P **P 23 06 06.6 +1.1**
GTA pmax pmax
comp=Z,19nm,1.5s
GTA pmax pmax
comp=Z,150nm,7.6s
GTA LR LR
comp=Z,98nm,18.5s
GTA LR LR
comp=Z,120nm,21.0s
GTA LR LR
comp=Z,210nm,22.7s
ULN Ulaanbaatar 65.92 328*ce*P **P 23 06 08.1 +0.9**
ULN pmax pmax
comp=Z,5.0nm,1.0s
SONM Songino Array 66.25 328 P **P 23 06 10.5 +1.3**
comp=Z,2.3nm,0.6s,baz=133,slow=6.5,SNR=8.9
SONM PKP2ab 23 34 49.6
comp=Z,0.6nm,0.4s,baz=259,slow=1.5,SNR=4.2
TAOE Nuku Hiva Isla 66.47 98 *e*LR LR 23 26 13.4
comp=Z,346nm,26.7s
SEY Seymchan 67.34 360 P **P 23 06 16.0 +0.3**
comp=Z,1.8nm,0.5s,baz=204,slow=5.3,SNR=7.5
SEY Seymchan 67.34 360‖ *e*P **P 23 06 16.0 +0.3**
CASY Casey 68.27 197 *e*P **P 23 06 21.4 -0.1**
comp=Z,26nm,1.1s
LSA Lhasa 68.28 304 P **P 23 06 23.7 +0.8**
LSA pmax pmax
comp=Z,120nm,4.0s
LSA LR LR
comp=Z,210nm,6.3s
LSA LR LR
comp=Z,190nm,7.4s
LSA LR LR
comp=Z,400nm,5.0s
LSA Lhasa 68.28 304 *e*P **P 23 06 23.4 +0.5**
comp=Z,6.9nm,0.8s
LSA Lhasa 68.28 304 *e*P **P 23 06 23.4 +0.5**
LSA pmax pmax
comp=Z,7.0nm,0.8s
YAK Yakutsk 68.81 348 *e*P **P 23 06 25.3 +0.4**
YAK *e* 23 06 55.8
YAK *e*S **S 23 15 22.3 -2.0**
YAK *e*SS **SKSac 23 16 17.3 -2.1**
RAMN Ramite 71.31 300 *e*P **P 23 06 41.3 0.0**
MOY Mondy 71.33 329 *e*P **P 23 06 42.1 +1.3**
JIRN Jiri 71.84 301 *e*P **P 23 06 44.9 +0.2**
GUN Gumba 72.18 301 *e*P **P 23 06 46.8 +0.2**
comp=Z,34nm,0.7s
PKI Pulchoki 72.49 301 *e*P **P 23 06 48.1 -0.4**
PKIN Phulchoki 72.50 301 *e*P **P 23 06 48.1 -0.4**
KKN Kakani 72.66 301 *e*P **P 23 06 49.3 0.0**
comp=Z,28nm,0.8s
DMN Daman 72.76 301 *e*P **P 23 06 49.7 -0.3**
comp=Z,74nm,1.1s
VNDA Vanda 73.03 178 P **P 23 06 50.9 +0.6**
comp=Z,8.6nm,0.9s,baz=328,slow=6.9,SNR=29
BILL Bilibino 73.07 5 *e*P **P 23 06 50.2 -0.4**
comp=Z,17nm,0.9s
BILL Bilibino 73.07 5*d i*P **P 23 06 50.6 0.0**
BILL *e* 23 07 07.0
BILL pmax pmax
comp=Z,12nm,1.0s
SBA Scott Base 73.57 177 *e*P **P 23 06 55.8 +2.3**
comp=Z,38nm,1.1s
SBA Scott Base 73.57 177 *e*P **P 23 06 55.8 +2.3**
SBA pmax pmax
comp=Z,37nm,1.1s
KOLN Koldanda 74.09 300 *e*P **P 23 06 57.5 -0.3**
comp=Z,40nm,0.9s
DANN Dangsing 74.10 301 *e*P **P 23 06 57.5 -0.4**
comp=Z,36nm,1.0s
PYUN Piuthan 74.70 301 *e*P **P 23 07 00.9 -0.4**
comp=Z,54nm,0.9s
WMQ Urumqi 75.72 317 P **P 23 07 07.9 +1.2**
WMQ PcP **PcP 23 07 19.5 +0.3**
WMQ pP pP 23 07 24.7 +2.2
WMQ pmax pmax
comp=Z,41nm,1.3s
WMQ pmax pmax
comp=Z,230nm,3.6s
WMQ LR LR
comp=Z,280nm,21.9s
WMQ LR LR
comp=Z,700nm,38.9s
WMQ LR LR
comp=Z,400nm,27.9s
TIXI Tiksi 77.72 352 P **P 23 07 17.3 +0.1**
comp=Z,7.3nm,1.2s,baz=140,slow=8.4,SNR=8.8
TIXI Tiksi 77.72 352 *e*P **P 23 07 16.6 -0.7**
comp=Z,3.5nm,1.1s
TIXI Tiksi 77.72 352⇑ *e*P **P 23 07 19.1 +1.9**
TIXI pmax pmax
comp=Z,10.0nm,1.3s
DGZ Jazzator, Alta 78.03 323*ce*P **P 23 07 19.9 +0.2**
DGZ pmax pmax
comp=Z,9.0nm,1.3s
MKAR Makanchi Array 80.29 319 P **P 23 07 31.5 -0.5**
comp=Z,6.0nm,0.9s,baz=103,slow=5.2,SNR=41
MKAR PKPPKP 23 34 23.3
comp=Z,0.8nm,1.0s,baz=257,slow=4.9,SNR=3.7
MKAR Makanchi Array 80.29 319*ce*P **P 23 07 32.2 +0.3**
MKAR pmax pmax
comp=Z,6.0nm,0.9s
MAKZ Makanchi 80.50 319 *e*P **P 23 07 32.8 -0.3**
comp=Z,16nm,1.0s
MAKZ Makanchi 80.50 319 *e*P **P 23 07 32.8 -0.3**
MAKZ pmax pmax
comp=Z,16nm,1.0s

ZALV Zalesovo Beam 81.08 326 P **P 23 07 34.6 -1.3**
comp=Z,2.0nm,0.6s,baz=115,slow=4.4,SNR=10
ZALV PKPPKP 23 34 20.6
comp=Z,0.4nm,0.5s,baz=252,slow=3.0,SNR=4.2
ZALV Zalesovo Beam 81.08 326 *i*P **P 23 07 35.5 -0.4**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
COLA College 81.59 22⇑ *e*P **P 23 07 37.7 -0.6**
COLA pmax pmax
comp=Z,12nm,1.0s
ILAR Eielson Array 81.89 22 P **P 23 07 38.5 -1.5**
comp=Z,3.9nm,0.9s,baz=257,slow=5.1,SNR=20
NVS Novosibirsk 82.26 327 *i*P **P 23 07 43.1 +1.0**
KSH Kashi 82.94 311 P **P 23 07 42.2 -4.0**
KSH sP sP 23 08 11.4 +2.9
KSH Kashi 82.94 311 S S 23 17 46.7 -15
KSH Kashi 82.94 311 SS SS 23 23 31.2 +5.5
KSH pmax pmax
comp=Z,330nm,0.9s
KSH pmax pmax
comp=Z,800nm,5.0s
KSH LR LR
comp=N,260nm,6.8s
KSH LR LR
comp=E,250nm,8.9s
KSH LR LR
comp=Z,280nm,18.7s
KURK Kurchatov 83.72 322 *e*P **P 23 07 49.4 -0.4**
comp=Z,11nm,1.0s
KURK Kurchatov 83.72 322*c i*P **P 23 07 49.3 -0.4**
KURK pmax pmax
comp=Z,35nm,1.3s
KURBB Kurchatov Arra 83.75 322 P **P 23 07 49.6 -0.3**
comp=Z,4.7nm,0.9s,baz=107,slow=4.2,SNR=33
H02S1 DAWSON INLET T 84.47 36 T T 00 41 11.0
SNR=22
QSPA South Pole Qui 85.37 180 *e*P **P 23 07 58.1 +0.1**
comp=Z,72nm,1.1s
NRIK Noril'sk 85.83 341 P **P 23 07 59.7 -0.3**
comp=Z,7.0nm,1.1s,baz=129,slow=4.8,SNR=14
MAW Mawson 85.84 203 P **P 23 07 59.8 -0.2**
comp=Z,8.8nm,1.0s,baz=81,slow=5.9,SNR=15
MAW Mawson 85.84 203 *e*P **P 23 08 00.2 +0.2**
comp=Z,3.0nm,0.8s
MAW Mawson 85.84 203 P **P 23 08 00.1 0.0**
baz=86,SNR=11
MAW Mawson 85.84 203 *e*P **P 23 08 00.2 +0.2**
MAW pmax pmax
comp=Z,3.0nm,0.8s
DLBC Dease Lake 87.11 31 P **P 23 08 06.8 +0.3**
comp=Z,17nm,1.4s,baz=238,slow=5.2,SNR=4.9
INK Inuvik 88.19 21 P **P 23 08 11.3 -0.1**
comp=Z,6.8nm,1.1s,baz=256,slow=5.1,SNR=7.6
INK Inuvik 88.19 21 *e*P **P 23 08 10.8 -0.6**
comp=Z,6.8nm,1.1s
INK Inuvik 88.19 21 *e*P **P 23 08 10.8 -0.6**
INK pmax pmax
comp=Z,7.0nm,1.1s
BVAR Borovoye Array 89.19 323 P **P 23 08 15.6 -0.9**
comp=Z,9.5nm,0.8s,baz=100,slow=5.3,SNR=66
BRVK Borovoye 89.26 323 *e*P **P 23 08 15.9 -0.9**
comp=Z,17nm,1.0s
BRVK Borovoye 89.26 323*c i*P **P 23 08 15.6 -1.2**
BRVK pmax pmax
comp=Z,18nm,1.2s
NV01 Mina Array Sit 91.81 52 *e*P **P 23 08 30.0 +0.7**
NVAR Mina Array Bea 91.81 52 P **P 23 08 30.0 +0.7**
comp=Z,1.0nm,0.9s,baz=254,slow=8.2,SNR=3.7
BMO Blue Mountains 92.99 45 *e*P **P 23 08 34.3 -0.2**
comp=Z,1.4nm,0.8s
BMO Blue Mountains 92.99 45 *e*P **P 23 08 34.3 -0.2**
BMO pmax pmax
comp=Z,1.0nm,0.8s
SYO Syowa Base 93.93 199⇑ *e*P **P 23 08 36.4 -1.7**
SYO Syowa Base 93.93 199⇑ *e*PcP **PcP 23 08 39.0 +0.4**
SVE Sverdlovsk 95.10 327 *e*P **P 23 08 42.6 -1.1**
SVE pmax pmax
comp=Z,14nm,1.6s
YKA Yellowknife Ar 95.15 28 P **P 23 08 43.7 -0.1**
comp=Z,1.4nm,1.0s,baz=269,slow=4.1,SNR=9.5
ABKAR Akbulak array 95.44 319 *e*P **P 23 08 43.7 -1.8**
comp=Z,3.8nm,0.6s
ARU Arti 96.25 326 P **P 23 08 47.6 -1.4**
comp=Z,0.7nm,0.4s,baz=100,slow=4.4,SNR=9.4
ARU Arti 96.25 326 *e*P **P 23 08 47.3 -1.7**
comp=Z,7.1nm,1.0s
ARU Arti 96.25 326*c i*P **P 23 08 47.0 -2.0**
ARU 23 12 41.8
ARU S **SKSac 23 19 17.1 -3.7**
ARU SS **SS 23 26 34.3 -3.0**
ARU pmax pmax
comp=Z,17nm,1.6s
AKTO Aktyubinsk 96.68 320 P **P 23 08 50.2 -0.9**
comp=Z,0.9nm,0.4s,baz=63,slow=7.8,SNR=6.1
PD31 Pinedale Array 98.57 48 *e*P Pdif 23 09 00.2 +0.1
comp=Z,1.9nm,1.1s
PDAR Pinedale Array 98.57 48 P Pdif 23 09 00.2 +0.1
comp=Z,0.2nm,0.4s,baz=211,slow=5.1,SNR=2.3
PRGR Permogore 102.23 332 *e*P **Pdif 23 09 20.6 +5.0**
PRGR pmax pmax
comp=Z,8.0nm,1.4s
TXAR Lajitas Array 103.86 61 PP **PKiKP 23 13 39.2 -2.3**
comp=Z,0.3nm,0.7s,baz=277,slow=7.2,SNR=2.8
APA Apatity 105.21 340⇑ *i*P **Pdif 23 09 38.0 +9.3**
APA pmax pmax
comp=Z,4.0nm,1.0s
FRB Frobisher Bay 113.77 19 PKiKP **PKiKP 23 13 58.5 -0.4**
comp=Z,1.5nm,0.5s,baz=267,slow=2.8,SNR=4.6
AKASG Malin Array Be 114.44 325 PKP PKPdf 23 13 60.0 -0.6
comp=Z,0.8nm,0.5s,baz=62,slow=2.1,SNR=4.2
AKASG Malin Array Be 114.44 325 PKIKP PKPdf 23 14 00.0 -0.5
KIEV Kiev 114.45 325‖ *i*PKIKP **PKiKP 23 14 01.9 +1.4**
BR101 Keskin Array S 115.31 312 *e*PKPdf **PKiKP 23 14 02.3 -0.5**
BRTR Keskin Array B 115.31 312 PKP **PKiKP 23 14 02.3 -0.5**
comp=Z,0.4nm,0.6s,baz=304,slow=2.2,SNR=3.8
BRTR PKKP **PKKPdf 23 24 57.6 -5.1**
comp=Z,0.4nm,0.7s,baz=226,slow=4.0,SNR=3.7
BRTR Keskin Array B 115.31 312*c i*PKIKP **PKPdf 23 14 04.6 +1.8**
KOLS Kolonicke sedl 119.25 325 *e*PKIKP **PKiKP 23 14 12.3 +2.3**
KOLS *e* 23 14 28.0
KOLS Kolonicke sedl 119.25 325 *e*PKP **PKiKP 23 14 12.3 +2.3**
KOLS *e* 23 14 28.0
PLCA Paso Flores 119.83 143 PKP **PKPdf 23 14 10.3 -1.1**
comp=Z,4.0nm,0.9s,baz=197,slow=7.5,SNR=3.4
LANS Liptovska Anna 120.71 326 *e*PKIKP **PKiKP 23 14 15.1 +2.2**
LANS *e* 23 14 31.9
LANS Liptovska Anna 120.71 326 *e*PKP **PKiKP 23 14 15.1 +2.2**
LANS *e* 23 14 31.8
MORC Moravsky Berou 121.40 328 *e*PKP **PKiKP 23 14 14.4 +0.2**
MORC *e* 23 14 30.4
VYHS Vyhne 121.42 326 *e*PKIKP **PKiKP 23 14 16.3 +2.1**
VYHS *e* 23 14 31.7
VYHS Vyhne 121.42 326 *e*PKP **PKiKP 23 14 16.3 +2.1**
VYHS *e* 23 14 31.7
VTS Vitosha 121.61 318 *e*PKPdf **PKPdf 23 14 14.4 -0.4**
VTS Vitosha 121.61 318 *e*PKIKP **PKPdf 23 14 14.4 -0.4**
DPC Dobruska-Polom 121.71 329 *e*PKIKP **PKiKP 23 14 16.0 +1.2**
DPC Dobruska-Polom 121.71 329 *e*PKP **PKiKP 23 14 16.0 +1.2**
JAVC Velka Javorina 121.86 327 *e*PKP **PKiKP 23 14 15.8 +0.7**
JAVC *e* 23 14 32.0
VRAC Vranov 122.18 328 *e*PKP **PKPdf 23 14 15.4 -0.1**
MODS Modra-Piesok 122.35 327 *e*PKIKP **PKiKP 23 14 18.0 +1.9**
MODS *e* 23 14 33.8
MODS Modra-Piesok 122.35 327 *e*PKP **PKiKP 23 14 18.0 +1.9**
MODS *e* 23 14 33.8
KRUC Moravsky 122.43 328 *e*PKP **PKPdf 23 14 15.8 -0.2**
KRUC *e* 23 14 32.1
BRG Berggiesshubel 122.58 330 *e*PKP **PKiKP 23 14 17.5 +1.1**
comp=Z,2.8nm,0.7s
BRG *e* 23 14 33.0
comp=Z,13nm,1.2s
BRG Berggiesshubel 122.58 330 *e*PKIKP **PKiKP 23 14 17.5 +1.1**
BRG *e* 23 14 33.0
BRG pmax pmax
comp=Z,3.0nm,0.7s
CLL Collm 122.76 331 *e*PKPdf **PKiKP 23 14 17.3 +0.5**
CLL Collm 122.76 331 *i*PKPdf **PKiKP 23 14 16.6 -0.1**
comp=Z,4.0nm,1.0s
CLL Collm 122.76 331 *i*PKIKP **PKiKP 23 14 16.6 -0.1**
CLL pmax pmax
comp=Z,4.0nm,1.0s
TREC Trest 122.77 328 *e*PKIKP **PKiKP 23 14 18.0 +1.1**
TREC Trest 122.77 328 *e*PKP **PKiKP 23 14 18.0 +1.1**
CONA Conrad Observa 123.38 327 *e*PKIKP **PKiKP 23 14 18.9 +0.7**
comp=Z,1.5nm,0.5s

FNA Florina 123.67 317 *e*PKPdf PKPdf 23 14 18.0 -0.7
FNA Florina 123.67 317 *e*PKIKP PKPdf 23 14 18.0 -0.7
KHC Kasperske Hory 123.86 329 *e*PKIKP PKiKP 23 14 20.7 +1.6
KHC Kasperske Hory 123.86 329 *e*PKP PKiKP 23 14 20.7 +1.6
GERES GERESS Array B 123.98 329 PKP PKPdf 23 14 19.2 +0.1
comp=Z,1.9nm,0.7s,baz=70,slow=2.0,SNR=12
MOA Molln 124.29 327 *e*PKiKP PKiKP 23 14 20.1 +0.1
comp=Z,5.2nm,1.4s
SOKA Soboth 124.57 326 *e*PKiKP PKiKP 23 14 21.7 +1.1
comp=Z,4.1nm,1.2s
OBKA Obir 124.94 326 *e*PKiKP PKiKP 23 14 21.3 -0.1
comp=Z,1.1nm,0.5s
KBA Koelnbreinsper 125.25 327 *e*PKiKP PKPdf 23 14 21.6 -0.1
comp=Z,4.6nm,1.0s
ABTA Abfaltersbach 125.91 327 *e*PKiKP PKiKP 23 14 23.2 -0.1
comp=Z,1.4nm,0.7s
WATA Walderalm 126.03 328 *e*PKiKP PKiKP 23 14 23.8 +0.3
comp=Z,2.8nm,0.5s
WTTA Wattenberg 126.05 328 *e*PKiKP PKiKP 23 14 23.9 +0.3
comp=Z,1.0nm,0.4s
MOTA Moosalm 126.27 329 *e*PKiKP PKiKP 23 14 24.3 +0.2
comp=Z,1.8nm,0.5s
SQTA Sankt Quirin 126.30 328 *e*PKiKP PKiKP 23 14 24.9 +0.8
comp=Z,3.6nm,1.0s
FETA Feichten 126.68 329 *e*PKiKP PKiKP 23 14 25.9 +1.1
comp=Z,7.3nm,1.1s
DAVA Damuels 126.94 329 *e*PKiKP PKiKP 23 14 25.8 +0.4
comp=Z,6.6nm,1.0s
FUORN Ofenpass-Fuorn 127.18 328 *e*PKPdf PKPdf 23 14 25.1 -0.4
TUE Stuetta 127.76 329 *e*PKPdf PKiKP 23 14 27.4 +0.3
LPAZ La Paz 134.35 118 PKP PKiKP 23 14 41.4 -0.3
comp=Z,1.6nm,0.6s,baz=319,slow=3.2,SNR=8.3
LPAZ SKPbc SKPab 23 18 07.9 -0.8
comp=Z,1.3nm,0.9s,baz=284,slow=1.9,SNR=4.5
SDV Santo Domingo 136.49 82 *e*PKPdf PKPdf 23 14 43.6 -0.3
CPUP Villa Florida 137.49 138 PKP PKPdf 23 14 46.0 +0.8
comp=Z,5.4nm,1.0s,baz=291,slow=2.3,SNR=7.7
PCAB Cabril 139.33 338 *i* LQ LQ 23 15 09.9
ESDC Sonseca Array 139.33 332 PKP PKiKP 23 14 49.7 -0.9
comp=Z,0.2nm,0.4s,baz=31,slow=3.7,SNR=3.9
MVO Moncorvo 139.42 337 *e*PKP PKiKP 23 14 51.7 +1.0
MVO *i* LQ LQ 23 15 07.1
POLO Lamas de Olo 139.53 338 *i* LQ LQ 23 15 12.1
PVRL Vila Real 139.59 337 *e*PKP PKiKP 23 14 51.0 0.0
PVIS Viseu 140.14 337 *e*PKP PKiKP 23 14 56.4 +4.2
PVIS *i* LQ LQ 23 15 06.9
MTE Manteigas 140.27 337 *i* LQ LQ 23 15 06.2
SIV San Ignacio 140.58 122 PKhKP PKPpre 23 14 43.5
comp=Z,2.9nm,1.1s,baz=244,slow=9.9,SNR=4.1
SIV PKP PKPdf 23 14 51.7 +0.6
comp=Z,2.7nm,0.8s,baz=264,slow=2.6,SNR=8.7
SIV SKPbc SKPbc 23 18 22.7 -0.5
comp=Z,1.5nm,0.8s,baz=262,slow=3.9,SNR=6.2
PMRV Marv??o 141.03 336 *e*PKP PKPdf 23 14 50.8 -0.5
PMRV *i* LQ LQ 23 15 05.4
PTOM Tomar 141.28 337 *e*PKP PKiKP 23 14 53.1 -1.4
PTOM *i* LQ LQ 23 15 08.6
PMTG Montargil 141.68 336 *e*PKP PKiKP 23 14 54.5 -0.8
PMTG *i* LQ LQ 23 15 12.5
PBEJ Beja 142.42 335 *e*PKP PKPdf 23 14 53.6 -0.2
PBEJ *i* LQ LQ 23 15 16.3
PNCL Nicolau / Gran 142.62 336 *i* LQ LQ 23 15 15.8
PCVE Castro Verde 142.82 335 *i* LQ LQ 23 15 24.4
PTEO Sao Teotonio 143.18 335 *i* LQ LQ 23 15 15.7
TAM Tamanrasset 143.73 303 *e*PKPdf PKPbc 23 14 55.3 +1.0
TAM Tamanrasset 143.73 303 *e*PKIKP PKPbc 23 14 55.3 +0.9
SPB Sao Paulo 145.63 145 *e*PKPdf PKPab 23 15 00.5 +0.1
PTGA Pitinga 146.65 98 PKPbc PKPdf 23 15 02.4 +0.5
comp=Z,5.5nm,0.7s,baz=287,slow=2.0,SNR=13
PTGA Pitinga 146.65 98 *e*PKPdf PKPbc 23 15 02.8 -0.8
TOA0 Torodi Ar. Sit 150.42 289 *e*PKPbc PKPbc 23 15 12.1 -1.1
TORD Torodi Ar. Bea 150.42 289 PKPbc PKPbc 23 15 11.1 -2.1
comp=Z,7.3nm,0.8s,baz=56,slow=2.4,SNR=44
TOA1 Torodi Ar. Sit 150.42 289 *e*PKPbc PKPbc 23 15 11.1 -2.1
PMAR Madeira 150.46 343 *e*PKP PKiKP 23 15 14.7 +0.9
PMAR *i* LQ LQ 23 15 31.8
BDFB Brasilia 151.08 134 PKP PKPdf 23 15 09.4 +0.3
comp=Z,13nm,1.0s,baz=9.6,slow=2.3,SNR=11
BDFB PKPbc PKPbc 23 15 15.0 +0.1
comp=Z,18nm,0.8s,baz=266,slow=4.3,SNR=17
BDFB Brasilia 151.08 134 *e*PKPdf PKPdf 23 15 09.1 +0.1
BDFB *e*PKPbc PKiKP 23 15 15.1 -0.3
BDFB Brasilia 151.08 134 *e*PKIKP PKPdf 23 15 09.1 +0.1
DBIC Dimbokro 157.86 276 PKPab PKPab 23 15 49.9 -1.5
comp=Z,5.8nm,0.8s,baz=52,slow=3.1,SNR=4.8

ISCJB ***04*** *22:55:41.0±0.3, 4°.63S±0°.05×152°.92E±0°.07, h55km, mb4.8/38, Error ellipse: s-maj=9.5km s-min=7.7km az=172.6*
IDC ***04*** *22:55:41.8±2.3, 4°.62S×152°.98E, h45km±21km, mb4.7/37, mb1 4.7/40, mb1mx4.6/58, mbtmp5.0/40, ML5.1/2, MS4.0/1, Ms1 4.0/1, ms1mx3.6/3, Error ellipse: s-maj=13.2km s-min=9.4km az=74.0*
ISC 04 22:55:42.7±0.3, 4°.62S±0°.07×152°.93E±0°.07, h55km, n87, σ1§60/88, mb4.9/37, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.45	230	P	Pn	22 57 28.8	0.0
PMG	29nm,0.3s,baz=39,slow=11,SNR=8.5			LR	LR	23 00 37.2	
	comp=Z,1μm,21.5s,baz=25,slow=39						
HNR	Honiara	8.45	125	P	Pn	22 57 40.6	-1.9
	22nm,0.3s,baz=175,slow=5.1,SNR=5.6						
JAY	Jayapura	12.38	279	P	Pn	22 58 33.8	-2.6
	1.7nm,0.3s,baz=130,slow=11,SNR=5.6						
GUMO	Guam	19.78	336	P	P	23 00 08.8	+0.2
	5.1nm,0.3s,baz=176,slow=19,SNR=2.0						
DZM	Mont Dzumac	21.73	144	P	P	23 00 29.2	-0.5
	155nm,0.7s,baz=345,slow=18,SNR=7.7						
DZM	Mont Dzumac	21.73	144	*e*pP	P	23 00 32.0	+2.3
	338nm,0.8s						
ASAR	Alice Springs	26.37	222	P	P	23 01 15.3	+1.2
	32nm,0.8s,baz=55,slow=9.8,SNR=22						
STKA	Stephens Creek	29.13	200	P	P	23 01 37.4	-1.2
	14nm,0.8s,baz=22,slow=12,SNR=11						
BATI	Baumata	29.54	257	P	P	23 01 41.6	-0.9
	26nm,0.6s,baz=204,slow=11,SNR=4.8						
FITZ	Fitzroy Crossi	29.86	241	P	P	23 01 43.8	-1.4
	52nm,0.6s,baz=100,slow=7.1,SNR=15						
KAPI	Kappang	33.06	268	P	P	23 02 13.4	-0.1
	3.5nm,0.3s,baz=30,slow=15,SNR=3.6						
JOW	Kunigami	39.33	324	P	P	23 03 06.3	-0.5
	2.5nm,0.6s,baz=164,slow=13,SNR=6.2						
JHJ	Hachijo jima 2	39.55	343	P	P	23 03 07.6	-0.9
	76nm,0.8s,baz=164,slow=13,SNR=1.1						
URZ	Urewera	40.08	150	P	P	23 03 12.8	0.0
	12nm,0.6s,baz=81,slow=3.1,SNR=8.3						
RPZ	Rata Peaks	42.10	160	P	P	23 03 28.7	-0.7
	28nm,0.7s,baz=352,slow=6.7,SNR=7.5						
JNU	Nakatsue	42.96	332	P	P	23 03 37.2	+0.6
	14nm,0.7s,baz=90,slow=5.8,SNR=6.3						
NWAO	Narrogin (SRO)	43.61	225	P	P	23 03 43.5	+1.7
	6.7nm,0.7s,baz=81,slow=8.6,SNR=4.6						
LEM	Lembang	45.13	265	P	P	23 03 55.2	+0.7
	13nm,0.4s,baz=342,slow=22,SNR=4.4						
KSRS	Korea Array	47.90	333	P	P	23 04 16.2	+0.7
	4.8nm,0.7s,baz=152,slow=7.1,SNR=11						
KSRS				PcP	PcP	23 05 45.4	+2.1
	2.6nm,0.7s,baz=162,slow=4.6,SNR=4.0						
USRK	Ussuriysk Ar.	52.12	341	P	P	23 04 47.9	+0.4
	8.8nm,0.9s,baz=165,slow=7.9,SNR=9.0						
KLR	Kul'dur	56.71	344	P	P	23 05 21.5	+0.8
	15nm,0.9s,baz=140,slow=6.6,SNR=13						
PETK	Petropavlovsk-	57.65	3	P	P	23 05 28.3	+1.0
	21nm,0.9s,baz=161,slow=5.8,SNR=12						
PPT	Papeete	57.66	108	P	P	23 05 29.3	+1.3
	27nm,0.7s,baz=202,slow=19,SNR=2.2						
CMAR	Chiang Mai Arr	57.92	295	P	P	23 05 31.4	+1.7
	12nm,0.9s,baz=119,slow=5.2,SNR=16						
MA2	Magadan	64.02	359	P	P	23 06 10.8	+0.4
	26nm,0.8s,baz=151,slow=7.3,SNR=9.7						
MA2	Magadan	64.02	359	*i* *P*P	P	23 06 10.4	0.0
SONM	Songino Array	66.24	328	P	P	23 06 26.0	+0.8
	4.0nm,0.7s,baz=151,slow=5.5,SNR=9.2						
SEY	Seymchan	67.37	360	P	P	23 06 32.1	+0.2
	2.3nm,0.7s,baz=206,slow=8.9,SNR=4.1						
YAK	Yakutsk	68.82	348	*e*PP	P	23 06 39.6	-1.4
VNDA	Vanda	73.00	178	P	P	23 07 07.3	+1.1
	21nm,1.0s,baz=330,slow=7.0,SNR=20						
PALK	Pallekele	73.04	279	P	P	23 07 08.4	+0.8
	19nm,1.1s,baz=116,slow=13,SNR=3.0						
TIXI	Tiksi	77.74	352	P	P	23 07 33.5	+0.2
	3.8nm,0.5s,baz=103,slow=4.9,SNR=4.4						

MKAR Makanchi Array 80.28 319 P P 23 07 48.5 +0.6
8.0nm,0.8s,baz=93,slow=7.0,SNR=7.7
ZALV Zalesovo Beam 81.08 326 P P 23 07 52.0 +1.0
7.1nm,0.6s,baz=103,slow=5.1,SNR=10
ILAR Eielson Array 81.94 22 P P 23 07 55.0 -1.3
4.8nm,0.9s,baz=251,slow=5.7,SNR=9.4
KURBB Kurchatov Arra 83.74 322 P P 23 08 06.0 +0.1
6.4nm,0.8s,baz=108,slow=4.3,SNR=10.0
MAW Mawson 85.79 203 P P 23 08 16.7 +0.9
10nm,0.7s,baz=91,slow=7.9,SNR=15
NRIK Noril'sk 85.84 341 P P 23 08 15.6 -0.4
6.8nm,0.6s,baz=130,slow=5.8,SNR=6.6
INK Inuvik 88.24 21 P P 23 08 27.1 -0.6
3.4nm,0.9s,baz=266,slow=6.0,SNR=3.8
BVAR Borovoye Array 89.18 323 P P 23 08 31.9 -0.5
9.2nm,0.6s,baz=109,slow=5.5,SNR=13
NVAR Mina Array Bea 91.87 52 P P 23 08 45.7 +0.1
1.5nm,0.9s,baz=267,slow=5.9,SNR=5.5
YKA Yellowknife Ar 95.21 28 P P 23 08 58.5 -1.6
1.0nm,0.7s,baz=272,slow=4.7,SNR=5.1
YKA PKKPbc PKKPdf 23 25 54.3 -2.0
0.3nm,0.7s,baz=94,slow=3.0,SNR=3.7
WSAR Wadi Sarin 95.75 293 P P 23 09 03.1 -0.4
6.5nm,1.0s,baz=204,slow=2.6,SNR=2.8
ARU Arti 96.24 326 P P 23 09 04.3 -0.7
1.0nm,0.5s,baz=127,slow=7.5,SNR=4.9
ARU Arti 96.24 326 *PP P 23 09 05.3 +0.4
PDAR Pinedale Array 98.63 48 P Pdif 23 09 17.3 +0.9
0.3nm,0.5s,baz=197,slow=3.1,SNR=3.7
ULM Lac du Bonnet 107.02 39 PKKPab PKKPab 23 25 33.9 -1.5
2.9nm,0.6s,baz=72,slow=3.2,SNR=3.0
AKASG Malin Array Be 114.43 324 PKP PKPdf 23 14 16.0 -0.5
4.9nm,0.7s,baz=56,slow=2.5,SNR=11
BRTR Keskin Array B 115.28 312 PKP PKiKP 23 14 18.2 -0.6
0.9nm,0.6s,baz=97,slow=2.4,SNR=4.4
MLR Muntele Rosu 118.60 320 PKKPbc PKKPbc 23 24 43.2 +0.3
1.3nm,0.7s,baz=248,slow=5.4,SNR=4.3
SADO Sadowa 119.51 40 PKP PKiKP 23 14 26.9 +0.4
3.8nm,0.8s,baz=280,slow=4.5,SNR=3.7
BOSA Boshof 119.84 233 PKP PKiKP 23 14 28.2 +0.3
4.0nm,1.0s,baz=139,slow=0.8,SNR=3.6
PLCA Paso Flores 119.84 143 PKP PKPdf 23 14 27.4 0.0
1.7nm,0.6s,baz=246,slow=5.5,SNR=4.1
DPC Dobruska-Polom 121.70 329 *e*pPKP PKiKP 23 14 31.0 +0.2
PVCC Panska Ves 122.48 330 *e*pPKP PKiKP 23 14 34.6 +2.4
CLL Collm 122.76 331 *e*pPKPdf PKiKP 23 14 33.0 +0.3
comp=Z,8.0nm,1.0s
TREC Trest 122.76 328 *e*pPKP PKiKP 23 14 33.2 +0.3
CONA Conrad Observa 123.37 327 *e*pPKPdf PKiKP 23 14 36.4 +2.2
comp=Z,5.9nm,0.8s
KHC Kasperske Hory 123.86 329 *e*pPKP PKiKP 23 14 37.3 +2.2
ARSA Arzberg 123.95 326 *e*pPKPdf PKiKP 23 14 37.3 +2.0
comp=Z,4.7nm,1.0s
GERES GERESS Array B 123.97 329 PKP PKiKP 23 14 35.5 +0.1
comp=Z,4.8nm,0.8s,baz=90,slow=1.3,SNR=17
MOA Molln 124.28 327 *e*pPKPdf PKiKP 23 14 37.1 +1.2
comp=Z,3.7nm,0.8s
SOKA Soboth 124.56 326 *e*pPKPdf PKiKP 23 14 38.2 +1.6
comp=Z,7.4nm,0.8s
OBKA Obir 124.93 326 *e*pPKPdf PKiKP 23 14 38.9 +1.5
comp=Z,3.8nm,0.8s
KBA Koelnbreinsper 125.25 327 *e*pPKiKP PKiKP 23 14 40.9 +2.8
comp=Z,4.4nm,0.7s
MYKA Terra Mystica 125.36 327 *e*pPKPdf PKiKP 23 14 39.6 +1.4
comp=Z,4.0nm,0.8s
ABTA Abfaltersbach 125.90 327 *e*pPKPdf PKiKP 23 14 40.6 +1.3
comp=Z,1.0nm,0.9s
WATA Walderalm 126.03 328 *e*pPKiKP PKiKP 23 14 42.1 +2.5
comp=Z,2.5nm,0.5s
WTTA Wattenberg 126.04 328 *e*pPKiKP PKiKP 23 14 41.7 +2.1
comp=Z,16nm,0.8s
MOTA Moosalm 126.27 329 *e*pPKPdf PKiKP 23 14 41.8 +1.7
comp=Z,12nm,0.9s
SQTA Sankt Quirin 126.29 328 *e*pPKPdf PKiKP 23 14 41.9 +1.9
comp=Z,6.8nm,0.9s,SNR=4.1
FETA Feichten 126.67 328 *e*pPKiKP PKiKP 23 14 42.9 +2.0
comp=Z,7.5nm,0.9s,SNR=4.4
CFA Coronel Fontan 126.76 135 PKP PKPdf 23 14 40.6 -0.3
DAVA Damuels 126.94 329 *e*pPKiKP PKiKP 23 14 43.4 +2.0
comp=Z,15nm,1.1s
KEST Kesra 134.36 318 PKP PKiKP 23 14 56.8 +0.2
comp=Z,3.5nm,0.7s,baz=118,slow=7.6,SNR=4.9
LPAZ La Paz 134.39 118 PKP PKPdf 23 14 56.6 +0.1
comp=Z,1.8nm,0.6s,baz=254,slow=2.2,SNR=5.0
CPUP Villa Florida 137.51 138 PKP PKiKP 23 15 02.8 -0.4
comp=Z,2.6nm,0.8s,baz=260,slow=2.6,SNR=3.8
ESDC Sonseca Array 139.33 332 PKP PKPdf 23 15 04.8 +0.6
comp=Z,0.4nm,0.5s,baz=31,slow=3.5,SNR=4.8
SIV San Ignacio 140.61 122 PKP PKPdf 23 15 08.1 +0.9
comp=Z,2.9nm,0.6s,baz=262,slow=4.2,SNR=6.7
SIV SKPab SKPab 23 18 54.6 +2.9
comp=Z,2.2nm,0.8s,baz=210,slow=1.1,SNR=5.0
PTGA Pitinga 146.71 98 PKPbc PKPdf 23 15 18.0 0.0
comp=Z,12nm,0.8s,baz=242,slow=3.7,SNR=8.5
TORD Torodi Ar. Bea 150.38 289 PKPbc PKPbc 23 15 28.3 -0.9
comp=Z,58nm,1.1s,baz=91,slow=2.7,SNR=19
BDFB Brasilia 151.10 135 PKP PKPdf 23 15 26.5 +1.4
comp=Z,20nm,1.2s,baz=304,slow=3.6,SNR=3.5
BDFB PKPbc PKPbc 23 15 29.8 -1.1
comp=Z,15nm,0.8s,baz=198,slow=1.5,SNR=9.3
KIC Kosan Boka 157.71 275 *e*P PKPdf 23 15 29.9 -4.3
comp=Z,44nm,1.2s
DBIC Dimbokro 157.80 276 PKP PKPdf 23 15 34.8 +0.5
comp=Z,3.3nm,0.9s,baz=58,slow=5.1,SNR=3.5
DBIC PKPab PKPab 23 16 08.2 +1.0
comp=Z,15nm,0.8s,baz=76,slow=3.6,SNR=9.2
TIC Toumodi 157.97 276 *e*P PKPdf 23 15 28.1 -6.5
LIC Lamto 158.00 275 *e*P PKPdf 23 15 29.5 -5.1
comp=Z,108nm,2.2s
RCBR Riachuelo 166.38 140 PKPab PKPab 23 16 44.3 -0.3
comp=Z,90nm,0.9s,baz=261,slow=1.3,SNR=3.2

NIED ***04*** *22:59:00, 34°.30N×141°.00E, h32km, Mw4.2 Best double couple: M0=2.62000×10^15 NP1:φ=188.00000°, δ=55.00000°, λ=171.00000°. NP2:φ=283.00000°, δ=83.00000°, λ=35.00000°.*
IDC ***04*** *22:59:51.9±0.7, 34°.42N×140°.95E, h0km, mb4.3/18, mb1 4.3/24, mb1mx4.1/72, mbtmp4.2/24, ML3.9/5, MS3.3/6, Ms1 3.4/6, ms1mx3.1/40, Error ellipse: s-maj=18.7km s-min=15.0km az=72.0*
JMA ***04*** *22:59:53.8±0.3, 34°.35N×140°.99E, h40km±2km, M4.2*
JMA Felt I J1.
ISCJB ***04*** *22:59:54.9±0.8, 34°.37N±0°.03×140°.86E±0°.04, h31km±5km, mb4.2/22, MS4.0/2, Error ellipse: s-maj=6.1km s-min=5.2km az=44.6*
NEIC ***04*** *22:59:56.1±2.1, 34°.48N×141°.09E, h31km±5km, mb4.5/12, Error ellipse: s-maj=17.2km s-min=15.9km az=113.0*
NEIC Recorded [1 JMA] on Mikura-jima and Miyake-jima.
ISC 04 22:59:54.9±1.4, 34°.39N±0°.04×141°.00E±0°.06, h25km±9km, n74, σ1§72/81, mb4.4/22, 6C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.26	357	||P	Pb	23 00 01.9	+0.9
BSO3	Boso 3	0.57	316	⇑P	Pb	23 00 06.5	+0.3
BSO4	Boso 4	0.81	318	⇑P	Pn	23 00 10.2	-0.4
KTR	Katsuura	0.94	324	⇑P	Pn	23 00 11.6	-0.9
KTR				S	Sn	23 00 23.4	-1.8
JKUC	kamogawauchiur	1.01	320	P	Pn	23 00 12.5	-1.0
JKUC				*e*S	Sn	23 00 25.0	-1.9
TATJ	Tateyama 2	1.11	305	⇑P	Pn	23 00 14.2	-0.7
TATJ				S	Sn	23 00 28.7	-0.7
JCN	Nagara	1.22	328	⇑P	Pn	23 00 15.8	-0.5
JCN				S	Sn	23 00 31.7	-0.3
JMKN	Mikurajimanish	1.27	247	||P	Pn	23 00 15.8	-1.2
JSMT	Sammumatsuo	1.33	340	P	Pn	23 00 17.1	-0.8
JIM2	Oshima 3	1.33	285	||P	Pn	23 00 16.3	-1.7
JIM2				*e*S	Sn	23 00 31.1	-3.8
JTHY	Toshimahigashi	1.42	276	P	Pn	23 00 17.9	-1.2
JTHY				*e*S	Sn	23 00 34.3	-2.6
JKO	Kozu shima	1.55	263	||P	Pn	23 00 19.8	-1.2
JKO				S	Sn	23 00 37.1	-3.2
JHJ2	Mitsune	1.61	218	*e*Pn	Pn	23 00 20.6	-1.1
JHJ2				*e*Sn	Sn	23 00 35.2	-6.5
JHJ2	Mitsune	1.61	218	||P	Pn	23 00 20.6	-1.1
JHJ	Hachijo jima 2	1.62	219	Pn	Pn	23 00 20.7	-1.2
	258nm,0.3s,baz=317,slow=23,SNR=120						
JHJ				Sn	Sn	23 00 36.8	-5.1
	414nm,0.3s,baz=41,slow=19,SNR=17						
JHJ				LR	LR	23 00 56.6	
	comp=Z,195nm,20.1s,baz=290,slow=40						
KTJ3	Kamata3	1.68	289	⇑P	Pn	23 00 20.9	-1.8
KTJ3				S	Sn	23 00 38.8	-4.6

MJAR Matsushiro Arr 3.13 314 Pn Pn 23 00 42.2 -0.5
5.1nm,0.3s,baz=145,slow=12,SNR=146
MJAR Sn Sn 23 01 18.4 -0.8
5.0nm,0.3s,baz=133,slow=23,SNR=7.3
MJAR LR LR 23 02 09.3
comp=Z,288nm,18.2s,baz=140,slow=45
MAJO Matsushiro 3.13 314 *e*Pn Pn 23 00 42.3 -0.4
MAJO *e*Sn Sn 23 01 18.4 -0.8
MAT Matsushiro 3.13 314 P Pn 23 00 42.4 -0.3
MAT S Sn 23 01 17.8 -1.4
MJB9 Matsu-Tunnel 3.13 314 *e*Pn Pn 23 00 42.4 -0.3
INU Inuyama 3.41 287 *e*Pn Pn 23 00 47.4 +1.0
ERM Erimo 7.80 12 *e*Pn Pn 23 01 46.1 -0.7
ERM *e*Sn Sn 23 03 08.4 -5.8
JNU Nakatsue 8.52 264 Pn Pn 23 01 58.1 +1.4
1.7nm,0.3s,baz=31,slow=5.8,SNR=13
JNU LR LR 23 04 06.5
comp=Z,84nm,20.1s,baz=150,slow=30
JNU Nakatsue 8.52 264 *e*Pn Pn 23 01 59.3 +2.6
ASAJ Asahikawa 9.79 7 Pn Pn 23 02 12.7 -1.4
3.6nm,0.3s,baz=220,slow=12,SNR=16
ASAJ Sn Sn 23 03 59.3 -3.9
0.5nm,0.3s,baz=11,slow=33,SNR=3.3
ASAJ LR LR 23 06 52.1
comp=Z,161nm,19.2s,baz=186,slow=43
KSRS Korea Array 11.03 290 Pn Pn 23 02 31.7 +0.6
0.2nm,0.3s,baz=78,slow=14,SNR=2.6
KSRS LR LR 23 06 19.1
comp=Z,75nm,20.9s,baz=122,slow=35
KS15 Wonju Array Si 11.06 290 *e*Pn Pn 23 02 31.7 +0.2
USA0B Ussuriysk Arra 12.02 327 *e*Pn Pn 23 02 44.7 +0.2
USRK Ussuriysk Ar. 12.02 327 Pn Pn 23 02 44.6 0.0
0.1nm,0.3s,baz=140,slow=11,SNR=11
MDJ Mudanjiang 13.47 323 *e*Pn Pn 23 03 01.4 -2.9
KLR Kul'dur 16.33 338 Pn Pn 23 03 41.0 -1.4
0.8nm,0.3s,baz=148,slow=9.1,SNR=17
MA2 Magadan 26.01 11 *e*P P 23 05 22.0 -3.6
4.6nm,0.8s
H11N2 WAKE ISLAND Hy 27.20 116 T T 23 34 47.3
baz=308,slow=75,SNR=28
H11N1 WAKE ISLAND Hy 27.20 116 T T 23 34 47.3
baz=308,slow=75,SNR=29
H11N3 WAKE ISLAND Hy 27.21 116 T T 23 34 47.3
baz=308,slow=75,SNR=26
H11S3 WAKE ISLAND Hy 27.81 118 T T 23 35 40.1
baz=310
H11S1 WAKE ISLAND Hy 27.81 118 T T 23 35 42.8
baz=310
H11S2 WAKE ISLAND Hy 27.83 118 T T 23 35 46.1
baz=310
ULN Ulaanbaatar 28.64 308 *e*P P 23 05 50.0 +0.4
2.6nm,0.6s
SONA0 Songino Array 29.06 308 *e*P P 23 05 53.8 +0.5
SONM Songino Array 29.06 308 P P 23 05 53.8 +0.5
2.8nm,0.7s,baz=104,slow=8.6,SNR=12
TIXI Tiksi 37.87 354 P P 23 07 09.9 +0.6
1.7nm,0.3s,baz=143,slow=5.3,SNR=2.8
MK32 Makanchi Array 45.28 304 *e*P P 23 08 11.1 +0.6
MKAR Makanchi Array 45.28 304 P P 23 08 11.1 +0.6
5.2nm,0.5s,baz=86,slow=9.0,SNR=9.0
KURBB Kurchatov Arra 47.39 310 P P 23 08 27.5 +0.5
3.2nm,0.5s,baz=82,slow=8.5,SNR=14
BVAR Borovoye Array 52.12 314 P P 23 09 03.9 +1.0
5.2nm,0.7s,baz=86,slow=8.1,SNR=3.2
BVAR Borovoye Array 52.12 314 P P 23 09 03.9 +1.0
ASAR Alice Springs 58.13 188 P P 23 09 46.9 +0.4
1.4nm,0.7s,baz=16,slow=14,SNR=9.1
ARU Arti 58.13 320 P P 23 09 46.5 +0.3
2.3nm,0.4s,baz=84,slow=5.0,SNR=8.6
ARU Arti 58.13 320 *e*P P 23 09 46.5 +0.3
5.8nm,0.5s
KIRV Kirov 62.16 324 P P 23 10 14.2 +0.5
8.3nm,0.6s,baz=78,slow=1.6,SNR=5.8
STKA Stephens Creek 65.92 179 P P 23 10 41.1 +2.5
0.6nm,0.3s,baz=0.0,slow=9.1,SNR=2.4
F03A Seaside 69.64 48 *e*P P 23 11 00.5 -1.6
FIA0 FINESS Array S 70.99 333 *e*P P 23 11 10.5 +0.4
FINES FINESS Array B 70.99 333 P P 23 11 10.5 +0.4
2.3nm,0.7s,baz=64,slow=4.4,SNR=8.4
KVAR Kislovodsk Arr 72.38 311 LR LR 23 44 31.8
comp=Z,35nm,20.4s,baz=150,slow=37
MOD Modoc Plateau 73.70 50 *e*P P 23 11 24.8 -2.1
2.4nm,0.5s
AKASG Malin Array Be 76.18 323 P P 23 11 41.0 +0.2
2.9nm,0.5s,baz=46,slow=6.4,SNR=11
AKBB Malin Array Si 76.18 323 *e*P P 23 11 41.0 +0.2
3.9nm,0.6s
NB2 NORSAR Subarra 76.49 337 P P 23 11 42.8 +0.4
comp=Z,2.9nm,0.7s,baz=41,slow=5.9
NOA NORSAR Array B 76.49 337 P P 23 11 43.1 +0.7
comp=Z,2.6nm,0.7s,baz=40,slow=5.8,SNR=12
NV01 Mina Array Sit 76.86 52 *e*P P 23 11 47.5 +2.3
NVAR Mina Array Bea 76.86 52 P P 23 11 47.5 +2.3
comp=Z,1.2nm,1.0s,baz=278,slow=6.3,SNR=3.4
FRB Frobisher Bay 79.42 13 P P 23 11 59.5 +1.0
comp=Z,3.0nm,0.7s,baz=339,slow=8.6,SNR=4.2
PD31 Pinedale Array 79.77 45 *e*P P 23 12 01.4 +0.2
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 79.77 45 P P 23 12 02.6 +1.4
comp=Z,0.4nm,0.6s,baz=264,slow=8.1,SNR=2.5
BR101 Keskin Array S 80.35 312 *e*P P 23 12 05.0 +0.7
BRTR Keskin Array B 80.35 312 P P 23 12 05.0 +0.7
comp=Z,0.6nm,0.5s,baz=84,slow=4.6,SNR=5.7
CLL Collm 83.21 330 *i* P P 23 12 19.2 +0.3
GERES GERESS Array B 84.77 328 P P 23 12 27.2 +0.2
comp=Z,1.0nm,0.6s,baz=39,slow=5.1,SNR=8.3
LTX Lajitas 92.00 52 *e*P P 23 13 02.7 +0.7
TXAR Lajitas Array 92.00 52 P P 23 13 02.7 +0.7
comp=Z,0.2nm,0.5s,baz=316,slow=3.8,SNR=3.0
TXAR LR LR 23 48 34.0
comp=Z,114nm,21.8s,baz=0.0,slow=32
LPAZ La Paz 148.26 63 PKPbc PKPbc 23 19 40.7 +0.5
comp=Z,1.3nm,0.9s,baz=297,slow=5.0,SNR=2.9
CPUP Villa Florida 162.28 68 PKP PKPdf 23 19 54.4 -0.2
comp=Z,1.5nm,0.3s,baz=332,slow=2.0,SNR=5.5

ISCJB ***04*** *23:05:31.3±0.2, 37°.11N±0°.02×71°.58E±0°.04, h106km, mb4.0/21, Error ellipse: s-maj=4.2km s-min=2.9km az=178.2*
IDC ***04*** *23:05:32.8±2.9, 37°.20N×71°.47E, h95km±25km, mb3.7/14, mb1 3.9/20, mb1mx3.6/55, mbtmp4.1/20, Error ellipse: s-maj=23.5km s-min=13.8km az=152.0*
MOS ***04*** *23:05:32.3±1.3, 37°.25N×71°.42E, h103km, mb4.3/9, Error ellipse: s-maj=9.3km s-min=5.5km az=87.0*
NNC ***04*** *23:05:32.7±3.2, 37°.58N×71°.07E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=25.1km s-min=16.9km az=178.0*
BJI ***04*** *23:05:33.3±0.0, 37°.35N×71°.58E, h90km, mb4.4/11, mB4.4/10*
NEIC ***04*** *23:05:33.6±0.5, 37°.20N×71°.44E, h99km±9km, mb4.1/6, Error ellipse: s-maj=9.3km s-min=6.2km az=109.0*
SOME ***04*** *23:05:38.5, 38°.83N×72°.13E, h80km*
ISC 04 23:05:32.6±0.4, 37°.13N±0°.04×71°.42E±0°.04, h106km, n110, σ2§39/134, mb4.0/21, 11C-11D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.23	217	*e*Pn	Pn	23

SNR=29
AAK Ala-Archa 5.98 22 P Pn 23 06 59.1 +0.3
10.0nm,0.3s,baz=163,slow=5.8,SNR=38
AAK S **Sn 23 08 04.2 -1.8**
7.1nm,0.3s,baz=352,slow=20,SNR=7.6
AAK Ala-Archa 5.98 22 P **Pn 23 06 59.6 +0.8**
SNR=16
AAK Ala-Archa 5.98 22 *e*Pn **Pn 23 06 58.9 +0.1**
AAK Ala-Archa 5.98 22 ⇓P **Pn 23 06 59.6 +0.8**
14nm,0.5s
AAK ⇑S **Sn 23 08 04.5 -1.5**
68nm,1.0s
KK31 Karatay Array 6.00 354 *e*Pn **Pn 23 06 58.6 -0.3**
KK31 Karatay Array 6.00 354 ⇓P **Pn 23 06 58.3 -0.6**
6.2nm,0.3s,baz=183,slow=14,SNR=87
KK31 ⇑S **Sn 23 08 02.7 -3.6**
15nm,0.5s,baz=175,slow=23,SNR=5.0
KK31 Karatay Array 6.00 354 PN **Pn 23 06 58.3 -0.6**
KKAR Karatay Array 6.00 354 *e*Pn **Pn 23 06 58.6 -0.3**
KKAR Karatay Array 6.00 354 PN **Pn 23 06 58.6 -0.3**
KBK Karagaybulak 6.15 25 P **Pn 23 07 02.4 +1.3**
SNR=22
FRU1 Bishkek 6.18 23 *e*Pn **Pn 23 07 01.9 +0.5**
FRU1 Bishkek 6.18 23 *e*PN **Pn 23 07 01.9 +0.5**
ULHL Ulahol 6.32 35 P **Pn 23 07 04.9 +1.5**
SNR=7.0
DHRM DHARAMSHALA 6.32 139 *e*P **Pn 23 07 02.4 -1.0**
DHRM *e*S **Sn 23 08 09.9 -4.4**
BOOM Boomskoye usch 6.38 32 *e*Pn **Pn 23 07 04.1 -0.1**
BOOM Boomskoye usch 6.38 32 *e*PN **Pn 23 07 04.1 -0.1**
CHMS Chumysh 6.39 23 P **Pn 23 07 04.9 +0.7**
SNR=22
USP Ospenovka 6.56 20 P **Pn 23 07 06.6 0.0**
SNR=36
TKM2 Tokmak 2 6.61 28 P **Pn 23 07 08.0 +0.7**
SNR=22
TKM2 Tokmak 2 6.61 28 ⇓P **Pn 23 07 07.7 +0.4**
13nm,0.7s
TKM2 ⇑S **Sn 23 08 22.5 +1.2**
22nm,0.7s
TKM2 Tokmak 2 6.61 28 PN **Pn 23 07 07.7 +0.4**
TKM2 S **Sn 23 08 22.5 +1.2**
TARG Taragay, Kyrgy 6.74 45 *e*Pn **Pn 23 07 10.3 +0.9**
KST Kastek 6.85 29 *e*P **Pn 23 07 11.7 +1.2**
9.7nm,0.6s
KST *e*S **Sn 23 08 25.6 -1.5**
30nm,0.5s
DGS Degeres 6.95 27 *e*P **Pn 23 07 12.3 +0.5**
16nm,0.6s
DGS *e*S **Sn 23 08 28.3 -1.1**
18nm,0.7s
SMLA Simla 7.65 140 *e*P **Pn 23 07 19.7 -1.6**
SMLA *e*S **Sn 23 08 39.0 -7.5**
SMLA IAML 23 08 45.0
comp=E,415nm,0.2s
SMLA IAML 23 08 45.3
comp=N,492nm,0.4s
PDGK Podgornoye 8.74 42 ⇓P **Pn 23 07 37.4 +1.3**
comp=N,5.3nm,0.5s
PDGK ⇓S **Sn 23 09 18.1 +5.2**
comp=N,26nm,1.2s
PDGK Podgornoye 8.74 42 PN **Pn 23 07 37.4 +1.3**
PDGK S **Sn 23 09 18.1 +5.2**
DDI Dehra Dun 8.76 139 *e*P **Pn 23 07 35.9 -0.5**
DDI *e*S **Sn 23 09 06.8 -6.6**
JOSI Joshimath 9.42 132 *e*x Pn 23 07 38.3 -7.4
JOSI *e*S **Sn 23 09 22.8 -7.1**
JOSI IAML 23 09 29.9
comp=E,209nm,0.1s
JOSI IAML 23 09 30.7
comp=N,235nm,0.4s
GEYT Alibeck 10.60 278 P **Pn 23 07 57.5 -3.8**
comp=N,3.0nm,0.3s,baz=101,slow=12,SNR=40
GEYT S Sn 23 09 48.6 -9.3
comp=N,13nm,0.3s,baz=104,slow=28,SNR=20
OTUK Ortayu 11.12 3 ⇓P **Pn 23 08 06.0 -2.4**
comp=N,9.5nm,1.0s
OTUK ⇓S **Sn 23 10 09.6 -1.1**
comp=N,5.0nm,0.7s
OTUK Ortayu 11.12 3 P **Pn 23 08 05.9 -2.4**
OTUK S **Sn 23 10 09.6 -1.1**
MKAR Makanchi Array 12.58 37 P **Pn 23 08 26.6 -1.1**
comp=N,0.5nm,0.3s,baz=228,slow=14,SNR=5.9
MKAR Makanchi Array 12.58 37 *i*P **Pn 23 08 27.1 -0.6**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
PYUN Piuthan 13.27 129 *e*P **Pn 23 08 32.6 -4.4**
comp=Z,52nm,0.3s
DANN Dangsing 13.58 127 *e*P **Pn 23 08 37.3 -3.8**
comp=Z,36nm,0.3s
KOLN Koldanda 13.88 129 *e*P **Pn 23 08 40.8 -4.1**
comp=Z,26nm,0.3s
WMQ Urumqi 14.06 57 *e*P **Pn 23 08 47.9 +0.8**
GKN Gorkha 14.38 125 *e*P **Pn 23 08 47.4 -3.9**
comp=Z,62nm,0.2s
KURBB Kurchatov Arra 14.42 18 P **Pn 23 08 51.3 -0.2**
comp=Z,0.1nm,0.3s,baz=216,slow=11,SNR=3.2
KURK Kurchatov 14.52 19 P **Pn 23 08 51.3 -1.5**
AB31 Akbulak array 14.70 329 ⇑P **Pn 23 08 51.9 -3.2**
comp=Z,0.9nm,0.3s
AB31 ⇑S **Sn 23 11 32.9 -4.3**
comp=Z,1.5nm,0.3s,baz=148,slow=24,SNR=5.3
AB31 Akbulak array 14.70 329 P **Pn 23 08 51.9 -3.2**
AB31 S **Sn 23 11 32.9 -4.3**
KKN Kakani 14.94 125 *e*P **Pn 23 08 54.3 -4.2**
comp=Z,31nm,0.5s
DMN Daman 14.95 126 *e*P **Pn 23 08 54.2 -4.5**
comp=Z,18nm,0.3s
PKIN Phulchoki 15.16 125 *e*P **Pn 23 08 57.4 -4.0**
comp=Z,29nm,0.5s
PKI Pulchoki 15.17 125 *e*P **Pn 23 08 57.8 -3.8**
comp=Z,23nm,0.4s
GUN Gumba 15.26 123 *e*P **Pn 23 08 58.2 -4.5**
comp=Z,70nm,0.5s
JIRN Jiri 15.63 123 *e*P **Pn 23 09 03.1 -4.3**
comp=Z,99nm,0.4s
BRVK Borovoye 15.94 358 *ce*P **Pn 23 09 08.4 -2.2**
RAMN Ramite 16.37 124 *e*P **Pn 23 09 12.0 -4.4**
comp=Z,87nm,0.7s
AKTO Aktyubinsk 16.41 328 P **Pn 23 09 16.5 +0.1**
comp=Z,0.9nm,0.3s,baz=137,slow=13,SNR=14
AKTO Aktyubinsk 16.41 328 ⇑P **P 23 09 18.6 +1.3**
comp=Z,11nm,0.9s
AKTO ⇓S **Sn 23 12 14.3 -4.0**
comp=Z,7.4nm,1.1s
AKTO Aktyubinsk 16.41 328 P **P 23 09 18.6 +1.3**
AKTO S **Sn 23 12 14.3 -4.0**
DGZ Jazzator, Alta 17.07 38 *ce*P **Pn 23 09 24.3 -0.4**
WSAR Wadi Sarin 17.69 222 P **Pn 23 09 32.5 +0.2**
comp=Z,0.8nm,0.3s,baz=45,slow=5.7,SNR=10
UOSS Minazif 17.79 231 *e*P **Pn 23 09 34.2 +0.7**
comp=Z,10nm,0.8s
LSA Lhasa 18.05 109 *e*P **Pn 23 09 37.2 +0.2**
comp=Z,8.4nm,0.7s
LSA Lhasa 18.05 109 *e*P **Pn 23 09 37.2 +0.2**
LSA pmax pmax
comp=Z,8.0nm,0.7s
AKT Akhty 18.82 291 *e*P **P 23 09 44.5 +0.5**
AKT *e*S **Sn 23 13 16.4 -0.2**
AKT pmax pmax
comp=Z,4.0nm,0.4s
AKT smax smax
comp=E,11nm,0.4s
AKT smax smax
comp=N,9.0nm,0.6s
ZAA0 Zalesovo Array 19.20 25 *e*P **P 23 09 47.8 -0.1**
comp=N,6.1nm,0.6s
ZALV Zalesovo Beam 19.20 25 P **P 23 09 47.7 -0.2**
comp=N,2.2nm,0.3s,baz=217,slow=11,SNR=24
NVS Novosibirsk 19.47 21 *i*P **P 23 09 50.9 +0.1**
GNI Garni 21.03 286 P **P 23 10 10.7 +2.8**
comp=N,8.9nm,0.8s,baz=342,slow=5.8,SNR=10
GNI Garni 21.03 286 *e*P **P 23 10 10.4 +2.5**
comp=N,8.3nm,0.8s
GNI Garni 21.03 286 *ce*P **P 23 10 11.0 +3.1**
GNI pmax pmax
comp=Z,23nm,0.7s
NCK Nalchik 22.09 295 ⇑*e*P **P 23 10 20.9 +1.9**
NCK pmax pmax
comp=Z,6.0nm,0.6s
KBZ Khabaz 22.62 296 P **P 23 10 24.0 -0.4**
comp=Z,1.2nm,0.7s,baz=95,slow=2.9,SNR=2.8
KBZ Khabaz 22.62 296 P **P 23 10 24.0 -0.4**
KIV Kislovodsk 22.80 296 *e*P **P 23 10 26.1 -0.3**
KIV pmax pmax
comp=Z,8.0nm,1.1s

LZH Lanzhou 25.99 82 ⇓P **P 23 10 57.9 +2.3**
LZH pP pP 23 11 20.3 0.0
LZH sP sP 23 11 33.1 -0.1
LZH PP **PnPn 23 11 43.5 +3.6**
LZH pmax pmax
comp=Z,17nm,1.3s
LZH pmax pmax
comp=Z,46nm,4.8s
VSR Storozhevoye 26.82 312 ⇓*e*P **P 23 11 02.7 0.0**
VSR *i* AP **pP 23 11 27.9 +1.0**
VSR pmax pmax
comp=Z,5.0nm,0.5s
SONM Songino Array 27.70 56 P **P 23 11 11.6 +0.7**
comp=Z,0.9nm,0.7s,baz=269,slow=10,SNR=3.6
BRTR Keskin Array B 29.57 287 P **P 23 11 28.9 +1.4**
comp=Z,0.5nm,0.6s,baz=106,slow=6.7,SNR=4.3
BRTR Keskin Array B 29.57 287 *i*P **P 23 11 31.2 +3.7**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
HHC Hu-ho-hao-te 31.23 71 *e*P **P 23 11 44.3 +2.2**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,100nm,5.7s
AKASG Malin Array Be 32.81 308 P **P 23 11 55.6 0.0**
comp=Z,0.8nm,0.3s,baz=81,slow=6.9,SNR=3.3
MLR Muntele Rosu 34.77 298 P **P 23 12 15.6 +2.7**
comp=Z,3.4nm,0.9s,baz=99,slow=7.8,SNR=5.8
MLR Muntele Rosu 34.77 298 *e*P **P 23 12 15.1 +2.2**
comp=Z,3.8nm,0.9s
MLR Muntele Rosu 34.77 298 *e*P **P 23 12 15.1 +2.2**
MLR pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 37.15 326 P **P 23 12 33.8 +1.0**
comp=Z,1.3nm,0.6s,baz=123,slow=8.9,SNR=6.0
FINES FINESS Array B 37.15 326 *i*P **P 23 12 34.0 +1.3**
FINES pmax pmax
comp=Z,1.0nm,0.6s
VYHS Vyhne 39.48 304 *e*P **P 23 12 55.3 +2.8**
VYHS Vyhne 39.48 304 *e*P **P 23 12 55.2 +2.8**
ARCES ARCESS Array B 40.69 337 P **P 23 13 03.6 +1.5**
comp=Z,1.5nm,0.8s,baz=116,slow=8.1,SNR=3.8
KHC Kasperske Hory 42.89 305 ⇑*e*P **P 23 13 20.9 +0.5**
KHC pmax pmax
comp=Z,16nm,2.5s
NB2 NORSAR Subarra 44.08 323 P **P 23 13 30.2 +0.4**
comp=Z,1.0nm,0.5s,baz=93,slow=7.9
NOA NORSAR Array B 44.08 323 P **P 23 13 30.4 +0.6**
comp=Z,1.4nm,0.5s,baz=95,slow=7.8,SNR=8.9
KLR Kul'dur 44.50 54 P **P 23 13 34.0 +0.8**
comp=Z,0.9nm,0.4s,baz=269,slow=8.3,SNR=4.8
KLR Kul'dur 44.50 54 ⇓*e*P **P 23 13 34.9 +1.6**
KLR pmax pmax
comp=Z,2.0nm,1.0s
SENIN Lac Senin/Sane 47.53 302 *e*P **P 23 13 58.5 +1.2**
comp=Z,13nm,1.4s
KMBO Kilima Mbogo 49.51 228 P **P 23 14 14.7 +1.9**
comp=Z,2.1nm,0.5s,baz=31,slow=12,SNR=6.7
ESDC Sonseca Array 57.46 298 P **P 23 15 11.2 +0.7**
comp=Z,0.9nm,0.6s,baz=61,slow=7.3,SNR=4.5
INK Inuvik 73.23 9 P **P 23 16 52.7 +1.2**
comp=Z,1.5nm,0.5s,baz=331,slow=6.2,SNR=6.7
YKA Yellowknife Ar 80.60 3 P **P 23 17 33.9 +0.9**
comp=Z,0.7nm,0.5s,baz=350,slow=5.3,SNR=5.3

KRSC 04 23:06:45.1±1.1, 53°.86N×161°.72E, h40km±18km, ML3.5,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.69**	**0**	*e*P	Pn	23 07 00.3	+1.8
MKZ				*e*S	Sn	23 07 08.9	+0.9
SPN	**Mys Shipunski**	**1.27**	**234**	*e*P	Pn	23 07 07.6	+1.2
SPN				*e*S	Sn	23 07 22.1	-0.1
KZV	**Kizimen**	**1.51**	**327**	*e*P	Pn	23 07 11.9	+2.2
KZV				*e*S	Sn	23 07 30.0	+1.8
TUMD	**Tumrok D**	**1.55**	**331**	*e*P	Pn	23 07 12.1	+1.9
TUMD				*e*S	Sn	23 07 30.1	+1.0
NLC	**Nalytchevo**	**1.58**	**245**	*e*P	Pn	23 07 12.5	+1.9
TUMR	**Tumrok**	**1.69**	**328**	*e*P	Pn	23 07 15.3	+3.0
SDLR	**Sedlovina**	**1.79**	**252**	*e*P	Pn	23 07 15.8	+2.2
SDLR				*e*S	Sn	23 07 36.6	+1.4
SMAR	**Somma**	**1.84**	**252**	*e*P	Pn	23 07 16.6	+2.2
SMAR				*e*S	Sn	23 07 37.9	+1.3
UGLR	**Uglovaya**	**1.85**	**250**	*e*P	Pn	23 07 17.0	+2.6
KRER	**Koryakskii**	**1.86**	**254**	*e*P	Pn	23 07 17.1	+2.5
KRER				*e*S	Sn	23 07 38.8	+1.8
AVH	**Avacha**	**1.88**	**253**	*e*P	Pn	23 07 17.3	+2.5
AVH				*e*S	Sn	23 07 39.6	+2.3
KRX	**Arik**	**1.90**	**256**	*e*P	Pn	23 07 17.4	+2.3
KRX				*e*S	Sn	23 07 39.0	+1.1
KOK	**Koryaka**	**1.93**	**254**	*e*P	Pn	23 07 18.3	+2.8
DALK	**Dalny**	**1.96**	**246**	*e*P	Pn	23 07 17.9	+2.1
DALK				*e*S	Sn	23 07 40.3	+1.1
PET	**Petropavlovsk**	**2.02**	**247**	*e*S	Sn	23 07 41.8	+1.2
GNL	**Ganaly**	**2.25**	**267**	*e*P	Pn	23 07 22.6	+2.7
GNL				*e*S	Sn	23 07 48.5	+2.0
KRMR	**Karymshinskiy**	**2.39**	**246**	*e*P	Pn	23 07 25.6	+3.9
KRMR				*e*S	Sn	23 07 53.6	+3.9
RUS	**Russkaya**	**2.41**	**235**	*e*P	Pn	23 07 26.4	+4.5
RUS				*e*S	Sn	23 07 54.9	+4.8
KBTR	**Krutoberegovo**	**2.43**	**15**	*e*P	Pn	23 07 25.9	+3.6
KBTR				*e*S	Sn	23 07 54.6	+3.8
MTVR	**Mutnovka**	**2.54**	**238**	*e*P	Pn	23 07 28.3	+4.4
ESO	**Esso**	**2.71**	**321**	*e*P	Pn	23 07 29.7	+3.6
SRDR	**Sredinnyy**	**2.72**	**336**	*e*P	Pn	23 07 30.4	+4.1
BKI	**Bering**	**2.82**	**60**	*e*S	Sn	23 08 01.9	+1.7
SRKR	**Sorokina**	**2.82**	**354**	*e*P	Pn	23 07 29.2	+1.6
APC	**Apacha**	**2.89**	**253**	*e*S	Sn	23 08 07.1	+5.0
KDTR	**Khodutka, Kamc**	**3.02**	**229**	*e*P	Pn	23 07 34.1	+3.7
KDTR				*e*S	Sn	23 08 08.7	+3.4

UCR 04 23:13:37.0±1.4, 10°.29N×86°.31W, h19km±8km, MD4.0,
ML3.2, 4C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.84**	**65**	*i*P	Pb	23 13 53.1	+0.1
GBS3	**Finca Las Img**	**0.97**	**60**	*i*P	Pb	23 13 54.4	-0.8
GPS1	**Guardaparques**	**1.06**	**63**	*i*P	Pb	23 13 55.8	-1.0
HORNC	**Hornillas**	**1.19**	**69**	*i*P	Pn	23 13 57.7	-0.9
ACAL	**Aguas Claras**	**1.30**	**74**	⇑*i*P	Pn	23 13 59.6	-0.5
JTS	**Las Juntas de**	**1.33**	**90**	⇑*e*P	Pn	23 14 00.0	-0.6
JTS				*e*S	Sg	23 14 23.9	+3.7
CONN	**Concepcion**	**1.43**	**28**	*e*P	Pn	23 14 01.5	-0.5
ARE1	**Arenal 1**	**1.57**	**84**	⇑*e*P	Pn	23 14 04.3	+0.5
SRA1	**San Ramn**	**1.81**	**96**	*e*P	Pn	23 14 06.6	-0.7
COPN	**Copaltepe**	**1.90**	**352**	*e*P	Pn	23 14 08.3	-0.1
ACON	**Acoyapa**	**2.00**	**34**	⇑*i*P	Pn	23 14 09.4	-0.4
ACON				*e*S	Sb	23 14 36.0	-1.4
MOMN	**Momotombo**	**2.12**	**354**	*e*P	Pn	23 14 11.3	-0.2
CNGN	**Cerro Negro**	**2.23**	**350**	*e*P	Pn	23 14 13.8	+0.8
CRIN	**San Cristobal**	**2.51**	**343**	*e*P	Pn	23 14 16.2	-0.5
CRIN				*e*S	Sn	23 14 47.0	+0.1
CRIN				IAML		23 14 49.2	
comp=N,170nm,0.3s							
ESPN	**Las Esperanzas**	**2.73**	**46**	*e*P	Pn	23 14 19.8	0.0
CSGN	**Cosiguina Volc**	**2.94**	**335**	*e*P	Pn	23 14 23.9	+1.1
CSGN				*e*S	Sn	23 14 57.3	-0.3

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*IDC **04** 23:26:25.8±1.3, 32°.65N×76°.04E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.4/36, mbtmp3.6/9, ML3.3/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/39, Error ellipse: s-maj=30.3km s-min=22.0km az=71.0*
*ISCJB **04** 23:26:26.5±0.5, 32°.69N±0°.04×76°.20E±0°.10, h20km, mb3.6/6, MS2.9/1, Error ellipse: s-maj=12.7km s-min=4.1km az=160.0*
*NDI **04** 23:26:27.4±2.2, 32°.63N×76°.16E, h12km±7km, ML3.4*
ISC 04 23:26:27.9±0.7, 32°.66N±0°.05×76°.25E±0°.09, h20km, n16, σ2°.10/22, mb3.6/6, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**0.41**	**174**	*e*P	**Pb**	**23 26 35.0**	**-1.6**
DHRM				*e*S	**Sb**	**23 26 41.4**	**-1.2**
DHRM				IAML		23 26 47.7	
comp=N,2μm,0.5s							
DHRM				IAML		23 26 48.0	
comp=E,2μm,0.3s							
SMLA	**Simla**	**1.72**	**153**	*e*P	**Pn**	**23 26 56.8**	**+0.1**
SMLA				*e*S	**Sn**	**23 27 18.3**	**+0.3**
SMLA				IAML		23 27 20.1	
comp=N,710nm,0.5s							
SMLA				IAML		23 27 20.2	
comp=E,573nm,0.3s							
DDI	**Dehra Dun**	**2.80**	**146**	*e*P	**Pn**	**23 27 14.0**	**+2.4**
DDI				*e*S	**Sn**	**23 27 45.7**	**+0.9**
DDI				IAML		23 27 53.4	
comp=N,184nm,0.7s							
DDI				IAML		23 27 53.8	
comp=E,254nm,0.8s							
JOSI	**Joshimath**	**3.52**	**126**	*e*P	**Pn**	**23 27 22.2**	**+0.5**
JOSI				*e*S	**Sn**	**23 28 03.9**	**+1.0**
JOSI				IAML		23 28 17.6	
comp=N,164nm,0.2s							
JOSI				IAML		23 28 22.8	
comp=E,119nm,0.3s							
KUDL	**Kundal**	**4.51**	**177**	*e*P	**Pn**	**23 27 35.2**	**+0.1**
KUDL				*e*S	**Sn**	**23 28 24.9**	**-2.0**
AAK	**Ala-Archa**	**10.05**	**353**	Pn	**Pn**	**23 28 52.9**	**+1.6**
comp=E,0.3nm,0.3s,baz=171,slow=8.0,SNR=3.6							
AAK				Sn	**Sn**	**23 30 44.2**	**+0.7**
comp=E,0.3nm,0.3s,baz=204,slow=15,SNR=1.8							
MKAR	**Makanchi Array**	**14.85**	**16**	Pn	**Pn**	**23 29 55.3**	**-1.4**
comp=E,0.3nm,0.3s,baz=202,slow=14,SNR=14							
MKAR				Sn	**Sn**	**23 32 33.8**	**-6.8**
comp=E,0.1nm,0.3s,baz=207,slow=23,SNR=2.8							
KURBB	**Kurchatov Arra**	**18.02**	**5**	P	**Pn**	**23 30 36.2**	**-0.8**
comp=E,0.0nm,0.3s,baz=193,slow=10,SNR=5.1							
BVAR	**Borovoye Array**	**20.79**	**350**	P	**P**	**23 31 08.1**	**+0.5**
comp=E,1.5nm,0.7s,baz=164,slow=12,SNR=14							
ZALV	**Zalesovo Beam**	**22.14**	**14**	P	**P**	**23 31 22.5**	**+0.4**
comp=E,1.4nm,0.6s,baz=212,slow=10,SNR=6.4							
AKTO	**Aktyubinsk**	**22.29**	**328**	P	**P**	**23 31 25.5**	**+1.7**
comp=E,1.6nm,0.5s,baz=144,slow=13,SNR=4.7							
CMAR	**Chiang Mai Arr**	**24.81**	**119**	P	**P**	**23 31 51.8**	**+3.0**
comp=E,1.0nm,0.9s,baz=313,slow=9.9,SNR=5.6							
GNI	**Garni**	**26.34**	**295**	LR	LR	23 44 52.3	
comp=E,41nm,21.2s,baz=91,slow=42							
FINES	**FINESS Array B**	**43.06**	**327**	P	**P**	**23 34 27.3**	**+1.3**
comp=E,1.4nm,0.9s,baz=145,slow=5.1,SNR=3.2							
ARCES	**ARCESS Array B**	**46.33**	**338**	P	**P**	**23 34 53.0**	**+0.9**
comp=E,2.2nm,0.8s,baz=108,slow=7.8,SNR=8.6							
TORD	**Torodi Ar. Bea**	**70.11**	**273**	P	**P**	**23 37 38.0**	**-1.2**
comp=E,0.3nm,0.9s,baz=56,slow=8.8,SNR=2.7							

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*ISN **04** 23:43:04.2±1.1, 37°.11N×42°.44E, h0km±5km, ML3.1*
*ISCJB **04** 23:43:05.9±0.7, 37°.13N±0°.03×42°.49E±0°.04, h3km±6km, Error ellipse: s-maj=5.6km s-min=4.1km az=44.5*
*DDA **04** 23:43:06.3, 37°.20N×42°.49E, h7km±3km, ML3.2*
*ISK **04** 23:43:06.4, 37°.11N×42°.49E, h16km, ML2.8/12*
ISC 04 23:43:05.4±1.4, 37°.12N±0°.03×42°.49E±0°.03, h1km±11km, n27, σ0°.82/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**Sırnak**	**0.38**	**351**	*i*P	**Pg**	**23 43 11.7**	**-1.0**
SIRN				*i*S	**Sg**	**23 43 15.8**	**-1.9**
SIRN				IAML_P			
comp=Z,10μm,0.2s							
MSL	**Mosul**	**0.88**	**145**	*e*Pg	**Pb**	**23 43 24.0**	**+0.6**
MSL				*e*Sg	**Sn**	**23 43 37.0**	**-1.2**
CUKT	**Cukurca**	**0.91**	**81**	PG	**Pb**	**23 43 24.2**	**+0.2**
CUKT				SG	**Sb**	**23 43 37.3**	**+0.7**
CUKT	**Cukurca**	**0.91**	**81**	*i*P	**Pb**	**23 43 24.5**	**+0.5**
CUKT				IAML_P			
comp=Z,2μm,0.2s							
SRTM	**Siirt_Merkez**	**0.98**	**333**	*i*P	**Pg**	**23 43 24.2**	**0.0**
HAKT	**HAKKARI**	**1.07**	**65**	*i*P	**Pg**	**23 43 26.8**	**+0.9**
HAKT				IAML_P			
comp=Z,1μm,0.1s							
BTMN	**Batman**	**1.24**	**309**	*i*P	**Pg**	**23 43 29.8**	**+0.6**
BTMN				*i*S	**Sn**	**23 43 47.5**	**+0.2**
BTMN				IAML_P			
comp=Z,1μm,0.3s							
AKDM	**Akdamar-Van**	**1.27**	**18**	PN	**Pn**	**23 43 30.2**	**-0.3**
AKDM				SN	**Sb**	**23 43 47.6**	**+0.4**
GEVA	**Gevas**	**1.28**	**21**	*i*P	**Pn**	**23 43 30.5**	**-0.1**
GEVA				IAML_P			
comp=Z,2μm,0.3s							
BLIS	**Bitlis-Merkez**	**1.33**	**347**	*i*P	**Pn**	**23 43 30.6**	**-0.7**
BLIS				*i*S	**Sb**	**23 43 48.5**	**-0.4**
BLIS				IAML_P			
comp=Z,2μm,0.3s							
MARD	**Mardin**	**1.38**	**279**	*i*P	**Pb**	**23 43 32.5**	**+0.4**
MARD				*i*S	**Sn**	**23 43 52.5**	**+1.6**
SVAN	**Silvan-Diyarba**	**1.45**	**316**	PN	**Pn**	**23 43 32.7**	**-0.2**
SVAN				SN	**Sn**	**23 43 52.0**	**-0.6**
SVAN	**Silvan-Diyarba**	**1.45**	**316**	*i*P	**Pn**	**23 43 32.6**	**-0.3**
SVAN				*i*S	**Sb**	**23 43 52.6**	**+0.4**
VANB	**Van**	**1.64**	**26**	PN	**Pn**	**23 43 34.4**	**-1.1**
MAZI	**Mazidag**	**1.66**	**282**	PN	**Pn**	**23 43 35.8**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.70**	**6**	*i*P	**Pb**	**23 43 37.7**	**+0.1**
ADCV				*i*S	**Sg**	**23 44 00.6**	**+0.6**
ADCV				IAML_P			
comp=Z,602nm,0.3s							
MUSM	**Mu-Merkez**	**1.78**	**335**	*i*P	**Pn**	**23 43 37.2**	**-0.2**
MUSM				*i*S	**Sn**	**23 44 00.3**	**-0.5**
MUSM				IAML_P			
comp=Z,863nm,0.2s							
MLAZ	**Malazgirt-MUS**	**2.02**	**1**	PN	**Pn**	**23 43 41.2**	**+0.4**
DYBB	**Diyarbakir**	**2.04**	**295**	PN	**Pn**	**23 43 41.2**	**+0.2**
BNGL	**BINGOL**	**2.11**	**330**	*i*P	**Pn**	**23 43 43.3**	**+1.2**
BNGL				*i*S	**Sb**	**23 44 11.4**	**-0.1**
VRTB	**Varto-Mus**	**2.19**	**339**	PN	**Pn**	**23 43 43.3**	**+0.1**
IKRK	**Kirkuk**	**2.28**	**138**	*e*Pn	**Pn**	**23 43 44.0**	**-0.2**
IKRK				*e*Sn	**Sn**	**23 44 13.0**	**+0.1**
CLDR	**Caldiran**	**2.32**	**29**	PN	**Pn**	**23 43 45.3**	**+0.4**
BNGB	**Bingl**	**2.35**	**323**	PN	**Pn**	**23 43 45.8**	**+0.5**
AGRB	**Hanur-Agry**	**2.49**	**9**	PN	**Pn**	**23 43 47.7**	**+0.5**
YEDI	**Yedisu-Bingol**	**2.77**	**327**	PN	**Pn**	**23 43 52.1**	**+1.0**
RTB	**Rutbah**	**4.45**	**204**	*e*Pn	**Pn**	**23 44 14.0**	**-0.1**
RTB				*e*Sn	**Sn**	**23 45 04.0**	**-2.6**

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*NIED **04** 23:48:00, 43°.30N×144°.00E, h5km, Mw3.6 Best double couple: M0=2.42000×10^14 NP1:φs=223.00000°, δ44.00000°, λ125.00000°. NP2:φs=359.00000°, δ55.00000°, λ61.00000°.*
*ISCJB **04** 23:48:35.0±0.8, 43°.35N±0°.04×144°.00E±0°.05, h12km±5km, mb3.7/10, Error ellipse: s-maj=6.7km s-min=5.7km az=148.0*
*JMA **04** 23:48:35.8, 43°.33N×143°.97E, h8km±1km, M3.6*
JMA Felt I J1.
*IDC **04** 23:48:38.5±4.1, 43°.43N×143°.92E, h22km±22km, mb3.6/10, mb1 3.7/11, mb1mx3.5/31, mbtmp3.7/11, ML2.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/29, Error ellipse: s-maj=29.6km s-min=20.3km az=180.0*
ISC 04 23:48:35.8±1.0, 43°.34N±0°.04×143°.99E±0°.03, h8km±7km, n26, σ0°.93/25, mb3.6/10, 1C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.17**	**256**	⇓P	**Pg**	**23 48 39.1**	**-0.1**
JAR				*e*S	**Sg**	**23 48 41.9**	**+0.3**
JOB	**Onbets**	**0.45**	**195**	⇓P	**Pg**	**23 48 44.4**	**-0.1**
JOB				*e*S	**Sg**	**23 48 51.7**	**+1.3**
JNK	**Nakash**	**0.58**	**65**	⇓P	**Pg**	**23 48 47.0**	**0.0**
JNK				*e*S	**Sg**	**23 48 54.9**	**+0.3**
JMP	**Maruseppu**	**0.81**	**326**	⇓P	**Pg**	**23 48 51.1**	**-0.3**
JMP				S	**Sg**	**23 49 02.1**	**+0.2**
JCH	**Churui**	**0.86**	**213**	⇑P	**Pb**	**23 48 51.2**	**-1.7**
JKHN	**Kushirohamanak**	**0.89**	**106**	P	**Pb**	**23 48 52.1**	**-1.4**
JFR	**Furan**	**1.04**	**261**	⇓P	**Pb**	**23 48 54.9**	**-1.1**
JFR				S	**Sb**	**23 49 08.9**	**-0.9**
ASAJ	**Asahikawa**	**1.28**	**308**	Pg	**Pb**	**23

baz=328,slow=76,SNR=49
H11S3 WAKE ISLAND Hy 31.30 135 T T 00 27 06.6
baz=328,slow=76,SNR=30
H11S2 WAKE ISLAND Hy 31.32 135 T T 00 27 09.3
baz=328,slow=76,SNR=23
ZALV Zalesovo Beam 39.41 307 P **P 23 56 06.0 +0.2**
0.6nm,0.4s,baz=76,slow=9.3,SNR=3.6
MKAR Makanchi Array 42.73 297 P **P 23 56 32.8 -0.5**
0.9nm,0.7s,baz=82,slow=10,SNR=7.6
MKAR PcP **PcP 23 58 26.2 +1.4**
0.1nm,0.5s,baz=54,slow=3.7,SNR=2.5
ILAR Eielson Array 43.17 36 P **P 23 56 36.7 +0.1**
1.0nm,0.8s,baz=262,slow=7.5,SNR=7.7
YKA Yellowknife Ar 57.40 33 P **P 23 58 25.2 +0.8**
0.3nm,0.6s,baz=309,slow=5.5,SNR=3.3
GEYT Alibeck 62.61 297 P **P 23 58 59.3 -1.2**
0.9nm,0.6s,baz=29,slow=3.4,SNR=3.8
FINES FINESS Array B 64.18 332 P **P 23 59 09.3 -1.1**
1.9nm,1.0s,baz=58,slow=7.2,SNR=5.6
NOA NORSAR Array B 69.13 338 P **P 23 59 41.6 -0.5**
0.4nm,0.6s,baz=34,slow=6.3,SNR=3.1
AKASG Malin Array Be 70.53 322 P **P 23 59 50.8 0.0**
0.3nm,0.3s,baz=48,slow=1.4,SNR=3.9
TXAR Lajitas Array 84.77 54 P **P 00 01 11.2 +0.4**
0.3nm,0.8s,baz=320,slow=4.0,SNR=3.1

SJA 04 23:59:21.1±0.6, 31°30S×65°02W, h30km±13km, ML3.2, MW3.5, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCA	**Tanti**	**0.37**	**95**	*e*P	Pn	23 59 30.1	-0.4
TCA				*e*S	Sn	23 59 36.6	-0.1
TCA				IAML		23 59 37.0	
	comp=Z,837nm,0.3s						
APLL	**PUNTA DE LOS L**	**1.58**	**305**	*e*P	Pb	23 59 49.5	-0.3
APLL				*e*S	Sb	00 00 10.0	+0.7
APLL				IAML		00 00 13.4	
	comp=Z,321nm,0.3s						
ACAN	**Cantantal**	**2.08**	**242**	*e*P	Pb	23 59 56.3	-1.9
ACAN				*e*S	Sb	00 00 22.6	-1.2
ACLC	**CERRO LA CRUZ**	**2.51**	**318**	*e*P	Pb	00 00 02.8	-2.8
CFA	**Coronel Fontan**	**2.76**	**263**	*e*P	Pn	00 00 05.6	+2.2
CYA	**Choya**	**2.93**	**346**	*e*P	Pn	00 00 08.3	+2.6
CYA				*e*S	Sb	00 00 53.7	+5.5
CYA				IAML		00 00 56.0	
	comp=Z,152nm,0.3s						
ASAL	**Salagasta**	**3.48**	**247**	*e*P	Pn	00 00 16.7	+3.3

*MOS **04** 23:59:25.2±0.0, 42°57N×45°45E, h11km, MPVA4.7*
*NORS **04** 23:59:25.4±0.0, 42°57N×45°45E, h14km, MPVA4.6*
*TIF **04** 23:59:26.1, 42°63N×45°41E, h14km±1km*
*ISK **04** 23:59:27.1, 42°65N×45°25E, h5km, ML3.3/10*
*DRS **04** 23:59:27.8±0.0, 42°63N×45°42E, h15km, ML3.6/4*
*AZER **04** 23:59:27.1±0.7, 42°40N×45°40E, h6km±3km, ml3.4/18, Error ellipse: s-maj=10.3km s-min=5.1km az=314.0*
*NNC **04** 23:59:37.9±2.3, 43°03N×46°43E, h0km, mb3.6, Error ellipse: s-maj=35.6km s-min=16.2km az=118.0*

ISC 04 23:59:26.9±1.0, 42°55N±0°01×45°41E±0°01, h6km±8km, n146, σ1§33/250, 14C-17D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.61**	**79**	⇓*e*PG	**Pg**	**23 59 38.7**	**+0.1**
BTLR				*i*		23 59 47.4	
BTLR				pmax	pmax		
	comp=Z,622nm,0.4s						
BTLR				smax	smax		
	comp=N,2μm,0.9s						
BTLR	**Botlikh**	**0.61**	**79**	*i* Pg	**Pg**	**23 59 38.7**	**+0.1**
	comp=N,622nm,0.5s						
BTLR				⇑*i*Sg	**Sg**	**23 59 46.9**	**+0.3**
	comp=N,3μm,0.3s						
DVE	**Vedeno**	**0.67**	**52**	⇓*i*PG	**Pg**	**23 59 39.3**	**-0.4**
DVE				*e*S	**Sg**	**23 59 48.6**	**+0.2**
DVE	**Vedeno**	**0.67**	**52**	*i* Pg	**Pg**	**23 59 39.2**	**-0.5**
DVE				*e*Sg	**Sg**	**23 59 48.2**	**-0.1**
GUDG	**Gudauri**	**0.69**	**263**	P	**Pb**	**23 59 40.8**	**-0.7**
GUDG				S	**Sg**	**23 59 49.9**	**+0.6**
GUDG	**Gudauri**	**0.69**	**263**	*e*PG	**Pb**	**23 59 40.8**	**-0.7**
GUDG				*e*S	**Sg**	**23 59 49.9**	**+0.6**
GROC	**Groznyy**	**0.71**	**24**	*e*PG	**Pb**	**23 59 40.9**	**-0.7**
GROC				*e*		23 59 51.4	
GROC				pmax	pmax		
	comp=Z,537nm,0.4s						
GROC				smax	smax		
	comp=E,1μm,1.0s						
GROC				smax	smax		
	comp=N,1μm,0.5s						
GROC				smax	smax		
	comp=N,2μm,0.8s						
GROC	**Groznyy**	**0.71**	**24**	*e*Pg	**Pb**	**23 59 41.0**	**-0.7**
GROC				*e*Sg	**Sb**	**23 59 52.1**	**+0.4**
VLKR	**Vladikavkaz**	**0.73**	**313**	*i* PG	**Pb**	**23 59 41.4**	**-0.6**
VLKR				*e*S	**Sb**	**23 59 52.0**	**-0.3**
VLKR				pmax	pmax		
	comp=Z,114nm,0.5s						
VLKR	**Vladikavkaz**	**0.73**	**313**	*i* Pg	**Pg**	**23 59 41.1**	**+0.2**
VLKR				*e*Sg	**Sb**	**23 59 52.0**	**-0.3**
LACR	**Lac**	**0.86**	**289**	⇓*i*PG	**Pg**	**23 59 42.2**	**-1.3**
LACR				*e*S	**Sg**	**23 59 53.8**	**-0.9**
LACR	**Lac**	**0.86**	**289**	*i* Pg	**Pg**	**23 59 41.9**	**-1.6**
LACR				*e*Sg	**Sg**	**23 59 53.8**	**-0.9**
SEAG	**Tbilisi Sea**	**0.91**	**210**	P	**Pb**	**23 59 44.7**	**-0.3**
SEAG				S	**Sn**	**23 59 58.7**	**-0.9**
SEAG	**Tbilisi Sea**	**0.91**	**210**	*e*PG	**Pb**	**23 59 44.7**	**-0.3**
SEAG				*e*S	**Sn**	**23 59 58.7**	**-0.9**
LGD	**Lagodekhi**	**0.95**	**139**	P	**Pb**	**23 59 45.1**	**-0.7**
LGD				S	**Sb**	**23 59 57.6**	**-1.0**
LGD	**Lagodekhi**	**0.95**	**139**	*e*PG	**Pb**	**23 59 45.0**	**-0.7**
LGD				*e*S	**Sb**	**23 59 57.5**	**-1.0**
LGD	**Lagodekhi**	**0.95**	**139**	*e*Pg	**Pb**	**23 59 45.1**	**-0.7**
LGD				*e*Sg	**Sb**	**23 59 57.6**	**-1.0**
XNZR	**Khunzakh**	**0.96**	**90**	⇑*e*PG	**Pb**	**23 59 45.3**	**-0.7**
XNZR				*i*		23 59 58.2	
XNZR	**Khunzakh**	**0.96**	**90**	*e*Pg	**Pg**	**23 59 45.1**	**-0.2**
XNZR				*e*Sg	**Sb**	**23 59 57.9**	**-1.1**
TBLG	**Delisi**	**0.96**	**211**	PG	**Pn**	**23 59 46.2**	**-0.7**
TBLG				SG	**Sn**	**00 00 01.8**	**+0.9**
TBLG	**Delisi**	**0.96**	**211**	P	**Pn**	**23 59 46.3**	**-0.7**
TBLG				S	**Sn**	**00 00 00.9**	**-0.1**
TBLG	**Delisi**	**0.96**	**211**	*e*PG	**Pn**	**23 59 46.2**	**-0.7**
TBLG				*e*S	**Sn**	**00 00 00.8**	**-0.1**
TBLG	**Delisi**	**0.96**	**211**	*e*Pg	**Pn**	**23 59 46.3**	**-0.7**
TBLG				*e*Sg	**Sn**	**00 00 00.9**	**-0.1**
BTNK	**Botanikuri**	**0.98**	**208**	P	**Pn**	**23 59 46.6**	**-0.6**
BTNK				S	**Sn**	**00 00 01.5**	**+0.1**
BTNK	**Botanikuri**	**0.98**	**208**	*e*PG	**Pn**	**23 59 46.6**	**-0.6**
BTNK				*e*S	**Sn**	**00 00 01.5**	**+0.1**
UNCR	**Uncukul**	**1.04**	**81**	⇓*i*PG	**Pg**	**23 59 46.0**	**-0.7**
UNCR				*e*S	**Sb**	**00 00 01.0**	**-0.1**
UNCR				pmax	pmax		
	comp=Z,479nm,0.3s						
UNCR	**Uncukul**	**1.04**	**81**	*i* Pg	**Pg**	**23 59 46.0**	**-0.7**
UNCR				*e*Sg	**Sb**	**00 00 01.0**	**-0.1**
ARNR	**Ardon**	**1.04**	**308**	⇓*i*PG	**Pb**	**23 59 47.4**	**+0.2**
ARNR				*e*S	**Sn**	**00 00 03.4**	**+0.6**
ARNR	**Ardon**	**1.04**	**308**	*i* Pg	**Pb**	**23 59 47.3**	**+0.1**
ARNR				*e*Sg	**Sn**	**00 00 03.4**	**+0.6**
BTKR	**Batakoyurt**	**1.04**	**322**	⇓*i*PG	**Pn**	**23 59 48.0**	**0.0**
BTKR				*e*S	**Sn**	**00 00 04.4**	**+1.5**
BTKR	**Batakoyurt**	**1.04**	**322**	*e*Pg	**Pb**	**23 59 47.4**	**+0.2**
BTKR				*e*Sg	**Sn**	**00 00 02.6**	**-0.2**
DLMR	**Dylym**	**1.04**	**60**	⇑*i*PG	**Pg**	**23 59 46.0**	**-0.8**
DLMR				*e*S	**Sg**	**00 00 00.0**	**-0.2**
DLMR	**Dylym**	**1.04**	**60**	*i* Pg	**Pg**	**23 59 46.0**	**-0.8**
DLMR				*e*Sg	**Sg**	**00 00 00.0**	**-0.2**
KORR	**Kora**	**1.12**	**299**	*e*PG	**Pb**	**23 59 48.7**	**0.0**
KORR				*e*S	**Sn**	**00 00 05.5**	**+0.6**
KORR	**Kora**	**1.12**	**299**	*e*Pg	**Pg**	**23 59 48.4**	**0.0**
KORR				*e*Sg	**Sn**	**00 00 05.3**	**+0.3**
ZEI	**Tsey**	**1.14**	**282**	*e*PG	**Pg**	**23 59 47.0**	**-1.7**
ZEI				*e*S	**Sb**	**00 00 04.9**	**+0.8**
ZEI				pmax	pmax		
	comp=Z,164nm,0.3s						
ZEI				smax	smax		
	comp=E,724nm,0.4s						
ZEI				smax	smax		
	comp=N,429nm,0.6s						
KRNR	**Karanay**	**1.14**	**76**	⇑*i*PG	**Pg**	**23 59 47.5**	**-1.2**
KRNR				*e*S	**Sg**	**00 00 03.0**	**-0.5**
KRNR				pmax	pmax		
	comp=Z,259nm,0.2s						
KRNR	**Karanay**	**1.14**	**76**	*i* Pg	**Pg**	**23 59 47.5**	**-1.2**
KRNR				*e*Sg	**Sg**	**00 00 03.0**	**-0.5**
GNBR	**Gunib**	**1.16**	**98**	⇓*i*PG	**Pb**	**23 59 49.1**	**-0.3**
GNBR				*e*S	**Sb**	**00 00 04.4**	**-0.4**
GNBR	**Gunib**	**1.16**	**98**	*e*Pg	**Pg**	**23 59 48.6**	**-0.5**
	comp=Z,763nm,0.4s						
GNBR				⇓*i*Sg	**Sb**	**00 00 04.3**	**-0.5**
	comp=Z,2μm,0.4s						
ARKR	**Arakani**	**1.17**	**87**	*i* PG	**Pg**	**23 59 49.0**	**-0.4**
ARKR				*e*S	**Sn**	**00 00 06.0**	**-0.2**
ARKR				pmax	pmax		
	comp=Z,239nm,0.3s						
ARKR	**Arakani**	**1.17**	**87**	*i* Pg	**Pg**	**23 59 49.0**	**-0.4**
ARKR				*e*Sg	**Sn**	**00 00 06.0**	**-0.2**
DDFL	**Dedoflistskaro**	**1.23**	**154**	P	**Pg**	**23 59 49.2**	**-1.2**
DDFL				S	**Sn**	**00 00 10.9**	**+3.4**
DDFL	**Dedoflistskaro**	**1.23**	**154**	*i* PG	**Pg**	**23 59 49.2**	**-1.2**
DDFL				*e*S	**Sn**	**00 00 10.9**	**+3.4**
TRKR	**Terskaya**	**1.27**	**337**	⇓*i*PG	**Pg**	**23 59 51.1**	**-0.1**
TRKR				*e*S	**Sn**	**00 00 09.8**	**+1.3**
TRKR	**Terskaya**	**1.27**	**337**	*e*Pg	**Pg**	**23 59 51.0**	**-0.2**
TRKR				*e*Sg	**Sn**	**00 00 09.6**	**+1.1**
STDR	**Stavd-Durt**	**1.28**	**310**	⇓*i*PG	**Pb**	**23 59 52.1**	**+0.7**
STDR				*e*S	**Sn**	**00 00 11.4**	**+2.6**
STDR	**Stavd-Durt**	**1.28**	**310**	*i* Pg	**Pb**	**23 59 51.6**	**+0.2**
STDR				*e*Sg	**Sn**	**00 00 10.8**	**+2.0**
BUJR	**Buynaksk**	**1.28**	**77**	*i* PG	**Pg**	**23 59 51.0**	**-0.5**
BUJR				*e*S	**Sn**	**00 00 10.0**	**+1.1**
BUJR				pmax	pmax		
	comp=Z,136nm,0.2s						
BUJR	**Buynaksk**	**1.28**	**77**	*i* Pg	**Pg**	**23 59 51.0**	**-0.5**
	comp=Z,136nm,0.2s						
BUJR				*e*Sg	**Sn**	**00 00 10.0**	**+1.1**
	comp=Z,1μm,0.2s						
ZKTA	**Zakatala**	**1.28**	**135**	P	**Pn**	**23 59 51.6**	**+0.2**
	SNR=70						
ZKTA				S	**Sn**	**00 00 11.3**	**+2.3**
KMKR	**Kumukh**	**1.32**	**108**	⇑*i*PG	**Pg**	**23 59 51.5**	**-0.7**
KMKR				*i* S	**Sn**	**00 00 10.0**	**-0.1**
KMKR				pmax	pmax		
	comp=Z,552nm,0.3s						
KMKR	**Kumukh**	**1.32**	**108**	*i* Pg	**Pg**	**23 59 51.5**	**-0.7**
KMKR				*i* Sg	**Sn**	**00 00 10.0**	**-0.1**
LSNR	**Lesken**	**1.37**	**303**	*e*PG	**Pn**	**23 59 52.3**	**-0.3**
LSNR				*e*S	**Sn**	**00 00 12.7**	**+1.6**
LSNR	**Lesken**	**1.37**	**303**	*e*Pg	**Pn**	**23 59 52.2**	**-0.3**
LSNR				*e*Sg	**Sn**	**00 00 12.7**	**+1.6**
KZRT	**Kazreti**	**1.39**	**213**	P	**Pg**	**23 59 53.2**	**-0.3**
KZRT				S	**Sn**	**00 00 13.1**	**+1.6**
KZRT	**Kazreti**	**1.39**	**213**	*e*PG	**Pg**	**23 59 53.2**	**-0.3**
KZRT				*e*S	**Sn**	**00 00 13.1**	**+1.6**
DIGR	**Digorskoe uzhe**	**1.39**	**285**	⇓*i*PG	**Pn**	**23 59 52.6**	**-0.4**
DIGR				*e*S	**Sg**	**00 00 11.0**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.39**	**285**	*e*Pg	**Pn**	**23 59 51.9**	**-1.1**
DIGR				*e*Sg	**Sg**	**00 00 10.4**	**-1.2**
ONI	**Oni**	**1.45**	**272**	PN	**Pn**	**23 59 53.5**	**-0.1**
ONI				SN	**Sn**	**00 00 13.0**	**+0.1**
ONI	**Oni**	**1.45**	**272**	P	**Pn**	**23 59 53.6**	**0.0**
ONI				S	**Sb**	**00 00 12.7**	**-0.2**
ONI	**Oni**	**1.45**	**272**	*e*PG	**Pn**	**23 59 53.6**	**0.0**
ONI				*e*S	**Sb**	**00 00 12.7**	**-0.2**
ONI	**Oni**	**1.45**	**272**	*e*Pg	**Pn**	**23 59 53.6**	**0.0**
ONI				*e*Sg	**Sb**	**00 00 12.7**	**-0.2**
PRTR	**Priterechnaya**	**1.45**	**326**	*e*PG	**Pb**	**23 59 54.1**	**-0.2**
PRTR				*e*S	**Sg**	**00 00 14.7**	**+1.1**
PRTR	**Priterechnaya**	**1.45**	**326**	*e*Pg	**Pn**	**23 59 53.8**	**+0.1**
PRTR				*e*Sg	**Sg**	**00 00 14.7**	**+1.1**
QZX	**Qazax, Azerbai**	**1.49**	**181**	P	**Pg**	**23 59 55.3**	**-0.2**
	SNR=197						
QZX				S	**Sg**	**00 00 16.3**	**+1.5**
MAK	**Makhachkala**	**1.60**	**74**	*e*PG	**Pg**	**23 59 57.8**	**+0.3**
MAK				*e*		00 00 20.3	
MAK				pmax	pmax		
	comp=Z,207nm,0.3s						
MAK				smax	smax		
	comp=E,2μm,0.5s						
MAK	**Makhachkala**	**1.60**	**74**	*e*Pg	**Pn**	**23 59 55.0**	**-0.6**
MAK				*e*Sg	**Sg**	**00 00 19.5**	**+1.3**
NCK	**Nalchik**	**1.63**	**306**	⇓*i*PG	**Pb**	**23 59 57.3**	**0.0**
NCK				*e*S	**Sg**	**00 00 19.0**	**-0.2**
NCK	**Nalchik**	**1.63**	**306**	*e*Pg	**Pn**	**23 59 55.9**	**-0.2**
NCK				*e*Sg	**Sb**	**00 00 18.5**	**+0.4**
SGKR	**Sergokala**	**1.67**	**92**	*e*PN	**Pg**	**23 59 58.0**	**-0.8**
SGKR				*e*S	**Sg**	**00 00 23.0**	**+2.6**
SGKR	**Sergokala**	**1.67**	**92**	*e*Pg	**Pg**	**23 59 58.0**	**-0.8**
SGKR				*e*Sg	**Sg**	**00 00 23.0**	**+2.6**
URKR	**Urkarakh**	**1.69**	**102**	⇓*e*PN	**Pg**	**23 59 58.9**	**-0.4**
URKR				*i*		00 00 23.1	
URKR	**Urkarakh**	**1.69**	**102**	*e*Pg	**Pb**	**23 59 57.7**	**-0.8**
URKR				*e*Sg	**Sg**	**00 00 23.2**	**+1.9**
TKB	**Tkibuli**	**1.80**	**264**	P	**Pb**	**23 59 59.9**	**-0.3**
TKB				S	**Sg**	**00 00 24.6**	**0.0**
TKB	**Tkibuli**	**1.80**	**264**	*e*PN	**Pb**	**23 59 59.9**	**-0.3**
TKB				*e*S	**Sg**	**00 00 24.6**	**0.0**
AKH	**Akhalkalaki**	**1.83**	**232**	PN	**Pb**	**00 00 00.4**	**-0.4**
AKH				SN	**Sg**	**00 00 24.8**	**-0.8**
AKH	**Akhalkalaki**	**1.83**	**232**	P	**Pb**	**00 00 00.6**	**-0.3**
AKH				S	**Sg**	**00 00 25.6**	**-0.1**
AKH	**Akhalkalaki**	**1.83**	**232**	*e*PN	**Pb**	**00 00 00.5**	**-0.3**
AKH				*e*S	**Sg**	**00 00 25.5**	**-0.1**
GDB	**GEDABAY**	**1.85**	**172**	P	**Pb**	**00 00 00.5**	**-0.6**
	SNR=16						
GDB				S	**Sg**	**00 00 25.5**	**-0.7**
BGD	**Bogdanovka**	**1.86**	**227**	P	**Pb**	**00 00 01.1**	**-0.4**
BGD				S	**Sg**	**00 00 26.4**	**-0.4**
BGD	**Bogdanovka**	**1.86**	**227**	PN	**Pb**	**00 00 01.3**	**-0.2**
SEKA	**Sheki**	**1.89**	**135**	PN	**Pb**	**00 00 01.9**	**+0.1**
SEKA	**Sheki**	**1.89**	**135**	P	**Pb**	**00 00 02.0**	**+0.1**
	SNR=115						
SEKA				S	**Sg**	**00 00 28.5**	**+0.8**
KBTC	**Kuba-Taba**	**1.93**	**312**	*e*PN	**Pn**	**00 00 00.0**	**-0.3**
KBTC				*e*S	**Sb**	**00 00 27.7**	**+0.8**
KBTC	**Kuba-Taba**	**1.93**	**312**	*e*Pg	**Pn**	**00 00 00.8**	**+0.4**
KBTC				*e*Sg	**Sn**	**00 00 25.9**	**+1.0**
GANJ	**Ganja**	**2.02**	**160**	PN	**Pb**	**00 00 03.2**	**-0.9**
GANJ	**Ganja**	**2.02**	**160**	P	**Pb**	**00 00 03.2**	**-0.9**
	SNR=79						
GANJ				S	**Sg**	**00 00 30.5**	**-1.4**
AKT	**Akhty**	**2.04**	**121**	*e*PN	**Pb**	**00 00 03.6**	**-0.7**
AKT				*e*		00 00 05.6	
AKT				*e*		00 00 06.5	
AKT				*e*		00 00 37.3	
AKT				pmax	pmax		
	comp=Z,122nm,0.4s						
AKT	**Akhty**	**2.04**	**121**	*e*Pg	**Pb**	**00 00 03.8**	**-0.5**
	comp=Z,122nm,0.4s						
AKT				⇑*e*Sg	**Sg**	**00 00 31.8**	**-0.5**
	comp=Z,214nm,0.5s						
NEY	**Neytrino**	**2.09**	**290**	*e*PN	**Pn**	**00 00 00.0**	**-2.6**
NEY	**Neytrino**	**2.09**	**290**	*e*Pg	**Pn**	**00 00 02.4**	**-0.3**
NEY				*e*Sg	**Sb**	**00 00 31.2**	**-0.4**
MNGR	**Mingechevir, A**	**2.18**	**144**	S	**Sg**	**00 00 34.8**	**-2.0**
DRN	**Derbent**	**2.23**	**103**	*e*PN	**Pb**	**00 00 08.0**	**+0.5**
DRN				*e*S	**Sg**	**00 00 39.3**	**+0.8**
DRN				pmax	pmax		
	comp=Z,116nm,0.4s						
DRN	**Derbent**	**2.23**	**103**	*e*Pg	**Pb**	**00 00 07.4**	**-0.1**
	comp=Z,122nm,0.5s						
DRN				⇑*e*Sg	**Sb**	**00 00 34.5**	**-0.9**
	comp=Z,301nm,0.8s						
KSMR	**Kasumkent**	**2.24**	**114**	*i* PN	**Pg**	**00 00 09.0**	**-0.7**
KSMR				*i* S	**Sg**	**00 00 42.0**	**+3.3**
PYA1	**Pyatigorsk**	**2.26**	**313**	*e*PN	**Pn**	**00 00 04.2**	**-0.7**
PYA1				*e*S	**Sn**	**00 00 31.2**	**-1.9**
PYA1	**Pyatigorsk**	**2.26**	**313**	*e*Pn	**Pn**	**00 00 04.2**	**-0.7**
PYA1				*e*Sn	**Sn**	**00 00 31.8**	**-1.4**
SHA1	**Shidzhatmaz**	**2.34**	**301**	*e*PN	**Pn**	**00 00 05.9**	**-0.1**
SHA1				*e*S	**Sn**	**00 00 36.1**	**+0.9**
SHA1	**Shidzhatmaz**	**2.34**	**301**	*e*Pn	**Pn**	**00 00 05.9**	**-0.1**
SHA1				*e*Sn	**Sn**	**00 00 36.1**	**+0.9**
QSAR	**Qusar**	**2.37**	**115**	P	**Pb**	**00 00 09.9**	**0.0**
	SNR=12						
QSAR				S	**Sg**	**00 00 41.0**	**-1.9**
QBL	**Gabala**	**2.42**	**131**	P	**Pb**	**00 00 09.7**	**-1.2**
	SNR=14						
QBL				S	**Sb**	**00 00 40.3**	**-0.8**
KIV0	**Kislovodsk Arr**	**2.43**	**306**	*e*Pn	**Pn**	**00 00 06.6**	**-0.6**
KIV0				*e*Pn	**Sn**	**00 00 36.8**	**-0.5**
KIV	**Kislovodsk**	**2.43**	**306**	PN	**Pn**	**00 00 07.2**	**0.0**
KIV	**Kislovodsk**	**2.43**	**306**	*e*PN	**Pn**	**00 00 06.6**	**-0.6**
KIV				*e*S	**Sn**	**00 00 36.8**	**-0.6**
GNI	**Garni**	**2.45**	**192**	PN	**Pb**	**00 00 10.9**	**-0.6**
GNI	**Garni**	**2.45**	**192**	*ce*PN	**Pb**	**00 00 10.1**	**-1.4**
GNI	**Garni**	**2.45**	**192**	*e*Pn	**Pb**	**00 00 10.1**	**-1.4**
XNQ	**Khinaliq**	**2.46**	**123**	P	**Pb**	**00 00 11.6**	**-0.1**
	SNR=28						
XNQ				S	**Sb**	**00 00 43.1**	**+0.8**
QUBA	**Quba, Azerbaij**	**2.59**	**116**	P	**Pb**	**00 00 12.2**	**-1.6**
	SNR=27						
QUBA				S	**Sb**	**00 00 46.8**	**+0.9**
KARS	**Kars**	**2.60**	**223**	PN	**Pb**	**00 00 11.6**	**-2.3**
KARS	**Kars**	**2.60**	**223**	PN	**Pb**	**00 00 12.3**	**-1.6**
BRDA	**Brd**	**2.65**	**149**	P	**Pn**	**00 00 11.6**	**+1.5**
	SNR=4.4						
BRDA				S	**Sb**	**00 00 45.8**	**-1.6**
TASB	**TASBURUN-IGDIR**	**2.71**	**199**	PN	**Pb**	**00 00 14.4**	**-1.4**
IML	**Ismayilli**	**2.72**	**129**	P	**Pb**	**00 00 13.6**	**-2.4**
	SNR=26						
IML				S	**Sb**	**00 00 49.4**	**-0.3**
ZRD	**Zardab**	**2.84**	**142**	P	**Pb**	**00 00 16.8**	**-1.2**
BATM	**Batumi**	**2.92**	**252**	PN	**Pn**	**00 00 15.5**	**+1.6**
BATM	**Batumi**	**2.92**	**252**	P	**Pb**	**00 00 17.3**	**-2.0**
BATM				S	**Sb**	**00 00 57.3**	**+1.9**
BATM	**Batumi**	**2.92**	**252**	PN	**Pn**	**00 00 15.5**	**+1.6**
SIZA	**Siyzn**	**3.00**	**118**	P	**Pb**	**00 00 18.7**	**-2.0**
	SNR=10						
BCA	**Borcka**	**3.03**	**250**	PN	**Pn**	**00 00 16.9**	**+1.5**
GOF	**Gofitskoye**	**3.03**	**326**	⇓*i*PN	**Pn**	**00 00 15.2**	**-0.2**
GOF				*e*S	**Sn**	**00 00 52.5**	**+0.5**
GOF				pmax	pmax		
	comp=Z,19nm,0.8s						
GOF				smax	smax		
	comp=E,77nm,0.5s						
SENK	**Senkaya-Erzuru**	**3.04**	**230**	PN	**Pn**	**00 00 17.7**	**+2.1**
ATGJ	**Altiaghaj**	**3.14**	**121**	P	**Pb**	**00 00 21.0**	**-2.1**
	SNR=11						
NVNR	**Nevinnomyssk**	**3.24**	**311**	*e*Pn	**Pn**	**00 00 19.0**	**+0.7**
NVNR				*e*Sn	**Sn**	**00 00 57.6**	**+0.4**
GBS	**Qobustan**	**3.33**	**126**	P	**Pn**	**00 00 22.5**	**+2.9**
	SNR=9.0						
AGRB	**Hanur-Agry**	**3.49**	**212**	PN	**Pn**	**00 00 25.0**	**+3.1**
CLDR	**Caldiran**	**3.59**	**199**	PN	**Pn**	**00 00 26.6**	**+3.3**
KOPR	**Koprukoy-ERZUR**	**3.70**	**227**	PN	**Pn**	**00 00 27.3**	**+2.5**
GUZR	**Guzeripl'**	**4.12**	**292**	*e*Pn	**Pn**	**00 00 33.5**	**+3.1**
GUZR				*e*Sn	**Sn**	**00 01 21.4**	**+2.4**
LRK	**Lerik**	**4.50**	**149**	P	**Pn**	**00 00 37.7**	**+2.0**
	SNR=9.2						
ASTR	**Astara**	**4.75**	**146**	P	**Pn**	**00 00 39.7**	**+0.7**
	SNR=12						
AKTO	**Aktyubinsk**	**11.72**	**43**	⇑Pn	**Pn**	**00 02 14.5**	**0.0**
	comp=E,3.1nm,0.8s						
AKTO				⇓Sn	**Sn**	**00 04 18.7**	**-7.0**
	comp=E,1.6nm,0.6s						
AKTO	**Aktyubinsk**	**11.72**	**43**	P	**Pn**	**00 02 14.5**	**0.0**
AKTO				SN	**Sn**	**00 04 27.1**	**+1.5**
AB31	**Akbulak array**	**12.13**	**51**	Pn	**Pn**	**00 02 19.4**	**-0.8**
	comp=E,0.2nm,0.3s,baz=242,slow=11,SNR=15						
AB31				⇑Sn	**Sn**	**00 04 27.1**	**-8.5**
	comp=E,1.0nm,0.6s,baz=244,slow=27,SNR=7.4						
AB31	**Akbulak array**	**12.13**	**51**	P	**Pn**	**00 02 19.4**	**-0.8**
KIEV	**Kiev**	**13.77**	**312**	⇑*e*P	**Pn**	**00 02 44.3**	**+1.8**
ARU	**Arti**	**16.26**	**27**	⇓*e*P	**Pn**	**00 03 15.9**	**+0.2**
KK31	**Karatay Array**	**18.41**	**80**	P	**P**	**00 03 44.5**	**+1.9**
	comp=E,0.3nm,0.3s,baz=289,slow=12,SNR=4.9						
KK31	**Karatay Array**	**18.41**	**80**	P	**P**	**00 03 44.5**	**+1.9**
BRVK	**Borovoye**	**19.64**	**49**	⇓*e*P	**P**	**00 03 54.4**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BVA0	**Borovoye Array**	**19.68**	**49**	P	**Pn**	**00 03 59.7**	**+1.8**
	baz=258,slow=11,SNR=3.5						
BVA0	**Borovoye Array**	**19.68**	**49**	P	**Pn**	**00 03 59.7**	**+1.8**
VSU	**Vasula**	**19.75**	**330**	⇑*e*P	**P**	**00 03 56.8**	**-0.4**
VSU				pmax	pmax		
	comp=Z,17nm,0.9s						
KHC	**Kasperske Hory**	**23.01**	**298**	⇑*e*P	**P**	**00 04 33.2**	**+0.8**
**KUR

MLH Mauna Loa 0.64 338 eP Pn 00 12 50.8 -1.0
I59US HAWAII INFRASO 0.99 314 Pg Pn 00 12 55.6 -1.0
baz=162,slow=14,SNR=3.3
KIP Kipapa 3.69 313d iP Pn 00 13 31.5 -2.1
KIP pmax pmax
comp=Z,5μm,0.8s
TAOE Nuku Hiva Isla 31.29 151 eT T 00 52 01.3
comp=Z,112nm,0.2s
MCCM Marconi Confer 33.97 49 eP P 00 19 19.5 +0.2
comp=Z,67nm,0.8s
KCPM Cahto Peak 34.17 46 eP P 00 19 20.4 -0.8
comp=Z,100nm,0.9s
HOPS Hopland Field 34.20 47 eP P 00 19 21.4 -0.1
comp=Z,124nm,1.1s
GDXM Geysers 34.31 48 eP P 00 19 22.0 -0.5
comp=Z,53nm,1.1s
PMOR Pomariorio Ree 34.44 168 eT T 00 55 59.4
comp=Z,197nm,0.2s
SAO San Andreas Ge 34.46 52 eP P 00 19 23.9 +0.2
comp=Z,100nm,1.1s
SAO San Andreas Ge 34.46 52 eP P 00 19 23.9 +0.2
SAO pmax pmax
comp=Z,100nm,1.1s
O02D Mt. Diablo Mer 34.94 46 P P 00 19 29.8 +2.0
baz=242,SNR=22
SCZ2 Santa Cruz Isl 34.96 57 P P 00 19 28.6 +0.6
baz=254
PAGB Antelope Grade 35.01 54 eP P 00 19 28.7 +0.3
comp=Z,27nm,1.2s
SBC Santa Barbara 35.02 57 P P 00 19 29.3 +0.8
baz=253
SMMC Simmler 35.07 55 P P 00 19 30.1 +1.1
baz=251
PKM Mcpherson Peak 35.08 56 P P 00 19 30.4 +1.2
baz=252,SNR=16
WDC Whiskeytown Da 35.30 45 eP P 00 19 30.8 0.0
comp=Z,50nm,1.1s
WDC Whiskeytown Da 35.30 45 eP P 00 19 30.8 0.0
WDC pmax pmax
comp=Z,51nm,1.1s
N02D Trinity Center 35.37 45 P P 00 19 33.3 +1.8
baz=241
L02E Cave Junction 35.38 42 P P 00 19 33.2 +1.7
baz=239
M02C Callahan 35.48 44 P P 00 19 34.5 +2.1
baz=240,SNR=10
ORV Oroville 35.55 47 eP P 00 19 33.2 +0.3
comp=Z,60nm,0.8s
ORV Oroville 35.55 47 eP P 00 19 33.3 +0.3
ORV pmax pmax
comp=Z,60nm,0.8s
SCI2 San Clemente I 35.57 59 P P 00 19 34.3 +1.0
baz=256
K02D Willamette Mer 35.62 41 P P 00 19 35.3 +1.6
baz=238,SNR=10
AFDM Forest Hills D 35.66 49 eP P 00 19 33.9 -0.1
comp=Z,63nm,0.9s
O03E Paynes Creek 35.66 46 P P 00 19 35.5 +1.5
baz=243,SNR=28
J01E Myrtle Point 35.71 41 P P 00 19 35.9 +1.6
baz=237,SNR=8.6
CMB Columbia Colle 35.72 50 eP P 00 19 34.6 0.0
comp=Z,8.3nm,0.9s
CMB Columbia Colle 35.72 50 eP P 00 19 34.6 0.0
CMB pmax pmax
comp=Z,8.0nm,0.9s
YBH Yreka Blue Hor 35.74 43 eP P 00 19 35.1 +0.5
comp=Z,78nm,0.9s
YBH Yreka Blue Hor 35.74 43 eP P 00 19 35.2 +0.5
YBH pmax pmax
comp=Z,78nm,0.9s
CIS Catalina Islan 35.78 59 P P 00 19 35.5 +0.4
baz=255
OSI Osito Audit: C 35.85 57 P P 00 19 36.4 +0.7
baz=254
VOG Valley Oaks Go 35.86 54 P P 00 19 36.0 +0.3
baz=251
ARVC Arvin 35.92 56 P P 00 19 37.2 +0.9
baz=253,SNR=7.4
UNV Unalaska Valle 35.97 349 eP P 00 19 37.2 +0.9
comp=Z,32nm,1.2s
DECC Green Verdugo 36.07 57 P P 00 19 38.0 +0.4
baz=254
AKUT Akutan 36.11 349 eP P 00 19 38.1 +0.6
comp=Z,160nm,0.9s
L04D Klamath Falls 36.24 43 P P 00 19 40.7 +1.6
baz=240,SNR=8.4
I02D Swisshome 36.28 39 P P 00 19 41.2 +2.0
baz=236
M04C Macdoel 36.33 44 P P 00 19 41.7 +1.8
baz=241,SNR=16
I03D Drain, OR 36.35 40 P P 00 19 41.1 +1.3
baz=237,SNR=7.0
ISA Isabella, Lake 36.36 55 P P 00 19 41.3 +1.2
baz=252,SNR=19
ATKA Atka Island 36.44 340 eP P 00 19 40.8 +0.4
comp=Z,40nm,1.0s
EDW2 Edwards Air Fo 36.51 57 P P 00 19 42.2 +0.8
baz=254,SNR=16
BFSC Mount Baldy Ra 36.60 58 P P 00 19 42.6 +0.4
baz=255,SNR=7.5
PPT Papeete 36.65 171 LR LR 00 31 10.0
comp=Z,754nm,18.5s,baz=327,slow=30
PPT2 Papeete2 36.67 171 eLQ LQ 00 27 29.5
comp=Z,853nm,24.2s
PPT2 eLR LR 00 29 40.5
comp=Z,3μm,26.5s,baz=350
PPT2 Papeete2 36.67 171 eT T 00 58 49.8
comp=Z,20nm,0.2s
TIAR Tiarei 36.68 171 eT T 00 58 49.8
comp=Z,44nm,0.2s
PNTR Pine Nut 36.70 49 eP P 00 19 44.6 +1.4
comp=Z,69nm,1.1s
MLAC Mammoth, Mammo 36.72 52 P P 00 19 44.9 +1.6
baz=250,SNR=8.4
109C Camp Elliot, M 36.73 60 P P 00 19 44.2 +1.0
baz=257
PAE Paea 36.74 171 eT T 00 58 55.2
comp=Z,5.9nm,0.3s
K04D Chiloquin, OR 36.80 43 P P 00 19 45.3 +1.5
baz=240
MURC Murrieta 36.82 59 P P 00 19 44.9 +1.0
baz=256,SNR=13
COR Corvallis 36.87 39 eP P 00 19 46.8 +2.6
comp=Z,49nm,1.1s
J04D Umpqua Nationa 36.88 42 P P 00 19 46.2 +1.6
baz=239,SNR=12
CWC Cottonwood Cre 36.90 54 P P 00 19 45.9 +1.1
baz=252
TVO Taravao 36.91 171 eT T 00 59 07.3
comp=Z,14nm,0.3s
LRMC Laurel Mtn Rad 36.92 56 P P 00 19 45.9 +0.9
baz=253,SNR=9.0
GSTR Great Sitkin T 36.97 339 eP P 00 19 45.5 +0.5
I04A Tendick Farm, 36.98 41 P P 00 19 46.7 +1.4
baz=238,SNR=14
TIN Tinemaha, Big 36.98 53 P P 00 19 46.9 +1.4
baz=251
ADK Adak 37.02 338 eP P 00 19 45.7 +0.4
comp=Z,22nm,0.9s
ADK Adak 37.02 338 eP P 00 19 45.7 +0.4
ADK pmax pmax
comp=Z,23nm,0.9s
KIWB Kanaga Island 37.16 337 eP P 00 19 48.7 +2.2
H04D Lebanon 37.17 39 P P 00 19 48.6 +1.8
baz=237,SNR=11
BBRC Big Bear Solar 37.20 58 P P 00 19 48.0 +0.5
baz=256
MPMC Manual Prospec 37.24 55 P P 00 19 49.1 +1.3
baz=253,SNR=47
G03D McMinnville, O 37.24 38 P P 00 19 49.1 +1.7
baz=236,SNR=8.6
MONP2 Monument Peak 37.29 60 P P 00 19 49.4 +1.2
baz=258,SNR=13
RRX Edison Barstow 37.29 57 P P 00 19 48.9 +0.9
baz=255
NVAR Mina Array Bea 37.39 51 P P 00 19 50.2 +1.1
comp=Z,21nm,0.9s,baz=241,slow=11,SNR=102
NVAR LR LR 00 31 12.1
comp=Z,685nm,21.6s,baz=238,slow=30
PFO Pinyon Flats O 37.42 59 eP P 00 19 49.2 0.0
comp=Z,30nm,1.1s
PFO Pinyon Flats O 37.42 59 eP P 00 19 49.2 0.0
PFO pmax pmax
comp=Z,30nm,1.1s
PFO Pinyon Flats O 37.42 59 P P 00 19 50.2 +1.0
baz=257,SNR=13
J05D Fort Rock, OR 37.45 42 P P 00 19 51.3 +1.9
baz=240,SNR=42
IKP In-Ko-Pah, Jac 37.50 61 P P 00 19 51.3 +1.4
baz=258,SNR=7.7
GSC Goldstone, Bar 37.56 56 P P 00 19 51.3 +1.0
baz=254,SNR=35
SII Sitkinak Islan 37.60 1 eP P 00 19 50.7 +0.4
comp=Z,91nm,0.9s
GRAC Grapevine Rang 37.62 53 P P 00 19 52.6 +1.8
baz=252,SNR=10.0
HEC Hector,Ludlow 37.81 57 P P 00 19 53.1 +0.7
baz=255,SNR=5.4
SWSC Sam W. Stewart 37.81 60 P P 00 19 53.4 +1.1
baz=258
FURC Furnace Creek, 37.84 54 P P 00 19 54.0 +1.5
baz=253,SNR=35
BELC Belle Mtn. Jos 37.88 59 P P 00 19 54.3 +1.2
baz=257,SNR=22
F04D Rainier, OR 37.88 37 P P 00 19 54.8 +2.0
baz=235
PINE Pine Mountain 37.89 42 eP P 00 19 53.9 +0.7
comp=Z,52nm,1.1s
I05D Terrebonne, OR 37.92 40 P P 00 19 55.1 +1.8
baz=239,SNR=16
SHOC Shoshone, Teco 38.14 56 P P 00 19 56.2 +1.1
baz=254,SNR=7.0
NLWA Neilton Lookou 38.18 35 eP P 00 19 57.7 +2.4
comp=Z,55nm,1.1s
BC3 Big Chuckawall 38.24 59 P P 00 19 57.1 +0.9
baz=258,SNR=9.3
OHAK Old Harbor 38.29 2 eP P 00 19 57.0 +1.0
comp=Z,93nm,1.0s
TUQ Turquoise Moun 38.29 56 P P 00 19 57.8 +1.2
baz=255,SNR=21
GMRC Granite Mounta 38.34 58 P P 00 19 57.6 +0.6
baz=256,SNR=27
E04D Cinebar 38.40 37 P P 00 19 59.1 +1.9
baz=235,SNR=21
G05D Wamic, OR 38.41 39 P P 00 19 58.9 +1.6
baz=238,SNR=14
TPNV Topopah Spring 38.45 54 eP P 00 19 57.9 0.0
comp=Z,93nm,1.0s
TPNV Topopah Spring 38.45 54 eP P 00 19 57.9 0.0
TPNV pmax pmax
comp=Z,93nm,1.0s
TPNV Topopah Spring 38.45 54 P P 00 19 59.4 +1.5
baz=253,SNR=69
IRM Iron Mountain 38.60 59 P P 00 19 59.8 +0.7
baz=257,SNR=23
GLA Glamis 38.63 60 P P 00 20 00.7 +1.4
baz=259,SNR=5.3
D04E Lakebay 38.65 36 P P 00 20 01.2 +2.0
baz=234
F05D White Salmon 38.67 38 P P 00 20 01.0 +1.6
baz=237,SNR=7.0
D03D Eldon 38.69 35 P P 00 20 01.4 +1.9
baz=233,SNR=23
KDAK Kodiak Island 38.87 2 eP P 00 20 01.7 +0.8
comp=Z,69nm,0.8s
KDAK Kodiak Island 38.87 2 eP P 00 20 01.7 +0.8
KDAK pmax pmax
comp=Z,69nm,0.8s
Y12C Blythe 39.02 59 P P 00 20 03.6 +1.1
baz=258,SNR=6.5
D05A Enumclaw 39.09 36 eP P 00 20 05.4 +2.5
comp=Z,146nm,1.1s
NEE2 Needles Airpor 39.16 58 P P 00 20 04.5 +0.7
baz=257
SHPR Sheep Range 39.17 55 eP P 00 20 04.3 +0.4
comp=Z,34nm,1.1s
R11A Troy Canyon, C 39.38 52 P P 00 20 07.0 +1.3
baz=252,SNR=67
PDMCI Parker Dam,Lak 39.45 59 P P 00 20 07.1 +1.0
baz=258,SNR=12
A04D Lummi Island 39.60 34 P P 00 20 09.1 +2.0
baz=233,SNR=12
B05A Bryant 39.66 35 P P 00 20 09.4 +1.8
baz=234,SNR=27
SPIA Saint Paul Isl 39.84 347 eP P 00 20 10.1 +1.1
comp=Z,185nm,0.9s
C06D Leavenworth 40.12 36 P P 00 20 12.6 +1.1
baz=236
214A Organ Pipe Nat 40.13 63 P P 00 20 12.9 +1.1
baz=261,SNR=6.7
CNPM China Poot 40.67 3 eP P 00 20 16.3 +0.4
comp=Z,35nm,0.9s
D08A Wollman Farm, 40.78 38 eP P 00 20 17.2 +0.3
comp=Z,41nm,1.1s
E09A Wood Farm, Sta 40.96 39 eP P 00 20 18.5 0.0
SEW Seward 41.35 4 eP P 00 20 21.6 +0.2
comp=Z,69nm,1.0s
TUC Tucson 41.88 62 eP P 00 20 26.4 +0.1
comp=Z,5.2nm,0.9s
TUC Tucson 41.88 62 eP P 00 20 26.4 +0.1
TUC pmax pmax
comp=Z,5.0nm,0.9s
TUC Tucson 41.88 62 P P 00 20 27.2 +0.9
baz=262
WUAZ Wupatki 41.92 58 P P 00 20 28.1 +1.4
baz=258,SNR=20
HLID Hailey 42.03 45 P P 00 20 28.8 +1.3
baz=247,SNR=129
TBI Tubuai 42.36 172 eLQ LQ 00 30 09.7
comp=Z,799nm,32.2s
TBI eLR LR 00 32 13.3
comp=Z,2μm,30.2s,baz=344
TBI Tubuai 42.36 172 eT T 01 05 53.5
comp=Z,380nm,0.3s
NEW Newport 42.44 38 P P 00 20 31.0 +0.4
baz=240,SNR=21
CTU Camp Tracy 42.92 50 eP P 00 20 34.9 +0.1
comp=Z,23nm,0.9s
W18A Petrified Fore 43.16 59 P P 00 20 38.0 +1.1
baz=260
HWUT Hardware Ranch 43.33 49 eP P 00 20 37.8 -0.3
comp=Z,33nm,0.9s
MSO Missoula 43.67 41 P P 00 20 41.0 +0.3
baz=244,SNR=20
HYT Haines Junctio 43.71 12 eP P 00 20 41.1 +0.3
comp=Z,34nm,1.0s
121A Cookes Peak, D 44.42 63 P P 00 20 48.2 +1.2
baz=264,SNR=7.7
MVCO Mesa Verde 44.53 56 P P 00 20 48.8 +1.0
baz=259,SNR=17
BOZ Bozeman (W) 44.65 43 P P 00 20 49.4 +0.8
baz=248,SNR=39
WALA Waterton Lakes 44.69 38 eP P 00 20 48.8 0.0
comp=Z,64nm,1.1s
H17A Grant Village 44.92 45 eP P 00 20 51.9 +1.0
comp=Z,13nm,0.9s
H17A Grant Village 44.92 45 P P 00 20 52.9 +2.0
baz=250
BW06 Boulder Array 45.10 48 P P 00 20 52.6 +0.3
baz=252,SNR=78
PDAR Pinedale Array 45.10 48 P P 00 20 52.6 +0.3
comp=Z,34nm,0.9s,baz=252,slow=7.3,SNR=135
PDAR LR LR 00 36 19.7
comp=Z,165nm,21.4s,baz=256,slow=32
Y22D IRIS PASSCAL I 45.31 61 P P 00 20 55.2 +1.2
baz=263
O20A White River Ci 45.35 52 P P 00 20 54.5 +0.2
baz=256,SNR=7.9
TASM ASL Pad, Albuq 45.80 59 P P 00 20 58.8 +0.8
baz=263,SNR=12
TASM ASL Pad, Albuq 45.80 59 P P 00 20 58.7 +0.8
baz=263,SNR=11
ANMO Albuquerque 45.80 59 eP P 00 20 57.7 -0.2
comp=Z,8.8nm,0.9s
ANMO Albuquerque 45.80 59c iP P 00 20 58.6 +0.7
ANMO pmax pmax
comp=Z,22nm,1.7s
ANMO Albuquerque 45.80 59 P P 00 20 58.6 +0.7
baz=263
HDA Harding Lake 45.81 5 P P 00 20 57.4 +0.1
baz=191,SNR=42
S22A 4UR Ranch, Cre 45.93 55 P P 00 20 59.8 +0.7
baz=260,SNR=7.2
RLMT Red Lodge 46.04 45 P P 00 21 00.9 +1.2
baz=251,SNR=33
ANM Nome 46.15 354 eP P 00 21 00.4 +0.4
comp=Z,26nm,1.0s
ANM Nome 46.15 354 eP P 00 21 00.4 +0.4
ANM pmax pmax
comp=Z,26nm,1.0s
ILAR Eielson Array 46.17 5 P P 00 21 00.3 +0.1
comp=Z,46nm,0.8s,baz=194,slow=7.3,SNR=378
ILAR PcP PcP 00 22 35.6 0.0
comp=Z,8.1nm,0.9s,baz=212,slow=4.7,SNR=4.5
ILAR LR LR 00 36 57.5
comp=Z,361nm,20.5s,baz=210,slow=32
RKT Rikitea 46.17 154 eT T 01 10 46.8
comp=Z,45nm,0.3s
TCOL CIGO, UAF Yank 46.20 4 P P 00 21 00.4 +0.1
baz=189,SNR=5.4
COLA College 46.20 4c iP P 00 21 00.2 -0.1
COLA pmax pmax
comp=Z,42nm,1.0s
MNTX Cornudas Mount 46.39 64 P P 00 21 03.3 +0.9
baz=266,SNR=16
POKR Poker Plat Res 46.47 4 P P 00 21 02.4 -0.1
baz=190,SNR=6.2
EGMT Eagleton 46.76 41 P P 00 21 05.1 0.0
baz=248,SNR=22
SDCO Great Sand Dun 46.97 56 P P 00 21 07.8 +0.6
baz=261,SNR=29
K22A Casper 47.22 49 P P 00 21 08.8 -0.1
baz=255,SNR=23
N23A Red Feather La 47.23 51 P P 00 21 10.0 +0.9
baz=257,SNR=67
ISCO Idaho Springs 47.25 53 P P 00 21 10.0 +0.6
ISCO pmax pmax
comp=Z,10.0nm,1.1s
ISCO Idaho Springs 47.25 53 P P 00 21 10.0 +0.6
baz=259,SNR=13
Q24A Divide 47.45 54 P P 00 21 11.7 +0.7
baz=260,SNR=13
T25A Trinidad 47.74 57 P P 00 21 13.9 +0.8
baz=262,SNR=9.0
TXAR Lajitas Array 47.78 67 P P 00 21 14.7 +1.3
comp=Z,10nm,0.8s,baz=254,slow=8.6,SNR=117
TXAR LR LR 00 38 02.3
comp=Z,113nm,18.9s,baz=0.0,slow=32
LAO LASA Array 48.55 44 P P 00 21 20.0 +1.0
baz=252,SNR=14
MSTX Muleshoe 48.73 61 P P 00 21 21.0 +0.3
baz=266,SNR=16
EPYK Eagle Plains 48.95 10 P P 00 21 21.8 +0.1
baz=203,SNR=32
PET Petropavlovsk 49.28 325 eP P 00 21 25.3 +0.9
PET e 00 23 19.7
PET eS S 00 28 27.4 -0.9
PET pmax pmax
comp=Z,35nm,0.9s
PET pmax pmax
comp=Z,100nm,15.1s
PET MLR MLR
comp=Z,300nm,15.0s
PET MLR MLR
comp=Z,200nm,15.0s
RSSD Black Hills 49.34 48 P P 00 21 24.9 -0.4
baz=256
RDOG Red Dog Mine 49.38 356 eP P 00 21 25.6 +0.6
comp=Z,22nm,0.9s
KSCO Kaye Shedlock' 49.40 55 P P 00 21 26.3 +0.6
baz=262,SNR=7.4
AMTX Amarillo 49.70 60 P P 00 21 27.9 -0.2
baz=266
SKR Severo-Kuril's 49.79 321 eP P 00 21 29.1 +0.8
PEA0B Petropavlovsk- 49.84 325 eP P 00 21 29.0 +0.3
comp=Z,61nm,1.1s
PETK Petropavlovsk- 49.84 325 P P 00 21 30.1 +1.4
comp=Z,26nm,0.8s,baz=109,slow=13,SNR=35
PETK LR LR 00 39 43.4
comp=Z,381nm,20.4s,baz=112,slow=33
PEA1 Petropavlovsk- 49.84 325 eP P 00 21 30.1 +1.4
TOLK Toolik Lake Re 49.85 3 P P 00 21 29.0 +0.4
baz=187,SNR=21
OGNE Ogallala 50.15 52 P P 00 21 31.4 0.0
baz=260,SNR=7.6
DGMT Dagmar 50.40 42 P P 00 21 33.5 +0.4
baz=252,SNR=7.7
JCT Junction City 51.14 66 P P 00 21 38.5 -0.4
baz=270
INK Inuvik 51.23 10 P P 00 21 38.3 -0.6
comp=Z,51nm,0.9s,baz=185,slow=7.6,SNR=63
ABTX Abilene, Hawle 51.29 63 P P 00 21 40.0 0.0
baz=269,SNR=6.4
833A Chaparral WMA, 51.55 68 P P 00 21 42.7 +0.7
baz=272
CBKS Cedar Bluff 51.61 55 P P 00 21 42.2 -0.1
baz=264
YKA Yellowknife Ar 51.73 23 P P 00 21 42.4 -0.4
comp=Z,12nm,0.7s,baz=232,slow=7.4,SNR=77
YKA LR LR 00 40 29.6
comp=Z,42nm,20.2s,baz=228,slow=32
WMOK Wichita Mounta 52.07 60 P P 00 21 45.2 -0.7
baz=268
SUSD Miller 52.98 48 P P 00 21 51.9 -0.4
baz=260
435B Jarrell 53.05 65 P P 00 21 53.3 +0.2
baz=271
BGNE Belgrade 53.11 52 P P 00 21 53.4 -0.1
baz=263
WHTX Lake Whitney, 53.14 64 P P 00 21 53.8 +0.1
baz=270
MDND Maddock 53.21 44 P P 00 21 53.9 -0.1
baz=257
KUR Kuril'sk 53.69 313 eP P 00 21 58.3 +0.8
KSU1 Kansas State U 54.06 55 P P 00 22 00.1 -0.3
baz=266
ECSD EROS Data Cent 54.53 49 P P 00 22 03.0 -0.8
baz=262,SNR=30
TUL1 Leonard 54.55 59 P P 00 22 03.7 -0.4
baz=268,SNR=5.3
HKT Hockley 54.59 66 eP P 00 22 04.2 -0.1
HKT Hockley 54.59 66 eP P 00 22 04.2 -0.1
HKT pmax pmax
comp=Z,10.0nm,1.1s
BILL Bilibino 54.78 343c iP P 00 22 05.8 +0.7
BILL pmax pmax
comp=Z,63nm,0.8s
YUK Yuzh-Kuril'sk 54.92 311 eP P 00 22 06.3 -0.2
YUK e 00 23 08.0
YUK e 00 24 11.1
YUK ePPP PPP 00 25 21.5
YUK eS S 00 29 44.2 -1.8
YUK e 00 31 54.8
YUK eSS SS 00 33 31.0 +1.4
DZM Mont Dzumac 55.41 224 eLR LR 00 38 22.2
comp=Z,657nm,28.2s
NATX Nacogdoches 55.52 64 P P 00 22 11.3 +0.2
baz=272
AGMN Agassiz Nation 55.76 44 P P 00 22 11.3 -1.2
baz=260,SNR=7.6
MA2 Magadan 55.96 330de P P 00 22 15.1 +1.3
MA2 pmax pmax
comp=Z,18nm,1.1s
ULM Lac du Bonnet 56.11 42 P P 00 22 13.8 -1.2
comp=Z,24nm,0.9s,baz=266,slow=7.4,SNR=18
ULM LR LR 00 44 22.8
comp=Z,346nm,18.6s,baz=268,slow=34
W39A Magazine 56.18 60 P P 00 22 15.2 -0.5
baz=270
MIAR Mount Ida 56.36 61 P P 00 22 16.6 -0.4
baz=271,SNR=5.7
SEY Seymchan 56.63 334 eP P 00 22 19.6 +1.2
SCIA State Center 56.84 52 P P 00 22 19.7 -0.6
baz=266
U40A Yellville 56.94 59 P P 00 22 20.3 -0.9
baz=270,SNR=20
Z41A Richland Creek 57.03 62 P P 00 22 21.8 0.0
baz=272
ASAJ Asahikawa 57.27 311 P P 00 22 24.4 +1.1
comp=Z,6.7nm,0.8s,baz=83,slow=6.4,SNR=3.6
SPMN Marine on St. 57.42 48 P P 00 22 23.6 -0.7
baz=264,SNR=6.3
W41B Gary Mavity, V 57.44 60 P P 00 22 24.0 -0.6
baz=271,SNR=11
YSS Yuzh-Sakhalins 57.46 314 eP P 00 22 25.7 +1.1
YSS e*PP pwP 00 22 37.4 -0.6
YSS e*SP sP 00 22 44.5 +7.9
YSS e 00 24 34.9
YSS eS S 00 30 23.1 +3.6
YSS ePS PnS 00 30 40.0 +6.6
YSS pmax pmax
comp=Z,20nm,0.8s
F37A Hinrichs Farm, 57.59 47 P P 00 22 24.5 -1.1
baz=264
GUMO Guam 57.62 274 LR LR 00 41 49.5
comp=Z,117nm,20.9s,baz=104,slow=30
H38A Maiden Rock 57.73 49 P P 00 22 25.6 -1.0
baz=265
N40A Mertquake, Sal 58.02 53 P P 00 22 27.9 -0.8
baz=268,SNR=19
TYV Tymovskoe 58.08 319 eP P 00 22 29.7 +0.9

TYV				pmax	pmax		
	comp=Z,12nm,1.4s						
G38A	Ridgeland	58.08	48	P	P	00 22 27.6	-1.4
	baz=265,SNR=5.9						
F38A	Pierce - Schro	58.13	47	P	P	00 22 28.7	-0.7
	baz=264,SNR=21						
I39A	Houston	58.22	50	P	P	00 22 28.4	-1.6
	baz=266,SNR=7.0						
CCM	Cathedral Cave	58.22	56	P	P	00 22 29.0	-1.2
	baz=270						
L40A	Anamosa	58.34	52	P	P	00 22 29.7	-1.2
	baz=267,SNR=5.1						
E38A	The Farm, Brul	58.42	46	P	P	00 22 30.0	-1.4
	baz=264,SNR=5.6						
H39A	Augusta	58.45	49	P	P	00 22 30.1	-1.5
	baz=266,SNR=6.3						
N41A	Harden Midland	58.56	53	P	P	00 22 31.4	-1.1
	baz=268						
G39A	Holcombe	58.57	48	P	P	00 22 31.1	-1.4
	baz=265,SNR=11						
X43A	Marvell	58.59	61	P	P	00 22 32.9	+0.2
	baz=272						
EYMN	Ely	58.60	45	P	P	00 22 30.8	-1.8
	baz=264,SNR=5.5						
J40A	Soldiers Grove	58.75	50	P	P	00 22 32.3	-1.5
	baz=267,SNR=9.6						
F39A	Loretta	58.80	47	P	P	00 22 32.6	-1.4
	baz=265,SNR=9.6						
M41A	Milan	58.82	53	P	P	00 22 33.5	-0.7
	baz=268,SNR=5.6						
I40A	Norwalk	58.87	50	P	P	00 22 33.2	-1.4
	baz=267						
H40A	Chili	59.08	49	P	P	00 22 34.7	-1.3
	baz=266,SNR=7.8						
E39A	Mellen	59.09	47	P	P	00 22 34.3	-1.7
	baz=265						
JFWS	Jewell Farm	59.09	51	P	P	00 22 35.0	-1.1
	baz=268,SNR=7.6						
G40A	Rib Lake	59.25	48	P	P	00 22 36.3	-0.9
	baz=266,SNR=27						
J41A	Loganville	59.28	50	P	P	00 22 35.9	-1.6
	baz=267						
F40A	Park Falls	59.35	47	P	P	00 22 36.5	-1.4
	baz=266,SNR=11						
I41A	Arkdale	59.42	50	P	P	00 22 36.6	-1.8
	baz=267						
L42A	Oliver, Polo	59.49	52	P	P	00 22 37.6	-1.3
	baz=268						
E40A	Wakefield	59.55	47	P	P	00 22 38.0	-1.2
	baz=266,SNR=13						
P43A	Skaggs, Pawnee	59.57	55	P	P	00 22 38.9	-0.6
	baz=270,SNR=5.6						
H41A	Junction City	59.60	49	P	P	00 22 38.2	-1.4
	baz=267,SNR=5.0						
HDIL	Hopedale	59.75	54	P	P	00 22 40.0	-0.6
	baz=270,SNR=12						
K42A	Prairie Point,	59.75	51	P	P	00 22 39.2	-1.4
	baz=268						
OXF	Oxford	59.80	61	P	P	00 22 40.4	-0.7
	baz=273,SNR=7.3						
S44A	Carbondale	59.80	57	P	P	00 22 40.0	-1.1
	baz=271,SNR=7.5						
N43A	Stutzman Famil	59.84	53	P	P	00 22 40.1	-1.2
	baz=269						
J42A	Columbus	59.93	50	P	P	00 22 40.5	-1.4
	baz=268						
G41A	Antigo	59.97	48	P	P	00 22 40.6	-1.5
	baz=267						
M43A	Waltham Townsh	60.01	53	P	P	00 22 41.4	-1.0
	baz=269,SNR=5.4						
F41A	Three Lakes	60.05	48	P	P	00 22 41.7	-1.0
	baz=267,SNR=12						
I42A	Draeger Farm,	60.10	50	P	P	00 22 41.7	-1.3
	baz=268,SNR=6.5						
C40A	Isle Royale Na	60.17	45	P	P	00 22 41.7	-1.7
	baz=265,SNR=24						
L43A	Garden Prairie	60.18	52	P	P	00 22 42.7	-1.0
	baz=269						
E41A	Kenton	60.19	47	P	P	00 22 42.0	-1.6
	baz=266						
T45A	Paducah	60.31	58	P	P	00 22 44.1	-0.5
	baz=272						
O44A	Mansfield	60.38	54	P	P	00 22 44.2	-0.8
	baz=270						
H42A	Shiocton	60.40	49	P	P	00 22 44.0	-1.1
	baz=268,SNR=7.0						
J43A	Natural Harves	60.45	50	P	P	00 22 44.1	-1.4
	baz=269						
MJAR	Matsushiro Arr	60.46	302	P	P	00 22 46.4	+0.7
	comp=Z,8.9nm,0.9s,baz=97,slow=4.2,SNR=24						
MJAR				LR	LR	00 43 54.8	
	comp=Z,109nm,21.8s,baz=300,slow=31						
MAJO	Matsushiro	60.46	302	*e*P	P	00 22 46.2	+0.5
	comp=Z,19nm,0.9s						
MAJO	Matsushiro	60.46	302	*ce*P	P	00 22 46.4	+0.7
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s						
MAT	Matsushiro	60.46	302	P	P	00 22 46.5	+0.8
MAT				S	S	00 30 58.6	-0.4
MJB9	Matsu-Tunnel	60.47	302	*e*P	P	00 22 45.6	-0.1
	comp=Z,21nm,0.9s						
X46A	Booneville	60.48	60	P	P	00 22 45.0	-0.7
	baz=274						
K43A	Burlington	60.49	51	P	P	00 22 44.5	-1.2
	baz=269						
D41A	Chassel	60.50	46	P	P	00 22 44.5	-1.3
	baz=266						
R45A	Skylar, Fairfi	60.56	56	P	P	00 22 45.8	-0.4
	baz=272,SNR=14						
W46A	Michie	60.61	60	P	P	00 22 45.9	-0.8
	baz=273						
N44A	Piper City	60.63	53	P	P	00 22 45.9	-0.8
	baz=270						
Q45A	Warren Harvey,	60.64	55	P	P	00 22 46.6	-0.2
	baz=271,SNR=18						
M44A	Midewin, Midew	60.70	53	P	P	00 22 46.4	-0.7
	baz=270						
U46A	Springville	60.71	58	P	P	00 22 46.6	-0.8
	baz=273						
F42A	Maple Grove Fa	60.73	48	P	P	00 22 46.2	-1.1
	baz=267						
V46A	Holladay	60.79	59	P	P	00 22 47.1	-0.8
	baz=273,SNR=17						
L44A	Lake County Fo	60.80	52	P	P	00 22 47.3	-0.6
	baz=270						
T46A	Princeton	60.91	58	P	P	00 22 48.3	-0.3
	baz=272,SNR=7.0						
E42A	Champion	60.91	47	P	P	00 22 47.2	-1.3
	baz=267,SNR=7.7						
H43A	Windswept, Lux	60.94	49	P	P	00 22 47.8	-0.9
	baz=268,SNR=14						
P45A	Graceland, Par	60.95	55	P	P	00 22 48.3	-0.6
	baz=271						
O45A	Potomac	60.95	54	P	P	00 22 48.3	-0.6
	baz=271,SNR=6.8						
WVT	Waverly	61.00	59	P	P	00 22 48.6	-0.8
	baz=273						
S46A	Don Dixon Farm	61.02	57	P	P	00 22 49.0	-0.5
	baz=272						
G43A	Wallace	61.03	48	P	P	00 22 48.0	-1.3
	baz=268,SNR=10.0						
X47A	Russelville	61.08	60	P	P	00 22 49.0	-0.9
	baz=274,SNR=12						
N45A	Kentland	61.10	53	P	P	00 22 49.1	-0.8
	baz=271						
R46A	Gibon Southern	61.16	56	P	P	00 22 50.1	-0.3
	baz=272,SNR=6.1						
Q46A	CEJHS Indians,	61.26	55	P	P	00 22 50.8	-0.2
	baz=272						
V47A	Nunnelly	61.27	59	P	P	00 22 50.3	-0.8
	baz=273,SNR=8.6						
M45A	Boilermakers S	61.30	53	P	P	00 22 51.1	-0.1
	baz=270						
P46A	Rosedale	61.36	55	P	P	00 22 51.1	-0.6
	baz=272,SNR=7.4						
F43A	Flat Rock, Esc	61.41	48	P	P	00 22 50.7	-1.2
	baz=268,SNR=18						
U47A	Clarksville	61.42	58	P	P	00 22 51.9	-0.3
	baz=273,SNR=19						
SFIN	Lafayette	61.43	54	P	P	00 22 51.7	-0.4
	baz=271,SNR=9.4						
148A	Greensboro	61.46	63	P	P	00 22 52.3	-0.1
	baz=275						
T47A	Sharon Grove	61.54	58	P	P	00 22 52.8	-0.2
	baz=273,SNR=14						
E43A	Lone Tree Farm	61.55	47	P	P	00 22 51.4	-1.4
	baz=268,SNR=17						
N46A	Monticello	61.69	53	P	P	00 22 53.5	-0.4
	baz=271,SNR=9.4						
S47A	Hartford	61.69	57	P	P	00 22 53.7	-0.2
	baz=273,SNR=18						
Y48A	Jasper	61.69	61	P	P	00 22 53.4	-0.7
	baz=275,SNR=5.3						
X48A	Hartselle	61.75	60	P	P	00 22 53.6	-0.9
	baz=274						
W48A	Pulaski	61.79	60	P	P	00 22 54.0	-0.7
	baz=274,SNR=9.3						
V48A	Smith Brothers	61.84	59	P	P	00 22 54.2	-0.9
	baz=274,SNR=6.3						
249A	Camden	61.90	63	P	P	00 22 55.9	+0.4
	baz=276,SNR=13						
349A	Repton	61.91	64	P	P	00 22 56.2	+0.7
	baz=276,SNR=5.2						
LRAL	Lakeview Retre	61.91	62	P	P	00 22 55.0	-0.5
	baz=275,SNR=17						
J45A	Montague	61.92	50	P	P	00 22 54.3	-1.1
	baz=270						
F44A	Big Bay de Noc	61.93	47	P	P	00 22 54.4	-1.0
	baz=268,SNR=23						
R47A	Wooly Knot Far	61.94	56	P	P	00 22 55.2	-0.4
	baz=273,SNR=15						
449A	Pace	61.95	65	P	P	00 22 55.2	-0.6
	baz=276						
M46A	Old House Fiel	61.97	53	P	P	00 22 55.3	-0.5
	baz=271						
Q47A	Bedord North L	61.99	55	P	P	00 22 55.0	-0.9
	baz=272,SNR=5.7						
L46A	Eue Claire	62.00	52	P	P	00 22 55.3	-0.7
	baz=271						
U48A	Cassie Pea, Po	62.02	58	P	P	00 22 55.8	-0.4
	baz=274,SNR=13						
BRAL	Brewton	62.05	64	P	P	00 22 57.0	+0.6
	baz=276						
P47A	Martinsville	62.09	55	P	P	00 22 56.1	-0.4
	baz=272						
T48A	Bowling Green	62.10	57	P	P	00 22 56.7	0.0
	baz=273,SNR=20						
149A	Jones	62.12	63	P	P	00 22 56.6	-0.3
	baz=276,SNR=7.8						
WCI	Wyandotte Cave	62.12	56	P	P	00 22 56.4	-0.4
	baz=273						
O47A	Sheridan	62.13	54	P	P	00 22 56.3	-0.6
	baz=272,SNR=9.2						
H45A	Beulah	62.18	49	P	P	00 22 56.0	-1.1
	baz=270						
Z49A	Columbiana	62.28	62	P	P	00 22 57.5	-0.5
	baz=275,SNR=14						
E44A	Grand Marais A	62.30	47	P	P	00 22 57.2	-0.7
	baz=269						
Y49A	Blount Mountai	62.32	61	P	P	00 22 57.9	-0.4
	baz=275,SNR=15						
S48A	Wiedeman Farm,	62.34	57	P	P	00 22 57.9	-0.5
	baz=273,SNR=12						
X49A	Woodville	62.34	60	P	P	00 22 57.9	-0.5
	baz=275,SNR=17						
W49A	Belvidere	62.34	60	P	P	00 22 57.7	-0.6
	baz=274,SNR=14						
K46A	Dorr	62.37	51	P	P	00 22 57.3	-1.1
	baz=271						
R48A	Northridge Ran	62.45	56	P	P	00 22 58.5	-0.6
	baz=273,SNR=5.2						
G45A	Suttons Bay	62.46	48	P	P	00 22 57.7	-1.2
	baz=270,SNR=6.0						
J46A	Howard City	62.47	50	P	P	00 22 57.6	-1.5
	baz=270						
N47A	Urbana	62.48	53	P	P	00 22 58.3	-0.9
	baz=272,SNR=14						
M47A	Cromwell	62.52	53	P	P	00 22 58.9	-0.5
	baz=272						
Q48A	North Vernon	62.53	55	P	P	00 22 58.9	-0.6
	baz=273,SNR=5.6						
F45A	CMU Biological	62.56	48	P	P	00 22 58.6	-1.0
	baz=269,SNR=9.2						
V49A	McMinnville	62.59	59	P	P	00 22 59.3	-0.7
	baz=274,SNR=15						
I46A	Reed City	62.61	50	P	P	00 22 58.4	-1.6
	baz=270						
250A	Grady	62.62	63	P	P	00 23 00.2	-0.2
	baz=276						
350A	Dozier	62.63	64	P	P	00 23 00.5	+0.2
	baz=276						
U49A	Red Boiling Sp	62.63	58	P	P	00 22 59.7	-0.5
	baz=274,SNR=7.2						
P48A	Milroy	62.74	55	P	P	00 22 60.0	-1.0
	baz=273,SNR=5.8						
150A	Eclectic	62.77	62	P	P	00 23 01.1	-0.1
	baz=276,SNR=10						
H46A	Fife Lake	62.78	49	P	P	00 22 59.7	-1.4
	baz=270						
Z50A	Ashland	62.79	62	P	P	00 23 01.2	-0.2
	baz=276,SNR=21						
T49A	Edmonton	62.79	57	P	P	00 23 00.8	-0.6
	baz=274,SNR=16						
E45A	Wooded Hills,	62.80	47	P	P	00 23 00.3	-0.9
	baz=269,SNR=12						
L47A	Sherwood	62.82	52	P	P	00 23 00.2	-1.2
	baz=272,SNR=5.6						
Y50A	Piedmont	62.88	61	P	P	00 23 01.6	-0.4
	baz=275,SNR=13						
X50B	Fort Payne	62.90	60	P	P	00 23 01.6	-0.5
	baz=275,SNR=15						
O48A	Farmland	62.91	54	P	P	00 23 01.4	-0.8
	baz=272,SNR=17						
S49A	Springfield	62.94	57	P	P	00 23 01.4	-0.9
	baz=274,SNR=10						
K47A	Vermontville	62.95	51	P	P	00 23 00.7	-1.6
	baz=271						
N48A	Decatur	62.99	53	P	P	00 23 01.5	-1.0
	baz=272,SNR=16						
R49A	Shelbyville	63.00	56	P	P	00 23 02.1	-0.6
	baz=273,SNR=6.5						
G46A	Petoskey	63.02	48	P	P	00 23 01.5	-1.2
	baz=270,SNR=5.2						
J47A	Sunmer	63.07	51	P	P	00 23 01.9	-1.2
	baz=271						
F46A	Macinaw City C	63.09	48	P	P	00 23 02.3	-0.9
	baz=270						
W50A	Signal Mountai	63.11	60	P	P	00 23 02.9	-0.7
	baz=275,SNR=15						
Q49A	Aurora	63.17	55	P	P	00 23 03.1	-0.8
	baz=273						
GLMI	Grayling	63.20	49	P	P	00 23 02.9	-1.0
	baz=270,SNR=5.1						
M48A	Edgerton	63.20	52	P	P	00 23 02.8	-1.2
	baz=272						
V50A	Pikeville	63.24	59	P	P	00 23 03.8	-0.6
	baz=275,SNR=19						
I47A	Gladwin	63.28	50	P	P	00 23 03.3	-1.2
	baz=271						
P49A	Miami Univ. Ec	63.28	55	P	P	00 23 03.8	-0.8
	baz=273,SNR=10						
251A	Midway	63.34	63	P	P	00 23 05.0	-0.1
	baz=276,SNR=28						
T50A	Nancy	63.35	57	P	P	00 23 04.3	-0.8
	baz=274,SNR=10						
151A	Opelika	63.36	62	P	P	00 23 04.7	-0.5
	baz=276,SNR=8.4						
U50A	Jamestown	63.39	58	P	P	00 23 04.5	-0.9
	baz=275,SNR=7.6						
L48A	N Adams	63.39	52	P	P	00 23 04.2	-1.1
	baz=272,SNR=8.4						
E46A	Sault Ste Mari	63.41	47	P	P	00 23 04.2	-1.1
	baz=270,SNR=36						
Y51A	Rockmart	63.44	61	P	P	00 23 04.7	-1.0
	baz=276,SNR=14						
H47A	Mio	63.49	49	P	P	00 23 04.8	-1.0
	baz=271						
X51A	Calhoun	63.54	60	P	P	00 23 05.6	-0.8
	baz=276,SNR=12						
O49A	Covington	63.54	54	P	P	00 23 05.5	-0.8
	baz=273,SNR=14						
W51A	Cleveland	63.57	60	P	P	00 23 05.9	-0.7
	baz=275,SNR=19						
D46A	Sault St. Mari	63.60	46	P	P	00 23 05.4	-1.1
	baz=270,SNR=16						
K48A	Perry	63.60	51	P	P	00 23 05.3	-1.2
	baz=272						
N49A	Columbus Grove	63.62	53	P	P	00 23 05.9	-0.9
	baz=273,SNR=9.1						
S50A	Richmond	63.65	57	P	P	00 23 06.3	-0.8
	baz=274,SNR=12						
R50A	Paris	63.66	56	P	P	00 23 06.4	-0.7
	baz=274,SNR=8.5						
552A	Lynn Haven	63.67	65	P	P	00 23 06.9	-0.4
	baz=277						
452A	Marianna	63.68	64	P	P	00 23 07.6	+0.3
	baz=277,SNR=6.0						
G47A	Hillman	63.73	48	P	P	00 23 06.3	-1.1
	baz=271,SNR=6.8						
M49A	Liberty Center	63.75	52	P	P	00 23 06.9	-0.7
	baz=273						
352A	Blakely	63.82	64	P	P	00 23 08.1	-0.1
	baz=277,SNR=5.3						
J48A	Bridge Port	63.83	50	P	P	00 23 07.0	-1.0
	baz=272,SNR=5.7						
V51A	Loudon	63.84	59	P	P	00 23 07.1	-1.2
	baz=275,SNR=10						
152A	Waverly Hall	63.85	62	P	P	00 23 08.0	-0.5
	baz=276,SNR=16						
I48A	Sherman Twp	63.86	49	P	P	00 23 07.1	-1.2
	baz=271						
L49A	Milan	63.88	52	P	P	00 23 07.6	-0.9
	baz=272,SNR=5.2						
Q50A	Georgetown	63.90	55	P	P	00 23 07.9	-0.7
	baz=274						
252A	Lumpkin	63.92	63	P	P	00 23 08.2	-0.7
	baz=277,SNR=8.9						
AAM	Ann Arbor	63.96	52	P	P	00 23 08.1	-0.8
	baz=272						
P50A	Jamestown	63.99	55	P	P	00 23 08.9	-0.3
	baz=274,SNR=29						
Z52A	Williamson	64.05	62	P	P	00 23 09.4	-0.3
	baz=276,SNR=25						
U51A	La Follette	64.06	58	P	P	00 23 08.6	-1.2
	baz=275,SNR=9.0						
T51A	Gray	64.07	57	P	P	00 23 08.9	-0.9
	baz=275,SNR=19						
K49A	Clarkson	64.08	51	P	P	00 23 08.8	-1.0
	baz=272						
O50A	Cable	64.09	54	P	P	00 23 09.4	-0.5
	baz=273,SNR=11						
H48A	Harrisville	64.12	49	P	P	00 23 09.0	-0.9
	baz=271						
E47A	Iron Bridge	64.12	47	P	P	00 23 08.6	-1.3
	baz=271,SNR=11						
D47A	Chapleau	64.23	46	P	P	00 23 09.3	-1.4
	baz=270,SNR=15						
R51A	Hillsboro	64.25	56	P	P	00 23 10.2	-0.7
	baz=274,SNR=20						
W52A	Murphy	64.25	60	P	P	00 23 10.3	-0.8
	baz=276						
Y52A	Lilburn	64.27	61	P	P	00 23 10.7	-0.4
	baz=276,SNR=14						
S51A	Beattyville	64.29	57	P	P	00 23 10.3	-1.0
	baz=275						
J49A	Marlette	64.30	50	P	P	00 23 10.0	-1.1
	baz=272,SNR=6.9						
X52A	Dahlonega	64.33	60	P	P	00 23 10.9	-0.7
	baz=276,SNR=11						
Q51A	Peebles	64.38	55	P	P	00 23 11.4	-0.4
	baz=274,SNR=9.1						
453A	Whigham	64.41	64	P	P	00 23 11.0	-1.1
	baz=278,SNR=5.4						
N50A	Nevada	64.42	53	P	P	00 23 11.7	-0.3
	baz=273,SNR=11						
253A	Americus	64.42	63	P	P	00 23 11.8	-0.4
	baz=277						
TZTN	Tazewell	64.42	58	P	P	00 23 11.3	-0.8
	baz=275,SNR=11						
353A	Camilla	64.44	64	P	P	00 23 12.2	0.0
	baz=277,SNR=9.2						
V52A	Sevierville	64.45	59	P	P	00 23 10.9	-1.4
	baz=276,SNR=8.6						
M50A	Fremont	64.46	52	P	P	00 23 11.7	-0.5
	baz=273,SNR=5.7						
I49A	Point Hope	64.50	50	P	P	00 23 11.6	-0.9
	baz=272,SNR=5.0						
P51A	Williamsport	64.57	55	P	P	00 23 12.2	-0.8
	baz=274						
ACSO	Alum Creek Sta	64.58	54	P	P	00 23 12.6	-0.5
	baz=274,SNR=11						
U52A	Thorn Hill	64.58	58	P	P	00 23 12.3	-0.9
	baz=275,SNR=6.3						
F48A	Evansville	64.59	48	P	P	00 23 11.5	-1.5
	baz=271,SNR=9.1						
L50A	Kingsville	64.60	52	P	P	00 23 12.3	-0.9
	baz=273,SNR=7.4						
153A	Fort Valley	64.60	62	P	P	00 23 12.7	-0.6
	baz=277						
Y53A	Monroe	64.67	61	P	P	00 23 13.4	-0.4
	baz=276,SNR=15						
S52A	Salyersville	64.69	57	P	P	00 23 13.1	-0.8
	baz=275						
K50A	Casco	64.70	51	P	P	00 23 12.6	-1.2
	baz=273						
Z53A	Monticello	64.74	61	P	P	00 23 13.8	-0.5
	baz=277,SNR=22						
PLIO	Pelee Island,	64.75	52	P	P	00 23 13.2	-0.9
	baz=273						
GOGA	Godfrey	64.81	61	P	P	00 23 14.2	-0.5
	baz=277,SNR=26						
T52A	Hallie	64.82	57	P	P	00 23 14.2	-0.5
	baz=275,SNR=9.7						
X53A	Estanollee	64.83	60	P	P	00 23 14.3	-0.5
	baz=276,SNR=6.4						
W53A	Cullowhee	64.87	59	P	P	00 23 14.2	-1.0
	baz=276,SNR=18						
O51A	Pataskala	64.87	54	P	P	00 23 14.5	-0.5
	baz=274						
E48A	Lockeyer	64.89	47	P	P	00 23 13.7	-1.3
	baz=271,SNR=16						
USRK	Ussuriysk Ar.	64.90	311	P	P	00 23 15.5	+0.4
	comp=Z,8.6nm,1.0s,baz=92,slow=6.5,SNR=16						
USRK				LR	LR	00 46 25.6	
	comp=Z,288nm,21.5s,baz=88,slow=31						
KLR	Kul'dur	64.95	316	P	P	00 23 15.1	-0.2
	comp=Z,4.1nm,1.0s,baz=82,slow=6.1,SNR=11						
KLR				LR	LR	00 46 59.0	
	comp=Z,170nm,20.8s,baz=110,slow=32						
KLR	Kul'dur	64.95	316	*ce*P	P	00 23 15.3	0.0
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIGA	Tifton	64.95	63	P	P	00 23 15.5	-0.1
	baz=278,SNR=11						
R52A	Catlettsburg	64.98	56	P	P	00 23 15.0	-0.8
	baz=275,SNR=5.7						
N51A	Ashland	64.99	53	P	P	00 23 15.1	-0.7
	baz=274						
F49A	Sandfield	64.99	48	P	P	00 23 14.2	-1.5
	baz=272,SNR=7.4						
454A	Quitman	65.02	64	P	P	00 23 16.1	0.0
	baz=278,SNR=9.6						
V53A	Saluda	65.10	59	P	P	00 23 15.6	-1.0
	baz=276,SNR=11						
M51A	Elyria	65.11	53	P	P	00 23 15.7	-0.8
	baz=274,SNR=6.0						
254A	Abbeville	65.14	63	P	P	00 23 16.7	-0.2
	baz=278,SNR=13						
T53A	Wise	65.19	57	P	P	00 23 16.7	-0.5
	baz=276,SNR=13						
154A	Montrose	65.21	62	P	P	00 23 16.8	-0.5
	baz=277,SNR=7.7						
U53A	Fall Branch	65.22	58	P	P	00 23 16.2	-1.1
	baz=276,SNR=7.3						
Q52A	Bidwell	65.22	55	P	P	00 23 16.5	-0.7
	baz=275,SNR=11						
P52A	Corning	65.27	54	P	P	00 23 16.8	-0.8
	baz=275,SNR=9.3						
BASO	Ashfield	65.33	50	P	P	00 23 17.5	-0.4
	baz=273,SNR=15						
Z54A	Sparta	65.35	61	P	P	00 23 17.6	-0.6
	baz=277,SNR=20						
TOBO	Tobermory, Bru	65.38	48	P	P	00 23 17.0	-1.1
	baz=272,SNR=5.1						
Y54A	Tignall	65.41	61	P	P	00 23 17.7	-0.8
	baz=277,SNR=5.4						
D49A	Beulah Townshi	65.42	46	P	P	00 23 16.9	-1.6
	baz=272,SNR=12						
S53A	Williamson	65.45	57	P	P	00 23 18.1	-0.7
	baz=276						
O52A	Adamsville	65.46	54	P	P	00 23 18.1	-0.7
	baz=274,SNR=11						
BRCO	Bruce Peninsul	65.48	49	P	P	00 23 18.2	-0.6
	baz=273						
N52A	McGinn's Farm,	65.52	53	P	P	00 23 18.3	-0.8
	baz=274						
K51A	Iona Station	65.52	51	P	P	00 23 18.5	-0.7
	baz=274						
R53A	Hurricane	65.52	56	P	P	00 23 18.6	-0.6
	baz=275,SNR=11						
455A	Stateville	65.53	64	P	P	00 23 19.1	-0.3
	baz=278						
X54A	Belton	65.58	60	P	P	00 23 19.1	-0.6
	baz=277,SNR=8.1						
355A	Pearson	65.59	64	P	P	00 23 19.1	-0.8

baz=278
BMRO Meriville Lake 65.62 49 P P 00 23 18.4 -1.4
baz=273
555A McAlpin 65.67 65 P P 00 23 19.8 -0.5
baz=278
W54A Cherokee Point 65.67 59 P P 00 23 19.5 -0.8
baz=277,SNR=19
BWLO Walkerton 65.71 49 P P 00 23 19.7 -0.6
baz=273,SNR=6.7
M52A Chesterland 65.71 52 P P 00 23 19.3 -1.1
baz=274
155A Kite 65.75 62 P P 00 23 20.3 -0.5
baz=278,SNR=6.7
V54A Nebo 65.79 59 P P 00 23 20.2 -0.8
baz=276,SNR=27
Q53A Leroy 65.81 55 P P 00 23 20.7 -0.4
baz=275,SNR=18
U54A Nelsons Funny 65.81 58 P P 00 23 20.7 -0.5
baz=276
I51A Listowel 65.81 50 P P 00 23 20.2 -0.8
baz=273,SNR=10
255A Hazlehurst 65.83 63 P P 00 23 21.0 -0.3
baz=278,SNR=7.1
P53A Whipple 65.86 55 P P 00 23 20.9 -0.5
baz=275,SNR=11
E50A Wahnapitae 65.88 47 P P 00 23 20.2 -1.2
baz=272,SNR=11
O53A New Philadelph 65.92 54 P P 00 23 21.3 -0.5
baz=275,SNR=5.3
Z55A Blythe 65.94 61 P P 00 23 21.6 -0.4
baz=278,SNR=7.9
T54A Tazewell 65.95 57 P P 00 23 21.6 -0.5
baz=276,SNR=16
S54A Dingess, Beckl 66.08 56 P P 00 23 22.6 -0.3
baz=276,SNR=6.4
Y55A Saluda 66.08 61 P P 00 23 22.2 -0.7
baz=277,SNR=7.2
K52A Tillsonburg 66.10 51 P P 00 23 22.0 -0.9
baz=274
656A Willston 66.16 66 P P 00 23 23.3 -0.1
baz=279,SNR=5.2
N53A Lisbon 66.16 53 P P 00 23 22.5 -0.8
baz=275,SNR=8.3
556A Lake Butler 66.17 65 P P 00 23 23.6 0.0
baz=279,SNR=9.7
X55A Gracelyn & Ava 66.20 60 P P 00 23 22.8 -0.8
baz=277,SNR=18
356A Blackshear 66.21 63 P P 00 23 23.8 0.0
baz=278
M53A WI Miller and 66.23 52 P P 00 23 23.0 -0.8
baz=275
J52A Paris 66.24 50 P P 00 23 23.2 -0.6
baz=274
R54A Victor 66.29 56 P P 00 23 23.6 -0.7
baz=276
KLBO Killbear Provi 66.30 48 P P 00 23 22.7 -1.3
baz=273,SNR=8.6
256A Glennville 66.32 63 P P 00 23 24.0 -0.4
baz=278
Q54A Coxs Mills 66.33 55 P P 00 23 23.8 -0.6
baz=276,SNR=7.1
KMSC Kings Mountain 66.36 59 P P 00 23 23.6 -1.1
baz=277,SNR=17
V55A Taylorsville 66.37 58 P P 00 23 24.1 -0.7
baz=277,SNR=5.2
456A Hilliard 66.39 64 P P 00 23 25.0 +0.1
baz=279
I52A Shelburne 66.40 49 P P 00 23 23.7 -1.1
baz=274
U55A TA2, Sparta 66.43 58 P P 00 23 24.5 -0.7
baz=277,SNR=16
D50A G1974 Best Tow 66.46 46 P P 00 23 23.4 -1.7
baz=273,SNR=9.3
L53A Girard 66.50 52 P P 00 23 24.5 -0.9
baz=275,SNR=10
ACTO Acton 66.52 50 P P 00 23 24.1 -1.4
baz=274
YAK Yakutsk 66.54 330 eP P 00 23 25.1 -0.2
YAK e*PP pP 00 23 33.8 -1.2
YAK e 00 23 50.9
YAK e 00 25 47.3
YAK eS S 00 32 13.6 -0.1
YAK e*SS sS 00 32 50.7 +23
P54A Burton 66.55 54 P P 00 23 25.1 -0.7
baz=276
156A Sylvania 66.55 62 P P 00 23 26.1 +0.1
baz=278
Y56A Pelion 66.56 61 P P 00 23 25.5 -0.5
baz=278
Z56A Williston 66.57 61 P P 00 23 25.7 -0.3
baz=278,SNR=5.8
O54A Avella 66.57 54 P P 00 23 25.5 -0.4
baz=275,SNR=17
T55A Pulaski 66.57 57 P P 00 23 25.8 -0.2
baz=276,SNR=13
H52A Wyevale 66.57 49 P P 00 23 24.4 -1.5
baz=274
MDJ Mudanjiang 66.59 311 P P 00 23 26.4 +0.4
MDJ pP sP 00 23 37.5 -0.6
MDJ S S 00 32 13.9 -1.1
MDJ ScS SKSac 00 33 19.2 -1.1
MDJ pmax pmax
comp=Z,32nm,1.1s
MDJ pmax pmax
comp=Z,190nm,3.0s
MDJ LR LR
comp=Z,230nm,21.4s
MDJ LR LR
comp=Z,250nm,24.2s
MDJ LR LR
comp=Z,510nm,29.9s
MDJ Mudanjiang 66.59 311 eP P 00 23 26.7 +0.7
comp=Z,30nm,1.0s
857A Zephyrhills 66.60 67 P P 00 23 26.1 -0.2
baz=280
757A Oxford 66.63 66 P P 00 23 26.0 -0.4
baz=279
ERPA Erie 66.69 52 P P 00 23 25.7 -0.9
baz=275,SNR=7.4
X56A White Oak 66.69 60 P P 00 23 26.0 -0.8
baz=278,SNR=9.8
957A Wimauma 66.69 67 P P 00 23 26.8 -0.1
baz=280
TYNO Tyneside 66.69 50 P P 00 23 25.5 -1.2
baz=274,SNR=5.1
657A Interlachen 66.70 65 P P 00 23 27.0 +0.1
baz=279,SNR=6.1
S55A Lewisburg 66.72 56 P P 00 23 26.9 -0.2
baz=276,SNR=20
E51A G1948 Merrick 66.73 47 P P 00 23 25.2 -1.7
baz=273,SNR=5.9
357A Townsend 66.74 63 P P 00 23 26.8 -0.3
baz=279
557A Orange Park 66.75 65 P P 00 23 27.2 0.0
baz=279
D51A Lot 18 Range I 66.78 46 P P 00 23 25.4 -1.7
baz=273
N54A Moraine State 66.79 53 P P 00 23 26.6 -0.8
baz=275,SNR=13
457A Yulee 66.80 64 P P 00 23 27.7 +0.1
baz=279
I53A Kortright Cn E 66.84 50 P P 00 23 26.5 -1.1
baz=274
BUKO Buck Lake 66.86 48 P P 00 23 25.9 -1.8
baz=274,SNR=11
F52A Sundridge 66.89 48 P P 00 23 26.3 -1.6
baz=274,SNR=6.4
Q55A Buckhannon 66.92 55 P P 00 23 27.9 -0.3
baz=276,SNR=16
V56A Mocksville 66.95 58 P P 00 23 27.9 -0.6
baz=277,SNR=13
157A Early Branch 66.97 62 P P 00 23 28.8 +0.2
baz=278,SNR=5.0
W56A Indian Trail 66.97 59 P P 00 23 27.7 -0.9
baz=278,SNR=7.2
U56A King 66.98 58 P P 00 23 28.3 -0.4
baz=277,SNR=12
M54A Oil Creek Stat 66.98 52 P P 00 23 27.5 -1.1
baz=275,SNR=8.5
MCWV Mont Chateau 67.03 54 P P 00 23 28.4 -0.5
baz=276,SNR=5.2
257A Skidaway Islan 67.04 63 P P 00 23 29.3 +0.2
baz=279
P55A Reedsville 67.06 54 P P 00 23 28.5 -0.6
baz=276,SNR=11
Z57A Bowman 67.12 61 P P 00 23 29.4 -0.1
baz=278,SNR=17
958A Wauchula 67.13 67 P P 00 23 29.8 +0.2
baz=280
L54A Sinclairville 67.17 51 P P 00 23 28.6 -1.2
baz=275,SNR=5.4
058A Arcadia 67.18 68 P P 00 23 30.4 +0.4
baz=280
T56A Rocky Mt 67.18 57 P P 00 23 29.6 -0.3
baz=277,SNR=14
STCO Saint Catharin 67.20 50 P P 00 23 28.7 -1.1
baz=275
PKRO Pickering 67.20 49 P P 00 23 28.5 -1.4
baz=275
658A Bunnell 67.25 65 P P 00 23 30.1 -0.3
baz=280
Y57A Sumter 67.28 60 P P 00 23 30.0 -0.5
baz=278
DWPF Disney Wildern 67.32 67 P P 00 23 30.7 -0.2
baz=280
E52A Mattawa 67.32 47 P P 00 23 29.1 -1.5
baz=274
858A St. Cloud 67.36 67 P P 00 23 29.4 -1.7
baz=280
758A Lake Helen 67.37 66 P P 00 23 31.1 -0.2
baz=280
O55A Ligonier 67.38 54 P P 00 23 30.8 -0.3
baz=276,SNR=14
G53A Haliburton 67.43 48 P P 00 23 29.8 -1.6
baz=274,SNR=5.4
D52A ZEK Kipawa Sen 67.44 46 P P 00 23 29.9 -1.5
baz=274,SNR=8.8
W57A Gilead 67.45 59 P P 00 23 31.1 -0.5
baz=278,SNR=21
DRWO Darlington Wes 67.46 50 P P 00 23 30.5 -1.0
baz=275
X57A Johnson Farm, 67.46 60 P P 00 23 31.3 -0.4
baz=278,SNR=6.8
S56A Natural Bridge 67.47 56 P P 00 23 31.1 -0.7
baz=277
DRCO St. Marys Ceme 67.48 50 P P 00 23 30.7 -1.0
baz=275
V57A Coltrane Farms 67.53 58 P P 00 23 31.5 -0.6
baz=278,SNR=8.5
N55A Marion Center 67.56 53 P P 00 23 31.5 -0.8
baz=276,SNR=8.5
J54A Appleton 67.58 50 P P 00 23 31.1 -1.2
baz=275
NHSC New Hope 67.58 61 P P 00 23 32.7 +0.2
baz=278,SNR=9.8
K54A Basiliko Farm, 67.60 51 P P 00 23 31.5 -1.0
baz=275,SNR=5.1
Q56A Snyder Ridge, 67.60 55 P P 00 23 32.1 -0.5
baz=277,SNR=12
059Z Ave Maria 67.62 69 P P 00 23 32.7 -0.1
baz=281
M55A Ridgway 67.66 52 P P 00 23 32.0 -0.9
baz=276,SNR=11
ZEA Zeya 67.69 321 eP P 00 23 32.4 -0.4
ZEA pmax pmax
comp=Z,37nm,1.4s
WLVO Wesleyville 67.69 49 P P 00 23 31.7 -1.2
baz=275,SNR=5.4
MEDO Medina 67.72 50 P P 00 23 31.9 -1.3
baz=275
ALGO Algonquin Park 67.77 47 P P 00 23 32.0 -1.4
baz=274,SNR=10
MATQ Matagami 67.79 43 P P 00 23 32.0 -1.5
baz=273,SNR=6.3
TIXI Tiksi 67.79 341 eP P 00 23 33.1 0.0
comp=Z,20nm,1.0s
TIXI Tiksi 67.79 341 ceP P 00 23 33.5 +0.4
TIXI pmax pmax
comp=Z,15nm,0.9s
T57A Hurt 67.80 57 P P 00 23 33.4 -0.4
baz=277,SNR=5.8
U57A Blanch 67.81 58 P P 00 23 33.8 0.0
baz=278,SNR=25
P56A Dayton Farm, R 67.82 54 P P 00 23 33.2 -0.7
baz=277,SNR=7.2
L55A Hinsdale 67.83 51 P P 00 23 32.7 -1.2
baz=276
Z58A St. Stephen 67.85 61 P P 00 23 34.1 0.0
baz=279,SNR=7.4
Y58A Scranton 67.89 60 P P 00 23 34.5 +0.1
baz=278
959A Okeechobee 67.90 67 P P 00 23 34.5 0.0
baz=280
D53A Lac Vacive, Po 67.92 46 P P 00 23 33.1 -1.3
baz=274,SNR=17
BANO Bancroft 67.93 48 P P 00 23 33.3 -1.2
baz=275,SNR=16
O56A Blue Knob Stat 67.94 53 P P 00 23 34.2 -0.5
baz=276,SNR=11
S57A Dark Hollow, R 67.94 56 P P 00 23 34.0 -0.6
baz=277,SNR=13
E53A Dumoine, Ponti 68.00 47 P P 00 23 33.6 -1.3
baz=275,SNR=13
K55A Perry 68.05 51 P P 00 23 33.9 -1.3
baz=276,SNR=5.1
X58A Rowland 68.06 60 P P 00 23 35.6 +0.1
baz=278
N56A West Decatur 68.07 53 P P 00 23 34.6 -0.9
baz=276,SNR=6.1
V58A Windy Hill, Pi 68.07 58 P P 00 23 35.5 0.0
baz=278,SNR=21
W58A Raeford 68.08 59 P P 00 23 35.4 -0.2
baz=278,SNR=24
M56A Emporium 68.09 52 P P 00 23 34.8 -0.8
baz=276,SNR=9.6
J55A Hilton 68.18 50 P P 00 23 35.0 -1.0
baz=276
I55A Frankford 68.18 49 P P 00 23 34.8 -1.3
baz=276,SNR=5.0
061Z Ochoppi 68.19 69 P P 00 23 35.4 -1.0
baz=281
DELO Deloro Mine 68.20 49 P P 00 23 34.9 -1.2
baz=275,SNR=7.9
Q57A Strasburg 68.20 55 P P 00 23 35.6 -0.7
baz=277
R57A Stanardsville 68.21 56 P P 00 23 36.3 0.0
baz=277,SNR=12
LSQQ Lebel-sur-Quev 68.26 44 P P 00 23 35.2 -1.2
baz=274
E54A Lac Daplat, Po 68.33 47 P P 00 23 35.4 -1.5
baz=275,SNR=6.0
PEMO Pembroke 68.35 48 P P 00 23 35.5 -1.5
baz=275
T58A Grand View Acr 68.38 57 P P 00 23 37.1 -0.4
baz=278,SNR=7.5
060Z West Palm Beac 68.39 68 P P 00 23 37.0 -0.7
baz=281
SSPA Standing Stone 68.41 53 P P 00 23 36.8 -0.8
baz=277
U58A Oxford 68.44 58 P P 00 23 37.4 -0.4
baz=278,SNR=8.6
P57A Homestead Farm 68.45 54 P P 00 23 37.1 -0.8
baz=277,SNR=5.8
H55A Tweed 68.50 49 P P 00 23 36.6 -1.4
baz=276,SNR=6.5
PLVO Plevna 68.53 48 P P 00 23 37.0 -1.2
baz=276,SNR=6.9
KSRS Korea Array 68.58 304 P P 00 23 39.5 +0.9
comp=Z,5.4nm,0.9s,baz=91,slow=6.6,SNR=18
KSRS LR LR 00 48 49.5
comp=Z,117nm,20.9s,baz=280,slow=32
KS15 Wonju Array Si 68.61 304 eP P 00 23 39.5 +0.6
comp=Z,13nm,1.1s
R58A Rapidan 68.61 55 P P 00 23 38.4 -0.5
baz=278,SNR=7.6
D54A Lac Fusel, La 68.63 46 P P 00 23 37.4 -1.4
baz=275,SNR=8.3
N57A Milroy 68.65 53 P P 00 23 38.3 -0.7
baz=277,SNR=15
O57A Amberson 68.65 53 P P 00 23 38.6 -0.5
baz=277,SNR=13
X59A McDuffie Farm, 68.66 59 P P 00 23 39.0 -0.2
baz=279
S58A Poland Farm, P 68.67 56 P P 00 23 38.5 -0.7
baz=278,SNR=9.9
PECO Prince Edward 68.70 49 P P 00 23 37.7 -1.6
baz=276
R58B Mineral 68.75 56 P P 00 23 39.0 -0.8
baz=278,SNR=12
G55A Calabogie 68.76 48 P P 00 23 38.3 -1.4
baz=276,SNR=6.7
V59A Middlesex 68.78 58 P P 00 23 39.9 -0.1
baz=278,SNR=11
F55A Otter Lake 68.96 47 P P 00 23 39.5 -1.4
baz=276
U59A Littleton 69.05 58 P P 00 23 41.5 -0.1
baz=278,SNR=9.5
Y60A Bolivia 69.07 60 P P 00 23 41.3 -0.5
baz=279
CBN Corbin Frederi 69.12 55 P P 00 23 41.7 -0.3
baz=278
CNNC Cliffs of the 69.14 59 P P 00 23 41.7 -0.5
baz=279
T59A Double "B" Far 69.15 57 P P 00 23 42.0 -0.2
baz=278,SNR=5.7
H56A Elgin 69.16 49 P P 00 23 40.9 -1.2
baz=276,SNR=11
X60A Albert Glenn T 69.17 59 P P 00 23 42.5 +0.1
baz=279,SNR=8.1
TJN Taejon 69.18 303⇑ eP P 00 23 42.2 -0.2
S59A Mechanicsville 69.24 56 P P 00 23 42.5 -0.3
baz=278
W60A Pink Hill 69.31 59 P P 00 23 43.5 +0.2
baz=279
R59A King George, V 69.32 55 P P 00 23 43.0 -0.3
baz=278
U60A Pendleton 69.54 57 P P 00 23 44.1 -0.6
baz=279
V60A Jim Taylor Roa 69.56 58 P P 00 23 44.8 0.0
baz=279,SNR=5.1
Q59A Harwood 69.58 55 P P 00 23 44.5 -0.3
baz=278
ORIO Orleans, Innes 69.59 48 P P 00 23 43.4 -1.3
baz=276
BINY Binghamton 69.64 51 P P 00 23 43.9 -1.3
baz=277,SNR=14
P59A Jarrettsville 69.65 54 P P 00 23 44.5 -0.8
baz=278,SNR=6.6
O59A Robesonia 69.74 53 P P 00 23 45.1 -0.8
baz=278,SNR=6.9
W61A Ground Anchor 69.88 59 P P 00 23 46.8 0.0
baz=279
CHGQ Chibougamau 69.88 43 P P 00 23 45.1 -1.5
baz=276,SNR=6.7
N59A State Game Lan 69.97 52 P P 00 23 46.8 -0.4
baz=278,SNR=16
JOW Kunigami 70.08 292 P P 00 23 49.3 +1.1
comp=Z,0.4nm,0.4s,baz=130,slow=17,SNR=3.1
V61A Roper 70.11 58 eP P 00 23 48.1 -0.1
comp=Z,187nm,1.1s
V61A Roper 70.11 58 P P 00 23 48.5 +0.4
baz=279
U61A Possum Corner 70.13 57 P P 00 23 48.2 -0.1
baz=279
Q60A Greensboro 70.19 54 P P 00 23 48.3 -0.3
baz=279
P60A Greenville 70.23 54 P P 00 23 48.2 -0.6
baz=278
O60A Telford 70.33 53 P P 00 23 48.9 -0.5
baz=278,SNR=9.2
LONY Lake Ozonia 70.34 48 P P 00 23 48.2 -1.3
baz=277
S61A Accomac 70.53 56 P P 00 23 49.0 -1.7
baz=279
P61A Hammonton 70.89 54 P P 00 23 52.3 -0.5
baz=279
LATQ La Tuque 71.22 45 P P 00 23 53.7 -1.0
baz=278,SNR=6.9
PAL Palisades 71.35 52 P P 00 23 55.0 -0.6
baz=273,SNR=6.3
M61A Granite Spring 71.41 52 P P 00 23 55.4 -0.5
baz=279
LBNH Lisbon 72.28 49 P P 00 24 00.6 -0.6
baz=279
HRV Adam Dziewonsk 72.83 50 P P 00 24 03.9 -0.6
baz=280
SCHQ Schefferville 73.81 37 LR LR 00 56 00.7
comp=Z,150nm,18.1s,baz=110,slow=35
PKME Peaks-Kenny Pk 73.95 47 P P 00 24 10.3 -0.7
baz=281,SNR=5.4
BOD Bodaibo 74.67 326 eP P 00 24 15.1 +0.2
BOD pmax pmax
comp=Z,50nm,1.5s
NJ2 Nanjing 76.94 300 eP P 00 24 27.8 -0.6
NJ2 pmax pmax
comp=Z,16nm,0.5s
BJI Beijing 77.12 308 eP P 00 24 29.7 +0.4
BJI pmax pmax
comp=Z,5.0nm,1.0s
TIA Tai'an 77.32 304 P P 00 24 30.9 +0.4
TIA pmax pmax
comp=Z,16nm,0.8s
OTAV Otavalo 77.33 94 eP P 00 24 33.8 +2.3
DAV Davao City (W) 77.64 273⇑ iP P 00 24 31.9 -0.8
SFJD Kangerlussuaq 78.30 23 i P P 00 24 34.9 -0.4
SFJD pmax pmax
comp=Z,19nm,1.1s
SFJD Kangerlussuaq 78.30 23 i P P 00 24 34.9 -0.4
comp=Z,19nm,1.1s
GUY2C Guyana, Caldas 78.66 88 eP P 00 24 40.4 +1.5
SKMP Bagumbayan, Su 78.79 273 eP P 00 24 38.9 -0.1
STKA Stephens Creek 78.87 231 P P 00 24 39.3 +0.3
comp=Z,1.7nm,0.7s,baz=58,slow=7.3,SNR=2.3
STKA LR LR 00 54 59.3
comp=Z,204nm,20.2s,baz=33,slow=32
STKA Stephens Creek 78.87 231 eP P 00 24 39.3 +0.3
comp=Z,1.2nm,0.9s
NORC Norcasia 79.03 88 eP P 00 24 40.4 0.0
SUMG Summit 79.69 16 i P P 00 24 43.2 -0.2
SUMG pmax pmax
comp=Z,40nm,0.8s
SUMG Summit 79.69 16 i P P 00 24 43.2 -0.2
comp=Z,40nm,0.8s
ROSC El Rosal 79.77 88 LR LR 00 54 52.8
comp=Z,58nm,19.0s,baz=148,slow=32
HHC Hu-ho-hao-te 80.30 310 eP P 00 24 46.3 -0.6
HHC pmax pmax
comp=Z,28nm,1.1s
HHC pmax pmax
comp=Z,84nm,5.6s
CHIC Chingaza 80.39 88 eP P 00 24 48.4 +0.1
PAMC Pamplona, Colo 80.53 85 eP P 00 24 48.4 -0.7
DAG Danmarks Havn 81.07 9 i P P 00 24 49.3 -0.9
DAG pmax pmax
comp=Z,15nm,0.9s
DAG Danmarks Havn 81.07 9 i P P 00 24 49.3 -0.9
comp=Z,18nm,0.9s
ASAR Alice Springs 81.11 241 P P 00 24 52.4 +1.0
comp=Z,1.9nm,0.8s,baz=63,slow=5.9,SNR=12
ASAR LR LR 00 56 10.9
comp=Z,161nm,20.5s,baz=72,slow=32
ULN Ulaanbaatar 81.29 318 eP P 00 24 52.2 +0.1
comp=Z,20nm,0.9s
ULN Ulaanbaatar 81.29 318 c iP P 00 24 52.4 +0.2
ULN pmax pmax
comp=Z,27nm,1.7s
NRIK Noril'sk 81.55 341 P P 00 24 53.8 +0.9
comp=Z,33nm,1.1s,baz=61,slow=4.2,SNR=27
SONM Songino Array 81.72 318 P P 00 24 54.5 +0.1
comp=Z,3.9nm,0.7s,baz=70,slow=3.8,SNR=22
SDV Santo Domingo 82.00 83 eP P 00 24 57.0 +0.4
TLY Talaya 82.11 322 ceP P 00 24 56.8 +0.6
ZAK Zakamensk 82.78 321 eP P 00 24 59.8 -0.1
ZAK pmax pmax
comp=Z,9.0nm,1.1s
XAN Xi'an 84.38 304 P P 00 25 07.3 -1.0
XAN pP pP 00 25 18.3 +0.5
XAN sP pwP 00 25 24.3 +2.7
XAN pmax pmax
comp=Z,7.0nm,1.4s
XAN pmax pmax
comp=Z,120nm,5.9s
SCO Scoresbysund 85.09 14 eP P 00 25 10.6 -0.5
SCO pmax pmax
comp=Z,28nm,1.0s
SCO Scoresbysund 85.09 14 i P P 00 25 10.6 -0.5
comp=Z,28nm,1.0s
LZH Lanzhou 87.58 307 eP P 00 25 23.8 -0.4
LZH pP sP 00 25 35.9 -0.7
LZH sP pwP 00 25 40.7 +3.2
LZH eS S 00 36 00.8 -3.1
LZH pmax pmax
comp=Z,20nm,1.4s
LZH pmax pmax
comp=Z,120nm,9.0s
LZH LR LR
comp=Z,270nm,18.1s
LZH LR LR
comp=Z,280nm,19.3s
GTA Gaotai 89.25 312 eP P 00 25 32.8 +0.8
GTA pP pP 00 25 40.2 -1.5
GTA pmax pmax
comp=Z,8.0nm,0.8s

ZAA0	Zalesovo Array	91.17	329	eP	P	00 25 41.2	+0.7
	comp=Z,13nm,1.0s						
ZALV	Zalesovo Beam	91.17	329	P	P	00 25 40.4	-0.1
	comp=Z,2.5nm,0.7s,baz=54,slow=3.8,SNR=10						
NVS	Novosibirsk	91.41	330	⇑iP	P	00 25 42.6	+1.1
NVS				pmax	pmax		
	comp=Z,17nm,1.6s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.4s						
ARCES	ARCESS Array B	91.81	360	P	P	00 25 41.5	-1.6
	comp=E,14nm,1.0s,baz=27,slow=6.8,SNR=14						
LPAZ	La Paz	92.42	106	P	P	00 25 46.4	-1.3
	comp=E,2.6nm,1.0s,baz=270,slow=3.0,SNR=7.2						
LPAZ				LR	LR	01 02 16.6	
	comp=E,78nm,18.3s,baz=269,slow=32						
LPAZ	La Paz	92.42	106	eP	P	00 25 47.8	+0.1
	comp=E,3.4nm,1.0s						
LPAZ	La Paz	92.42	106	eP	P	00 25 47.8	+0.1
LPAZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LCO	Las Campanas	94.30	119	eP	P	00 25 55.8	+0.1
	comp=Z,33nm,1.1s						
LCO	Las Campanas	94.30	119	eP	P	00 25 55.8	+0.1
LCO				pmax	pmax		
	comp=Z,33nm,1.1s						
WMQ	Urumqi	95.21	320	eP	P	00 26 00.4	+1.0
WMQ				pmax	pmax		
	comp=Z,16nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.7s						
KURK	Kurchatov	96.16	329	⇓eP	P	00 26 03.4	-0.1
KURK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MKAR	Makanchi Array	96.68	324	P	P	00 26 04.6	-1.4
	comp=Z,0.8nm,0.9s,baz=56,slow=6.5,SNR=5.5						
MKAR	Makanchi Array	96.68	324	ceP	P	00 26 06.0	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
PRGR	Permogore	98.04	350	eP	Pdif	00 26 13.1	+1.4
PRGR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PLCA	Paso Flores	98.13	130	LR	LR	01 00 40.2	
	comp=Z,212nm,20.5s,baz=328,slow=29						
SVE	Sverdlovsk	98.82	341	eP	Pdif	00 26 15.5	+0.2
SVE				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VNDA	Vanda	99.42	189	LR	LR	01 03 47.6	
	comp=Z,198nm,19.5s,baz=30,slow=31						
NOA	NORSAR Array B	99.58	7	LR	LR	01 08 32.7	
	comp=Z,162nm,21.3s,baz=75,slow=34						
KLMR	Klimovskoe	99.65	353	eP	Pdif	00 26 16.8	-2.1
KLMR				pmax	pmax		
	comp=Z,25nm,1.4s						
ARU	Arti	99.78	342	c iP	Pdif	00 26 18.2	-1.4
ARU						00 30 22.6	
ARU				S	SKSac	00 36 54.1	-1.7
ARU				pmax	pmax		
	comp=Z,4.0nm,1.3s						
FINES	FINESS Array B	99.93	359	P	Pdif	00 26 19.1	-1.1
	comp=Z,3.8nm,0.8s,baz=23,slow=6.8,SNR=13						
OBN	Obninsk	105.61	353	i P	Pdif	00 26 44.0	-1.6
OBN				e		00 31 07.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	Collm	109.32	8	ePS	PS	00 41 05.0	+3.1
CLL				eSS	SS	00 47 12.0	+20
AKASG	Malin Array Be	110.60	357	PP	PP	00 31 42.9	-0.4
	comp=Z,0.4nm,0.4s,baz=1.1,slow=6.0,SNR=4.3						
VYHS	Vyhne	112.70	4	eP	Pdif	00 27 21.5	+4.2
VYHS	Vyhne	112.70	4	ePDIF	Pdif	00 27 21.5	+4.2
GEYT	Alibeck	115.40	331	PP	PP	00 32 21.6	+3.5
	comp=Z,0.4nm,0.4s,baz=356,slow=8.8,SNR=3.8						
ESDC	Sonseca Array	115.81	24	PP	PP	00 32 18.6	-2.3
	comp=Z,1.5nm,0.9s,baz=329,slow=7.0,SNR=9.6						
VNA3	Neumayer Olymp	123.85	167	PKiKP	PKiKP	00 31 33.2	+0.1
VNA2	Neumayer--Watz	124.56	168	PKiKP	PKiKP	00 31 34.9	+0.4
	baz=296,slow=1.6						
SNAA	Sanae	124.80	170	PKiKP	PKPdf	00 31 33.9	-0.8
TOA1	Torodi Ar. Sit	140.81	37	ePKPdf	PKPdf	00 32 05.5	-0.9
TOA0	Torodi Ar. Sit	140.81	37	ePKPdf	PKPdf	00 32 05.1	-1.2
TORD	Torodi Ar. Bea	140.81	37	PKhKP	PKPpre	00 31 57.3	
	comp=Z,0.5nm,0.6s,baz=294,slow=3.1,SNR=4.2						
TORD				PKP	PKPdf	00 32 05.5	-0.9
	comp=Z,2.1nm,0.9s,baz=335,slow=5.2,SNR=10						
TORD				PP	PP	00 35 01.4	-4.1
	comp=Z,1.7nm,1.1s,baz=324,slow=7.1,SNR=4.6						
DBIC	Dimbokro	141.22	52	PKP	PKPdf	00 32 06.9	-0.2
	comp=Z,5.4nm,0.8s,baz=36,slow=0.8,SNR=4.6						

IDC ***05*** *00:20:31.8±1.4, 13.04N×125.67E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/37, mbtmp3.8/4, Error ellipse: s-maj=46.9km s-min=25.4km az=70.0*

MAN ***05*** *00:20:33.9, 13.28N×125.72E, h32km, mb4.6, ML3.3, MS3.3*

ISCJB ***05*** *00:20:34.6±0.9, 13.20N±0.04×125.67E±0.08, h28km, mb3.7/4, Error ellipse: s-maj=10.6km s-min=6.2km az=172.2*

ISC 05 00:20:36.1±1.2, 13.13N±0.06×125.58E±0.09, h28km, n10, σ1§30/15, mb3.7/4, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	Cataram	1.08	235	eP	Pb	00 20 56.0	-0.3
CNP				eS	Sb	00 21 11.9	+1.9
PVCP	Virac	1.46	289	eP	Pn	00 20 59.6	-1.0
PVCP				eS	Sn	00 21 18.4	-0.4
BESP	Borongan	1.53	185	eP	Pn	00 21 01.2	-0.4
BESP				eS	Sn	00 21 20.1	-0.4
PLP	Palo	2.04	197	⇑eP	Pn	00 21 09.7	+1.0
PLP				i S	Sb	00 21 35.7	-1.8
OCLP	Ormoc	2.28	205	eP	Pb	00 21 21.5	+5.0
OCLP				eS	Sb	00 21 42.3	-2.0
MSLP	Maasin	3.06	193	eP	Pn	00 21 23.7	+1.0
MSLP				eS	Sn	00 21 60.0	+1.5
KSRS	Korea Array	24.31	5	P	P	00 25 52.1	+0.8
	1.4nm,0.8s,baz=185,slow=9.9,SNR=5.8						
CMAR	Chiang Mai Arr	26.15	285	P	P	00 26 09.0	+0.7
	0.5nm,0.3s,baz=83,slow=7.4,SNR=2.9						
ASAR	Alice Springs	37.47	167	P	P	00 27 46.1	-1.3
	1.0nm,0.6s,baz=348,slow=6.8,SNR=8.4						
MKAR	Makanchi Array	49.36	322	P	P	00 29 24.0	+0.8
	1.7nm,0.8s,baz=112,slow=7.6,SNR=7.8						

MAN 05 00:24:25.4, 7.38N×124.76E, h12km, mb4.5, ML3.3, MS3.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.54	253	⇓iP	Pg	00 24 36.2	+0.3
CTBH				i S	Sb	00 24 45.1	+0.6
BUKP	Musuan	0.58	31	eP	Pg	00 24 37.0	+0.3
BUKP				eS	Sb	00 24 47.0	+1.2
CGP	Cagayan de Oro	1.07	356	⇑eP	Pg	00 24 46.1	0.0
CGP				eS	Sn	00 25 01.0	-0.1
PAGZ	Pagadian	1.45	289	eP	Pn	00 24 49.8	-1.6
PAGZ				eS	Sb	00 25 11.2	+0.5
DDMP	Don Marcelino,	1.58	143	eP	Pn	00 24 52.7	-0.6
DDMP				eS	Sb	00 25 14.2	-0.2

NIED ***05*** *00:36:00, 37.00N×140.80E, h5km, Mw4.1 Best double couple: M0 1.68000×10^15 NP1:φs 14.00000°, δ51.00000°, λ-129.00000°. NP2:φs 247.00000°, δ53.00000°, λ-52.00000°.*

ISCJB ***05*** *00:36:28.8±0.6, 37.04N±0.03×140.86E±0.05, h17km±3km, mb4.0/24, Error ellipse: s-maj=6.5km s-min=4.2km az=24.1*

JMA ***05*** *00:36:29.8, 37.05N×140.77E, h11km±1km, M4.4 Broadband fault plane solution: P waves. NP1: φs 1.00000°, δ54.00000°, λ-134.00000°. NP2:φs 239.00000°, δ54.00000°, λ-46.00000°. Principal axes: T Plg0.0000°, Azm120.0000°; N Plg34.0000°, Azm30.0000°; P Plg56.0000°, Azm210.0000°;*

JMA Felt III J1.

IDC ***05*** *00:36:34.6±1.5, 37.02N×140.75E, h50km±14km, mb3.7/22, mb1 3.8/30, mb1mx3.8/49, mbtmp3.9/30, ML3.2/7 Error ellipse: s-maj=11.6km s-min=9.3km az=97.0*

ISC 05 00:36:29.6±0.8, 37.05N±0.03×140.79E±0.04, h13km±5km, n50, σ1§05/59, mb3.9/24, 5C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.06	4	⇓P	Pg	00 36 31.9	-0.2
ONAJ				S	Sg	00 36 33.5	-0.5
JFFD	Fukushimafurud	0.19	283	⇑P	Pg	00 36 33.7	-0.2
JFFD				S	Sg	00 36 36.5	-0.3
JFK	Kawauchi	0.33	12	⇓P	Pg	00 36 36.4	+0.2
JFK				S	Sg	00 36 41.0	+0.3
JHO	Hitachi	0.47	202	⇓P	Pg	00 36 38.7	-0.2
JHO				S	Sg	00 36 45.0	-0.1
JFT	Otama	0.59	322	⇑P	Pg	00 36 41.3	+0.1
JFT				S	Sg	00 36 49.4	+0.3
JSB	Shiboa	0.70	264	⇑P	Pb	00 36 43.7	0.0
JSB				S	Sb	00 36 53.4	+0.1
JMM	Marumori	0.82	0	⇑P	Pg	00 36 45.1	-0.3
JFY	Yanaizu	0.94	293	⇑P	Pg	00 36 47.4	-0.3
JFY				S	Sg	00 36 59.6	-0.4
JYT	Yasato	0.95	211	⇓P	Pg	00 36 47.1	-0.8
MJAR	Matsushiro Arr	2.13	257	P	Pn	00 37 06.5	+1.5
	2.0nm,0.3s,baz=100,slow=16,SNR=165						
MJAR				S	Sn	00 37 32.7	+1.4
	5.1nm,0.3s,baz=86,slow=28,SNR=13						
MAT	Matsushiro	2.14	257	P	Pn	00 37 06.4	+1.4
MAT				S	Sb	00 37 34.5	-0.1
JHJ	Hachijo jima 2	4.00	192	P	Pn	00 37 31.9	+1.2
	5.3nm,0.3s,baz=233,slow=20,SNR=2.6						
JHJ				S	Sn	00 38 18.4	+0.9
	8.7nm,0.3s,baz=107,slow=19,SNR=2.9						
ASAJ	Asahikawa	7.19	10	P	Pn	00 38 16.2	+1.8
	1.7nm,0.3s,baz=217,slow=12,SNR=5.0						
ASAJ				S	Sn	00 39 35.8	-0.2
	1.0nm,0.3s,baz=137,slow=19,SNR=2.2						
JNU	Nakatsue	9.02	247	P	Pn	00 38 41.0	+1.4
	0.2nm,0.3s,baz=241,slow=3.9,SNR=3.6						
USRK	Ussuriysk Ar.	9.79	320	P	Pn	00 38 52.0	+2.1
	0.2nm,0.3s,baz=130,slow=15,SNR=2.8						
KSRS	Korea Array	10.27	276	P	Pn	00 38 58.3	+1.7
	0.3nm,0.3s,baz=91,slow=13,SNR=2.6						
KLR	Kul'dur	13.84	334	P	P	00 39 49.6	-4.1
	0.1nm,0.3s,baz=138,slow=14,SNR=3.1						
PETK	Petropavlovsk-	19.93	31	P	Pn	00 41 03.7	+1.0
	0.1nm,0.3s,baz=213,slow=5.0,SNR=4.4						
MA2	Magadan	23.45	13	P	P	00 41 39.9	+1.5
	7.3nm,0.7s,baz=200,slow=5.1,SNR=3.7						
SEY	Seymchan	26.88	12	P	P	00 42 12.2	+2.4
	2.1nm,0.6s,baz=170,slow=8.2,SNR=4.1						
SONM	Songino Array	27.37	304	P	P	00 42 14.9	+0.4
	0.9nm,0.6s,baz=106,slow=9.5,SNR=5.7						
H11N2	WAKE ISLAND Hy	28.58	120	T	T	01 12 15.9	
	baz=313,slow=75,SNR=66						
H11N1	WAKE ISLAND Hy	28.59	120	T	T	01 12 15.3	
	baz=313,slow=75,SNR=86						
H11N3	WAKE ISLAND Hy	28.60	120	T	T	01 12 17.3	
	baz=313,slow=75,SNR=89						
H11S1	WAKE ISLAND Hy	29.29	122	T	T	01 13 07.2	
	baz=314,slow=74						
H11S3	WAKE ISLAND Hy	29.29	122	T	T	01 13 08.2	
	baz=314						
H11S2	WAKE ISLAND Hy	29.30	122	T	T	01 13 08.7	
	baz=314,slow=74						
CMAR	Chiang Mai Arr	41.02	255	P	P	00 44 13.1	+0.4
	0.4nm,0.4s,baz=40,slow=7.2,SNR=3.2						
ZALV	Zalesovo Beam	41.54	312	P	P	00 44 15.9	-0.6
	1.3nm,0.7s,baz=90,slow=7.3,SNR=5.4						
ZALV				PcP	PcP	00 46 13.4	-0.3
	0.8nm,0.4s,baz=127,slow=3.8,SNR=3.6						
MKAR	Makanchi Array	43.69	302	P	P	00 44 34.5	+0.3
	1.1nm,0.6s,baz=87,slow=10,SNR=14						
KURBB	Kurchatov Arra	45.60	308	P	P	00 44 48.8	-0.5
	1.6nm,0.6s,baz=82,slow=8.0,SNR=15						
KURBB				PcP	PcP	00 46 26.8	-0.7
	0.5nm,0.7s,baz=117,slow=3.0,SNR=3.0						
KAPI	Kappang	46.23	210	P	P	00 44 54.6	+0.1
	9.1nm,0.6s,baz=27,slow=10,SNR=9.2						
ILAR	Eielson Array	49.75	32	P	P	00 45 21.9	+0.5
	1.2nm,0.7s,baz=271,slow=6.5,SNR=13						
ILAR				PcP	PcP	00 46 39.9	-2.2
	0.3nm,0.8s,baz=289,slow=5.6,SNR=2.1						
BVAR	Borovoye Array	50.20	312	P	P	00 45 24.7	-0.1
	1.0nm,0.8s,baz=85,slow=6.7,SNR=6.4						
BVAR				PcP	PcP	00 46 44.1	+0.1
	1.2nm,0.6s,baz=73,slow=2.7,SNR=7.4						
FITZ	Fitzroy Crossi	56.68	197	P	P	00 46 13.3	+0.6
	3.3nm,0.9s,baz=36,slow=8.7,SNR=3.4						
WRA	Warramunga Arr	57.01	187	P	P	00 46 14.4	-0.7
	49nm,0.2s						
ASAR	Alice Springs	60.74	187	P	P	00 46 41.1	+0.1
	1.3nm,0.9s,baz=13,slow=5.1,SNR=6.6						
GEYT	Alibeck	63.39	299	P	P	00 46 58.0	-0.9
	1.4nm,0.8s,baz=96,slow=12,SNR=3.5						
ARCES	ARCESS Array B	63.81	339	P	P	00 47 00.8	-0.2
	5.9nm,0.3s,baz=61,slow=9.9,SNR=3.9						
YKA	Yellowknife Ar	64.05	30	P	P	00 47 02.0	-0.7
	0.4nm,0.7s,baz=305,slow=6.1,SNR=3.9						
FINES	FINESS Array B	68.57	332	P	P	00 47 31.6	0.0
	0.9nm,0.7s,baz=64,slow=4.4,SNR=7.8						
NB2	NORSAR Subarra	73.98	337	P	P	00 48 04.4	-0.1
	comp=Z,0.7nm,0.7s,baz=41,slow=5.9						
NOA	NORSAR Array B	73.98	337	P	P	00 48 04.0	-0.5
	comp=Z,1.2nm,0.8s,baz=40,slow=5.8,SNR=4.5						
AKASG	Malin Array Be	73.98	322	P	P	00 48 03.8	-0.8
	comp=Z,0.5nm,0.4s,baz=242,slow=8.2,SNR=4.2						
NVAR	Mina Array Bea	75.38	53	P	P	00 48 14.1	+0.9
	comp=Z,0.7nm,0.7s,baz=310,slow=7.5,SNR=4.4						
PDAR	Pinedale Array	78.01	45	P	P	00 48 28.9	+0.8
	comp=Z,0.4nm,0.6s,baz=222,slow=2.0,SNR=3.9						
BRTR	Keskin Array B	78.47	311	P	P	00 48 31.0	+0.5
	comp=Z,0.7nm,0.9s,baz=134,slow=3.6,SNR=4.5						
GERES	GERESS Array B	82.44	328	P	P	00 48 50.7	-0.9
	comp=Z,0.4nm,0.5s,baz=56,slow=7.3,SNR=3.6						
TXAR	Lajitas Array	90.50	52	P	P	00 49 31.5	-0.1
	comp=Z,0.3nm,0.6s,baz=311,slow=6.9,SNR=3.7						
LPAZ	La Paz	147.11	59	PKPbc	PKPab	00 56 14.4	-0.8
	comp=Z,1.2nm,0.8s,baz=270,slow=4.0,SNR=5.2						

ISCJB ***05*** *00:43:35.7±0.1, 37.57N±0.01×95.88E±0.02, h14km, mb5.3/187, MS4.7/74, Error ellipse: s-maj=2.2km s-min=1.8km az=30.7*

BJI ***05*** *00:43:36.4±0.0, 37.59N×95.87E, h10km, mb5.1/60, mB5.2/49, ML5.5/10, Ms5.2/82, Ms7 5.1/76*

NEIC ***05*** *00:43:36.5±1.5, 37.60N×95.93E, h9km, mb5.4/253, MW5.1, Error ellipse: s-maj=11.2km s-min=10.0km az=359.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^16 Nm; Mrr 4.93; Mθθ -4.40; Mφφ -0.52; Mrθ -0.69; Mrφ 1.92; Mθφ -1.32; Best double couple: M0 5.30000×10^16 NP1:φs 128.00000°, δ47.00000°, λ113.00000°. NP2: φs 277.00000°, δ48.00000°, λ68.00000°. Principal axes: T 5.3600, Plg74.0000°, Azm115.0000°; N -0.1600, Plg16.0000°, Azm292.0000°; P -5.1900, Plg1.0000°, Azm22.0000°;*

NEIC Broadband depth 9 km.

MOS ***05*** *00:43:37.2±0.9, 37.59N×95.89E, h25km, mb5.6/65, MS4.8/40 Error ellipse: s-maj=5.4km s-min=3.5km az=121.9*

GCMT ***05*** *00:43:38.5±0.1, 37.62N±0.01×95.78E±0.02, h17km, MW5.1/108, Moment Tensor Solution. s73, c97; s108, c197; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 5.32±.15; Mθθ -6.14±.11; Mφφ 0.82±.10; Mrφ 2.21±.25; Mθφ 0.31±.07; Mθr -0.60±.31; Best double couple: M0 6.18200×10^16 NP1:φs 98.00000°, δ56.00000°, λ97.00000°. NP2:φs 266.00000°, δ35.00000°, λ80.00000°. Principal axes: T 5.7880, Plg78.0000°, Azm31.0000°; N 0.7950, Plg5.0000°, Azm274.0000°; P -6.5750, Plg11.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***05*** *00:43:42.0±2.7, 37.61N×96.03E, h51km±24km, mb4.8/35, mb1 4.9/38, mb1mx4.8/40, mbtmp5.0/38, ML5.1/2, MS4.3/28, Ms1 4.3/28, ms1mx4.2/39 Error ellipse: s-maj=11.6km s-min=8.6km az=26.0*

ISC 05 00:43:37.6±0.3, 37.59N±0.03×95.86E±0.02, h15km±2km, h15km:pP-P, n937, σ1§72/1003, mb5.4/226, MS4.7/74, 107C-30D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	Gaotai	3.60	58	⇑Pn	Pn	00 44 35.2	+2.3
GTA				Pg	Pb	00 44 42.7	+1.7
GTA				Sn	Sn	00 45 18.5	+3.3
GTA				Sg	Sb	00 45 23.4	-1.1
GTA				smax	smax		
	comp=N,1μm,1.4s						
GTA				smax	smax		
	comp=E,1μm,1.1s						
GTA				LR	LR		
	comp=E,31μm,7.2s						
GTA				LR	LR		
	comp=Z,32μm,7.3s						
LZH	Lanzhou	6.58	101	Pn	Pn	00 45 14.5	+0.6
LZH				Pg	Pb	00 45 37.1	+5.3
LZH				Sn	Sn	00 46 27.4	-1.4
LZH				Sg	Sg	00 47 00.0	-8.8
LZH				smax	smax		
	comp=N,2μm,1.9s						
LZH				smax	smax		
	comp=E,2μm,1.7s						
LZH				LR	LR		
	comp=N,15μm,5.7s						
LZH				LR	LR		
	comp=E,14μm,6.8s						
LZH				LR	LR		
	comp=Z,14μm,7.9s						
WMQ	Urumqi	8.78	318	P	Pn	00 45 45.6	+1.6
WMQ				pP		00 45 54.2	
WMQ				sP		00 45 56.9	
WMQ				S	Sn	00 47 26.9	+4.2
WMQ				sS		00 47 35.8	
WMQ				pmax	pmax		
	comp=Z,1μm,3.8s						
WMQ				LR	LR		
	comp=E,7μm,27.1s						
WMQ				LR	LR		
	comp=Z,8μm,10.1s						
WMQ	Urumqi	8.78	318	ePn	Pn	00 45 44.6	+0.6
WMQ	Urumqi	8.78	318	eP	Pn	00 45 44.6	+0.6
LSA	Lhasa	8.79	208	P	Pn	00 45 47.2	+2.6
LSA				S	Sn	00 47 17.0	-6.7
LSA				LR	LR		
	comp=N,19μm,9.0s						
LSA				LR	LR		
	comp=E,6μm,8.4s						
LSA				LR	LR		
	comp=Z,29μm,10.7s						
LSA	Lhasa	8.79	208	ePn	Pn	00 45 46.5	+1.9
LSA	Lhasa	8.79	208	i Pn	Pn	00 45 47.6	+3.0
	SNR=16						
LSA	Lhasa	8.79	208	eP	Pn	00 45 46.5	+1.9
CD2	Chengdu	9.34	133	P	Pn	00 45 53.4	+1.8
CD2				sP		00 46 07.3	
CD2				S	Sn	00 47 44.9	+8.5
CD2				PcP	PcP	00 52 10.7	-0.3
CD2				pmax	pmax		
	comp=Z,90nm,1.2s						
CD2				pmax	pmax		
	comp=Z,410nm,7.4s						
CD2				LR	LR		
	comp=N,20μm,7.9s						
CD2				LR	LR		
	comp=E,28μm,6.9s						
CD2				LR	LR		
	comp=Z,16μm,11.1s						
ZIRO	ZIRO	10.18	190	eP	Pn	00 46 02.0	-1.4
LKP	Lekhapani	10.23	180	eP	Pn	00 46 03.0	-0.8
JORH	JORHAT	10.90	188	eP	Pn	00 46 11.1	-2.0
XAN	Xi'an	11.18	105	P	Pn	00 46 13.5	-3.5
XAN				pP		00 46 16.7	
XAN				S	Sn	00 48 19.0	-2.7
XAN				pmax	pmax		
	comp=Z,17nm,0.6s						
XAN				pmax	pmax		
	comp=Z,99nm,3.5s						
XAN				LR	LR		
	comp=N,7μm,9.0s						
XAN				LR	LR		
	comp=E,4μm,13.7s						
XAN				LR	LR		
	comp=Z,6μm,10.2s						
XAN	Xi'an	11.18	105	ePn	Pn	00 46 13.8	-3.2
XAN	Xi'an	11.18	105	eP	Pn	00 46 13.8	-3.2
TEZP	TEZPUR	11.24	194	eP	Pn	00 46 15.5	-2.2
MOKO	MOKOCHONG	11.29	186	eP	Pn	00 46 17.1	-1.5
BTO	Baotou	11.41	70	eP	Pn	00 46 18.2	-1.9
BTO				S	Sn	00 48 39.2	+12
GTK	Tadong	11.93	213	eP	Pn	00 46 27.8	+0.6
KOHI	KOHIMA	11.93	188	eP	Pn	00 46 24.8	-2.4
SHL	Shillong	12.46	197	ePn	Pn	00 46 32.5	-2.0
SHL	Shillong	12.46	197	eP	Pn	00 46 32.5	-2.0
SHL	Shillong	12.46	197	eP	Pn	00 46 31.6	-2.9
HHC	Hu-ho-hao-te	12.61	70	eP	Pn	00 46 35.8	-0.7
HHC				pP	P	00 46 43.0	-4.9
HHC				PP	PnPn	00 46 46.2	+2.0
HHC				S	Sn	00 48 57.0	+0.4
HHC				SS	SnSn	00 49 12.0	+3.4
HHC				pmax	pmax		
	comp=Z,49nm,1.1s						
HHC				pmax	pmax		
	comp=Z,600nm,5.1s						
HHC				LR	LR		
	comp=E,6μm,15.9s						
HHC				LR	LR		
	comp=Z,5μm,14.7s						
HHC				LR	LR		
	comp=Z,4μm,13.5s						
GUN	Gumba	12.79	224	eP	Pn	00 46 39.0	-0.1
	comp=Z,419nm,0.9s						
JIRN	Jiri	12.81	222	eP	Pn	00 46 39.3	-0.3
	comp=Z,498nm,1.1s						
IMP	Imphal	12.82	188	eP	Pn	00 46 36.8	-2.6
SONA0	Songino Array	12.82	34	ePn	Pn	00 46 40.6	+1.2
SONM	Songino Array	12.82	34	P	Pn	00 46 40.6	+1.2
	comp=Z,16nm,0.3s,baz=218,slow=15,SNR=146						
SONM				LR	LR	00 51 50.4	
	comp=Z,4μm,18.9s,baz=218,slow=38						
SILR	SILCHAR	13.03	192	ex	Pn	00 46 38.1	-4.2
TIY	Taiyuan	13.14	84	eP	Pn	00 46 42.6	-1.1
TIY				S	Sn	00 49 15.0	+5.4
TIY				pmax	pmax		
	comp=Z,55nm,1.1s						
TIY				pmax	pmax		
	comp=Z,220nm,6.2s						
TIY				LR	LR		
	comp=Z,4μm,8.6s						
TIY				LR	LR		
	comp=Z,6μm,15.5s						
TIY				LR	LR		
	comp=Z,5μm,10.7s						
ULN	Ulaanbaatar	13.14	35	ePn	Pn	00 46 44.1	+0.4
ULN	Ulaanbaatar	13.14	35	deP	Pn	00 46 45.0	+1.2
ULN				pmax	pmax		
	comp=Z,41nm,1.3s						
ULN	Ulaanbaatar	13.14	35	P	Pn	00 46 45.1	+1.4
	SNR=65						
RAMN	Ramite	13.18	219	eP	Pn	00 46 43.0	-1.4
	comp=Z,135nm,1.0s						
KKN	Kakani	13.21	225	eP	Pn	00 46 44.0	-0.9
	comp=Z,154nm,0.8s						
PKI	Pulchoki	13.31	224	eP	Pn	00 46 45.3	-1.0
	comp=Z,295nm,0.9s						
PKIN	Phulchoki	13.31	224	eP	Pn	00 46 45.0	-1.3
	comp=Z,179nm,1.0s						
GKN	Gorkha	13.42	228	eP	Pn	00 46 46.6	-1.1
	comp=Z,169nm,0.9s						
DMN	Daman	13.45	225	eP	Pn	00 46 47.2	-0.9
	comp

comp=Z,122nm,0.8s
PDGK Podgornoye 13.71 300 P Pn 00 46 49.4 -2.1
PDGK S **Sn 00 49 17.7 -5.8**
PDGK pmax pmax
comp=Z,99nm,1.1s
PDGK smax smax
comp=N,232nm,0.9s
KMI Kunming 13.74 153 P Pn 00 46 54.5 +2.4
KMI pP P 00 47 01.0 +0.3
KMI S **Sn 00 49 25.5 +0.8**
KMI sS S 00 49 30.5 -17
KMI pmax pmax
comp=N,17nm,1.0s
KMI pmax pmax
comp=N,170nm,3.9s
KMI LR LR
comp=N,5μm,10.6s
KMI LR LR
comp=N,6μm,9.7s
KMI LR LR
comp=N,6μm,10.6s
MAKZ Makanchi 13.79 316 *e*Pn **Pn 00 46 50.6 -1.9**
MAKZ Makanchi 13.79 316 P **Pn 00 46 50.0 -2.5**
MAKZ S **Sn 00 49 17.7 -7.6**
MAKZ pmax pmax
comp=Z,95nm,0.6s
MAKZ smax smax
comp=N,248nm,1.4s
ZAK Zakamensk 13.85 20 *e*P **Pn 00 46 56.0 +2.7**
ZAK pmax pmax
comp=Z,170nm,1.1s
KOLN Koldanda 14.21 230 *e*P **Pn 00 46 56.8 -1.8**
comp=Z,187nm,1.0s
AGT Agartala 14.22 197 *e*P **Pn 00 46 59.6 +1.1**
AGT IAmb IAmb 00 47 05.1
comp=Z,107nm,0.8s
PYUN Piuthan 14.36 232 *e*P **Pn 00 46 59.1 -1.4**
comp=Z,139nm,0.7s
TARG Taragay, Kyrgy 14.50 292 *e*Pn **Pn 00 47 00.8 -1.8**
MOY Mondy 14.53 13 *e*P **P 00 47 06.0 -3.3**
MOY pmax pmax
comp=Z,325nm,2.0s
BELO BELONIA 14.79 196 *e*P **Pn 00 47 04.7 -1.6**
TLY Talaya 15.12 19 *e*Pn **Pn 00 47 10.4 -0.2**
comp=Z,74nm,1.2s
TLY Talaya 15.12 19 *ce*P **Pn 00 47 12.6 +2.0**
TLY pmax pmax
comp=Z,189nm,1.4s
TLY MLR MLR
comp=Z,24μm,9.0s
TLY Talaya 15.12 19 P **P 00 47 13.0 -2.7**
SNR=38
SAIH SAIHA 15.25 190 *e*P **Pn 00 47 10.1 -2.5**
BRDH Bariadhala 15.30 195 P **Pn 00 47 10.4 -2.7**
comp=Z,30nm,0.3s,baz=46,slow=8.9,SNR=9.8
AAA Alma-Ata 15.47 297 *e*P **Pn 00 47 13.8 -1.5**
AAA *e*S **Sn 00 50 01.9 -4.5**
AAA pmax pmax
comp=Z,900nm,1.8s
AAA smax smax
comp=N,500nm,3.8s
AAA MLR MLR
comp=Z,2μm,9.0s
KSH Kashi 15.68 283 P **Pn 00 47 19.4 +1.4**
KSH pP pP 00 47 27.6 +0.2
KSH PP **sP 00 47 32.1 +2.3**
KSH S **Sn 00 50 11.6 +0.2**
KSH pmax pmax
comp=Z,250nm,1.3s
KSH pmax pmax
comp=Z,500nm,6.7s
KSH LR LR
comp=Z,4μm,7.6s
KSH LR LR
comp=Z,6μm,10.0s
KSH LR LR
comp=Z,13μm,11.6s
ULHL Ulahol 15.74 293 P **Pn 00 47 16.9 -2.1**
SNR=18
NRN Naryn 15.79 290 *e*Pn **Pn 00 47 17.3 -2.4**
comp=Z,178nm,1.1s
NRN Naryn 15.79 290 *e*P **Pn 00 47 17.3 -2.4**
NRN pmax pmax
comp=Z,178nm,1.1s
IRK Irkutsk 15.80 19 *e*P **P 00 47 21.7 -1.5**
IRK pmax pmax
comp=Z,373nm,1.5s
BOOM Boomskoye usch 16.01 294 *e*Pn **Pn 00 47 19.8 -2.5**
comp=Z,136nm,0.9s
BOOM Boomskoye usch 16.01 294 *e*P **Pn 00 47 19.8 -2.5**
BOOM pmax pmax
comp=Z,137nm,0.9s
BJT Baijiatuau 16.02 75 *e*Pn **Pn 00 47 22.3 +0.1**
comp=Z,418nm,1.4s
BJI Beijing 16.02 75 ⇓P **Pn 00 47 23.0 +0.7**
BJI S **S 00 50 27.0 -6.3**
BJI pmax pmax
comp=Z,50nm,1.1s
BJI LR LR
comp=Z,2μm,9.8s
BJI LR LR
comp=Z,1μm,7.5s
BOK Bokaro 16.19 215 *e*P **Pn 00 47 22.9 -1.7**
BOK IAmb IAmb 00 47 27.3
comp=Z,74nm,0.3s
TKM2 Tokmak 2 16.34 295 P **Pn 00 47 24.4 -2.2**
SNR=232
DDI Dehra Dun 16.44 249 *e*P **P 00 47 29.2 -1.3**
KZA Kyzart 16.44 292 P **Pn 00 47 26.1 -1.9**
SNR=47
SMLA Simla 16.71 253 *e*P **Pn 00 47 29.3 -1.9**
KBK Karagaybulak 16.76 294 P **Pn 00 47 31.3 -0.6**
SNR=152
WHN Wuhan 16.85 109 ⇓P **P 00 47 34.8 -0.1**
WHN pP **pP 00 47 40.2 +0.1**
WHN S **S 00 50 44.8 -5.4**
WHN pmax pmax
comp=Z,87nm,0.9s
WHN LR LR
comp=Z,12μm,11.5s
WHN LR LR
comp=Z,15μm,10.5s
WHN LR LR
comp=Z,21μm,10.0s
DHRM DHARAMSHALA 16.89 257 *e*P **P 00 47 34.9 -0.8**
DHRM IAmb IAmb 00 47 40.3
comp=Z,166nm,0.8s
CHMS Chumysh 16.97 295 P **Pn 00 47 33.3 -1.1**
SNR=22
UCH Uchtor 17.00 292 P **Pn 00 47 34.8 -0.5**
SNR=54
FRU1 Bishkek 17.02 294 *e*Pn **Pn 00 47 34.3 -0.7**
comp=Z,318nm,1.3s
FRU1 Bishkek 17.02 294 *e*P **Pn 00 47 34.3 -0.7**
FRU1 pmax pmax
comp=Z,318nm,1.3s
TIA Tai'an 17.07 88 P **Pn 00 47 34.5 -1.1**
TIA LR LR
comp=Z,1μm,7.8s
TIA LR LR
comp=Z,2μm,11.3s
TIA LR LR
comp=Z,3μm,17.1s
AAK Ala-Archa 17.09 294 P **Pn 00 47 34.9 -1.0**
comp=Z,1.2nm,0.3s,baz=88,slow=7.9,SNR=88
AAK S **Sn 00 50 39.8 -5.9**
comp=Z,0.3nm,0.3s,baz=353,slow=19,SNR=1.8
AAK Ala-Archa 17.09 294 P **Pn 00 47 35.5 -0.5**
SNR=59
AAK Ala-Archa 17.09 294 *e*Pn **Pn 00 47 35.4 -0.5**
comp=Z,114nm,0.8s
AAK Ala-Archa 17.09 294 *i* Pn **Pn 00 47 36.3 +0.3**
SNR=107
AAK Ala-Archa 17.09 294 *de*P **Pn 00 47 35.0 -1.0**
AAK pmax pmax
comp=Z,188nm,1.3s
AAK Ala-Archa 17.09 294 P **Pn 00 47 35.6 -0.4**
SNR=64
USP Ospenovka 17.20 296 P **Pn 00 47 36.4 -0.9**
SNR=66
AML Almayashu 17.59 292 P **P 00 47 44.8 +1.2**
SNR=39
EKS2 Erkin-Say 17.61 294 P **P 00 47 43.5 +0.1**
SNR=71
SLVN Son La 17.64 154 *e*P **Pn 00 47 41.5 -1.4**
comp=Z,51nm,1.1s

KURBB Kurchatov Arra 17.95 322 P **Pn 00 47 44.8 -1.7**
comp=Z,0.5nm,0.3s,baz=134,slow=11,SNR=73
KURBB S **Sn 00 50 59.7 -6.6**
baz=130,slow=24,SNR=2.7
KURK Kurchatov 17.97 322 *e*P **Pn 00 47 44.8 -1.9**
comp=Z,220nm,1.0s
KURK Kurchatov 17.97 322 *e*P **Pn 00 47 44.8 -1.9**
KURK pmax pmax
comp=Z,220nm,1.0s
KURK Kurchatov 17.97 322 P **Pn 00 47 45.5 -1.2**
SNR=109
ARSB Arslanbob 18.04 289 *e*P **Pn 00 47 47.8 -0.1**
ZAA0 Zalesovo Array 18.04 339 *e*P **Pn 00 47 47.1 -0.5**
comp=Z,248nm,1.3s
ZALV Zalesovo Beam 18.04 339 P **Pn 00 47 47.6 0.0**
comp=Z,0.7nm,0.3s,baz=152,slow=10,SNR=92
ZALV S **Sn 00 51 05.8 -2.5**
comp=Z,0.1nm,0.3s,baz=137,slow=24,SNR=2.3
ZALV LR LR 00 54 45.3
comp=Z,2μm,19.1s,baz=198,slow=37
ZAA1 Zalesovo Array 18.05 339 *e*P **Pn 00 47 47.6 0.0**
PAYA Payao 18.50 168 P **Pn 00 47 54.6 +1.2**
comp=Z,91μm,1.0s
NIL Nilore 18.78 265 *e*P **P 00 47 54.7 -1.6**
comp=Z,302nm,1.1s
NIL Nilore 18.78 265 *e*P **P 00 47 54.7 -1.6**
NIL pmax pmax
comp=Z,301nm,1.1s
CHTO Chiang Mai 18.90 171 *e*P **Pn 00 47 57.9 -0.4**
comp=Z,25nm,0.8s
CHTO Chiang Mai 18.90 171 *e*P **Pn 00 47 57.9 -0.4**
CHTO pmax pmax
comp=Z,25nm,0.8s
CHTO Chiang Mai 18.90 171 P **Pn 00 47 58.0 -0.3**
SNR=11
CMMT Chiang Mai 18.91 171 P **Pn 00 47 58.6 +0.3**
comp=Z,19nm,0.8s,comp=Z,474nm
CIT Chita 19.05 35 *e*P **Pn 00 47 59.4 -0.5**
CIT pmax pmax
comp=Z,187nm,2.2s
CM31 Chiang Mai Arr 19.25 171 *e*P **Pn 00 48 02.6 0.0**
comp=Z,72nm,0.9s
CM31 *e*PcP **PcP 00 52 24.7 +0.4**
CM31 Chiang Mai Arr 19.25 171 P **Pn 00 48 01.9 -0.6**
SNR=24
CMAR Chiang Mai Arr 19.25 171 P **Pn 00 48 02.2 -0.3**
comp=Z,1.5nm,0.3s,baz=342,slow=10,SNR=38
CMAR PcP **PcP 00 52 24.7 +0.4**
comp=Z,0.3nm,0.3s,baz=300,slow=2.4,SNR=6.7
CMAR LR LR 00 55 44.0
comp=Z,1μm,20.6s,baz=346,slow=38
NVS Novosibirsk 19.28 337 ⇓*i*P **Pn 00 48 02.5 -0.1**
NVS *e* 00 51 35.7
LAMP Lampang 19.29 169 P **Pn 00 48 03.9 +1.0**
comp=Z,145μm,1.1s
BWNR Bhubaneshwar 19.33 210 *ex* Pn 00 47 55.5 -7.9
PHRA Phrae 19.41 167 P **Pn 00 48 04.7 +0.4**
comp=Z,8.4nm,1.2s
BTK Batken 19.65 285 P **P 00 48 06.1 +0.3**
BTK pmax pmax
comp=Z,53nm,0.9s
NJ2 Nanjing 19.66 99 *e*P **Pn 00 48 06.5 -0.7**
NJ2 pP **sP 00 48 14.9 +1.4**
NJ2 sP pP 00 48 19.0 +7.9
NJ2 S **Sn 00 51 48.2 +0.5**
NJ2 pmax pmax
comp=Z,13nm,0.6s
NJ2 pmax pmax
comp=Z,760nm,4.7s
NJ2 LR LR
comp=Z,2μm,10.2s
NJ2 LR LR
comp=Z,3μm,11.6s
NJ2 LR LR
comp=Z,4μm,11.6s
KK31 Karatay Array 20.05 294 P **P 00 48 10.7 +0.6**
KK31 pmax pmax
comp=Z,131nm,1.2s
KKAR Karatay Array 20.05 294 P **P 00 48 10.0 -0.1**
KKAR pmax pmax
comp=Z,131nm,1.2s
OTUK Ortayu 20.17 309 P **P 00 48 10.9 -0.5**
OTUK pmax pmax
comp=Z,92nm,0.9s
DL2 Dalian 20.27 78 P **P 00 48 13.0 +0.6**
DL2 S **S 00 51 59.4 +0.2**
DL2 pmax pmax
comp=Z,96nm,0.9s
DL2 pmax pmax
comp=Z,290nm,4.1s
DL2 LR LR
comp=Z,1μm,14.7s
DL2 LR LR
comp=Z,2μm,15.1s
DL2 LR LR
comp=Z,2μm,15.1s
HIA Hailar 20.81 48 *e*P **P 00 48 18.1 -0.3**
comp=Z,86nm,1.2s
HIA Hailar 20.81 48 *c i*P **P 00 48 18.3 0.0**
HIA pmax pmax
comp=Z,149nm,1.1s
TAS Tashkent 20.82 289 P Pn 00 48 20.1 -0.8
TAS pmax pmax
comp=Z,150nm,1.1s
GZH Guangzhou 20.85 129 P **P 00 48 16.6 -2.2**
GZH S **S 00 52 04.7 -6.3**
GZH LR LR
comp=Z,3μm,11.6s
GZH LR LR
comp=Z,5μm,10.2s
BHPL Bhopal 21.33 233 *e*P **P 00 48 22.6 -1.4**
BHPL IAmb IAmb 00 48 23.9
comp=Z,115nm,0.3s
PBKT Sadao Pong 21.42 166 P **P 00 48 25.4 +0.4**
comp=Z,85nm,1.0s
UMPA Umpang Tak 21.47 172 P **P 00 48 28.7 +3.1**
comp=Z,196μm,1.0s
SNY Shenyang 21.70 70 ⇑P **P 00 48 27.8 -0.1**
SNY S Sn 00 52 33.0 -3.7
SNY pmax pmax
comp=Z,700nm,10.3s
SNY LR LR
comp=Z,3μm,9.4s
SNY LR LR
comp=Z,3μm,9.2s
SNY LR LR
comp=Z,6μm,8.5s
SKNT Sakolnakorn 21.75 159 P **P 00 48 28.9 +0.3**
comp=Z,161nm,1.1s
PANO Nakornpanom 21.78 157 P **P 00 48 29.6 +0.7**
comp=Z,3.5nm,1.3s,comp=Z,68nm
KBL Kabul 21.86 270 *e*P **P 00 48 29.9 0.0**
comp=Z,171nm,0.9s
KBL Kabul 21.86 270 *e*P **P 00 48 29.9 0.0**
KBL pmax pmax
comp=Z,171nm,0.9s
SSE Sheshan 21.86 100 P **P 00 48 30.8 +1.1**
SSE S **S 00 52 32.5 +1.7**
SSE pmax pmax
comp=Z,30nm,0.7s
SSE LR LR
comp=Z,670nm,8.3s
SSE LR LR
comp=Z,590nm,9.7s
NGP Nagpur 21.92 226 *e*P **P 00 48 29.2 -1.1**
NGP IAmb IAmb 00 48 34.6
comp=Z,79nm,0.8s
HKPS Hong Kong Po S 21.94 129 *e*P **P 00 48 30.8 +0.2**
comp=Z,151nm,1.0s
KHON Khomkaen 22.05 162 P **P 00 48 32.2 +0.4**
comp=Z,187μm,0.9s
QIZ Qiongzhong 22.17 143 P **P 00 48 32.9 -0.2**
QIZ pP **sP 00 48 41.2 +0.3**
QIZ sP **pP 00 48 45.1 +6.7**
QIZ S **S 00 52 36.2 -0.7**
QIZ pmax pmax
comp=Z,20nm,0.8s
QIZ pmax pmax
comp=Z,190nm,5.1s
QIZ LR LR
comp=Z,2μm,15.3s
QIZ LR LR
comp=Z,4μm,15.7s
QIZ LR LR
comp=Z,1μm,8.0s
CHAI Chaiyaphum 22.28 164 P **P 00 48 33.9 -0.3**

comp=Z,95μm,0.9s,comp=Z,832μm
QZH Quanzhou 23.10 117 ⇑*i*P **P 00 48 42.1 -0.7**
QZH S **S 00 52 52.0 -1.5**
QZH pmax pmax
comp=Z,540nm,6.9s
QZH LR LR
comp=Z,2μm,9.0s
QZH LR LR
comp=Z,1μm,8.5s
QZH LR LR
comp=Z,2μm,10.9s
CN2 Changchun 23.20 65 *e*P **P 00 48 42.6 -1.2**
CN2 *e*S **S 00 52 56.5 +1.5**
CN2 pmax pmax
comp=Z,30nm,1.3s
CN2 pmax pmax
comp=Z,530nm,4.0s
CN2 LR LR
comp=Z,3μm,11.0s
CN2 LR LR
comp=Z,3μm,11.0s
CN2 LR LR
comp=Z,4μm,12.0s
KNMB Chin-men Tao 23.25 118 *e*P **P 00 48 43.5 -1.0**
comp=Z,132nm,1.5s
SRDT SRDT 23.33 172 P **P 00 48 46.3 +1.1**
comp=Z,52nm,1.1s,comp=Z,680nm
BVAR Borovoye Array 23.46 319 P **P 00 48 46.7 +0.4**
comp=Z,37nm,0.7s,baz=115,slow=8.7,SNR=169
BOD Bodaibo 23.49 25 *e*P **P 00 48 47.4 +0.9**
BOD pmax pmax
comp=Z,77nm,1.4s
BRVK Borovoye 23.54 319 *e*P **P 00 48 47.5 +0.5**
comp=Z,91nm,0.8s
BRVK Borovoye 23.54 319 *e*P **P 00 48 47.5 +0.5**
BRVK pmax pmax
comp=Z,91nm,0.8s
BRVK Borovoye 23.54 319 P **P 00 48 47.8 +0.8**
SNR=74
DGPR DIGLIPUR 24.45 187 *e*P **P 00 48 55.0 -0.9**
DGPR IAmb IAmb 00 49 05.5
comp=Z,242nm,1.1s
PHET Kaeng Krachan 24.81 171 P **P 00 49 01.4 +2.3**
comp=Z,275μm,1.1s
TJN Taejon 25.14 83 *c i*P **P 00 49 00.7 -1.3**
HYB Hyderabad 25.21 222 *i* P **P 00 49 01.0 -1.8**
YHNB Yeheng 25.27 113 *e*P **P 00 49 03.8 +0.4**
comp=Z,80nm,1.2s
KS15 Wonju Array Si 25.34 80 *e*P **P 00 49 03.5 -0.4**
comp=Z,214nm,1.1s
KSRS Korea Array 25.37 80 P **P 00 49 03.4 -0.7**
comp=Z,53nm,0.7s,baz=275,slow=9.9,SNR=88
SSLB Suanglung 25.50 115 *e*P **P 00 49 05.2 -0.2**
comp=Z,30nm,0.8s
TPUB Ta-pu 25.57 117 *e*P **P 00 49 04.0 -2.0**
comp=Z,74nm,1.1s
NACB Ninganchiao 25.73 114 *e*P **P 00 49 07.0 -0.4**
comp=Z,74nm,0.9s
PBA Port Blair 25.98 187 *e*P P 00 49 10.7 +1.0
comp=Z,244nm,1.0s
PBA Port Blair 25.98 187 *e*P P 00 49 09.9 +0.2
PBA IAmb IAmb 00 49 20.9
comp=Z,122nm,1.0s
MDJ Mudanjiang 26.24 64 P **P 00 49 11.7 -0.2**
MDJ S **S 00 53 43.2 -0.4**
MDJ pmax pmax
comp=Z,18nm,1.3s
MDJ pmax pmax
comp=Z,490nm,6.8s
MDJ LR LR
comp=Z,3μm,8.2s
MDJ LR LR
comp=Z,3μm,11.0s
MDJ LR LR
comp=Z,3μm,10.7s
BHJ Bhuj 26.62 245 *e*P **P 00 49 15.8 +0.3**
BHJ IAmb IAmb 00 49 23.2
comp=Z,279nm,1.8s
ZEA Zeya 26.94 43 *e*P **P 00 49 18.2 0.0**
ZEA pmax pmax
comp=Z,43nm,1.2s
ZEA MLR MLR
comp=E,6μm,10.0s
ZEA MLR MLR
comp=Z,8μm,10.0s
ZEA MLR MLR
comp=N,2μm,9.0s
POO Poona 27.05 231 *e*P **P 00 49 19.6 +0.2**
MSHR Mys Shultsa 27.33 68 ⇑*e*P **P 00 49 23.4 +1.6**
USRK Ussuriysk Ar. 27.94 65 P **P 00 49 26.7 -0.5**
comp=N,13nm,1.0s,baz=279,slow=3.7,SNR=16
USRK LR LR 01 00 24.6
comp=N,420nm,18.4s,baz=262,slow=36
KLR Kul'dur 28.29 54 *ce*P **P 00 49 29.8 -0.5**
comp=N,31nm,1.2s,baz=262,slow=9.5,SNR=23
KLR LR LR 01 02 30.5
comp=N,387nm,19.3s,baz=20,slow=40
KLR Kul'dur 28.29 54 *ce*P **P 00 49 30.0 -0.3**
KLR pmax pmax
comp=Z,17nm,1.1s
ABKAR Akbulak array 28.30 306 *e*P **P 00 49 30.7 +0.3**
comp=Z,43nm,1.0s
JNU Nakatsue 28.80 88 P **P 00 49 33.8 -1.3**
comp=Z,9.3nm,1.0s,baz=268,slow=5.6,SNR=3.2
JNU PcP **PcP 00 52 42.6 -2.1**
comp=Z,6.4nm,0.8s,baz=90,slow=1.0,SNR=3.3
JNU Nakatsue 28.80 88 *e*P **P 00 49 33.8 -1.3**
comp=Z,71nm,1.3s
JNU *e*PcP **PcP 00 52 42.6 -2.1**
JOW Kunigami 29.32 102 P **P 00 49 38.0 -1.7**
comp=Z,2.2nm,0.9s,baz=112,slow=13,SNR=4.1
KRAB Krabi 29.40 173 P P 00 49 47.3 +7.0
comp=Z,106μm,1.2s
GOA Goa 29.41 227 *e*P **P 00 49 39.8 -0.6**
GEYT Alibeck 29.71 282 P **P 00 49 45.2 +2.1**
comp=Z,72nm,1.2s,baz=94,slow=4.8,SNR=48
GEYT LR LR 01 03 03.6
comp=Z,383nm,20.7s,baz=80,slow=39
AKTO Aktyubinsk 29.75 308 P **P 00 49 44.3 +1.1**
comp=Z,63nm,0.9s,baz=92,slow=8.6,SNR=114
TRTT Trang 29.83 172 P P 00 49 51.3 +7.2
SVE Sverdlovsk 30.21 321 ⇓*e*P **P 00 49 48.2 +1.0**
SVE *e*S **S 00 54 53.2 +7.4**
SVE pmax pmax
comp=Z,78nm,1.2s
SVE MLR MLR
comp=Z,2μm,16.0s
SKLT Songkhla 30.59 171 P P 00 49 58.9 +8.0
ARU Arti 31.11 319 LR LR 01 03 02.0
comp=Z,2μm,18.1s,baz=100,slow=37
ARU Arti 31.11 319 *e*P **P 00 49 55.8 +0.6**
comp=Z,93nm,0.9s
ARU Arti 31.11 319 *c i*P **P 00 49 55.8 +0.6**
ARU 00 50 59.2
ARU PPP PPP 00 51 09.9
ARU 00 52 46.3
ARU S **S 00 55 02.7 +2.7**
ARU SS **SnSn 00 56 46.3 +4.9**
ARU pmax pmax
comp=Z,93nm,0.8s
ARU MLR MLR
comp=Z,1μm,17.0s
TEY Ternei 31.23 63 ⇑*e*P **P 00 49 56.1 -0.3**
TEY *e* 00 49 59.2
TEY *e*S **S 00 54 57.4 -4.7**
TEY pmax pmax
comp=Z,30nm,1.6s
TEY MLR MLR
comp=E,4μm,11.0s
TEY MLR MLR
comp=N,2μm,10.0s
TEY MLR MLR
comp=Z,4μm,10.0s
GRNR Gornyy 31.52 52 *e*P **P 00 50 00.2 +1.3**
GRNR pmax pmax
comp=Z,21nm,1.0s
NRIK Noril'sk 32.12 354 P **P 00 50 04.5 +0.6**
comp=Z,56nm,1.1s,baz=158,slow=6.8,SNR=28
YAK Yakutsk 32.13 30 *e*P **P 00 50 04.2 +0.1**
YAK *e**PP **sP 00 50 12.4 +0.2**
YAK *e* 00 51 06.5
YAK *e*PPP PPP 00 51 26.1
YAK *e* 00 52 57.3
YAK *e*S **S 00 55 14.5 -1.2**
YAK *e*SS **SnSn 00 57 11.4 +5.4**
PALK Pallekele 33.17 208 P **P 00 50 14.3 +0.7**

comp=Z,15nm,0.8s,baz=292,slow=1.1,SNR=7.3
PALK Pallekele 33.17 208 *e*P **P 00 50 14.1 +0.4**
comp=Z,34nm,0.8s
PALK Pallekele 33.17 208 P **P 00 50 15.1 +1.5**
PALK Pallekele 33.17 208 *e*P **P 00 50 14.1 +0.4**
PALK pmax pmax
comp=Z,34nm,0.8s
IPM Ipoh 33.30 171 *e*P **P 00 50 15.4 +0.7**
comp=Z,31nm,1.1s
IPM Ipoh 33.30 171 P P 00 50 20.0 +5.3
MAJO Matsushiro 33.60 79 *e*P **P 00 50 18.2 +0.9**
comp=Z,11nm,0.9s
MAJO *e*PcP **PcP 00 52 56.9 -0.5**
MAJO Matsushiro 33.60 79 *e*P **P 00 50 18.2 +0.9**
MAJO *e* 00 52 56.9
MAJO pmax pmax
comp=Z,11nm,0.9s
MAT Matsushiro 33.60 79 P **P 00 50 17.7 +0.4**
MAT *e*S **S 00 55 47.0 +7.7**
MJAR Matsushiro Arr 33.60 79 P **P 00 50 14.9 -2.5**
comp=Z,6.9nm,0.9s,baz=286,slow=10.0,SNR=7.3
MJAR PcP **PcP 00 52 56.9 -0.6**
comp=Z,3.1nm,0.7s,baz=251,slow=2.4,SNR=6.5
MJAR LR LR 01 04 24.6
comp=Z,344nm,18.9s,baz=285,slow=37
KCSI Kotacane, Aceh 33.95 177 P **P 00 50 24.0 +3.6**
PSI Prapat 34.74 175 *e*P **P 00 50 27.1 -0.3**
comp=Z,21nm,1.1s
PSI *e*PcP **PcP 00 53 00.9 -0.1**
PSI Prapat 34.74 175 *e*P **P 00 50 27.1 -0.3**
PSI *e* 00 53 00.9
PSI pmax pmax
comp=Z,21nm,1.1s
WSAR Wadi Sarin 34.90 257 P **P 00 50 30.5 +1.8**
SNR=12
SNSI Sinabang, Aceh 35.02 179 P P 00 50 34.6 +5.0
BIDO Bidbid 35.14 257 P **P 00 50 32.0 +1.3**
SNR=6.0
BANOM Banah 35.35 262 P **P 00 50 34.5 +1.9**
SHME Shamm 35.41 263 *i* P **P 00 50 34.2 +1.1**
SNR=6.5
TYV Tymovskoe 35.46 53 *e*P **P 00 50 33.5 +0.4**
TYV *e*S **S 00 56 10.2 +2.7**
TYV pmax pmax
comp=Z,41nm,1.4s
TYV smax smax
comp=E,100nm,5.2s
YSS Yuzh-Sakhalins 35.48 60 *e*P **P 00 50 33.2 -0.1**
comp=E,54nm,1.2s
YSS Yuzh-Sakhalins 35.48 60 *e*P **P 00 50 32.4 -0.9**
YSS *e* 00 50 36.4
YSS *e* 00 51 55.3
YSS *e*S **S 00 56 02.2 -5.7**
YSS *e*SS **SS 00 58 51.1 +9.0**
YSS pmax pmax
comp=Z,20nm,1.3s
YSS MLR MLR
comp=Z,2μm,14.0s
YSS MLR MLR
comp=E,2μm,12.0s
MSFE Esma-Masafi 35.73 262 *i* P **P 00 50 37.7 +1.8**
SNR=28
UOSS Minazif 35.91 261 *e*P **P 00 50 37.3 +0.1**
comp=E,33nm,1.2s
UOSS Minazif 35.91 261 P **P 00 50 38.1 +0.8**
UOSS Minazif 35.91 261 P **P 00 50 37.0 -0.3**
HATD Hatta, Dubai 36.02 261 P **P 00 50 40.4 +2.1**
SOHO SOHO 36.06 260 P **P 00 50 40.3 +1.8**
SNR=5.5
GSI Gunungsitoli 36.15 177 P **P 00 50 38.3 -1.0**
ASHO Ashiyiah 36.15 261 *i* P **P 00 50 41.5 +2.1**
SNR=37
ASHO Ashiyiah 36.15 261 P **P 00 50 41.9 +2.4**
SNR=14
ERM Erimo 36.24 68 *e*P **P 00 50 40.2 +0.2**
comp=E,23nm,0.9s
ERM Erimo 36.24 68 *de*P **P 00 50 40.7 +0.7**
ERM pmax pmax
comp=Z,23nm,1.4s
BSY Bisya 36.28 257 P P 00 50 47.4 +6.9
MYKOM Kota Tinggi 36.38 166 P P 00 50 47.0 +5.7
KIRV Kirov 36.47 320 LR LR 01 06 37.9
comp=Z,1μm,18.1s,baz=77,slow=38
KKM Kota Kinabalu 36.47 144 P P 00 50 48.0 +5.8
FAQ Al Faqa, Dubai 36.48 261 P **P 00 50 44.3 +2.1**
FAQ Al Faqa, Dubai 36.48 261 P **P 00 50 44.3 +2.1**
SNR=5.4
MHTO MHTO 36.67 254 P **P 00 50 45.2 +1.5**
SNR=5.9
ALNE Al Ain 36.71 260 *i* P **P 00 50 45.9 +1.8**
SNR=6.1
LKRN Lenkeran, Azer 36.72 287 P **P 00 50 46.1 +2.0**
ASUD Al Ashush, Dub 36.75 261 *i* P **P 00 50 46.8 +2.3**
SNR=17
ASUD Al Ashush, Dub 36.75 261 P **P 00 50 47.0 +2.5**
SNR=12
MNSI Mandailing Nat 36.78 174 P P 00 50 50.1 +5.4
MAK Makhachkala 36.87 294 *e*P **P 00 50 42.0 -3.3**
MAK *e*S **S 00 56 25.8 -3.4**
MAK *e*SS **SnSn 00 59 03.5 +2.2**
MAK pmax pmax
comp=Z,58nm,1.1s
MAK MLR MLR
comp=Z,559nm,13.0s
AKT Akhty 36.94 291⇑ *i*P **P 00 50 47.3 +1.2**
AKT *e* 00 52 13.5
AKT pmax pmax
comp=Z,126nm,1.2s
SEKA Sheki 37.38 291 P **P 00 50 51.3 +1.5**
BKNI Bangkinang 37.39 171 P **P 00 50 53.6 +3.7**
MNGR Mingechevir, A 37.55 290 P **P 00 50 53.4 +2.3**
DQM DQM 37.61 253 P **P 00 50 53.0 +1.2**
SNR=8.5
YUK Yuzh-Kuril'sk 37.91 64 *e*P **P 00 50 54.5 +0.4**
YUK *e* 00 52 22.1
YUK *e*PPP PPP 00 52 43.6
YUK *e*S **S 00 56 43.3 -1.7**
YUK *e*SS **SnSn 00 59 26.9 +0.5**
YUK *e*SSS SSS 00 59 52.8
YUK pmax pmax
comp=Z,418nm,1.3s
YUK pmax pmax
comp=N,200nm,0.9s
YUK pmax pmax
comp=E,182nm,0.9s
YUK pmax pmax
comp=Z,322nm,0.9s
YUK MLR MLR
comp=Z,305nm,13.0s
YUK MLR MLR
comp=E,343nm,13.0s
GROC Groznyy 38.07 295 *e*P **P 00 50 56.8 +1.3**
GROC *e* 00 52 32.4
GROC *e* 00 53 05.2
GROC pmax pmax
comp=Z,333nm,1.3s
SBUM Sibu 38.07 153 *e*P **P 00 50 55.7 0.0**
comp=Z,18nm,1.0s
SBUM Sibu 38.07 153 P P 00 51 03.0 +7.3
TIXI Tiksi 38.08 16 P **P 00 50 54.7 -0.4**
comp=Z,38nm,0.9s,baz=223,slow=4.2,SNR=21
TIXI Tiksi 38.08 16 *e*P **P 00 50 54.8 -0.4**
comp=Z,56nm,1.0s
TIXI Tiksi 38.08 16 *e*P **P 00 50 54.8 -0.4**
TIXI pmax pmax
comp=Z,56nm,1.0s
GANJ Ganja 38.15 290 P **P 00 50 57.9 +1.7**
KSM Kuching 38.33 156 *e*P **P 00 50 58.1 +0.2**
comp=Z,42nm,1.0s
PDSI Padang 38.55 173 P **P 00 51 04.1 +4.4**
SDSI Sungai Dareh 38.68 171 P **P 00 51 00.4 -0.4**
SISI Saibi 38.84 175 P P 00 51 14.1 +12
PRGR Permogore 39.07 324⇑ *i*P **P 00 51 03.7 +0.1**
PRGR *e* 00 53 14.8
PRGR pmax pmax
comp=Z,43nm,0.9s
NAX Nakhchivan 39.10 288 P **P 00 51 05.5 +1.2**
GNI Garni 39.43 290 *e*P **P 00 51 08.1 +0.9**
comp=Z,121nm,1.1s
GNI Garni 39.43 290 *i* P **P 00 51 08.8 +1.6**
SNR=37
GNI Garni 39.43 290 *e*P **P 00 51 08.1 +0.9**
GNI pmax pmax
comp=Z,121nm,1.1s
GNI Garni 39.43 290 P **P 00 51 10.1 +2.9**
SNR=38
ZEI Tsey 39.51 294 *e*P **P 00 51 06.7 -1.1**
ZEI pmax pmax
comp=Z,51nm,1.4s
GOF Gofitskoye 39.75 298⇑ *i*P **P 00 51 11.1 +1.6**
GOF pmax pmax
comp=Z,128nm,0.9s
KBZ Khabaz 40.06 296 P **P 00 51 13.3 +1.2**
comp=Z,10nm,0.9s,baz=100,slow=6.2,SNR=19
VRH Novokhopyorsk 40.09 308 *e*P **P 00 51 12.8 +0.5**
VRH *e**PP **pP 00 51 16.4 -1.7**
VRH pmax pmax
comp=Z,80nm,0.9s
VRH MLR MLR
comp=Z,500nm,14.0s
KIV Kislovodsk 40.18 296 *e*P **P 00 51 13.6 +0.4**
comp=Z,100nm,1.1s
KIV Kislovodsk 40.18 296 *i* P **P 00 51 15.5 +2.3**
SNR=11
KIV Kislovodsk 40.18 296 *e*P **P 00 51 14.2 +1.0**
KIV *e* 00 52 48.1
KIV pmax pmax
comp=Z,262nm,1.1s
KIV MLR MLR
comp=Z,909nm,16.0s
KIV Kislovodsk 40.18 296 P **P 00 51 15.4 +2.3**
SNR=24
NEY Neytrino 40.27 295 *de*P **P 00 51 16.4 +2.3**
DAV Davao City (W) 40.63 131⇑ *i*P **P 00 51 15.5 -1.6**
PPBI Pangkal Pinang 40.69 164 P **P 00 51 21.1 +3.6**
DMTO DMTO 40.89 252 P **P 00 51 19.6 +0.3**
MA2 Magadan 40.95 39 LR LR 01 09 35.2
comp=Z,692nm,20.1s,baz=261,slow=38
MA2 Magadan 40.95 39 *e*P **P 00 51 19.0 -0.3**
comp=Z,35nm,0.9s
MA2 Magadan 40.95 39 *ce*P **P 00 51 18.8 -0.5**
MA2 pmax pmax
comp=Z,56nm,1.3s
TPI Tanjungpandan 41.61 162 P **P 00 51 25.0 -0.1**
VORD Divnogorie 41.64 307 *e*P **P 00 51 25.3 +0.3**
VORD *e**PP **pP 00 51 28.9 -2.0**
VORD pmax pmax
comp=Z,50nm,0.8s
VORR Voronezh 41.65 308 *e*P **P 00 51 23.0 -2.1**
VORR pmax pmax
comp=Z,250nm,1.2s
WHFO Wadi Hawf 41.66 254 P **P 00 51 25.9 +0.2**
VSR Storozhevoye 41.70 308 *e*P **P 00 51 25.8 +0.3**
VSR *e**PP **pP 00 51 29.6 -1.8**
VSR pmax pmax
comp=Z,90nm,0.9s
VSR MLR MLR
comp=Z,440nm,13.0s
LPSR Galich'ya Gora 41.77 310 *e*P **P 00 51 27.0 +0.9**
LPSR *e**PP **pP 00 51 30.7 -1.3**
LPSR pmax pmax
comp=Z,130nm,0.8s
LPSR MLR MLR
comp=Z,1μm,15.0s
KLMR Klimovskoe 41.82 322 *e*P **P 00 51 25.5 -0.9**
KLMR *e* 00 53 04.6
KLMR pmax pmax
comp=Z,68nm,0.9s
LHSI Lahat 41.82 168 P **P 00 51 31.2 +4.4**
AKDA Akdag 41.96 291 *i* P **P 00 51 31.8 +3.8**
SEY Seymchan 42.22 35⇓ *e*P **P 00 51 29.8 +0.2**
KRIK Erzurum-spir 42.22 291 *i* P **P 00 51 33.7 +3.4**
KRIK IAML_P
comp=Z,853nm,1.1s
SOC Sochi 42.36 296 *e*P **P 00 51 31.1 +0.1**
SOC *e* 00 53 05.2
SOC *e*S **S 00 57 51.9 +0.3**
SOC *e*SS SS 01 00 48.0 -12
SOC *e*SSS SSS 01 01 43.1
SOC pmax pmax
comp=Z,464nm,0.9s
SOC MLR MLR
comp=Z,3μm,14.0s
ABTO Aybut 42.36 253 P **P 00 51 30.7 -0.7**
MOS Moscow 42.48 315 *e*P **P 00 51 31.5 -0.3**
MOS *e* 00 51 35.3
MOS *e* 00 53 10.2
MOS *e*S **S 00 57 54.5 +1.4**
MOS *e*SS **SS 01 00 55.9 -6.3**
MOS *e*SSS SSS 01 01 33.8
MOS pmax pmax
comp=Z,179nm,1.0s
MOS MLR MLR
comp=E,700nm,13.0s
MOS MLR MLR
comp=Z,900nm,13.0s
MDSI Maura Dua 42.57 168 P **P 00 51 30.6 -2.3**
KOPT Kop Dagi 42.62 291 *i* P **P 00 51 37.5 +4.0**
KOPT IAML_P
comp=Z,447nm,0.5s
BAYB BAYBURT 42.74 291 *i* P **P 00 51 37.2 +2.8**
BAYB IAML_P
comp=Z,818nm,0.9s
TMCR Tamitsa 42.99 327 *e*P **P 00 51 35.8 -0.1**
TMCR pmax pmax
comp=Z,46nm,0.8s
OBN Obninsk 43.09 314 *e*P **P 00 51 36.7 -0.1**
comp=Z,89nm,1.1s
OBN Obninsk 43.09 314 *e*P **P 00 51 36.7 -0.1**
OBN *i* 00 53 14.2
OBN *e* 00 53 25.4
OBN *e*PPP PPP 00 53 49.5
OBN pmax pmax
comp=Z,82nm,1.0s
OBN MLR MLR
comp=Z,748nm,17.0s
HANI Diyarbakir_Han 43.14 289 *i* P **P 00 51 40.6 +3.1**
HANI IAML_P
comp=Z,762nm,1.0s
MPSI Mapaga 43.20 143 P P 00 51 43.3 +5.2
SGSI Sangihe 43.32 134 P **P 00 51 42.5 +3.4**
KELT Kelkit 43.51 292 *i* P **P 00 51 43.8 +3.2**
KELT IAML_P
comp=Z,341nm,1.0s
ANN Anapa 43.72 299 *e*P **P 00 51 40.9 -1.1**
ANN *e*S **S 00 58 11.0 -0.5**
ANN pmax pmax
comp=Z,192nm,1.0s
ANN MLR MLR
comp=Z,684nm,14.0s
MRSI Marisa 44.07 141 P P 00 51 49.8 +4.7
ELZG Elazig 44.17 289 *i* P **P 00 51 49.5 +3.5**
ELZG IAML_P
comp=Z,522nm,0.6s
SUSE Susehri 44.27 292 *i* P **P 00 51 49.7 +3.0**
SUSE IAML_P
comp=Z,600nm,0.8s
ORDU Ordu-Boztepe 44.31 293 *i* P **P 00 51 48.8 +2.0**
ORDU IAML_P
comp=Z,373nm,0.8s
KEMA Kemaliye 44.31 291 *i* P **P 00 51 49.8 +2.8**
KEMA IAML_P
comp=Z,696nm,0.8s
CUZAR Zara_SIVAS 44.67 292 *i* P **P 00 51 52.7 +2.8**
PEA1 Petropavlovsk- 44.71 49 *e*P **P 00 51 48.8 -1.1**
PETK Petropavlovsk- 44.71 49 P **P 00 51 48.8 -1.1**
comp=Z,12nm,0.9s,baz=268,slow=6.8,SNR=13
PETK LR LR 01 11 09.3
comp=Z,315nm,18.4s,baz=285,slow=37
HEKM Malatya_Hekimh 44.83 290 *i* P **P 00 51 54.5 +3.3**
HEKM IAML_P
comp=Z,29nm,0.1s
LVZ Lovozero 45.00 332⇑ *e*P **P 00 51 52.0 0.0**
LVZ pmax pmax
comp=Z,26nm,1.2s
CUKAN kangal_SIVAS 45.06 291 *i* P **P 00 51 55.4 +2.4**
APSI Ampana 45.13 142 P **P 00 51 57.3 +3.8**
ERBA Erbaa 45.20 293 *i* P **P 00 51 56.4 +2.5**
ERBA IAML_P
comp=Z,442nm,0.7s
PET Petropavlovsk 45.30 49 *e*P **P 00 51 53.8 -0.7**
comp=Z,59nm,1.2s
PET Petropavlovsk 45.30 49 *e*P **P 00 51 53.0 -1.4**
PET *e* 00 53 37.6
PET *e*S **S 00 58 30.7 -3.5**
PET *e*SS **ScS 01 01 50.3 -0.1**
PET pmax pmax
comp=Z,49nm,1.3s
PET MLR MLR
comp=Z,700nm,18.0s
PET MLR MLR
comp=Z,800nm,15.0s
APA Apatity 45.42 331⇓ *i*P **P 00 51 52.5 -2.7**
APA MLR MLR
comp=Z,800nm,12.0s
LEM Lembang 45.53 164 LR LR 01 11 15.2
comp=Z,299nm,21.5s,baz=341,slow=36
CUALT Altinyayla-SIV 45.60 291 *i* P **P 00 52 00.9 +3.6**
LUWI Luwuk 45.80 141 P **P 00 52 02.4 +3.6**
HAVZ Havza 45.84 294 *i* P **P 00 52 01.3 +2.3**
HAVZ IAML_P
comp=Z,9.6nm,0.1s
CUSAR Sarkisla-SIVAS 45.94 292 *i* P **P 00 52 02.2 +2.3**
SIM Simferopol' 45.99 300 *c i*P **P 00 52 00.5 +0.4**
SIM *e*S **S 00 58 45.2 +0.7**
SIM pmax pmax
comp=Z,88nm,0.9s
SIM MLR MLR
comp=Z,80nm,8.9s
TTSI Tana Toraja 46.15 146 P **P 00 52 00.8 -0.8**
SEVA Sevastopol 46.39 299⇑ *i*P **P 00 52 03.4 +0.2**
COAL Corum-Alaca 46.61 293 *i* P **P 00 52 07.9 +2.7**
COAL IAML_P
comp=Z,141nm,0.8s
TNTI Ternate 46.74 134 P **P 00 52 09.1 +2.8**
SIRC Yozgat 46.77 292 *i* P **P 00 52 08.2 +1.7**
SIRC IAML_P
comp=Z,25nm,0.3s
SPSI Sidrap Palu 46.94 146 P **P 00 52 07.2 -0.6**
MSF Maaselka 46.98 329 P **P 00 52 08.8 +1.2**
MSF pmax pmax
comp=Z,44nm,0.5s
NGJI Ngawi 47.04 159 P **P 00 52 12.5 +3.9**
BNSI Bone 47.48 146 P **P 00 52 15.4 +3.4**
KMMI Kalianget 47.52 155 P **P 00 52 12.9 +0.6**
BR131 Keskin Array S 47.76 293 P **P 00 52 15.5 +1.3**
SNR=33
BRTR Keskin Array B 47.76 293 P **P 00 52 15.2 +1.0**
comp=Z,30nm,0.9s,baz=98,slow=7.5,SNR=129
BRTR PP **PP 00 54 06.2 +0.4**
comp=Z,5.4nm,1.0s,baz=96,slow=6.5,SNR=2.4
PWJI Pagerwojo 47.77 158 P **P 00 52 18.3 +4.1**
KAPI Kappang 47.87 147 P **P 00 52 15.2 +0.1**
comp=Z,9.8nm,0.8s,baz=349,slow=8.8,SNR=3.9
KAPI Kappang 47.87 147 *e*P **P 00 52 15.1 +0.1**
comp=Z,24nm,1.2s
KAPI Kappang 47.87 147 *e*P **P 00 52 15.1 +0.1**
KAPI pmax pmax
comp=Z,24nm,1.2s
KEV Kevo 47.99 334 *e*P **P 00 52 15.9 +0.5**
AKASG Malin Array Be 48.00 308 P **P 00 52 15.9 +0.3**
comp=Z,44nm,1.0s,baz=67,slow=7.6,SNR=52
AKASG PP **PP 00 54 07.8 +0.2**
comp=Z,0.4nm,0.3s,baz=67,slow=8.3,SNR=3.6
AKASG LR LR 01 13 06.4
comp=Z,363nm,18.4s,baz=60,slow=37
KIEV Kiev 48.01 308⇓ *i*P **P 00 52 16.1 +0.3**
KIEV Kiev 48.01 308 *i* P **P 00 52 15.9 +0.1**
SNR=38
KIEV Kiev 48.01 308 *ce*P **P 00 52 15.9 +0.1**
MICGM Minsk 48.15 313 *e* **P 00 52 15.0 -1.8**
MICGM *e*LQ LQ 01 08 40.0
MICGM *e*LR LR 01 12 20.0
MNK Minsk 48.15 313 *e*P **P 00 52 15.0 -1.8**
SUF Sumiainen 48.23 325 P **P 00 52 18.7 +1.4**
SUF pmax pmax
comp=Z,52nm,1.0s
BHL Bhannes 48.27 285 *e*P **P 00 52 19.2 +1.1**
VSU Vasula 48.27 319 *c i*P **P 00 52 17.8 +0.1**
VSU pmax pmax
comp=Z,235nm,1.0s
VSU Vasula 48.27 319 *e*P **P 00 52 17.7 +0.1**
VSU IAmb IAmb 00 52 22.9
comp=Z,172nm,0.8s
RCY Rachaya 48.29 284 *e*P **P 00 52 20.3 +1.9**
BKSI Bulukumba 48.31 147 P **P 00 52 21.9 +3.5**
comp=Z,12nm,2.1s
ANTO Ankara 48.33 293 *e*P **P 00 52 19.1 +0.5**
comp=Z,166nm,1.4s
ANTO Ankara 48.33 293⇓ *i*P **P 00 52 19.8 +1.3**
ANTO Ankara 48.33 293 *e*P **P 00 52 19.1 +0.5**
ANTO pmax pmax
comp=Z,166nm,1.4s
ANTO Ankara 48.33 293 P **P 00 52 17.4 -1.1**
SNR=26
FINES FINESS Array B 48.34 323 P **P 00 52 18.6 +0.4**
comp=Z,35nm,0.8s,baz=97,slow=9.8,SNR=74
QRWL Qaraoun 48.39 284 *e*P **P 00 52 21.1 +2.1**
SHBL Chebaa 48.42 284 *e*P **P 00 52 21.3 +1.9**
BILL Bilibino 48.47 28 *e*P **P 00 52 19.8 +0.7**
comp=Z,32nm,1.1s
BILL Bilibino 48.47 28 *c i*P **P 00 52 19.5 +0.4**
BILL pmax pmax
comp=Z,31nm,1.0s
BILL MLR MLR
comp=Z,496nm,14.0s
ARCES ARCESS Array B 48.50 334 P **P 00 52 19.6 +0.3**
comp=Z,9.0nm,0.3s,baz=90,slow=7.4,SNR=18
ARCES PcP **PcP 00 53 44.9 -0.2**
comp=Z,4.3nm,0.6s,baz=96,slow=4.0,SNR=7.5
ARCES LR LR 01 14 19.1
comp=Z,381nm,18.7s,baz=360,slow=38
ARE0 ARCESS Array S 48.50 334 *e*P **P 00 52 19.8 +0.5**
IDID Didziasalis 48.68 315 *e*P **P 00 52 21.9 +1.0**
IDID IAmb IAmb 00 52 26.5
comp=Z,28nm,0.9s
IZAR Zarasai 48.89 315 *e*P **P 00 52 23.4 +1.0**
IZAR IAmb IAmb 00 52 28.1
comp=Z,22nm,1.1s
SRBI Singaraja 48.91 154 P **P 00 52 26.9 +3.9**
JAGI Jajag, Banyuwa 48.91 156 *e*P **P 00 52 23.1 +0.1**
comp=Z,50nm,0.9s
JAGI Jajag, Banyuwa 48.91 156 P **P 00 52 26.6 +3.5**
IIGN Ignalina 48.96 315 *e*P **P 00 52 24.2 +1.2**
IIGN IAmb IAmb 00 52 28.9
comp=Z,37nm,0.8s
ISAL Salakas 48.98 315 *e*P **P 00 52 24.4 +1.2**
ISAL IAmb IAmb 00 52 28.9
comp=Z,25nm,0.9s
MMLI Mount Malkishu 49.03 283 P **P 00 52 26.2 +2.3**
KIS Kishinev 49.08 303 *e*P **P 00 52 23.5 -0.6**
comp=Z,180nm,1.3s
KIS Kishinev 49.08 303 *e*PP PP 00 54 20.0 +2.5
KIS *e*S **S 00 59 36.0 +7.7**
KIS *e*SS SS 01 03 20.0 +21
KIS *e*SSS SSS 01 04 47.0
KIS *e*LQ LQ 01 09 55.0
comp=Z,500nm,12.0s
KIS LRM MLR 01 17 36.0
comp=Z,700nm,14.0s
KIS Kishinev 49.08 303 *e*P **P 00 52 23.5 -0.6**
KIS *i* 00 52 28.0
KIS *e* 00 54 20.0
KIS *e*S **S 00 59 36.0 +7.7**
KIS pmax pmax
comp=Z,180nm,1.3s
KIS MLR MLR
comp=Z,700nm,14.0s
HEF Hetta 49.14 332 *e*P **P 00 52 24.9 +0.7**
HAMF Hammerfest 49.17 335 *e*P **P 00 52 24.5 +0.1**
BSSI Bau Bau, Buton 49.20 147 P **P 00 52 28.8 +3.5**
KTK1 Kautokeino 49.30 333 *e*P **P 00 52 25.2 -0.2**
GHAJ Ghor Haditha 49.38 282 P **P 00 52 28.6 +2.1**
comp=Z,51nm,1.1s
TLCR 49.56 301⇓ *i*P **P 00 52 28.8 +1.0**
TLCR 49.56 301 P **P 00 52 28.8 +1.0**
CSS Mathiatis 49.64 287 P **P 00 52 29.3 +0.7**
comp=Z,10nm,1.4s
IAS Iasi 49.86 304⇑ *i*P **P 00 52 30.4 +0.4**
LEF Lefka 49.92 287⇓ *i*P **P 00 52 32.1 +1.5**
CFR Carcaliu 50.02 301⇑ *i*P **P 00 52 32.1 +0.8**
TIRR Tirgusor 50.04 300⇑ *i*P **P 00 52 32.3 +0.9**
KIF Kilpisjarvi 50.17 333 *e*P **P 00 52 31.9 -0.2**
SILT Sile 50.20 296⇑ *i*P **P 00 52 33.2 +0.5**
PABE Paberze 50.20 315 *e*P **P 00 52 33.0 +0.6**
PABE IAmb IAmb 00 52 37.9
comp=Z,112nm,0.8s
TLB Topalu 50.26 301⇑ *i*P **P 00 52 33.5 +0.4**
HRFI Mount Harif 50.33 280 P **P 00 52 35.8 +1.9**
PLAI Plampang 50.53 151 P **P 00 52 39.5 +4.1**
comp=Z,25nm,0.9s
EIL Elat 50.55 280 P P 00 52 41.1 +5.6
comp=Z,147nm,1.3s
ICOR Ion Corvin 50.56 300⇑ *i*P **P 00 52 37.1 +1.7**

ODBI Odobesti 50.59 302⇑ *i*P P 00 52 37.5 +1.9
KLYT Kilyos 50.59 296⇑ *i*P P 00 52 36.9 +1.3
TESR Tescani 50.65 303⇓ *i*P P 00 52 36.7 +0.7
PRAR RASCA 50.69 305⇑ *i*P P 00 52 37.2 +0.8
ISP Isparta 50.69 292 P P 00 52 36.8 +0.2
ISP Isparta 50.69 292⇑ *i*P P 00 52 38.0 +1.4
SLIT Slitere, Latvi 50.73 318 *e*P P 00 52 35.8 -0.6
VRI Vrincioaia 50.78 303⇑ *i*P P 00 52 38.3 +1.2
VRI Vrincioaia 50.78 303 P P 00 52 38.2 +1.2
TRO Tromso 50.81 334 *e*P P 00 52 36.5 -0.4
PLOR Plostina 50.84 303⇓ *i*P P 00 52 39.4 +1.9
DAMY Dhamar 50.87 258 *e*P P 00 52 38.0 -0.4
comp=Z,160nm,1.1s
BIZ Bicaz 50.89 304⇑ *i*P P 00 52 39.1 +1.2
SUW Suwalki 50.95 313 *e*P P 00 52 37.3 -0.9
SUW LMZ LR 01 14 56.8
comp=Z,700nm,20.7s
SUW Suwalki 50.95 313 *e*P P 00 52 37.3 -0.9
SUW MLR MLR
comp=Z,700nm,20.7s
ISR Istrita 51.12 302⇓ *i*P P 00 52 41.6 +1.9
PRD Provadia 51.12 299 *i* P P 00 52 41.0 +1.4
SALU Saltoluokta 51.14 331 *e*P P 00 52 39.8 +0.3
PBUR Paburg 51.23 316 *e*P P 00 52 40.5 +0.2
PBUR IAmb IAmb 00 52 41.4
comp=Z,53nm,0.8s
BURAR Bucovina Array 51.28 305⇑ *i*P P 00 52 41.8 +0.9
OZUR 51.34 303⇓ *i*P P 00 52 42.7 +1.4
SPA0 Spitsbergen Ar 51.37 345 *e*P P 00 52 46.0 +5.0
MLR Muntele Rosu 51.41 302⇑ *i*P P 00 52 43.6 +1.6
LVV L'vov 51.44 308 *e*P P 00 52 42.9 +1.0
LVV *e* 00 54 45.8
LVV *e*S **S 01 00 03.7 +2.5**
LVV MLR MLR
comp=N,300nm,16.0s
LVV MLR MLR
comp=E,300nm,16.0s
LVV MLR MLR
comp=Z,300nm,16.0s
SULR 51.45 301⇑ *i*P P 00 52 44.2 +2.2
PHSR Pinarhisar 51.54 297⇑ *i*P P 00 52 44.1 +1.3
KULA Kula-Manisa 51.81 293 P P 00 52 44.1 -0.9
WBSI Waikabubak, Su 51.90 150 P P 00 52 42.4 -3.3
JMB Yambol 51.93 298 *i* P P 00 52 47.2 +1.5
ARCR ARCALIA 51.99 305⇑ *i*P P 00 52 48.5 +2.4
VOIR 52.03 302⇑ *i*P P 00 52 47.5 +1.0
EDFI Ende, Flores 52.05 147 P P 00 52 46.7 -0.2
STEI Steigen 52.31 332 *e*P P 00 52 47.2 -0.9
KWP Kalwaria Pacla 52.32 308 *e*P P 00 52 50.0 +1.5
KWP LMZ LR 01 14 46.9
comp=Z,600nm,25.9s
KWP Kalwaria Pacla 52.32 308 *e*P P 00 52 50.0 +1.5
KWP MLR MLR
comp=Z,600nm,25.9s
ARR Arges 52.33 303⇓ *i*P P 00 52 50.2 +1.5
HUMR Humele 52.36 301⇑ *i*P P 00 52 50.0 +1.1
KLNR Kaliningrad 52.51 315*de*P P 00 52 50.5 +0.7
KLNR pmax pmax
comp=Z,151nm,0.9s
BNDI Bandanaira 52.51 135 P P 00 52 53.7 +3.4
comp=Z,346nm,0.7s,comp=Z,8μm
KOLS Kolonicke sedl 52.79 307 *e*P P 00 52 52.9 +0.9
KOLS pmax pmax
comp=Z,25nm,1.1s
KOLS Kolonicke sedl 52.79 307 *e*P P 00 52 52.9 +0.9
ALN Alexandroupoli 52.84 297 P P 00 52 52.2 -0.3
TRPA Tarpa 52.86 306⇑ *i*P P 00 52 53.5 +1.0
TRPA Tarpa 52.86 306 EP P 00 52 53.0 +0.5
UZH Uzhgorod 52.87 307⇑ *i*P P 00 52 53.0 +0.5
UZH *e* 00 52 56.4
UZH *i* 00 53 03.8
UZH *e*S **S 01 00 20.0 -0.7**
UZH *e*SS **SS 01 03 55.0 -4.1**
UZH MLR MLR
comp=Z,100nm,15.0s
LOT Lotru 52.88 303⇑ *i*P P 00 52 54.1 +1.2
BEL Belsk 52.89 311 *e*P P 00 52 53.5 +0.9
BEL LMZ LR 01 15 47.1
comp=Z,1μm,16.1s
BEL Belsk 52.89 311 *e*P P 00 52 53.5 +0.9
BEL MLR MLR
comp=Z,1μm,16.1s
MOR8 Moi Rana 52.90 330 *e*P P 00 52 51.9 -0.7
LOF Lofoten 52.91 332 *e*P P 00 52 52.6 0.0
VLAD Vladila 52.92 301⇑ *i*P P 00 52 54.9 +1.9
KDZ Kurdzhali 53.02 298 *i* P P 00 52 58.9 +5.1
EZN Ezine 53.03 295 P P 00 52 54.5 +0.7
EZN Ezine 53.03 295⇑ *i*P P 00 52 55.5 +1.7
RDO Rodhopi 53.11 297 P P 00 52 55.2 +0.7
DRGR 53.16 305⇓ *i*P P 00 52 56.0 +1.2
DRGR 53.16 305 P P 00 52 56.0 +1.2
PRK Paraskevi 53.28 295 P P 00 52 57.1 +1.4
BODT Bodrum 53.35 292 P P 00 52 55.9 -0.4
SMTH Samothraki Isl 53.36 296 P P 00 52 56.4 +0.1
SMG Samos 53.45 293 P P 00 52 57.7 +0.7
RZN Rozhen 53.50 298 *i* P P 00 52 58.7 +1.1
GZR Gura Zlata 53.56 303⇑ *i*P P 00 52 59.1 +1.3
PGB Panagyurishte 53.58 299 *i* P P 00 52 59.5 +1.5
CHOS Chios island 53.76 294 P P 00 52 59.2 -0.2
NIE Niedzica 53.88 308 *e*P P 00 53 01.7 +1.6
NIE *e*S S 01 00 17.3 -17
NIE LMZ LR 01 15 58.5
comp=Z,400nm,23.9s
NIE Niedzica 53.88 308 *e*P P 00 53 01.7 +1.6
NIE MLR MLR
comp=Z,400nm,24.0s
KAVA Kavala 53.89 297 P P 00 53 00.6 +0.4
ATD Arta Tunnel 53.91 256 LR LR 01 18 11.8
comp=Z,102nm,19.1s,baz=48,slow=38
ATD Arta Tunnel 53.91 256 *e*P P 00 53 02.2 +1.6
comp=Z,109nm,1.2s
OJC Ojcow 53.95 310 *e*P P 00 53 01.4 +0.9
OJC LMZ LR 01 16 27.6
comp=Z,1μm,17.2s
OJC Ojcow 53.95 310 *e*P P 00 53 01.4 +0.9
OJC MLR MLR
comp=Z,1μm,17.2s
HERR Herculane 53.97 303⇓ *i*P P 00 53 01.9 +1.2
SIRR Siria 54.01 304⇑ *i*P P 00 53 02.8 +1.8
KMPI Kaimana, Papua 54.02 131 P P 00 53 04.7 +3.3
comp=Z,281nm,1.0s,comp=Z,5μm
KECS Kecovo 54.06 307 *e*P P 00 53 02.9 +1.6
KECS pmax pmax
comp=Z,87nm,1.2s
KECS Kecovo 54.06 307 *e*P P 00 53 02.9 +1.6
SOEI Soe 54.09 145 P P 00 53 09.2 +7.2
VTS Vitosha 54.20 300 P P 00 53 04.0 +1.4
VTS Vitosha 54.20 300⇓ *i*P P 00 53 04.2 +1.6
VTS Vitosha 54.20 300 *i* P P 00 53 04.1 +1.4
NVR Nevrokopi 54.22 298 P P 00 53 02.3 -0.3
MMB Musomiste 54.23 298 *i* P P 00 53 03.5 +0.8
NSS Namsos 54.25 328 *e*P P 00 53 02.2 -0.1
BZS Buzias 54.26 304⇑ *i*P P 00 53 03.7 +0.9
MDVR Moldovita 54.48 303⇑ *i*P P 00 53 05.5 +1.0
LANS Liptovska Anna 54.48 308 *e*P P 00 53 06.2 +1.7
LANS Liptovska Anna 54.48 308 *e*P P 00 53 06.2 +1.7
SMY Shemya 54.50 47 *e*P P 00 53 03.7 -0.7
comp=Z,124nm,0.9s
SMY Shemya 54.50 47 *e*P P 00 53 03.7 -0.7
SMY pmax pmax
comp=Z,124nm,0.9s
OUR Ouranopolis 54.51 297 P P 00 53 05.3 +0.6
GKP Gorka Klasztor 54.56 314 *e*P P 00 53 05.3 +0.5
GKP *e*S **S 01 00 40.3 -3.2**
GKP LMZ LR 01 17 35.6
comp=Z,1μm,17.3s
GKP Gorka Klasztor 54.56 314 *e*P P 00 53 05.3 +0.5
GKP *e*S **S 01 00 40.3 -3.2**
GKP MLR MLR
comp=Z,1μm,17.3s
KKB Krupnik 54.58 299 *i* P P 00 53 06.3 +1.1
PSZ Piszkesteto 54.61 307⇓ *i*P P 00 53 07.0 +1.6
PSZ Piszkesteto 54.61 307⇑ EP P 00 53 06.1 +0.6
APE Apeiranthos 54.65 293*ce*P P 00 53 05.9 0.0
APE pmax pmax
comp=Z,40nm,0.9s
SOH Sokhos 54.77 298 P P 00 53 06.8 +0.1
PLG Polygyros 54.88 297 P P 00 53 07.8 +0.4
PAIG Paliouri 54.88 296 P P 00 53 08.8 +1.4
ZKR Zakros 54.94 290 P P 00 53 09.1 +1.2
RAC Raciborz 54.97 310 *e*P P 00 53 09.5 +1.6
RAC MLR MLR
comp=Z,1μm,17.8s
OKC Ostrava-Krasne 55.08 310 *i* P P 00 53 09.9 +1.2
OKC *e* 00 53 13.7
OKC MLR MLR
comp=Z,800nm,13.8s
OKC Ostrava-Krasne 55.08 310⇑ *i*P P 00 53 09.9 +1.2
OKC *e*pP **pP 00 53 13.7 -1.0**
OKC AMS AMS 01 17 10.0
comp=Z,800nm,13.8s
VYHS Vyhne 55.09 308 *e*P P 00 53 10.4 +1.6
VYHS pmax pmax
comp=Z,91nm,1.7s
VYHS Vyhne 55.09 308 *e*P P 00 53 10.4 +1.6
NC405 NORSAR Array S 55.22 324 *e*P P 00 53 09.8 +0.3
comp=Z,92nm,0.8s
STIP Stip 55.26 299 *i* P P 00 53 09.5 -0.7
EREA Eretria 55.28 295 P P 00 53 10.7 +0.3
TBLU Trondheim 55.30 327 *e*P P 00 53 09.5 -0.5
BSD Bornholm Skovb 55.31 316 *e*P P 00 53 10.6 +0.3
BSD MLR MLR
comp=Z,1μm,13.0s
BSD Bornholm Skovb 55.31 316 *i* P P 00 53 10.6 +0.3
comp=Z,1μm,13.0s
GRG Griva 55.39 298 P P 00 53 11.5 +0.4
DION Dionisos Attik 55.42 294 P P 00 53 11.2 -0.1
XOR Xorichti 55.44 296 P P 00 53 10.6 -0.9
NEO Neokhori 55.44 296 P P 00 53 11.0 -0.5
MORC Moravsky Berou 55.47 310⇓ *i*P P 00 53 12.7 +1.1
MORC Moravsky Berou 55.47 310 *e*P P 00 53 12.6 +1.0
MORC *e* 01 16 31.2
LAST Lasithi 55.47 290 P P 00 53 12.2 +0.4
NB2 NORSAR Subarra 55.47 324 P P 00 53 11.1 -0.3
comp=Z,33nm,0.8s,baz=73,slow=7.4
NB2 NORSAR Subarra 55.47 324 P P 00 53 11.1 -0.3
baz=73,slow=7.4
NOA NORSAR Array B 55.47 324 P P 00 53 11.4 -0.1
comp=Z,21nm,0.8s,baz=73,slow=7.3,SNR=55
NOA LR LR 01 17 34.7
comp=Z,433nm,19.3s,baz=75,slow=37
PTL Penteli 55.48 294 P P 00 53 12.2 +0.4
FRGS Fruska Gora 55.61 304⇑ *i*P P 00 53 13.1 +0.5
ATH Athens Observa 55.62 294 P P 00 53 12.2 -0.5
SRO2 Moca 55.62 307 *e*P P 00 53 13.4 +0.8
SRO2 Moca 55.62 307 *e*P P 00 53 13.4 +0.8
NC204 NORSAR Array S 55.62 324 *e*P P 00 53 12.2 -0.3
comp=Z,72nm,0.9s
SRO Srobarova 55.65 307 *e*P P 00 53 14.6 +1.8
SRO Srobarova 55.65 307 *e*P P 00 53 14.6 +1.8
LIT Litokhoron 55.66 297 P P 00 53 12.2 -0.8
SKO Skopje 55.68 300 *i* P P 00 53 14.2 +1.0
NAO01 NORSAR Array S 55.68 324 *e*P P 00 53 12.8 0.0
JAVC Velka Javorina 55.70 309 *e*P P 00 53 15.5 +2.3
ATAL Atalanti 55.83 295 P P 00 53 13.2 -1.1
VILL Villia 55.83 295 P P 00 53 13.7 -0.7
CSKK Cskako 55.84 307 EP P 00 53 14.1 -0.1
LKR Lokris 55.86 295 P P 00 53 09.1 -5.4
DIVS Divibare 55.87 302⇑ *i*P P 00 53 15.1 +0.5
KSP Ksiaz 55.87 311 *e*P P 00 53 15.4 +1.0
KSP LMZ LR 01 17 35.6
comp=Z,1μm,15.9s
KSP Ksiaz 55.87 311 *e*P P 00 53 15.4 +1.0
KSP MLR MLR
comp=Z,1μm,15.9s
OSTC Ostas 56.02 311⇑ *e*P P 00 53 16.7 +1.2
OSTC *e*x x 00 53 20.1
OSTC AMS AMS 01 17 50.0
comp=Z,1μm,13.9s
DPC Dobruska-Polom 56.02 311⇑ *e*P P 00 53 17.1 +1.6
DPC *e* 00 53 20.4
DPC MLR MLR
comp=Z,1μm,14.9s
DPC Dobruska-Polom 56.02 311⇑ *e*P P 00 53 17.1 +1.6
DPC *e*pP **pP 00 53 20.4 -1.2**
DPC AMS AMS 01 17 50.0
comp=Z,1μm,14.9s
OSL Oslo 56.03 323 *e*P P 00 53 15.8 +0.5
KRUS Krusevo 56.04 299 *i* P P 00 53 15.9 +0.1
AXAR Agios Charalam 56.06 296 P P 00 53 18.2 +2.3
STRU Stroemstad 56.08 322 *e*P P 00 53 15.8 +0.1
CHVC Chvalec 56.10 311⇑ *e*P P 00 53 17.3 +1.2
CHVC AMS AMS 01 18 10.0
comp=Z,1μm,13.9s
MODS Modra-Piesok 56.11 308 *e*P P 00 53 16.7 +0.5
MODS pmax pmax
comp=Z,57nm,1.2s
MODS Modra-Piesok 56.11 308 *e*P P 00 53 16.7 +0.5
UPC Upice 56.16 311⇑ *e*P P 00 53 17.7 +1.3
UPC *e* 00 53 21.3
UPC MLR MLR
comp=Z,1μm,12.9s
UPC Upice 56.16 311⇑ *e*P P 00 53 17.7 +1.3
UPC *e*pP **pP 00 53 21.3 -1.2**
UPC AMS AMS 01 18 20.0
comp=Z,1μm,12.9s
DOMB Dombas 56.17 325 *e*P P 00 53 16.6 +0.2
FNA Florina 56.17 298 P P 00 53 16.0 -0.8
AGG Agios Georgios 56.19 296 P P 00 53 15.6 -1.3
THL Klokotos Trika 56.20 297 P P 00 53 16.1 -0.8
VRAC Vranov 56.21 309⇓ *i*P P 00 53 17.8 +0.9
VRAC Vranov 56.21 309 *e*P P 00 53 18.0 +1.1
VRAC *e* 01 16 33.4
TIH Tihany 56.24 306 EP P 00 53 17.0 0.0
ZST Bratislava 56.28 308 *e*P P 00 53 16.9 -0.4
ZST Bratislava 56.28 308 *e*P P 00 53 16.9 -0.4
DSF Desfina 56.30 295 P P 00 53 12.6 -5.1
RGN Rugen 56.37 316 *e*P P 00 53 17.5 -0.3
RGN IAmb IAmb 00 53 19.8
comp=Z,176nm,1.2s
IVA Berane 56.40 301⇑ *i*P P 00 53 19.8 +1.4
KRUC Moravsky 56.42 309 *e*P P 00 53 19.5 +1.2
KRUC *e* 01 16 33.0
IMMV Iera Moni Meta 56.46 291 P P 00 53 17.9 -0.9
PVY Plav 56.46 301⇑ *i*P P 00 53 19.9 +1.0
PHP Peshkopia 56.48 300 P P 00 53 18.5 -0.4
COP Copenhagen 56.48 318 *i* P P 00 53 18.8 +0.2
COP MLR MLR
comp=Z,930nm,14.0s
COP Copenhagen 56.48 318 *i* P P 00 53 18.8 +0.2
comp=Z,920nm,14.0s
KPRO Kipourio 56.51 297 P P 00 53 18.7 -0.5
NEST Nestorio 56.55 298 P P 00 53 17.9 -1.6
PLE Pljevlja 56.56 302⇑ *i*P P 00 53 20.9 +1.3
HAPS Han Pijesak,BI 56.57 303⇑ *i*P P 00 53 19.7 +0.1
KALE Kalithea 56.58 295 P P 00 53 18.5 -1.2
EVR Evrytania 56.61 296 P P 00 53 19.7 -0.3
GUR Goura 56.62 295 P P 00 53 18.9 -1.2
SERG Sergoula 56.63 295 P P 00 53 18.9 -1.2
ANX Ano Chora 56.66 296 P P 00 53 19.8 -0.5
KONO Kongsberg 56.66 323 *e*P P 00 53 19.8 0.0
comp=Z,38nm,0.9s
KONO Kongsberg 56.66 323⇓ *e*P P 00 53 20.5 +0.7
KONO pmax pmax
comp=Z,47nm,1.0s
KONO Kongsberg 56.66 323 *e*P P 00 53 20.3 +0.4
KOME Kolasin 56.66 301⇑ *i*P P 00 53 21.6 +1.3
MOL Molde 56.68 326 *e*P P 00 53 20.8 +0.8
VLI Veliai 56.70 293 P P 00 53 18.4 -2.1
EFP Efpalio 56.74 295 P P 00 53 19.8 -0.9
LAKA Lakka 56.76 295 P P 00 53 20.1 -0.9
RUE Ruedersdorf 56.80 314 *e*P P 00 53 21.6 +0.7
RUE IAmb IAmb 00 53 26.3
comp=Z,53nm,0.9s
SOP Sopron 56.80 307 ⇑EP P 00 53 22.0 +0.9
TREC Trest 56.89 310 *i* P P 00 53 23.0 +1.3
TREC *e* 00 53 26.6
TREC MLR MLR
comp=Z,900nm,14.7s
TREC Trest 56.89 310⇑ *i*P P 00 53 23.0 +1.3
TREC *e*pP **pP 00 53 26.6 -1.2**
TREC AMS AMS 01 18 10.0
comp=Z,900nm,14.7s
PVO Paravola 56.93 296 P P 00 53 21.7 -0.4
UPM Unac-Piva 56.94 302⇑ *i*P P 00 53 22.9 +0.5
UPM Unac-Piva 56.94 302 *e*P P 00 53 22.8 +0.4
JAN Janina 56.99 297 P P 00 53 22.7 +0.1
PDG Podgorica 57.00 301⇓ *i*P P 00 53 23.3 +0.7
PDG Podgorica 57.00 301⇑ *i*P P 00 53 23.2 +0.7
TTG Podgorica 57.00 301⇑ *i*P P 00 53 23.3 +0.7
PVCC Panska Ves 57.01 311⇑ *e*P P 00 53 24.0 +1.5
PVCC *e* 00 53 27.8
PVCC MLR MLR
comp=Z,800nm,15.7s
PVCC Panska Ves 57.01 311⇑ *e*P P 00 53 24.0 +1.5
PVCC *e*pP **pP 00 53 27.8 -0.8**
PVCC AMS AMS 01 18 50.0
comp=Z,800nm,15.7s
NKY Niksic 57.03 301⇑ *i*P P 00 53 23.7 +0.8
AKN Aaknes 57.05 326 *e*P P 00 53 23.6 +0.9
DRO Drossia 57.07 295 P P 00 53 22.1 -1.1
NKME Niksic 57.08 301⇑ *i*P P 00 53 23.9 +0.8
GOPC GO Pecny, Ondr 57.10 310 *i* P P 00 53 24.4 +1.2
GOPC *e* 00 53 27.7
GOPC MLR MLR
comp=Z,1μm,14.1s
GOPC GO Pecny, Ondr 57.10 310⇑ *i*P P 00 53 24.4 +1.2
GOPC *e*pP **pP 00 53 27.7 -1.5**
GOPC AMS AMS 01 18 30.0
comp=Z,1μm,14.1s
BEHE Becsehely 57.11 306⇑ *i*P P 00 53 24.4 +1.1
BEHE Becsehely 57.11 306 ⇑EP P 00 53 24.0 +0.7
DRME Dracevica, Mon 57.14 301⇑ *i*P P 00 53 24.5 +0.9
DRME Dracevica, Mon 57.14 301⇑ *i*P P 00 53 24.3 +0.7
CONA Conrad Observa 57.15 308 *e*pP P 00 53 25.1 +1.4
comp=Z,14nm,0.7s,SNR=27
CEME Cevo 57.19 301⇑ *i*P P 00 53 24.4 +0.5
ULC Ulcinj 57.19 300⇑ *i*P P 00 53 24.3 +0.4
PRU Pruhonice 57.22 311⇑ *e*P P 00 53 25.0 +1.0
PRU *e* 00 53 28.8
PRU MLR MLR
comp=Z,1μm,15.2s
PRU Pruhonice 57.22 311⇑ *e*P P 00 53 25.0 +1.0
PRU *e*pP **pP 00 53 28.8 -1.3**
PRU AMS AMS 01 19 00.0
comp=Z,1μm,15.2s
AMT Artemida-Makis 57.25 295 P P 00 53 22.2 -2.2
BRG Berggiesshubel 57.26 312⇑ *i*P P 00 53 25.4 +1.1
comp=Z,30nm,0.9s
BRG *i* 00 53 28.6
comp=Z,45nm,1.1s
BRG SS SS 01 04 50.0 -18
comp=N,337nm,10.0s
comp=E,694nm,14.2s
comp=Z,846nm,12.7s
BRG Berggiesshubel 57.26 312⇑ *i*P P 00 53 25.4 +1.1
BRG *i* 00 53 28.6
BRG pmax pmax
comp=Z,30nm,0.9s
BRG MLR MLR
comp=E,337nm,14.2s
BRG MLR MLR
comp=Z,694nm,12.7s
GENI Genyem 57.28 124 P P 00 53 26.8 +2.0
comp=Z,136nm,1.3s
BUM Brajici-Budva 57.30 301⇑ *i*P P 00 53 25.4 +0.6
BRY Bratogost 57.30 302⇑ *i*P P 00 53 25.4 +0.5
BRY Bratogost 57.30 302 *e*P P 00 53 25.4 +0.5
IGT Igoumenitsa 57.41 297 P P 00 53 24.4 -1.1
PYL PYLOS 57.49 294 P P 00 53 24.3 -1.8
BLY Banja Luka 57.49 304⇑ *i*P P 00 53 26.9 +0.9
BLY Banja Luka 57.49 304⇑ *i*P P 00 53 26.7 +0.7
SRN Sarande 57.50 298 P P 00 53 25.0 -1.1
TREB Trebinje 57.50 301 *e*P P 00 53 26.3 +0.2
HCY Herceg Novi 57.51 301⇑ *i*P P 00 53 26.4 +0.3
HCY Herceg Novi 57.51 301 *e*P P 00 53 26.5 +0.3
JAY Jayapura 57.58 123 P P 00 53 27.1 +0.1
ARSA Arzberg 57.62 307 *e*pP P 00 53 27.7 +0.8
comp=Z,18nm,0.8s,SNR=15
HOMB Homborsund 57.65 321 *e*P P 00 53 27.0 +0.1
CLL Collm 57.66 313⇑ *i*P P 00 53 27.6 +0.5
comp=Z,31nm,0.9s
CLL *i* (sP) **pP 00 53 31.7 -1.4**
CLL *e*PS **PnS 01 01 41.0 +5.0**
CLL *e*SS **SS 01 05 12.0 -2.5**
CLL LmV 01 19 00.0
comp=Z,300nm,18.3s
CLL Collm 57.66 313⇑ *i*P P 00 53 27.6 +0.5
CLL pmax pmax
comp=Z,31nm,0.9s
KFL Anninata 57.67 296 P P 00 53 26.1 -1.2
FSK Fiskardo 57.68 296 P P 00 53 39.6 +12
MGRS Mrkonjic Grad 57.69 304⇑ *i*P P 00 53 29.0 +1.6
KEK Kerkira 57.71 298 P P 00 53 25.9 -1.7
ZAG Zagreb 57.86 306⇑ *i*P P 00 53 29.9 +1.3
STON Ston 57.88 302 *i* P P 00 53 28.5 -0.3
STON Ston 57.88 302 *e*P P 00 53 27.1 -1.6
GROS Grobnik 57.93 306 *i* P P 00 53 29.8 +0.6
MUD Monsted U'grnd 57.94 319 *i* P P 00 53 29.3 +0.4
MUD MLR MLR
comp=Z,1μm,14.0s
MUD Monsted U'grnd 57.94 319 *i* P P 00 53 29.3 +0.4
comp=Z,1μm,14.0s
MUD Monsted U'grnd 57.94 319 *e*P P 00 53 30.0 +1.1
GOLS Golise 58.02 306 *i* P P 00 53 30.9 +1.1
KHC Kasperske Hory 58.12 310⇑ *e*P P 00 53 31.3 +0.9
KHC *e* 00 53 34.5
KHC *e*S **S 01 01 35.1 +4.2**
KHC MLR MLR
comp=Z,900nm,13.8s
KHC Kasperske Hory 58.12 310⇑ *e*P P 00 53 31.3 +0.9
KHC *e*pP **pP 00 53 34.5 -2.0**
KHC *e*S **S 01 01 35.1 +4.2**
KHC AMS AMS 01 19 10.0
comp=Z,900nm,13.8s
SOKA Soboth 58.15 307 *e*pP P 00 53 31.5 +0.8
comp=Z,29nm,0.8s,SNR=51
GERES GERESS Array B 58.15 310 P P 00 53 31.7 +1.0
comp=Z,12nm,0.9s,baz=68,slow=7.4,SNR=52
GERES LR LR 01 19 19.4
comp=Z,462nm,21.2s,baz=66,slow=37
MOA Molln 58.18 308 *e*pP P 00 53 32.0 +1.1
comp=Z,14nm,0.8s,SNR=15
CRES Cresnjev 58.20 306⇑ *i*P P 00 53 31.8 +0.8
BLS5 Blasjo 58.24 323 *e*P P 00 53 31.9 +0.9
OZLJ Ozalj 58.28 306 *i* P P 00 53 32.7 +1.2
NKC Novy Kostel 58.38 311 *i* P P 00 53 33.3 +1.1
NKC *e* 00 53 36.5
NKC MLR MLR
comp=Z,1μm,17.5s
NKC Novy Kostel 58.38 311⇑ *i*P P 00 53 33.3 +1.1
NKC *e*pP **pP 00 53 36.5 -1.8**
NKC AMS AMS 01 19 10.0
comp=Z,1μm,17.5s
BER Bergen 58.42 324 *e*P P 00 53 33.1 +0.9
ASK Askoy 58.45 324 *e*P P 00 53 30.2 -2.2
BOJS Bojanci 58.46 306 *i* P P 00 53 33.9 +1.1
UDBI Udbina 58.51 304 *i* P P 00 53 33.6 +0.4
OBKA Obir 58.52 307 *e*pP P 00 53 34.0 +0.7
comp=Z,18nm,0.9s,SNR=14
LJU Ljubljana 58.72 306 *i* P P 00 53 35.2 +0.7
LJU Ljubljana 58.72 306⇑ *i*P P 00 53 35.1 +0.5
FURI Furi 58.75 256 *e*P P 00 53 36.1 +0.5
comp=Z,60nm,0.9s
KMY Karmoy 58.90 323 *e*P P 00 53 36.0 +0.5
CEY Cerknica 58.90 306⇑ *i*P P 00 53 36.4 +0.5
DAG Danmarks Havn 58.99 346 *e*P P 00 53 34.9 -1.0
DAG Danmarks Havn 58.99 346 *i* P P 00 53 34.9 -1.0
RIY Rijeka 59.03 306⇑ *i*P P 00 53 37.2 +0.5
MYKA Terra Mystica 59.05 307 *e*pP P 00 53 37.4 +0.4
comp=Z,7.8nm,0.6s,SNR=6.2
KBA Koelnbreinsper 59.05 308 *e*pP P 00 53 37.9 +0.8
comp=Z,11nm,0.7s,SNR=20
NVLJ Novalja 59.08 305 *i* P P 00 53 37.1 0.0
BAI Bari 59.16 300 *e*P P 00 53 38.4 +0.7
GRFO Grafenberg 59.33 311 *e*P P 00 53 39.2 +0.5
comp=Z,66nm,0.9s
GRFO Grafenberg 59.33 311 *e*P P 00 53 39.2 +0.5
GRFO pmax pmax
comp=Z,66nm,0.9s
JMIC Jan Mayen 59.38 338 LR LR 01 21 02.6
comp=Z,99nm,21.0s,baz=70,slow=38
SG1 Sgolgore (BA) 59.41 300 *e*P P 00 53 39.7 +0.2
MATE Matera 59.47 300⇓ *i*P P 00 53 40.2 +0.4
ABTA Abfaltersbach 59.71 308 *i* P P 00 53 41.5 -0.1
comp=Z,16nm,0.8s,SNR=17
WTTA Wattenberg 60.05 309 *i* pP P 00 53 44.8 +0.8
comp=Z,51nm,0.8s,SNR=57
WATA Walderalm 60.05 309 *i* pP P 00 53 44.5 +0.6
comp=Z,39nm,0.8s,SNR=46
TIP Timpagrande 60.07 298 P P 00 53 44.4 +0.4
TIP Timpagrande 60.07 298⇑ *i*P P 00 53 44.5 +0.4
SQTA Sankt Quirin 60.33 309 *i* pP P 00 53 46.5 +0.6
comp=Z,41nm,0.7s,SNR=29
MOTA Moosalm 60.34 309 *e*pP P 00 53 46.4 +0.5
comp=Z,32nm,0.8s,SNR=91
RETA Reutte 60.50 309 *e*pP P 00 53 47.7 +0.8

comp=Z,26nm,0.8s,SNR=13
FETA Feichten 60.71 309 *i* pP **P 00 53 49.0 +0.5**
comp=Z,34nm,1.0s,SNR=41
AQU L'Aquila 60.98 303⇑ *i* P **P 00 53 50.9 +0.6**
DAVA Damuels 61.12 309 *e*pP **P 00 53 51.7 +0.4**
comp=Z,11nm,0.9s,SNR=12
FUORN Ofenpass-Fuorn 61.17 308 *e*P **P 00 53 52.0 +0.2**
comp=Z,56nm,1.0s
LRW Lerwick 61.49 326 *e*P **P 00 53 53.9 +0.5**
LRW IAmb IAmb 00 53 58.4
comp=Z,60nm,0.9s
BFO Black Forest 61.62 311 *e*P **P 00 53 54.5 +0.1**
comp=Z,45nm,1.1s
BFO Black Forest 61.62 311 *e*P **P 00 53 54.5 +0.1**
BFO pmax pmax
comp=Z,45nm,1.1s
HGN Heimansgroeve 61.97 314 *e*PKPdf **P 00 53 57.5 +0.8**
comp=Z,29nm,0.8s
HGN *e*PKPdf **pP 00 53 58.1 -4.7**
comp=Z,12nm,0.7s
HGN *e*PKPbc **sP 00 54 01.3 -3.9**
HGN *e*PKPbc PcP 00 54 01.7 -36
MEM Membach 62.00 314 P **P 00 53 57.7 +0.8**
comp=Z,17nm,1.1s
MEM x x 00 54 01.5
BEBN Eben Emael 62.10 314 P **P 00 53 58.4 +0.9**
BEBN x x 00 54 01.9
BHOU Houvegnez 62.11 314 P **P 00 53 58.8 +1.1**
BHOU x x 00 54 02.3
CDF Champ du Feu 62.22 311 *e*P **P 00 53 58.1 -0.4**
CDF pmax pmax
comp=Z,45nm,1.0s
WLF Walferdange 62.33 313 P **P 00 54 00.5 +1.4**
comp=Z,45nm,1.3s
BCLA Clavier 62.48 314 P **P 00 54 01.1 +1.0**
BCLA x x 00 54 04.1
MOF Molkenrain 62.55 311 P **P 00 54 01.5 +0.7**
BGES Gesves 62.62 314 P **P 00 54 01.9 +0.8**
BGES x x 00 54 05.9
BMRD Maredsous 62.84 314 P **P 00 54 03.4 +0.9**
comp=Z,14nm,1.0s
BMRD x x 00 54 07.0
UCC Uccle 62.85 315 P **P 00 54 03.3 +0.7**
UCC x x 00 54 07.0
SNF Seneffe 63.02 314 P **P 00 54 04.6 +0.9**
DOU Dourbes 63.03 314 P **P 00 54 04.8 +0.9**
comp=Z,14nm,0.9s
BSKQ Steenkerk 63.08 314 P **P 00 54 05.0 +0.9**
comp=Z,17nm,0.7s
BSKQ x x 00 54 09.1
BBOU Bougnies 63.27 314 P **P 00 54 06.8 +1.4**
comp=Z,27nm,1.1s
BBOU x x 00 54 10.2
MLA1 Latheron 63.34 324 *e*P **P 00 54 06.4 +0.7**
BIGH Upper Bighouse 63.50 325 *e*P **P 00 54 07.6 +0.9**
BIGH IAmb IAmb 00 54 12.2
comp=Z,50nm,0.9s
DRUM Mains of Drumt 63.59 323 *e*P **P 00 54 07.3 -0.1**
DRUM IAmb IAmb 00 54 12.4
comp=Z,41nm,0.9s
TOLK Toolik Lake Re 63.63 22 P **P 00 54 08.0 +0.5**
baz=306
MME1 Meikle Cairn 63.63 323 *e*P **P 00 54 07.9 +0.2**
MCD Coleburn Disti 63.64 324 *e*P **P 00 54 08.4 +0.7**
LPL La Plagne 63.86 308 *e*P **P 00 54 09.9 +0.2**
LPL pmax pmax
comp=Z,66nm,0.9s
EDU Dundee 64.03 323 *e*P **P 00 54 10.6 +0.3**
ESY Stoneypath 64.14 322 *e*P **P 00 54 10.9 -0.1**
RSC Scourie 64.15 325 *e*P **P 00 54 11.9 +0.9**
EDMD Edmundbyers 64.35 321 *e*P **P 00 54 12.3 -0.1**
EDMD IAmb IAmb 00 54 17.0
comp=Z,38nm,0.9s
INVG Invergeldie, C 64.58 323 *e*P **P 00 54 14.2 +0.2**
INVG IAmb IAmb 00 54 19.1
comp=Z,16nm,0.9s
HPK Haverah Park 64.60 320 *e*P **P 00 54 14.4 +0.4**
HPK IAmb IAmb 00 54 19.1
comp=Z,49nm,1.1s
KAC Achnashellach 64.64 324 *e*P **P 00 54 14.3 +0.1**
ESK Eskdalemuir 64.73 321 *e*P **P 00 54 14.7 -0.2**
comp=Z,22nm,0.9s
ESK Eskdalemuir 64.73 321 *e*P **P 00 54 14.6 -0.2**
ESK Eskdalemuir 64.73 321 *e*P **P 00 54 14.7 -0.2**
ESK pmax pmax
comp=Z,22nm,0.9s
BHH Howats Hill 64.84 321 *e*P **P 00 54 16.0 +0.4**
EAB Aberfoyle 64.84 323 *e*P **P 00 54 15.7 +0.1**
KPL Plockton 64.88 324 *e*P **P 00 54 16.5 +0.7**
LBWR Ladybower, Pea 64.93 319 *e*P **P 00 54 16.6 +0.4**
LBWR IAmb IAmb 00 54 21.7
comp=Z,47nm,0.9s
RRH Rhenigidale 65.06 325 *e*P **P 00 54 17.5 +0.6**
SSF Saint Saulge 65.10 311 *e*P **P 00 54 16.6 -0.9**
SSF pmax pmax
comp=Z,20nm,1.0s
LAWE Loch Awe, Argy 65.32 323 *e*P **P 00 54 19.0 +0.3**
SUMG Summit 65.67 346 *e*P **P 00 54 20.8 -0.4**
comp=Z,42nm,1.0s
SUMG Summit 65.67 346 *e*P **P 00 54 20.8 -0.4**
SUMG pmax pmax
comp=Z,42nm,1.0s
SUMG Summit 65.67 346 *i* P **P 00 54 21.1 -0.1**
IOMK Kirk Michael 65.94 321 *e*P **P 00 54 23.3 +0.5**
IOMK IAmb IAmb 00 54 28.0
comp=Z,104nm,0.9s
FOEL Foel Wylfa 65.95 319 *e*P **P 00 54 23.4 +0.5**
FOEL IAmb IAmb 00 54 28.1
comp=Z,58nm,1.0s
STRD Stroud 65.97 318 *e*P **P 00 54 23.3 +0.3**
STRD IAmb IAmb 00 54 28.1
comp=Z,67nm,0.8s
LLW Llanuwychllyn 66.22 319 *e*P **P 00 54 24.9 +0.3**
OLDB Oldbury-Upon-S 66.24 318 *e*P **P 00 54 25.1 +0.3**
OLDB IAmb IAmb 00 54 29.7
comp=Z,64nm,0.9s
KMBO Kilima Mbogo 66.30 249 P **P 00 54 26.5 +0.6**
comp=Z,3.9nm,0.7s,baz=31,slow=6.9,SNR=17
KMBO Kilima Mbogo 66.30 249 *e*P **P 00 54 26.2 +0.2**
comp=Z,43nm,1.2s
KMBO Kilima Mbogo 66.30 249 *i* P **P 00 54 27.1 +1.2**
SNR=8.0
KMBO Kilima Mbogo 66.30 249 *e*P **P 00 54 26.2 +0.2**
KMBO pmax pmax
comp=Z,43nm,1.2s
KMBO Kilima Mbogo 66.30 249 P **P 00 54 26.7 +0.8**
SNR=10
MCH1 Michaelchurch 66.31 318 *e*P **P 00 54 25.2 0.0**
MCH1 IAmb IAmb 00 54 30.1
comp=Z,54nm,0.8s
POKR Poker Plat Res 66.46 24 P **P 00 54 26.4 +0.5**
baz=309
TCOL CIGO, UAF Yank 66.48 25 P **P 00 54 26.0 0.0**
baz=309
COLA College 66.48 25 *e*P **P 00 54 26.3 +0.3**
comp=Z,49nm,0.9s
COLA College 66.48 25 *c i*P **P 00 54 26.3 +0.3**
COLA pmax pmax
comp=Z,33nm,1.1s
GMM Mts of Mourne 66.65 321 *e*P **P 00 54 27.6 +0.3**
ILAR Eielson Array 66.86 24 P **P 00 54 28.2 -0.4**
comp=Z,15nm,0.9s,baz=295,slow=5.3,SNR=86
ILAR PP **PP 00 56 57.8 +2.5**
comp=Z,5.6nm,1.1s,baz=303,slow=6.5,SNR=6.5
ILAR LR LR 01 27 21.3
comp=Z,352nm,18.0s,baz=310,slow=39
KEST Kesra 66.89 298 P **P 00 54 29.9 +0.7**
comp=Z,25nm,1.0s,baz=237,slow=1.1,SNR=13
PMG Port Moresby 66.96 123 *de*P **P 00 54 30.1 +0.3**
PMG pmax pmax
comp=Z,225nm,1.3s
CAF Calviac 67.03 310 *e*P **P 00 54 30.1 +0.1**
CAF pmax pmax
comp=Z,33nm,1.0s
HDA Harding Lake 67.08 25 P **P 00 54 28.8 -1.1**
baz=310
RSBS Rosebush, Pemb 67.25 319 *e*P **P 00 54 31.2 0.0**
RSBS IAmb IAmb 00 54 32.3
comp=Z,44nm,1.5s
MFF Saint Martin d 67.50 312 *e*P **P 00 54 32.4 -0.4**
MFF pmax pmax
comp=Z,49nm,1.0s
HTL Hartland 67.62 318 *e*P **P 00 54 33.9 +0.4**
HTL IAmb IAmb 00 54 39.0
comp=Z,55nm,1.0s

WRAB Tennant Creek 67.73 141 *e*P **P 00 54 33.9 -0.6**
comp=Z,58nm,1.0s
WRAB Tennant Creek 67.73 141 *e*P **P 00 54 33.9 -0.6**
WRAB pmax pmax
comp=Z,58nm,1.0s
WRA Warramunga Arr 67.73 141 P **P 00 54 34.0 -0.5**
comp=Z,39nm,0.9s
LFF La Frestale 67.83 310 *e*P **P 00 54 35.0 0.0**
LFF pmax pmax
comp=Z,40nm,0.8s
EPYK Eagle Plains 68.82 20 P **P 00 54 40.5 -0.3**
baz=317
MORW Morawa 68.96 161 *e*P **P 00 54 42.0 0.0**
comp=Z,83nm,1.0s
KDAK Kodiak Island 69.11 32 *e*P **P 00 54 41.8 -0.9**
comp=Z,154nm,1.4s
KDAK Kodiak Island 69.11 32 *e*P **P 00 54 41.8 -0.9**
KDAK pmax pmax
comp=Z,154nm,1.4s
ASAR Alice Springs 70.67 143 P **P 00 54 52.1 -0.6**
comp=Z,11nm,0.8s,baz=331,slow=6.1,SNR=68
ASAR PKP2bc 01 22 48.8
comp=Z,0.4nm,0.6s,baz=174,slow=2.5,SNR=4.3
ASAR LR LR 01 29 13.2
comp=Z,66nm,18.2s,baz=316,slow=39
MBAR Mbarara 70.86 254 *e*P **P 00 54 54.8 +0.5**
comp=Z,26nm,1.0s
MBAR Mbarara 70.86 254 *e*P **P 00 54 54.8 +0.5**
MBAR pmax pmax
comp=Z,26nm,1.0s
SFJD Kangerlussuaq 72.64 347 *e*P **P 00 55 03.5 -0.5**
comp=Z,36nm,1.0s
SFJD Kangerlussuaq 72.64 347 *e*P **P 00 55 03.5 -0.5**
SFJD pmax pmax
comp=Z,36nm,1.0s
SFJD Kangerlussuaq 72.64 347 *i* P **P 00 55 03.7 -0.3**
NWAO Narrogin (SRO) 72.94 161 *e*P **P 00 55 06.1 0.0**
comp=Z,79nm,1.0s
NWAO Narrogin (SRO) 72.94 161 *e*P **P 00 55 06.1 0.0**
NWAO pmax pmax
comp=Z,79nm,1.0s
ESDC Sonseca Array 73.64 308 P **P 00 55 11.2 +0.7**
comp=Z,19nm,0.7s,baz=45,slow=5.9,SNR=101
ESDC LR LR 01 29 16.7
comp=Z,179nm,20.3s,baz=20,slow=37
PAB San Pablo 73.95 308 *e*P **P 00 55 12.4 0.0**
comp=Z,21nm,1.0s
PAB San Pablo 73.95 308 *e*P **P 00 55 12.4 0.0**
PAB pmax pmax
comp=Z,21nm,1.0s
PBRG Braganca 74.10 311 *e*P **P 00 55 13.7 +0.5**
comp=Z,31nm,1.6s
FORT Forrest 74.39 152 *e*P **P 00 55 14.9 +0.3**
comp=Z,58nm,0.9s
CTAO Charters Tower 74.42 131 *e*P **P 00 55 15.3 +0.2**
comp=Z,54nm,1.0s
CTAO Charters Tower 74.42 131 *e*P **P 00 55 15.3 +0.2**
CTAO pmax pmax
comp=Z,55nm,1.0s
MVO Moncorvo 74.66 310 *e*P **P 00 55 17.3 +0.8**
comp=Z,36nm,0.9s
MVO Moncorvo 74.66 310 *e*LQ LQ 01 22 12.7
PGAV Gavieira, Arco 74.92 311 *e*P **P 00 55 19.1 +1.1**
comp=Z,26nm,1.3s
PGAV Gavieira, Arco 74.92 311 *e*LQ LQ 01 21 52.7
PCAB Cabril 74.93 311 *e*P **P 00 55 19.1 +1.1**
comp=Z,50nm,1.0s
POLO Lamas de Olo 74.99 311 *e*P **P 00 55 19.1 +0.7**
comp=Z,13nm,1.5s
MTE Manteigas 75.43 310 *e*P **P 00 55 22.2 +1.3**
comp=Z,57nm,1.6s
MTE Manteigas 75.43 310 *e*LQ LQ 01 22 51.0
PVIS Viseu 75.45 310 *e*P **P 00 55 22.5 +1.5**
comp=Z,31nm,1.2s
PTO Porto 75.62 311 *e*P **P 00 55 23.4 +1.5**
comp=Z,41nm,1.4s
PCBR Castelo Branco 75.72 309 *e*P **P 00 55 23.3 +0.8**
comp=Z,29nm,1.8s
PMRV Marv??o 75.92 309 *e*P **P 00 55 24.6 +0.9**
comp=Z,46nm,1.4s
PMRV Marv??o 75.92 309 *e*LQ LQ 01 23 37.2
COI Coimbra 76.07 310 *e*P **P 00 55 26.1 +1.6**
comp=Z,74nm,0.9s
PCAS Casmilo, Conde 76.22 310 *e*P **P 00 55 26.3 +0.9**
comp=Z,42nm,1.6s
PTOM Tomar 76.43 310 *e*P **P 00 55 28.2 +1.7**
comp=Z,39nm,1.3s
PMTG Montargil 76.65 309 *e*P **P 00 55 28.5 +0.7**
comp=Z,28nm,1.5s
PBEJ Beja 77.06 308 *e*P **P 00 55 32.1 +1.9**
comp=Z,39nm,1.5s
YKA Yellowknife Ar 77.28 14 P **P 00 55 30.6 -0.3**
comp=Z,8.9nm,0.9s,baz=336,slow=5.3,SNR=37
YKA LR LR 01 33 00.2
comp=Z,14nm,20.8s,baz=312,slow=38
PVAQ Vaqueiros 77.35 308 *e*P **P 00 55 32.9 +1.1**
comp=Z,50nm,1.6s
PVAQ Vaqueiros 77.35 308 *e*LQ LQ 01 21 47.3
MESJ Messejana 77.40 308 *e*P **P 00 55 32.0 0.0**
MESJ AMb AMB 00 55 38.7
comp=Z,45nm,1.8s
MESJ Messejana 77.40 308 *e*P **P 00 55 33.2 +1.2**
comp=Z,46nm,1.9s
MESJ Messejana 77.40 308 *e*P **P 00 55 32.0 0.0**
PCVE Castro Verde 77.41 308 *e*P **P 00 55 33.4 +1.3**
comp=Z,38nm,1.5s
PNCL Nicolau / Gran 77.43 308 *e*P **P 00 55 33.6 +1.4**
comp=Z,37nm,1.6s
PBDV Barranco-do-Ve 77.58 307 *e*P **P 00 55 34.5 +1.4**
PTEO Sao Teotonio 77.90 308 *e*P **P 00 55 36.5 +1.7**
comp=Z,51nm,1.7s
MORF Marmelete 78.00 308 *e*P **P 00 55 35.2 -0.2**
MORF AMb AMB 00 55 46.8
comp=Z,50nm,2.0s
MORF Marmelete 78.00 308 *e*P **P 00 55 37.4 +1.9**
MORF Marmelete 78.00 308 *e*P **P 00 55 35.2 -0.2**
PFVI Vila Bisbo 78.22 308 *e*P **P 00 55 38.0 +1.4**
BBOO Buckleboo 79.44 146 *e*P **P 00 55 42.3 -0.8**
comp=Z,20nm,0.9s
STKA Stephens Creek 81.23 142 P **P 00 55 52.1 -0.7**
comp=Z,17nm,0.7s,baz=324,slow=6.1,SNR=29
STKA LR LR 01 36 05.3
comp=Z,121nm,18.4s,baz=355,slow=39
LSZ Lusaka 82.40 244 *e*P **P 00 55 60.0 +0.5**
comp=Z,28nm,0.9s
LSZ Lusaka 82.40 244 *e*P **P 00 56 00.0 +0.5**
LSZ pmax pmax
comp=Z,28nm,0.9s
LSZ Lusaka 82.40 244 P **P 00 55 59.8 +0.3**
TOA0 Torodi Ar. Sit 85.34 283 *e*P **P 00 56 13.8 -0.7**
comp=Z,28nm,1.1s
TOA0 Torodi Ar. Sit 85.34 283 P **P 00 56 14.7 +0.2**
SNR=7.5
TORD Torodi Ar. Bea 85.34 283 P **P 00 56 13.3 -1.2**
comp=Z,8.9nm,1.0s,baz=37,slow=3.2,SNR=36
TORD PP **PP 00 59 34.3 +2.0**
comp=Z,4.6nm,1.1s,baz=50,slow=5.5,SNR=4.5
SCHQ Schefferville 86.75 350 P **P 00 56 19.3 -1.5**
comp=Z,9.7nm,0.8s,baz=27,slow=9.0,SNR=5.9
SCHQ LR LR 01 38 05.6
comp=Z,80nm,18.6s,baz=84,slow=38
FFC Flin Flon 86.78 10 *e*P **P 00 56 20.2 -0.8**
comp=Z,14nm,1.1s
FFC Flin Flon 86.78 10 *e*P **P 00 56 20.2 -0.8**
FFC pmax pmax
comp=Z,14nm,1.1s
A04D Lummi Island 87.49 24 P **P 00 56 25.0 +0.5**
baz=330
B05A Bryant 88.08 24 P **P 00 56 27.2 -0.1**
baz=331
D03D Eldon 88.39 25 P **P 00 56 29.4 +0.6**
baz=330
D04E Lakebay 88.81 25 P **P 00 56 31.7 +1.0**
baz=330
E04D Cinebar 89.42 25 P **P 00 56 34.3 +0.6**
baz=330
NEW Newport 89.62 21 P **P 00 56 35.0 +0.4**
baz=334
F05D White Salmon 90.38 25 P **P 00 56 38.9 +0.7**
baz=331
LBTB Lobatse 90.69 239 *e*P **P 00 56 39.7 -0.2**
comp=Z,17nm,1.0s
LBTB Lobatse 90.69 239 *e*P **P 00 56 39.7 -0.2**
LBTB pmax pmax
comp=Z,17nm,1.0s
G05D Wamic, OR 90.99 25 P **P 00 56 42.5 +1.5**
baz=331

I03D Drain, OR 91.62 27 P **P 00 56 45.0 +1.1**
baz=330
EGMT Eagleton 91.75 17 P **P 00 56 44.3 -0.3**
baz=340
MSO Missoula 91.81 20 P **P 00 56 44.9 0.0**
baz=337
I04A Tendick Farm, 91.87 27 P **P 00 56 44.8 -0.4**
baz=331
ULM Lac du Bonnet 91.92 8 P **P 00 56 43.3 -2.0**
comp=Z,4.5nm,0.8s,baz=360,slow=13,SNR=3.1
ULM LR LR 01 40 05.3
comp=Z,153nm,20.9s,baz=334,slow=37
CHGQ Chibougamau 92.45 354 P **P 00 56 47.1 -0.6**
baz=7.7
J05D Fort Rock, OR 92.73 26 P **P 00 56 49.8 +0.5**
baz=331
MATQ Matagami 92.83 356 P **P 00 56 49.5 0.0**
baz=5.1
BOSA Boshof 93.29 236 P **P 00 56 51.1 -0.8**
comp=Z,3.3nm,0.9s,baz=91,slow=3.1,SNR=3.5
BOSA LR LR 01 38 43.6
comp=Z,124nm,19.1s,baz=164,slow=35
BOZ Bozeman (W) 93.57 19 P **P 00 56 52.0 -1.1**
baz=338
M04C Macdoel 93.83 27 P **P 00 56 54.4 0.0**
baz=331
AGMN Agassiz Nation 93.85 8 P **P 00 56 53.2 -1.0**
baz=351
DBIC Dimbokro 94.39 282 P **P 00 56 56.7 -0.5**
comp=Z,13nm,0.9s,baz=30,slow=5.8,SNR=9.5
DBIC Dimbokro 94.39 282 *e*P **P 00 56 57.1 -0.1**
comp=Z,13nm,0.8s
DBIC Dimbokro 94.39 282 *e*P **P 00 56 57.1 -0.1**
DBIC pmax pmax
comp=Z,13nm,0.8s
KIC Kosan Boka 94.49 281 *e*PKP2 **P 00 56 57.3 -0.4**
comp=Z,39nm,1.1s
TIC Toumodi 94.53 282 *e*PKP2 **P 00 56 57.3 -0.6**
EYMN Ely 94.59 5 P **P 00 56 55.8 -1.8**
baz=354
RLMT Red Lodge 94.60 18 P **P 00 56 56.8 -1.2**
baz=340
HLID Hailey 94.68 22 P **P 00 56 56.9 -1.4**
baz=336
C40A Isle Royale Na 94.75 3 P **P 00 56 57.2 -1.1**
baz=356
LIC Lamto 94.80 282 *e*PKP2 **P 00 56 58.5 -0.6**
comp=Z,29nm,0.8s
D54A Lac Fusel, La 95.37 355 P **P 00 56 59.4 -1.8**
baz=5.9
D49A Beulah Townshi 95.48 358 P **P 00 57 00.0 -1.6**
baz=2.2
D50A G1974 Best Tow 95.53 357 P **P 00 57 01.4 -0.5**
baz=3.4
D52A ZEK Kipawa Sen 95.65 356 P **P 00 57 01.6 -0.8**
baz=4.5
D47A Chapleau 95.72 359 P **P 00 57 02.1 -0.7**
baz=0.8
D46A Sault St. Mari 95.89 360 P **P 00 57 02.8 -0.7**
E54A Lac Daplat, Po 96.12 355 P **P 00 57 03.9 -0.7**
baz=5.5
E40A Wakefield 96.18 4 P **P 00 57 04.1 -0.8**
baz=355
E53A Dumoine, Ponti 96.20 355 P **P 00 57 03.7 -1.3**
baz=5.1
E42A Champion 96.29 3 P **P 00 57 04.1 -1.2**
baz=357
E50A Wahnapitae 96.31 358 P **P 00 57 05.0 -0.4**
baz=2.6
E43A Lone Tree Farm 96.37 2 P **P 00 57 04.1 -1.7**
baz=358
F38A Pierce - Schro 96.54 5 P **P 00 57 05.7 -0.8**
baz=354
F39A Loretta 96.65 5 P **P 00 57 05.9 -1.1**
baz=355
RSSD Black Hills 96.69 14 *e*P **P 00 57 08.0 +0.5**
comp=Z,15nm,1.3s
RSSD Black Hills 96.69 14 *e*P **P 00 57 08.0 +0.5**
RSSD pmax pmax
comp=Z,15nm,1.3s
RSSD Black Hills 96.69 14 P **P 00 57 07.0 -0.5**
baz=344
F40A Park Falls 96.69 4 P **P 00 57 05.8 -1.4**
baz=355
BW06 Boulder Array 96.74 19 P **P 00 57 06.1 -1.7**
baz=340
PDAR Pinedale Array 96.74 19 P **P 00 57 06.8 -1.0**
comp=Z,1.0nm,0.8s,baz=25,slow=3.9,SNR=6.7
PDAR PP **PP 01 01 05.3 +3.8**
comp=Z,0.8nm,0.9s,baz=348,slow=6.8,SNR=3.8
PDAR PKKPbc **PKKPdf 01 13 47.8 -1.7**
comp=Z,0.1nm,0.3s,baz=198,slow=2.7,SNR=3.7
PDAR LR LR 01 46 39.7
comp=Z,123nm,18.2s,baz=347,slow=39
F44A Big Bay de Noc 96.79 2 P **P 00 57 05.9 -1.7**
baz=358
F52A Sundridge 96.88 357 P **P 00 57 07.0 -1.1**
baz=3.8
F43A Flat Rock, Esc 96.91 2 P **P 00 57 06.6 -1.5**
baz=358
F41A Three Lakes 96.93 3 P **P 00 57 07.0 -1.3**
baz=356
F45A CMU Biological 97.09 1 P **P 00 57 07.8 -1.2**
baz=359
G40A Rib Lake 97.34 4 P **P 00 57 09.0 -1.1**
baz=355
PLVO Plevna 97.50 355 P **P 00 57 10.1 -0.8**
baz=5.6
G53A Haliburton 97.51 356 P **P 00 57 10.5 -0.5**
baz=4.3
LONY Lake Ozonia 97.71 353 P **P 00 57 11.2 -0.6**
baz=7.6
H39A Augusta 97.85 5 P **P 00 57 12.2 -0.2**
baz=354
H40A Chili 97.97 4 P **P 00 57 12.2 -0.8**
baz=355
NVAR Mina Array Bea 98.06 26 P Pdif 00 57 14.2 +0.3
comp=Z,1.8nm,0.8s,baz=336,slow=3.3,SNR=3.7
NVAR LR LR 01 47 15.1
comp=Z,88nm,18.2s,baz=15,slow=39
H42A Shiocton 98.18 3 P **P 00 57 13.1 -0.8**
baz=356
ECSD EROS Data Cent 98.27 9 P **P 00 57 13.2 -1.2**
baz=350
I42A Draeger Farm, 98.78 3 P **P 00 57 15.8 -0.9**
baz=356
TXAR Lajitas Array 110.96 18 PKiKP **PKiKP 01 02 07.9 -2.8**
comp=Z,0.3nm,0.7s,baz=48,slow=1.3,SNR=3.1
TXAR PKKPbc **PKKPbc 01 13 04.8 -2.4**
comp=Z,0.4nm,0.8s,baz=172,slow=3.4,SNR=3.1
SYO Syowa Base 114.06 199⇑ *e*PKPdf PKPdf 01 02 13.4 -1.5
SYO Syowa Base 114.06 199⇑ *ep*PKPdf PKiKP 01 02 26.1 +11
VNDA Vanda 121.51 167 PKP **PKPdf 01 02 27.4 -1.7**
comp=Z,1.6nm,0.9s,baz=304,slow=4.2,SNR=7.6
RCBR Riachuelo 125.99 293 *e*P **PKiKP 01 02 41.3 +1.3**
QSPA South Pole Qui 127.36 180 *e*PKPdf **PKPdf 01 02 40.2 -0.5**
NBLI Livramento-PB 127.79 293 *e*P **PKiKP 01 02 44.6 +1.0**
SNAA Sanae 127.90 203 PKiKP **PKPdf 01 02 41.2 -0.4**
SNAA Sanae 127.90 203 *e*PKPdf **PKPdf 01 02 41.2 -0.4**
SNAA Sanae 127.90 203 *e*PKiKP **PKPdf 01 02 41.2 -0.4**
VNA2 Neumayer--Watz 129.31 204 PKiKP **PKPdf 01 02 44.3 +0.1**
baz=44,slow=2.0
VNA1 Neumayer--Stat 129.59 205 PKiKP **PKPdf 01 02 44.8 +0.1**
VNA3 Neumayer Olymp 130.06 204 PKiKP **PKPdf 01 02 45.4 -0.3**
SDV Santo Domingo 132.07 342 SKPbc **SKPbc 01 06 14.3 -2.8**
comp=Z,6.2nm,0.9s,baz=306,slow=20,SNR=6.1
SDV Santo Domingo 132.07 342 *e*PKPdf **PKPdf 01 02 50.8 -0.6**
SDV Santo Domingo 132.07 342 *e*P **PKPdf 01 02 50.5 -0.9**
ROSC El Rosal 136.81 346 PKP **PKPdf 01 02 59.4 -1.2**
comp=Z,4.5nm,0.6s,baz=151,slow=7.4,SNR=4.2
PTGA Pitinga 137.08 323 *e*P **PKiKP 01 03 02.6 +0.1**
RIB01 Linhares ES 137.87 283 *e*P **PKiKP 01 03 03.3 -0.5**
SJMB Sao Joao De Ma 138.13 285 *e*P **PKiKP 01 03 04.4 0.0**
JANB Januaria 138.26 292 *e*P **PKiKP 01 03 04.8 +0.1**
ALF01 Guarapari-ES 138.86 282 *e*P **PKiKP 01 03 05.5 -0.3**
DUB01 Friburgo-RJ 140.95 281 *e*P **PKiKP 01 03 09.8 -0.3**
BDFB Brasilia 141.34 295 PKhKP PKPpre 01 03 02.1
comp=Z,4.2nm,0.9s,baz=173,slow=8.3,SNR=4.3
OTAV Otavalo 141.99 351 *e*P **PKPdf 01 03 11.3 +1.2**
CLDB Colider 143.18 309 *e*P **PKiKP 01 03 13.7 -1.1**
BB19B Bebedouro 145.10 288 *e*P **PKPdf 01 03 16.1 +1.4**
RCLB Rio Claro- Sao 145.12 285 *e*P **PKPdf 01 03 15.4 +0.6**
ITRB Iturama 145.65 292 *e*P **PKPab 01 03 17.1 +0.7**
SPB Sao Paulo 145.68 283 *e*PKPdf **PKPbc 01 03 16.0 0.0**
SPB Sao Paulo 145.68 283 *e*P **PKPab 01 03 17.8 +1.5**
FRTB Fartura 147.19 286 *e*P **PKPbc 01 03 20.7 +0.2**
ATAH Atahualpa 149.23 349 PKPbc **PKPdf 01 03 23.4 +1.0**

comp=Z,12nm,0.8s,baz=128,slow=18,SNR=4.3
PTGB Pitanga 149.85 286 eP PKPbc 01 03 25.3 -2.1
AQDB Aquidauana 150.01 297 eP PKPbc 01 03 25.8 -2.0
SIV San Ignacio 150.37 310 PKP PKPdf 01 03 23.4 -0.2
comp=Z,7.7nm,0.8s,baz=84,slow=3.5,SNR=17
SIV PKPbc PKPbc 01 03 28.2 -0.6
comp=Z,15nm,0.9s,baz=72,slow=3.2,SNR=47
SIV PKPab sPKPdf 01 03 33.5 +1.2
comp=Z,17nm,0.8s,baz=37,slow=3.3,SNR=28
ITAB Concordia 151.19 282 eP PKPdf 01 03 27.3 +2.8
LPAZ La Paz 154.50 322 PKP PKPdf 01 03 29.4 -1.1
comp=Z,2.5nm,1.1s,baz=25,slow=4.1,SNR=5.8
LPAZ La Paz 154.50 322 ePKPdf PKPdf 01 03 30.4 0.0
LPAZ La Paz 154.50 322 ePKIKP PKPdf 01 03 30.4 0.0
LPAZ La Paz 154.50 322 eP PKPdf 01 03 30.8 +0.3
CPUP Villa Florida 154.72 289 PKP PKPdf 01 03 28.9 -0.8
comp=Z,3.0nm,1.0s,baz=359,slow=11,SNR=3.9
CPUP Villa Florida 154.72 289 eP PKPdf 01 03 31.7 +2.0
LVC Limon Verde 160.12 314 PKPab PKPab 01 04 16.8 -0.2
comp=Z,4.2nm,0.8s,baz=338,slow=0.9,SNR=5.1
TRQA Tornquist 162.48 262 ePKPdf PKPdf 01 03 39.2 +0.6
TRQA ePKPab PKPab 01 04 26.8 +0.1
TRQA Tornquist 162.48 262 ePKIKP PKPdf 01 03 39.2 +0.6
TRQA Tornquist 162.48 262 eP PKPdf 01 03 41.5 +2.8
CFA Coronel Fontan 165.61 290 PKP PKPdf 01 03 41.2 -0.5
comp=Z,1.7nm,0.6s,baz=286,slow=7.2,SNR=4.0
CFA PKPab PKPab 01 04 40.7 +0.1
comp=Z,14nm,1.0s,baz=22,slow=4.6,SNR=6.6
LCO Las Campanas 165.88 303 eP PKPdf 01 03 44.9 +2.6
PLCA Paso Flores 168.99 249 PKP PKPdf 01 03 44.0 +0.1
comp=Z,3.3nm,0.9s,baz=297,slow=2.3,SNR=3.3

*ISCJB **05** 01:06:22.1±0.5, 3°.78N±0°.08×63°.61E±0°.06, h10km, mb4.3/45, MS3.7/6, Error ellipse: s-maj=11.8km s-min=8.9km az=14.6*
*IDC **05** 01:06:22.5±0.7, 3°.74N×63°.58E, h0km, mb4.0/21, mb1 4.1/21, mb1mx3.9/54, mbtmp4.0/21, MS3.7/7, Ms1 3.7/7, ms1mx3.3/36, Error ellipse: s-maj=18.3km s-min=16.4km az=10.0*
*NEIC **05** 01:06:23.9±1.8, 3°.76N×63°.62E, h10km±2km, mb4.4/29, Error ellipse: s-maj=19.0km s-min=16.0km az=164.0*
ISC 05 01:06:23.8±0.6, 3°.8N±0°.1×63°.63E±0°.09, h10km, n68, σ1º00/66, mb4.3/45, MS3.6/6, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	12.43	144	T	T	01 22 04.6	
	baz=324,slow=76,SNR=93						
H08N3	Diego Garcia H	12.44	144	T	T	01 22 05.4	
	baz=324,slow=76,SNR=245						
H08N1	Diego Garcia H	12.45	144	T	T	01 22 06.3	
	baz=324,slow=76,SNR=60						
WSAR	Wadi Sarin	19.96	346	LR	LR	01 17 21.3	
	comp=Z,255nm,18.2s,baz=124,slow=33						
KMBO	Kilima Mbogo	26.81	260	P	P	01 12 03.5	-1.3
	0.5nm,0.3s,baz=38,slow=19,SNR=2.3						
KMBO	Kilima Mbogo	26.81	260	eP	P	01 12 03.5	-1.3
	4.1nm,1.1s						
NIL	Nilore	31.07	16	eP	P	01 12 39.0	-3.2
	9.8nm,1.2s						
LSA	Lhasa	36.67	42	eP	P	01 13 28.9	-2.5
	7.6nm,0.9s						
BTK	Batken	36.72	9	eP	P	01 13 34.1	+2.9
	6.5nm,0.9s						
CM31	Chiang Mai Arr	37.49	64	eP	P	01 13 39.4	+1.3
	21nm,1.6s						
CM31				ePcP	PcP	01 15 57.4	+0.8
CMAR	Chiang Mai Arr	37.49	64	P	P	01 13 39.4	+1.3
	0.8nm,0.4s,baz=255,slow=9.2,SNR=8.1						
CMAR				PcP	PcP	01 15 57.4	+0.8
	0.8nm,0.3s,baz=252,slow=6.2,SNR=4.2						
CMAR				LR	LR	01 27 22.4	
	comp=Z,68nm,19.6s,baz=246,slow=34						
CHTO	Chiang Mai	37.61	64	eP	P	01 13 38.7	-0.4
	8.9nm,1.2s						
ARSB	Arslanbob	38.33	11	eP	P	01 13 44.8	-0.2
	5.2nm,1.0s						
KK31	Karatay Array	39.66	8	eP	P	01 13 55.9	0.0
	13nm,1.8s						
KKAR	Karatay Array	39.66	8	eP	P	01 13 55.6	-0.3
	13nm,1.8s						
AAK	Ala-Archa	39.91	13	P	P	01 14 00.1	+1.9
	1.1nm,0.3s,baz=93,slow=5.0,SNR=4.2						
AAK	Ala-Archa	39.91	13	eP	P	01 13 56.8	-1.4
	8.6nm,1.5s						
GNI	Garni	40.05	337	P	P	01 14 00.7	+1.3
	2.5nm,0.5s,baz=351,slow=4.4,SNR=4.1						
GNI	Garni	40.05	337	eP	P	01 14 02.9	+3.5
	10nm,1.1s						
MATP	Matopo	42.03	234	P	P	01 14 16.9	+0.9
	2.5nm,0.8s,baz=214,slow=3.6,SNR=5.3						
BR101	Keskin Array S	44.93	327	eP	P	01 14 39.9	+0.7
BR131	Keskin Array S	44.93	327	eP	P	01 14 39.4	+0.3
	2.6nm,1.0s						
BRTR	Keskin Array B	44.93	327	P	P	01 14 39.9	+0.7
	0.9nm,0.8s,baz=127,slow=8.2,SNR=7.3						
ABKAR	Akbulak array	45.44	357	eP	P	01 14 44.5	+1.6
	8.9nm,1.4s						
MK32	Makanchi Array	45.82	18	eP	P	01 14 46.4	+0.4
MK32				ePcP	PcP	01 16 24.2	+0.9
MKAR	Makanchi Array	45.82	18	P	P	01 14 46.4	+0.4
	0.5nm,0.7s,baz=218,slow=7.7,SNR=4.6						
MKAR				PcP	PcP	01 16 24.2	+0.9
	0.8nm,0.9s,baz=242,slow=5.2,SNR=3.8						
MKAR				LR	LR	01 32 10.5	
	comp=Z,66nm,21.3s,baz=274,slow=34						
AKTO	Aktyubinsk	46.76	355	P	P	01 14 54.1	+0.9
	2.0nm,0.7s,baz=162,slow=8.8,SNR=9.1						
KURBB	Kurchatov Arra	48.36	13	P	P	01 15 05.9	+0.2
	1.0nm,0.9s,baz=211,slow=8.1,SNR=4.8						
KURBB				PcP	PcP	01 16 31.5	-0.7
	0.5nm,0.8s,baz=190,slow=4.7,SNR=3.2						
BVAR	Borovoye Array	49.42	5	P	P	01 15 13.9	+0.1
	0.5nm,0.6s,baz=183,slow=8.2,SNR=4.8						
BRVK	Borovoye	49.45	5	eP	P	01 15 14.5	+0.5
	7.3nm,1.7s						
XAN	Xi'an	51.74	49	eP	P	01 15 31.6	-0.1
	11nm,1.3s						
ARU	Arti	52.68	356	P	P	01 15 37.8	-0.4
	0.4nm,0.4s,baz=270,slow=20						
ARU	Arti	52.68	356	eP	P	01 15 38.5	+0.3
	12nm,1.5s						
VTS	Vitosha	52.78	323	eP	P	01 15 40.7	+1.3
	3.9nm,1.2s						
ZAA0	Zalesovo Array	52.95	16	eP	P	01 15 40.4	+0.1
	6.2nm,1.0s						
ZALV	Zalesovo Beam	52.95	16	P	P	01 15 40.3	0.0
	3.7nm,0.8s,baz=212,slow=8.2,SNR=12						
ZAA1	Zalesovo Array	52.96	16	eP	P	01 15 40.3	0.0
MLR	Muntele Rosu	53.01	327	eP	P	01 15 40.5	-0.5
	5.3nm,1.2s						
BUR08	Bucovina Ar. S	54.80	329	eP	P	01 15 54.5	+0.4
	3.2nm,1.1s						
AKASG	Malin Array Be	54.99	334	P	P	01 15 54.8	-0.4
	0.2nm,0.2s,baz=133,slow=6.5,SNR=4.6						
AKBB	Malin Array Si	54.99	334	eP	P	01 15 54.8	-0.4
	7.6nm,1.4s						
SONA0	Songino Array	57.20	33	eP	P	01 16 12.3	+1.0
SONM	Songino Array	57.20	33	P	P	01 16 12.3	+1.0
	1.3nm,0.7s,baz=230,slow=6.4,SNR=8.4						
SONM				LR	LR	01 40 54.0	
	comp=Z,133nm,20.9s,baz=252,slow=36						
KWP	Kalwaria Pacla	57.34	330	eP	P	01 16 11.3	-0.8
	91nm,1.1s						
ULN	Ulaanbaatar	57.58	33	eP	P	01 16 13.6	-0.4
	2.6nm,1.1s						
TAM	Tamanrasset	59.23	294	eP	P	01 16 25.9	-0.1
	11nm,1.7s						
MMRI	Maumere	59.71	102	eP	P	01 16 28.3	-1.0
	47nm,0.5s						
MORC	Moravsky Berou	60.12	327	eP	P	01 16 30.2	-1.3
	17nm,2.0s						
CLL	Collm	63.39	327	eP	P	01 16 54.0	+0.6
SENIN	Lac Senin/Sane	64.53	320	eP	P	01 17 01.7	+0.3
	7.1nm,0.9s						
KS15	Wonju Array Si	67.39	51	eP	P	01 17 20.2	+0.6
	14nm,1.4s						
KSRS	Korea Array	67.42	51	P	P	01 17 20.2	+0.4
	1.3nm,0.6s,baz=256,slow=7.8,SNR=6.1						
KSRS				LR	LR	01 48 03.2	
	comp=Z,40nm,20.0s,baz=245,slow=37						
NB200	NORSAR Array S	69.33	336	eP	P	01 17 30.5	-0.9
NOA	NORSAR Array B	69.33	336	P	P	01 17 30.5	-0.9
	0.6nm,0.7s,baz=114,slow=6.7,SNR=3.3						
MDT	Midelt	69.72	304	LR	LR	01 45 22.0	
	comp=Z,36nm,20.9s,baz=58,slow=34						
ESDC	Sonseca Array	70.43	311	P	P	01 17 38.5	-0.1
	1.3nm,0.7s,baz=90,slow=5.5,SNR=9.6						
KLR	Kul'dur	72.97	40	P	P	01 17 53.4	-0.2
	1.0nm,0.7s,baz=239,slow=5.9,SNR=2.9						
WR1	Warramunga Arr	73.25	112	eP	P	01 17 56.3	+0.4
WRA	Warramunga Arr	73.25	112	P	P	01 17 56.3	+0.4
	6.5nm,0.9s,baz=278,slow=7.5,SNR=8.4						
ASAR	Alice Springs	73.57	116	P	P	01 17 58.5	+0.8
	2.7nm,0.8s,baz=290,slow=5.8,SNR=17						
AS31	Alice Springs	73.57	116	eP	P	01 17 58.5	+0.8
	2.5nm,1.3s						
MAJO	Matsushiro	75.38	53	eP	P	01 18 07.9	-0.1
MJAR	Matsushiro Arr	75.39	53	P	P	01 18 07.9	-0.1
	1.5nm,0.7s,baz=272,slow=3.4,SNR=4.6						
PETK	Petropavlovsk-	89.47	37	LR	LR	02 02 14.6	
	comp=Z,36nm,18.7s,baz=285,slow=37						
NV01	Mina Array Sit	137.99	2	ePKPdf	PKiKP	01 25 51.5	-0.2
NVAR	Mina Array Bea	137.99	2	PKP	PKiKP	01 25 51.5	-0.2
	0.7nm,0.7s,baz=147,slow=1.8,SNR=3.4						
LTX	Lajitas	144.91	340	ePKPdf	PKPdf	01 26 01.2	-1.0
TXAR	Lajitas Array	144.91	340	PKP	PKPdf	01 26 01.2	-1.0
	0.9nm,0.8s,baz=66,slow=1.5,SNR=7.2						

*NIED **05** 01:12:00, 38°.70N×142°.50E, h53km, Mw4.0 Best double couple: M0 1.01000×10^15 NP1:φs6.00000°, δ28.00000°, λ78.00000°. NP2:φs199.00000°, δ63.00000°, λ96.00000°.*
*ISCJB **05** 01:12:46.0±0.9, 38°.73N±0°.04×142°.50E±0°.09, h52km±8km, mb3.9/10, Error ellipse: s-maj=11.3km s-min=5.8km az=8.8*
*JMA **05** 01:12:46.5±0.1, 38°.74N×142°.47E, h41km±2km, M4.2*
JMA Felt I J1.
*IDC **05** 01:12:49.1±2.3, 38°.75N×142°.25E, h63km±21km, mb3.6/10, mb1 3.7/14, mb1mx3.6/34, mbtmp3.8/14, MS3.0/3, Ms1 3.0/3, ms1mx2.7/42, Error ellipse: s-maj=21.8km s-min=15.0km az=92.0*
ISC 05 01:12:46.5±1.7, 38°.71N±0°.04×142°.56E±0°.10, h41km±16km, n36, σ1º52/43, mb3.8/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.79	298	P	Pn	01 13 00.4	-0.8
OFUJ				S	Sn	01 13 10.2	-1.6
JKMT	Kesennumamotoy	0.86	277	P	Pn	01 13 01.3	-0.8
JKMT				S	Sn	01 13 11.9	-1.6
JIKH	Ishinomakikobu	0.95	246	P	Pn	01 13 02.8	-0.5
JIKH				S	Sn	01 13 14.3	-1.4
JIO	Ouri	0.98	255	P	Pn	01 13 03.1	-0.7
JIO				S	Sn	01 13 14.8	-1.8
JMK	Ichinoseki	1.08	283	P	Pn	01 13 04.5	-0.6
JMK				S	Sn	01 13 17.4	-1.4
JOM	Ohasama	1.25	308	P	Pn	01 13 07.2	-0.3
JOM				S	Sn	01 13 22.0	-1.1
JOU	Okura	1.53	258	P	Pn	01 13 11.2	-0.1
JOU				S	Sn	01 13 29.6	-0.4
JMM	Marumori	1.63	239	P	Pn	01 13 12.3	-0.4
JMM				eS	Sn	01 13 31.3	-1.1
JRG	Rokugo	1.65	295	P	Pn	01 13 12.8	-0.2
JRG				S	Sn	01 13 32.7	-0.3
JYK	Kaneyama	1.73	278	P	Pn	01 13 14.0	-0.1
JYK				eS	Sn	01 13 35.9	+0.9
JANG	Nango	1.85	334	P	Pn	01 13 14.9	-0.8
JANG				eS	Sn	01 13 37.0	-0.9
JFK	Kawauchi	1.89	225	P	Pn	01 13 16.0	-0.3
JFK				eS	Sn	01 13 38.4	-0.5
MAT	Matsushiro	4.08	239	P	Pn	01 13 48.2	+1.8
MAT				S	Sn	01 14 36.7	+3.9
MJAR	Matsushiro Arr	4.08	239	P	Pn	01 13 48.1	+1.8
	0.7nm,0.3s,baz=40,slow=11,SNR=38						
MJAR				LR	LR	01 15 36.0	
	comp=Z,128nm,19.6s,baz=35,slow=43						
ASAJ	Asahikawa	5.40	0	P	Pn	01 14 05.7	+1.2
	1.4nm,0.3s,baz=198,slow=16,SNR=3.2						
JHJ	Hachijo jima 2	6.02	203	P	Pn	01 14 14.0	+1.0
	3.4nm,0.3s,baz=54,slow=19,SNR=3.7						
JHJ				S	Sn	01 15 15.9	-4.6
	11nm,0.3s,baz=69,slow=23,SNR=6.3						
JNU	Nakatsue	10.99	243	LR	LR	01 19 58.0	
	comp=Z,81nm,20.9s,baz=346,slow=40						
KSRS	Korea Array	11.61	268	P	Pn	01 15 32.5	+2.9
	0.3nm,0.3s,baz=83,slow=14,SNR=8.0						
KSRS				LR	LR	01 19 26.7	
	comp=Z,84nm,18.1s,baz=192,slow=35						
KLR	Kul'dur	13.07	327	P	Pn	01 15 50.6	+1.2
	0.1nm,0.3s,baz=142,slow=12,SNR=2.0						
SONM	Songino Array	27.65	301	P	P	01 18 27.8	-2.6
	0.5nm,0.5s,baz=93,slow=9.2,SNR=3.6						
H11N2	WAKE ISLAND Hy	28.29	125	T	T	01 49 05.9	
	baz=318,slow=75,SNR=28						
H11N1	WAKE ISLAND Hy	28.30	125	T	T	01 49 07.0	
	baz=318,slow=75,SNR=30						
H11N3	WAKE ISLAND Hy	28.31	125	T	T	01 49 09.4	
	baz=318,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	29.07	127	T	T	01 50 05.5	
	baz=319,slow=76,SNR=5.1						
H11S3	WAKE ISLAND Hy	29.07	127	T	T	01 50 05.2	
	baz=319,slow=76,SNR=5.8						
H11S2	WAKE ISLAND Hy	29.09	127	T	T	01 50 05.3	
	baz=319,slow=76,SNR=4.3						
ZALV	Zalesovo Beam	41.48	311	P	P	01 20 27.6	-1.6
	0.9nm,0.4s,baz=69,slow=8.4,SNR=5.5						
MKAR	Makanchi Array	44.02	301	P	P	01 20 48.8	-1.1
	1.4nm,0.8s,baz=78,slow=11,SNR=11						
ILAR	Eielson Array	47.60	33	P	P	01 21 19.0	+1.2
	1.0nm,0.6s,baz=268,slow=6.7,SNR=12						
WRA	Warramunga Arr	58.85	189	P	P	01 22 40.8	-0.1
	2.7nm,0.6s,baz=13,slow=8.0,SNR=2.2						
ASAR	Alice Springs	62.58	189	P	P	01 23 06.4	+0.1
	1.0nm,0.6s,baz=15,slow=8.6,SNR=12						
FINES	FINESS Array B	67.76	332	P	P	01 23 38.7	-0.8
	1.2nm,0.9s,baz=39,slow=5.3,SNR=3.3						
AKASG	Malin Array Be	73.53	322	P	P	01 24 14.3	-0.4
	0.4nm,0.3s,baz=47,slow=5.6,SNR=3.0						
PDAR	Pinedale Array	75.85	46	P	P	01 24 29.9	+1.1
	0.4nm,0.5s,baz=284,slow=3.6,SNR=4.0						
TXAR	Lajitas Array	88.39	53	P	P	01 25 34.5	+0.1
	0.3nm,0.6s,baz=259,slow=2.6,SNR=4.7						
LPAZ	La Paz	145.06	59	PKPbc	PKPdf	01 32 21.5	+1.0
	0.7nm,0.7s,baz=322,slow=1.5,SNR=4.8						

*SJA **05** 02:02:04.3±0.9, 33°.94S×70°.15W, h134km±8km, ML3.6, MW3.2*
*ISCJB **05** 02:02:05.6±0.5, 33°.89S±0°.04×70°.06W±0°.06, h123km±4km, Error ellipse: s-maj=8.2km s-min=6.1km az=24.2*
*GUC **05** 02:02:06.9±0.7, 33°.86S×70°.01W, h116km±5km, ML3.9*
ISC 05 02:02:06.3±1.1, 33°.89S±0°.06×70°.06W±0°.05, h120km±7km, n31, σ1º19/46, 5C-18D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	Las Melosas	0.12	288	⇓iP	Pn	02 02 22.5	-0.4
LMEL				eS	Sn	02 02 34.0	-1.4
ANTU	Antumapu	0.57	303	eP	Pn	02 02 24.9	+0.2
ANTU				eS	Sn	02 02 38.2	-0.4
ANTU				IAML		02 02 40.3	
	comp=N,6μm,0.5s						
FCH	Farellones	0.59	341	⇑iP	Pn	02 02 25.2	0.0
FCH				iS	Sn	02 02 38.2	-1.1
FCH				IAML		02 02 42.0	
	comp=N,3μm,0.3s						
CLCH	Cerro Calan	0.63	321	⇑iP	Pn	02 02 25.2	0.0
CLCH				eS	Sn	02 02 38.5	-0.8
CLCH				IAML		02 02 40.7	
	comp=E,9μm,0.3s						
PEL	Peldehue	0.91	325	⇓eP	Pn	02 02 27.4	-0.1
PEL				⇓eS	Sn	02 02 43.7	+0.4
PEL	Peldehue	0.91	325	⇑iP	Pn	02 02 27.3	-0.1
PEL				eS	Sn	02 02 43.4	0.0
PEL				IAML		02 02 44.6	
	comp=N,3μm,0.4s						
ROC1	El Roble	1.21	318	⇓eP	Pn	02 02 30.5	-0.2
ROC1				eS	Sn	02 02 49.6	+0.5
ROCH	El Roble	1.21	319	⇑iP	Pn	02 02 30.3	-0.4
ROCH				eS	Sn	02 02 49.1	0.0
ROCH				IAML		02 02 52.2	
	comp=N,2μm,0.4s						
AAGR	Agrelo	1.30	53	⇓eP	Pn	02 02 32.3	+0.8
AVIZ	Vizcacheras	1.35	73	⇓eP	Pn	02 02 32.8	+0.7
ARCO	CERRO ARCO	1.41	43	⇓eP	Pn	02 02 33.4	+0.6
ARCO				IAML		02 03 07.4	
	comp=Z,82nm,0.3s						
ASAL	Salagasta	1.65	39	⇓eP	Pn	02 02 36.7	+1.1
AUSP	Uspallata	1.75	19	eP	Pn	02 02 38.5	+1.5
EDS3	Malargue	1.96	164	⇓eP	Pn	02 02 39.1	-0.2
RTLL	Cerro Villicun	2.88	28	eP	Pn	02 02 51.4	+0.3
RTLL				eS	Sn	02 03 26.2	+0.7
RTLL				IAML		02 03 29.7	
	comp=Z,169nm,0.3s						
ACAN	Cantantal	2.90	57	⇓eP	Pn	02 02 51.7	+0.4
ACAN				eS	Sn	02 03 26.2	+0.2
AMOG	MOGNA	3.23	25	⇓eP	Pn	02 02 56.3	+0.7
AMOG				eS	Sn	02 03 35.2	+1.6
ACCO	Cerro Coronel	3.40	15	⇓eP	Pn	02 02 59.0	+0.8
ACCO				⇓eS	Sn	02 03 39.5	+1.4
AROD	Rodeo	3.74	8	⇓eP	Pn	02 03 03.8	+1.1
AROD				⇓eS	Sn	02 03 47.2	+1.0
GO04	Tololo Observa	3.75	350	⇓eP	Pn	02 03 02.2	-0.6
GO04				eS	Sn	02 03 44.6	-1.9
ACDV	Cuesta del Vie	3.79	12	⇓eP	Pn	02 03 04.0	+0.9
APLL	PUNTA DE LOS L	4.59	42	⇓eP	Pn	02 03 12.8	-1.1
APLL				eS	Sn	02 04 04.9	-1.4
ACLC	CERRO LA CRUZ	5.18	32	eP	Pn	02 03 20.0	-1.8
ACLC				IAML		02 04 24.1	
TCA	Tanti	5.27	63	eP	Pn	02 03 22.2	-0.7
VCA	Vinchina	5.37	18	eP	Pn	02 03 23.9	-0.5
VCA				IAML		02 04 29.8	
	comp=Z,69nm,0.4s						
CYA	Choya	6.54	35	eP	Pn	02 03 37.0	-3.0
CYA				eS	Sn	02 04 50.0	-3.3
CYA				IAML		02 04 50.5	
	comp=Z,12nm,0.4s						
FSA	Cafayete	8.52	26	eP	Pn	02 04 05.1	-1.9
FSA				IAML		02 04 05.2	
	comp=Z,4.6nm,0.5s						
VNA3	Neumayer Olymp	48.85	158	P	P	02 10 41.5	+2.4
VNA2	Neumayer--Watz	49.48	157	P	P	02 10 43.8	-0.1
	baz=280,slow=9.5						
SNAA	Sanae	51.07	158	P	P	02 10 56.6	+0.6
SYO	Syowa Base	65.36	158	eP	P	02 12 40.2	+4.9

*IDC **05** 02:30:23.7±0.9, 9°.41S×157°.90E, h0km, mb3.9/7, mb1 4.2/10, mb1mx3.9/34, mbtmp4.0/10, ML4.0/3, MS3.2/7, Ms1 3.2/7, ms1mx3.0/30, Error ellipse: s-maj=29.6km s-min=18.8km az=145.0*
*ISCJB **05** 02:30:25.5±0.4, 9°.51S±0°.07×157°.94E±0°.04, h27km, mb4.3/1, MS3.3/4, Error ellipse: s-maj=10.0km s-min=6.2km az=172.8*
*NEIC **05** 02:30:28.3±2.9, 9°.52S×157°.92E, h37km±7km, mb4.6/15, Error ellipse: s-maj=16.3km s-min=8.5km az=195.0*
ISC 05 02:30:27.0±0.5, 9°.54S±0°.09×157°.96E±0°.06, h27km, n39, σ1º31/36, MS3.3/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.97	87	iS	Sn	02 31 21.5	-0.9
HNR	Honiara	1.97	87	Pn	Pn	02 30 58.5	-0.1
	76nm,0.3s,baz=217,slow=7.4,SNR=9.4						
HNR				Sn	Sn	02 31 22.2	-0.2
	664nm,0.3s,baz=343,slow=23,SNR=30						
HNR				LR	LR	02 31 34.2	
	comp=Z,102nm,20.7s,baz=279,slow=35						
HNR	Honiara	1.97	87	ePn	Pn	02 31 00.0	+1.5
HNR				eSn	Sn	02 31 21.5	-0.9
PMG	Port Moresby	10.65	270	LR	LR	02 36 52.0	
	comp=Z,230nm,18.4s,baz=92,slow=37						
MANU	Manus Island	12.89	305	ePn	Pn	02 33 28.7	+0.1
DZM	Mont Dzumac	14.89	148	LR	LR	02 38 39.4	
	comp=Z,129nm,19.6s,baz=19,slow=33						
COEN	Coen	15.12	252	ePn	Pn	02 33 59.1	+0.1
	35nm,1.4s						
CTA	Charters Tower	15.42	226	Pn	Pn	02 34 02.0	-0.8
	0.5nm,0.3s,baz=46,slow=14,SNR=3.3						
CTAO	Charters Tower	15.42	226	ePn	Pn	02 33 58.9	-3.9
	17nm,1.1s						
JAY	Jayapura	18.51	291	P	P	02 34 39.5	-1.9
	0.4nm,0.3s,baz=98,slow=7.1,SNR=3.2						
WB2	Warramunga Arr	25.03	243	eP	P	02 35 49.6	+0.5
	25nm,1.4s						
WR1	Warramunga Arr	25.04	243	eP	P	02 35 49.1	0.0
WRA	Warramunga Arr	25.04	243	P	P	02 35 49.1	0.0
	4.8nm,0.8s,baz=59,slow=8.9,SNR=11						
STKA	Stephens Creek	26.91	212	P	P	02 36 08.3	+2.4
	5.3nm,0.6s,baz=41,slow=11,SNR=8.9						
STKA				LR	LR	02 45 30.3	
	comp=Z,78nm,18.7s,baz=27,slow=34						
STKA	Stephens Creek	26.91	212	eP	P	02 36 06.2	+0.2
	1.2nm,0.7s						
AS31	Alice Springs	26.93	236	eP	P	02 36 07.3	+1.0
	1.9nm,1.3s						
ASAR	Alice Springs	26.93	236	P	P	02 36 07.3	+1.0
	1.0nm,0.4s,baz=62,slow=11,SNR=12						
ANA2	Anatahan	28.42	335	eP	P	02 36 20.3	+0.6
	129nm,1.0s						
URZ	Urewera	33.38	152	eP	P	02 37 02.3	-0.8
	53nm,1.3s						
BKZ	Black Stump Fm	33.84	154	eP	P	02 37 08.6	+1.3
	28nm,1.2s						
THZ	Tophouse	34.70	160	eP	P	02 37 14.8	+0.3
RAR	Rarotonga	42.25	111	eP	P	02 38 20.0	+1.8
	77nm,1.5s						
PPT	Papeete	51.49	105	LR	LR	02 57 26.4	
	comp=Z,37nm,20.2s,baz=14,slow=32						
HMH	Humu'ula Sheep	54.23	58	eP	P	02 39 49.9	-1.3
	98nm,1.1s						
PUH	Pauahi	54.35	58	eP	P	02 39 51.7	-0.1
	79nm,0.9s						
LPH	Laupahoehoe	54.48	57	eP	P	02 39 52.6	0.0
KSRS	Korea Array	54.56	331	LR	LR	03 03 37.1	
	comp=Z,15nm,18.0s,baz=115,slow=37						
PETK	Pet

YANA	Yana	2.73	42	P	Pn	02 37 15.9	-2.1
ANTI	Antisana	2.81	52	P	Pn	02 37 19.6	+0.5
PULU	Pululahua	2.88	41	P	Pn	02 37 17.8	-2.2
PAC1	Pacto, Paraso	2.90	33	P	Pn	02 37 18.3	-1.8
CUSE	Cuicocha Este	3.17	39	P	Pn	02 37 25.1	+1.2
CUIC	Cuicocha-Domo	3.19	39	P	Pn	02 37 22.1	-2.1
IMBA	Imbabura, San	3.27	42	P	Pb	02 37 29.1	-2.6
URCU	Urcuqui	3.36	39	P	Pn	02 37 26.1	-0.5
LITE1	Lita	3.58	34	P	Pn	02 37 26.5	-2.8

JMA 05 02:45:31.3±0.1, 24°.86N×141°.15E, h176km, M4.8, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	1.99	27	P	Pn	02 46 08.2	+0.2
JHH2				eS	Sn	02 46 36.3	-0.3
CBIJ	Chichi jima	2.41	22	P	Pn	02 46 13.1	+0.4
CBIJ				S	Sn	02 46 45.7	+0.7
BSO3	Boso 3	9.92	357	P	Pn	02 47 49.2	-0.4
BSO4	Boso 4	10.12	356	P	Pn	02 47 52.9	+0.6
JHO	Hitachi	11.72	358	P	Pn	02 48 11.9	-1.3

ISK ***05*** *02:49:03.9, 38°.01N×26°.68E, h20km, ML1.8/5*
ISCJB ***05*** *02:49:04.6±0.7, 37°.99N±0°.05×26°.68E±0°.06, h12km±8km, Error ellipse: s-maj=10.6km s-min=5.1km az=36.4*
DDA ***05*** *02:49:05.3, 38°.07N×26°.80E, h15km±1km, ML2.5*

ISC 05 02:49:04.6±1.0, 38°.02N±0°.04×26°.70E±0°.05, h17km±8km, n10, σ0°53/17, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	zmir	0.15	77	*i* P	Pg	02 49 08.9	+0.1
DGB				*i* S	Sg	02 49 11.3	-0.2
DGB				IAML_P			
	comp=Z,11μm,0.1s						
ZEY	zmir	0.27	325	*i* P	Pb	02 49 11.9	+1.0
ZEY				*i* S	Sb	02 49 15.2	0.0
ZEY				IAML_P			
	comp=Z,1μm,0.1s						
URLA	Izmir	0.35	346	PG	Pg	02 49 11.9	-0.1
URLA				SG	Sb	02 49 17.6	0.0
URLA	Izmir	0.35	346	*i* P	Pb	02 49 12.8	+0.4
URLA				*i* S	Sb	02 49 18.2	+0.6
BLCB	Balcova	0.45	36	PG	Pb	02 49 13.8	-0.3
BLCB				SG	Sb	02 49 21.1	+0.6
GCAM	G?zelcaml?	0.53	127	PG	Pb	02 49 15.3	-0.1
GCAM				SG	Sb	02 49 23.1	+0.4
GCAM	G?zelcaml?	0.53	127	*i* P	Pb	02 49 16.0	+0.6
GCAM				*i* S	Sb	02 49 23.3	+0.6
GCAM				IAML_P			
	comp=Z,456nm,0.1s						
CHOS	Chios island	0.63	306	PG	Pg	02 49 16.6	-0.4
AYDB	Zeytinkoy-Aydi	0.94	94	PG	Pn	02 49 22.6	-0.5
APE	Apeiranthos	1.33	225	PN	Pn	02 49 27.8	-0.5

MOS ***05*** *03:23:29.2±1.2, 23°.34S×179°.76W, h526km, mb4.9/21, Error ellipse: s-maj=9.4km s-min=8.9km az=105.1*
ISCJB ***05*** *03:23:32.0±0.4, 23°.41S±0°.03×179°.88W±0°.03, h558km±5km, mb4.7/163, Error ellipse: s-maj=5.0km s-min=3.8km az=18.4*
BJI ***05*** *03:23:31.1±0.0, 23°.08S×179°.33W, h553km, mb4.9/34, mB4.8/19*
IDC ***05*** *03:23:32.1±0.4, 23°.40S×179°.69W, h554km±3km, mb4.2/23, mb1 4.3/25, mb1mx4.2/31, mbtmp5.0/25, Error ellipse: s-maj=9.9km s-min=9.0km az=113.0*
NEIC ***05*** *03:23:33.5±2.3, 23°.34S×179°.79W, h568km±4km, mb4.9/141, Error ellipse: s-maj=12.5km s-min=11.4km az=128.0*
GCMT ***05*** *03:23:34.5±0.3, 23°.49S±0°.04×179°.70W±0°.03, h563km±2km, MW5.2/62, Moment Tensor Solution. s62,c79; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr-0.56±.03; Mθθ0.10±.06; Mφφ0.46±.05; Mrθ0.73±.06; Mθφ-0.29±.04; Mφr0.40±.06; Best double couple: M0 0.90200×10^17 NP1:φs182.00000°, δ56.00000°, λ-44.00000°. NP2:φs300.00000°, δ55.00000°, λ-137.00000°. Principal axes: T 0.6230, Plg0.0000°, Azm241.0000°; N 0.5560, Plg37.0000°, Azm331.0000°; P -1.1800, Plg53.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 05 03:23:32.8±0.3, 23°.45S±0°.04×179°.75W±0°.04, h564km±2km, h565km:pP-P, n586, σ1s36/700, mb4.8/161, 51C-11D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	6.00	165	P	P	03 25 12.5	+0.6
RIZ				S	S	03 26 30.1	-3.0
RAO	Raoul Island	6.01	165	*e*P	P	03 25 08.7	-3.3
RAO				*e*S	S	03 26 30.0	-3.3
RAO	Raoul Island	6.01	165	*e*P	P	03 25 08.7	-3.3
RAO				*e*S	S	03 26 30.0	-3.3
GLKZ	Green Lake	6.02	165	P	P	03 25 12.1	0.0
GLKZ				S	S	03 26 33.0	-0.5
NIUE	Niue	10.14	66	*e*P	P	03 25 50.0	-2.4
NIUE				*e*S	S	03 27 50.5	+3.5
MARNC	Mare, Loyalty	11.47	277	*e*P	P	03 26 05.7	-0.2
PINNC	Pines Island,	11.82	272	*e*P	P	03 26 09.7	+0.2
DZM	Mont Dzumac	12.81	273	P	P	03 26 19.0	-0.8
	1.9nm,0.3s,baz=74,slow=18,SNR=5.4						
DZM	Mont Dzumac	12.81	273	*e*P	P	03 26 22.4	+2.6
OUZ	Omahuta	13.08	205	*e*P	P	03 26 24.4	+2.1
OUZ	Omahuta	13.08	205	P	P	03 26 23.8	+1.5
WCZ	Waipu Caves	13.46	201	P	P	03 26 27.8	+1.6
KUZ	Kuaotunu	13.82	195	P	P	03 26 29.0	-0.8
MXZ	Matakaoa Point	14.17	186	*e*P	P	03 26 32.4	-1.0
MXZ				*e*S	S	03 29 00.1	-1.8
MXZ	Matakaoa Point	14.17	186	P	P	03 26 33.3	-0.1
MXZ				S	S	03 28 58.3	-3.6
HAZ	Te Kaha	14.42	188	P	P	03 26 34.3	-1.6
HAZ				S	S	03 29 03.4	-3.1
RUGZ	Raukumara Rang	14.64	188	P	P	03 26 37.5	-0.7
RUGZ				S	S	03 29 06.0	-4.7
PUZ	Puketiti	14.68	186	P	P	03 26 39.3	+0.8
PUZ				S	S	03 29 06.7	-4.5
TOZ	Tahuroa Road	14.81	195	P	P	03 26 40.9	+1.1
TWGZ	Tauwhareparae	14.81	187	P	P	03 26 40.2	+0.3
TWGZ				S	S	03 29 11.3	-2.4
KARZ	Kaharoa	14.92	192	P	P	03 26 41.3	+0.3
URZ	Urewera	15.01	190	P	P	03 26 39.1	-2.7
	39nm,0.3s,baz=266,slow=3.9,SNR=69						
URZ				S	S	03 29 10.5	-6.6
	14nm,0.3s,baz=180,slow=10.0,SNR=17						
URZ	Urewera	15.01	190	*e*P	P	03 26 40.2	-1.5
	84nm,0.7s						
URZ				*e*S	S	03 29 12.8	-4.2
URZ	Urewera	15.01	190	P	P	03 26 38.8	-2.9
URZ				S	S	03 29 11.4	-5.7
MWZ	Matawai	15.02	188	P	P	03 26 40.6	-1.4
MWZ				S	S	03 29 13.6	-3.8
TKGZ	Te Karaka	15.08	187	P	P	03 26 42.0	-0.5
TKGZ				S	S	03 29 14.4	-4.0
CNGZ	Carnagh Statio	15.09	186	P	P	03 26 42.1	-0.5
RRRZ	Republican Roa	15.18	191	P	P	03 26 43.6	0.0
HSRZ	Hossack Road	15.21	192	P	P	03 26 44.9	+1.1
HRRZ	Handcock Road	15.28	192	P	P	03 26 44.1	-0.4
RIGZ	Rimuhau	15.36	187	P	P	03 26 43.4	-1.9
PRRZ	Plateau Road	15.36	192	P	P	03 26 44.4	-0.9
TLZ	Tolley Road	15.37	194	P	P	03 26 46.4	+0.9
RTZ	Ruatahuna	15.37	190	P	P	03 26 43.9	-1.6
SNGZ	Shannon Statio	15.48	189	P	P	03 26 44.4	-2.2
MTHZ	Maungataniwha	15.63	190	P	P	03 26 45.9	-2.1
RAHZ	Arahi	15.65	189	P	P	03 26 47.2	-1.0
KNZ	Kokohu	15.68	187	P	P	03 26 46.7	-1.7
WATZ	Wairara	15.69	193	P	P	03 26 47.9	-0.8
HIZ	Hauiti	15.71	196	*e*P	P	03 26 51.9	+3.1
	344nm,1.4s						
HIZ	Hauiti	15.71	196	P	P	03 26 49.5	+0.7
WHHZ	Waihua	15.79	189	P	P	03 26 49.0	-0.5
RATZ	Rangitukua	15.84	193	P	P	03 26 51.3	+1.2
NMHZ	Naumai	15.87	190	P	P	03 26 49.3	-1.2
BKZ	Black Stump Fm	15.99	191	*e*P	P	03 26 49.8	-1.7
	60nm,0.4s						
BKZ				*e*S	S	03 29 31.0	-2.7
BKZ	Black Stump Fm	15.99	191	P	P	03 26 48.7	-2.9
ARHZ	Aropaoanui	16.01	189	P	P	03 26 52.8	+1.2
TWVZ	Taurewa	16.10	194	P	P	03 26 53.2	+0.5
NGZ	Ngauruhoe	16.17	193	P	P	03 26 54.8	+1.5
MCHZ	McNeill Hill	16.23	190	P	P	03 26 52.7	-1.0
TUVZ	Tukino	16.25	193	P	P	03 26 54.1	0.0
KWHZ	Kaweka Forest	16.25	191	P	P	03 26 52.3	-1.7
FWVZ	Far West T-bar	16.25	193	P	P	03 26 53.6	-0.6
WHVZ	Whangaehu Hut	16.27	193	P	P	03 26 54.6	+0.2
VRZ	Vera Road	16.31	195	P	P	03 26 56.2	+1.8
MOVZ	Moawhango	16.36	192	P	P	03 26 53.7	-1.3
BHHZ	Black Hill Sta	16.38	192	P	P	03 26 52.1	-3.1
KRHZ	Kereru	16.48	191	P	P	03 26 54.1	-1.9
KAHZ	Kahuranaki	16.55	189	P	P	03 26 56.8	+0.2
PKE	Pukeiti	16.57	197	P	P	03 27 00.7	+3.9
NBEZ	Newall Road No	16.68	198	P	P	03 27 03.1	+5.4
LREZ	Lake Rotokare	16.72	196	P	P	03 27 00.5	+2.4
PXZ	Pawanui	16.78	189	P	P	03 26 58.0	-0.6
NMEZ	Namu Road	16.81	197	P	P	03 27 03.6	+4.7
WAZ	Wanganui	16.86	194	P	P	03 27 00.4	+1.1
WPHZ	Waipukurau	16.88	190	P	P	03 27 01.6	+2.1
TSZ	Takapari Road	16.95	191	P	P	03 27 00.2	-0.1
DVHZ	Dannevirke	17.15	191	P	P	03 27 01.6	-0.4
ANWZ	Angora Road	17.26	190	P	P	03 27 02.6	-0.3
PRWZ	Pori Road	17.43	191	P	P	03 27 04.9	+0.3
BFZ	Birch Farm	17.51	190	*e*P	P	03 27 03.1	-2.2
	64nm,0.9s						
BFZ				*e*S	S	03 29 55.6	-2.7
BFZ	Birch Farm	17.51	190	P	P	03 27 04.2	-1.0
SNZO	South Karori	18.41	193	*e*P	P	03 27 14.4	+1.0
	173nm,0.8s						
RAR	Rarotonga	18.61	87	P	P	03 27 13.6	-2.0
	3.7nm,0.3s,baz=118,slow=4.0,SNR=3.7						
RAR	Rarotonga	18.61	87	*e*P	P	03 27 14.0	-1.6
	36nm,1.1s						
RAR	Rarotonga	18.61	87	*e*P	P	03 27 14.0	-1.6
RAR				pmax	pmax		
	comp=Z,36nm,1.1s						
THZ	Tophouse	19.27	197	*e*P	P	03 27 22.2	+0.9
	comp=Z,112nm,0.6s						
KHZ	Kahutara	19.72	195	*e*P	P	03 27 25.6	+0.2
	comp=Z,88nm,0.5s						
KHZ				*e*S	S	03 30 34.1	+0.2
LTZ	Lake Taylor	20.39	197	*e*P	P	03 27 31.2	-0.2
	comp=Z,113nm,0.6s						
LTZ				*e*S	S	03 30 45.3	+0.7
LHI	Lord Howe Isla	20.42	242	*e*P	P	03 27 34.6	+2.7
	comp=Z,172nm,0.8s						
OXZ	Oxford	20.95	197	*e*P	P	03 27 35.6	-1.0
	comp=Z,183nm,0.5s						
OXZ				*e*S	S	03 30 54.4	+0.9
CRLZ	Canterbury Las	21.04	196	*e*P	P	03 27 37.3	+0.1
	comp=Z,38nm,0.7s						
MQZ	McQueen's Vall	21.15	195	*e*P	P	03 27 38.4	+0.1
	comp=Z,89nm,1.2s						
MQZ				*e*S	S	03 30 55.7	-0.8
RPZ	Rata Peaks	21.59	198	P	P	03 27 41.9	-0.4
	comp=Z,97nm,0.6s,baz=33,slow=7.2,SNR=14						
RPZ				S	S	03 31 01.4	-2.1
	comp=Z,5.9nm,0.5s,baz=306,slow=17,SNR=2.2						
RPZ	Rata Peaks	21.59	198	*e*P	P	03 27 43.2	+0.9
	comp=Z,98nm,0.6s						
FOZ	Fox Glacier	21.80	201	*e*P	P	03 27 44.7	+0.6
	comp=Z,253nm,1.5s						
KNTN	Kanton	21.97	22	*e*P	P	03 27 43.9	-2.2
	comp=Z,98nm,1.0s						
LBZ	Lake Benmore	22.46	199	*e*P	P	03 27 49.3	-0.7
	comp=Z,39nm,1.1s						
ODZ	Otahua Downs	22.93	198	*e*P	P	03 27 52.8	-1.4
	comp=Z,12nm,0.8s						
WKZ	Wanaka	23.22	201	*e*P	P	03 27 57.1	+0.4
	comp=Z,94nm,1.3s						
MLZ	Mavora Lakes	23.99	201	*e*P	P	03 28 05.3	+1.7
	comp=Z,87nm,1.2s						
DCZ	Deep Cove	24.41	203	*e*P	P	03 28 08.6	+1.3
	comp=Z,58nm,0.9s						
WHZ	Wether Hill Ro	24.51	201	*e*P	P	03 28 08.7	+0.5
	comp=Z,155nm,0.8s						
TARA	Tarawa	25.67	343	*e*P	P	03 28 17.7	-1.1
	comp=Z,228nm,0.8s						
ARMA	Armidale	26.40	249	*e*P	P	03 28 26.6	+1.4
	comp=Z,41nm,0.6s						
EIDS	Eidsvold	26.61	260	*e*P	P	03 28 27.3	+0.3
	comp=Z,76nm,1.0s						
PPT	Papeete	28.82	84	*e*P	P	03 28 47.0	+0.6
PPT	Papeete	28.82	84	*e*P	P	03 28 47.0	+0.6
CAN	Canberra	29.57	239	*e*P	P	03 28 52.5	-0.2
	comp=Z,109nm,0.6s						
CAN	Canberra	29.57	239	*e*P	P	03 28 52.5	-0.2
CTA	Charters Tower	31.71	269	P	P	03 29 11.7	+0.5
	comp=Z,214nm,0.4s,baz=94,slow=11,SNR=560						
CTAO	Charters Tower	31.71	269	*e*P	P	03 29 11.7	+0.5
	comp=Z,265nm,0.4s						
CTAO	Charters Tower	31.71	269	*e*P	P	03 29 11.7	+0.5
TOO	Toolangi	32.89	237	*e*P	P	03 29 22.0	+1.0
	comp=Z,72nm,0.6s						
TOO	Toolangi	32.89	237	*e*P	P	03 29 22.0	+1.0
TOO				pmax	pmax		
	comp=Z,73nm,0.6s						
XMAS	Kiritimati	33.37	44	*e*P	P	03 29 25.4	+0.1
	comp=Z,61nm,1.0s						
TAU	Tasmania Unive	33.41	227	*e*P	P	03 29 26.4	+1.1
	comp=Z,58nm,0.6s						
TAU	Tasmania Unive	33.41	227	*e*P	P	03 29 26.4	+1.1
TAU				pmax	pmax		
	comp=Z,58nm,0.6s						
PMG	Port Moresby	34.57	288	P	P	03 29 35.1	-0.2
	comp=Z,57nm,0.5s,baz=73,slow=5.2,SNR=15						
PMG	Port Moresby	34.57	288	*e*P	P	03 29 35.2	-0.2
	comp=Z,260nm,1.4s						
PMG	Port Moresby	34.57	288	*e*P	P	03 29 35.2	-0.1
PMG				pmax	pmax		
	comp=Z,260nm,1.4s						
STKA	Stephens Creek	35.10	248	P	P	03 29 40.3	+0.7
	comp=Z,51nm,0.6s,baz=94,slow=10,SNR=164						
STKA	Stephens Creek	35.10	248	*e*P	P	03 29 40.1	+0.5
	comp=Z,12nm,0.7s						
STKA	Stephens Creek	35.10	248	*e*P	P	03 29 40.1	+0.5
STKA				pmax	pmax		
	comp=Z,12nm,0.7s						
COEN	Coen	36.27	278	*e*P	P	03 29 49.9	+0.5
	comp=Z,43nm,1.1s						
PATS	Pohnpei	36.95	322	*e*P	P	03 29 53.9	-1.1
	comp=Z,78nm,1.0s						
MANU	Manus Island	38.30	299	*e*P	P	03 30 04.8	-1.2
	comp=Z,101nm,1.4s						
BBOO	Buckleboo	39.83	246	*e*P	P	03 30 17.9	-0.2
	comp=Z,93nm,1.1s						
AS31	Alice Springs	42.34	260	*e*P	P	03 30 38.1	0.0
	comp=Z,29nm,1.0s						
AS31				*e*ScP	ScP	03 35 17.6	+1.8
AS31				*e*S	S	03 36 19.0	-0.1
ASAR	Alice Springs	42.34	260	P	P	03 30 38.0	-0.1
	comp=Z,47nm,0.4s,baz=100,slow=6.8,SNR=438						
ASAR				ScP	ScP	03 35 17.6	+1.8
	comp=Z,8.5nm,1.0s,baz=115,slow=4.1,SNR=12						
ASAR				S	S	03 36 17.5	-1.6
	comp=Z,3.7nm,0.6s,baz=97,slow=14,SNR=8.8						
WB2	Warramunga Arr	42.66	266	*e*P	P	03 30 40.0	-0.7
	comp=Z,80nm,0.6s						
WRAB	Tennant Creek	42.66	266	*e*P	P	03 30 39.9	-0.8
	comp=Z,66nm,0.5s						
WRAB	Tennant Creek	42.66	266	*e*P	P	03 30 39.9	-0.8
WRAB				pmax	pmax		
	comp=Z,66nm,0.5s						
WR1	Warramunga Arr	42.67	266	*e*P	P	03 30 40.1	-0.7
WR1				*e*ScP	ScP	03 35 18.1	+1.0
WR1				*e*S	S	03 36 19.1	-4.8
WRA	Warramunga Arr	42.67	266	P	P	03 30 40.1	-0.7
	comp=Z,139nm,0.3s,baz=89,slow=9.6,SNR=3.4						
WRA				ScP	ScP	03 35 18.1	+1.0
	comp=Z,127nm,0.3s,baz=99,slow=4.3,SNR=1.2						
WRA				S	S	03 36 19.1	-4.9
	comp=Z,129nm,0.3s,baz=98,slow=11,SNR=2.1						
JAY	Jayapura	43.55	293	P	P	03 30 47.1	-0.7
	comp=Z,40nm,0.4s,baz=160,slow=3.1,SNR=56						
JAY	Jayapura	43.55	293	P	P	03 30 47.0	-0.7
	comp=Z,611nm,1.1s,comp=Z,7μm						
GENI	Genyem	43.97	292	P	P	03 30 50.7	-0.2
	comp=Z,108nm,1.5s,comp=Z,3μm						
FORT	Forrest	46.69	249	*e*P	P	03 31 11.1	-0.3
	comp=Z,306nm,0.6s						
FORT				*e*S	S	03 37 19.5	-0.6
MTN	Manton Dam	47.65	274	*e*P	P	03 31 17.7	-1.2
	comp=Z,29nm,0.4s						
GUMO	Guam	50.53	313	P	P	03 31 39.1	-0.8
	comp=Z,166nm,0.6s,baz=169,slow=16,SNR=7.8						
GUMO	Guam	50.53	313	*e*P	P	03 31 37.5	-2.4
	comp=Z,174nm,0.6s						
GUMO	Guam	50.53	313	*e*P	P	03 31 37.6	-2.4
GUMO				pmax	pmax		
	comp=Z,174nm,0.6s						
FAKI	Fak Fak	50.67	286	*e*P	P	03 31 40.5	-0.7
	comp=Z,34nm,0.8s						
FAKI	Fak Fak	50.67	286	P	P	03 31 39.6	-1.6
	comp=Z,49nm,1.2s						
FITZ	Fitzroy Crossi	51.09	265	*e*P	P	03 31 44.2	+0.1
	comp=Z,49nm,0.5s						
SBA	Scott Base	54.84	183	*e*P	P	03 32 13.0	+3.2
	comp=Z,96nm,1.0s						
VNDA	Vanda	54.84	185	P	P	03 32 11.9	+2.0
	comp=Z,14nm,0.7s,baz=358,slow=7.8,SNR=88						
VNDA				ScP	ScP	03 36 07.5	-0.5
	comp=Z,2.1nm,0.8s,baz=360,slow=3.4,SNR=4.8						
VNDA	Vanda	54.84	185	*e*P	P	03 32 12.0	+2.2
VNDA				*e*PcP	PcP	03 33 04.8	+1.5
VNDA				*e*ScP	ScP	03 36 07.5	-0.5
VNDA	Vanda	54.84	185	*e*P	P	03 32 12.0	+2.2
VNDA				*e*		03 33 04.8	
SOEI	Soe	55.04	274	*e*P	P	03 32 13.0	+0.6
	comp=Z,76nm,0.8s						
SOEI	Soe	55.04	274	P	P	03 32 11.5	-0.8
	comp=Z,105nm,1.1s,comp=Z,1μm						
BATI	Baumata	55.43	274	P	P	03 32 14.1	-0.8
	comp=Z,44nm,0.5s,comp=Z,873nm						
PSA00	Pilbara Seismi	55.47	259	*e*P	P	03 32 14.2	-0.9
	comp=Z,27nm,0.6s						
NWAO	Narrogin (SRO)	55.63	245	*e*P	P	03 32 15.9	-0.2
	comp=Z,16nm,0.6s						
NWAO	Narrogin (SRO)	55.63	245	*e*P	P	03 32 15.9	-0.2
NWAO				pmax	pmax		
	comp=Z,16nm,0.6s						
TNTI	Ternate	56.71	287	P	P	03 32 22.9	-0.9
	comp=Z,48nm,1.2s						
MORW	Morawa	57.25	250	*e*P	P	03 32 27.2	-0.1
	comp=Z,39nm,0.5s						
EDFI	Ende, Flores	57.77	274	P	P	03 32 30.4	-0.7
	comp=Z,53nm,1.1s,comp=Z,569nm						
WBSI	Waikabubak, Su	59.55	272	P	P	03 32 42.1	-0.9
	comp=Z,59nm,1.2s						
GIRL	Giralia	60.24	256	*e*P	P	03 32 48.4	+0.9
	comp=Z,113nm,1.2s						
PLAI	Plampang	61.33	273	P	P	03 32 54.1	-0.6
	comp=Z,82nm,0.5s,comp=Z,1μm						
QSPA	South Pole Qui	66.63	180	*e*P	P	03 33 29.1	+1.5
	comp=Z,130nm,1.0s						
JHJ2	Mitsune	68.19	324	*e*P	P	03 33 38.0	+0.6
	comp=Z,91nm,0.8s						
UGM	Wanagama	68.33	271	*e*P	P	03 33 38.3	-0.5
	comp=Z,162nm,1.3s						
KKM	Kota Kinabalu	68.99	287	*e*P	P	03 33 42.9	0.0
	comp=Z,25nm,0.5s						
KKM	Kota Kinabalu	68.99	287	P	P	03 33 43.0	+0.2
JOW	Kunigami	70.86	312	*e*P	P	03 33 53.8	+0.3
CISI	Cisompet, Garu	70.95	270	*e*P	P	03 33 54.6	+0.2
	comp=Z,87nm,0.4s						
MJAR	Matsushiro Arr	71.66	325	P	P	03 33 57.7	-0.3
	comp=Z,14nm,0.9s,baz=166,slow=6.0,SNR=37						
MJAR				pP	pP	03 35 53.3	+0.1
	comp=Z,0.8nm,0.7s,baz=146,slow=5.3,SNR=1.5						
MAJO	Matsushiro	71.66	325	*e*P	P	03 33 57.8	-0.2
	comp=Z,16nm,0.9s						
MAJO				*e*pP	pP	03 35 53.3	+0.1
MAJO	Matsushiro	71.66	325	*e*P	P	03 33 57.8	-0.2
MAJO				*e*PP	pP	03 35 53.3	+0.1
MAJO				pmax	pmax		
	comp=Z,17nm,0.9s						
MAT	Matsushiro	71.66	325	P	P	03 33 57.6	-0.4
MJB9	Matsu-Tunnel	71.66	325	*e*P	P	03 33 58.2	+0.2
	comp=Z,17nm,0.9s						
KSM	Kuching	72.26	280	P	P	03 34 03.0	+1.1
JNU	Nakatsue	73.34	318	*e*P	P	03 34 08.0	+0.3
	comp=Z,22nm,1.1s						
ERM	Erimo	73.62	332⇑	*e*P	P	03 34 11.4	+2.4
ERM				pmax	pmax		
	comp=Z,23nm,1.0s						
YULB	Yu-li	73.80	305	*e*P	P	03 34 09.2	-1.3
	comp=Z,5.8nm,0.7s						
NACB	Ninganchiao	74.03	306	*e*P	P	03 34 11.6	-0.2
	comp=Z,42nm,0.8s						
NACB				*e*S	S	03 42 57.4	-2.1
TPUB	Ta-pu	74.25	305	*e*P	P	03 34 12.1	-1.1
	comp=Z,28nm,0.8s						
SSLB	Suanglung	74.29	305	*e*P	P	03 34 12.3	-1.0
	comp=Z,21nm,0.9s						
YHNB	Yeheng	74.48	306	*e*P	P	03 34 14.4	0.0
	comp=Z,22nm,0.8s						
KIWB	Kanaga Island	75.01	2	*e*P	P	03 34 16.7	0.0
ADK	Adak	75.05	2	*e*P	P	03 34 16.3	-0.6
	comp=Z,80nm,0.6s						
ADK	Adak	75.05	2	*e*P	P	03 34 16.3	-0.6
ADK				pmax	pmax		
	comp=Z,80nm,0.6s						
GSTR	Great Sitkin T	75.29	2	*e*P	P	03 34 18.1	-0.1
ATKA	Atka Island	75.48	4	*e*P	P	03 34 18.8	-0.5
	comp=Z,62nm,0.8s						
ASAJ	Asahikawa	75.57	333	P	P	03 34 21.6	+1.7
	comp=Z,27nm,0.8s,baz=218,slow=6.6,SNR=33						
SMY	Shemya	76.04	356	*e*P	P	03 34 21.6	-0.7
	comp=Z,40nm,0.8s						
SMY	Shemya	76.04	356	*e*P	P	03 34 21.6	-0.7
SMY				pmax	pmax		
	comp=Z,40nm,0.8s						
NIKH	Nikolski High	76.69	7	*e*P	P	03 34 25.4	-0.4
	comp=Z,137nm,0.7s						
TJN	Taejon	77.67	319	*de*P	P	03 34 30.4	-1.2
UNV	Unalaska Valle	77.82	8	*e*P	P	03 34 31.5	-0.5
	comp=Z,37nm,0.8s						
YSS	Yuzh-Sakhalins	77.83	335	*e*P	P

CMB pmax pmax
comp=Z,4.0nm,0.8s
AFDM Forest Hills D 82.91 42 *e*P **P 03 34 60.0 +1.1**
comp=Z,9.6nm,1.4s
WHN Wuhan 82.91 307 ⇑P **P 03 35 00.2 +1.2**
WHN pmax pmax
comp=Z,46nm,0.6s
GRNR Gornyy 83.39 334 *e*P **P 03 35 04.2 +3.2**
GRNR pmax pmax
comp=Z,42nm,0.8s
SYO Syowa Base 83.50 193⇑*i*P **P 03 35 00.0 -1.3**
SYO Syowa Base 83.50 193‖*e*PcP **PcP 03 35 04.2 0.0**
YBH Yreka Blue Hor 83.59 39 P **P 03 35 03.0 +0.7**
comp=Z,2.5nm,0.7s,baz=341,slow=2.0,SNR=4.1
WAKR Walker 83.59 43 *e*P **P 03 35 04.4 +1.9**
comp=Z,6.2nm,1.2s
CN2 Changchun 83.67 323 *e*P **P 03 35 03.0 +0.6**
PNTR Pine Nut 83.84 43 *e*P **P 03 35 05.0 +1.3**
comp=Z,7.9nm,0.9s
YERR Yerington 84.00 43 *e*P **P 03 35 06.2 +1.7**
comp=Z,2.6nm,0.7s
KDAK Kodiak Island 84.06 14 *i*P **P 03 35 04.6 +0.6**
TIA Tai'an 84.09 314 P **P 03 35 05.9 +1.1**
TIA pmax pmax
comp=Z,31nm,0.8s
KLR Kul'dur 84.25 330*c i*P **P 03 35 06.2 +1.0**
KLR pmax pmax
comp=Z,8.0nm,1.3s
NV01 Mina Array Sit 84.27 44 *e*P **P 03 35 05.7 -0.1**
NV01 *e*pP **pP 03 37 06.0 -0.5**
NVAR Mina Array Bea 84.27 44 P **P 03 35 05.7 -0.1**
comp=Z,0.8nm,0.6s,baz=222,slow=7.2,SNR=9.7
NVAR pP **pP 03 37 06.0 -0.5**
comp=Z,0.1nm,0.3s,baz=225,slow=8.7,SNR=1.2
NV11 Mina Array Sit 84.36 44 *e*P **P 03 35 07.3 +1.0**
comp=Z,0.3nm,1.3s
LDFC Landfair 84.48 48 *e*P **P 03 35 08.7 +1.9**
comp=Z,9.2nm,0.8s
TPNV Topopah Spring 84.75 46 *e*P **P 03 35 09.4 +1.2**
comp=Z,2.2nm,0.7s
MOD Modoc Plateau 85.11 40 *e*P **P 03 35 11.0 +1.2**
comp=Z,8.2nm,1.4s
SNAA Sanae 85.11 179 P **P 03 35 08.9 -0.3**
SNAA Sanae 85.11 179 *e*P **P 03 35 09.1 -0.2**
comp=Z,9.8nm,0.7s
SNAA Sanae 85.11 179 *e*P **P 03 35 09.1 -0.2**
SNAA pmax pmax
comp=Z,10.0nm,0.7s
VNA3 Neumayer Olymp 85.31 177 P **P 03 35 10.0 -0.2**
VNA2 Neumayer--Watz 85.73 177 P **P 03 35 12.4 +0.2**
baz=192,slow=4.6
PINE Pine Mountain 85.90 38 *e*P **P 03 35 15.3 +1.7**
comp=Z,18nm,1.5s
VNA1 Neumayer--Stat 85.97 177 P **P 03 35 13.4 +0.1**
TUC Tucson 86.06 52 *e*P **P 03 35 16.6 +2.1**
comp=Z,5.0nm,1.0s
MA2 Magadan 86.20 345 P **P 03 35 14.0 -0.4**
comp=Z,26nm,0.7s,baz=143,slow=5.0,SNR=14
MA2 Magadan 86.20 345 *e*P **P 03 35 13.8 -0.6**
comp=Z,25nm,0.7s
MA2 Magadan 86.20 345*ce*P **P 03 35 14.2 -0.1**
MA2 pmax pmax
comp=Z,28nm,0.8s
ENH Enshi 86.37 305 *e*P **P 03 35 17.4 +1.5**
RSO Redoubt South 86.46 13 *e*P **P 03 35 15.1 -0.7**
SVW2 Sparrevohn 86.49 11 *e*P **P 03 35 15.5 -0.2**
comp=Z,5.0nm,0.7s
X16A Lo Mia Camp, P 86.67 50 *e*P **P 03 35 19.3 +1.8**
comp=Z,6.0nm,1.5s
319A Douglas 86.70 54 *e*P **P 03 35 19.9 +2.4**
comp=Z,24nm,1.4s
GYA Guiyang 86.72 301 *e*P **P 03 35 18.4 +0.6**
GYA pmax pmax
comp=Z,10.0nm,0.9s
LCMT Little Creek M 86.80 47 *e*P **P 03 35 19.4 +1.4**
comp=Z,7.2nm,1.4s
BJT Baijiatuau 86.86 316 *e*P **P 03 35 19.7 +1.8**
comp=Z,6.7nm,0.6s
BJT Baijiatuau 86.86 316 *e*P **P 03 35 19.7 +1.8**
BJT pmax pmax
comp=Z,7.0nm,0.6s
BJI Beijing 86.87 316 *e*P **P 03 35 18.8 +0.9**
BJI pmax pmax
comp=Z,4.0nm,0.7s
I07A Izee 86.89 39 *e*P **P 03 35 19.7 +1.5**
comp=Z,6.3nm,0.9s
CCUT Cedar City 87.00 47 *e*P **P 03 35 20.7 +1.7**
comp=Z,1.9nm,0.8s
J08A Circle Bar Ran 87.06 40 *e*P **P 03 35 20.2 +1.2**
comp=Z,9.8nm,1.3s
KNB Kanab 87.08 48 *e*P **P 03 35 21.0 +1.7**
comp=Z,3.8nm,1.0s
KNB Kanab 87.08 48 *e*P **P 03 35 21.0 +1.7**
KNB pmax pmax
comp=Z,4.0nm,1.0s
U15A North Rim 87.13 48 *e*P **P 03 35 21.4 +1.7**
comp=Z,4.4nm,0.8s
ELK Elko 87.53 43 *e*P **P 03 35 22.4 +1.0**
comp=Z,4.8nm,1.4s
ELK *e*pP **pwP 03 37 28.2 +1.6**
ELK Elko 87.53 43 *e*P **P 03 35 22.4 +1.0**
ELK pmax pmax
comp=Z,5.0nm,1.4s
SUA Susitna One 87.79 13 *e*P **P 03 35 22.1 +0.2**
comp=Z,23nm,0.6s
G08A Pilot Rock 87.93 38 *e*P **P 03 35 24.2 +1.2**
comp=Z,5.1nm,0.8s
G08A *e*pP **pwP 03 37 29.8 +2.2**
MTPU Mount Pierson 88.06 47 *e*P **P 03 35 26.2 +2.2**
comp=Z,3.3nm,0.7s
MTPU *e*pP **pwP 03 37 32.2 +2.8**
KNK Knik Glacier 88.25 14 *e*P **P 03 35 24.5 +0.5**
comp=Z,15nm,0.7s
PMR Palmer 88.25 14 *e*P **P 03 35 23.8 -0.1**
comp=Z,12nm,0.8s
PMR Palmer 88.25 14 *e*P **P 03 35 23.8 -0.1**
PMR pmax pmax
comp=Z,12nm,0.8s
MSU Marysvale 88.31 47 *e*P **P 03 35 27.0 +1.9**
PLCA Paso Flores 88.41 134 P **P 03 35 26.9 +1.4**
comp=Z,13nm,1.1s,baz=245,slow=5.8,SNR=7.5
PLCA Paso Flores 88.41 134 *e*P **P 03 35 27.5 +2.0**
comp=Z,36nm,1.3s
GHO Glory Hole Cre 88.46 14 *e*P **P 03 35 25.2 +0.2**
comp=Z,29nm,0.8s
BMO Blue Mountains 88.62 39 *e*P **P 03 35 26.9 +0.8**
comp=Z,1.4nm,1.0s
BMO Blue Mountains 88.62 39 *e*P **P 03 35 27.0 +0.8**
BMO pmax pmax
comp=Z,1.0nm,1.0s
DIV Divide 88.64 16 *e*P **P 03 35 26.4 +0.6**
comp=Z,16nm,1.0s
XAN Xi'an 88.64 308 P **P 03 35 27.8 +1.3**
XAN pP pP 03 37 25.4 -2.7
XAN pmax pmax
comp=Z,21nm,0.8s
XAN Xi'an 88.64 308 *e*P **P 03 35 28.1 +1.6**
comp=Z,16nm,0.6s
SCM Sheep Creek Mo 88.88 15 *e*P **P 03 35 27.5 +0.6**
comp=Z,20nm,0.8s
SCM Sheep Creek Mo 88.88 15 *e*P **P 03 35 27.5 +0.6**
SCM pmax pmax
comp=Z,20nm,0.8s
SEY Seymchan 88.88 348*ce*P **P 03 35 27.1 +0.3**
TLIG Tlapa 89.10 71 *e*P **P 03 35 31.1 +2.0**
comp=Z,11nm,1.3s
Q16A Castle Valley 89.19 47 *e*P **P 03 35 30.8 +1.7**
comp=Z,3.8nm,1.0s
KMI Kunming 89.26 298 P **P 03 35 31.2 +1.4**
KMI pmax pmax
comp=Z,13nm,0.6s
KMI pmax pmax
comp=Z,120nm,5.0s
CAST Castle Rocks 89.28 12 *e*P **P 03 35 27.4 -1.3**
comp=Z,14nm,0.8s
F10A Beach Ranch, E 89.31 38 *e*P **P 03 35 30.0 +0.6**
comp=Z,4.1nm,0.8s
TMUT Trail Mountain 89.36 46 *e*P **P 03 35 31.8 +1.8**
comp=Z,6.9nm,0.7s
CM31 Chiang Mai Arr 89.59 290 *e*P **P 03 35 33.5 +2.3**
comp=Z,14nm,0.9s
CM31 *e*pP **pP 03 37 32.9 -0.2**
CMAR Chiang Mai Arr 89.59 290 P **P 03 35 33.5 +2.3**
comp=Z,8.4nm,0.9s,baz=132,slow=3.1,SNR=30
CMAR pP **pP 03 37 32.9 -0.2**
comp=Z,0.9nm,0.3s,baz=103,slow=20,SNR=1.7

HLID Hailey 89.61 41 *e*P **P 03 35 31.8 +0.9**
comp=Z,2.1nm,0.8s
SRU San Rafael Swe 89.72 47 *e*P **P 03 35 32.8 +1.2**
comp=Z,5.5nm,0.8s
CHTO Chiang Mai 89.73 291 *e*P **P 03 35 34.0 +2.1**
comp=Z,16nm,0.8s
LENM Lemitar 89.75 52 *e*P **P 03 35 33.2 +1.4**
MNTX Cornudas Mount 89.77 55 *e*P **P 03 35 33.2 +1.5**
comp=Z,3.6nm,0.9s
RND Reindeer 89.92 13 *e*P **P 03 35 31.9 +0.1**
comp=Z,20nm,1.2s
RND *e*pP **pwP 03 37 36.4 -0.3**
RND Reindeer 89.92 13 *e*P **P 03 35 31.9 +0.1**
RND pmax pmax
comp=Z,20nm,1.2s
TX31 Lajitas Ar. Si 90.00 58 *e*P **P 03 35 34.5 +1.6**
comp=Z,13nm,1.4s
LTX Lajitas 90.00 58 *e*P **P 03 35 34.1 +1.2**
LTX *e*pP **pP 03 37 34.0 -1.3**
LTX Lajitas 90.00 58 *e*P **P 03 35 34.1 +1.2**
LTX *e*PP **pP 03 37 34.0 -1.3**
TXAR Lajitas Array 90.00 58 P **P 03 35 34.1 +1.2**
comp=Z,1.7nm,0.7s,baz=217,slow=6.7,SNR=22
TXAR pP **pP 03 37 34.0 -1.3**
comp=Z,0.4nm,1.0s,baz=213,slow=5.9,SNR=2.0
TXAR PKKPbc **PKKPbc 03 53 00.9 -0.1**
comp=Z,0.1nm,0.4s,baz=52,slow=4.7,SNR=4.6
TCUT Toone Canyon 90.18 45 *e*P **P 03 35 35.0 +1.3**
comp=Z,9.7nm,0.8s
HHC Hu-ho-hao-te 90.26 315 *e*P **P 03 35 35.5 +1.6**
HHC pmax pmax
comp=Z,17nm,1.1s
HHC pmax pmax
comp=Z,60nm,5.3s
BWN Browne 90.48 13 *e*pP pP 03 37 36.2 -0.8
ANMO Albuquerque 90.50 52 *e*P **P 03 35 36.3 +1.0**
comp=Z,5.5nm,1.3s
ANMO Albuquerque 90.50 52 *e*P **P 03 35 36.3 +1.0**
ANMO pmax pmax
comp=Z,6.0nm,1.3s
WRH Wood River Hil 91.02 13 *e*P **P 03 35 35.5 -1.2**
comp=Z,10nm,1.2s
CD2 Chengdu 91.03 303 P **P 03 35 40.0 +2.4**
CD2 pmax pmax
comp=Z,30nm,0.4s
HDA Harding Lake 91.21 14 *e*P **P 03 35 37.4 -0.1**
comp=Z,5.3nm,0.8s
DOT Dot Lake 91.22 15 *e*P **P 03 35 37.6 0.0**
comp=Z,3.0nm,0.7s
CCB Clear Creek Bu 91.24 13 *e*P **P 03 35 36.9 -0.8**
comp=Z,3.9nm,0.7s
LNIG Linares 91.43 64 *e*P **P 03 35 39.8 +0.2**
comp=Z,6.7nm,1.2s
COLA College 91.43 13*ce*P **P 03 35 38.5 0.0**
COLA pmax pmax
comp=Z,3.0nm,0.9s
SCRK Sand Creek 91.51 15 *e*P **P 03 35 39.2 +0.1**
comp=Z,2.3nm,0.8s
ILAR Eielson Array 91.54 13 P **P 03 35 38.2 -0.8**
comp=Z,1.4nm,0.6s,baz=222,slow=6.0,SNR=17
ILAR pP **pP 03 37 40.7 -1.3**
comp=Z,0.6nm,0.9s,baz=212,slow=4.9,SNR=3.1
ILAR PP **PP 03 39 25.2 -2.6**
comp=Z,1.3nm,1.0s,baz=225,slow=7.7,SNR=4.7
ILB Eielson Array 91.54 13 *e*P **P 03 35 38.5 -0.6**
comp=Z,2.2nm,0.8s
ILB *e*pP **pP 03 37 40.7 -1.3**
ILB *e*PP **PP 03 39 25.2 -2.6**
S22A 4UR Ranch, Cre 91.57 49 *e*P **P 03 35 41.2 +1.0**
comp=Z,3.2nm,1.1s
BILL Bilibino 91.80 355 *e*P **P 03 35 40.4 +0.2**
comp=Z,8.5nm,0.8s
BILL Bilibino 91.80 355 *e*P **P 03 35 40.4 +0.2**
BILL pmax pmax
comp=Z,9.0nm,0.8s
LOHW Long Hollow 91.98 43 *e*P **P 03 35 42.6 +0.7**
comp=Z,1.6nm,0.6s
PD31 Pinedale Array 92.21 44 *e*P **P 03 35 43.1 +0.1**
comp=Z,2.3nm,1.5s
PDAR Pinedale Array 92.21 44 P **P 03 35 43.1 +0.1**
comp=Z,0.9nm,0.6s,baz=214,slow=3.7,SNR=9.5
SDCO Great Sand Dun 92.50 50 *e*P **P 03 35 45.2 +0.7**
comp=Z,1.9nm,1.0s
LZH Lanzhou 93.28 308 ⇑P **P 03 35 49.0 +1.0**
LZH pP pP 03 37 50.9 +0.7
LZH sP sP 03 38 44.2 -1.8
LZH PP **PP 03 39 46.5 +4.4**
LZH pmax pmax
comp=Z,19nm,1.4s
LZH pmax pmax
comp=Z,87nm,9.3s
EPYK Eagle Plains 95.25 16 *e*P **P 03 35 55.9 -0.1**
comp=Z,3.3nm,0.6s
EPYK *e*pP **pwP 03 38 00.7 -0.8**
ULN Ulaanbaatar 96.53 320‖*e*P **P 03 36 02.5 +0.1**
ULN pmax pmax
comp=Z,5.0nm,1.6s
SONA0 Songino Array 96.91 319 *e*P **P 03 36 03.3 -0.8**
SONA0 *e*PP **PP 03 40 06.8 -2.7**
SONM Songino Array 96.91 319 P **P 03 36 03.3 -0.8**
comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=3.7
SONM PP **PP 03 40 06.8 -2.7**
comp=Z,1.3nm,0.9s,baz=116,slow=9.8,SNR=7.1
SONM PKKPbc **PKKPbc 03 52 43.3 -0.6**
comp=Z,0.8nm,0.7s,baz=252,slow=1.9,SNR=5.4
INK Inuvik 97.53 16 P Pdif 03 36 03.9 -2.2
comp=Z,1.1nm,0.5s,baz=270,slow=3.0,SNR=4.6
INK Inuvik 97.53 16 *e*P Pdif 03 36 03.9 -2.2
comp=Z,4.2nm,1.4s
INK Inuvik 97.53 16 *e*P Pdif 03 36 03.9 -2.2
INK pmax pmax
comp=Z,4.0nm,1.4s
YKB5 Yellowknife Ar 99.86 25 *e*PP **PP 03 40 29.1 -2.0**
YKA Yellowknife Ar 99.86 25 P **Pdif 03 36 16.2 -0.5**
comp=Z,0.2nm,0.5s,baz=245,slow=4.6,SNR=3.4
YKA PP **PP 03 40 29.0 -2.0**
comp=Z,0.2nm,0.3s,baz=237,slow=7.5,SNR=5.1
ZALV Zalesovo Beam 111.75 321 PKiKP **PKiKP 03 41 02.7 -0.8**
comp=Z,1.7nm,0.3s,baz=162,slow=0.9,SNR=1.7
ZAA1 Zalesovo Array 111.75 321 *e*PKiKP **PKiKP 03 41 02.7 -0.8**
MK32 Makanchi Array 112.02 313 *e*Pdif **Pdif 03 37 11.7 +0.5**
MK32 *e*PKiKP **PKiKP 03 41 03.6 -0.6**
MK32 *e*SKPdf **SKiKP 03 43 47.6 +1.1**
MKAR Makanchi Array 112.02 313 Pdiff **Pdif 03 37 11.7 +0.5**
comp=Z,0.4nm,0.5s,baz=110,slow=6.1,SNR=2.8
MKAR PKiKP **PKiKP 03 41 03.6 -0.6**
comp=Z,1.8nm,0.6s,baz=98,slow=0.8,SNR=7.5
MKAR SKP 03 43 47.6
comp=Z,0.9nm,0.6s,baz=75,slow=6.1,SNR=3.9
MKAR PKKPbc **PKKPbc 03 51 57.2 -1.3**
comp=Z,1.7nm,1.0s,baz=259,slow=2.5,SNR=5.7
MKAR PKKPab **PKKPab 03 52 07.6 +0.1**
comp=Z,0.9nm,0.6s,baz=270,slow=2.2,SNR=8.0
KURK Kurchatov 115.03 317 PKIKP **PKPdf 03 41 08.3 -1.5**
KURBB Kurchatov Arra 115.08 316 PKP **PKPdf 03 41 08.2 -1.7**
comp=Z,1.8nm,0.6s,baz=94,slow=1.8,SNR=18
KURBB PP **PP 03 42 16.6 -4.1**
comp=Z,1.6nm,0.9s,baz=97,slow=6.6,SNR=6.8
KURBB SKP 03 43 52.8
comp=Z,1.7nm,0.8s,baz=108,slow=1.9,SNR=8.0
KURBB PKKPbc **PKKPbc 03 51 47.5 -0.8**
comp=Z,0.3nm,0.4s,baz=274,slow=2.7,SNR=4.2
AAK Ala-Archa 116.81 307 PKKPbc PKKPbc 03 51 40.1 -2.3
comp=Z,1.9nm,0.4s,baz=264,slow=6.6,SNR=6.1
BDFB Brasilia 118.88 125 PKP **PKPdf 03 41 15.6 -2.9**
comp=Z,1.1nm,0.3s,baz=239,slow=5.9,SNR=3.3
KK31 Karatay Array 119.78 307 *e*PKPdf **PKPdf 03 41 18.9 -0.4**
KK31 Karatay Array 119.78 307 *e*PKIKP **PKPdf 03 41 18.9 -0.4**
KKAR Karatay Array 119.78 307 *e*PKPdf **PKPdf 03 41 18.9 -0.4**
KKAR Karatay Array 119.78 307 *e*PKIKP **PKPdf 03 41 18.9 -0.4**
BVAR Borovoye Array 120.25 319 PKP **PKPdf 03 41 19.1 -0.7**
comp=Z,2.6nm,0.4s,baz=64,slow=3.4,SNR=14
BVAR PP **PP 03 42 58.9 +3.0**
comp=Z,2.4nm,1.0s,baz=101,slow=7.6,SNR=4.0
BVAR SKP 03 44 02.8
comp=Z,2.6nm,0.8s,baz=61,slow=6.8,SNR=7.7
BVAR PKKPbc **PKKPbc 03 51 29.6 -0.7**
comp=Z,0.3nm,0.3s,baz=243,slow=9.8,SNR=3.6
BOSA Boshof 122.91 206 PKP **PKPdf 03 41 25.1 -0.9**
comp=Z,3.4nm,0.8s,baz=189,slow=3.7,SNR=7.3
SPA0 Spitsbergen Ar 124.69 356 *e*PKPdf **PKPdf 03 41 26.9 -0.8**
SPITS Spitsbergen Ar 124.69 356 PKP **PKPdf 03 41 26.9 -0.8**
comp=Z,7.5nm,0.7s,baz=132,slow=2.1,SNR=5.2
SPITS PKKPbc **PKKPab 03 51 11.8 +0.6**
comp=Z,7.6nm,1.0s,baz=163,slow=6.1,SNR=5.1
ARU Arti 126.66 324 PKP **PKPdf 03 41 31.5 -0.5**
comp=Z,2.0nm,0.3s,baz=90,slow=6.1,SNR=8.0
ARU Arti 126.66 324 *i*PKIKP **PKPdf 03 41 31.7 -0.3**
ARU 03 43 33.4
ARU 03 47 50.5
ABKAR Akbulak array 127.06 315 *e*PKPdf **PKPdf 03 41 33.0 0.0**
AKTO Aktyubinsk 128.13 317 PKP **PKPdf 03 41 33.4 -1.6**
comp=Z,2.8nm,0.6s,baz=83,slow=7.6,SNR=9.8
GEYT Alibeck 128.94 301 PKP **PKiKP 03 41 37.5 -0.3**
comp=Z,2.1nm,0.3s,baz=267,slow=2.9,SNR=3.7
GEYT SKPbc SKPbc 03 44 06.2
comp=Z,4.8nm,0.9s,baz=293,slow=1.1,SNR=7.5
KIRV Kirov 130.66 329 SKPbc **SKPbc 03 44 11.4 +0.2**
comp=Z,40nm,1.1s,baz=89,slow=2.0,SNR=15
SCO Scoresbysund 131.18 10 *e*PKIKP PKiKP 03 41 50.7 +9.5
SCO Scoresbysund 131.18 10 *i*P PKiKP 03 41 50.7 +9.5
ARCES ARCESS Array B 131.49 348 PKhKP PKPpre 03 41 30.4
comp=Z,0.9nm,0.5s,baz=34,slow=3.4,SNR=8.8
ARCES PKP **PKPdf 03 41 40.3 -0.6**
comp=Z,4.2nm,0.6s,baz=17,slow=0.9,SNR=21
ARCES SKPbc **SKPbc 03 44 14.0 +0.1**
comp=Z,12nm,0.9s,baz=56,slow=4.5,SNR=15
ARE0 ARCESS Array S 131.49 348 *e*PKPdf **PKPdf 03 41 40.6 -0.3**
TMCR Tamitsa 132.35 339 *e*PKIKP **PKPdf 03 41 42.0 -0.5**
KMBO Kilima Mbogo 136.52 241 PKP **PKiKP 03 41 53.4 -0.7**
comp=Z,2.0nm,0.6s,baz=50,slow=22,SNR=4.4
KMBO SKPbc **SKPbc 03 44 33.0 +0.8**
comp=Z,6.3nm,0.9s,baz=41,slow=1.7,SNR=14
KMBO Kilima Mbogo 136.52 241 *e*PKPdf **PKiKP 03 41 55.4 +1.3**
KMBO *e*SKPbc **SKiKP 03 44 35.4 -1.7**
KMBO Kilima Mbogo 136.52 241*c i*PKIKP **PKiKP 03 41 55.4 +1.3**
KMBO pmax pmax
comp=Z,2.0nm,0.6s
FIA0 FINESS Array S 138.09 342 *e*PKPpre PKPpre 03 41 42.1
FIA0 *e*PKPdf **PKPdf 03 41 53.8 +0.4**
FIA0 *e*SKPbc **SKPbc 03 44 35.5 +0.7**
FIA0 FINESS Array S 138.09 342 *e*PKHKP PKPpre 03 41 42.1
FIA0 *e* 03 41 53.8
FINES FINESS Array B 138.09 342 PKhKP PKPpre 03 41 42.1
comp=Z,1.2nm,0.4s,baz=51,slow=4.2,SNR=6.5
FINES PKP **PKPdf 03 41 53.8 +0.4**
comp=Z,1.4nm,0.5s,baz=22,slow=1.5,SNR=6.7
FINES SKPbc **SKPbc 03 44 35.5 +0.8**
comp=Z,19nm,1.0s,baz=58,slow=4.7,SNR=20
FINES FINESS Array B 138.09 342*c i*PKIKP **PKiKP 03 41 57.7 +2.2**
FINES pmax pmax
comp=Z,1.0nm,0.5s
OBN Obninsk 138.50 329 SKPbc **SKPbc 03 44 36.5 +0.4**
comp=Z,3.6nm,0.4s,baz=125,slow=0.5,SNR=6.9
OBN Obninsk 138.50 329 *e*PKIKP **PKPdf 03 41 53.9 -0.3**
OBN pmax pmax
comp=Z,5.0nm,1.0s
SHEL Horse Pasture 140.40 171 *i*PKIKP **PKPdf 03 41 59.8 +0.8**
NC303 NORSAR Array S 141.47 351 *e*PKPpre PKPpre 03 41 55.0
NC405 NORSAR Array S 141.53 351 *e*PKPpre PKPpre 03 41 55.0
NB201 NORSAR Array S 141.65 351 *e*PKPpre PKPpre 03 41 55.4
NB2 NORSAR Subarra141.67 351 PKP PKPpre 03 41 55.3
comp=Z,0.9nm,0.3s,baz=16,slow=3.2
NB200 NORSAR Array S 141.67 351 *e*PKPpre PKPpre 03 41 54.2
NB200 *e*SKPbc **SKiKP 03 44 45.3 -0.6**
NOA NORSAR Array B 141.67 351 PKhKP PKPpre 03 41 54.2
comp=Z,4.9nm,0.7s,baz=15,slow=4.6,SNR=25
NOA SKPbc **SKiKP 03 44 45.3 -0.6**
comp=Z,3.3nm,0.9s,baz=14,slow=4.2,SNR=7.3
NC602 NORSAR Array S 141.92 351 *e*PKPpre PKPpre 03 41 55.2
NC602 NORSAR Array S 141.92 351 *e*PKPdf PKPpre 03 41 56.0
HFS Hagfors 142.15 349 PKhKP PKPpre 03 41 56.3
comp=Z,20nm,0.3s,baz=58,slow=3.4,SNR=338
HFS SKPbc **SKPbc 03 44 45.1 -0.4**
comp=Z,6.2nm,0.8s,baz=260,slow=0.9,SNR=7.5
BAYB BAYBURT 142.47 306 *i*P **PKPdf 03 42 01.0 -1.2**
BAYB IAML_P
comp=Z,393nm,0.5s
OSL Oslo 142.80 351 *e*PKPdf **PKPdf 03 41 59.2 -2.6**
ASK Askoy 142.83 356 *e*PKPdf **PKPdf 03 41 59.5 -2.3**
BER Bergen 142.92 356 *e*PKPdf **PKPdf 03 41 59.8 -2.2**
KONO Kongsberg 143.23 352 *e*PKPpre PKPab 03 42 00.6 -0.1
KONO Kongsberg 143.23 352*ce*PKHKP PKPab 03 42 00.3 -0.4
KONO Kongsberg 143.23 352 *e*PKPab PKPab 03 42 00.7 0.0
KELT Kelkit 143.24 306 *i*P **PKPdf 03 42 03.2 -0.4**
KELT IAML_P
comp=Z,822nm,0.6s
ODD1 Odda 143.29 355 *e*PKPbc PKPab 03 42 00.6 -0.4
BLS5 Blasjo 143.79 355 *e*PKPab PKPbc 03 42 02.4 -0.3
ELZG Elazig 143.85 304 *i*P **PKPdf 03 42 05.8 +1.2**
ELZG IAML_P
comp=Z,3μm,0.7s
SUSE Susehri 144.00 307 *i*P **PKPdf 03 42 05.3 +0.5**
SUSE IAML_P
comp=Z,386nm,0.6s
ORDU Ordu-Boztepe 144.03 308 *i*P **PKPdf 03 42 05.2 +0.6**
ORDU IAML_P
comp=Z,590nm,0.6s
KEMA Kemaliye 144.03 305 *i*P **PKPdf 03 42 06.0 +1.2**
KEMA IAML_P
comp=Z,1μm,0.7s
KMY Karmoy 144.09 356 *e*PKPbc PKPbc 03 42 03.3 -0.3
CUZAR Zara_SIVAS 144.41 306 *i*P **PKPab 03 42 07.0 +1.0**
HEKM Malatya_Hekimh 144.53 305 *i*P **PKPab 03 42 07.3 +0.7**
HEKM IAML_P
comp=Z,800nm,0.6s
AKCD Akcadag 144.71 304 *i*P **PKPab 03 42 07.8 +0.5**
AKCD IAML_P
comp=Z,652nm,0.6s
HOMB Homborsund 144.71 352 *e*PKPab PKPbc 03 42 05.8 +0.3
AKASG Malin Array Be 144.72 328 PKP **PKPdf 03 42 05.1 -0.4**
comp=Z,12nm,0.4s,baz=43,slow=4.2,SNR=76
AKASG SKPbc **SKiKP 03 44 53.0 +0.7**
comp=Z,27nm,1.1s,baz=42,slow=2.7,SNR=24
AKBB Malin Array Si 144.72 328 *e*PKPdf **PKPdf 03 42 05.4 0.0**
AKBB *e*SKPbc **SKiKP 03 44 53.0 +0.7**
AKBB Malin Array Si 144.72 328 *e*PKIKP **PKPdf 03 42 05.4 0.0**
KIEV Kiev 144.73 328‖*i*P **PKPdf 03 42 05.4 0.0**
KIEV Kiev 144.73 328*de*PKIKP **PKPdf 03 42 04.8 -0.6**
SUW Suwalki 144.95 336 *e*PKPbc PKPbc 03 42 06.4 0.0
SUW Suwalki 144.95 336 *e*PKPdf **PKPdf 03 42 05.9 +0.2**
SUW Suwalki 144.95 336 *e*PKIKP PKPbc 03 42 06.4 -0.1
SIM Simferopol' 145.10 316*c i*PKIKP **PKPbc 03 42 07.3 +0.1**
SIM pmax pmax
comp=Z,46nm,0.6s
RRH Rhenigidale 145.20 6 *e*P **PKPdf 03 42 06.5 +0.4**
RRR Rubha Reidh 145.35 6 *e*P **PKPdf 03 42 06.8 +0.5**
KAC Achnashellach 145.75 5 *e*P **PKPbc 03 42 08.3 -0.4**
KPL Plockton 145.87 6 *e*P **PKPbc 03 42 08.5 -0.5**
MUD Monsted U'grnd 146.39 351 *e*PKIKP **PKPbc 03 42 10.7 +0.2**
MUD Monsted U'grnd 146.39 351 *i*P **PKPbc 03 42 10.7 +0.2**
DRUM Mains of Drumt 146.51 3 *e*P **PKPbc 03 42 10.0 -0.8**
BSD Bornholm Skovb 146.54 345‖*i*PKIKP **PKPbc 03 42 10.4 -0.5**
BSD pmax pmax
comp=Z,19nm,0.7s
BSD Bornholm Skovb 146.54 345‖*i*P **PKPbc 03 42 10.4 -0.5**
comp=Z,19nm,0.7s
ASF Jabal al Asfar 146.57 293 PKPbc **PKPbc 03 42 12.0 +0.1**
comp=Z,7.8nm,0.6s,baz=88,slow=4.6,SNR=15
ASF pPKPbc pPKPab 03 44 19.1 -0.8
comp=Z,0.6nm,0.4s,baz=117,slow=18,SNR=1.1
EDU Dundee 146.85 3 *e*P **PKPbc 03 42 11.4 -0.3**
ELO Logie Almond 146.89 4 *e*P **PKPbc 03 42 11.4 -0.5**
INVG Invergeldie, C 146.91 4 *e*P **PKPbc 03 42 11.5 -0.4**
ILGA Ilgaz 146.96 310 *e*PKPbc **PKPbc 03 42 13.7 +0.8**
LAWE Loch Awe, Argy 146.96 6 *e*P **PKPbc 03 42 11.8 -0.3**
EAB Aberfoyle 147.12 5 *e*P **PKPbc 03 42 11.9 -0.5**
EDI Edinburgh 147.47 4 *e*P **PKPbc 03 42 13.1 -0.3**
BR101 Keskin Array S 147.49 308 *e*PKPbc **PKPbc 03 42 13.9 -0.3**
BR101 *e*SKPbc **SKiKP 03 44 59.6 +0.9**
BR131 Keskin Array S 147.49 308 *e*PKPbc **PKPbc 03 42 14.0 -0.2**
BRTR Keskin Array B 147.49 308 PKPbc **PKPbc 03 42 13.9 -0.3**
comp=Z,5.0nm,0.6s,baz=144,slow=4.5,SNR=32
BRTR pPKPbc **pPKPdf 03 44 20.8 -0.7**
comp=Z,0.2nm,0.5s,baz=138,slow=39,SNR=2.2
BRTR SKPbc **SKiKP 03 44 59.6 +0.9**
comp=Z,1.2nm,1.0s,baz=45,slow=1.9,SNR=3.6
PGBU Glenifferbraes 147.49 5 *e*P **PKPbc 03 42 13.0 -0.5**
ESY Stoneypath 147.50 3 *e*P **PKPbc 03 42 13.0 -0.4**
EAU Auchinoon 147.53 4 *e*P **PKPbc 03 42 13.6 0.0**
GKP Gorka Klasztor 147.56 341 *e*PKP **PKPbc 03 42 13.8 +0.1**
GKP Gorka Klasztor 147.56 341 *e*PKP2 **PKPbc 03 42 13.8 +0.1**
BEL Belsk 147.56 336 *e*PKP **PKPbc 03 42 14.2 +0.5**
BEL Belsk 147.56 336 *e*PKP2 **PKPbc 03 42 14.2 +0.5**
EBL Broad Law 147.62 3 *e*P **PKPbc 03 42 13.5 -0.3**
MMAI Mount Meron Ar 147.72 295 PKPbc **PKiKP 03 42 15.9 -0.5**
comp=Z,11nm,0.4s,baz=72,slow=5.6,SNR=35
MMAI pPKPbc **pPKPdf 03 44 22.0 0.0**
comp=Z,0.4nm,0.3s,baz=327,slow=33,SNR=1.7
LVV L'vov 147.76 331 *e*PKP2 **PKPbc 03 42 14.4 +0.1**

ANTO	**Ankara**	**148.05**	**309**	*e*PKPbc	**PKPbc**	**03 42 15.9**	**+0.5**
ANTO	**Ankara**	**148.05**	**309**	⇑*i*P	**PKPbc**	**03 42 16.0**	**+0.5**
ANTO	**Ankara**	**148.05**	**309**	⇑PKP2	**PKPbc**	**03 42 16.0**	**+0.5**
CLGH	**Cloghs, Cushen**	**148.05**	**7**	*e*P	**PKPbc**	**03 42 14.7**	**-0.2**
EKA	**Eskdalemuir Ar**	**148.06**	**4**	PKPbc	**PKPbc**	**03 42 14.3**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=338,slow=2.3,SNR=47						
EKA				pPKPbc	**pPKPbc**	**03 44 23.4**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=204,slow=40,SNR=1.6						
ESK	**Eskdalemuir**	**148.07**	**4**	*e*PKPbc	**PKPbc**	**03 42 14.4**	**-0.5**
ESK	**Eskdalemuir**	**148.07**	**4**	*e*P	**PKPbc**	**03 42 14.4**	**-0.5**
ESK	**Eskdalemuir**	**148.07**	**4**	*i* PKP2	**PKPbc**	**03 42 15.4**	**+0.5**
TLCR		**148.23**	**320**	⇑*i*P	**PKPbc**	**03 42 15.3**	**-0.3**
BHH	**Howats Hill**	**148.29**	**4**	*e*P	**PKPbc**	**03 42 15.1**	**-0.3**
GAL1	**Galloway**	**148.41**	**5**	*e*P	**PKPbc**	**03 42 15.4**	**-0.3**
EIL	**Elat**	**148.43**	**289**	PKPbc	**PKPbc**	**03 42 16.7**	**0.0**
	comp=Z,5.9nm,0.5s,baz=235,slow=4.3,SNR=9.3						
EIL				PKPab	**PKPab**	**03 42 22.6**	**+0.4**
	comp=Z,11nm,0.6s,baz=344,slow=1.4,SNR=8.2						
KWP	**Kalwaria Pacla**	**148.49**	**332**	*e*PKP	**PKPbc**	**03 42 16.4**	**+0.2**
KWP	**Kalwaria Pacla**	**148.49**	**332**	*e*PKPbc	**PKPbc**	**03 42 16.6**	**+0.4**
EDMD	**Edmundbyers**	**148.62**	**2**	*e*P	**PKPbc**	**03 42 15.6**	**-0.7**
CFR	**Carcaliu**	**148.63**	**321**	⇑*i*P	**PKPbc**	**03 42 16.2**	**-0.4**
TESR	**Tescani**	**148.68**	**324**	⇑*i*P	**PKPbc**	**03 42 16.9**	**+0.1**
BIZ	**Bicaz**	**148.71**	**325**	⇑*i*P	**PKiKP**	**03 42 17.6**	**-0.2**
BUR08	**Bucovina Ar. S**	**148.71**	**327**	*e*PKPbc	**PKiKP**	**03 42 17.9**	**0.0**
BURAR	**Bucovina Array**	**148.72**	**327**	⇑*i*P	**PKiKP**	**03 42 17.7**	**-0.3**
BURAR	**Bucovina Array**	**148.72**	**327**	⇑PKP2	**PKiKP**	**03 42 17.7**	**-0.3**
KESW	**Keswick, Cumbr**	**148.80**	**4**	*e*P	**PKPbc**	**03 42 16.4**	**-0.3**
TIRR	**Tirgusor**	**148.87**	**319**	*e*PKPbc	**PKPbc**	**03 42 17.3**	**+0.1**
TIRR	**Tirgusor**	**148.87**	**319**	⇑*i*P	**PKPbc**	**03 42 17.5**	**+0.3**
GMM	**Mts of Mourne**	**148.90**	**7**	*e*P	**PKPbc**	**03 42 16.2**	**-0.8**
IOMK	**Kirk Michael**	**149.02**	**5**	*e*P	**PKPbc**	**03 42 16.7**	**-0.6**
TLB	**Topalu**	**149.02**	**320**	⇓*i*P	**PKiKP**	**03 42 18.3**	**-0.2**
VRI	**Vrincioaia**	**149.03**	**323**	⇓*i*P	**PKPbc**	**03 42 17.3**	**-0.4**
GDLE	**Glaisdale, N Y**	**149.06**	**1**	*e*P	**PKPbc**	**03 42 17.2**	**-0.2**
CSS	**Mathiatis**	**149.07**	**299**	*e*PKPbc	**PKPbc**	**03 42 18.0**	**0.0**
PLOR	**Plostina**	**149.09**	**323**	⇑*i*P	**PKPbc**	**03 42 17.5**	**-0.3**
KOLS	**Kolonicke sedl**	**149.19**	**331**	*e*PKP	**PKiKP**	**03 42 18.8**	**0.0**
OJC	**Ojcow**	**149.23**	**335**	*e*PKP	**PKPbc**	**03 42 18.0**	**+0.1**
OJC	**Ojcow**	**149.23**	**335**	*e*PKPbc	**PKPbc**	**03 42 18.0**	**+0.1**
HPK	**Haverah Park**	**149.50**	**2**	*e*P	**PKPbc**	**03 42 18.1**	**-0.4**
ISR	**Istrita**	**149.59**	**322**	⇓*i*P	**PKPbc**	**03 42 17.7**	**-1.3**
TRPA	**Tarpa**	**149.66**	**330**	⇑*i*P	**PKPbc**	**03 42 19.1**	**+0.1**
TRPA	**Tarpa**	**149.66**	**330**	EP	**PKPbc**	**03 42 18.1**	**-1.0**
NIE	**Niedzica**	**149.66**	**334**	*e*PKP	**PKiKP**	**03 42 19.8**	**0.0**
MLR	**Muntele Rosu**	**149.70**	**323**	PKP	**PKPdf**	**03 42 12.9**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=113,slow=22,SNR=3.4						
MLR				PKPbc	**PKPbc**	**03 42 18.7**	**-0.7**
	comp=Z,3.6nm,0.5s,baz=302,slow=5.1,SNR=18						
MLR				PKPab	**PKPab**	**03 42 27.6**	**+0.4**
	comp=Z,4.3nm,0.5s,baz=350,slow=9.9,SNR=10						
MLR				pPKPbc	**pPKPdf**	**03 44 25.7**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=307,slow=9.3,SNR=1.5						
MLR	**Muntele Rosu**	**149.70**	**323**	*e*PKPdf	**PKPdf**	**03 42 13.2**	**-0.8**
MLR				*e*PKPbc	**PKPbc**	**03 42 18.7**	**-0.7**
MLR				*e*PKPab	**PKPab**	**03 42 27.6**	**+0.4**
MLR				*ep*PKPdf	**pPKPdf**	**03 44 25.7**	**+0.7**
MLR	**Muntele Rosu**	**149.70**	**323**	⇑*i*P	**PKPbc**	**03 42 19.3**	**-0.1**
WPS	**Cemaes, Angles**	**149.88**	**6**	*e*P	**PKPbc**	**03 42 18.6**	**-0.7**
WME	**Myndd Eilian**	**149.90**	**5**	*e*P	**PKPbc**	**03 42 18.7**	**-0.7**
SECR		**149.91**	**322**	⇑*i*P	**PKPbc**	**03 42 20.0**	**+0.3**
KSP	**Ksiaz**	**149.95**	**340**	*e*PKP	**PKiKP**	**03 42 20.1**	**-0.1**
WLF1	**Llynfaes**	**150.00**	**6**	*e*P	**PKPbc**	**03 42 18.8**	**-0.8**
YRC	**Rhoscolyn**	**150.02**	**6**	*e*P	**PKPbc**	**03 42 18.7**	**-1.0**
CJR	**Cluj-Napoca**	**150.15**	**327**	⇑*i*P	**PKiKP**	**03 42 20.9**	**0.0**
CJR	**Cluj-Napoca**	**150.15**	**327**	⇑PKIKP	**PKiKP**	**03 42 20.9**	**0.0**
OKC	**Ostrava-Krasne**	**150.16**	**336**	*e*PKIKP	**PKiKP**	**03 42 20.5**	**-0.2**
OKC	**Ostrava-Krasne**	**150.16**	**336**	⇑*e*PKP	**PKiKP**	**03 42 20.5**	**-0.2**
LANS	**Liptovska Anna**	**150.21**	**334**	*e*PKIKP	**PKiKP**	**03 42 21.7**	**+0.8**
LANS				*e*		03 42 30.5	
LANS	**Liptovska Anna**	**150.21**	**334**	*e*PKP	**PKiKP**	**03 42 21.7**	**+0.8**
LANS				*e*		03 42 30.5	
OSTC	**Ostas**	**150.22**	**339**	⇑*e*PKP	**PKiKP**	**03 42 20.9**	**0.0**
OSTC				*ep*PKP	**pPKPab**	**03 44 35.3**	**+1.9**
VOIR		**150.22**	**324**	⇑*i*P	**PKPbc**	**03 42 19.9**	**-0.7**
VOIR		**150.22**	**324**	⇑PKIKP	**PKPbc**	**03 42 19.9**	**-0.7**
CHVC	**Chvalec**	**150.25**	**340**	⇑*e*PKP	**PKiKP**	**03 42 20.8**	**-0.1**
CHVC				*ep*PKP	**pPKPbc**	**03 44 30.9**	**+1.1**
UPC	**Upice**	**150.33**	**339**	*e*PKIKP	**PKiKP**	**03 42 21.0**	**-0.1**
UPC	**Upice**	**150.33**	**339**	⇑*e*PKP	**PKiKP**	**03 42 21.0**	**-0.1**
DPC	**Dobruska-Polom**	**150.36**	**339**	*e*PKIKP	**PKiKP**	**03 42 21.4**	**+0.2**
DPC				*e*		03 42 30.6	
DPC	**Dobruska-Polom**	**150.36**	**339**	⇑*e*PKP	**PKiKP**	**03 42 21.4**	**+0.2**
DPC				*e*PKPAB	**PKPab**	**03 42 30.6**	**+1.0**
DPC				*ep*PKP	**pPKPab**	**03 44 35.3**	**+1.3**
MORC	**Moravsky Berou**	**150.43**	**337**	*e*PKPbc	**PKPbc**	**03 42 20.6**	**-0.3**
MORC				*e*PKPab	**PKPab**	**03 42 29.2**	**-0.7**
MORC	**Moravsky Berou**	**150.43**	**337**	⇑*i*P	**PKPbc**	**03 42 20.9**	**0.0**
MORC	**Moravsky Berou**	**150.43**	**337**	⇑PKIKP	**PKPbc**	**03 42 20.9**	**0.0**
MORC	**Moravsky Berou**	**150.43**	**337**	*e*PKP	**PKPbc**	**03 42 21.1**	**+0.2**
MORC				*e*		03 42 30.3	
MORC				*e*		03 44 29.6	
FOEL	**Foel Wylfa**	**150.49**	**4**	*e*P	**PKPbc**	**03 42 20.3**	**-0.6**
CLL	**Collm**	**150.49**	**344**	*e*PKPdf	**PKPdf**	**03 42 14.0**	**-0.9**
	comp=Z,9.0nm,1.4s						
CLL				*i* PKPbc	**PKPbc**	**03 42 20.8**	**-0.1**
	comp=Z,33nm,0.7s						
CLL				*i* PKPab	**PKPab**	**03 42 29.9**	**-0.1**
	comp=Z,17nm,0.7s						
CLL				*i* pPKPbc	**pPKPab**	**03 44 33.6**	**-0.8**
	comp=Z,25nm,1.5s						
CLL				*i*		03 45 05.4	
CLL	**Collm**	**150.49**	**344**	*i* PKIKP	**PKPbc**	**03 42 20.8**	**-0.1**
CLL				*i*		03 42 29.9	
CLL				pmax	pmax		
	comp=Z,33nm,0.7s						
CLL				pmax	pmax		
	comp=Z,17nm,0.7s						
ARR	**Arges**	**150.50**	**324**	⇑*i*P	**PKPdf**	**03 42 16.7**	**+1.5**
DRGR		**150.53**	**328**	⇑*i*P	**PKiKP**	**03 42 21.6**	**-0.1**
DRGR		**150.53**	**328**	⇑PKIKP	**PKiKP**	**03 42 21.6**	**-0.1**
BRG	**Berggiesshubel**	**150.63**	**342**	*i* PKP	**PKiKP**	**03 42 21.5**	**-0.1**
	comp=Z,23nm,0.6s						
BRG	**Berggiesshubel**	**150.63**	**342**	*i* PKP	**PKPab**	**03 42 31.0**	**+0.3**
	comp=Z,9.8nm,0.8s						
BRG				*ep*PKP	**pPKPbc**	**03 44 31.9**	**+1.1**
	comp=Z,28nm,1.6s						
BRG	**Berggiesshubel**	**150.63**	**342**	*i* PKIKP	**PKiKP**	**03 42 21.5**	**-0.1**
BRG				*i*		03 42 31.0	
BRG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRG				pmax	pmax		
	comp=Z,23nm,0.8s						
CWF	**Charnwood Fore**	**150.73**	**2**	*e*P	**PKPbc**	**03 42 20.9**	**-0.5**
PVCC	**Panska Ves**	**150.76**	**341**	*e*PKIKP	**PKiKP**	**03 42 22.0**	**+0.1**
PVCC				*e*		03 42 32.3	
PVCC	**Panska Ves**	**150.76**	**341**	⇑*e*PKP	**PKiKP**	**03 42 22.0**	**+0.1**
PVCC				*e*PKPAB	**PKPab**	**03 42 32.3**	**+1.1**
PVCC				*ep*PKP	**pPKPab**	**03 44 35.7**	**+0.2**
HLM1	**Long Mynd**	**150.88**	**4**	*e*P	**PKPbc**	**03 42 20.2**	**-1.5**
VYHS	**Vyhne**	**150.99**	**334**	*e*PKIKP	**PKPbc**	**03 42 22.2**	**+0.1**
VYHS				*e*		03 42 32.9	
VYHS	**Vyhne**	**150.99**	**334**	*e*PKP	**PKPbc**	**03 42 22.2**	**+0.1**
VYHS				*e*		03 42 32.9	
PSZ	**Piszkesteto**	**151.00**	**332**	EP	**PKPbc**	**03 42 22.0**	**-0.2**
JAVC	**Velka Javorina**	**151.14**	**336**	*e*PKP	**PKiKP**	**03 42 23.7**	**+0.8**
JAVC				*e*		03 42 34.3	
JAVC				*e*		03 44 34.6	
VRAC	**Vranov**	**151.16**	**338**	PKPbc	**PKPbc**	**03 42 22.2**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=64,slow=0.6,SNR=4.2						
VRAC				PKPab	**PKPab**	**03 42 32.2**	**-0.8**
	comp=Z,10.0nm,0.7s,baz=40,slow=3.5,SNR=11						
VRAC	**Vranov**	**151.16**	**338**	⇑*i*P	**PKPbc**	**03 42 22.6**	**+0.1**
VRAC	**Vranov**	**151.16**	**338**	*e*PKP	**PKPbc**	**03 42 22.4**	**-0.1**
VRAC				*e*		03 42 33.3	
VRAC				*e*		03 44 30.4	
GOPC	**GO Pecny, Ondr**	**151.23**	**340**	*e*PKIKP	**PKPbc**	**03 42 22.7**	**+0.1**
GOPC	**GO Pecny, Ondr**	**151.23**	**340**	⇑*e*PKP	**PKPbc**	**03 42 22.7**	**+0.1**
GOPC				*ep*PKP	**pPKPab**	**03 44 37.4**	**-0.1**
PRU	**Pruhonice**	**151.24**	**341**	*e*PKIKP	**PKiKP**	**03 42 22.9**	**0.0**
PRU				*e*		03 42 33.8	
PRU	**Pruhonice**	**151.24**	**341**	⇑*e*PKP	**PKiKP**	**03 42 22.9**	**0.0**
PRU				*e*PKPAB	**PKPab**	**03 42 33.8**	**+0.5**
PRU				*ep*PKP	**pPKPab**	**03 44 37.2**	**-0.3**
MCH1	**Michaelchurch**	**151.39**	**4**	*e*P	**PKPbc**	**03 42 22.2**	**-0.6**
SIRR	**Siria**	**151.42**	**328**	⇑*i*P	**PKiKP**	**03 42 23.5**	**0.0**
KRUC	**Moravsky**	**151.44**	**338**	*e*PKP	**PKPbc**	**03 42 22.9**	**-0.2**
KRUC				*e*		03 42 34.3	
KRUC				*e*		03 44 32.6	
TREC	**Trest**	**151.55**	**339**	*e*PKIKP	**PKPbc**	**03 42 23.3**	**-0.1**
TREC	**Trest**	**151.55**	**339**	⇑*e*PKP	**PKPbc**	**03 42 23.3**	**-0.1**
MONM	**Monmouth**	**151.56**	**4**	*e*P	**PKPbc**	**03 42 22.5**	**-0.7**
NKC	**Novy Kostel**	**151.62**	**343**	*e*PKIKP	**PKiKP**	**03 42 23.8**	**+0.1**
NKC				*e*		03 42 35.5	
NKC	**Novy Kostel**	**151.62**	**343**	⇑*e*PKP	**PKiKP**	**03 42 23.8**	**+0.1**
NKC				*e*PKPAB	**PKPab**	**03 42 35.5**	**+0.6**
NKC				*ep*PKP	**pPKPab**	**03 44 37.9**	**-1.1**
MODS	**Modra-Piesok**	**151.69**	**336**	*e*PKIKP	**PKPbc**	**03 42 23.4**	**-0.3**
MODS				*e*		03 42 35.7	
MODS	**Modra-Piesok**	**151.69**	**336**	*e*PKP	**PKPbc**	**03 42 23.4**	**-0.3**
MODS				*e*		03 42 35.6	
BZS	**Buzias**	**151.90**	**327**	⇑*i*P	**PKPbc**	**03 42 24.3**	**+0.1**
BZS	**Buzias**	**151.90**	**327**	⇑PKIKP	**PKPbc**	**03 42 24.3**	**+0.1**
ZST	**Bratislava**	**151.90**	**336**	*e*PKP	**PKPab**	**03 42 36.1**	**0.0**
HERR	**Herculane**	**152.00**	**325**	⇑*i*P	**PKPbc**	**03 42 24.1**	**-0.4**
KHC	**Kasperske Hory**	**152.29**	**341**	*e*PKPbc	**PKiKP**	**03 42 25.3**	**+0.1**
KHC				*e*PKPab	**PKPab**	**03 42 38.0**	**+0.2**
KHC	**Kasperske Hory**	**152.29**	**341**	*e*PKIKP	**PKiKP**	**03 42 25.3**	**+0.1**
KHC				*e*		03 42 38.5	
KHC	**Kasperske Hory**	**152.29**	**341**	⇑*e*PKP	**PKiKP**	**03 42 25.3**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**03 42 38.5**	**+0.7**
KHC				*ep*PKP	**pPKPab**	**03 44 39.7**	**-2.2**
GRA1	**Grafenberg Arr**	**152.43**	**345**	*e*PKPab	**PKPab**	**03 42 38.9**	**+0.6**
GRFO	**Grafenberg**	**152.43**	**345**	*e*PKPab	**PKPab**	**03 42 39.0**	**+0.7**
MDVR	**Moldovita**	**152.43**	**326**	⇑*i*P	**PKPbc**	**03 42 25.3**	**-0.2**
GEC2	**GERESS Array S**	**152.51**	**341**	*e*PKPdf	**PKPdf**	**03 42 16.2**	**-1.8**
GEC2				*e*PKPbc	**PKPbc**	**03 42 25.4**	**-0.2**
GEC2				*e*PKPab	**PKPab**	**03 42 38.7**	**-0.1**
GEC2	**GERESS Array S**	**152.51**	**341**	*e*PKIKP	**PKPdf**	**03 42 16.3**	**-1.8**
GEC2				*e*		03 42 25.4	
GEC2				*e*		03 42 38.7	
GERES	**GERESS Array B**	**152.51**	**341**	PKP	**PKPdf**	**03 42 16.2**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=30,slow=2.6,SNR=3.3						
GERES				PKPbc	**PKPbc**	**03 42 25.4**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=42,slow=2.2,SNR=14						
GERES				PKPab	**PKPab**	**03 42 38.7**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=35,slow=4.9,SNR=7.4						
GERES				pPKPbc	**pPKPbc**	**03 44 34.7**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=196,slow=37,SNR=2.0						
SOP	**Sopron**	**152.53**	**336**	EP	**PKiKP**	**03 42 26.0**	**+0.3**
CONA	**Conrad Observa**	**152.59**	**337**	*e*PKIKP	**PKiKP**	**03 42 26.2**	**+0.3**
	comp=Z,4.6nm,0.8s						
CONA				*e*PKPab	**PKPab**	**03 42 40.2**	**+1.0**
	comp=Z,13nm,0.7s,SNR=5.4						
CONA				*ep*PKiKP	**pPKPab**	**03 44 40.8**	**-2.4**
	comp=Z,8.6nm,1.5s						
VTS	**Vitosha**	**153.00**	**321**	*e*PKPbc	**PKPbc**	**03 42 26.9**	**0.0**
VTS				*e*PKPab	**PKPab**	**03 42 42.5**	**+1.3**
VTS	**Vitosha**	**153.00**	**321**	*e*PKIKP	**PKPbc**	**03 42 26.9**	**0.0**
VTS				*e*		03 42 42.5	
MOA	**Molln**	**153.21**	**339**	*e*PKPab	**PKPab**	**03 42 42.0**	**+0.3**
	comp=Z,4.8nm,1.1s						
ARSA	**Arzberg**	**153.28**	**336**	*e*PKPbc	**PKPbc**	**03 42 27.1**	**-0.1**
	comp=Z,2.9nm,0.7s						
ARSA				*e*PKPab	**PKPab**	**03 42 43.1**	**+1.0**
	comp=Z,4.7nm,0.9s						
KOGS	**Kog**	**153.67**	**335**	*e*PKPab	**PKPab**	**03 42 43.3**	**-0.4**
SOKA	**Soboth**	**153.94**	**336**	*e*PKPab	**PKPab**	**03 42 45.0**	**0.0**
	comp=Z,4.7nm,0.9s						
SOKA				*ep*PKiKP	**pPKiKP**	**03 44 43.1**	**+4.0**
	comp=Z,4.3nm,1.3s						
KBA	**Koelnbreinsper**	**154.19**	**339**	*e*PKPab	**PKPab**	**03 42 47.5**	**+1.4**
	comp=Z,2.2nm,0.5s						
OBKA	**Obir**	**154.26**	**337**	*e*PKPab	**PKPab**	**03 42 46.8**	**+0.4**
	comp=Z,5.4nm,0.7s						
BFO	**Black Forest**	**154.35**	**347**	*e*PKPab	**PKPab**	**03 42 46.3**	**-0.3**
MYKA	**Terra Mystica**	**154.48**	**338**	*e*PKPab	**PKPab**	**03 42 46.9**	**-0.3**
	comp=Z,4.1nm,0.6s						
MYKA				*ep*PKiKP	**pPKiKP**	**03 44 43.6**	**+3.4**
	comp=Z,1.1nm,0.4s						
WATA	**Walderalm**	**154.50**	**342**	*e*PKPab	**PKPab**	**03 42 48.2**	**+0.8**
	comp=Z,2.4nm,0.4s						
WTTA	**Wattenberg**	**154.54**	**342**	*e*PKPab	**PKPab**	**03 42 48.2**	**+0.5**
	comp=Z,10nm,0.5s						
WTTA				pPKiKP	**pPKiKP**	**03 44 45.3**	**+4.7**
	comp=Z,1.7nm,0.6s						
RETA	**Reutte**	**154.58**	**343**	*e*PKPab	**PKPab**	**03 42 48.1**	**+0.4**
	comp=Z,6.0nm,0.7s,SNR=5.9						
MOTA	**Moosalm**	**154.62**	**343**	*e*PKPab	**PKPab**	**03 42 48.4**	**+0.5**
	comp=Z,5.4nm,0.5s,SNR=5.5						
MOTA				*ep*PKiKP	**pPKiKP**	**03 44 45.6**	**+5.2**
	comp=Z,0.4nm,0.4s						
LJU	**Ljubljana**	**154.67**	**336**	*e*PKPab	**PKPab**	**03 42 47.8**	**-0.2**
ECH	**Echery**	**154.68**	**349**	*e*PKPab	**PKPab**	**03 42 47.0**	**-0.9**
SQTA	**Sankt Quirin**	**154.70**	**342**	*e*PKPab	**PKPab**	**03 42 48.8**	**+0.6**
	comp=Z,7.2nm,0.7s						
SQTA				*ep*PKiKP	**pPKiKP**	**03 44 44.9**	**+4.1**
	comp=Z,3.8nm,0.9s						
ABTA	**Abfaltersbach**	**154.74**	**340**	*e*PKPab	**PKPab**	**03 42 48.5**	**+0.1**
	comp=Z,3.0nm,0.5s						
CEY	**Cerknica**	**154.96**	**336**	*i* PKPab	**PKPab**	**03 42 49.0**	**-0.3**
DAVA	**Damuels**	**154.99**	**344**	*e*PKPab	**PKPab**	**03 42 49.6**	**0.0**
	comp=Z,10nm,0.6s,SNR=5.4						
DAVA				pPKiKP	**pPKiKP**	**03 44 45.8**	**+4.6**
	comp=Z,7.1nm,1.7s						
FETA	**Feichten**	**155.02**	**343**	*e*PKPab	**PKPab**	**03 42 49.8**	**+0.2**
	comp=Z,4.1nm,1.1s						
FETA				pPKPab	**pPKPab**	**03 44 51.5**	**-2.0**
	comp=Z,6.3nm,1.5s						
FNA	**Florina**	**155.23**	**319**	*e*PKPab	**PKPab**	**03 42 51.1**	**+0.5**
DAVOX	**Davos/Dischmat**	**155.46**	**344**	PKPbc	PKPdf	03 42 32.1	+10
	comp=Z,4.5nm,0.6s,baz=180,slow=18,SNR=9.8						
DAVOX				PKPab	**PKPab**	**03 42 52.0**	**+0.4**
	comp=Z,12nm,0.6s,baz=24,slow=2.8,SNR=21						
DAVOX				pPKPbc	pPKPbc	03 44 41.4	-1.0
	comp=Z,2.1nm,0.8s,baz=151,slow=11,SNR=1.8						
FUORN	**Ofenpass-Fuorn**	**155.51**	**343**	*e*PKPab	**PKPab**	**03 42 52.9**	**+1.0**
AGG	**Agios Georgios**	**155.65**	**315**	*e*PKPab	**PKPab**	**03 42 51.9**	**-0.6**
TUE	**Stuetta**	**155.88**	**344**	*e*PKPab	**PKPab**	**03 42 53.7**	**+0.2**
SENIN	**Lac Senin/Sane**	**156.44**	**348**	*e*PKPab	**PKPab**	**03 42 56.3**	**+0.4**
BNI	**Bardonecchia**	**157.82**	**348**	*e*PKPab	**PKPab**	**03 43 02.5**	**+0.8**
VAE	**Valguarnera**	**161.47**	**322**	PKPab	**PKPab**	**03 43 15.3**	**-2.6**
	comp=Z,35nm,0.6s,baz=99,slow=7.6,SNR=6.9						
LIC	**Lamto**	**162.14**	**163**	*e*PKP2	**PKPab**	**03 43 21.8**	**+0.6**
	comp=Z,86nm,1.2s						
KIC	**Kosan Boka**	**162.34**	**163**	*e*PKP2	**PKPab**	**03 43 22.6**	**+0.5**
	comp=Z,105nm,1.3s						
TIC	**Toumodi**	**162.54**	**162**	*e*PKP2	**PKPab**	**03 43 23.6**	**+0.6**
DBIC	**Dimbokro**	**162.61**	**163**	PKP	**PKPdf**	**03 42 30.4**	**-0.9**
	comp=Z,8.0nm,1.0s,baz=187,slow=2.9,SNR=4.5						
DBIC				PKPab	**PKPab**	**03 43 21.8**	**-1.4**
	comp=Z,14nm,1.1s,baz=168,slow=6.9,SNR=6.5						
DBIC	**Dimbokro**	**162.61**	**163**	*e*PKPdf	**PKPdf**	**03 42 31.3**	**0.0**
DBIC				*e*PKPab	**PKPab**	**03 43 24.3**	**+1.1**
DBIC	**Dimbokro**	**162.61**	**163**	*e*PKIKP	**PKPdf**	**03 42 31.3**	**0.0**
DBIC				*e*		03 43 24.3	
ESDC	**Sonseca Array**	**163.43**	**11**	PKPab	**PKPab**	**03 43 24.7**	**-1.7**
	comp=Z,2.2nm,0.9s,baz=348,slow=4.7,SNR=11						
KEST	**Kesra**	**165.44**	**329**	PKPab	**PKPab**	**03 43 34.0**	**-1.4**
	comp=Z,7.6nm,0.8s,baz=265,slow=1.6,SNR=11						
KEST	**Kesra**	**165.44**	**329**	*e*PKPab	**PKPab**	**03 43 36.1**	**+0.7**
TOA0	**Torodi Ar. Sit**	**169.66**	**188**	*e*PKPdf	**PKPdf**	**03 42 36.2**	**-0.5**
TOA0				*e*PKPab	**PKPab**	**03 43 54.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**169.66**	**188**	PKP	**PKPdf**	**03 42 34.9**	**-1.9**
	comp=Z,5.5nm,1.1s,baz=162,slow=2.1,SNR=14						
TORD				PKPab	**PKPab**	**03 43 53.1**	**-1.2**
	comp=Z,8.0nm,1.0s,baz=172,slow=1.9,SNR=22						
TORD				PP	**PP**	**03 47 44.5**	**+0.7**
	comp=Z,4.0nm,1.0s,baz=168,slow=5.7,SNR=10						
TOA1	**Torodi Ar. Sit**	**169.67**	**188**	*e*PKPdf	**PKPdf**	**03 42 34.9**	**-1.9**
TOA1				*e*PKPab	**PKPab**	**03 43 53.1**	**-1.2**
TOA1				*e*PP	**PP**	**03 47 44.5**	**+0.7**
MDT	**Midelt**	**169.73**	**24**	PKP	**PKPdf**	**03 42 37.0**	**+0.6**
	comp=Z,4.8nm,1.1s,baz=288,slow=1.2,SNR=4.6						
TAM	**Tamanrasset**	**175.10**	**263**	*e*PKPdf	**PKPdf**	**03 42 39.9**	**+0.9**
TAM	**Tamanrasset**	**175.10**	**263**	*e*PKIKP	**PKPdf**	**03 42 39.9**	**+0.9**

*DSN **05** 03:32:52.3±3.0, 26°.77N×58°.06E, h10km, ML3.3/8, Error ellipse: s-maj=41.8km s-min=15.6km az=2.0*
*ISCJB **05** 03:32:54.5±0.9, 26°.66N±0°.04×57°.9E±0°.1, h10km, Error ellipse: s-maj=13.4km s-min=5.7km az=12.9*
*TEH **05** 03:32:54.0, 26°.74N×57°.89E, h12km, ML3.4*
ISC 05 03:32:56.0±1.4,**26°.65N**±0°.05×**57°.82E**±0°.08,**h10**km,**n20,**
σ1°31/21,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**1.00**	**183**	*e*Pg	**Pb**	**03 33 15.8**	**+0.3**
JSK1				IAMB	IAmb	03 33 45.9	
	comp=N,0.0nm,0.8s						
NIAN	**Nian**	**1.27**	**316**	*e*Pg	**Pn**	**03 33 19.3**	**-0.5**
NIAN				IAMB	IAmb	03 33 43.7	
	comp=Z,0.0nm,0.4s						
KHNJ	**Kahnooj**	**1.30**	**355**	*e*Pg	**Pn**	**03 33 17.2**	**-3.1**
KHNJ				IAMB	IAmb	03 33 38.9	
	comp=Z,0.0nm,0.6s						
BANOM	**Banah**	**1.55**	**243**	*e*P	**Pn**	**03 33 22.8**	**-0.9**
	SNR=88						
SHME	**Shamm**	**1.62**	**249**	P	**Pn**	**03 33 24.3**	**-0.5**
SHME				S	**Sg**	**03 33 48.9**	**+0.6**
GENO	**Geno**	**1.65**	**297**	*e*Pn	**Pn**	**03 33 24.9**	**-0.4**
GENO				IAMB	IAmb	03 33 28.1	
	comp=Z,0.0nm,0.3s						
MSFE	**Esma-Masafi**	**1.97**	**230**	P	**Pn**	**03 33 27.5**	**-2.0**
UOSS	**Minazif**	**2.24**	**221**	P	**Pn**	**03 33 32.1**	**-1.1**
HATD	**Hatta, Dubai**	**2.37**	**220**	P	**Pn**	**03 33 33.9**	**-1.1**
ASHO	**Ashiyiah**	**2.52**	**220**	*e*P	**Pn**	**03 33 37.0**	**-0.1**
	SNR=7.7						
NAZ	**Nazwa, Dubai**	**2.55**	**230**	P	**Pn**	**03 33 37.9**	**+0.4**

JAGI	Jajag, Banyuwa	15.34	264	P	Pn	03 52 11.4	-1.1
AS31	Alice Springs	16.91	166	eP	P	03 52 31.4	0.0
	4.4nm,0.4s						
AS31				eSn	Sn	03 55 21.1	-19
ASAR	Alice Springs	16.91	166	P	P	03 52 31.1	-0.3
	1.6nm,0.3s,baz=345,slow=14,SNR=41						
ASAR				S	Sn	03 55 21.1	-19
	0.5nm,0.3s,baz=356,slow=27,SNR=3.8						
ASAR				ScP	ScP	04 00 33.6	+1.2
	0.2nm,0.3s,baz=352,slow=2.3,SNR=6.4						
PSA00	Pilbara Seismi	17.12	212	eP	Pn	03 52 35.5	+1.3
	40nm,0.4s						
PSA00				eS	S	03 55 32.3	-13
PWJI	Pagerwojo	17.64	266	P	P	03 52 39.2	-0.2
UGM	Wanagama	18.91	267	eP	P	03 52 53.0	-0.4
	258nm,1.5s						
GIRL	Giralia	21.33	222	eP	P	03 53 21.8	+2.6
	236nm,1.4s						
FORT	Forrest	23.52	183	eP	P	03 53 42.8	+2.1
	42nm,1.1s						
MORW	Morawa	25.24	209	eP	P	03 53 57.6	+1.2
	14nm,1.1s						
BBOO	Buckleboo	26.20	168	eP	P	03 54 05.4	+0.4
	37nm,1.4s						
STKA	Stephens Creek	27.01	157	P	P	03 54 13.1	+0.9
	2.4nm,0.6s,baz=323,slow=10,SNR=5.5						
STKA	Stephens Creek	27.01	157	eP	P	03 54 13.1	+0.9
	0.9nm,0.8s						
NWAO	Narrogin (SRO)	28.07	202	P	P	03 54 22.0	+0.4
	3.4nm,0.4s,baz=63,slow=9.0,SNR=3.6						
CM31	Chiang Mai Arr	39.53	311	eP	P	03 56 01.5	+0.8
	5.8nm,0.4s						
CMAR	Chiang Mai Arr	39.53	311	P	P	03 56 01.5	+0.8
	1.0nm,0.5s,baz=131,slow=8.9,SNR=4.5						
MJAR	Matsushiro Arr	44.24	10	P	P	03 56 37.8	-1.0
	1.7nm,0.5s,baz=196,slow=10,SNR=6.7						
MAJO	Matsushiro	44.24	10	eP	P	03 56 37.8	-1.0
KS15	Wonju Array Si	44.42	358	eP	P	03 56 40.6	+0.5
	3.2nm,0.8s						
KSRS	Korea Array	44.43	358	P	P	03 56 40.6	+0.4
	0.6nm,0.6s,baz=179,slow=9.5,SNR=4.2						
ERM	Erimo	50.51	13	eP	P	03 57 26.1	-1.0
	10nm,1.1s						
USRK	Ussuriysk Ar.	51.19	2	P	P	03 57 33.1	+1.0
	2.0nm,0.6s,baz=187,slow=9.9,SNR=4.4						
SONA0	Songino Array	58.48	342	eP	P	03 58 25.8	+1.0
SONM	Songino Array	58.48	342	P	P	03 58 25.8	+1.0
	0.5nm,0.6s,baz=167,slow=7.0,SNR=4.0						
PETK	Petropavlovsk-	64.62	18	P	P	03 59 06.8	+1.1
	1.9nm,0.7s,baz=197,slow=4.6,SNR=3.6						
PEA1	Petropavlovsk-	64.63	18	eP	P	03 59 06.8	+1.1
MK31	Makanchi Array	68.15	327	eP	P	03 59 30.0	+1.6
	5.2nm,1.4s						
MK32	Makanchi Array	68.15	327	eP	P	03 59 30.2	+1.9
MKAR	Makanchi Array	68.15	327	P	P	03 59 30.2	+1.9
	4.0nm,0.5s,baz=116,slow=8.2,SNR=60						
ZALV	Zalesovo Beam	71.56	334	P	P	03 59 48.9	0.0
	1.6nm,0.3s,baz=146,slow=3.1,SNR=2.6						
ZAA1	Zalesovo Array	71.56	334	eP	P	03 59 48.9	-0.1
KURBB	Kurchatov Arra	72.45	329	P	P	03 59 55.5	+1.2
	1.7nm,0.6s,baz=135,slow=5.1,SNR=15						
MAW	Mawson	74.63	201	P	P	04 00 08.7	+1.8
	0.9nm,0.5s,baz=97,slow=9.6,SNR=4.3						
MAW	Mawson	74.63	201	eP	P	04 00 08.7	+1.8
	0.3nm,0.8s						
ABKAR	Akbulak array	82.39	322	eP	P	04 00 50.6	+0.9
	1.6nm,0.6s						
ILAR	Eielson Array	93.69	25	P	P	04 01 43.8	+0.1
	0.6nm,0.6s,baz=238,slow=5.3,SNR=8.0						
ILB	Eielson Array	93.69	25	eP	P	04 01 43.8	+0.1
	0.8nm,0.9s						
LTX	Lajitas	125.38	59	ePKPdf	PKiKP	04 07 28.9	+0.1
TXAR	Lajitas Array	125.38	59	PKP	PKiKP	04 07 28.9	+0.1
	0.1nm,0.4s,baz=328,slow=3.2,SNR=2.8						
TORD	Torodi Ar. Bea	128.44	281	PKP	PKiKP	04 07 35.9	+0.7
	0.3nm,0.7s,baz=116,slow=3.4,SNR=2.6						
TOA1	Torodi Ar. Sit	128.44	281	ePKPdf	PKiKP	04 07 35.9	+0.7
LPAZ	La Paz	150.83	143	PKPbc	PKiKP	04 08 23.2	+1.6
	0.6nm,0.4s,baz=28,slow=6.4,SNR=9.3						

RSNC 05 03:55:54.8±0.7, 3°.78N×71°.29W, h12km±14km, ML3.7, Mw3.8, 1C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUVC	San Jose del G	1.81	227	eP	Pn	03 56 24.1	-1.7
GUVC				eS	Sn	03 56 47.9	-0.9
GUVC				i		03 56 52.5	
	comp=N,4μm,0.3s						
YOPC	Yopal, Colombi	1.92	324	eP	Pn	03 56 26.3	-1.2
YOPC				eS	Sn	03 56 50.8	-0.9
YOPC				i		03 56 59.7	
	comp=N,753nm,0.6s						
VILC	Villavicencio,	2.42	278	eP	Pn	03 56 33.2	-1.0
VILC				eS	Sn	03 57 03.3	-0.6
VILC				i		03 57 18.4	
	comp=N,2μm,0.6s						
CHIC	Chingaza	2.57	289	eP	Pn	03 56 35.4	-1.2
CHIC				eS	Sn	03 57 06.6	-1.5
TAMC	Tame, Arauca	2.68	349	eP	Pn	03 56 36.3	-1.6
TAMC				eS	Sn	03 57 09.7	-0.6
TAMC				i		03 57 17.0	
	comp=Z,142nm,0.3s						
RUSC	La Rusia	2.75	320	eP	Pn	03 56 38.1	-1.2
RUSC				eS	Sn	03 57 11.6	-1.1
RUSC				i		03 57 26.3	
	comp=N,165nm,0.6s						
MACC	Macarena, Meta	3.02	238	eP	Pn	03 56 41.4	-1.2
MACC				eS	Sn	03 57 22.1	+3.4
BARC	Barichara	3.37	326	eP	Pn	03 56 45.4	-2.0
PRAC	Prado	3.58	269	eP	Pn	03 56 50.0	-0.2
PRAC				eS	Sb	03 57 41.8	+0.1
PRAC				i		03 57 55.5	
	comp=N,74nm,0.4s						
PAMC	Pamplona, Colo	3.80	338	eP	Pn	03 56 51.6	-2.1
PAMC				i		03 57 55.0	
	comp=Z,98nm,0.4s						
BRRC	Barranca, Sant	4.09	324	eP	Pn	03 56 54.8	-2.4
BRRC				i		03 58 04.6	
	comp=Z,36nm,0.4s						
PTBC	PUERTO BERRIO,	4.17	311	eP	Pb	03 57 07.3	-0.9
PTBC				eS	Sn	03 57 52.5	+5.4
PTBC				i		03 58 05.1	
	comp=N,44nm,0.4s						
HELC	Santa Helena	4.85	300	eP	Pn	03 57 06.7	-1.3
OCAC	Ocana	4.87	336	eP	Pn	03 57 05.7	-2.3
FLOC	Florencia	4.87	243	eP	Pn	03 57 06.8	-1.1
FLOC				eS	Sb	03 58 17.2	-1.5
YOTC	Yotoco, Valle	5.04	272	eP	Pn	03 57 08.3	-2.1
YOTC				eS	Sb	03 58 25.0	+1.2
SDV	Santo Domingo	5.11	7	eP	Pn	03 57 16.2	+4.7

*IDC **05** 04:26:55.9±2.1, 17°.08N×62°.65W, h121km±18km, mb3.7/15, mb1 3.9/20, mb1mx3.7/43, mbtmp4.1/20, Error ellipse: s-maj=17.5km s-min=11.3km az=64.0*
*TRN **05** 04:26:55.2, 17°.29N×62°.48W, h141km, MD4.0*
*NEIC **05** 04:26:57.1±1.6, 17°.19N×62°.64W, h121km±15km, mb4.4/10, Error ellipse: s-maj=26.3km s-min=12.4km az=46.0*
NEIC Felt at Mansion. Felt at Blowing Point, Anguilla and at Old Road, Antigua. Also felt at Marigot, Saint Martin and on Saint-Barthelemy.

ISC 05 04:26:57.3±0.5, 17°.17N±0°.04×62°.67W±0°.04, h135km±4km, n184, σ18°35/157, mb3.9/21, 14C-5D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVRH	Round Hill, Ne	0.07	77	⇓iP	Pn	04 27 15.9	+0.3
NVRH				eS	Sn	04 27 30.2	+0.8
NVBH	Bath Hotel, Ne	0.07	136	⇓iP	Pn	04 27 15.8	+0.3
NVBH				eS	Sn	04 27 31.3	+2.0
NEV	Hard Times	0.10	109	eP	Pn	04 27 15.7	+0.2
NEV				eS	Sn	04 27 30.5	+1.1
SKOC	St. Kitts, UWI	0.14	334	eP	Pn	04 27 15.0	-0.6
SKOC				eS	Sn	04 27 29.9	+0.4
SKI	Saint Kitts	0.18	338	ePn	Pn	04 27 14.6	-1.2
SKI				eSn	Sn	04 27 26.5	-3.3
SKI	Saint Kitts	0.18	338	⇓iP	Pn	04 27 15.0	-0.7
SKI				eS	Sn	04 27 29.9	+0.2
BSK	Brimstone Hill	0.24	317	⇓iP	Pn	04 27 16.3	+0.5
BSK				eS	Sn	04 27 30.5	+0.6
SKDB	Saint Kitts 2	0.26	330	eP	Pn	04 27 16.3	+0.4
SKDB				eS	Sn	04 27 31.4	+1.4
SEUS	St. Eustatius	0.44	317	ePn	Pn	04 27 16.3	-0.3
SEUS				eSn	Sn	04 27 28.3	-3.0
SEUS	St. Eustatius	0.44	317	eP	Pn	04 27 16.1	-0.4
SEUS				eS	Sn	04 27 32.1	+0.8
MLYT	Lee's Yard	0.64	134	eP	Pn	04 27 17.2	-0.5
MLYT				eS	Sn	04 27 33.8	+0.5
BPA	Boggy Peak	0.79	99	⇑iP	Pn	04 27 19.2	+0.3
BPA				eS	Sn	04 27 34.0	-1.2
SMRT	St. Maarten	0.96	336	ePn	Pn	04 27 19.4	-0.9
SMRT				eSn	Sn	04 27 35.3	-2.5
SMRT	St. Maarten	0.96	336	eP	Pn	04 27 19.4	-0.9
SMRT				eS	Sn	04 27 36.1	-1.7
ANWB	Willy Bob	0.98	59	ePn	Pn	04 27 18.8	-1.6
ANWB				eSn	Sn	04 27 35.6	-2.4
ANWB	Willy Bob	0.98	59	eP	Pn	04 27 18.9	-1.6
ANWB				eS	Sn	04 27 34.8	-3.2
ABD	La Joyeuse, An	1.32	121	eP	Pn	04 27 22.4	-1.4
CBE	Ff, Capester	1.49	137	eP	Pn	04 27 25.0	-0.7
TBG	Guadaloupe-3	1.64	143	eP	Pn	04 27 26.4	-0.8
TDBA	Terre de Bas,	1.64	143	eP	Pn	04 27 26.5	-0.8
DEG	La Desirade	1.76	119	eP	Pn	04 27 27.3	-1.5
DEG				eS	Sn	04 27 50.0	-2.8
MAGL	Barre de l'ile	1.80	132	⇑eP	Pn	04 27 28.2	-1.0
MDPO	Dominica; Chan	1.97	143	eP	Pn	04 27 30.4	-0.7
MDPO				eS	Sn	04 27 55.7	-1.4
BBL	Barber's Block	2.00	145	⇑iP	Pn	04 27 30.9	-0.7
BBL				eS	Sn	04 27 56.4	-1.4
DWS	Wesley	2.06	140	eP	Pn	04 27 31.1	-1.1
DWS				eS	Sn	04 27 57.1	-1.9
CDVI	St. Croix	2.08	286	ePn	Pn	04 27 32.6	+0.1
CDVI				eSn	Sn	04 27 58.0	-1.5
DLPL	La Plaine	2.28	143	eP	Pn	04 27 34.7	-0.3
DLPL				eS	Sn	04 28 03.4	-0.5
STVI	Saint Thomas	2.48	299	ePn	Pn	04 27 37.0	-0.4
STVI				eSn	Sn	04 28 07.4	-0.8
PCM	Pelee Case Pet	2.73	149	⇑eP	Pn	04 27 39.7	-0.9
CUPR	Culebra, Puert	2.74	295	ePn	Pn	04 27 40.6	-0.1
CUPR				eSn	Sn	04 28 12.9	-1.2
CXM	Morne La Croix	2.75	148	⇑eP	Pn	04 27 40.2	-0.9
BAMF	Morne Balai	2.76	148	⇑eP	Pn	04 27 40.2	-0.8
GBMF	Grand Be	2.77	148	⇑eP	Pn	04 27 40.2	-1.0
PML	Morne Lenard	2.77	149	⇑eP	Pn	04 27 40.1	-1.0
FDF	Fort de France	2.83	149	ePn	Pn	04 27 40.8	-1.1
FDF				eSn	Sn	04 28 15.4	-0.9
FDF	Fort de France	2.83	149	eP	Pn	04 27 40.8	-1.1
FDF				eS	Sn	04 28 14.9	-1.4
MTP	Monte Pirata	2.90	289	ePn	Pn	04 27 42.8	0.0
ILAM	Ilet Lapin Mar	2.94	144	eP	Pn	04 27 41.9	-1.4
ZAM	Aeronautique	3.02	148	⇑eP	Pn	04 27 43.7	-0.7
TRMF	Trois Ilets	3.04	149	⇑eP	Pn	04 27 44.0	-0.7
BIM	Bigot	3.05	150	⇑eP	Pn	04 27 44.2	-0.6
LPMF	Morne Lapointe	3.06	147	⇑eP	Pn	04 27 43.5	-1.3
MVM	Montagne Vaucl	3.11	146	eP	Pn	04 27 44.7	-0.9
HUMP	Col San Antoni	3.18	288	ePn	Pn	04 27 46.4	0.0
HUMP				eSn	Sn	04 28 22.3	-2.1
MPOM	Morne Pois Mar	3.22	147	eP	Pn	04 27 46.0	-0.9
CBYP	Canovanas	3.23	290	ePn	Pn	04 27 47.3	+0.2
SJG	San Juan	3.45	286	P	Pn	04 27 49.1	-0.8
	42nm,0.3s,baz=16,slow=14,SNR=60						
SJG				S	Sn	04 28 30.1	-0.5
	25nm,0.3s,baz=342,slow=18,SNR=7.4						
SJG	San Juan	3.45	286	ePn	Pn	04 27 49.9	0.0
SJG				eSn	Sn	04 28 30.6	0.0
SJG	San Juan	3.45	286	⇓e		04 28 50.1	
SLBI	Saint Lucia, B	3.53	152	⇑iP	Pn	04 27 50.0	-0.9
SLBI				eS	Sn	04 28 31.0	-1.5
SLW	Petit Monier	3.55	152	eP	Pn	04 27 51.6	+0.4
SLB	Belfond	3.67	154	eP	Pn	04 27 52.3	-0.6
SLB				eS	Sn	04 28 35.0	-1.1
SLDE	Delcer	3.69	155	eP	Pn	04 27 53.7	+0.6
SLPA	Patience	3.70	153	eP	Pn	04 27 53.8	+0.6
ICMP	Isla Caja de M	3.75	282	ePn	Pn	04 27 52.8	-1.1
MCLT	Moule a Chique	3.82	154	eP	Pn	04 27 54.5	-0.3
MCLT				eS	Sn	04 28 38.7	-0.7
OBIP	Obispado Ponce	3.85	284	ePn	Pn	04 27 53.7	-1.5
OBIP				eSn	Sn	04 28 39.2	-0.9
EMPR	Esperanza - Ma	3.90	290	ePn	Pn	04 27 55.9	+0.1
EMPR				eSn	Sn	04 28 33.0	-8.2
AOPR	Arecibo Observ	4.07	287	ePn	Pn	04 27 57.6	-0.4
AOPR				eSn	Sn	04 28 43.6	-1.6
SSV	Crater Summit	4.08	159	eP	Pn	04 27 58.0	-0.3
SVV	Soufriere Volc	4.08	160	eP	Pn	04 27 58.0	-0.2
SVB	Belmont	4.11	160	ePn	Pn	04 27 58.3	-0.4
SVB	Belmont	4.11	160	eP	Pn	04 27 58.4	-0.3
SVCV	St. Vincent, C	4.14	159	eP	Pn	04 27 58.4	-0.7
FCV	Fort Charlotte	4.22	161	eP	Pn	04 27 59.5	-0.6
CRPR	Cabo Rojo, PR	4.32	282	ePn	Pn	04 28 00.8	-0.5
CRPR				eSn	Sn	04 28 50.5	-0.6
MPR	Mayaguez	4.39	284	ePn	Pn	04 28 02.2	-0.1
MPR				eSn	Sn	04 28 51.0	-1.7
AGP	Aguadilla	4.44	287	ePn	Pn	04 28 02.9	0.0
AGP				eSn	Sn	04 28 52.3	-1.7
BBGH	Gun Hill	5.00	143	ePn	Pn	04 28 09.8	-0.7
BBGH				eSn	Sn	04 29 06.9	-0.6
BBGH	Gun Hill	5.00	143	eP	Pn	04 28 10.1	-0.4
BBSP	Saint Philip	5.09	142	eP	Pn	04 28 11.4	-0.3
GRGR	Grenville	5.10	169	ePn	Pn	04 28 10.2	-1.6
PCDR	Punta Cana, DR	5.60	285	ePn	Pn	04 28 18.5	+0.1
TOSP	Speyside	6.19	166	eP	Pn	04 28 26.7	+0.2
TRN	Trinidad (W)	6.60	169	eP	Pn	04 28 32.0	+0.2
SDDR	Presa de Saban	8.39	284	ePn	Pn	04 28 55.3	-0.7
LGNH	Logne	9.56	280	ePn	Pn	04 29 10.8	-0.8
SDV	Santo Domingo	11.31	224	P	Pn	04 29 32.9	-2.3
	0.6nm,0.3s,baz=68,slow=13,SNR=4.1						
CODC	Agustn Codazz	12.70	237	eP	P	04 29 58.5	-0.6
ARGC	Ariguani, Magd	13.39	239	eP	P	04 30 07.0	+0.2
OCAC	Ocana	13.66	231	eP	P	04 30 08.7	-1.2
PAMC	Pamplona, Colo	13.83	226	eP	Pn	04 30 07.9	-0.3
YOPC	Yopal, Colombi	15.13	220	eP	P	04 30 28.6	+2.4
RUSC	La Rusia	15.14	223	eP	Pn	04 30 25.3	+0.5
MDP	Montagnes des	15.50	140	P	Pn	04 30 25.3	-3.4
	2.2nm,0.3s,baz=333,slow=15,SNR=18						
MDP				S	Sn	04 33 04.3	-17
	1.7nm,0.3s,baz=66,slow=20,SNR=7.8						
PTBC	PUERTO BERRIO,	15.63	229	eP	Pn	04 30 29.8	-0.5
HELC	Santa Helena	16.65	231	eP	Pn	04 30 42.6	-0.5
ROSC	El Rosal	16.75	224	P	P	04 30 43.9	-0.4
	2.0nm,0.3s,baz=84,slow=9.3,SNR=6.3						
ROSC	El Rosal	16.75	224	ePn	Pn	04 30 45.4	+1.0
	12nm,0.9s						
GUY2C	Guyana, Caldas	17.19	228	eP	P	04 30 49.2	-0.1
PTGA	Pitinga	17.98	171	P	P	04 30 57.6	0.0
	0.6nm,0.3s,baz=322,slow=19,SNR=5.6						
PTGA	Pitinga	17.98	171	eP	Pn	04 31 00.9	+2.0
	4.2nm,0.8s						
SOLC	Bahia Solano	18.05	235	⇑e		04 29 48.6	
BCIP	Isla Barro Col	18.50	247	eP	P	04 31 03.8	+0.6
	21nm,0.6s						
658A	Bunnell	20.95	309	P	Pn	04 31 46.5	+13
	baz=122						
657A	Interlachen	21.48	309	P	pP	04 31 54.5	-4.7
	baz=121						
ESPN	Las Esperanzas	21.50	260	eP	P	04 31 35.9	+0.4
	15nm,1.0s						
557A	Orange Park	21.61	310	P	pP	04 31 55.8	-4.9
	baz=122						
656A	Willston	21.88	307	eP	P	04 31 41.0	+1.5
	36nm,1.0s						
656A	Willston	21.88	307	P	pP	04 31 59.6	-4.0
	baz=119						
Z59A	Georgetown, SC	21.90	320	P	pP	04 32 01.1	-2.9
	baz=133						
W61A	Ground Anchor	22.02	327	P	pP	04 32 03.1	-2.2
	baz=141						
158A	Hollywood	22.15	318	P	pP	04 32 04.6	-2.0
	baz=130						
456A	Hilliard	22.20	311	P	pP	04 32 03.7	-3.5
	baz=123						
357A	Townsend	22.21	313	P	pP	04 32 03.9	-3.3
	baz=125						
Z58A	St. Stephen	22.30	319	P	pP	04 32 06.2	-2.0
	baz=132						
W60A	Pink Hill	22.30	326	P	pP	04 32 07.0	-1.3
	baz=139						
NHSC	New Hope	22.38	318	eP	P	04 31 46.6	+2.3
	73nm,1.4s						
NHSC	New Hope	22.38	318	P	pP	04 32 07.3	-1.9
	baz=131						
655A	Horseshoe Beac	22.50	307	P	pP	04 32 09.6	-0.7
	baz=119						
555A	McAlpin	22.58	308	P	pP	04 32 10.2	-1.0
	baz=120						
Y58A	Scranton	22.59	321	P	pP	04 32 10.2	-1.3
	baz=133						
356A	Blackshear	22.61	312	P	pP	04 32 08.9	-2.6
	baz=124						
V60A	Jim Taylor Roa	22.61	328	eP	P	04 31 45.9	-0.8
	36nm,1.4s						
JTS	Las Juntas de	22.69	255	P	P	04 31 47.9	+0.3
	1.9nm,0.6s,baz=316,slow=19,SNR=4.3						
256A	Glennville	22.81	314	P	pP	04 32 11.9	-1.9
	baz=126						
Z57A	Bowman	22.84	318	P	pP	04 32 12.8	-1.3
	baz=130						
W58A	Raeford	23.12	323	P	pP	04 32 17.8	+0.7
	baz=136						
V59A	Middlesex	23.12	326	P	pP	04 32 17.4	+0.2
	baz=139						
355A	Pearson	23.13	311	P	pP	04 32 16.5	-0.7
	baz=123						
255A	Hazlehurst	23.19	313	P	pP	04 32 16.7	-1.1
	baz=125						
X57A	Johnson Farm,	23.23	321	P	pP	04 32 18.3	0.0
	baz=134						
Z56A	Williston	23.28	317	P	pP	04 32 18.3	-0.5
	baz=129						
Y56A	Pelion	23.54	318	P	pP	04 32 22.9	+1.2
	baz=130,SNR=12						
155A	Kite	23.59	314	P	pP	04 32 21.9	-0.1
	baz=126,SNR=47						
W57A	Gilead	23.65	323	P	pP	04 32 24.0	+1.2
	baz=135						
T59A	Double "B" Far	23.71	329	P	pP	04 32 25.5	+2.1
	baz=142						
Z55A	Blythe	23.72	316	P	pP	04 32 24.0	+0.5
	baz=128,SNR=12						
254A	Abbeville	23.77	312	P	pP	04 32 25.2	+1.1
	baz=123						
Y55A	Saluda	23.98	318	P	pP	04 32 28.5	+2.2
	baz=129,SNR=20						
154A	Montrose	24.02	314	P	pP	04 32 28.4	+1.7
	baz=125,SNR=7.7						
V57A	Coltrane Farms	24.05	324	P	pP	04 32 30.1	+2.9
	baz=136						
X55A	Gracelyn & Ava	24.18	319	P	pP	04 32 31.8	+3.3
	baz=131,SNR=7.9						
Z54A	Sparta	24.20	315	P	pP	04 32 30.2	+1.5
	baz=126						
KMSC	Kings Mountain	24.44	321	P	pP	04 32 36.6	+5.4
	baz=132,SNR=6.8						
Y54A	Tignall	24.48	317	P	pP	04 32 34.5	+3.0
	baz=128,SNR=24						
T57A	Hurt	24.59	327	P	pP	04 32 37.4	+4.5
	baz=139						
X54A	Belton	24.70	318	P	pP	04 32 38.7	+4.8
	baz=130,SNR=24						
Z53A	Monticello	24.72	314	P	pP	04 32 38.1	+4.0
	baz=125,SNR=16						
GOGA	Godfrey	24.73	315	P	pP	04 32 37.2	+3.1
	baz=126,SNR=16						
W54A	Cherokee Point	24.93	319	P	pP	04 32 41.8	+5.8
	baz=131,SNR=14						
R58A	Rapidan	24.98	330	P	pP	04 32 42.2	+5.5
	baz=143						
S57A	Dark Hollow, R	25.02	328	P	pP	04 32 44.4	+7.4
	baz=141						
T56A	Rocky Mt	25.03	326	P	pP	04 32 44.6	+7.4
	baz=138						
U55A	TA2, Sparta	25.21	323	P	pP	04 32 45.3	+6.5
	baz=135						
R57A	Stanardsville	25.22	330	P	pP	04 32 46.1	+7.0
	baz=142						
X53A	Estanollee	25.27	317	P	pP	04 32 45.4	+6.1
	baz=128,SNR=5.4						
W53A	Cullowhee	25.59	318	P	pP	04 32 50.9	+8.5
	baz=129						
U54A	Nelsons Funny	25.67	322	P	pP	04 32 52.9	+10
	baz=134						
V53A	Saluda	25.70	320	P	pP	04 32 52.3	+9.1
	baz=131,SNR=18						
X52A	Dahlonega	25.72	317	P	pP	04 32 51.6	+8.2
	baz=127,SNR=7.2						
S55A	Lewisburg	25.83	326	P	sP	04 32 55.4	-4.7
	baz=138						
V52A	Sevierville	26.29	319	P	sP	04 33 00.4	-3.7
	baz=130,SNR=9.2						
O57A	Amberson	26.37	334	P	sP	04 33 01.3	-3.8
	baz=146						
TZTN	Tazewell	26.72	320	P	sP	04 33 06.3	-1.6
	baz=131						
U51A	La Follette	26.90	320	P	sP	04 33 08.9	-0.6
	baz=130,SNR=11						
V50A	Pikeville	27.15	317	P	sP	04 33 11.5	-0.4
	baz=127,SNR=7.0						
U50A	Jamestown	27.44	319	P	sP	04 33 15.5	+1.0
	baz=128,SNR=9.8						
ATAH	Atahualpa	28.72	214	P	P	04 32 42.9	+0.4
	8.5nm,0.8s,baz=309,slow=11,SNR=4.5						
S47A	Hartford	29.45	319	P	sP	04 33 43.3	+11
	baz=127,SNR=5.7						
LPAZ	La Paz	33.68	189	P	P	04 33 25.1	-1.1
	1.4nm,0.6s,baz=23,slow=7.1,SNR=4.0						
TXAR	Lajitas Array	39.38	295	P	P	04 34 13.7	-0.2
	0.2nm,0.5s,baz=116,slow=7.9,SNR=7.2						
TXAR				PcP	PcP	04 36 20.8	+1.1
	0.5nm,0.6s,baz=115,slow=4.8,SNR=6.2						
ULM	Lac du Bonnet	42.40	329	P	P	04 34 38.4	+0.1
	4.1nm,0.3s,baz=127,slow=7.6,SNR=4.6						
LENM	Lemitar	43.01	302	eP	P	04 34 47.1	+3.4
CPUP	Villa Florida	43.55	173	P	P	04

HATJ	Hateruma jima	0.92	75	P	Pb	04 33 43.8	-0.1
HATJ				S	Sb	04 33 55.9	+0.2
IRIF	Iriomote-Funau	0.97	58	P	Pb	04 33 44.0	-0.7
IRIF				S	Sb	04 33 56.8	-0.3
EOS1	EOS1	0.97	319	eP	Pn	04 33 45.0	+0.5
	baz=313						
JKRS	Kuro-shima	1.15	69	P	Pn	04 33 47.4	+0.3
JKRS				S	Sn	04 34 02.3	+0.3
ENA	Nanau	1.17	301	eP	Pn	04 33 47.2	0.0
	baz=295						
NACB	Ninganchiao	1.19	288	eP	Pb	04 33 48.2	-0.2
	baz=272						
NACB				eS	Sn	04 34 02.5	-0.4
	baz=272						
TWC	Suao	1.20	311	eP	Pn	04 33 47.3	-0.3
	baz=306						
ETLH	Xiulin Townshi	1.30	288	eP	Pn	04 33 48.9	-0.3
	baz=284						
ETLH				eS	Sn	04 34 05.1	-0.6
	baz=284						
EGFH	Guangfu	1.30	264	S	Sn	04 34 05.8	+0.1
	baz=250						
JIJ	Ishigaki jima	1.31	65	P	Pn	04 33 49.6	+0.3
JIJ				eS	Sb	04 34 06.8	-0.2
HGSD	Ruisui	1.33	256	eP	Pn	04 33 49.2	-0.3
	baz=253						
HGSD				eS	Sn	04 34 05.3	-1.2
	baz=253						
NDT	Datong Townshi	1.44	303	eP	Pn	04 33 51.8	+0.8
	baz=300						
NDT				S	Sn	04 34 08.8	-0.2
	baz=300						
NNSB	Datong	1.46	295	P	Pn	04 33 51.9	+0.4
	baz=292						
NNSB				eS	Sn	04 34 09.5	-0.2
	baz=292						
TIPB	Shuangxi	1.47	321	eP	Pn	04 33 52.0	+0.6
	baz=318						
NNS	Nan Shan	1.47	295	eP	Pn	04 33 52.0	+0.4
	baz=292						
NNS				eS	Sn	04 34 10.0	-0.1
	baz=292						
WHF	Hehuan Shan	1.47	283	eP	Pn	04 33 51.9	0.0
	baz=280						
WHF				eS	Sn	04 34 09.9	-0.6
	baz=280						
YULB	Yu-li	1.47	254	eP	Pn	04 33 51.9	+0.4
	baz=243						
YULB				eS	Sn	04 34 09.7	-0.3
	baz=243						
TWF1	Yuli	1.49	252	eP	Pn	04 33 52.5	+0.9
	baz=241						
TWF1				S	Sn	04 34 10.9	+0.7
	baz=241						
OWD	Renai	1.52	275	P	Pn	04 33 52.9	+0.6
	baz=272						
OWD				eS	Sn	04 34 11.1	-0.3
	baz=272						
CHGB	Renai	1.54	279	eP	Pn	04 33 53.4	+0.8
	baz=277						
CHGB				eS	Sn	04 34 11.7	-0.2
	baz=277						
JISG	Ishigakijimahi	1.55	60	P	Pn	04 33 52.5	0.0
VWDT	VWDT	1.55	268	eP	Pn	04 33 53.3	+0.7
	baz=265						
VWDT				S	Sn	04 34 12.1	+0.2
	baz=265						
YHNB	Yeheng	1.58	303	eP	Pn	04 33 53.7	+0.7
	baz=288						
NSK	Sanguang	1.59	303	eP	Pn	04 33 53.6	+0.4
	baz=301						
NSK				eS	Sn	04 34 12.3	-0.8
	baz=301						

*IDC **05** 04:35:46.6±3.4, 27.79S×178.66E, h0km, mb4.0/2, mb1 4.1/3, mb1mx3.8/22, mbtmp4.1/3, ML3.9/1, Error ellipse: s-maj=67.2km s-min=33.2km az=122.0*
*ISCJB **05** 04:35:55.7±0.5, 37.75S±0.03×178.09E±0.05, h60km±4km, Error ellipse: s-maj=6.6km s-min=4.6km az=162.4*
*WEL **05** 04:35:57.1, 38°S±2°×17°8E°, h41km±2km, M4.1/20, ML4.4/16, MLv4.1/20, Error ellipse: s-maj=0.0km s-min=0.0km az=145.2*

ISC 05 04:35:55.5±1.0, 37.70S±0.04×178.13E±0.04, h37km, n100, σ1§25/112, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.20	47	P	Pn	04 36 06.1	+1.2
MXZ				S	Sn	04 36 13.1	-0.9
HAZ	Te Kaha	0.28	258	P	Pn	04 36 04.2	+0.5
HAZ				S	Sn	04 36 09.5	-1.6
PUZ	Puketiti	0.39	164	P	Pn	04 36 06.3	+2.0
PUZ				S	Sn	04 36 13.8	+2.6
RUGZ	Raukumara Rang	0.44	233	P	Pn	04 36 06.0	+0.7
RUGZ				S	Sn	04 36 12.5	+0.1
TWGZ	Tauwhareparae	0.49	193	P	Pn	04 36 07.4	+1.4
TWGZ				S	Sn	04 36 15.7	+2.3
WIZ	White Island	0.76	283	P	Pn	04 36 10.6	+1.0
TKGZ	Te Karaka	0.77	196	P	Pn	04 36 10.9	+1.1
TKGZ				S	Sn	04 36 22.6	+2.5
CNGZ	Carnagh Statio	0.79	175	P	Pn	04 36 11.7	+1.7
CNGZ				S	Sn	04 36 24.2	+3.7
MWZ	Matawai	0.79	216	P	Pn	04 36 11.0	+0.9
MWZ				S	Sn	04 36 21.7	+1.0
WHRZ	Whale Island	0.92	260	P	Pn	04 36 12.3	+0.4
URZ	Urewera	0.98	235	Pn	Pn	04 36 12.5	-0.1
	462nm,0.3s,baz=278,slow=5.5,SNR=1695						
URZ				Sn	Sn	04 36 25.2	0.0
	1μm,0.3s,baz=204,slow=20,SNR=42						
URZ				LR	LR	04 36 44.3	
	comp=Z,230nm,20.4s,baz=31,slow=44						
URZ	Urewera	0.98	235	P	Pn	04 36 13.0	+0.4
URZ				S	Sn	04 36 25.1	-0.2
RIGZ	Rimuhau	1.04	196	P	Pn	04 36 14.3	+0.7
EDRZ	Edgecumbe	1.17	249	P	Pn	04 36 15.9	+0.6
MARZ	Manawahe	1.18	256	P	Pn	04 36 15.6	+0.1
PRGZ	Paritu Road	1.24	189	P	Pn	04 36 16.7	+0.5
SNGZ	Shannon Statio	1.25	210	P	Pn	04 36 17.2	+0.9
OPRZ	Ohinepanea	1.25	263	P	Pn	04 36 16.4	0.0
RTZ	Ruatahuna	1.28	224	P	Pn	04 36 17.7	+0.8
RTZ				S	Sn	04 36 33.4	+0.5
MUGZ	Murupara	1.32	234	P	Pn	04 36 18.0	+0.6
MUGZ				S	Sn	04 36 33.8	0.0
KNZ	Kokohu	1.37	195	P	Pn	04 36 17.8	-0.2
MKRZ	Makatiti	1.38	251	P	Pn	04 36 19.3	+1.0
TARZ	Mount Tarawera	1.39	247	P	Pn	04 36 19.3	+0.9
LIRZ	Lichensteins R	1.41	257	P	Pn	04 36 19.2	+0.6
RRRZ	Republican Roa	1.42	243	P	Pn	04 36 19.2	+0.4
OMRZ	Omania	1.45	253	P	Pn	04 36 19.5	+0.4
MHGZ	Mahia Peninsul	1.46	187	P	Pn	04 36 19.4	+0.1
RAHZ	Arahi	1.46	214	P	Pn	04 36 20.2	+0.9
TGRZ	Tauranga	1.48	268	P	Pn	04 36 19.7	+0.2
HLRZ	Highlands Stat	1.50	248	P	Pn	04 36 20.6	+0.7
KARZ	Kaharoa	1.52	257	P	Pn	04 36 20.6	+0.4
MTHZ	Maungataniwha	1.53	221	P	Pn	04 36 21.2	+0.9
WHHZ	Waihua	1.54	207	P	Pn	04 36 21.3	+0.9
PRRZ	Plateau Road	1.58	239	P	Pn	04 36 21.4	+0.5
NGRZ	Ngongotaha	1.58	255	P	Pn	04 36 22.0	+0.9
UTU	Utuhina	1.60	252	P	Pn	04 36 21.7	+0.5
HSRZ	Hossack Road	1.61	247	P	Pn	04 36 22.2	+1.0
HRRZ	Handcock Road	1.61	244	P	Pn	04 36 22.1	+0.8
ALRZ	Allen Road	1.65	238	P	Pn	04 36 22.9	+1.0
GRRZ	Galatos Road	1.72	247	P	Pn	04 36 23.2	+0.3
KMRZ	Kaimai	1.74	265	P	Pn	04 36 22.9	-0.2
NMHZ	Naumai	1.74	216	P	Pn	04 36 24.1	+0.9
WPRZ	Whakapapatarin	1.75	242	P	Pn	04 36 24.1	+0.8
MRHZ	Matea Rd	1.76	229	P	Pn	04 36 24.3	+0.9
ARHZ	Aropaoanui	1.79	209	P	Pn	04 36 24.2	+0.4
BKZ	Black Stump Fm	1.95	221	P	Pn	04 36 26.3	+0.3
HATZ	Hinemaiaia	1.99	233	P	Pn	04 36 27.0	+0.3
MCHZ	McNeill Hill	2.07	212	P	Pn	04 36 27.8	+0.1
TOZ	Tahuroa Road	2.08	268	P	Pn	04 36 28.0	+0.2
CKHZ	Cape Kidnapper	2.12	202	P	Pn	04 36 27.6	-0.8
WATZ	Wairara	2.14	241	P	Pn	04 36 29.6	+1.0
TLZ	Tolley Road	2.14	252	P	Pn	04 36 29.2	+0.6
KUZ	Kuaotunu	2.14	296	P	Pn	04 36 29.1	+0.4
KWHZ	Kaweka Forest	2.18	217	P	Pn	04 36 29.2	0.0
RITZ	Rihia Road	2.19	234	P	Pn	04 36 30.1	+0.7
KATZ	Kakaramea	2.30	236	P	Pn	04 36 31.6	+0.7
KAHZ	Kahuranaki	2.31	205	P	Pn	04 36 30.4	-0.6
KRHZ	Kereru	2.38	215	P	Pn	04 36 32.1	+0.2
BHHZ	Black Hill Sta	2.41	221	P	Pn	04 36 32.4	0.0
MKAZ	Moumakai	2.43	283	P	Pn	04 36 33.3	+0.7
NGZ	Ngauruhoe	2.47	233	P	Pn	04 36 34.9	+1.6
TUVZ	Tukino	2.49	230	P	Pn	04 36 35.3	+1.7
MOVZ	Moawhango	2.52	227	P	Pn	04 36 34.1	+0.2
PXZ	Pawanui	2.53	203	P	Pn	04 36 32.8	-1.1
WHVZ	Whangaehu Hut	2.54	231	P	Pn	04 36 35.4	+1.1
FWVZ	Far West T-bar	2.55	232	P	Pn	04 36 35.6	+1.2
WIAZ	Waiheke Island	2.55	290	P	Pn	04 36 35.4	+1.1
GRZ	Great Barrier	2.58	303	P	Pn	04 36 36.0	+1.4
KBAZ	Karaka Road Bo	2.65	282	P	Pn	04 36 37.5	+2.0
ETAZ	East Tamaki Re	2.66	285	P	Pn	04 36 37.0	+1.3
WPHZ	Waipukurau	2.70	209	P	Pn	04 36 36.3	0.0
HIZ	Hauiti	2.70	252	P	Pn	04 36 37.6	+1.3
MBAZ	Motutapu North	2.74	289	P	Pn	04 36 38.2	+1.4
PRHZ	Porangahau	2.81	204	P	Pn	04 36 37.3	-0.6
EPAZ	Eden Park BICE	2.82	286	P	Pn	04 36 39.8	+1.8
HBAZ	Herne Bay Bore	2.84	286	P	Pn	04 36 40.0	+1.8
AWAZ	Awhitu Peninsu	2.84	282	P	Pn	04 36 39.8	+1.5
TSZ	Takapari Road	2.90	215	P	Pn	04 36 38.6	-0.5
WTAZ	Waiatarua	2.93	284	P	Pn	04 36 41.3	+1.8
VRZ	Vera Road	3.00	241	P	Pn	04 36 42.5	+2.0
DVHZ	Dannevirke	3.01	210	P	Pn	04 36 39.2	-1.4
ANWZ	Angora Road	3.04	204	P	Pn	04 36 39.8	-1.1
WAZ	Wanganui	3.20	229	P	Pn	04 36 44.2	+1.0
POWZ	Post Office Ro	3.25	214	P	Pn	04 36 44.3	+0.3
PRWZ	Pori Road	3.31	210	P	Pn	04 36 43.8	-0.9
LREZ	Lake Rotokare	3.41	238	P	Pn	04 36 47.8	+1.8
WCZ	Waipu Caves	3.50	299	P	Pn	04 36 48.9	+1.5
TIWZ	Tintock	3.53	209	P	Pn	04 36 47.6	-0.2
PKE	Pukeiti	3.58	244	P	Pn	04 36 51.0	+2.7
OGWZ	Otaki Gorge	3.87	215	P	Pn	04 36 50.4	-1.9
OUZ	Omahuta	4.41	303	P	Pn	04 37 02.1	+2.3
NNZ	Nelson	5.08	225	P	Pn	04 37 07.2	-1.8
QRZ	Quartz Range	5.35	233	P	Pn	04 37 15.0	+2.3
CTZ	Chatham Island	7.23	148	P	Pn	04 37 40.1	+1.6
RPZ	Rata Peaks	8.06	220	Pn	Pn	04 37 45.7	-4.2
	1.6nm,0.3s,baz=322,slow=19,SNR=4.4						
RPZ				Sn	Sn	04 39 08.4	-11
	3.2nm,0.3s,baz=298,slow=23,SNR=10						
STKA	Stephens Creek	30.43	270	P	P	04 42 05.3	+1.0
	2.9nm,0.8s,baz=135,slow=11,SNR=3.5						
HNR	Honiara	32.57	325	P	P	04 42 22.3	-1.0
	55nm,0.4s,baz=146,slow=3.6,SNR=3.0						
ASAR	Alice Springs	40.16	277	P	P	04 43 27.7	-0.4
	0.8nm,0.5s,baz=125,slow=8.3,SNR=13						
WRA	Warramunga Arr	41.82	283	P	P	04 43 41.7	-0.1
	13nm,0.3s,baz=120,slow=8.5,SNR=0.8						
BRTR	Keskin Array B	152.32	285	PKPbc	PKPbc	04 55 45.6	-1.7
	0.5nm,0.8s,baz=134,slow=4.2,SNR=3.3						

*IDC **05** 04:39:43.4±0.5, 24.15S×176.21W, h0km, mb4.7/20, mb1 4.8/22, mb1mx4.8/28, mbtmp4.7/22, ML4.0/2, Error ellipse: s-maj=17.5km s-min=14.4km az=125.0*
*ISCJB **05** 04:39:47.6±0.2, 24.29S±0.04×176.30W±0.04, h30km, mb4.9/163, Error ellipse: s-maj=7.1km s-min=4.3km az=141.5*
*MOS **05** 04:39:49.6±1.1, 24.17S×176.40W, h44km, mb5.2/33, Error ellipse: s-maj=11.4km s-min=9.4km az=62.6*
*NEIC **05** 04:39:50.9±1.7, 24.20S×176.37W, h45km±4km, mb4.9/143, Error ellipse: s-maj=16.5km s-min=12.6km az=118.0*
*BJI **05** 04:40:01.5±0.0, 24.30S×176.40W, h145km, mb5.1/34, mB5.3/21*

ISC 05 04:39:47.9±0.3, 24.38S±0.06×176.04W±0.06, h30km, n410, σ1§62/421, mb4.9/162, 42C-20D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	7.76	48	eP	Pn	04 41 32.0	-6.9
NIUE				eSn	Sn	04 42 46.3	-19
URZ	Urewera	15.01	201	Pn	Pn	04 43 18.6	+0.7
	0.7nm,0.3s,baz=325,slow=5.0,SNR=3.2						
URZ				Sn	Sn	04 45 55.1	-8.1
	0.9nm,0.3s,baz=342,slow=19,SNR=3.9						
URZ	Urewera	15.01	201	ePn	P	04 43 22.2	-0.9
	26nm,0.9s						
URZ				eSn	Sn	04 45 60.0	-3.2
RAR	Rarotonga	15.33	81	Pn	Pn	04 43 17.1	-5.2
	15nm,0.3s,baz=277,slow=9.6,SNR=14						
RAR				Sn	Sn	04 45 50.7	-20
	1.5nm,0.3s,baz=94,slow=19,SNR=3.1						
RAR	Rarotonga	15.33	81	ePn	Pn	04 43 16.9	-5.4
	362nm,1.4s						
RAR				eSn	Sn	04 45 50.7	-20
	0.4nm,0.3s,baz=78,slow=18,SNR=1.7						
BKZ	Black Stump Fm	16.04	201	ePn	P	04 43 34.8	+0.3
	63nm,1.3s						
HIZ	Hauiti	16.07	207	ePn	P	04 43 36.8	+2.0
	136nm,1.3s						
DZM	Mont Dzumac	16.26	275	Pn	Pn	04 43 33.0	-1.3
	0.4nm,0.3s,baz=78,slow=18,SNR=1.7						
DZM	Mont Dzumac	16.26	275	eP	P	04 43 39.8	+2.6
	395nm,1.4s						
DZM	Mont Dzumac	16.26	275	ePn	Pn	04 43 33.0	-1.3
	155nm,1.4s						
BFZ	Birch Farm	17.49	200	ePn	P	04 43 50.5	-0.1
	98nm,1.3s						
THZ	Tophouse	19.62	205	eP	P	04 44 12.1	-1.9
	40nm,1.2s						
KHZ	Kahutara	19.95	203	eP	P	04 44 15.2	-2.2
	60nm,1.3s						
MQZ	McQueen's Vall	21.39	203	eP	P	04 44 32.6	-0.5
	52nm,1.4s						
KNTN	Kanton	21.89	12	eP	P	04 44 38.6	0.0
	101nm,1.2s						
RPZ	Rata Peaks	22.00	206	P	P	04 44 39.0	-0.7
	2.7nm,0.3s,baz=16,slow=7.4,SNR=2.4						
WKZ	Wanaka	23.74	207	eP	P	04 44 57.5	0.0
	71nm,1.4s						
TBI	Tubuai	24.32	93	eS	S	04 49 17.9	-2.6
	969nm,26.2s						
TBI				eLR	LR	04 51 14.5	
	comp=Z,3μm,25.0s,baz=262						
TBI	Tubuai	24.32	93	eT	T	05 10 05.5	
	19nm,0.3s						
DCZ	Deep Cove	25.05	209	eP	P	04 45 09.6	+0.1
	21nm,1.0s						
PAE	Paea	25.57	80	eT	T	05 11 42.0	
	12nm,0.3s						
PPT2	Papeete2	25.59	80	eS	S	04 49 40.5	-0.6
	847nm,28.8s						
PPT2				eLR	LR	04 51 45.4	
	comp=Z,3μm,23.5s,baz=249						
PPT2	Papeete2	25.59	80	eT	T	05 11 44.7	
	8.4nm,0.3s						
TVO	Taravao	25.82	80	eT	T	05 12 01.0	
	2.0nm,0.3s						
MEH	Mehetia	26.86	81	eT	T	05 13 19.3	
	55nm,0.3s						
ARMA	Armidale	29.26	251	eP	P	04 45 48.5	+0.8
	23nm,1.4s						
EIDS	Eidsvold	29.80	261	eP	P	04 45 52.6	+0.3
	27nm,1.2s						
CTA	Charters Tower	35.09	269	P	P	04 46 38.6	-0.1
	27nm,0.5s,baz=91,slow=11,SNR=25						
CTAO	Charters Tower	35.09	269	eP	P	04 46 38.8	+0.1
	29nm,0.6s						
CTAO				eS	S	04 52 10.0	+0.3
CTAO	Charters Tower	35.09	269	eP	P	04 46 38.8	+0.1
CTAO				eS	S	04 52 10.0	+0.3
CTAO				pmax	pmax		
	comp=Z,29nm,0.6s						
MCQ	Macquarie Isla	35.36	205	eP	P	04 46 41.0	+0.4
	comp=Z,149nm,1.2s						
MCQ	Macquarie Isla	35.36	205	eP	P	04 46 41.0	+0.4
MCQ				pmax	pmax		
	comp=Z,149nm,1.2s						
RKT	Rikitea	37.52	97	eT	T	05 26 45.9	
	comp=Z,11nm,0.3s						
TAOE	Nuku Hiva Isla	37.55	72	eLR	LR	04 56 50.7	
	comp=Z,2μm,25.1s						
STKA	Stephens Creek	37.91	249	P	P	04 47 02.6	-0.1
	comp=Z,2.6nm,0.4s,baz=97,slow=10,SNR=11						
STKA	Stephens Creek	37.91	249	eP	P	04 47 02.6	-0.1
	comp=Z,3.8nm,1.3s						
STKA	Stephens Creek	37.91	249	eP	P	04 47 02.6	-0.1
STKA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
PMG	Port Moresby	38.08	287	P	P	04 47 01.5	-2.7
	comp=Z,36nm,0.8s,baz=39,slow=7.3,SNR=4.4						
PMG	Port Moresby	38.08	287	eP	P	04 47 03.2	-1.1
	comp=Z,100nm,1.3s						
PMG	Port Moresby	38.08	287	eP	P	04 47 03.1	-1.1
COEN	Coen	39.76	277	eP	P	04 47 17.3	-1.1
	comp=Z,40nm,1.5s						
BBOO	Buckleboo	42.59	247	eP	P	04 47 41.1	-0.4
	comp=Z,57nm,1.5s						
AS31	Alice Springs	45.52	260	ePcP	PcP	04 49 44.1	+0.5
ASAR	Alice Springs	45.52	260	P	P	04 48 04.0	-1.1
	comp=Z,9.5nm,0.4s,baz=91,slow=7.2,SNR=79						
ASAR				PcP	PcP	04 49 44.1	+0.5
	comp=Z,1.1nm,0.7s,baz=104,slow=4.7,SNR=2.6						
WB2	Warramunga Arr	45.96	265	eP	P	04 48 06.9	-1.7
	comp=Z,33nm,1.3s						
WRAB	Tennant Creek	45.97	265	eP	P	04 48 06.3	-2.3
	comp=Z,30nm,1.3s						
WRAB	Tennant Creek	45.97	265	eP	P	04 48 06.3	-2.3
WRAB				pmax	pmax		
	comp=Z,30nm,1.3s						
WR1	Warramunga Arr	45.97	265	eP	P	04 48 06.6	-2.1
WRA	Warramunga Arr	45.97	265	P	P	04 48 06.6	-2.1
	comp=Z,6.3nm,0.5s,baz=96,slow=8.5,SNR=2.0						
JAY	Jayapura	47.05	291	P	P	04 48 14.5	-2.6
	comp=Z,13nm,0.8s,baz=194,slow=4.2,SNR=3.9						
FORT	Forrest	49.53	250	eP	P	04 48 35.4	-0.7
	comp=Z,25nm,0.7s						
SBA	Scott Base	54.15	184	eP	P	04 49 14.1	+4.3
	comp=Z,48nm,1.1s						
VNDA	Vanda	54.23	186	P	P	04 49 12.4	+2.0
	comp=Z,8.5nm,1.0s,baz=15,slow=7.1,SNR=18						
VNDA	Vanda	54.23	186	eP	P	04 49 13.9	+3.4
	comp=Z,17nm,1.2s						
VNDA	Vanda	54.23	186	eP	P	04 49 13.9	+3.4
VNDA				pmax	pmax		
	comp=Z,17nm,1.2s						
FITZ	Fitzroy Crossi	54.39	265	eP	P	04 49 11.4	-1.0
MORW	Morawa	60.10	249	eP	P	04 49 52.3	-0.4
	comp=Z,19nm,1.1s						
QSPA	South Pole Qui	65.70	180	eP	P	04 50 32.1	+2.5
	comp=Z,51nm,1.1s						
MJAR	Matsushiro Arr	74.39	323	P	P	04 51 21.0	-2.0
	comp=Z,1.0nm,0.3s,baz=158,slow=6.7,SNR=4.3						
MAJO	Matsushiro	74.39	323	eP	P	04 51 21.0	-2.0
MAJO	Matsushiro	74.39	323‖	eP	P	04 51 22.1	-0.9
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIWB	Kanaga Island	75.91	359	eP	P	04 51 30.4	-1.0
ADK	Adak	75.94	360	eP	P	04 51 31.1	-0.4
	comp=Z,27nm,1.3s						
ADK	Adak	75.94	360	eP	P	04 51 31.1	-0.4
ADK				pmax	pmax		
	comp=Z,27nm,1.3s						
ATKA	Atka Island	76.27	1	eP	P	04 51 33.1	-0.3
	comp=Z,36nm,1.0s						
YULB	Yu-li	77.13	303	eP	P	04 51 37.8	-1.2
	comp=Z,8.4nm,1.2s						
SMY	Shemya	77.26	354	eP	P	04 51 38.2	-0.8
	comp=Z,15nm,0.8s						
SMY	Shemya	77.26	354	eP	P	04 51 38.2	-0.8
SMY				pmax	pmax		
	comp=Z,15nm,0.8s						
MAW	Mawson	78.53	200	P	P	04 51 48.1	+2.1
	comp=Z,17nm,0.9s,baz=124,slow=6.4,SNR=38						
MAW	Mawson	78.53	200	eP	P	04 51 48.1	+2.1
	comp=Z,5.7nm,0.9s						
MAW	Mawson	78.53	200	eP	P	04 51 48.1	+2.1
MAW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SAO	San Andreas Ge	79.66	42	eP	P	04 51 54.5	+1.9
	comp=Z,11nm,1.4s						
SAO	San Andreas Ge	79.66	42	eP	P	04 51 54.5	+1.9
SAO				pmax	pmax		
	comp=Z,11nm,1.4s						
YSS	Yuzh-Sakhalins	80.16	333	eP	P	04 51 55.8	+0.8
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
PETK	Petropavlovsk-	80.47	344	P	P	04 51 54.5	-2.2
	comp=Z,11nm,0.8s,baz=124,slow=6.7,SNR=14						
PEA1	Petropavlovsk-	80.48	344	eP	P	04 51 54.5	-2.2
SDPT	Sand Point	80.52	9	eP	P	04 51 56.6	-0.1
	comp=Z,26nm,0.8s						
ISA	Isabella, Lake	80.80	44	eP	P	04 52 00.6	+1.7
	comp=Z,13nm,1.3s						
ISA	Isabella, Lake	80.80	44	eP	P	04 52 00.6	+1.7
ISA				pmax	pmax		
	comp=Z,13nm,1.3s						
KSRS	Korea Array	80.98	318	P	P	04 51 58.3	-1.4
	comp=Z,0.5nm,0.4s,baz=131,slow=5.0,SNR=3.2						
KS15	Wonju Array Si	80.99	318	eP	P	04 51 58.3	-1.5
CMB	Columbia Colle	81.12	41	eP	P	04 52 01.8	+1.2
	comp=Z,9.3nm,1.3s						
CMB	Columbia Colle	81.12	41	eP	P	04 52 01.8	+1.2
CMB				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ORV	Oroville	81.46	40	eP	P	04 52 05.4	+3.2
	comp=Z,10nm,1.5s						
GSC	Goldstone, Bar	81.65	45	eP	P	04 52 05.0	+1.6
	comp=Z,6.6nm,1.1s						
GSC	Goldstone, Bar	81.65	45	eP	P	04 52 05.0	+1.6
GSC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
OMMB	Old Mammoth Mi	81.70	42	eP	P	04 52 06.2	+2.2
	comp=Z,6.0nm,1.3s						
WAKR	Walker	82.00	41	eP	P	04 52 07.2	+1.9
	comp=Z,11nm,1.2s						
PNTR	Pine Nut	82.27	41	eP	P	04 52 08.6	+1.7
	comp=Z,14nm,1.3s						
BEKR	Beckworth	82.33	40	eP	P	04 52 09.2	+2.2
	comp=Z,13nm,1.5s						
VCNR	Virginia City	82.38	41	eP	P	04 52 09.0	+1.7
	comp=Z,8.0nm,1.3s						
YERR	Yerington	82.42	41	eP	P	04 52 08.6	+1.1
	comp=Z,11nm,1.4s						
YERR				eS	S	05 02 19.7	-2.4
LDFC	Landfair	82.62	46	eP	P	04 52 10.9	+2.3
	comp=Z,38nm,1.4s						
RYN	Ryan	82.63	42	eP	P	04 52 10.1	+1.5
	comp=Z,12nm,1.4s						
NV01	Mina Array Sit	82.64	42	eP	P	04 52 09.3	+0.6
NVAR	Mina Array Bea	82.64	42	P

comp=Z,26nm,1.5s
BMN Battle Mountai 84.54 41 *e*P **P 04 52 20.4 +2.0**
BMN pmax pmax
comp=Z,26nm,1.5s
319A Douglas 84.55 52 *e*P **P 04 52 20.6 +2.0**
comp=Z,7.4nm,0.8s
PINE Pine Mountain 84.57 37 *e*P **P 04 52 20.1 +1.6**
comp=Z,12nm,1.1s
VNA2 Neumayer–Watz 84.62 176 P **P 04 52 19.6 +1.4**
baz=188,slow=3.7
X16A Lo Mia Camp, P 84.70 49 *e*P **P 04 52 21.2 +1.8**
comp=Z,8.6nm,1.0s
MDJ Mudanjiang 84.72 324 P **P 04 52 19.4 +0.5**
MDJ S **SKSac 05 02 39.4 -1.4**
MDJ pmax pmax
comp=Z,15nm,1.3s
MDJ pmax pmax
comp=Z,220nm,5.7s
MDJ LR LR
comp=Z,2μm,19.9s
MDJ LR LR
comp=Z,2μm,24.2s
MDJ LR LR
comp=Z,4μm,25.6s
VNA1 Neumayer–Stat 84.84 176 P **P 04 52 20.7 +1.5**
HPIG 84.93 58 *e*P **P 04 52 21.4 +0.7**
comp=Z,6.2nm,1.0s
WVOR Wild Horse Val 84.97 39 *e*P **P 04 52 21.6 +1.2**
comp=Z,16nm,1.4s
WVOR Wild Horse Val 84.97 39 *e*P **P 04 52 21.6 +1.2**
WVOR pmax pmax
comp=Z,16nm,1.4s
LCMT Little Creek M 84.98 46 *e*P **P 04 52 22.5 +1.9**
comp=Z,12nm,1.3s
CCUT Cedar City 85.21 45 *e*P **P 04 52 23.7 +1.8**
comp=Z,6.3nm,1.1s
KNB Kanab 85.25 46 *e*P **P 04 52 24.1 +2.0**
comp=Z,34nm,1.5s
KNB Kanab 85.25 46 *e*P **P 04 52 24.1 +2.0**
KNB pmax pmax
comp=Z,34nm,1.5s
U15A North Rim 85.27 47 *e*P **P 04 52 24.1 +1.8**
comp=Z,8.7nm,1.0s
WUAZ Wupatki 85.36 48 *e*P **P 04 52 24.6 +2.0**
comp=Z,15nm,1.4s
SZCU Shurtz Canyon 85.42 45 *e*P **P 04 52 25.0 +2.1**
comp=Z,11nm,1.5s
PSUT Pine Spring 85.47 44 *e*P **P 04 52 24.6 +1.5**
comp=Z,8.1nm,1.4s
I07A Izee 85.54 37 *e*P **P 04 52 24.1 +0.9**
comp=Z,6.0nm,1.1s
J08A Circle Bar Ran 85.65 38 *e*P **P 04 52 25.1 +1.3**
comp=Z,7.1nm,1.3s
X18A Snowflake 85.79 49 *e*P **P 04 52 26.9 +2.1**
comp=Z,8.2nm,1.0s
PKCU Pink Cliffs 85.83 46 *e*P **P 04 52 27.8 +2.7**
comp=Z,28nm,1.4s
ELK Elko 85.93 42 *e*P **P 04 52 26.4 +1.0**
comp=Z,9.9nm,1.5s
ELK Elko 85.93 42 *e*P **P 04 52 26.4 +1.0**
ELK pmax pmax
comp=Z,10.0nm,1.5s
WHN Wuhan 86.19 306 ⇓P **P 04 52 28.1 +1.5**
MTPU Mount Pierson 86.26 45 *e*P **P 04 52 29.6 +2.4**
comp=Z,12nm,1.4s
D05A Enumclaw 86.28 34 *e*P **P 04 52 29.3 +2.7**
comp=Z,34nm,1.4s
CN2 Changchun 86.46 322 *e*P **P 04 52 28.2 +0.6**
CN2 pmax pmax
comp=Z,20nm,1.3s
MSU Marysvale 86.53 45 *e*P **P 04 52 30.5 +2.1**
MSU Marysvale 86.53 45 *e*P **P 04 52 30.5 +2.1**
G08A Pilot Rock 86.62 36 *e*P **P 04 52 29.6 +1.1**
G08A *e*pP **sP 04 52 43.9 +3.2**
KLR Kul'dur 86.77 329 *c i*P **P 04 52 29.3 +0.3**
KLR pmax pmax
comp=Z,24nm,1.5s
SVW2 Sparrevohn 86.78 10 *e*P **P 04 52 28.9 +0.2**
comp=Z,3.5nm,0.8s
TIA Tai'an 87.21 312 P **P 04 52 32.2 +0.7**
TIA pmax pmax
comp=Z,18nm,1.3s
BMO Blue Mountains 87.25 37 *e*P **P 04 52 33.2 +1.6**
comp=Z,1.0nm,0.8s
BMO Blue Mountains 87.25 37 *e*P **P 04 52 33.2 +1.6**
BMO pmax pmax
comp=Z,1.0nm,0.8s
MNTX Cornudas Mount 87.55 54 *e*P **P 04 52 34.3 +1.1**
comp=Z,9.6nm,1.0s
TMUT Trail Mountain 87.60 45 *e*P **P 04 52 35.2 +1.6**
comp=Z,6.0nm,0.9s
TX31 Lajitas Ar. Si 87.65 56 *e*P **P 04 52 35.5 +1.6**
comp=Z,10nm,1.1s
LTX Lajitas 87.65 56 *e*P **P 04 52 35.0 +1.2**
LTX Lajitas 87.65 56 *e*P **P 04 52 35.1 +1.2**
TXAR Lajitas Array 87.65 56 P **P 04 52 35.0 +1.1**
comp=Z,3.4nm,0.8s,baz=215,slow=8.3,SNR=47
PANO Nakornpanom 87.66 290 P **P 04 52 35.6 +1.6**
LENM Lemitar 87.67 51 *e*P **P 04 52 36.0 +2.0**
LAZ Ladron 87.68 51 *e*P **P 04 52 36.4 +2.3**
D08A Wollman Farm, 87.77 35 *e*P **P 04 52 35.3 +1.4**
comp=Z,7.6nm,1.0s
RC01 Rabbit Creek A 87.80 12 *e*P **P 04 52 34.4 +0.7**
comp=Z,46nm,1.4s
BNM Barren Site 87.91 51 *e*P **P 04 52 36.8 +1.6**
SRU San Rafael Swe 87.94 45 *e*P **P 04 52 36.5 +1.3**
comp=Z,5.4nm,1.1s
SRU San Rafael Swe 87.94 45 *e*P **P 04 52 36.5 +1.3**
SRU pmax pmax
comp=Z,5.0nm,1.1s
F10A Beach Ranch, E 87.99 37 *e*P **P 04 52 35.6 +0.5**
comp=Z,7.6nm,1.3s
MA2 Magadan 88.00 344⇓*e*P **P 04 52 34.9 +0.2**
MA2 pmax pmax
comp=Z,12nm,1.3s
PLID Pearl Lake 88.12 38 *e*P **P 04 52 37.5 +1.6**
comp=Z,7.4nm,1.4s
PMR Palmer 88.38 13 *e*P **P 04 52 36.8 +0.4**
comp=Z,15nm,1.2s
PMR Palmer 88.38 13 *e*P **P 04 52 36.8 +0.4**
PMR pmax pmax
comp=Z,15nm,1.2s
ANMO Albuquerque 88.44 50 *e*P **P 04 52 38.9 +1.2**
comp=Z,9.3nm,1.3s
ANMO Albuquerque 88.44 50 *e*P **P 04 52 38.9 +1.2**
ANMO pmax pmax
comp=Z,9.0nm,1.3s
TCUT Toone Canyon 88.50 43 *e*P **P 04 52 39.7 +1.9**
comp=Z,14nm,1.3s
GHO Glory Hole Cre 88.58 13 *e*P **P 04 52 38.2 +0.7**
comp=Z,18nm,0.8s
C09A Chrisman Ranch 88.59 35 *e*P **P 04 52 38.9 +1.1**
comp=Z,4.9nm,0.8s
KRAB Krabi 88.62 280 P **P 04 52 39.4 +0.7**
LLLB Lillooet 88.64 31 *e*P **P 04 52 40.0 +2.0**
comp=Z,7.6nm,1.0s
DIV Divide 88.67 14 *e*P **P 04 52 38.6 +0.7**
comp=Z,19nm,1.0s
LNIG Linares 88.83 62 *e*P **P 04 52 39.4 -0.1**
comp=Z,13nm,1.1s
SCM Sheep Creek Mo 88.96 13 *e*P **P 04 52 40.1 +0.8**
comp=Z,22nm,0.9s
SCM Sheep Creek Mo 88.96 13 *e*P **P 04 52 40.1 +0.8**
SCM pmax pmax
comp=Z,22nm,0.9s
BALM Baldy 89.39 16 *e*P **P 04 52 42.5 +1.1**
comp=Z,19nm,1.0s
BALM Baldy 89.39 16 *e*P **P 04 52 42.5 +1.1**
BALM pmax pmax
comp=Z,19nm,1.0s
CAST Castle Rocks 89.53 11 *e*P **P 04 52 41.2 -0.6**
comp=Z,11nm,0.9s
S22A 4UR Ranch, Cre 89.64 48 *e*P **P 04 52 44.4 +1.1**
comp=Z,16nm,1.5s
ENH Enshi 89.70 304 *e*P **P 04 52 45.4 +1.9**
comp=Z,59nm,1.1s
MCMT McKenzie Canyo 89.76 39 *e*P **P 04 52 45.0 +1.3**
BJI Beijing 89.91 315⇑*i*P **P 04 52 44.6 +0.5**
BJI pmax pmax
comp=Z,5.0nm,1.6s
DHY Denali Highway 90.08 13 *e*P **P 04 52 45.1 +0.6**
comp=Z,6.3nm,1.1s
RND Reindeer 90.09 12 *e*P **P 04 52 44.6 +0.1**
comp=Z,18nm,1.0s
RND Reindeer 90.09 12 *e*P **P 04 52 44.6 +0.1**
RND pmax pmax
comp=Z,18nm,1.0s

SLVN Son La 90.09 293 *e*P **P 04 52 48.0 +2.4**
comp=Z,25nm,1.4s
REDW Red Top Meadow 90.11 41 *e*P **P 04 52 47.1 +1.8**
comp=Z,4.9nm,1.4s
TPAW Teton Pass 90.12 41 *e*P **P 04 52 46.8 +1.4**
comp=Z,3.1nm,1.2s
FXWY Fox Creek 90.16 41 *e*P **P 04 52 47.0 +1.4**
comp=Z,6.0nm,1.4s
DLMT Dillon 90.22 39 *e*P **P 04 52 46.9 +1.2**
DLMT *e*pP **sP 04 52 57.7 -0.1**
SMCO Snowmass 90.29 47 *e*P **P 04 52 48.4 +1.9**
comp=Z,3.7nm,1.1s
MSO Missoula 90.32 37 *e*P **P 04 52 46.4 +0.3**
comp=Z,4.3nm,1.1s
BPAW Bear Paw Mtn. 90.35 11 *e*P **P 04 52 48.0 +2.4**
comp=Z,6.6nm,1.4s
IMW Indian Meadow 90.35 41 *e*P **P 04 52 47.9 +1.4**
comp=Z,9.3nm,1.4s
MOOW Moose Ponds 90.39 41 *e*P **P 04 52 47.9 +1.3**
comp=Z,4.7nm,1.4s
LOHW Long Hollow 90.39 41 *e*P **P 04 52 47.7 +1.1**
comp=Z,6.5nm,1.4s
HYT Haines Junctio 90.48 18 *e*P **P 04 52 47.9 +1.4**
comp=Z,8.2nm,1.1s
SDCO Great Sand Dun 90.54 48 *e*P **P 04 52 48.6 +1.1**
comp=Z,3.5nm,1.1s
PBKT Sadao Pong 90.55 288 P **P 04 52 50.4 +2.8**
PBKT Sadao Pong 90.55 288 P **P 04 52 50.4 +2.8**
comp=Z,11nm,1.3s
SEY Seymchan 90.56 346⇑*e*P **P 04 52 46.6 0.0**
BW06 Boulder Array 90.56 42 *e*P **P 04 52 48.0 +0.6**
comp=Z,3.0nm,1.1s
PD31 Pinedale Array 90.56 42 *e*P **P 04 52 47.0 -0.5**
comp=Z,3.0nm,1.1s
PDAR Pinedale Array 90.56 42 P **P 04 52 47.0 -0.5**
comp=Z,0.4nm,0.5s,baz=198,slow=4.4,SNR=7.2
LRM Limekiln Ridge 90.57 39 *e*P **P 04 52 48.5 +1.0**
MSTX Muleshoe 90.58 53 *e*P **P 04 52 48.3 +0.7**
comp=Z,9.5nm,1.0s
QLMT Earthquake Lak 90.59 40 *e*P **P 04 52 49.4 +1.9**
FLWY Flagg Ranch 90.60 41 *e*P **P 04 52 49.4 +1.8**
comp=Z,5.3nm,1.0s
YPP Pitchstone Pla 90.64 41 *e*P **P 04 52 49.8 +1.9**
comp=Z,8.4nm,1.5s
YMR Madison River 90.77 40 *e*P **P 04 52 50.9 +2.6**
comp=Z,7.4nm,1.1s
YHH Holmes Hill 90.91 40 *e*P **P 04 52 51.7 +2.6**
comp=Z,5.0nm,1.2s
BOZ Bozeman (W) 90.91 39 *e*P **P 04 52 49.7 +0.8**
comp=Z,6.7nm,1.1s
BOZ Bozeman (W) 90.91 39 *e*P **P 04 52 49.7 +0.8**
BOZ pmax pmax
comp=Z,7.0nm,1.1s
DLBC Dease Lake 90.92 22 *e*P **P 04 52 50.2 +1.7**
comp=Z,17nm,1.4s
WHY Whitehorse 91.10 19 *e*P **P 04 52 50.8 +1.4**
comp=Z,9.2nm,1.1s
RIDG Independent Ri 91.19 13 *e*P **P 04 52 50.4 +0.8**
comp=Z,11nm,1.1s
WRH Wood River Hil 91.20 12 *e*P **P 04 52 49.5 0.0**
comp=Z,14nm,1.0s
CCIG Comitan 91.23 73 *e*P **P 04 52 52.8 +1.8**
comp=Z,26nm,1.5s
DOT Dot Lake 91.27 14 *e*P **P 04 52 50.8 +0.8**
comp=Z,9.7nm,1.0s
HDA Harding Lake 91.36 12 *e*P **P 04 52 50.7 +0.3**
comp=Z,9.0nm,0.8s
CCB Clear Creek Bu 91.41 12 *e*P **P 04 52 50.2 -0.3**
comp=Z,8.2nm,0.8s
HRY Holter Researc 91.43 38 *e*P **P 04 52 51.9 +0.7**
SCRK Sand Creek 91.58 14 *e*P **P 04 52 51.0 -0.5**
comp=Z,5.8nm,1.0s
COLA College 91.61 12⇓*e*P **P 04 52 51.4 0.0**
COLA pmax pmax
comp=Z,7.0nm,0.9s
ILAR Eielson Array 91.70 12 P **P 04 52 51.1 -0.7**
comp=Z,2.8nm,0.9s,baz=219,slow=5.6,SNR=24
ILB Eielson Array 91.70 12 *e*P **P 04 52 51.5 -0.4**
comp=Z,8.5nm,1.1s
NANT Nan 91.72 290 P **P 04 52 55.1 +2.0**
XAN Xi'an 91.90 307 P **P 04 52 54.0 +0.4**
XAN pmax pmax
comp=Z,16nm,1.4s
XAN Xi'an 91.90 307 *e*P **P 04 52 54.8 +1.2**
comp=Z,14nm,0.9s
XAN Xi'an 91.90 307 *e*P **P 04 52 54.8 +1.2**
XAN pmax pmax
comp=Z,14nm,0.9s
PHRA Phrae 92.00 289 P **P 04 52 56.5 +2.1**
RLMT Red Lodge 92.03 41 *e*P **P 04 52 55.5 +1.3**
comp=Z,7.1nm,1.4s
GCMT Greycliff 92.16 40 *e*P **P 04 52 56.1 +1.4**
LAMP Lampang 92.53 289 P **P 04 52 59.3 +2.5**
LAMP Lampang 92.53 289 P **P 04 52 59.3 +2.5**
comp=Z,26μm,0.5s,comp=Z,854μm
PAYA Payao 92.67 290 P **P 04 53 00.0 +2.5**
KMI Kunming 92.70 296 P **P 04 52 59.7 +1.9**
KMI pmax pmax
comp=Z,18nm,1.4s
KMI pmax pmax
comp=Z,100nm,3.9s
KMI LR LR
comp=Z,920nm,19.6s
KMI LR LR
comp=Z,2μm,20.7s
KMI LR LR
comp=Z,3μm,18.7s
HIA Hailar 92.89 324 *c e*P **P 04 52 59.9 +2.1**
EGAK Eagle 92.89 14 *e*P **P 04 52 58.2 +0.8**
comp=Z,10.0nm,1.2s
BILL Bilibino 93.07 353 *c i*P **P 04 52 58.2 0.0**
BILL pmax pmax
comp=Z,5.0nm,1.0s
CM31 Chiang Mai Arr 93.09 289 *e*P **P 04 53 00.1 +0.7**
CMAR Chiang Mai Arr 93.09 289 P **P 04 53 00.1 +0.7**
comp=Z,22nm,1.1s,baz=128,slow=3.2,SNR=45
CMAR Chiang Mai Arr 93.09 289 *i* P **P 04 53 01.5 +2.1**
CMAR pmax pmax
comp=Z,22nm,1.1s
CMMT Chiang Mai 93.23 289 P **P 04 53 01.8 +1.7**
CMMT Chiang Mai 93.23 289 P **P 04 53 01.8 +1.7**
comp=Z,16nm,1.2s
CHTO Chiang Mai 93.24 289 *e*P **P 04 53 01.3 +1.2**
comp=Z,26nm,1.0s
CHTO Chiang Mai 93.24 289 *e*P **P 04 53 01.3 +1.2**
CHTO pmax pmax
comp=Z,26nm,1.0s
HHC Hu-ho-hao-te 93.34 314 *e*P **P 04 52 59.2 -1.0**
HHC pmax pmax
comp=Z,21nm,1.1s
HHC pmax pmax
comp=Z,190nm,5.3s
CD2 Chengdu 94.38 302 P **P 04 53 07.1 +1.9**
CD2 pmax pmax
comp=Z,20nm,0.5s
LAO LASA Array 94.66 40 *e*P **P 04 53 07.8 +1.7**
comp=Z,9.4nm,1.4s
RSSD Black Hills 94.70 43 *e*P **P 04 53 07.2 +0.7**
comp=Z,4.7nm,0.9s
RSSD Black Hills 94.70 43 *e*P **P 04 53 07.2 +0.7**
RSSD pmax pmax
comp=Z,5.0nm,0.9s
ACON Acoyapa 95.63 79 *e*P **P 04 53 11.9 +0.8**
comp=Z,42nm,1.3s
LZH Lanzhou 96.54 307⇑P **P 04 53 16.0 +1.0**
LZH PP **PP 04 57 14.3 +4.5**
LZH pmax pmax
comp=Z,19nm,1.4s
LZH pmax pmax
comp=Z,82nm,9.2s
YKA Yellowknife Ar 99.28 24 P **Pdif 04 53 25.7 -0.7**
comp=Z,0.3nm,0.7s,baz=234,slow=4.0,SNR=4.8
YKB5 Yellowknife Ar 99.28 24 *e*P **Pdif 04 53 25.7 -0.7**
WMQ Urumqi 110.81 310 *e*PKP **PKiKP 04 58 16.8 -1.2**
WMQ LR LR
comp=Z,680nm,19.3s
WMQ LR LR
comp=Z,780nm,21.9s
WMQ LR LR
comp=Z,950nm,12.3s
MK32 Makanchi Array 115.15 312 *e*PKiKP **PKPdf 04 58 24.0 -2.2**
MKAR Makanchi Array 115.15 312 PKP **PKPdf 04 58 24.0 -2.2**
comp=Z,0.8nm,0.9s,baz=80,slow=1.4,SNR=5.7
MKAR Makanchi Array 115.15 312 PKIKP **PKPdf 04 58 24.0 -2.2**
KURK Kurchatov 118.05 316 *e*PKPdf **PKPdf 04 58 31.1 -0.5**
KURK Kurchatov 118.05 316 *e*PKIKP **PKPdf 04 58 31.1 -0.5**

KSH Kashi 118.55 303 *e*PKP **PKPdf 04 58 29.2 -3.9**
BRVK Borovoye 123.25 319 *e*PKPdf **PKiKP 04 58 41.9 +0.1**
BRVK Borovoye 123.25 319 *e*PKIKP **PKiKP 04 58 41.9 +0.1**
ARU Arti 129.40 324 *i* PKIKP **PKiKP 04 58 53.6 -0.3**
ARU 05 01 02.8
ARCES ARCESS Array B 133.05 350 PKP **PKPdf 04 58 58.6 -1.1**
comp=Z,1.0nm,0.5s,baz=15,slow=1.0,SNR=15
KLMR Klimovskoe 136.15 336 *e*PKIKP **PKPdf 04 59 01.2 -4.5**
KLMR pmax pmax
comp=Z,12nm,1.5s
FIA0 FINESS Array S 139.99 344 *e*PKPpre PKPpre 04 59 03.8
FIA0 *e*PKPdf **PKPdf 04 59 10.8 -2.0**
FIA0 FINESS Array S 139.99 344 *e*PKHKP PKPpre 04 59 03.8
FIA0 *e* 04 59 10.8
FINES FINESS Array B 139.99 344 PKhKP PKPpre 04 59 03.8
comp=Z,0.4nm,0.5s,baz=126,slow=2.6,SNR=4.5
FINES PKP **PKPdf 04 59 10.8 -2.0**
comp=Z,1.7nm,0.9s,baz=296,slow=4.5,SNR=4.0
OBN Obninsk 141.01 331 *e*PKIKP **PKPdf 04 59 14.6 -0.2**
OBN pmax pmax
comp=Z,8.0nm,1.0s
VSR Storozhevoye 141.97 324 *e*PKIKP **PKPdf 04 59 15.8 -0.9**
NB2 NORSAR Subarra143.02 354 PKP PKPbc 04 59 14.9 -0.3
comp=Z,0.8nm,0.6s,baz=11,slow=2.9
NB200 NORSAR Array S 143.02 354 *e*PKPpre PKPbc 04 59 14.1 -1.1
NOA NORSAR Array B 143.02 354 PKhKP PKPbc 04 59 14.1 -1.1
comp=Z,1.2nm,0.7s,baz=15,slow=4.3,SNR=6.5
AKH Akhalkalaki 143.08 307⇓*i*P PKPbc 04 59 16.2 +0.1
MBAR Mbarara 144.07 230 *e*PKPdf **PKPdf 04 59 21.9 +0.1**
MBAR Mbarara 144.07 230 *e*PKIKP **PKPdf 04 59 21.9 +0.1**
BCA Borcka 144.43 308⇓*i*P PKPbc 04 59 20.1 +0.2
IZAR Zarasai 144.65 338 *e*P PKPbc 04 59 20.5 +0.4
IDID Didziasalis 144.83 337 *e*P PKPbc 04 59 21.0 +0.4
IDID IAmb IAmb 04 59 22.4
comp=Z,3.6nm,0.9s
ISAL Salakas 144.84 338 *e*P PKPbc 04 59 20.8 +0.2
ISAL IAmb IAmb 04 59 22.5
comp=Z,7.8nm,0.8s
IIGN Ignalina 144.98 338 *e*P PKPbc 04 59 21.4 +0.2
IIGN IAmb IAmb 04 59 23.0
comp=Z,6.8nm,0.9s
MICGM Minsk 145.05 336 *e*P **PKPdf 04 59 22.0 0.0**
MICGM *e*LR LR 05 55 10.0
MNK Minsk 145.05 336 *e*PKIKP **PKPdf 04 59 22.0 0.0**
NACGM Naroch 145.14 337 *e* **PKPbc 04 59 21.0 -0.7**
PABE Paberze 145.59 340 *e*P **PKPdf 04 59 22.5 -0.3**
PABE IAmb IAmb 04 59 24.9
comp=Z,350nm,1.6s
PBUR Paburg 145.76 342 *e*P **PKPdf 04 59 23.2 +0.1**
PBUR IAmb IAmb 04 59 24.0
comp=Z,71nm,0.8s
SUW Suwalki 147.09 339 *e*PKP **PKPbc 04 59 27.7 +0.1**
SUW Suwalki 147.09 339 *e*PKP2 **PKPbc 04 59 27.7 +0.1**
AKASG Malin Array Be 147.27 330 PKPbc **PKPdf 04 59 26.4 +0.5**
comp=Z,5.2nm,0.6s,baz=38,slow=3.9,SNR=7.8
AKBB Malin Array Si 147.27 330 *e*PKPdf **PKPdf 04 59 26.4 +0.5**
AKBB Malin Array Si 147.27 330 *e*PKIKP **PKPdf 04 59 26.4 +0.5**
KIEV Kiev 147.28 330⇓*i*P **PKPbc 04 59 27.4 -0.8**
KIEV Kiev 147.28 330 *c e*PKP2 **PKPdf 04 59 26.9 +1.0**
BSD Bornholm Skovb 148.25 348 *e*PKP2 **PKPbc 04 59 30.9 +0.2**
BSD Bornholm Skovb 148.25 348 *i* P **PKPbc 04 59 30.9 +0.2**
SEVA Sevastopol 148.57 317⇑*i*P **PKPab 04 59 35.8 +0.4**
ESK Eskdalemuir 148.65 8 *i* PKP2 **PKiKP 04 59 32.6 -0.6**
BEL Belsk 149.71 339 *e*PKP **PKiKP 04 59 35.9 +0.4**
BEL Belsk 149.71 339 *e*PKP2 **PKiKP 04 59 35.9 +0.4**
KIS Kishinev 149.95 325 *e*P **PKPbc 04 59 35.0 -0.2**
comp=Z,140nm,1.2s
ILGA Ilgaz 150.14 311 *e*PKPbc **PKiKP 04 59 37.4 +0.3**
BR101 Keskin Array S 150.73 309 *e*PKPdf **PKPdf 04 59 30.1 -2.0**
BR101 *e*PKPbc **PKPbc 04 59 36.7 -0.9**
BR101 *e*PKPab **PKPab 04 59 44.7 +0.1**
BRTR Keskin Array B 150.73 309 PKP **PKPdf 04 59 30.1 -2.0**
comp=Z,1.0nm,1.0s,baz=231,slow=0.8,SNR=6.2
BRTR PKPbc **PKPbc 04 59 36.7 -0.9**
comp=Z,3.2nm,0.8s,baz=146,slow=4.0,SNR=20
BRTR PKPab **PKPab 04 59 44.7 +0.1**
comp=Z,5.9nm,0.8s,baz=106,slow=3.2,SNR=17
KWP Kalwaria Pacla 150.85 335 *e*PKP **PKiKP 04 59 37.8 -0.2**
KWP Kalwaria Pacla 150.85 335 *e*PKPbc **PKPbc 04 59 37.0 -0.4**
KWP Kalwaria Pacla 150.85 335 *e*PKIKP **PKiKP 04 59 37.8 -0.2**
RUE Ruedersdorf 150.96 348 *e*P **PKPbc 04 59 37.6 +0.2**
RUE IAmb IAmb 04 59 38.3
comp=Z,25nm,0.7s
ANTO Ankara 151.27 309 *e*PKPbc **PKiKP 04 59 39.4 +0.2**
ANTO Ankara 151.27 309⇑*i*P **PKPab 04 59 47.2 +0.4**
BURAR Bucovina Array 151.31 329⇑*i*P **PKiKP 04 59 39.9 +0.8**
BURAR Bucovina Array 151.31 329 ⇑PKIKP **PKiKP 04 59 39.9 +0.8**
BIZ Bicaz 151.37 327⇑*i*P **PKiKP 04 59 39.3 +0.2**
TESR Tescani 151.39 326⇑*i*P **PKiKP 04 59 42.4 +3.2**
OJC Ojcow 151.42 338 *e*PKP **PKPbc 04 59 38.8 +0.2**
OJC Ojcow 151.42 338 *e*PKPbc **PKPbc 04 59 38.9 +0.2**
OJC Ojcow 151.42 338 *e*PKIKP **PKPbc 04 59 38.8 +0.2**
CFR Carcaliu 151.47 323⇑*i*P **PKPbc 04 59 39.1 +0.2**
CFR Carcaliu 151.47 323 ⇑PKIKP **PKPbc 04 59 39.1 +0.2**
KOLS Kolonicke sedl 151.58 334 *e*PKIKP **PKiKP 04 59 39.5 0.0**
KOLS Kolonicke sedl 151.58 334 *e*PKP **PKiKP 04 59 39.5 0.0**
TIRR Tirgusor 151.76 321⇓*i*P **PKiKP 04 59 40.0 0.0**
TIRR Tirgusor 151.76 321 ⇓PKIKP **PKiKP 04 59 40.0 0.0**
UZH Uzhgorod 151.81 334 *e*PKIKP **PKPbc 04 59 39.4 -0.2**
PLOR Plostina 151.83 325⇓*i*P **PKPbc 04 59 39.8 0.0**
PLOR Plostina 151.83 325 ⇓PKIKP **PKPbc 04 59 39.8 0.0**
TLB Topalu 151.89 322⇑*i*P **PKPbc 04 59 39.5 -0.4**
TLB Topalu 151.89 322 ⇑PKIKP **PKPbc 04 59 39.5 -0.4**
KSP Ksiaz 151.91 343 *e*PKP **PKiKP 04 59 40.6 +0.5**
KSP Ksiaz 151.91 343 *e*PKIKP **PKiKP 04 59 40.6 +0.5**
NIE Niedzica 151.92 337 *e*PKP **PKiKP 04 59 41.4 +1.2**
NIE Niedzica 151.92 337 *e*PKIKP **PKiKP 04 59 41.4 +1.2**
TRPA Tarpa 152.11 333⇓*i*P **PKiKP 04 59 45.2 +4.6**
OZUR 152.11 326⇑*i*P **PKiKP 04 59 42.0 +1.3**
OSTC Ostas 152.19 343⇑*e*PKP **PKiKP 04 59 41.3 +0.6**
CHVC Chvalec 152.21 343⇑*e*PKP **PKiKP 04 59 40.7 -0.1**
CLL Collm 152.23 348 *i* PKPdf **PKPdf 04 59 34.8 +1.1**
CLL *i* PKPbc **PKiKP 04 59 40.7 0.0**
comp=Z,31nm,1.3s
CLL *e*PKPab **PKPab 04 59 51.0 +0.8**
comp=Z,23nm,1.2s
CLL Collm 152.23 348 *i* PKIKP **PKiKP 04 59 40.7 0.0**
CLL pmax pmax
comp=Z,31nm,1.3s
OKC Ostrava-Krasne 152.28 340 *e*PKIKP **PKiKP 04 59 42.3 +1.4**
OKC MLR MLR
comp=Z,3μm,23.5s
OKC Ostrava-Krasne 152.28 340⇑*e*PKP **PKiKP 04 59 42.3 +1.4**
UPC Upice 152.29 343 *e*PKIKP **PKiKP 04 59 41.4 +0.5**
UPC *e* 04 59 50.7
UPC Upice 152.29 343⇑*e*PKP **PKiKP 04 59 41.4 +0.5**
UPC *e*PKPAB **PKPab 04 59 50.7 +0.2**
DPC Dobruska-Polom 152.35 343 *e*PKIKP **PKiKP 04 59 41.8 +0.7**
DPC *e* 04 59 51.1
DPC Dobruska-Polom 152.35 343⇑*e*PKP **PKiKP 04 59 41.8 +0.7**
DPC *e*PKPAB **PKPab 04 59 51.1 +0.2**
LANS Liptovska Anna 152.44 338 *e*PKP **PKiKP 04 59 43.5 +2.2**
LANS *e* 04 59 53.0
MLR Muntele Rosu 152.44 325 *e*PKPdf **PKPdf 04 59 34.7 +0.3**
MLR Muntele Rosu 152.44 325⇑*i*P **PKiKP 04 59 41.8 +0.2**
MLR Muntele Rosu 152.44 325 *e*PKIKP **PKPdf 04 59 34.7 +0.3**
BRG Berggiesshubel 152.45 346 *e*PKP **PKPdf 04 59 35.2 +1.1**
comp=Z,16nm,1.7s
BRG Berggiesshubel 152.45 346 *i* PKP **PKiKP 04 59 41.5 +0.3**
comp=Z,20nm,1.1s
BRG PDIFF **PP 05 03 22.0 -1.0**
BRG Berggiesshubel 152.45 346 *e*PKIKP **PKPdf 04 59 35.2 +1.1**
BRG pmax pmax
comp=Z,28nm,1.7s
MORC Moravsky Berou 152.52 341 *e*PKPbc **PKiKP 04 59 41.5 +0.1**
MORC *e*PKPab **PKPab 04 59 51.4 -0.2**
MORC Moravsky Berou 152.52 341⇓*i*P **PKiKP 04 59 42.0 +0.5**
MORC Moravsky Berou 152.52 341 ⇓PKIKP **PKiKP 04 59 42.0 +0.5**
MORC Moravsky Berou 152.52 341 *e*PKP **PKPdf 04 59 35.3 +1.0**
LEHL Lehliu 152.64 323⇓*i*P **PKiKP 04 59 46.0 +4.2**
VOIR 152.94 326⇑*i*P **PKiKP 04 59 44.4 +1.9**
DRGR 153.07 331⇑*i*P **PKPab 04 59 48.7 -5.3**
ARR Arges 153.20 326⇓*i*P **PKiKP 04 59 44.0 +1.0**
VRAC Vranov 153.22 341⇑*i*P **PKiKP 04 59 44.0 +1.2**
VRAC Vranov 153.22 341 ⇑PKIKP **PKiKP 04 59 44.1 +1.2**
VRAC Vranov 153.22 341 *e*PKP **PKPdf 04 59 36.0 +0.7**
VYHS Vyhne 153.22 338 *e*PKP2 **PKPab 04 59 58.7 +4.2**
VYHS Vyhne 153.22 338 *e*PKP **PKPab 04 59 58.7 +4.2**
JAVC Velka Javorina 153.29 340 *e*PKP **PKPdf 04 59 37.6 +2.2**
KRUC Moravsky 153.50 341 *e*PKP **PKPdf 04 59 34.8 -0.8**
MEM Membach 153.77 357 ⇑PKPab **PKPab 04 59 57.5 +0.8**
MODS Modra-Piesok 153.84 340 *e*PKP2 **PKPab 04 59 57.7 +0.5**

MODS Modra-Piesok 153.84 340 *e*PKP **PKPab 04 59 57.7 +0.5**
PHSR Pinarhisar 153.93 317⇑*i*P **PKPab 04 59 51.5 -6.3**
SIRR Siria 153.93 331⇑*i*P **PKiKP 04 59 44.6 +0.1**
BCLA Clavier 153.99 358⇑PKPab **PKPab 04 59 56.9 -0.7**
KHC Kasperske Hory 154.17 345 *e*PKPab **PKPab 04 59 59.2 +0.7**
KHC Kasperske Hory 154.17 345 *e*PKIKP **PKPdf 04 59 30.0 -6.7**
KHC *e* 04 59 37.3
KHC *e* 04 59 45.7
KHC *e* 04 59 56.1
KHC Kasperske Hory 154.17 345 *e*PKPDF **PKPdf 04 59 37.3 +0.6**
KHC ⇑*e*PKP **pPKPdf 04 59 45.7 -0.3**
KHC *e*PKPAB **PKPab 04 59 56.1 -2.4**
GEC2 GERESS Array S 154.41 345 *e*PKPdf **PKPdf 04 59 36.7 -0.4**
GEC2 *e*PKPbc **PKPbc 04 59 44.9 -0.6**
GEC2 *e*PKPab **PKPab 04 59 58.8 -0.9**
GEC2 GERESS Array S 154.41 345 *e*PKIKP **PKPdf 04 59 36.7 -0.4**
GEC2 *e* 04 59 44.9
GEC2 *e* 04 59 58.8
GERES GERESS Array B 154.41 345 PKP **PKPdf 04 59 36.7 -0.4**
comp=Z,0.4nm,0.5s,baz=262,slow=2.0,SNR=5.1
GERES PKPbc **PKPbc 04 59 44.9 -0.6**
comp=Z,0.2nm,0.3s,baz=53,slow=3.8,SNR=5.8
GERES PKPab **PKPab 04 59 58.8 -0.9**
comp=Z,1.1nm,0.7s,baz=90,slow=1.3,SNR=5.7
BZS Buzias 154.46 330⇑*i*P **PKPdf 04 59 38.0 +0.9**
BZS Buzias 154.46 330⇑PKIKP **PKPdf 04 59 38.0 +0.9**
HERR Herculane 154.64 328⇑*i*P **PKPbc 04 59 44.5 -1.4**
WLF Walferdange 154.71 357⇑PKPbc **PKiKP 04 59 47.1 +1.2**
WLF ⇓PKPab **PKPab 05 00 00.6 -0.2**
BALB Balikesir 154.75 313 *e*PKPab **PKPab 05 00 02.3 +1.0**
EZN Ezine 155.68 315⇑*i*P **PKPab 05 00 05.4 +0.1**
EZN Ezine 155.68 315⇑PKP2 **PKPab 05 00 05.4 +0.1**
VTS Vitosha 155.82 323 *e*PKPab **PKPab 05 00 07.0 +1.0**
VTS Vitosha 155.82 323⇑*i*P **PKPab 05 00 06.6 +0.6**
VTS Vitosha 155.82 323⇑PKP2 **PKPab 05 00 06.6 +0.6**
FUORN Ofenpass-Fuorn 157.24 349 *e*PKPab **PKPab 05 00 12.4 +0.4**
SENIN Lac Senin/Sane 157.90 354 *e*PKPab **PKPab 05 00 15.6 +0.8**
PAB San Pablo 163.34 23 *e*PKPdf **PKPdf 04 59 49.3 +1.4**
PAB San Pablo 163.34 23 *e*PKIKP **PKPdf 04 59 49.3 +1.4**
ESDC Sonseca Array 163.35 22 PKP **PKPdf 04 59 47.2 -0.6**
comp=Z,0.1nm,0.3s,baz=349,slow=3.0,SNR=4.8
ESDC PKPab **PKPab 05 00 39.0 +0.4**
comp=Z,0.8nm,0.8s,baz=334,slow=3.7,SNR=6.0
TORD Torodi Ar. Bea 168.62 169 PKP **PKPdf 04 59 51.4 -1.3**
comp=Z,5.8nm,1.3s,baz=165,slow=2.2,SNR=9.6
TORD PKPab **PKPab 05 01 03.5 +1.3**
comp=Z,3.3nm,1.0s,baz=171,slow=5.0,SNR=7.5
TOA1 Torodi Ar. Sit 168.63 169 *e*PKPdf **PKPdf 04 59 51.4 -1.3**
TOA1 *e*PKPab **PKPab 05 01 03.5 +1.3**

MAN 05 04:40:01.8, 7°.41N×124°.75E, h1km, mb4.6, ML3.4, MS3.3, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.53**	**249**	⇑*i*P		Pg	04 40 12.2	+0.2
CTBH				*i*S		Sg	04 40 20.4	+1.4
BUKP	**Musuan**	**0.56**	**34**	*e*P		Pg	04 40 12.6	+0.1
BUKP				*e*S		Sb	04 40 23.2	+0.3
DMPH	**Davao City--Mi**	**0.82**	**114**⇑	*e*P		Pn	04 40 28.0	+7.5
DMPH				*e*S		Sn	04 40 39.4	+6.0
CGP	**Cagayan de Oro**	**1.03**	**357**	*e*P		Pb	04 40 22.3	-0.2
CGP				*e*S		Sb	04 40 36.8	+0.1
DDMP	**Don Marcelino,**	**1.61**	**144**	*e*P		Pn	04 40 31.3	-0.2
DDMP				*e*S		Sg	04 40 55.4	+1.7

ISCJB ***05*** *04:47:26.5±0.7, 11°.38S±0°.02×166°.21E±0°.02, h55km±6km, mb5.9/388, MS5.8/707, Error ellipse: s-maj=3.7km s-min=2.8km az=179.0*

IDC ***05*** *04:47:26.6±0.3, 11°.37S×166°.40E, h50km±2km, mb5.2/30, mb1 5.3/32, mb1mx5.3/34, mbtmp5.4/32, MS5.4/21, Ms1 5.4/21, ms1mx5.4/21, Error ellipse: s-maj=10.2km s-min=8.5km az=85.0*

BJI ***05*** *04:47:26.0±0.0, 11°.41S×166°.28E, h60km, mb5.7/64, mB5.9/77, Ms5.8/93, Ms7 5.7/86*

NEIC ***05*** *04:47:26.2±1.5, 11°.40S×166°.30E, h39km, mb5.9/327, ME5.5, MS5.8/699, MW6.0, MW6.1, MW6.1, Error ellipse: s-maj=13.3km s-min=13.1km az=30.0, Moment Tensor Solution. s54 Moment tensor: Scale 10^{18}Nm; M_{rr}1.24; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-0.90; $M_{r\theta}$0.12; $M_{\theta\phi}$0.21; $M_{r\phi}$0.07; Best double couple: $M_0$1.10000×10^{18} NP1:ϕ_s156.00000°, δ45.00000°, λ83.00000°. NP2:ϕ_s347.00000°, δ46.00000°, λ97.00000°. Principal axes: T 1.2600, Plg85.0000°, Azm334.0000°; N -0.2800, Plg5.0000°, Azm162.0000°; P -0.9700, Plg1.0000°, Azm71.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s350.00000°, δ45.00000°, λ90.00000°. NP2:ϕ_s170.00000°, δ45.00000°, λ90.00000°. Principal axes: T Plg90.0000°, Azm0.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm80.0000°; Apparent Stress 0.21 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

MOS ***05*** *04:47:26.3±0.9, 11°.29S×166°.18E, h51km, mb6.1/71, MS5.7/69 Error ellipse: s-maj=6.8km s-min=5.6km az=97.0*

NEIC ***05*** *04:47:29.0±0.0, 11°.41S×166°.06E, h45km, Moment Tensor Solution. s71 Moment tensor: Scale 10^{18}Nm; M_{rr}1.49; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$-1.43; $M_{r\theta}$0.11; $M_{\theta\phi}$0.28; $M_{r\phi}$0.24; Best double couple: $M_0$1.50000×10^{18} NP1:ϕ_s355.00000°, δ49.00000°, λ97.00000°. NP2:ϕ_s163.00000°, δ41.00000°, λ81.00000°. Principal axes: T 1.5200, Plg83.0000°, Azm313.0000°; N -0.0200, Plg5.0000°, Azm169.0000°; P -1.5000, Plg4.0000°, Azm79.0000°;*

GCMT ***05*** *04:47:29.2±0.1, 11°.47S×166°.00E, h47km, MW6.0/137, Moment Tensor Solution. s137,c309; s132,c441; Duration: 2≥6 Moment tensor: Scale 10^{18}Nm; M_{rr}1.42±.01; $M_{\theta\theta}$-0.06±.01; $M_{\phi\phi}$-1.36±.01; $M_{r\theta}$-0.01±.01; $M_{\theta\phi}$0.33±.01; $M_{r\phi}$0.10±.01; Best double couple: $M_0$1.43400×10^{18} NP1:ϕ_s347.00000°, δ47.00000°, λ91.00000°. NP2:ϕ_s166.00000°, δ43.00000°, λ89.00000°. Principal axes: T 1.4240, Plg88.0000°, Azm276.0000°; N 0.0190, Plg1.0000°, Azm166.0000°; P -1.4440, Plg2.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***05*** *04:47:45.2±0.0, 11°.27S×165°.80E, h49km, Moment Tensor Solution. s46 Moment tensor: Scale 10^{18}Nm; M_{rr}1.87; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-1.60; $M_{r\theta}$-0.06; $M_{\theta\phi}$0.34; $M_{r\phi}$-0.07; Best double couple: $M_0$1.80000×10^{18} NP1:ϕ_s0.00000°, δ0.00000°, λ0.00000°. NP2:ϕ_s344.00000°, δ44.00000°, λ87.00000°. Principal axes: T 1.8700, Plg88.0000°, Azm142.0000°; N -0.1900, Plg2.0000°, Azm346.0000°; P -1.6800, Plg1.0000°, Azm256.0000°;*

ISC 05 04:47:27.3±0.3, 11°.40S±0°.03×166°.30E±0°.03, h54km±2km, h54km:pP-P, n1714, σ1142/1420, mb5.9/401, MS5.8/713, 54C-38D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.55**	**287**	*i*P		**Pn**	**04 49 02.5**	**+1.4**
HNR				*i*S		**Sn**	**04 50 10.0**	**-4.5**
HNR	**Honiara**	**6.55**	**287**	P		**Pn**	**04 49 02.3**	**+1.2**
	457nm,0.3s,baz=130,slow=8.7,SNR=190							
HNR				S		**Sn**	**04 50 13.2**	**-1.3**
	baz=189,slow=19,SNR=3.0							
HNR				LR		LR	04 51 53.2	
	comp=Z,101μm,19.3s,baz=120,slow=40							
HNR	**Honiara**	**6.55**	**287**	*e*Pn		**Pn**	**04 49 02.2**	**+1.2**
HNR				*e*Sn		**Sn**	**04 50 14.8**	**+0.3**
HNR	**Honiara**	**6.55**	**287**	*e*P		**Pn**	**04 49 02.2**	**+1.2**
HNR				*e*			04 50 14.8	
MARNC	**Mare, Loyalty**	**10.16**	**171**	*e*Pn		**Pn**	**04 49 53.1**	**+2.7**
MARNC				*e*Sn		**Sn**	**04 51 39.7**	**-3.2**
DZM	**Mont Dzumac**	**10.61**	**179**	P		**Pn**	**04 49 58.3**	**+1.5**
	11nm,0.3s,baz=1.3,slow=23,SNR=31							
DZM				S		**Sn**	**04 51 50.9**	**-3.2**
	baz=282,slow=20,SNR=2.3							
DZM				LR		LR	04 52 47.8	
	comp=Z,7μm,21.6s,baz=17,slow=30							
DZM	**Mont Dzumac**	**10.61**	**179**	*e*Pn		**Pn**	**04 49 59.3**	**+2.6**
	1μm,1.3s							
DZM				*e*LQ		LQ	04 52 00.0	
	45μm,26.9s							
DZM				*e*LR		LR	04 52 28.4	
	comp=Z,85μm,24.3s							
DZM	**Mont Dzumac**	**10.61**	**179**	*e*Pn		**Pn**	**04 49 59.1**	**+2.4**
DZM				*e*Sn		**Sn**	**04 51 50.9**	**-3.2**
PINNC	**Pines Island,**	**11.20**	**175**	*e*Pn		**Pn**	**04 50 06.7**	**+2.0**
PINNC				*e*Sn		**Sn**	**04 52 07.4**	**-1.0**
FUNA	**Funafuti**	**13.02**	**78**	*e*Pn		**Pn**	**04 50 31.5**	**+1.9**
FUNA				*e*Sn		**Sn**	**04 52 50.5**	**-2.4**
TARA	**Tarawa**	**14.28**	**28**	*e*Pn		**Pn**	**04 50 49.5**	**+2.8**
RABL	**Rabaul**	**15.73**	**296**	*e*Pn		**P**	**04 51 09.0**	**+0.4**
	690nm,0.9s							
PMG	**Port Moresby**	**18.93**	**274**	P		**Pn**	**04 51 46.1**	**+1.0**
	1.7nm,0.3s,baz=108,slow=6.7,SNR=9.9							
PMG	**Port Moresby**	**18.93**	**274**	*e*P		**Pn**	**04 51 45.8**	**+0.7**
	555nm,1.0s							
PMG	**Port Moresby**	**18.93**	**274**	*e*P		**Pn**	**04 51 45.8**	**+0.7**
PMG				pmax		pmax		
	comp=Z,555nm,1.0s							
PATS	**Pohnpei**	**19.79**	**336**	*e*P		**Pn**	**04 51 55.2**	**0.0**
	comp=Z,1μm,0.9s							
PATS	**Pohnpei**	**19.79**	**336**	P		**Pn**	**04 51 55.3**	**+0.1**
	baz=20,SNR=47							
EIDS	**Eidsvold**	**20.01**	**224**	*e*P		Pn	04 51 58.5	+0.7
	comp=Z,678nm,1.3s							
EIDS	**Eidsvold**	**20.01**	**224**	P		Pn	04 51 58.4	+0.6
	baz=20,SNR=26							
KWAJ	**Kwajalein Atol**	**20.11**	**4**	*e*P		Pn	04 51 59.4	+0.3
	comp=Z,4μm,1.6s							
KWAJ				LR		LR		
	comp=Z,18μm,21.0s							
KWAJ	**Kwajalein Atol**	**20.11**	**4**	*e*P		Pn	04 51 59.4	+0.3
KWAJ				pmax		pmax		
	comp=Z,4μm,1.6s							
KWAJ				MLR		MLR		
	comp=Z,18μm,21.0s							
MANU	**Manus Island**	**20.96**	**295**	*e*P		**P**	**04 52 07.4**	**+1.3**
	comp=Z,3μm,1.3s							
LHI	**Lord Howe Isla**	**21.11**	**197**	*e*P		**P**	**04 52 09.7**	**+2.2**
	comp=Z,2μm,1.8s							
LHI	**Lord Howe Isla**	**21.11**	**197**	P		**P**	**04 52 09.7**	**+2.2**
	baz=21,SNR=8.4							
CTA	**Charters Tower**	**21.12**	**243**	P		**P**	**04 52 09.7**	**+2.0**
	comp=Z,346nm,0.9s,baz=74,slow=12,SNR=64							
RMQ	**Roma**	**22.33**	**225**	P		**P**	**04 52 22.5**	**+1.9**
	baz=22,SNR=30							
COEN	**Coen**	**22.70**	**261**	*e*P		**P**	**04 52 26.5**	**+1.8**
	comp=Z,819nm,1.0s							
COEN				LR		LR		
	comp=Z,29μm,22.0s							
COEN	**Coen**	**22.70**	**261**	P		**P**	**04 52 25.6**	**+0.9**
	baz=23,SNR=21							
RAO	**Raoul Island**	**23.07**	**143**	PFAKE			04 52 40.0	+12
RAO				LR		LR		
	comp=Z,13μm,19.0s							
ARMA	**Armidale**	**23.32**	**214**	*e*P		**P**	**04 52 32.1**	**+1.3**
	comp=Z,1μm,1.2s							
ARMA				LR		LR		
	comp=Z,27μm,19.0s							
ARMA	**Armidale**	**23.32**	**214**	P		**P**	**04 52 32.2**	**+1.3**
	baz=23,SNR=111							
KNTN	**Kanton**	**23.42**	**70**	*e*P		**P**	**04 52 33.7**	**+1.8**
	comp=Z,4μm,1.8s							
KNTN				LR		LR		
	comp=Z,14μm,20.0s							
NIUE	**Niue**	**24.15**	**111**	*e*P		**P**	**04 52 39.1**	**+0.6**
	comp=Z,1μm,1.3s							
NIUE	**Niue**	**24.15**	**111**	P		**P**	**04 52 39.2**	**+0.6**
	baz=24,SNR=4.9							
OUZ	**Omahuta**	**24.62**	**166**	*e*P		**P**	**04 52 44.9**	**+2.2**
	comp=Z,366nm,1.4s							
OUZ				LR		LR		
	comp=Z,25μm,20.0s							
MGCD	**Mangrove Creek**	**25.79**	**210**	P		**P**	**04 52 55.3**	**+1.9**
	baz=26,SNR=11							
RIV	**Riverview**	**26.27**	**209**	P		**P**	**04 52 59.6**	**+2.0**
	baz=26,SNR=9.1							
JAY	**Jayapura**	**26.87**	**287**	P		**P**	**04 53 03.4**	**+0.1**
	comp=Z,94nm,0.7s,baz=132,slow=2.7,SNR=26							
JAY	**Jayapura**	**26.87**	**287**	P		**P**	**04 53 03.2**	**-0.2**
QIS	**Mount Isa**	**27.20**	**247**	P		**P**	**04 53 06.7**	**+0.5**
	baz=27,SNR=44							
GENI	**Genyem**	**27.35**	**287**	P		**P**	**04 53 07.5**	**-0.1**
CMSA	**Cobar Meteorol**	**27.64**	**220**	P		**P**	**04 53 10.9**	**+0.9**
	baz=28,SNR=59							
YNG	**Young**	**28.04**	**213**	P		**P**	**04 53 15.5**	**+1.9**
	baz=28,SNR=11							
HIZ	**Hauiti**	**28.06**	**166**	*e*P		**P**	**04 53 15.9**	**+2.3**
	comp=Z,432nm,1.5s							
HIZ				LR		LR		
	comp=Z,20μm,21.0s							
MXZ	**Matakaoa Point**	**28.19**	**160**	PFAKE			04 53 30.0	+15
MXZ				LR		LR		
	comp=Z,10μm,22.0s							
CNB	**Canberra Magne**	**28.34**	**210**	P		**P**	**04 53 17.5**	**+1.2**
	baz=28,SNR=32							
URZ	**Urewera**	**28.44**	**162**	P		**P**	**04 53 17.5**	**+0.5**
	comp=Z,17nm,0.4s,baz=225,slow=2.3,SNR=11							
URZ				S		**S**	**04 58 00.9**	**+0.3**
	comp=Z,13nm,0.8s,baz=240,slow=20,SNR=2.4							
URZ				LR		LR	05 02 45.4	
	comp=Z,19μm,21.9s,baz=342,slow=32							
URZ	**Urewera**	**28.44**	**162**	*e*P		**P**	**04 53 18.1**	**+1.1**
	comp=Z,131nm,1.1s							
URZ				LR		LR		
	comp=Z,19μm,21.0s							
CAN	**Canberra**	**28.53**	**211**	*e*P		**P**	**04 53 18.5**	**+0.6**
	comp=Z,97nm,0.9s							
CAN				LR		LR		
	comp=Z,10μm,21.0s							
CAN	**Canberra**	**28.53**	**211**	*e*P		**P**	**04 53 18.5**	**+0.6**
CAN				pmax		pmax		
	comp=Z,97nm,0.9s							
CAN				MLR		MLR		
	comp=Z,10μm,21.0s							
BKZ	**Black Stump Fm**	**29.10**	**164**	*e*P		**P**	**04 53 23.4**	**+0.4**
	comp=Z,83nm,0.8s							
BKZ				LR		LR		
	comp=Z,22μm,22.0s							
H11S2	**WAKE ISLAND Hy**	**29.71**	**1**	T		T	05 24 00.0	
	baz=181,slow=76,SNR=105							
H11S3	**WAKE ISLAND Hy**	**29.71**	**1**	T		T	05 24 03.0	
	baz=181,slow=76,SNR=145							
H11S1	**WAKE ISLAND Hy**	**29.72**	**1**	T		T	05 24 06.1	
	baz=181,slow=76,SNR=56							
MILA	**Mila**	**29.84**	**208**	P		**P**	**04 53 30.8**	**+1.2**
	baz=30,SNR=8.0							
BFZ	**Birch Farm**	**30.45**	**165**	*e*P		**P**	**04 53 34.7**	**-0.2**
	comp=Z,326nm,1.4s							
BFZ				LR		LR		
	comp=Z,24μm,20.0s							
WAKE	**Wake Island**	**30.50**	**1**	*e*P		**P**	**04 53 35.2**	**-0.1**
	comp=Z,643nm,1.5s							
WAKE				LR		LR		
	comp=Z,11μm,22.0s							
STKA	**Stephens Creek**	**30.56**	**224**	P		**P**	**04 53 36.5**	**+0.6**
	comp=Z,102nm,0.8s,baz=38,slow=8.8,SNR=116							
STKA				PcP		**PcP**	**04 56 34.5**	**+0.7**
	comp=Z,57nm,1.0s,baz=84,slow=6.2,SNR=3.6							
STKA				ScP		**ScP**	**05 00 13.9**	**+1.9**
	comp=Z,6.0nm,0.8s,baz=248,slow=3.2,SNR=3.1							
STKA				LR		LR	05 04 58.7	
	comp=Z,20μm,21.2s,baz=45,slow=34							
STKA	**Stephens Creek**	**30.56**	**224**	*e*P		**P**	**04 53 36.5**	**+0.6**
	comp=Z,30nm,0.9s							
STKA				*e*PcP		**PcP**	**04 56 34.9**	**+1.1**
STKA				*e*ScP		**ScP**	**05 00 13.9**	**+1.9**
STKA	**Stephens Creek**	**30.56**	**224**	P		**P**	**04 53 37.0**	**+1.1**
	baz=31,SNR=48							
SNZO	**South Karori**	**30.69**	**168**	*e*P		**P**	**04 53 36.2**	**-0.8**
	comp=Z,190nm,1.0s							
SNZO				LR		LR		
	comp=Z,21μm,20.0s							
THZ	**Tophouse**	**30.79**	**170**	*e*P		**P**	**04 53 38.4**	**+0.5**
	comp=Z,159nm,0.7s							
THZ				LR		LR		
	comp=Z,9μm,20.0s							
SRPI	**Serui, Papua**	**31.29**	**285**	P		**P**	**04 53 42.6**	**0.0**
KHZ	**Kahutara**	**31.54**	**170**	*e*P		**P**	**04 53 43.6**	**-0.7**
	comp=Z,201nm,1.1s							
KHZ				LR		LR		
	comp=Z,16μm,19.0s							
LTZ	**Lake Taylor**	**31.69**	**172**	*e*P		**P**	**04 53 46.4**	**+0.6**
	comp=Z,234nm,0.8s							
LTZ				LR		LR		
	comp=Z,9μm,19.0s							
WRAB	**Tennant Creek**	**31.86**	**251**	*e*P		**P**	**04 53 47.6**	**0.0**
	comp=Z,361nm,1.0s							
WRAB				LR		LR		
	comp=Z,13μm,20.0s							
WRAB	**Tennant Creek**	**31.86**	**251**	*e*P		**P**	**04 53 47.6**	**0.0**
WRAB				pmax		pmax		
	comp=Z,361nm,1.0s							
WRAB				MLR		MLR		
	comp=Z,13μm,20.0s							
WB2	**Warramunga Arr**	**31.86**	**251**	*e*P		**P**	**04 53 47.2**	**-0.3**
	comp=Z,427nm,1.0s							
WB2				LR		LR		
	comp=Z,12μm,20.0s							
WC1	**Warramunga Arr**	**31.87**	**251**	PFAKE			04 54 00.0	+12
WC1				LR		LR		
	comp=Z,9μm,20.0s							
WR1	**Warramunga Arr**	**31.88**	**251**	*e*P		**P**	**04 53 47.6**	**-0.1**
WR1				*e*PcP		**PcP**	**04 56 38.0**	**+0.5**
WRA	**Warramunga Arr**	**31.88**	**251**	P		**P**	**04 53 47.6**	**-0.1**
	comp=Z,175nm,0.9s,baz=76,slow=7.8,SNR=165							
WRA				pP		**pP**	**04 54 01.5**	**+1.6**
	comp=Z,67nm,0.9s,baz=113,slow=34,SNR=12							
WRA				PcP		**PcP**	**04 56 38.0**	**+0.5**
	comp=Z,54nm,1.0s,baz=90,slow=2.6,SNR=3.7							
TOO	**Toolangi**	**32.06**	**212**	*e*P		**P**	**04 53 50.2**	**+1.2**
	comp=Z,243nm,1.1s							
TOO				LR		LR		
	comp=Z,21μm,22.0s							
TOO	**Toolangi**	**32.06**	**212**	P		**P**	**04 53 50.3**	**+1.2**
	baz=32,SNR=28							
TOO	**Toolangi**	**32.06**	**212**	*e*P		**P**	**04 53 50.2**	**+1.2**
TOO				pmax		pmax		
	comp=Z,243nm,1.1s							
TOO				MLR		MLR		
	comp=Z,21μm,22.0s							
FOZ	**Fox Glacier**	**32.16**	**175**	*e*P		**P**	**04 53 51.1**	**+1.3**
	comp=Z,416nm,1.1s							
FOZ				LR		LR		
	comp=Z,12μm,20.0s							
OXZ	**Oxford**	**32.19**	**172**	*e*P		**P**	**04 53 50.0**	**-0.1**
	comp=Z,276nm,1.0s							
OXZ				LR		LR		
	comp=Z,12μm,19.0s							
RPZ	**Rata Peaks**	**32.45**	**174**	P		**P**	**04 53 52.3**	**-0.1**
	comp=Z,151nm,0.5s,baz=316,slow=2.9,SNR=93							
RPZ				LR		LR	05 05 50.7	
	comp=Z,7μm,21.9s,baz=341,slow=34							
RPZ	**Rata Peaks**	**32.45**	**174**	*e*P		**P**	**04 53 52.7**	**+0.2**
	comp=Z,311nm,0.8s							
RPZ				LR		LR		
	comp=Z,12μm,19.0s							
CRLZ	**Canterbury Las**	**32.52**	**171**	*e*P		**P**	**04 53 53.2**	**+0.2**
	comp=Z,538nm,1.4s							
MQZ	**McQueen's Vall**	**32.65**	**171**	*e*P		**P**	**04 53 54.3**	**+0.2**
	comp=Z,264nm,0.9s							
GUMO	**Guam**	**32.69**	**319**	LR		LR	05 07 57.6	
	comp=Z,4μm,18.3s,baz=136,slow=38							
GUMO	**Guam**	**32.69**	**319**	PFAKE			04 54 10.0	+15
GUMO				LR		LR		
	comp=Z,5μm,18.0s							
LBZ	**Lake Benmore**	**33.03**	**175**	*e*P		**P**	**04 53 57.6**	**+0.1**
	comp=Z,209nm,1.2s							
LBZ				LR		LR		
	comp=Z,12μm,20.0s							
KDU	**Kakadu**	**33.10**	**264**	P		**P**	**04 53 58.5**	**+0.1**
	baz=33,SNR=18							
AS31	**Alice Springs**	**33.12**	**244**	*e*P		**P**	**04 53 57.8**	**-0.8**
AS31				*e*PcP		**PcP**	**04 56 41.4**	**+0.5**
AS31				*e*ScP		**ScP**	**05 00 21.5**	**+0.7**
AS31				LR		LR		
	comp=Z,300nm,21.0s							
ASAR	**Alice Springs**	**33.12**	**244**	P		**P**	**04 53 57.9**	**-0.8**
	comp=Z,219nm,0.8s,baz=74,slow=9.4,SNR=457							
ASAR				pP		**pP**	**04 54 11.8**	**+0.3**
	comp=Z,284nm,0.9s,baz=71,slow=9.3,SNR=22							
ASAR				PcP		**PcP**	**04 56 41.4**	**+0.5**
	comp=Z,44nm,0.8s,baz=75,slow=2.5,SNR=12							
ASAR				ScP		**ScP**	**05 00 21.5**	**+0.7**
	comp=Z,12nm,0.9s,baz=82,slow=3.7,SNR=6.2							
HTT	**Hallett**	**33.30**	**224**	P		**P**	**04 54 01.4**	**+1.4**
	baz=33,SNR=44							
WKZ	**Wanaka**	**33.39**	**176**	*e*P		**P**	**04 54 01.6**	**+1.0**
	comp=Z,651nm,1.3s							
WKZ				LR		LR		
	comp=Z,17μm,20.0s							
ARPS	**Mount Arapiles**	**33.52**	**217**	P		**P**	**04 54 03.2**	**+1.4**
	baz=34,SNR=15							
ODZ	**Otahua Downs**	**33.73**	**174**	*e*P		**P**	**04 54 03.6**	**+0.1**
	comp=Z,198nm,1.3s							
ODZ				LR		LR		
	comp=Z,7μm,22.0s							
MLZ	**Mavora Lakes**	**33.88**	**178**	*e*P		**P**	**04 54 06.1**	**+1.3**
	comp=Z,140nm,1.0s							
MLZ				LR		LR		
	comp=Z,17μm,20.0s							
RAR	**Rarotonga**	**33.92**	**111**	LR		LR	05 05 09.6	
	comp=Z,9μm,21.5s,baz=272,slow=31							
RAR	**Rarotonga**	**33.92**	**111**	PFAKE			04 54 20.0	+14
RAR				LR		LR		
	comp=Z,12μm,19.0s							
DCZ	**Deep Cove**	**33.95**	**179**	*e*P		**P**	**04 54 06.3**	**+0.9**
	comp=Z,233nm,1.1s							
MTN	**Manton Dam**	**34.40**	**264**	*e*P		**P**	**04 54 10.5**	**+0.7**
	comp=Z,168nm,0.9s							
MTN				LR		LR		
	comp=Z,14μm,20.0s							
MTN	**Manton Dam**	**34.40**	**264**	P		**P**	**04 54 10.4**	**+0.6**
	baz=34,SNR=31							
WHZ	**Wether Hill Ro**	**34.40**	**178**	*e*P		**P**	**04 54 09.2**	**-0.1**
	comp=Z,392nm,1.7s							
WHZ				LR		LR		
	comp=Z,10μm,20.0s							
SARN	**Sarigan**	**34.52**	**324**	*e*P		**P**	**04 54 09.4**	**-1.3**
	comp=Z,285nm,1.4s							
FAKI	**Fak Fak**	**34.79**	**281**	*e*P		**P**	**04 54 13.5**	**+0.4**
	comp=Z,121nm,1.1s							
FAKI				LR		LR		
	comp=Z,13μm,21.0s							
FAKI	**Fak Fak**	**34.79**	**281**	P		**P**	**04 54 13.1**	**0.0**
	comp=Z,110nm,1.7s,comp=Z,2μm							
BBOO	**Buckleboo**	**34.99**	**228**	*e*P		**P**	**04 54 15.6**	**+1.0**
	comp=Z,286nm,1.1s							
BBOO				LR		LR		
	comp=Z,13μm,18.0s							
BBOO	**Buckleboo**	**34.99**	**228**	P		**P**	**04 54 15.1**	**+0.5**
	baz=35,SNR=8.5							
MOO	**Moorlands**	**35.13**	**205**	P		**P**

comp=Z,4μm,19.5s,baz=268,slow=32
PPT2 Papeete2 43.08 104 *e*P **P 04 55 24.3 +1.8**
comp=Z,326nm,1.6s
PPT2 *e*S **S 05 01 45.2 +0.1**
comp=Z,5μm,27.2s
PPT2 *e*LQ LQ 05 05 38.8
comp=Z,20μm,31.8s
PPT2 *e*LR LR 05 07 27.6
comp=Z,27μm,28.8s,baz=279
PPTF Pamatai, Papee 43.09 104 *e*P **P 04 55 23.4 +0.8**
comp=Z,733nm,1.6s
SGSI Sangihe 43.24 288 P **P 04 55 24.9 +1.1**
TIAR Tiarei 43.30 103 *e*P **P 04 55 26.1 +1.9**
comp=Z,97nm,1.3s
TVO Taravao 43.40 104 *e*P **P 04 55 26.8 +1.7**
comp=Z,138nm,1.4s
MMRI Maumere 43.45 269 *e*P **P 04 55 25.9 +0.4**
comp=Z,1μm,1.0s
MMRI Maumere 43.45 269 P **P 04 55 25.1 -0.4**
TBI Tubuai 43.69 112 *e*S **S 05 01 53.6 -0.1**
comp=Z,4μm,27.8s
TBI *e*LQ LQ 05 05 53.7
comp=Z,15μm,30.8s
TBI *e*LR LR 05 07 45.0
comp=Z,31μm,28.8s,baz=283
KMSI Cibinong 43.70 283 P **P 04 55 28.5 +1.1**
KDI Kendari 43.87 276 P **P 04 55 28.5 -0.4**
EDFI Ende, Flores 43.97 269 P **P 04 55 28.4 -1.4**
DDMP Don Marcelino, 43.97 291 *e*P **P 04 55 28.8 -0.9**
LUWI Luwuk 44.41 280 *e*P **P 04 55 34.6 +1.4**
comp=Z,2μm,1.1s
LUWI Luwuk 44.41 280 P **P 04 55 33.6 +0.4**
DAV Davao City (W) 44.48 292⇑*i*P **P 04 55 33.0 -0.7**
MEH Mehetia 44.53 104 *e*P **P 04 55 35.6 +1.5**
comp=Z,199nm,1.4s
PMOR Pomariorio Ree 44.68 100 *e*P **P 04 55 37.5 +2.2**
comp=Z,1μm,1.6s
VAH Vaihoa 44.93 100 *e*P **P 04 55 39.3 +2.0**
comp=Z,784nm,1.5s
SKMP Bagumbayan, Su 45.20 291 *e*P **P 04 55 39.0 -0.5**
BUTP Butuan 45.24 295 *e*P **P 04 55 39.9 +0.2**
BUKP Musuan 45.28 293 *e*P **P 04 55 42.4 +2.3**
KMBL Kambalda 45.51 237 P **P 04 55 42.5 +0.8**
baz=46,SNR=12
PSA00 Pilbara Seismi 45.53 251 *e*P **P 04 55 42.6 +0.7**
comp=Z,379nm,0.9s
PSA00 *e*PcP **PcP 04 57 19.3 -0.8**
APSI Ampana 45.53 280 P **P 04 55 42.2 +0.1**
BSSI Bau Bau, Buton 45.54 273 P **P 04 55 42.5 +0.4**
comp=Z,1μm,1.1s,comp=Z,9μm
PSAC3 Pilbara Seismi 45.55 251 PFAKE 04 55 50.0 +7.8
PSAC3 LR LR
comp=Z,10μm,20.0s
MBWA Marble Bar 45.60 252 PFAKE 04 55 50.0 +7.5
MBWA LR LR
comp=Z,9μm,18.0s
MRSI Marisa 45.62 282 P **P 04 55 42.0 -0.8**
comp=Z,194nm,1.2s,comp=Z,2μm,comp=Z,6μm
CTBH Cotabato--PC H 45.75 292⇑*i*P **P 04 55 44.1 +0.4**
BKSI Bulukumba 46.04 274 P **P 04 55 45.9 -0.2**
WBSI Waikabubak, Su 46.12 268 P **P 04 55 47.2 +0.4**
comp=Z,558nm,0.9s,comp=Z,5μm
BNSI Bone 46.23 275 P **P 04 55 48.3 +0.7**
MSLP Maasin 46.42 296 *e*P **P 04 55 49.3 +0.3**
MSLP *e*S **pP 04 56 03.0 +0.7**
SPSI Sidrap Palu 46.65 275 P **P 04 55 50.6 -0.3**
comp=Z,263nm,1.1s,comp=Z,3μm,comp=Z,6μm
PAGZ Pagadian 46.78 292 *e*P **P 04 55 52.6 +0.7**
TTSI Tana Toraja 46.80 277 P **P 04 55 53.2 +1.2**
KEKH Kekaha 47.04 45 PFAKE 04 56 10.0 +16
KEKH LR LR
comp=Z,8μm,22.0s
MPSI Mapaga 47.55 281 P **P 04 55 57.4 -0.5**
comp=Z,380nm,1.1s,comp=Z,4μm,comp=Z,6μm
CNP Catarman 47.67 299 *e*P **P 04 55 59.3 +0.5**
PLAI Plampang 47.80 268 P **P 04 55 59.5 -0.3**
comp=Z,1μm,1.4s,comp=Z,10μm
KIP Kipapa 47.88 47 *e*P **P 04 56 02.4 +2.2**
comp=Z,633nm,1.1s
KIP Kipapa 47.88 47 *e*P **P 04 56 02.4 +2.2**
KIP pmax pmax
comp=Z,633nm,1.1s
OPA Opana 48.05 47 *e*P **P 04 56 04.1 +2.5**
comp=Z,2μm,1.2s
OPA LR LR
comp=Z,8μm,20.0s
OPA Opana 48.05 47 *e*P **P 04 56 04.1 +2.5**
OPA MLR MLR
comp=Z,8μm,20.0s
KHLU Kahalu`u 48.32 51 PFAKE 04 56 20.0 +16
KHLU LR LR
comp=Z,7μm,20.0s
KHU Kahuku 48.33 51 PFAKE 04 56 20.0 +16
KHU LR LR
comp=Z,9μm,22.0s
HUH Hualalai 48.42 51 PFAKE 04 56 20.0 +15
HUH LR LR
comp=Z,7μm,20.0s
MWH Moku'aweowe 48.49 51 PFAKE 04 56 20.0 +14
MWH LR LR
comp=Z,10μm,22.0s
AIN Ainahou 48.53 51 PFAKE 04 56 20.0 +14
AIN LR LR
comp=Z,11μm,22.0s
MLOA Mauna Loa Obse 48.53 51 *e*P **P 04 56 04.9 -1.0**
comp=Z,676nm,1.3s
MLOA LR LR
comp=Z,8μm,21.0s
HLP Hilina Pali 48.60 51 PFAKE 04 56 20.0 +14
HLP LR LR
comp=Z,10μm,22.0s
PVCP Virac 48.63 300 *e*P **P 04 56 06.6 +0.5**
HMH Humu'ula Sheep 48.64 51 PFAKE 04 56 20.0 +13
HMH LR LR
comp=Z,9μm,21.0s
GUIM Jordan 48.64 295 *e*P **P 04 56 06.3 0.0**
MLH Mauna Loa 48.65 51 PFAKE 04 56 20.0 +13
MLH LR LR
comp=Z,10μm,22.0s
SDHHI Sand Hill 48.66 51 PFAKE 04 56 20.0 +14
SDHHI LR LR
comp=Z,9μm,22.0s
RIM Rim 48.68 51 PFAKE 04 56 20.0 +13
RIM LR LR
comp=Z,9μm,22.0s
UWE Uwekahuna 48.68 51 PFAKE 04 56 20.0 +13
UWE LR LR
comp=Z,9μm,22.0s
NPH North Pit 48.69 51 PFAKE 04 56 20.0 +13
NPH LR LR
comp=Z,7μm,21.0s
OBL Observatory Le 48.69 51 PFAKE 04 56 20.0 +13
OBL LR LR
comp=Z,9μm,22.0s
UWB Uwekahuna B 48.69 51 PFAKE 04 56 20.0 +13
UWB LR LR
comp=Z,5μm,22.0s
POHA Pohakuloa 48.70 51 *e*P **P 04 56 09.5 +2.6**
comp=Z,643nm,1.1s
POHA LR LR
comp=Z,8μm,21.0s
KHLH Kahului Airpor 48.71 49 *e*P **P 04 56 10.1 +3.4**
comp=Z,2μm,1.4s
KHLH LR LR
comp=Z,6μm,20.0s
PUH Pauahi 48.71 51 PFAKE 04 56 20.0 +13
PUH LR LR
comp=Z,9μm,22.0s
HPAH Hawaii Prepara 48.73 50 *e*P **P 04 56 09.0 +2.0**
comp=Z,715nm,1.1s
HPAH LR LR
comp=Z,9μm,22.0s
HLK Haleakala 48.76 49 *e*P **P 04 56 10.5 +3.1**
comp=Z,837nm,1.1s
HLK LR LR
comp=Z,7μm,20.0s
STCH Steam Cracks 48.79 51 PFAKE 04 56 20.0 +13
STCH LR LR
comp=Z,8μm,22.0s
JCUZ Jacuzzi 48.81 52 PFAKE 04 56 20.0 +12
JCUZ LR LR
comp=Z,6μm,20.0s
KLBR Kellerberrin 48.98 238 P **P 04 56 08.8 +0.1**
baz=49,SNR=95
SGKI Sangatta, Kali 49.54 279 P **P 04 56 14.9 +1.7**
comp=Z,496nm,1.4s,comp=Z,6μm
BLDU Ballidu 49.65 239 P **P 04 56 14.2 +0.4**
baz=50,SNR=22
NWAO Narrogin (SRO) 49.72 236 *e*P **P 04 56 14.4 +0.1**
comp=Z,364nm,1.1s
NWAO LR LR
comp=Z,24μm,20.0s
NWAO Narrogin (SRO) 49.72 236 P **P 04 56 14.7 +0.4**
baz=50,SNR=31
NWAO Narrogin (SRO) 49.72 236 *e*P **P 04 56 14.4 +0.1**
NWAO pmax pmax
comp=Z,364nm,1.1s
NWAO MLR MLR
comp=Z,24μm,20.0s
AUQP San Andres 49.77 298 *e*P P 04 56 27.5 +13
OTRP Odiongan 49.90 297 *e*P **P 04 56 16.4 +0.5**
MORW Morawa 49.93 242 *e*P **P 04 56 16.9 +0.8**
comp=Z,469nm,1.1s
MORW LR LR
comp=Z,14μm,18.0s
MORW Morawa 49.93 242 P **P 04 56 16.8 +0.8**
baz=50,SNR=19
BKB Balikpapan 50.05 278 P **P 04 56 19.0 +1.9**
comp=Z,553nm,1.5s,comp=Z,9μm
CUYO Cuyo Island 50.13 295 *e*P **P 04 56 18.7 +1.0**
DNP Denpasar 50.33 268 P **P 04 56 17.3 -1.9**
RKGY Rocky Gully 50.34 234 P **P 04 56 19.9 +0.9**
baz=50,SNR=13
MUN Mundaring 50.35 238 P **P 04 56 19.9 +0.8**
baz=50,SNR=50
SRBI Singaraja 50.41 269 P **P 04 56 18.8 -1.0**
SJMP San Jose 50.73 297 *e*P **P 04 56 23.2 +1.1**
GIRL Giralia 50.80 250 *e*P **P 04 56 24.9 +2.3**
comp=Z,999nm,1.1s
GIRL LR LR
comp=Z,9μm,21.0s
GIRL Giralia 50.80 250 P **P 04 56 23.0 +0.4**
baz=51,SNR=4.1
JHJ2 Mitsune 50.97 331 *e*P **P 04 56 23.7 +0.1**
comp=Z,312nm,0.8s
JHJ2 LR LR
comp=Z,4μm,20.0s
JAGI Jajag, Banyuwa 51.40 268 *e*P **P 04 56 26.7 -0.6**
comp=Z,1μm,1.2s
JAGI Jajag, Banyuwa 51.40 268 P **P 04 56 26.2 -1.1**
ENPP El Nido 51.70 294 *e*P **P 04 56 30.1 +0.6**
PALP Palanan 51.77 302 *e*P **P 04 56 31.0 +1.0**
KMMI Kalianget 51.78 270 P **P 04 56 29.6 -0.5**
BALP Baler 51.84 300 *e*P **P 04 56 30.4 -0.1**
LUBP Lubang 52.06 297 *e*P **P 04 56 31.1 -1.0**
MTKI Muara Teweh, K 52.06 278 P **P 04 56 32.5 +0.3**
CAUP Cauayan 52.21 302 *e*P **P 04 56 34.9 +1.7**
BATP Bataraza 52.24 291 *e*P **P 04 56 33.3 -0.2**
H01W1 Cape Leeuwin H 52.67 235 P **P 04 56 32.9 -3.2**
baz=95,slow=7.0,SNR=4.5
H01W3 Cape Leeuwin H 52.68 235 P **P 04 56 38.2 +2.0**
baz=95,slow=7.0,SNR=4.0
H01W2 Cape Leeuwin H 52.68 235 P **P 04 56 38.3 +2.1**
baz=95,slow=7.0,SNR=5.1
TAOE Nuku Hiva Isla 52.72 92 *e*S **S 05 04 00.2 -1.5**
comp=Z,3μm,26.7s
TAOE *e*LQ LQ 05 09 42.7
comp=Z,3μm,25.7s
TAOE *e*LR LR 05 11 52.3
comp=Z,11μm,27.2s,baz=269
KKM Kota Kinabalu 52.76 287 *e*P **P 04 56 38.1 +0.6**
comp=Z,2μm,1.3s
KKM LR LR
comp=Z,2μm,22.0s
KKM Kota Kinabalu 52.76 287 P **P 04 56 39.0 +1.5**
SMPP San Manuel, Pa 52.79 300 *e*P **P 04 56 37.0 -0.6**
JOW Kunigami 52.99 316 *e*P **P 04 56 39.8 +1.0**
comp=Z,140nm,1.0s
INU Inuyama 54.13 330 *e*P **P 04 56 47.0 0.0**
comp=Z,121nm,1.1s
INU LR LR
comp=Z,4μm,21.0s
MJAR Matsushiro Arr 54.54 332 P **P 04 56 48.8 -1.2**
comp=Z,42nm,0.8s,baz=168,slow=8.5,SNR=106
MJAR pP **pP 04 57 03.2 -0.9**
comp=Z,94nm,0.9s,baz=167,slow=9.5,SNR=19
MAJO Matsushiro 54.54 332 *e*P **P 04 56 49.5 -0.5**
comp=Z,140nm,1.0s
MAJO LR LR
comp=Z,3μm,21.0s
MAJO Matsushiro 54.54 332 *e*P **P 04 56 49.5 -0.5**
MAJO pmax pmax
comp=Z,140nm,1.0s
MAJO MLR MLR
comp=Z,3μm,21.0s
MAT Matsushiro 54.54 332 P **P 04 56 49.0 -1.0**
MAT S **S 05 04 23.6 -1.9**
WOJI Wonogiri, Jawa 54.65 268 P **P 04 56 48.4 -2.8**
UGM Wanagama 55.03 268 *e*P **P 04 56 54.8 +0.8**
comp=Z,834nm,1.0s
UGM LR LR
comp=Z,2μm,19.0s
UGM Wanagama 55.03 268 P **P 04 56 54.8 +0.8**
comp=Z,979nm,1.1s,comp=Z,11μm
SMRI Semarang 55.24 269 *e*P **P 04 56 57.1 +1.6**
comp=Z,629nm,1.0s
SMRI Semarang 55.24 269 P **P 04 56 57.2 +1.6**
comp=Z,686nm,1.2s,comp=Z,9μm
YOGI Yogyakarta 55.27 268 P **P 04 56 56.2 +0.5**
comp=Z,2μm,1.0s,comp=Z,20μm
YOJ Yonaguni jima 55.28 311 *e*P **P 04 56 56.1 +0.6**
comp=Z,488nm,1.3s
YOJ LR LR
comp=Z,6μm,22.0s
YOJ Yonaguni jima 55.28 311 *e*P **P 04 56 56.1 +0.6**
YOJ pmax pmax
comp=Z,488nm,1.3s
YOJ MLR MLR
comp=Z,6μm,22.0s
SBUM Sibu 55.51 281 *e*P **P 04 56 58.1 +0.7**
comp=Z,366nm,1.9s
SBUM Sibu 55.51 281 P **P 04 56 59.0 +1.6**
JNU Nakatsue 55.69 324 P **P 04 56 57.6 -0.7**
comp=Z,70nm,0.9s,baz=116,slow=5.1,SNR=42
JNU pP **pP 04 57 12.3 0.0**
comp=Z,177nm,1.1s,baz=88,slow=4.7,SNR=18
JNU LR LR 05 18 12.1
comp=Z,2μm,20.5s,baz=146,slow=33
JNU Nakatsue 55.69 324 *e*P **P 04 56 58.0 -0.3**
comp=Z,290nm,1.2s
JNU LR LR
comp=Z,3μm,21.0s
YULB Yu-li 55.98 308 *e*P **P 04 57 00.2 -0.4**
comp=Z,123nm,1.1s
NACB Ninganchiao 56.19 309 *e*P **P 04 57 02.2 +0.2**
comp=Z,355nm,1.4s
TPUB Tau 56.45 308 *e*P **P 04 57 03.6 -0.4**
comp=Z,238nm,1.0s
TPUB LR LR
comp=Z,4μm,22.0s
SSLB Suanglung 56.46 309 *e*P **P 04 57 03.4 -0.7**
comp=Z,92nm,1.1s
YHNB Yeheng 56.63 310 *e*P **P 04 57 05.7 +0.4**
comp=Z,221nm,1.1s
TATO Taipei 56.72 310 *e*P **P 04 57 05.9 +0.2**
comp=Z,249nm,1.3s
TATO LR LR
comp=Z,5μm,20.0s
RKT Rikitea 56.95 110 *e*S **S 05 04 57.0 -1.1**
comp=Z,3μm,29.5s
RKT *e*LQ LQ 05 11 29.8
comp=Z,6μm,33.2s
RKT *e*LR LR 05 13 56.0
comp=Z,29μm,27.2s
KSM Kuching 57.10 279 *e*P **P 04 57 08.6 -0.1**
comp=Z,507nm,1.5s
KSM Kuching 57.10 279 P **P 04 57 10.0 +1.3**
ERM Erimo 57.26 340 *e*P **P 04 57 09.7 +0.5**
comp=Z,54nm,0.8s
ERM LR LR
comp=Z,9μm,22.0s
ERM Erimo 57.26 340 *e*P **P 04 57 09.7 +0.5**
ERM pmax pmax
comp=Z,54nm,0.8s
ERM MLR MLR
comp=Z,9μm,22.0s
CISI Cisompet, Garu 57.74 268 *e*P **P 04 57 13.3 -0.1**
CISI LR LR
comp=Z,3μm,19.0s
CISI Cisompet, Garu 57.74 268 P **P 04 57 13.1 -0.2**
LEM Lembang 58.05 269 P **P 04 57 16.5 +0.9**
YUK Yuzh-Kuril'sk 58.22 343⇑*i*P **P 04 57 15.4 -0.6**
YUK *i* S **S 05 05 18.0 +4.1**
YUK pmax pmax
comp=Z,213nm,1.0s
TPI Tanjungpandan 58.74 274 P **P 04 57 21.0 +0.8**
KUR Kuril'sk 58.78 345*c e*P **P 04 57 20.1 +0.2**
KUR *i* *PP **pP 04 57 31.5 -2.5**
KUR *e* 04 59 30.3
KUR *e*PPP PPP 05 00 49.7
KUR *e*S **S 05 05 23.1 +2.0**
KUR *i* SS **SS 05 09 17.0 +1.6**
KUR pmax pmax
comp=Z,1μm,7.3s
KUR pmax pmax
comp=Z,339nm,1.4s
KUR pmax pmax
comp=N,191nm,0.9s
QZH Quanzhou 58.90 308⇑*i*P **P 04 57 21.2 +0.1**
QZH pP **pP 04 57 33.2 -1.9**
QZH S **S 05 05 23.7 +0.3**
QZH pmax pmax
comp=N,2μm,4.8s
QZH LR LR
comp=N,2μm,19.9s
QZH LR LR
comp=N,2μm,19.6s
QZH LR LR
comp=N,2μm,20.8s
SKJI Sukabumi 59.06 269 P **P 04 57 22.1 -0.4**
ASAJ Asahikawa 59.31 340 P **P 04 57 24.1 +0.5**
comp=N,80nm,0.9s,baz=215,slow=8.5,SNR=52
ASAJ pP **pP 04 57 37.8 0.0**
comp=N,178nm,0.9s,baz=199,slow=8.2,SNR=17
XMIS Christmas Isla 59.46 265 *e*P **P 04 57 25.9 +0.7**
comp=N,571nm,1.3s
TJN Taejon 60.03 324*c e*P **P 04 57 28.5 -0.2**
KSRS Korea Array 60.48 325 P **P 04 57 31.6 -0.2**
comp=N,16nm,0.7s,baz=137,slow=7.1,SNR=95
KSRS pP **pP 04 57 45.4 -0.6**
comp=N,16nm,0.8s,baz=141,slow=6.8,SNR=9.7
SSE Sheshan 60.49 316 P **P 04 57 32.1 +0.2**
SSE S **S 05 05 38.9 -4.7**
SSE pmax pmax
comp=N,46nm,0.7s
SSE pmax pmax
comp=N,600nm,9.4s
SSE LR LR
comp=N,440nm,19.8s
SSE LR LR
comp=N,1μm,20.9s
SSE Sheshan 60.49 316 *e*P **P 04 57 31.7 -0.2**
comp=N,120nm,0.8s
SSE LR LR
comp=Z,3μm,21.0s
HKC Hong Kong Obse 61.10 303⇑P **P 04 57 37.0 +0.8**
HKPS Hong Kong Po S 61.11 303 *e*P **P 04 57 37.9 +1.6**
HKPS LR LR
comp=Z,6μm,22.0s
YSS Yuzh-Sakhalins 61.79 342 *e*P **P 04 57 41.3 +0.9**
comp=Z,374nm,1.1s
YSS LR LR
comp=Z,3μm,20.0s
YSS Yuzh-Sakhalins 61.79 342*α i*P **P 04 57 41.0 +0.6**
YSS *e* 04 57 56.2
YSS *e* 04 59 57.6
YSS *e*S **S 05 05 56.6 -3.0**
YSS *e*PS 05 06 19.8
YSS *e*PPS PPS 05 06 35.0
YSS pmax pmax
comp=Z,130nm,1.1s
DLV T Lat 61.92 290 *e*P **P 04 57 42.5 +0.3**
comp=Z,569nm,1.5s
GZH Guangzhou 62.14 304 P **P 04 57 43.6 +0.4**
GZH S **S 05 06 08.7 +3.8**
GZH pmax pmax
comp=Z,2μm,7.1s
GZH LR LR
comp=Z,3μm,23.3s
GZH LR LR
comp=Z,2μm,23.1s
TEY Ternei 62.27 337⇓*i*P **P 04 57 44.0 +0.4**
TEY *e* 04 57 58.6
TEY pmax pmax
comp=N,30nm,1.0s
TEY pmax pmax
comp=Z,70nm,1.0s
TEY pmax pmax
comp=E,20nm,0.9s
SKR Severo-Kuril's 62.46 353 *e*P **P 04 57 42.6 -2.2**
SKR *e* 04 57 57.8
SKR *e* 04 59 58.9
SKR *e*S **S 05 06 09.3 +1.4**
SKR pmax pmax
comp=Z,1μm,5.8s
SKR MLR MLR
comp=Z,2μm,15.0s
SKR MLR MLR
comp=Z,2μm,15.0s
MSHR Mys Shultsa 62.63 331*c i*P **P 04 57 46.4 +0.3**
NJ2 Nanjing 62.66 315⇑*i*P **P 04 57 47.1 +0.6**
NJ2 pP **pwP 04 58 04.1 +0.9**
NJ2 sP **sP 04 58 12.2 +5.7**
NJ2 S **S 05 06 13.7 +2.6**
NJ2 SS **SS 05 10 20.1 +3.4**
NJ2 pmax pmax
comp=Z,2μm,5.7s
NJ2 LR LR
comp=Z,3μm,25.0s
NJ2 LR LR
comp=Z,3μm,24.5s
NJ2 LR LR
comp=Z,5μm,24.0s
VLA Vladivostok 62.71 332*c i*P **P 04 57 47.0 +0.4**
VLA pmax pmax
comp=Z,67nm,1.2s
QIZ Qiongzhong 63.33 298 P **P 04 57 52.4 +1.1**
QIZ sP **sP 04 58 13.7 +2.4**
QIZ S **S 05 06 13.9 -6.1**
QIZ pmax pmax
comp=Z,2μm,5.6s
QIZ LR LR
comp=Z,2μm,22.6s
QIZ LR LR
comp=Z,4μm,22.1s
QIZ LR LR
comp=Z,6μm,23.0s
QIZ Qiongzhong 63.33 298 *e*P **P 04 57 53.1 +1.9**
comp=Z,248nm,1.3s
QIZ LR LR
comp=Z,6μm,22.0s
MYKOM Kota Tinggi 63.44 278 *e*P **P 04 57 53.0 +0.9**
comp=Z,781nm,2.0s
MYKOM Kota Tinggi 63.44 278 P **P 04 57 54.0 +1.9**
USA0B Ussuriysk Arra 63.51 333 *e*P **P 04 57 52.9 +1.0**
USRK Ussuriysk Ar. 63.51 333 P **P 04 57 52.7 +0.8**
comp=Z,47nm,0.8s,baz=139,slow=6.0,SNR=90
USRK pP **pP 04 58 06.5 +0.2**
comp=Z,163nm,1.0s,baz=132,slow=6.4,SNR=22
USRK PKP2ab 05 27 03.0
comp=Z,1.1nm,0.7s,baz=96,slow=1.9,SNR=4.6
SMY Shemya 64.22 5 *e*P **P 04 57 56.9 +0.5**
comp=Z,564nm,1.5s
SMY LR LR
comp=Z,5μm,22.0s
SMY Shemya 64.22 5 *e*P **P 04 57 56.9 +0.5**
SMY pmax pmax
comp=Z,564nm,1.5s
SMY MLR MLR
comp=Z,5μm,22.0s
PET Petropavlovsk 64.50 355 *e*P **P 04 57 57.5 -0.7**
comp=Z,199nm,1.6s
PET LR LR
comp=Z,5μm,21.0s
PET Petropavlovsk 64.50 355 *e*P **P 04 57 57.8 -0.4**
PET *e*S **S 05 06 34.3 +1.1**
PET *e*SS **SS 05 10 47.8 +3.1**
PET pmax pmax
comp=Z,1μm,8.5s
PET pmax pmax
comp=Z,1μm,16.8s
PET pmax pmax
comp=Z,74nm,1.4s
PETK Petropavlovsk- 64.67 354 P **P 04 57 59.6 +0.2**
comp=Z,29nm,0.8s,baz=138,slow=7.8,SNR=30
PETK SKKP 05 21 58.0
comp=Z,1.4nm,0.4s,baz=267,slow=5.8,SNR=5.0
PEA1 Petropavlovsk- 64.68 354 *e*P **P 04 57 59.6 +0.2**
ADK Adak 64.72 12 *e*P **P 04 57 60.0 +0.3**

	comp=Z,351nm,1.5s					
ADK				LR	LR	
	comp=Z,6μm,22.0s					
ADK	**Adak**	**64.72**	**12**	*e*P	**P**	**04 58 00.0 +0.3**
ADK				pmax	pmax	
	comp=Z,351nm,1.5s					
ADK				MLR	MLR	
	comp=Z,6μm,22.0s					
MDJ	**Mudanjiang**	**64.92**	**332**	P	**P**	**04 58 01.4 +0.2**
MDJ				S	**S**	**05 06 42.6 +3.9**
MDJ				pmax	pmax	
	comp=Z,69nm,1.0s					
MDJ				LR	LR	
	comp=Z,2μm,20.1s					
MDJ				LR	LR	
	comp=Z,1μm,17.5s					
MDJ				LR	LR	
	comp=Z,4μm,22.2s					
MDJ	**Mudanjiang**	**64.92**	**332**	*e*P	**P**	**04 58 02.2 +1.0**
	comp=Z,186nm,1.0s					
MDJ				LR	LR	
	comp=Z,3μm,21.0s					
WHN	**Wuhan**	**65.04**	**311**	⇓P	**P**	**04 58 02.5 +0.3**
WHN				S	S	05 06 31.6 -9.1
WHN				pmax	pmax	
	comp=Z,62nm,0.9s					
WHN				pmax	pmax	
	comp=Z,2μm,4.6s					
WHN				LR	LR	
	comp=Z,6μm,18.3s					
WHN				LR	LR	
	comp=Z,3μm,16.1s					
WHN				LR	LR	
	comp=Z,20μm,27.0s					
GSTR	**Great Sitkin T**	**65.05**	**12**	*e*P	**P**	**04 58 04.7 +2.8**
DL2	**Dalian**	**65.09**	**323**	⇑*i*P	**P**	**04 58 02.6 +0.2**
DL2				pP	**pP**	**04 58 16.5 -0.3**
DL2				S	**S**	**05 06 40.2 -0.9**
DL2				pmax	pmax	
	comp=Z,110nm,0.8s					
DL2				pmax	pmax	
	comp=Z,1μm,6.9s					
DL2				LR	LR	
	comp=Z,2μm,18.9s					
DL2				LR	LR	
	comp=Z,2μm,23.7s					
DL2				LR	LR	
	comp=Z,4μm,23.5s					
TYV	**Tymovskoe**	**65.34**	**344**	*e*P	**P**	**04 58 04.3 +0.6**
TYV				*e*S	**S**	**05 06 43.2 -0.4**
TYV				pmax	pmax	
	comp=Z,1μm,7.2s					
TYV				pmax	pmax	
	comp=Z,29nm,1.5s					
TYV				smax	smax	
	comp=N,600nm,10.3s					
ATKA	**Atka Island**	**65.54**	**13**	*e*P	**P**	**04 58 05.6 +0.6**
	comp=N,217nm,1.5s					
ATKA				LR	LR	
	comp=Z,7μm,22.0s					
BKNI	**Bangkinang**	**65.85**	**276**	*e*P	**P**	**04 58 09.5 +1.6**
SNY	**Shenyang**	**65.93**	**326**	⇑P	**P**	**04 58 07.2 -0.5**
SNY				S	**S**	**05 06 52.7 +1.5**
SNY				pmax	pmax	
	comp=Z,1μm,8.2s					
SNY				LR	LR	
	comp=Z,2μm,19.9s					
SNY				LR	LR	
	comp=Z,2μm,20.6s					
SNY				LR	LR	
	comp=Z,4μm,20.6s					
VNDA	**Vanda**	**66.15**	**181**	P	**P**	**04 58 08.9 +0.2**
	comp=Z,74nm,1.0s,baz=356,slow=6.7,SNR=110					
VNDA				LR	LR	05 22 55.9
	comp=Z,3μm,21.6s,baz=360,slow=32					
VNDA				PKP2bc		05 26 45.6
	comp=Z,1.8nm,1.1s,baz=262,slow=3.3,SNR=3.7					
VNDA	**Vanda**	**66.15**	**181**	*e*P	**P**	**04 58 08.8 +0.2**
	comp=Z,254nm,1.4s					
VNDA				⇑*e*		05 26 47.0
VNDA	**Vanda**	**66.15**	**181**	*e*P	**P**	**04 58 08.8 +0.2**
VNDA				pmax	pmax	
	comp=Z,254nm,1.4s					
TIA	**Tai'an**	**66.25**	**318**	P	**P**	**04 58 09.7 -0.2**
TIA				S	**S**	**05 06 55.9 +0.6**
TIA				LR	LR	
	comp=Z,2μm,19.4s					
TIA				LR	LR	
	comp=Z,2μm,24.1s					
TIA				LR	LR	
	comp=Z,5μm,23.6s					
CN2	**Changchun**	**66.33**	**329**	*e*P	**P**	**04 58 10.4 +0.1**
CN2				pmax	pmax	
	comp=Z,80nm,0.8s					
CN2				pmax	pmax	
	comp=Z,1μm,5.0s					
CN2				LR	LR	
	comp=Z,2μm,21.0s					
CN2				LR	LR	
	comp=Z,3μm,21.0s					
CN2				LR	LR	
	comp=Z,3μm,22.0s					
SBA	**Scott Base**	**66.44**	**180**	*e*P	**P**	**04 58 11.6 +1.1**
	comp=Z,155nm,1.0s					
SBA	**Scott Base**	**66.44**	**180**	*e*P	**P**	**04 58 11.6 +1.1**
SBA				pmax	pmax	
	comp=Z,155nm,1.0s					
IPM	**Ipoh**	**66.82**	**280**	*e*P	**P**	**04 58 14.7 +0.6**
	comp=Z,757nm,1.2s					
IPM				LR	LR	
	comp=Z,3μm,22.0s					
IPM	**Ipoh**	**66.82**	**280**	P	**P**	**04 58 16.0 +1.9**
GRNR	**Gornyy**	**67.16**	**340**	*e*P	**P**	**04 58 18.0 +2.5**
GRNR				pmax	pmax	
	comp=Z,42nm,1.0s					
PANO	**Nakornpanom**	**67.23**	**294**	P	**P**	**04 58 17.5 +1.0**
	comp=Z,5.5nm,1.5s,comp=Z,64nm					
KULM	**Kulim**	**67.38**	**281**	*e*P	**P**	**04 58 18.4 +0.7**
	comp=Z,350nm,1.3s					
KULM				LR	LR	
	comp=Z,2μm,21.0s					
KULM	**Kulim**	**67.38**	**281**	P	**P**	**04 58 19.0 +1.4**
NIKH	**Nikolski High**	**67.56**	**16**	*e*P	**P**	**04 58 18.1 +0.2**
	comp=Z,455nm,1.4s					
NIKH				LR	LR	
	comp=Z,4μm,22.0s					
KLR	**Kul'dur**	**67.60**	**336***c*	*i*P	**P**	**04 58 18.2 0.0**
KLR				pmax	pmax	
	comp=Z,69nm,1.1s					
SKLT	**Songkhla**	**67.89**	**283**	P	**P**	**04 58 22.1 +1.3**
	comp=Z,81nm,1.9s,comp=Z,2μm					
PSI	**Prapat**	**68.46**	**278**	*e*P	**P**	**04 58 23.9 -0.6**
	comp=Z,415nm,1.4s					
PSI	**Prapat**	**68.46**	**278**	*e*P	**P**	**04 58 23.9 -0.6**
PSI				pmax	pmax	
	comp=Z,415nm,1.4s					
ENH	**Enshi**	**68.55**	**309**	*e*P	**P**	**04 58 24.8 +0.2**
	comp=Z,198nm,1.2s					
KHON	**Khomkaen**	**68.56**	**293**	P	**P**	**04 58 26.4 +1.5**
	comp=Z,291μm,1.1s					
TRTT	**Trang**	**68.96**	**283**	P	**P**	**04 58 28.8 +1.3**
	comp=Z,232nm,1.2s,comp=Z,4μm					
UNV	**Unalaska Valle**	**68.99**	**17**	*e*P	**P**	**04 58 26.4 -0.4**
	comp=Z,57nm,0.9s					
UNV				LR	LR	
	comp=Z,3μm,22.0s					
GYA	**Guiyang**	**69.07**	**304**	⇑*i*P	**P**	**04 58 28.4 +0.3**
GYA				pP	pwP	04 58 45.6 +0.4
GYA				sP	PcP	04 58 51.4 -0.5
GYA				PP	**PP**	**05 01 04.8 +3.4**
GYA				S	**S**	**05 07 27.5 -2.2**
GYA				sS	sS	05 07 58.9 +5.8
GYA				SS	**SS**	**05 11 58.4 +1.5**
GYA				pmax	pmax	
	comp=Z,1μm,8.8s					
GYA				LR	LR	
	comp=Z,3μm,24.9s					
GYA				LR	LR	
	comp=Z,1μm,24.9s					
GYA				LR	LR	
	comp=Z,3μm,26.2s					
BJT	**Baijiatuau**	**69.09**	**321**	*e*P	**P**	**04 58 28.4 +0.6**
	comp=Z,125nm,1.1s					
BJT				LR	LR	
	comp=Z,3μm,21.0s					
BJT	**Baijiatuau**	**69.09**	**321**	*e*P	**P**	**04 58 28.4 +0.6**
BJT				pmax	pmax	
	comp=Z,125nm,1.1s					
BJT				MLR	MLR	
	comp=Z,3μm,21.0s					
BJI	**Beijing**	**69.10**	**321**	⇑*i*P	**P**	**04 58 27.7 -0.1**
BJI				sP	**PcP**	**04 58 54.5 +3.0**
BJI				S	**S**	**05 07 27.5 -1.8**
BJI				pmax	pmax	
	comp=Z,650nm,8.5s					
CHAI	**Chaiyaphum**	**69.18**	**292**	P	**P**	**04 58 29.3 +0.5**
	comp=Z,157μm,0.9s					
SLVN	**Son La**	**69.36**	**298**	*e*P	**P**	**04 58 30.7 +0.8**
	comp=Z,305nm,1.6s					
SLVN				LR	LR	
	comp=Z,5μm,22.0s					
GSI	**Gunungsitoli**	**69.44**	**276**	*e*P	**P**	**04 58 31.5 +1.0**
	comp=Z,313nm,0.7s					
AKUT	**Akutan**	**69.45**	**17**	*e*P	**P**	**04 58 30.8 +1.1**
	comp=Z,72nm,1.0s					
AKUT				LR	LR	
	comp=Z,3μm,22.0s					
TIY	**Taiyuan**	**70.19**	**317**	*e*P	**P**	**04 58 35.8 +1.1**
TIY				pP	**sP**	**04 58 53.6 -1.0**
TIY				sP	**PcP**	**04 59 02.5 +6.2**
TIY				S	**S**	**05 07 40.5 -1.9**
TIY				ScS	**SKSac**	**05 08 27.1 -4.7**
TIY				pmax	pmax	
	comp=Z,87nm,1.0s					
TIY				pmax	pmax	
	comp=Z,1μm,4.8s					
TIY				LR	LR	
	comp=Z,4μm,24.4s					
TIY				LR	LR	
	comp=Z,630nm,14.0s					
TIY				LR	LR	
	comp=Z,6μm,25.0s					
PBKT	**Sadao Pong**	**70.32**	**292**	P	**P**	**04 58 37.1 +1.3**
	comp=Z,118nm,1.3s,comp=Z,2μm					
XAN	**Xi'an**	**70.76**	**312**	P	**P**	**04 58 38.2 0.0**
XAN				pP	pP	04 58 54.0 +1.5
XAN				PP	**PP**	**05 01 12.5 -3.3**
XAN				S	**S**	**05 07 43.9 -5.3**
XAN				ScS	**SKSac**	**05 08 30.5 -5.7**
XAN				SS	**SS**	**05 12 16.0 -6.6**
XAN				pmax	pmax	
	comp=Z,130nm,0.8s					
XAN				pmax	pmax	
	comp=Z,2μm,8.0s					
XAN				LR	LR	
	comp=Z,2μm,24.0s					
XAN				LR	LR	
	comp=Z,3μm,23.0s					
XAN				LR	LR	
	comp=Z,7μm,24.9s					
XAN	**Xi'an**	**70.76**	**312**	*e*P	**P**	**04 58 38.4 +0.1**
	comp=Z,174nm,1.0s					
XAN				LR	LR	
	comp=Z,6μm,22.0s					
XAN	**Xi'an**	**70.76**	**312**	*e*P	**P**	**04 58 38.4 +0.1**
XAN				pmax	pmax	
	comp=Z,174nm,1.0s					
XAN				MLR	MLR	
	comp=Z,6μm,22.0s					
FALS	**False Pass**	**70.77**	**18**	PFAKE		04 58 50.0 +12
FALS				LR	LR	
	comp=Z,4μm,21.0s					
SPIA	**Saint Paul Isl**	**71.03**	**13**	PFAKE		04 58 50.0 +11
SPIA				LR	LR	
	comp=Z,7μm,20.0s					
NANT	**Nan**	**71.29**	**294**	P	**P**	**04 58 42.6 +0.9**
	comp=Z,212μm,1.0s					
SRDT	**SRDT**	**71.33**	**289**	P	**P**	**04 58 44.0 +2.1**
	comp=Z,114nm,1.4s,comp=Z,2μm					
PHRA	**Phrae**	**71.61**	**294**	P	**P**	**04 58 45.0 +1.4**
	comp=Z,27nm,1.4s,comp=Z,365nm					
KMI	**Kunming**	**71.77**	**301**	P	**P**	**04 58 46.0 +1.3**
KMI				pP	pP	04 58 58.4 -0.7
KMI				sP	sP	04 59 06.0 +1.1
KMI				S	**S**	**05 08 00.3 -1.2**
KMI				sS	sS	05 08 29.1 +3.8
KMI				pmax	pmax	
	comp=Z,89nm,1.3s					
KMI				pmax	pmax	
	comp=Z,2μm,4.3s					
KMI				LR	LR	
	comp=Z,1μm,22.1s					
KMI				LR	LR	
	comp=Z,3μm,25.4s					
KMI				LR	LR	
	comp=Z,5μm,26.7s					
KMI	**Kunming**	**71.77**	**301**	*e*P	**P**	**04 58 46.7 +2.0**
	comp=Z,323nm,1.2s					
KMI				LR	LR	
	comp=Z,4μm,22.0s					
MA2	**Magadan**	**71.84**	**352**	P	**P**	**04 58 43.5 -0.6**
	comp=Z,17nm,0.7s,baz=136,slow=6.0,SNR=8.7					
MA2	**Magadan**	**71.84**	**352**	*e*P	**P**	**04 58 43.8 -0.3**
	comp=Z,112nm,1.4s					
MA2				LR	LR	
	comp=Z,6μm,21.0s					
MA2	**Magadan**	**71.84**	**352***ce*	P	**P**	**04 58 43.2 -0.9**
MA2				pmax	pmax	
	comp=Z,61nm,2.5s					
SDPT	**Sand Point**	**72.11**	**19**	*e*P	**P**	**04 58 45.0 -0.8**
	comp=Z,104nm,1.2s					
SDPT				LR	LR	
	comp=Z,5μm,22.0s					
UMPA	**Umpang Tak**	**72.13**	**291**	P	**P**	**04 58 49.0 +2.2**
	comp=Z,165μm,1.1s					
LAMP	**Lampang**	**72.16**	**294**	P	**P**	**04 58 48.4 +1.5**
	comp=Z,382μm,1.0s					
PAYA	**Payao**	**72.22**	**295**	P	**P**	**04 58 48.5 +1.2**
	comp=Z,164μm,0.8s					
HHC	**Hu-ho-hao-te**	**72.46**	**319**	*e*P	**P**	**04 58 49.4 +1.0**
HHC				pP	PcP	04 59 05.1 -0.8
HHC				PP	**PP**	**05 01 33.4 +3.2**
HHC				S	**S**	**05 08 08.2 -0.4**
HHC				sS	sS	05 08 36.4 +3.7
HHC				SS	**SS**	**05 12 50.4 +2.0**
HHC				pmax	pmax	
	comp=Z,57nm,0.9s					
HHC				pmax	pmax	
	comp=Z,1μm,5.4s					
HHC				LR	LR	
	comp=Z,4μm,20.2s					
HHC				LR	LR	
	comp=Z,5μm,23.9s					
HHC				LR	LR	
	comp=Z,10μm,22.9s					
CM31	**Chiang Mai Arr**	**72.75**	**293**	P	**P**	**04 58 52.2 +1.7**
	SNR=24					
CMAR	**Chiang Mai Arr**	**72.75**	**293**	P	**P**	**04 58 51.1 +0.6**
	comp=Z,43nm,0.9s,baz=114,slow=4.3,SNR=93					
CMAR				pP	**pwP**	**04 59 06.6 -0.9**
	comp=Z,136nm,1.0s,baz=126,slow=5.0,SNR=15					
CMMT	**Chiang Mai**	**72.86**	**294**	P	**P**	**04 58 52.1 +1.0**
	comp=Z,117nm,1.5s,comp=Z,1μm					
CHTO	**Chiang Mai**	**72.87**	**294**	*e*P	**P**	**04 58 52.3 +1.2**
	comp=Z,321nm,1.3s					
CHTO				LR	LR	
	comp=Z,3μm,21.0s					
CHTO	**Chiang Mai**	**72.87**	**294**	P	**P**	**04 58 52.1 +1.0**
	SNR=36					
ZEA	**Zeya**	**72.88**	**337***ce*	P	**P**	**04 58 51.0 +0.6**
ZEA				*e*		04 59 03.0
ZEA				*e*		05 01 40.5
ZEA				*e*PPP	PPP	05 03 19.5
ZEA				*e*S	**S**	**05 08 14.0 +1.4**
ZEA				*e*PS		05 08 50.0
ZEA				pmax	pmax	
	comp=N,100nm,1.2s					
ZEA				pmax	pmax	
	comp=Z,140nm,1.2s					
ZEA				pmax	pmax	
	comp=Z,2μm,9.0s					
ZEA				pmax	pmax	
	comp=E,1μm,8.0s					
ZEA				pmax	pmax	
	comp=N,800nm,5.0s					
ZEA				pmax	pmax	
	comp=Z,500nm,10.0s					
ZEA				smax	smax	
	comp=E,500nm,10.0s					
ZEA				smax	smax	
	comp=N,600nm,12.0s					
ZEA				MLR	MLR	
	comp=Z,1μm,18.0s					
ZEA				MLR	MLR	
	comp=E,1μm,17.0s					
HIA	**Hailar**	**72.95**	**330**	*e*P	**P**	**04 58 51.8 +0.8**
	comp=E,108nm,1.0s					
HIA				LR	LR	
	comp=Z,3μm,19.0s					
HIA	**Hailar**	**72.95**	**330**	*e*P	**P**	**04 58 51.8 +0.8**
HIA				pmax	pmax	
	comp=Z,108nm,1.0s					
HIA				MLR	MLR	
	comp=Z,3μm,19.0s					
CD2	**Chengdu**	**73.25**	**307**	P	**P**	**04 58 53.7 +0.5**
CD2				PcP	**pP**	**04 59 05.1 -2.5**
CD2				sP	sP	04 59 13.9 +0.6
CD2				PP	**PP**	**05 01 35.0 -2.2**
CD2				S	**S**	**05 08 17.1 -0.8**
CD2				SS	**SS**	**05 12 59.8 -1.0**
CD2				pmax	pmax	
	comp=Z,190nm,1.1s					
CD2				pmax	pmax	
	comp=Z,2μm,8.7s					
CD2				LR	LR	
	comp=Z,2μm,22.2s					
CD2				LR	LR	
	comp=Z,5μm,23.2s					
CD2				LR	LR	
	comp=Z,7μm,23.2s					
BTO	**Baotou**	**73.32**	**319**	*e*P	**P**	**04 58 54.0 +0.5**
BTO				S	**S**	**05 08 12.4 -6.0**
SEY	**Seymchan**	**74.89**	**353***de*	P	**P**	**04 59 02.2 +0.2**
SII	**Sitkinak Islan**	**75.21**	**21**	*e*P	**P**	**04 59 05.4 +1.4**
	comp=Z,282nm,1.6s					
SII				LR	LR	
	comp=Z,8μm,22.0s					
LZH	**Lanzhou**	**75.40**	**312**	⇑P	**P**	**04 59 07.2 +1.4**
LZH				pP	pwP	04 59 23.0 -0.4
LZH				sP	sP	04 59 30.8 +5.0
LZH				S	**S**	**05 08 41.9 -0.1**
LZH				sS	SKSac	05 09 10.6 -0.7
LZH				SS	**SS**	**05 13 34.1 +0.5**
LZH				pmax	pmax	
	comp=Z,300nm,1.3s					
LZH				pmax	pmax	
	comp=Z,2μm,7.6s					
LZH				LR	LR	
	comp=Z,2μm,17.0s					
LZH				LR	LR	
	comp=Z,4μm,16.8s					
LZH				LR	LR	
	comp=Z,7μm,19.2s					
OHAK	**Old Harbor**	**76.04**	**21**	*e*P	**P**	**04 59 08.8 +0.2**
	comp=Z,147nm,1.3s					
OHAK				LR	LR	
	comp=Z,7μm,21.0s					
PBA	**Port Blair**	**76.56**	**285**	*e*P	P	04 59 10.6 -1.9
	comp=Z,293nm,1.1s					
PBA				LR	LR	
	comp=Z,3μm,21.0s					
PBA	**Port Blair**	**76.56**	**285**	*e*P	P	04 59 13.8 +1.3
KDAK	**Kodiak Island**	**76.71**	**21**	*e*P	**P**	**04 59 12.7 +0.2**
	comp=Z,57nm,1.0s					
KDAK				LR	LR	
	comp=Z,6μm,22.0s					
KDAK	**Kodiak Island**	**76.71**	**21**	*e*P	**P**	**04 59 12.7 +0.2**
KDAK				pmax	pmax	
	comp=Z,57nm,1.0s					
KDAK				MLR	MLR	
	comp=Z,6μm,22.0s					
DGPR	**DIGLIPUR**	**76.77**	**287**	*e*P	**P**	**04 59 15.6 +1.8**
CIT	**Chita**	**77.74**	**330**	*e*P	**P**	**04 59 19.0 +0.5**
CIT				*e*		04 59 26.6
CIT				*e*		04 59 31.4
CIT				*e*		04 59 40.0
CIT				pmax	pmax	
	comp=Z,204nm,1.2s					
SVW2	**Sparrevohn**	**78.28**	**18**	*e*P	**P**	**04 59 21.8 +0.6**
	comp=Z,267nm,1.8s					
SVW2				LR	LR	
	comp=Z,4μm,22.0s					
LKP	**Lekhapani**	**78.34**	**301**	IAMs_20	IAMs_20	05 30 01.0
	comp=Z,7μm,23.0s					
HOM	**Homer**	**78.44**	**20**	*e*P	**P**	**04 59 22.8 +0.7**
	comp=Z,144nm,0.7s					
HOM				LR	LR	
	comp=Z,7μm,21.0s					
CNPM	**China Poot**	**78.48**	**21**	*e*P	**P**	**04 59 22.9 +0.5**
	comp=Z,55nm,0.9s					
CNPM				LR	LR	
	comp=Z,8μm,21.0s					
YAK	**Yakutsk**	**78.59**	**343**	*e*P	**P**	**04 59 23.0 +0.1**
	comp=Z,1μm,1.1s					
YAK				LR	LR	
	comp=Z,13μm,19.0s					
YAK	**Yakutsk**	**78.59**	**343**	*e*P	**P**	**04 59 22.5 -0.4**
YAK				*e**PP	**sP**	**04 59 47.1 +3.6**
YAK				*e*S	**S**	**05 09 10.7 -4.5**
YAK				*e**SS	sS	05 10 16.1 +36
QSPA	**South Pole Qui**	**78.60**	**180**	*e*P	**P**	**04 59 23.0 -0.2**
	comp=Z,435nm,1.0s					
QSPA				LR	LR	
	comp=Z,3μm,22.0s					
RSO	**Redoubt South**	**78.68**	**19**	*e*P	**P**	**04 59 23.1 -0.5**
ANM	**Nome**	**78.72**	**12**	*e*P	**P**	**04 59 24.6 +1.0**
	comp=Z,91nm,1.5s					
ANM				LR	LR	
	comp=Z,4μm,20.0s					
ANM	**Nome**	**78.72**	**12**	*e*P	**P**	**04 59 24.6 +1.0**
ANM				pmax	pmax	
	comp=Z,91nm,1.5s					
ANM				MLR	MLR	
	comp=Z,4μm,20.0s					
BRLK	**Bradley Lake**	**78.78**	**21**	*e*P	**P**	**04 59 24.3 +0.3**
	comp=Z,79nm,0.8s					
BRLK				LR	LR	
	comp=Z,8μm,20.0s					
ULN	**Ulaanbaatar**	**78.91**	**324**	*e*P	**P**	**04 59 25.5 +0.3**
	comp=Z,169nm,1.0s					
ULN				LR	LR	
	comp=Z,3μm,22.0s					
ULN	**Ulaanbaatar**	**78.91**	**324**	*e*P	**P**	**04 59 25.5 +0.3**
ULN				pmax	pmax	
	comp=Z,169nm,1.0s					
ULN				MLR	MLR	
	comp=Z,3μm,22.0s					
ULN	**Ulaanbaatar**	**78.91**	**324**	P	**P**	**04 59 25.9 +0.7**
	SNR=50					
MOKO	**MOKOCHONG**	**79.14**	**300**	*e*P	**P**	**04 59 26.9 0.0**
MOKO				IAMs_20	IAMs_20	05 29 55.8
	comp=Z,3μm,18.0s					
IMP	**Imphal**	**79.16**	**298**	*e*P	**P**	**04 59 27.2 +0.2**
IMP				IAmb	IAmb	04 59 28.4
	comp=Z,298nm,1.4s					
DIBR	**DIBRUGARH**	**79.17**	**301**	*e*P	**P**	**04 59 27.5 +0.7**
BILL	**Biiibino**	**79.23**	**360**	*e*P	**P**	**04 59 26.0 -0.3**
	comp=Z,249nm,1.4s					
BILL	**Bilibino**	**79.23**	**360***c*	*i*P	**P**	**04 59 26.2 -0.1**
BILL				pmax	pmax	
	comp=Z,69nm,1.3s					
SONA0	**Songino Array**	**79.28**	**324**	*e*P	**P**	**04 59 27.4 +0.2**
SONM	**Songino Array**	**79.28**	**324**	P	**P**	**04 59 27.4 +0.2**
	comp=Z,36nm,0.9s,baz=136,slow=5.2,SNR=115					
SONM				pP	**pP**	**04 59 41.2 -0.7**
	comp=Z,63nm,1.0s,baz=138,slow=5.5,SNR=15					
KOHI	**KOHIMA**	**79.30**	**299**	*e*P	**P**	**04 59 25.3 -2.5**
KOHI				IAmb	IAmb	04 59 29.1
	comp=Z,116nm,0.8s					
SAIH	**SAIHA**	**79.30**	**296**	*e*P	**P**	**04 59 28.2 +0.4**
SAIH				IAmb	IAmb	04 59 30.9
	comp=Z,109nm,1.1s					
SAIH				IAMs_20	IAMs_20	05 29 37.1
	comp=Z,5μm,24.7s					
JORH	**JORHAT**	**79.50**	**300**	*e*P	**P**	**04 59 29.1 +0.5**
SEW	**Seward**	**79.52**	**21**	*e*P	**P**	**04 59 27.8 -0.2**
	comp=Z,48nm,1.0s					
SEW				LR	LR	
	comp=Z,4μm,21.0s					
GTA	**Gaotai**	**79.70**	**314**	P	**P**	**04 59 30.7 +1.1**
GTA				pP	pP	04 59 46.3 +1.9
GTA				sP	sP	04 59 54.3 +4.1
GTA				S	**S**	**05 09 28.0 -0.3**
GTA				SKS	SKSac	05 09 30.8 -11
GTA				SS	**SS**	**05 14 41.0 +2.8**
GTA				pmax	pmax	
	comp=Z,88nm,1.0s					
GTA				pmax	pmax	
	comp=Z,2μm,9.3s					

GTA				LR	LR		
	comp=Z,2μm,21.6s						
GTA				LR	LR		
	comp=Z,3μm,21.6s						
GTA				LR	LR		
	comp=Z,5μm,22.3s						
SUA	**Susitna One**	**80.08**	**19**	*eP*	**P**	**04 59 30.9**	**-0.3**
	comp=Z,80nm,1.0s						
SUA				LR	LR		
	comp=Z,4μm,22.0s						
ZIRO	**ZIRO**	**80.08**	**301**	*eP*	**P**	**04 59 31.2**	**-0.8**
RC01	**Rabbit Creek A**	**80.14**	**20**	*eP*	**P**	**04 59 31.6**	**+0.2**
	comp=Z,230nm,1.8s						
RC01				LR	LR		
	comp=Z,8μm,22.0s						
SILR	**SILCHAR**	**80.14**	**298**	*eP*	**P**	**04 59 35.6**	**+3.5**
MID	**Middleton Isla**	**80.17**	**22**	PFAKE		04 59 40.0	+8.5
MID				LR	LR		
	comp=Z,3μm,21.0s						
TEZP	**TEZPUR**	**80.69**	**300**	IAmb	IAmb	04 59 35.9	
TEZP				*eP*	**P**	**04 59 35.9**	**+0.8**
PMR	**Palmer**	**80.70**	**20**	*eP*	**P**	**04 59 34.5**	**+0.2**
	comp=Z,216nm,1.8s						
PMR				LR	LR		
	comp=Z,9μm,22.0s						
PMR	**Palmer**	**80.70**	**20**	*eP*	**P**	**04 59 34.5**	**+0.2**
PMR				pmax	pmax		
	comp=Z,216nm,1.8s						
PMR				MLR	MLR		
	comp=Z,9μm,22.0s						
KNK	**Knik Glacier**	**80.80**	**20**	*eP*	**P**	**04 59 35.4**	**+0.5**
	comp=Z,74nm,1.0s						
KNK				LR	LR		
	comp=Z,7μm,21.0s						
BELO	**BELONIA**	**80.88**	**296**	*eP*	**P**	**04 59 34.4**	**-1.7**
GLI	**Glacier Island**	**80.90**	**21**	*eP*	**P**	**04 59 35.7**	**+0.2**
	comp=Z,133nm,1.2s						
GLI				LR	LR		
	comp=Z,7μm,21.0s						
GHO	**Glory Hole Cre**	**80.90**	**20**	*eP*	**P**	**04 59 35.7**	**+0.2**
	comp=Z,70nm,1.0s						
GHO				LR	LR		
	comp=Z,8μm,21.0s						
BOD	**Bodaibo**	**81.08**	**335**	*eP*	**P**	**04 59 36.3**	**-0.2**
BOD				pmax	pmax		
	comp=Z,85nm,1.5s						
CAST	**Castle Rocks**	**81.12**	**18**	*eP*	**P**	**04 59 36.0**	**-0.6**
	comp=Z,68nm,0.8s						
CAST				LR	LR		
	comp=Z,4μm,22.0s						
SML	**Sawmill**	**81.12**	**20**	*eP*	**P**	**04 59 37.1**	**+0.4**
	comp=Z,145nm,1.3s						
SML				LR	LR		
	comp=Z,6μm,20.0s						
SML	**Sawmill**	**81.12**	**20**	*eP*	**P**	**04 59 37.1**	**+0.4**
SML				pmax	pmax		
	comp=Z,145nm,1.3s						
SML				MLR	MLR		
	comp=Z,6μm,20.0s						
EYAK	**Cordova Ski Ar**	**81.15**	**22**	*eP*	**P**	**04 59 37.2**	**+0.5**
	comp=Z,71nm,1.2s						
EYAK				LR	LR		
	comp=Z,12μm,22.0s						
SHL	**Shillong**	**81.17**	**298**	*eP*	**P**	**04 59 38.7**	**+0.8**
SHL	**Shillong**	**81.17**	**298**	*eP*	**P**	**04 59 38.7**	**+0.8**
SHL	**Shillong**	**81.17**	**298**	*eP*	**P**	**04 59 37.5**	**-0.3**
SHL				IAmb	IAmb	04 59 41.2	
	comp=Z,39nm,0.6s						
AGT	**Agartala**	**81.23**	**297**	*eP*	**P**	**04 59 38.4**	**+0.4**
SCM	**Sheep Creek Mo**	**81.48**	**20**	*eP*	**P**	**04 59 39.2**	**+0.6**
	comp=Z,97nm,1.0s						
SCM				LR	LR		
	comp=Z,4μm,21.0s						
SCM	**Sheep Creek Mo**	**81.48**	**20**	*eP*	**P**	**04 59 39.2**	**+0.6**
SCM				pmax	pmax		
	comp=Z,97nm,1.0s						
SCM				MLR	MLR		
	comp=Z,4μm,21.0s						
GUWA	**GUWAHATI**	**81.52**	**299**	*eP*	**P**	**04 59 39.3**	**-0.1**
GUWA				IAmb	IAmb	04 59 40.0	
	comp=Z,75nm,1.1s						
DIV	**Divide**	**81.54**	**21**	*eP*	**P**	**04 59 39.4**	**+0.5**
	comp=Z,75nm,0.9s						
DIV				LR	LR		
	comp=Z,10μm,21.0s						
HMT	**Hamilton**	**81.56**	**22**	*eP*	**P**	**04 59 39.3**	**+0.3**
	comp=Z,87nm,1.0s						
HMT				LR	LR		
	comp=Z,7μm,22.0s						
KTH	**Kantishna Hill**	**81.57**	**18**	PFAKE		04 59 50.0	+11
KTH				LR	LR		
	comp=Z,4μm,22.0s						
TAWA	**Tawang**	**81.78**	**300**	*eP*	**P**	**04 59 41.8**	**+0.5**
TAWA				IAmb	IAmb	04 59 43.3	
	comp=Z,89nm,0.6s						
BPAW	**Bear Paw Mtn.**	**81.96**	**18**	*eP*	**P**	**04 59 40.1**	**-0.9**
	comp=Z,48nm,1.3s						
BPAW				LR	LR		
	comp=Z,2μm,20.0s						
RND	**Reindeer**	**82.10**	**19**	*eP*	**P**	**04 59 41.7**	**-0.1**
	comp=Z,101nm,1.2s						
RND				LR	LR		
	comp=Z,2μm,20.0s						
RND	**Reindeer**	**82.10**	**19**	*eP*	**P**	**04 59 41.7**	**-0.1**
RND				pmax	pmax		
	comp=Z,101nm,1.2s						
RND				MLR	MLR		
	comp=Z,2μm,20.0s						
RDOG	**Red Dog Mine**	**82.27**	**11**	PFAKE		04 59 50.0	+7.5
RDOG				LR	LR		
	comp=Z,3μm,21.0s						
ZAK	**Zakamensk**	**82.31**	**325**	*eP*	**P**	**04 59 42.2**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,84nm,1.1s						
MCK	**McKinley**	**82.31**	**18**	PFAKE		04 59 50.0	+7.2
MCK				LR	LR		
	comp=Z,4μm,20.0s						
DHY	**Denali Highway**	**82.34**	**19**	*eP*	**P**	**04 59 43.2**	**+0.1**
	comp=Z,37nm,0.9s						
DHY				LR	LR		
	comp=Z,8μm,21.0s						
MCCM	**Marconi Confer**	**82.35**	**49**	*eP*	**P**	**04 59 44.4**	**+0.8**
	comp=Z,259nm,1.4s						
MCCM				LR	LR		
	comp=Z,6μm,22.0s						
TGL	**Tana Glacier**	**82.37**	**23**	PFAKE		05 00 00.0	+17
TGL				LR	LR		
	comp=Z,4μm,20.0s						
KCPM	**Cahto Peak**	**82.39**	**47**	*eP*	**P**	**04 59 45.4**	**+1.4**
	comp=Z,262nm,1.3s						
KCPM				LR	LR		
	comp=Z,2μm,22.0s						
BWN	**Browne**	**82.46**	**18**	*eP*	**P**	**04 59 43.6**	**0.0**
	comp=Z,251nm,1.1s						
BWN				LR	LR		
	comp=Z,6μm,21.0s						
JCC	**Jacoby Creek,**	**82.49**	**46**	PFAKE		05 00 00.0	+16
JCC				LR	LR		
	comp=Z,2μm,21.0s						
KMRM	**Mail Ridge**	**82.50**	**47**	*eP*	**P**	**04 59 46.2**	**+1.7**
	comp=Z,242nm,1.4s						
KMRM				LR	LR		
	comp=Z,3μm,21.0s						
HOPS	**Hopland Field**	**82.51**	**48**	*eP*	**P**	**04 59 45.6**	**+1.2**
	comp=Z,184nm,1.3s						
HOPS				LR	LR		
	comp=Z,3μm,22.0s						
HARP	**HAARP**	**82.61**	**21**	PFAKE		05 00 00.0	+16
HARP				LR	LR		
	comp=Z,4μm,22.0s						
GDXM	**Geysers**	**82.64**	**48**	*eP*	**P**	**04 59 46.8**	**+1.6**
	comp=Z,148nm,1.4s						
GDXM				LR	LR		
	comp=Z,5μm,20.0s						
IRK	**Irkutsk**	**82.66**	**327**	*eP*	**P**	**04 59 43.5**	**-1.4**
IRK				pmax	pmax		
	comp=Z,121nm,3.1s						
DIB	**Dawson Inlet,**	**82.70**	**32**	PFAKE		05 00 00.0	+15
DIB				LR	LR		
	comp=Z,4μm,20.0s						
MLY	**Manley**	**82.72**	**17**	*eP*	**P**	**04 59 44.9**	**-0.1**
	comp=Z,55nm,1.2s						
MLY				LR	LR		
	comp=Z,2μm,20.0s						
TLY	**Talaya**	**82.72**	**326**	*eP*	**P**	**04 59 45.8**	**+0.5**
	comp=Z,95nm,0.9s						
TLY				LR	LR		
	comp=Z,2μm,22.0s						
TLY	**Talaya**	**82.72**	**326**	*eP*	**P**	**04 59 44.4**	**-0.9**
TLY				*eS*	**S**	**05 09 53.5**	**-5.4**
TLY				*eSS*	**SS**	**05 15 27.9**	**+5.4**
TLY				pmax	pmax		
	comp=Z,157nm,0.9s						
TLY				MLR	MLR		
	comp=Z,3μm,18.0s						
TLY	**Talaya**	**82.72**	**326**	P	**P**	**04 59 45.4**	**+0.2**
	SNR=25						
KHMM	**Horse Mountain**	**82.72**	**46**	*eP*	**P**	**04 59 47.3**	**+1.6**
	comp=Z,157nm,1.1s						
KHMM				LR	LR		
	comp=Z,3μm,20.0s						
BALM	**Baldy**	**82.73**	**23**	*eP*	**P**	**04 59 45.5**	**+0.3**
	comp=Z,68nm,1.0s						
BALM				LR	LR		
	comp=Z,5μm,20.0s						
BALM	**Baldy**	**82.73**	**23**	*eP*	**P**	**04 59 45.5**	**+0.3**
BALM				pmax	pmax		
	comp=Z,68nm,1.0s						
BALM				MLR	MLR		
	comp=Z,5μm,20.0s						
YKU2	**Yakutat**	**82.84**	**25**	PFAKE		05 00 00.0	+14
YKU2				LR	LR		
	comp=Z,9μm,22.0s						
PAX	**Paxson**	**82.89**	**20**	PFAKE		05 00 00.0	+14
PAX				LR	LR		
	comp=Z,4μm,22.0s						
SAO	**San Andreas Ge**	**82.94**	**50**	*eP*	**P**	**04 59 47.8**	**+1.1**
	comp=Z,127nm,1.3s						
SAO				LR	LR		
	comp=Z,9μm,22.0s						
SAO	**San Andreas Ge**	**82.94**	**50**	*eP*	**P**	**04 59 47.8**	**+1.1**
SAO				pmax	pmax		
	comp=Z,127nm,1.3s						
SAO				MLR	MLR		
	comp=Z,9μm,22.0s						
LSA	**Lhasa**	**83.00**	**302**	P	**P**	**04 59 48.8**	**+1.0**
LSA				pmax	pmax		
	comp=Z,100nm,0.8s						
LSA				LR	LR		
	comp=Z,5μm,23.5s						
LSA				LR	LR		
	comp=Z,7μm,24.6s						
LSA				LR	LR		
	comp=Z,11μm,22.4s						
LSA	**Lhasa**	**83.00**	**302**	*eP*	**P**	**04 59 48.8**	**+1.0**
	comp=Z,230nm,1.9s						
KEBM	**Edson Butte**	**83.06**	**44**	PFAKE		05 00 00.0	+13
KEBM				LR	LR		
	comp=Z,3μm,22.0s						
CTGM	**Chitina Glacie**	**83.07**	**23**	PFAKE		05 00 00.0	+13
CTGM				LR	LR		
	comp=Z,6μm,20.0s						
WRH	**Wood River Hil**	**83.10**	**18**	*eP*	**P**	**04 59 46.5**	**-0.4**
	comp=Z,82nm,1.0s						
WRH				LR	LR		
	comp=Z,4μm,21.0s						
BCPM	**Bancas Point**	**83.12**	**24**	PFAKE		05 00 00.0	+13
BCPM				LR	LR		
	comp=Z,10μm,22.0s						
O02D	**Mt. Diablo Mer**	**83.14**	**47**	P	**P**	**04 59 48.6**	**+0.8**
	baz=249,SNR=17						
SNCC	**San Nicolas Is**	**83.29**	**54**	PFAKE		05 00 00.0	+11
SNCC				LR	LR		
	comp=Z,4μm,20.0s						
SNCC	**San Nicolas Is**	**83.29**	**54**	P	**P**	**04 59 50.6**	**+2.0**
	baz=252						
L02E	**Cave Junction**	**83.29**	**45**	P	**P**	**04 59 50.3**	**+1.9**
	baz=248						
CCB	**Clear Creek Bu**	**83.31**	**18**	*eP*	**P**	**04 59 46.8**	**-1.2**
	comp=Z,37nm,0.7s						
CCB				LR	LR		
	comp=Z,3μm,20.0s						
MDM	**Murphy Dome**	**83.40**	**18**	*eP*	**P**	**04 59 48.1**	**-0.4**
	comp=Z,38nm,1.0s						
MDM				LR	LR		
	comp=Z,3μm,20.0s						
HDA	**Harding Lake**	**83.41**	**19**	*eP*	**P**	**04 59 48.1**	**-0.4**
	comp=Z,120nm,0.7s						
HDA				LR	LR		
	comp=Z,5μm,22.0s						
HDA	**Harding Lake**	**83.41**	**19**	P	**P**	**04 59 48.2**	**-0.3**
	baz=226						
SCZ2	**Santa Cruz Isl**	**83.43**	**54**	P	**P**	**04 59 49.5**	**+0.2**
	baz=252						
J01E	**Myrtle Point**	**83.44**	**44**	P	**P**	**04 59 49.8**	**+0.7**
	baz=248						
K02D	**Willamette Mer**	**83.45**	**44**	P	**P**	**04 59 49.7**	**+0.4**
	baz=248						
TCOL	**CIGO, UAF Yank**	**83.45**	**18**	P	**P**	**04 59 47.5**	**-1.1**
	baz=225						
COLA	**College**	**83.45**	**18**	*eP*	**P**	**04 59 48.0**	**-0.7**
	comp=Z,87nm,0.9s						
COLA				LR	LR		
	comp=Z,4μm,21.0s						
COLA	**College**	**83.45**	**18**	*eP*	**P**	**04 59 48.0**	**-0.7**
COLA				pmax	pmax		
	comp=Z,87nm,0.9s						
COLA				MLR	MLR		
	comp=Z,4μm,21.0s						
WDC	**Whiskeytown Da**	**83.46**	**47**	*eP*	**P**	**04 59 50.4**	**+1.1**
	comp=Z,115nm,1.4s						
WDC				LR	LR		
	comp=Z,3μm,21.0s						
WDC	**Whiskeytown Da**	**83.46**	**47**	*eP*	**P**	**04 59 50.4**	**+1.1**
WDC				pmax	pmax		
	comp=Z,115nm,1.4s						
WDC				MLR	MLR		
	comp=Z,3μm,21.0s						
MENT	**Mentasta**	**83.47**	**21**	*eP*	**P**	**04 59 49.8**	**+0.9**
	comp=Z,407nm,2.0s						
MENT				LR	LR		
	comp=Z,6μm,22.0s						
N02D	**Trinity Center**	**83.48**	**46**	P	**P**	**04 59 50.3**	**+0.8**
	baz=249,SNR=13						
PAGB	**Antelope Grade**	**83.51**	**52**	*eP*	**P**	**04 59 51.1**	**+1.4**
	comp=Z,140nm,1.4s						
PAGB				LR	LR		
	comp=Z,6μm,22.0s						
SBC	**Santa Barbara**	**83.51**	**53**	P	**P**	**04 59 50.4**	**+0.7**
	baz=252						
M02C	**Callahan**	**83.53**	**46**	P	**P**	**04 59 50.5**	**+0.7**
	baz=249,SNR=10						
SMMC	**Simmler**	**83.57**	**52**	P	**P**	**04 59 51.0**	**+1.0**
	baz=251						
PKM	**Mcpherson Peak**	**83.58**	**53**	P	**P**	**04 59 50.8**	**+0.6**
	baz=251						
RIDG	**Independent Ri**	**83.62**	**20**	*eP*	**P**	**04 59 49.6**	**0.0**
	comp=Z,242nm,1.2s						
RIDG				LR	LR		
	comp=Z,6μm,21.0s						
ILAR	**Eielson Array**	**83.68**	**18**	P	**P**	**04 59 48.8**	**-1.1**
	comp=Z,18nm,0.6s,baz=257,slow=5.5,SNR=149						
ILAR				PKKPbc	**PKKPbc**	**05 18 06.7**	**-3.6**
	comp=Z,0.7nm,0.5s,baz=355,slow=2.2,SNR=8.2						
ILAR				PKPPKP	**P'P'df**	**05 26 08.1**	**-2.3**
	comp=Z,1.3nm,0.9s,baz=339,slow=3.0,SNR=7.1						
ILAR				LR	LR	05 36 32.7	
	comp=Z,1μm,18.1s,baz=228,slow=35						
ILB	**Eielson Array**	**83.68**	**18**	*eP*	**P**	**04 59 49.4**	**-0.5**
	comp=Z,74nm,1.0s						
ILB				*eP*KKPbc	**PKKPbc**	**05 18 06.7**	**-3.6**
ILB				*eP*'P'df	**P'P'df**	**05 26 08.1**	**-2.3**
YBH	**Yreka Blue Hor**	**83.75**	**45**	P	**P**	**04 59 50.7**	**-0.2**
	comp=Z,26nm,0.9s,baz=224,slow=2.6,SNR=19						
YBH				pP	**pP**	**05 00 05.8**	**-0.4**
	comp=Z,74nm,1.0s,baz=301,slow=4.0,SNR=15						
YBH	**Yreka Blue Hor**	**83.75**	**45**	*eP*	**P**	**04 59 51.8**	**+0.9**
	comp=Z,142nm,1.3s						
POKR	**Poker Plat Res**	**83.75**	**18**	P	**P**	**04 59 49.1**	**-1.2**
	baz=225						
DOT	**Dot Lake**	**83.82**	**20**	*eP*	**P**	**04 59 50.4**	**-0.3**
	comp=Z,151nm,1.1s						
DOT				LR	LR		
	comp=Z,3μm,22.0s						
ORV	**Oroville**	**83.85**	**48**	*eP*	**P**	**04 59 51.6**	**+0.3**
	comp=Z,92nm,1.3s						
ORV				LR	LR		
	comp=Z,3μm,22.0s						
ORV	**Oroville**	**83.85**	**48**	*eP*	**P**	**04 59 51.6**	**+0.3**
ORV				pmax	pmax		
	comp=Z,92nm,1.3s						
ORV				MLR	MLR		
	comp=Z,3μm,22.0s						
I02D	**Swisshome**	**83.85**	**43**	P	**P**	**04 59 51.9**	**+0.7**
	baz=248						
O03E	**Paynes Creek**	**83.89**	**47**	P	**P**	**04 59 51.9**	**+0.3**
	baz=250,SNR=25						
HUMO	**Hull Mountain**	**83.90**	**45**	*eP*	**P**	**04 59 52.9**	**+1.4**
	comp=Z,97nm,1.1s						
HUMO				LR	LR		
	comp=Z,3μm,20.0s						
BLG	**Laguna Peak, P**	**83.92**	**54**	P	**P**	**04 59 51.8**	**-0.1**
	baz=252						
SCI2	**San Clemente I**	**83.99**	**55**	P	**P**	**04 59 52.3**	**+0.2**
	baz=252						
AFDM	**Forest Hills D**	**84.03**	**48**	*eP*	**P**	**04 59 52.7**	**+0.4**
	comp=Z,124nm,1.1s						
AFDM				LR	LR		
	comp=Z,4μm,22.0s						
I03D	**Drain, OR**	**84.03**	**43**	P	**P**	**04 59 51.7**	**-0.5**
	baz=248						
SCRK	**Sand Creek**	**84.07**	**20**	*eP*	**P**	**04 59 52.1**	**0.0**
	comp=Z,160nm,1.0s						
SCRK				LR	LR		
	comp=Z,4μm,21.0s						
CMB	**Columbia Colle**	**84.16**	**49**	*eP*	**P**	**04 59 53.1**	**+0.1**
	comp=Z,146nm,1.4s						
CMB				LR	LR		
	comp=Z,8μm,22.0s						
CMB	**Columbia Colle**	**84.16**	**49**	*eP*	**P**	**04 59 53.1**	**+0.1**
CMB				pmax	pmax		
	comp=Z,146nm,1.4s						
CMB				MLR	MLR		
	comp=Z,8μm,22.0s						
MOY	**Mondy**	**84.18**	**325**	*eP*	**P**	**04 59 52.8**	**-0.1**
MOY				pmax	pmax		
	comp=Z,156nm,3.7s						
L04D	**Klamath Falls**	**84.21**	**45**	P	**P**	**04 59 53.5**	**+0.2**
	baz=249						
CIS	**Catalina Islan**	**84.22**	**54**	P	**P**	**04 59 53.6**	**+0.2**
	baz=252						
OSI	**Osito Audit: C**	**84.34**	**53**	PFAKE		05 00 10.0	+16
OSI				LR	LR		
	comp=Z,5μm,22.0s						
OSI	**Osito Audit: C**	**84.34**	**53**	P	**P**	**04 59 53.6**	**-0.4**
	baz=252						
BESE	**Bessie Mountai**	**84.35**	**27**	*eP*	**P**	**04 59 54.4**	**+0.9**
	comp=Z,81nm,1.2s						
BESE				LR	LR		
	comp=Z,5μm,22.0s						
VOG	**Valley Oaks Go**	**84.36**	**51**	P	**P**	**04 59 53.5**	**-0.5**
	baz=252						
M04C	**Macdoel**	**84.38**	**46**	P	**P**	**04 59 54.9**	**+0.7**
	baz=249,SNR=11						
WRAK	**Wrangell Islan**	**84.38**	**29**	*eP*	**P**	**04 59 54.2**	**+0.7**
	comp=Z,47nm,0.8s						
WRAK				LR	LR		
	comp=Z,3μm,20.0s						
COR	**Corvallis**	**84.40**	**43**	PFAKE		05 00 10.0	+16
COR				LR	LR		
	comp=Z,4μm,21.0s						
JIS	**Juneau Island**	**84.40**	**27**	*eP*	**P**	**04 59 54.3**	**+0.7**
	comp=Z,42nm,1.0s						
JIS				LR	LR		
	comp=Z,6μm,22.0s						
FMP	**Fort Macarthur**	**84.41**	**54**	P	**P**	**04 59 54.3**	**+0.1**
	baz=252						
ARVC	**Arvin**	**84.42**	**53**	P	**P**	**04 59 53.8**	**-0.5**
	baz=252						
GTK	**Tadong**	**84.48**	**299**	*eP*	**P**	**04 59 55.3**	**+0.3**
GTK				IAmb	IAmb	04 59 57.3	
	comp=Z,93nm,0.7s						
HYT	**Haines Junctio**	**84.49**	**24**	*eP*	**P**	**04 59 54.5**	**+0.3**
	comp=Z,29nm,0.7s						
COLD	**Coldfoot**	**84.49**	**16**	*eP*	**P**	**04 59 55.2**	**+1.2**
	comp=Z,24nm,0.9s						
DECC	**Green Verdugo**	**84.54**	**54**	P	**P**	**04 59 54.4**	**-0.5**
	baz=252						
MAW	**Mawson**	**84.60**	**202**	P	**P**	**04 59 54.7**	**+0.1**
	comp=Z,25nm,1.0s,baz=106,slow=6.8,SNR=36						
MAW				pP	**pP**	**05 00 07.8**	**-1.6**
	comp=Z,84nm,1.0s,baz=115,slow=4.4,SNR=14						
MAW				LR	LR	05 31 49.6	
	comp=Z,3μm,22.0s,baz=99,slow=32						
MAW	**Mawson**	**84.60**	**202**	*eP*	**P**	**04 59 54.3**	**-0.3**
MAW				LR	LR		
	comp=Z,700nm,21.0s						
SKAG	**Skagway**	**84.62**	**26**	*eP*	**P**	**04 59 56.1**	**+1.4**
	comp=Z,214nm,1.8s						
SKAG				LR	LR		
	comp=Z,6μm,22.0s						
PASC	**Pasadena Art C**	**84.63**	**54**	PFAKE		05 00 10.0	+15
PASC				LR	LR		
	comp=Z,4μm,20.0s						
G03D	**McMinnville, O**	**84.66**	**42**	P	**P**	**04 59 55.3**	**0.0**
	baz=248						
RUBR	**Rubicon Trail**	**84.66**	**49**	*eP*	**P**	**04 59 56.9**	**+1.1**
	comp=Z,243nm,1.3s						
RUBR				LR	LR		
	comp=Z,5μm,22.0s						
I04A	**Tendick Farm,**	**84.70**	**44**	P	**P**	**04 59 55.8**	**+0.2**
	baz=249						
J04D	**Umpqua Nationa**	**84.71**	**44**	P	**P**	**04 59 56.3**	**+0.4**
	baz=249,SNR=9.8						
K04D	**Chiloquin, OR**	**84.74**	**45**	P	**P**	**04 59 56.3**	**+0.4**
	baz=249						
H04D	**Lebanon**	**84.75**	**43**	P	**P**	**04 59 55.6**	**-0.1**
	baz=248						
MWC	**Mount Wilson**	**84.75**	**54**	*eP*	**P**	**04 59 56.9**	**+0.6**
	comp=Z,106nm,1.1s						
MWC				LR	LR		
	comp=Z,4μm,20.0s						
MWC	**Mount Wilson**	**84.75**	**54**	*eP*	**P**	**04 59 56.9**	**+0.6**
MWC				pmax	pmax		
	comp=Z,106nm,1.1s						
MWC				MLR	MLR		
	comp=Z,4μm,20.0s						
BEKR	**Beckworth**	**84.78**	**48**	*eP*	**P**	**04 59 57.1**	**+0.8**
	comp=Z,215nm,1.6s						
BEKR				LR	LR		
	comp=Z,4μm,22.0s						
ISA	**Isabella, Lake**	**84.86**	**52**	*eP*	**P**	**04 59 57.5**	**+0.9**
	comp=Z,147nm,1.4s						
ISA				LR	LR		
	comp=Z,4μm,21.0s						
ISA	**Isabella, Lake**	**84.86**	**52**	*eP*	**P**	**04 59 57.5**	**+0.9**
ISA				pmax	pmax		
	comp=Z,147nm,1.4s						
ISA				MLR	MLR		
	comp=Z,4μm,21.0s						
ISA	**Isabella, Lake**	**84.86**	**52**	P	**P**	**04 59 57.2**	**+0.6**
	baz=252,SNR=12						
EDW2	**Edwards Air Fo**	**85.00**	**53**	P	**P**	**04 59 57.8**	**+0.4**
	baz=252,SNR=13						
MDPB	**Devils Postpil**	**85.01**	**50**	*eP*	**P**	**04 59 58.1**	**+0.5**
	comp=Z,112nm,1.2s						
MDPB				LR	LR		
	comp=Z,10μm,22.0s						
WAKR	**Walker**	**85.02**	**49**	*eP*	**P**	**04 59 58.4**	**+0.9**
	comp=Z,170nm,1.3s						
WAKR				LR	LR		
	comp=Z,9μm,22.0s						
OMMB	**Old Mammoth Mi**	**85.06**	**50**	*eP*	**P**	**04 59 58.5**	**+0.6**
	comp=Z,109nm,1.4s						
OMMB				LR	LR		
	comp=Z,11μm,22.0s						
BFSC	**Mount Baldy Ra**	**85.07**	**54**	P	**P**	**04 59 57.7**	**-0.1**
	baz=253,SNR=13						
PNTR	**Pine Nut**	**85.08**	**49**	*eP*	**P**	**04 59 59.0**	**+1.1**
	comp=Z,220nm,1.4s						
PNTR				LR	LR		
	comp=Z,4μm,20.0s						
NLWA	**Neilton Lookou**	**85.09**	**40**	*eP*	**P**	**04 59 58.6**	**+1.1**
	comp=Z,183nm,1.9s						
NLWA				LR	LR		
	comp=Z,4μm,20.0s						
VCNR	**Virginia City**	**85.11**	**48**	*eP*	**P**	**04 59 58.9**	**+0.9**
	comp=Z,57nm,1.2s						
VCNR				LR	LR		
	comp=Z,4μm,22.0s						
109C	**Camp Elliot, M**	**85.12**	**55**	P	**P**	**04 59 58.4**	**+0.6**
	baz=253						
CPE	**Camp Elliot**	**85.12**	**55**	*eP*	**P**	**04 59 59.5**	**+1.7**
	comp=Z,113nm,1.3s						
CPE				LR	LR		
	comp=Z,5μm,21.0s						
F04D	**Rainier, OR**	**85.14**	**41**	P	**P**	**04 59 58.2**	**+0.5**
	baz=248						
BWNR	**Bhubaneshwar**	**85.17**	**292**	*ex*	P	04 59 50.4	-8.0
H04A	**Detroit Lake**	**85.17**	**43**	*eP*	**P**	**04 59 58.3**	**+0.4**
	comp=Z,149nm,1.5s						

H04A				LR	LR		
	comp=Z,3μm,20.0s						
MLAC	**Mammoth, Mammo**	**85.19**	**50**	P	**P**	**04 59 58.5**	**+0.1**
	baz=252,SNR=11						
MURC	**Murrieta**	**85.25**	**55**	P	**P**	**04 59 58.5**	**0.0**
	baz=253						
YERR	**Yerington**	**85.31**	**49**	PFAKE		05 00 10.0	+11
YERR				LR	LR		
	comp=Z,5μm,21.0s						
J05D	**Fort Rock, OR**	**85.32**	**44**	P	**P**	**04 59 59.6**	**+0.7**
	baz=250,SNR=7.2						
K05A	**Summer Lake**	**85.37**	**45**	*e*P	**P**	**05 00 00.1**	**+0.9**
	comp=Z,119nm,1.1s						
K05A				LR	LR		
	comp=Z,2μm,20.0s						
CWC	**Cottonwood Cre**	**85.40**	**52**	P	**P**	**04 59 59.7**	**+0.2**
	baz=252						
BAR	**Barrett**	**85.41**	**56**	*e*P	**P**	**05 00 02.2**	**+2.8**
	comp=Z,48nm,1.2s						
BAR				LR	LR		
	comp=Z,5μm,21.0s						
FYU	**Fort Yukon**	**85.41**	**17**	*e*P	**P**	**04 59 58.6**	**+0.1**
	comp=Z,60nm,1.2s						
LRMC	**Laurel Mtn Rad**	**85.42**	**53**	P	**P**	**04 59 60.0**	**+0.5**
	baz=253						
PAHR	**Pah Rah Range**	**85.44**	**48**	*e*P	**P**	**05 00 00.1**	**+0.6**
	comp=Z,137nm,1.3s						
PAHR				LR	LR		
	comp=Z,4μm,21.0s						
WHY	**Whitehorse**	**85.47**	**25**	*e*P	**P**	**04 59 58.4**	**-0.7**
	comp=Z,19nm,1.0s						
WHY				LR	LR		
	comp=Z,8μm,22.0s						
TIN	**Tinemaha, Big**	**85.47**	**51**	P	**P**	**04 59 59.7**	**0.0**
	baz=252						
MOD	**Modoc Plateau**	**85.50**	**46**	*e*P	**P**	**04 59 60.0**	**+0.2**
	comp=Z,94nm,1.4s						
EGAK	**Eagle**	**85.52**	**20**	*e*P	**P**	**04 59 59.3**	**+0.1**
	comp=Z,125nm,0.9s						
EGAK				LR	LR		
	comp=Z,3μm,22.0s						
E04D	**Cinebar**	**85.60**	**41**	P	**P**	**04 59 59.9**	**-0.1**
	baz=248,SNR=6.7						
I05D	**Terrebonne, OR**	**85.62**	**43**	P	**P**	**05 00 00.1**	**-0.1**
	baz=250,SNR=8.0						
D03D	**Eldon**	**85.63**	**40**	P	**P**	**05 00 00.7**	**+0.6**
	baz=248,SNR=10						
BBRC	**Big Bear Solar**	**85.66**	**54**	P	**P**	**05 00 00.5**	**-0.4**
	baz=253,SNR=7.7						
MONP2	**Monument Peak**	**85.67**	**55**	P	**P**	**05 00 01.6**	**+0.7**
	baz=254,SNR=11						
TOLK	**Toolik Lake Re**	**85.70**	**15**	*e*P	**P**	**05 00 00.6**	**+0.6**
	comp=Z,75nm,1.3s						
TOLK				LR	LR		
	comp=Z,5μm,22.0s						
TOLK	**Toolik Lake Re**	**85.70**	**15**	P	**P**	**05 00 00.8**	**+0.8**
	baz=223						
PINE	**Pine Mountain**	**85.70**	**44**	*e*P	**P**	**05 00 01.9**	**+1.1**
	comp=Z,101nm,1.3s						
PINE				LR	LR		
	comp=Z,5μm,22.0s						
D04E	**Lakebay**	**85.70**	**40**	P	**P**	**05 00 01.4**	**+1.0**
	baz=248						
DAC	**Darwin (Calif)**	**85.72**	**52**	*e*P	**P**	**05 00 03.5**	**+2.4**
	comp=Z,124nm,1.4s						
DAC				LR	LR		
	comp=Z,6μm,22.0s						
RYN	**Ryan**	**85.73**	**49**	*e*P	**P**	**05 00 01.5**	**+0.5**
	comp=Z,153nm,1.5s						
RYN				LR	LR		
	comp=Z,8μm,22.0s						
MPMC	**Manual Prospec**	**85.74**	**52**	P	**P**	**05 00 01.5**	**+0.3**
	baz=253,SNR=26						
RRX	**Edison Barstow**	**85.78**	**53**	P	**P**	**05 00 01.2**	**0.0**
	baz=253						
PGC	**Sidney**	**85.83**	**39**	*e*P	**P**	**05 00 01.8**	**+0.8**
	comp=Z,152nm,1.6s						
NV01	**Mina Array Sit**	**85.84**	**50**	*e*P	**P**	**05 00 01.9**	**+0.3**
NV01				*e*PKKPbc	**PKKPbc**	**05 18 05.5**	**+1.4**
NV01				*e*P'P'df	**P'P'df**	**05 26 07.9**	**-1.1**
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**05 00 01.9**	**+0.3**
	comp=Z,15nm,0.9s,baz=235,slow=7.9,SNR=65						
NVAR				pP	**pP**	**05 00 15.5**	**-1.5**
	comp=Z,60nm,1.0s,baz=236,slow=4.9,SNR=16						
NVAR				PKKPbc	**PKKPbc**	**05 18 05.5**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=46,slow=7.8,SNR=3.9						
NVAR				PKPPKP	**P'P'df**	**05 26 07.9**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=144,slow=1.4,SNR=5.1						
NVAR				LR	LR	05 30 13.3	
	comp=Z,8μm,21.6s,baz=270,slow=30						
PFO	**Pinyon Flats O**	**85.84**	**55**	P	**P**	**05 00 01.7**	**+0.1**
	comp=Z,8.6nm,0.8s,baz=281,slow=3.4,SNR=8.6						
PFO				pP	**pP**	**05 00 15.9**	**-1.1**
	comp=Z,32nm,1.1s,baz=247,slow=5.1,SNR=9.9						
PFO	**Pinyon Flats O**	**85.84**	**55**	*e*P	**P**	**05 00 02.4**	**+0.7**
	comp=Z,75nm,1.3s						
PFO				LR	LR		
	comp=Z,5μm,20.0s						
PFO	**Pinyon Flats O**	**85.84**	**55**	*e*P	**P**	**05 00 02.4**	**+0.7**
PFO				pmax	pmax		
	comp=Z,75nm,1.3s						
PFO				MLR	MLR		
	comp=Z,5μm,20.0s						
PFO	**Pinyon Flats O**	**85.84**	**55**	P	**P**	**05 00 02.0**	**+0.4**
	baz=253,SNR=8.2						
IKP	**In-Ko-Pah, Jac**	**85.85**	**56**	P	**P**	**05 00 02.1**	**+0.4**
	baz=254						
BOK	**Bokaro**	**85.94**	**295**	*e*P	**P**	**05 00 03.6**	**+1.4**
BOK				IAmb	IAmb	05 00 04.3	
	comp=Z,64nm,1.2s						
G05D	**Wamic, OR**	**85.95**	**42**	P	**P**	**05 00 02.0**	**+0.2**
	baz=250						
NV11	**Mina Array Sit**	**85.95**	**50**	*e*P	**P**	**05 00 02.6**	**+0.5**
	comp=Z,9.8nm,1.3s						
GSC	**Goldstone, Bar**	**86.05**	**53**	*e*P	**P**	**05 00 03.4**	**+0.8**
	comp=Z,113nm,1.4s						
GSC				LR	LR		
	comp=Z,4μm,19.0s						
GSC	**Goldstone, Bar**	**86.05**	**53**	P	**P**	**05 00 02.9**	**+0.3**
	baz=253,SNR=8.2						
F05D	**White Salmon**	**86.08**	**42**	P	**P**	**05 00 02.5**	**+0.2**
	baz=249						
RAMN	**Ramite**	**86.11**	**298**	*e*P	**P**	**05 00 03.5**	**+0.3**
	comp=Z,316nm,1.3s						
GRAC	**Grapevine Rang**	**86.11**	**51**	P	**P**	**05 00 03.1**	**+0.3**
	baz=253,SNR=16						
LON	**Longmire**	**86.16**	**41**	*e*P	**P**	**05 00 03.0**	**+0.2**
	comp=Z,85nm,1.9s						
LON				LR	LR		
	comp=Z,4μm,21.0s						
LON	**Longmire**	**86.16**	**41**	*e*P	**P**	**05 00 03.0**	**+0.2**
LON				pmax	pmax		
	comp=Z,85nm,1.9s						
LON				MLR	MLR		
	comp=Z,4μm,21.0s						
KVN	**Kaiserville**	**86.18**	**49**	*e*P	**P**	**05 00 03.5**	**+0.2**
	comp=Z,91nm,1.3s						
KVN				LR	LR		
	comp=Z,5μm,20.0s						
SWSC	**Sam W. Stewart**	**86.19**	**55**	P	**P**	**05 00 03.1**	**0.0**
	baz=254,SNR=5.6						
D05A	**Enumclaw**	**86.20**	**40**	*e*P	**P**	**05 00 04.2**	**+1.3**
	comp=Z,222nm,1.4s						
D05A				LR	LR		
	comp=Z,3μm,22.0s						
HEC	**Hector,Ludlow**	**86.29**	**54**	P	**P**	**05 00 04.0**	**+0.2**
	baz=253,SNR=8.8						
A04D	**Lummi Island**	**86.31**	**39**	P	**P**	**05 00 03.7**	**+0.3**
	baz=248						
BELC	**Belle Mtn. Jos**	**86.32**	**54**	P	**P**	**05 00 04.6**	**+0.6**
	baz=254,SNR=18						
FURC	**Furnace Creek,**	**86.34**	**52**	P	**P**	**05 00 04.4**	**+0.6**
	baz=253,SNR=25						
G06A	**Carlson Farm,**	**86.40**	**43**	PFAKE		05 00 20.0	+16
G06A				LR	LR		
	comp=Z,3μm,22.0s						
DLBC	**Dease Lake**	**86.46**	**28**	*e*P	**P**	**05 00 03.7**	**-0.4**
	comp=Z,24nm,1.0s						
B05A	**Bryant**	**86.52**	**39**	P	**P**	**05 00 04.7**	**+0.3**
	baz=249						
TIXI	**Tiksi**	**86.54**	**349**	*e*P	**P**	**05 00 03.0**	**-1.0**
	comp=Z,243nm,1.7s						
TIXI				LR	LR		
	comp=Z,2μm,22.0s						
TIXI	**Tiksi**	**86.54**	**349**	*c i*P	**P**	**05 00 03.2**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,48nm,1.8s						
SHOC	**Shoshone, Teco**	**86.64**	**53**	P	**P**	**05 00 05.5**	**+0.1**
	baz=253,SNR=7.1						
JIRN	**Jiri**	**86.64**	**299**	*e*P	**P**	**05 00 06.3**	**+0.3**
	comp=Z,303nm,1.1s						
BC3	**Big Chuckawall**	**86.66**	**55**	P	**P**	**05 00 06.1**	**+0.5**
	baz=254,SNR=12						
I07A	**Izee**	**86.77**	**44**	*e*P	**P**	**05 00 06.2**	**+0.2**
	comp=Z,77nm,1.3s						
I07A				LR	LR		
	comp=Z,4μm,22.0s						
TUQ	**Turquoise Moun**	**86.78**	**53**	P	**P**	**05 00 06.5**	**+0.3**
	baz=254						
GMRC	**Granite Mounta**	**86.81**	**54**	P	**P**	**05 00 06.8**	**+0.4**
	baz=254,SNR=19						
WVOR	**Wild Horse Val**	**86.84**	**46**	*e*P	**P**	**05 00 06.6**	**+0.2**
	comp=Z,117nm,1.3s						
WVOR				LR	LR		
	comp=Z,3μm,20.0s						
WVOR	**Wild Horse Val**	**86.84**	**46**	*e*P	**P**	**05 00 06.6**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,117nm,1.3s						
WVOR				MLR	MLR		
	comp=Z,3μm,20.0s						
TPNV	**Topopah Spring**	**86.95**	**52**	*e*P	**P**	**05 00 07.4**	**+0.3**
	comp=Z,283nm,1.9s						
TPNV				LR	LR		
	comp=Z,8μm,22.0s						
TPNV	**Topopah Spring**	**86.95**	**52**	*e*P	**P**	**05 00 07.4**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,283nm,1.9s						
TPNV				MLR	MLR		
	comp=Z,8μm,22.0s						
TPNV	**Topopah Spring**	**86.95**	**52**	P	**P**	**05 00 07.5**	**+0.3**
	baz=253,SNR=18						
GUN	**Gumba**	**86.97**	**299**	*e*P	**P**	**05 00 07.8**	**+0.2**
	comp=Z,129nm,0.9s						
B06A	**Marblemount**	**87.00**	**39**	PFAKE		05 00 20.0	+13
B06A				LR	LR		
	comp=Z,3μm,21.0s						
GLA	**Glamis**	**87.00**	**56**	*e*P	**P**	**05 00 08.8**	**+1.6**
	comp=Z,262nm,1.5s						
GLA				LR	LR		
	comp=Z,5μm,22.0s						
GLA	**Glamis**	**87.00**	**56**	*e*P	**P**	**05 00 08.8**	**+1.6**
GLA				pmax	pmax		
	comp=Z,262nm,1.5s						
GLA				MLR	MLR		
	comp=Z,5μm,22.0s						
GLA	**Glamis**	**87.00**	**56**	P	**P**	**05 00 08.1**	**+0.9**
	baz=254,SNR=5.9						
IRM	**Iron Mountain**	**87.04**	**54**	P	**P**	**05 00 07.8**	**+0.4**
	baz=254,SNR=20						
LTY	**Liberty**	**87.07**	**41**	*e*P	**P**	**05 00 07.6**	**+0.3**
	comp=Z,145nm,1.8s						
LTY				LR	LR		
	comp=Z,3μm,21.0s						
F07A	**Phinny Hill Vi**	**87.09**	**42**	*e*P	**P**	**05 00 08.2**	**+0.9**
	comp=Z,85nm,1.5s						
F07A				LR	LR		
	comp=Z,3μm,21.0s						
PALK	**Pallekele**	**87.14**	**278**	*e*P	**P**	**05 00 10.1**	**+1.8**
	comp=Z,223nm,1.2s						
C06D	**Leavenworth**	**87.16**	**40**	P	**P**	**05 00 07.1**	**-0.5**
	baz=250						
BMN	**Battle Mountai**	**87.24**	**48**	*e*P	**P**	**05 00 09.3**	**+0.9**
	comp=Z,180nm,1.7s						
BMN	**Battle Mountai**	**87.24**	**48**	*e*P	**P**	**05 00 09.3**	**+0.9**
BMN				pmax	pmax		
	comp=Z,180nm,1.7s						
J08A	**Circle Bar Ran**	**87.25**	**45**	*e*P	**P**	**05 00 08.8**	**+0.5**
	comp=Z,116nm,1.4s						
J08A				LR	LR		
	comp=Z,3μm,20.0s						
PKI	**Pulchoki**	**87.29**	**299**	*e*P	**P**	**05 00 09.0**	**-0.1**
	comp=Z,270nm,1.1s						
PKIN	**Phulchoki**	**87.30**	**299**	*e*P	**P**	**05 00 09.0**	**-0.1**
	comp=Z,171nm,1.1s						
LDFC	**Landfair**	**87.32**	**54**	*e*P	**P**	**05 00 09.7**	**+0.9**
	comp=Z,250nm,1.3s						
LDFC				LR	LR		
	comp=Z,4μm,19.0s						
Y12C	**Blythe**	**87.43**	**55**	*e*P	**P**	**05 00 10.5**	**+1.2**
	comp=Z,140nm,1.3s						
Y12C				LR	LR		
	comp=Z,4μm,20.0s						
Y12C	**Blythe**	**87.43**	**55**	P	**P**	**05 00 10.1**	**+0.8**
	baz=254,SNR=10						
KKN	**Kakani**	**87.45**	**299**	*e*P	**P**	**05 00 09.7**	**-0.1**
	comp=Z,104nm,0.9s						
LLLB	**Lillooet**	**87.50**	**37**	*e*P	**P**	**05 00 09.9**	**+0.7**
	comp=Z,50nm,1.4s						
HAWA	**Hanford**	**87.51**	**42**	*e*P	**P**	**05 00 10.2**	**+0.9**
	comp=Z,72nm,1.3s						
HAWA				LR	LR		
	comp=Z,3μm,21.0s						
G08A	**Pilot Rock**	**87.53**	**43**	*e*P	**P**	**05 00 09.6**	**0.0**
	comp=Z,113nm,1.4s						
G08A				LR	LR		
	comp=Z,3μm,22.0s						
DMN	**Daman**	**87.56**	**299**	*e*P	**P**	**05 00 10.5**	**+0.2**
	comp=Z,797nm,1.4s						
NEE2	**Needles Airpor**	**87.63**	**54**	P	**P**	**05 00 11.0**	**+0.9**
	baz=254						
SHPR	**Sheep Range**	**87.67**	**52**	*e*P	**P**	**05 00 11.3**	**+0.7**
	comp=Z,267nm,1.7s						
SHPR				LR	LR		
	comp=Z,4μm,20.0s						
SRIG	**Santa Rosalia**	**87.71**	**62**	PFAKE		05 00 20.0	+9.3
SRIG				LR	LR		
	comp=Z,5μm,20.0s						
113A	**Mohawk Valley,**	**87.79**	**56**	*e*P	**P**	**05 00 12.2**	**+1.3**
	comp=Z,192nm,1.6s						
113A				LR	LR		
	comp=Z,6μm,22.0s						
E08A	**Dider Farm, El**	**87.85**	**42**	*e*P	**P**	**05 00 11.8**	**+0.9**
	comp=Z,266nm,1.8s						
E08A				LR	LR		
	comp=Z,4μm,21.0s						
R11A	**Troy Canyon, C**	**87.86**	**50**	*e*P	**P**	**05 00 11.7**	**+0.3**
	comp=Z,90nm,1.4s						
R11A				LR	LR		
	comp=Z,9μm,22.0s						
R11A	**Troy Canyon, C**	**87.86**	**50**	P	**P**	**05 00 11.7**	**+0.3**
	baz=254,SNR=29						
PDMCI	**Parker Dam,Lak**	**87.88**	**55**	P	**P**	**05 00 12.1**	**+0.7**
	baz=255,SNR=12						
EPYK	**Eagle Plains**	**87.96**	**20**	*e*P	**P**	**05 00 09.0**	**-2.0**
	comp=Z,76nm,1.2s						
EPYK				LR	LR		
	comp=Z,3μm,20.0s						
EPYK	**Eagle Plains**	**87.96**	**20**	P	**P**	**05 00 10.2**	**-0.9**
	baz=235						
D08A	**Wollman Farm,**	**88.13**	**41**	*e*P	**P**	**05 00 13.0**	**+0.8**
	comp=Z,87nm,1.4s						
D08A				LR	LR		
	comp=Z,3μm,20.0s						
B08A	**Colville Reser**	**88.29**	**40**	PFAKE		05 00 20.0	+7.0
B08A				LR	LR		
	comp=Z,2μm,19.0s						
W13A	**Hualapai Mount**	**88.30**	**54**	*e*P	**P**	**05 00 14.2**	**+0.6**
	comp=Z,135nm,1.4s						
W13A				LR	LR		
	comp=Z,3μm,21.0s						
214A	**Organ Pipe Nat**	**88.36**	**57**	P	**P**	**05 00 14.8**	**+1.0**
	baz=256,SNR=12						
E09A	**Wood Farm, Sta**	**88.46**	**42**	*e*P	**P**	**05 00 14.6**	**+0.7**
	comp=Z,149nm,1.8s						
E09A				LR	LR		
	comp=Z,3μm,21.0s						
BMO	**Blue Mountains**	**88.51**	**44**	*e*P	**P**	**05 00 14.3**	**+0.1**
	comp=Z,239nm,2.0s						
BMO				LR	LR		
	comp=Z,4μm,22.0s						
BMO	**Blue Mountains**	**88.51**	**44**	*e*P	**P**	**05 00 14.3**	**+0.1**
BMO				pmax	pmax		
	comp=Z,239nm,2.0s						
BMO				MLR	MLR		
	comp=Z,4μm,22.0s						
Y14A	**Wickenburg**	**88.70**	**55**	*e*P	**P**	**05 00 15.8**	**+0.5**
	comp=Z,91nm,1.5s						
Y14A				LR	LR		
	comp=Z,5μm,22.0s						
MDRS	**Chennai**	**88.76**	**284**	*e*P	**P**	**05 00 15.7**	**-0.3**
ELK	**Elko**	**88.78**	**48**	*e*P	**P**	**05 00 15.8**	**+0.1**
	comp=Z,100nm,1.4s						
ELK				LR	LR		
	comp=Z,4μm,21.0s						
ELK	**Elko**	**88.78**	**48**	*e*P	**P**	**05 00 15.9**	**+0.1**
ELK				pmax	pmax		
	comp=Z,100nm,1.4s						
ELK				MLR	MLR		
	comp=Z,4μm,21.0s						
C09A	**Chrisman Ranch**	**88.78**	**41**	*e*P	**P**	**05 00 15.2**	**-0.2**
	comp=Z,94nm,1.7s						
C09A				LR	LR		
	comp=Z,3μm,20.0s						
DANN	**Dangsing**	**88.89**	**299**	*e*P	**P**	**05 00 15.9**	**-0.8**
	comp=Z,199nm,0.8s						
KOLN	**Koldanda**	**88.89**	**298**	*e*P	**P**	**05 00 15.9**	**-0.7**
	comp=Z,160nm,0.9s						
SLBS	**Sierra La Lagu**	**88.89**	**66**	PFAKE		05 00 30.0	+14
SLBS				LR	LR		
	comp=Z,3μm,22.0s						
F10A	**Beach Ranch, E**	**88.90**	**43**	*e*P	**P**	**05 00 15.6**	**-0.5**
	comp=Z,236nm,1.6s						
F10A				LR	LR		
	comp=Z,3μm,22.0s						
PSUT	**Pine Spring**	**89.21**	**51**	*e*P	**P**	**05 00 18.5**	**+0.7**
	comp=Z,92nm,1.4s						
HSIG		**89.22**	**60**	*e*P	**P**	**05 00 19.5**	**+1.7**
	comp=Z,106nm,1.3s						
HSIG				LR	LR		
	comp=Z,5μm,22.0s						
LCMT	**Little Creek M**	**89.29**	**52**	*e*P	**P**	**05 00 18.9**	**+0.7**
	comp=Z,110nm,1.3s						
CCUT	**Cedar City**	**89.33**	**52**	*e*P	**P**	**05 00 19.0**	**+0.5**
	comp=Z,162nm,1.5s						
PLID	**Pearl Lake**	**89.47**	**44**	*e*P	**P**	**05 00 19.2**	**+0.3**
	comp=Z,137nm,1.8s						
PYUN	**Piuthan**	**89.49**	**299**	*e*P	**P**	**05 00 18.5**	**-0.9**
	comp=Z,186nm,0.9s						
SZCU	**Shurtz Canyon**	**89.56**	**52**	*e*P	**P**	**05 00 20.5**	**+1.0**
	comp=Z,205nm,1.6s						
KNB	**Kanab**	**89.62**	**52**	*e*P	**P**	**05 00 20.7**	**+1.0**
	comp=Z,343nm,1.7s						
NEW	**Newport**	**89.66**	**41**	*e*P	**P**	**05 00 19.8**	**+0.3**
	comp=Z,141nm,1.8s						
NEW				LR	LR		
	comp=Z,3μm,21.0s						
NEW	**Newport**	**89.66**	**41**	*e*P	**P**	**05 00 19.8**	**+0.3**
NEW				pmax	pmax		
	comp=Z,141nm,1.8s						
NEW				MLR	MLR		
	comp=Z,3μm,21.0s						
NEW	**Newport**	**89.66**	**41**	P	**P**	**05 00 19.2**	**-0.3**
	baz=252						
WMQ	**Urumqi**	**89.73**	**315**	P	**P**	**05 00 20.6**	**+0.6**
WMQ				pP	pwP	05 00 38.0	+1.0
WMQ				sP	sP	05 00 42.1	+1.4
WMQ				PP	**PP**	**05 03 51.1**	**-1.8**
WMQ				SKS	**SKSac**	**05 10 43.9**	**-2.3**
WMQ				S	**S**	**05 11 05.2**	**-2.5**
WMQ				SS	**SS**	**05 17 06.5**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,120nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,2μm,4.7s						
WMQ				LR	LR		
	comp=Z,2μm,23.5s						
WMQ				LR	LR		
	comp=Z,3μm,24.7s						
WMQ				LR	LR		
	comp=Z,3μm,20.7s						
WMQ	**Urumqi**	**89.73**	**315**	*e*P	**P**	**05 00 20.8**	**+0.8**
	comp=Z,74nm,0.9s						
WMQ				LR	LR		
	comp=Z,3μm,22.0s						
U15A	**North Rim**	**89.88**	**53**	*e*P	**P**	**05 00 22.1**	**+1.0**
	comp=Z,131nm,1.3s						
U15A				LR	LR		
	comp=Z,3μm,18.0s						
INK	**Inuvik**	**90.06**	**19**	P	**P**	**05 00 19.9**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=249,slow=3.4,SNR=4.7						
INK	**Inuvik**	**90.06**	**19**	*e*P	**P**	**05 00 20.1**	**-0.7**
	comp=Z,9.8nm,1.0s						
INK				LR	LR		
	comp=Z,3μm,19.0s						
INK	**Inuvik**	**90.06**	**19**	*e*P	**P**	**05 00 20.1**	**-0.7**
INK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
INK				MLR	MLR		
	comp=Z,3μm,19.0s						
X16A	**Lo Mia Camp, P**	**90.08**	**55**	*e*P	**P**	**05 00 23.4**	**+1.5**
	comp=Z,67nm,1.1s						
X16A				LR	LR		
	comp=Z,5μm,22.0s						
PKCU	**Pink Cliffs**	**90.12**	**52**	*e*P	**P**	**05 00 24.2**	**+2.0**
	comp=Z,371nm,1.5s						
TUC	**Tucson**	**90.12**	**57**	*e*P	**P**	**05 00 23.1**	**+1.0**
	comp=Z,80nm,1.4s						
TUC				LR	LR		
	comp=Z,7μm,20.0s						
TUC	**Tucson**	**90.12**	**57**	*e*P	**P**	**05 00 23.1**	**+1.0**
TUC				pmax	pmax		
	comp=Z,80nm,1.4s						
TUC				MLR	MLR		
	comp=Z,7μm,20.0s						
TUC	**Tucson**	**90.12**	**57**	P	**P**	**05 00 22.0**	**-0.1**
	baz=257						
HLID	**Hailey**	**90.14**	**46**	*e*P	**P**	**05 00 22.6**	**+0.6**
	comp=Z,138nm,1.6s						
HLID				LR	LR		
	comp=Z,2μm,21.0s						
HLID	**Hailey**	**90.14**	**46**	P	**P**	**05 00 22.3**	**+0.3**
	baz=254						
MTPU	**Mount Pierson**	**90.36**	**51**	*e*P	**P**	**05 00 24.9**	**+1.5**
	comp=Z,96nm,1.3s						
WUAZ	**Wupatki**	**90.39**	**54**	*e*P	**P**	**05 00 24.6**	**+1.2**
	comp=Z,69nm,1.1s						
WUAZ				LR	LR		
	comp=Z,4μm,22.0s						
WUAZ	**Wupatki**	**90.39**	**54**	P	**P**	**05 00 23.9**	**+0.6**
	baz=256						
DUG	**Dugway, Tooele**	**90.42**	**49**	*e*P	**P**	**05 00 23.7**	**+0.3**
	comp=Z,76nm,1.4s						
DUG				LR	LR		
	comp=Z,5μm,22.0s						
DUG	**Dugway, Tooele**	**90.42**	**49**	*e*P	**P**	**05 00 23.7**	**+0.3**
DUG				pmax	pmax		
	comp=Z,76nm,1.4s						
DUG				MLR	MLR		
	comp=Z,5μm,22.0s						
DUG	**Dugway, Tooele**	**90.42**	**49**	P	**P**	**05 00 23.7**	**+0.3**
	baz=255						
BGU	**Big Grassy Mou**	**90.44**	**48**	*e*P	**P**	**05 00 24.3**	**+0.8**
	comp=Z,58nm,1.1s						
MSU	**Marysvale**	**90.48**	**51**	*e*P	**P**	**05 00 24.9**	**+1.1**
MSU	**Marysvale**	**90.48**	**51**	*e*P	**P**	**05 00 24.9**	**+1.1**
HVU	**Hansel Valley**	**90.84**	**48**	*e*P	**P**	**05 00 26.4**	**+1.1**
	comp=Z,154nm,1.3s						
HVU	**Hansel Valley**	**90.84**	**48**	*e*P	**P**	**05 00 26.4**	**+1.1**
HVU				pmax	pmax		
	comp=Z,154nm,1.3s						
NLU	**North Lily Min**	**90.91**	**50**	*e*P	**P**	**05 00 26.7**	**+1.0**
	comp=Z,106nm,1.3s						
SPUT	**South Promonto**	**90.96**	**48**	*e*P	**P**	**05 00 26.8**	**+1.0**
	comp=Z,178nm,1.7s						
TRD	**Trivandrum**	**91.02**	**278**	*e*P	**P**	**05 00 27.4**	**+0.9**
319A	**Douglas**	**91.16**	**58**	*e*P	**P**	**05 00 28.4**	**+1.5**
	comp=Z,73nm,1.1s						
319A				LR	LR		
	comp=Z,6μm,22.0s						
HYB	**Hyderabad**	**91.24**	**287**	*i* P	**P**	**05 00 24.0**	**-3.5**
HYB				*e*PP	**PP**	**05 04 10.0**	**+4.6**
HYB				*e*SKS	**SKSac**	**05 10 56.0**	**+0.1**
MPU	**Maple Canyon**	**91.25**	**50**	*e*P	**P**	**05 00 28.3**	**+1.0**
	comp=Z,86nm,1.4s						
X18A	**Snowflake**	**91.30**	**55**	*e*P	**P**	**05 00 28.9**	**+1.2**
	comp=Z,60nm,1.3s						
X18A				LR	LR		
	comp=Z,4μm,22.0s						
MSO	**Missoula**	**91.32**	**43**	*e*P	**P**	**05 00 27.1**	**-0.2**
	comp=Z,78nm,1.9s						

comp=Z,31nm,0.8s
JLU Jordanelle 91.53 49 *e*P **P 05 00 29.6 +0.9**
comp=Z,145nm,1.6s
MCMT McKenzie Canyo 91.55 45 *e*P **P 05 00 29.5 +0.9**
SYO Syowa Base 91.60 197‖*e*X **P 05 00 25.4 -2.7**
SYO Syowa Base 91.60 197‖*i*PcP **P 05 00 27.4 -0.7**
SYO Syowa Base 91.60 197‖*i*pP pP 05 00 46.0 +2.8
SYO Syowa Base 91.60 197‖*i*PP PP 05 04 06.9 +0.5
W18A Petrified Fore 91.60 55 *e*P **P 05 00 30.1 +1.1**
comp=Z,55nm,1.1s
W18A LR LR
comp=Z,4μm,21.0s
W18A Petrified Fore 91.60 55 P **P 05 00 28.9 -0.2**
baz=257
HWUT Hardware Ranch 91.68 48 *e*P **P 05 00 29.7 +0.5**
comp=Z,35nm,1.4s
HWUT LR LR
comp=Z,2μm,21.0s
TCUT Toone Canyon 91.68 49 *e*P **P 05 00 30.4 +1.1**
comp=Z,258nm,1.8s
P17A Butcher Ranch, 91.80 50 *e*P **P 05 00 32.5 +2.7**
comp=Z,84nm,1.7s
DLMT Dillon 91.86 44 *e*P **P 05 00 30.3 +0.4**
comp=Z,71nm,1.1s
DLMT LR LR
comp=Z,4μm,22.0s
SRU San Rafael Swe 91.88 51 *e*P **P 05 00 30.8 +0.6**
comp=Z,25nm,1.1s
SRU San Rafael Swe 91.88 51 *e*P **P 05 00 30.8 +0.6**
SRU pmax pmax
comp=Z,25nm,1.1s
WALA Waterton Lakes 91.92 40 *e*P **P 05 00 30.4 +0.2**
comp=Z,68nm,1.3s
WALA LR LR
comp=Z,2μm,21.0s
LRM Limekiln Ridge 92.07 44 *e*P **P 05 00 31.5 +0.5**
AHID Auburn Hatcher 92.28 47 *e*P **P 05 00 34.2 +2.1**
comp=Z,100nm,1.9s
AHID LR LR
comp=Z,3μm,22.0s
QLMT Earthquake Lak 92.53 45 *e*P **P 05 00 34.5 +1.4**
FXWY Fox Creek 92.54 46 *e*P **P 05 00 33.9 +0.7**
comp=Z,17nm,1.0s
TPAW Teton Pass 92.56 46 *e*P **P 05 00 34.2 +0.8**
comp=Z,102nm,1.8s
TPAW LR LR
comp=Z,2μm,19.0s
BOZ Bozeman (W) 92.57 44 *e*P **P 05 00 33.7 +0.4**
comp=Z,91nm,1.5s
BOZ LR LR
comp=Z,4μm,22.0s
BOZ Bozeman (W) 92.57 44 *e*P **P 05 00 33.7 +0.4**
BOZ pmax pmax
comp=Z,91nm,1.5s
BOZ MLR MLR
comp=Z,4μm,22.0s
BOZ Bozeman (W) 92.57 44 P **P 05 00 33.7 +0.4**
baz=256
ZSN Zaisan 92.59 318 *e*P P 05 00 42.6 +10
ZSN Zaisan 92.59 318 *e*P P 05 00 42.6 +10
REDW Red Top Meadow 92.60 46 *e*P **P 05 00 34.2 +0.7**
comp=Z,171nm,1.9s
REDW LR LR
comp=Z,1μm,21.0s
121A Cookes Peak, D 92.64 58 P **P 05 00 34.4 +0.5**
baz=258
IMW Indian Meadow 92.66 46 *e*P **P 05 00 34.7 +0.9**
comp=Z,36nm,1.1s
IMW LR LR
comp=Z,2μm,20.0s
YHB Horse Butte 92.67 45 *e*P **P 05 00 35.2 +1.4**
comp=Z,40nm,1.2s
SNOW Snow King Moun 92.69 46 *e*P **P 05 00 34.8 +0.9**
comp=Z,66nm,1.4s
SNOW LR LR
comp=Z,1μm,20.0s
HRY Holter Researc 92.70 43 *e*P **P 05 00 34.1 +0.3**
PV05 Paradox Valley 92.74 52 PFAKE 05 00 50.0 +16
PV05 LR LR
comp=Z,3μm,19.0s
MOOW Moose Ponds 92.76 46 *e*P **P 05 00 34.8 +0.6**
comp=Z,17nm,1.1s
MOOW LR LR
comp=Z,2μm,19.0s
PV09 Paradox Valley 92.80 51 *e*P **P 05 00 35.5 +0.9**
YMR Madison River 92.82 45 *e*P **P 05 00 36.5 +2.0**
comp=Z,76nm,1.5s
LOHW Long Hollow 92.83 46 *e*P **P 05 00 34.6 0.0**
comp=Z,32nm,1.4s
LOHW LR LR
comp=Z,1μm,19.0s
YPP Pitchstone Pla 92.84 46 *e*P **P 05 00 36.5 +1.8**
comp=Z,71nm,2.0s
PV10 Paradox Valley 92.85 52 PFAKE 05 00 50.0 +15
PV10 LR LR
comp=Z,4μm,21.0s
YFT Old Faithful 92.86 45 *e*P **P 05 00 37.3 +2.7**
comp=Z,33nm,1.4s
PV14 Lion Creek, Pa 92.86 52 PFAKE 05 00 50.0 +15
PV14 LR LR
comp=Z,4μm,22.0s
FLWY Flagg Ranch 92.87 46 *e*P **P 05 00 35.5 +0.8**
comp=Z,37nm,1.2s
FLWY LR LR
comp=Z,2μm,20.0s
PV19 Morning Glory 92.88 52 *e*P **P 05 00 37.8 +2.9**
comp=Z,51nm,1.2s
PV19 LR LR
comp=Z,3μm,22.0s
PV23 Carpenter Ridg 92.89 52 *e*P **P 05 00 36.0 +1.0**
comp=Z,44nm,1.0s
PV23 LR LR
comp=Z,5μm,22.0s
PV20 West Nyswonger 92.90 52 *e*P **P 05 00 38.0 +3.0**
comp=Z,37nm,1.0s
PV20 LR LR
comp=Z,3μm,22.0s
PV18 Skein Mesa, Pa 92.92 52 *e*P **P 05 00 38.0 +2.9**
comp=Z,64nm,1.4s
PV18 LR LR
comp=Z,2μm,18.0s
YHH Holmes Hill 92.92 45 *e*P **P 05 00 37.0 +1.9**
comp=Z,27nm,1.3s
PV16 Nyswonger Mesa 92.93 52 *e*P **P 05 00 36.5 +1.4**
comp=Z,85nm,1.7s
PV16 LR LR
comp=Z,2μm,20.0s
PV21 Cone Mtn., Par 92.94 51 *e*P **P 05 00 37.3 +2.1**
PV04 Paradox Valley 92.96 52 *e*P **P 05 00 37.3 +2.1**
comp=Z,50nm,1.1s
PV04 LR LR
comp=Z,4μm,22.0s
PV11 David Mesa, Pa 92.96 52 *e*P **P 05 00 37.1 +1.8**
comp=Z,32nm,1.0s
PV11 LR LR
comp=Z,3μm,18.0s
PV03 Paradox Valley 92.97 52 *e*P **P 05 00 37.8 +2.5**
comp=Z,35nm,1.4s
PV03 LR LR
comp=Z,3μm,18.0s
PV13 Radium Mtn., P 92.97 52 PFAKE 05 00 50.0 +15
PV13 LR LR
comp=Z,3μm,19.0s
PV12 Saucer Basin, 93.02 52 *e*P **P 05 00 36.3 +0.7**
comp=Z,61nm,1.3s
PV12 LR LR
comp=Z,4μm,20.0s
H17A Grant Village 93.03 45 *e*P **P 05 00 37.5 +2.0**
comp=Z,24nm,1.0s
H17A Grant Village 93.03 45 P **P 05 00 36.7 +1.2**
baz=257
MVCO Mesa Verde 93.03 53 *e*P **P 05 00 36.6 +1.0**
comp=Z,40nm,1.7s
MVCO LR LR
comp=Z,3μm,18.0s
MVCO Mesa Verde 93.03 53 P **P 05 00 35.2 -0.5**
baz=258
PV02 Paradox Valley 93.05 52 *e*P **P 05 00 38.3 +2.6**
comp=Z,26nm,1.3s
PV22 Blue Mesa, Par 93.08 51 *e*P **P 05 00 36.8 +1.0**
comp=Z,28nm,1.0s
PV22 LR LR
comp=Z,5μm,22.0s
PV01 Paradox Valley 93.16 52 *e*P **P 05 00 36.7 +0.5**
comp=Z,32nm,1.3s
PV01 LR LR
comp=Z,2μm,18.0s

PV07 Paradox Valley 93.16 52 *e*P **P 05 00 38.0 +1.8**
comp=Z,40nm,1.2s
LKWY Lake 93.19 45 *e*P **P 05 00 38.5 +2.3**
comp=Z,17nm,1.0s
LKWY Lake 93.19 45 *e*P **P 05 00 38.5 +2.3**
LKWY pmax pmax
comp=Z,17nm,1.0s
HPIG 93.35 63 PFAKE 05 00 50.0 +13
HPIG LR LR
comp=Z,3μm,21.0s
BW06 Boulder Array 93.39 47 *e*P **P 05 00 37.1 -0.1**
comp=Z,43nm,1.4s
BW06 LR LR
comp=Z,2μm,20.0s
BW06 Boulder Array 93.39 47 P **P 05 00 36.6 -0.6**
baz=258
PD31 Pinedale Array 93.39 47 *e*P **P 05 00 37.6 +0.5**
comp=Z,39nm,1.4s
PD31 *e*P'P'df **P'P'df 05 25 50.9 -3.9**
PDAR Pinedale Array 93.39 47 P **P 05 00 36.4 -0.8**
comp=Z,2.7nm,0.8s,baz=228,slow=1.8,SNR=22
PDAR pP **pP 05 00 49.8 -2.5**
comp=Z,9.5nm,1.0s,baz=241,slow=1.7,SNR=8.9
PDAR PKKP **PKKPdf 05 17 43.9 -0.3**
comp=Z,2.3nm,0.8s,baz=98,slow=5.0,SNR=14
PDAR PKPPKP **P'P'df 05 25 50.9 -3.9**
comp=Z,0.9nm,0.9s,baz=96,slow=3.0,SNR=4.9
PDAR LR LR 05 36 03.5
comp=Z,2μm,21.1s,baz=259,slow=31
BHPL Bhopal 93.41 293 *e*P **P 05 00 36.8 -0.6**
BHPL IAmb IAmb 05 00 50.3
comp=Z,148nm,1.6s
EPT El Paso 93.56 58 PFAKE 05 00 50.0 +12
EPT LR LR
comp=Z,7μm,21.0s
Y22D IRIS PASSCAL I 93.66 56 PFAKE 05 00 50.0 +12
Y22D LR LR
comp=Z,5μm,22.0s
Y22D IRIS PASSCAL I 93.66 56 P **P 05 00 38.0 -0.5**
baz=259
O20A White River Ci 93.82 50 *e*P **P 05 00 39.7 +0.5**
comp=Z,46nm,1.4s
O20A LR LR
comp=Z,6μm,21.0s
O20A White River Ci 93.82 50 P **P 05 00 39.6 +0.5**
baz=258
BNM Barren Site 93.91 56 *e*P **P 05 00 42.4 +2.6**
GCMT Greycliff 93.96 44 *e*P **P 05 00 40.7 +1.1**
RLMT Red Lodge 94.09 45 *e*P **P 05 00 41.2 +0.9**
comp=Z,30nm,1.5s
RLMT LR LR
comp=Z,3μm,22.0s
RLMT Red Lodge 94.09 45 P **P 05 00 40.7 +0.3**
baz=258
MK31 Makanchi Array 94.15 317 *i* P **P 05 00 40.0 -0.3**
MK31 pmax pmax
comp=Z,81nm,0.8s
MK32 Makanchi Array 94.15 317 *e*P **P 05 00 39.6 -0.7**
MK32 *e*PKKPdf **PKKPdf 05 17 40.0 -2.6**
MKAR Makanchi Array 94.15 317 P **P 05 00 39.6 -0.7**
comp=Z,96nm,0.9s,baz=92,slow=6.4,SNR=314
MKAR pP **pP 05 00 53.7 -1.6**
comp=Z,73nm,0.9s,baz=103,slow=6.0,SNR=15
MKAR PKKP **PKKPdf 05 17 40.0 -2.6**
comp=Z,0.9nm,0.5s,baz=254,slow=3.4,SNR=14
MKAR LR LR 05 43 13.6
comp=Z,489nm,20.9s,baz=100,slow=36
ZAA0 Zalesovo Array 94.16 324 PFAKE 05 00 50.0 +10
ZAA0 LR LR
comp=Z,2μm,20.0s
ZALV Zalesovo Beam 94.16 324 P **P 05 00 39.3 -0.8**
comp=Z,26nm,0.6s,baz=114,slow=4.0,SNR=30
ZALV pP **pP 05 00 52.9 -2.2**
comp=Z,53nm,1.0s,baz=101,slow=4.1,SNR=6.8
ZALV LR LR 05 42 09.4
comp=Z,1μm,20.4s,baz=67,slow=35
ZAA1 Zalesovo Array 94.17 324 *e*P **P 05 00 39.3 -0.8**
DDI Dehra Dun 94.17 300 *e*P **P 05 00 41.0 +0.2**
DDI IAmb IAmb 05 00 42.2
comp=Z,76nm,0.9s
TASM ASL Pad, Albuq 94.20 55 P **P 05 00 41.2 +0.2**
baz=259
TASM ASL Pad, Albuq 94.20 55 P **P 05 00 41.1 +0.1**
baz=259
ANMO Albuquerque 94.20 55 LR LR 05 35 13.6
comp=Z,3μm,21.2s,baz=242,slow=30
ANMO Albuquerque 94.20 55 *e*P **P 05 00 41.3 +0.3**
comp=Z,9.9nm,1.1s
ANMO LR LR
comp=Z,3μm,21.0s
ANMO Albuquerque 94.20 55 *e*P **P 05 00 41.3 +0.3**
ANMO pmax pmax
comp=Z,10.0nm,1.1s
ANMO MLR MLR
comp=Z,3μm,21.0s
ANMO Albuquerque 94.20 55 P **P 05 00 41.0 -0.1**
baz=259
EGMT Eagleton 94.37 42 *e*P **P 05 00 41.7 +0.4**
comp=Z,64nm,1.3s
EGMT LR LR
comp=Z,2μm,21.0s
EGMT Eagleton 94.37 42 P **P 05 00 41.2 -0.1**
baz=258
MAKZ Makanchi 94.37 317 *e*P **P 05 00 41.5 +0.2**
comp=Z,134nm,1.1s
MAKZ LR LR
comp=Z,900nm,20.0s
MAKZ Makanchi 94.37 317 *e*P **P 05 00 41.5 +0.2**
MAKZ pmax pmax
comp=Z,135nm,1.1s
MAKZ MLR MLR
comp=Z,900nm,20.0s
S22A 4UR Ranch, Cre 94.43 53 *e*P **P 05 00 42.8 +0.6**
comp=Z,20nm,1.1s
S22A LR LR
comp=Z,3μm,18.0s
S22A 4UR Ranch, Cre 94.43 53 P **P 05 00 42.1 -0.1**
baz=259
MNTX Cornudas Mount 94.48 59 *e*P **P 05 00 42.4 +0.2**
comp=Z,15nm,1.3s
MNTX LR LR
comp=Z,5μm,21.0s
MNTX Cornudas Mount 94.48 59 P **P 05 00 42.1 0.0**
baz=259
SMCO Snowmass 94.59 51 *e*P **P 05 00 44.0 +1.0**
comp=Z,20nm,1.4s
SMCO LR LR
comp=Z,7μm,22.0s
RWWY Rawlins 94.89 49 *e*P **P 05 00 46.7 +2.6**
comp=Z,23nm,1.2s
RWWY LR LR
comp=Z,2μm,19.0s
YKA Yellowknife Ar 95.04 27 P **P 05 00 42.4 -1.5**
comp=Z,4.8nm,0.6s,baz=256,slow=4.7,SNR=50
YKA PKKP **PKKPdf 05 17 40.7 -0.7**
comp=Z,0.9nm,0.8s,baz=66,slow=2.6,SNR=4.7
YKA PKPPKP **P'P'df 05 25 49.4 -0.4**
comp=Z,0.3nm,0.6s,baz=57,slow=2.2,SNR=5.2
YKA LR LR 05 36 22.6
comp=Z,228nm,21.6s,baz=263,slow=31
YKB5 Yellowknife Ar 95.04 27 *e*P **P 05 00 42.4 -1.5**
YKB5 *e*PKKPdf **PKKPdf 05 17 40.7 -0.7**
YKB5 *e*P'P'df **P'P'df 05 25 49.4 -0.4**
YKW3 Yellowknife Ar 95.05 27 PFAKE 05 01 00.0 +16
YKW3 LR LR
comp=Z,2μm,22.0s
SMLA Simla 95.07 301 *e*P **P 05 00 45.0 +0.2**
SMLA IAmb IAmb 05 00 45.8
comp=Z,48nm,0.6s
SMLA IAMs_20 IAMs_20 05 41 30.5
comp=Z,2μm,12.5s
PMSA Palmer Station 95.20 161 *e*P **P 05 00 47.3 +2.5**
NVS Novosibirsk 95.27 325‖*i*P **P 05 00 44.6 -0.5**
NVS pmax pmax
comp=Z,184nm,2.1s
NVS pmax pmax
comp=N,37nm,1.8s
NVS pmax pmax
comp=E,44nm,1.6s
GOA Goa 95.34 285 *e*P **P 05 00 44.8 -1.5**
ZAIG Zacatecas 95.36 68 PFAKE 05 01 00.0 +13
ZAIG LR LR
comp=Z,2μm,18.0s
PDGK Podgornoye 95.42 313 P **P 05 00 45.4 -1.0**
PDGK pmax pmax
comp=Z,21nm,0.7s
SDCO Great Sand Dun 95.47 53 *e*P **P 05 00 47.1 +0.2**

comp=Z,8.1nm,1.3s
SDCO LR LR
comp=Z,4μm,21.0s
SDCO Great Sand Dun 95.47 53 P **P 05 00 47.1 +0.2**
baz=260
TX31 Lajitas Ar. Si 95.52 61 *e*P **P 05 00 47.5 +0.4**
comp=Z,17nm,1.2s
LTX Lajitas 95.52 61 *e*P **P 05 00 46.6 -0.5**
LTX *e*PKKPdf **PKKPdf 05 17 39.5 -0.2**
LTX Lajitas 95.52 61 *e*P **P 05 00 46.6 -0.5**
TXAR Lajitas Array 95.52 61 P **P 05 00 46.6 -0.5**
comp=Z,1.3nm,0.7s,baz=218,slow=5.8,SNR=20
TXAR pP **pP 05 01 00.8 -1.5**
comp=Z,6.4nm,0.9s,baz=224,slow=5.0,SNR=17
TXAR PKKP **PKKPdf 05 17 39.5 -0.2**
comp=Z,1.2nm,0.6s,baz=106,slow=3.9,SNR=16
TXAR LR LR 05 36 02.7
comp=Z,4μm,20.8s,baz=0.0,slow=31
K22A Casper 95.56 48 PFAKE 05 01 00.0 +13
K22A LR LR
comp=Z,2μm,20.0s
K22A Casper 95.56 48 P **P 05 00 46.4 -0.7**
baz=260
N23A Red Feather La 95.68 50 PFAKE 05 01 00.0 +12
N23A LR LR
comp=Z,5μm,22.0s
N23A Red Feather La 95.68 50 P **P 05 00 47.4 -0.4**
baz=260
UZB Uzynbulak 95.73 313 *e*P **P 05 00 46.6 -1.1**
UZB Uzynbulak 95.73 313 *e*P **P 05 00 46.7 -1.1**
ISCO Idaho Springs 95.74 51 *e*P **P 05 00 51.1 +3.0**
comp=Z,8.8nm,1.2s
ISCO LR LR
comp=Z,7μm,22.0s
ISCO Idaho Springs 95.74 51 P **P 05 00 48.1 0.0**
baz=260
POO Poona 95.85 288 *e*P **P 05 00 48.6 -0.1**
POO IAmb IAmb 05 00 49.4
comp=Z,57nm,1.1s
POO IAMs_20 IAMs_20 05 41 42.4
comp=Z,3μm,22.9s
Q24A Divide 95.95 52 PFAKE 05 01 00.0 +11
Q24A LR LR
comp=Z,4μm,22.0s
Q24A Divide 95.95 52 P **P 05 00 49.4 +0.3**
baz=260
DHRM DHARAMSHALA 95.99 302 *e*P **P 05 00 49.5 +0.1**
KPKS Kokpek 96.03 313 *e*P **P 05 00 47.2 -1.8**
KPKS pmax pmax
comp=Z,174nm,4.3s
KPKS Kokpek 96.03 313 *e*P **P 05 00 47.2 -1.8**
comp=Z,174nm,4.3s
PHWY Pilot Hill 96.11 49 PFAKE 05 01 00.0 +10
PHWY LR LR
comp=Z,2μm,19.0s
SATY Saty 96.16 313 *e*P **P 05 00 48.9 -0.8**
SATY pmax pmax
comp=Z,175nm,3.9s
SATY Saty 96.16 313 *e*P **P 05 00 49.0 -0.8**
comp=Z,175nm,3.9s
T25A Trinidad 96.22 53 *e*P **P 05 00 51.0 +0.8**
comp=Z,9.9nm,1.1s
T25A LR LR
comp=Z,3μm,20.0s
T25A Trinidad 96.22 53 P **P 05 00 50.1 -0.1**
baz=260
TARG Taragay, Kyrgy 96.37 311 *e*P **P 05 00 51.0 -0.1**
comp=Z,27nm,1.1s
LAO LASA Array 96.47 44 *e*P **P 05 00 52.6 +1.6**
comp=Z,69nm,1.6s
LAO LR LR
comp=Z,2μm,21.0s
LAO LASA Array 96.47 44 P **P 05 00 51.5 +0.6**
baz=260
NRIK Noril'sk 96.65 339 P **P 05 00 50.0 -1.1**
comp=Z,13nm,0.9s,baz=126,slow=5.0,SNR=8.0
NRIK LR LR 05 41 34.9
comp=Z,3μm,21.8s,baz=104,slow=34
SNAA Sanae 96.80 183 P **P 05 00 50.1 -1.9**
SNAA Sanae 96.80 183 *e*P **P 05 00 49.6 -2.4**
comp=Z,39nm,1.1s
SNAA LR LR
comp=Z,3μm,18.0s
SNAA Sanae 96.80 183↑*e*P **P 05 00 49.6 -2.4**
MSTX Muleshoe 97.03 57 PFAKE 05 01 10.0 +16
MSTX LR LR
comp=Z,5μm,21.0s
MSTX Muleshoe 97.03 57 P **P 05 00 53.8 -0.1**
baz=261
KURK Kurchatov 97.26 320 *e*P **P 05 00 53.0 -1.3**
comp=Z,58nm,1.4s
KURK LR LR
comp=Z,4μm,22.0s
KURK Kurchatov 97.26 320 P **P 05 00 52.6 -1.7**
KURK pmax pmax
comp=Z,28nm,1.3s
KURK Kurchatov 97.26 320 P **P 05 00 53.5 -0.8**
SNR=14
KSH Kashi 97.40 309 P Pdif 05 00 57.2 +1.7
KSH pP pP 05 01 11.7 +1.2
KSH sP sP 05 01 18.6 +2.4
KSH PP **PP 05 04 54.4 +1.3**
KSH SKS **SKSac 05 11 26.7 -1.9**
KSH S **S 05 12 12.2 -3.7**
KSH pmax pmax
comp=Z,23nm,0.7s
KSH pmax pmax
comp=Z,900nm,7.0s
KSH LR LR
comp=Z,3μm,18.0s
KSH LR LR
comp=Z,3μm,19.9s
KSH LR LR
comp=Z,2μm,23.5s
VNA3 Neumayer Olymp 97.50 181 P **P 05 00 53.6 -1.5**
RSSD Black Hills 97.59 47 PFAKE 05 01 10.0 +14
RSSD LR LR
comp=Z,2μm,19.0s
RSSD Black Hills 97.59 47 P **P 05 00 56.2 -0.1**
baz=262
ULHL Ulaahol 97.61 311 P Pdif 05 00 56.9 +0.4
SNR=6.2
VNA2 Neumayer--Watz 97.75 182 P Pdif 05 00 56.4 +0.1
baz=177,slow=4.0
KSCO Kaye Shedlock' 97.90 52 PFAKE 05 01 10.0 +12
KSCO LR LR
comp=Z,3μm,22.0s
KSCO Kaye Shedlock' 97.90 52 P Pdif 05 00 57.9 +0.1
baz=262
VNA1 Neumayer--Stat 98.06 182 P **P 05 00 55.9 -1.6**
AMTX Amarillo 98.06 56 PFAKE 05 01 10.0 +12
AMTX LR LR
comp=Z,4μm,21.0s
AMTX Amarillo 98.06 56 P **P 05 00 58.1 -0.3**
baz=262
DGMT Dagmar 98.10 42 *e*P Pdif 05 00 59.1 +0.8
comp=Z,19nm,1.0s
DGMT LR LR
comp=Z,2μm,22.0s
DGMT Dagmar 98.10 42 P **P 05 00 57.9 -0.3**
baz=262
TKM2 Tokmak 2 98.17 312 P **P 05 00 58.8 -0.2**
SNR=11
TKM2 Tokmak 2 98.17 312 P **P 05 00 57.7 -1.2**
TLIG Tlapa 98.20 74 PFAKE 05 01 10.0 +11
TLIG LR LR
comp=Z,2μm,22.0s
KZA Kyzart 98.31 311 P Pdif 05 01 00.1 +0.3
SNR=6.5
LNIG Linares 98.51 66 PFAKE 05 01 10.0 +9.4
LNIG LR LR
comp=Z,3μm,22.0s
KBK Karagaybulak 98.61 312 P **P 05 01 00.7 -0.2**
SNR=5.6
OGNE Ogallala 98.62 50 PFAKE 05 01 10.0 +9.2
OGNE LR LR
comp=Z,8μm,22.0s
OGNE Ogallala 98.62 50 P **P 05 01 00.4 -0.4**
baz=262
NIL Nilore 98.73 303 *e*P Pdif 05 01 01.5 +0.1
comp=Z,84nm,1.8s
NIL LR LR
comp=Z,600nm,19.0s
NIL Nilore 98.73 303 *e*P Pdif 05 01 01.5 +0.1
NIL pmax pmax
comp=Z,84nm,1.8s
NIL MLR MLR

	comp=Z,600nm,19.0s						
UCH	**Uchtor**	**98.87**	**311**	P	Pdif	05 01 02.6	+0.2
	SNR=9.8						
AAK	**Ala-Archa**	**98.94**	**312**	LR	LR	05 48 44.9	
	comp=Z,685nm,18.2s,baz=74,slow=37						
AAK	**Ala-Archa**	**98.94**	**312**	P	Pdif	05 01 02.5	+0.2
	SNR=6.4						
AAK	**Ala-Archa**	**98.94**	**312**	*e*P	Pdif	05 01 02.4	+0.1
	comp=Z,11nm,0.9s						
AAK				LR	LR		
	comp=Z,1μm,20.0s						
AAK	**Ala-Archa**	**98.94**	**312**	*e*P	Pdif	05 01 02.4	+0.1
AAK				pmax	pmax		
	comp=Z,11nm,0.9s						
AAK				MLR	MLR		
	comp=Z,1μm,20.0s						
AAK	**Ala-Archa**	**98.94**	**312**	Pdiff	**P**	**05 01 01.9**	**-0.4**
	SNR=7.4						
JCT	**Junction City**	**99.01**	**61**	PFAKE		05 01 10.0	+7.2
JCT				LR	LR		
	comp=Z,5μm,20.0s						
JCT	**Junction City**	**99.01**	**61**	P	**Pdif**	**05 01 01.5**	**-1.2**
	baz=262						
833A	**Chaparral WMA,**	**99.07**	**63**	PFAKE		05 01 10.0	+7.0
833A				LR	LR		
	comp=Z,2μm,18.0s						
833A	**Chaparral WMA,**	**99.07**	**63**	P	**Pdif**	**05 01 02.5**	**-0.4**
	baz=262						
ABTX	**Abilene, Hawle**	**99.43**	**59**	PFAKE		05 01 20.0	+15
ABTX				LR	LR		
	comp=Z,6μm,22.0s						
ABTX	**Abilene, Hawle**	**99.43**	**59**	P	**Pdif**	**05 01 04.0**	**-0.6**
	baz=262						
EKS2	**Erkin-Say**	**99.47**	**312**	P	**Pdif**	**05 01 05.0**	**+0.4**
	SNR=5.7						
CBKS	**Cedar Bluff**	**100.11**	**52**	P	**Pdif**	**05 01 06.8**	**-0.7**
	baz=264						
FFC	**Flin Flon**	**100.20**	**36**	*e*Pdif	**Pdif**	**05 01 07.0**	**-0.4**
FFC				LR	LR		
	comp=Z,6μm,22.0s						
FFC	**Flin Flon**	**100.20**	**36**	*e*P	**Pdif**	**05 01 07.0**	**-0.4**
FFC				MLR	MLR		
	comp=Z,6μm,22.0s						
WMOK	**Wichita Mounta**	**100.41**	**57**	PFAKE		05 01 20.0	+11
WMOK				LR	LR		
	comp=Z,6μm,22.0s						
WMOK	**Wichita Mounta**	**100.41**	**57**	P	**Pdif**	**05 01 08.4**	**-0.4**
	baz=263						
U32A	**Winter Ranch,**	**100.42**	**55**	PFAKE		05 01 20.0	+11
U32A				LR	LR		
	comp=Z,4μm,21.0s						
BHJ	**Bhuj**	**100.46**	**292**	*e*P	**Pdif**	**05 01 09.1**	**-0.2**
BHJ				IAmb	IAmb	05 01 26.4	
	comp=Z,54nm,1.1s						
LVIG	**Laguna Verde**	**100.54**	**72**	PFAKE		05 01 20.0	+10
LVIG				LR	LR		
	comp=Z,2μm,18.0s						
435B	**Jarrell**	**100.95**	**61**	PFAKE		05 01 20.0	+8.7
435B				LR	LR		
	comp=Z,5μm,20.0s						
435B	**Jarrell**	**100.95**	**61**	P	**Pdif**	**05 01 10.1**	**-1.2**
	baz=263						
MDND	**Maddock**	**101.09**	**43**	PFAKE		05 01 20.0	+8.5
MDND				LR	LR		
	comp=Z,2μm,21.0s						
MDND	**Maddock**	**101.09**	**43**	P	**Pdif**	**05 01 09.7**	**-1.9**
	baz=265						
WHTX	**Lake Whitney,**	**101.20**	**59**	PFAKE		05 01 20.0	+7.6
WHTX				LR	LR		
	comp=Z,4μm,20.0s						
WHTX	**Lake Whitney,**	**101.20**	**59**	P	**Pdif**	**05 01 11.9**	**-0.4**
	baz=264						
SUSD	**Miller**	**101.25**	**47**	P	**Pdif**	**05 01 11.5**	**-0.9**
	baz=265						
BTK	**Batken**	**101.41**	**309**	PFAKE		05 01 30.0	+17
BTK				LR	LR		
	comp=Z,1μm,21.0s						
BGNE	**Belgrade**	**101.58**	**50**	PFAKE		05 01 30.0	+16
BGNE				LR	LR		
	comp=Z,4μm,20.0s						
KK31	**Karatay Array**	**101.90**	**312**	*i* P	**Pdif**	**05 01 14.5**	**-0.8**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	**Karatay Array**	**101.90**	**312**	*e*Pdif	**Pdif**	**05 01 15.0**	**-0.3**
KKAR	**Karatay Array**	**101.90**	**312**	*e*P	**Pdif**	**05 01 15.0**	**-0.3**
HKT	**Hockley**	**102.36**	**62**	PFAKE		05 01 30.0	+13
HKT				LR	LR		
	comp=Z,3μm,20.0s						
KSU1	**Kansas State U**	**102.56**	**52**	PFAKE		05 01 30.0	+12
KSU1				LR	LR		
	comp=Z,3μm,21.0s						
KSU1	**Kansas State U**	**102.56**	**52**	P	**Pdif**	**05 01 18.7**	**+0.4**
	baz=266						
BRVK	**Borovoye**	**102.63**	**322**	*e*Pdif	**Pdif**	**05 01 17.7**	**-0.5**
BRVK				LR	LR		
	comp=Z,3μm,22.0s						
BRVK	**Borovoye**	**102.63**	**322**	P	**Pdif**	**05 01 16.4**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,14nm,1.4s						
ECSD	**EROS Data Cent**	**102.88**	**48**	PFAKE		05 01 30.0	+10
ECSD				LR	LR		
	comp=Z,2μm,20.0s						
ECSD	**EROS Data Cent**	**102.88**	**48**	P	**Pdif**	**05 01 18.7**	**-0.9**
	baz=266						
TUL1	**Leonard**	**102.96**	**56**	PFAKE		05 01 30.0	+10
TUL1				LR	LR		
	comp=Z,5μm,22.0s						
TUL1	**Leonard**	**102.96**	**56**	P	**Pdif**	**05 01 19.4**	**-0.7**
	baz=265						
X37A	**Clayton**	**103.19**	**57**	PFAKE		05 01 30.0	+8.8
X37A				LR	LR		
	comp=Z,5μm,22.0s						
RES	**Resolute Bay**	**103.25**	**16**	PFAKE		05 01 30.0	+9.5
RES				LR	LR		
	comp=Z,3μm,22.0s						
NATX	**Nacogdoches**	**103.54**	**60**	PFAKE		05 01 30.0	+7.2
NATX				LR	LR		
	comp=Z,4μm,22.0s						
NATX	**Nacogdoches**	**103.54**	**60**	P	**Pdif**	**05 01 21.2**	**-1.6**
	baz=265						
AGMN	**Agassiz Nation**	**103.62**	**43**	PFAKE		05 01 30.0	+7.2
AGMN				LR	LR		
	comp=Z,2μm,22.0s						
AGMN	**Agassiz Nation**	**103.62**	**43**	P	**Pdif**	**05 01 21.9**	**-0.8**
	baz=268						
ULM	**Lac du Bonnet**	**103.67**	**41**	PFAKE		05 01 40.0	+17
ULM				LR	LR		
	comp=Z,2μm,22.0s						
HHAR	**Hobbs**	**104.48**	**55**	PFAKE		05 01 40.0	+13
HHAR				LR	LR		
	comp=Z,4μm,21.0s						
W39A	**Magazine**	**104.53**	**56**	PFAKE		05 01 40.0	+13
W39A				LR	LR		
	comp=Z,4μm,22.0s						
W39A	**Magazine**	**104.53**	**56**	P	**Pdif**	**05 01 27.1**	**-0.1**
	baz=266						
FCC	**Fort Churchill**	**104.65**	**32**	PFAKE		05 01 40.0	+13
FCC				LR	LR		
	comp=Z,6μm,21.0s						
MIAR	**Mount Ida**	**104.66**	**57**	PFAKE		05 01 40.0	+12
MIAR				LR	LR		
	comp=Z,6μm,21.0s						
MIAR	**Mount Ida**	**104.66**	**57**	P	**Pdif**	**05 01 28.0**	**+0.3**
	baz=266						
WLAR	**White Oak Lake**	**104.99**	**58**	PFAKE		05 01 40.0	+11
WLAR				LR	LR		
	comp=Z,3μm,21.0s						
Z41A	**Richland Creek**	**105.22**	**59**	PFAKE		05 06 00.0	+16
Z41A				LR	LR		
	comp=Z,4μm,21.0s						
Z41A	**Richland Creek**	**105.22**	**59**	P	**PKiKP**	**05 05 45.4**	**+1.1**
	baz=266						
X40A	**Basin Creek Fa**	**105.27**	**57**	PFAKE		05 06 00.0	+16
X40A				LR	LR		
	comp=Z,4μm,21.0s						
X40A	**Basin Creek Fa**	**105.27**	**57**	P	**PKiKP**	**05 05 45.9**	**+1.5**
	baz=266						
SCIA	**State Center**	**105.30**	**50**	PFAKE		05 06 00.0	+16
SCIA				LR	LR		
	comp=Z,5μm,21.0s						
SCIA	**State Center**	**105.30**	**50**	P	**PKiKP**	**05 05 45.6**	**+1.3**
	baz=268						
U40A	**Yellville**	**105.36**	**55**	P	**PKiKP**	**05 05 45.3**	**+0.8**
	baz=267						
SPMN	**Marine on St.**	**105.66**	**46**	PFAKE		05 06 00.0	+15
SPMN				LR	LR		
	comp=Z,3μm,20.0s						
SPMN	**Marine on St.**	**105.66**	**46**	P	**PKiKP**	**05 05 45.5**	**+0.7**
	baz=270						
UALR	**University of**	**105.69**	**57**	PFAKE		05 06 00.0	+15
UALR				LR	LR		
	comp=Z,5μm,20.0s						
WHAR	**Wooly Hollow**	**105.76**	**56**	PFAKE		05 06 00.0	+15
WHAR				LR	LR		
	comp=Z,7μm,22.0s						
F37A	**Hinrichs Farm,**	**105.79**	**46**	P	**PKiKP**	**05 05 46.8**	**+1.8**
	baz=270						
W41B	**Gary Mavity, V**	**105.79**	**57**	PFAKE		05 06 00.0	+15
W41B				LR	LR		
	comp=Z,7μm,20.0s						
W41B	**Gary Mavity, V**	**105.79**	**57**	P	**PKiKP**	**05 05 46.5**	**+1.1**
	baz=267						
H38A	**Maiden Rock**	**106.03**	**47**	P	**PKiKP**	**05 05 47.7**	**+2.2**
	baz=270						
CCAR	**Cane Creek**	**106.12**	**58**	PFAKE		05 06 00.0	+14
CCAR				LR	LR		
	comp=Z,4μm,20.0s						
F38A	**Pierce - Schro**	**106.31**	**45**	P	**PKiKP**	**05 05 48.2**	**+2.2**
	baz=270						
G38A	**Ridgeland**	**106.33**	**46**	P	**PKiKP**	**05 05 45.0**	**-1.1**
	baz=270						
N40A	**Mertquake, Sal**	**106.50**	**51**	P	**PKiKP**	**05 05 47.0**	**+0.5**
	baz=269						
E38A	**The Farm, Brul**	**106.53**	**45**	PFAKE		05 06 00.0	+14
E38A				LR	LR		
	comp=Z,2μm,19.0s						
E38A	**The Farm, Brul**	**106.53**	**45**	P	**PKiKP**	**05 05 47.0**	**+0.6**
	baz=271						
EYMN	**Ely**	**106.55**	**43**	PFAKE		05 06 00.0	+14
EYMN				LR	LR		
	comp=Z,2μm,21.0s						
EYMN	**Ely**	**106.55**	**43**	P	**PKiKP**	**05 05 48.7**	**+2.3**
	baz=271						
I39A	**Houston**	**106.57**	**48**	PFAKE		05 06 00.0	+13
I39A				LR	LR		
	comp=Z,2μm,18.0s						
I39A	**Houston**	**106.57**	**48**	P	**PKiKP**	**05 05 49.5**	**+3.0**
	baz=270						
CCM	**Cathedral Cave**	**106.71**	**54**	PFAKE		05 06 00.0	+13
CCM				LR	LR		
	comp=Z,4μm,22.0s						
CCM	**Cathedral Cave**	**106.71**	**54**	P	**PKiKP**	**05 05 48.2**	**+1.2**
	baz=268						
H39A	**Augusta**	**106.74**	**47**	P	**PKiKP**	**05 05 44.9**	**-1.9**
	baz=270						
L40A	**Anamosa**	**106.79**	**49**	PFAKE		05 06 00.0	+13
L40A				LR	LR		
	comp=Z,4μm,18.0s						
L40A	**Anamosa**	**106.79**	**49**	P	**PKiKP**	**05 05 45.0**	**-2.0**
	baz=270						
G39A	**Holcombe**	**106.81**	**46**	P	**PKiKP**	**05 05 46.7**	**-0.2**
	baz=271						
X43A	**Marvell**	**106.88**	**57**	PFAKE		05 06 00.0	+13
X43A				LR	LR		
	comp=Z,3μm,21.0s						
X43A	**Marvell**	**106.88**	**57**	P	**PKiKP**	**05 05 50.1**	**+2.7**
	baz=268						
MYIG	**Mrida**	**106.91**	**71**	PFAKE		05 06 00.0	+12
MYIG				LR	LR		
	comp=Z,2μm,22.0s						
F39A	**Loretta**	**106.98**	**45**	P	**PKiKP**	**05 05 49.5**	**+2.2**
	baz=271						
N41A	**Harden Midland**	**107.06**	**51**	PFAKE		05 06 00.0	+12
N41A				LR	LR		
	comp=Z,6μm,22.0s						
VBMS	**Vicksburg**	**107.08**	**60**	PFAKE		05 06 00.0	+12
VBMS				LR	LR		
	comp=Z,4μm,22.0s						
HBAR	**Harrisburg**	**107.11**	**56**	PFAKE		05 06 00.0	+12
HBAR				LR	LR		
	comp=Z,6μm,21.0s						
J40A	**Soldiers Grove**	**107.14**	**48**	P	**PKiKP**	**05 05 44.9**	**-2.8**
	baz=270						
E39A	**Mellen**	**107.22**	**45**	P	**PKiKP**	**05 05 46.6**	**-1.0**
	baz=272						
I40A	**Norwalk**	**107.23**	**48**	P	**PKiKP**	**05 05 48.3**	**+0.5**
	baz=271						
PBMO	**Poplar Bluff**	**107.33**	**55**	PFAKE		05 06 00.0	+12
PBMO				LR	LR		
	comp=Z,5μm,20.0s						
FVM	**French Village**	**107.35**	**54**	PFAKE		05 06 00.0	+12
FVM				LR	LR		
	comp=Z,4μm,22.0s						
H40A	**Chili**	**107.38**	**47**	P	**PKiKP**	**05 05 46.1**	**-1.9**
	baz=271						
G40A	**Rib Lake**	**107.50**	**46**	PFAKE		05 06 00.0	+12
G40A				LR	LR		
	comp=Z,2μm,20.0s						
G40A	**Rib Lake**	**107.50**	**46**	P	**PKiKP**	**05 05 50.4**	**+2.2**
	baz=271						
JFWS	**Jewell Farm**	**107.51**	**49**	PFAKE		05 06 00.0	+12
JFWS				LR	LR		
	comp=Z,3μm,19.0s						
JFWS	**Jewell Farm**	**107.51**	**49**	P	**PKiKP**	**05 05 48.0**	**-0.3**
	baz=271						
SLM	**Saint Louis**	**107.51**	**53**	PFAKE		05 06 00.0	+12
SLM				LR	LR		
	comp=Z,5μm,21.0s						
F40A	**Park Falls**	**107.54**	**45**	P	**PKiKP**	**05 05 46.4**	**-1.9**
	baz=272						
GNAR	**Gosnell**	**107.64**	**56**	PFAKE		05 06 00.0	+11
GNAR				LR	LR		
	comp=Z,4μm,20.0s						
J41A	**Loganville**	**107.67**	**48**	P	**PKiKP**	**05 05 48.3**	**-0.3**
	baz=271						
MET	**Memphis--Engin**	**107.68**	**57**	PFAKE		05 06 00.0	+11
MET				LR	LR		
	comp=Z,5μm,22.0s						
I41A	**Arkdale**	**107.76**	**47**	PFAKE		05 06 00.0	+11
I41A				LR	LR		
	comp=Z,3μm,21.0s						
I41A	**Arkdale**	**107.76**	**47**	P	**PKiKP**	**05 05 49.3**	**+0.5**
	baz=271						
PARMO	**Parma**	**107.87**	**55**	PFAKE		05 06 00.0	+11
PARMO				LR	LR		
	comp=Z,3μm,19.0s						
PVMO	**Portageville**	**107.90**	**55**	PFAKE		05 06 00.0	+11
PVMO				LR	LR		
	comp=Z,2μm,22.0s						
H41A	**Junction City**	**107.91**	**47**	PFAKE		05 06 00.0	+11
H41A				LR	LR		
	comp=Z,5μm,22.0s						
L42A	**Oliver, Polo**	**107.95**	**49**	PFAKE		05 06 00.0	+11
L42A				LR	LR		
	comp=Z,6μm,22.0s						
CSGN	**Cosiguina Volc**	**108.03**	**80**	PFAKE		05 06 00.0	+10
CSGN				LR	LR		
	comp=Z,2μm,22.0s						
OXF	**Oxford**	**108.10**	**57**	PFAKE		05 06 00.0	+10
OXF				LR	LR		
	comp=Z,3μm,20.0s						
C40A	**Isle Royale Na**	**108.12**	**43**	PFAKE		05 06 00.0	+11
C40A				LR	LR		
	comp=Z,2μm,20.0s						
HALT	**Halls**	**108.19**	**56**	PFAKE		05 06 00.0	+10
HALT				LR	LR		
	comp=Z,5μm,22.0s						
TEIG	**Tepich**	**108.20**	**72**	PFAKE		05 06 00.0	+10
TEIG				LR	LR		
	comp=Z,2μm,22.0s						
COWI	**Conover**	**108.22**	**45**	PFAKE		05 06 00.0	+10
COWI				LR	LR		
	comp=Z,4μm,22.0s						
GLAT	**Glass**	**108.23**	**55**	PFAKE		05 06 00.0	+10
GLAT				LR	LR		
	comp=Z,4μm,22.0s						
HDIL	**Hopedale**	**108.25**	**51**	PFAKE		05 06 00.0	+10
HDIL				LR	LR		
	comp=Z,7μm,22.0s						
F41A	**Three Lakes**	**108.25**	**46**	PFAKE		05 06 00.0	+10
F41A				LR	LR		
	comp=Z,4μm,20.0s						
SIUC	**Southern Illin**	**108.31**	**54**	PFAKE		05 06 00.0	+10
SIUC				LR	LR		
	comp=Z,6μm,21.0s						
TGUH	**Tegucigalpa,Un**	**108.45**	**79**	PFAKE		05 06 00.0	+9.0
TGUH				LR	LR		
	comp=Z,3μm,22.0s						
I42A	**Draeger Farm,**	**108.46**	**47**	PFAKE		05 06 00.0	+10
I42A				LR	LR		
	comp=Z,2μm,20.0s						
D41A	**Chassel**	**108.56**	**44**	PFAKE		05 06 00.0	+10
D41A				LR	LR		
	comp=Z,4μm,22.0s						
H42A	**Shiocton**	**108.71**	**47**	PFAKE		05 06 00.0	+9.5
H42A				LR	LR		
	comp=Z,4μm,21.0s						
T45A	**Paducah**	**108.76**	**55**	PFAKE		05 06 00.0	+9.2
T45A				LR	LR		
	comp=Z,4μm,18.0s						
TULEG	**Thule**	**108.80**	**12**	PFAKE		05 06 00.0	+10
TULEG				LR	LR		
	comp=Z,2μm,20.0s						
K43A	**Burlington**	**108.92**	**49**	PFAKE		05 06 00.0	+9.0
K43A				LR	LR		
	comp=Z,4μm,19.0s						
M44A	**Midewin, Midew**	**109.18**	**50**	PFAKE		05 06 00.0	+8.5
M44A				LR	LR		
	comp=Z,4μm,21.0s						
OLIL	**Olney**	**109.19**	**53**	PFAKE		05 06 00.0	+8.4
OLIL				LR	LR		
	comp=Z,4μm,21.0s						
ESTN	**Estel**	**109.20**	**80**	PFAKE		05 06 00.0	+7.6
ESTN				LR	LR		
	comp=Z,600nm,19.0s						
PLAL	**Pickwick Lake**	**109.20**	**57**	PFAKE		05 06 00.0	+8.3
PLAL				LR	LR		
	comp=Z,4μm,22.0s						
ARU	**Arti**	**109.23**	**326**	PFAKE		05 06 00.0	+8.9
ARU				LR	LR		
	comp=Z,2μm,21.0s						
H43A	**Windswept, Lux**	**109.26**	**47**	PFAKE		05 06 00.0	+8.5
H43A				LR	LR		
	comp=Z,4μm,22.0s						
G43A	**Wallace**	**109.27**	**46**	PFAKE		05 06 00.0	+8.5
G43A				LR	LR		
	comp=Z,2μm,22.0s						
MSEY	**Mahe Island**	**109.36**	**261**	PFAKE		05 06 10.0	+17
MSEY				LR	LR		
	comp=Z,3μm,21.0s						
WVT	**Waverly**	**109.41**	**56**	PFAKE		05 06 00.0	+7.9
WVT				LR	LR		
	comp=Z,4μm,21.0s						
P45A	**Graceland, Par**	**109.45**	**52**	PFAKE		05 06 00.0	+8.0
P45A				LR	LR		
	comp=Z,4μm,20.0s						
USIN	**University of**	**109.53**	**54**	PFAKE		05 06 00.0	+7.7
USIN				LR	LR		
	comp=Z,7μm,22.0s						
E43A	**Lone Tree Farm**	**109.69**	**45**	PFAKE		05 06 00.0	+7.7
E43A				LR	LR		
	comp=Z,2μm,21.0s						
SFIN	**Lafayette**	**109.92**	**51**	PFAKE		05 06 10.0	+17
SFIN				LR	LR		
	comp=Z,5μm,22.0s						
T47A	**Sharon Grove**	**109.99**	**55**	PFAKE		05 06 10.0	+17
T47A				LR	LR		
	comp=Z,3μm,22.0s						
BRAL	**Brewton**	**110.00**	**61**	PFAKE		05 06 10.0	+17
BRAL				LR	LR		
	comp=Z,2μm,22.0s						
X48A	**Hartselle**	**110.05**	**57**	PFAKE		05 06 10.0	+17
X48A				LR	LR		
	comp=Z,3μm,22.0s						
LRAL	**Lakeview Retre**	**110.08**	**59**	PFAKE		05 06 10.0	+17
LRAL				LR	LR		
	comp=Z,5μm,20.0s						
S47A	**Hartford**	**110.16**	**54**	P	**PKiKP**	**05 05 52.2**	**-1.3**
	baz=271						
JTS	**Las Juntas de**	**110.18**	**83**	PFAKE		05 06 10.0	+16
JTS				LR	LR		
	comp=Z,2μm,19.0s						
ACON	**Acoyapa**	**110.20**	**81**	PFAKE		05 06 10.0	+16
ACON				LR	LR		
	comp=Z,700nm,19.0s						
V48A	**Smith Brothers**	**110.23**	**56**	PFAKE		05 06 10.0	+16
V48A				LR	LR		
	comp=Z,4μm,21.0s						
J45A	**Montague**	**110.31**	**48**	PFAKE		05 06 10.0	+16
J45A				LR	LR		
	comp=Z,2μm,20.0s						
I45A	**Fountain**	**110.38**	**47**	PFAKE		05 06 10.0	+16
I45A				LR	LR		
	comp=Z,2μm,20.0s						
BLO	**Bloomington**	**110.41**	**52**	PFAKE		05 06 10.0	+16
BLO				LR	LR		
	comp=Z,4μm,19.0s						
E44A	**Grand Marais A**	**110.41**	**44**	PFAKE		05 06 10.0	+16
E44A				LR	LR		
	comp=Z,2μm,20.0s						
R47A	**Wooly Knot Far**	**110.43**	**53**	P	**PKiKP**	**05 05 56.7**	**+2.8**
	baz=272						
M46A	**Old House Fiel**	**110.45**	**50**	PFAKE		05 06 10.0	+16
M46A				LR	LR		
	comp=Z,6μm,22.0s						
L46A	**Eue Claire**	**110.46**	**49**	PFAKE		05 06 10.0	+16
L46A				LR	LR		
	comp=Z,5μm,22.0s						
Y49A	**Blount Mountai**	**110.57**	**58**	PFAKE		05 06 10.0	+16
Y49A				LR	LR		
	comp=Z,3μm,20.0s						
WCI	**Wyandotte Cave**	**110.61**	**53**	PFAKE		05 06 10.0	+16
WCI				LR	LR		
	comp=Z,8μm,22.0s						
CLTN	**Cedars of Leba**	**110.63**	**56**	PFAKE		05 06 10.0	+16
CLTN				LR	LR		
	comp=Z,2μm,20.0s						
250A	**Grady**	**110.68**	**60**	PFAKE		05 06 10.0	+15
250A				LR	LR		
	comp=Z,2μm,22.0s						
G45A	**Suttons Bay**	**110.72**	**46**	PFAKE		05 06 10.0	+16
G45A				LR	LR		
	comp=Z,4μm,22.0s						
HDC	**Heredia**	**110.95**	**84**	PFAKE		05 06 10.0	+14
HDC				LR	LR		
	comp=Z,2μm,21.0s						
SWET	**Sewanee**	**110.96**	**57**	PFAKE		05 06 10.0	+15
SWET				LR	LR		
	comp=Z,5μm,22.0s						
Z50A	**Ashland**	**110.98**	**59**	PFAKE		05 06 10.0	+15
Z50A				LR	LR		
	comp=Z,4μm,21.0s						
ESPN	**Las Esperanzas**	**111.08**	**81**	PFAKE		05 06 10.0	+14
ESPN				LR	LR		
	comp=Z,1μm,19.0s						
GYA0B	**ALIBECK ARRAY**	**111.24**	**306**	PFAKE		05 06 10.0	+14
GYA0B				LR	LR		
	comp=Z,900nm,20.0s						
T49A	**Edmonton**	**111.25**	**55**	PFAKE		05 06 10.0	+14
T49A				LR	LR		
	comp=Z,5μm,22.0s						
KBS	**Kingsbay**	**111.32**	**355**	PFAKE		05 06 10.0	+15
KBS				LR	LR		
	comp=Z,2μm,20.0s						
J47A	**Sunmer**	**111.46**	**48**	PFAKE		05 06 10.0	+14
J47A				LR	LR		
	comp=Z,2μm,19.0s						
W50A	**Signal Mountai**	**111.47**	**57**	PFAKE		05 06 10.0	+14
W50A				LR	LR		
	comp=Z,4μm,21.0s						
GLMI	**Grayling**	**111.48**	**46**	PFAKE		05 06 10.0	+14
GLMI				LR	LR		
	comp=Z,3μm,21.0s						
E46A	**Sault Ste Mari**	**111.54**	**45**	PFAKE		05 06 10.0	+14
E46A				LR	LR		
	comp=Z,3μm,20.0s						
I47A	**Gladwin**	**111.62**	**47**	PFAKE		05 06 10.0	+14
I47A				LR	LR		
	comp=Z,3μm,20.0s						
M48A	**Edgerton**	**111.67**	**50**	PFAKE		05 06 10.0	+14
M48A				LR	LR		
	comp=Z,5μm,22.0s						
352A	**Blakely**	**111.82**	**61**	PFAKE		05 06 10.0	+13
352A				LR	LR		
	comp=Z,2μm,20.0s						
X51A	**Calhoun**	**111.86**	**57**	PFAKE		05 06 10.0	+13
X51A				LR	LR		
	comp=Z,4μm,21.0s						
152A	**Waverly Hall**	**111.99**	**59**	PFAKE		05 06 10.0	+13
152A				LR	LR		
	comp=Z,6μm,22.0s						
O49A	**Covington**	**112.04**	**51**	PFAKE		05 06 10.0	+13
O49A				LR	LR		
	comp=Z,3μm,21.0s						
CPCT	**Cooper Cave**	**112.11**	**56**	PFAKE		05 06 10.0	+13
CPCT				LR	LR		
	comp=Z,4μm,21.0s						

N49A	Columbus Grove	112.11	50	PFAKE		05 06 10.0	+13
N49A				LR	LR		
comp=Z,6μm,22.0s							
J48A	Bridge Port	112.21	48	PFAKE		05 06 10.0	+13
J48A				LR	LR		
comp=Z,2μm,20.0s							
V51A	Loudon	112.24	56	PFAKE		05 06 10.0	+13
V51A				LR	LR		
comp=Z,4μm,22.0s							
453A	Whigham	112.34	61	PFAKE		05 06 10.0	+12
453A				LR	LR		
comp=Z,2μm,20.0s							
AAM	Ann Arbor	112.40	49	PFAKE		05 06 10.0	+12
AAM				LR	LR		
comp=Z,5μm,22.0s							
H48A	Harrisville	112.41	46	PFAKE		05 06 10.0	+13
H48A				LR	LR		
comp=Z,3μm,21.0s							
253A	Americus	112.50	60	PFAKE		05 06 10.0	+12
253A				LR	LR		
comp=Z,3μm,22.0s							
SOHO	SOHO	112.51	291	PKiKP	PKiKP	05 05 57.8	-0.5
SNR=6.2							
Y52A	Lilburn	112.53	58	PFAKE		05 06 10.0	+12
Y52A				LR	LR		
comp=Z,4μm,20.0s							
W52A	Murphy	112.61	57	PFAKE		05 06 10.0	+12
W52A				LR	LR		
comp=Z,3μm,21.0s							
S51A	Beattyville	112.77	54	PFAKE		05 06 10.0	+12
S51A				LR	LR		
comp=Z,5μm,22.0s							
I49A	Point Hope	112.84	47	PFAKE		05 06 10.0	+12
I49A				LR	LR		
comp=Z,4μm,22.0s							
V52A	Sevierville	112.85	56	PFAKE		05 06 10.0	+11
V52A				LR	LR		
comp=Z,4μm,22.0s							
TZTN	Tazewell	112.86	55	PFAKE		05 06 10.0	+11
TZTN				LR	LR		
comp=Z,4μm,22.0s							
Q51A	Peebles	112.88	52	PFAKE		05 06 10.0	+11
Q51A				LR	LR		
comp=Z,7μm,20.0s							
M50A	Fremont	112.93	50	PFAKE		05 06 10.0	+11
M50A				LR	LR		
comp=Z,7μm,22.0s							
TIGA	Tifton	112.96	61	PFAKE		05 06 10.0	+11
TIGA				LR	LR		
comp=Z,1μm,18.0s							
GOGA	Godfrey	113.03	59	PFAKE		05 06 10.0	+11
GOGA				LR	LR		
comp=Z,3μm,20.0s							
P51A	Williamsport	113.07	52	PFAKE		05 06 10.0	+11
P51A				LR	LR		
comp=Z,3μm,21.0s							
ACSO	Alum Creek Sta	113.07	51	PFAKE		05 06 10.0	+11
ACSO				LR	LR		
comp=Z,4μm,20.0s							
K50A	Casco	113.11	48	PFAKE		05 06 10.0	+11
K50A				LR	LR		
comp=Z,3μm,20.0s							
NNA	Nana	113.13	108	PFAKE		05 06 10.0	+10
NNA				LR	LR		
comp=Z,3μm,21.0s							
T52A	Hallie	113.28	54	PFAKE		05 06 10.0	+11
T52A				LR	LR		
comp=Z,5μm,21.0s							
154A	Montrose	113.35	59	PFAKE		05 06 10.0	+10
154A				LR	LR		
comp=Z,5μm,21.0s							
N51A	Ashland	113.48	50	PFAKE		05 06 10.0	+10
N51A				LR	LR		
comp=Z,4μm,21.0s							
V53A	Saluda	113.50	56	PFAKE		05 06 10.0	+10
V53A				LR	LR		
comp=Z,4μm,21.0s							
555A	McAlpin	113.50	62	PFAKE		05 06 10.0	+10
555A				LR	LR		
comp=Z,2μm,20.0s							
ASUD	Al Ashush, Dub	113.63	292	PKiKP	PKiKP	05 05 59.6	-0.8
656A	Willston	113.88	63	PFAKE		05 06 10.0	+9.3
656A				LR	LR		
comp=Z,2μm,21.0s							
255A	Hazlehurst	113.90	60	PFAKE		05 06 10.0	+9.3
255A				LR	LR		
comp=Z,2μm,20.0s							
O52A	Adamsville	113.96	51	PFAKE		05 06 10.0	+9.4
O52A				LR	LR		
comp=Z,4μm,20.0s							
R53A	Hurricane	114.02	53	PFAKE		05 06 10.0	+9.2
R53A				LR	LR		
comp=Z,7μm,22.0s							
957A	Wimauma	114.14	65	PFAKE		05 06 10.0	+8.7
957A				LR	LR		
comp=Z,2μm,20.0s							
M52A	Chesterland	114.18	50	PFAKE		05 06 10.0	+9.0
M52A				LR	LR		
comp=Z,7μm,22.0s							
U54A	Nelsons Funny	114.25	55	PFAKE		05 06 10.0	+8.6
U54A				LR	LR		
comp=Z,4μm,21.0s							
PRGR	Permogore	114.30	333	*e*PKIKP	PKPdf	05 05 57.5	-3.0
PRGR				pmax	pmax		
comp=Z,10.0nm,0.4s							
456A	Hilliard	114.31	61	PFAKE		05 06 10.0	+8.5
456A				LR	LR		
comp=Z,2μm,22.0s							
PAULI	Pauline	114.35	57	PFAKE		05 06 10.0	+8.5
PAULI				LR	LR		
comp=Z,4μm,22.0s							
P53A	Whipple	114.36	52	PFAKE		05 06 10.0	+8.6
P53A				LR	LR		
comp=Z,4μm,20.0s							
DAG	Danmarks Havn	114.59	1	*i* PKIKP	PKiKP	05 05 59.6	-1.2
DAG				MLR	MLR		
comp=Z,4μm,22.0s							
DAG	Danmarks Havn	114.59	1	*i* P	PKiKP	05 05 59.6	-1.2
comp=Z,3μm,22.0s							
N53A	Lisbon	114.65	50	PFAKE		05 06 10.0	+8.1
N53A				LR	LR		
comp=Z,3μm,22.0s							
KMSC	Kings Mountain	114.73	57	PFAKE		05 06 10.0	+7.8
KMSC				LR	LR		
comp=Z,4μm,21.0s							
OTAV	Otavalo	114.77	95	PFAKE		05 06 20.0	+16
OTAV				LR	LR		
comp=Z,900nm,21.0s							
Z56A	Williston	114.79	59	PFAKE		05 06 10.0	+7.6
Z56A				LR	LR		
comp=Z,4μm,21.0s							
Q54A	Coxs Mills	114.83	52	PFAKE		05 06 10.0	+7.7
Q54A				LR	LR		
comp=Z,6μm,20.0s							
JSC	Jenkinsville	114.84	57	PFAKE		05 06 10.0	+7.6
JSC				LR	LR		
comp=Z,5μm,22.0s							
DWPF	Disney Wildern	114.85	64	PFAKE		05 06 20.0	+17
DWPF				LR	LR		
comp=Z,2μm,22.0s							
658A	Bunnell	115.00	63	PFAKE		05 06 20.0	+17
658A				LR	LR		
comp=Z,1μm,18.0s							
ALLY	Alegheny Colle	115.07	49	PFAKE		05 06 20.0	+17
ALLY				LR	LR		
comp=Z,7μm,22.0s							
059A	Moore Haven	115.10	66	PFAKE		05 06 20.0	+17
059A				LR	LR		
comp=Z,2μm,20.0s							
ERPA	Erie	115.12	49	PFAKE		05 06 20.0	+17
ERPA				LR	LR		
comp=Z,4μm,22.0s							
257A	Skidaway Islan	115.13	60	PFAKE		05 06 20.0	+17
257A				LR	LR		
comp=Z,2μm,21.0s							
N54A	Moraine State	115.27	50	PFAKE		05 06 20.0	+17
N54A				LR	LR		
comp=Z,4μm,22.0s							
061Z	Ochoppi	115.31	67	PFAKE		05 06 20.0	+16
061Z				LR	LR		
comp=Z,1μm,20.0s							
BLA	Blacksburg	115.32	54	PFAKE		05 06 20.0	+17
BLA				LR	LR		
comp=Z,4μm,22.0s							
V56A	Mocksville	115.37	56	PFAKE		05 06 20.0	+17
V56A				LR	LR		
comp=Z,4μm,22.0s							
LVZ	Lovozero	115.37	342	PFAKE		05 06 10.0	+7.5
LVZ				LR	LR		
comp=Z,5μm,22.0s							
M54A	Oil Creek Stat	115.44	49	PFAKE		05 06 20.0	+17
M54A				LR	LR		
comp=Z,6μm,21.0s							
BIRD	Birdtown, Kers	115.47	57	PFAKE		05 06 20.0	+16
BIRD				LR	LR		
comp=Z,5μm,22.0s							
MCWV	Mont Chateau	115.53	51	PFAKE		05 06 20.0	+16
MCWV				LR	LR		
comp=Z,1μm,20.0s							
Y57A	Sumter	115.57	58	PFAKE		05 06 20.0	+16
Y57A				LR	LR		
comp=Z,5μm,20.0s							
NHSC	New Hope	115.80	59	PFAKE		05 06 20.0	+16
NHSC				LR	LR		
comp=Z,4μm,21.0s							
060A	Indiantown	115.80	65	PFAKE		05 06 20.0	+16
060A				LR	LR		
comp=Z,2μm,21.0s							
W57A	Gilead	115.83	56	PFAKE		05 06 20.0	+16
W57A				LR	LR		
comp=Z,4μm,22.0s							
D53A	Lac Vacive, Po	115.92	43	PFAKE		05 06 20.0	+16
D53A				LR	LR		
comp=Z,2μm,20.0s							
J54A	Appleton	115.94	47	PFAKE		05 06 20.0	+16
J54A				LR	LR		
comp=Z,4μm,22.0s							
N55A	Marion Center	116.05	50	PFAKE		05 06 20.0	+15
N55A				LR	LR		
comp=Z,6μm,22.0s							
MEDO	Medina	116.09	47	PFAKE		05 06 20.0	+15
MEDO				LR	LR		
comp=Z,3μm,22.0s							
Y58A	Scranton	116.18	58	PFAKE		05 06 20.0	+15
Y58A				LR	LR		
comp=Z,5μm,21.0s							
T57A	Hurt	116.27	54	PFAKE		05 06 20.0	+15
T57A				LR	LR		
comp=Z,4μm,19.0s							
KEV	Kevo	116.29	345	PFAKE		05 06 20.0	+16
KEV				LR	LR		
comp=Z,4μm,22.0s							
KEV	Kevo	116.29	345	*e*P	PKPdf	05 06 03.7	-0.5
X58A	Rowland	116.41	57	PFAKE		05 06 20.0	+15
X58A				LR	LR		
comp=Z,5μm,22.0s							
HAMF	Hammerfest	116.42	347	*e*PKPdf	PKPdf	05 06 03.6	-0.8
S57A	Dark Hollow, R	116.43	53	PFAKE		05 06 20.0	+15
S57A				LR	LR		
comp=Z,9μm,22.0s							
O56A	Blue Knob Stat	116.43	51	PFAKE		05 06 20.0	+15
O56A				LR	LR		
comp=Z,5μm,21.0s							
J55A	Hilton	116.54	47	PFAKE		05 06 20.0	+15
J55A				LR	LR		
comp=Z,4μm,21.0s							
MMNY	Mt. Morris Dam	116.56	48	PFAKE		05 06 20.0	+14
MMNY				LR	LR		
comp=Z,2μm,18.0s							
PB11	IPOC Station P	116.81	119	PFAKE		05 06 20.0	+13
PB11				LR	LR		
comp=Z,4μm,22.0s							
ARCES	ARCESS Array B	116.81	346	PKP	PKPdf	05 06 04.1	-1.2
comp=Z,16nm,0.6s,baz=86,slow=2.2,SNR=104							
ARCES				pPKP	pPKPdf	05 06 14.8	-6.1
comp=Z,14nm,0.7s,baz=48,slow=1.3,SNR=7.5							
ARCES				PKKPbc	PKKPbc	05 16 32.4	-2.0
comp=Z,1.0nm,0.6s,baz=196,slow=2.1,SNR=5.9							
ARE0	ARCESS Array S	116.81	346	PFAKE		05 06 20.0	+15
ARE0				LR	LR		
comp=Z,100nm,22.0s							
ARE0	ARCESS Array S	116.81	346	*e*PKPdf	PKPdf	05 06 04.7	-0.5
SSPA	Standing Stone	116.89	50	PFAKE		05 06 20.0	+14
SSPA				LR	LR		
comp=Z,6μm,22.0s							
SUMG	Summit	117.10	8	*e*PKPdf	PKiKP	05 06 06.7	+0.5
SUMG				LR	LR		
comp=Z,2μm,20.0s							
SUMG	Summit	117.10	8	*e*PKIKP	PKiKP	05 06 06.7	+0.5
SUMG				MLR	MLR		
comp=Z,2μm,20.0s							
MNMC	Minye Minye	117.11	118	*e*PKPdf	PKiKP	05 06 09.3	+1.7
MNMC				LR	LR		
comp=Z,2μm,21.0s							
S58A	Poland Farm, P	117.16	54	PFAKE		05 06 20.0	+13
S58A				LR	LR		
comp=Z,8μm,22.0s							
GO01	Chusmiza	117.24	119	*e*PKPdf	PKiKP	05 06 09.2	+1.1
GO01				LR	LR		
comp=Z,4μm,22.0s							
R58B	Mineral	117.25	53	PFAKE		05 06 20.0	+13
R58B				LR	LR		
comp=Z,8μm,22.0s							
KLMR	Klimovskoe	117.30	334	*e*PKIKP	PKPdf	05 06 04.3	-2.1
KLMR				*e*		05 07 20.1	
KLMR				pmax	pmax		
comp=Z,12nm,0.9s							
Y60A	Bolivia	117.37	58	PFAKE		05 06 20.0	+13
Y60A				LR	LR		
comp=Z,5μm,21.0s							
ILULI	Ilulissat	117.49	14	PFAKE		05 06 20.0	+13
ILULI				LR	LR		
comp=Z,3μm,21.0s							
U59A	Littleton	117.50	55	PFAKE		05 06 20.0	+12
U59A				LR	LR		
comp=Z,3μm,20.0s							
CNNC	Cliffs of the	117.53	56	PFAKE		05 06 20.0	+12
CNNC				LR	LR		
comp=Z,4μm,21.0s							
YOTC	Yotoco, Valle	117.58	91	*e*P	PP	05 07 17.2	-4.2
CBN	Corbin Frederi	117.62	53	PFAKE		05 06 20.0	+12
CBN				LR	LR		
comp=Z,7μm,21.0s							
T59A	Double "B" Far	117.62	54	PFAKE		05 06 20.0	+12
T59A				LR	LR		
comp=Z,4μm,22.0s							
KTK1	Kautokeino	117.75	346	*e*PKPdf	PKPdf	05 06 06.1	-1.0
PAGS	Pennsylvania G	117.83	50	PFAKE		05 06 20.0	+12
PAGS				LR	LR		
comp=Z,6μm,22.0s							
SDMD	Soldier's Deli	117.86	51	PFAKE		05 06 20.0	+12
SDMD				LR	LR		
comp=Z,2μm,20.0s							
V60A	Jim Taylor Roa	117.99	56	PFAKE		05 06 20.0	+12
V60A				LR	LR		
comp=Z,3μm,22.0s							
BINY	Binghamton	118.05	48	PFAKE		05 06 20.0	+12
BINY				LR	LR		
comp=Z,3μm,21.0s							
HEF	Hetta	118.10	345	*e*P	PKPdf	05 06 06.7	-1.0
MVL	Millersville	118.15	51	PFAKE		05 06 20.0	+11
MVL				LR	LR		
comp=Z,4μm,21.0s							
TRO	Tromso	118.24	348	*e*PKPdf	PKPdf	05 06 07.0	-0.9
T60A	Surry	118.25	54	PFAKE		05 06 20.0	+11
T60A				LR	LR		
comp=Z,5μm,22.0s							
KIF	Kilpisjarvi	118.33	347	*e*P	PKPdf	05 06 07.1	-1.0
KSPA	Keystone Colle	118.33	49	PFAKE		05 06 20.0	+11
KSPA				LR	LR		
comp=Z,5μm,20.0s							
N59A	State Game Lan	118.44	50	PFAKE		05 06 20.0	+11
N59A				LR	LR		
comp=Z,6μm,22.0s							
V61A	Roper	118.54	55	PFAKE		05 06 20.0	+10
V61A				LR	LR		
comp=Z,2μm,21.0s							
LONY	Lake Ozonia	118.57	45	PFAKE		05 06 20.0	+11
LONY				LR	LR		
comp=Z,3μm,22.0s							
U61A	Possum Corner	118.58	55	PFAKE		05 06 20.0	+10
U61A				LR	LR		
comp=Z,4μm,20.0s							
GUY2C	Guyana, Caldas	118.77	90	*e*P	PKPdf	05 06 10.8	-0.4
LUPA	Lehigh Univers	118.79	50	PFAKE		05 06 20.0	+10
LUPA				LR	LR		
comp=Z,600nm,22.0s							
AKT	Akhty	118.81	311	*e*PKIKP	PKiKP	05 06 10.5	+0.4
AKT				*e*		05 07 31.2	
AKT				pmax	pmax		
comp=Z,22nm,0.8s							
PSUB	Penn St. - Bra	118.84	51	PFAKE		05 06 20.0	+10
PSUB				LR	LR		
comp=Z,4μm,22.0s							
PRAC	Prado	118.96	92	*e*P	PKPdf	05 06 09.4	-1.6
NCB	Newcomb	118.96	46	PFAKE		05 06 20.0	+10
NCB				LR	LR		
comp=Z,2μm,22.0s							
S61A	Accomac	119.02	53	PFAKE		05 06 20.0	+10
S61A				LR	LR		
comp=Z,8μm,22.0s							
V62A	Hyde County Ai	119.07	56	PFAKE		05 06 20.0	+9.4
V62A				LR	LR		
comp=Z,4μm,22.0s							
FRNY	Flat Rock	119.21	45	PFAKE		05 06 20.0	+9.4
FRNY				LR	LR		
comp=Z,1μm,21.0s							
SFJD	Kangerlussuaq	119.26	16	PFAKE		05 06 20.0	+10
SFJD				LR	LR		
comp=Z,3μm,20.0s							
SFJD	Kangerlussuaq	119.26	16	*i* PKIKP	PKiKP	05 06 10.7	+0.7
SFJD				pmax	pmax		
comp=Z,8.0nm,0.9s							
SFJD				MLR	MLR		
comp=Z,3μm,23.0s							
SFJD	Kangerlussuaq	119.26	16	*i* P	PKiKP	05 06 10.7	+0.7
comp=Z,8.2nm,0.9s							
comp=Z,3μm,23.0s							
ODNJ	Ogdensburg	119.27	49	PFAKE		05 06 20.0	+9.2
ODNJ				LR	LR		
comp=Z,5μm,21.0s							
BRNJ	Basking Ridge	119.38	50	PFAKE		05 06 20.0	+9.0
BRNJ				LR	LR		
comp=Z,8μm,22.0s							
ACCN	Adirondack Com	119.49	46	PFAKE		05 06 20.0	+8.8
ACCN				LR	LR		
comp=Z,4μm,20.0s							
LPAZ	La Paz	119.54	116	PKP	PKPdf	05 06 11.6	-1.2
comp=Z,2.6nm,0.5s,baz=20,slow=1.4,SNR=14							
LPAZ				PKKPbc	PKKPbc	05 16 23.1	-0.8
comp=Z,3.9nm,0.8s,baz=104,slow=1.5,SNR=9.1							
LPAZ	La Paz	119.54	116	*e*PKPdf	PKPdf	05 06 12.5	-0.3
LPAZ				*e*PKKPbc	PKKPbc	05 16 23.9	-0.1
LPAZ	La Paz	119.54	116	*e*PKIKP	PKPdf	05 06 12.5	-0.3
TRY	Troy	119.63	47	PFAKE		05 06 20.0	+8.5
TRY				LR	LR		
comp=Z,5μm,22.0s							
ROSC	El Rosal	119.72	91	PFAKE		05 06 30.0	+17
ROSC				LR	LR		
comp=Z,500nm,20.0s							
PAL	Palisades	119.81	49	PFAKE		05 06 20.0	+8.1
PAL				LR	LR		
comp=Z,6μm,22.0s							
GROC	Groznyy	119.86	313	*i* PKIKP	PKPdf	05 06 10.5	-1.4
GROC				*e*		05 06 28.4	
GROC				*e*		05 07 34.2	
GROC				*e*		05 13 15.4	
GROC				pmax	pmax		
comp=Z,22nm,0.6s							
PTBC	PUERTO BERRIO	119.88	89	*e*P	PKPdf	05 06 12.8	0.0
VT1	Waterbury	119.91	45	PFAKE		05 06 20.0	+8.0
VT1				LR	LR		
comp=Z,3μm,20.0s							
KSCT	Kent School, K	119.97	48	PFAKE		05 06 20.0	+7.8
KSCT				LR	LR		
comp=Z,3μm,20.0s							
SALU	Saltoluokta	120.14	346	*e*P	PKPdf	05 06 10.8	-1.0
VRH	Novokhopyorsk	120.19	323	*e*PKIKP	PKPdf	05 06 11.7	-0.5
VRH				pmax	pmax		
comp=Z,20nm,0.6s							
VRH				MLR	MLR		
comp=Z,2μm,19.0s							
HNH	Hanover	120.39	46	PFAKE		05 06 30.0	+17
HNH				LR	LR		
comp=Z,2μm,20.0s							
STEI	Steigen	120.41	348	*e*PKPdf	PKPdf	05 06 11.3	-0.9
YLE	Yale	120.46	49	PFAKE		05 06 30.0	+17
YLE				LR	LR		
comp=Z,4μm,18.0s							
LBNH	Lisbon	120.51	45	PFAKE		05 06 30.0	+17
LBNH				LR	LR		
comp=Z,3μm,21.0s							
MOS	Moscow	120.57	329	*e*PKIKP	PKiKP	05 06 18.1	+5.2
MOS				*e*		05 06 37.9	
MOS				*e*		05 07 35.9	
QUA2	Belchertown	120.68	47	PFAKE		05 06 30.0	+16
QUA2				LR	LR		
comp=Z,5μm,20.0s							
SCO	Scoresbysund	120.74	3	PFAKE		05 06 30.0	+17
SCO				LR	LR		
comp=Z,3μm,21.0s							
FFD	Franklin Falls	120.89	46	PFAKE		05 06 30.0	+16
FFD				LR	LR		
comp=Z,3μm,20.0s							
TBLG	Delisi	120.96	312	*e*PKPdf	PKiKP	05 06 14.9	+0.7
RUSC	La Rusia	121.12	90	*e*P	PKPdf	05 06 15.4	-0.3
HRV	Adam Dziewonsk	121.20	47	PFAKE		05 06 30.0	+15
HRV				LR	LR		
comp=Z,5μm,21.0s							
LPSR	Galich'ya Gora	121.24	325	*e*PKIKP	PKPdf	05 06 13.4	-0.8
LPSR				pmax	pmax		
comp=Z,30nm,1.2s							
GNI	Garni	121.30	310	PFAKE		05 06 30.0	+15
GNI				LR	LR		
comp=Z,1μm,22.0s							
GNI	Garni	121.30	310	*c i* PKIKP	PKiKP	05 06 15.1	0.0
GOF	Gofitskoye	121.31	316	*e*PKIKP	PKiKP	05 06 27.2	+12
ZEI	Tsey	121.31	313	*i* PKIKP	PKPdf	05 06 14.4	-0.6
ZEI				pmax	pmax		
comp=Z,7.0nm,0.4s							
BRYW	Bryant College	121.35	48	PFAKE		05 06 30.0	+15
BRYW				LR	LR		
comp=Z,3μm,19.0s							
OBN	Obninsk	121.39	329	PFAKE		05 06 30.0	+15
OBN				LR	LR		
comp=Z,2μm,20.0s							
OBN	Obninsk	121.39	329	*i* PKIKP	PKPdf	05 06 13.0	-1.4
OBN				*e*		05 07 46.4	
OBN				*e*PPP	PPP	05 10 21.3	
OBN				pmax	pmax		
comp=Z,14nm,1.1s							
WES	Weston	121.39	47	PFAKE		05 06 30.0	+15
WES				LR	LR		
comp=Z,5μm,21.0s							
BCX	Boston College	121.52	47	PFAKE		05 06 30.0	+15
BCX				LR	LR		
comp=Z,5μm,21.0s							
VSR	Storozhevoye	121.67	324	*e*PKIKP	PKPdf	05 06 13.9	-1.2
VSR				pmax	pmax		
comp=Z,10.0nm,0.6s							
VSR				MLR	MLR		
comp=Z,2μm,21.0s							
VORD	Divnogorie	121.69	324	*e*PKIKP	PKPdf	05 06 14.3	-0.8
VORD				pmax	pmax		
comp=Z,10.0nm,0.9s							
KBZ	Khabaz	121.78	315	PKP	PKPdf	05 06 14.1	-1.4
comp=Z,4.1nm,0.8s,baz=129,slow=3.3,SNR=8.4							
KIV	Kislovodsk	121.86	315	PFAKE		05 06 30.0	+14
KIV				LR	LR		
comp=Z,2μm,21.0s							
KIV	Kislovodsk	121.86	315	*i* PKIKP	PKPdf	05 06 15.6	-0.2
KIV				*e*		05 07 48.6	
KIV				*e*		05 17 42.5	
KIV				pmax	pmax		
comp=Z,29nm,1.0s							
AKH	Akhalkalaki	121.94	312	*e*PKPdf	PKiKP	05 06 17.3	+0.9
AKH				LR	LR		
comp=Z,2μm,21.0s							
AKH	Akhalkalaki	121.94	312	‖ *i* P	PKiKP	05 06 17.3	+0.9
WVL	Waterville	121.99	44	PFAKE		05 06 30.0	+14
WVL				LR	LR		
comp=Z,3μm,21.0s							
PKME	Peaks-Kenny Pk	122.03	43	PFAKE		05 06 30.0	+14
PKME				LR	LR		
comp=Z,2μm,20.0s							
NEY	Neytrino	122.03	314	‖ *i* PKIKP	PKiKP	05 06 16.9	+0.5
MOR8	Moi Rana	122.06	347	*e*PKPdf	PKPdf	05 06 14.1	-1.3
KONS	Konsvik	122.06	348	*e*PKPdf	PKPdf	05 06 14.8	-0.5
CAPV	Capacho	122.18	88	*e*P	PKiKP	05 06 18.7	+1.1
FIA0	FINESS Array S	122.30	339	*e*PKPdf	PKPdf	05 06 15.2	-0.8
FIA0				*e*pPKPdf	pPKPdf	05 06 28.5	-3.1
FIA0				*e*PKKPbc	PKKPab	05 16 10.0	-1.6
FIA0	FINESS Array S	122.30	339	*e*PKIKP	PKPdf	05 06 15.2	-0.8
FIA0				*e*		05 06 28.5	

FINES	**FINESS Array B**	**122.30**	**339**	PKP	**PKPdf**	**05 06 15.2**	**-0.8**
	comp=Z,12nm,0.8s,baz=32,slow=2.8,SNR=37						
FINES				pPKP	**pPKPdf**	**05 06 28.5**	**-3.1**
	comp=Z,18nm,0.9s,baz=84,slow=4.3,SNR=9.9						
FINES				PKKPab	**PKKPab**	**05 16 10.0**	**-1.6**
	comp=Z,1.3nm,0.8s,baz=131,slow=10,SNR=4.4						
PQI	**Presque Isle**	**122.43**	**42**	PFAKE		05 06 30.0	+13
PQI				LR	LR		
	comp=Z,3μm,22.0s						
BATM	**Batumi**	**123.20**	**312**	⇓*i*P	**PKiK**	**05 06 18.8**	**+0.2**
BCA	**Borcka**	**123.30**	**312**	⇓*i*P	**PKiK**	**05 06 18.7**	**-0.1**
CPUP	**Villa Florida**	**123.38**	**132**	PKP	**PKPdf**	**05 06 17.5**	**-1.6**
	comp=Z,5.1nm,0.7s,baz=312,slow=2.0,SNR=11						
CPUP				PKKPab	**PKKPbc**	**05 16 08.1**	**-0.8**
	comp=Z,5.3nm,1.0s,baz=86,slow=4.0,SNR=6.1						
CPUP	**Villa Florida**	**123.38**	**132**	*e*PKPdf	**PKPdf**	**05 06 18.4**	**-0.7**
CPUP				*e*PKKPbc	**PKKPbc**	**05 16 08.1**	**-0.8**
CPUP	**Villa Florida**	**123.38**	**132**	*e*PKIKP	**PKPdf**	**05 06 18.5**	**-0.7**
CPUP	**Villa Florida**	**123.38**	**132**	*e*P	**PKiKP**	**05 06 21.1**	**+1.7**
ANGG	**Ammassalik, Gr**	**123.42**	**12**	PFAKE		05 06 30.0	+12
ANGG				LR	LR		
	comp=Z,2μm,22.0s						
DAMY	**Dhamar**	**123.43**	**280**	*e*PKPdf	**PKiKP**	**05 06 22.0**	**+1.8**
DAMY				LR	LR		
	comp=Z,1μm,20.0s						
EMMW	**East Machias**	**123.44**	**44**	PFAKE		05 06 30.0	+11
EMMW				LR	LR		
	comp=Z,2μm,20.0s						
GGN	**Saint George**	**123.72**	**43**	PFAKE		05 06 30.0	+11
GGN				LR	LR		
	comp=Z,3μm,20.0s						
SDV	**Santo Domingo**	**123.97**	**87**	*e*PKPdf	**PKPdf**	**05 06 19.8**	**-1.0**
SDV	**Santo Domingo**	**123.97**	**87**	*e*P	**PKiKP**	**05 06 22.6**	**+1.5**
NSS	**Namsos**	**124.00**	**347**	*e*PKPdf	**PKPdf**	**05 06 18.5**	**-0.6**
VSU	**Vasula**	**124.01**	**336**	*d i*PKIKP	**PKPdf**	**05 06 19.1**	**-0.2**
VSU	**Vasula**	**124.01**	**336**	*e*P	**PKPdf**	**05 06 18.5**	**-0.8**
VSU				IAmb	IAmb	05 06 20.1	
	comp=Z,70nm,0.8s						
SOC	**Sochi**	**124.03**	**315**	*i* PKIKP	**PKPdf**	**05 06 18.8**	**-1.0**
SOC				*e*		05 08 00.2	
SOC				*e*PPP	PPP	05 10 47.1	
SOC				*e*PS	**PS**	**05 17 54.3**	**-9.1**
SOC				*e*SSS	SSS	05 29 30.9	
SOC				MLR	MLR		
	comp=Z,1μm,20.0s						
SDDR	**Presa de Saban**	**124.11**	**75**	PFAKE		05 06 30.0	+8.9
SDDR				LR	LR		
	comp=Z,2μm,21.0s						
GRTK	**Grand Turk**	**124.27**	**72**	PFAKE		05 06 30.0	+8.8
GRTK				LR	LR		
	comp=Z,1μm,19.0s						
IVI	**Ivigtut**	**124.28**	**19**	PFAKE		05 06 30.0	+10
IVI				LR	LR		
	comp=Z,5μm,21.0s						
ATD	**Arta Tunnel**	**124.67**	**276**	PFAKE		05 06 30.0	+7.7
ATD				LR	LR		
	comp=Z,2μm,20.0s						
LMN	**Caledonia Moun**	**124.80**	**41**	PFAKE		05 06 30.0	+8.4
LMN				LR	LR		
	comp=Z,4μm,21.0s						
ANN	**Anapa**	**125.17**	**317**	*e*P	**Pdif**	**05 02 53.1**	**-5.5**
ANN				*e*		05 08 09.8	
ANN				pmax	pmax		
	comp=Z,84nm,1.0s						
ANN				MLR	MLR		
	comp=Z,2μm,26.0s						
NRS	**Narsarsuaq**	**125.18**	**18**	PFAKE		05 06 30.0	+8.2
NRS				LR	LR		
	comp=Z,6μm,21.0s						
BOSA	**Boshof**	**125.23**	**223**	PKP	**PKPdf**	**05 06 22.8**	**0.0**
	comp=Z,28nm,1.0s,baz=102,slow=2.8,SNR=14						
BOSA	**Boshof**	**125.23**	**223**	*e*PKPdf	**PKiKP**	**05 06 23.3**	**+0.1**
BOSA	**Boshof**	**125.23**	**223**	*e*PKIKP	**PKiKP**	**05 06 23.3**	**+0.1**
SUR	**Sutherland**	**125.38**	**216**	*e*PKPdf	**PKiKP**	**05 06 24.0**	**+0.5**
CNLB	**Canela**	**125.93**	**139**	*e*P	**PKPdf**	**05 06 22.3**	**-1.8**
CNLB				*i*		05 06 25.5	
CNLB				*i*		05 06 31.8	
CNLB				*i*		05 06 36.4	
CNLB				*i*		05 06 46.8	
CNLB	**Canela**	**125.93**	**139**	*e*P	**PKiKP**	**05 06 26.4**	**+1.9**
IZAR	**Zarasai**	**125.95**	**333**	*e*P	**PKPdf**	**05 06 22.9**	**-0.2**
IZAR				IAmb	IAmb	05 06 24.4	
	comp=Z,13nm,1.0s						
IDID	**Didziasalis**	**126.00**	**333**	*e*P	**PKPdf**	**05 06 22.9**	**-0.3**
IDID				IAmb	IAmb	05 06 24.5	
	comp=Z,18nm,0.9s						
HAL	**Halifax**	**126.05**	**42**	PFAKE		05 06 40.0	+16
HAL				LR	LR		
	comp=Z,4μm,21.0s						
ISAL	**Salakas**	**126.11**	**333**	*e*P	**PKPdf**	**05 06 23.3**	**-0.1**
ISAL				IAmb	IAmb	05 06 24.8	
	comp=Z,14nm,0.9s						
IIGN	**Ignalina**	**126.21**	**333**	*e*P	**PKPdf**	**05 06 23.5**	**-0.1**
IIGN				IAmb	IAmb	05 06 25.0	
	comp=Z,20nm,1.0s						
NACGM	**Naroch**	**126.23**	**332**	*e*	**PKPdf**	**05 06 23.0**	**-0.7**
NACGM				*e*LR	LR	05 54 00.0	
ITAB	**Concordia**	**126.47**	**137**	*e*P	**PKiKP**	**05 06 27.3**	**+1.7**
DOMB	**Dombas**	**126.82**	**347**	*e*PKPdf	**PKPdf**	**05 06 24.8**	**+0.1**
NC303	**NORSAR Array S**	**126.99**	**345**	*e*P	**PKPdf**	**05 06 25.1**	**+0.1**
PABE	**Paberze**	**127.09**	**334**	*e*P	**PKPdf**	**05 06 24.8**	**-0.5**
PABE				IAmb	IAmb	05 06 26.5	
	comp=Z,64nm,0.9s						
NC204	**NORSAR Array S**	**127.10**	**345**	*e*P	**PKPdf**	**05 06 25.3**	**0.0**
AKN	**Aaknes**	**127.14**	**348**	*e*PKPdf	**PKiKP**	**05 06 25.9**	**+0.1**
NB201	**NORSAR Array S**	**127.16**	**345**	*e*P	**PKPdf**	**05 06 24.4**	**-1.0**
NB2	**NORSAR Subarra**	**127.19**	**345**	PKPdf	**PKPdf**	**05 06 24.3**	**-1.1**
	comp=Z,21nm,1.1s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**127.19**	**345**	PKPdf	**PKPdf**	**05 06 24.3**	**-1.1**
	baz=31,slow=1.9						
NB200	**NORSAR Array S**	**127.19**	**345**	*e*PKPdf	**PKPdf**	**05 06 24.6**	**-0.9**
NB200				*ep*PKPdf	**pPKPdf**	**05 06 37.2**	**-3.9**
NOA	**NORSAR Array B**	**127.19**	**345**	PKP	**PKPdf**	**05 06 24.6**	**-0.9**
	comp=Z,10.0nm,0.8s,baz=34,slow=2.0,SNR=34						
NOA				pPKP	**pPKPdf**	**05 06 37.2**	**-3.9**
	comp=Z,9.4nm,0.8s,baz=34,slow=1.9,SNR=11						
LBTB	**Lobatse**	**127.29**	**226**	*e*PKPdf	**PKiKP**	**05 06 27.3**	**-0.1**
SIM	**Simferopol'**	**127.29**	**319**	*i* PKIKP	**PKiKP**	**05 06 27.9**	**+1.3**
SIM				*i*		05 08 25.0	
SIM				*e*PS	**PS**	**05 18 26.0**	**-6.0**
SIM				*e*SS	SS	05 25 33.0	+1.7
SIM				pmax	pmax		
	comp=Z,80nm,8.7s						
NBO00	**NORSAR Array S**	**127.30**	**345**	*e*P	**PKiKP**	**05 06 25.9**	**-0.3**
NC602	**NORSAR Array S**	**127.36**	**345**	*e*PKPdf	**PKPdf**	**05 06 25.5**	**-0.2**
AKASG	**Malin Array Be**	**127.46**	**327**	PKP	**PKPdf**	**05 06 25.5**	**-0.7**
	comp=Z,5.7nm,0.7s,baz=56,slow=2.0,SNR=13						
AKASG				pPKP	**pPKPdf**	**05 06 39.2**	**-2.7**
	comp=Z,12nm,1.0s,baz=70,slow=2.0,SNR=5.2						
AKBB	**Malin Array Si**	**127.46**	**327**	*e*PKPdf	**PKPdf**	**05 06 25.5**	**-0.7**
AKBB				*ep*PKPdf	**pPKPdf**	**05 06 39.2**	**-2.7**
AKBB	**Malin Array Si**	**127.46**	**327**	*e*PKIKP	**PKPdf**	**05 06 25.5**	**-0.7**
AKBB				*e*		05 06 39.2	
KIEV	**Kiev**	**127.47**	**327**	PFAKE		05 06 40.0	+13
KIEV				LR	LR		
	comp=Z,2μm,21.0s						
KIEV	**Kiev**	**127.47**	**327**	⇑*i*P	**PKPdf**	**05 06 25.6**	**-0.6**
KIEV	**Kiev**	**127.47**	**327**	*c i*PKIKP	**PKPdf**	**05 06 25.3**	**-0.9**
PBUR	**Paburg**	**127.59**	**336**	*e*P	**PKPdf**	**05 06 25.5**	**-0.7**
PBUR				IAmb	IAmb	05 06 28.3	
	comp=Z,67nm,1.0s						
DRLN	**Deer Lake**	**127.74**	**35**	PFAKE		05 06 40.0	+13
DRLN				LR	LR		
	comp=Z,8μm,21.0s						
SEVA	**Sevastopol**	**127.75**	**318**	⇑*i*P	**PKiKP**	**05 06 34.8**	**+7.3**
DIKM	**Dikmen**	**127.78**	**314**	⇑*i*P	**PKiKP**	**05 06 27.6**	**-0.1**
KMBO	**Kilima Mbogo**	**127.86**	**260**	PKP	**PKPdf**	**05 06 28.5**	**+0.1**
	comp=Z,9.8nm,0.9s,baz=52,slow=4.3,SNR=11						
KMBO	**Kilima Mbogo**	**127.86**	**260**	*e*PKPdf	**PKiKP**	**05 06 29.3**	**+0.3**
KMBO				LR	LR		
	comp=Z,2μm,22.0s						
KMBO	**Kilima Mbogo**	**127.86**	**260**	PKiKP	**PKiKP**	**05 06 28.7**	**-0.3**
	SNR=13						
AQDB	**Aquidauana**	**127.94**	**127**	*e*P	**PKPdf**	**05 06 26.2**	**-1.9**
AQDB				*i*		05 06 29.2	
AQDB				*i*		05 06 40.2	
AQDB				*i*		05 06 45.2	
AQDB				*i*		05 06 55.2	
AQDB				*i*		05 07 03.6	
AQDB				*i*		05 07 25.3	
AQDB				*i*		05 07 37.3	
AQDB	**Aquidauana**	**127.94**	**127**	*e*P	**PKiKP**	**05 06 31.2**	**+2.6**
MPR	**Mayaguez**	**128.04**	**76**	PFAKE		05 06 40.0	+11
MPR				LR	LR		
	comp=Z,2μm,22.0s						
CRPR	**Cabo Rojo, PR**	**128.06**	**76**	PFAKE		05 06 40.0	+11
CRPR				LR	LR		
	comp=Z,3μm,22.0s						
PTGB	**Pitanga**	**128.13**	**134**	*e*P	**PKiKP**	**05 06 31.9**	**+2.9**
NAI	**Nairobi**	**128.25**	**259**	PFAKE		05 06 40.0	+10
NAI				LR	LR		
	comp=Z,2μm,20.0s						
SUW	**Suwalki**	**128.42**	**333**	*e*PKPdf	**PKiKP**	**05 06 28.5**	**0.0**
SUW				LR	LR		
	comp=Z,3μm,22.0s						
SUW	**Suwalki**	**128.42**	**333**	*e*PKIKP	**PKiKP**	**05 06 28.5**	**0.0**
SUW				MLR	MLR		
	comp=Z,3μm,22.0s						
FURI	**Furi**	**128.44**	**272**	PFAKE		05 06 40.0	+10
FURI				LR	LR		
	comp=Z,2μm,21.0s						
OBIP	**Obispado Ponce**	**128.54**	**76**	PFAKE		05 06 40.0	+10
OBIP				LR	LR		
	comp=Z,1μm,21.0s						
ICMP	**Isla Caja de M**	**128.62**	**76**	PFAKE		05 06 40.0	+10
ICMP				LR	LR		
	comp=Z,700nm,20.0s						
KONO	**Kongsberg**	**128.80**	**345**	PFAKE		05 06 40.0	+11
KONO				LR	LR		
	comp=Z,3μm,22.0s						
KONO	**Kongsberg**	**128.80**	**345**	*e*PKPdf	**PKiKP**	**05 06 28.9**	**-0.2**
SJG	**San Juan**	**128.98**	**76**	PFAKE		05 06 40.0	+9.3
SJG				LR	LR		
	comp=Z,1μm,22.0s						
ILGA	**Ilgaz**	**129.07**	**314**	*e*PKPdf	**PKiKP**	**05 06 30.5**	**-0.1**
ILGA				LR	LR		
	comp=Z,1μm,22.0s						
CBYP	**Canovanas**	**129.26**	**76**	PFAKE		05 06 40.0	+8.7
CBYP				LR	LR		
	comp=Z,2μm,22.0s						
HUMP	**Col San Antoni**	**129.26**	**76**	*e*PKPdf	**PKiKP**	**05 06 33.1**	**+1.8**
HUMP				LR	LR		
	comp=Z,1μm,21.0s						
ODD1	**Odda**	**129.27**	**347**	*e*PKPdf	**PKiKP**	**05 06 29.9**	**-0.3**
KLNR	**Kaliningrad**	**129.29**	**335**	⇑*i*PKIKP	**PKiKP**	**05 06 30.6**	**+0.4**
MTP	**Monte Pirata**	**129.55**	**76**	PFAKE		05 06 40.0	+8.2
MTP				LR	LR		
	comp=Z,1μm,22.0s						
BR101	**Keskin Array S**	**129.61**	**313**	*e*PKPdf	**PKPdf**	**05 06 30.2**	**-0.6**
BR101				*ep*PKPdf	**pPKPdf**	**05 06 44.2**	**-2.3**
BR101				*e*PP	**PP**	**05 08 38.3**	**-3.2**
BR131	**Keskin Array S**	**129.61**	**313**	PKPdf	**PKPdf**	**05 06 30.8**	**-0.1**
	SNR=12						
BRTR	**Keskin Array B**	**129.61**	**313**	PKP	**PKPdf**	**05 06 30.2**	**-0.6**
	comp=Z,3.5nm,0.7s,baz=134,slow=3.6,SNR=18						
BRTR				pPKP	**pPKPdf**	**05 06 44.2**	**-2.3**
	comp=Z,7.7nm,1.0s,baz=66,slow=2.8,SNR=9.2						
BRTR				PP	**PP**	**05 08 38.3**	**-3.2**
	comp=Z,3.4nm,0.9s,baz=94,slow=4.9,SNR=3.9						
KIS	**Kishinev**	**129.63**	**323**	*e*PKP	PKiKP	05 06 44.0	+13
	comp=Z,110nm,1.0s						
KIS	**Kishinev**	**129.63**	**323**	*e*PP	PP	05 08 44.0	+2.9
KIS				*e*SKP		05 09 50.0	
KIS	**Kishinev**	**129.63**	**323**	*e*PKS	**PKSdf**	**05 10 08.0**	**+1.2**
KIS				*e*SKS	SKSdf	05 14 00.0	+22
KIS				*e*SKKS	SKKSac	05 15 50.0	+16
KIS				*e*L	L	05 49 20.0	
KIS				LRM	MLR	06 02 12.0	
	comp=Z,2μm,20.0s						
CUPR	**Culebra, Puert**	**129.80**	**76**	PFAKE		05 06 40.0	+7.7
CUPR				LR	LR		
	comp=Z,2μm,18.0s						
TIJ01	**Guaruva-PR**	**129.84**	**137**	*e*P	**PKiKP**	**05 06 33.6**	**+1.1**
ANTO	**Ankara**	**130.16**	**313**	*e*PKPdf	**PKiKP**	**05 06 33.4**	**+0.8**
ANTO				LR	LR		
	comp=Z,1μm,22.0s						
ANTO	**Ankara**	**130.16**	**313**	⇓*i*P	**PKiKP**	**05 06 32.4**	**-0.2**
ANTO	**Ankara**	**130.16**	**313**	⇓PKIKP	**PKiKP**	**05 06 32.4**	**-0.2**
ANTO	**Ankara**	**130.16**	**313**	PKPdf	**PKPdf**	**05 06 31.8**	**0.0**
	SNR=14						
TLCR		**130.54**	**321**	⇑*i*P	**PKPdf**	**05 06 32.4**	**+0.2**
TLCR		**130.54**	**321**	⇑PKIKP	**PKPdf**	**05 06 32.4**	**+0.2**
FRTB	**Fartura**	**130.76**	**135**	*e*P	**PKiKP**	**05 06 35.6**	**+1.3**
LSZ	**Lusaka**	**130.77**	**238**	*e*PKPdf	**PKiKP**	**05 06 34.5**	**-0.1**
LSZ				LR	LR		
	comp=Z,4μm,19.0s						
LSZ	**Lusaka**	**130.77**	**238**	PKiKP	**PKiKP**	**05 06 34.8**	**+0.2**
BSD	**Bornholm Skovb**	**130.94**	**339**	*e*PKIKP	**PKPdf**	**05 06 32.9**	**+0.2**
BSD				MLR	MLR		
	comp=Z,3μm,21.0s						
BSD	**Bornholm Skovb**	**130.94**	**339**	*i* P	**PKPdf**	**05 06 32.9**	**+0.2**
	comp=Z,3μm,21.0s						
CFR	**Carcaliu**	**130.96**	**321**	⇓*i*P	**PKPdf**	**05 06 33.1**	**+0.1**
CFR	**Carcaliu**	**130.96**	**321**	⇓PKIKP	**PKPdf**	**05 06 33.1**	**+0.1**
TIRR	**Tirgusor**	**131.15**	**320**	PFAKE		05 06 50.0	+16
TIRR				LR	LR		
	comp=Z,4μm,20.0s						
TIRR	**Tirgusor**	**131.15**	**320**	⇑*i*P	**PKPdf**	**05 06 32.2**	**-1.2**
TIRR	**Tirgusor**	**131.15**	**320**	⇑PKIKP	**PKPdf**	**05 06 32.2**	**-1.2**
TESR	**Tescani**	**131.16**	**324**	⇑*i*P	**PKPdf**	**05 06 33.1**	**-0.3**
BIZ	**Bicaz**	**131.24**	**324**	⇑*i*P	**PKiKP**	**05 06 34.7**	**+0.2**
TLB	**Topalu**	**131.32**	**321**	⇑*i*P	**PKiKP**	**05 06 34.4**	**-0.2**
TLB	**Topalu**	**131.32**	**321**	⇑PKIKP	**PKiKP**	**05 06 34.4**	**-0.2**
BUR08	**Bucovina Ar. S**	**131.35**	**326**	*e*PKPdf	**PKiKP**	**05 06 35.3**	**+0.5**
BURAR	**Bucovina Array**	**131.36**	**326**	⇓*i*P	**PKiKP**	**05 06 35.3**	**+0.5**
BURAR	**Bucovina Array**	**131.36**	**326**	⇓PKIKP	**PKiKP**	**05 06 35.4**	**+0.6**
CSS	**Mathiatis**	**131.38**	**307**	PFAKE		05 06 50.0	+15
CSS				LR	LR		
	comp=Z,2μm,21.0s						
CSS	**Mathiatis**	**131.38**	**307**	P	PKiKP	05 06 45.3	+10
VRI	**Vrincioaia**	**131.46**	**323**	⇓*i*P	**PKPdf**	**05 06 33.3**	**-0.7**
VRI	**Vrincioaia**	**131.46**	**323**	⇓PKIKP	**PKPdf**	**05 06 33.3**	**-0.7**
KWP	**Kalwaria Pacla**	**131.48**	**329**	*e*PKPdf	**PKPdf**	**05 06 33.4**	**-0.5**
KWP				LR	LR		
	comp=Z,16μm,20.0s						
SILT	**Sile**	**131.86**	**316**	⇑*i*P	PKiKP	05 06 48.6	+13
SMRT	**St. Maarten**	**131.90**	**76**	PFAKE		05 06 50.0	+13
SMRT				LR	LR		
	comp=Z,2μm,22.0s						
RGN	**Rugen**	**131.96**	**339**	PFAKE		05 06 50.0	+14
RGN				LR	LR		
	comp=Z,3μm,21.0s						
SEUS	**St. Eustatius**	**132.00**	**77**	PFAKE		05 06 50.0	+13
SEUS				LR	LR		
	comp=Z,2μm,20.0s						
SPB	**Sao Paulo**	**132.06**	**137**	*e*P	**PKiKP**	**05 06 38.3**	**+1.5**
MLR	**Muntele Rosu**	**132.12**	**323**	*e*PKPdf	**PKiKP**	**05 06 36.7**	**+0.3**
MLR				LR	LR		
	comp=Z,2μm,22.0s						
MLR	**Muntele Rosu**	**132.12**	**323**	⇑*i*P	**PKPdf**	**05 06 35.4**	**0.0**
MLR	**Muntele Rosu**	**132.12**	**323**	⇑PKIKP	**PKPdf**	**05 06 35.4**	**0.0**
KOLS	**Kolonicke sedl**	**132.14**	**329**	*e*PKIKP	**PKiKP**	**05 06 36.3**	**+0.1**
KOLS	**Kolonicke sedl**	**132.14**	**329**	*e*PKP	**PKiKP**	**05 06 36.3**	**+0.1**
KOLS				*e*		05 41 48.9	
SKI	**Saint Kitts**	**132.23**	**77**	PFAKE		05 06 50.0	+13
SKI				LR	LR		
	comp=Z,2μm,19.0s						
YLV	**Yalova**	**132.29**	**315**	⇓*i*P	**PKiKP**	**05 06 37.1**	**+0.2**
YLV	**Yalova**	**132.29**	**315**	⇓PKIKP	**PKiKP**	**05 06 37.1**	**+0.2**
UZH	**Uzhgorod**	**132.32**	**328**	*e*PKIKP	**PKPdf**	**05 06 29.5**	**-6.0**
UZH				*e*		05 08 55.0	
UZH				*e*		05 13 41.0	
UZH				*e*PS	PS	05 19 11.0	-4.2
UZH				MLR	MLR		
	comp=Z,300nm,11.0s						
PRD	**Provadia**	**132.40**	**319**	*i* P	**PKPdf**	**05 06 34.0**	**-1.8**
ITRB	**Iturama**	**132.47**	**130**	*e*P	**PKiKP**	**05 06 40.9**	**+3.1**
PTGA	**Pitinga**	**132.47**	**102**	*e*PKPdf	**PKPdf**	**05 06 37.0**	**+0.1**
PTGA				LR	LR		
	comp=Z,2μm,20.0s						
PTGA	**Pitinga**	**132.47**	**102**	*e*P	**PKiKP**	**05 06 38.9**	**+1.0**
TRPA	**Tarpa**	**132.50**	**328**	⇓*i*P	**PKPdf**	**05 06 36.0**	**+0.2**
OJC	**Ojcow**	**132.52**	**331**	*e*PKPdf	**PKPdf**	**05 06 35.9**	**+0.1**
ISP	**Isparta**	**132.56**	**311**	PFAKE		05 06 50.0	+12
ISP				LR	LR		
	comp=Z,1μm,22.0s						
CLDB	**Colider**	**132.67**	**116**	*e*P	**PKiKP**	**05 06 39.2**	**+0.9**
VOIR		**132.68**	**323**	⇑*i*P	**PKPdf**	**05 06 35.5**	**-0.9**
VOIR		**132.68**	**323**	⇑PKIKP	**PKPdf**	**05 06 35.5**	**-0.9**
RCLB	**Rio Claro- Sao**	**132.78**	**135**	*e*P	**PKiKP**	**05 06 39.2**	**+0.8**
BB19B	**Bebedouro**	**132.96**	**133**	*e*P	**PKiKP**	**05 06 40.0**	**+1.2**
ARR	**Arges**	**132.96**	**323**	⇓*i*P	**PKiKP**	**05 06 38.2**	**+0.1**
PHSR	**Pinarhisar**	**133.07**	**317**	⇑*i*P	**PKiKP**	**05 06 45.3**	**+7.0**
GRGR	**Grenville**	**133.09**	**84**	PFAKE		05 06 50.0	+11
GRGR				LR	LR		
	comp=Z,1μm,19.0s						
ANWB	**Willy Bob**	**133.14**	**76**	PFAKE		05 06 50.0	+11
ANWB				LR	LR		
	comp=Z,1μm,22.0s						
JMB	**Yambol**	**133.28**	**319**	*i* P	**PKPdf**	**05 06 37.2**	**-0.3**
LANS	**Liptovska Anna**	**133.40**	**330**	*e*PKIKP	**PKiKP**	**05 06 39.1**	**+0.3**
LANS	**Liptovska Anna**	**133.40**	**330**	*e*PKP	**PKiKP**	**05 06 39.1**	**+0.3**
PARB	**Paraibuna**	**133.44**	**138**	*e*P	**PKiKP**	**05 06 42.6**	**+2.9**
OKC	**Ostrava-Krasne**	**133.55**	**332**	*e*PP	PP	05 09 05.5	-0.5
OKC				*e*SKP		05 10 09.0	
OKC				AMS	AMS	06 01 40.0	
	comp=Z,3μm,23.5s						
SVB	**Belmont**	**133.56**	**82**	PFAKE		05 06 50.0	+10
SVB				LR	LR		
	comp=Z,1μm,20.0s						
KULA	**Kula-Manisa**	**133.65**	**313**	P	**PKPdf**	**05 06 38.0**	**-0.4**
FDF	**Fort de France**	**133.72**	**80**	PFAKE		05 06 50.0	+10
FDF				LR	LR		
	comp=Z,2μm,22.0s						
BALB	**Balikesir**	**133.72**	**315**	PFAKE		05 06 50.0	+10
BALB				LR	LR		
	comp=Z,4μm,22.0s						
MORC	**Moravsky Berou**	**133.87**	**332**	*e*PKPdf	**PKPdf**	**05 06 38.9**	**+0.5**
MORC				LR	LR		
	comp=Z,3μm,22.0s						
MORC	**Moravsky Berou**	**133.87**	**332**	⇓*i*P	**PKPdf**	**05 06 39.1**	**+0.6**
MORC	**Moravsky Berou**	**133.87**	**332**	⇓PKIKP	**PKPdf**	**05 06 39.1**	**+0.6**
MORC	**Moravsky Berou**	**133.87**	**332**	*e*PKP	**PKPdf**	**05 06 38.5**	**0.0**
OSTC	**Ostas**	**133.90**	**334**	*e*PKP	**PKPdf**	**05 06 38.9**	**+0.4**
OSTC				AMS	AMS	06 04 10.0	
	comp=Z,4μm,22.6s						
CHVC	**Chvalec**	**133.95**	**334**	*e*PKP	**PKPdf**	**05 06 38.9**	**+0.4**
CHVC				AMS	AMS	06 04 20.0	
	comp=Z,3μm,23.2s						
DPC	**Dobruska-Polom**	**134.00**	**334**	*e*PKIKP	**PKPdf**	**05 06 39.0**	**+0.3**
DPC				*e*		05 06 53.7	
DPC				MLR	MLR		
	comp=Z,5μm,22.5s						
DPC	**Dobruska-Polom**	**134.00**	**334**	*e*PKP	**PKPdf**	**05 06 39.0**	**+0.3**
DPC				*ep*PKP	**pPKPdf**	**05 06 53.7**	**-0.6**
DPC				*ex*	x	05 08 58.8	
DPC				*e*SKP		05 10 04.3	
DPC				AMS	AMS	06 05 20.0	
	comp=Z,5μm,22.5s						
PSZ	**Piszkesteto**	**134.01**	**329**	*e*PKPdf	**PKPdf**	**05 06 39.0**	**+0.2**
PSZ				LR	LR		
	comp=Z,1μm,20.0s						
PSZ	**Piszkesteto**	**134.01**	**329**	⇓*i*P	**PKiKP**	**05 06 40.0**	**-0.1**
PSZ	**Piszkesteto**	**134.01**	**329**	⇓PKIKP	**PKiKP**	**05 06 40.0**	**-0.1**
UPC	**Upice**	**134.02**	**334**	*e*PKIKP	**PKPdf**	**05 06 38.5**	**-0.2**
UPC				MLR	MLR		
	comp=Z,4μm,22.6s						
UPC	**Upice**	**134.02**	**334**	*e*PKP	**PKPdf**	**05 06 38.5**	**-0.2**
UPC				AMS	AMS	06 04 20.0	
	comp=Z,4μm,22.6s						
FETY	**Fethiye**	**134.07**	**310**	P	**PKPdf**	**05 06 38.0**	**-1.2**
SIRR	**Siria**	**134.12**	**326**	⇓*i*P	**PKiKP**	**05 06 39.7**	**-0.6**
VYHS	**Vyhne**	**134.15**	**330**	*e*PKIKP	**PKPdf**	**05 06 39.4**	**+0.4**
VYHS	**Vyhne**	**134.15**	**330**	*e*PKP	**PKPdf**	**05 06 39.4**	**+0.4**
MBAR	**Mbarara**	**134.27**	**258**	*e*PKPdf	**PKiKP**	**05 06 42.9**	**+1.1**
MBAR				LR	LR		
	comp=Z,700nm,20.0s						
ALN	**Alexandroupoli**	**134.40**	**317**	PFAKE		05 06 50.0	+9.0
ALN				LR	LR		
	comp=Z,600nm,21.0s						
ALN	**Alexandroupoli**	**134.40**	**317**	P	**PKPdf**	**05 06 39.4**	**-0.2**
KDZ	**Kurdzhali**	**134.44**	**319**	*i* P	**PKiKP**	**05 06 42.9**	**+1.8**
JAVC	**Velka Javorina**	**134.46**	**331**	*e*PKP	**PKiKP**	**05 06 40.9**	**-0.1**
HERR	**Herculane**	**134.53**	**324**	⇑*i*P	**PKPdf**	**05 06 39.3**	**-0.5**
BZS	**

BSCB			*i*			05 07 18.8
BSCB	**Bom Sucesso**	**135.62 136**	*e*P	**PKiKP**	**05 06 45.7**	**+1.4**
NKC	**Novy Kostel**	**135.71 336**	AMS	AMS	06 10 40.0	
comp=Z,3μm,20.6s						
KKB	**Krupnik**	**135.82 320**	*i* P	**PKPdf**	**05 06 41.7**	**-0.6**
SRS	**Serrai**	**135.90 319**	P	**PKPdf**	**05 06 41.5**	**-1.0**
CONA	**Conrad Observa**	**135.97 331**	*e*PKPdf	**PKPdf**	**05 06 42.0**	**-0.5**
comp=Z,13nm,0.9s						
PMNB	**Patos De Minas**	**136.09 132**	*e*P	**PKPdf**	**05 06 40.3**	**-3.2**
PMNB			*i*		05 06 43.2	
PMNB			*i*		05 06 56.1	
PMNB			*i*		05 07 24.8	
PMNB			*i*		05 07 45.4	
PMNB			*i*		05 08 01.5	
KHC	**Kasperske Hory**	**136.10 334**	*e*PKPdf	**PKPdf**	**05 06 43.1**	**+0.5**
KHC			LR	LR		
comp=Z,1μm,19.0s						
KHC	**Kasperske Hory**	**136.10 334**	*e*PKIKP	**PKPdf**	**05 06 43.0**	**+0.4**
KHC			*e*		05 06 57.2	
KHC			MLR	MLR		
comp=Z,4μm,24.3s						
KHC	**Kasperske Hory**	**136.10 334**	*e*PKP	**PKPdf**	**05 06 43.0**	**+0.4**
KHC			*e*pPKP	**pPKPdf**	**05 06 57.2**	**-1.1**
KHC			*e*PP	**PP**	**05 09 17.0**	**-5.1**
KHC			AMS	AMS	06 05 40.0	
comp=Z,4μm,24.3s						
SOH	**Sokhos**	**136.20 319**	P	**PKPdf**	**05 06 41.5**	**-1.6**
GEC2	**GERESS Array S**	**136.26 334**	*e*PKPpre	PKPpre	05 06 31.3	
GEC2			*e*PKPdf	**PKPdf**	**05 06 42.0**	**-1.0**
GEC2			LR	LR		
comp=Z,3μm,22.0s						
GEC2	**GERESS Array S**	**136.26 334**	*e*PKHKP	PKPpre	05 06 31.3	
GEC2			*e*		05 06 42.1	
GEC2			MLR	MLR		
comp=Z,3μm,22.0s						
GERES	**GERESS Array B**	**136.26 334**	PKhKP	PKPpre	05 06 31.3	
comp=Z,1.3nm,0.8s,baz=33,slow=3.2,SNR=8.0						
GERES			PKP	**PKPdf**	**05 06 42.0**	**-1.0**
comp=Z,6.6nm,0.8s,baz=82,slow=3.0,SNR=5.4						
APE	**Apeiranthos**	**136.50 313** ⇓	*i*P	**PKPdf**	**05 06 42.3**	**-1.5**
APE	**Apeiranthos**	**136.50 313** ⇓	PKIKP	**PKPdf**	**05 06 42.3**	**-1.5**
ARSA	**Arzberg**	**136.62 331**	*e*PKPdf	**PKPdf**	**05 06 43.0**	**-0.6**
comp=Z,2.5nm,0.6s						
GRA1	**Grafenberg Arr**	**136.62 337**	PFAKE		05 07 00.0	+15
GRA1			LR	LR		
comp=Z,2μm,20.0s						
GRFO	**Grafenberg**	**136.62 337**	PFAKE		05 07 00.0	+15
GRFO			LR	LR		
comp=Z,2μm,20.0s						
BDFB	**Brasilia**	**136.69 128**	PKhKP	PKPpre	05 06 34.9	
comp=Z,2.2nm,0.6s,baz=170,slow=3.2,SNR=4.8						
BDFB			PKP	**PKPdf**	**05 06 43.8**	**-0.9**
comp=Z,5.5nm,0.6s,baz=195,slow=2.4,SNR=3.1						
BDFB	**Brasilia**	**136.69 128**	*e*PKPpre	PKPpre	05 06 34.9	
BDFB			*e*PKPdf	**PKPdf**	**05 06 43.8**	**-0.9**
BDFB			LR	LR		
comp=Z,1μm,19.0s						
TSUM	**Tsumeb**	**136.69 226**	*e*PKPpre	PKPpre	05 06 38.6	
TSUM			LR	LR		
comp=Z,4μm,20.0s						
MOA	**Molln**	**136.76 333**	*i* PKPdf	**PKPdf**	**05 06 43.2**	**-0.7**
comp=Z,4.7nm,0.8s						
SKO	**Skopje**	**136.79 321**	P	**PKPdf**	**05 06 43.3**	**-0.8**
SKO	**Skopje**	**136.79 321**	*i* P	**PKPdf**	**05 06 43.8**	**-0.3**
XOR	**Xorichti**	**137.06 317**	P	**PKPdf**	**05 06 43.3**	**-1.4**
CAM01	**Campos-RJ**	**137.06 140**	*e*P	**PKiKP**	**05 06 48.0**	**+1.0**
LIT	**Litokhoron**	**137.14 318**	P	**PKPdf**	**05 06 43.3**	**-1.5**
KRUS	**Krusevo**	**137.25 321**	*i* P	**PKPdf**	**05 06 44.2**	**-0.9**
SOKA	**Soboth**	**137.26 331**	*e*PKPdf	**PKPdf**	**05 06 44.1**	**-0.8**
comp=Z,13nm,1.1s						
FNA	**Florina**	**137.49 320**	*e*PKPpre	PKPpre	05 06 39.3	
FNA			LR	LR		
comp=Z,1μm,20.0s						
FNA	**Florina**	**137.49 320**	P	**PKPdf**	**05 06 44.1**	**-1.4**
FNA	**Florina**	**137.49 320**	*e*PKIKP	PKPpre	05 06 39.3	
FNA			MLR	MLR		
comp=Z,1μm,20.0s						
KZN	**Kozani**	**137.50 319**	P	**PKPdf**	**05 06 44.2**	**-1.4**
ATAL	**Atalanti**	**137.51 316**	P	**PKPdf**	**05 06 43.9**	**-1.6**
BLY	**Banja Luka**	**137.51 327**	PFAKE		05 07 00.0	+13
BLY			LR	LR		
comp=Z,3μm,20.0s						
BLY	**Banja Luka**	**137.51 327** ⇓	*i*P	PKPpre	05 06 35.6	
PHP	**Peshkopia**	**137.56 321**	P	**PKPdf**	**05 06 45.1**	**-0.5**
OBKA	**Obir**	**137.61 331**	*i* PKPdf	**PKPdf**	**05 06 44.0**	**-1.6**
comp=Z,7.5nm,1.3s						
MEM	**Membach**	**137.69 341**	PKPdf	**PKPdf**	**05 06 45.5**	**0.0**
AXAR	**Agios Charalam**	**137.72 316**	P	**PKiKP**	**05 06 46.9**	**-1.0**
IDI	**Anoyia**	**137.73 311**	P	**PKPdf**	**05 06 43.3**	**-2.8**
THL	**Klokotos Trika**	**137.73 318**	P	**PKPdf**	**05 06 43.3**	**-2.6**
KBA	**Koelnbreinsper**	**137.75 332**	*e*PKPdf	**PKPdf**	**05 06 43.2**	**-2.7**
comp=Z,4.6nm,0.8s						
AGG	**Agios Georgios**	**137.81 317**	*e*PKPdf	**PKPdf**	**05 06 46.0**	**-0.1**
AGG			LR	LR		
comp=Z,2μm,22.0s						
AGG	**Agios Georgios**	**137.81 317**	P	**PKPdf**	**05 06 45.0**	**-1.1**
PDG	**Podgorica**	**137.83 323** ⇓	*i*P	**PKPdf**	**05 06 45.5**	**-0.5**
TTG	**Podgorica**	**137.83 323**	*e*PKPdf	**PKPdf**	**05 06 45.2**	**-0.8**
TTG			LR	LR		
comp=Z,3μm,22.0s						
DSB	**Dublin**	**137.86 353**	PFAKE		05 07 00.0	+12
DSB			LR	LR		
comp=Z,2μm,21.0s						
NEST	**Nestorio**	**137.90 320**	P	**PKPdf**	**05 06 45.1**	**-1.2**
DID	**Didima**	**137.93 314**	P	**PKPdf**	**05 06 46.1**	**-0.3**
KPRO	**Kipourio**	**137.95 319**	P	**PKPdf**	**05 06 45.1**	**-1.3**
MYKA	**Terra Mystica**	**137.95 332**	*e*PKPdf	**PKPdf**	**05 06 44.8**	**-1.4**
comp=Z,5.3nm,0.6s						
LJU	**Ljubljana**	**137.96 331**	*i* PKPdf	**PKPdf**	**05 06 45.7**	**-0.4**
DSF	**Desfina**	**137.98 316**	P	**PKPdf**	**05 06 46.2**	**-0.3**
BOJS	**Bojanci**	**137.99 329**	*e*PKPdf	**PKPdf**	**05 06 46.1**	**-0.1**
BOJS			*e*PP	**PP**	**05 09 33.0**	**-1.0**
BOJS			*e*		05 10 21.5	
UCC	**Uccle**	**138.02 343**	PFAKE		05 07 00.0	+12
UCC			LR	LR		
comp=Z,3μm,22.0s						
KRND	**KRANIDI**	**138.05 314**	P	**PKPdf**	**05 06 45.9**	**-0.6**
STU	**Stuttgart**	**138.15 337**	PFAKE		05 07 00.0	+12
STU			LR	LR		
comp=Z,2μm,21.0s						
EVR	**Evrytania**	**138.21 317**	P	**PKPdf**	**05 06 47.1**	**+0.2**
CEY	**Cerknica**	**138.23 330**	*i* PKPdf	**PKPdf**	**05 06 46.2**	**-0.5**
CEY			*e*PP	**PP**	**05 09 32.7**	**-2.8**
CEY			*e*		05 10 21.6	
KALE	**Kalithea**	**138.25 316**	P	**PKPdf**	**05 06 44.2**	**-2.8**
ANX	**Ano Chora**	**138.30 317**	P	**PKPdf**	**05 06 46.1**	**-1.0**
SERG	**Sergoula**	**138.30 316**	P	**PKPdf**	**05 06 45.1**	**-1.9**
TRIZ	**Trizonia**	**138.31 316**	P	**PKPdf**	**05 06 45.9**	**-1.1**
WATA	**Walderalm**	**138.34 334**	*e*PKPdf	**PKPdf**	**05 06 46.3**	**-0.7**
comp=Z,10nm,1.1s						
WTTA	**Wattenberg**	**138.37 334**	*e*PKPdf	**PKPdf**	**05 06 46.6**	**-0.5**
comp=Z,11nm,0.7s						
ABTA	**Abfaltersbach**	**138.38 333**	*i* PKPdf	**PKPdf**	**05 06 44.7**	**-2.3**
comp=Z,15nm,0.9s						
EFP	**Efpalio**	**138.40 316**	P	**PKiKP**	**05 06 48.2**	**-1.0**
KLV	**Kalavryta, Ach**	**138.42 316**	P	**PKPdf**	**05 06 46.8**	**-0.5**
LAKA	**Lakka**	**138.44 316**	P	**PKPdf**	**05 06 46.8**	**-0.5**
WLF	**Walferdange**	**138.47 341**	*e*PKPdf	**PKiKP**	**05 06 48.3**	**-0.7**
WLF			LR	LR		
comp=Z,11μm,21.0s						
WLF	**Walferdange**	**138.47 341**	PKPdf	**PKiKP**	**05 06 48.4**	**-0.7**
MOTA	**Moosalm**	**138.53 334**	*e*PKPdf	**PKPdf**	**05 06 47.2**	**-0.1**
comp=Z,15nm,1.0s						
ALF01	**Guarapari-ES**	**138.54 140**	*e*P	**PKiKP**	**05 06 50.2**	**+0.2**
PVO	**Paravola**	**138.55 317**	P	**PKPdf**	**05 06 47.7**	**+0.3**
RETA	**Reutte**	**138.56 335**	*e*PKPdf	**PKPdf**	**05 06 46.7**	**-0.5**
comp=Z,6.1nm,0.7s						
DOU	**Dourbes**	**138.58 342**	PKPdf	**PKPdf**	**05 06 47.5**	**+0.4**
SQTA	**Sankt Quirin**	**138.58 334**	*e*PKPdf	**PKPdf**	**05 06 46.4**	**-1.0**
comp=Z,6.9nm,0.7s						
VLX	**Vlachokerasia**	**138.60 315**	P	**PKPdf**	**05 06 46.8**	**-0.9**
DRO	**Drossia**	**138.77 316**	P	**PKPdf**	**05 06 48.2**	**+0.3**
BFO	**Black Forest**	**138.84 338**	PFAKE		05 07 00.0	+10
BFO			LR	LR		
comp=Z,1μm,21.0s						
IGT	**Igoumenitsa**	**138.85 319**	P	**PKPdf**	**05 06 46.8**	**-1.2**
RLS	**Riolos of Patr**	**138.88 316**	P	**PKPdf**	**05 06 48.0**	**0.0**
FETA	**Feichten**	**138.94 334**	*e*PKPdf	**PKPdf**	**05 06 47.3**	**-0.8**
comp=Z,22nm,0.9s						
ITM	**Ithomi**	**139.00 315**	*e*PKPpre	PKPpre	05 06 41.6	
ITM			LR	LR		
comp=Z,2μm,22.0s						
LKD2	**Lefkada island**	**139.04 318**	P	**PKPdf**	**05 06 45.1**	**-3.3**
MCI6	**Montes Claros**	**139.05 133**	*e*P	**PKiKP**	**05 06 52.3**	**+1.0**
DAVA	**Damuels**	**139.09 335**	*e*PKPdf	**PKPdf**	**05 06 47.8**	**-0.6**
comp=Z,8.7nm,0.6s						
KEK	**Kerkira**	**139.09 319**	P	**PKPdf**	**05 06 47.7**	**-0.7**
MCI8	**Montes Claros**	**139.13 132**	*e*P	**PKiKP**	**05 06 52.1**	**+0.7**
FSK	**Fiskardo**	**139.28 317**	P	**PKPdf**	**05 06 48.5**	**-0.2**
KFL	**Anninata**	**139.31 317**	P	**PKPdf**	**05 06 46.8**	**-2.0**
ECH	**Echery**	**139.36 339**	*e*PKPdf	**PKiKP**	**05 06 50.5**	**-0.5**
ECH			LR	LR		
comp=Z,2μm,21.0s						
FUORN	**Ofenpass-Fuorn**	**139.46 334**	*e*PKPpre	PKPpre	05 06 41.5	
FUORN			LR	LR		
comp=Z,2μm,21.0s						
DAVOX	**Davos/Dischmat**	**139.49 335**	PKhKP	PKPpre	05 06 40.8	
comp=Z,6.7nm,0.5s,baz=215,slow=4.3,SNR=11						
SJMB	**Sao Joao De Ma**	**139.63 138**	*e*P	**PKiKP**	**05 06 52.2**	**-0.2**
RIB01	**Linhares ES**	**139.70 139**	*e*P	**PKiKP**	**05 06 52.3**	**-0.1**
TUE	**Stuetta**	**139.96 335**	*e*PKPpre	PKPpre	05 06 42.9	
TUE			LR	LR		
comp=Z,3μm,20.0s						
MATE	**Matera**	**140.44 323** ⇑	*i*P	**PKPdf**	**05 06 49.8**	**-1.0**
SENIN	**Lac Senin/Sane**	**140.86 337**	*e*PKPpre	PKPpre	05 06 47.0	
SENIN			LR	LR		
comp=Z,2μm,21.0s						
CLF	**Chambon-Foret**	**141.12 343**	*e*PKPdf	**PKPdf**	**05 06 52.3**	**+0.5**
CLF			LR	LR		
comp=Z,3μm,22.0s						
AQU	**L'Aquila**	**141.16 327**	PFAKE		05 07 00.0	+5.1
AQU			LR	LR		
comp=Z,2μm,22.0s						
TIP	**Timpagrande**	**141.31 321**	*e*PKPpre	**PKPdf**	**05 06 48.2**	**-4.3**
TIP			LR	LR		
comp=Z,2μm,22.0s						
TIP	**Timpagrande**	**141.31 321**	P	PKPpre	05 06 41.5	
TIP	**Timpagrande**	**141.31 321** ⇑	*i*P	**PKPdf**	**05 06 49.2**	**-3.3**
VLC	**Villacollemand**	**141.32 332**	PFAKE		05 07 00.0	+4.9
VLC			LR	LR		
comp=Z,3μm,22.0s						
BNI	**Bardonecchia**	**142.19 336**	*e*PKPpre	PKPpre	05 06 48.0	
BNI			LR	LR		
comp=Z,3μm,20.0s						
BNI	**Bardonecchia**	**142.19 336**	*e*PKHKP	PKPpre	05 06 48.1	
BNI			MLR	MLR		
comp=Z,3μm,20.0s						
CEL	**Celeste**	**142.41 320**	PFAKE		05 07 10.0	+12
CEL			LR	LR		
comp=Z,1μm,22.0s						
SSB	**Saint Sauveur**	**142.81 339**	*e*PKPpre	**PKPdf**	**05 06 51.5**	**-3.5**
SSB			LR	LR		
comp=Z,3μm,22.0s						
SSB	**Saint Sauveur**	**142.81 339**	*e*PKIKP	**PKPdf**	**05 06 51.5**	**-3.5**
SSB			MLR	MLR		
comp=Z,3μm,22.0s						
CLTB	**Caltabellotta**	**144.48 322**	*e*PKPdf	PKPbc	05 06 56.7	-0.1
CLTB			LR	LR		
comp=Z,3μm,21.0s						
WDD	**Wied Dalam**	**144.74 318**	PFAKE		05 07 10.0	+7.7
WDD			LR	LR		
comp=Z,1μm,21.0s						
MAHO	**Mahon**	**147.46 334**	*i* PKP	**PKPdf**	**05 07 04.2**	**+1.1**
MAHO	**Mahon**	**147.46 334**	PP	PP	05 10 34.9	+3.9
KEST	**Kesra**	**148.03 323**	PKPbc	**PKPdf**	**05 07 04.8**	**+0.5**
comp=Z,89nm,0.9s,baz=93,slow=1.3,SNR=77						
KEST	**Kesra**	**148.03 323**	*e*PKPdf	**PKPdf**	**05 07 04.8**	**+0.5**
KEST			LR	LR		
comp=Z,2μm,20.0s						
PBRG	**Braganca**	**149.11 350**	*e*PKPbc	**PKPbc**	**05 07 09.9**	**-0.1**
PGAV	**Gavieira, Arco**	**149.19 352**	*e*PKPbc	**PKPbc**	**05 07 10.2**	**0.0**
PGAV	**Gavieira, Arco**	**149.19 352**	*e*LR	LR	05 59 32.3	
comp=Z,3μm,22.0s						
PGAV	**Gavieira, Arco**	**149.19 352**	*e*LR	LR	05 59 31.2	
comp=Z,3μm,22.0s						
PCAB	**Cabril**	**149.40 352**	*e*PKPdf	**PKPdf**	**05 07 06.6**	**+0.3**
PCAB	**Cabril**	**149.40 352**	*e*PKPbc	**PKPbc**	**05 07 10.8**	**+0.1**
POLO	**Lamas de Olo**	**149.70 351**	*e*PKPbc	**PKPbc**	**05 07 11.6**	**+0.1**
UCM	**Universidad Co**	**149.76 344**	*i* PKP	**PKPdf**	**05 07 08.7**	**+1.8**
MVO	**Moncorvo**	**149.78 350**	*e*PKPbc	**PKPbc**	**05 07 11.9**	**+0.2**
MVO	**Moncorvo**	**149.78 350**	*e*LR	LR	05 58 28.7	
comp=Z,3μm,20.0s						
MVO	**Moncorvo**	**149.78 350**	*e*LR	LR	05 59 00.0	
comp=Z,3μm,20.0s						
PVRL	**Vila Real**	**149.78 351**	*e*PKPbc	**PKPbc**	**05 07 11.8**	**+0.2**
SET	**Setif**	**149.88 328**	P	**PKiKP**	**05 07 13.0**	**0.0**
NBMO	**Morrinhos-CE**	**149.99 118**	*e*P	**PKPbc**	**05 07 10.6**	**-2.3**
PTO	**Porto**	**150.04 352**	*e*PKPdf	**PKPdf**	**05 07 08.0**	**+0.8**
PTO	**Porto**	**150.04 352**	*e*PKPbc	**PKiKP**	**05 07 12.7**	**-0.4**
NBLI	**Livramento-PB**	**150.29 128**	*e*P	**PKPdf**	**05 07 11.1**	**+2.6**
ADH	**Angra Heroismo**	**150.29 22**	*e*PKP	**PKPdf**	**05 07 07.6**	**-0.1**
PVIS	**Viseu**	**150.36 351**	*e*PKPbc	**PKPbc**	**05 07 12.9**	**-0.2**
ESDC	**Sonseca Array**	**150.55 345**	PKP	**PKPdf**	**05 07 08.4**	**+0.3**
comp=Z,1.7nm,0.6s,baz=9.1,slow=2.3,SNR=27						
ESDC			PKPbc	**PKPbc**	**05 07 13.5**	**0.0**
comp=Z,21nm,0.9s,baz=12,slow=2.6,SNR=51						
ESLA	**Sonseca Array**	**150.55 345**	PFAKE		05 07 20.0	-0.2
ESLA			LR	LR		
comp=Z,2μm,21.0s						
MTE	**Manteigas**	**150.61 350**	*e*PKPdf	**PKPdf**	**05 07 08.9**	**+0.7**
MTE	**Manteigas**	**150.61 350**	*e*PKPbc	**PKPbc**	**05 07 13.9**	**+0.2**
MTE	**Manteigas**	**150.61 350**	*e*PKPab	**PKPab**	**05 07 20.0**	**-0.5**
MTE	**Manteigas**	**150.61 350**	*e*PP	PP	05 10 53.1	+4.1
MTE	**Manteigas**	**150.61 350**	*e*LR	LR	06 01 39.0	
comp=Z,2μm,22.0s						
MTE	**Manteigas**	**150.61 350**	*e*LR	LR	06 00 21.2	
comp=Z,2μm,22.0s						
MTE	**Manteigas**	**150.61 350**	*e*PKPdf	**PKPdf**	**05 07 08.0**	**-0.2**
MTE			*e*PKPbc	**PKiKP**	**05 07 14.1**	**-0.3**
MTE			LR	LR		
comp=Z,2μm,20.0s						
PAB	**San Pablo**	**150.77 345**	*e*PKPdf	**PKPdf**	**05 07 09.0**	**+0.5**
PAB			LR	LR		
comp=Z,2μm,22.0s						
PAB	**San Pablo**	**150.77 345**	*e*PKIKP	**PKPdf**	**05 07 09.0**	**+0.5**
PAB			MLR	MLR		
comp=Z,2μm,22.0s						
COI	**Coimbra**	**150.93 352**	*e*PKPbc	**PKPbc**	**05 07 14.4**	**+0.1**
COI	**Coimbra**	**150.93 352**	*e*PP	PP	05 10 51.1	+0.4
COI	**Coimbra**	**150.93 352**	*e*PKPbc	**PKPbc**	**05 07 14.5**	**+0.1**
COI			LR	LR		
comp=Z,2μm,20.0s						
COI	**Coimbra**	**150.93 352**	*e*PKIKP	**PKPbc**	**05 07 14.5**	**+0.1**
COI			MLR	MLR		
comp=Z,2μm,20.0s						
PCAS	**Casmilo, Conde**	**151.10 352**	*e*PKPdf	**PKPdf**	**05 07 09.4**	**+0.5**
PCAS	**Casmilo, Conde**	**151.10 352**	*e*PKPbc	**PKPbc**	**05 07 14.8**	**0.0**
PCAS	**Casmilo, Conde**	**151.10 352**	*e*PP	PP	05 10 55.8	+4.1
NBPA	**Parau_RN**	**151.13 125**	*e*P	**PKPdf**	**05 07 12.4**	**+2.7**
PCBR	**Castelo Branco**	**151.15 350**	*e*PKPdf	**PKPdf**	**05 07 09.0**	**0.0**
PCBR	**Castelo Branco**	**151.15 350**	*e*PKPbc	**PKPbc**	**05 07 14.9**	**0.0**
PTOM	**Tomar**	**151.51 351**	*e*PKPbc	**PKiKP**	**05 07 16.1**	**-0.1**
PMRV	**Marv??o**	**151.53 350**	*e*PKPbc	**PKiKP**	**05 07 16.1**	**-0.2**
PMRV	**Marv??o**	**151.53 350**	*e*PP	PP	05 10 56.1	+1.9
PMRV	**Marv??o**	**151.53 350**	*e*LR	LR	06 03 29.4	
comp=Z,2μm,22.0s						
PMRV	**Marv??o**	**151.53 350**	*e*LR	LR	06 04 09.9	
comp=Z,2μm,22.0s						
CART	**Cartagena**	**151.54 339**	PFAKE		05 07 20.0	+3.7
CART			LR	LR		
comp=Z,1μm,20.0s						
CART	**Cartagena**	**151.54 339**	*i* PKP	**PKPdf**	**05 07 08.1**	**-1.6**
PSET	**Sete Cidades**	**151.57 20**	*e*PKP	**PKPdf**	**05 07 09.0**	**-0.7**
CMLA	**Cha da Macela**	**151.69 20**	*e*PKP	**PKPdf**	**05 07 09.9**	**0.0**
SHEL	**Horse Pasture**	**151.70 196**	*e*PKPbc	**PKiKP**	**05 07 18.2**	**+0.9**
SHEL			*e*PKPab	**PKPab**	**05 07 26.3**	**+0.8**
BART	**Pico Bartolome**	**151.79 19**	*e*PKP	**PKPdf**	**05 07 09.0**	**-1.1**
PMTG	**Montargil**	**152.02 351**	*e*PKPdf	**PKPdf**	**05 07 10.8**	**+0.5**
PMTG	**Montargil**	**152.02 351**	*e*PKPbc	**PKPbc**	**05 07 16.4**	**-0.5**
PMTG	**Montargil**	**152.02 351**	*e*PP	PP	05 10 59.0	+2.1
RCBR	**Riachuelo**	**152.05 127**	*e*PKPbc	**PKPbc**	**05 07 17.1**	**-0.6**
RCBR			LR	LR		
comp=Z,2μm,20.0s						
RCBR	**Riachuelo**	**152.05 127**	*e*PKIKP	**PKPbc**	**05 07 17.1**	**-0.6**
RCBR			MLR	MLR		
comp=Z,2μm,20.0s						
RCBR	**Riachuelo**	**152.05 127**	*e*P	**PKPbc**	**05 07 14.8**	**-2.9**
PMAFR	**Mafra**	**152.28 353**	*e*PKPbc	**PKPbc**	**05 07 17.6**	**+0.1**
PMAFR	**Mafra**	**152.28 353**	*e*PP	PP	05 11 01.9	+3.5
LIS	**Lisbon**	**152.50 352**	*e*PKPdf	**PKPdf**	**05 07 10.7**	**-0.3**
LIS			*e*PP	**PP**	**05 11 01.5**	**+1.9**
LIS			AMS	AMS	06 16 13.3	
comp=E,2μm,28.5s						
LIS	**Lisbon**	**152.50 352**	*e*PKIKP	**PKPdf**	**05 07 10.7**	**-0.3**
LIS			*e*		05 11 01.5	
PSMA	**Santa Maria**	**152.52 20**	*e*PKP	**PKPdf**	**05 07 11.0**	**-0.1**
PBEJ	**Beja**	**152.98 350**	*e*PKPdf	**PKPdf**	**05 07 13.5**	**+1.7**
PBEJ	**Beja**	**152.98 350**	*e*PKPbc	**PKiKP**	**05 07 20.5**	**+1.2**
PNCL	**Nicolau / Gran**	**153.00 351**	*e*PKPdf	**PKPdf**	**05 07 12.6**	**+0.8**
PNCL	**Nicolau / Gran**	**153.00 351**	*e*PKPbc	**PKiKP**	**05 07 19.4**	**+0.1**
PNCL	**Nicolau / Gran**	**153.00 351**	*e*PP	PP	05 11 04.8	+2.3
MESJ	**Messejana**	**153.22 350**	*e*PKPdf	**PKPdf**	**05 07 11.7**	**-0.4**
MESJ			AMS	AMS	06 17 12.5	
comp=Z,2μm,21.3s						
MESJ	**Messejana**	**153.22 350**	*e*PKPdf	**PKPdf**	**05 07 13.2**	**+1.1**
MESJ	**Messejana**	**153.22 350**	*e*PKPbc	**PKiKP**	**05 07 20.5**	**+0.8**
MESJ	**Messejana**	**153.22 350**	*e*PKIKP	**PKPdf**	**05 07 11.7**	**-0.4**
PCVE	**Castro Verde**	**153.39 350**	*e*PKPdf	**PKPdf**	**05 07 13.3**	**+0.9**
PCVE	**Castro Verde**	**153.39 350**	*e*PKPbc	**PKiKP**	**05 07 20.4**	**+0.3**
PCVE	**Castro Verde**	**153.39 350**	*e*PP	PP	05 11 05.7	+1.0
EMAL	**Malaga-Limoner**	**153.40 343**	*i* PKP	**PKPdf**	**05 07 12.0**	**-0.4**
EMAL	**Malaga-Limoner**	**153.40 343**	PP	PP	05 11 05.7	+0.8
LIJA	**Lijar**	**153.53 345**	*i* PKP	**PKiKP**	**05 07 20.8**	**+0.2**
PVAQ	**Vaqueiros**	**153.56 349**	*e*PKPdf	**PKPdf**	**05 07 12.7**	**+0.1**
PVAQ	**Vaqueiros**	**153.56 349**	*e*PKPbc	**PKiKP**	**05 07 21.0**	**+0.5**
PVAQ	**Vaqueiros**	**153.56 349**	*e*PP	PP	05 11 07.6	+1.9
PVAQ	**Vaqueiros**	**153.56 349**	*e*LR	LR	06 03 44.3	
comp=Z,3μm,22.0s						
PVAQ	**Vaqueiros**	**153.56 349**	*e*LR	LR	06 03 19.9	
comp=Z,3μm,22.0s						
PVAQ	**Vaqueiros**	**153.56 349**	*e*PKPbc	**PKiKP**	**05 07 20.7**	**+0.2**
PVAQ			LR	LR		
comp=Z,4μm,22.0s						
PTEO	**Sao Teotonio**	**153.59 351**	*e*PKPbc	**PKiKP**	**05 07 21.0**	**+0.5**
PBDV	**Barranco-do-Ve**	**153.75 350**	*e*PKPbc	**PKiKP**	**05 07 21.6**	**+0.7**
PBDV	**Barranco-do-Ve**	**153.75 350**	*e*PP	PP	05 11 10.4	+3.6
MORF	**Marmelete**	**153.81 351**	*e*PKPdf	**PKPdf**	**05 07 12.6**	**-0.5**
MORF			*e*PP	**PP**	**05 11 09.1**	**+1.9**
MORF			AMS	AMS	06 17 18.7	
comp=Z,1μm,22.1s						
MORF	**Marmelete**	**153.81 351**	*e*PKPdf	**PKPdf**	**05 07 13.1**	**0.0**
MORF	**Marmelete**	**153.81 351**	*e*PKPbc	**PKiKP**	**05 07 21.3**	**+0.2**
MORF	**Marmelete**	**153.81 351**	*e*PP	PP	05 11 08.6	+1.5
MORF	**Marmelete**	**153.81 351**	*e*PKIKP	**PKPdf**	**05 07 12.5**	**-0.5**
MORF			*e*		05 11 09.0	
PFVI	**Vila Bisbo**	**154.01 351**	*e*PKPbc	**PKiKP**	**05 07 22.3**	**+0.9**
PFVI	**Vila Bisbo**	**154.01 351**	*e*PP	PP	05 11 11.0	+2.8
PFVI	**Vila Bisbo**	**154.01 351**	*e*PKPbc	**PKiKP**	**05 07 22.4**	**+0.9**
PFVI			LR	LR		
comp=Z,2μm,21.0s						
SFS	**San Fernando**	**154.15 346**	*i* PKP	**PKPdf**	**05 07 13.7**	**+0.3**
SFS	**San Fernando**	**154.15 346**	PP	PP	05 11 12.7	+3.7
CNIL	**Conil**	**154.20 346**	*e*PKP	**PKiKP**	**05 07 22.5**	**+0.7**
MELI	**Melilla**	**154.28 339**	*i* PKP	**PKPdf**	**05 07 11.0**	**-2.7**
MELI	**Melilla**	**154.28 339**	PP	PP	05 11 14.0	+4.1
CEU	**Ceuta**	**154.47 344**	*i* PKP	**PKPdf**	**05 07 10.9**	**-3.1**
CEU	**Ceuta**	**154.47 344**	PP	PP	05 11 13.3	+2.4
PVLZ	**Peæn de**	**154.84 342**	*i* PKP	**PKPdf**	**05 07 09.8**	**-4.7**
PVLZ	**Peæn de**	**154.84 342**	PP	PP	05 11 13.1	0.0
IFR	**Ifrane**	**156.63 342**	*i* PKP	**PKPdf**	**05 07 17.7**	**+0.5**
IFR	**Ifrane**	**156.63 342**	PP	PP	05 11 25.9

BNDS	Bandar-Abbas	1.78	295	*e*Pg		Pn	05 35 05.6 -3.5
GENO	Geno	1.78	295	*e*Pn		Pn	05 35 10.1 +1.0
GENO				IAMB		IAmb	05 35 48.4
	comp=Z,0.0nm,0.5s						
MSFE	Esma-Masafi	2.08	232	*e*P		Pn	05 35 12.4 -0.7
	SNR=25						
UOSS	Minazif	2.33	224	*e*Pn		Pn	05 35 15.4 -1.1
UOSS	Minazif	2.33	224	*e*P		Pn	05 35 15.4 -1.1
	SNR=27						
UOSS	Minazif	2.33	224	P		Pn	05 35 15.4 -1.1
UMQ	Umm Al-Quwin	2.36	242	*e*P		Pn	05 35 17.8 +0.8
	SNR=5.3						
UMQ	Umm Al-Quwin	2.36	242	P		Pb	05 35 20.4 -0.3
HATD	Hatta, Dubai	2.46	223	*e*P		Pn	05 35 18.1 -0.2
	SNR=23						
HATD	Hatta, Dubai	2.46	223	P		Pn	05 35 17.7 -0.6
CHBR	Chabahar	2.48	114	*e*Pn		Pg	05 35 24.2 -1.5
ASHO	Ashiyiah	2.61	222	*e*P		Pn	05 35 20.7 +0.2
	SNR=28						
ASHO	Ashiyiah	2.61	222	P		Pn	05 35 20.3 -0.1
	SNR=29						
NAZ	Nazwa, Dubai	2.66	232	*i* P		Pn	05 35 22.4 +1.3
	SNR=14						
NAZ	Nazwa, Dubai	2.66	232	P		Pb	05 35 24.3 -1.6
SOHO	SOHO	2.82	208	P		Pn	05 35 21.9 -1.4
	SNR=27						
FAQ	Al Faqa, Dubai	2.86	229	*i* P		Pn	05 35 25.5 +1.6
	SNR=15						
FAQ	Al Faqa, Dubai	2.86	229	P		Pn	05 35 26.3 +2.4
	SNR=16						
FAQ				S		Sb	05 36 05.5 +1.0
HOQ	Hoqain	3.11	191	P		Pn	05 35 27.2 -0.1
	SNR=57						
BIDO	Bidbid	3.11	177	P		Pn	05 35 25.2 -2.1
BIDO				S		Sn	05 36 03.4 -1.2
ASUD	Al Ashush, Dub	3.12	231	*i* P		Pn	05 35 29.8 +2.3
	SNR=36						
ASUD	Al Ashush, Dub	3.12	231	P		Pn	05 35 30.4 +2.9
	SNR=9.2						
NGRK	Negar Kerman	3.19	340	IAMB		IAmb	05 36 36.8
	comp=E,0.0nm,0.6s						
CHMN	Cheshme madani	3.23	353	*e*Pn		Pn	05 35 31.2 +2.0
CHMN				IAMB		IAmb	05 36 34.8
	comp=Z,0.0nm,1.1s						
ALNE	Al Ain	3.27	218	*i* P		Pn	05 35 29.9 +0.3
	SNR=10						
WSAR	Wadi Sarin	3.44	170	Pn		Pn	05 35 32.0 +0.2
	comp=Z,21nm,0.3s,baz=343,slow=7.8,SNR=96						
WSAR				Sn		Sn	05 36 11.8 -0.9
	comp=Z,80nm,0.3s,baz=11,slow=8.9,SNR=16						
KRBR	Kerman	3.50	342	*e*Pn		Pn	05 35 32.7 -0.2
TVBK	TV Kerman	3.50	342	*e*Pn		Pn	05 35 35.0 +2.1
TVBK				IAMB		IAmb	05 36 38.2
	comp=Z,0.0nm,0.5s						
ARQ	Araqi	3.55	202	P		Pb	05 35 37.7 -3.3
SMDO	Samad	3.57	179	P		Pn	05 35 33.9 +0.2
	SNR=10						
ZHSF	Zahedan	3.85	39	*e*Pn		Pn	05 35 41.0 +3.3
BSY	Bisya	3.95	190	P		Pn	05 35 41.0 +2.2
	SNR=25						
BSY				S		Sn	05 36 29.8 +4.6
KHGB	Koh Gabri	3.95	341	*e*Pn		Pn	05 35 41.1 +2.1
KHGB				IAMB		IAmb	05 36 54.4
	comp=Z,0.0nm,1.0s						
WBK	Wadi Bani Khal	4.12	167	P		Pn	05 35 42.9 +1.7
JLN	Jalan Bani Buh	4.66	163	P		Pn	05 35 48.3 -0.3
GHIR	Ghir-Karzin	4.73	291	*e*Pn		Pn	05 35 47.5 -2.1
ISRV	Sarvestan	5.09	304	*e*Pn		Pn	05 35 56.2 +1.4
IBAF	Bafgh	5.36	337	*e*Pn		Pn	05 36 01.3 +2.9
BSRN	Basiran	5.40	10	*e*Pn		Pn	05 36 00.2 +1.3
IMEH	Mehriz	5.57	329	*e*Pn		Pn	05 36 01.6 +0.2
MHTO	MHTO	5.63	180	P		Pn	05 36 03.4 +1.4
IKOO	Kooshah	5.83	9	*e*Pn		Pn	05 36 05.5 +0.6
IKAZ	Kazeroun	6.25	301	*e*Pn		Pn	05 36 10.0 -0.8
ITEG	Tejag	6.27	6	*e*Pn		Pn	05 36 12.2 +1.3
TPRV	Parvadeh(Tabas	6.46	350	*e*Pn		Pn	05 36 14.9 +1.5
IMON	Monand	6.69	12	*e*Pn		Pn	05 36 19.1 +2.4
TKDS	Koohdasht(Taba	6.99	354	*e*Pn		Pn	05 36 21.7 +1.0
IZEF	Zefreh	7.93	323	*e*Pn		Pn	05 36 33.8 0.0
ZNGN	Zangjan	8.27	313	*e*Pn		Pn	05 36 38.8 +0.4
DMTO	DMTO	9.32	198	P		Pn	05 36 54.0 +1.4
	SNR=6.8						
IMYA	Miami	9.84	10	*e*Pn		Pn	05 37 02.2 +2.4
GEYT	Alibeck	11.25	1	Pn		Pn	05 37 15.4 -3.7
	comp=Z,0.3nm,0.3s,baz=110,slow=17,SNR=1.9						
NIL	Nilore	14.94	58	*e*Pn		Pn	05 38 08.8 -0.6
NIL	Nilore	14.94	58	*e*P		Pn	05 38 08.8 -0.6
CHCP	Chirah Chowk	14.95	58	P		Pn	05 38 08.3 -1.3
AKT	Akhty	17.04	333	*e*P		P	05 38 39.9 +1.4
AKT				pmax		pmax	
	comp=Z,6.0nm,0.4s						
BTK	Batken	17.12	35	*e*Pn		Pn	05 38 36.2 -1.4
	comp=Z,15nm,1.0s						
BTK	Batken	17.12	35	*e*P		Pn	05 38 36.2 -1.4
BTK				pmax		pmax	
	comp=Z,15nm,1.0s						
GNI	Garni	17.39	324⇑	*e*P		P	05 38 42.8 +0.4
GNI				pmax		pmax	
	comp=Z,113nm,1.7s						
ASF	Jabal al Asfar	19.16	292	P		P	05 39 00.0 -1.9
	comp=Z,0.6nm,0.3s,baz=308,slow=4.0,SNR=3.8						
ASF				S		Sn	05 42 31.6 -6.0
	comp=Z,0.3nm,0.3s,baz=315,slow=7.1,SNR=2.7						
ARSB	Arslanbob	19.17	36	*e*P		P	05 39 01.1 -0.9
KK31	Karatay Array	19.34	29	*e*P		P	05 39 01.6 -2.1
	comp=Z,3.6nm,0.8s						
KK31	Karatay Array	19.34	29	*e*P		P	05 39 01.6 -2.1
KK31				pmax		pmax	
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	19.34	29	*e*P		P	05 39 02.5 -1.1
	comp=Z,3.6nm,0.8s						
KKAR	Karatay Array	19.34	29	*e*P		P	05 39 02.6 -1.1
KKAR				pmax		pmax	
	comp=Z,4.0nm,0.8s						
KSH	Kashi	19.76	45	P		P	05 39 07.9 -0.5
KSH				PP		PnPn	05 39 23.2 -0.4
KSH				S		S	05 42 37.0 -14
KSH				pmax		pmax	
	comp=Z,28nm,0.7s						
KSH				pmax		pmax	
	comp=Z,390nm,7.8s						
KSH				LR		LR	
	comp=N,2μm,15.9s						
KSH				LR		LR	
	comp=E,980nm,12.3s						
KSH				LR		LR	
	comp=Z,5μm,21.8s						
ZEI	Tsey	19.79	328	*e*P		Pn	05 39 11.3 +1.0
ZEI				pmax		pmax	
	comp=Z,5.0nm,0.6s						
EIL	Elat	20.52	284	P		P	05 39 14.6 -2.0
	comp=Z,19nm,1.0s,baz=115,slow=1.1,SNR=6.2						
EKS2	Erkin-Say	20.54	35	P		P	05 39 16.1 -0.8
	SNR=20						
MMAI	Mount Meron Ar	20.57	293	P		P	05 39 16.8 -0.5
	comp=Z,0.5nm,0.3s,baz=112,slow=15,SNR=3.4						
UCH	Uchtor	20.62	37	P		Pn	05 39 19.1 -1.3
	SNR=7.4						
ATD	Arta Tunnel	20.71	226	P		P	05 39 19.7 +0.9
	comp=Z,5.4nm,0.4s,baz=45,slow=13,SNR=2.3						
AAK	Ala-Archa	20.90	36	P		P	05 39 19.9 -0.9
	comp=Z,4.3nm,0.4s,baz=228,slow=9.5,SNR=13						
AAK	Ala-Archa	20.90	36	*ce*P		P	05 39 20.2 -0.5
	comp=Z,13nm,0.9s						
AAK	Ala-Archa	20.90	36	*ce*P		P	05 39 20.3 -0.5
AAK				pmax		pmax	
	comp=Z,18nm,1.7s						
KZA	Kyzart	20.92	38	P		P	05 39 21.6 +0.3
	SNR=18						
KBZ	Khabaz	20.98	328	P		P	05 39 20.8 -0.6
	comp=Z,0.6nm,0.4s,baz=180,slow=7.2,SNR=1.6						
KBK	Karagaybulak	21.15	37	P		P	05 39 23.9 +0.4
	SNR=9.9						
KIV	Kislovodsk	21.25	328	*e*P		P	05 39 28.8 +4.3
KIV				pmax		pmax	
	comp=Z,29nm,1.0s						
BOOM	Boomskoye usch	21.58	38	*e*P		P	05 39 27.8 -0.4
	comp=Z,40nm,1.1s						
BOOM	Boomskoye usch	21.58	38	*e*P		P	05 39 27.8 -0.4
BOOM				pmax		pmax	
	comp=Z,40nm,1.1s						
ULHL	Ulahol	21.59	39	P		P	05 39 27.6 -0.7
	SNR=12						
TKM2	Tokmak 2	21.68	37	P		P	05 39 27.9 -1.4
	SNR=17						
ABKAR	Akbulak array	22.63	3	*e*P		P	05 39 37.7 -1.4
	comp=Z,15nm,1.0s						
AKTO	Aktyubinsk	23.76	0	P		P	05 39 49.1 -1.5
	comp=Z,2.5nm,0.5s,baz=174,slow=8.2,SNR=8.0						
BR101	Keskin Array S	24.10	309	*e*P		P	05 39 53.6 -0.5
BR131	Keskin Array S	24.10	309	*e*P		P	05 39 57.5 +3.4
	comp=Z,6.6nm,0.9s						
BRTR	Keskin Array B	24.10	309	P		P	05 39 53.6 -0.5
	comp=Z,0.8nm,0.7s,baz=199,slow=6.5,SNR=10						
BRTR	Keskin Array B	24.10	309	*i* P		P	05 39 54.7 +0.6
ANN	Anapa	24.51	323	*e*P		P	05 40 11.0 +13
ANN				pmax		pmax	
	comp=Z,88nm,1.1s						
MAKZ	Makanchi	27.65	37	*e*P		P	05 40 29.9 +3.8
	comp=Z,5.8nm,1.0s						
MK32	Makanchi Array	27.81	37	*e*P		P	05 40 26.4 -1.1
MKAR	Makanchi Array	27.81	37	P		P	05 40 26.4 -1.2
	comp=Z,1.5nm,0.9s,baz=220,slow=6.4,SNR=3.4						
BVAR	Borovoye Array	27.94	16	P		P	05 40 26.4 -2.1
	comp=Z,3.3nm,0.9s,baz=202,slow=7.2,SNR=6.8						
BRVK	Borovoye	27.94	16	*e*P		P	05 40 28.0 -0.5
	comp=Z,5.2nm,1.1s						
BRVK	Borovoye	27.94	16	⇓*i*P		P	05 40 31.2 +2.7
BRVK				pmax		pmax	
	comp=Z,5.0nm,1.2s						
KURBB	Kurchatov Arra	28.64	28	P		P	05 40 33.5 -1.2
	comp=Z,0.5nm,0.6s,baz=225,slow=8.7,SNR=4.0						
KURK	Kurchatov	28.75	28	⇓*i*P		P	05 40 38.7 +3.0
KURK				pmax		pmax	
	comp=Z,4.0nm,1.2s						
APE	Apeiranthos	29.33	299⇑	*i*P		P	05 40 48.8 +7.7
APE				pmax		pmax	
	comp=Z,9.0nm,0.8s						
ARU	Arti	29.77	1	*i* P		P	05 40 46.2 +1.5
OBN	Obninsk	32.45	337	*i* P		P	05 41 11.2 +2.8
OBN				pmax		pmax	
	comp=Z,11nm,0.4s						
AKASG	Malin Array Be	32.52	325	P		P	05 41 07.0 -2.0
	comp=Z,0.5nm,0.4s,baz=132,slow=7.8,SNR=2.0						
AKASG	Malin Array Be	32.52	325	P		P	05 41 07.0 -2.0
KIEV	Kiev	32.52	325	⇑*i*P		P	05 41 13.4 +4.3
ZALV	Zalesovo Beam	33.71	29	P		P	05 41 17.9 -1.6
	comp=Z,1.3nm,0.3s,baz=238,slow=8.5,SNR=5.0						
ZAA1	Zalesovo Array	33.72	29	*e*P		P	05 41 17.9 -1.6
KLMR	Klimovskoe	36.43	345	*e*P		P	05 41 35.7 -7.1
KLMR				pmax		pmax	
	comp=Z,11nm,1.5s						
GTA	Gaotai	37.00	59	*e*P		P	05 41 49.1 +1.0
GTA				pP		sP	05 41 53.7 +0.8
GTA				sP		pP	05 41 56.8 +5.3
GTA				pmax		pmax	
	comp=Z,2.0nm,1.0s						
FIA0	FINESS Array S	40.86	337	*e*P		P	05 42 18.1 -1.8
FIA0	FINESS Array S	40.86	337	*e*P		P	05 42 18.1 -1.8
FINES	FINESS Array B	40.86	337	P		P	05 42 18.1 -1.8
	comp=Z,1.4nm,0.6s,baz=133,slow=10,SNR=5.0						
SONA0	Songino Array	43.13	47	*e*P		P	05 42 38.6 -0.3
SONM	Songino Array	43.13	47	P		P	05 42 38.6 -0.3
	comp=Z,2.1nm,0.9s,baz=253,slow=8.7,SNR=8.9						
ULN	Ulaanbaatar	43.57	48	⇓*i*P		P	05 42 45.2 +2.8
ULN				pmax		pmax	
	comp=Z,3.0nm,0.9s						
XAN	Xi'an	44.21	68	P		P	05 42 49.5 +1.9
XAN				pP		sP	05 43 02.0 +10
XAN				pmax		pmax	
	comp=Z,6.0nm,1.2s						
HFS	Hagfors	45.02	330	P		P	05 42 51.9 -1.8
	comp=Z,1.5nm,0.8s,baz=132,slow=10.0,SNR=3.8						
NB200	NORSAR Array S	46.52	331	*e*P		P	05 43 04.0 -1.6
NOA	NORSAR Array B	46.52	331	P		P	05 43 04.0 -1.6
	comp=Z,0.4nm,0.8s,baz=117,slow=8.0,SNR=2.3						
NOA	NORSAR Array B	46.52	331	P		P	05 43 04.0 -1.6
KONO	Kongsberg	46.68	329	⇑*i*P		P	05 43 12.4 +5.7
KONO				pmax		pmax	
	comp=Z,22nm,1.9s						
ARCES	ARCESS Array B	46.91	345	P		P	05 43 06.8 -1.6
	comp=Z,7.5nm,0.4s,baz=132,slow=9.0,SNR=7.9						
BOD	Bodaibo	49.88	35	*e*P		P	05 43 30.1 -1.4
BOD				pmax		pmax	
	comp=Z,9.0nm,1.7s						
ESDC	Sonseca Array	52.52	301	P		P	05 43 50.3 -1.4
	comp=Z,0.2nm,0.3s,baz=73,slow=7.4,SNR=3.5						
TOA1	Torodi Ar. Sit	54.21	267	*e*P		P	05 44 01.7 -2.7
TORD	Torodi Ar. Bea	54.21	267	P		P	05 44 01.7 -2.7
	comp=Z,1.0nm,0.4s,baz=66,slow=7.4,SNR=17						
TIXI	Tiksi	58.94	20	⇑*i*P		P	05 44 40.2 +3.0
TIXI				pmax		pmax	
	comp=Z,2.0nm,1.0s						
KSRS	Korea Array	59.05	61	P		P	05 44 37.1 -1.4
	comp=Z,1.8nm,0.8s,baz=276,slow=7.0,SNR=7.3						
KLR	Kul'dur	59.95	47	⇓*i*P		P	05 44 47.1 +2.6
KLR				pmax		pmax	
	comp=Z,5.0nm,1.5s						
SEY	Seymchan	68.58	29	⇑*i*P		P	05 45 43.7 +2.8
BILL	Bilibino	72.08	22	*ce*P		P	05 46 04.7 +2.4
BILL				pmax		pmax	
	comp=Z,7.0nm,1.3s						
ILAR	Eielson Array	86.85	10	P		P	05 47 23.8 +1.1
	comp=Z,0.5nm,0.8s,baz=17,slow=2.6,SNR=5.5						
ILB	Eielson Array	86.85	10	*e*P		P	05 47 23.8 +1.1
ASAR	Alice Springs	88.77	117	P		P	05 47 33.5 +1.0
	comp=Z,0.4nm,0.7s,baz=329,slow=7.0,SNR=2.9						
YKA	Yellowknife Ar	90.98	357	P		P	05 47 42.4 +0.2
	comp=Z,0.4nm,0.9s,baz=360,slow=5.4,SNR=5.7						
YKB5	Yellowknife Ar	90.98	357	*e*P		P	05 47 42.4 +0.2

LDG ***05*** *05:40:36.0±0.1, 45°.54N×2°.84E, h15km, Md2.4/2, Ml2.3/13, Error ellipse: s-maj=1.1km s-min=0.8km az=115.0*

STR 05 05:40:36.1±0.3, 46°N±2°×°±°, h10km, M1.3/6, MLv1.3/6, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYM	Petit Puy Mans	0.25	28	Pg	Pg	05 40 40.9	-0.4
PYM				Sg	Sg	05 40 44.1	-0.7
CFF	Clermont-Ferra	0.30	39	Pg	Pg	05 40 41.9	-0.2
CFF				Sg	Sg	05 40 46.8	+0.5
LBL	Lubilhac	0.41	135	Pg	Pg	05 40 43.9	-0.3
LBL				Sg	Sg	05 40 49.5	-0.1
AGO	Saint Agoulin	0.56	21	Pg	Pg	05 40 46.7	-0.3
AGO				Sg	Sg	05 40 54.4	-0.1
CAF	Calviac	0.81	223	*e*Pg	Pg	05 40 51.4	-0.3
CAF	Calviac	0.81	223	*e*P	Pn	05 40 53.6	0.0
	SNR=1.0						
CAF				*e*Sg	Sb	05 41 03.0	-0.3
	12nm,0.2s,SNR=1.0						
TCF	Toulx Ste Croi	0.88	330	*e*Pg	Pg	05 40 52.7	-0.3
TCF	Toulx Ste Croi	0.88	330	*e*P	Pb	05 40 53.3	-0.2
	SNR=1.0						
TCF				*e*Sg	Sg	05 41 03.7	-0.8
	5.4nm,0.2s						
RJF	Les Rejaudoux	0.96	257	*e*Pg	Pg	05 40 54.3	-0.2
RJF	Les Rejaudoux	0.96	257	*e*P	Pn	05 40 55.2	-0.4
BGF	Bois d'Agland	1.03	0	*e*Pg	Pg	05 40 55.5	-0.4
SSB	Saint Sauveur	1.22	101	Pg	Pb	05 40 59.4	+0.1
SSB				Sg	Sb	05 41 15.0	-0.2
AVF	Avril sur Loir	1.31	16	*e*Pn	Pn	05 40 58.0	-2.5
AVF	Avril sur Loir	1.31	16	*e*Pg	Pn	05 41 00.4	-0.1
	SNR=1.0						
AVF				*e*Sg	Sb	05 41 17.0	-0.7
	5.3nm,0.2s,SNR=1.0						
SMF	Signal de Mont	1.32	32	*e*Pn	Pn	05 40 58.0	-2.6
	SNR=1.0						
SMF	Signal de Mont	1.32	32	*e*Pg	Pn	05 41 00.3	-0.3
SMF	Signal de Mont	1.32	32	*e*P	Pb	05 41 00.8	-0.1
SMF				*e*Sg	Sb	05 41 17.3	-0.6
	5.8nm,0.2s,SNR=1.0						
VIVF	Saint-Julien-l	1.46	117	*e*Pg	Pb	05 41 03.4	+0.1
	SNR=1.0						
VIVF				*e*Sg	Sb	05 41 22.4	+0.5
	4.6nm,0.2s,SNR=1.0						
LFF	La Frestale	1.59	249	*e*Sg	Sb	05 41 26.4	+0.6
	5.5nm,0.3s						
SSF	Saint Saulge	1.60	16	*e*Pg	Pb	05 41 05.7	-0.1
	SNR=1.0						
SSF				*e*Sg	Sb	05 41 26.4	+0.3
	5.3nm,0.3s,SNR=1.0						
LASF	Ste Croix	1.62	153	*e*Pg	Pg	05 41 06.6	-0.5
	SNR=1.0						
LASF				*e*Sg	Sg	05 41 28.2	+0.1
	1.1nm,0.2s,SNR=1.0						
MONQ	Montcuq	1.64	226	Pg	Pb	05 41 06.4	0.0
MONQ				Sg	Sg	05 41 28.2	-0.7
LOR	Lormes	1.88	22	*e*Pg	Pb	05 41 10.8	+0.3
	SNR=1.0						
LOR				*e*Sg	Sb	05 41 34.7	+0.6
	2.5nm,0.2s,SNR=1.0						
MFF	Saint Martin d	2.34	298	*e*Sg	Sg	05 41 49.5	-1.7
	3.2nm,0.2s,SNR=1.0						

LDG ***05*** *05:40:49.5±0.0, 45°.54N×2°.85E, h2km, Ml2.1/11, Error ellipse: s-maj=0.8km s-min=0.6km az=130.0*

STR 05 05:40:52.1±0.4, 46°N±2°×°±°, h0km, M0.9/6, MLv0.9/6, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYM	Petit Puy Mans	0.17	352	Pg	Pg	05 40 54.4	-1.0
PYM				Sg	Sg	05 40 57.8	+0.1
CFF	Clermont-Ferra	0.19	14	Pg	Pg	05 40 55.5	-0.2
LBL	Lubilhac	0.38	158	Pg	Pg	05 40 59.7	+0.4
LBL				Sg	Sg	05 41 03.8	-0.4
AGO	Saint Agoulin	0.48	7	Pg	Pg	05 41 01.6	+0.3
AGO				Sg	Sg	05 41 07.6	+0.2
TCF	Toulx Ste Croi	0.92	321	*e*Sg	Sg	05 41 17.3	-4.3
	4.7nm,0.3s						
CAF	Calviac	0.95	227	*e*Sg	Sg	05 41 16.2	-6.5
	6.7nm,0.2s						
BGF	Bois d'Agland	0.99	352	*e*Pg	Pg	05 41 08.7	-2.4
BGF				*e*Sg	Sg	05 41 22.1	-1.8
	11nm,0.3s						
BGF	Bois d'Agland	0.99	352	*e*Sg	Pg	05 41 08.7	-2.4
	22nm,0.3s,SNR=1.0						
SSB	Saint Sauveur	1.10	105	Pg	Pg	05 41 12.6	-0.5
RJF	Les Rejaudoux	1.11	256	*e*Pg	Pg	05 41 07.6	-5.8
RJF				*e*Sg	Sg	05 41 20.6	-7.2
	3.1nm,0.2s						
RJF	Les Rejaudoux	1.11	256	*e*Sg	Pg	05 41 07.3	-6.1
	6.9nm,0.3s,SNR=1.0						
SMF	Signal de Mont	1.20	27	*e*Pg	Pg	05 41 13.7	-1.4
SMF				*e*Sg	Sg	05 41 30.5	-0.2
	2.1nm,0.2s						
AVF	Avril sur Loir	1.23	10	*e*Sg	Sg	05 41 30.3	-1.3
	2.2nm,0.2s						
VIVF	Saint-Julien-l	1.36	122	*e*Pg	Pg	05 41 16.8	-1.4
VIVF				*e*Sg	Sg	05 41 35.5	-0.3
	2.6nm,0.2s						
SSF	Saint Saulge	1.52	12	*e*Pn	Pn	05 41 17.0	-3.5
SSF				*e*Sg	Sg	05 41 39.7	-1.1
	1.9nm,0.2s						
LFF	La Frestale	1.75	249	*e*Sg	Sn	05 41 39.8	-6.9
	3.0nm,0.2s						
LOR	Lormes	1.78	18	*e*Pg	Pn	05 41 24.2	0.0
LOR				*e*Sg	Sb	05 41 48.1	-0.4
	1.8nm,0.2s						
MONQ	Montcuq	1.79	228	Pg	Pb	05 41 25.3	-0.4

ECX 05 05:49:32.7±0.5, 30°.11N×114°.21W, h8km, MD3.6, ML3.8, 2C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	San Pedro Mart	1.43	311⇑	*e*P	Pn	05 49 57.9	-1.4
SPX				*e*S	Sb	05 50 16.6	-1.6
SPX				IAML		05 50 21.0	
	comp=N,890nm,0.5s						
SPX				⇓*e*		05 50 21.0	
SPX				⇓*e*		05 50 30.4	
SPX				IAML		05 50 30.4	
	comp=E,785nm,1.1s						
SPIG	San Pedro Mart	1.43	311⇑	*e*P	Pn	05 49 57.8	-1.4
SPIG				*e*S	Sb	05 50 16.7	-1.6
CPBX	Cerro Prieto	2.48	338	*e*P	Pn	05 50 13.6	+0.1
CBX	Cerro Bola	3.04	317	*e*P	Pn	05 50 21.7	+0.5
CBX				IAML		05 51 19.6	
	comp=N,548nm,1.1s						
CBX				*e*		05 51 19.6	
SRIG	Santa Rosalia	3.28	148	*e*P	Pn	05 50 23.8	-0.6

JMA ***05*** *06:16:10.3±0.5, 45°.46N×151°.22E, h30km, M4.6*
SKHL ***05*** *06:16:10.8±0.3, 45°.03N×151°.39E, h64km±1km, mb4.3/4*
ISCJB ***05*** *06:16:11.4±0.7, 45°.26N±0°.10×151°.07E±0°.08, h42km, mb3.6/11, Error ellipse: s-maj=15.7km s-min=4.8km az=153.6*
MOS ***05*** *06:16:15.3±1.0, 45°.48N×150°.69E, h70km, mb4.6/1, Error ellipse: s-maj=17.8km s-min=12.3km az=155.7*
IDC ***05*** *06:16:17.7±3.4, 45°.52N×150°.71E, h74km±30km, mb3.4/11, mb1 3.6/14, mb1mx3.5/35, mbtmp3.7/14, MS3.7/2, Ms1 3.7/2, ms1mx3.0/37, Error ellipse: s-maj=25.5km s-min=18.6km az=147.0*

ISC 05 06:16:13.1±0.8, 45°.2N±0°.1×151°.08E±0°.08, h42km, n44, σ1°54/52, mb3.8/11, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.27	271	*e*PN	Pn	06 16 48.1	0.0
KUR				*i*		06 17 06.4	
KUR				pmax	pmax		
	comp=N,219nm,0.2s						
KUR				pmax	pmax		
	comp=E,92nm,0.2s						
KUR				pmax	pmax		
	comp=Z,420nm,0.2s						
KUR				smax	smax		
	comp=N,749nm,0.4s						
KUR				smax	smax		
	comp=E,123nm,0.2s						
KUR	Kuril'sk	2.27	271	*i* P	Pn	06 16 48.1	0.0
KUR				AMB	AMB	06 16 49.0	
	comp=E,41nm,0.3s						
KUR				*i* S	Sn	06 17 16.0	+1.2
KUR				A	A	06 17 17.0	
	comp=E,180nm,0.3s						
KUR				A	A	06 17 17.0	
	comp=E,123nm,0.3s						
YUK	Yuzh-Kuril'sk	3.92	254	⇓*i*PN	Pn	06 17 12.3	+1.7
YUK				*i* S

comp=E,313nm,0.3s
GLVR Golovnino 4.25 251 *e*P **Pn 06 17 16.0 +0.7**
GLVR AMB AMB 06 17 17.0
comp=E,19nm,0.4s
GLVR *i* S **Sn 06 18 04.7 +1.1**
GLVR A A 06 18 18.0
comp=E,80nm,0.3s
GLVR A A 06 18 18.0
comp=E,130nm,0.3s
NEM2 Nemuro 2 4.26 246 P **Pn 06 17 14.7 -0.7**
NEM2 *e*S **Sn 06 18 02.8 -1.1**
JRA Rausu 4.45 255 P **Pn 06 17 19.6 +1.6**
JNK Nakash 4.85 252 P **Pn 06 17 24.4 +0.9**
JNK *e*S **Sn 06 18 17.6 -0.7**
JAK Akkeshi 5.11 246 P **Pn 06 17 26.7 -0.4**
JAK *e*S **Sn 06 18 23.2 -1.6**
JTKR Abashiri--Toko 5.28 259 P **Pn 06 17 31.1 +1.8**
JAR Ashorobuto 5.60 252 P **Pn 06 17 35.2 +1.5**
JAR *e*S **Sn 06 18 37.8 +1.1**
JMP Maruseppu 5.65 260 P **Pn 06 17 36.7 +2.2**
JKA Kamikawa-asahi 6.15 263 *e*P **Pn 06 17 41.3 -0.1**
ASAJ Asahikawa 6.15 263 P **Pn 06 17 41.3 -0.1**
comp=E,2.1nm,0.3s,baz=76,slow=15,SNR=9.0
ASAJ S **Sn 06 18 51.3 +0.9**
baz=210,slow=20,SNR=1.6
ASAJ Asahikawa 6.15 263 P **Pn 06 17 43.8 +2.4**
JCH Churui 6.16 248 P **Pn 06 17 41.5 +0.1**
JCH *e*S **Sn 06 18 48.0 -2.6**
JNBK Urakawa-nobuka 6.71 247 P **Pn 06 17 48.5 -0.6**
JNBK *e*S **Sn 06 19 01.3 -2.9**
JBT2 Biratori 2 6.75 252 P **Pn 06 17 49.5 0.0**
JKB Kayabe 8.03 249 P **Pn 06 18 06.4 -0.7**
KLR Kul'dur 13.73 294 P **Pn 06 19 24.5 -0.5**
comp=E,0.1nm,0.3s,baz=76,slow=16,SNR=2.0
MA2 Magadan 14.37 359 LR LR 06 24 52.2
comp=E,258nm,19.1s,baz=314,slow=36
KSRS Korea Array 19.00 254 P **P 06 20 31.6 +0.6**
comp=E,0.3nm,0.3s,baz=62,slow=11,SNR=4.2
KSRS LR LR 06 27 36.0
comp=E,232nm,21.9s,baz=284,slow=36
H11N2 WAKE ISLAND Hy 28.61 148 T T 06 53 41.8
baz=337,slow=75
H11N1 WAKE ISLAND Hy 28.62 148 T T 06 53 45.7
baz=337,slow=75
H11N3 WAKE ISLAND Hy 28.62 148 T T 06 53 44.0
baz=337,slow=75
H11S1 WAKE ISLAND Hy 29.65 149 T T 06 55 02.4
baz=337,slow=76
H11S3 WAKE ISLAND Hy 29.66 149 T T 06 55 04.3
baz=337,slow=76
H11S2 WAKE ISLAND Hy 29.67 149 T T 06 55 04.4
baz=337,slow=76
ILAR Eielson Array 38.62 37 P **P 06 23 34.1 +2.3**
comp=E,0.2nm,0.5s,baz=269,slow=7.2,SNR=4.1
MKAR Makanchi Array 46.39 298 P **P 06 24 34.8 -0.3**
comp=E,1.1nm,0.7s,baz=81,slow=12,SNR=6.1
MKAR PcP **PcP 06 26 09.3 -0.2**
comp=E,0.2nm,0.5s,baz=240,slow=1.2,SNR=2.4
YKA Yellowknife Ar 52.98 35 P **P 06 25 25.2 +0.2**
comp=E,0.1nm,0.3s,baz=299,slow=7.0,SNR=3.4
FINES FINESS Array B 64.80 334 P **P 06 26 44.4 -2.5**
comp=E,0.9nm,0.8s,baz=359,slow=8.3,SNR=4.1
NOA NORSAR Array B 69.20 340 P **P 06 27 13.1 -1.9**
comp=E,0.2nm,0.5s,baz=47,slow=7.3,SNR=2.6
ASAR Alice Springs 70.33 197 P **P 06 27 24.5 +2.3**
comp=E,0.5nm,0.8s,baz=12,slow=4.7,SNR=3.9
KBZ Khabaz 70.88 313 P **P 06 27 24.7 -0.7**
comp=E,3.5nm,0.8s,baz=63,slow=6.4,SNR=7.1
AKASG Malin Array Be 72.01 325 P **P 06 27 30.4 -1.8**
comp=E,0.8nm,0.5s,baz=36,slow=6.1,SNR=4.2
BRTR Keskin Array B 78.51 316 P **P 06 28 08.9 -1.0**
comp=E,0.7nm,0.7s,baz=72,slow=4.7,SNR=3.7
BRTR Keskin Array B 78.51 316 P **P 06 28 09.0 -1.0**
GERES GERESS Array B 79.18 333 P **P 06 28 12.6 -0.8**
comp=E,0.5nm,0.4s,baz=37,slow=5.5,SNR=5.1
TXAR Lajitas Array 79.48 59 P **P 06 28 16.5 +1.1**
comp=E,0.1nm,0.4s,baz=289,slow=2.8,SNR=4.4

TIR 05 06:20:13.8, 41°.47N×19°.61E, h7km, Md3.1/5, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.61**	**20**	*i* PG	Pg	06 20 26.0	+0.4
PUK				*i* SG	Sb	06 20 35.2	-0.5
PHP	**Peshkopia**	**0.66**	**71**	*i* PG	Pg	06 20 26.8	+0.3
PHP				*i* SG	Sb	06 20 36.8	-0.2
BCI	**Bajram Curri**	**0.96**	**21**	*i* PG	Pb	06 20 32.8	0.0
BCI				*i* SG	Sn	06 20 46.8	-0.9
TPE	**Tepelena**	**1.21**	**165**	*i* PN	Pn	06 20 37.4	+0.2
TPE				*i* SN	Sn	06 20 55.7	+1.9
FNA	**Florina**	**1.50**	**117**	*i* PN	Pg	06 20 42.4	-0.2
FNA				*i* SN	Sg	06 21 04.3	+2.3

ROM 05 06:21:42.8±0.1, 41°.841N±0°.004×13°.831E±0°.006, h9km, ML1.7/5, Error ellipse: s-maj=0.5km s-min=0.3km az=214.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POFI	**Posta Fibreno**	**0.15**	**216**	P	Pg	06 21 46.8	+0.6
POFI				S	Sg	06 21 49.7	+1.3
POFI				AML	AML		
comp=E,434μm,0.2s
POFI AML AML
comp=N,357μm,1.3s
POFI AML AML
comp=E,434μm,0.2s
POFI AML AML
comp=N,357μm,1.3s
POFI END
POFI END
VVLD Villa Vallelon 0.16 281 P Pg 06 21 46.5 +0.3
VVLD S Sg 06 21 49.6 +1.0
VVLD AML AML
comp=E,450μm,1.1s
VVLD AML AML
comp=N,729μm,1.4s
VVLD AML AML
comp=N,729μm,1.4s
VVLD AML AML
comp=E,450μm,1.1s
VVLD END
VVLD END
INTR Introdacqua 0.18 18 P Pg 06 21 47.2 +0.6
INTR S Sg 06 21 50.5 +1.2
INTR AML AML
comp=E,1085μm,0.3s
INTR AML AML
comp=N,1170μm,0.7s
INTR AML AML
comp=N,1170μm,0.7s
INTR AML AML
comp=E,1085μm,0.3s
INTR END
INTR END
RNI2 Rionero Sannit 0.28 120 P Pb 06 21 49.6 -0.5
RNI2 END
CERA Filignano 0.28 150 P Pg 06 21 49.0 +0.6
CERA S Sb 06 21 54.0 -1.0
CERA END
CERA END
PTQR Pietraquaria 0.37 300 P Pb 06 21 51.3 -0.4
PTQR S Sb 06 21 57.3 -0.2
PTQR END
MIDA Miranda 0.37 122 P Pg 06 21 50.7 +0.5
MIDA S Sb 06 21 57.4 -0.2
MIDA AML AML
comp=E,120μm,0.3s
MIDA AML AML
comp=N,170μm,0.3s
MIDA AML AML
comp=E,120μm,0.3s
MIDA AML AML
comp=N,170μm,0.3s
MIDA END
MIDA END
GUAR Guarcino 0.39 263 P Pg 06 21 51.0 +0.5
GUAR S Sb 06 21 57.3 -0.8
GUAR END
GUAR END
FAGN Fagnano 0.46 337 P Pg 06 21 52.3 +0.5
FAGN S Sb 06 21 59.4 -0.8
GIUL Giuliano Di Ro 0.52 237 P Pg 06 21 53.0 +0.2
GIUL S Sb 06 22 01.7 0.0
GIUL AML AML
comp=E,42μm,0.6s
GIUL AML AML
comp=N,70μm,0.2s
GIUL AML AML
comp=N,70μm,0.2s
GIUL AML AML
comp=E,42μm,0.6s
GIUL END
GIUL END
CERT Cerreto 0.64 280 P Pg 06 21 55.0 -0.3

*ISCJB **05** 06:22:10.5±0.6, 37°.76N±0°.03×141°.60E±0°.07, h52km±5km, mb3.6/9, Error ellipse: s-maj=9.1km s-min=4.3km az=22.4*
*JMA **05** 06:22:11.8, 37°.77N×141°.53E, h48km±1km, M3.9*
JMA Felt I J1.
*IDC **05** 06:22:12.7±2.3, 37°.76N×141°.51E, h53km±22km, mb3.4/9, mb1 3.7/14, mb1mx3.6/42, mbtmp3.8/14, ML3.6/4, Error ellipse: s-maj=22.5km s-min=15.7km az=100.0*
ISC 05 06:22:11.5±1.3, 37°.77N±0°.04×141°.61E±0°.08, h41km±13km, n34, σ1§18/44, mb3.6/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.56**	**348**	P	**Pn**	**06 22 23.5**	**+0.5**
JIKH				S	**Sn**	**06 22 31.3**	**+0.1**
JMM	**Marumori**	**0.65**	**279**	P	**Pn**	**06 22 24.1**	**-0.2**
JMM				S	**Sn**	**06 22 32.6**	**-0.9**
JFK	**Kawauchi**	**0.71**	**236**	P	**Pn**	**06 22 24.9**	**-0.2**
JFK				S	**Sn**	**06 22 33.9**	**-1.0**
JIO	**Ouri**	**0.72**	**343**	P	**Pn**	**06 22 25.3**	**+0.1**
JIO				S	**Sn**	**06 22 34.8**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.93**	**224**	P	**Pn**	**06 22 27.8**	**-0.3**
ONAJ				S	**Sn**	**06 22 39.0**	**-1.2**
JOU	**Okura**	**0.96**	**309**	P	**Pn**	**06 22 28.2**	**-0.3**
JOU				*e*S	**Sn**	**06 22 40.0**	**-0.9**
JFT	**Otama**	**1.04**	**257**	P	**Pn**	**06 22 29.8**	**+0.2**
JFT				S	**Sn**	**06 22 42.9**	**-0.1**
JKMT	**Kesennumamotoy**	**1.05**	**354**	P	**Pn**	**06 22 30.0**	**+0.3**
JKMT				S	**Sn**	**06 22 43.3**	**+0.2**
JMK	**Ichinoseki**	**1.22**	**346**	P	**Pn**	**06 22 32.5**	**+0.4**
JMK				S	**Sn**	**06 22 47.2**	**-0.2**
JYS	**Shirataka**	**1.30**	**291**	P	**Pn**	**06 22 33.0**	**-0.2**
JYS				S	**Sn**	**06 22 49.5**	**+0.1**
JYK	**Kaneyama**	**1.51**	**320**	P	**Pn**	**06 22 36.3**	**+0.2**
JYK				S	**Sn**	**06 22 54.3**	**-0.3**
JFY	**Yanaizu**	**1.56**	**257**	P	**Pn**	**06 22 36.6**	**-0.1**
JFY				S	**Sn**	**06 22 55.0**	**-0.7**
MJAR	**Matsushiro Arr**	**2.98**	**247**	P	**Pn**	**06 22 56.9**	**+0.6**
1.7nm,0.3s,baz=56,slow=9.7,SNR=25
MJAR S **Sn 06 23 33.3 +2.5**
0.5nm,0.3s,baz=96,slow=36,SNR=2.9
MAT Matsushiro 2.98 247 P **Pn 06 22 57.4 +1.1**
MAT S **Sn 06 23 36.5 +5.7**
JHJ Hachijo jima 2 4.87 198 P **Pn 06 23 22.7 +0.5**
35nm,0.3s,baz=322,slow=20,SNR=16
JHJ S **Sn 06 24 15.8 -1.5**
32nm,0.3s,baz=85,slow=22,SNR=6.8
ASAJ Asahikawa 6.39 6 P **Pn 06 23 43.3 +0.3**
1.4nm,0.3s,baz=198,slow=19,SNR=2.7
ASAJ S **Sn 06 24 54.8 +0.2**
0.7nm,0.3s,baz=90,slow=19,SNR=2.8
USRK Ussuriysk Ar. 9.70 314 P **Pn 06 24 29.2 +0.8**
0.3nm,0.3s,baz=108,slow=14,SNR=3.6
KSRS Korea Array 10.86 273 P **Pn 06 24 45.8 +1.4**
0.4nm,0.3s,baz=84,slow=13,SNR=5.1
SONM Songino Array 27.51 303 P **P 06 27 53.1 -1.1**
0.7nm,0.4s,baz=105,slow=9.8,SNR=4.7
H11N2 WAKE ISLAND Hy 28.40 122 T T 06 58 15.4
baz=315,slow=75,SNR=55
H11N1 WAKE ISLAND Hy 28.41 122 T T 06 58 16.4
baz=315,slow=75,SNR=39
H11N3 WAKE ISLAND Hy 28.41 122 T T 06 58 21.8
baz=315,slow=75,SNR=40
H11S1 WAKE ISLAND Hy 29.13 124 T T 06 59 09.7
baz=317,slow=76,SNR=29
H11S3 WAKE ISLAND Hy 29.14 124 T T 06 59 11.4
baz=317,slow=76,SNR=27
H11S2 WAKE ISLAND Hy 29.15 124 T T 06 59 12.7
baz=317,slow=76,SNR=25
ZALV Zalesovo Beam 41.54 312 P **P 06 29 54.0 -0.7**
1.2nm,0.3s,baz=79,slow=7.5,SNR=2.1
MKAR Makanchi Array 43.87 301 P **P 06 30 13.0 -0.8**
0.5nm,0.5s,baz=83,slow=12,SNR=5.3
ILAR Eielson Array 48.79 33 P **P 06 30 51.7 -0.4**
0.3nm,0.6s,baz=268,slow=5.9,SNR=4.0
WRA Warramunga Arr 57.81 188 P **P 06 31 57.8 -1.0**
1.7nm,0.6s,baz=355,slow=7.8,SNR=1.8
ASAR Alice Springs 61.53 188 P **P 06 32 24.1 -0.3**
0.6nm,0.9s,baz=17,slow=6.0,SNR=8.7
YKA Yellowknife Ar 63.10 30 P **P 06 32 34.6 +0.2**
0.1nm,0.5s,baz=300,slow=6.4,SNR=2.8
PDAR Pinedale Array 77.04 46 P **P 06 34 01.0 +0.5**
0.2nm,0.5s,baz=335,slow=1.3,SNR=2.8
TXAR Lajitas Array 89.55 52 P **P 06 35 05.6 +0.7**
0.2nm,0.6s,baz=289,slow=2.8,SNR=3.4
LPAZ La Paz 146.19 59 PKPbc **PKPbc 06 41 48.3 -0.2**
0.9nm,1.1s,baz=32,slow=9.5,SNR=3.2

*JMA **05** 07:10:26.6±0.3, 43°.80N×147°.51E, h0km, M3.6*
*SKHL **05** 07:10:27.2±0.2, 44°.02N×147°.84E, h35km±1km, mb4.3/3*
ISC 05 07:10:24.4±3.9, 44°.1N±0°.1×147°.7E±0°.1, h4km±20km, n12, σ1§06/15, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.19**	**5**	*e*P	Pg	07 10 47.0	-0.3
KUR				AMB	AMB	07 10 47.0	
68nm,0.3s
KUR *e*S **Sg 07 11 02.0 -0.8**
KUR A A 07 11 02.0
608nm,0.3s
KUR A A 07 11 02.0
423nm,0.3s
YUK Yuzh-Kuril'sk 1.33 270 *e*P Pn 07 10 50.0 +0.2
YUK AMB AMB 07 10 51.0
98nm,0.3s
YUK *e*S **Sg 07 11 07.0 -0.3**
YUK A A 07 11 07.0
752nm,0.3s
YUK A A 07 11 07.0
564nm,0.3s
GRPR Tuman 1.40 268 *i* P Pn 07 10 51.0 +0.3
GRPR AMB AMB 07 10 52.0
95nm,0.2s
GRPR *i* S **Sn 07 11 09.0 -0.6**
GRPR A A 07 11 10.0
316nm,0.2s
GRPR A A 07 11 10.0
92nm,0.2s
NEM2 Nemuro 2 1.58 245 P Pn 07 10 52.4 -0.8
NEM2 *e*S Sn 07 11 10.7 -3.3
GLVR Golovnino 1.61 260 *i* P **Pn 07 10 54.0 +0.4**
GLVR *i* S **Sn 07 11 14.0 -0.8**
GLVR A A 07 11 15.0
466nm,0.3s
GLVR A A 07 11 15.0
237nm,0.3s
JRA Rausu 1.87 268 P **Pn 07 10 58.7 +1.6**
JKHN Kushirohamanak 2.09 243 P **Pn 07 11 00.0 -0.1**
JNK Nakash 2.21 259 P **Pn 07 11 02.4 +0.5**
JNK *e*S **Sn 07 11 28.6 -1.1**
JAK Akkeshi 2.43 245 P **Pn 07 11 05.1 +0.3**
JAK *e*S **Sn 07 11 33.5 -1.5**
JAR Ashorobuto 2.96 257 P **Pn 07 11 13.6 +1.5**
JAR *e*S **Sn 07 11 48.3 +0.3**
JOB Onbets 3.04 249 P **Pn 07 11 14.3 +1.0**
JCH Churui 3.48 247 P **Pn 07 11 20.3 +1.0**

IDC 05 07:16:52.2±5.7, 28°.60S×178°.19W, h0km, mb3.7/2, mb1 3.7/2, mb1mx3.5/17, mbtmp3.7/2, Error ellipse: s-maj=204.3km s-min=88.3km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.76**	**254**	P	P	07 23 43.0	-1.4
0.7nm,0.4s,baz=114,slow=10.0,SNR=3.2
ASAR Alice Springs 43.07 265 P P 07 24 54.1 -0.1
0.3nm,0.4s,baz=102,slow=7.0,SNR=5.4
WRA Warramunga Arr 43.89 270 P P 07 25 01.6 +0.8
15nm,0.3s,baz=105,slow=8.6,SNR=1.8
FINES FINESS Array B 143.40 341 PKP PKPdf 07 36 27.0 -1.0
1.0nm,0.5s,baz=52,slow=3.4,SNR=6.6

*ISCJB **05** 07:27:32.0±0.5, 26°.43S±0°.03×27°.64E±0°.04, h10km±3km, mb3.4/1, Error ellipse: s-maj=6.0km s-min=4.8km az=138.3*
*IDC **05** 07:27:31.2±1.7, 26°.35S×27°.68E, h0km, mb3.3/1, mb1 3.6/5, mb1mx3.4/38, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=22.8km s-min=17.0km az=93.0*
*PRE **05** 07:27:32.1±2.0, 26°.43S×27°.65E, h2km, ML2.6*
*EAF **05** 07:27:33.5±1.4, 26°.51S×27°.62E, h0km±44km, MD3.3*
ISC 05 07:27:32.6±0.8, 26°.42S±0°.03×27°.62E±0°.03, h9km±5km, n24, σ1§20/38, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.07**	**356**	*e*P	**Pg**	**07 27 34.8**	**-0.1**
KLOF				*e*S	**Sg**	**07 27 35.7**	**-0.8**
KLOF				AML	AML	07 27 36.1	
comp=Z,28μm,0.1s
WDLM Western Deep L 0.17 269 *e*P **Pg 07 27 36.8 +0.4**
WDLM *e*S **Sg 07 27 39.1 +0.1**
WDLM AML AML 07 27 39.2
comp=Z,3μm,0.3s
PRYS Parys 0.55 204 *e*P **Pg 07 27 43.0 -0.4**
PRYS *e*S **Sg 07 27 49.8 -0.9**
PRYS AML AML 07 27 54.1
comp=Z,133nm,0.7s
ERPM east rand prop 0.57 82 *e*P **Pg 07 27 44.2 +0.6**
ERPM *e*S **Sg 07 27 49.9 -1.3**
ERPM AML AML 07 27 51.4
comp=Z,182nm,0.2s
KSR Koster 0.86 311 *e*P **Pg 07 27 48.3 -0.9**
KSR *e*S **Sg 07 28 00.6 +0.2**
KSR AML AML 07 28 08.5
comp=Z,56nm,0.4s
SWZ Schweizer 2.18 249 *e*P **Pn 07 28 09.6 +0.4**
SWZ *e*S **Sb 07 28 39.8 +0.3**
SWZ AML AML 07 28 40.7
comp=Z,110nm,0.5s
LBTB Lobatse 2.30 307 Pn **Pn 07 28 12.7 +1.9**
comp=Z,18nm,0.3s,baz=125,slow=15,SNR=252
LBTB Lg Lg 07 28 43.6
comp=Z,22nm,0.3s,baz=219,slow=13,SNR=19
LBTB Lobatse 2.30 307 *e*P **Pn 07 28 11.6 +0.8**
LBTB *e*S **Sn 07 28 39.9 +0.6**
LBTB AML AML 07 28 44.3
comp=Z,89nm,0.6s
BOSA Boshof 3.03 223 *i* P **Pn 07 28 21.7 +0.8**
BOSA Boshof 3.03 223 Pn **Pn 07 28 21.4 +0.5**
comp=Z,3.4nm,0.3s,baz=40,slow=12,SNR=56
BOSA Pg **Pb 07 28 27.6 +0.8**
comp=Z,4.6nm,0.3s,baz=42,slow=15,SNR=25
BOSA Sn **Sn 07 28 56.6 -0.8**
comp=Z,2.4nm,0.3s,baz=322,slow=19,SNR=5.5
BOSA Lg Lg 07 29 04.2
comp=Z,5.7nm,0.3s,baz=308,slow=20,SNR=10.0
BOSA Boshof 3.03 223 *i* P **Pn 07 28 21.7 +0.8**
BOSA Boshof 3.03 223 *e*P **Pn 07 28 21.1 +0.2**
BOSA *e*S **Sn 07 28 58.9 +1.5**
BOSA AML AML 07 29 16.2
comp=Z,14nm,0.4s
MSNA Messina 4.61 29 *i* P **Pn 07 28 45.5 +2.8**
MSNA Messina 4.61 29 *i* P **Pn 07 28 45.5 +2.8**
UPI Upington 5.98 250 *e*P **Pn 07 29 02.9 +1.5**
UPI *e*S **Sn 07 30 08.5 -1.6**
UPI AML AML 07 30 43.7
comp=Z,8.0nm,0.4s
MATP Matopo 6.02 8 *i* P **Pn 07 29 03.5 +1.4**
MATP *i* S **Sn 07 30 11.3 +0.1**
MATP Matopo 6.02 8 Pn **Pn 07 29 01.7 -0.4**
comp=Z,1.0nm,0.3s,baz=190,slow=13,SNR=12
MATP Sn **Sn 07 30 08.9 -2.4**
comp=Z,0.6nm,0.3s,baz=100,slow=22,SNR=5.4
MATP Lg Lg 07 30 38.7
comp=Z,1.7nm,0.3s,baz=281,slow=22,SNR=8.5
MATP Matopo 6.02 8 *i* P **Pn 07 29 03.5 +1.4**
MATP *i* S **Sn 07 30 11.3 +0.1**
BLWY Bulawayo 6.32 9 *i* P **Pn 07 29 07.3 +1.1**
BLWY Bulawayo 6.32 9 *i* P **Pn 07 29 07.3 +1.1**
LSZ Lusaka 11.10 3 Lg Lg 07 33 14.3
comp=Z,0.4nm,0.3s,baz=240,slow=17,SNR=2.3
TSUM Tsumeb 11.71 306 Pn **Pn 07 30 19.7 -0.4**
comp=Z,0.3nm,0.3s,baz=132,slow=14,SNR=8.6
TORD Torodi Ar. Bea 46.71 324 P **P 07 36 02.2 0.0**
comp=Z,0.3nm,0.6s,baz=136,slow=6.5,SNR=3.0
NVAR Mina Array Bea 149.01 301 PKP **PKPdf 07 47 16.2 -1.3**
comp=Z,0.2nm,0.3s,baz=85,slow=3.1,SNR=3.8
NVAR PKPbc **pPKPdf 07 47 20.8 -0.3**
comp=Z,0.2nm,0.5s,baz=96,slow=3.2,SNR=3.0

*ANF **05** 07:53:01.9±0.1, 34°.03N×116°.44W, h15km, ML2.0/20, Error ellipse: s-maj=0.9km s-min=0.9km az=84.0*
*SCEDC **05** 07:53:03.2, 34°.04N×116°.43W, h10km*
ISC 05 07:53:02.6±0.9, 34°.03N±0°.02×116°.44W±0°.02, h16km±9km, n20, σ0§56/34, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BELC	**Belle Mtn. Jos**	**0.36**	**95**	P	**Pg**	**07 53 10.3**	**+0.1**
baz=276,SNR=87
BELC S **Sg 07 53 15.4 +0.1**
baz=276
PFO Pinyon Flats O 0.42 183 P **Pg 07 53 11.0 -0.1**
baz=3.2,SNR=71
PFO S **Sg 07 53 16.9 -0.1**
baz=3.2
BBRC Big Bear Solar 0.46 300 P **Pg 07 53 11.9 -0.1**
baz=119,SNR=17
BBRC S **Sg 07 53 18.8 +0.5**
baz=119
MURC Murrieta 0.77 236 P **Pg 07 53 17.1 -0.4**
baz=55
MURC S **Sg 07 53 27.3 -0.4**
baz=55
HEC Hector,Ludlow 0.80 6 P **Pg 07 53 17.5 -0.6**
baz=186
HEC S **Sg 07 53 28.6 -0.1**
baz=186
BC3 Big Chuckawall 0.90 115 P **Pg 07 53 20.1 0.0**
baz=296,SNR=14
BC3 S **Sb 07 53 32.2 +0.4**
baz=296
RRX Edison Barstow 0.96 331 S **Sb 07 53 33.7 +0.4**
baz=151
GMRC Granite Mounta 0.99 40 P **Pg 07 53 21.1 -0.6**
baz=221,SNR=17
GMRC S **Sg 07 53 34.4 -0.2**
baz=221
BFSC Mount Baldy Ra 1.03 282 Pg **Pb 07 53 22.0 -0.1**
baz=101
BFSC S **Sb 07 53 35.6 0.0**
baz=101
IRM Iron Mountain 1.08 83 P **Pb 07 53 22.5 -0.3**
baz=264,SNR=20
IRM S **Sb 07 53 37.2 +0.4**
baz=264
MONP2 Monument Peak 1.14 179 Pg **Pb 07 53 24.2 +0.2**
baz=360
MONP2 S **Sb 07 53 38.7 0.0**
baz=360
SWSC Sam W. Stewart 1.21 154 P **Pn 07 53 23.8 -1.0**
baz=334
SWSC S **Sb 07 53 41.0 +0.5**
baz=334
109C Camp Elliot, M 1.27 206 Pb **Pn 07 53 25.8 +0.1**
baz=26
109C S **Sb 07 53 42.1 -0.2**
baz=26
GSC Goldstone, Bar 1.30 347 S **Sb 07 53 43.7 +0.5**
baz=166
IKP In-Ko-Pah, Jac 1.41 169 Sb **Sb 07 53 47.2 +0.9**
baz=349
TUQ Turquoise Moun 1.46 17 Pg **Pb 07 53 30.2 +0.7**
baz=197,SNR=6.1
TUQ Sb **Sg 07 53 49.0 -0.8**
baz=197
EDW2 Edwards Air Fo 1.54 304 Pg **Pb 07 53 31.3 +0.5**
baz=123,SNR=8.7
EDW2 Sb **Sb 07 53 51.2 +1.1**

baz=123
Y12C Blythe 1.62 100 Pg **Pg 07 53 33.0 -0.6**
baz=281
GLA Glamis 1.66 126 Pg **Pb 07 53 33.8 +0.9**
baz=307
NEE2 Needles Airpor 1.67 64 Pg **Pb 07 53 33.9 +0.9**
baz=244

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*ISCJB **05** 07:53:34.6±0.6, 33°.77N±0°.03×115°.98W±0°.03, h8km±5km, Error ellipse: s-maj=5.1km s-min=3.8km az=150.8*
*ANF **05** 07:53:34.3±0.1, 33°.78N×115°.98W, h16km±1km, ML2.3/12, Error ellipse: s-maj=1.5km s-min=1.1km az=151.0*
*SCEDC **05** 07:53:34.8, 33°.77N×115°.96W, h0km*
ISC 05 07:53:34.6±1.0, 33°.77N±0°.03×115°.98W±0°.03, h12km±11km, n12, σ0s28/21, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BELC	**Belle Mtn. Jos** baz=172	**0.23**	**355**	P	**Pg**	**07 53 39.6**	**+0.1**
BELC	baz=172			S	**Sg**	**07 53 42.7**	**-0.2**
PFO	**Pinyon Flats O** baz=70	**0.43**	**248**	P	**Pg**	**07 53 43.2**	**0.0**
PFO	baz=70			S	**Sg**	**07 53 49.2**	**+0.2**
BC3	**Big Chuckawall** baz=285	**0.45**	**105**	P	**Pg**	**07 53 43.6**	**+0.1**
BC3	baz=285			S	**Sg**	**07 53 49.9**	**+0.3**
IRM	**Iron Mountain** baz=240	**0.79**	**61**	P	**Pg**	**07 53 49.6**	**-0.3**
IRM	baz=240			S	**Sg**	**07 54 00.3**	**+0.1**
SWSC	**Sam W. Stewart** baz=351	**0.84**	**170**	P	**Pg**	**07 53 50.5**	**-0.3**
SWSC	baz=351			S	**Sg**	**07 54 02.0**	**+0.2**
MONP2	**Monument Peak** baz=24	**0.96**	**203**	P	**Pg**	**07 53 53.2**	**+0.1**
MONP2	baz=24			S	**Sg**	**07 54 05.6**	**+0.1**
MURC	**Murrieta** baz=81	**1.03**	**261**	P	**Pg**	**07 53 54.1**	**-0.4**
MURC	baz=81			S	**Sg**	**07 54 08.1**	**+0.2**
GMRC	**Granite Mounta** baz=194	**1.04**	**14**	S	**Sg**	**07 54 08.4**	**+0.1**
IKP	**In-Ko-Pah, Jac** baz=6.5	**1.13**	**186**	S	**Sg**	**07 54 10.9**	**0.0**
GLA	**Glamis** baz=307	**1.20**	**127**	Pb	**Pg**	**07 53 57.1**	**-0.7**
GLA	baz=307			S	**Sb**	**07 54 13.3**	**+0.4**
Y12C	**Blythe** baz=271	**1.21**	**91**	S	**Sb**	**07 54 13.3**	**+0.2**
109C	**Camp Elliot, M** baz=47	**1.29**	**227**	Pb	**Pn**	**07 53 58.5**	**0.0**
109C	baz=47			S	**Sb**	**07 54 15.4**	**-0.1**

MAN 05 07:53:38.0, 7°.27N×124°.84E, h7km, mb3.6, ML2.3, MS1.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.59**	**265**	⇓*iP*	Pg	07 53 49.8	+0.4
CTBH				*i* S	Sb	07 53 58.7	-0.5
BUKP	**Musuan**	**0.64**	**20**	*e*P	Pg	07 53 50.8	+0.4
BUKP				*e*S	Sb	07 54 00.9	+0.1
SKMP	**Bagumbayan, Su**	**0.80**	**201**	*e*P	Pg	07 53 53.2	-0.3
SKMP				*e*S	Sn	07 54 08.4	+0.4
CGP	**Cagayan de Oro**	**1.18**	**353**	*e*P	Pg	07 53 59.6	-1.1
CGP				*e*S	Sg	07 54 15.2	-0.9
DDMP	**Don Marcelino,**	**1.45**	**143**	*e*P	Pg	07 54 06.6	+0.7
DDMP				*e*S	Sg	07 54 25.8	+1.1
PAGZ	**Pagadian**	**1.55**	**292**	*e*P	Pn	07 54 05.4	-0.6
PAGZ				*e*S	Sn	07 54 23.6	-2.8

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*IDC **05** 08:00:09.4±4.8, 52°.58N×35°.30E, h0km, mb1 4.1/2, mb1mx3.3/26, mbtmp4.0/2, ML3.1/2, Error ellipse: s-maj=56.4km s-min=16.6km az=111.0*
VLA 05 08:00:02.0, 52°.32N×35°.41E, M2.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be** 1.5nm,0.3s,baz=55,slow=16,SNR=5.8	**4.19**	**250**	Pg	Pg	08 01 22.7	+0.4
AKASG	1.1nm,0.3s,baz=90,slow=28,SNR=4.4			Sn	Sn	08 02 00.2	+3.5
AKASG	2.1nm,0.3s,baz=66,slow=30,SNR=4.9			Lg	Lg	08 02 17.0	
FINES	**FINESS Array B** 0.1nm,0.3s,baz=162,slow=14,SNR=4.5	**10.46**	**335**	Pn	Pn	08 02 32.4	-0.6
FINES	0.1nm,0.3s,baz=150,slow=22,SNR=2.5			Sn	Sn	08 04 22.3	-8.5
I26DE	**FREYUNG INFRAS14.20** baz=67,slow=317,SNR=2.5	**264**	*i*			09 25 40.0	
ARCES	**ARCESS Array B** 0.2nm,0.3s,baz=155,slow=11,SNR=9.1	**17.89**	**349**	P	P	08 04 13.9	+1.4

MAN 05 08:00:56.3, 7°.21N×124°.84E, h25km, mb4.3, ML3.1, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.59**	**271**	⇓*iP*	Pn	08 01 08.9	-0.2
CTBH				*i* S	Sn	08 01 17.6	-0.3
BUKP	**Musuan**	**0.70**	**19**	*e*P	Pb	08 01 09.6	-0.4
BUKP				*e*S	Sn	08 01 20.3	-0.4
CGP	**Cagayan de Oro**	**1.24**	**353**	*e*P	Pn	08 01 18.6	+0.4
CGP				*e*S	Sb	08 01 34.7	-0.1

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*IDC **05** 08:01:18.8±5.9, 20°.08S×178°.99W, h622km±69km, mb2.8/5, mb1 3.2/5, mb1mx2.9/20, mbtmp3.7/5, Error ellipse: s-maj=100.3km s-min=25.8km az=154.0*
*ISCJB **05** 08:01:20.9±1.9, 20°.0S±0°.8×179°.2W±0°.4, h665km, mb3.6/6, Error ellipse: s-maj=118.2km s-min=19.6km az=155.8*
ISC 05 08:01:22.4±1.8, 19°.8S±0°.6×179°.2W±0°.3, h665km, n8, σ0s92/9, mb3.2/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 126nm,0.3s,baz=90,slow=7.9,SNR=1.3	**43.54**	**262**	P	**P**	**08 08 30.3**	**-0.6**
ASAR	**Alice Springs** 1.9nm,0.7s,baz=96,slow=7.5,SNR=32	**43.54**	**256**	P	**P**	**08 08 31.8**	**+0.9**
ASAR	0.4nm,0.5s,baz=101,slow=3.7,SNR=5.6			PcP	**PcP**	**08 10 03.5**	**+0.5**
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=233,slow=7.1,SNR=4.4	**81.34**	**44**	P	**P**	**08 12 32.6**	**+0.3**
TXAR	**Lajitas Array** 0.4nm,0.8s,baz=215,slow=6.1,SNR=5.3	**87.68**	**58**	P	**P**	**08 13 02.8**	**-0.2**
ILAR	**Eielson Array** 0.2nm,0.5s,baz=215,slow=7.7,SNR=2.7	**87.92**	**13**	P	**P**	**08 13 04.0**	**+0.8**
PDAR	**Pinedale Array** 0.3nm,0.6s,baz=215,slow=1.8,SNR=3.6	**89.27**	**44**	P	**P**	**08 13 10.2**	**-0.1**
AKASG	**Malin Array Be** 0.4nm,0.3s,baz=42,slow=3.9,SNR=4.8	**141.85**	**331**	PKP	**PKPdf**	**08 19 38.8**	**-1.6**
BRTR	**Keskin Array B** 0.4nm,0.6s,baz=120,slow=5.5,SNR=2.9	**145.52**	**312**	PKPbc	**PKPab**	**08 19 50.5**	**-0.4**

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*NNC **05** 08:07:24.2±0.9, 41°.88N×78°.17E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=6.6km s-min=3.4km az=162.0, Suspected Mining explosion.*
ISC 05 08:07:23.9±1.5, 41°.87N±0°.08×78°.12E±0°.05, h0km, n28, σ1s34/37, 7C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty** 18nm,0.1s	**1.20**	**10**	P	**Pg**	**08 07 46.1**	**-0.9**
SATY	41nm,0.2s			S	**Sg**	**08 08 02.3**	**-0.3**
UZB	**Uzynbulak** 11nm,0.4s	**1.44**	**27**	P	**Pn**	**08 07 49.3**	**-2.1**
UZB	12nm,0.3s			S	**Sg**	**08 08 07.9**	**-2.2**
ULHL	**Ulahol** SNR=59	**1.45**	**285**	P	**Pn**	**08 07 50.7**	**-0.9**
KOTS	**Kotyrbulak** 16nm,0.2s	**1.55**	**332**	P	**Pn**	**08 07 52.8**	**-0.2**
KOTS	33nm,0.4s			S	**Sb**	**08 08 14.0**	**+0.1**
KURS	**Kuram** 13nm,0.4s	**1.61**	**1**	P	**Pg**	**08 07 54.6**	**-0.3**
KURS	15nm,0.4s			S	**Sg**	**08 08 17.2**	**+1.4**
PDGK	**Podgornoye** 7.8nm,0.3s	**1.77**	**34**	P	**Pn**	**08 07 56.1**	**+0.1**
PDGK	18nm,0.4s			S	**Sb**	**08 08 19.6**	**-0.6**
PDGK	**Podgornoye** 9.3nm,0.4s	**1.77**	**34**	⇑P	**Pn**	**08 07 55.1**	**-0.8**
PDGK	22nm,0.5s			⇑S	**Sb**	**08 08 19.8**	**-0.4**
MTBS	**Maitube** 26nm,0.4s	**1.77**	**316**	P	**Pb**	**08 07 57.0**	**-0.4**
MTBS	37nm,0.5s			S	**Sg**	**08 08 21.4**	**+0.5**
KST	**Kastek** 32nm,0.4s	**1.98**	**307**	Pg	**Pb**	**08 08 00.3**	**-0.6**
KST	31nm,0.7s			Lg	Lg	08 08 26.8	
KTBS	**Karatobe** 39nm,0.4s	**2.12**	**330**	Pg	**Pb**	**08 08 03.4**	**+0.1**
KTBS	73nm,0.6s			Lg	Lg	08 08 32.1	
TKM2	**Tokmak 2** SNR=46	**2.14**	**300**	P	**Pb**	**08 08 03.2**	**-0.6**
TKM2	**Tokmak 2** 15nm,0.4s	**2.14**	**300**	⇓Pn	**Pb**	**08 08 02.9**	**-0.9**
TKM2	24nm,0.5s			⇑Lg	Lg	08 08 33.8	
CHKK	**Chushkaly** 96nm,0.3s	**2.15**	**338**	Pg	**Pb**	**08 08 04.0**	**+0.2**
CHKK	52nm,0.3s			Lg	Lg	08 08 33.1	
KZA	**Kyzart** SNR=28	**2.15**	**276**	P	**Pg**	**08 08 04.7**	**-0.5**
MNBS	**Baschi** 24nm,0.4s	**2.21**	**5**	Pg	**Pb**	**08 08 04.5**	**-0.4**
MNBS	45nm,0.1s			Lg	Lg	08 08 34.2	
ARXS	**Arharly** 46nm,0.2s	**2.35**	**355**	Pg	**Pb**	**08 08 06.6**	**-0.6**
ARXS	33nm,0.3s			Lg	Lg	08 08 38.0	
KUU	**Kurty** 27nm,0.3s	**2.41**	**328**	Pg	**Pb**	**08 08 07.9**	**-0.3**
KUU	31nm,0.5s			Lg	Lg	08 08 40.2	
KBK	**Karagaybulak** SNR=27	**2.48**	**289**	P	**Pb**	**08 08 09.3**	**-0.2**
UCH	**Uchtor** SNR=7.6	**2.71**	**279**	P	**Pb**	**08 08 13.9**	**+0.3**
DJR	**Jarkent** 23nm,0.3s	**2.74**	**26**	Pg	**Pb**	**08 08 12.9**	**-1.1**
DJR	28nm,0.4s			Lg	Lg	08 08 48.8	
AAK	**Ala-Archa** SNR=11	**2.80**	**287**	P	**Pb**	**08 08 13.7**	**-1.2**
AAK	**Ala-Archa** 1.7nm,0.2s	**2.80**	**287**	⇑Pg	**Pb**	**08 08 14.1**	**-0.8**
AAK	20nm,0.6s			⇑Lg	Lg	08 08 53.3	
USP	**Ospenovka** SNR=7.5	**3.02**	**299**	P	**Pb**	**08 08 16.7**	**-1.8**
AML	**Almayashu** SNR=8.6	**3.31**	**276**	P	**Pb**	**08 08 24.1**	**+0.3**
KAPS	**Kapalarasan** 6.4nm,0.4s	**3.53**	**14**	Pg	**Pb**	**08 08 28.1**	**+0.9**
KAPS	6.1nm,0.2s			Lg	Lg	08 09 14.5	
MRKS	**Merke** 4.8nm,0.3s	**3.73**	**285**	Pg	**Pb**	**08 08 32.4**	**+1.6**
MRKS	7.9nm,0.3s			Lg	Lg	08 09 22.2	
MK31	**Makanchi Array** 0.5nm,0.3s,baz=212,slow=14,SNR=23	**5.75**	**30**	Pn	**Pn**	**08 08 51.9**	**+1.3**
MK31	0.7nm,0.5s			⇑Pg	**Pb**	**08 09 08.7**	**+3.5**
MK31	1.4nm,0.5s			⇓Sn	**Sn**	**08 09 59.7**	**+2.4**
MK31	0.8nm,0.8s,baz=207,slow=16,SNR=4.3			⇓Lg	Lg	08 10 26.2	
KK31	**Karatay Array** 0.3nm,0.3s,baz=96,slow=16,SNR=5.7	**5.76**	**285**	⇑Pg	**Pb**	**08 09 09.1**	**+3.8**
KK31	1.0nm,0.5s			⇓Lg	Lg	08 10 27.4	

MAN 05 08:25:33.0, 7°.58N×124°.60E, h51km, mb4.4, ML3.2, MS3.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.49**	**225**	⇑*iP*	Pn	08 25 46.7	+2.4
CTBH				*i* S	Sn	08 25 55.5	+3.1
BUKP	**Musuan**	**0.55**	**57**	*e*P	Pn	08 25 46.6	+1.6
BUKP				*e*S	Sn	08 25 56.9	+3.3
DMPH	**Davao City--Mi**	**1.03**	**118**	⇑*e*P	Sn	08 26 04.9	+0.3
SKMP	**Bagumbayan, Su**	**1.05**	**183**	*e*P	Pn	08 25 49.0	-2.5
SKMP				*e*S	Sn	08 26 10.8	+5.7
PAGZ	**Pagadian**	**1.23**	**283**	*e*P	Pn	08 25 54.5	+0.6
DDMP	**Don Marcelino,**	**1.83**	**143**	*e*P	Pn	08 26 02.9	+0.8
DDMP				*e*S	Sn	08 26 22.3	-1.9

ECX 05 08:29:13.0±0.5, 30°.09N×114°.19W, h10km, MD3.4, ML3.5, 4C, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.46**	**311**	⇑*e*P	Pn	08 29 38.3	-1.4
SPX				*e*S	Sn	08 29 58.0	-1.0
SPX				⇑*e*		08 30 12.7	
SPX				IAML		08 30 12.7	
	comp=N,316nm,0.9s						
SPIG	**San Pedro Mart**	**1.46**	**311**	⇑*e*P	Pn	08 29 38.3	-1.4
ECBX	**El Chinero**	**1.57**	**332**	⇑*e*P	Pn	08 29 38.7	-2.2
ECBX				*e*S	Sn	08 29 59.2	-2.0
HSIG		**3.02**	**110**	*e*P	Pn	08 30 00.9	+0.1

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*IDC **05** 08:31:46.3±1.2, 64°.68S×175°.75E, h0km, mb4.0/4, mb1 4.1/5, mb1mx4.0/30, mbtmp4.0/5, ML3.8/1, MS4.1/8, Ms1 4.1/8, ms1mx3.9/14, Error ellipse: s-maj=42.5km s-min=25.0km az=65.0*
*ISCJB **05** 08:31:47.2±0.8, 64°.7S±0°.1×175°.3E±0°.4, h10km, mb4.5/5, MS4.1/9, Error ellipse: s-maj=21.8km s-min=14.9km az=2.4*
ISC 05 08:31:48.2±0.9, 64°.7S±0°.1×175°.6E±0°.2, h10km, n30, σ1s07/10, mb4.0/5, MS4.1/9, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda** 0.5nm,0.3s,baz=38,slow=16,SNR=28	**13.55**	**193**	Pn	**Pn**	**08 35 00.5**	**+0.4**
VNDA	comp=Z,1μm,18.5s,baz=26,slow=32			LR	LR	08 39 08.3	
RPZ	**Rata Peaks** comp=Z,712nm,18.3s,baz=180,slow=35	**21.20**	**351**	LR	LR	08 44 08.8	
URZ	**Urewera** comp=Z,796nm,21.6s,baz=182,slow=31	**26.50**	**3**	LR	LR	08 45 27.6	
STKA	**Stephens Creek** 1.0nm,0.3s,baz=157,slow=11,SNR=3.9	**38.97**	**311**	P	**P**	**08 39 15.6**	**+1.3**
STKA	comp=Z,145nm,18.6s,baz=164,slow=33			LR	LR	08 53 01.5	
MAW	**Mawson** 0.6nm,0.7s,baz=54,slow=19,SNR=2.3	**39.60**	**214**	P	**P**	**08 39 19.4**	**+0.3**
MAW	comp=Z,272nm,20.4s,baz=140,slow=35			LR	LR	08 55 04.0	
DZM	**Mont Dzumac** comp=Z,386nm,21.7s,baz=208,slow=31	**43.05**	**347**	LR	LR	08 53 54.5	
DZM	**Mont Dzumac** comp=Z,773nm,26.4s	**43.05**	**347**	*e*LR	LR	08 51 24.0	
H01W1	**Cape Leeuwin H** baz=148,slow=76,SNR=35	**46.93**	**279**	T	T	09 31 06.7	
H01W2	**Cape Leeuwin H** baz=148,slow=76,SNR=47	**46.93**	**279**	T	T	09 31 07.0	
H01W3	**Cape Leeuwin H** baz=148,slow=76,SNR=17	**46.94**	**279**	T	T	09 31 08.1	
TBI	**Tubuai** 754nm,28.5s	**47.19**	**46**	*e*LQ	LQ	08 51 06.8	
TBI	comp=Z,375nm,30.0s,baz=201			*e*LR	LR	08 53 14.9	
TBI	**Tubuai** 35nm,0.3s	**47.19**	**46**	*e*T	T	09 30 18.0	
ASAR	**Alice Springs** 4.6nm,0.9s,baz=153,slow=6.9,SNR=20	**49.12**	**306**	P	**P**	**08 40 35.5**	**-0.3**
ASAR	comp=Z,96nm,18.8s,slow=33			LR	LR	08 59 09.2	
WRA	**Warramunga Arr** 132nm,0.3s,baz=158,slow=7.3,SNR=1.4	**52.42**	**308**	P	**P**	**08 41 00.0**	**-0.6**
RKT	**Rikitea** 12nm,0.3s	**52.42**	**62**	*e*T	T	09 36 54.9	
TVO	**Taravao** 3.1nm,0.3s	**52.50**	**44**	*e*T	T	09 36 54.9	
PAE	**Paea** 1.4nm,0.2s	**52.51**	**43**	*e*T	T	09 36 55.6	
PPT2	**Papeete2** 123nm,27.5s	**52.58**	**43**	*e*S	**S**	**08 48 29.6**	**+0.8**
PPT2	455nm,24.8s			*e*LQ	LQ	08 53 07.2	
PPT2	comp=Z,453nm,28.0s,baz=203			*e*LR	LR	08 55 40.5	
PPT2	**Papeete2** 3.7nm,0.3s	**52.58**	**43**	*e*T	T	09 37 01.3	
PPT	**Papeete** comp=Z,71nm,20.4s,baz=164,slow=29	**52.60**	**43**	LR	LR	08 56 48.1	
VAH	**Vaihoa** 362nm,0.3s	**55.39**	**45**	*e*T	T	09 40 31.6	
PMOR	**Pomariorio Ree** 6.6nm,0.3s	**55.53**	**44**	*e*T	T	09 40 41.3	
LPAZ	**La Paz** 1.4nm,1.1s,baz=238,slow=9.5,SNR=4.0	**86.03**	**120**	P	**P**	**08 44 29.9**	**+0.3**
H08S2	**Diego Garcia H** baz=154,slow=76,SNR=24	**88.70**	**255**	T	T	10 23 36.0	
H08S1	**Diego Carcia H** baz=154,slow=76,SNR=21	**88.71**	**255**	T	T	10 23 33.2	
H08S3	**Diego Garcia H** baz=154,slow=76,SNR=26	**88.72**	**255**	T	T	10 23 36.6	
H02S1	**DAWSON INLET T** SNR=12	**124.19**	**35**	T	T	11 06 54.2	
ILAR	**Eielson Array** 1.7nm,1.1s,baz=212,slow=3.2,SNR=6.0	**132.06**	**21**	PKP	**PKPdf**	**08 50 59.1**	**-1.1**
KBZ	**Khabaz** 1.4nm,0.3s,baz=130,slow=16,SNR=3.5	**146.44**	**254**	PKPbc	**PKPdf**	**08 51 25.1**	**-1.8**
BRTR	**Keskin Array B** 2.6nm,0.9s,baz=164,slow=4.9,SNR=15	**146.70**	**240**	PKPbc	**PKPbc**	**08 51 29.0**	**-0.4**

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*ISCJB **05** 08:35:26.8±0.5, 9°.00N±0°.02×126°.31E±0°.04, h73km±4km, mb4.3/16, Error ellipse: s-maj=7.4km s-min=3.5km az=168.3*
*MAN **05** 08:35:27.0, 8°.93N×126°.29E, h35km, MS3.9*
*NEIC **05** 08:35:27.9±1.8, 8°.96N×126°.04E, h71km±7km, mb4.2/5, Error ellipse: s-maj=37.0km s-min=15.7km az=92.0*
*IDC **05** 08:35:28.9±2.0, 8°.95N×126°.14E, h79km±19km, mb4.0/13, mb1 4.1/14, mb1mx3.8/43, mbtmp4.4/14, MS3.1/8, Ms1 3.1/8, ms1mx2.8/41, Error ellipse: s-maj=31.0km s-min=11.2km az=83.0*
*DJA **05** 08:35:29.9±1.1, 9°.N±8°.×12°.6E±°., h102km±7km, M5.0/18, mB5.5/7, mb4.7/18, MLv5.2/2, Mw(mB)5.0/7*
ISC 05 08:35:27.8±0.9, 8°.96N±0°.03×126°.27E±0°.05, h65km±8km, n78, σ1s57/81, mb4.2/16, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.64**	**271**	*e*P	**Pn**	**08 35 40.4**	**-1.3**
BUTP				*e*S	**Sn**	**08 35 51.0**	**-0.9**
BIPH	**Bislig**	**0.78**	**173**	⇓*iP*	**Pn**	**08 35 42.4**	**-0.9**
BIPH				*i* S	**Sn**	**08 35 53.8**	**-1.0**
BUKP	**Musuan**	**1.61**	**228**	*e*P	**Pn**	**08 35 54.5**	**+0.4**
BUKP				*e*S	**Sn**	**08 36 15.8**	**+1.7**
CGP	**Cagayan de Oro**	**1.64**	**252**	⇓*e*P	**Pn**	**08 35 53.4**	**-1.0**
CGP				*e*S	**Sn**	**08 36 12.9**	**-1.8**
MSLP	**Maasin**	**1.81**	**310**	*e*P	**Pn**	**08 35 57.1**	**+0.2**
MSLP				*e*S	**Sn**	**08 36 19.0**	**+0.1**
DAV	**Davao City (W)** 108nm,0.3s,baz=90,slow=18,SNR=3.7	**2.00**	**200**	P	**Pn**	**08 36 00.2**	**+0.8**
DAV	221nm,0.3s,baz=43,slow=19,SNR=12			S	**Sn**	**08 36 24.5**	**+1.1**
DAV	comp=Z,319nm,18.5s,baz=342,slow=35			LR	LR	08 36 36.5	
DAV	**Davao City (W)**	**2.00**	**200**	*e*Pn	**Pn**	**08 35 59.4**	**0.0**
DAV				*e*Sn	**Sn**	**08 36 21.6**	**-1.9**
MATI	**Mati**	**2.00**	**180**	*e*P	**Pn**	**08 36 01.2**	**+1.8**
MATI				*e*S	**Sn**	**08 36 27.2**	**+3.8**
DMPH	**Davao City--Mi**	**2.01**	**202**	⇑*e*P	**Pn**	**08 35 59.0**	**-0.6**
DMPH				*e*S	**Sn**	**08 36 25.8**	**+2.1**
TBP	**Tagbilaran**	**2.48**	**287**	*e*P	**Pn**	**08 36 05.7**	**-0.2**
PLP	**Palo**	**2.53**	**330**	⇑*e*P	**Pn**	**08 36 07.8**	**+1.2**
PLP				*i* S	**Sn**	**08 36 38.8**	**+2.5**
LLP	**Lapu-Lapu**	**2.64**	**301**	*e*P	**Pn**	**08 36 08.3**	**+0.3**
LLP				*e*S	**Sn**	**08 36 40.0**	**+1.0**
OCLP	**Ormoc**	**2.64**	**322**	*e*P	**Pn**	**08 36 09.2**	**+1.1**
CTBH	**Cotabato--PC H**	**2.65**	**229**	⇑*iP*	**Pn**	**08 36 08.2**	**0.0**
CTBH				*i* S	**Sn**	**08 36 40.0**	**+0.8**
BESP	**Borongan**	**2.75**	**343**	*e*P	**Pn**	**08 36 10.7**	**+1.2**
BESP				*e*S	**Sn**	**08 36 44.8**	**+3.3**
DDMP	**Don Marcelino,**	**2.89**	**191**	*e*P	**Pn**	**08 36 11.6**	**+0.1**
DDMP				*e*S	**Sn**	**08 36 47.1**	**+1.9**
DCPH	**Dipolog City**	**2.91**	**263**	*e*P	**Pn**	**08 36 15.5**	**+3.8**
DCPH				*e*S	**Sn**	**08 36 48.9**	**+3.3**
SKMP	**Bagumbayan, Su**	**2.97**	**215**	*e*P	**Pn**	**08 36 12.0**	**-0.6**
SNPH	**Sibulan**	**3.02**	**277**	⇓*e*P	**Pn**	**08 36 14.6**	**+1.3**
SNPH				*e*S	**Sn**	**08 36 47.8**	**-0.5**
PAGZ	**Pagadian**	**3.06**	**249**	*e*P	**Pn**	**08 36 14.7**	**+0.9**
CNP	**Cataman**	**3.86**	**336**	*e*P	**Pn**	**08 36 24.0**	**-0.7**
CNP				*e*S	**Sn**	**08 37 09.4**	**+0.5**
PVCP	**Virac**	**5.05**	**336**	*e*P	**Pn**	**08 36 42.0**	**+1.0**
SGSI	**Sangihe**	**5.29**	**188**	P	**Pn**	**08 36 47.2**	**+2.8**
SGSI				S	**Sn**	**08 37 48.2**	**+4.2**
TNTI	**Ternate**	**8.21**	**172**	P	**Pn**	**08 37 26.3**	**+2.0**
KMSI	**Cibinong**	**8.64**	**195**	P	**Pn**	**08 37 33.2**	**+3.1**
MRSI	**Marisa**	**9.47**	**207**	P	**Pn**	**08 37 44.0**	**+2.5**
LUWI	**Luwuk**	**10.53**	**200**	P	Pn	08 38 00.9	+4.9
APSI	**Ampana**	**10.84**	**205**	P	**Pn**	**08 38 04.2**	**+4.0**
TTSI	**Tana Toraja**	**13.55**	**209**	P	**Pn**	**08 38 39.0**	**+1.9**
SPSI	**Sidrap Palu**	**14.38**	**207**	P	**Pn**	**08 38 49.8**	**+1.7**
BNSI	**Bone**	**14.63**	**205**	P	**Pn**	**08 38 52.8**	**+1.5**
KAPI	**Kappang** comp=Z,88nm,18.9s,baz=28,slow=39	**15.33**	**205**	LR	LR	08 45 22.8	
MMRI	**Maumere**	**17.94**	**193**	P	**P**	**08 39 32.7**	**+0.1**
EDFI	**Ende, Flores**	**18.18**	**195**	P	**Pn**	**08 39 36.5**	**+0.6**
JAY	**Jayapura** comp=Z,50nm,18.4s,baz=260,slow=38	**18.36**	**128**	LR	LR	08 47 10.0	
GUMO	**Guam** comp=Z,28nm,20.3s,baz=166,slow=32	**18.81**	**74**	LR	LR	08 45 30.2	
BATI	**Baumata** 8.8nm,0.3s,baz=64,slow=5.4,SNR=7.2	**19.22**	**188**	P	**P**	**08 39 45.4**	**-1.4**
BATI	**Baumata**	**19.22**	**188**	*e*P	**P**	**08 39 45.4**	**-1.4**
BATI				*e*P	**P**	**08 39 45.4**	**-1.4**
BATI	**Baumata**	**19.22**	**188**	P	**Pn**	**08 39 48.2**	**-0.1**
KMMI	**Kalianget**	**20.08**	**218**	P	Pn	08 39 59.5	+1.0
MTN	**Manton Dam** 16nm,0.7s	**22.20**	**167**	*e*P	**P**	**08 40 19.7**	**+0.9**
JNU	**Nakatsue** comp=Z,32nm,20.2s,baz=179,slow=36	**24.42**	**9**	LR	LR	08 50 21.1	
MDSI	**Maura Dua**	**25.76**	**240**	P	**P**	**08 40 53.1**	**+0.5**
FITZ	**Fitzroy Crossi** 5.7nm,1.0s,baz=5.2,slow=7.8,SNR=15	**26.89**	**181**	P	**P**	**08 41 01.8**	**-1.0**
FITZ	**Fitzroy Crossi** 3.7nm,0.9s	**26.89**	**181**	*e*P	**P**	**08 41 01.8**	**-1.0**
JHJ	**Hachijo jima 2** comp=Z,38nm,20.6s,baz=246,slow=31	**27.09**	**26**	LR	LR	08 49 41.9	
KSRS	**Korea Array** comp=Z,37nm,20.8s,baz=187,slow=35	**28.41**	**3**	LR	LR	08 52 12.2	
KCSI	**Kotacane, Aceh**	**28.83**	**261**	P	**P**	**08 41 19.8**	**-0.4**
MJAR	**Matsushiro Arr** comp=Z,21nm,18.1s,baz=245,slow=39	**29.52**	**20**	LR	LR	08 54 42.6	
WR1	**Warramunga Arr**	**29.80**	**165**	*e*P	**P**	**08 41 27.5**	**-1.2**
WRA	**Warramunga Arr** 136nm,0.3s,baz=350,slow=11,SNR=2.1	**29.80**	**165**	P	**P**	**08 41 27.5**	**-1.2**
AS31	**Alice Springs** 1.8nm,0.4s	**33.27**	**167**	*e*P	**P**	**08 41 59.0**	**-0.3**
ASAR	**Alice Springs** 1.2nm,0.3s,baz=347,slow=7.4,SNR=40	**33.28**	**167**	P	**P**	**08 41 58.7**	**-0.5**
USRK	**Ussuriysk Ar.** 2.3nm,0.7s,baz=187,slow=9.2,SNR=7.4	**35.45**	**7**	P	**P**	**08 42 18.0**	**+0.2**
H11S3	**WAKE ISLAND Hy** baz=262,slow=75,SNR=290	**40.31**	**72**	T	T	09 26 02.5	
H11S1	**WAKE

H11S2 WAKE ISLAND Hy 40.32 72 T T 09 26 04.1
baz=262,slow=75,SNR=222
KLR Kul'dur 40.40 6 P **P 08 42 59.2 -0.2**
0.9nm,0.5s,baz=207,slow=11,SNR=3.5
H11N1 WAKE ISLAND Hy 40.68 70 T T 09 26 42.8
baz=265,slow=74,SNR=100
H11N2 WAKE ISLAND Hy 40.69 70 T T 09 26 43.3
baz=265,slow=74,SNR=56
H11N3 WAKE ISLAND Hy 40.70 70 T T 09 26 42.9
baz=265,slow=74,SNR=88
STKA Stephens Creek 43.17 161 P **P 08 43 22.1 -0.1**
1.7nm,0.5s,baz=335,slow=9.6,SNR=6.6
PETK Petropavlovsk- 50.82 24 P **P 08 44 22.1 +0.5**
1.3nm,0.7s,baz=204,slow=4.5,SNR=3.1
PEA1 Petropavlovsk- 50.83 24 *eP* **P 08 44 22.1 +0.5**
MK32 Makanchi Array 53.07 323 *eP* **P 08 44 37.0 -1.4**
MKAR Makanchi Array 53.07 323 P **P 08 44 37.0 -1.4**
1.2nm,0.5s,baz=125,slow=7.9,SNR=11
MKAR LR LR 09 10 25.8
comp=Z,35nm,18.3s,baz=122,slow=40
ZALV Zalesovo Beam 55.77 332 P **P 08 44 56.8 -1.1**
2.3nm,0.3s,baz=138,slow=11,SNR=2.4
ZAA1 Zalesovo Array 55.77 332 *eP* **P 08 44 56.8 -1.1**
RPZ Rata Peaks 66.30 146 P **P 08 46 09.3 -0.1**
11nm,0.8s,baz=226,slow=4.3,SNR=5.1
ILAR Eielson Array 80.61 26 P **P 08 47 32.6 -0.5**
0.3nm,0.7s,baz=232,slow=4.7,SNR=6.6
ARCES ARCESS Array B 85.41 340 P **P 08 47 56.8 -1.0**
7.9nm,0.3s,baz=84,slow=6.6,SNR=11
MAW Mawson 88.48 200 P **P 08 48 12.6 +0.1**
2.0nm,1.0s,baz=26,slow=6.9,SNR=3.9
MAW Mawson 88.48 200 *eP* **P 08 48 12.6 +0.1**
0.3nm,0.9s
VNDA Vanda 88.64 173 P **P 08 48 13.7 +0.5**
1.7nm,0.6s,baz=316,slow=6.6,SNR=11
SYO Syowa Base 97.11 201⚠ *eP* Pdif 08 48 53.8 +1.4
TORD Torodi Ar. Bea 120.74 291 PKP **PKPdf 08 54 12.3 -1.1**
0.4nm,0.5s,baz=107,slow=1.8,SNR=4.2
TOA1 Torodi Ar. Sit 120.74 291 *e*PKPdf **PKPdf 08 54 12.3 -1.1**
PLCA Paso Flores 145.01 157 PKPbc **PKPdf 08 54 57.8 -0.3**
6.8nm,1.0s,baz=346,slow=1.7,SNR=7.3

MAN 05 08:57:37.9, 6.12N×126.47E, h33km, mb5.2, ML4.2, MS4.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.75**	**269**	*eP*	Pb	08 57 53.2	+0.6
DDMP				*eS*	Sb	08 58 03.1	+0.5
MATI	**Mati**	**0.85**	**346**	*eP*	Pn	08 57 53.5	-0.1
MATI				*eS*	Sb	08 58 05.3	0.0
DMPH	**Davao City--Mi**	**1.35**	**315**⚠	*eP*	Pn	08 58 00.9	+0.5
DMPH				*eS*	Sn	08 58 17.8	+0.5
SKMP	**Bagumbayan, Su**	**1.95**	**282**	*eP*	Pn	08 58 09.0	+0.2
SKMP				*eS*	Sn	08 58 30.6	-1.6
BUKP	**Musuan**	**2.24**	**322**	*eP*	Pb	08 58 17.2	-0.5
BUKP				*eS*	Sb	08 58 42.3	-2.7

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*HEL **05** 09:01:15.0±0.1, 64.73N×30.78E, h0km, ML2.3, Explosion*
*IDC **05** 09:01:17.4±2.5, 64.67N×30.85E, h0km, mb1 3.2/4, mb1mx3.0/49, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=36.0km s-min=8.8km az=102.0*
*UPP **05** 09:01:18.2±2.8, 64.69N×30.51E, h0km, ML1.8, Suspected explosion*

ISC 05 09:01:16.0±1.5, 64.72N±0.04×30.91E±0.09, h0km, n22, σ1§99/34, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSF	**Maaselka**	**1.43**	**328**	PN	**Pn**	**09 01 41.6**	**-1.6**
baz=150
MSF SN **Sg** **09 02 00.3 -1.6**
JOF Joensuu 1.82 174 PG **Pn 09 01 47.9 -0.6**
baz=353
JOF SG **Sn 09 02 12.3 +0.1**
OUL Oulu 2.17 282 PG **Pn 09 01 53.0 -0.3**
OUL SG **Sn 09 02 20.4 -0.5**
OUF Merijarvi 2.69 265 PB **Pn 09 02 00.6 +0.1**
baz=84
OUF MSG 09 02 32.7
comp=Z,16nm,0.2s
OUF SG **Sn 09 02 34.5 +0.8**
RNF Rovaniemi 2.77 315 PG **Pn 09 02 03.1 +1.5**
baz=131
RNF SG **Sb 09 02 38.4 -2.5**
SUF Sumiainen 2.92 229 PB **Pn 09 02 04.6 +1.0**
SUF MSG 09 02 40.0
comp=Z,7.4nm,0.2s
SUF SB **Sn 09 02 41.4 +2.1**
TOF Tornio 3.07 299 PG **Pn 09 02 07.4 +1.6**
TOF MSG 09 02 43.6
comp=Z,9.3nm,0.2s
TOF SG **Sn 09 02 45.2 +2.1**
KEF Keuruu 3.73 229 PB **Pn 09 02 15.7 +0.9**
PAJU Pajala 3.95 309 P **Pn 09 02 17.8 +0.1**
PAJU S **Sn 09 03 06.7 +2.0**
FINES FINESS Array B 3.96 216 Pn **Pn 09 02 17.7 -0.1**
comp=Z,0.2nm,0.3s,baz=34,slow=13,SNR=6.3
FINES Pg **Pb 09 02 25.7 -0.8**
comp=Z,0.6nm,0.3s,baz=30,slow=15,SNR=12
FINES Sn **Sn 09 03 00.3 -4.6**
comp=Z,0.3nm,0.3s,baz=34,slow=14,SNR=3.5
FINES Lg Lg 09 03 17.3
comp=Z,1.2nm,0.3s,baz=28,slow=24,SNR=5.3
SJUU Sjulsmark 4.01 286 P **Pn 09 02 18.4 -0.2**
ERTU Ertsjaerv 4.05 301 P **Pn 09 02 19.8 +0.6**
ERTU S **Sn 09 03 09.8 +2.5**
BURU Burvik 4.10 272 P **Pn 09 02 18.7 -1.2**
HARU Harads 4.39 294 P **Pn 09 02 23.9 +0.1**
ODEU Stanfors 4.41 271 P **Pn 09 02 22.3 -1.8**
VJF Virojoki 4.47 202 SG **Sb 09 03 33.8 +4.0**
HEF Hetta 4.70 325 SG **Sb 09 03 39.8 +3.7**
LILU Lilltraesk 4.73 282 P **Pn 09 02 27.3 -1.1**
ARCES ARCESS Array B 5.27 339 Pn **Pn 09 02 35.4 -0.6**
comp=Z,0.3nm,0.3s,baz=152,slow=14,SNR=21
ARCES Sn **Sn 09 03 34.3 -3.0**
comp=Z,0.5nm,0.3s,baz=153,slow=24,SNR=6.3
ARCES Lg Lg 09 03 57.6
comp=Z,0.8nm,0.3s,baz=159,slow=29,SNR=7.8
ARNU Arnoeviken 6.83 250 P **Pn 09 02 58.3 +1.0**
HFS Hagfors 9.20 248 Pn **Pn 09 03 26.8 -2.9**
comp=Z,0.5nm,0.3s,baz=57,slow=11,SNR=9.7
HFS Lg Lg 09 05 52.8
comp=Z,0.2nm,0.3s,baz=53,slow=29,SNR=2.6
NOA NORSAR Array B 9.70 257 Pn **Pn 09 03 34.0 -2.7**
comp=Z,0.0nm,0.3s,baz=63,slow=18,SNR=3.4
NOA Lg Lg 09 06 10.3
comp=Z,0.0nm,0.3s,baz=44,slow=26,SNR=2.7

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*ISCJB **05** 09:14:53.7±0.3, 8.06S±0.01×74.34W±0.02, h163km±3km, mb5.2/518, Error ellipse: s-maj=3.7km s-min=2.0km az=155.5*
*VAO **05** 09:14:53.5±0.8, 8.14S×74.21W, h126km±7km, mbR4.6*
*MOS **05** 09:14:53.4±1.1, 8.03S×74.36W, h155km, mb5.2/66, Error ellipse: s-maj=8.4km s-min=4.4km az=106.8*
*NEIC **05** 09:14:54.0±1.6, 8.10S×74.26W, h152km±3km, mb5.2/516, Error ellipse: s-maj=11.8km s-min=10.0km az=76.0*
*IDC **05** 09:14:54.3±0.3, 8.05S×74.30W, h152km±2km, mb5.0/30, mb1 5.1/37, mb1mx5.1/39, mbtmp5.5/37, MS3.7/8, Ms1 3.7/8, ms1mx3.5/35, Error ellipse: s-maj=8.9km s-min=6.6km az=71.0*
*BJI **05** 09:14:55.0±0.0, 8.10S×74.30W, h155km, mB5.0/16*
*GCMT **05** 09:14:56.0±0.2, 8.11S±0.01×74.37W±0.01, h160km±1km, MW5.3/117, Moment Tensor Solution. s88,c121; s117,c216; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.69±.02; $M_{\theta\theta}$=0.43±.02; $M_{\phi\phi}$1.13±.02; $M_{r\theta}$0.68±.01; $M_{\theta\phi}$0.05±.02; $M_{\phi r}$-0.36±.02; Best double couple: M=1.24900×10^{17} NP1:ϕ_s329.00000°, δ66.00000°, λ-131.00000°. NP2:ϕ_s214.00000°, δ46.00000°, λ-34.00000°. Principal axes: T 1.2040, Plg12.0000°, Azm87.0000°; N 0.0930, Plg37.0000°, Azm348.0000°; P -1.2940, Plg51.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 09:14:53.8±0.2, 8.11S±0.03×74.28W±0.04, h153km±2km, h153km:pP-P, n1630, σ1§34/1560, mb5.2/532, 26C-12D, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**4.20**	**283**	P	**Pn**	**09 15 55.6**	**-1.5**
292nm,0.3s,baz=79,slow=4.0,SNR=1457
ATAH S **Sn 09 16 41.0 -5.3**
113nm,0.3s,baz=103,slow=13,SNR=4.5
NNA Nana 4.61 213 P **Pn 09 16 01.4 -0.7**
76nm,0.3s,baz=13,slow=4.8,SNR=156
NNA S **Sn 09 16 50.5 -4.9**
108nm,0.3s,baz=53,slow=13,SNR=4.8
NNA Nana 4.61 213 *e*Pn **Pn 09 16 02.3 +0.2**
NNA *e*Sn **Sn 09 16 50.8 -4.6**
NNA Nana 4.61 213 *eP* **Pn 09 16 02.3 +0.2**
NNA *e* 09 16 50.8
PTLC Puerto Leguiza 8.25 356 *eP* Pn 09 16 45.2 -5.4
OTAV Otavalo 9.28 333 *e*Pn **Pn 09 17 05.4 +0.7**
OTAV Otavalo 9.28 333 *eP* **Pn 09 17 05.4 +0.7**
OTAV Otavalo 9.28 333 *eP* **Pn 09 17 05.5 +0.7**
CPAS1 Pasto 9.73 342 *eP* **Pn 09 17 09.9 -0.7**
FLOC Florencia 9.73 352 *eP* **Pn 09 17 09.4 -0.9**
CFLOR Florencia 9.73 352 *eP* **Pn 09 17 08.8 -1.6**
CPAS2 Pasto 9.74 342 *eP* **Pn 09 17 11.1 +0.4**
GCUF Volcan Galeras 9.77 342 *eP* **Pn 09 17 11.1 -0.2**
CCUFI Cufio, Nario 9.77 342 *eP* **Pn 09 17 11.1 -0.2**
CRUC La Cruz 9.98 344 *eP* **Pn 09 17 13.4 -0.5**
LPAZ La Paz 10.10 144 P **Pn 09 17 16.2 +0.5**
18nm,0.3s,baz=329,slow=10.0,SNR=895
LPAZ S **Sn 09 19 04.3 -3.6**
4.7nm,0.3s,baz=354,slow=18,SNR=1.7
LPAZ LR LR 09 21 36.1
comp=Z,730nm,20.2s,baz=320,slow=40
MACC Macarena, Meta 10.20 2 *eP* **Pn 09 17 16.3 -0.2**
SOTA Rioblanco 10.44 347 *eP* **Pn 09 17 21.4 +1.3**
BBAC Balboa, Cauca 10.49 343 *eP* **Pn 09 17 20.9 +0.3**
PCON Cinco Dias 10.59 348 *eP* **Pn 09 17 22.6 +0.5**
GUVC San Jose del G 10.71 9 *eP* **Pn 09 17 23.8 +0.5**
POPC Popayan, Colom 10.85 347 *eP* **Pn 09 17 25.5 +0.2**
MARP Paez Belalcaza 11.01 351 *eP* **Pn 09 17 25.5 -2.0**
PB12 IPOC Station P 11.12 160 *eP* **Pn 09 17 28.5 -0.2**
PB16 IPOC Station P 11.17 156 *eP* **Pn 09 17 31.3 +1.6**
MNMCX Minye Minye 11.86 158 *eP* **Pn 09 17 38.3 -0.2**
MNMC Minye Minye 11.86 158 *e*Pn **Pn 09 17 38.4 0.0**
PSGCX Pisagua 12.11 161 *eP* **Pn 09 17 40.5 -1.0**
VILC Villavicencio, 12.16 3 *eP* **Pn 09 17 42.8 +0.5**
YOTC Yotoco, Valle 12.19 350 *eP* **Pn 09 17 43.9 +1.2**
PB11 IPOC Station P 12.41 159 *e*Pn **Pn 09 17 45.8 +0.2**
PB11 IPOC Station P 12.41 159 *eP* **Pn 09 17 45.5 -0.1**
GO01 Chusmiza 12.50 157 *e*Pn **Pn 09 17 47.4 +0.4**
CVER Cruz Verde, Cu 12.55 1 *eP* **Pn 09 17 47.9 +0.2**
ROSC El Rosal 12.87 360 P **Pn 09 17 51.1 -0.6**
5.5nm,0.3s,baz=202,slow=5.9,SNR=17
ROSC El Rosal 12.87 360 *e*Pn **P 09 17 54.4 -2.2**
PB08 IPOC Station P 12.94 158 *eP* **Pn 09 17 51.5 -1.1**
RREF El Recreo 12.97 355 *eP* **P 09 17 56.6 -1.5**
PLMC San Jos del P 13.09 351 *eP* **Pn 09 17 53.7 -0.5**
GUY2C Guyana, Caldas 13.29 355 *eP* **P 09 17 59.5 -2.0**
NORC Norcasia 13.60 357 *eP* **Pn 09 18 01.8 +1.1**
PB01 IPOC Station P 13.66 161 *e*Pn **Pn 09 18 01.5 +0.1**
PB01 IPOC Station P 13.66 161 *eP* **P 09 18 05.7 +0.5**
PB02 IPOC Station P 13.79 163 *eP* **Pn 09 18 04.6 +1.5**
PB07 IPOC Station P 14.18 163 *eP* **Pn 09 18 08.5 +0.4**
HELC Santa Helena 14.27 355 *eP* **Pn 09 18 10.4 +1.0**
PB09 IPOC Station P 14.44 161 *eP* **Pn 09 18 12.1 +0.7**
PB03 IPOC Station P 14.52 163 *eP* **Pn 09 18 12.3 -0.1**
BARC Barichara 14.65 4 *eP* **P 09 18 18.5 +2.2**
PB04 IPOC Station P 14.69 165 *e*Pn **Pn 09 18 15.2 +0.8**
PB04 IPOC Station P 14.69 165 *eP* **P 09 18 15.6 -1.0**
SIV San Ignacio 15.09 122 P **Pn 09 18 20.0 +0.6**
29nm,0.3s,baz=299,slow=13,SNR=264
SIV S **Sn 09 21 05.9 -1.4**
19nm,0.3s,baz=234,slow=19,SNR=4.1
PB05 IPOC Station P 15.17 166 *eP* **P 09 18 22.3 +0.4**
PB06 IPOC Station P 15.20 163 *eP* **P 09 18 21.6 -0.6**
LVC Limon Verde 15.31 161 P **P 09 18 23.1 -0.6**
12nm,0.3s,baz=329,slow=9.7,SNR=66
LVC S **Sn 09 21 13.0 +0.2**
2.5nm,0.3s,baz=58,slow=19,SNR=2.1
LVC Limon Verde 15.31 161 *e*Pn **P 09 18 23.2 -0.5**
260nm,0.7s
LVC Limon Verde 15.31 161 *eP* **P 09 18 24.4 +0.7**
LVC Limon Verde 15.31 161 *eP* **Pn 09 18 22.9 +0.5**
PB15 IPOC Station P 15.70 163 *eP* **Pn 09 18 27.3 +0.2**
PB10 IPOC Station P 15.72 167 *e*Pn **P 09 18 28.0 +0.1**
894nm,1.6s
PB10 IPOC Station P 15.72 167 *eP* **P 09 18 28.3 +0.4**
ELOV Elorza 15.76 18 *eP* **P 09 18 28.2 -0.1**
UREC San Jos de Ur 15.81 355 *eP* **P 09 18 29.4 +0.5**
CAPV Capacho 15.99 7 *eP* **P 09 18 31.1 0.0**
PTGA Pitinga 16.03 63 P **P 09 18 31.4 0.0**
54nm,0.3s,baz=321,slow=22,SNR=133
PTGA S **S 09 21 20.5 -9.0**
21nm,0.3s,baz=148,slow=21,SNR=5.6
PTGA LR LR 09 25 02.7
comp=Z,397nm,21.8s,baz=247,slow=38
PTGA Pitinga 16.03 63 *e*Pn **Pn 09 18 30.7 -0.2**
247nm,0.6s
PTGA Pitinga 16.03 63 *eP* **Pn 09 18 30.7 -0.2**
YJA Yavi 16.33 150 *eP* **P 09 18 36.1 +1.1**
HJA Humahuaca 17.25 151 *eP* **P 09 18 45.3 +0.1**
SDV Santo Domingo 17.27 12 P **Pn 09 18 46.3 +0.2**
28nm,0.3s,baz=138,slow=4.5,SNR=46
SDV S **S 09 21 50.9 -6.8**
1.9nm,0.3s,baz=261,slow=19,SNR=2.5
SDV Santo Domingo 17.27 12 *eP* **Pn 09 18 46.1 0.0**
121nm,0.7s
SDV Santo Domingo 17.27 12 *eP* **Pn 09 18 46.1 0.0**
GO02 Mina Guanaco 17.53 166 *eP* **Pn 09 18 50.5 +1.2**
460nm,0.8s
PAYG Puerto Ayora 17.58 294 *eP* **Pn 09 18 49.6 -0.1**
1μm,1.6s
BCIP Isla Barro Col 18.04 342 *eP* **Pn 09 18 55.5 +0.5**
BCIP Isla Barro Col 18.04 342 *eP* **Pn 09 18 55.5 +0.5**
AZAP Zapla 18.28 152 *eP* **Pn 09 18 57.4 -0.7**
CLDB Colider 18.43 100 *eP* **Pn 09 18 59.8 +0.1**
SLA San Lorenzo 18.52 154 *eP* **Pn 09 19 00.9 +0.1**
FSA Cafayete 19.56 157 *eP* **P 09 19 11.2 +1.1**
GO03 Copiap 19.75 169 *eP* **Pn 09 19 13.6 -1.5**
364nm,1.0s
GO03 Copiap 19.75 169 *eP* **P 09 19 13.3 +1.3**
AHML Horco Molle 20.42 157 *eP* **P 09 19 19.7 +0.6**
HDC Heredia 20.49 331 *eP* Pn 09 19 22.4 -1.6
80nm,0.9s
LCO Las Campanas 21.06 171 *eP* **P 09 19 27.0 +0.8**
419nm,1.1s
LCO Las Campanas 21.06 171 *eP* **P 09 19 27.1 +0.9**
LCO Las Campanas 21.06 171 *eP* **P 09 19 27.0 +0.8**
LCO pmax pmax
comp=Z,419nm,1.1s
LCO Las Campanas 21.06 171 *eP* **P 09 19 27.1 +0.9**
JTS Las Juntas de 21.15 330 P **P 09 19 28.6 +1.6**
comp=Z,8.6nm,0.8s,baz=192,slow=6.0,SNR=12
JTS Las Juntas de 21.15 330 *eP* **P 09 19 29.1 +2.1**
comp=Z,21nm,0.9s
VCA Vinchina 21.30 165 *eP* **P 09 19 31.0 +2.4**
VCA *eP* **P 09 19 31.0 +2.4**
CYA Choya 21.74 159 *eP* **P 09 19 33.5 +0.2**
CYA *eP* **P 09 19 34.6 +1.3**
AQDB Aquidauana 21.76 126 *eP* **P 09 19 33.7 +0.2**
GO04 Tololo Observa 22.19 172 *eP* **P 09 19 38.5 +0.5**
comp=Z,617nm,1.5s
GO04 Tololo Observa 22.19 172 *eP* **P 09 19 38.8 +0.9**
ACLC CERRO LA CRUZ 22.29 163 *eP* **P 09 19 39.9 +1.0**
TPP Pointe-a-Pierr 22.32 35 *eP* **P 09 19 41.5 +2.4**
AROD Rodeo 22.40 169 *eP* **P 09 19 42.0 +1.9**
ACDV Cuesta del Vie 22.47 168 *eP* **P 09 19 42.4 +1.7**
ESPN Las Esperanzas 22.50 334 *eP* **P 09 19 41.6 +0.7**
comp=Z,22nm,0.9s
TRN Trinidad (W) 22.62 35 *eP* **P 09 19 42.8 +0.9**
TBH Brigand Hill 22.68 36 *eP* **P 09 19 44.2 +1.8**
ACON Acoyapa 22.70 331 *eP* **P 09 19 44.2 +1.5**
comp=Z,57nm,1.4s
ACCO Cerro Coronel 22.89 168 *eP* **P 09 19 45.9 +1.2**
APLL PUNTA DE LOS L 23.32 163 *eP* **P 09 19 49.1 +0.7**
AMOG MOGNA 23.34 167 *eP* **P 09 19 49.4 +0.9**
TOSP Speyside 23.64 36 *eP* **P 09 19 52.1 +0.8**
RTLL Cerro Villicun 23.72 168 *eP* **P 09 19 53.3 +1.3**
GRHS Sauteurs 23.79 32 *eP* **P 09 19 54.5 +1.8**
GRSS Sisters 23.87 32 *eP* **P 09 19 54.9 +1.5**
SJA San Juan 23.90 168 *eP* **P 09 19 54.8 +1.2**
CFA Coronel Fontan 24.04 167 P **P 09 19 55.9 +1.0**
comp=Z,266nm,0.7s,baz=344,slow=9.5,SNR=176
CPUP Villa Florida 24.24 140 P **P 09 19 56.2 -0.4**
comp=Z,126nm,0.8s,baz=324,slow=9.2,SNR=167
CPUP S **S 09 24 02.5 -1.8**
comp=Z,11nm,1.0s,baz=320,slow=7.9,SNR=1.9
CPUP Villa Florida 24.24 140 *eP* **P 09 19 56.9 +0.2**
ESTN Estel 24.26 330 *eP* **P 09 19 56.9 -0.2**
comp=Z,20nm,0.9s
AUSP Uspallata 24.42 170 *eP* **P 09 20 00.1 +1.5**
FCV Fort Charlotte 24.78 32 *eP* **P 09 20 04.2 +2.5**
TCA Tanti 24.81 160 *eP* **P 09 20 02.2 +0.3**
SVB Belmont 24.87 31 *eP* **P 09 20 02.6 +0.1**
comp=Z,944nm,0.4s
SVB Belmont 24.87 31 *eP* **P 09 20 02.4 -0.1**
SVB Belmont 24.87 31 *e* **P 09 20 06.0 +3.5**
ROC1 El Roble 24.92 173 *eP* **P 09 20 04.3 +1.2**
ROC1 El Roble 24.92 173 *eP* **P 09 20 04.3 +1.2**
ACAN Cantantal 24.93 166 *eP* **P 09 20 04.0 +1.1**
SVCV St. Vincent, C 24.93 32 *eP* **P 09 20 01.3 -1.7**
SVCV St. Vincent, C 24.93 32 *e* **P 09 20 06.8 +3.7**
SVV Soufriere Volc 24.93 31 *eP* **P 09 20 01.5 -1.6**
SVV Soufriere Volc 24.93 31 *e* **P 09 20 05.1 +2.0**
SSV Crater Summit 24.95 31 *eP* **P 09 20 03.8 +0.4**
SSV Crater Summit 24.95 31 *e* **P 09 20 07.1 +3.8**
SFAN Fancy Village 25.01 31 *eP* **P 09 20 05.1 +1.3**
PEL Peldehue 25.13 173 *eP* **P 09 20 05.2 +0.5**
comp=Z,320nm,0.8s
PEL Peldehue 25.13 173 *eP* **P 09 20 05.2 +0.5**
PEL pmax pmax
comp=Z,320nm,0.8s
MDP Montagnes des 25.26 59 P **P 09 20 06.2 +0.2**
comp=Z,56nm,0.6s,baz=243,slow=8.7,SNR=69
MCLT Moule a Chique 25.40 32 *eP* **P 09 20 05.1 -2.2**
SLDE Delcer 25.42 31 *eP* **P 09 20 10.4 +2.9**
SLB Belfond 25.45 31 *eP* **P 09 20 06.2 -1.6**
SLB Belfond 25.45 31 *e* **P 09 20 10.6 +2.8**
TGUH Tegucigalpa,Un 25.53 330 *eP* **P 09 20 09.3 +0.7**
comp=Z,18nm,0.9s
TGUH *e*PcP **PcP 09 23 36.8 +0.6**
SLPA Patience 25.54 31 *eP* **P 09 20 08.8 +0.3**
SLPA Patience 25.54 31 *e* **P 09 20 12.4 +3.9**
SLBI Saint Lucia, B 25.65 31 *eP* **P 09 20 08.3 -1.2**
SLBI Saint Lucia, B 25.65 31 *e* **P 09 20 12.3 +2.8**
SLW Petit Monier 25.67 31 *eP* **P 09 20 10.0 +0.2**
SLW Petit Monier 25.67 31 *e* **P 09 20 13.6 +3.8**
BBGH Gun Hill 25.68 35 *eP* **P 09 20 12.7 +2.8**
comp=Z,889nm,0.8s
BBGH Gun Hill 25.68 35 *eP* **P 09 20 13.1 +3.2**
BBSP Saint Philip 25.71 35 *eP* **P 09 20 14.0 +4.0**
ITRB Iturama 25.88 119 *eP* **P 09 20 13.9 +2.2**
FDF Fort de France 26.17 30 *eP* **P 09 20 12.6 -1.6**
comp=Z,258nm,0.8s
FDF Fort de France 26.17 30 *eP* **P 09 20 11.8 -2.5**
FDF Fort de France 26.17 30 *eP* **P 09 20 12.6 -1.6**
FDF pmax pmax
comp=Z,258nm,0.8s
MDN Morne-Daniel 26.55 29 *eP* **P 09 20 17.8 +0.2**
BBL Barber's Block 26.70 28 *eP* **P 09 20 16.8 -2.2**
BBL Barber's Block 26.70 28 *e* pP 09 20 51.4 +0.4
BDFB Brasilia 26.74 109 P **P 09 20 20.3 +0.8**
comp=Z,97nm,0.4s,baz=274,slow=10,SNR=94
BDFB Brasilia 26.74 109 *eP* **P 09 20 20.3 +0.8**
BDFB *eP* **P 09 20 20.4 +0.8**
MDPO Dominica; Chan 26.75 28 *eP* **P 09 20 17.5 -1.9**
DWS Wesley 26.81 29 *eP* **P 09 20 13.4 -6.5**
DWS Wesley 26.81 29 *e* **P 09 20 22.6 +2.7**
GO05 Huala 26.86 176 *eP* **P 09 20 21.0 +0.7**
comp=Z,68nm,1.1s
PTGB Pitanga 26.88 131 *eP* **P 09 20 21.0 +0.3**
CRPR Cabo Rojo, PR 26.90 15 *eP* **P 09 20 21.4 +0.7**
comp=Z,56nm,0.7s
ICMP Isla Caja de M 26.94 16 *eP* **P 09 20 21.9 +0.8**
comp=Z,94nm,0.6s
OBIP Obispado Ponce 27.07 16 *eP* **P 09 20 23.3 +1.0**
comp=Z,195nm,1.1s
SDDR Presa de Saban 27.09 6 *eP* **P 09 20 25.0 +2.6**
comp=Z,26nm,0.6s
MPR Mayaguez 27.09 15 *eP* **P 09 20 23.0 +0.6**
comp=Z,102nm,0.8s
PCDR Punta Cana, DR 27.09 12 *eP* **P 09 20 24.3 +1.9**
comp=Z,278nm,0.6s
SJG San Juan 27.27 17 P **P 09 20 23.7 -0.3**
comp=Z,132nm,0.4s,baz=157,slow=7.6,SNR=24
SJG S **S 09 24 49.8 -2.3**
comp=Z,17nm,0.6s,baz=163,slow=19,SNR=4.5
SJG San Juan 27.27 17 *eP* **P 09 20 24.6 +0.6**
comp=Z,135nm,0.6s
SJG San Juan 27.27 17 *eP* **P 09 20 24.6 +0.6**
SJG pmax pmax
comp=Z,135nm,0.6s
AOPR Arecibo Observ 27.32 16 *eP* **P 09 20 25.1 +0.6**
comp=Z,350nm,1.3s
CDVI St. Croix 27.36 20 *eP* **P 09 20 25.1 +0.2**
comp=Z,272nm,0.6s
HUMP Col San Antoni 27.38 18 *eP* **P 09 20 25.6 +0.6**
comp=Z,103nm,0.7s
HUMP *e*S **S 09 24 55.4 +1.5**
MLYT Lee's Yard 27.42 26 *eP* **P 09 20 26.1 +0.7**
MTP Monte Pirata 27.43 18 *eP* **P 09 20 24.6 -0.8**
comp=Z,141nm,1.0s
CBYP Canovanas 27.50 18 *eP* **P 09 20 26.4 +0.3**
comp=Z,187nm,1.1s
H05N1 Guadeloupe/Mar 27.57 28 P **P 09 20 23.7 -3.1**
SNR=30
NVBH Bath Hotel, Ne 27.59 25 *eP* **P 09 20 28.6 +1.8**
NEV Hard Times 27.63 25 *eP* **P 09 20 28.3 +1.1**
BSK Brimstone Hill 27.71 24 *eP* **P 09 20 29.4 +1.5**
CUPR Culebra, Puert 27.71 19 *eP* **P 09 20 27.9 -0.1**
comp=Z,176nm,0.7s
SKI Saint Kitts 27.74 24 *eP* **P 09 20 29.0 +0.8**
SEUS St. Eustatius 27.78 24 *eP* **P 09 20 28.5 -0.1**
comp=Z,339nm,0.8s
BPA Boggy Peak 27.85 26 *eP* **P 09 20 28.9 -0.4**
STVI Saint Thomas 27.86 19 *eP* **P 09 20 28.9 -0.4**
comp=Z,125nm,0.5s
BB19B Bebedouro 27.99 120 *eP* **P 09 20 32.0 +1.5**
FRTB Fartura 28.12 125 *eP* **P 09 20 33.6 +2.0**
SMRT St. Maarten 28.25 23 *eP* **P 09 20 32.6 -0.1**
comp=Z,177nm,0.8s
ITAB Concordia 28.31 135 *eP* **P 09 20 32.9 -0.3**
ANWB Willy Bob 28.43 26 *eP* **P 09 20 33.2 -1.2**
comp=Z,742nm,1.3s
ANWB Willy Bob 28.43 26 *eP* **P 09 20 33.0 -1.3**
ANWB *e*S **pP 09 21 07.3 +0.7**
PMNB Patos De Minas 28.96 114 *eP* **P 09 20 40.8 +1.6**
RCLB Rio Claro- Sao 29.39 122 *eP* **P 09 20 44.1 +1.2**
TIJ01 Guaruva-PR 29.55 128 *eP* **P 09 20 46.6 +2.3**
SPB Sao Paulo 29.97 124 *eP* **P 09 20 48.6 +0.7**
comp=Z,92nm,0.6s
SPB Sao Paulo 29.97 124 *eP* **P 09 20 48.8 +0.8**
CCIG Comitan 30.00 324 *eP* **P 09 20 49.8 +1.3**
comp=Z,13nm,0.9s
CNLB Canela 30.48 137 *eP* **P 09 20 53.1 +0.6**
MCI8 Montes Claros 30.80 109 *eP* **P 09 20 57.9 +2.4**
MCI9 Montes Claros 30.84 109 *eP* **P 09 20 57.9 +2.1**
MCI6 Montes Claros 30.86 109 *eP* **P 09 20 57.6 +1.6**
BSCB Bom Sucesso 31.22 117 *eP* **P 09 21 00.4 +1.2**
PARB Paraibuna 31.37 122 *eP* **P 09 21 02.4 +2.0**
TRQA Tornquist 31.82 161 *eP* **P 09 21 04.5 +0.5**
comp=Z,253nm,1.4s
TRQA Tornquist 31.82 161 *eP* **P 09 21 04.6 +0.5**
TRQA pmax pmax
comp=Z,253nm,1.4s
TRQA Tornquist 31.82 161 *eP* **P 09 21 05.6 +1.6**
CMIG Matias Romero 32.29 321 P **P 09 21 07.4 -1.0**
comp=Z,9.8nm,0.7s,baz=104,slow=6.8,SNR=11
CMIG pP **pP 09 21 41.2 +0.4**
comp=Z,13nm,0.8s,baz=143,slow=8.4,SNR=4.5
CMIG PcP **PcP 09 23 53.1 0.0**
comp=Z,9.6nm,0.8s,baz=353,slow=1.8,SNR=4.2
PLCA Paso Flores 32.65 175 P **P 09 21 12.2 +0.8**
comp=Z,119nm,0.5s,baz=13,slow=9.6,SNR=417
PLCA PcP **PcP 09 23 54.7 +0.9**
comp=Z,19nm,0.6s,baz=9.0,slow=3.3,SNR=4.9
PLCA Paso Flores 32.65 175 *eP* **P 09 21 12.5 +1.1**
comp=Z,148nm,0.6s
PLCA *e*PcP **PcP 09 23 54.7 +0.9**
PLCA Paso Flores 32.65 175 *eP* **P 09 21 12.5 +1.1**
PLCA *e* 09 23 54.7
PLCA pmax pmax
comp=Z,148nm,0.6s
PLCA Paso Flores 32.65 175 *eP* **P 09 21 12.8 +1.4**
DUB01 Friburgo-RJ 33.69 118 *eP* **P 09 21 23.2 +2.6**
SJMB Sao Joao De Ma 33.80 112 *eP* **P 09 21 23.5 +1.9**
BSFB Barra de Sao F 34.14 112 *eP* **P 09 21 26.3 +1.8**
CAM01 Campos-RJ 34.24 117 *eP* **P 09 21 26.8 +1.5**
NBMO Morrinhos-CE 34.38 84 *eP* **P 09 21 28.6 +1.9**

061Z	Ochoppi	34.38 349	pP	pP	09 21 59.5 +0.3
	baz=168				
RIB01	Linhares ES	34.67 112	eP	P	09 21 31.1 +2.0
ALF01	Guarapari-ES	34.71 115	eP	P	09 21 31.2 +1.9
060Z	West Palm Beac	34.85 350	pP	pP	09 22 04.2 +1.0
	baz=169				
GO07	Milladeo Hill,	34.87 179	eP	P	09 21 30.5 +0.2
	comp=Z,418nm,1.0s				
059Z	Ave Maria	34.95 349	pP	pP	09 22 05.0 +1.0
	baz=168				
TLIG	Tlapa	35.03 317	eP	P	09 21 34.0 +1.8
	comp=Z,6.9nm,0.7s				
TLIG			ePcP	PcP	09 24 02.1 +1.1
060A	Indiantown	35.44 351	pP	pP	09 22 09.2 +0.9
	baz=170				
059A	Moore Haven	35.50 349	pP	pP	09 22 08.6 -0.3
	baz=168				
058A	Arcadia	35.72 348	pP	pP	09 22 11.3 +0.6
	baz=167				
959A	Okeechobee	36.00 350	pP	pP	09 22 13.3 +0.1
	baz=169				
958A	Wauchula	36.22 349	pP	pP	09 22 14.9 -0.1
	baz=167				
957A	Wimauma	36.40 348	pP	pP	09 22 17.4 +0.9
	baz=167				
DWPF	Disney Wildern	36.67 349	pP	pP	09 22 19.2 +0.3
	baz=168				
858A	St. Cloud	36.76 350	pP	pP	09 22 20.0 +0.3
	baz=168				
NBPA	Parau_RN	36.96 89	eP	P	09 21 50.1 +1.5
857A	Zephyrhills	36.98 348	pP	pP	09 22 21.6 +0.1
	baz=167				
758A	Lake Helen	37.46 350	pP	pP	09 22 25.8 +0.1
	baz=169				
757A	Oxford	37.60 349	pP	pP	09 22 27.0 +0.1
	baz=167				
658A	Bunnell	37.92 350	pP	pP	09 22 29.6 0.0
	baz=169				
656A	Willston	38.10 348	eP	P	09 21 59.2 +1.3
	comp=Z,40nm,0.7s				
656A	Willston	38.10 348	pP	pP	09 22 31.1 -0.1
	baz=167				
RCBR	Riachuelo	38.15 89	P	P	09 21 59.2 +0.5
	comp=Z,73nm,0.6s,baz=271,slow=0.2,SNR=40				
RCBR	Riachuelo	38.15 89	eP	P	09 21 58.9 +0.2
	comp=Z,125nm,0.7s				
RCBR	Riachuelo	38.15 89	eP	P	09 21 58.9 +0.2
RCBR			pmax	pmax	
	comp=Z,125nm,0.7s				
RCBR	Riachuelo	38.15 89	eP	P	09 21 59.4 +0.7
657A	Interlachen	38.19 349	pP	pP	09 22 32.1 +0.3
	baz=168				
RPN	Rapa Nui	38.19 236	P	P	09 21 59.7 +0.9
	comp=Z,183nm,0.9s,baz=54,slow=4.7,SNR=5.9				
RPN			LR	LR	09 34 43.8
	comp=Z,162nm,18.1s,baz=27,slow=31				
RPN	Rapa Nui	38.19 236	eP	P	09 21 59.7 +0.9
	comp=Z,834nm,1.5s				
RPN			e		09 34 43.8
655A	Horseshoe Beac	38.39 347	pP	pP	09 22 33.1 -0.6
	baz=166				
557A	Orange Park	38.58 350	pP	pP	09 22 35.1 -0.2
	baz=168				
556A	Lake Butler	38.69 349	pP	pP	09 22 36.4 +0.2
	baz=167				
555A	McAlpin	38.92 348	eP	P	09 22 05.5 +0.7
	comp=Z,57nm,1.0s				
555A	McAlpin	38.92 348	pP	pP	09 22 37.6 -0.5
	baz=166				
554A	Perry	39.04 347	pP	pP	09 22 39.1 0.0
	baz=165				
457A	Yulee	39.14 350	pP	pP	09 22 39.1 -0.8
	baz=169				
456A	Hilliard	39.33 349	pP	pP	09 22 41.2 -0.2
	baz=168				
552A	Lynn Haven	39.47 345	pP	pP	09 22 42.5 -0.3
	baz=163				
455A	Stateville	39.53 348	pP	pP	09 22 42.2 -1.1
	baz=166				
454A	Quitman	39.64 347	pP	pP	09 22 43.5 -0.6
	baz=165				
357A	Townsend	39.91 350	pP	pP	09 22 46.0 -0.5
	baz=169				
453A	Whigham	39.92 346	pP	pP	09 22 46.1 -0.5
	baz=164				
356A	Blackshear	39.93 350	pP	pP	09 22 46.1 -0.4
	baz=168				
355A	Pearson	40.08 349	pP	pP	09 22 46.7 -1.2
	baz=167				
452A	Marianna	40.13 345	pP	pP	09 22 46.9 -1.3
	baz=163				
TIGA	Tifton	40.33 348	eP	P	09 22 16.0 -0.4
	comp=Z,27nm,0.8s				
TIGA			epP	pP	09 22 50.1 +0.2
TIGA	Tifton	40.33 348	pP	pP	09 22 49.3 -0.6
	baz=166				
353A	Camilla	40.38 347	pP	pP	09 22 49.3 -1.0
	baz=165				
257A	Skidaway Islan	40.38 351	pP	pP	09 22 49.1 -1.3
	baz=170				
450A	Crestview	40.46 344	pP	pP	09 22 50.6 -0.5
	baz=161				
256A	Glennville	40.53 350	pP	pP	09 22 51.3 -0.3
	baz=168				
255A	Hazlehurst	40.58 349	pP	pP	09 22 51.2 -0.8
	baz=168				
449A	Pace	40.59 343	pP	pP	09 22 52.3 +0.2
	baz=160				
352A	Blakely	40.67 346	pP	pP	09 22 51.9 -0.8
	baz=164				
254A	Abbeville	40.75 348	pP	pP	09 22 52.5 -1.0
	baz=166				
BRAL	Brewton	40.93 343	eP	P	09 22 22.6 +1.3
	comp=Z,48nm,0.8s				
BRAL			epP	pP	09 22 55.3 +0.3
BRAL	Brewton	40.93 343	pP	pP	09 22 54.1 -0.9
	baz=160				
350A	Dozier	40.97 344	pP	pP	09 22 54.6 -0.7
	baz=162				
LNIG	Linares	40.98 324	eP	P	09 22 22.9 +1.1
	comp=Z,27nm,0.9s				
253A	Americus	41.04 347	pP	pP	09 22 55.2 -0.6
	baz=165				
157A	Early Branch	41.07 351	pP	pP	09 22 55.9 -0.1
	baz=170				
252A	Lumpkin	41.12 346	pP	pP	09 22 55.6 -0.9
	baz=164				
156A	Sylvania	41.12 351	pP	pP	09 22 56.1 -0.4
	baz=169				
349A	Repton	41.14 343	pP	pP	09 22 56.7 0.0
	baz=160				
155A	Kite	41.25 349	pP	pP	09 22 57.5 -0.1
	baz=168				
ZAIG	Zacatecas	41.34 319	eP	P	09 22 25.8 +0.5
	comp=Z,4.9nm,0.9s				
154A	Montrose	41.37 349	eP	P	09 22 25.5 +0.6
	comp=Z,224nm,1.0s				
154A			epP	pP	09 22 59.1 +0.6
154A	Montrose	41.37 349	pP	pP	09 22 58.4 -0.1
	baz=167				
251A	Midway	41.37 346	pP	pP	09 22 58.2 -0.4
	baz=163				
NHSC	New Hope	41.37 352	eP	P	09 22 25.6 +0.6
	comp=Z,126nm,0.8s				
NHSC			epP	pP	09 22 59.5 +0.9
NHSC	New Hope	41.37 352	pP	pP	09 22 59.0 +0.4
	baz=171				
250A	Grady	41.48 345	eP	P	09 22 26.7 +0.9
	comp=Z,82nm,1.5s				
250A			epP	pP	09 22 59.9 +0.4
250A	Grady	41.48 345	pP	pP	09 22 58.9 -0.6
	baz=162				
153A	Fort Valley	41.55 348	pP	pP	09 22 59.7 -0.3
	baz=166				
Z58A	St. Stephen	41.55 353	pP	pP	09 22 60.0 -0.1
	baz=172				
Z57A	Bowman	41.63 352	pP	pP	09 23 00.3 -0.5
	baz=170				
249A	Camden	41.71 344	pP	pP	09 23 00.9 -0.5
	baz=161				
152A	Waverly Hall	41.76 347	eP	P	09 22 28.3 +0.2
	comp=Z,35nm,0.5s				
152A			epP	pP	09 23 01.6 -0.2
Z56A	Williston	41.76 351	eP	P	09 22 28.7 +0.6
	comp=Z,64nm,0.8s				
Z56A			epP	pP	09 23 01.9 +0.1
151A	Opelika	41.77 346	pP	pP	09 23 01.2 -0.7
	baz=164				
Z55A	Blythe	41.78 350	pP	pP	09 23 01.5 -0.4
	baz=168				
Z54A	Sparta	41.92 349	pP	pP	09 23 02.7 -0.4
	baz=167				
150A	Eclectic	42.01 345	pP	pP	09 23 02.8 -1.1
	baz=162				
Y60A	Bolivia	42.05 355	pP	pP	09 23 02.8 -1.4
	baz=174				
Y58A	Scranton	42.10 353	epP	pP	09 23 04.0 -0.6
Y58A	Scranton	42.10 353	pP	pP	09 23 03.1 -1.5
	baz=172				
Z53A	Monticello	42.10 348	pP	pP	09 23 03.9 -0.7
	baz=166				
KVTX	Kingsville	42.18 328	eP	P	09 22 32.6 +1.0
	comp=Z,79nm,0.8s				
KVTX			epP	pP	09 23 05.4 +0.1
Z52A	Williamson	42.19 347	pP	pP	09 23 04.9 -0.4
	baz=165				
Y56A	Pelion	42.21 351	pP	pP	09 23 05.2 -0.3
	baz=170				
149A	Jones	42.21 344	pP	pP	09 23 04.7 -0.8
	baz=161				
GOGA	Godfrey	42.21 349	eP	P	09 22 32.3 +0.6
	comp=Z,37nm,1.0s				
GOGA			epP	pP	09 23 05.3 -0.2
GOGA	Godfrey	42.21 349	eP	P	09 22 32.3 +0.6
GOGA			e*PP	pP	09 23 05.3 -0.2
GOGA			pmax	pmax	
	comp=Z,37nm,1.0s				
GOGA	Godfrey	42.21 349	pP	pP	09 23 04.9 -0.6
	baz=166				
Y57A	Sumter	42.30 352	eP	P	09 22 32.5 +0.1
	comp=Z,108nm,0.8s				
Y57A			epP	pP	09 23 06.0 -0.2
Y57A	Sumter	42.30 352	pP	pP	09 23 05.4 -0.8
	baz=171				
Y55A	Saluda	42.43 351	pP	pP	09 23 06.8 -0.5
	baz=169				
148A	Greensboro	42.47 343	pP	pP	09 23 06.7 -1.0
	baz=160				
Y54A	Tignall	42.50 350	pP	pP	09 23 06.9 -1.0
	baz=168				
X60A	Albert Glenn T	42.60 355	pP	pP	09 23 07.6 -1.1
	baz=175				
Z50A	Ashland	42.60 346	pP	pP	09 23 08.2 -0.6
	baz=163				
X59A	McDuffie Farm,	42.65 355	pP	pP	09 23 08.0 -1.1
	baz=174				
Y53A	Monroe	42.66 349	pP	pP	09 23 07.7 -1.5
	baz=166				
LRAL	Lakeview Retre	42.67 344	eP	P	09 22 35.8 +0.3
	comp=Z,11nm,0.6s				
LRAL			epP	pP	09 23 08.8 -0.6
JSC	Jenkinsville	42.68 351	eP	P	09 22 35.7 +0.2
	comp=Z,20nm,0.6s				
JSC			epP	pP	09 23 09.4 0.0
JSC	Jenkinsville	42.68 351	eP	P	09 22 35.7 +0.2
JSC			e*PP	pP	09 23 09.4 0.0
JSC			pmax	pmax	
	comp=Z,20nm,0.6s				
X57A	Johnson Farm,	42.70 353	pP	pP	09 23 08.9 -0.6
	baz=172				
Z49A	Columbiana	42.70 345	pP	pP	09 23 08.5 -1.0
	baz=162				
X58A	Rowland	42.70 354	eP	P	09 22 35.9 +0.2
	comp=Z,37nm,0.4s				
X58A			epP	pP	09 23 09.6 +0.1
Y52A	Lilburn	42.77 348	pP	pP	09 23 09.2 -0.9
	baz=166				
HODGE	Hodges	42.79 350	eP	P	09 22 37.2 +0.9
	comp=Z,47nm,0.5s				
HODGE			epP	pP	09 23 10.5 +0.3
X56A	White Oak	42.85 352	pP	pP	09 23 10.0 -0.7
	baz=170				
X55A	Gracelyn & Ava	42.92 351	pP	pP	09 23 11.1 -0.2
	baz=169				
BIRD	Birdtown, Kers	42.93 353	eP	P	09 22 38.5 +1.0
	comp=Z,40nm,0.8s				
BIRD			epP	pP	09 23 11.6 +0.3
VBMS	Vicksburg	43.00 340	pP	pP	09 23 11.1 -0.9
	baz=156				
Y51A	Rockmart	43.02 347	pP	pP	09 23 11.4 -0.8
	baz=164				
GO09	Cerro Castillo	43.05 178	eP	P	09 22 40.0 +1.7
	comp=Z,269nm,0.9s				
W60A	Pink Hill	43.05 356	pP	pP	09 23 11.6 -0.8
	baz=175				
X54A	Belton	43.12 350	pP	pP	09 23 12.8 -0.1
	baz=168				
W61A	Ground Anchor	43.13 357	pP	pP	09 23 12.8 -0.2
	baz=176				
HKT	Hockley	43.15 332	eP	P	09 22 39.8 +0.5
	comp=Z,5.9nm,0.8s				
HKT	Hockley	43.15 332	eP	P	09 22 39.8 +0.5
HKT			pmax	pmax	
	comp=Z,6.0nm,0.8s				
W58A	Raeford	43.16 354	pP	pP	09 23 13.0 -0.2
	baz=173				
Y50A	Piedmont	43.17 346	pP	pP	09 23 12.2 -1.1
	baz=163				
W59A	Clinton	43.23 355	pP	pP	09 23 12.2 -1.5
	baz=174				
X53A	Estanollee	43.24 349	pP	pP	09 23 13.3 -0.6
	baz=167				
CNNC	Cliffs of the	43.25 356	eP	P	09 22 39.8 -0.3
	comp=Z,39nm,0.4s				
CNNC			epP	pP	09 23 13.8 -0.2
CNNC	Cliffs of the	43.25 356	pP	pP	09 23 12.9 -1.1
	baz=175				
PAULI	Pauline	43.29 351	eP	P	09 22 41.5 +1.0
	comp=Z,17nm,0.9s				
PAULI			epP	pP	09 23 14.6 +0.2
Y49A	Blount Mountai	43.30 345	eP	P	09 22 40.4 -0.1
	comp=Z,39nm,0.4s				
Y49A			epP	pP	09 23 13.9 -0.6
Y49A	Blount Mountai	43.30 345	pP	pP	09 23 12.9 -1.6
	baz=162				
W57A	Gilead	43.37 353	eP	P	09 22 41.5 +0.5
	comp=Z,23nm,0.8s				
W57A			epP	pP	09 23 15.3 +0.4
W57A	Gilead	43.37 353	pP	pP	09 23 13.8 -1.2
	baz=172				
W56A	Indian Trail	43.42 352	pP	pP	09 23 14.7 -0.7
	baz=171				
X52A	Dahlonega	43.45 348	pP	pP	09 23 14.4 -1.3
	baz=166				
KMSC	Kings Mountain	43.53 352	eP	P	09 22 43.4 +1.0
	comp=Z,37nm,0.8s				
KMSC			epP	pP	09 23 16.5 +0.2
KMSC	Kings Mountain	43.53 352	pP	pP	09 23 15.5 -0.8
	baz=170				
Y48A	Jasper	43.55 344	pP	pP	09 23 15.0 -1.5
	baz=161				
833A	Chaparral WMA,	43.60 327	eP	P	09 22 44.1 +1.1
	comp=Z,53nm,1.3s				
833A			epP	pP	09 23 18.3 +1.4
833A	Chaparral WMA,	43.60 327	pP	pP	09 23 17.7 +0.7
	baz=143				
W54A	Cherokee Point	43.61 351	pP	pP	09 23 16.4 -0.6
	baz=169				
X51A	Calhoun	43.61 347	eP	P	09 22 42.2 -0.8
	comp=Z,24nm,1.2s				
X51A			epP	pP	09 23 15.9 -1.1
X50B	Fort Payne	43.69 346	pP	pP	09 23 16.6 -1.1
	baz=164				
V61A	Roper	43.72 357	eP	P	09 22 43.5 -0.3
	comp=Z,128nm,1.4s				
V61A			epP	pP	09 23 17.2 -0.6
V60A	Jim Taylor Roa	43.73 356	eP	P	09 22 44.2 +0.3
	comp=Z,58nm,0.6s				
V60A			epP	pP	09 23 17.9 +0.1
V59A	Middlesex	43.80 355	pP	pP	09 23 17.7 -0.8
	baz=174				
W53A	Cullowhee	43.86 349	pP	pP	09 23 18.7 -0.5
	baz=167				
X49A	Woodville	43.90 346	pP	pP	09 23 18.5 -0.8
	baz=163				
V58A	Windy Hill, Pi	43.91 354	pP	pP	09 23 18.4 -0.9
	baz=173				
W52A	Murphy	43.93 349	pP	pP	09 23 18.1 -1.5
	baz=166				
X48A	Hartselle	44.03 345	pP	pP	09 23 19.4 -1.0
	baz=162				
V57A	Coltrane Farms	44.07 354	pP	pP	09 23 19.6 -1.0
	baz=172				
V56A	Mocksville	44.08 353	eP	P	09 22 47.5 +0.8
	comp=Z,62nm,0.6s				
V56A	Mocksville	44.08 353	pP	pP	09 23 20.4 -0.3
	baz=171				
W51A	Cleveland	44.16 348	pP	pP	09 23 21.0 -0.5
	baz=165				
NATX	Nacogdoches	44.18 335	eP	P	09 22 47.1 -0.5
	comp=Z,33nm,0.7s				
NATX			epP	pP	09 23 22.6 +0.9
NATX	Nacogdoches	44.18 335	pP	pP	09 23 21.9 +0.3
	baz=150				
V55A	Taylorsville	44.22 352	pP	pP	09 23 21.4 -0.4
	baz=170				
V54A	Nebo	44.25 351	pP	pP	09 23 21.6 -0.6
	baz=169				
U61A	Possum Corner	44.26 357	epP	pP	09 23 22.7 +0.6
U61A	Possum Corner	44.26 357	pP	pP	09 23 21.4 -0.7
	baz=177				
V53A	Saluda	44.28 350	eP	P	09 22 49.5 +1.1
	comp=Z,43nm,0.5s				
V53A	Saluda	44.28 350	pP	pP	09 23 21.5 -1.0
	baz=168				
X47A	Russelville	44.31 344	pP	pP	09 23 21.1 -1.6
	baz=161				
W50A	Signal Mountai	44.32 347	eP	P	09 22 49.9 +1.2
	comp=Z,31nm,0.6s				
W50A			epP	pP	09 23 22.3 -0.5
W50A	Signal Mountai	44.32 347	pP	pP	09 23 21.9 -0.9
	baz=164				
U59A	Littleton	44.35 356	epP	pP	09 23 23.1 +0.2
U59A	Littleton	44.35 356	pP	pP	09 23 22.3 -0.6
	baz=175				
CPCT	Cooper Cave	44.39 348	epP	pP	09 23 22.9 -0.4
U60A	Pendleton	44.43 357	pP	pP	09 23 22.8 -0.7
	baz=176				
U58A	Oxford	44.45 355	pP	pP	09 23 22.7 -1.0
	baz=174				
W49A	Belvidere	44.47 346	pP	pP	09 23 22.7 -1.2
	baz=163				
SWET	Sewanee	44.48 346	eP	P	09 22 50.9 +1.0
	comp=Z,34nm,1.1s				
SWET			epP	pP	09 23 22.8 -1.3
X46A	Booneville	44.55 343	pP	pP	09 23 22.8 -1.8
	baz=160				
U57A	Blanch	44.56 354	pP	pP	09 23 23.4 -1.2
	baz=173				
V52A	Sevierville	44.59 349	eP	P	09 22 51.1 +0.3
	comp=Z,56nm,0.9s				
V52A			epP	pP	09 23 24.3 -0.6
V52A	Sevierville	44.59 349	pP	pP	09 23 23.4 -1.5
	baz=167				
U56A	King	44.59 353	pP	pP	09 23 25.0 +0.1
	baz=171				
W48A	Pulaski	44.65 345	pP	pP	09 23 23.6 -1.8
	baz=162				
435B	Jarrell	44.67 331	eP	P	09 22 50.7 -0.8
	comp=Z,32nm,0.7s				
435B			epP	pP	09 23 26.7 +1.1
V51A	Loudon	44.70 348	pP	pP	09 23 24.8 -1.0
	baz=166				
V50A	Pikevile	44.73 347	pP	pP	09 23 25.1 -0.9
	baz=165				
OXF	Oxford	44.75 342	eP	P	09 22 52.7 +0.7
	comp=Z,43nm,0.9s				
OXF			epP	pP	09 23 25.6 -0.6
OXF	Oxford	44.75 342	eP	P	09 22 52.7 +0.7
OXF			e*PP	pP	09 23 25.6 -0.6
OXF			pmax	pmax	
	comp=Z,43nm,0.9s				
OXF	Oxford	44.75 342	pP	pP	09 23 24.0 -2.2
	baz=158				
Z41A	Richland Creek	44.76 338	pP	pP	09 23 25.2 -1.0
	baz=154				
PLAL	Pickwick Lake	44.80 344	eP	P	09 22 52.4 -0.1
	comp=Z,30nm,0.8s				
PLAL			epP	pP	09 23 25.2 -1.4
U55A	TA2, Sparta	44.83 352	pP	pP	09 23 25.6 -1.3
	baz=170				
U53A	Fall Branch	44.92 351	pP	pP	09 23 26.2 -1.4
	baz=168				
T59A	Double "B" Far	44.95 356	eP	P	09 22 54.5 +0.9
	comp=Z,23nm,0.6s				
T59A			epP	pP	09 23 28.2 +0.4
T59A	Double "B" Far	44.95 356	pP	pP	09 23 27.5 -0.2
	baz=175				
U54A	Nelsons Funny	44.96 351	eP	P	09 22 53.9 +0.1
	comp=Z,45nm,0.6s				
U54A			epP	pP	09 23 28.1 +0.1
U54A	Nelsons Funny	44.96 351	pP	pP	09 23 27.1 -0.9
	baz=169				
GO10	Punta Arenas	44.99 177	eP	P	09 22 55.1 +1.3
	comp=Z,350nm,0.9s				
T58A	Grand View Acr	45.00 355	pP	pP	09 23 27.4 -0.7
	baz=174				
V49A	McMinnville	45.00 347	pP	pP	09 23 26.7 -1.5
	baz=164				
W46A	Michie	45.03 344	pP	pP	09 23 26.3 -2.1
	baz=160				
T60A	Surry	45.07 357	epP	pP	09 23 29.2 +0.5
T60A	Surry	45.07 357	pP	pP	09 23 28.1 -0.6
	baz=177				
U52A	Thorn Hill	45.09 350	pP	pP	09 23 27.2 -1.8
	baz=167				
T57A	Hurt	45.12 354	eP	P	09 22 54.7 -0.2
	comp=Z,59nm,0.6s				
T57A			epP	pP	09 23 29.2 +0.1
T57A	Hurt	45.12 354	pP	pP	09 23 28.0 -1.1
	baz=173				
U51A	La Follette	45.19 349	pP	pP	09 23 28.2 -1.6
	baz=166				
V48A	Smith Brothers	45.19 346	eP	P	09 22 55.1 -0.4
	comp=Z,64nm,0.7s				
V48A			epP	pP	09 23 28.9 -0.8
X43A	Marvell	45.22 341	eP	P	09 22 56.0 +0.3
	comp=Z,46nm,1.3s				
X43A			epP	pP	09 23 28.5 -1.5
X43A			ePcP	PcP	09 24 33.7 +0.4
T56A	Rocky Mt	45.23 354	pP	pP	09 23 29.4 -0.6
	baz=172				
WLAR	White Oak Lake	45.26 338	eP	P	09 22 57.0 +1.0
	comp=Z,51nm,0.9s				
WLAR			epP	pP	09 23 30.1 -0.2
TZTN	Tazewell	45.27 349	eP	P	09 22 56.6 +0.4
	comp=Z,62nm,0.5s				
TZTN			epP	pP	09 23 29.7 -0.7
U50A	Jamestown	45.39 348	pP	pP	09 23 29.8 -1.6
	baz=165				
T55A	Pulaski	45.40 353	pP	pP	09 23 31.2 -0.3
	baz=171				
CLTN	Cedars of Leba	45.41 346	eP	P	09 22 58.4 +1.1
	comp=Z,26nm,1.3s				
CLTN			epP	pP	09 23 30.6 -0.8
EFI	East Falkland	45.44 166	eP	P	09 22 58.6 +1.4
	comp=Z,276nm,0.8s				
EFI	East Falkland	45.44 166	d/P	P	09 22 58.6 +1.4
EFI			pmax	pmax	
	comp=Z,248nm,0.9s				
V47A	Nunnelly	45.45 345	pP	pP	09 23 30.0 -1.9
	baz=162				
T54A	Tazewell	45.45 352	pP	pP	09 23 31.6 -0.3
	baz=170				
MET	Memphis--Engin	45.48 342	eP	P	09 22 58.2 +0.4
	comp=Z,103nm,0.8s				
MET			epP	pP	09 23 31.1 -0.9
T53A	Wise	45.52 351	pP	pP	09 23 31.5 -0.9
	baz=168				
JCT	Junction City	45.53 329	pP	pP	09 23 32.4 -0.2
	baz=143				
S61A	Accomac	45.57 358	eP	P	09 22 58.6 +0.1
	comp=Z,132nm,1.4s				
S61A			epP	pP	09 23 33.7 +1.0
S61A	Accomac	45.57 358	pP	pP	09 23 32.4 -0.3
	baz=178				
V46A	Holladay	45.59 344	pP	pP	09 23 30.8 -2.1
	baz=161				
WHTX	Lake Whitney,	45.62 332	eP	P	09 22 59.3 +0.3
	comp=Z,32nm,1.0s				
WHTX			epP	pP	09 23 33.7 +0.6
S58A	Poland Farm, P	45.62 356	eP	P	09 22 59.5 +0.6
	comp=Z,17nm,0.4s				
S58A			epP	pP	09 23 33.6 +0.5
S58A	Poland Farm, P	45.62 356	pP	pP	09 23 32.8 -0.3
	baz=175				
S60A	Water View	45.63 357	pP	pP	09 23 32.4 -0.8
	baz=177				
U49A	Red Boiling Sp	45.69 347	pP	pP	09 23 32.0 -1.7
	baz=164				
T52A	Hallie	45.72 350	eP	P	09 23 00.4 +0.7
	comp=Z,170nm,0.3s				

T52A			*e*pP	**pP**	**09 23 33.7**	**-0.2**
S59A	**Mechanicsville**	**45.72 357**	pP	pP	09 23 32.5	-1.4
	baz=176					
T51A	**Gray**	**45.75 349**	pP	pP	09 23 33.4	-0.8
	baz=167					
WVT	**Waverly**	**45.82 345**	*e*P	**P**	**09 23 00.1**	**-0.4**
	comp=Z,36nm,0.6s					
WVT			*e*pP	**pP**	**09 23 32.9**	**-1.8**
WVT	**Waverly**	**45.82 345**	*e*P	**P**	**09 23 00.1**	**-0.4**
WVT			*e**PP	**pP**	**09 23 32.9**	**-1.8**
WVT			pmax	pmax		
	comp=Z,36nm,0.6s					
S56A	**Natural Bridge**	**45.82 354**	pP	pP	09 23 34.3	-0.5
	baz=173					
S57A	**Dark Hollow, R**	**45.84 355**	*e*P	**P**	**09 23 00.5**	**-0.1**
	comp=Z,44nm,0.6s					
S57A			*e*pP	**pP**	**09 23 35.5**	**+0.7**
S57A	**Dark Hollow, R**	**45.84 355**	pP	pP	09 23 34.5	-0.4
	baz=174					
U48A	**Cassie Pea, Po**	**45.86 346**	pP	pP	09 23 33.5	-1.6
	baz=163					
X40A	**Basin Creek Fa**	**45.87 339**	pP	pP	09 23 33.6	-1.6
	baz=154					
UALR	**University of**	**45.95 339**	*e*P	**P**	**09 23 01.4**	**-0.1**
	comp=Z,45nm,1.0s					
UALR			*e*pP	**pP**	**09 23 35.2**	**-0.7**
R58B	**Mineral**	**45.96 356**	*e*P	**P**	**09 23 02.0**	**+0.5**
	comp=Z,13nm,1.0s					
R58B			*e*pP	**pP**	**09 23 36.3**	**+0.5**
R58B	**Mineral**	**45.96 356**	pP	pP	09 23 34.6	-1.2
	baz=175					
T50A	**Nancy**	**45.98 348**	pP	pP	09 23 33.8	-2.1
	baz=165					
U47A	**Clarksville**	**45.98 345**	pP	pP	09 23 34.0	-1.9
	baz=162					
S55A	**Lewisburg**	**46.02 353**	pP	pP	09 23 36.1	-0.2
	baz=171					
HBAR	**Harrisburg**	**46.10 341**	*e*P	**P**	**09 23 01.9**	**-0.7**
	comp=Z,153nm,1.2s					
HBAR			*e*pP	**pP**	**09 23 35.6**	**-1.4**
U46A	**Springville**	**46.13 344**	pP	pP	09 23 35.1	-2.0
	baz=161					
S53A	**Williamson**	**46.14 351**	pP	pP	09 23 36.6	-0.7
	baz=169					
S54A	**Dingess, Beckl**	**46.15 352**	pP	pP	09 23 37.0	-0.3
	baz=170					
R59A	**King George, V**	**46.15 357**	pP	pP	09 23 37.0	-0.2
	baz=176					
CBN	**Corbin Frederi**	**46.17 357**	*e*P	**P**	**09 23 03.3**	**+0.2**
	comp=Z,36nm,0.4s					
CBN			*e*pP	**pP**	**09 23 37.9**	**+0.5**
CBN	**Corbin Frederi**	**46.17 357**	pP	pP	09 23 36.8	-0.6
	baz=176					
R60A	**Leonardtown, M**	**46.19 357**	pP	pP	09 23 37.6	0.0
	baz=177					
MIAR	**Mount Ida**	**46.19 338**	*e*P	**P**	**09 23 03.0**	**-0.4**
	comp=Z,16nm,0.8s					
MIAR	**Mount Ida**	**46.19 338**	*e*P	**P**	**09 23 03.0**	**-0.4**
MIAR			pmax	pmax		
	comp=Z,16nm,0.8s					
MIAR	**Mount Ida**	**46.19 338**	pP	pP	09 23 33.9	-3.9
	baz=153					
T49A	**Edmonton**	**46.20 348**	*e*P	**P**	**09 23 04.7**	**+1.2**
	comp=Z,56nm,0.4s					
T49A			*e*pP	**pP**	**09 23 37.5**	**-0.3**
T49A	**Edmonton**	**46.20 348**	pP	pP	09 23 36.6	-1.2
	baz=164					
R61A	**Willards**	**46.21 359**	pP	pP	09 23 37.0	-0.7
	baz=178					
HPIG		**46.26 320**	*e*P	**P**	**09 23 02.9**	**-1.4**
	comp=Z,9.0nm,0.8s					
HPIG			*e*pP	**pP**	**09 23 38.7**	**+0.1**
W41B	**Gary Mavity, V**	**46.28 340**	*e*P	**P**	**09 23 03.9**	**-0.2**
	comp=Z,27nm,0.9s					
W41B			*e*pP	**pP**	**09 23 38.2**	**-0.2**
W41B	**Gary Mavity, V**	**46.28 340**	pP	pP	09 23 36.5	-1.9
	baz=155					
GNAR	**Gosnell**	**46.28 342**	*e*PcP	**PcP**	**09 24 37.3**	**+0.4**
S52A	**Salyersville**	**46.29 350**	pP	pP	09 23 36.9	-1.6
	baz=168					
R58A	**Rapidan**	**46.30 356**	pP	pP	09 23 38.1	-0.4
	baz=175					
R57A	**Stanardsville**	**46.34 355**	pP	pP	09 23 38.1	-0.7
	baz=174					
S51A	**Beattyville**	**46.34 350**	*e*P	**P**	**09 23 05.9**	**+1.4**
	comp=Z,79nm,0.5s					
S51A			*e*pP	**pP**	**09 23 39.0**	**+0.1**
S51A	**Beattyville**	**46.34 350**	pP	pP	09 23 37.7	-1.1
	baz=167					
T48A	**Bowling Green**	**46.40 347**	pP	pP	09 23 36.6	-2.7
	baz=163					
WHAR	**Wooly Hollow**	**46.40 340**	*e*P	**P**	**09 23 04.1**	**-0.8**
	comp=Z,34nm,0.9s					
WHAR			*e*pP	**pP**	**09 23 38.8**	**-0.6**
T47A	**Sharon Grove**	**46.45 346**	*e*P	**P**	**09 23 05.4**	**0.0**
	comp=Z,44nm,0.8s					
T47A			*e*pP	**pP**	**09 23 37.9**	**-1.8**
R54A	**Victor**	**46.48 353**	pP	pP	09 23 39.2	-0.7
	baz=171					
S50A	**Richmond**	**46.53 349**	pP	pP	09 23 39.0	-1.4
	baz=166					
T46A	**Princeton**	**46.70 345**	pP	pP	09 23 39.3	-2.4
	baz=161					
R53A	**Hurricane**	**46.76 352**	*e*P	**P**	**09 23 07.9**	**+0.2**
	comp=Z,33nm,0.4s					
R53A			*e*pP	**pP**	**09 23 42.5**	**+0.4**
R53A	**Hurricane**	**46.76 352**	pP	pP	09 23 41.0	-1.1
	baz=170					
Q61A	**Milford**	**46.76 359**	pP	pP	09 23 41.8	-0.3
	baz=179					
LTX	**Lajitas**	**46.77 324**	*e*P	**P**	**09 23 08.7**	**+0.6**
LTX			*e*pP	**pP**	**09 23 42.5**	**+0.1**
LTX			*e*PcP	**PcP**	**09 24 38.6**	**-0.4**
LTX	**Lajitas**	**46.77 324**	*e*P	**P**	**09 23 08.7**	**+0.6**
LTX			*e**PP	**pP**	**09 23 42.6**	**+0.1**
LTX			*e*		09 24 38.6	
TX31	**Lajitas Ar. Si**	**46.77 324**	*e*P	**P**	**09 23 08.5**	**+0.4**
	comp=Z,17nm,1.1s					
TX31			*e*PcP	**PcP**	**09 24 38.1**	**-0.9**
TXAR	**Lajitas Array**	**46.77 324**	P	**P**	**09 23 08.7**	**+0.5**
	comp=Z,7.4nm,0.6s,baz=149,slow=8.8,SNR=123					
TXAR			pP	**pP**	**09 23 42.5**	**0.0**
	comp=Z,5.2nm,0.8s,baz=160,slow=8.7,SNR=3.8					
TXAR			PcP	**PcP**	**09 24 38.6**	**-0.4**
	comp=Z,3.7nm,0.6s,baz=141,slow=8.1,SNR=4.4					
Q59A	**Harwood**	**46.79 357**	pP	pP	09 23 42.3	0.0
	baz=177					
S49A	**Springfield**	**46.80 348**	pP	pP	09 23 41.3	-1.2
	baz=165					
USHA	**Ushuaia**	**46.83 175**	P	**P**	**09 23 09.8**	**+1.8**
	comp=Z,90nm,0.6s,baz=353,slow=6.1,SNR=135					
USHA			PcP	**PcP**	**09 24 38.0**	**-0.5**
	comp=Z,19nm,0.7s,baz=8.8,slow=3.8,SNR=3.2					
S48A	**Wiedeman Farm,**	**46.85 347**	pP	pP	09 23 40.8	-2.1
	baz=164					
W39A	**Magazine**	**46.85 338**	*e*P	**P**	**09 23 08.8**	**+0.2**
	comp=Z,47nm,0.8s					
W39A			*e*pP	**pP**	**09 23 42.9**	**0.0**
W39A			*e*PcP	**PcP**	**09 24 39.4**	**+0.4**
PARMO	**Parma**	**46.85 343**	*e*P	**P**	**09 23 08.8**	**+0.3**
	comp=Z,126nm,1.0s					
PARMO			*e*pP	**pP**	**09 23 41.9**	**-1.0**
PARMO			*e*PcP	**PcP**	**09 24 38.8**	**-0.2**
R52A	**Catlettsburg**	**46.86 351**	pP	pP	09 23 42.0	-1.0
	baz=169					
T45A	**Paducah**	**46.87 344**	pP	pP	09 23 41.1	-2.0
	baz=160					
Q60A	**Greensboro**	**46.90 358**	pP	pP	09 23 42.6	-0.6
	baz=178					
X37A	**Clayton**	**46.93 336**	*e*P	**P**	**09 23 09.2**	**+0.1**
	comp=Z,78nm,1.4s					
X37A			*e*pP	**pP**	**09 23 43.8**	**+0.3**
S47A	**Hartford**	**46.97 346**	pP	pP	09 23 41.9	-1.9
	baz=163					
R51A	**Hillsboro**	**46.98 350**	pP	pP	09 23 43.0	-1.0
	baz=167					
SLBS	**Sierra La Lagu**	**47.05 313**	*e*P	**P**	**09 23 11.8**	**+1.4**
	comp=Z,72nm,1.6s					
SLBS			*e*pP	**pP**	**09 23 45.3**	**+0.6**
Q57A	**Strasburg**	**47.06 356**	pP	pP	09 23 44.2	-0.4
	baz=174					
R50A	**Paris**	**47.10 349**	pP	pP	09 23 43.8	-1.1
	baz=166					
Q56A	**Snyder Ridge,**	**47.13 355**	pP	pP	09 23 45.0	-0.1
	baz=173					
PBMO	**Poplar Bluff**	**47.16 342**	*e*P	**P**	**09 23 11.1**	**+0.2**
	comp=Z,82nm,1.4s					
PBMO			*e*pP	**pP**	**09 23 44.1**	**-1.3**
PBMO			*e*PcP	**PcP**	**09 24 39.9**	**-0.2**
ABTX	**Abilene, Hawle**	**47.18 330**	*e*P	**P**	**09 23 11.7**	**+0.5**
	comp=Z,47nm,0.7s					
ABTX	**Abilene, Hawle**	**47.18 330**	pP	pP	09 23 46.5	+0.9
	baz=145					
Q55A	**Buckhannon**	**47.18 354**	pP	pP	09 23 45.7	+0.2
	baz=172					
Q53A	**Leroy**	**47.22 352**	pP	pP	09 23 45.4	-0.3
	baz=170					
Q54A	**Coxs Mills**	**47.25 353**	*e*P	**P**	**09 23 11.6**	**0.0**
	comp=Z,57nm,0.5s					
Q54A			*e*pP	**pP**	**09 23 46.1**	**+0.1**
Q54A	**Coxs Mills**	**47.25 353**	pP	pP	09 23 45.8	-0.2
	baz=171					
S46A	**Don Dixon Farm**	**47.26 345**	pP	pP	09 23 44.4	-1.7
	baz=162					
R49A	**Shelbyville**	**47.27 348**	pP	pP	09 23 45.0	-1.2
	baz=165					
SDMD	**Soldier's Deli**	**47.34 357**	*e*P	**P**	**09 23 13.1**	**+0.8**
	comp=Z,6.0nm,0.9s					
SDMD			*e*pP	**pP**	**09 23 46.2**	**-0.5**
Q52A	**Bidwell**	**47.42 352**	pP	pP	09 23 46.7	-0.6
	baz=169					
WCI	**Wyandotte Cave**	**47.45 347**	*e*P	**P**	**09 23 12.1**	**-1.0**
	comp=Z,60nm,0.5s					
WCI			*e*pP	**pP**	**09 23 46.7**	**-0.9**
WCI	**Wyandotte Cave**	**47.45 347**	*e*P	**P**	**09 23 12.1**	**-1.0**
WCI			*e**PP	**pP**	**09 23 46.7**	**-0.9**
WCI			pmax	pmax		
	comp=Z,60nm,0.5s					
WCI	**Wyandotte Cave**	**47.45 347**	pP	pP	09 23 45.9	-1.6
	baz=164					
P57A	**Homestead Farm**	**47.48 356**	pP	pP	09 23 47.5	-0.3
	baz=175					
USIN	**University of**	**47.51 346**	*e*P	**P**	**09 23 12.1**	**-1.5**
	comp=Z,129nm,0.8s					
USIN			*e*pP	**pP**	**09 23 46.7**	**-1.4**
USIN			*e*PcP	**PcP**	**09 24 41.1**	**-0.2**
R48A	**Northridge Ran**	**47.52 348**	pP	pP	09 23 46.6	-1.6
	baz=164					
P59A	**Jarrettsville**	**47.52 358**	pP	pP	09 23 47.3	-0.8
	baz=177					
P61A	**Hammonton**	**47.55 359**	pP	pP	09 23 46.9	-1.4
	baz=179					
U40A	**Yellville**	**47.56 340**	pP	pP	09 23 47.2	-1.3
	baz=155					
R47A	**Wooly Knot Far**	**47.56 347**	pP	pP	09 23 46.7	-1.8
	baz=164					
P56A	**Dayton Farm, R**	**47.56 355**	pP	pP	09 23 48.6	+0.1
	baz=174					
Q50A	**Georgetown**	**47.58 350**	pP	pP	09 23 46.6	-2.0
	baz=167					
Q51A	**Peebles**	**47.65 350**	*e*P	**P**	**09 23 14.2**	**-0.4**
	comp=Z,31nm,0.6s					
Q51A			*e*pP	**pP**	**09 23 48.5**	**-0.6**
Q51A			*e*PcP	**PcP**	**09 24 42.0**	**+0.3**
P55A	**Reedsville**	**47.66 354**	pP	pP	09 23 48.8	-0.4
	baz=173					
S44A	**Carbondale**	**47.67 344**	pP	pP	09 23 47.6	-1.7
	baz=160					
SIUC	**Southern Illin**	**47.68 344**	*e*P	**P**	**09 23 13.4**	**-1.5**
	comp=Z,83nm,1.0s					
SIUC			*e*pP	**pP**	**09 23 48.0**	**-1.5**
SIUC			*e*PcP	**PcP**	**09 24 42.3**	**+0.4**
P60A	**Greenville**	**47.70 359**	pP	pP	09 23 48.8	-0.7
	baz=178					
R46A	**Gibon Southern**	**47.71 346**	pP	pP	09 23 47.9	-1.7
	baz=162					
MCWV	**Mont Chateau**	**47.81 354**	*e*P	**P**	**09 23 15.7**	**-0.1**
	comp=Z,26nm,0.6s					
MCWV			*e*pP	**pP**	**09 23 51.4**	**+1.0**
MCWV	**Mont Chateau**	**47.81 354**	pP	pP	09 23 50.0	-0.4
	baz=173					
PSUB	**Penn St. - Bra**	**47.81 359**	*e*P	**P**	**09 23 16.0**	**+0.2**
	comp=Z,10nm,0.7s					
PSUB			*e*pP	**pP**	**09 23 50.3**	**0.0**
P53A	**Whipple**	**47.82 353**	*e*P	**P**	**09 23 16.5**	**+0.6**
	comp=Z,76nm,0.6s					
P53A			*e*pP	**pP**	**09 23 50.8**	**+0.3**
P53A	**Whipple**	**47.82 353**	pP	pP	09 23 50.0	-0.5
	baz=170					
P54A	**Burton**	**47.82 354**	pP	pP	09 23 50.0	-0.5
	baz=172					
HHAR	**Hobbs**	**47.87 338**	*e*P	**P**	**09 23 16.0**	**-0.5**
	comp=Z,43nm,1.1s					
HHAR			*e*pP	**pP**	**09 23 49.3**	**-1.6**
Q49A	**Aurora**	**47.91 349**	pP	pP	09 23 49.6	-1.5
	baz=166					
MVL	**Millersville**	**47.91 358**	*e*P	**P**	**09 23 17.3**	**+0.7**
	comp=Z,34nm,1.0s					
MVL			*e*pP	**pP**	**09 23 51.7**	**+0.6**
O61A	**Allentown**	**47.96 360**	pP	pP	09 23 49.1	-2.4
	baz=180					
R45A	**Skylar, Fairfi**	**47.98 345**	pP	pP	09 23 49.7	-2.0
	baz=161					
Q48A	**North Vernon**	**48.00 348**	pP	pP	09 23 50.3	-1.6
	baz=165					
P51A	**Williamsport**	**48.05 351**	*e*P	**P**	**09 23 18.2**	**+0.5**
	comp=Z,27nm,0.8s					
P51A			*e*pP	**pP**	**09 23 51.2**	**-1.1**
P51A	**Williamsport**	**48.05 351**	pP	pP	09 23 50.9	-1.3
	baz=168					
P52A	**Corning**	**48.06 352**	pP	pP	09 23 51.5	-0.9
	baz=170					
PAGS	**Pennsylvania G**	**48.15 357**	*e*P	**P**	**09 23 18.9**	**+0.4**
	comp=Z,18nm,1.0s					
PAGS			*e*pP	**pP**	**09 23 52.9**	**-0.1**
Q47A	**Bedord North L**	**48.15 347**	pP	pP	09 23 52.0	-1.1
	baz=164					
O57A	**Amberson**	**48.18 357**	pP	pP	09 23 53.6	+0.4
	baz=176					
O60A	**Telford**	**48.20 359**	pP	pP	09 23 53.1	-0.2
	baz=178					
O59A	**Robesonia**	**48.21 358**	pP	pP	09 23 53.5	0.0
	baz=177					
TUL1	**Leonard**	**48.25 336**	*e*P	**P**	**09 23 19.3**	**0.0**
	comp=Z,47nm,0.6s					
TUL1			*e*pP	**pP**	**09 23 54.8**	**+0.9**
TUL1	**Leonard**	**48.25 336**	pP	pP	09 23 53.3	-0.6
	baz=151					
FVM	**French Village**	**48.27 343**	*e*P	**P**	**09 23 19.0**	**-0.5**
	comp=Z,72nm,0.8s					
FVM			*e*pP	**pP**	**09 23 52.9**	**-1.2**
FVM	**French Village**	**48.27 343**	*e*P	**P**	**09 23 19.0**	**-0.5**
FVM			*e**PP	**pP**	**09 23 52.9**	**-1.2**
FVM			pmax	pmax		
	comp=Z,72nm,0.8s					
P50A	**Jamestown**	**48.29 350**	pP	pP	09 23 53.1	-1.1
	baz=167					
O55A	**Ligonier**	**48.30 355**	pP	pP	09 23 54.1	-0.1
	baz=173					
O56A	**Blue Knob Stat**	**48.30 356**	*e*P	**P**	**09 23 19.9**	**+0.2**
	comp=Z,20nm,0.8s					
O56A	**Blue Knob Stat**	**48.30 356**	pP	pP	09 23 54.3	+0.1
	baz=174					
OLIL	**Olney**	**48.35 346**	*e*P	**P**	**09 23 18.9**	**-1.1**
	comp=Z,74nm,0.8s					
OLIL			*e*pP	**pP**	**09 23 53.0**	**-1.7**
O54A	**Avella**	**48.38 354**	pP	pP	09 23 54.2	-0.7
	baz=172					
P49A	**Miami Univ. Ec**	**48.38 349**	pP	pP	09 23 52.3	-2.5
	baz=166					
BLO	**Bloomington**	**48.40 347**	*e*P	**P**	**09 23 19.7**	**-0.7**
	comp=Z,152nm,0.6s					
BLO			*e*pP	**pP**	**09 23 54.3**	**-0.7**
BLO	**Bloomington**	**48.40 347**	*e*P	**P**	**09 23 19.7**	**-0.7**
BLO			*e**PP	**pP**	**09 23 54.3**	**-0.7**
BLO			pmax	pmax		
	comp=Z,152nm,0.6s					
P48A	**Milroy**	**48.45 348**	pP	pP	09 23 52.6	-2.8
	baz=165					
LUPA	**Lehigh Univers**	**48.48 359**	*e*P	**P**	**09 23 21.4**	**+0.4**
	comp=Z,2.1nm,0.9s					
LUPA			*e*pP	**pP**	**09 23 56.0**	**+0.4**
O52A	**Adamsville**	**48.49 352**	*e*P	**P**	**09 23 20.3**	**-0.8**
	comp=Z,104nm,0.5s					
O52A			*e*pP	**pP**	**09 23 55.3**	**-0.4**
O52A	**Adamsville**	**48.49 352**	pP	pP	09 23 54.8	-0.9
	baz=170					
WMOK	**Wichita Mounta**	**48.51 333**	*e*P	**P**	**09 23 21.6**	**+0.2**
	comp=Z,13nm,0.8s					
WMOK			*e*pP	**pP**	**09 23 56.8**	**+0.8**
WMOK			*e*PcP	**PcP**	**09 24 45.2**	**+0.2**
WMOK	**Wichita Mounta**	**48.51 333**	*e*P	**P**	**09 23 21.6**	**+0.2**
WMOK			*e**PP	**pP**	**09 23 56.8**	**+0.8**
WMOK			*e*		09 24 45.2	
WMOK			pmax	pmax		
	comp=Z,13nm,0.8s					
WMOK	**Wichita Mounta**	**48.51 333**	pP	pP	09 23 55.9	-0.1
	baz=147					
Q45A	**Warren Harvey,**	**48.52 346**	pP	pP	09 23 53.7	-2.2
	baz=162					
O53A	**New Philadelph**	**48.55 353**	pP	pP	09 23 55.1	-1.1
	baz=171					
BRNJ	**Basking Ridge**	**48.55 360**	*e*P	**P**	**09 23 21.0**	**-0.5**
	comp=Z,22nm,0.6s					
BRNJ			*e*pP	**pP**	**09 23 55.1**	**-1.1**
CCM	**Cathedral Cave**	**48.58 342**	*e*P	**P**	**09 23 21.8**	**0.0**
	comp=Z,25nm,0.8s					
CCM			*e*PcP	**PcP**	**09 24 45.2**	**+0.1**
CCM	**Cathedral Cave**	**48.58 342**	*e*P	**P**	**09 23 21.8**	**0.0**
CCM			*e*		09 24 45.2	
CCM			pmax	pmax		
	comp=Z,25nm,0.8s					
CCM	**Cathedral Cave**	**48.58 342**	pP	pP	09 23 54.7	-1.8
	baz=157					
SSPA	**Standing Stone**	**48.62 356**	*e*pP	pP	09 23 57.0	+0.4
SSPA	**Standing Stone**	**48.62 356**	pP	pP	09 23 56.4	-0.3
	baz=175					
O51A	**Pataskala**	**48.63 351**	pP	pP	09 23 55.5	-1.3
	baz=169					
P47A	**Martinsville**	**48.65 348**	pP	pP	09 23 55.1	-1.8
	baz=164					
CPNY	**Central Park**	**48.66 0**	*e*P	**P**	**09 23 22.9**	**+0.6**
	comp=Z,19nm,0.6s					
CPNY			*e*pP	**pP**	**09 23 56.4**	**-0.5**
N57A	**Milroy**	**48.72 357**	pP	pP	09 23 56.4	-1.0
	baz=176					
ACSO	**Alum Creek Sta**	**48.77 351**	*e*P	**P**	**09 23 23.2**	**0.0**
	comp=Z,63nm,1.1s					
ACSO			*e*pP	**pP**	**09 23 57.6**	**-0.2**
ACSO	**Alum Creek Sta**	**48.77 351**	pP	pP	09 23 56.6	-1.3
	baz=168					
O50A	**Cable**	**48.79 350**	pP	pP	09 23 56.6	-1.4
	baz=168					
N59A	**State Game Lan**	**48.81 358**	*e*P	**P**	**09 23 24.1**	**+0.7**
	comp=Z,20nm,0.7s					
N59A			*e*pP	**pP**	**09 23 58.3**	**+0.2**
N59A	**State Game Lan**	**48.81 358**	pP	pP	09 23 57.8	-0.4
	baz=178					
N55A	**Marion Center**	**48.84 355**	*e*P	**P**	**09 23 25.1**	**+1.3**
	comp=Z,58nm,0.6s					
N55A			*e*pP	**pP**	**09 23 59.6**	**+1.1**
N55A	**Marion Center**	**48.84 355**	pP	pP	09 23 58.0	-0.5
	baz=174					
PAL	**Palisades**	**48.88 0**	*e*P	**P**	**09 23 22.9**	**-1.1**
	comp=Z,22nm,0.6s					
PAL			*e*pP	**pP**	**09 23 57.6**	**-0.9**
PAL	**Palisades**	**48.88 0**	*e*P	**P**	**09 23 22.9**	**-1.1**
PAL			*e**PP	**pP**	**09 23 57.7**	**-0.9**
PAL			pmax	pmax		
	comp=Z,22nm,0.6s					
N56A	**West Decatur**	**48.93 356**	pP	pP	09 23 58.9	-0.2
	baz=175					
O49A	**Covington**	**48.95 350**	*e*P	**P**	**09 23 23.9**	**-0.7**
	comp=Z,93nm,0.9s					
O49A			*e*pP	**pP**	**09 23 58.2**	**-1.1**
O49A	**Covington**	**48.95 350**	pP	pP	09 23 57.7	-1.5
	baz=167					
ODNJ	**Ogdensburg**	**48.95 360**	*e*pP	pP	09 23 58.6	-0.7
P46A	**Rosedale**	**48.98 347**	pP	pP	09 23 57.3	-2.2
	baz=163					
P45A	**Graceland, Par**	**49.02 346**	*e*P	**P**	**09 23 24.5**	**-0.6**
	comp=Z,79nm,0.7s					
P45A			*e*pP	**pP**	**09 23 59.2**	**-0.5**
P45A	**Graceland, Par**	**49.02 346**	pP	pP	09 23 57.6	-2.1
	baz=162					
N53A	**Lisbon**	**49.05 353**	*e*P	**P**	**09 23 25.7**	**+0.4**
	comp=Z,94nm,0.8s					
N53A			*e*pP	**pP**	**09 24 00.3**	**+0.3**
N53A	**Lisbon**	**49.05 353**	pP	pP	09 23 59.1	-0.9
	baz=171					
N54A	**Moraine State**	**49.11 354**	*e*P	**P**	**09 23 26.8**	**+0.9**
	comp=Z,104nm,0.6s					
N54A			*e*pP	**pP**	**09 24 01.0**	**+0.4**
N52A	**McGinn's Farm,**	**49.16 353**	pP	pP	09 23 59.4	-1.5
	baz=170					
O48A	**Farmland**	**49.17 349**	pP	pP	09 23 59.3	-1.7
	baz=166					
M61A	**Granite Spring**	**49.18 1**	pP	pP	09 23 58.2	-2.8
	baz=181					
YLE	**Yale**	**49.20 1**	*e*P	**P**	**09 23 26.6**	**+0.2**
	comp=Z,56nm,1.0s					
YLE			*e*pP	**pP**	**09 24 00.8**	**-0.3**
GDL2	**Guadalupe Moun**	**49.31 326**	*e*P	**P**	**09 23 28.0**	**+0.3**
N50A	**Nevada**	**49.32 351**	pP	pP	09 24 00.8	-1.3
	baz=168					
O47A	**Sheridan**	**49.35 348**	pP	pP	09 24 00.9	-1.4
	baz=164					
N51A	**Ashland**	**49.35 352**	*e*P	**P**	**09 23 26.5**	**-1.1**
	comp=Z,102nm,0.5s					
N51A	**Ashland**	**49.35 352**	pP	pP	09 24 01.1	-1.2
	baz=169					
KSPA	**Keystone Colle**	**49.45 359**	*e*P	**P**	**09 23 28.6**	**+0.3**
	comp=Z,11nm,0.6s					
KSPA			*e*pP	**pP**	**09 24 02.6**	**-0.4**
M56A	**Emporium**	**49.48 356**	pP	pP	09 24 02.6	-0.8
	baz=175					
M55A	**Ridgway**	**49.51 356**	pP	pP	09 24 02.9	-0.6
	baz=174					
MNTX	**Cornudas Mount**	**49.51 325**	*e*P	**P**	**09 23 28.9**	**-0.2**
	comp=Z,22nm,1.3s					
MNTX			*e*pP	**pP**	**09 24 03.1**	**-0.7**
MNTX	**Cornudas Mount**	**49.51 325**	pP	pP	09 24 04.2	+0.4
	baz=138					
M65A	**Busby, Falmout**	**49.54 4**	pP	pP	09 24 02.8	-0.9
	baz=185					
P43A	**Skaggs, Pawnee**	**49.57 345**	pP	pP	09 24 02.8	-1.2
	baz=160					
KSCT	**Kent School, K**	**49.60 1**	*e*P	**P**	**09 23 28.9**	**-0.5**
	comp=Z,16nm,0.7s					
KSCT			*e*pP	**pP**	**09 24 03.7**	**-0.5**
M54A	**Oil Creek Stat**	**49.62 355**	*e*P	**P**	**09 23 30.2**	**+0.5**
	comp=Z,69nm,0.6s					
M54A			*e*pP	**pP**	**09 24 04.8**	**+0.4**
N49A	**Columbus Grove**	**49.64 350**	*e*P	**P**	**09 23 29.9**	**+0.1**
	comp=Z,174nm,0.6s					
N49A			*e*pP	**pP**	**09 24 03.8**	**-0.7**
M53A	**WI Miller and**	**49.66 354**	pP	pP	09 24 04.0	-0.7
	baz=172					
CPRX	**Cap Rock**	**49.67 327**	*e*P	**P**	**09 23 30.9**	**+0.6**
CPRX			*e*pP	**pP**	**09 24 05.8**	**+0.7**
SFIN	**Lafayette**	**49.68 347**	*e*P	**P**	**09 23 29.0**	**-1.1**
	comp=Z,111nm,0.8s					
SFIN			*e*pP	**pP**	**09 24 03.2**	**-1.7**
SFIN	**Lafayette**	**49.68 347**	pP	pP	09 24 02.9	-2.0
	baz=163					
O45A	**Potomac**	**49.70 347**	pP	pP	09 24 03.3	-1.8
	baz=162					
N48A	**Decatur**	**49.73 349**	pP	pP	09 24 03.6	-1.6
	baz=166					
M51A	**Elyria**	**49.74 352**	pP	pP	09 24 03.8	-1.5
	baz=170					
O44A	**Mansfield**

BINY	Binghamton	50.09 358	eP	P	09 23 34.4	+1.2
	comp=Z,47nm,0.8s					
BINY			epP	pP	09 24 08.6	+0.5
BINY	Binghamton	50.09 358	pP	pP	09 24 07.8	-0.3
	baz=178					
N46A	Monticello	50.10 348	pP	pP	09 24 06.3	-1.8
	baz=164					
L53A	Girard	50.12 354	pP	pP	09 24 07.4	-0.9
	baz=172					
M49A	Liberty Center	50.14 351	pP	pP	09 24 07.0	-1.4
	baz=168					
QUA2	Belchertown	50.18 2	epP	pP	09 24 08.0	-0.6
L55A	Hinsdale	50.20 356	pP	pP	09 24 08.4	-0.5
	baz=175					
PLIO	Pelee Island,	50.21 352	pP	pP	09 24 07.2	-1.7
	baz=169					
N45A	Kentland	50.22 347	pP	pP	09 24 07.0	-2.1
	baz=163					
ERPA	Erie	50.26 354	eP	P	09 23 35.9	+1.5
	comp=Z,115nm,0.6s					
ERPA			epP	pP	09 24 09.2	-0.1
ERPA	Erie	50.26 354	pP	pP	09 24 08.4	-0.9
	baz=173					
M48A	Edgerton	50.28 350	pP	pP	09 24 07.3	-2.2
	baz=166					
BCX	Boston College	50.28 3	epP	pP	09 24 08.8	-0.6
N44A	Piper City	50.31 346	pP	pP	09 24 07.7	-2.1
	baz=162					
L54A	Sinclairville	50.31 355	pP	pP	09 24 09.4	-0.3
	baz=174					
M47A	Cromwell	50.32 349	pP	pP	09 24 08.1	-1.7
	baz=165					
WES	Weston	50.33 3	epP	pP	09 24 09.1	-0.6
HDIL	Hopedale	50.37 345	eP	P	09 23 34.0	-1.3
	comp=Z,109nm,0.8s					
HDIL			epP	pP	09 24 08.9	-1.3
HRV	Adam Dziewonsk	50.44 3	eP	P	09 23 35.6	-0.1
	comp=Z,26nm,0.9s					
HRV			epP	pP	09 24 10.2	-0.4
HRV	Adam Dziewonsk	50.44 3	eP	P	09 23 35.6	-0.1
HRV			e*PP	pP	09 24 10.2	-0.4
HRV			pmax	pmax		
	comp=Z,25nm,0.9s					
M46A	Old House Fiel	50.51 348	eP	P	09 23 36.6	+0.2
	comp=Z,107nm,1.1s					
M46A			epP	pP	09 24 09.3	-2.0
L50A	Kingsville	50.52 352	pP	pP	09 24 09.7	-1.6
	baz=169					
TRY	Troy	50.60 1	eP	P	09 23 37.5	+0.5
	comp=Z,23nm,0.9s					
TRY			epP	pP	09 24 11.7	-0.2
K54A	Basiliko Farm,	50.64 356	pP	pP	09 24 11.5	-0.8
	baz=174					
L48A	N Adams	50.67 350	pP	pP	09 24 11.2	-1.3
	baz=167					
M45A	Boilermakers S	50.68 347	pP	pP	09 24 10.4	-2.1
	baz=163					
N43A	Stutzman Famil	50.70 345	pP	pP	09 24 11.1	-1.6
	baz=161					
MMNY	Mt. Morris Dam	50.71 357	eP	P	09 23 37.9	+0.1
	comp=Z,49nm,0.6s					
MMNY			epP	pP	09 24 12.8	+0.1
K55A	Perry	50.71 356	pP	pP	09 24 12.2	-0.5
	baz=175					
L49A	Milan	50.73 351	pP	pP	09 24 11.5	-1.3
	baz=168					
L47A	Sherwood	50.84 349	pP	pP	09 24 11.9	-1.9
	baz=166					
M44A	Midewin, Midew	50.86 347	eP	P	09 23 37.3	-1.6
	comp=Z,62nm,1.3s					
M44A			epP	pP	09 24 11.9	-1.9
AAM	Ann Arbor	50.90 351	pP	pP	09 24 12.4	-1.8
	baz=168					
SRIG	Santa Rosalia	50.91 315	eP	P	09 23 39.3	-0.3
	comp=Z,20nm,1.0s					
N41A	Harden Midland	50.93 344	eP	P	09 23 38.3	-1.2
	comp=Z,81nm,0.8s					
N41A			epP	pP	09 24 13.2	-1.3
N41A	Harden Midland	50.93 344	pP	pP	09 24 12.7	-1.7
	baz=159					
K52A	Tillsonburg	50.99 354	pP	pP	09 24 13.7	-1.1
	baz=172					
K51A	Iona Station	51.02 353	pP	pP	09 24 13.5	-1.6
	baz=171					
L46A	Eue Claire	51.08 348	eP	P	09 23 40.7	+0.1
	comp=Z,57nm,0.9s					
L46A			epP	pP	09 24 14.3	-1.3
L46A	Eue Claire	51.08 348	pP	pP	09 24 13.6	-2.0
	baz=165					
HSIG		51.11 318	eP	P	09 23 40.6	-0.5
	comp=Z,11nm,0.8s					
HSIG			epP	pP	09 24 15.6	-0.4
M43A	Waltham Townsh	51.12 346	pP	pP	09 24 13.7	-2.2
	baz=161					
MEDO	Medina	51.17 356	epP	pP	09 24 17.8	+1.5
MEDO	Medina	51.17 356	pP	pP	09 24 15.4	-0.8
	baz=175					
K50A	Casco	51.21 352	pP	pP	09 24 15.3	-1.2
	baz=169					
TYNO	Tyneside	51.22 355	pP	pP	09 24 15.4	-1.1
	baz=173					
J55A	Hilton	51.23 357	eP	P	09 23 42.0	+0.3
	comp=Z,49nm,0.9s					
J55A			epP	pP	09 24 16.7	0.0
J55A	Hilton	51.23 357	pP	pP	09 24 15.9	-0.8
	baz=176					
ACCN	Adirondack Com	51.26 1	eP	P	09 23 41.1	-0.7
	comp=Z,17nm,1.2s					
ACCN			epP	pP	09 24 16.4	-0.4
STCO	Saint Catharin	51.27 355	pP	pP	09 24 16.2	-0.8
	baz=174					
J54A	Appleton	51.30 356	eP	P	09 23 42.7	+0.5
	comp=Z,20nm,0.8s					
J54A			epP	pP	09 24 17.8	+0.7
J54A	Appleton	51.30 356	pP	pP	09 24 16.4	-0.8
	baz=174					
N40A	Mertquake, Sal	51.30 343	pP	pP	09 24 15.2	-2.0
	baz=158					
K49A	Clarkson	51.34 351	pP	pP	09 24 15.0	-2.6
	baz=168					
KSU1	Kansas State U	51.35 338	pP	pP	09 24 16.7	-1.0
	baz=151					
FFD	Franklin Falls	51.39 2	eP	P	09 23 43.8	+0.9
	comp=Z,19nm,0.6s					
FFD			epP	pP	09 24 17.9	0.0
J52A	Paris	51.42 354	pP	pP	09 24 16.7	-1.4
	baz=172					
K48A	Perry	51.46 351	pP	pP	09 24 16.7	-1.7
	baz=168					
M41A	Milan	51.46 344	pP	pP	09 24 16.5	-2.0
	baz=159					
K47A	Vermontville	51.48 350	pP	pP	09 24 16.4	-2.2
	baz=166					
121A	Cookes Peak, D	51.51 323	pP	pP	09 24 19.5	+0.2
	baz=136					
L44A	Lake County Fo	51.58 347	pP	pP	09 24 17.2	-2.1
	baz=163					
HNH	Hanover	51.60 2	eP	P	09 23 45.5	+1.1
	comp=Z,6.9nm,0.8s					
HNH			epP	pP	09 24 18.8	-0.7
319A	Douglas	51.61 321	eP	P	09 23 45.5	+0.6
	comp=Z,60nm,1.0s					
K46A	Dorr	51.63 349	pP	pP	09 24 17.8	-1.9
	baz=165					
TORO	Toronto--Lesli	51.69 355	pP	pP	09 24 19.5	-0.6
	baz=174					
ACTO	Acton	51.74 355	pP	pP	09 24 19.7	-0.9
	baz=173					
L43A	Garden Prairie	51.77 346	pP	pP	09 24 18.9	-1.9
	baz=162					
L42A	Oliver, Polo	51.83 345	eP	P	09 23 46.8	+0.6
	comp=Z,33nm,0.5s					
L42A			epP	pP	09 24 19.7	-1.5
L42A	Oliver, Polo	51.83 345	pP	pP	09 24 18.9	-2.3
	baz=160					
NCB	Newcomb	51.84 0	eP	P	09 23 45.6	-0.6
	comp=Z,9.4nm,0.8s					
NCB			epP	pP	09 24 21.5	+0.2
J49A	Marlette	51.86 352	pP	pP	09 24 19.2	-2.3
	baz=169					
PECO	Prince Edward	51.86 358	eP	P	09 23 47.3	+0.9
	comp=Z,36nm,1.0s					
PECO			epP	pP	09 24 21.2	-0.2
PECO	Prince Edward	51.86 358	pP	pP	09 24 20.4	-1.0
	baz=177					
J48A	Bridge Port	51.89 351	eP	P	09 23 45.9	-0.7
	comp=Z,66nm,0.9s					
J48A			epP	pP	09 24 20.1	-1.6
J48A	Bridge Port	51.89 351	pP	pP	09 24 19.7	-2.0
	baz=168					
DRWO	Darlington Wes	51.90 356	pP	pP	09 24 20.1	-1.6
	baz=174					
DRCO	St. Marys Ceme	51.90 356	pP	pP	09 24 20.6	-1.1
	baz=174					
I53A	Kortright Cn E	51.92 355	pP	pP	09 24 20.7	-1.1
	baz=175					
WLVO	Wesleyville	51.93 356	pP	pP	09 24 21.2	-0.7
	baz=175					
J47A	Sunmer	52.00 350	eP	P	09 23 46.7	-0.7
	comp=Z,142nm,0.8s					
J47A			epP	pP	09 24 21.8	-0.7
J47A	Sunmer	52.00 350	pP	pP	09 24 20.9	-1.6
	baz=167					
PKRO	Pickering	52.01 356	pP	pP	09 24 21.2	-1.4
	baz=174					
BNM	Barren Site	52.02 326	eP	P	09 23 48.4	+0.3
I51A	Listowel	52.03 354	pP	pP	09 24 21.4	-1.4
	baz=172					
LPM	Los Pinos Moun	52.15 326	eP	P	09 23 49.5	+0.6
LBNH	Lisbon	52.15 2	eP	P	09 23 48.6	+0.1
	comp=Z,26nm,0.6s					
LBNH			epP	pP	09 24 23.2	-0.4
LBNH	Lisbon	52.15 2	eP	P	09 23 48.6	+0.1
LBNH			e*PP	pP	09 24 23.2	-0.4
LBNH			pmax	pmax		
	comp=Z,27nm,0.6s					
LBNH	Lisbon	52.15 2	pP	pP	09 24 22.4	-1.2
	baz=183					
I55A	Frankford	52.17 357	pP	pP	09 24 22.6	-1.1
	baz=176					
K43A	Burlington	52.17 347	eP	P	09 23 48.5	-0.2
	comp=Z,34nm,0.6s					
K43A			epP	pP	09 24 22.6	-1.3
K43A	Burlington	52.17 347	pP	pP	09 24 21.5	-2.3
	baz=162					
I52A	Shelburne	52.21 355	pP	pP	09 24 22.6	-1.5
	baz=173					
VT1	Waterbury	52.22 1	eP	P	09 23 48.7	-0.3
	comp=Z,15nm,0.9s					
VT1			epP	pP	09 24 24.2	0.0
LENM	Lemitar	52.23 325	eP	P	09 23 50.3	+0.8
J46A	Howard City	52.25 350	pP	pP	09 24 22.4	-2.0
	baz=166					
L40A	Anamosa	52.29 344	eP	P	09 23 48.4	-1.2
	comp=Z,44nm,0.8s					
L40A			epP	pP	09 24 23.3	-1.4
BASO	Ashfield	52.31 353	pP	pP	09 24 23.2	-1.6
	baz=171					
CBKS	Cedar Bluff	52.35 335	eP	P	09 23 50.5	+0.3
	comp=Z,40nm,0.6s					
CBKS			epP	pP	09 24 26.0	+0.8
CBKS	Cedar Bluff	52.35 335	eP	P	09 23 50.5	+0.3
CBKS			e*PP	pP	09 24 26.0	+0.8
CBKS			pmax	pmax		
	comp=Z,39nm,0.6s					
CBKS	Cedar Bluff	52.35 335	P	P	09 23 50.5	+0.3
	baz=148					
BWLO	Walkerton	52.36 354	pP	pP	09 24 23.5	-1.6
	baz=171					
I49A	Point Hope	52.38 352	pP	pP	09 24 23.7	-1.7
	baz=169					
DELO	Deloro Mine	52.47 357	eP	P	09 23 51.8	+0.9
	comp=Z,28nm,0.5s					
DELO			epP	pP	09 24 25.3	-0.7
J45A	Montague	52.47 349	pP	pP	09 24 23.9	-2.1
	baz=165					
K42A	Prairie Point,	52.48 346	pP	pP	09 24 24.5	-1.6
	baz=161					
H55A	Tweed	52.48 357	P	P	09 23 51.6	+0.7
	baz=176					
LONY	Lake Ozonia	52.49 360	eP	P	09 23 51.2	+0.2
	comp=Z,20nm,0.6s					
LONY			epP	pP	09 24 25.6	-0.6
H56A	Elgin	52.49 358	pP	pP	09 24 25.2	-0.9
	baz=178					
LAZ	Ladron	52.50 326	eP	P	09 23 50.4	-1.1
BRCO	Bruce Peninsul	52.51 354	pP	pP	09 24 25.2	-1.1
	baz=171					
ANMO	Albuquerque	52.52 327	P	P	09 23 52.2	+0.5
	comp=Z,17nm,0.9s,baz=133,slow=7.6,SNR=64					
ANMO			pP	pP	09 24 25.5	-1.3
	comp=Z,38nm,1.0s,baz=138,slow=11,SNR=8.3					
ANMO	Albuquerque	52.52 327	eP	P	09 23 51.9	+0.2
	comp=Z,24nm,1.0s					
ANMO			epP	pP	09 24 25.5	-1.3
ANMO	Albuquerque	52.52 327	eP	P	09 23 51.9	+0.2
ANMO			e*PP	pP	09 24 25.5	-1.3
ANMO			pmax	pmax		
	comp=Z,24nm,1.0s					
ANMO	Albuquerque	52.52 327	P	P	09 23 52.2	+0.5
	baz=138					
TASM	ASL Pad, Albuq	52.52 327	P	P	09 23 52.2	+0.5
	baz=138					
TASM	ASL Pad, Albuq	52.52 327	P	P	09 23 52.1	+0.4
	baz=138					
WVL	Waterville	52.60 4	eP	P	09 23 51.2	-0.5
	comp=Z,13nm,0.8s					
WVL			epP	pP	09 24 26.0	-0.9
FRNY	Flat Rock	52.71 1	eP	P	09 23 53.0	+0.4
	comp=Z,15nm,0.8s					
FRNY			epP	pP	09 24 27.7	0.0
I47A	Gladwin	52.71 351	pP	pP	09 24 26.3	-1.5
	baz=167					
SCIA	State Center	52.72 342	pP	pP	09 24 26.3	-1.6
	baz=156					
I48A	Sherman Twp	52.75 351	pP	pP	09 24 26.2	-1.8
	baz=168					
H52A	Wyevale	52.75 355	pP	pP	09 24 26.7	-1.4
	baz=173					
I46A	Reed City	52.79 350	pP	pP	09 24 26.5	-2.0
	baz=166					
SADO	Sadowa	52.82 356	P	P	09 23 53.6	+0.2
	comp=Z,11nm,0.5s,baz=213,slow=3.1,SNR=16					
SADO			pP	pP	09 24 27.3	-1.3
	comp=Z,33nm,0.7s,baz=213,slow=2.7,SNR=5.7					
SADO	Sadowa	52.82 356	eP	P	09 23 53.2	-0.2
	comp=Z,38nm,0.6s					
SADO			epP	pP	09 24 28.3	-0.3
JFWS	Jewell Farm	52.83 345	eP	P	09 23 52.2	-1.3
	comp=Z,53nm,0.9s					
JFWS			epP	pP	09 24 27.2	-1.5
JFWS	Jewell Farm	52.83 345	eP	P	09 23 52.2	-1.3
JFWS			e*PP	pP	09 24 27.2	-1.5
JFWS			pmax	pmax		
	comp=Z,53nm,0.9s					
JFWS	Jewell Farm	52.83 345	pP	pP	09 24 26.6	-2.1
	baz=160					
BMRO	Melville Lake	52.84 354	pP	pP	09 24 26.0	-2.8
	baz=171					
J43A	Natural Harves	52.84 347	pP	pP	09 24 27.0	-1.8
	baz=162					
EMMW	East Machias	52.94 6	epP	pP	09 24 28.8	-0.6
J42A	Columbus	52.94 346	pP	pP	09 24 28.2	-1.3
	baz=162					
PLVO	Plevna	52.97 358	eP	P	09 23 55.1	+0.6
	comp=Z,15nm,0.7s					
PLVO			epP	pP	09 24 29.3	-0.4
PLVO	Plevna	52.97 358	pP	pP	09 24 28.7	-1.0
	baz=176					
BANO	Bancroft	52.99 357	pP	pP	09 24 29.0	-0.9
	baz=176					
I45A	Fountain	53.02 349	pP	pP	09 24 27.7	-2.4
	baz=165					
T25A	Trinidad	53.13 330	eP	P	09 23 57.0	+0.8
	comp=Z,40nm,0.9s					
T25A			epP	pP	09 24 32.3	+1.0
T25A	Trinidad	53.13 330	P	P	09 23 56.9	+0.8
	baz=142					
G53A	Haliburton	53.13 356	pP	pP	09 24 30.3	-0.6
	baz=175					
G55A	Calabogie	53.17 358	pP	pP	09 24 30.5	-0.7
	baz=177					
TUC	Tucson	53.18 321	eP	P	09 23 56.3	-0.1
	comp=Z,20nm,0.9s					
TUC	Tucson	53.18 321	eP	P	09 23 56.3	-0.1
TUC			pmax	pmax		
	comp=Z,20nm,0.9s					
TUC	Tucson	53.18 321	P	P	09 23 57.1	+0.7
	baz=133					
J41A	Loganville	53.20 346	pP	pP	09 24 29.4	-2.0
	baz=160					
H48A	Harrisville	53.20 352	eP	P	09 23 58.2	+2.0
	comp=Z,51nm,1.0s					
H48A	Harrisville	53.20 352	pP	pP	09 24 29.4	-2.0
	baz=169					
MOQ	Mont Orford	53.21 2	eP	P	09 23 56.4	0.0
H47A	Mio	53.23 351	pP	pP	09 24 29.9	-1.8
	baz=168					
PKME	Peaks-Kenny Pk	53.32 4	eP	P	09 23 57.2	+0.1
	comp=Z,27nm,0.7s					
PKME			epP	pP	09 24 32.0	-0.2
PKME	Peaks-Kenny Pk	53.32 4	P	P	09 23 57.9	+0.8
	baz=186					
H46A	Fife Lake	53.33 350	pP	pP	09 24 29.7	-2.8
	baz=166					
ORIO	Orleans, Innes	53.33 359	pP	pP	09 24 31.2	-1.2
	baz=178					
GGN	Saint George	53.41 7	eP	P	09 23 58.0	+0.3
	comp=Z,16nm,0.5s					
GGN			epP	pP	09 24 33.1	+0.2
J40A	Soldiers Grove	53.41 345	pP	pP	09 24 31.0	-2.0
	baz=160					
I42A	Draeger Farm,	53.43 347	eP	P	09 23 58.0	0.0
	comp=Z,35nm,0.8s					
I42A			epP	pP	09 24 32.6	-0.6
I42A	Draeger Farm,	53.43 347	pP	pP	09 24 31.5	-1.7
	baz=162					
KLBO	Killbear Provi	53.49 355	pP	pP	09 24 32.1	-1.5
	baz=173					
TOBO	Tobermory, Bru	53.49 354	pP	pP	09 24 31.5	-2.1
	baz=171					
BUKO	Buck Lake	53.51 356	pP	pP	09 24 31.2	-2.5
	baz=174					
GLMI	Grayling	53.51 351	pP	pP	09 24 30.5	-3.3
	baz=167					
H45A	Beulah	53.56 350	pP	pP	09 24 30.7	-3.4
	baz=166					
F55A	Otter Lake	53.73 358	pP	pP	09 24 33.3	-2.0
	baz=177					
G47A	Hillman	53.74 352	pP	pP	09 24 32.7	-2.7
	baz=168					
H43A	Windswept, Lux	53.74 348	eP	P	09 23 59.8	-0.4
	comp=Z,38nm,1.0s					
H43A			epP	pP	09 24 34.3	-1.2
H43A	Windswept, Lux	53.74 348	pP	pP	09 24 32.8	-2.6
	baz=163					
KSCO	Kaye Shedlock'	53.77 333	eP	P	09 24 00.9	+0.2
	comp=Z,86nm,1.2s					
KSCO			epP	pP	09 24 35.9	-0.1
KSCO	Kaye Shedlock'	53.77 333	P	P	09 24 00.9	+0.2
	baz=144					
I41A	Arkdale	53.81 346	eP	P	09 23 59.7	-1.0
	comp=Z,25nm,1.0s					
I41A			epP	pP	09 24 34.3	-1.7
I41A	Arkdale	53.81 346	pP	pP	09 24 33.2	-2.8
	baz=161					
I40A	Norwalk	53.84 345	pP	pP	09 24 34.2	-2.0
	baz=160					
F52A	Sundridge	53.85 356	pP	pP	09 24 34.4	-1.8
	baz=174					
G45A	Suttons Bay	53.89 350	eP	P	09 24 00.1	-1.2
	comp=Z,59nm,0.4s					
G45A			epP	pP	09 24 34.8	-1.7
ALGO	Algonquin Park	53.93 357	pP	pP	09 24 34.8	-1.9
	baz=175					
BGNE	Belgrade	53.94 338	eP	P	09 24 01.2	-0.5
	comp=Z,82nm,0.9s					
BGNE			epP	pP	09 24 36.8	-0.2
BGNE	Belgrade	53.94 338	P	P	09 24 00.7	-0.9
	baz=150					
H42A	Shiocton	53.94 347	eP	P	09 24 00.7	-0.9
	comp=Z,43nm,0.8s					
H42A			epP	pP	09 24 35.3	-1.6
G46A	Petoskey	54.03 351	pP	pP	09 24 35.8	-1.7
	baz=167					
I39A	Houston	54.04 345	eP	P	09 24 01.1	-1.2
	comp=Z,44nm,0.6s					
I39A			epP	pP	09 24 36.4	-1.2
I39A	Houston	54.04 345	pP	pP	09 24 35.7	-2.0
	baz=159					
F49A	Sandfield	54.08 353	pP	pP	09 24 35.5	-2.4
	baz=170					
SDCO	Great Sand Dun	54.15 330	P	P	09 24 04.1	+0.5
	baz=141					
X18A	Snowflake	54.20 324	eP	P	09 24 04.8	+0.9
	comp=Z,31nm,0.8s					
X18A			epP	pP	09 24 41.6	+2.4
F48A	Evansville	54.22 353	pP	pP	09 24 36.6	-2.3
	baz=170					
214A	Organ Pipe Nat	54.23 319	P	P	09 24 04.9	+0.9
	baz=131					
H41A	Junction City	54.29 347	eP	P	09 24 03.1	-1.0
	comp=Z,37nm,1.0s					
H41A			epP	pP	09 24 38.4	-1.1
H41A	Junction City	54.29 347	pP	pP	09 24 37.8	-1.7
	baz=161					
E52A	Mattawa	54.29 356	pP	pP	09 24 38.1	-1.3
	baz=175					
E53A	Dumoine, Ponti	54.33 357	pP	pP	09 24 38.6	-1.1
	baz=176					
E54A	Lac Daplat, Po	54.36 358	P	P	09 24 02.6	-2.1
	baz=176					
LMN	Caledonia Moun	54.39 8	eP	P	09 24 04.9	+0.1
	comp=Z,27nm,1.0s					
LMN			epP	pP	09 24 38.7	-1.5
F46A	Macinaw City C	54.46 351	P	P	09 24 03.5	-1.8
	baz=167					
H40A	Chili	54.47 346	P	P	09 24 04.4	-1.0
	baz=160					
G43A	Wallace	54.48 348	eP	P	09 24 05.3	-0.2
	comp=Z,32nm,1.1s					
G43A			epP	pP	09 24 39.3	-1.5
G43A	Wallace	54.48 348	P	P	09 24 04.3	-1.2
	baz=164					
W18A	Petrified Fore	54.49 324	eP	P	09 24 06.9	+0.9
	comp=Z,36nm,1.1s					
W18A			epP	pP	09 24 41.6	+0.3
W18A	Petrified Fore	54.49 324	P	P	09 24 06.3	+0.3
	baz=135					
F45A	CMU Biological	54.49 350	P	P	09 24 04.1	-1.4
	baz=166					
E50A	Wahnapitae	54.60 355	P	P	09 24 04.5	-1.8
	baz=172					
E51A	G1948 Merrick	54.60 356	P	P	09 24 04.9	-1.4
	baz=174					
H39A	Augusta	54.74 345	P	P	09 24 06.0	-1.5
	baz=159					
G41A	Antigo	54.75 347	P	P	09 24 06.8	-0.7
	baz=162					
E48A	Lockeyer	54.80 353	P	P	09 24 05.8	-2.0
	baz=170					
PQI	Presque Isle	54.82 5	epP	pP	09 24 43.2	-0.1
S22A	4UR Ranch, Cre	54.82 329	eP	P	09 24 09.0	+0.5
	comp=Z,56nm,1.5s					
S22A			epP	pP	09 24 45.2	+1.4
S22A	4UR Ranch, Cre	54.82 329	P	P	09 24 09.0	+0.5
	baz=139					
E47A	Iron Bridge	54.91 352	P	P	09 24 06.6	-2.0
	baz=169					
Q24A	Divide	54.92 331	eP	P	09 24 09.3	+0.1
	comp=Z,18nm,1.0s					
Q24A			epP	pP	09 24 44.9	+0.3
Q24A	Divide	54.92 331	P	P	09 24 09.3	+0.1
	baz=142					
F43A	Flat Rock, Esc	54.93 349	P	P	09 24 07.5	-1.2
	baz=164					
F44A	Big Bay de Noc	54.93 350	P	P	09 24 07.2	-1.5
	baz=165					
D52A	ZEK Kipawa Sen	54.97 357	P	P	09 24 07.8	-1.2
	baz=175					
E46A	Sault Ste Mari	54.97 352	eP	P	09 24 07.7	-1.3
	comp=Z,44nm,0.7s					
E46A	Sault Ste Mari	54.97 352	P	P	09 24 07.4	-1.6
	baz=168					
H38A	Maiden Rock	55.00 344	P	P	09 24 08.2	-1.1
	baz=158					
X16A	Lo Mia Camp, P	55.01 322	eP	P	09 24 09.6	-0.2
	comp=Z,24nm,0.7s					
X16A			epP	pP	09 24 45.4	+0.2
D53A	Lac Vacive, Po	55.03 357	eP	P	09 24 09.3	-0.2
	comp=Z,36nm,1.0s					
D53A			epP	pP	09 24 44.8	0.0
D53A	Lac Vacive, Po	55.03 357	P	P	09 24 07.5	-1.9
	baz=176					
G40A	Rib Lake	55.03 346	eP	P	09 24 08.5	-1.1
	comp=Z,12nm,0.9s					
G40A			epP	pP	09 24 43.9	-1.1
G40A	Rib Lake	55.03 346	P	P	09 24 08.6	-0.9
	baz=161					
D54A	Lac Fusel, La	55.06 358	P	P	09 24 08.8	-0.9
	baz=177					

HOPE	Hope Point	55.08	154	eP	P	09 24 10.2 +0.5
	comp=Z,198nm,1.0s					
E45A	Wooded Hills,	55.09	351	pP	pP	09 24 43.6 -1.7
	baz=167					
OGNE	Ogallala	55.10	335	eP	P	09 24 10.4 +0.3
	comp=Z,69nm,0.8s					
OGNE				epP	pP	09 24 46.1 +0.5
OGNE	Ogallala	55.10	335	P	P	09 24 10.1 -0.1
	baz=146					
D51A	Lot 18 Range I	55.15	356	pP	pP	09 24 44.4 -1.3
	baz=174					
SACV	Santiago Islan	55.21	66	eP	P	09 24 12.1 +0.7
	comp=Z,181nm,0.6s					
F41A	Three Lakes	55.23	347	eP	P	09 24 09.8 -1.1
	comp=Z,29nm,0.9s					
F41A				epP	pP	09 24 45.5 -0.9
F41A	Three Lakes	55.23	347	P	P	09 24 10.1 -0.8
	baz=162					
D50A	G1974 Best Tow	55.26	355	P	P	09 24 10.2 -0.8
	baz=173					
LATQ	La Tuque	55.27	1	P	P	09 24 10.7 -0.4
	baz=182					
G39A	Holcombe	55.28	346	P	P	09 24 10.1 -1.2
	baz=160					
MVCO	Mesa Verde	55.31	327	eP	P	09 24 12.2 +0.2
	comp=Z,12nm,0.8s					
MVCO	Mesa Verde	55.31	327	P	P	09 24 12.1 +0.2
	baz=138					
G38A	Ridgeland	55.35	345	P	P	09 24 09.9 -1.8
	baz=159					
113A	Mohawk Valley,	55.37	319	eP	P	09 24 12.4 +0.2
	comp=Z,9.0nm,0.8s					
E43A	Lone Tree Farm	55.42	349	eP	P	09 24 11.0 -1.2
	comp=Z,24nm,0.5s					
E43A				epP	pP	09 24 46.2 -1.6
E43A	Lone Tree Farm	55.42	349	P	P	09 24 10.6 -1.7
	baz=165					
ECSD	EROS Data Cent	55.44	340	eP	P	09 24 11.6 -0.9
	comp=Z,10nm,1.0s					
ECSD	EROS Data Cent	55.44	340	P	P	09 24 11.1 -1.3
	baz=153					
D46A	Sault St. Mari	55.45	352	P	P	09 24 11.0 -1.4
	baz=168					
E44A	Grand Marais A	55.47	350	pP	pP	09 24 46.1 -2.0
	baz=166					
D47A	Chapleau	55.48	353	P	P	09 24 11.5 -1.2
	baz=169					
D49A	Beulah Townshi	55.50	354	pP	pP	09 24 46.3 -2.0
	baz=172					
COWI	Conover	55.58	348	eP	P	09 24 12.8 -0.7
	comp=Z,13nm,0.7s					
COWI				epP	pP	09 24 48.2 -0.8
F40A	Park Falls	55.63	347	P	P	09 24 12.5 -1.3
	baz=161					
E42A	Champion	55.65	349	P	P	09 24 12.5 -1.4
	baz=164					
SPMN	Marine on St.	55.65	344	eP	P	09 24 12.5 -1.4
	comp=Z,42nm,0.7s					
SPMN				epP	pP	09 24 48.4 -1.0
SPMN	Marine on St.	55.65	344	P	P	09 24 12.9 -1.0
	baz=158					
Y14A	Wickenburg	55.65	321	eP	P	09 24 14.7 +0.5
	comp=Z,13nm,0.7s					
WUAZ	Wupatki	55.73	323	eP	P	09 24 15.6 +0.8
	comp=Z,50nm,0.8s					
WUAZ	Wupatki	55.73	323	P	P	09 24 15.7 +0.8
	baz=134					
ISCO	Idaho Springs	55.80	331	eP	P	09 24 15.9 +0.5
	comp=Z,17nm,1.0s					
ISCO	Idaho Springs	55.80	331	eP	P	09 24 15.9 +0.5
ISCO				pmax	pmax	
	comp=Z,17nm,1.0s					
ISCO	Idaho Springs	55.80	331	P	P	09 24 16.0 +0.5
	baz=142					
F39A	Loretta	55.81	346	P	P	09 24 13.9 -1.2
	baz=160					
E41A	Kenton	55.89	348	P	P	09 24 14.3 -1.3
	baz=162					
SMCO	Snowmass	55.98	330	eP	P	09 24 16.7 -0.2
	comp=Z,17nm,0.8s					
PV01	Paradox Valley	56.03	328	eP	P	09 24 17.8 +0.8
	comp=Z,34nm,0.8s					
VLDQ	Val d'Or	56.05	357	eP	P	09 24 17.4 +0.7
	comp=Z,66nm,0.4s					
VLDQ				epP	pP	09 24 52.3 +0.1
F37A	Hinrichs Farm,	56.06	345	P	P	09 24 15.9 -0.9
	baz=158					
E40A	Wakefield	56.08	347	P	P	09 24 16.2 -0.8
	baz=161					
F38A	Pierce - Schro	56.09	345	P	P	09 24 16.0 -1.0
	baz=159					
E39A	Mellen	56.16	346	P	P	09 24 16.5 -1.0
	baz=160					
PV02	Paradox Valley	56.17	328	eP	P	09 24 18.7 +0.7
	comp=Z,38nm,0.9s					
PV13	Radium Mtn., P	56.18	327	eP	P	09 24 18.5 +0.4
	comp=Z,51nm,0.8s					
GLA	Glamis	56.24	319	eP	P	09 24 19.0 +0.6
	comp=Z,50nm,1.5s					
GLA				epP	pP	09 24 54.5 +0.6
GLA	Glamis	56.24	319	eP	P	09 24 19.0 +0.6
GLA				e*PP	pP	09 24 54.5 +0.6
GLA				pmax	pmax	
	comp=Z,50nm,1.5s					
GLA	Glamis	56.24	319	P	P	09 24 18.8 +0.4
	baz=129					
PV03	Paradox Valley	56.26	328	eP	P	09 24 19.1 +0.4
	comp=Z,30nm,1.1s					
PV05	Paradox Valley	56.27	327	eP	P	09 24 19.0 +0.3
	comp=Z,35nm,0.8s					
PV05				epP	pP	09 24 54.6 +0.3
PV12	Saucer Basin,	56.28	328	eP	P	09 24 19.3 +0.4
	comp=Z,76nm,1.5s					
PV18	Skein Mesa, Pa	56.29	327	eP	P	09 24 18.7 -0.1
	comp=Z,24nm,0.9s					
PV07	Paradox Valley	56.29	328	eP	P	09 24 19.3 +0.5
	comp=Z,56nm,1.6s					
PV11	David Mesa, Pa	56.31	328	eP	P	09 24 19.4 +0.5
	comp=Z,61nm,1.4s					
PV16	Nyswonger Mesa	56.34	328	eP	P	09 24 19.6 +0.4
	comp=Z,67nm,1.7s					
PV17	East Wray Mesa	56.34	327	eP	P	09 24 18.8 -0.4
	comp=Z,85nm,1.7s					
PV19	Morning Glory	56.37	327	eP	P	09 24 18.8 -0.7
	comp=Z,16nm,0.8s					
D41A	Chassel	56.38	348	eP	P	09 24 18.3 -0.8
	comp=Z,37nm,0.8s					
D41A				epP	pP	09 24 53.8 -0.8
D41A	Chassel	56.38	348	P	P	09 24 17.9 -1.1
	baz=163					
PV20	West Nyswonger	56.39	327	eP	P	09 24 20.0 +0.5
	comp=Z,27nm,1.3s					
PV04	Paradox Valley	56.39	328	eP	P	09 24 20.0 +0.5
	comp=Z,24nm,1.3s					
PV22	Blue Mesa, Par	56.44	328	eP	P	09 24 19.9 0.0
	comp=Z,22nm,0.7s					
PV10	Paradox Valley	56.45	327	eP	P	09 24 19.7 -0.3
	comp=Z,73nm,1.7s					
Y12C	Blythe	56.49	320	eP	P	09 24 20.7 +0.6
	comp=Z,36nm,1.0s					
Y12C	Blythe	56.49	320	P	P	09 24 20.8 +0.8
	baz=130					
PV23	Carpenter Ridg	56.49	328	eP	P	09 24 20.7 +0.4
	comp=Z,16nm,1.1s					
PV21	Cone Mtn., Par	56.55	328	eP	P	09 24 20.6 -0.1
	comp=Z,20nm,1.2s					
PV09	Paradox Valley	56.59	328	eP	P	09 24 21.2 +0.1
PDMCI	Parker Dam,Lak	56.60	321	P	P	09 24 21.2 +0.3
	baz=131					
E38A	The Farm, Brul	56.61	346	eP	P	09 24 19.8 -0.9
	comp=Z,44nm,0.7s					
E38A				epP	pP	09 24 55.5 -0.9
E38A	The Farm, Brul	56.61	346	P	P	09 24 19.6 -1.1
	baz=159					
SWSC	Sam W. Stewart	56.81	318	P	P	09 24 23.0 +0.6
	baz=128					
N23A	Red Feather La	56.81	332	eP	P	09 24 22.2 -0.4
	comp=Z,15nm,0.8s					
N23A	Red Feather La	56.81	332	P	P	09 24 23.2 +0.6
	baz=142					
IKP	In-Ko-Pah, Jac	56.83	318	P	P	09 24 23.0 +0.4
	baz=128					
SUSD	Miller	56.87	339	P	P	09 24 21.5 -1.1
	baz=150					
U15A	North Rim	56.89	324	eP	P	09 24 23.7 +0.5
	comp=Z,25nm,0.9s					
PHWY	Pilot Hill	56.91	332	eP	P	09 24 21.2 -2.1
	comp=Z,19nm,0.8s					
W13A	Hualapai Mount	56.96	321	eP	P	09 24 23.8 +0.1
	comp=Z,26nm,0.9s					
BC3	Big Chuckawall	57.03	319	P	P	09 24 24.8 +0.7
	baz=129					
PMSA	Palmer Station	57.03	175	P	P	09 24 25.0 +1.7
	comp=Z,164nm,0.7s,baz=358,slow=5.1,SNR=40					
PMSA				PcP	PcP	09 25 18.1 +1.6
	comp=Z,42nm,0.6s,baz=9.7,slow=4.5,SNR=5.6					
PMSA	Palmer Station	57.03	175	eP	P	09 24 23.9 +0.5
	comp=Z,191nm,0.8s					
PMSA	Palmer Station	57.03	175	eP	P	09 24 24.9 +1.6
IRM	Iron Mountain	57.15	320	P	P	09 24 25.6 +0.9
	baz=130					
MONP2	Monument Peak	57.19	318	P	P	09 24 25.9 +0.6
	baz=128					
BAR	Barrett	57.23	317	eP	P	09 24 24.8 -0.5
	comp=Z,7.1nm,0.8s					
C40A	Isle Royale Na	57.32	348	eP	P	09 24 25.0 -0.6
	comp=Z,41nm,0.6s					
C40A				epP	pP	09 24 59.7 -1.6
C40A	Isle Royale Na	57.32	348	P	P	09 24 24.3 -1.3
	baz=162					
O20A	White River Ci	57.35	329	P	P	09 24 26.9 +0.6
	baz=139					
BELC	Belle Mtn. Jos	57.60	319	P	P	09 24 28.8 +0.7
	baz=129					
PKCU	Pink Cliffs	57.60	324	eP	P	09 24 28.7 +0.4
	comp=Z,18nm,0.9s					
109C	Camp Elliot, M	57.64	317	P	P	09 24 28.6 +0.3
	baz=127					
PFO	Pinyon Flats O	57.66	318	eP	P	09 24 27.5 -0.9
	comp=Z,24nm,0.8s					
PFO	Pinyon Flats O	57.66	318	eP	P	09 24 27.5 -0.9
PFO				pmax	pmax	
	comp=Z,24nm,0.8s					
PFO	Pinyon Flats O	57.66	318	P	P	09 24 29.2 +0.8
	baz=128					
LDFC	Landfair	57.71	321	eP	P	09 24 29.9 +1.1
	comp=Z,40nm,0.8s					
LCMT	Little Creek M	57.85	324	eP	P	09 24 30.4 +0.6
	comp=Z,25nm,1.2s					
EYMN	Ely	57.86	346	eP	P	09 24 28.6 -0.8
	comp=Z,77nm,0.6s					
EYMN				epP	pP	09 25 05.2 0.0
EYMN	Ely	57.86	346	P	P	09 24 28.2 -1.2
	baz=160					
GMRC	Granite Mounta	57.87	320	P	P	09 24 30.8 +0.9
	baz=130					
MURC	Murrieta	58.13	318	P	P	09 24 32.3 +0.6
	baz=128					
SZCU	Shurtz Canyon	58.15	324	eP	P	09 24 32.3 +0.3
	comp=Z,12nm,0.8s					
MSU	Marysvale	58.27	325	eP	P	09 24 33.4 +0.6
MSU	Marysvale	58.27	325	eP	P	09 24 33.4 +0.6
TMUT	Trail Mountain	58.29	327	eP	P	09 24 33.2 +0.3
	comp=Z,10nm,0.6s					
HEC	Hector,Ludlow	58.33	320	P	P	09 24 34.0 +1.0
	baz=129					
BBRC	Big Bear Solar	58.36	319	P	P	09 24 34.5 +1.1
	baz=128					
TUQ	Turquoise Moun	58.45	320	P	P	09 24 34.6 +0.6
	baz=130					
K22A	Casper	58.46	332	eP	P	09 24 33.5 -0.5
	comp=Z,28nm,0.8s					
K22A	Casper	58.46	332	P	P	09 24 34.4 +0.5
	baz=142					
RSSD	Black Hills	58.55	335	P	P	09 24 35.1 +0.5
	baz=145					
SCI2	San Clemente I	58.67	317	P	P	09 24 35.8 +0.4
	baz=126					
RRX	Edison Barstow	58.78	319	P	P	09 24 35.8 -0.3
	baz=128					
BFSC	Mount Baldy Ra	58.83	318	P	P	09 24 37.0 +0.4
	baz=128					
CIS	Catalina Islan	58.83	317	P	P	09 24 37.1 +0.6
	baz=126					
GSC	Goldstone, Bar	58.93	320	P	P	09 24 38.1 +0.9
	baz=129					
FMP	Fort Macarthur	58.93	317	P	P	09 24 37.9 +0.7
	baz=127					
SHOC	Shoshone, Teco	58.97	321	P	P	09 24 38.0 +0.7
	baz=130					
MPU	Maple Canyon	59.03	327	eP	P	09 24 38.1 +0.1
	comp=Z,15nm,0.7s					
MWC	Mount Wilson	59.08	318	eP	P	09 24 38.6 +0.2
	comp=Z,14nm,0.8s					
MWC	Mount Wilson	59.08	318	eP	P	09 24 38.6 +0.2
MWC				pmax	pmax	
	comp=Z,14nm,0.8s					
PASC	Pasadena Art C	59.13	318	eP	P	09 24 38.6 0.0
	comp=Z,38nm,1.4s					
H10N3	ASCENSION HYDR	59.15	94	P	P	09 24 41.8 +3.1
	baz=257,slow=6.2,SNR=7.9					
H10N2	ASCENSION HYDR	59.16	94	P	P	09 24 41.8 +3.0
	baz=257,slow=6.2,SNR=6.1					
H10N1	ASCENSION HYDR	59.17	94	P	P	09 24 42.1 +3.2
	baz=257,slow=6.2,SNR=18					
NLU	North Lily Min	59.22	327	eP	P	09 24 39.9 +0.5
	comp=Z,20nm,1.2s					
DECC	Green Verdugo	59.28	318	P	P	09 24 40.3 +0.7
	baz=127					
AGMN	Agassiz Nation	59.31	343	eP	P	09 24 38.9 -0.5
	comp=Z,27nm,0.8s					
AGMN				epP	pP	09 25 15.2 -0.2
AGMN	Agassiz Nation	59.31	343	P	P	09 24 38.7 -0.7
	baz=155					
JLU	Jordanelle	59.35	328	eP	P	09 24 40.7 +0.5
	comp=Z,43nm,1.2s					
EDW2	Edwards Air Fo	59.44	319	P	P	09 24 41.1 +0.4
	baz=128					
SNCC	San Nicolas Is	59.49	316	P	P	09 24 41.5 +0.4
	baz=125					
CTU	Camp Tracy	59.57	328	eP	P	09 24 41.8 +0.2
	comp=Z,26nm,1.2s					
LRMC	Laurel Mtn Rad	59.60	319	P	P	09 24 42.3 +0.4
	baz=128					
TPNV	Topopah Spring	59.62	322	eP	P	09 24 43.0 +1.0
	comp=Z,36nm,0.8s					
TPNV	Topopah Spring	59.62	322	eP	P	09 24 43.0 +1.0
TPNV				pmax	pmax	
	comp=Z,36nm,0.8s					
TPNV	Topopah Spring	59.62	322	P	P	09 24 43.1 +1.1
	baz=130					
BLG	Laguna Peak, P	59.68	317	P	P	09 24 42.9 +0.6
	baz=126					
FURC	Furnace Creek,	59.69	321	P	P	09 24 43.2 +1.0
	baz=129					
TCUT	Toone Canyon	59.70	328	eP	P	09 24 43.0 +0.4
	comp=Z,135nm,0.6s					
DUG	Dugway, Tooele	59.80	326	eP	P	09 24 43.8 +0.6
	comp=Z,46nm,0.9s					
DUG	Dugway, Tooele	59.80	326	eP	P	09 24 43.8 +0.6
DUG				pmax	pmax	
	comp=Z,46nm,0.9s					
DUG	Dugway, Tooele	59.80	326	P	P	09 24 43.9 +0.8
	baz=134					
MPMC	Manual Prospec	59.83	320	P	P	09 24 43.8 +0.3
	baz=128					
BW06	Boulder Array	59.98	331	eP	P	09 24 43.9 -0.5
	comp=Z,39nm,1.4s					
BW06	Boulder Array	59.98	331	P	P	09 24 44.2 -0.2
	baz=139					
PD31	Pinedale Array	59.98	331	eP	P	09 24 43.9 -0.5
	comp=Z,36nm,1.4s					
PD31				epP	pP	09 25 21.0 +0.6
PD31				ePcP	PcP	09 25 27.8 -1.2
PDAR	Pinedale Array	59.98	331	P	P	09 24 44.1 -0.4
	comp=Z,8.2nm,0.7s,baz=134,slow=8.5,SNR=63					
PDAR				pP	pP	09 25 21.0 +0.6
	comp=Z,16nm,1.0s,baz=144,slow=5.5,SNR=5.2					
PDAR				PcP	PcP	09 25 27.8 -1.2
	comp=Z,3.9nm,0.5s,baz=114,slow=5.8,SNR=5.8					
PDAR				PKPPKP	P'P'df	09 54 07.2 -0.6
	comp=Z,1.2nm,1.0s,baz=329,slow=0.9,SNR=6.7					
PDAR				LR	LR	09 54 20.3
	comp=Z,51nm,18.2s,baz=154,slow=40					
PDAR				P4KPbc		10 01 47.8
	comp=Z,0.4nm,0.6s,baz=140,slow=7.2,SNR=4.5					
SCZ2	Santa Cruz Isl	60.00	317	P	P	09 24 43.9 -0.6
	baz=126					
DAC	Darwin (Calif)	60.03	320	eP	P	09 24 46.6 +1.7
	comp=Z,11nm,0.8s					
MDND	Maddock	60.05	341	eP	P	09 24 44.7 +0.1
	comp=Z,105nm,0.6s					
MDND	Maddock	60.05	341	P	P	09 24 45.0 +0.4
	baz=151					
R11A	Troy Canyon, C	60.12	323	P	P	09 24 46.5 +1.0
	baz=131					
HWUT	Hardware Ranch	60.13	328	eP	P	09 24 45.4 -0.1
	comp=Z,35nm,0.6s					
ISA	Isabella, Lake	60.22	319	eP	P	09 24 45.6 -0.5
	comp=Z,16nm,0.8s					
ISA	Isabella, Lake	60.22	319	eP	P	09 24 45.6 -0.5
ISA				pmax	pmax	
	comp=Z,16nm,0.8s					
ISA	Isabella, Lake	60.22	319	P	P	09 24 46.8 +0.8
	baz=127					
GRAC	Grapevine Rang	60.34	321	P	P	09 24 47.8 +1.0
	baz=129					
SPUT	South Promonto	60.38	328	eP	P	09 24 47.4 +0.2
	comp=Z,76nm,1.3s					
BGU	Big Grassy Mou	60.42	327	eP	P	09 24 47.5 0.0
	comp=Z,53nm,1.5s					
CWC	Cottonwood Cre	60.44	320	P	P	09 24 48.4 +0.7
	baz=128					
PKM	Mcpherson Peak	60.64	318	P	P	09 24 49.5 +0.5
	baz=126					
AHID	Auburn Hatcher	60.74	330	eP	P	09 24 49.3 -0.3
	comp=Z,25nm,0.8s					
HVU	Hansel Valley	60.89	328	eP	P	09 24 50.6 0.0
	comp=Z,23nm,0.9s					
HVU	Hansel Valley	60.89	328	eP	P	09 24 50.6 0.0
HVU				pmax	pmax	
	comp=Z,23nm,0.9s					
TIN	Tinemaha, Big	60.91	321	P	P	09 24 51.7 +1.0
	baz=128					
SMMC	Simmler	61.01	318	P	P	09 24 52.3 +0.9
	baz=126					
REDW	Red Top Meadow	61.05	330	eP	P	09 24 51.5 -0.3
	comp=Z,19nm,0.9s					
SNOW	Snow King Moun	61.08	330	eP	P	09 24 51.9 0.0
	comp=Z,18nm,0.8s					
ULM	Lac du Bonnet	61.09	344	P	P	09 24 50.5 -1.0
	comp=Z,14nm,0.7s,baz=157,slow=6.5,SNR=13					
ULM				pP	pP	09 25 27.2 -0.4
	comp=Z,93nm,0.9s,baz=154,slow=6.7,SNR=13					
ULM	Lac du Bonnet	61.09	344	eP	P	09 24 50.8 -0.7
	comp=Z,49nm,0.6s					
ULM				epP	pP	09 25 27.6 0.0
ULM	Lac du Bonnet	61.09	344	eP	P	09 24 50.8 -0.7
ULM				e*PP	pP	09 25 27.6 0.0
ULM				pmax	pmax	
	comp=Z,49nm,0.6s					
LOHW	Long Hollow	61.12	331	eP	P	09 24 51.6 -0.5
	comp=Z,17nm,0.8s					
TPAW	Teton Pass	61.20	330	eP	P	09 24 52.8 +0.1
	comp=Z,13nm,0.6s					
MOOW	Moose Ponds	61.29	331	eP	P	09 24 53.0 -0.3
	comp=Z,13nm,0.8s					
FXWY	Fox Creek	61.34	330	eP	P	09 24 53.3 -0.4
	comp=Z,9.3nm,0.8s					
PAGB	Antelope Grade	61.42	318	eP	P	09 24 54.2 +0.1
	comp=Z,20nm,1.0s					
IMW	Indian Meadow	61.49	331	eP	P	09 24 54.5 -0.2
	comp=Z,28nm,0.8s					
FLWY	Flagg Ranch	61.51	331	eP	P	09 24 55.2 +0.4
	comp=Z,57nm,0.8s					
ELK	Elko	61.52	325	eP	P	09 24 55.1 +0.2
	comp=Z,34nm,1.5s					
ELK	Elko	61.52	325	eP	P	09 24 55.1 +0.2
ELK				pmax	pmax	
	comp=Z,34nm,1.5s					
LAO	LASA Array	61.53	336	eP	P	09 24 54.2 -0.4
	comp=Z,12nm,0.7s					
LAO	LASA Array	61.53	336	P	P	09 24 54.8 +0.1
	baz=144					
RLMT	Red Lodge	61.62	333	eP	P	09 24 55.7 +0.2
	comp=Z,23nm,0.9s					
RLMT	Red Lodge	61.62	333	P	P	09 24 55.7 +0.2
	baz=140					
MLAC	Mammoth, Mammo	61.65	321	P	P	09 24 56.6 +0.8
	baz=128					
H17A	Grant Village	61.69	331	eP	P	09 24 56.7 +0.7
	comp=Z,13nm,0.6s					
H17A	Grant Village	61.69	331	P	P	09 24 56.7 +0.7
	baz=138					
YPP	Pitchstone Pla	61.70	331	eP	P	09 24 56.8 +0.6
	comp=Z,11nm,0.9s					
NV11	Mina Array Sit	61.73	322	eP	P	09 24 56.5 +0.3
	comp=Z,0.9nm,0.8s					
LKWY	Lake	61.73	331	eP	P	09 24 57.6 +1.3
	comp=Z,27nm,0.6s					
LKWY	Lake	61.73	331	eP	P	09 24 57.6 +1.3
LKWY				pmax	pmax	
	comp=Z,27nm,0.6s					
MDPB	Devils Postpil	61.80	321	eP	P	09 24 56.8 -0.1
	comp=Z,31nm,0.8s					
NV01	Mina Array Sit	61.81	322	eP	P	09 24 57.5 +0.5
NV01				epP	pP	09 25 33.0 -0.1
NVAR	Mina Array Bea	61.81	322	P	P	09 24 57.5 +0.5
	comp=Z,15nm,0.8s,baz=127,slow=7.3,SNR=116					
NVAR				pP	pP	09 25 33.0 -0.1
	comp=Z,9.5nm,0.8s,baz=132,slow=6.2,SNR=5.1					
NVAR				PKPPKP	P'P'df	09 53 59.6 -5.8
	comp=Z,0.8nm,0.7s,baz=255,slow=3.3,SNR=6.0					
YFT	Old Faithful	61.85	331	eP	P	09 24 58.6 +1.5
	comp=Z,106nm,1.7s					
RYN	Ryan	62.07	322	eP	P	09 24 59.0 +0.4
	comp=Z,8.2nm,0.8s					
YMR	Madison River	62.08	331	eP	P	09 24 59.3 +0.7
	comp=Z,65nm,0.8s					
KVN	Kaiserville	62.08	322	eP	P	09 24 58.9 +0.2
	comp=Z,24nm,1.4s					
KVN	Kaiserville	62.08	322	eP	P	09 24 58.9 +0.2
KVN				pmax	pmax	
	comp=Z,25nm,1.4s					
YHH	Holmes Hill	62.11	331	eP	P	09 24 59.8 +0.9
	comp=Z,44nm,0.8s					
DGMT	Dagmar	62.20	338	eP	P	09 24 59.8 +0.8
	comp=Z,51nm,0.7s					
DGMT	Dagmar	62.20	338	P	P	09 24 59.7 +0.7
	baz=146					
YHB	Horse Butte	62.25	331	eP	P	09 25 00.9 +1.2
	comp=Z,81nm,0.7s					
GCMT	Greycliff	62.32	333	eP	P	09 25 00.5 +0.5
QLMT	Earthquake Lak	62.42	331	eP	P	09 25 02.1 +1.3
BMN	Battle Mountai	62.44	324	eP	P	09 25 01.6 +0.6
	comp=Z,18nm,0.7s					
BMN	Battle Mountai	62.44	324	eP	P	09 25 01.6 +0.6
BMN				pmax	pmax	
	comp=Z,18nm,0.7s					
WAKR	Walker	62.56	321	eP	P	09 25 02.9 +1.1
	comp=Z,20nm,0.9s					
YERR	Yerington	62.73	322	eP	P	09 25 03.6 +0.6
	comp=Z,20nm,0.7s					
SAO	San Andreas Ge	62.81	319	eP	P	09 25 03.1 -0.2
	comp=Z,7.7nm,0.8s					
SAO	San Andreas Ge	62.81	319	eP	P	09 25 03.1 -0.2
SAO				pmax	pmax	
	comp=Z,8.0nm,0.8s					
CMB	Columbia Colle	62.87	320	eP	P	09 25 03.6 -0.1
	comp=Z,7.2nm,0.8s					
CMB	Columbia Colle	62.87	320	eP	P	09 25 03.6 -0.1
CMB				pmax	pmax	
	comp=Z,7.0nm,0.8s					
HLID	Hailey	63.00	328	eP	P	09 25 05.3 +0.6
	comp=Z,18nm,0.9s					
HLID	Hailey	63.00	328	P	P	09 25 05.3 +0.6
	baz=134					
PNTR	Pine Nut	63.02	322	eP	P	09 25 05.0 +0.1
	comp=Z,39nm,0.8s					
SCHQ	Schefferville	63.02	5	P	P	09 25 03.6 -0.8
	comp=Z,5.9nm,0.6s,baz=217,slow=10,SNR=2.8					
SCHQ				pP	pP	09 25 39.9 -0.7
	comp=Z,106nm,1.1s,baz=168,slow=6.1,SNR=9.1					
SCHQ				LR	LR	09 53 24.4
	comp=Z,54nm,20.5s,baz=316,slow=37					
SCHQ	Schefferville	63.02	5	epP	pP	09 25 40.4 -0.3
	comp=Z,8.8nm,0.8s					
BOZ	Bozeman (W)	63.08	331	eP	P	09 25 05.6 +0.5
	comp=Z,32nm,0.8s					
BOZ	Bozeman (W)	63.08	331	eP	P	09 25 05.6 +0.5
BOZ				pmax	pmax	
	comp=Z,32nm,0.8s					
BOZ	Bozeman (W)	63.08	331	P	P	09 25 05.6 +0.5
	baz=138					
MCMT	McKenzie Canyo	63.11	330	eP	P	09 25 06.2 +0.8
VCNR	Virginia City	63.17	322	eP	P	09 25 06.8 +0.9
	comp=Z,40nm,0.8s					
PAHR	Pah Rah Range	63.27	322	eP	P	09 25

AFDM	Forest Hills D	63.78	321	eP		P	09 25 09.9 +0.2
	comp=Z,17nm,0.9s						
BEKR	Beckworth	63.96	322	eP		P	09 25 11.4 +0.4
	comp=Z,24nm,0.9s						
HRY	Holter Researc	64.00	332	eP		P	09 25 11.4 +0.3
EGMT	Eagleton	64.07	334	eP		P	09 25 11.4 0.0
	comp=Z,43nm,0.6s						
EGMT	Eagleton	64.07	334	P		P	09 25 11.7 +0.3
	baz=140						
ORV	Oroville	64.47	321	eP		P	09 25 15.1 +0.9
	comp=Z,63nm,1.0s						
WVOR	Wild Horse Val	64.55	325	eP		P	09 25 14.7 0.0
	comp=Z,25nm,1.0s						
WVOR	Wild Horse Val	64.55	325	eP		P	09 25 14.7 0.0
WVOR				pmax	pmax		
	comp=Z,25nm,1.0s						
GDXM	Geysers	64.86	320	eP		P	09 25 17.8 +1.1
	comp=Z,12nm,1.1s						
PLID	Pearl Lake	64.88	329	eP		P	09 25 16.7 -0.2
	comp=Z,24nm,0.9s						
J08A	Circle Bar Ran	65.05	326	eP		P	09 25 17.8 -0.1
	comp=Z,14nm,0.7s						
MSO	Missoula	65.08	331	eP		P	09 25 19.1 +1.0
	comp=Z,68nm,0.8s						
MSO	Missoula	65.08	331	P		P	09 25 18.8 +0.8
	baz=136						
O03E	Paynes Creek	65.10	322	P		P	09 25 17.6 -0.7
	baz=126						
MOD	Modoc Plateau	65.17	324	eP		P	09 25 19.3 +0.5
	comp=Z,109nm,1.6s						
BMO	Blue Mountains	65.40	328	eP		P	09 25 19.8 -0.4
	comp=Z,12nm,0.9s						
BMO	Blue Mountains	65.40	328	eP		P	09 25 19.8 -0.4
BMO				pmax	pmax		
	comp=Z,11nm,0.9s						
O02D	Mt. Diablo Mer	65.64	321	P		P	09 25 21.5 -0.3
	baz=126						
WDC	Whiskeytown Da	65.72	321	eP		P	09 25 21.1 -1.1
	comp=Z,13nm,0.8s						
WDC	Whiskeytown Da	65.72	321	eP		P	09 25 21.1 -1.1
WDC				pmax	pmax		
	comp=Z,13nm,0.8s						
KCPM	Cahto Peak	65.86	320	eP		P	09 25 23.5 +0.2
	comp=Z,46nm,1.0s						
M04C	Macdoel	66.01	323	P		P	09 25 24.6 +0.4
	baz=127						
K05A	Summer Lake	66.03	324	eP		P	09 25 25.1 +0.7
	comp=Z,61nm,0.9s						
N02D	Trinity Center	66.05	322	P		P	09 25 23.6 -0.8
	baz=126						
I07A	Izee	66.09	326	eP		P	09 25 25.3 +0.7
	comp=Z,60nm,0.8s						
F10A	Beach Ranch, E	66.11	329	eP		P	09 25 24.7 0.0
	comp=Z,39nm,0.8s						
KMRM	Mail Ridge	66.24	321	eP		P	09 25 26.2 +0.5
	comp=Z,67nm,1.1s						
M02C	Callahan	66.39	322	P		P	09 25 26.3 -0.3
	baz=126						
MACI	Morro de la Ar	66.43	55	eP		P	09 25 28.0 +0.8
	comp=Z,247nm,0.7s						
K04D	Chiloquin, OR	66.47	324	P		P	09 25 27.4 +0.3
	baz=127						
YBH	Yreka Blue Hor	66.50	322	eP		P	09 25 26.2 -1.1
	comp=Z,17nm,0.9s						
YBH	Yreka Blue Hor	66.50	322	eP		P	09 25 26.2 -1.1
YBH				pmax	pmax		
	comp=Z,17nm,0.9s						
L04D	Klamath Falls	66.55	323	P		P	09 25 27.5 -0.1
	baz=127						
J05D	Fort Rock, OR	66.57	324	P		P	09 25 28.4 +0.7
	baz=128						
G08A	Pilot Rock	66.57	327	eP		P	09 25 27.8 +0.1
	comp=Z,14nm,0.6s						
KHMM	Horse Mountain	66.63	321	eP		P	09 25 29.2 +1.1
	comp=Z,43nm,0.8s						
WALA	Waterton Lakes	66.67	333	eP		P	09 25 28.8 +0.6
	comp=Z,32nm,0.9s						
PINE	Pine Mountain	66.71	325	eP		P	09 25 29.3 +0.7
	comp=Z,41nm,0.8s						
FFC	Flin Flon	66.78	343	eP		P	09 25 28.1 -0.5
	comp=Z,35nm,0.7s						
FFC	Flin Flon	66.78	343	eP		P	09 25 28.1 -0.5
FFC				pmax	pmax		
	comp=Z,35nm,0.7s						
E09A	Wood Farm, Sta	66.95	329	eP		P	09 25 29.6 -0.3
	comp=Z,22nm,0.8s						
J04D	Umpqua Nationa	67.05	324	P		P	09 25 31.2 +0.4
	baz=127						
HUMO	Hull Mountain	67.17	323	eP		P	09 25 30.0 -1.4
	comp=Z,39nm,1.5s						
I05D	Terrebonne, OR	67.28	325	P		P	09 25 33.1 +1.0
	baz=128						
L02E	Cave Junction	67.29	322	P		P	09 25 32.4 +0.2
	baz=126						
E08A	Dider Farm, El	67.41	328	eP		P	09 25 32.9 +0.2
	comp=Z,17nm,1.0s						
G06A	Carlson Farm,	67.44	326	eP		P	09 25 34.4 +1.3
	comp=Z,17nm,0.8s						
F07A	Phinny Hill Vi	67.48	327	eP		P	09 25 34.3 +1.1
	comp=Z,32nm,0.8s						
I04A	Tendick Farm,	67.56	324	P		P	09 25 33.9 +0.1
	baz=127						
HAWA	Hanford	67.59	328	eP		P	09 25 34.2 +0.3
	comp=Z,18nm,0.9s						
NEW	Newport	67.62	331	eP		P	09 25 34.2 +0.1
	comp=Z,25nm,0.8s						
NEW	Newport	67.62	331	eP		P	09 25 34.2 +0.1
NEW				pmax	pmax		
	comp=Z,25nm,0.8s						
NEW	Newport	67.62	331	P		P	09 25 34.2 +0.1
	baz=133						
K02D	Willamette Mer	67.64	323	P		P	09 25 35.1 +0.7
	baz=126						
D08A	Wollman Farm,	67.71	329	eP		P	09 25 35.4 +0.7
	comp=Z,12nm,0.8s						
G05D	Wamic, OR	67.82	326	P		P	09 25 36.8 +1.3
	baz=129						
PMOZ	Porto Moniz, M	67.82	50	eP		P	09 25 35.8 0.0
C09A	Chrisman Ranch	67.88	330	eP		P	09 25 36.1 +0.4
	comp=Z,29nm,0.6s						
H04A	Detroit Lake	67.97	325	eP		P	09 25 36.0 -0.4
	comp=Z,38nm,1.0s						
I03D	Drain, OR	68.04	324	P		P	09 25 37.2 +0.4
	baz=126						
J01E	Myrtle Point	68.07	323	P		P	09 25 37.9 +0.9
	baz=126						
H04D	Lebanon	68.18	325	P		P	09 25 37.7 +0.1
	baz=127						
F05D	White Salmon	68.30	327	P		P	09 25 39.3 +0.9
	baz=129						
COR	Corvallis	68.54	325	eP		P	09 25 40.0 +0.1
	comp=Z,57nm,1.0s						
COR	Corvallis	68.54	325	eP		P	09 25 40.0 +0.1
COR				pmax	pmax		
	comp=Z,57nm,1.0s						
FCC	Fort Churchill	68.54	349	eP		P	09 25 39.0 -0.5
	comp=Z,45nm,0.7s						
FCC	Fort Churchill	68.54	349	eP		P	09 25 39.0 -0.5
FCC				pmax	pmax		
	comp=Z,45nm,0.7s						
I02D	Swisshome	68.57	324	P		P	09 25 41.0 +0.9
	baz=126						
LTY	Liberty	68.75	328	eP		P	09 25 41.8 +0.6
	comp=Z,14nm,0.7s						
B08A	Colville Reser	68.78	330	eP		P	09 25 41.4 +0.1
	comp=Z,34nm,0.6s						
G03D	McMinnville, O	68.89	325	P		P	09 25 42.9 +0.8
	baz=127						
LON	Longmire	69.03	327	eP		P	09 25 43.0 +0.1
	comp=Z,17nm,0.8s						
LON	Longmire	69.03	327	eP		P	09 25 43.0 +0.1
LON				pmax	pmax		
	comp=Z,17nm,0.8s						
F04D	Rainier, OR	69.28	326	P		P	09 25 45.6 +1.3
	baz=127						
E04D	Cinebar	69.32	327	P		P	09 25 45.0 +0.3
	baz=128						
D05A	Enumclaw	69.40	327	eP		P	09 25 45.2 0.0
	comp=Z,79nm,0.8s						
D04E	Lakebay	69.81	327	P		P	09 25 48.7 +1.1
	baz=129						
B06A	Marblemount	69.97	329	eP		P	09 25 48.4 -0.2
	comp=Z,72nm,0.6s						
B05A	Bryant	70.13	328	P		P	09 25 49.4 -0.1
	baz=129						
D03D	Eldon	70.20	327	P		P	09 25 50.7 +0.7
	baz=128						
LIC	Lamto	70.51	80	eP		P	09 25 52.4 -0.2
	comp=Z,176nm,0.5s						
NLWA	Neilton Lookou	70.54	327	eP		P	09 25 53.0 +0.9
	comp=Z,58nm,0.8s						
TIC	Toumodi	70.59	80	eP		P	09 25 52.9 -0.2
A04D	Lummi Island	70.73	328	P		P	09 25 53.9 +0.7
	baz=128						
DBIC	Dimbokro	70.76	80	P		P	09 25 54.1 0.0
	comp=Z,78nm,0.3s,baz=244,slow=5.1,SNR=178						
DBIC				pP		pP	09 26 29.9 -1.3
	comp=Z,27nm,0.7s,baz=193,slow=2.8,SNR=1.8						
DBIC				S		S	09 34 50.0 -6.9
	comp=Z,12nm,1.1s,baz=56,slow=18,SNR=13						
DBIC	Dimbokro	70.76	80	eP		P	09 25 53.8 -0.3
	comp=Z,115nm,0.8s						
DBIC				epP		pP	09 26 29.9 -1.3
DBIC	Dimbokro	70.76	80	eP		P	09 25 53.8 -0.3
DBIC				e*PP		pP	09 26 29.9 -1.3
DBIC				pmax	pmax		
	comp=Z,115nm,0.8s						
KIC	Kosan Boka	70.81	80	eP		P	09 25 54.5 +0.1
	comp=Z,96nm,0.3s						
PGC	Sidney	71.08	328	eP		P	09 25 55.5 +0.2
	comp=Z,53nm,0.9s						
LLLB	Lillooet	71.50	330	eP		P	09 25 58.2 +0.3
	comp=Z,16nm,0.8s						
VAH	Vaihoa	71.92	257	eP		P	09 26 02.1 +1.1
	comp=Z,169nm,1.1s						
IVI	Ivigtut	72.07	13	eP		P	09 26 02.1 +1.2
	comp=Z,44nm,0.8s						
PMOR	Pomariorio Ree	72.19	257	eP		P	09 26 03.3 +0.7
	comp=Z,182nm,1.1s						
NRS	Narsarsuaq	72.67	14	eP		P	09 26 05.7 +1.2
	comp=Z,32nm,0.5s						
NRS	Narsarsuaq	72.67	14	eP		P	09 26 05.7 +1.2
NRS				pmax	pmax		
	comp=Z,32nm,0.5s						
PPT	Papeete	73.64	254	P		P	09 26 12.1 +1.0
	comp=Z,27nm,0.7s,baz=187,slow=5.8,SNR=4.5						
PPT				LR		LR	09 53 36.2
	comp=Z,92nm,18.7s,baz=106,slow=32						
VNA3	Neumayer Olymp	74.33	162	P		P	09 26 15.3 +1.1
VNA1	Neumayer--Stat	74.55	162	P		P	09 26 16.9 +1.5
VNA2	Neumayer--Watz	74.92	162	P		P	09 26 18.6 +1.1
	baz=288,slow=6.3						
BBB	Bella Bella	75.57	329	eP		P	09 26 21.9 +0.5
	comp=Z,29nm,0.8s						
PFVI	Vila Bisbo	75.85	49	eP		P	09 26 24.4 +0.9
	comp=Z,154nm,0.9s						
PFVI	Vila Bisbo	75.85	49	eP		P	09 26 22.6 -0.9
	comp=Z,95nm,0.8s						
MORF	Marmelete	76.04	48	eP		P	09 26 25.6 +1.0
MORF				AMb		AMB	09 26 29.9
	comp=Z,125nm,1.1s						
MORF	Marmelete	76.04	48	eP		P	09 26 26.4 +1.8
	comp=Z,127nm,1.0s						
MORF				epP		pP	09 27 04.3 +2.1
MORF	Marmelete	76.04	48	eP		P	09 26 25.6 +1.0
PTEO	Sao Teotonio	76.08	48	eP		P	09 26 25.4 +0.7
	comp=Z,82nm,1.0s						
PNCL	Nicolau / Gran	76.43	48	eP		P	09 26 28.0 +1.3
	comp=Z,74nm,0.8s						
PNCL				epP		pP	09 27 06.2 +1.9
SNAA	Sanae	76.54	162	P		P	09 26 28.0 +1.2
SNAA	Sanae	76.54	162	eP		P	09 26 27.9 +1.0
	comp=Z,225nm,1.0s						
SNAA	Sanae	76.54	162	d iP		P	09 26 27.9 +1.0
PBDV	Barranco-do-Ve	76.55	49	eP		P	09 26 29.0 +1.5
MESJ	Messejana	76.56	48	eP		P	09 26 28.4 +1.0
MESJ				AMb		AMB	09 26 35.9
	comp=Z,40nm,1.6s						
MESJ	Messejana	76.56	48	eP		P	09 26 28.9 +1.5
MESJ				epP		pP	09 27 06.3 +1.2
MESJ	Messejana	76.56	48	eP		P	09 26 28.4 +1.0
PCVE	Castro Verde	76.61	48	eP		P	09 26 29.3 +1.5
	comp=Z,80nm,1.0s						
PVAQ	Vaqueiros	76.77	49	eP		P	09 26 30.3 +1.6
PVAQ	Vaqueiros	76.77	49	eP		P	09 26 29.4 +0.8
	comp=Z,20nm,0.8s						
SFJD	Kangerlussuaq	76.85	9	eP		P	09 26 28.4 +0.1
	comp=Z,41nm,0.6s						
SFJD				epP		pP	09 27 04.7 -1.3
SFJD	Kangerlussuaq	76.85	9	eP		P	09 26 28.5 +0.1
SFJD				e*PP		pP	09 27 04.7 -1.3
SFJD				pmax	pmax		
	comp=Z,41nm,0.6s						
SFJD	Kangerlussuaq	76.85	9	‖ i P		P	09 26 34.5 +6.1
	comp=Z,176nm,0.4s						
PBEJ	Beja	76.88	48	eP		P	09 26 31.2 +1.9
YKA	Yellowknife Ar	76.92	342	P		P	09 26 28.9 0.0
	comp=Z,9.7nm,0.5s,baz=142,slow=6.0,SNR=99						
YKA				pP		pP	09 27 06.3 -0.3
	comp=Z,25nm,0.9s,baz=136,slow=6.5,SNR=4.8						
YKA				LR		LR	10 03 43.5
	comp=Z,5.8nm,19.1s,baz=152,slow=38						
YKB5	Yellowknife Ar	76.92	342	eP		P	09 26 28.9 0.0
YKB5				epP		pP	09 27 06.3 -0.3
YKW3	Yellowknife Ar	76.98	342	eP		P	09 26 28.8 -0.5
	comp=Z,52nm,1.1s						
YKW3				epP		pP	09 27 06.7 -0.2
PMTG	Montargil	77.00	47	eP		P	09 26 30.6 +0.7
	comp=Z,53nm,0.9s						
PMTG				epP		pP	09 27 08.8 +1.2
PTOM	Tomar	77.08	46	eP		P	09 26 31.2 +0.9
	comp=Z,74nm,0.7s						
PCAS	Casmilo, Conde	77.18	46	eP		P	09 26 31.7 +0.8
	comp=Z,65nm,0.8s						
COI	Coimbra	77.30	46	eP		P	09 26 32.2 +0.7
	comp=Z,155nm,0.9s						
COI				epP		pP	09 27 10.5 +1.3
COI	Coimbra	77.30	46	eP		P	09 26 31.7 +0.2
	comp=Z,130nm,0.8s						
COI	Coimbra	77.30	46	eP		P	09 26 31.7 +0.2
COI				pmax	pmax		
	comp=Z,130nm,0.8s						
PTO	Porto	77.52	45	eP		P	09 26 33.5 +0.8
	comp=Z,75nm,0.6s						
MDT	Midelt	77.64	54	P		P	09 26 35.1 +1.4
	comp=Z,33nm,0.9s,baz=267,slow=5.1,SNR=25						
PMRV	Marv??o	77.74	47	eP		P	09 26 34.0 0.0
	comp=Z,21nm,1.9s						
PCBR	Castelo Branco	77.83	46	eP		P	09 26 34.8 +0.3
	comp=Z,39nm,0.5s						
PVIS	Viseu	77.85	45	eP		P	09 26 35.1 +0.4
	comp=Z,68nm,0.8s						
PVIS				epP		pP	09 27 12.9 +0.5
MTE	Manteigas	77.98	46	eP		P	09 26 35.7 +0.3
	comp=Z,66nm,0.7s						
MTE	Manteigas	77.98	46	eP		P	09 26 36.0 +0.6
	comp=Z,59nm,0.7s						
PGAV	Gavieira, Arco	78.06	44	eP		P	09 26 36.2 +0.3
	comp=Z,33nm,0.7s						
PCAB	Cabril	78.13	44	eP		P	09 26 36.7 +0.5
	comp=Z,60nm,0.6s						
PCAB				epP		pP	09 27 15.3 +1.4
POLO	Lamas de Olo	78.17	45	eP		P	09 26 36.9 +0.4
	comp=Z,22nm,1.2s						
POLO				epP		pP	09 27 15.0 +0.8
ANGG	Ammassalik, Gr	78.33	15	eP		P	09 26 39.7 +3.1
	comp=Z,29nm,0.4s						
TOA1	Torodi Ar. Sit	78.34	75	eP		P	09 26 35.9 -1.9
TOA0	Torodi Ar. Sit	78.34	75	eP		P	09 26 37.4 -0.4
	comp=Z,62nm,0.6s						
TORD	Torodi Ar. Bea	78.34	75	P		P	09 26 35.9 -1.9
	comp=Z,43nm,0.6s,baz=275,slow=5.1,SNR=184						
TORD				S		S	09 36 13.1 -8.1
	comp=Z,5.2nm,1.0s,baz=242,slow=11,SNR=7.6						
TORD				PKP2bc			09 53 19.9
	comp=Z,0.8nm,0.8s,baz=7.0,slow=6.3,SNR=4.4						
DIB	Dawson Inlet,	78.36	329	eP		P	09 26 37.7 +0.6
	comp=Z,41nm,0.9s						
MVO	Moncorvo	78.63	45	eP		P	09 26 39.4 +0.4
	comp=Z,82nm,0.8s						
MVO				epP		pP	09 27 18.1 +1.3
ILULI	Ilulissat	78.81	8	i P		P	09 26 45.8 +6.6
ILULI				pmax	pmax		
	comp=Z,54nm,0.5s						
ILULI	Ilulissat	78.81	8	i P		P	09 26 45.8 +6.6
	comp=Z,54nm,0.5s						
PBRG	Braganca	79.06	45	eP		P	09 26 41.9 +0.6
	comp=Z,45nm,0.6s						
PBRG				epP		pP	09 27 19.3 +0.2
WRAK	Wrangell Islan	79.95	331	eP		P	09 26 45.7 0.0
	comp=Z,19nm,1.1s						
PAB	San Pablo	79.99	48	eP		P	09 26 46.8 +0.4
	comp=Z,60nm,0.6s						
PAB	San Pablo	79.99	48	eP		P	09 26 46.8 +0.4
PAB				pmax	pmax		
	comp=Z,60nm,0.6s						
DLBC	Dease Lake	79.99	334	eP		P	09 26 46.1 +0.2
	comp=Z,16nm,0.8s						
ESDC	Sonseca Array	80.31	47	P		P	09 26 49.1 +1.0
	comp=Z,32nm,0.8s,baz=257,slow=6.1,SNR=36						
ESDC				pP		pP	09 27 27.4 +1.3
	comp=Z,12nm,0.9s,baz=254,slow=6.3,SNR=2.6						
ESDC				PP		PP	09 29 51.9 -1.3
	comp=Z,0.5nm,0.4s,baz=250,slow=7.7,SNR=5.2						
ESDC				LR	LR		09 58 24.7
	comp=Z,66nm,20.9s,baz=210,slow=32						
ESLA	Sonseca Array	80.31	47	eP		P	09 26 48.6 +0.5
	comp=Z,37nm,0.9s						
JIS	Juneau Island	81.85	332	eP		P	09 26 56.0 +0.3
	comp=Z,18nm,0.8s						
QSPA	South Pole Qui	82.00	180	eP		P	09 26 58.0 +1.4
	comp=Z,288nm,0.7s						
BESE	Bessie Mountai	82.22	333	eP		P	09 26 58.6 +0.9
	comp=Z,40nm,1.0s						
RAR	Rarotonga	82.94	250	P		P	09 27 03.5 +1.3
	comp=Z,14nm,0.4s,baz=131,slow=9.3,SNR=5.6						
RAR	Rarotonga	82.94	250	eP		P	09 27 03.5 +1.3
	comp=Z,41nm,1.0s						
WHY	Whitehorse	83.26	334	eP		P	09 27 03.0 -0.1
	comp=Z,9.7nm,0.8s						
DSB	Dublin	83.58	34	eP		P	09 27 05.6 +0.9
	comp=Z,35nm,0.6s						
RES	Resolute Bay	83.62	355	eP		P	09 27 04.7 +0.2
	comp=Z,23nm,0.8s						
RES	Resolute Bay	83.62	355	eP		P	09 27 04.7 +0.2
RES				pmax	pmax		
	comp=Z,23nm,0.8s						
SUMG	Summit	83.79	10	eP		P	09 27 05.8 -0.1
	comp=Z,60nm,0.7s						
SUMG	Summit	83.79	10	eP		P	09 27 05.8 -0.1
SUMG				pmax	pmax		
	comp=Z,60nm,0.7s						
SUMG	Summit	83.79	10	i P		P	09 27 06.6 +0.7
SUMG				i			09 27 13.1
TAM	Tamanrasset	83.81	66	eP		P	09 27 08.0 +1.1
	comp=Z,32nm,0.7s						
TAM	Tamanrasset	83.81	66	eP		P	09 27 08.0 +1.1
TAM				pmax	pmax		
	comp=Z,32nm,0.7s						
HYT	Haines Junctio	84.47	334	eP		P	09 27 10.3 +1.0
	comp=Z,11nm,0.8s						
TULEG	Thule	84.57	1	eP		P	09 27 09.5 +0.2
	comp=Z,54nm,0.7s						
MFF	Saint Martin d	85.12	42	eP		P	09 27 12.9 +0.2
MFF				pmax	pmax		
	comp=Z,71nm,0.8s						
LFF	La Frestale	85.23	44	eP		P	09 27 13.5 +0.2
LFF				pmax	pmax		
	comp=Z,110nm,0.6s						
ESK	Eskdalemuir	86.07	33	eP		P	09 27 17.5 +0.3
	comp=Z,24nm,0.8s						
ESK	Eskdalemuir	86.07	33	eP		P	09 27 17.5 +0.3
ESK				pmax	pmax		
	comp=Z,24nm,0.8s						
CAF	Calviac	86.13	44	eP		P	09 27 18.1 +0.3
CAF				pmax	pmax		
	comp=Z,45nm,0.6s						
CTGM	Chitina Glacie	86.22	333	eP		P	09 27 17.7 -0.3
	comp=Z,42nm,1.1s						
INK	Inuvik	86.67	341	eP		P	09 27 19.9 +0.1
	comp=Z,27nm,0.8s						
INK				epP		pP	09 27 58.6 +0.3
INK	Inuvik	86.67	341	eP		P	09 27 19.9 +0.1
INK				e*PP		pP	09 27 58.6 +0.3
INK				pmax	pmax		
	comp=Z,27nm,0.8s						
BALM	Baldy	86.70	333	eP		P	09 27 20.1 -0.2
	comp=Z,27nm,0.8s						
BALM	Baldy	86.70	333	eP		P	09 27 20.1 -0.2
BALM				pmax	pmax		
	comp=Z,27nm,0.8s						
EPYK	Eagle Plains	86.77	339	eP		P	09 27 20.1 -0.3
	comp=Z,20nm,0.9s						
EPYK				epP		pP	09 27 59.6 +0.8
EPYK	Eagle Plains	86.77	339	P		P	09 27 20.2 -0.2
	baz=118						
CLF	Chambon-Foret	87.09	41	eP		P	09 27 21.8 -0.5
	comp=Z,40nm,0.7s						
CLF				epP		pP	09 28 01.2 +0.4
KIP	Kipapa	87.15	292	‖ i P		P	09 27 21.4 -1.8
KIP				pmax	pmax		
	comp=Z,54nm,1.3s						
HMT	Hamilton	87.31	332	eP		P	09 27 23.3 +0.1
	comp=Z,71nm,1.0s						
HMT				epP		pP	09 28 01.8 +0.2
SSF	Saint Saulge	87.65	42	eP		P	09 27 25.3 +0.3
SSF				pmax	pmax		
	comp=Z,9.0nm,0.5s						
EGAK	Eagle	87.71	337	eP		P	09 27 24.9 0.0
	comp=Z,31nm,0.9s						
EGAK				epP		pP	09 28 04.2 +0.7
SSB	Saint Sauveur	87.92	44	eP		P	09 27 27.1 +0.7
	comp=Z,14nm,0.8s						
SSB				epP		pP	09 28 05.0 0.0
SSB	Saint Sauveur	87.92	44	eP		P	09 27 27.1 +0.7
SSB				e*PP		pP	09 28 05.0 0.0
SSB				pmax	pmax		
	comp=Z,14nm,0.8s						
SBA	Scott Base	87.97	191	eP		P	09 27 27.4 +1.4
	comp=Z,60nm,1.0s						
SBA	Scott Base	87.97	191	eP		P	09 27 27.4 +1.4
SBA				pmax	pmax		
	comp=Z,60nm,1.0s						
EYAK	Cordova Ski Ar	88.08	332	eP		P	09 27 27.0 +0.4
	comp=Z,23nm,0.8s						
DIV	Divide	88.29	333	eP		P	09 27 27.6 -0.2
	comp=Z,60nm,0.8s						
DOT	Dot Lake	88.44	335	eP		P	09 27 28.5 +0.1
	comp=Z,42nm,0.7s						
HARP	HAARP	88.45	334	eP		P	09 27 28.1 -0.4
	comp=Z,26nm,0.7s						
PAX	Paxson	88.79	334	eP		P	09 27 29.7 -0.5
	comp=Z,36nm,0.8s						
PAX	Paxson	88.79	334	eP		P	09 27 29.7 -0.5
PAX				pmax	pmax		
	comp=Z,36nm,0.8s						
RIDG	Independent Ri	88.80	335	eP		P	09 27 30.0 -0.1
	comp=Z,53nm,1.0s						
GLI	Glacier Island	88.81	332	eP		P	09 27 29.4 -0.8
	comp=Z,40nm,0.8s						
VNDA	Vanda	89.04	190	P		P	09 27 31.8 +0.8
	comp=Z,27nm,0.7s,baz=129,slow=4.4,SNR=180						
VNDA	Vanda	89.04	190	eP		P	09 27 32.6 +1.6
	comp=Z,40nm,0.9s						
DOU	Dourbes	89.09	39	P		P	09 27 32.4 +0.7
DOU				x	x		09 27 36.4
DOU				pP		pP	09 28 10.4 0.0
TSUM	Tsumeb	89.11	109	eP		P	09 27 33.8 +1.1
	comp=Z,29nm,0.8s						
SCM	Sheep Creek Mo	89.22	333	eP		P	09 27 32.3 +0.1
	comp=Z,43nm,0.8s						
SCM	Sheep Creek Mo	89.22	333	eP		P	09 27 32.3 +0.1
SCM				pmax	pmax		
	comp=Z,43nm,0.8s						
BMRD	Maredsous	89.25	39	P		P	09 27 33.0 +0.6
BMRD				x	x		09 27 36.5
BMRD				pP		pP	09 28 11.1 0.0
BNI	Bardonecchia	89.34	44	eP		P	09 27 33.4 +0.2

SML Sawmill 89.67 333 *e*P **P 09 27 34.0 -0.2**
comp=Z,94nm,0.6s
SML Sawmill 89.67 333 *e*P **P 09 27 34.0 -0.2**
SML pmax pmax
comp=Z,94nm,0.6s
SEW Seward 89.68 331 *e*P **P 09 27 33.4 -0.9**
comp=Z,30nm,0.8s
HDA Harding Lake 89.90 336 *e*P **P 09 27 34.4 -0.8**
comp=Z,28nm,0.9s
HDA Harding Lake 89.90 336 P **P 09 27 34.8 -0.3**
baz=109
GHO Glory Hole Cre 89.93 333 *e*P **P 09 27 34.8 -0.7**
comp=Z,42nm,0.8s
PMR Palmer 89.97 333 *e*P **P 09 27 35.0 -0.5**
comp=Z,20nm,1.1s
PMR Palmer 89.97 333 *e*P **P 09 27 35.0 -0.5**
PMR pmax pmax
comp=Z,20nm,1.1s
WLF Walferdange 89.98 40 *e*P **P 09 27 36.8 +0.9**
comp=Z,171nm,0.8s
WLF Walferdange 89.98 40 x P 09 27 40.9 +5.1
WLF pP pP 09 28 13.9 -0.6
ILAR Eielson Array 89.99 336 P **P 09 27 35.2 -0.4**
comp=Z,9.2nm,0.8s,baz=137,slow=3.2,SNR=74
ILAR pP **pP 09 28 14.7 +0.4**
comp=Z,10nm,1.0s,baz=112,slow=4.3,SNR=5.5
ILAR S **SKSac 09 37 47.8 -4.1**
comp=Z,0.4nm,0.9s,baz=90,slow=2.1,SNR=3.3
ILAR PKKPbc **PKKPdf 09 45 04.8 0.0**
comp=Z,0.7nm,0.5s,baz=299,slow=3.5,SNR=7.9
ILB Eielson Array 89.99 336 *e*P **P 09 27 35.4 -0.2**
comp=Z,14nm,0.7s
ILB *e*pP **pP 09 28 13.5 -0.7**
ILB *e*PKKPdf **PKKPdf 09 45 04.8 0.0**
BHOU Houvegnez 90.03 39 x **P 09 27 40.2 +4.1**
BHOU pP **pP 09 28 14.2 -0.7**
SENIN Lac Senin/Sane 90.04 43 *e*P **P 09 27 37.2 +0.7**
comp=Z,19nm,0.8s
LKLB Kalborn 90.04 39 x P 09 27 41.0 +4.8
MEM Membach 90.09 39 x **P 09 27 40.6 +4.3**
MEM x x 09 27 40.8
RC01 Rabbit Creek A 90.10 332 *e*P **P 09 27 36.6 +0.4**
comp=Z,32nm,0.8s
BRLK Bradley Lake 90.28 331 *e*P **P 09 27 36.9 -0.2**
comp=Z,65nm,1.2s
BRLK *e*pP **pP 09 28 15.3 -0.4**
ECH Echery 90.32 41 *e*P **P 09 27 38.2 +0.7**
comp=Z,36nm,0.9s
ECH *e*pP **pP 09 28 14.5 -1.7**
POKR Poker Plat Res 90.33 336 P **P 09 27 37.4 +0.2**
baz=109
CCB Clear Creek Bu 90.33 336 *e*P **P 09 27 36.9 -0.2**
comp=Z,20nm,0.8s
WRH Wood River Hil 90.39 335 *e*P **P 09 27 37.9 +0.5**
comp=Z,19nm,0.8s
COLA College 90.42 336 *e*P **P 09 27 37.8 +0.3**
comp=Z,76nm,1.1s
COLA *e*pP **pP 09 28 17.0 +0.8**
COLA College 90.42 336 *e*P **P 09 27 37.8 +0.3**
COLA *e**PP **pP 09 28 17.0 +0.8**
COLA pmax pmax
comp=Z,76nm,1.1s
TCOL CIGO, UAF Yank 90.42 336 P **P 09 27 37.4 -0.2**
baz=108
DAG Danmarks Havn 90.44 11 ||*i*P **P 09 27 37.4 -0.1**
DAG *e* 09 28 15.0
DAG pmax pmax
comp=Z,12nm,0.9s
DAG Danmarks Havn 90.44 11 ||*i*P **P 09 27 37.4 -0.1**
comp=Z,14nm,0.9s
DAG *i* 09 27 44.6
DAG *e* 09 28 15.0
MDM Murphy Dome 90.60 336 *e*P **P 09 27 38.5 0.0**
comp=Z,82nm,1.2s
MDM *e*pP **pP 09 28 17.6 +0.4**
HOM Homer 90.62 330 *e*P **P 09 27 39.0 +0.4**
comp=Z,54nm,1.0s
KDAK Kodiak Island 90.62 328 *e*P **P 09 27 38.7 +0.1**
comp=Z,46nm,0.7s
KDAK Kodiak Island 90.62 328 *e*P **P 09 27 38.7 +0.1**
KDAK pmax pmax
comp=Z,46nm,0.7s
SUA Susitna One 90.67 332 *e*P **P 09 27 39.0 0.0**
comp=Z,29nm,0.6s
SYO Syowa Base 90.78 161 ||*i*P **P 09 27 38.6 -0.6**
SYO Syowa Base 90.78 161 ||*i*PcP **PcP 09 27 40.5 +0.3**
SYO Syowa Base 90.78 161 ||*i*pP pP 09 28 18.9 +1.0
OHAK Old Harbor 90.86 328 *e*P **P 09 27 39.4 -0.3**
comp=Z,70nm,0.7s
BWN Browne 90.87 335 *e*P **P 09 27 40.0 +0.3**
comp=Z,87nm,1.1s
BFO Black Forest 91.11 41 *e*P **P 09 27 41.1 -0.1**
comp=Z,11nm,0.8s
BFO Black Forest 91.11 41 *e*P **P 09 27 41.1 -0.1**
BFO pmax pmax
comp=Z,11nm,0.8s
SII Sitkinak Islan 91.19 327 *e*P **P 09 27 41.4 0.0**
comp=Z,54nm,0.8s
SPU Mount Spurr 91.21 332 *e*P **P 09 27 40.9 -0.5**
RSO Redoubt South 91.36 331 *e*P **P 09 27 41.9 -0.4**
TUE Stuetta 91.45 43 *e*P **P 09 27 42.7 -0.4**
comp=Z,29nm,0.8s
BPAW Bear Paw Mtn. 91.49 335 *e*P **P 09 27 42.2 -0.4**
comp=Z,38nm,0.8s
BPAW *e*pP **pP 09 28 21.3 0.0**
MLY Manley 91.64 336 *e*P **P 09 27 42.8 -0.6**
comp=Z,16nm,1.0s
MLY *e*pP **pP 09 28 21.7 -0.3**
STU Stuttgart 91.76 41 *e*P **P 09 27 45.5 +1.3**
comp=Z,38nm,0.6s
STU Stuttgart 91.76 41 *e*P **P 09 27 45.5 +1.3**
STU pmax pmax
comp=Z,38nm,0.6s
VLC Villacollemand 91.78 46 *e*P **P 09 27 48.4 +4.0**
comp=Z,23nm,0.8s
VLC *e*pP **pP 09 28 22.4 -0.8**
CAST Castle Rocks 91.79 334 *e*P **P 09 27 43.3 -0.7**
comp=Z,37nm,1.0s
CAST *e*pP **pP 09 28 22.4 -0.3**
DAVA Damuels 91.95 43 *e*PcP **P 09 27 47.1 +1.8**
comp=Z,4.7nm,0.7s,SNR=14
COLD Coldfoot 92.03 338 *e*P **P 09 27 45.9 +0.9**
comp=Z,12nm,0.9s
FUORN Ofenpass-Fuorn 92.10 43 *e*P **P 09 27 47.6 +1.5**
comp=Z,31nm,0.6s
TOLK Toolik Lake Re 92.20 339 *e*P **P 09 27 45.5 -0.4**
comp=Z,12nm,0.8s
TOLK Toolik Lake Re 92.20 339 P **P 09 27 45.8 -0.1**
baz=107
FETA Feichten 92.48 43 *e*PcP **P 09 27 50.0 +2.2**
comp=Z,14nm,0.8s,SNR=9.7
RETA Reutte 92.58 43 *e*PcP **P 09 27 50.0 +2.0**
comp=Z,2.4nm,0.6s,SNR=8.3
MOTA Moosalm 92.78 43 *e*PcP **P 09 27 50.7 +1.6**
comp=Z,5.4nm,0.6s,SNR=13
SQTA Sankt Quirin 92.83 43 *e*PcP **P 09 27 51.1 +1.8**
comp=Z,7.3nm,0.5s,SNR=11
SVW2 Sparrevohn 92.86 331 *e*P **P 09 27 47.6 -1.3**
comp=Z,12nm,0.9s
WATA Walderalm 93.10 43 *e*PcP **P 09 27 55.2 +4.6**
comp=Z,19nm,0.5s,SNR=8.1
WTTA Wattenberg 93.13 43 *e*PcP **P 09 27 52.7 +1.9**
comp=Z,6.7nm,0.7s,SNR=22
ABTA Abfaltersbach 93.65 43 *e*PcP **P 09 27 54.9 +1.8**
comp=Z,41nm,0.7s,SNR=26
KBA Koelnbreinsper 94.26 43 *e*PcP **P 09 27 57.5 +1.5**
comp=Z,7.4nm,0.9s,SNR=9.4
MYKA Terra Mystica 94.40 44 *e*PcP **P 09 27 58.2 +1.7**
comp=Z,17nm,0.6s,SNR=8.2
BOSA Boshof 94.44 120 P **P 09 27 58.1 +1.0**
baz=282,slow=4.1,SNR=7.6
SDPT Sand Point 94.45 325 *e*P **P 09 27 56.3 -0.1**
comp=Z,39nm,0.7s
CLL Collm 94.57 39 *i* (P) **P 09 28 01.7 +4.7**
comp=Z,4.0nm,0.7s
CLL *i* pP **pP 09 28 38.0 +2.2**
CLL L L 10 45 00.0
comp=Z,100nm,21.7s
CLL Collm 94.57 39 *i* P **P 09 28 01.7 +4.7**
CLL pmax pmax
comp=Z,4.0nm,0.7s
NBO00 NORSAR Array S 94.64 29 *e*P **P 09 27 56.2 -0.9**
comp=Z,36nm,1.0s
NAO01 NORSAR Array S 94.67 29 *e*P **P 09 27 56.4 -0.9**
comp=Z,21nm,0.8s
KHC Kasperske Hory 94.67 41 *e*P **P 09 27 56.4 -1.2**
comp=Z,1.9nm,0.8s
KHC Kasperske Hory 94.67 41 *e*P **P 09 28 01.9 +4.3**
KHC *e* 09 38 19.6
KHC Kasperske Hory 94.67 41 *e*P **P 09 28 01.9 +4.3**
KHC *e*SKS **SKSac 09 38 19.6 +0.9**
NC204 NORSAR Array S 94.67 29 *e*P **P 09 27 56.8 -0.6**
comp=Z,25nm,0.9s
GEC2 GERESS Array S 94.71 41 *e*P **P 09 27 57.1 -0.8**
comp=Z,5.0nm,0.8s
GEC2 GERESS Array S 94.71 41 *e*P **P 09 27 57.1 -0.8**
GEC2 pmax pmax
comp=Z,5.0nm,0.8s
GERES GERESS Array B 94.71 41 P **P 09 27 59.2 +1.3**
comp=Z,3.2nm,0.7s,baz=242,slow=2.9,SNR=21
GERES PKKPbc **PKKPdf 09 44 54.9 -1.2**
comp=Z,2.3nm,0.5s,baz=77,slow=2.9,SNR=12
CRNS Crni Vrh 94.77 44 *e*P **P 09 27 59.4 +1.3**
CRNS *i* 09 28 03.0
CEY Cerknica 94.84 45 *e*P **P 09 28 00.2 +1.7**
CEY *i* 09 28 03.3
NB2 NORSAR Subarra 94.85 29 P **P 09 27 59.2 +1.0**
comp=Z,10nm,0.8s,baz=262,slow=4.6
NB2 NORSAR Subarra 94.85 29 P **P 09 27 59.2 +1.0**
baz=262,slow=4.6
NB200 NORSAR Array S 94.85 29 *e*P **P 09 27 59.8 +1.6**
NB200 *e*pP **pP 09 28 35.7 -1.3**
NB200 *e*PKKPdf **PKKPdf 09 44 53.6 -2.4**
NOA NORSAR Array B 94.85 29 P **P 09 27 59.8 +1.6**
comp=Z,7.8nm,0.8s,baz=258,slow=4.6,SNR=11
NOA pP **pP 09 28 35.7 -1.3**
comp=Z,7.6nm,1.1s,baz=258,slow=4.5,SNR=4.0
NOA PKKPbc **PKKPdf 09 44 53.6 -2.4**
comp=Z,2.2nm,0.8s,baz=257,slow=2.9,SNR=6.4
NB201 NORSAR Array S 94.89 29 *e*P **P 09 27 56.3 -2.0**
comp=Z,28nm,1.0s
NC303 NORSAR Array S 94.95 29 *e*P **P 09 27 58.6 +0.1**
comp=Z,41nm,1.0s
MOA Molln 94.97 43 *i* PcP **P 09 28 00.9 +1.9**
comp=Z,6.3nm,0.9s
OBKA Obir 95.01 44 *e*PcP **P 09 28 01.0 +1.7**
comp=Z,6.2nm,0.9s,SNR=8.9
NC405 NORSAR Array S 95.10 29 *e*P **P 09 27 58.9 -0.4**
comp=Z,25nm,0.8s
BRG Berggiesshubel 95.10 39 *e*P P 09 28 04.7 +5.2
comp=Z,11nm,1.2s
BRG Berggiesshubel 95.10 39 *e*PKP 09 44 54.4
comp=Z,3.8nm,0.8s
comp=N,127nm,17.5s
comp=E,113nm,16.7s
comp=Z,253nm,18.4s
BRG Berggiesshubel 95.10 39 *e*P P 09 28 04.7 +5.2
BRG pmax pmax
comp=Z,14nm,1.2s
SOKA Soboth 95.36 44 *e*PcP **P 09 28 02.0 +1.1**
comp=Z,3.4nm,0.7s
PRU Pruhonice 95.39 40 *e*P P 09 28 05.9 +5.1
PRU *e* 09 38 24.0
PRU Pruhonice 95.39 40 *e*P P 09 28 05.9 +5.1
PRU *ex* x 09 28 08.9
PRU *e*SKS **SKSac 09 38 24.0 +1.7**
PERS Pernice 95.42 44 *i* P **P 09 28 02.4 +1.3**
LBTB Lobatse 95.45 116 *e*P **P 09 28 01.2 -0.7**
comp=Z,21nm,0.9s
LBTB Lobatse 95.45 116 *e*P **P 09 28 01.2 -0.7**
LBTB pmax pmax
comp=Z,21nm,0.9s
GOPC GO Pecny, Ondr 95.54 40 *e*P **P 09 28 06.2 +4.7**
GOPC *e* 09 38 23.9
GOPC GO Pecny, Ondr 95.54 40 *e*P **P 09 28 06.2 +4.7**
GOPC *e*SKS **SKSac 09 38 23.9 +0.7**
ARSA Arzberg 95.75 43 *e*PcP **P 09 28 04.2 +1.6**
comp=Z,23nm,0.7s,SNR=8.5
CONA Conrad Observa 96.05 43 *e*PcP **P 09 28 05.9 +1.9**
comp=Z,20nm,0.8s,SNR=10
UPC Upice 96.38 40 *e*P P 09 28 10.2 +4.9
UPC *e* 09 38 30.3
UPC Upice 96.38 40 *e*P P 09 28 10.2 +4.9
UPC *e*SKS **SKSac 09 38 30.3 +2.8**
CHVC Chvalec 96.41 40 *e*P **P 09 28 08.8 +3.3**
KRUC Moravsky 96.50 41 *e*P **P 09 28 06.1 +0.2**
OSTC Ostas 96.51 40 *e*P **P 09 28 07.3 +1.4**
OSTC *ex* x 09 28 11.6
BEHE Becsehely 96.54 44 ⇑EP P 09 28 11.0 +4.9
DPC Dobruska-Polom 96.56 40 *e*P **P 09 28 09.2 +3.0**
DPC *e* 09 38 25.0
DPC Dobruska-Polom 96.56 40 *e*P **P 09 28 09.2 +3.0**
DPC *ex* x 09 28 11.6
DPC *e*SKS **SKSac 09 38 25.0 -3.6**
KSP Ksiaz 96.58 40 *e*P P 09 28 11.9 +5.6
KSP Ksiaz 96.58 40 *e*P P 09 28 11.9 +5.7
VRAC Vranov 96.65 41 ⇑*i*P **P 09 28 08.7 +2.1**
VRAC Vranov 96.65 41 ⇑P **P 09 28 08.7 +2.1**
VRAC Vranov 96.65 41 *e*P **P 09 28 06.6 0.0**
BLY Banja Luka 96.68 46 *e*P **P 09 28 04.0 -2.8**
comp=Z,27nm,1.3s
BLY Banja Luka 96.68 46 ⇑*i*P **P 09 28 11.5 +4.7**
ZST Bratislava 96.90 42 *e*P **P 09 28 11.7 +4.0**
ZST Bratislava 96.90 42 *e*P **P 09 28 11.7 +4.0**
MODS Modra-Piesok 97.03 42 *e*P Pdif 09 28 12.7 +4.3
MODS Modra-Piesok 97.03 42 *e*P Pdif 09 28 12.7 +4.3
MORC Moravsky Berou 97.30 41 *e*P **P 09 28 09.3 -0.3**
comp=Z,8.4nm,0.9s
MORC Moravsky Berou 97.30 41 ⇑*i*P Pdif 09 28 11.4 +1.8
MORC Moravsky Berou 97.30 41 *e*P **P 09 28 09.3 -0.3**
MORC pmax pmax
comp=Z,8.0nm,0.9s
MORC Moravsky Berou 97.30 41 *e*P **P 09 28 09.5 -0.1**
JAVC Velka Javorina 97.32 42 *e*P Pdif 09 28 10.3 +0.5
TIH Tihany 97.34 44 EP Pdif 09 28 15.0 +5.2
GKP Gorka Klasztor 97.34 37 *e*P Pdif 09 28 15.9 +6.3
GKP Gorka Klasztor 97.34 37 *e*P Pdif 09 28 15.9 +6.3
CSKK Cskako 97.62 43 EP Pdif 09 28 15.1 +4.0
SPITS Spitsbergen Ar 98.02 12 PKKPbc PKKPbc 09 44 44.0 -4.5
comp=Z,3.7nm,0.5s,baz=113,slow=6.4,SNR=8.1
VYHS Vyhne 98.07 42 *e*P Pdif 09 28 18.0 +5.0
VYHS Vyhne 98.07 42 *e*PDIF Pdif 09 28 18.0 +5.0
MAW Mawson 98.55 165 P Pdif 09 28 15.3 +0.6
comp=Z,12nm,1.0s,baz=222,slow=6.4,SNR=21
MAW PKKPbc **PKKPbc 09 44 41.3 -5.2**
comp=Z,0.5nm,0.4s,baz=110,slow=2.1,SNR=10
MAW Mawson 98.55 165 *e*P Pdif 09 28 15.4 +0.7
comp=Z,5.5nm,1.3s
PSZ Piszkesteto 98.75 43 *e*P **P 09 28 13.5 -2.7**
comp=Z,7.8nm,1.0s
PSZ Piszkesteto 98.75 43 ⇑*i*P Pdif 09 28 19.0 +2.8
PSZ Piszkesteto 98.75 43 *e*P **P 09 28 13.5 -2.7**
PSZ pmax pmax
comp=Z,8.0nm,1.0s
PSZ Piszkesteto 98.75 43 EP Pdif 09 28 19.0 +2.9
OJC Ojcow 98.78 40 *e*P Pdif 09 28 22.0 +5.8
OJC Ojcow 98.78 40 *e*P **P 09 28 15.0 -1.1**
comp=Z,12nm,0.9s
OJC Ojcow 98.78 40 *e*P **P 09 28 15.0 -1.1**
OJC pmax pmax
comp=Z,12nm,0.9s
BZS Buzias 99.86 45 ⇑*i*P **Pdif 09 28 25.1 +4.1**
BZS Buzias 99.86 45 ⇑P **Pdif 09 28 25.1 +4.1**
MDVR Moldovita 99.90 46 ⇑*i*P **Pdif 09 28 26.4 +5.1**
TRPA Tarpa 100.53 43 ⇑*i*P **Pdif 09 28 28.7 +4.8**
ARCES ARCESS Array B 100.98 21 P **Pdif 09 28 26.3 +0.8**
comp=Z,2.0nm,0.5s,baz=270,slow=4.1,SNR=29
ARCES pP **pPdif 09 29 04.0 -0.3**
comp=Z,5.6nm,0.9s,baz=302,slow=2.3,SNR=4.7
ARCES PKKPbc **PKKPbc 09 44 36.8 -3.1**
comp=Z,2.1nm,0.4s,baz=100,slow=3.9,SNR=15
ARCES PKKPab PKKPdf 09 45 00.8 +16
comp=Z,1.7nm,0.5s,baz=90,slow=4.9,SNR=5.1
ARR Arges 101.98 45 ⇑*i*P **Pdif 09 28 36.0 +5.4**
FIA0 FINESS Array S 102.03 29 *e*Pdif **Pdif 09 28 30.8 +0.5**
FIA0 *e*PKKPbc **PKKPbc 09 44 33.9 -2.6**
FIA0 FINESS Array S 102.03 29 *e*P **Pdif 09 28 30.8 +0.5**
FINES FINESS Array B 102.03 29 P **Pdif 09 28 30.8 +0.5**
comp=Z,2.0nm,1.0s,baz=264,slow=8.2,SNR=2.6
FINES PKKPbc **PKKPbc 09 44 33.9 -2.6**
comp=Z,3.1nm,0.6s,baz=90,slow=3.8,SNR=10
VOIR 102.27 45 ⇑*i*P **Pdif 09 28 36.2 +4.3**
VOIR 102.27 45 ⇑P **Pdif 09 28 36.2 +4.3**
BURAR Bucovina Array 102.34 43 ⇑*i*P **Pdif 09 28 38.4 +6.2**
BURAR Bucovina Array 102.34 43 ⇑P **Pdif 09 28 38.4 +6.2**
MLR Muntele Rosu 102.90 45 ⇑*i*P **Pdif 09 28 39.9 +5.2**
MLR Muntele Rosu 102.90 45 ⇑P **Pdif 09 28 39.9 +5.2**
BIZ Bicaz 102.97 44 ⇑*i*P **Pdif 09 28 41.0 +6.2**
AKASG Malin Array Be 104.78 40 PKiKP **PKiKP 09 32 57.3 -0.1**
comp=Z,0.4nm,0.3s,baz=270,slow=3.7,SNR=3.7
AKASG PKKPbc **PKKPbc 09 44 26.2 -1.7**
comp=Z,6.5nm,0.7s,baz=73,slow=3.4,SNR=16
AKBB Malin Array Si 104.78 40 *e*PKiKP **PKiKP 09 32 57.3 -0.1**
AKBB *e*PKKPbc **PKKPbc 09 44 26.2 -1.7**
BILL Bilibino 108.24 340 *i* P **Pdif 09 28 57.2 -0.6**
BILL *e* 09 33 29.7
BILL pmax pmax
comp=Z,1.0nm,1.0s
OBN Obninsk 108.49 34 *i* P **Pdif 09 29 00.7 +1.6**
OBN *e* 09 33 32.5
OBN pmax pmax
comp=Z,2.0nm,0.8s
BR101 Keskin Array S 108.91 51 *e*Pdif **Pdif 09 29 00.1 -1.5**
BR101 *e*PKiKP **PKiKP 09 33 05.3 -0.3**
BR101 *e*PKKPbc **PKKPbc 09 44 13.6 -1.4**
BRTR Keskin Array B 108.91 51 Pdiff **Pdif 09 29 00.1 -1.5**
comp=Z,0.2nm,0.6s,baz=330,slow=7.5,SNR=2.6
BRTR PKiKP **PKiKP 09 33 05.3 -0.3**
comp=Z,1.0nm,0.8s,baz=207,slow=1.4,SNR=4.7
BRTR PKKPbc **PKKPbc 09 44 13.6 -1.4**
comp=Z,1.0nm,0.6s,baz=128,slow=6.0,SNR=5.3
VSR Storozhevoye 110.90 38 *i* PKiKP **PKiKP 09 33 08.4 -0.4**
KMBO Kilima Mbogo 111.13 94 PKKPbc PKKPbc 09 44 06.2 -0.8
comp=Z,1.4nm,0.4s,baz=62,slow=3.6,SNR=3.7
ASF Jabal al Asfar 112.18 59 PKKPbc PKKPbc 09 44 13.6 +10
comp=Z,0.8nm,0.4s,baz=358,slow=4.5,SNR=4.5
KIV Kislovodsk 114.91 45 *i* PKiKP PKPdf 09 33 17.4 +0.6
KIV pmax pmax
comp=Z,18nm,1.0s
TIXI Tiksi 114.92 352 PKKPbc PKKPbc 09 43 52.6 -3.3
comp=Z,4.2nm,0.7s,baz=112,slow=1.8,SNR=9.8
KBZ Khabaz 115.11 45 PKP **PKPdf 09 33 17.4 +0.4**
comp=Z,8.9nm,0.8s,baz=220,slow=3.3,SNR=20
KBZ pPKP **pPKiKP 09 33 58.3 +0.8**
comp=Z,5.5nm,0.8s,baz=345,slow=1.1,SNR=4.5
KBZ SKP 09 36 39.5
comp=Z,2.7nm,0.8s,baz=219,slow=3.3,SNR=4.3
KBZ PKKPbc **PKKPbc 09 43 53.3 -1.0**
comp=Z,2.2nm,0.8s,baz=129,slow=2.3,SNR=5.0
SEY Seymchan 115.82 338 PKP **PKiKP 09 33 17.6 -0.3**
comp=Z,2.8nm,0.7s,baz=90,slow=4.0,SNR=5.2
SEY Seymchan 115.82 338 ||*i*PKiKP **PKiKP 09 33 17.7 -0.2**
GNI Garni 117.27 49 ||*i*PKiKP **PKiKP 09 33 22.5 +0.9**
GNI pmax pmax
comp=Z,24nm,0.7s
NRIK Noril'sk 117.71 7 PKKPbc PKKPbc 09 43 43.0 -3.0
comp=Z,5.0nm,0.6s,baz=194,slow=2.0,SNR=4.8
BTLR Botlikh 117.73 46 *i* PKiKP **PKiKP 09 33 22.4 +0.1**
MA2 Magadan 118.47 336 PKKPbc PKKPbc 09 43 44.4 +1.3
comp=Z,6.6nm,0.6s,baz=245,slow=3.6,SNR=5.5
PEA1 Petropavlovsk- 118.66 327 *e*PKPdf **PKPdf 09 33 23.3 -0.3**
PETK Petropavlovsk- 118.66 327 PKP **PKPdf 09 33 23.3 -0.3**
comp=Z,2.5nm,0.8s,baz=107,slow=7.9,SNR=3.9
AKT Akhty 119.13 47 *e*PKiKP **PKiKP 09 33 28.4 +3.3**
AKT *e* 09 34 06.7
AKT *e* 09 34 54.2
AKT *e*PPP PPP 09 37 21.4
AKT pmax pmax
comp=Z,6.0nm,0.7s
ARU Arti 119.38 28 *i* PKiKP **PKiKP 09 33 25.2 +0.2**
ARU 09 34 49.8
ARU 09 40 23.2
ARMA Armidale 121.64 227 *e*PKPdf **PKPdf 09 33 30.2 -0.1**
AKTO Aktyubinsk 122.27 34 PKiKP **PKiKP 09 33 30.8 0.0**
AKTO pmax pmax
comp=Z,11nm,0.7s
AB31 Akbulak array 123.94 34 *i* PKiKP **PKiKP 09 33 34.5 +0.3**
AB31 pmax pmax
comp=Z,14nm,0.6s
ABKAR Akbulak array 123.94 34 *e*PKPdf **PKiKP 09 33 34.8 +0.6**
BRVK Borovoye 126.78 26 *e*PKPdf **PKiKP 09 33 39.8 +0.1**
BRVK Borovoye 126.78 26 PKiKP **PKPdf 09 33 39.3 +0.1**
BRVK pmax pmax
comp=Z,7.0nm,0.6s
BVAR Borovoye Array 126.84 26 SKKPbc SKKPbc 09 46 31.9 -17
comp=Z,0.9nm,0.6s,baz=108,slow=4.6,SNR=4.3
STKA Stephens Creek 127.51 219 PKP **PKiKP 09 33 41.7 -0.2**
comp=Z,55nm,0.7s,baz=94,slow=1.9,SNR=108
STKA pPKP **pPKPdf 09 34 21.3 -0.5**
comp=Z,12nm,0.8s,baz=91,slow=5.5,SNR=2.8
STKA PP **PP 09 35 41.5 -1.4**
comp=Z,8.5nm,1.1s,baz=151,slow=5.6,SNR=3.9
STKA PKKP **PKKPdf 09 43 53.2 -0.6**
comp=Z,0.5nm,0.4s,baz=268,slow=2.2,SNR=2.8
GEYT Alibeck 127.86 48 PKP **PKiKP 09 33 42.6 +0.2**
comp=Z,8.7nm,0.7s,baz=256,slow=4.3,SNR=10
GEYT pPKP **pPKPdf 09 34 22.6 +0.3**
comp=Z,10.0nm,0.9s,baz=270,slow=4.4,SNR=2.6
BOD Bodaibo 130.00 354 *e*PKiKP **PKPdf 09 33 43.7 -1.5**
BOD *e* 09 34 26.5
BOD pmax pmax
comp=Z,7.0nm,1.5s
YUK Yuzh-Kuril'sk 130.02 323 ⇑*i*PKiKP **PKiKP 09 33 46.6 +0.1**
NVS Novosibirsk 130.06 17 *i* PKiKP **PKiKP 09 33 46.2 0.0**
YSS Yuzh-Sakhalins 130.06 327 *e*PKPdf **PKPdf 09 33 45.6 0.0**
YSS Yuzh-Sakhalins 130.06 327 *e*PKiKP **PKPdf 09 33 45.7 0.0**
YSS *e* 09 34 27.8
YSS pmax pmax
comp=Z,20nm,0.7s
BBOO Buckleboo 130.09 214 *e*PKPdf **PKPdf 09 33 46.5 +0.3**
CTA Charters Tower 131.26 234 PKP **PKPdf 09 33 49.1 +0.3**
comp=Z,175nm,1.4s,baz=105,slow=2.2,SNR=12
CTA SKPbc **SKPbc 09 36 58.5 -1.2**
comp=Z,7.8nm,0.9s,baz=124,slow=11,SNR=3.6
CTAO Charters Tower 131.26 234 *e*PKPdf **PKPdf 09 33 48.4 -0.3**
CTAO Charters Tower 131.26 234 *e*PKiKP **PKPdf 09 33 48.4 -0.3**
ZAA1 Zalesovo Array 131.28 16 *e*PKPdf **PKiKP 09 33 48.4 -0.3**
ZAA1 *ep*PKPdf **pPKPdf 09 34 29.8 +1.5**
ZAA1 *e*SKPbc **SKPbc 09 36 57.0 -1.7**
ZAA0 Zalesovo Array 131.29 16 *e*PKPdf **PKiKP 09 33 48.4 -0.3**
ZALV Zalesovo Beam 131.29 16 PKP **PKiKP 09 33 48.4 -0.3**
comp=Z,34nm,0.8s,baz=280,slow=2.7,SNR=25
ZALV pPKP **pPKPdf 09 34 29.8 +1.5**
comp=Z,47nm,0.9s,baz=298,slow=3.2,SNR=5.0
ZALV SKPbc **SKPbc 09 36 57.0 -1.7**
comp=Z,4.3nm,0.3s,baz=316,slow=5.5,SNR=4.8
ASAJ Asahikawa 131.90 325 PKP **PKPdf 09 33 49.1 -0.1**
comp=Z,20nm,1.0s,baz=278,slow=8.7,SNR=18
ASAJ SKPbc **SKPbc 09 36 59.5 -1.8**
comp=Z,6.1nm,0.9s,baz=322,slow=5.0,SNR=4.8
KURK Kurchatov 131.96 23 *e*PKPdf **PKiKP 09 33 49.8 -0.4**
KURK Kurchatov 131.96 23 PKiKP **PKPdf 09 33 49.1 0.0**
KURK pmax pmax
comp=Z,24nm,1.0s
KURBB Kurchatov Arra 131.99 23 SKPbc **SKPbc 09 37 00.9 -0.4**
comp=Z,8.6nm,0.9s,baz=312,slow=4.6,SNR=21
KURBB PKKPbc 09 42 49.0
comp=Z,0.6nm,0.6s,baz=139,slow=3.5,SNR=4.6
KURBB PKKP **PKKPdf 09 43 43.0 -2.7**
comp=Z,0.1nm,0.3s,baz=144,slow=2.2,SNR=4.0
KURBB SKKPbc SKKPbc 09 46 05.1 -26
comp=Z,0.9nm,0.9s,baz=131,slow=4.5,SNR=5.1
RABL Rabaul 132.09 257 *e*PKPdf **PKPdf 09 33 50.3 -0.2**
KK31 Karatay Array 133.47 36 *e*PKPdf **PKiKP 09 33 53.0 -0.5**
KK31 Karatay Array 133.47 36 *i* PKiKP **PKPdf 09 33 52.6 +0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 133.47 36 *e*PKPdf **PKiKP 09 33 53.0 -0.5**
KLR Kul'dur 133.56 337 PKP **PKPdf 09 33 51.5 -0.7**
comp=Z,7.4nm,0.6s,baz=102,slow=2.7,SNR=30
KLR pPKP **pPKPdf 09 34 33.6 +0.9**
comp=Z,4.7nm,0.6s,baz=52,slow=2.4,SNR=3.6
USP Ospenovka 135.58 33 P **PKiKP 09 33 57.9 0.0**
SNR=7.0
EKS2 Erkin-Say 135.59 34 P **PKiKP 09 33 58.2 +0.2**
SNR=14
FORT Forrest 135.79 208 *e*PKPdf **PKPdf 09 33 56.2 -0.8**
DGZ Jazzator, Alta 135.81 17 ||*i*PKiKP **PKiKP 09 33 58.1 -0.2**
AAK Ala-Archa 136.00 33 SKPbc **SKPbc 09 37 15.7 +0.7**
comp=Z,9.0nm,0.8s,baz=281,slow=4.6,SNR=14
AAK Ala-Archa 136.00 33 P **PKiKP 09 33 58.9 0.0**
SNR=7.7
AAK Ala-Archa 136.00 33 *e*PKPdf **PKiKP 09 33 58.7 -0.2**
AAK Ala-Archa 136.00 33 ⇑*i*PKiKP **PKiKP 09 33 59.2 +0.3**
AAK pmax pmax
comp=Z,15nm,1.0s
ARSB Arslanbob 136.01 36 *e*PKPdf **PKiKP 09 33 59.1 +0.2**
KBK Karagaybulak 136.24 33 P **PKiKP 09 33 59.0 -0.4**
SNR=6.4
UCH Uchtor 136.29 34 P **PKiKP 09 34 00.1 +0.3**
SNR=18
TKM2 Tokmak 2 136.40 32 P **PKiKP 09 33 59.4 -0.4**
SNR=10
TKM2 Tokmak 2 136.40 32 PKiKP **PKPdf 09 33 58.6 +0.6**
TKM2 pmax pmax

comp=Z,10.0nm,0.5s
MAKZ Makanchi 136.42 24 *e*PKPdf **PKPdf 09 33 57.8 +0.1**
MAKZ Makanchi 136.42 24 PKIKP **PKPdf 09 33 57.0 -0.7**
MAKZ pmax pmax
comp=Z,15nm,0.7s
TLY Talaya 136.53 2 *e*PKPdf **PKiKP 09 33 58.7 -0.8**
TLY Talaya 136.53 2⇑*i*PKIKP **PKiKP 09 33 59.2 -0.3**
MK31 Makanchi Array 136.56 23 *e*PKPdf **PKPdf 09 33 57.9 0.0**
MK31 Makanchi Array 136.56 23 *i*PKIKP **PKPdf 09 33 57.4 -0.5**
MK31 pmax pmax
comp=Z,7.0nm,0.5s
MK32 Makanchi Array 136.56 23 *e*PKPdf **PKPdf 09 33 57.8 -0.1**
MK32 *ep*PKPdf **pPKPdf 09 34 40.1 +1.7**
MK32 *e*SKPbc **SKPbc 09 37 16.6 +0.2**
MKAR Makanchi Array 136.56 23 PKP **PKPdf 09 33 57.8 -0.1**
comp=Z,11nm,0.7s,baz=292,slow=3.3,SNR=50
MKAR pPKP **pPKPdf 09 34 40.1 +1.7**
comp=Z,10nm,0.8s,baz=336,slow=2.7,SNR=5.2
MKAR SKPbc **SKPbc 09 37 16.6 +0.2**
comp=Z,6.5nm,1.0s,baz=321,slow=1.7,SNR=7.8
MKAR SKKPbc SKKPbc 09 45 35.6 -38
comp=Z,1.7nm,0.8s,baz=134,slow=6.2,SNR=7.3
KZA Kyzart 136.79 33 P **PKiKP 09 34 01.0 +0.1**
SNR=5.4
COEN Coen 136.85 240 *e*PKPdf **PKPdf 09 33 58.5 -0.8**
ULHL Ulahol 137.21 33 P **PKiKP 09 34 01.5 0.0**
SNR=9.0
USA0B Ussuriysk Arra 137.40 332 *e*PKPdf **PKPdf 09 33 59.1 -0.4**
USRK Ussuriysk Ar. 137.40 332 PKhKP PKPpre 09 33 46.5
comp=Z,2.4nm,0.8s,baz=305,slow=1.5,SNR=5.2
USRK PKP **PKPdf 09 33 57.5 -2.0**
comp=Z,9.7nm,0.9s,baz=198,slow=0.6,SNR=19
USRK pPKP pPKPdf 09 34 40.2 +0.2
comp=Z,8.3nm,1.0s,baz=48,slow=4.3,SNR=3.0
USRK SKPbc **SKPbc 09 37 18.4 -0.4**
comp=Z,3.2nm,0.7s,baz=37,slow=1.5,SNR=5.4
NRN Naryn 137.64 34 *e*PKPdf **PKPdf 09 34 01.3 +0.8**
NRN Naryn 137.64 34 *e*PKIKP **PKPdf 09 34 01.3 +0.8**
ZAK Zakamensk 137.82 2 *e*PKIKP **PKPdf 09 34 00.1 -0.2**
ZAK pmax pmax
comp=Z,7.0nm,1.0s
PDGK Podgornoye 138.07 29 PKIKP **PKPdf 09 34 00.5 -0.5**
PDGK pmax pmax
comp=Z,8.0nm,1.2s
AS31 Alice Springs 138.10 220 *e*PKPdf **PKPdf 09 34 01.4 -0.1**
AS31 *ep*PKPdf **pPKPdf 09 34 41.4 -0.6**
AS31 *e*PP **PP 09 36 47.9 -2.7**
AS31 *e*SKPbc **SKPbc 09 37 20.0 -1.7**
ASAR Alice Springs 138.10 220 PKhKP PKPpre 09 33 49.5
comp=Z,4.5nm,0.4s,baz=126,slow=3.3,SNR=29
ASAR PKP **PKPdf 09 34 01.6 +0.1**
comp=Z,46nm,0.6s,baz=121,slow=2.2,SNR=48
ASAR pPKP pPKPdf 09 34 41.4 -0.6
comp=Z,20nm,1.0s,baz=135,slow=2.0,SNR=2.3
ASAR PP **PP 09 36 47.9 -2.7**
comp=Z,4.2nm,0.9s,baz=127,slow=5.7,SNR=5.4
ASAR SKPbc **SKPbc 09 37 20.0 -1.6**
comp=Z,7.6nm,0.8s,baz=135,slow=3.0,SNR=6.1
ASAR PKKP **PKKPdf 09 43 39.2 +5.8**
comp=Z,0.5nm,0.9s,baz=333,slow=1.8,SNR=4.2
TARG Taragay, Kyrgy 138.40 32 *e*PKPdf **PKiKP 09 34 03.1 -1.0**
KSH Kashi 138.92 36 PKP **PKiKP 09 34 04.4 -0.5**
KSH PP PP 09 37 04.1 +8.4
KSH AMB AMB
comp=Z,190nm,6.2s
KSH LR LR
comp=Z,1μm,12.9s
KSH LR LR
comp=Z,1μm,18.3s
KSH LR LR
comp=Z,240nm,16.9s
MSHR Mys Shultsa 139.02 331⇓*i*PKIKP **PKiKP 09 34 03.7 -1.1**
MJAR Matsushiro Arr 139.09 319 PKhKP PKPpre 09 33 51.8
comp=Z,9.6nm,0.7s,baz=124,slow=0.7,SNR=7.4
MJAR SKPbc **SKPbc 09 37 23.3 -0.7**
comp=Z,4.6nm,1.0s,baz=86,slow=1.8,SNR=5.3
MAJO Matsushiro 139.09 319 *e*SKPdf **SKPdf 09 37 23.3 -0.3**
MAT Matsushiro 139.09 319 PKP **PKPdf 09 33 58.0 -4.9**
WB2 Warramunga Arr 140.36 225 *e*PKPdf **PKPdf 09 34 05.8 +0.1**
WRAB Tennant Creek 140.37 225 *e*PKPdf **PKPdf 09 34 05.5 -0.2**
WRAB Tennant Creek 140.37 225 *e*PKIKP **PKPdf 09 34 05.5 -0.2**
WR1 Warramunga Arr 140.37 225 *e*PKPpre PKPpre 09 33 58.6
WR1 *e*PKPdf **PKPdf 09 34 05.7 0.0**
WRA Warramunga Arr 140.37 225 PKhKP PKPpre 09 33 58.6
comp=Z,18nm,0.6s,baz=144,slow=2.1,SNR=113
WRA PKP **PKPdf 09 34 05.7 0.0**
comp=Z,99nm,0.5s,baz=150,slow=1.8,SNR=64
SONA0 Songino Array 140.41 359 *e*PKPpre PKPpre 09 33 57.9
SONA0 *ep*PKPdf pPKPdf 09 34 47.5 +1.9
SONM Songino Array 140.41 359 PKhKP PKPpre 09 33 57.9
comp=Z,2.1nm,0.5s,baz=338,slow=3.3,SNR=12
SONM pPKP pPKPdf 09 34 47.5 +1.9
comp=Z,9.8nm,0.8s,baz=37,slow=1.3,SNR=4.4
SONM SKKPbc SKKPbc 09 45 16.3 -43
comp=Z,1.6nm,0.9s,baz=158,slow=4.3,SNR=5.2
INU Inuyama 140.57 318 *e*PKPdf **PKPdf 09 34 05.6 0.0**
WMQ Urumqi 141.10 21 *e*PKP **PKPdf 09 34 06.9 +0.5**
WMQ LR LR
comp=Z,860nm,28.5s
WMQ LR LR
comp=Z,1μm,28.5s
WMQ LR LR
comp=Z,310nm,29.5s
JAY Jayapura 143.55 255 PKP PKPbc 09 34 09.0 -0.3
comp=Z,28nm,0.6s,baz=201,slow=7.9,SNR=14
KSRS Korea Array 144.53 329 PKP **PKPab 09 34 11.1 -0.2**
comp=Z,23nm,0.8s,baz=61,slow=3.5,SNR=132
KSRS pPKP **pPKPdf 09 34 52.0 -1.0**
comp=Z,17nm,0.8s,baz=29,slow=2.3,SNR=3.8
KSRS SKPbc **SKPbc 09 37 37.5 -0.1**
comp=Z,3.8nm,0.9s,baz=12,slow=2.7,SNR=4.9
KS15 Wonju Array Si 144.56 329 *e*PKPdf **PKPab 09 34 11.5 +0.1**
KS15 *ep*PKPdf **pPKPdf 09 34 52.0 -1.1**
KS15 *e*SKPbc **SKPbc 09 37 37.5 -0.2**
JNU Nakatsue 145.93 320 PKPbc **PKPdf 09 34 14.7 -0.5**
comp=Z,58nm,0.8s,baz=359,slow=1.2,SNR=57
JNU pPKPbc pPKPab 09 34 56.2 +0.1
comp=Z,19nm,0.8s,baz=86,slow=4.9,SNR=2.4
DL2 Dalian 146.17 337 PKPbc **PKPdf 09 34 15.6 +0.3**
DL2 pPKP pPKPab 09 34 57.2 +0.4
DL2 *e*PP **PP 09 37 46.0 +7.3**
DL2 AMB AMB
comp=Z,52nm,4.7s
BJI Beijing 146.86 345 *i*PKPbc **PKPdf 09 34 17.3 +0.9**
BJI pPKP pPKPab 09 34 59.5 +0.1
BJT Baijiatuau 146.89 345 *e*PKPdf **PKPbc 09 34 17.5 -1.0**
BJT Baijiatuau 146.89 345 *e*PKP2 **PKPbc 09 34 17.5 -1.0**
HHC Hu-ho-hao-te 146.99 352 *e*PKPbc **PKPbc 09 34 19.5 +0.5**
MTN Manton Dam 147.28 231 *e*PKPdf **PKPdf 09 34 18.1 +0.3**
MTN *e*PKPbc **PKPbc 09 34 20.7 +0.4**
FITZ Fitzroy Crossi 147.37 217 PKPbc **PKPdf 09 34 18.6 +0.7**
comp=Z,258nm,0.7s,baz=231,slow=1.3,SNR=122
FITZ Fitzroy Crossi 147.37 217 *e*PKPdf **PKPdf 09 34 17.7 -0.1**
FITZ *e*PKPbc **PKPbc 09 34 20.8 +0.3**
PSA00 Pilbara Seismi 147.41 205 *e*PKPdf **PKPdf 09 34 17.3 -0.6**
PSA00 *e*PKPbc **PKPbc 09 34 20.4 -0.1**
BTO Baotou 147.42 354 *e*PKPbc **PKPbc 09 34 19.6 -0.6**
GIRL Giralia 148.32 195 *e*PKPbc **PKiKP 09 34 24.1 -0.4**
GIRL *e*PKPab **PKPab 09 34 27.8 +1.5**
GTA Gaotai 148.39 9 *e*PKPbc **PKPdf 09 34 19.6 +0.4**
GTA PKPab **PKPab 09 34 29.4 +3.1**
GTA pPKP pPKPbc 09 35 02.0 -1.0
GTA sPKP 09 35 18.8
GTA SKKS 09 44 27.4
GTA SS **SS 09 56 52.8 +6.3**
GTA AMB AMB
comp=Z,82nm,12.7s
TIA Tai'an 150.16 341 PKPbc **PKPdf 09 34 22.6 +0.7**
PYUN Piuthan 150.74 44 *e*P **PKPdf 09 34 23.9 +0.6**
comp=Z,40nm,0.8s
DANN Dangsing 151.11 43 *e*P **PKPdf 09 34 24.9 +0.9**
comp=Z,72nm,0.8s
NGP Nagpur 151.18 60⇑*i*P **PKPdf 09 34 25.6 +1.7**
FAKI Fak Fak 151.36 249 *e*PKPdf **PKPdf 09 34 25.2 +0.8**
FAKI *e*PKPbc **PKiKP 09 34 31.2 +0.1**
KOLN Koldanda 151.37 44 *e*P **PKPdf 09 34 24.6 +0.3**
JOW Kunigami 151.65 314 PKPbc **PKPbc 09 34 31.1 +0.2**
comp=Z,5.6nm,0.8s,baz=143,slow=12,SNR=7.3
GKN Gorkha 151.93 43 *e*P **PKPdf 09 34 24.9 -0.2**
HYB Hyderabad 151.97 68 *i*PKP **PKPdf 09 34 21.0 -4.2**
LZH Lanzhou 152.10 3⇑PKPbc **PKiKP 09 34 33.3 +1.2**
LZH PKPbc **PKPab 09 34 46.5 +4.7**
LZH pPKP pPKPdf 09 35 02.6 -3.1
LZH sPKP 09 35 14.3
LZH Lanzhou 152.10 3⇑PKPbc **PKPdf 09 34 26.2 +1.1**
KKN Kakani 152.50 42 *eP* **PKPdf 09 34 26.4 +0.4**
DMN Daman 152.50 43 *eP* **PKPdf 09 34 26.4 +0.3**
PKIN Phulchoki 152.71 42 *eP* **PKPdf 09 34 26.3 -0.1**
comp=Z,22nm,0.9s
PKI Pulchoki 152.72 42 *eP* **PKPdf 09 34 26.5 0.0**
GUN Gumba 152.81 41 *eP* **PKPdf 09 34 27.1 +0.5**
JIRN Jiri 153.18 41 *eP* **PKPdf 09 34 27.4 +0.2**
NJ2 Nanjing 153.23 335 *e*PKPbc **PKPdf 09 34 26.4 -0.2**
RAMN Ramite 153.93 42 *eP* **PKPdf 09 34 28.6 +0.5**
comp=Z,72nm,0.7s
XAN Xi'an 154.03 354 PKPbc **PKPdf 09 34 28.0 +0.2**
XAN Xi'an 154.03 354 *e*PKPdf **PKPdf 09 34 27.0 -0.8**
XAN *e*PKPbc **PKPbc 09 34 36.0 0.0**
XAN *e*PKPab **PKPab 09 34 47.6 -2.2**
XAN Xi'an 154.03 354 *e*PKIKP **PKPdf 09 34 27.0 -0.8**
XAN *e* 09 34 47.6
SOEI Soe 154.39 226 *e*PKPbc **PKiKP 09 34 38.5 +1.1**
BATI Baumata 154.50 225 PKP **PKPdf 09 34 29.2 +0.2**
comp=Z,14nm,0.5s,baz=106,slow=7.4,SNR=2.0
BATI PKPbc **PKiKP 09 34 38.5 +1.0**
comp=Z,46nm,0.5s,baz=150,slow=4.1,SNR=5.7
BATI PKPab **PKPab 09 34 53.8 +1.4**
comp=Z,131nm,0.7s,baz=184,slow=1.9,SNR=11
BATI Baumata 154.50 225 *e*PKPdf **PKPdf 09 34 29.2 +0.2**
BATI *e*PKPdf **PKPdf 09 34 29.2 +0.2**
BATI *e*PKPbc **PKiKP 09 34 38.5 +1.0**
BATI *e*PKPbc **PKiKP 09 34 38.5 +1.0**
BATI *e*PKPab **PKPab 09 34 53.8 +1.4**
BATI *e*PKPab **PKPab 09 34 53.8 +1.4**
LSA Lhasa 154.54 31 *e*PKPdf **PKPdf 09 34 29.9 +0.7**
LSA *e*PKPbc **PKiKP 09 34 39.1 +1.4**
LSA *e*PKPab **PKPab 09 34 47.4 -5.3**
LSA Lhasa 154.54 31 *e*PKIKP **PKPdf 09 34 29.9 +0.7**
WHN Wuhan 156.27 341⇓P PKPdf 09 34 41.0 +10
SHL Shillong 158.20 36 *eP* **PKPdf 09 34 34.5 +0.8**
SSLB Suanglung 158.65 319 *e*PKPdf **PKPdf 09 34 33.1 -0.9**
KAPI Kappang 160.87 227 PKPab **PKPab 09 35 20.5 +0.6**
comp=Z,12nm,0.6s,baz=114,slow=8.2,SNR=6.3
GYA Guiyang 161.73 357 *i*PKP **PKPdf 09 34 37.4 -0.2**
GYA pPKP pPKPdf 09 35 19.8 +1.5
GYA PKS **PKSdf 09 38 04.2 -6.8**
GYA PP **PP 09 39 11.4 +5.6**
GYA AMB AMB
comp=Z,140nm,8.2s
KMI Kunming 162.85 9 PKP **PKPdf 09 34 37.6 -1.2**
SMRI Semarang 164.22 197 *e*PKPab **PKPab 09 35 35.5 +1.1**
LEM Lembang 165.04 187 PKPab **PKPab 09 35 38.4 +0.2**
comp=Z,70nm,0.8s,baz=187,slow=13,SNR=6.0
SLVN Son La 166.74 7 *e*PKPdf **PKPdf 09 34 42.5 +0.5**
CHTO Chiang Mai 167.49 31 *e*PKPdf **PKPdf 09 34 42.1 -0.5**
CHTO Chiang Mai 167.49 31 *e*PKIKP **PKPdf 09 34 42.1 -0.5**
CM31 Chiang Mai Arr 167.79 32 *e*PKPdf **PKPdf 09 34 43.1 +0.3**
CM31 *ep*PKPdf **pPKPdf 09 35 23.4 -0.2**
CM31 *e*PKPab **PKPab 09 35 51.5 +1.3**
CMAR Chiang Mai Arr 167.79 32 PKP **PKPdf 09 34 43.1 +0.3**
comp=Z,8.6nm,0.7s,baz=282,slow=1.9,SNR=42
CMAR pPKP **pPKPdf 09 35 23.4 -0.2**
comp=Z,7.9nm,0.8s,baz=291,slow=1.9,SNR=4.8
CMAR PKPab **PKPab 09 35 51.5 +1.3**
comp=Z,6.5nm,0.8s,baz=320,slow=5.5,SNR=6.5
KKM Kota Kinabalu 169.39 260 *e*PKPdf **PKPdf 09 34 43.7 -0.5**
KKM *e*PKPab **PKPab 09 35 57.8 0.0**
PSI Prapat 171.42 128 PKP **PKPdf 09 34 44.6 -0.7**
comp=Z,16nm,1.0s,baz=222,slow=5.8,SNR=7.4
PSI pPKP **pPKPdf 09 35 26.5 +0.4**
comp=Z,23nm,1.1s,baz=218,slow=8.5,SNR=3.3
PSI PKPab **PKPab 09 36 07.4 +0.8**
comp=Z,7.9nm,0.5s,baz=165,slow=3.2,SNR=4.1
SBUM Sibu 171.43 229 *e*PKPdf **PKPdf 09 34 44.4 -0.7**
KSM Kuching 171.98 215 *e*PKPdf **PKPdf 09 34 45.1 -0.3**
KSM *e*PKPab **PKPab 09 36 08.5 -0.3**
IPM Ipoh 174.10 127 *e*PKPdf **PKPdf 09 34 45.5 -0.8**
IPM *e*PKPab **PKPab 09 36 18.8 +0.4**
KULM Kulim 174.23 119 *e*PKPdf **PKPdf 09 34 45.7 -0.6**
KULM *e*PKPab **PKPab 09 36 16.9 -2.2**

*ISCJB **05** 09:26:13.6±0.5, 41°.32N±0°.03×22°.70E±0°.05, h12km±5km, Error ellipse: s-maj=6.3km s-min=4.7km az=167.4*
*SKO **05** 09:26:13.2, 41°.32N×22°.70E, h18km, M1.0, ML1.1*
*SOF **05** 09:26:14.3, 41°.31N×22°.80E, h5km*
*ATH **05** 09:26:15.3, 41°.20N×22°.77E, h16km±3km, ML1.5/2, Error ellipse: s-maj=5.6km s-min=1.7km az=354.0*
ISC 05 09:26:14.0±1.1, 41°.31N±0°.03×22°.70E±0°.03, h13km±7km, n17, σ0°.83/24, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**275**	*i* Pg	**Pg**	**09 26 17.0**	**+0.1**
VAY				*i* Sg	**Sg**	**09 26 19.2**	**+0.2**
VAY				*e*Lg	Lg	09 26 19.2	
	comp=N,112nm,0.2s						
VAY				*e*Lg	Lg	09 26 19.3	
	comp=E,127nm,0.2s						
KNT	**Kendrikon**	**0.21**	**135**	*i* Pg	**Pg**	**09 26 18.5**	**-0.1**
KNT				*i* Sg	**Sg**	**09 26 21.5**	**-0.4**
KNT	**Kendrikon**	**0.21**	**135**	P	**Pg**	**09 26 18.6**	**-0.1**
KNT				S	**Sg**	**09 26 21.4**	**-0.4**
KNT				AML	AML	09 26 29.2	
	comp=N,1761μm,0.2s						
KNT				AML	AML	09 26 29.5	
	comp=E,685μm,0.1s						
GRG	**Griva**	**0.42**	**212**	*i* Pg	**Pg**	**09 26 22.2**	**-0.1**
GRG	**Griva**	**0.42**	**212**	P	**Pg**	**09 26 22.2**	**-0.1**
GRG				S	**Sg**	**09 26 28.2**	**+0.2**
STIP	**Stip**	**0.54**	**315**	*i* Pg	**Pg**	**09 26 23.4**	**-1.2**
STIP				*i* Sg	**Sg**	**09 26 30.4**	**-1.4**
STIP				*e*Lg	Lg	09 26 31.0	
	comp=N,10nm,0.3s						
STIP				*e*Lg	Lg	09 26 32.7	
	comp=E,17nm,0.4s						
KKB	**Krupnik**	**0.62**	**27**	*i* Pg	**Pg**	**09 26 26.2**	**0.0**
KKB				*i* Sg	**Sg**	**09 26 34.5**	**+0.1**
KKB	**Krupnik**	**0.62**	**27**	P	**Pg**	**09 26 26.1**	**-0.1**
SOH	**Sokhos**	**0.70**	**134**	*i* Pg	**Pg**	**09 26 27.3**	**-0.3**
SOH	**Sokhos**	**0.70**	**134**	P	**Pg**	**09 26 26.9**	**-0.6**
SOH				S	**Sg**	**09 26 34.1**	**-2.6**
SOH				AML	AML	09 26 35.7	
	comp=N,65μm,0.1s						
SOH				AML	AML	09 26 38.5	
	comp=E,61μm,0.1s						
SRS	**Serrai**	**0.70**	**106**	P	**Pg**	**09 26 27.2**	**-0.4**
HORT	**Hortiatis**	**0.78**	**157**	P	**Pg**	**09 26 28.7**	**-0.3**
MMB	**Musomiste**	**0.82**	**70**	*i* Pg	**Pg**	**09 26 29.7**	**-0.2**
MMB	**Musomiste**	**0.82**	**70**	P	**Pg**	**09 26 29.4**	**-0.5**
VTS	**Vitosha**	**1.36**	**17**	P	**Pn**	**09 26 39.7**	**+0.8**
RZN	**Rozhen**	**1.56**	**75**	P	**Pg**	**09 26 44.4**	**+0.4**
PAIG	**Paliouri**	**1.57**	**151**	P	**Pn**	**09 26 42.7**	**+1.1**

ROM 05 09:26:20.0±0.1, 39°.887N±0°.005×15°.984E±0°.008, h8km, ML3.0/34, Error ellipse: s-maj=0.8km s-min=0.5km az=65.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMN	**Mormanno**	**0.01**	**60**	*i* P	Pg	09 26 22.0	+0.5
MMN				S	Sg	09 26 23.1	+0.7
MMN				AML	AML		
MMN				AML	AML		
T0721	**Laino Castello**	**0.05**	**353**	*i* P	Pg	09 26 22.2	+0.3
T0721				S	Sg	09 26 23.4	+0.3
T0701	**Viggianello (P**	**0.14**	**46**	*i* P	Pg	09 26 23.4	+0.3
T0701				S	Sg	09 26 25.8	+0.5
T0701				AML	AML		
	comp=E,27550μm,0.2s						
T0701				AML	AML		
	comp=N,33850μm,0.5s						
T0701				AML	AML		
	comp=E,27550μm,0.2s						
T0701				AML	AML		
	comp=N,33850μm,0.5s						
T0701				AML	AML		
	comp=E,27550μm,0.2s						
T0701				AML	AML		
	comp=N,33850μm,0.5s						
T0701				AML	AML		
	comp=E,27550μm,0.2s						
CUC	**Castrocucco**	**0.17**	**309**	P	Pg	09 26 24.2	+0.7
CUC				S	Sg	09 26 27.1	+1.2
CUC				AML	AML		
	comp=E,9390μm,0.5s						
CUC				AML	AML		
	comp=N,7225μm,0.4s						
CUC				AML	AML		
	comp=E,11550μm,0.5s						
CUC				AML	AML		
	comp=N,8920μm,0.4s						
CUC				AML	AML		
	comp=E,9390μm,0.5s						
CUC				AML	AML		
	comp=N,7225μm,0.4s						
CUC				AML	AML		
	comp=E,11550μm,0.5s						
CUC				AML	AML		
	comp=N,8920μm,0.4s						
CUC				AML	AML		
	comp=E,9390μm,0.5s						
CUC				AML	AML		
	comp=N,7225μm,0.4s						
CUC				AML	AML		
	comp=E,11550μm,0.5s						
CUC				AML	AML		
	comp=N,8920μm,0.4s						
CUC				AML	AML		
	comp=E,9390μm,0.5s						
CUC				AML	AML		
	comp=N,7225μm,0.4s						
CUC				AML	AML		
	comp=E,11550μm,0.5s						
CUC				AML	AML		
	comp=N,8920μm,0.4s						
CUC				AML	AML		
	comp=N,7225μm,0.4s						
T0702	**Acquaformosa (**	**0.18**	**155**	*i* P	Pg	09 26 24.6	+0.8
T0702				S	Sg	09 26 27.7	+1.3
T0702				AML	AML		
	comp=E,8830μm,0.2s						
T0702				AML	AML		
	comp=N,8715μm,0.7s						
T0702				AML	AML		
	comp=E,8810μm,0.2s						
T0702				AML	AML		
	comp=N,8710μm,0.7s						
T0702				AML	AML		
	comp=E,8830μm,0.2s						
T0702				AML	AML		
	comp=N,8720μm,0.7s						
T0702				AML	AML		
	comp=N,8710μm,0.7s						
T0702				AML	AML		
	comp=E,8810μm,0.2s						
SALB	**San Lorenzo Be**	**0.28**	**92**	P	Pg	09 26 25.7	+0.1
SALB				S	Sg	09 26 30.7	+1.3
SALB				AML	AML		
	comp=E,12600μm,0.6s						
SALB				AML	AML		
	comp=N,6360μm,0.2s						
SALB				AML	AML		
	comp=E,12950μm,0.5s						
SALB				AML	AML		
	comp=N,6350μm,0.2s						
SALB				AML	AML		
	comp=E,12600μm,0.6s						
SALB				AML	AML		
	comp=N,6360μm,0.2s						
SALB				AML	AML		
	comp=E,12950μm,0.5s						
SALB				AML	AML		
	comp=N,6350μm,0.2s						
SALB				AML	AML		
	comp=E,12600μm,0.6s						
SALB				AML	AML		
	comp=N,6365μm,0.2s						
SALB				AML	AML		
	comp=E,12950μm,0.5s						
SALB				AML	AML		
	comp=N,6350μm,0.2s						
SALB				AML	AML		
	comp=N,6350μm,0.2s						
SALB				AML	AML		
	comp=N,6360μm,0.2s						
SALB				AML	AML		
	comp=E,12950μm,0.5s						
SALB				AML	AML		
	comp=E,12600μm,0.6s						
SIRI	**Monte Sirino -**	**0.31**	**343**	P	Pg	09 26 26.9	+0.8
SIRI				S	Sb	09 26 33.0	-0.1
SIRI				AML	AML		
	comp=E,7825μm,0.4s						
SIRI				AML	AML		
	comp=N,6745μm,0.3s						
SIRI				AML	AML		
	comp=E,8005μm,0.4s						
SIRI				AML	AML		
	comp=N,6960μm,0.3s						
SIRI				AML	AML		
	comp=E,7820μm,0.4s						
SIRI				AML	AML		
	comp=N,6745μm,0.3s						
SIRI				AML	AML		
	comp=E,8005μm,0.4s						
SIRI				AML	AML		
	comp=N,6960μm,0.3s						
SIRI				AML	AML		
	comp=N,6745μm,0.3s						
SIRI				AML	AML		
	comp=N,6960μm,0.3s						
SIRI				AML	AML		
	comp=E,7825μm,0.4s						
SIRI				AML	AML		
	comp=E,8005μm,0.4s						
SCHR	**S. Chirico Rap**	**0.32**	**13**	P	Pg	09 26 26.5	+0.1
SCHR				S	Sb	09 26 32.3	-1.0
SCHR				AML	AML		
	comp=E,2255μm,0.4s						
SCHR				AML	AML		
	comp=N,2565μm,0.6s						
SCHR				AML	AML		
	comp=E,2255μm,0.4s						
SCHR				AML	AML		
	comp=N,2565μm,0.6s						
SCHR				AML	AML		
	comp=E,2255μm,0.4s						
SCHR				AML	AML		
	comp=N,2560μm,0.6s						
SCHR				AML	AML		
	comp=N,2565μm,0.6s						
SCHR				AML	AML		
	comp=E,2255μm,0.4s						
CET2	**Cetraro**	**0.36**	**184**	P	Pg	09 26 27.8	+0.8
CET2				S	Sb	09 26 33.2	-1.2
CET2				AML	AML		
	comp=E,5640μm,0.3s						
CET2				AML	AML		
	comp=N,7235μm,0.4s						
CET2				AML	AML		
	comp=E,5640μm,0.3s						
CET2				AML	AML		
	comp=N,7235μm,0.4s						
CET2				AML	AML		
	comp=E,5640μm,0.3s						
CET2				AML	AML		
	comp=N,7235μm,0.4s						
MGR	**Morigerati**	**0.41**	**307**	P	Pg	09 26 28.3	+0.2
MGR				S	Sb	09 26 36.4	+0.4
MGR				AML	AML		
	comp=E,2320μm,0.3s						
MGR				AML	AML		
	comp=N,4360μm,0.3s						
MGR				AML	AML		
	comp=E,3115μm,0.3s						
MGR				AML	AML		
	comp=N,3735μm,0.3s						
MGR				AML	AML		
	comp=E,2320μm,0.3s						
MGR				AML	AML		
	comp=N,4360μm,0.3s						
MGR				AML	AML		
	comp=E,3115μm,0.3s						
MGR				AML	AML		
	comp=N,3735μm,0.3s						
MGR				AML	AML		
	comp=E,2320μm,0.3s						
MGR				AML	AML		
	comp=N,4355μm,0.3s						
MGR				AML	AML		
	comp=E,3115μm,0.3s						
MGR				AML	AML		
	comp=N,3735μm,0.3s						

MGR			AML	AML		
	comp=E,2320μm,0.3s					
MGR			AML	AML		
	comp=E,3115μm,0.3s					
MGR			AML	AML		
	comp=N,3735μm,0.3s					
MGR			AML	AML		
	comp=N,4360μm,0.3s					
MGR			AML	AML		
	comp=N,4355μm,0.3s					
MGR			AML	AML		
	comp=E,2320μm,0.3s					
MTSN	**Montesano sull**	**0.42 335**	P	Pg	09 26 28.7	+0.5
MTSN			AML	AML		
	comp=E,4440μm,0.4s					
MTSN			AML	AML		
	comp=N,3070μm,0.6s					
MTSN			AML	AML		
	comp=E,4440μm,0.4s					
MTSN			AML	AML		
	comp=N,3070μm,0.6s					
MTSN			AML	AML		
	comp=E,4440μm,0.4s					
MTSN			AML	AML		
	comp=N,3070μm,0.6s					
MCEL	**Monticello**	**0.46 342**	P	Pg	09 26 29.2	+0.2
MCEL			S	Sb	09 26 37.0	-0.3
MCEL			AML	AML		
	comp=E,2265μm,0.4s					
MCEL			AML	AML		
	comp=N,1555μm,0.4s					
MCEL			AML	AML		
	comp=E,2310μm,0.4s					
MCEL			AML	AML		
	comp=N,1605μm,0.4s					
MCEL			AML	AML		
	comp=E,2260μm,0.4s					
MCEL			AML	AML		
	comp=N,1550μm,0.4s					
MCEL			AML	AML		
	comp=E,2310μm,0.4s					
MCEL			AML	AML		
	comp=N,1605μm,0.4s					
MCEL			AML	AML		
	comp=E,2310μm,0.4s					
MCEL			AML	AML		
	comp=E,2265μm,0.4s					
MCEL			AML	AML		
	comp=N,1605μm,0.4s					
MCEL			AML	AML		
	comp=N,1555μm,0.4s					
BULG	**Bulgheria - Ca**	**0.50 292**	P	Pg	09 26 30.2	+0.5
BULG			AML	AML		
	comp=E,1920μm,0.3s					
BULG			AML	AML		
	comp=N,3420μm,0.3s					
BULG			AML	AML		
	comp=E,2005μm,0.3s					
BULG			AML	AML		
	comp=N,3550μm,0.3s					
BULG			AML	AML		
	comp=E,1920μm,0.3s					
BULG			AML	AML		
	comp=N,3420μm,0.3s					
BULG			AML	AML		
	comp=E,2000μm,0.3s					
BULG			AML	AML		
	comp=N,3550μm,0.3s					
BULG			AML	AML		
	comp=N,3550μm,0.3s					
BULG			AML	AML		
	comp=N,3420μm,0.3s					
BULG			AML	AML		
	comp=E,1920μm,0.3s					
BULG			AML	AML		
	comp=E,2005μm,0.3s					
SLCN	**Sala Consilina**	**0.57 332**	P	Pg	09 26 31.6	+0.6
SLCN			AML	AML		
	comp=E,3365μm,0.4s					
SLCN			AML	AML		
	comp=N,2320μm,0.4s					
SLCN			AML	AML		
	comp=E,3570μm,0.4s					
SLCN			AML	AML		
	comp=N,2120μm,0.8s					
SLCN			AML	AML		
	comp=E,3365μm,0.4s					
SLCN			AML	AML		
	comp=N,2315μm,0.4s					
SLCN			AML	AML		
	comp=E,3575μm,0.4s					
SLCN			AML	AML		
	comp=N,2115μm,0.8s					
SLCN			AML	AML		
	comp=N,2320μm,0.4s					
SLCN			AML	AML		
	comp=E,3365μm,0.4s					
SLCN			AML	AML		
	comp=N,2120μm,0.8s					
SLCN			AML	AML		
	comp=E,3570μm,0.4s					
CRAC	**Craco**	**0.59 36**	P	Pb	09 26 32.6	+0.1
CRAC			AML	AML		
	comp=E,1560μm,0.3s					
CRAC			AML	AML		
	comp=N,1795μm,0.7s					
CRAC			AML	AML		
	comp=E,1565μm,0.3s					
CRAC			AML	AML		
	comp=N,1790μm,0.7s					
CRAC			AML	AML		
	comp=N,1795μm,0.7s					
CRAC			AML	AML		
	comp=E,1560μm,0.3s					
CELI	**Celico**	**0.63 140**	P	Pg	09 26 32.5	+0.4
CELI			AML	AML		
	comp=E,1162μm,0.4s					
CELI			AML	AML		
	comp=N,2255μm,0.4s					
CELI			AML	AML		
	comp=E,2910μm,0.4s					
CELI			AML	AML		
	comp=N,5630μm,0.4s					
CELI			AML	AML		
	comp=E,2915μm,0.4s					
CELI			AML	AML		
	comp=N,5630μm,0.4s					
CELI			AML	AML		
	comp=E,1162μm,0.4s					
CELI			AML	AML		
	comp=E,2910μm,0.4s					
CELI			AML	AML		
	comp=N,5630μm,0.4s					
CELI			AML	AML		
	comp=N,2255μm,0.4s					
PTRP	**Pietrapertosa**	**0.64 5**	P	Pb	09 26 33.0	-0.4
CAR1	**CAROLEI**	**0.66 164**	P	Pb	09 26 33.3	-0.4
CAR1			AML	AML		
	comp=E,5525μm,0.6s					
CAR1			AML	AML		
	comp=N,6695μm,0.5s					
CAR1			AML	AML		
	comp=E,6010μm,0.6s					
CAR1			AML	AML		
	comp=N,6845μm,0.5s					
CAR1			AML	AML		
	comp=E,5525μm,0.6s					
CAR1			AML	AML		
	comp=N,6695μm,0.5s					
CAR1			AML	AML		
	comp=E,6010μm,0.6s					
CAR1			AML	AML		
	comp=N,6845μm,0.5s					
CAR1			AML	AML		
	comp=E,6010μm,0.6s					
CAR1			AML	AML		
	comp=E,5525μm,0.6s					
CAR1			AML	AML		
	comp=N,6845μm,0.5s					
CAR1			AML	AML		
	comp=N,6695μm,0.5s					
CMPR	**Campora**	**0.68 310**	P	Pg	09 26 32.8	-0.3
CMPR			AML	AML		
	comp=E,1575μm,0.4s					
CMPR			AML	AML		
	comp=N,1900μm,0.5s					
CMPR			AML	AML		
	comp=E,1575μm,0.4s					
CMPR			AML	AML		
	comp=N,1905μm,0.5s					
CMPR			AML	AML		
	comp=E,1575μm,0.4s					
CMPR			AML	AML		
	comp=N,1900μm,0.5s					
PIPA	**Pietrapaola**	**0.76 122**	P	Pb	09 26 35.7	+0.4
PIPA			AML	AML		
	comp=E,622μm,0.6s					
PIPA			AML	AML		
	comp=N,506μm,0.4s					
PIPA			AML	AML		
	comp=E,588μm,0.6s					
PIPA			AML	AML		
	comp=N,508μm,0.4s					
PIPA			AML	AML		
	comp=E,622μm,0.6s					
PIPA			AML	AML		
	comp=N,506μm,0.4s					
PIPA			AML	AML		
	comp=E,588μm,0.6s					
PIPA			AML	AML		
	comp=N,508μm,0.4s					
PIPA			AML	AML		
	comp=N,506μm,0.4s					
PIPA			AML	AML		
	comp=N,508μm,0.4s					
PIPA			AML	AML		
	comp=E,622μm,0.6s					
PIPA			AML	AML		
	comp=E,588μm,0.6s					
PIPA			AML	AML		
	comp=N,506μm,0.4s					
PIPA			AML	AML		
	comp=E,622μm,0.6s					
CDRU	**Civita di Ruta**	**0.80 319**	P	Pg	09 26 35.1	-0.2
CDRU			AML	AML		
	comp=E,873μm,0.3s					
CDRU			AML	AML		
	comp=N,470μm,0.8s					
CDRU			AML	AML		
	comp=E,873μm,0.3s					
CDRU			AML	AML		
	comp=N,470μm,0.8s					
CDRU			AML	AML		
	comp=E,873μm,0.3s					
CDRU			AML	AML		
	comp=N,470μm,0.8s					
MIGL	**Miglionico**	**0.80 26**	P	Pg	09 26 34.9	-0.4
MIGL			AML	AML		
	comp=E,1670μm,0.5s					
MIGL			AML	AML		
	comp=N,1570μm,0.6s					
MIGL			AML	AML		
	comp=E,1670μm,0.5s					
MIGL			AML	AML		
	comp=N,1570μm,0.6s					
MIGL			AML	AML		
	comp=E,1670μm,0.5s					
MIGL			AML	AML		
	comp=N,1570μm,0.6s					
TIP	**Timpagrande**	**0.93 140**	P	Pb	09 26 38.3	0.0
TIP			AML	AML		
	comp=E,229μm,0.7s					
TIP			AML	AML		
	comp=N,172μm,1.0s					
TIP			AML	AML		
	comp=E,268μm,0.5s					
TIP			AML	AML		
	comp=N,214μm,1.0s					
TIP			AML	AML		
	comp=E,229μm,0.7s					
TIP			AML	AML		
	comp=N,173μm,1.0s					
TIP			AML	AML		
	comp=E,268μm,0.5s					
TIP			AML	AML		
	comp=N,214μm,1.0s					
TIP			AML	AML		
	comp=N,172μm,1.0s					
TIP			AML	AML		
	comp=N,214μm,1.0s					
TIP			AML	AML		
	comp=E,229μm,0.7s					
TIP			AML	AML		
	comp=E,268μm,0.5s					
SERS	**Sersale**	**1.01 147**	P	Pb	09 26 39.6	-0.1
SERS			AML	AML		
	comp=E,522μm,0.9s					
SERS			AML	AML		
	comp=N,422μm,0.4s					
SERS			AML	AML		
	comp=E,439μm,0.4s					
SERS			AML	AML		
	comp=N,519μm,0.9s					
SERS			AML	AML		
	comp=E,522μm,0.9s					
SERS			AML	AML		
	comp=N,422μm,0.4s					
SERS			AML	AML		
	comp=E,439μm,0.4s					
SERS			AML	AML		
	comp=N,518μm,0.9s					
SERS			AML	AML		
	comp=E,522μm,0.9s					
SERS			AML	AML		
	comp=N,422μm,0.4s					
SERS			AML	AML		
	comp=E,439μm,0.4s					
SERS			AML	AML		
	comp=N,519μm,0.9s					
GRI	**Girifalco**	**1.12 162**	P	Pn	09 26 41.9	0.0
GRI			AML	AML		
	comp=E,1105μm,0.5s					
GRI			AML	AML		
	comp=N,464μm,0.4s					
GRI			AML	AML		
	comp=E,1105μm,0.5s					
GRI			AML	AML		
	comp=N,464μm,0.4s					
GRI			AML	AML		
	comp=E,1105μm,0.5s					
GRI			AML	AML		
	comp=N,464μm,0.4s					
GRI			AML	AML		
	comp=E,1105μm,0.5s					
GRI			AML	AML		
	comp=N,464μm,0.4s					
AMUR	**Altamura**	**1.12 25**	P	Pb	09 26 41.8	+0.2
AMUR			AML	AML		
	comp=E,470μm,0.5s					
AMUR			AML	AML		
	comp=N,362μm,1.2s					
AMUR			AML	AML		
	comp=E,470μm,0.5s					
AMUR			AML	AML		
	comp=N,362μm,1.2s					
AMUR			AML	AML		
	comp=N,362μm,1.2s					
AMUR			AML	AML		
	comp=E,470μm,0.5s					
NOCI	**Noci**	**1.22 42**	P	Pg	09 26 43.5	+0.1
NOCI			AML	AML		
	comp=E,369μm,0.4s					
NOCI			AML	AML		
	comp=N,646μm,1.4s					
NOCI			AML	AML		
	comp=E,368μm,0.4s					
NOCI			AML	AML		
	comp=N,646μm,1.4s					
NOCI			AML	AML		
	comp=N,646μm,1.4s					
NOCI			AML	AML		
	comp=E,369μm,0.4s					
JOPP	**Joppolo**	**1.28 183**	P	Pn	09 26 43.7	-0.4
JOPP			AML	AML		
	comp=E,371μm,0.3s					
JOPP			AML	AML		
	comp=N,402μm,1.1s					
JOPP			AML	AML		
	comp=E,371μm,0.3s					
JOPP			AML	AML		
	comp=N,402μm,1.1s					
JOPP			AML	AML		
	comp=E,371μm,0.3s					
JOPP			AML	AML		
	comp=N,402μm,1.1s					
PLAC	**Placanica**	**1.48 166**	P	Pn	09 26 47.0	+0.1
PLAC			AML	AML		
	comp=E,300μm,1.0s					
PLAC			AML	AML		
	comp=N,254μm,0.4s					
PLAC			AML	AML		
	comp=E,254μm,0.4s					
PLAC			AML	AML		
	comp=N,312μm,1.0s					
PLAC			AML	AML		
	comp=N,312μm,1.0s					
PLAC			AML	AML		
	comp=E,300μm,1.0s					
PLAC			AML	AML		
	comp=N,254μm,0.4s					
PLAC			AML	AML		
	comp=E,254μm,0.4s					
MSRU	**Castanea**	**1.66 193**	P	Pn	09 26 48.7	-0.7
MSRU			AML	AML		
	comp=E,510μm,1.0s					
MSRU			AML	AML		
	comp=N,306μm,1.3s					
MSRU			AML	AML		
	comp=N,306μm,1.3s					
MSRU			AML	AML		
	comp=E,510μm,1.0s					
ATN	**Antennamare**	**1.77 193**	AML	AML		
	comp=E,368μm,0.3s					
ATN			AML	AML		
	comp=E,368μm,0.3s					
ATN			AML	AML		
	comp=N,310μm,1.6s					
ATN			AML	AML		
	comp=N,310μm,1.6s					
ATN			AML	AML		
	comp=N,310μm,1.6s					
ATN			AML	AML		
	comp=E,368μm,0.3s					
ATN			AML	AML		
	comp=N,310μm,1.6s					
ATN			AML	AML		
	comp=E,368μm,0.3s					
SOI	**Samo**	**1.81 178**	P	Pn	09 26 51.4	0.0
SOI			AML	AML		
	comp=E,133μm,0.6s					
SOI			AML	AML		
	comp=N,149μm,0.6s					
SOI			AML	AML		
	comp=E,133μm,0.6s					
SOI			AML	AML		
	comp=N,149μm,0.6s					
SGRT	**San Giovanni R**	**1.87 354**	P	Pn	09 26 53.1	+0.7
NOV	**Novara**	**1.97 200**	P	Pn	09 26 53.3	-0.4
NOV			AML	AML		
	comp=E,226μm,0.7s					
NOV			AML	AML		
	comp=N,154μm,0.5s					
NOV			AML	AML		
	comp=E,226μm,0.7s					
NOV			AML	AML		
	comp=N,154μm,0.5s					
AIO	**Antillo**	**2.00 197**	P	Pn	09 26 53.7	-0.4
AIO			AML	AML		
	comp=E,116μm,0.3s					
AIO			AML	AML		
	comp=N,106μm,1.1s					
AIO			AML	AML		
	comp=E,116μm,0.3s					
AIO			AML	AML		
	comp=N,106μm,1.1s					
MUCR	**Ucria**	**2.04 206**	P	Pn	09 26 54.4	-0.2
MUCR			AML	AML		
	comp=E,104μm,0.8s					
MUCR			AML	AML		
	comp=N,124μm,0.5s					
MUCR			AML	AML		
	comp=N,124μm,0.5s					
MUCR			AML	AML		
	comp=E,104μm,0.8s					
MEU	**Monte Lauro**	**2.90 197**	AML	AML		
	comp=E,128μm,1.2s					
MEU			AML	AML		
	comp=E,128μm,1.2s					
MEU			AML	AML		
	comp=N,144μm,1.0s					
MEU			AML	AML		
	comp=N,144μm,1.0s					
STON	**Ston**	**3.25 23**	*e*Pn	Pn	09 27 11.9	+0.8
STON			Sn	Sn	09 27 52.5	+2.5
NARO	**Abbazia di Nar**	**4.51 327**	AML	AML		
	comp=E,23μm,0.1s					
NARO			AML	AML		
	comp=N,25μm,0.1s					
NARO			AML	AML		
	comp=E,23μm,0.1s					
NARO			AML	AML		
	comp=N,25μm,0.1s					

SOF 05 09:26:21.4, 41°.30N×22°.70E, h2km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.64**	**27**	P	Pg	09 26 33.7	+0.1
MMB	**Musomiste**	**0.82**	**69**	P	Pb	09 26 38.2	-0.3
VTS	**Vitosha**	**1.38**	**17**	P	Pb	09 26 47.9	-0.1
RZN	**Rozhen**	**1.56**	**75**	P	Pg	09 26 53.2	+1.8

BEO 05 09:26:43.1±0.9, 40°.53N×18°.49E, h15km, ML2.4/2, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**1.73**	**125**	*e*Pn	Pn	09 27 12.0	-0.6
FNA	**Florina**	**2.21**	**82**	*e*Pn	Pn	09 27 19.7	+0.4
FNA	**Florina**	**2.21**	**82**	*e*Pg	Pb	09 27 24.1	+1.3
SJES	**Sjenica**	**2.95**	**22**	*e*Pn	Pn	09 27 29.0	-0.5
SJES				*e*Sn	Sn	09 28 04.6	0.0
SELS	**Selova**	**3.33**	**35**	*e*Pn	Pn	09 27 33.7	-0.9
DIVS	**Divibare**	**3.74**	**17**	*e*Pn	Pn	09 27 41.0	+0.7
GRUS	**Gruza**	**3.74**	**25**	*e*Pn	Pn	09 27 40.6	+0.3
TRUS	**Trudelj**	**3.96**	**20**	*e*Pn	Pn	09 27 43.4	+0.2

DSN ***05*** *09:33:45.4±2.8, 26°.73N×58°.42E, h10km, ML4.2/8, Error ellipse: s-maj=43.8km s-min=13.2km az=3.0*
IDC ***05*** *09:33:47.8±2.7, 26°.30N×57°.92E, h0km, mb3.6/7, mb1 3.6/7, mb1mx3.4/60, mbtmp3.6/7, MS3.3/4, Ms1 3.3/4, ms1mx2.8/54, Error ellipse: s-maj=60.7km s-min=27.6km az=159.0*
ISCJB ***05*** *09:33:50.1±0.4, 26°.59N±0°.03×58°.02E±0°.06, h10km, mb3.5/7, MS3.4/3, Error ellipse: s-maj=7.2km s-min=3.7km az=2.4*
TEH ***05*** *09:33:51.6, 26°.89N×57°.92E, h20km, ML4.0*
OMAN ***05*** *09:33:55.4±1.4, 26°.53N×58°.21E, h34km±25km, ml4.0/15, Error ellipse: s-maj=34.5km s-min=8.1km az=38.0*

ISC 05 09:33:50.9±0.7, 26°.55N±0°.04×58°.04E±0°.04, h10km, n60, σ1§61/58, mb3.6/7, MS3.3/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**1.42**	**348**	*e*Pg	Pn	09 34 11.9	-4.9
NIAN	**Nian**	**1.47**	**313**	*e*Pg	**Pn**	**09 34 16.0**	**-1.4**
NIAN				IAMB	IAmb	09 34 46.1	
	comp=Z,0.0nm,0.4s						
BANOM	**Banah**	**1.68**	**249**	*e*P	**Pn**	**09 34 19.9**	**-0.5**
	SNR=57						
BANOM	**Banah**	**1.68**	**249**	P	**Pb**	**09 34 21.9**	**0.0**
	SNR=11						
BANOM				S	**Sg**	**09 34 46.3**	**+1.4**
SHME	**Shamm**	**1.77**	**254**	*e*P	**Pn**	**09 34 21.7**	**+0.1**
	SNR=23						
SHME				S	**Sg**	**09 34 49.0**	**+1.1**
SHME	**Shamm**	**1.77**	**254**	*e*Pn	**Pn**	**09 34 21.9**	**+0.3**
GENO	**Geno**	**1.86**	**297**	*e*Pn	**Pn**	**09 34 22.2**	**-0.8**
GENO				IAMB	IAmb	09 34 56.6	
	comp=E,0.0nm,0.6s						
BNDS	**Bandar-Abbas**	**1.87**	**297**	*e*Pg	Pn	09 34 16.9	-6.1
MDH	**Madha**	**2.00**	**232**	*e*P	**Pn**	**09 34 23.5**	**-1.3**
	SNR=12						
MDH	**Madha**	**2.00**	**232**	P	**Pn**	**09 34 23.4**	**-1.3**
	SNR=9.2						
MDH	**Madha**	**2.00**	**232**	*e*Pn	**Pn**	**09 34 23.5**	**-1.3**
MSFE	**Esma-Masafi**	**2.06**	**235**	*e*P	**Pn**	**09 34 24.6**	**-1.0**

	SNR=14					
UOSS	Minazif	2.30 226	*e*P	Pn	09 34 27.4	-1.4
	SNR=14					
CHBR	Chabahar	2.40 113	*e*Pn	Pg	09 34 36.1	-0.7
HATD	Hatta, Dubai	2.43 225	P	Pn	09 34 31.4	+0.7
ASHO	Ashiyiah	2.58 224	*e*P	Pn	09 34 33.7	+1.0
	SNR=13					
ASHO	Ashiyiah	2.58 224	P	Pb	09 34 38.7	+1.5
	SNR=6.6					
NAZ	Nazwa, Dubai	2.65 234	*i* P	Pn	09 34 35.0	+1.4
	SNR=7.2					
NAZ	Nazwa, Dubai	2.65 234	P	Pb	09 34 39.2	+0.8
	SNR=5.2					
NAZ	Nazwa, Dubai	2.65 234	*e*Pn	Pb	09 34 37.0	-1.4
SOHO	SOHO	2.76 210	P	Pn	09 34 34.1	-1.1
FAQ	Al Faqa, Dubai	2.84 231	*i* P	Pn	09 34 35.4	-1.0
	SNR=9.8					
FAQ	Al Faqa, Dubai	2.84 231	P	Pb	09 34 39.8	-2.0
FAQ	Al Faqa, Dubai	2.84 231	*e*Pn	Pn	09 34 37.8	+1.5
BIDO	Bidbid	3.02 178	S	Sn	09 35 16.4	+1.4
HOQ	Hoqain	3.03 193	*e*Pn	Pn	09 34 38.2	-0.7
ASUD	Al Ashush, Dub	3.10 232	*i* P	Pn	09 34 40.7	+0.8
	SNR=13					
ASUD	Al Ashush, Dub	3.10 232	P	Pb	09 34 44.1	-2.1
ASUD			S	Sb	09 35 25.6	+1.5
ASUD	Al Ashush, Dub	3.10 232	*e*Pn	Pn	09 34 42.3	+2.4
ALNE	Al Ain	3.23 220	*e*Pn	Pn	09 34 41.9	+0.2
NGRK	Negar Kerman	3.29 340	*e*Pn	Pn	09 34 43.8	+1.0
NGRK			IAMB	IAmb	09 35 31.3	
	comp=Z,0.0nm,0.8s					
CHMN	Cheshme madani	3.33 353	*e*Pn	Pn	09 34 44.5	+1.2
CHMN			IAMB	IAmb	09 35 44.5	
	comp=N,0.0nm,0.6s					
WSAR	Wadi Sarin	3.34 171	P	Pn	09 34 44.9	+1.7
SMDO	Samad	3.48 180	P	Pn	09 34 46.4	+1.3
	SNR=6.8					
ARQ	Araqi	3.48 204	P	Pb	09 34 49.9	-2.7
	SNR=6.4					
KRBR	Kerman	3.60 342	*e*Pn	Pn	09 34 42.6	-4.4
BSY	Bisya	3.87 192	P	Pn	09 34 53.2	+2.8
	SNR=8.2					
ZHSF	Zahedan	3.89 38	*e*Pn	Pn	09 34 51.1	+0.2
KHGB	Koh Gabri	4.05 341	*e*Pn	Pn	09 34 54.8	+1.7
KHGB			IAMB	IAmb	09 35 08.2	
	comp=Z,0.0nm,0.5s					
JMDO	Jabal Madar	4.16 179	P	Pn	09 34 58.0	+3.5
JLN	Jalan Bani Buh	4.56 164	P	Pn	09 35 00.6	+0.7
JLN			S	Sn	09 35 52.3	-0.6
GHIR	Ghir-Karzin	4.81 292	*e*Pn	Pn	09 34 58.8	-4.7
IBAF	Bafgh	5.47 337	*e*Pn	Pn	09 35 13.1	+0.6
BSRN	Basiran	5.48 10	*e*Pn	Pn	09 35 10.3	-2.4
MHTO	MHTO	5.54 181	P	Pn	09 35 15.0	+1.6
MHTO			S	Sn	09 36 19.5	+2.3
IMEH	Mehriz	5.68 329	*e*Pn	Pn	09 35 14.5	-1.0
IKAZ	Kazeroun	6.34 302	*e*Pn	Pn	09 35 23.8	-1.0
ITEG	Tejag	6.35 5	*e*Pn	Pn	09 35 27.2	+2.4
IDAH	Dahanechah	6.37 14	*e*Pn	Pn	09 35 28.0	+3.0
GNI	Garni	17.50 324	LR	LR	09 46 21.3	
	comp=Z,51nm,21.9s,baz=144,slow=43					
KVAR	Kislovodsk Arr	21.35 328	LR	LR	09 49 22.0	
	comp=Z,139nm,21.9s,baz=266,slow=43					
BRTR	Keskin Array B	24.20 309	P	P	09 39 07.4	-0.3
	comp=Z,0.9nm,0.7s,baz=133,slow=9.8,SNR=6.8					
MKAR	Makanchi Array	27.85 37	LR	LR	09 52 50.5	
	comp=Z,38nm,19.1s,baz=26,slow=41					
BVAR	Borovoye Array	28.01 16	P	P	09 39 41.9	+0.1
	comp=Z,0.8nm,0.7s,baz=212,slow=7.8,SNR=3.5					
KURBB	Kurchatov Arra	28.70 28	P	P	09 39 49.3	+1.3
	comp=Z,0.2nm,0.3s,baz=221,slow=8.3,SNR=3.2					
AKASG	Malin Array Be	32.62 325	P	P	09 40 22.4	-0.3
	comp=Z,0.2nm,0.3s,baz=128,slow=7.5,SNR=4.1					
FINES	FINESS Array B	40.97 337	P	P	09 41 33.2	-0.3
	comp=Z,0.8nm,0.7s,baz=136,slow=9.3,SNR=3.3					
SONM	Songino Array	43.15 47	P	P	09 41 52.3	+0.5
	comp=Z,0.3nm,0.3s,baz=277,slow=8.8,SNR=2.7					
TORD	Torodi Ar. Bea	54.26 267	P	P	09 43 14.8	-2.6
	comp=Z,0.4nm,0.6s,baz=58,slow=8.5,SNR=4.7					
PETK	Petropavlovsk-	74.69 38	LR	LR	10 22 47.3	
	comp=Z,43nm,20.5s,baz=29,slow=39					

MAN 05 09:33:58.0, 12°.22N×125°.96E, h20km, mb4.6, ML3.5, MS3.4, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.80	220	*e*P	Pb	09 34 12.6	-0.6
BESP				*e*S	Sb	09 34 22.4	-1.1
CNP	Cataram	1.30	283	*e*P	Pb	09 34 21.5	-0.3
CNP				*e*S	Sb	09 34 38.3	+0.2
PLP	Palo	1.42	223	‖*e*P	Pn	09 34 22.2	-0.4
PLP				*i* S	Sn	09 34 36.0	-4.8
PVCP	Virac	2.23	308	*e*P	Pn	09 34 33.8	0.0
MSLP	Maasin	2.33	208	*e*P	Pn	09 34 36.4	+1.1

*IDC **05** 09:45:17.6±0.5, 55°.46S×26°.48W, h0km, mb4.5/12, mb1 4.5/13, mb1mx4.4/24, mbtmp4.5/13, ML3.9/1, MS4.2/1, Ms1 4.3/1, ms1mx4.1/5, Error ellipse: s-maj=17.0km s-min=15.6km az=33.0*

*ISCJB **05** 09:45:21.0±0.3, 55°.45S±0°.06×26°.70W±0°.10, h38km, mb4.7/22, MS4.6/6, Error ellipse: s-maj=9.3km s-min=6.4km az=40.4*

*BJI **05** 09:45:21.5±0.0, 55°.40S×26°.80W, h30km, mB5.1/2, Ms5.1/1, Ms7 4.9/3*

*NEIC **05** 09:45:21.2±1.5, 55°.48S×26°.75W, h22km±4km, mb4.9/15, Error ellipse: s-maj=19.7km s-min=14.8km az=214.0*

*GCMT **05** 09:45:25.2±0.3, 55°.59S±0°.03×26°.55W±0°.04, h16km±1km, MW5.0/60, Moment Tensor Solution. s19,c21; s60,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.19±.30; $M_{\theta\theta}$-1.58±.20; $M_{\phi\phi}$-1.61±.20; $M_{r\theta}$-1.60±.59; $M_{\phi\phi}$2.38±.11; $M_{\phi r}$1.43±.61; Best double couple: M_0=4.17700×10^{16} NP1:ϕ_s313.00000°, δ60.00000°, λ88.00000°. NP2: ϕ_s138.00000°, δ30.00000°, λ94.00000°. Principal axes: T 3.7870, Plg74.0000°, Azm216.0000°; N 0.7800, Plg2.0000°, Azm314.0000°; P -4.5670, Plg15.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 09:45:22.9±0.4, 55°.49S±0°.09×26°.75W±0°.08, h38km, n95, σ0°74/89, mb4.8/20, MS4.6/6, 1C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	5.75	278	*e*Pn	Pn	09 46 45.0	-0.6
HOPE				*e*Sn	Sn	09 47 49.8	-0.4
VNA1	Neumayer--Stat	17.23	159	P	P	09 49 20.5	-0.8
VNA3	Neumayer Olymp	17.44	162	P	P	09 49 23.9	+0.1
VNA2	Neumayer--Watz	17.62	159	P	P	09 49 26.0	+0.2
	baz=314,slow=16						
SNAA	Sanae	19.16	157	P	Pn	09 49 45.7	+1.9
SNAA	Sanae	19.16	157	P	P	09 49 41.5	-1.1
	0.4nm,0.3s,baz=271,slow=10,SNR=14						
SNAA	Sanae	19.16	157	*e*P	P	09 49 42.2	-0.5
	35nm,1.1s						
PMSA	Palmer Station	20.46	228	P	Pn	09 49 59.1	+0.1
	27nm,0.8s,baz=89,slow=4.9,SNR=4.0						
USHA	Ushuaia	23.57	254	P	P	09 50 29.9	+0.3
	7.6nm,0.9s,baz=82,slow=12,SNR=3.3						
SYO	Syowa Base	31.86	141	‖*e*P	P	09 51 42.6	-1.1
SYO	Syowa Base	31.86	141	‖*e*pP	pP	09 51 49.3	-3.0
QSPA	South Pole Qui	34.76	180	*e*P	P	09 52 08.3	-1.0
	13nm,0.7s						
CPUP	Villa Florida	36.64	310	P	P	09 52 25.9	+0.4
	7.3nm,0.9s,baz=143,slow=8.3,SNR=13						
MAW	Mawson	40.45	144	P	P	09 52 57.2	+0.1
	5.5nm,1.0s,baz=210,slow=7.8,SNR=8.5						
MAW	Mawson	40.45	144	*e*P	P	09 52 57.5	+0.5
	2.9nm,1.3s						
BDFB	Brasilia	43.01	329	P	P	09 53 19.4	+0.8
	1.9nm,0.5s,baz=147,slow=12,SNR=3.6						
GO02	Mina Guanaco	43.46	296	*e*P	P	09 53 21.9	-0.6
	30nm,1.0s						
LVC	Limon Verde	45.24	299	*e*P	P	09 53 36.8	0.0
	41nm,1.3s						
BOSA	Boshof	45.59	76	P	P	09 53 38.0	-1.3
	baz=214,slow=7.3,SNR=7.6						
SBA	Scott Base	46.65	184	*e*P	P	09 53 47.3	+0.4
	7.8nm,0.9s						
PB01	IPOC Station P	46.85	300	*e*P	P	09 53 50.6	+1.5
	34nm,1.0s						
VNDA	Vanda	47.14	183	P	P	09 53 50.5	-0.2
	3.1nm,0.6s,baz=192,slow=6.3,SNR=26						
VNDA				LR	LR	10 12 25.8	
	comp=Z,283nm,20.0s,baz=166,slow=34						
H10S2	ASCENSION HYDR	47.39	16	T	T	10 44 55.3	
	baz=189,slow=75,SNR=22						
H10S3	ASCENSION HYDR	47.40	16	T	T	10 44 55.5	
	baz=189,slow=75,SNR=25						
H10S1	ASCENSION HYDR	47.41	16	T	T	10 44 56.5	
	baz=189,slow=75,SNR=19						
GO01	Chusmiza	47.87	301	*e*P	P	09 53 56.8	-0.7
	26nm,1.0s						
H10N1	ASCENSION HYDR	48.51	16	T	T	10 46 20.3	
	baz=192,slow=72,SNR=12						
H10N3	ASCENSION HYDR	48.51	16	T	T	10 46 19.3	
	baz=192,slow=72,SNR=20						
MNMC	Minye Minye	48.52	301	*e*P	P	09 54 02.5	+0.2
	20nm,0.9s						
H10N2	ASCENSION HYDR	48.53	16	T	T	10 46 20.0	
	baz=192,slow=72,SNR=15						
LBTB	Lobatse	48.61	73	P	P	09 54 00.9	-1.9
	7.6nm,1.1s,baz=195,slow=8.6,SNR=4.2						
LBTB	Lobatse	48.61	73	*e*P	P	09 54 01.7	-1.1
	15nm,1.1s						
LPAZ	La Paz	50.26	304	P	P	09 54 17.3	+1.3
	11nm,0.8s,baz=132,slow=7.6,SNR=38						
MATP	Matopo	53.88	73	P	P	09 54 42.0	-0.4
	6.4nm,0.9s,baz=212,slow=9.3,SNR=3.2						
PTGA	Pitinga	60.89	321	*e*P	P	09 55 30.6	-1.0
	8.5nm,1.3s						
DBIC	Dimbokro	64.55	24	P	P	09 55 55.0	-1.0
	3.3nm,0.8s,baz=163,slow=9.9,SNR=3.4						
DBIC	Dimbokro	64.55	24	*e*P	P	09 55 56.5	+0.5
	17nm,1.4s						
OTAV	Otavalo	69.56	303	*e*P	P	09 56 27.1	-1.3
	20nm,1.6s						
TOA0	Torodi Ar. Sit	72.45	29	*e*P	P	09 56 46.2	+1.1
	15nm,0.6s						
TORD	Torodi Ar. Bea	72.45	29	P	P	09 56 44.7	-0.5
	8.2nm,0.6s,baz=202,slow=5.8,SNR=58						
TOA1	Torodi Ar. Sit	72.45	29	*e*P	P	09 56 44.7	-0.5
TBI	Tubuai	87.63	231	*e*LR	LR	10 25 53.8	
	comp=Z,272nm,24.5s,baz=157						
PPT2	Papeete2	92.71	233	*e*LR	LR	10 28 20.5	
	comp=Z,199nm,23.8s						
ASAR	Alice Springs	99.45	162	P	Pdif	09 59 01.2	-0.3
	0.7nm,0.7s,baz=185,slow=3.9,SNR=11						
AS31	Alice Springs	99.45	162	*e*P	Pdif	09 59 01.2	-0.4
	1.0nm,0.9s						
DZM	Mont Dzumac	101.93	192	*e*LR	LR	10 32 28.8	
	comp=Z,277nm,23.6s						
NV01	Mina Array Sit	121.41	293	*e*PKPdf	PKiKP	10 04 12.8	+1.1
NVAR	Mina Array Bea	121.41	293	PKP	PKiKP	10 04 12.8	+1.1
	0.3nm,0.6s,baz=132,slow=2.6,SNR=3.9						
FRB	Frobisher Bay	123.22	339	PKP	PKiKP	10 04 14.7	+0.6
	3.7nm,1.0s,baz=151,slow=2.2,SNR=4.6						
FIA0	FINESS Array S	123.77	27	*e*PKPdf	PKiKP	10 04 15.5	+0.2
FINES	FINESS Array B	123.77	27	PKP	PKiKP	10 04 15.5	+0.2
	1.6nm,0.7s,baz=125,slow=5.3,SNR=4.0						
CM31	Chiang Mai Arr	125.02	110	*e*PKPdf	PKiKP	10 04 19.6	+0.4
CMAR	Chiang Mai Arr	125.02	110	PKP	PKiKP	10 04 19.8	+0.6
	1.6nm,0.3s,baz=214,slow=3.1,SNR=4.4						
MSO	Missoula	125.36	303	*e*PKPdf	PKiKP	10 04 19.3	+0.2
YBH	Yreka Blue Hor	126.12	293	PKP	PKiKP	10 04 21.4	+0.7
	1.5nm,0.9s,baz=79,slow=16,SNR=2.2						
G08A	Pilot Rock	126.72	298	*e*PKPdf	PKiKP	10 04 22.4	+0.6
KSH	Kashi	128.17	74	*e*PKP	PKiKP	10 04 26.8	+1.8
ARCES	ARCESS Array B	130.33	21	PKP	PKPdf	10 04 27.5	+0.1
	3.2nm,0.9s,baz=224,slow=3.3,SNR=8.1						
BVAR	Borovoye Array	134.27	57	PKP	PKPdf	10 04 35.7	+0.4
	4.2nm,1.1s,baz=222,slow=1.9,SNR=6.5						
YKA	Yellowknife Ar	135.92	318	PKP	PKPdf	10 04 38.1	+0.1
	1.9nm,0.8s,baz=119,slow=2.4,SNR=11						
YKB5	Yellowknife Ar	135.92	318	*e*PKPdf	PKPdf	10 04 38.1	+0.1
YKW3	Yellowknife Ar	135.97	318	*e*PKPdf	PKiKP	10 04 38.9	-0.9
KURBB	Kurchatov Arra	136.84	64	PKP	PKPdf	10 04 39.8	-0.3
	0.2nm,0.4s,baz=232,slow=1.1,SNR=3.9						
WMQ	Urumqi	137.54	77	*e*PKP	PKPdf	10 04 42.3	+0.5
WMQ				LR	LR		
	comp=Z,310nm,24.3s						
LZH	Lanzhou	141.46	99	*e*PKP	PKPdf	10 04 49.0	-0.3
LZH				sPKP		10 05 04.7	
LZH				LR	LR		
	comp=N,130nm,18.2s						
LZH				LR	LR		
	comp=E,140nm,18.0s						
LZH				LR	LR		
	comp=Z,180nm,20.1s						
HYT	Haines Junctio	144.65	308	*e*PKPdf	PKPdf	10 04 54.1	0.0
INK	Inuvik	145.53	321	PKPbc	PKPab	10 04 56.2	+0.5
	7.5nm,0.7s,baz=75,slow=3.1,SNR=9.6						
EPYK	Eagle Plains	146.19	317	*e*PKPdf	PKPbc	10 04 57.6	0.0
NJ2	Nanjing	146.41	120	*e*PKPbc	PKPdf	10 04 57.8	0.0
EGAK	Eagle	147.54	313	*e*PKPbc	PKPbc	10 05 01.3	-0.1
BTO	Baotou	148.08	99	*e*PKPbc	PKPbc	10 05 03.9	+0.1
NRIK	Noril'sk	148.41	38	PKPbc	PKiKP	10 05 04.5	-0.6
	2.6nm,0.5s,baz=177,slow=1.4,SNR=4.5						
SCRK	Sand Creek	148.52	311	*e*PKPbc	PKiKP	10 05 05.2	-0.5
DIV	Divide	148.53	306	*e*PKPbc	PKiKP	10 05 05.6	-0.1
RIDG	Independent Ri	148.83	311	*e*PKPbc	PKiKP	10 05 06.4	+0.2
PAX	Paxson	148.91	309	*e*PKPbc	PKiKP	10 05 06.2	-0.3
HHC	Hu-ho-hao-te	149.11	101	*e*PKPbc	PKPdf	10 05 02.7	+0.5
SCM	Sheep Creek Mo	149.45	307	*e*PKPbc	PKiKP	10 05 07.9	+0.3
DHY	Denali Highway	149.78	309	*e*PKPbc	PKiKP	10 05 08.7	+0.3
HDA	Harding Lake	149.88	312	*e*PKPbc	PKPbc	10 05 07.6	+0.2
SML	Sawmill	149.90	306	*e*PKPdf	PKPdf	10 05 03.5	+0.8
SML				*e*PKPbc	PKiKP	10 05 08.6	+0.1
ILAR	Eielson Array	149.93	312	PKPbc	PKiKP	10 05 08.0	-0.4
	11nm,0.8s,baz=125,slow=1.5,SNR=19						
ILB	Eielson Array	149.93	312	*e*PKPbc	PKiKP	10 05 08.3	-0.1
GHO	Glory Hole Cre	150.17	306	*e*PKPbc	PKiKP	10 05 09.3	+0.2
CCB	Clear Creek Bu	150.29	312	*e*PKPdf	PKPdf	10 05 04.1	+1.0
CCB				*e*PKPbc	PKPbc	10 05 08.3	0.0
SONA0	Songino Array	150.44	85	*e*PKPbc	PKiKP	10 05 10.1	0.0
SONM	Songino Array	150.44	85	*e*PKPbc	PKiKP	10 05 10.1	0.0
	2.2nm,0.8s,baz=242,slow=4.3,SNR=9.5						
RND	Reindeer	150.51	309	*e*PKPbc	PKiKP	10 05 10.2	+0.5
OHAK	Old Harbor	150.96	296	*e*PKPbc	PKiKP	10 05 11.6	+0.9
TOLK	Toolik Lake Re	151.42	320	*e*PKPdf	PKPdf	10 05 03.8	-1.0
TOLK				*e*PKPbc	PKiKP	10 05 12.0	+0.6
BPAW	Bear Paw Mtn.	151.56	310	*e*PKPbc	PKiKP	10 05 12.1	+0.3
COLD	Coldfoot	151.59	317	*e*PKPdf	PKPdf	10 05 06.5	+1.4
COLD				*e*PKPbc	PKiKP	10 05 13.2	+1.5
CAST	Castle Rocks	151.94	309	*e*PKPbc	PKiKP	10 05 12.4	-0.2
MAJO	Matsushiro	158.45	145	*e*PKPab	PKPab	10 05 49.7	-0.6
MJAR	Matsushiro Arr	158.45	145	PKPab	PKPab	10 05 49.7	-0.6
	1.0nm,0.6s,baz=197,slow=5.4,SNR=4.1						

*IDC **05** 09:46:02.1±0.7, 55°.48S×26°.72W, h0km, mb4.7/8, mb1 4.8/8, mb1mx4.5/21, mbtmp4.7/8, Error ellipse: s-maj=24.1km s-min=21.2km az=63.0*

*ISCJB **05** 09:46:05.5±0.8, 55°.5S±0°.1×26°.7W±0°.2, h35km, mb4.5/7, Error ellipse: s-maj=20.8km s-min=17.6km az=143.0*

ISC 05 09:46:07.3±0.7, 55°.5S±0°.1×26°.8W±0°.2, h35km, n21, σ0°88/15, mb4.6/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	Palmer Station	20.45	228	P	P	09 50 42.1	+0.8
	40nm,0.6s,baz=118,slow=6.8,SNR=6.6						
USHA	Ushuaia	23.56	254	P	P	09 51 13.9	-0.2
	6.3nm,0.8s,baz=93,slow=4.2,SNR=3.3						
CPUP	Villa Florida	36.62	310	P	P	09 53 08.6	-1.6
	4.9nm,0.8s,baz=146,slow=13,SNR=2.4						
MAW	Mawson	40.46	144	P	P	09 53 41.9	+0.1
	4.6nm,0.7s,baz=237,slow=9.8,SNR=5.1						
VNDA	Vanda	47.14	183	P	P	09 54 34.9	-0.5
	7.0nm,0.6s,baz=184,slow=5.8,SNR=7.7						
H10S2	ASCENSION HYDR	47.40	16	T	T	10 45 39.8	
	baz=190						
H10S3	ASCENSION HYDR	47.40	16	T	T	10 45 40.4	
	baz=190						
H10S1	ASCENSION HYDR	47.41	16	T	T	10 45 41.5	
	baz=190						
H10N1	ASCENSION HYDR	48.51	16	T	T	10 47 03.9	
	baz=199						
H10N3	ASCENSION HYDR	48.52	16	T	T	10 47 05.1	
	baz=199						
H10N2	ASCENSION HYDR	48.53	16	T	T	10 47 05.1	
	baz=199						
LPAZ	La Paz	50.25	304	P	P	09 55 02.1	+1.4
	13nm,0.8s,baz=151,slow=5.6,SNR=6.1						
TORD	Torodi Ar. Bea	72.45	29	P	P	09 57 30.2	+0.2
	5.8nm,0.5s,baz=205,slow=6.1,SNR=14						
ASAR	Alice Springs	99.45	162	P	Pdif	09 59 45.5	-0.9
	0.6nm,0.7s,baz=180,slow=4.3,SNR=5.0						
ARCES	ARCESS Array B	130.34	21	PKP	PKPdf	10 05 12.7	+0.5
	1.4nm,0.7s,baz=222,slow=1.6,SNR=4.8						
YKA	Yellowknife Ar	135.91	318	PKP	PKPdf	10 05 22.5	-0.3
	1.2nm,0.7s,baz=120,slow=2.2,SNR=3.8						
XAN	Xi'an	142.78	106	P	PKiKP	10 05 40.3	+0.8
XAN				pP	sPKPdf	10 05 47.5	-1.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
INK	Inuvik	145.52	321	PKPbc	PKPdf	10 05 40.1	+0.1
	comp=Z,8.0nm,0.8s,baz=104,slow=4.3,SNR=5.2						
ILAR	Eielson Array	149.91	312	PKPbc	PKPbc	10 05 52.5	+0.2
	comp=Z,4.6nm,0.7s,baz=129,slow=3.2,SNR=5.4						
SONM	Songino Array	150.45	85	PKPbc	PKPbc	10 05 54.6	+0.3
	comp=Z,1.3nm,0.4s,baz=204,slow=3.9,SNR=4.6						
KSRS	Korea Array	155.14	126	PKP	PKPdf	10 05 54.5	-1.4
	comp=Z,0.4nm,0.5s,baz=238,slow=2.1,SNR=4.5						

NNC 05 09:48:52.8±2.7, 54°.57N×83°.64E, h0km, mb3.8, mpv2.6, 6C-1D, Error ellipse: s-maj=24.1km s-min=10.2km az=8.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.93	132	‖P	Pg	09 49 10.6	0.0
	0.6nm,0.3s						
ZAA0				⇑S	Sb	09 49 23.7	-0.9
	9.0nm,0.7s						
KURBB	Kurchatov Arra	5.03	220	⇑Pg	Pg	09 50 26.9	-2.3
	3.8nm,0.8s,baz=40,slow=17						
KURBB				⇑Sn	Sn	09 51 08.4	+0.1
	8.6nm,0.7s						
KURBB				⇑Lg	Lg	09 51 35.8	
	13nm,0.6s						
MK31	Makanchi Array	7.83	187	⇑Sn	Sn	09 52 17.9	+0.6
	0.1nm,0.3s						
MK31				⇑Lg	Lg	09 53 04.9	
	1.3nm,0.7s,baz=359,slow=25						

MAN 05 09:51:49.2, 7°.33N×124°.79E, h5km, mb4.0, ML2.8, MS2.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.55	259	‖*i*P	Pg	09 52 00.2	+0.4
CTBH				*i* S	Sb	09 52 09.1	-0.5
BUKP	Musuan	0.61	26	*e*P	Pg	09 52 01.4	+0.4
BUKP				*e*S	Sb	09 52 11.5	+0.1
SKMP	Bagumbayan, Su	0.84	197	*e*P	Pg	09 52 03.5	-1.8
CGP	Cagayan de Oro	1.13	355	*e*P	Pg	09 52 10.4	-0.5
CGP				*e*S	Sg	09 52 25.8	+0.3
PAGZ	Pagadian	1.49	290	*e*P	Pn	09 52 15.2	-1.5
PAGZ				*e*S	Sg	09 52 37.4	+0.2
DDMP	Don Marcelino,	1.52	143	*e*P	Pn	09 52 16.7	-0.4

RSNC 05 09:55:36.1±1.2, 7°.24N×73°.76W, h3km±5km, ML3.5, Mw3.6, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRRC	Barranca, Sant	0.14	161	⇑*i*P	Pg	09 55 39.5	+0.6
BRRC				*e*S	Sg	09 55 41.6	+0.8
BRRC				*i*		09 55 42.5	
	comp=N,45μm,0.2s						
BARC	Barichara	0.86	138	⇑*i*P	Pg	09 55 51.2	-1.5
BARC				*e*S	Sg	09 56 01.9	-2.0
BARC				*i*		09 56 02.4	
	comp=Z,425nm,0.2s						
PTBC	PUERTO BERRIO,	0.98	225	*e*P	Pg	09 55 53.8	-1.2
PTBC				*e*S	Sg	09 56 06.9	-0.9
PTBC				*i*		09 56 07.8	
	comp=Z,2μm,0.3s						
PAMC	Pamplona, Colo	1.05	85	*e*P	Pg	09 55 54.7	-1.7
PAMC				*e*S	Sg	09 56 09.2	-0.8
PAMC				*i*		09 56 13.7	
	comp=Z,717nm,0.2s						
OCAC	Ocana	1.08	24	*e*P	Pg	09 55 55.3	-1.5
OCAC				*e*S	Sg	09 56 09.5	-1.4
OCAC				*i*		09 56 13.3	
	comp=N,6μm,0.2s						
RUSC	La Rusia	1.50	153	‖*e*P	Pn	09 56 02.2	-2.2
RUSC				*e*S	Sg	09 56 21.9	-2.5
RUSC				*i*		09 56 24.9	
	comp=Z,496nm,0.2s						
SMLC	San Martn de	1.58	349	*e*P	Pn	09 56 02.0	-3.0
SMLC				*e*S	Sn	09 56 22.1	-3.8
SMLC				*i*		09 56 30.9	
	comp=N,2μm,0.1s						
UREC	San Jos de Ur	1.83	286	*e*P	Pn	09 56 07.7	-0.8
UREC				*e*S	Sn	09 56 31.9	-0.3
UREC				*i*		09 56 35.5	
	comp=Z,354nm,0.3s						
NORC

DDMP				*e*S	Sn	10 22 42.5	-0.8
DCPH	**Dipolog City**	**1.73**	**309**⇑	*e*P	Pb	10 22 22.2	-0.7

WEL 05 10:24:54.4±1.3, 46°S±6°×16°6E±°, h5km, M3.3/5, ML3.6/8, MLv3.3/5, Error ellipse: s-maj=0.0km s-min=0.0km az=67.1, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**1.02**	**40**	P	Pg	10 25 12.6	-1.3
DCZ				S	Sg	10 25 26.3	-0.7
WHZ	**Wether Hill Ro**	**1.25**	**74**	P	Pg	10 25 17.9	-0.5
WHZ				S	Sn	10 25 36.2	+0.4
APZ	**The Paps**	**1.36**	**116**	P	Pn	10 25 18.8	-1.2
APZ				S	Sb	10 25 36.6	-1.3
MLZ	**Mavora Lakes**	**1.59**	**57**	P	Pn	10 25 23.7	+0.4
MSZ	**Milford Sound**	**1.98**	**38**	P	Pn	10 25 27.4	-1.1
SYZ	**Scrubby Hill**	**2.04**	**99**	P	Pn	10 25 29.3	-0.1
SYZ				S	Sn	10 25 55.7	+0.5
EAZ	**Earnscleugh**	**2.39**	**66**	P	Pn	10 25 35.2	+1.0
EAZ				S	Sn	10 26 05.7	+1.9
TUZ	**Tuapeka**	**2.39**	**84**	P	Pn	10 25 34.5	+0.3
TUZ				S	Sn	10 26 04.0	+0.2
WKZ	**Wanaka**	**2.42**	**55**	P	Pn	10 25 35.8	+1.1
JCZ	**Jackson Bay**	**2.83**	**41**	P	Pn	10 25 40.3	0.0

NNC 05 10:30:08.4±0.7, 49°10N×68°79E, h0km, mb3.9, mpv3.7, 3C-5D, Error ellipse: s-maj=7.3km s-min=4.7km az=55.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**4.06**	**14**	Pn	Pn	10 31 12.0	+0.3
	4.0nm,0.7s,baz=302,slow=22,SNR=6.2						
BVA0				⇓Pg	Pb	10 31 22.4	+1.7
	8.1nm,1.2s,baz=184,slow=16,SNR=9.1						
BVA0				⇑Lg	Lg	10 32 15.1	
	6.0nm,0.9s,baz=191,slow=24,SNR=5.7						
BTLS	**Baital**	**5.42**	**137**	Pg	Sn	10 32 25.1	-8.4
	1.3nm,0.4s						
BTLS				Lg	Lg	10 32 59.2	
	3.3nm,0.7s						
AB31	**Akbulak array**	**5.80**	**275**	⇓Pg	Pg	10 31 55.3	-4.3
	0.4nm,0.6s,baz=88,slow=15,SNR=4.0						
AB31				⇑Lg	Lg	10 33 11.5	
	0.5nm,0.5s,baz=88,slow=15,SNR=4.0						
KK31	**Karatay Array**	**6.12**	**168**	⇓Lg	Lg	10 33 20.0	
	1.5nm,0.6s						
KURBB	**Kurchatov Arra**	**6.48**	**73**	⇑Lg	Lg	10 33 34.8	
	10nm,0.6s						
KUU	**Kurty**	**7.36**	**132**	Pg	Pg	10 33 01.0	+32
	1.0nm,0.1s						
KUU				Lg	Lg	10 34 01.4	
	5.5nm,0.3s						
DGS	**Degeres**	**7.60**	**138**	Pg	Pg	10 33 05.3	+31
	1.9nm,0.2s						
DGS				Lg	Lg	10 34 08.7	
	11nm,0.6s						
KTBS	**Karatobe**	**7.67**	**132**	Pg	Pg	10 33 06.7	+32
	0.9nm,0.5s						
KTBS				Lg	Lg	10 34 10.9	
	9.7nm,0.6s						
CHKK	**Chushkaly**	**7.71**	**130**	Pg	Pg	10 33 07.5	+31
	1.4nm,0.1s						
CHKK				Lg	Lg	10 34 12.4	
	8.1nm,0.4s						
KST	**Kastek**	**7.84**	**138**	Pg	Pg	10 33 10.1	+32
	2.4nm,0.5s						
KST				Lg	Lg	10 34 17.1	
	6.5nm,0.6s						
ARXS	**Arharly**	**7.91**	**125**	Pg	Pg	10 33 12.4	+33
	1.4nm,0.3s						
ARXS				Lg	Lg	10 34 20.8	
	4.7nm,0.7s						
KAPS	**Kapalarasan**	**8.14**	**114**	Pg	Pg	10 33 21.4	+37
	0.9nm,0.3s						
KAPS				Lg	Lg	10 34 36.1	
	4.3nm,0.3s						
KOTS	**Kotyrbulak**	**8.23**	**132**	Pg	Pg	10 33 17.3	+31
	4.3nm,0.1s						
KOTS				Lg	Lg	10 34 29.3	
	22nm,0.7s						
KURS	**Kuram**	**8.58**	**127**	Pg	Pg	10 33 24.7	+32
	1.9nm,0.4s						
KURS				Lg	Lg	10 34 42.1	
	2.8nm,0.6s						
DJR	**Jarkent**	**8.93**	**118**	Pg	Pg	10 33 34.2	+35
	1.1nm,0.2s						
DJR				Lg	Lg	10 34 58.4	
	2.3nm,0.6s						
MAKZ	**Makanchi**	**9.14**	**100**	⇓Lg	Lg	10 34 59.2	
	3.2nm,0.8s						
MK31	**Makanchi Array**	**9.35**	**99**	⇓Lg	Lg	10 35 06.9	
	2.0nm,0.7s,baz=280,slow=30,SNR=3.8						

*ISCJB **05** 10:31:04.9±0.4, 59°.81N±0°.03×22°.26E±0°.04, h0km, Error ellipse: s-maj=4.4km s-min=3.2km az=179.9*
*HEL **05** 10:31:06.1±0.0, 59°.81N×22°.26E, h0km, ML2.1, ML2.4(UPP), Explosion*
*IDC **05** 10:31:06.7±1.6, 59°.92N×22°.08E, h0km, mb1 2.6/3, mb1mx2.6/57, mbtmp2.6/3, ML2.3/4, Error ellipse: s-maj=22.5km s-min=8.2km az=164.0*
*UPP **05** 10:31:06.5±1.2, 59°.87N×22°.16E, h0km, ML2.4, Suspected explosion*

ISC 05 10:31:03.6±0.8, 59°79N±0°.03×22°21E±0°.02, h0km, n28, σ0°69/40, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.18**	**68**	*e*P	**Pg**	**10 31 26.1**	**0.0**
MEF				*e*S	**Sg**	**10 31 41.7**	**+0.3**
AAL	**Aland**	**1.18**	**290**	P	**Pn**	**10 31 27.4**	**+0.1**
AAL				S	**Sb**	**10 31 42.8**	**+0.1**
AAL	**Aland**	**1.18**	**290**	*e*P	**Pn**	**10 31 27.4**	**+0.1**
AAL				*e*S	**Sb**	**10 31 42.8**	**+0.1**
RAF	**Rauma**	**1.26**	**350**	*e*P	**Pb**	**10 31 28.3**	**+0.1**
RAF				*e*S	**Sg**	**10 31 44.4**	**+0.4**
MTSE	**Matsula**	**1.35**	**142**	*e*P	**Pb**	**10 31 30.2**	**+0.4**
MTSE				*e*S	**Sn**	**10 31 47.6**	**-0.7**
NRTU	**Norrtaelje**	**1.82**	**268**	P	**Pg**	**10 31 38.5**	**+0.2**
NRTU	**Norrtaelje**	**1.82**	**268**	*e*P	**Pg**	**10 31 38.5**	**+0.2**
GRAU	**Graesoe**	**1.92**	**288**	P	**Pb**	**10 31 39.5**	**+0.1**
GRAU	**Graesoe**	**1.92**	**288**	*e*P	**Pb**	**10 31 39.5**	**+0.1**
ARBE	**Arbavere**	**1.95**	**99**	*e*P	**Pb**	**10 31 39.9**	**+0.1**
ARBE				*e*S	**Sg**	**10 32 05.2**	**-0.9**
PVF	**Pernaja**	**1.98**	**66**	*e*P	**Pb**	**10 31 40.3**	**0.0**
PVF				*e*S	**Sb**	**10 32 05.1**	**-0.4**
PVF				MSG		10 32 08.7	
	comp=Z,18nm,0.1s						
FORU	**Forsmark**	**2.11**	**288**	P	**Pb**	**10 31 42.9**	**+0.3**
FORU				S	**Sg**	**10 32 10.7**	**-0.5**
FORU	**Forsmark**	**2.11**	**288**	*e*P	**Pb**	**10 31 42.9**	**+0.3**
FORU				*e*S	**Sg**	**10 32 10.7**	**-0.5**
SLIT	**Slitere, Latvi**	**2.17**	**179**	*e*P	**Pb**	**10 31 43.1**	**-0.5**
SLIT				*e*S	**Sb**	**10 32 10.9**	**0.0**
NYNU	**Nynaeshamn**	**2.29**	**252**	P	**Pb**	**10 31 45.7**	**0.0**
NYNU	**Nynaeshamn**	**2.29**	**252**	*e*P	**Pb**	**10 31 45.7**	**0.0**
UPP	**Uppsala**	**2.32**	**274**	P	**Pb**	**10 31 45.9**	**-0.2**
UPP	**Uppsala**	**2.32**	**274**	*e*P	**Pb**	**10 31 45.9**	**-0.2**
FIBU	**Brunna**	**2.46**	**275**	P	**Pb**	**10 31 47.9**	**-0.6**
FINES	**FINESS Array B**	**2.53**	**47**	Pn	**Pb**	**10 31 48.8**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=230,slow=14,SNR=60						
FINES				Sn	**Sb**	**10 32 21.4**	**+0.1**
	comp=Z,4.6nm,0.3s,baz=232,slow=24,SNR=38						
FIA1	**FINESS Array S**	**2.53**	**47**	*e*PB	**Pb**	**10 31 49.4**	**-0.3**
FIA1				*e*SB	**Sb**	**10 32 21.8**	**+0.4**
FIA1				MSG		10 32 23.5	
	comp=Z,5.8nm,0.1s						
BACU	**Backbrunna**	**2.58**	**274**	P	**Pb**	**10 31 49.5**	**-1.1**
BACU	**Backbrunna**	**2.58**	**274**	*e*P	**Pb**	**10 31 49.5**	**-1.1**
OSTU	**Oestervaala**	**2.59**	**282**	P	**Pb**	**10 31 49.3**	**-1.5**
OSTU	**Oestervaala**	**2.59**	**282**	*e*P	**Pb**	**10 31 49.3**	**-1.5**
HFS	**Hagfors**	**4.30**	**278**	Pn	**Pn**	**10 32 12.5**	**+2.4**
	comp=Z,0.2nm,0.3s,baz=94,slow=12,SNR=9.2						
HFS				Lg	Lg	10 33 15.8	
	comp=Z,0.5nm,0.3s,baz=96,slow=29,SNR=4.5						
NOA	**NORSAR Array B**	**5.59**	**288**	Pn	**Pn**	**10 32 28.4**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=104,slow=11,SNR=4.0						
NOA				Lg	Lg	10 33 56.6	
	comp=Z,0.0nm,0.3s,baz=148,slow=7.3,SNR=3.8						
ARCES	**ARCESS Array B**	**9.89**	**7**	Pn	**Pn**	**10 33 26.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=183,slow=14,SNR=8.9						
ARCES				Sn	Sn	10 35 09.3	-8.9
	comp=Z,0.1nm,0.3s,baz=196,slow=19,SNR=3.0						

MAN 05 10:35:01.8, 12°22N×125°94E, h11km, mb4.5, ML3.3, MS3.1, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.78**	**219**	*e*P	Pg	10 35 16.6	-0.3
BESP				*e*S	Sg	10 35 26.8	-0.4
CNP	**Catarman**	**1.28**	**283**	*e*P	Pn	10 35 25.4	-0.2
CNP				*e*S	Sg	10 35 43.4	+0.5
PLP	**Palo**	**1.41**	**222**⇑	*e*P	Pn	10 35 26.6	-0.8
PLP				*i* S	Sn	10 35 45.6	-0.3
PVCP	**Virac**	**2.21**	**308**	*e*P	Pn	10 35 37.8	-0.7
PVCP				*e*S	Sg	10 36 14.8	+1.9
MSLP	**Maasin**	**2.33**	**207**	*e*P	Pn	10 35 41.3	+1.3
MSLP				*e*S	Sb	10 36 10.6	-1.9

IDC 05 10:48:11.2±8.5, 19°02S×177°81W, h566km±95km, mb3.0/3, mb1 3.3/3, mb1mx2.8/25, mbtmp3.9/3, Error ellipse: s-maj=141.3km s-min=40.4km az=160.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.01**	**261**	P	P	10 55 36.8	-0.4
	0.9nm,0.4s,baz=88,slow=7.5,SNR=18						
ASAR	**Alice Springs**	**45.05**	**255**	P	P	10 55 37.5	0.0
	1.9nm,0.7s,baz=90,slow=7.9,SNR=16						
ASAR				PcP	PcP	10 57 05.7	-0.5
	0.2nm,0.4s,baz=89,slow=4.2,SNR=3.2						
TXAR	**Lajitas Array**	**86.11**	**57**	P	P	10 59 53.0	-0.1
	0.2nm,0.6s,baz=225,slow=6.7,SNR=4.7						
BRTR	**Keskin Array B**	**145.96**	**314**	PKPbc	PKPbc	11 06 47.8	-0.7
	0.4nm,0.4s,baz=134,slow=4.2,SNR=2.4						

IDC 05 10:51:52.4±11.0, 31°14S×178°31W, h169km±119km, mb3.4/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.9/5, Error ellipse: s-maj=110.3km s-min=28.6km az=177.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.04**	**207**	P	Pn	10 53 47.7	+1.5
	0.6nm,0.3s,baz=346,slow=4.2,SNR=3.8						
URZ				S	Sn	10 55 13.8	-2.3
	1.3nm,0.3s,baz=116,slow=9.4,SNR=6.4						
STKA	**Stephens Creek**	**34.06**	**258**	P	P	10 58 22.1	+1.5
	5.5nm,0.7s,baz=97,slow=13,SNR=11						
ASAR	**Alice Springs**	**42.81**	**268**	P	P	10 59 33.1	-0.6
	0.5nm,0.6s,baz=106,slow=7.2,SNR=6.0						
WRA	**Warramunga Arr**	**43.86**	**273**	P	P	10 59 40.8	-1.4
	1.0nm,0.6s,baz=110,slow=8.6,SNR=11						
TXAR	**Lajitas Array**	**93.01**	**57**	P	P	11 04 46.5	-0.3
	0.1nm,0.5s,baz=205,slow=4.0,SNR=2.1						
FINES	**FINESS Array B**	**145.74**	**339**	PKPbc	PKPdf	11 11 09.9	0.0
	1.3nm,0.4s,baz=49,slow=4.4,SNR=12						

MAN 05 10:59:36.2, 12°23N×125°98E, h19km, mb4.4, ML3.3, MS3.0, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.82**	**220**	*e*P	Pb	10 59 51.3	-0.5
BESP				*e*S	Sb	11 00 01.6	-0.8
CNP	**Catarman**	**1.31**	**282**	*e*P	Pn	10 59 59.5	0.0
CNP				*e*S	Sb	11 00 17.6	+0.9
PLP	**Palo**	**1.44**	**223**⇑	*e*P	Pn	11 00 00.9	-0.4
PLP				*i* S	Sn	11 00 19.6	-0.1
PVCP	**Virac**	**2.23**	**308**	*e*P	Pn	11 00 12.0	-0.2
PVCP				*e*S	Sg	11 00 46.0	-2.1
MSLP	**Maasin**	**2.36**	**208**	*e*P	Pn	11 00 15.2	+1.4
MSLP				*e*S	Sb	11 00 44.9	-1.9

TAP 05 11:01:22.4, 24°11N×122°21E, h68km±1km, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.45**	**351**	*e*P	Pn	11 01 33.1	-1.3
	baz=350						
EOS1				S	Sn	11 01 44.0	+0.8
	baz=350						
ENA	**Nanau**	**0.53**	**307**	P	Pn	11 01 35.8	+0.5
	baz=307						
NACB	**Ninganchiao**	**0.56**	**277**	*e*S	Sn	11 01 47.8	+2.4
	baz=276						
ETLH	**Xiulin Townshi**	**0.67**	**279**	*e*P	Pn	11 01 38.3	+1.4
	baz=278						
ETLH				*e*S	Sn	11 01 48.0	+0.4
	baz=278						
ENTT	**Nioudou**	**0.79**	**312**	*e*P	Pn	11 01 38.0	-0.2
	baz=312						
ENTT				S	Sn	11 01 50.7	+0.8
	baz=312						
NDT	**Datong Townshi**	**0.80**	**308**	P	Pn	11 01 38.4	+0.1
	baz=307						
NDT				*e*S	Sn	11 01 51.8	+1.6
	baz=307						
NNSB	**Datong**	**0.82**	**293**	*e*P	Pn	11 01 39.4	+0.7
	baz=292						
NNSB				*e*S	Sn	11 01 51.3	+0.6
	baz=292						
NNS	**Nan Shan**	**0.83**	**294**	*e*S	Sn	11 01 51.8	+0.9
	baz=293						
WHF	**Hehuan Shan**	**0.86**	**273**	*e*S	Sn	11 02 52.4	+0.3
	baz=272						
YHNB	**Yeheng**	**0.94**	**307**	*e*P	Pn	11 01 39.5	-0.6
	baz=306						
YHNB				S	Sn	11 01 54.0	+0.7
	baz=306						
NSK	**Sanguang**	**0.96**	**306**	S	Sn	11 01 54.4	+0.8
	baz=306						

TAP 05 11:01:33.0, 23°67N×120°68E, h7km, ML2.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN5	**Tsauling**	**0.07**	**185**	P	Pg	11 01 35.3	+0.4
	baz=185						
CHN5				*e*S	Sg	11 01 37.2	+1.0
	baz=185						
WGK	**Gukeng**	**0.11**	**280**	P	Pg	11 01 35.9	+0.4
	baz=279						
WGK				*e*S	Sg	11 01 38.7	+1.5
	baz=279						
WDLH	**Douliu**	**0.14**	**280**	*e*P	Pg	11 01 36.5	+0.6
	baz=279						
WDLH				S	Sg	11 01 39.3	+1.5
	baz=279						
WHYT	**Xinyi Township**	**0.16**	**79**	P	Pg	11 01 37.1	+0.8
	baz=79						
WHYT				S	Sg	11 01 40.1	+1.6
	baz=79						
WJS	**Zhushan**	**0.16**	**15**	P	Pg	11 01 37.1	+0.8
	baz=14						
WJS				*e*S	Sg	11 01 40.3	+1.8
	baz=14						
ALS	**Alishan**	**0.19**	**144**	*e*P	Pg	11 01 38.0	+1.1
	baz=143						
ALS				*e*S	Sg	11 01 41.8	+2.1
	baz=143						
WNT	**Mingjian**	**0.21**	**0**	*e*P	Pg	11 01 38.3	+1.0
	baz=2.0						
WNT				*e*S	Sg	11 01 42.4	+2.3
	baz=2.0						
CHN2	**Minshiung**	**0.23**	**235**	*e*P	Pg	11 01 38.7	+1.1
	baz=235						
CHN2				*e*S	Sg	11 01 43.2	+2.5
	baz=235						
SSLB	**Suanglung**	**0.28**	**64**	*e*P	Pg	11 01 39.4	+0.9
	baz=63						
SSLB				*e*S	Sb	11 01 44.1	-1.1
	baz=63						
TYC	**Yuchr**	**0.28**	**34**	P	Pb	11 01 39.8	-0.7
	baz=35						
TYC				*e*S	Sb	11 01 45.4	-0.1
	baz=35						
CHY	**Chiayi**	**0.29**	**235**	*e*S	Sb	11 01 44.8	-0.9
	baz=233						
SMLT	**Sun Moon Lake**	**0.29**	**42**	P	Pb	11 01 39.9	-0.8
	baz=43						
SMLT				*e*S	Sb	11 01 44.7	-1.1
	baz=43						
YUS	**Yu-Shan**	**0.30**	**126**	*e*P	Pb	11 01 40.4	-0.7
	baz=126						
YUS				*e*S	Sb	11 01 46.1	-0.4
	baz=126						
CHN4	**Tsaushan**	**0.32**	**195**	P	Pb	11 01 40.4	-0.8
	baz=194						
CHN4				*e*S	Sb	11 01 47.0	+0.4
	baz=194						
TPUB	**Ta-pu**	**0.37**	**188**	P	Pb	11 01 41.2	-0.7
	baz=187						
TPUB				S	Sb	11 01 47.4	-0.4
	baz=187						
WLGB	**Puzi**	**0.40**	**242**	*e*S	Sb	11 01 48.6	-0.2
	baz=241						
DPDB	**Guoxing**	**0.43**	**31**	*e*P	Pb	11 01 42.3	-0.6
	baz=31						
DPDB				*e*S	Sb	11 01 49.5	-0.2
	baz=31						
VWDT	**VWDT**	**0.43**	**78**	*e*P	Pb	11 01 42.7	-0.2
	baz=78						
VWDT				*e*S	Sb	11 01 49.7	+0.1
	baz=78						
TWK	**Hsinying**	**0.44**	**204**	P	Pb	11 01 42.5	-0.6
	baz=202						
TWK				*e*S	Sb	11 01 49.6	-0.2
	baz=202						
SNST	**Tainan City**	**0.48**	**201**	*e*S	Sb	11 01 51.1	+0.2
	baz=201						
CHN1	**Nanshi**	**0.50**	**197**	*e*P	Pb	11 01 44.0	-0.2
	baz=196						
CHN1				*e*S	Sb	11 01 52.1	+0.4
	baz=196						
STYT	**Tauyuan**	**0.51**	**172**	*e*S	Sb	11 01 52.0	+0.1
	baz=171						
OWD	**Renai**	**0.53**	**57**	*e*P	Pb	11 01 44.3	-0.6
	baz=57						
OWD				*e*S	Sb	11 01 52.6	-0.2
	baz=57						
CHN8	**Yiju**	**0.54**	**234**	*e*S	Sb	11 01 52.9	+0.2
	baz=233						
ELDTW	**Lidau**	**0.56**	**147**	*e*P	Pb	11 01 45.0	-0.3
	baz=146						
ELDTW				*e*S	Sb	11 01 53.9	+0.3
	baz=146						
CHGB	**Renai**	**0.60**	**49**	*e*P	Pb	11 01 45.4	-0.6
	baz=48						
CHGB				*e*S	Sb	11 01 54.5	-0.1
	baz=48						
EHY	**Hungye**	**0.61**	**105**	*e*S	Sb	11 01 55.4	+0.7
	baz=233						
EHY	**Hungye**	**0.61**	**105**	*e*P	Pb	11 01 46.1	+0.1
	baz=105						
EHY				*e*S	Sb	11 01 55.5	+0.7
	baz=105						
YULB	**Yu-li**	**0.62**	**116**	*e*P	Pb	11 01 46.4	+0.1
	baz=115						
YULB				*e*S	Sb	11 01 55.8	+0.5
	baz=115						
TWF1	**Yuli**	**0.64**	**119**	*e*P	Pb	11 01 47.1	+0.5
	baz=118						
TWF1				S	Sb	11 01 56.3	+0.5
	baz=118						
WHP	**Taichung City**	**0.65**	**21**	*e*P	Pb	11 01 46.6	-0.2
	baz=21						
WHP				*e*S	Sb	11 01 56.8	+0.5
	baz=21						
SLGT	**Liugui**	**0.67**	**183**	*e*P	Pb	11 01 47.2	+0.2
	baz=182						
EGFH	**Guangfu**	**0.68**	**90**	*e*P	Pb	11 01 47.9	+0.6
	baz=89						
EGFH				*e*S	Sb	11 01 57.5	+0.6
	baz=89						
TWQ1	**Liyutan**	**0.68**	**7**	*e*S	Sb	11 01 57.6	+0.6
	baz=6.0						
HGSD	**Ruisui**	**0.70**	**104**	*e*P	Pb	11 01 47.7	+0.1
	baz=104						
HGSD				*e*S	Sn	11 01 59.0	-1.5
	baz=104						
ESL	**Shilin**	**0.70**	**78**	*e*P	Pb	11 01 47.9	+0.3
	baz=78						
ESL				*e*S	Sb	11 01 58.1	+0.6
	baz=78						
NSTT	**Nanjuang**	**1.00**	**17**	*e*P	Pb	11 01 53.0	+0.3
	baz=17						
NSTT				*e*S	Sn	11 02 07.5	-0.5
	baz=17						
LIOB	**Emei**	**1.02**	**17**	*e*P	Pb	11 01 53.3	+0.2
	baz=17						
LIOB				*e*S	Sn	11 02 08.1	-0.3
	baz=17						
WDGT	**Dungji**	**1.02**	**247**	*e*P	Pg	11 01 52.7	0.0
	baz=246						
PHUB	**P'eng-hu**	**1.03**	**262**	*e*S	Sb	11 02 07.5	+0.6
	baz=261						
YHNB	**Yeheng**	**1.18**	**32**	*e*S	Sn	11 02 12.9	+0.4
	baz=32						
VCHM	**Qimei**	**1.24**	**249**	*e*S	Sg	11 02 11.7	-1.2
	baz=248						
PTMZ	**Houxiangcun**	**1.98**	**314**	*e*S	Sn	11 02 32.7	+0.7
	baz=313						

*ISCJB **05** 11:05:32.1±1.4, 13°.4N±0°.1×91°.89W±0°.06, h35km, mb3.6/2, MS3.0/1, Error ellipse: s-maj=20.5km s-min=6.4km az=13.9*
*UCR **05** 11:05:32.6±2.2, 13°.43N×91°.85W, h35km±999km, MD3.7, ML3.6*
*SNET **05** 11:05:33.1±0.8, 14°.35N×91°.77W, h35km±999km, ML3.7*
*GCG **05** 11:05:45.1±0.3, 14°.43N×91°.40W, h31km±3km, MD4.0*
*IDC **05** 11:05:45.8±3.0, 15°.06N×91°.45W, h55km±63km, mb3.4/2, mb1 3.7/5, mb1mx3.3/39, mbtmp3.5/5, ML3.2/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/20, Error ellipse: s-maj=167.6km s-min=28.6km az=34.0*

ISC 05 11:05:34.5±1.4, 13°5N±0°.1×91°78W±0°.07, h35km, n24, σ1°49/29, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.97**	**12**	*e*P	**Pn**	**11 05 51.1**	**-0.6**
STG3	**Santiaguito 3,**	**1.23**	**9**	*e*P	**Pn**	**11 05 53.6**	**-1.8**
FUG	**Fuego 3**	**1.32**	**43**	*e*P	**Pn**	**11 05 56.6**	**0.0**
FUG	**Fuego 3**	**1.32**	**43**	*e*P	**Pn**	**11 05 56.6**	**0.0**
PCG	**Pacaya**	**1.45**	**52**	*e*P	**Pn**	**11 05 58.8**	**+0.3**
PCG	**Pacaya**	**1.45**	**52**	*e*P	**Pn**	**11 05 58.8**	**+0.3**
NBG	**Las Nubes**	**1.77**	**52**	*e*P	**Pn**	**11 06 04.3**	**+1.4**
NBG	**Las Nubes**	**1.77**	**52**	*e*P	**Pn**	**11 06 04.3**	**+1.4**
CEVE	**Cerro Verde**	**2.12**	**81**	*e*P	**Pn**	**11 06 07.2**	**-0.5**
CEVE				*e*S	**Sn**	**11 06 34.7**	**+1.7**
CEVE				IAML		11 06 43.3	
	comp=Z,550nm,0.2s						
CEVE	**Cerro Verde**	**2.12**	**81**	*e*P	**Pn**	**11 06 07.2**	**-0.5**
CEVE				*e*S	**Sn**	**11 06 34.7**	**+1.7**
CEVE				IAML		11 06 43.3	
	comp=Z,550nm,0.2s						
SBLS	**San Blas**	**2.12**	**80**	*e*P	**Pn**	**11 06 07.4**	**-0.4**
SBLS				*e*S	**Sn**	**11 06 34.1**	**+1.1**
SBLS	**San Blas**	**2.12**	**80**	*e*P	**Pn**	**11 06 07.4**	**-0.4**
SBLS				*e*S	**Sn**	**11 06 34.1**	**+1.1**
SNJE	**San Jose**	**2.15**	**80**	*e*P	**Pn**	**11 06 07.4**	**-0.6**
SNJE				*e*S	**Sn**	**11 06 33.5**	**-0.1**
SNJE	**San Jose**	**2.15**	**80**	*e*P	**Pn**	**11 06 07.4**	**-0.6**
SNJE				*e*S	**Sn**	**11 06 33.5**	**-0.1**
LOMA	**San Marcos**	**2.54**	**86**	*e*P	**Pn**	**11 06 13.8**	**+0.6**
LOMA	**San Marcos**	**2.54**	**86**	*e*P	**Pn**	**11 06

comp=Z,0.5nm,0.6s,baz=146,slow=7.5,SNR=6.3

*NORS **05** 11:07:30.5±0.0, 42.°51N×45.°42E, h10km, MPVA3.7*
*DRS **05** 11:07:31.3±0.0, 42.°55N×45.°25E, h14km, ML2.4/2*
*TIF **05** 11:07:32.0, 42.°65N×45.°38E, h14km±1km*
ISC 05 11:07:33.3±1.1, 42.°57N±0.°03×45.°44E±0.°02, h18km±4km, n27, σ1°29/53, 2C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.59**	**80**	*e*Pg	**Pb**	**11 07 44.6**	**-0.5**
	48nm,0.1s						
BTLR				⇑*e*Sg	**Sn**	**11 07 53.4**	**-2.7**
	215nm,0.3s						
KMGR	**Komgaron**	**0.65**	**320**	*e*Pg	**Pb**	**11 07 45.8**	**-0.3**
KMGR				*e*Sg	**Sb**	**11 07 55.7**	**+0.9**
GROC	**Groznyy**	**0.69**	**23**	*i* Pg	**Pn**	**11 07 47.5**	**-0.7**
GROC				*e*Sg	**Sn**	**11 07 58.0**	**-0.4**
GUDG	**Gudauri**	**0.72**	**262**	P	**Pg**	**11 07 45.7**	**-1.8**
GUDG				S	**Sg**	**11 07 56.0**	**-1.0**
LACR	**Lac**	**0.88**	**288**	*e*Pg	**Pb**	**11 07 48.0**	**-2.2**
LACR				*e*Sg	**Sb**	**11 08 00.3**	**-1.3**
XNZR	**Khunzakh**	**0.94**	**91**	*e*Pg	**Pn**	**11 07 51.0**	**-0.7**
XNZR				*e*Sg	**Sn**	**11 08 04.1**	**-0.7**
LGD	**Lagodekhi**	**0.95**	**140**	P	**Pn**	**11 07 51.5**	**-0.3**
LGD				S	**Sn**	**11 08 04.2**	**-0.6**
BTNK	**Botanikuri**	**1.00**	**208**	P	**Pn**	**11 07 52.8**	**+0.3**
BTNK				S	**Sn**	**11 08 07.5**	**+1.3**
DLMR	**Dylym**	**1.01**	**60**	*e*Pg	**Pn**	**11 07 53.0**	**+0.3**
	46nm,0.3s						
DLMR				*e*Sg	**Sn**	**11 08 06.5**	**+0.1**
	107nm,0.0s						
UNCR	**Uncukul**	**1.01**	**81**	*i* Pg	**Pn**	**11 07 52.5**	**-0.2**
UNCR				*e*Sg	**Sn**	**11 08 06.5**	**0.0**
KRNR	**Karanay**	**1.11**	**76**	*e*Pg	**Pg**	**11 07 54.0**	**-1.0**
KRNR				*e*Sg	**Sn**	**11 08 09.0**	**-0.1**
KORR	**Kora**	**1.13**	**298**	*e*Pg	**Pg**	**11 07 54.7**	**-0.5**
KORR				*e*Sg	**Sg**	**11 08 10.9**	**+0.7**
GNBR	**Gunib**	**1.14**	**98**	*e*Pg	**Pg**	**11 07 54.5**	**-1.0**
	29nm,0.4s						
GNBR				⇑*e*Sg	**Sn**	**11 08 10.0**	**+0.3**
	121nm,0.4s						
BUJR	**Buynaksk**	**1.26**	**78**	*e*Pg	Pg	11 08 01.0	+3.3
BUJR				*e*Sg	**Sg**	**11 08 19.0**	**+4.9**
TRKR	**Terskaya**	**1.27**	**336**	*e*Pg	**Pg**	**11 07 57.5**	**-0.3**
TRKR				*e*Sg	**Sg**	**11 08 15.4**	**+1.1**
STDR	**Stavd-Durt**	**1.29**	**309**	*e*Pg	**Pg**	**11 07 57.5**	**-0.7**
STDR				*e*Sg	**Sg**	**11 08 15.3**	**+0.3**
LSNR	**Lesken**	**1.38**	**302**	*e*Pg	**Pb**	**11 07 58.9**	**+0.3**
LSNR				*e*Sg	**Sg**	**11 08 17.9**	**-0.1**
DIGR	**Digorskoe uzhe**	**1.41**	**284**	*e*Pg	**Pn**	**11 07 58.4**	**+0.2**
DIGR				*e*Sg	**Sb**	**11 08 17.9**	**+1.1**
KZRT	**Kazreti**	**1.41**	**214**	P	**Pb**	**11 07 59.3**	**+0.1**
KZRT				S	**Sg**	**11 08 18.9**	**-0.1**
ONI	**Oni**	**1.47**	**272**	P	**Pb**	**11 07 59.7**	**-0.4**
ONI				S	**Sn**	**11 08 18.5**	**+0.8**
URKR	**Urkarakh**	**1.68**	**103**	*e*Pg	**Pg**	**11 08 07.2**	**+1.5**
URKR				*e*Sg	**Sg**	**11 08 28.8**	**+1.3**
TKB	**Tkibuli**	**1.82**	**264**	P	**Pb**	**11 08 06.4**	**+0.3**
TKB				S	**Sb**	**11 08 30.2**	**+1.6**
AKH	**Akhalkalaki**	**1.85**	**232**	P	**Pb**	**11 08 06.5**	**-0.3**
AKH				S	**Sb**	**11 08 30.8**	**+1.1**
KBTC	**Kuba-Taba**	**1.94**	**311**	*e*Pg	**Pb**	**11 08 07.3**	**-0.8**
KBTC				*e*Sg	**Sb**	**11 08 33.7**	**+1.7**
NEY	**Neytrino**	**2.11**	**290**	*e*Pg	**Pb**	**11 08 10.4**	**-0.7**
NEY				*e*Sg	**Sb**	**11 08 38.0**	**+1.0**
DRN	**Derbent**	**2.21**	**103**	*e*Pg	**Pb**	**11 08 10.6**	**-2.2**
DRN				*e*Sg	**Sn**	**11 08 33.2**	**-2.7**
SHA1	**Shidzhatmaz**	**2.35**	**301**	*e*Pn	**Pn**	**11 08 13.0**	**+1.8**
SHA1				*e*Sn	**Sb**	**11 08 43.8**	**-0.1**

*IDC **05** 11:13:53.5±3.3, 43.°97N×129.°13W, h0km, mb3.0/2, mb1 3.5/4, mb1mx3.3/44, mbtmp3.2/4, ML2.9/2, MS2.8/3, Ms1 2.9/3, ms1mx2.7/8, Error ellipse: s-maj=54.0km s-min=26.5km az=47.0*
*ISCJB **05** 11:13:56.7±0.7, 44.°27N±0.°04×128.°67W±0.°08, h13km, mb3.0/1, Error ellipse: s-maj=8.1km s-min=4.9km az=160.7*
*ANF **05** 11:13:57.5±1.9, 43.°95N×128.°60W, h5km, ML3.4/3, Error ellipse: s-maj=22.3km s-min=6.9km az=52.0*
*NEIC **05** 11:13:58.6±2.1, 44.°30N×128.°69W, h10km±3km, ML2.9, Error ellipse: s-maj=24.5km s-min=9.8km az=86.0*
ISC 05 11:13:57.6±1.4, 44.°19N±0.°08×128.°8W±0.°1, h13km, n71, σ1°60/71, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.50**	**111**	*e*Pn	**Pn**	**11 14 51.0**	**-0.8**
KEBM				*e*Sn	**Sn**	**11 15 32.1**	**-1.0**
I02D	**Swisshome**	**3.56**	**90**	P	**Pn**	**11 14 52.1**	**-0.4**
	baz=275,SNR=26						
I02D				S	**Sn**	**11 15 34.8**	**+0.4**
	baz=275						
J01E	**Myrtle Point**	**3.68**	**105**	P	**Pn**	**11 14 51.3**	**-2.8**
	baz=290						
J01E				S	**Sn**	**11 15 34.4**	**-2.8**
	baz=290						
COR	**Corvallis**	**3.96**	**82**	*e*Pn	**Pn**	**11 14 57.9**	**0.0**
I03D	**Drain, OR**	**3.96**	**95**	P	**Pn**	**11 14 57.2**	**-0.8**
	baz=281,SNR=5.1						
I03D				S	**Sn**	**11 15 43.2**	**-1.1**
	baz=281						
K02D	**Willamette Mer**	**4.02**	**110**	P	**Pn**	**11 14 56.3**	**-2.7**
	baz=296						
K02D				S	**Sn**	**11 15 42.8**	**-3.2**
	baz=296						
G03D	**McMinnville, O**	**4.07**	**74**	P	**Pn**	**11 14 58.9**	**-0.6**
	baz=259,SNR=12						
H04D	**Lebanon**	**4.36**	**84**	P	**Pn**	**11 15 03.4**	**-0.1**
	baz=269						
HUMO	**Hull Mountain**	**4.54**	**108**	*e*Pn	**Pn**	**11 15 05.1**	**-0.9**
HUMO				*e*Sn	**Sn**	**11 15 58.6**	**-0.1**
I04A	**Tendick Farm,**	**4.62**	**93**	P	**Pn**	**11 15 06.8**	**-0.4**
	baz=279,SNR=7.7						
NLWA	**Neilton Lookou**	**4.70**	**45**	*e*Pn	**Pn**	**11 15 07.2**	**-1.1**
H04A	**Detroit Lake**	**4.76**	**82**	*e*Pn	**Pn**	**11 15 08.9**	**-0.1**
H04A				*e*Sn	**Sn**	**11 16 07.5**	**+3.4**
J04D	**Umpqua Nationa**	**4.94**	**99**	P	**Pn**	**11 15 11.2**	**-0.4**
	baz=285,SNR=6.8						
E04D	**Cinebar**	**4.99**	**59**	P	**Pn**	**11 15 12.5**	**+0.5**
	baz=244,SNR=7.4						
YBH	**Yreka Blue Hor**	**5.10**	**117**	LR	LR	11 16 41.3	
	comp=Z,52nm,20.2s,baz=286,slow=32						
YBH	**Yreka Blue Hor**	**5.10**	**117**	*e*Pn	**Pn**	**11 15 14.1**	**+0.4**
I05D	**Terrebonne, OR**	**5.36**	**86**	P	**Pn**	**11 15 17.2**	**0.0**
	baz=272						
G05D	**Wamic, OR**	**5.43**	**76**	P	**Pn**	**11 15 18.5**	**+0.2**
	baz=262						
KMRM	**Mail Ridge**	**5.48**	**135**	*e*Pn	**Pn**	**11 15 20.8**	**+1.9**
LON	**Longmire**	**5.54**	**60**	*e*Pn	**Pn**	**11 15 19.3**	**-0.4**
D05A	**Enumclaw**	**5.63**	**55**	*e*Pn	**Pn**	**11 15 20.5**	**-0.4**
PINE	**Pine Mountain**	**5.68**	**91**	*e*Pn	**Pn**	**11 15 21.6**	**-0.3**
PGC	**Sidney**	**5.79**	**38**	*e*Pn	**Pn**	**11 15 22.8**	**-0.3**
G06A	**Carlson Farm,**	**5.91**	**77**	*e*Pn	**Pn**	**11 15 24.4**	**-0.4**
B05A	**Bryant**	**6.18**	**46**	P	**Pn**	**11 15 29.9**	**+1.4**
	baz=231						
LTY	**Liberty**	**6.46**	**59**	*e*Pn	**Pn**	**11 15 32.3**	**-0.1**
MOD	**Modoc Plateau**	**6.63**	**107**	*e*Pn	**Pn**	**11 15 34.6**	**-0.2**
B06A	**Marblemount**	**6.66**	**47**	*e*Pn	**Pn**	**11 15 33.1**	**-1.9**
I07A	**Izee**	**6.69**	**88**	*e*Pn	**Pn**	**11 15 36.0**	**+0.4**
HOPS	**Hopland Field**	**6.73**	**138**	*e*Pn	**Pn**	**11 15 37.0**	**+0.9**
HAWA	**Hanford**	**6.89**	**68**	*e*Pn	**Pn**	**11 15 38.6**	**+0.3**
G08A	**Pilot Rock**	**7.09**	**78**	*e*Pn	**Pn**	**11 15 39.4**	**-1.7**
ORV	**Oroville**	**7.15**	**128**	*e*Pn	**Pn**	**11 15 42.8**	**+1.0**
MCCM	**Marconi Confer**	**7.51**	**142**	*e*Pn	**Pn**	**11 15 49.5**	**+2.9**
J08A	**Circle Bar Ran**	**7.52**	**93**	*e*Pn	**Pn**	**11 15 47.8**	**+0.8**
WVOR	**Wild Horse Val**	**7.62**	**100**	*e*Pn	**Pn**	**11 15 50.2**	**+1.9**
B08A	**Colville Reser**	**7.77**	**54**	*e*Pn	**Pn**	**11 15 49.7**	**-0.6**
AFDM	**Forest Hills D**	**7.86**	**129**	*e*Pn	**Pn**	**11 15 52.1**	**+0.5**
LLLB	**Lilloet**	**7.95**	**34**	*e*Pn	**Pn**	**11 15 52.6**	**-0.1**
C09A	**Chrisman Ranch**	**8.17**	**60**	*e*Pn	**Pn**	**11 15 55.6**	**-0.1**
RUBR	**Rubicon Trail**	**8.26**	**125**	*e*Pn	**Pn**	**11 16 00.6**	**+3.4**
PAHR	**Pah Rah Range**	**8.32**	**119**	*e*Pn	**Pn**	**11 16 00.1**	**+2.1**
F10A	**Beach Ranch, E**	**8.38**	**74**	*e*Pn	**Pn**	**11 16 00.2**	**+1.5**
PNTR	**Pine Nut**	**8.56**	**123**	*e*Pn	**Pn**	**11 16 03.2**	**+1.7**
CMB	**Columbia Colle**	**8.84**	**131**	*e*Pn	**Pn**	**11 16 05.2**	**+0.3**
YERR	**Yerington**	**8.85**	**123**	*e*Pn	**Pn**	**11 16 05.3**	**+0.1**
WAKR	**Walker**	**9.04**	**126**	*e*Pn	**Pn**	**11 16 10.5**	**+2.6**
NEW	**Newport**	**9.06**	**59**	Pn	**Pn**	**11 16 11.4**	**+3.4**
	0.1nm,0.3s,baz=266,slow=13,SNR=2.6						
NEW				LR	LR	11 19 35.7	
	comp=Z,86nm,19.9s,baz=269,slow=36						
NEW	**Newport**	**9.06**	**59**	*e*Pn	**Pn**	**11 16 07.1**	**-0.9**
PLID	**Pearl Lake**	**9.17**	**80**	*e*Pn	**Pn**	**11 16 10.0**	**+0.3**
SAO	**San Andreas Ge**	**9.29**	**140**	*e*Pn	**Pn**	**11 16 15.2**	**+4.1**
BMN	**Battle Mountai**	**9.36**	**110**	*e*Pn	**Pn**	**11 16 14.5**	**+2.3**
RYN	**Ryan**	**9.51**	**122**	*e*Pn	**Pn**	**11 16 16.6**	**+2.3**
NV01	**Mina Array Sit**	**9.77**	**123**	*e*Pn	**Pn**	**11 16 18.2**	**+0.3**
NVAR	**Mina Array Bea**	**9.77**	**123**	Pn	**Pn**	**11 16 18.2**	**+0.3**
	0.0nm,0.3s,baz=299,slow=15,SNR=2.5						
NVAR				LR	LR	11 19 50.7	
	comp=Z,88nm,19.9s,baz=260,slow=36						
HLID	**Hailey**	**10.41**	**88**	*e*Pn	**Pn**	**11 16 27.4**	**+0.8**
YPP	**Pitchstone Pla**	**12.91**	**83**	*e*Pn	**Pn**	**11 17 02.8**	**+1.9**
FLWY	**Flagg Ranch**	**13.00**	**84**	*e*Pn	**Pn**	**11 17 04.7**	**+2.6**
MSU	**Marysvale**	**13.71**	**109**	*e*Pn	**Pn**	**11 17 13.2**	**+1.5**
Q16A	**Castle Valley**	**14.20**	**106**	*e*Pn	**Pn**	**11 17 22.0**	**+3.5**
PFO	**Pinyon Flats O**	**14.26**	**134**	*e*Pn	**P**	**11 17 25.7**	**-0.8**
YKA	**Yellowknife Ar**	**20.11**	**19**	P	**P**	**11 18 30.4**	**-0.4**
	0.3nm,0.6s,baz=206,slow=10,SNR=3.4						
YKB5	**Yellowknife Ar**	**20.11**	**19**	*e*P	**P**	**11 18 30.4**	**-0.4**
ILAR	**Eielson Array**	**22.98**	**340**	P	**P**	**11 19 01.1**	**-0.4**
	0.4nm,0.6s,baz=148,slow=8.9,SNR=4.8						
ILB	**Eielson Array**	**22.98**	**340**	*e*P	**P**	**11 19 02.2**	**+0.7**
H11N3	**WAKE ISLAND Hy**	**58.20**	**267**	T	T	12 26 26.3	
	baz=49,slow=75,SNR=1185						
H11N2	**WAKE ISLAND Hy**	**58.20**	**267**	T	T	12 26 31.7	
	baz=49,slow=75,SNR=311						
H11N1	**WAKE ISLAND Hy**	**58.22**	**267**	T	T	12 26 35.9	
	baz=49,slow=75,SNR=209						
H11S1	**WAKE ISLAND Hy**	**59.13**	**266**	T	T	12 27 37.6	
	baz=49,slow=75,SNR=144						
H11S2	**WAKE ISLAND Hy**	**59.14**	**266**	T	T	12 27 40.3	
	baz=49,slow=75,SNR=88						
H11S3	**WAKE ISLAND Hy**	**59.15**	**266**	T	T	12 27 41.0	
	baz=49,slow=75,SNR=76						

*ISCJB **05** 11:19:24.2±0.5, 3.°46N±0.°05×92.°96E±0.°05, h10km, mb4.1/10, MS3.3/3, Error ellipse: s-maj=8.3km s-min=5.5km az=36.0*
*IDC **05** 11:19:24.6±1.2, 3.°45N×92.°91E, h0km, mb4.0/6, mb1 4.3/9, mb1mx3.8/42, mbtmp4.1/9, ML4.4/3, MS3.2/6, Ms1 3.2/6, ms1mx2.9/48, Error ellipse: s-maj=38.8km s-min=18.4km az=46.0*
*NEIC **05** 11:19:25.8±2.4, 3.°42N×92.°91E, h10km±3km, mb4.4/9, Error ellipse: s-maj=20.7km s-min=15.2km az=51.0*
*DJA **05** 11:19:34.2±0.8, 3.°N±4.×9.°4E±.°, h10km, M4.4/9, mb4.5/6, mB5.2/5, MLv4.3/9, Mw(mB)4.6/5*
ISC 05 11:19:26.1±0.8, 3.°41N±0.°07×93.°01E±0.°06, h10km, n52, σ2°10/50, mb4.1/10, MS3.3/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**3.08**	**48**	P	Pn	11 20 10.3	-4.6
SNSI	**Sinabang, Aceh**	**3.46**	**107**	P	**Pn**	**11 20 21.0**	**+1.0**
SNSI				S	**Sn**	**11 20 56.0**	**-5.0**
MLSI	**Meulaboh, Aceh**	**3.49**	**76**	P	**Pn**	**11 20 20.9**	**+0.4**
MLSI				Pg	**Pb**	**11 20 29.7**	**+1.7**
MLSI				S	**Sn**	**11 20 57.2**	**-4.7**
TPTI		**4.17**	**92**	P	**Pn**	**11 20 30.5**	**+0.8**
TPTI				S	**Sn**	**11 21 13.1**	**-5.4**
LHMI	**Lhok Sumawe**	**4.32**	**65**	*e*Pn	**Pn**	**11 20 33.0**	**+1.1**
LHMI				*e*Sn	**Sn**	**11 21 24.0**	**+1.6**
LHMI	**Lhok Sumawe**	**4.32**	**65**	P	**Pn**	**11 20 32.0**	**+0.1**
KCSI	**Kotacane, Aceh**	**4.75**	**88**	P	**Pn**	**11 20 40.1**	**+2.2**
KCSI				S	**Sn**	**11 21 28.8**	**-4.3**
GSI	**Gunungsitoli**	**5.02**	**115**	*e*Pn	**Pn**	**11 20 43.1**	**+1.7**
GSI				*e*Sn	**Sn**	**11 21 39.1**	**-0.5**
GSI	**Gunungsitoli**	**5.02**	**115**	P	**Pn**	**11 20 42.0**	**+0.5**
GSI				S	**Sn**	**11 21 35.2**	**-4.4**
PSI	**Prapat**	**5.94**	**96**	Pn	**Pn**	**11 20 57.5**	**+3.3**
	7.2nm,0.3s,baz=303,slow=8.3,SNR=9.2						
PSI				Sn	**Sn**	**11 22 01.9**	**-0.5**
	4.3nm,0.3s,baz=226,slow=13,SNR=6.7						
PSI				LR	LR	11 23 16.1	
	comp=Z,161nm,18.4s,baz=312,slow=38						
PSI	**Prapat**	**5.94**	**96**	*e*Sn	**Sn**	**11 22 02.2**	**-0.2**
PKDT	**Phuket**	**6.92**	**50**	P	**Pn**	**11 21 08.8**	**+1.1**
	67nm,0.8s,0.4nm						
MNSI	**Mandailing Nat**	**7.06**	**111**	P	**Pn**	**11 21 11.1**	**+1.6**
KULM	**Kulim**	**7.84**	**76**	*e*Pn	**Pn**	**11 21 21.9**	**+1.6**
TRTT	**Trang**	**7.97**	**56**	P	**Pn**	**11 21 22.1**	**0.0**
	48nm,1.0s,0.1nm						
IPM	**Ipoh**	**8.07**	**82**	*e*Pn	**Pn**	**11 21 23.2**	**-0.2**
PPSI	**Pulau Pagai**	**9.30**	**131**	P	**Pn**	**11 21 42.4**	**+2.1**
SDSI	**Sungai Dareh**	**9.45**	**117**	P	**Pn**	**11 21 44.2**	**+1.8**
PALK	**Pallekele**	**12.84**	**288**	Pn	**Pn**	**11 22 27.3**	**-1.6**
	0.7nm,0.3s,baz=115,slow=11,SNR=3.1						
PALK				Sn	Sn	11 24 38.8	-13
	1.6nm,0.3s,baz=292,slow=0.5,SNR=4.6						
PALK				LR	LR	11 26 25.9	
	comp=Z,90nm,20.7s,baz=116,slow=33						
PALK	**Pallekele**	**12.84**	**288**	*e*Pn	**Pn**	**11 22 29.2**	**+0.3**
MDSI	**Maura Dua**	**13.64**	**125**	P	**Pn**	**11 22 41.5**	**+1.8**
CHAI	**Chaiyaphum**	**15.24**	**35**	P	**P**	**11 23 06.7**	**+0.3**
	16μm,0.8s,697μm						
CMAR	**Chiang Mai Arr**	**16.05**	**21**	Pn	**Pn**	**11 23 10.2**	**-1.8**
	1.3nm,0.3s,baz=216,slow=14,SNR=12						
CMAR				LR	LR	11 29 12.5	
	comp=Z,51nm,18.4s,baz=238,slow=37						
KHON	**Khomkaen**	**16.07**	**36**	P	**Pn**	**11 23 16.2**	**+3.9**
	66μm,0.6s						
LAMP	**Lampang**	**16.36**	**23**	P	**Pn**	**11 23 18.8**	**+2.8**
	24μm,0.8s						
CHTO	**Chiang Mai**	**16.38**	**20**	*e*Pn	**Pn**	**11 23 14.4**	**-1.8**
	5.0nm,0.8s						
CMMT	**Chiang Mai**	**16.38**	**20**	P	**Pn**	**11 23 18.6**	**+2.4**
	4.4nm,0.8s						
SKNT	**Sakolnakorn**	**17.26**	**38**	P	**Pn**	**11 23 26.7**	**-0.7**
SLVN	**Son La**	**20.73**	**30**	*e*P	**P**	**11 24 07.4**	**+0.3**
	18nm,1.3s						
SHL	**Shillong**	**22.06**	**357**	*e*P	**P**	**11 24 19.7**	**-1.7**
	18nm,0.3s						
H08S2	**Diego Garcia H**	**23.23**	**242**	T	T	11 50 00.4	
	baz=62,slow=75,SNR=34						
H08S3	**Diego Garcia H**	**23.23**	**242**	T	T	11 50 05.8	
	baz=62,slow=75,SNR=35						
H08S1	**Diego Carcia H**	**23.25**	**242**	T	T	11 50 00.7	
	baz=62,slow=75,SNR=35						
LSA	**Lhasa**	**26.21**	**356**	*e*P	**P**	**11 25 00.5**	**-1.2**
	6.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**38.61**	**125**	P	**P**	**11 26 49.7**	**-0.1**
	3.3nm,0.8s,baz=297,slow=6.8,SNR=4.2						
NWAO	**Narrogin (SRO)**	**42.80**	**149**	LR	LR	11 45 30.3	
	comp=Z,50nm,18.8s,baz=144,slow=36						
H01W3	**Cape Leeuwin H**	**42.95**	**154**	T	T	12 13 44.5	
	baz=331,slow=75,SNR=4.6						
H01W2	**Cape Leeuwin H**	**42.97**	**154**	T	T	12 13 43.1	
	baz=331,slow=75,SNR=5.0						
H01W1	**Cape Leeuwin H**	**42.97**	**154**	T	T	12 13 52.7	
	baz=331,slow=75,SNR=5.4						
MK31	**Makanchi Array**	**44.21**	**349**	*e*P	**P**	**11 27 34.8**	**-0.7**
	2.9nm,0.9s						
MK32	**Makanchi Array**	**44.21**	**349**	*e*P	**P**	**11 27 35.1**	**-0.3**
MKAR	**Makanchi Array**	**44.21**	**349**	P	**P**	**11 27 35.1**	**-0.3**
	1.3nm,0.6s,baz=172,slow=8.7,SNR=8.6						
SONA0	**Songino Array**	**45.74**	**13**	*e*P	**P**	**11 27 47.3**	**-0.4**
SONM	**Songino Array**	**45.74**	**13**	P	**P**	**11 27 47.3**	**-0.4**
	1.2nm,0.6s,baz=196,slow=9.1,SNR=5.3						
KSRS	**Korea Array**	**46.59**	**39**	LR	LR	11 47 24.2	
	comp=Z,25nm,21.6s,baz=355,slow=36						
WRA	**Warramunga Arr**	**46.75**	**121**	P	**P**	**11 27 57.0**	**+1.1**
	1.1nm,0.6s,baz=295,slow=10,SNR=20						
WR1	**Warramunga Arr**	**46.75**	**121**	*e*P	**P**	**11 27 57.0**	**+1.1**
ASAR	**Alice Springs**	**48.06**	**126**	P	**P**	**11 28 07.0**	**+0.8**
	0.4nm,0.5s,baz=302,slow=7.7,SNR=10						
AS31	**Alice Springs**	**48.06**	**126**	*e*P	**P**	**11 28 05.5**	**-0.7**
	1.3nm,1.3s						
KMBO	**Kilima Mbogo**	**55.91**	**266**	LR	LR	11 51 24.4	
	comp=Z,21nm,18.4s,baz=102,slow=34						
KEST	**Kesra**	**82.88**	**305**	P	**P**	**11 31 51.4**	**0.0**
	0.8nm,0.4s,baz=63,slow=5.0,SNR=5.5						
KEST	**Kesra**	**82.88**	**305**	*e*P	P	11 31 49.2	-2.2
	9.1nm,1.4s						

*NSSC **05** 11:48:46.0±0.7, 33.°34N×35.°50E, h8km±10km, ML1.6*
*GRAL **05** 11:48:48.5±0.3, 33.°40N×35.°64E, h0km±40km, MD2.5*
ISC 05 11:48:47.8±2.9, 33.°39N±0.°09×35.°6E±0.°1, h5km±16km, n7, σ0°62/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHBL	**Chebaa**	**0.13**	**107**	*e*P	**Pg**	**11 48 50.3**	**-0.1**
SHBL				*e*S	**Sg**	**11 48 51.7**	**-0.4**
QRWL	**Qaraoun**	**0.18**	**23**	*e*P	**Pg**	**11 48 51.4**	**+0.1**
RCY	**Rachaya**	**0.23**	**61**	*e*P	**Pg**	**11 48 52.1**	**-0.1**
RCY				*e*S	**Sg**	**11 48 54.6**	**-0.6**
BRBR	**Barbar**	**0.29**	**85**	*e*P	**Pg**	**11 48 53.7**	**+0.2**
BRBR				*e*S	**Sg**	**11 48 58.8**	**+1.3**
BRBR				AML	AML	11 49 02.4	
	comp=N,54nm,0.3s						
BRBR				AML	AML	11 49 03.7	
	comp=E,32nm,0.4s						
DQRL	**Deir Qamar**	**0.32**	**356**	*e*P	**Pg**	**11 48 54.2**	**+0.2**
QASN	**Qassioun**	**0.58**	**75**	*e*P	**Pg**	**11 48 59.5**	**+0.5**
QASN				*e*S	**Sb**	**11 49 08.8**	**-0.4**
QASN				AML	AML	11 49 14.3	
	comp=N,71nm,0.4s						
QASN				AML	AML	11 49 15.3	
	comp=E,30nm,0.3s						
QASN				AML	AML	11 49 15.4	
	comp=Z,119nm,0.4s						
TOTH	**TOTAH**	**0.69**	**92**	*e*P	**Pg**	**11 49 01.3**	**+0.2**
TOTH				*e*S	**Sb**	**11 49 12.0**	**-0.3**
TOTH				AML	AML	11 49 15.1	
	comp=Z,17nm,0.3s						
TOTH				AML	AML	11 49 17.9	
	comp=E,11nm,0.5s						
TOTH				AML	AML	11 49 19.5	
	comp=N,20nm,0.4s						

*ISCJB **05** 11:55:09.9±0.4, 3.°26S±0.°02×139.°03E±0.°02, h58km±3km, mb5.2/163, MS4.2/30, Error ellipse: s-maj=3.6km s-min=3.2km az=158.9*
*BJI **05** 11:55:09.2±0.0, 3.°16S×139.°41E, h60km, mb5.0/66, mB5.0/41, Ms4.5/39, Ms7 4.3/38*
*MOS **05** 11:55:10.0±0.9, 3.°21S×138.°99E, h59km, mb5.3/47, Error ellipse: s-maj=9.0km s-min=5.4km az=106.1*
*IDC **05** 11:55:12.0±0.5, 3.°19S×139.°09E, h58km±4km, mb4.7/19, mb1 4.9/24, mb1mx4.8/27, mbtmp5.1/24, MS4.1/22, Ms1 4.2/22, ms1mx4.0/28, Error ellipse: s-maj=9.4km s-min=6.9km az=157.0*
*NEIC **05** 11:55:11.5±1.9, 3.°26S×139.°06E, h60km±5km, mb5.2/128, Error ellipse: s-maj=11.7km s-min=6.6km az=155.0*
NEIC Felt [IV] at Tolikara and Wamena.
*DJA **05** 11:55:12.1±0.2, 3.°S±3.°×13.°9E±.°, h71km±3km, M5.1/41, mB5.5/34, mb5.3/41, MLv6.0/6, Mw(mB)5.0/34*
*GCMT **05** 11:55:13.5±0.2, 3.°14S±0.°01×138.°99E±0.°01, h78km±2km, MW5.2/100, Moment Tensor Solution. s71,c99; s100,c168; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.88±.16; Mθθ-4.11±.14; Mφφ3.22±.16; Mrθ-3.74±.09; Mrφ0.63±.12; Mθφ3.95±.10; Best double couple: M0 6.63000×10^16 NP1:φs315.00000°, δ85.00000°, λ124.00000°. NP2:φs52.00000°, δ34.00000°, λ8.00000°. Principal axes: T 6.4950, Plg40.0000°, Azm256.0000°; N 0.2640, Plg33.0000°, Azm132.0000°; P -6.7650, Plg32.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 11:55:12.3±0.4, 3.°23S±0.°03×139.°04E±0.°03, h68km±3km, h67km: pP-P, n403, σ1°54/437, mb5.1/161, 7C-10D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**0.72**	**207**	P	**Pn**	**11 55 30.2**	**+2.8**
WAMI				S	**Sn**	**11 55 43.4**	**+4.9**
GENI	**Genyem**	**1.30**	**61**	P	**Pn**	**11 55 33.5**	**-1.0**
GENI				S	**Sn**	**11 55 50.0**	**-1.2**
JAY	**Jayapura**	**1.81**	**67**	P	**Pn**	**11 55 39.5**	**-1.9**
	397nm,0.3s,baz=229,slow=12,SNR=726						
JAY				S	**Sn**	**11 56 01.2**	**-2.4**
	413nm,0.3s,baz=288,slow=20,SNR=10						
SRPI	**Serui, Papua**	**3.10**	**296**	P	**Pn**	**11

BKSI	Bulukumba	18.98 263	P	P	11 59 28.9	+0.4
TTSI	Tana Toraja	19.19 270	P	Pn	11 59 33.0	+0.6
SPSI	Sidrap Palu	19.24 267	P	Pn	11 59 33.1	+0.1
KAPI	Kappang	19.32 264	P	Pn	11 59 34.0	+0.1
	baz=97,slow=8.3,SNR=9.4					
KAPI	Kappang	19.32 264	eP	P	11 59 32.7	+0.5
	comp=Z,63nm,1.1s					
KAPI	Kappang	19.32 264	eP	P	11 59 32.7	+0.5
KAPI			pmax	pmax		
	comp=Z,63nm,1.1s					
KAPI	Kappang	19.32 264	P	Pn	11 59 34.8	+0.9
	SNR=11					
MPSI	Mapaga	19.46 280	P	P	11 59 34.2	+0.5
BASI	Baing, Sumba	19.59 248	P	Pn	11 59 36.5	-0.6
FITZ	Fitzroy Crossi	19.76 221	P	P	11 59 37.2	+0.2
	comp=Z,3.7nm,0.3s,baz=38,slow=11,SNR=93					
FITZ			S	S	12 03 07.0	-9.3
	comp=Z,5.2nm,0.3s,baz=202,slow=19,SNR=7.9					
FITZ	Fitzroy Crossi	19.76 221	eP	P	11 59 37.0	-0.1
FITZ			eS	S	12 03 09.3	-7.1
FITZ	Fitzroy Crossi	19.76 221	P	P	11 59 37.2	+0.2
	baz=20,SNR=51					
WBSI	Waikabubak, Su	20.52 251	P	P	11 59 42.6	-2.8
AS31	Alice Springs	20.91 193	eP	P	11 59 49.5	0.0
	comp=Z,95nm,0.5s					
AS31			eS	S	12 03 36.7	-2.3
ASAR	Alice Springs	20.91 193	P	P	11 59 49.1	-0.4
	comp=Z,215nm,0.7s,baz=24,slow=9.6,SNR=454					
ASAR			S	S	12 03 36.7	-2.3
	comp=Z,72nm,1.0s,baz=15,slow=25,SNR=6.4					
HNR	Honiara	21.67 107	P	P	11 59 58.0	+0.4
HNR	Honiara	21.67 107	P	P	11 59 59.0	+1.4
	comp=Z,67nm,0.9s,baz=278,slow=7.1,SNR=2.7					
HNR			LR	LR	12 08 31.3	
	comp=Z,251nm,19.5s,baz=279,slow=37					
HNR	Honiara	21.67 107	P	P	11 59 59.0	+1.4
PLAI	Plampang	21.85 254	P	P	11 59 56.7	-2.9
BKB	Balikpapan	22.21 275	P	P	12 00 08.5	+5.1
WRKA	Warakurna	24.02 205	P	P	12 00 19.8	-1.4
	baz=24,SNR=77					
SRBI	Singaraja	24.19 257	P	P	12 00 20.8	-1.9
MTKI	Muara Teweh, K	24.23 275	P	P	12 00 26.7	+3.6
KKM	Kota Kinabalu	24.58 292	eP	P	12 00 27.1	+0.7
	comp=Z,73nm,1.2s					
KKM	Kota Kinabalu	24.58 292	P	P	12 00 28.0	+1.6
EIDS	Eidsvold	24.87 153	eP	P	12 00 26.4	-2.4
	comp=Z,40nm,0.7s					
EIDS	Eidsvold	24.87 153	P	P	12 00 30.1	+1.3
	baz=25,SNR=22					
TGY	Tagaytay City	24.88 314	P	P	12 00 28.6	-0.4
	comp=Z,69nm,0.3s,baz=87,slow=18,SNR=2.8					
TGY			LR	LR	12 11 39.2	
	comp=Z,291nm,18.3s,baz=123,slow=40					
KMMI	Kalianget	25.25 260	P	P	12 00 33.2	+0.8
JAGI	Jajag, Banyuwa	25.29 257	eP	P	12 00 30.6	-2.2
	comp=Z,57nm,0.8s					
JAGI	Jajag, Banyuwa	25.29 257	P	P	12 00 30.1	-2.7
MBWA	Marble Bar	25.89 225	P	P	12 00 38.6	+0.5
	SNR=5.3					
GMJI	Gumukmas	25.94 258	P	P	12 00 34.1	-4.6
PSA00	Pilbara Seismi	26.08 224	eP	P	12 00 40.2	+0.3
	comp=Z,98nm,0.8s					
SBUM	Sibu	27.39 282	eP	P	12 00 53.1	+1.3
	comp=Z,7.4nm,1.0s					
SBUM	Sibu	27.39 282	P	P	12 00 55.0	+3.3
PWJI	Pagerwojo	27.51 259	P	P	12 00 50.4	-2.4
STKA	Stephens Creek	28.60 175	P	P	12 01 01.6	-0.7
	comp=Z,6.8nm,0.7s,baz=344,slow=8.9,SNR=15					
STKA			LR	LR	12 13 34.2	
	comp=Z,2μm,18.0s,baz=348,slow=38					
STKA	Stephens Creek	28.60 175	eP	P	12 01 01.3	-0.9
	comp=Z,3.4nm,1.1s					
STKA			e		12 13 34.2	
STKA	Stephens Creek	28.60 175	P	P	12 01 02.0	-0.2
	baz=29,SNR=13					
STKA	Stephens Creek	28.60 175	eP	P	12 01 01.3	-0.9
STKA			pmax	pmax		
	comp=Z,3.0nm,1.1s					
CMSA	Cobar Meteorol	28.85 168	P	P	12 01 05.9	+1.4
	baz=29,SNR=7.0					
KSM	Kuching	29.09 279	eP	P	12 01 04.6	-2.3
	comp=Z,28nm,1.0s					
KSM	Kuching	29.09 279	P	P	12 01 09.0	+2.1
FORT	Forrest	29.30 200	eP	P	12 01 07.3	-1.2
	comp=Z,60nm,0.8s					
FORT	Forrest	29.30 200	P	P	12 01 07.4	-1.1
	baz=29,SNR=11					
BBOO	Buckleboo	29.56 185	P	P	12 01 11.1	+0.4
	baz=30,SNR=7.5					
HTT	Hallett	30.04 180	P	P	12 01 15.7	+0.5
	baz=30,SNR=5.8					
GIRL	Giralia	30.82 229	P	P	12 01 23.9	+1.8
	baz=31,SNR=8.6					
LEM	Lembang	31.50 262	LR	LR	12 17 07.3	
	comp=Z,226nm,20.2s,baz=61,slow=42					
YULB	Yu-li	31.61 328	eP	P	12 01 27.1	-2.0
	comp=Z,14nm,0.7s					
NACB	Ninganchiao	32.10 329	eP	P	12 01 33.0	-0.2
	comp=Z,177nm,1.5s					
YNG	Young	32.12 165	P	P	12 01 33.8	+0.5
	baz=32,SNR=5.7					
SSLB	Suanglung	32.12 328	eP	P	12 01 32.7	-0.8
	comp=Z,33nm,0.8s					
DZM	Mont Dzumac	32.53 127	P	P	12 01 37.5	+0.3
	comp=Z,11nm,0.8s,baz=299,slow=10,SNR=3.2					
DZM	Mont Dzumac	32.53 127	eP	P	12 01 37.5	+0.3
	comp=Z,16nm,0.9s					
YHNB	Yeheng	32.62 329	eP	P	12 01 37.2	-0.7
	comp=Z,24nm,0.9s					
ARPS	Mount Arapiles	33.48 176	P	P	12 01 45.9	+0.8
	baz=34,SNR=9.7					
MORW	Morawa	33.73 218	eP	P	12 01 46.0	-1.5
	comp=Z,95nm,1.0s					
MORW	Morawa	33.73 218	P	P	12 01 47.1	-0.4
	baz=34,SNR=14					
BLDU	Ballidu	34.45 215	P	P	12 01 53.0	-0.7
	baz=34,SNR=9.8					
KLBR	Kellerberrin	34.60 213	P	P	12 01 54.3	-0.7
	baz=35,SNR=18					
TOO	Toolangi	34.69 171	P	P	12 01 57.7	+2.0
	baz=35,SNR=11					
MILA	Mila	34.92 166	P	P	12 01 58.9	+1.2
	baz=35,SNR=10					
NWAO	Narrogin (SRO)	35.91 212	P	P	12 02 05.5	-0.7
	comp=Z,31nm,1.0s,baz=39,slow=8.9,SNR=6.8					
JHJ	Hachijo jima 2	36.16 1	LR	LR	12 14 05.9	
	comp=Z,478nm,21.2s,baz=176,slow=31					
JNU	Nakatsue	36.97 349	LR	LR	12 15 05.6	
	comp=Z,291nm,21.2s,baz=166,slow=32					
JNU	Nakatsue	36.97 349	eP	P	12 02 15.0	-0.3
	comp=Z,60nm,1.0s					
JNU			e		12 15 05.7	
INU	Inuyama	38.42 357	eP	P	12 02 25.9	-1.5
	comp=Z,26nm,1.1s					
IPM	Ipoh	38.74 281	eP	P	12 02 30.6	+0.1
	comp=Z,62nm,1.6s					
IPM	Ipoh	38.74 281	P	P	12 02 31.0	+0.5
KULM	Kulim	39.27 282	eP	P	12 02 35.0	+0.1
	comp=Z,33nm,1.2s					
MJAR	Matsushiro Arr	39.58 359	P	P	12 02 35.8	-1.3
	comp=Z,6.6nm,0.6s,baz=182,slow=8.3,SNR=24					
MJAR			pP	pP	12 02 53.1	-0.7
	comp=Z,7.9nm,0.8s,baz=183,slow=8.5,SNR=5.7					
MJAR			LR	LR	12 17 18.5	
	comp=Z,330nm,21.9s,baz=145,slow=34					
MAJO	Matsushiro	39.58 359	eP	P	12 02 36.0	-1.1
	comp=Z,57nm,1.5s					
MAJO			e		12 17 18.5	
MAJO	Matsushiro	39.58 359	eP	P	12 02 36.0	-1.1
MAJO			pmax	pmax		
	comp=Z,57nm,1.5s					
MAT	Matsushiro	39.58 359	P	P	12 02 35.6	-1.5
MAT			S	S	12 08 31.0	-4.0
MJB9	Matsu-Tunnel	39.58 359	eP	P	12 02 36.2	-0.9
	comp=Z,60nm,1.5s					
SKLT	Songkhla	39.71 285	P	P	12 02 39.6	+1.1
	comp=Z,37nm,1.0s,comp=Z,521nm					
NJ2	Nanjing	39.99 333	eP	P	12 02 42.7	+2.2
NJ2			pmax	pmax		
	comp=Z,14nm,0.6s					
SKNT	Sakolnakorn	40.01 301	P	P	12 02 43.3	+2.3
	comp=Z,31nm,0.8s					
PSI	Prapat	40.54 278	LR	LR	12 22 56.1	
	comp=Z,132nm,21.8s,baz=109,slow=41					
PSI	Prapat	40.54 278	eP	P	12 02 45.4	-0.2
	comp=Z,50nm,1.0s					
PSI			e		12 22 56.1	
PSI	Prapat	40.54 278	eP	P	12 02 45.4	-0.2
PSI			pmax	pmax		
	comp=Z,50nm,1.0s					
TRTT	Trang	40.76 286	P	P	12 02 48.4	+1.2
	comp=Z,50nm,1.4s,comp=Z,853nm					
TJN	Taejon	40.88 346	ceP	P	12 02 47.8	-0.1
CHAI	Chaiyaphum	41.28 299	P	P	12 02 51.6	+0.2
	comp=Z,28μm,0.6s,comp=Z,315μm					
GSI	Gunungsitoli	41.69 276	eP	P	12 02 53.5	-1.4
	comp=Z,122nm,1.6s					
KS15	Wonju Array Si	41.77 347	eP	P	12 02 55.2	+0.1
	comp=Z,19nm,0.9s					
KS15			e		12 19 57.7	
KSRS	Korea Array	41.78 347	P	P	12 02 55.5	+0.4
	comp=Z,7.6nm,0.6s,baz=156,slow=8.6,SNR=58					
KSRS			LR	LR	12 19 57.7	
	comp=Z,160nm,19.1s,baz=145,slow=36					
SLVN	Son La	42.18 307	eP	P	12 02 59.1	+0.3
	comp=Z,18nm,1.4s					
PHET	Kaeng Krachan	42.29 293	P	P	12 03 03.7	+4.0
	comp=Z,45μm,0.9s					
ENH	Enshi	43.67 322	eP	P	12 03 10.3	-0.4
	comp=Z,18nm,0.8s					
TIA	Tai'an	44.26 334	P	P	12 03 15.4	+0.1
TIA			pmax	pmax		
	comp=Z,11nm,1.0s					
LAMP	Lampang	44.41 301	P	P	12 03 18.0	+1.2
	comp=Z,28μm,0.6s,comp=Z,360μm					
PAYA	Payao	44.57 302	P	P	12 03 18.8	+0.8
	comp=Z,62μm,0.8s,comp=Z,540μm					
DL2	Dalian	44.90 341	eP	P	12 03 17.7	-2.6
DL2			S	S	12 09 51.9	-1.5
DL2			pmax	pmax		
	comp=Z,41nm,0.6s					
DL2			LR	LR		
	comp=Z,310nm,21.8s					
DL2			LR	LR		
	comp=Z,140nm,18.6s					
DL2			LR	LR		
	comp=Z,240nm,28.4s					
CM31	Chiang Mai Arr	44.98 300	eP	P	12 03 22.4	+1.1
	comp=Z,13nm,0.6s					
CM31			eP	cP	PcP	12 05 03.7	+2.1
CM31			e		12 23 01.4	
CM31	Chiang Mai Arr	44.98 300	P	P	12 03 22.4	+1.1
	SNR=5.7					
CMAR	Chiang Mai Arr	44.98 300	P	P	12 03 21.8	+0.5
	comp=Z,7.4nm,0.5s,baz=117,slow=6.5,SNR=37					
CMAR			pP	pP	12 03 36.5	-1.8
	comp=Z,11nm,0.9s,baz=121,slow=6.1,SNR=10.0					
CMAR			PcP	PcP	12 05 03.7	+2.1
	comp=Z,3.4nm,0.8s,baz=113,slow=2.1,SNR=4.3					
CMAR			LR	LR	12 23 01.4	
	comp=Z,70nm,20.2s,baz=115,slow=37					
KMI	Kunming	45.11 311	P	P	12 03 25.0	+2.5
KMI			pmax	pmax		
	comp=Z,9.0nm,0.6s					
KMI			pmax	pmax		
	comp=Z,89nm,4.7s					
KMI			LR	LR		
	comp=Z,180nm,16.4s					
KMI			LR	LR		
	comp=Z,230nm,19.1s					
KMI			LR	LR		
	comp=Z,370nm,21.3s					
CMMT	Chiang Mai	45.12 301	P	P	12 03 23.3	+0.8
	comp=Z,7.2nm,1.2s					
CHTO	Chiang Mai	45.13 301	eP	P	12 03 22.7	+0.2
	comp=Z,8.3nm,0.8s					
CHTO	Chiang Mai	45.13 301	eP	P	12 03 22.7	+0.2
CHTO			pmax	pmax		
	comp=Z,8.0nm,0.8s					
MSHR	Mys Shultsa	46.15 352	iP	P	12 03 31.0	+0.9
VLA	Vladivostok	46.59 353	diP	P	12 03 34.6	+1.1
VLA			pmax	pmax		
	comp=Z,32nm,1.1s					
XAN	Xi'an	46.69 325	P	P	12 03 34.5	-0.1
XAN			pP	pP	12 03 47.8	-3.9
XAN			sP	sP	12 03 53.8	-5.6
XAN			S	S	12 10 14.8	-4.5
XAN			pmax	pmax		
	comp=Z,14nm,1.3s					
XAN			pmax	pmax		
	comp=Z,140nm,4.4s					
XAN			LR	LR		
	comp=Z,180nm,22.3s					
XAN			LR	LR		
	comp=Z,270nm,21.7s					
XAN	Xi'an	46.69 325	eP	P	12 03 34.5	-0.1
	comp=Z,13nm,0.8s					
XAN	Xi'an	46.69 325	eP	P	12 03 34.5	-0.1
XAN			pmax	pmax		
	comp=Z,13nm,0.8s					
SNY	Shenyang	47.00 344	⇓P	P	12 03 36.3	-0.5
SNY			pmax	pmax		
	comp=Z,14nm,1.1s					
YUK	Yuzh-Kuril'sk	47.45 7	P	P	12 03 37.5	-2.7
USA0B	Ussuriysk Arra	47.64 353	eP	P	12 03 42.4	+0.7
	comp=Z,40nm,0.9s					
USRK	Ussuriysk Ar.	47.64 353	P	P	12 03 42.1	+0.4
	comp=Z,11nm,0.8s,baz=190,slow=8.6,SNR=24					
USRK			sP	pP	12 04 01.4	+2.5
	comp=Z,28nm,0.8s,baz=184,slow=7.8,SNR=13					
USRK			LR	LR	12 19 48.1	
	comp=Z,274nm,21.6s,baz=143,slow=31					
CD2	Chengdu	47.78 318	P	P	12 03 44.1	+0.9
CD2			pmax	pmax		
	comp=Z,40nm,0.9s					
BJT	Baijiatuau	47.88 336	eP	P	12 03 44.1	+0.4
	comp=Z,29nm,1.0s					
BJT	Baijiatuau	47.88 336	eP	P	12 03 44.1	+0.4
BJT			pmax	pmax		
	comp=Z,29nm,1.0s					
BJI	Beijing	47.90 336	⇑iP	P	12 03 44.2	+0.4
BJI			S	S	12 10 40.2	+4.0
BJI			pmax	pmax		
	comp=Z,8.0nm,1.0s					
BJI			LR	LR		
	comp=Z,110nm,24.2s					
BJI			LR	LR		
	comp=Z,80nm,19.6s					
TEY	Ternei	48.10 358	⇓eP	P	12 03 44.3	-1.0
TEY			pmax	pmax		
	comp=Z,10.0nm,1.4s					
MDJ	Mudanjiang	48.38 351	P	P	12 03 47.9	+0.5
MDJ			pP	pP	12 04 00.9	-3.8
MDJ			sP	sP	12 04 05.7	-6.7
MDJ			S	S	12 10 43.6	+0.7
MDJ			pmax	pmax		
	comp=Z,30nm,1.0s					
MDJ			pmax	pmax		
	comp=Z,55nm,3.4s					
MDJ			LR	LR		
	comp=Z,270nm,18.2s					
MDJ			LR	LR		
	comp=Z,120nm,17.8s					
MDJ			LR	LR		
	comp=Z,420nm,21.4s					
MDJ	Mudanjiang	48.38 351	eP	P	12 03 48.1	+0.7
	comp=Z,43nm,0.9s					
CN2	Changchun	48.39 347	eP	P	12 03 47.3	-0.2
CN2			eS	S	12 10 40.3	-2.7
CN2			pmax	pmax		
	comp=Z,10.0nm,1.0s					
CN2			pmax	pmax		
	comp=Z,150nm,4.0s					
CN2			LR	LR		
	comp=Z,230nm,21.0s					
CN2			LR	LR		
	comp=Z,170nm,21.0s					
CN2			LR	LR		
	comp=Z,310nm,22.0s					
RPZ	Rata Peaks	49.28 150	P	P	12 03 55.2	+0.8
	comp=Z,50nm,1.0s,baz=300,slow=4.1,SNR=11					
RPZ	Rata Peaks	49.28 150	eP	P	12 03 55.4	+1.0
	comp=Z,66nm,1.1s					
YSS	Yuzh-Sakhalins	50.08 3	eP	P	12 04 00.3	-0.1
	comp=Z,58nm,0.7s					
YSS	Yuzh-Sakhalins	50.08 3	⇓eP	P	12 04 00.0	-0.3
YSS			e*SP	pP	12 04 16.5	-1.2
YSS			e		12 05 58.4	
YSS			eS	S	12 11 10.2	+3.6
YSS			ePS	PKiKP	12 11 29.1	-36
YSS			pmax	pmax		
	comp=Z,50nm,1.0s					
HHC	Hu-ho-hao-te	50.54 333	eP	P	12 04 07.9	+3.8
HHC			S	S	12 11 19.1	+5.6
HHC			pmax	pmax		
	comp=Z,15nm,1.1s					
HHC			pmax	pmax		
	comp=Z,70nm,5.2s					
HHC			LR	LR		
	comp=Z,210nm,17.5s					
HHC			LR	LR		
	comp=Z,700nm,15.1s					
HHC			LR	LR		
	comp=Z,700nm,15.7s					
LZH	Lanzhou	51.09 323	eP	P	12 04 09.7	+1.3
LZH			pP	pP	12 04 24.0	-1.8
LZH			sP	sP	12 04 29.1	-4.4
LZH			eS	S	12 11 24.2	+2.8
LZH			pmax	pmax		
	comp=Z,26nm,1.0s					
LZH			pmax	pmax		
	comp=Z,140nm,5.7s					
LZH			LR	LR		
	comp=Z,290nm,15.7s					
LZH			LR	LR		
	comp=Z,230nm,16.0s					
LZH			LR	LR		
	comp=Z,390nm,17.2s					
KLR	Kul'dur	52.63 354	diP	P	12 04 19.8	+0.4
KLR			pmax	pmax		
	comp=Z,16nm,0.9s					
GRNR	Gornyy	53.84 358	eP	P	12 04 30.2	+1.9
GRNR			pmax	pmax		
	comp=Z,16nm,1.0s					
SHL	Shillong	53.90 305	eP	P	12 04 29.8	+0.4
	comp=Z,17nm,0.8s					
SHL	Shillong	53.90 305	eP	P	12 04 29.8	+0.4
SHL			pmax	pmax		
	comp=Z,17nm,0.8s					
SHL	Shillong	53.90 305	eP	P	12 04 31.0	+1.6
TYV	Tymovskoe	53.97 3	eP	P	12 04 30.1	+0.9
TYV			eS	S	12 12 07.5	+7.7
TYV			pmax	pmax		
	comp=Z,16nm,1.0s					
TYV			pmax	pmax		
	comp=Z,200nm,5.1s					
TYV			smax	smax		
	comp=N,400nm,8.2s					
GTA	Gaotai	55.68 324	eP	P	12 04 43.0	+1.0
GTA			pP	pP	12 04 55.1	-4.5
GTA			sP	sP	12 05 01.2	-6.0
GTA			S	S	12 12 22.1	-1.4
GTA			pmax	pmax		
	comp=N,8.0nm,0.8s					
GTA			pmax	pmax		
	comp=N,80nm,7.6s					
GTA			LR	LR		
	comp=N,150nm,22.3s					
GTA			LR	LR		
	comp=N,200nm,22.3s					
GTA			LR	LR		
	comp=N,130nm,21.3s					
ZEA	Zeya	57.62 352	eP	P	12 04 55.4	+0.2
ZEA			pmax	pmax		
	comp=Z,64nm,1.2s					
ULN	Ulaanbaatar	58.07 335	eP	P	12 05 00.1	+1.4
	comp=Z,13nm,1.2s					
ULN	Ulaanbaatar	58.07 335	eP	P	12 05 00.2	+1.4
ULN			pmax	pmax		
	comp=Z,13nm,1.2s					
ULN	Ulaanbaatar	58.07 335	P	P	12 05 00.1	+1.4
	SNR=5.1					
ULN			P	P	12 05 00.1	+1.4
	SNR=5.1					
PETK	Petropavlovsk-	58.29 13	P	P	12 05 00.5	+0.5
	comp=Z,14nm,0.8s,baz=166,slow=6.1,SNR=20					
PETK			pP	pP	12 05 14.2	-3.5
	comp=Z,7.5nm,0.6s,baz=153,slow=5.9,SNR=6.7					
PETK			LR	LR	12 26 52.8	
	comp=Z,234nm,21.9s,baz=204,slow=33					
PEA1	Petropavlovsk-	58.30 13	eP	P	12 05 00.5	+0.5
SONA0	Songino Array	58.33 335	eP	P	12 05 00.9	+0.4
SONA0			e		12 31 28.4	
SONM	Songino Array	58.33 335	P	P	12 05 00.9	+0.4
	comp=Z,2.3nm,0.6s,baz=153,slow=8.3,SNR=6.5					
SONM			LR	LR	12 31 28.4	
	comp=Z,223nm,18.8s,baz=92,slow=37					
ZAK	Zakamensk	61.59 335	eP	P	12 05 22.2	-0.6
ZAK			pmax	pmax		
	comp=Z,14nm,1.3s					
TLY	Talaya	62.42 336	eP	P	12 05 29.2	+0.9
	comp=Z,6.8nm,0.7s					
TLY	Talaya	62.42 336	eP	P	12 05 28.7	+0.4
TLY			pmax	pmax		
	comp=Z,18nm,0.8s					
HYB	Hyderabad	63.07 291	iP	P	12 05 35.0	+1.8
MA2	Magadan	63.30 7	eP	P	12 05 34.0	+0.2
	comp=Z,26nm,0.9s					
MA2	Magadan	63.30 7	ceP	P	12 05 34.5	+0.6
MA2			pmax	pmax		
	comp=Z,18nm,1.0s					
BOD	Bodaibo	64.10 345	eP	P	12 05 39.3	+0.2
BOD			pmax	pmax		
	comp=Z,18nm,2.2s					
YAK	Yakutsk	65.48 355	eP	P	12 05 48.7	+0.7
	comp=Z,46nm,0.7s					
YAK	Yakutsk	65.48 355	eP	P	12 05 48.1	+0.1
YAK			e*PP	pP	12 06 06.7	+0.7
YAK			e		12 06 17.5	
YAK			eS	S	12 14 25.6	-1.8
YAK			e*SS	sS	12 15 01.0	+3.1
YAK			eSS	SS	12 18 35.7	-6.5
WMQ	Urumqi	65.62 322	P	P	12 05 50.8	+1.4
WMQ			pP	pP	12 06 02.2	-5.2
WMQ			sP	sP	12 06 10.0	-5.0
WMQ			pmax	pmax		
	comp=Z,51nm,0.7s					
WMQ			pmax	pmax		
	comp=Z,150nm,3.9s					
WMQ			LR	LR		
	comp=Z,430nm,24.5s					
WMQ			LR	LR		
	comp=Z,310nm,23.3s					
WMQ			LR	LR		
	comp=Z,210nm,25.9s					
WMQ	Urumqi	65.62 322	eP	P	12 05 50.2	+0.8
	comp=Z,27nm,0.6s					
WMQ	Urumqi	65.62 322	eP	P	12 05 50.2	+0.8
WMQ			pmax	pmax		
	comp=Z,27nm,0.6s					
CASY	Casey	66.03 192	eP	P	12 05 52.2	+0.6
	comp=Z,42nm,1.1s					
KIWB	Kanaga Island	66.24 28	eP	P	12 05 54.3	+1.2
ADK	Adak	66.48 28	eP	P	12 05 54.8	+0.1
	comp=Z,80nm,1.4s					
ADK	Adak	66.48 28	eP	P	12 05 54.8	+0.1
ADK			pmax	pmax		
	comp=Z,80nm,1.4s					
SEY	Seymchan	66.76 7	ceP	P	12 05 56.7	+0.5
DGZ	Jazzator, Alta	68.90 327	ciP	P	12 06 11.3	+1.1
DGZ			pmax	pmax		
	comp=Z,8.0nm,0.8s					
MK31	Makanchi Array	70.40 322	eP	P	12 06 20.4	+1.1
	comp=Z,16nm,0.9s					
MK31	Makanchi Array	70.40 322	eP	P	12 06 19.7	+0.4
MK31			pmax	pmax		
	comp=Z,23nm,1.0s					
MK32	Makanchi Array	70.40 322	eP	P	12 06 20.1	+0.8
MKAR	Makanchi Array	70.40 322	P	P	12 06 20.1	+0.8
	comp=Z,18nm,0.7s,baz=105,slow=8.2,SNR=127					
MKAR	Makanchi Array	70.40 322	iP	P	12 06 20.2	+0.8
MKAR			pmax	pmax		
	comp=Z,12nm,0.5s					
MAKZ	Makanchi	70.60 322	eP	P	12 06 21.2	+0.7
	comp=Z,30nm,0.7s					
MAKZ	Makanchi	70.60 322	eP	P	12 06 21.2	+0.7
MAKZ			pmax	pmax		
	comp=Z,31nm,0.7s					
PDGK	Podgornoye	70.67 318	P	P	12 06 21.4	+0.2
PDGK			pmax	pmax		
	comp=Z,18nm,0.9s					
TARG	Taragay, Kyrgy	71.18 316	eP	P	12 06 25.2	+0.5
	comp=Z,13nm,0.9s					
PPT	Papeete	71.29 107	LR	LR	12 33 30.3	
	comp=Z,83nm,20.2s,baz=296,slow=32					
PPT2	Papeete2	71.29 107	eLR	LR	12 28 21.7	
	comp=Z,392nm,33.2s					
KSH	Kashi	71.68 313	P	P	12 06 29.9	+2.6
KSH			pP	sP	12 06 51.1	-2.0

KSH PP **PP** 12 09 11.4 +4.1
KSH S **S** 12 15 42.0 -0.2
KSH ScS **SKSac** 12 16 22.8 -2.6
KSH pmax pmax
comp=Z,65nm,1.1s
KSH pmax pmax
comp=Z,200nm,4.0s
KSH LR LR
comp=Z,620nm,10.3s
KSH LR LR
comp=Z,350nm,16.3s
TBI Tubuai 71.75 113 *e*LR LR 12 28 32.0
comp=Z,218nm,36.5s
NIL Nilore 71.90 307 *e*P **P** 12 06 29.8 +1.1
comp=Z,17nm,0.8s
NIL Nilore 71.90 307 *e*P **P** 12 06 29.8 +1.1
NIL pmax pmax
comp=Z,17nm,0.8s
NRN Naryn 72.33 315 *e*P **P** 12 06 32.8 +1.3
comp=Z,9.6nm,0.8s
NRN Naryn 72.33 315 *e*P **P** 12 06 32.8 +1.3
NRN pmax pmax
comp=Z,10.0nm,0.8s
ZALV Zalesovo Beam 72.55 330 P **P** 12 06 31.5 -0.6
comp=Z,7.4nm,0.3s,baz=112,slow=6.4,SNR=1.9
ZAA1 Zalesovo Array 72.55 330 *e*P **P** 12 06 31.5 -0.6
UNV Unalaska Valle 72.62 30 *e*P **P** 12 06 32.4 0.0
comp=Z,20nm,0.9s
KZA Kyzart 73.09 316 P **P** 12 06 37.9 +1.8
SNR=19
TKM2 Tokmak 2 73.15 317 P **P** 12 06 37.5 +1.4
SNR=14
TKM2 Tokmak 2 73.15 317 P **P** 12 06 36.6 +0.5
TKM2 pmax pmax
comp=Z,15nm,0.9s
BILL Bilibino 73.62 10 *e*P **P** 12 06 38.4 +0.3
comp=Z,19nm,1.3s
BILL Bilibino 73.62 10⇓ *e*P **P** 12 06 38.1 0.0
BILL pmax pmax
comp=Z,15nm,1.2s
UCH Uchtor 73.65 316 P **P** 12 06 41.1 +1.7
SNR=20
NVS Novosibirsk 73.80 330 *e*P **P** 12 06 38.7 -0.7
NVS pmax pmax
comp=Z,17nm,1.4s
NVS pmax pmax
comp=N,10.0nm,1.5s
NVS pmax pmax
comp=E,15nm,1.4s
AAK Ala-Archa 73.81 316 *e*P **P** 12 06 41.3 +1.3
comp=E,15nm,1.0s
AAK Ala-Archa 73.81 316 *e*P **P** 12 06 41.3 +1.3
AAK pmax pmax
comp=Z,15nm,1.0s
AAK Ala-Archa 73.81 316 P **P** 12 06 41.1 +1.2
SNR=7.8
AAK P **P** 12 06 41.1 +1.2
SNR=7.8
USP Ospenovka 74.02 317 P **P** 12 06 42.4 +1.4
SNR=9.6
AML Almayashu 74.19 315 P **P** 12 06 44.4 +1.9
SNR=8.1
EKS2 Erkin-Say 74.31 316 P **P** 12 06 44.4 +1.6
SNR=7.2
KURK Kurchatov 74.33 325 *e*P **P** 12 06 42.7 +0.1
comp=Z,16nm,0.8s
KURK Kurchatov 74.33 325 *e*P **P** 12 06 42.7 +0.1
KURK pmax pmax
comp=Z,16nm,0.8s
KURK Kurchatov 74.33 325 P **P** 12 06 43.1 +0.5
SNR=6.3
KURK P **P** 12 06 43.1 +0.5
SNR=6.3
FALS False Pass 74.69 30 *e*P **P** 12 06 44.6 +0.1
comp=Z,55nm,0.8s
TIXI Tiksi 75.04 357 *e*P **P** 12 06 45.4 -0.8
comp=Z,21nm,1.4s
TIXI Tiksi 75.04 357 *ce*P **P** 12 06 45.0 -1.2
TIXI pmax pmax
comp=Z,8.0nm,1.0s
VNDA Vanda 75.23 175 P **P** 12 06 48.1 +0.7
comp=Z,9.1nm,0.9s,baz=325,slow=6.4,SNR=42
VNDA LR LR 12 40 04.1
comp=Z,374nm,18.4s,baz=346,slow=36
VNDA Vanda 75.23 175 *e*P **P** 12 06 48.1 +0.7
comp=Z,9.8nm,0.9s
VNDA *e* 12 40 04.1
BTK Batken 75.61 313 *e*P **P** 12 06 51.6 +1.2
comp=Z,18nm,1.1s
BTK Batken 75.61 313 *e*P **P** 12 06 51.6 +1.2
BTK pmax pmax
comp=Z,18nm,1.1s
SBA Scott Base 76.00 174 *e*P **P** 12 06 53.1 +1.4
comp=Z,14nm,1.1s
SBA Scott Base 76.00 174 *e*P **P** 12 06 53.1 +1.4
SBA pmax pmax
comp=Z,14nm,1.1s
SDPT Sand Point 76.41 31 *e*P **P** 12 06 54.4 0.0
comp=Z,57nm,0.7s
KK31 Karatay Array 76.73 316 *e*P **P** 12 06 57.4 +0.9
comp=Z,8.7nm,0.8s
KK31 Karatay Array 76.73 316 *e*P **P** 12 06 57.4 +0.9
KK31 pmax pmax
comp=Z,9.0nm,0.8s
KKAR Karatay Array 76.73 316 *e*P **P** 12 06 57.7 +1.1
comp=Z,8.7nm,0.8s
KKAR Karatay Array 76.73 316 *e*P **P** 12 06 57.7 +1.1
KKAR pmax pmax
comp=Z,9.0nm,0.8s
BRVK Borovoye 80.00 325 *e*P **P** 12 07 15.2 +0.9
comp=Z,28nm,0.8s
BRVK Borovoye 80.00 325 *e*P **P** 12 07 15.2 +0.9
BRVK pmax pmax
comp=Z,28nm,0.8s
BRVK Borovoye 80.00 325 P **P** 12 07 15.0 +0.7
SNR=9.9
BRVK P **P** 12 07 15.0 +0.7
SNR=9.9
SII Sitkinak Islan 80.14 31 *e*P **P** 12 07 16.1 +1.0
comp=Z,88nm,0.9s
NRIK Noril'sk 80.31 344 P **P** 12 07 16.1 +0.4
comp=Z,9.8nm,0.8s,baz=128,slow=6.6,SNR=8.6
NRIK LR LR 12 42 40.1
comp=Z,142nm,21.3s,baz=62,slow=36
OHAK Old Harbor 80.83 31 *e*P **P** 12 07 19.4 +0.7
comp=Z,45nm,0.8s
KDAK Kodiak Island 81.39 30 *e*P **P** 12 07 22.2 +0.6
comp=Z,39nm,0.9s
KDAK Kodiak Island 81.39 30 *i*P **P** 12 07 22.2 +0.6
RDOG Red Dog Mine 81.56 19 *e*P **P** 12 07 23.1 +0.8
comp=Z,27nm,1.0s
MAW Mawson 81.77 202 P **P** 12 07 24.4 +0.9
comp=Z,16nm,0.9s,baz=73,slow=6.1,SNR=34
MAW LR LR 12 41 19.6
comp=Z,300nm,19.9s,baz=64,slow=34
MAW Mawson 81.77 202 *e*P **P** 12 07 24.1 +0.7
comp=Z,3.7nm,0.9s
MAW *e* 12 41 19.6
MAW Mawson 81.77 202 P **P** 12 07 24.7 +1.3
baz=82,SNR=18
MAW Mawson 81.77 202 *e*P **P** 12 07 24.1 +0.7
MAW pmax pmax
comp=Z,4.0nm,0.9s
RSO Redoubt South 82.24 28 *e*P **P** 12 07 25.7 -0.6
HOM Homer 82.49 29 *e*P **P** 12 07 27.4 0.0
comp=Z,95nm,0.9s
CNPM China Poot 82.64 29 *e*P **P** 12 07 28.2 0.0
comp=Z,37nm,1.1s
BRLK Bradley Lake 82.88 29 *e*P **P** 12 07 29.4 -0.1
comp=Z,30nm,1.0s
SUA Susitna One 83.50 27 *e*P **P** 12 07 32.4 -0.4
comp=Z,19nm,0.9s
CAST Castle Rocks 83.58 25 *e*P **P** 12 07 33.2 +0.2
comp=Z,14nm,0.9s
SEW Seward 83.68 29 *e*P **P** 12 07 33.8 +0.4
comp=Z,40nm,1.1s
RC01 Rabbit Creek A 83.85 28 *e*P **P** 12 07 34.5 +0.2
comp=Z,39nm,0.8s
KTH Kantishna Hill 84.11 25 *e*P **P** 12 07 34.7 -1.1
comp=Z,26nm,1.1s
BPAW Bear Paw Mtn. 84.27 25 *e*P **P** 12 07 36.6 +0.1
comp=Z,14nm,1.2s
PMR Palmer 84.28 27 *e*P **P** 12 07 36.1 -0.4
comp=Z,40nm,1.1s
PMR Palmer 84.28 27 *e*P **P** 12 07 36.1 -0.4
PMR pmax pmax
comp=Z,40nm,1.1s

GHO Glory Hole Cre 84.43 27 *e*P **P** 12 07 37.5 +0.1
comp=Z,31nm,1.2s
KNK Knik Glacier 84.53 27 *e*P **P** 12 07 38.3 +0.4
comp=Z,78nm,1.1s
MLY Manley 84.68 24 *e*P **P** 12 07 38.9 +0.4
comp=Z,32nm,1.2s
SML Sawmill 84.71 27 *e*P **P** 12 07 38.8 0.0
comp=Z,76nm,1.1s
SML Sawmill 84.71 27 *e*P **P** 12 07 38.8 0.0
SML pmax pmax
comp=Z,76nm,1.1s
GEYT Alibeck 84.82 308 P **P** 12 07 41.4 +1.5
comp=Z,8.2nm,0.7s,baz=126,slow=2.6,SNR=14
GYA0B ALIBECK ARRAY 84.82 308 *e*P **P** 12 07 41.5 +1.6
comp=Z,50nm,1.4s
UOSS Minazif 84.86 295 *e*P **P** 12 07 41.1 +0.8
comp=Z,15nm,1.2s
BWN Browne 84.92 25 *e*P **P** 12 07 40.1 +0.3
comp=Z,66nm,1.2s
RND Reindeer 84.95 25 *e*P **P** 12 07 39.2 -0.8
comp=Z,50nm,1.1s
RND Reindeer 84.95 25 *e*P **P** 12 07 39.2 -0.8
RND pmax pmax
comp=Z,50nm,1.1s
GLI Glacier Island 85.02 28 *e*P **P** 12 07 40.7 +0.5
comp=Z,32nm,0.8s
SCM Sheep Creek Mo 85.17 27 *e*P **P** 12 07 41.4 +0.3
comp=Z,61nm,1.1s
SCM Sheep Creek Mo 85.17 27 *e*P **P** 12 07 41.4 +0.3
SCM pmax pmax
comp=Z,61nm,1.1s
AB31 Akbulak array 85.33 320 *i*P **P** 12 07 41.5 -0.6
AB31 pmax pmax
comp=Z,11nm,0.8s
ABKAR Akbulak array 85.33 320 *e*P **P** 12 07 42.1 +0.1
comp=Z,13nm,0.8s
DHY Denali Highway 85.50 26 *e*P **P** 12 07 42.6 -0.2
comp=Z,29nm,1.0s
EYAK Cordova Ski Ar 85.57 29 *e*P **P** 12 07 43.6 +0.6
comp=Z,14nm,0.9s
WRH Wood River Hil 85.59 25 *e*P **P** 12 07 42.8 -0.3
comp=Z,36nm,1.1s
COLD Coldfoot 85.61 22 *e*P **P** 12 07 44.1 +1.0
comp=Z,6.1nm,1.1s
DIV Divide 85.70 28 *e*P **P** 12 07 44.4 +0.7
comp=Z,47nm,0.8s
CCB Clear Creek Bu 85.76 24 *e*P **P** 12 07 42.9 -0.9
comp=Z,27nm,0.8s
TCOL CIGO, UAF Yank 85.80 24 P **P** 12 07 43.7 -0.3
baz=253
COLA College 85.80 24 *e*P **P** 12 07 43.4 -0.6
comp=Z,17nm,0.8s
COLA College 85.80 24 *e*P **P** 12 07 43.4 -0.6
COLA pmax pmax
comp=Z,17nm,0.8s
POKR Poker Plat Res 86.04 24 P **P** 12 07 45.1 -0.2
baz=254
HDA Harding Lake 86.05 25 *e*P **P** 12 07 43.9 -1.4
comp=Z,17nm,1.0s
HDA Harding Lake 86.05 25 P **P** 12 07 44.6 -0.8
baz=254
ILAR Eielson Array 86.17 24 P **P** 12 07 44.9 -1.0
comp=Z,12nm,0.7s,baz=263,slow=4.4,SNR=139
ILAR pP **pP** 12 08 02.8 -1.9
comp=Z,15nm,0.7s,baz=256,slow=4.9,SNR=9.8
ILAR LR LR 12 43 14.3
comp=Z,72nm,19.6s,baz=266,slow=34
ILB Eielson Array 86.17 24 *e*P **P** 12 07 45.0 -1.0
comp=Z,18nm,0.8s
ILB *e* 12 43 14.3
TOLK Toolik Lake Re 86.30 20 *e*P **P** 12 07 47.5 +1.0
comp=Z,26nm,1.0s
TOLK Toolik Lake Re 86.30 20 P **P** 12 07 47.3 +0.7
baz=251
QSPA South Pole Qui 86.72 180 *e*P **P** 12 07 48.9 +0.1
comp=Z,20nm,0.8s
AKTO Aktyubinsk 86.75 321 P **P** 12 07 48.2 -0.9
AKTO pmax pmax
comp=Z,9.0nm,1.1s
RIDG Independent Ri 86.77 26 *e*P **P** 12 07 49.0 0.0
comp=Z,36nm,1.4s
TGL Tana Glacier 87.02 29 *e*P **P** 12 07 50.5 +0.2
comp=Z,25nm,1.0s
DOT Dot Lake 87.08 26 *e*P **P** 12 07 50.5 +0.1
comp=Z,28nm,1.2s
BALM Baldy 87.31 29 *e*P **P** 12 07 52.0 +0.3
comp=Z,62nm,1.6s
ARU Arti 87.41 327 *e*P **P** 12 07 51.4 -0.7
comp=Z,7.8nm,0.8s
ARU Arti 87.41 327 *d i*P **P** 12 07 49.5 -2.6
ARU S **SKSac** 12 18 14.0 +0.2
ARU SS **SS** 12 24 12.1 -1.5
ARU pmax pmax
comp=Z,9.0nm,1.4s
CTGM Chitina Glacie 87.78 29 *e*P **P** 12 07 54.8 +0.8
comp=Z,47nm,1.0s
EGAK Eagle 88.56 25 *e*P **P** 12 07 58.1 +0.7
comp=Z,23nm,1.0s
HYT Haines Junctio 89.60 29 *e*P **P** 12 08 03.8 +1.3
comp=Z,22nm,0.9s
SYO Syowa Base 90.39 201⇑ *e*P **P** 12 08 04.4 -1.5
SYO Syowa Base 90.39 201⇓ *e*PcP **PcP** 12 08 06.6 -0.4
SKAG Skagway 90.53 31 *e*P **P** 12 08 07.9 +1.1
comp=Z,14nm,1.0s
EPYK Eagle Plains 90.62 24 *e*P **P** 12 08 07.5 +0.4
comp=Z,7.7nm,1.1s
EPYK Eagle Plains 90.62 24 P **P** 12 08 07.8 +0.7
baz=263
WHY Whitehorse 90.87 29 *e*P **P** 12 08 09.2 +0.7
comp=Z,9.3nm,0.9s
WRAK Wrangell Islan 91.90 34 *e*P **P** 12 08 13.8 +0.6
comp=Z,9.6nm,1.0s
INK Inuvik 92.03 22 *e*P **P** 12 08 13.0 -0.5
comp=Z,6.1nm,1.3s
INK Inuvik 92.03 22 *e*P **P** 12 08 13.0 -0.5
INK pmax pmax
comp=Z,6.0nm,1.3s
DLBC Dease Lake 93.22 32 *e*P **P** 12 08 19.1 -0.3
comp=Z,7.5nm,1.2s
ZEI Tsey 95.95 313 *e*P P 12 08 26.8 -5.6
ZEI pmax pmax
comp=Z,6.0nm,0.9s
KIV Kislovodsk 96.81 314 *e*P **P** 12 08 34.4 -1.7
KIV pmax pmax
comp=Z,11nm,1.0s
KLMR Klimovskoe 97.45 331 *e*P **P** 12 08 36.7 -1.7
KLMR pmax pmax
comp=Z,6.0nm,1.2s
G03D McMinnville, O 97.71 45 P **P** 12 08 39.9 -0.1
baz=273
M02C Callahan 98.21 49 P Pdif 12 08 43.2 +0.7
baz=273
B05A Bryant 98.31 42 P Pdif 12 08 43.4 +0.8
baz=274
O02D Mt. Diablo Mer 98.32 50 P Pdif 12 08 44.4 +1.4
baz=273
N02D Trinity Center 98.35 49 P Pdif 12 08 44.5 +1.4
baz=273
M04C Macdoel 98.95 48 P Pdif 12 08 45.9 +0.1
baz=274
O03E Paynes Creek 99.07 50 P **Pdif** 12 08 47.4 +1.0
baz=273
J05D Fort Rock, OR 99.29 47 P **Pdif** 12 08 47.8 +0.5
baz=274
PINE Pine Mountain 99.47 46 *e*P **Pdif** 12 08 47.8 -0.4
comp=Z,5.4nm,0.9s
OBN Obninsk 99.77 325 *e*P **Pdif** 12 08 48.5 -0.4
OBN *e* 12 12 54.5
OBN *e*PPP PPP 12 15 02.4
OBN pmax pmax
comp=Z,5.0nm,0.9s
AFDM Forest Hills D 99.80 51 *e*Pdif **Pdif** 12 08 49.6 +0.1
comp=Z,5.0nm,1.1s
B08A Colville Reser 100.14 42 *e*Pdif **Pdif** 12 08 50.9 +0.1
YKA Yellowknife Ar 100.38 27 P **Pdif** 12 08 52.6 +1.1
comp=Z,1.0nm,0.9s,baz=285,slow=4.7,SNR=6.9
YKA pP **pPdif** 12 09 09.4 -0.9
comp=Z,1.0nm,0.9s,baz=286,slow=5.0,SNR=3.9
YKB5 Yellowknife Ar 100.38 27 *e*Pdif **Pdif** 12 08 52.6 +1.1
ARCES ARCESS Array B 101.11 341 P **Pdif** 12 08 53.5 -1.1
comp=Z,2.2nm,0.8s,baz=73,slow=8.1,SNR=8.5
ARCES pP **pPdif** 12 09 12.4 -1.1
comp=Z,4.8nm,0.7s,baz=74,slow=6.6,SNR=6.4
SNCC San Nicolas Is 101.33 57 P **Pdif** 12 08 56.8 +0.4
baz=274
NV01 Mina Array Sit 101.92 52 *e*Pdif **Pdif** 12 08 59.6 +0.4
NVAR Mina Array Bea 101.92 52 P **Pdif** 12 08 59.6 +0.4

comp=Z,1.2nm,0.9s,baz=253,slow=6.1,SNR=7.0
VYHS Vyhne 112.08 322 *e*P **Pdif** 12 09 44.9 +1.0
VYHS Vyhne 112.08 322 *e*PDIF **Pdif** 12 09 44.9 +1.0
LTX Lajitas 115.28 59 *e*PKPdf **PKiKP** 12 13 47.2 +0.2
LTX Lajitas 115.28 59 *e*PKIKP **PKiKP** 12 13 47.2 +0.2
TXAR Lajitas Array 115.28 59 PKP **PKiKP** 12 13 47.2 +0.1
comp=Z,0.1nm,0.5s,baz=217,slow=0.5,SNR=3.0
PLCA Paso Flores 128.56 151 PKP **PKiKP** 12 14 14.7 +1.8
comp=Z,4.6nm,0.8s,baz=233,slow=1.9,SNR=8.4
MDT Midelt 135.02 315 PKP **PKiKP** 12 14 26.3 +0.2
comp=Z,1.8nm,0.9s,baz=5.8,slow=4.9,SNR=3.9
TOA0 Torodi Ar. Sit 136.71 286 *e*PKPdf **PKPdf** 12 14 27.6 -0.5
TORD Torodi Ar. Bea 136.71 286 PKP **PKiKP** 12 14 29.1 -0.7
comp=Z,3.8nm,0.7s,baz=104,slow=2.4,SNR=12
TORD pPKP **pPKPdf** 12 14 47.4 -0.2
comp=Z,3.4nm,0.9s,baz=59,slow=2.6,SNR=5.7
TOA1 Torodi Ar. Sit 136.71 286 *e*PKPdf **PKiKP** 12 14 29.1 -0.7
TOA1 *ep*PKPdf **pPKPdf** 12 14 47.4 -0.3
PB11 IPOC Station P 143.71 130 *e*PKPdf PKPbc 12 14 39.5 +1.0
KIC Kosan Boka 143.78 276 *e*PKP1 **PKPdf** 12 14 39.9 -1.0
comp=Z,61nm,0.9s
DBIC Dimbokro 143.87 277 PKP PKPbc 12 14 39.6 +0.6
comp=Z,14nm,0.8s,baz=49,slow=3.3,SNR=14
DBIC pPKP pPKPdf 12 14 59.9 -0.8
comp=Z,27nm,0.7s,baz=97,slow=2.5,SNR=9.4
DBIC Dimbokro 143.87 277 *e*PKPdf **PKPdf** 12 14 40.3 -0.8
DBIC *ep*PKPdf **pPKPdf** 12 14 59.9 -0.8
DBIC Dimbokro 143.87 277 *e*PKIKP **PKPdf** 12 14 40.3 -0.8
DBIC *e* 12 14 59.9
TIC Toumodi 144.04 277 *e*PKP1 **PKPdf** 12 14 40.8 -0.6
LIC Lamto 144.07 276 *e*PKP1 PKPbc 12 14 39.7 +0.1
comp=Z,56nm,0.9s
GO01 Chusmiza 144.12 130 *e*PKPdf **PKPdf** 12 14 42.2 +0.3
MNMC Minye Minye 144.12 129 *e*PKPdf **PKPdf** 12 14 41.7 0.0
POPC Popayan, Colom 144.33 90 *e*P **PKPdf** 12 14 42.4 +0.2
YOTC Yotoco, Valle 144.68 88 *e*P **PKPab** 12 14 40.4 -1.1
FLOC Florencia 145.30 92 *e*P **PKPbc** 12 14 42.4 -1.1
UREC San Jos de Ur 145.31 81 *e*P **PKPbc** 12 14 43.1 -0.4
HELC Santa Helena 145.43 84 *e*P **PKPdf** 12 14 43.8 -0.5
GUY2C Guyana, Caldas 145.64 86 *e*P **PKPbc** 12 14 45.1 0.0
NORC Norcasia 146.12 85 *e*P **PKPdf** 12 14 44.4 -0.6
PRAC Prado 146.14 88 *e*P **PKPbc** 12 14 45.8 -0.4
PTBC PUERTO BERRIO 146.47 83 *e*P **PKPdf** 12 14 45.8 +0.2
SDDR Presa de Saban 146.47 60 *e*PKPdf **PKPdf** 12 14 44.7 -0.8
CPUP Villa Florida 146.62 153 PKPbc **PKPab** 12 14 47.8 -0.4
comp=Z,5.2nm,0.6s,baz=190,slow=1.1,SNR=10
CPUP pPKPbc **pPKPdf** 12 15 04.1 -0.9
comp=Z,6.1nm,0.7s,baz=171,slow=2.5,SNR=5.3
CPUP Villa Florida 146.62 153 *e*PKPbc **PKPab** 12 14 48.3 +0.1
CPUP *ep*PKPdf **pPKPdf** 12 15 04.2 -0.9
CPUP Villa Florida 146.62 153 *e*PKP2 **PKPab** 12 14 48.3 +0.1
SMLC San Martn de 146.63 79 *e*P **PKPab** 12 14 48.4 -0.2
ROSC El Rosal 146.69 86 PKPbc **PKPab** 12 14 49.1 -0.3
comp=Z,9.3nm,0.4s,baz=102,slow=5.9,SNR=4.6
LPAZ La Paz 146.87 127 PKPbc **PKPab** 12 14 50.1 -0.2
comp=Z,9.2nm,1.0s,baz=236,slow=0.8,SNR=19
LPAZ La Paz 146.87 127 *e*PKPbc **PKPab** 12 14 50.5 +0.2
LPAZ La Paz 146.87 127 *e*PKP2 **PKPab** 12 14 50.5 +0.2
CODC Agustn Codazz 147.07 77 *e*P **PKPbc** 12 14 49.1 +0.4
MACC Macarena, Meta 147.13 91 *e*P **PKPbc** 12 14 48.4 -0.6
CHIC Chingaza 147.28 86 *e*P **PKPbc** 12 14 50.4 +0.5
GIRC Giron, Santand 147.68 82 *e*P **PKPdf** 12 14 49.1 +1.3
BARC Barichara 147.73 83 *e*P **PKPbc** 12 14 51.1 +0.2
RUSC La Rusia 147.88 84 *e*P **PKPbc** 12 14 50.4 -1.2
SDV Santo Domingo 149.98 78 *e*PKPbc **PKPbc** 12 14 56.4 -0.1

ISCJB ***05*** *12:14:24.7±0.3,23°.96N±0°.01×122°.54E±0°.01,h22km±2km,*
Error ellipse: s-maj=2.5km s-min=1.9km az=150.4
JMA ***05*** *12:14:24.9±0.2,24°.00N×122°.51E,h19km±4km,M2.7*
TAP ***05*** *12:14:25.0,23°.95N×122°.54E,h17km,ML3.2,D*
ISC 05 12:14:24.2±1.0,23°.97N±0°.02×122°.53E±0°.02,h15km±8km**,**
n105,$_{o}$**0°59/193,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.61**	**38**	P		**Pg**		**12 14 36.6**	**+0.3**
JYNG				S		**Sg**		**12 14 44.2**	**-0.3**
YOJ	**Yonaguni jima** baz=39	**0.66**	**42**	P		**Pb**		**12 14 37.6**	**+0.1**
YOJ				*e*S		**Sg**		**12 14 45.4**	**-0.6**
YOJ	**Yonaguni jima**	**0.66**	**42**	P		**Pg**		**12 14 37.4**	**+0.2**
YOJ				S		**Sg**		**12 14 45.6**	**-0.3**
EOS1	**EOS1** baz=327	**0.68**	**328**	P		**Pg**		**12 14 37.7**	**+0.2**
EOS1				S		**Sb**		**12 14 47.1**	**0.0**
ENLB	**Shoufeng** baz=266	**0.85**	**266**	*e*P		**Pg**		**12 14 40.4**	**-0.3**
ENLB				*e*S		**Sg**		**12 14 52.1**	**+0.2**
ENA	**Nanau** baz=303	**0.85**	**303**	P		**Pg**		**12 14 40.5**	**-0.2**
ENA				*e*S		**Sg**		**12 14 52.2**	**+0.2**
TWD	**Chiawan** baz=278	**0.86**	**278**	*e*P		**Pg**		**12 14 41.4**	**+0.5**
TWD				*e*S		**Sg**		**12 14 51.4**	**-0.7**
NACB	**Ninganchiao** baz=284	**0.88**	**284**	P		**Pb**		**12 14 41.2**	**+0.1**
NACB				*e*S		**Sg**		**12 14 52.9**	**+0.2**
TWC	**Suao** baz=316	**0.89**	**316**	*e*P		**Pb**		**12 14 40.7**	**-0.7**
TWC				*e*S		**Sb**		**12 14 51.8**	**-1.3**
ETLH	**Xiulin Townshi** baz=284	**0.98**	**284**	P		**Pb**		**12 14 42.8**	**-0.3**
ETLH				*e*S		**Sb**		**12 14 56.2**	**+0.3**
ESL	**Shilin** baz=261	**1.01**	**262**	*e*P		**Pb**		**12 14 43.0**	**-0.5**
EGS		**1.03**	**328**	*e*P		**Pb**		**12 14 43.7**	**-0.1**
EGS	baz=328			*e*S		**Sb**		**12 14 56.7**	**-0.4**
EGFH	**Guangfu** baz=254	**1.05**	**254**	*e*P		**Pb**		**12 14 43.9**	**-0.2**
EGFH				S		**Sb**		**12 14 57.9**	**+0.2**
ILA	**Ilan** baz=318	**1.06**	**318**	*e*P		**Pn**		**12 14 45.0**	**+0.3**
ILA				*e*S		**Sg**		**12 14 58.9**	**+0.2**
TWE	**Neicheng** baz=314	**1.08**	**314**	P		**Pb**		**12 14 44.8**	**+0.1**
TWE				*e*S		**Sb**		**12 14 57.2**	**-1.6**
NTC	**Toucheng** baz=324	**1.09**	**324**	P		**Pb**		**12 14 44.6**	**-0.2**
NTC				*e*S		**Sn**		**12 14 59.9**	**+0.1**
ENTT	**Nioudou** baz=307	**1.10**	**308**	P		**Pb**		**12 14 45.0**	**0.0**
ENTT				*e*S		**Sb**		**12 14 59.1**	**-0.1**
HGSD	**Ruisui** baz=245	**1.12**	**245**	*e*P		**Pb**		**12 14 45.1**	**-0.1**
HGSD				*e*S		**Sn**		**12 15 02.1**	**+1.6**
NDT	**Datong Townshi** baz=304	**1.12**	**305**	P		**Pb**		**12 14 45.5**	**+0.2**
NDT				*e*S		**Sg**		**12 15 00.5**	**0.0**
NNSB	**Datong** baz=294	**1.14**	**294**	P		**Pb**		**12 14 45.3**	**-0.5**
NNSB				*e*S		**Sb**		**12 15 00.1**	**-0.3**
TWB1	**Santiao Chiao** baz=334	**1.15**	**335**	*e*P		**Pb**		**12 14 43.9**	**-1.8**
NNS	**Nan Shan** baz=294	**1.15**	**294**	P		**Pb**		**12 14 45.6**	**-0.3**
NNS				*e*S		**Sb**		**12 15 01.1**	**+0.3**
IRIF	**Iriomote-Funau**	**1.16**	**71**	P		**Pb**		**12 14 46.4**	**+0.4**
IRIF				S		**Sn**		**12 15 01.6**	**+0.1**
WHF	**Hehuan Shan** baz=279	**1.17**	**279**	P		**Pb**		**12 14 45.8**	**-0.6**
WHF				*e*S		**Sb**		**12 15 01.4**	**-0.1**
HATJ	**Hateruma jima**	**1.17**	**85**	P		**Pb**		**12 14 46.7**	**+0.5**
HATJ				*e*S		**Sn**		**12 15 01.9**	**0.0**
TIPB	**Shuangxi**	**1.19**	**328**	P		**Pn**		**12 14 46.1**	**-0.3**

	baz=327						
TIPB				*e*S	**Sg**	**12 15 03.0**	**+0.4**
	baz=327						
EHY	**Hungye**	**1.20 248**		*e*P	**Pn**	**12 14 46.4**	**-0.1**
	baz=247						
EHY				S	**Sb**	**12 15 02.1**	**+0.2**
	baz=247						
NWLT	**Wulai**	**1.23 311**		P	**Pb**	**12 14 47.4**	**+0.1**
	baz=311						
NWLT				*e*S	**Sn**	**12 15 04.0**	**+0.5**
	baz=311						
OWD	**Renai**	**1.23 270**		*e*P	**Pn**	**12 14 47.1**	**-0.1**
	baz=270						
OWD				*e*S	**Sb**	**12 15 03.7**	**+0.5**
	baz=270						
CHGB	**Renai**	**1.24 275**		P	**Pn**	**12 14 46.8**	**-0.5**
	baz=274						
CHGB				S	**Sb**	**12 15 03.0**	**-0.5**
	baz=274						
YHNB	**Yeheng**	**1.26 304**		P	**Pn**	**12 14 47.4**	**0.0**
	baz=303						
YHNB				*e*S	**Sn**	**12 15 04.6**	**+0.3**
	baz=303						
YULB	**Yu-li**	**1.26 243**		P	**Pn**	**12 14 47.2**	**-0.2**
	baz=243						
YULB				*e*S	**Sn**	**12 15 04.6**	**+0.4**
	baz=243						
TWT	**Tachien**	**1.27 283**		*e*P	**Pn**	**12 14 47.5**	**-0.1**
	baz=283						
TWT				*e*S	**Sb**	**12 15 04.6**	**+0.4**
	baz=283						
NSK	**Sanguang**	**1.28 304**		P	**Pn**	**12 14 47.5**	**-0.1**
	baz=303						
NSK				*e*S	**Sn**	**12 15 04.8**	**+0.2**
	baz=303						
TDCB	**Techi**	**1.28 283**		P	**Pn**	**12 14 47.5**	**-0.3**
	baz=283						
TDCB				S	**Sb**	**12 15 04.2**	**-0.3**
	baz=283						
TWF1	**Yuli**	**1.28 242**		P	**Pn**	**12 14 47.6**	**0.0**
	baz=241						
TWF1				S	**Sb**	**12 15 04.1**	**-0.4**
	baz=241						
VWDT	**VWDT**	**1.29 261**		*e*P	**Pn**	**12 14 47.8**	**+0.1**
	baz=261						
VWDT				S	**Sb**	**12 15 04.2**	**-0.4**
	baz=261						
NWF	**Wu-fen Shan**	**1.29 328**		*e*P	**Pn**	**12 14 47.3**	**-0.6**
	baz=328						
NWF				*e*S	**Sb**	**12 15 04.8**	**+0.1**
	baz=328						
WFSB	**Wu-fen Shan**	**1.29 328**		P	**Pb**	**12 14 48.3**	**+0.1**
	baz=328						
WFSB				*e*S	**Sg**	**12 15 05.7**	**-0.2**
	baz=328						
NHDH	**Xindian Distri**	**1.35 318**		P	**Pn**	**12 14 49.0**	**+0.4**
	baz=317						
NHDH				*e*S	**Sb**	**12 15 06.9**	**+0.6**
	baz=317						
CHKT	**Chengkung**	**1.37 231**		P	**Pn**	**12 14 49.2**	**+0.3**
	baz=231						
CHKT				*e*S	**Sn**	**12 15 04.8**	**-2.0**
	baz=231						
TATO	**Taipei**	**1.38 317**		P	**Pn**	**12 14 49.6**	**+0.6**
	baz=317						
TATO				*e*S	**Sb**	**12 15 07.5**	**+0.3**
	baz=317						
JKRS	**Kuro-shima**	**1.38 79**		P	**Pb**	**12 14 49.9**	**+0.1**
SSLB	**Suanglung**	**1.45 263**		*e*P	**Pn**	**12 14 50.2**	**+0.2**
	baz=263						
SSLB				*e*S	**Sn**	**12 15 09.1**	**+0.2**
	baz=263						
WLTB	**Daxi**	**1.46 307**		*e*P	**Pn**	**12 14 50.4**	**+0.4**
	baz=307						
WLTB				*e*S	**Sb**	**12 15 09.5**	**0.0**
	baz=307						
YM07	**YM07**	**1.46 326**		*e*P	**Pn**	**12 14 50.0**	**-0.1**
	baz=325						
YM07				*e*S	**Sn**	**12 15 08.1**	**-1.0**
	baz=325						
YM01	**YM01**	**1.46 324**		P	**Pn**	**12 14 50.7**	**+0.5**
	baz=323						
YM01				*e*S	**Sb**	**12 15 09.8**	**+0.2**
	baz=323						
DPDB	**Guoxing**	**1.47 273**		*e*P	**Pn**	**12 14 50.6**	**+0.4**
	baz=273						
DPDB				*e*S	**Sn**	**12 15 09.0**	**-0.3**
	baz=273						
YM10	**YM10**	**1.47 324**		P	**Pn**	**12 14 50.6**	**+0.3**
	baz=323						
YM10				*e*S	**Sb**	**12 15 10.3**	**+0.3**
	baz=323						
YM11	**YM11**	**1.47 324**		P	**Pn**	**12 14 50.8**	**+0.4**
	baz=324						
YM11				*e*S	**Sn**	**12 15 09.5**	**0.0**
	baz=324						
WHP	**Taichung City**	**1.48 282**		*e*P	**Pn**	**12 14 50.6**	**+0.2**
	baz=282						
YM05	**YM05**	**1.48 324**		P	**Pn**	**12 14 50.9**	**+0.4**
	baz=323						
YM05				*e*S	**Sb**	**12 15 10.3**	**+0.1**
	baz=323						
YM08	**YM08**	**1.48 325**		*e*P	**Pb**	**12 14 51.4**	**-0.2**
	baz=324						
YM04	**YM04**	**1.48 323**		P	**Pn**	**12 14 50.8**	**+0.4**
	baz=322						
YM04				*e*S	**Sn**	**12 15 09.5**	**-0.2**
	baz=322						
SMLT	**Sun Moon Lake**	**1.49 267**		*e*P	**Pn**	**12 14 50.6**	**0.0**
	baz=267						
SMLT				*e*S	**Sn**	**12 15 09.8**	**-0.1**
	baz=267						
YM03	**YM03**	**1.50 324**		*e*P	**Pn**	**12 14 51.3**	**+0.5**
	baz=323						
YM03				*e*S	**Sb**	**12 15 11.6**	**+0.7**
	baz=323						
TWS1	**Kuangyinshan**	**1.51 318**		*e*S	**Sb**	**12 15 12.1**	**+1.0**
	baz=318						
YUS	**Yu-Shan**	**1.52 252**		*e*P	**Pn**	**12 14 51.3**	**-0.1**
	baz=252						
YUS				S	**Sn**	**12 15 11.4**	**+0.3**
	baz=252						
JIJ	**Ishigaki jima**	**1.53 75**		P	**Pn**	**12 14 51.4**	**+0.4**
JIJ				S	**Sn**	**12 15 10.2**	**-0.5**
TYC	**Yuchr**	**1.53 268**		*e*P	**Pn**	**12 14 51.1**	**+0.1**
	baz=268						
TYC				*e*S	**Sn**	**12 15 10.7**	**0.0**
	baz=268						
LIOB	**Emei**	**1.53 296**		*e*P	**Pb**	**12 14 52.3**	**-0.1**
	baz=296						
LIOB				*e*S	**Sn**	**12 15 10.3**	**-0.6**
	baz=296						
NSTT	**Nanjuang**	**1.54 296**		*e*P	**Pb**	**12 14 52.3**	**-0.2**
	baz=295						
NSTT				*e*S	**Sn**	**12 15 11.2**	**+0.2**
	baz=295						
TWY	**Chenhua**	**1.55 327**		*e*P	**Pn**	**12 14 52.2**	**+0.8**
	baz=327						
TWY				*e*S	**Sn**	**12 15 10.0**	**-1.3**
	baz=327						
WHYT	**Xinyi Township**	**1.56 260**		*e*P	**Pn**	**12 14 51.7**	**+0.2**
	baz=260						
WHYT				*e*S	**Sn**	**12 15 11.7**	**+0.2**
	baz=260						
NCU	**National Centr**	**1.58 310**		*e*S	**Sn**	**12 15 12.6**	**+0.7**
	baz=309						
ELDTW	**Lidau**	**1.59 241**		*e*P	**Pn**	**12 14 52.2**	**+0.2**
	baz=241						
ELDTW				*e*S	**Sn**	**12 15 10.0**	**-2.3**
	baz=241						
ALS	**Alishan**	**1.64 254**		*e*P	**Pn**	**12 14 52.9**	**0.0**
	baz=254						
ALS				*e*S	**Sn**	**12 15 13.7**	**-0.2**
	baz=254						
TWQ1	**Liyutan**	**1.65 284**		*e*P	**Pb**	**12 14 54.0**	**-0.3**
	baz=283						
TWQ1				*e*S	**Sb**	**12 15 14.6**	**-0.3**
	baz=283						
WJS	**Zhushan**	**1.65 265**		*e*P	**Pn**	**12 14 53.1**	**+0.3**
	baz=265						
WJS				*e*S	**Sn**	**12 15 14.1**	**+0.3**
	baz=265						
NSY	**Sanyi**	**1.67 286**		*e*S	**Sn**	**12 15 14.4**	**+0.1**
	baz=285						
WNT	**Mingjian**	**1.69 267**		*e*P	**Pn**	**12 14 53.7**	**+0.5**
	baz=267						
WNT				*e*S	**Sb**	**12 15 15.9**	**-0.2**
	baz=267						
PCYT	**Pengchaiyu**	**1.71 346**		*e*P	**Pn**	**12 14 52.7**	**-0.8**
	baz=346						
JISG	**Ishigakijimahi**	**1.74 69**		P	**Pn**	**12 14 53.9**	**-0.1**
JISG				S	**Sn**	**12 15 14.1**	**-1.8**
TWGBT	**Beinan**	**1.75 230**		P	**Pn**	**12 14 54.6**	**+0.4**
	baz=229						
TWGBT				*e*S	**Sn**	**12 15 16.9**	**+0.6**
	baz=229						
TWG	**Pinlang**	**1.76 230**		*e*P	**Pn**	**12 14 54.7**	**+0.5**
	baz=229						
TWG				*e*S	**Sn**	**12 15 16.9**	**+0.5**
	baz=229						
WCHH	**Zhanghua**	**1.80 274**		*e*S	**Sn**	**12 15 18.3**	**+0.8**
	baz=273						
STYT	**Tauyuan**	**1.81 244**		*e*P	**Pn**	**12 14 55.3**	**+0.3**
	baz=244						
STYT				*e*S	**Sn**	**12 15 18.0**	**+0.2**
	baz=244						
WGK	**Gukeng**	**1.82 262**		*e*S	**Sn**	**12 15 17.5**	**-0.4**
	baz=261						
WDLH	**Douliu**	**1.84 262**		*e*P	**Pn**	**12 14 56.3**	**+1.0**
	baz=261						
WDLH				*e*S	**Sb**	**12 15 20.6**	**0.0**
	baz=261						
TPUB	**Ta-pu**	**1.86 249**		*e*P	**Pn**	**12 14 56.1**	**+0.5**
	baz=249						
TPUB				*e*S	**Sn**	**12 15 19.3**	**+0.4**
	baz=249						
CHN4	**Tsaushan**	**1.88 251**		*e*P	**Pn**	**12 14 56.3**	**+0.5**
	baz=251						
CHN4				*e*S	**Sn**	**12 15 19.6**	**+0.4**
	baz=251						
WTP	**Ta-pu**	**1.90 248**		*e*P	**Pn**	**12 14 56.5**	**+0.4**
	baz=248						
WTP				*e*S	**Sn**	**12 15 20.0**	**+0.2**
	baz=248						
SLGT	**Liugui**	**1.98 241**		*e*P	**Pn**	**12 14 57.9**	**+0.6**
	baz=241						
SLGT				*e*S	**Sn**	**12 15 22.4**	**+0.5**
	baz=241						
CHY	**Chiayi**	**1.98 257**		*e*S	**Sn**	**12 15 22.9**	**+1.0**
	baz=256						
RLNB	**Erlin**	**1.98 268**		*e*S	**Sn**	**12 15 23.1**	**+1.2**
	baz=268						
ECL	**Taimali**	**1.99 227**		*e*P	**Pn**	**12 14 57.4**	**0.0**
	baz=226						
ECL				*e*S	**Sn**	**12 15 20.3**	**-1.7**
	baz=226						
SGST	**Jiashian**	**1.99 244**		*e*P	**Pn**	**12 14 58.1**	**+0.7**
	baz=244						
SGST				*e*S	**Sb**	**12 15 24.7**	**-0.1**
	baz=244						
CHN1	**Nanshi**	**1.99 247**		*e*P	**Pn**	**12 14 58.0**	**+0.5**
	baz=247						
CHN1				*e*S	**Sn**	**12 15 22.6**	**+0.4**
	baz=247						
TWK	**Hsinying**	**2.00 250**		*e*P	**Pn**	**12 14 57.9**	**+0.4**
	baz=249						
TWK				*e*S	**Sn**	**12 15 22.4**	**+0.1**
	baz=249						
SNST	**Tainan City**	**2.00 249**		*e*S	**Sb**	**12 15 24.7**	**-0.5**
	baz=248						
JTJ	**Tarama**	**2.10 71**		P	**Pn**	**12 14 59.6**	**+0.8**
JTJ				*e*S	**Sn**	**12 15 24.8**	**+0.1**
LAY	**Lan-yu**	**2.12 205**		*e*P	**Pn**	**12 14 58.4**	**-0.8**
	baz=205						
SSD	**Sandimen**	**2.12 235**		*e*P	**Pn**	**12 14 59.9**	**+0.7**
	baz=235						
SSD				*e*S	**Sn**	**12 15 25.9**	**+0.5**
	baz=235						
TAW	**Tawu**	**2.20 223**		*e*P	**Pn**	**12 15 01.5**	**+1.3**
	baz=223						
TAW				*e*S	**Sn**	**12 15 27.0**	**-0.1**
	baz=223						
MASBT	**Mashibuluo**	**2.20 233**		*e*P	**Pn**	**12 15 01.1**	**+0.8**
	baz=232						
MASBT				*e*S	**Sn**	**12 15 28.0**	**+0.6**
	baz=232						
EAST	**Anshuo**	**2.21 225**		*e*P	**Pn**	**12 14 59.7**	**-0.8**
	baz=224						
EAST				*e*S	**Sn**	**12 15 27.8**	**+0.3**
	baz=224						
CHN8	**Yiju**	**2.21 254**		*e*S	**Sn**	**12 15 27.3**	**-0.3**
	baz=254						
SCZT	**Fangliau**	**2.37 228**		*e*P	**Pb**	**12 15 05.3**	**-1.2**
	baz=228						
SCZT				*e*S	**Sn**	**12 15 31.2**	**-0.2**
	baz=228						
JIRB	**Irabujima**	**2.56 70**		P	**Pn**	**12 15 05.5**	**+0.3**
JIRB				S	**Sn**	**12 15 35.9**	**-0.3**
TWKBT	**Hengchun**	**2.56 218**		*e*P	**Pn**	**12 15 05.9**	**+0.6**
	baz=218						
TWKBT				*e*S	**Sn**	**12 15 35.8**	**-0.4**
	baz=218						
TWK1	**Hengchun**	**2.56 219**		*e*P	**Pn**	**12 15 06.6**	**+1.3**
	baz=218						
WDGT	**Dungji**	**2.72 256**		*e*P	**Pn**	**12 15 08.7**	**+1.3**
	baz=255						
WDGT				*e*S	**Sn**	**12 15 39.9**	**-0.2**
	baz=255						
PHUB	**P'eng-hu**	**2.75 261**		*e*P	**Pn**	**12 15 08.4**	**+0.7**
	baz=260						
PHUB				*e*S	**Sn**	**12 15 40.2**	**-0.5**
	baz=260						
PNG	**Penghu**	**2.75 262**		*e*P	**Pn**	**12 15 08.4**	**+0.6**
	baz=261						
PNG				*e*S	**Sn**	**12 15 41.2**	**+0.4**
	baz=261						
VCHM	**Qimei**	**2.94 256**		*e*P	**Pn**	**12 15 11.6**	**+1.1**
	baz=255						
VCHM				*e*S	**Sn**	**12 15 45.6**	**+0.1**
	baz=255						

ATH 05 12:32:44.1, 37°.21N×22°.04E, h29$^{km}_{\pm 3}$km, ML2.0/2, Error ellipse: s-maj=4.2km s-min=1.3km az=272.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.10**	**254**	P	Pb	12 32 49.6	+0.3
ITM				S	Sb	12 32 53.2	+0.4
ITM				AML	AML	12 32 53.5	
	comp=E,670μm,0.2s						
ITM				AML	AML	12 32 53.9	
	comp=N,386μm,0.3s						
MES3	**Kyparissia**	**0.30**	**278**	P	Pb	12 32 51.4	0.0
MES3				S	Sb	12 32 56.7	+0.2
MES3				AML	AML	12 32 57.5	
	comp=N,1034μm,0.2s						
MES3				AML	AML	12 32 58.6	
	comp=E,1104μm,0.2s						
PYL	**PYLOS**	**0.39**	**218**	P	Pb	12 32 53.1	+0.3
AMT	**Artemida-Makis**	**0.42**	**321**	P	Pb	12 32 53.5	+0.2
AMT				S	Sn	12 33 00.3	-0.8
MES2	**Methoni**	**0.47**	**215**	P	Pb	12 32 54.0	+0.1
MES2				S	Sn	12 33 01.5	-0.6
GUR	**Goura**	**0.77**	**18**	P	Pb	12 32 58.8	-0.2

IDC 05 12:33:12.7±5.4, 20°.32N×122°.06E, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.5/35, mbtmp3.8/3, Error ellipse: s-maj=428.3km s-min=28.3km az=61.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**41.71**	**319**	P	P	12 41 03.2	-0.1
	0.2nm,0.4s,baz=125,slow=7.2,SNR=3.6						
WRA	**Warramunga Arr**	**41.79**	**163**	P	P	12 41 03.9	-0.3
	1.0nm,0.7s,baz=349,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**45.22**	**165**	P	P	12 41 31.9	0.0
	1.2nm,0.5s,baz=343,slow=6.9,SNR=46						

*ATH **05** 13:03:15.0, 40°.22N×27°.68E, h20$^{km}_{\pm 2}$km, ML3.1/4, Error ellipse: s-maj=5.2km s-min=1.6km az=50.0*
*ISK **05** 13:03:16.8, 40°.21N×27°.57E, h10^{km}, ML3.4/39*
*DDA **05** 13:03:16.8, 40°.19N×27°.57E, h15$^{km}_{\pm 1}$km, ML3.5*
*THE **05** 13:03:16.9, 40°.19N×27°.59E, h3$^{km}_{\pm 1}$km, ML3.0/9, Error ellipse: s-maj=1.4km s-min=0.6km az=160.0*
*ISCJB **05** 13:03:17.2±0.3, 40°.21N±0°.02×27°.58E±0°.02, h9$^{km}_{\pm 2}$km, Error ellipse: s-maj=2.7km s-min=2.1km az=10.8*
ISC 05 13:03:17.2±0.8, 40°.21N±0°.02×27°.58E±0°.01, h15$^{km}_{\pm 5}$km, n85, σ0^{s}.65/118, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNL	**Balıkesir**			*i* P	**Pg**	**13 03 20.3**	**+0.1**
KNL				*i* S	**Sg**	**13 03 22.1**	**0.0**
GONE	**Gonen-Balikesi**	**0.18**	**152**	PG	**Pg**	**13 03 21.5**	**0.0**
GONE				SG	**Sg**	**13 03 24.5**	**+0.1**
EDC	**Edincik**	**0.26**	**58**	PG	**Pg**	**13 03 22.5**	**-0.3**
EDC				SG	**Sb**	**13 03 27.1**	**-0.8**
KRBG	**Karabiga-Canak**	**0.28**	**311**	PG	**Pg**	**13 03 23.2**	**+0.1**
KRBG				SG	**Sg**	**13 03 27.3**	**+0.1**
RKY	**Sarkoy-Tekirda**	**0.57**	**328**	PG	**Pb**	**13 03 28.6**	**-0.2**
RKY				SG	**Sb**	**13 03 36.7**	**-0.1**
SART	**Tekirdag**	**0.57**	**328**	*i* P	**Pb**	**13 03 29.2**	**+0.4**
SART				*i* S	**Sb**	**13 03 37.4**	**+0.6**
SART				IAML_P			
	comp=Z,32μm,0.2s						
KCTX	**Karacabey (Bur**	**0.60**	**84**	PG	**Pg**	**13 03 28.5**	**-0.5**
KCTX				SG	**Sb**	**13 03 37.2**	**-0.5**
BALB	**Balikesir**	**0.61**	**157**	PG	**Pg**	**13 03 28.8**	**-0.4**
LPK	**Lapseki**	**0.65**	**285**	PG	**Pg**	**13 03 29.8**	**0.0**
STEP	**BALIKESIR_Sava**	**0.84**	**172**	*i* P	**Pg**	**13 03 33.7**	**+0.2**
STEP				*i* S	**Sb**	**13 03 44.9**	**+0.4**
STEP				IAML_P			
	comp=Z,9μm,0.2s						
GELI	**Tayfur-Gelibol**	**0.86**	**283**	PG	**Pb**	**13 03 33.7**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.92**	**240**	*i* P	**Pb**	**13 03 34.1**	**-0.7**
BAYC				*i* S	**Sg**	**13 03 47.0**	**+0.1**
BAYC				IAML_P			
	comp=Z,10μm,0.2s						
DURS	**Dursunbey**	**0.92**	**131**	*i* P	**Pg**	**13 03 34.8**	**-0.2**
DURS				*i* S	**Sg**	**13 03 47.2**	**+0.1**
KESN	**Edirne-Kesan**	**0.92**	**312**	*i* P	**Pn**	**13 03 35.6**	**-0.3**
ERIK	**Erikli-Kesan**	**0.93**	**300**	PG	**Pb**	**13 03 34.9**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.01**	**80**	PG	**Pn**	**13 03 36.7**	**-0.1**
ORLT	**Orhaneli**	**1.03**	**99**	PG	**Pg**	**13 03 36.6**	**-0.4**
EZN	**Ezine**	**1.03**	**249**	PG	**Pn**	**13 03 36.9**	**-0.2**
EZN	**Ezine**	**1.03**	**249**	P	**Pb**	**13 03 36.4**	**-0.3**
EZN				S	**Sn**	**13 03 51.2**	**-0.1**
ARMT	**Armutlu**	**1.04**	**70**	PG	**Pn**	**13 03 36.9**	**-0.4**
AYVA	**Ayvalik**	**1.13**	**217**	*i* P	**Pg**	**13 03 38.6**	**-0.3**
AYVA				*i* S	**Sg**	**13 03 54.9**	**+1.2**
ELBA	**Catalca**	**1.14**	**34**	*i* P	**Pg**	**13 03 39.8**	**+0.6**
ULDT	**Uludag**	**1.20**	**93**	*i* P	**Pg**	**13 03 40.1**	**-0.2**
ULDT				*i* S	**Sg**	**13 03 57.1**	**+1.2**
ENEZ	**Enez**	**1.21**	**296**	PN	**Pb**	**13 03 39.8**	**+0.1**
BOZC	**Bozcaada**	**1.23**	**253**	PN	**Pb**	**13 03 40.1**	**+0.1**
BOZC	**Bozcaada**	**1.23**	**253**	*i* P	**Pg**	**13 03 40.5**	**-0.3**
BOZC				*i* S	**Sg**	**13 03 57.9**	**+1.2**
IGD	**Bursa**	**1.25**	**87**	*i* P	**Pb**	**13 03 40.0**	**-0.4**
IGD				*i* S	**Sg**	**13 03 58.2**	**+0.8**
CTKS	**Kestanelik-??a**	**1.25**	**34**	PN	**Pb**	**13 03 40.1**	**-0.3**
GEMT	**Gemlik**	**1.25**	**79**	PN	**Pb**	**13 03 40.5**	**0.0**
ZEDA	**zmir-Bergama**	**1.30**	**197**	*i* P	**Pg**	**13 03 41.9**	**-0.3**
ZEDA				*i* S	**Sg**	**13 04 00.1**	**+1.0**
ZEDA				IAML_P			
	comp=Z,6μm,0.2s						
BGKT	**Bogazkoy**	**1.33**	**43**	PN	**Pb**	**13 03 41.8**	**0.0**
BUY	**Buyukada**	**1.34**	**61**	PN	**Pb**	**13 03 41.9**	**-0.1**
AKHS	**Akhisar**	**1.34**	**172**	*i* P	**Pg**	**13 03 42.4**	**-0.6**
AKHS				*i* S	**Sg**	**13 04 00.5**	**+0.1**
AKHS				IAML_P			
	comp=Z,3μm,0.2s						
ALN	**Alexandroupoli**	**1.35**	**301**	P	**Pb**	**13 03 41.9**	**-0.3**
ALN				S	**Sg**	**13 04 00.5**	**-0.3**
ALN	**Alexandroupoli**	**1.35**	**301**	P	**Pb**	**13 03 42.0**	**-0.3**
ALN				S	**Sg**	**13 04 00.6**	**-0.2**
ALN				AML	AML	13 04 02.7	
	comp=N,1164μm,0.6s						
ALN				AML	AML	13 04 02.8	
	comp=E,1053μm,0.3s						
PRK	**Paraskevi**	**1.39**	**227**	P	**Pn**	**13 03 41.4**	**-0.6**
PRK				S	**Sg**	**13 04 01.5**	**-0.5**
PRK	**Paraskevi**	**1.39**	**227**	P	**Pb**	**13 03 43.2**	**+0.4**
PRK				S	**Sg**	**13 04 02.8**	**+0.7**
PRK				AML	AML	13 04 09.0	
	comp=N,1733μm,0.9s						
PRK				AML	AML	13 04 09.4	
	comp=E,1358μm,0.5s						
ISK	**Istanbul-Kandi**	**1.42**	**52**	PN	**Pb**	**13 03 42.9**	**-0.4**
ISK	**Istanbul-Kandi**	**1.42**	**52**	P	**Pn**	**13 03 42.0**	**-0.4**
ISK				S	**Sg**	**13 04 02.0**	**-0.9**
YLV	**Yalova**	**1.42**	**75**	PN	**Pb**	**13 03 42.9**	**-0.5**
PHSR	**Pinarhisar**	**1.42**	**358**	PN	**Pb**	**13 03 43.1**	**-0.3**
IZI	**Iznik**	**1.46**	**84**	PN	**Pb**	**13 03 43.7**	**-0.3**
KLYT	**Kilyos**	**1.53**	**46**	PN	**Pb**	**13 03 44.6**	**-0.6**
SMAA	**Simav-Kutahya**	**1.55**	**135**	PN	**Pb**	**13 03 45.2**	**-0.4**
SMTH	**Samothraki Isl**	**1.58**	**280**	P	**Pn**	**13 03 44.9**	**+0.2**
SMTH				S	**Sg**	**13 04 07.4**	**-0.8**
SMTH	**Samothraki Isl**	**1.58**	**280**	P	**Pn**	**13 03 44.9**	**+0.2**
SMTH				S	**Sb**	**13 04 06.9**	**+0.8**
SMTH				AML	AML	13 04 09.6	
	comp=N,1335μm,0.4s						
SMTH				AML	AML	13 04 09.9	
	comp=E,948μm,0.2s						
KIRK	**Kırklareli**	**1.61**	**347**	*i* P	**Pb**	**13 03 46.5**	**-0.1**
KIRK				IAML_P			
	comp=Z,1μm,0.1s						
SIGR	**SIGRI**	**1.66**	**234**	PN	**Pn**	**13 03 45.9**	**+0.2**
SIGR	**SIGRI**	**1.66**	**234**	P	**Pn**	**13 03 45.7**	**0.0**
SIGR				S	**Sb**	**13 04 07.6**	**-0.5**
SIGR	**SIGRI**	**1.66**	**234**	P	**Pn**	**13 03 45.8**	**0.0**
ADVT	**Abdulvahap**	**1.67**	**82**	PN	**Pb**	**13 03 47.1**	**-0.5**
HRT	**Hereke**	**1.71**	**68**	PN	**Pb**	**13 03 47.5**	**-0.8**
CAVI	**Cavuskoy**	**1.74**	**89**	PN	**Pb**	**13 03 47.5**	**-1.3**
SHAP	**Saphane-Kutahy**	**1.74**	**132**	PN	**Pb**	**13 03 47.9**	**-0.9**
EDRB	**Edirne**	**1.75**	**339**	P	**Pn**	**13 03 47.3**	**+0.3**
EDRB				S	**Sb**	**13 04 10.8**	**-0.1**
KRBN	**Karaburun**	**1.80**	**206**	PN	**Pn**	**13 03 47.6**	**0.0**
RDO	**Rodhopi**	**1.81**	**302**	P	**Pn**	**13 03 48.6**	**+0.8**
RDO				S	**Sb**	**13 04 12.1**	**-0.4**
RDO	**Rodhopi**	**1.81**	**302**	P	**Pn**	**13 03 48.6**	**+0.8**
RDO				AML	AML	13 04 18.3	
	comp=N,312μm,0.3s						
RDO				AML	AML	13 04 19.0	
	comp=E,368μm,0.3s						
SILT	**Sile**	**1.83**	**58**	PN	**Pb**	**13 03 49.4**	**-1.0**
GDZ	**Gediz**	**1.85**	**127**	*i* P	**Pb**	**13 03 49.5**	**-1.2**
LIA	**Limnos Island**	**1.86**	**261**	P	**Pn**	**13 03 48.9**	**+0.4**
LIA				S	**Sb**	**13 04 14.2**	**+0.2**
LIA	**Limnos Island**	**1.86**	**261**	P	**Pn**	**13 03 48.7**	**+0.2**
LIA				S	**Sb**	**13 04 14.4**	**+0.4**
BLCB	**Balcova**	**1.87**	**193**	PN	**Pn**	**13 03 49.4**	**+0.8**
MANT	**Manisa**	**1.88**	**156**	*i* P	**Pn**	**13 03 49.2**	**+0.3**
MANT				IAML_P			
	comp=Z,813nm,0.1s						
KULA	**Kula-Manisa**	**1.89**	**153**	PN	**Pn**	**13 03 49.9**	**+0.9**
KULA	**Kula-Manisa**	**1.89**	**153**	P	**Pn**	**13 03 49.3**	**+0.3**
KULA				S	**Sb**	**13 04 13.7**	**-1.1**
URLA	**Izmir**	**2.00**	**203**	PN	**Pn**	**13 03 51.4**	**+1.0**
SPNC	**Sapanca-Adapaz**	**2.14**	**76**	PN	**Pn**	**13 03 53.5**	**+1.2**
SAUV	**Serdivan-Sakar**	**2.17**	**75**	PN	**Pn**	**13 03 53.9**	**+1.2**
CHOS	**Chios island**	**2.17**	**213**	P	**Pn**	**13 03 52.6**	**-0.2**
CHOS				S	**Sn

QRWL	Qaraoun	0.01 292	eP	Pg	13 16 35.7	0.0
QRWL			eS	Sg	13 16 36.2	0.0
RCY	Rachaya	0.13 112	eP	Pg	13 16 37.3	-0.2
DQRL	Deir Qamar	0.19 328	eP	Pg	13 16 39.0	+0.3
DQRL			eS	Sg	13 16 41.8	+0.6
BRBR	Barbar	0.25 122	eP	Pg	13 16 40.0	+0.2
BRBR			eS	Sg	13 16 44.7	+1.6
BRBR			AML	AML	13 16 45.7	
	comp=N,72nm,0.2s					
BRBR			AML	AML	13 16 47.4	
	comp=E,37nm,0.3s					
BHL	Bhannes	0.36 355	eP	Pg	13 16 42.1	+0.2
QASN	Qassioun	0.49 91	eP	Pb	13 16 45.9	-0.3
QASN			eS	Sb	13 16 53.2	-0.5
QASN			AML	AML	13 16 55.4	
	comp=E,39nm,0.3s					
QASN			AML	AML	13 16 56.0	
	comp=N,53nm,0.3s					
TOTH	TOTAH	0.64 106	eP	Pb	13 16 48.0	-0.8
TOTH			eS	Sg	13 16 56.3	+0.8
TOTH			AML	AML	13 17 03.0	
	comp=N,8.1nm,0.2s					
TOTH			AML	AML	13 17 05.6	
	comp=E,12nm,0.4s					
HWQ	Hawqa	0.76 16	eP	Pg	13 16 49.4	-0.1

TAP 05 13:20:16.2, 24.26N×121.44E, h3km±1km, ML1.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.07	147	P	Pg	13 20 18.2	+0.6
	baz=149						
ETLH				S	Sg	13 20 19.4	+0.8
	baz=149						
NNSB	Datong	0.17	342	eP	Pg	13 20 20.2	+0.6
	baz=340						
NNSB				eS	Sg	13 20 22.6	+0.7
	baz=340						
NNS	Nan Shan	0.19	340	eS	Sg	13 20 23.3	+0.9
	baz=341						
WHF	Hehuan Shan	0.20	234	eP	Pg	13 20 20.9	+0.7
	baz=234						
WHF				S	Sg	13 20 24.0	+1.2
	baz=234						
CHGB	Renai	0.32	231	eP	Pg	13 20 23.0	+0.7
	baz=234						
SLBB	Yuanshan	0.52	20	P	Pb	13 20 27.4	-0.7
	baz=32						
SLBB				eS	Sg	13 20 33.9	+0.9
	baz=32						

*ISK **05** 13:20:42.8, 40.31N×36.61E, h2km, ML2.1/5*
*DDA **05** 13:20:43.4, 40.30N×36.58E, h7km±4km, ML2.6*
ISC 05 13:20:42.8±1.3, 40.32N±0.03×36.64E±0.03, h2km±10km, n16, σ0.86/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOKT	Tokat	0.07	269	PG	Pg	13 20 44.1	-0.1
TOKT				SG	Sg	13 20 45.2	+0.1
TOKA	Tokat	0.12	271	i P	Pg	13 20 45.2	+0.1
ERBA	Erbaa	0.37	14	i S	Sb	13 20 59.4	+1.0
SVSK	Karacayir	0.49	145	PG	Pg	13 20 53.2	+1.0
SVSK				SG	Sb	13 21 01.0	-0.7
SCER	sogukcermik	0.60	140	i P	Pb	13 20 55.9	-0.1
SCER				i S	Sb	13 21 05.4	+0.5
SCER				IAML_P			
	comp=Z,1μm,0.2s						
KVT	Kavak	0.88	330	PG	Pb	13 21 00.6	-0.2
CUSAR	Sarkisla-SIVAS	0.95	199	i P	Pg	13 21 01.3	+0.3
CUSAR				i S	Sn	13 21 17.3	-0.2
CUZAR	Zara_SIVAS	0.97	116	i P	Pg	13 20 59.4	-2.0
CUZAR				i S	Sn	13 21 18.5	+0.5
HAVZ	Havza	1.02	317	i P	Pg	13 21 02.9	+0.5
HAVZ				i S	Sn	13 21 19.1	0.0
CUALT	Altinyayla-SIV	1.05	175	i P	Pb	13 21 03.5	-0.2
CUALT				i S	Sn	13 21 19.1	-0.8
CUKAN	kangal_SIVAS	1.19	147	i S	Sn	13 21 25.6	+2.1
YOZ	Yozgat	1.22	236	PN	Pn	13 21 06.6	-0.3
COAL	Corum-Alaca	1.26	267	i P	Pg	13 21 06.1	-0.9
COAL				i S	Sb	13 21 23.3	-0.8
COAL				IAML_P			
	comp=Z,101nm,0.2s						
SIRC	Yozgat	1.51	230	i P	Pg	13 21 11.8	+0.2
SIRC				i S	Sg	13 21 32.2	+1.0
SIRC				IAML_P			
	comp=Z,630nm,0.2s						
CORM	Corum	1.54	265	PN	Pg	13 21 12.0	-0.3
DIKM	Dikmen	1.69	322	PN	Pb	13 21 14.4	-0.1

JMA 05 13:21:02.9±0.3, 24.65N×123.29E, h36km, M0.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.37	238	P	Pn	13 21 11.5	0.0
JYNG				eS	Sn	13 21 16.9	-1.2
IRIF	Iriomote-Funau	0.51	128	P	Pn	13 21 13.5	-0.1
JKRS	Kuro-shima	0.77	122	P	Pn	13 21 17.6	+0.3
JKRS				eS	Sn	13 21 27.4	-0.3
JIJ	Ishigaki jima	0.83	110	P	Pn	13 21 17.7	-0.3
JISG	Ishigakijimahi	0.93	94	P	Pn	13 21 20.0	+0.6
JISG				S	Sn	13 21 31.7	+0.1

*SNET **05** 13:32:31.8±0.8, 13.24N×89.73W, h30km±4km, ML3.1*
*GCG **05** 13:32:32.7±0.4, 13.20N×90.13W, h13km±999km, MD3.3*
ISC 05 13:32:29.3±2.7, 13.1N±0.1×89.79W±0.07, h27km±16km, n13, σ0.40/19, 3D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.77	12	eP	Pb	13 32 44.4	+0.1
CEVE				eS	Sb	13 32 54.8	+0.3
CEVE				IAML		13 33 05.7	
	comp=Z,935nm,0.5s						
SBLS	San Blas	0.78	12	⇓i P	Pb	13 32 44.6	+0.1
SBLS				eS	Sb	13 32 54.3	-0.5
SNJE	San Jose	0.81	13	eP	Pb	13 32 45.0	0.0
RTR	El Retiro	0.83	10	eP	Pb	13 32 45.3	0.0
LOMA	San Marcos	0.83	46	⇓i P	Pn	13 32 45.3	0.0
LOMA				eS	Sb	13 32 56.0	0.0
LOMA				IAML		13 32 57.8	
	comp=Z,1μm,0.2s						
LFU	La Fuente	0.94	44	i P	Pn	13 32 47.1	+0.3
MOYG	Moyuta, Jutiap	1.01	344	eP	Pn	13 32 48.7	+0.9
MOYG				eS	Sn	13 33 01.0	-0.2
PAVA	Las Pavas	1.05	52	eP	Pb	13 32 49.0	+0.1
PAVA				IAML		13 33 07.2	
	comp=Z,305nm,0.4s						
TECA	Tecapa	1.32	71	eP	Pn	13 32 52.8	+0.6
MTO3	Montecristo	1.38	18	⇓i P	Pn	13 32 53.3	+0.2
PACA	Pacayal	1.48	74	eP	Pb	13 32 55.9	-0.4
NBG	Las Nubes	1.60	340	eP	Pb	13 32 58.1	-0.3
NBG				eS	Sb	13 33 18.1	-0.2
FUG	Fuego 3	1.71	323	eP	Pb	13 32 60.0	-0.2
FUG				eS	Sn	13 33 17.9	-0.6

GUC 05 13:37:26.1±0.4, 35.66S×73.37W, h22km±3km, ML4.0, 1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	Huala	1.34	62	⇑i P	Pn	13 37 48.7	-0.8
GO05				i S	Sn	13 38 05.9	-0.8
GO05				IAML		13 38 09.7	
	comp=E,2μm,0.5s						
CCHI	Chillan	1.41	132	eP	Pb	13 37 51.4	-0.3
CCHI				i S	Sn	13 38 07.5	-0.7
CCHI				IAML		13 38 14.4	
	comp=N,3μm,0.1s						
LMEL	Las Melosas	3.17	56	eP	Pn	13 38 15.8	+1.0
LMEL				i S	Sn	13 38 53.3	+1.3
LMEL				IAML		13 39 07.4	
	comp=N,417nm,0.4s						
CLCH	Cerro Calan	3.25	47	eP	Pn	13 38 16.9	+1.1
CLCH				eS	Sn	13 38 54.8	+1.0
ROCH	El Roble	3.31	37	eP	Pn	13 38 17.5	+0.7
ROCH				IAML		13 39 25.1	
	comp=N,437nm,0.5s						
PEL	Peldehue	3.35	42	eP	Pn	13 38 17.9	+0.8
PEL				IAML		13 39 22.6	
	comp=N,238nm,0.5s						
FCH	Farellones	3.44	48	eP	Pn	13 38 19.3	+0.6

IDC 05 13:37:56.3±5.9, 6.25S×151.32E, h74km±46km, mb3.7/4, mb1 3.9/5, mb1mx3.4/38, mbtmp3.9/5, ML1.5/1, Error ellipse: s-maj=91.8km s-min=33.3km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.17	232	P	Pn	13 39 11.0	-0.3
	1.0nm,0.3s,baz=23,slow=13,SNR=4.3						
PMG				S	Sn	13 40 10.9	+1.2
	1.9nm,0.3s,baz=12,slow=4.7,SNR=3.1						
WRA	Warramunga Arr	21.38	229	P	P	13 42 37.6	-0.4
	4.1nm,0.9s,baz=55,slow=10,SNR=12						
ASAR	Alice Springs	24.09	222	P	P	13 43 05.7	+0.5
	3.2nm,0.8s,baz=56,slow=9.0,SNR=30						
FITZ	Fitzroy Crossi	27.68	243	P	P	13 43 37.2	-0.4
	3.2nm,0.9s,baz=69,slow=11,SNR=3.0						
ILAR	Eielson Array	84.05	22	P	P	13 50 18.9	+0.3
	0.5nm,0.8s,baz=234,slow=4.9,SNR=4.8						
TORD	Torodi Ar. Bea	149.31	285	PKPbc	PKPbc	13 57 37.0	-0.7
	0.2nm,0.5s,baz=65,slow=3.4,SNR=2.8						

*UCR **05** 13:38:02.6±1.2, 10.92N×86.81W, h36km±999km, MD4.4, ML3.7*
*ISCJB **05** 13:38:03.2±1.7, 11.0N±0.2×86.8W±0.2, h35km, Error ellipse: s-maj=31.2km s-min=7.4km az=42.6*
*SNET **05** 13:38:06.0±1.4, 11.26N×86.89W, h16km±44km, ML3.8*
ISC 05 13:38:03.5±2.0, 11.0N±0.1×86.7W±0.1, h35km, n14, σ0.80/18, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMN	Momotombo	1.38	7	eP	Pn	13 38 27.3	+0.9
MOMN	Momotombo	1.38	7	eP	Pn	13 38 27.3	+0.9
CNGN	Cerro Negro	1.46	1	eP	Pn	13 38 27.6	+0.1
CNGN	Cerro Negro	1.46	1	eP	Pn	13 38 27.6	+0.1
LIM1	Limonal	1.48	103	i P	Pn	13 38 27.8	+0.1
CEDE	Laguna Cedeo	2.05	105	i P	Pn	13 38 36.1	+0.5
CSGN	Cosiguina Volc	2.10	337	eP	Pn	13 38 37.2	+0.9
CSGN				eS	Sn	13 38 59.8	-1.6
CSGN	Cosiguina Volc	2.10	337	eP	Pn	13 38 37.2	+0.9
CSGN				eS	Sn	13 38 59.8	-1.6
CNCH	Conchagua	2.48	334	eP	Pn	13 38 42.3	+0.7
CNCH	Conchagua	2.48	334	eP	Pn	13 38 42.3	+0.7
PACA	Pacayal	2.89	327	eP	Pn	13 38 47.5	+0.3
PACA				eS	Sn	13 39 21.1	+0.3
PACA				IAML		13 39 32.0	
	comp=Z,391nm,0.3s						
PACA	Pacayal	2.89	327	eP	Pn	13 38 47.5	+0.3
PACA				eS	Sn	13 39 21.1	+0.3
PACA				IAML		13 39 32.0	
	comp=Z,391nm,0.3s						
TECA	Tecapa	3.01	325	eP	Pn	13 38 48.9	0.0
TECA	Tecapa	3.01	325	eP	Pn	13 38 48.9	0.0

*NIED **05** 13:39:00, 45.40N×151.30E, h35km, Mw3.8 Best double couple: M0=4.93000×10^14 NP1:φ=234.00000°, δ=43.00000°, λ=164.00000°. NP2:φ=336.00000°, δ=79.00000°, λ=49.00000°.*
*JMA **05** 13:39:20.3±0.6, 45.36N×151.34E, h30km, M4.3*
*SKHL **05** 13:39:22.8±0.6, 44.78N×151.35E, h47km±6km, mb4.1/3*
ISC 05 13:39:23.0±4.2, 44.6N±0.1×151.4E±0.2, h36km, n24, σ1.58/34, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.55	285	i P	Pn	13 40 00.3	-1.5
KUR				AMB	AMB	13 40 00.9	
	12nm,0.2s						
KUR				eS	Sn	13 40 28.5	-3.1
KUR				A	A	13 40 35.0	
	223nm,0.4s						
KUR				A	A	13 40 35.0	
	129nm,0.4s						
YUK	Yuzh-Kuril'sk	3.98	264	i P	Pn	13 40 22.2	+0.8
YUK				AMB	AMB	13 40 26.0	
	11nm,0.3s						
YUK				eS	Sn	13 41 07.2	+0.3
YUK				A	A	13 41 22.0	
	189nm,0.4s						
YUK				A	A	13 41 22.0	
	95nm,0.4s						
LAGR	Lagunnoye	4.03	264	eP	Pn	13 40 23.8	+1.7
LAGR				eS	Sn	13 41 09.0	+0.9
LAGR				A	A	13 41 20.0	
	120nm,0.4s						
LAGR				A	A	13 41 20.0	
	100nm,0.4s						
NEM2	Nemuro 2	4.24	255	P	Pn	13 40 25.2	+0.3
NEM2				eS	Sn	13 41 13.7	+0.6
GLVR	Golovnino	4.29	260	eP	Pn	13 40 27.0	+1.4
GLVR				AMB	AMB	13 40 30.0	
	28nm,0.4s						
GLVR				AMB	AMB	13 40 30.0	
	12nm,0.4s						
GLVR				AMB	AMB	13 40 30.0	
	41nm,0.4s						
GLVR				eS	Sn	13 41 15.1	+0.7
GLVR				A	A	13 41 24.0	
	110nm,0.4s						
GLVR				A	A	13 41 24.0	
	80nm,0.4s						
JRA	Rausu	4.53	264	P	Pn	13 40 30.5	+1.6
JNK	Nakash	4.89	260	P	Pn	13 40 34.8	+0.9
JAK	Akkeshi	5.08	254	P	Pn	13 40 37.0	+0.4
JTKR	Abashiri--Toko	5.38	266	P	Pn	13 40 41.8	+1.1
JAR	Ashorobuto	5.63	259	P	Pn	13 40 45.4	+1.3
JAR				eS	Sn	13 41 48.2	+0.7
JOB	Onbets	5.71	255	P	Pn	13 40 46.2	+1.1
JOB				eS	Sn	13 41 50.1	+0.7
JMP	Maruseppu	5.77	267	P	Pn	13 40 47.5	+1.5
JCH	Churui	6.14	254	P	Pn	13 40 51.8	+0.8
JCH				eS	Sn	13 41 59.2	-0.7
JKK2	Kamakawa 2	6.23	266	P	Pn	13 40 54.3	+2.0
ASAJ	Asahikawa	6.30	269	P	Pn	13 40 55.0	+1.8
JFR	Furan	6.50	260	P	Pn	13 40 58.9	+2.9
JNBK	Urakawa-nobuka	6.68	253	P	Pn	13 40 59.1	+0.6
JBT2	Biratori 2	6.77	257	P	Pn	13 41 00.5	+0.8
JNB	Noboribetsu	7.80	258	P	Pn	13 41 15.5	+1.7
JNB				eS	Sn	13 42 39.9	-0.8
JKB	Kayabe	8.01	254	P	Pn	13 41 17.3	+0.5
JKB				eS	Sn	13 42 42.7	-3.4
JYM2	Yakumo 2	8.38	256	P	Pn	13 41 22.9	+1.1
JANG	Nango	8.41	243	P	Pn	13 41 22.1	-0.2
JTH	Tanohata	8.45	240	eS	Sn	13 42 53.0	-3.7
JOSM	Okushiri--Mats	9.02	258	P	Pn	13 41 30.8	+0.2

GUC 05 13:53:04.1±0.4, 20.41S×69.57W, h71km±10km, ML2.7, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.47	56	eP	Pn	13 53 16.8	-0.3
PB08				i S	Sn	13 53 27.1	+0.4
PB01	IPOC Station P	0.64	173	eP	Pn	13 53 18.0	-0.6
PB01				IAML		13 53 26.1	
	comp=N,206nm,0.3s						
PB11	IPOC Station P	0.65	352	IAML		13 53 38.8	
	comp=N,306nm,0.1s						
GO01	Chusmiza	0.81	26	eP	Pn	13 53 21.1	+0.2
GO01				i S	Sn	13 53 33.6	+0.4
PB02	IPOC Station P	0.96	199	eP	Pn	13 53 22.2	-0.1
PB02				IAML		13 53 32.2	
	comp=N,453nm,0.5s						
MNMC	Minye Minye	1.27	359	i S	Sn	13 53 43.8	+0.8
MNMC				IAML		13 53 48.6	
	comp=E,290nm,0.1s						
PB07	IPOC Station P	1.35	193	eP	Pn	13 53 27.2	-0.1

*IDC **05** 14:06:09.3±1.6, 1.91N×125.49E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/37, mbtmp3.9/4, Error ellipse: s-maj=191.1km s-min=22.8km az=64.0*

*ISCJB **05** 14:06:13.8±0.9, 2.75N±0.07×127.32E±0.08, h63km, mb3.8/5, Error ellipse: s-maj=11.4km s-min=10.4km az=150.3*
*NEIC **05** 14:06:19.4±1.2, 2.52N×126.93E, h98km±11km, mb4.2/3, Error ellipse: s-maj=35.1km s-min=11.0km az=65.0*
*DJA **05** 14:06:22.3±1.3, 2.1N±8×12.7E±7, h10km, M4.0/4, mb4.6/1, mB4.6/1, MLv3.7/4, Mw(mB)3.8/1*
ISC 05 14:06:16.9±1.1, 2.7N±0.1×127.23E±0.09, h63km, n14, σ2.05/17, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.91	176	ePn	Pn	14 06 49.2	+2.0
TNTI	Ternate	1.91	176	P	Pn	14 06 50.3	+3.1
TNTI				S	Sn	14 07 08.3	-1.9
KMSI	Cibinong	3.86	237	P	Pn	14 07 15.7	+1.8
KMSI				S	Sn	14 07 58.2	+0.1
MRSI	Marisa	5.72	248	P	Pn	14 07 42.4	+3.1
FAKI	Fak Fak	7.50	138	ePn	Pn	14 08 07.2	+3.5
MTN	Manton Dam	15.91	166	ePn	Pn	14 09 56.5	-0.5
	43nm,1.5s						
WRA	Warramunga Arr	23.55	163	P	P	14 11 20.1	-1.7
	3.3nm,0.4s,baz=336,slow=11,SNR=80						
WR1	Warramunga Arr	23.55	163	eP	P	14 11 20.1	-1.7
AS31	Alice Springs	26.99	166	eP	P	14 11 51.5	-1.5
	5.2nm,1.9s						
ASAR	Alice Springs	26.99	166	P	P	14 11 51.6	-1.4
	0.3nm,0.3s,baz=347,slow=7.6,SNR=18						
ASAR				PcP	PcP	14 15 12.8	-0.7
	0.3nm,0.6s,baz=356,slow=1.9,SNR=4.1						
STKA	Stephens Creek	36.99	159	P	P	14 13 19.6	-0.8
	3.6nm,0.5s,baz=338,slow=12,SNR=9.9						
STKA	Stephens Creek	36.99	159	eP	P	14 13 19.4	-1.0
	6.0nm,1.8s						
MK32	Makanchi Array	58.69	325	eP	P	14 16 06.6	-1.4
MKAR	Makanchi Array	58.69	325	P	P	14 16 06.6	-1.4
	0.2nm,0.5s,baz=121,slow=7.9,SNR=3.4						

EAF 05 14:27:02.6±0.4, 4.92S×35.41E, h38km±40km, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOND	Kondoa	0.38	88	i P	Pn	14 27 11.6	-0.1
KIBA	Kibaya	1.22	108	i P	Pn	14 27 23.2	-0.1
KIBA				i S	Sn	14 27 38.0	-0.7

ISC 05 14:51:05.2±1.0, 50.51N±0.04×5.71E±0.03, h4km±9km, n13, σ1.14/22, 6C-3D, Belgium

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSTI	Sart Tilman	0.12	307	⇑P	Pg	14 51 07.9	+0.3
BLCH	La Chartreuse	0.14	330	⇑P	Pg	14 51 07.8	-0.3
BLCH				S	Sg	14 51 09.4	-0.6
MEM	Membach	0.21	63	⇑P	Pg	14 51 09.9	+0.6
BHOU	Houvegnez	0.25	130	P	Pg	14 51 08.4	-1.6
BHOU				S	Sb	14 51 16.9	+3.7
BCLA	Clavier	0.28	250	⇑P	Pb	14 51 12.2	-0.5
BCLA				S	Sb	14 51 17.6	-0.1
BEBN	Eben Emael	0.28	356	P	Pg	14 51 10.1	-0.6
HGN	Heimansgroeve	0.29	29	ePg	Pg	14 51 10.6	-0.2
	75nm,0.1s						
HGN				eSg	Sg	14 51 14.3	-0.2
HGN				eRg	Rg	14 51 17.0	
BGES	Gesves	0.42	252	⇓P	Pb	14 51 15.1	0.0
BGES				S	Sb	14 51 21.9	0.0
LKLB	Kalborn	0.49	148	⇑P	Pb	14 51 17.1	+0.8
LKLB				S	Sb	14 51 24.2	+0.5
BMRD	Maredsous	0.64	251	⇓P	Pg	14 51 18.5	+1.0
BMRD				S	Sg	14 51 26.9	+1.2
DOU	Dourbes	0.83	240	⇓P	Pg	14 51 20.3	-0.8
DOU				S	Sb	14 51 34.0	+0.4
SNF	Seneffe	0.91	270	P	Pg	14 51 21.8	-0.8
BSKQ	Steenkerk	1.05	278	⇑P	Pn	14 51 26.9	+0.3
BSKQ				S	Sn	14 51 40.9	-0.7

GUC 05 15:11:19.3±0.5, 35.62S×73.36W, h30km±4km, ML3.9, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	Huala	1.32	63	eP	Pn	15 11 41.2	-0.5
GO05				eS	Sn	15 11 58.5	+0.2
CCHI	Chillan	1.43	134	eP	Pn	15 11 43.4	+0.1
CCHI				i S	Sn	15 12 01.3	+0.2
CCHI				IAML		15 12 10.8	
	comp=N,3μm,0.7s						
LMEL	Las Melosas	3.14	57	eP	Pn	15 12 08.5	+1.5
LMEL				eS	Sn	15 12 45.1	+1.5
LMEL				IAML		15 12 59.6	
	comp=N,363nm,0.3s						
ROCH	El Roble	3.28	37	eP	Pn	15 12 10.1	+1.2
ROCH				eS	Sn	15 12 48.3	+1.3
ROCH				IAML		15 13 08.1	
	comp=N,326nm,0.5s						
PEL	Peldehue	3.31	43	eP	Pn	15 12 10.0	+0.8
PEL				IAML		15 13 07.3	
	comp=N,179nm,0.5s						
FCH	Farellones	3.41	49	eP	Pn	15 12 12.0	+1.2
FCH				eS	Sn	15 12 51.9	+1.4
FCH				IAML		15 13 10.2	
	comp=E,151nm,0.1s						

MAN 05 15:15:57.1, 11.19N×126.03E, h9km, mb4.3, ML3.1, MS2.8, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.71	305	eP	Pg	15 16 10.9	+0.1
BESP				eS	Sn	15 16 24.5	+0.2
PLP	Palo	1.03	269	⇓i P	Pg	15 16 16.9	0.0
PLP				i S	Sn	15 16 31.6	-0.7
MSLP	Maasin	1.55	228	eP	Pn	15 16 24.6	-0.3
MSLP				eS	Sg	15 16 47.0	-0.2
CNP	Catarman	1.87	315	eP	Pn	15 16 28.4	-0.9
CNP				eS	Sb	15 16 55.0	-0.1

*JSO **05** 15:21:23.0±4.3, 33.N±17×3.7E±2.8, h10km, M3.3/7, Mjma3.0/7, ML4.0/1, MLv3.1/7*
*ISCJB **05** 15:21:32.1±1.2, 32.22N±0.05×36.2E±0.3, h10km, Error ellipse: s-maj=31.0km s-min=5.6km az=8.7*
*NSSC **05** 15:21:37.2±2.4, 32.52N×36.59E, h44km±331km, ML1.9*
ISC 05 15:21:30.3±1.2, 32.27N±0.04×35.99E±0.09, h10km, n8, σ2.22/11, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSUJ	Al Zarqa	0.24	133	P	Pg	15 21 34.4	-0.8
SHMJ	Saham	0.50	338	P	Pg	15 21 38.3	-1.7
WALJ	Wala	0.72	192	P	Pn	15 21 47.3	+0.8
GHAJ	Ghor Haditha	1.03	201	P	Pn	15 21 51.9	+1.2
LISJ	El Lisan	1.11	203	P	Pn	15 21 53.4	+1.5
BRBR	Barbar	1.14	358	eP	Pn	15 21 54.0	+1.4
BRBR				eS	Sn	15 22 09.8	+1.4
BRBR				AML	AML	15 22 14.9	
	comp=E,19nm,0.4s						
BRBR				AML	AML	15 22 18.7	
	comp=N,36nm,0.3s						
TOTH	TOTAH	1.15	19	eP	Pn	15 21 53.6	+1.0
TOTH				eS	Sb	15 22 04.1	-3.3
TOTH				AML	AML	15 22 14.2	
	comp=Z,32nm,0.3s						
TOTH				AML	AML	15 22 17.6	
	comp=N,25nm,0.3s						
TOTH				AML	AML	15 22 20.7	
	comp=E,24nm,0.5s						
QASN	Qassioun	1.28	11	eP	Pg	15 21 57.4	+2.4
QASN				eS	Sb	15 22 08.1	-3.1
QASN				AML	AML	15 22 11.4	
	comp=E,58nm,0.3s						
QASN				AML	AML	15 22 12.4	
	comp=N,112nm,0.3s						

*NORS **05** 15:31:16.6±0.0, 43.31N×41.76E, h7km, MPVA3.2*
*DDA **05** 15:32:17.8, 42.00N×42.14E, h12km, ML2.3*
ISC 05 15:31:14.5±1.2, 43.20N±0.05×41.69E±0.04, h4km±10km, n12, σ1.36/23, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOMR	**Dombai**	**0.11**	**335**	*i* Pg	**Pg**	**15 31 16.8**	**0.0**
DOMR				*i* Sg	**Sg**	**15 31 18.8**	**+0.4**
NEY	**Neytrino**	**0.76**	**86**	*i* Pg	**Pg**	**15 31 27.8**	**-1.3**
NEY				*i* Sg	**Sg**	**15 31 36.9**	**-2.0**
SHA1	**Shidzhatmaz**	**0.89**	**52**	*i* Pg	**Pg**	**15 31 30.9**	**-0.7**
SHA1				*i* Sg	**Sg**	**15 31 42.8**	**-0.4**
KIV0	**Kislovodsk Arr**	**1.06**	**44**	*i* Pg	**Pg**	**15 31 34.1**	**-0.7**
KIV0				*e*Sg	**Sb**	**15 31 47.8**	**-1.9**
GUZR	**Guzeripl'**	**1.39**	**306**	*e*Pg	**Pn**	**15 31 41.0**	**+0.2**
GUZR				*e*Sg	**Sb**	**15 31 59.0**	**-0.3**
KBTC	**Kuba-Taba**	**1.40**	**63**	*e*Pg	**Pg**	**15 31 41.6**	**+0.3**
KBTC				*e*Sg	**Sn**	**15 32 00.2**	**+0.5**
DIGR	**Digorskoe uzhe**	**1.42**	**101**	*e*Pg	**Pg**	**15 31 43.4**	**+1.7**
DIGR				*e*Sg	**Sn**	**15 32 02.9**	**+2.5**
LSNR	**Lesken**	**1.57**	**86**	*e*Pg	**Pb**	**15 31 45.2**	**+1.2**
LSNR				*e*Sg	**Sg**	**15 32 06.0**	**+1.1**
DBOC	**Borcka**	**1.85**	**180**	*i* P	**Pn**	**15 31 47.8**	**+0.8**
DBOC				*i* S	**Sn**	**15 32 08.4**	**-2.4**
DBOC				IAML_P			
	comp=Z,362nm,0.1s						
EPOS	**Posof**	**1.86**	**155**	*i* P	**Pn**	**15 31 45.9**	**-1.3**
EPOS				*i* S	**Sn**	**15 32 12.9**	**+1.7**
DAGI	**Agillar**	**2.12**	**175**	*i* P	**Pn**	**15 31 50.8**	**-0.1**
DAGI				*i* S	**Sn**	**15 32 17.5**	**-0.2**
DAGI				IAML_P			
	comp=Z,134nm,0.1s						
DBAD	**Bademkaya**	**2.17**	**180**	*i* P	**Pn**	**15 31 50.2**	**-1.3**
DBAD				*i* S	Sn	15 32 13.2	-5.7
DBAD				IAML_P			
	comp=Z,287nm,0.1s						

ISCJB ***05*** *15:35:43.4±0.3, 6°.07S±0°.06×105°.85E±0°.05, h172km±3km, mb3.9/17, Error ellipse: s-maj=12.5km s-min=5.0km az=35.7*
DJA ***05*** *15:35:44.2±0.3, 6°.S±4°×10°.6E±°, h159km±3km, M4.2/12, mb4.6/7, mB5.2/1, MLv4.1/12, Mw(mB)4.5/1*
IDC ***05*** *15:35:44.5±0.9, 5°.82S×105°.98E, h167km±7km, mb3.6/14, mb1 3.7/14, mb1mx3.6/31, mbtmp4.1/14, Error ellipse: s-maj=18.6km s-min=7.9km az=42.0*
ISC 05 15:35:44.0±0.6, 6°.08S±0°.06×105°.84E±0°.06, h164km±5km, n43, σ1s22/55, mb4.0/17, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.55**	**195**	P	**Pn**	**15 36 07.1**	**-0.1**
CGJI				S	**Sn**	**15 36 23.4**	**-1.6**
BLSI	**Bandar Lampung**	**0.93**	**320**	P	**Pn**	**15 36 10.5**	**+0.9**
BLSI				S	**Sn**	**15 36 29.2**	**0.0**
CBJI	**Citeko**	**1.06**	**108**	P	**Pn**	**15 36 12.8**	**+2.2**
SKJI	**Sukabumi**	**1.16**	**142**	P	**Pn**	**15 36 11.1**	**-0.4**
SKJI				S	**Sn**	**15 36 31.7**	**-0.9**
KASI	**Kota Agung**	**1.45**	**293**	P	**Pn**	**15 36 15.2**	**+1.1**
KASI				S	**Sn**	**15 36 37.6**	**+0.3**
KLI	**Kotabumi**	**1.56**	**321**	P	**Pn**	**15 36 16.4**	**+1.2**
KLI				S	**Sn**	**15 36 40.7**	**+1.4**
LEM	**Lembang**	**1.92**	**113**	P	**Pn**	**15 36 20.2**	**+1.0**
	41nm,0.3s,baz=159,slow=23,SNR=26						
LEM				S	**Sn**	**15 36 47.1**	**+0.8**
	18nm,0.3s,baz=225,slow=23,SNR=5.7						
LEM	**Lembang**	**1.92**	**113**	P	**Pn**	**15 36 20.0**	**+0.8**
LWLI	**Liwa**	**2.06**	**301**	P	**Pn**	**15 36 22.1**	**+1.3**
MDSI	**Maura Dua**	**2.29**	**314**	P	**Pn**	**15 36 24.6**	**+1.2**
CISI	**Cisompet, Garu**	**2.45**	**127**	P	**Pn**	**15 36 24.8**	**-0.4**
JCJI	**Jatiwangi**	**2.45**	**100**	P	**Pn**	**15 36 26.5**	**+1.3**
LHSI	**Lahat**	**3.22**	**314**	P	**Pn**	**15 36 36.7**	**+2.0**
MNAI	**Manna**	**3.34**	**301**	P	**Pn**	**15 36 37.8**	**+1.5**
TPI	**Tanjungpandan**	**3.77**	**29**	P	**Pn**	**15 36 42.4**	**+0.7**
PPBI	**Pangkal Pinang**	**3.91**	**4**	P	**Pn**	**15 36 45.3**	**+1.8**
SISI	**Saibi**	**8.23**	**305**	P	**Pn**	**15 37 40.3**	**-0.1**
JAGI	**Jajag, Banyuwa**	**8.58**	**107**	P	**Pn**	**15 37 45.2**	**+0.1**
SRBI	**Singaraja**	**9.51**	**103**	P	**Pn**	**15 37 58.9**	**+1.5**
PLAI	**Plampang**	**12.15**	**104**	P	**Pn**	**15 38 29.9**	**-2.0**
EDFI	**Ende, Flores**	**15.94**	**101**	P	**Pn**	**15 39 16.6**	**-2.9**
BATI	**Baumata**	**18.11**	**104**	P	**P**	**15 39 44.5**	**+0.8**
	20nm,0.3s,baz=289,slow=1.9,SNR=35						
BATI				S	**S**	**15 43 02.0**	**-0.8**
	2.5nm,0.3s,baz=307,slow=20,SNR=5.2						
BATI	**Baumata**	**18.11**	**104**	P	**Pn**	**15 39 44.7**	**-0.8**
SOEI	**Soe**	**18.61**	**102**	P	**P**	**15 39 49.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.71**	**123**	P	**P**	**15 40 32.8**	**+0.7**
	1.4nm,0.6s,baz=310,slow=7.9,SNR=4.1						
CMAR	**Chiang Mai Arr**	**25.32**	**345**	P	**P**	**15 40 53.9**	**-1.8**
	0.6nm,0.6s,baz=183,slow=8.7,SNR=7.8						
CMAR				ScP	**ScP**	**15 47 49.0**	**+0.6**
	0.2nm,0.6s,baz=190,slow=4.3,SNR=4.6						
WRA	**Warramunga Arr**	**30.92**	**119**	P	**P**	**15 41 46.4**	**+0.8**
	1.6nm,0.3s,baz=295,slow=10.0,SNR=40						
WRA				PcP	**PcP**	**15 44 38.0**	**-0.3**
	0.7nm,0.4s,baz=282,slow=1.5,SNR=5.3						
ASAR	**Alice Springs**	**32.16**	**126**	P	**P**	**15 41 57.3**	**+0.9**
	1.1nm,0.3s,baz=299,slow=7.7,SNR=82						
ASAR				PcP	**PcP**	**15 44 41.2**	**-0.4**
	0.3nm,0.6s,baz=292,slow=2.8,SNR=3.8						
ASAR				S	**S**	**15 46 56.0**	**-1.1**
	0.5nm,0.6s,baz=295,slow=15,SNR=7.1						
ASAR				ScP	**ScP**	**15 48 10.5**	**+0.6**
	0.3nm,0.7s,baz=316,slow=2.5,SNR=4.0						
STKA	**Stephens Creek**	**42.11**	**132**	P	**P**	**15 43 21.7**	**+1.6**
	1.1nm,0.3s,baz=287,slow=6.2,SNR=5.6						
GTA	**Gaotai**	**45.61**	**353**	*e*P	**P**	**15 43 48.1**	**+0.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**53.69**	**0**	P	**P**	**15 44 48.1**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=152,slow=6.5,SNR=2.7						
MKAR	**Makanchi Array**	**56.64**	**341**	P	**P**	**15 45 08.7**	**-1.3**
	comp=Z,1.9nm,0.4s,baz=146,slow=8.6,SNR=22						
GEYT	**Alibeck**	**62.32**	**319**	P	**P**	**15 45 47.5**	**-1.5**
	comp=Z,2.4nm,0.6s,baz=133,slow=3.0,SNR=6.6						
ZALV	**Zalesovo Beam**	**62.37**	**346**	P	**P**	**15 45 47.1**	**-1.8**
	comp=Z,1.2nm,0.3s,baz=156,slow=6.1,SNR=8.4						
MAW	**Mawson**	**67.91**	**196**	P	**P**	**15 46 26.9**	**+2.4**
	comp=Z,1.3nm,0.5s,baz=67,slow=6.0,SNR=9.1						
KBZ	**Khabaz**	**75.20**	**318**	P	**P**	**15 47 07.9**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=141,slow=6.0,SNR=8.7						
VNDA	**Vanda**	**77.08**	**169**	P	**P**	**15 47 19.8**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=293,slow=5.8,SNR=2.9						
BOSA	**Boshof**	**78.86**	**242**	P	**P**	**15 47 30.7**	**+1.2**
	comp=Z,1.6nm,0.5s,baz=80,slow=6.1,SNR=4.2						
BRTR	**Keskin Array B**	**80.36**	**312**	P	**P**	**15 47 37.0**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=140,slow=7.6,SNR=8.5						
FINES	**FINESS Array B**	**90.42**	**332**	P	**P**	**15 48 26.4**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=123,slow=5.1,SNR=3.1						
ARCES	**ARCESS Array B**	**92.28**	**340**	P	**P**	**15 48 34.3**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=94,slow=6.0,SNR=3.6						
TXAR	**Lajitas Array**	**143.81**	**47**	PKP	**PKPdf**	**15 54 59.8**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=222,slow=1.2,SNR=3.3						
CPUP	**Villa Florida**	**143.88**	**206**	PKP	**PKPdf**	**15 55 00.5**	**0.0**
	comp=Z,0.9nm,0.5s,baz=153,slow=4.5,SNR=2.7						

JMA 05 15:44:13.5±0.2, 24°.84N×123°.34E, h27km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.48**	**219**	P	Pb	15 44 23.1	-0.4
YOJ				*e*S	Sb	15 44 29.6	-0.7
JYNG	**Yonagunijimaku**	**0.53**	**223**	P	Pb	15 44 24.2	-0.1
JYNG				S	Sb	15 44 31.3	-0.3
IRIF	**Iriomote-Funau**	**0.62**	**145**	P	Pb	15 44 25.6	-0.1
IRIF				S	Sb	15 44 33.9	-0.1
JKRS	**Kuro-shima**	**0.85**	**134**	P	Pb	15 44 29.4	-0.3
JKRS				S	Sb	15 44 41.1	+0.3
JIJ	**Ishigaki jima**	**0.87**	**123**	P	Pn	15 44 29.4	-0.6
JIJ				S	Sb	15 44 41.1	-0.2
HATJ	**Hateruma jima**	**0.89**	**151**	*e*S	Sb	15 44 40.8	-0.9
JISG	**Ishigakijimahi**	**0.92**	**106**	P	Pn	15 44 29.9	-0.7
JISG				*e*S	Sb	15 44 42.1	-0.5

TAP 05 15:45:10.8, 24°.32N×121°.73E, h24km, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.11**	**7**	P	Pb	15 45 15.8	+0.4
	baz=11						
ENA				S	Sb	15 45 19.4	+0.9
	baz=11						
NACB	**Ninganchiao**	**0.19**	**219**	*e*P	Pb	15 45 16.4	+0.2
	baz=219						
NACB				*e*S	Sb	15 45 20.7	+0.8
	baz=219						
ETLH	**Xiulin Townshi**	**0.25**	**243**	P	Pb	15 45 17.5	+0.4
	baz=242						
ETLH				*e*S	Sb	15 45 22.3	+0.9
	baz=242						
TWD	**Chiawan**	**0.27**	**206**	P	Pb	15 45 17.5	+0.3
	baz=204						
TWD				S	Sb	15 45 22.4	+0.7
	baz=204						
TWC	**Suao**	**0.31**	**21**	P	Pb	15 45 18.4	+0.6
	baz=23						
TWC				*e*S	Sb	15 45 23.7	+1.0
	baz=23						
NNSB	**Datong**	**0.33**	**289**	*e*P	Pb	15 45 19.1	+0.8
	baz=288						
NNSB				S	Sb	15 45 24.3	+0.9
	baz=288						
NDT	**Datong Townshi**	**0.34**	**325**	*e*S	Sb	15 45 24.8	+1.2
	baz=325						
NNS	**Nan Shan**	**0.34**	**290**	*e*P	Pn	15 45 19.6	-0.7
	baz=290						
NNS				*e*S	Sb	15 45 25.0	+1.3
	baz=290						
ENTT	**Nioudou**	**0.35**	**335**	P	Pb	15 45 19.1	+0.6
	baz=336						
ENTT				S	Sb	15 45 24.9	+1.1
	baz=336						
TWE	**Neicheng**	**0.40**	**352**	*e*P	Pb	15 45 19.9	+0.5
	baz=354						
TWE				*e*S	Sb	15 45 26.3	+1.2
	baz=354						
EOS1	**EOS1**	**0.43**	**58**	*e*S	Sn	15 45 28.3	-0.2
	baz=58						
SLBB	**Yuanshan**	**0.44**	**349**	*e*P	Pb	15 45 20.5	+0.6
	baz=349						
SLBB				*e*S	Sb	15 45 27.4	+1.2
	baz=349						
WHF	**Hehuan Shan**	**0.46**	**247**	P	Pb	15 45 21.0	+0.5
	baz=246						
WHF				S	Sb	15 45 28.2	+1.1
	baz=246						
YHNB	**Yeheng**	**0.47**	**317**	P	Pb	15 45 21.2	+0.7
	baz=317						
YHNB				*e*S	Sb	15 45 27.9	+0.7
	baz=317						
NSK	**Sanguang**	**0.49**	**317**	*e*P	Pb	15 45 21.4	+0.6
	baz=316						
NSK				S	Sb	15 45 28.4	+0.8
	baz=316						
NWLT	**Wulai**	**0.50**	**336**	S	Sb	15 45 29.0	+1.1
	baz=335						
CHGB	**Renai**	**0.57**	**243**	*e*P	Pb	15 45 22.5	+0.3
	baz=242						
CHGB				*e*S	Sn	15 45 31.3	-1.0
	baz=242						
OWD	**Renai**	**0.62**	**234**	*e*P	Pb	15 45 23.1	-0.1
	baz=233						
OWD				*e*S	Sb	15 45 32.3	+0.8
	baz=233						
TIPB	**Shuangxi**	**0.65**	**8**	*e*S	Sn	15 45 33.3	-0.9
	baz=7.0						

IDC 05 15:50:27.4±6.7, 7°.77S×151°.32E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/19, mbtmp3.2/3, Error ellipse: s-maj=199.3km s-min=36.5km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.42**	**232**	P	P	15 55 07.1	+0.7
	0.6nm,0.4s,baz=57,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**22.99**	**225**	P	P	15 55 33.4	-0.7
	0.5nm,0.8s,baz=55,slow=9.7,SNR=6.1						
MKAR	**Makanchi Array**	**81.60**	**320**	P	P	16 02 47.5	+0.1
	0.1nm,0.4s,baz=122,slow=6.3,SNR=2.3						

MAN 05 16:01:27.6, 7°.39N×124°.78E, h12km, mb4.5, ML3.4, MS3.2, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.55**	**253**	↓*i*P	Pg	16 01 38.7	+0.4
CTBH				*i* S	Sb	16 01 47.5	+0.5
BUKP	**Musuan**	**0.57**	**30**	*e*P	Pg	16 01 38.9	+0.3
BUKP				*e*S	Sb	16 01 48.5	+1.0
SKMP	**Bagumbayan, Su**	**0.89**	**195**	*e*P	Pg	16 01 44.1	-0.7
SKMP				*e*S	Sg	16 01 53.5	-2.9
CGP	**Cagayan de Oro**	**1.07**	**356**	↑*e*P	Pb	16 01 47.9	-0.1
CGP				*e*S	Sn	16 02 02.8	-0.3
DDMP	**Don Marcelino,**	**1.57**	**144**	*e*P	Pn	16 01 53.9	-1.4
DDMP				*e*S	Sb	16 02 16.9	+0.4

IDC ***05*** *16:05:43.5±1.5, 10°.59N×126°.92E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/36, mbtmp3.8/6, Error ellipse: s-maj=149.7km s-min=19.0km az=68.0*
NEIC ***05*** *16:05:47.8±1.7, 10°.71N×127°.44E, h35km, mb4.1/3, Error ellipse: s-maj=148.0km s-min=13.3km az=68.0*
MAN ***05*** *16:05:47.6, 10°.76N×126°.85E, h34km, mb5.1, ML4.0, MS4.1*
ISC 05 16:05:44.8±3.1, 10°.53N±0°.05×126°.7E±0°.1, h7km±17km, n22, σ0s86/29, mb3.9/10, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.64**	**310**	*e*P	**Pn**	**16 06 14.2**	**+0.2**
BESP				*e*S	**Sg**	**16 06 38.0**	**+0.6**
PLP	**Palo**	**1.81**	**290**	↓*e*P	**Pb**	**16 06 18.0**	**-0.3**
PLP				*e*S	**Sg**	**16 06 42.8**	**-0.3**
MSLP	**Maasin**	**1.86**	**258**	*e*P	**Pg**	**16 06 20.3**	**-0.2**
MSLP				*e*S	**Sg**	**16 06 44.9**	**+0.2**
BUTP	**Butuan**	**1.89**	**215**	*e*P	**Pb**	**16 06 20.9**	**+1.3**
BUTP				*e*S	**Sg**	**16 06 45.1**	**-0.4**
CNP	**Catarman**	**2.81**	**315**	*e*P	**Pn**	**16 06 30.2**	**+0.1**
CNP				*e*S	**Sn**	**16 07 03.2**	**-1.0**
BUKP	**Musuan**	**3.10**	**212**	*e*P	**Pb**	**16 06 39.5**	**-0.8**
BUKP				*e*S	**Sb**	**16 07 18.7**	**+0.4**
PVCP	**Virac**	**3.94**	**321**	*e*P	**Pn**	**16 06 46.1**	**+0.4**
WR1	**Warramunga Arr**	**31.20**	**166**	*e*P	**P**	**16 12 04.0**	**-0.9**
WRA	**Warramunga Arr**	**31.20**	**166**	P	**P**	**16 12 04.0**	**-0.9**
	1.8nm,1.1s,baz=339,slow=10,SNR=3.0						
AS31	**Alice Springs**	**34.71**	**168**	*e*P	**P**	**16 12 35.1**	**-0.5**
	1.6nm,1.3s						
ASAR	**Alice Springs**	**34.71**	**168**	P	**P**	**16 12 35.8**	**+0.2**
	0.3nm,0.6s,baz=351,slow=6.7,SNR=11						
ASAR				PcP	**PcP**	**16 15 10.2**	**+0.6**
	0.2nm,0.5s,baz=351,slow=3.1,SNR=5.6						
MK31	**Makanchi Array**	**52.08**	**322**	*e*P	**P**	**16 14 57.1**	**+1.6**
	1.9nm,0.9s						
MK32	**Makanchi Array**	**52.08**	**322**	*e*P	**P**	**16 14 57.0**	**+1.5**
MKAR	**Makanchi Array**	**52.08**	**322**	P	**P**	**16 14 57.0**	**+1.5**
	1.6nm,0.6s,baz=118,slow=7.9,SNR=18						
MAKZ	**Makanchi**	**52.27**	**322**	*e*P	**P**	**16 14 58.6**	**+1.7**
	3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**54.60**	**331**	P	**P**	**16 15 13.1**	**-0.8**
	0.4nm,0.3s,baz=134,slow=8.4,SNR=2.7						
ZAA1	**Zalesovo Array**	**54.61**	**331**	*e*P	**P**	**16 15 13.1**	**-0.8**
ARCES	**ARCESS Array B**	**84.10**	**340**	P	**P**	**16 18 16.2**	**0.0**
	0.5nm,0.5s,baz=38,slow=6.1,SNR=4.6						
BR101	**Keskin Array S**	**85.70**	**309**	*e*P	**P**	**16 18 24.7**	**-0.3**
BRTR	**Keskin Array B**	**85.70**	**309**	P	**P**	**16 18 24.7**	**-0.3**
	0.5nm,0.6s,baz=108,slow=4.7,SNR=3.9						
FIA0	**FINESS Array S**	**85.86**	**332**	*e*P	**P**	**16 18 25.2**	**+0.1**
FINES	**FINESS Array B**	**85.86**	**332**	P	**P**	**16 18 25.2**	**+0.1**
	0.6nm,0.4s,baz=90,slow=6.9,SNR=7.6						

DDA ***05*** *16:12:51.8, 41°.19N×43°.89E, h7km±3km, ML3.2*
ISK ***05*** *16:12:51.8, 41°.20N×43°.90E, h5km, ML2.9/8*
AZER ***05*** *16:12:52.3±0.4, 41°.08N×44°.06E, h6km±2km, ml3.0/12, Error ellipse: s-maj=6.3km s-min=2.3km az=291.0*
TIF ***05*** *16:12:52.1, 41°.23N×43°.89E, h10km±1km*
ISC 05 16:12:52.4±1.0, 41°.20N±0°.02×43°.91E±0°.02, h9km±8km, n47, σ1s07/80, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.24**	**287**	P	**Pg**	**16 12 57.6**	**+0.2**
BGD				S	**Sg**	**16 13 00.9**	**+0.2**
AKH	**Akhalkalaki**	**0.38**	**304**	PG	**Pg**	**16 12 59.6**	**-0.3**
AKH				SG	**Sg**	**16 13 05.1**	**+0.1**
AKH	**Akhalkalaki**	**0.38**	**304**	P	**Pg**	**16 12 59.8**	**-0.1**
AKH				S	**Sg**	**16 13 04.9**	**-0.1**
KZRT	**Kazreti**	**0.41**	**62**	P	**Pg**	**16 13 01.1**	**+0.5**
KZRT				S	**Sg**	**16 13 07.1**	**+1.1**
EAK	**Akyaka**	**0.56**	**204**	*i* P	**Pg**	**16 13 03.2**	**0.0**
EAK				*i* S	**Sg**	**16 13 10.6**	**+0.1**
EAK				IAML_P			
	comp=Z,6μm,0.1s						
TBLG	**Delisi**	**0.82**	**49**	PG	**Pg**	**16 13 08.1**	**-0.1**
TBLG				SG	**Sb**	**16 13 19.9**	**-0.2**
TBLG	**Delisi**	**0.82**	**49**	P	**Pg**	**16 13 08.3**	**+0.1**
TBLG				S	**Sb**	**16 13 20.1**	**0.0**
TBLG	**Delisi**	**0.82**	**49**	*i* P	**Pg**	**16 13 08.1**	**-0.1**
TBLG				*i* S	**Sb**	**16 13 20.7**	**+0.6**
TBLG				*i* S	**Sn**	**16 13 20.9**	**-1.7**
TBLG				IAML_P			
	comp=Z,9μm,0.1s						
BTNK	**Botanikuri**	**0.83**	**54**	P	**Pg**	**16 13 08.2**	**-0.1**
BTNK				S	**Sb**	**16 13 20.2**	**-0.1**
BTNK	**Botanikuri**	**0.83**	**54**	*i* P	**Pb**	**16 13 08.5**	**-0.5**
BTNK				*i* S	**Sb**	**16 13 20.5**	**+0.2**
BTNK				IAML_P			
	comp=Z,10μm,0.1s						
KARS	**Kars**	**0.85**	**228**	PG	**Pg**	**16 13 08.6**	**-0.1**
DIGO	**Kars**	**0.88**	**208**	*i* P	**Pg**	**16 13 09.3**	**0.0**
DIGO				*i* S	**Sb**	**16 13 21.8**	**-0.2**
DIGO				IAML_P			
	comp=Z,12μm,0.2s						
EPOS	**Posof**	**0.94**	**289**	*i* P	**Pb**	**16 13 10.4**	**-0.6**
EPOS				*i* S	**Sb**	**16 13 23.2**	**-0.5**
QZX	**Qazax, Azerbai**	**1.11**	**97**	P	**Pg**	**16 13 13.4**	**-0.4**
	SNR=54						
QZX				S	**Sb**	**16 13 29.1**	**+0.7**
GNI	**Garni**	**1.22**	**149**	PN	**Pn**	**16 13 15.8**	**0.0**
TASB	**TASBURUN-IGDIR**	**1.24**	**168**	PN	**Pg**	**16 13 15.9**	**-0.2**
TASB				SN	**Sn**	**16 13 33.4**	**+0.6**
IGDI	**IGDIR**	**1.33**	**174**	*i* P	**Pg**	**16 13 17.8**	**-0.2**
IGDI				*i* S	**Sb**	**16 13 33.5**	**-1.3**
IGDI				IAML_P			
	comp=Z,606nm,0.2s						
GUDG	**Gudauri**	**1.34**	**18**	P	**Pg**	**16 13 18.1**	**+0.1**
GUDG				S	**Sn**	**16 13 36.4**	**+0.8**
SENK	**Senkaya-Erzuru**	**1.34**	**242**	PN	**Pg**	**16 13 17.7**	**-0.4**
TKB	**Tkibuli**	**1.34**	**330**	P	**Pb**	**16 13 17.4**	**-0.4**
TKB				S	**Sn**	**16 13 35.6**	**+0.2**
ONI	**Oni**	**1.44**	**346**	PN	**Pb**	**16 13 19.0**	**-0.4**
ONI	**Oni**	**1.44**	**346**	P	**Pb**	**16 13 18.9**	**-0.5**
ONI				S	**Sg**	**16 13 38.4**	**-0.1**
GDB	**GEDABAY**	**1.48**	**108**	P	**Pn**	**16 13 19.2**	**-0.1**
	SNR=251						
GDB				S	**Sb**	**16 13 39.2**	**+0.2**
ARTV	**Artvin**	**1.50**	**270**	*i* P	**Pg**	**16 13 20.9**	**-0.2**
ARTV				*i* S	**Sg**	**16 13 39.8**	**-0.7**
ARTV				IAML_P			
	comp=Z,5μm,0.1s						
DAGI	**Agillar**	**1.51**	**266**	*i* P	**Pb**	**16 13 20.6**	**-0.1**
DAGI				*i* S	**Sn**	**16 13 39.4**	**-0.3**
DAGI				IAML_P			
	comp=Z,1μm,0.3s						
HYR	**Heyderabad**	**1.64**	**154**	P	**Pb**	**16 13 23.0**	**+0.1**
	SNR=4.2						
HYR				S	**Sg**	**16 13 46.1**	**+1.0**
DDFL	**Dedoflistskaro**	**1.68**	**81**	P	**Pn**	**16 13 21.3**	**-0.8**
DBAD	**Bademkaya**	**1.68**	**265**	*i* P	**Pb**	**16 13 23.3**	**-0.3**
DBAD				*i* S	**Sn**	**16 13 43.6**	**-0.3**
DBOC	**Borcka**	**1.70**	**276**	*i* P	**Pb**	**16 13 23.6**	**-0.2**
DBOC				*i* S	**Sb**	**16 13 45.0**	**-0.3**
DBOC				IAML_P			
	comp=Z,4μm,0.2s						
EATA	**Eleskirt**	**1.71**	**220**	*i* P	**Pg**	**16 13 24.7**	**-0.6**
EATA				IAML_P			
	comp=Z,219nm,0.2s						
BATM	**Batumi**	**1.72**	**284**	PN	**Pn**	**16 13 23.0**	**+0.5**
BATM	**Batumi**	**1.72**	**284**	P	**Pb**	**16 13 23.9**	**-0.3**
BATM				S	**Sg**	**16 13 46.4**	**-1.2**
BCA	**Borcka**	**1.74**	**279**	PN	**Pb**	**16 13 23.6**	**-0.9**
GANJ	**Ganja**	**1.91**	**106**	P	**Pb**	**16 13 27.0**	**-0.4**
	SNR=40						
GANJ				S	**Sb**	**16 13 51.5**	**+0.2**
KOPR	**Koprukoy-ERZUR**	**1.97**	**233**	PN	**Pn**	**16 13 26.8**	**+0.6**
TUTA	**Tutak**	**1.98**	**205**	*i* P	**Pg**	**16 13 30.5**	**+0.2**
ZKTA	**Zakatala**	**2.09**	**77**	P	**Pb**	**16 13 30.0**	**-0.5**
	SNR=13						
ZKTA				S	**Sg**	**16 13 59.9**	**+0.4**
AKDA	**Akdag**	**2.22**	**241**	*i* P	**Pb**	**16 13 33.5**	**+0.6**
MNGR	**Mingechevir, A**	**2.44**	**99**	P	**Pn**	**16 13 34.0**	**+1.5**
	SNR=4.7						
MNGR				S	**Sb**	**16 14 04.9**	**-1.7**
SEKA	**Sheki**	**2.48**	**89**	P	**Pb**	**16 13 36.5**	**-0.7**
	SNR=8.3						
SEKA				S	**Sb**	**16 14 09.2**	**+1.3**
ORD	**Ordubad**	**2.77**	**144**	P	**Pn**	**16 13 39.6**	**+2.5**
	SNR=5.8						
ORD				S	**Sg**	**16 14 19.5**	**-2.0**
KIV	**Kislovodsk**	**2.90**	**342**	PN	**Pn**	**16 13 39.9**	**+1.0**
QBL	**Gabala**	**2.98**	**94**	P	**Pb**	**16 13 43.1**	**-2.6**
	SNR=4.7	

WBSI				S	Sn	16 18 52.4	+2.3
EDFI	**Ende, Flores**	1.79	101	P	Pn	16 18 33.6	+2.0
BASI	**Baing, Sumba**	1.92	160	P	Pn	16 18 35.3	+2.4
PLAI	**Plampang**	2.15	258	P	Pn	16 18 37.2	+1.8
PLAI				S	Sn	16 19 06.3	+1.3
MMRI	**Maumere**	2.31	96	P	Pn	16 18 39.5	+2.3
BSSI	**Bau Bau, Buton**	2.31	14	P	Pn	16 18 38.6	+1.3
BKSI	**Bulukumba**	3.06	4	P	Pn	16 18 47.7	+1.4
KAPI	**Kappang**	3.37	357	P	Pn	16 18 51.6	+1.5
	4.3nm,0.3s,baz=175,slow=7.3,SNR=13						
KAPI				S	Sn	16 19 34.0	+2.7
	baz=91,slow=17,SNR=0.9						
BNSI	**Bone**	3.98	3	P	Pn	16 18 59.5	+1.7
BATI	**Baumata**	4.12	116	P	Pn	16 19 02.4	+2.8
	11nm,0.3s,baz=333,slow=1.5,SNR=18						
BATI				S	Sn	16 19 47.2	-1.1
	14nm,0.3s,baz=265,slow=2.5,SNR=4.6						
BATI	**Baumata**	4.12	116	P	Pn	16 19 01.6	+2.0
SOEI	**Soe**	4.51	108	P	Pn	16 19 07.0	+2.3
SRBI	**Singaraja**	4.66	274	P	Pn	16 19 08.3	+1.7
JAGI	**Jajag, Banyuwa**	5.70	269	P	Pn	16 19 17.9	-2.3
PWJI	**Pagerwojo**	8.03	272	P	Pn	16 19 51.6	+0.6
FITZ	**Fitzroy Crossi**	11.13	151	P	Pn	16 20 33.8	+2.1
	0.6nm,0.3s,baz=339,slow=14,SNR=11						
FITZ				S	Sn	16 22 33.1	-2.2
	0.4nm,0.3s,baz=80,slow=24,SNR=2.4						
WRA	**Warramunga Arr**	18.07	131	P	P	16 21 55.9	0.0
	0.4nm,0.3s,baz=294,slow=12,SNR=30						
WRA				S	S	16 25 11.8	-2.4
	0.2nm,0.3s,baz=321,slow=25,SNR=5.1						
ASAR	**Alice Springs**	20.25	140	P	P	16 22 19.8	+0.4
	1.3nm,0.6s,baz=318,slow=9.9,SNR=54						
ASAR				S	Sn	16 26 11.3	-1.9
	1.3nm,1.1s,baz=317,slow=23,SNR=4.4						
STKA	**Stephens Creek**	30.86	142	P	P	16 23 58.0	+0.7
	2.1nm,0.8s,baz=327,slow=12,SNR=5.5						
MKAR	**Makanchi Array**	64.34	332	P	P	16 28 12.6	-1.9
	0.2nm,0.4s,baz=153,slow=7.8,SNR=3.2						
VNDA	**Vanda**	72.44	171	P	P	16 29 02.5	-1.8
	0.3nm,0.4s,baz=321,slow=14,SNR=4.8						

*ISCJB **05** 16:24:17.3±0.8,23°.62S±0°.03×69°.29W±0°.07,h88km±8km, Error ellipse: s-maj=11.4km s-min=5.4km az=12.2*
*GUC **05** 16:24:17.6±0.7,23°.65S×69°.27W,h81km±4km,ML2.6*
ISC 05 16:24:18.5±1.5,23°.63S±0°.04×69°.31W±0°.06,h74km±11km, n26,σ1°27/47,1C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.44**	**340**	*i* P	**Pn**	**16 24 31.0**	**-0.4**
PB15				*i* S	**Sn**	**16 24 41.1**	**+0.1**
PB15	**IPOC Station P**	**0.44**	**340**	*e*P	**Pn**	**16 24 31.1**	**-0.4**
PB15				*e*S	**Sn**	**16 24 41.1**	**+0.1**
PB06	**IPOC Station P**	**0.95**	**345**	*i* P	**Pn**	**16 24 36.5**	**-0.3**
PB06				*i* S	**Sn**	**16 24 50.7**	**+0.3**
PB06	**IPOC Station P**	**0.95**	**345**	*e*P	**Pn**	**16 24 36.5**	**-0.3**
PB06				*e*S	**Sn**	**16 24 50.8**	**+0.4**
PB06				IAML		16 24 51.5	
	comp=N,252nm,0.1s						
LVC	**Limon Verde**	**1.08**	**20**	*i* P	**Pn**	**16 24 38.0**	**-0.5**
LVC				*i* S	**Sn**	**16 24 53.8**	**+0.4**
LVC	**Limon Verde**	**1.08**	**20**	*e*P	**Pn**	**16 24 38.1**	**-0.5**
LVC				*e*S	**Sn**	**16 24 53.8**	**+0.4**
PB05	**IPOC Station P**	**1.13**	**313**	*i* P	**Pn**	**16 24 38.6**	**-0.3**
PB05				*i* S	**Sn**	**16 24 54.6**	**+0.4**
PB05	**IPOC Station P**	**1.13**	**313**	*e*P	**Pn**	**16 24 38.6**	**-0.4**
PB05				*e*S	**Sn**	**16 24 54.5**	**+0.3**
PB05				IAML		16 24 59.4	
	comp=E,116nm,0.3s						
PB10	**IPOC Station P**	**1.15**	**275**	*i* P	**Pn**	**16 24 39.4**	**+0.3**
PB10				*i* S	**Sn**	**16 24 54.5**	**0.0**
PB10	**IPOC Station P**	**1.15**	**275**	*e*P	**Pn**	**16 24 39.0**	**-0.1**
PB10				*e*S	**Sn**	**16 24 55.1**	**+0.6**
PB10				IAML		16 24 59.2	
	comp=N,90nm,0.2s						
PB14	**IPOC Station P**	**1.41**	**225**	*i* P	**Pn**	**16 24 42.3**	**-0.4**
PB14				*i* S	**Sn**	**16 25 01.9**	**+1.0**
PB04	**IPOC Station P**	**1.50**	**329**	*i* P	**Pn**	**16 24 43.4**	**-0.5**
PB04				*i* S	**Sn**	**16 25 04.1**	**+1.2**
PB04	**IPOC Station P**	**1.50**	**329**	*e*P	**Pn**	**16 24 43.6**	**-0.3**
PB04				*e*S	**Sn**	**16 25 03.6**	**+0.6**
PB04				IAML		16 25 08.5	
	comp=N,122nm,0.1s						
GO02	**Mina Guanaco**	**1.55**	**190**	*e*P	**Pn**	**16 24 44.3**	**-0.3**
GO02				*i* S	**Sn**	**16 25 04.5**	**+0.4**
PB03	**IPOC Station P**	**1.62**	**345**	*i* P	**Pn**	**16 24 45.2**	**-0.2**
PB03				*i* S	**Sn**	**16 25 07.2**	**+1.4**
PB03	**IPOC Station P**	**1.62**	**345**	*e*P	**Pn**	**16 24 45.4**	**-0.1**
PB03				*e*S	**Sn**	**16 25 06.3**	**+0.6**
PB03				IAML		16 25 09.2	
	comp=E,164nm,0.2s						
PB09	**IPOC Station P**	**1.82**	**2**	*i* P	**Pn**	**16 24 49.0**	**+0.9**
PB09				*i* S	**Sn**	**16 25 14.1**	**+3.6**
PB09	**IPOC Station P**	**1.82**	**2**	*e*P	**Pn**	**16 24 48.8**	**+0.7**
PB07	**IPOC Station P**	**1.97**	**344**	*i* P	**Pn**	**16 24 49.6**	**-0.4**
PB07				*i* S	**Sn**	**16 25 08.9**	**-5.0**
PB07	**IPOC Station P**	**1.97**	**344**	⇑*i* P	**Pn**	**16 24 49.6**	**-0.4**
PB07				*i* S	**Sn**	**16 25 14.4**	**+0.4**
PB02	**IPOC Station P**	**2.36**	**347**	*i* P	**Pn**	**16 24 54.6**	**-0.6**
PB02				*i* S	**Sn**	**16 25 27.1**	**+3.8**
PB01	**IPOC Station P**	**2.58**	**356**	⇓*i* P	**Pn**	**16 24 57.8**	**-0.4**
PB01				*i* S	**Sn**	**16 25 28.9**	**+0.3**
PB08	**IPOC Station P**	**3.47**	**2**	*i* P	**Pn**	**16 25 10.3**	**-0.3**
PB11	**IPOC Station P**	**3.86**	**355**	*i* P	**Pn**	**16 25 14.1**	**-1.6**
MNMCX	**Minye Minye**	**4.48**	**357**	*i* P	**Pn**	**16 25 23.1**	**-1.2**
PB16	**IPOC Station P**	**5.27**	**358**	*i* P	**Pn**	**16 25 33.8**	**-1.5**

*IDC **05** 16:25:56.8±3.2,39°.49S×72°.76W,h81km±23km,mb3.6/7, mb1 3.8/11,mb1mx3.6/31,mbtmp3.9/11,Error ellipse: s-maj=45.4km s-min=16.3km az=83.0*
*ISCJB **05** 16:25:57.8±0.8,39°.46S±0°.03×72°.3W±0°.1,h94km±8km, mb3.7/7,Error ellipse: s-maj=16.2km s-min=5.2km az=178.7*
*SJA **05** 16:25:59.1±0.7,39°.65S×72°.37W,h79km±17km,MD3.8, ML4.4,MW3.8*
*GUC **05** 16:26:01.3±0.3,39°.37S×71°.30W,h140km±7km,ML4.6*
*NEIC **05** 16:26:01.0±0.0,39°.37S×71°.30W,h140km,mb4.1/1, MD4.2,ML4.6(GUC),After GUC.*
NEIC Felt [III] at Mehuin, Padre Las Casas, Pucon, Renaico, Temuco and Villarrica; [II] at Lanco, Los Lagos, Mariquina and Valdivia, Chile.
ISC 05 16:25:58.0±1.1,39°.49S±0°.05×72°.61W±0°.09,h92km±11km, n36,σ2°29/52,mb3.6/7,2C,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANA	**Caviahue**	**2.01**	**38**	*i* P	**Pn**	**16 26 33.5**	**+3.0**
CANA				*i* S	**Sn**	**16 26 58.5**	**+3.2**
PLCA	**Paso Flores**	**2.01**	**129**	P	**Pn**	**16 26 29.9**	**-0.6**
	51nm,0.3s,baz=341,slow=12,SNR=826						
PLCA				S	**Sn**	**16 26 50.8**	**-4.5**
	27nm,0.3s,baz=247,slow=15,SNR=19						
PLCA	**Paso Flores**	**2.01**	**129**	*i* P	**Pn**	**16 26 29.8**	**-0.6**
PLCA				IAML		16 26 30.0	
	comp=Z,593nm,0.4s						
PLCA				*i* S	**Sn**	**16 26 51.5**	**-3.7**
PLCA	**Paso Flores**	**2.01**	**129**	⇑*i* P	**Pn**	**16 26 29.8**	**-0.6**
PLCA				*i* S	**Sn**	**16 26 51.5**	**-3.7**
CCHI	**Chillan**	**2.91**	**9**	*i* P	**Pn**	**16 26 46.4**	**+4.1**
CCHI				*i* S	**Sn**	**16 27 19.1**	**+2.6**
CCHI	**Chillan**	**2.91**	**9**	*e*P	**Pn**	**16 26 46.1**	**+3.8**
CCHI				*i* S	**Sn**	**16 27 19.9**	**+3.4**
CCHI				IAML		16 27 22.5	
	comp=E,1μm,0.2s						
GO07	**Milladeo Hill,**	**3.71**	**192**	*i* P	**Pn**	**16 26 53.9**	**+0.9**
GO07				*i* S	**Sn**	**16 27 32.5**	**-3.1**
GO05	**Huala**	**4.50**	**7**	*e*Pn	**Pn**	**16 27 06.4**	**+2.5**
GO05	**Huala**	**4.50**	**7**	*i* P	**Pn**	**16 27 06.4**	**+2.5**
GO05				*i* S	**Sn**	**16 27 57.8**	**+2.8**
GO05	**Huala**	**4.50**	**7**	⇑*i* P	**Pn**	**16 27 06.4**	**+2.5**
GO05				*i* S	**Sn**	**16 27 56.1**	**+1.1**
PEL	**Peldehue**	**6.52**	**14**	*e*Pn	**Pn**	**16 27 32.6**	**+1.2**
ROC1	**El Roble**	**6.62**	**12**	*e*Pn	**Pn**	**16 27 33.8**	**+0.9**
ROC1	**El Roble**	**6.62**	**12**	*i* P	**Pn**	**16 27 33.9**	**+0.9**
ROC1				*i* S	**Sn**	**16 28 46.0**	**-1.1**
RTCV	**Cerro Valdivia**	**8.30**	**25**	*i* P	**Pn**	**16 27 55.1**	**-0.4**
RTCV				*i* S	**Sn**	**16 29 26.0**	**-1.6**
ZON	**Zonda**	**8.55**	**23**	*i* P	**Pn**	**16 27 59.7**	**+0.7**
ZON				IAML		16 28 01.8	
	comp=Z,30nm,0.2s						
CFA	**Coronel Fontan**	**8.63**	**26**	P	**Pn**	**16 27 59.5**	**-0.6**
	comp=Z,26nm,0.3s,baz=216,slow=8.7,SNR=239						
CFA				S	**Sn**	**16 29 33.3**	**-2.5**
	comp=Z,5.0nm,0.3s,baz=276,slow=18,SNR=9.6						
CFA	**Coronel Fontan**	**8.63**	**26**	*i* P	**Pn**	**16 27 59.6**	**-0.6**
CFA				*i* S	**Sn**	**16 29 33.0**	**-2.9**
RTLL	**Cerro Villicun**	**8.81**	**24**	*i* P	**Pn**	**16 28 02.8**	**+0.2**
RTLL				IAML		16 28 04.4	
	comp=Z,75nm,0.2s						
RTLL				*i* S	**Sn**	**16 29 39.8**	**-0.4**
GO04	**Tololo Observa**	**9.41**	**10**	*e*Pn	**Pn**	**16 28 11.1**	**+0.2**
GO04				*e*Sn	**Sn**	**16 29 50.9**	**-4.2**
LCO	**Las Campanas**	**10.57**	**9**	*e*Pn	**Pn**	**16 28 26.3**	**-0.4**
LCO				*e*Sn	**Sn**	**16 30 18.2**	**-5.1**
GO03	**Copiap**	**12.03**	**10**	*e*Pn	**Pn**	**16 28 44.1**	**-2.1**
USHA	**Ushuaia**	**15.61**	**171**	P	**Pn**	**16 29 32.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=356,slow=16,SNR=1.6						
LVC	**Limon Verde**	**17.12**	**12**	P	**Pn**	**16 29 51.6**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=207,slow=9.2,SNR=3.3						
LVC	**Limon Verde**	**17.12**	**12**	*e*P	**Pn**	**16 29 47.6**	**-4.2**
	comp=Z,15nm,1.4s						
CPUP	**Villa Florida**	**18.32**	**49**	P	**Pn**	**16 30 05.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=2.5						
LPAZ	**La Paz**	**23.44**	**11**	P	**Pn**	**16 30 59.7**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=182,slow=10.0,SNR=2.8						
SIV	**San Ignacio**	**25.49**	**27**	P	**P**	**16 31 18.5**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=222,slow=9.7,SNR=6.4						
VNA3	**Neumayer Olymp**	**44.51**	**156**	P	**P**	**16 34 00.6**	**+0.7**
VNA2	**Neumayer--Watz**	**45.19**	**155**	P	**P**	**16 34 06.6**	**+1.4**
	baz=282,slow=9.8						
SNAA	**Sanae**	**46.73**	**156**	P	**P**	**16 34 18.7**	**+1.4**
SNAA	**Sanae**	**46.73**	**156**	P	**P**	**16 34 18.2**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=281,slow=9.8,SNR=9.5						
BOSA	**Boshof**	**77.96**	**117**	P	**P**	**16 37 46.2**	**-0.2**
	comp=Z,4.4nm,0.8s,baz=245,slow=2.8,SNR=5.7						
LBTB	**Lobatse**	**80.44**	**114**	P	**P**	**16 38 00.1**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=248,slow=5.7,SNR=5.3						
TORD	**Torodi Ar. Bea**	**86.52**	**70**	P	**P**	**16 38 31.7**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=226,slow=7.3,SNR=2.7						
NVAR	**Mina Array Bea**	**88.14**	**326**	P	**P**	**16 38 37.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=133,slow=5.0,SNR=3.7						
MKAR	**Makanchi Array**	**160.34**	**60**	PKPab	**PKPab**	**16 46 28.5**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=308,slow=5.9,SNR=3.5						

JMA 05 16:38:27.7±0.2,24°.89N×123°.16E,h16km,M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.45**	**198**	P	Pg	16 38 36.5	-0.2
YOJ				*e*S	Sg	16 38 42.7	-0.1
JYNG	**Yonagunijimaku**	**0.48**	**204**	P	Pg	16 38 37.2	-0.1
JYNG				*e*S	Sg	16 38 44.1	+0.4
IRIF	**Iriomote-Funau**	**0.76**	**137**	P	Pg	16 38 42.3	-0.2
IRIF				*e*S	Sb	16 38 52.6	0.0
JKRS	**Kuro-shima**	**1.01**	**130**	P	Pb	16 38 46.0	-0.8
JKRS				*e*S	Sb	16 39 00.0	+0.1
HATJ	**Hateruma jima**	**1.02**	**145**	*e*S	Sb	16 39 00.3	+0.3
JISG	**Ishigakijimahi**	**1.09**	**106**	P	Pb	16 38 47.2	-1.0
JISG				*e*S	Sb	16 39 02.1	0.0

TAP 05 16:38:52.8,24°.29N×121°.48E,h7km,ML1.8,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.08**	**181**	*e*P	Pg	16 38 55.6	+0.7
	baz=182						
ETLH				S	Sg	16 38 56.9	+0.6
NACB	**Ninganchiao**	**0.15**	**139**	*e*P	Pg	16 38 56.9	+0.9
	baz=139						
NACB				S	Sg	16 38 59.0	+0.9
	baz=139						
NNSB	**Datong**	**0.17**	**326**	P	Pg	16 38 56.9	+0.7
	baz=326						
NNSB				*e*S	Sg	16 38 59.3	+0.7
	baz=326						
NNS	**Nan Shan**	**0.18**	**326**	P	Pg	16 38 57.2	+0.6
	baz=327						
NNS				S	Sg	16 38 59.9	+0.8
	baz=327						
TWD	**Chiawan**	**0.23**	**154**	*e*P	Pg	16 38 58.4	+1.0
	baz=152						
TWD				*e*S	Sg	16 39 01.7	+1.2
	baz=152						
WHF	**Hehuan Shan**	**0.25**	**234**	P	Pg	16 38 58.4	+0.6
	baz=233						
WHF				S	Sg	16 39 01.8	+0.6
	baz=233						
ENA	**Nanau**	**0.27**	**59**	P	Pg	16 38 58.6	+0.4
	baz=60						
ENA				S	Sg	16 39 02.6	+0.8
	baz=60						
TWT	**Tachien**	**0.28**	**263**	P	Pb	16 38 59.5	-0.9
	baz=252						
TWT				S	Sg	16 39 03.4	+1.2
	baz=252						
TDCB	**Techi**	**0.30**	**263**	*e*P	Pg	16 38 59.7	+0.9
	baz=253						
TDCB				S	Sg	16 39 03.5	+0.7
	baz=253						
NDT	**Datong Townshi**	**0.31**	**5**	*e*P	Pg	16 38 59.8	+0.8
	baz=5.0						
NDT				S	Sg	16 39 03.8	+0.7
	baz=5.0						
ENTT	**Nioudou**	**0.36**	**12**	P	Pg	16 39 00.6	+0.8
	baz=5.0						
ENTT				S	Sg	16 39 05.4	+0.9
	baz=5.0						
CHGB	**Renai**	**0.36**	**231**	*e*P	Pg	16 39 00.6	+0.6
	baz=232						
CHGB				*e*S	Sg	16 39 05.3	+0.5
	baz=232						
YHNB	**Yeheng**	**0.39**	**345**	*e*P	Pb	16 39 01.5	-0.7
	baz=346						
NSK	**Sanguang**	**0.40**	**343**	*e*P	Pb	16 39 01.8	-0.5
	baz=344						
NSK				S	Sg	16 39 06.8	+0.8
	baz=344						
OWD	**Renai**	**0.44**	**220**	*e*P	Pg	16 39 01.7	+0.4
	baz=220						
TWC	**Suao**	**0.46**	**46**	P	Pg	16 39 02.2	+0.4
	baz=38						
TWC				*i* S	Sg	16 39 08.4	+0.6
	baz=38						
TWE	**Neicheng**	**0.46**	**21**	*e*P	Pb	16 39 03.3	0.0
	baz=32						
TWE				*e*S	Sb	16 39 09.4	-1.0
	baz=32						
ESL	**Shilin**	**0.47**	**186**	P	Pg	16 39 02.5	+0.5
	baz=176						
ESL				*e*S	Sg	16 39 09.5	+1.2
	baz=176						
NWLT	**Wulai**	**0.49**	**2**	*e*P	Pg	16 39 02.1	-0.1
	baz=356						
NWLT				*e*S	Sg	16 39 08.3	-0.3
	baz=356						
WHP	**Taichung City**	**0.49**	**269**	*e*P	Pb	16 39 03.6	-0.2
	baz=269						
WHP				S	Sb	16 39 10.2	-1.1
	baz=269						
LIOB	**Emei**	**0.56**	**310**	*e*P	Pb	16 39 04.8	-0.1
	baz=310						
LIOB				S	Sb	16 39 12.9	-0.2
	baz=310						
NSTT	**Nanjuang**	**0.56**	**308**	*e*P	Pb	16 39 04.4	-0.5
	baz=308						
NSTT				*e*S	Sg	16 39 11.9	+1.1
	baz=308						
VWDT	**VWDT**	**0.62**	**211**	*e*P	Pg	16 39 05.2	+0.4
	baz=216						
SSLB	**Suanglung**	**0.70**	**224**	*e*P	Pg	16 39 06.2	0.0
	baz=235						
TIPB	**Shuangxi**	**0.75**	**25**	*e*P	Pg	16 39 07.7	+0.5
	baz=12						
TIPB				*e*S	Sg	16 39 16.8	-0.2
	baz=12						
YULB	**Yu-li**	**0.91**	**191**	*e*P	Pb	16 39 10.9	-0.1
	baz=181						
YULB				*e*S	Sb	16 39 23.5	+0.3
	baz=181						
TWF1	**Yuli**	**0.95**	**190**	P	Pb	16 39 11.5	-0.1
	baz=178						
ALS	**Alishan**	**0.99**	**219**	*e*P	Pb	16 39 12.2	-0.3
	baz=208						
CHN5	**Tsauling**	**1.01**	**227**	*e*P	Pn	16 39 13.5	0.0
	baz=229						
CHN5				S	Sn	16 39 29.1	+1.1
	baz=229						
ELDTW	**Lidau**	**1.18**	**201**	*e*P	Pg	16 39 15.4	0.0
	baz=192						
CHN4	**Tsaushan**	**1.24**	**221**	P	Pg	16 39 17.7	+1.1
	baz=222						
TPUB	**Ta-pu**	**1.26**	**219**	*e*P	Pg	16 39 17.4	+0.5
	baz=219						

*IDC **05** 16:57:18.6±4.0,51°.98N×160°.66E,h0km,mb3.7/3, mb1 3.6/4,mb1mx3.3/40,mbtmp3.6/4,ML2.4/1,MS2.0/1, Ms1 2.0/1,ms1mx2.0/42,Error ellipse: s-maj=80.5km s-min=45.9km az=11.0*
*KRSC **05** 16:57:23.2±1.3,52°.14N×160°.56E,h41km±20km,ML3.7*
ISC 05 16:57:25.1±1.6,52°.10N±0°.09×160°.56E±0°.09,h39km±4km, n26,σ0°97/40,mb3.9/3,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.05**	**342**	*e*P	**Pn**	**16 57 42.2**	**-1.0**
SPN				*e*S	**Sn**	**16 57 54.7**	**-1.9**
RUS	**Russkaya**	**1.30**	**286**	*e*P	**Pn**	**16 57 45.9**	**-0.8**
RUS				*e*S	**Sn**	**16 58 01.9**	**-0.9**
NLC	**Nalytchevo**	**1.30**	**326**	*e*P	**Pn**	**16 57 46.5**	**-0.2**
NLC				*e*S	**Sn**	**16 58 02.9**	**+0.1**
DALK	**Dalny**	**1.44**	**311**	*e*P	**Pn**	**16 57 48.0**	**-0.6**
DALK				*e*S	**Sn**	**16 58 05.8**	**-0.5**
MTVR	**Mutnovka**	**1.51**	**286**	*i* P	**Pn**	**16 57 49.4**	**-0.3**
MTVR				*e*S	**Sn**	**16 58 08.0**	**-0.1**
UGLR	**Uglovaya**	**1.53**	**317**	*e*P	**Pn**	**16 57 50.0**	**0.0**
SDLR	**Sedlovina**	**1.56**	**320**	*e*P	**Pn**	**16 57 50.3**	**0.0**
KDTR	**Khodutka, Kamc**	**1.56**	**260**	*e*P	**Pn**	**16 57 49.9**	**-0.4**
KDTR				*e*S	**Sn**	**16 58 08.4**	**-0.8**
SMAR	**Somma**	**1.58**	**318**	*e*P	**Pn**	**16 57 50.6**	**-0.1**
AVH	**Avacha**	**1.61**	**317**	*e*P	**Pn**	**16 57 51.3**	**+0.3**
AVH				*e*S	**Sn**	**16 58 10.9**	**+0.4**
KRER	**Koryakskii**	**1.63**	**318**	*e*P	**Pn**	**16 57 51.4**	**0.0**
KRMR	**Karymshinskiy**	**1.66**	**297**	*e*P	**Pn**	**16 57 51.2**	**-0.3**
KRMR				*e*S	**Sn**	**16 58 10.8**	**-0.7**
ASAK	**Asacha**	**1.66**	**281**	*e*P	**Pn**	**16 57 51.9**	**+0.2**
ASAK				*e*S	**Sn**	**16 58 12.2**	**+0.4**
KOK	**Koryaka**	**1.67**	**316**	*e*P	**Pn**	**16 57 51.7**	**-0.2**
KRX	**Arik**	**1.71**	**318**	*e*P	**Pn**	**16 57 52.4**	**-0.1**
PETK	**Petropavlovsk-**	**2.02**	**301**	**Pn**	**Pn**	**16 57 56.8**	**+0.2**
	5.7nm,0.3s,baz=118,slow=12,SNR=74						
PETK				Sn	**Sn**	**16 58 22.8**	**+2.4**
	5.5nm,0.3s,baz=94,slow=16,SNR=7.2						
PETK				LR	LR	16 59 11.2	
	comp=Z,37nm,20.1s,baz=85,slow=53						
APC	**Apacha**	**2.24**	**293**	*e*P	**Pn**	**16 57 59.5**	**0.0**
APC				*e*S	**Sn**	**16 58 27.4**	**+1.6**
GNL	**Ganaly**	**2.25**	**316**	*e*P	**Pn**	**16 58 00.9**	**+1.1**
GNL				*e*S	**Sn**	**16 58 27.2**	**+0.8**
PAU	**Pauzhetka**	**2.41**	**256**	*e*P	**Pn**	**16 58 03.2**	**+1.3**
MKZ	**Mys Kozlova**	**2.56**	**15**	*e*P	**Pn**	**16 58 04.1**	**+0.2**
MKZ				*e*S	**Sn**	**16 58 32.8**	**-0.9**
KZV	**Kizimen**	**3.02**	**357**	*e*P	**Pn**	**16 58 12.6**	**+2.1**
TUMD	**Tumrok D**	**3.11**	**358**	*e*P	**Pn**	**16 58 12.0**	**+0.5**
TUMD				*e*S	**Sn**	**16 58 47.0**	**-0.4**
TUMR	**Tumrok**	**3.20**	**356**	*e*P	**Pn**	**16 58 14.8**	**+2.0**
TIXI	**Tiksi**	**24.10**	**336**	P	**P**	**17 02 35.7**	**-0.9**
	1.2nm,0.3s,baz=111,slow=8.0,SNR=5.8						
MKAR	**Makanchi Array**	**48.85**	**297**	P	**P**	**17 06 05.3**	**-1.1**
	0.2nm,0.5s,baz=57,slow=7.2,SNR=2.4						
FINES	**FINESS Array B**	**61.15**	**337**	P	**P**	**17 07 36.1**	**+1.2**
	0.6nm,0.5s,baz=27,slow=8.8,SNR=3.9						

KRSC 05 17:00:25.5±1.2,52°.16N×160°.55E,h53km±18km,ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.00**	**341**	*i* P	Pn	17 00 44.4	+1.2
SPN				*e*S	Sn	17 00 57.1	+0.8
NLC	**Nalytchevo**	**1.25**	**325**	*e*P	Pn	17 00 48.6	+2.0
NLC				*e*S	Sn	17 01 05.3	+2.9
DALK	**Dalny**	**1.40**	**309**	*e*P	Pn	17 00 50.2	+1.5
DALK				*e*S	Sn	17 01 08.3	+2.2
MTVR	**Mutnovka**	**1.49**	**284**	*e*P	Pn	17 00 51.5	+1.5
MTVR				*e*S	Sn	17 01 09.9	+1.5
UGLR	**Uglovaya**	**1.49**	**316**	*e*P	Pn	17 00 52.2	+2.3
UGLR				*e*S	Sn	17 01 11.2	+2.9
SDLR	**Sedlovina**	**1.51**	**319**	*e*P	Pn	17 00 52.3	+2.0
SMAR	**Somma**	**1.54**	**317**	*e*P	Pn	17 00 52.4	+1.7
AVH	**Avacha**	**1.57**	**316**	*e*P	Pn	17 00 53.4	+2.5
KDTR	**Khodutka, Kamc**	**1.57**	**258**	*e*P	Pn	17 00 52.1	+1.2
KDTR				*e*S	Sn	17 01 10.6	+0.6
KRER	**Koryakskii**	**1.59**	**317**	*e*P	Pn	17 00 53.7	+2.3
KRMR	**Karymshinskiy**	**1.63**	**296**	*e*P	Pn	17 00 53.5	+1.8
KRMR				*e*S

KNT			S	Sg	17 05 19.5	-0.1
KNT	**Kendrikon**	**0.80 194**	⇑*i*Pg	**Pg**	17 05 08.9	-0.1
KNT			*i* Sg	**Sb**	17 05 20.0	-0.1
KNT	**Kendrikon**	**0.80 194**	P	**Pg**	17 05 08.9	-0.1
KNT			S	**Sg**	17 05 19.4	-0.2
SRS	**Serrai**	**0.89 158**	P	**Pg**	17 05 10.2	-0.4
SRS			S	**Sg**	17 05 22.0	-0.2
SRS	**Serrai**	**0.89 158**	*i* Pg	**Pg**	17 05 10.2	-0.4
SRS			*i* Sg	**Sb**	17 05 22.4	-0.1
SRS	**Serrai**	**0.89 158**	P	**Pg**	17 05 10.2	-0.4
SRS			S	**Sg**	17 05 21.4	-0.8
SRS			AML	AML	17 05 24.5	
	comp=N,283μm,0.2s					
SRS			AML	AML	17 05 25.2	
	comp=E,339μm,0.1s					
SOH	**Sokhos**	**1.13 172**	P	**Pb**	17 05 14.8	-0.1
SOH			S	**Sn**	17 05 30.2	-0.2
SOH	**Sokhos**	**1.13 172**	*i* Pg	**Pb**	17 05 14.8	-0.1
SOH			*i* Sg	**Sn**	17 05 30.2	-0.2
SOH	**Sokhos**	**1.13 172**	P	**Pb**	17 05 14.7	-0.1
GRG	**Griva**	**1.14 210**	P	**Pb**	17 05 14.8	-0.2
GRG			S	**Sn**	17 05 30.8	+0.3
GRG	**Griva**	**1.14 210**	*i* Pg	**Pg**	17 05 15.4	+0.1
GRG			*i* Sg	**Sn**	17 05 30.9	+0.3
GRG	**Griva**	**1.14 210**	P	**Pg**	17 05 15.5	+0.1
GRG			AML	AML	17 05 31.2	
	comp=N,322μm,0.4s					
GRG			AML	AML	17 05 31.5	
	comp=E,495μm,0.5s					
PLD	**Plovdiv**	**1.16 81**	*i* Pg	**Pb**	17 05 14.8	-0.6
PLD			*i* Sg	**Sn**	17 05 32.0	+0.9
RZN	**Rozhen**	**1.19 102**	P	**Pn**	17 05 15.2	-0.8
THE	**Thessaloniki**	**1.32 186**	*i* Pg	**Pg**	17 05 18.8	0.0
THE			*i* Sg	**Sg**	17 05 36.5	+0.6
BARS	**Barje**	**1.32 312**	*e*Pg	**Pg**	17 05 18.7	-0.2
BARS	**Barje**	**1.32 312**	*e*Pn	**Sb**	17 05 33.9	-1.1
BARS			*e*Sg	**Sn**	17 05 35.4	+0.2
HORT	**Hortiatis**	**1.34 182**	P	**Pg**	17 05 18.9	-0.4
ZAPS	**Zavoj**	**1.39 344**	*e*Pg	**Pb**	17 05 19.1	-0.1
ZAPS			*e*Sg	**Sn**	17 05 36.2	-0.5
KAVA	**Kavala**	**1.39 132**	P	**Pb**	17 05 19.2	-0.1
KAVA			S	**Sb**	17 05 37.3	+0.4
KAVA	**Kavala**	**1.39 132**	P	**Pb**	17 05 19.2	-0.1
KAVA			AML	AML	17 05 39.1	
	comp=E,575μm,0.4s					
KAVA			AML	AML	17 05 40.0	
	comp=N,524μm,0.3s					
MPEP	**Malo Peshtene**	**1.48 17**	P	**Pg**	17 05 21.5	-0.3
KRUS	**Krusevo**	**1.54 249**	*i* Pg	**Pg**	17 05 23.0	-0.1
PLG	**Polygyros**	**1.58 172**	P	**Pb**	17 05 21.9	-0.7
PLG			S	**Sg**	17 05 43.8	-0.6
PLG	**Polygyros**	**1.58 172**	P	**Pb**	17 05 22.1	-0.5
KDZ	**Kurdzhali**	**1.71 99**	P	**Pg**	17 05 26.6	+0.2
OUR	**Ouranopolis**	**1.72 159**	P	**Pn**	17 05 23.5	+0.4
OUR			S	**Sb**	17 05 47.3	+0.8
OUR	**Ouranopolis**	**1.72 159**	P	**Pn**	17 05 23.5	+0.4
OUR			AML	AML	17 05 49.2	
	comp=E,586μm,0.4s					
OUR			AML	AML	17 05 49.8	
	comp=N,623μm,0.5s					
FNA	**Florina**	**1.77 230**	*i* Pg	**Pb**	17 05 26.1	+0.2
THAS	**Thassos island**	**1.78 138**	P	**Pn**	17 05 24.2	+0.3
THAS			S	**Sb**	17 05 48.1	0.0
THAS	**Thassos island**	**1.78 138**	P	**Pn**	17 05 24.2	+0.3
THAS			AML	AML	17 05 51.2	
	comp=N,165μm,0.3s					
THAS			AML	AML	17 05 51.8	
	comp=E,270μm,0.2s					
RDO	**Rodhopi**	**1.96 113**	P	**Pn**	17 05 26.9	+0.6
RDO			S	**Sb**	17 05 53.0	-0.2
RDO	**Rodhopi**	**1.96 113**	P	**Pb**	17 05 27.7	-1.2
SELS	**Selova**	**1.97 311**	*e*Pn	**Pb**	17 05 28.9	-0.4
SELS			*e*Sg	**Sg**	17 05 55.6	-1.3
ZAGS	**Zajecar**	**1.99 340**	*e*Pn	**Pb**	17 05 29.1	-0.4
ZAGS			*e*Sg	**Sb**	17 05 54.7	+0.5
BOVS	**Bovan**	**2.00 328**	*e*Pn	**Pb**	17 05 29.6	-0.1
BOVS			*e*Sg	**Sg**	17 05 56.8	-1.0
PAIG	**Paliouri**	**2.05 169**	P	**Pn**	17 05 28.1	+0.5
PAIG			S	**Sb**	17 05 55.0	-0.9
ALN	**Alexandroupoli**	**2.41 115**	P	**Pn**	17 05 33.7	+1.1
ALN			S	**Sn**	17 06 02.9	+1.0
ALN	**Alexandroupoli**	**2.41 115**	P	**Pb**	17 05 34.9	-1.7
GRUS	**Gruza**	**2.65 318**	*e*Pn	**Pn**	17 05 38.1	+2.3
GRUS			*e*Sg	**Sg**	17 06 17.2	-1.3
KUBS	**Kucevo**	**2.70 337**	*e*Pn	**Pn**	17 05 38.7	+2.2
KUBS			*e*Sg	**Sb**	17 06 17.3	+2.8
TRUS	**Trudelj**	**3.04 319**	*e*Pn	**Pn**	17 05 44.2	+2.9
TRUS			*e*Sg	**Sg**	17 06 29.6	-1.6
BZS	**Buzias**	**3.84 344**	*e*Pn	**Pn**	17 05 54.3	+2.1
KOLS	**Kolonicke sedl**	**7.02 355**	*e*PN	Pn	17 06 30.1	-5.8

*IDC **05** 17:16:13.8±1.0, 16°.81N×146°.27E, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.6/43, mbtmp3.6/8, ML3.5/1, MS2.9/4, Ms1 3.0/4, ms1mx2.7/28, Error ellipse: s-maj=30.7km s-min=22.2km az=116.0*
*ISCJB **05** 17:16:21.2±0.8, 16°.86N±0°.08×146°.2E±0°.2, h68km, mb3.4/7, Error ellipse: s-maj=25.1km s-min=9.8km az=16.3*

ISC 05 17:16:22.8±0.9, 16°.8N±0°.1×146°.2E±0°.2, h68km, n16, σ0°.55/8, mb3.6/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.46 202**		Pn	Pn	17 17 08.8	-5.5
	4.1nm,0.3s,baz=18,slow=20,SNR=2.2						
GUMO				Sn	**Sn**	**17 17 54.6**	**+0.4**
	3.0nm,0.3s,baz=6.6,slow=22,SNR=1.1						
GUMO				LR	LR	17 18 22.9	
	comp=Z,160nm,20.9s,baz=73,slow=37						
H11S3	**WAKE ISLAND Hy 19.60**	**82**		T	T	17 41 16.2	
	baz=268,slow=75,SNR=321						
H11S1	**WAKE ISLAND Hy 19.62**	**82**		T	T	17 41 17.3	
	baz=268,slow=75,SNR=147						
H11S2	**WAKE ISLAND Hy 19.62**	**82**		T	T	17 41 17.4	
	baz=268,slow=75,SNR=214						
H11N1	**WAKE ISLAND Hy 19.87**	**79**		T	T	17 41 34.5	
	baz=265,slow=75,SNR=239						
H11N2	**WAKE ISLAND Hy 19.87**	**78**		T	T	17 41 36.4	
	baz=265,slow=75,SNR=175						
H11N3	**WAKE ISLAND Hy 19.89**	**79**		T	T	17 41 37.5	
	baz=265,slow=75,SNR=257						
MJAR	**Matsushiro Arr**	**20.87 342**		LR	LR	17 27 47.7	
	comp=Z,39nm,20.8s,baz=85,slow=33						
KSRS	**Korea Array**	**26.10 325**		P	**P**	**17 21 50.8**	**+0.6**
	0.4nm,0.6s,baz=148,slow=9.8,SNR=2.9						
PETK	**Petropavlovsk-**	**37.31 11**		LR	LR	17 39 01.0	
	comp=Z,23nm,18.9s,baz=173,slow=37						
ASAR	**Alice Springs**	**42.00 197**		P	**P**	**17 24 07.3**	**-0.3**
	0.3nm,0.8s,baz=17,slow=13,SNR=4.9						
CMAR	**Chiang Mai Arr**	**44.95 279**		P	**P**	**17 24 30.9**	**-0.5**
	0.8nm,0.7s,baz=73,slow=6.3,SNR=5.7						
CMAR				LR	LR	17 41 38.5	
	comp=Z,16nm,21.4s,baz=65,slow=34						
MKAR	**Makanchi Array**	**60.09 315**		P	**P**	**17 26 23.3**	**+0.2**
	0.3nm,0.6s,baz=89,slow=6.9,SNR=4.3						
ILAR	**Eielson Array**	**65.11 26**		P	**P**	**17 26 55.5**	**-0.7**
	0.3nm,0.4s,baz=249,slow=5.7,SNR=6.8						
YKA	**Yellowknife Ar**	**79.41 28**		P	**P**	**17 28 21.8**	**+0.5**
	0.2nm,0.3s,baz=286,slow=6.4,SNR=3.6						
NVAR	**Mina Array Bea**	**83.92 52**		P	**P**	**17 28 46.1**	**+0.2**
	0.3nm,0.4s,baz=267,slow=6.3,SNR=3.0						

MAN 05 17:17:53.5, 7°.33N×124°.81E, h8km, mb3.9, ML2.7, MS2.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.57 259**	⇑*i*P		Pg	17 18 04.9	+0.3
CTBH				*i* S	Sb	17 18 13.6	-0.5
BUKP	**Musuan**	**0.60 24**		*e*P	Pg	17 18 05.5	+0.3
BUKP				*e*S	Sb	17 18 15.3	+0.2
SKMP	**Bagumbayan, Su**	**0.84 198**		*e*P	Pg	17 18 06.9	-2.9
CGP	**Cagayan de Oro**	**1.13 354**		*e*P	Pg	17 18 14.3	-0.9
CGP				*e*S	Sg	17 18 29.6	-0.3
DDMP	**Don Marcelino,**	**1.51 144**		*e*P	Pn	17 18 20.2	-0.7
DDMP				*e*S	Sg	17 18 43.5	+1.5

*NIED **05** 17:29:00, 39°.60N×142°.20E, h53km, Mw3.8 Best double couple: M0:5.92000×10^14 NP1:φs189.00000°, δ19.00000°, λ78.00000°. NP2:φs22.00000°, δ72.00000°, λ94.00000°.*
*ISCJB **05** 17:29:03.2±0.7, 39°.64N±0°.04×142°.22E±0°.09, h55km±4km, mb3.7/17, MS3.5/3, Error ellipse: s-maj=11.2km s-min=5.6km az=14.1*
*JMA **05** 17:29:05.0, 39°.64N×142°.11E, h49km±1km, M3.8*
JMA Felt II J1.
*IDC **05** 17:29:05.8±2.1, 39°.62N×142°.25E, h64km±19km, mb3.5/17, mb1 3.6/22, mb1mx3.5/53, mbtmp3.8/22, MS3.4/3, Ms1 3.4/3, ms1mx2.7/37, Error ellipse: s-maj=20.4km s-min=14.5km az=108.0*

ISC 05 17:29:03.9±1.2, 39°.64N±0°.04×142°.30E±0°.08, h46km±9km, n39, σ1°.82/43, mb3.8/17, MS3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.37 261**		P	**Pn**	**17 29 13.5**	**+0.1**
MIYJ				S	**Sn**	**17 29 19.4**	**-0.8**
JTH	**Tanohata**	**0.45 312**		S	**Sn**	**17 29 21.3**	**-0.4**
OFUJ	**Ofunato**	**0.74 221**		P	**Pn**	**17 29 17.9**	**-0.1**
OFUJ				*e*S	**Sn**	**17 29 27.1**	**-1.1**
JOM	**Ohasama**	**0.79 258**		P	**Pn**	**17 29 18.3**	**-0.4**
JOM				S	**Sn**	**17 29 27.7**	**-1.8**
JKZ	**Kuzumaki**	**0.82 295**		P	**Pn**	**17 29 18.8**	**-0.4**
JKZ				S	**Sn**	**17 29 28.4**	**-1.9**
JANG	**Nango**	**0.95 321**		P	**Pn**	**17 29 20.7**	**-0.1**
JANG				S	**Sn**	**17 29 32.1**	**-1.2**
JMK	**Ichinoseki**	**1.08 231**		P	**Pn**	**17 29 22.3**	**-0.3**
JMK				*e*S	**Sn**	**17 29 35.4**	**-1.0**
JRG	**Rokugo**	**1.31 260**		P	**Pn**	**17 29 25.0**	**-0.7**
JRG				*e*S	**Sn**	**17 29 39.4**	**-2.6**
JAH	**Hinai**	**1.39 294**		P	**Pn**	**17 29 26.6**	**-0.2**
MJAR	**Matsushiro Arr**	**4.47 227**		P	**Pn**	**17 30 11.2**	**+2.1**
	0.3nm,0.3s,baz=32,slow=13,SNR=56						
MAT	**Matsushiro**	**4.47 228**		P	**Pn**	**17 30 11.8**	**+2.7**
MAT				*e*S	**Sn**	**17 31 07.5**	**+7.7**
ASAJ	**Asahikawa**	**4.48 3**		P	**Pn**	**17 30 11.2**	**+2.0**
	0.9nm,0.3s,baz=189,slow=18,SNR=9.4						
ASAJ				S	**Sn**	**17 31 00.8**	**+0.8**
	0.9nm,0.3s,baz=229,slow=27,SNR=3.6						
JHJ	**Hachijo jima 2**	**6.81 198**		P	**Pn**	**17 30 41.3**	**0.0**
	3.9nm,0.3s,baz=354,slow=23,SNR=6.4						
JHJ				S	**Sn**	**17 31 52.9**	**-4.6**
	1.0nm,0.3s,baz=218,slow=23,SNR=1.6						
USRK	**Ussuriysk Ar.**	**8.93 304**		P	**Pn**	**17 31 12.3**	**+2.1**
	0.2nm,0.3s,baz=108,slow=14,SNR=7.6						
KSRS	**Korea Array**	**11.47 264**		P	**Pn**	**17 31 46.8**	**+1.9**
	0.4nm,0.3s,baz=73,slow=14,SNR=9.7						
SEY	**Seymchan**	**24.10 11**		P	**P**	**17 34 15.6**	**+0.7**
	3.0nm,0.9s,baz=174,slow=9.2,SNR=5.6						
SONM	**Songino Array**	**27.01 300**		P	**P**	**17 34 41.0**	**-0.5**
	0.3nm,0.4s,baz=87,slow=9.0,SNR=2.9						
H11N2	**WAKE ISLAND Hy 29.00**	**126**		T	T	18 05 34.0	
	baz=319,slow=75,SNR=228						
H11N1	**WAKE ISLAND Hy 29.01**	**126**		T	T	18 05 43.8	
	baz=319,slow=75,SNR=252						
H11N3	**WAKE ISLAND Hy 29.02**	**126**		T	T	18 05 44.5	
	baz=319,slow=75,SNR=300						
H11S1	**WAKE ISLAND Hy 29.80**	**128**		T	T	18 06 47.1	
	baz=320,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy 29.80**	**128**		T	T	18 06 39.3	
	baz=320,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy 29.82**	**128**		T	T	18 06 39.5	
	baz=320,slow=76,SNR=18						
ZALV	**Zalesovo Beam**	**40.72 310**		P	**P**	**17 36 39.7**	**-0.1**
	1.3nm,0.5s,baz=86,slow=8.2,SNR=5.9						
ZALV				PcP	**PcP**	**17 38 39.2**	**-1.3**
	0.4nm,0.4s,baz=70,slow=1.7,SNR=2.5						
CMAR	**Chiang Mai Arr**	**42.87 253**		P	**P**	**17 36 57.1**	**-0.7**
	0.4nm,0.8s,baz=44,slow=6.3,SNR=2.8						
MKAR	**Makanchi Array**	**43.37 300**		P	**P**	**17 37 01.4**	**-0.2**
	1.2nm,0.7s,baz=85,slow=9.4,SNR=15						
ILAR	**Eielson Array**	**46.93 34**		P	**P**	**17 37 30.2**	**+0.6**
	0.4nm,0.7s,baz=265,slow=6.9,SNR=4.4						
INK	**Inuvik**	**51.76 28**		P	**P**	**17 38 06.9**	**+0.7**
	0.9nm,0.6s,baz=269,slow=4.3,SNR=3.8						
INK				LR	LR	18 02 47.5	
	comp=Z,31nm,18.1s,baz=34,slow=39						
PSI	**Prapat**	**53.74 238**		LR	LR	18 02 11.5	
	comp=Z,30nm,18.1s,baz=351,slow=37						
ARU	**Arti**	**54.89 318**		P	**P**	**17 38 29.2**	**-0.2**
	0.8nm,0.5s,baz=0.0,slow=4.0,SNR=6.2						
AKTO	**Aktyubinsk**	**57.47 311**		P	**P**	**17 38 48.6**	**+0.6**
	1.0nm,0.7s,baz=61,slow=14,SNR=4.6						
WRA	**Warramunga Arr**	**59.73 189**		P	**P**	**17 39 03.5**	**-0.4**
	2.1nm,1.0s,baz=12,slow=5.1,SNR=3.5						
RES	**Resolute Bay**	**59.91 15**		P	**P**	**17 39 04.8**	**+0.3**
	0.9nm,0.6s,baz=347,slow=14,SNR=3.6						
YKA	**Yellowknife Ar**	**61.22 31**		P	**P**	**17 39 12.9**	**-0.6**
	0.1nm,0.3s,baz=300,slow=7.5,SNR=2.6						
ASAR	**Alice Springs**	**63.46 189**		P	**P**	**17 39 29.4**	**+0.4**
	0.5nm,0.9s,baz=15,slow=12,SNR=4.9						
FINES	**FINESS Array B**	**66.84 332**		P	**P**	**17 39 50.5**	**0.0**
	1.1nm,0.6s,baz=46,slow=6.0,SNR=3.7						
FINES				LR	LR	18 10 29.0	
	comp=Z,34nm,18.7s,baz=68,slow=37						
HFS	**Hagfors**	**72.00 336**		P	**P**	**17 40 22.4**	**0.0**
	0.7nm,0.4s,baz=49,slow=6.5,SNR=5.4						
NOA	**NORSAR Array B**	**72.06 337**		P	**P**	**17 40 22.6**	**-0.2**
	0.4nm,0.6s,baz=38,slow=5.9,SNR=3.1						
AKASG	**Malin Array Be**	**72.67 322**		P	**P**	**17 40 25.9**	**-0.6**
	0.2nm,0.2s,baz=53,slow=5.7,SNR=3.6						

*NEIC **05** 17:29:21.9±0.0, 19°.50N×65°.47W, h77km, MD3.7(RSPR), After RSPR.*

RSPR 05 17:29:21.9, 19°.50N×65°.47W, h77km±3km, MD3.7/16, 21C-16D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**1.20 172**		*e*P	Pn	17 29 42.6	-0.7
CUPR	**Culebra, Puert**	**1.20 172**		*e*S	Sn	17 29 58.8	-0.5
CUPR	**Culebra, Puert**	**1.20 172**		*e*Pn	Pn	17 29 42.0	-1.3
STVI	**Saint Thomas**	**1.24 157**		⇑*e*P	Pn	17 29 43.1	-0.7
STVI	**Saint Thomas**	**1.24 157**		*e*Pn	Pn	17 29 42.6	-1.2
STVI	**Saint Thomas**	**1.24 157**		⇑*e*P	Pn	17 29 43.1	-0.7
STVI				*e*S	Sn	17 29 59.8	-0.4
CBYP	**Canovanas**	**1.27 197**		⇓*e*P	Pn	17 29 43.5	-0.8
CBYP	**Canovanas**	**1.27 197**		⇓*e*P	Pn	17 29 43.5	-0.8
CBYP	**Canovanas**	**1.27 197**		*e*Pn	Pn	17 29 43.0	-1.3
CBYP				*e*Pn	Pn	17 29 43.5	-0.8
CBYP	**Canovanas**	**1.27 197**		⇓*e*P	Pn	17 29 43.5	-0.8
HUMP	**Col San Antoni**	**1.40 195**		⇑*e*P	Pn	17 29 45.3	-0.6
HUMP				*e*S	Sn	17 30 03.1	-0.7
HUMP	**Col San Antoni**	**1.40 195**		⇑*e*P	Pn	17 29 45.0	-0.9
HUMP	**Col San Antoni**	**1.40 195**		*e*Pn	Pn	17 29 44.6	-1.2
HUMP	**Col San Antoni**	**1.40 195**		⇑*e*P	Pn	17 29 45.0	-0.9
HUMP				*e*S	Sn	17 30 03.1	-0.7
MTP	**Monte Pirata**	**1.40 183**		⇓*e*P	Pn	17 29 45.5	-0.3
MTP	**Monte Pirata**	**1.40 183**		*e*Pn	Pn	17 29 45.2	-0.7
MTP	**Monte Pirata**	**1.40 183**		⇓*e*P	Pn	17 29 45.5	-0.3
MTP				*e*S	Sn	17 30 03.3	-0.5
EMPR	**Esperanza - Ma**	**1.43 225**		⇑*e*P	Pn	17 29 45.7	-0.5
EMPR	**Esperanza - Ma**	**1.43 225**		*e*S	Sn	17 30 04.4	-0.2
EMPR	**Esperanza - Ma**	**1.43 225**		*e*Pn	Pn	17 29 44.4	-1.9
SJG	**San Juan**	**1.52 205**		⇓*e*P	Pn	17 29 46.8	-0.7
SJG	**San Juan**	**1.52 205**		*e*Pn	Pn	17 29 46.6	-0.8
SJG	**San Juan**	**1.52 205**		⇓*e*P	Pn	17 29 46.8	-0.7
SJG				*e*S	Sn	17 30 06.1	-0.7
PDPR	**Patillas Dam,**	**1.56 200**		⇑*e*P	Pn	17 29 47.4	-0.6
PDPR	**Patillas Dam,**	**1.56 200**		*e*S	Sn	17 30 07.2	-0.5
IGPR	**InterUniversit**	**1.64 202**		⇑*e*P	Pn	17 29 48.6	-0.5
IGPR	**InterUniversit**	**1.64 202**		⇑*e*P	Pn	17 29 48.6	-0.4
AOPR	**Arecibo Observ**	**1.67 227**		⇑*e*P	Pn	17 29 48.7	-0.8
AOPR	**Arecibo Observ**	**1.67 227**		⇑*e*P	Pn	17 29 48.7	-0.7
AOPR	**Arecibo Observ**	**1.67 227**		*e*Pn	Pn	17 29 48.1	-1.3
AOPR	**Arecibo Observ**	**1.67 227**		⇑*e*P	Pn	17 29 48.7	-0.8
AOPR	**Arecibo Observ**	**1.67 227**		⇑*e*P	Pn	17 29 48.7	-0.7
AOPR				*e*S	Sn	17 30 10.0	-0.3
CELP	**Cerrillos**	**1.77 217**		⇑*e*P	Pn	17 29 50.1	-0.5
CELP	**Cerrillos**	**1.77 217**		*e*Pn	Pn	17 29 50.1	-0.5
CELP	**Cerrillos**	**1.77 217**		⇑*e*P	Pn	17 29 50.1	-0.5
OBIP	**Obispado Ponce**	**1.81 217**		⇑*e*P	Pn	17 29 50.8	-0.4
OBIP	**Obispado Ponce**	**1.81 217**		*e*Pn	Pn	17 29 50.4	-0.8
OBIP	**Obispado Ponce**	**1.81 217**		⇑*e*P	Pn	17 29 50.8	-0.4
OBIP				*e*S	Sn	17 30 12.8	-0.6
CDVI	**St. Croix**	**1.86 159**		*e*Pn	Pn	17 29 52.5	+0.6
AGPR	**Aguadilla, PR**	**1.86 237**		⇓*e*P	Pn	17 29 51.2	-0.7
AGPR	**Aguadilla, PR**	**1.86 237**		⇓*e*P	Pn	17 29 51.2	-0.7
AGPR				*e*S	Sn	17 30 14.4	-0.3
ICMP	**Isla Caja de M**	**1.89 212**		*e*Pn	Pn	17 29 52.2	-0.2
AGP	**Aguadilla**	**1.92 236**		*e*Pn	Pn	17 29 50.9	-1.8
LSP	**Las Mesas**	**2.02 230**		⇑*e*P	Pn	17 29 54.0	-0.1
LSP	**Las Mesas**	**2.02 230**		*e*Pn	Pn	17 29 54.0	-0.1
LSP	**Las Mesas**	**2.02 230**		⇑*e*P	Pn	17 29 54.0	-0.1
MPR	**Mayaguez**	**2.04 231**		*e*Pn	Pn	17 29 53.2	-1.0
MLPR	**Magueyes Islan**	**2.13 225**		⇓*e*P	Pn	17 29 55.1	-0.4
MLPR	**Magueyes Islan**	**2.13 225**		*e*S	Sn	17 30 20.8	-0.4
CRPR	**Cabo Rojo, PR**	**2.15 227**		⇓*e*P	Pn	17 29 55.3	-0.4
CRPR	**Cabo Rojo, PR**	**2.15 227**		*e*Pn	Pn	17 29 53.4	-2.4
CRPR	**Cabo Rojo, PR**	**2.15 227**		⇓*e*P	Pn	17 29 55.3	-0.4
CRPR				*e*S	Sn	17 30 21.4	-0.2
IDE	**Isla Desecheo**	**2.20 240**		⇑*e*P	Pn	17 29 55.6	-0.9
IDE	**Isla Desecheo**	**2.20 240**		*e*Pn	Pn	17 29 55.6	-0.9
IDE				*e*Sn	Sn	17 30 22.5	-0.3
IDE	**Isla Desecheo**	**2.20 240**		⇑*e*P	Pn	17 29 55.6	-0.9
IDE				*e*S	Sn	17 30 22.5	-0.3
PCDR	**Punta Cana, DR**	**2.93 251**		⇓*e*P	Pn	17 30 05.9	-0.4
PCDR				*e*S	Sn	17 30 40.0	-0.4
PCDR	**Punta Cana, DR**	**2.93 251**		*e*S	Sn	17 30 40.3	-0.1
PCDR	**Punta Cana, DR**	**2.93 251**		⇓*e*P	Pn	17 30 05.7	-0.5
PCDR	**Punta Cana, DR**	**2.93 251**		*e*Pn	Pn	17 30 05.5	-0.7
PCDR	**Punta Cana, DR**	**2.93 251**		⇓*e*P	Pn	17 30 05.7	-0.5
PCDR				*e*S	Sn	17 30 40.0	-0.4
SDDR	**Presa de Saban**	**5.52 266**		*e*Pn	Pn	17 30 41.6	-0.1

IDC 05 17:29:33.8±3.4, 15°.08N×143°.17E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.3/47, mbtmp3.4/4, ML2.8/1, MS1.9/1, Ms1 1.9/1, ms1mx1.9/20, Error ellipse: s-maj=79.4km s-min=30.5km az=38.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.22 132**		Pn	Pn	17 30 10.7	-1.2
	2.7nm,0.3s,baz=342,slow=20,SNR=2.0						
GUMO				Sn	Sg	17 30 52.0	+6.8
	3.1nm,0.3s,baz=326,slow=17,SNR=2.1						
GUMO				LR	LR	17 31 07.2	
	comp=Z,26nm,19.0s,baz=41,slow=42						
WRA	**Warramunga Arr**	**35.87 194**		P	P	17 36 36.3	+0.7
	0.8nm,0.9s,baz=9.4,slow=6.5,SNR=3.0						
ASAR	**Alice Springs**	**39.56 193**		P	P	17 37 06.5	-0.4
	0.2nm,0.7s,baz=18,slow=13,SNR=6.3						
CMAR	**Chiang Mai Arr**	**42.40 281**		P	P	17 37 30.4	0.0
	0.6nm,0.7s,baz=75,slow=7.2,SNR=4.4						

*NEIC **05** 17:36:39.4±0.0, 18°.12N×68°.33W, h157km, MD3.4(RSPR), After RSPR.*

RSPR 05 17:36:39.4, 18°.12N×68°.33W, h157km±1km, MD3.4/11, 11C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.39 353**		⇑*e*P	Pn	17 37 00.6	-0.5
PCDR	**Punta Cana, DR**	**0.39 353**		⇑*e*P	Pn	17 37 00.7	-0.4
PCDR	**Punta Cana, DR**	**0.39 353**		*e*S	Sn	17 37 17.7	-0.1
PCDR	**Punta Cana, DR**	**0.39 353**		*e*Pn	Pn	17 37 00.7	-0.4
PCDR				*e*Sn	Sn	17 37 17.7	-0.1
IDE	**Isla Desecheo**	**0.85 72**		*e*S	Sn	17 37 22.4	0.0
IDE	**Isla Desecheo**	**0.85 72**		⇑*e*P	Pn	17 37 03.9	+0.1
IDE	**Isla Desecheo**	**0.85 72**		*e*Pn	Pn	17 37 03.9	+0.1
IDE				*e*Pn	Pn	17 37 03.9	+0.1
IDE				*e*Sn	Sn	17 37 22.4	0.0
IDE				*e*Sn	Sn	17 37 22.4	0.0
AGP	**Aguadilla**	**1.16 76**		*e*Pn	Pn	17 37 07.1	+0.8
AGP				*e*Sn	Sn	17 37 28.1	+1.2
CRPR	**Cabo

ONAJ	Iwakimizuishiy	0.29 218	⇑P		Pn	17 50 08.9 +0.3
ONAJ			S		Sn	17 50 17.1 +0.3
JFFD	Fukushimafurud	0.44 237	⇑P		Pn	17 50 09.8 +0.1
JFFD			S		Sn	17 50 18.6 -0.1
JMM	Marumori	0.57 341	⇑P		Pn	17 50 11.3 +0.4
JMM			S		Sn	17 50 21.4 +0.6
JFT	Otama	0.58 289	⇑P		Pn	17 50 11.0 0.0
JFT			S		Sn	17 50 21.0 -0.1
JFY	Yanaizu	1.05 275	⇓P		Pn	17 50 16.3 -0.2
JFY			S		Sn	17 50 30.3 -0.5
JOU	Okura	1.07 345	⇑P		Pn	17 50 17.2 +0.4
JOU			eS		Sn	17 50 32.2 +0.9
JIO	Ouri	1.15 13	⇑P		Pn	17 50 18.3 +0.5
JIO			S		Sn	17 50 33.6 +0.5
JYS	Shirataka	1.17 320	⇑P		Pn	17 50 18.4 +0.4
JYS			eS		Sn	17 50 34.5 +1.0
JNS	Sasagawa	1.44 290	P		Pn	17 50 21.1 -0.4
JNS			eS		Sn	17 50 39.1 -0.6
JKT	Katashina	1.52 249	⇓P		Pn	17 50 23.2 +0.5
JKT			S		Sn	17 50 43.3 +1.4
JAG	Ashikaga	1.55 235	⇓P		Pn	17 50 22.9 0.0
JAG			S		Sn	17 50 41.9 -0.3
JHK	Hiroka	1.60 268	⇓P		Pn	17 50 23.7 +0.1
JHK			eS		Sn	17 50 42.6 -0.9
JMK	Ichinoseki	1.63 5	⇑P		Pn	17 50 24.3 +0.3
JMK			eS		Sn	17 50 44.7 +0.5
JYA	Atsumi	1.63 321	⇑P		Pn	17 50 24.6 +0.6
MJAR	Matsushiro Arr	2.39 252	P		Pn	17 50 34.1 -0.1
	6.6nm,0.3s,baz=81,slow=13,SNR=260					
MJAR			S		Sn	17 51 05.7 +3.2
	4.4nm,0.3s,baz=47,slow=14,SNR=6.7					
MJAR			LR		LR	17 51 34.3
	comp=Z,83nm,18.1s,baz=45,slow=42					
MAT	Matsushiro	2.39 252	P		Pn	17 50 35.0 +0.8
MAT			S		Sn	17 51 05.6 +3.1
JHJ	Hachijo jima 2	4.32 194	P		Pn	17 50 59.6 -0.9
	22nm,0.3s,baz=342,slow=20,SNR=34					
JHJ			S		Sn	17 51 45.6 -4.1
	54nm,0.3s,baz=85,slow=23,SNR=3.8					
ASAJ	Asahikawa	6.89 10	P		Pn	17 51 34.9 -0.7
	1.0nm,0.3s,baz=208,slow=12,SNR=16					
ASAJ			S		Sn	17 52 48.7 -3.7
	0.5nm,0.3s,baz=201,slow=19,SNR=1.7					
JNU	Nakatsue	9.30 246	P		Pn	17 52 08.8 +0.3
	0.2nm,0.3s,baz=63,slow=6.8,SNR=2.7					
JNU			LR		LR	17 55 44.1
	comp=Z,33nm,21.4s,baz=36,slow=38					
USRK	Ussuriysk Ar.	9.69 318	P		Pn	17 52 14.6 +0.7
	0.1nm,0.3s,baz=129,slow=13,SNR=5.5					
KSRS	Korea Array	10.43 275	P		Pn	17 52 25.3 +1.4
	0.5nm,0.3s,baz=91,slow=14,SNR=23					
KSRS			LR		LR	17 55 39.5
	comp=Z,44nm,20.7s,baz=56,slow=33					
KLR	Kul'dur	13.66 333	LR		LR	17 57 54.0
	comp=Z,22nm,19.6s,baz=86,slow=35					
SONM	Songino Array	27.36 304	P		P	17 55 35.1 -0.7
	1.2nm,0.5s,baz=100,slow=8.7,SNR=4.6					
SONM			pP		pP	17 55 51.9 -0.7
	0.4nm,0.3s,baz=93,slow=8.7,SNR=1.6					
H11N2	WAKE ISLAND Hy 28.57 121		T		T	18 26 09.5
	baz=315,slow=75,SNR=54					
H11N1	WAKE ISLAND Hy 28.57 121		T		T	18 26 10.2
	baz=315,slow=75,SNR=102					
H11N3	WAKE ISLAND Hy 28.59 121		T		T	18 26 10.9
	baz=315,slow=75,SNR=80					
H11S1	WAKE ISLAND Hy 29.28 123		T		T	18 27 06.0
	baz=316,slow=75,SNR=89					
H11S3	WAKE ISLAND Hy 29.28 123		T		T	18 27 07.3
	baz=316,slow=75,SNR=57					
H11S2	WAKE ISLAND Hy 29.30 123		T		T	18 27 05.4
	baz=316,slow=75,SNR=72					
ZALV	Zalesovo Beam	41.49 312	P		P	17 57 36.8 -0.3
	1.8nm,0.5s,baz=96,slow=6.9,SNR=7.8					
ZALV			pP		pP	17 57 54.2 -0.5
	0.6nm,0.5s,baz=106,slow=8.1,SNR=2.4					
MKAR	Makanchi Array	43.70 302	P		P	17 57 54.7 -0.5
	0.9nm,0.5s,baz=85,slow=10,SNR=13					
ILAR	Eielson Array	49.41 32	P		P	17 58 39.7 +0.1
	0.3nm,0.6s,baz=287,slow=9.3,SNR=2.5					
ILAR			pP		pP	17 58 58.5 +1.1
	0.6nm,0.7s,baz=265,slow=5.2,SNR=4.8					
WRA	Warramunga Arr	57.31 187	P		P	17 59 36.7 -1.2
	1.3nm,0.7s,baz=1.1,slow=8.3,SNR=20					
WRA			sP		sP	18 00 04.5 +0.5
	0.7nm,0.5s,baz=357,slow=7.5,SNR=1.7					
ASAR	Alice Springs	61.04 187	P		P	18 00 03.4 -0.2
	0.7nm,0.8s,baz=19,slow=12,SNR=20					
ARCES	ARCESS Array B	63.61 339	P		P	18 00 20.1 -0.2
	7.5nm,0.3s,baz=69,slow=8.1,SNR=2.5					
STKA	Stephens Creek	68.85 179	P		P	18 00 54.1 0.0
	2.1nm,0.9s,baz=353,slow=11,SNR=3.2					
NB2	NORSAR Subarra	73.79 337	P		pP	18 01 42.3 -0.5
	comp=Z,0.9nm,0.7s,baz=41,slow=6.2					
NOA	NORSAR Array B	73.79 337	pP		pP	18 01 42.2 -0.5
	comp=Z,1.0nm,0.8s,baz=40,slow=5.9,SNR=4.3					
AKASG	Malin Array Be	73.87 322	P		P	18 01 23.5 -0.8
	comp=Z,0.3nm,0.3s,baz=40,slow=7.2,SNR=2.7					
NVAR	Mina Array Bea	75.06 53	P		P	18 01 32.4 +0.6
	comp=Z,0.5nm,0.7s,baz=279,slow=5.7,SNR=3.9					
PDAR	Pinedale Array	77.68 45	P		P	18 01 46.9 +0.3
	comp=Z,0.3nm,0.6s,baz=315,slow=0.4,SNR=3.9					
TXAR	Lajitas Array	90.19 52	P		P	18 02 50.7 +0.5
	comp=Z,0.1nm,0.3s,baz=350,slow=5.1,SNR=3.5					
LPAZ	La Paz	146.81 59	PKPbc		PKPbc	18 09 32.7 +0.1
	comp=Z,0.6nm,0.5s,baz=341,slow=7.6,SNR=3.1					

MAN 05 17:50:41.3, 7°.28N×124°.79E, h2km, MS3.9, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.54 264		i/P	Pg	17 50 51.9	+0.2
CTBH				i S	Sb	17 51 01.3	-0.4
BUKP	Musuan	0.66	25	eP	Pg	17 50 52.0	-2.0
BUKP				eS	Sg	17 51 00.8	-1.7
DMPH	Davao City--Mi	0.74 105		⇑eP	Pg	17 50 51.4	-4.2
DMPH				eS	Pg	17 50 51.4	-4.2
SKMP	Bagumbayan, Su	0.79 198		eP	Pb	17 50 57.5	-0.4
SKMP				eS	Sn	17 51 11.7	-0.3
CGP	Cagayan de Oro	1.17 356		⇑i/P	Pg	17 51 00.9	-2.9
CGP				eS	Sg	17 51 15.7	-3.4
DDMP	Don Marcelino,	1.49 142		eP	Pn	17 51 08.7	-0.4
DDMP				eS	Sg	17 51 30.9	+1.8
MATI	Mati	1.50 103		eP	Pn	17 51 08.9	-0.4
PAGZ	Pagadian	1.50 292		eP	Pn	17 51 07.5	-1.8
PAGZ				eS	Sg	17 51 29.7	+0.1
BUTP	Butuan	1.87	26	eP	Pn	17 51 14.4	0.0
BUTP				eS	Sg	17 51 42.1	+0.5
DCPH	Dipolog City	1.92 312		⇑eP	Pg	17 51 19.0	+0.8
DCPH				eS	Sg	17 51 44.0	+0.8
IPIL	Ipil	2.25 283		eP	Pn	17 51 20.5	+0.8
IPIL				eS	Sb	17 51 50.4	-0.8
SNPH	Sibulan	2.56 323		eP	Pn	17 51 25.0	+1.1
SNPH				eS	Sg	17 52 05.3	+1.6
MSLP	Maasin	2.84	1	eP	Pb	17 51 31.4	-1.4

*ISCJB **05** 18:00:33.2±0.4, 14°.77S±0°.04×167°.32E±0°.07, h150km, mb4.5/29, Error ellipse: s-maj=10.2km s-min=5.9km az=172.8*
*NEIC **05** 18:00:33.6±1.8, 14°.74S×167°.41E, h140km±6km, mb4.6/21, Error ellipse: s-maj=21.5km s-min=15.0km az=87.0*
*IDC **05** 18:00:33.4±0.9, 14°.71S×167°.36E, h136km±7km, mb4.1/15, mb1 4.2/17, mb1mx4.0/33, mbtmp4.5/17, MS3.2/2, Ms1 3.2/2, ms1mx2.8/20, Error ellipse: s-maj=17.2km s-min=11.0km az=97.0*

ISC 05 18:00:34.6±0.5, 14°.75S±0°.06×167°.4E±0°.1, h150km, n67, σ1§68/76, mb4.5/30, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	6.73 175		ePn	Pn	18 02 07.8	-3.3
DZM	Mont Dzumac	7.34 187		P	Pn	18 02 19.1	-0.2
	14nm,0.3s,baz=4.3,slow=14,SNR=51						
DZM				S	Sn	18 03 40.6	-0.9
	17nm,0.3s,baz=128,slow=23,SNR=6.5						
PINNC	Pines Island,	7.83 180		ePn	Pn	18 02 24.8	-0.9
HNR	Honiara	8.98 305		P	Pn	18 02 40.6	-0.6
	17nm,0.3s,baz=190,slow=11,SNR=7.6						
HNR				LR	LR	18 05 58.1	
	comp=Z,156nm,20.3s,baz=109,slow=36						
HNR	Honiara	8.98 305		ePn	Pn	18 02 42.4	+1.3
EIDS	Eidsvold	18.58 233		eP	P	18 04 42.1	+1.8
	45nm,0.8s						
CTA	Charters Tower	20.83 252		P	P	18 05 05.2	+0.5
	20nm,0.8s,baz=74,slow=12,SNR=12						
CTAO	Charters Tower	20.83 252		eP	P	18 05 05.5	+0.8
	29nm,0.9s						
OUZ	Omahuta	21.14 166		eP	P	18 05 09.8	+2.0
	229nm,1.9s						
ARMA	Armidale	21.28 220		eP	P	18 05 11.2	+1.8
	13nm,1.0s						
OXZ	Oxford	28.76 173		eP	P	18 06 17.1	-1.0
	25nm,1.1s						
RPZ	Rata Peaks	29.04 175		P	P	18 06 20.8	+0.2
	18nm,0.7s,baz=275,slow=1.5,SNR=12						
STKA	Stephens Creek	29.06 230		P	P	18 06 22.2	+1.3
	8.5nm,0.8s,baz=55,slow=9.5,SNR=15						
STKA				PcP	PcP	18 09 26.1	+0.6
	4.1nm,0.7s,baz=2.6,slow=3.2,SNR=6.0						
STKA	Stephens Creek	29.06 230		eP	P	18 06 20.7	-0.2
	1.6nm,0.8s						
STKA				ePcP	PcP	18 09 26.1	+0.6
LBZ	Lake Benmore	29.64 176		eP	P	18 06 26.5	+0.6
	119nm,2.0s						
MLZ	Mavora Lakes	30.53 179		eP	P	18 06 33.5	-0.3
	18nm,1.2s						
WB2	Warramunga Arr	31.91 256		eP	P	18 06 44.5	-1.7
	9.8nm,1.1s						
WRAB	Tennant Creek	31.91 256		eP	P	18 06 45.6	-0.6
	9.5nm,1.0s						
WR1	Warramunga Arr	31.92 256		eP	P	18 06 44.4	-1.9
WRA	Warramunga Arr	31.92 256		P	P	18 06 44.4	-1.9
	13nm,0.3s,baz=84,slow=8.4,SNR=7.4						
AS31	Alice Springs	32.76 249		eP	P	18 06 52.3	-1.3
	2.7nm,0.9s						
AS31				ePcP	PcP	18 09 34.8	-0.8
ASAR	Alice Springs	32.76 249		P	P	18 06 52.5	-1.1
	13nm,1.0s,baz=76,slow=9.4,SNR=48						
ASAR				pP	pP	18 07 22.1	-2.6
	2.7nm,0.6s,baz=74,slow=9.0,SNR=3.5						
ASAR				PcP	PcP	18 09 34.8	-0.8
	0.9nm,0.7s,baz=75,slow=2.5,SNR=7.1						
ASAR				ScP	ScP	18 13 08.1	+2.4
	0.3nm,0.8s,baz=76,slow=3.9,SNR=4.1						
BBOO	Buckleboo	33.65 232		eP	P	18 07 01.9	+0.8
	102nm,2.0s						
FORT	Forrest	39.38 239		eP	P	18 07 49.9	+0.2
	32nm,0.8s						
FITZ	Fitzroy Crossi	40.11 259		eP	P	18 07 55.7	-0.3
BATI	Baumata	42.87 271		P	P	18 08 19.5	+1.0
	23nm,0.8s,baz=282,slow=1.6,SNR=5.8						
BATI	Baumata	42.87 271		eP	P	18 08 19.5	+1.0
BATI				eP	P	18 08 19.5	+1.0
EDFI	Ende, Flores	45.06 272		P	P	18 08 36.4	+0.3
MPSI	Mapaga	49.28 283		P	P	18 09 08.3	-0.3
MJAR	Matsushiro Arr	57.97 332		P	P	18 10 10.9	-0.6
	0.7nm,0.6s,baz=181,slow=7.3,SNR=4.0						
MAJO	Matsushiro	57.97 332		eP	P	18 10 10.9	-0.6
ASAJ	Asahikawa	62.79 340		P	P	18 10 43.8	-0.2
	2.9nm,0.9s,baz=232,slow=15,SNR=5.1						
VNDA	Vanda	62.85 181		P	P	18 10 44.2	+0.2
	3.7nm,0.7s,baz=358,slow=7.1,SNR=34						
VNDA	Vanda	62.85 181		eP	P	18 10 43.9	-0.1
	4.6nm,0.8s						
SBA	Scott Base	63.12 180		eP	P	18 10 46.9	+1.1
	12nm,0.8s						
CASY	Casey	63.55 202		eP	P	18 10 49.1	+0.3
	9.3nm,0.7s						
PETK	Petropavlovsk-	68.09 354		P	P	18 11 18.3	+0.4
	2.5nm,0.8s,baz=185,slow=9.8,SNR=3.8						
PETK				LR	LR	18 38 24.1	
	comp=Z,15nm,18.8s,baz=133,slow=33						
PEA1	Petropavlovsk-	68.09 354		eP	P	18 11 18.3	+0.4
CM31	Chiang Mai Arr	75.05 294		ePP	pP	18 12 34.7	-1.8
CMAR	Chiang Mai Arr	75.05 294		pP	pP	18 12 34.7	-1.8
	0.6nm,0.4s,baz=111,slow=4.9,SNR=2.4						
QSPA	South Pole Qui	75.28 180		eP	P	18 12 00.8	-0.2
	7.1nm,0.8s						
MAW	Mawson	81.91 202		P	P	18 12 38.0	+0.9
	1.8nm,0.6s,baz=116,slow=6.8,SNR=9.2						
MAW	Mawson	81.91 202		eP	P	18 12 37.4	+0.3
	0.5nm,0.8s						
YAK	Yakutsk	82.08 343		eP	P	18 12 38.0	+0.2
	7.3nm,0.8s						
SONA0	Songino Array	82.57 324		eP	P	18 12 41.4	+0.4
SONM	Songino Array	82.57 324		P	P	18 12 41.3	+0.4
	0.4nm,0.3s,baz=116,slow=3.4,SNR=3.8						
ILAR	Eielson Array	86.51 18		P	P	18 12 58.9	-1.3
	1.5nm,0.7s,baz=238,slow=5.5,SNR=14						
ILAR				pP	pP	18 13 34.9	-3.1
	0.4nm,0.6s,baz=248,slow=5.1,SNR=1.8						
ILB	Eielson Array	86.51 18		eP	P	18 12 58.8	-1.4
	14nm,1.8s						
ILB				epP	pP	18 13 34.9	-3.1
NV01	Mina Array Sit	87.20 49		eP	P	18 13 05.4	+1.0
NVAR	Mina Array Bea	87.20 49		P	P	18 13 05.4	+1.0
	1.7nm,0.5s,baz=117,slow=5.2,SNR=7.0						
SNAA	Sanae	93.54 183		PKPdf	P	18 13 32.2	-1.0
VNA3	Neumayer Olymp	94.20 181		PKPdf	P	18 13 35.2	-1.0
VNA2	Neumayer--Watz	94.47 182		PKPdf	P	18 13 36.5	-0.9
	baz=194,slow=3.8						
MK32	Makanchi Array	97.29 316		eP	P	18 13 51.5	+0.9
MK32				epP	pP	18 14 26.6	-1.7
MKAR	Makanchi Array	97.29 316		P	P	18 13 51.5	+0.9
	0.5nm,0.7s,baz=95,slow=6.6,SNR=6.8						
MKAR				pP	pP	18 14 26.6	-1.7
	0.4nm,0.8s,baz=76,slow=6.1,SNR=2.4						
ZALV	Zalesovo Beam	97.47 324		P	P	18 13 51.4	+0.2
	0.7nm,0.3s,baz=97,slow=3.6,SNR=4.3						
ZAA1	Zalesovo Array	97.47 324		eP	P	18 13 51.4	+0.2
KSH	Kashi	100.29 308		eP	Pdif	18 13 54.8	-10
ARCES	ARCESS Array B	120.29 345		PKP	PKPdf	18 19 07.5	+0.1
	11nm,0.5s,baz=14,slow=2.5,SNR=6.3						
NB2	NORSAR Subarra	130.67 345		SKPa	SKPbc	18 22 40.4	+2.8
	comp=Z,6.9nm,1.1s,baz=38,slow=4.8						
NB2	NORSAR Subarra	130.67 345		SKPa	SKPbc	18 22 40.4	+2.8
	baz=38,slow=4.8						
NOA	NORSAR Array B	130.67 345		SKPbc	SKPab	18 22 39.8	+2.1
	comp=Z,4.4nm,1.0s,baz=31,slow=3.1,SNR=7.5						
TIP	Timpagrande	144.53 319		ePKPdf	PKPab	18 19 53.6	+1.2
BNI	Bardonecchia	145.65 335		ePKPdf	PKPdf	18 19 57.3	+1.8
KEST	Kesra	151.29 321		PKPbc	PKPbc	18 20 11.8	+0.8
	comp=Z,2.2nm,0.6s,baz=50,slow=8.4,SNR=4.1						
TORD	Torodi Ar. Bea	166.01 265		PKPab	PKPab	18 21 23.5	-0.3
	comp=Z,0.5nm,0.8s,baz=129,slow=4.3,SNR=3.6						
TOA1	Torodi Ar. Sit	166.01 265		ePKPab	PKPab	18 21 23.5	-0.3

*ISCJB **05** 18:03:16.3±1.5, 33°.79N±0°.04×35°.64E±0°.10, h18km±13km, Error ellipse: s-maj=13.4km s-min=7.5km az=178.9*
*NSSC **05** 18:03:16.2±0.3, 33°.76N×35°.62E, h17km±6km, ML1.5*
*GRAL **05** 18:03:17.5±0.3, 33°.78N×35°.76E, h5km±8km, MD2.7*

ISC 05 18:03:16.3±1.3, 33°.79N±0°.04×35°.67E±0°.07, h19km±2km, n9, σ0§45/14, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.11 353		eP	Pg	18 03 20.3	0.0
BHL				eS	Sg	18 03 22.6	-0.5
DQRL	Deir Qamar	0.12 224		eP	Pg	18 03 20.8	+0.4
QRWL	Qaraoun	0.24 178		eP	Pg	18 03 21.9	-0.1
QRWL				eS	Sb	18 03 25.2	-0.4
RCY	Rachaya	0.33 155		eP	Pg	18 03 22.9	-0.6
BRBR	Barbar	0.45 148		eP	Pg	18 03 25.1	-0.5
BRBR				eS	Sg	18 03 31.9	+0.1
BRBR				AML	AML	18 03 35.2	
	comp=E,30nm,0.3s						
BRBR				AML	AML	18 03 35.8	
	comp=N,42nm,0.6s						
SHBL	Chebaa	0.45 172		eP	Pg	18 03 25.4	-0.2
HWQ	Hawqa	0.54 25		eP	Pb	18 03 26.9	-0.1
QASN	Qassioun	0.57 117		eP	Pb	18 03 27.9	+0.3
QASN				eS	Sb	18 03 36.0	+0.8
QASN				AML	AML	18 03 39.7	
	comp=E,48nm,0.4s						
QASN				AML	AML	18 03 41.7	
	comp=N,98nm,0.4s						
TOTH	TOTAH	0.77 124		eP	Pb	18 03 31.3	+0.3
TOTH				eS	Sb	18 03 41.2	+0.1
TOTH				AML	AML	18 03 49.5	
	comp=N,14nm,0.6s						
TOTH				AML	AML	18 03 54.5	
	comp=E,9.4nm,0.7s						

MEX 05 18:21:14.0±0.4, 16°.39N×92°.76W, h40km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	Comitan	0.60 101		eP	Pn	18 21 24.8	-1.5
CCIG				i S	Sn	18 21 32.9	-2.1
PCIG		0.82 213		eP	Pn	18 21 27.2	-1.8
PCIG				eS	Sn	18 21 38.2	-1.8
CMIG	Matias Romero	2.15 289		i P	Pn	18 21 40.7	-6.7

NNC 05 18:23:46.9±1.3, 38°.96N×70°.07E, h12km±5km, mb3.7, mpv3.2, 4C-4D, Error ellipse: s-maj=9.8km s-min=5.2km az=169.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	4.15	4	Pn	Pn	18 24 50.1	0.0
	0.9nm,0.3s,baz=177,slow=11,SNR=25						
KK31				⇓Pg	Pb	18 25 02.6	+2.7
	1.1nm,0.4s,baz=181,slow=16,SNR=6.5						
KK31				Lg	Lg	18 25 59.6	
	13nm,0.7s,baz=187,slow=36,SNR=8.4						
AAK	Ala-Archa	4.97	41	⇓Pn	Pn	18 25 01.9	+0.4
	2.6nm,0.5s						
AAK				⇑Sn	Sn	18 25 59.4	+0.4
	7.3nm,0.7s						
AAK				⇓Lg	Lg	18 26 24.8	
	14nm,1.0s						
TKM2	Tokmak 2	5.76	45	⇑Pn	Pn	18 25 12.0	-0.3
	2.5nm,0.5s						
TKM2				⇑Sn	Sn	18 26 20.0	+1.6
	8.7nm,0.9s						
TKM2				⇓Lg	Lg	18 26 49.1	
	9.1nm,1.1s						
AB31	Akbulak array	12.59 328		Pn	Pn	18 26 45.4	-0.3
	0.9nm,0.6s,baz=156,slow=8.2,SNR=12						
AB31				Sn	Sn	18 29 06.5	+0.8
	1.7nm,0.8s,baz=151,slow=22,SNR=7.6						
AKTO	Aktyubinsk	14.30 327		⇑Pn	Pn	18 27 09.3	+0.3
	3.3nm,0.8s						

*SIGU **05** 18:45:45.7±0.1, 48°.0N±0°.8×19°.3E±0°.5, h17km*
*IDC **05** 18:45:45.8±0.7, 47°.93N×19°.30E, h0km, mb3.7/5, mb1 3.8/15, mb1mx3.6/56, mbtmp3.7/15, ML3.9/6, MS3.1/8, Ms1 3.1/8, ms1mx2.7/54, Error ellipse: s-maj=11.5km s-min=7.9km az=14.0*
*PDG **05** 18:45:46.8±0.4, 47°.99N×19°.24E, h17km±1km, ML3.9/14, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*IPEC **05** 18:45:46.9±0.1, 47°.97N×19°.25E, h15km, ML3.8/4, Error ellipse: s-maj=0.8km s-min=0.6km az=79.0*
*NEIC **05** 18:45:46.9±1.8, 48°.02N×19°.25E, h6km±5km, mb4.1/2, ML3.8(BUC), Error ellipse: s-maj=12.0km s-min=8.4km az=189.0*
NEIC Felt at Balassagyarmat, Budakeszi and Budapest.
*LDG **05** 18:45:46.8±0.1, 48°.00N×19°.29E, h2km, Ml3.8/8, Error ellipse: s-maj=4.8km s-min=3.2km az=14.0*
*ISCJB **05** 18:45:47.1±0.3, 47°.96N±0°.01×19°.23E±0°.02, h22km±3km, mb3.7/7, MS3.0/4, Error ellipse: s-maj=2.1km s-min=1.6km az=31.0*
*PRU **05** 18:45:47.3±0.0, 48°.02N×19°.21E, h0km, M4.1*
*BEO **05** 18:45:48.3±0.9, 48°.01N×19°.46E, h20km, ML3.6/4*
*BGR **05** 18:45:48.0±0.7, 48°.00N×19°.22E, h10km, ML4.1/19, Error ellipse: s-maj=6.7km s-min=5.6km az=89.0*

ISC 05 18:45:46.8±1.0, 48°.01N±0°.02×19°.23E±0°.02, h12km±7km, n283, σ1§70/364, mb3.8/7, MS3.1/4, 21C-24D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSZ	Piszkesteto	0.46 101		ePg	Pg	18 45 55.4	-0.4
PSZ	Piszkesteto	0.46 101		EPg	Pg	18 45 55.0	-0.7
PSZ				ESg	Sg	18 46 01.1	-0.8
VYHS	Vyhne	0.55 332		ePG	Pb	18 45 58.4	0.0
VYHS				eSG	Sb	18 46 06.3	-0.1
SRO2	Moca	0.61 247		ePG	Pg	18 45 57.8	-0.9
SRO2				eSG	Sg	18 46 06.5	-0.2
SRO	Srobarova	0.65 253		ePG	Pg	18 45 59.4	+0.1
SRO				eSG	Sb	18 46 08.6	-0.3
KOLL	Kolacno	0.80 316		ePG	Pn	18 46 03.2	-0.6
KOLL				eSG	Sb	18 46 13.8	+0.5
CSKK	Cskako	0.92 226		EPn	Pg	18 46 04.1	-0.4
CSKK				ESg		18 46 17.0	
CSKK				Sn	Sn	18 46 19.1	+0.5
KECS	Kecovo	0.97 60		ePG	Pg	18 46 04.8	-0.6
KECS				eSG	Sg	18 46 17.8	-0.2
KECS				eLG	Lg	18 46 20.7	
LANS	Liptovska Anna	1.16 8		ePG	Pg	18 46 09.6	+0.6
LANS				eSG	Sn	18 46 25.7	+1.1
JAVC	Velka Javorina	1.34 310		ePG	Pg	18 46 12.3	-0.3
JAVC				eSN	Sg	18 46 30.2	+0.2
JAVC	Velka Javorina	1.34 310		ePg	Pg	18 46 12.3	-0.3
	baz=130						
JAVC				eSn	Sg	18 46 30.2	+0.2
	3μm,1.2s,baz=130						
MODS	Modra-Piesok	1.36 286		ePG	Pn	18 46 10.6	-0.9
MODS				eSG	Sg	18 46 31.0	+0.6
MODS				eLG	Lg	18 46 33.6	
TIH	Tihany	1.43 220		EPn	Pg	18 46 14.0	-0.2
TIH				Sn	Sg	18 46 33.1	+0.3
ZST	Bratislava	1.44 278		ePG	Pn	18 46 11.8	-0.8
ZST				eSG	Sb	18 46 32.1	+0.4
NIE	Niedzica	1.58 26		ePb	Pb	18 46 16.1	+0.1
NIE				ePg	Pg	18 46 16.8	-0.3
NIE				eSb	Sg	18 46 37.8	+0.1
NIE				eSg	Sb	18 46 39.0	+3.1
SOP	Sopron	1.83 261		EPn	Pn	18 46 18.1	+0.1
SOP				ESg		18 46 22.0	
SOP				⇓Sn	Sn	18 46 41.0	0.0
STHS	Stebnicka Huta	1.94 43		ePN	Pb	18 46 21.0	-1.1
STHS				eSG	Sg	18 46 50.2	+1.0
STHS				eLG	Lg	18 46 54.1	
OKC	Ostrava-Krasne	1.97 339

BEHE Becsehely 2.27 228 EPn Pn 18 46 24.1 0.0
BEHE ESg 18 46 29.1
BEHE Sn **Sb 18 46 54.1 -1.6**
BERU Beregovo 2.30 83 *e*Pn **Pn 18 46 23.6 -0.9**
MUKU Mukachevo 2.36 78 *e*Pn **Pn 18 46 25.3 +0.1**
SIRR Siria 2.40 135 ⇓*i*P **Pn 18 46 25.7 -0.2**
STZU Stuzhytsa 2.47 65 *e*Pn **Pn 18 46 27.8 +0.9**
TRSU Trosnyk 2.50 87 *e*Pn **Pn 18 46 26.7 -0.6**
KOGS Kog 2.56 234 *i* Pn **Pn 18 46 28.6 +0.6**
BRIU Brid 2.56 81 *e*Pn **Pn 18 46 27.8 -0.2**
ARSA Arzberg 2.62 255 *e*Pn **Pn 18 46 29.6 +0.7**
22nm,0.3s,SNR=41
ARSA Sn **Sb 18 47 03.2 -2.5**
194nm,0.5s
ARSA Arzberg 2.62 255 *e*Pn **Pn 18 46 29.6 +0.7**
DRGR 2.66 116 *e*Pn **Pn 18 46 29.1 -0.4**
DRGR *e*Sn **Sn 18 46 58.1 -3.6**
DRGR 2.66 116 ⇑*i*P **Pn 18 46 29.5 0.0**
DRGR 2.66 116 S **Sn 18 47 02.7 +1.0**
TREC Trest 2.80 299 *e*PN **Pn 18 46 32.3 +1.0**
KWP Kalwaria Pacla 2.82 53 *e*Pn **Pn 18 46 33.1 +1.5**
FRGS Fruska Gora 2.88 172 *e*Pn **Pn 18 46 32.8 +0.4**
FRGS Fruska Gora 2.88 172 *e*Pn **Pn 18 46 32.3 -0.1**
BMR Baia Mare 2.89 95 ⇓*i*P **Pn 18 46 33.8 +1.2**
BZS Buzias 2.90 145 *e*Pn **Pn 18 46 32.7 0.0**
BZS *e*Sn **Sn 18 47 05.3 -2.2**
BZS Buzias 2.90 145 ⇑*i*P **Pn 18 46 32.8 0.0**
MEZ Mezhgor'ye 2.91 78 *e*Pn **Pn 18 46 33.6 +0.7**
SHIU Shidnytsya 3.00 64 *e*Pn **Pn 18 46 35.0 +0.8**
DPC Dobruska-Polom 3.02 322 *e*PN **Pn 18 46 35.9 +1.4**
ZAG Zagreb 3.11 227 *e*Pn **Pb 18 46 42.5 +0.5**
SOKA Soboth 3.15 247 *e*Pn **Pn 18 46 36.9 +0.7**
20nm,0.4s,SNR=30
SOKA Sn **Sn 18 47 13.3 -0.5**
64nm,0.7s
GOLS Golise 3.17 232 *i* Pn **Pn 18 46 36.9 +0.4**
OSTC Ostas 3.23 323 *e*PN **Pn 18 46 38.8 +1.6**
OSTC *e*SG **Sg 18 47 27.6 -2.7**
CJR Cluj-Napoca 3.24 112 ⇑*i*P **Pn 18 46 37.8 +0.3**
UPC Upice 3.27 321 *e*PN **Pn 18 46 39.3 +1.4**
UPC *e*SG **Sb 18 47 27.7 +3.2**
comp=Z,432nm,1.2s
DEV Deva 3.29 129 ⇑*i*P **Pn 18 46 38.3 +0.2**
MORS Morshin 3.30 68 *e*Pn **Pn 18 46 39.4 +1.2**
RAKU Rahkiv 3.31 88 *e*Pn **Pn 18 46 38.4 0.0**
CHVC Chvalec 3.32 322 *e*PN **Pn 18 46 40.0 +1.5**
CHVC *e*SG **Sg 18 47 30.3 -2.9**
MOA Molln 3.34 269 *e*Pn **Pn 18 46 39.7 +0.9**
12nm,0.2s,SNR=19
MOA *i* Sn **Sn 18 47 20.3 +1.9**
187nm,0.8s
MOA Molln 3.34 269 *e*Pn **Pn 18 46 39.8 +1.0**
CRES Cresnjev 3.38 231 *e*Pn **Pn 18 46 39.9 +0.5**
GOPC GO Pecny, Ondr 3.49 305 *e*PN **Pn 18 46 41.6 +0.7**
GOPC *e*SN **Sn 18 47 22.3 +0.1**
NSLU Nyzhne Selyshc 3.51 85 *e*Pn Pn 18 46 31.8 -9.3
OZLJ Ozalj 3.52 229 *i* Pn **Pn 18 46 42.0 +0.7**
OBKA Obir 3.52 247 *e*Pn **Pn 18 46 42.4 +1.0**
21nm,0.5s,SNR=27
OBKA Sn **Sn 18 47 23.8 +0.8**
81nm,0.5s
OBKA Obir 3.52 247 *e*Pn **Pn 18 46 42.4 +1.0**
OBKA *e*Sn **Sn 18 47 23.7 +0.8**
BLY Banja Luka 3.55 204 *e*Pn **Pn 18 46 41.5 -0.2**
BLY Banja Luka 3.55 204 ⇑*i*P **Pn 18 46 42.1 +0.4**
BLY Banja Luka 3.55 204 *e*Pn **Pn 18 46 42.0 +0.4**
GZR Gura Zlata 3.58 136 ⇓*i*P **Pn 18 46 42.8 +0.7**
ARCR ARCALIA 3.59 103 ⇑*i*P **Pn 18 46 43.0 +0.8**
LVV L'vov 3.65 58 *e*PN **Pn 18 46 44.3 +1.3**
MDVR Moldovita 3.66 151 ⇓*i*P **Pn 18 46 43.4 +0.2**
PRU Pruhonice 3.67 304 *e*PN **Pn 18 46 44.1 +0.8**
PRU *e*SN **Sn 18 47 26.5 +0.1**
PRU *ex* x 18 47 40.0
LJU Ljubljana 3.77 240 *e*Pn **Pn 18 46 45.9 +1.2**
GEC2 GERESS Array S 3.77 285 *e*Pn **Pn 18 46 45.8 +1.0**
GEC2 *e*Sn **Sn 18 47 29.4 +0.2**
GEC2 GERESS Array S 3.77 285 *e*Pn **Pn 18 46 45.9 +1.0**
GEC2 *e*Sn **Sn 18 47 30.4 +1.1**
GERES GERESS Array B 3.77 285 Pn **Pn 18 46 45.8 +1.0**
13nm,0.3s,baz=101,slow=14,SNR=230
GERES Sn **Sn 18 47 29.4 +0.2**
34nm,0.3s,baz=102,slow=26,SNR=14
HERR Herculane 3.82 144 ⇓*i*P **Pn 18 46 46.7 +1.3**
TRUS Trudelj 3.87 167 *e*Pn **Pn 18 46 46.3 +0.2**
MGRS Mrkonjic Grad 3.89 203 *e*Pn **Pn 18 46 47.2 +0.9**
KHC Kasperske Hory 3.92 289 *e*Pn **Pn 18 46 47.6 +0.9**
KHC Kasperske Hory 3.92 289 *e*PN **Pn 18 46 47.9 +1.1**
KHC *ex* x 18 47 01.0
KHC *e*SN **Sn 18 47 33.1 +0.4**
KHC *ex* x 18 47 44.8
KHC AMS AMS 18 48 40.0
comp=Z,500nm,7.8s
HAPS Han Pijesak,BI 3.92 183 *e*Pn **Pn 18 46 46.8 -0.1**
HAPS Han Pijesak,BI 3.92 183 *e*Pn **Pn 18 46 46.3 -0.6**
DIVS Divibare 3.94 172 *e*Pn **Pn 18 46 47.5 +0.3**
DIVS Divibare 3.94 172 *e*Pn **Pn 18 46 47.0 -0.2**
PVCC Panska Ves 3.96 311 *e*PN **Pn 18 46 48.4 +1.1**
PVCC *e*SN **Sn 18 47 34.3 +0.7**
KUBS Kucevo 3.98 154 *e*Pn **Pn 18 46 46.5 -1.0**
MDB Medias 3.98 116 ⇑*i*P **Pn 18 46 49.0 +1.4**
SVIS Svilajnac 3.99 159 *e*Pn **Pn 18 46 47.2 -0.5**
CEY Cerknica 4.00 237 *e*Pn **Pn 18 46 49.0 +1.1**
LOT Lotru 4.04 128 ⇑*i*P **Pn 18 46 48.7 +0.2**
BUR08 Bucovina Ar. S 4.04 93 *e*Pn **Pn 18 46 49.5 +1.0**
MYKA Terra Mystica 4.04 252 *e*Pn **Pn 18 46 49.7 +1.2**
12nm,0.3s,SNR=11
MYKA Sn **Sn 18 47 35.3 -0.4**
28nm,0.3s
BURAR Bucovina Array 4.05 93 ⇑*i*P **Pn 18 46 50.2 +1.5**
KBA Koelnbreinsper 4.09 259 *e*Pn **Pn 18 46 50.4 +1.1**
23nm,0.4s,SNR=31
KBA *e*Sn **Sn 18 47 37.5 +0.3**
59nm,0.6s
KBA Koelnbreinsper 4.09 259 *e*Pn **Pn 18 46 50.5 +1.2**
KBA *e*Sn **Sn 18 47 37.3 +0.2**
RIY Rijeka 4.23 232 *e*Pn **Pn 18 46 52.9 +2.0**
UDBI Udbina 4.23 216 *i* Pn **Pn 18 46 51.9 +0.9**
UDBI Sn **Sn 18 47 40.5 +0.1**
GRUS Gruza 4.25 165 *e*Pn **Pn 18 46 51.5 +0.3**
RJOB Jochberg 4.34 269 *e*Pn **Pn 18 46 53.7 +1.1**
WET Wettzell 4.37 287 *e*Pn **Pn 18 46 53.7 +0.8**
BRG Berggiesshubel 4.49 312 PN **Pn 18 46 54.9 +0.4**
BRG PG **Pb 18 47 05.5 +0.1**
BRG SG **Sg 18 48 07.4 -3.3**
79nm,0.8s
comp=N,523nm,7.8s
comp=E,78nm,12.3s
comp=Z,569nm,9.5s
BRG Berggiesshubel 4.49 312 *e*Pn **Pn 18 46 55.4 +0.9**
ARR Arges 4.56 123 ⇓*i*P **Pn 18 46 56.2 +0.6**
NVLJ Novalja 4.58 223 *e*Pn **Pn 18 46 57.3 +1.5**
NVLJ Sn **Sn 18 47 50.7 +1.8**
PLE Pljevlja 4.68 179 ⇑*i*Pn **Pn 18 46 58.1 +0.8**
PLE *e*Sn **Sn 18 47 51.8 +0.3**
BOVS Bovan 4.70 157 *e*Pn **Pn 18 46 57.8 +0.3**
BOVS *e*Sn **Sn 18 47 50.0 -1.9**
ABTA Abfaltersbach 4.73 257 *e*Pn **Pn 18 46 59.2 +1.2**
comp=Z,7.0nm,0.5s,SNR=7.8
ABTA *e*Sn **Sn 18 47 54.5 +1.7**
comp=Z,44nm,0.7s
VOIR 4.76 121 ⇓*i*P **Pn 18 46 59.3 +1.0**
SJES Sjenica 4.77 173 *e*Pn **Pn 18 46 59.3 +0.7**
SJES *e*Sn **Sn 18 47 51.6 -2.3**
BIZ Bicaz 4.78 100 ⇑*i*P **Pn 18 47 00.6 +2.0**
UPM Unac-Piva 4.81 183 ⇓*i*Pn **Pn 18 46 59.3 +0.2**
UPM *e*Sn **Sn 18 47 54.6 -0.3**
UPM Unac-Piva 4.81 183 *e*Pn **Pn 18 46 59.9 +0.8**
FBE Freiberg 4.81 309 *e*Pn **Pn 18 47 00.1 +1.1**
KMPD K-Podol'skiy 4.86 81 *e*Pn **Pn 18 47 00.4 +0.8**
OZUR 4.87 111 ⇑*i*P **Pn 18 47 00.8 +0.9**
ROTZ Rotzenmuhle 4.96 293 *e*Pn **Pn 18 47 01.6 +0.6**
SELS Selova 4.97 164 *e*Pn **Pn 18 47 01.5 +0.3**
NKC Novy Kostel 4.98 299 *e*Pn **Pn 18 47 02.6 +1.2**
NKC *e*Sn **Sn 18 47 59.2 +0.4**
NKC Novy Kostel 4.98 299 *e*PN **Pn 18 47 02.5 +1.2**
WERN Wernitzgruen 5.04 299 *e*Pn **Pn 18 47 03.6 +1.3**
ROHR Rohrbach 5.06 299 *e*Pn **Pn 18 47 03.6 +1.2**
ROHR *e*Sn **Sn 18 48 00.7 -0.1**
MANZ Manzenberg 5.09 296 *e*Pn **Pn 18 47 03.7 +0.9**
MANZ *e*Sn **Sn 18 47 59.2 -2.3**
BRY Bratogost 5.13 186 ⇓*i*Pn **Pn 18 47 04.3 +0.8**
BRY *e*Sn **Sn 18 48 02.3 -0.4**
BRY Bratogost 5.13 186 *e*Pn **Pn 18 47 04.1 +0.6**
IVA Berane 5.16 175 ⇓*i*Pn **Pn 18 47 04.7 +0.9**
IVA *e*Sn **Sn 18 48 03.4 +0.1**
KOME Kolasin 5.16 178 ⇑*i*Pn **Pn 18 47 04.5 +0.6**
KOME *e*Sn **Sn 18 48 03.4 0.0**
WTTA Wattenberg 5.19 265 *e*Pn **Pn 18 47 05.9 +1.5**
comp=Z,10nm,0.3s,SNR=16
WTTA *i* Sn **Sn 18 48 07.6 +3.5**
comp=Z,55nm,0.9s
NKY Niksic 5.20 182 ⇓*i*Pn **Pn 18 47 05.3 +0.9**
NKY *e*Sn **Sn 18 48 04.3 0.0**
SCHF Schoenfels 5.20 303 *e*Pn **Pn 18 47 05.1 +0.8**
WATA Walderalm 5.21 265 *e*Pn **Pn 18 47 06.0 +1.3**
comp=Z,3.6nm,0.3s
CLL Collm 5.22 312 *e*Pn **Pn 18 47 05.2 +0.6**
CLL Collm 5.22 312 *i* Pn **Pn 18 47 05.5 +0.9**
comp=Z,64nm,0.7s
CLL *e*Sn **Sn 18 48 07.0 +2.3**
CLL *e*Sg **Sg 18 48 33.0 -1.3**
comp=Z,142nm,1.2s
CLL Collm 5.22 312 *e*Pn **Pn 18 47 05.5 +0.9**
NKME Niksic 5.24 182 ⇓*i*Pn **Pn 18 47 05.4 +0.4**
NKME *e*Sn **Sn 18 48 04.7 -0.7**
STON Ston 5.25 192 *e*Pn **Pn 18 47 06.6 +1.7**
STON Sn **Sn 18 48 04.8 -0.5**
STON Ston 5.25 192 *e*Pn **Pn 18 47 06.0 +1.1**
MLR Muntele Rosu 5.26 116 Pn **Pn 18 47 05.7 +0.5**
comp=Z,0.6nm,0.3s,baz=80,slow=3.6,SNR=9.2
MLR Muntele Rosu 5.26 116 ⇓*i*P **Pn 18 47 06.1 +0.9**
TESR Tescani 5.27 104 ⇓*i*P **Pn 18 47 07.1 +1.8**
ZAPS Zavoj 5.30 152 *e*Pn **Pn 18 47 05.5 -0.3**
TREB Trebinje 5.33 187 *e*Pn **Pn 18 47 07.2 +1.1**
FUR Furstenfeldbru 5.33 275 *e*Pn **Pn 18 47 07.5 +1.3**
PVY Plav 5.44 174 ⇓*i*Pn **Pn 18 47 09.0 +1.3**
PVY *e*Sn **Sn 18 48 10.3 +0.1**
NDNU Novodnistrovsk 5.46 81 *e*Pn **Pn 18 47 08.9 +1.0**
CEME Cevo 5.46 182 ⇓*i*Pn **Pn 18 47 08.8 +0.8**
CEME *e*Sn **Sn 18 48 10.3 -0.5**
SQTA Sankt Quirin 5.48 265 *e*Pn **Pn 18 47 10.1 +1.8**
comp=Z,35nm,0.6s,SNR=11
SQTA Sn **Sn 18 48 13.9 +2.6**
comp=Z,30nm,0.5s
PLOR Plostina 5.52 110 ⇑*i*P **Pn 18 47 09.6 +0.8**
MOTA Moosalm 5.53 266 *e*Pn **Pn 18 47 10.4 +1.4**
comp=Z,7.2nm,0.5s,SNR=13
MOTA Sn **Sb 18 48 22.2 -7.3**
comp=Z,37nm,0.7s
GRA1 Grafenberg Arr 5.55 291 *e*Pn **Pn 18 47 09.7 +0.5**
GRF Grafenberg Arr 5.55 291 *e*Pn **Pn 18 47 09.8 +0.7**
GRF *e*Sn **Sn 18 48 11.2 -1.6**
GRFO Grafenberg 5.55 291 *e*Pn **Pn 18 47 09.2 +0.1**
VRI Vrincioaia 5.56 110 ⇑*i*P **Pn 18 47 10.3 +0.9**
PDG Podgorica 5.58 180 ⇑*i*P **Pn 18 47 10.8 +1.3**
PDG Podgorica 5.58 180 *e*Pn **Pn 18 47 10.2 +0.7**
TTG Podgorica 5.58 180 ⇓*i*Pn **Pn 18 47 10.5 +1.0**
TTG *e*Sn **Sn 18 48 13.5 0.0**
TTG Podgorica 5.58 180 *e*Pn **Pn 18 47 10.4 +1.0**
HCY Herceg Novi 5.58 186 ⇑*i*Pn **Pn 18 47 10.5 +0.9**
HCY *e*Sn **Sn 18 48 13.5 -0.2**
HCY Herceg Novi 5.58 186 *e*Pn **Pn 18 47 10.3 +0.7**
MOX Moxa 5.63 301 *e*Pn **Pn 18 47 11.9 +1.6**
MOX *e*Sn **Sn 18 48 13.0 -1.9**
BUM Brajici-Budva 5.71 182 ⇓*i*Pn **Pn 18 47 12.4 +1.0**
BUM *e*Sn **Sn 18 48 15.9 -1.0**
RETA Reutte 5.73 268 *e*Pn **Pn 18 47 13.2 +1.5**
comp=Z,6.6nm,0.3s,SNR=6.2
DRME Dracevica, Mon 5.82 180 ⇓*i*Pn **Pn 18 47 13.7 +0.8**
DRME *e*Sn **Sn 18 48 19.3 -0.2**
DRME Dracevica, Mon 5.82 180 *e*Pn **Pn 18 47 13.9 +1.0**
FETA Feichten 5.84 263 *i* Pn **Pn 18 47 14.7 +1.4**
comp=Z,15nm,0.6s,SNR=15
FETA *i* Sn **Sn 18 48 20.6 +0.3**
comp=Z,1μm,0.0s
ULC Ulcinj 6.04 180 ⇓*i*Pn **Pn 18 47 17.3 +1.4**
ULC *e*Sn **Sn 18 48 24.6 -0.4**
VTS Vitosha 6.08 151 *e*Pn **Pn 18 47 16.8 +0.2**
VTS Vitosha 6.08 151 *e*Pn **Pn 18 47 17.5 +0.8**
VTS Vitosha 6.08 151 ⇓*i*P **Pn 18 47 17.4 +0.8**
FUORN Ofenpass-Fuorn 6.25 261 *e*Pn **Pn 18 47 20.8 +1.8**
DAVA Damuels 6.36 267 *i* Pn **Pn 18 47 21.4 +1.0**
comp=Z,22nm,0.4s,SNR=18
DAVA *i* Sg **Sg 18 49 16.1 +5.4**
comp=Z,23nm,0.5s
DAVOX Davos/Dischmat 6.46 263 Pn **Pn 18 47 23.5 +1.7**
comp=Z,1.8nm,0.3s,baz=77,slow=12,SNR=21
DAVOX Sn **Sn 18 48 34.9 -0.8**
comp=Z,1.6nm,0.3s,baz=287,slow=23,SNR=4.2
KIS Kishinev 6.58 95 *e*P **Pg 18 47 49.0 -3.6**
KIS LRM MLR 18 50 26.0
comp=Z,260nm,7.0s
STIP Stip 6.65 161 *i* Pn **Pn 18 47 24.4 +0.1**
CFR Carcaliu 6.76 111 ⇑*i*P **Pn 18 47 26.2 +0.5**
KRUS Krusevo 6.79 167 *i* Pn **Pn 18 47 28.1 +1.8**
TUE Stuetta 6.90 261 *e*Pn **Pn 18 47 29.5 +1.6**
TLB Topalu 7.00 116 ⇑*i*P **Pn 18 47 30.5 +1.5**
AKASG Malin Array Be 7.06 64 Pn **Pn 18 47 28.2 -1.7**
comp=Z,1.3nm,0.3s,baz=253,slow=13,SNR=5.4
AKASG Sn **Sn 18 48 47.6 -2.5**
comp=Z,1.1nm,0.3s,baz=251,slow=24,SNR=5.3
AKBB Malin Array Si 7.06 64 *e*Pn **Pn 18 47 29.2 -0.7**
AKBB *e*Sn **Sn 18 48 47.6 -2.5**
TIRR Tirgusor 7.29 116 *e*Pn **Pn 18 47 34.3 +1.3**
TIRR Tirgusor 7.29 116 ⇓*i*P **Pn 18 47 34.7 +1.7**
BFO Black Forest 7.30 277 *e*Pn **Pn 18 47 33.0 -0.1**
BFO Black Forest 7.30 277 *e*Pn **Pn 18 47 33.4 +0.3**
FNA Florina 7.38 167 *e*Pn **Pn 18 47 36.3 +1.9**
TNS Taunus Mts 7.42 291 *e*Pn **Pn 18 47 35.8 +1.0**
BSD Bornholm Skovb 7.61 341 *i* P **Pn 18 47 37.9 +0.6**
BSD *e*S **Sn 18 48 56.8 -6.6**
CDF Champ du Feu 8.00 277 *e*Pn **Pn 18 47 42.7 -0.1**
CDF Champ du Feu 8.00 277 *e*P **Pn 18 47 47.0 +4.2**
CDF *e*S **Sn 18 49 14.3 +1.1**
SENIN Lac Senin/Sane 8.29 263 *e*Pn **Pn 18 47 47.9 +0.9**
HINF Hinteralfeld 8.32 273 *e*Pn **Pn 18 47 46.7 -0.5**
HINF Hinteralfeld 8.32 273 *e*P Pn 18 47 52.0 +4.8
NACGM Naroch 8.36 31 *e* **Pg 18 48 26.0 -0.6**
HAU Haudompre 8.64 275 *e*Pn **Pn 18 47 51.3 -0.3**
HAU Haudompre 8.64 275 *e*P Pn 18 47 56.3 +4.7
WLF Walferdange 8.79 286 *e*Pn **Pn 18 47 54.8 +1.2**
WLF Walferdange 8.79 286 PnPn Pn 18 48 01.5 +7.9
LPG La Plagne 8.93 258 *e*Pn **Pn 18 47 56.7 +1.0**
LPG La Plagne 8.93 258 *e*P Pn 18 47 58.0 +2.3
LPL La Plagne 8.93 258 *e*Pn **Pn 18 47 57.3 +1.5**
LPL La Plagne 8.93 258 *e*P Pn 18 48 01.0 +5.2
CABF La Chapelle 9.04 266 *e*Pn **Pn 18 47 56.7 -0.4**
CABF La Chapelle 9.04 266 *e*P Pn 18 48 02.1 +5.0
CABF *e*Sn **Sn 18 49 34.1 -4.7**
comp=Z,12nm,0.5s
CABF *e*S **Sn 18 49 40.2 +1.4**
PGF Pioggiola 9.04 237 *e*Sn **Sn 18 49 35.3 -3.6**
comp=Z,15nm,1.0s
BNI Bardonecchia 9.14 256 *e*Pn **Pn 18 48 01.1 +2.6**
SBF Sospel 9.20 248 *e*Pn **Pn 18 47 59.8 +0.5**
SBF Sospel 9.20 248 *e*P Pn 18 48 05.8 +6.5
SBF *e*Sn **Sn 18 49 39.4 -3.3**
comp=Z,11nm,0.7s
MBDF Montbardon 9.22 254 *e*Pn **Pn 18 47 59.6 0.0**
MBDF Montbardon 9.22 254 *e*P Pn 18 48 04.6 +5.0
MBDF *e*Sn **Sn 18 49 40.2 -3.0**
comp=Z,5.7nm,0.6s
AGG Agios Georgios 9.26 165 *e*Pn **Pn 18 48 02.4 +2.3**
SFTF Sexfontaines 9.50 276 *e*Pn **Pn 18 48 03.0 -0.3**
baz=103
SFTF Sexfontaines 9.50 276 *e*P Pn 18 48 09.2 +5.9
ORIF Oris-en-Rattie 9.72 256 *e*Pn **Pn 18 48 07.9 +1.5**
ORIF Oris-en-Rattie 9.72 256 *e*P Pn 18 48 11.6 +5.2
ORIF *e*Sn **Sn 18 49 50.6 -4.8**
comp=Z,12nm,0.6s
DOU Dourbes 9.84 288 P **Pn 18 48 09.7 +1.8**
FRF La Foret Royal 9.85 248 *e*Pn **Pn 18 48 07.6 -0.5**
FRF La Foret Royal 9.85 248 *e*P **Pn 18 48 11.9 +3.8**
LMR La Mourre 10.05 247 *e*Pn **Pn 18 48 09.7 -1.2**
LMR La Mourre 10.05 247 *e*P Pn 18 48 15.7 +4.8
BAIF Baives 10.08 287 *e*Pn **Pn 18 48 11.3 +0.1**
BAIF Baives 10.08 287 *e*P **Pn 18 48 15.5 +4.3**
SMRF Simiane la Rot 10.32 252 *e*Pn **Pn 18 48 15.1 +0.5**
SMRF Simiane la Rot 10.32 252 *e*P Pn 18 48 21.1 +6.5
LOR Lormes 10.40 272 *e*Pn **Pn 18 48 15.6 -0.1**
LOR Lormes 10.40 272 *e*P **Pn 18 48 20.1 +4.4**
LOR *e*Sn **Sn 18 50 07.8 -4.3**
comp=Z,3.7nm,0.5s
VIVF Saint-Julien-l 10.53 258 *e*Pn **Pn 18 48 16.8 -0.7**
VIVF Saint-Julien-l 10.53 258 *e*P **Pn 18 48 20.5 +3.0**
VIVF *e*Sn **Sn 18 50 08.9 -6.4**
comp=Z,1.5nm,0.3s
SMF Signal de Mont 10.54 268 *e*Pn **Pn 18 48 17.0 -0.5**
SMF Signal de Mont 10.54 268 *e*P **Pn 18 48 22.2 +4.7**
SSF Saint Saulge 10.68 271 *e*Pn **Pn 18 48 19.9 +0.5**
SSF Saint Saulge 10.68 271 *e*P Pn 18 48 25.2 +5.8
AVF Avril sur Loir 10.83 269 *e*Pn **Pn 18 48 20.7 -0.9**
AVF Avril sur Loir 10.83 269 *e*P Pn 18 48 27.3 +5.7
LASF Ste Croix 11.38 255 *e*Pn **Pn 18 48 29.2 +0.1**
LASF Ste Croix 11.38 255 *e*P **Pn 18 48 32.9 +3.8**
LASF *e*Sn **Sn 18 50 29.6 -6.6**
comp=Z,18nm,0.9s
LASF *e*S **Sn 18 50 43.0 +6.8**
TCF Toulx Ste Croi 11.72 268 *e*Pn **Pn 18 48 32.6 -1.1**
TCF Toulx Ste Croi 11.72 268 *e*P **Pn 18 48 37.7 +4.0**
CAF Calviac 12.23 262 *e*Pn **Pn 18 48 39.8 -0.9**
CAF Calviac 12.23 262 *e*P **Pn 18 48 45.1 +4.4**
HFS Hagfors 12.57 347 Pn **Pn 18 48 43.5 -1.8**
comp=Z,0.1nm,0.3s,baz=155,slow=14,SNR=2.3
HFS Sn **Sn 18 50 57.6 -7.4**
comp=Z,0.1nm,0.3s,baz=155,slow=24,SNR=2.4
HFS LR LR 18 53 35.9
comp=Z,76nm,18.2s,baz=162,slow=37
FLN La Foliniere 13.12 281 *e*Pn **Pn 18 48 51.7 -1.2**
FLN La Foliniere 13.12 281 *e*P **Pn 18 48 56.4 +3.5**
baz=105
MFF Saint Martin d 13.22 271 *e*Pn **Pn 18 48 54.1 -0.1**
MFF Saint Martin d 13.22 271 *e*P **Pn 18 48 58.8 +4.6**
BRTR Keskin Array B 13.27 123 LR LR 18 55 43.0
comp=Z,54nm,18.6s,baz=295,slow=45
NB2 NORSAR Subarra 13.85 344 P **Pn 18 49 01.9 -0.8**
comp=Z,4.0nm,1.2s,baz=157,slow=11
NB200 NORSAR Array S 13.85 344 *e*Pn **Pn 18 49 00.9 -1.8**
NOA NORSAR Array B 13.85 344 Pn **Pn 18 49 00.9 -1.8**
comp=Z,0.0nm,0.3s,baz=156,slow=12,SNR=5.0
NOA LR LR 18 54 33.7
comp=Z,59nm,18.4s,baz=165,slow=38
FIA0 FINESS Array S 14.02 14 *e*Pn **Pn 18 49 02.7 -2.3**
FINES FINESS Array B 14.02 14 Pn **Pn 18 49 02.7 -2.3**
comp=Z,0.1nm,0.3s,baz=186,slow=13,SNR=2.1
FINES Sn Sn 18 51 31.2 -9.2
comp=Z,0.4nm,0.3s,baz=192,slow=18,SNR=6.0
FINES LR LR 18 55 07.4
comp=Z,69nm,20.5s,baz=214,slow=40
SGMF Saint Gilles 14.55 279 *e*P **Pn 18 49 12.4 +0.1**
EKA Eskdalemuir Ar 15.66 306 Pn **Pn 18 49 27.3 +0.2**
baz=112,slow=14,SNR=8.5
ESDC Sonseca Array 18.64 252 P **Pn 18 50 05.2 +0.7**
baz=56,slow=11,SNR=5.4
ARCES ARCESS Array B 21.81 6 P **P 18 50 38.6 +0.2**
comp=Z,7.4nm,0.3s,baz=166,slow=8.4,SNR=3.2
MDT Midelt 23.52 238 LR LR 19 01 25.8
comp=Z,18nm,19.4s,baz=322,slow=40
ARU Arti 25.22 56 *e*P **P 18 51 13.8 +1.7**
comp=Z,10nm,1.5s
AKTO Aktyubinsk 25.26 70 P **P 18 51 11.9 -0.6**
comp=Z,2.1nm,0.8s,baz=279,slow=4.3,SNR=6.2
ABKAR Akbulak array 26.71 72 *e*P **P 18 51 25.9 +0.2**
comp=Z,1.6nm,0.7s
BORG Borgarnes 27.35 323 LR LR 19 03 22.1
comp=Z,43nm,18.7s,baz=105,slow=38
TOA1 Torodi Ar. Sit 37.70 209 *e*P **P 18 53 04.0 +2.0**
TORD Torodi Ar. Bea 37.70 209 P **P 18 53 04.0 +1.9**
comp=Z,0.8nm,0.9s,baz=13,slow=9.5,SNR=3.7
TORD LR LR 19 09 58.6
comp=Z,42nm,19.1s,baz=300,slow=39
NRIK Noril'sk 38.67 32 LR LR 19 09 30.5
comp=Z,34nm,18.4s,baz=175,slow=37
MK32 Makanchi Array 41.63 67 *e*P **P 18 53 36.9 +2.3**
MKAR Makanchi Array 41.63 67 P **P 18 53 36.9 +2.3**
comp=Z,0.3nm,0.8s,baz=283,slow=7.4,SNR=3.9
WMQ Urumqi 46.40 68 *e*P **P 18 54 15.5 +2.6**
YKA Yellowknife Ar 63.88 338 P **P 18 56 20.9 +2.2**
comp=Z,0.1nm,0.3s,baz=40,slow=6.8,SNR=3.8
YKB5 Yellowknife Ar 63.88 338 *e*P **P 18 56 20.9 +2.2**

PRU ***05*** *18:46:21.5±0.0,50°.48N×12°.19E,h0km, Near Plauen*
WBNET 05 18:46:21.2,50°.47N×12°.21E,h12km,Ml1.6,11D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCW	**Kopaniny**	**0.20**	**175**	⇓P	Pg	18 46 25.4	-0.3
KOCW				S	Sg	18 46 28.3	-0.4
POCW	**Potky**	**0.20**	**136**	⇓P	Pg	18 46 25.4	-0.3
POCW				S	Sg	18 46 28.4	-0.4
LBCW	**Luby**	**0.24**	**146**	⇓P	Pg	18 46 26.1	-0.3
LBCW				S	Sg	18 46 29.5	-0.3
KRCW	**Kraslice**	**0.25**	**123**	⇓P	Pg	18 46 26.1	-0.4
KRCW				S	Sg	18 46 29.6	-0.4
VAC	**Vackov**	**0.26**	**154**	⇓P	Pg	18 46 26.3	-0.3
VAC				S	Sg	18 46 29.7	-0.5
NKC	**Novy Kostel**	**0.28**	**146**	*e*PG	Pg	18 46 26.5	-0.5
NKC				*e*SG	Sg	18 46 30.0	-0.9
NKC	**Novy Kostel**	**0.28**	**146**	⇓P	Pg	18 46 26.7	-0.4
NKC				S	Sg	18 46 30.3	-0.6
STCW	**Studenec**	**0.29**	**136**	⇓P	Pg	18 46 26.8	-0.4
STCW				S	Sg	18 46 30.5	-0.7
SKC	**Skalna**	**0.31**	**161**	⇓P	Pg	18 46 27.2	-0.4
SKC				S	Sg	18 46 31.5	-0.4
KVC	**Kvetna**	**0.33**	**143**	P	Pg	18 46 27.5	-0.4
KVC				S	Sg	18 46 31.7	-0.6
KACW	**Kaceov**	**0.38**	**148**	⇓P	Pg	18 46 28.5	-0.3
KACW				S	Sg	18 46 33.8	-0.1
ZHC	**Zelena Hora**	**0.40**	**170**	⇓P	Pg	18 46 28.9	-0.3
ZHC				S	Sg	18 46 34.4	-0.2
LACW	**Lazy**	**0.49**	**147**	⇓P	Pg	18 46 30.7	-0.3
LACW				S	Sg	18 46 37.2	-0.3
CLL	**Collm**	**0.98**	**31**	*i* Pg	Pb	18 46 39.1	-1.1
CLL				*e*		18 46 41.0	
CLL				*i*		18 46 43.5	
CLL				*i* Sg	Sg	18 46 52.6	-0.4
comp=Z,12nm,0.3s							
BRG	**Berggiesshubel**	**1.18**	**69**	SG	Pb	18 46 42.7	-0.8
comp=Z,1.7nm,0.3s							

ISCJB ***05*** *18:57:06.6±0.5,30°.58S±0°.04×178°.59E±0°.10,h550km, mb3.8/9, Error ellipse: s-maj=10.9km s-min=4.9km az=7.9*
IDC ***05*** *18:57:06.6±2.2,30°.44S×178°.75E,h547km±23km,mb3.2/8, mb1 3.4/10,mb1mx3.2/36,mbtmp4.2/10, Error ellipse: s-maj=21.2km s-min=17.4km az=55.0*
WEL ***05*** *18:57:10.8±0.7,31°S±15°×17°9E±4°5,h514km±31km, M5.1/3,MLv5.1/3, Error ellipse: s-maj=0.1km s-min=0.0km az=107.7*
ISC 05 18:57:06.6±0.6,30°.60S±0°.07×178°.7E±0°.1,h550km,n41, σ1 75/62,mb3.7/9,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.22**	**66**	P	**P**	**18 58 22.7**	**-0.4**
GLKZ				S	**S**	**18 59 27.3**	**+2.0**
RIZ	**Raoul Island**	**3.22**	**66**	P	**P**	**18 58 21.9**	**-1.2**
MXZ	**Matakaoa Point**	**6.96**	**183**	P	**P**	**18 58 53

BFZ			S	S	19 01 22.4	-0.1
MRZ	**Mangatainoka R**	**10.36 193**	P	**P**	18 59 29.4	+1.4
MRZ			S	S	19 01 21.4	-2.9
OGWZ	**Otaki Gorge**	**10.59 195**	P	**P**	18 59 32.1	+1.7
OGWZ			S	S	19 01 26.8	-1.9
HOWZ	**Holdsworth Sta**	**10.60 193**	P	**P**	18 59 31.3	+0.8
HOWZ			S	S	19 01 25.4	-3.4
KIW	**Kapiti Island**	**10.69 196**	P	**P**	18 59 32.2	+0.7
KIW			S	S	19 01 27.1	-3.6
MTW	**Mount Morrison**	**10.85 193**	P	**P**	18 59 33.5	+0.4
MTW			S	S	19 01 31.2	-2.5
MSWZ	**Moikau Station**	**11.15 194**	P	**P**	18 59 36.4	+0.2
TCW	**Tory Channel**	**11.18 197**	P	**P**	18 59 38.5	+2.1
QRZ	**Quartz Range**	**11.37 204**	P	**P**	18 59 42.1	+3.7
NNZ	**Nelson**	**11.44 201**	P	**P**	18 59 41.1	+1.9
TUWZ	**Tuamarina**	**11.47 198**	P	**P**	18 59 41.1	+1.7
BSWZ	**Blackbirch Sta**	**11.76 198**	P	**P**	18 59 45.2	+2.8
RPZ	**Rata Peaks**	**14.43 203**	P	**P**	19 00 11.0	+0.9
	3.7nm,0.3s,baz=2.9,slow=1.8,SNR=19					
STKA	**Stephens Creek**	**31.65 258**	P	**P**	19 02 46.4	+1.2
	5.2nm,0.4s,baz=97,slow=9.4,SNR=32					
ASAR	**Alice Springs**	**40.25 269**	P	**P**	19 03 56.7	+0.3
	2.1nm,0.4s,baz=106,slow=7.1,SNR=80					
ASAR			ScP	ScP	19 08 43.7	-0.1
	0.6nm,0.8s,baz=112,slow=4.0,SNR=4.6					
ASAR			S	S	19 09 23.1	-1.5
	0.7nm,1.0s,baz=105,slow=15,SNR=4.3					
WRA	**Warramunga Arr**	**41.26 274**	P	**P**	19 04 04.8	+0.3
	13nm,0.3s,baz=98,slow=9.2,SNR=2.9					
VNDA	**Vanda**	**47.63 185**	P	**P**	19 04 54.0	+1.4
	0.3nm,0.5s,baz=29,slow=7.2,SNR=3.5					
FITZ	**Fitzroy Crossi**	**49.51 272**	P	**P**	19 05 07.0	-0.4
	2.1nm,0.6s,baz=141,slow=3.9,SNR=8.0					
MAW	**Mawson**	**71.10 201**	P	**P**	19 07 30.7	+1.5
	1.2nm,0.5s,baz=138,slow=7.1,SNR=10					
KSRS	**Korea Array**	**82.69 322**	P	**P**	19 08 33.2	+0.4
	0.4nm,0.6s,baz=140,slow=5.0,SNR=3.1					
PETK	**Petropavlovsk-**	**85.34 347**	P	**P**	19 08 45.0	-0.4
	1.6nm,0.8s,baz=90,slow=5.8,SNR=2.8					
NVAR	**Mina Array Bea**	**90.35 44**	P	**P**	19 09 09.2	-0.3
	0.3nm,0.6s,baz=217,slow=8.6,SNR=5.2					
MKAR	**Makanchi Array**	**115.73 311**	PKP	**PKPdf**	19 14 45.6	-0.9
	0.2nm,0.6s,baz=101,slow=1.5,SNR=2.6					
FINES	**FINESS Array B**	**144.30 338**	PKP	PKPbc	19 15 38.1	-1.2
	5.1nm,0.4s,baz=50,slow=3.8,SNR=66					
NB2	**NORSAR Subarra**	**148.44 348**	PKP	**PKPbc**	19 15 49.9	-1.0
	comp=Z,2.5nm,0.5s,baz=17,slow=2.6					
NOA	**NORSAR Array B**	**148.44 348**	PKPbc	**PKPbc**	19 15 50.4	-0.5
	comp=Z,0.5nm,0.5s,baz=17,slow=4.2,SNR=4.3					
NOA			PKPab	**PKPab**	19 15 55.0	-1.3
	comp=Z,0.8nm,0.7s,baz=24,slow=3.2,SNR=4.9					
TORD	**Torodi Ar. Bea**	**162.41 190**	PKPab	**PKPab**	19 16 57.2	-0.2
	comp=Z,0.2nm,0.3s,baz=167,slow=4.9,SNR=4.4					

MAN 05 18:58:11.6, 4°.85N×127°.42E, h150km, mb4.2, ML3.0, MS2.7, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.11**	**306**	*e*P	Pn	18 58 48.9	+0.8
MATI	**Mati**	**2.38**	**331**	*e*P	Pn	18 58 51.9	+0.5
MATI				*e*S	Sn	18 59 22.9	+0.9
SKMP	**Bagumbayan, Su**	**3.31**	**300**	*e*P	Pn	18 59 03.2	+0.2
CTBH	**Cotabato--PC H**	**3.94**	**307**	⇓*i*P	Pn	18 59 12.5	+1.4

ISCJB ***05*** *18:58:22.2±0.3, 64°.64N±0°.02×149°.64W±0°.06, h10km, mb4.0/7, MS2.9/2, Error ellipse: s-maj=3.7km s-min=3.2km az=39.0°.*

NEIC ***05*** *18:58:23.3±0.0, 64°.64N×149°.68W, h13km, MW3.8, ML4.0(AEIC), Moment Tensor Solution. s26 Moment tensor: Scale 10^14Nm; Mrr-0.62; Mθθ-4.83; Mφφ5.45; Mrθ 1.15; Mθφ-4.79; Mφr1.09; Best double couple: M0 7.20000×10^14 NP1:φs294.00000°, δ78.00000°, λ-174.00000°. NP2:φs203.00000°, δ84.00000°, λ-12.00000°. Principal axes: T 7.3800, Plg4.0000°, Azm249.0000°; N -0.3300, Plg76.0000°, Azm357.0000°; P -7.0500, Plg13.0000°, Azm158.0000°; After AEIC.*

NEIC Felt [II] at Fairbanks. Also felt at Nenana.

IDC ***05*** *18:58:25.4±1.3, 64°.50N×149°.17W, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.5/38, mbtmp3.7/7, ML3.1/1, MS2.9/3, Ms1 2.9/3, ms1mx2.5/46 Error ellipse: s-maj=33.0km s-min=10.9km az=176.0*

ISC 05 18:58:24.7±0.5, 64°.64N±0°.03×149°.56W±0°.03, h10km, n84, σ2§17/86, mb3.9/7, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BWN	**Browne**	**0.47**	**175**	*e*Pg	**Pg**	**18 58 33.4**	**-0.4**
BWN				*e*Pg	**Pb**	18 58 33.5	-1.5
MLY	**Manley**	**0.64**	**309**	*e*Pg	**Pg**	18 58 35.0	-2.0
MDM	**Murphy Dome**	**0.66**	**60**	*e*Pg	**Pg**	18 58 36.5	-0.9
WRH	**Wood River Hil**	**0.66**	**104**	*e*Pg	**Pg**	18 58 36.8	-0.6
CCB	**Clear Creek Bu**	**0.76**	**89**	*e*Pg	**Pg**	18 58 38.4	-0.9
COLA	**College**	**0.77**	**71**	*e*Pg	**Pg**	18 58 38.5	-1.1
BPAW	**Bear Paw Mtn.**	**0.82**	**230**	*e*Pg	**Pg**	18 58 37.9	-2.7
PS07	**TAPS Pump Stn7**	**0.87**	**38**	*e*Pg	**Pg**	18 58 40.5	-0.9
MCK	**McKinley**	**0.95**	**163**	*e*Pg	**Pg**	18 58 41.8	-1.2
ILAR	**Eielson Array**	**1.16**	**82**	Pg	**Pb**	**18 58 44.6**	**-2.1**
	485nm,0.3s,baz=268,slow=15,SNR=1042						
ILAR				Lg	Lg	18 59 00.9	
	1μm,0.3s,baz=264,slow=29,SNR=85						
ILB	**Eielson Array**	**1.16**	**82**	*e*Sg	**Sb**	**18 59 00.9**	**-0.9**
PS08	**TAPS Pump Stn8**	**1.19**	**93**	*e*Pn	**Pb**	**18 58 45.2**	**-2.0**
PS08				*e*Sn	**Sg**	18 59 02.3	-0.5
PS06	**TAPS Pump Stn6**	**1.22**	**357**	*e*Pn	**Pn**	18 58 45.8	-2.0
KTH	**Kantishna Hill**	**1.24**	**209**	*e*Pn	**Pn**	18 58 44.9	-3.3
RND	**Reindeer**	**1.28**	**166**	*e*Pn	**Pn**	18 58 46.4	-2.2
CHUM	**Lake Minchumin**	**1.42**	**239**	*e*Pn	**Pn**	18 58 47.5	-3.0
CAST	**Castle Rocks**	**1.65**	**223**	*e*Pn	**Pn**	18 58 50.4	-3.4
DHY	**Denali Highway**	**1.84**	**147**	*e*Pn	**Pn**	18 58 55.2	-1.3
IM3	**Indian Mountai**	**2.22**	**309**	*e*Pn	**Pn**	18 58 58.9	-2.6
PS05	**TAPS Pump Stn5**	**2.23**	**349**	*e*Pn	**Pn**	18 59 00.2	-1.4
RIDG	**Independent Ri**	**2.25**	**111**	*e*Pn	**Pn**	18 59 02.2	-1.8
PAX	**Paxson**	**2.47**	**131**	*e*Pn	**Pn**	18 59 04.1	-0.9
DOT	**Dot Lake**	**2.61**	**110**	*e*Pn	**Pn**	18 59 04.7	-2.1
COLD	**Coldfoot**	**2.61**	**355**	*e*Pn	**Pn**	18 59 05.7	-1.2
GHO	**Glory Hole Cre**	**2.89**	**174**	*e*Pn	**Pn**	18 59 08.8	-2.0
SML	**Sawmill**	**2.90**	**168**	*e*Pn	**Pn**	18 59 08.8	-2.1
HARP	**HAARP**	**2.99**	**137**	*e*Pn	**Pn**	18 59 11.9	-0.1
SCM	**Sheep Creek Mo**	**2.99**	**159**	*e*Pn	**Pn**	18 59 11.0	-1.2
PMR	**Palmer**	**3.06**	**176**	*e*Pn	**Pn**	18 59 11.6	-1.5
MENT	**Mentasta**	**3.10**	**121**	*e*Pn	**Pn**	18 59 12.4	-1.3
PS11	**TAPS Pump St11**	**3.16**	**143**	*e*Pn	**Pn**	18 59 14.5	0.0
SUA	**Susitna One**	**3.23**	**190**	*e*Pn	**Pn**	18 59 14.0	-1.5
KNK	**Knik Glacier**	**3.28**	**171**	*e*Pn	**Pn**	18 59 15.2	-0.9
TT01	**Tatalina**	**3.35**	**242**	*e*Pn	**Pn**	18 59 13.7	-3.3
TT01				*e*Pn	**Pn**	18 59 13.7	-3.3
BM3	**Burnt Mountain**	**3.45**	**34**	*e*Pn	**Pn**	18 59 16.2	-2.2
RC01	**Rabbit Creek A**	**3.56**	**181**	*e*Pn	**Pn**	18 59 19.2	-0.8
SPCP	**Crater Peak Br**	**3.59**	**200**	*e*Pn	**Pn**	18 59 18.9	-1.5
EGAK	**Eagle**	**3.61**	**84**	*e*Pn	**Pn**	18 59 18.2	-2.4
SPWE	**Spurr West**	**3.64**	**203**	*e*Pn	**Pn**	18 59 20.1	-1.0
BCA3	**Beaver Creek A**	**3.79**	**111**	*e*Pn	**Pn**	18 59 20.9	-2.1
PS04	**TAPS Pump Stn4**	**3.80**	**1**	*e*Pn	**Pn**	18 59 22.9	-0.4
DIV	**Divide**	**3.93**	**152**	*e*Pn	**Pn**	18 59 24.3	-0.7
GLI	**Glacier Island**	**3.94**	**162**	*e*Pn	**Pn**	18 59 24.4	-0.8
TOLK	**Toolik Lake Re**	**4.02**	**360**	*e*Pn	**Pn**	18 59 25.1	-1.2
SLKM	**Skilak Lake**	**4.16**	**185**	*e*Pn	**Pn**	18 59 27.9	-0.3
RDJH	**Redoubt Jeurge**	**4.33**	**202**	*e*Pn	**Pn**	18 59 29.4	-1.2
RDWB	**Redoubt West**	**4.43**	**201**	*e*Pn	**Pn**	18 59 31.0	-1.1
RSO	**Redoubt South**	**4.44**	**201**	*e*Pn	**Pn**	18 59 31.0	-1.3
EYAK	**Cordova Ski Ar**	**4.47**	**155**	*e*Pn	**Pn**	18 59 31.6	-0.7
SVW2	**Sparrevohn**	**4.50**	**221**	*e*Pn	**Pn**	18 59 30.0	-2.8
SEW	**Seward**	**4.55**	**179**	*e*Pn	**Pn**	18 59 32.8	-0.7
SGAM	**Sherman Glacie**	**4.61**	**152**	*e*Pn	**Pn**	18 59 33.0	-1.4
BALM	**Baldy**	**4.90**	**134**	*e*Pn	**Pn**	18 59 38.5	+0.1
BRLK	**Bradley Lake**	**4.93**	**188**	*e*Pn	**Pn**	18 59 38.6	-0.2
HMT	**Hamilton**	**4.97**	**148**	*e*Pn	**Pn**	18 59 38.7	-0.6
CNPM	**China Poot**	**5.19**	**189**	*e*Pn	**Pn**	18 59 42.3	0.0
CTGM	**Chitina Glacie**	**5.27**	**131**	*e*Pn	**Pn**	18 59 44.9	+1.3
EPYK	**Eagle Plains**	**5.62**	**66**	*e*Pn	**Pn**	18 59 45.6	-2.6
HYT	**Haines Junctio**	**6.73**	**119**	*e*Pn	**Pn**	19 00 01.1	-2.4
KDAK	**Kodiak Island**	**7.03**	**193**	*e*Pn	**Pn**	19 00 05.9	-1.6
INK	**Inuvik**	**7.39**	**53**	Pn	**Pn**	**19 00 11.0**	**-1.4**
	2.0nm,0.3s,baz=232,slow=15,SNR=45						
INK				Sn	**Sn**	19 01 31.6	-4.5
	2.5nm,0.3s,baz=144,slow=31,SNR=4.7						
INK				LR	LR	19 03 09.4	
	comp=Z,45nm,18.7s,baz=28,slow=39						
INK	**Inuvik**	**7.39**	**53**	*e*Pn	**Pn**	**19 00 10.8**	**-1.6**
WHY	**Whitehorse**	**7.84**	**114**	*e*Pn	**Pn**	**19 00 16.6**	**-2.2**
DLBC	**Dease Lake**	**11.17**	**115**	Lg	Lg	19 04 12.7	
	0.5nm,0.3s,baz=39,slow=25,SNR=13						
YKA	**Yellowknife Ar**	**15.59**	**82**	Pn	**Pn**	**19 01 59.4**	**-4.8**
	0.1nm,0.3s,baz=293,slow=13,SNR=4.3						
YKB5	**Yellowknife Ar**	**15.59**	**82**	*e*Pn	**Pn**	**19 01 59.4**	**-4.8**
RES	**Resolute Bay**	**20.57**	**38**	P	Pn	19 03 05.3	0.0
	1.5nm,0.7s,baz=270,slow=4.0,SNR=4.0						
RES				LR	LR	19 13 39.1	
	comp=Z,35nm,18.6s,baz=205,slow=44						
NEW	**Newport**	**23.89**	**118**	LR	LR	19 13 52.3	
	comp=Z,50nm,18.8s,baz=289,slow=39						
LKWY	**Lake**	**29.56**	**114**	*e*S	**S**	**19 09 19.4**	**-5.0**
FXWY	**Fox Creek**	**30.09**	**116**	*e*S	**S**	**19 09 32.3**	**-0.3**
OMMB	**Old Mammoth Mi**	**32.54**	**131**	*e*P	**P**	**19 04 56.8**	**+0.9**
LTX	**Lajitas**	**45.44**	**118**	*e*P	**P**	**19 06 44.8**	**+1.2**
TXAR	**Lajitas Array**	**45.44**	**118**	P	**P**	**19 06 44.8**	**+1.2**
	0.6nm,0.9s,baz=325,slow=11,SNR=3.3						
ZAA1	**Zalesovo Array**	**54.57**	**324**	*e*P	**P**	**19 07 56.0**	**+3.6**
ZALV	**Zalesovo Beam**	**54.57**	**324**	P	**P**	**19 07 56.0**	**+3.6**
	0.7nm,0.5s,baz=2.1,slow=8.0,SNR=4.2						
HHC	**Hu-ho-hao-te**	**57.48**	**297**	*e*P	**P**	**19 08 11.9**	**-1.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,51nm,5.3s						
WMQ	**Urumqi**	**62.99**	**317**	*e*P	**P**	**19 08 51.4**	**+0.1**
ABKAR	**Akbulak array**	**64.14**	**339**	*e*P	**P**	**19 09 00.7**	**+2.1**
LZH	**Lanzhou**	**64.56**	**301**	*e*P	**P**	**19 08 59.2**	**-2.6**
LZH				pP	pP	19 09 03.0	-2.1
LZH				sP	sP	19 09 04.9	-1.4
LZH				*e*PP	**PP**	**19 11 22.6**	**-0.7**
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,45nm,7.6s						
AKASG	**Malin Array Be**	**65.00**	**1**	P	**P**	**19 09 07.4**	**+3.2**
	comp=Z,1.1nm,0.6s,baz=1.5,slow=6.1,SNR=4.3						
BR101	**Keskin Array S**	**75.94**	**357**	*e*P	**P**	**19 10 15.0**	**+3.5**
BRTR	**Keskin Array B**	**75.94**	**357**	P	**P**	**19 10 15.0**	**+3.5**
	comp=Z,0.4nm,0.6s,baz=30,slow=8.9,SNR=3.6						
CM31	**Chiang Mai Arr**	**82.29**	**297**	*e*P	**P**	**19 10 50.1**	**+3.9**
CMAR	**Chiang Mai Arr**	**82.29**	**297**	P	**P**	**19 10 50.1**	**+3.9**
	comp=Z,0.6nm,0.7s,baz=14,slow=6.9,SNR=4.9						

MAN 05 19:00:14.1, 7°.31N×124°.86E, h12km, MS4.6, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.60**	**20**	*e*P	Pg	19 00 26.1	+0.2
BUKP				*e*S	Sb	19 00 35.6	+0.4
CTBH	**Cotabato--PC H**	**0.61**	**262**	⇓*i*P	Pg	19 00 26.1	0.0
DMPH	**Davao City--Mi**	**0.68**	**109**	⇑*e*P	Pn	19 00 29.0	-0.6
DMPH				*e*S	Sn	19 00 43.6	+3.4
SKMP	**Bagumbayan, Su**	**0.84**	**202**	*e*P	Pg	19 00 30.2	-0.2
SKMP				*e*S	Sn	19 00 44.2	+0.1
CGP	**Cagayan de Oro**	**1.15**	**352**	⇓*i*P	Pb	19 00 34.6	-1.3
CGP				*i*S	Sb	19 00 49.7	-1.3
MATI	**Mati**	**1.44**	**104**	*e*P	Pn	19 00 39.1	-0.9
DDMP	**Don Marcelino,**	**1.47**	**145**	*e*P	Pg	19 00 43.0	+0.7
DDMP				*e*S	Sg	19 01 04.2	+2.8
PAGZ	**Pagadian**	**1.56**	**290**	*e*P	Pn	19 00 41.1	-0.5
BUTP	**Butuan**	**1.82**	**25**	*e*P	Pb	19 00 48.0	+0.7
BUTP				*e*S	Sg	19 01 14.8	+2.1
DCPH	**Dipolog City**	**1.96**	**311**	⇑*e*P	Pg	19 00 53.8	+2.1
DCPH				*e*S	Sg	19 01 23.5	+6.4
SNPH	**Sibulan**	**2.58**	**322**	*e*P	Pg	19 01 02.1	-1.5
MSLP	**Maasin**	**2.81**	**0**	*e*P	Pb	19 01 03.6	-0.7
GUIM	**Jordan**	**3.99**	**326**	*e*P	Pn	19 01 13.6	-1.5

IDC ***05*** *19:23:00.4±0.5, 3°.02N×117°.76E, h0km, mb4.0/26, mb1 4.1/29, mb1mx4.0/56, mbtmp4.1/29, ML4.3/3, MS3.6/20, Ms1 3.6/20, ms1mx3.5/38, Error ellipse: s-maj=22.9km s-min=11.0km az=66.0*

NEIC ***05*** *19:23:02.9±1.4, 2°.96N×117°.69E, h16km±4km, mb4.8/23, Error ellipse: s-maj=14.0km s-min=6.2km az=99.0*

NEIC Felt [II] at Nunukan and Tarakan. Felt at Tawau, Malaysia.

ISCJB ***05*** *19:23:03.6±0.2, 3°.02N±0°.03×117°.82E±0°.04, h33km, mb4.3/48, MS3.7/20, Error ellipse: s-maj=6.4km s-min=3.1km az=146.9*

GCMT ***05*** *19:23:03.9±0.5, 3°.00N±0°.03×117°.74E±0°.03, h23km±2km, MW4.8/64, Moment Tensor Solution. s17,c21; s64,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.07±.17; Mθθ 1.85±.13; Mφφ-1.78±.13; Mrθ-0.36±.15; Mφθ 0.22±.10; Mφr 0.20±.21; Best double couple: M0 1.87200×10^16 NP1:φs312.00000°, δ88.00000°, λ12.00000°. NP2: φs221.00000°, δ78.00000°, λ178.00000°. Principal axes: T 1.9240, Plg10.0000°, Azm177.0000°; N -0.1050, Plg78.0000°, Azm321.0000°; P -1.8200, Plg7.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***05*** *19:23:03.6±0.4, 3°N±3°×11°8E±°, h18km±3km, M4.8/12, mB5.1/5, mb4.7/12, MLv5.0/6, Mw(mB)4.5/5*

BJI ***05*** *19:23:03.4±0.0, 3°.14N×117°.89E, h6km, mb4.5/40, mB4.8/26, Ms4.2/16, Ms7 4.0/14*

KLM ***05*** *19:23:04.0, 2°.90N×117°.77E, h37km, mb4.6*

ISC 05 19:23:05.9±0.4, 3°.06N±0°.05×117°.85E±0°.06, h35km, n117, σ1§71/107, mb4.3/48, MS3.6/22, 1C, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**3.38**	**331**	*e*Pn	**Pn**	**19 23 55.8**	**-0.5**
KKM	**Kota Kinabalu**	**3.38**	**331**	P	**Pn**	**19 23 56.0**	**-0.3**
MPSI	**Mapaga**	**3.39**	**143**	P	**Pn**	**19 23 54.8**	**-1.6**
MPSI				S	**Sn**	**19 24 35.5**	**+0.1**
SGKI	**Sangatta, Kali**	**3.58**	**184**	P	Pn	19 23 43.2	-16
BKB	**Balikpapan**	**4.40**	**193**	P	**Pn**	**19 24 12.3**	**+2.1**
MRSI	**Marisa**	**4.83**	**122**	P	**Pn**	**19 24 16.1**	**0.0**
MRSI				S	**Sn**	**19 25 09.8**	**-1.0**
MTKI	**Muara Teweh, K**	**4.96**	**217**	P	Pn	19 24 32.1	+14
APSI	**Ampana**	**5.48**	**136**	P	**Pn**	**19 24 26.5**	**+1.5**
SBUM	**Sibu**	**5.66**	**264**	*e*Pn	**Pn**	**19 24 24.1**	**-3.5**
SBUM	**Sibu**	**5.66**	**264**	P	**Pn**	**19 24 26.0**	**-1.5**
TTSI	**Tana Toraja**	**6.38**	**162**	P	**Pn**	**19 24 38.1**	**+0.7**
	251nm,0.8s,2μm0.7nm						
LUWI	**Luwuk**	**6.39**	**130**	*e*Pn	**Pn**	**19 24 37.1**	**-0.4**
LUWI	**Luwuk**	**6.39**	**130**	P	**Pn**	**19 24 39.6**	**+2.0**
KMSI	**Cibinong**	**6.61**	**112**	P	**Pn**	**19 24 38.5**	**-2.1**
	166nm,0.8s,2μm0.9nm						
SPSI	**Sidrap Palu**	**7.24**	**165**	P	**Pn**	**19 24 49.0**	**-0.3**
	76nm,1.2s,804nm0.3nm						
KSM	**Kuching**	**7.70**	**258**	*e*Pn	**Pn**	**19 24 51.9**	**-3.7**
BNSI	**Bone**	**7.75**	**163**	P	**Pn**	**19 24 57.5**	**+1.2**
KAPI	**Kappang**	**8.24**	**167**	Pn	**Pn**	**19 25 02.6**	**-0.5**
	7.4nm,0.3s,baz=333,slow=10,SNR=31						
KAPI				LR	LR	19 29 08.1	
	comp=Z,475nm,21.2s,baz=348,slow=45						
KAPI	**Kappang**	**8.24**	**167**	*e*Pn	**Pn**	**19 25 02.0**	**-1.1**
BKSI	**Bulukumba**	**8.63**	**165**	P	**Pn**	**19 25 09.6**	**+1.2**
BSSI	**Bau Bau, Buton**	**9.52**	**164**	P	Pn	19 25 33.1	+13
TNTI	**Ternate**	**9.78**	**103**	*e*Pn	**Pn**	**19 25 25.7**	**+1.6**
TPI	**Tanjungpandan**	**11.72**	**241**	P	**Pn**	**19 25 53.9**	**+3.2**
	16nm,1.3s						
EDFI	**Ende, Flores**	**12.34**	**162**	P	**P**	**19 26 13.4**	**+2.4**
MMRI	**Maumere**	**12.42**	**159**	*e*Pn	**Pn**	**19 25 59.4**	**-0.8**
MMRI	**Maumere**	**12.42**	**159**	P	**Pn**	**19 26 01.0**	**+0.7**
WBSI	**Waikabubak, Su**	**12.71**	**173**	P	**Pn**	**19 26 04.6**	**+0.2**
	104nm,0.7s						
DLV	**T Lat**	**12.80**	**314**	*e*Pn	**Pn**	**19 26 04.3**	**-1.5**
WSI	**Waingapu**	**12.88**	**169**	P	**P**	**19 26 21.2**	**+4.3**
SOEI	**Soe**	**14.25**	**153**	*e*Pn	**Pn**	**19 26 24.4**	**-1.0**
SOEI	**Soe**	**14.25**	**153**	P	P	19 26 39.5	+7.3
BATI	**Baumata**	**14.40**	**156**	Pn	**Pn**	**19 26 27.6**	**+0.3**
	0.4nm,0.3s,baz=273,slow=17,SNR=2.0						
BATI				LR	LR	19 33 41.7	
	comp=Z,516nm,18.3s,baz=356,slow=45						
BATI	**Baumata**	**14.40**	**156**	*e*Pn	**Pn**	**19 26 27.6**	**+0.3**
BATI				*e*Pn	**Pn**	**19 26 27.6**	**+0.3**
BATI	**Baumata**	**14.40**	**156**	P	**Pn**	**19 26 30.0**	**+2.7**
	25nm,1.7s						
FAKI	**Fak Fak**	**15.57**	**112**	*e*Pn	**P**	**19 26 45.2**	**-1.6**
	36nm,1.1s						
MDSI	**Maura Dua**	**15.59**	**241**	P	**P**	**19 26 45.2**	**-1.8**
	16nm,2.0s						
SDSI	**Sungai Dareh**	**16.89**	**257**	P	**P**	**19 27 02.3**	**+0.8**
	29nm,1.6s						
QIZ	**Qiongzhong**	**17.70**	**334**	P	**P**	**19 27 10.6**	**+0.2**
QIZ				sP	**pP**	**19 27 16.7**	**-2.8**
QIZ				S	**S**	**19 30 31.5**	**-0.9**
QIZ				pmax	pmax		
	comp=Z,150nm,6.2s						
QIZ				LR	LR		
	comp=N,230nm,18.6s						
QIZ				LR	LR		
	comp=E,260nm,14.2s						
QIZ				LR	LR		
	comp=Z,170nm,16.7s						
PSI	**Prapat**	**18.91**	**270**	P	**P**	**19 27 23.0**	**-0.9**
	1.1nm,0.3s,baz=330,slow=18,SNR=5.2						
PSI				LR	LR	19 35 15.1	
	comp=Z,271nm,18.3s,baz=104,slow=39						
PANO	**Nakornpanom**	**19.10**	**318**	P	**Pn**	**19 27 33.4**	**+6.5**
	0.5nm,1.1s						
SKNT	**Sakolnakorn**	**19.41**	**316**	P	**Pn**	**19 27 32.0**	**+1.4**
	38nm,1.4s						
KCSI	**Kotacane, Aceh**	**20.05**	**272**	P	**P**	**19 27 35.6**	**-0.7**
	32nm,1.4s						
CHAI	**Chaiyaphum**	**20.16**	**310**	P	Pn	19 27 43.3	+3.8
	37μm,0.8s,315μm						
TPUB	**Ta-pu**	**20.30**	**7**	*e*P	Pn	19 27 40.8	-0.2
	44nm,0.9s						
GSI	**Gunungsitoli**	**20.34**	**266**	*e*P	**P**	**19 27 37.6**	**-1.8**
	89nm,1.1s						
GSI	**Gunungsitoli**	**20.34**	**266**	P	**P**	**19 27 37.5**	**-1.9**
	76nm,1.2s						
YULB	**Yu-li**	**20.48**	**9**	*e*P	Pn	19 27 42.3	-0.9
	62nm,1.4s						
PHET	**Kaeng Krachan**	**20.51**	**300**	P	Pn	19 27 49.9	+6.4
	77μm,0.9s,607μm						
SSLB	**Suanglung**	**20.82**	**8**	*e*P	**P**	**19 27 44.7**	**+0.2**
	34nm,1.1s						
PBKT	**Sadao Pong**	**21.34**	**310**	P	**P**	**19 27 55.2**	**+5.0**
	8.2nm,1.3s,665nm						
YHNB	**Yeheng**	**21.75**	**9**	*e*P	**P**	**19 27 56.1**	**+1.6**
	109nm,1.4s						
FITZ	**Fitzroy Crossi**	**22.39**	**160**	P	**P**	**19 28 01.2**	**-0.1**
	4.3nm,0.9s,baz=340,slow=6.9,SNR=3.2						
FITZ				LR	LR	19 38 17.9	
	comp=Z,127nm,19.9s,baz=339,slow=41						
JAY	**Jayapura**	**23.51**	**103**	LR	LR	19 38 32.1	
	comp=Z,96nm,20.2s,baz=318,slow=40						
CM31	**Chiang Mai Arr**	**24.02**	**311**	*e*P	**P**	**19 28 16.9**	**-0.9**
	19nm,1.6s						
CMAR	**Chiang Mai Arr**	**24.02**	**311**	P	**P**	**19 28 16.9**	**-0.9**
	1.4nm,0.8s,baz=124,slow=7.8,SNR=6.7						
CMAR				LR	LR	19 37 37.5	
	comp=Z,126nm,18.9s,baz=132,slow=37						
PSAB2	**Pilbara Seismi**	**24.55**	**175**	*e*P	**P**	**19 28 20.8**	**-1.8**
	18nm,0.8s						
PSAC2	**Pilbara Seismi**	**24.56**	**175**	*e*P	**P**	**19 28 20.8**	**-1.8**
	38nm,1.0s						
PSAB3	**Pilbara Seismi**	**24.58**	**176**	*e*P	**P**	**19 28 21.1**	**-1.8**
	49nm,1.1s						
KMI	**Kunming**

10.0nm,1.1s
ZALV **Zalesovo Beam** **57.48 338** P **P** **19 32 51.0 -0.4**
1.4nm,0.8s,baz=144,slow=3.2,SNR=3.8
ZALV LR LR 19 57 39.1
comp=Z,34nm,19.0s,baz=70,slow=36
ZAA1 **Zalesovo Array** **57.48 338** *eP* **P** **19 32 51.0 -0.4**
KURBB **Kurchatov Arra** **57.79 332** P **P** **19 32 51.7 -1.9**
1.3nm,1.0s,baz=129,slow=6.7,SNR=10
KURK **Kurchatov** **57.81 332** *eP* **P** **19 32 53.7 -0.1**
11nm,0.9s
PETK **Petropavlovsk-** **59.70 27** P **P** **19 33 07.2 +0.3**
1.5nm,0.7s,baz=211,slow=4.2,SNR=3.6
PEA1 **Petropavlovsk-** **59.70 27** *eP* **P** **19 33 07.2 +0.3**
MA2 **Magadan** **61.81 18** LR LR 20 01 09.7
comp=Z,25nm,20.4s,baz=204,slow=37
BVAR **Borovoye Array** **63.25 330** P **P** **19 33 29.9 -0.9**
1.8nm,0.8s,baz=134,slow=8.5,SNR=12
BRVK **Borovoye** **63.32 330** *eP* **P** **19 33 30.7 -0.6**
11nm,1.0s
GEYT **Alibeck** **64.50 311** P **P** **19 33 38.2 -1.3**
5.6nm,0.5s,baz=139,slow=5.3,SNR=2.5
GEYT LR LR 20 07 52.4
comp=Z,32nm,18.1s,baz=210,slow=42
ABKAR **Akbulak array** **67.19 323** *eP* **P** **19 33 56.5 0.0**
15nm,1.4s
AKTO **Aktyubinsk** **68.80 324** P **P** **19 34 06.1 -0.5**
1.7nm,0.8s,baz=111,slow=6.2,SNR=6.8
TIXI **Tiksi** **68.85 4** P **P** **19 34 05.8 -0.6**
6.2nm,1.0s,baz=151,slow=6.5,SNR=5.0
TIXI **Tiksi** **68.85 4** *eP* **P** **19 34 05.5 -0.9**
4.9nm,0.8s
NRIK **Noril'sk** **69.17 349** P **P** **19 34 08.1 -0.4**
2.7nm,0.6s,baz=129,slow=6.5,SNR=1.9
NRIK LR LR 20 06 37.6
comp=Z,34nm,18.2s,baz=17,slow=38
ARU **Arti** **70.89 330** P **P** **19 34 18.5 -0.8**
3.2nm,0.9s,baz=101,slow=6.6,SNR=3.8
ARU **Arti** **70.89 330** *eP* **P** **19 34 18.4 -0.9**
11nm,1.0s
KBZ **Khabaz** **77.03 314** P **P** **19 34 56.5 +1.0**
0.8nm,0.9s,baz=118,slow=7.4,SNR=2.4
MAW **Mawson** **80.18 199** P **P** **19 35 11.6 -0.6**
1.0nm,0.8s,baz=84,slow=5.6,SNR=3.5
MAW LR LR 20 06 14.5
comp=Z,45nm,19.0s,baz=32,slow=32
MAW **Mawson** **80.18 199** *eP* **P** **19 35 10.7 -1.5**
1.2nm,1.3s
BR101 **Keskin Array S** **83.60 309** *eP* **P** **19 35 30.5 -0.6**
BRTR **Keskin Array B** **83.60 309** P **P** **19 35 30.5 -0.6**
0.6nm,0.8s,baz=64,slow=6.6,SNR=4.2
BRTR LR LR 20 18 17.3
comp=Z,18nm,18.4s,baz=96,slow=40
VNDA **Vanda** **84.00 171** P **P** **19 35 31.1 -1.1**
0.5nm,0.8s,baz=343,slow=4.7,SNR=3.7
VNDA LR LR 20 14 52.8
comp=Z,26nm,18.1s,baz=324,slow=37
VNDA **Vanda** **84.00 171** *eP* **P** **19 35 30.7 -1.5**
AKASG **Malin Array Be** **86.78 320** P **P** **19 35 47.5 +1.0**
0.2nm,0.3s,baz=72,slow=3.3,SNR=3.6
ARCES **ARCESS Array B** **87.98 339** P **P** **19 35 52.8 +0.8**
1.9nm,0.8s,baz=67,slow=7.9,SNR=4.9
FIA0 **FINESS Array S** **88.18 331** *eP* **P** **19 35 54.2 +1.1**
FINES **FINESS Array B** **88.18 331** P **P** **19 35 54.2 +1.1**
0.8nm,0.8s,baz=120,slow=9.8,SNR=2.4
FINES LR LR 20 17 19.1
comp=Z,32nm,18.4s,baz=76,slow=37
ILAR **Eielson Array** **89.50 25** P **P** **19 36 00.9 +1.7**
0.3nm,0.7s,baz=264,slow=4.4,SNR=3.1
ILB **Eielson Array** **89.50 25** *eP* **P** **19 36 00.9 +1.7**
GERES **GERESS Array B** **96.97 320** LR LR 20 25 02.1
comp=Z,52nm,18.0s,baz=86,slow=38

MAN 05 19:23:57.1,9°.01N×123°.75E,h432km,mb4.5,ML3.4,
MS3.2,1C,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**1.84**	**165**	⇑*iP*	P	19 24 55.7	+0.5

IDC 05 19:35:43.1±2.1,6°.15S×130°.08E,h0km,mb3.7/2,
mb1 3.8/4,mb1mx3.4/39,mbtmp3.7/4,ML4.4/3,Error
ellipse: s-maj=110.4km s-min=25.6km az=77.0,Banda
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.64**	**200**	Pn	Pn	19 38 44.9	+0.5
FITZ	0.2nm,0.3s,baz=20,slow=12,SNR=10			Sn	Sn	19 40 48.4	-18
WRA	**Warramunga Arr**	**14.32**	**164**	Pn	Pn	19 39 06.7	-0.7
WRA	0.2nm,0.3s,baz=90,slow=20,SNR=3.9 15nm,0.3s,baz=337,slow=8.4,SNR=2.2			Sn	Sn	19 41 30.7	-16
ASAR	**Alice Springs**	**17.80**	**168**	P	Pn	19 39 52.4	-0.1
MKAR	0.3nm,0.3s,baz=347,slow=10,SNR=24 **Makanchi Array**	**67.57**	**327**	P	P	19 46 41.9	+0.3
KURBB	0.4nm,0.4s,baz=115,slow=7.9,SNR=8.1 **Kurchatov Arra**	**71.83**	**328**	P	P	19 47 07.4	-0.3
	0.4nm,0.5s,baz=121,slow=5.0,SNR=5.0						

*IDC **05** 19:39:59.8±1.1,27°.68N×142°.79E,h0km,mb3.9/11,*
mb1 4.0/15,mb1mx3.8/50,mbtmp3.9/15,ML3.2/4,MS3.7/6,
Ms1 3.7/6,ms1mx3.1/39,Error ellipse: s-maj=35.0km
s-min=15.4km az=83.0
*ISCJB **05** 19:40:01.9±0.6,27°.83N±0°.04×142°.92E±0°.10,h27km,*
mb4.3/22,MS3.9/5,Error ellipse: s-maj=12.4km
s-min=5.3km az=10.5
*NEIC **05** 19:40:01.2±0.8,27°.67N×142°.81E,h11km±6km,mb4.5/11,*
Error ellipse: s-maj=25.6km s-min=19.4km az=100.0
*JMA **05** 19:40:02.9±0.1,27°.79N×142°.94E,h26km,M3.9*
ISC 05 19:40:03.9±0.9,27°.79N±0°.06×142°.8E±0°.1,h27km,n48,
σ1§10/45,mb4.3/22,MS3.9/5,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.89**	**219**	P	**Pn**	**19 40 20.6**	**-0.1**
CBIJ				*eS*	**Sn**	**19 40 33.5**	**+0.8**
JHH2	**Haha-jima-NKT2**	**1.29**	**207**	P	**Pb**	**19 40 26.3**	**-1.2**
BSO1	**Boso 1**	**7.02**	**347**	P	**Pn**	**19 41 45.9**	**+1.5**
BSO1				*eS*	**Sn**	**19 43 01.7**	**-1.4**
BSO3	**Boso 3**	**7.26**	**345**	P	**Pn**	**19 41 48.5**	**+0.5**
JOD2	**Odawara 2**	**8.10**	**338**	P	**Pn**	**19 42 01.7**	**+1.9**
JHU	**Hanno**	**8.58**	**340**	P	**Pn**	**19 42 06.3**	**-0.1**
JHU				*eS*	**Sn**	**19 43 39.0**	**-3.3**
JAG	**Ashikaga**	**9.07**	**343**	P	**Pn**	**19 42 11.7**	**-1.4**
MJAR	**Matsushiro Arr**	**9.56**	**337**	Pn	**Pn**	**19 42 19.9**	**+0.1**
	0.2nm,0.3s,baz=157,slow=9.1,SNR=13						
MAJO	**Matsushiro**	**9.56**	**337**	*e*Pn	**Pn**	**19 42 17.5**	**-2.3**
MJB9	**Matsu-Tunnel**	**9.56**	**337**	*e*Pn	**Pn**	**19 42 21.8**	**+1.9**
JNU	**Nakatsue**	**11.59**	**300**	LR	LR	19 46 59.9	
	comp=Z,76nm,18.7s,baz=166,slow=36						
KSRS	**Korea Array**	**15.80**	**311**	Pn	**Pn**	**19 43 45.6**	**+1.1**
	0.3nm,0.3s,baz=116,slow=13,SNR=7.8						
KS15	**Wonju Array Si**	**15.82**	**311**	*e*Pn	**Pn**	**19 43 45.6**	**+0.8**
	14nm,1.7s						
ASAJ	**Asahikawa**	**16.29**	**359**	Pn	**Pn**	**19 43 50.1**	**-0.7**
	0.1nm,0.3s,baz=157,slow=16,SNR=2.3						
USRK	**Ussuriysk Ar.**	**18.54**	**335**	P	**P**	**19 44 18.1**	**-0.3**
	0.2nm,0.3s,baz=180,slow=10,SNR=8.0						
KLR	**Kul'dur**	**23.04**	**341**	P	**P**	**19 45 07.4**	**+0.5**
	1.1nm,0.6s,baz=151,slow=8.9,SNR=4.3						
SONA0	**Songino Array**	**34.61**	**315**	*eP*	**P**	**19 46 50.8**	**0.0**
SONM	**Songino Array**	**34.61**	**315**	P	**P**	**19 46 50.8**	**0.0**
	1.2nm,0.7s,baz=132,slow=8.6,SNR=4.9						
TLY	**Talaya**	**37.76**	**320**	*eP*	**P**	**19 47 17.8**	**+0.3**
	8.7nm,1.0s						
CM31	**Chiang Mai Arr**	**41.22**	**267**	*eP*	**P**	**19 47 46.1**	**-0.7**
	18nm,1.6s						
CMAR	**Chiang Mai Arr**	**41.22**	**267**	P	**P**	**19 47 46.1**	**-0.7**
	0.5nm,0.2s,baz=61,slow=7.3,SNR=5.1						
WR1	**Warramunga Arr**	**48.16**	**191**	*eP*	**P**	**19 48 40.7**	**-1.2**
WRA	**Warramunga Arr**	**48.16**	**191**	P	**P**	**19 48 40.7**	**-1.2**
	35nm,0.3s,baz=4.9,slow=8.8,SNR=2.1						
FITZ	**Fitzroy Crossi**	**48.56**	**202**	P	**P**	**19 48 44.2**	**-0.8**
	3.5nm,1.1s,baz=31,slow=7.9,SNR=2.4						
ZAA1	**Zalesovo Array**	**49.34**	**319**	*eP*	**P**	**19 48 51.8**	**+1.2**
ZALV	**Zalesovo Beam**	**49.34**	**319**	P	**P**	**19 48 51.8**	**+1.2**
	2.2nm,0.8s,baz=113,slow=7.1,SNR=8.1						
MK31	**Makanchi Array**	**50.47**	**309**	*eP*	**P**	**19 49 00.1**	**+0.7**
	2.5nm,1.1s						
MK32	**Makanchi Array**	**50.47**	**309**	*eP*	**P**	**19 48 59.9**	**+0.5**
MKAR	**Makanchi Array**	**50.47**	**309**	P	**P**	**19 48 59.9**	**+0.5**
	0.9nm,0.7s,baz=88,slow=8.4,SNR=8.8						
MAKZ	**Makanchi**	**50.69**	**309**	*eP*	**P**	**19 49 01.1**	**+0.1**
	4.7nm,1.4s						
ASAR	**Alice Springs**	**51.88**	**190**	P	**P**	**19 49 09.0**	**-1.1**
	0.4nm,0.3s,baz=5.0,slow=6.8,SNR=9.5						
KURK	**Kurchatov**	**52.90**	**314**	*eP*	**P**	**19 49 18.2**	**+0.7**
	12nm,1.1s						
KURBB	**Kurchatov Arra**	**52.96**	**314**	P	**P**	**19 49 18.6**	**+0.7**
	4.6nm,0.7s,baz=91,slow=7.5,SNR=46						
KK31	**Karatay Array**	**59.14**	**306**	*eP*	**P**	**19 50 03.4**	**+1.1**
	5.4nm,1.1s						
KKAR	**Karatay Array**	**59.14**	**306**	*eP*	**P**	**19 50 02.2**	**0.0**
	5.4nm,1.1s						
ARU	**Arti**	**64.22**	**322**	*eP*	**P**	**19 50 36.4**	**+0.2**
	12nm,1.4s						
ABKAR	**Akbulak array**	**65.02**	**314**	*eP*	**P**	**19 50 42.4**	**+0.9**
	4.4nm,1.0s						
DLBC	**Dease Lake**	**65.32**	**35**	LR	LR	20 17 06.3	
	comp=Z,35nm,21.3s,baz=121,slow=34						
DLBC	**Dease Lake**	**65.32**	**35**	*eP*	**P**	**19 50 43.3**	**-0.1**
	11nm,1.6s						
YKA	**Yellowknife Ar**	**71.27**	**29**	P	**P**	**19 51 21.8**	**+1.3**
	0.2nm,0.3s,baz=304,slow=4.9,SNR=3.7						
YKB5	**Yellowknife Ar**	**71.27**	**29**	*eP*	**P**	**19 51 21.8**	**+1.3**
ARCES	**ARCESS Array B**	**73.07**	**341**	LR	LR	20 26 20.2	
	comp=Z,55nm,21.9s,baz=338,slow=38						
YBH	**Yreka Blue Hor**	**75.18**	**51**	LR	LR	20 16 52.4	
	comp=Z,126nm,22.0s,baz=272,slow=29						
FIA0	**FINESS Array S**	**77.57**	**334**	*eP*	**P**	**19 51 57.6**	**+0.4**
FINES	**FINESS Array B**	**77.57**	**334**	P	**P**	**19 51 57.6**	**+0.4**
	0.7nm,0.6s,baz=66,slow=4.8,SNR=4.3						
KBZ	**Khabaz**	**77.95**	**313**	P	**P**	**19 51 59.9**	**+0.3**
	2.3nm,0.8s,baz=134,slow=1.3,SNR=6.9						
NVAR	**Mina Array Bea**	**79.65**	**52**	LR	LR	20 20 41.9	
	comp=Z,60nm,20.9s,baz=235,slow=31						
PDAR	**Pinedale Array**	**83.33**	**45**	LR	LR	20 25 45.7	
	comp=Z,46nm,19.0s,slow=33						

*IDC **05** 19:48:36.6±390.0,22°.84S×68°.54W,h0km,Error ellipse:*
s-maj=181.3km s-min=134.2km az=10.0
SJA 05 19:49:05.0±0.5,31°.31S×68°.57W,h103km±1km,ML2.1,
MW2.8,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.08**	**106**	*eP*	Pn	19 49 20.0	+0.6
RTLL				IAML		19 49 20.2	
	comp=Z,119nm,0.1s						
RTLL				*eS*	Sn	19 49 31.1	+1.0
ZON	**Zonda**	**0.26**	**202**	*eP*	Pn	19 49 20.6	+0.7
ZON				IAML		19 49 20.8	
	comp=Z,32nm,0.1s						
ZON				*eS*	Sn	19 49 32.0	+1.0
AMOG	**MOGNA**	**0.37**	**10**	*eP*	Pn	19 49 21.4	+1.0
AMOG				*eS*	Sn	19 49 32.8	+0.9
CFA	**Coronel Fontan**	**0.41**	**137**	*eP*	Pn	19 49 21.3	+0.7
CFA				*eS*	Sn	19 49 33.2	+1.0
RTCV	**Cerro Valdivia**	**0.56**	**178**	*eP*	Pn	19 49 22.3	+0.7
RTCV				*eS*	Sn	19 49 34.7	+0.7
ACCO	**Cerro Coronel**	**0.83**	**329**	*eP*	Pn	19 49 25.5	+1.2
AUSP	**Uspallata**	**1.15**	**217**	*eP*	Pn	19 49 28.9	+1.3
ACDV	**Cuesta del Vie**	**1.23**	**337**	*eP*	Pn	19 49 29.4	+1.1
ASAL	**Salagasta**	**1.30**	**190**	*eP*	Pn	19 49 30.4	+1.2
AROD	**Rodeo**	**1.38**	**325**	*eP*	Pn	19 49 31.5	+1.2
ACAN	**Cantantal**	**1.52**	**130**	*eP*	Pn	19 49 33.1	+1.4
ARCO	**CERRO ARCO**	**1.56**	**191**	*eP*	Pn	19 49 33.4	+1.0
ARCO				IAML		19 49 57.0	
	comp=Z,17nm,0.2s						
AAGR	**Agrelo**	**1.79**	**187**	*eP*	Pn	19 49 36.3	+1.2
AGUA	**GÜANDACOL**	**1.81**	**2**	*eP*	Pn	19 49 36.9	+1.5
APLL	**PUNTA DE LOS L**	**1.98**	**63**	*eP*	Pn	19 49 38.4	+1.0
APLL				IAML		19 50 03.9	
	comp=Z,12nm,0.2s						
GO04	**Tololo Observa**	**2.23**	**300**	*eP*	Pn	19 49 42.2	+1.3
ACLC	**CERRO LA CRUZ**	**2.34**	**37**	*eP*	Pn	19 49 43.5	+1.2
TCA	**Tanti**	**3.40**	**92**	*eP*	Pn	19 49 57.4	+1.2
I41PY	**VILLA FLORIDA**	**11.04**	**66**	*i*		20 51 40.0	
	baz=287,slow=304,SNR=4.3						
I08BO	**LAS PENAS INFR**	**15.02**	**0**	*i*		20 29 10.0	
	baz=182,slow=324,SNR=1.8						
I09BR	**BRASILIA INFRA**	**24.40**	**55**	*i*		21 57 50.0	
	baz=246,slow=325,SNR=1.6						

JMA 05 19:55:43.6,24°.69N×123°.34E,h14km±2km,M1.5,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.38**	**233**	P	Pg	19 55 51.1	-0.1
YOJ				S	Sg	19 55 56.3	-0.1
JYNG	**Yonagunijimaku**	**0.43**	**237**	P	Pg	19 55 52.2	0.0
JYNG				S	Sg	19 55 58.2	+0.2
IRIF	**Iriomote-Funau**	**0.50**	**135**	P	Pg	19 55 53.4	-0.1
IRIF				S	Sg	19 56 00.4	+0.2
JKRS	**Kuro-shima**	**0.76**	**126**	P	Pg	19 55 58.2	-0.1
JKRS				S	Sg	19 56 08.5	+0.2
HATJ	**Hateruma jima**	**0.76**	**146**	P	Pg	19 55 58.0	-0.4
HATJ				*eS*	Sg	19 56 07.9	-0.5
JIJ	**Ishigaki jima**	**0.80**	**114**	P	Pg	19 55 58.6	-0.5
JIJ				S	Sg	19 56 08.8	-0.9
JISG	**Ishigakijimahi**	**0.89**	**96**	P	Pb	19 56 00.5	-0.3
JISG				S	Sg	19 56 11.9	-0.6
JTJ	**Tarama**	**1.24**	**92**	P	Pn	19 56 06.3	-0.2
JTJ				S	Sb	19 56 22.0	-0.6

TAP 05 19:56:09.8,24°.35N×121°.45E,h10km,ML2.2,6C,B,
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.10**	**322**	P	Pg	19 56 13.0	+0.6
NNSB	baz=322			*eS*	Sg	19 56 14.5	+0.1
NNS	**Nan Shan**	**0.11**	**322**	P	Pg	19 56 13.3	+0.7
NNS	baz=324			*eS*	Sg	19 56 15.1	+0.3
ETLH	**Xiulin Townshi**	**0.15**	**168**	*eP*	Pg	19 56 14.4	+1.2
ETLH	baz=167			*eS*	Sg	19 56 16.6	+1.1
NACB	**Ninganchiao**	**0.22**	**143**	*eP*	Pg	19 56 15.8	+1.4
NACB	baz=142			S	Sg	19 56 19.2	+1.7
NDT	**Datong Townshi**	**0.26**	**13**	⇑*iP*	Pb	19 56 16.0	-0.5
NDT	baz=13			*eS*	Sg	19 56 19.6	+1.1
WHF	**Hehuan Shan**	**0.27**	**219**	⇑*iP*	Pg	19 56 16.1	+0.7
WHF	baz=217			*eS*	Sg	19 56 19.7	+0.6
TWT	**Tachien**	**0.27**	**249**	P	Pb	19 56 16.4	-0.4
TWT	baz=248			*eS*	Sb	19 56 20.4	-1.1
ENA	**Nanau**	**0.28**	**74**	⇑*iP*	Pb	19 56 16.4	-0.5
ENA	baz=74			*eS*	Sb	19 56 21.1	-0.6
TDCB	**Techi**	**0.28**	**250**	*eP*	Pb	19 56 16.4	-0.6
TDCB	baz=249			*eS*	Sg	19 56 19.9	+0.5
TWD	**Chiawan**	**0.30**	**153**	*eP*	Pb	19 56 17.3	0.0
TWD	baz=151			*eS*	Sb	19 56 21.6	-0.7
ENTT	**Nioudou**	**0.31**	**20**	⇑*iP*	Pb	19 56 17.0	-0.4
ENTT	baz=21			*eS*	Sb	19 56 21.7	-0.8
YHNB	**Yeheng**	**0.32**	**348**	*eP*	Pb	19 56 17.5	-0.2
YHNB	baz=348			*eS*	Sg	19 56 21.4	+0.7
NSK	**Sanguang**	**0.33**	**346**	P	Pb	19 56 17.7	-0.2
NSK	baz=346			*eS*	Sg	19 56 21.6	+0.7
CHGB	**Renai**	**0.38**	**221**	*eP*	Pg	19 56 18.1	+0.6
	baz=220						
CHGB				*eS*	Sb	19 56 23.9	-0.9
TWE	**Neicheng**	**0.42**	**28**	⇑*iP*	Pb	19 56 19.2	-0.1
TWE	baz=30			*eS*	Sb	19 56 25.2	-0.5
NWLT	**Wulai**	**0.43**	**7**	*iP*	Pb	19 56 19.4	-0.1
NWLT	baz=6.0			*eS*	Sg	19 56 24.4	+0.5
TWC	**Suao**	**0.45**	**55**	P	Pb	19 56 19.4	-0.3
TWC	baz=55			*eS*	Sb	19 56 25.8	-0.7
WHP	**Taichung City**	**0.46**	**261**	*eP*	Pb	19 56 20.3	+0.2
OWD	baz=260 **Renai**	**0.47**	**212**	⇑P	Pg	19 56 19.3	+0.4
OWD	baz=212			S	Sb	19 56 27.1	-0.1
LIOB	**Emei**	**0.49**	**307**	*eP*	Pb	19 56 21.3	+0.8
LIOB	baz=306			S	Sb	19 56 28.0	+0.2
NSTT	**Nanjuang**	**0.49**	**304**	*eP*	Pb	19 56 21.1	+0.5
NSTT	baz=304			S	Sb	19 56 27.6	-0.3
ILA	**Ilan**	**0.49**	**33**	*eP*	Pb	19 56 20.4	-0.2
ESL	baz=34 **Shilin**	**0.54**	**181**	P	Pb	19 56 21.0	-0.2
ESL	baz=180			*eS*	Sb	19 56 28.6	-0.4
DPDB	**Guoxing**	**0.57**	**237**	*eP*	Pb	19 56 22.1	+0.1
TWQ1	baz=236 **Liyutan**	**0.62**	**270**	*eP*	Pb	19 56 23.2	+0.6
EOS1	baz=269 **EOS1**	**0.65**	**72**	*eP*	Pb	19 56 24.0	+0.8
EOS1	baz=72			S	Sb	19 56 33.0	+0.7
VWDT	**VWDT**	**0.66**	**205**	*eP*	Pb	19 56 22.9	-0.4
VWDT	baz=205			*eS*	Sb	19 56 33.5	+1.0
EGS	baz=42	**0.66**	**42**	*eP*	Pb	19 56 24.1	+0.7
EGS	baz=42			*eS*	Sb	19 56 32.8	+0.2
EGFH	**Guangfu**	**0.68**	**182**	P	Pb	19 56 23.8	0.0
SMLT	baz=181 **Sun Moon Lake**	**0.68**	**227**	P	Pb	19 56 23.9	0.0
TYC	baz=226 **Yuchr**	**0.70**	**231**	P	Pb	19 56 24.1	+0.1
TIPB	baz=229 **Shuangxi**	**0.71**	**29**	P	Pb	19 56 24.3	+0.1
TIPB	baz=29			*eS*	Sb	19 56 33.6	-0.5
SSLB	**Suanglung**	**0.72**	**219**	*eP*	Pg	19 56 24.0	+0.3
SSLB	baz=218			S	Sb	19 56 35.0	+0.6
YM01	**YM01**	**0.80**	**8**	*eP*	Pn	19 56 27.2	0.0
YM01	baz=7.0			S	Sb	19 56 37.5	+0.8
YM05	baz=7.0 **YM05**	**0.82**	**7**	*eP*	Pn	19 56 27.4	0.0
YM03	baz=7.0 **YM03**	**0.83**	**6**	*eP*	Pn	19 56 28.0	+0.4
YM07	baz=5.0 **YM07**	**0.84**	**11**	*eP*	Pn	19 56 27.9	+0.2
EHY	baz=10.0 **Hungye**	**0.85**	**188**	P	Pb	19 56 26.8	+0.2
EHY	baz=187			*eS*	Sb	19 56 38.7	+0.6
WHYT	**Xinyi Township**	**0.85**	**220**	*eP*	Pb	19 56 26.6	-0.1
HGSD	baz=219 **Ruisui**	**0.85**	**181**	*eP*	Pn	19 56 27.9	0.0
YULB	baz=181 **Yu-li**	**0.96**	**188**	*eP*	Pn	19 56 29.3	-0.1
YULB	baz=188			S	Sn	19 56 42.5	-0.7
TWF1	**Yuli**	**1.00**	**188**	*eP*	Pn	19 56 30.1	+0.1
TWF1	baz=187			S	Sn	19 56 43.6	-0.5
ALS	baz=187 **Alishan**	**1.02**	**215**	*eP*	Pn	19 56 30.1	-0.3
CHN5	baz=214 **Tsauling**	**1.03**	**223**	*eP*	Pn	19 56 31.2	+0.8
ELDTW	baz=223 **Lidau**	**1.22**	**199**	*eP*	Pg	19 56 33.3	0.0
CHN4	baz=198 **Tsaushan**	**1.27**	**218**	*eP*	Pg	19 56 35.4	+1.2
TPUB	baz=218 **Ta-pu**	**1.29**	**216**	*eP*	Pg	19 56 35.2	+0.7
WTP	baz=215 **Ta-pu**	**1.34**	**215**	*eP*	Pg	19 56 36.5	+1.0
STYT	baz=214 **Tauyuan**	**1.34**	**208**	*eP*	Pg	19 56 37.0	+1.5
TWK	baz=207 **Hsinying**	**1.39**	**219**	*eP*	Pg	19 56 38.0	+1.4
	baz=218						

IDC 05 19:58:21.7±0.8,17°.02N×146°.20E,h0km,mb3.7/8,
mb1 4.0/9,mb1mx3.7/45,mbtmp3.8/9,ML3.7/1,MS2.9/4,
Ms1 2.9/4,ms1mx2.6/39,Error ellipse: s-maj=28.5km
s-min=17.3km az=100.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.64**	**201**	Pn	Pn	19 59 18.1	-1.3
GUMO	6.0nm,0.3s,baz=10,slow=19,SNR=3.1			LR	LR	20 00 24.1	
	comp=Z,68nm,21.1s,baz=8.5,slow=34						
H11S3	**WAKE ISLAND Hy 19.57**		**83**	T	T	20 23 22.7	
	baz=269,slow=75,SNR=277						
H11S1	**WAKE ISLAND Hy 19.58**		**83**	T	T	20 23 22.5	
	baz=269,slow=75,SNR=206						
H11S2	**WAKE ISLAND Hy 19.59**		**83**	T	T	20 23 22.8	
	baz=269,slow=75,SNR=278						
H11N1	**WAKE ISLAND Hy 19.82**		**79**	T	T	20 23 42.5	
	baz=265,slow=75,SNR=674						
H11N2	**WAKE ISLAND Hy 19.83**		**79**	T	T	20 23 42.9	
	baz=265,slow=75,SNR=437						
H11N3	**WAKE ISLAND Hy 19.84**		**79**	T	T	20 23 43.8	
	baz=265,slow=75,SNR=662						
MJAR	**Matsushiro Arr**	**20.70**	**342**	P	P	20 03 02.8	-0.8
	1.0nm,0.8s,baz=177,slow=10,SNR=4.5						
TGY	**Tagaytay City**	**24.50**	**267**	LR	LR	20 12 31.7	
	comp=Z,19nm,19.9s,baz=130,slow=35						
KSRS	**Korea Array**	**25.95**	**325**	P	P	20 03 56.6	+0.7
	1.5nm,0.9s,baz=153,slow=11,SNR=12						
WRA	**Warramunga Arr**	**38.53**	**198**	P	P	20 05 46.3	+0.1
	88nm,0.3s,baz=4.8,slow=6.4,SNR=3.2						
ASAR	**Alice Springs**	**42.18**	**197**	P	P	20 06 15.9	-0.5
	0.5nm,0.8s,baz=11,slow=10,SNR=3.1						
CMAR	**Chiang Mai Arr**	**44.93**	**279**	P	P	20 06 39.1	+0.4
	3.0nm,1.0s,baz=71,slow=5.8,SNR=12						
CMAR				LR	LR	20 25 52.0	
	comp=Z,6.4nm,18.2s,baz=185,slow=37						
MKAR	**Makanchi Array**	**59.97**	**315**	P	P	20 08 29.3	-0.7
	0.5nm,0.7s,baz=91,slow=10,SNR=5.0						
URZ	**Urewera**	**62.17**	**153**	LR	LR	20 30 54.6	
	comp=Z,60nm,19.3s,baz=104,slow=31						
ILAR	**Eielson Array**	**64.94**	**26**	P	P	20 09 02.8	-0.1
	0.8nm,0.9s,baz=266,slow=5.0,SNR=6.5						
INK	**Inuvik**	**70.73**	**23**	P	P	20 09 38.9	-0.4
	1.4nm,0.9s,baz=238,slow=1.9,SNR=4.2						
YKA	**Yellowknife Ar**	**79.25**	**28**	P	P	20 10 28.3	-0.3
	0.7nm,0.7s,baz=290,slow=5.9,SNR=5.3						
LPAZ	**La Paz**	**147.13**	**94**	PKPbc	PKPab	20 18 09.3	-0.7
	0.6nm,0.5s,baz=171,slow=1.5,SNR=3.9						

*ISCJB **05** 20:04:20.7±0.3,43°.81N±0°.02×105°.28W±0°.04,h0km,*
mb4.1/3,Error ellipse: s-maj=4.0km s-min=3.4km az=16.3
*ANF **05** 20:04:22.3±0.3,43°.77N×105°.36W,ML3.9/13,Error*
ellipse: s-maj=4.5km s-min=2.9km az=94.0
*NEIC **05** 20:04:22.4±0.3,43°.84N×105°.29W,h0km,ML3.6,Error*

NEIC 52 km [33 miles] SSE of Gillette.
*IDC **05** 20:04:23.2±0.9, 44°.10N×105°.82W, h0km, mb4.0/2, mb1 3.7/8, mb1mx3.5/42, mbtmp3.5/8, ML3.3/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/43, Error ellipse: s-maj=24.6km s-min=7.9km az=144.0*

ISC 05 20:04:21.7±0.6, 43°.83N±0°.04×105°.25W±0°.04, h0km, n108, σ1§42/111, mb4.2/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.92**	**72**	*e*P	Pg	20 04 23.3	-16
RSSD	**Black Hills**	**0.92**	**72**	P	**Pb**	**20 04 41.6**	**+0.8**
	baz=253						
RSSD				S	**Sb**	**20 04 56.2**	**+2.4**
	baz=253						
K22A	**Casper**	**1.50**	**219**	P	**Pn**	**20 04 47.9**	**-2.3**
	baz=36						
K22A				S	**Sg**	**20 05 08.6**	**-1.4**
	baz=36						
PHWY	**Pilot Hill**	**2.54**	**183**	*e*Pn	**Pn**	**20 05 04.5**	**0.0**
RWWY	**Rawlins**	**2.58**	**215**	*e*Pn	**Pn**	**20 05 05.4**	**+0.3**
LAO	**LASA Array**	**2.94**	**347**	*e*Pn	**Pn**	**20 05 10.5**	**+0.8**
LAO	**LASA Array**	**2.94**	**347**	P	**Pn**	**20 05 10.9**	**+1.2**
	baz=167						
LAO				Sb	**Sg**	**20 05 55.1**	**-1.0**
	baz=167						
N23A	**Red Feather La**	**2.98**	**190**	*e*Pn	**Pn**	**20 05 10.7**	**+0.2**
N23A	**Red Feather La**	**2.98**	**190**	P	**Pn**	**20 05 10.2**	**-0.4**
	baz=9.0,SNR=46						
N23A				S	**Sn**	**20 05 46.8**	**-0.4**
	baz=9.0						
RLMT	**Red Lodge**	**3.15**	**296**	*e*Pn	**Pn**	**20 05 12.3**	**-0.5**
RLMT	**Red Lodge**	**3.15**	**296**	P	**Pn**	**20 05 13.1**	**+0.3**
	baz=113,SNR=24						
PD31	**Pinedale Array**	**3.32**	**253**	*e*Pn	**Pn**	**20 05 15.2**	**0.0**
PD31				*e*Lg	Lg	20 05 58.9	
PDAR	**Pinedale Array**	**3.32**	**253**	Pn	**Pn**	**20 05 15.2**	**0.0**
	3.8nm,0.3s,baz=64,slow=17,SNR=16						
PDAR				Lg	Lg	20 05 58.9	
	7.4nm,0.3s,baz=72,slow=35,SNR=7.8						
BW06	**Boulder Array**	**3.32**	**253**	P	**Pn**	**20 05 15.8**	**+0.6**
	baz=69,SNR=21						
GCMT	**Greycliff**	**3.70**	**303**	*e*Pn	**Pn**	**20 05 21.2**	**+0.9**
OGNE	**Ogallala**	**3.75**	**139**	*e*Pn	**Pn**	**20 05 22.2**	**+1.3**
OGNE	**Ogallala**	**3.75**	**139**	P	**Pn**	**20 05 21.8**	**+1.0**
	baz=321						
LOHW	**Long Hollow**	**3.88**	**269**	*e*Pn	**Pn**	**20 05 22.4**	**-0.5**
FLWY	**Flagg Ranch**	**3.94**	**275**	*e*Pn	**Pn**	**20 05 23.6**	**0.0**
MOOW	**Moose Ponds**	**3.98**	**271**	*e*Pn	**Pn**	**20 05 20.5**	**-3.7**
SNOW	**Snow King Moun**	**4.01**	**267**	*e*Pn	**Pn**	**20 05 21.9**	**-2.7**
YPP	**Pitchstone Pla**	**4.03**	**278**	*e*Pn	**Pn**	**20 05 24.9**	**0.0**
ISCO	**Idaho Springs**	**4.04**	**184**	*e*Pn	**Pn**	**20 05 25.4**	**+0.2**
ISCO	**Idaho Springs**	**4.04**	**184**	P	**Pn**	**20 05 25.1**	**0.0**
	baz=3.3						
YFT	**Old Faithful**	**4.07**	**281**	*e*Pn	**Pn**	**20 05 24.1**	**-1.3**
REDW	**Red Top Meadow**	**4.09**	**265**	*e*Pn	**Pn**	**20 05 27.8**	**+2.0**
IMW	**Indian Meadow**	**4.11**	**273**	*e*Pn	**Pn**	**20 05 27.2**	**+1.1**
YHH	**Holmes Hill**	**4.13**	**285**	*e*Pn	**Pn**	**20 05 25.1**	**-1.2**
TPAW	**Teton Pass**	**4.15**	**267**	*e*Pn	**Pn**	**20 05 25.7**	**-0.9**
YMR	**Madison River**	**4.19**	**283**	*e*Pn	**Pn**	**20 05 25.0**	**-2.1**
FXWY	**Fox Creek**	**4.19**	**269**	*e*Pn	**Pn**	**20 05 28.3**	**+1.2**
O20A	**White River Ci**	**4.32**	**212**	*e*Pn	**Pn**	**20 05 29.1**	**+0.3**
O20A	**White River Ci**	**4.32**	**212**	P	**Pn**	**20 05 28.3**	**-0.5**
	baz=30,SNR=8.1						
YHB	**Horse Butte**	**4.36**	**284**	*e*Pn	**Pn**	**20 05 29.8**	**+0.3**
AHID	**Auburn Hatcher**	**4.40**	**258**	*e*Pn	**Pn**	**20 05 31.0**	**+1.0**
QLMT	**Earthquake Lak**	**4.54**	**285**	*e*Pn	**Pn**	**20 05 32.0**	**+0.1**
DGMT	**Dagmar**	**4.70**	**9**	*e*Pn	**Pn**	**20 05 35.1**	**+1.3**
DGMT	**Dagmar**	**4.70**	**9**	P	**Pn**	**20 05 36.4**	**+2.5**
	baz=190						
DGMT				Sb	**Sg**	**20 06 48.8**	**-3.7**
	baz=190						
SMCO	**Snowmass**	**4.83**	**196**	*e*Pn	**Pn**	**20 05 36.9**	**+0.8**
BOZ	**Bozeman (W)**	**4.87**	**293**	*e*Pn	**Pn**	**20 05 36.2**	**-0.3**
BOZ	**Bozeman (W)**	**4.87**	**293**	Sb	**Sb**	**20 06 51.1**	**+3.8**
	baz=110						
HWUT	**Hardware Ranch**	**5.16**	**247**	*e*Pn	**Pn**	**20 05 42.5**	**+2.2**
KSCO	**Kaye Shedlock'**	**5.21**	**157**	*e*Pn	**Pn**	**20 05 40.8**	**-0.2**
KSCO	**Kaye Shedlock'**	**5.21**	**157**	P	**Pn**	**20 05 41.6**	**+0.6**
	baz=338						
EGMT	**Eagleton**	**5.24**	**325**	*e*Pn	**Pn**	**20 05 42.2**	**+0.9**
EGMT	**Eagleton**	**5.24**	**325**	P	**Pn**	**20 05 42.5**	**+1.1**
	baz=142						
TCUT	**Toone Canyon**	**5.30**	**241**	*e*Pn	**Pn**	**20 05 42.3**	**-0.1**
HRY	**Holter Researc**	**5.46**	**304**	*e*Pn	**Pn**	**20 05 45.8**	**+1.3**
DLMT	**Dillon**	**5.46**	**289**	*e*Pn	**Pn**	**20 05 45.9**	**+1.4**
LRM	**Limekiln Ridge**	**5.49**	**294**	*e*Pn	**Pn**	**20 05 49.0**	**+4.0**
MCMT	**McKenzie Canyo**	**5.54**	**283**	*e*Pn	**Pn**	**20 05 46.2**	**+0.5**
JLU	**Jordanelle**	**5.62**	**237**	*e*Pn	**Pn**	**20 05 48.0**	**+1.2**
MDND	**Maddock**	**5.63**	**43**	*e*Pn	**Pn**	**20 05 47.6**	**+1.0**
MDND	**Maddock**	**5.63**	**43**	P	**Pn**	**20 05 48.1**	**+1.5**
	baz=227						
HVU	**Hansel Valley**	**5.90**	**252**	*e*Pn	**Pn**	**20 05 49.3**	**-1.3**
PV22	**Blue Mesa, Par**	**5.93**	**208**	*e*Pn	**Pn**	**20 05 50.9**	**-0.1**
PV07	**Paradox Valley**	**5.97**	**207**	*e*Pn	**Pn**	**20 05 50.7**	**-0.9**
P17A	**Butcher Ranch,**	**5.99**	**225**	*e*Pn	**Pn**	**20 05 52.9**	**+1.1**
PV23	**Carpenter Ridg**	**6.08**	**209**	*e*Pn	**Pn**	**20 05 54.9**	**+1.8**
PV09	**Paradox Valley**	**6.08**	**210**	*e*Pn	**Pn**	**20 05 53.4**	**+0.2**
SDCO	**Great Sand Dun**	**6.09**	**182**	*e*Pn	**Pn**	**20 05 54.6**	**+1.4**
PV04	**Paradox Valley**	**6.09**	**208**	*e*Pn	**Pn**	**20 05 53.9**	**+0.7**
MPU	**Maple Canyon**	**6.10**	**233**	*e*Pn	**Pn**	**20 05 54.4**	**+1.0**
PV12	**Saucer Basin,**	**6.13**	**207**	*e*Pn	**Pn**	**20 05 55.0**	**+1.2**
PV14	**Lion Creek, Pa**	**6.15**	**209**	*e*Pn	**Pn**	**20 05 54.8**	**+0.7**
SRU	**San Rafael Swe**	**6.16**	**222**	*e*Pn	**Pn**	**20 05 54.8**	**+0.7**
PV20	**West Nyswonger**	**6.16**	**208**	*e*Pn	**Pn**	**20 05 54.7**	**+0.5**
PV11	**David Mesa, Pa**	**6.17**	**208**	*e*Pn	**Pn**	**20 05 55.0**	**+0.7**
PV16	**Nyswonger Mesa**	**6.17**	**208**	*e*Pn	**Pn**	**20 05 54.8**	**+0.5**
PV03	**Paradox Valley**	**6.20**	**207**	*e*Pn	**Pn**	**20 05 54.8**	**+0.1**
PV02	**Paradox Valley**	**6.21**	**206**	*e*Pn	**Pn**	**20 05 55.8**	**+1.0**
PV01	**Paradox Valley**	**6.22**	**205**	*e*Pn	**Pn**	**20 05 56.0**	**+0.9**
PV18	**Skein Mesa, Pa**	**6.23**	**208**	*e*Pn	**Pn**	**20 05 55.5**	**+0.4**
ECSD	**EROS Data Cent**	**6.25**	**88**	*e*Pn	**Pn**	**20 05 56.9**	**+1.6**
ECSD	**EROS Data Cent**	**6.25**	**88**	P	**Pn**	**20 05 56.8**	**+1.6**
	baz=274						
PV13	**Radium Mtn., P**	**6.28**	**207**	*e*Pn	**Pn**	**20 05 56.6**	**+0.8**
TMUT	**Trail Mountain**	**6.36**	**227**	*e*Pn	**Pn**	**20 05 57.4**	**+0.3**
NLU	**North Lily Min**	**6.40**	**235**	*e*Pn	**Pn**	**20 05 56.9**	**-0.5**
PV05	**Paradox Valley**	**6.44**	**208**	*e*Pn	**Pn**	**20 05 58.3**	**+0.2**
BGU	**Big Grassy Mou**	**6.45**	**246**	*e*Pn	**Pn**	**20 05 58.8**	**+0.7**
Q16A	**Castle Valley**	**6.63**	**224**	*e*Pn	**Pn**	**20 06 00.9**	**+0.3**
HLID	**Hailey**	**6.65**	**271**	*e*Pn	**Pn**	**20 06 03.1**	**+2.3**
DUG	**Dugway, Tooele**	**6.70**	**240**	*e*Pn	**Pn**	**20 06 01.7**	**+0.1**
T25A	**Trinidad**	**6.72**	**174**	*e*Pn	**Pn**	**20 06 02.3**	**+0.5**
T25A	**Trinidad**	**6.72**	**174**	P	**Pn**	**20 06 01.3**	**-0.5**
	baz=355						
MSU	**Marysvale**	**7.45**	**227**	*e*Pn	**Pn**	**20 06 11.7**	**-0.2**
MTPU	**Mount Pierson**	**7.81**	**225**	*e*Pn	**Pn**	**20 06 15.6**	**-1.4**
AGMN	**Agassiz Nation**	**7.91**	**52**	*e*Pn	**Pn**	**20 06 20.0**	**+2.1**
ELK	**Elko**	**8.02**	**251**	Pn	**Pn**	**20 06 17.7**	**-2.0**
	0.1nm,0.3s,baz=45,slow=20,SNR=2.3						
PSUT	**Pine Spring**	**8.37**	**234**	*e*Pn	**Pn**	**20 06 24.2**	**-0.3**
CCUT	**Cedar City**	**8.79**	**227**	*e*Pn	**Pn**	**20 06 30.6**	**+0.3**
ULM	**Lac du Bonnet**	**9.06**	**42**	Pn	**Pn**	**20 06 34.8**	**+1.0**
	1.6nm,0.3s,baz=258,slow=9.0,SNR=6.0						
ULM				Lg	Lg	20 09 04.5	
	0.9nm,0.3s,baz=158,slow=19,SNR=2.6						
ULM	**Lac du Bonnet**	**9.06**	**42**	*e*Pn	**Pn**	**20 06 34.9**	**+1.2**
ULM				*e*		20 07 10.6	
ULM				Lg	Lg	20 09 04.5	
NEW	**Newport**	**9.37**	**302**	LR	LR	20 10 39.3	
	comp=Z,85nm,20.1s,baz=28,slow=42						
I39A	**Houston**	**9.92**	**85**	*e*Pn	**Pn**	**20 06 47.7**	**+2.1**
WMOK	**Wichita Mounta**	**10.37**	**149**	*e*Pn	**Pn**	**20 06 50.0**	**-1.7**
NV01	**Mina Array Sit**	**11.22**	**246**	*e*Pn	**Pn**	**20 07 05.7**	**+2.1**
NVAR	**Mina Array Bea**	**11.22**	**246**	Pn	**Pn**	**20 07 05.7**	**+2.1**
	0.1nm,0.3s,baz=42,slow=10,SNR=3.2						
LTX	**Lajitas**	**14.53**	**174**	*e*P	**P**	**20 07 55.6**	**+0.1**
TXAR	**Lajitas Array**	**14.53**	**174**	Pn	**P**	**20 07 55.6**	**+0.1**
	0.0nm,0.3s,baz=11,slow=7.8,SNR=4.2						
N54A	**Moraine State**	**18.86**	**90**	*e*P	**P**	**20 08 38.6**	**-4.7**
YKA	**Yellowknife Ar**	**19.48**	**347**	P	**P**	**20 08 47.6**	**-2.2**
	baz=159,slow=11,SNR=2.9						
YKB5	**Yellowknife Ar**	**19.48**	**347**	*e*P	**P**	**20 08 47.6**	**-2.2**
ARCES	**ARCESS Array B**	**61.32**	**18**	P	**P**	**20 14 39.4**	**+0.8**
	2.3nm,0.9s,baz=342,slow=6.4,SNR=5.0						
ZAA1	**Zalesovo Array**	**82.21**	**354**	*e*P	**P**	**20 16 44.0**	**-0.3**
ZALV	**Zalesovo Beam**	**82.21**	**354**	P	**P**	**20 16 44.0**	**-0.4**
	0.9nm,0.5s,baz=356,slow=6.2,SNR=3.9						
MK32	**Makanchi Array**	**89.51**	**355**	*e*P	**P**	**20 17 20.7**	**0.0**
MKAR	**Makanchi Array**	**89.51**	**355**	P	**P**	**20 17 20.7**	**0.0**
	0.5nm,0.7s,baz=12,slow=4.8,SNR=6.8						

*OMAN **05** 20:16:16.2±4.6, 26°.90N×58°.51E, h24km, Error ellipse: s-maj=67.5km s-min=40.7km az=154.0*

DSN 05 20:16:14.8±3.0, 26°.57N×58°.59E, h10km, ML3.5/8, Error ellipse: s-maj=43.0km s-min=13.7km az=12.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	**Banah**	**2.16**	**253**	*e*P	Pn	20 16 50.5	-0.4
	SNR=15						
BANOM	**Banah**	**2.16**	**253**	P	Pn	20 16 51.7	+0.8
	SNR=86						
BANOM				S	Sn	20 17 17.9	+0.1
SHME	**Shamm**	**2.26**	**257**	*e*P	Pn	20 16 52.7	+0.3
	SNR=24						
SHME				S	Sn	20 17 21.1	+0.8
MDH	**Madha**	**2.42**	**239**	P	Pn	20 16 53.5	-1.1
MDH	**Madha**	**2.42**	**239**	P	Pn	20 16 53.7	-0.8
MSFE	**Esma-Masafi**	**2.50**	**242**	P	Pn	20 16 55.5	-0.1
UOSS	**Minazif**	**2.69**	**234**	P	Pn	20 16 57.6	-0.6
HATD	**Hatta, Dubai**	**2.82**	**233**	P	Pn	20 16 59.1	-0.9
HATD	**Hatta, Dubai**	**2.82**	**233**	P	Pn	20 17 00.2	+0.3
ASHO	**Ashiyiah**	**2.96**	**231**	P	Pn	20 17 02.7	+0.8
ASHO	**Ashiyiah**	**2.96**	**231**	P	Pb	20 17 04.9	-2.8
SOHO	**SOHO**	**3.06**	**218**	P	Pn	20 17 05.1	+1.9
FAQ	**Al Faqa, Dubai**	**3.26**	**237**	P	Pn	20 17 07.2	+1.2
FAQ	**Al Faqa, Dubai**	**3.26**	**237**	P	Pn	20 17 08.3	+2.3
FAQ				S	Sn	20 17 48.7	+3.8
ASUD	**Al Ashush, Dub**	**3.52**	**237**	*i* P	Pn	20 17 11.4	+1.7
	SNR=14						
ASUD	**Al Ashush, Dub**	**3.52**	**237**	P	Pn	20 17 12.6	+2.9

*ISCJB **05** 20:21:15.5±0.8, 6°.15S±0°.07×149°.6E±0°.1, h58km, mb3.9/11, MS3.4/2, Error ellipse: s-maj=19.5km s-min=8.4km az=21.0*
*IDC **05** 20:21:17.9±3.6, 6°.18S×149°.55E, h63km±30km, mb3.7/12, mb1 3.9/14, mb1mx3.8/34, mbtmp4.0/14, ML3.3/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/31, Error ellipse: s-maj=33.0km s-min=15.0km az=95.0*

ISC 05 20:21:17.1±0.9, 6°.17S±0°.09×149°.6E±0°.1, h58km, n17, σ0§80/17, mb3.8/11, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.05**	**217**	P	**Pn**	**20 22 17.1**	**+0.5**
	58nm,0.3s,baz=2.0,slow=4.4,SNR=68						
PMG				S	**Sn**	**20 23 02.1**	**-0.7**
	50nm,0.3s,baz=333,slow=18,SNR=7.7						
PMG				LR	LR	20 23 40.4	
	comp=Z,106nm,21.5s,baz=42,slow=36						
JAY	**Jayapura**	**9.62**	**292**	P	**Pn**	**20 23 33.5**	**+0.6**
	1.1nm,0.3s,baz=138,slow=15,SNR=5.1						
WRA	**Warramunga Arr**	**20.21**	**226**	P	**P**	**20 25 47.0**	**-0.4**
	2.6nm,0.3s,baz=55,slow=11,SNR=55						
ASAR	**Alice Springs**	**23.06**	**219**	P	**P**	**20 26 17.2**	**-0.6**
	2.4nm,0.8s,baz=57,slow=9.3,SNR=32						
ASAR				PcP	**PcP**	**20 30 05.8**	**+0.2**
	0.5nm,0.6s,baz=25,slow=2.0,SNR=4.8						
FITZ	**Fitzroy Crossi**	**26.25**	**241**	P	**P**	**20 26 45.9**	**-1.1**
	3.2nm,0.4s,baz=51,slow=8.2,SNR=29						
STKA	**Stephens Creek**	**26.66**	**195**	P	**P**	**20 26 51.8**	**+1.1**
	1.8nm,0.8s,baz=357,slow=16,SNR=3.2						
JHJ	**Hachijo jima 2**	**40.17**	**347**	LR	LR	20 44 09.9	
	comp=Z,23nm,21.3s,baz=286,slow=34						
KSRS	**Korea Array**	**47.90**	**337**	P	**P**	**20 29 50.1**	**+0.6**
	0.4nm,0.4s,baz=152,slow=8.0,SNR=4.8						
USRK	**Ussuriysk Ar.**	**52.60**	**344**	P	**P**	**20 30 25.6**	**+0.6**
	1.0nm,0.5s,baz=138,slow=9.0,SNR=4.9						
CMAR	**Chiang Mai Arr**	**55.65**	**297**	P	**P**	**20 30 48.0**	**+0.2**
	0.2nm,0.4s,baz=114,slow=5.6,SNR=2.9						
PETK	**Petropavlovsk-**	**59.44**	**6**	P	**P**	**20 31 14.0**	**+0.3**
	4.8nm,0.5s,baz=156,slow=5.9,SNR=30						
VNDA	**Vanda**	**71.61**	**177**	P	**P**	**20 32 32.7**	**+0.8**
	0.9nm,0.6s,baz=329,slow=8.3,SNR=6.0						
MKAR	**Makanchi Array**	**79.31**	**320**	P	**P**	**20 33 16.1**	**-0.5**
	0.2nm,0.5s,baz=96,slow=7.0,SNR=6.6						
ZALV	**Zalesovo Beam**	**80.56**	**327**	P	**P**	**20 33 22.7**	**-0.4**
	0.5nm,0.4s,baz=129,slow=4.6,SNR=2.9						
ILAR	**Eielson Array**	**84.61**	**23**	P	**P**	**20 33 42.8**	**-1.2**
	0.7nm,0.6s,baz=237,slow=4.7,SNR=6.7						
ARU	**Arti**	**95.69**	**326**	LR	LR	21 16 53.5	
	comp=Z,32nm,19.0s,baz=28,slow=35						
TORD	**Torodi Ar. Bea**	**147.67**	**285**	PKPbc	**PKPbc**	**20 40 55.2**	**-1.1**
	0.8nm,0.5s,baz=73,slow=3.2,SNR=17						

MAN 05 20:25:12.3, 7°.31N×124°.83E, h0km, mb4.2, ML3.0, MS2.7, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.58**	**261**	‖*i*P	Pg	20 25 23.9	+0.4
BUKP	**Musuan**	**0.61**	**22**	*e*P	Pg	20 25 24.5	+0.4
BUKP				*e*S	Sb	20 25 34.5	-0.7
DMPH	**Davao City--Mi**	**0.71**	**108**	⇑*e*P	Pn	20 25 36.9	+7.3
DMPH				*e*S	Sn	20 25 47.3	+6.0
SKMP	**Bagumbayan, Su**	**0.83**	**200**	*e*P	Pg	20 25 27.6	-0.7
SKMP				*e*S	Sg	20 25 40.1	+1.0
CGP	**Cagayan de Oro**	**1.15**	**353**	⇑*e*P	Pg	20 25 33.5	-0.8
CGP				*e*S	Sg	20 25 47.8	-1.4
DDMP	**Don Marcelino,**	**1.48**	**144**	*e*P	Pn	20 25 39.7	-0.6

*JMA **05** 20:28:11.4±0.4, 24°.29N×122°.32E, h2km±4km, M1.7*

TAP 05 20:28:11.2, 24°.86N×122°.41E, h25km, ML2.2, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.40**	**220**	*e*P	Pb	20 28 20.0	+0.2
	baz=220						
EOS1				*e*S	Sb	20 28 26.7	+1.2
	baz=220						
TWB1	**Santiao Chiao**	**0.41**	**292**	*e*S	Sb	20 28 24.5	-1.4
	baz=291						
EGS		**0.43**	**269**	*e*P	Pb	20 28 19.3	-1.0
	baz=265						
TIPB	**Shuangxi**	**0.54**	**282**	*i* P	Pb	20 28 22.0	-0.2
	baz=290						
TIPB				S	Sb	20 28 29.5	-0.1
	baz=290						
TWC	**Suao**	**0.56**	**244**	P	Pb	20 28 22.2	-0.3
	baz=244						
TWC				*e*S	Sb	20 28 29.9	-0.3
	baz=244						
NWF	**Wu-fen Shan**	**0.61**	**291**	P	Pb	20 28 23.3	-0.1
	baz=290						
NWF				S	Sb	20 28 32.0	+0.5
	baz=290						
WFSB	**Wu-fen Shan**	**0.61**	**291**	*e*P	Pb	20 28 23.2	0.0
	baz=290						
WFSB				*e*S	Sb	20 28 31.8	+0.3
	baz=290						
JYNG	**Yonagunijimaku**	**0.63**	**129**	P	Pb	20 28 23.3	-0.4
JYNG				S	Sb	20 28 31.8	-0.3
YOJ	**Yonaguni jima**	**0.68**	**125**	*e*P	Pb	20 28 23.8	-0.6
	baz=115						
YOJ				*e*S	Sb	20 28 33.1	-0.2
	baz=115						
YOJ	**Yonaguni jima**	**0.68**	**125**	P	Pb	20 28 24.1	-0.3
YOJ				*e*S	Sb	20 28 32.9	-0.4
TWE	**Neicheng**	**0.69**	**259**	P	Pb	20 28 24.6	0.0
	baz=259						
TWE				*e*S	Sb	20 28 34.0	+0.4
	baz=259						
ENA	**Nanau**	**0.74**	**235**	*e*P	Pb	20 28 25.6	+0.1
	baz=235						
ENA				*e*S	Sb	20 28 35.0	-0.2
	baz=235						
YM07	**YM07**	**0.78**	**294**	*e*P	Pn	20 28 26.7	0.0
	baz=293						
YM07				*e*S	Sn	20 28 37.1	-0.5
	baz=293						
ENTT	**Nioudou**	**0.80**	**254**	*e*P	Pn	20 28 26.9	+0.1
	baz=245						
ENTT				*e*S	Sn	20 28 38.0	0.0
	baz=245						
YM08	**YM08**	**0.81**	**294**	*e*P	Pn	20 28 27.2	+0.1
	baz=293						
YM08				S	Sb	20 28 37.8	+0.5
	baz=293						
YM01	**YM01**	**0.81**	**291**	*e*P	Pb	20 28 26.6	-0.2
	baz=290						
YM01				*e*S	Sb	20 28 37.7	+0.3
	baz=290						
YM05	**YM05**	**0.82**	**292**	*e*P	Pn	20 28 27.5	+0.1
	baz=292						
NWLT	**Wulai**	**0.83**	**265**	*e*P	Pn	20 28 27.2	-0.1
	baz=265						
NWLT				*e*S	Sn	20 28 38.7	-0.1
	baz=265						
PCYT	**Pengchaiyu**	**0.83**	**338**	*i* P	Pb	20 28 27.0	+0.1
	baz=338						
TWY	**Chenhua**	**0.84**	**300**	*e*P	Pn	20 28 27.8	+0.3
	baz=299						
TWY				*e*S	Sn	20 28 38.8	-0.3
	baz=299						
YM03	**YM03**	**0.85**	**292**	*e*P	Pb	20 28 27.4	0.0
	baz=292						
NDT	**Datong Townshi**	**0.85**	**253**	*e*P	Pn	20 28 27.6	0.0
	baz=248						
YHNB	**Yeheng**	**0.96**	**259**	*e*P	Pb	20 28 29.2	+0.1
	baz=271						
NSK	**Sanguang**	**0.97**	**260**	*e*P	Pb	20 28 29.5	0.0
	baz=271						
NNSB	**Datong**	**1.02**	**246**	*e*P	Pb	20 28 30.6	+0.2
	baz=246						
ETLH	**Xiulin Townshi**	**1.06**	**233**	*e*P	Pb	20 28 30.9	-0.1
	baz=233						
IRIF	**Iriomote-Funau**	**1.31**	**113**	P	Pb	20 28 35.8	+0.6
IRIF				*e*S	Sb	20 28 52.7	+1.2

TAP 05 20:28:21.7, 23°.87N×120°.66E, h23km, ML1.9, 6C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WNT	**Mingjian**	**0.02**	**71**	⇑*i*P	Pb	20 28 25.9	+0.3
	baz=78						
WNT				*i* S	Sb	20 28 29.0	+0.8
	baz=78						
WJS	**Zhushan**	**0.08**	**129**	⇑*i*P	Pb	20 28 26.1	+0.2
	baz=129						
WJS				*i* S	Sb	20 28 29.4	+0.8
	baz=129						
TYC	**Yuchr**	**0.18**	**80**	⇑*i*P	Pb	20 28 27.4	+0.5
	baz=79						
TYC				S	Sb	20 28 31.4	+1.1
	baz=79						
WGK	**Gukeng**	**0.21**	**206**	⇑*i*P	Pb	20 28 27.7	+0.6
	baz=204						
WGK				S	Sb	20 28 32.4	+1.5
	baz=204						
WDLH	**Douliu**	**0.21**	**212**	⇑*i*P	Pb	20 28 27.7	+0.4
	baz=212						
WDLH				*i* S	Sb	20 28 32.2	+1.1
	baz=212						
SMLT	**Sun Moon Lake**	**0.22**	**87**	*i* P	Pb	20 28 28.0	+0.6
	baz=87						
SMLT				S	Sb	20 28 32.8	+1.5
	baz=87						
WCHH	**Zhanghua**	**0.23**	**335**	P	Pb	20 28 27.9	+0.4
	baz=335						
WCHH				*e*S	Sb	20 28 32.7	+1.3
	baz=335						
WHYT	**Xinyi Township**	**0.25**	**135**	⇑*i*P	Pb	20 28 28.1	+0.4
	baz=134						
WHYT				S	Sb	20 28 32.7	+0.8
	baz=134						
CHN5	**Tsauling**	**0.27**	**177**	P	Pb	20 28 28.5	+0.3
	baz=177						
CHN5				*e*S	Sb	20 28 33.5	+0.9
	baz=177						
TCU	**Taichung**	**0.28**	**3**	*e*P	Pb	20 28 28.5	+0.3
	baz=4.0						
TCU				*e*S	Sb	20 28 33.4	+0.8
	baz=4.0						
RLNB	**Erlin**	**0.28**	**274**	*e*P	Pb	20 28 28.4	+0.2
	baz=274						
RLNB				S	Sb	20 28 33.7	+1.1
	baz=274						
SSLB	**Suanglung**	**0.28**	**107**	P	Pb	20 28 28.6	+0.4
	baz=107						
SSLB				*e*S	Sb	20 28 33.6	+0.8
	baz=107						
DPDB	**Guoxing**	**0.29**	**56**	*e*P	Pb	20 28 28.8	+0.4
	baz=56						
CHN2	**Minshiung**	**0.38**	**207**	*e*P	Pb	20 28 30.1	+0.4
	baz=207						
CHN2				*e*S	Sn	20 28 37.1	-1.2
	baz=207						
ALS	**Alishan**	**0.38**	**160**	P	Pb	20 28 30.6	+0.6
	ba

JMA 05 20:33:21.9±0.1, 29°.53N×131°.57E, h72km±3km, M3.5, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**1.04**	**326**	P	Pn	20 33 41.1	+0.1
JMTN				*e*S	Sn	20 33 56.0	+0.7
JYAK	**Yakushimahirau**	**1.16**	**308**	P	Pn	20 33 42.7	+0.2
JYAK				*e*S	Sn	20 33 58.5	+0.6
JTN	**Tanegashima 3**	**1.23**	**336**	P	Pn	20 33 43.5	0.0
JTN				*e*S	Sn	20 33 59.7	+0.1
JNN	**Nakanoshima**	**1.51**	**282**	P	Pn	20 33 47.7	+0.7
JNN				*e*S	Sn	20 34 06.2	+0.2
JKC	**Kuchinoerabu**	**1.51**	**308**	P	Pn	20 33 47.8	+0.7
JKC				*e*S	Sn	20 34 07.1	+1.1
JTSR	**Tashiro 2**	**1.73**	**341**	P	Pn	20 33 50.6	+0.7
JTSR				*e*S	Sn	20 34 10.9	-0.3
JZK	**Kikaishima**	**1.85**	**230**	*e*S	Sn	20 34 16.4	+2.2
JNAR	**Kushima--Naru**	**2.01**	**353**	P	Pn	20 33 54.7	+1.0
JNAR				*e*S	Sn	20 34 18.3	+0.4
JAM	**Amami Oshima**	**2.05**	**238**	P	Pn	20 33 54.2	-0.1
JAM				*e*S	Sn	20 34 18.8	-0.1
JTAJ	**Takarajima**	**2.10**	**260**	P	Pn	20 33 55.9	+1.0
JSU	**Suzuyama**	**2.19**	**334**	P	Pn	20 33 56.7	+0.5
JSU				*e*S	Sn	20 34 22.2	-0.2
JTZ	**Takazaki**	**2.40**	**350**	P	Pn	20 33 59.9	+0.9
JTZ				*e*S	Sn	20 34 27.7	+0.3
JAMN	**Amaminishikomi**	**2.46**	**239**	P	Pn	20 34 00.1	+0.3
JAMN				*e*S	Sn	20 34 28.7	-0.1
JSJ	**Shimokoshiki**	**2.67**	**324**	P	Pn	20 34 02.4	-0.3
JSJ				*e*S	Sn	20 34 33.8	-0.2
JTSN	**Tsuno**	**2.71**	**359**	P	Pn	20 34 03.8	+0.7
JTSN				*e*S	Sn	20 34 35.2	+0.4
JZO	**Okuchi**	**2.73**	**342**	P	Pn	20 34 04.2	+0.7
JZO				*e*S	Sn	20 34 36.4	+0.9
JTK	**Tokunoshima**	**2.88**	**234**	P	Pn	20 34 05.9	+0.3
JIU3	**Izumi3**	**3.08**	**348**	P	Pn	20 34 09.0	+0.8

*ISCJB **05** 20:34:03.5±0.5, 21°.71N±0°.04×143°.1E±0°.1, h330km, mb3.7/21, Error ellipse: s-maj=15.3km s-min=5.7km az=173.0*
*IDC **05** 20:34:03.4±2.0, 21°.59N×143°.04E, h312km±20km, mb3.4/20, mb1 3.6/24, mb1mx3.5/50, mbtmp4.2/24, Error ellipse: s-maj=15.1km s-min=8.6km az=86.0*
*JMA **05** 20:34:04.1±0.2, 21°.97N×143°.73E, h330km*
ISC 05 20:34:04.0±0.6, 21°.73N±0°.06×143°.3E±0°.1, h330km, n45, σ1§62/49, mb3.8/21, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.98**	**349**	P	**Pn**	**20 35 21.9**	**-0.6**
JHH2				S	**S**	**20 36 22.6**	**-3.2**
CBIJ	**Chichi jima**	**5.43**	**350**	P	**Pn**	**20 35 26.6**	**-1.0**
CBIJ				S	**S**	**20 36 31.3**	**-3.8**
GUMO	**Guam**	**8.24**	**169**	P	**Pn**	**20 35 59.9**	**-1.0**
	7.0nm,0.3s,baz=246,slow=0.5,SNR=6.3						
JHCJ	**Hachijojimakas**	**11.71**	**346**	P	**P**	**20 36 42.9**	**-0.3**
JHJ	**Hachijo jima 2**	**11.75**	**346**	P	**P**	**20 36 42.8**	**-1.0**
	16nm,0.3s,baz=267,slow=22,SNR=15						
BSO3	**Boso 3**	**13.24**	**350**	P	**Pn**	**20 37 01.0**	**+0.5**
BSO4	**Boso 4**	**13.46**	**350**	P	**Pn**	**20 37 04.1**	**+0.9**
JIE	**Ise**	**13.87**	**337**	P	**Pn**	**20 37 08.3**	**+0.1**
JKN2	**Miekihoku**	**13.90**	**335**	P	**Pn**	**20 37 10.1**	**+1.6**
JOD2	**Odawara 2**	**13.97**	**346**	P	**Pn**	**20 37 09.6**	**+0.2**
JTO	**Tosashimizu**	**14.45**	**322**	P	**Pn**	**20 37 17.2**	**+2.1**
JHU	**Hanno**	**14.49**	**347**	P	**Pn**	**20 37 14.9**	**-0.6**
JYT	**Yasato**	**14.69**	**350**	P	**Pn**	**20 37 18.2**	**+0.4**
JRY	**Ryogami san**	**14.73**	**346**	P	**Pn**	**20 37 17.6**	**-0.7**
JHO	**Hitachi**	**15.01**	**352**	P	**Pn**	**20 37 21.3**	**-0.2**
JAG	**Ashikaga**	**15.01**	**348**	P	**Pn**	**20 37 20.6**	**-1.0**
JAG				*e*S	**S**	**20 39 57.8**	**-4.1**
MJAR	**Matsushiro Arr**	**15.40**	**345**	P	**Pn**	**20 37 24.4**	**-1.6**
	0.5nm,0.3s,baz=163,slow=5.7,SNR=27						
MAT	**Matsushiro**	**15.40**	**345**	P	**Pn**	**20 37 24.9**	**-1.2**
MAT				*e*S	**S**	**20 40 07.4**	**-2.3**
JNU	**Nakatsue**	**15.78**	**319**	P	**P**	**20 37 28.4**	**+0.3**
	0.5nm,0.3s,baz=100,slow=5.1,SNR=3.9						
JHS	**Saijyo**	**15.93**	**328**	P	**Pn**	**20 37 31.6**	**-0.7**
JMK	**Ichinoseki**	**17.25**	**355**	P	**Pn**	**20 37 46.5**	**-0.9**
KSRS	**Korea Array**	**20.53**	**323**	P	**P**	**20 38 19.0**	**+0.8**
	4.9nm,0.6s,baz=145,slow=9.1,SNR=39						
ASAJ	**Asahikawa**	**22.33**	**359**	P	**P**	**20 38 36.9**	**+2.3**
	2.6nm,0.5s,baz=189,slow=9.8,SNR=6.2						
USRK	**Ussuriysk Ar.**	**24.27**	**340**	P	**P**	**20 38 53.9**	**+1.7**
	2.9nm,0.6s,baz=126,slow=10,SNR=9.1						
KLR	**Kul'dur**	**28.93**	**344**	P	**P**	**20 39 34.9**	**+1.5**
	4.1nm,0.6s,baz=168,slow=9.2,SNR=4.4						
CMAR	**Chiang Mai Arr**	**41.64**	**274**	P	**P**	**20 41 21.6**	**+0.2**
	1.3nm,0.5s,baz=96,slow=6.1,SNR=18						
WRA	**Warramunga Arr**	**42.33**	**193**	P	**P**	**20 41 25.3**	**-1.4**
	111nm,0.3s,baz=6.0,slow=7.9,SNR=1.3						
FITZ	**Fitzroy Crossi**	**43.18**	**205**	P	**P**	**20 41 32.5**	**-1.0**
	3.3nm,0.6s,baz=13,slow=8.7,SNR=15						
ASAR	**Alice Springs**	**46.03**	**192**	P	**P**	**20 41 54.7**	**-1.1**
	1.2nm,0.6s,baz=16,slow=9.9,SNR=22						
TIXI	**Tiksi**	**50.62**	**354**	P	**P**	**20 42 31.0**	**+1.1**
	0.8nm,0.5s,baz=128,slow=1.2,SNR=2.8						
STKA	**Stephens Creek**	**53.33**	**182**	P	**P**	**20 42 48.7**	**-1.5**
	1.5nm,0.8s,baz=339,slow=12,SNR=3.6						
ZALV	**Zalesovo Beam**	**54.23**	**322**	P	**P**	**20 42 58.1**	**+1.7**
	0.6nm,0.6s,baz=124,slow=18,SNR=2.4						
ZALV				PcP	**PcP**	**20 43 55.6**	**-0.5**
	1.9nm,0.4s,baz=122,slow=3.7,SNR=6.6						
MKAR	**Makanchi Array**	**54.73**	**313**	P	**P**	**20 43 00.9**	**+0.8**
	0.3nm,0.6s,baz=89,slow=9.4,SNR=4.5						
MKAR				PcP	**PcP**	**20 43 59.2**	**+0.9**
	0.7nm,0.4s,baz=79,slow=4.1,SNR=8.5						
KURBB	**Kurchatov Arra**	**57.55**	**317**	P	**P**	**20 43 20.7**	**+0.9**
	0.8nm,0.4s,baz=94,slow=7.6,SNR=9.1						
ILAR	**Eielson Array**	**61.98**	**27**	P	**P**	**20 43 51.3**	**+1.8**
	0.8nm,0.6s,baz=258,slow=5.2,SNR=5.0						
YKA	**Yellowknife Ar**	**76.39**	**28**	P	**P**	**20 45 19.7**	**+2.4**
	1.8nm,0.5s,baz=291,slow=5.8,SNR=12						
ARCES	**ARCESS Array B**	**78.91**	**342**	P	**P**	**20 45 32.2**	**+1.2**
	1.2nm,0.7s,baz=92,slow=6.2,SNR=7.1						
KBZ	**Khabaz**	**82.39**	**314**	P	**P**	**20 45 51.2**	**+1.3**
	2.2nm,0.9s,baz=78,slow=5.3,SNR=6.5						
NVAR	**Mina Array Bea**	**83.07**	**52**	P	P	20 45 57.1	+3.4
	1.9nm,0.7s,baz=275,slow=5.1,SNR=13						
FINES	**FINESS Array B**	**83.18**	**335**	P	**P**	**20 45 53.9**	**+0.4**
	2.4nm,0.6s,baz=68,slow=5.3,SNR=20						
ELK	**Elko**	**84.35**	**48**	P	P	20 46 03.0	+2.8
	1.1nm,0.5s,baz=313,slow=2.7,SNR=4.1						
PDAR	**Pinedale Array**	**87.32**	**45**	P	**P**	**20 46 16.1**	**+1.5**
	0.3nm,0.5s,baz=222,slow=2.0,SNR=3.6						
BRTR	**Keskin Array B**	**90.37**	**313**	P	**P**	**20 46 28.6**	**-0.2**
	0.3nm,0.5s,baz=316,slow=0.7,SNR=3.3						
PLCA	**Paso Flores**	**145.73**	**131**	PKPbc	**PKiKP**	**20 53 07.0**	**-1.0**
	5.7nm,0.7s,baz=256,slow=3.6,SNR=15						
LPAZ	**La Paz**	**149.87**	**85**	PKPbc	**PKPab**	**20 53 19.9**	**-4.0**
	3.9nm,0.6s,baz=324,slow=1.8,SNR=9.2						

*KRSC **05** 20:36:56.7±1.8, 48°.11N×150°.29E, h590km±27km, ML4.5*
*ISCJB **05** 20:36:59.2±0.5, 49°.27N±0°.10×148°.55E±0°.09, h500km, mb3.7/7, Error ellipse: s-maj=14.2km s-min=5.3km az=153.9*
*IDC **05** 20:37:00.2±1.7, 49°.33N×148°.71E, h508km±25km, mb3.2/6, mb1 3.2/10, mb1mx2.8/46, mbtmp4.1/10, Error ellipse: s-maj=25.2km s-min=16.3km az=56.0*
ISC 05 20:36:59.8±0.8, 49°.3N±0°.1×148°.74E±0°.09, h500km, n27, σ1§72/33, mb3.8/7, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**4.67**	**67**	P	**P**	**20 38 25.1**	**+1.2**
PAU	**Pauzhetka**	**5.62**	**64**	P	**P**	**20 38 33.4**	**+1.1**
KDTR	**Khodutka, Kamc**	**6.48**	**63**	P	**P**	**20 38 39.7**	**-0.8**
PETK	**Petropavlovsk-**	**6.82**	**52**	P	**P**	**20 38 44.2**	**+0.2**
	0.5nm,0.3s,baz=217,slow=7.7,SNR=14						
RUS	**Russkaya**	**6.96**	**59**	S	**S**	**20 40 09.9**	**-2.0**
GNL	**Ganaly**	**7.26**	**49**	P	**P**	**20 38 49.6**	**+1.1**
DALK	**Dalny**	**7.34**	**55**	P	**P**	**20 38 50.7**	**+1.5**
DALK				S	**S**	**20 40 20.3**	**+1.3**
KOK	**Koryaka**	**7.40**	**53**	P	**P**	**20 38 51.8**	**+1.9**
KOK				S	**S**	**20 40 22.0**	**+1.6**
KRX	**Arik**	**7.44**	**53**	P	**P**	**20 38 50.9**	**+0.5**
KRX				S	**S**	**20 40 20.9**	**-0.3**
AVH	**Avacha**	**7.44**	**54**	P	**P**	**20 38 52.9**	**+2.6**
UGLR	**Uglovaya**	**7.46**	**54**	P	**P**	**20 38 53.1**	**+2.5**
KRER	**Koryakskii**	**7.47**	**53**	S	**S**	**20 40 22.6**	**+0.8**
SMAR	**Somma**	**7.47**	**54**	P	**P**	**20 38 52.5**	**+1.7**
SMAR				S	**S**	**20 40 23.6**	**+1.7**
SDLR	**Sedlovina**	**7.53**	**54**	P	**P**	**20 38 53.7**	**+2.5**
SDLR				S	**S**	**20 40 24.5**	**+1.8**
SPN	**Mys Shipunski**	**8.06**	**57**	P	**P**	**20 38 55.7**	**-0.9**
SPN				S	**S**	**20 40 28.7**	**-3.9**
KZV	**Kizimen**	**9.20**	**46**	P	**P**	**20 39 11.0**	**+2.4**
MKZ	**Mys Kozlova**	**9.62**	**52**	S	**S**	**20 40 58.9**	**-3.4**
MA2	**Magadan**	**10.40**	**6**	P	**P**	**20 39 21.6**	**+0.5**
	0.7nm,0.3s,baz=190,slow=12,SNR=3.9						
KLR	**Kul'dur**	**11.11**	**276**	P	**P**	**20 39 30.1**	**+1.4**
	0.5nm,0.3s,baz=76,slow=11,SNR=24						
MJAR	**Matsushiro Arr**	**14.85**	**215**	P	**P**	**20 40 08.4**	**0.0**
	0.1nm,0.3s,baz=16,slow=8.8,SNR=4.2						
TIXI	**Tiksi**	**24.25**	**345**	P	**P**	**20 41 34.8**	**-1.3**
	1.3nm,0.3s,baz=111,slow=2.5,SNR=3.6						
SONM	**Songino Array**	**27.81**	**283**	P	**P**	**20 42 06.5**	**-1.4**
	1.0nm,0.7s,baz=26,slow=11,SNR=3.1						
ZALV	**Zalesovo Beam**	**38.77**	**302**	P	**P**	**20 43 39.8**	**-0.5**
	1.7nm,0.4s,baz=62,slow=6.8,SNR=6.1						
MKAR	**Makanchi Array**	**43.21**	**293**	P	**P**	**20 44 15.5**	**-0.3**
	1.3nm,0.5s,baz=67,slow=7.3,SNR=13						
KURBB	**Kurchatov Arra**	**43.64**	**300**	P	**P**	**20 44 18.7**	**-0.4**
	3.6nm,0.6s,baz=68,slow=8.4,SNR=17						
WRA	**Warramunga Arr**	**70.08**	**194**	P	**P**	**20 47 20.4**	**-0.7**
	1.7nm,0.9s,baz=7.3,slow=6.1,SNR=4.0						
ASAR	**Alice Springs**	**73.79**	**194**	P	**P**	**20 47 43.5**	**+0.9**
	1.0nm,0.6s,baz=8.3,slow=5.4,SNR=12						

*ISCJB **05** 20:48:14.8±0.8, 17°.60S±0°.06×69°.7W±0°.1, h156km±8km, mb3.2/2, Error ellipse: s-maj=19.0km s-min=7.9km az=19.1*
*GUC **05** 20:48:16.2±0.5, 17°.86S×69°.94W, h171km±4km, ML3.8*
*IDC **05** 20:48:19.1±5.0, 17°.40S×69°.06W, h182km±26km, mb3.3/2, mb1 3.6/2, mb1mx3.1/17, mbtmp3.8/2, Error ellipse: s-maj=88.0km s-min=48.1km az=15.0*
ISC 05 20:48:14.6±1.1, 17°.57S±0°.07×69°.7W±0°.1, h158km±9km, n13, σ1§31/22, 6C-2D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**1.20**	**210**	⇓*i*P	**Pn**	**20 48 42.2**	**+0.3**
PB12				*i* S	**Sn**	**20 49 02.4**	**-0.5**
MNMC	**Minye Minye**	**1.55**	**177**	⇑*i*P	**Pn**	**20 48 46.6**	**+1.0**
MNMC				*i* S	**Sn**	**20 49 09.6**	**+0.1**
MNMC				IAML		20 49 14.1	
	comp=E,919nm,0.2s						
LPAZ	**La Paz**	**1.97**	**50**	P	**Pn**	**20 48 51.0**	**+0.6**
	comp=E,16nm,0.3s,baz=231,slow=6.8,SNR=275						
LPAZ				S	**Sn**	**20 49 16.2**	**-1.8**
	comp=E,1.4nm,0.3s,baz=336,slow=24,SNR=7.3						
PSGC	**Pisagua**	**2.05**	**191**	⇓*i*P	**Pn**	**20 48 51.1**	**+0.2**
PSGC				*e*S	**Sn**	**20 49 17.1**	**-1.8**
GO01	**Chusmiza**	**2.14**	**167**	⇑*i*P	**Pn**	**20 48 53.6**	**+1.3**
GO01				*i* S	**Sn**	**20 49 22.5**	**+1.2**
PB11	**IPOC Station P**	**2.17**	**179**	⇑*i*P	**Pn**	**20 48 53.1**	**+0.7**
PB11				*i* S	**Sn**	**20 49 21.1**	**-0.5**
PB08	**IPOC Station P**	**2.60**	**169**	⇑*i*P	**Pn**	**20 48 59.0**	**+1.3**
PB08				*i* S	**Sn**	**20 49 31.1**	**0.0**
PB08				IAML		20 49 33.1	
	comp=E,200nm,0.4s						
PB01	**IPOC Station P**	**3.46**	**177**	⇑*i*P	**Pn**	**20 49 08.4**	**+0.3**
PB01				*i* S	**Sn**	**20 49 47.6**	**-2.2**
PB01				IAML		20 49 48.4	
	comp=E,257nm,0.3s						
PB02	**IPOC Station P**	**3.73**	**183**	*e*P	**Pn**	**20 49 12.0**	**+0.3**
PB02				*i* S	**Sn**	**20 49 53.9**	**-2.2**
PB07	**IPOC Station P**	**4.13**	**183**	*e*P	**Pn**	**20 49 17.4**	**+0.4**
PB03	**IPOC Station P**	**4.45**	**181**	⇑*i*P	**Pn**	**20 49 21.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**76.78**	**71**	P	**P**	**20 59 47.6**	**-1.6**
	comp=E,0.3nm,0.5s,baz=263,slow=5.8,SNR=3.9						
YKA	**Yellowknife Ar**	**87.26**	**341**	P	**P**	**21 00 44.7**	**+1.9**
	comp=E,0.1nm,0.3s,baz=135,slow=4.8,SNR=6.3						

GUC 05 20:53:56.3±0.6, 23°.99S×68°.03W, h198km±12km, ML3.5, 2C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**1.53**	**300**	⇑*i*P	Pn	20 54 31.3	+0.9
PB15				*i* S	Sn	20 54 58.0	+1.3
GO02	**Mina Guanaco**	**1.84**	**230**	⇑*i*P	Pn	20 54 31.8	-1.6
GO02				*i* S	Sn	20 55 00.2	-2.1
PB06	**IPOC Station P**	**1.91**	**312**	*e*P	Pn	20 54 35.3	+1.4
PB06				*i* S	Sn	20 55 05.0	+1.9
PB06				IAML		20 55 06.8	
	comp=N,214nm,0.5s						
PB05	**IPOC Station P**	**2.29**	**299**	⇓*i*P	Pn	20 54 39.1	+1.2
PB04	**IPOC Station P**	**2.55**	**310**	*e*P	Pn	20 54 42.2	+1.3
PB04				*e*S	Sn	20 55 17.4	+1.9
PB04				IAML		20 55 23.2	
	comp=N,110nm,0.2s						
PB07	**IPOC Station P**	**2.83**	**322**	⇓*i*P	Pn	20 54 45.7	+1.6
PB07				*e*P		20 54 45.7	
PB07				*e*S	Sn	20 55 23.1	+1.9
PB07				IAML		20 55 25.1	
	comp=N,86nm,0.1s						
PB07				IAML		20 55 27.3	
	comp=E,92nm,0.5s						

*TAP **05** 20:56:23.4, 24°.65N×122°.55E, h19km, ML2.9, C*
*ISCJB **05** 20:56:24.2±0.3, 24°.65N±0°.03×122°.57E±0°.02, h20km±5km, Error ellipse: s-maj=4.9km s-min=2.5km az=14.0*
*JMA **05** 20:56:24.4±0.1, 24°.63N×122°.58E, h26km±2km, M2.2*
ISC 05 20:56:24.1±1.0, 24°.65N±0°.03×122°.56E±0°.02, h22km±11km, n50, σ0§54/80, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.40**	**120**	P	**Pb**	**20 56 32.5**	**0.0**
JYNG				S	**Sb**	**20 56 38.2**	**0.0**
EOS1	**EOS1**	**0.41**	**256**	P	**Pb**	**20 56 32.7**	**0.0**
	baz=256						
EOS1				*i* S	**Sb**	**20 56 38.8**	**+0.3**
	baz=256						
YOJ	**Yonaguni jima**	**0.45**	**115**	P	**Pb**	**20 56 33.3**	**0.0**
	baz=113						
YOJ				S	**Sb**	**20 56 39.5**	**-0.1**
	baz=113						
YOJ	**Yonaguni jima**	**0.45**	**115**	P	**Pb**	**20 56 33.3**	**0.0**
YOJ				S	**Sb**	**20 56 39.5**	**-0.1**
EGS		**0.61**	**289**	*e*P	**Pb**	**20 56 35.6**	**-0.4**
	baz=289						
EGS				*e*S	**Sb**	**20 56 44.3**	**+0.1**
	baz=289						
TWB1	**Santiao Chiao**	**0.63**	**304**	P	**Pb**	**20 56 36.2**	**-0.3**
	baz=305						
TWB1				*e*S	**Sb**	**20 56 44.3**	**-0.7**
	baz=305						
TWC	**Suao**	**0.65**	**267**	P	**Pb**	**20 56 35.9**	**-0.9**
	baz=266						
TWC				*e*S	**Sb**	**20 56 45.5**	**0.0**
	baz=266						
NTC	**Toucheng**	**0.70**	**287**	*e*P	**Pb**	**20 56 37.4**	**-0.2**
	baz=287						
NTC				*e*S	**Sn**	**20 56 48.5**	**-0.2**
	baz=287						
TIPB	**Shuangxi**	**0.74**	**296**	P	**Pb**	**20 56 38.4**	**0.0**
	baz=296						
TIPB				*e*S	**Sb**	**20 56 48.6**	**+0.5**
	baz=296						
ILA	**Ilan**	**0.75**	**279**	*e*P	**Pb**	**20 56 38.2**	**-0.3**
	baz=279						
ENA	**Nanau**	**0.78**	**254**	P	**Pb**	**20 56 38.7**	**-0.4**
	baz=253						
ENA				*e*S	**Sb**	**20 56 48.2**	**-0.9**
	baz=253						
TWE	**Neicheng**	**0.82**	**275**	P	**Pb**	**20 56 39.1**	**-0.6**
	baz=275						
TWE				*e*S	**Sb**	**20 56 50.1**	**-0.2**
	baz=275						
NWF	**Wu-fen Shan**	**0.83**	**301**	P	**Pb**	**20 56 39.8**	**0.0**
	baz=301						
NWF				*e*S	**Sb**	**20 56 51.3**	**+0.7**
	baz=301						
WFSB	**Wu-fen Shan**	**0.83**	**301**	*e*P	**Pb**	**20 56 39.8**	**0.0**
	baz=301						
WFSB				*e*S	**Sb**	**20 56 51.0**	**+0.6**
	baz=301						
ENTT	**Nioudou**	**0.91**	**270**	*e*P	**Pn**	**20 56 41.4**	**-0.2**
	baz=269						
ENTT				*e*S	**Sn**	**20 56 53.3**	**-0.6**
	baz=269						
NDT	**Datong Townshi**	**0.96**	**267**	*e*P	**Pn**	**20 56 42.4**	**+0.1**
	baz=267						
NDT				*i* S	**Sn**	**20 56 55.0**	**-0.2**
	baz=267						
NWLT	**Wulai**	**0.97**	**278**	*e*P	**Pn**	**20 56 42.7**	**+0.3**
	baz=277						
NWLT				*e*S	**Sb**	**20 56 54.8**	**+0.1**
	baz=277						
NHDH	**Xindian Distri**	**0.99**	**289**	*e*P	**Pb**	**20 56 42.0**	**-0.6**
	baz=288						
NHDH				*e*S	**Sb**	**20 56 55.3**	**0.0**
	baz=288						
NACB	**Ninganchiao**	**1.00**	**242**	*e*P	**Pn**	**20 56 42.8**	**0.0**
	baz=241						
NACB				*e*S	**Sb**	**20 56 55.5**	**-0.1**
	baz=241						
YM07	**YM07**	**1.00**	**302**	*e*P	**Pb**	**20 56 42.4**	**-0.4**
	baz=302						
YM07				*e*S	**Sb**	**20 56 55.6**	**0.0**
	baz=302						
YM01	**YM01**	**1.03**	**299**	*e*P	**Pn**	**20 56 43.0**	**-0.2**
	baz=299						
YM01				*e*S	**Sb**	**20 56 56.3**	**-0.1**
	baz=299						
TATO	**Taipei**	**1.03**	**289**	*e*P	**Pb**	**20 56 43.7**	**+0.5**
	baz=288						
TATO				*e*S	**Sn**	**20 56 56.9**	**0.0**
	baz=288						
YM08	**YM08**	**1.03**	**301**	*e*P	**Pb**	**20 56 43.8**	**+0.4**
	baz=301						
YM05	**YM05**	**1.04**	**300**	*e*P	**Pb**	**20 56 44.1**	**+0.6**
	baz=300						
YM10	**YM10**	**1.04**	**299**	*e*P	**Pn**	**20 56 42.4**	**-1.0**
	baz=299						
TWD	**Chiawan**	**1.05**	**237**	*e*P	**Pb**	**20 56 44.0**	**+0.4**
	baz=236						
TWD				*e*S	**Sn**	**20 56 57.2**	**-0.2**
	baz=236						
YM04	**YM04**	**1.06**	**298**	*e*P	**Pn**	**20 56 43.3**	**-0.3**
	baz=298						
YM03	**YM03**	**1.07**	**300**	*e*P	**Pn**	**20 56 43.2**	**-0.6**
	baz=300						
PCYT	**Pengchaiyu**	**1.07**	**336**	*e*P	**Pb**	**20 56 44.0**	**+0.1**
	baz=336						
TWY	**Chenhua**	**1.07**	**306**	*e*P	**Pn**	**20 56 43.6**	**-0.2**
	baz=306						
TWY				*e*S	**Sn**	**20 56 57.9**	**-0.1**
	baz=306						
ETLH	**Xiulin Townshi**	**1.08**	**246**	*e*P	**Pb**	**20 56 44.2**	**0.0**
	baz=245						
ETLH				*e*S	**Sn**	**20 56 58.2**	**-0.1**
	baz=245						
YHNB	**Yeheng**	**1.08**	**271**	*e*P	**Pb**	**20 56 44.0**	**-0.2**
	baz=271						
YHNB				*e*S	**Sn**	**20 56 58.6**	**+0.3**
	baz=271						
NNSB	**Datong**	**1.10**	**259**	*e*P	**Pb**	**20 56 44.2**	**-0.2**
	baz=258						
NNSB				*e*S	**Sn**	**20 56 58.8**	**0.0**
	baz=258						
NSK	**Sanguang**	**1.10**	**272**	*e*P	**Pb**	**20 56 44.6**	**+0.1**
	baz=271						
NSK				*e*S	**Sn**	**20 56 58.6**	**-0.1**
	baz=271						
NNS	**Nan Shan**	**1.10**	**259**	*e*P	**Pb**	**20 56 45.1**	**+0.5**
	baz=259						
IRIF	**Iriomote-Funau**	**1.11**	**106**	P	**Pn**	**20 56 43.6**	**-0.6**
IRIF				S	**Sn**	**20 56 59.9**	**+1.1**
HATJ	**Hateruma jima**	**1.28**	**117**	P	**Pn**	**20 56 46.3**	**-0.3**
WHF	**Hehuan Shan**	**1.29**	**247**	*e*P	**Pb**	**20 56 48.0**	**+0.1**
	baz=246						
ESL	**Shilin**	**1.33**	**231**	*e*P	**Pb**	**20 56 47.9**	**-0.4**
	baz=230						
JKRS	**Kuro-shima**	**1.38**	**107**	P	**Pn**	**20 56 47.9**	**-0.1**
JKRS				S	**Sb**	**20 57 06.0**	**-0.4**
OWD	**Renai**	**1.44**	**242**	*e*P	**Pb**	**20 56 50.6**	**+0.3**
	baz=241						
JIJ	**Ishigaki jima**	**1.47**	**101**	P	**Pb**	**20 56 50.2**	**-0.5**
JIJ				*e*S	**Sb**	**20 57 08.8**	**-0.1**
HGSD	**Ruisui**	**1.55**	**222**	*e*P	**Pb**	**20 56 51.2**	**-1.0**
	baz=221						
EHY	**Hungye**	**1.61**	**225**	*e*P	**Pn**	**20 56 51.3**	**+0.1**
	baz=224						
YULB	**Yu-li**	**1.71**	**223**	*e*P	**Pb**	**20 56 53.4**	**-1.4**
	baz=222						
TWF1	**Yuli**	**1.73**	**222**	*e*P	**Pb**	**20 56 53.8**	**-1.5**
	baz=221						
JTJ	**Tarama**	**1.95**	**90**	P	**Pn**	**20 56 56.5**	**+0.7**
ELDTW	**Lidau**	**2.03**	**225**	*e*P	**Pn**	**20 56 58.0**	**+0.9**
	baz=223						
TPUB	**Ta-pu**	**2.22**	**233**	*e*P	**Pn**	**20 57 01.1**	**+1.5**
	baz=232						
EAST	**Anshuo**	**2.75**	**215**	*e*P	**Pn**	**20 57 08.7**	**+1.7**
	baz=214						

KRSC 05 21:00:08.0±1.4, 53°.24N×157°.28E, h302km±10km, ML3.6, Kamchatka Peninsula

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

n53,○0°61/77,2C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.19**	**255**	P	**Pn**	**21 29 27.0**	**-0.2**
	baz=242						
NACB				S	**Sn**	**21 29 33.3**	**+0.7**
	baz=242						
ENA	**Nanau**	**0.21**	**347**	⇑*i*P	**Pn**	**21 29 27.0**	**-0.4**
ENA				*e*S	**Sn**	**21 29 33.8**	**+0.9**
TWD	**Chiawan**	**0.23**	**232**	*i* P	**Pn**	**21 29 27.4**	**-0.1**
	baz=218						
TWD				S	**Sn**	**21 29 33.9**	**+0.8**
	baz=218						
ETLH	**Xiulin Townshi**	**0.28**	**267**	*i* P	**Pn**	**21 29 27.7**	**-0.5**
	baz=260						
ETLH				*e*S	**Sn**	**21 29 34.2**	**0.0**
	baz=260						
HWA	**Hwalien**	**0.30**	**215**	*e*P	**Pn**	**21 29 28.3**	**+0.2**
	baz=204						
ENLB	**Shoufeng**	**0.36**	**209**	*i* P	**Pn**	**21 29 28.9**	**0.0**
	baz=201						
TWC	**Suao**	**0.39**	**8**	*i* P	**Pn**	**21 29 28.9**	**-0.2**
	baz=16						
TWC				S	**Sn**	**21 29 36.6**	**+0.7**
	baz=16						
NNSB	**Datong**	**0.43**	**299**	P	**Pn**	**21 29 29.1**	**-0.6**
	baz=298						
NNSB				S	**Sn**	**21 29 36.7**	**-0.2**
	baz=298						
NNS	**Nan Shan**	**0.44**	**300**	P	**Pn**	**21 29 29.3**	**-0.6**
	baz=299						
NNS				*e*S	**Sn**	**21 29 37.1**	**-0.1**
	baz=299						
EOS1	**EOS1**	**0.45**	**43**	*e*P	**Pn**	**21 29 30.2**	**+0.4**
	baz=49						
NDT	**Datong Townshi**	**0.46**	**326**	*i* P	**Pn**	**21 29 29.3**	**-0.7**
	baz=328						
NDT				S	**Sn**	**21 29 37.2**	**-0.2**
	baz=328						
ENTT	**Nioudou**	**0.46**	**334**	*i* P	**Pn**	**21 29 29.3**	**-0.7**
	baz=337						
ENTT				*e*S	**Sn**	**21 29 37.4**	**-0.1**
	baz=337						
WHF	**Hehuan Shan**	**0.49**	**261**	P	**Pn**	**21 29 30.2**	**-0.5**
	baz=256						
WHF				*e*S	**Sn**	**21 29 38.4**	**-0.3**
	baz=256						
TWE	**Neicheng**	**0.51**	**347**	P	**Pn**	**21 29 29.9**	**-0.7**
	baz=352						
TWE				S	**Sn**	**21 29 38.5**	**0.0**
	baz=352						
TDCB	**Techi**	**0.58**	**273**	*e*P	**Pn**	**21 29 31.5**	**-0.1**
	baz=270						
TDCB				*e*S	**Sn**	**21 29 40.3**	**0.0**
	baz=270						
YHNB	**Yeheng**	**0.58**	**320**	*i* P	**Pn**	**21 29 30.9**	**-0.7**
	baz=321						
YHNB				*e*S	**Sn**	**21 29 39.5**	**-0.8**
	baz=321						
CHGB	**Renai**	**0.59**	**254**	*e*P	**Pn**	**21 29 31.5**	**-0.3**
	baz=250						
CHGB				*e*S	**Sn**	**21 29 40.5**	**-0.1**
	baz=250						
NWLT	**Wulai**	**0.61**	**334**	*i* P	**Pn**	**21 29 31.2**	**-0.7**
	baz=337						
NWLT				*e*S	**Sn**	**21 29 40.1**	**-0.8**
	baz=337						
OWD	**Renai**	**0.62**	**245**	*i* P	**Pn**	**21 29 31.7**	**-0.5**
	baz=240						
OWD				*e*S	**Sn**	**21 29 40.9**	**-0.4**
	baz=240						
NTC	**Toucheng**	**0.63**	**3**	⇑P	**Pn**	**21 29 31.9**	**-0.2**
	baz=7.0						
NTC				*i* S	**Sn**	**21 29 41.6**	**+0.4**
	baz=7.0						
EGS		**0.63**	**12**	*e*P	**Pn**	**21 29 32.4**	**+0.2**
	baz=16						
EGS				*e*S	**Sn**	**21 29 42.4**	**+1.1**
	baz=16						
EGFH	**Guangfu**	**0.65**	**211**	*e*P	**Pn**	**21 29 31.4**	**-1.0**
	baz=206						
TIPB	**Shuangxi**	**0.75**	**2**	P	**Pn**	**21 29 33.7**	**0.0**
	baz=5.0						
TIPB				S	**Sn**	**21 29 44.7**	**+0.7**
	baz=5.0						
VWDT	**VWDT**	**0.76**	**232**	*e*P	**Pn**	**21 29 33.6**	**-0.2**
	baz=228						
VWDT				*e*S	**Sn**	**21 29 44.3**	**+0.2**
	baz=228						
WHP	**Taichung City**	**0.78**	**274**	*e*P	**Pn**	**21 29 34.6**	**+0.5**
	baz=272						
HGSD	**Ruisui**	**0.80**	**205**	*e*P	**Pn**	**21 29 34.3**	**-0.1**
	baz=201						
TWB1	**Santiao Chiao**	**0.80**	**13**	*e*P	**Pn**	**21 29 34.0**	**-0.4**
	baz=16						
TWB1				*e*S	**Sn**	**21 29 46.1**	**+0.9**
	baz=16						
DPDB	**Guoxing**	**0.81**	**257**	*e*P	**Pn**	**21 29 34.7**	**0.0**
	baz=254						
LIOB	**Emei**	**0.82**	**301**	*e*P	**Pn**	**21 29 34.8**	**0.0**
	baz=300						
LIOB				*e*S	**Sn**	**21 29 46.3**	**+0.5**
	baz=300						
NSTT	**Nanjuang**	**0.83**	**300**	*e*P	**Pn**	**21 29 34.8**	**0.0**
	baz=299						
NSTT				*e*S	**Sn**	**21 29 46.1**	**+0.2**
	baz=299						
EHY	**Hungye**	**0.83**	**211**	*e*P	**Pn**	**21 29 33.5**	**-1.4**
	baz=207						
NWF	**Wu-fen Shan**	**0.84**	**359**	*e*S	**Sn**	**21 29 47.7**	**+1.3**
	baz=2.0						
WFSB	**Wu-fen Shan**	**0.84**	**359**	*e*S	**Sn**	**21 29 47.7**	**+1.4**
	baz=2.0						
SSLB	**Suanglung**	**0.88**	**241**	*e*P	**Pn**	**21 29 35.5**	**-0.1**
	baz=237						
SMLT	**Sun Moon Lake**	**0.88**	**248**	*e*P	**Pn**	**21 29 36.5**	**+0.9**
	baz=244						
TYC	**Yuchr**	**0.91**	**250**	*e*P	**Pn**	**21 29 36.2**	**+0.4**
	baz=246						
YM01	**YM01**	**0.94**	**348**	*e*P	**Pn**	**21 29 36.1**	**-0.2**
	baz=349						
YULB	**Yu-li**	**0.94**	**209**	*e*P	**Pn**	**21 29 35.2**	**-1.2**
	baz=205						
YM10	**YM10**	**0.95**	**347**	*e*P	**Pn**	**21 29 35.8**	**-0.7**
	baz=349						
YM05	**YM05**	**0.96**	**348**	*e*P	**Pn**	**21 29 35.8**	**-0.8**
	baz=349						
YM05				*e*S	**Sn**	**21 29 48.9**	**-0.3**
	baz=349						
YM11	**YM11**	**0.96**	**348**	*e*P	**Pn**	**21 29 35.8**	**-0.8**
	baz=350						
YM07	**YM07**	**0.96**	**351**	*e*P	**Pn**	**21 29 36.5**	**-0.2**
	baz=352						
TWF1	**Yuli**	**0.98**	**208**	*e*P	**Pn**	**21 29 37.0**	**+0.2**
	baz=204						
WHYT	**Xinyi Township**	**1.01**	**239**	*e*P	**Pn**	**21 29 37.6**	**+0.3**
	baz=236						
JYNG	**Yonagunijimaku**	**1.08**	**78**	P	**Pn**	**21 29 37.6**	**-0.5**
YOJ	**Yonaguni jima**	**1.14**	**78**	*e*P	**Pn**	**21 29 38.4**	**-0.6**
	baz=79						
YOJ	**Yonaguni jima**	**1.14**	**78**	P	**Pn**	**21 29 38.4**	**-0.6**
ELDTW	**Lidau**	**1.25**	**215**	*e*P	**Pn**	**21 29 40.7**	**0.0**
	baz=212						
WDLH	**Douliu**	**1.27**	**245**	*e*P	**Pn**	**21 29 41.7**	**+1.0**
	baz=243						
CHN4	**Tsaushan**	**1.40**	**232**	*e*P	**Pn**	**21 29 43.4**	**+0.9**
	baz=229						
TWK	**Hsinying**	**1.53**	**232**	*e*P	**Pn**	**21 29 45.4**	**+1.0**
	baz=229						
SLGT	**Liugui**	**1.61**	**221**	*e*P	**Pn**	**21 29 44.7**	**-0.8**
	baz=218						
IRIF	**Iriomote-Funau**	**1.77**	**86**	P	**Pn**	**21 29 46.7**	**-0.9**

ISCJB ***05*** *22:03:57.8±0.2, 32.°90N±0.°02×76.°36E±0.°03, h15km, mb4.1/42, MS3.2/6, Error ellipse: s-maj=4.2km s-min=2.5km az=157.8*
IDC ***05*** *22:03:57.1±0.6, 32.°84N×76.°16E, h0km, mb3.9/18, mb1 4.0/22, mb1mx3.9/38, mbtmp3.9/22, ML3.4/4, MS3.2/7, Ms1 3.2/7, ms1mx2.9/36, Error ellipse: s-maj=15.7km s-min=13.5km az=32.0*
NDI ***05*** *22:04:00.3±3.5, 32.°79N×76.°11E, h13km±10km, ML4.4*
NNC ***05*** *22:04:00.0±1.6, 32.°82N×76.°48E, h27km±17km, mb4.3, Error ellipse: s-maj=13.4km s-min=6.7km az=132.0*
MOS ***05*** *22:04:01.6±1.3, 32.°99N×76.°33E, h39km, mb4.4/15, Error ellipse: s-maj=8.3km s-min=4.7km az=98.6*
NEIC ***05*** *22:04:03.1±2.8, 32.°91N×76.°29E, h43km±7km, mb4.0/21, Error ellipse: s-maj=15.4km s-min=9.3km az=169.0*
BJI ***05*** *22:04:05.4±0.0, 33.°08N×76.°57E, h50km, mb4.4/24, mB4.6/18, Ms3.9/14, Ms7 3.7/12*
ISC 05 22:03:59.4±0.3, 32.°86N±0.°03×76.°25E±0.°04, h15km, n160, ○2°00/185, mb4.1/42, MS3.5/7, 12C-10D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**0.61**	**176**	*e*P	**Pg**	**22 04 11.1**	**-0.5**
DHRM				*e*S	**Sg**	**22 04 19.8**	**+0.1**
SMLA	**Simla**	**1.90**	**156**	*e*P	**Pb**	**22 04 33.7**	**0.0**
SMLA				*e*S	**Sb**	**22 04 57.9**	**+0.6**
SMLA				IAML		22 05 01.3	
	comp=E,11μm,0.1s						
SMLA				IAML		22 05 01.8	
	comp=N,12μm,0.1s						
CHCP	**Chirah Chowk**	**2.62**	**288**	P	**Pb**	**22 04 45.5**	**-0.7**
NIL	**Nilore**	**2.63**	**288**	*e*Pn	**Pb**	**22 04 45.4**	**-0.9**
NIL	**Nilore**	**2.63**	**288**	*e*P	**Pb**	**22 04 45.4**	**-0.9**
KKR	**Kurukshetra**	**2.93**	**170**	*e*P	Pn	22 04 33.6	-12
KKR				*e*S	Sn	22 05 08.8	-12
DDI	**Dehra Dun**	**2.96**	**148**	*e*P	**Pn**	**22 04 48.5**	**+2.4**
DDI				*e*S	**Sn**	**22 05 19.9**	**-1.4**
DDI				IAML		22 05 34.8	
	comp=N,3μm,0.6s						
DDI				IAML		22 05 37.0	
	comp=E,4μm,0.2s						
SARP	**Sargodha**	**3.17**	**254**	P	**Pb**	**22 04 55.8**	**+0.3**
JOSI	**Joshimath**	**3.64**	**128**	*e*P	**Pn**	**22 04 57.8**	**+2.4**
JOSI				*e*S	**Sn**	**22 05 40.9**	**+2.7**
JOSI				IAML		22 05 55.1	
	comp=N,3μm,0.9s						
JOSI				IAML		22 05 55.6	
	comp=E,974nm,0.3s						
CEP	**Cherat**	**3.76**	**286**	P	**Pn**	**22 04 59.1**	**+2.1**
THW	**Thamme Wali**	**3.80**	**270**	P	**Pn**	**22 04 59.6**	**+2.2**
NDI	**New Delhi**	**4.25**	**168**	*e*P	**Pn**	**22 05 04.0**	**+0.4**
NDI				*e*S	**Sn**	**22 05 50.5**	**-2.5**
KUDL	**Kundal**	**4.71**	**177**	*e*P	Pn	22 05 02.9	-7.1
KUDL				*e*S	Sn	22 05 50.6	-14
KUDL				AML	AML	22 06 22.0	
	comp=N,473nm,0.7s						
KUDL				AML	AML	22 06 23.6	
	comp=E,583nm,0.4s						
KBL	**Kabul**	**6.24**	**288**	*e*Pn	**Pn**	**22 05 33.7**	**+2.6**
KBL				*e*Sn	**Sn**	**22 06 39.9**	**-2.3**
KBL	**Kabul**	**6.24**	**288**	*e*P	**Pn**	**22 05 33.7**	**+2.6**
KBL				*e*		22 06 39.9	
KSH	**Kashi**	**6.64**	**358**	P	**Pn**	**22 05 37.5**	**+0.9**
KSH				S	**Sn**	**22 06 48.8**	**-3.3**
PYUN	**Piuthan**	**7.51**	**127**	*e*Pn	**Pn**	**22 05 48.5**	**-0.1**
PYUN				*e*Sn	**Sn**	**22 07 09.6**	**-4.0**
	comp=E,241nm,0.3s						
DANN	**Dangsing**	**7.88**	**123**	*e*Pn	**Pn**	**22 05 54.2**	**+0.4**
DANN				*e*Sn	**Sn**	**22 07 19.4**	**-3.5**
	comp=E,213nm,0.4s						
KOLN	**Koldanda**	**8.13**	**127**	*e*Pn	**Pn**	**22 05 57.7**	**+0.6**
KOLN				*e*Sn	**Sn**	**22 07 26.1**	**-2.8**
	comp=E,163nm,0.4s						
BTK	**Batken**	**8.41**	**330**	*e*Pn	**Pn**	**22 06 02.1**	**+1.3**
BTK				*e*Sn	**Sn**	**22 07 33.8**	**-1.6**
BTK	**Batken**	**8.41**	**330**	*e*P	**Pn**	**22 06 02.1**	**+1.3**
BTK				*e*		22 07 33.8	
NRN	**Naryn**	**8.56**	**359**	*e*Pn	**Pn**	**22 06 06.4**	**+3.3**
NRN	**Naryn**	**8.56**	**359**	*e*P	**Pn**	**22 06 06.4**	**+3.3**
GKN	**Gorkha**	**8.71**	**122**	*e*Pn	**Pn**	**22 06 05.3**	**+0.2**
GKN				*e*Sn	**Sn**	**22 07 38.0**	**-5.1**
	comp=E,248nm,0.2s						
DMN	**Daman**	**9.28**	**122**	*e*Pn	**Pn**	**22 06 13.0**	**+0.1**
KKN	**Kakani**	**9.30**	**121**	*e*Pn	**Pn**	**22 06 13.0**	**-0.2**
PKIN	**Phulchoki**	**9.50**	**121**	*e*Pn	**Pn**	**22 06 15.8**	**-0.2**
PKI	**Pulchoki**	**9.52**	**121**	*e*Pn	**Pn**	**22 06 15.7**	**-0.6**
BOOM	**Boomskoye usch**	**9.61**	**359**	*e*Pn	**Pn**	**22 06 19.1**	**+1.7**
BOOM	**Boomskoye usch**	**9.61**	**359**	*e*P	**Pn**	**22 06 19.1**	**+1.7**
BHPL	**Bhopal**	**9.64**	**174**	*e*P	**Pn**	**22 06 17.3**	**-0.4**
BHPL				*e*S	**Sn**	**22 07 58.6**	**-7.3**
GUN	**Gumba**	**9.67**	**118**	*e*Pn	**Pn**	**22 06 18.3**	**-0.1**
AAK	**Ala-Archa**	**9.86**	**352**	Pn	**Pn**	**22 06 22.8**	**+2.1**
	comp=E,0.5nm,0.3s,baz=166,slow=12,SNR=15						
AAK				LR	LR	22 10 29.4	
	comp=E,273nm,18.5s,baz=160,slow=40						
AAK	**Ala-Archa**	**9.86**	**352**	*e*Pn	**Pn**	**22 06 22.5**	**+1.8**
AAK	**Ala-Archa**	**9.86**	**352**	⇑P	**Pn**	**22 06 20.4**	**-0.3**
	comp=E,6.3nm,0.6s						
AAK				⇓S	**Sn**	**22 08 12.5**	**+1.3**
	comp=E,11nm,0.9s						
AAK	**Ala-Archa**	**9.86**	**352**	P	**Pn**	**22 06 20.4**	**-0.3**
AAK				S	**Sn**	**22 08 12.5**	**+1.3**
FRU1	**Bishkek**	**10.01**	**353**	*e*Pn	**Pn**	**22 06 25.1**	**+2.3**
FRU1	**Bishkek**	**10.01**	**353**	*e*P	**Pn**	**22 06 25.1**	**+2.3**
JIRN	**Jiri**	**10.04**	**119**	*e*Pn	**Pn**	**22 06 23.0**	**-0.4**
TKM2	**Tokmak 2**	**10.05**	**357**	⇓P	**Pn**	**22 06 23.3**	**-0.2**
	comp=E,5.0nm,0.7s						
TKM2				⇑S	**Sn**	**22 08 17.1**	**+1.0**
	comp=E,4.7nm,0.8s						
TKM2	**Tokmak 2**	**10.05**	**357**	P	**Pn**	**22 06 23.3**	**-0.2**
TKM2				S	**Sn**	**22 08 17.9**	**+1.8**
RAMN	**Ramite**	**10.74**	**121**	*e*Pn	**Pn**	**22 06 31.9**	**-1.0**
PDGK	**Podgornoye**	**10.75**	**13**	⇑P	**Pn**	**22 06 32.4**	**-0.6**
	comp=E,18nm,0.8s						
PDGK				⇓S	**Sn**	**22 08 32.7**	**-0.5**
	comp=E,18nm,1.3s						
PDGK	**Podgornoye**	**10.75**	**13**	P	**Pn**	**22 06 32.4**	**-0.6**
PDGK				S	**Sn**	**22 08 32.7**	**-0.5**
KK31	**Karatay Array**	**11.18**	**338**	*e*Pn	**Pn**	**22 06 39.6**	**+1.0**
KK31	**Karatay Array**	**11.18**	**338**	⇓P	**Pn**	**22 06 39.7**	**+1.0**
	comp=E,2.9nm,0.5s,baz=149,slow=12,SNR=43						
KK31				⇓S	**Sn**	**22 08 45.0**	**+1.7**
	comp=E,5.9nm,0.6s,baz=156,slow=24,SNR=3.7						
KK31	**Karatay Array**	**11.18**	**338**	P	**Pn**	**22 06 39.7**	**+1.0**
KK31				S	**Sn**	**22 08 45.1**	**+1.7**
KKAR	**Karatay Array**	**11.18**	**338**	*e*Pn	**Pn**	**22 06 39.5**	**+0.8**
KKAR	**Karatay Array**	**11.18**	**338**	*e*P	**Pn**	**22 06 39.5**	**+0.8**
NGP	**Nagpur**	**11.93**	**167**	⇑*i*P	**Pn**	**22 06 47.5**	**-1.5**
NGP				*e*S	Sn	22 08 52.8	-9.2
GTK	**Tadong**	**12.03**	**114**	*e*S	**Sn**	**22 08 55.7**	**-9.0**
BOK	**Bokaro**	**12.39**	**134**	*e*P	**Pn**	**22 06 55.1**	**-0.2**
LSA	**Lhasa**	**13.13**	**100**	P	**Pn**	**22 07 05.1**	**-0.7**
LSA	**Lhasa**	**13.13**	**100**	*e*Pn	**Pn**	**22 07 05.2**	**-0.5**
LSA	**Lhasa**	**13.13**	**100**	*e*P	**Pn**	**22 07 05.3**	**-0.5**
WMQ	**Urumqi**	**14.14**	**36**	*e*P	**Pn**	**22 07 19.1**	**-0.1**
WMQ				pP	P	22 07 30.2	+3.5
WMQ				pmax	pmax		
	comp=E,88nm,4.5s						
WMQ				LR	LR		
	comp=E,250nm,13.3s						
WMQ				LR	LR		
	comp=E,350nm,15.3s						
WMQ				LR	LR		
	comp=E,410nm,17.1s						
WMQ	**Urumqi**	**14.14**	**36**	*e*Pn	**Pn**	**22 07 17.3**	**-1.8**
WMQ	**Urumqi**	**14.14**	**36**	*e*P	**Pn**	**22 07 17.3**	**-1.8**
MAKZ	**Makanchi**	**14.60**	**16**	*e*Pn	**Pn**	**22 07 24.6**	**-0.8**
MAKZ	**Makanchi**	**14.60**	**16**	⇓P	**Pn**	**22 07 24.4**	**-1.0**
	comp=E,5.6nm,0.9s						
MAKZ				⇑S	**Sn**	**22 10 06.2**	**-0.7**
	comp=E,4.6nm,1.0s						
MAKZ	**Makanchi**	**14.60**	**16**	P	**Pn**	**22 07 24.4**	**-1.0**
MAKZ				S	**Sn**	**22 10 06.2**	**-0.7**
MK31	**Makanchi Array**	**14.66**	**17**	*e*Pn	**Pn**	**22 07 24.9**	**-1.3**
MK31	**Makanchi Array**	**14.66**	**17**	⇑P	**Pn**	**22 07 25.5**	**-0.7**
	comp=E,6.8nm,0.9s,baz=202,slow=12,SNR=24						
MK31				⇑S	**Sn**	**22 10 06.2**	**-2.2**
	comp=E,2.8nm,0.8s,baz=198,slow=22,SNR=5.0						
MK31	**Makanchi Array**	**14.66**	**17**	P	**Pn**	**22 07 25.5**	**-0.7**
MK31				S	**Sn**	**22 10 06.2**	**-2.2**
MK32	**Makanchi Array**	**14.66**	**17**	*e*Pn	**Pn**	**22 07 24.3**	**-1.9**
MKAR	**Makanchi Array**	**14.66**	**17**	Pn	**Pn**	**22 07 24.3**	**-1.9**
	comp=E,0.3nm,0.3s,baz=202,slow=12,SNR=22						
MKAR				Sn	**Sn**	**22 10 03.8**	**-4.6**
	comp=E,0.4nm,0.3s,baz=195,slow=17,SNR=5.6						
MKAR				LR	LR	22 13 17.9	
	comp=E,39nm,18.4s,baz=183,slow=38						
MKAR	**Makanchi Array**	**14.66**	**17**	*i* P	**Pn**	**22 07 25.6**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SHL	**Shillong**	**15.46**	**114**	*e*Pn	**Pn**	**22 07 35.5**	**-1.6**
	comp=Z,5.4nm,1.0s						
SHL	**Shillong**	**15.46**	**114**	*e*P	**Pn**	**22 07 35.5**	**-1.6**
SHL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SHL	**Shillong**	**15.46**	**114**	*e*P	**Pn**	**22 07 37.0**	**-0.1**
HYB	**Hyderabad**	**15.52**	**172**	*i* P	**Pn**	**22 07 32.0**	**-5.9**
HYB				*e*S	**Sn**	**22 10 34.0**	**+4.3**
GEYT	**Alibeck**	**15.62**	**294**	Pn	**Pn**	**22 07 37.2**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=109,slow=17,SNR=2.8						
GYA0B	**ALIBECK ARRAY**	**15.62**	**294**	*e*Pn	**Pn**	**22 07 40.0**	**+0.9**
	comp=Z,3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**17.82**	**5**	P	**Pn**	**22 08 05.1**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=190,slow=11,SNR=18						
KURBB	**Kurchatov Arra**	**17.82**	**5**	⇑P	**Pn**	**22 08 05.1**	**-1.7**
	comp=Z,11nm,1.1s						
KURK	**Kurchatov**	**17.92**	**5**	*e*Pn	**Pn**	**22 08 06.5**	**-1.5**
	comp=Z,6.8nm,0.8s						
KURK	**Kurchatov**	**17.92**	**5**	*e*P	**Pn**	**22 08 06.5**	**-1.5**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DGZ	**Jazzator, Alta**	**18.77**	**23**	*d i*P	**Pn**	**22 08 19.2**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
UOSS	**Minazif**	**19.22**	**251**	*e*P	**Pn**	**22 08 26.1**	**+2.1**
	comp=Z,7.6nm,1.0s						
GTA	**Gaotai**	**20.09**	**64**	*e*P	Pn	22 08 33.8	-0.6
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AB31	**Akbulak array**	**20.41**	**328**	⇓P	**P**	**22 08 36.4**	**+0.7**
	comp=Z,5.1nm,0.7s,baz=134,slow=11,SNR=57						
AB31	**Akbulak array**	**20.41**	**328**	P	**P**	**22 08 36.4**	**+0.7**
ABKAR	**Akbulak array**	**20.41**	**328**	*e*P	**P**	**22 08 36.2**	**+0.5**
	comp=Z,6.3nm,0.8s						
BVAR	**Borovoye Array**	**20.59**	**350**	P	Pn	22 08 39.0	-1.0
	comp=Z,9.3nm,0.7s,baz=161,slow=10,SNR=48						
BVAR	**Borovoye Array**	**20.59**	**350**	P	Pn	22 08 39.0	-1.0
BRVK	**Borovoye**	**20.64**	**350**	*e*P	**P**	**22 08 39.1**	**+0.8**
	comp=Z,18nm,0.8s						
BRVK	**Borovoye**	**20.64**	**350**	⇑P	**P**	**22 08 38.4**	**+0.2**
	comp=Z,19nm,0.8s						
BRVK	**Borovoye**	**20.64**	**350**	*c i*P	**P**	**22 08 39.1**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,22nm,0.9s						
ZAA0	**Zalesovo Array**	**21.94**	**14**	*e*P	**P**	**22 08 51.6**	**-0.6**
	comp=Z,5.6nm,0.8s						
ZALV	**Zalesovo Beam**	**21.94**	**14**	P	**P**	**22 08 51.9**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=210,slow=9.5,SNR=9.5						
ZALV				LR	LR	22 19 03.2	
	comp=Z,20nm,18.7s,baz=250,slow=41						
ZAA1	**Zalesovo Array**	**21.95**	**14**	*e*P	**P**	**22 08 51.9**	**-0.4**
AKTO	**Aktyubinsk**	**22.12**	**328**	P	**P**	**22 08 54.5**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=127,slow=9.7,SNR=19						
AKTO	**Aktyubinsk**	**22.12**	**328**	⇑P	**P**	**22 08 54.3**	**0.0**
	comp=Z,18nm,0.9s						
NVS	**Novosibirsk**	**22.52**	**11**	⇑*i*P	**P**	**22 09 00.3**	**+1.9**
NVS				*e*S	**S**	**22 13 00.3**	**-4.4**
NVS				pmax	pmax		
	comp=N,11nm,1.0s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,13nm,1.0s						
NVS				smax	smax		
	comp=N,14nm,1.8s						
LZH	**Lanzhou**	**22.94**	**74**	*e*P	**P**	**22 09 03.5**	**+0.2**
LZH				pP	sP	22 09 15.8	+4.7
LZH				sP	pP	22 09 22.1	+13
LZH				*e*PP	**PnPn**	**22 09 34.2**	**+6.3**
LZH				pmax	pmax		
	comp=N,20nm,1.0s						
LZH				pmax	pmax		
	comp=N,47nm,4.6s						
LZH				LR	LR		
	comp=N,220nm,10.8s						
LZH				LR	LR		
	comp=N,220nm,11.2s						
LZH				LR	LR		
	comp=N,300nm,13.7s						
AKT	**Akhty**	**24.21**	**299**	*e*P	**P**	**22 09 19.9**	**+4.2**
AKT				*e*		22 09 50.6	
AKT				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CHTO	**Chiang Mai**	**24.68**	**119**	*e*P	**P**	**22 09 22.1**	**+2.2**
	comp=Z,4.9nm,1.0s						
CHTO	**Chiang Mai**	**24.68**	**119**	*e*P	**P**	**22 09 22.1**	**+2.2**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMMT	**Chiang Mai**	**24.69**	**119**	P	**P**	**22 09 27.0**	**+7.0**
	comp=Z,4.3nm,0.9s						
CM31	**Chiang Mai Arr**	**24.91**	**120**	*e*P	**P**	**22 09 20.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**24.91**	**120**	P	**P**	**22 09 23.9**	**+2.0**
	comp=Z,3.2nm,0.8s,baz=302,slow=9.1,SNR=17						
CMAR				LR	LR	22 21 25.3	
	comp=Z,19nm,19.2s,baz=250,slow=42						
CMAR	**Chiang Mai Arr**	**24.91**	**120**	P	**P**	**22 09 24.0**	**+2.0**
GROC	**Groznyy**	**25.98**	**302**	*e*P	**P**	**22 09 31.6**	**+0.1**
GROC				*e*		22 10 07.0	
GROC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GNI	**Garni**	**26.25**	**295**	*e*P	**P**	**22 09 35.7**	**+1.5**
	comp=Z,7.0nm,0.9s						
GNI	**Garni**	**26.25**	**295**	*i* P	**P**	**22 09 38.7**	**+4.5**
GNI				pmax	pmax		
	comp=Z,17nm,1.2s						
SVE	**Sverdlovsk**	**26.27**	**340**	*e*P	**P**	**22 09 32.6**	**-1.3**
ARU	**Arti**	**26.55**	**338**	*e*P	**P**	**22 09 37.2**	**+0.7**
	comp=Z,4.2nm,0.7s						
ARU	**Arti**	**26.55**	**338**	*d i*P	**P**	**22 09 37.9**	**+1.4**
ARU						22 10 13.5	
ARU						22 12 55.2	
ARU				S	**S**	**22 14 08.1**	**-2.2**

comp=Z,7.7nm,0.3s,baz=102,slow=8.4,SNR=7.4
NB2 NORSAR Subarra 49.86 325 P **P 22 12 52.9 +1.1**
comp=Z,1.6nm,0.7s,baz=94,slow=7.9
NB200 NORSAR Array S 49.86 325 *eP* **P 22 12 51.8 0.0**
NOA NORSAR Array B 49.86 325 P **P 22 12 51.8 0.0**
comp=Z,0.4nm,0.6s,baz=95,slow=7.5,SNR=4.9
KMBO Kilima Mbogo 49.95 235 P **P 22 12 52.5 -0.9**
comp=Z,1.2nm,0.5s,baz=31,slow=14,SNR=4.4
KMBO Kilima Mbogo 49.95 235 *eP* **P 22 12 52.5 -0.9**
comp=Z,2.2nm,0.8s
KMBO Kilima Mbogo 49.95 235 *i* P **P 22 12 55.5 +2.2**
KMBO pmax pmax
comp=Z,1.0nm,0.4s
MAJO Matsushiro 50.30 67 *eP* **P 22 12 55.1 -0.4**
MAJO Matsushiro 50.30 67 *eP* **P 22 12 55.1 -0.4**
MJAR Matsushiro Arr 50.30 67 P **P 22 12 55.1 -0.4**
comp=Z,2.2nm,0.8s,baz=284,slow=9.4,SNR=7.8
YSS Yuzh-Sakhalins 51.44 53 *eP* **P 22 13 04.9 +1.0**
PEA1 Petropavlovsk- 59.58 44 *eP* **P 22 14 02.5 +0.2**
PETK Petropavlovsk- 59.58 44 P **P 22 14 02.5 +0.2**
comp=Z,1.1nm,0.7s,baz=270,slow=2.9,SNR=3.1
BILL Bilibino 59.98 26 *eP* **P 22 14 06.3 +1.4**
BILL *e* 22 14 51.9
BILL *e* 22 16 19.3
BILL pmax pmax
comp=Z,1.0nm,1.1s
ESDC Sonseca Array 63.01 301 P **P 22 14 25.1 -0.8**
comp=Z,0.1nm,0.3s,baz=55,slow=11,SNR=3.0
SUMG Summit 65.86 343 *eP* **P 22 14 45.4 +1.0**
comp=Z,7.7nm,1.0s
SUMG Summit 65.86 343 *i* P **P 22 14 45.7 +1.3**
SUMG pmax pmax
comp=Z,14nm,0.8s
SUMG Summit 65.86 343 *i* P **P 22 14 45.7 +1.3**
comp=Z,14nm,0.8s
PESTR Estremoz 65.92 302 *eP* **P 22 14 43.6 -1.3**
TOA1 Torodi Ar. Sit 70.10 273 *eP* **P 22 15 10.3 -1.2**
TORD Torodi Ar. Bea 70.10 273 P **P 22 15 10.3 -1.2**
comp=Z,1.1nm,0.8s,baz=44,slow=5.0,SNR=8.3
TOLK Toolik Lake Re 73.28 16 *eP* **P 22 15 30.2 +0.4**
comp=Z,4.1nm,0.8s
WR1 Warramunga Arr 76.38 125 *eP* **P 22 15 47.5 -0.9**
WRA Warramunga Arr 76.38 125 P **P 22 15 47.5 -0.9**
comp=Z,49nm,0.3s,baz=307,slow=7.3,SNR=3.0
CAST Castle Rocks 76.67 20 *eP* **P 22 15 48.6 -0.9**
comp=Z,4.7nm,0.8s
ILAR Eielson Array 77.01 18 P **P 22 15 51.3 0.0**
comp=Z,1.1nm,0.9s,baz=315,slow=5.1,SNR=7.7
BOSA Boshof 77.97 224 P **P 22 15 57.7 +0.4**
comp=Z,5.6nm,1.0s,baz=35,slow=1.3,SNR=4.7
AS31 Alice Springs 78.62 128 *eP* **P 22 16 01.6 +0.8**
comp=Z,1.1nm,1.1s
ASAR Alice Springs 78.62 128 P **P 22 16 01.6 +0.8**
comp=Z,0.2nm,0.3s,baz=321,slow=5.3,SNR=2.9
BCPM Bancas Point 82.90 17 *eP* **P 22 16 23.3 0.0**
comp=Z,27nm,0.7s
YKA Yellowknife Ar 84.57 5 P **P 22 16 32.0 +0.3**
comp=Z,0.2nm,0.3s,baz=343,slow=4.8,SNR=6.1
YKA Yellowknife Ar 84.57 5 P **P 22 16 32.0 +0.3**

MAN 05 22:10:14.9, 7°.27N×124°.87E, h14km, MS3.5, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.64**	**18**	*eP*	Pg	22 10 27.3	-0.1
BUKP				*eS*	Sb	22 10 36.8	+0.1
DMPH	**Davao City--Mi**	**0.66**	**106⇑**	*eP*	Pn	22 10 31.2	+1.3
DMPH				*eS*	Sn	22 10 43.2	+3.1
SKMP	**Bagumbayan, Su**	**0.81**	**203**	*eP*	Pg	22 10 30.1	-0.4
SKMP				*eS*	Sn	22 10 44.0	+0.4
CGP	**Cagayan de Oro**	**1.19**	**352⇑**	*iP*	Pn	22 10 36.1	-1.1
CGP				*i* S	Sb	22 10 50.1	-2.6
DDMP	**Don Marcelino,**	**1.43**	**144**	*eP*	Pg	22 10 43.4	+1.0
PAGZ	**Pagadian**	**1.58**	**292**	*eP*	Pn	22 10 42.1	-0.4
PAGZ				*eS*	Sn	22 11 03.2	+0.5

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*IDC **05** 22:11:15.2±7.4, 33°.07S×179°.11W, h0km, mb3.8/1, mb1 4.0/1, mb1mx3.6/16, mbtmp3.8/1, Error ellipse: s-maj=349.3km s-min=55.6km az=162.0*
*WEL **05** 22:11:19.6±1.4, 34°S±14°×17°.9W±1°.8, h194km±33km, M4.4/8, mB4.5/2, MLv4.4/8, Mw(mB)3.6/2, Error ellipse: s-maj=0.0km s-min=0.0km az=107.5*
ISC 05 22:11:15.0±2.0, 34°.1S±0°.1×178°.2W±0°.2, h48km, n21, σ1°.38/30, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.46**	**218**	P	**Pn**	**22 12 21.3**	**+1.2**
MXZ				S	**Sn**	**22 13 11.4**	**+0.6**
HAZ	**Te Kaha**	**4.88**	**221**	P	**Pn**	**22 12 26.9**	**+1.1**
HAZ				S	**Sn**	**22 13 22.7**	**+1.7**
PUZ	**Puketiti**	**4.88**	**215**	P	**Pn**	**22 12 26.9**	**+1.0**
PUZ				S	**Sn**	**22 13 22.8**	**+1.7**
WIZ	**White Island**	**5.06**	**226**	P	**Pn**	**22 12 31.9**	**+3.5**
TWGZ	**Tauwhareparae**	**5.10**	**216**	P	**Pn**	**22 12 30.9**	**+2.0**
TWGZ				S	**Sn**	**22 13 24.9**	**-1.6**
CNGZ	**Carnagh Statio**	**5.24**	**213**	P	**Pn**	**22 12 32.0**	**+1.2**
TKGZ	**Te Karaka**	**5.37**	**215**	P	**Pn**	**22 12 33.8**	**+1.3**
TKGZ				S	**Sn**	**22 13 30.5**	**-2.6**
MWZ	**Matawai**	**5.45**	**218**	P	**Pn**	**22 12 34.2**	**+0.5**
MWZ				S	**Sn**	**22 13 33.7**	**-1.4**
URZ	**Urewera**	**5.61**	**221**	P	**Pn**	**22 12 36.2**	**+0.3**
URZ				S	**Sn**	**22 13 37.5**	**-1.5**
RIGZ	**Rimuhau**	**5.62**	**214**	P	**Pn**	**22 12 36.9**	**+0.8**
SNGZ	**Shannon Statio**	**5.88**	**216**	P	**Pn**	**22 12 40.9**	**+1.2**
SNGZ				S	**Sn**	**22 13 45.0**	**-0.8**
MTHZ	**Maungataniwha**	**6.19**	**219**	P	**Pn**	**22 12 44.6**	**+0.7**
MTHZ				S	**Sn**	**22 13 52.4**	**-0.9**
TOZ	**Tahuroa Road**	**6.26**	**233**	P	**Pn**	**22 12 45.5**	**+0.8**
BKZ	**Black Stump Fm**	**6.61**	**219**	P	**Pn**	**22 12 49.5**	**-0.1**
KWHZ	**Kaweka Forest**	**6.83**	**218**	P	**Pn**	**22 12 53.6**	**+0.8**
OUZ	**Omahuta**	**6.85**	**258**	P	**Pn**	**22 12 52.6**	**-0.3**
BFZ	**Birch Farm**	**7.91**	**212**	P	**Pn**	**22 13 06.1**	**-1.2**
MRZ	**Mangatainoka R**	**8.20**	**215**	P	**Pn**	**22 13 10.2**	**-1.1**
ASAR	**Alice Springs**	**42.87**	**271**	P	**P**	**22 19 09.2**	**+0.3**
1.2nm,0.8s,baz=106,slow=7.0,SNR=7.8
WRA Warramunga Arr 44.19 276 P **P 22 19 18.9 -0.5**
57nm,0.3s,baz=117,slow=7.5,SNR=1.8
FINES FINESS Array B 148.53 338 PKPbc **PKPab 22 30 59.1 -0.1**
1.7nm,0.6s,baz=42,slow=4.5,SNR=10.0

DJA 05 22:17:53.9±0.9, 5°.5S±3°.×10°.2E±1°.0, h11km±7km, M3.6/6, MLv3.6/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.92**	**75**	P	Pb	22 18 12.0	+0.2
LHSI	**Lahat**	**1.64**	**62**	P	Pn	22 18 19.6	-3.1
LWLI	**Liwa**	**2.02**	**102**	P	Pn	22 18 28.8	+0.7
LWLI				S	Sn	22 18 53.2	-0.3
MDSI	**Maura Dua**	**2.10**	**87**	P	Pn	22 18 28.4	-0.7
MDSI				S	Sn	22 18 55.4	+0.1
KASI	**Kota Agung**	**2.59**	**111**	P	Pn	22 18 37.0	+1.3

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*ISK **05** 22:23:55.4, 38°.39N×38°.81E, h16km, ML1.9/5*
*ISCJB **05** 22:23:56.5±0.5, 38°.32N±0°.03×38°.80E±0°.03, h9km±6km, Error ellipse: s-maj=5.8km s-min=4.5km az=1.1*
*DDA **05** 22:23:56.2, 38°.31N×38°.82E, h7km±2km, ML2.6*
ISC 05 22:23:56.2±1.1, 38°.33N±0°.04×38°.80E±0°.03, h13km±9km, n12, σ0°.44/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.22**	**40**	*i* P	**Pb**	**22 24 02.0**	**-0.3**
ELZG				*i* S	**Sg**	**22 24 05.3**	**+0.8**
ELZG				IAML_P			
comp=Z,9μm,0.2s
SVRC Sivrice-ELAZID 0.40 83 PG **Pg 22 24 03.7 -0.6**
SVRC SG **Sg 22 24 09.7 -0.1**
AKCD Akcadag 0.69 268 *i* P **Pb 22 24 10.1 -0.1**
AKCD *i* S **Sb 22 24 20.4 +0.6**
HEKM Malatya_Hekimh 0.86 310 *i* P **Pb 22 24 13.1 0.0**
HEKM IAML_P
comp=Z,337nm,0.1s
URFA Urfa 0.89 179 PG **Pn 22 24 14.2 -0.2**
URFA SG **Sn 22 24 27.6 +0.4**
KEMA Kemaliye 0.97 346 *i* P **Pn 22 24 15.5 -0.1**
KEMA *i* S **Sn 22 24 29.7 +0.3**

TNCL Tunceli-Merkez 0.98 36 *i* P **Pn 22 24 15.4 -0.3**
TNCL IAML_P
comp=Z,69nm,0.1s
DARE Darende-Malaty 1.06 284 PG **Pg 22 24 16.4 -0.3**
DARE SG **Sn 22 24 31.1 -0.5**
DIYA Diyarbakir 1.12 111 *i* P **Pn 22 24 18.0 +0.4**
DYBB Diyarbakir 1.12 109 PN **Pb 22 24 17.1 -0.4**
HANI Diyarbakir_Han 1.26 86 *i* P **Pg 22 24 20.8 +0.3**
HANI IAML_P
comp=Z,706nm,0.3s
MAZI Mazidag 1.56 123 PN **Pn 22 24 23.7 -0.1**

JMA 05 22:37:23.9±0.2, 39°.14N×144°.20E, h59km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.90**	**284**	P	Pn	22 37 54.8	+0.9
MIYJ				S	Sn	22 38 17.5	+0.8
OFUJ	**Ofunato**	**1.97**	**269**	P	Pn	22 37 55.6	+0.7
JTH	**Tanohata**	**1.98**	**295**	P	Pn	22 37 55.8	+0.8
JTH				S	Sn	22 38 19.6	+1.0
JOM	**Ohasama**	**2.28**	**279**	P	Pn	22 38 00.4	+1.3
JOM				S	Sn	22 38 27.5	+1.4
JMK	**Ichinoseki**	**2.33**	**266**	P	Pn	22 38 00.8	+1.0
JMK				S	Sn	22 38 28.2	+1.0
JANG	**Nango**	**2.41**	**302**	P	Pn	22 38 01.3	+0.4
JANG				S	Sn	22 38 29.4	+0.2
JYK	**Kaneyama**	**3.00**	**267**	P	Pn	22 38 10.3	+1.3
JOT	**Ohata**	**3.29**	**314**	P	Pn	22 38 14.0	+1.1
JOT				S	Sn	22 38 51.0	+0.2
JNBK	**Urakawa-nobuka**	**3.32**	**341**	P	Pn	22 38 14.0	+0.6
JNBK				S	Sn	22 38 52.3	+0.7
JFT	**Otama**	**3.44**	**243**	P	Pn	22 38 15.7	+0.6
JFT				S	Sn	22 38 54.6	0.0
JCH	**Churui**	**3.53**	**350**	P	Pn	22 38 15.8	-0.4
JCH				*eS*	Sn	22 38 54.6	-2.0
NEM2	**Nemuro 2**	**4.38**	**15**	P	Pn	22 38 24.8	-3.0
JTKR	**Abashiri--Toko**	**4.83**	**357**	P	Pn	22 38 33.4	-0.6
JTKR				S	Sn	22 39 25.9	-2.7
JRY	**Ryogami san**	**5.24**	**235**	P	Pn	22 38 39.3	-0.3
JRY				S	Sn	22 39 36.3	-2.4
JOD2	**Odawara 2**	**5.62**	**228**	S	Sn	22 39 43.7	-4.5

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*JMA **05** 22:37:54.0±0.6, 31°.81N×138°.03E, h409km, M3.2*
*ISCJB **05** 22:37:57.0±0.8, 31°.97N±0°.10×138°.0E±0°.2, h380km, mb3.5/4, Error ellipse: s-maj=19.9km s-min=13.1km az=6.5*
*IDC **05** 22:37:58.7±2.0, 32°.16N×138°.05E, h391km±30km, mb2.9/3, mb1 2.9/4, mb1mx2.7/29, mbtmp3.6/4, Error ellipse: s-maj=72.1km s-min=17.8km az=73.0*
ISC 05 22:37:58.2±1.2, 32°.1N±0°.1×138°.0E±0°.1, h380km, n16, σ0°.60/16, mb3.2/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**1.81**	**328**	P	**Pn**	**22 38 51.8**	**+1.1**
JIE	**Ise**	**2.52**	**336**	P	**Pn**	**22 38 56.7**	**+0.8**
JKN2	**Miekihoku**	**2.56**	**327**	P	**Pn**	**22 38 56.6**	**+0.4**
JTNC	**Tanabenakahech**	**2.61**	**312**	P	**Pn**	**22 38 56.9**	**+0.2**
HMMJ	**Hamamatsu 2**	**2.76**	**356**	P	**Pn**	**22 38 58.4**	**+0.6**
JWY	**Kouya**	**2.90**	**318**	P	**Pn**	**22 38 59.9**	**+0.9**
JOD2	**Odawara 2**	**3.30**	**16**	P	**Pn**	**22 39 02.9**	**+0.4**
JAI	**Aioi**	**3.39**	**301**	P	**Pn**	**22 39 03.5**	**+0.2**
JMN	**Monobe**	**3.79**	**297**	P	**Pn**	**22 39 07.5**	**+0.5**
JHU	**Hanno**	**3.91**	**16**	P	**Pn**	**22 39 08.4**	**+0.3**
MJAR	**Matsushiro Arr**	**4.44**	**3**	P	**Pn**	**22 39 13.7**	**+0.3**
0.3nm,0.3s,baz=183,slow=10,SNR=15
MAT Matsushiro 4.45 3 P **Pn 22 39 13.9 +0.5**
MAT *eS* S 22 39 47.4 -27
MKAR Makanchi Array 44.51 306 P **P 22 45 33.4 -0.2**
0.6nm,0.6s,baz=87,slow=11,SNR=8.8
WRA Warramunga Arr 51.85 184 P **P 22 46 29.0 -0.3**
14nm,0.3s,baz=0.2,slow=6.9,SNR=1.8
ASAR Alice Springs 55.58 184 P **P 22 46 56.1 +0.2**
0.2nm,0.3s,baz=12,slow=14,SNR=4.4
FINES FINESS Array B 71.83 332 P **P 22 48 39.6 -0.7**
0.4nm,0.4s,baz=48,slow=5.7,SNR=8.8

MEX 05 22:46:34.0±0.6, 18°.13N×103°.46W, h1km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.20**	**34**	*eP*	Pg	22 46 37.9	0.0
MMIG				*i* S	Sg	22 46 40.5	+0.1
EZ5V		**1.35**	**354**	*i* P	Pg	22 46 57.0	-3.0
EZ5V				*eS*	Sg	22 47 14.2	-3.4

IDC 05 22:51:33.8±2.4, 5°.08S×145°.84E, h128km±23km, mb3.4/3, mb1 3.6/6, mb1mx3.2/39, mbtmp3.8/6, Error ellipse: s-maj=27.6km s-min=19.5km az=64.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.49**	**163**	P	Pn	22 52 40.9	+0.8
1.9nm,0.3s,baz=291,slow=14,SNR=2.3
PMG S Sn 22 53 31.7 0.0
6.0nm,0.3s,baz=155,slow=20,SNR=9.3
JAY Jayapura 5.72 296 P Pn 22 52 56.7 0.0
1.4nm,0.3s,baz=154,slow=6.4,SNR=7.7
WRA Warramunga Arr 18.54 216 P Pn 22 55 41.8 -0.7
0.3nm,0.3s,baz=43,slow=14,SNR=2.7
ASAR Alice Springs 21.77 211 P P 22 56 15.9 +0.4
0.6nm,0.4s,baz=39,slow=7.7,SNR=14
FITZ Fitzroy Crossi 23.61 235 P P 22 56 32.5 -0.9
3.2nm,0.5s,baz=49,slow=9.6,SNR=14
ILAR Eielson Array 85.09 23 P P 23 03 55.2 +0.1
0.5nm,0.6s,baz=259,slow=5.3,SNR=5.5

IDC 05 22:54:59.8±7.8, 7°.78S×128°.37E, h184km±84km, mb3.6/2, mb1 3.9/6, mb1mx3.3/33, mbtmp4.3/6, Error ellipse: s-maj=84.3km s-min=22.4km az=40.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.24**	**242**	P	Pn	22 56 17.5	+0.4
11nm,0.3s,baz=322,slow=3.8,SNR=11
BATI S Sn 22 57 18.3 +0.6
19nm,0.3s,baz=103,slow=19,SNR=9.2
FITZ Fitzroy Crossi 10.60 194 P Pn 22 57 25.5 -1.6
2.2nm,0.3s,baz=25,slow=9.9,SNR=62
FITZ S Sn 22 59 21.2 -4.0
2.0nm,0.3s,baz=103,slow=15,SNR=5.0
WRA Warramunga Arr 13.41 155 P Pn 22 58 02.9 -0.2
1.7nm,0.3s,baz=328,slow=14,SNR=11
WRA S Sn 23 00 25.3 -7.2
2.9nm,0.3s,baz=347,slow=21,SNR=11
ASAR Alice Springs 16.67 162 P Pn 22 58 44.1 +1.0
1.0nm,0.3s,baz=340,slow=11,SNR=44
ASAR S S 23 01 44.9 -2.0
0.5nm,0.3s,baz=323,slow=17,SNR=4.9
MKAR Makanchi Array 68.00 328 P P 23 05 39.8 +0.7
0.7nm,0.4s,baz=121,slow=8.8,SNR=22
ZALV Zalesovo Beam 71.57 335 P P 23 05 59.1 -1.6
1.2nm,0.4s,baz=137,slow=6.6,SNR=3.9

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*KRSC **05** 23:29:41.4±2.3, 53°.98N×153°.57E, h647km±31km, ML4.5*
*ISCJB **05** 23:29:43.4±0.2, 54°.24N±0°.04×153°.34E±0°.04, h622km, mb3.9/70, Error ellipse: s-maj=5.0km s-min=3.4km az=3.6*
*MOS **05** 23:29:43.3±0.7, 54°.21N×153°.39E, h627km, mb4.0/19, Error ellipse: s-maj=9.8km s-min=7.3km az=96.7*
*IDC **05** 23:29:44.9±0.8, 54°.21N×153°.31E, h632km±11km, mb3.2/26, mb1 3.4/31, mb1mx3.3/42, mbtmp4.2/31, Error ellipse: s-maj=11.1km s-min=7.5km az=155.0*
*NEIC **05** 23:29:44.3±1.2, 54°.23N×153°.33E, h622km±10km, mb4.0/41, Error ellipse: s-maj=22.1km s-min=14.4km az=170.0*
ISC 05 23:29:43.8±0.4, 54°.11N±0°.05×153°.43E±0°.05, h622km, n171, σ1°.22/210, mb3.9/70, 4C-2D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**2.52**	**116**	P	**P**	**23 31 02.9**	**+0.7**
APC S **S 23 32 07.1 +0.8**
APC Apacha 2.52 116 P **P 23 31 02.9 +0.7**
APC S **S 23 32 07.1 +0.8**
GNL Ganaly 2.70 97 P **P 23 31 04.1 +0.9**
GNL S **S 23 32 09.5 +1.3**
GNL Ganaly 2.70 97 P **P 23 31 04.1 +0.9**
GNL S **S 23 32 09.5 +1.3**
PEA0B Petropavlovsk- 2.73 110 *eP* **P 23 31 04.0 +0.6**
PETK Petropavlovsk- 2.73 110 P **P 23 31 03.9 +0.5**
4.5nm,0.3s,baz=329,slow=2.1,SNR=50
KRMR Karymshinskiy 3.09 113 P **P 23 31 05.4 +0.3**
KRMR Karymshinskiy 3.09 113 P **P 23 31 05.4 +0.3**
KRX Arik 3.19 101 P **P 23 31 06.4 +0.5**
KRX Arik 3.19 101 P **P 23 31 06.4 +0.5**
ASAK Asacha 3.19 121 P **P 23 31 06.5 +0.6**
ASAK Asacha 3.19 121 P **P 23 31 06.5 +0.6**
KOK Koryaka 3.20 103 P **P 23 31 06.8 +0.9**
KOK Koryaka 3.20 103 P **P 23 31 06.8 +0.9**
KRER Koryakskii 3.26 102 P **P 23 31 07.4 +1.0**
KRER S **S 23 32 13.9 0.0**
KRER Koryakskii 3.26 102 P **P 23 31 07.4 +1.0**
KRER S **S 23 32 13.9 0.0**
AVH Avacha 3.27 103 P **P 23 31 07.1 +0.8**
AVH S **S 23 32 13.9 +0.2**
AVH Avacha 3.27 103 P **P 23 31 07.1 +0.8**
AVH S **S 23 32 13.9 +0.2**
PET Petropavlovsk 3.30 107 *eP* **P 23 31 06.7 +0.3**
PET *eS* **S 23 32 14.7 +0.8**
PET Petropavlovsk 3.30 107⇓ *iP* **P 23 31 06.5 +0.2**
PET *eS* **S 23 32 12.9 -0.9**
PET pmax pmax
comp=Z,100nm,1.1s
PET pmax pmax
comp=Z,63nm,0.9s
PET smax smax
comp=E,200nm,1.7s
PET smax smax
comp=N,200nm,2.3s
PET smax smax
comp=N,70nm,0.7s
PET smax smax
comp=E,57nm,0.6s
PET MLR MLR
comp=Z,100nm,15.0s
PET MLR MLR
comp=Z,100nm,15.0s
SMAR Somma 3.30 103 P **P 23 31 07.3 +0.6**
SMAR S **S 23 32 13.9 -0.5**
SMAR Somma 3.30 103 P **P 23 31 07.3 +0.6**
SMAR S **S 23 32 13.9 -0.5**
UGLR Uglovaya 3.33 103 P **P 23 31 07.6 +0.9**
UGLR S **S 23 32 15.5 +1.0**
UGLR Uglovaya 3.33 103 P **P 23 31 07.6 +0.9**
UGLR S **S 23 32 15.5 +1.0**
PAU Pauzhetka 3.35 141 P **P 23 31 07.0 +0.3**
PAU Pauzhetka 3.35 141 P **P 23 31 07.0 +0.3**
SDLR Sedlovina 3.35 102 P **P 23 31 07.0 +0.2**
SDLR S **S 23 32 14.6 -0.1**
SDLR Sedlovina 3.35 102 P **P 23 31 07.0 +0.2**
SDLR S **S 23 32 14.6 -0.1**
RUS Russkaya 3.48 117 P **P 23 31 07.2 -0.3**
RUS S **S 23 32 13.8 -2.0**
RUS Russkaya 3.48 117 P **P 23 31 07.2 -0.3**
RUS S **S 23 32 13.8 -2.0**
ALID Alaid 3.49 157 P **P 23 31 08.3 +0.5**
ALID Alaid 3.49 157 P **P 23 31 08.3 +0.5**
ESO Esso 3.54 57 P **P 23 31 09.1 +1.4**
ESO S **S 23 32 18.0 +1.4**
ESO Esso 3.54 57 P **P 23 31 09.1 +1.4**
ESO S **S 23 32 18.0 +1.4**
KDTR Khodutka, Kamc 3.63 127 P **P 23 31 07.4 -1.0**
KDTR S **S 23 32 14.3 -3.2**
KDTR Khodutka, Kamc 3.63 127 P **P 23 31 07.4 -1.0**
KDTR S **S 23 32 14.3 -3.2**
NLC Nalytchevo 3.64 103 P **P 23 31 08.5 +0.1**
NLC S **S 23 32 16.8 -0.8**
NLC Nalytchevo 3.64 103 P **P 23 31 08.5 +0.1**
NLC S **S 23 32 16.8 -0.8**
SKR Severo-Kuril's 3.80 153 P **P 23 31 09.4 -0.1**
SKR Severo-Kuril's 3.80 153⇑ *iP* **P 23 31 09.6 +0.1**
SKR *eS* **S 23 32 17.8 -1.7**
SKR pmax pmax
comp=Z,91nm,0.7s
SKR smax smax
comp=E,110nm,0.7s
SKR smax smax
comp=N,116nm,1.0s
SPN Mys Shipunski 4.06 102 P **P 23 31 10.2 -0.9**
SPN S **S 23 32 18.3 -4.3**
SPN Mys Shipunski 4.06 102 P **P 23 31 10.2 -0.9**
SPN S **S 23 32 18.3 -4.3**
TUMR Tumrok 4.07 70 P **P 23 31 12.3 +1.0**
TUMR Tumrok 4.07 70 P **P 23 31 12.3 +1.0**
KZV Kizimen 4.12 73 P **P 23 31 11.3 -0.3**
KZV Kizimen 4.12 73 P **P 23 31 11.3 -0.3**
SRDR Sredinnyy 4.23 56 P **P 23 31 13.1 +0.9**
SRDR S **S 23 32 24.7 -0.1**
SRDR Sredinnyy 4.23 56 P **P 23 31 13.1 +0.9**
SRDR S **S 23 32 24.7 -0.1**
MKZ Mys Kozlova 4.88 81 S **S 23 32 28.9 -4.4**
MA2 Magadan 5.67 346 P **P 23 31 24.0 +1.0**
comp=N,1.4nm,0.3s,baz=148,slow=7.8,SNR=11
MA2 Magadan 5.67 346 *eP* **P 23 31 23.6 +0.6**
KBTR Krutoberegovo 5.78 65 P **P 23 31 22.5 -1.5**
KBTR S **S 23 32 42.2 -4.1**
KBTR Krutoberegovo 5.78 65 P **P 23 31 22.5 -1.5**
KBTR S **S 23 32 42.2 -4.1**
BKI Bering 7.36 76 P **P 23 31 39.3 +1.5**
BKI S **S 23 33 13.9 +2.6**
BKI Bering 7.36 76 P **P 23 31 39.3 +1.5**
BKI S **S 23 33 13.9 +2.6**
SEY Seymchan 8.87 357 P **P 23 31 51.6 -0.1**
comp=N,0.4nm,0.3s,baz=133,slow=6.2,SNR=5.9
YSS Yuzh-Sakhalins 9.86 228 *eP* **P 23 32 03.0 +1.4**
YSS Yuzh-Sakhalins 9.86 228 *eP* **P 23 32 02.4 +0.8**
YSS *eS* **S 23 33 51.0 -3.8**
YSS pmax pmax
comp=Z,20nm,0.4s
YSS smax smax
comp=E,200nm,3.0s
SMY Shemya 12.40 88 *eP* **P 23 32 27.2 +1.0**
SMY Shemya 12.40 88 *eP* **P 23 32 27.2 +1.0**
ERM Erimo 13.89 214 *eP* **P 23 32 42.0 +1.1**
ERM Erimo 13.89 214 *eP* **P 23 32 42.0 +1.1**
TEY Ternei 14.17 237 *eP* P 23 32 32.4 -11
KLR Kul'dur 14.29 259 P **P 23 32 45.0 +0.6**
comp=E,3.5nm,0.3s,baz=67,slow=8.6,SNR=46
YAK Yakutsk 14.79 312 *eP* **P 23 32 48.3 -0.5**
YAK Yakutsk 14.79 312 *c iP* **P 23 32 48.2 -0.5**
YAK *eS* **S 23 35 19.1 -0.4**
BILL Bilibino 15.24 19 *eP* **P 23 32 52.0 -0.8**
BILL pmax pmax
comp=Z,1.0nm,1.0s
ZEA Zeya 15.40 279 *eP* **P 23 32 54.8 +0.3**
ZEA pmax pmax
comp=Z,35nm,1.0s
USRK Ussuriysk Ar. 17.11 243 P **P 23 33 11.6 +1.4**
comp=Z,0.6nm,0.3s,baz=42,slow=7.2,SNR=12
MDJ Mudanjiang 18.12 248 *eP* **P 23 33 19.8 +0.4**
comp=Z,8.8nm,0.5s
MJAR Matsushiro Arr 20.49 217 P **P 23 33 42.5 +1.6**
comp=Z,0.7nm,0.4s,baz=113,slow=12,SNR=4.3
TIXI Tiksi 20.57 338 *i* P **P 23 33 41.0 0.0**
BOD Bodaibo 22.15 296 *eP* **P 23 33 55.6 +0.2**
BOD *e* 23 37 15.9
BOD pmax pmax
comp=Z,7.0nm,1.1s
KSRS Korea Array 24.16 237 P **P 23 34 14.8 +1.4**
comp=Z,4.7nm,0.5s,baz=31,slow=9.1,SNR=28
KSRS PcP **PcP 23 37 31.6 +0.4**
comp=Z,1.0nm,0.5s,baz=23,slow=1.5,SNR=5.4
SVW2 Sparrevohn 27.56 55 *eP* **P 23 34 44.1 +1.2**
comp=Z,1.6nm,0.8s
ULN Ulaanbaatar 29.41 277 *eP* **P 23 34 59.6 +0.4**
comp=Z,2.7nm,0.7s
ULN Ulaanbaatar 29.41 277 *eP* **P 23 34 59.6 +0.4**
ULN pmax pmax
comp=Z,3.0nm,0.7s
TOLK Toolik Lake Re 29.59 38 *eP* **P 23 35 00.2 -0.1**
comp=Z,1.8nm,0.6s
TLY Talaya 29.64 286 *eP* **P 23 35 01.6 +0.7**
comp=Z,5.0nm,0.8s
TLY Talaya 29.64 286 *i* P **P 23 35 02.6 +1.7**
KDAK Kodiak Island 29.78 61 *eP* **P 23 35 02.2 +0.2**
comp=Z,5.6nm,0.8s

KDAK	**Kodiak Island**	**29.78**	**61**	*e*P		**P**		**23 35 02.2 +0.2**
KDAK					pmax	pmax		
	comp=Z,6.0nm,0.8s							
SUA	**Susitna One**	**29.80**	**53**	*e*P		**P**		**23 35 02.6 +0.3**
	comp=Z,3.9nm,1.1s							
SONM	**Songino Array**	**29.81**	**277**	P		**P**		**23 35 03.5 +0.9**
	comp=Z,2.8nm,0.8s,baz=61,slow=8.0,SNR=12							
CNPM	**China Poot**	**29.99**	**57**	*e*P		**P**		**23 35 03.9 +0.1**
	comp=Z,4.4nm,0.6s							
WRH	**Wood River Hil**	**30.48**	**47**	*e*P		**P**		**23 35 08.8 +0.9**
	comp=Z,5.9nm,0.6s							
HHC	**Hu-ho-hao-te**	**30.76**	**262**	*e*P		**P**		**23 35 12.5 +1.7**
HHC					pmax	pmax		
	comp=Z,8.0nm,1.1s							
HHC					pmax	pmax		
	comp=Z,55nm,5.2s							
ILAR	**Eielson Array**	**30.95**	**46**	P		**P**		**23 35 12.6 +0.7**
	comp=Z,1.6nm,0.7s,baz=279,slow=12,SNR=18							
MENT	**Mentasta**	**32.69**	**49**	*e*P		P		23 35 21.6 -5.0
	comp=Z,7.7nm,0.8s							
EGAK	**Eagle**	**33.36**	**45**	*e*P		**P**		**23 35 32.5 +0.3**
	comp=Z,5.2nm,0.9s							
INK	**Inuvik**	**35.50**	**38**	P		**P**		**23 35 50.5 +0.7**
	comp=Z,3.1nm,0.5s,baz=292,slow=7.0,SNR=12							
WHN	**Wuhan**	**36.58**	**246**	P		**P**		**23 36 02.3 +3.1**
GTA	**Gaotai**	**38.59**	**270**	*e*P		**P**		**23 36 16.1 +0.6**
GTA					pmax	pmax		
	comp=Z,8.0nm,0.8s							
ZALV	**Zalesovo Beam**	**38.84**	**299**	P		**P**		**23 36 16.7 -0.5**
	comp=Z,1.5nm,0.5s,baz=52,slow=8.1,SNR=6.5							
ZALV					PcP	**PcP**		**23 38 10.7 -0.8**
	comp=Z,0.8nm,0.5s,baz=123,slow=4.1,SNR=3.7							
NVS	**Novosibirsk**	**39.22**	**301**	⇑*i*P		**P**		**23 36 20.3 +0.1**
NVS					pmax	pmax		
	comp=Z,10.0nm,1.0s							
NVS					pmax	pmax		
	comp=E,6.0nm,0.9s							
DGZ	**Jazzator, Alta**	**39.63**	**292**	*c i*P		**P**		**23 36 24.6 +0.9**
DGZ					pmax	pmax		
	comp=Z,4.0nm,0.9s							
WMQ	**Urumqi**	**42.88**	**284**	*e*P		**P**		**23 36 51.5 +2.3**
WMQ					pmax	pmax		
	comp=Z,21nm,0.7s							
KURK	**Kurchatov**	**43.78**	**298**	*e*P		**P**		**23 36 56.1 +0.1**
	comp=Z,4.9nm,0.6s							
KURK	**Kurchatov**	**43.78**	**298**	*e*P		**P**		**23 36 56.1 +0.1**
KURK					pmax	pmax		
	comp=Z,5.0nm,0.6s							
RES	**Resolute Bay**	**43.83**	**21**	P		**P**		**23 36 55.6 -0.3**
	comp=Z,3.1nm,0.8s,baz=341,slow=7.3,SNR=8.9							
RES	**Resolute Bay**	**43.83**	**21**	*e*P		**P**		**23 36 56.1 +0.1**
	comp=Z,2.8nm,0.8s							
RES	**Resolute Bay**	**43.83**	**21**	*e*P		**P**		**23 36 56.1 +0.1**
RES					pmax	pmax		
	comp=Z,3.0nm,0.8s							
KURBB	**Kurchatov Arra**	**43.88**	**297**	P		**P**		**23 36 56.6 -0.1**
	comp=Z,3.3nm,0.5s,baz=60,slow=7.5,SNR=20							
KURBB					PcP	**PcP**		**23 38 27.4 -1.1**
	comp=Z,0.8nm,0.8s,baz=56,slow=3.3,SNR=5.1							
KURBB					pP	**PP**		**23 38 48.5 -2.7**
	comp=Z,0.9nm,0.8s,baz=61,slow=9.3,SNR=5.2							
MKAR	**Makanchi Array**	**44.11**	**291**	P		**P**		**23 36 58.4 -0.2**
	comp=Z,2.9nm,0.5s,baz=57,slow=7.3,SNR=36							
MAKZ	**Makanchi**	**44.27**	**291**	*e*P		**P**		**23 36 59.0 -0.8**
	comp=Z,2.6nm,0.5s							
MAKZ	**Makanchi**	**44.27**	**291**	*e*P		**P**		**23 36 59.0 -0.8**
MAKZ					pmax	pmax		
	comp=Z,3.0nm,0.5s							
YKA	**Yellowknife Ar**	**45.05**	**41**	P		**P**		**23 37 05.7 +0.3**
	comp=Z,2.3nm,0.6s,baz=304,slow=7.4,SNR=22							
YKA					PcP	**PcP**		**23 38 32.1 -0.2**
	comp=Z,0.5nm,0.6s,baz=318,slow=3.6,SNR=5.2							
BVAR	**Borovoye Array**	**46.59**	**304**	P		**P**		**23 37 16.9 -0.4**
	comp=Z,2.1nm,0.5s,baz=59,slow=7.7,SNR=20							
BVAR					PcP	**PcP**		**23 38 37.0 -1.0**
	comp=Z,1.2nm,0.6s,baz=68,slow=2.7,SNR=7.4							
BRVK	**Borovoye**	**46.62**	**304**	*e*P		**P**		**23 37 17.0 -0.5**
	comp=Z,2.5nm,0.6s							
BRVK	**Borovoye**	**46.62**	**304**	*e*P		**P**		**23 37 17.0 -0.5**
BRVK					pmax	pmax		
	comp=Z,3.0nm,0.6s							
ARU	**Arti**	**49.89**	**314**	*d i*P		**P**		**23 37 41.0 -0.5**
ARU								23 38 47.6
ARU					S	**S**		**23 44 07.2 +0.6**
ARU					SS	**SS**		**23 47 46.4 -3.6**
ARU					pmax	pmax		
	comp=Z,3.0nm,0.6s							
ARCES	**ARCESS Array B**	**51.00**	**339**	P		**P**		**23 37 48.7 -0.7**
	comp=Z,7.0nm,0.3s,baz=28,slow=8.2,SNR=5.7							
SUMG	**Summit**	**53.34**	**4**	*e*P		**P**		**23 38 05.4 -1.0**
	comp=Z,4.0nm,1.1s							
SUMG	**Summit**	**53.34**	**4**	*e*P		**P**		**23 38 05.4 -1.0**
SUMG					pmax	pmax		
	comp=Z,4.0nm,1.1s							
KLMR	**Klimovskoe**	**53.99**	**326**	*e*P		**P**		**23 38 09.6 -1.1**
KLMR					pmax	pmax		
	comp=Z,6.0nm,1.1s							
ABKAR	**Akbulak array**	**54.05**	**306**	*e*P		**P**		**23 38 10.7 -0.6**
	comp=Z,1.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**54.62**	**251**	P		**P**		**23 38 16.8 +1.1**
	comp=Z,1.0nm,0.4s,baz=23,slow=7.9,SNR=5.1							
FFC	**Flin Flon**	**55.09**	**43**	*e*P		**P**		**23 38 19.0 +0.5**
	comp=Z,3.6nm,0.7s							
FFC	**Flin Flon**	**55.09**	**43**	*e*P		**P**		**23 38 19.0 +0.5**
FFC					pmax	pmax		
	comp=Z,4.0nm,0.7s							
MOD	**Modoc Plateau**	**55.50**	**65**	*e*P		**P**		**23 38 22.7 +0.9**
	comp=Z,2.2nm,0.6s							
WVOR	**Wild Horse Val**	**56.01**	**63**	*e*P		**P**		**23 38 26.6 +1.4**
	comp=Z,2.9nm,0.9s							
WVOR	**Wild Horse Val**	**56.01**	**63**	*e*P		**P**		**23 38 26.6 +1.4**
HRY	**Holter Researc**	**56.43**	**55**	*e*P		**P**		**23 38 29.3 +1.3**
BOZ	**Bozeman (W)**	**57.32**	**56**	*e*P		**P**		**23 38 35.3 +1.2**
	comp=Z,2.8nm,0.7s							
BOZ	**Bozeman (W)**	**57.32**	**56**	*e*P		**P**		**23 38 35.3 +1.2**
BOZ					pmax	pmax		
	comp=Z,3.0nm,0.7s							
FINES	**FINESS Array B**	**57.51**	**333**	P		**P**		**23 38 34.3 -0.6**
	comp=Z,1.7nm,0.7s,baz=34,slow=6.2,SNR=7.8							
PAHR	**Pah Range**	**57.55**	**66**	*e*P		**P**		**23 38 37.4 +1.7**
	comp=Z,5.2nm,1.2s							
YHB	**Horse Butte**	**58.14**	**57**	*e*P		**P**		**23 38 41.2 +1.5**
	comp=Z,5.0nm,0.8s							
YHH	**Holmes Hill**	**58.29**	**56**	*e*P		**P**		**23 38 41.5 +0.7**
	comp=Z,2.9nm,0.7s							
KVN	**Kaiserville**	**58.71**	**66**	*e*P		**P**		**23 38 44.3 +0.7**
	comp=Z,3.8nm,0.9s							
KVN	**Kaiserville**	**58.71**	**66**	*e*P		**P**		**23 38 44.3 +0.7**
KVN					pmax	pmax		
	comp=Z,4.0nm,0.9s							
RLMT	**Red Lodge**	**58.81**	**55**	*e*P		**P**		**23 38 45.8 +1.6**
	comp=Z,4.7nm,0.8s							
NVAR	**Mina Array Bea**	**59.05**	**66**	P		**P**		**23 38 47.4 +1.5**
	comp=Z,2.1nm,0.6s,baz=303,slow=6.5,SNR=16							
OBN	**Obninsk**	**59.42**	**323**	*e*P		**P**		**23 38 47.7 0.0**
OBN					pmax	pmax		
	comp=Z,4.0nm,0.8s							
PD31	**Pinedale Array**	**60.41**	**57**	*e*P		**P**		**23 38 55.6 +0.8**
	comp=Z,2.7nm,1.0s							
PDAR	**Pinedale Array**	**60.41**	**57**	P		**P**		**23 38 55.3 +0.5**
	comp=Z,1.5nm,0.5s,baz=0.3,slow=2.0,SNR=19							
TPNV	**Topopah Spring**	**61.24**	**66**	*e*P		**P**		**23 39 01.5 +1.2**
	comp=Z,3.8nm,0.6s							
TPNV	**Topopah Spring**	**61.24**	**66**	*e*P		**P**		**23 39 01.5 +1.2**
TPNV					pmax	pmax		
	comp=Z,4.0nm,0.6s							
NB2	**NORSAR Subarra**	**61.34**	**340**	P		**P**		**23 38 59.5 -0.8**
	comp=Z,1.0nm,0.7s,baz=24,slow=6.9							
NOA	**NORSAR Array B**	**61.34**	**340**	P		**P**		**23 38 59.6 -0.7**
	comp=Z,1.9nm,0.7s,baz=24,slow=6.6,SNR=11							
PSUT	**Pine Spring**	**61.34**	**63**	*e*P		**P**		**23 39 02.3 +1.3**
	comp=Z,3.0nm,0.8s							
RSSD	**Black Hills**	**62.05**	**53**	*e*P		**P**		**23 39 05.9 +0.4**
	comp=Z,7.2nm,0.8s							
RSSD	**Black Hills**	**62.05**	**53**	*e*P		**P**		**23 39 05.9 +0.4**
RSSD					pmax	pmax		
	comp=Z,7.0nm,0.8s							
O20A	**White River Ci**	**63.03**	**58**	*e*P		**P**		**23 39 12.5 +0.7**
	comp=Z,8.5nm,0.3s							
GEYT	**Alibeck**	**63.15**	**298**	P		**P**		**23 39 12.8 +0.4**
	comp=Z,2.2nm,0.6s,baz=46,slow=4.3,SNR=8.8							
PV22	**Blue Mesa, Par**	**63.97**	**60**	*e*P		**P**		**23 39 17.8 +0.1**
	comp=Z,4.8nm,0.7s							
AKASG	**Malin Array Be**	**65.59**	**325**	P		**P**		**23 39 26.1 -1.2**
	comp=Z,1.3nm,0.5s,baz=32,slow=6.6,SNR=4.8							
KBZ	**Khabaz**	**65.98**	**312**	P		**P**		**23 39 29.9 +0.1**
	comp=Z,1.4nm,0.7s,baz=49,slow=2.5,SNR=4.1							
KBZ	**Khabaz**	**65.98**	**312**	P		**P**		**23 39 30.0 +0.1**
KOLS	**Kolonicke sedl**	**69.39**	**328**	*e*P		**P**		**23 39 50.2 -0.3**
KOLS	**Kolonicke sedl**	**69.39**	**328**	*e*P		**P**		**23 39 50.2 -0.3**
VLDQ	**Val d'Or**	**69.46**	**34**	*e*P		**P**		**23 39 49.4 -1.5**
	comp=Z,8.4nm,0.8s							
BUR08	**Bucovina Ar. S**	**69.57**	**325**	*e*P		**P**		**23 39 51.1 -0.6**
	comp=Z,3.0nm,1.1s							
VYHS	**Vyhne**	**70.82**	**330**	*e*P		**P**		**23 39 59.1 +0.1**
VYHS	**Vyhne**	**70.82**	**330**	*e*P		**P**		**23 39 59.1 +0.1**
MNTX	**Cornudas Mount**	**71.02**	**62**	*e*P		**P**		**23 40 00.6 +0.1**
	comp=Z,3.0nm,0.8s							
WMOK	**Wichita Mounta**	**71.92**	**56**	*e*P		**P**		**23 40 05.8 +0.2**
	comp=Z,4.2nm,0.8s							
WMOK	**Wichita Mounta**	**71.92**	**56**	*e*P		**P**		**23 40 05.8 +0.2**
WMOK					pmax	pmax		
	comp=Z,4.0nm,0.8s							
GERES	**GERESS Array B**	**71.94**	**333**	P		**P**		**23 40 05.2 -0.3**
	comp=Z,0.3nm,0.5s,baz=30,slow=11,SNR=3.8							
BRTR	**Keskin Array B**	**73.21**	**316**	P		**P**		**23 40 12.8 -0.2**
	comp=Z,0.6nm,0.6s,baz=60,slow=3.8,SNR=5.4							
BFO	**Black Forest**	**73.76**	**337**	*i* P		**P**		**23 40 16.2 +0.3**
TX31	**Lajitas Ar. Si**	**73.79**	**62**	*e*P		**P**		**23 40 16.8 +0.3**
	comp=Z,2.3nm,0.7s							
TXAR	**Lajitas Array**	**73.79**	**62**	P		**P**		**23 40 17.5 +1.0**
	comp=Z,2.6nm,0.7s,baz=301,slow=4.7,SNR=25							
W41B	**Gary Mavity, V**	**74.64**	**51**	*e*P		**P**		**23 40 20.7 -0.3**
	comp=Z,4.0nm,0.6s							
WRA	**Warramunga Arr**	**75.55**	**199**	P		**P**		**23 40 26.4 +0.3**
	comp=Z,3.7nm,0.7s,baz=8.9,slow=5.9,SNR=23							
Z50A	**Ashland**	**79.07**	**47**	*e*P		**P**		**23 40 44.4 -0.6**
	comp=Z,8.4nm,0.9s							
ASAR	**Alice Springs**	**79.27**	**198**	P		**P**		**23 40 46.2 +0.2**
	comp=Z,1.8nm,0.5s,baz=13,slow=5.1,SNR=23							
ESDC	**Sonseca Array**	**84.58**	**343**	P		**P**		**23 41 11.6 -1.3**
	comp=Z,0.8nm,0.7s,baz=18,slow=3.7,SNR=8.0							
CPUP	**Villa Florida**	**144.16**	**52**	PKP		PKPbc		23 48 09.2 -0.4
	comp=Z,3.7nm,0.6s,baz=326,slow=3.0,SNR=16							
CPUP	**Villa Florida**	**144.16**	**52**	*e*PKPbc		PKPbc		23 48 08.9 -0.8
PLCA	**Paso Flores**	**147.93**	**84**	PKPbc		**PKPbc**		**23 48 19.4 -0.4**
	comp=Z,1.8nm,0.8s,baz=322,slow=8.8,SNR=4.4							

MAN 05 23:31:16.6, 7°.56N×124°.61E, h37km, mb3.7, ML2.4, MS1.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.49**	**227**	⇑*i*P		Pn	23 31 28.4 +1.4
CTBH				*i* S		Sn	23 31 36.9 +2.5
BUKP	**Musuan**	**0.55**	**55**	*e*P		Pn	23 31 28.9 +0.8
BUKP				*e*S		Sn	23 31 38.3 +2.3
DMPH	**Davao City--Mi**	**1.01**	**118**	⇑*e*P		Pn	23 31 34.6 +0.4
SKMP	**Bagumbayan, Su**	**1.04**	**183**	*e*P		Pn	23 31 30.5 -4.0
SKMP				*e*S		Sn	23 31 42.8 -5.0
DDMP	**Don Marcelino,**	**1.82**	**143**	*e*P		Pn	23 31 43.3 -2.0
DDMP				*e*S		Sn	23 32 07.2 +0.2

ISCJB ***05*** *23:31:47.3±0.6, 24°.70N±0°.04×122°.58E±0°.02, h9km±4km,*
Error ellipse: s-maj=7.2km s-min=2.8km az=9.8
TAP ***05*** *23:31:48.1, 24°.68N×122°.57E, h9km±1km, ML2.5, C*
JMA ***05*** *23:31:48.0±0.1, 24°.65N×122°.60E, h25km±2km, M1.8*
ISC 05 23:31:46.7±1.2, 24°.63N±0°.05×122°.60E±0°.02, h6km±11km**, n28,** σ0**°43**/45**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.36**	**119**	P		**Pb**	**23 31 55.9 +0.3**
JYNG				S		**Sb**	**23 32 01.7 +0.2**
YOJ	**Yonaguni jima**	**0.41**	**114**	*i* P		**Pb**	**23 31 56.8 +0.3**
	baz=118						
YOJ				S		**Sb**	**23 32 03.1 +0.1**
	baz=118						
YOJ	**Yonaguni jima**	**0.41**	**114**	P		**Pb**	**23 31 56.7 +0.3**
YOJ				*e*S		**Sb**	**23 32 03.0 +0.1**
EOS1	**EOS1**	**0.43**	**260**	P		**Pb**	**23 31 56.1 -0.7**
	baz=251						
EOS1				*i* S		**Sg**	**23 32 02.2 +1.4**
	baz=251						
EGS		**0.64**	**290**	*e*P		**Pg**	**23 31 59.5 +0.4**
	baz=285						
TWB1	**Santiao Chiao**	**0.67**	**304**	*e*P		**Pg**	**23 32 00.0 +0.4**
	baz=301						
TWB1				*e*S		**Sg**	**23 32 07.6 -0.8**
	baz=301						
TWC	**Suao**	**0.68**	**269**	*e*P		**Pg**	**23 31 59.8 -0.1**
	baz=263						
TWC				*e*S		**Sb**	**23 32 10.5 -0.3**
	baz=263						
TIPB	**Shuangxi**	**0.78**	**296**	P		**Pg**	**23 32 01.9 +0.2**
	baz=292						
TIPB				S		**Sg**	**23 32 11.9 0.0**
	baz=292						
ENA	**Nanau**	**0.81**	**256**	P		**Pb**	**23 32 02.9 -0.3**
	baz=250						
ENA				*e*S		**Sg**	**23 32 13.1 +0.4**
	baz=250						
TWE	**Neicheng**	**0.85**	**276**	*e*P		**Pb**	**23 32 03.8 -0.2**
	baz=272						
ENTT	**Nioudou**	**0.94**	**271**	P		**Pg**	**23 32 04.9 +0.2**
	baz=267						
ENTT				S		**Sg**	**23 32 17.5 +0.5**
	baz=267						
NDT	**Datong Townshi**	**0.99**	**269**	*e*P		**Pb**	**23 32 06.1 -0.2**
	baz=265						
NWLT	**Wulai**	**1.01**	**279**	*e*P		**Pb**	**23 32 07.0 +0.3**
	baz=275						
NWLT				*e*S		**Sg**	**23 32 18.6 -0.6**
	baz=275						
IRIF	**Iriomote-Funau**	**1.07**	**106**	P		**Pg**	**23 32 07.1 -0.2**
IRIF				S		**Sn**	**23 32 23.6 +0.1**
ETLH	**Xiulin Townshi**	**1.10**	**248**	*e*P		**Pg**	**23 32 07.4 -0.5**
	baz=244						
ETLH				*e*S		**Sg**	**23 32 21.6 -0.5**
	baz=244						
PCYT	**Pengchaiyu**	**1.10**	**335**	*e*P		**Pb**	**23 32 08.2 -0.1**
	baz=334						
YHNB	**Yeheng**	**1.11**	**272**	*e*P		**Pg**	**23 32 08.1 0.0**
	baz=269						
YHNB				S		**Sg**	**23 32 22.5 0.0**
	baz=269						
NNSB	**Datong**	**1.12**	**260**	P		**Pg**	**23 32 08.4 +0.1**
	baz=256						
NSK	**Sanguang**	**1.13**	**273**	S		**Sg**	**23 32 22.7 -0.4**
	baz=269						
NNS	**Nan Shan**	**1.13**	**261**	*e*P		**Pg**	**23 32 08.6 +0.2**
	baz=257						
NNS				*e*S		**Sg**	**23 32 23.4 +0.2**
	baz=257						
HATJ	**Hateruma jima**	**1.24**	**117**	P		**Pg**	**23 32 10.0 -0.5**
HATJ				S		**Sn**	**23 32 28.5 +0.8**
WHF	**Hehuan Shan**	**1.31**	**249**	*e*P		**Pg**	**23 32 11.7 -0.2**
	baz=245						
WHF				*e*S		**Sg**	**23 32 28.9 +0.1**
	baz=245						
JKRS	**Kuro-shima**	**1.34**	**107**	P		**Pn**	**23 32 11.5 -0.6**
CHGB	**Renai**	**1.42**	**247**	*e*P		**Pb**	**23 32 14.0 +0.2**
	baz=243						
CHGB				*e*S		**Sn**	**23 32 32.9 +0.4**
	baz=243						
JIJ	**Ishigaki jima**	**1.43**	**100**	P		**Pn**	**23 32 13.0 -0.3**
OWD	**Renai**	**1.46**	**243**	*e*P		**Pb**	**23 32 14.4 0.0**
	baz=240						
JISG	**Ishigakijimahi**	**1.56**	**91**	P		**Pb**	**23 32 15.7 -0.3**
JTJ	**Tarama**	**1.92**	**89**	P		**Pn**	**23 32 19.9 0.0**

GUC 05 23:37:59.6±0.4, 24°.13S×67°.48W, h222km±5km, ML3.7, 5C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.01**	**319**	⇓*i*P		Pn	23 38 39.9 -0.4
LVC				*i* S		S	23 39 11.0 -0.9
PB15	**IPOC Station P**	**2.04**	**296**	⇑*i*P		Pn	23 38 40.6 +0.1
PB15				*i* S		S	23 39 11.5 -0.7
GO02	**Mina Guanaco**	**2.18**	**241**	⇓*i*P		Pn	23 38 40.9 -1.0
GO02				*i* S		S	23 39 12.9 -1.9
PB06	**IPOC Station P**	**2.39**	**306**	⇑*i*P		Pn	23 38 44.2 +0.2
PB06				*i* S		S	23 39 17.6 -0.9
PB06				IAML			23 39 20.5
	comp=N,249nm,0.1s						
PB14	**IPOC Station P**	**2.71**	**259**	*e*P		Pn	23 38 47.8 +0.2
PB05	**IPOC Station P**	**2.81**	**296**	⇑*i*P		Pn	23 38 48.7 +0.3
PB05				*i* S		S	23 39 25.6 -0.8
PB05				IAML			23 39 29.0
	comp=N,130nm,0.8s						
PB09	**IPOC Station P**	**2.84**	**325**	*e*P		Pn	23 38 49.2 +0.3
PB09				*i* S		S	23 39 26.4 -0.8
PB09				IAML			23 39 30.5
	comp=E,50nm,0.4s						
PB10	**IPOC Station P**	**2.88**	**282**	⇑*e*P		Pn	23 38 49.4 +0.2
PB10				*i* S		S	23 39 27.0 -0.7
PB10				IAML			23 39 33.7
	comp=E,81nm,0.3s						
PB03	**IPOC Station P**	**2.95**	**314**	⇑*i*P		Pn	23 38 50.3 +0.2
PB03				*i* S		S	23 39 28.8 -0.6
PB03				IAML			23 39 31.1
	comp=E,105nm,0.3s						
PB04	**IPOC Station P**	**3.04**	**306**	*e*P		Pn	23 38 51.2 +0.1
PB04				*i* S		S	23 39 30.5 -0.7
PB04				IAML			23 39 33.7
	comp=N,174nm,0.8s						
PB07	**IPOC Station P**	**3.26**	**317**	*e*P		Pn	23 38 53.5 -0.2
PB07				*i* S		S	23 39 35.2 -0.7
PB07				IAML			23 39 37.9
	comp=E,93nm,0.3s						
PB02	**IPOC Station P**	**3.58**	**321**	*e*P		Pn	23 38 57.4 +0.1
PB02				*i* S		S	23 39 41.7 -0.8
PB02				IAML			23 39 49.2
	comp=E,84nm,0.4s						
PB01	**IPOC Station P**	**3.59**	**328**	*e*P		Pn	23 38 57.6 +0.1
PB01				*i* S		S	23 39 42.1 -0.7
PB01				IAML			23 39 43.9
	comp=E,49nm,0.2s						
PB08	**IPOC Station P**	**4.26**	**338**	*e*P		Pn	23 39 06.5 +0.6
PB08				*e*S		S	23 39 58.1 +0.2
PB08				IAML			23 40 02.6
	comp=E,15nm,0.2s						
MNMC	**Minye Minye**	**5.35**	**338**	*e*P		Pn	23 39 19.1 -0.3

MEX 05 23:49:42.2±0.7, 16°.01N×98°.15W, h15km±999km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.38**	**3**	*i* P		Pg	23 49 48.9 -1.1
PNIG				*i* S		Sg	23 49 54.5 -0.8

ISCJB ***05*** *23:59:06.3±0.3, 24°.17N±0°.02×122°.25E±0°.02, h16km±4km,*
Error ellipse: s-maj=3.8km s-min=2.6km az=156.7
TAP ***05*** *23:59:06.7, 24°.21N×122°.18E, h25km, ML2.9, C*
JMA ***05*** *23:59:06.5, 24°.16N×122°.20E, h37km±2km, M1.8*
ISC 05 23:59:06.5±1.0, 24°.18N±0°.02×122°.20E±0°.02, h27km±10km**, n69,** σ0**°64**/100**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.38**	**350**	P		**Pb**	**23 59 14.3 -0.4**
	baz=352						
EOS1				*e*S		**Sb**	**23 59 20.8 +0.4**
	baz=352						
ENA	**Nanau**	**0.49**	**301**	P		**Pb**	**23 59 15.9 -0.6**
	baz=304						
ENA				*e*S		**Sb**	**23 59 23.4 -0.1**
	baz=304						
TWC	**Suao**	**0.54**	**323**	⇓P		**Pb**	**23 59 16.4 -1.0**
	baz=323						
TWC				*e*S		**Sb**	**23 59 24.5 -0.2**
	baz=323						
NACB	**Ninganchiao**	**0.56**	**270**	*i* P		**Pb**	**23 59 17.6 0.0**
	baz=250						
NACB				*e*S		**Sn**	**23 59 26.8 -0.2**
	baz=250						
TWD	**Chiawan**	**0.56**	**260**	*e*P		**Pb**	**23 59 17.9 +0.2**
	baz=240						
TWD				*e*S		**Sn**	**23 59 26.6 -0.6**
	baz=240						
ENLB	**Shoufeng**	**0.61**	**244**	*e*P		**Pb**	**23 59 18.9 +0.2**
	baz=226						
ENLB				*e*S		**Sn**	**23 59 28.5 +0.1**
	baz=226						
ETLH	**Xiulin Townshi**	**0.66**	**273**	*e*P		**Pb**	**23 59 19.2 -0.2**
	baz=269						
ETLH				*e*S		**Sn**	**23 59 29.1 -0.5**
	baz=269						
EGS		**0.71**	**340**	*e*P		**Pb**	**23 59 20.1 -0.1**
	baz=341						
EGS				*e*S		**Sb**	**23 59 29.8 +0.2**
	baz=341						
TWE	**Neicheng**	**0.73**	**318**	P		**Pn**	**23 59 20.1 -0.9**
	baz=324						
TWE				*e*S		**Sb**	**23 59 30.0 -0.2**
	baz=324						
JYNG	**Yonagunijimaku**	**0.73**	**68**	P		**Pn**	**23 59 20.4 -0.6**
JYNG				*e*S		**Sb**	**23 59 30.1 -0.1**
ENTT	**Nioudou**	**0.74**	**309**	P		**Pn**	**23 59 20.5 -0.7**
	baz=307						
ENTT				*e*S		**Sn**	**23 59 31.1 -0.5**
	baz=307						
NTC	**Toucheng**	**0.75**	**333**	*e*P		**Pb**	**23 59 21.0 +0.1**
	baz=346						
NTC				*e*S		**Sn**	**23 59 31.7 -0.2**
	baz=346						
NDT	**Datong Townshi**	**0.76**	**304**	P		**Pn**	**23 59 20.9 -0.5**
	baz=312						
NDT				*e*S		**Sn**	**23 59 31.4 -0.6**
	baz=312						
NNSB	**Datong**	**0.79**	**289**	*e*P		**Pb**	**23 59 21.7 +0.1**
	ba

	baz=345						
YM07	YM07	1.12	332	eP	Pb	23 59 27.9	+0.5
	baz=347						
YM10	YM10	1.13	329	eP	Pb	23 59 28.3	+0.9
	baz=345						
YM11	YM11	1.14	330	eP	Pb	23 59 28.0	+0.5
	baz=346						
YM05	YM05	1.14	330	eP	Pb	23 59 27.7	+0.2
	baz=345						
YULB	Yu-li	1.14	227	eP	Pn	23 59 25.5	-1.1
	baz=238						
YM04	YM04	1.14	328	eP	Pb	23 59 27.8	+0.2
	baz=344						
YM08	YM08	1.15	331	eP	Pb	23 59 27.9	+0.2
	baz=347						
WHP	Taichung City	1.15	275	eP	Pb	23 59 28.3	+0.5
	baz=261						
YM03	YM03	1.16	329	eP	Pb	23 59 28.2	+0.2
	baz=329						
TWF1	Yuli	1.17	225	eP	Pn	23 59 26.1	-1.0
	baz=213						
DPDB	Guoxing	1.17	263	eP	Pb	23 59 28.2	0.0
	baz=249						
NSTT	Nanjuang	1.18	293	eP	Pb	23 59 28.5	+0.2
	baz=291						
SSLB	Suanglung	1.21	251	eP	Pb	23 59 28.3	-0.4
	baz=238						
TWY	Chenhua	1.22	334	eP	Pb	23 59 29.1	+0.1
	baz=350						
SMLT	Sun Moon Lake	1.23	256	eP	Pn	23 59 28.1	+0.2
	baz=243						
TYC	Yuchr	1.26	258	eP	Pb	23 59 30.1	+0.5
	baz=242						
CHKT	Chengkung	1.32	216	eP	Pn	23 59 27.4	-1.7
	baz=200						
WHYT	Xinyi Township	1.32	249	eP	Pb	23 59 30.2	-0.5
	baz=237						
YUS	Yu-Shan	1.33	239	eP	Pn	23 59 29.8	0.0
	baz=225						
IRIF	Iriomote-Funau	1.40	83	P	Pn	23 59 30.6	+0.3
IRIF				S	Sn	23 59 48.3	+0.4
PCYT	Pengchaiyu	1.45	355	eP	Pn	23 59 30.4	-0.5
	baz=343						
ELDTW	Lidau	1.47	228	eP	Pn	23 59 30.8	-0.5
	baz=225						
WDLH	Douliu	1.60	253	eP	Pb	23 59 35.4	+0.1
	baz=250						
WDLH				eS	Sb	23 59 57.2	+2.1
	baz=250						
JKRS	Kuro-shima	1.65	88	P	Pn	23 59 34.7	+1.0
CHN4	Tsaushan	1.69	241	eP	Pb	23 59 36.3	-0.6
	baz=227						
CHN4				eS	Sb	23 59 58.5	+0.8
	baz=227						
RLNB	Erlin	1.71	261	eS	Sb	23 59 58.7	+0.5
	baz=259						
WTP	Ta-pu	1.73	238	eP	Pb	23 59 36.6	-1.0
	baz=224						
JIJ	Ishigaki jima	1.78	84	P	Pn	23 59 36.0	+0.5
JIJ				eS	Sn	23 59 56.9	-0.4
TWK	Hsinying	1.81	240	eP	Pb	23 59 38.4	-0.7
	baz=238						
TWK				eS	Sb	00 00 01.5	+0.1
	baz=238						
CHN1	Nanshi	1.83	238	eP	Pb	23 59 38.7	-0.5
	baz=235						
CHN1				eS	Sb	00 00 01.9	+0.2
	baz=235						
SGST	Jiashian	1.84	234	P	Pb	23 59 38.5	-1.0
	baz=221						
SGST				eS	Sb	00 00 02.1	0.0
	baz=221						
SLGT	Liugui	1.85	231	eP	Pb	23 59 38.4	-1.2
	baz=228						
SLGT				eS	Sb	00 00 02.6	+0.2
	baz=228						
WDGT	Dungji	2.50	249	eP	Pn	23 59 46.7	+1.3
	baz=246						

*IDC **06** 00:08:20.3±1.1, 1°.99N×126°.61E, h0km, mb3.9/5, mb1 4.1/7, mb1mx3.7/34, mbtmp3.9/7, ML3.7/2, Error ellipse: s-maj=54.6km s-min=17.3km az=72.0*
*ISCJB **06** 00:08:25.1±0.6, 1°.92N±0°.07×126°.4E±0°.1, h47km, mb4.0/9, Error ellipse: s-maj=15.8km s-min=9.2km az=157.9*
*NEIC **06** 00:08:25.9±1.7, 1°.92N×126°.46E, h37km±7km, mb4.1/5, Error ellipse: s-maj=26.3km s-min=9.3km az=64.0*

ISC 06 00:08:26.4±0.8, **1°.9N**±0°.1×**126°.4E**±0°.1, **h47**km, **n19, σ1°12/19, mb4.1/9, Northern Moluca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.50	141	ePn	Pn	00 08 50.3	-0.5
LUWI	Luwuk	4.70	231	ePn	Pn	00 09 36.0	+1.2
KAPI	Kappang	9.60	224	Pn	Pn	00 10 42.9	+0.9
	1.1nm,0.3s,baz=67,slow=7.7,SNR=4.0						
KKM	Kota Kinabalu	10.97	292	ePn	Pn	00 10 57.6	-3.2
FITZ	Fitzroy Crossi	19.93	182	P	P	00 12 54.5	+0.1
	0.1nm,0.3s,baz=0.4,slow=12,SNR=2.7						
WRAB	Tennant Creek	23.09	161	eP	P	00 13 29.1	+0.9
	6.6nm,0.8s						
WR1	Warramunga Arr	23.09	161	eP	P	00 13 27.8	-0.5
WRA	Warramunga Arr	23.09	161	P	P	00 13 27.8	-0.5
	2.6nm,0.3s,baz=344,slow=12,SNR=32						
WB2	Warramunga Arr	23.10	161	eP	P	00 13 27.8	-0.6
	10nm,1.0s						
AS31	Alice Springs	26.47	164	eP	P	00 13 59.5	+0.2
	1.2nm,0.4s						
ASAR	Alice Springs	26.48	164	P	P	00 13 59.5	+0.2
	0.9nm,0.4s,baz=343,slow=7.9,SNR=12						
STKA	Stephens Creek	36.59	158	P	P	00 15 27.9	-0.2
	2.0nm,0.7s,baz=315,slow=5.7,SNR=3.2						
SONA0	Songino Array	48.89	342	eP	P	00 17 09.0	+1.3
SONM	Songino Array	48.89	342	P	P	00 17 09.0	+1.3
	0.4nm,0.5s,baz=161,slow=10,SNR=3.3						
MK32	Makanchi Array	58.85	326	eP	P	00 18 20.7	+0.4
MKAR	Makanchi Array	58.85	326	P	P	00 18 20.7	+0.4
	0.4nm,0.3s,baz=123,slow=7.3,SNR=12						
KURK	Kurchatov	63.08	328	eP	P	00 18 50.0	+1.1
	1.9nm,0.8s						
TORD	Torodi Ar. Bea	123.16	287	PKP	PKiKP	00 27 19.5	+0.3
	0.5nm,0.9s,baz=80,slow=3.1,SNR=2.9						
TOA1	Torodi Ar. Sit	123.17	287	ePKPdf	PKiKP	00 27 19.6	+0.3

*SJA **06** 00:20:49.7±0.7, 21°.80S×68°.55W, h145km±6km, ML2.9, MW4.0*
*ISCJB **06** 00:20:51.3±0.5, 21°.77S±0°.03×68°.53W±0°.06, h134km±6km, mb3.7/4, Error ellipse: s-maj=9.8km s-min=5.0km az=0.4*
*IDC **06** 00:20:51.3±0.7, 21°.92S×68°.14W, h118km±13km, mb3.6/4, mb1 3.6/7, mb1mx3.3/25, mbtmp3.9/7, MS3.3/1, Ms1 3.3/1, ms1mx2.8/21, Error ellipse: s-maj=33.1km s-min=19.2km az=110.0*
*GUC **06** 00:20:52.2±0.7, 21°.75S×68°.50W, h129km±4km, ML3.5*

ISC 06 00:20:51.4±0.8, **21°.81S**±0°.04×**68°.47W**±0°.06, **h130**km±7km, **n31, σ1°35/53, mb3.8/4, 9C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.72	271	iP	Pn	00 21 12.1	-0.1
PB09				iS	Sn	00 21 28.7	+0.9
PB09	IPOC Station P	0.72	271	⇑iP	Pn	00 21 12.4	+0.3
PB09				iS	Sn	00 21 27.4	-0.3
PB09				IAML		00 21 29.7	
	comp=N,715nm,0.6s						
LVC	Limon Verde	0.90	207	P	Pn	00 21 14.2	+0.4
	comp=N,100nm,0.3s,baz=34,slow=9.4,SNR=994						
LVC				S	Sn	00 21 30.5	-0.3
	comp=N,108nm,0.3s,baz=90,slow=20,SNR=37						
LVC	Limon Verde	0.90	207	iP	Pn	00 21 13.8	0.0
LVC				iS	Sn	00 21 32.1	+1.3
LVC	Limon Verde	0.90	207	⇓iP	Pn	00 21 14.2	+0.4
LVC				iS	Sn	00 21 31.2	+0.4
PB01	IPOC Station P	1.22	308	⇑iP	Pn	00 21 16.3	-0.3
PB01				iS	Sn	00 21 34.9	-0.7
PB01				IAML		00 21 36.6	
	comp=N,1μm,0.1s						
PB03	IPOC Station P	1.22	258	iP	Pn	00 21 16.1	-0.5
PB03	IPOC Station P	1.22	258	⇑iP	Pn	00 21 16.8	+0.2
PB03				iS	Sn	00 21 35.7	0.0
PB03				IAML		00 21 36.6	
	comp=E,1μm,0.7s						
PB07	IPOC Station P	1.32	273	iP	Pn	00 21 17.4	-0.3
PB07				iS	Sn	00 21 36.8	-0.9
PB07	IPOC Station P	1.32	273	⇑iP	Pn	00 21 17.8	0.0
PB07				iS	Sn	00 21 37.5	-0.2
PB07				IAML		00 21 38.7	
	comp=N,1μm,0.1s						
PB06	IPOC Station P	1.36	229	iP	Pn	00 21 18.0	-0.1
PB06				iS	Sn	00 21 38.0	-0.4
PB06	IPOC Station P	1.36	229	⇑iP	Pn	00 21 18.8	+0.6
PB06				iS	Sn	00 21 39.0	+0.6
PB06				IAML		00 21 40.2	
	comp=N,1μm,0.5s						
PB02	IPOC Station P	1.41	290	iP	Pn	00 21 18.0	-0.7
PB02				iS	Sn	00 21 38.8	-0.6
PB02	IPOC Station P	1.41	290	⇑iP	Pn	00 21 18.4	-0.2
PB02				iS	Sn	00 21 38.5	-0.9
PB02				IAML		00 21 40.0	
	comp=N,2μm,0.3s						
PB04	IPOC Station P	1.65	251	eP	Pn	00 21 21.5	+0.2
PB04				iS	Sn	00 21 44.4	+0.3
PB04				IAML		00 21 50.5	
	comp=N,534nm,0.6s						
PB15	IPOC Station P	1.68	213	⇑iP	Pn	00 21 22.4	+0.7
PB15				iS	Sn	00 21 46.5	+1.6
PB08	IPOC Station P	1.77	339	⇑iP	Pn	00 21 23.6	+0.5
PB08				iS	Sn	00 21 47.1	-0.1
PB08				IAML		00 21 48.5	
	comp=E,237nm,0.5s						
PB05	IPOC Station P	1.92	237	⇑iP	Pn	00 21 24.7	+0.3
PB05				iS	Sn	00 21 50.0	+0.2
PB05				IAML		00 22 02.5	
	comp=E,272nm,0.5s						
GO01	Chusmiza	2.23	342	eP	Pn	00 21 28.8	+0.1
GO01				iS	Sn	00 21 56.1	-1.2
PB11	IPOC Station P	2.32	331	eP	Pn	00 21 29.2	-0.3
PB11				iS	Sn	00 21 57.4	-1.3
PB11				IAML		00 21 59.1	
	comp=E,527nm,0.5s						
YJA	Yavi	2.77	98	iP	Pn	00 21 36.6	+1.2
YJA				IAML		00 21 41.7	
	comp=Z,18nm,0.4s						
MNMC	Minye Minye	2.86	338	⇓iP	Pn	00 21 36.4	-0.2
MNMC				iS	Sn	00 22 10.9	-0.4
HJA	Humahuaca	3.15	117	iP	Pn	00 21 41.6	+1.2
HJA				IAML		00 21 43.6	
	comp=Z,35nm,0.5s						
LPAZ	La Paz	5.50	3	P	Pn	00 22 12.6	+0.8
	comp=Z,0.7nm,0.3s,baz=176,slow=8.0,SNR=23						
LPAZ				S	Sn	00 23 13.7	-0.6
	comp=Z,0.1nm,0.3s,baz=83,slow=18,SNR=2.3						
SIV	San Ignacio	9.08	52	P	Pn	00 22 55.6	-3.8
	comp=Z,3.5nm,0.3s,baz=245,slow=11,SNR=82						
SIV				S	Sn	00 24 28.1	-12
	comp=Z,0.0nm,0.3s,baz=307,slow=20,SNR=2.6						
CFA	Coronel Fontan	9.76	179	P	Pn	00 23 06.1	-2.5
	comp=Z,0.2nm,0.3s,baz=4.6,slow=16,SNR=4.6						
CFA				S	Sn	00 24 49.7	-6.7
	comp=Z,0.4nm,0.3s,baz=149,slow=19,SNR=3.2						
PTGA	Pitinga	22.53	23	P	P	00 25 42.4	+1.8
	comp=Z,1.2nm,0.3s,baz=142,slow=19,SNR=3.7						
PTGA				LR	LR	00 36 08.7	
	comp=Z,77nm,18.1s,baz=259,slow=41						
DBIC	Dimbokro	68.43	73	P	P	00 31 40.2	+0.4
	comp=Z,2.6nm,0.8s,baz=225,slow=8.6,SNR=3.1						
TORD	Torodi Ar. Bea	77.07	70	P	P	00 32 30.1	-0.7
	comp=Z,0.5nm,0.4s,baz=257,slow=5.4,SNR=18						
YKA	Yellowknife Ar	91.61	340	P	P	00 33 44.3	+1.1
	comp=Z,0.5nm,0.7s,baz=129,slow=4.7,SNR=7.7						
MKAR	Makanchi Array	145.64	36	PKPbc	PKPab	00 40 15.7	+0.3
	comp=Z,0.3nm,0.6s,baz=320,slow=4.3,SNR=3.3						

IDC 06 00:26:20.6±6.0, **17°.88S**×**13°.78W**, **h0**km, **mb3.9**/4, **mb1 3.9**/4, **mb1mx3.6**/26, **mbtmp3.9**/4, **MS3.4**/5, **Ms1 3.4**/5, **ms1mx3.0**/28, **Error ellipse: s-maj=300.5km s-min=29.2km az=95.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	8.91	354	T	T	00 37 58.6	
	baz=170,slow=74,SNR=54						
H10S3	ASCENSION HYDR	8.92	354	T	T	00 37 59.4	
	baz=170,slow=74,SNR=66						
H10S1	ASCENSION HYDR	8.93	354	T	T	00 37 60.0	
	baz=170,slow=74,SNR=71						
DBIC	Dimbokro	25.94	21	LR	LR	00 39 22.5	
	comp=Z,57nm,21.6s,baz=156,slow=30						
TORD	Torodi Ar. Bea	34.41	27	P	P	00 33 08.9	-1.0
	2.0nm,0.7s,baz=213,slow=8.5,SNR=13						
TORD				LR	LR	00 44 25.2	
	comp=Z,61nm,20.1s,baz=310,slow=32						
BOSA	Boshof	37.27	114	LR	LR	00 45 55.2	
	comp=Z,58nm,19.3s,baz=284,slow=32						
PLCA	Paso Flores	53.49	232	LR	LR	00 57 49.8	
	comp=Z,61nm,18.2s,baz=90,slow=35						
MAW	Mawson	68.52	156	P	P	00 37 24.4	-0.2
	0.8nm,0.8s,baz=268,slow=8.7,SNR=3.3						
BRTR	Keskin Array B	72.38	37	P	P	00 37 49.7	+1.0
	0.9nm,0.6s,baz=222,slow=6.3,SNR=8.4						
AKASG	Malin Array Be	78.04	26	P	P	00 38 20.8	0.0
	0.5nm,0.5s,baz=216,slow=4.6,SNR=3.9						
SADO	Sadowa	86.07	320	LR	LR	01 09 20.2	
	comp=Z,22nm,21.2s,baz=316,slow=30						

IDC 06 00:37:44.4±1.4, **34°.00S**×**178°.77W**, **h0**km, **mb3.9**/2, **mb1 4.2**/2, **mb1mx3.7**/17, **mbtmp3.9**/2, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.7**/27, **Error ellipse: s-maj=62.6km s-min=40.2km az=4.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	30.82	65	LR	LR	00 52 54.0	
	comp=Z,38nm,20.8s,baz=337,slow=30						
ASAR	Alice Springs	42.40	271	P	P	00 45 40.8	0.0
	0.9nm,0.7s,baz=117,slow=7.3,SNR=7.7						
WRA	Warramunga Arr	43.71	276	P	P	00 45 51.1	-0.3
	1.5nm,0.5s,baz=113,slow=8.3,SNR=11						
FINES	FINESS Array B	148.25	337	PKPbc	PKPbc	00 57 31.1	-0.4
	1.3nm,0.6s,baz=97,slow=4.6,SNR=9.6						
NB2	NORSAR Subarra	152.18	350	PKP	PKPbc	00 57 41.1	-0.1
	comp=Z,0.2nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	152.18	350	PKPbc	PKPbc	00 57 40.8	-0.4
	comp=Z,0.5nm,0.7s,baz=15,slow=4.1,SNR=3.2						
BRTR	Keskin Array B	153.53	292	PKPbc	PKPbc	00 57 45.0	0.0
	comp=Z,0.3nm,0.7s,baz=59,slow=0.7,SNR=4.0						
TORD	Torodi Ar. Bea	159.24	181	PKPab	PKPab	00 58 21.7	-0.4
	comp=Z,0.4nm,0.8s,baz=182,slow=3.5,SNR=3.1						

*ISK **06** 00:57:59.8, 36°.65N×26°.79E, h138km, ML2.4/8*
*ISCJB **06** 00:58:01.3±0.9, 36°.63N±0°.05×26°.88E±0°.06, h129km±8km, Error ellipse: s-maj=10.6km s-min=4.9km az=138.3*
*ATH **06** 00:58:01.1, 36°.73N×26°.79E, h120km±15km, ML2.5/1, Error ellipse: s-maj=17.8km s-min=1.9km az=153.0*
*THE **06** 00:58:04.7, 36°.61N×26°.93E, h116km±11km, ML2.5/3, Error ellipse: s-maj=11.2km s-min=1.8km az=121.0*

ISC 06 00:58:01.0±1.8, **36°.65N**±0°.05×**26°.92E**±0°.04, **h132**km±13km, **n34, σ1°33/51, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.52	37	PG	Pn	00 58 20.6	+0.2
BODT				SG	Sn	00 58 35.8	+0.6
BODT	Bodrum	0.52	37	P	Pn	00 58 21.1	+0.7
DAT	Datca	0.54	81	PG	Pn	00 58 20.9	+0.3
DAT				SG	Sn	00 58 36.3	+0.8
DAT	Datca	0.54	81	iP	Pn	00 58 21.4	+0.8
DAT				IAML_P			
	comp=Z,75nm,0.2s						
BDRM	Kayabasi	0.59	45	iP	Pn	00 58 21.6	+0.8
BDRM				IAML_P			
	comp=Z,479nm,0.2s						
SMG	Samos	1.06	357	P	Pn	00 58 24.9	+0.2
ARG	Arkhangelos	1.06	113	PN	Pn	00 58 25.6	+1.0
ARG	Arkhangelos	1.06	113	P	Pn	00 58 25.9	+1.2
ARG				S	Sn	00 58 39.4	-3.2
ARG	Arkhangelos	1.06	113	P	Pn	00 58 25.8	+1.2
ARG				S	Sn	00 58 43.5	+0.9
ARG				AML	AML	00 58 46.5	
	comp=E,281μm,0.3s						
ARG				AML	AML	00 58 47.2	
	comp=N,205μm,0.1s						
GCAM	G?zelcaml?	1.08	13	PN	Pn	00 58 24.9	+0.1
GCAM	G?zelcaml?	1.08	13	iP	Pn	00 58 25.2	+0.5
GCAM				IAML_P			
	comp=Z,85nm,0.1s						
KARP	Karpathos	1.11	170	PN	Pn	00 58 25.1	-0.1
KARP				SN	Sn	00 58 43.7	+0.1
KARP	Karpathos	1.11	170	P	Pn	00 58 25.9	+0.7
KARP				S	Sn	00 58 40.5	-3.1
KARP	Karpathos	1.11	170	P	Pn	00 58 25.9	+0.7
AYDN	Tasoluk	1.27	37	iP	Pn	00 58 28.0	+1.2
AYDN				IAML_P			
	comp=Z,1μm,0.2s						
TURN	Turunc	1.37	80	PN	Pn	00 58 25.4	-2.3
TURN	Turunc	1.37	80	iP	Pn	00 58 25.2	-2.6
TURN				iS	Sn	00 58 43.8	-4.3
TURN				IAML_P			
	comp=Z,490nm,0.1s						
DALY	Dalyan (Mula)	1.41	82	PN	Pn	00 58 29.2	+1.1
DALY	Dalyan (Mula)	1.41	82	iP	Pn	00 58 30.0	+1.9
DALY				iS	Sn	00 58 50.6	+1.8
DALY				IAML_P			
	comp=Z,391nm,0.1s						
AYDB	Zeytinkoy-Aydi	1.51	31	PN	Pn	00 58 29.8	+0.3
STIA	Sitia Lasithi	1.59	205	P	Pn	00 58 30.9	+0.7
STIA				S	Sn	00 58 52.8	+0.3
ZKR	Zakros	1.63	201	PN	Pn	00 58 30.1	-0.6
ZKR	Zakros	1.63	201	P	Pn	00 58 32.1	+1.4
ZKR				S	Sn	00 58 53.4	0.0
ZKR	Zakros	1.63	201	P	Pn	00 58 32.0	+1.4
NPS	Neapolis	1.74	218	P	Pn	00 58 32.2	+0.2
NPS				S	Sn	00 58 55.2	-0.4
NPS	Neapolis	1.74	218	P	Pn	00 58 32.2	+0.2
NPS				S	Sn	00 58 55.0	-0.6
FETY	Fethiye	1.74	90	PN	Pn	00 58 32.9	+0.9
FETY	Fethiye	1.74	90	P	Pn	00 58 32.5	+0.5
FETY				S	Sn	00 58 55.2	-0.5
FETY	Fethiye	1.74	90	iP	Pn	00 58 33.8	+1.8
FETY				iS	Sn	00 58 55.5	-0.2
FETY				IAML_P			
	comp=Z,402nm,0.1s						
LAST	Lasithi	1.89	219	P	Pn	00 58 34.1	+0.3
LAST				S	Sn	00 58 58.4	-0.5
LAST	Lasithi	1.89	219	P	Pn	00 58 33.8	0.0
LAST				S	Sn	00 58 58.3	-0.5
SIVA	Sivas	2.36	227	P	Pn	00 58 40.7	+1.2
ELL	Elmali	2.41	87	PN	Pn	00 58 40.9	+0.7
VAM	Vamos	2.53	242	P	Pn	00 58 41.6	+0.1
VAM				S	Sn	00 59 11.7	-1.1

*SNET **06** 01:05:26.9±0.7, 12°.84N×88°.78W, h36km±211km, ML3.6*
*UCR **06** 01:05:26.6±1.4, 12°.82N×88°.76W, h36km±273km, ML3.7*

ISC 06 01:05:24.1±1.8, **12°.75N**±0°.07×**88°.80W**±0°.04, **h16**km±10km, **n44, σ0°68/67, 3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECA	Tecapa	0.80	21	⇓iP	Pg	01 05 40.7	+1.0
TECA	Tecapa	0.80	21	⇓iP	Pg	01 05 40.7	+1.0
LCY	Lacayo	0.83	36	eP	Pg	01 05 41.1	+0.7
LCY	Lacayo	0.83	36	eP	Pg	01 05 41.1	+0.7
PACA	Pacayal	0.85	33	eP	Pg	01 05 41.3	+0.6
PACA				eS	Sb	01 05 52.5	+0.5
PACA	Pacayal	0.85	33	eP	Pg	01 05 41.3	+0.6
PACA				eS	Sb	01 05 52.5	+0.5
SNVI	San Vicente	0.86	357	eP	Pg	01 05 41.7	+0.8
SNVI				eS	Sb	01 05 53.3	+1.1
SNVI	San Vicente	0.86	357	eP	Pg	01 05 41.7	+0.8
SNVI				eS	Sb	01 05 53.3	+1.1
LFRS	El Faro	0.91	344	⇓iP	Pg	01 05 42.3	+0.4
PAVA	Las Pavas	0.97	352	eP	Pg	01 05 43.3	+0.2
PAVA				eS	Sg	01 05 55.8	0.0
PAVA	Las Pavas	0.97	352	eP	Pg	01 05 43.3	+0.2
PAVA				eS	Sg	01 05 55.8	0.0
LOMA	San Marcos	0.97	338	eP	Pg	01 05 43.2	+0.2
LOMA				eS	Sg	01 05 55.7	-0.2
LOMA				IAML		01 05 58.1	
	comp=Z,3μm,0.2s						
LOMA	San Marcos	0.97	338	eP	Pg	01 05 43.2	+0.2
LOMA				eS	Sg	01 05 55.7	-0.2
LOMA				IAML		01 05 58.1	
	comp=Z,3μm,0.2s						
LBRS	Las Brisas	1.02	346	eP	Pg	01 05 44.1	+0.3
SNET	Serv Nac Est T	1.03	336	eP	Pg	01 05 44.2	+0.2
SNET				eS	Sg	01 05 56.8	-0.7
SNET				IAML		01 05 58.9	
	comp=Z,1μm,0.2s						
SNET	Serv Nac Est T	1.03	336	eP	Pg	01 05 44.2	+0.2
SNET				eS	Sg	01 05 56.8	-0.7
SNET				IAML		01 05 58.9	
	comp=Z,1μm,0.2s						
LCND	La Caada	1.04	57	eP	Pg	01 05 43.9	-0.5
LCND				eS	Sg	01 05 57.2	-0.8
LCND				IAML		01 05 59.0	
	comp=Z,3μm,0.3s						
LCND	La Caada	1.04	57	eP	Pg	01 05 43.9	-0.5
LCND				eS	Sg	01 05 57.2	-0.8
LCND				IAML		01 05 59.0	
	comp=Z,3μm,0.3s						
LFU	La Fuente	1.04	343	eP	Pg	01 05 44.4	0.0
LFU	La Fuente	1.04	343	eP	Pg	01 05 44.4	0.0
UEES	San Salvador	1.07	336	eP	Pg	01 05 44.6	-0.2
UEES				eS	Sg	01 05 57.9	-1.0
UEES	San Salvador	1.07	336	eP	Pg	01 05 44.6	-0.2
UEES				eS	Sg	01 05 57.9	-1.0
CNCH	Conchagua	1.08	61	eP	Pg	01 05 44.9	-0.1
CNCH				eS	Sg	01 05 59.3	+0.2
CNCH				IAML		01 06 01.9	
	comp=Z,8μm,0.4s						
CNCH	Conchagua	1.08	61	eP	Pg	01 05 44.9	-0.1
CNCH				eS	Sg	01 05 59.3	+0.2
CNCH				IAML		01 06 01.9	
	comp=Z,8μm,0.4s						
BOQS	Boqueron	1.09	334	eP	Pg	01 05 45.3	0.0
BOQS				eS	Sg	01 05 59.7	+0.1
CAHU	Cacacuatique	1.17	29	eP	Pg	01 05 46.0	-0.8
CAHU	Cacacuatique	1.17	29	eP	Pg	01 05 46.2	-0.5
VICT	Victoria	1.22	7	eP	Pb	01 05 46.4	-0.5
VICT				eS	Sg	01 06 02.2	-1.4
VICT				IAML		01 06 02.9	
	comp=Z,474nm,0.2s						
VICT	Victoria	1.22	7	eP	Pb	01 05 46.4	-0.5
VICT				eS	Sg	01 06 02.2	-1.4
VICT				IAML		01 06 02.9	
	comp=Z,474nm,0.2s						
CSGN	Cosiguina Volc	1.23	79	eP	Pb	01 05 47.9	+0.9
CSGN				IAML		01 06 09.3	
	comp=E,5μm,0.3s						
CEVE	Cerro Verde	1.34	323	eP	Pn	01 05 49.1	+0.7
CEVE				eS	Sb	01 06 06.0	-0.2
CEVE				IAML

MLOA	**Mauna Loa Obse**	**0.80**	**89**	*e*Pn	Pn	01 10 17.4	-1.8
MLOA				*e*Sn	Sn	01 10 27.4	-2.7
KHU	**Kahuku**	**0.81**	**110**	*e*Pn	Pn	01 10 17.3	-1.9
KHU				*e*Sn	Sn	01 10 28.4	-1.8
MHA	**Mahukona**	**0.82**	**36**	*e*Pn	Pn	01 10 17.7	-1.5
MHA				*e*Sn	Sn	01 10 27.1	-3.1
HPAH	**Hawaii Prepara**	**0.85**	**53**	*e*Pn	Pn	01 10 17.8	-1.8
HPAH				*e*Sn	Sn	01 10 27.2	-3.7
POHA	**Pohakuloa**	**0.87**	**74**	*e*Pn	Pn	01 10 18.3	-1.8
POHA				*e*Sn	Sn	01 10 29.4	-2.3
HMH	**Humu'ula Sheep**	**0.89**	**85**	*e*Pn	Pn	01 10 19.1	-1.3
HMH				*e*Sn	Sn	01 10 31.3	-0.9
AIN	**Ainahou**	**0.92**	**99**	*e*Pn	Pn	01 10 18.9	-1.7
AIN				*e*Sn	Sn	01 10 32.2	-0.6
MLH	**Mauna Loa**	**0.98**	**91**	*e*Pn	Pn	01 10 19.7	-1.8
MLH				*e*Sn	Sn	01 10 32.9	-1.4
UWE	**Uwekahuna**	**1.07**	**95**	*e*Pn	Pn	01 10 20.9	-1.8
UWE				*e*Sn	Sn	01 10 35.1	-1.2
SDHHI	**Sand Hill**	**1.07**	**97**	*e*Pn	Pn	01 10 20.4	-2.2
SDHHI				*e*Sn	Sn	01 10 33.7	-2.7
HLP	**Hilina Pali**	**1.07**	**102**	*e*Pn	Pn	01 10 20.5	-2.2
HLP				*e*Sn	Sn	01 10 34.0	-2.4
OBL	**Observatory Le**	**1.08**	**95**	*e*Pn	Pn	01 10 18.7	-4.0
OBL				*e*Sn	Sn	01 10 34.0	-2.5
NPH	**North Pit**	**1.08**	**96**	*e*Pn	Pn	01 10 20.3	-2.5
NPH				*e*Sn	Sn	01 10 33.0	-3.6
UWB	**Uwekahuna B**	**1.08**	**95**	*e*Pn	Pn	01 10 19.1	-3.8
UWB				*e*Sn	Sn	01 10 33.7	-2.9
RIM	**Rim**	**1.09**	**96**	*e*Pn	Pn	01 10 20.3	-2.6
RIM				*e*Sn	Sn	01 10 33.6	-3.2
SBLHI	**Steaming Bluff**	**1.09**	**95**	*e*Pn	Pn	01 10 21.3	-1.7
SBLHI				*e*Sn	Sn	01 10 35.7	-1.2
KKO	**Keanakako`i**	**1.10**	**96**	*e*Pn	Pn	01 10 20.9	-2.2
KKO				*e*Sn	Sn	01 10 35.5	-1.5
BYL	**Byron's Ledge**	**1.10**	**95**	*e*Pn	Pn	01 10 20.9	-2.2
BYL				*e*Sn	Sn	01 10 35.6	-1.5
PUH	**Pauahi**	**1.15**	**97**	*e*Pn	Pn	01 10 21.6	-2.1
PUH				*e*Sn	Sn	01 10 36.7	-1.5
HLK	**Haleakala**	**1.24**	**7**	*e*Pn	Pn	01 10 23.1	-2.1
KHLH	**Kahului Airpor**	**1.37**	**360**	*e*Pn	Pn	01 10 25.4	-1.3
KHLH				*e*Sn	Sn	01 10 41.4	-2.2
KIP	**Kipapa**	**2.41**	**322**	*e*Pn	Pn	01 10 38.8	-2.2
KIP				*e*Sn	Sn	01 11 04.9	-4.4
OPA	**Opana**	**2.62**	**326**	*e*Pn	Pn	01 10 40.9	-2.9
OPA				*e*Sn	Sn	01 11 09.7	-4.7

*IDC **06** 01:11:24.0±1.4, 6°.33N×126°.55E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.5/38, mbtmp3.9/5, MS3.2/3, Ms1 3.2/3, ms1mx2.7/47, Error ellipse: s-maj=128.8km s-min=20.3km az=72.0*
*ISCJB **06** 01:11:27.8±1.1, 6°.3N±0°.2×126°.6E±0°.6, h35km, mb3.9/6, MS3.3/3, Error ellipse: s-maj=95.9km s-min=16.6km az=162.7*
*MAN **06** 01:11:32.6, 5°.94N×126°.36E, h32km, mb4.6, ML3.5, MS3.4*
ISC 06 01:11:29.6±1.4, 6°.3N±0°.3×126°.5E±0°.8, h35km, n9, σ0°.69/7, mb3.9/6, MS3.3/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**24.20**	**182**	P	**P**	**01 16 43.5**	**+0.4**
	3.4nm,0.9s,baz=360,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**30.61**	**167**	P	**P**	**01 17 40.4**	**-0.2**
	0.8nm,0.7s,baz=342,slow=7.1,SNR=8.1						
STKA	**Stephens Creek**	**40.57**	**160**	P	**P**	**01 19 06.1**	**+0.2**
	1.2nm,0.5s,baz=349,slow=10,SNR=3.4						
MKAR	**Makanchi Array**	**55.36**	**324**	P	**P**	**01 21 00.5**	**+0.2**
	0.3nm,0.4s,baz=119,slow=8.7,SNR=4.6						
MKAR				PcP	**PcP**	**01 22 00.5**	**+0.1**
	0.5nm,0.7s,baz=104,slow=4.6,SNR=3.0						
MKAR				LR	LR	01 45 20.9	
	comp=Z,24nm,18.8s,baz=40,slow=37						
KIRV	**Kirov**	**77.95**	**329**	LR	LR	01 58 46.6	
	comp=Z,21nm,18.3s,baz=150,slow=36						
OBN	**Obninsk**	**84.86**	**325**	LR	LR	02 02 25.5	
	comp=Z,7.0nm,19.7s,baz=353,slow=36						
ARCES	**ARCESS Array B**	**88.01**	**340**	P	**P**	**01 24 16.2**	**+0.3**
	1.1nm,0.7s,baz=82,slow=6.5,SNR=4.3						
FINES	**FINESS Array B**	**89.50**	**332**	P	P	01 24 22.1	-0.9
	0.7nm,0.7s,baz=76,slow=5.9,SNR=3.5						
TORD	**Torodi Ar. Bea**	**121.86**	**290**	PKP	**PKPdf**	**01 30 20.0**	**-1.3**
	0.4nm,0.6s,baz=83,slow=1.7,SNR=6.4						

*NIED **06** 01:18:00, 31°.40N×142°.40E, h8km, Mw3.9 Best double couple: M0=8.98000×10^14 NP1:φ=110.00000°, δ37.00000°, λ-48.00000°. NP2:φ=242.00000°, δ63.00000°, λ-117.00000°.*
*IDC **06** 01:18:46.0±0.7, 31°.27N×142°.15E, h0km, mb3.9/14, mb1 4.2/18, mb1mx4.0/37, mbtmp4.0/18, ML3.6/4, MS2.9/6, Ms1 2.9/6, ms1mx2.6/61, Error ellipse: s-maj=21.3km s-min=16.7km az=63.0*
*JMA **06** 01:18:47.3±0.2, 31°.37N×142°.40E, h61km, M4.5*
*ISCJB **06** 01:18:49.9±0.4, 31°.39N±0°.05×142°.06E±0°.06, h35km, mb4.2/25, MS3.2/2, Error ellipse: s-maj=8.8km s-min=4.6km az=141.3*
*NEIC **06** 01:18:49.0±2.8, 31°.33N×142°.27E, h21km±4km, mb4.5/11, Error ellipse: s-maj=16.9km s-min=11.1km az=203.0*
ISC 06 01:18:50.8±0.5, 31°.38N±0°.06×142°.25E±0°.07, h35km, n70, σ1°.55/77, mb4.2/25, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.68**	**310**	P	**Pn**	**01 19 40.9**	**-0.5**
JHJ2	**Mitsune**	**2.69**	**311**	*e*Pn	**Pn**	**01 19 30.7**	**-0.9**
JHJ2				*e*Sn	**Sn**	**01 20 01.4**	**-1.6**
JHJ2	**Mitsune**	**2.69**	**311**	P	**Pn**	**01 19 30.6**	**-1.0**
JHJ	**Hachijo jima 2**	**2.72**	**310**	Pn	**Pn**	**01 19 30.3**	**-1.7**
	67nm,0.3s,baz=90,slow=20,SNR=73						
JHJ				Sn	**Sn**	**01 20 00.7**	**-2.9**
	52nm,0.3s,baz=88,slow=22,SNR=6.5						
JHJ				LR	LR	01 20 44.4	
	comp=Z,173nm,18.6s,baz=86,slow=44						
BSO1	**Boso 1**	**3.44**	**342**	P	**Pn**	**01 19 40.9**	**-0.5**
BSO1				*e*S	**Sn**	**01 20 20.7**	**0.0**
BSO3	**Boso 3**	**3.71**	**337**	P	**Pn**	**01 19 44.5**	**-1.0**
BSO4	**Boso 4**	**3.94**	**337**	P	**Pn**	**01 19 48.5**	**-0.3**
CBIJ	**Chichi jima**	**4.26**	**181**	P	**Pn**	**01 19 51.2**	**-2.1**
JOD2	**Odawara 2**	**4.69**	**327**	P	**Pn**	**01 19 59.0**	**-0.2**
JHU	**Hanno**	**5.10**	**332**	P	**Pn**	**01 20 04.3**	**-0.5**
JHU				S	**Sn**	**01 21 02.9**	**+0.4**
JRY	**Ryogami san**	**5.40**	**330**	P	**Pn**	**01 20 08.3**	**-0.6**
JHO	**Hitachi**	**5.41**	**346**	P	**Pn**	**01 20 07.9**	**-1.0**
JAG	**Ashikaga**	**5.55**	**336**	P	**Pn**	**01 20 10.2**	**-0.7**
JIE	**Ise**	**5.55**	**304**	P	**Pn**	**01 20 11.2**	**+0.3**
MJAR	**Matsushiro Arr**	**6.15**	**328**	Pn	**Pn**	**01 20 18.9**	**-0.3**
	1.2nm,0.3s,baz=157,slow=11,SNR=56						
MJAR				Sn	**Sn**	**01 21 25.8**	**-2.5**
	0.3nm,0.3s,baz=97,slow=39,SNR=2.6						
MJAR				LR	LR	01 22 12.2	
	comp=Z,25nm,20.0s,baz=130,slow=33						
MAJO	**Matsushiro**	**6.15**	**328**	*e*Pn	**Pn**	**01 20 19.9**	**+0.7**
MAJO				*e*Sn	**Sn**	**01 21 25.8**	**-2.5**
MAT	**Matsushiro**	**6.15**	**328**	P	**Pn**	**01 20 19.7**	**+0.5**
MAT				S	**Sn**	**01 21 23.9**	**-4.4**
MJB9	**Matsu-Tunnel**	**6.15**	**328**	*e*Pn	**Pn**	**01 20 20.0**	**+0.8**
JNU	**Nakatsue**	**9.78**	**283**	*e*Pn	**Pn**	**01 21 07.7**	**-1.4**
ERM	**Erimo**	**10.64**	**4**	*e*Pn	**Pn**	**01 21 17.6**	**-3.1**
ERM				*e*Sn	**Sn**	**01 23 13.9**	**-4.7**
ASAJ	**Asahikawa**	**12.72**	**1**	Pn	**Pn**	**01 21 46.9**	**-2.3**
	1.9nm,0.3s,baz=209,slow=11,SNR=6.1						
ASAJ				LR	LR	01 28 12.6	
	comp=Z,62nm,20.8s,baz=158,slow=44						
KSRS	**Korea Array**	**13.28**	**301**	LR	LR	01 27 29.8	
	comp=Z,57nm,18.6s,baz=112,slow=39						
USA0B	**Ussuriysk Arra**	**15.14**	**331**	*e*Pn	**Pn**	**01 22 21.8**	**-0.1**
USRK	**Ussuriysk Ar.**	**15.14**	**331**	Pn	**Pn**	**01 22 20.6**	**-1.4**
	0.4nm,0.3s,baz=170,slow=12,SNR=8.0						
KLR	**Kul'dur**	**19.51**	**339**	P	**Pn**	**01 23 15.8**	**-0.6**
	0.6nm,0.3s,baz=142,slow=13,SNR=13						
SMY	**Shemya**	**31.45**	**38**	*e*P	**P**	**01 25 06.5**	**-2.3**
	39nm,0.8s						
SONA0	**Songino Array**	**31.79**	**312**	*e*P	**P**	**01 25 13.9**	**+1.9**
SONM	**Songino Array**	**31.79**	**312**	P	**P**	**01 25 13.9**	**+1.9**
	0.6nm,0.4s,baz=123,slow=10,SNR=6.0						
JAY	**Jayapura**	**33.73**	**183**	LR	LR	01 37 40.7	
	comp=Z,37nm,20.3s,baz=358,slow=34						
KMI	**Kunming**	**35.22**	**270**	*e*P	**P**	**01 25 39.7**	**-2.5**
	23nm,0.4s						
ZALV	**Zalesovo Beam**	**46.36**	**317**	P	**P**	**01 27 13.8**	**+0.4**
	0.8nm,0.5s,baz=106,slow=11,SNR=4.3						
ZALV				PcP	**PcP**	**01 28 48.4**	**+0.5**
	0.5nm,0.3s,baz=90,slow=1.7,SNR=2.7						
ZAA1	**Zalesovo Array**	**46.36**	**317**	*e*P	**P**	**01 27 13.8**	**+0.4**
ZAA1				*e*PcP	**PcP**	**01 28 48.4**	**+0.5**
MK32	**Makanchi Array**	**47.88**	**307**	*e*P	**P**	**01 27 25.7**	**+0.3**
MKAR	**Makanchi Array**	**47.88**	**307**	P	**P**	**01 27 25.7**	**+0.3**
	1.1nm,0.6s,baz=84,slow=11,SNR=11						
WR1	**Warramunga Arr**	**51.59**	**190**	*e*P	**P**	**01 27 52.8**	**-1.0**
WRA	**Warramunga Arr**	**51.59**	**190**	P	**P**	**01 27 52.7**	**-1.0**
	2.8nm,0.4s,baz=1.0,slow=9.2,SNR=43						
ILAR	**Eielson Array**	**53.97**	**30**	P	**P**	**01 28 11.9**	**+1.1**
	0.9nm,0.7s,baz=258,slow=6.7,SNR=9.7						
ILB	**Eielson Array**	**53.97**	**30**	*e*P	**P**	**01 28 11.9**	**+1.1**
DOT	**Dot Lake**	**55.19**	**31**	*e*P	**P**	**01 28 22.1**	**+2.3**
	9.2nm,1.1s						
AS31	**Alice Springs**	**55.31**	**189**	*e*P	**P**	**01 28 20.9**	**-0.1**
	1.4nm,0.6s						
ASAR	**Alice Springs**	**55.31**	**189**	P	**P**	**01 28 20.4**	**-0.7**
	2.2nm,0.5s,baz=6.2,slow=6.4,SNR=32						
KK31	**Karatay Array**	**56.70**	**304**	*e*P	**P**	**01 28 32.3**	**+1.4**
KKAR	**Karatay Array**	**56.70**	**304**	*e*P	**P**	**01 28 32.3**	**+1.4**
	4.1nm,0.9s						
ABKAR	**Akbulak array**	**62.20**	**313**	*e*P	**P**	**01 29 10.2**	**+1.6**
	1.7nm,0.6s						
YKA	**Yellowknife Ar**	**68.38**	**29**	P	**P**	**01 29 48.9**	**+0.4**
	0.3nm,0.9s,baz=297,slow=6.5,SNR=3.0						
YKB5	**Yellowknife Ar**	**68.38**	**29**	*e*P	**P**	**01 29 48.9**	**+0.4**
K05A	**Summer Lake**	**74.04**	**50**	*e*P	**P**	**01 30 22.8**	**-0.5**
	5.0nm,1.2s						
FIA0	**FINESS Array S**	**74.15**	**333**	*e*P	**P**	**01 30 23.8**	**+0.4**
FINES	**FINESS Array B**	**74.15**	**333**	P	**P**	**01 30 23.8**	**+0.4**
	0.3nm,0.4s,baz=64,slow=5.1,SNR=4.1						
I07A	**Izee**	**74.29**	**48**	*e*P	**P**	**01 30 25.2**	**+0.5**
	2.6nm,1.1s						
JMIC	**Jan Mayen**	**75.83**	**350**	LR	LR	02 07 39.2	
	comp=Z,17nm,18.8s,baz=260,slow=39						
SUMG	**Summit**	**76.33**	**0**	*e*P	**P**	**01 30 35.4**	**-0.8**
	9.9nm,1.5s						
VCNR	**Virginia City**	**76.51**	**52**	*e*P	**P**	**01 30 37.5**	**-0.2**
	7.6nm,0.3s						
NV01	**Mina Array Sit**	**77.86**	**52**	*e*P	**P**	**01 30 47.2**	**+2.0**
NVAR	**Mina Array Bea**	**77.86**	**52**	P	**P**	**01 30 47.2**	**+2.0**
	1.1nm,0.7s,baz=291,slow=6.1,SNR=7.2						
AKASG	**Malin Array Be**	**79.22**	**323**	P	**P**	**01 30 52.7**	**+0.6**
	0.5nm,0.4s,baz=49,slow=5.9,SNR=3.4						
AKBB	**Malin Array Si**	**79.22**	**323**	*e*P	**P**	**01 30 52.7**	**+0.6**
	1.9nm,0.7s						
NB2	**NORSAR Subarra**	**79.67**	**338**	P	**P**	**01 30 55.0**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=42,slow=5.6						
NB200	**NORSAR Array S**	**79.67**	**338**	*e*P	**P**	**01 30 54.7**	**+0.2**
NOA	**NORSAR Array B**	**79.67**	**338**	P	**P**	**01 30 54.7**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=39,slow=5.2,SNR=4.4						
PD31	**Pinedale Array**	**81.15**	**45**	*e*P	**P**	**01 31 04.5**	**+1.4**
PDAR	**Pinedale Array**	**81.15**	**45**	P	**P**	**01 31 04.5**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=279,slow=3.1,SNR=5.0						
BR101	**Keskin Array S**	**83.15**	**313**	*e*P	**P**	**01 31 14.7**	**+1.2**
BRTR	**Keskin Array B**	**83.15**	**313**	P	**P**	**01 31 14.7**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=32,slow=4.8,SNR=5.0						
CLL	**Collm**	**86.35**	**331**	*e*P	**P**	**01 31 30.0**	**+0.8**
LAZ	**Ladron**	**87.57**	**51**	*e*P	**P**	**01 31 38.0**	**+2.2**
TX31	**Lajitas Ar. Si**	**93.00**	**53**	*e*P	**P**	**01 32 03.2**	**+2.2**
LTX	**Lajitas**	**93.00**	**53**	*e*P	**P**	**01 32 03.2**	**+2.2**
TXAR	**Lajitas Array**	**93.00**	**53**	P	**P**	**01 32 03.2**	**+2.2**
	comp=Z,1.9nm,0.7s,baz=294,slow=2.7,SNR=20						
LPAZ	**La Paz**	**148.55**	**69**	PKPbc	**PKPab**	**01 38 36.4**	**-2.4**
	comp=Z,0.8nm,0.6s,baz=32,slow=5.3,SNR=6.4						

*IDC **06** 01:23:46.8±0.8, 55°.34S×26°.23W, h0km, mb4.0/5, mb1 4.0/5, mb1mx3.8/25, mbtmp4.0/5, MS3.7/5, Ms1 3.7/5, ms1mx3.3/22, Error ellipse: s-maj=33.5km s-min=22.6km az=53.0*
*NEIC **06** 01:23:47.3±1.7, 55°.43S×26°.60W, h8km±4km, mb4.3/11, Error ellipse: s-maj=22.6km s-min=13.8km az=117.0*
*ISCJB **06** 01:23:49.0±0.5, 55°.37S±0°.08×26°.9W±0°.1, h35km, mb4.3/11, MS3.7/5, Error ellipse: s-maj=11.8km s-min=8.0km az=29.9*
ISC 06 01:23:51.2±0.6, 55°.4S±0°.1×26°.76W±0°.08, h35km, n33, σ1°.33/28, mb4.2/11, MS3.7/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.74**	**278**	*e*Pn	**Pn**	**01 25 13.3**	**-0.5**
HOPE				*e*Sn	**Sn**	**01 26 15.5**	**-2.9**
VNA1	**Neumayer--Stat**	**17.28**	**159**	P	**P**	**01 27 51.8**	**+1.3**
VNA3	**Neumayer Olymp**	**17.49**	**162**	P	**P**	**01 27 53.5**	**+0.6**
VNA2	**Neumayer--Watz**	**17.67**	**159**	P	**Pn**	**01 27 54.7**	**+0.5**
	baz=316,slow=14						
SNAA	**Sanae**	**19.21**	**157**	P	**P**	**01 28 10.9**	**-0.9**
SNAA	**Sanae**	**19.21**	**157**	*e*P	**P**	**01 28 10.0**	**-1.8**
	9.1nm,1.5s						
PMSA	**Palmer Station**	**20.49**	**228**	LR	LR	01 35 13.1	
	comp=Z,211nm,19.6s,baz=88,slow=33						
PMSA	**Palmer Station**	**20.49**	**228**	*e*P	**P**	**01 28 25.9**	**+0.2**
	43nm,1.0s						
QSPA	**South Pole Qui**	**34.81**	**180**	*e*P	**P**	**01 30 37.5**	**-0.9**
	2.3nm,0.8s						
CFA	**Coronel Fontan**	**37.55**	**292**	P	**P**	**01 31 06.3**	**+4.4**
	3.5nm,0.9s,baz=145,slow=10,SNR=3.7						
MAW	**Mawson**	**40.50**	**144**	P	**P**	**01 31 27.4**	**+1.3**
	0.9nm,0.6s,baz=249,slow=12,SNR=3.6						
MAW				LR	LR	01 46 31.3	
	comp=Z,71nm,20.4s,baz=232,slow=34						
LVC	**Limon Verde**	**45.21**	**299**	*e*P	**P**	**01 32 06.3**	**+1.1**
	4.6nm,0.8s						
BOSA	**Boshof**	**45.58**	**76**	LR	LR	01 48 02.4	
	comp=Z,181nm,18.3s,baz=203,slow=32						
BOSA	**Boshof**	**45.58**	**76**	*e*P	**P**	**01 32 07.6**	**-0.2**
	1.2nm,0.8s						
SBA	**Scott Base**	**46.71**	**184**	*e*P	**P**	**01 32 15.7**	**-0.2**
	5.3nm,1.3s						
VNDA	**Vanda**	**47.20**	**183**	P	**P**	**01 32 19.5**	**-0.3**
	1.2nm,0.8s,baz=184,slow=5.7,SNR=7.2						
VNDA	**Vanda**	**47.20**	**183**	*e*P	**P**	**01 32 19.1**	**-0.7**
	2.6nm,0.9s						
H10S2	**ASCENSION HYDR**	**47.34**	**16**	T	T	02 23 26.0	
	baz=189						
H10S3	**ASCENSION HYDR**	**47.34**	**16**	T	T	02 23 25.9	
	baz=189						
H10S1	**ASCENSION HYDR**	**47.36**	**16**	T	T	02 23 27.1	
	baz=189						
LPAZ	**La Paz**	**50.23**	**304**	P	**P**	**01 32 45.5**	**+1.1**
	1.5nm,0.8s,baz=122,slow=6.8,SNR=6.1						
LPAZ	**La Paz**	**50.23**	**304**	*e*P	**P**	**01 32 44.5**	**+0.1**
	4.1nm,1.0s						
DBIC	**Dimbokro**	**64.50**	**24**	LR	LR	01 57 45.2	
	comp=Z,45nm,19.4s,baz=148,slow=32						
ABPO	**Ambohimpanom**	**65.48**	**88**	*e*P	**P**	**01 34 29.5**	**-1.5**
	14nm,1.4s						
TORD	**Torodi Ar. Bea**	**72.40**	**29**	P	**P**	**01 35 12.8**	**-0.8**
	1.1nm,0.6s,baz=194,slow=5.9,SNR=16						
TORD				LR	LR	02 02 10.4	
	comp=Z,55nm,18.5s,baz=325,slow=32						
TOA1	**Torodi Ar. Sit**	**72.40**	**29**	*e*P	**P**	**01 35 12.8**	**-0.8**
ANWB	**Willy Bob**	**78.64**	**326**	*e*P	**P**	**01 35 48.1**	**-1.1**
	69nm,0.9s						
YKA	**Yellowknife Ar**	**135.88**	**318**	PKP	**PKPdf**	**01 43 07.2**	**+0.5**
	0.2nm,0.5s,baz=128,slow=2.7,SNR=3.7						
INK	**Inuvik**	**145.48**	**321**	PKPbc	**PKPab**	**01 43 24.5**	**+0.2**
	1.4nm,0.6s,baz=80,slow=3.5,SNR=3.4						
ILAR	**Eielson Array**	**149.89**	**312**	PKPbc	**PKiKP**	**01 43 37.0**	**-0.1**
	1.1nm,0.7s,baz=132,slow=3.9,SNR=16						
ILB	**Eielson Array**	**149.89**	**312**	*e*PKPbc	**PKiKP**	**01 43 37.0**	**-0.1**
SONA0	**Songino Array**	**150.44**	**85**	*e*PKPbc	**PKiKP**	**01 43 38.9**	**+0.1**
SONM	**Songino Array**	**150.44**	**85**	PKPbc	**PKiKP**	**01 43 38.9**	**+0.1**
	0.4nm,0.5s,baz=227,slow=3.3,SNR=3.7						

*NEIC **06** 01:32:28.5±1.6, 21°.07S×177°.40W, h428km±6km, mb4.2/36, Error ellipse: s-maj=32.8km s-min=18.8km az=122.0*
*ISCJB **06** 01:32:34.5±0.3, 21°.02S±0°.06×178°.79W±0°.1, h550km, mb4.1/44, Error ellipse: s-maj=10.9km s-min=7.0km az=30.0*
*IDC **06** 01:32:35.7±1.7, 20°.89S×178°.73W, h556km±18km, mb3.6/19, mb1 3.8/20, mb1mx3.7/42, mbtmp4.5/20, Error ellipse: s-maj=13.7km s-min=12.3km az=121.0*
ISC 06 01:32:35.3±0.4, 20°.99S±0°.09×178°.7W±0°.1, h550km, n115, σ2°.33/115, mb4.1/44, 10C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.84**	**263**	P	**P**	**01 35 33.9**	**+1.0**
	1.3nm,0.3s,baz=88,slow=18,SNR=7.7						
URZ	**Urewera**	**17.58**	**191**	P	**P**	**01 36 08.8**	**-0.4**
	0.9nm,0.3s,baz=342,slow=3.2,SNR=3.5						
URZ				S	**S**	**01 38 59.3**	**-4.1**
	0.7nm,0.3s,baz=343,slow=17,SNR=3.6						
STKA	**Stephens Creek**	**36.96**	**245**	P	**P**	**01 38 59.0**	**+0.7**
	17nm,0.7s,baz=90,slow=11,SNR=23						
JAY	**Jayapura**	**43.55**	**289**	P	**P**	**01 39 51.4**	**+0.1**
	78nm,0.6s,baz=144,slow=3.3,SNR=57						
ASAR	**Alice Springs**	**43.74**	**257**	P	**P**	**01 39 52.5**	**0.0**
	30nm,0.7s,baz=96,slow=7.8,SNR=251						
ASAR				PcP	**PcP**	**01 41 26.6**	**-0.6**
	2.7nm,0.6s,baz=102,slow=4.0,SNR=7.3						
ASAR				ScP	**ScP**	**01 44 26.9**	**+0.2**
	2.8nm,0.8s,baz=98,slow=4.7,SNR=12						
WRA	**Warramunga Arr**	**43.85**	**263**	P	**P**	**01 39 52.4**	**-1.1**
	22nm,0.9s,baz=91,slow=7.6,SNR=16						
SBA	**Scott Base**	**57.34**	**184**	*e*P	**P**	**01 41 33.7**	**+3.1**
	6.1nm,0.9s						
VNDA	**Vanda**	**57.37**	**185**	P	**P**	**01 41 32.4**	**+1.5**
	1.1nm,0.7s,baz=2.8,slow=7.0,SNR=11						
LUWI	**Luwuk**	**60.35**	**281**	*e*P	P	01 42 03.6	+12
	89nm,0.3s						
QSPA	**South Pole Qui**	**69.08**	**180**	*e*P	**P**	**01 42 47.2**	**+0.9**
	7.5nm,0.8s						
MJAR	**Matsushiro Arr**	**70.20**	**324**	P	**P**	**01 42 51.9**	**-1.3**
	1.7nm,0.5s,baz=163,slow=7.1,SNR=6.9						
ASAJ	**Asahikawa**	**73.83**	**332**	P	**P**	**01 43 14.6**	**+0.5**
	1.8nm,0.3s,baz=96,slow=19,SNR=4.3						
PETK	**Petropavlovsk-**	**76.57**	**346**	P	**P**	**01 43 28.2**	**-0.9**
	4.4nm,0.7s,baz=125,slow=7.7,SNR=9.0						
KSRS	**Korea Array**	**76.80**	**319**	P	**P**	**01 43 30.9**	**+0.2**
	0.8nm,0.6s,baz=134,slow=5.7,SNR=6.2						
USRK	**Ussuriysk Ar.**	**78.98**	**326**	P	**P**	**01 43 42.7**	**+0.5**
	1.4nm,0.6s,baz=215,slow=2.3,SNR=7.8						
CMB	**Columbia Colle**	**80.28**	**43**	*e*P	**P**	**01 43 49.5**	**+0.2**
	1.8nm,0.8s						
MAW	**Mawson**	**80.87**	**200**	P	**P**	**01 43 51.4**	**-0.5**
	1.1nm,0.7s,baz=89,slow=1.9,SNR=4.5						
MDPB	**Devils Postpil**	**80.89**	**44**	*e*P	**P**	**01 43 53.6**	**+0.8**
	4.4nm,0.9s						
WAKR	**Walker**	**81.17**	**43**	*e*P	**P**	**01 43 54.8**	**+0.7**
	5.5nm,1.0s						
PNTR	**Pine Nut**	**81.40**	**43**	*e*P	**P**	**01 43 55.5**	**+0.2**
	7.8nm,0.8s						
YERR	**Yerington**	**81.57**	**43**	*e*P	**P**	**01 43 56.4**	**+0.3**
	4.9nm,0.6s						
NVAR	**Mina Array Bea**	**81.85**	**44**	P	**P**	**01 43 57.5**	**-0.1**
	2.6nm,0.6s,baz=225,slow=7.9,SNR=25						
PAHR	**Pah Rah Range**	**81.90**	**42**	*e*P	**P**	**01 43 58.0**	**+0.3**
	2.7nm,0.7s						
NV11	**Mina Array Sit**	**81.95**	**44**	*e*P	**P**	**01 43 58.2**	**+0.2**
	0.3nm,0.8s						
KVN	**Kaiserville**	**82.33**	**43**	*e*P	**P**	**01 43 59.9**	**-0.2**
	3.3nm,0.7s						
TPNV	**Topopah Spring**	**82.37**	**46**	*e*P	**P**	**01 44 00.5**	**+0.2**
	5.5nm,1.0s						
MOD	**Modoc Plateau**	**82.63**	**40**	*e*P	**P**	**01 44 01.7**	**+0.3**
	3.7nm,0.6s						
Y14A	**Wickenburg**	**83.02**	**50**	*e*P	**P**	**01 44 03.9**	**+0.4**
HOM	**Homer**	**83.36**	**13**	*e*pP	pP	01 45 42.3	-20
PINE	**Pine Mountain**	**83.39**	**38**	*e*P	**P**	**01 44 06.0**	**+0.8**
	5.8nm,0.8s						
TUC	**Tucson**	**83.82**	**52**	*e*P	**P**	**01 44 08.5**	**

comp=Z,3.0nm,0.6s
PVCC Panska Ves 148.71 344 *e*PKP **PKPdf 01 51 19.8 +3.7**
PVCC *ex* x 01 51 26.5
VOIR 148.75 327 ⇓*i*P **PKPdf 01 51 20.1 +3.6**
DRGR 148.91 331 ⇓*i*P **PKPdf 01 51 20.1 +3.4**
ARR Arges 149.01 327 ⇓*i*P **PKPbc 01 51 22.0 +0.3**
PRU Pruhonice 149.21 343 *e*PKP **PKPdf 01 51 21.0 +4.1**
PRU *ex* x 01 51 28.5
JAVC Velka Javorina 149.25 339 *e*PKP **PKPbc 01 51 22.3 +0.2**
LOT Lotru 149.39 328 ⇑*i*P **PKPdf 01 51 21.2 +3.7**
KRUC Moravsky 149.49 340 *e*PKP **PKPdf 01 51 21.5 +4.1**
TREC Trest 149.56 341 *e*PKP **PKPdf 01 51 21.9 +4.3**
SIRR Siria 149.78 331 ⇑*i*P **PKPdf 01 51 22.6 +4.6**
GZR Gura Zlata 149.91 329 ⇑*i*P **PKPdf 01 51 22.6 +4.3**
KHC Kasperske Hory 150.25 344 *e*PKP **PKPdf 01 51 23.7 +5.0**
KHC *ex* x 01 51 32.3
BZS Buzias 150.29 330 ⇓*i*P **PKPdf 01 51 23.3 +4.5**
HERR Herculane 150.46 329 ⇑*i*P **PKPdf 01 51 23.8 +4.7**
GERES GERESS Array B 150.47 343 PKPbc **PKPdf 01 51 23.8 +4.6**
comp=Z,1.3nm,0.6s,baz=31,slow=3.1,SNR=15
CONA Conrad Observa 150.66 340 *i* PKPdf **PKPdf 01 51 24.5 +5.1**
comp=Z,3.9nm,0.6s
VTS Vitosha 151.63 324 ⇑*i*P **PKPdf 01 51 26.1 +5.0**
SOKA Soboth 152.03 340 *i* PKPdf **PKPdf 01 51 26.6 +5.1**
comp=Z,1.7nm,0.8s
KBA Koelnbreinsper 152.18 342 *i* PKPdf **PKPbc 01 51 28.3 -0.7**
comp=Z,2.1nm,0.7s
OBKA Obir 152.33 340 *i* PKPdf **PKPbc 01 51 28.7 -0.6**
comp=Z,2.0nm,0.5s
WTTA Wattenberg 152.47 345 *i* PKPdf **PKPbc 01 51 28.6 -1.1**
comp=Z,2.6nm,0.4s
MOTA Moosalm 152.52 345 *i* PKPdf **PKPbc 01 51 28.4 -1.4**
comp=Z,2.5nm,0.9s
SQTA Sankt Quirin 152.61 345 *i* PKPdf **PKPbc 01 51 28.8 -1.1**
comp=Z,3.0nm,0.9s
ABTA Abfaltersbach 152.72 343 *i* PKPdf **PKPdf 01 51 28.5 +6.0**
comp=Z,2.5nm,0.6s
ESDC Sonseca Array 160.84 12 PKPab **PKPab 01 52 17.7 -1.3**
comp=Z,0.1nm,0.4s,baz=357,slow=4.4,SNR=3.4
TORD Torodi Ar. Bea 172.19 183 PKPab **PKPab 01 53 09.9 +0.4**
comp=Z,0.4nm,0.9s,baz=180,slow=4.0,SNR=2.7

ATH ***06*** *01:34:13.3, 38.°03N×20.°17E, h17km±1km, ML2.5/10, Error ellipse: s-maj=2.7km s-min=1.4km az=66.0*
THE ***06*** *01:34:14.2, 38.°05N×20.°19E, h0km±2km, ML2.6/7, Error ellipse: s-maj=2.7km s-min=0.6km az=242.0*
ISC 06 01:34:14.7±1.6, 38.°06N±0.°05×20.°21E±0.°05, h12km±9km, n33, σ0°72/54, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.32**	**68**	P	**Pg**	**01 34 20.8**	**-0.3**
VLS				S	**Sg**	**01 34 25.8**	**+0.3**
VLS	**Valsamata**	**0.32**	**68**	P	**Pg**	**01 34 20.8**	**-0.3**
VLS				S	**Sg**	**01 34 25.7**	**+0.3**
VLS				AML	AML	01 34 26.5	
	comp=E,3162μm,0.2s						
VLS				AML	AML	01 34 26.6	
	comp=N,4115μm,0.3s						
KFL	**Anninata**	**0.46**	**84**	P	**Pg**	**01 34 23.3**	**-0.4**
KFL				S	**Sb**	**01 34 30.8**	**-0.6**
KFL	**Anninata**	**0.46**	**84**	P	**Pg**	**01 34 23.2**	**-0.4**
KFL				S	**Sg**	**01 34 30.5**	**+0.8**
KFL				AML	AML	01 34 32.1	
	comp=N,2677μm,0.3s						
KFL				AML	AML	01 34 33.6	
	comp=E,3492μm,0.3s						
FSK	**Fiskardo**	**0.48**	**34**	P	**Pg**	**01 34 23.8**	**-0.3**
FSK				S	**Sg**	**01 34 31.2**	**+0.6**
FSK	**Fiskardo**	**0.48**	**34**	P	**Pg**	**01 34 23.9**	**-0.3**
FSK				S	**Sg**	**01 34 31.0**	**+0.5**
EVGI	**Lefkada island**	**0.66**	**32**	P	**Pg**	**01 34 27.1**	**-0.4**
EVGI				S	**Sg**	**01 34 36.9**	**+0.8**
EVGI	**Lefkada island**	**0.66**	**32**	P	**Pg**	**01 34 27.0**	**-0.4**
EVGI				S	**Sg**	**01 34 36.1**	**0.0**
LKD2	**Lefkada island**	**0.81**	**25**	P	**Pg**	**01 34 30.1**	**-0.2**
LKD2				S	**Sb**	**01 34 42.1**	**+0.5**
LKD2	**Lefkada island**	**0.81**	**25**	P	**Pg**	**01 34 30.0**	**-0.3**
LKD2				AML	AML	01 34 52.3	
	comp=N,687μm,0.4s						
LKD2				AML	AML	01 34 53.1	
	comp=E,661μm,0.4s						
TSLK	**Tsoukalades, L**	**0.84**	**24**	P	**Pg**	**01 34 30.3**	**-0.6**
TSLK				S	**Sb**	**01 34 43.0**	**+0.5**
PDO	**Prodromos**	**0.93**	**55**	P	**Pg**	**01 34 31.9**	**-0.7**
PDO				S	**Sb**	**01 34 46.0**	**+0.8**
PDO				AML	AML	01 34 52.9	
	comp=E,869μm,0.4s						
PDO				AML	AML	01 34 53.5	
	comp=N,883μm,0.3s						
RLS	**Riolos of Patr**	**0.99**	**90**	P	**Pg**	**01 34 32.6**	**-1.1**
RLS				AML	AML	01 34 54.6	
	comp=N,241μm,0.5s						
RLS				AML	AML	01 34 57.3	
	comp=E,152μm,0.4s						
PVO	**Paravola**	**1.17**	**61**	P	**Pb**	**01 34 36.6**	**-0.3**
PVO	**Paravola**	**1.17**	**61**	P	**Pb**	**01 34 36.7**	**-0.3**
PVO				AML	AML	01 35 01.1	
	comp=E,474μm,0.5s						
PVO				AML	AML	01 35 02.0	
	comp=N,555μm,0.6s						
DRO	**Drossia**	**1.19**	**95**	P	**Pb**	**01 34 36.7**	**-0.5**
DRO	**Drossia**	**1.19**	**95**	P	**Pn**	**01 34 36.9**	**-0.2**
DRO				S	**Sn**	**01 34 54.0**	**+0.7**
DRO				AML	AML	01 35 05.1	
	comp=E,588μm,0.4s						
DRO				AML	AML	01 35 06.2	
	comp=N,521μm,0.4s						
AMT	**Artemida-Makis**	**1.30**	**114**	P	**Pb**	**01 34 38.7**	**-0.3**
AMT				S	**Sn**	**01 34 57.9**	**+1.9**
AMT	**Artemida-Makis**	**1.30**	**114**	P	**Pn**	**01 34 38.4**	**-0.3**
AMT				S	**Sn**	**01 34 56.7**	**+0.7**
AMT				AML	AML	01 35 05.4	
	comp=N,393μm,0.6s						
AMT				AML	AML	01 35 10.6	
	comp=E,415μm,0.7s						
EFP	**Efpalio**	**1.38**	**74**	P	**Pn**	**01 34 39.7**	**-0.1**
LAKA	**Lakka**	**1.40**	**82**	P	**Pn**	**01 34 40.3**	**+0.1**
LAKA				S	**Sg**	**01 35 00.5**	**+0.7**
ANX	**Ano Chora**	**1.44**	**68**	P	**Pn**	**01 34 40.7**	**-0.1**
ANX	**Ano Chora**	**1.44**	**68**	P	**Pn**	**01 34 40.9**	**+0.1**
ANX				S	**Sg**	**01 35 01.9**	**+0.7**
IGT	**Igoumenitsa**	**1.47**	**4**	P	**Pb**	**01 34 41.8**	**-0.2**
IGT	**Igoumenitsa**	**1.47**	**4**	P	**Pb**	**01 34 41.6**	**-0.4**
IGT				S	**Sg**	**01 35 03.2**	**+1.1**
IGT				AML	AML	01 35 09.8	
	comp=E,156μm,0.5s						
IGT				AML	AML	01 35 13.7	
	comp=N,121μm,0.3s						
SERG	**Sergoula**	**1.49**	**76**	P	**Pn**	**01 34 41.1**	**-0.3**
SERG	**Sergoula**	**1.49**	**76**	P	**Pn**	**01 34 41.0**	**-0.3**
EVR	**Evrytania**	**1.52**	**55**	P	**Pg**	**01 34 43.2**	**-0.6**
EVR				S	**Sg**	**01 35 04.0**	**+0.6**
EVR				AML	AML	01 35 11.2	
	comp=N,104μm,0.5s						
EVR				AML	AML	01 35 16.2	
	comp=E,111μm,0.5s						
KLV	**Kalavryta, Ach**	**1.53**	**90**	P	**Pb**	**01 34 42.3**	**-0.7**
SG1	**Sgolgore (BA)**	**3.90**	**317**	*e*Pn	**Pn**	**01 35 15.7**	**+1.3**
SG1				Sn	**Sn**	**01 35 59.8**	**-0.4**
BAI	**Bari**	**3.99**	**321**	*e*Pn	**Pn**	**01 35 16.3**	**+0.7**
BAI				Sn	**Sn**	**01 36 02.2**	**-0.1**
STON	**Ston**	**5.17**	**339**	*e*Pn	**Pn**	**01 35 31.3**	**-0.6**
STON				Sn	**Sn**	**01 36 28.9**	**-2.6**
NVLJ	**Novalja**	**7.64**	**330**	*e*Pn	**Pn**	**01 36 06.3**	**+0.5**

ISCJB ***06*** *01:36:36.2±0.8, 49.°17N±0.°10×174.°81E±0.°07, h10km, mb3.9/16, MS3.2/2, Error ellipse: s-maj=13.7km s-min=6.7km az=178.5*
NEIC ***06*** *01:36:38.2±2.6, 49.°05N×174.°87E, h16km±7km, mb4.2/11, Error ellipse: s-maj=20.1km s-min=1.4km az=177.0*
IDC ***06*** *01:36:40.3±3.4, 49.°86N×174.°74E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.5/62, mbtmp3.7/7, ML3.8/1, MS2.9/4, Ms1 2.9/4, ms1mx2.5/43, Error ellipse: s-maj=90.3km s-min=29.0km az=171.0*
ISC 06 01:36:37.8±1.2, 49.°2N±0.°1×174.°80E±0.°06, h10km, n38, σ1°74/38, mb4.0/16, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.56**	**353**	*e*Pn	**Pn**	**01 37 35.4**	**+2.4**
SMY				*e*Sn	**Sn**	**01 38 15.3**	**+0.1**
KIWB	**Kanaga Island**	**5.78**	**60**	*e*Pn	**Pn**	**01 38 03.3**	**-0.3**
KIWB				*e*Sn	**Sn**	**01 39 08.3**	**-1.5**
ADK	**Adak**	**6.06**	**60**	*e*Pn	**Pn**	**01 38 06.2**	**-1.1**
ADK				*e*Sn	**Sn**	**01 39 14.6**	**-2.1**
ATKA	**Atka Island**	**7.61**	**63**	*e*Pn	**Pn**	**01 38 27.9**	**-0.7**
ATKA				*e*Sn	**Sn**	**01 39 51.4**	**-3.4**
PET	**Petropavlovsk**	**10.85**	**297**	*e*Pn	**Pn**	**01 39 12.2**	**-0.7**
NIKH	**Nikolski High**	**10.95**	**64**	*e*Pn	**Pn**	**01 39 13.1**	**-1.3**
PEA0B	**Petropavlovsk-**	**11.43**	**297**	*e*Pn	**Pn**	**01 39 22.6**	**+1.7**
PETK	**Petropavlovsk-**	**11.43**	**297**	Pn	**Pn**	**01 39 21.9**	**+1.0**
	3.7nm,0.3s,baz=109,slow=18,SNR=45						
PETK				Sn	**Sn**	**01 41 24.1**	**-4.4**
	0.2nm,0.3s,baz=114,slow=18,SNR=2.8						
PETK				LR	LR	01 43 28.8	
	comp=Z,21nm,19.0s,baz=107,slow=37						
PEA1	**Petropavlovsk-**	**11.43**	**297**	*e*Pn	**Pn**	**01 39 21.9**	**+1.0**
PEA1				*e*Sn	**Sn**	**01 41 24.1**	**-4.5**
SPIA	**Saint Paul Isl**	**11.99**	**43**	*e*Pn	**Pn**	**01 39 31.1**	**+2.6**
MA2	**Magadan**	**17.32**	**316**	LR	LR	01 48 32.5	
	comp=Z,16nm,18.3s,baz=132,slow=42						
SVW2	**Sparrevohn**	**20.48**	**43**	*e*P	**P**	**01 41 17.2**	**+1.7**
	10nm,1.3s						
BPAW	**Bear Paw Mtn.**	**23.60**	**38**	*e*P	**P**	**01 41 49.8**	**+1.3**
	2.9nm,0.8s						
SML	**Sawmill**	**24.01**	**44**	*e*P	**P**	**01 41 53.3**	**+0.9**
	13nm,1.3s						
GLI	**Glacier Island**	**24.38**	**47**	*e*P	**P**	**01 41 56.9**	**+1.0**
	7.1nm,0.6s						
SCM	**Sheep Creek Mo**	**24.48**	**45**	*e*P	**P**	**01 41 58.7**	**+1.9**
	7.5nm,0.8s						
DHY	**Denali Highway**	**24.78**	**42**	*e*P	**P**	**01 41 58.6**	**-1.0**
	4.9nm,0.7s						
MDM	**Murphy Dome**	**25.03**	**37**	*e*P	**P**	**01 42 01.8**	**+0.1**
	24nm,1.0s						
CCB	**Clear Creek Bu**	**25.09**	**38**	*e*P	**P**	**01 42 02.8**	**+0.6**
	1.6nm,0.7s						
ILAR	**Eielson Array**	**25.50**	**38**	P	**P**	**01 42 04.8**	**-1.1**
	0.2nm,0.6s,baz=261,slow=10,SNR=3.1						
ILB	**Eielson Array**	**25.50**	**38**	*e*P	**P**	**01 42 04.8**	**-1.1**
RIDG	**Independent Ri**	**26.06**	**41**	*e*P	**P**	**01 42 11.7**	**+0.7**
	3.6nm,0.9s						
TOLK	**Toolik Lake Re**	**26.15**	**29**	*e*P	**P**	**01 42 14.5**	**+2.7**
	2.3nm,0.6s						
KLR	**Kul'dur**	**27.84**	**287**	LR	LR	01 54 34.8	
	comp=Z,22nm,18.2s,baz=108,slow=39						
H11N2	**WAKE ISLAND Hy**	**30.08**	**195**	T	T	02 13 30.6	
	baz=10						
H11N3	**WAKE ISLAND Hy**	**30.09**	**195**	T	T	02 13 33.6	
	baz=10,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.09**	**195**	T	T	02 13 35.6	
	baz=10,slow=74						
YKA	**Yellowknife Ar**	**39.67**	**43**	P	**P**	**01 44 10.1**	**+0.6**
	0.5nm,0.4s,baz=281,slow=7.9,SNR=7.4						
YKB5	**Yellowknife Ar**	**39.67**	**43**	*e*P	**P**	**01 44 10.1**	**+0.6**
KURBB	**Kurchatov Arra**	**57.57**	**311**	P	**P**	**01 46 26.9**	**-0.4**
	0.2nm,0.5s,baz=55,slow=5.7,SNR=3.3						
ANMO	**Albuquerque**	**57.62**	**73**	LR	LR	02 09 01.9	
	comp=Z,43nm,19.1s,baz=205,slow=34						
FIA0	**FINESS Array S**	**66.89**	**344**	*e*P	**P**	**01 47 30.0**	**+0.5**
FINES	**FINESS Array B**	**66.89**	**344**	P	**P**	**01 47 30.0**	**+0.5**
	0.7nm,0.8s,baz=22,slow=7.8,SNR=3.1						
NB200	**NORSAR Array S**	**69.32**	**352**	*e*P	**P**	**01 47 45.3**	**+0.4**
NOA	**NORSAR Array B**	**69.32**	**352**	P	**P**	**01 47 45.3**	**+0.4**
	0.4nm,0.7s,baz=12,slow=6.3,SNR=2.8						
AKASG	**Malin Array Be**	**76.21**	**338**	P	**P**	**01 48 26.3**	**+0.5**
	0.6nm,0.5s,baz=23,slow=6.2,SNR=3.1						
AKBB	**Malin Array Si**	**76.21**	**338**	*e*P	**P**	**01 48 26.3**	**+0.5**
	1.9nm,0.6s						
BOSA	**Boshof**	**148.96**	**300**	PKPbc	**PKiKP**	**01 56 28.8**	**+1.7**
	2.3nm,0.9s,baz=34,slow=4.5,SNR=4.7						

TIR 06 01:40:17.3, 41.°71N×20.°39E, h10km, Md2.2/2, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.05**	**124**	*i* PG	Pg	01 40 19.9	+0.6
PHP				*i* SG	Sg	01 40 20.8	0.0
PUK	**Puka**	**0.50**	**312**	*i* PG	Pg	01 40 26.9	-0.1
PUK				*i* SG	Sb	01 40 35.3	-0.2

ATH ***06*** *01:41:54.8, 36.°10N×23.°28E, h18km±2km, ML2.1/5, Error ellipse: s-maj=3.0km s-min=0.9km az=230.0*
ISCJB ***06*** *01:41:55.3±0.6, 36.°11N±0.°03×23.°30E±0.°07, h8km±8km, Error ellipse: s-maj=10.0km s-min=3.8km az=156.6*
THE ***06*** *01:41:55.4, 36.°11N×23.°32E, h5km±8km, ML2.0/6, Error ellipse: s-maj=8.5km s-min=0.3km az=246.0*
ISC 06 01:41:55.3±0.9, 36.°11N±0.°03×23.°32E±0.°04, h13km±9km, n20, σ0°45/34, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.24**	**183**	P	**Pg**	**01 42 00.5**	**+0.1**
ANKY				S	**Sg**	**01 42 03.8**	**-0.1**
ANKY	**Antikythira Is**	**0.24**	**183**	P	**Pg**	**01 42 00.5**	**+0.1**
ANKY				S	**Sg**	**01 42 03.8**	**-0.1**
ANKY				AML	AML	01 42 04.3	
	comp=N,716μm,0.4s						
ANKY				AML	AML	01 42 10.1	
	comp=E,700μm,0.7s						
KYTH	**Kithira**	**0.27**	**305**	P	**Pg**	**01 42 00.9**	**0.0**
KYTH				S	**Sg**	**01 42 04.5**	**-0.2**
KYTH	**Kithira**	**0.27**	**305**	P	**Pg**	**01 42 00.9**	**0.0**
KYTH				S	**Sg**	**01 42 04.4**	**-0.2**
KYTH				AML	AML	01 42 06.0	
	comp=E,1845μm,0.3s						
KYTH				AML	AML	01 42 06.0	
	comp=N,1270μm,0.3s						
KTHR	**Kythira**	**0.29**	**301**	P	**Pg**	**01 42 01.2**	**-0.1**
KTHR				S	**Sg**	**01 42 05.7**	**+0.3**
MNVA	**Monemvasia**	**0.62**	**339**	P	**Pg**	**01 42 07.4**	**0.0**
VLI	**Veliai**	**0.68**	**333**	P	**Pg**	**01 42 08.2**	**-0.3**
VLI				S	**Sb**	**01 42 18.4**	**0.0**
VLI	**Veliai**	**0.68**	**333**	P	**Pg**	**01 42 08.4**	**-0.1**
VLI				S	**Sg**	**01 42 17.0**	**-0.5**
VLI				AML	AML	01 42 18.3	
	comp=E,150μm,0.3s						
VLI				AML	AML	01 42 18.5	
	comp=N,155μm,0.4s						
IMMV	**Iera Moni Meta**	**0.84**	**140**	P	**Pg**	**01 42 11.5**	**-0.1**
IMMV				S	**Sb**	**01 42 23.9**	**+0.9**
IMMV	**Iera Moni Meta**	**0.84**	**140**	P	**Pg**	**01 42 11.1**	**-0.5**
IMMV				S	**Sb**	**01 42 23.0**	**-0.1**
IMMV				AML	AML	01 42 29.4	
	comp=E,292μm,0.5s						
IMMV				AML	AML	01 42 30.2	
	comp=N,195μm,0.4s						
VAM	**Vamos**	**1.00**	**134**	P	**Pg**	**01 42 13.9**	**-0.7**
VAM				S	**Sb**	**01 42 28.5**	**+0.9**
VAM	**Vamos**	**1.00**	**134**	P	**Pg**	**01 42 13.7**	**-0.9**
VAM				S	**Sg**	**01 42 27.2**	**-0.5**
VAM				AML	AML	01 42 29.8	
	comp=N,257μm,0.2s						
VAM				AML	AML	01 42 32.5	
	comp=E,227μm,0.2s						
MHLO	**Agia Marina, M**	**1.05**	**56**	P	**Pb**	**01 42 15.0**	**-0.3**
MHLO				S	**Sn**	**01 42 30.1**	**-0.1**
MHLO	**Agia Marina, M**	**1.05**	**56**	P	**Pg**	**01 42 15.7**	**+0.2**
MHLO				S	**Sg**	**01 42 29.9**	**+0.7**
MHLA	**Plaka, Milos I**	**1.09**	**54**	P	**Pn**	**01 42 16.9**	**+0.6**
KRND	**KRANIDI**	**1.28**	**354**	P	**Pn**	**01 42 18.6**	**-0.3**
DID	**Didima**	**1.40**	**357**	P	**Pn**	**01 42 20.1**	**-0.4**
DID				S	**Sg**	**01 42 39.6**	**-0.6**
GVD	**Gavdhos**	**1.42**	**153**	P	**Pg**	**01 42 22.2**	**-0.2**
PYL	**PYLOS**	**1.49**	**302**	P	**Pb**	**01 42 22.7**	**-0.1**
GUR	**Goura**	**1.98**	**337**	P	**Pn**	**01 42 29.5**	**+0.8**

BJI ***06*** *01:42:36.6±0.0, 36.°83N×84.°61E, h8km, ML3.6/5*
IDC ***06*** *01:42:37.4±8.0, 37.°22N×84.°71E, h0km, mb1 3.4/3, mb1mx3.1/53, mbtmp3.4/3, ML3.3/3, Error ellipse: s-maj=111.3km s-min=39.3km az=51.0*
NNC ***06*** *01:42:51.0±10.0, 38.°53N×87.°06E, h28km±73km, mb3.8, mpv3.5, Error ellipse: s-maj=74.2km s-min=69.2km az=29.0*
ISC 06 01:42:48.5±3.7, 38.°3N±0.°2×86.°8E±0.°2, h10km, n7, σ2°39/10, 5C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**5.53**	**7**	*e*Pn	**Pb**	**01 44 24.5**	**-0.6**
WMQ				smax	smax		
	comp=N,36nm,0.7s						
WMQ				smax	smax		
	comp=E,27nm,0.7s						
PDGK	**Podgornoye**	**7.46**	**314**	⇑Pn	**Pn**	**01 44 39.3**	**+1.8**
	2.3nm,0.4s						
PDGK				⇓Sn	**Sn**	**01 45 59.1**	**-3.1**
	7.4nm,0.4s						
PDGK				⇑Lg	Lg	01 46 47.8	
	18nm,0.6s						
MK31	**Makanchi Array**	**9.09**	**340**	⇑Pn	**Pn**	**01 44 57.6**	**-2.1**
	0.4nm,0.4s,baz=154,slow=14,SNR=12						
MK31				⇑Sn	**Sn**	**01 46 42.0**	**-0.1**
	2.4nm,0.7s,baz=181,slow=20,SNR=4.6						
MK31				⇓Lg	Lg	01 47 35.4	
	1.0nm,0.5s,baz=150,slow=28						
MKAR	**Makanchi Array**	**9.09**	**340**	Pn	**Pn**	**01 44 59.4**	**-0.3**
	0.1nm,0.3s,baz=165,slow=13,SNR=8.7						
MKAR				Sn	**Sn**	**01 46 46.6**	**+4.5**
	0.3nm,0.3s,baz=172,slow=23,SNR=3.9						
MKAR				Lg	Lg	01 47 45.7	
	0.2nm,0.3s,baz=176,slow=26,SNR=3.0						
MAKZ	**Makanchi**	**9.19**	**339**	⇓Pn	**Pn**	**01 45 00.3**	**-0.7**
	2.6nm,1.1s						
MAKZ				⇓Sn	**Sn**	**01 46 44.5**	**0.0**
	1.1nm,0.5s						
MAKZ				⇑Lg	Lg	01 47 39.0	
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**15.68**	**356**	Pn	**P**	**01 46 34.2**	**+0.8**
	0.4nm,0.3s,baz=183,slow=10,SNR=4.3						
SONM	**Songino Array**	**17.14**	**50**	P	P	01 47 01.4	+12
	0.2nm,0.3s,baz=243,slow=9.8,SNR=2.9						

NEIC ***06*** *01:45:12.9±2.8, 24.°29S×67.°14W, h176km±28km, mb4.7/4, MD4.8(SJA), Error ellipse: s-maj=31.6km s-min=19.5km az=102.0*
ISCJB ***06*** *01:45:13.3±0.2, 24.°27S±0.°02×67.°27W±0.°03, h180km±2km, mb3.7/13, Error ellipse: s-maj=4.1km s-min=3.1km az=152.6*
SJA ***06*** *01:45:13.1±0.9, 24.°21S×67.°19W, h194km±7km, ML3.1, MW3.7*
IDC ***06*** *01:45:14.0±1.3, 24.°17S×66.°94W, h167km±12km, mb3.5/12, mb1 3.7/19, mb1mx3.6/45, mbtmp4.0/19, MS3.2/1, Ms1 3.2/1, ms1mx2.6/21, Error ellipse: s-maj=15.0km s-min=12.6km az=63.0*
GUC ***06*** *01:45:16.4±0.5, 24.°09S×67.°90W, h226km±7km, ML4.5*
ISC 06 01:45:13.6±0.7, 24.°24S±0.°03×67.°23W±0.°03, h174km±6km, n86, σ1°66/132, mb3.7/13, 9C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.65**	**107**	*i* P	**Pn**	**01 45 48.2**	**+1.5**
SLA				*e*S	**Sn**	**01 46 13.7**	**+1.5**
SLA				IAML		01 46 14.6	
	comp=Z,216nm,0.7s						
HJA	**Humahuaca**	**1.96**	**59**	*i* P	**Pn**	**01 45 51.6**	**+1.3**
HJA				IAML		01 45 52.3	
	comp=Z,70nm,0.6s						
HJA				*e*S	**Sn**	**01 46 19.9**	**+1.3**
AZAP	**Zapla**	**1.98**	**90**	*e*P	**Pn**	**01 45 51.3**	**+1.0**
AZAP				IAML		01 45 51.6	
	comp=Z,242nm,0.3s						
AZAP				*i* S	**Sn**	**01 46 20.6**	**+2.0**
FSA	**Cafayete**	**2.18**	**149**	*i* P	**Pn**	**01 45 53.5**	**+1.1**
FSA				IAML		01 45 54.3	
	comp=Z,15nm,0.5s						
FSA				*e*S	**Sn**	**01 46 22.2**	**-0.4**
LVC	**Limon Verde**	**2.24**	**316**	P	**Pn**	**01 45 55.0**	**+1.7**
	comp=Z,85nm,0.3s,baz=104,slow=10,SNR=515						
LVC				S	**Sn**	**01 46 24.9**	**+0.9**
	comp=Z,92nm,0.3s,baz=270,slow=20,SNR=77						
LVC	**Limon Verde**	**2.24**	**316**	*e*Pn	**Pn**	**01 45 55.2**	**+1.8**
LVC				*e*Sn	**Sn**	**01 46 25.6**	**+1.5**
LVC	**Limon Verde**	**2.24**	**316**	*e*P	**Pn**	**01 45 55.4**	**+2.0**
LVC				*e*S	**Sn**	**01 46 25.5**	**+1.5**
PB15	**IPOC Station P**	**2.29**	**296**	*e*P	**Pn**	**01 45 55.7**	**+1.9**
PB15				*e*S	**Sn**	**01 46 26.9**	**+2.0**
PB15	**IPOC Station P**	**2.29**	**296**	⇑*i*P	**Pn**	**01 45 55.7**	**+1.9**
PB15				*e*S	**Sn**	**01 46 25.7**	**+0.8**
GO02	**Mina Guanaco**	**2.33**	**246**	*e*Pn	**Pn**	**01 45 56.1**	**+1.8**
GO02				*e*Sn	**Sn**	**01 46 26.9**	**+1.1**
GO02	**Mina Guanaco**	**2.33**	**246**	⇑*i*P	**Pn**	**01 45 56.1**	**+1.8**
GO02				*e*S	**Sn**	**01 46 27.3**	**+1.4**
GO02				IAML		01 46 28.8	
	comp=N,2μm,0.3s						
YJA	**Yavi**	**2.59**	**38**	*e*P	**Pn**	**01 45 59.1**	**+1.6**
YJA				*e*S	**Sn**	**01 46 31.0**	**-0.5**
YJA				IAML		01 46 39.4	
	comp=Z,19nm,0.7s						
PB06	**IPOC Station P**	**2.63**	**305**	*e*P	**Pn**	**01 45 59.4**	**+1.6**
PB06				*e*S	**Sn**	**01 46 31.9**	**-0.1**
PB06	**IPOC Station P**	**2.63**	**305**	⇑*i*P	**Pn**	**01 45 59.4**	**+1.6**
PB06				*e*S	**Sn**	**01 46 31.9**	**-0.1**
PB06				IAML		01 46 34.2	
	comp=N,2μm,0.3s						
PB14	**IPOC Station P**	**2.92**	**262**	*e*P	**Pn**	**01 46 02.2**	**+1.0**
PB14				*e*S	**Sn**	**01 46 38.0**	**-0.2**
PB14	**IPOC Station P**	**2.92**	**262**	*e*P	**Pn**	**01 46 02.3**	**+1.0**
PB14				*e*S	**Sn**	**01 46 37.6**	**-0.7**
PB14				IAML		01 46 39.6	
	comp=E,1μm,0.5s						
PB05	**IPOC Station P**	**3.06**	**296**	*e*P	**Pn**	**01 46 03.9**	**+1.1**
PB05				*e*S	**Sn**	**01 46 39.4**	**-1.6**
PB05	**IPOC Station P**	**3.06**	**296**	⇑*i*P	**Pn**	**01 46 03.8**	**+1.0**
PB05				*e*S	**Sn**	**01 46 38.9**	**-2.1**
PB05				IAML		01 46 41.9	
	comp=N,745nm,0.3s						
PB09	**IPOC Station P**	**3.06**	**322**	*e*P	**Pn**	**01 46 04.8**	**+2.0**
PB09				*e*S	**Sn**	**01 46 41.9**	**+0.8**
PB09	**IPO

LCO	Las Campanas	5.67 212	*e*Pn	Pn	01 46 35.5	-1.0
LCO			*e*Sn	Sn	01 47 38.5	-3.1
APLL	PUNTA DE LOS L	6.16 174	*e*P	Pn	01 46 42.1	-0.6
APLL			IAML		01 46 43.4	
	comp=Z,20nm,0.5s					
APLL			*i* S	Sn	01 47 49.1	-3.7
GO04	Tololo Observa	6.71 207	*e*Pn	Pn	01 46 49.8	-0.3
GO04			*e*Sn	Sn	01 48 03.9	-2.2
CFA	Coronel Fontan	7.39 187	P	Pn	01 46 58.8	-0.1
	comp=Z,1.1nm,0.3s,baz=27,slow=16,SNR=16					
CFA			S	Sn	01 48 17.1	-4.9
	comp=Z,1.0nm,0.3s,baz=56,slow=24,SNR=6.4					
LPAZ	La Paz	7.96 354	P	Pn	01 47 07.5	+0.5
	comp=Z,3.7nm,0.3s,baz=148,slow=5.1,SNR=150					
LPAZ			S	Sn	01 48 32.8	-3.8
	comp=Z,0.5nm,0.3s,baz=260,slow=18,SNR=2.3					
LPAZ	La Paz	7.96 354	*e*Pn	Pn	01 47 07.6	+0.5
LPAZ			*e*Sn	Sn	01 48 34.9	-1.6
CPUP	Villa Florida	9.20 105	P	Pn	01 47 21.4	-1.4
	comp=Z,0.2nm,0.3s,baz=297,slow=14,SNR=5.8					
CPUP	Villa Florida	9.20 105	*e*Pn	Pn	01 47 19.5	-3.3
SIV	San Ignacio	10.04 36	P	Pn	01 47 31.4	-2.5
	comp=Z,2.3nm,0.3s,baz=224,slow=12,SNR=48					
SIV			S	Sn	01 49 10.2	-15
	comp=Z,0.2nm,0.3s,baz=225,slow=16,SNR=6.0					
TRQA	Tornquist	14.48 163	*e*Pn	Pn	01 48 29.4	-1.2
PLCA	Paso Flores	16.68 189	P	Pn	01 48 57.5	+0.1
	comp=Z,0.2nm,0.3s,baz=29,slow=11,SNR=7.5					
PLCA			LR	LR	01 56 01.9	
	comp=Z,87nm,19.7s,baz=268,slow=39					
PLCA	Paso Flores	16.68 189	*e*P	P	01 48 56.1	-0.7
	comp=Z,12nm,0.9s					
GO07	Milladeo Hill,	19.56 194	*e*P	P	01 49 26.6	-1.4
	comp=Z,82nm,0.6s					
BDFB	Brasilia	19.97 68	P	P	01 49 32.0	-0.9
	comp=Z,2.4nm,0.3s,baz=245,slow=11,SNR=49					
BDFB	Brasilia	19.97 68	*e*P	P	01 49 32.2	-0.6
	comp=Z,28nm,0.8s					
PTGA	Pitinga	24.41 18	P	P	01 50 14.7	-1.5
	comp=Z,1.0nm,0.2s,baz=258,slow=18,SNR=4.0					
RCBR	Riachuelo	35.22 64	*e*P	P	01 51 48.4	-3.2
TEIG	Tepich	48.72 333	*e*P	P	01 53 41.8	+1.1
	comp=Z,25nm,1.3s					
VNA3	Neumayer Olymp	56.99 161	P	P	01 54 42.2	+1.5
VNA1	Neumayer--Stat	57.20 160	P	P	01 54 42.0	-0.1
VNA2	Neumayer--Watz	57.56 160	P	P	01 54 46.1	+1.4
	baz=285,slow=7.4					
SNAA	Sanae	59.20 161	P	P	01 54 57.1	+1.0
TXAR	Lajitas Array	63.75 325	P	P	01 55 28.7	+1.5
	comp=Z,0.2nm,0.5s,baz=140,slow=7.1,SNR=2.8					
DBIC	Dimbokro	68.08 72	P	P	01 55 55.1	+0.1
	comp=Z,1.4nm,0.4s,baz=248,slow=5.4,SNR=2.6					
ANMO	Albuquerque	69.63 326	P	P	01 56 06.8	+2.4
	comp=Z,1.1nm,0.8s,baz=139,slow=9.3,SNR=4.0					
SYO	Syowa Base	73.40 159	⇑*e*X	P	01 56 26.5	+0.3
VNDA	Vanda	74.43 190	P	P	01 56 35.1	+3.0
	comp=Z,0.9nm,0.9s,baz=125,slow=4.3,SNR=3.8					
TORD	Torodi Ar. Bea	76.85 69	P	P	01 56 44.9	-2.0
	comp=Z,0.9nm,0.6s,baz=264,slow=5.7,SNR=23					
PDAR	Pinedale Array	77.25 329	P	P	01 56 50.2	+1.4
	comp=Z,0.3nm,0.5s,baz=139,slow=8.0,SNR=4.2					
ELK	Elko	78.55 325	P	P	01 56 57.7	+1.7
	comp=Z,0.9nm,0.8s,baz=102,slow=5.7,SNR=4.6					
NVAR	Mina Array Bea	78.59 321	P	P	01 56 58.8	+2.5
	comp=Z,0.4nm,0.5s,baz=126,slow=3.8,SNR=3.9					
BOSA	Boshof	80.81 117	P	P	01 57 09.2	+0.6
	comp=Z,3.9nm,1.1s,baz=232,slow=2.8,SNR=4.1					
MAW	Mawson	81.27 163	P	P	01 57 11.3	+1.4
	comp=Z,1.6nm,0.6s,baz=198,slow=3.3,SNR=8.8					
YKA	Yellowknife Ar	94.28 340	P	P	01 58 13.5	+0.9
	comp=Z,0.5nm,0.4s,baz=133,slow=4.7,SNR=13					
ASAR	Alice Springs	128.15 205	PKP	PKiKP	02 04 00.8	+0.3
	comp=Z,1.3nm,0.7s,baz=128,slow=1.7,SNR=14					
WRA	Warramunga Arr	131.31 207	PKP	PKiKP	02 04 07.0	+0.1
	comp=Z,126nm,0.3s,baz=171,slow=2.4,SNR=1.7					
KURBB	Kurchatov Arra	142.70 36	PKP	PKPdf	02 04 27.6	+1.7
	comp=Z,0.5nm,0.9s,baz=311,slow=2.7,SNR=4.5					
ZALV	Zalesovo Beam	143.71 28	PKP	PKPdf	02 04 26.9	-0.6
	comp=Z,1.5nm,0.4s,baz=299,slow=4.6,SNR=5.1					
KSH	Kashi	145.51 55	*e*PKPbc	PKPdf	02 04 30.2	-1.1
MKAR	Makanchi Array	146.84 40	PKPbc	PKPbc	02 04 34.8	-0.6
	comp=Z,1.8nm,0.5s,baz=326,slow=2.4,SNR=18					
WMQ	Urumqi	151.67 40	*e*PKPbc	PKPdf	02 04 39.3	-1.8
HHC	Hu-ho-hao-te	163.41 3	*e*PKP	PKPdf	02 04 55.0	-0.7
LZH	Lanzhou	165.91 31	*e*PKP	PKPdf	02 04 58.1	0.0
LZH			pPKP	pPKPdf	02 05 41.3	-4.0
LZH			sPKP		02 05 57.5	
NJ2	Nanjing	170.55 327	*e*PKP	PKPdf	02 05 00.1	-1.0

ISCJB ***06*** *01:47:40.4±0.9, 30°.04N±0°.10×114°.18W±0°.09, h10km, mb3.7/1, MS3.3/5, Error ellipse: s-maj=16.8km s-min=6.5km az=35.3*
IDC ***06*** *01:47:40.5±2.1, 29°.96N×114°.14W, h0km, mb3.8/1, mb1 3.7/7, mb1mx3.5/63, mbtmp3.4/7, ML3.3/6, MS3.3/10, Ms1 3.3/10, ms1mx3.0/43, Error ellipse: s-maj=32.9km s-min=12.5km az=33.0*
ECX ***06*** *01:47:40.9±0.7, 30°.03N×114°.21W, h8km, MD3.6, ML3.9*
ISC 06 01:47:42.6±1.4, 30°.0N±0°.1×114°.3W±0°.1, h10km, n20, σ2s06/15, MS3.2/5, 2C-1D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.43**	**318**	⇑*e*P	**Pn**	**01 48 07.0**	**-1.9**
SPX				*e*S	**Sn**	**01 48 25.9**	**-2.1**
SPX				⇑*e*		01 48 27.0	
SPX				IAML		01 48 27.0	
	comp=N,888nm,0.4s						
SPX				IAML		01 48 30.8	
	comp=E,863nm,1.3s						
SPX				*e*		01 48 30.8	
SPIG	**San Pedro Mart**	**1.44**	**318**	*e*P	**Pn**	**01 48 07.0**	**-2.0**
ECNX	**Esteban Cantu**	**2.56**	**311**	*e*P	**Pn**	**01 48 23.0**	**-1.3**
PBX	**Punta Banda**	**2.70**	**311**	*e*P	**Pn**	**01 48 24.7**	**-1.3**
CBX	**Cerro Bola**	**3.06**	**320**	*e*P	**Pn**	**01 48 29.8**	**-1.4**
CBX				*e*S	**Sn**	**01 49 08.5**	**+0.6**
CBX				⇓*e*		01 49 23.7	
CBX				IAML		01 49 23.7	
	comp=N,488nm,0.9s						
SRIG	**Santa Rosalia**	**3.23**	**145**	*e*P	**Pn**	**01 48 32.8**	**-0.7**
PFO	**Pinyon Flats O**	**4.04**	**334**	Pn	**Pn**	**01 48 43.5**	**-1.1**
	comp=N,1.1nm,0.3s,baz=149,slow=15,SNR=7.6						
PFO				Lg	Lg	01 49 47.8	
	comp=N,5.6nm,0.3s,baz=267,slow=18,SNR=6.3						
LPIG	**La Paz**	**6.87**	**148**	LR	LR	01 51 55.5	
	comp=N,363nm,18.2s,baz=337,slow=38						
ANMO	**Albuquerque**	**8.30**	**51**	Pn	**Pn**	**01 49 40.1**	**-3.1**
	comp=N,0.2nm,0.3s,baz=231,slow=12,SNR=5.2						
ANMO				Lg	Lg	01 52 01.6	
	comp=N,0.1nm,0.3s,baz=152,slow=18,SNR=2.5						
ANMO				LR	LR	01 53 14.3	
	comp=N,274nm,18.6s,baz=241,slow=41						
NVAR	**Mina Array Bea**	**9.04**	**340**	Pn	**Pn**	**01 49 55.4**	**+2.0**
	comp=N,0.1nm,0.3s,baz=166,slow=16,SNR=1.9						
NVAR				Lg	Lg	01 52 29.7	
	comp=N,0.1nm,0.3s,baz=166,slow=33,SNR=2.4						
TXAR	**Lajitas Array**	**9.31**	**91**	Pn	**Pn**	**01 49 54.7**	**-2.3**
	comp=N,0.3nm,0.3s,baz=273,slow=14,SNR=12						
TXAR				Lg	Lg	01 52 25.6	
	comp=N,0.2nm,0.3s,baz=280,slow=32,SNR=2.9						
TXAR				LR	LR	01 53 37.8	
	comp=N,307nm,19.2s,baz=0.0,slow=39						
ELK	**Elko**	**10.76**	**356**	Pn	**Pn**	**01 50 18.3**	**+1.3**
	comp=N,0.0nm,0.3s,baz=183,slow=17,SNR=2.0						
ELK				LR	LR	01 55 01.5	
	comp=N,62nm,20.9s,baz=176,slow=41						
PDAR	**Pinedale Array**	**13.32**	**15**	Pn	**Pn**	**01 50 54.9**	**+2.9**
	comp=N,0.0nm,0.3s,baz=192,slow=14,SNR=3.1						
YBH	**Yreka Blue Hor**	**13.54**	**332**	LR	LR	01 56 00.9	
	comp=N,58nm,20.0s,baz=174,slow=37						
CMIG	**Matias Romero**	**21.93**	**121**	LR	LR	02 01 22.2	
	comp=N,173nm,18.1s,baz=100,slow=38						
DLBC	**Dease Lake**	**30.43**	**344**	LR	LR	02 05 31.7	
	comp=N,53nm,21.1s,baz=151,slow=35						
ILAR	**Eielson Array**	**40.30**	**339**	P	**P**	**01 55 21.1**	**+1.5**
	comp=N,1.1nm,0.7s,baz=156,slow=7.3,SNR=12						
SJG	**San Juan**	**45.27**	**94**	LR	LR	02 17 43.8	
	comp=N,32nm,19.1s,baz=290,slow=40						
RES	**Resolute Bay**	**45.83**	**7**	LR	LR	02 16 48.0	
	comp=N,26nm,20.0s,baz=131,slow=38						
ZALV	**Zalesovo Beam**	**94.78**	**349**	LR	LR	02 49 03.0	
	comp=N,7.7nm,18.9s,baz=61,slow=39						

IDC 06 01:47:49.2±5.8, 17°.50S×178°.48W, h639km±61km,
mb2.9/4, mb1 3.3/4, mb1mx2.8/38, mbtmp3.9/4, Error ellipse: s-maj=116.7km s-min=23.7km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.64**	**259**	P	P	01 55 07.6	-0.1
	96nm,0.3s,baz=91,slow=8.0,SNR=1.8						
WRA				PcP	PcP	01 56 35.5	-0.4
	105nm,0.3s,baz=90,slow=4.7,SNR=1.9						
ASAR	**Alice Springs**	**44.84**	**254**	P	P	01 55 09.3	+0.2
	2.9nm,0.5s,baz=89,slow=7.9,SNR=45						
ASAR				PcP	PcP	01 56 36.1	-0.5
	0.7nm,0.6s,baz=99,slow=4.1,SNR=6.3						
NVAR	**Mina Array Bea**	**79.18**	**44**	P	P	01 58 50.5	+0.3
	0.5nm,0.7s,baz=230,slow=8.2,SNR=3.3						
ILAR	**Eielson Array**	**85.50**	**13**	P	P	01 59 20.8	-0.1
	0.2nm,0.4s,baz=215,slow=5.0,SNR=5.2						
PDAR	**Pinedale Array**	**87.10**	**43**	P	P	01 59 28.9	-0.4
	0.3nm,0.6s,baz=222,slow=1.2,SNR=3.8						
BRTR	**Keskin Array B**	**144.44**	**315**	PKP	PKPbc	02 06 15.2	+0.1
	0.6nm,0.7s,baz=144,slow=4.7,SNR=6.0						
GERES	**GERESS Array B**	**147.20**	**345**	PKPbc	PKPbc	02 06 21.5	-0.9
	0.8nm,0.6s,baz=42,slow=4.2,SNR=5.6						
DAVOX	**Davos/Dischmat**	**149.99**	**348**	PKPbc	PKiKP	02 06 29.8	-0.2
	1.3nm,0.4s,baz=322,slow=15,SNR=5.3						

ISCJB ***06*** *02:00:05.8±0.8, 13°.0N±0°.1×89°.01W±0°.05, h66km±16km, Error ellipse: s-maj=22.2km s-min=4.9km az=20.1*
SNET ***06*** *02:00:06.1±1.0, 13°.00N×89°.03W, h35km±7km, ML3.8*
UCR ***06*** *02:00:06.0±1.2, 12°.99N×89°.02W, h33km±2km, ML3.7*
ISC 06 02:00:06.6±1.7, 13°.16N±0°.10×88°.98W±0°.05, h76km±10km, n60, σ0s78/91, 5D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UESV	**Ojushtada**	**0.28**	**40**	*e*P	**Pn**	**02 00 19.5**	**+1.1**
UESV				*e*S	**Sn**	**02 00 29.8**	**+2.8**
UESV	**Ojushtada**	**0.28**	**40**	*e*P	**Pn**	**02 00 19.5**	**+1.1**
UESV				*e*S	**Sn**	**02 00 29.8**	**+2.8**
LFRS	**El Faro**	**0.47**	**350**	⇓*i*P	**Pn**	**02 00 18.6**	**-1.2**
SNVI	**San Vicente**	**0.47**	**17**	*e*P	**Pn**	**02 00 19.1**	**-0.8**
SNVI				*e*S	**Sn**	**02 00 28.9**	**-0.7**
SNVI	**San Vicente**	**0.47**	**17**	*e*P	**Pn**	**02 00 19.1**	**-0.8**
SNVI				*e*S	**Sn**	**02 00 28.9**	**-0.7**
LOMA	**San Marcos**	**0.52**	**338**	⇓*i*P	**Pn**	**02 00 19.2**	**-1.0**
LOMA				*e*S	**Sn**	**02 00 29.3**	**-0.9**
LOMA				IAML		02 00 30.5	
	comp=Z,4μm,0.3s						
LOMA	**San Marcos**	**0.52**	**338**	⇓*i*P	**Pn**	**02 00 19.2**	**-1.0**
LOMA				*e*S	**Sn**	**02 00 29.3**	**-0.9**
LOMA				IAML		02 00 30.5	
	comp=Z,4μm,0.3s						
PAVA	**Las Pavas**	**0.55**	**4**	*e*P	**Pn**	**02 00 20.2**	**-0.4**
PAVA				*e*S	**Sn**	**02 00 31.0**	**+0.2**
PAVA	**Las Pavas**	**0.55**	**4**	*e*P	**Pn**	**02 00 20.2**	**-0.4**
PAVA				*e*S	**Sn**	**02 00 31.0**	**+0.2**
TECA	**Tecapa**	**0.57**	**54**	*e*P	**Pn**	**02 00 20.1**	**-0.7**
TECA	**Tecapa**	**0.57**	**54**	*e*P	**Pn**	**02 00 20.1**	**-0.7**
LBRS	**Las Brisas**	**0.58**	**354**	*e*P	**Pn**	**02 00 20.5**	**-0.3**
SNET	**Serv Nac Est T**	**0.58**	**335**	*e*P	**Pn**	**02 00 19.8**	**-1.0**
SNET				*e*S	**Sn**	**02 00 30.2**	**-1.0**
SNET				IAML		02 00 31.2	
	comp=Z,2μm,0.2s						
SNET	**Serv Nac Est T**	**0.58**	**335**	*e*P	**Pn**	**02 00 19.8**	**-1.0**
SNET				*e*S	**Sn**	**02 00 30.2**	**-1.0**
SNET				IAML		02 00 31.2	
	comp=Z,2μm,0.2s						
UDBS	**Soyapango**	**0.59**	**343**	*e*P	**Pn**	**02 00 20.1**	**-0.8**
UDBS				*e*S	**Sn**	**02 00 31.3**	**0.0**
UDBS	**Soyapango**	**0.59**	**343**	*e*P	**Pn**	**02 00 20.1**	**-0.8**
UDBS				*e*S	**Sn**	**02 00 31.3**	**0.0**
OPAM	**San Salvador**	**0.59**	**338**	*e*P	**Pn**	**02 00 20.2**	**-0.8**
OPAM				*e*S	**Sn**	**02 00 31.2**	**-0.3**
OPAM				IAML		02 00 32.0	
	comp=Z,2μm,0.1s						
OPAM	**San Salvador**	**0.59**	**338**	*e*P	**Pn**	**02 00 20.2**	**-0.8**
OPAM				*e*S	**Sn**	**02 00 31.2**	**-0.3**
OPAM				IAML		02 00 32.0	
	comp=Z,2μm,0.1s						
LFU	**La Fuente**	**0.60**	**347**	⇓*i*P	**Pn**	**02 00 20.6**	**-0.4**
LFU	**La Fuente**	**0.60**	**347**	⇓*i*P	**Pn**	**02 00 20.6**	**-0.4**
UEES	**San Salvador**	**0.62**	**335**	*e*P	**Pn**	**02 00 20.3**	**-0.9**
UEES				*e*S	**Sn**	**02 00 31.6**	**-0.4**
UEES	**San Salvador**	**0.62**	**335**	*e*P	**Pn**	**02 00 20.3**	**-0.9**
UEES				*e*S	**Sn**	**02 00 31.6**	**-0.4**
PMON	**Piamonte**	**0.64**	**329**	*e*P	**Pn**	**02 00 20.6**	**-0.8**
PMON				*e*S	**Sn**	**02 00 31.7**	**-0.7**
PMON	**Piamonte**	**0.64**	**329**	*e*P	**Pn**	**02 00 20.6**	**-0.8**
PMON				*e*S	**Sn**	**02 00 31.7**	**-0.7**
BOQS	**Boqueron**	**0.64**	**333**	*e*P	**Pn**	**02 00 21.0**	**-0.6**
BOQS				IAML		02 00 34.6	
	comp=Z,1μm,0.3s						
PACA	**Pacayal**	**0.70**	**64**	*e*P	**Pn**	**02 00 21.8**	**-0.4**
PACA				*e*S	**Sn**	**02 00 34.2**	**+0.5**
PACA				IAML		02 00 35.7	
	comp=Z,33μm,0.4s						
PACA	**Pacayal**	**0.70**	**64**	*e*P	**Pn**	**02 00 21.8**	**-0.4**
PACA				*e*S	**Sn**	**02 00 34.2**	**+0.5**
PACA				IAML		02 00 35.7	
	comp=Z,33μm,0.4s						
LCY	**Lacayo**	**0.71**	**69**	*e*P	**Pn**	**02 00 21.9**	**-0.3**
LCY	**Lacayo**	**0.71**	**69**	*e*P	**Pn**	**02 00 21.9**	**-0.3**
VSM	**San Miguel**	**0.73**	**69**	*e*P	**Pn**	**02 00 22.2**	**-0.4**
VSM	**San Miguel**	**0.73**	**69**	*e*P	**Pn**	**02 00 22.2**	**-0.4**
CEDA	**San Andres**	**0.76**	**327**	*e*P	**Pn**	**02 00 22.2**	**-0.4**
CEDA				*e*S	**Sn**	**02 00 34.8**	**+0.4**
CEDA	**San Andres**	**0.76**	**327**	*e*P	**Pn**	**02 00 22.2**	**-0.4**
CEDA				*e*S	**Sn**	**02 00 34.8**	**+0.4**
VICT	**Victoria**	**0.86**	**23**	*e*P	**Pn**	**02 00 24.3**	**+0.4**
VICT	**Victoria**	**0.86**	**23**	*e*P	**Pn**	**02 00 24.3**	**+0.4**
CEVE	**Cerro Verde**	**0.91**	**316**	*e*P	**Pn**	**02 00 24.6**	**-0.1**
CEVE				*e*S	**Sn**	**02 00 39.5**	**+1.5**
CEVE				IAML		02 00 40.2	
	comp=Z,2μm,0.3s						
CEVE	**Cerro Verde**	**0.91**	**316**	*e*P	**Pn**	**02 00 24.6**	**-0.1**
CEVE				*e*S	**Sn**	**02 00 39.5**	**+1.5**
CEVE				IAML		02 00 40.2	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	**0.92**	**317**	*e*P	**Pn**	**02 00 24.7**	**0.0**
SBLS	**San Blas**	**0.92**	**317**	*e*P	**Pn**	**02 00 24.7**	**0.0**
SNJE	**San Jose**	**0.93**	**319**	*e*P	**Pn**	**02 00 24.6**	**-0.2**
SNJE	**San Jose**	**0.93**	**319**	*e*P	**Pn**	**02 00 24.6**	**-0.2**
CAHU	**Cacacuatique**	**0.96**	**51**	*e*P	**Pn**	**02 00 25.4**	**+0.3**
CAHU				*e*P	**Pn**	**02 00 25.6**	**+0.4**
CAHU	**Cacacuatique**	**0.96**	**51**	*e*P	**Pn**	**02 00 25.6**	**+0.4**
RTR	**El Retiro**	**0.98**	**318**	*e*P	**Pn**	**02 00 25.5**	**+0.2**
RTR	**El Retiro**	**0.98**	**318**	*e*P	**Pn**	**02 00 25.5**	**+0.2**
UNIC	**Santa Ana**	**1.00**	**326**	*e*P	**Pn**	**02 00 25.6**	**+0.1**
UNIC				*e*S	**Sn**	**02 00 40.6**	**+1.0**
UNIC				IAML		02 00 40.9	
	comp=Z,573nm,0.2s						
UNIC	**Santa Ana**	**1.00**	**326**	*e*P	**Pn**	**02 00 25.6**	**+0.1**
UNIC				*e*S	**Sn**	**02 00 40.6**	**+1.0**
UNIC				IAML		02 00 40.9	
	comp=Z,573nm,0.2s						
LCND	**La Caada**	**1.07**	**82**	*e*P	**Pn**	**02 00 25.7**	**-0.6**
LCND				*e*S	**Sn**	**02 00 41.3**	**+0.3**
LCND				IAML		02 00 43.3	
	comp=Z,1μm,0.4s						
LCND	**La Caada**	**1.07**	**82**	*e*P	**Pn**	**02 00 25.7**	**-0.6**
LCND				*e*S	**Sn**	**02 00 41.3**	**+0.3**
LCND				IAML		02 00 43.3	
	comp=Z,1μm,0.4s						
CNCH	**Conchagua**	**1.12**	**84**	*e*P	**Pn**	**02 00 27.1**	**0.0**
CNCH				*e*S	**Sn**	**02 00 41.9**	**-0.3**
CNCH	**Conchagua**	**1.12**	**84**	*e*P	**Pn**	**02 00 27.1**	**0.0**
CNCH				*e*S	**Sn**	**02 00 41.9**	**-0.3**
MTO3	**Montecristo**	**1.28**	**343**	*e*P	**Pn**	**02 00 29.9**	**+0.6**
MTO3	**Montecristo**	**1.28**	**343**	*e*P	**Pn**	**02 00 29.9**	**+0.6**
CSGN	**Cosiguina Volc**	**1.39**	**97**	*e*P	**Pn**	**02 00 30.6**	**+0.1**
CSGN				IAML		02 00 56.8	
	comp=E,4μm,0.4s						
CSGN	**Cosiguina Volc**	**1.39**	**97**	*e*P	**Pn**	**02 00 30.6**	**+0.1**
CRIN	**San Cristobal**	**1.93**	**104**	*e*P	**Pn**	**02 00 37.4**	**-0.2**
CRIN				IAML		02 01 16.5	
	comp=N,410nm,0.4s						
CNGN	**Cerro Negro**	**2.32**	**106**	*e*P	**Pn**	**02 00 42.6**	**-0.1**
CNGN				IAML		02 01 19.0	
	comp=E,99nm,0.3s						
MOMN	**Momotombo**	**2.49**	**107**	*e*P	**Pn**	**02 00 44.8**	**-0.2**
ESTN	**Estel**	**2.54**	**91**	*e*P	**Pn**	**02 00 44.0**	**-1.7**
MATN	**Matagalpa**	**2.98**	**94**	*e*P	**Pn**	**02 00 51.2**	**-0.6**

IDC ***06*** *02:09:17.5±1.3, 45°.16N×110°.67W, h0km, mb1 3.8/5, mb1mx3.4/43, mbtmp3.5/5, ML4.0/4, Error ellipse: s-maj=18.1km s-min=8.7km az=63.0*
ISCJB ***06*** *02:09:20.7±0.3, 44°.83N±0°.01×111°.49W±0°.02, h7km±2km, Error ellipse: s-maj=2.9km s-min=2.0km az=44.5*
ANF ***06*** *02:09:20.7±0.8, 44°.85N×111°.47W, h13km±7km, ML3.8/12, Error ellipse: s-maj=7.2km s-min=5.1km az=49.0*
NEIC ***06*** *02:09:21.5±0.0, 44°.82N×111°.45W, h10km, MW3.5, MD3.3(BUT), Moment Tensor Solution. s29 Moment tensor: Scale 10^14 Nm; Mrr-0.22; Mθθ0.93; Mφφ-0.72; Mrθ0.82; Mθφ0.88; Mφr1.47; Best double couple: M0 2.10000×10^14 NP1:φs207.00000°, δ86.00000°, λ-125.00000°. NP2:φs111.00000°, δ35.00000°, λ-7.00000°. Principal axes: T 2.1800, Plg32.0000°, Azm325.0000°; N -0.2100, Plg35.0000°, Azm209.0000°; P -1.9700, Plg39.0000°, Azm86.0000°; After BUT.*
NEIC Felt at West Yellowstone.
BUT ***06*** *02:09:21.5, 44°.82N×111°.45W, h10km, MD3.3, MW3.5(NEIC)*
ISC 06 02:09:20.8±0.8, 44°.82N±0°.02×111°.46W±0°.02, h9km±5km, n100, σ2s12/138, Hebgen Lake region, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLMT	**Earthquake Lak**	**0.02**	**73**	*e*Pg	**Pg**	**02 09 23.0**	**+0.4**
QLMT				*e*Sg	**Sg**	**02 09 24.3**	**+0.4**
YHB	**Horse Butte**	**0.20**	**111**	*e*Pg	**Pg**	**02 09 25.4**	**+0.4**
YHB				*e*Sg	**Sg**	**02 09 28.3**	**+0.4**
YMR	**Madison River**	**0.39**	**113**	*e*Pg	**Pg**	**02 09 29.1**	**+0.7**
YMR				*e*Sg	**Sg**	**02 09 34.1**	**+0.6**
YHH	**Holmes Hill**	**0.44**	**94**	*e*Pg	**Pg**	**02 09 29.9**	**+0.5**
YHH				*e*Sg	**Sg**	**02 09 35.4**	**+0.3**
YFT	**Old Faithful**	**0.58**	**130**	*e*Pg	**Pg**	**02 09 32.6**	**+0.6**
YFT				*e*Sg	**Sg**	**02 09 40.1**	**+0.4**
YPP	**Pitchstone Pla**	**0.72**	**139**	*e*Pg	**Pg**	**02 09 35.3**	**+0.6**
YPP				*e*Sg	**Sg**	**02 09 44.6**	**+0.4**
H17A	**Grant Village**	**0.76**	**124**	*e*Pg	**Pb**	**02 09 36.5**	**+0.1**
H17A				*e*Sg	**Sg**	**02 09 45.1**	**-0.3**
H17A	**Grant Village**	**0.76**	**124**	P	**Pb**	**02 09 36.5**	**+0.1**
	baz=305						
H17A				S	**Sb**	**02 09 47.0**	**0.0**
	baz=305						
BOZ	**Bozeman (W)**	**0.78**	**351**	*e*Pg	**Pg**	**02 09 35.9**	**+0.1**
BOZ				*e*Sg	**Sg**	**02 09 46.1**	**0.0**
BOZ	**Bozeman (W)**	**0.78**	**351**	P	**Pg**	**02 09 36.1**	**+0.2**
	baz=171						
LKWY	**Lake**	**0.80**	**108**	*e*Pn	**Pb**	**02 09 37.9**	**+0.9**
LKWY				*e*Sn	**Sg**	**02 09 45.6**	**-1.0**
FLWY	**Flagg Ranch**	**0.92**	**143**	*e*Pg	**Pg**	**02 09 38.5**	**0.0**
FLWY				*e*Sg	**Sg**	**02 09 50.7**	**+0.3**
DLMT	**Dillon**	**0.97**	**304**	*e*Pg	**Pg**	**02 09 39.6**	**+0.2**
DLMT				*e*Sg	**Sg**	**02 09 51.6**	**-0.4**
MCMT	**McKenzie Canyo**	**0.99**	**271**	*e*Pg	**Pg**	**02 09 40.1**	**+0.3**
MCMT				*e*Sg	**Sg**	**02 09 52.2**	**-0.4**
IMW	**Indian Meadow**	**1.00**	**158**	*e*Pg	**Pg**	**02 09 39.7**	**-0.2**
IMW				*e*Sg	**Sg**	**02 09 52.6**	**-0.3**
MOOW	**Moose Ponds**	**1.19**	**154**	*e*Pg	**Pb**	**02 09 42.7**	**-1.0**
MOOW				*e*Sn	**Sb**	**02 09 58.0**	**-1.3**
FXWY	**Fox Creek**	**1.23**	**165**	*e*Pn	**Pb**	**02 09 43.5**	**-0.8**
FXWY				*e*Sg	**Sb**	**02 09 59.5**	**-0.8**
LOHW	**Long Hollow**	**1.36**	**153**	*e*Pn	**Pn**	**02 09 45.8**	**-0.4**
LOHW				*e*Sn	**Sb**	**02 10 03.8**	**-0.3**
TPAW	**Teton Pass**	**1.38**	**164**	*e*Pn	**Pn**	**02 09 46.5**	**-0.1**
TPAW				*e*Sn	**Sb**	**02 10 04.4**	**-0.5**
SNOW	**Snow King Moun**	**1.45**	**159**

E08A				*e*Sg	**Sg**	**02 12 14.9**	**-5.0**
D08A	**Wollman Farm,**	**5.66**	**296**	*e*Pn	**Pn**	**02 10 46.0**	**+0.9**
I07A	**Izee**	**5.80**	**265**	*e*Pn	**Pn**	**02 10 49.6**	**+2.4**
HAWA	**Hanford**	**5.88**	**288**	*e*Pn	**Pn**	**02 10 49.7**	**+1.7**
Q16A	**Castle Valley**	**5.91**	**178**	*e*Pg	**Pg**	**02 11 12.5**	**-1.4**
DGMT	**Dagmar**	**6.19**	**51**	*e*Pg	Pb	02 11 13.8	+5.0
DGMT				*e*Sg	**Sg**	**02 12 34.0**	**-5.3**
B08A	**Colville Reser**	**6.47**	**306**	*e*Pn	**Pn**	**02 10 56.9**	**+0.6**
PV21	**Cone Mtn., Par**	**6.53**	**163**	*e*Pn	**Pn**	**02 11 01.1**	**+3.9**
PSUT	**Pine Spring**	**6.54**	**197**	*e*Pg	**Pb**	**02 11 14.1**	**-0.7**
PV09	**Paradox Valley**	**6.55**	**164**	*e*Pg	**Pg**	**02 11 23.9**	**-2.4**
PV09				*e*Lg	Lg	02 12 49.2	
SMCO	**Snowmass**	**6.56**	**148**	*e*Pg	Pb	02 11 20.8	+5.6
PV22	**Blue Mesa, Par**	**6.59**	**161**	*e*Pn	**Pn**	**02 11 01.9**	**+3.7**
PV14	**Lion Creek, Pa**	**6.70**	**163**	*e*Pn	**Pn**	**02 11 03.1**	**+3.5**
PV04	**Paradox Valley**	**6.70**	**163**	*e*Pn	**Pn**	**02 11 03.1**	**+3.5**
PV20	**West Nyswonger**	**6.74**	**163**	*e*Pn	**Pn**	**02 11 03.7**	**+3.6**
PV19	**Morning Glory**	**6.77**	**163**	*e*Sg	**Sg**	**02 12 54.4**	**-3.7**
PV16	**Nyswonger Mesa**	**6.78**	**163**	*e*Pn	**Pn**	**02 11 04.2**	**+3.5**
PV12	**Saucer Basin,**	**6.80**	**162**	*e*Pn	**Pn**	**02 11 04.6**	**+3.7**
PV11	**David Mesa, Pa**	**6.80**	**163**	*e*Pn	**Pn**	**02 11 04.7**	**+3.7**
PV17	**East Wray Mesa**	**6.80**	**163**	*e*Sg	**Sg**	**02 12 53.3**	**-5.8**
PV18	**Skein Mesa, Pa**	**6.84**	**163**	*e*Pn	**Pn**	**02 11 06.0**	**+4.4**
PV03	**Paradox Valley**	**6.85**	**162**	*e*Pn	**Pn**	**02 11 04.9**	**+3.3**
LTY	**Liberty**	**6.86**	**294**	*e*Pn	**Pn**	**02 11 02.7**	**+1.2**
PV13	**Radium Mtn., P**	**6.95**	**163**	*e*Pn	**Pn**	**02 11 06.6**	**+3.6**
PV01	**Paradox Valley**	**7.03**	**161**	*e*Pn	**Pn**	**02 11 07.8**	**+3.7**
R11A	**Troy Canyon, C**	**7.17**	**207**	*e*Pg	**Pg**	**02 11 37.7**	**-0.3**
LON	**Longmire**	**7.49**	**289**	*e*Pn	**Pn**	**02 11 12.3**	**+2.1**
LON				*e*Lg	Lg	02 13 23.5	
KVN	**Kaiserville**	**7.60**	**223**	*e*Pg	**Pb**	**02 11 31.4**	**-1.4**
D05A	**Enumclaw**	**7.70**	**292**	*e*Lg	Lg	02 13 33.8	
S22A	**4UR Ranch, Cre**	**7.88**	**152**	*e*Pg	**Pg**	**02 11 54.0**	**+2.3**
MVCO	**Mesa Verde**	**7.93**	**163**	*e*Pn	**Pn**	**02 11 20.1**	**+3.7**
OGNE	**Ogallala**	**7.93**	**116**	*e*Pn	**Pn**	**02 11 18.4**	**+2.0**
NV11	**Mina Array Sit**	**8.12**	**220**	*e*Pg	**Pb**	**02 11 46.3**	**+4.7**
NV01	**Mina Array Sit**	**8.19**	**221**	*e*Pn	Pn	02 11 28.3	+8.3
NVAR	**Mina Array Bea**	**8.19**	**221**	Pn	Pn	02 11 28.3	+8.3
	0.0nm,0.3s,baz=44,slow=16,SNR=2.7						
YKA	**Yellowknife Ar**	**17.80**	**355**	P	**Pn**	**02 13 24.8**	**-3.7**
	0.1nm,0.3s,baz=175,slow=12,SNR=8.3						
YKA				Lg	Lg	02 18 18.6	
	baz=165,slow=28,SNR=3.2						
YKB5	**Yellowknife Ar**	**17.80**	**355**	*e*Pn	**Pn**	**02 13 24.8**	**-3.7**

*IDC **06** 02:46:55.4±1.0,5.°34N×77.°69W,h0^{km},mb3.6/7,mb1 3.9/9, mb1mx3.7/26,mbtmp3.7/9,ML2.8/1,MS3.3/6,Ms1 3.3/6, ms1mx3.0/21,Error ellipse: s-maj=31.2km s-min=18.6km az=51.0*

*ISCJB **06** 02:46:57.1±1.1,5.°47N±0.°03×77.°65W±0.°04,h20^{km}±9^{km}, mb3.5/7,MS3.3/4,Error ellipse: s-maj=6.4km s-min=5.0km az=162.3*

*RSNC **06** 02:46:58.2±1.1,5.°45N×77.°53W,h3^{km}±8^{km},ML3.0*

ISC 06 02:46:55.9±1.4,5.°41N±0.°03×77.°59W±0.°05,h2^{km}±9^{km},n25, σ1§57/35,mb3.8/7,MS3.3/4,1D,Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.83**	**13**	*e*P	**Pg**	**02 47 11.8**	**+0.1**
SOLC				*e*S	**Sg**	**02 47 22.8**	**+0.3**
SOLC				*i*		02 47 29.9	
	comp=Z,1μm,0.5s						
PLMC	**San Jos del P**	**1.40**	**111**	*e*P	**Pn**	**02 47 21.7**	**-0.7**
PLMC				*e*S	**Sn**	**02 47 40.0**	**-1.5**
PLMC				*i*		02 47 45.0	
	comp=N,1μm,0.2s						
MALC	**Bahia Malaga**	**1.42**	**170**	*e*P	**Pg**	**02 47 23.2**	**+0.2**
MALC				*e*S	**Sg**	**02 47 43.6**	**+2.2**
MALC				*i*		02 47 46.7	
	comp=N,344nm,0.4s						
YOTC	**Yotoco, Valle**	**1.89**	**139**	*i* P	**Pn**	**02 47 29.1**	**-0.1**
YOTC				*e*S	**Sb**	**02 47 54.3**	**-0.9**
YOTC				*i*		02 47 59.6	
	comp=Z,43nm,0.5s						
HELC	**Santa Helena**	**2.19**	**69**	⇓*i*P	**Pn**	**02 47 33.3**	**-0.3**
HELC				*e*S	**Sn**	**02 48 00.9**	**-0.6**
HELC				*i*		02 48 08.8	
	comp=Z,40nm,0.7s						
RREF	**El Recreo**	**2.29**	**103**	*e*P	**Pb**	**02 47 36.5**	**-1.8**
RREF				*e*S	**Sb**	**02 48 05.1**	**-2.2**
NORC	**Norcasia**	**2.71**	**87**	*e*P	**Pn**	**02 47 41.7**	**+1.1**
NORC				*e*S	**Sn**	**02 48 14.1**	**+0.1**
NORC				*i*		02 48 35.4	
	comp=N,63nm,0.6s						
POPC	**Popayan, Colom**	**3.00**	**162**	*e*P	**Pn**	**02 47 45.9**	**+1.3**
POPC				*e*S	**Sn**	**02 48 21.1**	**-0.2**
POPC				*i*		02 49 00.2	
	comp=N,11nm,0.5s						
UREC	**San Jos de Ur**	**3.09**	**41**	*e*P	**Pn**	**02 47 46.9**	**+1.2**
UREC				*e*S	**Sn**	**02 48 22.6**	**-0.8**
UREC				*i*		02 48 26.0	
	comp=N,34nm,0.7s						
ROSC	**El Rosal**	**3.31**	**100**	Pn	**Pb**	**02 47 53.7**	**-1.8**
	comp=N,2.3nm,0.3s,baz=247,slow=6.8,SNR=12						
PTBC	**PUERTO BERRIO,**	**3.31**	**70**	*e*P	**Pn**	**02 47 50.4**	**+1.6**
PTBC				*e*S	**Sn**	**02 48 28.6**	**-0.1**
PTBC				*i*		02 48 46.3	
	comp=N,54nm,0.8s						
BCIP	**Isla Barro Col**	**4.34**	**329**	*e*P	**Pn**	**02 48 01.7**	**-1.3**
BCIP				*e*S	**Sn**	**02 48 51.0**	**-3.2**
SDV	**Santo Domingo**	**7.72**	**63**	Pn	**Pn**	**02 48 51.0**	**+1.5**
	comp=N,1.4nm,0.3s,baz=250,slow=11,SNR=13						
SDV				Sn	**Sn**	**02 50 22.6**	**+5.0**
	comp=N,0.3nm,0.3s,baz=274,slow=19,SNR=1.8						
JTS	**Las Juntas de**	**8.76**	**304**	LR	LR	02 52 08.8	
	comp=N,200nm,19.4s,baz=222,slow=36						
PTGA	**Pitinga**	**18.63**	**109**	P	**Pn**	**02 51 15.2**	**+0.1**
	baz=299,slow=19,SNR=2.9						
PTGA				LR	LR	02 58 02.1	
	comp=N,44nm,20.4s,baz=280,slow=36						
LPAZ	**La Paz**	**23.51**	**157**	P	**P**	**02 52 08.4**	**+0.4**
	comp=N,0.4nm,0.6s,baz=348,slow=9.3,SNR=3.1						
LPAZ				LR	LR	03 03 29.6	
	comp=N,44nm,19.8s,baz=296,slow=42						
SIV	**San Ignacio**	**26.83**	**143**	P	**P**	**02 52 37.3**	**-0.6**
	comp=N,1.5nm,0.8s,baz=323,slow=13,SNR=5.5						
LVC	**Limon Verde**	**29.12**	**163**	LR	LR	03 05 05.6	
	comp=N,149nm,20.7s,baz=324,slow=38						
TXAR	**Lajitas Array**	**34.26**	**317**	PcP	**PcP**	**02 56 21.9**	**+1.6**
	comp=N,0.5nm,0.9s,baz=126,slow=4.7,SNR=4.6						
TXAR				LR	LR	03 09 24.6	
	comp=N,44nm,19.9s,baz=0.0,slow=39						
PDAR	**Pinedale Array**	**46.73**	**328**	P	**P**	**02 55 27.5**	**+0.7**
	comp=N,0.2nm,0.3s,baz=118,slow=12,SNR=3.6						
PDAR				LR	LR	03 19 10.8	
	comp=N,41nm,18.8s,baz=162,slow=41						
YKA	**Yellowknife Ar**	**63.12**	**342**	P	**P**	**02 57 24.0**	**-0.8**
	comp=N,0.6nm,0.7s,baz=133,slow=6.9,SNR=9.4						
ILAR	**Eielson Array**	**76.38**	**336**	P	**P**	**02 58 46.7**	**+0.2**
	comp=N,0.3nm,0.7s,baz=103,slow=4.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**78.38**	**78**	P	**P**	**02 58 58.8**	**+0.1**
	comp=N,0.7nm,0.8s,baz=278,slow=6.6,SNR=5.0						
GERES	**GERESS Array B**	**86.82**	**41**	P	**P**	**02 59 43.5**	**+1.4**
	comp=N,0.4nm,0.6s,baz=265,slow=5.8,SNR=4.8						
ASAR	**Alice Springs**	**144.67**	**236**	PKP	**PKPdf**	**03 06 33.4**	**-1.8**
	comp=N,1.6nm,0.9s,baz=120,slow=3.6,SNR=8.2						

*ISCJB **06** 02:49:27.7±1.2,1.°2N±0.°1×126.°38E±0.°09,h10^{km},mb4.0/4, MS3.2/3,Error ellipse: s-maj=19.2km s-min=12.2km az=10.1*

*IDC **06** 02:49:28.5±1.3,1.°15N×126.°45E,h0^{km},mb3.8/3, mb1 3.9/4,mb1mx3.5/31,mbtmp3.9/4,ML3.6/1,MS3.3/4, Ms1 3.3/4,ms1mx2.8/29,Error ellipse: s-maj=53.9km s-min=22.8km az=65.0*

*DJA **06** 02:49:31.9±0.4,1.°N±5.°×12.°6E±.°,h10^{km},M4.2/10,mb4.3/7, mB5.0/3,MLv4.1/10,Mw(mB)4.3/3*

ISC 06 02:49:30.4±1.2,1.°2N±0.°1×126.°3E±0.°1,h10^{km},n17, σ1§42/14,mb3.9/4,MS3.2/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**110**	P	**Pn**	**02 49 55.6**	**+3.0**
LUWI	**Luwuk**	**4.14**	**238**	P	**Pn**	**02 50 34.6**	**+0.9**
MRSI	**Marisa**	**4.40**	**261**	P	**Pn**	**02 50 37.6**	**+0.4**
APSI	**Ampana**	**5.08**	**246**	P	**Pn**	**02 50 47.6**	**+1.0**
MPSI	**Mapaga**	**6.44**	**263**	P	**Pn**	**02 51 05.5**	**+0.2**
TTSI	**Tana Toraja**	**7.70**	**237**	P	**Pn**	**02 51 23.7**	**+1.0**
SPSI	**Sidrap Palu**	**8.27**	**232**	P	**Pn**	**02 51 31.3**	**+0.8**
BNSI	**Bone**	**8.29**	**228**	P	**Pn**	**02 51 31.8**	**+1.0**
KAPI	**Kappang**	**8.96**	**227**	Pn	**Pn**	**02 51 41.7**	**+1.7**
	0.6nm,0.3s,baz=60,slow=16,SNR=2.8						
KAPI				LR	LR	02 55 10.4	
	comp=Z,133nm,19.4s,baz=34,slow=38						
WRA	**Warramunga Arr**	**22.42**	**160**	P	**P**	**02 54 27.5**	**-2.0**
	13nm,0.3s,baz=337,slow=12,SNR=2.5						
PMG	**Port Moresby**	**23.30**	**117**	LR	LR	03 04 30.5	
	comp=Z,90nm,20.3s,baz=254,slow=39						
ASAR	**Alice Springs**	**25.78**	**164**	P	**P**	**02 55 00.8**	**-0.9**
	1.1nm,0.6s,baz=345,slow=7.2,SNR=15						
PSI	**Prapat**	**27.39**	**274**	LR	LR	03 06 40.9	
	comp=Z,102nm,19.6s,baz=38,slow=38						
CMAR	**Chiang Mai Arr**	**31.86**	**304**	LR	LR	03 10 25.4	
	comp=Z,32nm,18.1s,baz=90,slow=39						
STKA	**Stephens Creek**	**35.93**	**157**	P	**P**	**02 56 30.4**	**-0.7**
	1.3nm,0.7s,baz=324,slow=8.7,SNR=3.0						
MKAR	**Makanchi Array**	**59.41**	**326**	P	**P**	**02 59 33.2**	**+0.1**
	0.5nm,0.5s,baz=124,slow=8.2,SNR=6.3						
TORD	**Torodi Ar. Bea**	**123.25**	**286**	PKP	**PKPdf**	**03 08 28.8**	**+0.2**
	0.6nm,1.0s,baz=45,slow=2.6,SNR=3.4						

*SOME **06** 03:03:07.8,42.°22N×76.°43E,h20^{km}*
*NNC **06** 03:03:07.6±0.4,42.°28N×76.°41E,h0^{km},mb4.0,mpv4.0, Error ellipse: s-maj=2.8km s-min=1.4km az=164.0*
*ISCJB **06** 03:03:08.2±0.7,42.°26N±0.°03×76.°43E±0.°03,h10^{km}±4^{km}, Error ellipse: s-maj=5.9km s-min=2.7km az=151.4*
*KRNET **06** 03:03:08.1±0.1,42.°27N×76.°42E,h22^{km},mb4.0*
*KNET **06** 03:03:08.6±0.4,42.°28N×76.°31E,h16^{km}±2^{km},ml3.2,Error ellipse: s-maj=4.3km s-min=1.9km az=115.0*

ISC 06 03:03:08.8±0.9,42.°30N±0.°03×76.°39E±0.°02,h14^{km}±6^{km}, n59,σ1§01/109,50C-12D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.12**	**244**	⇑P	**Pg**	**03 03 12.0**	**-0.4**
	4μm,0.3s,SNR=8206						
ULHL				⇑S	**Sg**	**03 03 15.5**	**+0.6**
	4μm,0.3s						
ULHL	**Ulahol**	**0.12**	**244**	⇑*i*P	**Pg**	**03 03 12.0**	**-0.4**
	baz=60						
ULHL				⇑*i*S	**Sg**	**03 03 15.5**	**+0.6**
	baz=60						
BOOM	**Boomskoye usch**	**0.39**	**300**	⇑*i*P	**Pg**	**03 03 16.2**	**-0.4**
	baz=3.0						
BOOM				⇑*i*S	**Sg**	**03 03 22.6**	**+0.7**
	baz=3.0						
IZV	**Izvestkoviy**	**0.75**	**12**	P	**Pb**	**03 03 22.9**	**-0.9**
	238nm,0.3s						
IZV				S	**Sb**	**03 03 33.9**	**-0.2**
	790nm,0.2s						
IZV	**Izvestkoviy**	**0.75**	**12**	*e*P	**Pb**	**03 03 22.9**	**-0.9**
	baz=11						
IZV				*e*S	**Sb**	**03 03 33.9**	**-0.2**
	baz=11						
IZV	**Izvestkoviy**	**0.75**	**12**	*e*P	**Pb**	**03 03 22.9**	**-0.9**
	238nm,0.3s						
IZV				*e*S	**Sb**	**03 03 33.9**	**-0.2**
	790nm,0.2s						
MTBS	**Maitube**	**0.83**	**2**	P	**Pg**	**03 03 24.2**	**-0.7**
	355nm,0.2s						
MTBS				S	**Sb**	**03 03 36.1**	**-0.1**
	758nm,0.2s						
MTBS	**Maitube**	**0.83**	**2**	*e*P	**Pg**	**03 03 24.2**	**-0.7**
	baz=1.0						
MTBS				*e*S	**Sb**	**03 03 36.1**	**-0.1**
	baz=1.0						
MTBS	**Maitube**	**0.83**	**2**	*e*P	**Pg**	**03 03 24.2**	**-0.7**
	355nm,0.2s						
MTBS				*e*S	**Sb**	**03 03 36.1**	**-0.1**
	758nm,0.2s						
TKM2	**Tokmak 2**	**0.85**	**317**	P	**Pg**	**03 03 24.7**	**-0.7**
	96nm,0.1s,SNR=371						
TKM2				⇓S	**Sb**	**03 03 37.2**	**+0.1**
	1μm,0.1s						
TKM2	**Tokmak 2**	**0.85**	**317**	⇑P	**Pg**	**03 03 24.7**	**-0.7**
	39nm,0.5s						
TKM2				⇑S	**Sg**	**03 03 36.8**	**+0.2**
	672nm,0.3s						
TKM2	**Tokmak 2**	**0.85**	**317**	⇑*i*P	**Pg**	**03 03 24.7**	**-0.7**
	baz=17						
TKM2				⇑*i*S	**Sb**	**03 03 37.1**	**+0.1**
	baz=17						
KZA	**Kyzart**	**0.88**	**256**	P	**Pg**	**03 03 24.8**	**-1.1**
	269nm,0.2s,SNR=725						
KZA				⇑S	**Sg**	**03 03 37.1**	**-0.3**
	848nm,0.3s						
KZA	**Kyzart**	**0.88**	**256**	*i* P	**Pg**	**03 03 24.8**	**-1.1**
	baz=58						
KZA				*i* S	**Sg**	**03 03 37.1**	**-0.3**
	baz=58						
AAA	**Alma-Ata**	**0.99**	**23**	P	**Pb**	**03 03 27.1**	**-0.6**
	262nm,0.2s						
AAA				S	**Sb**	**03 03 41.2**	**+0.5**
	888nm,0.3s						
AAA	**Alma-Ata**	**0.99**	**23**	*e*P	**Pb**	**03 03 27.1**	**-0.6**
	baz=21						
AAA				*e*S	**Sb**	**03 03 41.2**	**+0.5**
	baz=21						
AAA	**Alma-Ata**	**0.99**	**23**	*e*P	**Pb**	**03 03 27.1**	**-0.6**
	262nm,0.2s						
AAA				*e*S	**Sb**	**03 03 41.2**	**+0.5**
	888nm,0.3s						
KNDC	**Almaty**	**1.01**	**25**	⇑P	**Pb**	**03 03 27.3**	**-0.9**
KNDC				⇓S	**Sb**	**03 03 41.6**	**+0.3**
DGS	**Degeres**	**1.05**	**334**	P	**Pg**	**03 03 28.2**	**-0.8**
	136nm,0.2s						
DGS				S	**Sb**	**03 03 42.8**	**+0.4**
	685nm,0.2s						
DGS	**Degeres**	**1.05**	**334**	*e*P	**Pg**	**03 03 28.2**	**-0.8**
	baz=34						
DGS				*e*S	**Sb**	**03 03 42.8**	**+0.4**
	baz=34						
DGS	**Degeres**	**1.05**	**334**	*e*P	**Pg**	**03 03 28.2**	**-0.8**
	136nm,0.2s						
DGS				*e*S	**Sb**	**03 03 42.8**	**+0.4**
	685nm,0.2s						
KOTS	**Kotyrbulak**	**1.07**	**29**	P	**Pb**	**03 03 28.3**	**-1.0**
	125nm,0.1s						
KOTS				S	**Sb**	**03 03 43.3**	**+0.1**
	1μm,0.3s						
KOTS	**Kotyrbulak**	**1.07**	**29**	*e*P	**Pb**	**03 03 28.3**	**-1.0**
	baz=28						
KOTS				*e*S	**Sb**	**03 03 43.3**	**+0.1**
	baz=28						
KOTS	**Kotyrbulak**	**1.07**	**29**	*e*P	**Pb**	**03 03 28.3**	**-1.0**
	125nm,0.1s						
KOTS				*e*S	**Sb**	**03 03 43.3**	**+0.1**
	1μm,0.3s						
KBK	**Karagaybulak**	**1.13**	**289**	⇑P	**Pg**	**03 03 29.5**	**-1.0**
	80nm,0.1s,SNR=77						
KBK				⇑S	**Sb**	**03 03 45.7**	**+0.9**
	466nm,0.2s						
KBK	**Karagaybulak**	**1.13**	**289**	⇑*i*P	**Pg**	**03 03 29.5**	**-1.0**
	baz=90						
KBK				⇑*i*S	**Sb**	**03 03 45.4**	**+0.6**
	baz=90						
UCH	**Uchtor**	**1.40**	**268**	P	**Pn**	**03 03 33.6**	**-0.7**
	91nm,0.2s,SNR=136						
UCH				⇑S	**Sb**	**03 03 52.7**	**-0.2**
	90nm,0.2s						
UCH	**Uchtor**	**1.40**	**268**	⇑*i*P	**Pn**	**03 03 33.9**	**-0.4**
	baz=69						
UCH				⇑*i*S	**Sb**	**03 03 53.0**	**+0.2**
	baz=69						
CHMS	**Chumysh**	**1.40**	**301**	⇑P	**Pn**	**03 03 33.9**	**-0.1**
	38nm,0.2s,SNR=17						
CHMS				⇓S	**Sn**	**03 03 53.0**	**+0.8**
	142nm,0.2s						
CHMS	**Chumysh**	**1.40**	**301**	⇑*i*P	**Pn**	**03 03 33.9**	**-0.1**
	baz=1.0						
CHMS				⇑*i*S	**Sn**	**03 03 53.0**	**+0.8**
	baz=1.0						
FRU1	**Bishkek**	**1.40**	**292**	⇑*i*P	**Pn**	**03 03 33.8**	**-0.2**
	baz=93						
FRU1				⇑*i*S	**Sn**	**03 03 53.0**	**+0.7**
	baz=93						
KTBS	**Karatobe**	**1.43**	**8**	P	**Pb**	**03 03 34.7**	**-0.5**
	150nm,0.1s						
KTBS				S	**Sg**	**03 03 54.2**	**-0.5**
	556nm,0.2s						
KTBS	**Karatobe**	**1.43**	**8**	*e*P	**Pb**	**03 03 34.8**	**-0.5**
	baz=2.0						
KTBS				*e*S	**Sg**	**03 03 54.3**	**-0.5**
	baz=2.0						
KTBS	**Karatobe**	**1.43**	**8**	*e*P	**Pb**	**03 03 34.8**	**-0.5**
	150nm,0.1s						
KTBS				*e*S	**Sg**	**03 03 54.2**	**-0.5**
	556nm,0.2s						
AAK	**Ala-Archa**	**1.45**	**284**	⇓P	**Pn**	**03 03 34.8**	**+0.1**
	32nm,0.1s,SNR=36						
AAK				⇑S	**Sb**	**03 03 54.6**	**+0.7**
	198nm,0.2s						
AAK	**Ala-Archa**	**1.45**	**284**	⇑P	**Pn**	**03 03 34.7**	**+0.1**
	23nm,0.3s						
AAK				⇑S	**Sb**	**03 03 54.6**	**+0.7**
	136nm,0.5s						
AAK	**Ala-Archa**	**1.45**	**284**	⇑*i*P	**Pn**	**03 03 34.8**	**+0.1**
	baz=85						
AAK				⇑*i*S	**Sb**	**03 03 54.6**	**+0.7**
	baz=85						
ARLS	**Aral**	**1.60**	**255**	⇑*i*P	**Pn**	**03 03 37.0**	**+0.1**
	baz=56						
ARLS				⇑*i*S	**Sb**	**03 03 58.6**	**+0.2**
	baz=56						
USP	**Ospenovka**	**1.70**	**305**	⇑P	**Pb**	**03 03 39.0**	**-0.7**
	92nm,0.2s,SNR=154						
USP	**Ospenovka**	**1.70**	**305**	⇑*i*P	**Pb**	**03 03 39.1**	**-0.7**
	baz=6.0						
USP				⇑*i*S	**Sb**	**03 04 01.6**	**+0.6**
	baz=6.0						
EKS2	**Erkin-Say**	**1.97**	**281**	⇑*i*P	**Pn**	**03 03 42.7**	**+0.8**
	baz=82						
EKS2				⇑*i*S	**Sn**	**03 04 08.3**	**+1.9**
	baz=82						
AML	**Almayashu**	**2.01**	**266**	⇑*i*P	**Pn**	**03 03 43.7**	**+1.0**
	baz=67						
AML				⇑*i*S	**Sn**	**03 04 09.6**	**+1.7**
	baz=67						
ARXS	**Arharly**	**2.18**	**28**	Pg	**Pb**	**03 03 47.3**	**-0.8**
	42nm,0.3s						
ARXS				Lg	Lg	03 04 15.5	
	408nm,0.2s						
ARXS	**Arharly**	**2.18**	**28**	*e*P	**Pb**	**03 03 47.3**	**-0.8**
	42nm,0.3s						
ARXS				*e*S	**Sb**	**03 04 15.5**	**+0.5**
	408nm,0.2s						
MNBS	**Baschi**	**2.31**	**39**	Pg	**Pb**	**03 03 50.2**	**-0.1**
	39nm,0.3s						
MNBS				Lg	Lg	03 04 20.6	
	390nm,0.2s						
MNBS	**Baschi**	**2.31**	**39**	*e*P	**Pb**	**03 03 50.2**	**-0.1**
	39nm,0.3s						
MNBS				*e*S	**Sg**	**03 04 20.6**	**-2.3**
	390nm,0.2s						
MRKS	**Merke**	**2.38**	**282**	Pg	**Pb**	**03 03 51.9**	**+0.4**
	99nm,0.4s						
MRKS				Lg	Lg	03 04 23.5	
	176nm,0.2s						
MRKS	**Merke**	**2.38**	**282**	*e*P	**Pb**	**03 03 51.9**	**+0.4**
	99nm,0.4s						
MRKS				*e*S	**Sg**	**03 04 23.5**	**-1.9**
	176nm,0.2s						
PDGK	**Podgornoye**	**2.50**	**65**	⇑Pn	**Pn**	**03 03 49.5**	**+0.4**
	9.6nm,0.4s						
PDGK				⇑Lg	Lg	03 04 25.0	
	144nm,0.6s						
PDGK	**Podgornoye**	**2.50**	**65**	⇑*i*P	**Pn**	**03 03 49.6**	**+0.4**
	baz=64						
PDGK				⇑*i*S	**Sn**	**03 04 20.2**	**+0.6**
	baz=64						
ARSB	**Arslanbob**	**2.73**	**250**	⇑*i*P	**Pn**	**03 03 53.3**	**+0.9**
	baz=51						
ARSB				⇑*i*S	**Sn**	**03 04 26.3**	**+1.0**
	baz=51						
KTMS	**Ketmen**	**3.13**	**67**	Pg	**Pb**	**03 04 02.6**	**-1.7**
	26nm,0.3s						
KTMS				Lg	Lg	03 04 41.9	
	56nm,0.3s						
KTMS	**Ketmen**	**3.13**	**67**	*e*P	**Pb**	**03 04 02.6**	**-1.7**
	26nm,0.3s						
KTMS				*e*S	**Sb**	**03 04 41.9**	**-0.5**
	56nm,0.3s						
ARK	**Arkit**	**3.34**	**263**	⇓*i*P	**Pn**	**03 04 02.0**	**+1.3**
	baz=63						
ARK				⇓*i*S	**Sn**	**03 04 41.4**	**+1.2**
	baz=63						
KK31	**Karatay Array**	**4.41**	**282**	⇑Pg	**Pg**	**03 04 29.3**	**-3.9**
	2.6nm,0.3s,baz=95,slow=16,SNR=36						
KK31				⇑Lg	Lg	03 05 25.9	
	32nm,0.5s,baz=97,slow=26,SNR=32						
MAKZ	**Makanchi**	**6.02**	**40**	⇓Pn	**Pn**	**03 04 40.3**	**+2.9**
	1.2nm,0.3s						
MAKZ				⇑Sn	**Sn**	**03 05 48.7**	**+2.5**
	1.5nm,0.6s						
MAKZ				⇓Lg	Lg	03 06 17.3	
	14nm,1.1s						
MK31	**Makanchi Array**	**6.16**	**41**	⇓Pn	**Pn**	**03 04 41.3**	**+1.9**
	1.0nm,0.5s,baz=220,slow=15,SNR=14						
MK31				⇓Sn	**Sn**	**03 05 53.2**	**+3.6**
	2.7nm,0.6s,baz=217,slow=25,SNR=4.4						
MK31				⇓Lg	Lg	03 06 23.8	
	3.9nm,0.5s,baz=219,slow=29,SNR=4.8						
KURBB	**Kurchatov Arra**	**8.46**	**9**	⇓Pn	**Pn**	**03 05 09.6**	**-1.2**
	0.6nm,0.5s						
KURBB				⇑Lg	Lg	03 07 37.5	
	13nm,0.6s						
KURK	**Kurchatov**	**8.56

1.0nm,0.6s,baz=205,slow=5.6,SNR=22
TOA1 Torodi Ar. Sit 72.43 29 *e*P **P 03 14 42.7 -0.3**
MOD Modoc Plateau 125.09 294 *e*PKPdf **PKPdf 03 22 16.3 0.0**
YKA Yellowknife Ar 136.01 318 PKP **PKPdf 03 22 35.3 -0.8**
0.1nm,0.3s,baz=118,slow=2.2,SNR=4.0
YKB5 Yellowknife Ar 136.01 318 *e*PKPdf **PKPdf 03 22 35.3 -0.8**
RIDG Independent Ri 148.92 311 *e*PKPbc **PKiKP 03 23 04.0 -0.3**
ILAR Eielson Array 150.02 312 PKPbc **PKPbc 03 23 06.0 +0.4**
2.0nm,0.9s,baz=114,slow=1.3,SNR=20
ILB Eielson Array 150.02 312 *e*PKPbc **PKPbc 03 23 05.8 +0.2**
RND Reindeer 150.60 309 *e*PKPbc **PKiKP 03 23 07.9 +0.1**
BPAW Bear Paw Mtn. 151.66 310 *e*PKPbc **PKPbc 03 23 09.7 +0.2**

NIED ***06*** *03:28:00, 35.°60N× 140.°70E, h47km, Mw5.2 Best double couple: M0 7.20000×10^16 NP1:φs 194.00000°, δ20.00000°, λ104.00000°. NP2:φs 359.00000°, δ70.00000°, λ85.00000°.*
BJI ***06*** *03:28:50.3± 0.0, 35.°43N× 140.°87E, h35km, mb5.1/81, mB5.0/63, Ms4.7/84, Ms7 4.7/77*
ISCJB ***06*** *03:28:55.7± 0.2, 35.°53N± 0.°02× 140.°47E± 0.°02, h48km± 2km, mb5.0/409, MS4.5/61, Error ellipse: s-maj=3.0km s-min=2.2km az=158.7*
JMA ***06*** *03:28:55.8± 0.1, 35.°64N× 140.°66E, h50km± 1km, M5.0 Broadband fault plane solution: P waves. NP1: φs 9.00000°, δ67.00000°, λ79.00000°. NP2:φs 215.00000°, δ25.00000°, λ115.00000°. Principal axes: T Plg66.0000°, Azm259.0000°; N Plg10.0000°, Azm13.0000°; P Plg21.0000°, Azm107.0000°;*
JMA Felt III J1.
IDC ***06*** *03:28:56.5± 1.2, 35.°55N× 140.°54E, h45km± 11km, mb4.7/34, mb1 4.9/37, mb1mx4.8/41, mbtmp5.0/37, ML3.7/3, MS4.3/31, Ms1 4.3/31, ms1mx4.3/32 Error ellipse: s-maj=13.1km s-min=7.3km az=94.0*
MOS ***06*** *03:28:56.5± 1.0, 35.°58N× 140.°44E, h56km, mb5.4/114, MS4.5/19, Error ellipse: s-maj=6.5km s-min=3.8km az=113.7*
NEIC ***06*** *03:28:58.1± 1.8, 35.°55N× 140.°46E, h54km± 4km, mb5.0/310, Error ellipse: s-maj=11.8km s-min=9.7km az=95.0*
NEIC Felt at Narita and Yokosuka. Recorded [3 JMA] in Chiba and Ibaraki.
GCMT ***06*** *03:28:59.1± 0.2, 35.°51N± 0.°01× 140.°81E± 0.°01, h47km, MW5.2/101, Moment Tensor Solution. s86,c139; s101,c181; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr 0.72±.02; Mθθ -0.02±.01; Mφφ -0.70±.01; Mrθ -0.05±.01; Mθφ -0.17±.01; Mφr 0.46±.01; Best double couple: M0 8.87200×10^17 NP1:φs 3.00000°, δ61.00000°, λ80.00000°. NP2:φs 203.00000°, δ30.00000°, λ108.00000°. Principal axes: T 0.8730, Plg72.0000°, Azm249.0000°; N -0.0030, Plg9.0000°, Azm8.0000°; P -0.8700, Plg16.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 03:28:56.2± 0.3, 35.°59N± 0.°03× 140.°58E± 0.°03, h44km± 2km, h44km: pP-P, n1238, σ1.9s 46/1320, mb5.1/433, MS4.6/63, 65C-71D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	**0.12**	**297**	P	**Pn**	**03 29 04.3**	**+0.9**
CHOJ	**Chosi**	**0.26**	**64**	⇑P	**Pn**	**03 29 03.9**	**-0.5**
CHOJ				S	**Sn**	**03 29 10.1**	**0.0**
JCN	**Nagara**	**0.35**	**241**	⇓P	**Pn**	**03 29 07.0**	**+1.7**
I30JP	**ISUMI INFRASON**	**0.35**	**218**	P	**Pn**	**03 29 06.7**	**+1.3**
baz=38,slow=14,SNR=3.5							
JIHU	**Itakohorinouch**	**0.38**	**354**	P	**Pn**	**03 29 06.0**	**+0.4**
JIHU				S	**Sn**	**03 29 12.4**	**+0.1**
BSO4	**Boso 4**	**0.63**	**198**	⇓P	**Pn**	**03 29 09.9**	**+1.2**
JYT	**Yasato**	**0.71**	**334**	⇓P	**Pn**	**03 29 09.3**	**-0.6**
JYT				S	**Sn**	**03 29 19.6**	**-0.1**
JHYU	**Hitachinakayam**	**0.75**	**1**	P	**Pn**	**03 29 09.8**	**-0.6**
BSO3	**Boso 3**	**0.79**	**184**	⇑P	**Pn**	**03 29 11.7**	**+1.0**
BSO1	**Boso 1**	**0.99**	**161**	P	**Pn**	**03 29 13.4**	**+0.2**
JAG	**Ashikaga**	**1.23**	**313**	⇓P	**Pn**	**03 29 16.9**	**-0.2**
JOD2	**Odawara 2**	**1.26**	**255**	⇓P	**Pn**	**03 29 18.3**	**+0.9**
JIM2	**Oshima 3**	**1.28**	**228**	⇓P	**Pn**	**03 29 17.8**	**+0.1**
JRY	**Ryogami san**	**1.43**	**288**	⇓P	**Pn**	**03 29 21.1**	**+1.4**
JFFD	**Fukushimafurud**	**1.50**	**360**	⇓P	**Pn**	**03 29 20.5**	**-0.2**
JFY	**Yanaizu**	**1.94**	**339**	⇓P	**Pn**	**03 29 27.2**	**+0.4**
MJAR	**Matsushiro Arr**	**2.14**	**297**	P	**Pn**	**03 29 30.2**	**+0.7**
34nm,0.3s,baz=100,slow=14,SNR=594							
MJAR				LR	LR	03 30 31.9	
comp=Z,14μm,19.4s,baz=115,slow=46							
MAJO	**Matsushiro**	**2.14**	**297**	*e*Pn	**Pn**	**03 29 31.6**	**+2.1**
MAJO				*e*Sn	**Sn**	**03 29 51.9**	**-3.0**
MAJO	**Matsushiro**	**2.14**	**297**	*e*P	**Pn**	**03 29 31.6**	**+2.1**
MAJO				*e*		03 29 51.9	
MAT	**Matsushiro**	**2.14**	**297**	P	**Pn**	**03 29 31.4**	**+1.9**
MAT				S	**Sn**	**03 30 01.1**	**+6.2**
JHJ	**Hachijo jima 2**	**2.55**	**195**	P	**Pn**	**03 29 35.4**	**+0.3**
210nm,0.3s,baz=338,slow=19,SNR=80							
JHJ				S	**Sn**	**03 30 04.2**	**-0.7**
654nm,0.3s,baz=65,slow=22,SNR=10							
JHJ				LR	LR	03 30 12.7	
comp=Z,1μm,19.1s,baz=332,slow=30							
JHJ2	**Mitsune**	**2.55**	**195**	*e*Pn	**Pn**	**03 29 35.7**	**+0.6**
JHJ2				*e*Sn	**Sn**	**03 30 02.3**	**-2.6**
INU	**Inuyama**	**2.92**	**266**	*e*Pn	**Pn**	**03 29 42.2**	**+2.1**
INU				*e*Sn	**Sn**	**03 30 11.7**	**-2.2**
JOM	**Ohasama**	**3.92**	**8**	⇓P	**Pn**	**03 29 54.2**	**+0.3**
JYW	**Yuwa**	**3.96**	**356**	⇓P	**Pn**	**03 29 56.4**	**+2.1**
ERM	**Erimo**	**6.72**	**17**	*e*Pn	**Pn**	**03 30 29.9**	**-2.5**
ERM				*e*Sn	**Sn**	**03 31 40.8**	**-6.7**
ERM	**Erimo**	**6.72**	**17**	*ce*P	**Pn**	**03 30 29.9**	**-2.5**
ERM				pmax	pmax		
comp=Z,71nm,1.0s							
JNU	**Nakatsue**	**8.39**	**256**	P	**Pn**	**03 30 58.0**	**+2.7**
comp=Z,0.8nm,0.3s,baz=69,slow=9.9,SNR=9.6							
JNU				S	Sn	03 32 41.5	+13
baz=158,slow=19,SNR=1.6							
JNU				LR	LR	03 34 36.0	
comp=Z,9μm,19.3s,baz=62,slow=41							
JNU	**Nakatsue**	**8.39**	**256**	*e*Pn	**Pn**	**03 30 58.7**	**+3.5**
JNU				*e*Sn	**Sn**	**03 32 30.6**	**+1.9**
ASAJ	**Asahikawa**	**8.66**	**10**	P	**Pn**	**03 30 56.5**	**-2.3**
comp=Z,6.5nm,0.3s,baz=207,slow=14,SNR=27							
ASAJ				S	**Sn**	**03 32 26.9**	**-8.1**
comp=Z,1.5nm,0.3s,baz=227,slow=19,SNR=2.6							
ASAJ				LR	LR	03 35 05.5	
comp=Z,1μm,21.5s,baz=199,slow=42							
GRPR	**Tuman**	**9.29**	**24**	*e*P	**Pn**	**03 31 05.7**	**-1.8**
GRPR				pmax	pmax		
comp=E,151nm,0.3s							
GRPR				pmax	pmax		
comp=Z,225nm,0.3s							
GRPR				pmax	pmax		
comp=N,138nm,0.2s							
LAGR	**Lagunnoye**	**9.35**	**24**	*e*P	**Pn**	**03 31 07.1**	**-1.3**
LAGR				pmax	pmax		
comp=Z,357nm,0.4s							
LAGR				pmax	pmax		
comp=E,147nm,0.1s							
YUK	**Yuzh-Kuril'sk**	**9.36**	**24**	*e*P	**Pn**	**03 31 06.9**	**-1.5**
YUK				pmax	pmax		
comp=N,116nm,0.2s							
YUK				pmax	pmax		
comp=Z,200nm,0.2s							
YUK				pmax	pmax		
comp=E,112nm,0.3s							
TEY	**Ternei**	**9.91**	**343**	⇓*e*P	**Pn**	**03 31 16.6**	**+0.6**
TEY				pmax	pmax		
comp=E,20nm,0.7s							
TEY				pmax	pmax		
comp=N,20nm,0.9s							
TEY				pmax	pmax		
comp=Z,10.0nm,0.6s							
MSHR	**Mys Shultsa**	**10.11**	**316**	*d i*P	**Pn**	**03 31 21.0**	**+2.3**
KSRS	**Korea Array**	**10.35**	**284**	P	**Pn**	**03 31 26.1**	**+4.1**
comp=Z,1.7nm,0.3s,baz=101,slow=13,SNR=108							
KSRS				LR	LR	03 35 29.3	
comp=Z,4μm,19.9s,baz=108,slow=38							
KS15	**Wonju Array Si**	**10.38**	**284**	*e*Pn	**Pn**	**03 31 26.1**	**+3.7**
TJN	**Taejon**	**10.74**	**278**	*i* P	**Pn**	**03 31 29.8**	**+2.5**
USRK	**Ussuriysk Ar.**	**10.83**	**325**	P	**Pn**	**03 31 30.6**	**+2.0**
comp=Z,0.9nm,0.3s,baz=139,slow=12,SNR=35							
USRK				LR	LR	03 35 32.4	
comp=Z,2μm,18.2s,baz=134,slow=36							
KUR	**Kuril'sk**	**11.11**	**28**	*e*P	**Pn**	**03 31 32.5**	**+0.1**
KUR				pmax	pmax		
comp=Z,79nm,0.6s							
KUR				pmax	pmax		
comp=E,49nm,0.4s							
KUR				pmax	pmax		
comp=N,35nm,0.3s							
YSS	**Yuzh-Sakhalins**	**11.47**	**8**	*e*Pn	**Pn**	**03 31 35.9**	**-1.4**
YSS	**Yuzh-Sakhalins**	**11.47**	**8**	⇑*e*P	**Pn**	**03 31 35.6**	**-1.7**
YSS				*e*S	**Sn**	**03 33 38.5**	**-5.5**
YSS				pmax	pmax		
comp=Z,30nm,0.9s							
YSS				MLR	MLR		
comp=Z,600nm,13.0s							
YSS				MLR	MLR		
comp=E,600nm,15.0s							
MDJ	**Mudanjiang**	**12.32**	**320**	P	Pn	03 31 54.2	+5.3
MDJ				pP	P	03 32 01.9	+1.8
MDJ				sP		03 32 07.8	
MDJ				S	**Sn**	**03 34 12.0**	**+7.3**
MDJ				sS	S	03 34 24.6	-6.6
MDJ				pmax	pmax		
comp=E,28nm,1.1s							
MDJ				pmax	pmax		
comp=E,420nm,4.7s							
MDJ				LR	LR		
comp=E,890nm,21.4s							
MDJ				LR	LR		
comp=E,1μm,16.7s							
MDJ				LR	LR		
comp=E,2μm,16.7s							
MDJ	**Mudanjiang**	**12.32**	**320**	*e*Pn	**Pn**	**03 31 51.1**	**+2.2**
JOW	**Kunigami**	**13.67**	**234**	P	**P**	**03 32 12.5**	**-2.7**
comp=E,0.1nm,0.3s,baz=81,slow=18,SNR=4.2							
CN2	**Changchun**	**14.23**	**310**	*e*P	**Pn**	**03 32 14.7**	**-0.3**
CN2				*e*PP	**PnPn**	**03 32 26.8**	**+3.8**
CN2				*e*S	**Sn**	**03 34 51.6**	**+0.3**
CN2				LR	LR		
comp=E,1μm,17.0s							
CN2				LR	LR		
comp=E,1μm,17.0s							
CN2				LR	LR		
comp=E,1μm,18.0s							
SNY	**Shenyang**	**14.65**	**300**	⇑P	**Pn**	**03 32 19.8**	**-0.8**
SNY				S	**Sn**	**03 34 59.4**	**-2.2**
SNY				pmax	pmax		
comp=E,61nm,0.8s							
SNY				pmax	pmax		
comp=E,260nm,9.3s							
SNY				LR	LR		
comp=E,990nm,17.6s							
SNY				LR	LR		
comp=E,2μm,20.1s							
SNY				LR	LR		
comp=E,3μm,26.0s							
KLR	**Kul'dur**	**15.09**	**337**	P	**Pn**	**03 32 23.4**	**-3.0**
comp=E,0.3nm,0.3s,baz=137,slow=14,SNR=11							
TYV	**Tymovskoe**	**15.34**	**5**	*e*P	**Pn**	**03 32 26.0**	**-3.6**
TYV				pmax	pmax		
comp=Z,100nm,1.1s							
TYV				pmax	pmax		
comp=Z,92nm,0.9s							
TYV				MLR	MLR		
comp=Z,2μm,16.0s							
DL2	**Dalian**	**15.45**	**288**	⇑*i*P	**P**	**03 32 33.5**	**-1.4**
DL2				pP	**pP**	**03 32 42.4**	**-2.9**
DL2				sP	**sP**	**03 32 46.2**	**-4.7**
DL2				S	**Sn**	**03 35 27.1**	**+6.1**
DL2				pmax	pmax		
comp=Z,130nm,0.8s							
DL2				pmax	pmax		
comp=Z,880nm,5.9s							
DL2				LR	LR		
comp=Z,1μm,16.7s							
DL2				LR	LR		
comp=Z,2μm,20.7s							
DL2				LR	LR		
comp=Z,3μm,22.9s							
GRNR	**Gornyy**	**15.47**	**350**	*e*P	**P**	**03 32 36.7**	**+1.6**
GRNR				pmax	pmax		
comp=Z,42nm,0.8s							
SSE	**Sheshan**	**16.81**	**260**	P	**Pn**	**03 32 47.4**	**-1.0**
SSE				S	**Sn**	**03 35 54.0**	**-0.1**
SSE				pmax	pmax		
comp=Z,11nm,0.5s							
SSE				pmax	pmax		
comp=Z,310nm,5.3s							
SSE				LR	LR		
comp=Z,470nm,15.7s							
SSE				LR	LR		
comp=Z,1μm,13.9s							
SSE	**Sheshan**	**16.81**	**260**	*e*Pn	**Pn**	**03 32 46.4**	**-1.9**
comp=Z,47nm,0.7s							
NJ2	**Nanjing**	**18.39**	**265**	*e*P	**Pn**	**03 33 08.2**	**+0.4**
NJ2				pmax	pmax		
comp=Z,22nm,0.5s							
NJ2				LR	LR		
comp=Z,2μm,17.4s							
NJ2				LR	LR		
comp=Z,2μm,19.5s							
NJ2				LR	LR		
comp=Z,2μm,20.6s							
YOJ	**Yonaguni jima**	**18.79**	**239**	*e*P	**P**	**03 33 06.4**	**-5.6**
comp=Z,74nm,1.1s							
YOJ	**Yonaguni jima**	**18.79**	**239**	*e*P	**P**	**03 33 06.4**	**-5.6**
YOJ				pmax	pmax		
comp=Z,74nm,1.1s							
TIA	**Tai'an**	**19.01**	**279**	P	**P**	**03 33 13.2**	**-1.1**
TIA				pP	**pP**	**03 33 20.4**	**-4.4**
TIA				PP	**sP**	**03 33 32.4**	**+2.1**
TIA				pmax	pmax		
comp=Z,140nm,1.4s							
TIA				LR	LR		
comp=Z,960nm,15.7s							
TIA				LR	LR		
comp=Z,1μm,21.4s							
TIA				LR	LR		
comp=Z,3μm,23.5s							
TATO	**Taipei**	**19.55**	**242**	*e*P	**P**	**03 33 18.8**	**-1.5**
comp=Z,93nm,1.4s							
BJI	**Beijing**	**19.76**	**290**	⇓*i*P	**P**	**03 33 21.1**	**-1.4**
BJI				sP	**pP**	**03 33 33.4**	**+0.4**
BJI				S	**S**	**03 37 00.2**	**-2.6**
BJI				pmax	pmax		
comp=Z,29nm,1.1s							
BJI				LR	LR		
comp=Z,780nm,27.9s							
BJT	**Baijiatuau**	**19.77**	**290**	*e*P	**P**	**03 33 21.1**	**-1.4**
comp=Z,49nm,0.8s							
BJT	**Baijiatuau**	**19.77**	**290**	*e*P	**P**	**03 33 21.1**	**-1.4**
BJT				pmax	pmax		
comp=Z,49nm,0.8s							
YHNB	**Yeheng**	**19.82**	**242**	*e*P	**P**	**03 33 22.6**	**-0.7**
comp=Z,27nm,1.0s							
NACB	**Ninganchiao**	**19.97**	**240**	*e*P	**P**	**03 33 21.9**	**-2.9**
comp=Z,21nm,0.7s							
ZEA	**Zeya**	**20.41**	**337**	*e*P	**P**	**03 33 26.0**	**-3.4**
ZEA				*e*S	Sn	03 37 20.0	-0.7
ZEA				*e*SS	SnSn	03 38 00.5	+25
ZEA				pmax	pmax		
comp=N,59nm,1.0s							
ZEA				pmax	pmax		
comp=E,43nm,1.2s							
ZEA				pmax	pmax		
comp=Z,71nm,1.2s							
ZEA				pmax	pmax		
comp=Z,300nm,5.0s							
ZEA				smax	smax		
comp=E,500nm,12.0s							
ZEA				smax	smax		
comp=N,600nm,10.0s							
ZEA				MLR	MLR		
comp=Z,1μm,17.0s							
ZEA				MLR	MLR		
comp=E,300nm,15.0s							
HIA	**Hailar**	**20.48**	**318**	*e*P	**P**	**03 33 26.9**	**-3.4**
comp=E,15nm,0.6s							
HIA	**Hailar**	**20.48**	**318**	*e*P	**P**	**03 33 26.9**	**-3.4**
HIA				pmax	pmax		
comp=Z,15nm,0.6s							
SSLB	**Suanglung**	**20.67**	**241**	*e*P	**P**	**03 33 31.0**	**-1.4**
comp=Z,34nm,1.0s							
YULB	**Yu-li**	**20.68**	**239**	*e*P	**P**	**03 33 29.3**	**-3.3**
comp=Z,32nm,1.1s							
TPUB	**Ta-pu**	**21.21**	**240**	*e*P	**P**	**03 33 35.7**	**-2.5**
comp=Z,37nm,0.9s							
TWG	**Pinlang**	**21.21**	**238**	*e*P	**P**	**03 33 35.8**	**-2.4**
comp=Z,203nm,1.0s							
PETK	**Petropavlovsk-**	**21.27**	**29**	P	**P**	**03 33 39.9**	**+1.2**
comp=Z,30nm,1.0s,baz=222,slow=5.5,SNR=30							
PETK				LR	LR	03 42 46.5	
comp=Z,216nm,19.1s,baz=219,slow=39							
PEA1	**Petropavlovsk-**	**21.28**	**29**	*e*P	**P**	**03 33 39.9**	**+1.1**
PET	**Petropavlovsk**	**21.60**	**31**	*e*P	**P**	**03 33 43.5**	**+0.3**
comp=Z,69nm,1.1s							
PET	**Petropavlovsk**	**21.60**	**31**	*e*P	**P**	**03 33 43.5**	**+1.4**
PET				*e*S	**S**	**03 37 36.1**	**-2.8**
PET				pmax	pmax		
comp=Z,200nm,8.0s							
PET				pmax	pmax		
comp=Z,100nm,8.6s							
PET				pmax	pmax		
comp=Z,65nm,1.2s							
PET				MLR	MLR		
comp=Z,900nm,21.0s							
QZH	**Quanzhou**	**21.71**	**247**	P	**P**	**03 33 38.2**	**-5.3**
QZH				S	**S**	**03 37 42.5**	**+1.1**
QZH				LR	LR		
comp=Z,1μm,19.9s							
QZH				LR	LR		
comp=Z,620nm,21.8s							
QZH				LR	LR		
comp=Z,1μm,19.4s							
WHN	**Wuhan**	**22.52**	**265**	P	**P**	**03 33 51.6**	**-0.6**
WHN				pmax	pmax		
comp=Z,140nm,0.8s							
WHN				pmax	pmax		
comp=Z,780nm,6.1s							
WHN				LR	LR		
comp=Z,2μm,11.9s							
WHN				LR	LR		
comp=Z,6μm,19.2s							
WHN				LR	LR		
comp=Z,4μm,19.6s							
TIY	**Taiyuan**	**22.65**	**284**	*e*P	**P**	**03 33 54.3**	**+0.6**
TIY				S	**S**	**03 37 54.2**	**-4.5**
TIY				pmax	pmax		
comp=Z,44nm,0.6s							
TIY				pmax	pmax		
comp=Z,140nm,5.2s							
TIY				LR	LR		
comp=Z,570nm,11.6s							
TIY				LR	LR		
comp=Z,990nm,14.3s							
TIY				LR	LR		
comp=Z,2μm,27.7s							
HHC	**Hu-ho-hao-te**	**23.33**	**292**	*e*P	**P**	**03 33 59.0**	**-1.6**
HHC				pP	pP	03 34 08.8	-2.9
HHC				S	**S**	**03 38 04.4**	**-5.8**
HHC				SS	**SnSn**	**03 38 52.8**	**+5.2**
HHC				pmax	pmax		
comp=Z,30nm,0.8s							
HHC				pmax	pmax		
comp=Z,220nm,7.4s							
HHC				LR	LR		
comp=Z,450nm,16.6s							
HHC				LR	LR		
comp=Z,920nm,17.5s							
HHC				LR	LR		
comp=Z,2μm,18.0s							
MA2	**Magadan**	**24.91**	**12**	P	**P**	**03 34 15.3**	**+0.6**
comp=Z,48nm,0.8s,baz=195,slow=8.4,SNR=24							
MA2	**Magadan**	**24.91**	**12**	*e*P	**P**	**03 34 15.6**	**+0.8**
comp=Z,63nm,0.9s							
MA2	**Magadan**	**24.91**	**12**	*ce*P	**P**	**03 34 15.1**	**+0.3**
MA2				pmax	pmax		
comp=Z,56nm,0.8s							
XAN	**Xi'an**	**25.98**	**276**	P	**P**	**03 34 23.3**	**-1.6**
XAN				PP	sP	03 35 05.0	+23
XAN				PcP	**PcP**	**03 37 55.2**	**+2.8**
XAN				S	**S**	**03 38 43.6**	**-8.9**
XAN				pmax	pmax		
comp=Z,78nm,0.6s							
XAN				pmax	pmax		
comp=Z,320nm,5.7s							
XAN				LR	LR		
comp=Z,1μm,18.8s							
XAN				LR	LR		
comp=Z,1μm,20.4s							
XAN				LR	LR		
comp=Z,2μm,21.8s							
XAN	**Xi'an**	**25.98**	**276**	*e*P	**P**	**03 34 24.1**	**-0.8**
comp=Z,59nm,0.6s							
XAN	**Xi'an**	**25.98**	**276**	*e*P	**P**	**03 34 24.1**	**-0.8**
XAN				pmax	pmax		
comp=Z,59nm,0.6s							
ENH	**Enshi**	**26.56**	**267**	*e*P	**P**	**03 34 29.3**	**-0.9**
comp=Z,120nm,0.7s							
YAK	**Yakutsk**	**27.34**	**349**	*e*P	**P**	**03 34 39.0**	**+2.3**
comp=Z,64nm,0.7s							
YAK	**Yakutsk**	**27.34**	**349**	*e*P	**P**	**03 34 36.1**	**-0.6**
YAK				*e**PP	**pP**	**03 34 48.4**	**0.0**
YAK				*e*		03 35 21.8	
YAK				*e*		03 37 53.2	
YAK				*e*S	**S**	**03 39 12.4**	**-0.8**
YAK				*e*SS	**SnSn**	**03 40 30.8**	**+5.9**
YAK				*e*		03 45 23.2	
ULN	**Ulaanbaatar**	**27.64**	**307**	*e*P	**P**	**03 34 39.5**	**-0.3**
comp=Z,42nm,1.5s							
ULN	**Ulaanbaatar**	**27.64**	**307**	*e*P	**P**	**03 34 39.5**	**-0.3**
ULN				pmax	pmax		
comp=Z,42nm,1.5s							
ULN	**Ulaanbaatar**	**27.64**	**307**	P	**P**	**03 34 39.9**	**+0.1**
SNR=12							
ULN				P	**P**	**03 34 39.9**	**+0.1**
SNR=12							
TGY	**Tagaytay City**	**27.74**	**224**	LR	LR	03 44 26.8	
comp=Z,181nm,22.0s,baz=35,slow=34							
MMPH	**Masbate**	**27.75**	**218**	*i* P	**P**	**03 34 39.8**	**-1.0**
MMPH				*i* S	**P**	**03 34 41.3**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**28.04**	**117**	T	T	04 03 49.8	
baz=310,slow=75,SNR=84							
H11N1	**WAKE ISLAND Hy**	**28.05**	**117**	T	T	04 03 50.4	
baz=310,slow=75,SNR=73							
H11N3	**WAKE ISLAND Hy**	**28.06**	**117**	T	T	04 04 02.2	
baz=310,slow=75,SNR=104							
SONA0	**Songino Array**	**28.06**	**306**	*e*P	**P**	**03 34 43.4**	**-0.2**
SONA0				*e*ScP	**ScP**	**03 41 34.3**	**-0.2**
SONM	**Songino Array**	**28.06**	**306**	P	**P**	**03 34 43.4**	**-0.2**
comp=Z,14nm,0.7s,baz=107,slow=8.9,SNR=43							
SONM				ScP	**ScP**	**03 41 34.3**	**-0.2**
comp=Z,5.8nm,1.3s,baz=112,slow=1.6,SNR=6.5							
SONM				LR	LR	03 46 14.1	
comp=Z,1μm,19.0s,baz=105,slow=37							
SEY	**Seymchan**	**28.34**	**11**	P	**P**	**03 34 45.9**	**+0.3**
comp=Z,14nm,0.8s,baz=209,slow=5.5,SNR=19							
SEY	**Seymchan**	**28.34**	**11**	*ce*P	**P**	**03 34 46.2**	**+0.6**
H11S3	**WAKE ISLAND Hy**	**28.69**	**120**	T	T	04 04 41.8	
baz=312,slow=75,SNR=148							
H11S1	**WAKE ISLAND Hy**	**28.69**	**120**	T	T	04 04 42.7	
baz=312,slow=75,SNR=200							
H11S2	**WAKE ISLAND Hy**	**28.71**	**120**	T	T	04 04 43.8	
baz=312,slow=75,SNR=220							
LZH	**Lanzhou**	**29.67**	**282**	*e*P	**P**	**03 34 57.6**	**-0.4**
LZH				pP	pP	03 35 07.3	-2.5
LZH				sP	sP	03 35 11.0	-4.0
LZH				PP	**PnPn**	**03 35 55.8**	**+1.5**
LZH				S	**S**	**03 39 54.5**	**+3.6**
LZH				sS	sS	03 40 10.2	-0.3
LZH				pmax	pmax		
comp=Z,50nm,1.2s							
LZH				pmax	pmax		
comp=Z,270nm,5.4s							
LZH				LR	LR		
comp=Z,1μm,15.3s							
LZH				LR	LR		
comp=Z,1μm,15.7s							
LZH				LR	LR		
comp=Z,1μm,16.3s							
GYA	**Guiyang**	**30.33**	**262**	⇓*i*P	**P**	**03 35 02.7**	**-1.2**
GYA				pP	pP	03 35 13.8	-1.8
GYA				sP	sP	03 35 20.0	-0.9
GYA				PP	**PP**	**03 36 08.3**	**-4.5**
GYA				S	**S**	**03 40 01.8**	**+0.5**
GYA				sS	sS	03 40 19.2	-1.7
GYA				pmax	pmax		
comp=Z,30nm,1.1s							
GYA				pmax	pmax		
comp=Z,120nm,4.9s							
GYA				LR	LR		
comp=Z,600nm,13.7s							
GYA				LR	LR		
comp=Z,750nm,14.6s							
GYA				LR	LR		
comp=Z,960nm,15.2s							

ZAK	**Zakamensk**	**30.66 310**	*e*P	**P**	**03 35 05.9**	**-0.6**
ZAK			pmax	pmax		
comp=Z,7.0nm,0.9s						
TLY	**Talaya**	**30.79 313**	*e*P	**P**	**03 35 07.7**	**+0.2**
comp=Z,12nm,0.9s						
TLY	**Talaya**	**30.79 313**	*e*P	**P**	**03 35 08.0**	**+0.4**
TLY			*e*		03 36 21.3	
TLY			*i* S	**S**	**03 40 15.1**	**+7.3**
TLY			pmax	pmax		
comp=Z,29nm,0.9s						
TLY			MLR	MLR		
comp=Z,1μm,16.0s						
TLY	**Talaya**	**30.79 313**	P	**P**	**03 35 07.8**	**+0.2**
TLY			P	**P**	**03 35 07.8**	**+0.2**
CD2	**Chengdu**	**31.02 272**	‖P	**P**	**03 35 08.9**	**-1.0**
CD2			S	**S**	**03 40 11.0**	**-0.9**
CD2			pmax	pmax		
comp=Z,100nm,0.7s						
CD2			pmax	pmax		
comp=Z,370nm,8.8s						
CD2			LR	LR		
comp=Z,4μm,16.2s						
CD2			LR	LR		
comp=Z,6μm,20.6s						
CD2			LR	LR		
comp=Z,6μm,21.1s						
QIZ	**Qiongzhong**	**31.73 247**	P	**P**	**03 35 15.2**	**-0.9**
QIZ			S	**S**	**03 40 23.7**	**+0.7**
QIZ			sS	**sS**	**03 40 39.7**	**-3.0**
QIZ			LR	LR		
comp=Z,760nm,20.1s						
QIZ			LR	LR		
comp=Z,670nm,19.6s						
QIZ			LR	LR		
comp=Z,740nm,23.5s						
GTA	**Gaotai**	**32.37 289**	*e*P	**P**	**03 35 21.6**	**-0.1**
GTA			pP	pP	03 35 30.7	-2.8
GTA			sP	sP	03 35 34.8	-3.9
GTA			PcP	**PcP**	**03 38 09.8**	**+1.2**
GTA			S	**S**	**03 40 33.3**	**+0.4**
GTA			pmax	pmax		
comp=Z,22nm,0.9s						
GTA			pmax	pmax		
comp=Z,180nm,7.2s						
GTA			LR	LR		
comp=Z,540nm,22.3s						
GTA			LR	LR		
comp=Z,790nm,20.3s						
GTA			LR	LR		
comp=Z,1μm,23.4s						
KMI	**Kunming**	**34.09 263**	P	**P**	**03 35 36.2**	**-0.8**
KMI			pP	pP	03 35 48.0	-0.8
KMI			sP	sP	03 35 51.7	-2.3
KMI			PP	**PP**	**03 36 53.3**	**-1.3**
KMI			S	**S**	**03 41 00.6**	**+0.5**
KMI			sS	sS	03 41 19.3	-0.5
KMI			SS	**SnSn**	**03 43 08.3**	**-1.9**
KMI			pmax	pmax		
comp=Z,34nm,1.1s						
KMI			pmax	pmax		
comp=Z,140nm,4.2s						
KMI			LR	LR		
comp=Z,1μm,23.2s						
KMI			LR	LR		
comp=Z,490nm,24.1s						
KMI			LR	LR		
comp=Z,1μm,24.5s						
SLVN	**Son La**	**35.01 256**	*e*P	**P**	**03 35 44.3**	**-0.4**
comp=Z,31nm,1.4s						
BILL	**Bilibino**	**35.60 16**	*e*P	**P**	**03 35 48.8**	**-0.4**
comp=Z,16nm,1.0s						
BILL	**Bilibino**	**35.60 16**	‖*i*P	**P**	**03 35 49.1**	**-0.1**
BILL			pmax	pmax		
comp=Z,17nm,1.0s						
TIXI	**Tiksi**	**36.65 354**	*e*P	**P**	**03 35 57.7**	**-0.3**
comp=Z,15nm,0.8s						
TIXI	**Tiksi**	**36.65 354**	*ce*P	**P**	**03 35 57.1**	**-0.9**
TIXI			pmax	pmax		
comp=Z,20nm,1.0s						
TNTI	**Ternate**	**36.76 202**	*e*P	**P**	**03 35 57.4**	**-2.2**
comp=Z,51nm,1.4s						
PANO	**Nakornpanom**	**36.82 250**	P	**P**	**03 36 01.2**	**+1.0**
comp=Z,0.5nm,1.2s						
KKM	**Kota Kinabalu**	**36.97 223**	P	**P**	**03 36 02.0**	**+0.5**
DLV	**T Lat**	**37.35 239**	*e*P	**P**	**03 36 04.4**	**-0.6**
comp=Z,46nm,1.2s						
SRPI	**Serui, Papua**	**37.49 187**	P	**P**	**03 36 05.0**	**-0.8**
JAY	**Jayapura**	**37.91 180**	P	**P**	**03 36 09.7**	**+0.3**
comp=Z,21nm,1.0s,baz=328,slow=6.6						
GENI	**Genyem**	**37.98 181**	P	**P**	**03 36 09.8**	**-0.2**
comp=Z,66nm,0.5s,comp=Z,6μm						
KHON	**Khomkaen**	**38.68 250**	P	**P**	**03 36 17.8**	**+2.0**
MRSI	**Marisa**	**39.01 211**	P	**P**	**03 36 17.1**	**-1.5**
comp=Z,27nm,1.4s,comp=Z,451nm						
FAKI	**Fak Fak**	**39.09 193**	*e*P	**P**	**03 36 18.1**	**-1.2**
comp=Z,40nm,0.9s						
FAKI	**Fak Fak**	**39.09 193**	P	**P**	**03 36 18.7**	**-0.6**
PAYA	**Payao**	**39.26 257**	P	P	03 36 26.8	+6.0
CHAI	**Chaiyaphum**	**39.58 250**	P	**P**	**03 36 22.9**	**-0.5**
comp=Z,51μm,1.2s,comp=Z,450μm						
UTTA	**Uttaradit**	**39.62 254**	P	**P**	**03 36 24.0**	**+0.3**
comp=Z,32μm,0.9s						
LAMP	**Lampang**	**39.91 256**	P	**P**	**03 36 26.9**	**+0.8**
comp=Z,23μm,1.0s						
PBKT	**Sadao Pong**	**39.97 252**	P	**P**	**03 36 26.2**	**-0.4**
comp=Z,19nm,1.1s,comp=Z,2μm						
MPSI	**Mapaga**	**40.01 213**	P	**P**	**03 36 24.4**	**-2.6**
CMMT	**Chiang Mai**	**40.29 257**	P	**P**	**03 36 29.3**	**0.0**
comp=Z,8.9nm,1.2s						
CHTO	**Chiang Mai**	**40.29 257**	*e*P	**P**	**03 36 29.4**	**0.0**
comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**40.29 257**	*e*P	**P**	**03 36 29.4**	**0.0**
CHTO			pmax	pmax		
comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**40.29 257**	P	**P**	**03 36 29.6**	**+0.2**
SNR=7.2						
CHTO			P	**P**	**03 36 29.6**	**+0.2**
SNR=7.2						
APSI	**Ampana**	**40.38 210**	P	**P**	**03 36 28.1**	**-1.9**
CM31	**Chiang Mai Arr**	**40.49 256**	*e*P	**P**	**03 36 30.9**	**-0.1**
CM31			*e*PcP	**PcP**	**03 38 33.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**40.49 256**	P	**P**	**03 36 30.9**	**-0.1**
comp=Z,4.7nm,0.8s,baz=47,slow=6.8,SNR=15						
CMAR			PcP	**PcP**	**03 38 33.8**	**+0.8**
comp=Z,2.3nm,0.4s,baz=22,slow=2.3,SNR=8.2						
CMAR			LR	LR	03 54 59.2	
comp=Z,892nm,18.3s,baz=66,slow=39						
DGZ	**Jazzator, Alta**	**40.71 307**	*d i*P	**P**	**03 36 34.0**	**+1.4**
UNV	**Unalaska Valle**	**40.72 46**	*e*P	**P**	**03 36 32.0**	**-0.4**
comp=Z,18nm,1.2s						
WMQ	**Urumqi**	**40.91 298**	P	**P**	**03 36 36.0**	**+1.8**
WMQ			pP	pP	03 36 44.2	-2.0
WMQ			sP	sP	03 36 52.0	+0.6
WMQ			pmax	pmax		
comp=Z,89nm,1.3s						
WMQ			pmax	pmax		
comp=Z,410nm,4.7s						
WMQ			LR	LR		
comp=Z,810nm,16.7s						
WMQ			LR	LR		
comp=Z,660nm,24.3s						
WMQ			LR	LR		
comp=Z,2μm,23.5s						
WMQ	**Urumqi**	**40.91 298**	*e*P	**P**	**03 36 36.2**	**+2.0**
comp=Z,74nm,1.1s						
WMQ	**Urumqi**	**40.91 298**	*e*P	**P**	**03 36 36.2**	**+2.0**
WMQ			pmax	pmax		
comp=Z,74nm,1.1s						
LSA	**Lhasa**	**41.68 276**	*e*P	**P**	**03 36 43.5**	**+2.3**
comp=Z,37nm,0.8s						
LSA	**Lhasa**	**41.68 276**	P	**P**	**03 36 43.3**	**+2.1**
LSA	**Lhasa**	**41.68 276**	*e*P	**P**	**03 36 43.5**	**+2.3**
LSA			pmax	pmax		
comp=Z,37nm,0.8s						
SBUM	**Sibu**	**42.17 225**	*e*P	**P**	**03 36 41.5**	**-3.2**
comp=Z,3.7nm,1.0s						
SBUM	**Sibu**	**42.17 225**	P	**P**	**03 36 45.0**	**+0.3**
ZAA1	**Zalesovo Array**	**42.40 314**	*e*P	**P**	**03 36 45.7**	**-0.5**
ZAA1			*e*PcP	**PcP**	**03 38 39.1**	**+0.4**
ZALV	**Zalesovo Beam**	**42.40 314**	P	**P**	**03 36 45.7**	**-0.5**
comp=Z,31nm,0.8s,baz=89,slow=6.5,SNR=44						
ZALV			PcP	**PcP**	**03 38 39.1**	**+0.4**
comp=Z,3.9nm,0.5s,baz=90,slow=2.2,SNR=3.8						
ZALV			LR	LR	03 54 37.6	
comp=Z,249nm,19.6s,baz=70,slow=36						
SRDT	**SRDT**	**42.72 251**	P	**P**	**03 36 51.5**	**+2.3**
comp=Z,10nm,1.2s						
SHL	**Shillong**	**42.73 270**	*e*P	**P**	**03 36 48.8**	**-0.6**
comp=Z,20nm,0.8s						
SHL	**Shillong**	**42.73 270**	*e*P	**P**	**03 36 48.8**	**-0.6**
SHL			pmax	pmax		
comp=Z,20nm,0.8s						
SHL	**Shillong**	**42.73 270**	*i* P	**P**	**03 36 49.0**	**-0.4**
ANM	**Nome**	**43.18 31**	*e*P	**P**	**03 36 54.7**	**+2.3**
comp=Z,28nm,1.4s						
ANM	**Nome**	**43.18 31**	*e*P	**P**	**03 36 54.7**	**+2.3**
ANM			pmax	pmax		
comp=Z,28nm,1.4s						
NVS	**Novosibirsk**	**43.36 315**	‖*i*P	**P**	**03 36 54.9**	**+0.9**
NVS			pmax	pmax		
comp=Z,49nm,0.9s						
NVS			pmax	pmax		
comp=N,7.0nm,0.7s						
NVS			pmax	pmax		
comp=E,27nm,0.7s						
SPSI	**Sidrap Palu**	**43.92 211**	P	**P**	**03 36 58.2**	**-0.6**
comp=E,10nm,1.0s						
KSM	**Kuching**	**44.07 226**	*e*P	**P**	**03 36 59.6**	**-0.5**
comp=E,14nm,1.0s						
KSM	**Kuching**	**44.07 226**	P	**P**	**03 37 01.0**	**+0.9**
BNSI	**Bone**	**44.18 210**	P	**P**	**03 36 59.7**	**-1.2**
NRIK	**Noril'sk**	**44.30 336**	P	**P**	**03 37 00.9**	**-0.4**
comp=E,38nm,0.9s,baz=108,slow=8.2,SNR=19						
NRIK			LR	LR	03 56 24.5	
comp=E,515nm,19.6s,baz=106,slow=37						
MK31	**Makanchi Array**	**44.33 303**	*i* P	**P**	**03 37 02.1**	**+0.2**
MK31			pmax	pmax		
comp=Z,33nm,0.8s						
MK32	**Makanchi Array**	**44.33 303**	*e*P	**P**	**03 37 02.0**	**+0.1**
MK32			*e*PcP	**PcP**	**03 38 45.7**	**+0.3**
MKAR	**Makanchi Array**	**44.33 303**	P	**P**	**03 37 02.0**	**+0.1**
comp=Z,28nm,0.8s,baz=91,slow=9.8,SNR=199						
MKAR			PcP	**PcP**	**03 38 45.7**	**+0.3**
comp=Z,5.2nm,0.8s,baz=73,slow=5.0,SNR=3.1						
MKAR			LR	LR	03 56 08.7	
comp=Z,764nm,19.5s,baz=87,slow=37						
MKAR	**Makanchi Array**	**44.33 303**	*i* P	**P**	**03 37 02.5**	**+0.6**
MKAR			pmax	pmax		
comp=Z,28nm,0.8s						
MAKZ	**Makanchi**	**44.54 303**	*e*P	**P**	**03 37 03.8**	**+0.2**
comp=Z,31nm,0.8s						
MAKZ	**Makanchi**	**44.54 303**	*e*P	**P**	**03 37 03.8**	**+0.2**
MAKZ			pmax	pmax		
comp=Z,31nm,0.8s						
KAPI	**Kappang**	**44.88 210**	P	**P**	**03 37 05.8**	**-0.7**
comp=Z,17nm,0.8s,baz=84,slow=1.9,SNR=10						
KAPI			PcP	**PcP**	**03 38 48.9**	**+1.3**
comp=Z,19nm,0.9s,baz=52,slow=5.6,SNR=4.8						
KAPI	**Kappang**	**44.88 210**	P	**P**	**03 37 08.2**	**+1.7**
SNR=6.2						
BKSI	**Bulukumba**	**45.01 209**	P	**P**	**03 37 05.9**	**-1.6**
SKLT	**Songkhla**	**46.23 242**	P	**P**	**03 37 18.0**	**+0.8**
comp=Z,12nm,0.7s,comp=Z,2μmcomp=Z,164μm						
KURK	**Kurchatov**	**46.30 309**	*e*P	**P**	**03 37 17.2**	**-0.2**
comp=Z,118nm,1.0s						
KURK	**Kurchatov**	**46.30 309**	*ce*P	**P**	**03 37 17.2**	**-0.2**
KURK			pmax	pmax		
comp=Z,110nm,1.0s						
KURK	**Kurchatov**	**46.30 309**	P	**P**	**03 37 17.6**	**+0.2**
SNR=50						
KURK			P	**P**	**03 37 17.6**	**+0.2**
SNR=50						
RAMN	**Ramite**	**46.45 275**	*e*P	**P**	**03 37 18.9**	**-0.3**
comp=Z,172nm,0.9s						
JIRN	**Jiri**	**46.49 276**	*e*P	**P**	**03 37 19.9**	**+0.3**
comp=Z,202nm,0.8s						
GUN	**Gumba**	**46.64 277**	*e*P	**P**	**03 37 20.9**	**+0.1**
comp=Z,134nm,1.0s						
PDGK	**Podgornoye**	**46.87 299**	P	**P**	**03 37 22.0**	**-0.1**
PDGK			pmax	pmax		
comp=Z,80nm,1.0s						
SVW2	**Sparrevohn**	**47.08 37**	*e*P	**P**	**03 37 25.9**	**+2.5**
comp=Z,16nm,1.0s						
PKI	**Pulchoki**	**47.16 276**	*e*P	**P**	**03 37 24.8**	**0.0**
comp=Z,48nm,0.9s						
PKIN	**Phulchoki**	**47.16 276**	*e*P	**P**	**03 37 24.6**	**-0.2**
comp=Z,26nm,0.6s						
KKN	**Kakani**	**47.17 277**	*e*P	**P**	**03 37 24.9**	**+0.1**
comp=Z,77nm,0.9s						
DMN	**Daman**	**47.39 277**	*e*P	**P**	**03 37 26.5**	**0.0**
comp=Z,17nm,0.6s						
EDFI	**Ende, Flores**	**47.56 206**	P	**P**	**03 37 26.5**	**-1.2**
SOEI	**Soe**	**47.66 202**	*e*P	**P**	**03 37 27.7**	**-0.8**
comp=Z,167nm,1.0s						
SOEI	**Soe**	**47.66 202**	P	**P**	**03 37 28.0**	**-0.5**
IPM	**Ipoh**	**47.82 239**	*e*P	**P**	**03 37 27.3**	**-2.3**
comp=Z,25nm,1.2s						
DANN	**Dangsing**	**48.17 278**	*e*P	**P**	**03 37 33.0**	**+0.3**
comp=Z,290nm,0.9s						
BATI	**Baumata**	**48.27 203**	P	**P**	**03 37 32.3**	**-0.8**
comp=Z,159nm,0.8s,baz=25,slow=0.4,SNR=19						
RSO	**Redoubt South**	**48.45 37**	*e*P	**P**	**03 37 36.4**	**+2.1**
KOLN	**Koldanda**	**48.54 278**	*e*P	**P**	**03 37 35.5**	**+0.1**
comp=Z,120nm,1.0s						
KDAK	**Kodiak Island**	**48.63 41**	*e*P	**P**	**03 37 36.8**	**+1.5**
comp=Z,21nm,0.9s						
KDAK	**Kodiak Island**	**48.63 41**	*e*P	**P**	**03 37 36.8**	**+1.5**
KDAK			pmax	pmax		
comp=Z,21nm,0.9s						
CAST	**Castle Rocks**	**48.80 33**	*e*P	**P**	**03 37 39.0**	**+2.4**
comp=Z,5.8nm,0.8s						
PYUN	**Piuthan**	**48.90 278**	*e*P	**P**	**03 37 38.2**	**+0.1**
comp=Z,362nm,1.0s						
MTN	**Manton Dam**	**48.99 192**	*e*P	**P**	**03 37 38.2**	**-0.4**
comp=Z,180nm,1.3s						
TPI	**Tanjungpandan**	**49.03 226**	P	**P**	**03 37 36.8**	**-2.1**
BPAW	**Bear Paw Mtn.**	**49.30 33**	*e*P	**P**	**03 37 42.0**	**+1.6**
comp=Z,7.1nm,1.0s						
KTH	**Kantishna Hill**	**49.32 33**	*e*P	**P**	**03 37 41.6**	**+0.9**
comp=Z,15nm,0.8s						
COEN	**Coen**	**49.34 177**	*e*P	**P**	**03 37 41.9**	**+0.7**
comp=Z,46nm,1.0s						
BRLK	**Bradley Lake**	**49.41 38**	*e*P	**P**	**03 37 44.3**	**+3.0**
comp=Z,15nm,0.9s						
SUA	**Susitna One**	**49.42 36**	*e*P	**P**	**03 37 43.0**	**+1.5**
comp=Z,17nm,0.8s						
MLY	**Manley**	**49.43 31**	*e*P	**P**	**03 37 43.9**	**+2.4**
SRBI	**Singaraja**	**49.59 214**	P	**P**	**03 37 42.3**	**-0.8**
BOOM	**Boomskoye usch**	**49.60 299**	*e*P	**P**	**03 37 44.4**	**+1.1**
comp=Z,16nm,0.8s						
BOOM	**Boomskoye usch**	**49.60 299**	*e*P	**P**	**03 37 44.4**	**+1.1**
BOOM			pmax	pmax		
comp=Z,16nm,0.8s						
TKM2	**Tokmak 2**	**49.73 299**	P	**P**	**03 37 45.3**	**+1.0**
SNR=44						
RC01	**Rabbit Creek A**	**49.92 37**	*e*P	**P**	**03 37 45.2**	**0.0**
comp=Z,21nm,1.1s						
BWN	**Browne**	**49.97 33**	*e*P	**P**	**03 37 47.6**	**+2.0**
comp=Z,70nm,1.2s						
TOLK	**Toolik Lake Re**	**50.06 27**	*e*P	**P**	**03 37 47.8**	**+1.6**
comp=Z,13nm,1.0s						
TOLK	**Toolik Lake Re**	**50.06 27**	P	**P**	**03 37 47.4**	**+1.2**
baz=266,SNR=15						
PMR	**Palmer**	**50.19 36**	*e*P	**P**	**03 37 48.4**	**+1.2**
comp=Z,16nm,1.0s						
PMR	**Palmer**	**50.19 36**	*e*P	**P**	**03 37 48.4**	**+1.2**
PMR			pmax	pmax		
comp=Z,17nm,1.0s						
KZA	**Kyzart**	**50.20 298**	P	**P**	**03 37 50.2**	**+2.1**
SNR=24						
RND	**Reindeer**	**50.25 34**	*e*P	**P**	**03 37 48.9**	**+1.1**
comp=Z,30nm,1.4s						
RND	**Reindeer**	**50.25 34**	*e*P	**P**	**03 37 48.9**	**+1.1**
RND			pmax	pmax		
comp=Z,30nm,1.4s						
KBK	**Karagaybulak**	**50.26 299**	P	**P**	**03 37 49.6**	**+1.3**
SNR=32						
GHO	**Glory Hole Cre**	**50.28 36**	*e*P	**P**	**03 37 49.3**	**+1.3**
comp=Z,28nm,1.1s						
KSH	**Kashi**	**50.39 295**	P	**P**	**03 37 53.3**	**+4.1**
KSH			pP	sP	03 38 05.3	-1.4
KSH			sP	pP	03 38 11.5	+10
KSH			PP	**PP**	**03 39 50.9**	**+6.0**
KSH			S	**S**	**03 45 04.1**	**+4.6**
KSH			ScS	**ScS**	**03 47 37.8**	**+1.1**
KSH			pmax	pmax		
comp=Z,32nm,0.9s						
KSH			pmax	pmax		
comp=Z,380nm,7.5s						
KSH			LR	LR		
comp=Z,3μm,16.9s						
KSH			LR	LR		
comp=Z,790nm,12.9s						
KSH			LR	LR		
comp=Z,2μm,23.7s						
USP	**Ospenovka**	**50.42 300**	P	**P**	**03 37 50.3**	**+1.0**
SNR=12						
FRU1	**Bishkek**	**50.45 299**	*e*P	**P**	**03 37 50.6**	**+1.0**
comp=Z,45nm,0.5s						
PSI	**Prapat**	**50.48 239**	*e*P	**P**	**03 37 49.0**	**-1.1**
comp=Z,12nm,0.8s						
PSI	**Prapat**	**50.48 239**	*e*P	**P**	**03 37 49.0**	**-1.1**
PSI			pmax	pmax		
comp=Z,12nm,0.8s						
MDM	**Murphy Dome**	**50.50 31**	*e*P	**P**	**03 37 51.9**	**+2.3**
comp=Z,17nm,0.9s						
KNK	**Knik Glacier**	**50.52 36**	*e*P	**P**	**03 37 52.2**	**+2.4**
comp=Z,21nm,0.9s						
SML	**Sawmill**	**50.55 36**	*e*P	**P**	**03 37 52.0**	**+1.9**
comp=Z,18nm,0.8s						
SML	**Sawmill**	**50.55 36**	*e*P	**P**	**03 37 52.0**	**+1.9**
SML			pmax	pmax		
comp=Z,18nm,0.8s						
WRH	**Wood River Hil**	**50.56 32**	*e*P	**P**	**03 37 51.4**	**+1.4**
comp=Z,8.0nm,0.8s						
AAK	**Ala-Archa**	**50.59 299**	P	**P**	**03 37 51.0**	**+0.2**
SNR=15						
AAK	**Ala-Archa**	**50.59 299**	*e*P	**P**	**03 37 51.1**	**+0.4**
comp=Z,20nm,0.9s						
AAK	**Ala-Archa**	**50.59 299**	*i* P	**P**	**03 37 51.3**	**+0.6**
SNR=16						
AAK	**Ala-Archa**	**50.59 299**	*i* P	**P**	**03 37 51.2**	**+0.4**
AAK			pmax	pmax		
comp=Z,14nm,0.8s						
AAK	**Ala-Archa**	**50.59 299**	P	**P**	**03 37 51.7**	**+0.9**
SNR=9.6						
AAK			P	**P**	**03 37 51.7**	**+0.9**
SNR=9.6						
TCOL	**CIGO, UAF Yank**	**50.65 32**	P	**P**	**03 37 51.7**	**+1.0**
baz=271						
COLA	**College**	**50.66 32**	*e*P	**P**	**03 37 52.7**	**+2.0**
comp=Z,14nm,0.8s						
COLA	**College**	**50.66 32**	*e*P	**P**	**03 37 52.7**	**+2.0**
COLA			pmax	pmax		
comp=Z,14nm,0.8s						
CCB	**Clear Creek Bu**	**50.68 32**	*e*P	**P**	**03 37 52.1**	**+1.2**
comp=Z,6.6nm,1.2s						
UCH	**Uchtor**	**50.69 299**	P	**P**	**03 37 53.3**	**+1.5**
SNR=23						
BKNI	**Bangkinang**	**50.81 235**	*e*P	**P**	**03 37 51.6**	**-1.0**
comp=Z,83nm,0.5s						
POKR	**Poker Plat Res**	**50.83 31**	P	**P**	**03 37 53.5**	**+1.4**
baz=271						
DHY	**Denali Highway**	**50.93 34**	*e*P	**P**	**03 37 54.3**	**+1.3**
comp=Z,14nm,1.3s						
SCM	**Sheep Creek Mo**	**51.03 36**	*e*P	**P**	**03 37 55.3**	**+1.6**
comp=Z,21nm,1.1s						
SCM	**Sheep Creek Mo**	**51.03 36**	*e*P	**P**	**03 37 55.3**	**+1.6**
SCM			pmax	pmax		
comp=Z,21nm,1.1s						
HDA	**Harding Lake**	**51.06 32**	*e*P	**P**	**03 37 54.4**	**+0.6**
comp=Z,15nm,0.9s						
HDA	**Harding Lake**	**51.06 32**	P	**P**	**03 37 54.1**	**+0.3**
baz=272						
ILAR	**Eielson Array**	**51.07 32**	P	**P**	**03 37 53.7**	**-0.2**
comp=Z,11nm,0.8s,baz=270,slow=6.1,SNR=81						
ILB	**Eielson Array**	**51.07 32**	*e*P	**P**	**03 37 54.5**	**+0.6**
comp=Z,21nm,1.0s						
EKS2	**Erkin-Say**	**51.09 299**	P	**P**	**03 37 55.4**	**+0.9**
SNR=5.7						
BRVK	**Borovoye**	**51.11 313**	*e*P	**P**	**03 37 54.9**	**+0.6**
comp=Z,24nm,0.8s						
BRVK	**Borovoye**	**51.11 313**	*e*P	**P**	**03 37 54.9**	**+0.6**
BRVK			pmax	pmax		
comp=Z,24nm,0.8s						
BRVK	**Borovoye**	**51.11 313**	P	**P**	**03 37 54.7**	**+0.4**
SNR=20						
PWJI	**Pagerwojo**	**51.16 218**	P	**P**	**03 37 53.1**	**-1.9**
GLI	**Glacier Island**	**51.22 37**	*e*P	**P**	**03 37 56.8**	**+1.8**
comp=Z,17nm,1.2s						
AML	**Almayashu**	**51.30 299**	P	**P**	**03 37 58.0**	**+1.7**
SNR=49						
SDSI	**Sungai Dareh**	**51.49 234**	P	**P**	**03 37 56.5**	**-1.1**
UGM	**Wanagama**	**51.71 219**	*e*P	**P**	**03 37 57.2**	**-2.0**
comp=Z,276nm,1.4s						
PAX	**Paxson**	**51.81 34**	*e*P	**P**	**03 37 59.4**	**-0.1**
comp=Z,8.9nm,1.0s						
PAX	**Paxson**	**51.81 34**	*e*P	**P**	**03 37 59.4**	**-0.1**
PAX			pmax	pmax		
comp=Z,9.0nm,1.0s						
DIV	**Divide**	**51.84 36**	*e*P	**P**	**03 38 01.7**	**+2.0**
comp=Z,26nm,1.1s						
EYAK	**Cordova Ski Ar**	**51.91 37**	*e*P	**P**	**03 38 02.6**	**+2.5**
comp=Z,20nm,1.0s						
RIDG	**Independent Ri**	**52.03 33**	*e*P	**P**	**03 38 01.7**	**+0.7**
comp=Z,9.5nm,0.8s						
KRJI	**Kerinci**	**52.34 233**	P	P	03 38 12.6	+8.6
LEM	**Lembang**	**52.36 223**	P	**P**	**03 38 03.6**	**-0.6**
comp=Z,74nm,0.8s,baz=120,slow=16						
LHSI	**Lahat**	**52.37 229**	P	**P**	**03 38 03.1**	**-1.0**
SCRK	**Sand Creek**	**52.38 33**	*e*P	**P**	**03 38 04.6**	**+0.8**
comp=Z,18nm,0.9s						
MDSI	**Maura Dua**	**52.48 228**	P	**P**	**03 38 02.8**	**-2.1**
GSI	**Gunungsitoli**	**52.48 239**	*e*P	**P**	**03 38 03.0**	**-1.9**
comp=Z,88nm,1.1s						
GSI	**Gunungsitoli**	**52.48 239**	P	**P**	**03 38 03.1**	**-1.9**
MENT	**Mentasta**	**52.61 34**	*e*P	**P**	**03 38 07.7**	**+2.4**
comp=Z,20nm,1.0s						
KK31	**Karatay Array**	**53.27 301**	P	**P**	**03 38 10.6**	**+0.1**
KK31			pmax	pmax		
comp=Z,22nm,0.9s						
KKAR	**Karatay Array**	**53.27 301**	*e*P	**P**	**03 38 11.2**	**+0.7**
comp=Z,30nm,0.9s						
KKAR	**Karatay Array**	**53.27 301**	*e*P	**P**	**03 38 11.3**	**+0.7**
KKAR			pmax	pmax		
comp=Z,30nm,0.9s						
BALM	**Baldy**	**53.50 36**	*e*P	**P**	**03 38 13.8**	**+1.8**
comp=Z,12nm,0.9s						
BALM	**Baldy**	**53.50 36**	*e*P	**P**	**03 38 13.8**	**+1.8**
BALM			pmax	pmax		
comp=Z,12nm,0.9s						
EGAK	**Eagle**	**53.52 31**	*e*P	**P**	**03 38 12.7**	**+0.7**
comp=Z,10nm,0.9s						
NIL	**Nilore**	**54.43 289**	*e*P	**P**	**03 38 20.0**	**+0.8**
NIL	**Nilore**	**54.43 289**	*e*P	**P**	**03 38 20.0**	**+0.8**
EPYK	**Eagle Plains**	**55.11 29**	*e*P	**P**	**03 38 24.9**	**+1.3**
comp=Z,47nm,0.9s						
EPYK	**Eagle Plains**	**55.11 29**	P	**P**	**03 38 25.0**	**+1.4**
baz=280,SNR=32						
FITZ	**Fitzroy Crossi**	**55.24 197**	P	**P**	**03 38 25.0**	**0.0**
comp=Z,44nm,1.0s,baz=22,slow=8.6,SNR=18						
FITZ	**Fitzroy Crossi**	**55.24 197**	*e*P	**P**	**03 38 25.5**	**+0.5**
comp=Z,83nm,1.3s						
WRAB	**Tennant Creek**	**55.53 187**	*e*P	**P**	**03 38 26.6**	**-0.4**
comp=Z,59nm,1.0s						
WRAB	**Tennant Creek**	**55.53 187**	*e*P	**P**	**03 38 26.6**	**-0

KBL **Kabul** 57.31 292 *e*P P 03 38 40.0 0.0
KBL pmax pmax
comp=Z,19nm,1.0s
HYB **Hyderabad** 57.49 269 *i* P P 03 38 41.0 -0.3
ABKAR **Akbulak array** 58.36 311 *e*P P 03 38 46.2 -0.6
comp=Z,28nm,0.8s
AS31 **Alice Springs** 59.27 187 *e*P P 03 38 53.1 -0.2
comp=Z,2.6nm,0.6s
ASAR **Alice Springs** 59.27 187 P P 03 38 52.3 -1.1
comp=Z,9.8nm,0.9s,baz=8.9,slow=5.9,SNR=51
ASAR LR LR 04 01 59.3
comp=Z,164nm,21.2s,baz=16,slow=34
ASAR PKP2bc 04 08 34.4
comp=Z,1.1nm,0.8s,baz=191,slow=1.8,SNR=6.5
PSA00 **Pilbara Seismi** 60.15 202 *e*P P 03 38 59.4 0.0
comp=Z,50nm,1.1s
DLBC **Dease Lake** 60.18 37 *e*P P 03 39 02.1 +2.8
comp=Z,7.8nm,0.9s
PRGR **Permogore** 61.61 327 *e*P P 03 39 05.8 -3.1
PRGR pmax pmax
comp=Z,20nm,0.6s
KBS **Kingsbay** 61.96 350*ce*P P 03 39 12.7 +1.7
KBS pmax pmax
comp=Z,79nm,0.8s
KBS **Kingsbay** 61.96 350 *e*P P 03 39 13.0 +1.9
DZM **Mont Dzumac** 62.37 153 *e*LR LR 03 57 45.0
comp=Z,686nm,26.2s
DZM **Mont Dzumac** 62.37 153 *e*P P 03 39 16.9 +2.4
comp=Z,23nm,1.0s
HSPB **Hornsund (broa** 62.72 348 *e*P P 03 39 17.6 +1.5
LVZ **Lovozero** 63.15 336*ce*P P 03 39 18.1 -1.1
LVZ pmax pmax
comp=Z,26nm,2.5s
TMCR **Tamitsa** 63.69 332 *e*P P 03 39 22.6 -0.1
TMCR pmax pmax
comp=Z,33nm,1.0s
APA **Apatity** 63.73 336⇓*i*P P 03 39 21.7 -1.2
APA pmax pmax
comp=Z,8.0nm,0.7s
GEYT **Alibeck** 63.95 299 P P 03 39 25.1 +0.2
comp=Z,10nm,1.0s,baz=54,slow=2.6,SNR=21
GEYT LR LR 04 09 48.3
comp=Z,317nm,19.7s,baz=75,slow=38
RES **Resolute Bay** 64.16 14 *e*P P 03 39 26.2 +0.5
comp=Z,26nm,0.9s
RES **Resolute Bay** 64.16 14 *e*P P 03 39 26.2 +0.5
RES pmax pmax
comp=Z,26nm,0.9s
KEV **Kevo** 64.55 339 *e*P P 03 39 28.8 +0.5
comp=Z,22nm,1.0s
KEV **Kevo** 64.55 339 *e*P P 03 39 28.8 +0.5
KEV pmax pmax
comp=Z,22nm,1.0s
KLMR **Klimovskoe** 64.62 328 *e*P P 03 39 27.6 -1.2
KLMR pmax pmax
comp=Z,18nm,0.8s
HAMF **Hammerfest** 64.96 341 *e*P P 03 39 31.1 +0.2
ARCES **ARCESS Array B** 65.11 339 P P 03 39 32.5 +0.5
comp=Z,9.3nm,0.3s,baz=54,slow=8.2,SNR=40
ARCES LR LR 04 10 58.6
comp=Z,412nm,21.5s,baz=50,slow=39
ARE0 **ARCESS Array S** 65.11 339 *e*P P 03 39 32.6 +0.7
YKA **Yellowknife Ar** 65.39 30 P P 03 39 33.7 -0.1
comp=Z,5.9nm,0.9s,baz=297,slow=6.5,SNR=60
YKA LR LR 04 07 37.7
comp=Z,9.4nm,21.9s,baz=290,slow=36
YKA PKP2bc 04 08 09.7
comp=Z,0.7nm,0.9s,baz=111,slow=2.2,SNR=4.0
YKB5 **Yellowknife Ar** 65.39 30 *e*P P 03 39 33.7 -0.1
KTK1 **Kautokeino** 66.07 340 *e*P P 03 39 39.0 +0.9
TRO **Tromso** 66.86 341 *e*P P 03 39 43.2 +0.1
FORT **Forrest** 67.06 192 *e*P P 03 39 45.4 +0.6
comp=Z,49nm,0.8s
STKA **Stephens Creek** 67.12 179 P P 03 39 45.0 -0.2
comp=Z,6.8nm,0.9s,baz=340,slow=8.4,SNR=7.0
STKA LR LR 04 09 45.9
comp=Z,148nm,20.4s,baz=14,slow=36
STKA **Stephens Creek** 67.12 179 *e*P P 03 39 45.0 -0.2
comp=Z,3.3nm,1.1s
STKA **Stephens Creek** 67.12 179 P P 03 39 45.0 -0.2
DAG **Danmarks Havn** 67.15 355⇑*i*P P 03 39 44.9 0.0
DAG pmax pmax
comp=Z,10.0nm,0.9s
DAG **Danmarks Havn** 67.15 355⇑*i*P P 03 39 44.9 0.0
comp=Z,12nm,0.9s
DAG *i* 03 39 53.2
LLLB **Lillooet** 67.77 43 *e*P P 03 39 50.5 +1.2
comp=Z,8.0nm,1.1s
MOS **Moscow** 68.01 324 *e*P P 03 39 49.2 -1.4
MOS *e* 03 40 06.4
MOS *e*S S 03 48 43.5 -2.9
MOS pmax pmax
comp=Z,44nm,1.2s
VRH **Novokhopyorsk** 68.20 318 *e*P P 03 39 51.0 -0.9
VRH pmax pmax
comp=Z,50nm,0.7s
A04D **Lummi Island** 68.22 45 P P 03 39 52.4 +0.3
baz=300
D03D **Eldon** 68.58 46 P P 03 39 56.0 +1.6
baz=300
B05A **Bryant** 68.80 45 P P 03 39 57.0 +1.2
baz=300
OBN **Obninsk** 68.85 323⇓*e*P P 03 39 55.0 -0.8
OBN *e* 03 42 27.9
OBN pmax pmax
comp=Z,22nm,1.0s
OBN MLR MLR
comp=Z,267nm,15.0s
D04E **Lakebay** 68.95 47 P P 03 39 57.7 +1.1
baz=300
LPSR **Galich'ya Gora** 68.98 320 *e*P P 03 39 56.3 -0.4
LPSR pmax pmax
comp=Z,50nm,1.0s
STEI **Steigen** 69.00 341 *e*P P 03 39 57.0 +0.4
LOF **Lofoten** 69.31 341 *e*P P 03 39 59.2 +0.6
E04D **Cinebar** 69.38 47 P P 03 40 00.5 +1.2
baz=300
AKT **Akhty** 69.40 307 *e*P P 03 39 59.5 -0.2
AKT *e* 03 40 25.2
AKT *e* 03 42 42.5
AKT pmax pmax
comp=Z,53nm,1.1s
KULLO **Kullorsuaq** 69.47 5⇑*i*P P 03 39 59.6 +0.2
KULLO pmax pmax
comp=Z,30nm,0.9s
KULLO **Kullorsuaq** 69.47 5⇑*i*P P 03 39 59.6 +0.2
comp=Z,30nm,0.9s
VSR **Storozhevoye** 69.57 319 *e*P P 03 40 00.0 -0.4
VSR pmax pmax
comp=Z,40nm,0.7s
VORD **Divnogorie** 69.64 319 *e*P P 03 40 00.2 -0.6
VORD pmax pmax
comp=Z,20nm,0.7s
FIA0 **FINESS Array S** 69.78 332 *e*P P 03 40 00.8 -0.7
FIA0 **FINESS Array S** 69.78 332 *e*P P 03 40 00.8 -0.7
FINES **FINESS Array B** 69.78 332 P P 03 40 00.8 -0.7
comp=Z,22nm,0.9s,baz=57,slow=7.3,SNR=57
FINES LR LR 04 12 40.6
comp=Z,246nm,18.6s,baz=51,slow=38
FINES **FINESS Array B** 69.78 332 *i* P P 03 40 01.6 +0.1
FINES pmax pmax
comp=Z,22nm,0.9s
GROC **Groznyy** 69.78 309 *e*P P 03 39 59.9 -2.0
GROC *e* 03 40 23.8
GROC pmax pmax
comp=Z,21nm,0.7s
SEKA **Sheki** 69.88 307 P P 03 40 04.1 +1.5
ZKTA **Zakatala** 70.04 307 P P 03 40 04.6 +1.0
LKRN **Lenkeran, Azer** 70.07 304 P P 03 40 04.5 +0.8
LTY **Liberty** 70.14 46 *e*P P 03 40 05.5 +1.4
comp=Z,8.2nm,1.1s
MNGR **Mingechevir, A** 70.17 306 P P 03 40 05.0 +0.7
I03D **Drain, OR** 70.35 50 P P 03 40 06.6 +1.2
baz=301
GOF **Gofitskoye** 70.55 312⇑*e*P P 03 40 06.7 +0.1
GOF pmax pmax
comp=Z,59nm,0.9s
K02D **Willamette Mer** 70.66 51 P P 03 40 07.5 +0.1
baz=301
G05D **Wamic, OR** 70.80 48 P P 03 40 09.4 +1.3
baz=301
I04A **Tendick Farm,** 70.88 50 P P 03 40 09.5 +0.8
baz=301
L02E **Cave Junction** 70.97 51 P P 03 40 10.6 +1.3
baz=301
CAN **Canberra** 70.98 173 *e*P P 03 40 10.7 +1.5
comp=Z,28nm,1.4s
CAN **Canberra** 70.98 173 *e*P P 03 40 10.7 +1.5
CAN pmax pmax
comp=Z,28nm,1.4s
NCK **Nalchik** 71.02 310 *i* P P 03 40 07.6 -1.9
NCK pmax pmax
comp=Z,21nm,1.0s
SHME **Shamm** 71.09 289 *i* P P 03 40 10.8 +0.6
SNR=19
ZEI **Tsey** 71.19 309 *e*P P 03 40 08.5 -2.3
ZEI pmax pmax
comp=Z,15nm,0.7s
TBLG **Delisi** 71.21 308 *e*P P 03 40 11.6 +0.9
comp=Z,30nm,1.0s
TBLG **Delisi** 71.21 308 *e*P P 03 40 11.6 +0.9
TBLG pmax pmax
comp=Z,30nm,1.0s
C09A **Chrisman Ranch** 71.24 44 *e*P P 03 40 12.1 +1.4
comp=Z,12nm,1.0s
I05D **Terrebonne, OR** 71.26 49 P P 03 40 12.1 +1.1
baz=302
HAWA **Hanford** 71.26 46 *e*P P 03 40 13.2 +2.4
comp=Z,6.5nm,0.9s
D08A **Wollman Farm,** 71.26 45 *e*P P 03 40 12.5 +1.6
comp=Z,8.8nm,1.0s
KBZ **Khabaz** 71.33 311 P P 03 40 12.0 +0.7
comp=Z,28nm,0.8s,baz=61,slow=3.8,SNR=70
KBZ LR LR 04 15 17.7
comp=Z,241nm,20.6s,baz=61,slow=39
KIV **Kislovodsk** 71.34 311 *e*P P 03 40 12.0 +0.5
comp=Z,52nm,0.8s
KIV **Kislovodsk** 71.34 311⇓*i*P P 03 40 12.1 +0.6
KIV **Kislovodsk** 71.34 311 *i* P P 03 40 12.1 +0.6
SNR=9.4
KIV **Kislovodsk** 71.34 311 *e*P P 03 40 12.0 +0.5
KIV pmax pmax
comp=Z,52nm,0.8s
KIV **Kislovodsk** 71.34 311 P P 03 40 12.3 +0.8
SNR=21
KIV P P 03 40 12.3 +0.8
SNR=21
MDH **Madha** 71.35 288 P P 03 40 11.7 0.0
VSU **Vasula** 71.35 330*ce*P P 03 40 10.9 -0.3
VSU pmax pmax
comp=Z,76nm,0.8s
VSU **Vasula** 71.35 330 *e*P P 03 40 10.8 -0.3
VSU IAmb IAmb 03 40 12.8
comp=Z,81nm,0.9s
J04D **Umpqua Nationa** 71.36 50 P P 03 40 12.7 +0.9
baz=302
MSFE **Esma-Masafi** 71.43 288 *i* P P 03 40 12.7 +0.5
SNR=9.2
E08A **Dider Farm, El** 71.48 46 *e*P P 03 40 14.0 +1.8
comp=Z,8.9nm,1.1s
NWAO **Narrogin (SRO)** 71.58 201 P P 03 40 13.1 +0.3
comp=Z,12nm,0.8s,baz=131,slow=7.7,SNR=2.3
UOSS **Minazif** 71.61 288 *e*P P 03 40 13.9 +0.6
comp=Z,26nm,1.0s
UOSS **Minazif** 71.61 288 *i* P P 03 40 13.7 +0.4
SNR=6.6
NEW **Newport** 71.64 43 *e*P P 03 40 14.4 +1.2
comp=Z,16nm,1.3s
NEW **Newport** 71.64 43 *e*P P 03 40 14.4 +1.2
NEW pmax pmax
comp=Z,16nm,1.3s
NEW **Newport** 71.64 43 P P 03 40 13.6 +0.4
baz=303,SNR=7.5
NEY **Neytrino** 71.69 310⇓*e*P P 03 40 15.3 +1.6
NEY pmax pmax
comp=Z,3.0nm,0.8s
HATD **Hatta, Dubai** 71.72 288 *i* P P 03 40 14.7 +0.6
SNR=12
HATD **Hatta, Dubai** 71.72 288 P P 03 40 15.2 +1.1
SNR=6.5
HATD P P 03 40 15.2 +1.1
SNR=6.5
L04D **Klamath Falls** 71.77 51 P P 03 40 14.5 +0.3
baz=302
SOHO **SOHO** 71.77 287 P P 03 40 15.1 +0.9
SNR=7.0
SOHO P P 03 40 15.1 +0.9
SNR=7.0
PINE **Pine Mountain** 71.79 49 *e*P P 03 40 16.7 +2.4
comp=Z,14nm,1.0s
M02C **Callahan** 71.85 52 P P 03 40 15.9 +1.2
baz=302
ASHO **Ashiyiah** 71.85 288 *i* P P 03 40 15.2 +0.4
SNR=12
ASHO **Ashiyiah** 71.85 288 P P 03 40 16.7 +1.8
SNR=6.1
ASHO P P 03 40 16.7 +1.8
SNR=6.1
J05D **Fort Rock, OR** 71.88 50 P P 03 40 15.8 +1.0
baz=302
E09A **Wood Farm, Sta** 72.00 45 *e*P P 03 40 17.2 +1.9
comp=Z,13nm,1.0s
GNI **Garni** 72.03 307 *e*P P 03 40 17.5 +1.7
comp=Z,64nm,1.2s
GNI **Garni** 72.03 307 *i* P P 03 40 17.1 +1.3
SNR=10
GNI **Garni** 72.03 307*ce*P P 03 40 16.9 +1.1
GNI pmax pmax
comp=Z,253nm,1.3s
GNI **Garni** 72.03 307 P P 03 40 17.5 +1.7
SNR=12
GNI P P 03 40 17.5 +1.7
SNR=12
NAX **Nakhchivan** 72.04 306 P P 03 40 16.7 +0.9
SUMG **Summit** 72.12 360 *e*P P 03 40 17.4 +1.3
comp=Z,24nm,1.0s
SUMG **Summit** 72.12 360 *e*P P 03 40 17.4 +1.3
SUMG pmax pmax
comp=Z,24nm,1.0s
SUMG **Summit** 72.12 360 *i* P P 03 40 17.2 +1.1
N02D **Trinity Center** 72.17 52 P P 03 40 17.4 +0.9
baz=302
AKH **Akhalkalaki** 72.17 308 *e*P P 03 40 18.2 +1.6
comp=Z,25nm,0.8s
AKH **Akhalkalaki** 72.17 308⇓*i*P P 03 40 18.4 +1.7
FAQ **Al Faqa, Dubai** 72.18 288 *i* P P 03 40 16.9 +0.1
SNR=10
G08A **Pilot Rock** 72.19 47 *e*P P 03 40 18.3 +1.7
comp=Z,5.8nm,1.3s
MHTO **MHTO** 72.29 283 P P 03 40 19.0 +1.6
SNR=6.3
M04C **Macdoel** 72.29 51 P P 03 40 18.5 +1.2
baz=302
K05A **Summer Lake** 72.39 50 *e*P P 03 40 20.4 +2.4
comp=Z,16nm,0.9s
NSS **Namsos** 72.39 339 *e*P P 03 40 17.3 +0.1
ALNE **Al Ain** 72.42 287 *i* P P 03 40 18.5 +0.3
SNR=9.0
ASUD **Al Ashush, Dub** 72.45 288 *i* P P 03 40 19.1 +0.7
SNR=12
O02D **Mt. Diablo Mer** 72.53 53 P P 03 40 19.1 +0.4
baz=302
EPOS **Posof** 72.61 309 *i* P P 03 40 21.5 +2.3
F10A **Beach Ranch, E** 72.83 46 *e*P P 03 40 22.2 +1.8
comp=Z,5.2nm,1.0s
WALA **Waterton Lakes** 72.96 42 *e*P P 03 40 22.8 +1.7
comp=Z,9.4nm,0.9s
O03E **Paynes Creek** 73.11 52 P P 03 40 22.3 +0.2
baz=302
MOD **Modoc Plateau** 73.20 50 *e*P P 03 40 24.5 +1.8
comp=Z,6.0nm,1.0s
BATM **Batumi** 73.21 309⇓*i*P P 03 40 22.9 +0.3
IZAR **Zarasai** 73.26 327 *e*P P 03 40 22.8 +0.2
IZAR IAmb IAmb 03 40 24.6
comp=Z,6.6nm,0.7s
ARTV **Artvin** 73.29 309 *i* P P 03 40 25.0 +1.7
ARTV IAML_P
comp=Z,1μm,0.7s
IDID **Didziasalis** 73.32 327 *e*P P 03 40 23.3 +0.4
IDID IAmb IAmb 03 40 24.7
comp=Z,10nm,0.9s
BCA **Borcka** 73.34 309⇓*i*P P 03 40 23.7 +0.3
DAGI **Agillar** 73.36 309 *i* P P 03 40 25.1 +1.5
DAGI IAML_P
comp=Z,210nm,0.8s
SOC **Sochi** 73.36 312 *e*P P 03 40 22.2 -1.2
SOC *e**PP **PcP** 03 40 38.9 -0.6
SOC *e**SP **sP** 03 40 44.0 +2.7
SOC *e* 03 43 06.2
SOC *e*PPP PPP 03 44 49.5
SOC *e*S **S** 03 49 43.5 -5.5
SOC *e**SS **sS** 03 50 15.7 +5.2
SOC *e*SS **SS** 03 54 26.0 -4.9
SOC pmax pmax
comp=Z,31nm,0.7s
SOC MLR MLR
comp=Z,235nm,19.0s
DBOC **Borcka** 73.37 309 *i* P P 03 40 25.0 +1.4
DBOC IAML_P
comp=Z,886nm,0.6s
BMO **Blue Mountains** 73.41 47 *e*P P 03 40 25.2 +1.3
comp=Z,9.3nm,1.3s
BMO **Blue Mountains** 73.41 47 *e*P P 03 40 25.2 +1.3
BMO pmax pmax
comp=Z,9.0nm,1.3s
ISAL **Salakas** 73.43 327 *e*P P 03 40 24.1 +0.5
ISAL IAmb IAmb 03 40 25.5
comp=Z,24nm,1.1s
SCO **Scoresbysund** 73.48 354 *e*P P 03 40 24.8 +1.2
SCO pmax pmax
comp=Z,17nm,0.9s
SCO **Scoresbysund** 73.48 354 *i* P P 03 40 24.8 +1.2
comp=Z,17nm,0.9s
IIGN **Ignalina** 73.52 327 *e*P P 03 40 24.4 +0.2
IIGN IAmb IAmb 03 40 26.1
comp=Z,9.5nm,0.8s
DBAD **Bademkaya** 73.53 309 *i* P P 03 40 25.2 +0.6
DBAD IAML_P
comp=Z,582nm,0.7s
J08A **Circle Bar Ran** 73.53 48 *e*P P 03 40 26.4 +1.8
comp=Z,13nm,1.2s
EATA **Eleskirt** 73.64 307 *i* P P 03 40 27.9 +2.3
EATA IAML_P
comp=Z,548nm,0.4s
ORV **Oroville** 73.70 53 *e*P P 03 40 26.7 +1.2
comp=Z,4.4nm,0.9s
ORV **Oroville** 73.70 53 *e*P P 03 40 26.7 +1.2
ORV pmax pmax
comp=Z,4.0nm,0.9s
TBLU **Trondheim** 73.86 339 *e*P P 03 40 25.6 -0.3
HOMI **Horasan** 73.92 308 *i* P P 03 40 28.7 +1.6
HOMI IAML_P
comp=Z,18nm,0.1s
WVOR **Wild Horse Val** 73.94 49 *e*P P 03 40 29.0 +1.9
comp=Z,5.6nm,1.1s
WVOR **Wild Horse Val** 73.94 49 *e*P P 03 40 29.0 +1.9
WVOR pmax pmax
comp=Z,6.0nm,1.1s
ANN **Anapa** 74.04 314 *e*P P 03 40 25.6 -1.8
ANN *e**PP **PcP** 03 40 42.6 +0.2
ANN *e* 03 43 09.4
ANN *e*PPP PPP 03 44 57.7
ANN *e*S **SKiKP** 03 49 50.6 -1.1
ANN pmax pmax
comp=Z,61nm,1.3s
ANN MLR MLR
comp=N,320nm,22.0s
ANN MLR MLR
comp=E,202nm,22.0s
ANN MLR MLR
comp=Z,325nm,22.0s
HAKT **HAKKARI** 74.09 305 *i* P P 03 40 29.5 +1.4
HAKT IAML_P
comp=Z,413nm,0.7s
MSO **Missoula** 74.23 43 *e*P P 03 40 29.4 +0.8
comp=Z,8.4nm,1.1s
MSO **Missoula** 74.23 43 P P 03 40 28.7 +0.1
baz=305,SNR=7.9
BEKR **Beckworth** 74.27 52 *e*P P 03 40 30.7 +1.6
comp=Z,7.6nm,0.9s
AFDM **Forest Hills D** 74.38 53 *e*P P 03 40 31.2 +1.7
comp=Z,5.8nm,1.3s
KRIK **Erzurum-spir** 74.39 309 *i* P P 03 40 32.2 +2.4
KRIK IAML_P
comp=Z,65nm,0.1s
PABE **Paberze** 74.41 328 *e*P P 03 40 29.0 -0.3
PABE IAmb IAmb 03 40 30.8
comp=Z,44nm,1.0s
BAYB **BAYBURT** 74.86 309 *i* P P 03 40 33.0 +0.5
BAYB IAML_P
comp=Z,763nm,0.6s
MUSM **Mu-Merkez** 74.90 307 *i* P P 03 40 34.3 +1.6
MUSM IAML_P
comp=Z,282nm,0.7s
PBUR **Paburg** 74.92 329 *e*P P 03 40 32.2 -0.1
PBUR IAmb IAmb 03 40 34.7
comp=Z,34nm,0.9s
PAHR **Pah Rah Range** 74.98 52 *e*P P 03 40 34.8 +1.6
comp=Z,5.8nm,1.0s
AKASG **Malin Array Be** 75.02 322 P P 03 40 33.1 +0.1
comp=Z,24nm,0.8s,baz=47,slow=6.2,SNR=77
AKASG LR LR 04 16 31.0
comp=Z,676nm,18.7s,baz=55,slow=38
AKASG **Malin Array Be** 75.02 322 *i* P P 03 40 33.0 +0.1
AKASG pmax pmax
comp=Z,25nm,0.8s
AKBB **Malin Array Si** 75.02 322 *e*P P 03 40 33.1 +0.1
comp=Z,34nm,0.8s
AKBB **Malin Array Si** 75.02 322 *e*P P 03 40 33.1 +0.1
AKBB pmax pmax
comp=Z,34nm,0.8s
SRTM **Siirt_Merkez** 75.03 306 *i* P P 03 40 34.5 +1.0
SRTM IAML_P
comp=Z,865nm,0.8s
KIEV **Kiev** 75.03 322⇑*i*P P 03 40 32.7 -0.3
KIEV **Kiev** 75.03 322 *i* P P 03 40 33.0 0.0
SNR=20
KIEV **Kiev** 75.03 322*c i*P P 03 40 32.8 -0.3
KIEV pmax pmax
comp=Z,39nm,0.9s
VCNR **Virginia City** 75.04 52 *e*P P 03 40 35.2 +1.6
comp=Z,3.9nm,1.0s
DOMB **Dombas** 75.14 339 *e*P P 03 40 34.1 +0.5
MOL **Molde** 75.17 340 *e*P P 03 40 34.5 +0.9
PNTR **Pine Nut** 75.19 52 *e*P P 03 40 36.5 +2.0
comp=Z,4.9nm,0.8s
NB2 **NORSAR Subarra** 75.25 337 P P 03 40 34.0 -0.2
comp=Z,25nm,0.8s,baz=40,slow=5.9
NB2 **NORSAR Subarra** 75.25 337 P P 03 40 34.0 -0.2
baz=40,slow=5.9
NB200 **NORSAR Array S** 75.25 337 *e*P P 03 40 34.0 -0.2
NB200 *e*PP **PP** 03 43 21.4 -1.1
NOA **NORSAR Array B** 75.25 337 P P 03 40 34.0 -0.2
comp=Z,24nm,0.9s,baz=40,slow=5.8,SNR=106
NOA PP **PP** 03 43 21.4 -1.1
comp=Z,2.6nm,0.8s,baz=44,slow=8.7,SNR=4.5
NOA LR LR 04 16 20.6
comp=Z,384nm,20.6s,baz=35,slow=38
CMB **Columbia Colle** 75.26 54 *e*P P 03 40 36.1 +1.4
comp=Z,5.5nm,0.8s
FFC **Flin Flon** 75.28 32 *e*P P 03 40 34.9 +0.5
comp=Z,21nm,1.0s
FFC **Flin Flon** 75.28 32 *i* P P 03 40 34.9 +0.5
HRY **Holter Researc** 75.47 43 *e*P P 03 40 37.2 +1.4
YERR **Yerington** 75.48 52 *e*P P 03 40 38.0 +1.9
comp=Z,9.4nm,1.1s
NAO01 **NORSAR Array S** 75.51 337 *e*P P 03 40 35.8 +0.2
KELT **Kelkit** 75.55 309 *i* P P 03 40 37.7 +1.2
KELT IAML_P
comp=Z,362nm,0.8s
FCC **Fort Churchill** 75.59 26 *e*P P 03 40 35.9 -0.2
comp=Z,29nm,1.1s
FCC **Fort Churchill** 75.59 26 *e*P P 03 40 35.9 -0.2
FCC pmax pmax
comp=Z,29nm,1.1s
WAKR **Walker** 75.62 53 *e*P P 03 40 39.0 +2.1
comp=Z,3.8nm,0.8s
AKN **Aaknes** 75.64 339 *e*P P 03 40 37.0 +0.7
SUW **Suwalki** 75.74 327 *e*P P 03 40 36.5 -0.5
SUW **Suwalki** 75.74 327 *e*P P 03 40 37.3 +0.3
SUW **Suwalki** 75.74 327 *e*P P 03 40 37.3 +0.3
comp=Z,24nm,0.9s
SUW **Suwalki** 75.74 327 *e*P P 03 40 37.3 +0.3
SUW pmax pmax
comp=Z,24nm,0.9s
HANI **Diyarbakir_Han** 75.80 307 *i* P P 03 40 39.3 +1.5
HANI IAML_P
comp=Z,15nm,0.3s
EGMT **Eagleton** 75.80 41 *e*P P 03 40 38.7 +1.1
comp=Z,25nm,0.9s
EGMT **Eagleton** 75.80 41 P P 03 40 37.9 +0.3
baz=308,SNR=15
DLMT **Dillon** 75.84 44 *e*P P 03 40 39.8 +1.8
comp=Z,17nm,1.0s
HLID **Hailey** 75.85 46 *e*P P 03 40 39.7 +1.6
comp=Z,4.8nm,0.9s
HLID **Hailey** 75.85 46 P P 03 40 39.3 +1.2
baz=306
SIM **Simferopol'** 75.88 315*d i*P P 03 40 38.6 +0.6

SIM pmax pmax
comp=Z,33nm,0.8s
BMN Battle Mountai 75.95 50 *e*P **P 03 40 40.5 +1.8**
comp=Z,9.5nm,1.0s
BMN Battle Mountai 75.95 50 *e*P **P 03 40 40.5 +1.8**
BMN pmax pmax
comp=Z,9.0nm,1.0s
MCMT McKenzie Canyo 76.02 45 *e*P **P 03 40 42.6 +3.4**
RYN Ryan 76.14 52 *e*P **P 03 40 41.8 +1.9**
comp=Z,5.9nm,1.1s
KVN Kaiserville 76.18 52 *e*P **P 03 40 41.7 +1.6**
comp=Z,8.0nm,1.1s
BOZ Bozeman (W) 76.25 43 *e*P **P 03 40 41.6 +1.3**
comp=Z,9.9nm,0.9s
BOZ Bozeman (W) 76.25 43 *e*P **P 03 40 41.6 +1.3**
BOZ pmax pmax
comp=Z,10.0nm,0.9s
BOZ Bozeman (W) 76.25 43 P **P 03 40 41.2 +0.9**
baz=307,SNR=18
OSL Oslo 76.25 337 *e*P **P 03 40 41.1 +1.3**
MDPB Devils Postpil 76.34 53 *e*P **P 03 40 43.5 +2.4**
comp=Z,4.6nm,1.0s
NV01 Mina Array Sit 76.40 52 *e*P **P 03 40 42.5 +1.2**
NVAR Mina Array Bea 76.40 52 P **P 03 40 42.5 +1.1**
comp=Z,4.8nm,0.6s,baz=289,slow=5.9,SNR=31
NVAR LR LR 04 07 38.1
comp=Z,129nm,21.6s,baz=276,slow=30
OMMB Old Mammoth Mi 76.41 53 *e*P **P 03 40 43.5 +2.0**
comp=Z,9.8nm,1.5s
NV11 Mina Array Sit 76.49 52 *e*P **P 03 40 43.4 +1.5**
comp=Z,0.2nm,0.7s
KEMA Kemaliye 76.54 309 *i*P **P 03 40 44.0 +2.0**
KEMA IAML_P
comp=Z,661nm,0.8s
PAGB Antelope Grade 76.64 56 *e*P **P 03 40 45.1 +2.6**
comp=Z,10nm,0.9s
CUZAR Zara_SIVAS 76.64 310 *i*P **P 03 40 44.2 +1.6**
HYA Hoyanger 76.68 339 *e*P **P 03 40 43.5 +1.3**
QLMT Earthquake Lak 76.82 44 *e*P **P 03 40 45.3 +1.6**
KONO Kongsberg 76.84 337 *e*P **P 03 40 44.0 +0.9**
comp=Z,20nm,1.0s
KONO Kongsberg 76.84 337 *ce*P **P 03 40 44.1 +0.9**
KONO pmax pmax
comp=Z,28nm,1.7s
KONO Kongsberg 76.84 337 *e*P **P 03 40 43.8 +0.7**
ELK Elko 77.00 49 *e*P **P 03 40 46.5 +1.7**
comp=Z,5.9nm,1.1s
ELK Elko 77.00 49 *e*P **P 03 40 46.5 +1.7**
ELK pmax pmax
comp=Z,6.0nm,1.1s
YHB Horse Butte 77.00 44 *e*P **P 03 40 46.7 +2.0**
comp=Z,11nm,1.1s
HEKM Malatya_Hekimh 77.10 309 *i*P **P 03 40 47.4 +2.1**
HEKM IAML_P
comp=Z,175nm,0.1s
DIKM Dikmen 77.16 312⇑*i*P **P 03 40 45.8 +0.5**
YHH Holmes Hill 77.18 44 *e*P **P 03 40 47.7 +2.0**
comp=Z,11nm,1.4s
SUE Sulen 77.18 340 *e*P **P 03 40 45.5 +0.5**
GCMT Greycliff 77.22 42 *e*P **P 03 40 47.2 +1.5**
VES Vestal, Richgr 77.35 55 P **P 03 40 48.4 +1.8**
baz=305
SFJD Kangerlussuaq 77.38 4 *i*P **P 03 40 46.2 +0.2**
SFJD pmax pmax
comp=Z,13nm,0.9s
SFJD Kangerlussuaq 77.38 4 *i*P **P 03 40 46.2 +0.2**
comp=Z,13nm,0.9s
YFT Old Faithful 77.39 44 *e*P **P 03 40 50.6 +3.7**
comp=Z,7.7nm,0.9s
AKCD Akcadag 77.46 308 *i*P **P 03 40 50.0 +2.7**
AKCD IAML_P
comp=Z,677nm,0.3s
YPP Pitchstone Pla 77.52 44 *e*P **P 03 40 50.5 +2.8**
comp=Z,8.4nm,1.3s
ASK Askoy 77.52 339 *e*P **P 03 40 48.1 +1.2**
ODD1 Odda 77.56 338 *e*P **P 03 40 48.4 +1.1**
BER Bergen 77.56 339 *e*P **P 03 40 48.1 +1.0**
H17A Grant Village 77.57 44 *e*P **P 03 40 51.2 +3.2**
comp=Z,19nm,1.1s
H17A Grant Village 77.57 44 P **P 03 40 50.2 +2.3**
baz=308,SNR=10
IMW Indian Meadow 77.67 45 *e*P **P 03 40 50.6 +2.1**
comp=Z,6.1nm,0.9s
CWC Cottonwood Cre 77.68 54 P **P 03 40 49.5 +0.9**
baz=305
FLWY Flagg Ranch 77.69 44 *e*P **P 03 40 51.5 +2.9**
comp=Z,9.7nm,1.1s
FXWY Fox Creek 77.78 45 *e*P **P 03 40 50.9 +1.9**
comp=Z,5.0nm,1.1s
GRAC Grapevine Rang 77.83 53 P **P 03 40 49.9 +0.7**
baz=306
RLMT Red Lodge 77.86 43 *e*P **P 03 40 51.1 +1.7**
comp=Z,9.1nm,1.1s
RLMT Red Lodge 77.86 43 P **P 03 40 50.7 +1.3**
baz=309,SNR=6.9
ISA Isabella, Lake 77.86 55 P **P 03 40 50.2 +0.7**
baz=305
MOOW Moose Ponds 77.87 45 *e*P **P 03 40 51.7 +2.1**
comp=Z,5.0nm,0.9s
HVU Hansel Valley 77.88 47 *e*P **P 03 40 51.7 +2.1**
comp=Z,6.9nm,0.9s
HVU Hansel Valley 77.88 47 *e*P **P 03 40 51.7 +2.1**
HVU pmax pmax
comp=Z,7.0nm,0.9s
TPAW Teton Pass 77.91 45 *e*P **P 03 40 51.9 +2.0**
comp=Z,6.8nm,1.1s
BLS5 Blasjo 78.00 338 *e*P **P 03 40 50.7 +1.0**
LOHW Long Hollow 78.04 45 *e*P **P 03 40 52.3 +1.9**
comp=Z,7.7nm,1.4s
REDW Red Top Meadow 78.05 45 *e*P **P 03 40 52.9 +2.3**
comp=Z,11nm,1.3s
LVV L'vov 78.14 324 *e*P **P 03 40 51.3 +0.7**
LVV *e* 03 41 07.9
COAL Corum-Alaca 78.15 311 *i*P **P 03 40 52.6 +1.6**
COAL IAML_P
comp=Z,149nm,0.7s
R11A Troy Canyon, C 78.19 51 *e*P **P 03 40 52.7 +1.4**
comp=Z,5.4nm,1.0s
R11A Troy Canyon, C 78.19 51 P **P 03 40 52.2 +0.9**
baz=306
BGU Big Grassy Mou 78.24 48 *e*P **P 03 40 53.2 +1.6**
comp=Z,3.8nm,0.9s
BEL Belsk 78.28 327 *e*P **P 03 40 52.3 +1.0**
BEL Belsk 78.28 327 *e*P **P 03 40 52.7 +1.4**
BEL Belsk 78.28 327 *e*P **P 03 40 52.3 +1.0**
MPMC Manual Prospec 78.29 54 P **P 03 40 52.9 +0.9**
baz=306
SPUT South Promonto 78.36 47 *e*P **P 03 40 54.4 +2.1**
comp=Z,3.3nm,0.9s
DGMT Dagmar 78.39 38 P **P 03 40 52.4 +0.3**
baz=311
BSD Bornholm Skovb 78.39 332⇑*i*P **P 03 40 51.5 -0.4**
BSD pmax pmax
comp=Z,38nm,0.9s
BSD Bornholm Skovb 78.39 332⇑*i*P **P 03 40 51.5 -0.4**
comp=Z,38nm,0.9s
ILGA Ilgaz 78.45 312 *e*P **P 03 40 54.5 +1.7**
comp=Z,34nm,0.8s
FURC Furnace Creek, 78.46 53 P **P 03 40 53.6 +1.0**
baz=306
LAO LASA Array 78.51 40 *e*P **P 03 40 54.4 +1.5**
comp=Z,18nm,1.0s
LAO LASA Array 78.51 40 P **P 03 40 53.7 +0.9**
baz=310,SNR=5.1
KMY Karmoy 78.54 338 *e*P **P 03 40 54.1 +1.5**
TPNV Topopah Spring 78.58 53 *e*P **P 03 40 55.2 +1.7**
comp=Z,4.7nm,0.8s
TPNV Topopah Spring 78.58 53 *e*P **P 03 40 55.2 +1.7**
TPNV pmax pmax
comp=Z,5.0nm,0.8s
TPNV Topopah Spring 78.58 53 P **P 03 40 54.3 +0.7**
baz=306
STAV Stavanger 78.63 338 *e*P **P 03 40 53.5 +0.4**
EDW2 Edwards Air Fo 78.63 55 P **P 03 40 54.6 +0.9**
baz=306
HWUT Hardware Ranch 78.71 47 *e*P **P 03 40 58.7 +4.5**
comp=Z,6.2nm,1.0s
GKP Gorka Klasztor 78.80 329 *e*P **P 03 40 54.3 +0.1**
GKP Gorka Klasztor 78.80 329 *e*P **P 03 40 54.8 +0.6**
GKP Gorka Klasztor 78.80 329 *e*P **P 03 40 54.3 +0.1**
DUG Dugway, Tooele 78.81 48 *e*P **P 03 40 56.3 +1.6**
comp=Z,8.9nm,0.9s
DUG Dugway, Tooele 78.81 48 *e*P **P 03 40 56.3 +1.6**
DUG pmax pmax
comp=Z,9.0nm,0.9s
DUG Dugway, Tooele 78.81 48 P **P 03 40 55.6 +0.9**
baz=307
ANDN Andirin 78.89 308 *i*P **P 03 40 57.0 +1.8**
ANDN IAML_P
comp=Z,600nm,0.7s
KWP Kalwaria Pacla 78.90 324 *e*P **P 03 40 55.4 +0.5**
KWP Kalwaria Pacla 78.90 324 *e*P **P 03 40 55.6 +0.7**
KWP Kalwaria Pacla 78.90 324 *e*P **P 03 40 55.4 +0.5**
comp=Z,555nm,1.0s
KWP Kalwaria Pacla 78.90 324 *e*P **P 03 40 55.4 +0.5**
COP Copenhagen 78.91 333 *e*P **P 03 40 54.1 -0.6**
COP Copenhagen 78.91 333 *i*P **P 03 40 54.1 -0.6**
CDAG Cicekdag 78.91 311 *i*P **P 03 40 57.0 +1.8**
CDAG IAML_P
comp=Z,427nm,0.7s
DELI KIRIKKALE 78.96 311 *i*P **P 03 40 56.6 +1.1**
DELI IAML_P
comp=Z,303nm,0.8s
BORG Borgarnes 78.99 352 *e*P **P 03 40 57.6 +2.6**
comp=Z,45nm,1.2s
BORG Borgarnes 78.99 352 *e*P **P 03 40 57.6 +2.6**
BORG pmax pmax
comp=Z,45nm,1.2s
TESR Tescani 79.01 320⇑*i*P **P 03 40 55.2 -0.3**
BIZ Bicaz 79.01 321⇓*i*P **P 03 40 56.5 +1.0**
BUR08 Bucovina Ar. S 79.01 322 *e*P **P 03 40 56.5 +0.8**
comp=Z,12nm,0.9s
BURAR Bucovina Array 79.02 321⇑*i*P **P 03 40 56.1 +0.4**
CFR Carcaliu 79.08 318⇓*i*P **P 03 40 56.2 +0.4**
CFR Carcaliu 79.08 318 ⇓P **P 03 40 56.2 +0.4**
TCUT Toone Canyon 79.10 47 *e*P **P 03 40 58.5 +2.1**
comp=Z,12nm,1.1s
BW06 Boulder Array 79.16 45 *e*P **P 03 40 57.6 +0.9**
comp=Z,2.8nm,0.7s
BW06 Boulder Array 79.16 45 P **P 03 40 57.3 +0.6**
baz=309,SNR=5.6
PD31 Pinedale Array 79.16 45 *e*P **P 03 40 57.9 +1.2**
PDAR Pinedale Array 79.16 45 P **P 03 40 57.1 +0.4**
comp=Z,2.3nm,0.7s,baz=276,slow=2.4,SNR=16
PDAR LR LR 04 11 11.6
comp=Z,101nm,21.9s,baz=325,slow=32
PSUT Pine Spring 79.17 50 *e*P **P 03 41 01.2 +4.4**
comp=Z,6.0nm,0.9s
GSC Goldstone, Bar 79.18 54 *e*P **P 03 40 58.8 +2.1**
comp=Z,11nm,1.4s
GSC Goldstone, Bar 79.18 54 P **P 03 40 57.9 +1.2**
baz=306
CIS Catalina Islan 79.21 57 P **P 03 40 57.4 +0.6**
baz=306
BFSC Mount Baldy Ra 79.23 56 P **P 03 40 57.6 +0.5**
baz=306
BR101 Keskin Array S 79.30 311 *e*P **P 03 40 57.2 -0.2**
BR131 Keskin Array S 79.30 311 P **P 03 40 58.3 +0.9**
SNR=21
BRTR Keskin Array B 79.30 311 P **P 03 40 57.2 -0.2**
comp=Z,12nm,0.8s,baz=107,slow=4.0,SNR=72
BRTR LR LR 04 20 39.2
comp=Z,100nm,19.7s,baz=60,slow=39
BRTR Keskin Array B 79.30 311 *i*P **P 03 40 58.0 +0.6**
BRTR pmax pmax
comp=Z,13nm,0.8s
TIRR Tirgusor 79.39 318 *e*P **P 03 40 58.0 +0.4**
comp=Z,30nm,1.0s
TIRR Tirgusor 79.39 318⇓*i*P **P 03 40 57.9 +0.4**
TIRR Tirgusor 79.39 318 *e*P **P 03 40 58.0 +0.4**
TIRR pmax pmax
comp=Z,30nm,1.0s
VRI Vrincioaia 79.39 319⇑*i*P **P 03 40 59.0 +1.4**
VRI Vrincioaia 79.39 319 ⇑P **P 03 40 59.0 +1.4**
NLU North Lily Min 79.41 48 *e*P **P 03 40 60.0 +1.9**
comp=Z,6.3nm,1.0s
MUD Monsted U'grnd 79.48 335 *i*P **P 03 40 57.3 -0.5**
MUD pmax pmax
comp=Z,24nm,1.1s
MUD Monsted U'grnd 79.48 335 *i*P **P 03 40 57.3 -0.5**
comp=Z,24nm,1.1s
SHPR Sheep Range 79.55 53 *e*P **P 03 41 01.9 +3.1**
comp=Z,2.9nm,0.9s
KOLS Kolonicke sedl 79.59 324 *e*P **P 03 40 59.1 +0.5**
KOLS pmax pmax
comp=Z,10.0nm,1.0s
KOLS Kolonicke sedl 79.59 324 *e*P **P 03 40 59.1 +0.5**
MPU Maple Canyon 79.64 48 *e*P **P 03 41 01.4 +2.0**
comp=Z,8.2nm,0.9s
TUQ Turquoise Moun 79.68 54 P **P 03 41 00.5 +0.9**
baz=306
ANTO Ankara 79.73 312 *e*P **P 03 41 00.7 +1.1**
comp=Z,20nm,0.8s
ANTO Ankara 79.73 312⇓*i*P **P 03 41 00.1 +0.5**
ANTO Ankara 79.73 312 ⇓P **P 03 41 00.1 +0.5**
ANTO Ankara 79.73 312 P **P 03 41 00.7 +1.1**
SNR=5.6
ANTO P **P 03 41 00.7 +1.1**
SNR=5.6
OZUR 79.73 320⇓*i*P **P 03 41 00.9 +1.4**
HEC Hector,Ludlow 79.77 55 P **P 03 41 01.8 +1.9**
baz=306
UZH Uzhgorod 79.79 324⇓*i*P **P 03 41 00.0 +0.4**
UZH *i* 03 41 06.1
OJC Ojcow 79.86 326 *e*P **P 03 41 00.2 +0.1**
OJC Ojcow 79.86 326 *e*P **P 03 41 01.2 +1.1**
OJC Ojcow 79.86 326 *e*P **P 03 41 00.6 +0.5**
comp=Z,36nm,1.1s
OJC Ojcow 79.86 326 *e*P **P 03 41 00.6 +0.5**
OJC pmax pmax
comp=Z,36nm,1.1s
MURC Murrieta 79.92 56 P **P 03 41 01.3 +0.6**
baz=306
TRPA Tarpa 80.01 323⇓*i*P **P 03 41 01.5 +0.7**
TRPA Tarpa 80.01 323 ⇑EP **P 03 41 01.0 +0.2**
MLR Muntele Rosu 80.05 320 *e*P **P 03 41 01.3 0.0**
comp=Z,10nm,1.2s
MLR Muntele Rosu 80.05 320⇓*i*P **P 03 41 01.6 +0.3**
MLR Muntele Rosu 80.05 320 *e*P **P 03 41 01.3 0.0**
MLR pmax pmax
comp=Z,10.0nm,1.2s
GULE Gulek 80.07 309 *i*P **P 03 41 03.2 +1.6**
GULE IAML_P
comp=Z,606nm,0.7s
CCUT Cedar City 80.07 51 *e*P **P 03 41 04.9 +3.2**
comp=Z,5.8nm,1.1s
NIE Niedzica 80.19 325 *e*P **P 03 41 02.3 +0.4**
NIE Niedzica 80.19 325 *e*P **P 03 41 02.8 +0.9**
NIE Niedzica 80.19 325 *e*P **P 03 41 02.3 +0.4**
SZCU Shurtz Canyon 80.22 51 *e*P **P 03 41 05.4 +2.9**
comp=Z,4.4nm,1.1s
MSU Marysvale 80.23 49 *e*P **P 03 41 05.1 +2.6**
GMRC Granite Mounta 80.24 54 P **P 03 41 03.5 +0.9**
baz=307
TMUT Trail Mountain 80.34 48 *e*P **P 03 41 06.2 +3.0**
comp=Z,7.1nm,0.7s
109C Camp Elliot, M 80.40 56 P **P 03 41 04.6 +1.3**
baz=306
PFO Pinyon Flats O 80.41 56 *e*P **P 03 41 05.1 +1.6**
comp=Z,17nm,1.1s
PFO Pinyon Flats O 80.41 56 *e*P **P 03 41 05.1 +1.6**
PFO pmax pmax
comp=Z,17nm,1.1s
PFO Pinyon Flats O 80.41 56 P **P 03 41 04.7 +1.2**
baz=306,SNR=7.0
LCMT Little Creek M 80.47 51 *e*P **P 03 41 05.7 +1.9**
comp=Z,8.8nm,1.1s
BELC Belle Mtn. Jos 80.48 55 P **P 03 41 04.8 +0.9**
baz=307
MTPU Mount Pierson 80.51 50 *e*P **P 03 41 06.4 +2.2**
comp=Z,7.3nm,1.0s
P17A Butcher Ranch, 80.52 48 *e*P **P 03 41 05.8 +1.8**
comp=Z,14nm,1.0s
VOIR 80.55 320⇑*i*P **P 03 41 05.4 +1.4**
VOIR 80.55 320 ⇑P **P 03 41 05.4 +1.4**
Q16A Castle Valley 80.60 49 *e*P **P 03 41 07.7 +3.2**
comp=Z,7.7nm,1.0s
KNB Kanab 80.74 51 *e*P **P 03 41 07.4 +2.2**
comp=Z,18nm,1.1s
KECS Kecovo 80.75 324 *e*P **P 03 41 05.5 +0.6**
KECS Kecovo 80.75 324 *e*P **P 03 41 05.5 +0.6**
LANS Liptovska Anna 80.76 325 *e*P **P 03 41 06.7 +1.7**
LANS Liptovska Anna 80.76 325 *e*P **P 03 41 06.7 +1.7**
RUE Ruedersdorf 80.81 330 *e*P **P 03 41 05.3 +0.3**
RUE IAmb IAmb 03 41 06.8
comp=Z,24nm,0.8s
ARR Arges 80.82 320⇑*i*P **P 03 41 06.8 +1.4**
DRGR 80.84 322 P **P 03 41 06.2 +0.7**
MONP2 Monument Peak 80.86 56 P **P 03 41 07.7 +1.7**
baz=307
SRU San Rafael Swe 80.87 48 *e*P **P 03 41 07.4 +1.4**
comp=Z,12nm,0.9s
SRU San Rafael Swe 80.87 48 *e*P **P 03 41 07.4 +1.4**
SRU pmax pmax
comp=Z,12nm,0.9s
OKC Ostrava-Krasne 80.88 326 *e*P **P 03 41 06.1 +0.6**
OKC *e* 03 41 20.9
OKC MLR MLR
comp=Z,400nm,16.4s
OKC Ostrava-Krasne 80.88 326 *e*P **P 03 41 06.1 +0.6**
OKC *e*pP **pP 03 41 20.9 +2.4**
OKC AMS AMS 04 20 30.0
comp=Z,400nm,16.4s
K22A Casper 80.96 43 P **P 03 41 06.5 +0.1**
baz=311
IRM Iron Mountain 80.96 54 P **P 03 41 07.4 +1.1**
baz=307,SNR=6.1
KSP Ksiaz 80.97 328 *e*P **P 03 41 06.4 +0.4**
KSP Ksiaz 80.97 328 *e*P **P 03 41 06.5 +0.6**
KSP Ksiaz 80.97 328 *e*P **P 03 41 06.4 +0.4**
BC3 Big Chuckawall 81.06 55 P **P 03 41 07.9 +1.0**
baz=307
MDND Maddock 81.07 36 *e*P **P 03 41 08.0 +1.4**
comp=Z,20nm,0.9s
MDND Maddock 81.07 36 P **P 03 41 06.7 +0.1**
baz=314
ULM Lac du Bonnet 81.08 33 P **P 03 41 07.0 +0.5**
comp=Z,5.6nm,0.6s,baz=314,slow=6.8,SNR=11
ULM LR LR 04 19 15.7
comp=Z,58nm,20.5s,baz=337,slow=37
KLYT Kilyos 81.08 315⇑*i*P **P 03 41 07.0 +0.3**
RWWY Rawlins 81.19 45 *e*P **P 03 41 08.2 +0.5**
comp=Z,8.5nm,0.9s
MORC Moravsky Berou 81.19 327 *e*P **P 03 41 07.7 +0.4**
comp=Z,18nm,1.1s
MORC Moravsky Berou 81.19 327⇑*i*P **P 03 41 07.7 +0.4**
MORC Moravsky Berou 81.19 327 ⇑P **P 03 41 07.7 +0.4**
MORC Moravsky Berou 81.19 327 *e*P **P 03 41 07.4 +0.1**
OSTC Ostas 81.21 328 *e*P **P 03 41 07.9 +0.6**
OSTC AMS AMS 04 19 40.0
comp=Z,300nm,21.6s
IKP In-Ko-Pah, Jac 81.21 56 P **P 03 41 08.9 +1.2**
baz=307
SWSC Sam W. Stewart 81.25 56 P **P 03 41 08.7 +1.0**
baz=307
CHVC Chvalec 81.26 328 *e*P **P 03 41 08.0 +0.4**
CHVC *ex* x 03 41 19.1
CHVC AMS AMS 04 20 00.0
comp=Z,400nm,17.8s
DPC Dobruska-Polom 81.32 328 *e*P **P 03 41 08.9 +1.0**
DPC MLR MLR
comp=Z,300nm,22.7s
DPC Dobruska-Polom 81.32 328 *e*P **P 03 41 08.9 +1.0**
DPC AMS AMS 04 21 00.0
comp=Z,300nm,22.7s
YLV Yalova 81.33 314⇑*i*P **P 03 41 08.1 -0.1**
YLV Yalova 81.33 314 ⇑P **P 03 41 08.1 -0.1**
UPC Upice 81.34 328 *e*P **P 03 41 08.5 +0.5**
UPC MLR MLR
comp=Z,400nm,16.1s
UPC Upice 81.34 328 *e*P **P 03 41 08.5 +0.5**
UPC AMS AMS 04 21 30.0
comp=Z,400nm,16.1s
RSSD Black Hills 81.36 41 *e*P **P 03 41 09.0 +0.6**
comp=Z,7.7nm,1.2s
RSSD Black Hills 81.36 41 *e*P **P 03 41 09.0 +0.6**
RSSD pmax pmax
comp=Z,8.0nm,1.2s
RSSD Black Hills 81.36 41 P **P 03 41 08.7 +0.2**
baz=312
PSZ Piszkesteto 81.43 324 *e*P **P 03 41 09.6 +1.0**
comp=Z,28nm,1.1s
PSZ Piszkesteto 81.43 324⇓*i*P **P 03 41 08.3 -0.3**
PSZ Piszkesteto 81.43 324 ⇓P **P 03 41 08.3 -0.3**
PSZ Piszkesteto 81.43 324 ⇑EP **P 03 41 09.0 +0.4**
U15A North Rim 81.44 51 *e*P **P 03 41 11.0 +1.9**
comp=Z,5.1nm,0.9s
VYHS Vyhne 81.52 325 *e*P **P 03 41 10.0 +1.0**
VYHS pmax pmax
comp=Z,10.0nm,1.2s
VYHS Vyhne 81.52 325 *e*P **P 03 41 10.0 +1.0**
PDMCI Parker Dam,Lak 81.53 54 P **P 03 41 10.2 +0.9**
baz=308
O20A White River Ci 81.59 46 *e*P **P 03 41 11.3 +1.6**
comp=Z,15nm,1.1s
O20A White River Ci 81.59 46 P **P 03 41 10.9 +1.1**
baz=310,SNR=7.7
Y12C Blythe 81.62 54 *e*P **P 03 41 11.7 +2.0**
comp=Z,7.4nm,0.9s
Y12C Blythe 81.62 54 P **P 03 41 10.3 +0.6**
baz=307
PHSR Pinarhisar 81.71 316⇓*i*P **P 03 41 11.2 +1.1**
GZR Gura Zlata 81.76 321⇓*i*P **P 03 41 10.9 +0.5**
GZR Gura Zlata 81.76 321 ⇓P **P 03 41 10.9 +0.5**
JAVC Velka Javorina 81.80 326 *e*P **P 03 41 11.7 +1.2**
GLA Glamis 81.84 55 *e*P **P 03 41 12.6 +1.6**
comp=Z,12nm,0.8s
GLA Glamis 81.84 55 P **P 03 41 11.7 +0.7**
baz=307
PVCC Panska Ves 81.94 329 *e*P **P 03 41 12.3 +1.2**
PVCC MLR MLR
comp=Z,300nm,17.8s
PVCC Panska Ves 81.94 329 *e*P **P 03 41 12.3 +1.2**
PVCC AMS AMS 04 20 10.0
comp=Z,300nm,17.8s
BRG Berggiesshubel 81.94 329⇓*i*P **P 03 41 11.2 0.0**
comp=Z,14nm,0.9s
BRG Berggiesshubel 81.94 329 S S 03 51 42.0 +20
BRG SS SS 03 57 16.0 +36
BRG *e*PKPPKP 04 07 08.7
comp=Z,1.6nm,0.7s
comp=N,264nm,13.1s
comp=E,117nm,14.0s
comp=Z,269nm,14.6s
BRG Berggiesshubel 81.94 329⇓*i*P **P 03 41 11.1 0.0**
BRG pmax pmax
comp=Z,2.0nm,0.9s
BRG MLR MLR
comp=N,2µm,13.1s
BRG MLR MLR
comp=E,264nm,14.0s
BRG MLR MLR
comp=Z,117nm,14.6s
VRAC Vranov 81.96 327⇑*i*P **P 03 41 11.8 +0.5**
VRAC Vranov 81.96 327 ⇑P **P 03 41 11.8 +0.5**
VRAC Vranov 81.96 327 *e*P **P 03 41 11.7 +0.5**
CLL Collm 82.01 330 *e*P **P 03 41 11.4 0.0**
comp=Z,31nm,0.9s
CLL Collm 82.01 330⇑*i*P **P 03 41 11.3 -0.1**
comp=Z,36nm,0.9s
CLL *i* 03 41 19.1
CLL *e*PP **PP 03 44 19.0 +0.2**
comp=Z,8.0nm,1.3s
CLL *e*SS SS 03 57 42.0 +62
CLL LmV 04 24 00.0
comp=Z,400nm,18.0s
CLL Collm 82.01 330⇑*i*P **P 03 41 11.3 -0.1**
CLL pmax pmax
comp=Z,36nm,0.9s
CLL MLR MLR
comp=Z,400nm,18.0s
PV09 Paradox Valley 82.10 48 *e*P **P 03 41 14.9 +2.3**
PV21 Cone Mtn., Par 82.16 48 *e*P **P 03 41 14.5 +1.7**
comp=Z,12nm,0.9s
SHMJ Saham 82.18 305 P **P 03 41 13.3 +0.6**
comp=Z,35nm,0.9s
BZS Buzias 82.20 322⇑*i*P **P 03 41 12.6 0.0**
BZS Buzias 82.20 322 ⇑P **P 03 41 12.7 +0.1**
PV23 Carpenter Ridg 82.20 48 *e*P **P 03 41 15.1 +2.0**
comp=Z,26nm,1.1s
KRUC Moravsky 82.23 327 *e*P **P 03 41 13.0 +0.3**
PV10 Paradox Valley 82.24 48 *e*P **P 03 41 16.4 +3.1**
comp=Z,40nm,1.0s
PV14 Lion Creek, Pa 82.25 48 *e*P **P 03 41 14.9 +1.6**
comp=Z,30nm,1.0s
SRO Srobarova 82.26 325 *e*P **P 03 41 14.6 +1.8**
SRO Srobarova 82.26 325 *e*P **P 03 41 14.6 +1.8**
PV22 Blue Mesa, Par 82.29 48 *e*P **P 03 41 15.4 +1.9**
comp=Z,16nm,1.1s
PV20 West Nyswonger 82.30 48 *e*P **P 03 41 15.5 +2.0**
comp=Z,19nm,0.9s
GOPC GO Pecny, Ondr 82.31 328 *e*P **P 03 41 13.8 +0.7**
GOPC MLR MLR
comp=Z,300nm,19.8s
GOPC GO Pecny, Ondr 82.31 328 *e*P **P 03 41 13.8 +0.7**
GOPC AMS AMS 04 20 50.0
comp=Z,300nm,19.8s
PV04 Paradox Valley 82.31 48 *e*P **P 03 41 15.7 +2.2**

comp=Z,22nm,1.2s
PV19 Morning Glory 82.31 48 *e*P **P 03 41 15.7 +2.1**
comp=Z,22nm,0.9s
MODS Modra-Piesok 82.33 326 *e*P **P 03 41 13.4 +0.1**
MODS pmax pmax
comp=Z,15nm,1.1s
MODS Modra-Piesok 82.33 326 *e*P **P 03 41 13.4 +0.1**
PV17 East Wray Mesa 82.35 48 *e*P **P 03 41 15.4 +1.6**
comp=Z,41nm,1.2s
PV16 Nyswonger Mesa 82.35 48 *e*P **P 03 41 15.8 +2.0**
comp=Z,18nm,1.1s
PRU Pruhonice 82.36 328 *e*P **P 03 41 13.9 +0.6**
PRU MLR MLR
comp=Z,300nm,14.0s
PRU Pruhonice 82.36 328 *e*P **P 03 41 13.9 +0.6**
PRU AMS AMS 04 22 10.0
comp=Z,300nm,14.0s
PV11 David Mesa, Pa 82.39 48 *e*P **P 03 41 16.2 +2.3**
comp=Z,41nm,1.3s
PV05 Paradox Valley 82.39 48 *e*P **P 03 41 15.8 +1.8**
comp=Z,35nm,1.1s
PV18 Skein Mesa, Pa 82.40 48 *e*P **P 03 41 16.1 +2.1**
comp=Z,24nm,1.1s
PV12 Saucer Basin, 82.42 48 *e*P **P 03 41 16.4 +2.3**
comp=Z,24nm,1.2s
PV03 Paradox Valley 82.43 48 *e*P **P 03 41 15.8 +1.6**
comp=Z,25nm,1.2s
N23A Red Feather La 82.43 45 *e*P **P 03 41 15.9 +1.6**
comp=Z,21nm,1.2s
N23A Red Feather La 82.43 45 P **P 03 41 14.8 +0.6**
baz=311,SNR=10
PV07 Paradox Valley 82.43 48 *e*P **P 03 41 16.5 +2.2**
comp=Z,6.0nm,0.9s
TREC Trest 82.46 327 *e*P **P 03 41 14.4 +0.5**
TREC MLR MLR
comp=Z,200nm,19.1s
TREC Trest 82.46 327 *e*P **P 03 41 14.4 +0.5**
TREC AMS AMS 04 20 40.0
comp=Z,200nm,19.1s
Y14A Wickenburg 82.50 54 *e*P **P 03 41 15.8 +1.3**
comp=Z,12nm,1.4s
AGMN Agassiz Nation 82.51 34 *e*P **P 03 41 14.0 -0.2**
comp=Z,5.9nm,0.8s
AGMN Agassiz Nation 82.51 34 P **P 03 41 13.8 -0.4**
baz=317
PV13 Radium Mtn., P 82.51 48 *e*P **P 03 41 16.3 +1.6**
comp=Z,35nm,1.1s
PV02 Paradox Valley 82.53 48 *e*P **P 03 41 16.9 +2.1**
comp=Z,20nm,1.2s
ZST Bratislava 82.54 326 *e*P **P 03 41 14.7 +0.4**
ZST Bratislava 82.54 326 *e*P **P 03 41 14.7 +0.4**
MMLI Mount Malkishu 82.58 305 P **P 03 41 14.2 -0.7**
comp=Z,34nm,1.6s
WUAZ Wupatki 82.58 51 *e*P **P 03 41 16.7 +1.7**
comp=Z,17nm,1.4s
WUAZ Wupatki 82.58 51 P **P 03 41 15.8 +0.8**
baz=309
PV01 Paradox Valley 82.67 48 *e*P **P 03 41 17.2 +1.7**
comp=Z,22nm,1.1s
113A Mohawk Valley, 82.72 55 *e*P **P 03 41 17.2 +1.7**
comp=Z,16nm,1.5s
MDVR Moldovita 82.73 321⇓ *i*P **P 03 41 15.8 +0.4**
BALB Balikesir 82.80 314 *e*P **P 03 41 16.6 +0.8**
comp=Z,84nm,1.0s
WALJ Wala 82.85 304 P **P 03 41 17.9 +1.7**
comp=Z,43nm,0.9s
RRH Rhenigidale 82.87 343 *e*P **P 03 41 16.5 +0.7**
KDZ Kurdzhali 82.88 317 P **P 03 41 21.0 +4.8**
KAC Achnashellach 82.91 342⇓ *e*P **P 03 41 16.8 +0.8**
SMCO Snowmass 82.96 46 *e*P **P 03 41 18.7 +1.5**
comp=Z,6.8nm,1.1s
ALN Alexandroupoli 83.03 316 *e*P **P 03 41 17.7 +0.7**
comp=Z,11nm,1.0s
ALN Alexandroupoli 83.03 316 P **P 03 41 16.8 -0.2**
ALN Alexandroupoli 83.03 316 *e*P **P 03 41 17.7 +0.7**
ALN pmax pmax
comp=Z,11nm,1.0s
NKC Novy Kostel 83.05 329 *e*P **P 03 41 17.0 0.0**
NKC MLR MLR
comp=Z,300nm,14.1s
NKC Novy Kostel 83.05 329 *e*P **P 03 41 17.0 0.0**
NKC AMS AMS 04 21 40.0
comp=Z,300nm,14.1s
TIH Tihany 83.11 324 EP **P 03 41 14.1 -3.2**
KPL Plockton 83.14 342⇓ *e*P **P 03 41 18.1 +0.9**
KPL IAmb IAmb 03 41 19.1
comp=Z,44nm,0.9s
RDO Rodhopi 83.15 316 P **P 03 41 17.8 +0.2**
SOP Sopron 83.17 326 ⇑EP **P 03 41 18.1 +0.5**
GHAJ Ghor Haditha 83.17 304 P **P 03 41 18.8 +0.9**
comp=Z,7nm,1.1s
X16A Lo Mia Camp, P 83.22 52 *e*P **P 03 41 20.2 +1.8**
comp=Z,8.8nm,1.1s
RZN Rozhen 83.25 317 P **P 03 41 18.0 -0.3**
LISJ El Lisan 83.27 304 P **P 03 41 19.3 +1.0**
comp=Z,60nm,1.2s
CONA Conrad Observa 83.30 326 *i* P **P 03 41 19.5 +1.1**
comp=Z,17nm,1.0s,SNR=15
MVCO Mesa Verde 83.31 49 *e*P **P 03 41 20.4 +1.5**
comp=Z,18nm,1.1s
MVCO Mesa Verde 83.31 49 P **P 03 41 20.2 +1.4**
baz=310,SNR=10
ISCO Idaho Springs 83.34 45 *e*P **P 03 41 20.6 +1.6**
comp=Z,7.3nm,1.1s
ISCO Idaho Springs 83.34 45 P **P 03 41 19.5 +0.4**
baz=312
ELO Logie Almond 83.41 341⇓ *e*P **P 03 41 19.1 +0.4**
KHC Kasperske Hory 83.41 328 *e*P **P 03 41 18.9 0.0**
comp=Z,6.9nm,1.0s
KHC Kasperske Hory 83.41 328 *e*P **P 03 41 18.9 0.0**
KHC pmax pmax
comp=Z,7.0nm,1.0s
KHC Kasperske Hory 83.41 328 *e*P **P 03 41 19.0 +0.1**
KHC *ex* x 03 41 29.0
KHC AMS AMS 04 22 30.0
comp=Z,400nm,19.0s
VTS Vitosha 83.42 319 *e*P **P 03 41 18.8 -0.4**
comp=Z,29nm,1.0s
VTS Vitosha 83.42 319 P **P 03 41 16.7 -2.5**
VTS Vitosha 83.42 319⇑ *i*P **P 03 41 19.8 +0.6**
VTS Vitosha 83.42 319 *e*P **P 03 41 18.8 -0.4**
VTS pmax pmax
comp=Z,29nm,1.0s
VTS Vitosha 83.42 319 P **P 03 41 19.0 -0.2**
JDRJ Daraweish 83.45 303 P **P 03 41 19.9 +0.3**
comp=Z,267nm,0.9s
AMAZ Amatzia 83.47 304 P **P 03 41 20.2 +0.7**
comp=Z,134nm,1.1s
INVG Invergeldie, C 83.54 341⇓ *e*P **P 03 41 19.3 0.0**
INVG IAmb IAmb 03 41 20.2
comp=Z,16nm,0.8s
GEC2 GERESS Array S 83.58 328 *e*P **P 03 41 19.5 -0.3**
GEC2 GERESS Array S 83.58 328 *e*P **P 03 41 19.5 -0.3**
GERES GERESS Array B 83.58 328 P **P 03 41 19.5 -0.3**
comp=Z,6.9nm,1.0s,baz=44,slow=4.4,SNR=35
GERES PP **PP 03 44 30.9 -1.0**
comp=Z,1.0nm,0.7s,baz=36,slow=8.5,SNR=4.6
GERES LR LR 04 22 41.5
comp=Z,280nm,18.0s,baz=58,slow=39
EZN Ezine 83.58 315 P **P 03 41 19.6 -0.2**
EZN Ezine 83.58 315⇑ *i*P **P 03 41 19.7 -0.1**
EZN Ezine 83.58 315 ⇑P **P 03 41 19.7 -0.1**
ESY Stoneypath 83.60 340⇓ *e*P **P 03 41 20.2 +0.5**
SMTH Samothraki Isl 83.61 316 P **P 03 41 16.1 -3.9**
HSNJ Maan 83.73 303 P **P 03 41 22.4 +1.5**
comp=Z,553nm,0.9s
SUSD Miller 83.78 38 P **P 03 41 20.9 +0.1**
baz=315
EAB Aberfoyle 83.83 341 *e*P **P 03 41 20.2 -0.5**
214A Organ Pipe Nat 83.85 55 P **P 03 41 22.8 +1.4**
baz=308,SNR=6.9
MMB Musomiste 83.86 318 P **P 03 41 21.0 -0.3**
W18A Petrified Fore 83.87 51 P **P 03 41 22.5 +0.8**
baz=310
NVR Nevrokopi 83.95 317 P **P 03 41 21.7 0.0**
ARSA Arzberg 83.96 326 *i* P **P 03 41 22.2 +0.6**
comp=Z,11nm,0.9s,SNR=6.7
THAS Thassos island 83.97 316 P **P 03 41 21.0 -0.8**
S22A 4UR Ranch, Cre 83.97 47 *e*P **P 03 41 24.1 +1.8**
comp=Z,21nm,1.1s
S22A 4UR Ranch, Cre 83.97 47 P **P 03 41 23.9 +1.6**
baz=311,SNR=27
GRA1 Grafenberg Arr 83.98 330 *e*P **P 03 41 22.7 +1.0**
comp=Z,35nm,0.9s
GRFO Grafenberg 83.98 330 *e*P **P 03 41 22.3 +0.6**
comp=Z,36nm,1.0s
GRFO Grafenberg 83.98 330 *e*P **P 03 41 22.3 +0.6**
GRFO pmax pmax
comp=Z,36nm,1.0s
PRK Paraskevi 84.00 315 P **P 03 41 22.7 +0.7**
KKB Krupnik 84.02 318 P **P 03 41 22.0 -0.1**
LAWE Loch Awe, Argy 84.04 342⇓ *e*P **P 03 41 22.4 +0.6**
MOA Molln 84.08 327 *i* P **P 03 41 23.2 +0.9**
comp=Z,16nm,1.3s,SNR=9.7
DIVS Divibare 84.09 321⇑ *i*P **P 03 41 22.4 -0.1**
X18A Snowflake 84.11 51 *e*P **P 03 41 24.9 +2.0**
comp=Z,15nm,1.3s
Q24A Divide 84.17 46 *e*P **P 03 41 25.0 +1.7**
comp=Z,11nm,0.9s
Q24A Divide 84.17 46 P **P 03 41 24.5 +1.2**
baz=312,SNR=11
LIA Limnos Island 84.19 316 P **P 03 41 22.2 -0.7**
PGBU Glenifferbraes 84.20 341⇓ *e*P **P 03 41 23.4 +0.8**
PGBU IAmb IAmb 03 41 24.1
comp=Z,22nm,0.9s
KZIT Kziot 84.21 304 P **P 03 41 23.2 0.0**
comp=Z,169nm,0.9s
PMOR Pomariorio Ree 84.23 113 *e*T T 05 13 51.9
comp=Z,9.6nm,0.2s
SRS Serrai 84.25 317 P **P 03 41 19.6 -3.7**
SIGR SIGRI 84.26 315 P **P 03 41 22.9 -0.4**
ESK Eskdalemuir 84.29 340⇓ *e*P **P 03 41 23.6 +0.4**
HRFI Mount Harif 84.31 303 P **P 03 41 24.1 +0.3**
comp=Z,130nm,1.1s
AQBJ Aqaba 84.49 303 P **P 03 41 25.3 +0.7**
comp=Z,124nm,0.9s
EIL Elat 84.59 303 P **P 03 41 26.1 +0.9**
OGNE Ogallala 84.59 43 P **P 03 41 25.6 +0.5**
baz=314
PERS Pernice 84.60 326 *i* P **P 03 41 24.9 -0.1**
PPT Papeete 84.60 116 LR LR 04 11 48.9
comp=Z,340nm,21.1s,baz=322,slow=30
KNT Kendrikon 84.60 318 P **P 03 41 22.8 -2.3**
SOKA Soboth 84.61 326 *i* P **P 03 41 25.3 +0.2**
comp=Z,36nm,1.1s,SNR=28
PPT2 Papeete2 84.62 116 *e*LR LR 04 07 53.9
comp=Z,664nm,22.8s,baz=314
PPT2 Papeete2 84.62 116 *e*T T 05 14 21.3
comp=Z,1.7nm,0.2s
HAPS Han Pijesak,Bl 84.62 322⇑ *i*P **P 03 41 25.2 0.0**
STIP Stip 84.62 319 *i* P **P 03 41 24.9 -0.2**
VAY Valandovo 84.67 318 P **P 03 41 25.4 0.0**
VAY Valandovo 84.67 318 *i* P **P 03 41 26.2 +0.8**
SMG Samos 84.68 313 P **P 03 41 25.2 -0.3**
CHOS Chios island 84.69 314 P **P 03 41 22.7 -2.9**
EYMN Ely 84.72 32 *e*P **P 03 41 25.8 +0.2**
comp=Z,10nm,1.0s
EYMN Ely 84.72 32 P **P 03 41 25.7 +0.2**
baz=320
SDCO Great Sand Dun 84.77 47 *e*P **P 03 41 26.1 -0.2**
comp=Z,15nm,1.1s
SDCO Great Sand Dun 84.77 47 P **P 03 41 28.0 +1.7**
baz=312,SNR=15
SKO Skopje 84.83 319 *i* P **P 03 41 27.5 +1.4**
OBKA Obir 84.96 326 *i* P **P 03 41 27.0 +0.2**
comp=Z,5.2nm,0.7s
TUC Tucson 84.97 54 *e*P **P 03 41 28.4 +1.2**
comp=Z,4.9nm,0.9s
TUC Tucson 84.97 54 *e*P **P 03 41 28.4 +1.2**
TUC pmax pmax
comp=Z,5.0nm,0.9s
TUC Tucson 84.97 54 P **P 03 41 27.9 +0.8**
baz=309
BLY Banja Luka 85.02 323 *e*P **P 03 41 27.7 +0.6**
comp=Z,14nm,1.0s
BLY Banja Luka 85.02 323⇑ *i*P **P 03 41 26.7 -0.3**
HPK Haverah Park 85.02 339⇓ *e*P **P 03 41 27.5 +0.6**
HPK IAmb IAmb 03 41 28.1
comp=Z,15nm,0.7s
CRES Cresnjev 85.05 325⇑ *i*P **P 03 41 26.8 -0.4**
KBA Koelnbreinsper 85.07 327 *i* P **P 03 41 27.6 +0.1**
comp=Z,8.0nm,0.8s,SNR=7.4
GAL1 Galloway 85.10 341⇓ *e*P **P 03 41 27.4 +0.2**
GAL1 IAmb IAmb 03 41 28.3
comp=Z,15nm,0.9s
BEBN Eben Emael 85.26 333 P **P 03 41 28.4 +0.3**
CLGH Cloghs, Cushen 85.27 342⇓ *e*P **P 03 41 28.5 +0.4**
CLGH IAmb IAmb 03 41 29.4
comp=Z,35nm,0.8s
MYKA Terra Mystica 85.28 326 *i* P **P 03 41 28.2 -0.2**
comp=Z,9.5nm,0.8s,SNR=7.0
UPM Unac-Piva 85.28 321⇑ *i*P **P 03 41 28.7 +0.1**
MEM Membach 85.29 333 P **P 03 41 28.0 -0.3**
comp=Z,15nm,1.0s
MEM PcP **PcP 03 41 31.1 -0.2**
MEM x x 03 41 34.7
MEM pP **pP 03 41 40.1 -1.3**
MGRS Mrkonjic Grad 85.31 323 *e*P **P 03 41 29.6 +1.1**
LJU Ljubljana 85.32 326⇑ *i*P **P 03 41 27.8 -0.7**
VISS Visnje 85.35 325 *e*P **P 03 41 28.1 -0.6**
KRUS Krusevo 85.36 319 *i* P **P 03 41 29.2 +0.3**
BOJS Bojanci 85.38 325 *i* P **P 03 41 28.6 -0.2**
ECSD EROS Data Cent 85.47 38 *e*P **P 03 41 29.4 0.0**
comp=Z,10nm,0.8s
ECSD EROS Data Cent 85.47 38 P **P 03 41 29.2 -0.2**
baz=317,SNR=14
BSTI Sart Tilman 85.47 333 P **P 03 41 29.1 -0.1**
STU Stuttgart 85.53 330 *e*P **P 03 41 30.0 +0.5**
comp=Z,44nm,1.0s
STU Stuttgart 85.53 330 *e*P **P 03 41 30.0 +0.5**
STU pmax pmax
comp=Z,44nm,1.0s
LBWR Ladybower, Pea 85.53 338⇓ *e*P **P 03 41 29.8 +0.3**
LBWR IAmb IAmb 03 41 31.1
comp=Z,73nm,1.0s
LIT Litokhoron 85.56 317 P P 03 41 23.9 -6.0
KSCO Kaye Shedlock' 85.58 44 *e*P **P 03 41 31.0 +0.8**
comp=Z,47nm,1.4s
KSCO Kaye Shedlock' 85.58 44 P **P 03 41 30.1 -0.1**
baz=313
CEY Cerknica 85.59 325⇑ *i*P **P 03 41 29.1 -0.8**
IOMK Kirk Michael 85.59 340⇓ *e*P **P 03 41 30.3 +0.6**
IOMK IAmb IAmb 03 41 30.8
comp=Z,44nm,0.9s
JAVS Javornik 85.64 326 *i* P **P 03 41 28.6 -1.7**
WATA Walderalm 85.65 328 *i* P **P 03 41 30.7 +0.4**
comp=Z,2.6nm,0.5s
PDG Podgorica 85.65 321⇑ *i*P **P 03 41 29.9 -0.3**
PDG Podgorica 85.65 321⇑ *i*P **P 03 41 29.8 -0.4**
TTG Podgorica 85.65 321 *e*P **P 03 41 30.6 +0.4**
comp=Z,42nm,1.1s
TTG Podgorica 85.65 321 *e*P **P 03 41 30.6 +0.4**
TTG pmax pmax
comp=Z,42nm,1.1s
LKLB Kalborn 85.67 333 P **P 03 41 30.1 0.0**
LKLB PcP **PcP 03 41 33.1 +0.1**
LKLB pP **pP 03 41 42.7 -0.5**
WTTA Wattenberg 85.68 328 *i* P **P 03 41 30.7 +0.2**
comp=Z,4.0nm,0.7s
BRY Bratogost 85.68 321 *e*P **P 03 41 29.8 -0.8**
ABTA Abfaltersbach 85.69 327 *i* P **P 03 41 29.4 -1.1**
comp=Z,13nm,1.0s,SNR=9.7
FNA Florina 85.70 318 *e*P **P 03 41 31.0 +0.4**
comp=Z,7.4nm,1.0s
FNA Florina 85.70 318 *e*P **P 03 41 31.0 +0.4**
FNA pmax pmax
comp=Z,7.0nm,1.0s
BCLA Clavier 85.70 333 P **P 03 41 29.9 -0.5**
comp=Z,16nm,1.1s
BCLA PcP **PcP 03 41 32.9 -0.3**
E38A The Farm, Brul 85.71 33 P **P 03 41 30.2 -0.3**
baz=320
BGES Gesves 85.81 333 P **P 03 41 30.6 -0.2**
comp=Z,15nm,1.1s
BGES x x 03 41 36.7
BGES pP **pP 03 41 43.2 -0.8**
BGES sP **sP 03 41 47.1 -1.8**
T25A Trinidad 85.82 47 *e*P **P 03 41 32.8 +1.4**
comp=Z,25nm,1.0s
T25A Trinidad 85.82 47 P **P 03 41 32.5 +1.0**
baz=312,SNR=22
MOTA Moosalm 85.85 328 *i* PcP **P 03 41 31.8 +0.4**
comp=Z,7.1nm,0.9s
DRME Dracevica, Mon 85.86 321⇑ *i*P **P 03 41 31.0 -0.3**
RETA Reutte 85.88 329 *i* PcP **P 03 41 32.0 +0.6**
comp=Z,12nm,0.8s,SNR=7.4
APE Apeiranthos 85.89 313⇓ *i*P **P 03 41 30.6 -1.0**
APE Apeiranthos 85.89 313 ⇓P **P 03 41 30.6 -1.0**
SQTA Sankt Quirin 85.90 328 *i* P **P 03 41 31.8 +0.3**
comp=Z,4.7nm,0.6s
F37A Hinrichs Farm, 85.90 34 P **P 03 41 31.8 +0.4**
baz=319
LAZ Ladron 85.97 50 *e*P **P 03 41 33.8 +1.6**
CWF Charnwood Fore 85.98 338⇓ *e*P **P 03 41 31.9 +0.2**
CWF IAmb IAmb 03 41 32.5
comp=Z,26nm,0.9s
GMM Mts of Mourne 85.99 341⇓ *e*P **P 03 41 31.9 +0.3**
BMRD Maredsous 86.00 333 P **P 03 41 31.4 -0.4**
comp=Z,22nm,1.1s
BMRD PcP **PcP 03 41 34.4 -0.1**
BMRD x x 03 41 40.8
BMRD pP **pP 03 41 44.7 -0.2**
BMRD x x 03 41 54.8
SNF Seneffe 86.00 334 P **P 03 41 31.9 +0.1**
comp=Z,24nm,1.1s
SNF pP **pP 03 41 45.0 0.0**
WLF Walferdange 86.00 332 *e*P **P 03 41 32.0 +0.2**
comp=Z,94nm,1.1s
WLF Walferdange 86.00 332 *e*P **P 03 41 32.0 +0.2**
WLF pmax pmax
comp=Z,94nm,1.1s
WLF Walferdange 86.00 332 P **P 03 41 32.5 +0.7**
HCY Herceg Novi 86.03 321 *e*P **P 03 41 31.2 -0.9**
TASM ASL Pad, Albuq 86.03 49 P **P 03 41 33.6 +1.1**
baz=311,SNR=14
TASM ASL Pad, Albuq 86.03 49 P **P 03 41 33.6 +1.1**
baz=311,SNR=11
ANMO Albuquerque 86.04 49 *e*P **P 03 41 33.9 +1.4**
comp=Z,11nm,1.1s
ANMO Albuquerque 86.04 49 *ce*P **P 03 41 34.1 +1.5**
ANMO pmax pmax
comp=Z,13nm,1.3s
ANMO Albuquerque 86.04 49 P **P 03 41 33.3 +0.7**
baz=311
F38A Pierce - Schro 86.06 34 P **P 03 41 32.3 +0.1**
baz=320,SNR=8.2
STON Ston 86.13 322⇑ *i*P **P 03 41 31.2 -1.4**
SPMN Marine on St. 86.20 35 *e*P **P 03 41 33.3 +0.4**
comp=Z,11nm,1.2s
SPMN Marine on St. 86.20 35 P **P 03 41 33.1 +0.2**
baz=319
BBOU Bougnies 86.22 334 P **P 03 41 33.1 +0.3**
comp=Z,33nm,1.2s
BBOU pP **pP 03 41 46.8 +0.8**
BFO Black Forest 86.23 330 *e*P **P 03 41 32.9 -0.1**
comp=Z,26nm,0.9s
BFO Black Forest 86.23 330 *e*P **P 03 41 32.9 -0.1**
BFO pmax pmax
comp=Z,26nm,0.9s
LENM Lemitar 86.23 50 *e*P **P 03 41 34.9 +1.4**
DOU Dourbes 86.23 333 P **P 03 41 32.9 -0.1**
DOU PcP **PcP 03 41 35.2 -0.2**
DOU sP **sP 03 41 49.3 -1.7**
FETA Feichten 86.26 328 *i* P **P 03 41 33.3 -0.1**
comp=Z,11nm,1.0s,SNR=6.9
WME Myndd Eilian 86.29 340⇓ *e*P **P 03 41 33.6 +0.4**
E39A Mellen 86.33 33 P **P 03 41 33.8 +0.2**
baz=321
WLF1 Llynfaes 86.41 340⇓ *e*P **P 03 41 34.2 +0.5**
WLF1 IAmb IAmb 03 41 34.9
comp=Z,31nm,0.8s
DAVA Damuels 86.41 329 *i* PcP **P 03 41 34.4 +0.3**
comp=Z,23nm,1.2s,SNR=10.0
FOEL Foel Wylfa 86.42 339⇓ *e*P **P 03 41 34.6 +0.8**
FOEL IAmb IAmb 03 41 35.1
comp=Z,42nm,0.8s
BNM Barren Site 86.45 50 *e*P **P 03 41 36.1 +1.5**
YLL Llanberis 86.47 340⇓ *e*P **P 03 41 34.6 +0.6**
YRC Rhoscolyn 86.49 340⇓ *e*P **P 03 41 34.5 +0.4**
F39A Loretta 86.53 33 P **P 03 41 34.0 -0.5**
baz=320
E40A Wakefield 86.57 32 P **P 03 41 35.2 +0.5**
baz=321,SNR=7.7
LLW Llanuwychllyn 86.59 339⇓ *e*P **P 03 41 34.6 0.0**
G38A Ridgeland 86.67 34 P **P 03 41 35.5 +0.2**
baz=320
FUORN Ofenpass-Fuorn 86.77 328 *e*P **P 03 41 36.5 +0.5**
comp=Z,22nm,0.9s
121A Cookes Peak, D 86.78 52 P **P 03 41 36.8 +0.6**
baz=311
ECH Echery 86.79 331 *e*P **P 03 41 35.5 -0.3**
comp=Z,17nm,0.9s
ECH Echery 86.79 331 *e*P **P 03 41 35.5 -0.3**
ECH pmax pmax
comp=Z,17nm,0.9s
H38A Maiden Rock 86.85 35 P **P 03 41 36.0 -0.1**
baz=320
F40A Park Falls 86.88 33 P **P 03 41 36.3 0.0**
baz=321
G39A Holcombe 86.90 34 P **P 03 41 35.4 -1.0**
baz=320
SCHQ Schefferville 86.91 15 P **P 03 41 37.4 +1.2**
comp=Z,11nm,0.7s,baz=341,slow=5.0,SNR=5.1
SCHQ LR LR 04 22 09.7
comp=Z,157nm,21.4s,baz=348,slow=37
SCHQ Schefferville 86.91 15 *e*P **P 03 41 37.4 +1.2**
comp=Z,37nm,1.4s
E41A Kenton 86.96 32 P **P 03 41 36.5 -0.1**
baz=322,SNR=5.4
STRD Stroud 87.08 338⇓ *e*P **P 03 41 37.1 +0.1**
STRD IAmb IAmb 03 41 38.2
comp=Z,76nm,0.9s
MCH1 Michaelchurch 87.14 338⇓ *e*P **P 03 41 37.8 +0.5**
MCH1 IAmb IAmb 03 41 38.4
comp=Z,28nm,0.7s
COWI Conover 87.17 32 *e*P **P 03 41 38.0 +0.3**
comp=Z,25nm,1.4s
MONM Monmouth 87.22 338⇓ *e*P **P 03 41 37.8 +0.1**
MONM IAmb IAmb 03 41 38.8
comp=Z,37nm,0.9s
TUE Stuetta 87.28 329 *e*P **P 03 41 37.6 -0.9**
comp=Z,8.7nm,1.0s
H39A Augusta 87.31 34 P **P 03 41 38.6 +0.2**
baz=320
CBKS Cedar Bluff 87.34 43 *e*P **P 03 41 38.8 +0.1**
comp=Z,26nm,1.1s
CBKS Cedar Bluff 87.34 43 *e*P **P 03 41 38.8 +0.1**
CBKS pmax pmax
comp=Z,26nm,1.1s
CBKS Cedar Bluff 87.34 43 P **P 03 41 38.4 -0.3**
baz=315
G40A Rib Lake 87.35 33 *e*P **P 03 41 39.1 +0.5**
comp=Z,11nm,0.8s
G40A Rib Lake 87.35 33 P **P 03 41 38.6 +0.1**
baz=321,SNR=8.9
E42A Champion 87.43 31 P **P 03 41 39.2 +0.2**
baz=322,SNR=5.8
F41A Three Lakes 87.46 32 P **P 03 41 39.0 -0.1**
baz=322,SNR=8.8
RSBS Rosebush, Pemb 87.69 339 *e*P **P 03 41 40.3 +0.3**
RSBS IAmb IAmb 03 41 41.6
comp=Z,9.6nm,1.1s
H40A Chili 87.76 34 P **P 03 41 40.5 0.0**
baz=321
G41A Antigo 87.84 33 P **P 03 41 40.7 -0.2**
baz=322
E43A Lone Tree Farm 87.86 31 *e*P **P 03 41 41.5 +0.6**
comp=Z,13nm,1.0s
E43A Lone Tree Farm 87.86 31 P **P 03 41 41.0 0.0**
baz=323
ITM Ithomi 87.91 315 *e*P **P 03 41 40.7 -0.7**
comp=Z,16nm,0.9s
H41A Junction City 88.10 33 P **P 03 41 42.1 0.0**
baz=321
E44A Grand Marais A 88.11 30 *e*P **P 03 41 43.5 +1.4**
comp=Z,32nm,0.9s
E44A Grand Marais A 88.11 30 P **P 03 41 42.4 +0.3**
baz=324,SNR=6.1
F43A Flat Rock, Esc 88.22 31 P **P 03 41 42.8 +0.2**
baz=323
SENIN Lac Senin/Sane 88.22 330 *e*P **P 03 41 42.7 -0.2**
comp=Z,5.1nm,1.1s
MATE Matera 88.26 321⇑ *i*P **P 03 41 42.6 -0.3**
TBI Tubuai 88.38 120 *e*LR LR 04 09 27.9
comp=Z,568nm,23.0s,baz=306
TBI Tubuai 88.38 120 *e*T T 05 19 01.9
comp=Z,5.2nm,0.3s
F44A Big Bay de Noc 88.42 31 P **P 03 41 43.4 -0.2**
baz=324
I41A Arkdale 88.43 34 *e*P **P 03 41 44.5 +0.7**
comp=Z,27nm,1.3s
I41A Arkdale 88.43 34 P **P 03 41 43.6 -0.1**
baz=321
G43A Wallace 88.46 32 *e*P **P 03 41 44.7 +0.9**
comp=Z,21nm,1.0s
G43A Wallace 88.46 32 P **P 03 41 44.1 +0.4**
baz=323
SCIA State Center 88.50 37 *e*P **P 03 41 45.6 +1.6**

comp=Z,15nm,0.8s
SCIA State Center 88.50 37 P P 03 41 44.4 +0.4
baz=319
MATQ Matagami 88.53 24 P P 03 41 44.0 0.0
baz=330
J40A Soldiers Grove 88.55 35 P P 03 41 43.9 -0.3
baz=321
E45A Wooded Hills, 88.62 30 P P 03 41 44.7 +0.2
baz=324
AQU L'Aquila 88.63 324 *eP* **P 03 41 45.3 +0.6**
comp=Z,25nm,0.8s
AQU L'Aquila 88.63 324 *eP* **P 03 41 45.3 +0.6**
AQU pmax pmax
comp=Z,25nm,0.8s
AQU L'Aquila 88.63 324 *iP* **P 03 41 44.3 -0.5**
D46A Sault St. Mari 88.64 29 P P 03 41 44.5 -0.2
baz=325,SNR=11
H42A Shiocton 88.68 33 P P 03 41 44.7 -0.1
baz=322
KSU1 Kansas State U 88.84 41 P P 03 41 45.6 -0.1
baz=317
MNTX Cornudas Mount 88.86 51 *eP* **P 03 41 46.8 +0.8**
comp=Z,4.1nm,1.2s
MNTX Cornudas Mount 88.86 51 P P 03 41 45.7 -0.2
baz=312
D47A Chapleau 88.87 28 P P 03 41 45.6 -0.1
baz=326,SNR=9.7
J41A Loganville 88.91 34 P P 03 41 45.1 -0.8
baz=321
E46A Sault Ste Mari 88.96 29 *eP* **P 03 41 46.8 +0.7**
comp=Z,24nm,1.1s
E46A Sault Ste Mari 88.96 29 P P 03 41 46.2 0.0
baz=325,SNR=6.1
AMTX Amarillo 88.97 47 *eP* **P 03 41 47.9 +1.4**
comp=Z,22nm,1.0s
AMTX Amarillo 88.97 47 P P 03 41 46.0 -0.5
baz=314
I42A Draeger Farm, 89.00 33 *eP* **P 03 41 47.1 +0.7**
comp=Z,23nm,1.2s
I42A Draeger Farm, 89.00 33 P P 03 41 45.9 -0.5
baz=322
F45A CMU Biological 89.03 30 P P 03 41 45.8 -0.7
baz=324
H43A Windswept, Lux 89.05 32 P P 03 41 46.7 +0.2
baz=323
LPL La Plagne 89.14 330 *eP* **P 03 41 46.8 -0.5**
LPL pmax pmax
comp=Z,9.0nm,0.9s
JFWS Jewell Farm 89.15 35 *eP* **P 03 41 47.3 +0.2**
comp=Z,18nm,1.2s
JFWS Jewell Farm 89.15 35 *eP* **P 03 41 47.3 +0.2**
JFWS pmax pmax
comp=Z,18nm,1.2s
JFWS Jewell Farm 89.15 35 P P 03 41 46.4 -0.7
baz=321
SSF Saint Saulge 89.15 332 *eP* **P 03 41 47.8 +0.8**
SSF pmax pmax
comp=Z,12nm,1.1s
F46A Macinaw City C 89.27 30 P P 03 41 47.4 -0.2
baz=325
E47A Iron Bridge 89.30 29 P P 03 41 47.5 -0.2
baz=326,SNR=9.0
D49A Beulah Townshi 89.35 27 P P 03 41 47.9 0.0
baz=327
L40A Anamosa 89.35 36 *eP* **P 03 41 48.5 +0.4**
comp=Z,16nm,1.0s
L40A Anamosa 89.35 36 P P 03 41 47.7 -0.3
baz=320
LSQQ Lebel-sur-Quev 89.35 24 P P 03 41 48.2 +0.3
baz=330
J42A Columbus 89.35 34 P P 03 41 47.7 -0.3
baz=322
CHGQ Chibougamau 89.42 22 P P 03 41 47.9 -0.3
baz=332,SNR=14
G45A Suttons Bay 89.49 31 *eP* **P 03 41 50.1 +1.5**
comp=Z,28nm,0.8s
G45A Suttons Bay 89.49 31 P P 03 41 48.5 -0.2
baz=324
BNI Bardonecchia 89.54 329 *eP* **P 03 41 49.1 +0.1**
comp=Z,6.1nm,1.1s
BNI Bardonecchia 89.54 329 *eP* **P 03 41 49.1 +0.1**
BNI pmax pmax
comp=Z,6.0nm,1.1s
G46A Petoskey 89.59 30 P P 03 41 49.3 +0.2
baz=325,SNR=5.5
H45A Beulah 89.66 31 P P 03 41 49.6 +0.2
baz=324
K42A Prairie Point, 89.67 34 P P 03 41 49.0 -0.5
baz=322
E48A Lockeyer 89.70 28 P P 03 41 49.5 -0.1
baz=327,SNR=5.7
D50A G1974 Best Tow 89.99 26 P P 03 41 50.7 -0.2
baz=328
VLDQ Val d'Or 90.01 24 *eP* **P 03 41 50.8 -0.2**
comp=Z,27nm,1.2s
I45A Fountain 90.06 32 P P 03 41 51.8 +0.5
baz=324
F48A Evansville 90.07 29 P P 03 41 51.4 +0.1
baz=326,SNR=8.1
N40A Mertquake, Sal 90.08 37 P P 03 41 51.6 +0.2
baz=320
H46A Fife Lake 90.08 31 P P 03 41 52.1 +0.6
baz=324
GLMI Grayling 90.10 30 *eP* **P 03 41 52.8 +1.3**
comp=Z,72nm,1.0s
GLMI Grayling 90.10 30 P P 03 41 52.1 +0.6
baz=325,SNR=6.0
G47A Hillman 90.12 30 P P 03 41 52.1 +0.5
baz=325
L42A Oliver, Polo 90.13 35 P P 03 41 51.2 -0.5
baz=321
M41A Milan 90.20 36 P P 03 41 52.0 0.0
baz=321
D51A Lot 18 Range I 90.22 26 P P 03 41 51.8 -0.2
baz=329
SSB Saint Sauveur 90.22 331 *eP* **P 03 41 52.2 +0.1**
comp=Z,6.6nm,1.1s
SSB Saint Sauveur 90.22 331 *eP* **P 03 41 52.2 +0.1**
SSB pmax pmax
comp=Z,7.0nm,1.1s
E50A Wahnapitae 90.29 27 P P 03 41 52.5 +0.1
baz=328,SNR=5.4
F49A Sandfield 90.35 28 P P 03 41 52.6 0.0
baz=327
H47A Mio 90.45 30 P P 03 41 53.9 +0.7
baz=325,SNR=5.7
I46A Reed City 90.47 31 P P 03 41 53.4 +0.1
baz=324
N41A Harden Midland 90.56 36 *eP* **P 03 41 54.8 +1.0**
comp=Z,20nm,1.2s
N41A Harden Midland 90.56 36 P P 03 41 53.9 +0.2
baz=321
E51A G1948 Merrick 90.66 26 P P 03 41 53.3 -0.8
baz=328
D52A ZEK Kipawa Sen 90.66 26 P P 03 41 54.0 0.0
baz=329,SNR=5.7
WMOK Wichita Mounta 90.77 45 *eP* **P 03 41 55.6 +0.8**
comp=Z,16nm,1.2s
WMOK Wichita Mounta 90.77 45 *eP* **P 03 41 55.6 +0.8**
WMOK pmax pmax
comp=Z,15nm,1.2s
WMOK Wichita Mounta 90.77 45 P P 03 41 55.1 +0.3
baz=316,SNR=11
I47A Gladwin 90.80 31 *eP* **P 03 41 56.0 +1.2**
comp=Z,47nm,1.3s
I47A Gladwin 90.80 31 P P 03 41 55.4 +0.6
baz=325
D53A Lac Vacive, Po 90.82 25 *eP* **P 03 41 54.9 0.0**
comp=Z,12nm,0.9s
D53A Lac Vacive, Po 90.82 25 P P 03 41 54.7 -0.1
baz=330
MFF Saint Martin d 90.88 334 *eP* **P 03 41 55.2 +0.1**
MFF pmax pmax
comp=Z,25nm,0.9s
M43A Waltham Townsh 90.90 35 P P 03 41 54.9 -0.3
baz=322
I48A Sherman Twp 90.99 30 P P 03 41 55.8 +0.1
baz=326
D54A Lac Fusel, La 91.11 24 P P 03 41 56.1 -0.1
baz=331
E52A Mattawa 91.17 26 P P 03 41 56.4 -0.1
baz=329
J47A Sunmer 91.30 31 P P 03 41 58.1 +1.0
baz=325
F52A Sundridge 91.34 27 P P 03 41 57.4 +0.1
baz=329
KLBO Killbear Provi 91.39 27 P P 03 41 57.5 +0.1
baz=328,SNR=5.9

HDIL Hopedale 91.43 36 P P 03 41 57.7 0.0
baz=322
E53A Dumoine, Ponti 91.44 25 P P 03 41 57.6 -0.1
baz=330
CAF Calviac 91.49 332 *eP* **P 03 41 58.4 +0.4**
CAF pmax pmax
comp=Z,19nm,1.0s
TX31 Lajitas Ar. Si 91.54 52 *eP* **P 03 41 59.8 +1.1**
comp=Z,14nm,1.4s
LTX Lajitas 91.54 52 *eP* **P 03 41 59.6 +1.0**
LTX Lajitas 91.54 52 *eP* **P 03 41 59.6 +1.0**
TXAR Lajitas Array 91.54 52 P P 03 41 59.6 +1.0
comp=Z,3.2nm,0.8s,baz=293,slow=3.2,SNR=40
TXAR LR LR 04 17 44.6
comp=Z,195nm,21.1s,baz=0.0,slow=32
E54A Lac Daplat, Po 91.56 25 P P 03 41 57.6 -0.6
baz=330
TUL1 Leonard 91.61 43 *eP* **P 03 41 59.5 +0.8**
comp=Z,27nm,1.3s
TUL1 Leonard 91.61 43 P P 03 41 59.0 +0.3
baz=317,SNR=6.6
BUKO Buck Lake 91.62 27 P P 03 41 58.6 +0.1
baz=329
ALGO Algonquin Park 91.67 26 P P 03 41 58.8 +0.1
baz=330
J48A Bridge Port 91.69 31 P P 03 41 59.9 +1.0
baz=325
K47A Vermontville 91.69 32 P P 03 41 59.2 +0.3
baz=324
ABTX Abilene, Hawle 91.76 47 *eP* **P 03 42 01.1 +1.6**
comp=Z,31nm,1.3s
ABTX Abilene, Hawle 91.76 47 P P 03 42 00.0 +0.5
baz=315
J49A Marlette 91.91 30 P P 03 42 00.2 +0.3
baz=326
K48A Perry 91.96 31 P P 03 42 00.4 +0.3
baz=325
BASO Ashfield 91.96 29 P P 03 42 00.6 +0.4
baz=327
LFF La Frestale 91.98 333 *eP* **P 03 42 00.4 +0.2**
LFF pmax pmax
comp=Z,24nm,0.9s
N45A Kentland 92.03 34 P P 03 42 00.7 +0.1
baz=323
BWLO Walkerton 92.08 29 P P 03 42 01.3 +0.6
baz=327
H52A Wyevale 92.11 28 P P 03 42 01.1 +0.3
baz=328
LATQ La Tuque 92.15 22 P P 03 42 01.0 +0.1
baz=334
L47A Sherwood 92.17 32 P P 03 42 01.6 +0.4
baz=324
G53A Haliburton 92.18 27 P P 03 42 00.5 -0.6
baz=329
PEMO Pembroke 92.19 25 P P 03 42 01.2 +0.1
baz=330
HHAR Hobbs 92.34 41 *eP* **P 03 42 02.7 +0.6**
comp=Z,9.1nm,1.0s
CCM Cathedral Cave 92.41 38 *eP* **P 03 42 03.3 +0.9**
comp=Z,12nm,1.1s
CCM Cathedral Cave 92.41 38 *eP* **P 03 42 03.3 +0.9**
CCM pmax pmax
comp=Z,12nm,1.1s
CCM Cathedral Cave 92.41 38 P P 03 42 02.3 0.0
baz=320
O45A Potomac 92.41 35 P P 03 42 02.6 +0.3
baz=323
M47A Cromwell 92.48 33 P P 03 42 02.4 -0.2
baz=324
BANO Bancroft 92.52 26 P P 03 42 02.4 -0.3
baz=330
L48A N Adams 92.53 32 P P 03 42 03.1 +0.2
baz=325
SFIN Lafayette 92.60 34 P P 03 42 03.3 +0.1
baz=323
K50A Casco 92.60 30 P P 03 42 03.6 +0.4
baz=326
L49A Milan 92.67 31 P P 03 42 02.9 -0.6
baz=325
G55A Calabogie 92.74 25 P P 03 42 03.6 -0.1
baz=330
PLVO Plevna 92.80 26 P P 03 42 03.9 -0.1
baz=330
N47A Urbana 92.83 33 P P 03 42 03.7 -0.6
baz=324
U40A Yellville 92.87 40 P P 03 42 04.3 -0.2
baz=319,SNR=12
ORIO Orleans, Innes 92.98 25 P P 03 42 04.7 -0.1
baz=331
PKRO Pickering 93.00 27 P P 03 42 04.7 -0.3
baz=329
DELO Deloro Mine 93.06 26 P P 03 42 05.8 +0.6
baz=330
K51A Iona Station 93.10 30 P P 03 42 06.3 +0.9
baz=327
N48A Decatur 93.15 33 P P 03 42 05.9 +0.3
baz=324
P46A Rosedale 93.16 35 P P 03 42 06.2 +0.4
baz=323
JCT Junction City 93.17 49 *eP* **P 03 42 06.2 +0.1**
comp=Z,7.0nm,0.8s
JCT Junction City 93.17 49 *eP* **P 03 42 06.2 +0.1**
JCT pmax pmax
comp=Z,7.0nm,0.8s
JCT Junction City 93.17 49 P P 03 42 06.2 +0.1
baz=315
H55A Tweed 93.19 26 P P 03 42 05.7 -0.1
baz=330
W39A Magazine 93.24 42 *eP* **P 03 42 07.6 +1.4**
comp=Z,15nm,1.4s
W39A Magazine 93.24 42 P P 03 42 07.0 +0.8
baz=319
Q45A Warren Harvey, 93.28 36 P P 03 42 06.6 +0.3
baz=322
I55A Frankford 93.30 26 P P 03 42 07.2 +0.9
baz=330
N49A Columbus Grove 93.47 32 P P 03 42 07.2 +0.1
baz=325
H56A Elgin 93.48 25 P P 03 42 07.3 +0.2
baz=331
WHTX Lake Whitney, 93.51 46 *eP* **P 03 42 09.1 +1.5**
comp=Z,21nm,1.0s
WHTX Lake Whitney, 93.51 46 P P 03 42 08.2 +0.7
baz=316,SNR=7.4
O48A Farmland 93.58 33 P P 03 42 07.8 +0.1
baz=324
P47A Martinsville 93.69 34 P P 03 42 07.6 -0.6
baz=324
PBMO Poplar Bluff 93.80 39 *eP* **P 03 42 09.3 +0.6**
comp=Z,13nm,1.1s
MIAR Mount Ida 93.84 42 *eP* **P 03 42 09.7 +0.7**
comp=Z,16nm,1.0s
MIAR Mount Ida 93.84 42 *eP* **P 03 42 09.7 +0.7**
MIAR pmax pmax
comp=Z,16nm,1.0s
MIAR Mount Ida 93.84 42 P P 03 42 09.3 +0.3
baz=319,SNR=9.1
WHAR Wooly Hollow 93.97 41 *eP* **P 03 42 10.4 +0.8**
comp=Z,10nm,1.2s
O49A Covington 94.00 33 P P 03 42 09.7 0.0
baz=325
LONY Lake Ozonia 94.03 24 P P 03 42 09.3 -0.4
baz=332
Q47A Bedord North L 94.06 35 P P 03 42 10.2 +0.2
baz=324
W41B Gary Mavity, V 94.08 41 P P 03 42 10.4 +0.3
baz=320
MOQ Mont Orford 94.17 23 *eP* **P 03 42 11.4 +1.0**
X40A Basin Creek Fa 94.29 42 P P 03 42 11.8 +0.8
baz=319
O50A Cable 94.35 32 P P 03 42 11.6 +0.4
baz=325
Q48A North Vernon 94.39 34 P P 03 42 11.2 -0.3
baz=324
K55A Perry 94.44 27 P P 03 42 11.2 -0.4
baz=330
R47A Wooly Knot Far 94.53 35 P P 03 42 12.3 +0.2
baz=323
ACSO Alum Creek Sta 94.56 32 P P 03 42 12.5 +0.4
baz=326
WCI Wyandotte Cave 94.69 35 P P 03 42 12.2 -0.6
baz=324
P50A Jamestown 94.71 33 P P 03 42 12.8 -0.1
baz=325
T46A Princeton 94.87 37 P P 03 42 14.1 +0.4
baz=322
833A Chaparral WMA, 94.94 50 P P 03 42 14.5 +0.4
baz=315

N53A Lisbon 94.98 30 P P 03 42 13.6 -0.5
baz=327
P51A Williamsport 95.14 32 P P 03 42 14.5 -0.3
baz=326
O52A Adamsville 95.14 31 P P 03 42 14.2 -0.7
baz=327
N54A Moraine State 95.19 30 P P 03 42 14.7 -0.4
baz=328
S48A Wiedeman Farm, 95.26 35 P P 03 42 15.3 -0.1
baz=324
T47A Sharon Grove 95.29 36 P P 03 42 15.7 0.0
baz=323
Q51A Peebles 95.39 33 P P 03 42 15.8 -0.2
baz=326
M56A Emporium 95.46 28 P P 03 42 16.4 +0.1
baz=329
S49A Springfield 95.52 35 P P 03 42 16.6 0.0
baz=324
U47A Clarksville 95.64 37 P P 03 42 17.2 0.0
baz=323
BINY Binghamton 95.66 26 P P 03 42 17.0 -0.3
baz=331
O54A Avella 95.69 30 P P 03 42 17.4 0.0
baz=328
N55A Marion Center 95.75 29 P P 03 42 17.6 -0.1
baz=329
KEST Kesra 95.75 322 P P 03 42 18.2 +0.4
comp=Z,6.7nm,1.0s,baz=131,slow=6.6,SNR=4.9
KEST LR LR 04 30 28.9
comp=Z,189nm,18.2s,baz=340,slow=39
KEST Kesra 95.75 322 *eP* **P 03 42 18.2 +0.4**
comp=Z,14nm,1.1s
N56A West Decatur 95.90 29 P P 03 42 16.9 -1.4
baz=329
Q52A Bidwell 95.92 32 P P 03 42 18.4 0.0
baz=326
T49A Edmonton 95.95 35 P P 03 42 17.9 -0.7
baz=324
V47A Nunnelly 96.01 37 P P 03 42 18.1 -0.8
baz=323
S50A Richmond 96.02 34 P P 03 42 18.5 -0.4
baz=325
P54A Burton 96.14 31 P P 03 42 19.2 -0.3
baz=328
U49A Red Boiling Sp 96.31 36 P P 03 42 20.4 +0.2
baz=324
Q53A Leroy 96.32 32 P P 03 42 20.0 -0.2
baz=327
N57A Milroy 96.33 28 P P 03 42 20.0 -0.2
baz=330
T50A Nancy 96.35 35 P P 03 42 20.2 -0.2
baz=324
O56A Blue Knob Stat 96.35 29 P P 03 42 20.3 -0.1
baz=329
MCWV Mont Chateau 96.36 30 P P 03 42 20.2 -0.2
baz=328
S51A Beattyville 96.42 34 P P 03 42 20.3 -0.4
baz=325
Q54A Coxs Mills 96.51 31 P P 03 42 20.4 -0.7
baz=327
O57A Amberson 96.77 28 P P 03 42 22.8 +0.6
baz=330
T51A Gray 96.81 34 P P 03 42 22.3 -0.2
baz=325
Q55A Buckhannon 96.82 31 P P 03 42 22.8 +0.2
baz=328
U50A Jamestown 96.83 35 P P 03 42 22.8 +0.1
baz=324
W48A Pulaski 96.85 37 P P 03 42 22.2 -0.5
baz=323
N59A State Game Lan 96.86 27 P P 03 42 22.9 +0.2
baz=331
P56A Dayton Farm, R 96.89 30 P P 03 42 22.8 -0.1
baz=329
M61A Granite Spring 97.23 25 P P 03 42 23.9 -0.5
baz=332
P60A Greenville 97.88 27 P P 03 42 26.4 -0.8
baz=331
ESDC Sonseca Array 98.28 333 P Pdif 03 42 29.4 +0.2
comp=Z,0.3nm,0.4s,baz=18,slow=4.1,SNR=8.3
ESDC PP **PP 03 46 24.6 -3.5**
comp=Z,1.6nm,0.9s,baz=36,slow=7.0,SNR=4.3
ESDC LR LR 04 31 40.7
comp=Z,118nm,19.2s,baz=35,slow=38
TOA1 Torodi Ar. Sit 117.85 314 *e*PKPdf **PKPdf 03 47 37.3 -1.2**
TOA1 *e*PP **PP 03 48 48.9 -2.7**
TORD Torodi Ar. Bea 117.85 314 PKP **PKPdf 03 47 37.3 -1.2**
comp=Z,2.4nm,1.0s,baz=9.0,slow=2.4,SNR=8.1
TORD PP **PP 03 48 48.9 -2.7**
comp=Z,2.7nm,1.1s,baz=8.8,slow=8.7,SNR=4.7
MAW Mawson 117.95 205 PKP **PKiKP 03 47 37.2 +0.3**
comp=Z,1.1nm,0.7s,baz=5.4,slow=5.5,SNR=5.4
MAW PP **PP 03 48 50.1 -2.1**
comp=Z,2.3nm,1.1s,baz=50,slow=6.7,SNR=3.8
MAW PKKPab **PKKPab 03 57 58.2 +0.3**
comp=Z,1.0nm,0.9s,baz=265,slow=11,SNR=4.5
QSPA South Pole Qui 125.33 180 *e*PKPdf **PKPdf 03 47 51.3 0.0**
BOSA Boshof 125.63 258 PKP **PKPdf 03 47 52.4 -0.7**
comp=Z,3.0nm,0.9s,baz=11,slow=4.3,SNR=3.6
SDV Santo Domingo 126.86 40 PKP **PKiKP 03 47 56.4 -0.1**
comp=Z,10nm,0.8s,baz=227,slow=1.3,SNR=13
SDV Santo Domingo 126.86 40 *e*PKPdf **PKPdf 03 47 56.0 0.0**
SNAA Sanae 139.17 197 *e*PKPpre PKPpre 03 48 08.7
SNAA Sanae 139.17 197 *e*PKHKP PKPpre 03 48 08.7
PTGA Pitinga 140.40 33 PKhKP PKPpre 03 48 13.6
comp=Z,2.9nm,0.6s,baz=19,slow=0.9,SNR=6.1
PTGA PKP **PKPdf 03 48 22.3 +1.2**
comp=Z,1.3nm,0.3s,baz=43,slow=3.6,SNR=5.4
LPAZ La Paz 148.00 61 PKPbc **PKPbc 03 48 36.6 -1.5**
comp=Z,13nm,0.9s,baz=347,slow=3.7,SNR=52
LPAZ La Paz 148.00 61 *e*PKPdf **PKPdf 03 48 36.2 +1.2**
LPAZ La Paz 148.00 61 *e*PKIKP **PKPdf 03 48 36.2 +1.2**
PB11 IPOC Station P 149.09 67 *e*PKPdf **PKPdf 03 48 35.7 -0.4**
GO01 Chusmiza 149.38 67 *e*PKPbc **PKiKP 03 48 42.6 +0.1**
PB01 IPOC Station P 149.97 69 *e*PKPbc **PKiKP 03 48 43.4 +0.1**
RCBR Riachuelo 150.20 353 *e*PKPbc **PKiKP 03 48 43.8 -0.1**
RCBR Riachuelo 150.20 353 *e*PKIKP **PKiKP 03 48 43.8 -0.1**
LVC Limon Verde 151.29 71 *e*PKPbc **PKiKP 03 48 47.3 +1.0**
LVC Limon Verde 151.29 71 *e*PKIKP **PKiKP 03 48 47.3 +1.0**
GO02 Mina Guanaco 152.07 77 *e*PKPbc **PKiKP 03 48 48.4 +0.6**
BDFB Brasilia 158.70 23 PKPab **PKPab 03 49 24.4 -0.8**
comp=Z,4.9nm,0.8s,baz=324,slow=4.2,SNR=6.2

IDC ***06*** *03:39:03.7±3.1, 6°.98S×129°.50E, h122km±28km, mb4.0/15, mb1 4.2/18, mb1mx4.1/30, mbtmp4.5/18, Error ellipse: s-maj=20.0km s-min=11.3km az=65.0*
ISCJB ***06*** *03:39:04.5±0.2, 7°.16S±0°.03×129°.56E±0°.03, h150km, mb4.5/39, Error ellipse: s-maj=4.2km s-min=3.3km az=150.7*
NEIC ***06*** *03:39:06.2±2.9, 7°.04S×129°.59E, h149km±7km, mb4.7/28, Error ellipse: s-maj=14.9km s-min=3.4km az=49.0*
DJA ***06*** *03:39:07.6±0.2, 7°.S±2°×12°.9E±°, h170km±4km, M4.8/25, mB5.3/17, mb4.6/25, MLv5.3/12, Mw(mB)4.7/17*
BJI ***06*** *03:39:09.2±0.0, 6°.72S×129°.67E, h169km, mb4.6/19, mB4.9/13*
ISC 06 03:39:06.3±0.4, **7°.13S**±0°.04×**129°.52E**±0°.05, **h150**km, **n120,**
σ1§**84**/124, **mb4.6**/37, **1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.96**	**116**	*e*Pn		**Pn**		**03 39 45.4**	**+4.5**
SAUI				*e*Sn		**Sn**		**03 40 04.3**	**-3.2**
SAUI	**Saumlaki**	**1.96**	**116**	P		**Pn**		**03 39 44.4**	**+3.5**
BNDI	**Bandanaira**	**2.62**	**8**	P		**Pn**		**03 39 52.2**	**+3.2**
FAKI	**Fak Fak**	**4.99**	**33**	*e*Pn		**Pn**		**03 40 19.4**	**-0.3**
FAKI				*e*Sn		**Sn**		**03 41 10.0**	**-6.9**
FAKI	**Fak Fak**	**4.99**	**33**	P		**Pn**		**03 40 19.4**	**-0.3**
	131nm,0.7s,8μm1.9nm								
KMPI	**Kaimana, Papua**	**5.41**	**51**	P		**Pn**		**03 40 27.8**	**+2.6**
SOEI	**Soe**	**5.81**	**243**	*e*Pn		**Pn**		**03 40 32.3**	**+1.6**
SOEI				*e*Sn		**Sn**		**03 41 34.1**	**-2.5**
SOEI	**Soe**	**5.81**	**243**	P		**Pn**		**03 40 32.1**	**+1.4**
MTN	**Manton Dam**	**5.89**	**164**	*e*Pn		**Pn**		**03 40 33.9**	**+2.3**
MTN				*e*Sn		**Sn**		**03 41 36.3**	**-2.0**
SWI	**Sorong**	**6.47**	**16**	P		**Pn**		**03 40 39.1**	**-0.2**
BATI	**Baumata**	**6.55**	**242**	P		**Pn**		**03 40 41.9**	**+1.5**
	52nm,0.3s,baz=120,slow=1.5,SNR=28								
BATI					S		**Sn**	**03 41 51.0**	**-3.0**
	68nm,0.3s,baz=100,slow=23,SNR=16								
BATI	**Baumata**	**6.55**	**242**	P		**Pn**		**03 40 41.7**	**+1.3**
RKPI	**Ransiki, Papua**	**7.26**	**40**	P		**Pn**		**03 40 51.0**	**+1.1**
MMRI	**Maumere**	**7.37**	**258**	P		**Pn**		**03 40 52.3**	**+1.0**
EDFI	**Ende, Flores**	**7.92**	**258**	P		**Pn**		**03 40 59.8**	**+1.0**
TNTI	**Ternate**	**8.14**	**345**	*e*Pn		**Pn**		**03 41 03.1**	**+1.4**

TNTI	Ternate	8.14 345	P	Pn	03 41 03.1 +1.4
BSSI	Bau Bau, Buton	9.02 276	P	Pn	03 41 13.4 0.0
BKSI	Bulukumba	9.52 280	P	Pn	03 41 20.1 +0.1
BNSI	Bone	9.75 286	P	Pn	03 41 22.8 -0.3
KAPI	Kappang	9.94 282	P	Pn	03 41 27.5 +1.9
	1.0nm,0.3s,baz=110,slow=6.1,SNR=7.8				
APSI	Ampana	9.99 308	P	Pn	03 41 27.1 +0.8
SPSI	Sidrap Palu	10.20 287	P	Pn	03 41 29.8 +0.7
WBSI	Waikabubak, Su	10.33 255	P	Pn	03 41 29.7 -1.1
TTSI	Tana Toraja	10.48 292	P	Pn	03 41 44.4 +12
MRSI	Marisa	10.69 315	P	Pn	03 41 36.7 +1.1
	26nm,0.8s,2μm				
FITZ	Fitzroy Crossi	11.54 199	P	Pn	03 41 45.4 -1.2
	10nm,0.3s,baz=25,slow=11,SNR=96				
FITZ			S	Sn	03 43 47.4 -6.7
	9.3nm,0.3s,baz=114,slow=22,SNR=5.6				
FITZ	Fitzroy Crossi	11.54 199	ePn	Pn	03 41 46.1 -0.5
FITZ			eSn	Sn	03 43 49.9 -4.2
PLAI	Plampang	11.75 261	P	Pn	03 41 48.1 -1.4
	67nm,0.7s,1μm				
JAY	Jayapura	12.05 68	P	Pn	03 41 57.7 +4.3
	1.0nm,0.3s,baz=234,slow=12,SNR=5.2				
MPSI	Mapaga	12.13 307	P	Pn	03 41 55.3 +0.9
WRAB	Tennant Creek	13.56 160	ePn	Pn	03 42 11.7 -1.0
WRAB			eSn	Sn	03 44 34.1 -8.8
WR1	Warramunga Arr	13.56 160	ePn	Pn	03 42 11.6 -1.2
WR1			eSn	Sn	03 44 33.8 -9.2
WRA	Warramunga Arr	13.56 160	P	Pn	03 42 11.6 -1.2
	8.1nm,0.3s,baz=334,slow=13,SNR=118				
WRA			S	Sn	03 44 33.8 -9.2
	8.1nm,0.3s,baz=334,slow=22,SNR=11				
WB2	Warramunga Arr	13.57 160	ePn	Pn	03 42 11.8 -1.1
WB2			eSn	Sn	03 44 30.2 -13
COEN	Coen	15.03 118	ePn	P	03 42 36.0 +3.0
	45nm,1.4s				
COEN			eSn	Sn	03 45 12.3 -6.1
JAGI	Jajag, Banyuwa	15.29 264	ePn	Pn	03 42 32.9 -1.5
	40nm,1.0s				
AS31	Alice Springs	16.97 166	eP	Pn	03 42 56.5 +1.6
	37nm,0.9s				
AS31			eS	S	03 45 54.0 -10
ASAR	Alice Springs	16.97 166	P	Pn	03 42 57.2 +2.3
	8.2nm,0.3s,baz=345,slow=10.0,SNR=222				
ASAR			S	S	03 45 54.0 -10
	1.6nm,0.3s,baz=331,slow=18,SNR=5.9				
PSA00	Pilbara Seismi	17.13 212	eP	Pn	03 42 57.9 +1.1
	53nm,1.4s				
PSA00			eS	S	03 45 52.8 -14
KKM	Kota Kinabalu	18.64 314	eP	Pn	03 43 17.1 +2.1
	33nm,1.0s				
UGM	Wanagama	18.85 266	eP	P	03 43 16.3 +1.3
	343nm,1.4s				
SBUM	Sibu	19.72 298	eP	P	03 43 26.5 +2.1
	18nm,0.9s				
CTA	Charters Tower	20.71 130	P	P	03 43 37.2 +2.1
	4.1nm,0.5s,baz=312,slow=14,SNR=3.7				
CTAO	Charters Tower	20.71 130	eP	P	03 43 33.6 -1.4
	17nm,1.1s				
KSM	Kuching	20.99 293	eP	P	03 43 39.4 +1.4
	17nm,0.8s				
CISI	Cisompet, Garu	21.53 268	eP	P	03 43 42.0 -2.0
	49nm,0.7s				
LEM	Lembang	21.74 269	P	P	03 43 46.0 -0.3
	33nm,0.6s,baz=333,slow=10,SNR=3.7				
TPI	Tanjungpandan	22.21 280	P	P	03 43 49.4 -1.4
	10nm,0.7s				
FORT	Forrest	23.56 183	eP	P	03 44 04.1 +0.9
	53nm,0.8s				
PPBI	Pangkal Pinang	23.82 281	P	P	03 44 05.0 -0.8
BBOO	Buckleboo	26.26 167	eP	P	03 44 29.0 +1.4
	48nm,1.4s				
STKA	Stephens Creek	27.07 157	P	P	03 44 35.8 +0.8
	5.1nm,0.7s,baz=329,slow=10.0,SNR=20				
STKA	Stephens Creek	27.07 157	eP	P	03 44 35.8 +0.8
	1.7nm,0.6s				
PSI	Prapat	32.09 287	P	P	03 45 18.8 -0.8
	15nm,0.8s,baz=131,slow=6.7,SNR=16				
PSI	Prapat	32.09 287	eP	P	03 45 19.4 -0.3
	24nm,0.9s				
GSI	Gunungsitoli	32.96 284	eP	P	03 45 25.4 -1.7
	22nm,1.0s				
UTTA	Uttaradit	37.81 311	P	P	03 46 09.2 +0.8
	25μm,0.7s				
UTTA	Uttaradit	37.81 311	P	P	03 46 09.2 +0.8
	25μm,0.7s				
CM31	Chiang Mai Arr	39.45 311	eP	P	03 46 21.8 -0.4
CMAR	Chiang Mai Arr	39.45 311	P	P	03 46 21.8 -0.4
	3.7nm,0.5s,baz=137,slow=7.2,SNR=17				
CMMT	Chiang Mai	39.67 311	P	P	03 46 23.6 -0.3
	7.3nm,0.8s				
CMMT	Chiang Mai	39.67 311	P	P	03 46 23.6 -0.3
	7.3nm,0.8s				
CHTO	Chiang Mai	39.67 311	eP	P	03 46 23.8 -0.1
	10nm,0.8s				
NJ2	Nanjing	40.27 346	eP	P	03 46 29.7 +1.0
NJ2			pmax	pmax	
	comp=Z,14nm,0.5s				
KMI	Kunming	41.32 322	P	P	03 46 39.1 +1.4
KMI			pmax	pmax	
	comp=Z,9.0nm,0.6s				
MJAR	Matsushiro Arr	44.20 10	P	P	03 46 58.2 -2.3
	1.5nm,0.5s,baz=192,slow=10,SNR=6.2				
MAJO	Matsushiro	44.20 10	eP	P	03 46 58.2 -2.3
MAT	Matsushiro	44.20 10	P	P	03 46 59.1 -1.4
KS15	Wonju Array Si	44.37 358	eP	P	03 47 01.6 -0.1
KSRS	Korea Array	44.38 358	P	P	03 47 01.6 -0.2
	0.8nm,0.6s,baz=173,slow=11,SNR=5.5				
CD2	Chengdu	45.16 328	eP	P	03 47 09.0 +0.8
SHL	Shillong	48.94 313	eP	P	03 47 36.9 -0.9
	11nm,0.9s				
LZH	Lanzhou	49.30 332	eP	P	03 47 43.3 +3.0
LZH			pP	pwP	03 48 22.8 +4.2
LZH			sP	sP	03 48 41.5 +12
LZH			pmax	pmax	
	comp=Z,18nm,1.0s				
HHC	Hu-ho-hao-te	50.52 342	eP	P	03 47 51.1 +1.7
HHC			pmax	pmax	
	comp=Z,15nm,0.6s				
HHC			pmax	pmax	
	comp=Z,190nm,5.0s				
MDJ	Mudanjiang	51.51 0	P	P	03 47 56.7 +0.2
MDJ			pmax	pmax	
	comp=Z,19nm,0.5s				
MDJ			pmax	pmax	
	comp=Z,74nm,4.0s				
MDJ	Mudanjiang	51.51 0	eP	P	03 47 56.7 +0.2
	12nm,0.6s				
MQZ	McQueen's Vall	52.40 141	eP	P	03 48 02.6 -0.6
	15nm,1.2s				
BKZ	Black Stump Fm	52.84 135	eP	P	03 48 07.2 +0.6
	25nm,1.2s				
RAMN	Ramite	53.62 311	eP	P	03 48 12.1 -0.7
	28nm,0.5s				
JIRN	Jiri	54.32 311	eP	P	03 48 16.8 -1.1
	8.8nm,0.3s				
GUN	Gumba	54.68 312	eP	P	03 48 19.5 -1.0
	17nm,0.6s				
PKI	Pulchoki	54.85 311	eP	P	03 48 20.7 -1.0
	5.6nm,0.4s				
PKIN	Phulchoki	54.86 311	eP	P	03 48 20.5 -1.3
	7.9nm,0.5s				
KKN	Kakani	55.06 311	eP	P	03 48 22.0 -1.1
	9.7nm,0.4s				
KOLN	Koldanda	56.32 310	eP	P	03 48 31.0 -1.1
	14nm,0.6s				
DANN	Dangsing	56.50 311	eP	P	03 48 32.1 -1.3
	8.4nm,0.5s				
PYUN	Piuthan	56.95 310	eP	P	03 48 35.7 -0.8
	18nm,0.6s				
SONA0	Songino Array	58.42 342	eP	P	03 48 46.7 +0.4
SONM	Songino Array	58.42 342	P	P	03 48 46.7 +0.4
	0.9nm,0.4s,baz=157,slow=7.0,SNR=4.9				
WMQ	Urumqi	63.25 327	eP	P	03 49 20.7 +1.8
WMQ			pmax	pmax	
	comp=Z,38nm,0.8s				
WMQ			pmax	pmax	
	comp=Z,140nm,6.1s				
PETK	Petropavlovsk-	64.60 18	P	P	03 49 27.9 +0.4
	2.0nm,0.7s,baz=186,slow=4.5,SNR=4.0				
PEA1	Petropavlovsk-	64.60 18	eP	P	03 49 27.9 +0.4
MK32	Makanchi Array	68.08 327	eP	P	03 49 49.6 -0.2
MKAR	Makanchi Array	68.08 327	P	P	03 49 49.6 -0.2
	10.0nm,0.5s,baz=115,slow=8.4,SNR=108				
MAKZ	Makanchi	68.26 327	eP	P	03 49 50.7 -0.2
	8.0nm,0.5s				
ZALV	Zalesovo Beam	71.49 334	P	P	03 50 09.3 -1.2
	2.1nm,0.4s,baz=113,slow=3.9,SNR=8.4				
ZAA1	Zalesovo Array	71.50 334	eP	P	03 50 09.3 -1.2
VNDA	Vanda	72.37 173	P	P	03 50 16.5 +1.1
	0.5nm,0.5s,baz=313,slow=7.0,SNR=3.9				
KURK	Kurchatov	72.38 329	eP	P	03 50 15.5 -0.4
	8.6nm,0.9s				
KKAR	Karatay Array	73.13 319	eP	P	03 50 20.8 +0.3
	2.3nm,0.8s				
MAW	Mawson	74.65 201	P	P	03 50 30.4 +1.5
	0.8nm,0.4s,baz=85,slow=7.5,SNR=6.6				
TIXI	Tiksi	78.62 360	eP	P	03 50 50.0 -1.0
	3.3nm,0.5s				
ABKAR	Akbulak array	82.32 322	eP	P	03 51 10.4 -0.8
	5.2nm,0.6s				
SYO	Syowa Base	83.37 201⇑	eX	P	03 51 29.0 +13
ARU	Arti	85.57 328	eP	P	03 51 27.1 -0.4
	8.7nm,0.7s				
RND	Reindeer	92.59 26	eP	P	03 51 59.7 -0.9
	3.6nm,0.7s				
ILAR	Eielson Array	93.67 25	P	P	03 52 03.7 -1.8
	0.6nm,0.8s,baz=253,slow=4.3,SNR=5.7				
ILB	Eielson Array	93.67 25	eP	P	03 52 03.7 -1.8
BR101	Keskin Array S	99.03 309	eP	Pdif	03 52 28.8 -1.7
BRTR	Keskin Array B	99.03 309	P	Pdif	03 52 28.8 -1.7
	0.4nm,0.6s,baz=20,slow=4.6,SNR=3.8				
ARCES	ARCESS Array B	101.54 340	P	Pdif	03 52 39.4 -1.5
	11nm,0.5s,baz=76,slow=8.5,SNR=8.8				
ULM	Lac du Bonnet	122.82 33	PKP	PKPdf	03 57 45.4 +0.8
	1.6nm,0.4s,baz=219,slow=1.6,SNR=3.1				
LTX	Lajitas	125.40 59	ePKPdf	PKPdf	03 57 50.5 +0.2
TXAR	Lajitas Array	125.40 59	PKP	PKPdf	03 57 50.5 +0.2
	0.3nm,0.5s,baz=176,slow=2.1,SNR=5.5				
TORD	Torodi Ar. Bea	128.37 281	PKP	PKPdf	03 57 56.9 +0.7
	1.0nm,0.6s,baz=99,slow=1.6,SNR=8.6				
TOA1	Torodi Ar. Sit	128.37 281	ePKPdf	PKPdf	03 57 56.9 +0.7
CPUP	Villa Florida	146.08 169	PKPbc	PKPbc	03 58 30.6 +1.1
	3.1nm,0.8s,baz=164,slow=3.6,SNR=6.2				
LPAZ	La Paz	150.90 143	PKPbc	PKPbc	03 58 44.4 +1.3
	2.2nm,0.4s,baz=28,slow=2.6,SNR=32				
LPAZ	La Paz	150.90 143	ePKPbc	PKPbc	03 58 44.5 +1.4

IDC 06 03:49:05.5±1.2, 55°.44S×26°.18W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/21, mbtmp3.9/3, Error ellipse: s-maj=46.0km s-min=32.2km az=92.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	47.22	182	P	P	03 57 39.2	-0.2
	0.7nm,0.6s,baz=178,slow=4.2,SNR=6.1						
LPAZ	La Paz	50.50	304	P	P	03 58 05.8	-0.2
	1.1nm,0.6s,baz=144,slow=6.0,SNR=8.4						
TORD	Torodi Ar. Bea	72.24	29	P	P	04 00 32.3	0.0
	0.7nm,0.5s,baz=204,slow=6.0,SNR=14						
ILAR	Eielson Array	150.13	312	PKPbc	PKPbc	04 08 56.4	-0.3
	0.5nm,0.8s,baz=116,slow=2.1,SNR=4.1						

*MDD **06** 03:56:38.5±3.9, 35°.73N×11°.19W, h0km, mb4.0/1, Error ellipse: s-maj=59.0km s-min=32.3km az=132.0, PRXIMO*

INMG 06 03:56:36.6±0.7, 35°.33N×11°.59W, h31km, ML1.9, 1D, Error ellipse: s-maj=7.3km s-min=3.3km az=108.0, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.87	50	⇓iPn	Pn	03 57 18.5	-1.7
PFVI				eSn	Sn	03 57 50.2	-3.5
PFVI				A	A	03 57 52.5	
	3.7nm,0.6s						
PFVI	Vila Bisbo	2.87	50	Pn	Pn	03 57 18.4	-1.8
	3.5nm,0.1s,SNR=7.9						
PFVI				Sn	Sn	03 57 49.8	-3.9
	4.1nm,0.4s,SNR=7.9						
MORF	Marmelete	3.09	49	ePn	Pn	03 57 21.5	-1.8
MORF				eSn	Sn	03 57 55.4	-3.8
MORF				A	A	03 58 00.3	
	2.2nm,0.3s						
MORF	Marmelete	3.09	49	Pn	Pn	03 57 21.5	-1.8
MORF				Sn	Sn	03 57 55.4	-3.8
	2.2nm,0.3s						
PTEO	Sao Teotonio	3.20	45	eSn	Sn	03 57 58.0	-3.8
PTEO				A	A	03 58 05.6	
	5.5nm,0.5s						
PTEO	Sao Teotonio	3.20	45	Sn	Sn	03 57 58.0	-3.8
	2.8nm,0.5s						
PBDV	Barranco-do-Ve	3.52	56	ePn	Pn	03 57 27.9	-1.3
PBDV				eSn	Sn	03 58 05.3	-4.5
PBDV				A	A	03 58 13.0	
	4.2nm,0.9s						
PBDV	Barranco-do-Ve	3.52	56	Pn	Pn	03 57 27.9	-1.3
PBDV				Sn	Sn	03 58 05.3	-4.5
	4.2nm,0.9s						
PCVE	Castro Verde	3.67	50	eSn	Sn	03 58 09.3	-4.2
PCVE				A	A	03 58 09.4	
	2.2nm,0.9s						
PCVE	Castro Verde	3.67	50	Sn	Sn	03 58 09.3	-4.2
	2.2nm,0.9s						
MESJ	Messejana	3.69	46	ePn	Pn	03 57 30.0	-1.5
MESJ				eSn	Sn	03 58 09.4	-4.6
MESJ				A	A	03 58 15.2	
	1.7nm,0.6s						
MESJ	Messejana	3.69	46	Pn	Pn	03 57 30.0	-1.5
MESJ				Sn	Sn	03 58 09.4	-4.6
	1.7nm,0.6s						
PNCL	Nicolau / Gran	3.71	41	ePn	Pn	03 57 29.7	-2.1
PNCL				eSn	Sn	03 58 09.8	-4.6
PNCL				A	A	03 58 17.4	
	2.4nm,0.6s						
PNCL	Nicolau / Gran	3.71	41	Pn	Pn	03 57 29.7	-2.1
PNCL				Sn	Sn	03 58 09.8	-4.6
	2.4nm,0.6s						
PVAQ	Vaqueiros	3.75	55	ePn	Pn	03 57 30.7	-1.6
PVAQ				eSn	Sn	03 58 10.9	-4.5
PVAQ				A	A	03 58 20.7	
	2.4nm,0.8s						
PVAQ	Vaqueiros	3.75	55	Pn	Pn	03 57 30.7	-1.6
PVAQ				Sn	Sn	03 58 10.9	-4.5
	2.4nm,0.8s						
EGRO	El Granado	3.98	55	Pn	Pn	03 57 34.5	-0.9
	0.2nm,0.0s,SNR=7.9						
EGRO				Sn	Sn	03 58 16.7	-4.3
	0.3nm,0.2s,SNR=7.9						
PMAFR	Mafra	4.06	26	Sn	Sn	03 58 19.1	-4.1
	2.0nm,0.2s,SNR=7.9						
EVO	Evora	4.29	41	ePn	Pn	03 57 37.7	-2.1
EVO				eSn	Sn	03 58 23.9	-4.9
EVO				A	A	03 58 26.9	
	1.1nm,0.6s						
EVO	Evora	4.29	41	Pn	Pn	03 57 37.7	-2.1
EVO				Sn	Sn	03 58 23.9	-4.9
	1.1nm,0.6s						
PMTG	Montargil	4.60	35	eSn	Sn	03 58 31.4	-5.0
PMTG				A	A	03 58 33.4	
	0.5nm,0.1s						
PMTG	Montargil	4.60	35	Sn	Sn	03 58 31.4	-5.0
	0.5nm,0.1s						
EMIN	Mina Concepcio	4.65	57	Pn	Pn	03 57 42.7	-1.9
	0.0nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	03 58 32.8	-4.8
	0.2nm,0.2s,SNR=7.9						
EBAD	Badajoz	5.01	46	Pn	Pn	03 57 47.9	-1.7
	0.0nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	03 58 41.2	-5.3
	1.1nm,0.1s,SNR=7.9						
PMRV	Marv??o	5.29	38	ePn	Pn	03 57 51.5	-1.9
PMRV				eSn	Sn	03 58 47.5	-5.8
PMRV				A	A	03 59 00.2	
	1.0nm,0.6s						
PMRV	Marv??o	5.29	38	Pn	Pn	03 57 51.5	-1.9
PMRV				Sn	Sn	03 58 47.5	-5.8
	1.0nm,0.6s						
ECAB	El Cabril	5.67	59	Pn	Pn	03 57 56.8	-1.9
	0.1nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	03 58 55.9	-6.8
	0.1nm,0.2s,SNR=7.9						

*ISCJB **06** 04:15:18.0±0.5, 6°.59S±0°.06×154°.20E±0°.08, h48km, mb4.3/21, MS3.6/5, Error ellipse: s-maj=12.5km s-min=8.4km az=20.2*
*NEIC **06** 04:15:21.2±2.5, 6°.58S×154°.13E, h62km±6km, mb4.5/13, Error ellipse: s-maj=18.0km s-min=12.2km az=115.0*
*IDC **06** 04:15:21.2±5.7, 6°.69S×154°.27E, h66km±48km, mb3.8/11, mb1 4.0/12, mb1mx3.8/43, mbtmp4.2/12, ML2.3/1, MS3.6/6, Ms1 3.6/6, ms1mx3.1/36, Error ellipse: s-maj=37.1km s-min=17.4km az=96.0*

ISC 06 04:15:19.2±0.6, 6°.64S±0°.07×154°.3E±0°.1, h48km, n41, σ1§56/39, mb4.2/21, MS3.5/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.25	318	ePn	Pn	04 16 05.9	-1.8
RABL				eSn	Sn	04 16 50.9	+5.8
PMG	Port Moresby	7.61	248	P	Pn	04 17 07.7	+0.2
	2.6nm,0.3s,baz=75,slow=8.1,SNR=5.4						
PMG				LR	LR	04 20 37.2	
	comp=Z,256nm,18.2s,baz=38,slow=42						
PATS	Pohnpei	13.97	17	ePn	Pn	04 18 28.8	-5.8
CTA	Charters Tower	15.49	210	P	P	04 18 59.1	+0.8
	0.3nm,0.3s,baz=43,slow=11,SNR=7.3						
CTAO	Charters Tower	15.49	210	ePn	Pn	04 18 54.5	-0.2
	21nm,1.0s						
WRAB	Tennant Creek	23.46	234	eP	P	04 20 24.6	-0.1
	24nm,0.9s						
WB2	Warramunga Arr	23.47	234	eP	P	04 20 24.7	0.0
	21nm,0.9s						
WR1	Warramunga Arr	23.48	234	eP	P	04 20 24.7	-0.1
WRA	Warramunga Arr	23.48	234	P	P	04 20 24.7	-0.1
	36nm,0.3s,baz=61,slow=11,SNR=3.1						
AS31	Alice Springs	25.91	227	eP	P	04 20 46.9	-0.2
	1.4nm,1.0s						
ASAR	Alice Springs	25.92	227	P	P	04 20 46.9	-0.2
	2.7nm,0.9s,baz=57,slow=9.2,SNR=12						
ASAR				LR	LR	04 30 01.9	
	comp=Z,130nm,19.8s,baz=50,slow=34						
STKA	Stephens Creek	27.78	204	P	P	04 21 03.2	-0.5
	3.4nm,0.8s,baz=20,slow=10.0,SNR=4.7						
STKA				LR	LR	04 31 55.5	
	comp=Z,119nm,18.8s,baz=26,slow=36						
STKA	Stephens Creek	27.78	204	eP	P	04 21 03.2	-0.5
	2.3nm,1.3s						
FITZ	Fitzroy Crossi	30.19	245	P	P	04 21 24.6	-0.6
	6.9nm,0.8s,baz=87,slow=11,SNR=6.1						
FITZ				LR	LR	04 34 22.8	
	comp=Z,90nm,18.5s,baz=44,slow=38						
FITZ	Fitzroy Crossi	30.19	245	eP	P	04 21 24.6	-0.6
	9.2nm,0.9s						
BBOO	Buckleboo	31.09	211	eP	P	04 21 32.2	-0.8
	26nm,1.1s						
THZ	Tophouse	38.68	158	eP	P	04 22 41.2	+2.9
	26nm,1.3s						
SMRI	Semarang	43.56	267	eP	P	04 23 17.1	-1.8
	60nm,1.2s						
YULB	Yu-li	43.96	314	eP	P	04 23 19.1	-2.8
	6.8nm,0.7s						
KSRS	Korea Array	50.32	333	P	P	04 24 12.6	+1.4
	1.3nm,0.6s,baz=149,slow=7.5,SNR=7.4						
KS15	Wonju Array Si	50.33	333	eP	P	04 24 12.6	+1.3
KLR	Kul'dur	59.03	343	P	P	04 25 15.8	+1.7
	1.1nm,0.6s,baz=123,slow=2.8,SNR=4.7						
SONA0	Songino Array	68.68	328	eP	P	04 26 18.1	+0.2
SONM	Songino Array	68.68	328	P	P	04 26 18.1	+0.2
	1.9nm,0.9s,baz=124,slow=4.3,SNR=8.7						
VNDA	Vanda	70.95	178	P	P	04 26 32.1	+1.0
	0.5nm,0.7s,baz=323,slow=8.8,SNR=4.1						
CAST	Castle Rocks	80.64	22	eP	P	04 27 28.0	+1.3
	2.0nm,0.7s						
MK32	Makanchi Array	82.70	319	eP	P	04 27 36.8	-1.1
MKAR	Makanchi Array	82.70	319	P	P	04 27 36.8	-1.1
	1.1nm,0.9s,baz=95,slow=6.6,SNR=5.4						
ILAR	Eielson Array	83.29	22	P	P	04 27 40.8	+0.2
	0.5nm,0.6s,baz=253,slow=5.6,SNR=9.3						
ILB	Eielson Array	83.29	22	eP	P	04 27 40.8	+0.2
QSPA	South Pole Qui	83.33	180	eP	P	04 27 41.6	+0.6
	7.1nm,1.0s						
MAW	Mawson	84.47	203	P	P	04 27 46.8	+0.4
	2.1nm,0.6s,baz=121,slow=6.3,SNR=12						
MAW	Mawson	84.47	203	eP	P	04 27 46.8	+0.4
	0.7nm,0.8s						
YBH	Yreka Blue Hor	89.15	48	LR	LR	05 03 04.2	
	comp=Z,55nm,19.3s,baz=270,slow=32						
NV01	Mina Array Sit	92.03	52	eP	P	04 28 22.7	-0.9
NVAR	Mina Array Bea	92.03	52	P	P	04 28 22.7	-0.9
	1.1nm,0.8s,baz=255,slow=6.5,SNR=7.8						
NV11	Mina Array Sit	92.14	52	eP	P	04 28 23.8	-0.3
ELK	Elko	94.61	50	LR	LR	05 01 40.3	
	comp=Z,22nm,21.0s,baz=162,slow=29						
CLL	Collm	125.19	331	ePKPdf	PKPdf	04 34 11.0	-3.5
TORD	Torodi Ar. Bea	152.29	286	PKPbc	PKPbc	04 35 09.6	-1.2
	2.6nm,0.7s,baz=105,slow=2.8,SNR=15						
TOA1	Torodi Ar. Sit	152.29	286	ePKPbc	PKPbc	04 35 09.6	-1.2

DJA 06 04:20:21.2±0.8, 8°S±7°×111°E±°, h260km±7km, M3.8/7, mb4.5/1, mB4.4/1, MLv3.5/7, Mw(mB)3.5/1, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	1.11	142	P	Pn	04 20 58.4	+0.5
PLAI				S	S	04 21 28.0	+1.1
WBSI	Waikabubak, Su	2.83	127	P	Pn	04 21 13.2	+0.6
WBSI				S	S	04 21 52.8	-0.6
BKSI	Bulukumba	3.98	49	P	Pn	04 21 25.6	+0.3
EDFI	Ende, Flores	4.62	100	P	Pn	04 21 32.6	-0.3

*NIED **06** 04:25:00.35°.60N×140°.70E, h47km, Mw4.5 Best double couple: M07.44000×1015 NP1:φs205.00000°, δ17.00000°, λ103.00000°. NP2:φs12.00000°, δ73.00000°, λ86.00000°.*
*BJI **06** 04:25:35.4±0.0, 35°.44N×140°.89E, h24km, mb4.7/51, mB4.7/33, Ms3.9/18, Ms7 3.7/19*
*MOS **06** 04:25:39.4±1.0, 35°.54N×140°.60E, h32km, mb4.9/23, Error ellipse: s-maj=10.5km s-min=5.8km az=110.3*
*NEIC **06** 04:25:41.2±2.1, 35°.64N×140°.58E, h31km±5km, mb4.6/33, Error ellipse: s-maj=13.2km s-min=9.9km az=92.0*
NEIC Recorded [2 JMA] in Chiba and Ibaraki.
*ISCJB **06** 04:25:42.1±0.3, 35°.58N±0°.03×140°.61E±0°.04, h54km±2km, mb4.6/74, MS3.8/20, Error ellipse: s-maj=5.7km s-min=4.3km az=12.3*
*JMA **06** 04:25:42.0±0.1, 35°.64N×140°.69E, h51km±2km, M4.3 Broadband fault plane solution: P waves. NP1: φs359.00000°, δ80.00000°, λ82.00000°. NP2: φs220.00000°, δ13.00000°, λ130.00000°. Principal axes: T Plg54.0000°, Azm259.0000°; N Plg8.0000°, Azm0.0000°; P Plg35.0000°, Azm96.0000°;*
JMA Felt III J1.
*IDC **06** 04:25:43.6±1.5, 35°.58N×140°.55E, h52km±14km, mb4.0/25, mb1 4.2/29, mb1mx4.2/40, mbtmp4.3/29, ML3.0/3, MS3.6/22, Ms1 3.7/22, ms1mx3.5/44 Error ellipse: s-maj=15.2km s-min=8.8km az=90.0*

ISC 06 04:25:42.5±0.6, 35°.66N±0°.04×140°.58E±0°.04, h41km±5km, n191, σ1§78/198, mb4.6/74, MS3.7/22, 11C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.11	264	P	Pn	04 25 50.7	+1.4
JSMT				eS	Sn	04 25 57.7	+3.7
CHOJ	Chosi	0.23	78	⇑iP	Pn	04 25 50.1	0.0
CHOJ				eS

JHJ2 *e*Sn **Sn** **04 26 49.4 -3.4**
INU Inuyama 2.92 265 *e*Pn **Pn** **04 26 27.7 +1.2**
ERM Erimo 6.66 17 *e*Pn **Pn** **04 27 16.7 -1.0**
ERM *e*Sn **Sn** **04 28 27.3 -5.0**
ERM Erimo 6.66 17 *e*P **Pn** **04 27 16.7 -1.0**
ERM *e* 04 28 27.3
JNU Nakatsue 8.41 255 P **Pn** **04 27 42.9 +1.1**
0.3nm,0.3s,baz=46,slow=8.5,SNR=3.7
JNU LR LR 04 31 22.2
comp=Z,738nm,19.1s,baz=54,slow=40
JNU Nakatsue 8.41 255 *e*Pn **Pn** **04 27 40.4 -1.4**
ASAJ Asahikawa 8.59 10 P **Pn** **04 27 42.0 -2.2**
3.4nm,0.3s,baz=222,slow=15,SNR=9.3
ASAJ S **Sn** **04 29 14.5 -5.3**
1.0nm,0.3s,baz=286,slow=20,SNR=1.6
ASAJ LR LR 04 31 40.4
comp=Z,138nm,19.1s,baz=162,slow=41
TEY Ternei 9.85 343⇑ *e*P **Pn** **04 27 59.2 -2.2**
TEY pmax pmax
comp=Z,10.0nm,1.0s
MSHR Mys Shultsa 10.07 316 *i*P **Pn** **04 28 07.7 +3.3**
KSRS Korea Array 10.34 284 P **Pn** **04 28 12.8 +4.6**
comp=Z,0.5nm,0.3s,baz=103,slow=14,SNR=30
KSRS LR LR 04 32 15.4
comp=Z,446nm,19.6s,baz=118,slow=38
KS15 Wonju Array Si 10.37 284 *e*Pn **Pn** **04 28 12.8 +4.2**
USRK Ussuriysk Ar. 10.78 325 P **Pn** **04 28 17.4 +3.3**
comp=Z,0.2nm,0.3s,baz=149,slow=12,SNR=13
USRK LR LR 04 32 09.5
comp=Z,286nm,19.7s,baz=139,slow=36
KUR Kuril'sk 11.05 28 *e*P **Pn** **04 28 20.3 +2.4**
YSS Yuzh-Sakhalins 11.41 8 *i*P **Pn** **04 28 23.4 +0.7**
MDJ Mudanjiang 12.27 320 *e*Pn **Pn** **04 28 34.6 +0.1**
CN2 Changchun 14.19 310 *e*P **P** **04 29 06.5 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
KLR Kul'dur 15.04 337 P **Pn** **04 29 10.8 -1.2**
comp=Z,0.2nm,0.3s,baz=137,slow=14,SNR=6.2
TYV Tymovskoe 15.28 5 *e*P **P** **04 29 20.3 +1.0**
TYV pmax pmax
comp=Z,24nm,0.9s
TYV pmax pmax
comp=Z,100nm,3.7s
DL2 Dalian 15.43 288 *e*P **Pn** **04 29 11.5 -5.7**
DL2 *e*S **Sn** **04 32 00.1 -6.9**
DL2 pmax pmax
comp=Z,20nm,1.2s
DL2 LR LR
comp=N,160nm,19.3s
DL2 LR LR
comp=E,270nm,21.0s
DL2 LR LR
comp=Z,340nm,20.3s
NJ2 Nanjing 18.40 265 *e*P **Pn** **04 29 54.5 +0.2**
NJ2 pmax pmax
comp=Z,16nm,0.5s
BJI Beijing 19.75 290⇑ *i*P **P** **04 30 08.4 -0.3**
BJI S **Sn** **04 33 54.4 +3.1**
BJI pmax pmax
comp=Z,6.0nm,0.9s
BJI LR LR
comp=Z,37nm,11.4s
BJI LR LR
comp=Z,61nm,20.8s
BJI LR LR
comp=Z,150nm,32.2s
BJT Baijiatuau 19.75 290 *e*P **P** **04 30 09.0 +0.2**
comp=Z,11nm,0.6s
BJT Baijiatuau 19.75 290 *e*P **P** **04 30 09.0 +0.2**
BJT pmax pmax
comp=Z,11nm,0.6s
ZEA Zeya 20.35 337 *e*P **P** **04 30 13.9 -1.3**
ZEA pmax pmax
comp=Z,23nm,1.0s
SSLB Suanglung 20.70 241 *e*P **P** **04 30 16.0 -3.3**
comp=Z,9.3nm,0.9s
PETK Petropavlovsk- 21.21 29 P **P** **04 30 26.1 +1.5**
comp=Z,6.0nm,1.1s,baz=217,slow=4.7,SNR=5.4
PETK LR LR 04 40 17.3
comp=Z,40nm,18.2s,baz=217,slow=41
PEA1 Petropavlovsk- 21.22 29 *e*P **P** **04 30 26.1 +1.5**
TPUB Ta-pu 21.24 240 *e*P **P** **04 30 23.1 -2.0**
comp=Z,17nm,1.1s
TWG Pinlang 21.24 238 *e*P **P** **04 30 20.2 -4.9**
comp=Z,124nm,0.3s
WHN Wuhan 22.53 264 ⇓P **P** **04 30 38.4 -0.4**
WHN S **S** **04 34 36.1 -7.1**
WHN pmax pmax
comp=Z,34nm,0.9s
WHN pmax pmax
comp=Z,300nm,5.8s
WHN LR LR
comp=Z,350nm,11.8s
WHN LR LR
comp=Z,1μm,22.3s
WHN LR LR
comp=Z,530nm,17.0s
HHC Hu-ho-hao-te 23.31 292 *e*P **P** **04 30 47.1 +0.2**
HHC pmax pmax
comp=Z,16nm,1.1s
HHC pmax pmax
comp=Z,93nm,6.9s
MA2 Magadan 24.84 12 P **P** **04 30 59.7 -1.0**
comp=Z,6.3nm,0.4s,baz=187,slow=6.9,SNR=4.7
MA2 Magadan 24.84 12 *ce*P **P** **04 31 02.2 +1.5**
MA2 pmax pmax
comp=Z,17nm,1.3s
XAN Xi'an 25.98 276 P **P** **04 31 10.2 -1.2**
XAN pmax pmax
comp=Z,13nm,0.8s
XAN pmax pmax
comp=Z,97nm,5.7s
XAN Xi'an 25.98 276 *e*P **P** **04 31 10.8 -0.6**
comp=Z,9.9nm,0.6s
XAN Xi'an 25.98 276 *e*P **P** **04 31 10.8 -0.6**
XAN pmax pmax
comp=Z,10.0nm,0.6s
ENH Enshi 26.57 267 *e*P **P** **04 31 15.3 -1.4**
comp=Z,32nm,0.8s
ULN Ulaanbaatar 27.61 307 *ce*P **P** **04 31 28.0 +2.0**
ULN pmax pmax
comp=Z,4.0nm,1.3s
SONA0 Songino Array 28.03 306 *e*P **P** **04 31 29.7 -0.1**
SONM Songino Array 28.03 306 P **P** **04 31 29.7 -0.1**
comp=Z,4.6nm,0.8s,baz=103,slow=9.2,SNR=14
SONM LR LR 04 42 50.5
comp=Z,159nm,20.0s,baz=68,slow=37
H11N2 WAKE ISLAND Hy 28.06 117 T T 05 00 30.5
baz=310,slow=75,SNR=38
H11N1 WAKE ISLAND Hy 28.07 117 T T 05 00 38.4
baz=310,slow=75,SNR=39
H11N3 WAKE ISLAND Hy 28.08 117 T T 05 00 47.0
baz=310,slow=75,SNR=31
SEY Seymchan 28.27 11 P **P** **04 31 32.9 +1.3**
comp=Z,3.3nm,0.7s,baz=208,slow=3.5,SNR=4.6
H11S1 WAKE ISLAND Hy 28.72 120 T T 05 01 22.8
baz=312,slow=75,SNR=95
H11S3 WAKE ISLAND Hy 28.72 120 T T 05 01 22.0
baz=312,slow=75,SNR=64
H11S2 WAKE ISLAND Hy 28.73 120 T T 05 01 28.7
baz=312,slow=75,SNR=72
CD2 Chengdu 31.03 272 ⇓P **P** **04 31 55.1 -1.3**
CD2 S **S** **04 37 00.1 +1.5**
CD2 pmax pmax
comp=Z,50nm,0.6s
CD2 pmax pmax
comp=Z,120nm,4.6s
CD2 LR LR
comp=Z,610nm,18.1s
CD2 LR LR
comp=Z,770nm,16.7s
GTA Gaotai 32.35 289 *e*P **P** **04 32 07.5 -0.6**
GTA pP pP 04 32 12.1 -7.2
GTA sP sP 04 32 15.1 -9.2
GTA pmax pmax
comp=Z,6.0nm,0.9s
KMI Kunming 34.10 263 P **P** **04 32 22.9 -0.7**
KMI pmax pmax
comp=Z,13nm,1.1s
KMI pmax pmax
comp=Z,40nm,6.4s
KMI LR LR
comp=Z,120nm,19.9s
KMI LR LR
comp=Z,120nm,14.5s
KMI LR LR
comp=Z,170nm,27.3s
BILL Bilibino 35.54 16 *ce*P **P** **04 32 35.5 +0.3**
BILL pmax pmax
comp=Z,6.0nm,1.7s
TIXI Tiksi 36.58 354 P **P** **04 32 43.8 -0.2**
comp=Z,3.0nm,0.4s,baz=178,slow=1.9,SNR=5.0
TIXI Tiksi 36.58 354 *e*P **P** **04 32 43.6 -0.5**
comp=Z,7.2nm,1.2s
TIXI Tiksi 36.58 354 *ce*P **P** **04 32 43.5 -0.5**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
FAKI Fak Fak 39.16 193 *e*P **P** **04 33 05.6 -0.7**
comp=Z,45nm,1.5s
CHAI Chaiyaphum 39.60 250 P **P** **04 33 12.4 +2.3**
comp=Z,15μm,0.9s,comp=Z,742μm
PBKT Sadao Pong 39.99 252 P **P** **04 33 14.7 +1.4**
comp=Z,3.8nm,0.9s,comp=Z,462nm
CM31 Chiang Mai Arr 40.51 256 *e*P **P** **04 33 17.1 -0.6**
CMAR Chiang Mai Arr 40.51 256 P **P** **04 33 17.1 -0.6**
comp=Z,1.2nm,0.4s,baz=57,slow=6.9,SNR=4.5
DGZ Jazzator, Alta 40.67 307 *c i*P **P** **04 33 20.2 +1.4**
DGZ pmax pmax
comp=Z,10.0nm,0.7s
WMQ Urumqi 40.88 298 *e*P **P** **04 33 22.6 +2.1**
WMQ pP pP 04 33 25.3 -6.7
WMQ sP sP 04 33 30.8 -6.1
WMQ pmax pmax
comp=Z,37nm,0.9s
WMQ pmax pmax
comp=Z,220nm,4.3s
WMQ LR LR
comp=Z,360nm,23.1s
WMQ LR LR
comp=Z,320nm,19.7s
WMQ LR LR
comp=Z,230nm,20.5s
ZAA1 Zalesovo Array 42.36 314 *e*P **P** **04 33 33.1 +0.7**
ZALV Zalesovo Beam 42.36 314 P **P** **04 33 33.1 +0.7**
comp=Z,4.3nm,0.5s,baz=87,slow=6.7,SNR=8.6
ZALV LR LR 04 51 13.8
comp=Z,48nm,18.6s,baz=240,slow=36
NVS Novosibirsk 43.32 315 *i*P **P** **04 33 40.8 +0.7**
NRIK Noril'sk 44.24 336 P **P** **04 33 47.4 0.0**
comp=Z,3.1nm,0.3s,baz=109,slow=10,SNR=6.1
NRIK LR LR 04 53 10.6
comp=Z,91nm,18.8s,baz=116,slow=37
MK32 Makanchi Array 44.30 303 *e*P **P** **04 33 48.5 +0.4**
MK32 *e*PP **PP** **04 35 31.5 -0.3**
MKAR Makanchi Array 44.30 303 P **P** **04 33 48.5 +0.4**
comp=Z,6.2nm,0.8s,baz=90,slow=9.5,SNR=52
MKAR PcP **PP** **04 35 31.5 -0.3**
comp=Z,0.7nm,0.7s,baz=108,slow=4.7,SNR=2.3
MKAR LR LR 04 52 45.0
comp=Z,91nm,20.5s,baz=72,slow=37
MAKZ Makanchi 44.51 303 *e*P **P** **04 33 50.4 +0.5**
comp=Z,6.4nm,0.8s
MAKZ Makanchi 44.51 303 *e*P **P** **04 33 50.4 +0.5**
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
KURK Kurchatov 46.27 309 *e*P **P** **04 34 03.6 0.0**
comp=Z,28nm,1.0s
KURK Kurchatov 46.27 309 *e*P **P** **04 34 03.6 0.0**
KURK pmax pmax
comp=Z,28nm,1.0s
RAMN Ramite 46.44 275 *e*P **P** **04 34 05.4 -0.3**
comp=Z,7.9nm,0.2s
JIRN Jiri 46.48 276 *e*P **P** **04 34 06.2 +0.1**
comp=Z,55nm,0.7s
GUN Gumba 46.63 277 *e*P **P** **04 34 07.1 -0.2**
comp=Z,23nm,0.7s
PKI Pulchoki 47.15 276 *e*P **P** **04 34 11.1 -0.2**
comp=Z,10nm,0.7s
PKIN Phulchoki 47.16 276 *e*P **P** **04 34 11.2 -0.1**
KKN Kakani 47.17 277 *e*P **P** **04 34 11.6 +0.3**
comp=Z,7.8nm,0.5s
SOEI Soe 47.72 202 *e*P **P** **04 34 14.0 -1.5**
comp=Z,30nm,0.9s
DANN Dangsing 48.17 278 *e*P **P** **04 34 19.4 +0.2**
comp=Z,83nm,0.8s
BATI Batamata 48.33 203 P **P** **04 34 19.7 -0.3**
comp=Z,40nm,0.5s,baz=308,slow=3.2,SNR=5.3
KOLN Koldanda 48.53 277 *e*P **P** **04 34 22.3 +0.4**
comp=Z,28nm,0.9s
PYUN Piuthan 48.89 278 *e*P **P** **04 34 24.8 +0.2**
comp=Z,77nm,0.9s
MTN Manton Dam 49.06 192 *e*P **P** **04 34 24.4 -1.2**
comp=Z,26nm,1.1s
BOOM Boomskoye usch 49.57 299 *e*P **P** **04 34 29.2 -0.4**
BOOM Boomskoye usch 49.57 299 *e*P **P** **04 34 29.2 -0.4**
GHO Glory Hole Cre 50.22 36 *e*P **P** **04 34 32.9 -1.2**
comp=Z,5.4nm,1.0s
KSH Kashi 50.37 295 *e*P P 04 34 40.6 +5.0
AAK Ala-Archa 50.56 299 LR LR 04 57 05.0
comp=Z,110nm,20.4s,baz=56,slow=37
AAK Ala-Archa 50.56 299 *e*P **P** **04 34 40.2 +3.1**
comp=Z,5.2nm,0.9s
AAK Ala-Archa 50.56 299 *e*P **P** **04 34 40.2 +3.1**
AAK pmax pmax
comp=Z,5.0nm,0.9s
ILAR Eielson Array 51.02 32 P **P** **04 34 40.8 +0.8**
comp=Z,1.8nm,0.8s,baz=271,slow=6.5,SNR=17
ILB Eielson Array 51.02 32 *e*P **P** **04 34 40.8 +0.8**
BRVK Borovoye 51.07 313 *e*P **P** **04 34 41.7 +1.2**
comp=Z,7.0nm,0.9s
BRVK Borovoye 51.07 313 *e*P **P** **04 34 41.7 +1.2**
BRVK pmax pmax
comp=Z,7.0nm,0.9s
KKAR Karatay Array 53.24 301 *e*P **P** **04 34 57.6 +0.7**
comp=Z,7.1nm,1.0s
KKAR Karatay Array 53.24 301 *e*P **P** **04 34 57.6 +0.7**
KKAR pmax pmax
comp=Z,7.0nm,1.0s
NIL Nilore 54.42 289 *e*P **P** **04 35 06.6 +1.0**
comp=Z,11nm,0.8s
NIL Nilore 54.42 289 *e*P **P** **04 35 06.6 +1.0**
NIL pmax pmax
comp=Z,11nm,0.8s
EPYK Eagle Plains 55.05 29 *e*P **P** **04 35 11.2 +1.5**
comp=Z,5.7nm,0.7s
FITZ Fitzroy Crossi 55.30 197 P **P** **04 35 11.9 0.0**
comp=Z,6.1nm,0.8s,baz=18,slow=6.6,SNR=11
WRAB Tennant Creek 55.60 187 *ce*P **P** **04 35 12.0 -2.0**
WRAB pmax pmax
comp=Z,8.0nm,1.3s
WR1 Warramunga Arr 55.61 187 *e*P **P** **04 35 12.9 -1.2**
WRA Warramunga Arr 55.61 187 P **P** **04 35 12.9 -1.2**
comp=Z,2.8nm,0.5s,baz=359,slow=7.6,SNR=36
SVE Sverdlovsk 55.74 319 *e*P **P** **04 35 15.2 +0.5**
SVE pmax pmax
comp=Z,16nm,0.8s
INK Inuvik 55.92 27 P **P** **04 35 16.4 +0.6**
comp=Z,1.7nm,0.7s,baz=245,slow=8.4,SNR=3.5
INK Inuvik 55.92 27 *e*P **P** **04 35 16.4 +0.6**
comp=Z,4.8nm,1.1s
ARU Arti 56.95 319 *e*P **P** **04 35 23.4 0.0**
comp=Z,26nm,1.1s
ARU Arti 56.95 319 *c i*P **P** **04 35 23.5 +0.1**
ARU S **S** **04 43 17.5 +3.2**
ARU SS **SS** **04 47 01.8 -0.8**
ARU pmax pmax
comp=Z,23nm,1.1s
ABKAR Akbulak array 58.32 311 *e*P **P** **04 35 32.9 -0.2**
comp=Z,5.5nm,0.6s
AKTO Aktyubinsk 59.10 312 LR LR 05 01 23.1
comp=Z,60nm,18.0s,baz=73,slow=36
AS31 Alice Springs 59.34 187 *e*P **P** **04 35 40.2 -0.2**
comp=Z,1.9nm,1.1s
ASAR Alice Springs 59.34 187 P **P** **04 35 40.2 -0.2**
comp=Z,0.9nm,0.5s,baz=17,slow=12,SNR=14
DLBC Dease Lake 60.12 37 LR LR 05 02 17.7
comp=Z,36nm,19.7s,baz=40,slow=36
KIRV Kirov 60.95 323 LR LR 05 03 46.2
comp=Z,55nm,18.5s,baz=56,slow=37
PRGR Permogore 61.56 327 *e*P **P** **04 35 53.3 -1.8**
PRGR *e**PP **pP** **04 36 04.9 -2.2**
PRGR pmax pmax
comp=Z,6.0nm,0.4s
BBB Bella Bella 63.52 43 LR LR 05 01 32.5
comp=Z,42nm,18.5s,baz=163,slow=34
GEYT Alibeck 63.92 299 LR LR 05 05 45.6
comp=Z,46nm,18.8s,baz=180,slow=38
ARCES ARCESS Array B 65.05 339 P **P** **04 36 18.9 +0.8**
comp=Z,8.6nm,0.3s,baz=51,slow=9.6,SNR=8.2
YKA Yellowknife Ar 65.33 30 P **P** **04 36 20.1 +0.1**
comp=Z,0.3nm,0.3s,baz=298,slow=6.5,SNR=7.3
YKB5 Yellowknife Ar 65.33 30 *e*P **P** **04 36 20.1 +0.1**
FIA0 FINESS Array S 69.72 332 *e*P **P** **04 36 47.5 -0.1**
FIA0 FINESS Array S 69.72 332 *e*P **P** **04 36 47.6 -0.1**
FINES FINESS Array B 69.72 332 P **P** **04 36 47.5 -0.1**
comp=Z,4.1nm,0.7s,baz=58,slow=6.4,SNR=14
FINES LR LR 05 08 23.2
comp=Z,55nm,20.6s,baz=33,slow=37
ZEI Tsey 71.15 309 *e*P **P** **04 36 53.5 -3.6**
ZEI pmax pmax
comp=Z,5.0nm,0.6s
KBZ Khabaz 71.29 311 P **P** **04 36 57.9 +0.3**
comp=Z,6.4nm,0.8s,baz=52,slow=3.5,SNR=16
KIV Kislovodsk 71.30 311 *e*P **P** **04 36 58.7 +0.9**
KIV pmax pmax
comp=Z,44nm,1.1s
KIV MLR MLR
comp=Z,76nm,18.0s
NEY Neytrino 71.65 310 *i*P **P** **04 37 01.7 +1.6**
NEY pmax pmax
comp=Z,2.0nm,1.2s
GNI Garni 71.99 307 *ce*P **P** **04 37 02.4 +0.3**
GNI pmax pmax
comp=Z,88nm,1.3s
AKASG Malin Array Be 74.97 322 P **P** **04 37 18.9 -0.3**
comp=Z,6.6nm,0.8s,baz=46,slow=6.2,SNR=19
AKASG LR LR 05 13 26.6
comp=Z,59nm,18.5s,baz=115,slow=38
AKASG Malin Array Be 74.97 322 P **P** **04 37 19.0 -0.3**
AKBB Malin Array Si 74.97 322 *e*P **P** **04 37 18.9 -0.3**
comp=Z,8.5nm,0.9s
AKBB Malin Array Si 74.97 322 *e*P **P** **04 37 19.0 -0.3**
AKBB pmax pmax
comp=Z,9.0nm,0.9s
KIEV Kiev 74.99 322 *i*P **P** **04 37 18.8 -0.5**
KIEV pmax pmax
comp=Z,9.0nm,0.9s
NB2 NORSAR Subarra 75.19 337 P **P** **04 37 20.3 -0.1**
comp=Z,1.4nm,0.5s,baz=40,slow=6.2
NB200 NORSAR Array S 75.19 337 *e*P **P** **04 37 20.3 -0.1**
NOA NORSAR Array B 75.19 337 P **P** **04 37 20.3 -0.1**
comp=Z,4.1nm,0.8s,baz=40,slow=5.7,SNR=24
NOA LR LR 05 13 07.1
comp=Z,45nm,20.5s,baz=245,slow=38
FFC Flin Flon 75.23 32 *e*P **P** **04 37 21.2 +0.6**
comp=Z,3.2nm,0.8s
FFC Flin Flon 75.23 32 *e*P **P** **04 37 21.2 +0.6**
FFC pmax pmax
comp=Z,3.0nm,0.8s
NV01 Mina Array Sit 76.35 52 *e*P **P** **04 37 28.4 +0.7**
NVAR Mina Array Bea 76.35 52 P **P** **04 37 28.4 +0.7**
comp=Z,0.4nm,0.6s,baz=310,slow=6.0,SNR=4.0
NVAR LR LR 05 04 48.9
comp=Z,43nm,21.0s,baz=218,slow=31
ILGA Ilgaz 78.41 312 *e*P **P** **04 37 40.7 +1.5**
comp=Z,7.2nm,0.9s
KWP Kalwaria Pacla 78.85 324 *e*P **P** **04 37 41.9 +0.8**
KWP Kalwaria Pacla 78.85 324 *e*P **P** **04 37 41.9 +0.8**
PD31 Pinedale Array 79.11 45 *e*P **P** **04 37 43.0 +0.1**
PDAR Pinedale Array 79.11 45 P **P** **04 37 43.0 +0.1**
comp=Z,0.5nm,0.5s,baz=261,slow=2.2,SNR=8.1
BR101 Keskin Array S 79.26 311 *e*P **P** **04 37 44.2 +0.5**
BRTR Keskin Array B 79.26 311 P **P** **04 37 44.2 +0.5**
comp=Z,2.7nm,0.9s,baz=114,slow=4.9,SNR=14
BRTR Keskin Array B 79.26 311 *i*P **P** **04 37 44.7 +1.0**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
KOLS Kolonicke sedl 79.54 324 *e*P **P** **04 37 45.8 +0.9**
KOLS Kolonicke sedl 79.54 324 *e*P **P** **04 37 45.8 +0.9**
NIE Niedzica 80.14 325 *e*P **P** **04 37 48.6 +0.4**
NIE Niedzica 80.14 325 *e*P **P** **04 37 48.6 +0.4**
PFO Pinyon Flats O 80.37 56 LR LR 05 05 26.2
comp=Z,102nm,21.6s,baz=300,slow=30
KSP Ksiaz 80.92 328 *e*P **P** **04 37 52.7 +0.4**
KSP Ksiaz 80.92 328 *e*P **P** **04 37 52.7 +0.4**
CLL Collm 81.95 330 *e*P **P** **04 37 57.9 +0.2**
comp=Z,10nm,1.1s
CLL Collm 81.95 330 *i*P **P** **04 37 57.7 0.0**
comp=Z,7.0nm,0.8s
CLL Collm 81.95 330 *e*P **P** **04 37 57.9 +0.2**
CLL pmax pmax
comp=Z,10.0nm,1.1s
PV01 Paradox Valley 82.63 48 *e*P **P** **04 38 04.3 +2.5**
comp=Z,5.7nm,1.3s
VTS Vitosha 83.38 319 *e*P **P** **04 38 06.3 +0.8**
comp=Z,5.7nm,1.0s
GEC2 GERESS Array S 83.52 328 *e*P **P** **04 38 05.7 -0.4**
GEC2 GERESS Array S 83.52 328 *e*P **P** **04 38 05.7 -0.4**
GERES GERESS Array B 83.52 328 P **P** **04 38 05.7 -0.4**
comp=Z,1.0nm,0.7s,baz=30,slow=6.5,SNR=6.4
GERES LR LR 05 17 20.2
comp=Z,35nm,20.0s,baz=59,slow=37
S22A 4UR Ranch, Cre 83.93 47 *e*P **P** **04 38 10.9 +2.3**
comp=Z,3.3nm,1.1s
MEM Membach 85.23 333 P **P** **04 38 14.1 -0.5**
comp=Z,5.6nm,0.7s
MEM PcP **PcP** **04 38 17.2 -0.4**
TTG Podgorica 85.61 321 *e*P **P** **04 38 16.8 +0.2**
comp=Z,7.7nm,1.1s
TTG Podgorica 85.61 321 *e*P **P** **04 38 16.8 +0.2**
TTG pmax pmax
comp=Z,8.0nm,1.1s
T25A Trinidad 85.77 47 *e*P **P** **04 38 18.9 +1.2**
comp=Z,3.4nm,1.0s
BFO Black Forest 86.17 330 *i*P **P** **04 38 20.1 +0.8**
FUORN Ofenpass-Fuorn 86.72 328 *e*P **P** **04 38 23.1 +0.8**
comp=Z,6.4nm,1.0s
WMOK Wichita Mounta 90.72 45 *e*P **P** **04 38 44.0 +2.8**
comp=Z,4.9nm,0.9s
WMOK Wichita Mounta 90.72 45 *e*P **P** **04 38 44.0 +2.8**
WMOK pmax pmax
comp=Z,5.0nm,0.9s
LTX Lajitas 91.50 52 *e*P **P** **04 38 46.0 +1.0**
LTX Lajitas 91.50 52 *e*P **P** **04 38 46.0 +1.0**
TXAR Lajitas Array 91.50 52 P **P** **04 38 46.0 +1.0**
comp=Z,0.3nm,0.6s,baz=298,slow=2.7,SNR=5.2
TXAR Lajitas Array 91.50 52 P **P** **04 38 46.0 +1.0**
LPAZ La Paz 147.96 60 PKPbc **PKiKP** **04 45 24.9 -1.5**
comp=Z,1.3nm,0.8s,baz=333,slow=2.5,SNR=6.5
LPAZ La Paz 147.96 60 PKP2 **PKiKP** **04 45 25.0 -1.5**

*SJA **06** 04:35:47.8±1.2, 33°.74S×69°.08W, h162km±6km, ML3.5, MW3.5*
*ISCJB **06** 04:35:48.5±0.8, 33°.65S±0°.05×69°.15W±0°.06, h163km±6km, Error ellipse: s-maj=9.7km s-min=5.3km az=44.4*
*GUC **06** 04:35:49.5±0.7, 33°.68S×69°.28W, h174km±5km, ML3.6*

ISC 06 04:35:47.4±1.8, 33.74S±0.07×69.10W±0.06, h167km±10km, n26, σ1°.05/47, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAGR	**Agrelo**	**0.69**	**20**	*e*P		**Pn**	**04 36 12.4**	**+0.5**
AAGR				*e*S		**Sn**	**04 36 28.4**	**-2.2**
ARCO	**CERRO ARCO**	**0.90**	**9**	*i*P		**Pn**	**04 36 13.6**	**+0.3**
ARCO				IAML			04 36 14.1	
ARCO	comp=Z,229nm,0.4s			*i*S		**Sn**	**04 36 32.6**	**-0.6**
LMEL	**Las Melosas**	**0.92**	**263**	*e*P		**Pn**	**04 36 14.6**	**+1.2**
FCH	**Farellones**	**1.07**	**292**	*e*P		**Pn**	**04 36 15.7**	**+0.9**
FCH				*i*S		**Sn**	**04 36 36.0**	**+0.2**
ASAL	**Salagasta**	**1.16**	**11**	*i*P		**Pn**	**04 36 15.9**	**+0.6**
ASAL				*i*S		**Sn**	**04 36 36.8**	**+0.1**
CLCH	**Cerro Calan**	**1.24**	**285**	*e*P		**Pn**	**04 36 17.1**	**+1.1**
CLCH				*e*S		**Sn**	**04 36 37.4**	**-0.6**
ANTU	**Antumapu**	**1.29**	**277**	*e*P		**Pn**	**04 36 16.8**	**+0.4**
ANTU				*i*S		**Sn**	**04 36 37.6**	**-1.0**
PEL	**Peldehue**	**1.45**	**294**	*e*P		**Pn**	**04 36 18.4**	**+0.5**
PEL				*e*S		**Sn**	**04 36 40.8**	**-0.5**
PEL	**Peldehue**	**1.45**	**294**	*e*P		**Pn**	**04 36 18.1**	**+0.3**
PEL				*i*S		**Sn**	**04 36 40.5**	**-0.7**
PEL	comp=N,522nm,0.1s			IAML			04 36 41.7	
AUSP	**Uspallata**	**1.53**	**351**	*i*P		**Pn**	**04 36 19.8**	**+0.8**
AUSP				*i*S		**Sn**	**04 36 43.7**	**+0.5**
ROCH	**El Roble**	**1.77**	**295**	*e*P		**Pn**	**04 36 22.0**	**+0.6**
ROCH				*i*S		**Sn**	**04 36 46.3**	**-1.1**
ROCH	comp=N,744nm,0.3s			IAML			04 36 48.7	
ROC1	**El Roble**	**1.77**	**295**	*i*P		**Pn**	**04 36 22.2**	**+0.8**
ROC1				*i*S		**Sn**	**04 36 47.6**	**0.0**
RTCV	**Cerro Valdivia**	**1.93**	**14**	*i*P		**Pn**	**04 36 23.5**	**+0.6**
RTCV				*i*S		**Sn**	**04 36 49.8**	**-0.4**
ACAN	**Cantantal**	**2.17**	**48**	*i*P		**Pn**	**04 36 26.6**	**+1.1**
ZON	**Zonda**	**2.21**	**9**	*e*P		**Pn**	**04 36 26.9**	**+0.8**
ZON				*e*S		**Sn**	**04 36 54.4**	**-1.6**

ZON					IAML		04 36 56.3	
	comp=Z,78nm,0.2s							
RTLL	**Cerro Villicun**	**2.46**	**13**	*i* P		**Pn**	**04 36 29.5**	**+0.5**
RTLL				*i* S		**Sn**	**04 37 00.7**	**-0.4**
RTLL					IAML		04 37 00.8	
	comp=N,558nm,0.4s							
GO05	**Huala**	**2.66**	**241**	*eP*		**Pn**	**04 36 31.9**	**+0.6**
GO05				*i* S		**Sn**	**04 37 04.0**	**-1.4**
AMOG	**MOGNA**	**2.83**	**11**	*eP*		**Pn**	**04 36 34.8**	**+1.2**
AMOG				*eS*		**Sn**	**04 37 08.7**	**-0.6**
ACCO	**Cerro Coronel**	**3.14**	**1**	*eP*		**Pn**	**04 36 39.1**	**+1.5**
ACCO				*eS*		**Sn**	**04 37 17.4**	**+1.0**
ACDV	**Cuesta del Vie**	**3.55**	**360**	*eP*		**Pn**	**04 36 44.2**	**+1.6**
ACDV				*eS*		**Sn**	**04 37 23.9**	**-1.7**
GO04	**Tololo Observa**	**3.83**	**337**	*eP*		**Pn**	**04 36 47.0**	**+0.7**
GO04				*i* S		**Sn**	**04 37 29.6**	**-2.5**
APLL	**PUNTA DE LOS L**	**3.98**	**34**	*eP*		**Pn**	**04 36 48.2**	**+0.2**
AGUA	**GUANDACOL**	**4.27**	**7**	*eP*		**Pn**	**04 36 52.9**	**+1.2**
AGUA				*eS*		**Sn**	**04 37 40.8**	**-1.1**
TCA	**Tanti**	**4.50**	**59**	*eP*		**Pn**	**04 36 55.5**	**+0.9**
ACLC	**CERRO LA CRUZ**	**4.67**	**24**	*eP*		**Pn**	**04 36 57.0**	**-0.1**
VCA	**Vinchina**	**5.04**	**9**	*eP*		**Pn**	**04 37 02.8**	**+0.9**
VCA				*eS*		**Sn**	**04 37 58.7**	**-1.4**
VCA					IAML		04 38 05.3	
	comp=Z,44nm,0.2s							

IDC 06 04:38:14.3±3.7, 55°.34S×26°.48W, h0km, mb3.9/2, mb1 4.0/2, mb1mx3.7/23, mbtmp3.9/2, Error ellipse: s-maj=129.3km s-min=44.8km az=169.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**50.30**	**304**	P	P	04 47 13.1	-0.2
	0.7nm,0.7s,baz=135,slow=4.3,SNR=2.6						
TORD	**Torodi Ar. Bea**	**72.23**	**29**	P	P	04 49 41.1	0.0
	0.8nm,0.5s,baz=207,slow=6.0,SNR=18						
INK	**Inuvik**	**145.50**	**321**	PKPbc	PKPdf	04 57 52.5	-0.1
	1.0nm,0.5s,baz=180,slow=2.0,SNR=4.2						
ILAR	**Eielson Array**	**149.94**	**312**	PKPbc	PKPbc	04 58 04.2	-0.8
	0.4nm,0.6s,baz=129,slow=3.4,SNR=4.8						

NNC 06 04:49:43.5±5.8, 36°.92N×70°.78E, h119km±108km, mb3.0, mpv3.5, 7C-3D, Error ellipse: s-maj=45.3km s-min=34.0km az=16.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.18**	**358**	⇓P	Pn	04 51 12.0	-0.2
	2.1nm,0.4s,baz=176,slow=13,SNR=19						
KK31				⇑S	Sn	04 52 23.7	+2.2
	1.8nm,0.4s,baz=182,slow=20,SNR=4.5						
AAK	**Ala-Archa**	**6.38**	**25**	⇑P	Pn	04 51 13.4	-1.7
	1.8nm,0.6s						
AAK				⇓S	Sn	04 52 25.8	-0.9
	6.7nm,0.5s						
TKM2	**Tokmak 2**	**7.04**	**30**	⇑P	Pn	04 51 26.4	+2.4
	3.0nm,0.7s						
TKM2				⇓S	Sn	04 52 43.0	+0.3
	3.0nm,0.7s						
AB31	**Akbulak array**	**14.63**	**331**	⇑P	Pn	04 53 03.2	-1.3
	0.4nm,0.5s,baz=142,slow=13,SNR=12						
AB31				⇑S	Sn	04 55 46.3	+0.3
	0.4nm,0.6s,baz=151,slow=24,SNR=2.6						
AKTO	**Aktyubinsk**	**16.33**	**330**	⇑P	P	04 53 27.2	+0.9
	2.1nm,0.8s						
AKTO				⇑S	Sn	04 56 26.1	-0.7
	1.6nm,1.0s						

*TIF **06** 04:50:36.9, 40°.56N×42°.03E, h7km±1km*
*ISK **06** 04:50:37.2, 40°.61N×42°.05E, h5km, ML3.0/18*
*DDA **06** 04:50:37.4, 40°.57N×42°.06E, h5km±1km, ML3.5*
*NSSP **06** 04:50:37.1, 40°.63N×42°.05E, h8km, Ms3.0*
ISC 06 04:50:37.4±1.1, 40°.61N±0°.02×42°.03E±0°.02, h3km±11km, n51, σ1°.12/75, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENK	**Senkaya-Erzuru**	**0.25**	**101**	PG	**Pg**	**04 50 42.3**	**+0.1**
SENK				SG	**Sg**	**04 50 46.2**	**+0.7**
DAGI	**Agillar**	**0.48**	**349**	*i* P	**Pb**	**04 50 48.8**	**+0.3**
DAGI				*i* S	**Sb**	**04 50 55.9**	**-0.1**
DAGI					IAML_P		
	comp=Z,16μm,0.1s						
DBAD	**Bademkaya**	**0.48**	**328**	*i* P	**Pb**	**04 50 48.3**	**-0.3**
DBAD				*i* S	**Sb**	**04 50 55.8**	**-0.4**
HOMI	**Horasan**	**0.57**	**190**	*i* P	**Pg**	**04 50 48.2**	**-0.2**
HOMI				*i* S	**Sb**	**04 50 59.4**	**+0.5**
HOMI					IAML_P		
	comp=Z,13μm,0.2s						
KOPR	**Koprukoy-ERZUR**	**0.63**	**192**	PG	**Pg**	**04 50 49.6**	**+0.1**
KOPR				SG	**Sb**	**04 50 59.3**	**-1.2**
AKDA	**Akdag**	**0.72**	**225**	*i* P	**Pb**	**04 50 52.2**	**-0.5**
DBOC	**Borcka**	**0.79**	**340**	*i* P	**Pb**	**04 50 53.5**	**-0.3**
KARS	**Kars**	**0.80**	**88**	PG	**Pg**	**04 50 52.9**	**+0.2**
KARS				SG	**Sb**	**04 51 04.4**	**-0.9**
EATA	**Eleskirt**	**0.83**	**155**	*i* P	**Pg**	**04 50 53.4**	**+0.1**
EATA				*i* S	**Sb**	**04 51 05.2**	**-1.0**
EATA					IAML_P		
	comp=Z,3μm,0.2s						
KRIK	**Erzurum-spir**	**0.89**	**252**	*i* P	**Pb**	**04 50 55.1**	**-0.4**
BCA	**Borcka**	**0.89**	**340**	PG	**Pb**	**04 50 54.8**	**-0.7**
BCA				SG	**Sb**	**04 51 07.4**	**-0.4**
BATM	**Batumi**	**1.02**	**346**	PG	**Pb**	**04 50 57.3**	**-0.5**
BATM	**Batumi**	**1.02**	**346**	P	**Pb**	**04 50 57.4**	**-0.4**
BATM				S	**Sn**	**04 51 11.8**	**-1.9**
EPOS	**Posof**	**1.04**	**30**	*i* P	**Pn**	**04 50 58.7**	**-0.3**
DIGO	**Kars**	**1.04**	**100**	*i* P	**Pg**	**04 50 57.4**	**0.0**
DIGO				*i* S	**Sg**	**04 51 10.2**	**-0.7**
CHAY	**Cayeli-Rize**	**1.10**	**296**	PN	**Pn**	**04 50 58.9**	**-0.8**
EAK	**Akyaka**	**1.20**	**86**	*i* S	**Pg**	**04 51 00.7**	**+0.3**
AGRB	**Hanur-Agry**	**1.27**	**144**	PN	**Pg**	**04 51 01.5**	**-0.2**
KOPT	**Kop Dagi**	**1.31**	**244**	*i* P	**Pg**	**04 51 05.0**	**+2.4**
KOPT				*i* S	**Sn**	**04 51 25.9**	**+4.8**
KOPT					IAML_P		
	comp=Z,6μm,0.5s						
TUTA	**Tutak**	**1.35**	**153**	*i* P	**Pg**	**04 51 03.7**	**+0.4**
TUTA				*i* S	**Sg**	**04 51 24.1**	**+3.4**
TUTA					IAML_P		
	comp=Z,4μm,0.2s						
BGD	**Bogdanovka**	**1.36**	**61**	P	**Pg**	**04 51 03.3**	**-0.1**
BGD				S	**Sg**	**04 51 23.9**	**+2.9**
AKH	**Akhalkalaki**	**1.36**	**54**	PN	**Pg**	**04 51 03.3**	**-0.3**
AKH	**Akhalkalaki**	**1.36**	**54**	P	**Pg**	**04 51 04.0**	**+0.4**
AKH				S	**Sg**	**04 51 22.6**	**+1.4**
BAYB	**BAYBURT**	**1.40**	**256**	*i* P	**Pg**	**04 51 04.5**	**+0.3**
BAYB				*i* S	**Sb**	**04 51 21.7**	**-1.0**
BAYB					IAML_P		
	comp=Z,3μm,0.2s						
BAYT	**Aydintepe-Bayb**	**1.46**	**262**	PN	**Pb**	**04 51 04.9**	**-0.4**
VRTB	**Varto-Mus**	**1.51**	**197**	PN	**Pb**	**04 51 05.6**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.52**	**165**	PN	**Pb**	**04 51 05.6**	**-0.8**
ARUZ	**Aruch**	**1.61**	**101**	*i* P	**Pb**	**04 51 07.3**	**-0.5**
ARUZ				*i* S	**Sg**	**04 51 29.5**	**+0.5**
YEDI	**Yedisu-Bingol**	**1.64**	**225**	PN	**Pb**	**04 51 07.4**	**-0.9**
IGDI	**IGDIR**	**1.73**	**115**	*i* P	**Pb**	**04 51 08.5**	**-1.5**
MACK	**Trabzon**	**1.75**	**282**	*i* P	**Pg**	**04 51 10.8**	**-0.1**
MACK				*i* S	**Sb**	**04 51 32.7**	**+0.1**
MACK					IAML_P		
	comp=Z,12μm,0.2s						
KTUT	**Trabzon**	**1.76**	**283**	PN	**Pb**	**04 51 09.2**	**-1.1**
BNGL	**BINGOL**	**1.79**	**203**	*i* P	**Pg**	**04 51 11.1**	**-0.6**
BNGL				*i* S	**Sg**	**04 51 34.5**	**-0.4**
TASB	**TASBURUN-IGDIR**	**1.80**	**110**	PN	**Pb**	**04 51 09.4**	**-1.7**
STEZ	**Stepenevan**	**1.84**	**77**	*eP*	**Pb**	**04 51 11.5**	**-0.3**
STEZ				*eS*	**Sg**	**04 51 37.0**	**+0.5**
TKB	**Tkibuli**	**1.88**	**22**	P	**Pg**	**04 51 13.2**	**-0.3**
TKB				S	**Sg**	**04 51 39.4**	**+1.4**
BNGB	**Bingl**	**1.92**	**213**	PN	**Pb**	**04 51 11.5**	**-1.7**
MUSM	**Mu-Merkez**	**1.93**	**192**	*i* P	**Pb**	**04 51 13.0**	**-0.3**
MUSM				*i* S	**Sg**	**04 51 39.7**	**+0.4**
MUSM					IAML_P		
	comp=Z,1μm,0.2s						
KZRT	**Kazreti**	**1.95**	**66**	P	**Pg**	**04 51 14.3**	**-0.5**
KZRT				S	**Sg**	**04 51 40.2**	**0.0**
ERZN	**Erzincan**	**2.04**	**241**	PN	**Pb**	**04 51 13.4**	**-1.9**
GNI	**Garni**	**2.12**	**102**	PN	**Pn**	**04 51 13.9**	**0.0**
GNI	**Garni**	**2.12**	**102**	⇓*iP*	**Pb**	**04 51 16.2**	**-0.4**
GNI				⇑*iS*	**Sg**	**04 51 44.6**	**-1.0**
KELT	**Kelkit**	**2.17**	**259**	*i* P	**Pg**	**04 51 18.2**	**-0.8**
KELT				*i* S	**Sg**	**04 51 47.4**	**+0.3**
KELT				IAML_P			
	comp=Z,612nm,0.2s						
BLIS	**Bitlis-Merkez**	**2.19**	**178**	*i* P	**Pn**	**04 51 14.9**	**-0.1**
ONI	**Oni**	**2.25**	**28**	PN	**Pn**	**04 51 15.9**	**+0.3**
TBLG	**Delisi**	**2.33**	**60**	PN	**Pn**	**04 51 16.9**	**+0.2**
AKDM	**Akdamar-Van**	**2.39**	**162**	PN	**Pn**	**04 51 18.0**	**+0.3**
SVAN	**Silvan-Diyarba**	**2.54**	**195**	PN	**Pn**	**04 51 20.2**	**+0.6**
SUSE	**Susehri**	**2.95**	**263**	*i* P	**Pg**	**04 51 32.6**	**-1.3**
KEMA	**Kemaliye**	**3.03**	**245**	*i* P	**Pg**	**04 51 33.8**	**-1.7**
CUZAR	**Zara_SIVAS**	**3.34**	**259**	*i* P	**Pb**	**04 51 37.4**	**0.0**

IDC 06 04:51:18.7±1.2, 55°.45S×26°.72W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/25, mbtmp3.7/3, Error ellipse: s-maj=49.5km s-min=32.8km az=90.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**47.19**	**183**	P	P	04 59 52.1	-0.1
	0.7nm,0.6s,baz=222,slow=4.8,SNR=6.3						
LPAZ	**La Paz**	**50.25**	**304**	P	P	05 00 17.1	-0.2
	0.7nm,0.7s,baz=177,slow=4.1,SNR=5.6						
TORD	**Torodi Ar. Bea**	**72.40**	**29**	P	P	05 02 46.5	0.0
	0.4nm,0.5s,baz=206,slow=5.8,SNR=7.8						
ILAR	**Eielson Array**	**149.91**	**312**	PKPbc	PKPbc	05 11 08.9	-0.3
	0.4nm,0.6s,baz=111,slow=2.6,SNR=5.5						

*IDC **06** 04:57:15.2±1.0, 55°.48S×26°.58W, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.5/33, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=43.1km s-min=27.1km az=76.0*
*ISCJB **06** 04:57:18.0±1.1, 55°.6S±0°.2×26°.3W±0°.5, h38km, mb3.8/3, Error ellipse: s-maj=44.8km s-min=21.3km az=160.3*
ISC 06 04:57:20.3±1.0, 55°.5S±0°.2×26°.5W±0°.3, h38km, n6, σ1°.27/6, mb3.8/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**19.07**	**157**	P	**P**	**05 01 37.6**	**-1.5**
	0.1nm,0.3s,baz=292,slow=11,SNR=5.1						
VNDA	**Vanda**	**47.11**	**182**	P	**P**	**05 05 48.8**	**+1.0**
	0.7nm,0.6s,baz=193,slow=7.5,SNR=4.2						
LPAZ	**La Paz**	**50.39**	**304**	P	**P**	**05 06 13.7**	**-0.6**
	0.8nm,0.7s,baz=170,slow=7.8,SNR=6.0						
TORD	**Torodi Ar. Bea**	**72.42**	**29**	P	**P**	**05 08 42.3**	**-0.1**
	0.5nm,0.5s,baz=213,slow=6.1,SNR=9.7						
ILAR	**Eielson Array**	**150.04**	**312**	PKPbc	**PKiKP**	**05 17 06.1**	**+0.1**
	0.6nm,0.6s,baz=139,slow=3.6,SNR=7.9						
SONM	**Songino Array**	**150.32**	**85**	PKPbc	**PKiKP**	**05 17 08.3**	**+1.1**
	0.3nm,0.4s,baz=258,slow=5.3,SNR=2.7						

*IDC **06** 04:59:05.4±0.7, 55°.44S×26°.67W, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.1/33, mbtmp4.2/9, ML3.6/1, MS3.8/3, Ms1 3.8/3, ms1mx3.3/25, Error ellipse: s-maj=31.3km s-min=16.7km az=50.0*
*ISCJB **06** 04:59:09.1±0.5, 55°.44S±0°.07×26°.8W±0°.1, h35km, mb4.5/12, MS3.9/2, Error ellipse: s-maj=12.3km s-min=7.1km az=39.0*
*NEIC **06** 04:59:10.5±2.0, 55°.50S×26°.63W, h34km±2km, mb4.5/9, Error ellipse: s-maj=20.9km s-min=16.1km az=46.0*
ISC 06 04:59:10.6±0.6, 55°.46S±0°.10×26°.77W±0°.09, h35km, n44, σ0°.82/37, mb4.5/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.73**	**278**	*ePn*	**Pn**	**05 00 32.5**	**-0.6**
HOPE				*eSn*	**Sn**	**05 01 38.0**	**+0.4**
VNA1	**Neumayer--Stat**	**17.26**	**159**	P	**P**	**05 03 11.0**	**+1.4**
VNA3	**Neumayer Olymp**	**17.47**	**162**	P	**Pn**	**05 03 11.4**	**+0.3**
VNA2	**Neumayer--Watz**	**17.65**	**159**	P	**P**	**05 03 15.6**	**+1.6**
	baz=327,slow=17						
SNAA	**Sanae**	**19.19**	**157**	P	**P**	**05 03 30.9**	**0.0**
SNAA	**Sanae**	**19.19**	**157**	P	**P**	**05 03 30.1**	**-0.9**
	0.2nm,0.3s,baz=319,slow=14,SNR=7.2						
SNAA				LR	LR	05 09 52.3	
	comp=Z,179nm,18.2s,baz=342,slow=34						
SNAA	**Sanae**	**19.19**	**157**	*eP*	**P**	**05 03 29.6**	**-1.4**
	5.4nm,0.8s						
TRQA	**Tornquist**	**29.32**	**292**	*eP*	**P**	**05 05 09.4**	**-0.3**
	17nm,1.2s						
QSPA	**South Pole Qui**	**34.79**	**180**	*eP*	**P**	**05 05 57.1**	**-0.4**
	9.8nm,1.0s						
CPUP	**Villa Florida**	**36.61**	**310**	P	**P**	**05 06 13.2**	**0.0**
	1.2nm,0.5s,baz=154,slow=12,SNR=6.0						
CPUP	**Villa Florida**	**36.61**	**310**	*eP*	**P**	**05 06 13.2**	**0.0**
	3.2nm,1.0s						
CFA	**Coronel Fontan**	**37.55**	**292**	P	**P**	**05 06 20.6**	**-0.7**
	4.1nm,0.8s,baz=145,slow=9.5,SNR=7.0						
MAW	**Mawson**	**40.48**	**144**	P	**P**	**05 06 45.6**	**+0.3**
	1.0nm,0.7s,baz=232,slow=7.5,SNR=5.0						
SHEL	**Horse Pasture**	**42.61**	**31**	*eP*	**P**	**05 07 03.2**	**-0.1**
	140nm,1.0s						
LVC	**Limon Verde**	**45.22**	**299**	P	**P**	**05 07 25.7**	**+1.1**
	5.3nm,0.7s,baz=157,slow=0.7,SNR=7.4						
LVC	**Limon Verde**	**45.22**	**299**	*eP*	**P**	**05 07 27.0**	**+2.4**
	7.0nm,0.8s						
BOSA	**Boshof**	**45.60**	**76**	LR	LR	05 23 40.8	
	comp=Z,268nm,18.1s,baz=230,slow=32						
VNDA	**Vanda**	**47.17**	**183**	P	**P**	**05 07 38.4**	**-0.5**
	2.1nm,0.7s,baz=190,slow=6.1,SNR=10						
VNDA	**Vanda**	**47.17**	**183**	*eP*	**P**	**05 07 38.0**	**-0.9**
	3.3nm,0.8s						
SIV	**San Ignacio**	**47.35**	**313**	P	**P**	**05 07 40.6**	**-0.4**
	0.9nm,0.6s,baz=93,slow=3.7,SNR=5.3						
H10S2	**ASCENSION HYDR**	**47.37**	**16**	T	T	05 58 46.7	
	baz=191,slow=75,SNR=5.5						
H10S3	**ASCENSION HYDR**	**47.37**	**16**	T	T	05 58 46.4	
	baz=191,slow=75,SNR=4.4						
H10S1	**ASCENSION HYDR**	**47.38**	**16**	T	T	05 58 47.3	
	baz=191,slow=75,SNR=4.5						
GO01	**Chusmiza**	**47.84**	**301**	*eP*	**P**	**05 07 46.5**	**+1.2**
H10N1	**ASCENSION HYDR**	**48.48**	**16**	T	T	06 00 12.3	
	baz=204						
H10N3	**ASCENSION HYDR**	**48.49**	**16**	T	T	06 00 11.0	
	baz=204						
MNMC	**Minye Minye**	**48.49**	**301**	*eP*	**P**	**05 07 51.5**	**+1.4**
	22nm,1.4s						
H10N2	**ASCENSION HYDR**	**48.50**	**16**	T	T	06 00 12.7	
	baz=204						
LPAZ	**La Paz**	**50.23**	**304**	P	**P**	**05 08 04.5**	**+0.7**
	4.7nm,0.6s,baz=149,slow=4.8,SNR=26						
MDP	**Montagnes des**	**64.03**	**331**	LR	LR	05 33 33.8	
	comp=Z,37nm,20.3s,baz=132,slow=32						
TORD	**Torodi Ar. Bea**	**72.42**	**29**	P	**P**	**05 10 32.6**	**-0.5**
	2.9nm,0.5s,baz=203,slow=5.8,SNR=35						
TOA1	**Torodi Ar. Sit**	**72.43**	**29**	*eP*	**P**	**05 10 32.6**	**-0.5**
YKA	**Yellowknife Ar**	**135.89**	**318**	PKP	**PKPdf**	**05 18 25.8**	**-0.3**
	0.4nm,0.6s,baz=114,slow=2.0,SNR=4.2						
YKB5	**Yellowknife Ar**	**135.89**	**318**	*ePKPdf*	**PKPdf**	**05 18 25.8**	**-0.3**
HYT	**Haines Junctio**	**144.62**	**308**	*ePKPdf*	**PKPdf**	**05 18 42.9**	**+0.8**
INK	**Inuvik**	**145.50**	**321**	*ePKPdf*	**PKPab**	**05 18 44.0**	**+0.3**
RIDG	**Independent Ri**	**148.80**	**311**	*ePKPbc*	**PKiKP**	**05 18 54.0**	**-0.3**
ILAR	**Eielson Array**	**149.90**	**312**	PKPbc	**PKPbc**	**05 18 55.5**	**-0.1**
	3.1nm,0.7s,baz=131,slow=2.5,SNR=26						
ILB	**Eielson Array**	**149.90**	**312**	*ePKPbc*	**PKPbc**	**05 18 55.5**	**-0.1**
CCB	**Clear Creek Bu**	**150.26**	**312**	*ePKPbc*	**PKPbc**	**05 18 56.3**	**0.0**
SONA0	**Songino Array**	**150.45**	**85**	*ePKPbc*	**PKPbc**	**05 18 58.1**	**+0.6**
SONM	**Songino Array**	**150.45**	**85**	PKPbc	**PKPbc**	**05 18 58.1**	**+0.6**
	0.5nm,0.5s,baz=197,slow=4.5,SNR=2.8						
RND	**Reindeer**	**150.48**	**309**	*ePKPbc*	**PKiKP**	**05 18 57.8**	**+0.1**
BPAW	**Bear Paw Mtn.**	**151.53**	**310**	*ePKPbc*	**PKPbc**	**05 18 59.7**	**+0.3**

SVSA 06 05:03:00.2±0.9, 38°.28N×26°.14W, h5km, MD3.5, ML1.8, Error ellipse: s-maj=12.1km s-min=2.4km az=44.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**0.56**	**144**	*eP*	Pg	05 03 09.5	-1.5
PSET				*eS*	Sg	05 03 16.9	-1.3
PSET				A	A	05 03 18.8	
	17nm,0.2s						
PDA	**Ponta Delgada**	**0.65**	**144**	*eP*	Pg	05 03 10.7	-1.9
PDA				*eS*	Sg	05 03 19.5	-1.5
PDA				A	A	05 03 21.4	
	23nm,0.2s						
BART	**Pico Bartolome**	**0.91**	**123**	*eP*	Pg	05 03 14.8	-2.9
BART				*eS*	Sg	05 03 26.1	-3.5
BART				A	A	05 03 27.4	
	12nm,0.5s						
ADH	**Angra Heroismo**	**0.94**	**294**	*eP*	Pg	05 03 14.8	-3.4
ADH				*eS*	Sg	05 03 26.4	-4.0
ADH				A	A	05 03 28.0	
	13nm,0.3s						

*IDC **06** 05:19:39.6±1.1, 55°.50S×26°.73W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.8/29, mbtmp4.0/4, MS3.7/1, Ms1 3.6/1, ms1mx3.0/15, Error ellipse: s-maj=36.1km s-min=31.5km az=80.0*
*ISCJB **06** 05:19:41.6±0.7, 55°.39S±0°.09×27°.1W±0°.1, h25km, mb4.1/5, MS3.7/1, Error ellipse: s-maj=15.5km s-min=8.3km az=34.0*
*NEIC **06** 05:19:44.5±0.9, 55°.46S×27°.04W, h35km±3km, mb4.5/1, Error ellipse: s-maj=22.0km s-min=12.8km az=144.0*
ISC 06 05:19:43.7±0.8, 55°.46S±0°.1×27°.0W±0°.1, h25km, n19, σ0°.84/20, mb4.2/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.58**	**278**	*ePn*	**Pn**	**05 21 05.0**	**+0.1**
HOPE				*eSn*	**Sn**	**05 22 08.2**	**0.0**
VNA3	**Neumayer Olymp**	**17.56**	**161**	P	**Pn**	**05 23 46.7**	**+0.4**
VNA2	**Neumayer--Watz**	**17.75**	**159**	P	**Pn**	**05 23 49.6**	**+0.9**
	baz=322,slow=13						
SNAA	**Sanae**	**19.29**	**157**	P	**P**	**05 24 06.6**	**+0.4**
QSPA	**South Pole Qui**	**34.83**	**180**	*eP*	**P**	**05 26 32.1**	**-0.2**
	9.5nm,1.5s						
CFA	**Coronel Fontan**	**37.40**	**292**	P	**P**	**05 26 54.4**	**0.0**
	3.0nm,0.8s,baz=164,slow=7.0,SNR=4.3						
BOSA	**Boshof**	**45.73**	**76**	LR	LR	05 43 37.5	
	comp=Z,80nm,18.1s,baz=215,slow=32						
VNDA	**Vanda**	**47.21**	**183**	P	**P**	**05 28 12.6**	**-1.0**
	0.8nm,0.7s,baz=184,slow=5.7,SNR=6.4						
VNDA	**Vanda**	**47.21**	**183**	*eP*	**P**	**05 28 12.8**	**-0.9**
GO01	**Chusmiza**	**47.69**	**301**	*eP*	**P**	**05 28 18.4**	**-0.2**
LPAZ	**La Paz**	**50.09**	**305**	P	**P**	**05 28 38.8**	**+1.7**
	1.6nm,0.7s,baz=178,slow=6.4,SNR=7.8						
LPAZ	**La Paz**	**50.09**	**305**	*eP*	**P**	**05 28 35.3**	**-1.9**
TORD	**Torodi Ar. Bea**	**72.46**	**29**	P	**P**	**05 31 07.3**	**-0.5**
	1.1nm,0.5s,baz=206,slow=6.1,SNR=18						
TOA1	**Torodi Ar. Sit**	**72.46**	**29**	*eP*	**P**	**05 31 07.3**	**-0.5**
INK	**Inuvik**	**145.37**	**321**	PKPbc	**PKPdf**	**05 39 18.0**	**+0.5**
	1.5nm,0.6s,baz=130,slow=2.5,SNR=3.9						
INK	**Inuvik**	**145.37**	**321**	*ePKPbc*	**PKPdf**	**05 39 17.1**	**-0.4**
ILAR	**Eielson Array**	**149.76**	**312**	PKPbc	**PKPbc**	**05 39 30.3**	**+0.6**
	1.1nm,0.7s,baz=130,slow=3.1,SNR=12						
ILB	**Eielson Array**	**149.76**	**312**	*ePKPbc*	**PKPbc**	**05 39 30.3**	**+0.6**
TOLK	**Toolik Lake Re**	**151.25**	**320**	*ePKPbc*	**PKPbc**	**05 39 33.3**	**0.0**
TOLK				*ePKPab*	**PKPab**	**05 39 42.6**	**+1.1**

*KRNET **06** 05:27:50.0±0.1, 39°.86N×70°.34E, mb3.3*
*ISCJB **06** 05:27:53.6±1.1, 39°.81N±0°.05×70°.46E±0°.07, h10km, Error ellipse: s-maj=8.3km s-min=6.7km az=41.2*
*SOME **06** 05:27:53.6, 39°.90N×70°.32E, h15km*
*NNC **06** 05:27:55.7±2.8, 40°.04N×70°.35E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=21.7km s-min=11.3km az=11.0*
ISC 06 05:27:55.5±1.6, 39°.96N±0°.06×70°.52E±0°.07, h10km, n27, σ2°.18/45, 22C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.25**	**67**	⇓*iP*	**Pg**	**05 27 58.2**	**-2.5**
BTK				⇓*iS*	**Sg**	**05 28 04.7**	**+0.5**
	baz=61						
DRK	**Karamyk**	**1.10**	**115**	⇑*iP*	**Pg**	**05 28 13.4**	**-3.3**
DRK				⇑*iS*	**Sg**	**05 28 29.3**	**-1.7**
	baz=8.0						
ARK	**Arkit**	**2.14**	**30**	⇑*iP*	**Pn**	**05 28 31.5**	**+0.1**
ARK				⇑*iS*	**Sb**	**05 29 01.2**	**+0.1**
	baz=33						
IUG	**Iuzhnay**	**2.22**	**351**	Pg	**Pn**	**05 28 33.7**	**+1.2**
IUG				Lg	Lg	05 29 02.8	
	68nm,0.5s						
IUG	**Iuzhnay**	**2.22**	**351**	*eP*	**Pn**	**05 28 33.7**	**+1.2**
IUG				*eS*	**Sb**	**05 29 02.8**	**-0.5**
	68nm,0.5s						
ARSB	**Arslanbob**	**2.32**	**53**	⇓*iP*	**Pn**	**05 28 34.0**	**+0.1**
ARSB				⇓*iS*	**Sb**	**05 29 05.9**	**-0.4**
	212nm,0.4s						
KK31	**Karatay Array**	**3.14**	**360**	⇑Pn	**Pn**	**05 28 46.1**	**+0.9**
KK31				⇑Pg	**Pb**	**05 28 51.2**	**-0.3**
	baz=53						
KK31				⇑Lg	Lg	05 29 32.9

7.6nm,0.6s

JMA 06 05:31:24.6±0.2,24°.72N×123°.24E,h14km,M1.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.33**	**219**	P	Pg	05 31 31.4	0.0
YOJ				*e*S	Sg	05 31 35.9	-0.1
JYNG	**Yonagunijimaku**	**0.38**	**225**	P	Pg	05 31 32.1	-0.2
JYNG				*e*S	Sg	05 31 38.1	+0.7
IRIF	**Iriomote-Funau**	**0.59**	**131**	P	Pg	05 31 36.0	-0.1
IRIF				*e*S	Sg	05 31 43.0	-1.0
JIJ	**Ishigaki jima**	**0.90**	**113**	S	Sg	05 31 52.6	-1.1
JISG	**Ishigakijimahi**	**0.98**	**98**	P	Pb	05 31 43.0	-0.4

TAP 06 05:31:39.1,24°.27N×121°.68E,h8km,ML1.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao** baz=220	**0.12**	**220**	*e*P	Pg	05 31 42.4	+0.6
ENA	**Nanau** baz=21	**0.17**	**19**	P	Pg	05 31 43.5	+0.9
ENA	baz=21			*i* S	Sg	05 31 46.8	+1.7
ETLH	**Xiulin Townshi** baz=251	**0.19**	**252**	*e*P	Pg	05 31 43.9	+0.8
ETLH	baz=251			*e*S	Sg	05 31 47.9	+2.1
TWD	**Chiawan** baz=200	**0.20**	**203**	*e*P	Pg	05 31 44.2	+1.0
TWD	baz=200			*e*S	Sg	05 31 47.8	+1.8
HWA	**Hwalien** baz=192	**0.30**	**194**	*e*P	Pb	05 31 46.1	-0.6
HWA	baz=192			*e*S	Sb	05 31 51.1	-0.7
NNSB	**Datong** baz=300	**0.32**	**301**	*e*P	Pg	05 31 46.3	+0.8
NNSB	baz=300			*e*S	Sb	05 31 51.5	-1.1
NNS	**Nan Shan** baz=301	**0.33**	**302**	*e*P	Pb	05 31 46.6	-0.7
NNS	baz=301			S	Sb	05 31 51.7	-1.2
NDT	**Datong Townshi** baz=335	**0.37**	**335**	*e*P	Pg	05 31 46.7	+0.3
NDT	baz=335			S	Sb	05 31 53.8	-0.1
ENTT	**Nioudou** baz=345	**0.39**	**344**	P	Pb	05 31 47.5	-0.8
ENTT	baz=345			S	Sb	05 31 53.9	-0.5
WHF	**Hehuan Shan** baz=251	**0.40**	**252**	P	Pb	05 31 48.0	-0.7
WHF	baz=251			S	Sb	05 31 54.6	-0.6
TWE	**Neicheng**	**0.45**	**358**	*e*S	Sb	05 31 56.1	-0.2
YHNB	**Yeheng** baz=325	**0.49**	**325**	*e*P	Pb	05 31 50.1	0.0
YHNB	baz=325			*e*S	Sb	05 31 57.4	0.0
CHGB	**Renai** baz=246	**0.51**	**246**	*e*P	Pb	05 31 49.8	-0.7
CHGB	baz=246			*e*S	Sb	05 31 57.8	-0.3
NWLT	**Wulai** baz=342	**0.53**	**342**	*e*P	Pb	05 31 50.7	-0.1
NWLT	baz=342			S	Sb	05 31 59.1	+0.5
OWD	**Renai** baz=236	**0.56**	**236**	*e*P	Pb	05 31 51.1	-0.1
OWD	baz=236			*e*S	Sb	05 31 59.0	-0.4
WHP	**Taichung City** baz=270	**0.67**	**271**	*e*P	Pb	05 31 52.9	-0.3
WHP	baz=270			*e*S	Sb	05 32 03.3	+0.6
VWDT	**VWDT** baz=224	**0.71**	**224**	*e*P	Pb	05 31 54.1	+0.3
VWDT	baz=224			*e*S	Sb	05 32 04.7	+1.0

*IDC **06** 05:33:05.1±0.5, 13°.89N×144°.93E, h129km±4km, mb3.6/9, mb1 3.8/9, mb1mx3.4/49, mbtmp4.0/9, Error ellipse: s-maj=24.5km s-min=13.9km az=86.0*

ISC 06 05:33:04.7±0.7,13°.9N±0°.1×145°.1E±0°.2,h125km,n19, σ1§58/14,mb3.9/11,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 408nm,0.3s,baz=316,slow=1.1,SNR=369	**0.41**	**217**	P	**Pn**	**05 33 24.7**	**+1.9**
GUMO	2μm,0.3s,baz=72,slow=20,SNR=63			S	**Sn**	**05 33 38.0**	**+1.7**
H11S3	**WAKE ISLAND Hy 21.20** baz=261,slow=75,SNR=20	**75**		T	T	05 59 29.5	
H11S1	**WAKE ISLAND Hy 21.21** baz=261,slow=75,SNR=10	**75**		T	T	05 59 57.3	
H11S2	**WAKE ISLAND Hy 21.21** baz=261,slow=75,SNR=9.6	**75**		T	T	05 59 52.3	
H11N1	**WAKE ISLAND Hy 21.61** baz=257,slow=75,SNR=7.9	**72**		T	T	06 00 58.5	
H11N2	**WAKE ISLAND Hy 21.62** baz=257,slow=75,SNR=6.1	**72**		T	T	06 01 02.7	
H11N3	**WAKE ISLAND Hy 21.63** baz=257,slow=75,SNR=20	**72**		T	T	06 01 03.7	
WRA	**Warramunga Arr** 47nm,0.3s,baz=18,slow=8.3,SNR=0.3	**35.29**	**198**	P	**P**	**05 39 45.9**	**-1.9**
ASAR	**Alice Springs** 0.9nm,0.5s,baz=18,slow=12,SNR=15	**38.94**	**196**	P	**P**	**05 40 17.5**	**-1.1**
DZM	**Mont Dzumac** 13nm,0.6s,baz=249,slow=5.1,SNR=10	**41.44**	**149**	P	**P**	**05 40 40.9**	**+1.6**
STKA	**Stephens Creek** 2.4nm,0.5s,baz=98,slow=8.7,SNR=4.5	**45.66**	**184**	P	**P**	**05 41 11.4**	**-1.6**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=92,slow=8.1,SNR=5.1	**61.42**	**316**	P	**P**	**05 43 07.9**	**+0.1**
KURBB	**Kurchatov Arra** 1.0nm,0.5s,baz=103,slow=6.8,SNR=13	**64.53**	**320**	P	**P**	**05 43 27.8**	**-0.4**
ILAR	**Eielson Array** 0.4nm,0.4s,baz=254,slow=5.6,SNR=12	**68.16**	**25**	P	**P**	**05 43 49.9**	**-1.3**
BVAR	**Borovoye Array** 0.7nm,0.5s,baz=95,slow=7.4,SNR=3.7	**69.82**	**322**	P	**P**	**05 44 01.1**	**-0.5**
YKA	**Yellowknife Ar** 0.4nm,0.7s,baz=292,slow=5.1,SNR=4.1	**82.45**	**27**	P	**P**	**05 45 11.7**	**-1.1**
NVAR	**Mina Array Bea** 0.9nm,0.6s,baz=263,slow=5.8,SNR=9.4	**86.52**	**51**	P	**P**	**05 45 36.2**	**+2.0**
ARCES	**ARCESS Array B** 1.9nm,0.9s,baz=70,slow=11,SNR=3.5	**86.84**	**342**	P	**P**	**05 45 36.0**	**+1.1**
LPAZ	**La Paz** 1.5nm,0.7s,baz=23,slow=3.8,SNR=7.9	**147.83**	**98**	PKPbc	**PKPab**	**05 52 37.9**	**-1.6**

*ISCJB **06** 05:41:40.3±0.4, 43°.04N±0°.02×74°.92E±0°.03, h0km, Error ellipse: s-maj=3.5km s-min=2.4km az=151.8*
*KRNET **06** 05:41:40.1±0.1, 43°.05N×74°.92E, h10km, mb2.6*
*SOME **06** 05:41:40.7, 43°.00N×74°.93E*
*NNC **06** 05:41:40.6±0.6, 43°.01N×74°.94E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=6.0km s-min=1.6km az=156.0, Suspected Mining explosion.*
*KNET **06** 05:41:40.1±0.2, 43°.06N×74°.93E, h4km±5km, ml1.2, Error ellipse: s-maj=1.6km s-min=0.9km az=14.0*

ISC 06 05:41:40.6±0.9,43°.05N±0°.02×74°.92E±0°.02,h0km,n26, σ0§52/48,28C-9D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	**Chumysh** 24nm,0.2s,SNR=69	**0.13**	**247**	⇑P	**Pg**	**05 41 42.9**	**-0.2**
CHMS	52nm,0.2s			⇑S	**Sg**	**05 41 45.2**	**+0.4**
CHMS	**Chumysh** baz=47	**0.13**	**247**	⇑*i*P	**Pg**	**05 41 42.9**	**-0.2**
CHMS	baz=47			⇑*i*S	**Sg**	**05 41 44.7**	**-0.1**
USP	**Ospenovka** 6.2nm,0.1s,SNR=35	**0.38**	**306**	⇑P	**Pg**	**05 41 47.8**	**0.0**
USP	13nm,0.2s			⇑S	**Sg**	**05 41 53.4**	**+0.8**
USP	**Ospenovka** baz=5.0	**0.38**	**306**	⇑*i*P	**Pg**	**05 41 47.7**	**0.0**
USP	baz=5.0			⇑*i*S	**Sg**	**05 41 53.2**	**+0.6**
KBK	**Karagaybulak** 11nm,0.1s,SNR=48	**0.39**	**177**	⇑P	**Pg**	**05 41 48.3**	**+0.2**
KBK	26nm,0.2s			⇓S	**Sg**	**05 41 54.7**	**+1.5**
KBK	**Karagaybulak** baz=77	**0.39**	**177**	⇓*i*P	**Pg**	**05 41 48.1**	**0.0**
KBK	baz=77			⇓*i*S	**Sg**	**05 41 53.8**	**+0.6**
TKM2	**Tokmak 2** 2.7nm,0.1s,SNR=5.9	**0.51**	**104**	⇓P	**Pg**	**05 41 50.4**	**0.0**
TKM2	10nm,0.1s			⇑S	**Sg**	**05 41 57.7**	**+0.6**
TKM2	**Tokmak 2** 1.4nm,0.3s	**0.51**	**104**	⇑P	**Pg**	**05 41 50.0**	**-0.4**
TKM2	2.4nm,0.3s			⇑S	**Sg**	**05 41 57.1**	**+0.1**
TKM2	**Tokmak 2** baz=5.0	**0.51**	**104**	⇑*i*P	**Pg**	**05 41 50.2**	**-0.2**
TKM2	baz=5.0			⇑*i*S	**Sg**	**05 41 57.6**	**+0.5**
AAK	**Ala-Archa** 1.3nm,0.1s	**0.52**	**217**	⇑P	**Pg**	**05 41 50.2**	**-0.3**
AAK	**Ala-Archa** 2.9nm,0.7s	**0.52**	**217**	⇓P	**Pg**	**05 41 50.4**	**-0.1**
AAK	3.6nm,0.6s			⇑S	**Sg**	**05 41 57.4**	**+0.3**
AAK	**Ala-Archa** baz=17	**0.52**	**217**	⇑*i*P	**Pg**	**05 41 50.3**	**-0.1**
AAK	baz=17			⇑*i*S	**Sg**	**05 41 57.7**	**+0.6**
DGS	**Degeres** 3.3nm,0.2s	**0.65**	**73**	P	**Pg**	**05 41 53.8**	**+0.7**
DGS	5.7nm,0.5s			S	**Sg**	**05 42 01.5**	**-0.1**
UCH	**Uchtor** 0.4nm,0.1s,SNR=5.7	**0.87**	**200**	⇓P	**Pg**	**05 41 56.9**	**-0.3**
UCH	**Uchtor** baz=0.0	**0.87**	**200**	⇓*i*P	**Pg**	**05 41 57.0**	**-0.3**
UCH	baz=0.0			⇓*i*S	**Sg**	**05 42 09.3**	**+0.7**
EKS2	**Erkin-Say** 1.2nm,0.1s,SNR=5.9	**0.92**	**246**	⇓P	**Pg**	**05 41 58.0**	**-0.3**
EKS2	**Erkin-Say** baz=46	**0.92**	**246**	⇑*i*P	**Pg**	**05 41 57.9**	**-0.3**
EKS2	baz=46			⇑*i*S	**Sg**	**05 42 10.8**	**+0.6**
BOOM	**Boomskoye usch** baz=26	**0.94**	**126**	⇑*i*P	**Pg**	**05 41 58.0**	**-0.5**
BOOM	baz=26			⇑*i*S	**Sg**	**05 42 11.1**	**+0.4**
KZA	**Kyzart** baz=66	**1.00**	**166**	⇑*i*P	**Pg**	**05 41 59.5**	**-0.2**
KZA	baz=66			⇑*i*S	**Sg**	**05 42 13.6**	**+0.9**
ULHL	**Ulahol** baz=29	**1.27**	**129**	⇑*i*P	**Pg**	**05 42 04.1**	**-0.7**
ULHL	baz=29			⇑*i*S	**Sb**	**05 42 21.7**	**-0.6**
ARLS	**Aral** baz=1.0	**1.27**	**201**	⇑*i*P	**Pg**	**05 42 04.0**	**-0.8**
ARLS	baz=1.0			⇑*i*S	**Sg**	**05 42 21.5**	**+0.3**
KUU	**Kurty** 1.9nm,0.3s	**1.33**	**50**	P	**Pb**	**05 42 06.3**	**-0.2**
KUU	2.7nm,0.3s			S	**Sg**	**05 42 23.0**	**-0.5**
KTBS	**Karatobe** 3.6nm,0.4s	**1.45**	**62**	P	**Pn**	**05 42 07.9**	**-0.2**
KTBS	7.0nm,0.5s			S	**Sg**	**05 42 26.2**	**-0.8**
KOTS	**Kotyrbulak** 3.2nm,0.3s	**1.62**	**83**	P	**Pg**	**05 42 12.1**	**+0.5**
KOTS	9.9nm,0.6s			S	**Sg**	**05 42 33.4**	**+0.9**
CHKK	**Chushkaly** 2.9nm,0.4s	**1.71**	**61**	P	**Pb**	**05 42 12.9**	**0.0**
CHKK	6.4nm,0.3s			S	**Sb**	**05 42 34.8**	**-0.1**
ARXS	**Arharly** 1.8nm,0.5s	**2.41**	**60**	Pg	**Pb**	**05 42 25.3**	**+0.4**
ARXS	5.7nm,0.5s			Lg	Lg	05 42 56.4	

JMA 06 05:58:38.2±0.1,24°.83N×123°.23E,h37km±4km,M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.42**	**209**	P	Pn	05 58 47.5	+0.1
YOJ				S	Sn	05 58 54.0	-0.3
JYNG	**Yonagunijimaku**	**0.46**	**215**	P	Pn	05 58 48.0	-0.1
JYNG				*e*S	Sn	05 58 54.9	-0.2
IRIF	**Iriomote-Funau**	**0.67**	**137**	P	Pn	05 58 51.0	-0.3
IRIF				S	Sn	05 59 00.5	0.0
JKRS	**Kuro-shima**	**0.92**	**130**	P	Pn	05 58 54.7	+0.1
JKRS				S	Sn	05 59 06.7	+0.1
HATJ	**Hateruma jima**	**0.93**	**146**	P	Pn	05 58 55.3	+0.6
HATJ				*e*S	Sn	05 59 07.1	+0.2
JIJ	**Ishigaki jima**	**0.95**	**119**	P	Pn	05 58 55.2	+0.2
JISG	**Ishigakijimahi**	**1.01**	**104**	P	Pn	05 58 56.2	+0.4
JISG				*e*S	Sn	05 59 09.5	+0.7

TAP 06 05:59:10.9,24°.45N×121°.96E,h12km±1km,ML2.0,1C-1D, C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=57	**0.18**	**57**	⇓P	Pb	05 59 15.7	-0.5
EOS1	baz=57			S	Sg	05 59 19.2	+1.4
TWC	**Suao** baz=329	**0.19**	**327**	⇑P	Pb	05 59 16.1	-0.2
TWC	baz=329			S	Sg	05 59 18.9	+0.9
ENA	**Nanau** baz=262	**0.20**	**264**	P	Pb	05 59 16.4	-0.1
ENA	baz=262			S	Sg	05 59 19.6	+1.2
ENTT	**Nioudou** baz=297	**0.41**	**298**	*e*P	Pb	05 59 20.1	+0.2
NACB	**Ninganchiao** baz=230	**0.43**	**231**	*e*P	Pg	05 59 19.4	0.0
NACB	baz=230			*e*S	Sb	05 59 26.1	-0.8
NDT	**Datong Townshi** baz=290	**0.43**	**291**	*e*P	Pb	05 59 21.0	+0.5
NDT	baz=290			S	Sb	05 59 26.9	0.0
ETLH	**Xiulin Townshi** baz=240	**0.50**	**241**	*e*P	Pb	05 59 21.5	-0.2
ETLH	baz=240			*e*S	Sb	05 59 28.6	-0.3
NNSB	**Datong** baz=267	**0.53**	**268**	*e*P	Pb	05 59 22.8	+0.7
NNSB	baz=267			*e*S	Sb	05 59 30.0	+0.2
NWLT	**Wulai** baz=307	**0.53**	**308**	*e*P	Pb	05 59 22.2	+0.1
NWLT	baz=307			*e*S	Sb	05 59 30.0	+0.3
TIPB	**Shuangxi** baz=346	**0.53**	**347**	*e*P	Pb	05 59 22.7	+0.5
TIPB	baz=346			*e*S	Sb	05 59 30.2	+0.4
NNS	**Nan Shan** baz=268	**0.54**	**269**	*e*P	Pb	05 59 22.4	+0.1
NNS	baz=268			*e*S	Sb	05 59 29.9	-0.1
YHNB	**Yeheng** baz=292	**0.57**	**292**	*e*P	Pb	05 59 23.7	+0.8
YHNB	baz=292			*e*S	Sb	05 59 31.1	+0.1

*IDC **06** 06:04:19.2±1.2, 13°.03S×167°.40E, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/31, mbtmp4.1/6, Error ellipse: s-maj=42.0km s-min=27.0km az=127.0*
*ISCJB **06** 06:04:23.4±1.1, 13°.1S±0°.2×167°.3E±0°.2, h33km, mb4.2/7, Error ellipse: s-maj=36.8km s-min=24.9km az=34.5*

ISC 06 06:04:24.9±1.1,13°.1S±0°.2×167°.4E±0°.3,h35km,n8, σ1§01/8,mb4.2/7,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 4.1nm,0.4s,baz=44,slow=9.8,SNR=8.4	**30.16**	**227**	P	**P**	**06 10 33.1**	**+1.3**
WRA	**Warramunga Arr** 14nm,0.3s,baz=83,slow=9.1,SNR=1.7	**32.34**	**253**	P	**P**	**06 10 50.6**	**-0.6**
ASAR	**Alice Springs** 1.7nm,0.3s,baz=76,slow=9.0,SNR=40	**33.37**	**247**	P	**P**	**06 10 59.8**	**-0.4**
VNDA	**Vanda** 0.6nm,0.6s,baz=348,slow=5.7,SNR=5.2	**64.53**	**181**	P	**P**	**06 14 57.9**	**+0.1**
MAW	**Mawson** 1.1nm,0.6s,baz=101,slow=7.2,SNR=4.7	**83.46**	**202**	P	**P**	**06 16 47.8**	**-0.8**
ILAR	**Eielson Array** 0.3nm,0.6s,baz=252,slow=4.0,SNR=4.8	**84.91**	**18**	P	**P**	**06 16 56.7**	**+0.8**
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=92,slow=7.3,SNR=3.7	**96.05**	**317**	P	**P**	**06 17 48.8**	**+0.1**
ARCES	**ARCESS Array B** 11nm,0.4s,baz=72,slow=2.9,SNR=17	**118.65**	**346**	PKP	**PKPdf**	**06 23 07.4**	**-1.2**

*IDC **06** 06:39:58.6±0.7, 32°.63S×71°.57W, h0km, mb4.2/9, mb1 4.3/14, mb1mx4.2/24, mbtmp4.1/14, ML4.3/5, MS3.5/6, Ms1 3.5/6, ms1mx3.3/20, Error ellipse: s-maj=26.8km s-min=16.5km az=84.0*
*SJA **06** 06:40:00.9±0.9, 32°.72S×71°.72W, h5km±17km, ML4.5, MW4.2*
*GUC **06** 06:40:02.6±0.6, 32°.57S×71°.40W, h31km±5km, ML4.5*
*NEIC **06** 06:40:02.0±0.0, 32°.56S×71°.38W, h27km, mb4.5/28, ML4.5(GUC), After GUC.*
NEIC Felt [IV] at Quillota, San Felipe, Valparaiso and Zapallar; [III] at San Bernardo; [II] at Lampa, Salamanca, Santiago and Tiltil. Also felt at Vina del Mar.

ISC 06 06:40:00.8±1.5,32°.62S±0°.03×71°.67W±0°.05,h17km±8km, n99,σ1§07/104,mb4.4/34,MS3.6/3,1C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.66**	**123**	*e*Pn	**Pb**	**06 40 14.8**	**+0.8**
ROC1				*e*Sg	**Sg**	**06 40 23.2**	**+0.6**
ROC1	**El Roble**	**0.66**	**123**	*i* P	**Pb**	**06 40 14.8**	**+0.8**
ROC1				*i* S	**Sb**	**06 40 24.1**	**+1.1**
ROCH	**El Roble**	**0.66**	**123**	*e*P	**Pb**	**06 40 14.4**	**+0.4**
ROCH				*i* S	**Sg**	**06 40 23.1**	**+0.5**
ROCH				IAML		06 40 24.7	
PEL	comp=N,23μm,0.3s **Peldehue**	**0.98**	**123**	*e*Pn	**Pg**	**06 40 20.0**	**+0.2**
PEL				*e*Sg	**Sb**	**06 40 32.5**	**+0.4**
PEL	**Peldehue**	**0.98**	**123**	*i* P	**Pg**	**06 40 20.0**	**+0.2**
PEL				*i* S	**Sn**	**06 40 35.0**	**+1.6**
PEL	**Peldehue**	**0.98**	**123**	*e*P	**Pb**	**06 40 19.0**	**-0.4**
PEL				*e*S	**Sb**	**06 40 31.2**	**-0.9**
PEL				IAML		06 40 33.9	
CLCH	comp=E,56μm,0.3s **Cerro Calan**	**1.23**	**129**	*e*P	**Pn**	**06 40 23.3**	**0.0**
CLCH				*i* S	**Sb**	**06 40 39.0**	**-0.3**
CLCH				IAML		06 40 45.0	
ANTU	comp=E,29μm,0.5s **Antumapu**	**1.29**	**138**	*e*P	**Pb**	**06 40 25.1**	**+0.5**
ANTU				*i* S	**Sb**	**06 40 41.2**	**+0.3**
FSR	**Penalolen**	**1.29**	**132**	*e*P	**Pb**	**06 40 25.1**	**+0.5**
FSR				*i* S	**Sn**	**06 40 41.6**	**+0.5**
FCH	**Farellones**	**1.36**	**122**	*e*P	**Pn**	**06 40 25.5**	**+0.2**
FCH				*i* S	**Sn**	**06 40 43.0**	**-0.2**
FCH				IAML		06 40 44.6	
LMEL	comp=N,15μm,0.4s **Las Melosas**	**1.74**	**135**	⇓*i*P	**Pn**	**06 40 31.1**	**+0.8**
LMEL				*i* S	**Sb**	**06 40 53.7**	**-0.2**
AUSP	**Uspallata**	**1.97**	**79**	*i* P	**Pg**	**06 40 38.1**	**-0.5**
ARCO	**CERRO ARCO**	**2.32**	**96**	*i* P	**Pb**	**06 40 42.8**	**+0.5**
ARCO				IAML		06 40 54.5	
ARCO	comp=Z,3μm,0.6s			*i* S	**Sg**	**06 41 13.7**	**-1.7**
ASAL	**Salagasta**	**2.40**	**90**	*i* P	**Pb**	**06 40 44.2**	**+0.7**
GO05	**Huala**	**2.40**	**185**	*e*Pn	**Pn**	**06 40 38.0**	**-1.3**
AAGR	**Agrelo**	**2.44**	**102**	*i* P	**Pb**	**06 40 44.8**	**+0.5**
GO04	**Tololo Observa**	**2.55**	**17**	*e*Pn	**Pb**	**06 40 45.2**	**-1.0**
ZON	**Zonda** comp=Z,1μm,0.5s	**2.76**	**68**	IAML		06 41 33.2	
RTCV	**Cerro Valdivia**	**2.76**	**75**	*i* P	**Pb**	**06 40 49.6**	**-0.1**
AVIZ	**Vizcacheras**	**2.78**	**109**	*i* P	**Pb**	**06 40 48.7**	**-1.4**
SJA	**San Juan**	**2.86**	**68**	IAML		06 41 36.7	
RTLL	comp=Z,936nm,0.3s **Cerro Villicun**	**3.00**	**66**	*i* P	**Pb**	**06 40 52.6**	**-1.2**
RTLL				*i* S	**Sb**	**06 41 32.4**	**+2.1**
RTLL				IAML		06 41 40.0	
ACCO	comp=Z,3μm,0.4s **Cerro Coronel**	**3.01**	**48**	*i* P	**Pb**	**06 40 54.5**	**+0.4**
CFA	**Coronel Fontan**	**3.08**	**72**	Pn	**Pb**	**06 40 53.1**	**-2.1**
CFA	comp=Z,64nm,0.3s,baz=245,slow=12,SNR=440			Lg	Lg	06 41 34.9	
CFA	comp=Z,511nm,0.3s,baz=148,slow=23,SNR=12			LR	LR	06 42 22.4	
ACDV	comp=Z,896nm,19.0s,baz=304,slow=48 **Cuesta del Vie**	**3.27**	**42**	*i* P	**Pb**	**06 40 57.7**	**-0.8**
LCO	**Las Campanas**	**3.69**	**13**	*e*Pn	**Pb**	**06 41 00.2**	**+2.9**
LCO				*e*Sn	**Sn**	**06 41 44.2**	**+3.7**
GO03	**Copiap**	**5.16**	**14**	*e*Pn	**Pn**	**06 41 20.2**	**+2.9**
GO02	**Mina Guanaco**	**7.65**	**14**	*e*Pn	**Pn**	**06 41 52.2**	**+0.5**
PLCA	**Paso Flores** comp=Z,1.5nm,0.3s,baz=1.7,slow=10,SNR=48	**8.15**	**174**	Pn	**Pn**	**06 41 58.3**	**-0.1**
PLCA				LR	LR	06 45 32.5	
PLCA	comp=Z,150nm,19.9s,baz=12,slow=41 **Paso Flores**	**8.15**	**174**	*e*Pn	**Pn**	**06 41 58.5**	**+0.1**
TRQA	**Tornquist**	**9.60**	**127**	*e*Pn	**Pn**	**06 42 20.0**	**+1.8**
LVC	**Limon Verde** comp=Z,0.4nm,0.3s,baz=226,slow=11,SNR=5.1	**10.26**	**14**	Pn	**Pn**	**06 42 26.2**	**-1.5**
LVC				Sn	Sn	06 44 36.1	+14
CPUP	comp=Z,1.3nm,0.3s,baz=161,slow=18,SNR=2.2 **Villa Florida**	**13.97**	**67**	Pn	**Pn**	**06 43 18.7**	**+0.7**
CPUP	comp=Z,1.1nm,0.3s,baz=233,slow=9.2,SNR=19			Sn	**Sn**	**06 45 50.5**	**-2.2**
CPUP	comp=Z,0.4nm,0.3s,baz=214,slow=18,SNR=2.1			LR	LR	06 49 01.0	
LPAZ	comp=Z,202nm,20.0s,baz=256,slow=39 **La Paz**	**16.57**	**12**	Pn	**P**	**06 43 54.8**	**-0.8**
LPAZ	comp=Z,0.4nm,0.3s,baz=194,slow=7.0,SNR=34 **La Paz**	**16.57**	**12**	*e*Pn	**Pn**	**06 43 51.2**	**-1.8**
SIV	**San Ignacio** comp=Z,0.2nm,0.3s,baz=217,slow=9.9,SNR=10	**19.14**	**33**	P	**Pn**	**06 44 23.7**	**-0.5**
NNA	**Nana** comp=Z,129nm,18.8s,baz=192,slow=33	**21.07**	**346**	LR	LR	06 51 40.3	
USHA	**Ushuaia** comp=Z,13nm,0.9s,baz=350,slow=8.8,SNR=5.1	**22.33**	**175**	P	**P**	**06 44 58.4**	**+1.0**
ATAH	**Atahualpa** comp=Z,159nm,18.1s,baz=269,slow=34	**26.11**	**345**	LR	LR	06 55 01.7	
BDFB	**Brasilia** comp=Z,4.1nm,0.9s,baz=236,slow=2.1,SNR=4.9	**27.32**	**57**	P	**P**	**06 45 44.2**	**-0.7**
ROSC	**El Rosal** comp=Z,1.3nm,0.3s,baz=104,slow=19,SNR=2.0	**37.34**	**356**	P	**P**	**06 47 12.9**	**0.0**
ROSC	**El Rosal** comp=Z,4.6nm,0.6s	**37.34**	**356**	*e*P	**P**	**06 47 12.4**	**-0.5**
VNA3	**Neumayer Olymp**	**50.52**	**158**	P	**P**	**06 48 57.4**	**-0.3**
VNA1	**Neumayer--Stat**	**50.83**	**157**	P	**P**	**06 48 59.5**	**-0.4**
VNA2	**Neumayer--Watz** baz=291,slow=8.5	**51.17**	**158**	P	**P**	**06 49 02.1**	**-0.5**
SNAA	**Sanae**	**52.75**	**158**	P	**P**	**06 49 13.9**	**-0.5**
SNAA	**Sanae** comp=Z,26nm,1.9s	**52.75**	**158**	*e*P	**P**	**06 49 14.0**	**-0.4**
QSPA	**South Pole Qui** comp=Z,8.9nm,1.1s	**57.62**	**180**	*e*P	**P**	**06 49 49.3**	**-0.4**
SYO	**Syowa Base**	**67.04**	**159**	⇑*e*P	**P**	**06 50 50.2**	**-2.3**
LTX	**Lajitas**	**68.69**	**330**	*e*P	**P**	**06 51 04.6**	**+1.2**
TXAR	**Lajitas Array** comp=Z,0.8nm,0.6s,baz=155,slow=8.1,SNR=13	**68.69**	**330**	P	**P**	**06 51 04.6**	**+1.2**
WVT	**Waverly** comp=Z,15nm,0.8s	**70.04**	**346**	*e*P	**P**	**06 51 12.4**	**+0.9**
ABTX	**Abilene, Hawle** comp=Z,30nm,0.8s	**70.05**	**335**	*e*P	**P**	**06 51 11.9**	**+0.2**
W39A	**Magazine** comp=Z,7.4nm,0.8s	**70.58**	**341**	*e*P	**P**	**06 51 15.9**	**+1.0**
MNTX	**Cornudas Mount** comp=Z,3.3nm,0.7s	**71.46**	**330**	*e*P	**P**	**06 51 20.5**	**+0.2**
MAW	**Mawson** comp=Z,3.7nm,0.9s,baz=248,slow=6.0,SNR=9.4	**74.42**	**164**	P	**P**	**06 51 37.3**	**-0.1**
MAW	**Mawson** comp=Z,1.0nm,1.1s	**74.42**	**164**	*e*P	**P**	**06 51 37.3**	**-0.1**
ANMO	**Albuquerque** comp=Z,4.7nm,1.4s	**74.72**	**331**	*e*P	**P**	**06 51 39.2**	**-0.6**
T25A	**Trinidad** comp=Z,5.2nm,0.8s	**75.83**	**334**	*e*P	**P**	**06 51 45.9**	**-0.2**
X16A	**Lo Mia Camp, P** comp=Z,5.3nm,1.2s	**76.44**	**327**	*e*P	**P**	**06 51 49.3**	**-0.4**
SDCO	**Great Sand Dun** comp=Z,9.6nm,1.8s	**76.78**	**333**	*e*P	**P**	**06 51 50.5**	**-1.2**
Q24A	**Divide**	**77.71**	**334**	*e*P	**P**	**06 51 55.7**	**-1.2**

comp=Z,7.7nm,0.9s
W13A Hualapai Mount 78.14 326 *e*P **P 06 52 00.1 +0.8**
comp=Z,5.5nm,1.5s
PV13 Radium Mtn., P 78.45 331 *e*P **P 06 52 01.2 +0.3**
comp=Z,3.8nm,1.0s
U15A North Rim 78.49 328 *e*P **P 06 52 01.1 -0.1**
comp=Z,2.2nm,0.9s
SMCO Snowmass 78.59 333 *e*P **P 06 52 01.8 0.0**
comp=Z,15nm,1.8s
ISCO Idaho Springs 78.62 334 *e*P **P 06 52 02.8 +0.9**
comp=Z,2.6nm,1.0s
KNB Kanab 79.22 328 *e*P **P 06 52 04.0 -1.1**
comp=Z,18nm,1.9s
ECSD EROS Data Cent 79.33 342 *e*P **P 06 52 04.1 -1.2**
comp=Z,6.0nm,0.8s
SHPR Sheep Range 79.89 326 *e*P **P 06 52 09.7 +1.0**
comp=Z,1.9nm,0.9s
BOSA Boshof 80.44 118 P **P 06 52 11.7 -0.3**
comp=Z,7.6nm,1.1s,baz=25,slow=3.0,SNR=3.9
TPNV Topopah Spring 80.77 325 *e*P **P 06 52 14.7 +1.3**
comp=Z,12nm,1.8s
R11A Troy Canyon, C 81.57 327 *e*P **P 06 52 19.1 +1.4**
comp=Z,3.4nm,1.4s
PD31 Pinedale Array 82.67 333 *e*P **P 06 52 23.5 +0.1**
PDAR Pinedale Array 82.67 333 P **P 06 52 23.5 +0.1**
comp=Z,0.2nm,0.4s,baz=115,slow=6.7,SNR=3.8
PDAR LR LR 07 25 08.9
comp=Z,46nm,20.8s,baz=194,slow=33
NV01 Mina Array Sit 82.93 325 *e*P **P 06 52 26.4 +1.6**
NVAR Mina Array Bea 82.93 325 P **P 06 52 26.4 +1.6**
comp=Z,1.7nm,0.7s,baz=159,slow=6.6,SNR=14
KVN Kaiserville 83.32 325 *e*P **P 06 52 27.6 +0.7**
comp=Z,1.5nm,0.6s
ELK Elko 83.35 328 *e*P **P 06 52 27.7 +0.7**
comp=Z,1.6nm,0.9s
TORD Torodi Ar. Bea 83.45 70 P **P 06 52 27.9 +0.1**
comp=Z,1.5nm,0.9s,baz=295,slow=6.5,SNR=6.8
TOA1 Torodi Ar. Sit 83.45 70 *e*P **P 06 52 27.9 +0.1**
YHH Holmes Hill 84.88 333 *e*P **P 06 52 34.7 -0.1**
comp=Z,3.6nm,1.1s
MCMT McKenzie Canyo 85.69 332 *e*P **P 06 52 40.2 +1.5**
J08A Circle Bar Ran 86.88 328 *e*P **P 06 52 45.2 +0.7**
comp=Z,5.5nm,0.6s
H11S2 WAKE ISLAND Hyl 26.09 270 T T 09 18 01.4
baz=118,slow=75,SNR=115
H11S1 WAKE ISLAND Hyl 26.10 270 T T 09 18 03.3
baz=118,slow=75,SNR=172
H11S3 WAKE ISLAND Hyl 26.11 270 T T 09 17 58.5
baz=118,slow=75,SNR=126
H11N3 WAKE ISLAND Hyl 26.47 271 T T 09 18 25.8
baz=117,slow=75,SNR=57
H11N1 WAKE ISLAND Hyl 26.48 271 T T 09 18 30.7
baz=117,slow=75,SNR=25
H11N2 WAKE ISLAND Hyl 26.48 271 T T 09 18 25.7
baz=117,slow=75,SNR=111
BVAR Borovoye Array 146.05 42 PKPbc **PKPab 06 59 39.8 -0.1**
comp=Z,1.2nm,0.5s,baz=300,slow=3.6,SNR=7.8
AAK Ala-Archa 151.56 60 PKPbc **PKiKP 06 59 55.1 +0.6**
comp=Z,1.4nm,0.3s,baz=251,slow=4.6,SNR=4.5
KURBB Kurchatov Arra 151.65 42 PKPbc **PKiKP 06 59 54.1 -0.1**
comp=Z,2.0nm,0.5s,baz=300,slow=3.0,SNR=19
ZAA1 Zalesovo Array 152.89 31 *e*PKPbc **PKPbc 06 59 55.1 -1.3**
ZALV Zalesovo Beam 152.89 31 PKPbc **PKPbc 06 59 55.1 -1.3**
comp=Z,2.7nm,0.5s,baz=300,slow=2.9,SNR=6.3
KSH Kashi 153.06 66 PKPbc **PKPdf 06 59 48.7 -1.5**
MK32 Makanchi Array 155.61 47 *e*PKPab **PKPab 07 00 19.9 +0.4**
MKAR Makanchi Array 155.61 47 PKPab **PKPab 07 00 19.9 +0.4**
comp=Z,0.3nm,0.5s,baz=304,slow=4.3,SNR=4.2
WMQ Urumqi 160.36 49 *e*P **PKPdf 06 59 59.2 -0.1**
WMQ pmax pmax
comp=Z,180nm,6.3s

ISN ***06*** *06:53:15.0±1.0, 32.°90N×46.°54E, h1km±4km, ML3.5*
ISCJB ***06*** *06:53:18.4±0.4, 32.°81N±0.°03×46.°29E±0.°04, h10km, Error ellipse: s-maj=5.0km s-min=4.3km az=43.7*
TEH ***06*** *06:53:20.8, 32.°90N×46.°32E, h28km, ML3.5*
ISC 06 06:53:19.4±1.1, 32.°83N±0.°04×46.°26E±0.°05, h10km, n28, σ0.°84/33, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.39**	**315**	*e*Pg	**Pg**	**06 53 27.5**	**+0.3**
IBDR				*e*Sg	**Sb**	**06 53 35.4**	**+0.8**
IKFM	**Kafar-mosalman**	**1.50**	**62**	*e*Pn	**Pn**	**06 53 45.1**	**-1.2**
IGHG	**Ghaleghazi**	**1.52**	**10**	*e*Pn	**Pn**	**06 53 45.7**	**-1.1**
IGHG				IAMB	IAmb	06 53 47.6	
comp=Z,10μm,0.2s
IGHG				*e*Sg	**Sg**	**06 54 08.2**	**0.0**
KCHF	**Cheshme Sefid,**	**1.58**	**24**	*e*Pn	**Pn**	**06 53 46.7**	**-1.0**
IKOM	**Komasi**	**1.70**	**38**	*e*Pn	**Pn**	**06 53 49.0**	**-0.2**
IVIS	**Veis**	**1.76**	**16**	*e*Pn	**Pn**	**06 53 50.0**	**-0.1**
IVIS				IAMB	IAmb	06 53 53.1	
comp=Z,7μm,0.3s
NSR	**Nassriya**	**1.82**	**183**	*e*Pn	**Pn**	**06 53 49.5**	**-1.2**
NSR				*e*Sn	**Sn**	**06 54 12.5**	**-1.3**
IDOB	**Doab**	**1.87**	**59**	*e*Pn	**Pn**	**06 53 51.6**	**0.0**
IDHR	**Dehrash**	**1.87**	**3**	*e*Pn	**Pn**	**06 53 51.6**	**0.0**
IKMR	**Kamar-syah**	**1.90**	**68**	*e*Pn	**Pn**	**06 53 51.7**	**-0.2**
IBZA	**Bozab**	**2.11**	**39**	*e*Pn	**Pn**	**06 53 55.4**	**+0.4**
ILIN	**Lien**	**2.16**	**15**	*e*Pn	**Pn**	**06 53 55.9**	**+0.2**
ILIN				IAMB	IAmb	06 53 58.9	
comp=Z,3μm,0.2s
SHGR	**Shooshtar-Gavs**	**2.26**	**108**	*e*Pn	**Pn**	**06 53 57.9**	**+1.0**
HSAM	**Samen**	**2.39**	**54**	*e*Pn	**Pn**	**06 53 58.5**	**-0.4**
SNGE	**Sanandaj**	**2.43**	**21**	*e*Pn	**Pn**	**06 53 59.6**	**+0.2**
IKRK	**Kirkuk**	**3.02**	**329**	*e*Pn	**Pn**	**06 54 06.0**	**-1.3**
IKRK				*e*Sn	**Sn**	**06 54 42.0**	**-1.5**
HAGD	**Aghdareh**	**3.11**	**50**	*e*Pn	**Pn**	**06 54 08.7**	**-0.1**
KHMZ	**Khomeyn**	**3.23**	**73**	*e*Pn	**Pn**	**06 54 10.0**	**-0.3**
ASAO	**Ashtian**	**3.57**	**60**	*e*Pn	**Pn**	**06 54 14.9**	**-0.2**
JHBN	**Jahan bin**	**3.77**	**98**	*e*Pn	**Pn**	**06 54 18.2**	**+0.4**
QABG	**Abgarm-Qazvin**	**3.97**	**43**	*e*Pn	**Pn**	**06 54 20.7**	**+0.1**
IQOM	**Qom**	**4.48**	**62**	*e*Pn	**Pn**	**06 54 26.9**	**-0.6**
IQOM				IAMB	IAmb	06 55 20.8	
comp=Z,400nm,0.3s
IKLH	**Kolahrood**	**4.49**	**82**	*e*Pn	**Pn**	**06 54 27.6**	**-0.1**
IKLH				IAMB	IAmb	06 54 29.5	
comp=Z,410nm,0.2s
IGAR	**Gharneh**	**4.89**	**93**	*e*Pn	**Pn**	**06 54 32.6**	**-0.7**
IGAR				IAMB	IAmb	06 54 34.7	
comp=Z,330nm,0.2s
RTB	**Rutbah**	**5.01**	**274**	*e*Pn	**Pn**	**06 54 37.0**	**+2.3**
RTB				*e*Sn	**Sn**	**06 55 34.0**	**+1.3**
IZEF	**Zefreh**	**5.11**	**88**	*e*Pn	**Pn**	**06 54 35.9**	**-0.3**
IRAM	**Ramesheh**	**5.28**	**99**	*e*Pn	**Pn**	**06 54 38.4**	**-0.1**
IRAM				IAMB	IAmb	06 55 43.4	
comp=Z,144nm,0.5s
IKAZ	**Kazeroun**	**5.66**	**121**	*e*Pn	**Pn**	**06 54 44.1**	**+0.2**

MOS ***06*** *07:05:39.8±1.0, 6.°98S×128.°18E, h35km, mb5.2/48, Error ellipse: s-maj=10.6km s-min=6.3km az=118.4*
ISCJB ***06*** *07:05:39.3±0.1, 6.°99S±0.°02×128.°31E±0.°02, h33km, mb5.0/136, MS4.1/34, Error ellipse: s-maj=3.0km s-min=2.6km az=150.0*
BJI ***06*** *07:05:40.1±0.0, 7.°00S×128.°30E, h23km, mb4.8/47, mB5.0/36, Ms4.6/20, Ms7 4.3/15*
GCMT ***06*** *07:05:40.4±0.2, 6.°91S±0.°02×128.°19E±0.°02, h20km±1km, MW5.0/78, Moment Tensor Solution. s29,c30; s78,c116; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.47±.16; Mθθ=-3.24±.12; Mφφ=3.71±.15; Mrθ=-0.30±.25; Mrφ=0.46±.11; Mθφ=0.51±.27; Best double couple: M0=3.55400×10^16 NP1:φs=139.00000°, δ90.00000°, λ=-170.00000°. NP2: φs=49.00000°, δ80.00000°, λ0.00000°. Principal axes: T 3.7970, Plg7.0000°, Azm273.0000°; N -0.4820, Plg80.0000°, Azm140.0000°; P -3.3100, Plg7.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***06*** *07:05:41.1±3.7, 6.°97S×128.°28E, h32km±28km, mb4.5/22, mb1 4.6/25, mb1mx4.6/29, mbtmp4.7/25, ML4.4/4, MS4.0/27, Ms1 4.0/27, ms1mx3.8/41 Error ellipse: s-maj=13.5km s-min=10.0km az=56.0*
DJA ***06*** *07:05:42.3±0.6, 7.°S±2.°×12.°8E±.°, h30km±5km, M5.0/41, mB5.5/23, mb5.3/41, MLv5.3/14, Mw(mB)4.9/23*
NEIC ***06*** *07:05:42.4±1.7, 6.°97S×128.°29E, h45km±2km, mb5.1/91, Error ellipse: s-maj=13.4km s-min=10.5km az=222.0*
KLM ***06*** *07:05:45.0, 6.°87S×128.°35E, h55km, mb5.1*
ISC 06 07:05:40.9±0.2, 7.°09S±0.°03×128.°31E±0.°04, h35km, n364, σ2.°06/385, mb5.0/135, MS4.0/34, 8C-4D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**3.01**	**32**	P	**Pn**	**07 06 21.6**	**-4.5**
BNDI				S	**Sn**	**07 06 58.6**	**-2.4**
SAUI	**Saumlaki**	**3.10**	**107**	P	**Pn**	**07 06 32.1**	**+4.8**
SOEI	**Soe**	**4.79**	**236**	P	**Pn**	**07 06 53.0**	**+2.2**
SOEI				S	**Sn**	**07 07 50.7**	**+5.5**
BATI	**Baumata**	**5.54**	**236**	Pn	**Pn**	**07 07 02.8**	**+1.9**
86nm,0.3s,baz=117,slow=1.8,SNR=79
BATI				Sn	**Sn**	**07 08 05.6**	**+2.2**
24nm,0.3s,baz=306,slow=24,SNR=12
BATI				LR	LR	07 09 42.3	
comp=Z,3μm,19.7s,baz=98,slow=43
BATI	**Baumata**	**5.54**	**236**	P	**Pn**	**07 07 03.1**	**+2.2**
330nm,0.8s,3μm1.4nm
BATI				S	**Sn**	**07 08 07.0**	**+3.6**
330nm,0.8s,3μm1.4nm
FAKI	**Fak Fak**	**5.71**	**44**	P	**Pn**	**07 07 01.8**	**-1.5**
217nm,0.7s,3μm0.9nm
FAKI				S	**Sn**	**07 08 04.1**	**-3.6**
217nm,0.7s,3μm0.9nm
MMRI	**Maumere**	**6.21**	**255**	P	**Pn**	**07 07 12.7**	**+2.6**
689nm,1.1s,7μm2.1nm
MTN	**Manton Dam**	**6.36**	**154**	*e*Pn	**Pn**	**07 07 14.8**	**+2.6**
MTN				*e*Sn	**Sn**	**07 08 27.4**	**+3.8**
MTN	**Manton Dam**	**6.36**	**154**	P	**Pn**	**07 07 15.1**	**+2.9**
baz=6.4,SNR=37
KMPI	**Kaimana, Papua**	**6.36**	**58**	P	**Pn**	**07 07 12.0**	**-0.3**
912nm,0.7s,9μm3.5nm
KDI	**Kendari**	**6.46**	**299**	P	**Pn**	**07 07 12.1**	**-1.5**
213nm,1.3s,2μm
EDFI	**Ende, Flores**	**6.76**	**255**	P	**Pn**	**07 07 18.7**	**+0.9**
288nm,1.0s,3μm0.8nm
SWI	**Sorong**	**6.85**	**26**	P	**Pn**	**07 07 16.8**	**-2.2**
243nm,1.1s,5μm1.3nm
SWI				S	**Sn**	**07 08 31.7**	**-4.2**
243nm,1.1s,5μm1.3nm
KDU	**Kakadu**	**6.91**	**144**	P	**Pn**	**07 07 20.3**	**+0.5**
baz=7.0,SNR=239
BSSI	**Bau Bau, Buton**	**7.82**	**276**	P	**Pn**	**07 07 32.1**	**-0.2**
167nm,0.9s,2μm0.5nm
TNTI	**Ternate**	**7.87**	**353**	P	**Pn**	**07 07 32.5**	**-0.5**
73nm,0.6s,2μm0.4nm
RKPI	**Ransiki, Papua**	**8.06**	**47**	P	**Pn**	**07 07 35.1**	**-0.5**
396nm,0.7s,1.9nm
LUWI	**Luwuk**	**8.16**	**317**	P	**Pn**	**07 07 36.1**	**-0.9**
162nm,0.9s,7μm0.7nm
BKSI	**Bulukumba**	**8.32**	**282**	P	**Pn**	**07 07 39.5**	**+0.3**
121nm,0.9s,933nm
KNRA	**Kununurra**	**8.54**	**177**	P	**Pn**	**07 07 42.8**	**+0.6**
baz=8.6,SNR=84
BNSI	**Bone**	**8.59**	**288**	P	**Pn**	**07 07 42.5**	**-0.3**
272nm,0.6s,3μm
KAPI	**Kappang**	**8.76**	**283**	Pn	**Pn**	**07 07 44.7**	**-0.4**
11nm,0.3s,baz=132,slow=8.1,SNR=88
KAPI				Sn	**Sn**	**07 09 22.2**	**-0.5**
1.8nm,0.3s,baz=15,slow=20,SNR=2.9
KAPI				LR	LR	07 10 56.8	
comp=Z,2μm,20.2s,baz=77,slow=36
KAPI	**Kappang**	**8.76**	**283**	*e*Pn	**Pn**	**07 07 45.0**	**-0.1**
KAPI				*e*Sn	**Sn**	**07 09 18.3**	**-4.4**
KAPI	**Kappang**	**8.76**	**283**	*e*P	**Pn**	**07 07 45.0**	**-0.1**
KAPI				*e*		07 09 18.3	
APSI	**Ampana**	**9.04**	**312**	P	**Pn**	**07 07 48.9**	**-0.2**
55nm,1.0s,627nm
SPSI	**Sidrap Palu**	**9.05**	**290**	P	**Pn**	**07 07 49.0**	**-0.2**
343nm,0.7s,2μm
WBSI	**Waikabubak, Su**	**9.18**	**253**	P	Pn	07 08 02.6	+12
TTSI	**Tana Toraja**	**9.36**	**295**	P	**Pn**	**07 07 53.8**	**+0.3**
100nm,0.9s,1μm
SRPI	**Serui, Papua**	**9.46**	**57**	P	**Pn**	**07 07 54.6**	**-0.2**
206nm,0.5s
MRSI	**Marisa**	**9.84**	**320**	P	**Pn**	**07 08 00.1**	**0.0**
47nm,0.8s
PCI	**Palu**	**10.45**	**306**	P	Pn	07 08 02.8	-5.5
PLAI	**Plampang**	**10.57**	**260**	P	**Pn**	**07 08 11.5**	**+1.4**
110nm,1.0s,1μm
WAMI	**Wamena**	**10.84**	**73**	P	Pn	07 08 19.7	+6.0
MPSI	**Mapaga**	**11.17**	**311**	P	**Pn**	**07 08 18.8**	**+0.5**
22nm,0.8s
GENI	**Genyem**	**12.63**	**70**	P	**Pn**	**07 08 40.7**	**+2.4**
109nm,0.8s
JAY	**Jayapura**	**13.16**	**70**	Pn	**Pn**	**07 08 45.9**	**+0.4**
2.2nm,0.3s,baz=233,slow=14,SNR=6.3
JAY	**Jayapura**	**13.16**	**70**	P	**Pn**	**07 08 45.4**	**-0.1**
456nm,1.1s
WRAB	**Tennant Creek**	**14.05**	**156**	*e*Pn	**Pn**	**07 08 55.8**	**-1.8**
WRAB				*e*Sn	**Sn**	**07 11 26.1**	**-6.3**
WRAB	**Tennant Creek**	**14.05**	**156**	*e*P	**Pn**	**07 08 55.8**	**-1.8**
WRA	**Warramunga Arr**	**14.05**	**156**	Pn	**Pn**	**07 08 56.3**	**-1.4**
39nm,0.3s,baz=334,slow=13,SNR=3.7
WRA				Sn	**Sn**	**07 11 25.6**	**-6.9**
42nm,0.3s,baz=327,slow=24,SNR=8.6
WR1	**Warramunga Arr**	**14.05**	**156**	*e*Pn	**Pn**	**07 08 56.3**	**-1.4**
WR1				*e*Sn	**Sn**	**07 11 25.6**	**-6.9**
WB2	**Warramunga Arr**	**14.05**	**156**	*e*Pn	**Pn**	**07 08 55.2**	**-2.5**
WB2				*e*Sn	**Sn**	**07 11 26.2**	**-6.4**
WC3	**Warramunga Arr**	**14.08**	**156**	*e*Pn	**Pn**	**07 08 55.2**	**-2.8**
WC3				*e*Sn	**Sn**	**07 11 26.7**	**-6.4**
JAGI	**Jajag, Banyuwa**	**14.09**	**264**	P	**P**	**07 09 10.1**	**+4.7**
KMMI	**Kalianget**	**14.23**	**269**	P	P	07 09 12.7	+5.7
MTKI	**Muara Teweh, K**	**14.70**	**294**	P	**Pn**	**07 09 09.0**	**+2.5**
60nm,0.8s
COEN	**Coen**	**16.12**	**116**	*e*Pn	**Pn**	**07 09 25.4**	**+0.3**
389nm,0.7s
COEN				*e*Sn	**Sn**	**07 12 18.8**	**-4.1**
COEN	**Coen**	**16.12**	**116**	P	**Pn**	**07 09 24.8**	**-0.3**
baz=16,SNR=19
PSAD1	**Pilbara Seismi**	**16.46**	**209**	*e*Pn	**Pn**	**07 09 28.7**	**-0.7**
68nm,0.8s
PSAD1				*e*Sn	**Sn**	**07 12 22.2**	**-8.9**
PSAC2	**Pilbara Seismi**	**16.52**	**209**	*e*Pn	**Pn**	**07 09 27.5**	**-2.6**
78nm,0.9s
PSAC2				*e*Sn	**Sn**	**07 12 26.2**	**-6.3**
PSAA2	**Pilbara Seismi**	**16.55**	**209**	*e*Pn	**Pn**	**07 09 28.4**	**-2.0**
90nm,0.8s
PSAA2				*e*Sn	**Sn**	**07 12 25.7**	**-7.4**
PSA00	**Pilbara Seismi**	**16.55**	**209**	*e*Pn	**Pn**	**07 09 28.4**	**-2.1**
76nm,0.8s
PSA00				*e*Sn	**Sn**	**07 12 26.1**	**-7.2**
PSAB3	**Pilbara Seismi**	**16.57**	**209**	*e*Pn	**Pn**	**07 09 28.1**	**-2.6**
92nm,0.8s
QIS	**Mount Isa**	**17.29**	**142**	P	**Pn**	**07 09 39.3**	**-0.5**
baz=17,SNR=70
AS31	**Alice Springs**	**17.33**	**163**	*e*Pn	**Pn**	**07 09 39.3**	**-1.0**
17nm,0.6s
AS31				*e*Sn	**Sn**	**07 12 48.4**	**-3.9**
ASAR	**Alice Springs**	**17.33**	**163**	P	**Pn**	**07 09 39.3**	**-1.0**
2.2nm,0.3s,baz=329,slow=8.8,SNR=113
ASAR				S	**Sn**	**07 12 46.3**	**-6.0**
4.1nm,0.3s,baz=328,slow=17,SNR=8.2
ASAR				LR	LR	07 17 08.9	
comp=Z,556nm,18.9s,baz=336,slow=39
KKM	**Kota Kinabalu**	**17.77**	**317**	*e*Pn	**Pn**	**07 09 45.1**	**-0.8**
40nm,1.1s
KKM	**Kota Kinabalu**	**17.77**	**317**	P	**P**	**07 09 47.0**	**+0.6**
SBUM	**Sibu**	**18.64**	**300**	*e*P	**Pn**	**07 09 56.3**	**-0.1**
13nm,0.9s
SBUM	**Sibu**	**18.64**	**300**	P	**Pn**	**07 09 58.0**	**+1.6**
PMG	**Port Moresby**	**18.80**	**98**	P	**Pn**	**07 09 58.8**	**+0.6**
5.4nm,0.3s,baz=304,slow=5.3,SNR=20
PMG				LR	LR	07 19 01.3	
comp=Z,562nm,19.1s,baz=280,slow=42
PMG	**Port Moresby**	**18.80**	**98**	*e*P	**Pn**	**07 09 59.5**	**+1.2**
130nm,0.8s
PMG	**Port Moresby**	**18.80**	**98**	*e*P	**Pn**	**07 09 59.5**	**+1.2**
PMG				pmax	pmax		
comp=Z,130nm,0.8s
KSM	**Kuching**	**19.87**	**295**	*e*P	**Pn**	**07 10 10.3**	**-0.8**
comp=Z,132nm,1.2s
KSM	**Kuching**	**19.87**	**295**	P	**P**	**07 10 10.0**	**+0.6**
LEM	**Lembang**	**20.54**	**269**	P	**P**	**07 10 17.0**	**+0.2**
comp=Z,34nm,0.8s,baz=90,slow=20,SNR=2.9
LEM				LR	LR	07 19 26.1	
comp=Z,1μm,18.3s,baz=84,slow=40
GIRL	**Giralia**	**20.56**	**220**	*e*P	Pn	07 10 18.8	-0.3
comp=Z,360nm,1.3s
GIRL	**Giralia**	**20.56**	**220**	P	**P**	**07 10 16.8**	**+0.1**
baz=20,SNR=9.9
TPI	**Tanjungpandan**	**21.02**	**281**	P	**P**	**07 10 27.0**	**+5.2**
comp=Z,46nm,1.1s,comp=Z,732nm
CBJI	**Citeko**	**21.32**	**271**	P	P	07 10 33.7	+8.7
CTA	**Charters Tower**	**21.67**	**128**	P	**P**	**07 10 30.6**	**+1.8**
comp=Z,28nm,0.7s,baz=300,slow=11,SNR=25
CTA				LR	LR	07 20 08.9	
comp=Z,694nm,19.2s,baz=309,slow=40
CTAO	**Charters Tower**	**21.67**	**128**	*e*P	**P**	**07 10 31.2**	**+2.4**
comp=Z,49nm,0.9s
CTAO	**Charters Tower**	**21.67**	**128**	*e*P	**P**	**07 10 31.2**	**+2.4**
CTAO				pmax	pmax		
comp=Z,49nm,0.9s
TGY	**Tagaytay City**	**22.29**	**341**	P	**P**	**07 10 35.4**	**-0.1**
comp=Z,119nm,0.3s,baz=162,slow=13,SNR=6.2
CGJI	**Cibinong**	**22.46**	**270**	P	P	07 10 46.9	+10
PPBI	**Pangkal Pinang**	**22.63**	**281**	P	**P**	**07 10 41.1**	**+2.0**
comp=Z,47nm,1.0s,comp=Z,2μm
FORT	**Forrest**	**23.57**	**181**	*e*P	**P**	**07 10 50.3**	**+1.9**
comp=Z,194nm,1.4s
FORT	**Forrest**	**23.57**	**181**	P	**P**	**07 10 50.7**	**+2.3**
baz=24,SNR=18
MDSI	**Maura Dua**	**24.14**	**275**	P	**P**	**07 10 56.8**	**+2.8**
comp=Z,16nm,1.5s
MORW	**Morawa**	**24.73**	**206**	*e*P	**P**	**07 11 00.4**	**+1.2**
comp=Z,40nm,0.8s
MORW	**Morawa**	**24.73**	**206**	P	**P**	**07 11 00.8**	**+1.6**
baz=25,SNR=8.1
LHSI	**Lahat**	**24.88**	**276**	P	**P**	**07 11 05.9**	**+5.2**
comp=Z,46nm,1.3s
KMBL	**Kambalda**	**24.89**	**193**	P	**P**	**07 11 02.3**	**+1.7**
baz=25,SNR=18
BLDU	**Ballidu**	**25.80**	**203**	P	**P**	**07 11 09.5**	**+0.6**
baz=26,SNR=10
MYKOM	**Kota Tinggi**	**25.95**	**289**	*e*P	**P**	**07 11 10.7**	**+0.3**
comp=Z,28nm,1.0s
MYKOM	**Kota Tinggi**	**25.95**	**289**	P	**P**	**07 11 11.0**	**+0.6**
KLBR	**Kellerberrin**	**26.29**	**201**	P	**P**	**07 11 14.7**	**+1.4**
baz=26,SNR=12
BBOO	**Buckleboo**	**26.58**	**165**	*e*P	**P**	**07 11 17.7**	**+1.8**
comp=Z,49nm,0.6s
BBOO	**Buckleboo**	**26.58**	**165**	P	**P**	**07 11 17.6**	**+1.7**
baz=27,SNR=54
RMQ	**Roma**	**27.40**	**137**	P	**P**	**07 11 25.2**	**+1.9**
baz=28,SNR=11
SDSI	**Sungai Dareh**	**27.49**	**282**	P	**P**	**07 11 24.2**	**-0.1**
comp=Z,46nm,1.6s
STKA	**Stephens Creek**	**27.60**	**155**	P	**P**	**07 11 26.5**	**+1.5**
comp=Z,17nm,0.5s,baz=326,slow=8.9,SNR=27
STKA				LR	LR	07 24 32.6	
comp=Z,259nm,18.7s,baz=329,slow=41
STKA	**Stephens Creek**	**27.60**	**155**	*e*P	**P**	**07 11 26.3**	**+1.2**
comp=Z,6.1nm,0.9s
STKA	**Stephens Creek**	**27.60**	**155**	P	**P**	**07 11 26.5**	**+1.5**
baz=28,SNR=28
STKA	**Stephens Creek**	**27.60**	**155**	*e*P	**P**	**07 11 26.3**	**+1.2**
STKA				pmax	pmax		
comp=Z,6.0nm,0.9s
NWAO	**Narrogin (SRO)**	**27.69**	**200**	P	**P**	**07 11 26.8**	**+0.9**
comp=Z,18nm,0.8s,baz=30,slow=8.9,SNR=12
NWAO				LR	LR	07 23 54.6	
comp=Z,589nm,20.9s,baz=22,slow=39
NWAO	**Narrogin (SRO)**	**27.69**	**200**	*e*P	**P**	**07 11 26.9**	**+1.0**
comp=Z,32nm,1.0s
NWAO	**Narrogin (SRO)**	**27.69**	**200**	P	**P**	**07 11 27.1**	**+1.2**
baz=28,SNR=4.1
NWAO	**Narrogin (SRO)**	**27.69**	**200**	*e*P	**P**	**07 11 26.9**	**+1.0**
NWAO				pmax	pmax		
comp=Z,33nm,1.0s
HTT	**Hallett**	**27.99**	**161**	P	**P**	**07 11 30.8**	**+2.2**
baz=28,SNR=12
EIDS	**Eidsvold**	**28.34**	**132**	*e*P	**P**	**07 11 30.6**	**-1.1**
comp=Z,13nm,0.8s
EIDS	**Eidsvold**	**28.34**	**132**	P	**P**	**07 11 34.3**	**+2.5**
baz=28,SNR=4.0
ANA2	**Anatahan**	**28.96**	**36**	*e*P	**P**	**07 11 37.6**	**+0.3**
comp=Z,125nm,0.7s
CMSA	**Cobar Meteorol**	**29.24**	**149**	P	**P**	**07 11 41.4**	**+1.7**
baz=29,SNR=167
MNSI	**Mandailing Nat**	**29.71**	**284**	P	**P**	**07 11 43.9**	**-0.2**
comp=Z,105nm,0.7s
PSI	**Prapat**	**30.93**	**288**	P	**P**	**07 11 53.5**	**-1.5**
comp=Z,15nm,0.7s,baz=119,slow=2.6,SNR=12
PSI				LR	LR	07 25 15.5	
comp=Z,423nm,18.9s,baz=103,slow=38
PSI	**Prapat**	**30.93**	**288**	*e*P	**P**	**07 11 53.8**	**-1.2**
comp=Z,38nm,1.0s
PSI	**Prapat**	**30.93**	**288**	*e*P	**P**	**07 11 53.8**	**-1.2**
PSI				pmax	pmax		
comp=Z,38nm,1.0s
YULB	**Yu-li**	**31.06**	**347**	*e*P	**P**	**07 11 55.4**	**-0.4**
comp=Z,4.2nm,0.7s
HNR	**Honiara**	**31.39**	**96**	P	**P**	**07 11 59.7**	**+0.8**
comp=Z,191nm,0.7s,baz=338,slow=6.4,SNR=3.6
HNR	**Honiara**	**31.39**	**96**	*e*P	**P**	**07 12 00.1**	**+1.3**
comp=Z,347nm,1.0s
HNR	**Honiara**	**31.39**	**96**	*e*P	**P**	**07 12 00.2**	**+1.3**
GSI	**Gunungsitoli**	**31.78**	**284**	P	**P**	**07 12 02.4**	**+0.1**
comp=Z,46nm,1.1s
ARMA	**Armidale**	**31.89**	**140**	*e*P	**P**	**07 12 05.6**	**+2.3**
comp=Z,10.0nm,0.6s
ARMA	**Armidale**	**31.89**	**140**	P	**P**	**07 12 05.5**	**+2.3**
baz=32,SNR=8.8
ARPS	**Mount Arapiles**	**32.02**	**159**	P	**P**	**07 12 06.8**	**+2.7**
baz=32,SNR=34
KCSI	**Kotacane, Aceh**	**32.25**	**288**	P	**P**	**07 12 10.7**	**+4.2**
comp=Z,14nm,0.7s
TPTI		**32.73**	**287**	P	**P**	**07 12 14.2**	**+3.6**
comp=Z,26nm,1.0s
YNG	**Young**	**32.81**	**148**	P	**P**	**07 12 13.6**	**+2.4**
baz=33,SNR=25
MLSI	**Meulaboh, Aceh**	**33.78**	**289**	P	**P**	**07 12 21.4**	**+1.5**
comp=Z,96nm,0.8s
CAN	**Canberra**	**33.92**	**149**	*e*P	**P**	**07 12 23.5**	**+2.7**
comp=Z,38nm,0.6s
CAN	**Canberra**	**33.92**	**149**	*e*P	**P**	**07 12 23.5**	**+2.7**
CAN				pmax	pmax		
comp=Z,38nm,0.6s
TOO	**Toolangi**	**34.12**	**155**	*e*P	**P**	**07 12 25.6**	**+3.0**
comp=Z,32nm,0.7s
TOO	**Toolangi**	**34.12**	**155**	*e*P	**P**	**07 12 25.6**	**+3.0**
TOO				pmax	pmax		
comp=Z,33nm,0.7s
KHON	**Khomkaen**	**34.32**	**313**	P	P	07 12 32.6	+8.1
CHAI	**Chaiyaphum**	**34.66**	**311**	P	**P**	**07 12 31.2**	**+3.8**
comp=Z,33μm,0.8s,comp=Z,719μm
UTTA	**Uttaradit**	**36.88**	**312**	P	P	07 12 55.4	+9.0
SLVN	**Son La**	**37.04**	**320**	*e*P	**P**	**07 12 47.2**	**-0.6**
comp=Z,9.8nm,1.0s
CM31	**Chiang Mai Arr**	**38.52**	**312**	*e*P	**P**	**07 13 00.4**	**+0.1**
CM31				*e*PcP	**PcP**	**07 15 14.2**	**+1.4**
CMAR	**Chiang Mai Arr**	**38.52**	**312**	P	**P**	**07 13 00.

comp=Z,8.0nm,0.5s
JNU Nakatsue 40.07 3 LR LR 07 28 34.7
comp=Z,124nm,21.0s,baz=176,slow=34
KMI Kunming 40.56 323 P **P** **07 13 21.9 +4.4**
KMI pP sP 07 13 28.9 -1.7
KMI sP pwP 07 13 33.2 +2.4
KMI S **S** **07 19 25.5 +0.7**
KMI SS **SS** **07 22 17.2 -8.4**
KMI pmax pmax
comp=Z,19nm,1.2s
KMI pmax pmax
comp=Z,120nm,4.6s
KMI LR LR
comp=Z,110nm,16.9s
KMI LR LR
comp=Z,170nm,18.9s
PINNC Pines Island, 40.70 117 *e*P **P** **07 13 19.8 +1.4**
comp=Z,30nm,0.8s
MARNC Mare, Loyalty 40.92 115 *e*P **P** **07 13 21.4 +1.1**
comp=Z,141nm,1.1s
TJN Taejon 43.25 359 *ce*P **P** **07 13 39.5 +0.5**
KS15 Wonju Array Si 44.30 360 *e*P **P** **07 13 47.0 -0.4**
KSRS Korea Array 44.32 360 P **P** **07 13 47.0 -0.5**
comp=Z,9.1nm,1.1s,baz=180,slow=10.0,SNR=20
KSRS LR LR 07 31 07.3
comp=Z,87nm,21.2s,baz=169,slow=34
MAJO Matsushiro 44.39 11 *e*P **P** **07 13 47.0 -1.2**
comp=Z,12nm,0.8s
MAJO Matsushiro 44.39 11 *e*P **P** **07 13 47.0 -1.2**
MAJO pmax pmax
comp=Z,13nm,0.8s
MAT Matsushiro 44.39 11 P **P** **07 13 47.0 -1.2**
MAT S **S** **07 20 20.0 -0.5**
MJAR Matsushiro Arr 44.39 11 P **P** **07 13 46.9 -1.3**
comp=Z,2.0nm,0.4s,baz=197,slow=10,SNR=8.5
MJAR LR LR 07 31 59.8
comp=Z,86nm,19.6s,baz=175,slow=36
CD2 Chengdu 44.51 329 *e*P **P** **07 13 50.0 +0.7**
XAN Xi'an 44.84 337 P **P** **07 13 54.2 +2.3**
XAN sP pP 07 14 00.8 -0.4
XAN pmax pmax
comp=Z,8.0nm,1.3s
XAN pmax pmax
comp=Z,83nm,3.6s
BRDH Bariadhala 46.51 311 LR LR 07 36 03.9
comp=Z,100nm,18.4s,baz=104,slow=39
SHL Shillong 48.04 314 *e*P **P** **07 14 16.9 -0.4**
comp=Z,14nm,1.0s
SHL Shillong 48.04 314 *e*P **P** **07 14 16.9 -0.4**
SHL pmax pmax
comp=Z,14nm,1.0s
SHL Shillong 48.04 314 *e*P **P** **07 14 17.5 +0.2**
BJT Baijiatuau 48.20 347 *e*P **P** **07 14 17.1 -1.0**
comp=Z,13nm,1.3s
BJT Baijiatuau 48.20 347 *e*P **P** **07 14 17.1 -1.0**
BJT pmax pmax
comp=Z,13nm,1.3s
BJI Beijing 48.22 348 *e*P **P** **07 14 21.1 +2.9**
BJI S **S** **07 21 18.2 +3.0**
BJI pmax pmax
comp=Z,3.0nm,1.2s
BJI LR LR
comp=Z,46nm,12.0s
BJI LR LR
comp=Z,49nm,12.8s
LZH Lanzhou 48.72 333 *e*P **P** **07 14 22.6 +0.3**
LZH pP pP 07 14 32.0 +0.3
LZH sP sP 07 14 35.4 -0.1
LZH SS SS 07 24 50.0 -3.7
LZH pmax pmax
comp=Z,22nm,1.0s
LZH pmax pmax
comp=Z,170nm,4.3s
LZH LR LR
comp=Z,470nm,13.6s
LZH LR LR
comp=Z,630nm,14.6s
LZH LR LR
comp=Z,740nm,16.3s
OUZ Omahuta 50.05 131 *e*P **P** **07 14 32.1 -0.3**
comp=Z,50nm,1.2s
HHC Hu-ho-hao-te 50.13 343 *e*P **P** **07 14 34.4 +1.4**
HHC pmax pmax
comp=Z,23nm,1.0s
HHC pmax pmax
comp=Z,100nm,5.5s
FUNA Funafuti 50.41 95 *e*P **P** **07 14 33.3 -2.1**
comp=Z,89nm,1.2s
CN2 Changchun 50.72 357 *e*P **P** **07 14 35.8 -1.4**
ERM Erimo 50.72 14 *i*P **P** **07 14 39.3 +2.1**
ERM pmax pmax
comp=Z,12nm,0.9s
DCZ Deep Cove 50.87 145 *e*P **P** **07 14 37.2 -1.1**
comp=Z,30nm,1.4s
LSA Lhasa 51.12 318 *e*P **P** **07 14 39.1 -2.0**
comp=Z,12nm,0.7s
LSA Lhasa 51.12 318 *e*P **P** **07 14 39.1 -2.0**
LSA pmax pmax
comp=Z,12nm,0.7s
USRK Ussuriysk Ar. 51.16 3 P **P** **07 14 39.5 -1.0**
comp=Z,2.1nm,0.6s,baz=189,slow=11,SNR=5.6
USRK LR LR 07 36 40.3
comp=Z,62nm,19.1s,baz=162,slow=36
FOZ Fox Glacier 51.34 142 *e*P **P** **07 14 44.0 +2.1**
comp=Z,31nm,1.0s
MLZ Mavora Lakes 51.36 145 *e*P **P** **07 14 44.4 +2.2**
comp=Z,24nm,1.2s
MDJ Mudanjiang 51.48 1 *e*P **P** **07 14 43.7 +0.8**
comp=Z,18nm,1.0s
WHZ Wether Hill Ro 51.57 145 *e*P **P** **07 14 45.3 +1.7**
comp=Z,19nm,0.8s
WKZ Wanaka 51.57 144 *e*P **P** **07 14 45.6 +1.8**
comp=Z,37nm,1.3s
LBZ Lake Benmore 52.02 143 *e*P **P** **07 14 49.0 +1.9**
comp=Z,16nm,0.8s
RPZ Rata Peaks 52.20 141 LR LR 07 36 03.4
comp=Z,411nm,20.8s,baz=302,slow=35
RPZ Rata Peaks 52.20 141 *e*P **P** **07 14 51.0 +2.6**
comp=Z,111nm,1.2s
HIZ Hauiti 52.30 134 *e*P **P** **07 14 51.1 +1.8**
comp=Z,40nm,1.0s
THZ Tophouse 52.41 138 *e*P **P** **07 14 52.5 +2.5**
comp=Z,30nm,1.0s
TEY Ternei 52.42 7‖ *e*P P 07 14 58.1 +8.2
TEY pmax pmax
comp=Z,10.0nm,1.3s
OXZ Oxford 52.61 141 *e*P **P** **07 14 52.3 +0.8**
comp=Z,18nm,0.6s
ODZ Otahua Downs 52.66 143 *e*P **P** **07 14 52.8 +1.1**
comp=Z,18nm,1.4s
RAMN Ramite 52.69 312 *e*P **P** **07 14 51.2 -1.4**
comp=Z,36nm,0.7s
CRLZ Canterbury Las 53.11 141 *e*P **P** **07 14 57.6 +2.5**
comp=Z,54nm,1.2s
KHZ Kahutara 53.13 139 *e*P **P** **07 14 57.0 +1.8**
comp=Z,59nm,0.7s
MQZ McQueen's Vall 53.19 141 *e*P **P** **07 14 57.4 +1.7**
GTA Gaotai 53.26 333 *e*P **P** **07 14 56.2 -0.2**
GTA pP pP 07 15 05.5 -0.4
GTA sP sP 07 15 09.6 -0.1
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,100nm,6.2s
GTA LR LR
comp=Z,120nm,23.7s
GTA LR LR
comp=Z,150nm,22.0s
GTA LR LR
comp=Z,130nm,18.2s
SNZO South Karori 53.40 137 *e*P **P** **07 14 58.7 +1.5**
comp=Z,47nm,0.8s
BKZ Black Stump Fm 53.73 134 *e*P **P** **07 15 01.4 +1.6**
comp=Z,29nm,0.7s
GUN Gumba 53.76 312 *e*P **P** **07 15 00.1 -0.5**
comp=Z,38nm,0.7s
URZ Urewera 53.83 133 P **P** **07 15 01.1 +0.7**
comp=Z,8.6nm,0.6s,baz=246,slow=3.2,SNR=8.5
URZ LR LR 07 36 58.6
comp=Z,144nm,20.4s,baz=309,slow=35
URZ Urewera 53.83 133 *e*P **P** **07 15 01.3 +0.8**
comp=Z,13nm,0.8s
BFZ Birch Farm 54.18 136 *e*P **P** **07 15 04.5 +1.5**
comp=Z,57nm,1.0s
YSS Yuzh-Sakhalins 55.32 12 *e*P **P** **07 15 11.1 +0.1**
comp=Z,12nm,0.6s
YSS Yuzh-Sakhalins 55.32 12 *e*P **P** **07 15 13.5 +2.5**
YSS pmax pmax
comp=Z,10.0nm,0.8s
KOLN Koldanda 55.38 311 *e*P **P** **07 15 11.8 -0.3**
comp=Z,54nm,0.9s
DANN Dangsing 55.57 311 *e*P **P** **07 15 13.6 0.0**
comp=Z,46nm,0.8s
PYUN Piuthan 56.01 311 *e*P **P** **07 15 17.1 +0.4**
comp=Z,68nm,0.9s
KLR Kul'dur 56.17 3 *i*P **P** **07 15 16.7 -0.4**
KLR pmax pmax
comp=Z,17nm,1.3s
ULN Ulaanbaatar 57.85 343 *e*P **P** **07 15 29.1 -0.2**
comp=Z,6.0nm,0.9s
ULN Ulaanbaatar 57.85 343 *ce*P **P** **07 15 28.8 -0.5**
ULN pmax pmax
comp=Z,13nm,1.7s
SONA0 Songino Array 58.01 343 *e*P **P** **07 15 30.2 -0.1**
SONM Songino Array 58.01 343 P **P** **07 15 30.2 -0.1**
comp=Z,1.5nm,0.5s,baz=148,slow=8.5,SNR=2.9
GRNR Gornyy 58.05 6 *e*P **P** **07 15 32.2 +1.8**
TYV Tymovskoe 59.04 11 *e*P **P** **07 15 37.8 +0.5**
TYV pmax pmax
comp=Z,100nm,4.5s
TYV pmax pmax
comp=Z,7.0nm,1.0s
KNTN Kanton 59.87 89 *e*P **P** **07 15 44.7 +1.0**
comp=Z,58nm,1.3s
CASY Casey 60.36 188 *e*P **P** **07 15 46.7 +0.5**
comp=Z,8.7nm,1.0s
ZEA Zeya 60.61 359 *e*P **P** **07 15 50.7 +2.7**
ZEA pmax pmax
comp=Z,26nm,1.0s
ZAK Zakamensk 61.22 342 *e*P **P** **07 15 52.0 -0.4**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
TLY Talaya 62.26 343 *e*P **P** **07 15 58.8 -0.5**
comp=Z,15nm,1.5s
TLY Talaya 62.26 343 *i*P **P** **07 15 58.9 -0.3**
TLY pmax pmax
comp=Z,6.0nm,0.7s
WMQ Urumqi 62.57 328 *e*P **P** **07 16 03.9 +2.3**
WMQ pP pP 07 16 10.7 -0.6
WMQ sP pwP 07 16 21.7 +6.4
WMQ pmax pmax
comp=Z,38nm,1.1s
WMQ pmax pmax
comp=Z,220nm,4.7s
WMQ LR LR
comp=Z,890nm,23.9s
WMQ LR LR
comp=Z,570nm,24.7s
WMQ LR LR
comp=Z,250nm,26.5s
WMQ Urumqi 62.57 328 *e*P **P** **07 16 01.5 0.0**
comp=Z,22nm,0.8s
WMQ Urumqi 62.57 328 *e*P **P** **07 16 01.5 0.0**
WMQ pmax pmax
comp=Z,22nm,0.8s
MOY Mondy 63.05 341 *e*P **P** **07 16 05.7 +1.0**
MOY pmax pmax
comp=Z,28nm,1.6s
PETK Petropavlovsk- 64.95 19 P **P** **07 16 17.2 +0.3**
comp=Z,4.6nm,0.8s,baz=186,slow=4.0,SNR=9.3
PETK LR LR 07 40 35.2
comp=Z,34nm,21.9s,baz=202,slow=32
PEA1 Petropavlovsk- 64.95 19 *e*P **P** **07 16 17.2 +0.3**
PET Petropavlovsk 65.19 20 *i*P **P** **07 16 20.1 +1.6**
PET pmax pmax
comp=Z,17nm,1.1s
BOD Bodaibo 65.73 352 *e*P **P** **07 16 19.8 -2.1**
BOD pmax pmax
comp=Z,14nm,1.8s
NIL Nilore 66.01 312 *e*P **P** **07 16 24.6 +0.3**
comp=Z,16nm,1.0s
NIL Nilore 66.01 312 *e*P **P** **07 16 24.6 +0.3**
NIL pmax pmax
comp=Z,16nm,1.0s
DGZ Jazzator, Alta 66.80 332 *i*P **P** **07 16 28.6 -0.5**
DGZ pmax pmax
comp=Z,4.0nm,1.0s
KSH Kashi 66.96 318 P **P** **07 16 31.6 +1.2**
KSH pP pP 07 16 41.9 +1.8
KSH PP **PP** **07 18 59.4 +1.1**
KSH S **S** **07 25 18.1 -3.4**
KSH ScS **SKSac** **07 26 21.0 -4.1**
KSH pmax pmax
comp=Z,13nm,0.8s
KSH pmax pmax
comp=Z,280nm,4.6s
KSH LR LR
comp=Z,790nm,11.9s
KSH LR LR
comp=Z,750nm,13.4s
KSH LR LR
comp=Z,310nm,18.0s
MK31 Makanchi Array 67.39 328 *i*P **P** **07 16 32.0 -0.8**
MK31 pmax pmax
comp=Z,17nm,0.8s
MK32 Makanchi Array 67.39 328 *e*P **P** **07 16 32.5 -0.3**
MKAR Makanchi Array 67.39 328 P **P** **07 16 32.5 -0.3**
comp=Z,12nm,0.9s,baz=127,slow=7.8,SNR=49
MKAR Makanchi Array 67.39 328 *i*P **P** **07 16 32.7 -0.1**
MKAR pmax pmax
comp=Z,12nm,0.9s
MAKZ Makanchi 67.57 327 *e*P **P** **07 16 34.1 +0.2**
comp=Z,12nm,0.8s
MAKZ Makanchi 67.57 327 *e*P **P** **07 16 34.1 +0.2**
MAKZ pmax pmax
comp=Z,12nm,0.8s
NRN Naryn 67.95 320 *e*P **P** **07 16 37.3 +0.5**
comp=Z,12nm,1.1s
NRN Naryn 67.95 320 *e*P **P** **07 16 37.3 +0.5**
NRN pmax pmax
comp=Z,12nm,1.1s
MA2 Magadan 68.83 12 *e*P **P** **07 16 42.6 +1.1**
MA2 pmax pmax
comp=Z,7.0nm,0.9s
TKM2 Tokmak 2 69.00 321 P **P** **07 16 42.8 -0.4**
TKM2 pmax pmax
comp=Z,21nm,1.2s
AAK Ala-Archa 69.54 321 *e*P **P** **07 16 46.7 +0.2**
comp=Z,19nm,1.1s
AAK Ala-Archa 69.54 321 P **P** **07 16 47.4 +0.9**
AAK pmax pmax
comp=Z,25nm,1.5s
KBL Kabul 69.55 311 *e*P **P** **07 16 47.0 +0.2**
comp=Z,12nm,1.0s
KBL Kabul 69.55 311 *e*P **P** **07 16 47.0 +0.2**
KBL pmax pmax
comp=Z,13nm,1.0s
BTK Batken 70.69 317 *e*P **P** **07 16 53.7 +0.2**
comp=Z,10nm,1.3s
BTK Batken 70.69 317 *e*P **P** **07 16 53.7 +0.2**
BTK pmax pmax
comp=Z,10.0nm,1.3s
ZALV Zalesovo Beam 70.93 335 P **P** **07 16 54.1 -0.5**
comp=Z,7.1nm,0.7s,baz=114,slow=4.6,SNR=12
ZAA1 Zalesovo Array 70.94 335 *e*P **P** **07 16 54.1 -0.5**
KURK Kurchatov 71.73 329 *e*P **P** **07 16 59.5 +0.1**
comp=Z,39nm,0.9s
KURK Kurchatov 71.73 329 *e*P **P** **07 16 59.5 +0.1**
KURK pmax pmax
comp=Z,39nm,0.9s
SEY Seymchan 72.22 11 *ce*P **P** **07 17 02.4 +0.3**
NVS Novosibirsk 72.22 335 *e*P **P** **07 17 02.5 +0.2**
KKAR Karatay Array 72.31 319 *e*P **P** **07 17 03.0 -0.2**
comp=Z,11nm,1.2s
KKAR Karatay Array 72.31 319 *e*P **P** **07 17 03.0 -0.2**
KKAR pmax pmax
comp=Z,11nm,1.2s
VNDA Vanda 72.56 173 P **P** **07 17 05.4 +1.4**
comp=Z,2.4nm,0.7s,baz=322,slow=6.8,SNR=16
VNDA LR LR 07 47 45.4
comp=Z,163nm,20.2s,baz=340,slow=35
VNDA Vanda 72.56 173 *e*P **P** **07 17 05.3 +1.2**
VNDA Vanda 72.56 173 *e*P **P** **07 17 05.3 +1.2**
SBA Scott Base 73.47 172 *e*P **P** **07 17 11.3 +1.9**
comp=Z,4.7nm,0.9s
SBA Scott Base 73.47 172 *e*P **P** **07 17 11.3 +1.9**
SBA pmax pmax
comp=Z,5.0nm,0.9s
MAW Mawson 74.25 201 P **P** **07 17 15.4 +1.3**
comp=Z,2.3nm,0.7s,baz=88,slow=7.8,SNR=7.7
MAW LR LR 07 47 27.6
comp=Z,98nm,20.4s,baz=58,slow=34
MAW Mawson 74.25 201 *e*P **P** **07 17 16.1 +2.0**
comp=Z,1.4nm,1.0s
MAW Mawson 74.25 201 *e*P **P** **07 17 16.1 +2.0**
MAW pmax pmax
comp=Z,1.0nm,1.0s
ATKA Atka Island 76.61 32 *e*P **P** **07 17 28.3 +0.4**
comp=Z,50nm,1.2s
BRVK Borovoye 77.33 328 *e*P **P** **07 17 32.3 +0.4**
comp=Z,22nm,0.9s
BRVK Borovoye 77.33 328 *e*P **P** **07 17 32.3 +0.4**
BRVK pmax pmax
comp=Z,22nm,0.9s
TIXI Tiksi 78.58 0 *e*P **P** **07 17 38.1 -0.4**
comp=Z,6.6nm,0.8s
TIXI Tiksi 78.58 0 *ce*P **P** **07 17 38.3 -0.2**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
GEYT Alibeck 79.00 311 P **P** **07 17 41.8 +0.2**
comp=Z,8.2nm,1.1s,baz=183,slow=3.0,SNR=7.2
GEYT LR LR 07 59 17.0
comp=Z,37nm,18.3s,baz=20,slow=41
BILL Bilibino 79.59 14‖ *e*P **P** **07 17 45.0 +0.9**
BILL *e* 07 20 52.1
BILL pmax pmax
comp=Z,3.0nm,1.1s
BILL MLR MLR
comp=Z,304nm,23.0s
TBI Tubuai 80.12 112 *e*LR LR 07 42 45.6
comp=Z,210nm,30.5s
PPT2 Papeete2 80.41 107 *e*LR LR 07 43 05.0
comp=Z,128nm,24.0s
PPT Papeete 80.41 107 LR LR 07 49 00.3
comp=Z,51nm,21.7s,baz=314,slow=32
SPIA Saint Paul Isl 81.06 29 *e*P **P** **07 17 52.1 0.0**
comp=Z,33nm,0.9s
NRIK Noril'sk 81.25 346 P **P** **07 17 53.5 +0.6**
comp=Z,2.6nm,0.7s,baz=127,slow=4.9,SNR=5.2
NRIK LR LR 07 56 36.1
comp=Z,71nm,19.4s,baz=184,slow=38
UNV Unalaska Valle 81.49 33 *e*P **P** **07 17 54.0 -0.5**
comp=Z,16nm,1.0s
AB31 Akbulak array 81.54 322 *i*P **P** **07 17 54.2 -0.7**
AB31 pmax pmax
comp=Z,7.0nm,0.7s
ABKAR Akbulak array 81.54 322 *e*P **P** **07 17 54.9 0.0**
comp=Z,12nm,0.8s
QSPA South Pole Qui 82.88 180 *e*P **P** **07 18 02.5 +0.6**
comp=Z,6.4nm,0.8s
SYO Syowa Base 82.97 201‖ *e*P **P** **07 18 02.2 +0.1**
SYO Syowa Base 82.97 201‖ *e*PcP **PcP** **07 18 05.0 -1.7**
AKTO Aktyubinsk 83.12 323 P **P** **07 18 02.8 -0.4**
AKTO pmax pmax
comp=Z,26nm,0.9s
ARU Arti 84.90 328 *e*P **P** **07 18 12.4 +0.3**
comp=Z,24nm,1.1s
ARU Arti 84.90 328 *d i*P **P** **07 18 12.0 -0.1**
ARU 07 21 22.5
ARU S **S** **07 28 33.7 -4.4**
ARU SS **SS** **07 34 10.3 -1.1**
ARU pmax pmax
comp=Z,17nm,1.1s
AKT Akhty 87.64 312 *e*P **P** **07 18 23.3 -2.8**
AKT *e* 07 21 49.1
AKT pmax pmax
comp=Z,18nm,1.0s
ZEI Tsey 90.68 313 *e*P **P** **07 18 44.8 +4.3**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 90.91 269 LR LR 08 00 02.2
comp=Z,33nm,18.2s,baz=170,slow=36
KNK Knik Glacier 92.94 29 *e*P **P** **07 18 49.5 -0.8**
comp=Z,12nm,0.9s
SML Sawmill 93.06 28 *e*P **P** **07 18 50.5 -0.4**
comp=Z,16nm,0.9s
RND Reindeer 93.09 27 *e*P **P** **07 18 49.9 -1.1**
comp=Z,13nm,0.9s
RND Reindeer 93.09 27 *e*P **P** **07 18 49.9 -1.1**
RND pmax pmax
comp=Z,13nm,0.9s
WRH Wood River Hil 93.59 26 *e*P **P** **07 18 52.1 -1.1**
comp=Z,9.9nm,1.0s
DHY Denali Highway 93.70 27 *e*P **P** **07 18 53.4 -0.6**
comp=Z,8.3nm,1.0s
CCB Clear Creek Bu 93.74 25 *e*P **P** **07 18 52.2 -1.6**
comp=Z,8.3nm,1.0s
HDA Harding Lake 94.07 26 *e*P **P** **07 18 54.3 -1.1**
comp=Z,5.4nm,1.0s
ILAR Eielson Array 94.15 25 P **P** **07 18 53.9 -1.9**
comp=Z,1.2nm,0.8s,baz=239,slow=4.6,SNR=13
ILB Eielson Array 94.15 25 *e*P **P** **07 18 53.9 -1.9**
PAX Paxson 94.55 27 *e*P **P** **07 18 57.8 +0.1**
comp=Z,11nm,1.2s
PAX Paxson 94.55 27 *e*P **P** **07 18 57.8 +0.1**
PAX pmax pmax
comp=Z,11nm,1.2s
RIDG Independent Ri 94.91 26 *e*P **P** **07 18 58.7 -0.7**
comp=Z,11nm,1.2s
VSR Storozhevoye 94.93 321 *i*P **P** **07 18 57.3 -2.3**
VSR pmax pmax
comp=Z,9.0nm,1.5s
SNAA Sanae 95.18 194 P **P** **07 19 02.1 +1.6**
SNAA Sanae 95.18 194 *e*P **P** **07 19 01.7 +1.2**
comp=Z,4.1nm,0.9s
SNAA Sanae 95.18 194 *e*P **P** **07 19 01.7 +1.2**
SNAA pmax pmax
comp=Z,4.0nm,0.9s
DOT Dot Lake 95.25 27 *e*P **P** **07 19 00.6 -0.2**
comp=Z,9.5nm,1.4s
KLMR Klimovskoe 95.55 331 *e*P **P** **07 18 59.5 -2.7**
KLMR pmax pmax
comp=Z,7.0nm,1.0s
VNA2 Neumayer--Watz 96.76 193 P **P** **07 19 07.5 -0.1**
baz=128,slow=3.1
VNA3 Neumayer Olymp 97.03 193 P Pdif 07 19 10.2 +1.3
VNA1 Neumayer--Stat 97.16 193 P Pdif 07 19 11.7 +2.2
BOSA Boshof 97.97 240 P Pdif 07 19 14.4 +0.2
comp=Z,4.7nm,1.0s,baz=208,slow=12,SNR=4.2
BOSA LR LR 07 58 45.6
comp=Z,42nm,20.1s,baz=113,slow=32
BR101 Keskin Array S 98.07 309 *e*P Pdif 07 19 15.1 +0.7
BRTR Keskin Array B 98.07 309 P Pdif 07 19 15.1 +0.7
comp=Z,0.2nm,0.3s,baz=120,slow=5.2,SNR=2.3
APA Apatity 98.39 337‖ *i*P P 07 19 01.6 -13
APA pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 99.57 22 LR LR 08 00 44.3
comp=Z,27nm,20.7s,baz=288,slow=33
ARCES ARCESS Array B 101.08 340 P **Pdif** **07 19 26.4 -0.6**
comp=Z,1.9nm,0.9s,baz=68,slow=7.1,SNR=3.5
ARCES PKKPbc **PKKPbc** **07 35 37.4 -3.4**
comp=Z,0.8nm,0.7s,baz=290,slow=5.0,SNR=5.2
AKASG Malin Array Be 101.20 320 P **Pdif** **07 19 27.3 -0.5**
comp=Z,0.1nm,0.3s,baz=66,slow=4.5,SNR=3.3
AKBB Malin Array Si 101.20 320 *e*Pdif **Pdif** **07 19 26.4 -1.4**
AKBB Malin Array Si 101.20 320 *e*P **Pdif** **07 19 26.4 -1.4**
YKA Yellowknife Ar 108.57 26 PKiKP **PKiKP** **07 24 06.4 +0.7**
comp=Z,0.2nm,0.4s,baz=298,slow=1.7,SNR=2.9
YKA PKKPbc **PKKPbc** **07 35 13.1 -4.7**
comp=Z,0.2nm,0.2s,baz=111,slow=3.1,SNR=4.0
YKB5 Yellowknife Ar 108.57 26 *e*PKiKP **PKiKP** **07 24 06.4 +0.7**
YKB5 *e*PKKPbc **PKKPbc** **07 35 13.1 -4.7**
CLL Collm 111.21 323 *e*(PKiKP) **PKiKP** **07 24 11.7 +0.7**
CLL *e*PP **PP** **07 24 53.0 +2.4**
NV01 Mina Array Sit 112.67 51 *e*PKiKP **PKiKP** **07 24 15.4 +0.9**
NVAR Mina Array Bea 112.67 51 PKiKP **PKiKP** **07 24 15.4 +0.9**
comp=Z,0.3nm,0.7s,baz=112,slow=1.6,SNR=4.2
PLID Pearl Lake 113.04 44 *e*Pdif **Pdif** **07 20 19.7 -1.2**
SNOW Snow King Moun 117.10 45 *e*PKPdf **PKiKP** **07 24 23.2 +0.3**
PD31 Pinedale Array 118.15 45 *e*PKPdf **PKiKP** **07 24 25.1 +0.1**
PD31 *e*PKKPbc **PKKPbc** **07 34 44.5 -0.7**
PDAR Pinedale Array 118.15 45 PKP **PKiKP** **07 24 25.0 +0.1**
comp=Z,0.4nm,0.7s,baz=214,slow=1.1,SNR=4.3
PDAR PKKPbc **PKKPbc** **07 34 44.5 -0.7**
comp=Z,0.3nm,0.8s,baz=112,slow=6.9,SNR=3.7
O20A White River Ci 119.88 48 *e*PKPdf **PKiKP** **07 24 28.6 +0.2**
O20A White River Ci 119.88 48 P **PKiKP** **07 24 28.4 +0.1**
baz=287
PV01 Paradox Valley 120.20 50 *e*PKPdf **PKPdf** **07 24 28.9 -0.1**
K22A Casper 120.30 44 P **PKiKP** **07 24 30.7 +1.7**
baz=290
MVCO Mesa Verde 120.51 51 P **PKiKP** **07 24 30.9 +1.1**
baz=286
RSSD Black Hills 121.45 42 P **PKPdf** **07 24 31.2 0.0**
baz=293
S22A 4UR Ranch, Cre 121.63 50 *e*PKPdf **PKiKP** **07 24 33.0 +1.0**
S22A 4UR Ranch, Cre 121.63 50 P **PKiKP** **07 24 32.8 +0.8**
baz=287

ISCO	Idaho Springs	121.90	47	P		PKiKP	07 24 33.6	+1.1
	baz=289							
121A	Cookes Peak, D	122.23	56	P		PKiKP	07 24 33.9	+0.7
	baz=283							
SDCO	Great Sand Dun	122.64	49	*e*PKPdf		PKiKP	07 24 35.0	+1.0
SDCO	Great Sand Dun	122.64	49	P		PKiKP	07 24 34.7	+0.7
	baz=288							
TASM	ASL Pad, Albuq	122.70	53	P		PKiKP	07 24 34.2	+0.1
	baz=286							
ANMO	Albuquerque	122.71	53	*e*PKPdf		PKPdf	07 24 33.9	0.0
ANMO	Albuquerque	122.71	53	*e*PKIKP		PKPdf	07 24 33.9	0.0
ANMO	Albuquerque	122.71	53	P		PKiKP	07 24 34.2	+0.1
	baz=286							
ULM	Lac du Bonnet	123.43	32	PKP		PKPdf	07 24 34.6	+0.1
	comp=Z,1.3nm,0.3s,baz=317,slow=4.7,SNR=2.0							
T25A	Trinidad	123.65	50	P		PKiKP	07 24 36.3	+0.4
	baz=289							
MNTX	Cornudas Mount	124.41	56	*e*PKPdf		PKiKP	07 24 37.9	+0.6
MNTX	Cornudas Mount	124.41	56	P		PKiKP	07 24 37.6	+0.3
	baz=284							
ESDC	Sonseca Array	126.39	315	PKP		PKiKP	07 24 40.9	-0.1
	comp=Z,0.2nm,0.3s,baz=151,slow=2.9,SNR=4.5							
LTX	Lajitas	126.41	59	*e*PKPdf		PKPdf	07 24 40.8	-0.2
LTX	Lajitas	126.41	59	*e*PKIKP		PKPdf	07 24 40.8	-0.2
TXAR	Lajitas Array	126.41	59	PKP		PKPdf	07 24 40.8	-0.2
	comp=Z,0.4nm,0.7s,baz=214,slow=2.6,SNR=6.2							
ECSD	EROS Data Cent	126.43	40	P		PKPdf	07 24 40.7	+0.1
	baz=300							
CBKS	Cedar Bluff	126.51	46	P		PKiKP	07 24 41.3	0.0
	baz=294							
TORD	Torodi Ar. Bea	127.18	281	PKP		PKPdf	07 24 42.2	-0.4
	comp=Z,1.2nm,1.0s,baz=224,slow=1.6,SNR=3.6							
TOA1	Torodi Ar. Sit	127.18	281	*e*PKPdf		PKPdf	07 24 42.2	-0.5
C40A	Isle Royale Na	128.37	31	P		PKiKP	07 24 44.6	-0.1
	baz=310							
PLCA	Paso Flores	129.34	161	PKP		PKiKP	07 24 47.3	+0.3
	comp=Z,2.8nm,1.0s,baz=233,slow=5.1,SNR=4.1							
PLCA	Paso Flores	129.34	161	*e*PKPdf		PKiKP	07 24 47.5	+0.5
PLCA	Paso Flores	129.34	161	*e*PKIKP		PKiKP	07 24 47.5	+0.5
JCT	Junction City	129.34	56	*e*PKPdf		PKiKP	07 24 47.7	+0.5
JCT	Junction City	129.34	56	P		PKiKP	07 24 47.5	+0.2
	baz=287							
LVC	Limon Verde	146.01	151	*e*PKPdf		PKPab	07 25 19.8	+0.9
LVC	Limon Verde	146.01	151	*e*PKP2		PKPab	07 25 19.8	+0.9
CPUP	Villa Florida	146.33	171	PKPbc		PKPbc	07 25 18.7	-0.1
	comp=Z,10nm,1.0s,baz=181,slow=1.8,SNR=13							
ACON	Acoyapa	146.65	79	*e*PKPdf		PKPbc	07 25 20.4	+0.4
PB11	IPOC Station P	147.99	147	*e*PKPdf		PKPdf	07 25 21.2	+0.5
PB11				*e*PKPbc		PKiKP	07 25 24.9	-0.8
GO01	Chusmiza	148.31	147	*e*PKPbc		PKiKP	07 25 26.6	-0.2
MNMC	Minye Minye	148.53	146	*e*PKPbc		PKiKP	07 25 26.6	-0.4
LPAZ	La Paz	151.64	145	PKP		PKPdf	07 25 28.2	+1.0
	comp=Z,3.2nm,1.1s,baz=278,slow=1.6,SNR=6.3							
LPAZ				PKPbc		PKiKP	07 25 34.2	+0.3
	comp=Z,5.3nm,0.5s,baz=23,slow=2.5,SNR=49							
LPAZ				PKPab		PKPab	07 25 43.7	+1.7
	comp=Z,8.4nm,0.7s,baz=227,slow=4.9,SNR=16							
LPAZ	La Paz	151.64	145	*e*PKPdf		PKPdf	07 25 24.3	-2.9
LPAZ				*e*PKPbc		PKiKP	07 25 34.0	+0.1
LPAZ				*e*PKPab		pPKPbc	07 25 44.1	+0.1
LPAZ	La Paz	151.64	145	*e*PKIKP		PKPdf	07 25 24.3	-2.9
LPAZ				*e*			07 25 34.0	

IDC 06 07:13:53.3±6.7, 13°79S×168°22E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/34, mbtmp3.7/2, Error ellipse: s-maj=392.7km s-min=39.7km az=141.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	33.87	248	P	P	07 20 38.2	+0.2
	0.6nm,0.7s,baz=72,slow=9.9,SNR=4.2						
ILAR	Eielson Array	85.36	18	P	P	07 26 32.5	+0.4
	0.6nm,0.7s,baz=238,slow=5.0,SNR=10						
ARCES	ARCESS Array B	119.58	346	PKP	PKPdf	07 32 43.5	-1.1
	6.5nm,0.3s,baz=64,slow=2.8,SNR=4.4						

*ISCJB **06** 07:23:39.8±0.4, 14°.39S±0°.05×167°.18E±0°.08, h170km, mb4.4/20, Error ellipse: s-maj=11.2km s-min=7.0km az=178.1*
*NEIC **06** 07:23:41.7±1.9, 14°.40S×167°.27E, h178km±7km, mb4.5/14, Error ellipse: s-maj=24.1km s-min=16.5km az=98.0*
*IDC **06** 07:23:41.3±3.6, 14°.39S×167°.23E, h170km±33km, mb3.8/9, mb1 3.9/10, mb1mx3.6/35, mbtmp4.2/10, MS3.4/1, Ms1 3.4/1, ms1mx2.7/23, Error ellipse: s-maj=25.2km s-min=20.0km az=124.0*

ISC 06 07:23:41.1±0.6, 14°.41S±0°.07×167°.3E±0°.1, h170km, n43, σ0°82/43, mb4.3/20, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	7.07	175	*e*Pn	Pn	07 25 22.8	+0.8
DZM	Mont Dzumac	7.67	186	P	Pn	07 25 31.7	+1.6
	1.6nm,0.3s,baz=93,slow=12,SNR=14						
DZM				S	Sn	07 26 55.6	-0.6
	0.4nm,0.3s,baz=84,slow=19,SNR=2.7						
PINNC	Pines Island,	8.16	179	*e*Pn	Pn	07 25 37.0	+0.5
HNR	Honiara	8.74	304	*e*Pn	Pn	07 25 44.8	+0.4
EIDS	Eidsvold	18.74	232	*e*P	P	07 27 47.4	+0.3
	42nm,1.9s						
BKZ	Black Stump Fm	25.95	164	*e*P	P	07 28 58.3	+0.5
	86nm,1.9s						
JAY	Jayapura	28.81	292	LR	LR	07 39 27.0	
	comp=Z,72nm,18.6s,baz=94,slow=33						
STKA	Stephens Creek	29.23	229	P	P	07 29 27.5	+0.4
	3.5nm,0.4s,baz=50,slow=8.6,SNR=11						
STKA	Stephens Creek	29.23	229	*e*P	P	07 29 27.7	+0.6
	7.4nm,1.8s						
WC3	Warramunga Arr	31.92	255	*e*P	P	07 29 49.5	-1.4
	18nm,1.4s						
WB2	Warramunga Arr	31.94	255	*e*P	P	07 29 49.5	-1.6
	29nm,1.8s						
WRAB	Tennant Creek	31.94	255	*e*P	P	07 29 51.4	+0.3
	53nm,2.0s						
WR1	Warramunga Arr	31.95	255	*e*P	P	07 29 49.4	-1.7
WRA	Warramunga Arr	31.95	255	P	P	07 29 49.4	-1.8
	131nm,0.3s,baz=74,slow=7.6,SNR=1.0						
AS31	Alice Springs	32.83	249	*e*P	P	07 29 57.4	-1.4
	2.6nm,1.4s						
ASAR	Alice Springs	32.83	249	P	P	07 29 57.5	-1.3
	0.9nm,0.4s,baz=72,slow=9.5,SNR=21						
MORW	Morawa	49.45	244	*e*P	P	07 32 13.9	-0.3
	88nm,1.8s						
VNDA	Vanda	63.18	181	P	P	07 33 51.0	+0.4
	0.9nm,0.7s,baz=2.6,slow=7.0,SNR=5.5						
VNDA	Vanda	63.18	181	*e*P	P	07 33 50.2	-0.3
	6.9nm,1.5s						
SBA	Scott Base	63.45	180	*e*P	P	07 33 51.9	-0.4
	5.8nm,1.0s						
PETK	Petropavlovsk-	67.75	354	P	P	07 34 20.7	+0.6
	3.1nm,0.8s,baz=140,slow=9.4,SNR=5.4						
PEA1	Petropavlovsk-	67.75	354	*e*P	P	07 34 20.7	+0.6
CM31	Chiang Mai Arr	74.86	294	*e*P	P	07 35 04.2	+0.7
CMAR	Chiang Mai Arr	74.86	294	P	P	07 35 04.2	+0.7
	1.0nm,0.3s,baz=116,slow=6.5,SNR=4.2						
QSPA	South Pole Qui	75.62	180	*e*P	P	07 35 07.6	+0.4
	17nm,1.6s						
MAW	Mawson	82.20	202	P	P	07 35 43.2	+0.4
	3.4nm,1.0s,baz=134,slow=4.9,SNR=7.0						
MAW	Mawson	82.20	202	*e*P	P	07 35 41.8	-0.9
	1.0nm,1.1s						
CAST	Castle Rocks	83.68	17	*e*P	P	07 35 50.0	-0.3
	15nm,1.9s						
SCM	Sheep Creek Mo	83.95	20	*e*P	P	07 35 51.4	-0.4
	43nm,1.8s						
ILAR	Eielson Array	86.21	18	P	P	07 36 02.3	-0.6
	1.5nm,0.8s,baz=234,slow=5.7,SNR=15						
ILB	Eielson Array	86.21	18	*e*P	P	07 36 02.3	-0.6
NV01	Mina Array Sit	87.03	49	*e*P	P	07 36 07.7	-0.1
NVAR	Mina Array Bea	87.03	49	P	P	07 36 07.7	-0.1
	0.4nm,0.6s,baz=217,slow=7.1,SNR=3.7						
SNAA	Sanae	93.87	183	P	P	07 36 37.8	-1.1
VNA3	Neumayer Olymp	94.53	181	P	P	07 36 41.0	-0.9
VNA2	Neumayer--Wätz	94.80	182	P	P	07 36 42.7	-0.3
MK32	Makanchi Array	97.00	316	*e*P	P	07 36 53.9	+0.4
MKAR	Makanchi Array	97.00	316	P	P	07 36 53.9	+0.4
	0.6nm,0.6s,baz=107,slow=5.6,SNR=8.6						
ARCES	ARCESS Array B	119.96	345	PKP	PKPdf	07 42 10.7	-0.1
	0.9nm,0.5s,baz=82,slow=2.7,SNR=9.4						
FIA0	FINESS Array S	125.44	338	*e*PKPdf	PKPdf	07 42 21.1	-0.4
FINES	FINESS Array B	125.44	338	PKP	PKPdf	07 42 21.0	-0.4
	0.7nm,0.6s,baz=352,slow=4.2,SNR=2.5						
KEST	Kesra	150.99	321	PKPbc	PKPbc	07 43 14.0	-0.3
	4.3nm,0.7s,baz=346,slow=1.8,SNR=4.4						
ESDC	Sonseca Array	153.69	345	PKPbc	PKiKP	07 43 20.6	+0.3
	0.3nm,0.3s,baz=48,slow=2.2,SNR=4.7						

*KRNET **06** 08:00:51.6±0.1, 40°.72N×71°.44E, h9km, mb3.0*
*SOME **06** 08:00:52.4, 40°.72N×71°.40E, h10km*
*NNC **06** 08:00:57.2±2.4, 40°.88N×71°.61E, h23km±10km, mb3.5, mpv3.1, Error ellipse: s-maj=18.7km s-min=7.1km az=15.0*

ISC 06 08:00:51.0±1.3, 40°.70N±0°.04×71°.57E±0°.03, h4km±12km, n21, σ1°39/37, 18C-8D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	0.86	222	↑*iP*	Pg	08 01 07.5	+0.1
	baz=16						
BTK				↑*iS*	Sg	08 01 19.0	+0.4
	baz=16						
ARK	Arkit	1.14	15	↓*iP*	Pn	08 01 13.5	-0.4
	baz=21						
ARK				↓*iS*	Sn	08 01 29.2	-0.8
	baz=21						
ARSB	Arslanbob	1.24	59	↑*iP*	Pg	08 01 16.8	+2.1
	baz=62						
ARSB				↑*iS*	Sn	08 01 35.1	+2.6
	baz=62						
IUG	luzhnay	1.85	322	P	Pb	08 01 24.7	-0.8
	33nm,0.2s						
IUG				S	Sb	08 01 48.0	-1.2
	128nm,0.4s						
IUG	luzhnay	1.85	322	*e*P	Pb	08 01 24.6	-0.9
	33nm,0.2s						
IUG				*e*S	Sb	08 01 47.9	-1.2
	128nm,0.4s						
AML	Almayashu	2.15	47	↓*iP*	Pb	08 01 29.0	-1.7
	baz=50						
AML				↓*iS*	Sg	08 02 02.6	+2.7
	baz=50						
MRKS	Merke	2.39	31	Pg	Pg	08 01 36.7	-0.1
	9.7nm,0.3s						
MRKS				Lg	Lg	08 02 08.4	
	48nm,0.4s						
MRKS	Merke	2.39	31	*e*P	Pg	08 01 36.5	-0.4
	9.7nm,0.3s						
MRKS				*e*S	Sg	08 02 08.2	+0.4
	48nm,0.4s						
KK31	Karatay Array	2.53	342	Pn	Pb	08 01 35.6	-1.4
	0.6nm,0.3s,baz=171,slow=18,SNR=48						
KK31				Pg	Pg	08 01 41.8	+2.4
	3.3nm,0.3s,baz=159,slow=14,SNR=32						
KK31				↑Lg	Lg	08 02 09.4	
	4.7nm,0.4s,baz=158,slow=30,SNR=7.6						
EKS2	Erkin-Say	2.57	39	↑*iP*	Pb	08 01 35.1	-2.6
	baz=41						
EKS2				↑*iS*	Sg	08 02 12.9	-0.5
	baz=41						
UCH	Uchtor	2.69	54	↓*iP*	Pn	08 01 36.4	+0.9
	baz=56						
UCH				↓*iS*	Sb	08 02 15.0	+1.5
	baz=56						
AAK	Ala-Archa	2.92	48	↑Pn	Pn	08 01 39.9	+1.4
	3.4nm,0.3s						
AAK				↓Lg	Lg	08 02 27.0	
	6.2nm,0.5s						
AAK	Ala-Archa	2.92	48	↑*iP*	Pn	08 01 39.5	+1.0
	baz=49						
AAK				↑*iS*	Sb	08 02 21.0	+1.0
	baz=49						
KZA	Kyzart	3.09	62	↑*iP*	Pn	08 01 41.3	+0.3
	baz=63						
KZA				↑*iS*	Sb	08 02 23.6	-1.5
	baz=63						
KBK	Karagaybulak	3.20	51	↑*iP*	Pn	08 01 43.1	+0.9
	baz=53						
KBK				↑*iS*	Sb	08 02 27.2	-0.7
	baz=53						
USP	Ospenovka	3.37	39	↑*iP*	Pn	08 01 46.1	+1.6
	baz=41						
USP				↑*iS*	Sb	08 02 32.1	-0.6
	baz=41						
TKM2	Tokmak 2	3.74	52	↓Pn	Pn	08 01 51.5	+1.8
	1.0nm,0.3s						
TKM2				↑Pg	Pg	08 02 02.4	-0.3
	3.7nm,0.8s						
TKM2				↑Lg	Lg	08 02 52.8	
	5.9nm,0.5s						
DGS	Degeres	4.04	50	Pg	Pg	08 02 08.2	-0.1
	3.5nm,0.8s						
DGS				Lg	Lg	08 03 02.2	
	12nm,0.6s						
DGS	Degeres	4.04	50	*e*P	Pg	08 02 06.9	-1.3
	3.5nm,0.8s						
DGS				*e*S	Sg	08 03 00.2	-0.3
	12nm,0.6s						
KTBS	Karatobe	4.85	50	Pg	Pg	08 02 23.4	-0.4
	1.5nm,0.5s						
KTBS				Lg	Lg	08 03 27.9	
	8.4nm,0.4s						
ARXS	Arharly	5.81	51	Pg	Pg	08 02 40.3	-2.0
	2.5nm,0.8s						
ARXS				Lg	Lg	08 03 57.1	
	6.1nm,0.7s						

MAN 06 08:01:42.5, 8°.02N×123°.55E, h19km, mb4.4, ML3.2, MS2.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	1.35	347	↓*iP*	Pn	08 02 05.5	-0.8
SNPH				*i* S	Sb	08 02 24.1	0.0

*NEIC **06** 08:03:11.0±0.0, 16°.83N×94°.97W, h120km, mb4.4/1, MD4.0(MEX), After MEX.*

MEX 06 08:03:11.0±0.4, 16°.83N×94°.97W, h120km±6km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.27	18	*e*Pn	Pn	08 03 26.6	-1.3
CMIG				*e*Sn	Sn	08 03 38.4	-2.2
CMIG	Matias Romero	0.27	18	*i* P	Pn	08 03 26.6	-1.3
CMIG				*i* S	Sn	08 03 38.4	-2.2
HUIG	Huatulco	1.52	226	*e*Pn	Pn	08 03 37.2	-1.4
HUIG				*e*Sn	Sn	08 03 58.6	-1.2
HUIG	Huatulco	1.52	226	*e*P	Pn	08 03 37.2	-1.4
HUIG				*e*S	Sn	08 03 58.6	-1.2
PCIG		2.02	123	*e*Sn	Sn	08 04 08.5	-1.9
PCIG		2.02	123	*e*S	Sn	08 04 08.5	-1.9
CCIG	Comitan	2.77	101	*e*Pn	Pn	08 03 54.9	+0.4
CCIG				*e*Sn	Sn	08 04 24.0	-3.9
TLIG	Tlapa	3.51	282	*e*Pn	Pn	08 04 05.6	+1.4
TLIG				*e*Sn	Sn	08 04 43.2	-2.1
TMUT	Trail Mountain	26.49	331	*e*P	P	08 08 40.7	+3.2
	9.3nm,0.9s						

*ASRS **06** 08:11:29.6, 53°.56N×87°.87E, M2.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **06** 08:11:34.9±1.8, 53°.48N×87°.78E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=14.7km s-min=7.3km az=64.0, Suspected Mining explosion.*
*IDC **06** 08:11:36.0±2.4, 53°.45N×87°.78E, h0km, mb1 3.8/3, mb1mx3.3/44, mbtmp3.8/3, ML3.5/3, Error ellipse: s-maj=21.8km s-min=13.6km az=68.0*

ISC 06 08:11:35.2±3.4, 53°.6N±0°.1×87°.7E±0°.2, h0km, n10, σ0°72/16, 11C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.78	284	*i*		08 23 30.0	
	baz=102,slow=337,SNR=10						
ZAA0	Zalesovo Array	1.78	284	↓Pn	Pn	08 12 06.6	-0.5
	3.1nm,0.6s						
ZAA0				↑Sn	Sg	08 12 32.5	+0.2
	6.1nm,0.4s						
ZALV	Zalesovo Beam	1.78	284	Pn	Pn	08 12 06.7	-0.5
	16nm,0.3s,baz=102,slow=12,SNR=77						
ZALV				Lg	Lg	08 12 33.1	
	26nm,0.3s,baz=107,slow=29,SNR=12						
KURK	Kurchatov	6.29	247	↑Pn	Pn	08 13 09.6	+0.4
	2.0nm,0.5s						
KURK				↑Sn	Sn	08 14 20.8	-0.9
	1.8nm,0.4s						
KURK				↓Lg	Lg	08 14 52.5	
	11nm,0.8s						
KURBB	Kurchatov Arra	6.39	246	Pn	Pn	08 13 11.2	+0.7
	0.5nm,0.3s,baz=62,slow=14,SNR=46						
KURBB				Sn	Sn	08 14 23.6	-0.5
	0.3nm,0.3s,baz=64,slow=28,SNR=5.4						
KURBB				Lg	Lg	08 14 58.0	
	0.3nm,0.3s,baz=63,slow=32,SNR=9.6						
KURBB	Kurchatov Arra	6.39	246	↑Pn	Pn	08 13 10.9	+0.4
	6.5nm,0.5s						
KURBB				↑Sn	Sn	08 14 24.1	0.0
	13nm,0.6s						
KURBB				↓Lg	Lg	08 15 01.5	
	30nm,1.4s						
MK31	Makanchi Array	7.62	209	↑Pn	Pn	08 13 27.8	+0.4
	0.5nm,0.5s,baz=28,slow=13,SNR=36						
MK31				↑Sn	Sn	08 14 54.4	-0.1
	1.6nm,0.7s,baz=33,slow=19,SNR=4.7						
MK31				↑Lg	Lg	08 15 34.3	
	0.8nm,0.6s,baz=36,slow=31,SNR=4.4						
MKAR	Makanchi Array	7.62	209	Pn	Pn	08 13 28.2	+0.8
	0.6nm,0.3s,baz=26,slow=13,SNR=28						
MKAR				Sn	Sn	08 14 53.1	-1.3
	0.5nm,0.3s,baz=32,slow=19,SNR=6.4						
MKAR				Lg	Lg	08 15 35.6	
	0.6nm,0.3s,baz=29,slow=33,SNR=6.4						
MAKZ	Makanchi	7.70	211	↑Pn	Pn	08 13 28.3	-0.2
	1.0nm,0.6s						
MAKZ				↑Sn	Sn	08 14 56.2	-0.2
	1.2nm,0.5s						
MAKZ				↑Lg	Lg	08 15 35.4	
	6.2nm,1.1s						
BVAR	Borovoye Array	10.40	274	Pn	Pn	08 14 06.8	+1.3
	0.8nm,0.3s,baz=72,slow=14,SNR=8.7						

*ISCJB **06** 08:16:14.3±0.1, 6°.39S±0°.02×154°.70E±0°.02, h48km, mb5.1/160, MS4.2/14, Error ellipse: s-maj=3.6km s-min=3.0km az=12.8*
*GCMT **06** 08:16:15.8±0.3, 6°.46S±0°.03×154°.86E±0°.03, h78km±8km, MW4.9/84, Moment Tensor Solution. s9,c11; s84,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}~0.39±.23; $M_{\theta\theta}$0.05±.20; $M_{\phi\phi}$0.34±.23; $M_{r\theta}$-0.21±.09; $M_{\theta\phi}$-1.09±.20; $M_{\phi r}$-2.34±.08; Best double couple: $M_0$2.61400×10^{16} NP1:ϕ_s101.00000°, δ25.00000°, λ-170.00000°. Principal axes: T 2.5470, Plg36.0000°, Azm70.0000°; N 0.1340, Plg25.0000°, Azm179.0000°; P -2.6800, Plg44.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **06** 08:16:18.2±1.6, 6°.33S×154°.71E, h71km±14km, mb4.4/26, mb1 4.5/31, mb1mx4.4/38, mbtmp4.7/31, MS3.7/8, Ms1 3.8/8, ms1mx3.5/26 Error ellipse: s-maj=11.6km s-min=9.7km az=44.0*
*BJI **06** 08:16:19.9±0.0, 5°.69S×154°.82E, h81km, mb5.1/39, mB5.0/30, Ms4.7/17, Ms7 4.4/18*
*DJA **06** 08:16:19.3±1.3, 6°.S±11°.×15°.5E±°, h79km±12km, M5.5/38, mB5.9/19, mb5.3/38, Mw(mB)5.5/19*
*NEIC **06** 08:16:19.8±1.6, 6°.39S×154°.67E, h88km±5km, mb5.0/108, Error ellipse: s-maj=13.0km s-min=11.3km az=221.0*

ISC 06 08:16:15.6±0.3, 6°.36S±0°.04×154°.74E±0°.04, h48km, n325, σ1°39/338, mb5.0/158, MS4.3/14, 2C-2D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.35	310	*e*Pn	Pn	08 17 08.4	+3.0
RABL				*e*Sn	Sn	08 17 48.7	+4.7
HNR	Honiara	6.00	121	*e*P	Pn	08 17 55.0	+13
HNR				*e*S	Sn	08 18 44.0	-5.3
HNR	Honiara	6.00	121	P	Pn	08 17 46.8	+4.9
	13nm,0.3s,baz=225,slow=16,SNR=3.3						
HNR				S	Sn	08 18 53.7	+4.4
	22nm,0.3s,baz=324,slow=18,SNR=2.6						
HNR	Honiara	6.00	121	*e*Pn	Pn	08 17 46.5	+4.7
HNR				*e*Sn	Sn	08 18 49.2	0.0
PMG	Port Moresby	8.09	248	P	Pn	08 18 13.7	+3.0
	20nm,0.3s,baz=56,slow=8.9,SNR=59						
PMG				S	Sn	08 19 43.4	+2.6
	27nm,0.3s,baz=349,slow=21,SNR=16						
PMG				LR	LR	08 21 17.4	
	comp=Z,806nm,19.0s,baz=9.5,slow=37						
PMG	Port Moresby	8.09	248	*e*Pn	Pn	08 18 13.6	+3.0
PMG				*e*		08 19 35.8	
PMG				*e*Sn	Sn	08 19 43.4	+2.6
MANU	Manus Island	8.51	300	*e*Pn	Pn	08 18 19.3	+3.0
PATS	Pohnpei	13.59	15	*e*Pn	Pn	08 19 27.6	+1.8
COEN	Coen	13.65	236	*e*Pn	Pn	08 19 27.6	+0.9
JAY	Jayapura	14.50	285	P	Pn	08 19 39.5	+1.3
	0.6nm,0.3s,baz=106,slow=5.3,SNR=5.4						
JAY				LR	LR	08 25 48.3	
	comp=Z,490nm,20.9s,baz=116,slow=39						
JAY	Jayapura	14.50	285	P	Pn	08 19 40.2	+2.1
GENI	Genyem	14.99	284	P	Pn	08 19 45.6	+1.0
	86nm,1.3s						
CTA	Charters Tower	15.94	210	P	P	08 19 59.1	-0.6
	0.2nm,0.3s,baz=33,slow=16,SNR=4.5						
SRPI	Serui, Papua	18.98	283	P	Pn	08 20 34.4	+0.1
EIDS	Eidsvold	19.23	190	*e*P	Pn	08 20 36.6	-0.6
	17nm,0.9s						
DZM	Mont Dzumac	19.29	145	P	Pn	08 20 38.0	0.0
	2.3nm,0.3s,baz=352,slow=11,SNR=18						
DZM	Mont Dzumac	19.29	145	*e*P	Pn	08 20 38.2	+0.2
	241nm,1.1s						
DZM				*e*LR	LR	08 25 15.7	
	comp=Z,3μm,25.1s						
DZM	Mont Dzumac	19.29	145	*e*P	Pn	08 20 38.9	+0.8
ONTNC	Ouen Toro	19.48	146	*e*P	P	08 20 39.2	+0.6
TARA	Tarawa	19.71	68	*e*P	Pn	08 20 43.5	+0.5
	334nm,1.1s						
MARNC	Mare, Loyalty	19.79	141	*e*P	P	08 20 42.7	+0.7
	321nm,1.1s						
KWAJ	Kwajalein Atol	19.79	41	*e*P	Pn	08 20 44.2	+0.2
	636nm,1.4s						
PINNC	Pines Island,	20.29	144	*e*P	Pn	08 20 49.4	-0.3
	92nm,1.0s						
GUMO	Guam	22.11	334	LR	LR	08 28 26.1	
	comp=Z,136nm,21.5s,baz=158,slow=33						
FAKI	Fak Fak	22.67	278	P	P	08 21 13.9	+0.7
WRAB	Tennant Creek	23.96	234	*e*P	P	08 21 25.5	-0

30nm,1.3s
TOO Toolangi 32.19 194 *e*P P **08 22 39.3 +0.2**
9.7nm,1.1s
MMRI Maumere 32.29 264 P P **08 22 40.6 +0.3**
LUWI Luwuk 32.32 278 P P **08 22 41.1 +0.6**
EDFI Ende, Flores 32.84 264 P P **08 22 44.4 -0.8**
161nm,0.9s,1µm
MRSI Marisa 33.43 281 P P **08 22 50.2 0.0**
20nm,0.9s
APSI Ampana 33.45 278 P P **08 22 51.0 +0.6**
OUZ Omahuta 33.56 151 *e*P P **08 22 52.3 +1.2**
67nm,1.4s
BSSI Bau Bau, Buton 34.04 268 P P **08 22 55.9 +0.4**
WSI Waingapu 34.25 262 P P **08 22 57.6 +0.3**
549nm,0.6s,40µm
BKSI Bulukumba 34.45 270 P P **08 22 59.5 +0.5**
10nm,0.9s
BNSI Bone 34.53 271 P P **08 23 00.2 +0.5**
KAPI Kappang 34.83 270 P P **08 23 02.4 0.0**
9.4nm,0.6s,baz=112,slow=6.3,SNR=7.7
KAPI ScP ScP **08 29 15.4 -1.3**
7.3nm,0.4s,baz=132,slow=4.8,SNR=4.9
FORT Forrest 34.88 223 *e*P P **08 23 02.5 0.0**
35nm,0.8s
SPSI Sidrap Palu 34.90 272 P P **08 23 04.9 +1.9**
13nm,0.9s
TTSI Tana Toraja 34.95 274 P P 08 23 10.9 +7.5
WBSI Waikabubak, Su 35.14 262 P P **08 23 05.9 +0.8**
109nm,0.9s,1µm
MPSI Mapaga 35.40 280 P P **08 23 07.2 -0.1**
32nm,1.1s,299nm
PLAI Plampang 36.71 264 P P **08 23 18.2 -0.3**
262nm,0.7s,2µm
HIZ Hauiti 36.83 153 P P **08 23 21.4 +2.2**
PSA00 Pilbara Seismi 36.96 242 *e*P P **08 23 20.2 -0.3**
19nm,0.8s
HAZ Te Kaha 37.63 149 P P **08 23 24.5 -1.4**
WTVZ West Tongariro 37.66 153 P P **08 23 30.2 +3.9**
URZ Urewera 37.69 151 P P **08 23 27.1 +0.7**
19nm,0.7s,baz=80,slow=3.4,SNR=12
URZ Urewera 37.69 151 *e*P P **08 23 26.7 +0.3**
68nm,1.3s
URZ Urewera 37.69 151 P P **08 23 25.8 -0.6**
MWZ Matawai 37.95 150 P P **08 23 26.9 -1.8**
MOVZ Moawhango 37.97 153 P P **08 23 30.3 +1.4**
MTHZ Maungataniwha 38.02 152 P P **08 23 29.6 +0.3**
TWGZ Tauwhareparae 38.05 150 P P **08 23 27.3 -2.3**
BKZ Black Stump Fm 38.11 152 *e*P P **08 23 30.3 +0.2**
37nm,1.2s
PUZ Puketiti 38.11 149 P P **08 23 29.4 -0.7**
BHHZ Black Hill Sta 38.17 153 P P **08 23 32.1 +1.5**
NMHZ Naumai 38.20 152 P P **08 23 31.2 +0.3**
SNGZ Shannon Statio 38.21 151 P P **08 23 29.7 -1.1**
RIGZ Rimuhau 38.35 150 P P **08 23 30.3 -1.8**
KRHZ Kereru 38.44 153 P P **08 23 31.2 -1.6**
THZ Tophouse 38.78 158 *e*P P **08 23 35.5 -0.2**
43nm,1.0s
SNZO South Karori 39.10 156 *e*P P **08 23 38.3 +0.1**
75nm,1.2s
BFZ Birch Farm 39.23 154 *e*P P **08 23 39.4 +0.1**
38nm,1.0s
FOZ Fox Glacier 39.33 163 *e*P P **08 23 41.0 +0.9**
38nm,1.0s
LTZ Lake Taylor 39.45 160 *e*P P **08 23 41.7 +0.5**
46nm,0.9s
KHZ Kahutara 39.59 158 *e*P P **08 23 42.2 0.0**
34nm,0.8s
OXZ Oxford 39.85 160 *e*P P **08 23 43.9 -0.6**
21nm,0.6s
RPZ Rata Peaks 39.88 161 P P **08 23 45.0 +0.3**
32nm,0.8s,baz=214,slow=0.6,SNR=17
RPZ Rata Peaks 39.88 161 *e*P P **08 23 45.0 +0.3**
33nm,0.8s
LBZ Lake Benmore 40.22 163 *e*P P **08 23 47.6 +0.1**
12nm,0.9s
CRLZ Canterbury Las 40.27 160 *e*P P **08 23 48.4 +0.5**
48nm,0.9s
JAGI Jajag, Banyuwa 40.29 264 P P **08 23 47.4 -1.1**
183nm,0.8s
WKZ Wanaka 40.30 164 *e*P P **08 23 47.3 -0.9**
13nm,0.9s
KKM Kota Kinabalu 40.37 287 *e*P P **08 23 48.4 -1.0**
53nm,0.9s
MQZ McQueen's Vall 40.40 160 *e*P P **08 23 48.2 -0.8**
109nm,1.5s
MLZ Mavora Lakes 40.56 165 *e*P P **08 23 50.3 -0.1**
54nm,1.1s
ODZ Otahua Downs 40.95 163 *e*P P **08 23 52.8 -0.8**
86nm,1.4s
WHZ Wether Hill Ro 41.02 166 *e*P P **08 23 54.0 0.0**
12nm,1.0s
PWJI Pagerwojo 42.61 265 P P **08 24 07.5 -0.1**
143nm,1.0s
SBUM Sibu 43.34 280 *e*P P **08 24 13.0 -0.5**
12nm,1.3s
SBUM Sibu 43.34 280 P P **08 24 16.0 +2.5**
YOJ Yonaguni jima 43.52 316 *e*P P **08 24 14.0 -0.7**
125nm,1.5s
NWAO Narrogin (SRO) 43.72 228 P P **08 24 15.5 -0.8**
13nm,1.0s,baz=70,slow=6.9,SNR=4.5
NWAO Narrogin (SRO) 43.72 228 *e*P P **08 24 15.5 -0.8**
NWAO *e*P P **08 24 15.7 -0.7**
YULB Yu-li 44.06 313 *e*P P **08 24 18.9 -0.2**
19nm,0.8s
TPUB Ta-pu 44.49 313 *e*P P **08 24 22.5 -0.1**
26nm,0.7s
YHNB Yeheng 44.80 315 *e*P P **08 24 25.6 +0.5**
27nm,1.2s
KSM Kuching 45.03 278 *e*P P **08 24 26.3 -0.7**
20nm,1.0s
KSM Kuching 45.03 278 P P **08 24 28.0 +1.0**
JNU Nakatsue 45.33 331 *e*P P **08 24 28.7 -0.4**
18nm,0.8s
MJAR Matsushiro Arr 45.40 341 LR LR 08 41 29.1
comp=Z,79nm,22.0s,baz=160,slow=33
RAR Rarotonga 46.39 113 P P **08 24 37.3 -0.4**
18nm,0.7s,baz=83,slow=2.3,SNR=3.8
RAR Rarotonga 46.39 113 *e*P P **08 24 37.8 +0.1**
39nm,1.0s
CISI Cisompet, Garu 46.57 266 P P **08 24 39.8 +0.5**
148nm,0.7s
QZH Quanzhou 46.96 313 P P **08 24 43.2 +1.2**
QZH S S **08 31 21.9 -8.3**
CGJI Cibinong 48.71 267 P P **08 24 55.0 -0.8**
94nm,0.8s
DLV T Lat 49.46 292 *e*P P **08 25 01.3 -0.4**
44nm,1.2s
KSRS Korea Array 50.26 332 P P **08 25 07.0 -0.1**
6.9nm,0.8s,baz=149,slow=8.5,SNR=32
KS15 Wonju Array Si 50.27 332 *e*P P **08 25 07.0 -0.2**
MDSI Maura Dua 50.35 269 P P **08 25 09.0 +0.7**
20nm,1.6s
NJ2 Nanjing 51.26 320 *e*P P **08 25 15.3 +0.5**
NJ2 pmax pmax
comp=Z,13nm,0.5s
MYKOM Kota Tinggi 51.44 277 P P **08 25 17.0 +0.5**
WHN Wuhan 53.31 316 ⇑P P **08 25 26.7 -3.3**
SDSI Sungai Dareh 53.45 274 P P **08 25 30.9 -0.5**
32nm,1.4s,1µm
USRK Ussuriysk Ar. 54.35 340 P P **08 25 37.2 -0.2**
3.3nm,0.8s,baz=163,slow=7.4,SNR=9.8
IPM Ipoh 54.69 280 *e*P P **08 25 40.2 -0.3**
44nm,1.1s
IPM Ipoh 54.69 280 P P **08 25 41.0 +0.5**
PANO Nakornpanom 54.76 296 P P **08 25 42.8 +2.0**
0.3nm,0.9s,74nm
KHU Kahuku 55.11 61 *e*P P **08 25 44.6 +1.0**
140nm,1.1s
KULM Kulim 55.22 281 *e*P P **08 25 43.6 -0.7**
18nm,0.7s
KULM Kulim 55.22 281 P P **08 25 44.0 -0.2**
SKNT Sakolnakorn 55.26 296 P P **08 25 45.8 +1.3**
15nm,0.8s
PPT2 Papeete2 55.43 107 *e*LQ LQ 08 39 40.9
PPT2 *e*LR LR 08 41 36.6
comp=Z,910nm,29.5s,baz=276
MNSI Mandailing Nat 55.51 275 P P **08 25 45.3 -1.0**
59nm,0.8s
MDJ Mudanjiang 55.56 338 *e*P P **08 25 45.9 -0.2**
14nm,1.2s
SKLT Songkhla 55.63 283 P P **08 25 47.8 +0.6**
13nm,0.9s
TBI Tubuai 56.17 114 *e*LQ LQ 08 40 05.0
400nm,30.8s
TBI *e*LR LR 08 42 15.3
comp=Z,625nm,26.0s,baz=284

PSI Prapat 56.46 278 *e*P P **08 25 52.0 -1.3**
10nm,0.6s
ENH Enshi 56.62 313 *e*P P **08 25 53.9 -0.2**
8.9nm,0.8s
CHAI Chaiyaphum 56.71 294 P P **08 25 55.9 +1.1**
23µm,0.8s
GYA Guiyang 56.87 307 ⇑*i*P P **08 25 57.3 +1.3**
GYA pP pwP 08 26 12.0 +1.0
GYA PP PP **08 28 06.6 +3.7**
GYA S S **08 33 44.2 -2.3**
GYA sS sS 08 34 17.0 +9.0
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,120nm,5.7s
GYA LR LR
comp=N,230nm,19.9s
GYA LR LR
comp=E,210nm,20.0s
GYA LR LR
comp=Z,250nm,19.8s
SLVN Son La 56.94 300 *e*P P **08 25 55.5 -1.1**
27nm,1.2s
GSI Gunungsitoli 57.56 276 P P **08 26 00.3 -0.7**
68nm,0.9s
KCSI Kotacane, Aceh 57.72 278 P P **08 26 00.2 -1.9**
21nm,0.6s,634nm
PBKT Sadao Pong 57.84 294 P P **08 26 05.0 +2.2**
5.2nm,1.1s
UTTA Uttaradit 58.60 295 P P **08 26 09.9 +1.8**
41µm,1.1s,427µm
NANT Nan 58.82 296 P P **08 26 10.6 +0.9**
69µm,1.0s,652µm
KLR Kul'dur 58.89 343 P P **08 26 09.3 -0.2**
4.5nm,0.6s,baz=19,slow=21,SNR=8.5
XAN Xi'an 59.07 316 P P **08 26 10.9 -0.3**
XAN pmax pmax
comp=Z,12nm,0.7s
XAN pmax pmax
comp=Z,69nm,4.5s
XAN Xi'an 59.07 316 *e*P P **08 26 11.0 -0.2**
8.8nm,0.6s
MLSI Meulaboh, Aceh 59.19 279 P P **08 26 11.6 -0.7**
66nm,1.0s
PETK Petropavlovsk- 59.29 2 P P **08 26 12.7 +0.4**
2.6nm,0.5s,baz=145,slow=6.2,SNR=7.5
PEA1 Petropavlovsk- 59.30 2 *e*P P **08 26 12.7 +0.4**
KMI Kunming 59.45 304 P P **08 26 15.7 +1.5**
KMI pP sP 08 26 36.5 +4.0
KMI S S **08 34 13.5 -7.0**
KMI pmax pmax
comp=Z,59nm,1.0s
KMI pmax pmax
comp=Z,120nm,3.1s
KMI LR LR
comp=N,160nm,27.2s
KMI LR LR
comp=E,240nm,20.9s
KMI LR LR
comp=Z,220nm,27.3s
LAMP Lampang 59.68 296 P P **08 26 17.2 +1.6**
62µm,0.9s
PAYA Payao 59.75 297 P P **08 26 17.3 +1.2**
77µm,0.9s,652µm
CM31 Chiang Mai Arr 60.28 295 *e*P P **08 26 21.1 +1.4**
CMAR Chiang Mai Arr 60.28 295 P P **08 26 21.1 +1.4**
21nm,0.9s,baz=112,slow=5.0,SNR=62
CMAR LR LR 08 52 46.7
comp=Z,48nm,19.4s,baz=102,slow=36
CMMT Chiang Mai 60.39 296 P P **08 26 21.6 +1.1**
15nm,1.1s
CHTO Chiang Mai 60.39 296 *e*P P **08 26 19.7 -0.8**
37nm,1.2s
CD2 Chengdu 61.21 310 *e*P P **08 26 26.0 +0.1**
HHC Hu-ho-hao-te 61.43 324 *e*P P **08 26 30.2 +2.9**
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,89nm,6.8s
HHC LR LR
comp=N,190nm,19.9s
HHC LR LR
comp=E,170nm,20.8s
HHC LR LR
comp=Z,910nm,20.8s
HIA Hailar 63.24 335 *e*P P **08 26 39.2 +0.1**
10nm,0.8s
LZH Lanzhou 63.68 315 *e*P P **08 26 44.2 +1.7**
LZH pP sP 08 27 05.7 +4.4
LZH sP PcP 08 27 13.1 -5.3
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.0s
LZH LR LR
comp=N,190nm,13.0s
LZH LR LR
comp=E,150nm,14.3s
LZH LR LR
comp=Z,200nm,13.6s
GTA Gaotai 68.10 317 *e*P P **08 27 11.4 +0.6**
GTA pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 68.33 328 *e*P P **08 27 12.6 +0.5**
4.1nm,0.5s
SONA0 Songino Array 68.67 327 *e*P P **08 27 14.4 +0.2**
SONM Songino Array 68.67 327 P P **08 27 14.4 +0.2**
2.9nm,0.5s,baz=139,slow=5.3,SNR=6.5
SHL Shillong 68.75 300 *e*P P **08 27 15.6 +0.4**
85nm,0.8s
SHL Shillong 68.75 300 ||*i*P P **08 27 17.0 +1.8**
LSA Lhasa 70.70 304 *e*P P **08 27 27.0 -0.5**
13nm,0.8s
VNDA Vanda 71.22 178 P P **08 27 29.6 +0.4**
3.6nm,1.0s,baz=334,slow=6.1,SNR=10
VNDA Vanda 71.22 178 *e*P P **08 27 29.4 +0.2**
VNDA *e*PcP P **08 27 29.5 +0.3**
SBA Scott Base 71.73 177 *e*P P **08 27 31.6 -0.7**
7.2nm,1.3s
RAMN Ramie 73.69 300 *e*P P **08 27 45.3 +0.1**
14nm,0.6s
JIRN Jiri 74.24 301 *e*P P **08 27 48.3 -0.2**
GUN Gumba 74.57 301 *e*P P **08 27 50.5 +0.1**
54nm,0.8s
BILL Bilibino 74.67 4 *e*P P **08 27 50.1 +0.4**
6.8nm,1.0s
PKI Pulchoki 74.88 301 *e*P P **08 27 52.2 0.0**
73nm,1.3s
PKIN Phulchoki 74.89 301 *e*P P **08 27 52.2 0.0**
31nm,0.9s
KKN Kakani 75.05 301 *e*P P **08 27 53.1 +0.1**
26nm,0.6s
DMN Daman 75.15 301 *e*P P **08 27 53.6 0.0**
56nm,0.7s
KOLN Koldanda 76.48 300 *e*P P **08 28 01.0 -0.2**
45nm,0.9s
DANN Dangsing 76.49 301 *e*P P **08 28 00.9 -0.4**
29nm,0.7s
PYUN Piuthan 77.09 301 *e*P P **08 28 04.5 -0.1**
49nm,1.0s
SVW2 Sparrevohn 77.51 22 *e*P P **08 28 07.2 +1.2**
10nm,1.5s
WMQ Urumqi 78.19 317 *e*P P **08 28 11.2 +1.0**
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ pmax pmax
comp=Z,270nm,4.9s
WMQ LR LR
comp=N,870nm,28.7s
WMQ LR LR
comp=E,600nm,28.7s
WMQ LR LR
comp=Z,270nm,27.9s
CNPM China Poot 78.29 25 *e*P P **08 28 09.5 -0.9**
23nm,1.3s
SUA Susitna One 79.60 23 *e*P P **08 28 17.8 +0.2**
5.9nm,1.2s
CAST Castle Rocks 80.23 21 *e*P P **08 28 19.9 -0.9**
3.4nm,0.8s
MK32 Makanchi Array 82.76 319 *e*P P **08 28 34.6 0.0**
MKAR Makanchi Array 82.76 319 P P **08 28 34.6 0.0**
2.8nm,0.7s,baz=101,slow=6.3,SNR=23
MKAR LR LR 09 06 29.9
comp=Z,31nm,18.7s,baz=92,slow=36
ILAR Eielson Array 82.88 22 P P **08 28 34.4 -0.4**
1.0nm,0.7s,baz=243,slow=5.0,SNR=9.6
ILB Eielson Array 82.88 22 *e*P P **08 28 34.4 -0.4**

MAKZ Makanchi 82.97 319 *e*P P **08 28 35.7 0.0**
5.5nm,0.8s
DOT Dot Lake 83.38 23 *e*P P **08 28 38.4 +0.9**
2.2nm,0.8s
ZALV Zalesovo Beam 83.51 326 P P **08 28 37.3 -1.0**
3.1nm,0.6s,baz=114,slow=4.1,SNR=8.8
ZAA1 Zalesovo Array 83.51 326 *e*P P **08 28 37.3 -1.0**
QSPA South Pole Qui 83.61 180 *e*P P **08 28 38.6 -0.2**
14nm,0.8s
TOLK Toolik Lake Re 84.10 18 P P **08 28 42.4 +1.4**
baz=236
MAW Mawson 84.88 203 P P **08 28 44.9 -0.1**
4.2nm,0.5s,baz=99,slow=6.0,SNR=32
MAW Mawson 84.88 203 *e*P P **08 28 44.9 -0.1**
1.1nm,0.6s
KSH Kashi 85.41 310 P P **08 28 51.1 +2.7**
KSH pP sP 08 29 12.1 +5.1
KSH PP PP **08 32 12.5 +5.4**
KSH S S **08 39 13.4 -2.8**
KSH SS SS **08 44 49.4 -2.8**
KSH pmax pmax
comp=Z,16nm,1.0s
KSH pmax pmax
comp=Z,370nm,5.3s
KSH LR LR
comp=N,150nm,8.7s
KSH LR LR
comp=E,260nm,7.4s
KSH LR LR
comp=Z,260nm,11.3s
KURBB Kurchatov Arra 86.21 322 P P **08 28 51.0 -0.9**
0.7nm,0.6s,baz=97,slow=5.1,SNR=8.8
AAK Ala-Archa 87.13 313 P P **08 28 56.3 -0.5**
2.2nm,0.5s,baz=157,slow=4.6,SNR=2.5
EPYK Eagle Plains 87.37 22 *e*P P **08 28 59.9 +2.5**
5.5nm,0.8s
EPYK Eagle Plains 87.37 22 P P **08 28 58.7 +1.4**
baz=248
J01E Myrtle Point 88.02 46 P P **08 29 01.6 +0.8**
baz=260
NRIK Noril'sk 88.05 341 P P **08 28 59.4 -1.1**
2.6nm,0.5s,baz=128,slow=6.0,SNR=4.3
O02D Mt. Diablo Mer 88.34 49 P P **08 29 03.2 +0.6**
baz=260
O03E Paynes Creek 89.10 49 P P **08 29 06.1 0.0**
baz=261
AFDM Forest Hills D 89.53 51 *e*P P **08 29 08.6 +0.5**
5.5nm,0.9s
CMB Columbia Colle 89.85 52 *e*P P **08 29 08.0 -1.7**
2.2nm,0.9s
PKM Mcpherson Peak 89.88 55 P P **08 29 10.0 0.0**
baz=262
SNCC San Nicolas Is 89.89 57 P P **08 29 09.4 -0.5**
baz=262
SBC Santa Barbara 89.90 55 P P **08 29 09.6 -0.3**
baz=262
J05D Fort Rock, OR 89.98 47 P P **08 29 10.7 +0.4**
baz=261
I05D Terrebonne, OR 90.06 46 P P **08 29 10.8 +0.3**
baz=261
KKAR Karatay Array 90.09 313 *e*P P **08 29 08.5 -2.1**
1.3nm,0.8s
B05A Bryant 90.16 42 P P **08 29 11.0 +0.2**
baz=261
RUBR Rubicon Trail 90.17 51 *e*P P **08 29 11.0 -0.4**
9.5nm,0.9s
MOD Modoc Plateau 90.46 48 *e*P P **08 29 12.6 0.0**
6.7nm,1.2s
VES Vestal, Richgr 90.59 54 P P **08 29 13.4 +0.3**
baz=263
VCNR Virginia City 90.60 51 *e*P P **08 29 13.2 -0.1**
6.2nm,1.0s
PNTR Pine Nut 90.61 51 *e*P P **08 29 12.0 -1.4**
9.9nm,0.9s
WAKR Walker 90.66 51 *e*P P **08 29 12.5 -1.1**
4.7nm,0.9s
MDPB Devils Postpil 90.82 52 *e*P P **08 29 14.5 0.0**
4.7nm,0.9s
CIS Catalina Islan 90.83 57 P P **08 29 14.4 0.0**
baz=263
PAHR Pah Rah Range 90.86 50 *e*P P **08 29 15.4 +1.0**
6.6nm,1.0s
YERR Yerington 90.87 51 *e*P P **08 29 15.3 +0.7**
6.1nm,1.0s
ISA Isabella, Lake 91.06 54 *e*P P **08 29 16.2 +0.8**
3.2nm,1.0s
ISA Isabella, Lake 91.06 54 P P **08 29 15.5 +0.1**
baz=263
MWC Mount Wilson 91.23 56 *e*P P **08 29 16.4 0.0**
25nm,1.0s
EDW2 Edwards Air Fo 91.36 55 P P **08 29 17.3 +0.5**
baz=263,SNR=6.4
RYN Ryan 91.38 51 *e*P P **08 29 17.8 +0.8**
9.1nm,1.0s
CWC Cottonwood Cre 91.47 54 P P **08 29 17.7 +0.2**
baz=263
NV01 Mina Array Sit 91.53 52 *e*P P **08 29 18.6 +0.9**
NVAR Mina Array Bea 91.53 52 P P **08 29 18.7 +0.9**
10nm,0.9s,baz=253,slow=6.4,SNR=59
BFSC Mount Baldy Ra 91.56 56 P P **08 29 18.4 +0.6**
baz=263,SNR=5.3
BVAR Borovoye Array 91.64 323 P P **08 29 15.9 -1.7**
2.0nm,0.7s,baz=79,slow=7.7,SNR=8.4
LRMC Laurel Mtn Rad 91.68 55 P P **08 29 19.1 +0.7**
baz=263,SNR=9.9
KVN Kaiserville 91.76 51 *e*P P **08 29 19.3 +0.5**
8.2nm,0.9s
DAC Darwin (Calif) 91.84 54 *e*P P **08 29 17.5 -1.7**
9.3nm,0.9s
109C Camp Elliot, M 91.87 57 P P **08 29 19.6 +0.5**
baz=264
MURC Murrieta 91.87 57 P P **08 29 19.9 +0.7**
baz=264
G08A Pilot Rock 91.87 45 *e*P P **08 29 18.3 -0.7**
4.9nm,1.0s
MPMC Manual Prospec 91.90 54 P P **08 29 20.1 +0.6**
baz=264,SNR=11
J08A Circle Bar Ran 91.99 47 *e*P P **08 29 18.9 -0.6**
3.2nm,1.0s
GRAC Grapevine Rang 92.11 53 P P **08 29 20.8 +0.6**
baz=264
BBRC Big Bear Solar 92.17 56 P P **08 29 21.2 +0.4**
baz=264
RRX Edison Barstow 92.17 55 P P **08 29 21.4 +0.9**
baz=264
GSC Goldstone, Bar 92.37 55 *e*P P **08 29 21.6 0.0**
5.0nm,0.9s
GSC Goldstone, Bar 92.37 55 P P **08 29 22.5 +1.0**
baz=264
MONP2 Monument Peak 92.44 57 P P **08 29 22.9 +0.9**
baz=264
FURC Furnace Creek, 92.45 54 P P **08 29 21.9 +0.2**
baz=264,SNR=14
PFO Pinyon Flats O 92.48 57 *e*P P **08 29 22.9 +0.8**
6.8nm,0.9s
PFO Pinyon Flats O 92.48 57 P P **08 29 22.6 +0.5**
baz=264
BMN Battle Mountai 92.59 50 *e*P P **08 29 22.7 +0.2**
7.4nm,1.1s
IKP In-Ko-Pah, Jac 92.68 58 P P **08 29 23.4 +0.4**
baz=264
HEC Hector,Ludlow 92.71 55 P P **08 29 23.6 +0.5**
baz=264
SYO Syowa Base 92.84 199 ||*e*pP pP 08 29 42.0 +5.4
SHOC Shoshone, Teco 92.86 54 P P **08 29 24.2 +0.5**
baz=264,SNR=9.0
BELC Belle Mtn. Jos 92.90 56 P P **08 29 24.7 +0.6**
baz=264,SNR=15
SWSC Sam W. Stewart 92.97 57 P P **08 29 24.8 +0.7**
baz=264
BMO Blue Mountains 92.99 45 *e*P P **08 29 23.9 -0.3**
3.8nm,1.3s
TPNV Topopah Spring 92.99 53 *e*P P **08 29 25.7 +1.2**
11nm,1.1s
TPNV Topopah Spring 92.99 53 P P **08 29 25.1 +0.7**
baz=264
TUQ Turquoise Moun 93.10 55 P P **08 29 25.6 +0.6**
baz=264
F10A Beach Ranch, E 93.16 44 *e*P P **08 29 24.1 -0.8**
4.1nm,0.9s
GMRC Granite Mounta 93.26 56 P P **08 29 26.2 +0.5**
baz=265,SNR=11
BC3 Big Chuckawall 93.32 57 P P **08 29 27.3 +1.3**
baz=265,SNR=5.8
NEW Newport 93.46 42 *e*P P **08 29 25.5 -0.7**
4.3nm,1.0s
NEW Newport 93.46 42 P P **08 29 25.9 -0.3**
baz=264

IRM	Iron Mountain	93.62	56	P		P	08 29 28.4	+1.2
	baz=265,SNR=17							
R11A	Troy Canyon, C	93.65	52	*e*P		P	08 29 28.1	+0.7
	6.9nm,1.1s							
R11A	Troy Canyon, C	93.65	52	P		P	08 29 28.3	+0.9
	baz=265							
GLA	Glamis	93.79	57	P		P	08 29 29.2	+1.1
	baz=265							
SHPR	Sheep Range	93.82	54	*e*P		P	08 29 28.9	+0.7
	8.6nm,1.0s							
Y12C	Blythe	94.10	57	P		P	08 29 30.1	+0.7
	baz=265							
ELK	Elko	94.12	50	*e*P		P	08 29 30.1	+0.5
	3.6nm,1.0s							
PDMCI	Parker Dam,Lak	94.46	56	P		P	08 29 31.3	+0.3
	baz=265							
W13A	Hualapai Mount	94.74	55	*e*P		P	08 29 33.5	+0.9
	6.0nm,0.8s							
PSUT	Pine Spring	95.02	52	*e*P		P	08 29 34.7	+1.0
	7.8nm,1.2s							
CCUT	Cedar City	95.33	53	*e*P		P	08 29 36.9	+1.7
	2.6nm,0.8s							
LCMT	Little Creek M	95.39	53	*e*P		P	08 29 36.9	+1.5
	6.0nm,1.3s							
KNB	Kanab	95.73	53	*e*P		P	08 29 38.5	+1.5
	12nm,1.4s							
YKA	Yellowknife Ar	95.90	28	P		P	08 29 36.6	-0.3
	0.8nm,0.8s,baz=270,slow=4.6,SNR=9.0							
YKA				PKKPbc		PKKPbc	08 46 24.4	-3.9
	0.3nm,0.4s,baz=71,slow=3.2,SNR=5.0							
YKB5	Yellowknife Ar	95.90	28	*e*P		P	08 29 36.6	-0.3
YKB5				*e*PKKPbc		PKKPbc	08 46 24.4	-3.9
HVU	Hansel Valley	96.05	49	*e*P		P	08 29 37.8	-0.5
	3.2nm,1.0s							
U15A	North Rim	96.12	54	*e*P		P	08 29 40.2	+1.3
	4.9nm,0.9s							
MTPU	Mount Pierson	96.30	52	*e*P		P	08 29 41.6	+1.8
	5.2nm,0.9s							
BOZ	Bozeman (W)	97.04	45	P		P	08 29 42.6	-0.1
	baz=268							
EGMT	Eagleton	98.37	42	P		P	08 29 48.6	+0.1
	baz=270							
BW06	Boulder Array	98.47	48	P		P	08 29 49.2	-0.2
	baz=269							
PD31	Pinedale Array	98.47	48	*e*P		P	08 29 48.5	-0.8
PDAR	Pinedale Array	98.47	48	P		P	08 29 48.5	-0.8
	0.9nm,0.8s,baz=260,slow=2.6,SNR=7.1							
PDAR				LR		LR	09 09 50.7	
	comp=Z,48nm,19.4s,baz=198,slow=33							
PV04	Paradox Valley	98.89	52	*e*P		P	08 29 51.5	+0.2
	3.2nm,0.9s							
PV03	Paradox Valley	98.93	52	*e*P		Pdif	08 29 52.5	+1.0
	7.4nm,1.4s							
PV12	Saucer Basin,	98.97	52	*e*P		Pdif	08 29 52.6	+1.0
	7.4nm,1.2s							
LAO	LASA Array	100.80	44	P		Pdif	08 29 59.3	-0.1
	baz=272							
N23A	Red Feather La	101.17	50	*e*Pdif		Pdif	08 30 03.0	+1.5
N23A	Red Feather La	101.17	50	P		Pdif	08 30 01.1	-0.4
	baz=271							
TXAR	Lajitas Array	103.19	61	PP		PKiKP	08 34 27.6	-2.3
	0.1nm,0.5s,baz=277,slow=7.0,SNR=2.2							
G40A	Rib Lake	112.04	44	P		PKiKP	08 34 45.3	-0.6
	baz=284							
PLCA	Paso Flores	117.38	143	PKP		PKPdf	08 34 55.6	-0.8
	1.1nm,0.8s,baz=173,slow=2.2,SNR=2.9							
452A	Marianna	118.98	58	P		PKPdf	08 34 59.0	-0.6
	baz=281							
152A	Waverly Hall	119.02	56	P		PKPdf	08 34 58.8	-0.8
	baz=282							
F52A	Sundridge	119.13	40	P		PKPdf	08 34 58.9	-0.6
	baz=293							
Z52A	Williamson	119.16	56	P		PKPdf	08 34 58.7	-1.2
	baz=282							
D52A	ZEK Kipawa Sen	119.23	39	P		PKPdf	08 34 59.0	-0.6
	baz=294							
Y52A	Lilburn	119.31	55	P		PKPdf	08 34 58.9	-1.3
	baz=283							
353A	Camilla	119.70	58	P		PKPdf	08 34 59.6	-1.4
	baz=281							
V53A	Saluda	119.88	52	P		PKPdf	08 35 00.4	-0.9
	baz=285							
U53A	Fall Branch	119.88	52	P		PKPdf	08 34 60.0	-1.3
	baz=285							
P53A	Whipple	119.89	48	P		PKPdf	08 35 00.5	-0.7
	baz=288							
BOSA	Boshof	120.21	232	PKP		PKPdf	08 35 00.9	-1.3
	1.4nm,0.6s,baz=205,slow=3.4,SNR=5.8							
454A	Quitman	120.32	58	P		PKPdf	08 35 01.6	-0.6
	baz=281							
X54A	Belton	120.50	54	P		PKPdf	08 35 01.8	-0.6
	baz=284							
W56A	Indian Trail	121.77	52	P		PKPdf	08 35 04.2	-0.6
	baz=286							
LPAZ	La Paz	131.99	118	PKP		PKPdf	08 35 25.7	0.0
	1.0nm,0.8s,baz=27,slow=4.5,SNR=3.5							
SDV	Santo Domingo	134.98	84	*e*PKPdf		PKPdf	08 35 30.1	-0.8
PTGA	Pitinga	144.65	100	*e*PKPdf		PKPab	08 35 43.3	-3.6
BDFB	Brasilia	148.61	134	PKPbc		PKPbc	08 35 57.2	-1.3
	2.9nm,0.8s,baz=298,slow=2.3,SNR=4.0							
TORD	Torodi Ar. Bea	152.61	286	PKPbc		PKPbc	08 36 07.2	-0.7
	1.9nm,0.7s,baz=56,slow=2.4,SNR=12							
TORD				PKPab		PKPab	08 36 17.5	-1.1
	6.1nm,0.9s,baz=69,slow=3.6,SNR=7.1							
TOA1	Torodi Ar. Sit	152.61	286	*e*PKPbc		PKPbc	08 36 07.2	-0.7
TOA1				*e*PKPab		PKPab	08 36 17.5	-1.1

MOS ***06*** *08:21:14.6±0.9, 11°.37S×166°.33E, h33km, mb5.1/34, Error ellipse: s-maj=8.5km s-min=8.3km az=55.9*
NEIC ***06*** *08:21:16.3±1.4, 11°.44S×166°.34E, h35km, mb4.9/119, Error ellipse: s-maj=16.4km s-min=8.9km az=54.0*
ISCJB ***06*** *08:21:17.4±0.1, 11°.48S±0°.03×166°.28E±0°.03, h59km, mb4.8/147, MS4.1/19, Error ellipse: s-maj=4.5km s-min=3.7km az=2.3*
IDC ***06*** *08:21:18.8±2.1, 11°.38S×166°.34E, h56km±17km, mb4.4/26, mb1 4.5/29, mb1mx4.5/36, mbtmp4.7/29, ML3.2/2, MS3.9/16, Ms1 3.9/16, ms1mx3.8/24, Error ellipse: s-maj=14.7km s-min=11.2km az=80.0*
GCMT ***06*** *08:21:19.3±0.3, 11°.44S±0°.02×165°.88E±0°.03, h45km, MW5.1/55, Moment Tensor Solution. s55,c62; s51,c70; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr6.19±.24; Mθθ-1.46±.16; Mφφ-4.73±.15; Mrθ-0.57±.13; Mφφ1.37±.13; Mθφ0.92±.16; Best double couple: M0 5.81000×10^16^ NP1:φs 338.00000°, δ50.00000°, λ88.00000°. NP2: φs 162.00000°, δ40.00000°, λ93.00000°. Principal axes: T 6.2940, Plg84.0000°, Azm231.0000°; N -0.9690, Plg2.0000°, Azm340.0000°; P -5.3260, Plg5.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BJI ***06*** *08:21:19.0±0.0, 11°.00S×166°.64E, h69km, mb5.1/41, mB5.1/30, Ms4.7/12, Ms7 4.4/12*

ISC 06 08:21:18.9±0.3, 11°.48S±0°.05×166°.33E±0°.05, h59km, n267, σ0.92/276, mb4.8/148, MS4.1/20, 9C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.60	287	*e*P		Pn	08 22 52.0	-1.4
HNR				*e*S		Sn	08 24 10.0	+2.7
HNR	Honiara	6.60	287	P		Pn	08 22 53.4	0.0
	107nm,0.3s,baz=286,slow=3.1,SNR=16							
HNR				S		Sn	08 24 06.3	-1.0
	baz=49,slow=19,SNR=2.5							
HNR	Honiara	6.60	287	*e*Pn		Pn	08 22 53.8	+0.4
MARNC	Mare, Loyalty	10.08	171	*e*Pn		Pn	08 23 42.4	+1.4
DZM	Mont Dzumac	10.54	179	P		Pn	08 23 49.0	+1.7
	1.7nm,0.3s,baz=306,slow=13,SNR=19							
DZM				S		Sn	08 25 41.2	-2.6
	baz=294,slow=20,SNR=3.3							
DZM	Mont Dzumac	10.54	179	*e*Pn		Pn	08 23 49.6	+2.3
DZM				*e*Sn		Sn	08 25 41.2	-2.6
ONTNC	Ouen Toro	10.77	179	*e*Pn		Pn	08 23 48.7	-1.7
PINNC	Pines Island,	11.13	175	*e*Pn		Pn	08 23 52.2	-3.1
FUNA	Funafuti	13.00	78	*e*Pn		Pn	08 24 23.0	+2.1
TARA	Tarawa	14.33	28	*e*Pn		Pn	08 24 39.6	+0.8
PMG	Port Moresby	18.97	274	P		Pn	08 25 37.6	+0.8
	0.5nm,0.3s,baz=319,slow=19,SNR=1.5							
PMG				LR		LR	08 32 13.9	
	comp=Z,918nm,21.8s,baz=108,slow=34							
PATS	Pohnpei	19.87	336	*e*P		P	08 25 46.2	+0.8
	308nm,1.1s							
EIDS	Eidsvold	19.98	224	*e*P		P	08 25 47.1	+0.6
	16nm,1.0s							
MANU	Manus Island	21.02	295	*e*P		P	08 25 58.4	+0.5
	231nm,0.2s							
LHI	Lord Howe Isla	21.05	198	*e*P		P	08 25 57.9	-0.1
	40nm,1.1s							
CTA	Charters Tower	21.12	244	P		P	08 26 00.6	+1.7
	14nm,0.7s,baz=82,slow=13,SNR=8.0							
CTAO	Charters Tower	21.12	244	*e*P		P	08 25 59.3	+0.4
	17nm,0.8s							
CTAO	Charters Tower	21.12	244	*e*P		P	08 25 59.3	+0.4
CTAO				pmax		pmax		
	comp=Z,17nm,0.8s							
COEN	Coen	22.72	261	*e*P		P	08 26 15.9	-0.2
	comp=Z,12nm,0.8s							
ARMA	Armidale	23.27	214	*e*P		P	08 26 21.0	-0.6
OUZ	Omahuta	24.54	166	*e*P		P	08 26 34.0	+1.0
	comp=Z,51nm,1.4s							
JAY	Jayapura	26.93	287	LR		LR	08 39 07.2	
	comp=Z,368nm,18.1s,baz=104,slow=40							
HIZ	Hauiti	27.98	166	*e*P		P	08 27 03.8	-0.3
	comp=Z,36nm,1.2s							
MXZ	Matakaoa Point	28.11	160	*e*P		P	08 27 05.5	+0.3
	comp=Z,146nm,1.2s							
URZ	Urewera	28.36	162	P		P	08 27 08.3	+0.9
	comp=Z,5.8nm,0.5s,baz=235,slow=7.7,SNR=7.5							
URZ	Urewera	28.36	162	*e*P		P	08 27 07.1	-0.2
	comp=Z,24nm,1.4s							
CAN	Canberra	28.48	211	*e*P		P	08 27 09.0	+0.4
	comp=Z,19nm,1.3s							
CAN	Canberra	28.48	211	*e*P		P	08 27 09.0	+0.4
CAN				pmax		pmax		
	comp=Z,19nm,1.3s							
BKZ	Black Stump Fm	29.02	164	*e*P		P	08 27 13.3	-0.1
	comp=Z,16nm,0.6s							
H11S2	WAKE ISLAND Hy	29.78	1	T		T	08 57 59.3	
	baz=181,slow=74,SNR=37							
H11S3	WAKE ISLAND Hy	29.78	1	T		T	08 57 59.9	
	baz=181,SNR=24							
H11S1	WAKE ISLAND Hy	29.80	1	T		T	08 57 58.1	
	baz=181,slow=74,SNR=31							
BFZ	Birch Farm	30.38	165	*e*P		P	08 27 25.0	-0.2
	comp=Z,86nm,1.4s							
STKA	Stephens Creek	30.53	224	P		P	08 27 27.6	+0.8
	comp=Z,7.7nm,0.7s,baz=32,slow=9.3,SNR=11							
STKA				PcP		PcP	08 30 24.9	+0.3
	comp=Z,5.0nm,0.7s,baz=99,slow=3.4,SNR=4.7							
STKA				ScP		ScP	08 34 01.8	-0.5
	comp=Z,1.3nm,0.6s,baz=27,slow=2.3,SNR=2.2							
STKA				LR		LR	08 38 38.7	
	comp=Z,555nm,21.5s,baz=38,slow=34							
STKA	Stephens Creek	30.53	224	*e*P		P	08 27 27.8	+1.0
	comp=Z,1.8nm,0.8s							
STKA				*e*PcP		PcP	08 30 24.7	+0.1
STKA	Stephens Creek	30.53	224	*e*P		P	08 27 27.8	+1.0
STKA				*e*			08 30 24.7	
STKA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
SNZO	South Karori	30.61	168	*e*P		P	08 27 27.8	+0.5
	comp=Z,58nm,1.1s							
THZ	Tophouse	30.71	170	*e*P		P	08 27 28.6	+0.3
	comp=Z,20nm,0.9s							
H11N1	WAKE ISLAND Hy	31.00	1	T		T	08 59 33.1	
	baz=182,slow=76,SNR=26							
H11N3	WAKE ISLAND Hy	31.00	1	T		T	08 59 29.3	
	baz=182,slow=76,SNR=7.9							
H11N2	WAKE ISLAND Hy	31.02	1	T		T	08 59 23.2	
	baz=182,slow=76,SNR=7.6							
KHZ	Kahutara	31.46	170	*e*P		P	08 27 33.6	-1.1
	comp=Z,26nm,1.0s							
LTZ	Lake Taylor	31.61	172	*e*P		P	08 27 35.9	-0.3
	comp=Z,27nm,0.9s							
WB2	Warramunga Arr	31.87	251	*e*P		P	08 27 38.4	-0.3
	comp=Z,32nm,1.2s							
WRAB	Tennant Creek	31.87	251	*e*P		P	08 27 38.3	-0.4
	comp=Z,32nm,1.1s							
WRAB	Tennant Creek	31.87	251	*e*P		P	08 27 38.3	-0.4
WRAB				pmax		pmax		
	comp=Z,32nm,1.1s							
TOO	Toolangi	32.01	212	*e*P		P	08 27 40.7	+0.9
	comp=Z,10nm,1.0s							
TOO	Toolangi	32.01	212	*e*P		P	08 27 40.7	+0.9
TOO				pmax		pmax		
	comp=Z,11nm,1.0s							
FOZ	Fox Glacier	32.08	175	*e*P		P	08 27 41.7	+1.5
	comp=Z,44nm,1.1s							
OXZ	Oxford	32.12	172	*e*P		P	08 27 40.8	+0.3
	comp=Z,45nm,1.2s							
RPZ	Rata Peaks	32.38	174	P		P	08 27 43.7	+0.9
	comp=Z,21nm,0.5s,baz=356,slow=5.6,SNR=28							
RPZ	Rata Peaks	32.38	174	*e*P		P	08 27 43.8	+0.9
	comp=Z,24nm,0.6s							
CRLZ	Canterbury Las	32.44	171	*e*P		P	08 27 44.5	+1.1
	comp=Z,43nm,1.2s							
MQZ	McQueen's Vall	32.58	171	*e*P		P	08 27 44.8	+0.3
	comp=Z,28nm,0.8s							
LBZ	Lake Benmore	32.96	175	*e*P		P	08 27 49.0	+1.1
	comp=Z,25nm,1.3s							
AS31	Alice Springs	33.12	244	*e*P		P	08 27 49.2	-0.4
	comp=Z,4.0nm,0.6s							
ASAR	Alice Springs	33.12	244	P		P	08 27 49.3	-0.4
	comp=Z,14nm,0.8s,baz=68,slow=10.0,SNR=46							
ASAR				PcP		PcP	08 30 31.8	-0.1
	comp=Z,5.8nm,0.8s,baz=72,slow=2.8,SNR=13							
ASAR				ScP		ScP	08 34 12.7	+1.4
	comp=Z,1.2nm,1.0s,baz=70,slow=3.4,SNR=3.2							
ASAR				LR		LR	08 40 05.1	
	comp=Z,459nm,21.4s,baz=68,slow=34							
WKZ	Wanaka	33.31	177	*e*P		P	08 27 52.1	+1.1
	comp=Z,4.6nm,0.5s							
ODZ	Otahua Downs	33.65	174	*e*P		P	08 27 54.6	+0.7
	comp=Z,28nm,1.4s							
MLZ	Mavora Lakes	33.81	178	*e*P		P	08 27 56.1	+0.7
	comp=Z,32nm,1.4s							
DCZ	Deep Cove	33.88	179	*e*P		P	08 27 56.1	+0.2
	comp=Z,13nm,1.2s							
WHZ	Wether Hill Ro	34.33	178	*e*P		P	08 27 59.6	-0.1
	comp=Z,12nm,1.2s							
BBOO	Buckleboo	34.96	228	*e*P		P	08 28 05.0	-0.5
	comp=Z,17nm,0.9s							
TAU	Tasmania Unive	35.41	204	*e*P		P	08 28 08.3	-0.8
	comp=Z,70nm,1.5s							
TAU	Tasmania Unive	35.41	204	*e*P		P	08 28 08.3	-0.8
TAU				pmax		pmax		
	comp=Z,70nm,1.5s							
FITZ	Fitzroy Crossi	39.83	256	*e*P		P	08 28 45.0	-1.8
	comp=Z,14nm,0.7s							
BATI	Baumata	41.90	267	P		P	08 29 04.0	0.0
	comp=Z,14nm,0.5s,baz=325,slow=2.2,SNR=4.7							
PPT	Papeete	43.03	103	LR		LR	08 44 57.6	
	comp=Z,216nm,19.3s,baz=288,slow=33							
PSA00	Pilbara Seismi	45.53	251	*e*P		P	08 29 33.9	+0.8
	comp=Z,11nm,1.0s							
KAPI	Kappang	46.50	274	P		P	08 29 41.5	+0.8
	comp=Z,7.8nm,0.3s,baz=110,slow=6.0,SNR=4.4							
KAPI				PcP		PcP	08 31 15.0	+0.5
	comp=Z,2.8nm,0.3s,baz=68,slow=5.4,SNR=4.1							
NWAO	Narrogin (SRO)	49.70	236	P		P	08 30 05.8	+0.5
	comp=Z,29nm,0.8s,baz=72,slow=6.2,SNR=10							
NWAO	Narrogin (SRO)	49.70	236	*e*P		P	08 30 05.6	+0.3
	comp=Z,112nm,1.5s							
NWAO				*e*P		P	08 30 05.8	+0.5
NWAO	Narrogin (SRO)	49.70	236	*e*P		P	08 30 05.6	+0.3
NWAO				pmax		pmax		
	comp=Z,112nm,1.5s							
MORW	Morawa	49.92	242	*e*P		P	08 30 07.7	+0.7
	comp=Z,16nm,0.8s							
JHJ2	Mitsune	51.05	331	*e*P		P	08 30 14.6	-0.6
	comp=Z,343nm,1.2s							
KKM	Kota Kinabalu	52.81	287	*e*P		P	08 30 29.6	+0.7
	comp=Z,106nm,1.4s							
MJAR	Matsushiro Arr	54.62	332	P		P	08 30 40.5	-1.1
	comp=Z,6.5nm,0.8s,baz=170,slow=8.7,SNR=20							
MJAR				LR		LR	08 51 45.5	
	comp=Z,67nm,21.8s,baz=210,slow=34							
MAJO	Matsushiro	54.62	332	*e*P		P	08 30 40.5	-1.1
	comp=Z,10nm,0.8s							
MAJO	Matsushiro	54.62	332	*e*P		P	08 30 40.5	-1.1
MAJO				pmax		pmax		
	comp=Z,10.0nm,0.8s							
MAT	Matsushiro	54.62	332	P		P	08 30 40.4	-1.2
MAT				S		S	08 38 04.4	-13
SBUM	Sibu	55.55	281	*e*P		P	08 30 48.5	-0.2
	comp=Z,9.6nm,1.0s							
JNU	Nakatsue	55.77	324	*e*P		P	08 30 49.6	-0.4
	comp=Z,15nm,1.0s							
TPUB	Ta-pu	56.52	308	*e*P		P	08 30 54.9	-0.6
	comp=Z,18nm,0.9s							
KSM	Kuching	57.14	279	*e*P		P	08 31 00.8	+0.7
	comp=Z,26nm,1.1s							
ASAJ	Asahikawa	59.39	340	LR		LR	08 52 24.0	
	comp=Z,171nm,21.7s,baz=170,slow=31							
KSRS	Korea Array	60.56	325	P		P	08 31 23.2	-0.1
	comp=Z,3.0nm,0.7s,baz=134,slow=6.9,SNR=16							
KSRS				LR		LR	08 56 03.6	
	comp=Z,31nm,19.0s,baz=130,slow=34							
KS15	Wonju Array Si	60.57	325	*e*P		P	08 31 23.2	-0.2
YSS	Yuzh-Sakhalins	61.87	342	*e*P		P	08 31 32.9	+1.0
	comp=Z,34nm,1.3s							
YSS	Yuzh-Sakhalins	61.87	342⇑	*e*P		P	08 31 32.5	+0.5
YSS				pmax		pmax		
	comp=Z,20nm,0.7s							
YSS				MLR		MLR		
	comp=Z,200nm,18.0s							
DLV	T Lat	61.97	290	*e*P		P	08 31 34.2	+0.7
	comp=Z,19nm,1.1s							
NJ2	Nanjing	62.73	315	*e*P		P	08 31 38.9	+0.9
NJ2				pmax		pmax		
	comp=Z,22nm,0.5s							
USRK	Ussuriysk Ar.	63.59	333	P		P	08 31 44.0	+0.5
	comp=Z,9.2nm,1.0s,baz=141,slow=6.4,SNR=21							
USRK				LR		LR	08 54 28.5	
	comp=Z,45nm,20.9s,baz=143,slow=31							
USRK	Ussuriysk Ar.	63.59	333	P		P	08 31 44.0	+0.5
PETK	Petropavlovsk-	64.75	354	P		P	08 31 50.7	-0.2
	comp=Z,3.7nm,0.9s,baz=149,slow=7.4,SNR=5.5							
PETK				LR		LR	08 54 07.8	
	comp=Z,127nm,21.5s,baz=155,slow=30							
PEA1	Petropavlovsk-	64.75	354	*e*P		P	08 31 50.7	-0.3
MDJ	Mudanjiang	65.00	332	*e*P		P	08 31 53.0	+0.3
	comp=Z,16nm,1.2s							
VNDA	Vanda	66.08	181	P		P	08 31 59.8	+0.6
	comp=Z,4.4nm,0.7s,baz=352,slow=9.5,SNR=16							
VNDA				LR		LR	08 57 07.5	
	comp=Z,109nm,19.9s,baz=357,slow=32							
VNDA	Vanda	66.08	181	*e*P		P	08 31 58.5	-0.7
CASY	Casey	66.19	201	*e*P		P	08 32 00.6	+0.5
	comp=Z,20nm,1.1s							
SBA	Scott Base	66.37	180	*e*P		P	08 32 02.9	+1.8
	comp=Z,13nm,0.9s							
SBA	Scott Base	66.37	180	*e*P		P	08 32 02.9	+1.8
SBA				pmax		pmax		
	comp=Z,13nm,0.9s							
CN2	Changchun	66.41	329	*e*P		P	08 32 00.1	-1.7
CN2				*e*pP		pwP	08 32 19.8	+0.4
CN2				*e*S		S	08 40 43.9	-3.6
CN2				*e*SS		SS	08 45 04.0	-1.4
CN2				pmax		pmax		
	comp=Z,20nm,0.7s							
CN2				pmax		pmax		
	comp=Z,200nm,5.0s							
IPM	Ipoh	66.86	280	*e*P		P	08 32 05.3	-0.1
	comp=Z,32nm,1.0s							
KLR	Kul'dur	67.68	336	P		P	08 32 09.7	0.0
	comp=Z,3.4nm,0.7s,baz=118,slow=2.3,SNR=12							
KLR				LR		LR	08 57 32.3	
	comp=Z,98nm,21.9s,baz=180,slow=32							
KLR	Kul'dur	67.68	336	*c i*P		P	08 32 09.8	0.0
KLR				pmax		pmax		
	comp=Z,8.0nm,1.1s							
PSI	Prapat	68.50	278	*e*P		P	08 32 15.5	-0.3
	comp=Z,24nm,1.0s							
PSI	Prapat	68.50	278	*e*P		P	08 32 15.5	-0.3
PSI				pmax		pmax		
	comp=Z,24nm,1.0s							
ENH	Enshi	68.61	309	*e*P		P	08 32 15.7	-0.4
	comp=Z,19nm,0.9s							
GYA	Guiyang	69.14	304	P		P	08 32 19.8	+0.3
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
BJT	Baijiatuau	69.17	321	*e*P		P	08 32 19.3	0.0
	comp=Z,8.3nm,0.9s							
BJT	Baijiatuau	69.17	321	*e*P		P	08 32 19.3	0.0
BJT				pmax		pmax		
	comp=Z,8.0nm,0.9s							
BJI	Beijing	69.18	321⇑	*i*P		P	08 32 19.3	0.0
BJI				pmax		pmax		
	comp=Z,4.0nm,1.1s							
SLVN	Son La	69.42	298	*e*P		P	08 32 22.1	+0.8
	comp=Z,11nm,1.3s							
TIY	Taiyuan	70.27	317	*e*P		P	08 32 28.1	+1.9
TIY				pmax		pmax		
	comp=Z,180nm,6.2s							
XAN	Xi'an	70.84	312	P		P	08 32 30.1	+0.5
XAN				pP		pwP	08 32 47.1	-1.2
XAN				pmax		pmax		
	comp=Z,19nm,0.8s							
XAN				pmax		pmax		
	comp=Z,81nm,4.4s							
XAN	Xi'an	70.84	312	*e*P		P	08 32 30.2	+0.5
	comp=Z,16nm,0.8s							
XAN	Xi'an	70.84	312	*e*P		P	08 32 30.2	+0.5
XAN				pmax		pmax		
	comp=Z,16nm,0.8s							
KMI	Kunming	71.84	301	P		P	08 32 37.7	+1.6
KMI				pP		PcP	08 32 55.6	+0.9
KMI				pmax		pmax		
	comp=Z,22nm,0.9s							
KMI				LR		LR		
	comp=Z,100nm,16.9s							
KMI				LR		LR		
	comp=Z,160nm,21.7s							
KMI				LR		LR		
	comp=Z,170nm,27.8s							
HHC	Hu-ho-hao-te	72.53	319	*e*P		P	08 32 40.6	+0.8
HHC				pmax		pmax		
	comp=Z,26nm,0.8s							
HHC				pmax		pmax		
	comp=Z,140nm,7.9s							
HHC				LR		LR		
	comp=Z,190nm,17.1s							
HHC				LR		LR		
	comp=Z,150nm,18.0s							
HHC				LR		LR		
	comp=Z,840nm,18.9s							
CM31	Chiang Mai Ar

GTA Gaotai 79.77 314 *e*P P 08 33 22.3 +1.3
GTA pmax pmax
comp=Z,18nm,1.1s
SUA Susitna One 80.14 19 *e*P P 08 33 22.8 +0.3
comp=Z,9.9nm,1.0s
CAST Castle Rocks 81.18 18 *e*P P 08 33 29.0 +1.1
comp=Z,6.8nm,0.7s
SHL Shillong 81.23 298 *e*P P 08 33 29.6 +0.5
comp=Z,18nm,1.2s
SHL Shillong 81.23 298 *e*P P 08 33 29.7 +0.5
SHL pmax pmax
comp=Z,18nm,1.2s
SCM Sheep Creek Mo 81.54 20 *e*P P 08 33 30.1 +0.2
comp=Z,14nm,0.9s
SCM Sheep Creek Mo 81.54 20 *e*P P 08 33 30.1 +0.2
SCM pmax pmax
comp=Z,14nm,0.9s
DIV Divide 81.60 21 *e*P P 08 33 30.6 +0.4
comp=Z,14nm,1.0s
RND Reindeer 82.16 19 *e*P P 08 33 32.1 -1.0
comp=Z,7.7nm,1.0s
RND Reindeer 82.16 19 *e*P P 08 33 32.1 -1.0
RND pmax pmax
comp=Z,8.0nm,1.0s
RDOG Red Dog Mine 82.33 11 *e*P P 08 33 33.5 -0.3
comp=Z,8.6nm,1.1s
MCK McKinley 82.37 18 *e*P P 08 33 33.7 -0.4
comp=Z,9.9nm,1.2s
MCK McKinley 82.37 18 *e*P P 08 33 33.7 -0.4
MCK pmax pmax
comp=Z,10.0nm,1.2s
ZAK Zakamensk 82.38 325 *e*P P 08 33 33.8 -0.8
ZAK pmax pmax
comp=Z,8.0nm,1.0s
HARP HAARP 82.68 21 *e*P P 08 33 35.6 -0.2
comp=Z,12nm,0.8s
TLY Talaya 82.80 326 *e*P P 08 33 36.3 -0.4
comp=Z,9.7nm,0.8s
TLY Talaya 82.80 326*c i*P P 08 33 36.5 -0.1
TLY pmax pmax
comp=Z,22nm,0.9s
CTGM Chitina Glacie 83.13 23 *e*P P 08 33 38.6 +0.3
comp=Z,12nm,1.0s
WRH Wood River Hil 83.16 18 *e*P P 08 33 37.4 -0.7
comp=Z,9.5nm,0.9s
CCB Clear Creek Bu 83.37 18 *e*P P 08 33 38.4 -0.8
comp=Z,5.6nm,0.8s
HDA Harding Lake 83.47 19 *e*P P 08 33 39.9 +0.1
comp=Z,17nm,0.6s
COLA College 83.52 18 *e*P P 08 33 39.5 -0.5
comp=Z,12nm,0.8s
COLA College 83.52 18 *e*P P 08 33 39.5 -0.5
COLA pmax pmax
comp=Z,13nm,0.8s
MENT Mentasta 83.53 21 *e*P P 08 33 40.6 +0.4
comp=Z,6.9nm,0.8s
RIDG Independent Ri 83.68 20 *e*P P 08 33 41.3 +0.3
comp=Z,15nm,1.0s
ILAR Eielson Array 83.74 18 P P 08 33 40.8 -0.4
comp=Z,3.5nm,0.7s,baz=245,slow=5.0,SNR=24
ILB Eielson Array 83.74 18 *e*P P 08 33 40.8 -0.4
ORV Oroville 83.87 48 *e*P P 08 33 42.6 +0.2
comp=Z,3.3nm,0.8s
ORV Oroville 83.87 48 *e*P P 08 33 42.6 +0.2
ORV pmax pmax
comp=Z,3.0nm,0.8s
DOT Dot Lake 83.88 20 *e*P P 08 33 42.2 +0.2
comp=Z,12nm,0.9s
AFDM Forest Hills D 84.05 48 *e*P P 08 33 43.7 +0.3
comp=Z,5.2nm,1.0s
CMB Columbia Colle 84.18 49 *e*P P 08 33 44.5 +0.4
comp=Z,3.6nm,0.8s
WRAK Wrangell Islan 84.43 29 *e*P P 08 33 44.8 0.0
comp=Z,14nm,1.4s
HYT Haines Junctio 84.54 24 *e*P P 08 33 45.6 +0.1
comp=Z,7.1nm,1.0s
MAW Mawson 84.54 202 P P 08 33 45.9 +0.6
comp=Z,2.1nm,0.9s,baz=23,slow=3.5,SNR=6.2
MAW Mawson 84.54 202 *e*P P 08 33 45.4 +0.1
comp=Z,1.0nm,1.0s
RUBR Rubicon Trail 84.69 49 *e*P P 08 33 46.2 -0.6
comp=Z,6.8nm,0.9s
MWC Mount Wilson 84.77 54 *e*P P 08 33 43.9 -3.4
comp=Z,4.8nm,0.8s
MWC Mount Wilson 84.77 54 *e*P P 08 33 43.9 -3.4
MWC pmax pmax
comp=Z,5.0nm,0.8s
BEKR Beckworth 84.81 48 *e*P P 08 33 47.6 +0.3
comp=Z,3.3nm,0.8s
ISA Isabella, Lake 84.88 52 *e*P P 08 33 47.5 -0.2
comp=Z,3.6nm,1.0s
ISA Isabella, Lake 84.88 52 *e*P P 08 33 47.5 -0.2
ISA pmax pmax
comp=Z,4.0nm,1.0s
MDPB Devils Postpil 85.03 50 *e*P P 08 33 49.1 +0.4
comp=Z,5.5nm,0.8s
WAKR Walker 85.04 49 *e*P P 08 33 49.0 +0.4
comp=Z,5.8nm,1.2s
PNTR Pine Nut 85.11 49 *e*P P 08 33 49.0 +0.1
comp=Z,3.2nm,0.8s
PAHR Pah Rah Range 85.47 48 *e*P P 08 33 50.7 0.0
comp=Z,8.9nm,1.5s
MOD Modoc Plateau 85.53 46 *e*P P 08 33 49.9 -1.0
comp=Z,2.8nm,0.9s
EGAK Eagle 85.58 20 *e*P P 08 33 50.7 +0.3
comp=Z,12nm,0.8s
RYN Ryan 85.76 49 *e*P P 08 33 52.2 0.0
comp=Z,2.5nm,0.8s
TOLK Toolik Lake Re 85.76 15 *e*P P 08 33 52.3 +1.0
comp=Z,3.4nm,1.0s
NV01 Mina Array Sit 85.86 50 *e*P P 08 33 53.1 +0.4
NVAR Mina Array Bea 85.86 50 P P 08 33 53.1 +0.4
comp=Z,2.7nm,0.8s,baz=237,slow=7.4,SNR=14
KVN Kaiserville 86.20 49 *e*P P 08 33 53.3 -1.0
comp=Z,3.3nm,1.0s
KVN Kaiserville 86.20 49 *e*P P 08 33 53.3 -1.0
KVN pmax pmax
comp=Z,3.0nm,1.0s
TIXI Tiksi 86.62 349 P P 08 33 54.9 -0.5
comp=Z,1.9nm,0.4s,baz=161,slow=5.8,SNR=4.8
TIXI Tiksi 86.62 349*c e*P P 08 33 53.3 -2.1
TIXI pmax pmax
comp=Z,5.0nm,1.7s
J08A Circle Bar Ran 87.28 45 *e*P P 08 33 59.7 +0.3
comp=Z,5.2nm,1.1s
EPYK Eagle Plains 88.02 20 *e*P P 08 34 02.3 0.0
comp=Z,4.1nm,0.8s
PSUT Pine Spring 89.24 51 *e*P P 08 34 08.6 -0.4
comp=Z,3.2nm,0.8s
LCMT Little Creek M 89.31 52 *e*P P 08 34 08.9 -0.3
comp=Z,2.6nm,0.8s
CCUT Cedar City 89.36 52 *e*P P 08 34 10.2 +0.7
comp=Z,2.6nm,0.8s
KNB Kanab 89.64 52 *e*P P 08 34 11.4 +0.6
comp=Z,2.2nm,0.8s
KNB Kanab 89.64 52 *e*P P 08 34 11.4 +0.6
KNB pmax pmax
comp=Z,2.0nm,0.8s
WMQ Urumqi 89.81 315 *e*P P 08 34 11.7 +0.4
WMQ pP sP 08 34 33.1 -0.7
WMQ pmax pmax
comp=Z,21nm,1.1s
WMQ pmax pmax
comp=Z,160nm,5.9s
WMQ LR LR
comp=Z,270nm,19.1s
WMQ LR LR
comp=Z,240nm,24.9s
U15A North Rim 89.90 53 *e*P P 08 34 14.0 +1.8
comp=Z,5.8nm,0.7s
X16A Lo Mia Camp, P 90.09 55 *e*P P 08 34 12.5 -0.5
comp=Z,2.0nm,0.8s
HLID Hailey 90.16 46 *e*P P 08 34 11.9 -1.2
comp=Z,2.3nm,0.9s
MTPU Mount Pierson 90.38 51 *e*P P 08 34 13.9 -0.6
comp=Z,3.7nm,0.8s
MSU Marysvale 90.50 51 *e*P P 08 34 16.0 +1.1
MSU Marysvale 90.50 51 *e*P P 08 34 16.0 +1.1
HVU Hansel Valley 90.87 48 *e*P P 08 34 16.6 +0.2
comp=Z,4.8nm,0.8s
HVU Hansel Valley 90.87 48 *e*P P 08 34 16.6 +0.2
HVU pmax pmax
comp=Z,5.0nm,0.8s
NLU North Lily Min 90.93 50 *e*P P 08 34 17.1 +0.2
comp=Z,2.6nm,0.8s
SPUT South Promonto 90.99 48 *e*P P 08 34 16.6 -0.4
comp=Z,2.0nm,0.8s

DGZ Jazzator, Alta 91.59 320*c i*P P 08 34 19.0 -0.6
DGZ pmax pmax
comp=Z,5.0nm,1.3s
DLMT Dillon 91.89 44 *e*P P 08 34 19.3 -1.7
comp=Z,3.6nm,0.8s
FXWY Fox Creek 92.57 46 *e*P P 08 34 23.7 -0.6
comp=Z,2.0nm,0.8s
PD31 Pinedale Array 93.42 47 *e*P P 08 34 28.4 +0.2
PD31 *e*PKKPdf **PKKPdf** 08 51 34.5 -0.5
PDAR Pinedale Array 93.42 47 P P 08 34 28.4 +0.2
comp=Z,0.5nm,0.6s,baz=232,slow=1.7,SNR=5.6
PDAR PKKPbc **PKKPdf** 08 51 34.5 -0.5
comp=Z,0.1nm,0.4s,baz=87,slow=6.1,SNR=3.7
ANMO Albuquerque 94.22 55*c e*P P 08 34 33.7 +1.6
ANMO pmax pmax
comp=Z,1.0nm,1.1s
MK32 Makanchi Array 94.23 317 *e*P P 08 34 31.7 +0.1
MKAR Makanchi Array 94.23 317 P P 08 34 31.7 +0.1
comp=Z,13nm,0.7s,baz=101,slow=6.3,SNR=67
ZALV Zalesovo Beam 94.24 324 P P 08 34 30.4 -1.0
comp=Z,4.4nm,0.6s,baz=116,slow=4.2,SNR=15
ZALV LR LR 09 14 10.2
comp=Z,44nm,22.0s,baz=58,slow=34
ZAA1 Zalesovo Array 94.24 324 *e*P P 08 34 30.4 -1.0
MAKZ Makanchi 94.44 317 *e*P P 08 34 32.5 -0.1
comp=Z,16nm,1.0s
MAKZ Makanchi 94.44 317 *e*P P 08 34 32.5 -0.1
MAKZ pmax pmax
comp=Z,16nm,1.0s
YKA Yellowknife Ar 95.09 27 P P 08 34 34.0 -1.1
comp=Z,0.6nm,0.6s,baz=257,slow=4.7,SNR=6.3
YKA LR LR 09 10 13.0
comp=Z,7.8nm,20.8s,baz=235,slow=31
YKB5 Yellowknife Ar 95.09 27 *e*P P 08 34 34.0 -1.1
LTX Lajitas 95.53 61 *e*P P 08 34 38.2 +0.1
LTX Lajitas 95.53 61 *e*P P 08 34 38.2 +0.1
TXAR Lajitas Array 95.53 61 P P 08 34 38.2 +0.1
comp=Z,0.6nm,0.8s,baz=213,slow=4.0,SNR=6.6
TXAR LR LR 09 11 58.5
comp=Z,133nm,19.3s,baz=0.0,slow=32
NRIK Noril'sk 96.72 339 LR LR 09 15 14.7
comp=Z,99nm,22.0s,baz=56,slow=34
KURK Kurchatov 97.34 320 *e*P P 08 34 44.2 -1.4
comp=Z,8.6nm,1.5s
KURK Kurchatov 97.34 320 *e*P P 08 34 44.2 -1.4
KURK pmax pmax
comp=Z,9.0nm,1.5s
KURBB Kurchatov Arra 97.38 320 P P 08 34 44.6 -1.2
comp=Z,0.7nm,0.5s,baz=92,slow=3.5,SNR=6.1
AAK Ala-Archa 99.01 312*c e*P Pdif 08 34 52.2 -1.4
AAK pmax pmax
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 102.64 322 P Pdif 08 35 08.4 -0.9
comp=Z,1.0nm,0.7s,baz=83,slow=3.4,SNR=4.9
ARCES ARCESS Array B 116.89 346 PKP PKPdf 08 39 55.9 -0.4
comp=Z,1.6nm,0.4s,baz=77,slow=2.0,SNR=23
LPAZ La Paz 119.48 116 PKP PKiKP 08 40 05.2 +1.5
comp=Z,0.8nm,0.5s,baz=45,slow=1.4,SNR=7.9
FIA0 FINESS Array S 122.38 339 *e*PKPdf PKPdf 08 40 06.5 -0.5
FIA0 FINESS Array S 122.38 339 *e*PKiKP PKPdf 08 40 06.5 -0.5
FINES FINESS Array B 122.38 339 PKP PKPdf 08 40 06.5 -0.5
comp=Z,1.9nm,0.7s,baz=62,slow=3.5,SNR=10
BOSA Boshof 125.19 223 PKP PKiKP 08 40 14.1 0.0
comp=Z,4.6nm,0.9s,baz=315,slow=1.4,SNR=5.6
NB2 NORSAR Subarra 127.27 345 PKPdf PKPdf 08 40 16.2 -0.3
comp=Z,0.4nm,0.7s,baz=31,slow=1.9
NB200 NORSAR Array S 127.27 345 *e*PKPdf PKPdf 08 40 16.2 -0.3
NOA NORSAR Array B 127.27 345 PKP PKPdf 08 40 16.2 -0.3
comp=Z,1.1nm,0.8s,baz=30,slow=2.0,SNR=5.1
BR101 Keskin Array S 129.68 313 *e*PKPdf PKPdf 08 40 21.6 -0.3
BRTR Keskin Array B 129.68 313 PKP PKPdf 08 40 21.6 -0.3
comp=Z,0.3nm,0.5s,baz=130,slow=1.9,SNR=4.1
CLL Collm 134.73 337 *e*PKPdf PKiKP 08 40 33.0 +0.7
MODS Modra-Piesok 135.06 331 *e*PKiKP PKPdf 08 40 31.7 +0.1
MODS Modra-Piesok 135.06 331 *e*PKP PKPdf 08 40 31.7 +0.1
GEC2 GERESS Array S 136.34 334 *e*PKPdf PKPdf 08 40 34.0 -0.1
GEC2 GERESS Array S 136.34 334 *e*PKiKP PKPdf 08 40 34.0 -0.1
GERES GERESS Array B 136.34 334 PKP PKPdf 08 40 34.0 -0.1
comp=Z,1.0nm,0.8s,baz=88,slow=3.2,SNR=5.7
KEST Kesra 148.10 323 PKPbc PKPbc 08 40 58.2 -0.3
comp=Z,8.7nm,0.7s,baz=337,slow=1.7,SNR=7.8
KEST Kesra 148.10 323 *e*PKPdf PKPdf 08 40 53.6 -1.7
KEST *e*PKPbc **PKPbc** 08 40 58.7 +0.1
KEST *e*PKPab **PKPab** 08 41 02.2 +0.8
PBRG Braganca 149.19 350 *e*PKPbc PKPbc 08 41 00.7 -0.4
PGAV Gavieira, Arco 149.26 352 *e*PKPdf PKPdf 08 40 56.0 -1.0
POLO Lamas de Olo 149.78 351 *e*PKPbc PKPbc 08 41 03.0 +0.4
PVIS Viseu 150.43 351 *e*PKPbc PKPbc 08 41 04.5 +0.3
ESDC Sonseca Array 150.63 345 PKPbc PKPbc 08 41 04.3 -0.4
comp=Z,0.6nm,0.3s,baz=19,slow=2.3,SNR=8.7
MTE Manteigas 150.69 350 *e*PKPdf PKPdf 08 40 58.3 -1.0
MTE Manteigas 150.69 350 *e*PKPbc PKPbc 08 41 04.5 -0.3
PCBR Castelo Branco 151.22 350 *e*PKPbc PKPbc 08 41 06.1 +0.1
PMRV Marv??o 151.61 350 *e*PKPbc PKPbc 08 41 06.9 0.0
PMTG Montargil 152.10 351 *e*PKPbc PKPbc 08 41 07.9 -0.1
PNCL Nicolau / Gran 153.08 351 *e*PKPbc PKiKP 08 41 10.4 0.0
PTEO Sao Teotonio 153.66 351 *e*PKPdf PKPdf 08 41 03.0 -0.7
TORD Torodi Ar. Bea 164.90 278 PKP PKPdf 08 41 17.1 -0.2
comp=Z,1.3nm,1.1s,baz=122,slow=1.7,SNR=3.7
TORD PKPab **PKPab** 08 42 12.7 -1.0
comp=Z,2.6nm,1.0s,baz=86,slow=6.0,SNR=6.7
TOA1 Torodi Ar. Sit 164.90 278 *e*PKPdf PKPdf 08 41 17.1 -0.2
TOA1 *e*PKPab **PKPab** 08 42 12.8 -1.1

MAN 06 08:22:24.6, 7.°37N×124.°72E, h29km, mb4.6, ML3.4, MS3.3, Mindanao

*ISCJB **06** 08:28:56.9±0.9, 36.°97N±0.°04×27.°72E±0.°07, h15km±26km, Error ellipse: s-maj=10.2km s-min=5.1km az=148.2*
*DDA **06** 08:28:56.2, 36.°98N×27.°74E, h7km±4km, ML2.6*
*ISK **06** 08:28:56.3, 36.°98N×27.°74E, h15km±2km, ML2.0/6*
ISC 06 08:28:54.0±1.3, 37.°02N±0.°04×27.°82E±0.°03, h4km±12km, n12, σ1°±21/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DATC	**Datca-Mugla**	**0.28**	**206**	PG	**Pb**	**08 29 01.6**	**0.0**
DATC				SG	**Sb**	**08 29 05.7**	**-1.0**
BDRM	**Kayabasi**	**0.30**	**280**	*i* P	**Pg**	**08 29 00.3**	**+0.5**
BDRM				*i* S	**Sb**	**08 29 06.5**	**-0.8**
DAT	**Datca**	**0.34**	**214**	PG	**Pb**	**08 29 02.6**	**-0.1**
DAT				SG	**Sb**	**08 29 07.3**	**-1.2**
DAT	**Datca**	**0.34**	**214**	*i* P	**Pb**	**08 29 03.0**	**+0.3**
DAT				*i* S	**Sg**	**08 29 06.0**	**+0.9**
DAT				IAML_P			
comp=Z,2μm,0.1s							
BBRN	**Bozburun-Marma**	**0.39**	**150**	PG	**Pb**	**08 29 04.7**	**+1.3**
BBRN				SG	**Sb**	**08 29 10.8**	**+1.2**
BODT	**Bodrum**	**0.41**	**277**	PG	**Pb**	**08 29 03.9**	**+0.1**
BODT				SG	**Sb**	**08 29 09.7**	**-0.6**
MRSB	**Marmaris-Mugla**	**0.43**	**134**	PG	**Pb**	**08 29 05.6**	**+1.6**
TURN	**Turunc**	**0.65**	**102**	PG	**Pg**	**08 29 05.7**	**-0.6**
TURN	**Turunc**	**0.65**	**102**	*i* P	**Pg**	**08 29 05.9**	**-0.4**
TURN				*i* S	**Sg**	**08 29 12.0**	**-2.7**
AYDN	**Tasoluk**	**0.65**	**4**	*i* P	**Pn**	**08 29 11.0**	**+1.1**
AYDN				*i* S	**Sn**	**08 29 19.3**	**-1.4**
AYDN				IAML_P			
comp=Z,1μm,0.2s							
ARG	**Arkhangelos**	**0.83**	**163**	PG	**Pn**	**08 29 12.8**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**0.93**	**4**	PG	**Pn**	**08 29 15.5**	**+1.5**

*NNC **06** 08:37:09.6±2.4, 53.°47N×87.°93E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=19.2km s-min=9.7km az=65.0, Suspected Mining explosion.*
*IDC **06** 08:37:11.3±2.7, 53.°54N×87.°78E, h0km, mb1 3.3/2, mb1mx3.1/52, mbtmp3.3/2, ML2.8/2, Error ellipse: s-maj=23.3km s-min=15.3km az=61.0*
KRAR 06 08:37:10.5±0.1, 53.°61N×87.°75E, M2.2, 5C-9D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.77**	**282**	*i*		08 49 00.0	
baz=99,slow=341,SNR=20							
ZAA0	**Zalesovo Array**	**1.77**	**282**	⇑Pn	Pn	08 37 42.7	+0.4
1.0nm,0.5s							
ZAA0				⇑Sn	Sg	08 38 09.4	+2.0
6.1nm,0.6s							
ZALV	**Zalesovo Beam**	**1.77**	**282**	Pn	Pb	08 37 43.2	-0.6
2.8nm,0.3s,baz=105,slow=11,SNR=28							
ZALV				Lg	Lg	08 38 08.6	
8.1nm,0.3s,baz=104,slow=18,SNR=19							
KURK	**Kurchatov**	**6.32**	**246**	⇓Pn	Pn	08 38 45.0	+0.2
1.5nm,0.6s							
KURK				⇓Sn	Sn	08 39 59.3	+1.6
2.1nm,0.7s							
KURK				⇓Lg	Lg	08 40 32.6	
13nm,1.1s							
KURBB	**Kurchatov Arra**	**6.42**	**246**	Pn	Pn	08 38 47.6	+1.4
0.2nm,0.3s,baz=62,slow=14,SNR=15							
KURBB				Sn	Sn	08 39 59.4	-0.7
0.1nm,0.3s,baz=67,slow=26,SNR=4.0							
KURBB				Lg	Lg	08 40 35.4	
0.1nm,0.3s,baz=64,slow=32,SNR=10							
KURBB	**Kurchatov Arra**	**6.42**	**246**	⇓Pn	Pn	08 38 47.4	+1.2
4.9nm,0.7s							
KURBB				⇓Sn	Sn	08 39 58.8	-1.2
7.4nm,0.6s							
KURBB				⇓Lg	Lg	08 40 34.7	
14nm,0.8s							
MK31	**Makanchi Array**	**7.67**	**209**	⇓Pn	Pn	08 39 03.7	+0.3
0.8nm,0.7s,baz=28,slow=13,SNR=9.1							
MK31				⇑Sn	Sn	08 40 30.6	-0.3
1.2nm,0.7s							
MK31				⇑Lg	Lg	08 41 11.4	
5.1nm,0.9s,baz=33,slow=31,SNR=4.8							
MKAR	**Makanchi Array**	**7.67**	**209**	Pn	Pn	08 39 04.9	+1.5
0.2nm,0.3s,baz=26,slow=10,SNR=7.1							
MKAR				Sn	Sn	08 40 30.5	-0.5
0.1nm,0.3s,baz=30,slow=20,SNR=5.8							
MKAR				Lg	Lg	08 41 12.9	
0.1nm,0.3s,baz=26,slow=28,SNR=7.1							
MAKZ	**Makanchi**	**7.75**	**211**	⇓Pn	Pn	08 39 00.8	-3.7
2.1nm,0.6s							
MAKZ				⇑Sn	Sn	08 40 31.6	-1.3
2.4nm,1.0s							
MAKZ				⇓Lg	Lg	08 41 14.8	
5.2nm,1.1s							

ROM 06 08:39:01.8±0.5, 43.°38N±0.°02×12.°59E±0.°02, h9km±1km, ML0.4/2, Error ellipse: s-maj=1.7km s-min=1.3km az=166.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.02**	**215**	P	Pg	08 39 03.4	0.0
ATFO				S	Sg	08 39 04.9	+0.2
ATFO				AML	AML		
comp=E,278μm,0.3s							
ATFO				AML	AML		
comp=N,284μm,0.2s							
ATFO				AML	AML		
comp=E,278μm,0.3s							
ATFO				AML	AML		
comp=N,284μm,0.2s							
ATVO	**AVT- Monte Val**	**0.13**	**270**	P	Pg	08 39 05.2	+0.4
ATVO				S	Sg	08 39 08.1	+1.3
ATVO				AML	AML		
comp=E,25μm,1.0s							
ATVO				AML	AML		
comp=N,22μm,0.5s							
ATVO				AML	AML		
comp=N,22μm,0.5s							
ATVO				AML	AML		
comp=E,25μm,1.0s							
ATPI	**Pietralunga -**	**0.15**	**297**	P	Pg	08 39 05.4	+0.4
ATPI				S	Sg	08 39 08.0	+0.6
PIEI	**Pieia**	**0.16**	**346**	P	Pg	08 39 05.9	+0.7
PIEI				AML	AML		
comp=E,24μm,0.9s							
PIEI				AML	AML		
comp=N,16μm,1.6s							
PIEI				AML	AML		
comp=E,24μm,0.9s							
PIEI				AML	AML		
comp=N,16μm,1.6s							
RMP	**Rome, Mte Porz**	**1.57**	**177**	AML	AML		
comp=E,528μm,0.7s							
RMP				AML	AML		
comp=E,528μm,0.7s							
RMP				AML	AML		
comp=N,454μm,0.1s							
RMP				AML	AML		
comp=N,454μm,0.1s							

TAP 06 08:55:02.7, 24.°28N×121.°43E, h5km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.09**	**147**	P	Pg	08 55 05.3	+0.6
baz=147							
ETLH				S	Sg	08 55 06.8	+0.8
baz=147							
NNSB	**Datong**	**0.15**	**344**	P	Pg	08 55 06.2	+0.3
baz=343							
NNSB				S	Sg	08 55 08.7	+0.6
baz=343							
NNS	**Nan Shan**	**0.17**	**342**	*e*P	Pg	08 55 06.4	+0.3
baz=344							
NNS				S	Sg	08 55 09.1	+0.7
baz=344							
NACB	**Ninganchiao**	**0.18**	**125**	P	Pg	08 55 06.8	+0.5
baz=125							
NACB				*e*S	Sg	08 55 09.5	+0.7
baz=125							
WHF	**Hehuan Shan**	**0.20**	**229**	*e*P	Pg	08 55 07.4	+0.6
baz=226							
WHF				S	Sg	08 55 10.7	+1.2
baz=226							
TWD	**Chiawan**	**0.25**	**143**	*e*P	Pg	08 55 08.5	+0.9
baz=143							
TWD				*e*S	Sg	08 55 11.9	+1.0
baz=143							
NDT	**Datong Townshi**	**0.33**	**13**	*e*P	Pg	08 55 09.2	+0.1
baz=13							
NDT				*e*S	Sg	08 55 14.3	+0.8
baz=13							
OWD	**Renai**	**0.40**	**216**	*e*P	Pg	08 55 10.9	+0.5
baz=215							
OWD				*e*S	Sg	08 55 16.7	+1.0
baz=215							

*ISCJB **06** 08:55:28.0±0.7, 4.°9S±0.°1×11.°8W±0.°1, h10km, mb4.1/10, MS4.0/27, Error ellipse: s-maj=25.9km s-min=13.2km az=137.9*
*IDC **06** 08:55:28.0±1.0, 5.°03S×11.°76W, h0km, mb4.1/10, mb1 4.3/11, mb1mx3.9/55, mbtmp4.1/11, ML3.3/1, MS3.9/28, Ms1 3.9/28, ms1mx3.8/38, Error ellipse: s-maj=33.4km s-min=19.7km az=141.0*
*NEIC **06** 08:55:29.9±1.4, 4.°88S×11.°89W, h10km±2km, mb4.3/2, Error ellipse: s-maj=28.7km s-min=13.4km az=155.0*
*GCMT **06** 08:55:32.0±0.3, 5.°53S±0.°03×11.°49W±0.°02, h18km±1km, MW5.0/90, Moment Tensor Solution. s33,c36; s90,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.62±.23; $M_{\theta\theta}$=0.19±.13; $M_{\phi\phi}$=3.43±.16; $M_{r\theta}$=-0.34±.38; $M_{r\phi}$=-0.27±.09; $M_{\theta\phi}$=-1.57±.34; Best double couple: M_0=3.88200×10^{16} NP1:φs=2.00000°, δ57.00000°, λ-83.00000°. NP2: φs=169.00000°, δ34.00000°, λ-101.00000°. Principal axes: T 3.7740, Plg12.0000°, Azm87.0000°; N 0.2140, Plg6.0000°, Azm178.0000°; P -3.9900, Plg77.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 08:55:29.5±0.8, 5.°0S±0.°2×11.°9W±0.°1, h10km, n46, σ1°±04/18, mb4.2/10, MS4.0/27, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**3.87**	**222**	T	T	09 00 17.1	
baz=54,slow=74,SNR=1200							
H10N1	**ASCENSION HYDR**	**3.88**	**222**	T	T	09 00 00.4	
baz=54,slow=74,SNR=63							
H10N3	**ASCENSION HYDR**	**3.89**	**222**	T	T	09 00 09.9	
baz=54,slow=74,SNR=31							
H10S1	**ASCENSION HYDR**	**4.84**	**215**	T	T	09 01 22.8	
baz=44,slow=75,SNR=392							
H10S2	**ASCENSION HYDR**	**4.85**	**215**	T	T	09 01 18.9	
baz=44,slow=75,SNR=397							
H10S3	**ASCENSION HYDR**	**4.86**	**215**	T	T	09 01 20.4	
baz=44,slow=75,SNR=378							

DBIC Dimbokro 13.49 31 Pn **Pn 08 58 41.3 +0.1**
0.1nm,0.3s,baz=190,slow=14,SNR=3.9
DBIC LR LR 09 03 00.7
comp=Z,618nm,19.9s,baz=176,slow=34
TORD Torodi Ar. Bea 22.46 37 P **P 09 00 27.8 -1.3**
4.6nm,0.6s,baz=216,slow=10.0,SNR=35
TORD LR LR 09 08 20.0
comp=Z,691nm,20.1s,baz=275,slow=34
TOA1 Torodi Ar. Sit 22.46 37 *e*P **P 09 00 27.8 -1.3**
TSUM Tsumeb 32.01 119 P **P 09 01 55.2 -1.3**
2.3nm,0.6s,baz=239,slow=22,SNR=9.6
TSUM Tsumeb 32.01 119 *e*P **P 09 01 57.6 +1.1**
11nm,1.5s
BDFB Brasilia 37.06 251 P **P 09 02 40.4 +0.1**
2.1nm,0.5s,baz=48,slow=6.9,SNR=5.0
BDFB LR LR 09 15 19.5
comp=Z,449nm,19.9s,baz=90,slow=32
BDFB Brasilia 37.06 251 *e*P **P 09 02 40.4 +0.1**
BDFB *e*P **pP 09 02 40.8 -1.7**
LBTB Lobatse 41.09 123 LR LR 09 18 19.6
comp=Z,262nm,19.9s,baz=247,slow=34
MATP Matopo 42.11 115 LR LR 09 18 33.6
comp=Z,327nm,19.6s,baz=265,slow=33
BOSA Boshof 42.32 128 LR LR 09 18 41.8
comp=Z,213nm,20.8s,baz=167,slow=33
ESDC Sonseca Array 45.00 9 LR LR 09 23 26.5
comp=Z,62nm,18.1s,baz=350,slow=37
KEST Kesra 45.10 25 LR LR 09 23 21.3
comp=Z,391nm,20.2s,baz=208,slow=37
CPUP Villa Florida 48.33 239 LR LR 09 21 23.0
comp=Z,114nm,21.6s,baz=74,slow=32
SIV San Ignacio 49.50 253 P **P 09 04 21.6 +0.8**
0.7nm,0.8s,baz=114,slow=5.9,SNR=4.6
LPAZ La Paz 56.28 254 LR LR 09 28 08.8
comp=Z,172nm,20.1s,baz=83,slow=35
GEC2 GERESS Array S 58.03 20 *e*P **P 09 05 22.3 -0.5**
GERES GERESS Array B 58.03 20 P **P 09 05 22.3 -0.5**
0.4nm,0.4s,baz=172,slow=5.1,SNR=4.7
GERES LR LR 09 31 32.2
comp=Z,150nm,20.4s,baz=297,slow=37
MLR Muntele Rosu 60.47 30 P **P 09 05 41.3 +1.5**
2.0nm,0.7s,baz=187,slow=8.1,SNR=3.4
BRTR Keskin Array B 61.05 39 P **P 09 05 45.0 +1.1**
1.3nm,0.8s,baz=208,slow=8.5,SNR=4.4
BRTR LR LR 09 34 56.8
comp=Z,38nm,18.7s,baz=216,slow=39
BR101 Keskin Array S 61.05 39 *e*P **P 09 05 45.0 +1.1**
ROSC El Rosal 63.14 278 LR LR 09 32 07.3
comp=Z,142nm,20.8s,baz=118,slow=35
AKASG Malin Array Be 65.71 27 P **P 09 06 14.3 0.0**
1.0nm,0.5s,baz=228,slow=6.2,SNR=4.5
HFS Hagfors 67.93 13 LR LR 09 38 15.3
comp=Z,96nm,19.4s,baz=28,slow=38
NOA NORSAR Array B 68.21 12 LR LR 09 37 17.7
comp=Z,50nm,21.1s,baz=35,slow=37
GNI Garni 68.57 43 LR LR 09 39 35.6
comp=Z,48nm,18.4s,baz=246,slow=39
KBZ Khabaz 69.04 39 P **P 09 06 35.7 +0.2**
1.9nm,0.8s,baz=27,slow=1.2,SNR=3.9
BORG Borgarnes 69.87 356 LR LR 09 30 48.8
comp=Z,62nm,21.9s,baz=228,slow=30
OBN Obninsk 71.96 27 LR LR 09 40 39.2
comp=Z,31nm,19.8s,baz=120,slow=38
FIA0 FINESS Array S 72.40 18 *e*P **P 09 06 56.3 +0.7**
FINES FINESS Array B 72.40 18 P **P 09 06 56.3 +0.7**
3.1nm,0.8s,baz=190,slow=5.6,SNR=5.2
JMIC Jan Mayen 75.82 1 LR LR 09 35 45.6
comp=Z,41nm,21.2s,baz=250,slow=32
GEYT Alibeck 77.45 50 LR LR 09 43 17.7
comp=Z,74nm,19.3s,baz=185,slow=37
MAW Mawson 79.64 158 LR LR 09 34 53.0
comp=Z,54nm,21.8s,baz=280,slow=30
ULM Lac du Bonnet 89.95 320 LR LR 09 41 56.3
comp=Z,88nm,21.2s,baz=138,slow=31
TXAR Lajitas Array 93.97 299 LR LR 09 46 18.5
comp=Z,40nm,21.6s,baz=0.0,slow=32
MKAR Makanchi Array 96.42 44 LR LR 09 58 01.9
comp=Z,43nm,19.6s,baz=254,slow=39
VNDA Vanda 97.57 179 LR LR 09 46 30.2
comp=Z,77nm,20.4s,baz=193,slow=31
ZALV Zalesovo Beam 97.91 36 LR LR 09 57 34.2
comp=Z,33nm,20.6s,baz=108,slow=38
NRIK Noril'sk 97.93 21 LR LR 09 57 45.3
comp=Z,48nm,18.8s,baz=54,slow=38
PDAR Pinedale Array 98.99 312 LR LR 09 48 07.3
comp=Z,101nm,20.8s,baz=153,slow=32

JMA 06 08:55:38.1±0.3, 24°.87N×123°.34E, h23km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.51**	**216**	P	Pb	08 55 48.1	-0.2
YOJ				S	Sb	08 55 55.0	-0.3
IRIF	**Iriomote-Funau**	**0.64**	**146**	P	Pb	08 55 50.4	-0.2
IRIF				S	Sb	08 55 58.7	-0.5
JKRS	**Kuro-shima**	**0.88**	**136**	S	Sb	08 56 05.4	-0.5
JIJ	**Ishigaki jima**	**0.89**	**124**	S	Sb	08 56 04.5	-1.8
HATJ	**Hateruma jima**	**0.91**	**152**	P	Pb	08 55 55.3	0.0
HATJ				S	Sb	08 56 06.9	-0.1
JISG	**Ishigakijimahi**	**0.93**	**108**	S	Sb	08 56 05.7	-1.7

*ISK **06** 09:01:01.2, 35°.68N×26°.00E, h8km, ML3.7/18*
*NEIC **06** 09:01:03.5±0.0, 35°.64N×26°.14E, h34km, mb4.2/2, ML4.1(ATH), After ATH.*
*IDC **06** 09:01:03.6±2.3, 35°.57N×26°.13E, h26km±17km, mb3.8/13, mb1 3.9/19, mb1mx3.7/43, mbtmp3.9/19, ML3.6/5, MS2.9/3, Ms1 2.9/3, ms1mx2.4/45, Error ellipse: s-maj=18.3km s-min=11.6km az=158.0*
*ATH **06** 09:01:03.5, 35°.64N×26°.13E, h39km±2km, ML4.1/9, Error ellipse: s-maj=2.3km s-min=1.0km az=179.0*
*ISCJB **06** 09:01:04.5±0.2, 35°.61N±0°.02×26°.09E±0°.02, h46km±3km, mb3.9/15, Error ellipse: s-maj=3.4km s-min=2.7km az=158.5*
*THE **06** 09:01:05.0, 35°.63N×26°.10E, h24km±1km, ML3.9/17, Error ellipse: s-maj=1.1km s-min=0.3km az=161.0*
*DDA **06** 09:01:20.5, 36°.36N×27°.37E, h43km±1km, ML3.1*

ISC 06 09:01:04.2±1.1, 35°.59N±0°.02×26°.10E±0°.02, h30km±9km, n127, σ1§44/161, mb4.0/15, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIA	**Sitia Lasithi**	**0.39**	**182**	P	**Pn**	**09 01 13.8**	**0.0**
STIA				S	**Sn**	**09 01 20.4**	**+0.2**
ZKR	**Zakros**	**0.49**	**169**	P	**Pn**	**09 01 15.1**	**0.0**
ZKR				S	**Sn**	**09 01 22.9**	**+0.3**
ZKR	**Zakros**	**0.49**	**169**	P	**Pn**	**09 01 15.2**	**+0.1**
ZKR				S	**Sn**	**09 01 22.9**	**+0.3**
ZKR				AML	AML	09 01 23.1	
	comp=E,54290μm,0.3s						
ZKR				AML	AML	09 01 23.3	
	comp=N,32983μm,0.3s						
NPS	**Neapolis**	**0.52**	**231**	P	**Pn**	**09 01 15.9**	**+0.4**
NPS				S	**Sn**	**09 01 23.6**	**+0.2**
NPS	**Neapolis**	**0.52**	**231**	P	**Pn**	**09 01 16.0**	**+0.4**
NPS				S	**Sn**	**09 01 23.6**	**+0.2**
NPS				AML	AML	09 01 23.9	
	comp=N,95958μm,0.4s						
NPS				AML	AML	09 01 24.1	
LAST	**Lasithi**	**0.67**	**230**	P	**Pn**	**09 01 18.1**	**+0.5**
LAST				S	**Sn**	**09 01 27.7**	**+0.5**
LAST	**Lasithi**	**0.67**	**230**	P	**Pn**	**09 01 18.2**	**+0.5**
LAST				S	**Sn**	**09 01 27.9**	**+0.8**
LAST				AML	AML	09 01 28.5	
	comp=E,23374μm,0.6s						
LAST				AML	AML	09 01 29.0	
	comp=N,26223μm,0.4s						
ANAF	**Anafi Island**	**0.81**	**341**	P	**Pn**	**09 01 19.1**	**-0.5**
ANAF				S	**Sn**	**09 01 30.2**	**-0.3**
ANAF	**Anafi Island**	**0.81**	**341**	P	**Pn**	**09 01 19.1**	**-0.5**
ANAF				S	**Sn**	**09 01 30.3**	**-0.3**
ANAF				AML	AML	09 01 31.5	
	comp=N,90358μm,0.4s						
ANAF				AML	AML	09 01 33.7	
	comp=E,64019μm,0.5s						
KARP	**Karpathos**	**0.86**	**93**	P	**Pn**	**09 01 19.9**	**-0.4**
KARP				S	**Sn**	**09 01 32.6**	**+0.7**
KARP	**Karpathos**	**0.86**	**93**	P	**Pn**	**09 01 19.9**	**-0.4**
KARP				S	**Sn**	**09 01 32.3**	**+0.4**
KARP				AML	AML	09 01 35.1	
	comp=E,14712μm,0.4s						
KARP				AML	AML	09 01 37.1	
	comp=N,8163μm,0.3s						
IACM	**Heraklion**	**0.89**	**252**	P	**Pb**	**09 01 21.0**	**-0.1**
IACM				S	**Sn**	**09 01 33.1**	**+0.6**
IACM	**Heraklion**	**0.89**	**252**	P	**Pb**	**09 01 21.1**	**+0.1**
IACM				S	**Sn**	**09 01 34.8**	**+2.3**
KSTL	**Kastelli Herak**	**0.89**	**251**	P	**Pn**	**09 01 19.0**	**-1.6**
KSTL				S	**Sb**	**09 01 29.4**	**-3.2**
SAP1	**Santorini-Akro**	**0.95**	**323**	P	**Pn**	**09 01 21.4**	**-0.2**
SAP1				S	**Sn**	**09 01 33.9**	**-0.3**
SAP2K	**Karterados**	**0.97**	**327**	P	**Pn**	**09 01 21.3**	**-0.5**
IDI	**Anoyia**	**1.04**	**253**	Pn	**Pb**	**09 01 23.0**	**-0.6**
	comp=N,68nm,0.3s,baz=69,slow=11,SNR=236						
IDI				Lg	Lg	09 01 37.0	
	comp=N,523nm,0.3s,baz=313,slow=19,SNR=38						
CMBO	**Columbo, Santo**	**1.04**	**327**	P	**Pn**	**09 01 22.5**	**-0.3**
CMBO	**Columbo, Santo**	**1.04**	**327**	P	**Pb**	**09 01 23.1**	**-0.6**
CMBO				S	**Sb**	**09 01 36.8**	**-0.2**
CMBO				AML	AML	09 01 38.2	
	comp=N,18365μm,0.6s						
CMBO				AML	AML	09 01 42.0	
	comp=E,15170μm,0.6s						
SIVA	**Sivas**	**1.20**	**242**	P	**Pb**	**09 01 25.5**	**-0.8**
SIVA				S	**Sb**	**09 01 40.9**	**-0.6**
SIVA	**Sivas**	**1.20**	**242**	P	**Pb**	**09 01 26.4**	**+0.1**
SIVA				S	**Sb**	**09 01 42.6**	**+1.1**
SIVA				AML	AML	09 01 47.8	
	comp=E,16079μm,0.3s						
SIVA				AML	AML	09 01 49.0	
	comp=N,10646μm,0.6s						
TMBK	**Timbaki Herakl**	**1.21**	**245**	P	**Pn**	**09 01 25.2**	**+0.2**
TMBK				S	**Sb**	**09 01 41.4**	**-0.3**
AMGA	**Amorgos Island**	**1.25**	**352**	P	**Pn**	**09 01 24.9**	**-0.7**
AMGA				S	**Sn**	**09 01 40.9**	**-0.5**
AMGA	**Amorgos Island**	**1.25**	**352**	P	**Pn**	**09 01 25.1**	**-0.6**
IOSP	**Ios island**	**1.31**	**330**	P	**Pn**	**09 01 26.2**	**-0.2**
IOSP				S	**Sn**	**09 01 42.6**	**-0.2**
IOSP	**Ios island**	**1.31**	**330**	P	**Pn**	**09 01 26.4**	**0.0**
IOSP				S	**Sn**	**09 01 42.4**	**-0.4**
IOSP				AML	AML	09 01 43.4	
	comp=E,10527μm,0.5s						
IOSP				AML	AML	09 01 43.7	
	comp=N,6258μm,0.4s						
NISR	**Nisiros**	**1.31**	**39**	P	**Pn**	**09 01 26.0**	**-0.4**
NISR				S	**Sn**	**09 01 43.3**	**+0.4**
NISR	**Nisiros**	**1.31**	**39**	P	**Pn**	**09 01 26.7**	**+0.2**
PRNS	**Prines Rethymn**	**1.33**	**261**	P	**Pb**	**09 01 28.2**	**-0.2**
PRNS				S	**Sb**	**09 01 45.3**	**+0.2**
APE	**Apeiranthos**	**1.54**	**343**	P	**Pn**	**09 01 29.4**	**-0.3**
APE				S	**Sn**	**09 01 48.4**	**-0.4**
DAT	**Datca**	**1.65**	**46**	PN	**Pn**	**09 01 31.2**	**0.0**
DAT				SN	**Sb**	**09 01 53.2**	**-1.1**
DAT	**Datca**	**1.65**	**46**	*i* P	**Pn**	**09 01 31.1**	**0.0**
DAT				*i* S	**Sn**	**09 01 46.1**	**-5.2**
DATC	**Datca-Mugla**	**1.71**	**47**	PN	**Pn**	**09 01 32.3**	**+0.3**
ARG	**Arkhangelos**	**1.76**	**69**	PN	**Pn**	**09 01 33.4**	**+0.8**
ARG	**Arkhangelos**	**1.76**	**69**	P	**Pn**	**09 01 32.8**	**+0.3**
ARG				S	**Sn**	**09 01 54.3**	**+0.4**
ARG	**Arkhangelos**	**1.76**	**69**	P	**Pn**	**09 01 32.8**	**+0.3**
ARG				S	**Sn**	**09 01 54.6**	**+0.7**
ARG				AML	AML	09 02 03.1	
	comp=E,4166μm,0.5s						
ARG				AML	AML	09 02 05.6	
	comp=N,3302μm,0.5s						
MHLO	**Agia Marina, M**	**1.76**	**309**	P	**Pn**	**09 01 32.2**	**-0.4**
MHLO				S	**Sn**	**09 01 53.7**	**-0.3**
BODT	**Bodrum**	**1.76**	**33**	PN	**Pn**	**09 01 32.5**	**-0.2**
BODT	**Bodrum**	**1.76**	**33**	P	**Pn**	**09 01 31.8**	**-0.9**
BDRM	**Kayabasi**	**1.82**	**36**	*i* P	**Pn**	**09 01 32.2**	**-1.3**
BDRM				*i* S	**Sn**	**09 01 55.3**	**-0.4**
BBRN	**Bozburun-Marma**	**1.92**	**55**	PN	**Pn**	**09 01 35.4**	**+0.6**
MRSB	**Marmaris-Mugla**	**2.03**	**56**	PN	**Pn**	**09 01 37.0**	**+0.6**
SERI	**Serifos**	**2.04**	**321**	P	**Pn**	**09 01 36.4**	**-0.1**
SERI				S	**Sn**	**09 02 00.6**	**-0.3**
SERI	**Serifos**	**2.04**	**321**	P	**Pn**	**09 01 36.8**	**+0.3**
SMG	**Samos**	**2.19**	**15**	P	**Pn**	**09 01 38.1**	**-0.5**
SMG	**Samos**	**2.19**	**15**	P	**Pn**	**09 01 38.3**	**-0.2**
GCAM	**G?zelcaml?**	**2.29**	**23**	PN	**Pn**	**09 01 40.1**	**+0.2**
GCAM	**G?zelcaml?**	**2.29**	**23**	*i* P	**Pb**	**09 01 45.8**	**+1.0**
GCAM				IAML_P			
	comp=Z,2μm,0.4s						
ANKY	**Antikythira Is**	**2.30**	**278**	P	**Pn**	**09 01 40.8**	**+0.8**
TURN	**Turunc**	**2.39**	**57**	PN	**Pn**	**09 01 37.9**	**-3.4**
DALY	**Dalyan (Mula)**	**2.40**	**59**	PN	**Pn**	**09 01 42.3**	**+0.9**
DALY	**Dalyan (Mula)**	**2.40**	**59**	*i* P	**Pn**	**09 01 43.9**	**+2.5**
DALY				IAML_P			
	comp=Z,3μm,0.2s						
AYDN	**Tasoluk**	**2.51**	**34**	*i* P	**Pn**	**09 01 45.1**	**+2.2**
AYDN				IAML_P			
	comp=Z,769nm,0.2s						
FETY	**Fethiye**	**2.63**	**66**	PN	**Pn**	**09 01 45.0**	**+0.4**
FETY	**Fethiye**	**2.63**	**66**	P	**Pn**	**09 01 44.9**	**+0.4**
FETY	**Fethiye**	**2.63**	**66**	*i* P	**Pn**	**09 01 46.5**	**+2.0**
FETY				IAML_P			
	comp=Z,912nm,0.1s						
ZEY	**zmir**	**2.66**	**7**	*i* P	**Pb**	**09 01 54.4**	**+3.3**
AYDB	**Zeytinkoy-Aydi**	**2.75**	**31**	PN	**Pn**	**09 01 46.6**	**+0.2**
CHOS	**Chios island**	**2.79**	**359**	PN	**Pn**	**09 01 46.2**	**-0.6**
URLA	**Izmir**	**2.79**	**8**	PN	**Pn**	**09 01 46.5**	**-0.3**
URLA	**Izmir**	**2.79**	**8**	*i* P	**Pb**	**09 01 56.0**	**+2.6**
URLA				IAML_P			
	comp=Z,8μm,0.4s						
VLI	**Veliai**	**2.80**	**295**	P	**Pn**	**09 01 46.7**	**-0.2**
VLI				S	**Sn**	**09 02 19.4**	**-0.2**
VLI	**Veliai**	**2.80**	**295**	P	**Pn**	**09 01 48.1**	**+1.2**
VLI				S	**Sn**	**09 02 19.4**	**-0.2**
AKAS	**Kas**	**2.91**	**76**	PN	**Pn**	**09 01 50.1**	**+1.5**
AKAS	**Kas**	**2.91**	**76**	*i* P	**Pn**	**09 01 50.7**	**+2.1**
AKAS				IAML_P			
	comp=Z,2μm,0.1s						
DID	**Didima**	**3.00**	**310**	P	**Pn**	**09 01 50.7**	**+1.1**
DID				S	**Sn**	**09 02 24.9**	**+0.3**
ELL	**Elmali**	**3.29**	**68**	PN	**Pn**	**09 01 55.4**	**+1.7**
ZEDA	**zmir-Bergama**	**3.46**	**13**	*i* P	**Pn**	**09 01 57.0**	**+1.1**
VLX	**Vlachokerasia**	**3.49**	**302**	P	**Pn**	**09 01 56.1**	**-0.3**
MANT	**Manisa**	**3.50**	**33**	*e*Pn	**Pn**	**09 01 59.3**	**+2.6**
MANT	**Manisa**	**3.50**	**33**	*i* P	**Pn**	**09 01 58.5**	**+1.8**
MANT				IAML_P			
	comp=Z,244nm,0.3s						
AKUM	**Antalya-Kumluc**	**3.52**	**77**	*i* P	**Pn**	**09 01 58.0**	**+1.3**
AKUM				IAML_P			
	comp=Z,229nm,0.1s						
KULA	**Kula-Manisa**	**3.56**	**34**	PN	**Pn**	**09 01 58.2**	**+0.7**
KULA	**Kula-Manisa**	**3.56**	**34**	P	**Pn**	**09 01 57.8**	**+0.3**
SIGR	**SIGRI**	**3.62**	**357**	PN	**Pn**	**09 01 57.9**	**-0.2**
KORT	**Korkueli**	**3.71**	**66**	PN	**Pn**	**09 02 01.4**	**+1.9**
KORT	**Korkueli**	**3.71**	**66**	*i* P	**Pn**	**09 02 03.0**	**+3.4**
KORT				IAML_P			
	comp=Z,333nm,0.2s						
ITM	**Ithomi**	**3.72**	**296**	*e*Pn	**Pn**	**09 02 03.5**	**+3.8**
GUR	**Goura**	**3.82**	**309**	P	**Pn**	**09 02 01.7**	**+0.7**
KHAL	**Karahalli**	**3.88**	**43**	*i* P	**Pn**	**09 02 04.6**	**+2.7**
KHAL				IAML_P			
	comp=Z,318nm,0.2s						
USAK	**Uak-Merkez**	**3.89**	**36**	*i* P	**Pn**	**09 02 04.4**	**+2.4**
KLV	**Kalavryta, Ach**	**4.00**	**309**	P	**Pn**	**09 02 04.1**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**4.16**	**5**	*i* P	**Pn**	**09 02 05.2**	**-0.4**
BALB	**Balikesir**	**4.28**	**19**	*e*Pn	**Pn**	**09 02 09.1**	**+1.8**
GDZ	**Gediz**	**4.41**	**37**	*i* P	**Pn**	**09 02 12.7**	**+3.5**
GDZ				IAML_P			
	comp=Z,640nm,0.1s						
AGG	**Agios Georgios**	**4.56**	**320**	*e*Pn	**Pn**	**09 02 14.5**	**+3.4**
SHUT	**Suhut-Afyon**	**4.62**	**49**	PN	**Pn**	**09 02 13.7**	**+1.6**
KEPZ	**Antalya-Kepez**	**4.63**	**72**	*i* P	**Pn**	**09 02 15.2**	**+3.0**
LPK	**Lapseki**	**4.80**	**6**	PN	**Pn**	**09 02 14.9**	**+0.5**
BOLV	**Bolvadin**	**4.97**	**50**	*i* P	**Pn**	**09 02 20.6**	**+3.8**
ALN	**Alexandroupoli**	**5.30**	**360**	*e*Pn	**Pn**	**09 02 21.4**	**+0.2**
FNA	**Florina**	**6.38**	**326**	*e*Pn	Pn	09 02 43.4	+7.2
ANTO	**Ankara**	**6.80**	**49**	*e*Pn	**Pn**	**09 02 45.0**	**+3.0**
BR101	**Keskin Array S**	**7.26**	**53**	*e*Pn	**Pn**	**09 02 49.7**	**+1.4**
BRTR	**Keskin Array B**	**7.26**	**53**	Pn	**Pn**	**09 02 49.7**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=222,slow=15,SNR=30						
VTS	**Vitosha**	**7.36**	**343**	*e*Pn	**Pn**	**09 02 51.9**	**+2.2**
MMAI	**Mount Meron Ar**	**8.11**	**106**	Pn	**Pn**	**09 02 59.3**	**-0.7**
	baz=302,slow=12,SNR=1.9						
MMAI				LR	LR	09 07 00.6	
	comp=Z,37nm,20.3s,baz=155,slow=44						
EIL	**Elat**	**9.51**	**126**	Pn	**Pn**	**09 03 18.5**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=352,slow=4.2,SNR=7.2						
EIL				Sn	**Sn**	**09 04 58.4**	**-6.6**
	comp=Z,1.7nm,0.3s,baz=332,slow=9.1,SNR=5.1						
MLR	**Muntele Rosu**	**9.89**	**359**	Pn	**Pn**	**09 03 26.2**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=311,slow=3.2,SNR=6.0						
MLR				LR	LR	09 08 15.1	
	comp=Z,76nm,18.6s,baz=292,slow=44						
KBZ	**Khabaz**	**15.26**	**53**	Pn	**P**	**09 04 41.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=260,slow=3.9,SNR=4.3						
AKASG	**Malin Array Be**	**15.27**	**8**	Pn	**P**	**09 04 40.7**	**-1.3**
	comp=Z,2.7nm,0.3s,baz=196,slow=11,SNR=14						
AKBB	**Malin Array Si**	**15.27**	**8**	*e*Pn	**P**	**09 04 40.7**	**-1.3**
	comp=Z,6.6nm,0.7s						
GNI	**Garni**	**15.40**	**67**	LR	LR	09 11 40.2	
	comp=Z,72nm,18.1s,baz=223,slow=41						
GEC2	**GERESS Array S**	**16.09**	**329**	*e*Pn	**P**	**09 04 51.5**	**+0.2**
GERES	**GERESS Array B**	**16.09**	**329**	Pn	**P**	**09 04 51.5**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=149,slow=14,SNR=2.4						
DAVOX	**Davos/Dischmat**	**16.52**	**318**	Pn	**P**	**09 04 59.3**	**+3.2**
	comp=Z,0.7nm,0.3s,baz=151,slow=19,SNR=2.2						
ESDC	**Sonseca Array**	**24.10**	**289**	P	**P**	**09 06 18.0**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=86,slow=10.0,SNR=3.1						
MDT	**Midelt**	**25.50**	**273**	P	**P**	**09 06 30.7**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=68,slow=9.3,SNR=4.3						
GEYT	**Alibeck**	**25.69**	**75**	P	**P**	**09 06 32.5**	**+0.9**
	comp=Z,2.9nm,0.6s,baz=309,slow=7.3,SNR=7.6						
HFS	**Hagfors**	**25.84**	**346**	P	**P**	**09 06 33.8**	**+1.1**
	comp=Z,2.8nm,1.1s,baz=268,slow=37,SNR=3.2						
FIA0	**FINESS Array S**	**25.87**	**360**	*e*P	**P**	**09 06 33.1**	**+0.1**
FINES	**FINESS Array B**	**25.87**	**360**	P	**P**	**09 06 33.1**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=178,slow=11,SNR=2.9						
EKA	**Eskdalemuir Ar**	**28.14**	**324**	P	**P**	**09 06 54.1**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=123,slow=10,SNR=3.9						
TOA1	**Torodi Ar. Sit**	**31.36**	**231**	*e*P	**P**	**09 07 21.6**	**-0.6**
TORD	**Torodi Ar. Bea**	**31.36**	**231**	P	**P**	**09 07 21.6**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=29,slow=9.4,SNR=22						
ARCES	**ARCESS Array B**	**34.00**	**360**	P	**P**	**09 07 43.0**	**-1.8**
	comp=Z,1.0nm,0.9s,baz=185,slow=8.6,SNR=3.8						
KURK	**Kurchatov**	**40.31**	**51**	*e*P	**P**	**09 08 38.8**	**+0.3**
	comp=Z,3.6nm,0.4s						
DBIC	**Dimbokro**	**40.44**	**232**	P	**P**	**09 08 40.5**	**+0.5**
	comp=Z,7.0nm,1.1s,baz=94,slow=3.9,SNR=2.9						
MK32	**Makanchi Array**	**42.89**	**57**	*e*P	**P**	**09 09 00.4**	**+0.5**
MKAR	**Makanchi Array**	**42.89**	**57**	P	**P**	**09 09 00.4**	**+0.5**
	comp=Z,2.5nm,0.3s,baz=267,slow=8.6,SNR=54						
ZAA1	**Zalesovo Array**	**44.15**	**46**	*e*P	**P**	**09 09 08.9**	**-0.9**
ZALV	**Zalesovo Beam**	**44.15**	**46**	P	**P**	**09 09 08.9**	**-0.9**
	comp=Z,2.4nm,0.4s,baz=273,slow=8.9,SNR=4.9						
USRK	**Ussuriysk Ar.**	**75.99**	**45**	P	**P**	**09 12 47.7**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=320,slow=4.3,SNR=4.5						
YKA	**Yellowknife Ar**	**77.27**	**342**	P	**P**	**09 12 54.2**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=25,slow=5.7,SNR=6.0						
YKB5	**Yellowknife Ar**	**77.27**	**342**	*e*P	**P**	**09 12 54.2**	**-1.0**
KS15	**Wonju Array Si**	**77.39**	**53**	*e*P	**P**	**09 12 56.1**	**-0.3**
KSRS	**Korea Array**	**77.41**	**53**	P	**P**	**09 12 56.1**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=300,slow=5.2,SNR=5.8						

IDC 06 09:12:06.4±5.2, 5°.48S×11°.47W, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/35, mbtmp3.9/5, MS3.6/3, Ms1 3.6/3, ms1mx3.1/33, Error ellipse: s-maj=158.7km s-min=102.8km az=133.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**3.80**	**232**	T	T	09 17 04.3	
	baz=54,slow=74,SNR=147						
H10N1	**ASCENSION HYDR**	**3.80**	**232**	T	T	09 17 06.9	
	baz=54,slow=74,SNR=149						
H10N3	**ASCENSION HYDR**	**3.81**	**232**	T	T	09 17 08.1	
	baz=54,slow=74,SNR=151						
H10S1	**ASCENSION HYDR**	**4.66**	**222**	T	T	09 18 19.3	
	baz=43,slow=75,SNR=102						
H10S2	**ASCENSION HYDR**	**4.67**	**222**	T	T	09 18 10.4	
	baz=43,slow=75,SNR=112						
H10S3	**ASCENSION HYDR**	**4.68**	**222**	T	T	09 18 20.6	
	baz=43,slow=75,SNR=93						
DBIC	**Dimbokro**	**13.76**	**29**	LR	LR	09 19 53.0	
	comp=Z,222nm,19.0s,baz=186,slow=34						
TORD	**Torodi Ar. Bea**	**22.66**	**35**	P	P	09 17 09.5	0.0
	3.8nm,0.7s,baz=210,slow=10,SNR=19						
TORD				LR	LR	09 25 31.4	
	comp=Z,195nm,18.1s,baz=265,slow=36						
CPUP	**Villa Florida**	**48.39**	**239**	LR	LR	09 37 33.9	
	comp=Z,44nm,20.2s,baz=49,slow=32						
GERES	**GERESS Array B**	**58.41**	**19**	P	P	09 22 04.0	+0.2
	0.3nm,0.3s,baz=203,slow=7.3,SNR=3.1						
BRTR	**Keskin Array B**	**61.22**	**39**	P	P	09 22 23.4	-0.1
	0.7nm,0.7s,baz=201,slow=7.7,SNR=3.8						
AKASG	**Malin Array Be**	**66.00**	**27**	P	P	09 22 54.0	-0.6
	0.7nm,0.5s,baz=233,slow=6.2,SNR=4.3						
KBZ	**Khabaz**	**69.20**	**39**	P	P	09 23 15.5	+0.5
	1.8nm,0.8s,baz=281,slow=9.4,SNR=3.1						

*ATH **06** 09:12:07.0, 35°.63N×26°.14E, h33km±2km, ML2.2/5, Error ellipse: s-maj=3.5km s-min=1.3km az=190.0*

THE 06 09:12:08.9, 35°.59N×26°.12E, h27km±7km, ML2.0/5, Error ellipse: s-maj=8.2km s-min=0.8km az=206.0, Crete

| Code | Station Name | Δ° | AZ° | Phase

comp=N,158μm,0.1s
AMGA Amorgos Island 1.25 352 P Pn 09 12 28.7 -1.9
AMGA S Sn 09 12 45.9 -0.7
AMGA Amorgos Island 1.25 352 P Pn 09 12 28.9 -1.7
AMGA Amorgos Island 1.25 352 P Pn 09 12 29.0 -1.6
APE Apeiranthos 1.55 342 P Pn 09 12 33.2 -1.6
VAM Vamos 1.58 264 P Pn 09 12 36.1 +1.0

*KRSC **06** 09:22:06.2±0.7, 55°.04N×162°.46E, h47km±14km, ML4.5*
*MOS **06** 09:22:08.0±0.8, 55°.12N×162°.36E, h51km, mb3.9/4, Error ellipse: s-maj=8.5km s-min=4.6km az=78.3*
*IDC **06** 09:22:10.9±3.5, 55°.39N×161°.78E, h56km±37km, mb3.3/9, mb1 3.6/11, mb1mx3.3/49, mbtmp3.6/11, ML3.1/2, MS3.3/3, Ms1 3.4/3, ms1mx2.7/26, Error ellipse: s-maj=30.1km s-min=19.0km az=158.0*
ISC 06 09:22:07.3±1.1, 55°.08N±0°.02×162°.34E±0°.03, h26km±9km, n102, σ1°.94/141, mb3.7/13, 1C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.64**	**214**	*i* P	**Pb**	**09 22 20.2**	**+0.4**
MKZ				*e*S	**Sb**	**09 22 29.2**	**+0.9**
MKZ	**Mys Kozlova**	**0.64**	**214**	PN	**Pb**	**09 22 20.2**	**+0.4**
MKZ				S	**Sb**	**09 22 29.2**	**+0.9**
TUMD	**Tumrok D**	**1.12**	**277**	*e*P	**Pn**	**09 22 27.7**	**+0.3**
TUMD				*e*S	**Sn**	**09 22 42.3**	**+0.3**
KBTR	**Krutoberegovo**	**1.16**	**13**	*i* P	**Pn**	**09 22 27.8**	**-0.1**
KBTR				*e*S	**Sb**	**09 22 43.6**	**+0.3**
KBTR	**Krutoberegovo**	**1.16**	**13**	PN	**Pn**	**09 22 27.8**	**-0.1**
KBTR				S	**Sb**	**09 22 43.6**	**+0.3**
KZV	**Kizimen**	**1.18**	**272**	*e*P	**Pn**	**09 22 28.5**	**+0.2**
KZV				*e*S	**Sn**	**09 22 43.8**	**+0.2**
KZV	**Kizimen**	**1.18**	**272**	PN	**Pn**	**09 22 28.5**	**+0.2**
KZV				S	**Sn**	**09 22 43.8**	**+0.2**
KBG	**Krutoberegovo**	**1.19**	**10**	*e*P	**Pn**	**09 22 28.6**	**+0.3**
KBG				*e*S	**Sb**	**09 22 45.0**	**+0.8**
KBG	**Krutoberegovo**	**1.19**	**10**	PN	**Pn**	**09 22 28.6**	**+0.3**
KBG				S	**Sb**	**09 22 45.0**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**1.27**	**313**	*e*P	**Pb**	**09 22 30.4**	**-0.2**
BZGR	**Bezymyannyi-Gr**	**1.27**	**313**	PN	**Pb**	**09 22 30.4**	**-0.2**
TUMR	**Tumrok**	**1.28**	**280**	*e*P	**Pn**	**09 22 30.5**	**+0.9**
TUMR	**Tumrok**	**1.28**	**280**	PN	**Pn**	**09 22 27.7**	**-1.9**
TUMR				S	**Sn**	**09 22 42.3**	**-3.7**
BZWR	**Bezymyannyi-We**	**1.37**	**311**	*e*P	**Pn**	**09 22 31.6**	**+0.6**
BZWR	**Bezymyannyi-We**	**1.37**	**311**	PN	**Pn**	**09 22 31.6**	**+0.6**
LGNR	**Loginova**	**1.37**	**318**	*e*P	**Pb**	**09 22 32.3**	**-0.2**
LGNR	**Loginova**	**1.37**	**318**	PN	**Pb**	**09 22 32.3**	**-0.2**
CIRR	**Tsirk**	**1.38**	**319**	*e*P	**Pn**	**09 22 31.9**	**+0.9**
CIRR	**Tsirk**	**1.38**	**319**	PN	**Pn**	**09 22 31.9**	**+0.9**
KPT	**Kopyto**	**1.50**	**307**	*e*P	**Pn**	**09 22 33.1**	**+0.5**
KPT	**Kopyto**	**1.50**	**307**	PN	**Pn**	**09 22 33.1**	**+0.5**
KLY	**Klyuchi**	**1.56**	**323**	*e*P	**Pn**	**09 22 33.0**	**-0.4**
KLY	**Klyuchi**	**1.56**	**323**	PN	**Pn**	**09 22 33.0**	**-0.4**
SMKR	**Semkarok**	**1.58**	**342**	*e*P	**Pn**	**09 22 34.9**	**+1.1**
SMKR				*e*S	**Sb**	**09 22 55.4**	**-0.1**
SMKR	**Semkarok**	**1.58**	**342**	PN	**Pn**	**09 22 34.9**	**+1.1**
SMKR				S	**Sb**	**09 22 55.4**	**-0.1**
BDR	**Baidarnaya**	**1.62**	**337**	*e*P	**Pb**	**09 22 35.6**	**-1.0**
BDR	**Baidarnaya**	**1.62**	**337**	PN	**Pb**	**09 22 35.6**	**-1.0**
SRKR	**Sorokina**	**1.71**	**338**	*e*P	**Pn**	**09 22 36.7**	**+1.2**
SRKR				*e*S	**Sn**	**09 22 58.0**	**+1.4**
SRKR	**Sorokina**	**1.71**	**338**	PN	**Pn**	**09 22 36.7**	**+1.2**
SRKR				S	**Sn**	**09 22 58.0**	**+1.4**
KOZ	**Kozyrevsk**	**1.71**	**306**	*e*P	**Pn**	**09 22 36.8**	**+1.3**
KOZ	**Kozyrevsk**	**1.71**	**306**	PN	**Pn**	**09 22 36.8**	**+1.3**
SRDR	**Sredinnyy**	**1.94**	**311**	*e*P	**Pn**	**09 22 39.4**	**+0.8**
SRDR	**Sredinnyy**	**1.94**	**311**	PN	**Pn**	**09 22 39.4**	**+0.8**
BKI	**Bering**	**2.09**	**85**	*e*P	**Pn**	**09 22 40.8**	**+0.2**
BKI				*e*S	**Sn**	**09 23 04.1**	**-1.6**
BKI	**Bering**	**2.09**	**85**	PN	**Pn**	**09 22 40.8**	**+0.2**
BKI				S	**Sn**	**09 23 04.1**	**-1.6**
ESO	**Esso**	**2.24**	**294**	*e*P	**Pn**	**09 22 43.3**	**+0.6**
ESO	**Esso**	**2.24**	**294**	PN	**Pn**	**09 22 43.3**	**+0.6**
SPN	**Mys Shipunski**	**2.41**	**215**	*e*P	**Pn**	**09 22 44.4**	**-0.7**
SPN				*e*S	**Sn**	**09 23 12.7**	**-1.1**
SPN	**Mys Shipunski**	**2.41**	**215**	PN	**Pn**	**09 22 44.4**	**-0.7**
SPN				S	**Sn**	**09 23 12.7**	**-1.1**
NLC	**Nalytchevo**	**2.60**	**224**	*e*P	**Pn**	**09 22 48.4**	**+0.7**
NLC				*e*S	**Sn**	**09 23 18.9**	**+0.4**
NLC	**Nalytchevo**	**2.60**	**224**	PN	**Pn**	**09 22 48.4**	**+0.7**
NLC				S	**Sn**	**09 23 18.9**	**+0.4**
SDLR	**Sedlovina**	**2.72**	**230**	*e*P	**Pn**	**09 22 51.1**	**+1.6**
SDLR				*e*S	**Sn**	**09 23 23.3**	**+1.7**
SDLR	**Sedlovina**	**2.72**	**230**	PN	**Pn**	**09 22 51.1**	**+1.6**
SDLR				S	**Sn**	**09 23 23.3**	**+1.7**
KRER	**Koryakskii**	**2.76**	**231**	*e*P	**Pn**	**09 22 52.0**	**+1.9**
KRER				*e*S	**Sn**	**09 23 26.4**	**+3.7**
KRER	**Koryakskii**	**2.76**	**231**	PN	**Pn**	**09 22 52.0**	**+1.9**
KRER				S	**Sn**	**09 23 26.4**	**+3.7**
SMAR	**Somma**	**2.77**	**230**	*e*P	**Pn**	**09 22 51.8**	**+1.6**
SMAR				*e*S	**Sn**	**09 23 24.3**	**+1.4**
SMAR	**Somma**	**2.77**	**230**	PN	**Pn**	**09 22 51.8**	**+1.6**
SMAR				S	**Sn**	**09 23 24.3**	**+1.4**
KRX	**Arik**	**2.77**	**233**	*e*P	**Pn**	**09 22 52.5**	**+2.3**
KRX				*e*S	**Sn**	**09 23 25.5**	**+2.6**
KRX	**Arik**	**2.77**	**233**	PN	**Pn**	**09 22 52.5**	**+2.3**
KRX				S	**Sn**	**09 23 25.5**	**+2.6**
AVH	**Avacha**	**2.79**	**231**	*e*P	**Pn**	**09 22 53.0**	**+2.6**
AVH				*e*S	**Sn**	**09 23 26.3**	**+3.0**
AVH	**Avacha**	**2.79**	**231**	PN	**Pn**	**09 22 53.0**	**+2.6**
AVH				S	**Sn**	**09 23 26.3**	**+3.0**
UGLR	**Uglovaya**	**2.79**	**229**	*e*P	**Pn**	**09 22 52.4**	**+1.9**
UGLR	**Uglovaya**	**2.79**	**229**	PN	**Pn**	**09 22 52.4**	**+1.9**
KOK	**Koryaka**	**2.82**	**232**	*e*P	**Pn**	**09 22 52.7**	**+1.9**
KOK				*e*S	**Sn**	**09 23 27.0**	**+3.0**
KOK	**Koryaka**	**2.82**	**232**	PN	**Pn**	**09 22 52.7**	**+1.9**
KOK				S	**Sn**	**09 23 27.0**	**+3.0**
GNL	**Ganaly**	**2.93**	**243**	*e*P	**Pn**	**09 22 54.4**	**+2.1**
GNL	**Ganaly**	**2.93**	**243**	PN	**Pn**	**09 22 54.4**	**+2.1**
DALK	**Dalny**	**2.95**	**227**	*e*P	**Pn**	**09 22 53.9**	**+1.4**
DALK				*e*S	**Sn**	**09 23 28.4**	**+1.4**
DALK	**Dalny**	**2.95**	**227**	PN	**Pn**	**09 22 53.9**	**+1.4**
DALK				S	**Sn**	**09 23 28.4**	**+1.4**
PET	**Petropavlovsk**	**3.00**	**228**	⇓*i* PN	**Pn**	**09 22 55.2**	**+2.1**
PET				*e*S	**Sn**	**09 23 30.5**	**+2.3**
PET	comp=Z,95nm,0.6s			pmax	pmax		
PET	comp=N,444nm,0.6s			smax	smax		
PET	comp=E,479nm,0.5s			smax	smax		
KRMR	**Karymshinskiy**	**3.36**	**230**	*e*P	**Pn**	**09 23 00.6**	**+2.5**
KRMR				*e*S	**Sn**	**09 23 40.2**	**+3.1**
KRMR	**Karymshinskiy**	**3.36**	**230**	PN	**Pn**	**09 23 00.6**	**+2.5**
KRMR				S	**Sn**	**09 23 40.2**	**+3.1**
PETK	**Petropavlovsk-**	**3.38**	**236**	P	**Pn**	**09 23 00.5**	**+2.1**
PETK	comp=E,4.3nm,0.3s,baz=67,slow=18,SNR=40			S	**Sb**	**09 23 43.5**	**-3.4**
PETK	comp=E,12nm,0.3s,baz=296,slow=18,SNR=8.8			LR	LR	09 24 26.1	
PETK	comp=E,90nm,18.5s,baz=56,slow=41						
RUS	**Russkaya**	**3.50**	**222**	*e*P	**Pn**	**09 23 01.3**	**+1.3**
RUS				*e*S	**Sn**	**09 23 41.3**	**+0.9**
RUS	**Russkaya**	**3.50**	**222**	PN	**Pn**	**09 23 01.3**	**+1.3**
RUS				S	**Sn**	**09 23 41.3**	**+0.9**
MTVR	**Mutnovka**	**3.59**	**225**	*e*P	**Pn**	**09 23 03.9**	**+2.5**
MTVR				*e*S	**Sn**	**09 23 46.6**	**+3.6**
MTVR	**Mutnovka**	**3.59**	**225**	PN	**Pn**	**09 23 03.9**	**+2.5**
MTVR				S	**Sn**	**09 23 46.6**	**+3.6**
ASAK	**Asacha**	**3.78**	**226**	*e*P	**Pn**	**09 23 06.6**	**+2.6**
ASAK	**Asacha**	**3.78**	**226**	PN	**Pn**	**09 23 06.6**	**+2.6**
OSSR	**Ossora**	**4.20**	**5**	*e*P	**Pn**	**09 23 11.0**	**+1.4**
OSSR				S	**Sn**	**09 24 00.6**	**+2.9**
OSSR	**Ossora**	**4.20**	**5**	PN	**Pn**	**09 23 11.0**	**+1.4**
OSSR				S	**Sn**	**09 24 00.6**	**+2.9**
PAU	**Pauzhetka**	**4.91**	**225**	*e*P	**Pn**	**09 23 22.2**	**+2.8**
PAU				*e*S	**Sn**	**09 24 17.9**	**+2.5**
PAU	**Pauzhetka**	**4.91**	**225**	PN	**Pn**	**09 23 22.2**	**+2.8**
PAU				S	**Sn**	**09 24 17.9**	**+2.5**
SKR	**Severo-Kuril's**	**5.80**	**223**	*e*PN	Pn	09 23 38.0	+6.4
SKR				*e*S	**Sb**	**09 24 48.4**	**-8.1**
SKR	comp=E,41nm,0.3s			smax	smax		
SKR	comp=N,77nm,0.6s			smax	smax		
SKR	comp=Z,100nm,13.0s			MLR	MLR		
ALID	**Alaid**	**5.89**	**227**	P	**Pn**	**09 23 35.4**	**+2.5**
ALID	**Alaid**	**5.89**	**227**	PN	**Pn**	**09 23 35.4**	**+2.5**
SEY	**Seymchan**	**9.39**	**331**	*i* PN	**Pn**	**09 24 18.9**	**-1.9**
BILL	**Bilibino**	**13.13**	**7**	⇑*e*PN	**Pn**	**09 25 12.3**	**+0.4**
BILL	comp=Z,2.0nm,1.2s			pmax	pmax		
ASAJ	**Asahikawa**	**16.80**	**237**	P	**Pn**	**09 26 00.3**	**-0.2**
ASAJ	comp=Z,0.2nm,0.3s,baz=72,slow=20,SNR=2.4			Sn	**Sn**	**09 38 51.3**	**-3.1**
ERM	**Erimo**	**18.15**	**232**	*i* P	**Pn**	**09 26 14.6**	**-2.7**
KLR	**Kul'dur**	**19.56**	**265**	*i* P	**P**	**09 26 31.4**	**-1.5**
KLR	comp=Z,1.0nm,1.0s			pmax	pmax		
TIXI	**Tiksi**	**21.88**	**332**	*i* P	**P**	**09 26 56.5**	**-1.3**
COLA	**College**	**26.07**	**48**	*i* P	**P**	**09 27 41.0**	**+2.8**
COLA	comp=Z,2.0nm,0.9s			pmax	pmax		
ILAR	**Eielson Array**	**26.48**	**48**	P	**P**	**09 27 42.1**	**0.0**
ILAR	**Eielson Array**	**26.48**	**48**	*e*P	**P**	**09 27 46.6**	**+4.6**
INK	**Inuvik**	**31.48**	**40**	P	**P**	**09 28 25.8**	**-0.6**
ULN	**Ulaanbaatar**	**34.38**	**281**	*i* P	P	09 28 49.0	-3.1
ULN	comp=Z,1.0nm,0.9s			pmax	pmax		
H11N2	**WAKE ISLAND Hy**	**35.46**	**173**	T	T	10 06 22.6	
H11N3	**WAKE ISLAND Hy**	**35.48**	**173**	T	T	10 06 23.6	
H11N1	**WAKE ISLAND Hy**	**35.48**	**173**	T	T	10 06 23.9	
YKA	**Yellowknife Ar**	**40.80**	**45**	P	**P**	**09 29 46.8**	**+0.8**
DGZ	**Jazzator, Alta**	**43.99**	**295**	*i* P	**P**	**09 30 10.1**	**-2.2**
DGZ	comp=Z,1.0nm,0.8s			pmax	pmax		
KURK	**Kurchatov**	**47.82**	**301**	P	P	09 30 38.9	-3.3
KURBB	**Kurchatov Arra**	**47.92**	**301**	P	P	09 30 38.9	-4.2
BRVK	**Borovoye**	**50.22**	**308**	*i* P	**P**	**09 30 59.9**	**-0.7**
BRVK	comp=Z,1.0nm,1.1s			pmax	pmax		
PRGR	**Permogore**	**53.46**	**328**	*e*P	**P**	**09 31 24.4**	**-0.2**
NVAR	**Mina Array Bea**	**53.85**	**73**	P	**P**	**09 31 29.6**	**+1.5**
NVAR	comp=Z,0.3nm,0.6s,baz=296,slow=8.5,SNR=4.1			LR	LR	09 53 36.0	
PDAR	**Pinedale Array**	**55.42**	**63**	P	**P**	**09 31 40.5**	**+1.0**
FINES	**FINESS Array B**	**58.81**	**337**	P	**P**	**09 32 00.5**	**-2.3**
CMAR	**Chiang Mai Arr**	**59.88**	**259**	LR	LR	09 59 12.8	
TXAR	**Lajitas Array**	**68.66**	**69**	P	**P**	**09 33 09.4**	**+1.0**
ASAR	**Alice Springs**	**82.13**	**206**	P	**P**	**09 34 25.9**	**+0.5**

MEX 06 09:33:04.5±0.3, 19°.24N×105°.25W, h6km±5km, MD3.7, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.32**	**38**	*i* P	Pg	09 33 10.5	-0.3
CJM				*i* S	Sg	09 33 15.1	0.0
EZ5V		**1.58**	**81**	*e*P	Pn	09 33 31.3	-1.9
EZ5V				*e*S	Sn	09 33 52.4	-1.8

*NIED **06** 09:37:00, 41°.00N×143°.10E, h41km, Mw3.9 Best double couple: M0:9.08000×10^14 NP1:φ0=202.00000°, δ28.00000°, λ91.00000°. NP2:φ0=21.00000°, δ62.00000°, λ90.00000°.*
*IDC **06** 09:37:26.5±0.8, 40°.94N×143°.12E, h0km, mb3.9/10, mb1 4.0/14, mb1mx3.8/38, mbtmp3.9/14, ML3.2/4, MS2.7/4, Ms1 2.7/4, ms1mx2.5/41, Error ellipse: s-maj=20.8km s-min=17.2km az=84.0*
*ISCJB **06** 09:37:30.2±0.5, 40°.99N±0°.03×143°.23E±0°.06, h42km±5km, mb3.9/17, Error ellipse: s-maj=8.0km s-min=4.3km az=34.1*
*MOS **06** 09:37:30.8±1.3, 41°.03N×143°.17E, h41km, mb4.1/7, Error ellipse: s-maj=13.7km s-min=7.9km az=90.2*
*JMA **06** 09:37:30.6±0.1, 41°.00N×143°.15E, h35km, M3.9*
*NEIC **06** 09:37:33.3±1.3, 41°.11N×143°.07E, h44km±7km, mb4.3/3, Error ellipse: s-maj=18.5km s-min=13.7km az=99.0*
ISC 06 09:37:31.0±1.7, 41°.03N±0°.05×143°.21E±0°.05, h30km±12km, n68, σ1°.29/71, mb4.0/17, 10C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.99**	**358**	*e*Pn	**Pb**	**09 37 48.8**	**-0.8**
ERM	**Erimo**	**0.99**	**358**	*e*P	**Pb**	**09 37 48.8**	**-0.8**
JEM	**Erimo**	**0.99**	**358**	⇑P	**Pn**	**09 37 48.6**	**-0.2**
JEM				*e*S	**Sn**	**09 38 02.2**	**+0.4**
JTHR	**Tokachihiroo**	**1.26**	**3**	P	**Pn**	**09 37 52.8**	**+0.2**
JNBK	**Urakawa-nobuka**	**1.30**	**345**	⇑P	**Pn**	**09 37 53.2**	**+0.1**
JARK	**Aomorirokkasho**	**1.40**	**270**	P	**Pn**	**09 37 53.6**	**-0.8**
JKEN	**Kujiedanarisaw**	**1.41**	**235**	P	**Pn**	**09 37 53.4**	**-1.2**
JANG	**Nango**	**1.45**	**244**	⇑P	**Pn**	**09 37 54.4**	**-0.7**
JCH	**Churui**	**1.59**	**4**	P	**Pn**	**09 37 57.1**	**0.0**
JTM	**Tenmabayashi**	**1.64**	**262**	⇑P	**Pn**	**09 37 57.6**	**-0.2**
JTM				*e*S	**Sn**	**09 38 17.5**	**-0.4**
JOT	**Ohata**	**1.67**	**283**	⇑P	**Pn**	**09 37 57.8**	**-0.4**
JOT				*e*S	**Sn**	**09 38 17.6**	**-0.9**
JKB	**Kayabe**	**1.85**	**298**	⇑P	**Pn**	**09 38 00.2**	**-0.4**
JBT2	**Biratori 2**	**1.86**	**340**	P	**Pn**	**09 38 01.8**	**+1.0**
JBT2				*e*S	**Sn**	**09 38 25.3**	**+2.0**
JOM	**Ohasama**	**2.14**	**224**	P	**Pn**	**09 38 04.8**	**+0.2**
JEW	**Eniwo**	**2.24**	**325**	P	**Pn**	**09 38 07.0**	**+1.0**
JAK	**Akkeshi**	**2.26**	**29**	⇓P	**Pn**	**09 38 06.1**	**-0.2**
JAK				*e*S	**Sn**	**09 38 31.3**	**-1.8**
JAR	**Ashorobuto**	**2.31**	**10**	P	**Pn**	**09 38 06.6**	**-0.3**
JAR				*e*S	**Sn**	**09 38 32.8**	**-1.5**
JMK	**Ichinoseki**	**2.58**	**217**	⇑P	**Pn**	**09 38 11.1**	**+0.4**
ASAJ	**Asahikawa**	**3.12**	**352**	Pn	**Pn**	**09 38 19.6**	**+1.4**
ASAJ	3.1nm,0.3s,baz=199,slow=17,SNR=24			Sn	**Sn**	**09 38 51.3**	**-3.1**
YUK	**Yuzh-Kuril'sk**	**3.59**	**32**	*d* P	**Pn**	**09 38 24.8**	**+0.3**
YUK				*i* S	**Sn**	**09 39 03.1**	**-2.8**
YUK	comp=Z,210nm,0.1s			pmax	pmax		
YUK	comp=N,101nm,0.2s			pmax	pmax		
YUK	comp=E,63nm,0.2s			smax	smax		
YUK	comp=N,531nm,0.3s			smax	smax		
YUK	comp=E,356nm,0.3s			smax	smax		
KUR	**Kuril'sk**	**5.41**	**37**	*e*P	**Pn**	**09 38 50.5**	**+0.9**
KUR				*i* S	**Sn**	**09 39 49.2**	**-1.6**
KUR	comp=N,38nm,0.3s			pmax	pmax		
KUR	comp=E,14nm,0.3s			pmax	pmax		
KUR	comp=Z,53nm,0.3s			smax	smax		
KUR	comp=N,31nm,0.2s			smax	smax		
KUR	comp=E,72nm,0.2s			smax	smax		
MJA0	**Matsu Arr-Jizo**	**5.92**	**222**	*e*P	**Pn**	**09 38 57.5**	**+0.8**
YSS	**Yuzh-Sakhalins**	**5.93**	**357**	*e*P	**Pn**	**09 38 59.7**	**+2.9**
YSS	comp=Z,200nm,13.0s			MLR	MLR		
YSS	comp=E,100nm,14.0s			MLR	MLR		
MAJO	**Matsushiro**	**5.94**	**223**	*e*Pn	**Pn**	**09 38 58.7**	**+1.7**
MAJO	**Matsushiro**	**5.94**	**223**	*i* P	**Pn**	**09 39 00.5**	**+3.5**
MJAR	**Matsushiro Arr**	**5.94**	**223**	Pn	**Pn**	**09 38 57.7**	**+0.7**
MJAR	comp=E,0.1nm,0.3s,baz=32,slow=13,SNR=15			LR	LR	09 41 39.4	
MJAR	comp=E,55nm,19.3s,baz=55,slow=43			LR	LR	09 41 39.4	
JHJ	**Hachijo jima 2**	**8.35**	**200**	Pn	**Pn**	**09 39 28.5**	**-1.5**
USRK	**Ussuriysk Ar.**	**8.86**	**295**	Pn	**Pn**	**09 39 37.2**	**+0.2**
KLR	**Kul'dur**	**11.51**	**319**	Pn	**Pn**	**09 40 13.4**	**+0.1**
KLR	comp=E,0.1nm,0.3s,baz=0.0,slow=20,SNR=3.2			LR	LR	09 44 40.0	
KLR	comp=E,69nm,20.4s,baz=149,slow=38			LR	LR	09 44 40.0	
KSRS	**Korea Array**	**12.38**	**258**	LR	LR	09 45 03.4	
PETK	**Petropavlovsk-**	**15.56**	**34**	LR	LR	09 46 40.6	
BJT	**Baijiatuau**	**20.56**	**276**	*e*S	**S**	**09 45 52.9**	**-2.5**
BOD	**Bodaibo**	**25.07**	**322**	*e*P	**P**	**09 42 50.8**	**-1.7**
BOD	comp=Z,3.0nm,1.2s			pmax	pmax		
ULN	**Ulaanbaatar**	**26.52**	**297**	*i* P	**P**	**09 43 06.0**	**0.0**
SONA0	**Songino Array**	**26.96**	**297**	*e*P	**P**	**09 43 09.6**	**-0.3**
SONM	**Songino Array**	**26.96**	**297**	P	**P**	**09 43 09.6**	**-0.3**
BILL	**Bilibino**	**29.80**	**17**	*i* P	**P**	**09 43 37.3**	**+2.5**
H11S1	**WAKE ISLAND Hy**	**30.15**	**131**	T	T	10 16 04.0	
H11S3	**WAKE ISLAND Hy**	**30.15**	**131**	T	T	10 16 05.7	
H11S2	**WAKE ISLAND Hy**	**30.16**	**131**	T	T	10 16 05.7	
DGZ	**Jazzator, Alta**	**39.32**	**302**	*i* P	**P**	**09 44 59.6**	**+2.2**
ZAA1	**Zalesovo Array**	**40.37**	**309**	*e*P	**P**	**09 45 06.9**	**+1.1**
ZALV	**Zalesovo Beam**	**40.37**	**309**	P	**P**	**09 45 06.9**	**+1.1**
ZALV	**Zalesovo Beam**	**40.37**	**309**	*e*P	**P**	**09 45 08.4**	**+2.6**
MK32	**Makanchi Array**	**43.30**	**299**	*e*P	**P**	**09 45 29.1**	**-0.8**
MKAR	**Makanchi Array**	**43.30**	**299**	P	**P**	**09 45 29.1**	**-0.8**
MKAR	**Makanchi Array**	**43.30**	**299**	*e*P	P	09 45 37.0	+7.1
KURK	**Kurchatov**	**44.67**	**305**	*e*P	**P**	**09 45 39.9**	**-0.9**
KURK	**Kurchatov**	**44.67**	**305**	*e*P	**P**	**09 45 39.9**	**-0.9**
KURBB	**Kurchatov Arra**	**44.75**	**305**	P	**P**	**09 45 40.5**	**-0.9**
ILAR	**Eielson Array**	**45.39**	**34**	P	**P**	**09 45 47.3**	**+0.9**
ILB	**Eielson Array**	**45.39**	**34**	*e*P	**P**	**09 45 47.3**	**+0.9**
INK	**Inuvik**	**50.21**	**29**	P	**P**	**09 46 24.8**	**+1.2**
INK	**Inuvik**	**50.21**	**29**	*e*P	**P**	**09 46 24.8**	**+1.2**
AB31	**Akbulak array**	**56.49**	**309**	⇓Pn	**P**	**09 47 09.0**	**-1.0**
AB31	comp=Z,1.7nm,0.8s,baz=39,slow=13,SNR=7.7			⇑Lg	Lg	09 48 02.1	
ABKAR	**Akbulak array**	**56.49**	**309**	*e*P	**P**	**09 47 09.4**	**-0.6**
AKTO	**Aktyubinsk**	**57.09**	**311**	⇑Pn	**P**	**09 47 12.7**	**-1.6**
AKTO	comp=Z,2.0nm,0.8s			⇑Lg	Lg	09 47 59.9	
WR1	**Warramunga Arr**	**61.22**	**190**	*e*P	**P**	**09 47 42.3**	**-0.7**
WRA	**Warramunga Arr**	**61.22**	**190**	P	**P**	**09 47 42.3**	**-0.7**
ASAR	**Alice Springs**	**64.94**	**189**	P	**P**	**09 48 07.7**	**-0.1**
FIA0	**FINESS Array S**	**65.94**	**332**	*e*P	**P**	**09 48 13.2**	**-0.5**
FIA0	**FINESS Array S**	**65.94**	**332**	*e*P	**P**	**09 48 13.2**	**-0.5**
FINES	**FINESS Array B**	**65.94**	**332**	P	**P**	**09 48 13.2**	**-0.5**
FINES	**FINESS Array B**	**65.94**	**332**	*e*P	**P**	**09 48 13.9**	**+0.1**
KIV	**Kislovodsk**	**69.36**	**311**	*e*P	**P**	**09 48 36.3**	**+0.5**
KBZ	**Khabaz**	**69.38**	**310**	P	**P**	**09 48 35.9**	**+0.2**
PD31	**Pinedale Array**	**73.90**	**47**	*e*P	**P**	**09 49 04.0**	**+0.6**
PDAR	**Pinedale Array**	**73.90**	**47**	P	**P**	**09 49 04.0**	**+0.6**

ISC 06 09:59:33.3±3.1, 48°.1N±0°.1×16°.96E±0°.09, h10km, n6, σ0°.67/12, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZST	**Bratislava**	**0.12**	**53**	*e*PG	**Pg**	**09 59 35.6**	**-0.6**
ZST				*e*SG	**Sg**	**09 59 37.7**	**-0.6**
MODS	**Modra-Piesok**	**0.33**	**40**	*e*PG	**Pg**	**09 59 39.0**	**-0.9**
MODS				*e*SG	**Sg**	**09 59 44.1**	**-0.2**
MODS				*e*LG	Lg	09 59 50.6	
JAVC	**Velka Javorina**	**0.88**	**33**	*e*PG	**Pn**	**09 59 51.4**	**-0.4**
JAVC				*e*SG	**Sn**	**10 00 05.2**	**+0.6**
KRUC	**Moravsky**	**1.01**	**339**	*e*PG	**Pg**	**09 59 52.2**	**-0.5**
KRUC				*e*SG	**Sb**	**10 00 07.0**	**+0.7**
VRAC	**Vranov**	**1.21**	**349**	*e*PG	**Pg**	**09 59 56.5**	**-0.1**
VRAC				*e*SG	**Sg**	**10 00 12.9**	**+0.6**
VYHS	**Vyhne**	**1.31**	**73**	*e*PG	**Pg**	**09 59 59.1**	**+0.7**
VYHS				*e*SG	**Sn**	**10 00 15.7**	**+0.5**

*NNC **06** 10:05:17.3±2.9, 53°.45N×87°.84E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=23.0km s-min=11.4km az=65.0, Suspected Mining explosion.*
KRAR 06 10:05:14.4±0.1, 53°.53N×87°.81E, M2.3, 9C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.82**	**284**	⇑Pn	Pg	10 05 49.1	-0.3
ZAA0	1.2nm,0.3s			⇓Sn	Sg	10 06 16.4	+3.4
KURK	**Kurchatov**	**6.32**	**247**	⇑Pn	Pn	10 06 51.9	+3.1
KURK	4.7nm,0.4s			⇓Sn	Sn	10 08 02.3	+0.7
KURK	1.9nm,0.5s			⇑Lg	Lg	10 08 37.0	
KURBB	**Kurchatov Arra**	**6.42**	**247**	⇑Pn	Pn	10 06 53.1	+3.0
KURBB	1.2nm,0.5s			⇑Sn	Sn	10 08 05.9	+2.0
KURBB	8.1nm,0.6s			⇓Lg	Lg	10 08 41.0	
MK31	**Makanchi Array**	**7.62**	**210**	⇑Pn	Pn	10 07 09.8	+3.2
MK31	0.5nm,0.5s,baz=29,slow=14,SNR=18			⇓Sn	Sn	10 08 38.2	+4.6
MK31	0.8nm,0.6s,baz=30,slow=21,SNR=5.7			⇓Lg	Lg	10 09 15.8	
MAKZ	**Makanchi**	**7.70**	**211**	⇑Pn	Pn	10 07 12.8	+5.1
MAKZ	1.0nm,0.7s			⇑Sn	Sn	10 08 38.5	+2.9
MAKZ	0.8nm,0.6s

KNZ			S	S	10 15 38.7	-0.2
ALRZ	**Allen Road**	**7.12 207**	P	Pn	10 14 15.4	-1.0
MHGZ	**Mahia Peninsul**	**7.18 196**	P	Pn	10 14 17.9	+0.8
RAHZ	**Arahi**	**7.18 201**	P	Pn	10 14 16.4	-0.7
RAHZ			S	S	10 15 38.7	-1.8
KUTZ	**Kaahu Road**	**7.27 210**	P	Pn	10 14 18.3	+0.1
WHHZ	**Waihua**	**7.29 200**	P	Pn	10 14 18.2	-0.2
WHHZ			S	S	10 15 41.4	-1.4
MRHZ	**Matea Rd**	**7.33 205**	P	Pn	10 14 17.7	-1.3
NMHZ	**Naumai**	**7.44 202**	P	Pn	10 14 20.0	-0.3
WATZ	**Wairara**	**7.49 209**	P	Pn	10 14 19.8	-1.2
ARHZ	**Aropaoanui**	**7.53 201**	P	Pn	10 14 20.6	-0.8
BKZ	**Black Stump Fm**	**7.60 204**	P	Pn	10 14 19.7	-2.7
RATZ	**Rangitukua**	**7.61 209**	P	Pn	10 14 20.4	-2.1
HIZ	**Hauiti**	**7.73 215**	P	Pn	10 14 22.3	-1.5
MCHZ	**McNeill Hill**	**7.79 202**	P	Pn	10 14 22.5	-2.1
KRVZ	**Karewarewa**	**7.86 208**	P	Pn	10 14 24.3	-1.2
KWHZ	**Kaweka Forest**	**7.86 203**	P	Pn	10 14 23.1	-2.5
WTVZ	**West Tongariro**	**7.90 209**	P	Pn	10 14 24.3	-1.7
TWVZ	**Taurewa**	**7.92 209**	P	Pn	10 14 24.8	-1.5
NGZ	**Ngauruhoe**	**7.94 208**	P	Pn	10 14 25.7	-1.0
TUVZ	**Tukino**	**8.00 208**	P	Pn	10 14 25.4	-2.0
BHHZ	**Black Hill Sta**	**8.04 205**	P	Pn	10 14 24.0	-3.8
KAHZ	**Kahuranaki**	**8.06 200**	P	Pn	10 14 26.2	-1.7
KRHZ	**Kereru**	**8.07 203**	P	Pn	10 14 24.9	-3.2
MOVZ	**Moawhango**	**8.08 207**	P	Pn	10 14 25.3	-3.0
PKVZ	**Pokaka**	**8.14 209**	P	Pn	10 14 26.0	-3.1
MTVZ	**Mangateitei**	**8.18 208**	P	Pn	10 14 27.0	-2.4
VRZ	**Vera Road**	**8.26 212**	P	Pn	10 14 27.9	-2.5
PXZ	**Pawanui**	**8.28 199**	P	Pn	10 14 28.9	-1.7
PRHZ	**Porangahau**	**8.56 200**	P	Pn	10 14 32.0	-2.1
PKE	**Pukeiti**	**8.68 215**	P	Pn	10 14 33.4	-2.2
WAZ	**Wanganui**	**8.69 209**	P	Pn	10 14 32.1	-3.6
KHEZ	**Kahui Hut**	**8.75 215**	P	Pn	10 14 34.7	-1.8
ANWZ	**Angora Road**	**8.79 200**	P	Pn	10 14 33.5	-3.4
POWZ	**Post Office Ro**	**8.95 204**	P	Pn	10 14 35.0	-4.0
BFZ	**Birch Farm**	**9.06 201**	P	Pn	10 14 37.7	-2.6
MRZ	**Mangatainoka R**	**9.25 204**	P	Pn	10 14 37.7	-5.1
TIWZ	**Tintock**	**9.26 202**	P	Pn	10 14 39.1	-3.8
HOWZ	**Holdsworth Sta**	**9.49 203**	P	Pn	10 14 40.3	-5.3
TMWZ	**Te Maipa**	**9.56 201**	P	Pn	10 14 43.2	-3.3
KIW	**Kapiti Island**	**9.67 206**	P	Pn	10 14 42.0	-5.9
MTW	**Mount Morrison**	**9.73 203**	P	Pn	10 14 43.7	-4.9
CAW	**Cannon Point**	**9.83 204**	P	Pn	10 14 43.7	-6.1
TRWZ	**Traveller**	**9.88 201**	P	Pn	10 14 46.4	-4.2
PAWZ	**Paruwai Farm**	**9.95 202**	P	Pn	10 14 47.0	-4.4
DUWZ	**D'Urville Isla**	**10.01 210**	P	Pn	10 14 45.2	-6.9
MSWZ	**Moikau Station**	**10.04 203**	P	Pn	10 14 47.0	-5.5
BHW	**Baring Head**	**10.16 204**	P	Pn	10 14 49.2	-4.8
PLWZ	**Palliser**	**10.18 203**	P	Pn	10 14 48.8	-5.4
CMWZ	**Cape Campbell**	**10.70 206**	P	Pn	10 14 53.3	-7.3

*ISCJB **06** 10:30:38.5±0.5, 33°.01N±0°.03×104°.23E±0°.06, h9km, mb3.6/4, MS3.0/4, Error ellipse: s-maj=6.7km s-min=4.6km az=7.1*
*IDC **06** 10:30:40.3±2.0, 33°.06N×104°.02E, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.4/67, mbtmp3.6/7, ML3.6/2, MS3.0/7, Ms1 3.1/7, ms1mx2.8/51, Error ellipse: s-maj=42.7km s-min=29.8km az=18.0*
*BJI **06** 10:30:41.6±0.0, 33°.03N×104°.01E, h15km, mb3.9/1, ML3.8/21, Ms3.5/7, Ms7 3.2/9*
ISC 06 10:30:41.0±0.7, 33°.08N±0°.03×104°.09E±0°.05, h9km, n15, σ2§30/21, mb3.7/4, MS3.0/4, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.19**	**187**	Pn	**Pn**	**10 31 18.2**	**+0.6**
CD2				Pg	**Pg**	**10 31 21.3**	**-1.6**
CD2				Sg	**Sb**	**10 31 48.4**	**+0.4**
CD2				smax	smax		
	comp=N,2μm,0.8s						
CD2				smax	smax		
	comp=E,2μm,0.7s						
LZH	**Lanzhou**	**3.00**	**356**	Pn	**Pn**	**10 31 31.3**	**+2.4**
LZH				Pg	**Pg**	**10 31 37.4**	**-1.2**
LZH				Sn	**Sb**	**10 32 09.6**	**-2.0**
LZH				Sg	**Sg**	**10 32 18.1**	**+0.6**
LZH				smax	smax		
	comp=N,840nm,1.2s						
LZH				smax	smax		
	comp=E,610nm,1.1s						
LZH				LR	LR		
	comp=N,520nm,7.0s						
LZH				LR	LR		
	comp=E,460nm,5.4s						
LZH				LR	LR		
	comp=Z,760nm,7.9s						
XAN	**Xi'an**	**4.15**	**75**	Pn	**Pn**	**10 31 45.6**	**+1.1**
XAN				Pg	**Pg**	**10 31 59.8**	**-0.6**
XAN				Sg	**Sg**	**10 32 52.1**	**-2.1**
XAN				smax	smax		
	comp=N,190nm,0.6s						
XAN				smax	smax		
	comp=E,240nm,0.8s						
GYA	**Guiyang**	**6.97**	**161**	*e*Pn	**Pn**	**10 32 22.8**	**-0.6**
GYA				Sn	**Sn**	**10 33 39.5**	**-3.4**
GYA				Sg	**Sb**	**10 34 13.4**	**+7.6**
GYA				smax	smax		
	comp=N,80nm,0.8s						
GYA				smax	smax		
	comp=E,60nm,1.0s						
SONM	**Songino Array**	**14.84**	**6**	Pn	**Pn**	**10 34 10.2**	**-0.8**
	baz=172,slow=12,SNR=2.9						
SONM				LR	LR	10 40 14.1	
	comp=Z,37nm,18.6s,baz=320,slow=39						
CMAR	**Chiang Mai Arr**	**15.28**	**199**	Pn	**Pn**	**10 34 16.0**	**-1.0**
	0.2nm,0.3s,baz=7.0,slow=8.2,SNR=3.0						
CMAR				LR	LR	10 40 43.5	
	comp=Z,52nm,18.2s,baz=356,slow=40						
WMQ	**Urumqi**	**16.70**	**315**	*e*P	**Pn**	**10 34 34.9**	**-0.3**
KSRS	**Korea Array**	**19.93**	**71**	P	**Pn**	**10 35 14.9**	**+0.2**
	0.1nm,0.3s,baz=258,slow=11,SNR=11						
KSRS				LR	LR	10 43 42.9	
	comp=Z,27nm,19.9s,baz=145,slow=39						
MKAR	**Makanchi Array**	**21.51**	**316**	P	**P**	**10 35 31.3**	**+1.1**
	3.1nm,1.0s,baz=113,slow=12,SNR=13						
MKAR				LR	LR	10 45 03.2	
	comp=Z,40nm,19.6s,baz=93,slow=40						
JNU	**Nakatsue**	**22.43**	**83**	LR	LR	10 44 58.4	
	comp=Z,34nm,18.5s,baz=64,slow=38						
ZALV	**Zalesovo Beam**	**24.95**	**332**	P	**P**	**10 36 04.5**	**0.0**
	0.7nm,0.3s,baz=140,slow=7.4,SNR=3.8						
AAK	**Ala-Archa**	**25.13**	**301**	LR	LR	10 46 46.5	
	comp=Z,114nm,20.3s,baz=86,slow=38						
KURBB	**Kurchatov Arra**	**25.68**	**321**	P	**P**	**10 36 12.0**	**+0.9**
	1.8nm,0.8s,baz=125,slow=11,SNR=11						
NOA	**NORSAR Array B**	**62.99**	**327**	LR	LR	11 09 17.6	
	comp=Z,13nm,19.6s,baz=295,slow=37						
YKA	**Yellowknife Ar**	**79.81**	**17**	P	**P**	**10 42 49.9**	**+0.5**
	0.3nm,0.6s,baz=329,slow=5.2,SNR=4.3						

*ISCJB **06** 10:35:54.9±0.8, 0°.38N±0°.08×122°.2E±0°.1, h196km±7km, mb3.8/4, Error ellipse: s-maj=20.8km s-min=10.9km az=157.2*
*DJA **06** 10:35:58.0±0.9, 0°N±6°×12°2E±°, h170km±11km, M4.1/12, mb4.2/4, mB4.7/1, MLv4.0/12, Mw(mB)3.9/1*
*IDC **06** 10:35:59.3±5.5, 0°.14N×121°.88E, h229km±53km, mb3.6/4, mb1 3.6/5, mb1mx3.1/53, mbtmp4.1/5, Error ellipse: s-maj=94.5km s-min=14.1km az=57.0*
ISC 06 10:35:55.6±1.0, 0°.40N±0°.09×122°.2E±0°.1, h193km±9km, n22, σ1§05/24, mb4.0/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.23**	**290**	P	**Pn**	**10 36 21.0**	**-0.1**
APSI	**Ampana**	**1.40**	**201**	P	**Pn**	**10 36 27.7**	**-0.1**
LUWI	**Luwuk**	**1.56**	**157**	P	**Pn**	**10 36 29.6**	**+0.3**
MPSI	**Mapaga**	**2.26**	**268**	P	**Pn**	**10 36 35.9**	**-0.5**
TTSI	**Tana Toraja**	**4.14**	**214**	P	**Pn**	**10 36 59.0**	**0.0**
SPSI	**Sidrap Palu**	**4.95**	**209**	P	**Pn**	**10 37 08.8**	**-0.4**
BNSI	**Bone**	**5.19**	**203**	P	**Pn**	**10 37 13.0**	**+0.7**
KAPI	**Kappang**	**5.89**	**204**	P	**Pn**	**10 37 21.2**	**-0.2**
	1.6nm,0.3s,baz=32,slow=9.5,SNR=7.8						
BKSI	**Bulukumba**	**6.04**	**200**	P	**Pn**	**10 37 23.1**	**-0.2**
BSSI	**Bau Bau, Buton**	**6.71**	**194**	P	**Pn**	**10 37 32.9**	**+0.9**
WRA	**Warramunga Arr**	**23.48**	**150**	P	**P**	**10 40 47.4**	**-0.6**
	baz=329,slow=13						
ASAR	**Alice Springs**	**26.51**	**155**	P	**P**	**10 41 14.9**	**-0.4**
	1.7nm,0.6s,baz=333,slow=9.2,SNR=44						
ASAR				PcP	**PcP**	**10 44 34.9**	**-0.3**
	0.6nm,0.3s,baz=348,slow=2.2,SNR=19						
STKA	**Stephens Creek**	**37.00**	**152**	P	**P**	**10 42 46.8**	**+0.1**
	2.7nm,0.5s,baz=345,slow=9.8,SNR=5.9						
JIRN	**Jiri**	**43.85**	**311**	*e*P	**P**	**10 43 44.6**	**+1.2**
	18nm,0.6s						
GUN	**Gumba**	**44.22**	**311**	*e*P	**P**	**10 43 47.5**	**+1.2**
	18nm,0.7s						
PKI	**Pulchoki**	**44.40**	**311**	*e*P	**P**	**10 43 48.6**	**+0.9**
	2.7nm,0.3s						
KOLN	**Koldanda**	**45.88**	**310**	*e*P	**P**	**10 44 00.5**	**+1.3**
	20nm,0.6s						
DANN	**Dangsing**	**46.05**	**311**	*e*P	**P**	**10 44 01.9**	**+1.3**
	38nm,0.6s						
PYUN	**Piuthan**	**46.51**	**310**	*e*P	**P**	**10 44 05.8**	**+1.7**
	34nm,0.5s						
MKAR	**Makanchi Array**	**57.83**	**329**	P	**P**	**10 45 28.2**	**+1.3**
	1.6nm,0.4s,baz=129,slow=8.6,SNR=19						
MKAR				PcP	**PcP**	**10 46 15.0**	**-2.3**
	0.5nm,0.6s,baz=142,slow=3.3,SNR=4.0						
KURBB	**Kurchatov Arra**	**62.20**	**330**	P	**P**	**10 45 56.7**	**+0.2**
	0.3nm,0.3s,baz=126,slow=6.0,SNR=5.6						
TORD	**Torodi Ar. Bea**	**119.49**	**285**	PKP	**PKPdf**	**10 54 21.5**	**-1.7**
	0.2nm,0.4s,baz=11,slow=1.5,SNR=1.1						

*JMA **06** 10:41:19.9, 28°.92N×141°.39E, h121km, M3.9*
*IDC **06** 10:41:21.3±2.2, 28°.80N×140°.60E, h109km±18km, mb3.7/16, mb1 3.8/19, mb1mx3.6/57, mbtmp4.0/19, Error ellipse: s-maj=21.7km s-min=12.5km az=92.0*
ISC 06 10:41:20.4±0.6, 28°.87N±0°.06×141°.0E±0°.1, h100km, n36, σ1§39/43, mb4.0/17, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.04**	**150**	P	**Pn**	**10 41 53.3**	**-0.2**
CBIJ				*e*S	**Sn**	**10 42 18.7**	**0.0**
JHH2	**Haha-jima-NKT2**	**2.45**	**155**	P	**Pn**	**10 41 58.7**	**-0.1**
JHH2				*e*S	**Sn**	**10 42 27.9**	**-0.3**
JHJ	**Hachijo jima 2**	**4.37**	**346**	P	**Pn**	**10 42 26.5**	**+2.0**
	5.2nm,0.3s,baz=49,slow=20,SNR=2.6						
JHJ				S	**Sn**	**10 43 14.9**	**+0.5**
	10nm,0.3s,baz=231,slow=18,SNR=2.9						
JMKN	**Mikurajimanish**	**5.16**	**347**	*e*S	**Sn**	**10 43 35.1**	**+1.6**
BSO1	**Boso 1**	**5.77**	**360**	P	**Pn**	**10 42 44.2**	**+1.2**
BSO1				*e*S	**Sn**	**10 43 49.8**	**+2.3**
BSO3	**Boso 3**	**5.93**	**356**	P	**Pn**	**10 42 46.4**	**+0.9**
BSO4	**Boso 4**	**6.13**	**355**	*e*S	**Sn**	**10 43 57.6**	**+0.6**
JOD2	**Odawara 2**	**6.59**	**346**	*e*S	**Sn**	**10 44 10.4**	**+2.2**
JHU	**Hanno**	**7.12**	**348**	P	**Pn**	**10 43 03.2**	**+1.3**
JHU				*e*S	**Sn**	**10 44 20.7**	**-0.5**
JRY	**Ryogami san**	**7.35**	**346**	P	**Pn**	**10 43 06.8**	**+1.8**
JYT	**Yasato**	**7.37**	**355**	P	**Pn**	**10 43 05.3**	**0.0**
JYT				*e*S	**Sn**	**10 44 26.2**	**-1.1**
JAG	**Ashikaga**	**7.65**	**350**	P	**Pn**	**10 43 09.4**	**+0.3**
JHO	**Hitachi**	**7.73**	**357**	P	**Pn**	**10 43 10.4**	**+0.2**
JHO				*e*S	**Sn**	**10 44 32.8**	**-3.3**
MJAR	**Matsushiro Arr**	**8.01**	**343**	P	**Pn**	**10 43 14.7**	**+0.7**
	0.1nm,0.3s,baz=278,slow=14,SNR=4.6						
JNU	**Nakatsue**	**9.69**	**298**	P	**Pn**	**10 43 39.6**	**+2.8**
	0.2nm,0.3s,baz=31,slow=16,SNR=4.3						
ASAJ	**Asahikawa**	**15.27**	**4**	P	**P**	**10 44 52.4**	**-0.6**
	0.3nm,0.3s,baz=288,slow=20,SNR=3.8						
KLR	**Kul'dur**	**21.54**	**343**	P	**P**	**10 46 01.3**	**-0.1**
	3.3nm,0.6s,baz=150,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**48.95**	**188**	P	**P**	**10 49 55.5**	**-1.2**
	baz=356,slow=6.9						
FITZ	**Fitzroy Crossi**	**49.00**	**200**	P	**P**	**10 49 55.8**	**-1.2**
	1.3nm,0.5s,baz=18,slow=13,SNR=2.9						
NRIK	**Noril'sk**	**50.63**	**338**	P	**P**	**10 50 08.2**	**-0.7**
	1.7nm,0.3s,baz=95,slow=7.8,SNR=2.3						
KURBB	**Kurchatov Arra**	**51.08**	**313**	P	**P**	**10 50 10.4**	**-2.1**
	0.3nm,0.4s,baz=90,slow=7.9,SNR=4.2						
ASAR	**Alice Springs**	**52.68**	**188**	P	**P**	**10 50 23.4**	**-1.2**
	0.5nm,0.5s,baz=360,slow=5.2,SNR=20						
BVAR	**Borovoye Array**	**56.06**	**317**	P	**P**	**10 50 47.3**	**-1.5**
	0.9nm,0.5s,baz=93,slow=8.7,SNR=4.3						
ILAR	**Eielson Array**	**56.66**	**29**	P	**P**	**10 50 54.2**	**+1.3**
	1.2nm,1.0s,baz=266,slow=6.4,SNR=6.6						
INK	**Inuvik**	**61.85**	**25**	P	**P**	**10 51 29.8**	**+1.3**
	0.4nm,0.4s,baz=209,slow=19,SNR=3.2						
ARU	**Arti**	**62.41**	**322**	P	**P**	**10 51 30.8**	**-1.7**
	2.6nm,0.2s,baz=106,slow=3.6,SNR=4.6						
AKTO	**Aktyubinsk**	**64.06**	**315**	P	**P**	**10 51 41.4**	**-2.1**
	0.5nm,0.3s,baz=20,slow=19,SNR=3.8						
YKA	**Yellowknife Ar**	**71.07**	**28**	P	**P**	**10 52 28.4**	**+1.0**
	0.1nm,0.3s,baz=306,slow=5.2,SNR=3.6						
ARCES	**ARCESS Array B**	**71.54**	**340**	P	**P**	**10 52 30.5**	**+0.4**
	1.6nm,0.5s,baz=68,slow=8.4,SNR=16						
FINES	**FINESS Array B**	**75.91**	**333**	P	**P**	**10 52 55.5**	**-0.3**
	3.1nm,0.4s,baz=70,slow=5.2,SNR=44						
NVAR	**Mina Array Bea**	**80.22**	**52**	P	**P**	**10 53 22.4**	**+2.0**
	1.5nm,0.5s,baz=291,slow=6.0,SNR=22						
NB2	**NORSAR Subarra**	**81.59**	**338**	P	**P**	**10 53 26.4**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=42,slow=5.3						
NOA	**NORSAR Array B**	**81.59**	**338**	P	**P**	**10 53 26.3**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=44,slow=5.9,SNR=6.6						
PDAR	**Pinedale Array**	**83.67**	**44**	P	**P**	**10 53 39.9**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=329,slow=2.6,SNR=3.8						
EKA	**Eskdalemuir Ar**	**90.70**	**340**	P	**P**	**10 54 11.5**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=58,slow=2.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**122.65**	**311**	PKP	**PKPdf**	**11 00 03.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=107,slow=2.2,SNR=3.9						

*ISCJB **06** 11:06:02.6±0.4, 41°.94N±0°.02×22°.92E±0°.03, h7km±3km, Error ellipse: s-maj=3.5km s-min=2.7km az=4.6*
*ATH **06** 11:06:03.8, 41°.88N×23°.00E, h25km±1km, ML2.7/7, Error ellipse: s-maj=3.2km s-min=1.4km az=169.0*
*SKO **06** 11:06:03.3, 41°.90N×22°.98E, h15km, M2.4, ML2.6*
*SOF **06** 11:06:04.5, 41°.97N×23°.11E, h2km*
*THE **06** 11:06:05.1, 41°.84N×22°.96E, h8km±1km, ML2.7/7, Error ellipse: s-maj=1.8km s-min=0.6km az=177.0*
ISC 06 11:06:03.7±0.9, 41°.92N±0°.02×22°.96E±0°.02, h14km±6km, n63, σ0§93/91, 16C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.11**	**118**	⇑*i*Pg	**Pg**	**11 06 07.0**	**+0.1**
KKB				*i* Sg	**Sg**	**11 06 09.3**	**+0.2**
KKB	**Krupnik**	**0.11**	**118**	P	**Pg**	**11 06 07.1**	**+0.1**
STIP	**Stip**	**0.62**	**249**	*i* Pg	Pg	11 06 12.0	-3.8
STIP				*i* Sg	**Sg**	**11 06 17.9**	**-6.0**
STIP				*e*Lg	Lg	11 06 18.3	
	comp=N,220nm,0.4s						
STIP				*e*Lg	Lg	11 06 19.4	
	comp=E,188nm,0.3s						
VAY	**Valandovo**	**0.66**	**206**	P	**Pg**	**11 06 16.8**	**+0.2**
VAY				S	**Sg**	**11 06 25.0**	**-0.3**
VAY	**Valandovo**	**0.66**	**206**	*i* Pg	**Pg**	**11 06 16.9**	**+0.2**
VAY				*i* Sg	**Sg**	**11 06 26.2**	**+0.9**
VAY				*e*Lg	Lg	11 06 26.4	
	comp=E,302nm,0.4s						
VAY				*e*Lg	Lg	11 06 26.7	
	comp=N,132nm,0.2s						
MMB	**Musomiste**	**0.66**	**119**	⇑*i*Pg	**Pg**	**11 06 16.9**	**+0.3**
MMB				*i* Sg	**Sb**	**11 06 26.2**	**0.0**
MMB	**Musomiste**	**0.66**	**119**	P	**Pg**	**11 06 16.9**	**+0.3**
VTS	**Vitosha**	**0.73**	**16**	⇑*i*P	**Pg**	**11 06 17.5**	**-0.5**
VTS				S	**Sg**	**11 06 27.0**	**-0.5**
VTS	**Vitosha**	**0.73**	**16**	⇑*i*Pg	**Pg**	**11 06 17.4**	**-0.5**
VTS				*i* Sg	**Sg**	**11 06 27.1**	**-0.5**
VTS	**Vitosha**	**0.73**	**16**	P	**Pg**	**11 06 17.4**	**-0.5**
KNT	**Kendrikon**	**0.76**	**183**	P	**Pg**	**11 06 18.2**	**-0.2**
KNT				S	**Sg**	**11 06 27.9**	**-0.4**
KNT	**Kendrikon**	**0.76**	**183**	*i* Pg	**Pg**	**11 06 18.2**	**-0.2**
KNT				*i* Sg	**Sg**	**11 06 28.1**	**-0.2**
KNT	**Kendrikon**	**0.76**	**183**	P	**Pg**	**11 06 18.2**	**-0.2**
KNT				S	**Sg**	**11 06 27.5**	**-0.8**
KNT				AML	AML	11 06 33.2	
	comp=E,1009μm,0.2s						
KNT				AML	AML	11 06 33.7	
	comp=N,873μm,0.2s						
NVR	**Nevrokopi**	**0.89**	**130**	P	**Pb**	**11 06 20.3**	**-0.5**
NVR				S	**Sn**	**11 06 33.3**	**-1.0**
NVR	**Nevrokopi**	**0.89**	**130**	P	**Pb**	**11 06 20.2**	**-0.5**
NVR				S	**Sg**	**11 06 31.4**	**-1.0**
NVR				AML	AML	11 06 35.7	
	comp=E,951μm,0.2s						
NVR				AML	AML	11 06 36.0	
	comp=N,1978μm,0.3s						
SRS	**Serrai**	**0.93**	**149**	P	**Pb**	**11 06 21.1**	**-0.5**
SRS				S	**Sn**	**11 06 34.6**	**-0.9**
SRS	**Serrai**	**0.93**	**149**	⇑*i*Pg	**Pb**	**11 06 21.1**	**-0.5**
SRS				*i* Sg	**Sg**	**11 06 34.2**	**+0.3**
SRS	**Serrai**	**0.93**	**149**	P	**Pb**	**11 06 21.1**	**-0.5**
SRS				S	**Sg**	**11 06 34.0**	**+0.1**
SRS				AML	AML	11 06 36.2	
	comp=E,509μm,0.3s						
SRS				AML	AML	11 06 37.2	
	comp=N,909μm,0.2s						
GRG	**Griva**	**1.05**	**204**	P	**Pb**	**11 06 23.4**	**-0.2**
GRG				S	**Sb**	**11 06 37.3**	**+0.2**
GRG	**Griva**	**1.05**	**204**	⇑*i*Pg	**Pb**	**11 06 23.4**	**-0.2**
GRG				*i* Sg	**Sb**	**11 06 37.7**	**+0.5**
GRG	**Griva**	**1.05**	**204**	P	**Pb**	**11 06 23.4**	**-0.2**
GRG				S	**Sb**	**11 06 37.3**	**+0.2**
GRG				AML	AML	11 06 40.5	
	comp=E,494μm,0.6s						
GRG				AML	AML	11 06 41.5	
	comp=N,563μm,0.3s						
SOH	**Sokhos**	**1.14**	**165**	P	**Pb**	**11 06 24.9**	**-0.1**
SOH				S	**Sg**	**11 06 40.5**	**+0.1**
SOH	**Sokhos**	**1.14**	**165**	⇑*i*Pg	**Pb**	**11 06 24.9**	**-0.1**
SOH				*i* Sg	**Sg**	**11 06 40.1**	**-0.3**
SOH	**Sokhos**	**1.14**	**165**	P	**Pb**	**11 06 25.0**	**-0.1**
SOH				S	**Sb**	**11 06 39.6**	**-0.1**
SOH				AML	AML	11 06 42.3	
	comp=N,1997μm,0.5s						
SOH				AML	AML	11 06 42.6	
	comp=E,911μm,0.3s						
THE	**Thessaloniki**	**1.28**	**180**	P	**Pn**	**11 06 27.5**	**+0.4**
THE	**Thessaloniki**	**1.28**	**180**	*i* Pg	**Pn**	**11 06 27.4**	**+0.3**
THE				*i* Sg	**Sn**	**11 06 44.4**	**+0.2**
THE	**Thessaloniki**	**1.28**	**180**	P	**Pn**	**11 06 27.6**	**+0.5**
THE				S	**Sn**	**11 06 44.3**	**+0.2**
THE				AML	AML	11 06 48.0	
	comp=E,423μm,0.3s						
THE				AML	AML	11 06 48.4	
	comp=N,434μm,0.5s						
PLD	**Plovdiv**	**1.31**	**81**	*i* Pg	**Pg**	**11 06 29.1**	**+0.1**
PLD				*i* Sg	**Sg**	**11 06 46.9**	**+0.8**
HORT	**Hortiatis**	**1.32**	**175**	P	**Pb**	**11 06 28.6**	**+0.3**
HORT	**Hortiatis**	**1.32**	**175**	P	**Pn**	**11 06 28.4**	**+0.7**
RZN	**Rozhen**	**1.34**	**99**	P	**Pb**	**11 06 28.8**	**+0.2**
KRUS	**Krusevo**	**1.39**	**247**	*i* Pg	**Pn**	**11 06 29.9**	**+1.2**
KRUS				*i* Sg	**Sb**	**11 06 49.1**	**+1.9**
KRUS				*e*Lg	Lg	11 06 49.3	
	comp=N,4.9nm,0.3s						
KVLA	**Kavala**	**1.46**	**132**	P	**Pn**	**11 06 29.4**	**-0.1**
KVLA				S	**Sg**	**11 06 49.6**	**-0.9**
KAVA	**Kavala**	**1.49**	**128**	P	**Pn**	**11 06 30.6**	**+0.6**
KAVA				S	**Sb**	**11 06 50.2**	**+0.4**
KAVA	**Kavala**	**1.49**	**128**	P	**Pn**	**11 06 30.6**	**+0.6**
KAVA				S	**Sg**	**11 06 50.5**	**-1.1**
KAVA				AML	AML	11 06 51.7	
	comp=E,629μm,0.4s						
KAVA				AML	AML	11 06 52.1	
	comp=N,708μm,0.4s						
MPEP	**Malo Peshtene**	**1.55**	**22**	P	**Pb**	**11 06 33.0**	**+0.9**
PLG	**Polygyros**	**1.59**	**166**	P	**Pn**	**11 06 31.1**	**-0.2**
PLG	**Polygyros**	**1.59**	**166**	P	**Pn**	**11 06 31.6**	**+0.3**
FNA	**Florina**	**1.64**	**227**	*i* Pn	**Pn**	**11 06 33.7**	**+1.5**
FNA	**Florina**	**1.64**	**227**	P	**Pn**	**11 06 33.1**	**+1.0**
OUR	**Ouranopolis**	**1.76**	**154**	P	**Pn**	**11 06 34.1**	**+0.4**
OUR	**Ouranopolis**	**1.76**	**154**	P	**Pn**	**11 06 34.1**	**+0.4**
OHR	**Ohrid**	**1.81**	**244**	*i* Pn	**Pn**	**11 06 36.3**	**+1.9**
KDZ	**Kurdzhali**	**1.86**	**97**	P	**Pg**	**11 06 38.9**	**-0.4**
THAS	**Thassos island**	**1.87**	**134**	P	**Pn**	**11 06 36.1**	**+1.0**
PAIG	**Paliouri**	**2.06**	**164**	P	**Pn**	**11 06 37.8**	**-0.1**
PAIG	**Paliouri**	**2.06**	**164**	P	**Pn**	**11 06 38.3**	**+0.4**
RDO	**Rodhopi**	**2.09**	**111**	P	**Pn**	**11 06 39.2**	**+1.0**
RDO				S	**Sb**	**11 07 05.9**	**-1.1**
RDO	**Rodhopi**	**2.09**	**111**	P	**Pn**	**11 06 38.8**	**+0.7**
VLAD	**Vladila**	**2.34**	**27**	⇑*i*P	**Pn**	**11 06 42.4**	**+0.8**
SMTH	**Samothraki Isl**	**2.42**	**126**	P	**Pn**	**11 06 42.7**	**-0.1**
ALN	**Alexandroupoli**	**2.54**	**113**	P	**Pn**	**11 06 45.4**	**+1.0**
HERR	**Herculane**	**2.99**	**353**

USP Ospenovka 7.49 24 P **Pn 11 11 36.6 +1.8**
SNR=5.1
TKM2 Tokmak 2 7.59 30 P **Pn 11 11 36.8 +0.5**
SNR=24
TKM2 Tokmak 2 7.59 30 ⇑P **Pn 11 11 36.7 +0.5**
comp=Z,20nm,0.5s
TKM2 ⇑S **Sn 11 12 58.7 -3.4**
comp=Z,33nm,0.8s
TKM2 Tokmak 2 7.59 30 PN **Pn 11 11 36.7 +0.4**
TKM2 pmax pmax
comp=Z,20nm,0.5s
SMLA Simla 7.74 131 *e*P **Pn 11 11 38.4 +0.3**
SMLA *e*S **Sn 11 13 01.4 -4.0**
SMLA IAML 11 13 07.2
comp=N,311nm,0.4s
SMLA IAML 11 13 07.3
comp=E,335nm,0.8s
DDI Dehra Dun 8.85 132 *e*P **Pn 11 11 53.4 +0.8**
DDI *e*S **Sn 11 13 27.0 -4.9**
DDI *e*S **Sn 11 13 28.4 -3.4**
JOSI Joshimath 9.64 125 *e*P **Pn 11 12 03.7 +0.6**
JOSI *e*S Sn 11 13 42.4 -8.5
NDI New Delhi 9.64 142 *e*P **Pn 11 12 04.0 +1.0**
NDI *e*S **Sn 11 13 43.5 -7.3**
KUDL Kundal 9.75 146 *e*P Pn 11 11 55.3 -9.1
KUDL *e*S Sn 11 13 36.8 -16
KUDL IAML 11 13 40.8
comp=E,84nm,0.1s
GEYT Alibeck 9.92 282 P **Pn 11 12 04.6 -1.9**
comp=E,0.6nm,0.3s,baz=108,slow=9.7,SNR=15
GEYT S **Sn 11 13 52.7 -4.4**
comp=E,1.3nm,0.3s,baz=74,slow=21,SNR=3.9
GYA0B ALIBECK ARRAY 9.92 282 ⇓P **Pn 11 12 08.3 +1.8**
GYA0B ⇑S **Sn 11 13 50.6 -6.6**
SONA Sohna 9.94 144 *e*P **Pn 11 12 06.5 -0.3**
SONA *e*S **Sn 11 13 50.1 -7.6**
SONA IAML 11 13 53.2
comp=N,80nm,0.5s
SONA IAML 11 13 54.4
comp=E,120nm,0.7s
MAKZ Makanchi 13.47 36 *e*Pn **Pn 11 12 50.8 -0.9**
MAKZ Makanchi 13.47 36 *e*P **Pn 11 12 50.8 -0.9**
PYUN Piuthan 13.51 125 *e*P **Pn 11 12 51.5 -1.0**
comp=E,60nm,0.4s
MK31 Makanchi Array 13.61 37 *i*P **Pn 11 12 53.2 -0.2**
MK31 pmax pmax
comp=Z,15nm,0.9s
MKAR Makanchi Array 13.61 37 P **Pn 11 12 53.2 -0.2**
comp=Z,1.0nm,0.3s,baz=215,slow=10,SNR=20
DANN Dangsing 13.87 122 *e*P **Pn 11 12 56.4 -0.7**
comp=Z,88nm,0.5s
KOLN Koldanda 14.13 124 *e*P **Pn 11 12 59.9 -0.4**
comp=Z,50nm,0.3s
BHPL Bhopal 14.50 153 *e*P **P 11 13 07.0 +0.9**
BHPL *ex* x 11 15 39.2
AB31 Akbulak array 14.90 332 ⇑P **Pn 11 13 07.9 -1.3**
comp=Z,9.3nm,0.6s,baz=151,slow=12,SNR=186
AB31 ⇓S S 11 15 43.8 -11
comp=Z,2.4nm,0.6s,baz=154,slow=23,SNR=4.1
AB31 Akbulak array 14.90 332 P **Pn 11 13 07.9 -1.3**
AB31 S S 11 15 43.8 -11
ABKAR Akbulak array 14.90 332 *e*Pn **Pn 11 13 08.7 -0.5**
KKN Kakani 15.27 120 *e*P **Pn 11 13 14.0 -0.2**
comp=Z,76nm,0.3s
KURBB Kurchatov Arra 15.32 20 P **Pn 11 13 13.7 -0.7**
comp=Z,0.2nm,0.3s,baz=212,slow=9.9,SNR=20
KURK Kurchatov 15.43 20 *e*Pn **Pn 11 13 15.2 -0.5**
comp=Z,5.1nm,0.9s
KURK Kurchatov 15.43 20 *c e*P **Pn 11 13 15.4 -0.3**
KURK pmax pmax
comp=Z,6.0nm,0.8s
PKIN Phulchoki 15.48 121 *e*P **Pn 11 13 16.7 -0.1**
comp=Z,80nm,0.4s
PKI Pulchoki 15.49 121 *e*P **Pn 11 13 17.0 0.0**
comp=Z,252nm,0.6s
GUN Gumba 15.61 119 *e*P **Pn 11 13 19.0 +0.5**
comp=Z,139nm,0.5s
JIRN Jiri 15.98 119 *e*P **Pn 11 13 23.7 +0.7**
comp=Z,390nm,0.6s
BVAR Borovoye Array 16.57 360 P **Pn 11 13 29.3 -0.1**
comp=Z,1.4nm,0.3s,baz=176,slow=10,SNR=29
BVAR S **S 11 16 29.5 -2.0**
comp=Z,0.3nm,0.3s,baz=168,slow=21,SNR=3.7
AKTO Aktyubinsk 16.58 331 P **Pn 11 13 29.4 -0.3**
comp=Z,1.5nm,0.3s,baz=147,slow=10,SNR=71
AKTO Aktyubinsk 16.58 331 ⇓P **P 11 13 29.0 +0.3**
comp=Z,29nm,0.8s
AKTO ⇑S **S 11 16 29.9 -2.1**
comp=Z,9.1nm,1.1s
AKTO Aktyubinsk 16.58 331 P **P 11 13 29.1 +0.3**
AKTO S **S 11 16 29.9 -2.1**
BRVK Borovoye 16.60 360 *e*P **P 11 13 29.0 +0.1**
comp=Z,13nm,0.7s
BRVK Borovoye 16.60 360 *e*P **P 11 13 29.0 +0.1**
BRVK pmax pmax
comp=Z,13nm,0.7s
RAMN Ramite 16.70 120 *e*P **Pn 11 13 31.9 +0.3**
comp=Z,149nm,0.5s
DGZ Jazzator, Alta 18.11 38 *d i*P **Pn 11 13 47.5 -0.3**
LSA Lhasa 18.63 105 *e*P **P 11 13 52.0 +0.3**
comp=Z,12nm,0.6s
LSA Lhasa 18.63 105 *e*P **P 11 13 52.1 +0.3**
LSA pmax pmax
comp=Z,12nm,0.6s
ZALV Zalesovo Beam 20.16 25 P **P 11 14 07.7 +0.3**
comp=Z,14nm,0.4s,baz=221,slow=11,SNR=44
NVS Novosibirsk 20.39 22 *i*P **P 11 14 11.1 +1.2**
GNI Garni 20.45 288 P **P 11 14 11.9 +1.0**
comp=Z,12nm,0.5s,baz=88,slow=1.8,SNR=7.5
GNI Garni 20.45 288 *c e*P **P 11 14 12.8 +1.9**
GNI pmax pmax
comp=Z,50nm,0.9s
ZEI Tsey 21.32 295 *e*P **P 11 14 21.5 +1.3**
ZEI pmax pmax
comp=Z,5.0nm,0.6s
SVE Sverdlovsk 21.41 345 *e*P **P 11 14 21.7 +1.0**
SVE pmax pmax
comp=Z,22nm,1.4s
ARU Arti 21.52 342 *e*P **P 11 14 22.2 +0.4**
comp=Z,18nm,0.7s
ARU Arti 21.52 342 *c i*P **P 11 14 22.0 +0.2**
ARU *PP **pP 11 14 53.8 -1.7**
ARU S **S 11 18 08.4 +1.0**
ARU pmax pmax
comp=Z,20nm,0.7s
KBZ Khabaz 22.20 298 P **P 11 14 28.4 -0.2**
comp=Z,2.9nm,0.8s,baz=109,slow=7.6,SNR=7.7
KIRV Kirov 26.07 335 P **P 11 15 04.3 +0.8**
comp=Z,12nm,0.6s,baz=126,slow=17,SNR=4.3
ANN Anapa 26.24 299 *e*P **P 11 15 02.6 -2.5**
ANN *e**PP **pP 11 15 44.8 +0.3**
ANN *e* 11 15 57.0
ANN *e*S **S 11 19 18.5 -4.3**
ANN pmax pmax
comp=Z,20nm,0.9s
TLY Talaya 28.02 47 *i*P **P 11 15 21.9 +0.9**
TLY pmax pmax
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 28.99 288 P **P 11 15 30.4 +0.4**
comp=Z,0.9nm,0.5s,baz=108,slow=9.4,SNR=6.7
BRTR pP **pP 11 16 13.2 +3.5**
comp=Z,0.7nm,0.7s,baz=87,slow=12,SNR=3.5
BRTR Keskin Array B 28.99 288 *c e*P **P 11 15 31.6 +1.7**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
ULN Ulaanbaatar 29.20 55 *i*P **P 11 15 32.4 +0.8**
ULN pmax pmax
comp=Z,1.0nm,1.0s
PRGR Permogore 29.61 336 *e*P **P 11 15 33.1 -1.8**
PRGR pmax pmax
comp=Z,8.0nm,0.6s
OBN Obninsk 29.66 320 ⇓*e*P **P 11 15 36.1 +0.7**
OBN *e**PP **pP 11 16 16.1 +0.7**
OBN *e* 11 16 41.3
OBN *e*S **S 11 20 14.7 -1.6**
OBN pmax pmax
comp=Z,11nm,1.0s
CMAR Chiang Mai Arr 30.86 118 P **P 11 15 46.8 +0.4**
comp=Z,1.1nm,0.5s,baz=303,slow=8.0,SNR=8.2
KLMR Klimovskoe 31.29 331 *e*P **P 11 15 48.5 -1.1**
KLMR pmax pmax
comp=Z,9.0nm,1.0s
AKASG Malin Array Be 32.60 309 P **P 11 16 01.4 +0.1**
comp=Z,2.2nm,0.6s,baz=81,slow=6.9,SNR=10
KIEV Kiev 32.61 309 *i*P **P 11 16 00.2 -1.1**
KIEV pmax pmax
comp=Z,2.0nm,0.8s
NRIK Noril'sk 34.26 11 P **P 11 16 16.5 +1.2**
comp=Z,9.9nm,0.6s,baz=216,slow=4.6,SNR=7.8
MLR Muntele Rosu 34.38 299 P **P 11 16 18.1 +1.2**
comp=Z,1.1nm,0.5s,baz=176,slow=5.9,SNR=3.5
FINES FINESS Array B 37.25 326 P **P 11 16 41.2 +0.4**
comp=Z,6.7nm,0.7s,baz=101,slow=10,SNR=22
FINES FINESS Array B 37.25 326 *i*P **P 11 16 41.4 +0.6**
FINES pmax pmax
comp=Z,7.0nm,0.6s
SUF Sumiainen 37.71 328 P **P 11 16 46.4 +1.8**
SUF pmax pmax
comp=Z,20nm,1.4s
KLNR Kaliningrad 38.61 314 *i*P **P 11 16 54.7 +2.5**
KLNR pmax pmax
comp=Z,70nm,1.2s
ARCES ARCESS Array B 41.00 338 P **P 11 17 12.5 +0.7**
comp=Z,8.8nm,0.6s,baz=110,slow=7.8,SNR=43
ARE0 ARCESS Array S 41.00 338 *e*P **P 11 17 12.7 +0.8**
KTK1 Kautokeino 41.47 336 *e*P **P 11 17 15.9 +0.3**
HAMF Hammerfest 42.09 339 *e*P **P 11 17 21.6 +1.0**
HFS Hagfors 42.81 322 P **P 11 17 26.6 +0.1**
comp=Z,4.0nm,0.5s,baz=104,slow=11,SNR=14
HFS pP **pP 11 18 11.1 +2.8**
comp=Z,2.2nm,0.6s,baz=115,slow=13,SNR=2.6
STEI Steigen 43.80 333 *e*P **P 11 17 34.6 +0.3**
NB2 NORSAR Subarra 44.13 323 P **P 11 17 36.6 -0.5**
comp=Z,3.6nm,1.0s,baz=98,slow=7.9
NB2 NORSAR Subarra 44.13 323 P **P 11 17 36.6 -0.5**
baz=98,slow=7.9
NOA NORSAR Array B 44.13 323 P **P 11 17 36.9 -0.2**
comp=Z,3.1nm,0.7s,baz=98,slow=7.8,SNR=15
NOA LR LR 11 36 21.6
comp=Z,16nm,18.2s,baz=80,slow=36
KONS Konsvik 44.22 331 *e*P **P 11 17 38.1 +0.4**
YAK Yakutsk 44.28 35 *i*P **P 11 17 37.8 -0.4**
YAK pmax pmax
comp=Z,38nm,0.8s
NBO00 NORSAR Array S 44.34 323 *e*P **P 11 17 38.0 -0.8**
KLR Kul'dur 45.55 54 P **P 11 17 49.1 +0.6**
comp=Z,0.6nm,0.4s,baz=265,slow=11,SNR=4.1
TIXI Tiksi 45.99 22 *e*P **P 11 17 51.8 +0.2**
comp=Z,8.0nm,0.8s
TIXI Tiksi 45.99 22 *c e*P **P 11 17 51.2 -0.3**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
BLS5 Blasjo 46.41 321 *e*P **P 11 17 56.0 +0.9**
SPITS Spitsbergen Ar 47.43 347 P **P 11 18 03.5 +0.9**
comp=Z,5.9nm,0.7s,baz=125,slow=12,SNR=5.0
MBAR Mbarara 52.09 234 P **P 11 18 39.1 +0.3**
comp=Z,2.3nm,0.2s,baz=27,slow=14,SNR=4.1
SEY Seymchan 54.72 34 P **P 11 18 57.9 +0.9**
comp=Z,1.7nm,0.7s,baz=238,slow=13,SNR=4.9
SEY Seymchan 54.72 34 *i*P **P 11 18 57.7 +0.7**
ESDC Sonseca Array 57.05 298 P **P 11 19 13.6 -0.5**
comp=Z,0.5nm,0.5s,baz=76,slow=10,SNR=4.1
BILL Bilibino 58.85 26 ⇓*e*P **P 11 19 27.2 +1.2**
BILL *e**PP **PcP 11 20 18.6 +5.3**
BILL *e* 11 21 35.2
BILL *e*S S 11 27 27.7 +12
BILL pmax pmax
comp=Z,3.0nm,1.0s
SUMG Summit 60.95 341 P **P 11 19 43.4 +2.7**
SUMG pmax pmax
comp=Z,17nm,1.1s
LSZ Lusaka 65.08 226 P **P 11 20 07.8 -0.5**
comp=Z,1.6nm,0.4s,baz=76,slow=12,SNR=2.7
TORD Torodi Ar. Bea 65.24 268 P **P 11 20 07.3 -1.9**
comp=Z,0.9nm,0.4s,baz=46,slow=6.0,SNR=12
INK Inuvik 74.02 9 P **P 11 21 03.2 +1.1**
comp=Z,1.9nm,0.6s,baz=335,slow=6.9,SNR=8.8
ILAR Eielson Array 74.95 16 P **P 11 21 07.7 +0.2**
comp=Z,0.8nm,0.7s,baz=313,slow=3.9,SNR=7.4
YKA Yellowknife Ar 81.31 2 P **P 11 21 42.6 +0.2**
comp=Z,1.0nm,0.7s,baz=346,slow=5.0,SNR=8.5
YKA pP **pP 11 22 32.2 +2.1**
comp=Z,0.2nm,0.3s,baz=350,slow=5.6,SNR=2.5
WRA Warramunga Arr 82.38 122 P **P 11 21 47.5 -1.2**
baz=301,slow=6.4
ASAR Alice Springs 84.62 124 P **P 11 21 58.8 -1.2**
comp=Z,0.4nm,0.5s,baz=306,slow=5.0,SNR=12
PDAR Pinedale Array 101.15 360 P **Pdif 11 23 16.3 -0.2**
comp=Z,0.1nm,0.5s,baz=57,slow=6.6,SNR=2.4

ISCJB ***06*** *11:16:26.3±1.1, 21°.9N±0°.1×142°.7E±0°.3, h300km, mb3.8/10, Error ellipse: s-maj=34.7km s-min=18.5km az=175.6*
IDC ***06*** *11:16:28.1±4.2, 21°.92N×142°.72E, h303km±39km, mb3.4/10, mb1 3.4/11, mb1mx3.1/48, mbtmp4.0/11, Error ellipse: s-maj=29.8km s-min=16.4km az=84.0*
ISC 06 11:16:27.7±1.2, 21°.9N±0°.2×142°.7E±0°.3, h300km, n13, σ0°74/13, mb3.6/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.09**	**346**	P	**P**	**11 19 44.6**	**-1.1**
	0.1nm,0.3s,baz=174,slow=12,SNR=4.2						
KSRS	**Korea Array**	**20.08**	**324**	P	**P**	**11 20 40.0**	**+0.7**
	4.4nm,0.6s,baz=145,slow=8.9,SNR=28						
ASAJ	**Asahikawa**	**22.13**	**360**	P	**P**	**11 20 59.2**	**+0.4**
	1.6nm,0.5s,baz=221,slow=18,SNR=4.8						
ASAR	**Alice Springs**	**46.12**	**191**	P	**P**	**11 24 22.7**	**-0.2**
	0.6nm,0.5s,baz=13,slow=7.3,SNR=13						
ZALV	**Zalesovo Beam**	**53.77**	**322**	P	**P**	**11 25 18.1**	**-1.6**
	0.8nm,0.3s,baz=109,slow=8.4,SNR=4.2						
MKAR	**Makanchi Array**	**54.23**	**313**	P	**P**	**11 25 23.4**	**+0.2**
	0.8nm,0.5s,baz=83,slow=9.9,SNR=8.1						
KURBB	**Kurchatov Arra**	**57.07**	**317**	P	**P**	**11 25 42.9**	**-0.2**
	1.2nm,0.5s,baz=94,slow=7.6,SNR=12						
BVAR	**Borovoye Array**	**62.23**	**319**	P	**P**	**11 26 18.3**	**+0.3**
	3.7nm,0.4s,baz=118,slow=7.4,SNR=15						
YKA	**Yellowknife Ar**	**76.45**	**28**	P	**P**	**11 27 44.5**	**+0.1**
	0.2nm,0.4s,baz=294,slow=5.7,SNR=2.5						
ARCES	**ARCESS Array B**	**78.57**	**341**	P	**P**	**11 27 56.4**	**+0.4**
	9.4nm,0.3s,baz=78,slow=10,SNR=10						
KBZ	**Khabaz**	**81.91**	**314**	P	**P**	**11 28 14.7**	**+0.6**
	2.2nm,0.8s,baz=158,slow=2.9,SNR=5.6						
FINES	**FINESS Array B**	**82.79**	**334**	P	**P**	**11 28 17.7**	**-0.6**
	1.3nm,0.3s,baz=67,slow=4.5,SNR=16						
TORD	**Torodi Ar. Bea**	**128.27**	**309**	PKP	**PKPdf**	**11 34 59.5**	**+0.1**
	0.2nm,0.5s,baz=4.1,slow=4.5,SNR=3.2						

ISCJB ***06*** *11:21:23.5±0.5, 14°.95S±0°.07×73°.58W±0°.09, h98km, mb3.9/3, Error ellipse: s-maj=15.7km s-min=5.0km az=143.3*
IDC ***06*** *11:21:25.9±1.7, 14°.71S×73°.53W, h94km±17km, mb3.8/3, mb1 3.9/8, mb1mx3.6/28, mbtmp4.1/8, Error ellipse: s-maj=40.6km s-min=12.7km az=34.0*
NEIC ***06*** *11:21:25.1±2.9, 14°.94S×73°.60W, h106km±36km, mb4.3/1, Error ellipse: s-maj=41.8km s-min=11.5km az=223.0*
ISC 06 11:21:24.7±0.8, 14°.95S±0°.08×73°.59W±0°.09, h98km, n19, σ1°69/25, mb3.9/3, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.32**	**313**	P	**Pn**	**11 22 28.2**	**-0.1**
	4.2nm,0.3s,baz=139,slow=12,SNR=7.7						
NNA				S	**Sn**	**11 23 16.2**	**-1.4**
	17nm,0.3s,baz=217,slow=19,SNR=8.4						
NNA	**Nana**	**4.32**	**313**	*e*Pn	**Pn**	**11 22 29.5**	**+1.2**
NNA				*e*Sn	**Sn**	**11 23 16.4**	**-1.2**
LPAZ	**La Paz**	**5.43**	**105**	P	**Pn**	**11 22 46.7**	**+2.9**
	2.7nm,0.3s,baz=291,slow=9.0,SNR=22						
LPAZ	**La Paz**	**5.43**	**105**	*e*Pn	**Pn**	**11 22 45.3**	**+1.5**
LPAZ				*e*		11 22 46.7	
MNMC	**Minye Minye**	**5.65**	**138**	*e*Pn	**Pn**	**11 22 47.7**	**+1.2**
MNMC				*e*Sn	**Sn**	**11 23 49.4**	**-0.8**
PB11	**IPOC Station P**	**6.08**	**142**	*e*Pn	**Pn**	**11 22 52.5**	**+0.2**
PB11				*e*Sn	**Sn**	**11 23 59.3**	**-1.3**
GO01	**Chusmiza**	**6.30**	**139**	*e*Pn	**Pn**	**11 22 57.8**	**+2.2**
PB01	**IPOC Station P**	**7.21**	**148**	*e*Pn	**Pn**	**11 23 08.5**	**+0.9**
PB01				*e*Sn	**Sn**	**11 24 25.0**	**-3.0**
PB04	**IPOC Station P**	**8.04**	**157**	*e*Pn	**Pn**	**11 23 18.5**	**-0.4**
LVC	**Limon Verde**	**8.82**	**151**	P	**Pn**	**11 23 32.9**	**+3.3**
	0.7nm,0.3s,baz=0.7,slow=3.6,SNR=14						
LVC				S	**Sn**	**11 25 07.5**	**0.0**
	0.6nm,0.3s,baz=92,slow=22,SNR=6.4						
LVC	**Limon Verde**	**8.82**	**151**	*e*Pn	**Pn**	**11 23 30.2**	**+0.5**
SIV	**San Ignacio**	**12.11**	**97**	P	**Pn**	**11 24 13.0**	**-1.0**
	0.7nm,0.3s,baz=287,slow=14,SNR=17						
PTGA	**Pitinga**	**19.51**	**45**	P	**Pn**	**11 25 44.0**	**-2.7**
	2.4nm,0.3s,baz=228,slow=17,SNR=19						
PTGA	**Pitinga**	**19.51**	**45**	*e*P	**Pn**	**11 25 44.3**	**-2.3**
	8.0nm,0.6s						
ULM	**Lac du Bonnet**	**67.81**	**345**	P	**P**	**11 32 12.1**	**0.0**
	2.0nm,0.4s,baz=131,slow=3.4,SNR=3.1						
TOA1	**Torodi Ar. Sit**	**79.56**	**73**	*e*P	**P**	**11 33 21.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**79.56**	**73**	P	**P**	**11 33 21.8**	**+0.3**
	1.4nm,0.7s,baz=271,slow=5.0,SNR=6.5						
YKA	**Yellowknife Ar**	**83.59**	**342**	P	**P**	**11 33 43.1**	**+1.5**
	0.7nm,0.8s,baz=137,slow=2.5,SNR=8.1						
YKB5	**Yellowknife Ar**	**83.59**	**342**	*e*P	**P**	**11 33 43.1**	**+1.5**

ISCJB ***06*** *11:31:47.8±0.4, 59°.87N±0°.04×22°.44E±0°.04, h0km, Error ellipse: s-maj=5.3km s-min=2.9km az=165.0*
EST ***06*** *11:31:49.8±0.1, 59°.83N×22°.30E, h0km, ML2.2(HEL), Explosion*
IDC ***06*** *11:31:51.6±1.6, 59°.98N×22°.19E, h0km, mb1 2.6/3, mb1mx2.5/34, mbtmp2.5/3, ML2.1/4, Error ellipse: s-maj=25.2km s-min=7.8km az=163.0*
UPP ***06*** *11:31:53.4±1.0, 59°.90N×21°.75E, h0km, ML2.5, Suspected explosion*
ISC 06 11:31:48.8±0.8, 59°.87N±0°.04×22°.36E±0°.03, h0km, n30, σ0°85/40, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.08**	**70**	*e*P	**Pb**	**11 32 10.1**	**-0.2**
RAF	**Rauma**	**1.20**	**346**	*e*P	**Pb**	**11 32 12.2**	**0.0**
AAL	**Aland**	**1.23**	**286**	*e*P	**Pg**	**11 32 11.5**	**-0.7**
MTSE	**Matsula**	**1.38**	**147**	*e*P	**Pg**	**11 32 14.1**	**-1.0**
PVF	**Pernaja**	**1.88**	**67**	*e*PG	**Pb**	**11 32 24.2**	**+0.3**
PVF				*e*SG	**Sg**	**11 32 49.2**	**+0.2**
PVF				MSG		11 32 52.8	
	comp=Z,16nm,0.1s						
ARBE	**Arbavere**	**1.89**	**102**	*e*SG	**Sg**	**11 32 48.9**	**-0.5**
NRTU	**Norrtaelje**	**1.90**	**266**	P	**Pn**	**11 32 22.5**	**+0.2**
NRTU				S	**Sn**	**11 32 47.1**	**+0.2**
GRAU	**Graesoe**	**1.97**	**285**	P	**Pn**	**11 32 23.4**	**+0.1**
FORU	**Forsmark**	**2.15**	**286**	P	**Pn**	**11 32 26.9**	**+1.1**
FORU				S	**Sn**	**11 32 54.5**	**+1.2**
SLIT	**Slitere, Latvi**	**2.25**	**181**	*e*PB	**Pn**	**11 32 28.0**	**+0.8**
SLIT				*e*SG	**Sb**	**11 32 57.9**	**-0.6**
UPP	**Uppsala**	**2.39**	**272**	P	**Pn**	**11 32 30.0**	**+0.9**
NYNU	**Nynaeshamn**	**2.39**	**251**	P	**Pn**	**11 32 29.7**	**+0.6**
FIA0	**FINESS Array S**	**2.42**	**48**	*e*PB	**Pb**	**11 32 32.9**	**-0.2**
FIA0				*e*SG	**Sg**	**11 33 05.4**	**-1.0**
FIA0				MSG		11 33 07.1	
	comp=Z,11nm,0.2s						
FINES	**FINESS Array B**	**2.42**	**48**	Pn	**Pb**	**11 32 32.9**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=230,slow=14,SNR=93						
FINES				Sn	**Sg**	**11 33 05.1**	**-1.3**
	comp=Z,4.3nm,0.3s,baz=236,slow=27,SNR=38						
FIA1	**FINESS Array S**	**2.42**	**48**	*e*PB	**Pb**	**11 32 33.2**	**+0.1**
FIA1				*e*SG	**Sg**	**11 33 05.4**	**-1.0**
FIA1				MSG		11 33 07.2	
	comp=Z,13nm,0.1s						
FIBU	**Brunna**	**2.52**	**273**	P	**Pn**	**11 32 31.9**	**+1.0**
KEF	**Keuruu**	**2.61**	**27**	*e*PG	**Pb**	**11 32 36.9**	**+0.6**
KEF				*e*SG	**Sg**	**11 33 11.1**	**-1.4**
KEF				MSG		11 33 13.2	
	comp=Z,7.8nm,0.1s						
OSTU	**Oestervaala**	**2.65**	**280**	P	**Pn**	**11 32 33.3**	**+0.7**
BACU	**Backbrunna**	**2.65**	**272**	P	**Pn**	**11 32 33.5**	**+0.9**
VSU	**Vasula**	**2.66**	**120**	*e*SG	**Sb**	**11 33 10.8**	**+0.5**
IGGU	**Iggoen**	**2.70**	**294**	P	**Pn**	**11 32 34.4**	**+1.0**
ARNU	**Arnoeviken**	**3.05**	**309**	P	**Pn**	**11 32 39.1**	**+0.9**
ESKU	**Eskilstuna**	**3.10**	**261**	P	**Pn**	**11 32 39.8**	**+0.9**
VAF	**Ylistaro**	**3.19**	**3**	*e*SB	**Sb**	**11 33 25.3**	**-0.2**
FALU	**Falun**	**3.32**	**284**	P	**Pn**	**11 32 42.9**	**+1.0**
SUF	**Sumiainen**	**3.40**	**31**	*e*P	**Pn**	**11 32 44.9**	**+2.0**
SUF				MSG		11 33 34.6	
	comp=Z,3.3nm,0.1s						
HFS	**Hagfors**	**4.36**	**277**	Pn	**Pn**	**11 32 56.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=95,slow=11,SNR=6.8						
HFS				Pg	**Pb**	**11 33 06.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=85,slow=16,SNR=5.6						
HFS				Sn	**Sn**	**11 33 47.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=95,slow=26,SNR=4.8						
HFS				Lg	Lg	11 34 01.4	
	comp=Z,0.2nm,0.3s,baz=82,slow=32,SNR=4.1						
JOF	**Joensuu**	**5.28**	**51**	*e*P	**Pn**	**11 33 10.5**	**+1.7**
NOA	**NORSAR Array B**	**5.64**	**287**	Pn	**Pn**	**11 33 13.5**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=92,slow=13,SNR=3.0						
ARCES	**ARCESS Array B**	**9.80**	**7**	Pn	**Pn**	**11 34 10.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=6.1						
ARCES				Lg	Lg	11 36 52.4	
	comp=Z,0.1nm,0.3s,baz=190,slow=26,SNR=2.5						

BJI ***06*** *11:53:38.1±0.0, 36°.97N×21°.50E, h13km, mb5.1/60, mB5.0/39, Ms4.7/30, Ms7 4.4/32*
MOS ***06*** *11:53:42.5±1.3, 36°.83N×21°.86E, h22km, mb5.3/50, Error ellipse: s-maj=4.4km s-min=2.6km az=81.5*
GII ***06*** *11:53:42.3±0.4, 36°.71N×21°.75E, h40km, mb4.9/4, MD4.9/4*
HLW ***06*** *11:53:43.0, 36°.87N×22°.28E, h10km±20km, Md4.9, Ml5.3*
PDG ***06*** *11:53:45.2±0.3, 36°.78N×21°.61E, h35km±6km, MD5.3/9, ML5.3/11, Error ellipse: s-maj=4.9km s-min=1.4km az=90.0*
IDC ***06*** *11:53:45.3±2.1, 36°.86N×21°.93E, h30km±14km, mb4.6/36, mb1 4.7/47, mb1mx4.7/52, mbtmp4.8/47, ML4.5/10, MS4.0/43, Ms1 4.1/43, ms1mx4.0/47, Error ellipse: s-maj=10.0km s-min=9.3km az=172.0*
ATH ***06*** *11:53:46.4, 36°.74N×21°.86E, h39km, ML5.0/40, Error ellipse: s-maj=1.5km s-min=0.8km az=231.0*
MED_RC ***06*** *11:53:46.0±2.4, 36°.83N×21°.60E, h44km±2km, MW5.0/10, Moment Tensor Solution. Mantle waves: s10, c24; Duration: 1s3 Moment tensor: Scale 10^16 Nm; Mrr-1.06±.38; Mθθ-3.31±.28; Mφφ4.37±.20; Mrθ0.72±.21; Mθφ-0.79±.26; Mφr-0.93±.17; Best double couple: M0 4.09000×10^16 NP1:φs310.00000°, δ87.00000°, λ-162.00000°. NP2:φs219.00000°, δ72.00000°, λ-3.00000°. Principal axes: T 4.6300, Plg10.0000°, Azm83.0000°; N -1.0700, Plg72.0000°, Azm320.0000°; P -3.5500, Plg15.0000°, Azm176.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
ISCJB ***06*** *11:53:47.1±0.2, 36°.95N±0°.01×21°.91E±0°.01, h51km±1km, mb4.9/160, MS4.1/43 Error ellipse: s-maj=2.3km s-min=1.5km az=32.2*
NEIC ***06*** *11:53:47.1±2.2, 36°.82N×21°.87E, h39km±2km, mb5.1/236, ML5.0(THE), ML5.0(ATH), Error ellipse: s-maj=9.7km s-min=5.1km az=55.0*
NEIC Felt [II] at Kalamata. Also felt at Kallithea.
THE ***06*** *11:53:48.5, 36°.79N×21°.85E, h26km, ML5.1/8, Error ellipse: s-maj=1.6km s-min=0.6km az=242.0*
BEO ***06*** *11:53:48.1±0.6, 37°.11N×21°.57E, h0km, ML4.9/15*
GCMT ***06*** *11:53:48.1±0.3, 36°.77N±0°.02×21°.88E±0°.02, h34km±2km, MW5.0/84, Moment Tensor Solution. s28, c30; s84, c122; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.34±.21; Mθθ-2.39±.14; Mφφ2.72±.14; Mrθ0.89±.18; Mθφ-1.28±.11; Mφr-2.84±.25; Best double couple: M0 3.75000×10^16 NP1:φs122.00000°, δ79.00000°, λ148.00000°. NP2: φs219.00000°, δ59.00000°, λ13.00000°. Principal axes: T 4.7560, Plg30.0000°, Azm76.0000°; N -2.0170, Plg56.0000°, Azm285.0000°; P -2.7440, Plg14.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 11:53:46.5±0.4, 36°.82N±0°.03×21°.88E±0°.02, h42km±3km, h42km:pP-P, n1382, σ2°14/1561, mb5.0/182, MS4.2/44, 43C-55D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.13**	**302**	*e*Pn	**Pn**	**11 53 53.7**	**+0.1**
PYL				*e*Sn	**Sn**	**11 53 58.2**	**-0.3**
PYL	**PYLOS**	**0.13**	**302**	P	**Pn**	**11 53 53.7**	**+0.1**
PYL				S	**Sn**	**11 53 57.9**	**-0.6**
PYL	**PYLOS**	**0.13**	**302**	P	**Pn**	**11 53 53.8**	**+0.3**
PYL				S	**Sn**	**11 53 57.9**	**-

ITM				S	Sn	11 54 04.0	+2.1
	119µm,0.3s						
ITM	**Ithomi**	**0.36**	**5**	P	Pn	11 53 56.7	+1.1
ITM				S	Sn	11 54 04.1	+2.1
ITM				AML	AML	11 54 07.7	
ITM				AML	AML	11 54 08.2	
MES3	**Kyparissia**	**0.46**	**338**	P	Pn	11 53 57.9	+1.2
MES3				S	Sn	11 54 06.5	+2.5
VLX	**Vlachokerasia**	**0.67**	**36**	*e*Pn	Pn	11 54 01.6	+1.9
VLX				*e*Sn	Sn	11 54 13.4	+4.2
VLX	**Vlachokerasia**	**0.67**	**36**	P	Pn	11 54 01.9	+2.2
VLX				S	Sn	11 54 13.2	+4.0
	189µm,0.7s						
VLX	**Vlachokerasia**	**0.67**	**36**	P	Pn	11 54 01.9	+2.2
VLX				S	Sn	11 54 13.2	+4.0
VLX				AML	AML	11 54 17.2	
VLX				AML	AML	11 54 17.9	
AMT	**Artemida-Makis**	**0.72**	**349**	P	Pn	11 54 02.5	+2.2
AMT				S	Sn	11 54 13.8	+3.6
	203µm,0.9s						
AMT	**Artemida-Makis**	**0.72**	**349**	P	Pn	11 54 02.4	+2.2
AMT				S	Sn	11 54 14.1	+3.9
AMT				AML	AML	11 54 16.1	
AMT				AML	AML	11 54 20.9	
TRIP	**Tripoli**	**0.77**	**24**	P	Pn	11 54 02.9	+1.9
TRIP				S	Sn	11 54 15.8	+4.4
	84µm,0.6s						
TRIP	**Tripoli**	**0.77**	**24**	P	Pn	11 54 03.2	+2.2
TRIP				S	Sn	11 54 16.0	+4.6
TRIP				AML	AML	11 54 17.6	
TRIP				AML	AML	11 54 19.1	
VLI	**Veliai**	**0.85**	**97**	*e*Pn	Pn	11 54 04.4	+2.4
VLI				*e*Sn	Sn	11 54 17.9	+4.5
VLI	**Veliai**	**0.85**	**97**	P	Pn	11 54 04.4	+2.4
VLI				S	Sn	11 54 17.5	+4.1
	76µm,0.8s						
VLI	**Veliai**	**0.85**	**97**	P	Pn	11 54 04.4	+2.4
VLI				S	Sn	11 54 15.3	+2.0
VLI				AML	AML	11 54 20.9	
VLI				AML	AML	11 54 21.1	
MNVA	**Monemvasia**	**0.94**	**98**	P	Pn	11 54 05.5	+2.4
MNVA				S	Sn	11 54 18.7	+3.3
MNVA				AML	AML	11 54 27.4	
	comp=E,92334µm,1.3s						
MNVA				AML	AML	11 54 29.1	
	comp=N,47094µm,1.0s						
KTHR	**Kythira**	**1.06**	**122**	P	Pn	11 54 07.1	+2.2
KTHR				S	Sn	11 54 22.3	+3.8
KYTH	**Kithira**	**1.09**	**120**	*e*Pn	Pn	11 54 07.6	+2.3
KYTH				*e*Sn	Sn	11 54 23.0	+3.8
KYTH	**Kithira**	**1.09**	**120**	P	Pn	11 54 07.8	+2.5
KYTH				S	Sn	11 54 22.4	+3.2
	comp=N,88µm,0.6s						
KYTH	**Kithira**	**1.09**	**120**	P	Pn	11 54 07.5	+2.3
KYTH				S	Sn	11 54 21.1	+1.8
KYTH				AML	AML	11 54 28.0	
KYTH				AML	AML	11 54 32.0	
DRO	**Drossia**	**1.13**	**353**	P	Pn	11 54 08.6	+2.7
DRO	**Drossia**	**1.13**	**353**	P	Pn	11 54 08.6	+2.7
DRO				AML	AML	11 54 37.7	
DRO				AML	AML	11 54 41.9	
KRND	**KRANIDI**	**1.16**	**61**	P	Pn	11 54 08.6	+2.4
KRND	**KRANIDI**	**1.16**	**61**	P	Pn	11 54 08.7	+2.5
KRND				AML	AML	11 54 34.2	
KRND				AML	AML	11 54 39.0	
	comp=E,61844µm,0.8s						
GUR	**Goura**	**1.17**	**18**	*e*Pn	Pn	11 54 09.2	+2.7
GUR				*e*Sn	Sn	11 54 25.2	+3.9
GUR	**Goura**	**1.17**	**18**	P	Pn	11 54 09.2	+2.7
GUR				S	Sn	11 54 25.6	+4.3
	comp=E,92µm,0.7s						
GUR	**Goura**	**1.17**	**18**	P	Pn	11 54 09.6	+3.1
GUR				S	Sn	11 54 27.0	+5.7
GUR				AML	AML	11 54 33.1	
GUR				AML	AML	11 54 35.8	
VTN	**Vitineika**	**1.22**	**333**	P	Pn	11 54 09.8	+2.7
KLV	**Kalavryta, Ach**	**1.23**	**10**	P	Pn	11 54 10.3	+2.9
KLV	**Kalavryta, Ach**	**1.23**	**10**	P	Pn	11 54 10.1	+2.8
KLV				AML	AML	11 54 33.8	
	comp=E,93327µm,0.7s						
KLV				AML	AML	11 54 41.5	
	comp=N,85632µm,0.9s						
EPID	**Epidavros**	**1.26**	**51**	P	Pn	11 54 10.3	+2.6
EPID				S	Sn	11 54 27.8	+4.4
RLS	**Riolos of Patr**	**1.27**	**345**	P	Pn	11 54 10.6	+2.8
RLS	**Riolos of Patr**	**1.27**	**345**	P	Pn	11 54 11.0	+3.1
RLS				S	Sn	11 54 29.0	+5.3
RLS				AML	AML	11 54 38.0	
	comp=N,86941µm,0.9s						
RLS				AML	AML	11 54 39.2	
	comp=E,53386µm,1.0s						
DID	**Didima**	**1.28**	**57**	*e*Pn	Pn	11 54 09.9	+2.0
DID				*e*Sn	Sn	11 54 28.3	+4.5
DID	**Didima**	**1.28**	**57**	P	Pn	11 54 09.9	+2.0
DID	**Didima**	**1.28**	**57**	P	Pn	11 54 10.3	+2.4
DID				AML	AML	11 54 36.0	
	comp=E,96732µm,1.2s						
DID				AML	AML	11 54 39.2	
	comp=N,81259µm,0.6s						
YDRA	**Hydra**	**1.37**	**67**	P	Pn	11 54 11.3	+2.2
LAKA	**Lakka**	**1.42**	**3**	P	Pn	11 54 13.4	+3.6
LAKA	**Lakka**	**1.42**	**3**	P	Pn	11 54 13.4	+3.6
LAKA				S	Sn	11 54 31.3	+4.1
LAKA				AML	AML	11 54 44.0	
LAKA				AML	AML	11 54 44.0	
LOUT	**Loutraki**	**1.45**	**36**	P	Pn	11 54 12.4	+2.2
LOUT	**Loutraki**	**1.45**	**36**	P	Pn	11 54 12.5	+2.3
UPR	**University Cam**	**1.46**	**357**	P	Pn	11 54 14.7	+4.3
LTK	**Loutraki**	**1.48**	**35**	*e*Pn	Pn	11 54 12.8	+2.2
LTK	**Loutraki**	**1.48**	**35**	P	Pn	11 54 12.8	+2.2
LTK	**Loutraki**	**1.48**	**35**	P	Pn	11 54 12.7	+2.1
ANKY	**Antikythira Is**	**1.49**	**129**	*e*Pn	Pn	11 54 13.3	+2.5
ANKY				*e*Sn	Sn	11 54 32.8	+3.8
ANKY	**Antikythira Is**	**1.49**	**129**	P	Pn	11 54 13.3	+2.5
ANKY				S	Sn	11 54 32.8	+3.8
	comp=N,54µm,0.6s						
ANKY	**Antikythira Is**	**1.49**	**129**	P	Pn	11 54 13.4	+2.6
ANKY				S	Sn	11 54 30.9	+1.9
ANKY				AML	AML	11 54 44.5	
ANKY				AML	AML	11 54 47.0	
TRIZ	**Trizonia**	**1.55**	**6**	P	Pn	11 54 15.1	+3.6
TRIZ	**Trizonia**	**1.55**	**6**	P	Pn	11 54 15.3	+3.8
KFL	**Anninata**	**1.55**	**326**	P	Pn	11 54 13.2	+1.6
KFL	**Anninata**	**1.55**	**326**	P	Pn	11 54 13.7	+2.1
KALE	**Kalithea**	**1.58**	**7**	P	Pn	11 54 15.5	+3.5
KALE	**Kalithea**	**1.58**	**7**	P	Pn	11 54 15.5	+3.5
KALE				S	Sn	11 54 36.8	+5.5
KALE				AML	AML	11 54 47.4	
	comp=E,57660µm,0.8s						
KALE				AML	AML	11 54 54.2	
	comp=N,54800µm,0.8s						
SERG	**Sergoula**	**1.59**	**5**	P	Pn	11 54 15.8	+3.6
SERG	**Sergoula**	**1.59**	**5**	P	Pn	11 54 15.8	+3.6
SERG				AML	AML	11 54 46.7	
	comp=E,46402µm,1.0s						
SERG				AML	AML	11 54 49.9	
	comp=N,56780µm,0.7s						
EFP	**Efpalio**	**1.60**	**1**	P	Pn	11 54 16.1	+3.8
EFP	**Efpalio**	**1.60**	**1**	P	Pn	11 54 16.0	+3.8
EFP				AML	AML	11 54 48.6	
	comp=E,58247µm,1.3s						
EFP				AML	AML	11 54 49.7	
	comp=N,60923µm,0.9s						
PROD	**Prodromos**	**1.64**	**29**	P	Pn	11 54 14.9	+2.0
PROD	**Prodromos**	**1.64**	**29**	P	Pn	11 54 15.1	+2.2
PROD				AML	AML	11 54 48.1	
	comp=E,71816µm,1.0s						
PROD				AML	AML	11 54 48.3	
	comp=N,56448µm,1.1s						
DSF	**Desfina**	**1.66**	**18**	P	Pn	11 54 15.5	+2.3
DSF	**Desfina**	**1.66**	**18**	P	Pn	11 54 15.5	+2.3
DSF				AML	AML	11 54 47.8	
	comp=E,54127µm,1.2s						
DSF				AML	AML	11 54 50.8	
	comp=N,28879µm,0.8s						
VLS	**Valsamata**	**1.70**	**323**	P	Pn	11 54 14.8	+1.2
VLS	**Valsamata**	**1.70**	**323**	P	Pn	11 54 14.9	+1.2
VLS				AML	AML	11 54 55.6	
	comp=N,29030µm,0.9s						
VLS				AML	AML	11 54 57.2	
	comp=E,27965µm,1.2s						
DLFA	**Delphi**	**1.72**	**16**	P	Pn	11 54 16.3	+2.3
VILL	**Villia**	**1.75**	**40**	P	Pn	11 54 16.2	+1.7
ANX	**Ano Chora**	**1.77**	**1**	P	Pn	11 54 18.7	+4.0
ANX	**Ano Chora**	**1.77**	**1**	P	Pn	11 54 18.7	+4.0
ANX				AML	AML	11 54 59.2	
	comp=N,83317µm,0.9s						
ANX				AML	AML	11 55 01.4	
	comp=E,59867µm,1.3s						
VIL2	**Platees**	**1.77**	**38**	P	Pn	11 54 16.3	+1.7
VIL2				AML	AML	11 54 53.9	
	comp=E,91317µm,0.9s						
VIL2				AML	AML	11 54 54.7	
	comp=N,59878µm,1.0s						
PVO	**Paravola**	**1.81**	**351**	P	Pn	11 54 19.0	+3.8
PVO	**Paravola**	**1.81**	**351**	P	Pn	11 54 19.3	+4.1
PVO				AML	AML	11 54 56.2	
	comp=E,36008µm,0.9s						
PVO				AML	AML	11 55 14.2	
	comp=N,32964µm,1.2s						
VLY	**Voula,Athens**	**1.84**	**55**	P	Pn	11 54 17.2	+1.7
VLY	**Voula,Athens**	**1.84**	**55**	P	Pn	11 54 17.2	+1.7
VLY				AML	AML	11 54 52.2	
	comp=N,46592µm,0.8s						
VLY				AML	AML	11 54 53.4	
	comp=E,45913µm,0.9s						
ATH	**Athens Observa**	**1.85**	**51**	P	Pn	11 54 17.7	+1.9
ATH	**Athens Observa**	**1.85**	**51**	P	Pn	11 54 17.8	+2.1
ATH				AML	AML	11 54 54.2	
	comp=E,55345µm,1.0s						
ATH				AML	AML	11 54 54.8	
	comp=N,47396µm,0.9s						
PDO	**Prodromos**	**1.86**	**343**	P	Pn	11 54 19.6	+3.8
PDO				AML	AML	11 54 58.2	
	comp=N,43414µm,0.4s						
PDO				AML	AML	11 55 00.0	
	comp=E,47232µm,0.6s						
ATHU	**Athens Univers**	**1.90**	**52**	P	Pn	11 54 18.0	+1.7
ATHU	**Athens Univers**	**1.90**	**52**	P	Pn	11 54 18.2	+1.9
FSK	**Fiskardo**	**1.94**	**328**	P	Pn	11 54 18.7	+1.8
FSK	**Fiskardo**	**1.94**	**328**	P	Pn	11 54 19.3	+2.3
PTL	**Penteli**	**2.00**	**52**	P	Pn	11 54 19.6	+1.9
PTL	**Penteli**	**2.00**	**52**	P	Pn	11 54 19.8	+2.1
PTL				AML	AML	11 54 56.4	
	comp=N,35953µm,0.7s						
PTL				AML	AML	11 54 56.8	
	comp=E,39714µm,0.9s						
MGNA	**Meganis**	**2.02**	**335**	P	Pn	11 54 21.9	+3.8
LKR	**Lokris**	**2.03**	**26**	P	Pn	11 54 19.9	+1.8
LKR	**Lokris**	**2.03**	**26**	P	Pn	11 54 19.9	+1.8
LKR				AML	AML	11 55 01.2	
	comp=E,39224µm,0.9s						
LKR				AML	AML	11 55 10.9	
	comp=N,38177µm,1.1s						
MHLO	**Agia Marina, M**	**2.03**	**93**	P	Pn	11 54 19.7	+1.6
MHLO	**Agia Marina, M**	**2.03**	**93**	P	Pn	11 54 19.8	+1.6
MHLA	**Plaka, Milos I**	**2.04**	**91**	P	Pn	11 54 20.6	+2.3
EVGI	**Lefkada island**	**2.04**	**332**	P	Pn	11 54 20.8	+2.5
DION	**Dionisos Attik**	**2.06**	**52**	P	Pn	11 54 20.5	+2.0
DION				AML	AML	11 54 58.4	
	comp=N,52979µm,1.1s						
DION				AML	AML	11 55 01.3	
	comp=E,38775µm,0.8s						
ATAL	**Atalanti**	**2.07**	**25**	P	Pn	11 54 20.5	+1.7
ATAL	**Atalanti**	**2.07**	**25**	P	Pn	11 54 20.5	+1.7
ATAL				AML	AML	11 55 02.9	
	comp=E,29899µm,0.9s						
ATAL				AML	AML	11 55 03.1	
	comp=N,44527µm,0.9s						
EVR	**Evrytania**	**2.09**	**358**	P	Pn	11 54 23.5	+4.4
EVR	**Evrytania**	**2.09**	**358**	P	Pn	11 54 23.6	+4.5
EVR				AML	AML	11 55 09.8	
	comp=N,26908µm,0.8s						
EVR				AML	AML	11 55 11.1	
	comp=E,47745µm,1.0s						
SERI	**Serifos**	**2.11**	**80**	P	Pn	11 54 20.7	+1.4
SERI	**Serifos**	**2.11**	**80**	P	Pn	11 54 20.8	+1.4
IMMV	**Iera Moni Meta**	**2.17**	**128**	P	Pn	11 54 22.3	+2.1
IMMV	**Iera Moni Meta**	**2.17**	**128**	P	Pn	11 54 22.4	+2.2
IMMV				AML	AML	11 55 07.5	
	comp=N,64899µm,0.8s						
IMMV				AML	AML	11 55 07.6	
	comp=E,65955µm,0.8s						
LKD2	**Lefkada island**	**2.19**	**334**	P	Pn	11 54 23.2	+2.9
LKD2	**Lefkada island**	**2.19**	**334**	P	Pn	11 54 23.3	+2.9
LKD2				AML	AML	11 55 10.8	
	comp=E,34692µm,0.6s						
LKD2				AML	AML	11 55 14.8	
	comp=N,35854µm,0.7s						
AGG	**Agios Georgios**	**2.22**	**9**	*e*P	Pn	11 54 23.4	+2.5
AGG	**Agios Georgios**	**2.22**	**9**	*e*Pn	Pn	11 54 23.4	+2.5
AGG	**Agios Georgios**	**2.22**	**9**	P	Pn	11 54 23.1	+2.2
AGG	**Agios Georgios**	**2.22**	**9**	*e*P	Pn	11 54 23.4	+2.5
AGG	**Agios Georgios**	**2.22**	**9**	P	Pn	11 54 23.4	+2.5
AGG				AML	AML	11 55 09.5	
	comp=E,29288µm,0.9s						
AGG				AML	AML	11 55 13.3	
	comp=N,21050µm,0.9s						
TSLK	**Tsoukalades, L**	**2.22**	**334**	P	Pn	11 54 23.8	+2.9
TSLK	**Tsoukalades, L**	**2.22**	**334**	P	Pn	11 54 23.7	+2.9
EREA	**Eretria**	**2.28**	**45**	P	Pn	11 54 23.3	+1.7
EREA	**Eretria**	**2.28**	**45**	P	Pn	11 54 23.4	+1.8
SMIA	**Simia**	**2.30**	**27**	P	Pn	11 54 24.0	+2.0
SMIA	**Simia**	**2.30**	**27**	P	Pn	11 54 24.1	+2.1
MRKA	**Markates**	**2.31**	**35**	P	Pn	11 54 23.8	+1.7
MRKA	**Markates**	**2.31**	**35**	P	Pn	11 54 23.9	+1.8
MRKA				AML	AML	11 55 12.9	
	comp=E,29925µm,0.9s						
MRKA				AML	AML	11 55 14.3	
	comp=N,30269µm,0.8s						
VAM	**Vamos**	**2.35**	**126**	P	Pn	11 54 24.3	+1.7
VAM	**Vamos**	**2.35**	**126**	P	Pn	11 54 24.1	+1.5
VAM	**Vamos**	**2.35**	**126**	P	Pn	11 54 24.4	+1.9
VAM				AML	AML	11 55 14.6	
	comp=N,60334µm,1.0s						
VAM				AML	AML	11 55 16.7	
	comp=E,57595µm,1.0s						
DSL	**Palaion Diasel**	**2.39**	**345**	P	Pn	11 54 24.9	+1.8
GVD	**Gavdhos**	**2.67**	**137**	P	Pn	11 54 28.1	+1.1
GVD	**Gavdhos**	**2.67**	**137**	P	Pn	11 54 27.6	+0.6
GVD				AML	AML	11 55 27.7	
	comp=N,24724µm,1.1s						
GVD				AML	AML	11 55 30.8	
	comp=E,18470µm,0.9s						
NEO	**Neokhori**	**2.69**	**23**	P	Pn	11 54 29.4	+2.1
NEO	**Neokhori**	**2.69**	**23**	P	Pn	11 54 28.8	+1.4
FYTO	**Fytoko, Volos**	**2.71**	**18**	P	Pn	11 54 29.7	+2.1
FYTO	**Fytoko, Volos**	**2.71**	**18**	P	Pn	11 54 29.7	+2.1
TNSA	**Tinos**	**2.71**	**74**	P	Pn	11 54 29.8	+2.3
IOSP	**Ios island**	**2.74**	**91**	P	Pn	11 54 29.2	+1.3
IOSP	**Ios island**	**2.74**	**91**	P	Pn	11 54 29.3	+1.4
THL	**Klokotos Trika**	**2.74**	**2**	P	Pn	11 54 30.6	+2.7
THL	**Klokotos Trika**	**2.74**	**2**	P	Pn	11 54 30.8	+2.9
THL				AML	AML	11 55 27.9	
	comp=E,8390µm,1.1s						
THL				AML	AML	11 55 33.1	
	comp=N,5017µm,1.0s						
XOR	**Xorichti**	**2.74**	**22**	P	Pn	11 54 29.7	+1.7
XOR	**Xorichti**	**2.74**	**22**	P	Pn	11 54 29.7	+1.7
ALNA	**Alonissos**	**2.80**	**33**	P	Pn	11 54 30.3	+1.6
SAP3	**Santorini-Thir**	**2.81**	**97**	P	Pn	11 54 30.8	+1.9
SAP3	**Santorini-Thir**	**2.81**	**97**	P	Pn	11 54 30.7	+1.8
THR5	**Thira Island,**	**2.82**	**97**	P	Pn	11 54 31.1	+2.1
THR5	**Thira Island,**	**2.82**	**97**	P	Pn	11 54 31.0	+2.1
SAP4	**Santorini-Oia**	**2.83**	**96**	P	Pn	11 54 30.9	+1.8
THR9	**Santorini-Faro**	**2.83**	**98**	P	Pn	11 54 31.4	+2.2
CMBO	**Columbo, Santo**	**2.85**	**96**	P	Pn	11 54 31.4	+1.9
CMBO	**Columbo, Santo**	**2.85**	**96**	P	Pn	11 54 31.4	+1.9
THR3	**Thira Island,**	**2.86**	**97**	P	Pn	11 54 31.9	+2.4
THR3	**Thira Island,**	**2.86**	**97**	P	Pn	11 54 32.0	+2.4
SAP1	**Santorini-Akro**	**2.86**	**98**	P	Pn	11 54 31.9	+2.3
SAP1	**Santorini-Akro**	**2.86**	**98**	P	Pn	11 54 31.6	+2.0
THR6	**Thira Island,**	**2.87**	**98**	P	Pn	11 54 31.9	+2.2
THR6	**Thira Island,**	**2.87**	**98**	P	Pn	11 54 31.4	+1.8
THT2	**Imerovigli**	**2.87**	**97**	P	Pn	11 54 31.9	+2.1
IDI	**Anoyia**	**2.88**	**121**	Pn	Pn	11 54 30.4	+0.4
	comp=N,19nm,0.3s,baz=318,slow=14,SNR=52						
IDI				Sn	Sn	11 55 04.5	+1.2
	comp=N,202nm,0.3s,baz=162,slow=20,SNR=12						
IDI				Lg	Lg	11 55 20.4	
	comp=N,197nm,0.3s,baz=236,slow=11,SNR=6.8						
IDI				LR	LR	11 55 57.4	
	comp=N,3µm,19.4s,baz=303,slow=46						
IDI	**Anoyia**	**2.88**	**121**	P	Pn	11 54 30.3	+0.4
THR7	**Fira-Santorini**	**2.88**	**97**	P	Pn	11 54 31.9	+2.1
THR2	**Thira island,**	**2.88**	**96**	P	Pn	11 54 31.9	+2.0
THT1	**Athinios (Pele**	**2.89**	**98**	P	Pn	11 54 31.9	+2.0
SANT	**Santorini**	**2.91**	**98**	P	Pn	11 54 32.3	+1.9
APE	**Apeiranthos**	**2.93**	**84**	P	Pn	11 54 31.8	+1.2
JAN	**Janina**	**2.94**	**344**	P	Pn	11 54 33.8	+3.0
JAN	**Janina**	**2.94**	**344**	P	Pn	11 54 33.8	+3.0
SKY	**Skiros Island**	**2.94**	**45**	P	Pn	11 54 31.8	+1.1
IGT	**Igoumenitsa**	**2.97**	**336**	*e*Pn	Pn	11 54 32.7	+1.7
IGT				*e*Sn	Sn	11 55 04.1	-1.3
IGT	**Igoumenitsa**	**2.97**	**336**	P	Pn	11 54 32.8	+1.7
IGT	**Igoumenitsa**	**2.97**	**336**	P	Pn	11 54 33.0	+1.9
SIVA	**Sivas**	**2.98**	**126**	P	Pn	11 54 32.8	+1.6
SIVA	**Sivas**	**2.98**	**126**	P	Pn	11 54 32.7	+1.4
KPRO	**Kipourio**	**3.15**	**353**	P	Pn	11 54 37.1	+3.4
KPRO	**Kipourio**	**3.15**	**353**	P	Pn	11 54 37.4	+3.7
ANAF	**Anafi Island**	**3.16**	**97**	P	Pn	11 54 36.0	+2.2
ANAF	**Anafi Island**	**3.16**	**97**	P	Pn	11 54 35.8	+2.0
AMGA	**Amorgos Island**	**3.22**	**89**	P	Pn	11 54 36.0	+1.5
KASA	**Kassiopi**	**3.30**	**333**	P	Pn	11 54 37.1	+1.5
LIT	**Litokhoron**	**3.31**	**8**	P	Pn	11 54 38.2	+2.5
KEK	**Kerkira**	**3.32**	**331**	P	Pn	11 54 37.2	+1.3
LAST	**Lasithi**	**3.35**	**119**	P	Pn	11 54 38.3	+1.8
LAST	**Lasithi**	**3.35**	**119**	P	Pn	11 54 37.4	+0.9
PSRA	**Psara**	**3.38**	**58**	P	Pn	11 54 38.9	+2.2
NPS	**Neapolis**	**3.40**	**116**	P	Pn	11 54 38.3	+1.3
PAIG	**Paliouri**	**3.40**	**24**	P	Pn	11 54 38.5	+1.4
PENT	**Pentalofos**	**3.42**	**350**	P	Pn	11 54 41.1	+3.8
PENT	**Pentalofos**	**3.42**	**350**	P	Pn	11 54 41.1	+3.8
KZN	**Kozani**	**3.48**	**359**	P	Pn	11 54 40.8	+2.6
KZN	**Kozani**	**3.48**	**359**	P	Pn	11 54 41.3	+3.1
NEST	**Nestorio**	**3.64**	**350**	P	Pn	11 54 43.9	+3.5
NEST	**Nestorio**	**3.64**	**350**	P	Pn	11 54 43.8	+3.4
CHOS	**Chios island**	**3.66**	**64**	*e*P	Pn	11 54 41.1	+0.4
CHOS	**Chios island**	**3.66**	**64**	P	Pn	11 54 42.1	+1.4
PLG	**Polygyros**	**3.75**	**19**	P	Pn	11 54 44.0	+2.2
CESE	**eme**	**3.82**	**65**	*e*P	Pn	11 54 43.6	+0.9
OUR	**Ouranopolis**	**3.87**	**24**	*e*P	Pn	11 54 44.9	+1.5
OUR	**Ouranopolis**	**3.87**	**24**	P	Pn	11 54 45.0	+1.6
HORT	**Hortiatis**	**3.89**	**14**	*e*P	Pn	11 54 46.3	+2.5
HORT	**Hortiatis**	**3.89**	**14**	P	Pn	11 54 46.0	+2.3
THE	**Thessaloniki**	**3.90**	**12**	P	Pn	11 54 46.0	+2.2
ZKR	**Zakros**	**3.91**	**115**	P	Pn	11 54 45.8	+1.8
ZKR	**Zakros**	**3.91**	**115**	P	Pn	11 54 45.7	+1.8
ZEY	**zmir**	**3.93**	**68**	*i* P	Pn	11 54 46.5	+2.2
SIGR	**SIGRI**	**3.94**	**52**	*e*P	Pn	11 54 44.9	+0.5
FNA	**Florina**	**3.97**	**354**	*e*Pn	Pn	11 54 47.1	+2.2
FNA				*e*Sn	Sn	11 55 29.3	-1.0
FNA	**Florina**	**3.97**	**354**	P	Pn	11 54 47.1	+2.2
URLA	**Izmir**	**4.04**	**66**	*e*P	Pn	11 54 46.8	+0.9
URLA	**Izmir**	**4.04**	**66**	*i* P	Pn	11 54 47.7	+1.8
URLA				*i* S	Sn	11 55 48.8	+17
SMG	**Samos**	**4.05**	**76**	P	Pn	11 54 47.6	+1.7
KRBN	**Karaburun**	**4.10**	**63**	*e*P	Pn	11 54 47.5	+0.9
GRG	**Griva**	**4.15**	**5**	P	Pn	11 54 49.3	+2.0
SOH	**Sokhos**	**4.15**	**16**	P	Pn	11 54 49.8	+2.5
DGB	**zmir**	**4.16**	**71**	*i* S	Sn	11 55 33.7	-1.1
NISR	**Nisiros**	**4.22**	**91**	P	Pn	11 54 50.6	+2.4
PRK	**Paraskevi**	**4.22**	**54**	P	Pn	11 54 50.4	+2.1
FOCM	**Foa**	**4.28**	**62**	*e*P	Pn	11 54 49.9	+0.9
BODT	**Bodrum**	**4.35**	**85**	*e*P	Pn	11 54 52.3	+2.2
GCAM	**G?zelcaml?**	**4.36**	**77**	*e*P	Pn	11 54 51.9	+1.8
GCAM	**G?zelcaml?**	**4.36**	**77**	*i* P	Pn	11 54 53.4	+3.3
GCAM				IAML_P			
	comp=Z,2µm,0.3s						
OHR	**Ohrid**	**4.36**	**349**	⇓*i* Pn	Pn	11 54 52.4	+2.1
OHR				*i* Sn	Sn	11 56 02.8	+23
BLCB	**Balcova**	**4.38**	**68**	*e*P	Pn	11 54 51.6	+1.1
KNT	**Kendrikon**	**4.40**	**10**	*e*P	Pn	11 54 53.9	+3.1
KNT	**Kendrikon**	**4.40**	**10**	P	Pn	11 54 53.2	+2.4
BOZC	**Bozcaada**	**4.45**	**46**	*e*P	Pn	11 54 52.3	+0.9
BOZC	**Bozcaada**	**4.45**	**46**	*i* P	Pn	11 54 52.5	+1.1
BOZC				IAML_P			
	comp=Z,2µm,0.2s						
KARP	**Karpathos**	**4.46**	**105**	P	Pn	11 54 53.1	+1.6
BDRM	**Kayabasi**	**4.46**	**85**	*i* P	Pn	11 54 54.9	+3.3
BDRM				IAML_P			
	comp=Z,7µm,0.5s						
SRS	**Serrai**	**4.49**	**17**	*e*Pn	Pn	11 54 53.7	+1.7
SRS				*e*Sn	Sn	11 55 44.1	+1.2
SRS	**Serrai**	**4.49**	**17**	P	Pn	11 54 54.0	+2.0
VAY	**Valandovo**	**4.52**	**7**	⇓*i* Pn	Pn	11 54 54.5	+2.1
AYVA	**Ayvalik**	**4.53**	**55**	*i* P	Pn	11 54 52.3	-0.2
AYVA				IAML_P			
	comp=Z,543nm,0.3s						
KRUS	**Krusevo**	**4.56**	**354**	⇓*i* Pn	Pn	11 54 54.5	+1.5
DAT	**Datca**	**4.57**	**89**	*e*P	Pn	11

DRME eSn Sn 11 56 12.2 -1.7
DRME Dracevica, Mon 5.75 340⇓iPn Pn 11 55 09.4 +0.2
FETY Fethiye 5.79 90 eP Pn 11 55 13.0 +3.2
FETY Fethiye 5.79 90 *i* P Pn 11 55 14.8 +5.0
FETY *i* S Sn 11 56 20.1 +5.2
BAI Bari 5.79 319⇓iPn Pn 11 55 09.9 +0.2
BAI Sn Sn 11 56 11.5 -3.3
EDC Edincik 5.86 51 *eP* **Pn 11 55 12.4 +1.7**
VTS Vitosha 5.88 10 *ePn* **Pn 11 55 12.7 +1.5**
VTS eSn Sn 11 56 16.1 -1.2
VTS Vitosha 5.88 10 *ePn* **Pn 11 55 13.1 +1.9**
VTS Vitosha 5.88 10⇑iP Pn 11 55 13.0 +1.9
VTS Vitosha 5.88 10 *eP* **Pn 11 55 13.1 +1.9**
VTS Vitosha 5.88 10 P **Pn 11 55 12.0 +0.8**
BUM Brajici-Budva 5.94 338⇑iPn Pn 11 55 11.6 -0.3
BUM eSn Sn 11 56 15.6 -3.0
PVY Plav 5.95 346⇑iPn Pn 11 55 12.9 +0.8
PVY eSn Sn 11 56 17.3 -1.8
PDG Podgorica 5.96 341 *ePn* **Pn 11 55 11.8 -0.2**
PDG eSn Sn 11 56 15.1 -3.8
PDG Podgorica 5.96 341⇓iPn Pn 11 55 12.1 0.0
TTG Podgorica 5.96 341⇓iPn Pn 11 55 12.0 0.0
TTG eSn Sn 11 56 16.7 -2.2
BARS Barje 5.99 360 *ePn* **Pn 11 55 13.4 +0.9**
BARS Barje 5.99 360 *ePn* Pn 11 55 29.4 +17
BARS eSn Sn 11 56 17.5 -2.2
SLUM Salum 5.99 152 P **Pn 11 55 12.6 0.0**
baz=154
VAE Valguarnera 6.00 278 Pn **Pn 11 55 13.9 +1.1**
comp=Z,16nm,0.3s,baz=195,slow=0.5,SNR=33
VAE Sn Sn 11 56 17.1 -3.2
comp=Z,61nm,0.3s,baz=155,slow=15,SNR=10
VAE LR LR 11 57 12.7
comp=Z,1µm,19.9s,baz=148,slow=34
KCTX Karacabey (Bur 6.13 54 *eP* **Pn 11 55 15.9 +1.4**
CEME Cevo 6.16 339⇓iPn Pn 11 55 14.4 -0.5
CEME eSn Sn 11 56 21.4 -2.6
HCY Herceg Novi 6.20 336⇓iPn Pn 11 55 14.6 -0.8
HCY eSn Sn 11 56 21.4 -3.5
HCY Herceg Novi 6.20 336⇓iPn Pn 11 55 14.5 -0.8
IVA Berane 6.23 346⇑iPn Pn 11 55 16.9 +1.0
IVA eSn Sn 11 56 23.6 -2.3
KHAL Karahalli 6.24 73 *i P* **Pn 11 55 19.2 +3.2**
KHAL IAML_P
comp=Z,912nm,0.5s
AKAS Kas 6.25 93 *eP* **Pn 11 55 19.5 +3.3**
AKAS Kas 6.25 93 *i* P **Pn 11 55 19.4 +3.2**
AKAS *i* S Sn 11 56 27.6 +1.2
EDRB Edirne 6.27 35 *eP* **Pn 11 55 18.5 +2.1**
KOME Kolasin 6.29 344⇓iPn Pn 11 55 17.4 +0.7
KOME eSn Sn 11 56 25.9 -1.4
NKME Niksic 6.35 340⇑iPn Pn 11 55 16.9 -0.6
NKME eSn Sn 11 56 26.1 -2.6
NKY Niksic 6.38 340⇑iPn Pn 11 55 17.6 -0.4
NKY eSn Sn 11 56 27.0 -2.6
GDZ Gediz 6.41 67 *i* P **Pn 11 55 21.3 +2.8**
SELS Selova 6.42 355 *ePn* **Pn 11 55 18.6 +0.2**
SELS eSn Sn 11 56 27.5 -2.8
ELL Elmali 6.44 88 *eP* **Pn 11 55 22.1 +3.2**
ZAPS Zavoj 6.47 5 *ePn* **Pn 11 55 21.3 +2.2**
TREB Trebinje 6.48 336 *ePn* **Pn 11 55 18.4 -0.9**
BRY Bratogost 6.59 338⇓iPn Pn 11 55 20.1 -0.8
BRY eSn Sn 11 56 32.4 -2.4
BRY Bratogost 6.59 338⇓iPn Pn 11 55 20.1 -0.8
SJES Sjenica 6.59 348 *ePn* **Pn 11 55 21.5 +0.6**
SJES eSn Sn 11 56 31.7 -3.2
ARMT Armutlu 6.61 53 *eP* **Pn 11 55 22.9 +1.8**
UPM Unac-Piva 6.77 341⇓iPn Pn 11 55 23.2 -0.2
UPM eSn Sn 11 56 36.4 -2.8
UPM Unac-Piva 6.77 341⇓iPn Pn 11 55 23.4 0.0
PLE Pljevlja 6.77 344⇓iPn Pn 11 55 24.0 +0.6
PLE eSn Sn 11 56 36.9 -2.4
CTKS Kestanelik-??a 6.78 47 *eP* **Pn 11 55 24.9 +1.5**
KORT Korkueli 6.79 86 *eP* **Pn 11 55 26.8 +3.2**
BOVS Bovan 6.80 359 *ePn* **Pn 11 55 24.1 +0.4**
BOVS eSn Sn 11 56 37.2 -2.6
STON Ston 6.84 333 *i* Pn **Pn 11 55 23.2 -1.0**
STON Sn Sn 11 56 33.3 -7.5
STON Ston 6.84 333⇓iPn Pn 11 55 23.0 -1.2
BGKT Bogazkoy 6.91 49 *eP* **Pn 11 55 27.4 +2.3**
PVL Pavlikeni 6.91 21 P **Pn 11 55 26.0 +0.8**
YLV Yalova 6.95 55⇑iP Pn 11 55 26.2 +0.5
YLV Yalova 6.95 55 P **Pn 11 55 24.7 -1.0**
ISP Isparta 6.96 79 *ePn* **Pn 11 55 28.3 +2.4**
ISP Isparta 6.96 79 *eP* **Pn 11 55 28.3 +2.4**
CLTB Caltabellotta 6.96 279 *ePn* **Pn 11 55 26.2 +0.3**
ZAGS Zajecar 6.99 2 *ePn* **Pn 11 55 27.5 +1.3**
ISK Istanbul-Kandi 7.01 51 *eP* **Pn 11 55 28.8 +2.2**
ANTB Antalya 7.03 87 *eP* **Pn 11 55 30.8 +4.0**
MATC Matruh 7.04 139 P **Pn 11 55 25.8 -1.1**
baz=141
MATC AMP 11 56 00.0
baz=141
SHUT Suhut-Afyon 7.09 73 *eP* **Pn 11 55 30.8 +3.1**
KLYT Kilyos 7.11 49 *eP* **Pn 11 55 29.8 +1.9**
GRUS Gruza 7.11 353 *ePn* **Pn 11 55 27.8 -0.1**
GRUS eSn Sn 11 56 42.5 -4.9
HRT Hereke 7.27 54 *eP* **Pn 11 55 32.1 +2.0**
DIVS Divibare 7.41 349 *ePn* **Pn 11 55 31.6 -0.5**
DIVS eSn Sn 11 56 49.3 -5.5
DIVS Divibare 7.41 349⇓iPn Pn 11 55 31.6 -0.5
SILT Sile 7.43 52 *eP* **Pn 11 55 34.2 +1.9**
SVIS Svilajnac 7.45 356 *ePn* **Pn 11 55 32.3 -0.3**
TRUS Trudelj 7.48 352 *ePn* **Pn 11 55 32.4 -0.5**
TRUS eSn Sn 11 56 51.9 -4.5
SRCK Saricakaya, Es 7.58 62 *eP* **Pn 11 55 36.5 +2.2**
KUBS Kucevo 7.58 359 *ePn* **Pn 11 55 33.6 -0.8**
HAPS Han Pijesak,Bl 7.59 344⇓iPn Pn 11 55 33.3 -1.3
GULT Gulveren 7.66 59 *eP* **Pn 11 55 36.8 +1.3**
SAUV Serdivan-Sakar 7.67 57 *eP* **Pn 11 55 37.7 +2.2**
CIFT Cifteler, Eski 7.67 68 *eP* **Pn 11 55 37.9 +2.2**
MDVR Moldovita 7.95 359⇑iP Pn 11 55 39.6 +0.1
SGRR Singureni 8.02 22⇑iP Pn 11 55 43.6 +3.3
SVRH Sivrihisar-ESK 8.03 68 *eP* **Pn 11 55 43.2 +2.5**
HUMR Humele 8.05 16⇑iP Pn 11 55 43.6 +2.9
HERR Herculane 8.06 3⇑iP Pn 11 55 41.5 +0.6
SWA2 8.13 157 P **Pn 11 55 40.8 -1.2**
baz=159
KIZT Kizilcal 8.17 72 *eP* **Pn 11 55 45.3 +2.7**
PSN Preselentsi 8.37 33 P **Pn 11 55 46.6 +1.4**
MGRS Mrkonjic Grad 8.41 336 *ePn* **Pn 11 55 46.0 +0.2**
FRGS Fruska Gora 8.47 350 *ePn* **Pn 11 55 45.9 -0.7**
FRGS eSn Sn 11 57 14.4 -6.4
FRGS Fruska Gora 8.47 350⇓iPn Pn 11 55 45.5 -1.1
ICOR Ion Corvin 8.56 30⇑iPn Pn 11 55 49.8 +2.0
GZR Gura Zlata 8.59 4⇓iP Pn 11 55 49.1 +0.9
BLY Banja Luka 8.68 337⇓iPn Pn 11 55 48.5 -0.9
PPCY Paphos 8.71 100 S Sn 11 57 04.7 -22
MTUR Matau 8.73 15⇑iP Pn 11 55 52.5 +2.3
LOT Lotru 8.73 9⇑iP Pn 11 55 51.4 +1.2
ARR Arges 8.78 13⇓iP Pn 11 55 52.4 +1.5
BZS Buzias 8.79 359 *ePn* **Pn 11 55 50.2 -0.7**
BZS eSn Sn 11 57 23.7 -4.8
BZS Buzias 8.79 359⇑iP Pn 11 55 50.5 -0.4
SECR 8.79 20⇑iP Pn 11 55 53.2 +2.2
ALFC Alefka 8.84 98 S Sn 11 57 19.0 -11
MFTR Murfatlar 8.87 32⇑iP Pn 11 55 54.2 +2.2
VOIR 8.93 15⇑iP Pn 11 55 54.9 +2.0
UDBI Udbina 8.99 331 *i* Pn **Pn 11 55 54.1 +0.4**
UDBI Sn Sn 11 57 28.6 -5.0
ISR Istrita 9.00 22⇑iP Pn 11 55 57.2 +3.3
ISR Istrita 9.00 22 P **Pn 11 55 57.1 +3.2**
TLB Topalu 9.05 29⇑iP Pn 11 55 55.9 +1.4
DEV Deva 9.08 5⇑iP Pn 11 55 56.8 +1.9
ANTO Ankara 9.09 67 *ePn* **Pn 11 55 57.9 +2.7**
ANTO Ankara 9.09 67 *eP* **Pn 11 55 57.9 +2.7**
ANTO Ankara 9.09 67 P **Pn 11 55 58.8 +3.7**
SNR=32
TIRR Tirgusor 9.09 31⇑iP Pn 11 55 57.5 +2.4
HBRG Burj al `Arab 9.10 131 S Sn 11 57 26.4 -10
baz=132
HARR Harsova 9.10 28⇑iP Pn 11 55 56.5 +1.4
SZAC Souni 9.17 100 S **Sn 11 57 30.5 -7.6**
MLR Muntele Rosu 9.18 18 Pn **Pn 11 55 59.1 +2.7**
comp=Z,0.7nm,0.3s,baz=163,slow=12,SNR=23
MLR Muntele Rosu 9.18 18⇑iP Pn 11 55 59.6 +3.1
MLR Muntele Rosu 9.18 18 P **Pn 11 55 59.5 +3.1**
NVLJ Novalja 9.38 328 *i* Pn **Pn 11 55 58.1 -0.9**
NVLJ Sn Sn 11 57 34.8 -8.4
SIRR Siria 9.44 359⇑iP Pn 11 55 59.9 +0.1

CSS Mathiatis 9.47 98 S **Sn 11 57 41.1 -4.4**
CFR Carcaliu 9.59 28⇑iP Pn 11 56 04.5 +2.7
BR131 Keskin Array S 9.69 69 P **Pn 11 56 07.3 +3.9**
SNR=116
BRTR Keskin Array B 9.69 69 Pn **Pn 11 56 07.0 +3.6**
comp=Z,0.6nm,0.3s,baz=255,slow=14,SNR=39
BRTR LR LR 12 00 28.7
comp=Z,2µm,20.6s,baz=254,slow=42
PLOR Plostina 9.70 20⇑iP Pn 11 56 06.7 +3.2
PLOR Plostina 9.70 20 P **Pn 11 56 06.7 +3.2**
OZUR 9.71 16⇑iP Pn 11 56 05.0 +1.4
VRI Vrincioaia 9.74 20⇓iP Pn 11 56 07.2 +3.3
CJR Cluj-Napoca 9.96 7⇑iP Pn 11 56 09.0 +2.0
DRGR 9.98 3⇓iP Pn 11 56 08.0 +0.7
DRGR 9.98 3 P **Pn 11 56 07.9 +0.7**
BOJS Bojanci 10.01 332 *i* Pn **Pn 11 56 06.7 -0.9**
BOJS *i* Sn **Sn 11 57 52.0 -6.5**
OZLJ Ozalj 10.02 333 *ePn* **Pn 11 56 06.5 -1.3**
ILGA Ilgaz 10.14 62 *ePn* **Pn 11 56 09.8 +0.2**
RIY Rijeka 10.16 329 *ePn* **Pn 11 56 08.6 -1.1**
KEST Kesra 10.18 268 Pn **Pn 11 56 10.3 +0.2**
comp=Z,2.4nm,0.3s,baz=354,slow=5.7,SNR=21
KEST Sn **Sn 11 57 59.0 -3.9**
comp=Z,3.2nm,0.3s,baz=239,slow=22,SNR=6.2
KEST LR LR 12 00 42.8
comp=Z,1µm,21.1s,baz=34,slow=41
CRES Cresnjev 10.21 334⇓iPn Pn 11 56 08.9 -1.4
HNAT Natroun 10.24 132 P **Pn 11 56 08.3 -2.5**
baz=133
BEHE Becsehely 10.37 340⇓iPn Pn 11 56 11.3 -1.2
BEHE Becsehely 10.37 340⇓iEPn Pn 11 56 11.0 -1.5
BEHE Sn **Sn 11 58 04.0 -3.2**
VISS Visnje 10.41 332 *i* Pn **Pn 11 56 12.0 -1.2**
VISS *i* Sn **Sn 11 58 00.9 -7.6**
ARCR ARCALIA 10.42 9⇓iP Pn 11 56 15.3 +2.1
TIH Tihany 10.50 345 EPn **Pn 11 56 13.0 -1.2**
TIH Sn **Sn 11 58 11.1 +0.7**
CEY Cerknica 10.52 330⇓iPn Pn 11 56 13.4 -1.2
BIZ Bicaz 10.58 16⇓iP Pn 11 56 18.5 +3.0
LJU Ljubljana 10.73 331 *i* Pn **Pn 11 56 16.2 -1.3**
LJU *i* Sn **Sn 11 58 07.9 -8.4**
LJU Ljubljana 10.73 331⇓iPn Pn 11 56 16.1 -1.4
KOT Kottamia 10.79 127 P **Pn 11 56 15.3 -3.1**
baz=128
KOT S Sn 11 58 07.4 -10
baz=128
JAVS Javornik 10.79 330 *i* Pn **Pn 11 56 16.9 -1.6**
JAVS *i* Sn **Sn 11 58 11.5 -6.3**
HSAF As Saff 10.82 129 P **Pn 11 56 16.7 -2.2**
baz=130
CSKK Cskako 10.87 347 EPn **Pn 11 56 18.1 -1.3**
CSKK Sn **Sn 11 58 19.0 -0.5**
BMR Baia Mare 10.91 6⇓iP Pn 11 56 21.4 +1.5
GLL Jalalah 10.95 128 P **Pn 11 56 18.1 -2.5**
baz=130
PERS Pernice 11.03 335 *i* Pn **Pn 11 56 19.9 -1.7**
PERS eSn **Sn 11 58 14.6 -8.9**
BURAR Bucovina Array 11.06 12⇓iP Pn 11 56 24.5 +2.4
HFRF Wahat Farafira 11.08 149 P **Pn 11 56 20.3 -2.0**
baz=150
SOKA Soboth 11.09 335 *i* Pn **Pn 11 56 21.2 -1.3**
comp=Z,32nm,0.6s,SNR=64
SOKA *i* Sn **Sn 11 58 17.4 -7.8**
comp=Z,43nm,0.6s
OBKA Obir 11.12 333 *i* Pn **Pn 11 56 22.5 -0.4**
comp=Z,21nm,0.4s,SNR=20
OBKA eSn **Sn 11 58 22.3 -3.5**
PSZ Piszkesteto 11.18 353⇓EPn Pn 11 56 23.1 -0.7
PSZ Sn **Sn 11 58 25.0 -2.3**
TRPA Tarpa 11.31 2 EPn **Pn 11 56 25.1 -0.3**
KIS Kishinev 11.40 25 *eP* Pn 11 56 32.0 +5.4
KIS *eS* **Sn 11 58 37.0 +4.5**
KIS *eLi* 11 59 18.0
KIS *i LQ1* 11 59 34.0
KIS *i LQ2* 12 00 06.0
KIS *eRQ* 12 00 32.0
KIS LRM MLR 12 01 24.0
comp=Z,2µm,12.0s
KIS Kishinev 11.40 25 *eP* Pn 11 56 32.0 +5.4
KIS *eS* **Sn 11 58 37.0 +4.5**
KIS MLR MLR
comp=Z,2µm,12.0s
KIS MLR MLR
comp=N,2µm,13.0s
VLC Villacollemand 11.41 314 *ePn* **Pn 11 56 26.1 -0.7**
ARSA Arzberg 11.44 338 *i* Pn **Pn 11 56 25.8 -1.3**
comp=N,31nm,0.5s,SNR=23
ARSA *i* Sn **Sn 11 58 26.2 -7.3**
comp=N,40nm,0.7s
SUZ Suez 11.50 124 P **Pn 11 56 25.6 -2.5**
baz=125
HNTI Hanita 11.53 105 Pn **Pn 11 56 25.9 -2.5**
SOP Sopron 11.54 342 EPn **Pn 11 56 26.1 -2.5**
SOP Sn **Sn 11 58 32.0 -4.0**
MYKA Terra Mystica 11.56 330 *ePn* **Pn 11 56 28.8 -0.2**
comp=N,3.2nm,0.3s,SNR=7.7
MYKA *i* Sn **Sn 11 58 29.7 -7.0**
comp=N,76nm,0.6s
OFRI `Ofer 11.56 107 Pn **Pn 11 56 26.7 -2.3**
KECS Kecovo 11.70 355 *eP* **Pn 11 56 31.2 +0.5**
KECS *e* 11 58 37.9
KECS Kecovo 11.70 355 *ePN* **Pn 11 56 31.2 +0.5**
KECS Kecovo 11.70 355 *eSN* **Sn 11 58 37.9 -1.9**
MMAI Mount Meron Ar 11.73 105 Pn **Pn 11 56 28.4 -2.8**
comp=N,12nm,0.3s,baz=299,slow=12,SNR=7.6
MMAI Sn Sn 11 58 30.6 -10
comp=N,9.1nm,0.3s,baz=316,slow=12,SNR=5.1
MMAI LR LR 12 03 04.8
comp=N,425nm,19.7s,baz=340,slow=48
UZH Uzhgorod 11.80 1 *eP* **Pn 11 56 33.4 +1.3**
UZH *i* S **Sn 11 58 45.0 +2.6**
GEM Giv'at Ha'Em 11.86 104 Pn **Pn 11 56 30.0 -3.0**
KSDI Kefar Szold 11.86 104 Pn **Pn 11 56 29.5 -3.5**
VYHS Vyhne 11.88 350 *eP* **Pn 11 56 32.2 -0.9**
VYHS *e* 11 58 38.1
VYHS Vyhne 11.88 350 *ePN* **Pn 11 56 32.2 -0.9**
VYHS Vyhne 11.88 350 *eSN* **Sn 11 58 38.1 -6.1**
VYHS *eSG* 12 00 06.2
NATI Neve Ativ 11.90 103 Pn **Pn 11 56 29.9 -3.6**
ZST Bratislava 11.90 344 *eP* **Pn 11 56 32.1 -1.3**
ZST Bratislava 11.90 344 *ePN* **Pn 11 56 32.1 -1.3**
CONA Conrad Observa 11.95 340 *i* Pn **Pn 11 56 32.9 -1.4**
comp=N,11nm,0.7s,SNR=6.5
CONA *i* Sn **Sn 11 58 39.9 -6.2**
comp=N,13nm,0.5s
KZIT Kziot 11.95 116 Pn **Pn 11 56 31.0 -3.3**
MMLI Mount Malkishu 11.98 107 Pn **Pn 11 56 31.9 -2.7**
MMLI Mount Malkishu 11.98 107 P **Pn 11 56 30.5 -4.1**
comp=N,33nm,0.7s
BRBR Barbar 12.01 102 *eP* **Pn 11 56 31.7 -3.6**
BRBR *eS* Sn 11 58 34.1 -14
BRBR AML AML 11 58 45.6
comp=N,86nm,0.8s
BRBR AML AML 11 58 50.8
comp=E,49nm,0.7s
MODS Modra-Piesok 12.03 345 *eP* **Pn 11 56 33.5 -1.7**
MODS *e* 11 58 41.6
MODS Modra-Piesok 12.03 345 *ePN* **Pn 11 56 33.5 -1.7**
MODS Modra-Piesok 12.03 345 *eSN* **Sn 11 58 41.6 -6.3**
MODS *eSG* 12 00 24.3
KBA Koelnbreinsper 12.05 331 *ePn* **Pn 11 56 35.6 -0.1**
comp=E,18nm,0.7s,SNR=36
KBA *i* Sn **Sn 11 58 43.4 -5.3**
comp=E,0.1nm,0.1s
KOLS Kolonicke sedl 12.11 1 *eP* **Pn 11 56 37.4 +1.1**
KOLS Kolonicke sedl 12.11 1 *ePN* **Pn 11 56 37.4 +1.1**
ABTA Abfaltersbach 12.12 328 *ePn* **Pn 11 56 36.7 +0.1**
comp=E,34nm,0.6s,SNR=16
ABTA *i* Sn **Sn 11 58 42.7 -7.7**
comp=E,136nm,0.7s
HMDT Nahal Hemdat 12.13 108 Pn **Pn 11 56 34.3 -2.5**
QASN Qassioun 12.22 101 *eP* **Pn 11 56 35.1 -3.0**
QASN *eS* Sn 11 58 39.0 -14
QASN AML AML 11 58 52.1
comp=E,74nm,0.7s
QASN AML AML 11 59 08.8
comp=N,132nm,0.6s
SIM Simferopol' 12.30 45 *eP* **Pn 11 56 41.3 +2.4**
SIM pmax pmax
comp=Z,29nm,0.9s
SIM MLR MLR
comp=Z,670nm,17.3s
DSI Dead Sea 12.34 111 Pn **Pn 11 56 37.1 -2.4**

MOA Molln 12.37 335 *i* Pn **Pn 11 56 39.1 -0.7**
comp=Z,23nm,0.7s,SNR=28
MOA *i* Sn **Sn 11 58 49.5 -6.8**
comp=Z,46nm,0.5s
TOTH TOTAH 12.40 102 *eP* **Pn 11 56 38.7 -1.8**
TOTH *eS* Sn 11 58 43.2 -14
TOTH AML AML 11 58 54.0
comp=N,69nm,0.8s
TOTH AML AML 11 59 23.9
comp=E,30nm,0.8s
JAVC Velka Javorina 12.42 347 *ePN* **Pn 11 56 37.8 -2.8**
MZDA Masada 12.45 112 Pn **Pn 11 56 37.9 -3.1**
LISJ El Lisan 12.57 112 P **Pn 11 56 40.4 -2.3**
comp=E,66nm,0.8s
KRMI Paran Flat 12.63 118 Pn **Pn 11 56 40.5 -3.0**
NIE Niedzica 12.64 355 *eP* **Pn 11 56 44.1 +0.6**
NIE Niedzica 12.64 355 *eP* **Pn 11 56 44.7 +1.1**
NIE Niedzica 12.64 355 *eP* **Pn 11 56 44.2 +0.6**
WALJ Wala 12.66 110 P **Pn 11 56 42.0 -2.0**
comp=E,121nm,0.6s
PRNI Paran 12.70 117 Pn **Pn 11 56 41.2 -3.2**
KWP Kalwaria Pacla 12.81 2 *eP* **Pn 11 56 47.9 +1.9**
KWP Kalwaria Pacla 12.81 2 *eP* **Pn 11 56 48.3 +2.4**
KWP Kalwaria Pacla 12.81 2 *eP* **Pn 11 56 47.9 +1.9**
KRUC Moravsky 12.87 344 *ePN* **Pn 11 56 44.9 -1.8**
KRUC Moravsky 12.87 344 *eSN* **Sn 11 59 03.6 -4.8**
HRFI Mount Harif 12.90 118 Pn **Pn 11 56 44.2 -3.0**
HRFI Mount Harif 12.90 118 P **Pn 11 56 44.2 -3.0**
comp=E,64nm,0.8s
WTTA Wattenberg 12.90 327 *i* Pn **Pn 11 56 47.5 +0.2**
comp=E,34nm,0.7s,SNR=21
WTTA Sn **Sn 11 59 01.6 -7.9**
comp=E,164nm,0.6s
MBRI Mt Berech 12.95 119 Pn **Pn 11 56 44.7 -3.3**
JDRJ Daraweish 12.97 114 P **Pn 11 56 46.1 -2.2**
comp=E,100nm,1.0s
WATA Walderalm 12.98 327 *i* Pn **Pn 11 56 49.2 +0.8**
comp=E,100nm,1.0s,SNR=20
WATA *i* Sn **Sn 11 59 06.5 -5.0**
comp=E,64nm,0.6s
EIL Elat 13.05 119 Pn **Pn 11 56 46.2 -3.0**
comp=E,2.4nm,0.3s,baz=317,slow=3.0,SNR=17
EIL Sn Sn 11 59 00.6 -12
comp=E,11nm,0.3s,baz=56,slow=5.7,SNR=6.6
EIL LR LR 12 03 33.5
comp=E,390nm,21.1s,baz=272,slow=45
EIL Elat 13.05 119 Pn **Pn 11 56 46.1 -3.2**
SQTA Sankt Quirin 13.06 326 *ePn* **Pn 11 56 50.5 +1.1**
comp=E,34nm,0.6s,SNR=12
SQTA *i* Sn **Sn 11 59 07.5 -5.8**
comp=E,106nm,0.6s
VRAC Vranov 13.06 345 Pn **Pn 11 56 47.2 -2.0**
comp=E,0.6nm,0.3s,baz=170,slow=13,SNR=17
VRAC LR LR 12 02 37.3
comp=E,673nm,20.1s,baz=171,slow=41
VRAC Vranov 13.06 345⇑iP Pn 11 56 47.5 -1.8
VRAC Vranov 13.06 345 *ePN* **Pn 11 56 47.5 -1.8**
FUORN Ofenpass-Fuorn 13.07 322 *ePn* **Pn 11 56 48.7 -0.9**
LVV L'vov 13.08 6 *eP* **Pn 11 56 51.0 +1.4**
LVV *eS* **Sn 11 59 18.0 +4.4**
LVV MLR MLR
comp=Z,400nm,10.0s
AQBJ Aqaba 13.09 119 P **P 11 56 55.2 -3.9**
FETA Feichten 13.13 324 *ePn* **Pn 11 56 53.1 +2.7**
comp=Z,27nm,0.9s,SNR=9.6
FETA *eSn* **Sn 11 59 08.9 -6.1**
comp=Z,72nm,0.9s
MOTA Moosalm 13.20 326 *i* Pn **Pn 11 56 51.6 +0.3**
comp=Z,84nm,0.8s,SNR=46
MOTA *i* Sn **Sn 11 59 11.4 -5.3**
comp=Z,28nm,0.5s
ASF Jabal al Asfar 13.22 106 Pn **Pn 11 56 51.1 -0.6**
comp=Z,1.4nm,0.3s,baz=215,slow=3.6,SNR=10
ASF Sn **Sn 11 59 09.7 -7.7**
comp=Z,1.3nm,0.3s,baz=114,slow=20,SNR=2.8
ASF LR LR 12 04 22.1
comp=Z,239nm,19.2s,baz=240,slow=48
HSNJ Maan 13.24 116 P **Pn 11 56 54.0 +2.0**
comp=Z,151nm,0.8s
OKC Ostrava-Krasne 13.29 349 *eP* **Pn 11 56 51.5 -0.9**
OKC MLR MLR
comp=Z,1µm,7.5s
OKC Ostrava-Krasne 13.29 349 *eP* **Pn 11 56 51.5 -0.9**
OKC AMS AMS 12 01 20.0
comp=Z,1µm,7.5s
TREC Trest 13.30 342 *eP* **Pn 11 56 51.4 -1.3**
TREC MLR MLR
comp=Z,2µm,15.5s
TREC Trest 13.30 342 *eP* **Pn 11 56 51.4 -1.3**
TREC AMS AMS 12 02 30.0
comp=Z,2µm,15.5s
MORC Moravsky Berou 13.32 348 *ePn* **Pn 11 56 52.0 -0.9**
MORC Moravsky Berou 13.32 348 *eP* **Pn 11 56 52.1 -0.9**
MORC Moravsky Berou 13.32 348 *ePN* **Pn 11 56 51.1 -1.8**
MORC Moravsky Berou 13.32 348 *eSN* **Sn 11 59 17.5 -2.1**
DAVOX Davos/Dischmat 13.37 322 Pn **Pn 11 56 55.8 +2.1**
comp=Z,1.3nm,0.3s,baz=141,slow=17,SNR=21
DAVOX Sn **Sn 11 59 12.6 -8.3**
comp=Z,3.0nm,0.3s,baz=315,slow=19,SNR=5.7
DAVOX LR LR 12 03 07.8
comp=Z,407nm,20.1s,baz=101,slow=42
GERES GERESS Array B 13.42 336 Pn **Pn 11 56 52.2 -2.1**
comp=Z,2.5nm,0.3s,baz=150,slow=14,SNR=28
GERES Sn **Sn 11 59 13.6 -8.4**
comp=Z,4.5nm,0.3s,baz=154,slow=22,SNR=13
GERES LR LR 12 03 16.4
comp=Z,1µm,18.2s,baz=151,slow=43
RETA Reutte 13.46 326 *i* Pn **Pn 11 56 56.3 +1.5**
comp=Z,14nm,0.5s,SNR=6.0
RETA *i* Sn **Sn 11 59 17.1 -5.9**
comp=Z,108nm,0.7s
OJC Ojcow 13.47 354 *eP* **Pn 11 56 55.9 +0.9**
OJC Ojcow 13.47 354 *eP* **Pn 11 56 55.9 +0.9**
OJC Ojcow 13.47 354 *ePn* **Pn 11 56 55.8 +0.9**
OJC Ojcow 13.47 354 *eP* **Pn 11 56 55.9 +0.9**
KHC Kasperske Hory 13.71 336 *eP* **Pn 11 56 56.3 -1.9**
KHC *e* 11 59 21.6
KHC MLR MLR
comp=Z,1µm,12.7s
KHC Kasperske Hory 13.71 336 *eP* **Pn 11 56 56.3 -1.9**
KHC *eS* **Sn 11 59 21.6 -7.4**
KHC AMS AMS 12 02 50.0
comp=Z,1µm,12.7s
DAVA Damuels 13.72 323 *ePn* **Pn 11 57 00.4 +1.9**
comp=Z,24nm,0.7s,SNR=10
GOPC GO Pecny, Ondr 14.05 341 *eP* **Pn 11 57 01.9 -1.0**
GOPC *e* 11 59 30.8
GOPC MLR MLR
comp=Z,1µm,18.4s
GOPC GO Pecny, Ondr 14.05 341 *eP* **Pn 11 57 01.9 -1.0**
GOPC *eS* **Sn 11 59 30.8 -6.6**
GOPC AMS AMS 12 03 10.0
comp=Z,1µm,18.4s
DPC Dobruska-Polom 14.10 345 *eP* **Pn 11 57 01.7 -1.8**
DPC MLR MLR
comp=Z,800nm,10.4s
DPC Dobruska-Polom 14.10 345 *eP* **Pn 11 57 01.7 -1.8**
DPC AMS AMS 12 03 20.0
comp=Z,800nm,10.4s
BNI Bardonecchia 14.11 310 *ePn* **Pn 11 57 05.4 +1.6**
BNI Bardonecchia 14.11 310 *eP* **Pn 11 57 05.4 +1.6**
PRU Pruhonice 14.19 340 *eP* **Pn 11 57 03.5 -1.1**
PRU MLR MLR
comp=Z,1µm,9.1s
PRU Pruhonice 14.19 340 *eP* **Pn 11 57 03.5 -1.1**
PRU AMS AMS 12 03 00.0
comp=Z,1µm,9.1s
ANN Anapa 14.20 51 *eP* **Pn 11 57 01.6 -3.2**
ANN *eS* **Sn 11 59 42.0 +1.1**
ANN pmax pmax
comp=Z,29nm,0.9s
UPC Upice 14.31 345 *eP* **Pn 11 57 05.7 -0.7**
UPC MLR MLR
comp=Z,800nm,11.2s
UPC Upice 14.31 345 *eP* **Pn 11 57 05.7 -0.7**
UPC AMS AMS 12 03 20.0
comp=Z,800nm,11.2s
OSTC Ostas 14.32 345 *eP* **Pn 11 57 04.9 -1.5**
OSTC AMS AMS 12 03 30.0
comp=Z,800nm,10.5s
CHVC Chvalec 14.38 345 *eP* **Pn 11 57 06.4 -0.9**
CHVC AMS AMS 12 03 30.0
comp=Z,700nm,11.8s
SENIN Lac Senin/Sane 14.47 316 *ePn* **Pn 11 57 07.5 -1.1**
KSP Ksiaz 14.58 346 *eP* **Pn 11 57 11.9 +2.1**

KSP Ksiaz 14.58 346 *eP* **Pn 11 57 12.2 +2.4**
KSP Ksiaz 14.58 346 *eP* **Pn 11 57 11.9 +2.1**
PVCC Panska Ves 14.67 341 AMS AMS 12 03 30.0
comp=Z,1µm,17.0s
KIEV Kiev 14.83 18 *i* Pn **Pn 11 57 11.6 -1.5**
SNR=9.9
KIEV Kiev 14.83 18 *i* P **Pn 11 57 10.9 -2.3**
AKASG Malin Array Be 14.84 18 Pn **Pn 11 57 11.5 -1.8**
comp=Z,4.8nm,0.3s,baz=209,slow=12,SNR=22
AKASG Sn **S 12 00 05.6 -7.5**
comp=Z,3.7nm,0.3s,baz=200,slow=22,SNR=9.3
AKASG LR LR 12 03 38.5
comp=Z,348nm,21.7s,baz=230,slow=40
AKBB Malin Array Si 14.84 18 *e*Pn **Pn 11 57 11.5 -1.8**
AKBB *e*Sn **Sn 12 00 03.5 +7.1**
AKBB Malin Array Si 14.84 18 *e*P **Pn 11 57 11.5 -1.8**
AKBB *e* 12 00 03.5
GRFO Grafenberg 15.00 332 *e*Pn **Pn 11 57 13.6 -1.9**
comp=Z,140nm,1.2s
GRFO Grafenberg 15.00 332 *e*P **Pn 11 57 13.6 -1.9**
GRFO pmax pmax
comp=Z,140nm,1.2s
BEL Belsk 15.03 357 *e*P **P 11 57 22.8 +2.3**
BEL Belsk 15.03 357 *e*P **P 11 57 22.9 +2.3**
BEL Belsk 15.03 357 *e*P **P 11 57 22.8 +2.3**
NKC Novy Kostel 15.03 336 *e*P **Pn 11 57 13.5 -2.4**
NKC MLR MLR
comp=Z,1µm,16.6s
NKC Novy Kostel 15.03 336 *e*P **Pn 11 57 13.5 -2.4**
NKC AMS AMS 12 03 40.0
comp=Z,1µm,16.6s
BRG Berggiesshubel 15.15 340⇓ *i*P **Pn 11 57 17.0 -0.4**
comp=Z,34nm,1.3s
BRG *i* PP **P 11 57 23.8 +1.9**
comp=Z,35nm,1.0s
comp=N,738nm,17.8s
comp=E,683nm,12.7s
comp=Z,1µm,15.2s
BRG Berggiesshubel 15.15 340⇓ *i*P **Pn 11 57 17.0 -0.4**
BRG pmax pmax
comp=Z,6.0nm,1.3s
BRG pmax pmax
comp=Z,34nm,1.0s
BRG MLR MLR
comp=N,35µm,17.8s
BRG MLR MLR
comp=E,738nm,12.7s
BRG MLR MLR
comp=Z,683nm,15.2s
SOC Sochi 15.19 58 *e*P **Pn 11 57 17.2 -0.8**
SOC *e* 12 00 09.4
SOC pmax pmax
comp=Z,31nm,0.6s
SOC MLR MLR
comp=Z,511nm,20.0s
BFO Black Forest 15.20 323 *e*Pn **Pn 11 57 17.6 -0.5**
comp=Z,54nm,1.2s
BFO Black Forest 15.20 323 *e*P **Pn 11 57 17.6 -0.5**
BFO pmax pmax
comp=Z,53nm,1.2s
SSB Saint Sauveur 15.55 308 *e*Pn **Pn 11 57 20.9 -1.8**
SSB Saint Sauveur 15.55 308 *e*P **Pn 11 57 20.9 -1.8**
MOX Moxa 15.66 335 P **Pn 11 57 25.7 +1.7**
CLL Collm 15.80 339 *i*P **Pn 11 57 25.7 -0.2**
CLL *i* Pmax 11 57 29.9
comp=Z,126nm,1.2s
CLL *i* sP **pP 11 57 39.2 -0.2**
CLL *i* 11 58 00.0
CLL *e*S **Sn 12 00 24.0 +4.2**
CLL Collm 15.80 339 *i*P **Pn 11 57 25.7 -0.2**
CLL pmax pmax
comp=Z,126nm,1.2s
CLL MLR MLR
comp=Z,900nm,15.9s
DOMR Dombai 16.42 61 *i*P **Pn 11 57 34.9 +1.0**
RUE Ruedersdorf 16.66 343 *e*P **P 11 57 38.6 0.0**
RUE IAmb IAmb 11 57 42.0
comp=Z,77nm,0.7s
BRNS Bernies 16.67 137 P **P 11 57 39.4 +0.5**
baz=138
GKP Gorka Klasztor 16.76 350 *e*P **P 11 57 41.6 +1.9**
GKP Gorka Klasztor 16.76 350 *e*P **P 11 57 41.6 +1.9**
CAF Calviac 17.01 305 *e*P **Pn 11 57 40.5 -0.6**
WLF Walferdange 17.16 323 *e*Pn **P 11 57 44.8 +0.6**
comp=Z,368nm,1.0s
WLF Walferdange 17.16 323 *e*P **P 11 57 44.8 +0.6**
WLF pmax pmax
comp=Z,368nm,1.0s
WLF Walferdange 17.16 323 P **P 11 57 43.9 -0.3**
WLF sP **Pn 11 57 48.0 +5.0**
WLF PnPn **PnPn 11 57 52.5 -0.9**
WLF x x 11 58 34.0
NEY Neytrino 17.18 62 *i*P **P 11 57 45.1 +0.5**
NEY pmax pmax
comp=Z,9.0nm,0.8s
SUW Suwalki 17.21 3 *e*P **Pn 11 57 43.3 -0.3**
SUW *e*S **Sn 12 00 56.9 +3.0**
SUW Suwalki 17.21 3 *e*P **Pn 11 57 43.6 +0.1**
SUW Suwalki 17.21 3 *e*P **Pn 11 57 43.3 -0.3**
SUW *e*S **Sn 12 00 56.9 +3.0**
SHA1 Shidzhatmaz 17.27 60 *i*P **P 11 57 45.9 +0.2**
KIV Kislovodsk 17.35 59 *e*Pn **P 11 57 46.7 +0.3**
comp=Z,79nm,1.1s
KIV Kislovodsk 17.35 59 Pn **P 11 57 47.4 +1.0**
KIV Kislovodsk 17.35 59 *e*P **P 11 57 46.1 -0.3**
KIV *e* 12 01 02.8
KIV pmax pmax
comp=Z,217nm,1.1s
KIV MLR MLR
comp=Z,789nm,14.0s
KIV Kislovodsk 17.35 59 P **Pn 11 57 45.2 -0.3**
AKH Akhalkalaki 17.37 68 *e*Pn **Pn 11 57 46.0 +0.2**
comp=Z,104nm,1.2s
AKH Akhalkalaki 17.37 68 *e*P **Pn 11 57 46.0 +0.2**
AKH pmax pmax
comp=Z,104nm,1.2s
KBZ Khabaz 17.43 60 Pn **P 11 57 48.4 +1.2**
comp=Z,2.4nm,0.3s,baz=281,slow=6.7,SNR=78
KBZ LR LR 12 05 59.0
comp=Z,786nm,20.8s,baz=274,slow=42
LKLB Kalborn 17.48 324 pP **P 11 57 48.8 +1.1**
LKLB x x 11 58 12.4
PYA1 Pyatigorsk 17.66 59 *i*P **P 11 57 50.2 +0.4**
BHOU Houvegnez 17.70 325 pP **P 11 57 51.3 +1.1**
BHOU sP **Pn 11 57 53.8 +4.1**
KLNR Kaliningrad 17.82 357 *i*P **Pn 11 57 50.6 -0.4**
KLNR pmax pmax
comp=Z,48nm,0.7s
NCK Nalchik 17.86 61 *i*P **P 11 57 53.2 +1.2**
NCK pmax pmax
comp=Z,49nm,1.0s
MEM Membach 17.88 325 pP **P 11 57 54.1 +2.0**
MEM sP **Pn 11 57 55.5 +3.7**
MEM x x 11 58 58.2
LFF La Frestale 17.89 303 *e*P **P 11 57 52.6 +0.3**
ZEI Tsey 17.91 64 *e*P **Pn 11 57 50.7 -1.8**
ZEI pmax pmax
comp=Z,120nm,1.3s
GOF Gofitskoye 17.94 56⇑ *i*P **P 11 57 53.2 +0.4**
GOF pmax pmax
comp=Z,171nm,1.1s
BCLA Clavier 18.07 324 pP **P 11 57 56.8 +2.6**
BGES Gesves 18.15 324 pP **Pn 11 57 56.7 +1.5**
BGES x x 11 58 12.5
BGES x x 11 58 56.0
MICGM Minsk 18.16 11 *e*Pn **P 11 57 53.0 -2.1**
MICGM *e*PP **PnPn 11 58 06.0 -1.0**
MICGM *e*PPP PPP 11 58 18.0
MICGM *e*Sn **Sn 12 01 13.0 -3.7**
MICGM *e*SS **SnSn 12 01 35.0 +4.2**
MICGM *e*SSS SSS 12 01 44.0
MICGM *e*LQ LQ 12 03 30.0
MICGM *e*LR LR 12 04 40.0
MNK Minsk 18.16 11 *e*P **P 11 57 53.0 -2.1**
MNK *e*S **Sn 12 01 13.0 -3.7**
BEBN Eben Emael 18.16 325 pP **Pn 11 57 56.8 +1.6**
BEBN sP **P 11 57 58.5 +3.3**
GNI Garni 18.19 73 Pn **Pn 11 57 57.3 +1.4**
comp=Z,4.0nm,0.3s,baz=176,slow=2.2,SNR=33
GNI LR LR 12 06 16.3
comp=Z,1µm,20.1s,baz=272,slow=41
GNI Garni 18.19 73 *e*P **Pn 11 57 56.4 +0.5**
comp=Z,69nm,0.9s
GNI Garni 18.19 73 *i*P **Pn 11 57 57.3 +1.4**
SNR=11
GNI Garni 18.19 73 P **Pn 11 57 57.5 +1.6**
SNR=19
DOU Dourbes 18.20 322 P **Pn 11 57 56.9 +1.2**
comp=Z,114nm,1.3s
DOU pP **P 11 57 58.3 +2.7**
BMRD Maredsous 18.25 323 P **P 11 57 55.1 -1.1**
BMRD pP **Pn 11 57 58.1 +1.8**
BMRD x 11 58 19.3
CLF Chambon-Foret 18.25 314 *e*P **P 11 57 56.2 0.0**
TBLG Delisi 18.34 67 *e*P **Pn 11 57 57.9 +0.3**
TBLG Delisi 18.34 67 *e*P **Pn 11 57 57.9 +0.3**
NACGM Naroch 18.39 9 *e*Pn **P 11 57 56.0 -1.7**
NACGM *e*PP **pP 11 58 08.0 +0.1**
NACGM *e*PPP PPP 11 58 17.0
NACGM *e*Sn **Sn 12 01 17.0 -5.4**
NACGM *e*SS **SnSn 12 01 40.0 +3.5**
NACGM *e*LQ LQ 12 04 16.0
NACGM *e*LR LR 12 05 46.0
RGN Rugen 18.68 344 *e*P **P 11 58 00.7 -0.1**
RGN IAmb IAmb 11 58 04.9
comp=Z,54nm,0.6s
BBOU Bougnies 18.71 322 P **Pn 11 58 02.5 +0.6**
BBOU pP **P 11 58 04.5 +3.2**
PABE Paberze 18.74 4 *e*P **P 11 58 01.2 -0.3**
PABE IAmb IAmb 11 58 02.3
comp=Z,289nm,0.7s
NAX Nakhchivan 18.75 76 P **Pn 11 58 03.7 +1.1**
IIGN Ignalina 18.77 8 *e*P **P 11 58 01.8 0.0**
IIGN IAmb IAmb 11 58 04.3
comp=Z,38nm,0.9s
UCC Uccle 18.77 324 *e*P **Pn 11 58 02.8 +0.1**
comp=Z,183nm,1.2s
UCC Uccle 18.77 324 *e*P **Pn 11 58 02.8 +0.1**
UCC pmax pmax
comp=Z,183nm,1.2s
UCC Uccle 18.77 324 pP **Pn 11 58 03.7 +1.0**
UCC sP **P 11 58 05.0 +3.0**
UCC x x 11 58 24.1
IDID Didziasalis 18.79 9 *e*P **P 11 58 01.2 -0.9**
IDID IAmb IAmb 11 58 03.5
comp=Z,21nm,0.7s
VORD Divnogorie 18.83 36 *e*P **P 11 58 01.9 -0.6**
VORD pmax pmax
comp=Z,20nm,1.0s
BSD Bornholm Skovb 18.91 348 *i*P **P 11 58 02.7 -0.6**
BSD pmax pmax
comp=Z,140nm,1.0s
BSD Bornholm Skovb 18.91 348 *i*P **P 11 58 02.7 -0.6**
comp=Z,141nm,1.0s
VSR Storozhevoye 18.94 35 *e*P **P 11 58 02.8 -1.0**
VSR pmax pmax
comp=Z,40nm,1.0s
ISAL Salakas 18.97 7 *e*P **P 11 58 03.9 -0.2**
ISAL IAmb IAmb 11 58 04.8
comp=Z,32nm,0.5s
MFF Saint Martin d 19.07 308 *e*P **P 11 58 05.2 -0.1**
IZAR Zarasai 19.16 8 *e*P **P 11 58 05.3 -0.8**
IZAR IAmb IAmb 11 58 07.6
comp=Z,29nm,0.5s
PBUR Paburg 19.20 0 *e*P **P 11 58 06.0 -0.6**
PBUR IAmb IAmb 11 58 07.8
comp=Z,117nm,0.7s
VORR Voronezh 19.27 34 P **Pn 11 58 10.0 +1.3**
VORR pmax pmax
comp=Z,250nm,1.0s
GROC Groznyy 19.36 63 *e*P **P 11 58 06.7 -1.7**
GROC *e*S **S 12 01 45.0 -0.1**
GROC pmax pmax
comp=Z,230nm,1.3s
GANJ Ganja 19.42 71 P **P 11 58 09.9 +0.7**
BTLR Botlikh 19.57 65 *i*P **P 11 58 10.5 -0.3**
ZKTA Zakatala 19.73 68 P **P 11 58 12.8 +0.3**
LPSR Galich'ya Gora 19.81 32 *e*P **P 11 58 13.1 -0.1**
LPSR *e*S **Sn 12 01 57.8 +1.3**
LPSR pmax pmax
comp=Z,130nm,0.8s
LPSR smax smax
comp=N,890nm,3.0s
TAM Tamanrasset 19.89 230 *e*P **P 11 58 15.1 +0.6**
TAM Tamanrasset 19.89 230 *e*P **P 11 58 15.1 +0.6**
COP Copenhagen 19.93 344⇓ *i*P **P 11 58 15.2 +0.7**
COP pmax pmax
comp=Z,94nm,0.9s
COP Copenhagen 19.93 344⇓ *i*P **P 11 58 15.2 +0.7**
comp=Z,94nm,0.9s
UCM Universidad Co 19.93 288 *i*P Pn 11 58 25.9 +9.2
UCM *e*S **Sn 12 02 09.1 +9.2**
GNBR Gunib 20.07 66 *i*P Pn 11 58 17.4 -0.9
GNBR pmax pmax
comp=Z,144nm,1.0s
SEKA Sheki 20.12 70 P Pn 11 58 18.2 -0.7
VRH Novokhopyorsk 20.16 38 *e*P **P 11 58 16.8 -0.2**
VRH *e*S Sn 12 02 04.2 -0.8
VRH pmax pmax
comp=Z,150nm,0.8s
VRH smax smax
comp=N,2µm,1.8s
ESDC Sonseca Array 20.48 286 P **P 11 58 20.8 +0.1**
comp=N,17nm,0.7s,baz=81,slow=11,SNR=105
ESDC LR LR 12 06 34.1
comp=N,124nm,20.1s,baz=95,slow=38
AKT Akhty 20.54 69 *e*P **P 11 58 21.5 0.0**
AKT *e* 11 58 42.9
AKT *e*SS Sn 12 02 36.4 +22
AKT pmax pmax
comp=Z,100nm,1.2s
MAK Makhachkala 20.55 65 *e*P **P 11 58 18.1 -3.2**
MAK *e*S **S 12 02 07.2 -1.6**
MAK *e*SS **SnSn 12 02 34.0 +4.6**
MAK pmax pmax
comp=Z,386nm,1.4s
MAK MLR MLR
comp=Z,121nm,12.0s
PAB San Pablo 20.78 286 *e*P **P 11 58 23.2 -0.7**
comp=Z,96nm,1.7s
PAB San Pablo 20.78 286 *e*P **P 11 58 23.3 -0.7**
PAB pmax pmax
comp=Z,96nm,1.7s
SLIT Slitere, Latvi 20.82 1 *e*P **P 11 58 23.1 -1.0**
SLIT IAmb IAmb 11 58 24.5
comp=Z,1µm,1.1s
OBN Obninsk 20.87 24 P **P 11 58 23.7 -1.0**
comp=Z,11nm,0.3s,baz=217,slow=22,SNR=7.2
OBN S **S 12 02 11.5 -3.3**
comp=Z,15nm,0.8s,baz=212,slow=23,SNR=7.2
OBN LR LR 12 07 11.0
comp=Z,167nm,18.9s,baz=184,slow=39
OBN Obninsk 20.87 24 *e*P **P 11 58 23.6 -1.0**
comp=Z,87nm,0.8s
OBN Obninsk 20.87 24 *de*P **P 11 58 24.1 -0.5**
OBN *e* 11 58 41.3
OBN *e*S S 12 02 03.2 -12
OBN pmax pmax
comp=Z,64nm,1.1s
OBN MLR MLR
comp=Z,537nm,18.0s
EMAL Malaga-Limoner 21.06 278 *i*P P 11 58 34.5 +7.6
EMAL *e*S Sn 12 02 26.5 -0.3
LKRN Lenkeran, Azer 21.32 77 P **P 11 58 31.9 +2.2**
JSA Saint Aubin 21.39 313 *e*P **P 11 58 30.2 -0.1**
JSA IAmb IAmb 11 58 34.9
comp=Z,51nm,1.1s
MUD Monsted U'grnd 21.42 340 *i*P **P 11 58 34.1 +3.5**
MUD pmax pmax
comp=Z,81nm,1.0s
MUD Monsted U'grnd 21.42 340 *i*P **P 11 58 34.1 +3.5**
comp=Z,81nm,1.0s
JVM Valle D.L. Mar 21.43 313 *e*P **P 11 58 31.1 +0.4**
MOS Moscow 21.73 24 *e*P **P 11 58 33.3 -0.6**
MOS *e* 11 59 01.4
MOS *e* 11 59 07.6
MOS *e*S **S 12 02 24.9 -6.9**
MOS *e* 12 02 34.2
MOS *e* 12 09 48.0
MOS pmax pmax
comp=Z,122nm,0.7s
LIJA Lijar 21.81 278 *e*P **P 11 58 34.3 -0.7**
VSU Vasula 21.88 7 *e*P **P 11 58 34.6 -0.9**
VSU IAmb IAmb 11 58 41.4
comp=Z,674nm,0.7s
CEU Ceuta 21.95 276 *e*P **P 11 58 33.2 -3.2**
CEU *e*S S 12 02 14.2 -22
ALJ Aljibe 22.06 278 *e*P **P 11 58 37.2 -0.5**
MDT Midelt 22.09 267 P **P 11 58 38.0 -0.1**
comp=Z,13nm,0.9s,baz=88,slow=13,SNR=20
MDT LR LR 12 09 07.2
comp=Z,359nm,20.6s,baz=78,slow=42
IFR Ifrane 22.30 270 *i*P P 11 58 51.1 +11
IFR *i*S **S 12 02 47.4 +4.1**
PBRG Braganca 22.64 292 *e*P **P 11 58 43.1 -0.8**
comp=Z,50nm,0.8s
STRD Stroud 22.65 319 *e*P **P 11 58 43.4 -0.4**
STRD IAmb IAmb 11 58 45.5
comp=Z,116nm,0.9s
MVO Moncorvo 22.84 290 *e*P **P 11 58 44.9 -1.1**
comp=Z,54nm,0.8s
MVO *e*S **S 12 02 53.0 +0.7**
MONM Monmouth 23.02 318 *e*P **P 11 58 47.0 -0.7**
MONM IAmb IAmb 11 58 49.3
comp=Z,62nm,1.1s
PMRV Marv??o 23.13 285 *e*P **P 11 58 47.7 -1.2**
comp=Z,40nm,1.1s
PCBR Castelo Branco 23.18 286 *e*P **P 11 58 47.6 -1.8**
comp=Z,31nm,1.7s
HOMB Homborsund 23.19 342 *e*P **P 11 58 48.8 -0.5**
MCH1 Michaelchurch 23.20 319 *e*P **P 11 58 48.6 -0.9**
MCH1 IAmb IAmb 11 58 51.0
comp=Z,78nm,1.2s
MTE Manteigas 23.22 288 *e*P **P 11 58 48.7 -1.2**
comp=Z,26nm,1.4s
MTE *e*S **S 12 03 01.3 +2.5**
LBWR Ladybower, Pea 23.33 323 *e*P **P 11 58 50.9 +0.1**
LBWR IAmb IAmb 11 58 51.5
comp=Z,32nm,0.9s
PVRL Vila Real 23.36 290 *e*P **P 11 58 49.6 -1.5**
comp=Z,30nm,1.4s
POLO Lamas de Olo 23.42 290 *e*P **P 11 58 51.3 -0.5**
comp=Z,15nm,1.5s
PVIS Viseu 23.48 289 *e*P **P 11 58 52.0 -0.4**
comp=Z,25nm,1.6s
PVAQ Vaqueiros 23.57 280 *e*P **P 11 58 53.3 +0.1**
comp=Z,85nm,1.4s
PVAQ *e*S **S 12 03 07.4 +3.0**
PVAQ Vaqueiros 23.57 280 *e*P **P 11 58 51.9 -1.3**
comp=Z,54nm,0.9s
PCAB Cabril 23.60 291 *e*P **P 11 58 53.0 -0.5**
comp=Z,64nm,1.4s
PUL Pulkovo 23.60 11 *i*P **P 11 58 52.8 -0.4**
PUL pmax pmax
comp=Z,107nm,0.6s
PBEJ Beja 23.61 282 *e*P **P 11 58 53.4 -0.2**
comp=Z,58nm,1.5s
EVO Evora 23.68 283 *i*P P 11 59 15.7 +22
PBDV Barranco-do-Ve 23.76 280 *e*P **P 11 58 54.9 -0.1**
comp=Z,122nm,1.2s
PBDV *e*S **S 12 03 14.1 +6.6**
FOEL Foel Wylfa 23.78 320 *e*P **P 11 58 54.6 -0.4**
FOEL IAmb IAmb 11 58 56.9
comp=Z,102nm,1.1s
PGAV Gavieira, Arco 23.79 292 *e*P **P 11 58 56.6 +1.3**
PGAV *e*S **S 12 03 14.3 +6.2**
PCVE Castro Verde 23.80 281 *e*P **P 11 58 54.1 -1.2**
comp=Z,56nm,1.4s
PMTG Montargil 23.80 285 *e*P **P 11 58 53.8 -1.5**
comp=Z,31nm,1.2s
PMTG *e*S **S 12 03 12.2 +4.2**
COI Coimbra 23.89 287 *e*P **P 11 58 56.8 +0.7**
comp=Z,45nm,1.5s
PTOM Tomar 23.91 286 *e*P **P 11 58 53.9 -2.4**
HFS Hagfors 23.91 350 P **P 11 58 55.5 -0.6**
comp=Z,22nm,0.5s,baz=156,slow=11,SNR=121
HFS LR LR 12 08 50.6
comp=Z,301nm,20.1s,baz=169,slow=38
MESJ Messejana 23.91 282 *e*P **P 11 58 55.3 -1.1**
MESJ AMb AMB 11 58 58.4
comp=Z,51nm,1.2s
MESJ *e*S **S 12 03 09.3 -0.5**
MESJ Messejana 23.91 282 *e*P **P 11 58 56.7 +0.3**
comp=Z,50nm,1.8s
MESJ Messejana 23.91 282 *e*P **P 11 58 55.2 -1.1**
MESJ *e*S **S 12 03 09.3 -0.5**
RSBS Rosebush, Pemb 24.12 317 *e*P **P 11 58 57.6 -0.5**
PNCL Nicolau / Gran 24.12 282 *e*P **P 11 58 57.8 -0.5**
comp=Z,33nm,1.4s
PNCL *e*S **S 12 03 17.8 +4.6**
KONO Kongsberg 24.18 345 *e*P **P 11 58 57.9 -0.7**
comp=Z,81nm,1.3s
KONO Kongsberg 24.18 345 *e*P **P 11 58 57.9 -0.7**
KONO pmax pmax
comp=Z,81nm,1.3s
KONO Kongsberg 24.18 345 *e*P **P 11 58 57.2 -1.4**
OSL Oslo 24.22 346 *e*P **P 11 58 58.4 -0.5**
MORF Marmelete 24.32 280 *e*S **S 12 03 15.9 -0.6**
PTEO Sao Teotonio 24.35 281 *e*P **P 11 59 00.7 +0.3**
comp=Z,88nm,1.8s
YLL Llanberis 24.41 320 *e*P **P 11 59 01.5 +0.8**
PFVI Vila Bisbo 24.49 280 *e*S **S 12 03 26.2 +7.1**
STAV Stavanger 24.51 340 *e*P **P 11 59 02.6 +1.0**
WLF1 Llynfaes 24.61 320 *e*P **P 11 59 02.7 +0.2**
WLF1 IAmb IAmb 11 59 03.8
comp=Z,93nm,1.5s
PMAFR Mafra 24.63 284 *e*S **S 12 03 27.3 +5.9**
YRC Rhoscolyn 24.68 320 *e*P **P 11 59 03.0 -0.1**
KESW Keswick, Cumbr 24.69 324 *e*P **P 11 59 03.5 +0.2**
KESW IAmb IAmb 11 59 05.4
comp=Z,59nm,1.2s
BLS5 Blasjo 24.72 341 *e*P **P 11 59 04.4 +0.8**
FIA0 FINESS Array S 24.78 5 *e*PcP **PcP 12 02 39.8 +0.3**
FINES FINESS Array B 24.78 5 P **P 11 59 04.2 +0.1**
comp=Z,14nm,0.3s,baz=174,slow=9.8,SNR=172
FINES PcP **PcP 12 02 39.8 +0.3**
comp=Z,12nm,1.1s,baz=162,slow=1.3,SNR=3.9
FINES S **S 12 03 20.9 -2.4**
comp=Z,8.4nm,0.8s,baz=183,slow=15,SNR=4.0
FINES LR LR 12 10 01.8
comp=Z,572nm,18.4s,baz=190,slow=40
BBO1 Bothel 24.84 324 *e*P **P 11 59 05.2 +0.5**
KMY Karmoy 24.87 340 *e*P **P 11 59 06.0 +1.1**
NAO01 NORSAR Array S 25.04 347 *e*P **P 11 59 06.2 -0.1**
BHH Howats Hill 25.04 325 *e*P **P 11 59 06.6 +0.1**
ODD1 Odda 25.10 342 *e*P **P 11 59 07.6 +0.6**
EKA Eskdalemuir Ar 25.16 325 P **P 11 59 07.5 -0.1**
comp=Z,58nm,0.9s,baz=124,slow=9.2,SNR=75
EKA PcP **PcP 12 02 41.1 +0.7**
comp=Z,1.2nm,0.5s,baz=100,slow=3.7,SNR=4.0
NB2 NORSAR Subarra 25.16 348 P **P 11 59 07.0 -0.6**
comp=Z,30nm,0.9s,baz=155,slow=9.3
NB2 NORSAR Subarra 25.16 348 P **P 11 59 07.0 -0.6**
baz=155,slow=9.3
NOA NORSAR Array B 25.16 348 P **P 11 59 07.5 -0.1**
comp=Z,38nm,0.9s,baz=160,slow=9.8,SNR=56
NOA LR LR 12 10 12.0
comp=Z,222nm,18.6s,baz=165,slow=39
ESK Eskdalemuir 25.17 325 *e*P **P 11 59 07.5 -0.1**
comp=Z,77nm,1.0s
ESK Eskdalemuir 25.17 325 *e*P **P 11 59 07.5 -0.1**
ESK IAmb IAmb 11 59 09.9
comp=Z,66nm,1.0s
ESK Eskdalemuir 25.17 325 *e*P **P 11 59 07.5 -0.1**
ESK pmax pmax
comp=Z,77nm,1.0s
IOMK Kirk Michael 25.21 322 *e*P **P 11 59 07.2 -0.8**
IOMK IAmb IAmb 11 59 10.2
comp=Z,123nm,1.1s
ESY Stoneypath 25.27 327 *e*P **P 11 59 09.3 +0.7**
EBL Broad Law 25.37 326 *e*P **P 11 59 09.6 +0.1**
EDI Edinburgh 25.53 326 *e*P **P 11 59 11.0 +0.2**
EDI IAmb IAmb 11 59 13.3
comp=Z,113nm,0.9s
DSB Dublin 25.61 319 *e*P **P 11 59 11.7 0.0**
comp=Z,28nm,1.0s
GAL1 Galloway 25.61 323 *e*P **P 11 59 11.7 0.0**
GAL1 IAmb IAmb 11 59 14.0
comp=Z,19nm,1.1s
BER Bergen 25.84 341 *e*P **P 11 59 14.8 +1.1**
DRUM Mains of Drumt 25.86 329 *e*P **P 11 59 13.1 -0.7**
DRUM IAmb IAmb 11 59 14.1
comp=Z,39nm,0.8s
GMM Mts of Mourne 25.89 321 *e*P **P 11 59 14.2 +0.1**
ASK Askoy 25.96 341 *e*P **P 11 59 16.7 +1.9**
EAB Aberfoyle 26.20 326 *e*P **P 11 59 17.2 +0.2**
INVG Invergeldie, C 26.22 327 *e*P **P 11 59 17.2 +0.1**
INVG IAmb IAmb 11 59 19.7
comp=Z,35nm,0.8s
HYA Hoyanger 26.31 343 *e*P **P 11 59 18.6 +0.7**
CLGH Cloghs, Cushen 26.41 323 *e*P **P 11 59 18.9 0.0**
CLGH IAmb IAmb 11 59 21.3
comp=Z,45nm,1.0s

DOMB	Dombas	26.48	346	eP	P	11 59 20.2	+0.7
KLMR	Klimovskoe	26.53	19	eP	P	11 59 18.5	-1.3
KLMR				eS	S	12 03 57.9	+6.9
KLMR				pmax	pmax		
	comp=Z,38nm,0.8s						
MCD	Coleburn Disti	26.61	329	eP	P	11 59 19.9	-0.7
LAWE	Loch Awe, Argy	26.73	325	eP	P	11 59 21.7	0.0
LAWE				IAmb	IAmb	11 59 24.4	
	comp=Z,22nm,1.2s						
AKN	Aaknes	27.02	345	eP	P	11 59 25.4	+1.1
KAC	Achnashellach	27.41	328	eP	P	11 59 27.0	-0.9
KPL	Plockton	27.47	327	eP	P	11 59 28.0	-0.4
KPL				IAmb	IAmb	11 59 28.9	
	comp=Z,42nm,1.1s						
LRW	Lerwick	27.61	335	eP	P	11 59 29.2	-0.3
LRW				IAmb	IAmb	11 59 30.5	
	comp=Z,49nm,0.9s						
KIRV	Kirov	28.23	31	P	P	11 59 34.9	-0.2
	comp=Z,16nm,0.5s,baz=186,slow=4.2,SNR=8.3						
KIRV				S	S	12 04 12.0	-5.8
	comp=Z,39nm,0.7s,baz=90,slow=20,SNR=30						
KIRV				LR	LR	12 13 08.3	
	comp=Z,239nm,18.1s,baz=196,slow=41						
RRH	Rhenigidale	28.27	327	eP	P	11 59 35.4	0.0
NSS	Namsos	28.37	351	eP	P	11 59 36.1	-0.2
GEYT	Alibeck	28.70	77	P	P	11 59 40.0	+0.3
	comp=Z,12nm,0.5s,baz=280,slow=8.9,SNR=22						
GEYT				LR	LR	12 14 35.4	
	comp=Z,238nm,18.6s,baz=290,slow=44						
PRGR	Permogore	28.95	23	eP	P	11 59 39.9	-1.5
PRGR				eS	S	12 04 24.3	-4.7
PRGR				pmax	pmax		
	comp=Z,24nm,0.6s						
TMCR	Tamitsa	29.05	15	eP	P	11 59 44.4	+2.0
TMCR				pmax	pmax		
	comp=Z,18nm,0.6s						
AKTO	Aktyubinsk	29.16	51	P	P	11 59 42.9	-0.6
	comp=Z,6.7nm,0.5s,baz=260,slow=9.6,SNR=24						
TOA1	Torodi Ar. Sit	29.71	223	eP	P	11 59 47.9	-0.8
TOA1				ePcP	PcP	12 02 52.2	+0.1
TOA1				eScP	ScP	12 06 30.9	+0.3
TOA0	Torodi Ar. Sit	29.72	223	P	P	11 59 48.1	-0.6
TORD	Torodi Ar. Bea	29.72	223	P	P	11 59 47.9	-0.8
	comp=Z,5.4nm,0.6s,baz=29,slow=8.8,SNR=34						
TORD				PcP	PcP	12 02 52.2	+0.1
	comp=Z,2.6nm,0.9s,baz=12,slow=3.5,SNR=4.1						
TORD				ScP	ScP	12 06 30.9	+0.3
	comp=Z,0.7nm,0.8s,baz=27,slow=6.6,SNR=3.1						
TORD				LR	LR	12 12 45.7	
	comp=Z,302nm,19.4s,baz=0.0,slow=38						
AB31	Akbulak array	30.14	54	i P	P	11 59 51.4	-0.8
AB31				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ABKAR	Akbulak array	30.14	54	eP	P	11 59 51.8	-0.4
	comp=Z,13nm,1.1s						
KONS	Konsvik	30.15	353	eP	P	11 59 52.2	+0.2
MZR	Muzera	30.50	108	i P	P	11 59 56.0	+0.4
	SNR=5.9						
MZR	Muzera	30.50	108	P	P	11 59 56.1	+0.4
MZR				P	P	11 59 56.1	+0.4
SHME	Shamm	30.99	100	i P	P	11 59 59.8	-0.2
	SNR=12						
ASUD	Al Ashush, Dub	31.06	104	P	P	12 00 01.1	+0.6
NAZ	Nazwa, Dubai	31.13	103	i P	P	12 00 01.4	+0.2
	SNR=6.8						
NAZ	Nazwa, Dubai	31.13	103	P	P	12 00 00.6	-0.6
NAZ				P	P	12 00 00.6	-0.6
BANOM	Banah	31.18	101	i P	P	12 00 01.6	0.0
	SNR=10						
BANOM	Banah	31.18	101	P	P	12 00 01.6	0.0
	SNR=22						
BANOM				P	P	12 00 01.6	0.0
	SNR=22						
FAQ	Al Faqa, Dubai	31.20	103	i P	P	12 00 01.9	+0.1
	SNR=9.3						
FAQ	Al Faqa, Dubai	31.20	103	P	P	12 00 01.4	-0.4
MSFE	Esma-Masafi	31.34	102	P	P	12 00 02.8	-0.3
ARU	Arti	31.38	40	P	P	12 00 02.8	-0.2
	comp=Z,11nm,0.7s,baz=236,slow=9.1						
ARU				LR	LR	12 13 52.8	
	comp=Z,213nm,21.4s,baz=248,slow=38						
ARU	Arti	31.38	40	eP	P	12 00 02.1	-0.9
	comp=Z,40nm,0.9s						
ARU	Arti	31.38	40c	iP	P	12 00 02.2	-0.8
ARU						12 01 05.7	
ARU				S	S	12 05 12.7	+5.4
ARU				SS	SnSn	12 06 55.1	+1.5
ARU				pmax	pmax		
	comp=Z,61nm,1.1s						
STEI	Steigen	31.38	355	eP	P	12 00 03.0	+0.2
MDH	Madha	31.48	102	P	P	12 00 03.6	-0.6
MDH				P	P	12 00 03.6	-0.6
APA	Apatity	31.48	8	‖iP	P	12 00 02.8	-1.0
APA				i		12 01 09.0	
APA				i S	S	12 05 05.0	-3.6
APA				i SS	SS	12 07 21.0	-3.3
APA				MLR	MLR		
	comp=Z,600nm,19.0s						
UOSS	Minazif	31.58	102	eP	P	12 00 04.8	-0.4
	comp=Z,33nm,0.9s						
UOSS	Minazif	31.58	102	i P	P	12 00 04.7	-0.4
	SNR=11						
UOSS	Minazif	31.58	102	P	P	12 00 04.0	-1.1
UOSS				P	P	12 00 04.0	-1.1
HATD	Hatta, Dubai	31.58	102	i P	P	12 00 05.1	-0.1
	SNR=13						
HATD	Hatta, Dubai	31.58	102	P	P	12 00 06.0	+0.8
	SNR=7.4						
HATD				P	P	12 00 06.0	+0.8
	SNR=7.4						
ASHO	Ashiyiah	31.60	103	i P	P	12 00 05.2	-0.2
	SNR=13						
ASHO	Ashiyiah	31.60	103	P	P	12 00 05.7	+0.4
	SNR=6.4						
ASHO				P	P	12 00 05.7	+0.4
	SNR=6.4						
ALNE	Al Ain	31.68	104	i P	P	12 00 06.4	+0.3
	SNR=31						
LVZ	Lovozero	31.95	9	i P	P	12 00 08.6	+0.7
LVZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KTK1	Kautokeino	32.25	1	eP	P	12 00 10.8	+0.2
SOHO	SOHO	32.25	103	P	P	12 00 10.8	-0.2
	SNR=8.1						
SOHO				P	P	12 00 10.8	-0.2
	SNR=8.1						
SOHO				P	P	12 00 11.3	+0.3
	SNR=21						
SOHO				P	P	12 00 11.3	+0.3
	SNR=21						
SVE	Sverdlovsk	32.59	40	‖eP	P	12 00 13.2	-0.5
SVE				pmax	pmax		
	comp=Z,136nm,1.0s						
ARQ	Araqi	32.66	105	P	P	12 00 15.4	+0.7
	SNR=6.6						
ARCES	ARCESS Array B	32.83	2	P	P	12 00 15.7	+0.1
	comp=Z,11nm,0.4s,baz=183,slow=8.5,SNR=70						
ARCES				S	S	12 05 27.4	-2.3
	comp=Z,5.3nm,0.8s,baz=187,slow=18,SNR=5.2						
ARCES				LR	LR	12 14 50.9	
	comp=Z,504nm,18.1s,slow=39						
ARE0	ARCESS Array S	32.83	2	eP	P	12 00 15.6	0.0
TRO	Tromso	32.91	358	eP	P	12 00 11.7	-4.6
KEV	Kevo	33.11	3	eP	P	12 00 18.4	+0.5
	comp=Z,89nm,1.7s						
KEV	Kevo	33.11	3	eP	P	12 00 18.5	+0.5
KEV				pmax	pmax		
	comp=Z,89nm,1.7s						
HOQ	Hoqain	33.15	103	P	P	12 00 19.1	+0.2
BSY	Bisya	33.50	105	P	P	12 00 22.4	+0.4
SMDO	Samad	34.00	104	P	P	12 00 26.7	+0.3
	SNR=5.4						
DMTO	DMTO	34.77	114	P	P	12 00 32.8	-0.1
WBK	Wadi Bani Khal	34.95	103	P	P	12 00 36.0	+1.4
MHTO	MHTO	35.07	107	P	P	12 00 36.4	+0.8
	SNR=8.8						
MHTO				P	P	12 00 36.4	+0.8
	SNR=8.8						
DQM	DQM	35.35	109	P	P	12 00 37.8	-0.1
JLN	Jalan Bani Buh	35.54	104	P	P	12 00 39.7	0.0
JLN				P	P	12 00 39.7	0.0
BRVK	Borovoye	37.12	48	eP	P	12 00 52.7	0.0
	comp=Z,51nm,0.9s						
BRVK	Borovoye	37.12	48	eP	P	12 00 52.7	0.0
BRVK				pmax	pmax		
	comp=Z,51nm,0.9s						
BRVK	Borovoye	37.12	48	P	P	12 00 53.0	+0.3
	SNR=29						
KK31	Karatay Array	37.37	65	i P	P	12 00 54.7	-0.3
KK31				pmax	pmax		
	comp=Z,22nm,0.5s						
KKAR	Karatay Array	37.37	65	eP	P	12 00 54.6	-0.4
	comp=Z,40nm,0.6s						
KKAR	Karatay Array	37.37	65	eP	P	12 00 54.6	-0.4
KKAR				pmax	pmax		
	comp=Z,40nm,0.6s						
MBAR	Mbarara	38.13	166	i P	P	12 01 00.8	-1.0
DBIC	Dimbokro	38.68	226	P	P	12 01 05.9	-0.3
	comp=Z,8.8nm,0.6s,baz=17,slow=8.5,SNR=15						
DBIC				LR	LR	12 17 38.6	
	comp=Z,210nm,20.7s,baz=14,slow=37						
TIC	Toumodi	38.79	226	eP	P	12 01 07.0	-0.2
KIC	Kosan Boka	38.86	225	eP	P	12 01 07.1	-0.7
	comp=Z,85nm,1.2s						
LIC	Lamto	39.14	225	eP	P	12 01 09.3	-0.8
	comp=Z,95nm,0.9s						
EKS2	Erkin-Say	39.81	65	P	P	12 01 16.0	+0.4
	SNR=48						
AML	Almayashu	39.84	66	P	P	12 01 16.7	+0.5
	SNR=13						
AAK	Ala-Archa	40.33	65	P	P	12 01 20.7	+0.7
	SNR=26						
AAK	Ala-Archa	40.33	65	eP	P	12 01 20.7	+0.7
	comp=Z,50nm,1.0s						
AAK	Ala-Archa	40.33	65	i P	P	12 01 20.2	+0.2
	SNR=7.7						
AAK	Ala-Archa	40.33	65	eP	P	12 01 20.7	+0.7
AAK				pmax	pmax		
	comp=Z,50nm,1.0s						
AAK	Ala-Archa	40.33	65	P	P	12 01 20.4	+0.4
	SNR=21						
AAK				P	P	12 01 20.4	+0.4
	SNR=21						
KMBO	Kilima Mbogo	40.37	156	P	P	12 01 21.9	+1.4
	comp=Z,1.3nm,0.3s,baz=355,slow=7.7,SNR=4.0						
KMBO				LR	LR	12 19 37.7	
	comp=Z,238nm,18.7s,baz=290,slow=38						
KMBO	Kilima Mbogo	40.37	156	i P	P	12 01 24.8	+4.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
UCH	Uchtor	40.42	66	P	P	12 01 21.2	+0.2
	SNR=24						
CHMS	Chumysh	40.46	64	P	P	12 01 20.9	0.0
	SNR=18						
KBK	Karagaybulak	40.66	65	P	P	12 01 23.3	+0.5
	SNR=24						
KZA	Kyzart	40.98	66	P	P	12 01 26.5	+0.8
	SNR=17						
TKM2	Tokmak 2	41.08	64	P	P	12 01 26.0	-0.3
	SNR=8.7						
TKM2	Tokmak 2	41.08	64	P	P	12 01 25.4	-0.8
TKM2				pmax	pmax		
	comp=Z,22nm,1.1s						
NIL	Nilore	41.67	79	eP	P	12 01 31.6	+0.6
	comp=Z,138nm,1.3s						
NIL	Nilore	41.67	79	eP	P	12 01 31.6	+0.6
NIL				pmax	pmax		
	comp=Z,138nm,1.3s						
KSH	Kashi	42.08	69	P	P	12 01 33.1	-1.2
KSH				sP	pP	12 01 46.8	+1.0
KSH				PP	PP	12 03 14.1	+2.0
KSH				S	S	12 07 48.3	-2.5
KSH				pmax	pmax		
	comp=Z,91nm,1.1s						
KSH				pmax	pmax		
	comp=Z,340nm,4.2s						
KSH				LR	LR		
	comp=Z,2μm,9.8s						
KSH				LR	LR		
	comp=Z,810nm,8.9s						
KSH				LR	LR		
	comp=Z,390nm,14.2s						
KURK	Kurchatov	42.23	52	eP	P	12 01 34.8	-0.4
	comp=Z,42nm,0.9s						
KURK	Kurchatov	42.23	52	eP	P	12 01 34.8	-0.4
KURK				pmax	pmax		
	comp=Z,42nm,0.9s						
KURK	Kurchatov	42.23	52	P	P	12 01 34.9	-0.3
	SNR=20						
KURK				P	P	12 01 34.9	-0.3
	SNR=20						
PDGK	Podgornoye	43.80	63	P	P	12 01 57.4	+9.1
PDGK				pmax	pmax		
	comp=Z,18nm,0.9s						
DAG	Danmarks Havn	43.85	348	‖iP	P	12 01 48.6	+0.6
DAG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DAG	Danmarks Havn	43.85	348	‖iP	P	12 01 48.6	+0.6
	comp=Z,4.0nm,0.9s						
NVS	Novosibirsk	44.82	46	‖iP	P	12 01 56.6	+0.6
NVS				i		12 02 08.0	
NVS				eS	S	12 08 27.1	-3.1
NVS				pmax	pmax		
	comp=Z,42nm,0.5s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,23nm,0.8s						
NVS				smax	smax		
	comp=N,33nm,1.2s						
NVS				smax	smax		
	comp=E,7.0nm,0.7s						
MAKZ	Makanchi	44.88	58	eP	P	12 01 56.6	-0.1
	comp=E,18nm,1.2s						
MAKZ	Makanchi	44.88	58	eP	P	12 01 56.6	-0.1
MAKZ				pmax	pmax		
	comp=Z,18nm,1.2s						
MK31	Makanchi Array	45.10	58	P	P	12 01 57.3	-1.1
MK31				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MK32	Makanchi Array	45.10	58	eScP	ScP	12 07 26.7	-0.9
MKAR	Makanchi Array	45.10	58	P	P	12 01 57.8	-0.7
	comp=Z,12nm,0.6s,baz=271,slow=7.6,SNR=116						
MKAR				ScP	ScP	12 07 26.7	-0.9
	comp=Z,2.9nm,0.6s,baz=270,slow=4.0,SNR=6.5						
MKAR				LR	LR	12 25 04.6	
	comp=Z,146nm,18.4s,baz=264,slow=42						
ZALV	Zalesovo Beam	45.80	47	P	P	12 02 03.1	-0.7
	comp=Z,25nm,0.3s,baz=265,slow=9.5,SNR=80						
ZALV				S	S	12 08 40.2	-4.2
	comp=Z,3.1nm,0.7s,baz=269,slow=13,SNR=5.5						
SUMG	Summit	46.47	339	eP	P	12 02 10.5	+1.2
	comp=Z,18nm,1.1s						
SUMG	Summit	46.47	339	eP	P	12 02 10.5	+1.2
SUMG				pmax	pmax		
	comp=Z,18nm,1.1s						
SUMG	Summit	46.47	339	i P	P	12 02 11.0	+1.7
SUMG				e		12 02 23.6	
SUMG				i		12 02 48.7	
DDI	Dehra Dun	46.68	81	eP	P	12 02 11.1	0.0
NRIK	Noril'sk	47.53	26	P	P	12 02 17.6	+0.5
	comp=Z,3.8nm,0.6s,baz=255,slow=6.7,SNR=5.9						
NRIK				LR	LR	12 24 23.9	
	comp=Z,285nm,20.1s,baz=258,slow=39						
DGZ	Jazzator, Alta	47.97	53c	i P	P	12 02 20.7	-0.3
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
POO	Poona	48.88	97	eP	P	12 02 28.6	+0.2
BHPL	Bhopal	49.33	90	eP	P	12 02 31.4	-0.3
BHPL				IAmb	IAmb	12 02 33.1	
	comp=Z,18nm,0.5s						
WMQ	Urumqi	49.48	60	eP	P	12 02 32.9	+0.3
WMQ				pP	pP	12 02 39.1	-5.5
WMQ				sP	sP	12 02 41.6	-8.0
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.3s						
WMQ				LR	LR		
	comp=Z,310nm,19.5s						
WMQ				LR	LR		
	comp=Z,430nm,17.9s						
WMQ				LR	LR		
	comp=Z,590nm,21.1s						
GOA	Goa	50.56	101	eP	P	12 02 42.1	+1.1
PYUN	Piuthan	51.53	81	eP	P	12 02 48.4	-0.1
	comp=Z,134nm,0.6s						
NGP	Nagpur	51.67	91	eP	P	12 02 48.8	-0.5
DANN	Dangsing	52.03	80	eP	P	12 02 52.2	-0.1
	comp=Z,338nm,0.8s						
KOLN	Koldanda	52.16	81	eP	P	12 02 52.7	-0.4
	comp=Z,174nm,1.1s						
LSZ	Lusaka	52.16	172	eP	P	12 02 54.4	+1.4
	comp=Z,9.5nm,1.0s						
LSZ	Lusaka	52.16	172	eP	P	12 02 54.4	+1.4
LSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DMN	Daman	53.42	81	eP	P	12 03 02.2	-0.3
	comp=Z,109nm,0.7s						
KKN	Kakani	53.48	80	eP	P	12 03 02.2	-0.7
	comp=Z,58nm,0.6s						
PKIN	Phulchoki	53.67	80	eP	P	12 03 03.7	-0.7
	comp=Z,74nm,1.0s						
PKI	Pulchoki	53.68	80	eP	P	12 03 03.8	-0.7
	comp=Z,88nm,0.9s						
GUN	Gumba	53.90	80	eP	P	12 03 05.6	-0.5
	comp=Z,124nm,0.9s						
JIRN	Jiri	54.26	80	eP	P	12 03 08.3	-0.5
	comp=Z,112nm,0.9s						
TULEG	Thule	54.70	343	eP	P	12 03 11.6	+0.7
	comp=Z,27nm,1.2s						
RAMN	Ramite	54.90	81	eP	P	12 03 12.4	-0.9
	comp=Z,152nm,0.9s						
BOK	Bokaro	55.83	84	eP	P	12 03 18.8	-1.0
MOY	Mondy	55.85	48	eP	P	12 03 19.8	+0.2
MOY				pmax	pmax		
	comp=Z,13nm,1.4s						
GTK	Tadong	56.31	79	eP	P	12 03 23.0	-0.3
TLY	Talaya	57.41	47	eP	P	12 03 30.7	+0.1
	comp=Z,13nm,1.1s						
TLY	Talaya	57.41	47	eP	P	12 03 31.4	+0.8
TLY				e		12 05 34.8	
TLY				pmax	pmax		
	comp=Z,42nm,1.5s						
TLY				MLR	MLR		
	comp=Z,694nm,28.0s						
TLY	Talaya	57.41	47	P	P	12 03 31.1	+0.5
	SNR=5.2						
ZAK	Zakamensk	57.64	49	eP	P	12 03 31.3	-1.0
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DHUB	DHUBRI	58.02	80	eP	P	12 03 34.3	-0.9
TAWA	Tawang	58.75	77	eP	P	12 03 40.8	0.0
GUWA	GUWAHATI	59.28	79	eP	P	12 03 42.8	-1.1
GUWA				IAmb	IAmb	12 03 44.2	
	comp=Z,29nm,1.0s						
GTA	Gaotai	59.51	62	eP	P	12 03 44.2	-1.4
GTA				pP	pP	12 03 48.6	-9.1
GTA				sP	sP	12 03 51.8	-11
GTA				pmax	pmax		
	comp=Z,16nm,0.8s						
GTA				pmax	pmax		
	comp=Z,73nm,6.5s						
GTA				LR	LR		
	comp=Z,130nm,15.1s						
GTA				LR	LR		
	comp=Z,99nm,15.5s						
GTA				LR	LR		
	comp=Z,180nm,20.3s						
SHL	Shillong	59.73	79	eP	P	12 03 46.1	-1.3
TEZP	TEZPUR	59.95	78	eP	P	12 03 46.9	-1.7
TEZP				IAmb	IAmb	12 03 48.4	
	comp=Z,9.0nm,0.4s						
SCHQ	Schefferville	60.19	318	P	P	12 03 50.5	+0.6
	comp=Z,13nm,0.8s,baz=67,slow=11,SNR=5.9						
ZIRO	ZIRO	60.33	76	eP	P	12 03 50.3	-1.1
SONM	Songino Array	60.48	50	P	P	12 03 51.8	-0.2
	comp=Z,7.7nm,0.8s,baz=283,slow=8.4,SNR=10						
SONM				LR	LR	12 33 19.6	
	comp=Z,200nm,19.2s,baz=272,slow=39						
TIXI	Tiksi	60.54	20	eP	P	12 03 52.6	+0.8
	comp=Z,4.9nm,0.8s						
TIXI	Tiksi	60.54	20c	eP	P	12 03 52.7	+0.8
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GBN	Guysborough	60.75	307	eP	P	12 03 54.9	+1.1
	comp=Z,40nm,1.0s						
BOD	Bodaibo	60.77	38	‖iP	P	12 03 52.9	-0.8
BOD				eS	S	12 12 03.0	-4.6
BOD				pmax	pmax		
	comp=Z,21nm,0.9s						
SILR	SILCHAR	60.84	80	eP	P	12 03 55.1	+0.4
ULN	Ulaanbaatar	60.88	50	eP	P	12 03 54.7	-0.1
	comp=Z,9.2nm,0.6s						
ULN	Ulaanbaatar	60.88	50	eP	P	12 03 54.7	-0.1
ULN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DIBR	DIBRUGARH	61.19	76	ex	P	12 03 53.4	-3.7
KOHI	KOHIMA	61.41	78	eP	P	12 03 58.3	-0.4
KOHI				IAmb	IAmb	12 03 59.8	
	comp=Z,28nm,1.0s						
MOKO	MOKOCHONG	61.43	77	eP	P	12 03 58.5	-0.3
LKP	Lekhapani	61.98	76	eP	P	12 04 02.5	+0.2
SAIH	SAIHA	62.14	82	eP	P	12 04 04.1	+0.4
HAL	Halifax	62.41	307	eP	P	12 04 06.2	+1.2
	comp=Z,49nm,0.8s						
HAL	Halifax	62.41	307	eP	P	12 04 06.2	+1.2
HAL				pmax	pmax		
	comp=Z,49nm,0.8s						
LZH	Lanzhou	63.84	63	eP	P	12 04 15.3	+0.5
LZH				pP	pP	12 04 20.3	-6.7
LZH				sP	sP	12 04 23.3	-8.5
LZH				PP	PP	12 06 37.4	+2.1
LZH				pmax	pmax		
	comp=Z,34nm,1.0s						
LZH				pmax	pmax		
	comp=Z,160nm,4.2s						
LZH				LR	LR		
	comp=Z,300nm,14.1s						
LZH				LR	LR		
	comp=Z,540nm,14.6s						
LZH				LR	LR		
	comp=Z,630nm,15.2s						
PQI	Presque Isle	64.30	310	eP	P	12 04 18.2	+0.8
	comp=Z,16nm,0.7s						
BOSA	Boshof	65.17	177	P	P	12 04 24.1	+0.8
	comp=Z,8.1nm,0.4s,baz=354,slow=6.8,SNR=37						
BOSA				LR	LR	12 36 21.1	
	comp=Z,224nm,18.3s,baz=346,slow=39						
PKME	Peaks-Kenny Pk	65.74	309	eP	P	12 04 28.3	+1.5
	comp=Z,40nm,1.3s						
PKME	Peaks-Kenny Pk	65.74	309	P	P	12 04 28.3	+1.5
	baz=62,SNR=5.9						
YAK	Yakutsk	65.75	29	i P	P	12 04 24.7	-1.9
YAK				e*PP	pP	12 04 37.9	-1.0
YAK				e		12 04 56.5	
YAK				e		12 06 48.3	
YAK				eS	S	12 13 07.9	-1.6
YAK				e		12 14 14.2	
YAK				eSS	SS	12 17 24.3	+0.7
YAK				eSSS	SSS	12 20 28.3	
BTO	Baotou	66.00	56	eP	P	12 04 23.5	-5.2
CD2	Chengdu	66.26	68	P	P	12 04 30.3	-0.2
CD2				pmax	pmax		
	comp=Z,70nm,0.6s						
WVL	Waterville	66.30	309	eP	P	12 04 31.1	+0.6
	comp=Z,12nm,0.9s						
CHGQ	Chibougamau	66.50	316	P	P	12 04 32.9	+1.3
	baz=60,SNR=8.4						
HHC	Hu-ho-hao-te	66.91	56	eP	P	12 04 34.6	+0.1
HHC				pmax	pmax		
	comp=Z,27nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.3s						
HHC				LR	LR		
	comp=Z,190nm,12.3s						
HHC				LR	LR		
	comp=Z,190nm,12.3s						
HHC				LR	LR		
	comp=Z,960nm,11.4s						
HIA	Hailar	67.72	45	i P	P	12 04 38.5	-1.0
HIA				pmax	pmax		
	comp=Z,91nm,1.1s						
LBNH	Lisbon	67.88	309	eP	P	12 04 40.7	+0.2
	comp=Z,30nm,1.1s						
LBNH	Lisbon	67.88	309	eP	P	12 04 40.7	+0.2
LBNH				pmax	pmax		
	comp=Z,30nm,1.1s						
LBNH	Lisbon	67.88	309	P	P	12 04 42.4	+1.9
	baz=60,SNR=6.7						
MATQ	Matagami	68.40	317	P	P	12 04 45.0	+1.4
	baz=58,SNR=7.9						
LSQQ	Lebel-sur-Quev	68.40	316	P	P	12 04 45.0	+1.4
	baz=58						
M65A	Busby, Falmout	68.42	306	P	P	12 04 45.6	+1.8
	baz=60						
KMI	Kunming	68.43	74	P	P	12 04 44.1	-0.4
KMI				pmax	pmax		

comp=Z,20nm,1.0s
KMI LR LR
comp=Z,140nm,34.8s
WES Weston 68.43 307 *e*P **P 12 04 45.6 +1.6**
comp=Z,34nm,0.8s
XAN Xi'an 68.47 63 P **P 12 04 44.0 -0.4**
XAN pmax pmax
comp=Z,26nm,1.3s
XAN pmax pmax
comp=Z,74nm,4.7s
XAN Xi'an 68.47 63 *e*P **P 12 04 44.2 -0.2**
comp=Z,27nm,1.0s
XAN Xi'an 68.47 63 *e*P **P 12 04 44.2 -0.2**
XAN pmax pmax
comp=Z,27nm,1.0s
HRV Adam Dziewonsk 68.52 308 *e*P **P 12 04 46.1 +1.6**
comp=Z,20nm,0.9s
HRV Adam Dziewonsk 68.52 308 *e*P **P 12 04 46.1 +1.6**
HRV pmax pmax
comp=Z,20nm,0.9s
HRV Adam Dziewonsk 68.52 308 P **P 12 04 46.1 +1.6**
baz=59
FRNY Flat Rock 68.60 310 *e*P **P 12 04 45.1 +0.1**
comp=Z,11nm,0.7s
CHTO Chiang Mai 68.81 82 *e*P **P 12 04 46.2 -0.4**
comp=Z,17nm,1.1s
CHTO Chiang Mai 68.81 82 *e*P **P 12 04 46.2 -0.4**
CHTO pmax pmax
comp=Z,17nm,1.1s
CMAR Chiang Mai Arr 69.00 82 P **P 12 04 47.5 -0.4**
comp=Z,5.8nm,0.8s,baz=302,slow=7.8,SNR=30
CMAR LR LR 12 41 11.1
comp=Z,89nm,18.4s,baz=303,slow=41
VLDQ Val d'Or 69.16 315 *e*P **P 12 04 50.3 +1.9**
comp=Z,27nm,0.8s
D54A Lac Fusel, La 69.22 314 P **P 12 04 50.2 +1.4**
baz=58,SNR=11
LONY Lake Ozonia 69.32 311 *e*P **P 12 04 50.6 +1.1**
comp=Z,16nm,0.9s
LONY Lake Ozonia 69.32 311 P **P 12 04 50.8 +1.4**
baz=58,SNR=6.7
ORIO Orleans, Innes 69.44 312 P **P 12 04 52.0 +1.9**
baz=58
F55A Otter Lake 69.74 312 P **P 12 04 53.6 +1.6**
baz=58
D53A Lac Vacive, Po 69.86 314 *e*P **P 12 04 54.2 +1.5**
comp=Z,36nm,0.9s
D53A Lac Vacive, Po 69.86 314 P **P 12 04 54.6 +1.9**
baz=57,SNR=15
E54A Lac Daplat, Po 69.91 313 P **P 12 04 54.5 +1.5**
baz=58,SNR=7.7
E53A Dumoine, Ponti 70.22 313 P **P 12 04 56.7 +1.7**
baz=57,SNR=9.6
G55A Calabogie 70.27 312 P **P 12 04 57.0 +1.8**
baz=57
D52A ZEK Kipawa Sen 70.32 314 P **P 12 04 57.0 +1.4**
baz=57,SNR=6.2
H56A Elgin 70.35 311 P **P 12 04 57.8 +2.0**
baz=57
BJI Beijing 70.35 54 *e*P **P 12 04 55.4 -0.4**
BJI S **S 12 14 06.0 +0.9**
BJI pmax pmax
comp=Z,4.0nm,1.1s
BJI LR LR
comp=Z,67nm,14.1s
BJI LR LR
comp=Z,100nm,19.6s
BJI LR LR
comp=Z,270nm,49.3s
PEMO Pembroke 70.35 313 P **P 12 04 57.4 +1.7**
baz=57,SNR=8.7
M61A Granite Spring 70.55 307 P **P 12 04 58.5 +1.4**
baz=58
PLVO Plevna 70.59 312 P **P 12 04 59.3 +2.0**
baz=57,SNR=13
ALGO Algonquin Park 70.67 313 P **P 12 04 59.3 +1.6**
baz=57,SNR=11
GYA Guiyang 70.74 71⇑ *i*P **P 12 04 57.6 -1.0**
GYA S **S 12 14 07.9 -2.4**
GYA SKS **SKSac 12 14 55.6 -2.1**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,120nm,7.3s
GYA LR LR
comp=Z,260nm,20.9s
GYA LR LR
comp=Z,210nm,21.0s
GYA LR LR
comp=Z,240nm,20.8s
PAL Palisades 70.81 307 P **P 12 05 00.2 +1.6**
baz=58
ENH Enshi 70.83 66 *e*P **P 12 04 58.3 -0.7**
comp=Z,39nm,1.1s
E52A Mattawa 70.84 314 P **P 12 05 00.4 +1.6**
baz=57,SNR=11
H55A Tweed 70.92 312 P **P 12 05 01.3 +2.0**
baz=57,SNR=5.4
D50A G1974 Best Tow 71.03 315 P **P 12 05 01.6 +1.7**
baz=56,SNR=13
BANO Bancroft 71.11 312 P **P 12 05 02.4 +1.9**
baz=57
PECO Prince Edward 71.15 311 P **P 12 05 02.4 +1.8**
baz=57
E51A G1948 Merrick 71.19 314 P **P 12 05 02.6 +1.8**
baz=56,SNR=7.8
DELO Deloro Mine 71.20 312 *e*P **P 12 05 03.1 +2.2**
comp=Z,44nm,1.5s
DELO Deloro Mine 71.20 312 P **P 12 05 02.7 +1.7**
baz=57
I55A Frankford 71.41 312 P **P 12 05 04.1 +1.9**
baz=56
G53A Haliburton 71.47 313 P **P 12 05 04.3 +1.8**
baz=56
BINY Binghamton 71.47 309 *e*P **P 12 05 03.8 +1.1**
comp=Z,29nm,0.9s
BINY Binghamton 71.47 309 P **P 12 05 04.6 +1.9**
baz=57,SNR=6.9
F52A Sundridge 71.50 314 P **P 12 05 04.7 +1.9**
baz=56,SNR=8.9
KSPA Keystone Colle 71.69 308 *e*P **P 12 05 05.1 +1.1**
comp=Z,21nm,0.7s
O61A Allentown 71.71 307 P **P 12 05 05.9 +1.9**
baz=57
BUKO Buck Lake 71.74 313 P **P 12 05 05.8 +1.6**
baz=56,SNR=5.0
D49A Beulah Townshi 71.83 316 P **P 12 05 06.3 +1.6**
baz=55,SNR=11
E50A Wahnapitae 71.96 315 P **P 12 05 07.5 +2.0**
baz=55,SNR=10
WLVO Wesleyville 72.00 312 P **P 12 05 07.6 +1.8**
baz=56
J55A Hilton 72.01 311 P **P 12 05 07.4 +1.6**
baz=56
N59A State Game Lan 72.04 308 *e*P **P 12 05 07.7 +1.6**
comp=Z,30nm,0.9s
N59A State Game Lan 72.04 308 P **P 12 05 08.2 +2.1**
baz=57,SNR=10
BILL Bilibino 72.09 13 *ce*P **P 12 05 05.7 -0.2**
BILL pmax pmax
comp=Z,7.0nm,1.3s
P61A Hammonton 72.09 306 P **P 12 05 08.3 +1.9**
baz=57
O60A Telford 72.14 307 P **P 12 05 08.6 +2.0**
baz=57,SNR=6.3
DRWO Darlington Wes 72.23 312 P **P 12 05 08.6 +1.6**
baz=56
KLBO Killbear Provi 72.26 314 P **P 12 05 09.2 +1.9**
baz=55,SNR=8.7
PSUB Penn St. - Bra 72.38 307 *e*P **P 12 05 09.1 +1.1**
comp=Z,22nm,1.0s
MEDO Medina 72.46 311 P **P 12 05 10.1 +1.6**
baz=56
K55A Perry 72.47 310 P **P 12 05 10.4 +1.8**
baz=56,SNR=6.6
H52A Wyevale 72.48 313 P **P 12 05 10.0 +1.4**
baz=55
J54A Appleton 72.51 311 P **P 12 05 10.6 +1.8**
baz=56
P60A Greenville 72.56 307 P **P 12 05 10.4 +1.3**
baz=56
O59A Robesonia 72.64 308 P **P 12 05 11.3 +1.6**
baz=56,SNR=6.7
E48A Lockeyer 72.74 315 P **P 12 05 12.0 +1.9**
baz=54,SNR=18
K54A Basiliko Farm, 72.91 311 P **P 12 05 13.1 +1.8**
baz=56
MVL Millersville 72.91 307 *e*P **P 12 05 12.8 +1.6**
comp=Z,25nm,1.3s
D47A Chapleau 72.93 316 P **P 12 05 13.0 +1.8**
baz=54,SNR=15
L55A Hinsdale 73.00 310 P **P 12 05 13.8 +2.0**
baz=56,SNR=6.4
SEY Seymchan 73.00 21 *ce*P **P 12 05 11.4 0.0**
F49A Sandfield 73.08 315 P **P 12 05 14.3 +2.2**
baz=54,SNR=14
TOBO Tobermory, Bru 73.10 314 P **P 12 05 14.4 +2.1**
baz=55
ACTO Acton 73.17 312 P **P 12 05 13.9 +1.1**
baz=55
P59A Jarrettsville 73.18 307 P **P 12 05 14.3 +1.4**
baz=56
R61A Willards 73.19 305 P **P 12 05 14.6 +1.7**
baz=56
M56A Emporium 73.23 309 P **P 12 05 15.1 +1.9**
baz=56,SNR=14
N57A Milroy 73.25 309 P **P 12 05 15.2 +1.9**
baz=56,SNR=12
BMRO Meriville Lake 73.28 313 P **P 12 05 15.2 +1.8**
baz=55
TYNO Tyneside 73.35 312 P **P 12 05 15.1 +1.3**
baz=55
F48A Evansville 73.37 315 P **P 12 05 15.8 +1.9**
baz=54,SNR=6.6
E47A Iron Bridge 73.38 316 P **P 12 05 15.8 +1.9**
baz=54,SNR=15
L54A Sinclairville 73.51 311 P **P 12 05 15.9 +1.1**
baz=55
BWLO Walkerton 73.51 313 P **P 12 05 16.9 +2.2**
baz=54,SNR=6.6
SSPA Standing Stone 73.53 309 *e*P **P 12 05 16.1 +1.1**
comp=Z,32nm,1.0s
SSPA Standing Stone 73.53 309 P **P 12 05 16.7 +1.8**
baz=56
D46A Sault St. Mari 73.54 317 P **P 12 05 17.0 +2.1**
baz=54,SNR=17
SDMD Soldier's Deli 73.56 307 *e*P **P 12 05 15.7 +0.6**
comp=Z,14nm,1.0s
INK Inuvik 73.58 351 P **P 12 05 14.8 +0.2**
comp=Z,3.0nm,0.8s,baz=3.8,slow=6.0,SNR=15
M55A Ridgway 73.60 310 P **P 12 05 17.3 +1.9**
baz=55,SNR=12
O57A Amberson 73.61 308 P **P 12 05 17.2 +1.8**
baz=56,SNR=7.0
BRCO Bruce Peninsul 73.62 313 P **P 12 05 17.3 +1.9**
baz=54
N56A West Decatur 73.63 309 P **P 12 05 17.4 +1.9**
baz=55
I51A Listowel 73.63 313 P **P 12 05 17.5 +2.0**
baz=54,SNR=6.2
J52A Paris 73.63 312 P **P 12 05 17.0 +1.6**
baz=55
BASO Ashfield 73.88 313 P **P 12 05 19.0 +2.1**
baz=54
ERPA Erie 73.98 311 P **P 12 05 19.3 +1.7**
baz=55
E46A Sault Ste Mari 74.00 316 *e*P **P 12 05 18.4 +0.9**
comp=Z,40nm,0.9s
E46A Sault Ste Mari 74.00 316 P **P 12 05 19.4 +1.9**
baz=53,SNR=11
CN2 Changchun 74.02 47 *e*P P 12 05 13.0 -4.7
CN2 *e*PP **PP 12 07 59.5 -3.3**
CN2 *e*S **SKiKP 12 14 42.5 +0.2**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,80nm,18.0s
CN2 LR LR
comp=Z,130nm,18.0s
CN2 LR LR
comp=Z,190nm,19.0s
N55A Marion Center 74.13 309 *e*P **P 12 05 19.9 +1.4**
comp=Z,47nm,1.0s
N55A Marion Center 74.13 309 P **P 12 05 20.5 +2.0**
baz=55,SNR=11
M54A Oil Creek Stat 74.14 310 *e*P **P 12 05 19.3 +0.9**
comp=Z,48nm,1.3s
M54A Oil Creek Stat 74.14 310 P **P 12 05 20.4 +1.9**
baz=55,SNR=7.5
O56A Blue Knob Stat 74.17 309 *e*P **P 12 05 20.1 +1.3**
comp=Z,20nm,0.8s
O56A Blue Knob Stat 74.17 309 P **P 12 05 20.6 +1.9**
baz=55,SNR=6.9
PANO Nakornpanom 74.22 80 P **P 12 05 19.2 -0.1**
comp=Z,0.4nm,1.1s
KLR Kul'dur 74.22 40 *c i*P **P 12 05 18.6 -0.2**
KLR pmax pmax
comp=Z,12nm,1.0s
L53A Girard 74.24 311 P **P 12 05 20.8 +1.7**
baz=54
P57A Homestead Farm 74.26 308 P **P 12 05 21.1 +1.9**
baz=55,SNR=6.6
S60A Water View 74.40 305 P **P 12 05 21.8 +1.8**
baz=55
R59A King George, V 74.42 306 P **P 12 05 21.6 +1.5**
baz=55
H48A Harrisville 74.44 314 P **P 12 05 21.8 +1.6**
baz=53
G47A Hillman 74.46 315 P **P 12 05 22.2 +2.0**
baz=53,SNR=8.4
E45A Wooded Hills, 74.49 317 P **P 12 05 22.2 +1.8**
baz=53
K51A Iona Station 74.55 312 P **P 12 05 22.3 +1.5**
baz=54
CBN Corbin Frederi 74.58 306 P **P 12 05 22.6 +1.6**
baz=55
I49A Point Hope 74.60 314 P **P 12 05 22.8 +1.7**
baz=54
N54A Moraine State 74.65 310 *e*P **P 12 05 22.5 +1.0**
comp=Z,34nm,1.0s
N54A Moraine State 74.65 310 P **P 12 05 23.3 +1.9**
baz=54,SNR=6.3
TOLK Toolik Lake Re 74.66 357 P **P 12 05 22.5 +1.4**
baz=7.1
O55A Ligonier 74.66 309 P **P 12 05 23.4 +1.8**
baz=55,SNR=9.5
E44A Grand Marais A 74.74 317 P **P 12 05 23.8 +1.9**
baz=52
Q57A Strasburg 74.77 307 P **P 12 05 23.6 +1.4**
baz=55
P56A Dayton Farm, R 74.78 308 P **P 12 05 23.8 +1.6**
baz=55,SNR=7.8
M53A Wl Miller and 74.79 310 P **P 12 05 23.8 +1.5**
baz=54
R58A Rapidan 74.93 307 P **P 12 05 24.2 +1.1**
baz=55
I48A Sherman Twp 74.96 314 P **P 12 05 24.9 +1.7**
baz=53
YKA Yellowknife Ar 75.03 341 P **P 12 05 23.9 +0.7**
comp=Z,1.7nm,0.6s,baz=35,slow=5.8,SNR=20
YKA LR LR 12 40 41.9
comp=Z,8.3nm,18.2s,baz=23,slow=38
R58B Mineral 75.05 306 P **P 12 05 25.2 +1.4**
baz=55
MA2 Magadan 75.09 24 *e*P **P 12 05 24.4 +0.7**
comp=Z,40nm,0.8s
MA2 Magadan 75.09 24 *ce*P **P 12 05 24.7 +1.1**
MA2 pmax pmax
comp=Z,30nm,0.8s
J49A Marlette 75.13 313 P **P 12 05 25.9 +1.7**
baz=53,SNR=5.2
M52A Chesterland 75.15 311 P **P 12 05 26.0 +1.7**
baz=54
K50A Casco 75.18 312 *e*P **P 12 05 25.5 +1.1**
comp=Z,49nm,0.8s
K50A Casco 75.18 312 P **P 12 05 26.1 +1.6**
baz=53
Q56A Snyder Ridge, 75.26 308 P **P 12 05 26.7 +1.6**
baz=54,SNR=7.7
N53A Lisbon 75.26 310 P **P 12 05 26.6 +1.6**
baz=54,SNR=5.4
R57A Stanardsville 75.27 307 P **P 12 05 26.6 +1.5**
baz=55
MCWV Mont Chateau 75.32 309 *e*P **P 12 05 25.5 +0.2**
comp=Z,25nm,0.9s
MCWV Mont Chateau 75.32 309 P **P 12 05 27.2 +1.9**
baz=54,SNR=9.4
O54A Avella 75.35 309 P **P 12 05 27.1 +1.6**
baz=54
S58A Poland Farm, P 75.36 306 P **P 12 05 27.1 +1.5**
baz=55,SNR=8.1
P55A Reedsville 75.39 308 P **P 12 05 27.4 +1.6**
baz=54,SNR=6.5
T59A Double "B" Far 75.40 305 *e*P **P 12 05 26.1 +0.3**
comp=Z,19nm,1.0s
T59A Double "B" Far 75.40 305 P **P 12 05 27.2 +1.3**
baz=55,SNR=6.4
F44A Big Bay de Noc 75.41 317 P **P 12 05 27.4 +1.6**
baz=52,SNR=6.5
E43A Lone Tree Farm 75.47 317 *e*P **P 12 05 27.0 +0.9**
comp=Z,18nm,1.0s
E43A Lone Tree Farm 75.47 317 P **P 12 05 27.5 +1.4**
baz=52
I47A Gladwin 75.53 314 P **P 12 05 28.2 +1.8**
baz=53
G45A Suttons Bay 75.56 316 P **P 12 05 28.1 +1.5**
baz=52
GRNR Gornyy 75.56 37 *e*P **P 12 05 28.0 +1.5**
GRNR pmax pmax
comp=Z,25nm,1.0s
H46A Fife Lake 75.61 315 P **P 12 05 28.4 +1.5**
baz=52
C40A Isle Royale Na 75.65 320 P **P 12 05 28.4 +1.3**
baz=51
L50A Kingsville 75.72 312 P **P 12 05 29.1 +1.5**
baz=53
P54A Burton 75.75 309 P **P 12 05 29.6 +1.8**
baz=54
M51A Elyria 75.77 311 P **P 12 05 29.2 +1.3**
baz=53
N52A McGinn's Farm, 75.78 310 P **P 12 05 29.3 +1.4**
baz=54
PLIO Pelee Island, 75.79 312 P **P 12 05 29.4 +1.4**
baz=53
EPYK Eagle Plains 75.82 351 P **P 12 05 28.5 +0.8**
baz=18
O53A New Philadelph 75.82 310 P **P 12 05 29.9 +1.7**
baz=54
Q55A Buckhannon 75.86 308 P **P 12 05 29.9 +1.5**
baz=54
S57A Dark Hollow, R 75.86 307 P **P 12 05 29.5 +1.1**
baz=54
D41A Chassel 75.89 319 *e*pP pP 12 05 42.0 +1.0
D41A Chassel 75.89 319 P **P 12 05 30.1 +1.7**
baz=51,SNR=7.3
F43A Flat Rock, Esc 75.91 317 P **P 12 05 30.2 +1.7**
baz=51
U59A Littleton 75.92 305 P **P 12 05 30.5 +1.7**
baz=54,SNR=5.1
E42A Champion 75.94 318 P **P 12 05 30.1 +1.3**
baz=51,SNR=6.7
K48A Perry 76.04 313 P **P 12 05 30.6 +1.2**
baz=52
T58A Grand View Acr 76.06 306 P **P 12 05 31.0 +1.4**
baz=54
I46A Reed City 76.11 315 P **P 12 05 31.4 +1.6**
baz=52
N51A Ashland 76.14 311 P **P 12 05 31.4 +1.4**
baz=53
J47A Sunmer 76.19 314 P **P 12 05 31.6 +1.4**
baz=52
M50A Fremont 76.25 312 P **P 12 05 31.7 +1.1**
baz=53
L49A Milan 76.25 312 P **P 12 05 31.9 +1.3**
baz=53
O52A Adamsville 76.29 310 P **P 12 05 32.4 +1.6**
baz=53
S56A Natural Bridge 76.30 307 P **P 12 05 32.5 +1.5**
baz=54
Q54A Coxs Mills 76.34 309 P **P 12 05 32.6 +1.4**
baz=54,SNR=6.1
P53A Whipple 76.39 309 *e*P **P 12 05 33.1 +1.7**
comp=Z,40nm,1.1s
P53A Whipple 76.39 309 P **P 12 05 33.2 +1.7**
baz=53,SNR=6.1
U58A Oxford 76.39 305 P **P 12 05 33.0 +1.5**
baz=54,SNR=5.8
E41A Kenton 76.47 318 P **P 12 05 33.0 +1.2**
baz=50,SNR=9.6
T57A Hurt 76.50 306 P **P 12 05 33.6 +1.5**
baz=54
I45A Fountain 76.50 315 P **P 12 05 33.6 +1.6**
baz=52
G43A Wallace 76.55 317 P **P 12 05 33.9 +1.7**
baz=51
V59A Middlesex 76.55 305 P **P 12 05 33.8 +1.4**
baz=54
NJ2 Nanjing 76.56 60 *e*P **P 12 05 31.8 -0.7**
NJ2 pmax pmax
comp=Z,11nm,0.5s
J46A Howard City 76.59 314 P **P 12 05 33.8 +1.3**
baz=52
K47A Vermontville 76.64 313 P **P 12 05 33.9 +1.2**
baz=52
O51A Pataskala 76.74 310 P **P 12 05 34.8 +1.4**
baz=53,SNR=8.1
L48A N Adams 76.75 313 P **P 12 05 34.5 +1.1**
baz=52
P52A Corning 76.76 310 P **P 12 05 34.7 +1.2**
baz=53
M49A Liberty Center 76.76 312 P **P 12 05 34.4 +0.9**
baz=52
EYMN Ely 76.84 321 P **P 12 05 34.8 +1.0**
baz=49
Q53A Leroy 76.84 309 P **P 12 05 35.4 +1.4**
baz=53,SNR=6.1
S55A Lewisburg 76.84 307 P **P 12 05 35.8 +1.7**
baz=54,SNR=5.2
U57A Blanch 76.88 306 P **P 12 05 35.5 +1.3**
baz=54
FFC Flin Flon 76.89 330 *e*P **P 12 05 35.3 +1.3**
comp=Z,21nm,1.0s
FFC Flin Flon 76.89 330 *e*P **P 12 05 35.3 +1.3**
FFC pmax pmax
comp=Z,21nm,1.0s
R54A Victor 76.91 308 P **P 12 05 35.7 +1.3**
baz=53
ACSO Alum Creek Sta 76.92 311 P **P 12 05 35.6 +1.2**
baz=53
T56A Rocky Mt 76.98 307 P **P 12 05 36.4 +1.5**
baz=54,SNR=6.3
E40A Wakefield 76.98 319 P **P 12 05 36.2 +1.5**
baz=50,SNR=10.0
F41A Three Lakes 77.01 318 P **P 12 05 36.3 +1.4**
baz=50,SNR=9.0
K46A Dorr 77.08 314 P **P 12 05 36.2 +0.9**
baz=52
H43A Windswept, Lux 77.09 316 *e*P **P 12 05 36.4 +1.1**
comp=Z,26nm,0.9s
H43A Windswept, Lux 77.09 316 P **P 12 05 37.0 +1.7**
baz=51
V58A Windy Hill, Pi 77.11 305 P **P 12 05 36.8 +1.3**
baz=54
L47A Sherwood 77.18 313 P **P 12 05 36.8 +1.0**
baz=52
M48A Edgerton 77.20 312 P **P 12 05 36.8 +0.8**
baz=52
N49A Columbus Grove 77.22 312 P **P 12 05 37.2 +1.1**
baz=52
Q52A Bidwell 77.24 309 P **P 12 05 37.5 +1.2**
baz=53
S54A Dingess, Beckl 77.34 308 P **P 12 05 37.8 +0.9**
baz=53
O50A Cable 77.36 311 P **P 12 05 38.1 +1.2**
baz=52
E39A Mellen 77.37 319 P **P 12 05 38.0 +1.2**
baz=49,SNR=6.6
G41A Antigo 77.39 317 P **P 12 05 38.1 +1.1**
baz=50
T55A Pulaski 77.41 307 P **P 12 05 38.6 +1.3**
baz=53
P51A Williamsport 77.42 310 P **P 12 05 38.0 +0.8**
baz=52
R53A Hurricane 77.43 309 P **P 12 05 38.8 +1.5**
baz=53,SNR=6.6
ULM Lac du Bonnet 77.43 324 P **P 12 05 37.7 +0.7**
comp=Z,16nm,0.9s,baz=54,slow=4.9,SNR=14
ULM LR LR 12 39 41.5
comp=Z,107nm,20.3s,baz=50,slow=36
F40A Park Falls 77.44 318 P **P 12 05 38.3 +1.0**
baz=50,SNR=8.6
H42A Shiocton 77.49 317 P **P 12 05 38.8 +1.3**
baz=50
V57A Coltrane Farms 77.49 305 P **P 12 05 38.9 +1.2**
baz=54,SNR=6.6
USRK Ussuriysk Ar. 77.51 44 P **P 12 05 37.5 -0.2**
comp=Z,9.6nm,0.8s,baz=283,slow=6.0,SNR=18
USRK LR LR 12 43 25.0
comp=Z,108nm,18.6s,baz=302,slow=38
U56A King 77.61 306 P **P 12 05 39.9 +1.5**
baz=53
W58A Raeford 77.65 304 P **P 12 05 40.4 +1.8**

baz=54
O49A **Covington** 77.77 311 P P 12 05 40.2 +1.1
baz=52,SNR=5.6
N48A **Decatur** 77.77 312 P P 12 05 40.0 +0.9
baz=52,SNR=5.2
P50A **Jamestown** 77.80 310 P P 12 05 39.8 +0.5
baz=52
F39A **Loretta** 77.87 319 P P 12 05 40.7 +1.1
baz=49
Q51A **Peebles** 77.87 310 P P 12 05 40.9 +1.1
baz=52,SNR=5.6
G40A **Rib Lake** 77.91 318 P P 12 05 41.2 +1.4
baz=49,SNR=8.2
U55A **TA2, Sparta** 77.95 307 P P 12 05 41.9 +1.6
baz=53,SNR=12
PSI **Prapat** 77.95 96 P P 12 05 40.0 -0.7
comp=Z,7.0nm,0.4s,baz=152,slow=18,SNR=6.0
T54A **Tazewell** 77.95 307 P P 12 05 41.4 +1.1
baz=53
V56A **Mocksville** 78.01 306 P P 12 05 41.6 +1.1
baz=53
H41A **Junction City** 78.03 317 P P 12 05 41.8 +1.3
baz=50
POKR **Poker Plat Res** 78.05 355 P P 12 05 41.4 +1.2
baz=8.8
W57A **Gilead** 78.07 305 P P 12 05 42.2 +1.3
baz=53
I42A **Draeger Farm,** 78.09 316 P P 12 05 41.9 +1.0
baz=50
J43A **Natural Harves** 78.14 316 P P 12 05 42.5 +1.3
baz=50
N47A **Urbana** 78.15 312 P P 12 05 42.2 +0.9
baz=51
M46A **Old House Fiel** 78.21 313 P P 12 05 42.5 +0.9
baz=51
O48A **Farmland** 78.22 312 P P 12 05 42.2 +0.6
baz=52
COLA **College** 78.31 356 *i* P P 12 05 41.9 +0.2
COLA pmax pmax
comp=Z,4.0nm,1.1s
F38A **Pierce - Schro** 78.34 319 P P 12 05 43.7 +1.5
baz=48,SNR=5.4
ILAR **Eielson Array** 78.35 355 P P 12 05 42.6 +0.6
comp=Z,2.7nm,0.9s,baz=1.6,slow=4.0,SNR=20
ILAR PKKPbc **PKKPbc** 12 24 38.0 -1.1
comp=Z,0.6nm,0.9s,baz=219,slow=3.1,SNR=4.8
ILAR LR LR 12 41 49.4
comp=Z,66nm,20.4s,baz=4.5,slow=37
Q50A **Georgetown** 78.38 310 P P 12 05 43.4 +0.8
baz=52
P49A **Miami Univ. Ec** 78.40 311 P P 12 05 43.1 +0.4
baz=52
G39A **Holcombe** 78.41 318 P P 12 05 43.8 +1.2
baz=49,SNR=9.9
H40A **Chili** 78.43 318 P P 12 05 44.1 +1.4
baz=49,SNR=8.2
U54A **Nelsons Funny** 78.44 307 *ep*P pP 12 05 56.0 +0.4
U54A **Nelsons Funny** 78.44 307 P P 12 05 44.2 +1.2
baz=53,SNR=6.7
V55A **Taylorsville** 78.45 306 P P 12 05 44.4 +1.4
baz=53
R51A **Hillsboro** 78.47 309 P P 12 05 44.0 +0.9
baz=52
W56A **Indian Trail** 78.47 305 P P 12 05 43.8 +0.7
baz=53
K43A **Burlington** 78.53 315 *e*P P 12 05 43.7 +0.4
comp=Z,40nm,1.1s
K43A **Burlington** 78.53 315 P P 12 05 44.4 +1.1
baz=50
J42A **Columbus** 78.58 316 P P 12 05 44.8 +1.2
baz=50
L44A **Lake County Fo** 78.62 314 P P 12 05 44.8 +1.0
baz=50
HDA **Harding Lake** 78.72 355 P P 12 05 44.5 +0.6
baz=9.1
M45A **Boilermakers S** 78.75 314 P P 12 05 45.5 +1.0
baz=50
AGMN **Agassiz Nation** 78.77 323 P P 12 05 45.4 +0.8
baz=46
T52A **Hallie** 78.82 308 P P 12 05 46.1 +1.1
baz=52
Q49A **Aurora** 78.84 311 P P 12 05 45.9 +0.8
baz=51
O47A **Sheridan** 78.84 312 P P 12 05 45.9 +0.8
baz=51
G38A **Ridgeland** 78.85 319 P P 12 05 45.8 +0.8
baz=48
H39A **Augusta** 78.87 318 P P 12 05 46.4 +1.2
baz=49
P48A **Milroy** 78.88 311 P P 12 05 45.6 +0.3
baz=51
S51A **Beattyville** 78.88 309 P P 12 05 46.1 +0.8
baz=52
F37A **Hinrichs Farm,** 78.89 319 P P 12 05 46.4 +1.2
baz=48
R50A **Paris** 78.94 310 P P 12 05 46.5 +0.9
baz=52
KMSC **Kings Mountain** 78.95 306 P P 12 05 46.7 +0.9
baz=53
V54A **Nebo** 78.97 306 P P 12 05 47.2 +1.3
baz=52,SNR=6.2
U53A **Fall Branch** 79.01 307 P P 12 05 47.2 +1.0
baz=52
Z58A **St. Stephen** 79.03 303 P P 12 05 47.3 +1.1
baz=53
J41A **Loganville** 79.04 316 P P 12 05 47.2 +1.0
baz=49
K42A **Prairie Point,** 79.05 316 P P 12 05 47.0 +0.8
baz=50
L43A **Garden Prairie** 79.09 315 P P 12 05 47.6 +1.1
baz=50
X56A **White Oak** 79.15 305 P P 12 05 48.2 +1.3
baz=53,SNR=5.5
DOT **Dot Lake** 79.24 354 *e*P P 12 05 47.8 +0.9
comp=Z,12nm,1.2s
N45A **Kentland** 79.24 313 P P 12 05 47.9 +0.6
baz=50
SFIN **Lafayette** 79.30 313 P P 12 05 48.2 +0.7
baz=50
SPMN **Marine on St.** 79.32 319 *ep*P pP 12 06 00.6 +0.3
SPMN **Marine on St.** 79.32 319 P P 12 05 48.7 +1.1
baz=48
KSRS **Korea Array** 79.34 51 P P 12 05 47.9 +0.1
comp=Z,9.8nm,0.6s,baz=310,slow=4.5,SNR=51
KSRS LR LR 12 46 48.6
comp=Z,126nm,18.0s,baz=312,slow=40
S50A **Richmond** 79.36 309 P P 12 05 48.8 +0.9
baz=52
P47A **Martinsville** 79.37 312 P P 12 05 48.9 +0.9
baz=51
Q48A **North Vernon** 79.39 311 P P 12 05 49.1 +1.0
baz=51
H38A **Maiden Rock** 79.41 319 P P 12 05 49.0 +0.9
baz=48
J40A **Soldiers Grove** 79.42 317 P P 12 05 49.1 +0.9
baz=49
R49A **Shelbyville** 79.45 310 P P 12 05 49.5 +1.1
baz=51,SNR=5.8
TEY **Ternei** 79.46 41 ⇓ *i*P pP 12 05 59.5 -1.5
TEY pmax pmax
comp=E,10.0nm,1.0s
TEY pmax pmax
comp=N,10.0nm,0.9s
TEY pmax pmax
comp=Z,30nm,0.9s
PAULI **Pauline** 79.46 306 *e*P P 12 05 49.0 +0.5
comp=Z,19nm,1.0s
JFWS **Jewell Farm** 79.47 316 P P 12 05 49.2 +0.8
baz=49
U52A **Thorn Hill** 79.50 308 P P 12 05 49.9 +1.1
baz=52
T51A **Gray** 79.51 308 P P 12 05 50.1 +1.2
baz=52
TZTN **Tazewell** 79.52 308 P P 12 05 50.2 +1.3
baz=52
W54A **Cherokee Point** 79.54 306 P P 12 05 50.4 +1.3
baz=52
X55A **Gracelyn & Ava** 79.56 305 P P 12 05 50.3 +1.2
baz=52
V53A **Saluda** 79.59 307 P P 12 05 50.5 +1.2
baz=52
N44A **Piper City** 79.64 314 P P 12 05 50.4 +0.9
baz=50
Z57A **Bowman** 79.65 304 P P 12 05 51.3 +1.6
baz=53
TJN **Taejon** 79.66 52 *ce*P P 12 05 48.9 -0.7
M43A **Waltham Townsh** 79.70 314 P P 12 05 51.2 +1.4
baz=50

L42A **Oliver, Polo** 79.74 315 P P 12 05 51.1 +1.2
baz=49
O45A **Potomac** 79.75 313 P P 12 05 50.9 +0.8
baz=50
R48A **Northridge Ran** 79.81 311 P P 12 05 51.4 +1.0
baz=51
S49A **Springfield** 79.84 310 P P 12 05 51.6 +1.0
baz=51
P46A **Rosedale** 79.84 312 P P 12 05 51.7 +1.1
baz=50
MENT **Mentasta** 79.91 353 *e*P P 12 05 51.9 +1.4
comp=Z,5.6nm,0.8s
U51A **La Follette** 79.92 308 P P 12 05 52.5 +1.4
baz=52,SNR=8.0
V52A **Sevierville** 79.99 307 P P 12 05 52.5 +1.1
baz=52
X54A **Belton** 79.99 306 P P 12 05 52.8 +1.4
baz=52
Y55A **Saluda** 80.03 305 P P 12 05 52.9 +1.3
baz=52
T50A **Nancy** 80.04 309 P P 12 05 52.7 +1.0
baz=51
W53A **Cullowhee** 80.12 307 P P 12 05 53.3 +1.0
baz=52
N43A **Stutzman Famil** 80.15 314 P P 12 05 53.3 +1.1
baz=49
WCI **Wyandotte Cave** 80.18 311 *e*P P 12 05 54.2 +1.8
comp=Z,29nm,0.9s
WCI **Wyandotte Cave** 80.18 311 *e*P P 12 05 54.2 +1.8
WCI pmax pmax
comp=Z,29nm,0.9s
WCI **Wyandotte Cave** 80.18 311 P P 12 05 53.5 +1.1
baz=51
P45A **Graceland, Par** 80.22 312 P P 12 05 53.6 +1.0
baz=50,SNR=5.1
O44A **Mansfield** 80.25 313 P P 12 05 53.7 +0.9
baz=50
R47A **Wooly Knot Far** 80.28 311 P P 12 05 54.0 +1.1
baz=50,SNR=6.5
S48A **Wiedeman Farm,** 80.39 310 P P 12 05 54.6 +1.0
baz=51,SNR=6.5
T49A **Edmonton** 80.42 309 P P 12 05 54.8 +1.1
baz=51,SNR=8.3
U50A **Jamestown** 80.42 308 P P 12 05 55.1 +1.3
baz=51
HDIL **Hopedale** 80.47 314 P P 12 05 55.3 +1.4
baz=49
V51A **Loudon** 80.49 308 P P 12 05 55.5 +1.4
baz=51
L40A **Anamosa** 80.57 316 P P 12 05 55.3 +0.9
baz=48,SNR=7.6
Y54A **Tignall** 80.62 305 P P 12 05 56.3 +1.5
baz=52,SNR=5.5
X53A **Estanollee** 80.62 306 P P 12 05 56.2 +1.4
baz=52
M41A **Milan** 80.64 315 P P 12 05 55.7 +0.8
baz=49
W52A **Murphy** 80.66 307 P P 12 05 56.2 +1.1
baz=51
CPCT **Cooper Cave** 80.82 307 *e*P P 12 05 57.0 +1.1
comp=Z,20nm,1.0s
Q45A **Warren Harvey,** 80.87 312 P P 12 05 57.0 +0.9
baz=50
R46A **Gibon Southern** 80.92 311 P P 12 05 56.9 +0.5
baz=50
S47A **Hartford** 80.94 310 P P 12 05 57.5 +1.0
baz=50,SNR=6.3
U49A **Red Boiling Sp** 80.94 309 P P 12 05 57.7 +1.2
baz=51,SNR=11
X52A **Dahlonega** 80.94 307 P P 12 05 57.7 +1.1
baz=51,SNR=8.3
T48A **Bowling Green** 80.95 310 P P 12 05 58.0 +1.5
baz=50,SNR=12
V50A **Pikeville** 81.05 308 P P 12 05 58.6 +1.5
baz=51,SNR=12
Z54A **Sparta** 81.11 305 P P 12 05 58.7 +1.2
baz=52
W51A **Cleveland** 81.15 307 P P 12 05 58.9 +1.2
baz=51
P43A **Skaggs, Pawnee** 81.19 313 P P 12 05 58.9 +1.1
baz=49
Y53A **Monroe** 81.21 306 P P 12 05 59.3 +1.3
baz=51,SNR=5.0
YSS **Yuzh-Sakhalins** 81.22 37 *e*P P 12 05 58.5 +0.7
comp=Z,90nm,1.1s
YSS **Yuzh-Sakhalins** 81.22 37 *e*P P 12 05 58.3 +0.6
YSS *e* 12 06 02.6
YSS *e* 12 06 09.8
YSS *e*S S 12 16 03.1 -1.6
YSS pmax pmax
comp=Z,30nm,1.2s
YSS MLR MLR
comp=Z,100nm,17.0s
YSS MLR MLR
comp=N,100nm,16.0s
R45A **Skylar, Fairfi** 81.34 312 P P 12 05 59.4 +0.8
baz=50
S46A **Don Dixon Farm** 81.39 311 P P 12 05 59.5 +0.7
baz=50
GOGA **Godfrey** 81.41 305 P P 12 06 00.2 +1.2
baz=51
U48A **Cassie Pea, Po** 81.42 309 P P 12 06 00.1 +1.0
baz=50,SNR=5.6
T47A **Sharon Grove** 81.46 310 P P 12 06 00.4 +1.1
baz=50,SNR=8.1
W50A **Signal Mountai** 81.48 308 P P 12 06 01.0 +1.5
baz=51,SNR=7.1
V49A **McMinnville** 81.49 308 P P 12 06 00.5 +1.1
baz=50,SNR=7.1
Y52A **Lilburn** 81.51 306 *e*P P 12 06 00.8 +1.2
comp=N,29nm,1.1s
Y52A **Lilburn** 81.51 306 P P 12 06 01.2 +1.5
baz=51,SNR=5.4
N40A **Mertquake, Sal** 81.56 315 P P 12 06 00.3 +0.6
baz=48
Z53A **Monticello** 81.56 305 P P 12 06 01.0 +1.2
baz=51
X51A **Calhoun** 81.59 307 P P 12 06 01.1 +1.2
baz=51
T46A **Princeton** 81.91 310 P P 12 06 02.3 +0.6
baz=50
U47A **Clarksville** 81.93 310 P P 12 06 02.7 +1.0
baz=50,SNR=8.6
V48A **Smith Brothers** 82.09 309 P P 12 06 03.5 +0.9
baz=50
W49A **Belvidere** 82.13 308 P P 12 06 03.8 +1.0
baz=50,SNR=5.8
Y51A **Rockmart** 82.14 307 P P 12 06 04.1 +1.2
baz=51
X50B **Fort Payne** 82.16 307 P P 12 06 04.2 +1.2
baz=50
Z52A **Williamson** 82.17 306 P P 12 06 04.2 +1.2
baz=51
S44A **Carbondale** 82.31 312 P P 12 06 04.6 +0.8
baz=49,SNR=6.3
ECSD **EROS Data Cent** 82.32 320 P P 12 06 04.9 +1.2
baz=45,SNR=5.3
WVT **Waverly** 82.46 310 *e*P P 12 06 03.9 -0.6
comp=N,10nm,0.8s
WVT **Waverly** 82.46 310 *e*P P 12 06 03.9 -0.6
WVT pmax pmax
comp=Z,10.0nm,0.8s
WVT **Waverly** 82.46 310 P P 12 06 04.8 +0.3
baz=50
V47A **Nunnelly** 82.46 309 P P 12 06 05.1 +0.5
baz=50
U46A **Springville** 82.53 310 P P 12 06 05.6 +0.8
baz=49
W48A **Pulaski** 82.54 309 P P 12 06 05.9 +1.0
baz=50,SNR=8.4
X49A **Woodville** 82.56 308 P P 12 06 06.5 +1.4
baz=50
PETK **Petropavlovsk-** 82.58 25 P P 12 06 04.2 -0.6
comp=Z,1.8nm,0.8s,baz=352,slow=5.8,SNR=3.1
PETK LR LR 12 48 45.1
comp=Z,117nm,18.4s,baz=314,slow=40
Y50A **Piedmont** 82.58 307 P P 12 06 06.4 +1.2
baz=50
152A **Waverly Hall** 82.69 305 P P 12 06 06.7 +0.9
baz=51
455A **Stateville** 82.77 303 P P 12 06 07.6 +1.4
baz=51
V46A **Holladay** 82.85 310 P P 12 06 06.9 +0.3
baz=49,SNR=12
W47A **Westpoint** 82.88 309 P P 12 06 07.6 +0.8
baz=50
SUSD **Miller** 83.00 322 P P 12 06 08.4 +1.1
baz=44

Y49A **Blount Mountai** 83.03 307 P P 12 06 08.4 +0.9
baz=50
X48A **Hartselle** 83.05 308 P P 12 06 08.5 +0.9
baz=50,SNR=7.9
Z50A **Ashland** 83.10 307 P P 12 06 08.9 +1.0
baz=50
252A **Lumpkin** 83.13 305 P P 12 06 09.0 +1.0
baz=51
CCM **Cathedral Cave** 83.25 313 *e*P P 12 06 09.8 +1.2
comp=Z,21nm,1.1s
CCM **Cathedral Cave** 83.25 313 *e*P P 12 06 09.8 +1.2
CCM pmax pmax
comp=Z,21nm,1.1s
CCM **Cathedral Cave** 83.25 313 P P 12 06 09.6 +1.0
baz=48
W46A **Michie** 83.45 309 P P 12 06 09.8 +0.2
baz=49
Y48A **Jasper** 83.48 308 P P 12 06 10.5 +0.7
baz=50
251A **Midway** 83.51 305 P P 12 06 10.9 +0.9
baz=50
X47A **Russelville** 83.52 309 P P 12 06 10.3 +0.2
baz=49
Z49A **Columbiana** 83.53 307 P P 12 06 11.1 +1.0
baz=50
150A **Eclectic** 83.58 306 P P 12 06 11.2 +0.9
baz=50
060Z **West Palm Beac** 83.75 298 P P 12 06 12.5 +1.2
baz=52
PTGA **Pitinga** 83.91 265 *e*P P 12 06 14.2 +1.9
comp=Z,13nm,1.3s
BDFB **Brasilia** 83.93 245 P P 12 06 14.1 +1.7
comp=Z,5.3nm,0.6s,baz=68,slow=5.6,SNR=8.5
BDFB LR LR 12 42 41.7
comp=Z,485nm,21.1s,baz=60,slow=35
LRAL **Lakeview Retre** 83.93 307 P P 12 06 13.4 +1.2
baz=50,SNR=6.6
JNU **Nakatsue** 83.95 53 P P 12 06 12.2 -0.2
comp=Z,7.0nm,0.9s,baz=180,slow=3.0,SNR=3.3
X46A **Booneville** 83.95 309 P P 12 06 12.6 +0.4
baz=49
149A **Jones** 84.08 306 P P 12 06 14.0 +1.1
baz=50
249A **Camden** 84.70 306 P P 12 06 17.6 +1.6
baz=50
LAO **LASA Array** 84.72 327 P P 12 06 17.9 +1.9
baz=39,SNR=9.7
BGNE **Belgrade** 84.77 319 P P 12 06 17.8 +1.4
baz=44
ERM **Erimo** 84.98 40 *e*P P 12 06 18.4 +1.1
ERM *ep*P pP 12 06 29.2 -0.8
ERM **Erimo** 84.98 40 *ce*P P 12 06 17.2 -0.1
ERM pmax pmax
comp=Z,19nm,1.7s
147A **Livingston** 84.98 307 P P 12 06 18.9 +1.4
baz=49
EGMT **Eagleton** 85.16 330 P P 12 06 19.8 +1.6
baz=37,SNR=27
U40A **Yellville** 85.34 313 P P 12 06 20.5 +1.2
baz=47,SNR=11
KSU1 **Kansas State U** 85.58 317 P P 12 06 22.0 +1.6
baz=45
RSSD **Black Hills** 85.70 324 *e*P P 12 06 22.7 +1.6
comp=Z,7.2nm,1.1s
RSSD **Black Hills** 85.70 324 *e*P P 12 06 22.7 +1.6
RSSD pmax pmax
comp=Z,7.0nm,1.1s
RSSD **Black Hills** 85.70 324 P P 12 06 22.3 +1.2
baz=41
W41B **Gary Mavity, V** 85.79 311 P P 12 06 22.5 +1.1
baz=47,SNR=8.7
MAJO **Matsushiro** 86.14 46 *e*P P 12 06 23.1 -0.1
MAJO *e*PcP P 12 06 23.5 +0.3
MAJO **Matsushiro** 86.14 46 *i* P P 12 06 23.4 +0.2
MAJO pmax pmax
comp=Z,5.0nm,1.0s
MAT **Matsushiro** 86.14 46 P P 12 06 23.1 -0.1
MAT S S 12 16 47.0 -7.8
MJAR **Matsushiro Arr** 86.14 46 P P 12 06 23.5 +0.3
comp=Z,7.3nm,1.1s,baz=304,slow=5.3,SNR=11
MJAR LR LR 12 48 47.3
comp=Z,59nm,18.7s,baz=10.0,slow=38
X40A **Basin Creek Fa** 86.61 311 P P 12 06 26.6 +1.1
baz=47,SNR=5.1
W39A **Magazine** 86.69 312 P P 12 06 27.0 +1.1
baz=46
VBMS **Vicksburg** 86.71 308 P P 12 06 27.6 +1.6
baz=48
GCMT **Greycliff** 86.91 328 *e*P P 12 06 28.1 +1.2
GCMT *ep*P pP 12 06 41.4 +1.5
MIAR **Mount Ida** 87.01 312 P P 12 06 28.8 +1.3
baz=46,SNR=6.9
RLMT **Red Lodge** 87.27 328 P P 12 06 30.4 +1.6
baz=37,SNR=6.3
TUL1 **Leonard** 87.37 314 P P 12 06 30.1 +0.9
baz=45
CBKS **Cedar Bluff** 87.49 318 P P 12 06 30.5 +0.8
baz=43
NEW **Newport** 87.75 334 P P 12 06 32.1 +1.2
baz=32,SNR=14
MSO **Missoula** 87.78 331 P P 12 06 31.8 +0.7
baz=34
KSM **Kuching** 87.86 90 *e*P P 12 06 33.3 +1.4
comp=Z,21nm,1.4s
BOZ **Bozeman (W)** 87.88 329 P P 12 06 33.2 +1.5
baz=36,SNR=16
K22A **Casper** 87.99 325 P P 12 06 32.5 +0.2
baz=39,SNR=6.2
SBUM **Sibu** 88.82 88 *e*P P 12 06 38.0 +1.6
comp=Z,3.4nm,0.8s
KSCO **Kaye Shedlock'** 88.86 320 P P 12 06 37.6 +1.2
baz=41
N23A **Red Feather La** 89.08 323 P P 12 06 38.6 +1.0
baz=39,SNR=6.4
BW06 **Boulder Array** 89.27 326 P P 12 06 38.8 +0.3
baz=37,SNR=7.7
PDAR **Pinedale Array** 89.27 326 P P 12 06 38.6 +0.2
comp=Z,2.9nm,0.8s,baz=48,slow=4.4,SNR=26
PDAR LR LR 12 47 32.7
comp=Z,81nm,20.3s,baz=44,slow=36
ISCO **Idaho Springs** 89.76 322 P P 12 06 41.7 +0.9
baz=39,SNR=6.1
WMOK **Wichita Mounta** 89.92 315 P P 12 06 42.7 +1.4
baz=44,SNR=6.5
Q24A **Divide** 90.17 322 P P 12 06 43.6 +0.9
baz=40
HLID **Hailey** 90.68 330 P P 12 06 45.9 +1.0
baz=34
O20A **White River Ci** 90.76 324 P P 12 06 45.6 +0.2
baz=38,SNR=6.6
WHTX **Lake Whitney,** 91.11 312 P P 12 06 48.2 +1.3
baz=44
T25A **Trinidad** 91.19 320 P P 12 06 48.2 +0.7
baz=40
SDCO **Great Sand Dun** 91.28 321 P P 12 06 48.3 +0.3
baz=40,SNR=8.6
F05D **White Salmon** 91.29 335 P P 12 06 48.3 +0.8
baz=29
S22A **4UR Ranch, Cre** 91.95 322 P P 12 06 51.8 +0.8
baz=39
435B **Jarrell** 92.05 311 P P 12 06 52.5 +1.2
baz=44
PV09 **Paradox Valley** 92.48 324 *ep*P pP 12 07 06.6 +0.3
DUG **Dugway, Tooele** 92.79 327 P P 12 06 55.6 +1.0
baz=35
MVCO **Mesa Verde** 93.19 322 P P 12 06 57.2 +0.5
baz=38
I04A **Tendick Farm,** 93.46 335 P P 12 06 58.2 +0.7
baz=28
ANMO **Albuquerque** 93.93 320 *i* P P 12 06 56.8 -3.3
ANMO pmax pmax
comp=Z,1.0nm,0.8s
R11A **Troy Canyon, C** 95.52 328 P P 12 07 07.4 +0.1
baz=33
MNTX **Cornudas Mount** 95.86 317 P P 12 07 09.2 +0.4
baz=40
NVAR **Mina Array Bea** 96.59 330 P P 12 07 13.2 +1.0
comp=Z,1.2nm,0.8s,baz=43,slow=3.8,SNR=11
NVAR LR LR 12 51 09.1
comp=Z,98nm,21.7s,baz=35,slow=36
TXAR **Lajitas Array** 96.69 314 P P 12 07 13.5 +0.9
comp=Z,0.9nm,0.9s,baz=64,slow=5.7,SNR=4.3
TXAR LR LR 12 52 57.0
comp=Z,77nm,18.1s,baz=0.0,slow=37
CPUP **Villa Florida** 97.38 243 LR LR 12 52 52.2
comp=Z,283nm,19.3s,baz=46,slow=36
LPAZ **La Paz** 99.59 257 LR LR 12 53 16.8
comp=Z,77nm,20.3s,baz=26,slow=36

PLCA	**Paso Flores**	**114.44**	**237**	PKP	**PKiKP**	**12 12 22.3**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=117,slow=4.0,SNR=3.6						
WRA	**Warramunga Arr**	**119.39**	**94**	PKP	**PKPdf**	**12 12 31.2**	**-0.5**
	baz=245,slow=1.8						
AS31	**Alice Springs**	**120.93**	**98**	*e*PKPdf	**PKPdf**	**12 12 34.2**	**-0.4**
ASAR	**Alice Springs**	**120.93**	**98**	PKP	**PKPdf**	**12 12 34.2**	**-0.4**
	comp=Z,2.8nm,0.5s,baz=306,slow=1.6,SNR=80						
ASAR				PKKPbc	**PKKPab**	**12 22 38.5**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=123,slow=4.2,SNR=5.2						
QSPA	**South Pole Qui**	**126.68**	**180**	*e*PKPdf	**PKPdf**	**12 12 44.4**	**+0.1**
STKA	**Stephens Creek**	**130.69**	**103**	PKP	**PKiKP**	**12 12 53.7**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=296,slow=12,SNR=4.7						

MEX 06 12:06:39.5±0.5, 14°.54N×92°.19W, h78km±9km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.37**	**349**	*i* P	Pn	12 06 50.9	-1.2
THIG				*i* S	Sn	12 06 59.2	-2.1
PCIG		**1.52**	**320**	*e*P	Pn	12 07 03.7	-1.4
PCIG				*i* S	Sn	12 07 22.5	-1.8
CCIG	**Comitan**	**1.73**	**2**	*e*P	Pn	12 07 06.9	-1.0
CCIG				*e*S	Sn	12 07 27.8	-1.7

IDC 06 12:21:11.4±1.8, 17°.93N×145°.50E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/27, mbtmp3.4/4, Error ellipse: s-maj=210.7km s-min=23.3km az=113.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.20**	**197**	P	P	12 28 42.0	+0.5
	baz=358,slow=7.5						
ASAR	**Alice Springs**	**42.87**	**196**	P	P	12 29 10.7	-0.9
	0.2nm,0.8s,baz=12,slow=5.9,SNR=4.6						
ILAR	**Eielson Array**	**64.41**	**26**	P	P	12 31 49.2	+0.1
	0.2nm,0.4s,baz=250,slow=6.1,SNR=4.4						
YKA	**Yellowknife Ar**	**78.75**	**28**	P	P	12 33 15.5	-0.1
	0.3nm,0.7s,baz=289,slow=5.3,SNR=2.8						
NVAR	**Mina Array Bea**	**83.76**	**52**	P	P	12 33 43.0	0.0
	0.2nm,0.5s,baz=272,slow=6.2,SNR=3.4						

MEX 06 12:24:36.0±0.7, 16°.20N×98°.12W, h4km±6km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**357**	*i* P	Pg	12 24 39.5	-0.2
PNIG				*i* S	Sg	12 24 42.0	-0.2
TLIG	**Tlapa**	**1.42**	**342**	*i* P	Pn	12 24 58.7	-4.1
TLIG				*i* S	Sb	12 25 16.5	-5.1

BJI ***06*** *13:03:20.5±0.0, 10°.19N×91°.65E, h21km, mb4.7/57, mB4.8/42, Ms4.2/37, Ms7 3.9/34*
IDC ***06*** *13:03:21.7±0.5, 10°.57N×91°.62E, h0km, mb4.4/24, mb1 4.5/26, mb1mx4.4/36, mbtmp4.4/26, ML4.3/2, MS3.7/16, Ms1 3.7/16, ms1mx3.5/32, Error ellipse: s-maj=16.8km s-min=11.5km az=50.0*
ISCJB ***06*** *13:03:22.1±0.2, 10°.45N±0°.03×91°.60E±0°.03, h17km, mb4.6/92, MS3.9/28, Error ellipse: s-maj=4.4km s-min=3.6km az=27.7*
MOS ***06*** *13:03:23.7±0.9, 10°.55N×91°.67E, h27km, mb4.9/44, Error ellipse: s-maj=8.0km s-min=5.1km az=100.9*
NDI ***06*** *13:03:25.3±3.1, 10°.56N×91°.58E, h24km, mb4.7, ML4.6, mb4.6(NEIC)*
NEIC ***06*** *13:03:26.0±1.8, 10°.55N×91°.70E, h24km±4km, mb4.6/40, Error ellipse: s-maj=14.5km s-min=13.2km az=222.0*
DJA ***06*** *13:03:30.3±1.3, 10°N±20'×9°2E±°, h56km±12km, M4.9/11, mB5.8/2, mb4.8/11, MLv5.0/2, Mw(mB)5.3/2*
ISC 06 13:03:24.2±0.3, 10°.50N±0°.04×91°.52E±0°.04, h17km, n241, σ1§91/249, mb4.7/94, MS3.8/28, 27C-10D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.66**	**46**	*e*Pn	Pn	13 03 51.8	-0.8
PBA	**Port Blair**	**1.66**	**46**	*e*P	Pn	13 03 51.5	-1.0
PBA				*e*S	Sn	13 04 13.4	-0.1
PBA				IAML		13 04 25.5	
	comp=N,3μm,0.1s						
PBA				IAML		13 04 25.6	
	comp=E,3μm,0.6s						
DGPR	**DIGLIPUR**	**3.00**	**27**	*e*P	**Pn**	**13 04 09.7**	**-1.3**
DGPR				*ex*	x	13 04 21.5	
LHMI	**Lhok Sumawe**	**7.51**	**134**	P	**Pn**	**13 05 12.6**	**-0.4**
MLSI	**Meulaboh, Aceh**	**7.86**	**142**	P	**Pn**	**13 05 15.1**	**-2.8**
SRDT	**SRDT**	**8.35**	**62**	P	Pb	13 05 53.2	+4.8
TPTI		**9.13**	**142**	P	**Pn**	**13 05 31.3**	**-3.9**
KCSI	**Kotacane, Aceh**	**9.30**	**138**	P	**Pn**	**13 05 35.5**	**-2.2**
KULM	**Kulim**	**10.42**	**119**	*e*Pn	**Pn**	**13 05 50.5**	**-2.4**
PSI	**Prapat**	**10.61**	**136**	LR	LR	13 10 47.3	
	comp=E,300nm,20.4s,baz=296,slow=42						
CM31	**Chiang Mai Arr**	**10.68**	**41**	*e*Pn	**Pn**	**13 05 55.0**	**-1.5**
CM31				*e*Sn	Sn	13 07 39.9	-16
CMAR	**Chiang Mai Arr**	**10.68**	**41**	Pn	**Pn**	**13 05 55.0**	**-1.5**
	comp=E,0.7nm,0.3s,baz=232,slow=14,SNR=16						
CMAR				Sn	Sn	13 07 39.9	-16
	comp=E,0.4nm,0.3s,baz=220,slow=25,SNR=2.8						
VIS	**Vishakhapatnam**	**10.70**	**313**	*i* P	**Pn**	**13 05 57.3**	**+0.5**
VIS				*i* S	Sn	13 07 46.4	-10
VIS				*ex*	x	13 07 50.9	
	comp=E,544nm,0.7s						
VIS				*ex*	x	13 07 51.2	
	comp=N,724nm,0.8s						
CHTO	**Chiang Mai**	**10.95**	**40**	*e*Pn	**Pn**	**13 06 00.6**	**+0.5**
CHTO	**Chiang Mai**	**10.95**	**40**	*e*P	**Pn**	**13 06 00.6**	**+0.5**
CMMT	**Chiang Mai**	**10.95**	**40**	P	**Pn**	**13 06 01.8**	**+1.6**
	comp=N,4.2nm,1.0s						
PALK	**Pallekele**	**11.16**	**254**	Pn	**Pn**	**13 06 04.6**	**+1.4**
	comp=N,1.7nm,0.3s,baz=116,slow=8.9,SNR=4.6						
PALK				Sn	**Sn**	**13 08 01.1**	**-6.5**
	comp=N,4.8nm,0.3s,baz=116,slow=3.5,SNR=6.3						
PALK				LR	LR	13 10 06.1	
	comp=N,690nm,18.5s,baz=117,slow=36						
PALK	**Pallekele**	**11.16**	**254**	*e*Pn	**Pn**	**13 06 05.0**	**+1.9**
PALK				*e*Sn	Sn	13 07 59.4	-8.2
PALK	**Pallekele**	**11.16**	**254**	*e*P	**Pn**	**13 06 05.0**	**+1.9**
IPM	**Ipoh**	**11.16**	**122**	*e*Pn	**Pn**	**13 06 02.0**	**-1.1**
LAMP	**Lampang**	**11.19**	**44**	P	**Pn**	**13 06 06.1**	**+2.6**
	comp=N,28μm,0.8s,comp=N,225μm						
MDRS	**Chennai**	**11.33**	**284**	*e*P	**Pn**	**13 06 03.7**	**-1.7**
MDRS				IAmb	IAmb	13 06 10.5	
	comp=Z,168nm,1.4s						
PAYA	**Payao**	**11.94**	**42**	P	**Pn**	**13 06 16.4**	**+2.6**
	comp=Z,51μm,0.8s,comp=Z,405μm						
KHON	**Khomkaen**	**12.43**	**61**	P	**P**	**13 06 35.1**	**+2.8**
	comp=Z,29μm,0.4s						
BOK	**Bokaro**	**14.27**	**339**	*e*P	**Pn**	**13 06 43.9**	**-1.7**
BOK				IAmb	IAmb	13 06 47.6	
	comp=Z,23nm,0.9s						
PDSI	**Padang**	**14.41**	**141**	P	**P**	**13 06 54.4**	**-0.1**
SHL	**Shillong**	**14.99**	**1**	*e*Pn	**Pn**	**13 06 53.6**	**-1.9**
SHL	**Shillong**	**14.99**	**1**	*e*P	**Pn**	**13 06 53.6**	**-1.9**
SHL	**Shillong**	**14.99**	**1**	*e*P	**Pn**	**13 06 53.8**	**-1.8**
SDSI	**Sungai Dareh**	**15.04**	**138**	P	**P**	**13 06 59.8**	**-1.6**
KOHI	**KOHIMA**	**15.33**	**9**	*ex*	**Pn**	**13 06 54.3**	**-5.8**
KOHI				IAmb	IAmb	13 07 00.7	
	comp=Z,70nm,0.2s						
KRJI	**Kerinci**	**15.95**	**141**	P	**P**	**13 07 11.1**	**-0.5**
MOKO	**MOKOCHONG**	**15.99**	**10**	*e*P	**Pn**	**13 07 07.0**	**-1.5**
MOKO				IAmb	IAmb	13 07 11.8	
	comp=Z,41nm,1.0s						
NGP	**Nagpur**	**15.99**	**313**	*ex*	**Sn**	**13 09 57.8**	**-7.6**
SLVN	**Son La**	**16.05**	**46**	*e*Pn	**Pn**	**13 07 08.8**	**-0.4**
	comp=Z,38nm,0.8s						
GTK	**Tadong**	**16.95**	**351**	*e*P	**Pn**	**13 07 21.7**	**+0.9**
GTK				IAmb	IAmb	13 07 25.5	
RAMN	**Ramite**	**17.01**	**345**	*e*P	**Pn**	**13 07 20.6**	**-1.0**
	comp=Z,36nm,0.5s						
ZIRO	**ZIRO**	**17.08**	**7**	*e*P	**Pn**	**13 07 21.0**	**-1.4**
JIRN	**Jiri**	**17.79**	**344**	*e*P	**Pn**	**13 07 31.8**	**+0.3**
	comp=Z,72nm,0.9s						
PKI	**Pulchoki**	**17.93**	**342**	*e*P	**Pn**	**13 07 32.3**	**-0.8**
	comp=Z,31nm,0.6s						
PKIN	**Phulchoki**	**17.94**	**342**	*e*P	**Pn**	**13 07 32.3**	**-0.9**
	comp=Z,28nm,0.6s						
KMI	**Kunming**	**18.02**	**35**	P	**P**	**13 07 34.5**	**-0.2**
KMI				sP	pwP	13 07 45.4	+2.3
KMI				PP	**PnPn**	**13 07 53.0**	**+7.5**
KMI				S	**Sn**	**13 10 53.7**	**-1.5**
KMI				SS	S	13 11 14.7	+14
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
KMI				pmax	pmax		
	comp=Z,130nm,5.6s						
KMI				LR	LR		
	comp=Z,420nm,17.1s						
KMI				LR	LR		
	comp=Z,140nm,22.4s						
KMI				LR	LR		
	comp=Z,340nm,17.9s						
DMN	**Daman**	**18.05**	**341**	*e*P	**Pn**	**13 07 34.0**	**-0.7**
	comp=Z,73nm,0.8s						
GUN	**Gumba**	**18.11**	**344**	*e*P	**P**	**13 07 35.9**	**+0.2**
	comp=Z,44nm,0.7s						
BHPL	**Bhopal**	**18.48**	**315**	*e*P	**Pn**	**13 07 40.2**	**+0.6**
BHPL				IAmb	IAmb	13 07 48.7	
	comp=Z,162nm,0.1s						
KOLN	**Koldanda**	**18.72**	**338**	*e*P	**P**	**13 07 42.3**	**0.0**
	comp=Z,42nm,0.6s						
LSA	**Lhasa**	**19.10**	**359**	*e*P	**P**	**13 07 47.3**	**+0.5**
	comp=Z,30nm,0.9s						
LSA	**Lhasa**	**19.10**	**359**	*e*P	**P**	**13 07 47.3**	**+0.5**
LSA				pmax	pmax		
	comp=Z,30nm,0.9s						
DANN	**Dangsing**	**19.19**	**339**	*e*P	**Pn**	**13 07 48.6**	**+0.1**
	comp=Z,61nm,0.7s						
PYUN	**Piuthan**	**19.25**	**337**	*e*P	**Pn**	**13 07 49.3**	**+0.1**
	comp=Z,51nm,0.6s						
QIZ	**Qiongzhong**	**19.63**	**62**	P	**P**	**13 07 51.1**	**-1.0**
QIZ				sP	**pwP**	**13 07 59.6**	**+0.2**
QIZ				S	**S**	**13 11 27.1**	**-6.1**
QIZ				LR	LR		
	comp=Z,260nm,18.0s						
QIZ				LR	LR		
	comp=Z,240nm,13.1s						
QIZ				LR	LR		
	comp=Z,310nm,17.2s						
KSM	**Kuching**	**20.71**	**114**	*e*P	**P**	**13 08 01.6**	**-2.3**
	comp=Z,14nm,0.8s						
GYA	**Guiyang**	**21.37**	**40**	⇓*i*P	**P**	**13 08 11.0**	**-0.1**
GYA				PP	**PnPn**	**13 08 35.3**	**+4.1**
GYA				S	**S**	**13 11 58.1**	**-10**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,40nm,4.6s						
GYA				LR	LR		
	comp=Z,160nm,13.4s						
GYA				LR	LR		
	comp=Z,150nm,14.9s						
GYA				LR	LR		
	comp=Z,200nm,14.0s						
SBUM	**Sibu**	**22.05**	**110**	*e*P	**P**	**13 08 17.8**	**-0.6**
	comp=Z,3.0nm,0.8s						
CD2	**Chengdu**	**23.27**	**27**	⇓P	**P**	**13 08 30.4**	**-0.7**
CD2				sP	pwP	13 08 41.9	+2.4
CD2				S	**S**	**13 12 41.4**	**-1.5**
CD2				sS	Sn	13 12 55.7	-5.4
CD2				pmax	pmax		
	comp=Z,130nm,0.6s						
CD2				pmax	pmax		
	comp=Z,230nm,4.1s						
CD2				LR	LR		
	comp=Z,800nm,14.7s						
CD2				LR	LR		
	comp=Z,490nm,12.7s						
DDI	**Dehra Dun**	**23.37**	**329**	*e*P	**P**	**13 08 33.8**	**+1.7**
LEM	**Lembang**	**23.52**	**136**	LR	LR	13 20 03.7	
	comp=Z,279nm,18.5s,baz=288,slow=43						
BHJ	**Bhuj**	**24.42**	**304**	*e*P	**P**	**13 08 42.4**	**+0.3**
SMLA	**Simla**	**24.47**	**329**	*e*P	**P**	**13 08 43.2**	**+0.8**
SMLA				IAmb	IAmb	13 08 48.1	
	comp=Z,35nm,1.1s						
HKPS	**Hong Kong Po S**	**24.62**	**59**	*e*P	**P**	**13 08 42.7**	**-1.2**
	comp=Z,49nm,1.1s						
KKM	**Kota Kinabalu**	**24.83**	**98**	*e*P	**P**	**13 08 46.2**	**+0.1**
	comp=Z,6.5nm,0.9s						
DHRM	**DHARAMSHALA**	**25.80**	**329**	*e*P	**P**	**13 08 56.0**	**+1.2**
DHRM				IAmb	IAmb	13 09 05.5	
	comp=Z,16nm,0.8s						
ENH	**Enshi**	**25.82**	**38**	*e*P	**P**	**13 08 53.9**	**-0.8**
	comp=Z,49nm,0.8s						
H08S3	**Diego Garcia H**	**26.14**	**227**	T	T	13 36 20.7	
	baz=47,slow=75,SNR=3385						
H08S2	**Diego Garcia H**	**26.15**	**227**	T	T	13 36 20.6	
	baz=47,slow=75,SNR=2820						
H08S1	**Diego Carcia H**	**26.16**	**227**	T	T	13 36 16.4	
	baz=47,slow=75,SNR=3618						
LZH	**Lanzhou**	**27.82**	**22**	*e*P	**P**	**13 09 13.9**	**+1.1**
LZH				pP	pwP	13 09 20.1	-1.0
LZH				sP	sP	13 09 23.5	+4.6
LZH				PP	**PnPn**	**13 10 04.0**	**+4.8**
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,92nm,4.5s						
LZH				LR	LR		
	comp=Z,410nm,14.1s						
LZH				LR	LR		
	comp=Z,450nm,12.6s						
LZH				LR	LR		
	comp=Z,540nm,14.5s						
XAN	**Xi'an**	**28.34**	**32**	P	**P**	**13 09 15.7**	**-1.6**
XAN				PP	**PnPn**	**13 10 04.5**	**-1.7**
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				pmax	pmax		
	comp=Z,73nm,4.3s						
XAN				LR	LR		
	comp=Z,210nm,17.3s						
XAN				LR	LR		
	comp=Z,140nm,21.6s						
XAN				LR	LR		
	comp=Z,220nm,13.7s						
XAN	**Xi'an**	**28.34**	**32**	*e*P	**P**	**13 09 16.0**	**-1.4**
	comp=Z,17nm,1.1s						
XAN	**Xi'an**	**28.34**	**32**	*e*P	**P**	**13 09 16.0**	**-1.4**
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
NIL	**Nilore**	**28.49**	**327**	*e*P	**P**	**13 09 19.2**	**+0.5**
	comp=Z,9.5nm,0.8s						
NIL	**Nilore**	**28.49**	**327**	*e*P	**P**	**13 09 19.2**	**+0.5**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TGY	**Tagaytay City**	**28.95**	**80**	LR	LR	13 20 58.7	
	comp=Z,205nm,18.5s,baz=278,slow=37						
WHN	**Wuhan**	**29.12**	**43**	⇑P	P	13 09 29.3	+5.0
WHN				S	**S**	**13 14 19.9**	**+4.2**
WHN				pmax	pmax		
	comp=Z,18nm,0.5s						
WHN				LR	LR		
	comp=Z,580nm,13.8s						
GTA	**Gaotai**	**29.72**	**13**	*e*P	**P**	**13 09 30.3**	**+0.6**
GTA				pP	sP	13 09 36.2	+0.4
GTA				sP	pwP	13 09 39.2	+1.3
GTA				pmax	pmax		
	comp=Z,16nm,1.1s						
GTA				pmax	pmax		
	comp=Z,93nm,5.8s						
GTA				LR	LR		
	comp=Z,99nm,12.7s						
GTA				LR	LR		
	comp=Z,170nm,13.4s						
GTA				LR	LR		
	comp=Z,120nm,14.4s						
MPSI	**Mapaga**	**29.97**	**108**	P	**P**	**13 09 32.2**	**+0.2**
TTSI	**Tana Toraja**	**31.22**	**114**	P	P	13 09 58.4	+15
SPSI	**Sidrap Palu**	**31.59**	**116**	P	P	13 09 50.9	+4.6
MRSI	**Marisa**	**31.84**	**106**	P	**P**	**13 09 47.9**	**-0.6**
KSH	**Kashi**	**32.04**	**337**	P	**P**	**13 09 50.0**	**-0.1**
KSH				PP	**PnPn**	**13 10 59.1**	**+3.5**
KSH				S	S	13 14 51.9	-10
KSH				SS	**SnSn**	**13 16 50.0**	**-1.4**
KSH				pmax	pmax		
	comp=Z,19nm,0.7s						
KSH				pmax	pmax		
	comp=Z,290nm,4.5s						
KSH				LR	LR		
	comp=Z,2μm,14.6s						
KSH				LR	LR		
	comp=Z,890nm,14.3s						
KSH				LR	LR		
	comp=Z,320nm,13.0s						
KAPI	**Kappang**	**32.06**	**117**	P	**P**	**13 09 50.6**	**+0.1**
	comp=Z,4.6nm,0.4s,baz=290,slow=8.8,SNR=5.3						
BNSI	**Bone**	**32.09**	**116**	P	**P**	**13 09 51.0**	**+0.3**
BKSI	**Bulukumba**	**32.53**	**118**	P	**P**	**13 09 56.9**	**+2.3**
WMQ	**Urumqi**	**33.36**	**355**	P	**P**	**13 10 03.7**	**+2.1**
WMQ				pP	pwP	13 10 09.0	-0.6
WMQ				sP	sP	13 10 14.6	+6.9
WMQ				pmax	pmax		
	comp=Z,29nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.7s						
WMQ				LR	LR		
	comp=Z,250nm,18.7s						
WMQ				LR	LR		
	comp=Z,310nm,21.9s						
WMQ				LR	LR		
	comp=Z,220nm,24.9s						
NRN	**Naryn**	**33.70**	**339**	*e*P	**P**	**13 10 06.9**	**+2.0**
	comp=Z,5.8nm,0.9s						
NRN	**Naryn**	**33.70**	**339**	*e*P	**P**	**13 10 06.9**	**+2.0**
NRN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PDGK	**Podgornoye**	**34.34**	**344**	P	**P**	**13 10 10.7**	**+0.5**
PDGK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**35.03**	**27**	*e*P	**P**	**13 10 18.9**	**+2.7**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,47nm,6.1s						
HHC				LR	LR		
	comp=Z,180nm,16.1s						
HHC				LR	LR		
	comp=Z,170nm,16.1s						
HHC				LR	LR		
	comp=Z,1μm,17.1s						
AAK	**Ala-Archa**	**35.30**	**338**	*e*P	**P**	**13 10 20.9**	**+2.4**
	comp=Z,11nm,1.1s						
AAK	**Ala-Archa**	**35.30**	**338**	*ce*P	**P**	**13 10 20.0**	**+1.5**
AAK				pmax	pmax		
	comp=Z,12nm,1.3s						
EDFI	**Ende, Flores**	**35.60**	**121**	P	**P**	**13 10 17.8**	**-3.6**
BJI	**Beijing**	**36.66**	**32**	⇓*i*P	**P**	**13 10 30.7**	**+0.7**
BJI				S	**S**	**13 16 13.5**	**+1.0**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				LR	LR		
	comp=Z,120nm,19.1s						
BJI				LR	LR		
	comp=Z,57nm,15.1s						
BJI				LR	LR		
	comp=Z,130nm,32.2s						
MK32	**Makanchi Array**	**37.01**	**349**	*e*PcP	**PcP**	**13 12 53.8**	**+0.1**
MKAR	**Makanchi Array**	**37.01**	**349**	P	**P**	**13 10 33.3**	**+0.4**
	comp=Z,8.3nm,0.7s,baz=169,slow=8.2,SNR=70						
MKAR				PcP	**PcP**	**13 12 53.8**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=198,slow=3.6,SNR=4.5						
MKAR				LR	LR	13 29 55.7	
	comp=Z,73nm,18.3s,baz=162,slow=43						
MKAR	**Makanchi Array**	**37.01**	**349**	*ce*P	**P**	**13 10 33.0**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAKZ	**Makanchi**	**37.08**	**349**	*e*P	**P**	**13 10 34.3**	**+0.8**
	comp=Z,8.1nm,1.0s						
MAKZ	**Makanchi**	**37.08**	**349**	*e*P	**P**	**13 10 34.3**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DGZ	**Jazzator, Alta**	**39.22**	**356**	*i* P	**P**	**13 10 52.1**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**39.27**	**16**	P	**P**	**13 10 52.2**	**+0.1**
	comp=Z,9.0nm,0.8s,baz=202,slow=8.6,SNR=9.7						
ULN	**Ulaanbaatar**	**39.47**	**16**	*e*P	**P**	**13 10 54.2**	**+0.3**
	comp=Z,5.5nm,0.8s						
ULN	**Ulaanbaatar**	**39.47**	**16**	*e*P	**P**	**13 10 54.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GEYT	**Alibeck**	**40.53**	**318**	P	**P**	**13 11 04.3**	**+1.7**
	comp=Z,3.0nm,0.5s,baz=126,slow=10,SNR=7.6						
GEYT				LR	LR	13 29 38.0	
	comp=Z,85nm,18.6s,baz=145,slow=39						
ZAK	**Zakamensk**	**40.93**	**11**	*e*P	**P**	**13 11 04.2**	**-1.6**
ZAK				*e*		13 13 00.0	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
TJN	**Taejon**	**41.38**	**46**	*ce*P	**P**	**13 11 08.5**	**-1.1**
KURK	**Kurchatov**	**41.48**	**348**	*e*P	**P**	**13 11 11.0**	**+0.9**
	comp=Z,12nm,1.1s						
KURK	**Kurchatov**	**41.48**	**348**	*e*P	**P**	**13 11 11.0**	**+0.9**
KURK				pmax	pmax		
	comp=Z,13nm,1.1s						
TLY	**Talaya**	**42.24**	**11**	*i* P	**P**	**13 11 17.1**	**+0.7**
TLY				pmax	pmax		
	comp=Z,11nm,1.0s						
KS15	**Wonju Array Si**	**42.27**	**45**	*e*P	**P**	**13 11 16.0**	**-0.9**
KSRS	**Korea Array**	**42.30**	**45**	P	**P**	**13 11 16.0**	**-1.1**
	comp=Z,1.5nm,0.4s,baz=242,slow=8.8,SNR=11						
KSRS				LR	LR	13 29 49.5	
	comp=Z,102nm,18.4s,baz=224,slow=38						
FAKI	**Fak Fak**	**42.68**	**106**	*e*P	**P**	**13 11 19.6**	**-0.9**
	comp=Z,16nm,1.0s						
ZALV	**Zalesovo Beam**	**43.66**	**354**	P	**P**	**13 11 28.2**	**+0.3**
	comp=Z,6.6nm,0.6s,baz=177,slow=9.9,SNR=33						
FITZ	**Fitzroy Crossi**	**44.07**	**130**	P	**P**	**13 11 30.4**	**-1.3**
	comp=Z,5.3nm,0.8s,baz=335,slow=6.9,SNR=14						
CN2	**Changchun**	**44.30**	**35**	*e*P	**P**	**13 11 31.9**	**-1.2**
CN2				*e*PP	**PP**	**13 13 16.7**	**+0.2**
CN2				*e*S	**S**	**13 18 03.1**	**-3.3**
CN2				*e*SS	SS	13 21 12.9	-12
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,130nm,18.0s						
CN2				LR	LR		
	comp=Z,170nm,18.0s						
CN2				LR	LR		
	comp=Z,120nm,18.0s						
NVS	**Novosibirsk**	**44.71**	**353**	*e*P	**P**	**13 11 36.2**	**0.0**
HIA	**Hailar**	**45.21**	**26**	*i* P	**P**	**13 11 39.1**	**-1.3**
HIA				pmax	pmax		
	comp=Z,18nm,0.9s						
BRVK	**Borovoye**	**45.76**	**342**	*e*P	**P**	**13 11 45.3**	**+0.7**
	comp=Z,3.7nm,1.0s						
BRVK	**Borovoye**	**45.76**	**342**	*e*P	**P**	**13 11 45.3**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ABKAR	**Akbulak array**	**46.70**	**332**	*e*P	**P**	**13 11 53.6**	**+1.5**
	comp=Z,4.2nm,0.8s						
MAJO	**Matsushiro**	**49.41**	**51**	*e*P	**P**	**13 12 13.3**	**0.0**
MAJO	**Matsushiro**	**49.41**	**51**	*e*P	**P**	**13 12 11.9**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAT	**Matsushiro**	**49.41**	**51**	P	**P**	**13 12 10.7**	**-2.6**
MJAR	**Matsushiro Arr**	**49.41**	**51**	P	**P**	**13 12 13.3**	**0.0**
	comp=Z,1.3nm,0.8s,baz=222,slow=7.0,SNR=5.5						
MJAR				LR	LR	13 35 09.9	
	comp=Z,57nm,19.4s,baz=245,slow=39						
BOD	**Bodaibo**	**50.26**	**15**	*e*P	**

SVE pmax pmax
comp=Z,21nm,1.1s
AKH Akhalkalaki 52.12 315 P **P 13 12 35.6 +1.8**
AKH pmax pmax
comp=Z,10.0nm,0.8s
ZEI Tsey 52.37 317 *e*P **P 13 12 37.2 +1.5**
ZEI pmax pmax
comp=Z,6.0nm,0.6s
ARU Arti 52.48 338*d i*P **P 13 12 36.2 +0.1**
ARU 13 14 33.1
ARU S **S 13 20 02.4 +0.7**
ARU SS **SS 13 23 38.9 -0.8**
ARU pmax pmax
comp=Z,8.0nm,1.1s
NEY Neytrino 53.34 317 *i* P **P 13 12 43.6 +0.7**
NEY pmax pmax
comp=Z,1.0nm,0.8s
KBZ Khabaz 53.41 317 P **P 13 12 45.0 +1.9**
comp=Z,3.6nm,0.8s,baz=84,slow=7.0,SNR=8.5
AS31 Alice Springs 53.58 130 *e*P **P 13 12 44.0 -0.7**
comp=Z,3.3nm,1.0s
ASAR Alice Springs 53.58 130 P **P 13 12 44.0 -0.7**
comp=Z,7.6nm,0.8s,baz=307,slow=7.4,SNR=48
KIV Kislovodsk 53.64 318 *e*P **P 13 12 45.5 +0.5**
KIV pmax pmax
comp=Z,62nm,1.0s
KIV MLR MLR
comp=Z,125nm,17.0s
YSS Yuzh-Sakhalins 56.38 40 *e*P **P 13 13 04.3 -0.3**
comp=Z,13nm,0.7s
YSS Yuzh-Sakhalins 56.38 40 *e*P **P 13 13 03.2 -1.3**
YSS pmax pmax
comp=Z,20nm,0.8s
VRH Novokhopyorsk 57.31 325 *e*P **P 13 13 09.9 -1.2**
VRH pmax pmax
comp=Z,20nm,0.4s
ANN Anapa 57.46 317 *e*P **P 13 13 09.0 -3.3**
ANN *e**PP **pwP 13 13 19.9 -1.3**
ANN *e* 13 15 18.3
ANN *e*S **S 13 21 04.9 -3.9**
ANN pmax pmax
comp=Z,31nm,1.0s
DIKM Dikmen 58.04 313⇑*i*P **P 13 13 17.8 +1.3**
YAK Yakutsk 58.38 20 *e*P **P 13 13 17.7 -0.7**
VORD Divnogorie 58.59 324 *e*P **P 13 13 20.4 +0.4**
VORD pmax pmax
comp=Z,10.0nm,1.2s
VSR Storozhevoye 58.76 324 *e*P **P 13 13 19.6 -1.7**
VSR pmax pmax
comp=Z,10.0nm,1.3s
BR101 Keskin Array S 58.76 310 *e*P **P 13 13 20.6 -1.1**
BRTR Keskin Array B 58.76 310 P **P 13 13 20.6 -1.1**
comp=Z,2.9nm,0.7s,baz=118,slow=7.6,SNR=17
BRTR Keskin Array B 58.76 310*ce*P **P 13 13 21.7 0.0**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
NRIK Noril'sk 58.83 358 P **P 13 13 21.2 -0.2**
comp=Z,2.6nm,0.4s,baz=172,slow=4.6,SNR=7.3
LPSR Galich'ya Gora 59.47 326 *e*P **P 13 13 25.9 -0.3**
LPSR pmax pmax
comp=Z,20nm,0.6s
PRGR Permogore 60.92 337 *e*P **P 13 13 33.9 -2.0**
PRGR pmax pmax
comp=Z,16nm,0.8s
MOS Moscow 61.50 329 *e*P **P 13 13 39.8 -0.2**
OBN Obninsk 61.79 328*de*P **P 13 13 42.4 +0.5**
OBN *e* 13 14 20.4
OBN *e* 13 15 58.3
OBN *e*S **S 13 21 57.2 -7.1**
OBN pmax pmax
comp=Z,38nm,1.7s
OBN MLR MLR
comp=Z,51nm,16.0s
KLMR Klimovskoe 62.98 334 *e*P **P 13 13 48.9 -0.9**
KLMR pmax pmax
comp=Z,17nm,1.3s
TIRR Tirgusor 63.58 315⇑*i*P **P 13 13 54.6 +0.5**
TIRR Tirgusor 63.58 315 ⇑P **P 13 13 54.6 +0.5**
STKA Stephens Creek 63.78 133 P **P 13 13 55.9 +0.3**
comp=Z,1.8nm,0.5s,baz=335,slow=8.5,SNR=9.0
STKA LR LR 13 43 23.7
comp=Z,61nm,19.4s,baz=209,slow=38
STKA Stephens Creek 63.78 133 *e*P **P 13 13 55.9 +0.3**
comp=Z,0.9nm,0.9s
STKA Stephens Creek 63.78 133 *e*P **P 13 13 55.9 +0.3**
STKA pmax pmax
comp=Z,1.0nm,0.9s
AKASG Malin Array Be 64.50 321 P **P 13 13 58.9 -1.1**
comp=Z,0.3nm,0.3s,baz=90,slow=5.3,SNR=5.3
AKASG Malin Array Be 64.50 321*ce*P **P 13 14 00.3 +0.3**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 64.50 321 *e*P **P 13 13 58.9 -1.1**
comp=Z,3.9nm,0.8s
AKBB Malin Array Si 64.50 321 *e*P **P 13 13 58.9 -1.1**
AKBB pmax pmax
comp=Z,4.0nm,0.8s
KIEV Kiev 64.51 321⇓*i*P **P 13 13 59.7 -0.4**
KIEV Kiev 64.51 321 *i* P **P 13 13 59.6 -0.5**
KIEV pmax pmax
comp=Z,3.0nm,0.9s
VRI Vrincioaia 65.02 316⇑*i*P **P 13 14 05.2 +1.6**
VRI Vrincioaia 65.02 316 ⇑P **P 13 14 05.2 +1.6**
PLOR Plostina 65.07 316⇑*i*P **P 13 14 05.7 +1.8**
PLOR Plostina 65.07 316 ⇑P **P 13 14 05.7 +1.8**
TESR Tescani 65.20 316⇓*i*P **P 13 14 05.4 +0.7**
TIXI Tiksi 65.20 12 *e*P **P 13 14 03.2 -1.0**
comp=Z,12nm,1.1s
TIXI Tiksi 65.20 12*ce*P **P 13 14 02.8 -1.4**
TIXI pmax pmax
comp=Z,10.0nm,1.0s
MLR Muntele Rosu 65.49 315⇑*i*P **P 13 14 07.8 +1.0**
MLR Muntele Rosu 65.49 315 ⇑P **P 13 14 07.8 +1.0**
BIZ Bicaz 65.65 317⇓*i*P **P 13 14 08.5 +0.9**
MA2 Magadan 65.68 29*ce*P **P 13 14 07.3 -0.2**
MA2 pmax pmax
comp=Z,24nm,1.7s
VOIR 66.11 315⇑*i*P **P 13 14 10.9 +0.2**
VOIR 66.11 315 ⇑P **P 13 14 10.9 +0.2**
ARR Arges 66.38 315⇑*i*P **P 13 14 12.7 +0.3**
VTS Vitosha 67.00 312⇑*i*P **P 13 14 17.4 +0.9**
VTS Vitosha 67.00 312 ⇑P **P 13 14 17.4 +0.9**
PETK Petropavlovsk- 67.42 37 LR LR 13 47 44.9
comp=Z,84nm,18.1s,baz=225,slow=40
SEY Seymchan 67.66 26*ce*P **P 13 14 19.1 -1.0**
HERR Herculane 67.87 314⇑*i*P **P 13 14 18.2 -3.6**
DRGR 67.92 316⇓*i*P **P 13 14 22.9 +0.7**
DRGR 67.92 316 ⇓P **P 13 14 22.9 +0.7**
PET Petropavlovsk 67.97 37 *i* P **P 13 14 22.0 -0.2**
PET pmax pmax
comp=Z,4.0nm,0.2s
SIRR Siria 68.57 316⇑*i*P **P 13 14 27.3 +1.1**
FIA0 FINESS Array S 69.19 332 *e*P **P 13 14 28.9 -0.8**
FIA0 FINESS Array S 69.19 332 *e*P **P 13 14 28.9 -0.8**
FINES FINESS Array B 69.19 332 P **P 13 14 28.9 -0.8**
comp=Z,5.4nm,0.8s,baz=106,slow=6.9,SNR=17
FINES LR LR 13 48 20.3
comp=Z,52nm,20.5s,baz=57,slow=39
FINES FINESS Array B 69.19 332 *i* P **P 13 14 29.7 0.0**
FINES pmax pmax
comp=Z,5.0nm,0.8s
MSF Maaselka 69.41 337 P **P 13 14 31.7 +0.7**
MSF pmax pmax
comp=Z,16nm,0.9s
SUF Sumiainen 69.54 333 P **P 13 14 32.6 +0.8**
SUF pmax pmax
comp=Z,18nm,0.9s
VYHS Vyhne 70.73 318 *e*P P 13 14 45.3 +5.8
VYHS Vyhne 70.73 318 *e*P P 13 14 45.3 +5.8
ARCES ARCESS Array B 71.93 340 P **P 13 14 46.6 +0.3**
comp=Z,2.1nm,0.6s,baz=87,slow=6.2,SNR=10.0
BRG Berggiesshubel 74.09 320 *e*P **P 13 15 00.3 +0.9**
comp=Z,4.3nm,0.9s
BRG Berggiesshubel 74.09 320 *e*P **P 13 15 00.3 +0.9**
BRG pmax pmax
comp=Z,1.0nm,0.9s
GERES GERESS Array B 74.15 318 P **P 13 14 60.0 0.0**
comp=Z,1.4nm,0.7s,baz=76,slow=5.6,SNR=11
GERES GERESS Array B 74.15 318 P **P 13 15 00.0 0.0**
BILL Bilibino 74.63 22 *e*P **P 13 14 59.9 -2.3**
comp=Z,3.5nm,0.7s
BILL Bilibino 74.63 22⇑*e*P **P 13 15 01.8 -0.4**
BILL *e* 13 15 19.9
BILL *e* 13 17 50.7
BILL *e*S **SKSac 13 25 06.0 -3.6**
BILL pmax pmax
comp=Z,11nm,2.5s
BILL MLR MLR
comp=Z,86nm,19.0s
CLL Collm 74.70 320 *i* P **P 13 15 03.3 +0.3**
comp=Z,4.0nm,1.1s
CLL Collm 74.70 320 *i* P **P 13 15 03.3 +0.3**
CLL pmax pmax
comp=Z,4.0nm,1.1s
BOSA Boshof 74.82 237 P **P 13 15 04.8 +0.6**
comp=Z,3.4nm,0.8s,baz=109,slow=6.7,SNR=4.9
BOSA LR LR 13 45 43.2
comp=Z,72nm,19.7s,baz=33,slow=34
NB2 NORSAR Subarra 76.18 330 P **P 13 15 10.9 -0.5**
comp=Z,3.7nm,0.9s,baz=94,slow=5.9
NOA NORSAR Array B 76.18 330 P **P 13 15 10.6 -0.8**
comp=Z,1.5nm,0.7s,baz=95,slow=5.5,SNR=5.2
NOA LR LR 13 51 55.3
comp=Z,37nm,20.9s,baz=95,slow=38
KEST Kesra 77.63 304 P **P 13 15 20.7 +0.6**
comp=Z,14nm,0.9s,baz=17,slow=2.2,SNR=4.8
KEST LR LR 13 55 14.3
comp=Z,37nm,19.6s,baz=252,slow=40
BFO Black Forest 77.72 317 *i* P **P 13 15 21.3 +1.0**
SENIN Lac Senin/Sane 78.51 315 *e*P **P 13 15 25.6 +0.7**
comp=Z,10nm,1.0s
LPL La Plagne 78.95 314 *e*P **P 13 15 27.7 +0.3**
LPL pmax pmax
comp=Z,11nm,0.9s
SSB Saint Sauveur 80.51 314 *e*P **P 13 15 36.4 +0.8**
comp=Z,5.7nm,0.8s
SSB Saint Sauveur 80.51 314 *e*P **P 13 15 36.4 +0.8**
SSB pmax pmax
comp=Z,6.0nm,0.8s
MAW Mawson 80.59 191 P **P 13 15 36.8 +1.4**
comp=Z,1.6nm,0.7s,baz=22,slow=7.0,SNR=4.7
MAW Mawson 80.59 191 *e*P **P 13 15 36.8 +1.4**
comp=Z,0.9nm,1.0s
MAW Mawson 80.59 191 *e*P **P 13 15 36.8 +1.4**
MAW pmax pmax
comp=Z,1.0nm,1.0s
CAF Calviac 82.29 314 *e*P **P 13 15 47.8 +2.7**
CAF pmax pmax
comp=Z,5.0nm,0.9s
TAM Tamanrasset 82.35 292 *e*P **P 13 15 48.5 +2.6**
comp=Z,6.9nm,1.1s
TAM Tamanrasset 82.35 292 *e*P **P 13 15 48.5 +2.6**
TAM pmax pmax
comp=Z,7.0nm,1.1s
TORD Torodi Ar. Bea 87.48 283 P **P 13 16 13.1 +1.4**
comp=Z,1.0nm,0.9s,baz=123,slow=5.5,SNR=4.9
TORD LR LR 13 54 46.7
comp=Z,47nm,19.2s,baz=330,slow=35
ESDC Sonseca Array 87.56 310 P **P 13 16 11.6 -0.2**
comp=Z,0.2nm,0.3s,baz=66,slow=4.5,SNR=4.0
SUMG Summit 91.01 347 *e*P **P 13 16 31.0 +3.3**
comp=Z,6.0nm,1.0s
SUMG Summit 91.01 347 *e*P **P 13 16 31.0 +3.3**
SUMG pmax pmax
comp=Z,6.0nm,1.0s
SVW2 Sparrevohn 91.58 27 *e*P **P 13 16 31.7 +1.6**
comp=Z,6.1nm,1.0s
ILAR Eielson Array 93.28 21 P **P 13 16 36.4 -1.4**
comp=Z,0.9nm,0.8s,baz=297,slow=4.9,SNR=9.6
ILAR PP **PP 13 20 23.6 +2.6**
comp=Z,0.6nm,1.0s,baz=292,slow=7.9,SNR=4.3
DBIC Dimbokro 95.02 278 LR LR 14 00 15.1
comp=Z,23nm,18.2s,baz=108,slow=36
PDAR Pinedale Array 123.59 19 PKP **PKiKP 13 22 21.8 0.0**
comp=Z,0.6nm,0.7s,baz=325,slow=2.3,SNR=6.0
NVAR Mina Array Bea 123.92 28 PKP **PKiKP 13 22 23.6 +1.1**
comp=Z,1.2nm,0.8s,baz=262,slow=1.1,SNR=9.1
R11A Troy Canyon, C 125.20 26 *e*PKPdf **PKiKP 13 22 26.3 +1.3**
ECSD EROS Data Cent 125.52 7 *e*PKPdf **PKiKP 13 22 25.7 +0.4**
MSU Marysvale 126.45 23 *e*PKPdf **PKiKP 13 22 29.4 +1.8**
MSU Marysvale 126.45 23 *e*PKIKP **PKiKP 13 22 29.4 +1.8**
PLCA Paso Flores 145.97 205 PKPbc **PKPab 13 23 04.9 +1.0**
comp=Z,3.3nm,0.8s,baz=158,slow=3.4,SNR=6.3
SDDR Presa de Saban 146.15 330 *e*PKPdf **PKPab 13 23 05.9 +0.7**
CPUP Villa Florida 146.64 238 PKPbc **PKiKP 13 23 08.0 -0.6**
comp=Z,1.9nm,0.6s,baz=126,slow=8.7,SNR=4.1
CPUP Villa Florida 146.64 238 PKP2 **PKiKP 13 23 08.0 -0.6**
PTGA Pitinga 150.04 287 *e*PKPbc **PKiKP 13 23 16.4 +0.5**

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*SOME **06** 13:08:05.7, 39.°08N×68.°85E, h15km*
NNC 06 13:08:15.2±3.5, 39.°99N×67.°75E, h0km, mb3.5, mpv3.1, 2C-3D, Error ellipse: s-maj=47.5km s-min=24.8km az=147.0, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**2.76**	**38**	*e*P	Pn	13 09 02.9	+2.0
IUG	12nm,0.1s			*e*S	Sg	13 09 46.0	+2.0
	48nm,0.4s						
KK31	**Karatay Array**	**3.74**	**33**	⇑Pn	Pn	13 09 14.5	+0.3
	2.2nm,0.5s,baz=339,slow=41,SNR=20			⇓Pg	Pb	13 09 22.7	+0.5
KK31	3.7nm,0.6s,baz=223,slow=17,SNR=6.0			⇓Lg	Lg	13 10 14.9	
	18nm,0.7s,baz=212,slow=33,SNR=12						
MRKS	**Merke**	**4.96**	**54**	*e*P	Pn	13 09 35.2	+4.2
MRKS	5.8nm,0.4s			*e*S	Sb	13 10 41.0	-2.1
	6.9nm,0.6s						
AAK	**Ala-Archa**	**5.73**	**60**	⇓Lg	Lg	13 11 17.8	
	7.8nm,0.9s						
TKM2	**Tokmak 2**	**6.58**	**61**	⇑Lg	Lg	13 11 43.4	
	7.2nm,0.9s						

DDA 06 13:12:20.7, 39.°12N×29.°04E, h7km±2km, ML2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.35**	**95**	*i* P	Pb	13 12 28.9	-0.4
USAK	**Uak-Merkez**	**0.41**	**182**	*i* P	Pg	13 12 29.3	+0.7
DURS	**Dursunbey**	**0.65**	**318**	*i* P	Pb	13 12 34.5	+0.1
DURS				IAML_P			
	comp=Z,430nm,0.2s						
MANT	**Manisa**	**0.73**	**211**	*i* P	Pg	13 12 35.2	+0.4
KHAL	**Karahalli**	**0.83**	**154**	*i* P	Pb	13 12 38.1	+0.6
ULDT	**Uludag**	**1.02**	**4**	*i* P	Pb	13 12 40.8	0.0
ULDT				IAML_P			
	comp=Z,355nm,0.2s						

MAN 06 13:36:56.5, 7.°32N×124.°79E, h1km, mb4.9, ML3.8, MS3.8, Mindanao

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JMA 06 13:41:29.2±0.2, 38.°06N×143.°64E, h45km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.73**	**279**	P	Pn	13 41 57.7	+0.9
JIKH				S	Sn	13 42 18.2	+0.5
JIO	**Ouri**	**1.85**	**283**	P	Pn	13 41 59.4	+1.0
JIO				S	Sn	13 42 21.3	+0.8
OFUJ	**Ofunato**	**1.85**	**304**	P	Pn	13 41 59.4	+1.0
JKMT	**Kesennumamotoy**	**1.86**	**294**	P	Pn	13 41 59.6	+1.1
JKMT				*e*S	Sn	13 42 22.1	+1.3
JMK	**Ichinoseki**	**2.10**	**296**	P	Pn	13 42 03.2	+1.4
JMK				S	Sn	13 42 28.4	+1.7
JOM	**Ohasama**	**2.31**	**308**	P	Pn	13 42 06.3	+1.5
JOM				S	Sn	13 42 34.3	+2.2
JFT	**Otama**	**2.67**	**259**	P	Pn	13 42 11.6	+1.9
JYK	**Kaneyama**	**2.71**	**289**	P	Pn	13 42 12.6	+2.3
JYK				S	Sn	13 42 44.9	+3.0
JANG	**Nango**	**2.84**	**325**	P	Pn	13 42 13.3	+1.3
JAG	**Ashikaga**	**3.72**	**245**	P	Pn	13 42 24.7	+0.6
JOT	**Ohata**	**3.87**	**330**	P	Pn	13 42 28.3	+2.1
JNBK	**Urakawa-nobuka**	**4.27**	**351**	P	Pn	13 42 32.8	+1.2
JNBK				*e*S	Sn	13 43 20.6	+0.4
JRY	**Ryogami san**	**4.30**	**243**	P	Pn	13 42 33.2	+1.0
JRY				*e*S	Sn	13 43 19.6	-1.5
JKB	**Kayabe**	**4.32**	**333**	P	Pn	13 42 34.1	+1.9
JKB				S	Sn	13 43 21.3	0.0
JCH	**Churui**	**4.55**	**357**	P	Pn	13 42 35.9	+0.4
JCH				*e*S	Sn	13 43 25.0	-2.2
JOD2	**Odawara 2**	**4.60**	**234**	P	Pn	13 42 36.7	+0.5
JOD2				*e*S	Sn	13 43 26.0	-2.4

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*ISK **06** 13:51:32.5, 40.°54N×36.°66E, h2km, ML3.8/22*
*DDA **06** 13:51:32.4, 40.°56N×36.°64E, h15km±1km, ML3.7*
*IDC **06** 13:51:32.5±1.2, 40.°45N×36.°69E, h0km, mb3.5/3, mb1 3.8/7, mb1mx3.4/39, mbtmp3.6/7, ML3.8/4, MS2.7/2, Ms1 2.7/2, ms1mx2.2/38, Error ellipse: s-maj=29.0km s-min=7.9km az=157.0*
*ISCJB **06** 13:51:33.5±0.4, 40.°58N±0.°02×36.°65E±0.°02, h7km±3km, mb3.6/3, MS2.5/1, Error ellipse: s-maj=3.4km s-min=2.7km az=1.4*
ISC 06 13:51:33.8±0.9, 40.°54N±0.°02×36.°65E±0.°02, h8km±7km, n80, σ1°42/89, mb3.7/3, 9C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERBA	**Erbaa**	**0.17**	**31**	*i* Pn	**Pg**	**13 51 37.0**	**-0.2**
ERBA				*i* S	**Sg**	**13 51 39.5**	**-0.1**
ERBA				IAML_P			
TOKT	**Tokat**	**0.23**	**199**	PG	**Pg**	**13 51 38.4**	**0.0**
TOKT				SG	**Sg**	**13 51 42.5**	**+0.9**
TOKA	**Tokat**	**0.25**	**210**	*i* P	**Pg**	**13 51 39.3**	**+0.5**
TOKA				IAML_P			
	comp=Z,291μm,0.2s						
RSDY	**Resadiye-TOKAT**	**0.54**	**105**	PG	**Pg**	**13 51 43.7**	**-0.5**
RSDY				SG	**Sg**	**13 51 51.8**	**+0.5**
AMSY	**Amasya-Merkez**	**0.62**	**279**	*i* P	**Pg**	**13 51 45.8**	**-0.1**
AMSY				*i* S	**Sg**	**13 51 54.8**	**+0.8**
SVSK	**Karacayir**	**0.68**	**156**	PG	**Pg**	**13 51 46.2**	**-0.6**
SVSK				SG	**Sb**	**13 51 56.8**	**-0.5**
KVT	**Kavak**	**0.71**	**320**	PG	**Pg**	**13 51 46.8**	**-0.6**
SCER	**sogukcermik**	**0.77**	**151**	*i* P	**Pg**	**13 51 47.8**	**-0.8**
SCER				IAML_P			
	comp=Z,20μm,0.2s						
HAVZ	**Havza**	**0.88**	**308**	*i* P	**Pg**	**13 51 50.4**	**-0.3**
HAVZ				*i* S	**Sb**	**13 52 03.8**	**+0.5**
ORDU	**Ordu-Boztepe**	**1.02**	**64**	*i* P	**Pg**	**13 51 52.5**	**-1.0**
ORDU				IAML_P			
	comp=Z,17μm,0.2s						
CUZAR	**Zara_SIVAS**	**1.08**	**127**	*i* P	**Pg**	**13 51 53.4**	**-1.1**
CUSAR	**Sarkisla-SIVAS**	**1.16**	**195**	*i* P	**Pg**	**13 51 55.3**	**-0.8**
CUALT	**Altinyayla-SIV**	**1.27**	**176**	*i* P	**Pn**	**13 51 57.1**	**-0.8**
COAL	**Corum-Alaca**	**1.30**	**258**	*i* P	**Pn**	**13 51 56.4**	**-2.0**
COAL				*i* S	**Sb**	**13 52 11.4**	**-4.0**
COAL				IAML_P			
	comp=Z,2μm,0.3s						
CUKAN	**kangal_SIVAS**	**1.38**	**152**	*i* P	**Pn**	**13 51 59.2**	**-0.2**
DIKM	**Dikmen**	**1.53**	**317**	PN	**Pn**	**13 52 01.7**	**+0.4**
DIKM	**Dikmen**	**1.53**	**317**	⇓*i*P	**Pn**	**13 52 01.6**	**+0.3**
DIKM	**Dikmen**	**1.53**	**317**	S	**Sn**	**13 52 18.8**	**-2.6**
CORM	**Corum**	**1.58**	**257**	PN	**Pn**	**13 52 02.7**	**+0.5**
SIRC	**Yozgat**	**1.66**	**224**	*i* P	**Pn**	**13 52 03.4**	**0.0**
SIRC				*i* S	**Sn**	**13 52 25.2**	**+0.2**
SIRC				IAML_P			
	comp=Z,7μm,0.4s						
KAGI	**orum-Kargı**	**1.75**	**291**	*i* P	**Pn**	**13 52 05.1**	**+0.7**
KAGI				IAML_P			
	comp=Z,10μm,0.4s						
BNN	**Bunyan**	**1.79**	**200**	PN	**Pn**	**13 52 05.8**	**+0.6**
CUGUR	**Gurin_SVAS**	**1.88**	**165**	*i* P	**Pb**	**13 52 09.2**	**+0.8**
KEMA	**Kemaliye**	**1.91**	**131**	*i* P	**Pb**	**13 52 08.2**	**-0.7**
KEMA				IAML_P			
	comp=Z,3μm,0.2s						
HEKM	**Malatya_Hekimh**	**1.94**	**148**	*i* P	**Pb**	**13 52 09.8**	**+0.2**
HEKM				IAML_P			
	comp=Z,4μm,0.2s						
CDAG	**Cicekdag**	**1.97**	**243**	*i* P	**Pb**	**13 52 09.2**	**-0.7**
CDAG				IAML_P			
	comp=Z,11μm,0.5s						
REFA	**Refahiye_ERZN**	**1.99**	**124**	*i* P	**Pn**	**13 52 05.0**	**-2.9**
REFA				*i* S	**Sn**	**13 52 28.4**	**-4.7**
REFA				IAML_P			
	comp=Z,3μm,0.3s						
KELT	**Kelkit**	**2.03**	**100**	*i* P	**Pn**	**13 52 08.8**	**+0.3**
KELT				IAML_P			
	comp=Z,1μm,0.2s						
DARE	**Darende-Malaty**	**2.07**	**161**	PN	**Pn**	**13 52 09.7**	**+0.8**
DELI	**KIRIKKALE**	**2.15**	**256**	*i* P	**Pn**	**13 52 10.6**	**+0.5**
DELI				IAML_P			
	comp=Z,3μm,0.4s						
AVNS	**Nevsehir-Avano**	**2.22**	**219**	*i* P	**Pn**	**13 52 12.0**	**+1.1**
ELBS	**KAHRAMANMARAS**	**2.24**	**170**	*i* P	**Pg**	**13 52 16.3**	**-0.5**
ILGA	**Ilgaz**	**2.28**	**284**	*i* P	**Pn**	**13 52 13.7**	**+1.8**
ILGA				IAML_P			
	comp=Z,5μm,0.3s						
CANT	**Cankiri**	**2.31**	**273**	PN	**Pn**	**13 52 13.1**	**+1.0**
MACK	**Trabzon**	**2.41**	**79**	*i* P	**Pb**	**13 52 16.0**	**-1.4**
MACK				IAML_P			
	comp=Z,3μm,0.1s						
KTUT	**Trabzon**	**2.41**	**78**	PN	**Pn**	**13 52 14.8**	**+1.3**
KTUT	**Trabzon**	**2.41**	**78**	⇑*i*P	**Pn**	**13 52 13.9**	**+0.4**
KTUT	**Trabzon**	**2.41**	**78**	S	**Sn**	**13 52 43.7**	**+0.5**
BRTR	**Keskin Array B**	**2.44**	**252**	Pn	**Pn**	**13 52 14.7**	**+0.6**
	comp=Z,5.0nm,0.3s,baz=68,slow=13,SNR=52						
BRTR				Lg	Lg	13 52 52.4	
	comp=Z,4.0nm,0.3s,baz=78,slow=18,SNR=4.5						
AKCD	**Akcadag**	**2.45**	**156**	*i* P	**Pn**	**13 52 15.8**	**+1.6**
AKCD				IAML_P			
	comp=Z,855nm,0.2s						
ELDT	**Eldivan**	**2.45**	**270**	*i* P	**Pb**	**13 52 17.4**	**-0.8**
ELDT				IAML_P			
	comp=Z,3μm,0.4s						
KIRS	**Kırehir-Merke**	**2.53**	**237**	*i* P	**Pn**	**13 52 16.1**	**+1.0**
KIRS				IAML_P			
	comp=Z,1μm,0.4s						
ERZN	**Erzincan**	**2.55**	**111**	PN	**Pn**	**13 52 16.5**	**+1.0**
SAIM	**ADANA**	**2.60**	**190**	*i* P	**Pn**	**13 52 17.8**	**+1.6**
SAIM				IAML_P			
	comp=Z,555nm,0.1s						
YAHY	**KAYSERI_Yahyal**	**2.64**	**203**	*i* P	**Pn**	**13 52 18.9**	**+2.2**
YAHY				IAML_P			
	comp=Z,249nm,0.1s						
TNCL	**Tunceli-Merkez**	**2.65**	**122**	*i* P	**Pn**	**13 52 17.4**	**+0.5**
TNCL				IAML_P			
	comp=Z,381nm,0.4s						
BAYT	**Aydıntepe-Bayb**	**2.67**	**92**	PN	**Pn**	**13 52 18.3**	**+1.0**
YAYX	**Yaylak**	**2.71**	**235**	PN	**Pn**	**13 52 18.3**	**+0.6**
ELZG	**Elazig**	**2.73**	**138**	*i* P	**Pb**	**13 52 20.6**	**-2.3**
ELZG				IAML_P			
	comp=Z,980nm,0.3s						
SERE	**Serefilkochisa**	**2.86**	**237**	PN	**Pn**	**13 52 21.2**	**+1.4**
AFSR	**Afar-Bala (An**	**2.95**	**249**	PN	**Pn**	**13 52 22.4**	**+1.3**
ANTO	**Ankara**	**3.02**	**258**	PN	**Pn**	**13 52 23.3**	**+1.3**
ANTO	**Ankara**	**3.02**	**258**	⇑*i*P	**Pn**	**13 52 24.4**	**+2.4**
LOD	**Lodumlu**	**3.04**	**259**	PN	**Pn**	**13 52 23.7**	**+1.5**
KOZT	**Kozan**	**3.12**	**192**	PN	**Pn**	**13 52 24.9**	**+1.6**
YEDI	**Yedisu-Bingol**	**3.19**	**109**	PN	**Pn**	**13 52 25.7**	**+1.3**
KURC	**Kurucasile-Bar**	**3.22**	**295**	PN	**Pn**	**13 52 26.0**	**+1.4**
SULT	**Sultanhani-AKS**	**3.37**	**227**	PN	**Pn**	**13 52 28.3**	**+1.5**
KARA	**Karaisali**	**3.50**	**201**	PN	**Pn**	**13 52 30.2**	**+1.7**
BCA	**Borcka**	**3.87**	**75**	⇑*i*P	**Pn**	**13 52 34.5**	**+0.9**
BCA	**Borcka**	**3.87**	**75**	S	**Sn**	**13 53 20.3**	**+1.0**
BATM	**Batumi**	**3.96**	**73**	⇓*i*P	**Pn**	**13 52 35.7**	**+0.9**
BATM	**Batumi**	**3.96**	**73**	S	**Sn**	**13 53 21.4**	**-0.1**
SEVA	**Sevastopol**	**4.55**	**332**	⇑*i*P	**Pn**	**13 52 43.5**	**+0.6**
SEVA	**Sevastopol**	**4.55**	**332**	S	**Sn**	**13 53 35.5**	**-0.4**
KBZ	**Khabaz**	**5.63**	**54**	Pn	**Pn**	**13 52 59.6**	**+1.9**
	comp=Z,1.9nm,0.3s,baz=227,slow=7.4,SNR=16						
KBZ				Sn	**Sn**	**13 54 04.9**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=270,slow=18,SNR=2.8						
KVAR	**Kislovodsk Arr**	**5.64**	**51**	Pn	**Pn**	**13 53 00.8**	**+2.8**
	baz=254,slow=20,SNR=11						
KVAR				Sn	**Sn**	**13 54 05.5**	**+2.5**
	baz=283,slow=19,SNR=4.3						
GNI	**Garni**	**6.20**	**91**	LR	LR	13 55 51.6	
	comp=Z,67nm,19.7s,baz=291,slow=42						
MANR	**Mangalia**	**6.82**	**301**	⇑*i*P	**Pn**	**13 53 13.3**	**-0.8**
MANR	**Mangalia**	**6.82**	**301**	S	**Pg**	**13 53 41.1**	**-3.3**
TIRR	**Tirgusor**	**7.23**	**305**	⇑*i*P	**Pn**	**13 53 18.4**	**-1.3**
TIRR	**Tirgusor**	**7.23**	**305**	S	**Pg**	**13 53 51.5**	**-0.7**
CFR	**Carcaliu**	**7.78**	**309**	⇑*i*P	**Pn**	**13 53 26.4**	**-0.8**
MLR	**Muntele Rosu**	**9.27**	**306**	Pn	**Pn**	**13 53 49.0**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=134,slow=12,SNR=4.1						
BIZ	**Bicaz**	**9.95**	**313**	⇑*i*P	**Pn**	**13 53 56.6**	**-0.4**
BURAR	**Bucovina Array**	**10.84**	**315**	⇑*i*P	**Pn**	**13 54 08.5**	**-0.7**
FINES	**FINESS Array B**	**21.91**	**346**	P	**P**	**13 56 29.4**	**+2.3**
	comp=Z,1.4nm,0.5s,baz=154,slow=11,SNR=13						
NOA	**NORSAR Array B**	**25.77**	**331**	LR	LR	14 09 40.8	
	comp=

*ISCJB **06** 13:51:42.3±1.1, 36°.03N±0°.09×71°.1E±0°.2, h200km, mb3.4/1, Error ellipse: s-maj=20.6km s-min=11.5km az=12.4*
*NNC **06** 13:51:46.8±12.0, 36°.77N×70°.44E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=100.3km s-min=86.9km az=165.0*
*IDC **06** 13:51:47.2±6.0, 36°.30N×71°.57E, h226km±54km, mb3.2/1, mb1 3.1/7, mb1mx2.8/49, mbtmp3.8/7, Error ellipse: s-maj=51.1km s-min=31.1km az=39.0*

ISC 06 13:51:43.8±1.6, 36°.2N±0°.1×71°.0E±0°.2, h200km, n19, σ2§13/23, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=54	**6.27**	**19**	P	**Pn**	**13 53 16.7**	**+1.8**
UCH	**Uchtor** SNR=32	**6.60**	**23**	P	**Pn**	**13 53 21.9**	**+2.8**
KZA	**Kyzart** SNR=24	**6.72**	**28**	P	**Pn**	**13 53 22.1**	**+1.4**
EKS2	**Erkin-Say** SNR=5.5	**6.79**	**17**	P	**Pn**	**13 53 23.7**	**+2.4**
KK31	**Karatay Array** 5.2nm,0.4s,baz=187,slow=13,SNR=60	**6.90**	**357**	⇑P	**Pn**	**13 53 24.5**	**+1.9**
KK31	3.9nm,0.4s,baz=187,slow=24,SNR=9.9			⇓S	**Sn**	**13 54 36.9**	**-4.2**
AAK	**Ala-Archa** 4.9nm,0.3s,baz=180,slow=5.8,SNR=22	**6.96**	**22**	P	**Pn**	**13 53 25.2**	**+1.7**
AAK	0.9nm,0.3s,baz=318,slow=22,SNR=8.9			S	**Sn**	**13 54 40.1**	**-2.7**
AAK	**Ala-Archa** SNR=15	**6.96**	**22**	P	**Pn**	**13 53 25.5**	**+1.9**
AAK	**Ala-Archa** 8.3nm,0.5s	**6.96**	**22**	⇓P	**Pn**	**13 53 25.4**	**+1.9**
AAK	6.1nm,0.6s			⇑S	**Sn**	**13 54 42.2**	**-0.6**
KBK	**Karagaybulak** SNR=6.3	**7.12**	**24**	P	**Pn**	**13 53 28.0**	**+2.4**
ULHL	**Ulahol** SNR=7.2	**7.27**	**32**	P	**Pn**	**13 53 31.1**	**+3.6**
TKM2	**Tokmak 2** SNR=7.4	**7.58**	**26**	P	**Pn**	**13 53 33.4**	**+1.7**
TKM2	**Tokmak 2** 14nm,0.8s	**7.58**	**26**	⇑P	**Pn**	**13 53 33.0**	**+1.3**
TKM2	3.3nm,0.8s			⇑S	**Sn**	**13 54 58.1**	**+0.7**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=225,slow=13,SNR=7.0	**13.52**	**35**	P	**Pn**	**13 54 47.0**	**-0.6**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=207,slow=11,SNR=10	**15.40**	**18**	P	**Pn**	**13 55 09.1**	**-1.4**
BVAR	**Borovoye Array** 0.5nm,0.3s,baz=169,slow=10,SNR=6.3	**16.82**	**359**	P	**Pn**	**13 55 27.2**	**-0.5**
AKTO	**Aktyubinsk** 0.4nm,0.3s,baz=171,slow=8.5,SNR=5.6	**17.04**	**331**	P	**Pn**	**13 55 32.1**	**+1.8**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=200,slow=13,SNR=3.7	**20.18**	**24**	P	**P**	**13 56 02.5**	**-0.2**
WRA	**Warramunga Arr**	**81.83**	**122**	P	**P**	**14 03 39.4**	**-1.2**
ASAR	**Alice Springs** 0.5nm,0.6s,baz=300,slow=4.5,SNR=6.1	**84.08**	**125**	P	**P**	**14 03 50.9**	**-1.3**

*NORS **06** 14:18:55.3±0.0, 42°.08N×48°.00E, h4km, MPVA4.3*

DRS 06 14:18:54.7±0.0, 42°.32N×48°.40E, h16km, ML2.5/3, 3C, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRN	**Derbent** 367nm,0.5s	**0.29**	**191**	*e*Pg	Pb	14 19 02.1	+0.5
DRN	654nm,0.5s			⇑*e*Sg	Sb	14 19 07.6	+1.4
URKR	**Urkarakh**	**0.59**	**255**	*i* Pg	Pg	14 19 05.8	-0.6
URKR				*e*Sg	Sg	14 19 11.3	-3.0
AKT	**Akhty** 63nm,0.3s	**0.98**	**211**	*e*Pg	Pb	14 19 10.7	-2.6
AKT	348nm,0.3s			⇑*e*Sg	Sb	14 19 21.9	-4.1
KMKR	**Kumukh** 111nm,0.2s	**0.99**	**259**	*e*Pg	Pb	14 19 12.0	-1.5
KMKR				*i* Sg	Sb	14 19 24.0	-2.4
GNBR	**Gunib** 74nm,0.1s	**1.07**	**274**	*e*Pg	Pb	14 19 13.8	-1.0
GNBR	93nm,0.2s			⇑*e*Sg	Sb	14 19 28.2	-0.4
ARKR	**Arakani** 91nm,0.3s	**1.08**	**286**	*e*Pg	Pb	14 19 14.5	-0.5
ARKR				*i* Sg	Sb	14 19 28.0	-0.9
XNZR	**Khunzakh**	**1.28**	**281**	*e*Pg	Pb	14 19 18.9	+0.4
XNZR				*e*Sg	Sn	14 19 35.0	+0.1

MAN 06 14:22:39.0, 7°.62N×124°.55E, h54km, mb4.2, ML3.0, MS2.7, Mindanao

MAN 06 14:30:41.4, 12°.57N×120°.53E, h11km, mb4.1, ML2.9, MS2.6, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**1.02**	**24**	⇓*e*P	Pg	14 30 59.6	-1.4
PGP				*i* S	Sg	14 31 12.7	-1.6

*BJI **06** 14:33:20.9±0.0, 6°.60S×150°.60E, h35km, mb4.7/18, mB5.0/9, Ms4.4/3, Ms7 4.2/2*
*ISCJB **06** 14:33:21.3±0.4, 6°.47S±0°.05×150°.46E±0°.08, h35km, mb4.5/30, MS3.5/9, Error ellipse: s-maj=12.5km s-min=5.2km az=28.9*
*IDC **06** 14:33:24.4±3.9, 6°.45S×150°.51E, h48km±36km, mb4.2/17, mb1 4.3/18, mb1mx4.1/32, mbtmp4.4/18, ML2.8/1, MS3.4/11, Ms1 3.5/11, ms1mx3.2/31, Error ellipse: s-maj=30.1km s-min=16.3km az=105.0*
*NEIC **06** 14:33:25.7±2.1, 6°.48S×150°.49E, h62km±7km, mb4.6/20, Error ellipse: s-maj=20.3km s-min=13.8km az=121.0*

ISC 06 14:33:23.0±0.6, 6°.55S±0°.07×150°.67E±0°.09, h35km, n63, σ1§56/64, mb4.5/30, MS3.5/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.77**	**33**	*e*Pn	**Pn**	**14 34 06.3**	**+1.3**
PMG	**Port Moresby** 39nm,0.3s,baz=61,slow=7.2,SNR=61	**4.49**	**230**	P	**Pn**	**14 34 29.4**	**+0.9**
PMG	73nm,0.3s,baz=336,slow=18,SNR=11			S	**Sn**	**14 35 17.5**	**-2.1**
PMG	comp=Z,379nm,18.4s,baz=356,slow=37			LR	LR	14 36 08.6	
PMG	**Port Moresby**	**4.49**	**230**	*e*Pn	**Pn**	**14 34 28.7**	**+0.2**
MANU	**Manus Island**	**5.55**	**324**	*e*Pn	**Pn**	**14 34 47.8**	**+4.6**
COEN	**Coen**	**10.42**	**224**	*e*Pn	**Pn**	**14 35 50.0**	**0.0**
JAY	**Jayapura** comp=Z,140nm,21.4s,baz=306,slow=34	**10.71**	**292**	LR	LR	14 39 26.5	
CTAO	**Charters Tower**	**14.13**	**197**	*e*Pn	**Pn**	**14 36 40.1**	**-0.6**
EIDS	**Eidsvold** 18nm,1.1s	**18.72**	**179**	*e*P	**P**	**14 37 39.7**	**+1.0**
MTN	**Manton Dam** 49nm,0.8s	**20.24**	**251**	*e*P	**P**	**14 37 54.3**	**-1.0**
WRAB	**Tennant Creek** 56nm,0.8s	**20.69**	**228**	*e*P	**P**	**14 37 59.6**	**-0.6**
WR1	**Warramunga Arr**	**20.70**	**228**	*e*P	**P**	**14 38 00.1**	**-0.3**
WRA	**Warramunga Arr**	**20.70**	**228**	P	**P**	**14 38 00.2**	**-0.3**
GUMO	**Guam** comp=Z,80nm,21.1s,baz=166,slow=33	**20.82**	**344**	LR	LR	14 44 39.0	
AS31	**Alice Springs** 3.0nm,1.0s	**23.44**	**222**	*e*P	**P**	**14 38 28.6**	**-0.8**
ASAR	**Alice Springs** 8.3nm,1.0s,baz=56,slow=9.3,SNR=44	**23.44**	**222**	P	**P**	**14 38 28.6**	**-0.8**
ARMA	**Armidale** 14nm,1.0s	**23.77**	**178**	*e*P	**P**	**14 38 37.1**	**+4.6**
STKA	**Stephens Creek** 5.4nm,0.9s,baz=24,slow=12,SNR=6.0	**26.59**	**197**	P	**P**	**14 38 58.5**	**+0.4**
STKA	comp=Z,155nm,20.5s,baz=16,slow=34			LR	LR	14 48 41.8	
STKA	**Stephens Creek** 1.0nm,0.7s	**26.59**	**197**	*e*P	**P**	**14 38 58.5**	**+0.4**
BATI	**Baumata** 24nm,0.6s,baz=300,slow=20,SNR=3.3	**26.95**	**260**	P	**P**	**14 39 01.9**	**+0.3**
BATI	**Baumata**	**26.95**	**260**	*e*P	**P**	**14 39 01.9**	**+0.3**
BATI				*e*P	**P**	**14 39 01.9**	**+0.3**
FITZ	**Fitzroy Crossi** 10nm,0.7s,baz=50,slow=7.6,SNR=40	**26.97**	**243**	P	**P**	**14 39 00.9**	**-0.7**
FITZ	comp=Z,104nm,18.8s,baz=74,slow=38			LR	LR	14 50 19.4	
FITZ	**Fitzroy Crossi**	**26.97**	**243**	*e*P	**P**	**14 39 01.1**	**-0.5**
	18nm,1.0s						
JNU	**Nakatsue** 10nm,0.7s,baz=130,slow=2.8,SNR=9.0	**43.70**	**336**	P	**P**	**14 41 23.9**	**-0.9**
JNU	**Nakatsue** 16nm,1.0s	**43.70**	**336**	*e*P	**P**	**14 41 23.9**	**-0.9**
MJAR	**Matsushiro Arr** 1.0nm,0.5s,baz=292,slow=2.3,SNR=5.2	**44.42**	**346**	P	**P**	**14 41 28.4**	**-2.1**
MJAR	comp=Z,30nm,18.7s,baz=145,slow=36			LR	LR	14 59 40.6	
MAJO	**Matsushiro**	**44.43**	**346**	*e*P	**P**	**14 41 28.4**	**-2.1**
MAT	**Matsushiro**	**44.43**	**346**	P	**P**	**14 41 29.3**	**-1.2**
KSRS	**Korea Array** 6.5nm,0.6s,baz=153,slow=8.5,SNR=53	**48.65**	**336**	P	**P**	**14 42 03.2**	**-0.4**
KS15	**Wonju Array Si**	**48.66**	**336**	*e*P	**P**	**14 42 03.2**	**-0.5**
NJ2	**Nanjing** comp=Z,11nm,0.5s	**48.92**	**324**	*e*P	**P**	**14 42 06.4**	**+0.6**
NJ2				pmax	pmax		
ASAJ	**Asahikawa** 1.6nm,0.8s,baz=215,slow=9.8,SNR=3.8	**50.95**	**353**	P	**P**	**14 42 21.1**	**+0.1**
USRK	**Ussuriysk Ar.** 2.1nm,0.7s,baz=214,slow=13,SNR=7.5	**53.25**	**343**	P	**P**	**14 42 38.5**	**+0.5**
CN2	**Changchun**	**55.06**	**338**	*e*P	**P**	**14 42 50.6**	**-0.7**
CN2				*e*S	**S**	**14 50 30.0**	**-1.4**
CN2				*e*SS	**SS**	**14 54 14.0**	**-1.9**
HHC	**Hu-ho-hao-te** comp=Z,18nm,0.7s	**59.26**	**326**	*e*P	**P**	**14 43 22.6**	**+1.4**
HHC				pmax	pmax		
HHC	comp=Z,97nm,7.0s			pmax	pmax		
PETK	**Petropavlovsk-** 0.9nm,0.4s,baz=153,slow=7.2,SNR=7.4	**59.73**	**5**	P	**P**	**14 43 22.3**	**-1.7**
PETK	comp=Z,17nm,21.1s,baz=211,slow=31			LR	LR	15 04 26.4	
PEA1	**Petropavlovsk-**	**59.73**	**5**	*e*P	**P**	**14 43 22.3**	**-1.8**
LZH	**Lanzhou**	**61.03**	**318**	*e*P	**P**	**14 43 37.1**	**+3.5**
LZH				pP	pwP	14 43 48.0	-0.1
LZH				sP	sP	14 43 52.3	+5.6
LZH	comp=Z,15nm,1.1s			pmax	pmax		
SONA0	**Songino Array**	**66.69**	**329**	*e*P	**P**	**14 44 08.9**	**-1.6**
SONM	**Songino Array** 1.8nm,0.5s,baz=149,slow=6.4,SNR=4.7	**66.69**	**329**	P	**P**	**14 44 08.9**	**-1.6**
SONM	comp=Z,29nm,19.1s,baz=246,slow=36			LR	LR	15 13 27.1	
WMQ	**Urumqi** 3.6nm,1.0s	**75.60**	**318**	*e*P	**P**	**14 45 06.0**	**+1.5**
WMQ				pP	pP	14 45 16.2	+2.2
WMQ	comp=Z,14nm,0.8s			pmax	pmax		
MK32	**Makanchi Array**	**80.25**	**320**	*e*P	**P**	**14 45 28.5**	**-1.7**
MKAR	**Makanchi Array** 0.8nm,0.6s,baz=96,slow=7.6,SNR=12	**80.25**	**320**	P	**P**	**14 45 28.5**	**-1.7**
RDOG	**Red Dog Mine** 3.6nm,1.0s	**81.23**	**16**	*e*P	**P**	**14 45 36.3**	**+1.4**
ZALV	**Zalesovo Beam** 1.5nm,0.5s,baz=113,slow=6.2,SNR=6.9	**81.43**	**327**	P	**P**	**14 45 33.6**	**-2.7**
ZAA1	**Zalesovo Array**	**81.44**	**327**	*e*P	**P**	**14 45 33.6**	**-2.7**
CAST	**Castle Rocks** 3.9nm,0.7s	**81.91**	**22**	*e*P	**P**	**14 45 39.0**	**+0.3**
RND	**Reindeer** 10nm,0.9s	**83.15**	**23**	*e*P	**P**	**14 45 45.3**	**+0.1**
MLY	**Manley** 7.1nm,0.8s	**83.27**	**21**	*e*P	**P**	**14 45 45.8**	**+0.1**
DHY	**Denali Highway** 4.3nm,0.9s	**83.58**	**24**	*e*P	**P**	**14 45 48.1**	**+0.6**
KURK	**Kurchatov** 2.3nm,0.9s	**83.84**	**323**	*e*P	**P**	**14 45 47.5**	**-1.4**
CCB	**Clear Creek Bu** 4.9nm,0.7s	**84.16**	**22**	*e*P	**P**	**14 45 49.2**	**-1.0**
AAK	**Ala-Archa** comp=Z,27nm,21.6s,baz=75,slow=36	**84.33**	**314**	LR	LR	15 24 39.1	
ILAR	**Eielson Array** 4.5nm,0.7s,baz=252,slow=5.3,SNR=40	**84.57**	**22**	P	**P**	**14 45 51.0**	**-1.4**
ILAR	comp=Z,27nm,21.2s,baz=186,slow=32			LR	LR	15 18 09.2	
NRIK	**Noril'sk** 2.4nm,0.6s,baz=167,slow=4.4,SNR=4.5	**86.93**	**342**	P	**P**	**14 46 02.8**	**-1.1**
NV01	**Mina Array Sit**	**94.83**	**52**	*e*P	**P**	**14 46 43.2**	**+1.4**
NVAR	**Mina Array Bea** 1.3nm,0.7s,baz=252,slow=6.6,SNR=12	**94.83**	**52**	P	**P**	**14 46 43.2**	**+1.4**
NVAR	comp=Z,67nm,21.8s,baz=193,slow=31			LR	LR	15 22 18.6	
YKA	**Yellowknife Ar** 0.6nm,0.6s,baz=272,slow=4.6,SNR=7.0	**97.95**	**28**	P	**P**	**14 46 54.8**	**-0.3**
SRU	**San Rafael Swe**	**100.93**	**52**	*e*Pdif	**Pdif**	**14 47 08.4**	**-0.8**
PD31	**Pinedale Array**	**101.59**	**48**	*e*Pdif	**Pdif**	**14 47 13.4**	**+1.3**
PDAR	**Pinedale Array** 0.6nm,0.8s,baz=276,slow=2.8,SNR=4.7	**101.59**	**48**	P	**Pdif**	**14 47 13.4**	**+1.3**
GERES	**GERESS Array B** 1.2nm,0.6s,baz=38,slow=5.4,SNR=7.7	**124.39**	**327**	PKP	**PKPdf**	**14 52 19.4**	**+0.8**
TORD	**Torodi Ar. Bea** 6.0nm,0.9s,baz=12,slow=1.6,SNR=26	**148.76**	**285**	PKPbc	**PKPdf**	**14 53 06.2**	**+2.2**
TOA1	**Torodi Ar. Sit**	**148.76**	**285**	*e*PKPbc	**PKPdf**	**14 53 06.2**	**+2.2**

MAN 06 14:35:34.6, 13°.48N×121°.13E, h100km, mb4.1, ML2.9, MS2.5, Mindoro

MAN 06 14:36:19.5, 8°.41N×125°.32E, h22km, mb3.8, ML2.5, MS2.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.05**	**102**	⇓*i*P	Pn	14 36 36.4	-2.6
BIPH				*i* S	Sb	14 36 50.7	-1.7

MAN 06 14:55:43.5, 7°.37N×124°.61E, h7km, mb4.5, ML3.3, MS3.1, Mindanao

MAN 06 15:34:57.3, 11°.43N×125°.55E, h23km, mb4.2, ML2.6, MS3.0, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.61**	**245**	⇑*i*P	Pb	15 35 09.4	-0.1
PLP				*i* S	Sb	15 35 18.7	+1.0

*ISCJB **06** 15:51:30.7±0.3, 24°.70N±0°.02×122°.61E±0°.01, h16km±3km, mb3.6/7, MS2.9/2, Error ellipse: s-maj=3.2km s-min=2.0km az=9.5*
*TAP **06** 15:51:30.6, 24°.68N×122°.57E, h19km, ML3.9, C*
*JMA **06** 15:51:31.1, 24°.64N×122°.59E, h28km±1km, M3.9*
*IDC **06** 15:51:35.8±4.3, 24°.70N×122°.58E, h52km±45km, mb3.4/8, mb1 3.4/9, mb1mx3.3/40, mbtmp3.6/9, ML2.4/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/24, Error ellipse: s-maj=23.8km s-min=16.4km az=69.0*

ISC 06 15:51:30.6±0.9, 24°.70N±0°.03×122°.58E±0°.02, h13km±7km, n121, σ1§15/174, mb3.8/7, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.41**	**126**	P	**Pg**	**15 51 39.3**	**+0.5**
JYNG				S	**Sg**	**15 51 45.2**	**+0.9**
EOS1	**EOS1** baz=245	**0.44**	**251**	P	**Pg**	**15 51 39.5**	**+0.2**
EOS1	baz=245			*e*S	**Sg**	**15 51 45.9**	**+0.7**
YOJ	**Yonaguni jima** baz=117	**0.45**	**121**	P	**Pg**	**15 51 40.1**	**+0.5**
YOJ	baz=117			S	**Sg**	**15 51 46.5**	**+0.8**
YOJ	**Yonaguni jima**	**0.45**	**121**	P	**Pg**	**15 51 40.1**	**+0.5**
YOJ				S	**Sg**	**15 51 46.4**	**+0.8**
TWB1	**Santiao Chiao** baz=302	**0.62**	**300**	P	**Pg**	**15 51 43.1**	**+0.3**
TWB1	baz=302			*e*S	**Sg**	**15 51 51.3**	**+0.3**
TWC	**Suao** baz=264	**0.67**	**263**	*e*P	**Pg**	**15 51 42.6**	**-1.1**
TWC	baz=264			*e*S	**Sg**	**15 51 52.6**	**0.0**
NTC	**Toucheng** baz=285	**0.70**	**283**	*e*P	**Pg**	**15 51 44.1**	**-0.2**
TIPB	**Shuangxi** baz=303	**0.74**	**292**	*e*P	**Pg**	**15 51 45.2**	**+0.2**
TIPB	baz=303			*e*S	**Sg**	**15 51 55.2**	**+0.4**
ILA	**Ilan** baz=277	**0.76**	**275**	*e*P	**Pg**	**15 51 44.9**	**-0.5**
ILA	baz=277			*e*S	**Sg**	**15 51 56.6**	**+1.2**
ENA	**Nanau** baz=259	**0.81**	**251**	*e*P	**Pg**	**15 51 45.7**	**-0.7**
ENA	baz=259			*e*S	**Sg**	**15 51 56.0**	**-1.0**
NWF	**Wu-fen Shan** baz=299	**0.82**	**297**	P	**Pg**	**15 51 46.7**	**+0.2**
NWF	baz=299			*e*S	**Sg**	**15 51 57.6**	**+0.3**
WFSB	**Wu-fen Shan** baz=299	**0.82**	**297**	*e*P	**Pg**	**15 51 46.7**	**+0.2**
WFSB	baz=299			*e*S	**Sg**	**15 51 57.4**	**+0.1**
TWE	**Neicheng** baz=273	**0.83**	**272**	*e*P	**Pg**	**15 51 46.0**	**-0.7**
TWE	baz=273			*e*S	**Sg**	**15 51 57.2**	**-0.5**
SLBB	**Yuanshan** baz=275	**0.86**	**274**	*e*P	**Pg**	**15 51 47.2**	**-0.1**
ENTT	**Nioudou** baz=268	**0.93**	**267**	*e*P	**Pg**	**15 51 47.9**	**-0.7**
ENTT	baz=268			*e*S	**Sg**	**15 52 00.3**	**-0.4**
TWA	**Mucha** baz=289	**0.95**	**288**	*e*P	**Pg**	**15 51 48.8**	**-0.2**
TWA	baz=289			*e*S	**Sg**	**15 52 00.7**	**-0.7**
NDT	**Datong Townshi** baz=266	**0.98**	**265**	*e*P	**Pg**	**15 51 49.1**	**-0.4**
NDT	baz=266			*e*S	**Sg**	**15 52 01.8**	**-0.5**
NWLT	**Wulai** baz=288	**0.99**	**275**	*e*P	**Pg**	**15 51 49.6**	**0.0**
NWLT	baz=288			*e*S	**Sg**	**15 52 02.1**	**-0.5**
YM07	**YM07** baz=300	**1.00**	**299**	⇑*e*P	**Pg**	**15 51 49.3**	**-0.5**
YM07	baz=300			*e*S	**Sg**	**15 52 02.1**	**-0.8**
NHDH	**Xindian Distri** baz=287	**1.00**	**286**	*e*P	**Pg**	**15 51 50.0**	**+0.1**
NHDH	baz=287			*e*S	**Sg**	**15 52 02.6**	**-0.3**
YM01	**YM01** baz=298	**1.02**	**296**	*e*P	**Pg**	**15 51 49.8**	**-0.6**
YM01	baz=298			*e*S	**Sg**	**15 52 02.0**	**-1.8**
YM08	**YM08** baz=300	**1.03**	**299**	*e*P	**Pg**	**15 51 49.5**	**-1.0**
YM11	**YM11** baz=298	**1.03**	**297**	*e*P	**Pg**	**15 51 49.4**	**-1.1**
TATO	**Taipei** baz=287	**1.03**	**286**	*e*P	**Pg**	**15 51 50.1**	**-0.4**
YM05	**YM05** baz=299	**1.03**	**297**	*e*P	**Pg**	**15 51 49.8**	**-0.8**
YM05	baz=299			*e*S	**Sg**	**15 52 03.3**	**-0.9**
YM10	**YM10** baz=298	**1.03**	**296**	*e*P	**Pg**	**15 51 49.9**	**-0.7**
YM10	baz=298			*e*S	**Sg**	**15 52 03.1**	**-1.0**
TAP	**Taipei** baz=291	**1.04**	**289**	*e*P	**Pg**	**15 51 50.6**	**0.0**
TAP	baz=291			*e*S	**Sg**	**15 52 03.1**	**-1.1**
PCYT	**Pengchaiyu** baz=336	**1.04**	**334**	P	**Pg**	**15 51 49.9**	**-0.8**
PCYT	baz=336			*e*S	**Sg**	**15 52 03.3**	**-1.0**
YM04	**YM04** baz=297	**1.05**	**296**	*e*P	**Pg**	**15 51 50.0**	**-1.0**
YM04	baz=297			*e*S	**Sg**	**15 52 03.4**	**-1.3**
YM03	**YM03** baz=299	**1.06**	**297**	*e*P	**Pg**	**15 51 50.1**	**-1.0**
YM03	baz=299			*e*S	**Sg**	**15 52 03.8**	**-1.2**
TWY	**Chenhua** baz=305	**1.06**	**303**	*e*P	**Pb**	**15 51 50.4**	**-0.5**
TWY	baz=305			*e*S	**Sg**	**15 52 04.1**	**-0.9**
ANP	**Anpu** baz=298	**1.08**	**297**	*e*P	**Pb**	**15 51 50.4**	**-0.9**
TWD	**Chiawan** baz=235	**1.09**	**236**	*e*P	**Pb**	**15 51 50.7**	**-0.6**
TWD	baz=235			*e*S	**Sb**	**15 52 07.4**	**+1.9**
YHNB	**Yeheng** baz=270	**1.10**	**269**	*e*P	**Pb**	**15 51 51.2**	**-0.3**
YHNB	baz=270			*e*S	**Sb**	**15 52 04.9**	**-0.9**
IRIF	**Iriomote-Funau**	**1.10**	**109**	P	**Pb**	**15 51 50.4**	**-1.2**
IRIF				S	**Sb**	**15 52 05.5**	**-0.4**
NSK	**Sanguang** baz=270	**1.11**	**269**	P	**Pb**	**15 51 51.4**	**-0.4**
NSK	baz=270			*e*S	**Sb**	**15 52 05.0**	**-1.3**
ETLH	**Xiulin Townshi** baz=253	**1.12**	**244**	*e*P	**Pb**	**15 51 51.2**	**-0.6**
ETLH	baz=253			*e*S	**Sb**	**15 52 05.2**	**-1.2**
NNSB	**Datong** baz=257	**1.12**	**257**	*e*P	**Pb**	**15 51 51.5**	**-0.6**
NNSB	baz=257			*e*S	**Sb**	**15 52 05.6**	**-1.0**
NNS	**Nan Shan** baz=257	**1.13**	**257**	*e*P	**Pb**	**15 51 51.8**	**-0.4**
NNS	baz=257			*e*S	**Sb**	**15 52 05.5**	**-1.3**
TWS1	**Kuangyinshan** baz=292	**1.13**	**291**	*e*P	**Pb**	**15 51 52.0**	**-0.1**
HWA	**Hwalien** baz=231	**1.14**	**231**	*e*P	**Pb**	**15 51 52.0**	**-0.3**
ENLB	**Shoufeng** baz=228	**1.19**	**229**	*e*P	**Pn**	**15 51 51.5**	**-1.6**
HATJ	**Hateruma jima**	**1.28**	**119**	P	**Pn**	**15 51 53.2**	**-1.0**
HATJ				*e*S	**Sb**	**15 52 10.3**	**-0.7**
NCU	**National Centr** baz=284	**1.30**	**282**	*e*S	**Sb**	**15 52 10.5**	**-1.0**
WHF	**Hehuan Shan** baz=229	**1.32**	**246**	P	**Pn**	**15 51 55.2**	**0.0**
WHF	baz=229			*e*S	**Sb**	**15 52 11.4**	**-1.1**
TWT	**Tachien** baz=260	**1.36**	**251**	*e*P	**Pn**	**15 51 56.5**	**+1.0**
ESL	**Shilin** baz=229	**1.37**	**230**	P	**Pn**	**15 51 54.8**	**-0.6**
ESL	baz=229			*e*S	**Sn**	**15 52 11.9**	**-1.5**
TDCB	**Techi** baz=235	**1.37**	**252**	*e*P	**Pn**	**15 51 56.1**	**+0.5**
JKRS	**Kuro-shima**	**1.38**	**109**	P	**Pn**	**15 51 54.8**	**-0.7**
JKRS				S	**Sb**	**15 52 12.3**	**-1.4**
LIOB	**Emei** baz=269	**1.43**	**268**	*e*P	**Pn**	**15 51 56.8**	**+0.5**
LIOB	baz=269			*e*S	**Sn**	**15 52 15.9**	**+0.9**
CHGB	**Renai** baz=225	**1.43**	**244**	*e*P	**Pn**	**15 51 57.1**	**+0.5**
CHGB	baz=225			*e*S	**Sn**	**15 52 15.1**	**-0.3**
NSTT	**Nanjuang** baz=268	**1.44**	**268**	*e*P	**Pn**	**15 51 57.4**	**+1.0**
NSTT	baz=268			*e*S	**Sn**	**15 52 14.8**	**-0.4**
SBCB	**Hsinchu** baz=292	**1.46**	**274**	*e*P	**Pn**	**15 51 57.0**	**+0.3**
SBCB	baz=292			*e*S	**Sn**	**15 52 16.7**	**+1.1**
JIJ	**Ishigaki jima**	**1.46**	**103**	P	**Pn**	**15 51 55.4**	**-1.3**
JIJ				*e*S	**Sn**	**15 52 13.5**	**-2.2**
EGFH	**Guangfu** baz=225	**1.47**	**226**	*e*P	**Pn**	**15 51 56.7**	**-0.2**
OWD	**Renai** baz=224	**1.48**	**240**	*e*P	**Pn**	**15 51 57.2**	**+0.1**
WHP	**Taichung City** baz=240	**1.55**	**255**	*e*P	**Pn**	**15 52 00.1**	**+2.1**
JISG	**Ishigakijimahi**	**1.57**	**94**	P	**Pn**	**15 51 57.1**	**-1.2**
HGSD	**Ruisui** baz=207	**1.60**	**222**	*e*P	**Pn**	**15 51 57.3**	**-1.3**
HGSD	baz=207			*e*S	**Sn**	**15 52 17.6**	**-1.5**
VWDT	**VWDT** baz=234	**1.62**	**235**	*e*P	**Pn**	**15 51 59.0**	**+0.2**
VWDT	baz=234			S	**Sn**	**15 52 16.1**	**-3.5**
NMLH	**Miaoli** baz=281	**1.64**	**265**	*e*P	**Pn**	**15 52 01.4**	**+2.3**
DPDB	**Guoxing**	**1.65**	**247**	*e*P	**Pn**	**15 52 00.2**	**+0.8**

	baz=232					
EHY	**Hungye**	**1.65 224**	*e*P	**Pn**	**15 51 58.5**	**-0.8**
	baz=223					
NSY	**Sanyi**	**1.68 261**	*e*P	**Pn**	**15 52 02.1**	**+2.3**
	baz=260					
TWQ1	**Liyutan**	**1.69 259**	*e*P	**Pn**	**15 52 01.8**	**+2.0**
	baz=258					
TWQ1			*e*S	**Sn**	**15 52 23.7**	**+2.4**
	baz=258					
PTSB	**Yuanli**	**1.73 262**	*e*P	**Pn**	**15 52 02.6**	**+2.2**
	baz=262					
SMLT	**Sun Moon Lake**	**1.74 243**	*e*P	**Pn**	**15 52 01.8**	**+1.1**
	baz=226					
SSLB	**Suanglung**	**1.74 239**	*e*P	**Pn**	**15 52 01.0**	**+0.4**
	baz=222					
YULB	**Yu-li**	**1.75 222**	*e*P	**Pn**	**15 51 59.8**	**-0.9**
	baz=221					
YULB			*e*S	**Sn**	**15 52 21.0**	**-2.0**
	baz=221					
TYC	**Yuchr**	**1.76 244**	*e*P	**Pn**	**15 52 01.8**	**+0.9**
	baz=227					
TWF1	**Yuli**	**1.78 222**	*e*P	**Pn**	**15 52 00.5**	**-0.6**
	baz=237					
TWF1			*e*S	**Sn**	**15 52 23.1**	**-0.5**
	baz=237					
WDJ	**Dajia District**	**1.80 259**	*e*P	**Pn**	**15 52 02.4**	**+1.0**
	baz=259					
TCU	**Taichung**	**1.82 253**	*e*P	**Pn**	**15 52 03.3**	**+1.6**
	baz=252					
WHYT	**Xinyi Township**	**1.87 238**	*e*P	**Pn**	**15 52 03.4**	**+1.0**
	baz=223					
WJS	**Zhushan**	**1.90 243**	*e*P	**Pn**	**15 52 05.0**	**+2.1**
	baz=225					
WNT	**Mingjian**	**1.92 245**	*e*P	**Pn**	**15 52 05.4**	**+2.4**
	baz=244					
YUS	**Yu-Shan**	**1.92 231**	*e*P	**Pn**	**15 52 03.8**	**+0.4**
	baz=230					
YUS			*e*S	**Sn**	**15 52 26.5**	**-1.1**
	baz=230					
JTJ	**Tarama**	**1.93 91**	P	**Pn**	**15 52 03.1**	**0.0**
CHKT	**Chengkung**	**1.94 215**	*e*P	**Pn**	**15 52 02.1**	**-1.2**
	baz=213					
ALS	**Alishan**	**2.01 234**	*e*P	**Pn**	**15 52 05.4**	**+0.9**
	baz=219					
ALS			*e*S	**Sn**	**15 52 28.4**	**-1.3**
	baz=219					
CHN5	**Tsauling**	**2.06 238**	*e*P	**Pn**	**15 52 06.5**	**+1.5**
	baz=237					
ELDTW	**Lidau**	**2.08 224**	*e*P	**Pn**	**15 52 04.3**	**-1.0**
	baz=222					
WGK	**Gukeng**	**2.10 242**	*e*P	**Pn**	**15 52 06.3**	**+0.8**
	baz=240					
RLNB	**Erlin**	**2.18 249**	*e*P	**Pn**	**15 52 08.5**	**+1.8**
	baz=247					
CHN2	**Minshiung**	**2.25 239**	*e*P	**Pn**	**15 52 09.7**	**+2.1**
	baz=223					
CHN4	**Tsaushan**	**2.26 234**	*e*P	**Pn**	**15 52 09.6**	**+1.8**
	baz=217					
CHN4			*e*S	**Sn**	**15 52 38.0**	**+2.6**
	baz=217					
STYT	**Tauyuan**	**2.26 228**	*e*P	**Pn**	**15 52 08.7**	**+0.9**
	baz=215					
STYT			*e*S	**Sn**	**15 52 34.3**	**-1.3**
	baz=215					
TPUB	**Ta-pu**	**2.26 233**	*e*P	**Pn**	**15 52 09.1**	**+1.4**
	baz=231					
TPUB			*e*S	**Sn**	**15 52 36.0**	**+0.4**
	baz=231					
WTP	**Ta-pu**	**2.31 232**	*e*P	**Pn**	**15 52 09.8**	**+1.4**
	baz=230					
TWGBT	**Beinan**	**2.32 217**	*e*P	**Pn**	**15 52 07.8**	**-0.8**
	baz=215					
TWG	**Pinlang**	**2.32 217**	*e*P	**Pn**	**15 52 07.8**	**-0.8**
	baz=215					
JIRB	**Irabujima**	**2.36 86**	P	**Pn**	**15 52 09.2**	**+0.2**
TWK	**Hsinying**	**2.39 234**	*e*P	**Pn**	**15 52 11.2**	**+1.7**
	baz=231					
TWK			*e*S	**Sn**	**15 52 41.1**	**+2.4**
	baz=231					
WSF	**Szhu**	**2.40 244**	*e*P	**Pn**	**15 52 10.8**	**+1.2**
	baz=243					
CHN1	**Nanshi**	**2.41 232**	*e*P	**Pn**	**15 52 11.8**	**+2.1**
	baz=230					
WLGB	**Puzi**	**2.41 240**	*e*P	**Pn**	**15 52 09.4**	**-0.4**
	baz=238					
SGST	**Jiashian**	**2.44 229**	*e*P	**Pn**	**15 52 12.1**	**+1.9**
	baz=227					
SGST			*e*S	**Sn**	**15 52 40.3**	**+0.5**
	baz=227					
SLGT	**Liugui**	**2.45 227**	*e*P	**Pn**	**15 52 11.7**	**+1.3**
	baz=225					
JMJ	**Miyako jima 2**	**2.47 87**	*e*P	**Pn**	**15 52 11.9**	**+1.3**
	baz=99					
CHN8	**Yiju**	**2.55 239**	*e*S	**Sn**	**15 52 45.4**	**+2.7**
	baz=221					
ECL	**Taimali**	**2.57 216**	*e*P	**Pn**	**15 52 11.0**	**-1.0**
	baz=214					
SSD	**Sandimen**	**2.64 223**	*e*P	**Pn**	**15 52 14.5**	**+1.6**
	baz=211					
PTTC	**Pingtan**	**2.67 288**	*e*P	**Pn**	**15 52 13.0**	**-0.4**
	baz=288					
MASBT	**Mashibuluo**	**2.74 221**	*e*P	**Pn**	**15 52 15.0**	**+0.7**
	baz=208					
MASBT			*e*S	**Sn**	**15 52 48.9**	**+1.6**
	baz=208					
MATB	**Ma-tsu**	**2.79 302**	*e*P	**Pn**	**15 52 13.8**	**-1.2**
	baz=301					
EAST	**Anshuo**	**2.80 215**	*e*P	**Pn**	**15 52 14.6**	**-0.6**
	baz=213					
LAY	**Lan-yu**	**2.81 200**	*e*P	**Pn**	**15 52 13.8**	**-1.5**
	baz=198					
SCZT	**Fangliau**	**2.93 218**	*e*P	**Pn**	**15 52 17.6**	**+0.6**
	baz=204					
JOW	**Kunigami**	**5.55 66**	P	**Pn**	**15 52 55.2**	**+2.2**
	0.3nm,0.3s,baz=192,slow=15,SNR=6.1					
KSRS	**Korea Array**	**13.51 18**	P	**P**	**15 54 51.8**	**+0.6**
	0.5nm,0.3s,baz=199,slow=12,SNR=30					
KSRS			LR	LR	16 00 24.4	
	comp=Z,75nm,18.9s,baz=182,slow=39					
MJAR	**Matsushiro Arr**	**17.87 45**	LR	LR	16 04 00.6	
	comp=Z,33nm,19.1s,baz=90,slow=42					
USRK	**Ussuriysk Ar.**	**20.92 19**	P	**P**	**15 56 14.6**	**+1.7**
	2.5nm,0.9s,baz=193,slow=7.8,SNR=6.4					
CMAR	**Chiang Mai Arr**	**22.83 259**	P	**P**	**15 56 35.0**	**+1.4**
	0.5nm,0.7s,baz=55,slow=7.8,SNR=3.2					
ASAJ	**Asahikawa**	**25.34 35**	P	**P**	**15 56 58.0**	**+0.8**
	0.9nm,0.4s,baz=315,slow=13,SNR=4.1					
SONM	**Songino Array**	**26.42 335**	P	**P**	**15 57 07.1**	**0.0**
	1.9nm,0.7s,baz=148,slow=8.0,SNR=5.6					
SONM			LR	LR	16 08 40.7	
	comp=Z,50nm,18.4s,baz=224,slow=39					
KAPI	**Kappang**	**29.66 186**	LR	LR	16 10 15.7	
	comp=Z,20nm,20.0s,baz=48,slow=38					
MKAR	**Makanchi Array**	**38.87 315**	P	**P**	**15 58 56.2**	**+0.5**
	0.4nm,0.7s,baz=101,slow=12,SNR=0.1					
ZALV	**Zalesovo Beam**	**40.52 326**	P	**P**	**15 59 08.7**	**-0.5**
	1.2nm,0.6s,baz=111,slow=6.3,SNR=2.7					
KURBB	**Kurchatov Arra**	**42.55 319**	P	**P**	**15 59 25.7**	**-0.2**
	0.3nm,0.4s,baz=115,slow=8.5,SNR=4.2					
WRA	**Warramunga Arr**	**45.82 164**	P	**P**	**15 59 52.4**	**-0.1**
ASAR	**Alice Springs**	**49.31 166**	P	**P**	**16 00 19.8**	**+0.2**
	1.2nm,0.4s,baz=350,slow=7.5,SNR=52					

JMA 06 15:59:27.4±0.1, 38°.52N×142°.23E, h42km±1km, M3.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.64**	**251**	P	Pn	15 59 40.0	0.0
JIKH				S	Sn	15 59 48.6	-0.4
JKMT	**Kesennumamotoy**	**0.66**	**296**	P	Pn	15 59 40.4	+0.1
JKMT				S	Sn	15 59 49.5	-0.1
JIO	**Ouri**	**0.69**	**265**	P	Pn	15 59 40.8	0.0
JIO				S	Sn	15 59 50.1	-0.3
OFUJ	**Ofunato**	**0.71**	**322**	P	Pn	15 59 41.1	+0.1
OFUJ				S	Sn	15 59 50.7	-0.1
JMK	**Ichinoseki**	**0.90**	**299**	P	Pn	15 59 43.8	+0.2
JMK				S	Sn	15 59 55.5	+0.1
JOM	**Ohasama**	**1.20**	**323**	P	Pn	15 59 48.2	+0.5
JOM				S	Sn	16 00 03.7	+0.9
JOU	**Okura**	**1.24**	**263**	P	Pn	15 59 48.8	+0.5
JOU				S	Sn	16 00 04.4	+0.6
JMM	**Marumori**	**1.31**	**240**	P	Pn	15 59 48.9	-0.3
JYK	**Kaneyama**	**1.52**	**286**	P	Pn	15 59 52.7	+0.7
JYK				*e*S	Sn	16 00 11.2	+0.6
JRG	**Rokugo**	**1.52**	**306**	P	Pn	15 59 52.8	+0.7
JFK	**Kawauchi**	**1.57**	**223**	P	Pn	15 59 52.6	-0.3
JYS	**Shiratake**	**1.73**	**261**	P	Pn	15 59 55.8	+0.8
JYS				S	Sn	16 00 16.8	+1.0

KRSC 06 16:13:03.2±1.9, 54°.19N×169°.04E, h16km±46km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.05**	**301**	*e*P	Pn	16 13 37.6	+0.7
BKI				*e*S	Sb	16 14 05.1	-0.1
KBTR	**Krutoberegovo**	**4.09**	**302**	*e*P	Pn	16 14 07.8	+2.7
KBTR				*e*S	Sn	16 14 55.8	+3.1
MKZ	**Mys Kozlova**	**4.29**	**278**	*e*P	Pn	16 14 11.6	+3.9
MKZ				*e*S	Sn	16 15 01.9	+4.5
BDR	**Baidarnaya**	**5.06**	**301**	*e*P	Pn	16 14 23.4	+5.0
BDR				*e*S	Sn	16 15 24.0	+7.5
KZV	**Kizimen**	**5.16**	**284**	*e*P	Pn	16 14 24.7	+4.8
KZV				*e*S	Sn	16 15 25.3	+6.2
TUMR	**Tumrok**	**5.27**	**286**	*e*P	Pn	16 14 27.0	+5.7
SPN	**Mys Shipunski**	**5.47**	**262**	*e*P	Pn	16 14 28.4	+4.4
SPN				*e*S	Sn	16 15 30.5	+3.9
KOZ	**Kozyrevsk**	**5.58**	**293**	*e*P	Pn	16 14 27.4	+1.9
NLC	**Nalytchevo**	**5.85**	**264**	*e*P	Pn	16 14 33.9	+4.7
NLC				*e*S	Sn	16 15 39.7	+3.8
SDLR	**Sedlovina**	**6.10**	**265**	*e*P	Pn	16 14 37.3	+4.6
SDLR				*e*S	Sn	16 15 46.9	+4.8
UGLR	**Uglovaya**	**6.15**	**265**	*e*P	Pn	16 14 38.7	+5.3
SMAR	**Somma**	**6.15**	**265**	*e*P	Pn	16 14 38.2	+4.7
KRER	**Koryakskii**	**6.17**	**266**	*e*P	Pn	16 14 38.9	+5.1
AVH	**Avacha**	**6.18**	**266**	*e*P	Pn	16 14 38.8	+4.9
KRX	**Arik**	**6.22**	**266**	*e*P	Pn	16 14 39.3	+4.9
DALK	**Dalny**	**6.23**	**263**	*e*P	Pn	16 14 38.8	+4.4
DALK				*e*S	Sn	16 15 50.3	+5.1
KOK	**Koryaka**	**6.24**	**266**	*e*P	Pn	16 14 39.7	+5.1
GNL	**Ganaly**	**6.57**	**270**	*e*P	Pn	16 14 45.0	+5.8
KRMR	**Karymshinskiy**	**6.65**	**263**	P	Pn	16 14 45.1	+4.9
MTVR	**Mutnovka**	**6.72**	**260**	*e*P	Pn	16 14 46.0	+4.7
ASAK	**Asacha**	**6.92**	**259**	*e*P	Pn	16 14 49.1	+5.1
KDTR	**Khodutka, Kamc**	**7.03**	**255**	*e*P	Pn	16 14 49.9	+4.5
KDTR				*e*S	Sn	16 16 09.7	+4.7
APC	**Apacha**	**7.19**	**265**	*e*P	Pn	16 14 53.0	+5.4

NIED ***06*** *16:15:00, 43°.30N×144°.00E, h5km, Mw4.0 Best double couple: M0=1.08000×10^15 NP1:φs=219.00000°, δ40.00000°, λ120.00000°. NP2:φs=2.00000°, δ56.00000°, λ67.00000°.*
SKHL ***06*** *16:15:32.5±0.2, 43°.14N×143°.95E, h34km, mb4.6/8*
ISCJB ***06*** *16:15:32.2±0.3, 43°.31N±0°.02×143°.95E±0°.03, h22km±2km, mb4.3/54, MS3.5/5, Error ellipse: s-maj=3.9km s-min=3.1km az=156.2*
NEIC ***06*** *16:15:32.8±1.7, 43°.23N×143°.94E, h16km±5km, mb4.4/33, Error ellipse: s-maj=15.2km s-min=1.2km az=79.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido.
JMA ***06*** *16:15:32.5, 43°.34N×143°.96E, h9km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs31.00000°, δ60.00000°, λ95.00000°. NP2:φs200.00000°, δ30.00000°, λ81.00000°. Principal axes: T Plg74.0000°, Azm315.0000°; N Plg5.0000°, Azm208.0000°; P Plg15.0000°, Azm117.0000°;*
JMA Felt II J1.
MOS ***06*** *16:15:33.9±0.8, 43°.31N×143°.97E, h39km, mb4.5/17 Error ellipse: s-maj=8.4km s-min=6.2km az=85.4*
IDC ***06*** *16:15:37.2±2.0, 43°.34N×143°.93E, h46km±16km, mb3.8/15, mb1 3.9/18, mb1mx3.7/33, mbtmp3.9/18, ML2.8/3, MS3.1/6, Ms1 3.2/6, ms1mx2.8/43, Error ellipse: s-maj=16.1km s-min=15.3km az=124.0*

ISC 06 16:15:32.7±0.8, 43°.30N±0°.03×143°.98E±0°.02, h14km±5km, n141, σ1§20/161, mb4.3/54, MS3.3/5, 4C-10D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.15**	**268**	⇓P	**Pg**	**16 15 35.8**	**-0.8**
JAR				*e*S	**Sg**	**16 15 38.6**	**-0.5**
JOB	**Onbets**	**0.41**	**195**	⇓P	**Pg**	**16 15 41.2**	**+0.3**
JOB				*e*S	**Sb**	**16 15 48.4**	**+0.7**
JAK	**Akkeshi**	**0.61**	**120**	⇓P	**Pg**	**16 15 44.2**	**-0.4**
JAK				S	**Sb**	**16 15 53.5**	**+0.1**
JNK	**Nakash**	**0.61**	**62**	⇓P	**Pg**	**16 15 43.8**	**-0.8**
JNK				S	**Sg**	**16 15 51.9**	**-0.8**
JTKR	**Abashiri--Toko**	**0.67**	**356**	⇓P	**Pg**	**16 15 44.6**	**-1.2**
JTKR				S	**Sg**	**16 15 53.7**	**-1.0**
JCH	**Churui**	**0.82**	**214**	⇑P	**Pg**	**16 15 47.9**	**-0.7**
JMP	**Maruseppu**	**0.84**	**328**	⇓P	**Pg**	**16 15 47.7**	**-1.2**
JMP				S	**Sg**	**16 15 58.9**	**-1.0**
JKHN	**Kushirohamanak**	**0.89**	**104**	P	**Pb**	**16 15 48.9**	**-0.9**
JFR	**Furan**	**1.02**	**263**	⇓P	**Pb**	**16 15 51.6**	**-0.5**
GLVR	**Golovnino**	**1.20**	**68**	*d i* PN	**Pn**	**16 15 53.6**	**-1.4**
GLVR				*i* S	**Sb**	**16 16 10.4**	**-0.1**
GLVR				pmax	pmax		
	comp=Z,363nm,0.3s						
GLVR				pmax	pmax		
	comp=N,167nm,0.2s						
GLVR				pmax	pmax		
	comp=E,152nm,0.2s						
GLVR				smax	smax		
	comp=N,10μm,0.2s						
GLVR				smax	smax		
	comp=E,17μm,0.3s						
GLVR	**Golovnino**	**1.20**	**68**	*i* P	**Pn**	**16 15 53.0**	**-2.0**
GLVR				AMB	AMB	16 15 55.0	
	comp=E,167nm,0.3s						
GLVR				AMB	AMB	16 15 55.0	
	comp=E,152nm,0.3s						
GLVR				AMB	AMB	16 15 55.0	
	comp=E,363nm,0.3s						
GLVR				*i* S	**Sb**	**16 16 09.2**	**-1.3**
GLVR				A	A	16 16 11.0	
	comp=E,997nm,0.3s						
GLVR				A	A	16 16 11.0	
	comp=E,2μm,0.3s						
ASAJ	**Asahikawa**	**1.29**	**310**	P	**Pb**	**16 15 57.0**	**+0.3**
	comp=E,215nm,0.3s,baz=154,slow=11,SNR=2497						
ASAJ				S	**Sg**	**16 16 14.0**	**-0.4**
	comp=E,265nm,0.3s,baz=342,slow=18,SNR=35						
ERM	**Erimo**	**1.42**	**206**	*e*Pn	**Pn**	**16 15 57.6**	**-0.4**
ERM				*e*Sn	**Sn**	**16 16 14.2**	**-2.2**
ERM	**Erimo**	**1.42**	**206**	PN	**Pn**	**16 15 57.3**	**-0.7**
ERM				SN	**Sn**	**16 16 14.2**	**-2.2**
GRPR	**Tuman**	**1.47**	**61**	*c i* PN	**Pn**	**16 15 58.3**	**-0.4**
GRPR				*i* S	**Sn**	**16 16 17.1**	**-0.7**
GRPR				pmax	pmax		
	comp=N,211nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,712nm,0.3s						
GRPR				pmax	pmax		
	comp=E,393nm,0.4s						
GRPR				smax	smax		
	comp=N,1μm,0.4s						
GRPR	**Tuman**	**1.47**	**61**	*i* P	**Pn**	**16 15 58.0**	**-0.7**
GRPR				AMB	AMB	16 16 03.0	
	comp=N,211nm,0.4s						
GRPR				AMB	AMB	16 16 03.0	
	comp=N,393nm,0.4s						
GRPR				AMB	AMB	16 16 03.0	
	comp=N,712nm,0.4s						
GRPR				*i* S	**Sn**	**16 16 17.0**	**-0.7**
GRPR				A	A	16 16 21.0	
	comp=N,1μm,0.4s						
LAGR	**Lagunnoye**	**1.51**	**59**	*c i* PN	**Pn**	**16 15 59.0**	**-0.2**
LAGR				*i* S	**Sb**	**16 16 19.7**	**+0.3**
LAGR				pmax	pmax		
	comp=E,124nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,410nm,0.4s						
LAGR				pmax	pmax		
	comp=N,61nm,0.2s						
LAGR				smax	smax		
	comp=E,3μm,0.6s						
LAGR				smax	smax		
	comp=N,3μm,0.5s						
LAGR	**Lagunnoye**	**1.51**	**59**	*i* P	**Pn**	**16 15 59.0**	**-0.2**
LAGR				AMB	AMB	16 16 00.0	
	comp=N,61nm,0.5s						
LAGR				AMB	AMB	16 16 00.0	
	comp=N,124nm,0.5s						
LAGR				AMB	AMB	16 16 00.0	
	comp=N,410nm,0.5s						
LAGR				*i* S	**Sn**	**16 16 19.0**	**+0.3**
LAGR				A	A	16 16 33.0	
	comp=N,3μm,0.6s						
LAGR				A	A	16 16 33.0	
	comp=N,3μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.55**	**61**	*d i* PN	**Pn**	**16 15 59.5**	**-0.3**
YUK				*i* S	**Sn**	**16 16 19.8**	**+0.2**
YUK				pmax	pmax		
	comp=N,101nm,0.3s						
YUK				pmax	pmax		
	comp=Z,270nm,0.3s						
YUK				pmax	pmax		
	comp=E,44nm,0.1s						
YUK				smax	smax		
	comp=N,488nm,0.2s						
YUK				smax	smax		
	comp=E,1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.55**	**61**	*i* P	**Pn**	**16 15 59.0**	**-0.8**
YUK				AMB	AMB	16 16 02.0	
	comp=E,101nm,0.4s						
YUK				AMB	AMB	16 16 02.0	
	comp=E,44nm,0.4s						
YUK				AMB	AMB	16 16 02.0	
	comp=E,270nm,0.4s						
YUK				*i* S	**Sn**	**16 16 19.0**	**-0.6**
YUK				A	A	16 16 31.0	
	comp=E,488nm,0.5s						
YUK				A	A	16 16 31.0	
	comp=E,1μm,0.5s						
KUR	**Kuril'sk**	**3.40**	**54**	*e*PN	**Pn**	**16 16 28.2**	**+3.1**
KUR				*i* S	**Sb**	**16 17 12.6**	**-1.0**
KUR				pmax	pmax		
	comp=E,28nm,0.5s						
KUR				pmax	pmax		
	comp=Z,72nm,0.5s						
KUR				pmax	pmax		
	comp=N,26nm,0.4s						
KUR				smax	smax		
	comp=N,112nm,0.8s						
KUR				smax	smax		
	comp=E,74nm,0.5s						
KUR				MLR	MLR		
	comp=Z,400nm,5.0s						
KUR	**Kuril'sk**	**3.40**	**54**	*e*P	**Pn**	**16 16 26.0**	**+0.9**
KUR				AMB	AMB	16 16 35.0	
	comp=Z,12nm,0.5s						
KUR				AMB	AMB	16 16 35.0	
	comp=Z,26nm,0.5s						
KUR				AMB	AMB	16 16 35.0	
	comp=Z,57nm,0.5s						
KUR				*i* S	**Sn**	**16 17 06.0**	**+0.9**
KUR				A	A	16 17 15.0	
	comp=Z,221nm,0.5s						
KUR				A	A	16 17 15.0	
	comp=Z,176nm,0.5s						
YSS	**Yuzh-Sakhalins**	**3.75**	**347**	*e*Pn	**Pn**	**16 16 29.9**	**-0.1**
YSS				*e*Lg	Lg	16 17 32.6	
YSS	**Yuzh-Sakhalins**	**3.75**	**347**	*e*PN	**Pn**	**16 16 30.3**	**+0.3**
YSS				*e*S	**Sn**	**16 17 14.4**	**+0.4**
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,18.0s						
YSS	**Yuzh-Sakhalins**	**3.75**	**347**	*e*P	**Pn**	**16 16 30.3**	**+0.3**
MAJO	**Matsushiro**	**8.07**	**215**	*e*Pn	**Pn**	**16 17 25.8**	**-3.7**
MAJO	**Matsushiro**	**8.07**	**215**	*i* PN	**Pn**	**16 17 31.5**	**+2.1**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MJAR	**Matsushiro Arr**	**8.07**	**215**	P	**Pn**	**16 17 31.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=15						
MJAR				LR	LR	16 21 36.1	
	comp=Z,45nm,18.8s,baz=60,slow=44						
USA0B	**Ussuriysk Arra**	**8.73**	**280**	*e*Pn	**Pn**	**16 17 37.8**	**-0.6**
INU	**Inuyama**	**9.60**	**216**	*e*Pn	**Pn**	**16 17 49.0**	**-1.2**
KLR	**Kul'dur**	**10.33**	**309**	P	**Pn**	**16 18 03.2**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=113,slow=16,SNR=4.5						
KLR				LR	LR	16 22 23.5	
	comp=Z,94nm,20.1s,baz=136,slow=40						
KLR	**Kul'dur**	**10.33**	**309**	*i* PN	**Pn**	**16 18 01.9**	**+1.6**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLR	**Kul'dur**	**10.33**	**309**	*e*P	**Pn**	**16 18 01.9**	**+1.6**
EKMR	**Ekimchan**	**12.22**	**327**	*e*P	**Pn**	**16 18 26.0**	**-0.1**
KSRS	**Korea Array**	**13.55**	**250**	P	**Pn**	**16 18 46.3**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=58,slow=12,SNR=8.3						
KS15	**Wonju Array Si**	**13.59**	**250**	*e*Pn	**Pn**	**16 18 46.3**	**+1.4**
JNU	**Nakatsue**	**14.45**	**230**	LR	LR	16 24 08.9	
	comp=Z,77nm,18.9s,baz=176,slow=35						
BMKR	**Bomnak**	**15.09**	**324**	*e*P	**Pn**	**16 19 03.5**	**-1.7**
BMKR				AMB	AMB	16 19 10.5	
	comp=Z,8.0nm,1.0s						
ZEA	**Zeya**	**15.19**	**319**	*e*P	**P**	**16 19 10.0**	**-1.5**
ZEA				pmax	pmax		
	comp=Z,14nm,0.9s						
ZEA	**Zeya**	**15.19**	**319**	*e*P	**Pn**	**16 19 07.0**	**+0.5**
ZEA				AMB	AMB	16 19 13.0	
	comp=Z,14nm,0.9s						
KROS	**Kirovskiy**	**15.74**	**321**	*e*P	**Pn**	**16 19 15.0**	**+1.3**
MA2	**Magadan**	**16.82**	**12**	*e*Pn	**P**	**16 19 29.4**	**-0.2**
	comp=Z,17nm,1.2s						
MA2	**Magadan**	**16.82**	**12**	*i* P	**Pn**	**16 19 27.7**	**+0.2**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MA2	**Magadan**	**16.82**	**12**	*e*P	**Pn**	**16 19 27.7**	**+0.2**
SEY	**Seymchan**	**20.27**	**11**	P	**P**	**16 20 07.8**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=179,slow=9.2,SNR=7.4						
YAK	**Yakutsk**	**20.58**	**341**	*e*P	**P**	**16 20 11.1**	**+0.4**
	comp=Z,9.2nm,0.8s						
YAK	**Yakutsk**	**20.58**	**341**	*i* P	**P**	**16 20 10.9**	**+0.2**
YAK				pmax	pmax		
	comp=Z,41nm,0.9s						
YAK	**Yakutsk**	**20.58**	**341**	*e*P	**P**	**16 20 10.9**	**+0.2**
HHC	**Hu-ho-hao-te**	**24.11**	**275**	*e*P	**P**	**16 20 47.9**	**+0.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,47nm,7.1s						
ULN	**Ulaanbaatar**	**26.07**	**293**	*e*P	**P**	**16 21 05.4**	**-0.3**
	comp=Z,3.6nm,1.1s						
ULN	**Ulaanbaatar**	**26.07**	**293**	*e*P	**P**	**16 21 05.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	**Ulaanbaatar**	**26.07**	**293**	*e*P	**P**	**16 21 05.7**	**0.0**
SONA0	**Songino Array**	**26.52**	**293**	*e*P	**P**	**16 21 08.7**	**-1.0**
SONM	**Songino Array**	**26.52**	**293**	P	**P**	**16 21 08.7**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=82,slow=7.5,SNR=6.4						
BILL	**Bilibino**	**27.47**	**18**	*e*P	**P**	**16 21 16.5**	**-1.3**
BILL				*e*S	**S**	**16 25 57.2**	**-0.5**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,86nm,19.0s						
BILL	**Bilibino**	**27.47**	**18**	*e*P	**P**	**16 21 16.5**	**-1.3**
TLY	**Talaya**	**28.21**	**302**	*i* P	**P**	**16 21 27.5**	**+2.8**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZAK	**Zakamensk**	**28.44**	**299**	*e*P	**P**	**16 21

comp=Z,4.1nm,0.9s
BPAW Bear Paw Mtn. 41.47 37 *eP* **P 16 23 19.7 +1.0**
comp=Z,2.7nm,0.8s
RND Reindeer 42.46 38 *eP* **P 16 23 26.7 -0.1**
comp=Z,4.4nm,0.9s
RND Reindeer 42.46 38 *eP* **P 16 23 26.7 -0.1**
RND pmax pmax
comp=Z,4.0nm,0.9s
MDM Murphy Dome 42.62 36 *eP* **P 16 23 29.6 +1.6**
comp=Z,9.0nm,0.8s
MK31 Makanchi Array 42.74 297 *eP* **P 16 23 29.3 +0.1**
comp=Z,3.4nm,0.9s
MK31 Makanchi Array 42.74 297 *eP* **P 16 23 29.3 +0.1**
MK31 pmax pmax
comp=Z,3.0nm,0.9s
MKAR Makanchi Array 42.74 297 P **P 16 23 29.6 +0.3**
comp=Z,3.2nm,0.9s,baz=83,slow=9.5,SNR=17
MKAR PcP **PcP 16 25 20.8 +0.2**
comp=Z,0.4nm,0.6s,baz=52,slow=3.9,SNR=3.5
COLA College 42.79 36 *eP* **P 16 23 30.9 +1.6**
comp=Z,10nm,0.3s
COLA College 42.79 36 *i* P **P 16 23 29.2 -0.1**
COLA pmax pmax
comp=Z,4.0nm,1.0s
MAKZ Makanchi 42.94 297 *eP* **P 16 23 30.8 0.0**
comp=Z,4.8nm,0.9s
MAKZ Makanchi 42.94 297 *eP* **P 16 23 30.8 0.0**
MAKZ pmax pmax
comp=Z,5.0nm,0.9s
DHY Denali Highway 43.16 38 *eP* **P 16 23 32.1 -0.4**
comp=Z,4.7nm,0.8s
ILAR Eielson Array 43.21 36 P **P 16 23 33.0 +0.3**
comp=Z,3.0nm,0.9s,baz=267,slow=6.6,SNR=20
HDA Harding Lake 43.21 36 *eP* **P 16 23 32.2 -0.6**
comp=Z,5.2nm,1.4s
KURK Kurchatov 43.86 303 *eP* **P 16 23 38.1 0.0**
comp=Z,4.7nm,0.8s
KURK Kurchatov 43.86 303 *eP* **P 16 23 37.4 -0.7**
KURK pmax pmax
comp=Z,4.0nm,0.9s
KURK Kurchatov 43.86 303 *eP* **P 16 23 37.4 -0.7**
RIDG Independent Ri 44.21 37 *eP* **P 16 23 40.9 0.0**
comp=Z,28nm,1.9s
DOT Dot Lake 44.56 37 *eP* **P 16 23 43.9 +0.2**
comp=Z,2.5nm,0.8s
MENT Mentasta 44.83 38 *eP* **P 16 23 47.3 +1.5**
comp=Z,3.4nm,0.9s
CM31 Chiang Mai Arr 45.19 251 *eP* **P 16 23 50.4 +1.2**
comp=Z,10nm,1.5s
CMAR Chiang Mai Arr 45.19 251 P **P 16 23 50.4 +1.2**
comp=Z,0.8nm,0.7s,baz=49,slow=8.3,SNR=5.7
EGAK Eagle 45.64 35 *eP* **P 16 23 53.1 +0.9**
comp=Z,3.2nm,0.9s
BALM Baldy 45.83 41 *eP* **P 16 23 54.4 +0.6**
comp=Z,21nm,1.6s
BALM Baldy 45.83 41 *eP* **P 16 23 54.4 +0.6**
BALM pmax pmax
comp=Z,21nm,1.6s
PDGK Podgornoye 45.84 293 P **P 16 23 53.4 -0.8**
PDGK pmax pmax
comp=Z,2.0nm,0.8s
FAKI Fak Fak 47.21 196 *eP* **P 16 24 04.2 -0.8**
comp=Z,24nm,1.1s
BRVK Borovoye 48.04 309 *eP* **P 16 24 09.8 -1.3**
comp=Z,4.3nm,1.1s
BRVK Borovoye 48.04 309 *eP* **P 16 24 09.8 -1.3**
BRVK pmax pmax
comp=Z,4.0nm,1.1s
BRVK Borovoye 48.04 309 *eP* **P 16 24 10.4 -0.7**
HYT Haines Junctio 48.17 40 *eP* **P 16 24 14.1 +1.9**
comp=Z,10.0nm,0.8s
BOOM Boomskoye usch 48.56 294 *eP* **P 16 24 15.6 +0.1**
comp=Z,10nm,0.9s
BOOM Boomskoye usch 48.56 294 *eP* **P 16 24 15.6 +0.1**
BOOM pmax pmax
comp=Z,10.0nm,0.9s
WHY Whitehorse 49.45 40 *eP* **P 16 24 23.1 +1.2**
comp=Z,23nm,2.0s
KSH Kashi 49.86 290 *eP* **P 16 24 29.8 +4.4**
KK31 Karatay Array 51.87 297 *eP* **P 16 24 39.8 -0.5**
KK31 Karatay Array 51.87 297 *eP* **P 16 24 39.8 -0.5**
KKAR Karatay Array 51.87 297 *eP* **P 16 24 39.8 -0.5**
comp=Z,2.6nm,0.7s
KKAR Karatay Array 51.87 297 *eP* **P 16 24 39.8 -0.5**
KKAR pmax pmax
comp=Z,3.0nm,0.7s
PMG Port Moresby 52.53 176 *eP* **P 16 24 44.9 -0.5**
comp=Z,36nm,1.3s
PMG Port Moresby 52.53 176 *eP* **P 16 24 44.9 -0.5**
PMG pmax pmax
comp=Z,36nm,1.3s
ARU Arti 53.08 316 *eP* **P 16 24 48.5 -0.6**
comp=Z,5.2nm,1.1s
ARU Arti 53.08 316 *d i P* **P 16 24 49.1 0.0**
ARU 16 26 45.8
ARU S **S 16 32 17.3 -1.2**
ARU SS **SS 16 35 50.7 -6.5**
ARU pmax pmax
comp=Z,5.0nm,1.1s
ARU Arti 53.08 316 *eP* **P 16 24 49.1 0.0**
KBS Kingsbay 54.83 350 *eP* **P 16 25 03.0 +1.4**
comp=Z,84nm,1.7s
KBS Kingsbay 54.83 350 *eP* **P 16 25 03.0 +1.4**
KBS pmax pmax
comp=Z,84nm,1.7s
ABKAR Akbulak array 55.53 308 *eP* **P 16 25 07.2 +0.1**
comp=Z,6.3nm,1.2s
YKA Yellowknife Ar 57.44 33 P **P 16 25 21.1 +0.7**
comp=Z,1.4nm,0.8s,baz=303,slow=6.7,SNR=11
JOF Joensuu 61.39 331 P **P 16 25 47.2 -0.5**
JOF pmax pmax
comp=Z,4.0nm,1.2s
GEYT Alibeck 62.61 297 P **P 16 25 55.9 -0.5**
comp=Z,2.2nm,0.6s,baz=46,slow=4.3,SNR=5.5
SUF Sumiainen 63.29 333 P **P 16 25 59.6 -0.8**
SUF pmax pmax
comp=Z,6.0nm,1.2s
FIA0 FINESS Array S 64.20 332 *eP* **P 16 26 05.8 -0.6**
FIA0 FINESS Array S 64.20 332 *eP* **P 16 26 05.8 -0.6**
FINES FINESS Array B 64.20 332 P **P 16 26 05.8 -0.6**
comp=Z,2.2nm,0.7s,baz=46,slow=8.2,SNR=9.3
ASAR Alice Springs 67.28 190 P **P 16 26 27.0 +0.4**
comp=Z,0.5nm,0.8s,baz=3.2,slow=6.7,SNR=3.3
KIV Kislovodsk 68.32 310 *eP* **P 16 26 33.4 +0.1**
comp=Z,4.8nm,0.8s
KIV Kislovodsk 68.32 310 *eP* **P 16 26 33.4 +0.1**
KIV pmax pmax
comp=Z,18nm,0.9s
KIV MLR MLR
comp=Z,74nm,17.0s
KIV Kislovodsk 68.32 310 *eP* **P 16 26 33.4 +0.1**
KBZ Khabaz 68.34 310 P **P 16 26 34.0 +0.7**
comp=Z,3.3nm,0.8s,baz=80,slow=4.9,SNR=6.4
KBZ Khabaz 68.34 310 P **P 16 26 34.0 +0.7**
NB200 NORSAR Array S 69.16 338 *eP* **P 16 26 37.1 -1.0**
NOA NORSAR Array B 69.16 338 P **P 16 26 37.1 -1.0**
comp=Z,1.6nm,0.7s,baz=36,slow=6.1,SNR=10
NOA LR LR 16 59 22.2
comp=Z,12nm,21.6s,baz=270,slow=38
NV01 Mina Array Sit 69.76 56 *eP* **P 16 26 42.6 +0.2**
NVAR Mina Array Bea 69.76 56 P **P 16 26 42.6 +0.2**
comp=Z,0.2nm,0.4s,baz=310,slow=7.0,SNR=3.7
NVAR LR LR 16 54 47.0
comp=Z,49nm,21.2s,baz=200,slow=34
AKASG Malin Array Be 70.55 322 P **P 16 26 45.3 -1.4**
comp=Z,1.6nm,0.7s,baz=41,slow=6.8,SNR=5.5
KIEV Kiev 70.56 322 *i P* **P 16 26 45.9 -0.9**
KIEV pmax pmax
comp=Z,2.0nm,0.9s
PD31 Pinedale Array 71.94 48 *eP* **P 16 26 56.8 +1.1**
PDAR Pinedale Array 71.94 48 P **P 16 26 56.8 +1.1**
comp=Z,0.5nm,0.7s,baz=333,slow=1.7,SNR=4.4
CLL Collm 76.61 331 *i P* **P 16 27 23.2 +0.8**
CLL Collm 76.61 331 *i P* **P 16 27 23.2 +0.8**

KRSC 06 16:41:51.1±1.4, 54°.20N×168°.94E, h16km±35km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.00**	**302**	*eP*			Pn	16 42 24.6	+0.4
BKI				*eS*			Sb	16 42 51.5	-0.1
MKZ	**Mys Kozlova**	**4.23**	**278**	*eP*			Pn	16 42 58.2	+3.3
MKZ				*eS*			Sn	16 43 48.5	+4.6
KZV	**Kizimen**	**5.10**	**284**	*eP*			Pn	16 43 11.6	+4.6
TUMR	**Tumrok**	**5.21**	**286**	*eP*			Pn	16 43 12.3	+3.9
SPN	**Mys Shipunski**	**5.42**	**262**	*eP*			Pn	16 43 15.4	+4.2
SPN				*eS*			Sn	16 44 17.1	+4.0
NLC	**Nalytchevo**	**5.79**	**264**	*eS*			Sn	16 44 27.2	+4.8
SDLR	**Sedlovina**	**6.04**	**265**	*eP*			Pn	16 43 24.5	+4.7
UGLR	**Uglovaya**	**6.09**	**265**	*eP*			Pn	16 43 25.2	+4.7
SMAR	**Somma**	**6.09**	**265**	*eP*			Pn	16 43 25.6	+5.0
KRER	**Koryakskii**	**6.11**	**266**	*eP*			Pn	16 43 26.1	+5.2
AVH	**Avacha**	**6.13**	**265**	*eP*			Pn	16 43 25.6	+4.6
KRX	**Arik**	**6.16**	**266**	*eP*			Pn	16 43 26.6	+5.1
DALK	**Dalny**	**6.18**	**263**	*eP*			Pn	16 43 25.9	+4.3
DALK				*eS*			Sn	16 44 38.0	+6.2
KOK	**Koryaka**	**6.18**	**266**	*eP*			Pn	16 43 26.7	+4.9
GNL	**Ganaly**	**6.51**	**270**	*eP*			Pn	16 43 32.0	+5.7
ASAK	**Asacha**	**6.87**	**259**	*eP*			Pn	16 43 36.1	+5.0
KDTR	**Khodutka, Kamc**	**6.98**	**254**	*eS*			Sn	16 44 56.6	+5.1

ISCJB ***06*** *16:43:16.4±0.5, 40°.51N±0°.04×43°.04E±0°.05, h6km±7km, Error ellipse: s-maj=6.8km s-min=5.9km az=13.3*
DDA ***06*** *16:43:16.5, 40°.52N×43°.03E, h7km±2km, ML2.9*
ISK ***06*** *16:43:16.4, 40°.53N×43°.05E, h7km, ML2.2/8*
ISC 06 16:43:16.1±0.9, 40°.56N±0°.04×43°.04E±0°.03, h12km±7km, n16, σ0°.28/18, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KARS	**Kars**	**0.08**	**24**	PG			**Pg**	**16 43 19.0**	**+0.1**
KARS				SG			**Sg**	**16 43 20.9**	**-0.1**
DIGO	**Kars**	**0.29**	**119**	*i P*			**Pg**	**16 43 22.4**	**+0.1**
DIGO				IAML_P					
comp=Z,30μm,0.2s									
EAK	**Akyaka**	**0.45**	**73**	*i P*			**Pb**	**16 43 26.1**	**0.0**
EAK				IAML_P					
comp=Z,6μm,0.2s									
SENK	**Senkaya-Erzuru**	**0.52**	**271**	PG			**Pb**	**16 43 27.1**	**-0.2**
SENK				SG			**Sb**	**16 43 35.0**	**+0.1**
EATA	**Eleskirt**	**0.81**	**211**	*i P*			**Pg**	**16 43 31.5**	**-0.4**
EATA				IAML_P					
comp=Z,3μm,0.3s									
AKH	**Akhalkalaki**	**0.92**	**22**	PG			**Pn**	**16 43 34.8**	**-0.2**
AGRB	**Hanur-Agry**	**0.98**	**182**	PG			**Pb**	**16 43 35.1**	**0.0**
DAGI	**Agilar**	**1.00**	**302**	*i P*			**Pn**	**16 43 36.1**	**+0.1**
DAGI				IAML_P					
comp=Z,1μm,0.2s									
KOPR	**Koprukoy-ERZUR**	**1.07**	**238**	PG			**Pb**	**16 43 36.5**	**-0.1**
TASB	**TASBURUN-IGDIR**	**1.08**	**122**	PG			**Pn**	**16 43 37.1**	**0.0**
DBAD	**Bademkaya**	**1.12**	**295**	*i P*			**Pn**	**16 43 38.1**	**+0.4**
DBAD				IAML_P					
comp=Z,966nm,0.2s									
TUTA	**Tutak**	**1.17**	**189**	*i P*			**Pn**	**16 43 39.1**	**+0.6**
AKDA	**Akdag**	**1.36**	**251**	*i P*			**Pb**	**16 43 41.2**	**-0.4**
GNI	**Garni**	**1.36**	**107**	PN			**Pg**	**16 43 42.1**	**-0.2**
BCA	**Borcka**	**1.39**	**310**	PN			**Pg**	**16 43 43.0**	**+0.2**
BATM	**Batumi**	**1.46**	**316**	PN			**Pg**	**16 43 44.1**	**0.0**

IDC ***06*** *16:46:18.0±0.7, 7°.05S×117°.06E, h500km±7km, mb3.8/25, mb1 3.9/27, mb1mx3.8/39, mbtmp4.7/27, Error ellipse: s-maj=9.5km s-min=6.2km az=54.0*
BJI ***06*** *16:46:17.8±0.0, 6°.70S×117°.65E, h485km, mb4.2/22, mB4.6/16*
DJA ***06*** *16:46:17.8±0.2, 7°.5±3°.×11°.7E±°., h493km±2km, M4.5/37, mB5.0/22, mb4.8/37, MLv5.0/27, Mw(mB)4.4/22*
ISCJB ***06*** *16:46:17.0±0.2, 7°.12S±0°.03×117°.01E±0°.02, h503km±2km, mb4.6/86, Error ellipse: s-maj=4.6km s-min=3.2km az=32.5*
NEIC ***06*** *16:46:17.6±1.8, 7°.08S×116°.96E, h497km±5km, mb4.6/66, Error ellipse: s-maj=12.0km s-min=9.8km az=46.0*
KLM ***06*** *16:46:20.0, 7°.00S×117°.11E, h528km, mb4.9*
ISC 06 16:46:17.4±0.5, 7°.14S±0°.04×116°.99E±0°.04, h496km±5km, n511, σ1°.12/477, mb4.4/86, 1C, Bali Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.85**	**155**	P			**P**	**16 47 21.4**	**-0.1**
PLAI				S			**S**	**16 48 11.7**	**-1.8**
SRBI	**Singaraja**	**2.00**	**242**	P			**P**	**16 47 23.1**	**+0.9**
SRBI				S			**S**	**16 48 14.5**	**-0.2**
DNP	**Denpasar**	**2.33**	**229**	P			**P**	**16 47 24.1**	**+0.1**
IGBI	**Denpasar**	**2.48**	**227**	P			**P**	**16 47 25.0**	**+0.2**
KMMI	**Kalianget**	**3.00**	**271**	P			**P**	**16 47 31.0**	**+2.9**
JAGI	**Jajag, Banyuwa**	**3.11**	**245**	*eP*			**P**	**16 47 28.6**	**-0.3**
JAGI				*eS*			**S**	**16 48 20.6**	**-6.3**
JAGI	**Jajag, Banyuwa**	**3.11**	**245**	P			**P**	**16 47 28.6**	**-0.3**
JAGI				S			**S**	**16 48 22.6**	**-4.3**
WBSI	**Waikabubak, Su**	**3.44**	**136**	P			**P**	**16 47 31.3**	**0.0**
KAPI	**Kappang**	**3.46**	**53**	P			**P**	**16 47 32.5**	**+1.1**
88nm,0.3s,baz=213,slow=5.9,SNR=422									
KAPI				S			**S**	**16 48 30.8**	**-0.8**
baz=73,slow=19,SNR=3.2									
BKSI	**Bulukumba**	**3.60**	**60**	P			**P**	**16 47 33.7**	**+1.2**
BSSI	**Bau Bau, Buton**	**3.62**	**74**	P			**P**	**16 47 33.4**	**+0.8**
GMJI	**Gumukmas**	**3.69**	**252**	P			**P**	**16 47 33.4**	**+0.3**
BNSI	**Bone**	**4.12**	**49**	P			**P**	**16 47 38.7**	**+2.0**
WSI	**Waingapu**	**4.13**	**128**	P			**P**	**16 47 37.2**	**+0.5**
SPSI	**Sidrap Palu**	**4.19**	**41**	P			**P**	**16 47 38.6**	**+1.4**
GRJI	**Gresik**	**4.48**	**273**	P			**P**	**16 47 40.6**	**+0.9**
EDFI	**Ende, Flores**	**4.93**	**109**	P			**P**	**16 47 43.3**	**-0.4**
TTSI	**Tana Toraja**	**4.95**	**35**	P			**P**	**16 47 45.0**	**+1.2**
PWJI	**Pagerwojo**	**5.21**	**260**	P			**P**	**16 47 46.3**	**+0.1**
MMRI	**Maumere**	**5.41**	**106**	*eP*			**P**	**16 47 47.9**	**-0.1**
MMRI				*eS*			**S**	**16 48 59.9**	**-2.1**
MMRI	**Maumere**	**5.41**	**106**	P			**P**	**16 47 47.9**	**-0.1**
NGJI	**Ngawi**	**5.49**	**267**	P			P	16 47 57.5	+8.8
BKB	**Balikpapan**	**5.84**	**359**	P			**P**	**16 47 56.8**	**+4.7**
KDI	**Kendari**	**6.43**	**61**	P			**P**	**16 48 00.1**	**+2.2**
320nm,0.8s,3μm1.2nnm									
UGM	**Wanagama**	**6.46**	**263**	*eP*			**P**	**16 47 58.4**	**+0.2**
UGM				*eS*			**S**	**16 49 20.6**	**+0.1**
UGM	**Wanagama**	**6.46**	**263**	P			**P**	**16 47 59.2**	**+1.0**
MTKI	**Muara Teweh, K**	**6.50**	**341**	P			**P**	**16 48 00.1**	**+1.5**
SMRI	**Semarang**	**6.50**	**270**	*eP*			**P**	**16 47 59.6**	**+1.0**
SMRI	**Semarang**	**6.50**	**270**	P			**P**	**16 47 59.4**	**+0.8**
YOGI	**Yogyakarta**	**6.67**	**264**	P			**P**	**16 47 59.9**	**-0.4**
PBKI	**Pangkalan Bun**	**6.89**	**309**	P			**P**	**16 48 04.5**	**+2.0**
BATI	**Baumata**	**7.27**	**115**	P			**P**	**16 48 06.9**	**+0.6**
158nm,0.3s,baz=321,slow=2.4,SNR=186									
BATI				S			**S**	**16 49 32.8**	**-2.7**
89nm,0.3s,baz=309,slow=21,SNR=11									
BATI	**Baumata**	**7.27**	**115**	*eP*			**P**	**16 48 06.9**	**+0.6**
BATI				*eP*			**P**	**16 48 06.9**	**+0.6**
BATI				*eS*			**S**	**16 49 32.8**	**-2.7**
BATI				*eS*			**S**	**16 49 32.8**	**-2.7**
BATI	**Baumata**	**7.27**	**115**	P			**P**	**16 48 06.7**	**+0.4**
SOEI	**Soe**	**7.66**	**110**	*eP*			**P**	**16 48 10.5**	**0.0**
SOEI	**Soe**	**7.66**	**110**	P			**P**	**16 48 10.4**	**0.0**
APSI	**Ampana**	**7.74**	**37**	P			**P**	**16 48 12.7**	**+1.6**
MPSI	**Mapaga**	**7.97**	**21**	P			**P**	**16 48 15.2**	**+1.7**
LUWI	**Luwuk**	**8.36**	**44**	*eP*			**P**	**16 48 19.1**	**+1.5**
LUWI	**Luwuk**	**8.36**	**44**	P			**P**	**16 48 19.2**	**+1.6**
MRSI	**Marisa**	**9.03**	**33**	P			**P**	**16 48 25.3**	**+0.7**
CISI	**Cisompet, Garu**	**9.11**	**267**	*eP*			**P**	**16 48 25.5**	**0.0**
CISI	**Cisompet, Garu**	**9.11**	**267**	P			**P**	**16 48 25.6**	**+0.1**
LEM	**Lembang**	**9.31**	**271**	P			**P**	**16 48 29.4**	**+1.7**
31nm,0.3s,baz=41,slow=6.8,SNR=158									
LEM				S			**S**	**16 50 15.0**	**+0.4**
4.9nm,0.3s,baz=306,slow=19,SNR=3.8									
LEM	**Lembang**	**9.31**	**271**	P			**P**	**16 48 29.3**	**+1.6**
CBJI	**Citeko**	**10.09**	**273**	P			**P**	**16 48 35.8**	**0.0**
TPI	**Tanjungpandan**	**10.27**	**295**	P			**P**	**16 48 38.1**	**+0.4**
57nm,1.0s									
SKJI	**Sukabumi**	**10.35**	**270**	P			**P**	**16 48 38.8**	**+0.2**
861nm,0.6s,10μm									
SBUM	**Sibu**	**10.64**	**333**	*eP*			**P**	**16 48 44.0**	**+2.3**
KSM	**Kuching**	**10.84**	**322**	*eP*			**P**	**16 48 45.7**	**+1.9**
CGJI	**Cibinong**	**11.23**	**272**	P			**P**	**16 48 47.3**	**-0.6**
XMIS	**Christmas Isla**	**11.69**	**253**	*eP*			**P**	**16 48 53.0**	**+0.3**
PPBI	**Pangkal Pinang**	**11.89**	**294**	P			**P**	**16 48 55.8**	**+0.9**
KASI	**Kota Agung**	**12.52**	**277**	P			**P**	**16 49 00.3**	**-1.3**
TNTI	**Ternate**	**13.00**	**53**	*eP*			**P**	**16 49 06.1**	**-0.6**
TNTI	**Ternate**	**13.00**	**53**	P			**P**	**16 49 08.6**	**+1.9**
8.7nm,0.7s,691nm									
MDSI	**Maura Dua**	**13.01**	**281**	P			**P**	**16 49 05.7**	**-1.2**
LWLI	**Liwa**	**13.03**	**279**	P			**P**	**16 49 09.9**	**+2.7**
29nm,0.4s									
KKM	**Kota Kinabalu**	**13.12**	**357**	*eP*			**P**	**16 49 07.8**	**-0.3**
KKM	**Kota Kinabalu**	**13.12**	**357**	P			**P**	**16 49 08.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**13.78**	**143**	P			**P**	**16 49 15.9**	**+1.0**
3.6nm,0.3s,baz=348,slow=8.8,SNR=84									
FITZ				S			**S**	**16 51 41.1**	**-0.1**
baz=15,slow=19,SNR=3.6									
FITZ	**Fitzroy Crossi**	**13.78**	**143**	*eP*			**P**	**16 49 15.7**	**+0.9**
DSRI	**Dabo**	**14.03**	**298**	P			**P**	**16 49 18.7**	**+1.0**
135nm,0.9s,3μm									
MNAI	**Manna**	**14.23**	**280**	*eP*			**P**	**16 49 16.8**	**-3.0**
PSA00	**Pilbara Seismi**	**14.62**	**169**	*eP*			**P**	**16 49 24.5**	**+0.8**
TPRI	**Tanjung Pinang**	**14.79**	**302**	P			**P**	**16 49 27.1**	**+1.5**
MTN	**Manton Dam**	**15.04**	**113**	*eP*			**P**	**16 49 27.8**	**-0.4**
98nm,0.4s									
GIRL	**Giralia**	**15.64**	**189**	*eP*			**P**	**16 49 36.2**	**+1.8**
692nm,1.7s									
FAKI	**Fak Fak**	**15.77**	**75**	*eP*			**P**	**16 49 33.4**	**-2.4**
75nm,0.8s									
FAKI	**Fak Fak**	**15.77**	**75**	P			**P**	**16 49 33.0**	**-2.9**
MYKOM	**Kota Tinggi**	**15.83**	**304**	*eP*			**P**	**16 49 37.1**	**+0.7**
42nm,0.9s									
MYKOM	**Kota Tinggi**	**15.83**	**304**	P			**P**	**16 49 37.0**	**+0.5**
SDSI	**Sungai Dareh**	**16.69**	**291**	P			**P**	**16 49 46.0**	**+0.4**
BKNI	**Bangkinang**	**17.55**	**294**	*eP*			**P**	**16 49 54.3**	**+0.3**
89nm,0.8s									
BKNI	**Bangkinang**	**17.55**	**294**	P			**P**	**16 49 54.1**	**+0.1**
PDSI	**Padang**	**17.60**	**290**	P			**P**	**16 49 51.9**	**-2.6**
MNSI	**Mandailing Nat**	**19.07**	**294**	P			**P**	**16 50 08.1**	**+0.1**
IPM	**Ipoh**	**19.67**	**305**	*eP*			**P**	**16 50 13.8**	**+0.3**
13nm,0.8s									
IPM	**Ipoh**	**19.67**	**305**	P			**P**	**16 50 14.0**	**+0.5**
KULM	**Kulim**	**20.45**	**307**	*eP*			**P**	**16 50 20.6**	**+0.1**
22nm,1.2s									
KULM	**Kulim**	**20.45**	**307**	P			**P**	**16 50 21.0**	**+0.5**
PSI	**Prapat**	**20.55**	**298**	P			**P**	**16 50 21.1**	**-0.5**
7.9nm,0.6s,baz=154,slow=11,SNR=6.2									
PSI	**Prapat**	**20.55**	**298**	*eP*			**P**	**16 50 21.3**	**-0.3**
10nm,0.9s									
DLV	**T Lat**	**20.75**	**336**	*eP*			**P**	**16 50 24.3**	**+0.8**
13nm,0.6s									
WRA	**Warramunga Arr**	**21.10**	**129**	P			**P**	**16 50 27.5**	**+1.1**
WRA				S			**S**	**16 53 46.4**	**-1.9**
GSI	**Gunungsitoli**	**21.11**	**293**	*eP*			**P**	**16 50 25.7**	**-0.9**
34nm,1.1s									
GSI				*eS*			**S**	**16 53 43.1**	**-5.4**
GSI	**Gunungsitoli**	**21.11**	**293**	P			**P**	**16 50 26.8**	**+0.3**
26nm,0.9s									
WRAB	**Tennant Creek**	**21.11**	**129**	*eP*			**P**	**16 50 27.0**	**+0.5**
47nm,0.6s									
WB2	**Warramunga Arr**	**21.11**	**129**	*eP*			**P**	**16 50 27.1**	**+0.6**
49nm,0.6s									
WB2				*eS*			**S**	**16 53 47.4**	**-1.1**
MORW	**Morawa**	**21.84**	**182**	*eP*			**P**	**16 50 34.0**	**+1.1**
14nm,0.5s									
AS31	**Alice Springs**	**23.11**	**137**	*eP*			**P**	**16 50 45.1**	**+0.6**
6.0nm,0.5s									
AS31				*ePcP*			**PcP**	**16 54 16.3**	**+0.5**
ASAR	**Alice Springs**	**23.11**	**137**	P			**P**	**16 50 45.0**	**+0.5**
13nm,0.5s,baz=316,slow=8.5,SNR=250									
ASAR				PcP			**PcP**	**16 54 15.8**	**-0.1**
4.0nm,0.6s,baz=315,slow=1.7,SNR=7.7									
ASAR				S			**S**	**16 54 18.3**	**-1.6**
8.1nm,0.8s,baz=309,slow=15,SNR=8.8									
ASAR				ScP			**ScP**	**16 57 05.2**	**-1.4**
2.0nm,0.5s,baz=312,slow=2.5,SNR=5.5									
LHMI	**Lhok Sumawe**	**23.47**	**301**	*eP*			**P**	**16 50 48.1**	**+0.3**
81nm,1.1s									
JAY	**Jayapura**	**24.07**	**80**	P			**P**	**16 50 52.5**	**-0.7**
4.4nm,0.5s,baz=236,slow=13,SNR=6.2									
NWAO	**Narrogin (SRO)**	**25.66**	**180**	P			**P**	**16 51 08.0**	**+1.0**
6.2nm,0.4s,baz=5.8,slow=8.9,SNR=11									
NWAO				PcP			**PcP**	**16 54 21.2**	**-0.1**
15nm,1.1s,baz=60,slow=8.1,SNR=4.1									
NWAO	**Narrogin (SRO)**	**25.66**	**180**	*eP*			**P**	**16 51 08.0**	**+1.0**
27nm,1.3s									
NWAO				*ePcP*			**PcP**	**16 54 21.2**	**-0.1**
FORT	**Forrest**	**25.71**	**158**	*eP*			**P**	**16 51 08.7**	**+1.3**
138nm,2.0s									
COEN	**Coen**	**26.60**	**107**	*eP*			**P**	**16 51 15.3**	**-0.3**
20nm,0.8s									
PANO	**Nakornpanom**	**27.05**	**333**	P			**P**	**16 51 20.9**	**+1.5**
0.3nm,1.0s,123nm									
KHON	**Khomkaen**	**27.21**	**329**	P			**P**	**16 51 22.5**	**+1.7**
44μm,1.0s									
CHAI	**Chaiyaphum**	**27.29**	**327**	P			**P**	**16 51 22.7**	**+1.2**
42μm,0.7s,382μm									
PBKT	**Sadao Pong**	**28.39**	**326**	P			**P**	**16 51 32.0**	**+0.9**
13nm,0.8s									
UTTA	**Uttaradit**	**29.57**	**327**	P			**P**	**16 51 42.5**	**+1.0**
31μm,0.6s,382μm									
PMG	**Port Moresby**	**29.94**	**96**	P			**P**	**16 51 45.1**	**+0.3**
16nm,0.5s,baz=147,slow=3.5,SNR=13									
PMG	**Port Moresby**	**29.94**	**96**	*eP*			**P**	**16 51 44.9**	**+0.2**
71nm,1.4s									
PBA	**Port Blair**	**30.50**	**308**	*eP*			P	16 51 48.1	-1.5
96nm,1.2s									
LAMP	**Lampang**	**30.71**	**326**	P			**P**	**16 51 54.2**	**+2.9**
22μm,0.7s,247μm									
SSLB	**Suanglung**	**30.98**	**7**	*eP*			**P**	**16 51 55.2**	**+1.6**
5.8nm,1.1s									
CM31	**Chiang Mai Arr**	**31.04**	**325**	*eP*			**P**	**16 51 55.4**	**+1.2**
6.9nm,0.6s									
CM31				*ePcP*			**PcP**	**16 54 36.0**	**+0.9**
CM31				*eScP*			**ScP**	**16 57 31.1**	**+0.3**
CMAR Chiang Mai Arr 31.04 325 P **P 16 51 55.1 +0.9**
3.7nm,0.6s,baz=156,slow=7.0,SNR=39									
CMAR				PcP			**PcP**	**16 54 36.0**	**+0.9**
1.8nm,0.7s,baz=185,slow=2.9,SNR=6.9									
CMAR				ScP			**ScP**	**16

	7.0nm,0.4s							
BJI	Beijing	46.95	359	eP	P	16 54 06.5	+3.9	
KOLN	Koldanda	47.39	319	eP	P	16 54 06.0	-0.5	
	5.9nm,0.3s							
DANN	Dangsing	47.67	319	eP	P	16 54 08.3	-0.5	
	18nm,0.5s							
MAJO	Matsushiro	47.79	23	eP	P	16 54 07.9	-1.2	
MAT	Matsushiro	47.79	23	P	P	16 54 07.9	-1.3	
MJAR	Matsushiro Arr	47.79	23	P	P	16 54 07.9	-1.2	
	4.9nm,0.8s,baz=197,slow=8.5,SNR=15							
HHC	Hu-ho-hao-te	48.01	354	eP	P	16 54 12.8	+2.0	
HHC				pmax	pmax			
	comp=Z,11nm,0.9s							
HHC				pmax	pmax			
	comp=Z,110nm,7.7s							
PYUN	Piuthan	48.01	318	eP	P	16 54 10.6	-0.6	
	10nm,0.5s							
USRK	Ussuriysk Ar.	52.87	14	P	P	16 54 45.2	-0.9	
	2.1nm,0.5s,baz=196,slow=5.8,SNR=6.9							
SONM	Songino Array	55.53	351	P	P	16 55 04.9	-0.2	
	1.5nm,0.5s,baz=179,slow=8.6,SNR=6.1							
WMQ	Urumqi	57.23	335	eP	P	16 55 18.0	+1.1	
WMQ				pmax	pmax			
	comp=Z,13nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,160nm,3.7s							
MLZ	Mavora Lakes	58.23	140	eP	P	16 55 24.6	+0.9	
	26nm,1.3s							
WHZ	Wether Hill Ro	58.34	140	eP	P	16 55 24.7	+0.3	
	63nm,1.8s							
YSS	Yuzh-Sakhalins	58.51	20	eP	P	16 55 24.6	-0.9	
	9.3nm,0.5s							
MRIV	Mauritius Mete	58.97	251	eP	P	16 55 28.6	-0.6	
	39nm,1.5s							
LBZ	Lake Benmore	59.19	138	eP	P	16 55 29.9	-0.2	
	77nm,2.0s							
CASY	Casey	59.22	183	eP	P	16 55 30.6	+0.7	
	26nm,1.4s							
RPZ	Rata Peaks	59.52	137	P	P	16 55 33.0	+0.6	
	14nm,0.8s,baz=295,slow=4.3,SNR=7.0							
RPZ	Rata Peaks	59.52	137	eP	P	16 55 33.5	+1.1	
	13nm,0.8s							
KSH	Kashi	59.93	324	eP	P	16 55 40.9	+5.6	
KSH				S	S	17 03 10.9	+1.9	
KSH				pmax	pmax			
	comp=Z,320nm,5.5s							
THZ	Tophouse	60.14	134	eP	P	16 55 38.3	+1.7	
	26nm,1.5s							
MQZ	McQueen's Vall	60.60	137	eP	P	16 55 40.3	+0.8	
	74nm,1.5s							
KHZ	Kahutara	60.79	135	eP	P	16 55 41.4	+0.6	
	69nm,1.8s							
SNZO	South Karori	61.29	133	eP	P	16 55 43.9	-0.2	
	155nm,1.5s							
MK31	Makanchi Array	61.91	334	eP	P	16 55 46.8	-1.3	
MKAR	Makanchi Array	61.91	334	P	P	16 55 47.7	-0.3	
	2.9nm,0.6s,baz=146,slow=7.2,SNR=42							
BKZ	Black Stump Fm	62.02	131	eP	P	16 55 49.3	+0.2	
	20nm,1.2s							
MAKZ	Makanchi	62.06	334	eP	P	16 55 48.8	-0.2	
	2.8nm,1.3s							
BFZ	Birch Farm	62.23	132	eP	P	16 55 50.8	+0.4	
	106nm,1.3s							
URZ	Urewera	62.27	130	eP	P	16 55 49.5	-1.1	
	50nm,1.3s							
AAK	Ala-Archa	62.83	326	eP	P	16 55 54.1	-0.2	
	2.6nm,0.8s							
FRU1	Bishkek	62.87	326	eP	P	16 55 55.2	+0.8	
	26nm,0.4s							
KURK	Kurchatov	66.46	335	eP	P	16 56 16.5	-0.4	
	4.2nm,0.9s							
KURK	Kurchatov	66.46	335	P	P	16 56 16.6	-0.3	
	SNR=6.6							
ZAA0	Zalesovo Array	66.61	340	eP	P	16 56 16.7	-1.1	
	3.9nm,0.8s							
ZAA0				epP	pP	16 58 01.0	+0.2	
ZALV	Zalesovo Beam	66.61	340	P	P	16 56 16.6	-1.2	
	3.5nm,0.4s,baz=149,slow=5.5,SNR=15							
UOSS	Minazif	67.17	301	eP	P	16 56 19.9	-2.1	
	12nm,1.3s							
ABPO	Ambohimpanom	68.61	252	eP	P	16 56 31.1	+0.1	
	4.9nm,0.6s							
OPO	Ambohidratompo	68.65	253	P	P	16 56 31.5	+0.2	
	9.4nm,0.7s,baz=84,slow=8.0,SNR=9.8							
PETK	Petropavlovsk-	69.20	25	P	P	16 56 33.9	+0.2	
	3.4nm,0.7s,baz=131,slow=1.2,SNR=9.9							
MAW	Mawson	70.31	199	P	P	16 56 41.5	+1.4	
	13nm,0.8s,baz=63,slow=7.0,SNR=24							
MAW	Mawson	70.31	199	eP	P	16 56 41.0	+0.9	
	3.3nm,0.9s							
VNDA	Vanda	74.13	171	P	P	16 57 03.1	+1.0	
	4.0nm,0.5s,baz=317,slow=6.7,SNR=23							
VNDA	Vanda	74.13	171	eP	P	16 57 02.5	+0.4	
	4.4nm,0.6s							
ABKAR	Akbulak array	74.90	325	eP	P	16 57 06.2	-0.7	
	5.7nm,0.6s							
SBA	Scott Base	75.15	170	eP	P	16 57 08.1	+0.3	
	2.9nm,0.8s							
SYO	Syowa Base	78.86	201⇑	eP	P	16 57 27.8	-0.4	
TIXI	Tiksi	79.02	4	eP	P	16 57 27.4	-1.5	
	4.8nm,0.7s							
ARU	Arti	79.28	331	eP	P	16 57 29.6	-1.0	
	2.7nm,0.7s							
KMBO	Kilima Mbogo	79.68	270	P	P	16 57 34.7	+0.6	
	5.4nm,0.6s,baz=61,slow=9.1,SNR=13							
KMBO	Kilima Mbogo	79.68	270	eP	P	16 57 34.3	+0.2	
	5.7nm,0.8s							
QSPA	South Pole Qui	82.85	180	eP	P	16 57 49.5	+0.3	
	46nm,1.9s							
KBZ	Khabaz	83.56	315	P	P	16 57 51.5	-1.4	
	2.3nm,0.8s,baz=348,slow=1.2,SNR=4.5							
MATP	Matopo	86.14	250	P	P	16 58 06.4	+0.1	
	9.4nm,0.6s,baz=112,slow=4.3,SNR=23							
MBAR	Mbarara	86.20	270	eP	P	16 58 07.4	+0.6	
	17nm,0.6s							
LSZ	Lusaka	87.00	255	eP	P	16 58 10.4	0.0	
	5.8nm,0.7s							
BOSA	Boshof	88.14	242	P	P	16 58 16.0	+0.4	
	2.2nm,0.6s,baz=97,slow=4.1,SNR=6.0							
BRTR	Keskin Array B	89.42	310	P	P	16 58 20.1	-1.1	
	0.6nm,0.6s,baz=117,slow=4.3,SNR=4.2							
SNAA	Sanae	92.24	196	P	P	16 58 34.3	+0.8	
SNAA	Sanae	92.24	196	eP	P	16 58 34.3	+0.8	
	4.1nm,0.6s							
VNA2	Neumayer--Watz	93.88	196	P	P	16 58 41.7	+0.7	
	baz=125,slow=1.1							
VNA1	Neumayer--Stat	94.28	196	P	P	16 58 44.0	+1.2	
VNA3	Neumayer Olymp	94.30	195	P	P	16 58 43.4	+0.5	
FINES	FINESS Array B	96.65	331	P	P	16 58 52.6	-1.0	
	1.5nm,0.7s,baz=104,slow=8.0,SNR=6.7							
FINES				PKiKP	PKiKP	17 03 27.1	-0.2	
	0.5nm,0.3s,baz=119,slow=2.6,SNR=10.0							
ARCES	ARCESS Array B	97.15	339	P	P	16 58 54.2	-1.5	
	6.9nm,0.2s,baz=102,slow=5.1,SNR=3.5							
TOLK	Toolik Lake Re	97.85	22	P	P	16 58 59.3	+0.3	
	baz=271							
YKA	Yellowknife Ar	113.30	23	PKiKP	PKiKP	17 03 57.6	-0.4	
	1.6nm,0.4s,baz=308,slow=1.8,SNR=17							
B05A	Bryant	115.62	39	P	PKiKP	17 04 03.0	+0.1	
	baz=289							
TORD	Torodi Ar. Bea	116.16	281	PKP	PKPdf	17 04 03.1	-1.8	
	3.8nm,0.5s,baz=23,slow=2.7,SNR=30							
TOA1	Torodi Ar. Sit	116.17	281	ePKPdf	PKPdf	17 04 03.1	-1.8	
I04A	Tendick Farm,	116.80	44	P	PKPdf	17 04 05.3	-0.1	
	baz=287							
J04D	Umpqua Nationa	117.17	45	P	PKPdf	17 04 06.1	-0.3	
	baz=287							
J05D	Fort Rock, OR	117.77	45	P	PKiKP	17 04 08.0	+0.5	
	baz=288							
ESDC	Sonseca Array	118.19	311	PKP	PKiKP	17 04 08.3	0.0	
	0.3nm,0.4s,baz=38,slow=2.2,SNR=3.5							
MSO	Missoula	121.28	39	ePKPdf	PKPdf	17 04 13.7	-0.3	
MSO	Missoula	121.28	39	P	PKiKP	17 04 14.1	-0.1	
	baz=296							
NVAR	Mina Array Bea	121.34	49	PKP	PKiKP	17 04 15.3	+0.7	
	1.5nm,0.6s,baz=255,slow=1.8,SNR=15							
CWC	Cottonwood Cre	122.08	51	P	PKiKP	17 04 16.3	+0.2	
	baz=286							
DBIC	Dimbokro	122.30	273	PKP	PKPdf	17 04 16.2	-0.5	
	5.6nm,0.6s,baz=84,slow=2.4,SNR=5.7							
HLID	Hailey	122.33	42	ePKPdf	PKiKP	17 04 17.2	+0.7	
HLID	Hailey	122.33	42	P	PKiKP	17 04 17.1	+0.7	
	baz=294							
EDW2	Edwards Air Fo	122.58	53	P	PKiKP	17 04 17.1	+0.1	
	baz=286							
SCI2	San Clemente I	122.61	55	P	PKiKP	17 04 16.9	-0.1	
	baz=284							
CIS	Catalina Islan	122.61	55	P	PKiKP	17 04 17.2	+0.1	
	baz=284							
FMP	Fort Macarthur	122.63	54	P	PKiKP	17 04 17.2	+0.1	
	baz=284							
MPMC	Manual Prospec	122.65	52	P	PKiKP	17 04 17.2	-0.1	
	baz=287							
ELK	Elko	122.82	46	ePKPdf	PKiKP	17 04 17.6	0.0	
EGMT	Eagleton	123.23	36	ePKPdf	PKPdf	17 04 17.4	-0.3	
EGMT	Eagleton	123.23	36	P	PKiKP	17 04 18.1	+0.2	
	baz=300							
BOZ	Bozeman (W)	123.26	39	P	PKiKP	17 04 18.2	0.0	
	baz=297							
RRX	Edison Barstow	123.37	53	P	PKiKP	17 04 18.5	-0.1	
	baz=286							
R11A	Troy Canyon, C	123.40	48	P	PKiKP	17 04 18.6	-0.1	
	baz=289							
GSC	Goldstone, Bar	123.40	52	P	PKiKP	17 04 18.6	0.0	
	baz=287							
HEC	Hector,Ludlow	123.90	53	P	PKiKP	17 04 19.8	+0.2	
	baz=287							
TUQ	Turquoise Moun	124.05	52	P	PKiKP	17 04 20.7	+0.7	
	baz=287							
PFO	Pinyon Flats O	124.14	54	P	PKiKP	17 04 20.3	+0.1	
	baz=286							
MONP2	Monument Peak	124.36	55	P	PKiKP	17 04 20.9	+0.1	
	baz=285							
BELC	Belle Mtn. Jos	124.40	54	P	PKiKP	17 04 21.5	+0.7	
	baz=286							
GMRC	Granite Mounta	124.45	53	P	PKiKP	17 04 21.7	+0.9	
	baz=287							
IKP	In-Ko-Pah, Jac	124.68	55	P	PKiKP	17 04 22.1	+0.8	
	baz=285							
DUG	Dugway, Tooele	124.75	45	P	PKiKP	17 04 22.0	+0.7	
	baz=293							
REDW	Red Top Meadow	124.76	41	ePKPdf	PKiKP	17 04 21.2	-0.2	
BC3	Big Chuckawall	124.93	54	P	PKiKP	17 04 22.3	+0.5	
	baz=286							
BW06	Boulder Array	125.88	41	P	PKiKP	17 04 23.6	0.0	
	baz=297							
PDAR	Pinedale Array	125.88	41	PKP	PKiKP	17 04 23.4	-0.1	
	0.7nm,0.5s,baz=78,slow=0.3,SNR=7.7							
LAO	LASA Array	125.97	36	ePKPdf	PKiKP	17 04 23.6	+0.2	
LAO	LASA Array	125.97	36	P	PKiKP	17 04 24.2	+0.8	
	baz=303							
U15A	North Rim	126.52	50	ePKPdf	PKiKP	17 04 25.9	+0.8	
K22A	Casper	127.90	40	P	PKiKP	17 04 27.5	-0.1	
	baz=300							
O20A	White River Ci	127.95	44	P	PKiKP	17 04 27.8	0.0	
	baz=297							
RSSD	Black Hills	128.67	37	P	PKiKP	17 04 29.0	-0.1	
	baz=304							
N23A	Red Feather La	129.14	42	P	PKPdf	17 04 29.7	+0.3	
	baz=300							
S22A	4UR Ranch, Cre	130.00	46	P	PKiKP	17 04 32.0	-0.1	
	baz=296							
TASM	ASL Pad, Albuq	131.47	49	P	PKiKP	17 04 35.1	+0.1	
	baz=295							
TASM	ASL Pad, Albuq	131.47	49	P	PKiKP	17 04 35.1	+0.1	
	baz=295							
ANMO	Albuquerque	131.47	49	P	PKiKP	17 04 35.2	+0.2	
	baz=295							
T25A	Trinidad	131.99	45	P	PKiKP	17 04 36.0	-0.1	
	baz=298							
EYMN	Ely	132.67	26	P	PKiKP	17 04 37.1	+0.3	
	baz=320							
ECSD	EROS Data Cent	133.17	33	P	PKiKP	17 04 37.6	-0.4	
	baz=311							
MNTX	Cornudas Mount	133.59	52	P	PKiKP	17 04 39.1	0.0	
	baz=293							
C40A	Isle Royale Na	133.68	24	P	PKiKP	17 04 38.7	-0.1	
	baz=323							
E39A	Mellen	134.28	27	P	PKiKP	17 04 39.9	-0.2	
	baz=320							
F39A	Loretta	134.47	27	P	PKiKP	17 04 39.8	-0.6	
	baz=320							
E40A	Wakefield	134.52	26	P	PKiKP	17 04 40.2	-0.4	
	baz=321							
G38A	Ridgeland	134.60	29	P	PKiKP	17 04 40.0	-0.8	
	baz=318							
D41A	Chassel	134.60	24	P	PKPdf	17 04 39.9	+0.7	
	baz=323							
F40A	Park Falls	134.83	27	P	PKiKP	17 04 40.7	-0.5	
	baz=321							
G39A	Holcombe	134.83	28	P	PKiKP	17 04 40.5	-0.7	
	baz=319							
E41A	Kenton	134.91	25	P	PKiKP	17 04 41.0	-0.3	
	baz=322							
H39A	Augusta	135.23	29	P	PKiKP	17 04 41.4	-0.7	
	baz=318							
G40A	Rib Lake	135.29	27	P	PKiKP	17 04 41.9	-0.3	
	baz=320							
E42A	Champion	135.37	24	P	PKiKP	17 04 42.0	-0.3	
	baz=324							
F41A	Three Lakes	135.42	26	P	PKiKP	17 04 42.1	-0.4	
	baz=322							
H40A	Chili	135.70	28	P	PKiKP	17 04 42.3	-0.8	
	baz=319							
MATQ	Matagami	135.78	14	P	PKiKP	17 04 42.5	-0.5	
	baz=339							
E43A	Lone Tree Farm	135.79	24	P	PKiKP	17 04 42.5	-0.6	
	baz=325							
TXAR	Lajitas Array	135.85	55	PKhKP	PKPpre	17 04 31.8		
	0.4nm,0.5s,baz=259,slow=2.6,SNR=4.3							
TXAR				PKP	PKiKP	17 04 43.5	-0.4	
	0.6nm,0.8s,baz=349,slow=2.6,SNR=4.8							
F43A	Flat Rock, Esc	136.16	24	P	PKiKP	17 04 43.7	-0.2	
	baz=324							
CHGQ	Chibougamau	136.31	11	P	PKiKP	17 04 43.5	-0.6	
	baz=344							
F44A	Big Bay de Noc	136.35	24	P	PKiKP	17 04 43.8	-0.4	
	baz=325							
G43A	Wallace	136.41	25	P	PKiKP	17 04 43.9	-0.5	
	baz=323							
D46A	Sault St. Mari	136.48	21	P	PKPdf	17 04 43.5	+0.9	
	baz=329							
D47A	Chapleau	136.66	20	P	PKPdf	17 04 43.4	+0.4	
	baz=330							
J41A	Loganville	136.82	29	P	PKPdf	17 04 43.6	+0.2	
	baz=319							
E46A	Sault Ste Mari	136.83	22	P	PKPdf	17 04 43.7	+0.4	
	baz=328							
F45A	CMU Biological	136.94	23	P	PKPdf	17 04 43.9	+0.4	
	baz=326							
L40A	Anamosa	137.18	31	P	PKPdf	17 04 44.8	+0.7	
	baz=316							
E48A	Lockeyer	137.47	20	P	PKPdf	17 04 44.9	+0.4	
	baz=331							
D50A	G1974 Best Tow	137.59	17	P	PKPdf	17 04 45.5	+0.8	
	baz=335							
K43A	Burlington	138.12	28	P	PKPdf	17 04 46.1	+0.3	
	baz=321							
F49A	Sandfield	138.15	20	P	PKPdf	17 04 46.4	+0.7	
	baz=331							
D52A	ZEK Kipawa Sen	138.16	16	P	PKPdf	17 04 46.5	+0.7	
	baz=337							
D53A	Lac Vacive, Po	138.26	15	P	PKPdf	17 04 46.6	+0.7	
	baz=338							
E51A	G1948 Merrick	138.26	17	P	PKPdf	17 04 46.7	+0.7	
	baz=335							
L43A	Garden Prairie	138.33	29	P	PKPdf	17 04 47.1	+0.8	
	baz=320							
I48A	Sherman Twp	138.90	23	P	PKiKP	17 04 48.5	-1.1	
	baz=328							
U40A	Yellville	140.15	39	P	PKiKP	17 04 51.6	-0.7	
	baz=310							
W39A	Magazine	140.28	41	P	PKiKP	17 04 52.0	-0.7	
	baz=308							
L48A	N Adams	140.48	25	P	PKiKP	17 04 51.5	-1.4	
	baz=326							
PKME	Peaks-Kenny Pk	141.63	7	P	PKiKP	17 04 54.2	-0.9	
	baz=350							
J55A	Hilton	141.73	18	P	PKiKP	17 04 54.3	-1.1	
	baz=336							
O49A	Covington	141.95	27	P	PKiKP	17 04 54.8	-1.2	
	baz=324							
N50A	Nevada	141.99	25	P	PKPdf	17 04 54.0	+1.1	
	baz=326							
M52A	Chesterland	142.06	23	P	PKPdf	17 04 50.6	-2.4	
	baz=330							
L53A	Girard	142.10	21	P	PKPdf	17 04 50.9	-2.1	
	baz=332							
R47A	Wooly Knot Far	142.39	31	P	PKPdf	17 04 50.5	-3.1	
	baz=320							
ACSO	Alum Creek Sta	142.51	25	P	PKPdf	17 04 50.3	-3.5	
	baz=326							
L55A	Hinsdale	142.52	19	P	PKPdf	17 04 50.7	-3.1	
	baz=334							
WCI	Wyandotte Cave	142.56	31	P	PKPdf	17 04 50.6	-3.3	
	baz=320							
T46A	Princeton	142.59	34	P	PKPdf	17 04 51.0	-3.0	
	baz=317,SNR=5.2							
R48A	Northridge Ran	142.64	30	P	PKPdf	17 04 51.3	-2.7	
	baz=321							
Q49A	Aurora	142.64	29	P	PKPdf	17 04 51.5	-2.5	
	baz=323							
P50A	Jamestown	142.66	27	P	PKPdf	17 04 51.2	-2.9	
	baz=325							
M54A	Oil Creek Stat	142.71	21	P	PKPdf	17 04 50.7	-3.4	
	baz=332							
S47A	Hartford	142.73	32	P	PKPdf	17 04 51.3	-3.0	
	baz=319							
O51A	Pataskala	142.74	25	P	PKPdf	17 04 51.2	-3.0	
	baz=327							
U46A	Springville	142.93	35	P	PKPdf	17 04 51.7	-3.0	
	baz=316							
M55A	Ridgway	143.05	20	P	PKPab	17 04 52.0	-0.1	
	baz=334							
T47A	Sharon Grove	143.06	33	P	PKPab	17 04 52.2	0.0	
	baz=318							
R49A	Shelbyville	143.07	30	P	PKPbc	17 04 52.5	-0.2	
	baz=322							
N54A	Moraine State	143.07	22	P	PKPab	17 04 52.1	-0.1	
	baz=331							
O52A	Adamsville	143.08	24	P	PKPab	17 04 52.0	-0.2	
	baz=328							
P51A	Williamsport	143.09	26	P	PKPab	17 04 52.4	+0.2	
	baz=326							
S48A	Wiedeman Farm,	143.11	31	P	PKPab	17 04 52.1	-0.2	
	baz=320							
Q50A	Georgetown	143.20	28	P	PKPab	17 04 52.2	-0.5	
	baz=324							
O53A	New Philadelph	143.22	24	P	PKPab	17 04 52.6	-0.1	
	baz=329							
M56A	Emporium	143.23	19	P	PKPab	17 04 52.4	-0.3	
	baz=334							
BINY	Binghamton	143.24	16	P	PKPab	17 04 52.6	-0.1	
	baz=338							
WVT	Waverly	143.28	35	ePKPdf	PKPab	17 04 53.0	-0.1	
WVT	Waverly	143.28	35	P	PKPab	17 04 52.9	-0.1	
	baz=316							
LCO	Las Campanas	143.31	169	ePKPdf	PKPbc	17 04 54.5	+0.4	
Q51A	Peebles	143.34	27	ePKPpre	PKPab	17 04 52.4	-0.8	
Q51A	Peebles	143.34	27	P	PKPab	17 04 52.9	-0.3	
	baz=325,SNR=5.5							
T48A	Bowling Green	143.35	32	P	PKPab	17 04 53.1	-0.2	
	baz=319							
V46A	Holladay	143.35	35	P	PKPab	17 04 52.9	-0.4	
	baz=315							
U47A	Clarksville	143.36	34	P	PKPab	17 04 53.4	0.0	
	baz=317,SNR=6.5							
P52A	Corning	143.37	25	P	PKPab	17 04 52.9	-0.4	
	baz=327							
S49A	Springfield	143.40	30	P	PKPab	17 04 53.4	-0.1	
	baz=321,SNR=9.2							
OXF	Oxford	143.48	38	ePKPdf	PKPab	17 04 53.4	-0.5	
R50A	Paris	143.48	29	P	PKPab	17 04 53.4	-0.4	
	baz=323,SNR=6.7							
N55A	Marion Center	143.59	21	P	PKPab	17 04 53.6	-0.5	
	baz=333							
O54A	Avella	143.60	23	P	PKPab	17 04 53.9	-0.3	
	baz=330							
W46A	Michie	143.67	36	P	PKPab	17 04 54.0	-0.6	
	baz=314							
V47A	Nunnelly	143.68	35	P	PKPab	17 04 54.1	-0.5	
	baz=316							
N56A	West Decatur	143.70	20	P	PKPab	17 04 54.1	-0.4	
	baz=334							
U48A	Cassie Pea, Po	143.72	33	P	PKPab	17 04 54.4	-0.3	
	baz=318,SNR=7.4							
P53A	Whipple	143.80	24	ePKPbc	PKPab	17 04 54.7	-0.2	
P53A	Whipple	143.80	24	P	PKPab	17 04 54.7	-0.2	
	baz=328,SNR=8.1							
T49A	Edmonton	143.80	31	ePKPbc	PKPab	17 04 54.6	-0.4	
T49A	Edmonton	143.80	31	P	PKPab	17 04 54.8	-0.2	
	baz=320,SNR=7.1							
R51A	Hillsboro	143.82	28	P	PKPab	17 04 54.3	-0.7	
	baz=324							
Q52A	Bidwell	143.87	26	P	PKPab	17 04 54.6	-0.6	
	baz=326,SNR=6.6							
S50A	Richmond	143.93	29	P	PKPbc	17 04 54.9	-0.6	
	baz=322,SNR=7.3							
X46A	Booneville	143.95	37	P	PKPbc	17 04 55.1	-0.5	
	baz=314,SNR=5.3							
PLAL	Pickwick Lake	143.96	36	ePKPbc	PKPbc	17 04 54.0	-1.6	
HRV	Adam Dziewonsk	143.97	11	ePKPbc	PKPbc	17 04 55.3	-0.1	
HRV	Adam Dziewonsk	143.97	11	P	PKPbc	17 04 55.3	-0.1	
	baz=346							
O55A	Ligonier	143.98	21	P	PKPbc	17 04 55.2	-0.4	
	baz=332							
P54A	Burton	144.06	23	P	PKPab	17 04 55.9	0.0	
	baz=330,SNR=16							
SSPA	Standing Stone	144.09	19	ePKPbc	PKPbc	17 04 55.7	-0.2	
SSPA	Standing Stone	144.09	19	P	PKPbc	17 04 55.8	-0.1	
	baz=334							
N57A	Milroy	144.09	19	P	PKPbc	17 04 55.6	-0.2	
	baz=335,SNR=8.5							
U49A	Red Boiling Sp	144.12	32	P	PKPbc	17 04 56.0	-0.1	
	baz=319,SNR=17							
V48A	Smith Brothers	144.13	34	P	PKPbc	17 04 55.6	-0.5	
	baz=317							
WES	Weston	144.13	11	ePKPbc	PKPbc	17 04 55.7	-0.2	
CLTN	Cedars of Leba	144.14	33	ePKPbc	PKPbc	17 04 56.1	-0.1	
O56A	Blue Knob Stat	144.19	21	ePKPbc	PKPbc	17 04 55.3	-1.0	
O56A	Blue Knob Stat	144.19	21	P	PKPbc	17 04 55.9	-0.4	
	baz=333							
R52A	Catlettsburg	144.22	27	P	PKPbc	17 04 55.7	-0.7	
	baz=325							
T50A	Nancy	144.22	31	P	PKPbc	17 04 56.0	-0.4	
	baz=321,SNR=11							
MCWV	Mont Chateau	144.26	23	ePKPbc	PKPbc	17 04 55.9	-0.5	
MCWV	Mont Chateau	144.26	23	P	PKPab	17 04 56.5	-0.1	
	baz=331,SNR=6.6							
Q53A	Leroy	144.27	25	P	PKPbc	17 04 56.3	-0.2	
	baz=328,SNR=5.1							
KSCT	Kent School, K	144.32	13	ePKPbc	PKPbc	17 04 55.7	-0.8	
S51A	Beattyville	144.34	29	ePKPbc	PKPbc	17 04 55

	baz=334,SNR=5.1						
V50A	Pikevile	145.12	32	P	PKPdf	17 04 58.6	+0.1
	baz=320						
U51A	La Follette	145.13	30	P	PKPdf	17 04 58.7	+0.2
	baz=322						
O60A	Telford	145.15	17	P	PKPdf	17 04 58.7	+0.3
	baz=338						
MVL	Millersville	145.16	18	ePKPdf	PKPbc	17 04 59.0	-0.2
Y48A	Jasper	145.24	37	P	PKPbc	17 04 59.2	-0.4
	baz=315						
TZTN	Tazewell	145.24	30	ePKPdf	PKPbc	17 04 59.5	0.0
TZTN	Tazewell	145.24	30	P	PKPbc	17 04 59.2	-0.4
	baz=323						
S54A	Dingess, Beckl	145.25	26	P	PKPbc	17 04 59.4	-0.2
	baz=327						
X49A	Woodville	145.30	35	P	PKPdf	17 04 59.2	+0.4
	baz=317,SNR=5.4						
Q57A	Strasburg	145.34	21	P	PKPbc	17 04 59.5	-0.3
	baz=333,SNR=6.8						
W50A	Signal Mountai	145.36	33	P	PKPdf	17 04 59.4	+0.5
	baz=319,SNR=5.2						
T53A	Wise	145.37	28	P	PKPbc	17 04 59.7	-0.3
	baz=324						
V51A	Loudon	145.41	31	P	PKPbc	17 04 59.7	-0.3
	baz=321,SNR=5.0						
U52A	Thorn Hill	145.45	30	P	PKPbc	17 04 60.0	-0.2
	baz=323						
P59A	Jarrettsville	145.49	18	P	PKPbc	17 05 00.3	+0.1
	baz=336						
P60A	Greenville	145.55	17	P	PKPbc	17 05 00.0	-0.3
	baz=338						
S55A	Lewisburg	145.62	25	P	PKPdf	17 04 59.8	+0.4
	baz=328						
W51A	Cleveland	145.69	33	P	PKPbc	17 05 00.3	-0.6
	baz=320						
X50B	Fort Payne	145.72	34	P	PKPbc	17 05 00.3	-0.7
	baz=318						
Y49A	Blount Mountai	145.72	36	P	PKPbc	17 05 00.5	-0.5
	baz=316						
T54A	Tazewell	145.75	27	P	PKPbc	17 05 00.6	-0.5
	baz=326,SNR=6.6						
V52A	Sevierville	145.77	31	ePKPdf	PKPbc	17 05 00.9	-0.3
V52A	Sevierville	145.77	31	P	PKPbc	17 05 00.8	-0.3
	baz=322,SNR=5.8						
U53A	Fall Branch	145.85	29	P	PKPbc	17 05 00.8	-0.6
	baz=324						
148A	Greensboro	145.87	39	P	PKPbc	17 05 01.1	-0.4
	baz=313						
R57A	Stanardsville	145.95	22	P	PKPbc	17 05 01.3	-0.2
	baz=332,SNR=5.2						
LRAL	Lakeview Retre	145.95	38	ePKPdf	PKPdf	17 05 00.5	+0.5
LRAL	Lakeview Retre	145.95	38	P	PKPbc	17 05 01.4	-0.3
	baz=314						
T55A	Pulaski	146.05	26	P	PKPbc	17 05 01.6	-0.3
	baz=327						
U54A	Nelsons Funny	146.08	28	P	PKPbc	17 05 01.6	-0.5
	baz=325						
X51A	Calhoun	146.08	33	P	PKPbc	17 05 01.4	-0.6
	baz=319						
S56A	Natural Bridge	146.08	24	P	PKPbc	17 05 01.4	-0.6
	baz=330						
Y50A	Piedmont	146.09	35	P	PKPbc	17 05 01.5	-0.6
	baz=317						
Z49A	Columbiana	146.12	37	P	PKPbc	17 05 01.8	-0.4
	baz=315						
R58A	Rapidan	146.14	21	P	PKPbc	17 05 01.9	-0.2
	baz=333						
S57A	Dark Hollow, R	146.25	23	P	PKPbc	17 05 02.0	-0.5
	baz=331						
CPUP	Villa Florida	146.28	189	PKPbc	PKPbc	17 05 03.2	+0.5
	7.8nm,0.5s,baz=175,slow=3.7,SNR=20						
V53A	Saluda	146.29	30	P	PKPbc	17 05 02.7	0.0
	baz=323,SNR=8.2						
149A	Jones	146.38	38	P	PKPbc	17 05 02.8	-0.1
	baz=314						
Z50A	Ashland	146.44	36	ePKPdf	PKPbc	17 05 02.3	-0.8
Z50A	Ashland	146.44	36	P	PKPbc	17 05 02.6	-0.5
	baz=316						
T56A	Rocky Mt	146.45	25	P	PKPbc	17 05 02.5	-0.5
	baz=328						
U55A	TA2, Sparta	146.45	27	P	PKPbc	17 05 02.7	-0.4
	baz=326,SNR=7.2						
Y51A	Rockmart	146.46	34	P	PKPbc	17 05 02.6	-0.5
	baz=318						
R58B	Mineral	146.48	22	ePKPdf	PKPbc	17 05 02.4	-0.6
R58B	Mineral	146.48	22	P	PKPbc	17 05 02.4	-0.6
	baz=333						
W53A	Cullowhee	146.51	31	P	PKPbc	17 05 03.4	+0.1
	baz=322,SNR=9.0						
X52A	Dahlonega	146.57	32	P	PKPbc	17 05 03.3	-0.2
	baz=320						
V54A	Nebo	146.62	29	P	PKPbc	17 05 03.4	-0.1
	baz=324,SNR=6.0						
S58A	Poland Farm, P	146.73	22	ePKPdf	PKPbc	17 05 03.1	-0.5
S58A	Poland Farm, P	146.73	22	P	PKPbc	17 05 03.4	-0.3
	baz=332						
T57A	Hurt	146.79	24	P	PKPbc	17 05 03.6	-0.4
	baz=330						
150A	Eclectic	146.84	37	P	PKPbc	17 05 03.6	-0.5
	baz=315						
S59A	Mechanicsville	146.87	21	P	PKPbc	17 05 03.9	-0.2
	baz=334						
U56A	King	146.87	26	P	PKPbc	17 05 03.6	-0.5
	baz=327						
V55A	Taylorsville	146.91	28	P	PKPbc	17 05 03.8	-0.5
	baz=326,SNR=5.8						
X53A	Estanollee	146.96	32	P	PKPbc	17 05 04.7	+0.2
	baz=321,SNR=5.4						
Y52A	Lilburn	147.04	33	ePKPbc	PKPbc	17 05 04.9	+0.2
Y52A	Lilburn	147.04	33	P	PKPbc	17 05 04.8	+0.1
	baz=319,SNR=6.0						
W54A	Cherokee Point	147.07	30	P	PKPbc	17 05 04.5	-0.2
	baz=323						
250A	Grady	147.13	38	P	PKPbc	17 05 04.4	-0.6
	baz=314						
T58A	Grand View Acr	147.13	23	P	PKPbc	17 05 04.2	-0.6
	baz=331						
U57A	Blanch	147.25	25	P	PKPbc	17 05 04.7	-0.4
	baz=329						
GO02	Mina Guanaco	147.26	169	ePKPbc	PKPbc	17 05 06.4	+0.5
V56A	Mocksville	147.27	27	ePKPbc	PKPbc	17 05 05.0	-0.2
V56A	Mocksville	147.27	27	P	PKPbc	17 05 04.9	-0.3
	baz=327,SNR=5.3						
151A	Opelika	147.31	36	P	PKPbc	17 05 05.2	-0.2
	baz=316						
Y53A	Monroe	147.31	33	P	PKPbc	17 05 04.9	-0.5
	baz=320						
Z52A	Williamson	147.35	35	P	PKPbc	17 05 05.6	+0.1
	baz=318						
X54A	Belton	147.40	31	P	PKPbc	17 05 05.7	+0.2
	baz=323,SNR=5.2						
KMSC	Kings Mountain	147.43	29	ePKPbc	PKPbc	17 05 05.1	-0.5
KMSC	Kings Mountain	147.43	29	P	PKPbc	17 05 05.3	-0.4
	baz=325,SNR=5.7						
PAULI	Pauline	147.46	30	ePKPbc	PKPbc	17 05 05.3	-0.4
T59A	Double "B" Far	147.48	22	ePKPbc	PKPbc	17 05 06.0	+0.3
T59A	Double "B" Far	147.48	22	P	PKPbc	17 05 05.8	+0.1
	baz=333,SNR=9.8						
V57A	Coltrane Farms	147.52	26	P	PKPbc	17 05 05.5	-0.4
	baz=328,SNR=6.4						
152A	Waverly Hall	147.56	36	ePKPbc	PKPbc	17 05 05.9	-0.2
152A	Waverly Hall	147.56	36	P	PKPbc	17 05 05.8	-0.2
	baz=317						
251A	Midway	147.56	37	P	PKPbc	17 05 06.1	+0.1
	baz=315						
U58A	Oxford	147.60	24	P	PKPbc	17 05 05.7	-0.3
	baz=330,SNR=5.3						
T60A	Surry	147.62	21	P	PKPbc	17 05 06.1	0.0
	baz=334						
GOGA	Godfrey	147.71	33	P	PKPbc	17 05 06.4	0.0
	baz=320						
Z53A	Monticello	147.75	33	P	PKPbc	17 05 06.4	-0.1
	baz=320						
Y54A	Tignall	147.78	32	P	PKPbc	17 05 06.8	+0.3
	baz=321,SNR=5.6						
W56A	Indian Trail	147.79	28	P	PKPbc	17 05 06.5	0.0
	baz=326						
X55A	Gracelyn & Ava	147.83	30	P	PKPbc	17 05 06.8	+0.1
	baz=324						
V58A	Windy Hill, Pi	147.88	25	P	PKPbc	17 05 06.5	-0.3
	baz=329						
351A	Pinckard	148.02	38	P	PKPbc	17 05 06.3	-1.0
	baz=314						
W57A	Gilead	148.04	27	P	PKPbc	17 05 06.9	-0.3
	baz=327						
X56A	White Oak	148.10	29	P	PKPbc	17 05 06.8	-0.6
	baz=325						
Y55A	Saluda	148.14	31	P	PKPbc	17 05 07.3	-0.2
	baz=323						
Z54A	Sparta	148.18	33	P	PKPbc	17 05 07.4	-0.2
	baz=321						
V59A	Middlesex	148.27	24	P	PKPbc	17 05 07.7	-0.1
	baz=330						
W58A	Raeford	148.49	26	P	PKPbc	17 05 08.1	-0.3
	baz=328						
V60A	Jim Taylor Roa	148.65	23	P	PKPbc	17 05 08.6	-0.1
	baz=332						
X58A	Rowland	148.84	27	P	PKPbc	17 05 09.0	-0.2
	baz=328						
155A	Kite	148.85	33	P	PKPbc	17 05 09.4	+0.1
	baz=320						
453A	Whigham	149.10	37	P	PKPbc	17 05 09.2	-0.8
	baz=316						
W60A	Pink Hill	149.10	24	P	PKPbc	17 05 09.8	0.0
	baz=331						
Y58A	Scranton	149.23	28	P	PKPbc	17 05 09.6	-0.5
	baz=326						
Z57A	Bowman	149.23	30	P	PKPbc	17 05 10.3	+0.1
	baz=324						
Z58A	St. Stephen	149.63	29	P	PKPbc	17 05 11.1	0.0
	baz=326						
LVC	Limon Verde	149.88	169	ePKPbc	PKiKP	17 05 13.8	+0.5
455A	Stateville	149.95	36	P	PKPbc	17 05 11.8	-0.1
	baz=318						
656A	Willston	151.24	37	P	PKPbc	17 05 14.7	-0.3
	baz=317						
657A	Interlachen	151.48	36	P	PKPbc	17 05 15.2	-0.4
	baz=318						
857A	Zephyrhills	152.21	39	P	PKPbc	17 05 17.1	-0.1
	baz=316						
PB11	IPOC Station P	152.48	166	ePKPdf	PKPdf	17 05 08.8	-2.1
PB11				ePKPbc	PKiKP	17 05 18.7	+0.3
GO01	Chusmiza	152.68	167	ePKPdf	PKPdf	17 05 10.7	-0.9
GO01				ePKPbc	PKiKP	17 05 19.7	+0.5
BDFB	Brasilia	152.93	213	PKPbc	PKPbc	17 05 18.5	-0.7
	3.1nm,0.4s,baz=152,slow=5.3,SNR=4.4						
BDFB				PKPab	PKPab	17 05 33.2	+0.5
	1.6nm,0.4s,baz=134,slow=5.7,SNR=6.3						
LPAZ	La Paz	156.18	168	PKPab	PKPab	17 05 47.7	+0.6
	3.7nm,0.7s,baz=156,slow=3.7,SNR=9.3						
LPAZ	La Paz	156.18	168	ePKPdf	PKPdf	17 05 15.2	-1.4
LPAZ				ePKPab	PKPab	17 05 48.3	+1.1

*OMAN **06** 16:50:33.6±2.3, 27.°90N×59.°16E, h12km±16km, Error ellipse: s-maj=8.3km s-min=1.9km az=254.0*
*DSN **06** 16:50:51.6±3.4, 26.°57N×58.°41E, h10km, ML3.7/8, Error ellipse: s-maj=48.7km s-min=15.5km az=11.0*
*ISCJB **06** 16:50:54.2±0.5, 26.°68N±0.°03×58.°03E±0.°06, h10km, Error ellipse: s-maj=7.5km s-min=4.3km az=178.0*
*TEH **06** 16:50:54.2, 26.°82N×58.°06E, h28km, ML3.6*

ISC 06 16:50:53.1±0.9, 26.°82N±0.°03×58.°06E±0.°04, h10km, n51, σ1§63/58, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	Kahnooj	1.17	344	ePg	Pn	16 51 17.0	+1.4
JSK1	Jask	1.20	193	ePg	Pg	16 51 18.6	+2.4
NIAN	Nian	1.32	304	ePg	Pg	16 51 20.6	+2.1
NIAN				IAMB	IAmb	16 51 47.4	
	comp=Z,0.0nm,0.4s						
GENO	Geno	1.78	289	ePn	Pb	16 51 27.0	+1.0
GENO				IAMB	IAmb	16 52 03.8	
	comp=Z,0.0nm,0.4s						
BNDS	Bandar-Abbas	1.78	289	ePg	Pn	16 51 20.4	-3.7
BANOM	Banah	1.81	241	eP	Pn	16 51 25.7	+1.2
	SNR=16						
BANOM	Banah	1.81	241	P	Pn	16 51 24.8	+0.3
	SNR=39						
BANOM				S	Sg	16 51 51.9	+0.4
SHME	Shamm	1.88	246	eP	Pn	16 51 27.0	+1.6
	SNR=34						
SHME				S	Sg	16 51 53.9	+0.2
SHME	Shamm	1.88	246	ePn	Pn	16 51 27.1	+1.6
MDH	Madha	2.19	227	P	Pn	16 51 28.5	-1.2
MDH	Madha	2.19	227	P	Pn	16 51 28.7	-0.9
MDH				S	Sn	16 51 54.1	-2.7
MDH	Madha	2.19	227	ePn	Pn	16 51 28.6	-1.0
MSFE	Esma-Masafi	2.24	230	P	Pn	16 51 28.8	-1.6
MSFE	Esma-Masafi	2.24	230	ePn	Pn	16 51 29.1	-1.3
CHBR	Chabahar	2.49	119	ePn	Pg	16 51 41.6	+0.7
UOSS	Minazif	2.50	222	P	Pn	16 51 32.4	-1.5
UOSS	Minazif	2.50	222	P	Pn	16 51 34.1	+0.2
UOSS	Minazif	2.50	222	ePn	Pn	16 51 32.5	-1.5
UMQ	Umm Al-Quwin	2.51	240	P	Pn	16 51 34.4	+0.4
HATD	Hatta, Dubai	2.64	222	P	Pn	16 51 35.5	-0.3
HATD	Hatta, Dubai	2.64	222	P	Pn	16 51 36.1	+0.4
HATD	Hatta, Dubai	2.64	222	ePn	Pn	16 51 34.3	-1.5
ASHO	Ashiyiah	2.79	221	eP	Pn	16 51 37.3	-0.6
	SNR=10						
ASHO	Ashiyiah	2.79	221	P	Pn	16 51 37.7	-0.2
	SNR=19						
ASHO				P	Pn	16 51 37.7	-0.2
	SNR=19						
ASHO				S	Sb	16 52 16.5	-0.8
ASHO	Ashiyiah	2.79	221	ePn	Pn	16 51 37.0	-0.9
NAZ	Nazwa, Dubai	2.83	230	P	Pn	16 51 39.9	+1.5
NAZ	Nazwa, Dubai	2.83	230	P	Pn	16 51 41.3	+2.9
NAZ	Nazwa, Dubai	2.83	230	ePn	Pn	16 51 40.7	+2.4
SOHO	SOHO	3.01	208	P	Pn	16 51 39.2	-1.7
	SNR=47						
SOHO				S	Sn	16 52 13.7	-3.3
FAQ	Al Faqa, Dubai	3.04	228	P	Pn	16 51 41.8	+0.6
FAQ	Al Faqa, Dubai	3.04	228	P	Pn	16 51 42.4	+1.2
FAQ	Al Faqa, Dubai	3.04	228	ePn	Pn	16 51 42.8	+1.6
NGRK	Negar Kerman	3.05	338	ePn	Pb	16 51 47.3	-0.5
CHMN	Cheshme madani	3.07	351	ePn	Pg	16 51 51.4	-0.5
CHMN				IAMB	IAmb	16 52 41.1	
	comp=N,0.0nm,0.6s						
BIDO	Bidbid	3.28	179	P	Pn	16 51 44.1	-0.6
BIDO	Bidbid	3.28	179	ePn	Pn	16 51 43.6	-1.0
ASUD	Al Ashush, Dub	3.29	229	P	Pn	16 51 47.2	+2.5
HOQ	Hoqain	3.29	192	P	Pn	16 51 44.2	-0.6
TVBK	TV Kerman	3.36	340	ePn	Pb	16 51 50.9	-2.1
ALNE	Al Ain	3.45	218	ePn	Pn	16 51 48.7	+1.7
WSAR	Wadi Sarin	3.60	172	P	Pn	16 51 49.4	+0.4
ZHSF	Zahedan	3.67	40	ePn	Pn	16 51 52.2	+2.1
ARQ	Araqi	3.74	202	P	Pn	16 51 52.1	+1.2
SMDO	Samad	3.74	180	P	Pn	16 51 51.7	+0.6
KHGB	Koh Gabri	3.81	339	ePn	Pb	16 51 59.2	-1.4
KHGB				IAMB	IAmb	16 53 04.3	
	comp=Z,0.0nm,0.9s						
BSY	Bisya	4.13	191	P	Pn	16 51 58.2	+1.9
BSY				S	Sn	16 52 46.0	+1.3
WBK	Wadi Bani Khal	4.27	169	P	Pn	16 51 59.4	+1.1
WBK				S	Sn	16 52 45.8	-2.4
JMDO	Jabal Madar	4.43	179	P	Pn	16 52 02.8	+2.4
IKOO	Kooshah	5.65	8	ePn	Pn	16 52 22.4	+5.0
IKAZ	Kazeroun	6.23	300	ePn	Pn	16 52 27.1	+1.7
IRAM	Ramesheh	7.02	316	ePn	Pn	16 52 39.3	+3.1

*DSN **06** 16:56:06.9±3.5, 27.°02N×58.°24E, h10km, ML3.8/8, Error ellipse: s-maj=54.1km s-min=16.4km az=175.0*
*ISCJB **06** 16:56:12.0±0.5, 26.°62N±0.°03×57.°99E±0.°06, h10km, Error ellipse: s-maj=7.9km s-min=4.4km az=4.9*
*TEH **06** 16:56:11.5, 26.°74N×57.°94E, h13km, ML3.8*
*OMAN **06** 16:56:12.3±4.2, 26.°45N×57.°87E, h0km, ml3.4/13, Error ellipse: s-maj=45.5km s-min=22.3km az=35.0*

ISC 06 16:56:11.2±0.9, 26.°73N±0.°03×57.°97E±0.°04, h10km, n47, σ1§90/50, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	Jask	1.10	189	ePg	Pn	16 56 33.6	+1.0
KHNJ	Kahnooj	1.24	349	ePg	Pn	16 56 34.5	-0.1
NIAN	Nian	1.31	310	ePg	Pg	16 56 37.6	+1.3
NIAN				IAMB	IAmb	16 57 00.5	
	comp=Z,0.0nm,0.3s						
BANOM	Banah	1.69	242	eP	Pn	16 56 41.1	+0.3
	SNR=19						
BANOM	Banah	1.69	242	P	Pn	16 56 41.7	+0.8
	SNR=74						
BANOM				S	Sg	16 57 08.8	+3.0
	SNR=5.8						
GENO	Geno	1.73	293	ePn	Pg	16 56 44.0	-0.5
GENO				IAMB	IAmb	16 57 21.0	
	comp=Z,0.0nm,0.3s						
BNDS	Bandar-Abbas	1.74	293	ePn	Pn	16 56 37.2	-4.4
SHME	Shamm	1.77	248	eP	Pb	16 56 43.4	-0.3
	SNR=52						
SHME				S	Sg	16 57 09.5	+1.4
SHME	Shamm	1.77	248	ePn	Pb	16 56 43.7	-0.1
MDH	Madha	2.07	227	P	Pn	16 56 45.4	-0.6
MDH	Madha	2.07	227	P	Pn	16 56 44.8	-1.2
MDH				S	Sn	16 57 11.1	-0.7
MDH	Madha	2.07	227	ePn	Pn	16 56 45.5	-0.5
MSFE	Esma-Masafi	2.12	230	P	Pn	16 56 46.7	-0.1
MSFE	Esma-Masafi	2.12	230	ePn	Pn	16 56 46.8	+0.1
UOSS	Minazif	2.38	222	P	Pn	16 56 50.3	0.0
UOSS	Minazif	2.38	222	P	Pn	16 56 50.7	+0.5
UOSS	Minazif	2.38	222	ePn	Pn	16 56 49.6	-0.7
UMQ	Umm Al-Quwin	2.39	241	P	Pb	16 56 53.0	-1.3
HATD	Hatta, Dubai	2.51	222	P	Pb	16 56 54.5	-1.9
HATD	Hatta, Dubai	2.51	222	P	Pn	16 56 50.9	-1.2
HATD	Hatta, Dubai	2.51	222	ePn	Pn	16 56 51.7	-0.4
CHBR	Chabahar	2.53	116	ePn	Pg	16 56 59.1	-0.5
ASHO	Ashiyiah	2.66	221	i P	Pn	16 56 55.5	+1.3
	SNR=9.2						
ASHO	Ashiyiah	2.66	221	P	Pn	16 56 55.0	+0.8
	SNR=15						
SOHO	SOHO	2.89	207	P	Pn	16 56 56.1	-1.1
	SNR=61						
FAQ	Al Faqa, Dubai	2.91	228	P	Pn	16 56 59.4	+1.8
FAQ	Al Faqa, Dubai	2.91	228	ePn	Pn	16 57 00.4	+2.8
NGRK	Negar Kerman	3.11	340	ePn	Pb	16 57 04.7	-2.0
NGRK				IAMB	IAmb	16 57 57.9	
	comp=Z,0.0nm,0.6s						
CHMN	Cheshme madani	3.15	353	IAMB	IAmb	16 58 01.7	
	comp=Z,0.0nm,0.8s						
ASUD	Al Ashush, Dub	3.17	229	P	Pn	16 57 04.4	+3.4
	SNR=10						
ASUD	Al Ashush, Dub	3.17	229	ePn	Pn	16 57 04.2	+3.1
HOQ	Hoqain	3.19	191	P	Pn	16 57 01.1	-0.3
	SNR=7.6						
HOQ	Hoqain	3.19	191	ePn	Pn	16 57 01.5	+0.1
BIDO	Bidbid	3.19	177	P	Pn	16 57 00.9	-0.6
	SNR=12						
BIDO				S	Sn	16 57 37.8	-1.8
BIDO	Bidbid	3.19	177	ePn	Pn	16 57 00.6	-0.9
ALNE	Al Ain	3.33	217	i P	Pn	16 57 05.3	+1.9
	SNR=16						
ALNE	Al Ain	3.33	217	ePn	Pn	16 57 05.5	+2.2
TVBK	TV Kerman	3.42	342	ePn	Pb	16 57 10.6	-1.5
TVBK				IAMB	IAmb	16 57 26.7	
	comp=Z,0.0nm,0.4s						
WSAR	Wadi Sarin	3.52	170	P	Pn	16 57 06.2	+0.2
ZHSF	Zahedan	3.80	40	ePn	Pn	16 57 13.5	+3.6
KHGB	Koh Gabri	3.87	341	ePn	Pb	16 57 15.5	-4.1
KHGB				IAMB	IAmb	16 58 21.3	
	comp=Z,0.0nm,0.9s						
BSY	Bisya	4.02	190	P	Pn	16 57 14.4	+1.5
WBK	Wadi Bani Khal	4.20	167	P	Pn	16 57 16.3	+1.0
IMEH	Mehriz	5.50	329	ePn	Pn	16 57 36.1	+2.7
IKOO	Kooshah	5.75	9	ePn	Pn	16 57 39.5	+2.6
ITEG	Tejag	6.19	6	ePn	Pn	16 57 47.4	+4.6
IKAZ	Kazeroun	6.20	301	ePn	Pn	16 57 44.5	+1.4

JMA 06 17:14:25.5±0.1, 38.°31N×142.°19E, h35km±2km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.57	270	P	Pn	17 14 36.9	-0.2
JIKH				eS	Sn	17 14 44.6	-0.7
JIO	Ouri	0.68	283	P	Pn	17 14 38.5	-0.1
JIO				eS	Sn	17 14 47.7	-0.2
JKMT	Kesennumamotoy	0.75	312	P	Pn	17 14 39.8	+0.2
JKMT				eS	Sn	17 14 49.7	-0.1
OFUJ	Ofunato	0.87	332	P	Pn	17 14 41.2	-0.1
OFUJ				eS	Sn	17 14 52.3	-0.4
JMK	Ichinoseki	0.99	310	P	Pn	17 14 43.3	+0.4
JMK				eS	Sn	17 14 55.9	+0.2
JMM	Marumori	1.19	249	P	Pn	17 14 45.4	-0.2
JMM				eS	Sn	17 15 00.1	-0.4
JOU	Okura	1.20	273	P	Pn	17 14 46.8	+1.0
JOM	Ohasama	1.36	329	P	Pn	17 14 48.7	+0.8
JOM				eS	Sn	17 15 05.8	+1.1
JFK	Kawauchi	1.40	228	P	Pn	17 14 47.9	-0.7
JFK				eS	Sn	17 15 04.1	-1.8

*IDC **06** 17:19:49.3±6.6, 3.°39N×129.°37E, h0km, mb3.5/2, mb1 3.6/2, mb1mx3.3/25, mbtmp3.5/2, Error ellipse: s-maj=535.9km s-min=25.2km az=69.0*
*ISCJB **06** 17:20:00.2±1.3, 3.°2N±0.°1×128.°7E±0.°1, h100km, Error ellipse: s-maj=18.6km s-min=14.3km az=23.1*
*DJA **06** 17:20:09.5±1.3, 3.°N±12.°×12.°8E±.°, h124km±19km, M4.3/6, mB4.5/2, mb4.3/6, MLv4.4/6, Mw(mB)3.7/2*

ISC 06 17:20:02.6±1.7, 3.°1N±0.°1×128.°6E±0.°2, h100km, n8, σ1§78/9, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.64	207	P	Pn	17 20 45.6	+2.1
TNTI				S	Sn	17 21 15.0	0.0
LUWI	Luwuk	7.13	235	P	Pn	17 21 46.5	+2.2
MRSI	Marisa	7.14	248	P	Pn	17 21 44.7	+0.4
APSI	Ampana	8.00	240	P	Pn	17 21 55.9	-0.3
SPSI	Sidrap Palu	11.28	231	P	Pn	17 22 38.5	-2.1
WRA	Warramunga Arr	23.62	166	P	P	17 25 03.0	-1.7
	22nm,0.3s						
ASAR	Alice Springs	27.14	169	P	P	17 25 35.4	-1.2
	0.1nm,0.3s,baz=356,slow=9.9,SNR=5.4						
MKAR	Makanchi Array	59.10	325	P	P	17 29 53.3	+0.8
	0.4nm,0.4s,baz=113,slow=8.0,SNR=11						

MAN 06 17:28:52.7, 7.°93N×123.°41E, h39km, mb4.2, ML3.0, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	Pagadian	0.09	198	eP	Pn	17 28 59.4	+0.2
PAGZ				eS	Sn	17 29 04.9	+1.3
IPIL	Ipil	0.84	260	eP	Pn	17 29 11.8	+3.7
IPIL				eS	Sn	17 29 26.7	+7.5
SNPH	Sibulan	1.41	353	⇓i P	Pn	17 29 15.9	0.0
SNPH				i S	Sn	17 29 34.0	+0.6
BUKP	Musuan	1.64	92	eP	Pn	17 29 18.3	-0.7
BUKP				eS

PSGC *i* S **Sn** **17 34 53.0 -0.5**
PSGC IAML 17 34 54.3
comp=N,17μm,0.4s
PB01 IPOC Station P 1.19 205 *e*Pn **Pn** **17 34 36.4 -0.4**
PB01 IPOC Station P 1.19 205⇑*i*P **Pn** **17 34 37.1 +0.4**
PB01 *e*S **Sn** **17 34 54.0 0.0**
PB01 IAML 17 34 55.9
comp=N,28μm,0.2s
PB02 IPOC Station P 1.62 213⇑*i*P **Pn** **17 34 41.9 0.0**
PB02 IAML 17 35 10.1
comp=N,8μm,0.2s
PB09 IPOC Station P 1.85 189⇑*e*P **Pn** **17 34 45.6 +0.9**
PB09 *e*S **Sn** **17 35 09.2 +0.9**
PB09 IAML 17 35 14.5
comp=E,3μm,0.4s
PB12 IPOC Station P 1.87 316⇑*i*P **Pn** **17 34 45.2 +0.2**
PB07 IPOC Station P 1.96 206 *e*P **Pn** **17 34 46.4 +0.1**
PB07 IAML 17 35 15.7
comp=N,4μm,0.3s
PB03 IPOC Station P 2.21 200⇑*i*P **Pn** **17 34 49.2 -0.2**
PB03 *e*S **Sn** **17 35 15.8 -0.9**
PB03 IAML 17 35 21.2
comp=E,3μm,0.3s
PB04 IPOC Station P 2.62 205 *e*Pn **Pn** **17 34 54.5 -0.2**
PB04 IPOC Station P 2.62 205 *e*P **Pn** **17 34 54.9 +0.2**
PB04 IAML 17 35 39.3
comp=N,3μm,0.8s
LVC Limon Verde 2.64 179 P **Pn** **17 34 56.5 +1.3**
comp=N,92nm,0.3s,baz=26,slow=12,SNR=476
LVC S **Sn** **17 35 28.0 +1.1**
comp=N,211nm,0.3s,baz=307,slow=20,SNR=13
LVC Limon Verde 2.64 179 *e*Pn **Pn** **17 34 56.3 +1.2**
LVC Limon Verde 2.64 179 *e*P **Pn** **17 34 56.7 +1.5**
LVC *e*S **Sn** **17 35 28.0 +1.1**
LVC *i* S **Sn** **17 35 28.0 +1.1**
LVC Limon Verde 2.64 179 *e*P **Pn** **17 34 56.4 +1.2**
LVC *e*S **Sn** **17 35 29.0 +2.1**
PB06 IPOC Station P 2.79 192 *e*P **Pn** **17 34 56.6 -0.5**
PB06 IAML 17 35 37.3
comp=N,2μm,0.5s
PB05 IPOC Station P 3.11 202 *e*P **Pn** **17 35 00.6 -0.6**
PB05 IAML 17 35 46.6
comp=E,2μm,0.3s
LPAZ La Paz 3.73 12 P **Pn** **17 35 13.9 +3.8**
comp=E,63nm,0.3s,baz=191,slow=9.9,SNR=354
LPAZ S **Sn** **17 35 55.9 +2.4**
comp=E,5.6nm,0.3s,baz=122,slow=15,SNR=1.9
LPAZ LR LR 17 36 54.2
comp=E,234nm,21.8s,baz=232,slow=43
LPAZ La Paz 3.73 12 *e*Pn **Pn** **17 35 13.5 +3.4**
PB10 IPOC Station P 3.84 203 *e*Pn **Pn** **17 35 09.3 -1.6**
SIV San Ignacio 8.47 63 P **Pn** **17 36 12.5 -1.2**
comp=E,48nm,0.3s,baz=261,slow=12,SNR=1079
SIV S **Sn** **17 37 44.9 -2.8**
baz=186,slow=19,SNR=2.0
LCO Las Campanas 9.15 190 *e*P **Pn** **17 36 24.4 +1.3**
CPUP Villa Florida 12.42 123 P **Pn** **17 37 04.5 -2.5**
comp=E,0.4nm,0.3s,baz=298,slow=13,SNR=13
AQDB Aquidauana 12.45 95 *e*P **Pn** **17 37 05.6 -1.7**
C2SB Chapadao do Su 15.25 88 *e*P **Pn** **17 37 42.6 -1.0**
CLDB Colider 15.56 56 *e*P **Pn** **17 37 46.2 -1.3**
PTGB Pitanga 16.32 110 *e*P **Pn** **17 37 57.0 +0.1**
ITAB Concordia 17.02 118 *e*P **Pn** **17 38 05.1 -0.3**
ITRB Iturama 17.49 92 *e*P **P** **17 38 10.4 -0.6**
FRTB Fartura 18.33 104 *e*P **P** **17 38 19.7 -0.4**
CNLB Canela 18.88 123 *e*P **P** **17 38 26.9 +0.7**
TRQA Tornquist 19.02 163 *e*P **P** **17 38 27.5 0.0**
comp=E,11nm,0.8s
TRQA Tornquist 19.02 163 *e*P **Pn** **17 38 28.5 -0.9**
TIJ01 Guaruva-PR 19.16 110 *e*P **P** **17 38 28.8 -0.5**
BB19B Bebedouro 19.16 97 *e*P **P** **17 38 28.6 -0.6**
RCLB Rio Claro- Sao 20.12 101 *e*P **P** **17 38 39.0 -0.6**
SPB Sao Paulo 20.30 104 *e*P **P** **17 38 40.9 -0.6**
BDFB Brasilia 20.38 81 P **P** **17 38 41.3 -1.3**
comp=E,7.5nm,0.5s,baz=255,slow=12,SNR=8.7
BDFB Brasilia 20.38 81 *e*P **P** **17 38 41.3 -1.3**
BDFB *e*P **P** **17 38 41.8 -0.8**
PLCA Paso Flores 20.75 183 P **P** **17 38 46.2 0.0**
comp=E,11nm,0.8s,baz=16,slow=11,SNR=16
PLCA Paso Flores 20.75 183 *e*P **P** **17 38 46.7 +0.4**
comp=E,14nm,0.8s
PTGA Pitinga 21.04 26 P **P** **17 38 47.4 -2.1**
comp=E,5.6nm,0.3s,baz=197,slow=16,SNR=21
PTGA Pitinga 21.04 26 *e*P **P** **17 38 46.8 -2.7**
comp=E,8.2nm,0.6s
PTGA Pitinga 21.04 26 *e*P **P** **17 38 47.4 -2.1**
PMNB Patos De Minas 21.30 90 *e*P **P** **17 38 51.3 -1.0**
PARB Paraibuna 21.93 103 *e*P **P** **17 38 56.8 -2.3**
OTAV Otavalo 22.13 334 *e*P **P** **17 39 02.0 +0.4**
BSCB Bom Sucesso 22.67 97 *e*P **P** **17 39 05.8 -0.9**
ESAR Angra dos Reis 23.00 102 *e*P **P** **17 39 09.5 -0.3**
VAS01 Vassouras-RJ 23.89 100 *e*P **P** **17 39 17.8 -0.3**
MCI6 Montes Claros 23.97 87 *e*P **P** **17 39 18.0 -0.9**
MCI8 Montes Claros 23.98 86 *e*P **P** **17 39 17.8 -1.1**
JANB Januaria 23.98 82 *e*P **P** **17 39 17.4 -1.6**
MCI9 Montes Claros 24.00 86 *e*P **P** **17 39 18.4 -0.6**
DUB01 Friburgo-RJ 24.88 100 *e*P **P** **17 39 26.7 -0.5**
CAM01 Campos-RJ 25.55 99 *e*P **P** **17 39 32.2 -0.9**
SJMB Sao Joao De Ma 26.22 92 *e*P **P** **17 39 38.7 -0.5**
ALF01 Guarapari-ES 26.47 96 *e*P **P** **17 39 41.0 -0.4**
BSFB Barra de Sao F 26.52 92 *e*P **P** **17 39 41.8 -0.1**
RIB01 Linhares ES 26.89 94 *e*P **P** **17 39 45.2 0.0**
SDV Santo Domingo 28.71 357 *e*P **P** **17 40 01.4 -0.2**
NBMO Morrinhos-CE 32.69 63 *e*P **P** **17 40 36.0 -0.6**
NBPA Parau_RN 34.01 70 *e*P **P** **17 40 47.6 -0.4**
PMSA Palmer Station 44.91 177 *e*P **P** **17 42 18.9 +1.2**
BIRD Birdtown, Kers 55.40 348 *e*P **P** **17 43 37.6 +0.4**
comp=E,12nm,0.8s
LRAL Lakeview Retre 55.45 342 *e*P **P** **17 43 39.0 +1.3**
comp=E,15nm,1.0s
V56A Mocksville 56.53 349 *e*P **P** **17 43 46.0 +0.6**
comp=E,13nm,1.0s
V48A Smith Brothers 57.93 343 *e*P **P** **17 43 54.5 -0.7**
comp=E,29nm,1.1s
T49A Edmonton 58.88 345 *e*P **P** **17 44 01.3 -0.4**
T49A *e*pP **pP** **17 44 28.9 +0.5**
MIAR Mount Ida 59.05 336 *e*P **P** **17 44 03.1 +0.1**
comp=E,11nm,1.2s
T47A Sharon Grove 59.18 343 *e*P **P** **17 44 03.4 -0.5**
comp=E,11nm,0.8s
LTX Lajitas 59.35 325 *e*P **P** **17 44 05.3 0.0**
LTX *e*pP **pP** **17 44 32.5 +0.9**
TXAR Lajitas Array 59.35 325 P **P** **17 44 05.3 0.0**
comp=E,0.7nm,0.7s,baz=146,slow=9.1,SNR=4.8
TXAR pP **pP** **17 44 32.5 +0.9**
comp=E,0.4nm,0.6s,baz=146,slow=9.7,SNR=2.3
P53A Whipple 60.27 349 *e*P **P** **17 44 11.7 +0.5**
comp=E,13nm,0.6s
N55A Marion Center 61.15 351 *e*P **P** **17 44 17.6 +0.4**
comp=E,74nm,2.0s
VNA3 Neumayer Olymp 61.54 162 P **P** **17 44 20.3 +0.8**
VNA1 Neumayer--Stat 61.74 161 P **P** **17 44 21.5 +0.7**
VNA2 Neumayer--Watz 62.11 161 P **P** **17 44 24.0 +0.7**
baz=283,slow=7.7
MNTX Cornudas Mount 62.12 325 *e*P **P** **17 44 23.6 -0.3**
comp=E,3.0nm,1.0s
N49A Columbus Grove 62.20 347 *e*P **P** **17 44 23.8 -0.4**
comp=E,18nm,0.6s
SFIN Lafayette 62.37 344 *e*P **P** **17 44 24.2 -1.1**
comp=E,14nm,0.6s
MSTX Muleshoe 62.57 329 *e*P **P** **17 44 26.8 -0.2**
comp=E,6.9nm,0.9s
SNAA Sanae 63.74 161 P **P** **17 44 34.9 +0.7**
SNAA Sanae 63.74 161 *e*P **P** **17 44 34.9 +0.7**
comp=E,5.5nm,0.9s
SDCO Great Sand Dun 66.91 329 *e*P **P** **17 44 55.9 +0.5**
comp=E,5.3nm,0.8s
Q24A Divide 67.71 330 *e*P **P** **17 45 01.2 +0.7**
comp=E,5.5nm,0.8s
LIC Lamto 68.00 74 *e*P **P** **17 45 00.9 -1.5**
comp=E,70nm,1.6s
TIC Toumodi 68.18 74 *e*P **P** **17 45 02.3 -1.2**
KIC Kosan Boka 68.31 74 *e*P **P** **17 45 03.3 -1.1**
comp=E,60nm,0.7s
DBIC Dimbokro 68.34 74 P **P** **17 45 03.5 -1.0**
comp=E,22nm,0.7s,baz=217,slow=4.2,SNR=26
DBIC Dimbokro 68.34 74 *e*P **P** **17 45 03.1 -1.4**
comp=E,20nm,0.7s
SMCO Snowmass 68.75 329 *e*P **P** **17 45 08.0 +0.9**
comp=E,3.1nm,0.8s
W13A Hualapai Mount 69.41 322 *e*P **P** **17 45 12.1 +1.1**
comp=E,2.1nm,0.7s
U15A North Rim 69.45 324 *e*P **P** **17 45 12.4 +1.1**
comp=E,2.7nm,0.7s

KNB Kanab 70.17 324 *e*P **P** **17 45 16.5 +1.0**
comp=E,13nm,1.1s
QSPA South Pole Qui 70.22 180 *e*P **P** **17 45 16.5 +1.0**
comp=E,6.8nm,0.9s
CCUT Cedar City 70.85 324 *e*P **P** **17 45 21.8 +2.1**
comp=E,7.1nm,1.0s
MSU Marysvale 70.90 325 *e*P **P** **17 45 21.4 +1.4**
PSUT Pine Spring 71.82 324 *e*P **P** **17 45 26.6 +1.1**
comp=E,3.3nm,0.8s
TPNV Topopah Spring 72.07 322 *e*P **P** **17 45 28.9 +1.9**
comp=E,6.0nm,1.1s
DUG Dugway, Tooele 72.46 326 *e*P **P** **17 45 30.2 +1.0**
comp=E,4.8nm,1.1s
ISA Isabella, Lake 72.53 320 *e*P **P** **17 45 31.0 +1.3**
comp=E,4.1nm,0.8s
PD31 Pinedale Array 72.77 330 *e*P **P** **17 45 31.4 +0.4**
PDAR Pinedale Array 72.77 330 P **P** **17 45 31.4 +0.4**
comp=E,0.5nm,0.5s,baz=142,slow=5.1,SNR=4.9
ULM Lac du Bonnet 73.85 342 P **P** **17 45 36.3 -0.7**
comp=E,2.4nm,0.6s,baz=172,slow=6.5,SNR=3.9
NV01 Mina Array Sit 74.27 322 *e*P **P** **17 45 41.4 +1.4**
NVAR Mina Array Bea 74.27 322 P **P** **17 45 41.4 +1.4**
comp=E,1.8nm,0.9s,baz=149,slow=6.1,SNR=9.4
FLWY Flagg Ranch 74.31 330 *e*P **P** **17 45 40.9 +0.9**
comp=E,6.0nm,0.8s
RLMT Red Lodge 74.45 332 *e*P **P** **17 45 41.6 +0.7**
comp=E,12nm,1.5s
KVN Kaiserville 74.57 322 *e*P **P** **17 45 41.9 +0.3**
comp=E,6.1nm,1.2s
YHH Holmes Hill 74.91 330 *e*P **P** **17 45 43.5 -0.1**
comp=E,5.3nm,0.8s
YHB Horse Butte 75.05 330 *e*P **P** **17 45 44.5 +0.2**
comp=E,5.2nm,0.7s
HLID Hailey 75.73 328 *e*P **P** **17 45 49.5 +1.3**
comp=E,5.2nm,1.1s
PAHR Pah Rah Range 75.75 322 *e*P **P** **17 45 49.9 +1.6**
comp=E,6.1nm,0.9s
MCMT McKenzie Canyo 75.89 329 *e*P **P** **17 45 51.1 +1.9**
BOZ Bozeman (W) 75.89 331 *e*P **P** **17 45 50.0 +1.0**
comp=E,4.6nm,1.2s
TOA1 Torodi Ar. Sit 76.88 71 *e*P **P** **17 45 53.3 -1.8**
TOA1 *e*pP **pP** **17 46 22.6 -0.3**
TORD Torodi Ar. Bea 76.88 71 P **P** **17 45 53.3 -1.8**
comp=E,4.9nm,0.5s,baz=250,slow=5.2,SNR=28
TORD pP **pP** **17 46 22.6 -0.3**
comp=E,6.7nm,0.9s,baz=289,slow=6.4,SNR=7.7
EGMT Eagleton 76.91 333 *e*P **P** **17 45 55.1 +0.4**
comp=E,4.1nm,0.7s
PLID Pearl Lake 77.61 328 *e*P **P** **17 45 59.4 +0.5**
comp=E,4.3nm,0.8s
SYO Syowa Base 77.95 160⇑*e*P P 17 46 14.0 +14
BMO Blue Mountains 78.11 327 *e*P **P** **17 46 02.6 +1.2**
comp=E,4.4nm,1.0s
VNDA Vanda 78.35 190 P **P** **17 46 03.5 +1.3**
comp=E,1.2nm,0.8s,baz=129,slow=4.4,SNR=6.8
VNDA Vanda 78.35 190 *e*P **P** **17 46 03.1 +0.8**
WALA Waterton Lakes 79.50 332 *e*P **P** **17 46 09.8 +0.8**
comp=E,3.7nm,0.6s
C09A Chrisman Ranch 80.64 329 *e*P **P** **17 46 16.1 +1.1**
comp=E,7.7nm,0.8s
LTY Liberty 81.46 327 *e*P **P** **17 46 20.6 +1.1**
comp=E,8.3nm,1.2s
ESDC Sonseca Array 84.77 45 P **P** **17 46 36.5 -0.1**
comp=E,0.5nm,0.7s,baz=205,slow=5.7,SNR=4.5
MAW Mawson 85.81 163 P **P** **17 46 41.5 +0.3**
comp=E,0.9nm,0.6s,baz=253,slow=12,SNR=4.6
MAW Mawson 85.81 163 *e*P **P** **17 46 41.7 +0.4**
comp=E,3.6nm,1.8s
YKA Yellowknife Ar 89.73 341 P **P** **17 47 00.1 +0.3**
comp=E,6.4nm,0.7s,baz=133,slow=4.7,SNR=53
YKA pP **pP** **17 47 29.5 +1.0**
comp=E,1.6nm,0.6s,baz=135,slow=4.7,SNR=3.2
YKB5 Yellowknife Ar 89.73 341 *e*P **P** **17 47 00.1 +0.3**
YKB5 *e*pP **pP** **17 47 29.6 +1.0**
YKW3 Yellowknife Ar 89.78 341 *e*P **P** **17 47 00.1 0.0**
comp=E,10nm,1.0s
VYHS Vyhne 103.25 43 *e*PDIF **Pdif** **17 48 01.7 +0.1**
ASAR Alice Springs 131.25 208 PKP **PKPdf** **17 53 14.2 -0.3**
comp=E,0.8nm,0.6s,baz=123,slow=1.6,SNR=14
WR1 Warramunga Arr 134.25 211 *e*PKPdf **PKPdf** **17 53 20.2 -0.1**
WRA Warramunga Arr 134.25 211 PKP **PKPdf** **17 53 20.2 -0.1**
ZAA1 Zalesovo Array 140.57 24 *e*PKPdf **PKPdf** **17 53 31.0 +0.2**
ZAA1 *ep*PKPdf **pPKPdf** **17 54 00.8 +0.1**
ZALV Zalesovo Beam 140.58 24 PKP **PKPdf** **17 53 31.0 +0.2**
comp=E,2.1nm,0.7s,baz=255,slow=2.7,SNR=7.1
ZALV pPKP **pPKPdf** **17 54 00.8 +0.1**
comp=E,2.7nm,0.8s,baz=320,slow=3.1,SNR=4.8
MK32 Makanchi Array 144.40 35 *e*PKPdf PKPbc 17 53 36.6 0.0
MK32 *ep*PKPdf pPKPdf 17 54 06.2 -1.6
MKAR Makanchi Array 144.40 35 PKP PKPbc 17 53 36.6 0.0
comp=E,0.4nm,0.4s,baz=338,slow=2.6,SNR=10
MKAR pPKP pPKPdf 17 54 06.2 -1.6
comp=E,0.5nm,0.6s,baz=329,slow=4.2,SNR=4.2
USRK Ussuriysk Ar. 150.19 329 PKPbc **PKiKP** **17 53 53.1 -0.3**
comp=E,6.1nm,0.9s,baz=281,slow=3.1,SNR=11
MJAR Matsushiro Arr 151.07 311 PKPbc **PKPbc** **17 53 55.1 +0.1**
comp=E,2.4nm,0.8s,baz=227,slow=1.1,SNR=5.1
MAJO Matsushiro 151.07 311 *e*PKPbc **PKPbc** **17 53 55.1 +0.1**
SONA0 Songino Array 151.94 7 *e*PKPdf **PKPdf** **17 53 50.5 +0.2**
SONA0 *e*PKPbc **PKPbc** **17 53 57.0 +0.1**
SONM Songino Array 151.94 7 PKP **PKPdf** **17 53 50.5 +0.2**
comp=E,1.1nm,0.6s,baz=343,slow=4.5,SNR=2.7
SONM PKPbc **PKPbc** **17 53 57.0 +0.1**
comp=E,2.1nm,0.5s,baz=22,slow=2.7,SNR=5.4
SONM pPKPbc **pPKPbc** **17 54 27.0 +0.5**
comp=E,2.3nm,0.7s,baz=132,slow=2.2,SNR=3.8
KAPI Kappang 153.75 200 PKPab **PKPab** **17 54 14.8 +0.2**
comp=E,3.1nm,0.3s,baz=150,slow=5.1,SNR=3.9
KSRS Korea Array 157.20 323 PKP **PKPdf** **17 53 57.9 +0.2**
comp=E,0.9nm,0.8s,baz=31,slow=2.9,SNR=5.3
KSRS PKPab **PKPab** **17 54 29.6 +0.7**
comp=E,0.9nm,0.7s,baz=38,slow=3.3,SNR=5.9
KS15 Wonju Array Si 157.23 323 *e*PKPdf **PKPdf** **17 53 57.9 +0.2**
KS15 *e*PKPab **PKPab** **17 54 29.6 +0.6**

SJA ***06*** *17:42:14.9±0.8, 34.°92S×69.°59W, h178km±3km, ML4.2, MW4.2, Fault plane solution: NP1:φs155.00000°, δ38.00000°, λ-6.00000°.*
NEIC ***06*** *17:42:14.8±1.8, 34.°93S×69.°43W, h152km±8km, mb4.6/8, Error ellipse: s-maj=27.7km s-min=21.7km az=76.0*
ISCJB ***06*** *17:42:15.6±0.3, 34.°84S±0.°02×69.°41W±0.°05, h176km±2km, mb4.4/9, Error ellipse: s-maj=6.2km s-min=3.6km az=4.8*
GUC ***06*** *17:42:15.9±0.6, 34.°97S×69.°63W, h176km±10km, ML4.0*
IDC ***06*** *17:42:16.6±1.5, 34.°88S×69.°28W, h161km±12km, mb4.2/8, mb1 4.2/11, mb1mx3.9/33, mbtmp4.7/11, MS3.4/2, Ms1 3.5/2, ms1mx2.9/18, Error ellipse: s-maj=31.2km s-min=12.7km az=98.0*
ISC 06 17:42:16.7±0.7,**34.°81S**±0.°05×**69.°47W**±0.°04,**h172**km±5km, **n104,**σ1**70/**144,**mb4.5**/9,**22C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COIS	**El Sosneado**	**0.31**	**200**⇑	*i*P	**Pn**	**17 42 38.7**	**-1.2**
COIS				AMPG		17 42 38.9	
comp=Z,15μm,0.2s							
COIS				*e*S	**Sn**	**17 42 56.1**	**-1.9**
COIS				AMSG		17 42 56.4	
comp=Z,19μm,0.5s							
PUMA	**Malargue**	**0.68**	**179**⇑	*i*P	**Pn**	**17 42 40.7**	**-0.9**
PUMA				*e*S	**Sn**	**17 42 58.7**	**-2.1**
EDS3	**Malargue**	**0.96**	**177**⇑	*i*P	**Pn**	**17 42 42.4**	**-1.1**
EDS3				AMPG		17 42 42.7	
comp=Z,9μm,0.3s							
EDS3				*i* S	**Sn**	**17 43 02.0**	**-2.3**
EDS3				AMSG		17 43 02.6	
comp=Z,14μm,0.7s							
LMEL	**Las Melosas**	**1.14**	**327**⇑	*i*P	**Pn**	**17 42 45.2**	**+0.2**
LMEL				IAML		17 43 27.0	
comp=N,652nm,0.1s							
AVIZ	**Vizcacheras**	**1.55**	**31**⇓	*i*P	**Pn**	**17 42 49.6**	**+1.0**
AVIZ				*e*S	**Sn**	**17 43 15.0**	**+1.7**
ANTU	**Antumapu**	**1.57**	**322**	IAML		17 43 16.6	
comp=E,766nm,0.3s							
FCH	**Farellones**	**1.63**	**335**⇑	*i*P	**Pn**	**17 42 50.2**	**+0.5**
FCH				*i* S	**Sn**	**17 43 16.3**	**+1.1**
FCH				IAML		17 43 28.6	
comp=N,397nm,0.1s							
CLCH	**Cerro Calan**	**1.67**	**328**⇑	*i*P	**Pn**	**17 42 50.2**	**+0.4**
CLCH				*i* S	**Sn**	**17 43 16.1**	**+0.7**
CLCH				IAML		17 43 23.1	
comp=E,897nm,1.0s							
AAGR	**Agrelo**	**1.80**	**17**⇓	*i*P	**Pn**	**17 42 52.3**	**+1.0**
AAGR				*i* S	**Sn**	**17 43 18.1**	**+0.1**
PEL	**Peldehue**	**1.95**	**328**⇓	*e*P	**Pn**	**17 42 53.4**	**+0.7**
PEL				*i* S	**Sn**	**17 43 21.6**	**+1.0**
PEL	**Peldehue**	**1.95**	**328**⇑	*i*P	**Pn**	**17 42 52.9**	**+0.2**
PEL				*i* S	**Sn**	**17 43 21.3**	**+0.7**
PEL				IAML		17 43 23.3	
comp=N,620nm,0.4s							
ARCO	**CERRO ARCO**	**2.02**	**13**	*i* P	**Pn**	**17 42 54.5**	**+0.9**
ARCO				*i* S	**Sn**	**17 43 22.4**	**+0.2**
ARCO				IAML		17 43 24.8	
comp=Z,148nm,0.7s							
GO05	**Huala**	**2.03**	**264**	*e*P	**Pn**	**17 42 51.6**	**-2.0**
GO05				*i* S	**Sn**	**17 43 18.4**	**-3.9**
GO05	**Huala**	**2.03**	**264**⇑	*i*P	**Pn**	**17 42 51.5**	**-2.1**
GO05				*i* S	**Sn**	**17 43 18.3**	**-3.9**
GO05				IAML		17 43 20.5	
comp=N,2μm,0.3s							
ROC1	**El Roble**	**2.24**	**324**	*e*P	**Pn**	**17 42 56.2**	**0.0**
ROC1				*e*S	**Sn**	**17 43 26.4**	**-0.4**
ROCH	**El Roble**	**2.24**	**325**⇓	*i*P	**Pn**	**17 42 56.3**	**+0.1**
ROCH				IAML		17 43 29.4	
comp=E,717nm,0.2s							
ASAL	**Salagasta**	**2.28**	**14**	*e*P	**Pn**	**17 42 57.6**	**+1.2**
ASAL				*i* S	**Sn**	**17 43 28.6**	**+1.3**
AUSP	**Uspallata**	**2.58**	**1**⇓	*e*P	**Pn**	**17 43 02.0**	**+1.7**
AUSP				*i* S	**Sn**	**17 43 36.2**	**+2.2**
CCHI	**Chillan**	**2.77**	**229**	IAML		17 43 39.3	
comp=N,1μm,0.2s							
RTCV	**Cerro Valdivia**	**3.04**	**15**⇑	*e*P	**Pn**	**17 43 06.4**	**+0.8**
RTCV				*i* S	**Sn**	**17 43 44.7**	**+1.1**
ACAN	**Cantantal**	**3.17**	**38**⇑	*i*P	**Pn**	**17 43 08.3**	**+1.2**
ACAN				*i* S	**Sn**	**17 43 46.5**	**+0.2**
ZON	**Zonda**	**3.33**	**12**⇑	*e*P	**Pn**	**17 43 09.7**	**+0.6**
ZON				AMPG		17 43 10.1	
comp=Z,634nm,0.2s							
ZON				*i* S	**Sn**	**17 43 50.0**	**+0.1**
ZON				AMSG		17 43 50.6	
comp=Z,1μm,0.3s							
ZON				IAML		17 43 52.0	
comp=Z,201nm,0.2s							
CFA	**Coronel Fontan**	**3.36**	**18**	P	**Pn**	**17 43 09.8**	**+0.3**
baz=198,slow=13							
CFA				S	**Sn**	**17 43 50.0**	**-0.7**
comp=Z,40nm,0.3s,baz=94,slow=20,SNR=4.5							
CFA				LR	LR	17 44 09.8	
comp=Z,193nm,21.2s,baz=201,slow=33							
CFA	**Coronel Fontan**	**3.36**	**18**⇑	*i*P	**Pn**	**17 43 10.1**	**+0.6**
CFA				AMPG		17 43 10.3	
comp=Z,12μm,0.3s							
CFA				*i* S	**Sn**	**17 43 50.3**	**-0.4**
CFA				AMSG		17 43 50.8	
comp=Z,45μm,0.7s							
SJA	**San Juan**	**3.36**	**13**	*e*P	**Pn**	**17 43 10.8**	**+1.2**
SJA				*i* S	**Sn**	**17 43 51.6**	**+0.9**
RTLL	**Cerro Villicun**	**3.57**	**14**⇑	*e*P	**Pn**	**17 43 12.7**	**+0.5**
RTLL				*i* S	**Sn**	**17 43 55.0**	**-0.5**
RTLL				IAML		17 43 58.9	
comp=Z,814nm,0.4s							
RTLL	**Cerro Villicun**	**3.57**	**14**	*e*P	**Pn**	**17 43 12.7**	**+0.5**
RTLL				*i* S	**Sn**	**17 43 55.5**	**+0.1**
AMOG	**MOGNA**	**3.95**	**12**⇑	*e*P	**Pn**	**17 43 17.5**	**+0.5**
AMOG				*i* S	**Sn**	**17 44 04.0**	**-0.1**
ACCO	**Cerro Coronel**	**4.23**	**5**⇑	*e*P	**Pn**	**17 43 21.6**	**+0.7**
ACCO				*i* S	**Sn**	**17 44 11.2**	**+0.3**
AROD	**Rodeo**	**4.63**	**360**⇑	*e*P	**Pn**	**17 43 27.2**	**+1.1**
AROD				*i* S	**Sn**	**17 44 18.6**	**-1.7**
ACDV	**Cuesta del Vie**	**4.64**	**4**⇑	*e*P	**Pn**	**17 43 26.7**	**+0.7**
ACDV				*i* S	**Sn**	**17 44 20.2**	**0.0**
ACDV				IAML		17 44 21.3	
comp=Z,140nm,0.5s							
GO04	**Tololo Observa**	**4.76**	**346**	*i* P	**Pn**	**17 43 27.9**	**+0.3**
GO04				*i* S	**Sn**	**17 44 21.6**	**-1.6**
APLL	**PUNTA DE LOS L**	**5.05**	**30**⇑	*e*P	**Pn**	**17 43 30.4**	**-0.9**
APLL				*e*S	**Sn**	**17 44 28.4**	**-1.3**
APLL				IAML		17 44 31.9	
comp=Z,150nm,0.6s							
TCA	**Tanti**	**5.36**	**51**	*i* P	**Pn**	**17 43 35.1**	**-0.2**
TCA				*i* S	**Sn**	**17 44 36.2**	**-0.8**
AGUA	**GUANDACOL**	**5.38**	**9**⇑	*e*P	**Pn**	**17 43 35.6**	**+0.1**
AGUA				*i* S	**Sn**	**17 44 36.2**	**-1.2**
ACLC	**CERRO LA CRUZ**	**5.78**	**22**	*e*P	**Pn**	**17 43 39.5**	**-1.4**
ACLC				*i* S	**Sn**	**17 44 43.5**	**-3.6**
LCO	**Las Campanas**	**5.88**	**349**	*e*Pn	**Pn**	**17 43 41.7**	**-0.6**
LCO	**Las Campanas**	**5.88**	**349**⇑	*e*P	**Pn**	**17 43 42.0**	**-0.3**
LCO				AMPG		17 43 42.3	
comp=Z,131nm,0.3s							
LCO				*i* S	**Sn**	**17 44 46.1**	**-3.4**
LCO				AMSG		17 44 46.7	
comp=E,736nm,0.3s							
LCO	**Las Campanas**	**5.88**	**349**	*e*P	**Pn**	**17 43 40.4**	**-1.9**
PLCA	**Paso Flores**	**5.97**	**188**	P	**Pn**	**17 43 41.9**	**-1.3**
comp=E,0.5nm,0.3s,baz=26,slow=13,SNR=12							
PLCA	**Paso Flores**	**5.97**	**188**	*e*Pn	**Pn**	**17 43 40.0**	**-3.2**
VCA	**Vinchina**	**6.15**	**10**	*e*P	**Pn**	**17 43 45.7**	**-0.1**
VCA				*i* S	**Sn**	**17 44 54.9**	**-1.0**
VCA				IAML		17 44 59.1	
comp=Z,210nm,0.5s							
TRQA	**Tornquist**	**6.85**	**120**	*e*Pn	**Pn**	**17 43 53.1**	**-1.6**
CYA	**Choya**	**7.08**	**27**⇑	*e*P	**Pn**	**17 43 55.3**	**-2.6**
CYA				AMPG		17 43 55.5	
comp=Z,101nm,0.3s							
CYA				*i* S	**Sn**	**17 45 11.7**	**-6.0**
CYA				AMSG		17 45 11.9	
comp=Z,337nm,0.2s							
GO03	**Copiap**	**7.23**	**355**	*i* P	**Pn**	**17 43 59.2**	**-0.7**
GO03				*i* S	**Sn**	**17 45 18.6**	**-2.7**
AHML	**Horco Molle**	**8.75**	**25**⇑	*i*P	**Pn**	**17 44 17.3**	**-2.7**
AHML				*i* S	**Sn**	**17 45 52.3**	**-5.5**
FSA	**Cafayete**	**9.18**	**20**	*i* P	**Pn**	**17 44 24.4**	**-1.4**
FSA				*i* S	**Sn**	**17 46 03.6**	**-4.5**
GO02	**Mina Guanaco**	**9.62**	**359**	*i* P	**Pn**	**17 44 31.0**	**-0.7**
GO02				*i* S	**Sn**	**17 46 15.5**	**-3.3**
LVC	**Limon Verde**	**12.17**	**2**	P	**Pn**	**17 45 03.1**	**-1.8**
comp=Z,1.2nm,0.3s,baz=121,slow=11,SNR=9.3							
LVC				S	**Sn**	**17 47 14.6**	**-5.5**
comp=Z,0.4nm,0.3s,baz=123,slow=4.1,SNR=3.6							
LVC	**Limon Verde**	**12.17**	**2**	*e*Pn	**Pn**	**17 45 04.0**	**-0.9**
LVC	**Limon Verde**	**12.17**	**2**	*e*P	**Pn**	**17 45 07.4**	**+2.5**
PB01	**IPOC Station P**	**13.72**	**360**	*e*Pn	**Pn**	**17 45 23.7**	**-0.6**
PB11	**IPOC Station P**	**14.99**	**359**	*e*Pn	**Pn**	**17 45 39.8**	**-0.4**
comp=Z,13nm,0.8s							
MNMC	**Minye Minye**	**15.62**	**360**	*e*Pn	**Pn**	**17 45 48.3**	**+0.3**
comp=Z,38nm,1.1s							
ITAB	**Concordia**	**16.66**	**68**	*e*P	**P**	**17 45 58.4**	**-1.2**
PTGB	**Pitanga**	**18.13**	**61**	*e*P	**Pn**	**17 46 17.1**	**-0.7**
LPAZ	**La Paz**	**18.49**	**4**	P	**Pn**	**17 46 23.4**	**+0.8**

VNA2	Neumayer--Watz	48.44	157	P	P	17 50 41.6	+0.5
	baz=287,slow=8.7						
SNAA	Sanae	50.03	158	P	P	17 50 53.6	+0.4
TXAR	Lajitas Array	71.50	329	LR	LR	18 22 14.5	
	comp=Z,87nm,19.4s,baz=0.0,slow=34						
DBIC	Dimbokro	73.45	69	P	P	17 53 30.9	+0.5
	comp=Z,6.7nm,0.7s,baz=200,slow=3.2,SNR=7.2						
R53A	Hurricane	73.69	350	eP	P	17 53 31.3	+0.1
	comp=Z,23nm,0.8s						
BOSA	Boshof	77.81	116	P	P	17 53 56.0	+0.8
	comp=Z,5.2nm,0.7s,baz=234,slow=5.5,SNR=8.8						
PV21	Cone Mtn., Par	81.67	330	eP	P	17 54 16.9	+1.1
	comp=Z,10nm,1.1s						
TORD	Torodi Ar. Bea	82.51	68	P	P	17 54 19.9	-0.4
	comp=Z,1.8nm,0.4s,baz=256,slow=5.6,SNR=18						
TOA1	Torodi Ar. Sit	82.51	68	eP	P	17 54 19.9	-0.4
PD31	Pinedale Array	85.47	332	eP	P	17 54 36.5	+1.5
	comp=Z,8.5nm,1.9s						
PDAR	Pinedale Array	85.47	332	P	P	17 54 36.5	+1.5
	comp=Z,0.5nm,0.5s,baz=188,slow=4.0,SNR=4.9						
AKASG	Malin Array Be	121.18	47	PKP	PKiKP	18 00 48.5	0.0
	comp=Z,0.4nm,0.5s,baz=246,slow=2.4,SNR=3.9						
KKAR	Karatay Array	148.04	63	ePKPbc	PKiKP	18 01 42.4	-0.8
AAK	Ala-Archa	150.99	64	ePKPbc	PKiKP	18 01 50.6	+1.1
KURK	Kurchatov	151.97	46	ePKPbc	PKiKP	18 01 52.3	+1.3
KSH	Kashi	152.17	70	PKPbc	PKiKP	18 01 53.1	+1.1
KSH				PP	PP	18 05 46.2	+11
ZAA1	Zalesovo Array	153.71	35	ePKPbc	PKiKP	18 01 55.9	+1.3
ZALV	Zalesovo Beam	153.72	35	PKPbc	PKiKP	18 01 55.9	+1.3
	comp=Z,2.4nm,0.4s,baz=306,slow=4.1,SNR=9.3						
MK32	Makanchi Array	155.64	52	ePKPdf	PKPdf	18 01 49.0	-0.4
MK32				ePKPdif	PKPbc	18 01 59.2	
MK32				ePKPab	PKPab	18 02 17.7	+1.2
MKAR	Makanchi Array	155.64	52	PKP	PKPdf	18 01 49.0	-0.4
	comp=Z,0.3nm,0.8s,baz=224,slow=4.0,SNR=3.0						
MKAR				PKPbc	PKPbc	18 01 59.2	
	comp=Z,0.2nm,0.5s,baz=14,slow=1.5,SNR=3.9						
MKAR				PKPab	PKPab	18 02 17.7	+1.2
	comp=Z,2.3nm,0.8s,baz=300,slow=4.0,SNR=16						

RSNC ***06*** *17:42:35.3±1.3, 5°.58N×77°.69W, h100km±17km, ML3.0*
IDC ***06*** *17:42:36.3±2.3, 5°.57N×77°.90W, h0km, mb3.6/1, mb1 3.9/3, mb1mx3.5/33, mbtmp3.8/3, ML2.4/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/24, Error ellipse: s-maj=59.1km s-min=31.0km az=8.0*
ISCJB ***06*** *17:42:37.1±1.0, 5°.46N±0°.04×77°.71W±0°.07, h25km, mb3.8/1, Error ellipse: s-maj=10.7km s-min=5.8km az=1.8*

ISC 06 17:42:38.4±1.1, 5°.47N±0°.04×77°.70W±0°.07, h25km, n20, σ1=91/24, 1D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	Bahia Solano	0.81	21	eP	Pb	17 42 51.4	-2.5
SOLC				eS	Sn	17 43 06.1	+0.6
SOLC				i		17 43 09.5	
	comp=Z,563nm,0.5s						
MALC	Bahia Malaga	1.49	166	eP	Pn	17 43 03.0	-0.7
MALC				i		17 43 19.6	
	comp=Z,115nm,0.6s						
MALC				eS	Sb	17 43 22.7	-1.3
PLMC	San Jos del P	1.52	111	eP	Pn	17 43 02.0	-2.1
PLMC				eS	Sn	17 43 22.2	-1.0
YOTC	Yotoco, Valle	2.00	137	↓iP	Pn	17 43 08.5	-2.3
YOTC				eS	Sn	17 43 34.6	-0.6
YOTC				i		17 43 43.2	
	comp=Z,41nm,0.7s						
HELC	Santa Helena	2.28	72	eP	Pn	17 43 12.6	-2.3
GUY2C	Guyana, Caldas	2.34	96	eP	Pn	17 43 13.5	-2.2
RREF	El Recreo	2.41	103	eP	Pn	17 43 15.7	-1.3
NORC	Norcasia	2.82	88	eP	Pn	17 43 20.9	-1.2
POPC	Popayan, Colom	3.08	161	eP	Pn	17 43 25.8	0.0
PRAC	Prado	3.31	122	eP	Pn	17 43 28.7	+0.1
PTBC	PUERTO BERRIO,	3.40	72	eP	Pn	17 43 29.6	-0.4
ROSC	El Rosal	3.43	100	Pn	Pb	17 43 36.0	-2.7
	comp=Z,3.0nm,0.3s,baz=289,slow=16,SNR=8.8						
ROSC				Sn	Sb	17 44 21.9	+1.7
	comp=Z,2.7nm,0.3s,baz=202,slow=19,SNR=2.3						
CHIC	Chingaza	4.04	102	eP	Pn	17 43 41.4	+2.3
FLOC	Florencia	4.37	152	eP	Pb	17 43 56.2	+1.6
BARC	Barichara	4.63	76	eP	Pn	17 43 48.1	+1.0
SDV	Santo Domingo	7.79	64	Pn	Pn	17 44 31.7	+1.2
	comp=Z,1.7nm,0.3s,baz=255,slow=11,SNR=3.8						
SDV				Sn	Sn	17 46 02.7	+4.5
	comp=Z,1.6nm,0.3s,baz=131,slow=3.0,SNR=1.9						
JTS	Las Juntas de	8.63	304	LR	LR	17 47 59.2	
	comp=Z,145nm,19.5s,baz=156,slow=38						
NNA	Nana	17.36	177	LR	LR	17 55 09.5	
	comp=Z,112nm,21.6s,baz=2.0,slow=43						
YKA	Yellowknife Ar	63.03	342	P	P	17 53 04.6	+1.4
	comp=Z,0.3nm,0.4s,baz=138,slow=6.9,SNR=5.4						
ASAR	Alice Springs	144.60	236	PKP	PKPdf	18 02 13.2	-0.6
	comp=Z,1.2nm,1.0s,baz=121,slow=3.6,SNR=10						

IDC ***06*** *17:48:33.9±4.6, 11°.20S×113°.51E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/28, mbtmp3.7/4, Error ellipse: s-maj=271.1km s-min=26.3km az=48.0*
ISCJB ***06*** *17:48:37.0±0.8, 10°.90S±0°.06×114°.00E±0°.04, h33km, Error ellipse: s-maj=8.7km s-min=6.1km az=10.9*
DJA ***06*** *17:48:39.4±1.0, 11°.S±4°.×11°.4E±°, h27km±12km, M4.2/11, mb4.4/7, mB6.9/1, MLv4.1/11, Mw(mB)6.8/1*

ISC 06 17:48:39.8±1.3, 10°.9S±0°.1×114°.00E±0°.07, h35km, n17, σ0=89/22, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	2.37	4	P	Pn	17 49 16.1	-0.2
JAGI				S	Sn	17 49 44.2	0.0
DNP	Denpasar	2.47	29	P	Pn	17 49 17.2	-0.4
SRBI	Singaraja	3.00	24	P	Pn	17 49 24.1	-0.8
SRBI				S	Sn	17 49 59.4	-0.2
PWJI	Pagerwojo	3.55	322	P	Pn	17 49 31.3	-1.2
PWJI				S	Sn	17 50 12.4	-0.8
KMMI	Kalianget	3.78	360	P	Pn	17 49 35.6	0.0
KMMI				S	Sn	17 50 20.0	+1.1
PLAI	Plampang	4.23	62	P	Pn	17 49 41.0	-0.8
PLAI				S	Sn	17 50 28.6	-1.5
UGM	Wanagama	4.51	310	P	Pn	17 49 46.6	+0.9
WSI	Waingapu	6.31	80	P	Pn	17 50 10.2	-0.2
	55nm,1.0s,94μm0.6nm						
CISI	Cisompet, Garu	6.93	298	P	Pn	17 50 17.6	-1.4
	49nm,1.9s,0.3nm						
EDFI	Ende, Flores	7.86	75	P	Pn	17 50 31.5	-0.3
	5.7nm,0.5s,0.8nm						
BSSI	Bau Bau, Buton	7.94	54	P	Pn	17 50 32.4	-0.5
	26nm,0.8s,0.1nm						
BKSI	Bulukumba	8.18	48	P	Pn	17 50 36.1	0.0
	7.6nm,0.5s						
CGJI	Cibinong	9.23	296	P	Pn	17 50 48.8	-1.7
	41nm,1.1s						
ASAR	Alice Springs	22.84	126	P	P	17 53 41.1	+0.9
	0.7nm,0.9s,baz=302,slow=9.8,SNR=7.1						
CMAR	Chiang Mai Arr	32.70	333	P	P	17 55 10.2	+1.1
	0.4nm,0.6s,baz=165,slow=9.0,SNR=3.4						
MKAR	Makanchi Array	64.01	336	P	P	17 59 10.0	+0.2
	1.0nm,0.4s,baz=149,slow=7.6,SNR=23						
ZALV	Zalesovo Beam	69.14	342	P	P	17 59 42.1	-0.3
	0.6nm,0.5s,baz=156,slow=4.3,SNR=2.6						

IDC ***06*** *18:26:12.2±1.6, 15°.17S×173°.73W, h0km, mb3.9/7, mb1 4.3/7, mb1mx4.0/27, mbtmp3.9/7, MS3.8/14, Ms1 3.8/14, ms1mx3.5/27, Error ellipse: s-maj=78.5km s-min=26.1km az=155.0*
NEIC ***06*** *18:26:14.4±2.6, 15°.10S×173°.71W, h14km±8km, mb4.6/12, Error ellipse: s-maj=59.7km s-min=24.8km az=154.0*

ISC 06 18:26:16.2±1.3, 15°.3S±0°.4×173°.6W±0°.2, h30km, n56, σ1=01/34, mb4.5/16, MS3.9/16, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	20.08	247	LR	LR	18 37 15.9	
	comp=Z,270nm,19.1s,baz=30,slow=33						
DZM	Mont Dzumac	20.08	247	eLR	LR	18 35 32.4	
	comp=Z,1μm,23.6s						
PAE	Paea	23.14	99	eT	T	18 55 28.5	
	3.2nm,0.2s						
PPT	Papeete	23.14	99	LR	LR	18 37 42.4	
	comp=Z,72nm,21.9s,baz=298,slow=30						
PPT2	Papeete2	23.14	99	eLQ	LQ	18 35 56.1	
	415nm,27.2s						
PPT2				eLR	LR	18 37 02.8	
	comp=Z,144nm,23.8s						
TVO	Taravao	23.46	99	eT	T	18 55 48.3	
	2.2nm,0.4s						
TBI	Tubuai	24.11	113	eLQ	LQ	18 36 22.5	
	365nm,27.5s						
TBI				eLR	LR	18 37 30.3	
	comp=Z,150nm,26.5s						
TBI	Tubuai	24.11	113	eT	T	18 56 53.8	
	11nm,0.3s						
URZ	Urewera	24.32	198	LR	LR	18 39 46.7	
	comp=Z,251nm,18.1s,baz=12,slow=33						
HNR	Honiara	26.48	280	LR	LR	18 40 39.9	
	comp=Z,144nm,18.7s,baz=156,slow=33						
RKT	Rikitea	37.20	108	eT	T	19 13 10.5	
	2.5nm,0.3s						
H11S2	WAKE ISLAND Hy	38.77	329	T	T	19 14 10.1	
	baz=149,slow=76,SNR=8.2						
H11S3	WAKE ISLAND Hy	38.78	329	T	T	19 14 15.4	
	baz=149,slow=76,SNR=9.6						
H11S1	WAKE ISLAND Hy	38.79	329	T	T	19 14 12.2	
	baz=149,slow=76,SNR=8.4						
H11N3	WAKE ISLAND Hy	39.72	331	T	T	19 15 31.4	
	baz=149,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	39.73	330	T	T	19 15 24.8	
	baz=149,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	39.74	331	T	T	19 15 32.6	
	baz=149,slow=76,SNR=16						
STKA	Stephens Creek	43.94	240	LR	LR	18 50 56.9	
	comp=Z,134nm,18.2s,baz=39,slow=34						
AS31	Alice Springs	49.97	252	eP	P	18 35 07.2	-0.8
	2.1nm,0.6s						
ASAR	Alice Springs	49.98	252	P	P	18 35 07.4	-0.6
	6.7nm,0.6s,baz=89,slow=7.4,SNR=86						
ASAR				LR	LR	18 54 18.1	
	comp=Z,64nm,19.8s,baz=110,slow=34						
PFO	Pinyon Flats O	72.97	47	LR	LR	19 04 39.0	
	comp=Z,116nm,18.2s,baz=246,slow=32						
YBH	Yreka Blue Hor	73.61	37	LR	LR	19 03 04.7	
	comp=Z,83nm,19.1s,baz=254,slow=30						
NV01	Mina Array Sit	74.36	42	eP	P	18 37 52.7	+1.2
NVAR	Mina Array Bea	74.36	42	P	P	18 37 52.7	+1.2
	0.7nm,0.8s,baz=229,slow=8.2,SNR=3.8						
NVAR				LR	LR	19 07 12.7	
	comp=Z,57nm,18.6s,baz=202,slow=33						
KSRS	Korea Array	75.95	316	P	P	18 38 00.7	+0.4
	0.3nm,0.4s,baz=131,slow=5.7,SNR=4.1						
KS15	Wonju Array Si	75.97	316	eP	P	18 38 00.7	+0.3
BCPM	Bancas Point	79.83	17	eP	P	18 38 19.3	-2.1
	42nm,0.7s						
PV12	Saucer Basin,	80.70	46	eP	P	18 38 27.1	+0.3
	6.6nm,1.0s						
TX31	Lajitas Ar. Si	80.70	56	eP	P	18 38 25.9	-1.0
	7.4nm,1.6s						
LTX	Lajitas	80.70	56	eP	P	18 38 28.7	+1.8
TXAR	Lajitas Array	80.70	56	P	P	18 38 28.7	+1.8
	0.8nm,0.9s,baz=218,slow=4.2,SNR=5.5						
TXAR				LR	LR	19 06 22.0	
	comp=Z,80nm,20.2s,baz=0.0,slow=30						
WRH	Wood River Hil	81.87	11	eP	P	18 38 31.2	-1.0
	12nm,1.3s						
CCB	Clear Creek Bu	82.08	11	eP	P	18 38 33.7	+0.4
	8.8nm,1.4s						
PD31	Pinedale Array	82.30	42	eP	P	18 38 35.7	+0.4
PDAR	Pinedale Array	82.30	42	P	P	18 38 35.7	+0.4
	0.7nm,0.8s,baz=228,slow=3.8,SNR=5.7						
PDAR				LR	LR	19 08 51.5	
	comp=Z,63nm,19.4s,baz=198,slow=31						
SMCO	Snowmass	82.36	46	eP	P	18 38 36.8	+1.0
	8.6nm,1.5s						
ILAR	Eielson Array	82.37	11	P	P	18 38 34.9	+0.1
	0.6nm,0.6s,baz=211,slow=7.1,SNR=6.3						
ILB	Eielson Array	82.37	11	eP	P	18 38 34.9	+0.1
	7.8nm,1.4s						
SDCO	Great Sand Dun	82.77	48	eP	P	18 38 39.5	+1.6
	6.0nm,1.5s						
RWWY	Rawlins	83.33	44	eP	P	18 38 39.1	-1.5
	14nm,1.4s						
MAW	Mawson	87.84	199	LR	LR	19 15 35.5	
	comp=Z,60nm,19.6s,baz=110,slow=34						
YKA	Yellowknife Ar	90.06	23	P	P	18 39 11.5	-1.2
	0.3nm,0.6s,baz=238,slow=4.3,SNR=4.9						
YKA				LR	LR	19 14 22.6	
	comp=Z,7.0nm,19.4s,baz=204,slow=32						
YKB5	Yellowknife Ar	90.06	23	eP	P	18 39 11.5	-1.2
ULM	Lac du Bonnet	93.95	39	LR	LR	19 15 17.4	
	comp=Z,103nm,20.0s,baz=261,slow=31						
KHC	Kasperske Hory	145.74	352	ePKP	PKPab	18 45 54.0	+1.4
BR101	Keskin Array S	145.95	321	ePKPdf	PKPdf	18 45 53.3	+0.6
BRTR	Keskin Array B	145.95	321	PKPbc	PKPdf	18 45 53.3	+0.6
	1.9nm,0.8s,baz=94,slow=1.0,SNR=11						
GERES	GERESS Array B	146.00	351	PKPbc	PKPbc	18 45 53.6	+0.5
	0.4nm,0.7s,baz=0.0,slow=3.0,SNR=2.9						
CONA	Conrad Observa	146.52	348	i pPKPdf	PKPab	18 45 56.1	+0.4
	10nm,1.5s						
MOA	Molln	146.88	350	i PKiKP	PKiKP	18 45 58.7	+0.4
	2.6nm,0.7s						
WTTA	Wattenberg	147.82	353	i PKPab	PKPbc	18 45 59.3	+0.9
	7.8nm,1.4s						
SOKA	Soboth	147.88	349	i pPKPdf	PKPbc	18 45 59.0	+0.5
	8.5nm,1.6s						
DAVA	Damuels	147.96	356	PKiKP	PKiKP	18 46 00.5	-0.2
	8.0nm,1.4s						
OBKA	Obir	148.13	349	i pPKPdf	PKPbc	18 45 59.7	+0.5
	4.3nm,1.1s						
FETA	Feichten	148.15	354	i PKPab	PKiKP	18 46 01.0	-0.2
	5.7nm,1.4s						
ABTA	Abfaltersbach	148.22	352	i pPKPdf	PKPbc	18 46 00.4	+0.9
	4.4nm,1.1s						

MAN 06 18:26:30.5, 10°.16N×123°.23E, h16km, mb4.4, ML3.2, MS3.0, 1C-2D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.74	78	↑iP	Pg	18 26 43.0	-2.0
LLP				i S	Sg	18 26 53.0	-1.7
TBP	Tagbilaran	0.78	127	eP	Pb	18 26 43.8	-1.8
GUIM	Jordan	0.79	306	eP	Pg	18 26 45.9	+0.1
GUIM				eS	Sn	18 26 58.1	-0.2
SNPH	Sibulan	0.81	180	↓iP	Pb	18 26 45.6	-0.6
SNPH				i S	Sb	18 26 56.6	-0.3
JAP	San Jose, Anti	1.39	295	↓eP	Pg	18 26 57.9	+0.6
MSLP	Maasin	1.60	91	eP	Pn	18 26 57.9	-0.2
MSLP				eS	Sb	18 27 20.2	+0.4
OCLP	Ormoc	1.62	57	eP	Pn	18 26 57.7	-0.7
OCLP				eS	Sn	18 27 19.5	+0.5
CUYO	Cuyo Island	2.28	288	eP	Pn	18 27 08.3	+0.8
CUYO				eS	Sg	18 27 41.9	-2.1
PAGZ	Pagadian	2.30	176	eP	Pn	18 27 07.5	-0.2
PAGZ				eS	Sb	18 27 38.9	-0.9
IPIL	Ipil	2.44	196	eP	Pn	18 27 09.9	+0.2
IPIL				eS	Sn	18 27 41.3	+2.1
BUKP	Musuan	2.90	141	eP	Pn	18 27 15.8	-0.2
BUKP				eS	Sb	18 27 54.2	-2.9
BUSP	Coron	3.50	302	eP	Pn	18 27 25.6	+1.4

TAP 06 18:27:46.1, 23°.89N×121°.19E, h5km±1km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OWD	Renai	0.07	346	P	Pg	18 27 47.6	-0.1
OWD	baz=346			eS	Sg	18 27 48.6	-0.4
VWDT	VWDT	0.14	199	P	Pg	18 27 48.9	-0.1
VWDT	baz=199			S	Sg	18 27 51.1	+0.2
CHGB	Renai	0.17	354	eP	Pg	18 27 49.5	-0.1
CHGB	baz=354			eS	Sg	18 27 51.9	0.0
ESL	Shilin	0.23	109	eP	Pg	18 27 51.2	+0.5
ESL	baz=108			eS	Sg	18 27 54.6	+0.9
SSLB	Suanglung	0.24	245	P	Pg	18 27 50.8	0.0
SSLB	baz=244			eS	Sg	18 27 53.4	-0.6
WHF	Hehuan Shan	0.26	15	P	Pg	18 27 51.2	-0.2
SMLT	Sun Moon Lake	0.27	269	eP	Pg	18 27 51.5	+0.1
	baz=268						
DPDB	Guoxing	0.28	300	P	Pg	18 27 51.9	+0.2
	baz=300						
EGFH	Guangfu	0.31	136	eS	Sg	18 27 56.3	+0.2
	baz=135						
TYC	Yuchr	0.31	273	eP	Pg	18 27 51.7	-0.4
	baz=272						
WHYT	Xinyi Township	0.37	238	eP	Pg	18 27 52.8	-0.4
	baz=238						
WHYT				eS	Sg	18 27 57.5	-0.5
	baz=238						
EHY	Hungye	0.40	163	eP	Pg	18 27 53.9	+0.1
	baz=161						
EHY				eS	Sg	18 27 58.8	-0.3
	baz=161						
ETLH	Xiulin Townshi	0.41	40	P	Pg	18 27 53.8	-0.3
	baz=39						
ETLH				eS	Sg	18 28 00.5	+1.0
	baz=39						
TWD	Chiawan	0.41	63	eS	Sg	18 27 59.5	0.0
	baz=63						
HGSD	Ruisui	0.45	152	eP	Pg	18 27 54.7	0.0
	baz=151						
HGSD				eS	Sg	18 28 01.7	+1.1
	baz=151						
NACB	Ninganchiao	0.46	52	eS	Sg	18 28 01.1	0.0
	baz=52						
YULB	Yu-li	0.50	169	P	Pg	18 27 55.7	-0.2
	baz=169						
YULB				eS	Sg	18 28 01.6	-0.8
	baz=169						
TWF1	Yuli	0.54	170	P	Pg	18 27 56.5	-0.1
	baz=169						
TWF1				eS	Sg	18 28 04.3	+0.6
	baz=169						
NNSB	Datong	0.56	18	P	Pg	18 27 56.0	-1.0
	baz=17						
NNSB				S	Sg	18 28 05.1	+0.8
	baz=17						

TAP 06 18:27:49.2, 23°.87N×121°.20E, h24km, ML1.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OWD	Renai	0.09	344	eP	Pb	18 27 53.5	-0.3
OWD	baz=344			eS	Sb	18 27 54.5	-2.4
VWDT	VWDT	0.13	206	S	Sb	18 27 57.0	0.0
	baz=205						
CHGB	Renai	0.19	352	eS	Sb	18 27 58.2	-0.5
	baz=352						
SSLB	Suanglung	0.24	250	S	Sb	18 27 59.4	-0.1
	baz=250						
SMLT	Sun Moon Lake	0.28	273	eP	Pb	18 27 55.3	-0.6
	baz=272						
SMLT	Sun Moon Lake	0.28	273	eS	Pb	18 27 55.2	-0.6
	baz=268						
DPDB	Guoxing	0.30	303	eP	Pb	18 27 55.9	-0.3
	baz=302						
DPDB	Guoxing	0.30	303	eS	Pb	18 27 55.5	-0.7
	baz=300						
TYC	Yuchr	0.32	276	eP	Pb	18 27 56.1	-0.3
	baz=276						
TYC				eS	Sb	18 28 01.0	-0.3
	baz=276						
TYC	Yuchr	0.32	276	eS	Pb	18 27 56.2	-0.1
	baz=272						

MEX 06 18:32:56.6±0.4, 16°.09N×98°.73W, h9km±5km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.65	63	eP	Pg	18 33 07.7	-1.5
PNIG				eS	Sg	18 33 16.8	-0.9
TLIG	Tlapa	1.47	6	eP	Pn	18 33 19.8	-3.6
TLIG				i S	Sn	18 33 37.7	-5.1

MAN 06 18:41:45.5, 7°.32N×124°.75E, h33km, mb4.1, ML2.9, MS2.6, Mindanao

ISCJB ***06*** *19:00:53.7±0.6, 27°.79N±0°.06×89°.4E±0°.1, h10km, mb3.7/10, MS3.2/1, Error ellipse: s-maj=15.1km s-min=6.3km az=152.4*
NEIC ***06*** *19:00:53.2±2.6, 27°.72N×89°.28E, h10km±6km, mb3.9/3, Error ellipse: s-maj=27.3km s-min=18.1km az=78.0*
NEIC Felt [III] at Thimphu.
BJI ***06*** *19:00:57.9±0.0, 27°.88N×90°.12E, h8km, mb4.4/5, mB4.3/3*
IDC ***06*** *19:01:02.5±2.7, 27°.95N×90°.22E, h72km±31km, mb3.4/8, mb1 3.6/10, mb1mx3.3/41, mbtmp3.8/10, MS3.3/1, Ms1 3.3/1, ms1mx2.4/30, Error ellipse: s-maj=36.3km s-min=16.7km az=69.0*

ISC 06 19:00:55.9±0.7, 27°.92N±0°.06×89°.49E±0°.10, h10km, n23, σ2=50/25, mb3.8/10, Bhutan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	2.30	39	ePn	Pn	19 01 35.1	+0.9
SHL	Shillong	3.17	137	ePn	Pn	19 01 45.8	-0.3
SHL	Shillong	3.17	137	ePN	Pn	19 01 48.0	+2.0
SHL				ePG	Pg	19 01 58.0	+1.3
SHL				eSG	Sb	19 02 34.0	+2.7
BRDH	Bariadhala	5.57	159	P	Pn	19 02 22.3	+3.5
	53nm,0.3s,baz=9.0,slow=19,SNR=14						
BRDH				S	Sn	19 03 21.2	-1.7
	70nm,0.3s,baz=326,slow=23,SNR=11						
CMAR	Chiang Mai Arr	12.81	135	P	Pn	19 03 55.5	-2.6
	0.1nm,0.3s,baz=322,slow=12,SNR=9.0						
LZH	Lanzhou	14.64	53	eP	Pn	19 04 25.5	+2.3
LZH				pP	P	19 04 29.0	-0.6
LZH				sP		19 04 31.9	
WMQ	Urumqi	15.94	355	eP	P	19 04 49.7	+5.8
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
BTK	Batken	19.61	313	eP	P	19 05 21.7	-2.8
	4.1nm,0.6s						
MK31	Makanchi Array	19.68	345	eP	P	19 05 26.7	+1.7
MKAR	Makanchi Array	19.68	345	P	P	19 05 26.4	+1.3
	1.3nm,0.3s,baz=158,slow=10,SNR=63						
MAKZ	Makanchi	19.76	345	eP	Pn	19 05 27.9	+0.4
	3.2nm,0.6s						
SONM	Songino Array	23.85	29	P	P	19 06 05.9	-3.5
	0.8nm,0.5s,baz=210,slow=11,SNR=5.2						
KURBB	Kurchatov Arra	24.16	343	P	P	19 06 13.2	+1.2
	2.7nm,0.6s,baz=156,slow=9.5,SNR=34						
KURK	Kurchatov	24.22	343	eP	P	19 06 10.2	-2.4
	3.6nm,0.6s						
ZALV	Zalesovo Beam	26.23	354	P	P	19 06 31.8	+0.9
	1.2nm,0.6s,baz=168,slow=9.6,SNR=6.0						
KS15	Wonju Array Si	33.49	64	eP	P	19 07 34.6	-0.8
KSRS	Korea Array	33.52	64	LR	LR	19 22 20.4	
	comp=Z,43nm,18.6s,baz=141,slow=39						
FINES	FINESS Array B	53.22	328	P	P	19 10 15.8	+1.6
	1.0nm,0.6s,baz=99,slow=9.8,SNR=6.3						
ARCES	ARCESS Array B	55.07	337	P	P	19 10 28.3	+0.8
	0.8nm,0.5

mb3.5/4, Error ellipse: s-maj=7.2km s-min=5.2km az=44.9
*NNC **06** 19:35:05.9±2.5, 36°.58N×70°.70E, h98km±61km, mb3.2, mpv3.5, Error ellipse: s-maj=24.1km s-min=12.8km az=147.0*

ISC 06 19:35:00.2±0.8, 36°24N±0°.07×70°.96E±0°.06, h100km, n28, σ3°39/34, mb3.6/4, 7C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.87**	**357**	⇑P	**Pn**	**19 36 40.4**	**+2.1**
	1.0nm,0.3s,baz=178,slow=12,SNR=23						
KK31				⇓S	**Sn**	**19 37 53.3**	**-1.6**
	22nm,0.7s,baz=184,slow=21,SNR=12						
AAK	**Ala-Archa**	**6.95**	**22**	P	**Pn**	**19 36 40.5**	**+1.0**
	0.8nm,0.3s,baz=194,slow=8.3,SNR=4.6						
AAK				S	**Sn**	**19 37 56.8**	**-0.4**
	0.3nm,0.3s,baz=188,slow=7.1,SNR=4.1						
AAK	**Ala-Archa**	**6.95**	**22**	⇓P	**Pn**	**19 36 41.4**	**+1.9**
	2.6nm,0.6s						
AAK				⇑S	**Sn**	**19 37 57.7**	**+0.6**
	3.1nm,0.5s						
TKM2	**Tokmak 2**	**7.57**	**27**	⇑P	**Pn**	**19 36 49.9**	**+1.8**
	3.4nm,1.0s						
TKM2				⇓S	**Sn**	**19 38 13.7**	**+1.4**
	2.0nm,0.8s						
GEYT	**Alibeck**	**10.40**	**283**	P	**Pn**	**19 37 26.5**	**+0.1**
	0.5nm,0.3s,baz=106,slow=8.7,SNR=10.0						
GEYT				S	**Sn**	**19 39 19.3**	**-1.7**
	1.2nm,0.3s,baz=123,slow=16,SNR=8.2						
GYA0B	**ALIBECK ARRAY**	**10.40**	**283**	⇑P	**Pn**	**19 37 27.9**	**+1.5**
GYA0B				⇑S	**Sn**	**19 39 21.1**	**+0.1**
PYUN	**Piuthan**	**13.01**	**125**	*e*P	**Pn**	**19 37 57.9**	**-3.6**
	11nm,0.3s						
DANN	**Dangsing**	**13.37**	**122**	*e*P	**Pn**	**19 38 02.3**	**-4.0**
	4.5nm,0.2s						
MKAR	**Makanchi Array**	**13.52**	**35**	P	**Pn**	**19 38 09.8**	**+2.0**
	0.0nm,0.3s,baz=228,slow=15,SNR=2.6						
KOLN	**Koldanda**	**13.64**	**125**	*e*P	**Pn**	**19 38 06.8**	**-2.8**
	3.5nm,0.3s						
DMN	**Daman**	**14.76**	**122**	*e*P	**Pn**	**19 38 20.1**	**-4.1**
	3.9nm,0.3s						
KKN	**Kakani**	**14.77**	**121**	*e*P	**Pn**	**19 38 20.6**	**-3.6**
	4.5nm,0.4s						
PKIN	**Phulchoki**	**14.98**	**121**	*e*P	**Pn**	**19 38 23.2**	**-3.8**
	3.4nm,0.4s						
PKI	**Pulchoki**	**14.99**	**121**	*e*P	**Pn**	**19 38 23.3**	**-3.9**
	2.6nm,0.2s						
AB31	**Akbulak array**	**15.30**	**332**	⇓P	**P**	**19 38 31.9**	**-1.2**
	0.4nm,0.3s,baz=161,slow=12,SNR=3.0						
AB31				⇓S	**Sn**	**19 41 13.0**	**-6.5**
	1.9nm,0.6s,baz=152,slow=23,SNR=9.0						
KURBB	**Kurchatov Arra**	**15.38**	**18**	P	**P**	**19 38 33.5**	**-0.5**
	0.0nm,0.3s,baz=206,slow=10,SNR=3.1						
JIRN	**Jiri**	**15.48**	**119**	*e*P	**Pn**	**19 38 29.0**	**-4.4**
	23nm,0.5s						
RAMN	**Ramite**	**16.21**	**120**	*e*P	**Pn**	**19 38 39.1**	**-3.2**
	2.9nm,0.3s						
BVAR	**Borovoye Array**	**16.79**	**359**	P	**P**	**19 38 52.9**	**+3.3**
	0.1nm,0.3s,baz=146,slow=10,SNR=2.8						
AKTO	**Aktyubinsk**	**17.00**	**331**	P	**P**	**19 38 53.6**	**+1.7**
	0.3nm,0.3s,baz=145,slow=17,SNR=4.9						
AKTO				S	**Sn**	**19 41 51.4**	**-8.9**
	0.1nm,0.3s,baz=155,slow=19,SNR=3.1						
AKTO	**Aktyubinsk**	**17.00**	**331**	⇑P	**P**	**19 38 54.2**	**+2.3**
	2.9nm,0.9s						
AKTO				⇑S	**Sn**	**19 41 55.0**	**-5.3**
	3.3nm,1.1s						
ZALV	**Zalesovo Beam**	**20.17**	**24**	P	Pn	19 39 27.5	-1.7
	0.7nm,0.4s,baz=217,slow=9.9,SNR=4.1						
ARU	**Arti**	**21.87**	**341**	LR	LR	19 49 10.0	
	comp=Z,30nm,18.1s,baz=192,slow=39						
ATD	**Arta Tunnel**	**35.34**	**233**	LR	LR	19 57 08.7	
	comp=Z,19nm,18.6s,baz=349,slow=38						
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**19 42 08.9**	**+3.4**
	0.4nm,0.4s,baz=108,slow=25,SNR=3.8						
ARCES	**ARCESS Array B**	**41.38**	**338**	P	**P**	**19 42 40.5**	**+4.4**
	3.1nm,1.1s,baz=98,slow=6.4,SNR=3.5						
TORD	**Torodi Ar. Bea**	**65.68**	**269**	P	**P**	**19 45 36.0**	**+1.7**
	0.5nm,0.9s,baz=62,slow=7.1,SNR=5.2						
ASAR	**Alice Springs**	**84.13**	**125**	P	**P**	**19 47 20.9**	**+0.6**
	0.3nm,0.7s,baz=315,slow=5.1,SNR=4.6						

*IDC **06** 19:43:37.2±1.1, 28°.27N×51°.73E, h0km, mb3.6/10, mb1 3.7/12, mb1mx3.5/45, mbtmp3.6/12, ML3.7/1, Error ellipse: s-maj=24.3km s-min=19.3km az=21.0*
*ISCJB **06** 19:43:39.0±0.5, 28°.35N±0°.03×51°.65E±0°.05, h15km, mb3.5/10, Error ellipse: s-maj=7.0km s-min=3.9km az=158.5*
*TEH **06** 19:43:39.6, 28°.41N×51°.68E, h12km, ML3.4*
*OMAN **06** 19:43:45.5±11.0, 28°.39N×52°.15E, h18km, ml3.3/8, Error ellipse: s-maj=124.5km s-min=89.5km az=132.0*
*DSN **06** 19:43:45.2±0.7, 28°.35N×52°.17E, h10km, ML3.5/10, Error ellipse: s-maj=15.0km s-min=6.2km az=51.0*

ISC 06 19:43:40.2±0.7, 28°37N±0°.05×51°69E±0°.06, h15km, n58, σ1°29/62, mb3.5/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**1.14**	**94**	*e*Pg	**Pg**	**19 44 02.3**	**0.0**
IKAZ	**Kazeroun**	**1.41**	**5**	IAMB	IAmb	19 44 34.8	
	comp=Z,13μm,0.5s						
IKAZ				*e*Pg	**Pn**	**19 44 05.4**	**-0.3**
SHI	**Shiraz**	**1.46**	**29**	IAMB	IAmb	19 44 28.9	
	comp=Z,8μm,0.8s						
SHI				*e*Pg	**Pb**	**19 44 06.8**	**-0.4**
ISRV	**Sarvestan**	**1.60**	**51**	*e*Sg	**Sg**	**19 44 32.5**	**+0.5**
ISRV				*e*Pn	**Pb**	**19 44 09.5**	**-0.2**
ISRV				IAMB	IAmb	19 44 38.3	
	comp=Z,10μm,0.6s						
LMD1	**Lamerd**	**1.66**	**128**	*e*Pn	**Pb**	**19 44 10.2**	**-0.2**
JHRM	**Jahrom**	**1.66**	**85**	*e*Pn	**Pb**	**19 44 10.7**	**+0.1**
IPAR	**Pars**	**1.89**	**39**	*e*Pn	**Pn**	**19 44 11.6**	**-0.6**
IPAR				IAMB	IAmb	19 44 43.5	
	comp=E,4μm,0.6s						
IRAM	**Ramesheh**	**3.48**	**10**	*e*Pn	**Pn**	**19 44 34.7**	**+0.6**
ZNGN	**Zangian**	**3.81**	**349**	*e*Pn	**Pn**	**19 44 39.6**	**+1.0**
ISAD	**Sadrabad**	**3.93**	**26**	*e*Pn	**Pn**	**19 44 43.0**	**+2.7**
ISAD				IAMB	IAmb	19 44 53.8	
	comp=Z,312nm,0.5s						
IMEH	**Mehriz**	**3.94**	**39**	*e*Pn	**Pn**	**19 44 42.7**	**+2.4**
IMEH				IAMB	IAmb	19 44 47.3	
	comp=N,576nm,0.5s						
IPIR	**Pirpir**	**4.36**	**351**	*e*Pn	**Pn**	**19 44 46.6**	**+0.4**
IPIR				IAMB	IAmb	19 46 09.3	
	comp=Z,237nm,0.6s						
IZEF	**Zefreh**	**4.55**	**7**	*e*Pn	**Pn**	**19 44 50.2**	**+1.5**
IZEF				IAMB	IAmb	19 44 54.3	
	comp=Z,176nm,0.2s						
SHME	**Shamm**	**4.58**	**119**	P	**Pn**	**19 44 49.4**	**+0.4**
SHME	**Shamm**	**4.58**	**119**	*e*Pn	**Pn**	**19 44 50.1**	**+1.1**
IBAF	**Bafgh**	**4.65**	**45**	*e*Pn	**Pn**	**19 44 52.1**	**+2.1**
YZKH	**Yazd**	**4.73**	**31**	*e*Pn	**Pn**	**19 44 52.7**	**+1.7**
BANOM	**Banah**	**4.77**	**120**	*i* P	**Pn**	**19 44 52.8**	**+1.2**
	SNR=19						
BANOM	**Banah**	**4.77**	**120**	P	**Pn**	**19 44 52.4**	**+0.8**
NAZ	**Nazwa, Dubai**	**4.89**	**133**	*i* P	**Pn**	**19 44 55.0**	**+1.8**
	SNR=7.7						
NAZ	**Nazwa, Dubai**	**4.89**	**133**	P	**Pn**	**19 44 55.0**	**+1.8**
NAZ	**Nazwa, Dubai**	**4.89**	**133**	*e*Pn	**Pn**	**19 44 55.5**	**+2.3**
ASUD	**Al Ashush, Dub**	**4.95**	**138**	*i* P	**Pn**	**19 44 56.1**	**+2.1**
	SNR=23						
ASUD	**Al Ashush, Dub**	**4.95**	**138**	P	**Pn**	**19 44 56.1**	**+2.1**
	SNR=23						
MSFE	**Esma-Masafi**	**4.99**	**126**	*i* P	**Pn**	**19 44 55.5**	**+1.0**
	SNR=11						
MSFE	**Esma-Masafi**	**4.99**	**126**	*e*Pn	**Pn**	**19 44 55.9**	**+1.3**
FAQ	**Al Faqa, Dubai**	**5.02**	**135**	P	**Pn**	**19 44 56.6**	**+1.6**
MDH	**Madha**	**5.12**	**126**	P	**Pn**	**19 44 57.3**	**+0.9**
MDH	**Madha**	**5.12**	**126**	P	**Pn**	**19 44 57.4**	**+0.9**
MDH	**Madha**	**5.12**	**126**	*e*Pn	**Pn**	**19 44 57.8**	**+1.4**
UOSS	**Minazif**	**5.28**	**129**	*i* P	**Pn**	**19 44 59.4**	**+0.7**
	SNR=6.9						
UOSS	**Minazif**	**5.28**	**129**	P	**Pn**	**19 44 59.2**	**+0.6**
UOSS	**Minazif**	**5.28**	**129**	*e*Pn	**Pn**	**19 44 59.3**	**+0.7**
HATD	**Hatta, Dubai**	**5.31**	**131**	*i* P	**Pn**	**19 44 59.7**	**+0.7**
	SNR=5.9						
HATD	**Hatta, Dubai**	**5.31**	**131**	P	**Pn**	**19 45 00.2**	**+1.2**
HATD	**Hatta, Dubai**	**5.31**	**131**	*e*Pn	**Pn**	**19 45 00.6**	**+1.6**
ASHO	**Ashiyiah**	**5.36**	**132**	*i* P	**Pn**	**19 45 00.8**	**+1.1**
	SNR=6.6						
ASHO				S	**Sn**	**19 46 00.6**	**-0.7**
ASHO	**Ashiyiah**	**5.36**	**132**	P	**Pn**	**19 45 01.0**	**+1.3**
	SNR=25						
ASHO				S	**Sn**	**19 46 00.5**	**-0.7**
ASHO	**Ashiyiah**	**5.36**	**132**	*e*Pn	**Pn**	**19 45 01.1**	**+1.4**
KHMZ	**Khomeyn**	**5.56**	**345**	*e*Pn	**Pn**	**19 45 03.7**	**+1.1**
ALNE	**Al Ain**	**5.63**	**139**	*i* P	**Pn**	**19 45 05.3**	**+1.9**
	SNR=5.8						
ALNE	**Al Ain**	**5.63**	**139**	*e*Pn	**Pn**	**19 45 05.8**	**+2.4**
SOHO	**SOHO**	**6.05**	**133**	P	**Pn**	**19 45 10.1**	**+0.9**
	SNR=12						
HOQ	**Hoqain**	**6.94**	**132**	*e*Pn	**Pn**	**19 45 22.9**	**+1.4**
BSY	**Bisya**	**7.49**	**137**	P	**Pn**	**19 45 30.1**	**+1.2**
WSAR	**Wadi Sarin**	**8.07**	**128**	Pn	**Pn**	**19 45 35.8**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=315,slow=9.0,SNR=15						
WSAR				Sn	**Sn**	**19 47 05.8**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=281,slow=10,SNR=2.2						
MHTO	**MHTO**	**9.30**	**141**	P	**Pn**	**19 45 54.4**	**+0.6**
BRTR	**Keskin Array B**	**18.73**	**312**	P	**P**	**19 47 59.5**	**+1.0**
	baz=133,slow=12,SNR=3.0						
AKTO	**Aktyubinsk**	**22.56**	**11**	P	**P**	**19 48 41.2**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=188,slow=11,SNR=3.8						
BVAR	**Borovoye Array**	**28.25**	**24**	P	**P**	**19 49 32.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=211,slow=8.4,SNR=5.6						
KURBB	**Kurchatov Arra**	**30.09**	**35**	P	**P**	**19 49 49.4**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=241,slow=1.0,SNR=3.4						
MKAR	**Makanchi Array**	**30.16**	**44**	P	**P**	**19 49 49.9**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=248,slow=5.3,SNR=3.3						
ZALV	**Zalesovo Beam**	**35.17**	**34**	P	**P**	**19 50 33.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=237,slow=6.3,SNR=2.7						
FINES	**FINESS Array B**	**37.22**	**340**	P	**P**	**19 50 50.0**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=148,slow=9.9,SNR=9.2						
NOA	**NORSAR Array B**	**42.34**	**332**	P	**P**	**19 51 32.6**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=122,slow=8.2,SNR=3.1						
TORD	**Torodi Ar. Bea**	**48.80**	**263**	P	**P**	**19 52 25.1**	**0.0**
	comp=Z,0.3nm,0.5s,baz=53,slow=9.6,SNR=3.6						
KSRS	**Korea Array**	**63.05**	**60**	P	**P**	**19 54 05.3**	**-1.6**
	comp=Z,0.7nm,0.4s,baz=278,slow=9.7,SNR=10						
ASAR	**Alice Springs**	**94.54**	**114**	P	**P**	**19 56 59.5**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=309,slow=4.8,SNR=8.3						

*ISCJB **06** 19:45:44.9±1.0, 41°.85N±0°.03×30°.12E±0°.04, h2km±7km, Error ellipse: s-maj=6.1km s-min=4.8km az=36.8*
*DDA **06** 19:45:45.4, 41°.84N×30°.27E, h7km±4km, ML2.8*
*ISK **06** 19:45:45.9, 41°.78N×30°.14E, h8km, ML2.5/16*

ISC 06 19:45:45.9±1.4, 41°81N±0°.04×30°19E±0°.03, h11km±11km, n34, σ0°55/40, 6C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAND	**Kocaeli-Kandir**	**0.71**	**180**	*i* P	**Pn**	**19 46 01.8**	**-0.1**
KAND				*i* S	**Sb**	**19 46 10.3**	**+0.3**
SILT	**Sile**	**0.77**	**212**	PG	**Pg**	**19 46 00.4**	**-0.4**
SILT				SG	**Sg**	**19 46 11.1**	**+0.3**
SILT	**Sile**	**0.77**	**212**	⇑*i*P	Pn	19 46 11.6	+8.9
KLYT	**Kilyos**	**1.02**	**238**	PG	**Pg**	**19 46 05.0**	**-0.6**
KLYT				SG	**Sg**	**19 46 18.9**	**0.0**
HRT	**Hereke**	**1.06**	**202**	PG	**Pb**	**19 46 06.3**	**+0.1**
HRT				SG	**Sb**	**19 46 20.5**	**+0.4**
KDZE	**Karadeniz Ereo**	**1.06**	**117**	PN	**Pn**	**19 46 06.9**	**+0.2**
SAUV	**Serdivan-Sakar**	**1.07**	**174**	PG	**Pb**	**19 46 06.6**	**+0.2**
SAUV				SG	**Sb**	**19 46 20.9**	**+0.5**
SAHE	**Sakarya_HENDEK**	**1.08**	**152**	*i* P	**Pn**	**19 46 07.4**	**+0.4**
SAHE				*i* S	**Sn**	**19 46 21.6**	**-0.2**
SPNC	**Sapanca-Adapaz**	**1.12**	**175**	PN	**Pb**	**19 46 07.4**	**+0.1**
ISK	**Istanbul-Kandi**	**1.12**	**229**	PG	**Pg**	**19 46 07.1**	**-0.4**
BGKT	**Bogazkoy**	**1.23**	**240**	PN	**Pn**	**19 46 08.9**	**-0.1**
BUY	**Buyukada**	**1.25**	**221**	PN	**Pn**	**19 46 09.3**	**+0.1**
BUY	**Buyukada**	**1.25**	**221**	*i* P	**Pg**	**19 46 09.8**	**-0.1**
YIGI	**Dzce**	**1.27**	**131**	*i* P	**Pn**	**19 46 09.6**	**0.0**
YIGI				IAML_P			
	comp=Z,675nm,0.2s						
GEYV	**SAKARYA_Geyve**	**1.32**	**176**	*i* P	**Pg**	**19 46 12.0**	**+0.7**
GEYV				IAML_P			
	comp=Z,877nm,0.1s						
BTAS	**Taskesti**	**1.38**	**153**	*i* P	**Pg**	**19 46 12.4**	**+0.1**
BTAS				IAML_P			
	comp=Z,657nm,0.1s						
YLV	**Yalova**	**1.38**	**207**	PN	**Pn**	**19 46 11.4**	**+0.2**
CTKS	**Kestanelik-??a**	**1.38**	**246**	PN	**Pn**	**19 46 10.9**	**-0.2**
GULT	**Gulveren**	**1.40**	**170**	PN	**Pb**	**19 46 11.9**	**-0.1**
ADVT	**Abdulvahap**	**1.41**	**194**	PN	**Pn**	**19 46 12.0**	**+0.5**
ELBA	**Catalca**	**1.48**	**244**	*i* P	**Pn**	**19 46 12.6**	**+0.2**
ELBA				*i* S	**Sn**	**19 46 30.3**	**-1.3**
ELBA				IAML_P			
	comp=Z,671nm,0.2s						
BTIN	**Bartin**	**1.55**	**96**	*i* P	**Pn**	**19 46 13.6**	**+0.1**
ARMT	**Armutlu**	**1.59**	**219**	PN	**Pn**	**19 46 14.3**	**+0.3**
BCAM	**Yenicaga**	**1.73**	**124**	*i* P	**Pb**	**19 46 17.0**	**-0.6**
BCAM				IAML_P			
	comp=Z,282nm,0.2s						
SRCK	**Saricakaya, Es**	**1.79**	**169**	PN	**Pn**	**19 46 17.6**	**+0.8**
SRCK	**Saricakaya, Es**	**1.79**	**169**	*i* P	**Pg**	**19 46 20.3**	**0.0**
KIBS	**BOLU**	**1.87**	**137**	*i* P	**Pb**	**19 46 20.0**	**-0.1**
KIBS				IAML_P			
	comp=Z,160nm,0.1s						
KURC	**Kurucasile-Bar**	**1.91**	**88**	PN	**Pb**	**19 46 19.9**	**-0.8**
BORA	**Eskisehir**	**1.94**	**174**	*i* P	**Pg**	**19 46 22.2**	**-0.8**
BORA				IAML_P			
	comp=Z,559nm,0.1s						
HARR	**Harsova**	**3.32**	**331**	⇑*i*P	**Pn**	**19 46 38.9**	**+1.2**
VRI	**Vrincioaia**	**4.77**	**330**	⇑*i*P	**Pn**	**19 46 57.6**	**0.0**
PLOR	**Plostina**	**4.79**	**329**	⇑*i*P	**Pn**	**19 46 59.2**	**+1.3**
MLR	**Muntele Rosu**	**4.80**	**322**	⇑*i*P	**Pn**	**19 46 59.0**	**+0.8**
VOIR		**5.20**	**316**	⇑*i*P	**Pn**	**19 47 04.3**	**+0.6**

*ISCJB **06** 20:17:29.5±0.9, 36°.74N±0°.05×7°.60W±0°.04, h54km±10km, Error ellipse: s-maj=8.4km s-min=5.3km az=8.9*
*MDD **06** 20:17:29.3±0.8, 36°.71N×7°.61W, h51km±9km, mb3.6/4, Error ellipse: s-maj=6.1km s-min=3.4km az=180.0, PRXIMO*
*SFS **06** 20:17:30.0, 36°.69N×7°.60W, h47km, ML3.0, GOLFO DE CADIZ*
*INMG **06** 20:17:30.2±1.8, 36°.64N×7°.68W, h25km±8km, ML1.4, Error ellipse: s-maj=6.8km s-min=4.6km az=49.0*
*IGIL **06** 20:17:30.4, 36°.65N×7°.71W, h23km, ML1.4*

ISC 06 20:17:29.1±1.6, 36°65N±0°.07×7°62W±0°.04, h41km±33km, n35, σ0°70/74, 1C-7D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.64**	**337**	⇓*i*Pg	**Pn**	**20 17 42.3**	**+0.5**
PBDV				*e*Sg	**Sn**	**20 17 50.7**	**-0.2**
PBDV				A	A	20 17 51.8	
	8.0nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.64**	**337**	P	**Pn**	**20 17 42.3**	**+0.5**
PBDV				S	**Sn**	**20 17 50.7**	**-0.2**
	8.0nm,0.2s						
PVAQ	**Vaqueiros**	**0.76**	**354**	⇓*e*Pg	**Pn**	**20 17 43.7**	**+0.4**
PVAQ				*e*Sg	**Sn**	**20 17 52.9**	**-0.7**
PVAQ				A	A	20 17 58.8	
	4.3nm,0.1s						
PVAQ	**Vaqueiros**	**0.76**	**354**	P	**Pn**	**20 17 43.7**	**+0.4**
PVAQ				S	**Sn**	**20 17 52.9**	**-0.7**
	4.3nm,0.1s						
EGRO	**El Granado**	**0.89**	**7**	P	**Pn**	**20 17 45.7**	**+0.6**
	2.5nm,0.0s,SNR=23						
EGRO				S	**Sn**	**20 17 56.6**	**-0.3**
	2.4nm,0.1s,SNR=10						
PCVE	**Castro Verde**	**1.04**	**341**	⇓*e*P	**Pn**	**20 17 47.8**	**+0.7**
PCVE				*e*S	**Sn**	**20 18 00.4**	**-0.1**
PCVE				A	A	20 18 01.0	
	2.9nm,0.2s						
PCVE	**Castro Verde**	**1.04**	**341**	P	**Pn**	**20 17 47.8**	**+0.7**
PCVE				S	**Sn**	**20 18 00.4**	**-0.1**
	2.9nm,0.2s						
MORF	**Marmelete**	**1.06**	**309**	*e*P	**Pn**	**20 17 47.5**	**+0.1**
MORF				*e*S	**Sn**	**20 17 60.0**	**-1.0**
MORF				AML	AML	20 18 01.2	
	comp=N,11nm,0.2s						
MORF	**Marmelete**	**1.06**	**309**	⇓*e*P	**Pn**	**20 17 47.5**	**+0.1**
MORF				*e*S	**Sn**	**20 18 00.0**	**-1.0**
MORF				A	A	20 18 01.5	
	comp=N,5.7nm,0.2s						
MORF	**Marmelete**	**1.06**	**309**	P	**Pn**	**20 17 47.5**	**+0.1**
MORF				P	**Pn**	**20 17 47.5**	**+0.1**
MORF				S	**Sn**	**20 17 60.0**	**-1.0**
	comp=N,11nm,0.2s						
MORF				S	**Sn**	**20 18 00.0**	**-1.0**
	comp=N,5.7nm,0.2s						
PFVI	**Vila Bisbo**	**1.08**	**297**	*e*P	**Pn**	**20 17 48.0**	**+0.3**
PFVI				*e*S	**Sn**	**20 18 01.0**	**-0.6**
PFVI				A	A	20 18 03.5	
	comp=N,5.0nm,0.7s						
PFVI	**Vila Bisbo**	**1.08**	**297**	P	**Pn**	**20 17 48.0**	**+0.3**
	comp=N,1.1nm,0.1s,SNR=6.8						
PFVI				S	**Sn**	**20 18 01.0**	**-0.6**
	comp=N,3.3nm,0.3s,SNR=7.9						
PTEO	**Sao Teotonio**	**1.26**	**316**	*e*P	**Pn**	**20 17 50.8**	**+0.6**
PTEO				*e*S	**Sn**	**20 18 05.8**	**-0.1**
PTEO				A	A	20 18 08.5	
	comp=N,2.7nm,0.6s						
PTEO	**Sao Teotonio**	**1.26**	**316**	P	**Pn**	**20 17 50.8**	**+0.6**
PTEO				S	**Sn**	**20 18 05.8**	**-0.1**
	comp=N,1.4nm,0.6s						
MESJ	**Messejana**	**1.28**	**338**	*e*P	**Pn**	**20 17 51.0**	**+0.6**
MESJ				*e*S	**Sn**	**20 18 05.9**	**-0.5**
MESJ				AML	AML	20 18 07.8	
	comp=N,3.6nm,0.1s						
MESJ	**Messejana**	**1.28**	**338**	⇓*e*P	**Pn**	**20 17 51.1**	**+0.6**
MESJ				*e*S	**Sn**	**20 18 06.0**	**-0.5**
MESJ				A	A	20 18 20.2	
	comp=N,4.6nm,0.3s						
MESJ	**Messejana**	**1.28**	**338**	P	**Pn**	**20 17 51.0**	**+0.6**
MESJ				P	**Pn**	**20 17 51.1**	**+0.6**
MESJ				S	**Sn**	**20 18 05.9**	**-0.5**
	comp=N,3.6nm,0.1s						
MESJ				S	**Sn**	**20 18 06.0**	**-0.5**
	comp=N,4.6nm,0.3s						
EMIN	**Mina Concepcio**	**1.35**	**34**	P	**Pn**	**20 17 51.5**	**+0.1**
	comp=N,0.6nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**20 18 06.9**	**-1.2**
	comp=N,1.5nm,0.1s,SNR=7.9						
ESPR	**Espera**	**1.43**	**81**	P	**Pn**	**20 17 53.4**	**+0.8**
	comp=N,2.4nm,0.2s,SNR=4.8						
ESPR				S	**Sn**	**20 18 10.5**	**+0.3**
	comp=N,9.9nm,0.2s,SNR=6.9						
PNCL	**Nicolau / Gran**	**1.63**	**334**	⇓*e*P	**Pn**	**20 17 55.7**	**+0.4**
PNCL				*e*S	**Sn**	**20 18 14.1**	**-0.9**
PNCL				A	A	20 18 17.6	
	comp=N,1.6nm,0.2s						
PNCL	**Nicolau / Gran**	**1.63**	**334**	P	**Pn**	**20 17 55.7**	**+0.4**
PNCL				S	**Sn**	**20 18 14.1**	**-0.9**
	comp=N,1.6nm,0.2s						
EVO	**Evora**	**1.91**	**351**	⇑*i*Pn	**Pn**	**20 17 59.8**	**+0.7**
EVO				*e*Sn	**Sn**	**20 18 22.3**	**+0.5**
EVO	**Evora**	**1.91**	**351**	P	**Pn**	**20 17 59.7**	**+0.7**
EVO				P	**Pn**	**20 17 59.8**	**+0.7**
EVO				S	**Sn**	**20 18 21.8**	**0.0**
EVO				S	**Sn**	**20 18 22.3**	**+0.5**
EVO	**Evora**	**1.91**	**351**	*e*P	**Pn**	**20 17 59.7**	**+0.7**
EVO				*e*S	**Sn**	**20 18 21.8**	**0.0**
EBAD	**Badajoz**	**2.16**	**13**	P	**Pn**	**20 18 02.7**	**+0.2**
	comp=N,0.8nm,0.1s,SNR=7.4						
EBAD				S	**Sn**	**20 18 26.8**	**-1.3**
	comp=N,0.7nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**2.26**	**50**	P	**Pn**	**20 18 04.5**	**+0.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**20 18 28.1**	**-2.4**
	comp=N,1.0nm,0.2s,SNR=7.9						
PMTG	**Montargil**	**2.46**	**349**	*e*Pn	**Pn**	**20 18 07.4**	**+0.7**
PMTG				*e*Sn	**Sn**	**20 18 35.6**	**0.0**
PMTG				A	A	20 18 36.9	
	comp=N,1.3nm,0.6s						
PMTG	**Montargil**	**2.46**	**349**	P	**Pn**	**20 18 07.4**	**+0.7**
PMTG				S	**Sn**	**20 18 35.6**	**0.0**
	comp=N,1.3nm,0.6s						
PMAFR	**Mafra**	**2.65**	**331**	*e*Pn	**Pn**	**20 18 10.4**	**+1.1**
PMAFR	**Mafra**	**2.65**	**331**	P	**Pn**	**20 18 09.9**	**+0.6**
	comp=N,2.0nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**20 18 39.3**	**-1.0**
	comp=N,1.3nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**2.78**	**4**	⇓*e*Pn	**Pn**	**20 18 11.6**	**+0.5**
PMRV				*e*Sn	**Sn**	**20 18 42.6**	**-0.8**
PMRV				A	A	20 18 43.3	
	comp=N,1.1nm,0.4s						
PMRV	**Marv??o**	**2.78**	**4**	P	**Pn**	**20 18 11.6**	**+0.5**
PMRV				S	**Sn**	**20 18 42.6**	**-0.8**
	comp=N,1.1nm,0.4s					

KEST Kesra 93.27 312 LR LR 21 22 48.2
comp=Z,40nm,18.1s,baz=250,slow=39

*ISCJB **06** 20:30:22.1±0.3, 8°61S±0°03×118°34E±0°04, h152km, mb4.2/27, Error ellipse: s-maj=5.7km s-min=4.2km az=141.1*
*NEIC **06** 20:30:22.4±1.9, 8°63S×118°29E, h138km±8km, mb4.4/12, Error ellipse: s-maj=16.8km s-min=6.9km az=219.0*
*DJA **06** 20:30:23.7±0.2, 9°S±3°×11°8E±°, h114km±4km, M4.6/18, mb4.7/11, mB5.1/4, MLv4.6/18, Mw(mB)4.5/4*
*IDC **06** 20:30:23.5±1.4, 8°58S×118°45E, h145km±12km, mb4.0/18, mb1 4.0/21, mb1mx3.8/50, mbtmp4.4/21, MS2.9/3, Ms1 2.9/3, ms1mx2.6/34, Error ellipse: s-maj=15.8km s-min=7.0km az=64.0*
ISC 06 20:30:23.6±0.4, 8.71S±0.04×118.38E±0.05, h152km, n77, σ1.66/88, mb4.3/27, 1C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.61**	**259**	P	**Pn**	**20 30 43.2**	**-2.6**
WBSI	**Waikabubak, Su**	**1.36**	**133**	P	**Pn**	**20 30 50.0**	**-2.0**
WSI	**Waingapu**	**2.12**	**117**	P	**Pn**	**20 30 59.3**	**-0.9**
DNP	**Denpasar**	**3.14**	**270**	P	**Pn**	**20 31 11.4**	**-1.4**
SRBI	**Singaraja**	**3.20**	**281**	P	**Pn**	**20 31 12.4**	**-1.2**
EDFI	**Ende, Flores**	**3.27**	**91**	P	**Pn**	**20 31 14.0**	**-0.6**
BSSI	**Bau Bau, Buton**	**3.30**	**39**	P	**Pn**	**20 31 13.4**	**-1.5**
BKSI	**Bulukumba**	**3.78**	**27**	P	**Pn**	**20 31 19.8**	**-1.4**
MMRI	**Maumere**	**3.81**	**89**	*e*Pn	**Pn**	**20 31 21.3**	**-0.2**
MMRI	**Maumere**	**3.81**	**89**	P	**Pn**	**20 31 21.4**	**-0.1**
KAPI	**Kappang**	**3.92**	**20**	P	**Pn**	**20 31 21.8**	**-1.1**
	12nm,0.3s,baz=200,slow=8.0,SNR=50						
KAPI				S	**Sn**	**20 32 05.6**	**-3.4**
	7.4nm,0.3s,baz=153,slow=11,SNR=6.5						
KAPI				LR	LR	20 33 09.7	
	comp=Z,71nm,18.9s,baz=184,slow=44						
KAPI	**Kappang**	**3.92**	**20**	*e*Pn	**Pn**	**20 31 21.1**	**-1.8**
KAPI				*e*Sn	**Sn**	**20 32 05.6**	**-3.4**
JAGI	**Jajag, Banyuwa**	**4.19**	**273**	*e*Pn	**Pn**	**20 31 24.0**	**-2.5**
JAGI	**Jajag, Banyuwa**	**4.19**	**273**	P	**Pn**	**20 31 24.5**	**-2.0**
BNSI	**Bone**	**4.61**	**22**	P	**Pn**	**20 31 32.2**	**+0.2**
KMMI	**Kalianget**	**4.68**	**290**	P	Pn	20 31 44.7	+12
GMJI	**Gumukmas**	**4.91**	**275**	P	**Pn**	**20 31 33.7**	**-2.2**
SPSI	**Sidrap Palu**	**4.91**	**16**	P	**Pn**	**20 31 37.4**	**+1.4**
BATI	**Baumata**	**5.42**	**106**	P	**Pn**	**20 31 42.8**	**+0.1**
	101nm,0.3s,baz=309,slow=3.6,SNR=200						
BATI				S	**Sn**	**20 32 41.5**	**-2.8**
	33nm,0.3s,baz=275,slow=22,SNR=6.0						
BATI	**Baumata**	**5.42**	**106**	*e*Pn	**Pn**	**20 31 42.8**	**+0.1**
BATI				*e*Pn	**Pn**	**20 31 42.8**	**+0.1**
BATI				*e*Sn	**Sn**	**20 32 41.5**	**-2.8**
BATI				*e*Sn	**Sn**	**20 32 41.5**	**-2.8**
BATI	**Baumata**	**5.42**	**106**	P	**Pn**	**20 31 42.5**	**-0.2**
TTSI	**Tana Toraja**	**5.81**	**14**	P	**Pn**	**20 31 49.5**	**+1.6**
SOEI	**Soe**	**5.90**	**101**	*e*Pn	**Pn**	**20 31 48.6**	**-0.6**
SOEI	**Soe**	**5.90**	**101**	P	**Pn**	**20 31 49.0**	**-0.2**
PWJI	**Pagerwojo**	**6.55**	**276**	P	Pn	20 32 10.5	+13
FITZ	**Fitzroy Crossi**	**11.70**	**144**	P	**Pn**	**20 33 06.2**	**+0.2**
	1.2nm,0.3s,baz=333,slow=8.0,SNR=56						
FITZ				S	**Sn**	**20 35 09.1**	**-6.3**
	6.9nm,0.3s,baz=306,slow=12,SNR=16						
FITZ				LR	LR	20 37 34.8	
	comp=Z,51nm,20.3s,baz=324,slow=37						
PSA00	**Pilbara Seismi**	**12.87**	**174**	*e*Pn	**Pn**	**20 33 21.8**	**+0.7**
PSA00				*e*Sn	Sn	20 35 34.5	-9.0
MTN	**Manton Dam**	**13.18**	**109**	*e*Pn	**Pn**	**20 33 23.4**	**-1.7**
MTN				*e*Sn	Sn	20 35 40.7	-10
KKM	**Kota Kinabalu**	**14.82**	**352**	*e*Pn	**P**	**20 33 48.8**	**+0.9**
FAKI	**Fak Fak**	**14.94**	**68**	*e*Pn	**Pn**	**20 33 45.1**	**-2.3**
FAKI	**Fak Fak**	**14.94**	**68**	P	**Pn**	**20 33 46.3**	**-1.1**
WR1	**Warramunga Arr**	**19.05**	**128**	*e*P	**Pn**	**20 34 36.0**	**-0.8**
WR1				*e*S	**S**	**20 38 01.1**	**-1.4**
WRA	**Warramunga Arr**	**19.05**	**128**	P	**Pn**	**20 34 36.0**	**-0.8**
	2.4nm,0.3s,baz=301,slow=11,SNR=98						
WRA				S	**S**	**20 38 01.1**	**-1.4**
	38nm,0.3s,baz=310,slow=11,SNR=2.9						
WRAB	**Tennant Creek**	**19.05**	**128**	*e*P	**P**	**20 34 35.1**	**+0.8**
	15nm,0.8s						
WB2	**Warramunga Arr**	**19.06**	**128**	*e*P	**P**	**20 34 35.4**	**+1.0**
	14nm,0.8s						
MORW	**Morawa**	**20.37**	**186**	*e*P	Pn	20 34 51.0	-1.2
	18nm,1.0s						
AS31	**Alice Springs**	**21.02**	**137**	*e*P	**P**	**20 34 57.2**	**+1.7**
	6.8nm,0.3s						
ASAR	**Alice Springs**	**21.02**	**137**	P	**P**	**20 34 57.5**	**+2.0**
	10nm,0.4s,baz=312,slow=9.4,SNR=352						
ASAR				S	**S**	**20 38 43.2**	**+2.1**
	2.2nm,0.9s,baz=311,slow=20,SNR=5.0						
ASAR				ScP	**ScP**	**20 42 22.8**	**+3.5**
	2.0nm,0.6s,baz=319,slow=1.8,SNR=6.7						
FORT	**Forrest**	**23.74**	**159**	*e*P	**P**	**20 35 22.5**	**+0.5**
	75nm,0.7s						
NWAO	**Narrogin (SRO)**	**24.12**	**182**	P	**P**	**20 35 27.2**	**+1.8**
	14nm,0.6s,baz=13,slow=9.7,SNR=20						
NWAO				S	S	20 39 51.9	+20
	4.1nm,0.4s,baz=16,slow=18,SNR=2.3						
NWAO	**Narrogin (SRO)**	**24.12**	**182**	*e*P	**P**	**20 35 27.2**	**+1.8**
NWAO				*e*		20 35 27.6	
NWAO				*e*S	S	20 39 51.9	+20
STKA	**Stephens Creek**	**31.56**	**140**	P	**P**	**20 36 34.1**	**+2.4**
	3.5nm,0.5s,baz=318,slow=9.3,SNR=16						
STKA				PcP	**PcP**	**20 39 23.1**	**+2.3**
	1.8nm,0.7s,baz=325,slow=8.3,SNR=2.9						
STKA	**Stephens Creek**	**31.56**	**140**	*e*P	**P**	**20 36 34.4**	**+2.6**
	7.2nm,1.8s						
CM31	**Chiang Mai Arr**	**33.12**	**325**	*e*P	**P**	**20 36 45.6**	**+0.1**
	6.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**33.12**	**325**	P	**P**	**20 36 45.6**	**+0.1**
	1.0nm,0.7s,baz=154,slow=7.1,SNR=9.7						
WHN	**Wuhan**	**39.22**	**354**	⇑P	**P**	**20 37 38.8**	**+1.7**
ENH	**Enshi**	**39.69**	**348**	*e*P	**P**	**20 37 42.2**	**+1.1**
	5.2nm,0.6s						
KS15	**Wonju Array Si**	**46.77**	**10**	*e*P	**P**	**20 38 38.4**	**+0.7**
	7.8nm,0.8s						
KS15				*e*PcP	**PcP**	**20 40 10.2**	**+1.7**
KSRS	**Korea Array**	**46.78**	**10**	P	**P**	**20 38 38.4**	**+0.5**
	8.1nm,0.9s,baz=192,slow=8.1,SNR=32						
KSRS				PcP	**PcP**	**20 40 10.2**	**+1.6**
	0.8nm,0.5s,baz=194,slow=3.3,SNR=4.4						
MAJO	**Matsushiro**	**48.72**	**21**	*e*P	**P**	**20 38 51.6**	**-1.2**
MJAR	**Matsushiro Arr**	**48.72**	**21**	P	**P**	**20 38 51.6**	**-1.2**
	3.4nm,0.8s,baz=201,slow=8.1,SNR=9.8						
GTA	**Gaotai**	**50.89**	**341**	*e*P	**P**	**20 39 09.7**	**+0.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**54.09**	**12**	P	**P**	**20 39 32.8**	**+0.2**
	comp=Z,4.1nm,0.5s,baz=206,slow=7.6,SNR=12						
ASAJ	**Asahikawa**	**56.97**	**21**	P	**P**	**20 39 53.3**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=259,slow=15,SNR=5.4						
SONA0	**Songino Array**	**57.29**	**350**	*e*P	**P**	**20 39 55.6**	**0.0**
SONM	**Songino Array**	**57.29**	**350**	P	**P**	**20 39 55.6**	**0.0**
	comp=Z,2.4nm,0.4s,baz=171,slow=7.6,SNR=7.9						
KLR	**Kul'dur**	**58.88**	**10**	P	**P**	**20 40 05.8**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=202,slow=9.3,SNR=9.0						
KBL	**Kabul**	**63.46**	**316**	*e*P	**P**	**20 40 36.5**	**-1.3**
	comp=Z,4.1nm,0.6s						
MK32	**Makanchi Array**	**63.92**	**333**	*e*P	**P**	**20 40 39.9**	**-0.5**
MKAR	**Makanchi Array**	**63.92**	**333**	P	**P**	**20 40 39.9**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=152,slow=6.2,SNR=32						
MKAR				LR	LR	21 10 04.8	
	comp=Z,22nm,20.2s,baz=77,slow=37						
KURBB	**Kurchatov Arra**	**68.44**	**334**	P	**P**	**20 41 08.1**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=139,slow=5.6,SNR=20						
KURK	**Kurchatov**	**68.47**	**334**	*e*P	**P**	**20 41 08.2**	**-0.9**
	comp=Z,5.2nm,1.4s						
ZALV	**Zalesovo Beam**	**68.56**	**339**	P	**P**	**20 41 08.2**	**-1.5**
	comp=Z,2.9nm,0.5s,baz=140,slow=4.8,SNR=14						
ZAA1	**Zalesovo Array**	**68.56**	**339**	*e*P	**P**	**20 41 08.2**	**-1.5**
MAW	**Mawson**	**69.30**	**200**	P	**P**	**20 41 16.6**	**+2.6**
	comp=Z,2.5nm,0.6s,baz=78,slow=8.7,SNR=7.6						
PETK	**Petropavlovsk-**	**70.06**	**24**	P	**P**	**20 41 20.1**	**+1.1**
	comp=Z,8.2nm,0.6s,baz=204,slow=3.9,SNR=17						
PEA1	**Petropavlovsk-**	**70.06**	**24**	*e*P	**P**	**20 41 20.1**	**+1.1**
BVAR	**Borovoye Array**	**73.76**	**332**	P	**P**	**20 41 40.2**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=126,slow=7.5,SNR=8.3						
ABKAR	**Akbulak array**	**76.98**	**325**	*e*P	**P**	**20 41 58.3**	**-1.2**
	comp=Z,1.2nm,0.6s						
AKTO	**Aktyubinsk**	**78.64**	**325**	P	**P**	**20 42 07.4**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=113,slow=5.7,SNR=4.2						
TIXI	**Tiksi**	**80.49**	**3**	P	**P**	**20 42 17.6**	**-0.6**
	comp=Z,2.0nm,0.3s,baz=163,slow=6.0,SNR=10						
VYHS	**Vyhne**	**102.79**	**318**	*e*PDIF	**Pdif**	**20 44 02.0**	**-2.0**
TORD	**Torodi Ar. Bea**	**117.81**	**280**	PKP	**PKPdf**	**20 48 52.6**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=88,slow=1.8,SNR=25						
TOA1	**Torodi Ar. Sit**	**117.81**	**280**	*e*PKPdf	**PKPdf**	**20 48 52.6**	**-0.4**
NV01	**Mina Array Sit**	**121.30**	**50**	*e*PKPdf	**PKPdf**	**20 48 59.1**	**-0.3**
NVAR	**Mina Array Bea**	**121.30**	**50**	PKP	**PKPdf**	**20 48 59.1**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=250,slow=3.4,SNR=5.1						
CPUP	**Villa Florida**	**144.92**	**187**	PKPbc	**PKPdf**	**20 49 43.8**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=171,slow=4.2,SNR=4.3						

MEX 06 20:42:48.0±0.5, 19.12N×104.13W, h3km, MD3.8, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZ5V		**0.62**	**54**	*e*P	Pg	20 42 59.8	-0.1
EZ5V				*i* S	Sg	20 43 08.2	+0.3
CJM	**Chamela**	**0.94**	**294**	*i* P	Pg	20 43 04.1	-2.0
CJM				*i* S	Sg	20 43 16.9	-1.4
MMIG	**Aquila**	**1.11**	**138**	*e*P	Pg	20 43 06.4	-2.9
MMIG				*i* S	Sg	20 43 21.6	-2.1
ANIG	**Ahuacatlan**	**1.96**	**349**	*e*P	Pn	20 43 19.6	-2.7

IDC 06 21:18:01.9±2.5, 2.00N×126.94E, h0km, mb3.7/2, mb1 3.8/2, mb1mx3.3/28, mbtmp3.7/2, Error ellipse: s-maj=222.2km s-min=24.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.98**	**162**	P	P	21 23 07.7	-0.7
	128nm,0.3s,baz=338,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**26.39**	**166**	P	P	21 23 40.8	+0.5
	0.7nm,0.5s,baz=356,slow=8.2,SNR=18						
MKAR	**Makanchi Array**	**59.09**	**326**	P	P	21 28 04.1	-0.1
	0.3nm,0.4s,baz=115,slow=8.1,SNR=6.9						

*IDC **06** 21:20:29.1±0.7, 34.09S×73.11W, h0km, mb4.4/11, mb1 4.4/15, mb1mx4.2/33, mbtmp4.3/15, ML3.8/4, MS3.5/9, Ms1 3.5/9, ms1mx3.4/18, Error ellipse: s-maj=25.5km s-min=16.3km az=86.0*
*ISCJB **06** 21:20:30.7±1.2, 34.14S±0.03×73.27W±0.04, h23km±9km, mb4.3/13, MS3.9/4, Error ellipse: s-maj=6.1km s-min=4.2km az=36.8*
*SJA **06** 21:20:31.1±1.0, 34.08S×72.99W, h10km±13km, ML3.9, MW3.7*
*GUC **06** 21:20:32.4±0.6, 34.07S×73.00W, h20km±9km, ML4.0*
*NEIC **06** 21:20:32.0±0.0, 34.07S×73.00W, h20km, mb4.3/6, ML4.0(GUC), After GUC.*
*BJI **06** 21:20:33.0±0.0, 34.15S×73.10W, h25km*
ISC 06 21:20:29.7±2.3, 34.06S±0.03×73.02W±0.05, h5km±13km, n89, σ2.25/114, mb4.5/12, MS3.9/4, 4C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**1.31**	**137**	*e*Pn	**Pn**	**21 20 55.4**	**+0.7**
GO05	**Huala**	**1.31**	**137**	*i* P	**Pn**	**21 20 55.5**	**+0.9**
GO05				*i* S	**Sb**	**21 21 12.8**	**+1.0**
GO05	**Huala**	**1.31**	**137**	*e*P	**Pn**	**21 20 55.2**	**+0.6**
GO05				*e*S	**Sn**	**21 21 11.9**	**-0.6**
GO05				IAML		21 21 13.4	
	comp=N,8μm,0.3s						
ROC1	**El Roble**	**1.99**	**58**	*e*P	**Pb**	**21 21 06.7**	**+0.2**
ROC1				*i* S	**Sb**	**21 21 33.1**	**+1.3**
ROCH	**El Roble**	**2.00**	**58**	*e*P	**Pn**	**21 21 06.6**	**+2.3**
ROCH				*i* S	**Sb**	**21 21 32.7**	**+0.8**
ROCH				IAML		21 21 35.6	
	comp=N,981nm,0.4s						
ANTU	**Antumapu**	**2.04**	**77**	*e*P	**Pb**	**21 21 08.2**	**+0.8**
ANTU				*e*S	**Sb**	**21 21 34.2**	**+1.1**
ANTU				IAML		21 21 38.2	
	comp=N,1μm,0.4s						
PEL	**Peldehue**	**2.15**	**66**	*e*Pn	**Pb**	**21 21 09.3**	**+0.1**
PEL	**Peldehue**	**2.15**	**66**	*i* P	**Pb**	**21 21 09.5**	**+0.4**
PEL				*e*S	**Sb**	**21 21 37.7**	**+1.6**
PEL	**Peldehue**	**2.15**	**66**	⇑*e*P	**Pb**	**21 21 08.9**	**-0.3**
PEL				*e*S	**Sb**	**21 21 36.9**	**+0.8**
PEL				IAML		21 21 39.7	
	comp=N,2μm,0.3s						
CLCH	**Cerro Calan**	**2.17**	**73**	*e*P	**Pb**	**21 21 09.2**	**-0.3**
CLCH				*e*S	**Sb**	**21 21 37.2**	**+0.4**
CLCH				IAML		21 21 46.5	
	comp=E,991nm,0.2s						
LMEL	**Las Melosas**	**2.35**	**86**	⇑*e*P	**Pb**	**21 21 12.2**	**-0.4**
LMEL				*i* S	**Sb**	**21 21 42.3**	**+0.3**
LMEL				IAML		21 21 45.2	
	comp=N,1μm,0.2s						
FCH	**Farellones**	**2.39**	**73**	⇑*e*P	**Pb**	**21 21 12.8**	**-0.6**
FCH				*e*S	**Sb**	**21 21 43.6**	**+0.4**
FCH				IAML		21 21 45.6	
	comp=N,1μm,0.3s						
CCHI	**Chillan**	**2.65**	**163**	*e*P	**Pn**	**21 21 13.0**	**0.0**
CCHI				*i* S	**Sn**	**21 21 43.9**	**-1.7**
EDS3	**Malargue**	**3.43**	**121**	*e*P	**Pb**	**21 21 30.2**	**-0.8**
AUSP	**Uspallata**	**3.55**	**60**	*e*P	**Pb**	**21 21 31.0**	**-2.2**
AUSP				*e*S	**Sb**	**21 22 14.3**	**-2.4**
ARCO	**CERRO ARCO**	**3.63**	**72**	*e*P	**Pb**	**21 21 33.3**	**-1.0**
ARCO				IAML		21 22 02.2	
	comp=Z,166nm,0.7s						
AAGR	**Agrelo**	**3.63**	**76**	*e*P	**Pb**	**21 21 32.2**	**-2.2**
ASAL	**Salagasta**	**3.80**	**68**	*e*P	**Pb**	**21 21 35.0**	**-2.2**
AVIZ	**Vizcacheras**	**3.80**	**82**	*e*P	**Pb**	**21 21 34.7**	**-2.5**
GO04	**Tololo Observa**	**4.31**	**27**	*e*Pn	**Pn**	**21 21 37.5**	**+1.5**
GO04	**Tololo Observa**	**4.31**	**27**	*e*P	**Pn**	**21 21 37.3**	**+1.2**
GO04				*e*S	**Sn**	**21 22 27.0**	**+0.2**
RTCV	**Cerro Valdivia**	**4.36**	**61**	*e*P	Pn	21 21 41.4	+4.8
RTCV				*i* S	**Sb**	**21 22 36.0**	**-3.6**
ZON	**Zonda**	**4.43**	**57**	*e*P	Pn	21 21 43.7	+6.1
ZON				*i* S	**Sb**	**21 22 37.6**	**-4.2**
ZON				IAML		21 22 45.8	
	comp=Z,48nm,0.3s						
RTLL	**Cerro Villicun**	**4.70**	**56**	*e*P	Pn	21 21 46.3	+5.0
RTLL				IAML		21 22 47.5	
	comp=Z,94nm,0.3s						
CFA	**Coronel Fontan**	**4.71**	**60**	Pn	**Pn**	**21 21 44.2**	**+2.8**
	comp=Z,4.2nm,0.3s,baz=213,slow=7.0,SNR=47						
CFA				Sn	**Sn**	**21 22 39.5**	**+3.0**
	comp=Z,13nm,0.3s,baz=37,slow=15,SNR=8.3						
CFA				LR	LR	21 23 16.2	
	comp=Z,165nm,21.7s,baz=218,slow=35						
CFA	**Coronel Fontan**	**4.71**	**60**	*i* P	**Pn**	**21 21 45.6**	**+4.1**
CFA				*e*S	**Sb**	**21 22 44.5**	**-5.3**
ACCO	**Cerro Coronel**	**4.81**	**45**	*e*P	**Pn**	**21 21 47.5**	**+4.4**
ACCO				*e*S	**Sb**	**21 22 47.0**	**-6.1**
AROD	**Rodeo**	**4.91**	**39**	*e*P	**Pn**	**21 21 48.8**	**+4.3**
AROD				*i* S	**Sb**	**21 22 52.1**	**-3.7**
AMOG	**MOGNA**	**4.93**	**52**	*e*P	**Pn**	**21 21 48.4**	**+3.9**
AMOG				*e*S	**Sn**	**21 22 49.2**	**+7.3**
ACDV	**Cuesta del Vie**	**5.10**	**42**	*e*P	Pn	21 21 51.4	+4.5
ACAN	**Cantantal**	**5.20**	**72**	*e*P	**Pn**	**21 21 52.8**	**+4.6**
LCO	**Las Campanas**	**5.41**	**22**	*e*Pn	**Pn**	**21 21 52.0**	**+0.8**
LCO	**Las Campanas**	**5.41**	**22**	*e*P	**Pn**	**21 21 51.8**	**+0.6**
LCO				*i* S	**Sn**	**21 22 54.2**	**+0.2**
AGUA	**GUANDACOL**	**5.97**	**41**	*e*P	**Pn**	**21 22 02.7**	**+3.9**
AGUA				*e*S	**Sn**	**21 23 15.0**	**+7.4**
APLL	**PUNTA DE LOS L**	**6.60**	**58**	*e*P	**Pn**	**21 22 09.8**	**+2.4**
APLL				*e*S	**Sn**	**21 23 26.4**	**+3.3**
APLL				IAML		21 23 33.2	
	comp=Z,17nm,0.6s						
VCA	**Vinchina**	**6.71**	**39**	*e*P	**Pn**	**21 22 12.9**	**+3.8**
VCA				IAML		21 22 32.6	
	comp=Z,48nm,0.6s						
VCA				*e*S	**Sn**	**21 23 33.0**	**+7.0**
GO03	**Copiap**	**6.87**	**21**	*e*Pn	**Pn**	**21 22 12.9**	**+1.8**
GO03	**Copiap**	**6.87**	**21**	*e*P	**Pn**	**21 22 11.3**	**+0.1**
GO03				*e*S	**Sn**	**21 23 28.3**	**-1.6**
ACLC	**CERRO LA CRUZ**	**6.93**	**50**	*e*P	**Pn**	**21 22 14.6**	**+2.6**
ACLC				*e*S	**Sn**	**21 23 36.0**	**+4.6**
PLCA	**Paso Flores**	**6.95**	**164**	Pn	**Pn**	**21 22 12.7**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=352,slow=9.8,SNR=16						
PLCA				LR	LR	21 24 59.4	
	comp=Z,306nm,18.9s,baz=3.5,slow=39						
PLCA	**Paso Flores**	**6.95**	**164**	*e*Pn	**Pn**	**21 22 12.9**	**+0.7**
TCA	**Tanti**	**7.60**	**71**	*e*P	**Pn**	**21 22 23.2**	**+2.0**
CYA	**Choya**	**8.34**	**50**	*e*P	**Pn**	**21 22 31.4**	**+0.1**
CYA				IAML		21 22 43.2	
	comp=Z,19nm,0.7s						
CYA				*e*S	**Sn**	**21 24 03.2**	**-2.6**
GO02	**Mina Guanaco**	**9.35**	**19**	*e*Pn	**Pn**	**21 22 47.5**	**+2.1**
TRQA	**Tornquist**	**9.79**	**117**	*e*Pn	**Pn**	**21 22 51.7**	**+0.6**
LVC	**Limon Verde**	**11.96**	**19**	Pn	**Pn**	**21 23 21.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=281,slow=10,SNR=3.2						
LVC				LR	LR	21 27 21.3	
	comp=Z,143nm,20.2s,baz=220,slow=34						
CPUP	**Villa Florida**	**15.59**	**65**	LR	LR	21 30 28.3	
	comp=Z,126nm,20.4s,baz=239,slow=38						
LPAZ	**La Paz**	**18.23**	**15**	P	**Pn**	**21 24 44.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=227,slow=7.6,SNR=3.3						
LPAZ				LR	LR	21 30 33.2	
	comp=Z,79nm,21.3s,baz=187,slow=33						
LPAZ	**La Paz**	**18.23**	**15**	*e*P	**Pn**	**21 24 45.0**	**+0.8**
SIV	**San Ignacio**	**20.96**	**34**	P	**P**	**21 25 15.6**	**+2.0**
	comp=Z,3.4nm,0.8s,baz=230,slow=12,SNR=16						
VNA3	**Neumayer Olymp**	**49.61**	**158**	P	**P**	**21 29 22.9**	**+1.4**
VNA1	**Neumayer--Stat**	**49.94**	**157**	P	**P**	**21 29 25.8**	**+1.9**
VNA2	**Neumayer--Watz**	**50.27**	**157**	P	**P**	**21 29 27.7**	**+1.2**
	baz=290,slow=9.3						
SNAA	**Sanae**	**51.84**	**158**	P	**P**	**21 29 39.2**	**+0.9**
SNAA	**Sanae**	**51.84**	**158**	P	**P**	**21 29 39.3**	**+0.9**
	comp=Z,12nm,0.8s,baz=275,slow=6.4,SNR=37						
SNAA	**Sanae**	**51.84**	**158**	*e*P	**P**	**21 29 38.9**	**+0.5**
	comp=Z,18nm,1.0s						
QSPA	**South Pole Qui**	**56.18**	**180**	*e*P	**P**	**21 30 10.2**	**-0.1**
SYO	**Syowa Base**	**66.11**	**159**	⇑*e*P	**P**	**21 31 14.8**	**-2.5**
SYO	**Syowa Base**	**66.11**	**159**	‖*e*pP	pP	21 31 21.0	+3.7
LTX	**Lajitas**	**69.39**	**332**	*e*P	**P**	**21 31 39.5**	**+0.9**
TX31	**Lajitas Ar. Si**	**69.39**	**332**	*e*P	**P**	**21 31 39.6**	**+1.0**
TXAR	**Lajitas Array**	**69.39**	**332**	P	**P**	**21 31 39.5**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=148,slow=9.7,SNR=7.3						
TXAR				LR	LR	21 58 52.9	
	comp=Z,65nm,18.3s,baz=0.0,slow=33						
WVT	**Waverly**	**71.19**	**347**	*e*P	**P**	**21 31 48.9**	**-0.4**
	comp=Z,15nm,1.0s						
MAW	**Mawson**	**73.35**	**164**	P	**P**	**21 32 02.5**	**+0.5**
	comp=Z,5.9nm,0.9s,baz=200,slow=6.5,SNR=13						
MAW	**Mawson**	**73.35**	**164**	*e*P	**P**	**21 32 01.6**	**-0.4**
	comp=Z,1.7nm,0.9s						
DBIC	**Dimbokro**	**75.97**	**72**	P	**P**	**21 32 19.4**	**+1.4**
	comp=Z,5.3nm,0.7s,baz=243,slow=10.0,SNR=4.7						
DBIC				LR	LR	22 02 51.1	
	comp=Z,31nm,20.2s,baz=148,slow=33						
X16A	**Lo Mia Camp, P**	**77.05**	**328**	*e*P	**P**	**21 32 24.4**	**+0.5**
	comp=Z,2.6nm,1.0s						
TSUM	**Tsumeb**	**79.98**	**106**	P	**P**	**21 32 41.4**	**+0.9**
	comp=Z,3.7nm,1.0s,baz=249,slow=8.6,SNR=3.3						
TSUM				LR	LR	22 03 35.0	
	comp=Z,71nm,18.6s,baz=233,slow=32						
BOSA	**Boshof**	**80.76**	**118**	P	**P**	**21 32 45.3**	**+0.7**
	comp=Z,4.8nm,0.9s,baz=232,slow=9.5,SNR=5.6						
BOSA				LR	LR	22 04 29.4	
	comp=Z,43nm,18.1s,baz=230,slow=33						
LBTB	**Lobatse**	**83.02**	**115**	P	**P**	**21 32 57.4**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=244,slow=5.1,SNR=11						
LBTB	**Lobatse**	**83.02**	**115**	*e*P	**P**	**21 32 55.3**	**-1.2**
NVAR	**Mina Array Bea**	**83.47**	**326**	P	**P**	**21 32 58.8**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=148,slow=5.3,SNR=3.1						
TORD	**Torodi Ar. Bea**	**85.00**	**71**	P	**P**	**21 33 05.8**	**-0.7**
	comp=Z,2.9nm,0.9s,baz=271,slow=2.6,SNR=14						
TOA1	**Torodi Ar. Sit**	**85.00**	**71**	*e*P	**P**	**21 33 05.8**	**-0.7**
MATP	**Matopo**	**87.83**	**113**	P	**P**	**21 33 19.8**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=318,slow=3.7,SNR=6.1						
LANS	**Liptovska Anna**	**116.37**	**47**	*e*PDIF	**Pdif**	**

NACB *e*S Sg 22 25 49.6 +1.3
baz=213
ETLH Xiulin Townshi 0.26 237 *e*P Pb 22 25 47.3 -0.5
baz=236
ETLH *e*S Sb 22 25 51.9 -0.4
baz=236
TWC Suao 0.28 24 *e*P Pb 22 25 47.4 -0.6
baz=26
TWD Chiawan 0.29 203 *e*P Pg 22 25 47.5 +0.7
baz=201
TWD *e*S Sb 22 25 52.4 -0.7
baz=201
NNSB Datong 0.32 284 *e*P Pb 22 25 48.7 0.0
baz=283
NNSB *e*S Sb 22 25 53.5 -0.4
baz=283
ENTT Nioudou 0.32 334 *e*P Pb 22 25 48.2 -0.5
baz=334
ENTT *e*S Sb 22 25 53.0 -0.9
baz=334
NNS Nan Shan 0.33 285 *e*P Pb 22 25 48.2 -0.7
baz=285
NNS *e*S Sb 22 25 53.3 -1.0
baz=285
NSK Sanguang 0.46 314 *e*P Pb 22 25 50.7 -0.4
baz=314
NSK *e*S Sb 22 25 57.7 -0.4
baz=314
WHF Hehuan Shan 0.47 244 *e*P Pb 22 25 51.1 -0.3
baz=243
WHF *e*S Sb 22 25 58.1 -0.4
baz=243
TIPB Shuangxi 0.62 9 *e*P Pb 22 25 53.6 -0.2
baz=8.0
TIPB *e*S Sb 22 26 03.0 +0.3
baz=8.0
TWB1 Santiao Chiao 0.70 20 *e*P Pb 22 25 54.9 -0.1
baz=20

*NEIC **06** 22:57:43.5±1.3, 10.°70S×166.°07E, h35km±2km, mb4.6/18, Error ellipse: s-maj=18.7km s-min=10.4km az=167.0*
*ISCJB **06** 22:57:49.1±0.3, 10.°77S±0.°06×165.°91E±0.°05, h100km, mb4.3/34, Error ellipse: s-maj=9.2km s-min=7.0km az=158.2*
*IDC **06** 22:57:49.7±3.0, 10.°79S×165.°99E, h92km±25km, mb4.0/19, mb1 4.2/21, mb1mx4.0/39, mbtmp4.3/21, MS3.5/6, Ms1 3.4/6, ms1mx3.1/25, Error ellipse: s-maj=19.5km s-min=17.0km az=106.0*
ISC 06 22:57:49.9±0.5, 10.°93S±0.°06×165.°97E±0.°08, h100km, n64, σ1♀26/57, mb4.4/34, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.12**	**284**	P	**Pn**	**22 59 17.3**	**-0.5**
	17nm,0.3s,baz=196,slow=15,SNR=2.0						
HNR				S	**Sn**	**23 00 25.2**	**-1.2**
	34nm,0.3s,baz=192,slow=4.1,SNR=3.2						
HNR				LR	LR	23 01 50.5	
	comp=Z,358nm,18.1s,baz=102,slow=40						
HNR	**Honiara**	**6.12**	**284**	*e*Pn	**Pn**	**22 59 16.0**	**-1.8**
DZM	**Mont Dzumac**	**11.09**	**178**	P	**Pn**	**23 00 27.3**	**+1.7**
	8.8nm,0.3s,baz=339,slow=14,SNR=86						
DZM				S	**Sn**	**23 02 23.7**	**-4.0**
	0.9nm,0.3s,baz=173,slow=19,SNR=4.5						
DZM				LR	LR	23 03 58.8	
	comp=Z,253nm,21.0s,baz=11,slow=33						
DZM	**Mont Dzumac**	**11.09**	**178**	*e*Pn	**Pn**	**23 00 27.4**	**+1.8**
	105nm,0.8s						
DZM				*e*Sn	**Sn**	**23 02 23.7**	**-4.0**
	4.6nm,0.2s						
DZM				*e*LR	LR	23 03 03.0	
	comp=Z,282nm,30.7s						
DZM	**Mont Dzumac**	**11.09**	**178**	*e*Pn	**Pn**	**23 00 25.2**	**-0.4**
EIDS	**Eidsvold**	**20.13**	**222**	*e*P	Pn	23 02 19.0	+0.1
	24nm,0.9s						
CTA	**Charters Tower**	**21.05**	**242**	P	**P**	**23 02 28.4**	**+2.3**
	10nm,0.9s,baz=93,slow=11,SNR=4.7						
ARMA	**Armidale**	**23.54**	**212**	*e*P	**P**	**23 02 53.0**	**+1.6**
	38nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**29.24**	**1**	T	T	23 34 28.2	
	baz=181,slow=76,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**29.25**	**1**	T	T	23 34 29.5	
	baz=181,slow=76,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**29.26**	**1**	T	T	23 34 28.4	
	baz=181,slow=76,SNR=4.0						
BKZ	**Black Stump Fm**	**29.64**	**163**	*e*P	**P**	**23 03 47.0**	**+1.0**
	27nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	23 35 59.6	
	baz=182,slow=76,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	23 35 55.6	
	baz=182,slow=76,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	23 35 57.1	
	baz=182,slow=76,SNR=4.0						
STKA	**Stephens Creek**	**30.68**	**223**	P	**P**	**23 03 57.2**	**+2.0**
	3.2nm,0.7s,baz=87,slow=3.1,SNR=4.6						
STKA				LR	LR	23 14 46.7	
	comp=Z,91nm,19.9s,baz=17,slow=33						
WR1	**Warramunga Arr**	**31.73**	**250**	*e*P	**P**	**23 04 05.5**	**+0.9**
WRA	**Warramunga Arr**	**31.73**	**250**	P	**P**	**23 04 05.5**	**+0.8**
	5.1nm,0.9s,baz=77,slow=8.9,SNR=8.5						
ASAR	**Alice Springs**	**33.04**	**243**	P	**P**	**23 04 16.9**	**+0.8**
	7.4nm,0.8s,baz=73,slow=9.5,SNR=55						
ASAR				LR	LR	23 16 23.8	
	comp=Z,47nm,19.8s,baz=136,slow=34						
BATI	**Baumata**	**41.58**	**267**	LR	LR	23 24 01.3	
	comp=Z,83nm,19.5s,baz=152,slow=38						
PPT	**Papeete**	**43.51**	**104**	LR	LR	23 21 40.6	
	comp=Z,40nm,19.4s,baz=36,slow=33						
PPT2	**Papeete2**	**43.51**	**104**	*e*LR	LR	23 18 00.0	
	comp=Z,99nm,29.5s						
TBI	**Tubuai**	**44.17**	**112**	*e*LR	LR	23 18 21.6	
	comp=Z,148nm,30.8s						
MJAR	**Matsushiro Arr**	**53.97**	**332**	P	**P**	**23 07 02.9**	**-0.8**
	0.9nm,0.4s,baz=168,slow=9.1,SNR=4.8						
MAJO	**Matsushiro**	**53.97**	**332**	*e*P	**P**	**23 07 02.9**	**-0.8**
ASAJ	**Asahikawa**	**58.76**	**340**	P	**P**	**23 07 38.1**	**+0.6**
	2.8nm,0.3s,baz=204,slow=15,SNR=5.5						
USRK	**Ussuriysk Ar.**	**62.94**	**333**	P	**P**	**23 08 06.4**	**+0.6**
	2.0nm,0.6s,baz=180,slow=5.7,SNR=5.6						
PETK	**Petropavlovsk-**	**64.17**	**354**	P	**P**	**23 08 13.2**	**-0.5**
	2.7nm,0.9s,baz=164,slow=5.8,SNR=3.4						
PEA1	**Petropavlovsk-**	**64.18**	**354**	*e*P	**P**	**23 08 13.2**	**-0.5**
KLR	**Kul'dur**	**67.04**	**336**	P	**P**	**23 08 32.6**	**+0.4**
	0.9nm,0.5s,baz=22,slow=14,SNR=4.0						
CMAR	**Chiang Mai Arr**	**72.27**	**293**	P	**P**	**23 09 04.7**	**-0.4**
	0.4nm,0.3s,baz=125,slow=4.5,SNR=2.8						
SONA0	**Songino Array**	**78.70**	**324**	*e*P	**P**	**23 09 42.5**	**+1.1**
SONM	**Songino Array**	**78.70**	**324**	P	**P**	**23 09 42.5**	**+1.1**
	0.5nm,0.3s,baz=126,slow=9.4,SNR=4.1						
WRH	**Wood River Hil**	**82.75**	**18**	*e*P	**P**	**23 10 01.3**	**-1.1**
	7.7nm,1.2s						
CCB	**Clear Creek Bu**	**82.96**	**18**	*e*P	**P**	**23 10 02.9**	**-0.6**
	18nm,2.0s						
RIDG	**Independent Ri**	**83.29**	**20**	*e*P	**P**	**23 10 05.1**	**-0.2**
	5.2nm,0.9s						
ILAR	**Eielson Array**	**83.33**	**18**	P	**P**	**23 10 05.3**	**-0.1**
	1.8nm,0.6s,baz=234,slow=5.1,SNR=22						
ILB	**Eielson Array**	**83.33**	**18**	*e*P	**P**	**23 10 05.1**	**-0.3**
	3.0nm,0.8s						
DOT	**Dot Lake**	**83.49**	**20**	*e*P	**P**	**23 10 05.3**	**-0.9**
	7.7nm,1.2s						
AFDM	**Forest Hills D**	**83.96**	**49**	*e*P	**P**	**23 10 09.1**	**-0.1**
	4.9nm,1.1s						
EGAK	**Eagle**	**85.19**	**20**	*e*P	**P**	**23 10 15.3**	**+0.5**
	8.5nm,0.8s						
PAHR	**Pah Rah Range**	**85.37**	**48**	*e*P	**P**	**23 10 16.2**	**-0.2**
	3.5nm,1.0s						
NVAR	**Mina Array Bea**	**85.78**	**50**	P	**P**	**23 10 18.7**	**+0.1**
	2.3nm,0.9s,baz=235,slow=7.6,SNR=10						
NV01	**Mina Array Sit**	**85.78**	**50**	*e*P	**P**	**23 10 18.7**	**+0.1**
TIXI	**Tiksi**	**86.02**	**349**	P	**P**	**23 10 18.4**	**-0.4**
	2.0nm,0.3s,baz=114,slow=5.7,SNR=5.3						
KVN	**Kaiserville**	**86.11**	**49**	*e*P	**P**	**23 10 19.3**	**-0.9**
	3.3nm,1.0s						
LCMT	**Little Creek M**	**89.25**	**52**	*e*P	**P**	**23 10 35.9**	**+0.7**
	3.8nm,1.0s						
CCUT	**Cedar City**	**89.29**	**52**	*e*P	**P**	**23 10 36.1**	**+0.6**
	3.3nm,0.9s						
MTPU	**Mount Pierson**	**90.32**	**51**	*e*P	**P**	**23 10 41.3**	**+0.8**
	2.9nm,0.8s						
MSU	**Marysvale**	**90.43**	**51**	*e*P	**P**	**23 10 41.4**	**+0.6**
HVU	**Hansel Valley**	**90.76**	**48**	*e*P	**P**	**23 10 42.5**	**+0.3**
	5.5nm,1.0s						
PDAR	**Pinedale Array**	**93.31**	**47**	P	**P**	**23 10 53.0**	**-1.0**
	0.1nm,0.3s,baz=232,slow=5.6,SNR=3.8						
MK31	**Makanchi Array**	**93.59**	**317**	*e*P	**P**	**23 10 55.1**	**+0.1**
	2.4nm,0.8s						
MK32	**Makanchi Array**	**93.59**	**317**	*e*P	**P**	**23 10 55.1**	**+0.2**
MKAR	**Makanchi Array**	**93.59**	**317**	P	**P**	**23 10 55.1**	**+0.2**
	2.5nm,0.7s,baz=95,slow=6.6,SNR=21						
ZALV	**Zalesovo Beam**	**93.59**	**324**	P	**P**	**23 10 54.1**	**-0.6**
	1.3nm,0.7s,baz=74,slow=5.3,SNR=4.0						
YKA	**Yellowknife Ar**	**94.77**	**27**	P	**P**	**23 10 58.1**	**-1.8**
	0.4nm,0.6s,baz=250,slow=5.0,SNR=4.5						
YKB5	**Yellowknife Ar**	**94.77**	**27**	*e*P	**P**	**23 10 58.1**	**-1.8**
LTX	**Lajitas**	**95.58**	**61**	*e*P	**P**	**23 11 06.0**	**+1.4**
TXAR	**Lajitas Array**	**95.58**	**61**	P	**P**	**23 11 06.0**	**+1.4**
	0.4nm,0.6s,baz=289,slow=5.6,SNR=3.0						
ARCES	**ARCESS Array B**	**116.28**	**346**	PKP	**PKPdf**	**23 16 20.7**	**-0.5**
	1.3nm,0.6s,baz=65,slow=2.3,SNR=8.4						
BOSA	**Boshof**	**125.35**	**223**	PKP	**PKiKP**	**23 16 40.4**	**-0.1**
	1.3nm,0.7s,baz=135,slow=4.3,SNR=2.7						
KEST	**Kesra**	**147.46**	**323**	PKPbc	**PKPab**	**23 17 23.4**	**-1.6**
	5.4nm,0.8s,baz=93,slow=3.8,SNR=4.8						
ESDC	**Sonseca Array**	**150.01**	**344**	PKPbc	**PKPbc**	**23 17 28.5**	**-0.7**
	0.7nm,0.7s,baz=24,slow=2.5,SNR=6.8						
ESDC				PKPab	**PKPab**	**23 17 36.3**	**+1.1**
	1.1nm,0.7s,baz=11,slow=4.0,SNR=9.8						

*IDC **06** 22:58:00.8±8.0, 47.°83N×155.°98E, h0km, mb3.9/4, mb1 3.7/5, mb1mx3.4/48, mbtmp3.8/5, ML2.1/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/36, Error ellipse: s-maj=178.5km s-min=49.8km az=139.0*
*KRSC **06** 22:58:08.6±1.8, 48.°45N×157.°10E, h17km±32km, ML4.3*
ISC 06 22:58:05.6±1.7, 48.°0N±0.°1×156.°6E±0.°1, h35km, n29, σ2♀24/38, mb3.9/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.70**	**353**	*e*P	**Pn**	**22 58 46.9**	**+0.5**
SKR				*e*S	**Sn**	**22 59 14.8**	**-3.0**
ALID	**Alaid**	**2.95**	**347**	*e*P	**Pn**	**22 58 50.4**	**+0.4**
ALID				*e*S	**Sn**	**22 59 24.1**	**-0.1**
PAU	**Pauzhetka**	**3.46**	**2**	*e*P	**Pn**	**22 58 58.3**	**+1.4**
PAU				*e*S	**Sn**	**22 59 35.1**	**-1.6**
KDTR	**Khodutka, Kamc**	**3.92**	**13**	*e*P	**Pn**	**22 59 04.8**	**+1.6**
KDTR				*e*S	**Sn**	**22 59 46.3**	**-1.6**
ASAK	**Asacha**	**4.46**	**10**	*e*P	**Pn**	**22 59 12.4**	**+1.8**
MTVR	**Mutnovka**	**4.59**	**12**	*e*P	**Pn**	**22 59 14.0**	**+1.5**
MTVR				*e*S	**Sn**	**23 00 03.3**	**-1.4**
RUS	**Russkaya**	**4.59**	**15**	*e*P	**Pn**	**22 59 13.9**	**+1.5**
RUS				*e*S	**Sn**	**23 00 03.4**	**-1.1**
KRMR	**Karymshinskiy**	**4.92**	**11**	*e*P	**Pn**	**22 59 18.7**	**+1.8**
KRMR				*e*S	**Sn**	**23 00 11.3**	**-1.3**
PETK	**Petropavlovsk-**	**5.15**	**7**	Pn	**Pn**	**22 59 22.7**	**+2.6**
	0.3nm,0.3s,baz=174,slow=14,SNR=4.3						
PETK				Sn	**Sn**	**23 00 22.2**	**+3.9**
	0.2nm,0.3s,baz=124,slow=18,SNR=2.2						
PETK				LR	LR	23 01 29.9	
	comp=Z,45nm,19.2s,baz=219,slow=39						
DALK	**Dalny**	**5.21**	**14**	*e*P	**Pn**	**22 59 23.3**	**+2.4**
DALK				*e*S	**Sn**	**23 00 19.0**	**-0.6**
UGLR	**Uglovaya**	**5.39**	**14**	*e*P	**Pn**	**22 59 26.2**	**+2.7**
AVH	**Avacha**	**5.43**	**14**	*e*P	**Pn**	**22 59 26.8**	**+2.8**
AVH				*e*S	**Sn**	**23 00 25.2**	**-0.1**
SMAR	**Somma**	**5.44**	**14**	*e*P	**Pn**	**22 59 27.1**	**+2.8**
KOK	**Koryaka**	**5.44**	**13**	*e*P	**Pn**	**22 59 27.6**	**+3.4**
NLC	**Nalytchevo**	**5.45**	**18**	*e*P	**Pn**	**22 59 25.9**	**+1.7**
NLC				*e*S	**Sn**	**23 00 22.4**	**-3.2**
SDLR	**Sedlovina**	**5.47**	**14**	*e*P	**Pn**	**22 59 26.6**	**+2.0**
SDLR				*e*S	**Sn**	**23 00 24.2**	**-2.0**
KRER	**Koryakskii**	**5.47**	**14**	*e*S	**Sn**	**23 00 25.8**	**-0.6**
KRX	**Arik**	**5.51**	**13**	*e*P	**Pn**	**22 59 28.3**	**+3.1**
SPN	**Mys Shipunski**	**5.54**	**22**	*e*P	**Pn**	**22 59 27.9**	**+2.5**
SPN				*e*S	**Sn**	**23 00 26.5**	**-1.2**
GNL	**Ganaly**	**5.75**	**8**	*e*P	**Pn**	**22 59 32.1**	**+3.6**
BKI	**Bering**	**9.25**	**35**	*e*S	**Sn**	**23 01 54.5**	**-4.5**
H11S1	**WAKE ISLAND Hy**	**30.55**	**161**	T	T	23 37 39.3	
	baz=345,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**30.56**	**161**	T	T	23 37 43.3	
	baz=345,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**30.57**	**161**	T	T	23 37 41.0	
	baz=345,slow=76,SNR=7.7						
MKAR	**Makanchi Array**	**48.47**	**298**	P	**P**	**23 06 43.0**	**-1.5**
	1.5nm,0.7s,baz=68,slow=8.3,SNR=17						
SPITS	**Spitsbergen Ar**	**51.78**	**350**	LR	LR	23 28 48.2	
	comp=Z,34nm,19.2s,baz=115,slow=36						
FINES	**FINESS Array B**	**63.89**	**336**	P	**P**	**23 08 34.2**	**0.0**
	0.3nm,0.3s,baz=28,slow=7.2,SNR=7.2						
HFS	**Hagfors**	**68.08**	**341**	P	**P**	**23 09 02.9**	**+1.8**
	0.5nm,0.4s,baz=46,slow=6.4,SNR=4.7						
AKASG	**Malin Array Be**	**71.79**	**328**	P	**P**	**23 09 23.3**	**-0.8**
	0.5nm,0.4s,baz=33,slow=5.2,SNR=3.8						

*ISCJB **06** 23:00:54.9±0.6, 3.°8N±0.°1×63.°57E±0.°09, h10km, mb4.1/24, MS3.4/19, Error ellipse: s-maj=16.3km s-min=12.5km az=21.0*
*IDC **06** 23:00:55.1±0.8, 3.°79N×63.°59E, h0km, mb4.0/19, mb1 4.2/19, mb1mx4.0/52, mbtmp4.0/19, MS3.4/19, Ms1 3.4/19, ms1mx3.3/35, Error ellipse: s-maj=22.2km s-min=16.3km az=30.0*
*NEIC **06** 23:00:57.5±1.9, 3.°90N×63.°46E, h10km±1km, mb4.5/4, Error ellipse: s-maj=20.5km s-min=14.9km az=191.0*
ISC 06 23:00:56.9±0.8, 3.°8N±0.°2×63.°6E±0.°1, h10km, n54, σ0♀76/37, mb4.2/24, MS3.4/19, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**12.51**	**144**	T	T	23 16 24.4	
	baz=323,slow=76,SNR=281						
H08N3	**Diego Garcia H**	**12.52**	**144**	T	T	23 16 25.2	
	baz=323,slow=76,SNR=365						
H08N1	**Diego Garcia H**	**12.53**	**143**	T	T	23 16 27.4	
	baz=323,slow=76,SNR=152						
KMBO	**Kilima Mbogo**	**26.74**	**260**	LR	LR	23 15 34.3	
	comp=Z,54nm,21.5s,baz=86,slow=33						
KMBO	**Kilima Mbogo**	**26.74**	**260**	*e*P	P	23 06 48.7	+11
	19nm,1.8s						
GEYT	**Alibeck**	**34.33**	**352**	P	**P**	**23 07 45.2**	**+1.4**
	0.4nm,0.4s,baz=205,slow=6.4,SNR=3.3						
GEYT				LR	LR	23 21 20.5	
	comp=Z,64nm,19.8s,baz=170,slow=36						
PSI	**Prapat**	**35.32**	**91**	LR	LR	23 20 00.6	
	comp=Z,76nm,19.1s,baz=249,slow=32						
PSI	**Prapat**	**35.32**	**91**	*e*P	P	23 08 07.7	+15
	8.7nm,1.2s						
EIL	**Elat**	**37.36**	**317**	LR	LR	23 22 34.9	
	comp=Z,39nm,19.5s,baz=96,slow=35						
CM31	**Chiang Mai Arr**	**37.55**	**64**	*e*PcP	**PcP**	**23 10 30.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**37.55**	**64**	P	**P**	**23 08 11.9**	**+0.2**
	1.8nm,0.8s,baz=253,slow=9.8,SNR=7.9						
CMAR				PcP	**PcP**	**23 10 30.2**	**+0.4**
	0.5nm,0.4s,baz=256,slow=4.7,SNR=4.4						
CMAR				LR	LR	23 23 59.4	
	comp=Z,46nm,18.7s,baz=236,slow=37						
MMAI	**Mount Meron Ar**	**39.20**	**321**	LR	LR	23 23 44.6	
	comp=Z,40nm,20.3s,baz=35,slow=35						
GNI	**Garni**	**39.98**	**337**	LR	LR	23 24 60.0	
	comp=Z,46nm,21.1s,baz=138,slow=36						
MATP	**Matopo**	**41.99**	**234**	P	**P**	**23 08 49.2**	**+0.4**
	1.5nm,0.7s,baz=315,slow=20,SNR=4.9						
KBZ	**Khabaz**	**43.76**	**338**	LR	LR	23 27 41.9	
	comp=Z,23nm,19.3s,baz=184,slow=37						
BRTR	**Keskin Array B**	**44.85**	**327**	P	**P**	**23 09 12.1**	**+0.4**
	1.1nm,0.9s,baz=129,slow=9.7,SNR=6.7						
BRTR				LR	LR	23 28 27.3	
	comp=Z,41nm,19.5s,baz=101,slow=37						
BR101	**Keskin Array S**	**44.85**	**327**	*e*P	**P**	**23 09 12.1**	**+0.4**
MK32	**Makanchi Array**	**45.81**	**18**	*e*P	**P**	**23 09 18.7**	**-0.2**
MKAR	**Makanchi Array**	**45.81**	**18**	P	**P**	**23 09 18.7**	**-0.2**
	0.5nm,0.7s,baz=212,slow=8.0,SNR=3.1						
MKAR				LR	LR	23 28 06.3	
	comp=Z,22nm,19.0s,baz=220,slow=36						
AKTO	**Aktyubinsk**	**46.70**	**355**	LR	LR	23 28 25.9	
	comp=Z,14nm,18.9s,baz=187,slow=35						
BOSA	**Boshof**	**48.92**	**226**	LR	LR	23 29 09.9	
	comp=Z,78nm,18.2s,baz=172,slow=35						
XAN	**Xi'an**	**51.77**	**49**	P	**P**	**23 10 05.2**	**+0.1**
XAN				pP	pwP	23 10 12.6	+0.6
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,50nm,3.7s						
ZALV	**Zalesovo Beam**	**52.93**	**16**	P	**P**	**23 10 12.6**	**-0.6**
	comp=Z,4.2nm,0.8s,baz=232,slow=7.3,SNR=13						
ZALV				LR	LR	23 32 32.4	
	comp=Z,45nm,21.2s,baz=250,slow=36						
ZAA1	**Zalesovo Array**	**52.94**	**16**	*e*P	**P**	**23 10 12.6**	**-0.6**
WHN	**Wuhan**	**54.73**	**55**	P	**P**	**23 10 28.9**	**+2.1**
AKASG	**Malin Array Be**	**54.91**	**334**	P	**P**	**23 10 26.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=135,slow=6.1,SNR=4.3						
SONA0	**Songino Array**	**57.21**	**33**	*e*P	**P**	**23 10 45.0**	**+0.6**
SONM	**Songino Array**	**57.21**	**33**	P	**P**	**23 10 45.0**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=230,slow=6.7,SNR=5.2						
SONM				LR	LR	23 35 37.8	
	comp=Z,103nm,21.2s,baz=252,slow=36						
DAVOX	**Davos/Dischmat**	**63.00**	**322**	P	**P**	**23 11 24.5**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=125,slow=12,SNR=5.5						
FIA0	**FINESS Array S**	**64.01**	**341**	*e*P	**P**	**23 11 30.2**	**-0.2**
FINES	**FINESS Array B**	**64.01**	**341**	P	**P**	**23 11 30.2**	**-0.2**
	comp=Z,1.3nm,1.0s,baz=171,slow=9.7,SNR=2.7						
NRIK	**Noril'sk**	**67.35**	**9**	LR	LR	23 44 19.7	
	comp=Z,30nm,19.1s,baz=218,slow=39						
KS15	**Wonju Array Si**	**67.42**	**51**	*e*P	P	23 12 06.6	+14
	comp=Z,15nm,1.5s						
KSRS	**Korea Array**	**67.46**	**51**	P	**P**	**23 11 52.5**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=252,slow=7.3,SNR=6.3						
KSRS				LR	LR	23 43 19.9	
	comp=Z,26nm,18.6s,baz=230,slow=38						
HFS	**Hagfors**	**67.73**	**336**	P	**P**	**23 11 54.4**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=111,slow=8.1,SNR=20						
NB2	**NORSAR Subarra**	**69.25**	**336**	P	**P**	**23 12 03.0**	**-1.0**
	comp=Z,1.9nm,1.1s,baz=122,slow=6.5						
NB200	**NORSAR Array S**	**69.25**	**336**	*e*P	**P**	**23 12 03.4**	**-0.6**
NOA	**NORSAR Array B**	**69.25**	**336**	P	**P**	**23 12 03.4**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=115,slow=6.7,SNR=4.4						
NOA				LR	LR	23 44 22.6	
	comp=Z,17nm,21.3s,baz=355,slow=38						
ARCES	**ARCESS Array B**	**70.25**	**347**	P	**P**	**23 12 09.1**	**-0.9**
	comp=Z,7.2nm,0.2s,baz=107,slow=6.0,SNR=5.5						
ESDC	**Sonseca Array**	**70.34**	**311**	P	**P**	**23 12 11.3**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=88,slow=5.5,SNR=10						
KLR	**Kul'dur**	**72.98**	**40**	P	**P**	**23 12 25.9**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=240,slow=5.7,SNR=5.2						
WRA	**Warramunga Arr**	**73.34**	**112**	P	**P**	**23 12 28.2**	**-1.3**
	comp=Z,5.0nm,0.8s,baz=311,slow=5.4,SNR=12						
WR1	**Warramunga Arr**	**73.34**	**112**	*e*P	**P**	**23 12 28.2**	**-1.3**
ASAR	**Alice Springs**	**73.66**	**116**	P	**P**	**23 12 31.4**	**0.0**
	comp=Z,3.7nm,0.8s,baz=288,slow=5.8,SNR=23						
MAJO	**Matsushiro**	**75.42**	**53**	*e*P	**P**	**23 12 41.4**	**+0.1**
MJAR	**Matsushiro Arr**	**75.42**	**53**	P	**P**	**23 12 41.4**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=271,slow=8.3,SNR=5.9						
TIXI	**Tiksi**	**78.79**	**17**	P	**P**	**23 12 58.9**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=316,slow=5.0,SNR=5.0						
PETK	**Petropavlovsk-**	**89.48**	**37**	LR	LR	23 55 40.6	
	comp=Z,40nm,18.0s,baz=321,slow=37						
VNDA	**Vanda**	**95.49**	**168**	LR	LR	23 52 04.1	
	comp=Z,57nm,18.5s,slow=32						
VNDA	**Vanda**	**95.49**	**168**	*e*P	P	23 14 37.4	+16
NV01	**Mina Array Sit**	**137.95**	**2**	*e*PKPdf	**PKPdf**	**23 20 23.5**	**+0.8**
NVAR	**Mina Array Bea**	**137.95**	**2**	PKP	**PKPdf**	**23 20 23.5**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=271,slow=2.1,SNR=4.1						
LTX	**Lajitas**	**144.85**	**340**	*e*PKPdf	**PKPab**	**23 20 33.9**	**-0.2**
TXAR	**Lajitas Array**	**144.85**	**340**	PKP	**PKPab**	**23 20 33.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=93,slow=2.8,SNR=5.1						

*SOME **06** 23:04:39.2, 40.°47N×78.°23E, h10km*
*KRNET **06** 23:04:40.8±0.1, 40.°06N×78.°30E, mb3.4*
*NNC **06** 23:04:45.5±2.1, 40.°79N×78.°23E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=15.1km s-min=9.8km az=158.0*
ISC 06 23:04:43.4±1.9, 40.°50N±0.°10×78.°18E±0.°04, h10km, n57, σ1♀86/83, 20C-18D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.89**	**300**	⇑*e*P	**Pb**	**23 05 16.5**	**-1.7**
	baz=8.0						
NRN				⇑*e*S	**Sg**	**23 05 42.7**	**-1.5**
	baz=8.0						
ULHL	**Ulahol**	**2.27**	**321**	P	**Pb**	**23 05 23.0**	**-1.6**
	SNR=14						
ULHL	**Ulahol**	**2.27**	**321**	⇓*e*P	**Pb**	**23 05 22.8**	**-1.8**
	baz=25						
ULHL				⇓*e*S	**Sb**	**23 05 53.4**	**+0.6**
	baz=25						
SATY	**Saty**	**2.56**	**4**	Pg	**Pb**	**23 05 27.1**	**-2.4**
	64nm,0.5s						
SATY				Lg	Lg	23 06 02.0	
	56nm,0.8s						
SATY	**Saty**	**2.56**	**4**	*e*P	**Pb**	**23 05 27.1**	**-2.4**
	64nm,0.5s						
SATY				*e*S	**Sb**	**23 06 02.0**	**+0.9**
	56nm,0.8s						
BOOM	**Boomskoye usch**	**2.60**	**321**	⇑*e*P	**Pb**	**23 05

	16nm,0.6s						
DGS				Lg	Lg	23 06 21.7	
	20nm,0.5s						
DGS	**Degeres**	**3.27**	**328**	*e*P	**Pb**	**23 05 40.0**	**-1.6**
	16nm,0.6s						
DGS				*e*S	**Sb**	**23 06 23.1**	**+1.5**
	20nm,0.5s						
KTMS	**Ketmen**	**3.36**	**28**	Pg	**Pb**	**23 05 40.4**	**-2.7**
	3.0nm,0.3s						
KTMS				Lg	Lg	23 06 25.2	
	10nm,0.6s						
KTMS	**Ketmen**	**3.36**	**28**	*e*P	**Pb**	**23 05 41.1**	**-2.0**
	3.0nm,0.3s						
KTMS				*e*S	**Sb**	**23 06 25.0**	**+1.0**
	10nm,0.6s						
KTBS	**Karatobe**	**3.40**	**341**	Pg	**Pn**	**23 05 37.6**	**+1.1**
	10nm,0.5s						
KTBS				Lg	Lg	23 06 19.2	
	19nm,0.8s						
KTBS	**Karatobe**	**3.40**	**341**	⇓*i*P	**Pb**	**23 05 41.7**	**-1.9**
	10nm,0.5s						
KTBS				*e*S	**Sb**	**23 06 26.2**	**+1.2**
	19nm,0.8s						
CHKK	**Chushkaly**	**3.46**	**346**	Pg	**Pb**	**23 05 42.6**	**-2.2**
	11nm,0.4s						
CHKK				Lg	Lg	23 06 28.2	
	15nm,0.7s						
CHKK	**Chushkaly**	**3.46**	**346**	*e*P	**Pb**	**23 05 42.8**	**-2.0**
	11nm,0.4s						
CHKK				*e*S	**Sb**	**23 06 28.0**	**+1.0**
	15nm,0.7s						
AAK	**Ala-Archa**	**3.49**	**309**	P	**Pb**	**23 05 44.5**	**-0.9**
	SNR=12						
AAK	**Ala-Archa**	**3.49**	**309**	⇑Pn	**Pb**	**23 05 44.1**	**-1.2**
	7.7nm,0.6s						
AAK				⇑Lg	Lg	23 06 28.6	
	35nm,1.0s						
AAK	**Ala-Archa**	**3.49**	**309**	⇑*i*P	**Pn**	**23 05 39.3**	**+1.4**
	baz=13						
AAK				⇑*i*S	**Sn**	**23 06 21.9**	**+2.6**
	baz=13						
CHMS	**Chumysh**	**3.58**	**315**	P	**Pb**	**23 05 46.1**	**-0.6**
	SNR=18						
CHMS	**Chumysh**	**3.58**	**315**	⇑*i*P	**Pn**	**23 05 40.7**	**+1.8**
	baz=19						
CHMS				⇑*i*S	**Sn**	**23 06 24.1**	**+2.9**
	baz=19						
MNBS	**Baschi**	**3.58**	**3**	Pg	**Pb**	**23 05 43.7**	**-3.2**
	5.4nm,0.4s						
MNBS				Lg	Lg	23 06 30.6	
	12nm,0.3s						
MNBS	**Baschi**	**3.58**	**3**	*e*P	**Pb**	**23 05 46.0**	**-0.8**
	5.4nm,0.4s						
MNBS				*e*S	**Sb**	**23 06 33.5**	**+3.2**
	12nm,0.3s						
KUU	**Kurty**	**3.65**	**339**	Pg	**Pb**	**23 05 44.7**	**-3.3**
	4.1nm,0.5s						
KUU				Lg	Lg	23 06 32.2	
	10nm,0.7s						
KUU	**Kurty**	**3.65**	**339**	*e*P	**Pb**	**23 05 45.8**	**-2.3**
	4.1nm,0.5s						
KUU				*e*S	**Sb**	**23 06 33.2**	**+0.8**
	10nm,0.7s						
ARXS	**Arharly**	**3.72**	**356**	Pg	**Pb**	**23 05 47.5**	**-1.7**
	6.7nm,0.6s						
ARXS				Lg	Lg	23 06 36.5	
	10nm,0.6s						
ARXS	**Arharly**	**3.72**	**356**	*e*P	**Pb**	**23 05 48.1**	**-1.0**
	6.7nm,0.6s						
ARXS				*e*S	**Sb**	**23 06 37.0**	**+2.7**
	10nm,0.6s						
AML	**Almayashu**	**3.75**	**297**	P	**Pb**	**23 05 51.1**	**+1.3**
	SNR=9.0						
USP	**Ospenovka**	**3.89**	**316**	P	**Pb**	**23 05 51.7**	**-0.4**
	SNR=14						
EKS2	**Erkin-Say**	**3.94**	**305**	P	**Pb**	**23 05 53.8**	**+0.8**
	SNR=9.8						
EKS2	**Erkin-Say**	**3.94**	**305**	⇑*i*P	**Pn**	**23 05 44.9**	**+0.9**
	baz=9.0						
EKS2				⇑*i*S	**Sn**	**23 06 31.9**	**+1.5**
	baz=9.0						
DJR	**Jarkent**	**4.01**	**17**	Pg	**Pb**	**23 05 52.0**	**-2.1**
	5.8nm,0.6s						
DJR				Lg	Lg	23 06 44.4	
	8.0nm,0.5s						
MRKS	**Merke**	**4.33**	**303**	Pg	**Pb**	**23 05 59.1**	**-0.6**
	4.6nm,0.3s						
MRKS				Lg	Lg	23 06 56.8	
	4.7nm,0.5s						
TDK	**Taldyqorghan**	**4.50**	**2**	Pg	**Pb**	**23 06 03.8**	**+1.3**
	23nm,0.6s						
TDK				Lg	Lg	23 07 04.9	
	22nm,0.6s						
BTLS	**Baital**	**5.46**	**328**	Pg	**Pb**	**23 06 19.2**	**+0.4**
	3.3nm,0.6s						
BTLS				Lg	Lg	23 07 31.0	
	3.2nm,0.9s						
KK31	**Karatay Array**	**6.29**	**297**	⇑Pg	**Pg**	**23 06 41.2**	**-2.6**
	0.4nm,0.4s,baz=102,slow=16,SNR=4.6						
KK31				⇑Lg	Lg	23 07 58.9	
	1.1nm,0.7s,baz=100,slow=27,SNR=4.0						
MAKZ	**Makanchi**	**6.88**	**22**	⇑Pg	**Pb**	**23 06 43.7**	**+0.7**
	0.7nm,0.5s						
MAKZ				⇓Sn	**Sn**	**23 07 44.0**	**+1.4**
	1.5nm,1.2s						
MAKZ				⇓Lg	Lg	23 08 14.8	
	0.9nm,0.9s						
MK31	**Makanchi Array**	**6.96**	**24**	⇓Pg	**Pb**	**23 06 46.6**	**+2.3**
	1.1nm,0.5s,baz=68,slow=8.7,SNR=12						
MK31				⇓Sn	**Sn**	**23 07 43.8**	**-0.8**
	0.5nm,0.6s						
MK31				⇓Lg	Lg	23 08 17.0	
	0.8nm,0.7s,baz=209,slow=27,SNR=3.6						

TAP 06 23:10:39.7,24°.04N×121°.26E,h10km,ML1.2,A,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGB	**Renai**	**0.08**	**284**	*i* P	Pg	23 10 42.6	+0.3
	baz=283						
CHGB				S	Sg	23 10 44.7	+0.5
	baz=283						
WHF	**Hehuan Shan**	**0.10**	**1**	P	Pg	23 10 43.3	+0.5
	baz=4.0						
WHF				S	Sg	23 10 45.5	+0.5
	baz=4.0						
OWD	**Renai**	**0.12**	**223**	P	Pg	23 10 43.1	+0.4
	baz=223						
OWD				*e*S	Sg	23 10 45.9	+1.1
	baz=223						
TWT	**Tachien**	**0.23**	**339**	*e*P	Pb	23 10 45.3	-0.7
	baz=336						
TWT				*e*S	Sg	23 10 49.3	+1.5
	baz=336						
TDCB	**Techi**	**0.23**	**336**	*e*P	Pb	23 10 45.4	-0.7
	baz=335						
TDCB				*e*S	Sg	23 10 49.3	+1.4
	baz=335						
ETLH	**Xiulin Townshi**	**0.26**	**50**	P	Pb	23 10 45.8	-0.7
	baz=50						
ETLH				*e*S	Sb	23 10 50.7	-0.3
	baz=50						
ESL	**Shilin**	**0.27**	**145**	*e*P	Pb	23 10 46.2	-0.5
	baz=144						
ESL				*e*S	Sb	23 10 50.8	-0.6
	baz=144						
VWDT	**VWDT**	**0.31**	**201**	P	Pb	23 10 46.9	-0.3
	baz=201						
VWDT				*e*S	Sb	23 10 51.2	-1.1
	baz=201						
TWD	**Chiawan**	**0.31**	**82**	*e*P	Pb	23 10 47.7	+0.5
	baz=82						
TWD				*e*S	Sb	23 10 51.9	-0.4
	baz=82						
DPDB	**Guoxing**	**0.31**	**269**	*e*P	Pg	23 10 46.3	+0.4
	baz=268						
DPDB				*e*S	Sb	23 10 51.3	-1.1
	baz=268						
HWA	**Hwalien**	**0.32**	**101**	*e*P	Pb	23 10 47.1	-0.4
	baz=101						
HWA				*e*S	Sb	23 10 52.3	-0.3
	baz=101						
NACB	**Ninganchiao**	**0.33**	**66**	*e*P	Pb	23 10 47.4	-0.2
	baz=66						
NACB				*e*S	Sb	23 10 53.1	+0.1
	baz=66						
ENLB	**Shoufeng**	**0.34**	**114**	*e*P	Pb	23 10 47.4	-0.3
	baz=113						
ENLB				*e*S	Sb	23 10 53.2	0.0
	baz=113						
SMLT	**Sun Moon Lake**	**0.37**	**245**	*e*P	Pb	23 10 47.8	-0.5
	baz=244						
SMLT				*e*S	Sb	23 10 54.0	-0.1
	baz=244						
SSLB	**Suanglung**	**0.38**	**228**	P	Pb	23 10 48.7	+0.2
	baz=228						
SSLB				*e*S	Sb	23 10 54.0	-0.4
	baz=228						
NNSB	**Datong**	**0.40**	**16**	P	Pb	23 10 48.6	-0.3
	baz=15						
NNSB				*e*S	Sb	23 10 54.8	-0.4
	baz=15						
NNS	**Nan Shan**	**0.41**	**14**	*e*P	Pb	23 10 48.7	-0.4
	baz=15						
NNS				*e*S	Sb	23 10 55.3	-0.1
	baz=15						
HGSD	**Ruisui**	**0.56**	**165**	*e*P	Pb	23 10 51.6	0.0
	baz=164						
HGSD				*e*S	Sb	23 11 00.1	+0.4
	baz=164						
YHNB	**Yeheng**	**0.64**	**9**	*e*S	Sb	23 11 02.0	+0.1
	baz=9.0						
LIOB	**Emei**	**0.64**	**340**	*e*P	Pg	23 10 52.1	-0.1
	baz=339						
LIOB				*e*S	Sb	23 11 02.7	+0.6
	baz=339						
YULB	**Yu-li**	**0.65**	**177**	*e*P	Pb	23 10 52.6	-0.4
	baz=177						
YULB				*e*S	Sb	23 11 02.6	+0.6
	baz=177						
YM04	**YM04**	**1.14**	**13**	P	Pb	23 11 01.4	0.0
	baz=12						

TAP 06 23:10:43.7,24°.82N×121°.77E,h39km±1km,ML2.1,A,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.06**	**196**	*e*P	Pn	23 10 50.0	0.0
	baz=188						
ILA				*e*S	Sn	23 10 55.3	+0.9
	baz=188						
NTC	**Toucheng**	**0.07**	**62**	*e*S	Sn	23 10 55.6	+1.2
	baz=61						
TWE	**Neicheng**	**0.14**	**222**	*e*P	Pn	23 10 50.5	-2.3
	baz=215						
TWE				*e*S	Sn	23 10 56.0	-4.9
	baz=215						
TIPB	**Shuangxi**	**0.16**	**20**	*e*P	Pn	23 10 51.3	-1.2
	baz=19						
TIPB				*e*S	Sn	23 10 56.5	-3.6
	baz=19						
TWC	**Suao**	**0.23**	**160**	*e*P	Pn	23 10 51.5	-0.2
	baz=158						
TWC				*e*S	Sn	23 10 56.5	-2.1
	baz=158						
ENTT	**Nioudou**	**0.26**	**225**	P	Pn	23 10 51.9	+0.1
	baz=223						
ENTT				*e*S	Sn	23 10 57.4	-1.0
	baz=223						
TATO	**Taipei**	**0.29**	**301**	*e*P	Pn	23 10 52.2	+0.3
	baz=301						
TATO				*e*S	Sn	23 10 58.4	+0.1
	baz=301						
NDT	**Datong Townshi**	**0.32**	**226**	*e*P	Pn	23 10 51.6	-0.5
	baz=226						
NDT				*e*S	Sn	23 10 57.8	-0.7
	baz=226						
TAP	**Taipei**	**0.32**	**312**	*e*P	Pn	23 10 52.3	+0.3
	baz=312						
TAP				*e*S	Sn	23 10 59.0	+0.5
	baz=312						
YM01	**YM01**	**0.37**	**331**	*e*P	Pn	23 10 52.8	+0.2
	baz=331						
YM01				*e*S	Sn	23 10 59.7	+0.5
	baz=331						
YM07	**YM07**	**0.38**	**339**	*e*P	Pn	23 10 53.3	+0.7
	baz=339						
YM07				*e*S	Sn	23 11 00.3	+1.1
	baz=339						
YM11	**YM11**	**0.38**	**333**	P	Pn	23 10 53.2	+0.4
	baz=332						
YM11				*e*S	Sn	23 11 00.3	+0.8
	baz=332						
YM05	**YM05**	**0.39**	**332**	*e*P	Pn	23 10 52.9	+0.1
	baz=331						
YM05				*e*S	Sn	23 11 00.1	+0.6
	baz=331						
YHNB	**Yeheng**	**0.39**	**247**	P	Pn	23 10 53.3	+0.4
	baz=246						
YHNB				S	Sn	23 11 00.1	+0.6
	baz=246						
YHNB	**Yeheng**	**0.39**	**247**	P	Pn	23 10 53.2	+0.4
	baz=9.0						
YM04	**YM04**	**0.39**	**328**	*e*P	Pn	23 10 53.3	+0.5
	baz=327						
YM04				*e*S	Sn	23 11 00.6	+1.1
	baz=327						
YM08	**YM08**	**0.40**	**336**	*e*P	Pn	23 10 53.6	+0.7
	baz=336						
YM08				*e*S	Sn	23 11 00.9	+1.2
	baz=336						
NSK	**Sanguang**	**0.40**	**249**	*e*P	Pn	23 10 53.4	+0.4
	baz=247						
NSK				*e*S	Sn	23 11 01.2	+1.4
	baz=247						
YM03	**YM03**	**0.41**	**330**	*e*P	Pn	23 10 53.6	+0.4
	baz=329						
YM03				*e*S	Sn	23 11 00.5	+0.5
	baz=329						
EOS1	**EOS1**	**0.43**	**129**	*e*P	Pn	23 10 54.1	+0.9
	baz=129						
EOS1				*e*S	Sn	23 11 01.4	+1.3
	baz=129						
WLTB	**Daxi**	**0.47**	**274**	*e*P	Pn	23 10 54.7	+0.8
	baz=273						
WLTB				*e*S	Sn	23 11 02.5	+1.4
	baz=273						

ISCJB ***06*** *23:12:01.5±0.2,50°.13N±0°.02×18°.29E±0°.02,h0km, mb3.6/1,Error ellipse: s-maj=2.3km s-min=1.4km az=3.7*
LDG ***06*** *23:12:02.6±0.1,50°.10N×18°.44E,h1km,Ml3.7/17,Error ellipse: s-maj=3.2km s-min=1.3km az=8.0,Suspected Mining induced.*
SIGU ***06*** *23:12:02.2±0.4,50°.N±3°.×1°.8E±°.,h2km,mb2.5/7*
IPEC ***06*** *23:12:04.1±0.2,50°.09N×18°.44E,h0km,ML3.4/3,Error ellipse: s-maj=1.8km s-min=1.1km az=161.0*
IDC ***06*** *23:12:04.6±0.7,49°.98N×18°.40E,h0km,mb3.5/1, mb1 3.3/9,mb1mx3.2/44,mbtmp3.2/9,ML3.0/7,Error ellipse: s-maj=9.3km s-min=6.4km az=150.0*
PRU ***06*** *23:12:04.8±0.0,50°.05N×18°.37E,h0km*
BGR ***06*** *23:12:05.0±0.3,50°.08N×18°.39E,h1km,ML3.7/16,Error ellipse: s-maj=4.4km s-min=2.2km az=0.0*

ISC 06 23:12:00.8±0.5,50°.09N±0°.02×18°.38E±0°.02,h0km,n132,σ3=13/249,5C-6D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.12**	**268**	*e*Pg	Pg	23 12 08.2	+5.1
RAC				*e*Sg	**Sg**	**23 12 11.4**	**+6.7**
OKC	**Ostrava-Krasne**	**0.29**	**211**	*e*Pg	**Pb**	**23 12 10.4**	**+1.5**
OKC				*e*Sg	**Sb**	**23 12 15.2**	**+0.9**
OKC	**Ostrava-Krasne**	**0.29**	**211**	*e*PG	**Pb**	**23 12 09.9**	**+0.9**
OKC				*e*SG	**Sb**	**23 12 14.4**	**+0.1**
	comp=Z,3μm,1.1s						
CHZP	**Chorzow**	**0.44**	**62**	*i* Pg	**Pb**	**23 12 13.1**	**+1.6**
CHZP				*e*Sg	**Sb**	**23 12 19.6**	**+0.9**
MORC	**Moravsky Berou**	**0.62**	**240**	⇓*i*P	**Pb**	**23 12 16.3**	**+1.6**
MORC				S	**Sb**	**23 12 25.2**	**+1.2**
MORC	**Moravsky Berou**	**0.62**	**240**	*e*PG	**Pb**	**23 12 16.4**	**+1.8**
MORC				*e*SG	**Sb**	**23 12 24.5**	**+0.5**
MORC	**Moravsky Berou**	**0.62**	**240**	*e*Pg	**Pb**	**23 12 16.3**	**+1.6**
	baz=61						
MORC				*e*Sg	**Sb**	**23 12 24.5**	**+0.5**
	614nm,0.7s,baz=61						
MORC	**Moravsky Berou**	**0.62**	**240**	*e*Pg	**Pb**	**23 12 16.4**	**+1.8**
MORC				*e*Sg	**Sb**	**23 12 25.4**	**+1.4**
OJC	**Ojcow**	**0.92**	**81**	*i* Pg	**Pb**	**23 12 21.1**	**+1.4**
OJC				*e*Sg	**Sb**	**23 12 33.7**	**+1.2**
OJC	**Ojcow**	**0.92**	**81**	*e*Pg	**Pb**	**23 12 21.1**	**+1.4**
OJC				*e*Sg	**Sn**	**23 12 35.4**	**+0.4**
LANS	**Liptovska Anna**	**1.18**	**143**	*e*PG	**Pn**	**23 12 26.4**	**+1.8**
LANS				*e*SG	**Sn**	**23 12 43.1**	**+1.8**
JAVC	**Velka Javorina**	**1.31**	**201**	*e*PG	**Pn**	**23 12 29.4**	**+2.9**
DPC	**Dobruska-Polom**	**1.35**	**282**	*e*Pg	**Pb**	**23 12 29.9**	**+2.9**
DPC				*e*Sg	**Sn**	**23 12 48.7**	**+3.1**
DPC	**Dobruska-Polom**	**1.35**	**282**	*e*PG	**Pb**	**23 12 30.2**	**+3.2**
DPC				*e*SG	**Sn**	**23 12 49.0**	**+3.4**
	comp=Z,772nm,0.5s						
VRAC	**Vranov**	**1.40**	**237**	Pg	**Pb**	**23 12 30.5**	**+2.6**
	40nm,0.3s,baz=59,slow=13,SNR=112						
VRAC				Lg	Lg	23 12 47.7	
	119nm,0.3s,baz=142,slow=19,SNR=35						
VRAC	**Vranov**	**1.40**	**237**	⇓*i*P	**Pb**	**23 12 30.1**	**+2.3**
VRAC	**Vranov**	**1.40**	**237**	S	**Sn**	**23 12 49.0**	**+2.2**
VRAC	**Vranov**	**1.40**	**237**	*e*PG	**Pb**	**23 12 30.5**	**+2.6**
VRAC				*e*SG	**Sn**	**23 12 48.7**	**+1.9**
VRAC	**Vranov**	**1.40**	**237**	*e*Pg	**Pb**	**23 12 30.4**	**+2.6**
	baz=56						
VRAC				*e*Sg	**Sn**	**23 12 48.7**	**+1.9**
	529nm,0.6s,baz=56						
NIE	**Niedzica**	**1.41**	**118**	*e*Pg	**Pb**	**23 12 30.0**	**+1.9**
NIE				*e*Sg	**Sn**	**23 12 49.4**	**+2.2**
OSTC	**Ostas**	**1.47**	**290**	*e*PG	**Pb**	**23 12 31.6**	**+2.6**
KSP	**Ksiaz**	**1.53**	**300**	*e*Pn	**Pg**	**23 12 32.3**	**+2.1**
KSP				*e*Pg	**Pb**	**23 12 34.4**	**+4.2**
KSP				*e*Sg	**Sn**	**23 12 54.6**	**+4.5**
KSP	**Ksiaz**	**1.53**	**300**	*e*Pn	**Pg**	**23 12 32.4**	**+2.1**
KSP				*e*Pg	**Pb**	**23 12 34.6**	**+4.4**
KSP				*e*Sg	**Sn**	**23 12 53.9**	**+3.8**
CHVC	**Chvalec**	**1.57**	**289**	*e*PG	**Pg**	**23 12 33.4**	**+2.4**
CHVC				*e*SG	**Sg**	**23 12 55.7**	**+4.4**
	comp=Z,255nm,0.8s						
UPC	**Upice**	**1.58**	**286**	*e*PG	**Pg**	**23 12 33.8**	**+2.8**
UPC				*e*SG	**Sg**	**23 12 55.5**	**+4.1**
	comp=Z,309nm,0.5s						
VYHS	**Vyhne**	**1.62**	**169**	*e*PN	**Pg**	**23 12 32.8**	**+0.9**
VYHS				*e*SN	**Sg**	**23 12 54.2**	**+1.3**
KRUC	**Moravsky**	**1.65**	**232**	*e*PG	**Pg**	**23 12 34.4**	**+1.9**
KRUC				*e*SG	**Sg**	**23 12 56.6**	**+2.8**
KRUC	**Moravsky**	**1.65**	**232**	*e*Pg	**Pg**	**23 12 34.3**	**+1.8**
	baz=52						
KRUC				*e*Sg	**Sg**	**23 12 56.6**	**+2.8**
	368nm,0.6s,baz=52						
MODS	**Modra-Piesok**	**1.86**	**203**	*e*PN	**Pn**	**23 12 35.7**	**+1.7**
MODS				*e*SN	**Sn**	**23 12 58.6**	**+0.4**
MODS				*e*LG	Lg	23 13 07.2	
STHS	**Stebnicka Huta**	**1.98**	**109**	*e*PN	**Pg**	**23 12 40.6**	**+1.9**
STHS				*e*SG	**Sg**	**23 13 09.5**	**+5.3**
STHS				*e*LG	Lg	23 13 16.0	
TREC	**Trest**	**2.04**	**248**	*e*PG	**Pg**	**23 12 41.5**	**+1.6**
TREC				*e*SG	**Sg**	**23 13 08.8**	**+2.5**
	comp=Z,160nm,0.6s						
ZST	**Bratislava**	**2.07**	**204**	*e*PN	**Pn**	**23 12 38.7**	**+1.9**
ZST				*e*SN	**Sn**	**23 13 04.2**	**+0.9**
KECS	**Kecovo**	**2.12**	**139**	*e*PN	**Pn**	**23 12 39.6**	**+2.1**
KECS				*e*PG	**Pg**	**23 12 44.8**	**+3.4**
KECS				*e*SN	**Sn**	**23 13 05.4**	**+0.9**
KECS				*e*LG	Lg	23 13 18.0	
SRO	**Srobarova**	**2.28**	**181**	*e*	**Pg**	**23 12 47.8**	**+3.4**
SRO	**Srobarova**	**2.28**	**181**	*e*SN	**Sn**	**23 13 05.7**	**-2.7**
GOPC	**GO Pecny, Ondr**	**2.33**	**267**	*e*PN	**Pn**	**23 12 42.2**	**+1.8**
GOPC				*e*PG	**Pg**	**23 12 46.6**	**+1.2**
GOPC				*e*SG	**Sg**	**23 13 18.1**	**+2.6**
	comp=Z,248nm,1.1s						
SRO2	**Moca**	**2.33**	**180**	*e*SG	**Sg**	**23 13 17.1**	**+1.6**
PSZ	**Piszkesteto**	**2.39**	**155**	⇓*i*P	**Pn**	**23 12 43.6**	**+2.3**
PSZ	**Piszkesteto**	**2.39**	**155**	S	**Sb**	**23 13 15.2**	**+0.4**
PSZ	**Piszkesteto**	**2.39**	**155**	EPn	**Pn**	**23 12 43.0**	**+1.8**
PSZ				EPg	**Pg**	**23 12 49.0**	**+2.4**
PSZ				Sn	**Sb**	**23 13 17.1**	**+2.3**
PRU	**Pruhonice**	**2.48**	**269**	*e*PN	**Pn**	**23 12 44.6**	**+2.2**
PRU				*e*SG	**Sg**	**23 13 23.5**	**+3.1**
	comp=Z,266nm,1.2s						
PVCC	**Panska Ves**	**2.48**	**282**	*e*PN	**Pb**	**23 12 45.2**	**-1.1**
PVCC				*e*PG	**Pg**	**23 12 50.0**	**+1.6**
PVCC				*e*SG	**Sg**	**23 13 25.0**	**+4.4**
	comp=Z,260nm,0.6s						
SOP	**Sopron**	**2.69**	**207**	EPn	**Pn**	**23 12 48.0**	**+2.7**
SOP				Sn	**Sb**	**23 13 23.0**	**-0.3**
CONA	**Conrad Observa**	**2.72**	**218**	Pn	**Pb**	**23 12 49.1**	**-1.4**
	2.3nm,0.2s						
CONA				*e*Sn	**Sn**	**23 13 21.0**	**+1.4**
	29nm,0.5s						
CSKK	**Cskako**	**2.73**	**182**	EPn	**Pn**	**23 12 50.0**	**+4.1**
CSKK				EPg	**Pg**	**23 12 54.0**	**+0.9**
CSKK				Sn	**Sn**	**23 13 21.1**	**+1.5**
KOLS	**Kolonicke sedl**	**2.79**	**113**	*e*PN	**Pn**	**23 12 48.8**	**+2.1**
KOLS				*e*PG	**Pg**	**23 12 57.6**	**+3.4**
KOLS				*e*LG	Lg	23 13 50.7	
BRG	**Berggiesshubel**	**2.94**	**287**	PG	**Pg**	**23 12 59.0**	**+1.8**
BRG				SG	**Sg**	**23 13 38.0**	**+2.7**
	113nm,0.7s						
BRG	**Berggiesshubel**	**2.94**	**287**	*e*Pg	**Pg**	**23 12 59.2**	**+2.0**
BRG				*e*Sg	**Sg**	**23 13 38.0**	**+2.7**
UZH	**Uzhgorod**	**2.94**	**118**	*e*P	**Pb**	**23 12 54.2**	**+0.1**
UZH				*e*S	**Sb**	**23 13 33.3**	**+2.7**
STZU	**Stuzhytsa**	**2.96**	**110**	*i* P	**Pb**	**23 12 54.0**	**-0.5**
STZU				Pm		23 13 02.3	
STZU				*i* S	**Sb**	**23 13 32.9**	**+1.7**
STZU				Sm		23 13 52.1	
MUKU	**Mukachevo**	**3.26**	**118**	*e*P	**Pb**	**23 12 59.1**	**-0.4**
MUKU				Pm		23 13 03.0	
MUKU				*i* S	**Sb**	**23 13 41.3**	**+1.6**
MUKU				Sm		23 14 10.1	
KHC	**Kasperske Hory**	**3.27**	**255**	*e*PN	**Pn**	**23 12 56.3**	**+3.0**
KHC				*e*PG	**Pg**	**23 13 04.0**	**+0.6**
KHC				*e*SG	**Sg**	**23 13 48.5**	**+2.8**
	comp=Z,163nm,0.4s						
GEC2	**GERESS Array S**	**3.29**	**250**	*e*Pn	**Pn**	**23 12 57.3**	**+3.5**
GEC2				*e*Pg	**Pg**	**23 13 06.2**	**+2.2**
GEC2				*e*Sg	**Sg**	**23 13 48.2**	**+1.5**
GERES	**GERESS Array B**	**3.29**	**250**	Pn	**Pn**	**23 12 57.2**	**+3.5**
	0.6nm,0.3s,baz=64,slow=15,SNR=12						
GERES				Pg	**Pg**	**23 13 05.7**	**+1.8**
	5.6nm,0.3s,baz=66,slow=17,SNR=52						
GERES				Sn	**Sn**	**23 13 36.6**	**+2.9**
	5.2nm,0.3s,baz=70,slow=28,SNR=6.1						
GERES				Lg	Lg	23 13 47.2	
	10nm,0.3s,baz=68,slow=33,SNR=10						
FBE	**Freiberg**	**3.32**	**287**	*e*Pn	**Pn**	**23 12 57.3**	**+3.4**
FBE				*e*Pg	**Pg**	**23 13 06.5**	**+2.2**
FBE				*e*Sg	**Sg**	**23 13 50.2**	**+2.9**
SHIU	**Shidnytsya**	**3.35**	**103**	P	**Pb**	**23 12 59.2**	**-1.9**
BERU	**Beregovo**	**3.36**	**122**	*e*P	**Pb**	**23 13 00.1**	**-1.1**
TRPA	**Tarpa**	**3.36**	**124**	⇑*i*P	**Pn**	**23 12 56.4**	**+1.8**
TRPA	**Tarpa**	**3.36**	**124**	EPn	**Pn**	**23 12 56.0**	**+1.5**
TRPA				EPg	**Pg**	**23 13 07.0**	**+1.8**
TRPA				Sn	**Sn**	**23 13 30.1**	**-5.1**
ARSA	**Arzberg**	**3.41**	**215**	*e*Pn	**Pn**	**23 12 59.0**	**+3.6**
	3.3nm,0.3s						
ARSA				*i* Sg	**Sg**	**23 13 57.7**	**+7.3**
	19nm,0.4s						
BRIU	**Br

MEZ	**Mezhgor'ye**	**3.71 113**	*e*P	**Pb**	**23 13 04.9**	**-2.3**
MEZ			Pm		23 13 05.2	
MEZ			*e*S	**Sb**	**23 13 51.9**	**-0.8**
MEZ			Sm		23 14 22.1	
MORS	**Morshin**	**3.71 103**	*e*P	**Pn**	**23 13 03.9**	**+4.5**
MORS			*i* S	**Sb**	**23 13 51.9**	**-0.8**
RUE	**Ruedersdorf**	**3.75 311**	*e*P	**Pg**	**23 13 13.5**	**+0.8**
BEHE	**Becsehely**	**3.77 197**	EPn	**Pn**	**23 12 57.0**	**-3.3**
BEHE			Sn	**Sn**	**23 13 41.1**	**-4.3**
TANN	**Tannenbergstha**	**3.81 277**	*e*Pn	**Pn**	**23 13 03.4**	**+2.5**
TANN			*e*Pg	**Pg**	**23 13 16.1**	**+2.2**
TANN			*e*Sg	**Sg**	**23 14 05.1**	**+1.9**
NKC	**Novy Kostel**	**3.82 274**	*e*SG	**Sg**	**23 14 06.9**	**+3.5**
	comp=Z,86nm,0.7s					
ROTZ	**Rotzenmuhle**	**4.00 268**	*e*Pn	**Pn**	**23 13 05.9**	**+2.5**
ROTZ			*e*Sg	**Sg**	**23 14 10.7**	**+1.4**
MANZ	**Manzenberg**	**4.04 271**	*e*Pn	**Pn**	**23 13 06.9**	**+2.9**
MANZ			*e*Sg	**Sg**	**23 14 12.1**	**+1.4**
SOKA	**Soboth**	**4.08 214**	*e*Pn	**Pn**	**23 13 07.2**	**+2.8**
	comp=Z,2.2nm,0.4s					
SOKA			*i* Sg	**Sg**	**23 14 18.0**	**+6.2**
	comp=Z,4.3nm,0.4s					
BMR	**Baia Mare**	**4.15 124**⇑	*i*P	**Pn**	**23 13 07.8**	**+2.4**
BMR	**Baia Mare**	**4.15 124**	S	**Sn**	**23 13 56.2**	**+1.6**
MOX	**Moxa**	**4.37 280**	*e*Pn	**Pn**	**23 13 12.0**	**+3.6**
MOX			*e*Sg	**Sg**	**23 14 24.3**	**+3.3**
DRGR		**4.38 137**⇓	*i*P	**Pn**	**23 13 11.4**	**+2.7**
DRGR		**4.38 137**	S	**Sn**	**23 14 01.8**	**+1.4**
OBKA	**Obir**	**4.40 217**	*i* Pn	**Pn**	**23 13 12.7**	**+3.8**
	comp=Z,3.7nm,0.4s					
NSLU	**Nyzhne Selyshc**	**4.41 113**	*i* P	**Pn**	**23 13 06.7**	**-2.3**
NSLU			Pm		23 13 12.0	
NSLU			*i* S	**Sn**	**23 13 55.3**	**-5.8**
NSLU			Sm		23 14 09.0	
KBA	**Koelnbreinsper**	**4.50 230**	*e*Pn	**Pn**	**23 13 15.1**	**+4.8**
	comp=Z,2.4nm,0.4s					
KBA			*i* Pg	**Pg**	**23 13 27.1**	**0.0**
	comp=Z,4.7nm,0.4s					
KBA			*i* Sn	**Sn**	**23 14 07.6**	**+4.1**
	comp=Z,11nm,0.4s					
KBA			*i* Sg	**Sg**	**23 14 31.8**	**+6.5**
	comp=Z,30nm,0.5s					
GRF	**Grafenberg Arr**	**4.64 268**	*e*Pn	**Pn**	**23 13 15.4**	**+3.1**
GRF			*e*Sg	**Sg**	**23 14 30.9**	**+0.9**
BZS	**Buzias**	**4.97 153**⇑	*i*P	**Pn**	**23 13 19.4**	**+2.6**
ABTA	**Abfaltersbach**	**5.14 232**	*i* Pn	**Pg**	**23 13 38.1**	**-1.2**
	comp=Z,3.1nm,0.4s					
ABTA			*i* Sg	**Sg**	**23 14 51.5**	**+5.6**
	comp=Z,27nm,0.6s					
BURAR	**Bucovina Array**	**5.15 116**⇑	*i*P	**Pn**	**23 13 21.8**	**+2.6**
CLZ	**Clausthal**	**5.36 292**	*e*Sg	**Sg**	**23 14 54.4**	**+1.6**
RGN	**Rugen**	**5.44 327**	*e*P	**Pn**	**23 13 24.1**	**+1.0**
BSD	**Bornholm Skovb**	**5.46 339**	*i* P	**Pn**	**23 13 25.4**	**+2.0**
BSD			*i* S	**Sn**	**23 14 22.6**	**-4.2**
GZR	**Gura Zlata**	**5.55 146**⇑	*i*P	**Pn**	**23 13 27.8**	**+3.0**
MDVR	**Moldovita**	**5.77 156**⇓	*i*P	**Pn**	**23 13 30.1**	**+2.4**
HERR	**Herculane**	**5.88 151**⇓	*i*P	**Pn**	**23 13 31.6**	**+2.4**
FETA	**Feichten**	**5.93 242**	*i* Pg	**Pg**	**23 13 54.4**	**-0.1**
	comp=Z,2.5nm,0.5s					
FETA			*i* Sg	**Sg**	**23 15 17.7**	**+6.4**
	comp=Z,22nm,1.1s					
DAVA	**Damuels**	**6.29 247**	*e*Pn	**Pn**	**23 13 38.3**	**+3.4**
DAVA			Sg	**Sg**	**23 15 26.4**	**+3.7**
	comp=Z,37nm,0.6s					
PBUR	**Paburg**	**6.32 18**	*e*P	Pn	23 13 43.3	+8.2
PABE	**Paberze**	**6.40 30**	*e*P	**Pn**	**23 13 39.5**	**+3.3**
PABE			IAML		23 13 42.6	
	comp=Z,9.7nm,0.4s					
DAVOX	**Davos/Dischmat**	**6.55 243**	Pn	**Pn**	**23 13 42.1**	**+3.5**
	comp=Z,1.2nm,0.3s,baz=59,slow=15,SNR=14					
DAVOX			Sn	**Sn**	**23 14 54.8**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=280,slow=16,SNR=3.9					
DAVOX			Lg	Lg	23 15 30.6	
	comp=Z,1.2nm,0.3s,baz=320,slow=15,SNR=6.9					
MLR	**Muntele Rosu**	**6.86 129**	Pn	**Pn**	**23 13 45.5**	**+2.7**
	comp=Z,0.0nm,0.3s,baz=302,slow=9.5,SNR=1.9					
AKASG	**Malin Array Be**	**6.96 81**	Pn	**Pn**	**23 13 44.5**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=266,slow=12,SNR=4.5					
AKASG			Pg	Pb	23 14 08.6	+6.0
	comp=Z,2.3nm,0.3s,baz=273,slow=15,SNR=8.4					
AKASG			Sn	**Sn**	**23 15 03.2**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=262,slow=22,SNR=4.4					
NACGM	**Naroch**	**7.04 44**	*e*	**Sn**	**23 15 12.0**	**+6.3**
IIGN	**Ignalina**	**7.10 39**	*e*P	**Pn**	**23 13 48.6**	**+2.7**
IIGN			IAML		23 13 51.7	
	comp=Z,2.3nm,0.4s					
ISAL	**Salakas**	**7.22 38**	*e*P	**Pn**	**23 13 49.1**	**+1.6**
ISAL			IAML		23 13 54.0	
	comp=Z,2.2nm,0.6s					
IDID	**Didziasalis**	**7.29 41**	*e*P	**Pn**	**23 13 49.1**	**+0.6**
IDID			IAML		23 13 54.2	
	comp=Z,1.0nm,0.3s					
IZAR	**Zarasai**	**7.40 37**	*e*P	**Pn**	**23 13 52.0**	**+2.0**
IZAR			IAML		23 13 55.9	
	comp=Z,2.4nm,0.6s					
CDF	**Champ du Feu**	**7.46 261**	*e*Pn	**Pn**	**23 13 50.9**	**0.0**
CDF			*e*Sn	**Sn**	**23 15 11.2**	**-5.0**
CDF			*e*Sg	**Sg**	**23 15 57.3**	**-3.0**
	comp=Z,15nm,0.5s					
HINF	**Hinteralfeld**	**7.92 258**	*e*Pn	**Pn**	**23 13 56.9**	**-0.3**
HINF			*e*Sn	**Sn**	**23 15 22.7**	**-4.9**
HINF			*e*Sg	**Sg**	**23 16 11.8**	**-3.3**
	comp=Z,16nm,0.5s					
HAU	**Haudompre**	**8.18 260**	*e*Pn	**Pn**	**23 14 00.6**	**-0.1**
HAU			*e*Sn	**Sn**	**23 15 28.0**	**-5.8**
HAU			*e*Sg	**Sg**	**23 16 19.6**	**-3.6**
	comp=Z,17nm,0.5s					
PAGF	**Fort de Pagny**	**8.41 264**	*e*Pn	**Pn**	**23 14 03.6**	**-0.3**
PAGF			*e*Sn	**Sn**	**23 15 34.3**	**-5.2**
PAGF			*e*Sg	**Sg**	**23 16 26.8**	**-3.9**
	comp=Z,16nm,0.7s					
GIVF	**Givet**	**8.72 275**	*e*Pn	**Pn**	**23 14 07.6**	**-0.5**
GIVF			*e*Sn	**Sn**	**23 15 40.9**	**-6.2**
GIVF			*e*Sg	**Sg**	**23 16 36.7**	**-3.9**
	comp=Z,4.0nm,0.3s					
MEZF	**Maizieres J'vi**	**8.86 265**	*e*Pn	**Pn**	**23 14 09.2**	**-0.8**
MEZF			*e*Sn	**Sn**	**23 15 44.3**	**-6.1**
MEZF			*e*Sg	**Sg**	**23 16 40.9**	**-4.1**
	comp=Z,4.4nm,0.5s					
CABF	**La Chapelle**	**8.89 252**	*e*Pn	**Pn**	**23 14 10.6**	**0.0**
CABF			*e*Sn	**Sn**	**23 15 44.6**	**-6.9**
CABF			*e*Sg	**Sg**	**23 16 42.0**	**-4.2**
	comp=Z,22nm,0.8s					
SFTF	**Sexfontaines**	**8.95 263**	*e*Pn	**Pn**	**23 14 10.6**	**-0.7**
SFTF			*e*Sn	**Sn**	**23 15 46.0**	**-6.7**
SFTF			*e*Sg	**Sg**	**23 16 43.6**	**-4.4**
	comp=Z,7.8nm,0.6s					
LPG	**La Plagne**	**9.07 244**	*e*Pn	**Pn**	**23 14 13.2**	**0.0**
LPG			*e*Sn	**Sn**	**23 15 50.8**	**-5.4**
LPG			*e*Sg		23 16 47.4	
	comp=Z,24nm,1.1s					
LPL	**La Plagne**	**9.07 244**	*e*Pn	**Pn**	**23 14 13.4**	**+0.2**
LPL			*e*Sn	**Sn**	**23 15 49.9**	**-6.2**
LPL			*e*Sg		23 16 47.8	
	comp=Z,0.6nm,0.3s					
BAIF	**Baives**	**9.12 275**	*e*Pn	**Pn**	**23 14 13.3**	**-0.3**
BAIF			*e*Sn	**Sn**	**23 15 50.6**	**-6.2**
BAIF			*e*Sg		23 16 49.4	
	comp=Z,10nm,0.8s					
VSU	**Vasula**	**9.70 27**	*e*P	**Pn**	**23 14 19.8**	**-1.7**
ORIF	**Oris-en-Rattie**	**9.91 243**	*e*P	**Pn**	**23 14 28.0**	**+3.5**
ORIF			*e*Sn	**Sn**	**23 16 09.4**	**-7.1**
ORIF			*e*Sg		23 17 13.7	
	comp=Z,1.6nm,0.4s					
LOR	**Lormes**	**10.01 259**	*e*Pn	**Pn**	**23 14 24.9**	**-0.9**
LOR			*e*Sn	**Sn**	**23 16 13.5**	**-5.3**
LOR			*e*Sg		23 17 16.9	
	comp=Z,4.7nm,0.6s					
SMF	**Signal de Mont**	**10.27 256**	*e*Pn	**Pn**	**23 14 28.7**	**-0.7**
SMF			*e*Sn	**Sn**	**23 16 18.8**	**-6.3**
SMF			*e*Sg		23 17 24.7	
	comp=Z,4.7nm,0.5s					
SSF	**Saint Saulge**	**10.31 259**	*e*Pn	**Pn**	**23 14 29.2**	**-0.7**
SSF			*e*Sn	**Sn**	**23 16 18.1**	**-8.1**
SSF			*e*Sg		23 17 26.1	
	comp=Z,5.8nm,0.6s					
HFS	**Hagfors**	**10.42 347**	Pn	**Pn**	**23 14 32.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=158,slow=13,SNR=7.5					
HFS			Sn	**Sn**	**23 16 23.3**	**-5.3**
	comp=Z,0.2nm,0.3s,baz=168,slow=28,SNR=4.5					
AVF	**Avril sur Loir**	**10.52 257**	*e*Pn	**Pn**	**23 14 33.1**	**+0.4**
AVF			*e*Sn	**Sn**	**23 16 23.5**	**-7.6**
AVF			*e*Sg		23 17 32.5	
	comp=Z,3.6nm,0.6s					
BGF	**Bois d'Agland**	**10.93 257**	*e*Pn	**Pn**	**23 14 37.6**	**-0.8**
BGF			*e*Sn	**Sn**	**23 16 34.2**	**-7.1**
BGF			*e*Sg		23 17 45.4	
	comp=Z,8.3nm,0.6s					
LASF	**Ste Croix**	**11.58 244**	*e*Pn	**Pn**	**23 14 46.4**	**-0.9**
LASF			*e*Sn	**Sn**	**23 16 50.3**	**-6.9**
NOA	**NORSAR Array B**	**11.69 343**	Pn	**Pn**	**23 14 49.1**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=159,slow=13,SNR=5.0					
NOA			Sn	**Sn**	**23 16 53.0**	**-6.9**
	comp=Z,0.0nm,0.3s,baz=100,slow=20,SNR=2.8					
FINES	**FINESS Array B**	**12.17 18**	Pn	**Pn**	**23 14 55.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=197,slow=12,SNR=18					
FINES			Sn	Sn	23 17 02.5	-8.9
	comp=Z,0.2nm,0.3s,baz=197,slow=23,SNR=3.7					
EKA	**Eskdalemuir Ar**	**14.05 300**	Pn	**Pn**	**23 15 24.0**	**+3.1**
	baz=105,slow=14,SNR=2.5					
ARCES	**ARCESS Array B**	**19.81 7**	P	**P**	**23 16 33.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=194,slow=15,SNR=5.0					
ARU	**Arti**	**24.58 60**	P	**P**	**23 17 24.6**	**+2.4**
	comp=Z,0.7nm,0.5s,baz=270,slow=8.4,SNR=4.8					

JMA 06 23:18:16.9±0.2, 37°.21N×142°.27E, h15km±3km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.18**	**265**	P	Pn	23 18 38.4	-0.5
JIKH	**Ishinomakikobu**	**1.27**	**330**	P	Pn	23 18 39.9	-0.2
JIKH				S	Sn	23 18 56.9	0.0
JMM	**Marumori**	**1.34**	**300**	P	Pn	23 18 40.9	-0.2
JMM				S	Sn	23 18 58.0	-0.7
JFFD	**Fukushimafurud**	**1.37**	**266**	*e*S	Sb	23 18 59.9	+0.3
JIO	**Ouri**	**1.44**	**330**	P	Pn	23 18 42.3	-0.1
JIO				S	Sb	23 19 01.4	-0.2
JFT	**Otama**	**1.57**	**282**	P	Pn	23 18 44.9	+0.6
JFT				S	Sn	23 19 04.5	+0.2
JOU	**Okura**	**1.72**	**313**	P	Pn	23 18 47.2	+0.9
JOU				*e*S	Sn	23 19 08.6	+0.6
JMK	**Ichinoseki**	**1.93**	**335**	P	Pn	23 18 50.3	+1.2
JYS	**Shiratake**	**2.02**	**301**	P	Pb	23 18 52.3	-1.0
JYS				S	Sb	23 19 17.6	-0.6
JFY	**Yanaizu**	**2.06**	**276**	S	Sn	23 19 16.5	+0.2
JYK	**Kaneyama**	**2.28**	**319**	P	Pn	23 18 55.3	+1.3
JOM	**Ohasama**	**2.39**	**342**	P	Pn	23 18 56.8	+1.3
JOM				*e*S	Sn	23 19 26.2	+1.7
JAG	**Ashikaga**	**2.39**	**252**	P	Pn	23 18 56.7	+1.2
MAT	**Matsushiro**	**3.33**	**260**	P	Pb	23 19 12.1	-3.5
MAT				S	Sb	23 19 51.9	-4.0

MAN 06 23:27:50.5, 8°.30N×124°.38E, h19km, mb3.9, ML2.7, MS2.2, Mindanao

*PRU **06** 23:30:16.9±0.0, 43°.77N×17°.16E, h0km*
*BEO **06** 23:30:16.9±0.5, 43°.85N×17°.05E, h5km, ML2.7/14*
*LDG **06** 23:30:17.8±0.1, 43°.81N×17°.06E, h2km, Ml3.0/4, Error ellipse: s-maj=5.8km s-min=2.7km az=14.0*
*SAR **06** 23:30:17.7±0.2, 43°.84N×17°.24E, h5km±1km, ML2.9/1*
*PDG **06** 23:30:17.9±0.4, 43°.88N×17°.17E, h2km, ML3.0/14, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
ISC 06 23:30:17.2±1.1, 43°.82N±0°.02×17°.14E±0°.02, h9km±9km, n118, σ2§17/197, 8C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGRS	**Mrkonjic Grad**	**0.60**	**356**⇑	*i*Pg	**Pg**	**23 30 28.2**	**-0.5**
MGRS				*e*Sg	**Sg**	**23 30 36.9**	**+0.3**
BLY	**Banja Luka**	**0.93**	**2**	*e*Pg	**Pg**	**23 30 34.5**	**-0.5**
BLY				*e*Sg	**Sg**	**23 30 46.6**	**-0.5**
BLY	**Banja Luka**	**0.93**	**2**⇑	*i*Pg	**Pg**	**23 30 34.3**	**-0.7**
BLY				*e*Sg	**Sg**	**23 30 46.9**	**-0.2**
STON	**Ston**	**1.03**	**157**	*e*Pg	**Pg**	**23 30 36.2**	**-0.8**
STON				*e*Sg	**Sn**	**23 30 51.8**	**-0.6**
STON	**Ston**	**1.03**	**157**	*i* Pg	**Pg**	**23 30 35.6**	**-1.4**
STON	**Ston**	**1.03**	**157**	*e*Pg	**Pg**	**23 30 35.6**	**-1.4**
STON				*e*Sg	**Sg**	**23 30 50.5**	**+0.1**
DOB	**Doboj**	**1.14**	**37**	*e*Pg	**Pb**	**23 30 37.1**	**-2.0**
DOB				*e*Sg	**Sb**	**23 30 51.5**	**-2.5**
UDBI	**Udbina**	**1.22**	**306**	*i* Pg	**Pn**	**23 30 38.6**	**-1.9**
UDBI				Sg	**Sb**	**23 30 56.0**	**-0.3**
HAPS	**Han Pijesak,Bl**	**1.33**	**78**	*e*Pg	**Pn**	**23 30 41.1**	**-1.0**
HAPS				*e*Sg	**Sg**	**23 31 00.4**	**+0.4**
HAPS	**Han Pijesak,Bl**	**1.33**	**78**	*e*Pg	**Pn**	**23 30 40.7**	**-1.4**
HAPS				*e*Sg	**Sb**	**23 30 57.9**	**-1.8**
BRY	**Bratogost**	**1.37**	**132**⇓	*i*Pg	**Pg**	**23 30 43.4**	**-0.1**
BRY				*e*Sg	**Sg**	**23 31 05.4**	**+4.1**
BRY	**Bratogost**	**1.37**	**132**	*e*Pg	**Pn**	**23 30 41.6**	**-1.1**
BRY				*e*Sg	**Sb**	**23 31 00.4**	**-0.4**
TREB	**Trebinje**	**1.41**	**141**	*e*Pg	**Pn**	**23 30 42.9**	**-0.2**
TREB				*e*Sg	**Sg**	**23 31 03.2**	**+0.6**
TREB	**Trebinje**	**1.41**	**141**	*e*Pg	**Pn**	**23 30 42.9**	**-0.2**
TREB				*e*Sg	**Sn**	**23 31 01.6**	**-0.3**
UPM	**Unac-Piva**	**1.42**	**115**	*e*Pg	**Pb**	**23 30 44.0**	**0.0**
UPM				*e*Sg	**Sg**	**23 31 06.9**	**+3.9**
UPM	**Unac-Piva**	**1.42**	**115**	*e*Pg	**Pn**	**23 30 42.1**	**-1.3**
UPM				*e*Sg	**Sn**	**23 31 01.1**	**-1.3**
NKY	**Niksic**	**1.69**	**126**⇑	*i*Pn	**Pg**	**23 30 49.2**	**-0.3**
NKY				*e*Sn	**Sg**	**23 31 15.1**	**+3.7**
NKME	**Niksic**	**1.69**	**128**⇑	*i*Pn	**Pg**	**23 30 49.2**	**-0.4**
NKME				*e*Sn	**Sg**	**23 31 15.3**	**+3.8**
HCY	**Herceg Novi**	**1.69**	**144**⇑	*i*Pn	**Pg**	**23 30 49.0**	**-0.6**
HCY				*e*Sn	**Sg**	**23 31 15.8**	**+4.2**
HCY	**Herceg Novi**	**1.69**	**144**	*e*Pn	**Pn**	**23 30 47.4**	**+0.4**
HCY				*e*Sn	**Sb**	**23 31 09.2**	**-0.7**
PLE	**Pljevlja**	**1.71**	**106**⇑	*i*Pn	**Pb**	**23 30 49.1**	**+0.3**
PLE				*e*Sn	**Sg**	**23 31 15.4**	**+3.4**
NVLJ	**Novalja**	**1.79**	**295**	*i* Pn	**Pb**	**23 30 49.1**	**-1.1**
CEME	**Cevo**	**1.82**	**134**⇑	*i*Pn	**Pg**	**23 30 51.8**	**-0.3**
CEME				*e*Sn	**Sg**	**23 31 18.3**	**+2.6**
KOME	**Kolasin**	**1.98**	**118**⇓	*i*Pn	**Pb**	**23 30 54.2**	**+0.7**
KOME				*e*Sn	**Sg**	**23 31 22.2**	**+1.2**
BUM	**Brajici-Budva**	**1.99**	**139**⇓	*i*Pn	**Pb**	**23 30 53.9**	**+0.3**
BUM				*e*Sn	**Sg**	**23 31 22.7**	**+1.6**
DIVS	**Divibare**	**2.08**	**81**	*e*Pn	**Pn**	**23 30 52.9**	**+0.6**
DIVS				*e*Sn	**Sb**	**23 31 20.8**	**-0.2**
DIVS	**Divibare**	**2.08**	**81**	*e*Pn	**Pn**	**23 30 52.6**	**+0.3**
DIVS				*e*Sn	**Sn**	**23 31 17.3**	**-1.1**
PDG	**Podgorica**	**2.08**	**131**	*e*Pn	**Pb**	**23 30 54.1**	**-1.0**
PDG				*e*Sg	**Sg**	**23 31 25.1**	**+1.1**
PDG	**Podgorica**	**2.08**	**131**	*e*Pn	**Pn**	**23 30 53.4**	**+1.1**
PDG				*e*Sn	**Sn**	**23 31 19.0**	**+0.7**
TTG	**Podgorica**	**2.08**	**131**⇑	*i*Pn	**Pb**	**23 30 55.3**	**+0.2**
TTG				*e*Sn	**Sg**	**23 31 24.9**	**+0.9**
SJES	**Sjenica**	**2.13**	**104**	*e*Pn	**Pn**	**23 30 53.7**	**+0.6**
SJES				*e*Sn	**Sb**	**23 31 21.7**	**-1.0**
OZLJ	**Ozalj**	**2.15**	**327**	*e*Pn	**Pb**	**23 30 54.5**	**-1.8**
ZAG	**Zagreb**	**2.17**	**338**	*e*Pn	**Pn**	**23 30 54.4**	**+0.9**
ZAG				*e*Sn	**Sb**	**23 31 22.1**	**-1.5**
IVAS	**Ivanjica**	**2.20**	**95**	*e*Pn	**Pn**	**23 30 54.4**	**+0.4**
DRME	**Dracevica, Mon**	**2.22**	**137**⇓	*i*Pn	**Pb**	**23 30 57.6**	**+0.2**
DRME				*e*Sn	**Sg**	**23 31 28.4**	**0.0**
DRME	**Dracevica, Mon**	**2.22**	**137**	*e*Pn	**Pn**	**23 30 54.4**	**+0.2**
DRME				*e*Sn	**Sn**	**23 31 22.0**	**+0.3**
IVA	**Berane**	**2.22**	**114**⇓	*i*Pn	**Pb**	**23 30 57.5**	**0.0**
IVA				*e*Sn	**Sg**	**23 31 28.0**	**-0.5**
FRGS	**Fruska Gora**	**2.33**	**54**	*e*Pn	**Pn**	**23 30 56.2**	**+0.5**
FRGS				*e*Sn	**Sb**	**23 31 26.9**	**-1.4**
FRGS	**Fruska Gora**	**2.33**	**54**	*e*Pn	**Pn**	**23 30 56.2**	**+0.5**
FRGS				*e*Sn	**Sn**	**23 31 23.5**	**-1.0**
CRES	**Cresnjev**	**2.33**	**330**	*e*Pn	**Pn**	**23 30 56.7**	**+0.9**
CRES				*e*Sn	**Sn**	**23 31 25.9**	**+1.2**
TRUS	**Trudelj**	**2.39**	**79**	*e*Pn	**Pn**	**23 30 57.2**	**+0.7**
TRUS				*e*Sn	**Sb**	**23 31 28.6**	**-1.3**
PVY	**Plav**	**2.40**	**120**⇓	*i*Pn	**Pb**	**23 31 00.0**	**-0.6**
PVY				*e*Sn	**Sg**	**23 31 32.4**	**-1.8**
ULC	**Ulcinj**	**2.42**	**140**⇓	*i*Pn	**Pb**	**23 31 00.2**	**-0.7**
ULC				*e*Sn	**Sg**	**23 31 33.0**	**-1.8**
RIY	**Rijeka**	**2.42**	**309**	*e*Pn	**Pb**	**23 30 59.0**	**-1.9**
RIY				*e*Sn	**Sb**	**23 31 29.8**	**-1.1**
GRUS	**Gruza**	**2.58**	**87**	*e*Pn	**Pn**	**23 31 00.1**	**+0.9**
BEHE	**Becsehely**	**2.66**	**355**	*e*Pn	**Pn**	**23 31 01.4**	**+1.1**
BEHE				*e*Sn	**Sn**	**23 31 33.7**	**+1.0**
BEHE	**Becsehely**	**2.66**	**355**	EPn	**Pn**	**23 31 01.0**	**+0.8**
BEHE				⇓EPg	**Pg**	**23 31 11.1**	**+2.9**
BEHE				Sn	**Sb**	**23 31 36.0**	**-1.8**
CEY	**Cerknica**	**2.72**	**316**	*e*Pn	**Pb**	**23 31 03.4**	**-2.7**
CEY				*e*Sn	**Sn**	**23 31 36.2**	**+2.0**
LJU	**Ljubljana**	**2.90**	**321**	*e*Pn	**Pn**	**23 31 04.1**	**+0.6**
LJU				*e*Sn	**Sn**	**23 31 40.2**	**+1.7**
SELS	**Selova**	**2.95**	**100**	*e*Pn	**Pn**	**23 31 05.2**	**+0.9**
SG1	**Sgolgore (BA)**	**3.00**	**187**	*e*Pn	**Pn**	**23 31 04.7**	**-0.3**
SG1				Sn	**Sn**	**23 31 42.3**	**+1.2**
AQU	**L'Aquila**	**3.11**	**243**	*e*Pn	**Pn**	**23 31 07.7**	**+1.2**
AQU				*e*Sn	**Sn**	**23 31 46.3**	**+2.5**
TIH	**Tihany**	**3.12**	**9**	EPn	**Pn**	**23 31 08.0**	**+1.4**
TIH				Sn	**Sn**	**23 31 44.1**	**+0.1**
SOKA	**Soboth**	**3.22**	**333**	*i* Pn	**Pn**	**23 31 09.1**	**+1.1**
	1.2nm,0.2s					
SOKA			*i* Sn	**Sn**	**23 31 46.5**	**-0.1**
	2.9nm,0.4s					
SOKA	**Soboth**	**3.22**	**333**	*i* Pn	**Pn**	**23 31 09.1**	**+1.1**
	1.2nm,0.2s					
SOKA			*i* Sn	**Sn**	**23 31 46.5**	**-0.1**
	2.9nm,0.4s					
OBKA	**Obir**	**3.25**	**327**	*e*Pn	**Pn**	**23 31 10.1**	**+1.6**
	0.7nm,0.1s					
OBKA			*i* Sn	**Sb**	**23 31 57.3**	**+2.3**
	38nm,0.6s					
OBKA	**Obir**	**3.25**	**327**	*e*Pn	**Pn**	**23 31 10.1**	**+1.6**
	0.7nm,0.1s					
OBKA			*i* Sn	**Sb**	**23 31 57.3**	**+2.3**
	38nm,0.6s					
BOVS	**Bovan**	**3.31**	**92**	*e*Pn	**Pn**	**23 31 10.0**	**+0.8**
KUBS	**Kucevo**	**3.32**	**78**	*e*Pn	**Pn**	**23 31 09.6**	**+0.3**
BARS	**Barje**	**3.56**	**105**	*e*Pn	**Pn**	**23 31 14.0**	**+1.4**
BARS	**Barje**	**3.56**	**105**	*e*Pn	**Pn**	**23 31 14.5**	**+1.9**
ARSA	**Arzberg**	**3.61**	**342**	*i* Pn	**Pn**	**23 31 14.3**	**+0.9**
	3.7nm,0.3s					
ARSA			*i* Sn	**Sn**	**23 31 57.5**	**+1.3**
	4.4nm,0.4s					
ARSA	**Arzberg**	**3.61**	**342**	*i* Pn	**Pn**	**23 31 14.3**	**+0.9**
	3.7nm,0.3s					
ARSA			*i* Sn	**Sn**	**23 31 57.5**	**+1.3**
	4.4nm,0.4s					
CSKK	**Cskako**	**3.63**	**12**	EPn	**Pn**	**23 31 15.0**	**+1.5**
CSKK				ESg	**Sg**	**23 32 15.1**	**+1.4**
BZS	**Buzias**	**3.66**	**59**	*e*Pn	**Pn**	**23 31 14.4**	**+0.4**
BZS			*e*Sn	**Sn**	**23 31 57.8**	**+0.5**
MYKA	**Terra Mystica**	**3.74**	**320**	*e*Pn	**Pb**	**23 31 20.3**	**-3.2**
	0.7nm,0.2s					
MYKA	**Terra Mystica**	**3.74**	**320**	*e*Pn	**Pb**	**23 31 20.3**	**-3.2**
	0.7nm,0.2s					
KRUS	**Krusevo**	**3.90**	**128**	*i* Pn	**Pb**	**23 31 21.7**	**-4.5**
ZAPS	**Zavoj**	**4.03**	**96**	*e*Pn	**Pn**	**23 31 20.1**	**+1.0**
ZAPS			*e*Sn	**Sn**	**23 32 07.9**	**+1.4**
SRO	**Srobarova**	**4.08**	**11**	*e*PN	**Pn**	**23 31 21.2**	**+1.5**
SRO			*e*SN	**Sn**	**23 32 08.7**	**+1.2**
BOSS	**Bosilegrad**	**4.12**	**107**	*e*Pn	**Pn**	**23 31 21.9**	**+1.5**
CONA	**Conrad Observa**	**4.20**	**348**	*i* Pn	**Pn**	**23 31 22.6**	**+1.0**
	3.2nm,0.3s					
CONA			*i* Sn	**Sn**	**23 32 11.0**	**+0.2**
	4.7nm,0.5s					
CONA	**Conrad Observa**	**4.20**	**348**	*i* Pn	**Pn**	**23 31 22.6**	**+1.0**
	3.2nm,0.3s					
CONA			*i* Sn	**Sn**	**23 32 11.0**	**+0.2**
	4.7nm,0.5s					
KBA	**Koelnbreinsper**	**4.21**	**322**	*i* Pn	**Pn**	**23 31 25.1**	**+3.3**
	0.6nm,0.2s					
KBA			*i* Sn	**

NEY	**Neytrino**	**0.76**	**87**	*i* Pg		**Pg**	**23 52 16.3**	**-1.5**
NEY				*e*Sg		**Sg**	**23 52 25.5**	**-2.3**
SHA1	**Shidzhatmaz**	**0.88**	**53**	*i* Pg		**Pg**	**23 52 19.8**	**-0.4**
SHA1				*e*Sg		**Sg**	**23 52 31.6**	**-0.1**
KIV	**Kislovodsk**	**1.04**	**44**	PG		**Pg**	**23 52 22.7**	**-0.4**
KIV				SG		**Sg**	**23 52 36.7**	**+0.1**
KIV0	**Kislovodsk Arr**	**1.04**	**44**	*i* Pg		**Pg**	**23 52 23.0**	**-0.3**
KIV0				*i* Sg		**Sg**	**23 52 36.8**	**0.0**
TKB	**Tkibuli**	**1.29**	**131**	P		**Pn**	**23 52 27.0**	**-0.3**
TKB				S		**Sg**	**23 52 46.3**	**+1.5**
NCK	**Nalchik**	**1.42**	**78**	*e*Pg		**Pg**	**23 52 31.8**	**+1.3**
NCK				*e*Sg		**Sg**	**23 52 50.5**	**+1.6**
DIGR	**Digorskoe uzhe**	**1.43**	**102**	*e*Pg		**Pg**	**23 52 31.4**	**+0.9**
DIGR				*e*Sg		**Sg**	**23 52 50.8**	**+1.7**
ONI	**Oni**	**1.44**	**115**	PN		**Pn**	**23 52 29.6**	**+0.2**
ONI				SN		**Sg**	**23 52 50.3**	**+0.8**
ONI	**Oni**	**1.44**	**115**	P		**Pb**	**23 52 30.1**	**0.0**
ONI				S		**Sg**	**23 52 51.3**	**+1.8**
SOC	**Sochi**	**1.48**	**285**	*i* Pg		**Pg**	**23 52 31.5**	**0.0**
SOC				*e*Sg		**Sg**	**23 52 53.1**	**+2.4**
BATM	**Batumi**	**1.61**	**180**	PN		**Pn**	**23 52 31.3**	**-0.3**
BATM	**Batumi**	**1.61**	**180**	P		**Pn**	**23 52 31.4**	**-0.2**
BATM				S		**Sn**	**23 52 52.6**	**+0.2**
ZEI	**Tsey**	**1.68**	**104**	*e*Pg		**Pg**	**23 52 36.5**	**+1.1**
ZEI				*e*Sg		**Sg**	**23 53 00.1**	**+2.8**
BCA	**Borcka**	**1.77**	**182**	PN		**Pn**	**23 52 33.3**	**-0.5**
DBOC	**Borcka**	**1.87**	**180**	*i* P		**Pn**	**23 52 35.0**	**-0.3**
DBOC				IAML_P				
	comp=Z,2μm,0.1s							
EPOS	**Posof**	**1.88**	**155**	*i* P		**Pn**	**23 52 35.3**	**-0.1**
EPOS				*i* S		**Sg**	**23 53 02.9**	**-0.6**
ARNR	**Ardon**	**1.90**	**90**	*e*Pg		**Pg**	**23 52 40.6**	**+1.0**
ARNR				*e*Sg		**Sg**	**23 53 04.0**	**-0.2**
PRTR	**Priterechnaya**	**1.96**	**73**	*e*Pg		**Pg**	**23 52 40.6**	**-0.2**
PRTR				*e*Sg		**Sb**	**23 53 05.2**	**+1.7**
ARTV	**Artvin**	**2.04**	**175**	*i* P		**Pn**	**23 52 37.2**	**-0.5**
ARTV				*i* S		**Sn**	**23 53 02.7**	**-0.6**
ARTV				IAML_P				
	comp=Z,5μm,0.2s							
DAGI	**Agillar**	**2.14**	**175**	*i* P		**Pn**	**23 52 39.2**	**+0.1**
DAGI				IAML_P				
	comp=Z,557nm,0.2s							
GUDG	**Gudauri**	**2.19**	**109**	P		**Pg**	**23 52 45.1**	**0.0**
DBAD	**Bademkaya**	**2.20**	**180**	*i* P		**Pn**	**23 52 39.5**	**-0.3**
DBAD				IAML_P				
	comp=Z,1μm,0.1s							
AKH	**Akhalkalaki**	**2.25**	**143**	PN		**Pn**	**23 52 41.1**	**+0.5**
AKH	**Akhalkalaki**	**2.25**	**143**	P		**Pb**	**23 52 42.6**	**-1.4**
AKH				S		**Sb**	**23 53 12.2**	**+0.3**
BGD	**Bogdanovka**	**2.41**	**143**	P		**Pn**	**23 52 44.7**	**+1.8**
BGD				S		**Sb**	**23 53 15.9**	**-0.7**
SENK	**Senkaya-Erzuru**	**2.70**	**169**	PN		**Pn**	**23 52 47.2**	**+0.4**
TBLG	**Delisi**	**2.70**	**122**	PN		**Pn**	**23 52 47.5**	**+0.8**
TBLG	**Delisi**	**2.70**	**122**	P		**Pb**	**23 52 49.5**	**-2.1**
TBLG				S		**Sb**	**23 53 23.4**	**-1.4**
KRIK	**Erzurum-spir**	**2.93**	**191**	*i* P		**Pn**	**23 52 50.5**	**+0.5**
BAYT	**Aydintepe-Bayb**	**3.05**	**203**	PN		**Pn**	**23 52 51.2**	**-0.3**
BAYB	**BAYBURT**	**3.14**	**200**	*i* P		**Pn**	**23 52 54.0**	**+1.1**
BAYB				IAML_P				
	comp=Z,157nm,0.3s							
DIKM	**Dikmen**	**5.01**	**254**	PN		**Pn**	**23 53 18.5**	**+0.2**

KRSC 07 00:35:00.5±0.8, 52°.13N×160°.48E, h16km±9km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.01**	**344**	*e*P	Pb	00 35 18.4	-1.2
SPN				*e*S	Sb	00 35 32.3	-0.3
RUS	**Russkaya**	**1.25**	**285**	*e*P	Pn	00 35 23.3	+0.1
RUS				*e*S	Sn	00 35 39.7	0.0
NLC	**Nalytchevo**	**1.25**	**327**	*e*P	Pn	00 35 23.1	-0.2
DALK	**Dalny**	**1.39**	**311**	*e*P	Pn	00 35 25.2	0.0
DALK				*e*S	Sb	00 35 43.7	+0.2
PET	**Petropavlovsk**	**1.43**	**309**	*e*P	Pn	00 35 25.8	0.0
PET				*e*S	Sb	00 35 44.7	0.0
MTVR	**Mutnovka**	**1.45**	**285**	*e*P	Pn	00 35 26.6	+0.3
MTVR				*e*S	Sb	00 35 46.2	+0.6
UGLR	**Uglovaya**	**1.48**	**318**	*e*P	Pb	00 35 27.2	-0.5
SDLR	**Sedlovina**	**1.50**	**320**	*e*P	Pn	00 35 27.0	+0.1
KDTR	**Khodutka, Kamc**	**1.52**	**259**	*e*P	Pn	00 35 27.1	+0.1
KDTR				*e*S	Sb	00 35 47.0	-0.3
SMAR	**Somma**	**1.53**	**319**	*e*P	Pn	00 35 27.4	+0.1
AVH	**Avacha**	**1.55**	**318**	*e*P	Pb	00 35 28.3	-0.6
KRER	**Koryakskii**	**1.58**	**319**	*e*P	Pn	00 35 28.6	+0.6
KRMR	**Karymshinskiy**	**1.60**	**297**	*e*P	Pn	00 35 28.3	+0.2
KRMR				*e*S	Sb	00 35 49.1	-0.5
ASAK	**Asacha**	**1.61**	**280**	*e*P	Pb	00 35 29.3	-0.5
ASAK				*e*S	Sb	00 35 50.9	+1.0
KOK	**Koryaka**	**1.62**	**317**	*e*P	Pb	00 35 29.3	-0.7
KRX	**Arik**	**1.66**	**319**	*e*P	Pn	00 35 29.5	+0.4
APC	**Apacha**	**2.18**	**293**	*e*P	Pb	00 35 38.1	-1.4
GNL	**Ganaly**	**2.19**	**317**	*e*P	Pn	00 35 37.4	+1.0
PAU	**Pauzhetka**	**2.37**	**255**	*e*P	Pn	00 35 40.6	+1.9
KZV	**Kizimen**	**2.99**	**358**	*e*P	Pb	00 35 50.5	-2.9
TUMD	**Tumrok D**	**3.08**	**359**	*e*P	Pn	00 35 51.1	+2.6
TUMR	**Tumrok**	**3.16**	**357**	*e*P	Pn	00 35 52.4	+2.7
BDR	**Baidarnaya**	**4.47**	**5**	*e*P	Pn	00 36 12.6	+5.0

SVSA 07 00:38:36.8±1.2, 37°.53N×24°.91W, h1km±13km, MD3.7, ML1.9, 1C, Error ellipse: s-maj=19.5km s-min=3.5km az=72.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	**0.32**	**320**	⇑*i* P	Pg	00 38 42.7	-0.2
BART				*e*S	Sg	00 38 47.3	+0.2
BART				A	A	00 38 49.0	
	82nm,0.2s						
PSMN	**Pico do Norte,**	**0.55**	**193**	*e*P	Pg	00 38 46.4	-0.8
PSMN				*e*S	Sg	00 38 54.3	0.0
PSMN				A	A	00 38 56.9	
	5.6nm,0.1s						
GRON	**Grota Negra**	**0.55**	**295**	*e*P	Pg	00 38 45.5	-1.8
GRON				*e*S	Sg	00 38 50.9	-3.5
GRON				A	A	00 38 52.5	
	37nm,0.2s						
PSMA	**Santa Maria**	**0.57**	**198**	*e*P	Pg	00 38 46.7	-0.9
PSMA				*e*S	Sg	00 38 53.9	-1.1
PSMA				A	A	00 38 55.0	
	37nm,0.1s						
PDA	**Ponta Delgada**	**0.64**	**290**	*e*P	Pg	00 38 47.6	-1.4
PDA				*e*S	Sg	00 38 56.2	-1.0
PDA				A	A	00 38 57.5	
	15nm,0.1s						
PSET	**Sete Cidades**	**0.71**	**294**	*e*P	Pg	00 38 48.8	-1.6
PSET				*e*S	Sg	00 38 58.1	-1.4
PSET				A	A	00 38 59.7	
	28nm,0.8s						

MEX 07 00:44:18.1±0.6, 17°.58N×101°.12W, h47km±8km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.33**	**275**	*i* P	Pn	00 44 25.5	-1.7
ZIIG				*e*S	Sn	00 44 32.3	-1.4
CAIG	**El Cayaco**	**0.97**	**123**	*e*P	Pn	00 44 33.3	-2.0
CAIG				*e*S	Sn	00 44 45.7	-2.3
ARIG	**Puente Sto Nin**	**1.01**	**46**	*e*P	Pn	00 44 33.9	-2.1
ARIG				*e*S	Sn	00 44 46.9	-2.3
MEIG	**Mezcala**	**1.47**	**76**	*i* P	Pn	00 44 40.8	-1.5
MEIG				*e*S	Sn	00 44 58.8	-1.9
PLIG	**Platanillo**	**1.74**	**62**	*e*P	Pn	00 44 43.8	-2.1
PLIG				*i* S	Sn	00 45 05.5	-1.5
MMIG	**Aquila**	**2.23**	**289**	*e*P	Pn	00 44 51.4	-1.3
MMIG				*e*S	Sn	00 45 17.1	-2.0
TLIG	**Tlapa**	**2.44**	**90**	*e*P	Pn	00 44 54.9	-0.6
TLIG				*e*S	Sn	00 45 22.7	-1.5

PAS ***07*** *00:48:46.0±0.0, 32°.22N×115°.28W, h8km*
ISCJB ***07*** *00:48:46.7±0.3, 32°.28N±0°.02×115°.32W±0°.02, h19km±3km, Error ellipse: s-maj=3.5km s-min=3.3km az=13.7*
ANF ***07*** *00:48:46.5±0.5, 32°.31N×115°.32W, h23km±3km, ML3.2/12, Error ellipse: s-maj=4.1km s-min=2.2km az=1.0*
SCEDC ***07*** *00:48:46.2, 32°.23N×115°.32W, h3km*
MEX ***07*** *00:48:47.0±0.6, 32°.43N×115°.09W, h35km±5km, MD3.8*
ECX ***07*** *00:48:47.3±0.6, 32°.26N×115°.32W, h4km, MD3.4, ML3.5*
NEIC ***07*** *00:48:47.3±0.0, 32°.26N×115°.32W, h4km, MD3.6(ECX), MD3.8(MEX), ML3.6(PAS), After ECX.*

ISC 07 00:48:46.1±0.9, 32°.24N±0°.03×115°.33W±0°.02, h16km±6km, n57, σ1§30/76, 13C-8D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.17**	**6**	⇓*e*P	**Pg**	**00 48 50.2**	**-0.3**
CPBX				*e*S	**Sg**	**00 48 53.3**	**-0.1**
CPBX				IAML		00 48 55.0	
	comp=E,51μm,0.2s						
CPBX				⇑*e*		00 48 55.0	
CPBX				⇓*e*		00 48 58.9	
CPBX				IAML		00 48 58.9	
	comp=N,43μm,0.4s						
MBIG	**Mexicali**	**0.20**	**34**	*e*Pg	**Pg**	**00 48 51.0**	**+0.3**
MBIG				*e*Sg	**Sb**	**00 48 55.5**	**+0.7**
MBIG	**Mexicali**	**0.20**	**34**	*e*P	**Pg**	**00 48 51.0**	**+0.3**
MBIG				*i* S	**Sb**	**00 48 55.5**	**+0.7**
UABX	**UABC, Campus M**	**0.40**	**346**	⇓*e*P	**Pg**	**00 48 54.0**	**-0.3**
WESC	**Westside Schoo**	**0.62**	**326**	⇑*i*P	**Pg**	**00 48 58.6**	**+0.4**
RMX	**La Rumorosa**	**0.73**	**300**	⇑*e*P	**Pg**	**00 48 59.2**	**-1.2**
RMX				*e*S	**Sg**	**00 49 08.2**	**-1.8**
RMX				⇑*e*		00 49 10.4	
RMX				IAML		00 49 10.4	
	comp=N,2μm,0.7s						
IKP	**In-Ko-Pah, Jac**	**0.78**	**302**	P	**Pg**	**00 49 01.1**	**-0.2**
	baz=122,SNR=285						
IKP				S	**Sg**	**00 49 10.7**	**-0.8**
	baz=122						
IKP	**In-Ko-Pah, Jac**	**0.78**	**302**	⇑*e*P	**Pg**	**00 49 01.0**	**-0.2**
ECBX	**El Chinero**	**0.80**	**163**	⇓*e*P	**Pn**	**00 49 02.1**	**-0.7**
ECBX				*e*S	**Sn**	**00 49 13.5**	**-0.9**
SWSC	**Sam W. Stewart**	**0.81**	**330**	P	**Pg**	**00 49 01.0**	**-0.8**
	baz=150,SNR=53						
SWSC				S	**Sg**	**00 49 11.2**	**-1.2**
	baz=150						
CRR	**Carrizo Plain**	**0.84**	**320**	*e*P	**Pg**	**00 49 01.8**	**-0.6**
GLA	**Glamis**	**0.91**	**28**	*e*Pg	**Pg**	**00 49 02.5**	**-1.3**
GLA	**Glamis**	**0.91**	**28**	P	**Pg**	**00 49 02.4**	**-1.3**
	baz=207,SNR=108						
GLA				S	**Sg**	**00 49 14.4**	**-1.3**
	baz=207						
GLA	**Glamis**	**0.91**	**28**	⇑*e*P	**Pg**	**00 49 02.5**	**-1.3**
ZAX	**El Zacaton**	**1.08**	**228**	⇓*e*P	**Pn**	**00 49 06.8**	**0.0**
MONP2	**Monument Peak**	**1.13**	**305**	P	**Pg**	**00 49 06.6**	**-1.4**
	baz=125,SNR=140						
MONP2				S	**Sg**	**00 49 21.4**	**-1.3**
	baz=125						
MONP2	**Monument Peak**	**1.13**	**305**	*i* P	**Pg**	**00 49 06.7**	**-1.2**
CBX	**Cerro Bola**	**1.13**	**274**	*e*Pg	**Pb**	**00 49 07.6**	**+0.2**
CBX				*e*Sg	**Sb**	**00 49 22.7**	**+0.7**
CBX	**Cerro Bola**	**1.13**	**274**	*e*P	**Pb**	**00 49 07.6**	**+0.2**
CBX				*i* S	**Sb**	**00 49 22.7**	**+0.7**
CBX	**Cerro Bola**	**1.13**	**274**	⇑*e*P	**Pb**	**00 49 07.6**	**+0.2**
CBX				⇓*e*		00 49 28.8	
CBX				IAML		00 49 28.8	
	comp=N,1μm,0.4s						
TJIG	**Tijuana**	**1.16**	**280**	*e*P	**Pb**	**00 49 07.7**	**0.0**
TJIG				*e*S	**Sb**	**00 49 22.9**	**+0.3**
TJIG	**Tijuana**	**1.16**	**280**	⇑*e*P	**Pb**	**00 49 07.8**	**0.0**
SPIG	**San Pedro Mart**	**1.20**	**186**	*e*Pn	**Pn**	**00 49 08.8**	**+0.2**
SPIG				*e*Sg	**Sn**	**00 49 26.4**	**+1.7**
SPIG	**San Pedro Mart**	**1.20**	**186**	*e*P	**Pn**	**00 49 08.8**	**+0.2**
SPIG				*i* S	**Sn**	**00 49 26.4**	**+1.7**
SPIG	**San Pedro Mart**	**1.20**	**186**	⇓*e*P	**Pn**	**00 49 08.8**	**+0.2**
SPX	**San Pedro Mart**	**1.20**	**186**	*e*P	**Pn**	**00 49 08.6**	**0.0**
SPX				*e*S	**Sn**	**00 49 24.9**	**+0.2**
SPX	**San Pedro Mart**	**1.20**	**186**	⇓*e*P	**Pn**	**00 49 08.8**	**+0.2**
BAR	**Barrett**	**1.22**	**291**	*e*Pg	**Pg**	**00 49 08.3**	**-1.3**
BAR	**Barrett**	**1.22**	**291**	⇑*e*P	**Pg**	**00 49 08.3**	**-1.3**
ECNX	**Esteban Cantu**	**1.23**	**242**	⇓*e*P	**Pn**	**00 49 09.0**	**+0.2**
PBX	**Punta Banda**	**1.29**	**248**	⇑*e*P	**Pn**	**00 49 09.8**	**+0.3**
BC3	**Big Chuckawall**	**1.41**	**356**	P	**Pn**	**00 49 10.0**	**-1.3**
	baz=176,SNR=35						
BC3				S	**Sb**	**00 49 27.9**	**-2.2**
	baz=176						
113A	**Mohawk Valley,**	**1.42**	**68**	*e*Pn	**Pn**	**00 49 10.6**	**-0.7**
EML	**El Monte Cty P**	**1.44**	**297**	⇑*e*P	**Pn**	**00 49 12.3**	**+0.8**
SDRC	**San Diego Road**	**1.45**	**290**	⇑*e*P	**Pn**	**00 49 11.6**	**-0.1**
109C	**Camp Elliot, M**	**1.63**	**294**	P	**Pn**	**00 49 14.2**	**-0.1**
	baz=113,SNR=43						
109C				Sb	**Sn**	**00 49 36.9**	**+1.9**
	baz=113						
CPE	**Camp Elliot**	**1.63**	**294**	*e*Pn	**Pn**	**00 49 14.3**	**+0.1**
Y12C	**Blythe**	**1.65**	**24**	*e*Pn	**Pn**	**00 49 16.3**	**+1.9**
Y12C	**Blythe**	**1.65**	**24**	P	**Pn**	**00 49 13.4**	**-1.0**
	baz=204						
Y12C				S	**Sn**	**00 49 33.7**	**-1.6**
	baz=204						
PFO	**Pinyon Flats O**	**1.66**	**325**	*e*Pn	**Pn**	**00 49 13.7**	**-1.1**
PFO	**Pinyon Flats O**	**1.66**	**325**	P	**Pn**	**00 49 13.6**	**-1.1**
	baz=145,SNR=16						
PFO				S	**Sn**	**00 49 34.1**	**-1.8**
	baz=145						
IRM	**Iron Mountain**	**1.92**	**5**	S	**Sn**	**00 49 40.4**	**-1.5**
	baz=184						
MURC	**Murrieta**	**2.07**	**311**	Sb	**Sb**	**00 49 50.5**	**+1.5**
	baz=131						
214A	**Organ Pipe Nat**	**2.15**	**97**	P	**Pn**	**00 49 20.5**	**-0.9**
	baz=278						
Y14A	**Wickenburg**	**2.58**	**48**	*e*Pn	**Pn**	**00 49 28.7**	**+1.4**
LDFC	**Landfair**	**2.83**	**4**	*e*Pn	**Pn**	**00 49 33.2**	**+2.3**
CIS	**Catalina Islan**	**2.84**	**295**	Sb	**Sb**	**00 50 12.4**	**+1.3**
	baz=114						
MWC	**Mount Wilson**	**3.02**	**312**	*e*Pn	**Pn**	**00 49 36.1**	**+2.6**
W13A	**Hualapai Mount**	**3.09**	**22**	*e*Pn	**Pn**	**00 49 36.6**	**+2.1**
GSC	**Goldstone, Bar**	**3.29**	**338**	*e*Pn	**Pn**	**00 49 39.3**	**+2.2**
X16A	**Lo Mia Camp, P**	**3.91**	**55**	*e*Pn	**Pn**	**00 49 46.8**	**+1.1**
SHPR	**Sheep Range**	**4.25**	**2**	*e*Pn	**Pn**	**00 49 52.9**	**+2.5**
WUAZ	**Wupatki**	**4.63**	**44**	*e*Pn	**Pn**	**00 49 57.8**	**+2.2**
U15A	**North Rim**	**4.87**	**30**	*e*Pn	**Pn**	**00 50 01.1**	**+2.0**
CCUT	**Cedar City**	**5.54**	**16**	*e*Pn	**Pn**	**00 50 10.5**	**+2.4**
SZCU	**Shurtz Canyon**	**5.65**	**18**	*e*Pn	**Pn**	**00 50 11.6**	**+2.0**
MTPU	**Mount Pierson**	**6.33**	**23**	*e*Pn	**Pn**	**00 50 22.2**	**+3.0**

WEL 07 00:52:24.0±1.2, 45°.S±4°×16°.7E±°, h5km, M3.4/8, ML3.5/6, MLv3.4/8, Error ellipse: s-maj=0.0km s-min=0.0km az=106.1, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.38**	**154**	P	Pg	00 52 31.9	+0.5
DCZ				S	Sb	00 52 38.1	-1.5
MSZ	**Milford Sound**	**0.84**	**59**	P	Pg	00 52 39.5	-0.7
MSZ				S	Sg	00 52 51.5	+0.3
MLZ	**Mavora Lakes**	**0.89**	**107**	P	Pg	00 52 41.1	+0.2
MLZ				S	Sb	00 52 53.8	-0.2
WHZ	**Wether Hill Ro**	**1.06**	**137**	P	Pg	00 52 43.4	-1.0
WHZ				S	Sb	00 52 58.7	-0.4
WKZ	**Wanaka**	**1.52**	**80**	P	Pn	00 52 52.2	+0.3
WKZ				S	Sn	00 53 12.0	-0.1
EAZ	**Earnscleugh**	**1.70**	**95**	P	Pn	00 52 54.9	+0.6
EAZ				S	Sn	00 53 16.5	+0.1
JCZ	**Jackson Bay**	**1.70**	**53**	P	Pn	00 52 54.1	-0.2
JCZ				S	Sn	00 53 16.8	+0.3
APZ	**The Paps**	**1.87**	**157**	P	Pn	00 52 56.6	-0.1
APZ				S	Sn	00 53 20.7	0.0
TUZ	**Tuapeka**	**2.08**	**115**	P	Pn	00 52 59.3	-0.2
TUZ				S	Sn	00 53 26.5	+0.6
SYZ	**Scrubby Hill**	**2.10**	**133**	P	Pn	00 52 59.1	-0.7
SYZ				S	Sn	00 53 25.3	-1.1
LBZ	**Lake Benmore**	**2.44**	**74**	P	Pn	00 53 04.1	-0.4
LBZ				S	Sn	00 53 34.1	-0.6
ODZ	**Otahua Downs**	**2.64**	**90**	P	Pn	00 53 06.5	-0.7
ODZ				S	Sn	00 53 38.6	-1.1
HHSZ	**Highcliff Hill**	**2.70**	**108**	S	Pn	00 53 07.6	-0.5
RPZ	**Rata Peaks**	**3.28**	**66**	P	Pn	00 53 15.4	-0.7
WVZ	**Waitaha Valley**	**3.43**	**55**	P	Pn	00 53 16.2	-1.9
INZ	**Inchbonnie**	**4.05**	**55**	P	Pn	00 53 24.6	-2.1
OXZ	**Oxford**	**4.09**	**66**	P	Pn	00 53 26.7	-0.6
MQZ	**McQueen's Vall**	**4.35**	**73**	P	Pn	00 53 29.2	-1.5
LTZ	**Lake Taylor**	**4.52**	**61**	P	Pn	00 53 33.3	+0.2
GVZ	**Greta Valley S**	**4.91**	**66**	P	Pn	00 53 37.6	-0.9
THZ	**Tophouse**	**5.50**	**55**	P	Pn	00 53 46.1	-0.5
QRZ	**Quartz Range**	**5.95**	**46**	P	Pn	00 53 49.0	-3.7
DUWZ	**D'Urville Isla**	**6.71**	**52**	P	Pn	00 54 01.6	-1.6

IDC ***07*** *00:52:48.5±2.8, 44°.60N×105°.68W, h0km, mb1 3.2/2, mb1mx3.1/30, mbtmp2.8/2, ML3.3/2, Error ellipse: s-maj=47.6km s-min=17.8km az=132.0*
NEIC ***07*** *00:52:53.6±1.1, 44°.22N×105°.31W, h0km, ML2.9, Error ellipse: s-maj=17.3km s-min=9.1km az=10.0, Suspected Mining explosion.*
NEIC 18 km [11 miles] ESE of Gillette.

ISC 07 00:52:49.0±1.2, 44°.45N±0°.08×105°.58W±0°.05, h0km, n14, σ1§41/14, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.16**	**106**	*e*Pg	**Pg**	**00 53 11.2**	**-0.1**
K22A	**Casper**	**1.92**	**201**	*e*Pn	**Pg**	**00 53 25.8**	**-0.1**
RWWY	**Rawlins**	**3.00**	**204**	*e*Pn	**Pb**	**00 53 41.6**	**-1.9**
PHWY	**Pilot Hill**	**3.15**	**178**	*e*Pn	**Pn**	**00 53 41.5**	**+1.4**
BW06	**Boulder Array**	**3.34**	**241**	*e*Pn	**Pb**	**00 53 47.9**	**-1.4**
PD31	**Pinedale Array**	**3.34**	**241**	*e*Pn	**Pb**	**00 53 50.1**	**+0.9**
PDAR	**Pinedale Array**	**3.34**	**241**	Pn	**Pn**	**00 53 45.1**	**+2.4**
	1.4nm,0.3s,baz=55,slow=16,SNR=21						
PDAR				Pg	**Pg**	**00 53 52.4**	**-0.7**
	2.6nm,0.3s,baz=63,slow=18,SNR=42						
PDAR				Lg	Lg	00 54 33.8	
	3.3nm,0.3s,baz=57,slow=34,SNR=13						
N23A	**Red Feather La**	**3.56**	**184**	*e*Pn	**Pn**	**00 53 47.3**	**+1.5**
LOHW	**Long Hollow**	**3.71**	**259**	*e*Pn	**Pb**	**00 53 54.5**	**-1.1**
YPP	**Pitchstone Pla**	**3.75**	**269**	*e*Pn	**Pb**	**00 53 55.5**	**-0.7**
MOOW	**Moose Ponds**	**3.78**	**261**	*e*Pn	**Pb**	**00 53 56.1**	**-0.7**
SNOW	**Snow King Moun**	**3.86**	**257**	*e*Pn	**Pb**	**00 53 57.0**	**-1.2**
I56US	**NEWPORT INFRAS**	**8.85**	**300**	*i*		01 42 00.0	
	baz=113,slow=313,SNR=2.1						
YKA	**Yellowknife Ar**	**18.82**	**347**	P	**P**	**00 57 09.0**	**-1.0**
	0.0nm,0.3s,baz=158,slow=13,SNR=3.0						

SJA 07 01:04:42.3±0.8, 31°.70S×69°.73W, h115km±5km, ML2.8, MW3.5, 4D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**0.60**	**151**	*i* P	Pn	01 05 01.6	+0.8
AUSP				*i* S	Sn	01 05 16.1	+1.5
RTCV	**Cerro Valdivia**	**1.03**	**99**	*i* P	Pn	01 05 05.0	+0.8
RTCV				*i* S	Sn	01 05 21.9	+1.1
RTLL	**Cerro Villicun**	**1.14**	**71**	*i* P	Pn	01 05 05.6	+0.2
RTLL				IAML		01 05 25.1	
	comp=N,295nm,0.4s						
ASAL	**Salagasta**	**1.17**	**140**	*i* P	Pn	01 05 07.0	+1.2
ASAL				⇓*i* S	Sn	01 05 24.6	+1.1
ACCO	**Cerro Coronel**	**1.25**	**27**	*i* P	Pn	01 05 08.1	+1.2
ACCO				*i* S	Sn	01 05 27.3	+1.8
AMOG	**MOGNA**	**1.30**	**55**	*i* P	Pn	01 05 08.2	+1.0
AMOG				*e*S	Sn	01 05 27.4	+1.2
ARCO	**CERRO ARCO**	**1.32**	**149**	*i* P	Pn	01 05 09.0	+1.5
ARCO				*i* S	Sn	01 05 27.6	+0.9
ARCO				IAML		01 05 30.0	
	comp=Z,131nm,0.2s						
AROD	**Rodeo**	**1.55**	**8**	*i* P	Pn	01 05 12.2	+1.9
AROD				⇓*e*S	Sn	01 05 33.6	+2.1
AAGR	**Agrelo**	**1.58**	**151**	*e*P	Pn	01 05 11.9	+1.5
AAGR				*e*S	Sn	01 05 36.4	+4.5
ACDV	**Cuesta del Vie**	**1.61**	**19**	*i* P	Pn	01 05 12.8	+1.8
ACDV				*e*S	Sn	01 05 34.7	+2.0
ROC1	**El Roble**	**1.67**	**220**	*i* P	Pn	01 05 12.3	+0.6
ROC1				*e*S	Sn	01 05 33.6	-0.5
ACAN	**Cantantal**	**2.23**	**105**	*e*P	Pn	01 05 19.3	+0.8
ACAN				⇓*e*S	Sn	01 05 45.8	-0.5
APLL	**PUNTA DE LOS L**	**3.04**	**65**	*i* P	Pn	01 05 29.9	+0.8
APLL				IAML		01 06 07.0	
	comp=Z,20nm,0.7s						
VCA	**Vinchina**	**3.24**	**24**	*e*P	Pn	01 05 33.5	+1.7
VCA				IAML		01 06 19.3	
	comp=Z,14nm,0.3s						
ACLC	**CERRO LA CRUZ**	**3.30**	**47**	⇓*e*P	Pn	01 05 33.5	+0.9

IDC ***07*** *01:29:11.3±1.3, 11°.53S×162°.51E, h0km, mb4.0/5, mb1 4.3/7, mb

*MDD **07** 01:43:50.5±0.7, 36°.81N×7°.31W, h41km±14km, mb3.9/2, Error ellipse: s-maj=5.9km s-min=3.0km az=3.0, PRXIMO*
*SFS **07** 01:43:51.0, 36°.84N×7°.33W, h46km, ML3.4, GOLFO DE CADIZ*
*INMG **07** 01:43:51.6±1.2, 36°.79N×7°.36W, h24km±3km, ML1.4, Error ellipse: s-maj=3.8km s-min=2.3km az=33.0*
*IGIL **07** 01:43:52.1, 36°.80N×7°.39W, h25km, ML1.3*
ISC 07 01:43:49.7±1.3, 36°.75N±0°.06×7°.30W±0°.03, h31km±11km, n36, σ1°.06/66, 2C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.70**	**315**	*e*Pg	**Pb**	**01 44 03.9**	**+0.4**
PBDV				*e*Sg	**Sb**	**01 44 12.3**	**-0.7**
PBDV				A	A	01 44 13.1	
	7.6nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.70**	**315**	P	**Pb**	**01 44 03.9**	**+0.4**
PBDV				S	**Sb**	**01 44 12.3**	**-0.7**
	7.6nm,0.2s						
PVAQ	**Vaqueiros**	**0.73**	**333**	⇓*e*Pg	**Pb**	**01 44 04.2**	**+0.2**
PVAQ				*e*Sg	**Sb**	**01 44 12.9**	**-0.8**
PVAQ				A	A	01 44 13.5	
	14nm,0.4s						
PVAQ	**Vaqueiros**	**0.73**	**333**	P	**Pb**	**01 44 04.2**	**+0.2**
PVAQ				S	**Sb**	**01 44 12.9**	**-0.8**
	14nm,0.4s						
EGRO	**El Granado**	**0.80**	**350**	⇓P	**Pb**	**01 44 05.2**	**+0.1**
	2.3nm,0.0s,SNR=18						
EGRO				S	**Sn**	**01 44 14.4**	**-1.2**
	7.1nm,0.1s,SNR=10						
PCVE	**Castro Verde**	**1.06**	**326**	*e*P	**Pn**	**01 44 08.9**	**+0.5**
PCVE				*e*S	**Sn**	**01 44 21.7**	**-0.4**
PCVE				A	A	01 44 24.8	
	2.6nm,0.3s						
PCVE	**Castro Verde**	**1.06**	**326**	P	**Pn**	**01 44 08.9**	**+0.5**
PCVE				S	**Sn**	**01 44 21.7**	**-0.4**
	2.6nm,0.3s						
EMIN	**Mina Concepcio**	**1.13**	**26**	P	**Pn**	**01 44 10.2**	**+0.8**
	0.4nm,0.1s,SNR=5.6						
EMIN				S	**Sn**	**01 44 22.6**	**-1.3**
	1.5nm,0.1s,SNR=12						
ESPR	**Espera**	**1.17**	**84**	⇑P	**Pb**	**01 44 11.6**	**+0.3**
	4.7nm,0.1s,SNR=18						
ESPR				S	**Sn**	**01 44 25.4**	**+0.6**
	0.5nm,0.0s,SNR=7.9						
MORF	**Marmelete**	**1.21**	**298**	*e*P	**Pn**	**01 44 10.9**	**+0.3**
MORF				*e*S	**Sn**	**01 44 24.7**	**-1.3**
MORF				AML	AML	01 44 25.9	
	comp=N,5.3nm,0.1s						
MORF	**Marmelete**	**1.21**	**298**	*e*P	**Pn**	**01 44 10.9**	**+0.3**
MORF				*e*S	**Sn**	**01 44 25.0**	**-1.0**
MORF				A	A	01 44 25.9	
	comp=N,3.4nm,0.1s						
MORF	**Marmelete**	**1.21**	**298**	P	**Pn**	**01 44 10.9**	**+0.3**
MORF				S	**Sn**	**01 44 25.0**	**-1.0**
	comp=N,3.4nm,0.1s						
PFVI	**Vila Bisbo**	**1.28**	**288**	*e*P	**Pn**	**01 44 12.0**	**+0.6**
PFVI				*e*S	**Sn**	**01 44 26.4**	**-1.1**
PFVI				A	A	01 44 28.6	
	comp=N,4.6nm,0.7s						
PFVI	**Vila Bisbo**	**1.28**	**288**	P	**Pn**	**01 44 11.8**	**+0.4**
	SNR=7.9						
PFVI				S	**Sn**	**01 44 26.4**	**-1.1**
	comp=N,3.4nm,0.1s,SNR=6.0						
MESJ	**Messejana**	**1.31**	**326**	*e*P	**Pn**	**01 44 12.3**	**+0.4**
MESJ				*e*S	**Sn**	**01 44 26.9**	**-1.4**
MESJ				AML	AML	01 44 29.0	
	comp=E,3.5nm,0.1s						
MESJ	**Messejana**	**1.31**	**326**	*e*P	**Pn**	**01 44 12.4**	**+0.5**
MESJ				*e*S	**Sn**	**01 44 27.3**	**-1.0**
MESJ				A	A	01 44 35.1	
	comp=E,2.2nm,0.5s						
MESJ	**Messejana**	**1.31**	**326**	P	**Pn**	**01 44 12.4**	**+0.5**
MESJ				S	**Sn**	**01 44 27.3**	**-1.0**
	comp=E,2.2nm,0.5s						
PTEO	**Sao Teotonio**	**1.39**	**305**	*e*S	**Sn**	**01 44 29.2**	**-0.9**
PTEO	**Sao Teotonio**	**1.39**	**305**	S	**Sn**	**01 44 29.2**	**-0.9**
PNCL	**Nicolau / Gran**	**1.67**	**325**	*e*P	**Pn**	**01 44 17.4**	**+0.6**
PNCL				*e*S	**Sn**	**01 44 35.9**	**-1.3**
PNCL				A	A	01 44 46.1	
	comp=E,2.3nm,0.5s						
PNCL	**Nicolau / Gran**	**1.67**	**325**	P	**Pn**	**01 44 17.4**	**+0.6**
PNCL				S	**Sn**	**01 44 35.9**	**-1.3**
	comp=E,2.3nm,0.5s						
EVO	**Evora**	**1.86**	**343**	⇓*e*Pn	**Pn**	**01 44 20.0**	**+0.5**
EVO	**Evora**	**1.86**	**343**	P	**Pn**	**01 44 20.0**	**+0.5**
EVO				S	**Sn**	**01 44 42.9**	**+0.9**
EVO	**Evora**	**1.86**	**343**	*e*P	**Pb**	**01 44 26.5**	**+3.4**
EVO				*e*S	**Sn**	**01 44 42.9**	**+0.9**
ECAB	**El Cabril**	**2.00**	**48**	P	**Pn**	**01 44 22.0**	**+0.6**
	comp=E,0.1nm,0.1s,SNR=7.8						
ECAB				S	**Sn**	**01 44 43.6**	**-1.8**
	comp=E,0.4nm,0.3s,SNR=7.7						
EBAD	**Badajoz**	**2.02**	**6**	P	**Pn**	**01 44 21.8**	**+0.3**
	comp=E,0.4nm,0.1s,SNR=4.7						
EBAD				S	**Sn**	**01 44 44.6**	**-1.1**
	comp=E,1.5nm,0.4s,SNR=7.9						
PMTG	**Montargil**	**2.43**	**343**	*e*Pn	**Pn**	**01 44 27.6**	**+0.4**
PMTG				*e*Sn	**Sn**	**01 44 56.2**	**+0.4**
PMTG				A	A	01 44 58.3	
	comp=E,1.2nm,0.8s						
PMTG	**Montargil**	**2.43**	**343**	P	**Pn**	**01 44 27.6**	**+0.4**
PMTG				S	**Sn**	**01 44 56.2**	**+0.4**
	comp=E,1.2nm,0.8s						
PMRV	**Marv??o**	**2.67**	**359**	*e*Pn	**Pn**	**01 44 31.1**	**+0.5**
PMRV				*e*Sn	**Sn**	**01 45 01.3**	**-0.7**
PMRV	**Marv??o**	**2.67**	**359**	P	**Pn**	**01 44 31.1**	**+0.5**
PMRV				S	**Sn**	**01 45 01.3**	**-0.7**
PCBR	**Castelo Branco**	**3.09**	**358**	⇑*e*Pn	**Pn**	**01 44 36.8**	**+0.5**
PCBR	**Castelo Branco**	**3.09**	**358**	P	**Pn**	**01 44 36.8**	**+0.5**
EQES	**Quesada**	**3.54**	**71**	P	**Pn**	**01 44 43.7**	**+1.1**
	comp=E,0.1nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**01 45 22.8**	**-0.6**
	comp=E,0.1nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**3.63**	**39**	S	**Sn**	**01 45 21.6**	**-4.2**
	comp=E,0.3nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**4.03**	**69**	P	**Pn**	**01 44 50.4**	**+1.1**
	comp=E,0.1nm,0.2s,SNR=4.0						
SESP				S	**Sn**	**01 45 34.4**	**-1.1**
	comp=E,0.1nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.94**	**66**	P	**Pn**	**01 45 01.9**	**0.0**
	SNR=7.9						
ETOB				S	**Sn**	**01 45 56.8**	**-1.1**
	SNR=7.9						

*IDC **07** 02:24:38.1±1.2, 13°.48N×88°.16W, h0km, mb3.8/7, mb1 4.1/10, mb1mx3.8/37, mbtmp3.9/10, ML3.3/3, Error ellipse: s-maj=58.0km s-min=15.3km az=45.0*
*ISCJB **07** 02:24:42.3±0.6, 12°.75N±0°.06×88°.80W±0°.04, h66km±4km, mb4.1/27, Error ellipse: s-maj=12.2km s-min=3.4km az=29.7*
*UCR **07** 02:24:42.4±1.5, 12°.73N×88°.82W, h43km±69km, ML4.1, mb4.2(NEIC)*
*SNET **07** 02:24:43.0±0.7, 12°.79N×88°.84W, h32km±3km, ML4.2*
*NEIC **07** 02:24:45.2±1.6, 12°.89N×88°.64W, h72km±10km, mb4.2/26, MD4.2(SNET), Error ellipse: s-maj=16.2km s-min=2.3km az=218.0*
NEIC Felt [II] at San Vicente.
ISC 07 02:24:43.6±1.1, 12°.80N±0°.07×88°.78W±0°.05, h62km±9km, n100, σ1°.07/117, mb4.2/27, 11C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UESV	**Ojushtada**	**0.58**	**359**	*e*P	**Pn**	**02 24 59.1**	**+2.5**
UESV	**Ojushtada**	**0.58**	**359**	*e*P	**Pn**	**02 24 59.1**	**+2.5**
TECA	**Tecapa**	**0.74**	**22**	⇑*i*P	**Pn**	**02 24 58.1**	**-0.6**
TECA	**Tecapa**	**0.74**	**22**	⇑*i*P	**Pn**	**02 24 58.1**	**-0.6**
LCY	**Lacayo**	**0.78**	**38**	*e*P	**Pn**	**02 24 58.6**	**-0.5**
LCY	**Lacayo**	**0.78**	**38**	*e*P	**Pn**	**02 24 58.6**	**-0.5**
VSM	**San Miguel**	**0.80**	**39**	*e*P	**Pn**	**02 24 59.2**	**-0.3**
PACA	**Pacayal**	**0.80**	**34**	⇑*e*P	**Pn**	**02 24 58.9**	**-0.5**
PACA	**Pacayal**	**0.80**	**34**	⇑*e*P	**Pn**	**02 24 58.9**	**-0.5**
SNVI	**San Vicente**	**0.81**	**356**	*e*P	**Pn**	**02 24 59.0**	**-0.5**
SNVI	**San Vicente**	**0.81**	**356**	*e*P	**Pn**	**02 24 59.0**	**-0.5**
LFRS	**El Faro**	**0.86**	**342**	*e*P	**Pn**	**02 24 58.7**	**-1.4**
PAVA	**Las Pavas**	**0.92**	**351**	⇑*e*P	**Pn**	**02 25 00.2**	**-0.7**
PAVA	**Las Pavas**	**0.92**	**351**	⇑*e*P	**Pn**	**02 25 00.2**	**-0.7**
LOMA	**San Marcos**	**0.93**	**336**	*e*P	**Pn**	**02 24 59.6**	**-1.2**
LOMA	**San Marcos**	**0.93**	**336**	*e*P	**Pn**	**02 24 59.6**	**-1.2**
LBRS	**Las Brisas**	**0.96**	**345**	*e*P	**Pn**	**02 25 00.8**	**-0.6**
SNET	**Serv Nac Est T**	**0.98**	**334**	*e*P	**Pn**	**02 25 00.6**	**-1.1**
SNET				*i* P	**Pn**	**02 25 00.6**	**-1.1**
SNET				*e*S	**Sn**	**02 25 14.1**	**-0.8**
SNET				IAML		02 25 15.2	
	comp=Z,4μm,0.2s						
SNET	**Serv Nac Est T**	**0.98**	**334**	*i* P	**Pn**	**02 25 00.6**	**-1.1**
SNET				*e*S	**Sn**	**02 25 13.8**	**-1.1**
SNET				IAML		02 25 15.2	
	comp=Z,4μm,0.2s						
LFU	**La Fuente**	**0.99**	**341**	*e*P	**Pn**	**02 25 01.0**	**-0.8**
LFU	**La Fuente**	**0.99**	**341**	*e*P	**Pn**	**02 25 01.0**	**-0.8**
LCND	**La Caada**	**1.01**	**60**	*e*P	**Pn**	**02 25 01.4**	**-0.4**
LCND				IAML		02 25 18.9	
	comp=Z,9μm,0.3s						
LCND	**La Caada**	**1.01**	**60**	*e*P	**Pn**	**02 25 01.4**	**-0.4**
LCND				IAML		02 25 18.9	
	comp=Z,9μm,0.3s						
UEES	**San Salvador**	**1.02**	**334**	*e*P	**Pn**	**02 25 00.9**	**-1.3**
UEES	**San Salvador**	**1.02**	**334**	*e*P	**Pn**	**02 25 00.9**	**-1.3**
CNCH	**Conchagua**	**1.04**	**63**	*e*P	**Pn**	**02 25 02.3**	**-0.1**
CNCH				*e*S	**Sn**	**02 25 17.3**	**+1.0**
PMON	**Piamonte**	**1.04**	**330**	⇓*e*P	**Pn**	**02 25 01.3**	**-1.1**
PMON	**Piamonte**	**1.04**	**330**	⇓*e*P	**Pn**	**02 25 01.3**	**-1.1**
BOQS	**Boqueron**	**1.05**	**333**	⇑*e*P	**Pn**	**02 25 01.6**	**-1.0**
BOQS				*e*S	**Sn**	**02 25 16.4**	**-0.2**
CAHU	**Cacacuatique**	**1.11**	**30**	*e*P	**Pn**	**02 25 03.7**	**+0.2**
CAHU	**Cacacuatique**	**1.11**	**30**	*e*P	**Pn**	**02 25 03.7**	**+0.2**
CEDA	**San Andres**	**1.16**	**329**	*e*P	**Pn**	**02 25 02.9**	**-1.0**
CEDA				*e*S	**Sn**	**02 25 18.7**	**-0.3**
CEDA				IAML		02 25 25.5	
	comp=Z,4μm,0.4s						
CEDA	**San Andres**	**1.16**	**329**	*e*P	**Pn**	**02 25 02.9**	**-1.0**
CEDA				*e*S	**Sn**	**02 25 18.7**	**-0.3**
CEDA				IAML		02 25 25.5	
	comp=Z,4μm,0.4s						
VICT	**Victoria**	**1.16**	**7**	⇑*e*P	**Pn**	**02 25 04.0**	**0.0**
VICT	**Victoria**	**1.16**	**7**	⇑*e*P	**Pn**	**02 25 04.0**	**0.0**
CSGN	**Cosiguina Volc**	**1.21**	**82**	*e*Pn	**Pn**	**02 25 04.2**	**-0.4**
CSGN	**Cosiguina Volc**	**1.21**	**82**	*e*P	**Pn**	**02 25 04.7**	**+0.1**
CEVE	**Cerro Verde**	**1.31**	**321**	*e*P	**Pn**	**02 25 05.5**	**-0.6**
CEVE				IAML		02 25 29.8	
	comp=Z,4μm,0.4s						
CEVE	**Cerro Verde**	**1.31**	**321**	*e*P	**Pn**	**02 25 05.5**	**-0.6**
CEVE				IAML		02 25 29.8	
	comp=Z,4μm,0.4s						
SBLS	**San Blas**	**1.32**	**322**	*e*P	**Pn**	**02 25 05.5**	**-0.6**
SBLS	**San Blas**	**1.32**	**322**	*e*P	**Pn**	**02 25 05.5**	**-0.6**
SNJE	**San Jose**	**1.33**	**323**	*e*P	**Pn**	**02 25 05.5**	**-0.8**
SNJE	**San Jose**	**1.33**	**323**	*e*P	**Pn**	**02 25 05.5**	**-0.8**
LLGN	**La Laguna**	**1.37**	**353**	*e*P	**Pn**	**02 25 06.6**	**-0.2**
LLGN	**La Laguna**	**1.37**	**353**	*e*P	**Pn**	**02 25 06.6**	**-0.2**
RTR	**El Retiro**	**1.38**	**323**	*e*P	**Pn**	**02 25 06.4**	**-0.5**
RTR	**El Retiro**	**1.38**	**323**	*e*P	**Pn**	**02 25 06.4**	**-0.5**
MTO3	**Montecristo**	**1.68**	**341**	⇑*i*P	**Pn**	**02 25 10.8**	**-0.2**
MTO3	**Montecristo**	**1.68**	**341**	⇑*i*P	**Pn**	**02 25 10.8**	**-0.2**
CRIN	**San Cristobal**	**1.69**	**93**	*e*P	**Pn**	**02 25 11.2**	**+0.1**
CRIN				*e*S	**Sn**	**02 25 32.3**	**+0.5**
CRIN				IAML		02 25 33.2	
	comp=N,4μm,0.5s						
TEL3	**Telica 3**	**1.91**	**97**	*e*P	**Pn**	**02 25 13.2**	**-0.7**
TELN	**Telica**	**1.92**	**96**	*e*S	**Sn**	**02 25 36.7**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.93**	**50**	*e*Pn	**Pn**	**02 25 14.4**	**+0.3**
CNGN	**Cerro Negro**	**2.06**	**98**	*e*P	**Pn**	**02 25 14.1**	**-1.9**
CNGN				*e*S	**Sn**	**02 25 38.4**	**-2.2**
CNGN				IAML		02 25 47.2	
	comp=N,412nm,0.3s						
MOMN	**Momotombo**	**2.23**	**100**	*e*P	**Pn**	**02 25 17.3**	**-1.0**
ESTN	**Estel**	**2.37**	**82**	*e*Pn	**Pn**	**02 25 19.5**	**-0.8**
ESTN	**Estel**	**2.37**	**82**	*e*P	**Pn**	**02 25 20.4**	**+0.1**
ESTN				*e*S	**Sn**	**02 25 48.7**	**+0.3**
APYN	**Apoyeque**	**2.44**	**103**	*e*P	**Pn**	**02 25 20.6**	**-0.6**
MATN	**Matagalpa**	**2.79**	**87**	*e*P	**Pn**	**02 25 25.6**	**-0.4**
ACON	**Acoyapa**	**3.62**	**103**	*e*Pn	**Pn**	**02 25 38.1**	**+0.8**
JTS	**Las Juntas de**	**4.51**	**123**	Pn	**Pn**	**02 25 49.2**	**-0.3**
	comp=N,2.5nm,0.3s,baz=11,slow=19,SNR=11						
JTS				Sn	**Sn**	**02 26 40.6**	**-0.1**
	comp=N,6.0nm,0.3s,baz=344,slow=19,SNR=4.1						
JTS				Lg	Lg	02 26 59.6	
	comp=N,3.3nm,0.3s,baz=202,slow=19,SNR=7.9						
JTS	**Las Juntas de**	**4.51**	**123**	*e*Pn	**Pn**	**02 25 50.5**	**+1.1**
JTS				*e*Sn	**Sn**	**02 26 40.6**	**-0.1**
CMIG	**Matias Romero**	**7.28**	**307**	Pn	**Pn**	**02 26 29.5**	**+2.2**
	comp=N,0.7nm,0.3s,baz=134,slow=17,SNR=5.3						
CMIG				Sn	**Sn**	**02 27 51.7**	**+3.1**
	comp=N,0.4nm,0.3s,baz=253,slow=19,SNR=2.6						
TEIG	**Tepich**	**7.40**	**4**	*e*Pn	**Pn**	**02 26 30.2**	**+1.2**
SDV	**Santo Domingo**	**18.24**	**100**	P	**P**	**02 28 49.5**	**-2.9**
	comp=N,0.5nm,0.3s,baz=299,slow=10,SNR=5.5						
WHTX	**Lake Whitney,**	**20.70**	**339**	*e*P	**P**	**02 29 18.6**	**-0.1**
	comp=N,62nm,1.8s						
LTX	**Lajitas**	**21.49**	**322**	*e*P	**P**	**02 29 28.1**	**+0.6**
TXAR	**Lajitas Array**	**21.49**	**322**	P	**P**	**02 29 28.1**	**+0.6**
	comp=N,2.1nm,0.8s,baz=142,slow=11,SNR=12						
TX31	**Lajitas Ar. Si**	**21.49**	**322**	*e*P	**P**	**02 29 27.7**	**+0.3**
	comp=N,12nm,1.8s						
MIAR	**Mount Ida**	**22.08**	**349**	*e*P	**P**	**02 29 34.1**	**+0.5**
	comp=N,9.4nm,1.1s						
ABTX	**Abilene, Hawle**	**22.10**	**335**	*e*P	**P**	**02 29 33.5**	**-0.3**
	comp=N,20nm,1.8s						
FCAR	**Ozark Folk Cen**	**23.19**	**353**	*e*P	**P**	**02 29 45.2**	**+0.1**
	comp=N,8.0nm,1.0s						
WMOK	**Wichita Mounta**	**23.65**	**339**	*e*P	**P**	**02 29 49.8**	**+0.3**
	comp=N,7.0nm,1.3s						
HHAR	**Hobbs**	**23.84**	**350**	*e*P	**P**	**02 29 51.3**	**+0.2**
	comp=N,4.6nm,0.7s						
T47A	**Sharon Grove**	**24.13**	**3**	*e*P	**P**	**02 29 53.0**	**-0.8**
	comp=N,19nm,1.3s						
MSTX	**Muleshoe**	**24.62**	**331**	*e*P	**P**	**02 29 57.8**	**-0.7**
	comp=N,12nm,0.9s						
AMTX	**Amarillo**	**24.90**	**334**	*e*P	**P**	**02 30 01.4**	**+0.4**
	comp=N,15nm,1.3s						
CCM	**Cathedral Cave**	**25.25**	**355**	*e*P	**P**	**02 30 03.3**	**-0.7**
	comp=N,7.1nm,0.8s						
T25A	**Trinidad**	**27.99**	**333**	*e*P	**P**	**02 30 29.9**	**+1.0**
	comp=N,5.9nm,0.9s						
ISCO	**Idaho Springs**	**30.72**	**334**	*e*P	**P**	**02 30 54.2**	**+1.0**
	comp=N,2.1nm,0.8s						
SMCO	**Snowmass**	**30.82**	**332**	*e*P	**P**	**02 30 54.6**	**+0.4**
	comp=N,2.7nm,1.0s						
PV12	**Saucer Basin,**	**31.03**	**329**	*e*P	**P**	**02 30 57.0**	**+1.2**
	comp=N,4.9nm,0.8s						
PHWY	**Pilot Hill**	**31.92**	**336**	*e*P	**P**	**02 31 04.2**	**+0.5**
	comp=N,2.8nm,0.8s						
PD31	**Pinedale Array**	**34.86**	**333**	*e*P	**P**	**02 31 29.6**	**+0.4**
	comp=N,3.7nm,1.5s						
PD31				*e*PcP	**PcP**	**02 34 01.2**	**+0.1**
PDAR	**Pinedale Array**	**34.86**	**333**	P	**P**	**02 31 29.6**	**+0.4**
	comp=N,0.4nm,0.6s,baz=126,slow=10,SNR=4.5						
PDAR				PcP	**PcP**	**02 34 01.2**	**+0.1**
	comp=N,0.2nm,0.5s,baz=134,slow=5.2,SNR=3.1						
AGMN	**Agassiz Nation**	**35.88**	**352**	*e*P	**P**	**02 31 36.9**	**-0.7**
	comp=N,11nm,1.3s						
NV01	**Mina Array Sit**	**36.59**	**320**	*e*P	**P**	**02 31 46.5**	**+2.5**
NV01				*e*PcP	**PcP**	**02 34 08.0**	**+1.7**
NVAR	**Mina Array Bea**	**36.59**	**320**	P	**P**	**02 31 46.5**	**+2.5**
	comp=N,0.4nm,0.6s,baz=132,slow=8.7,SNR=5.0						
NVAR				PcP	**PcP**	**02 34 08.0**	**+1.7**
	comp=N,0.5nm,0.7s,baz=97,slow=2.1,SNR=4.2						
RLMT	**Red Lodge**	**36.64**	**335**	*e*P	**P**	**02 31 44.9**	**+0.5**
	comp=N,3.7nm,1.1s						
ULM	**Lac du Bonnet**	**37.79**	**353**	P	**P**	**02 31 51.2**	**-2.6**
	comp=N,3.0nm,0.5s,baz=154,slow=8.4,SNR=3.6						
BOZ	**Bozeman (W)**	**38.01**	**334**	*e*P	**P**	**02 31 57.0**	**+1.0**
	comp=N,9.6nm,1.9s						
EGMT	**Eagleton**	**39.23**	**338**	*e*P	**P**	**02 32 06.5**	**+0.5**
	comp=N,9.2nm,1.1s						
YKA	**Yellowknife Ar**	**52.94**	**345**	P	**P**	**02 33 52.2**	**-1.2**
	comp=N,1.6nm,0.6s,baz=142,slow=7.7,SNR=19						
YKB5	**Yellowknife Ar**	**52.94**	**345**	*e*P	**P**	**02 33 52.2**	**-1.2**
YKW3	**Yellowknife Ar**	**53.00**	**345**	*e*P	**P**	**02 33 54.2**	**+0.4**
	comp=N,3.7nm,1.0s						
INK	**Inuvik**	**62.48**	**343**	P	**P**	**02 34 59.5**	**-0.8**
	comp=N,1.4nm,0.6s,baz=158,slow=4.8,SNR=5.4						
INK	**Inuvik**	**62.48**	**343**	*e*P	**P**	**02 34 59.9**	**-0.4**
	comp=N,13nm,1.8s						
GLI	**Glacier Island**	**63.73**	**332**	*e*PcP	**PcP**	**02 35 47.8**	**+3.5**
ILAR	**Eielson Array**	**65.18**	**336**	P	**P**	**02 35 17.8**	**-0.3**
	comp=N,0.8nm,0.9s,baz=136,slow=4.2,SNR=5.4						
ILB	**Eielson Array**	**65.18**	**336**	*e*P	**P**	**02 35 17.8**	**-0.3**
	comp=N,10nm,1.6s						

*NNC **07** 02:25:09.0±4.9, 38°.26N×73°.93E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=39.0km s-min=34.9km az=1.0*
*IDC **07** 02:25:08.5±4.3, 37°.83N×74°.19E, h149km±41km, mb3.3/2, mb1 3.5/8, mb1mx3. 1/50, mbtmp4.0/8, Error ellipse: s-maj=41.7km s-min=20.2km az=178.0*
*ISCJB **07** 02:25:10.1±0.4, 38°.07N±0°.03×74°.27E±0°.07, h150km, Error ellipse: s-maj=7.5km s-min=4.0km az=179.1*
*BJI **07** 02:25:13.7±0.0, 38°.28N×74°.29E, h166km, mb4.4/2, mB4.3/1*
ISC 07 02:25:09.9±0.6, 38°.15N±0°.05×74°.25E±0°.06, h150km, n41, σ2°.55/48, 4C-9D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.92**	**44**	P	**Pn**	**02 25 43.5**	**-0.6**
KSH				S	**Sn**	**02 26 06.0**	**-4.5**
KSH				smax	smax		
	comp=N,3μm,0.6s						
KSH				smax	smax		
	comp=E,2μm,0.3s						
KZA	**Kyzart**	**4.00**	**11**	P	**Pn**	**02 26 12.9**	**+2.5**
	SNR=62						
AML	**Almayashu**	**4.00**	**354**	P	**Pn**	**02 26 13.1**	**+2.7**
	SNR=204						
UCH	**Uchtor**	**4.08**	**3**	P	**Pn**	**02 26 14.4**	**+2.9**
	SNR=75						
ULHL	**Ulahol**	**4.37**	**20**	P	**Pn**	**02 26 18.2**	**+3.1**
	SNR=21						
AAK	**Ala-Archa**	**4.49**	**2**	P	**Pn**	**02 26 19.7**	**+3.1**
	4.6nm,0.3s,baz=152,slow=5.9,SNR=22						
AAK				S	**Sn**	**02 27 07.9**	**-0.6**
	4.4nm,0.3s,baz=220,slow=3.0,SNR=6.3						
AAK	**Ala-Archa**	**4.49**	**2**	P	**Pn**	**02 26 19.8**	**+3.3**
	SNR=16						
AAK	**Ala-Archa**	**4.49**	**2**	⇓Pn	**Pn**	**02 26 19.5**	**+2.9**
	4.9nm,0.3s						
AAK				⇓Sn	**Sn**	**02 27 12.4**	**+3.9**
	41nm,0.7s						
EKS2	**Erkin-Say**	**4.52**	**356**	P	**Pn**	**02 26 20.2**	**+3.2**
	SNR=16						
KBK	**Karagaybulak**	**4.53**	**7**	P	**Pn**	**02 26 20.6**	**+3.4**
	SNR=29						
CHCP	**Chirah Chowk**	**4.55**	**190**	P	**Pn**	**02 26 21.2**	**+3.7**
CEP	**Cherat**	**4.72**	**204**	⇓P	**Pn**	**02 26 21.8**	**+2.1**
CEP				S	**Sn**	**02 27 14.0**	**0.0**
CHMS	**Chumysh**	**4.86**	**4**	P	**Pn**	**02 26 24.6**	**+3.3**
	SNR=20						
TKM2	**Tokmak 2**	**4.87**	**12**	P	**Pn**	**02 26 24.8**	**+3.1**
	SNR=27						
TKM2	**Tokmak 2**	**4.87**	**12**	⇑Pn	**Pn**	**02 26 24.6**	**+2.8**
	7.1nm,0.5s						
TKM2				⇑Sn	**Sn**	**02 27 18.8**	**+1.0**
	66nm,0.7s						
KK31	**Karatay Array**	**5.70**	**331**	⇑Pn	**Pn**	**02 26 34.1**	**+1.6**
	6.8nm,0.3s,baz=145,slow=14,SNR=362						
KK31				⇑Sn	**Sn**	**02 27 35.3**	**-1.9**
	40nm,0.3s,baz=143,slow=13,SNR=4.3						
THW	**Thamme Wali**	**5.72**	**202**	P	**Pn**	**02 26 34.1**	**+1.2**
SARP	**Sargodha**	**6.35**	**192**	P	**Pn**	**02 26 41.9**	**+0.7**
PDGK	**Podgornoye**	**6.53**	**36**	⇓Pn	**Pn**	**02 26 45.4**	**+1.8**
	9.6nm,0.7s						
MK31	**Makanchi Array**	**10.48**	**32**	⇓P	**Pn**	**02 27 37.8**	**+1.7**
	4.9nm,0.7s,baz=200,slow=11,SNR=40						
MKAR	**Makanchi Array**	**10.48**	**32**	P	**Pn**	**02 27 37.6**	**+1.6**
	0.4nm,0.3s,baz=216,slow=13,SNR=50						
WMQ	**Urumqi**	**11.63**	**57**	*e*P	**Pn**	**02 27 53.7**	**+2.4**
PYUN	**Piuthan**	**12.41**	**141**	*e*P	**Pn**	**02 28 00.2**	**-1.5**
	19nm,0.4s						
DANN	**Dangsing**	**12.60**	**138**	*e*P	**Pn**	**02 28 03.1**	**-1.1**
	20nm,0.4s						
GEYT	**Alibeck**	**12.72**	**274**	P	**Pn**	**02 28 03.2**	**-2.2**
	1.3nm,0.3s,baz=102,slow=11,SNR=12						
GEYT				S	Sn	02 30 17.4	-8.7
	1.1nm,0.3s,baz=161,slow=11,SNR=5.7						
KURBB	**Kurchatov

Error ellipse: s-maj=13.1km s-min=8.5km az=53.0
NEIC Felt at Kingstown, Saint Vincent. Also felt at Castries and Vieux Fort, Saint Lucia.

ISC 07 02:50:44.5±1.1, 12°.91N±0°.02×60°.71W±0°.03, h26km±9km, n113, σ1°.60/138, mb3.8/8, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVCV	**St. Vincent, C**	**0.56**	**310**	*eP*	**Pn**	**02 50 56.6**	**-0.3**
FCV	**Fort Charlotte**	**0.58**	**295**	*eP*	**Pn**	**02 50 57.4**	**+0.2**
FCV				*eS*	**Sn**	**02 51 05.7**	**-0.2**
SSV	**Crater Summit**	**0.63**	**311**	*eP*	**Pn**	**02 50 58.2**	**+0.3**
SVV	**Soufriere Volc**	**0.64**	**309**	*eP*	**Pn**	**02 50 58.5**	**+0.4**
SVV				*eS*	**Sn**	**02 51 07.3**	**-0.1**
SVB	**Belmont**	**0.64**	**304**	*ePn*	**Pb**	**02 50 57.4**	**+0.2**
SVB				*eSn*	**Sb**	**02 51 06.1**	**+0.3**
SVB	**Belmont**	**0.64**	**304**	*eP*	**Pb**	**02 50 57.4**	**+0.2**
SVB	**Belmont**	**0.64**	**304**	*e*	Pn	02 51 06.2	+8.2
SVB				*eS*	**Sn**	**02 51 10.2**	**+2.8**
SFAN	**Fancy Village**	**0.65**	**316**	*eP*	**Pn**	**02 50 58.3**	**+0.1**
MCLT	**Moule a Chique**	**0.82**	**344**	*eP*	**Pb**	**02 50 59.9**	**-0.4**
MCLT				*eS*	**Sb**	**02 51 11.1**	**+0.1**
SLDE	**Delcer**	**0.95**	**339**	*eP*	**Pn**	**02 51 03.9**	**+1.6**
SLDE				*eS*	**Sn**	**02 51 16.5**	**+1.5**
SLPA	**Patience**	**0.96**	**347**	*eP*	**Pn**	**02 51 03.5**	**+1.1**
SLPA				*eS*	**Sn**	**02 51 16.0**	**+0.8**
SLB	**Belfond**	**0.96**	**340**	*eP*	**Pn**	**02 51 03.0**	**+0.5**
BCHC	**Barbados, Cave**	**1.07**	**78**	*eP*	**Pb**	**02 51 04.3**	**-0.1**
BCHC				*eS*	**Sn**	**02 51 19.9**	**+2.0**
GRSS	**Sisters**	**1.08**	**235**	*eP*	**Pb**	**02 51 05.3**	**+0.7**
GRSS				*eS*	**Sn**	**02 51 20.6**	**+2.4**
SLW	**Petit Monier**	**1.12**	**348**	*eP*	**Pb**	**02 51 05.8**	**+0.5**
SLW				*eS*	**Sn**	**02 51 21.0**	**+1.7**
SLBI	**Saint Lucia, B**	**1.13**	**347**	*eP*	**Pn**	**02 51 04.2**	**-0.5**
SLBI				*eS*	**Sb**	**02 51 18.8**	**-1.0**
BBGH	**Gun Hill**	**1.14**	**78**	*ePn*	**Pb**	**02 51 05.6**	**-0.1**
BBGH	**Gun Hill**	**1.14**	**78**	*eP*	**Pb**	**02 51 05.9**	**+0.2**
BBGH				*eS*	**Sn**	**02 51 21.0**	**+1.3**
GRHS	**Sauteurs**	**1.14**	**233**	*eP*	**Pb**	**02 51 06.3**	**+0.6**
GRHS				*eS*	**Sb**	**02 51 22.7**	**+2.6**
BBSP	**Saint Philip**	**1.23**	**81**	*eP*	**Pb**	**02 51 07.6**	**+0.5**
BBSP				*eS*	**Sb**	**02 51 23.6**	**+1.0**
MPOM	**Morne Pois Mar**	**1.53**	**354**	*eP*	**Pn**	**02 51 09.7**	**-0.6**
TOSP	**Speyside**	**1.61**	**174**	*eP*	**Pn**	**02 51 12.4**	**+0.9**
TOSP				*eS*	**Sb**	**02 51 34.5**	**+0.8**
BIM	**Bigot**	**1.63**	**347**	*eP*	**Pn**	**02 51 11.9**	**+0.2**
MVM	**Montagne Vaucl**	**1.64**	**354**	*eP*	**Pn**	**02 51 11.7**	**-0.1**
TRMF	**Trois Ilets**	**1.65**	**348**	*eP*	**Pn**	**02 51 12.2**	**+0.3**
LPMF	**Morne Lapointe**	**1.67**	**351**	*eP*	**Pn**	**02 51 12.2**	**0.0**
ZAM	**Aeronautique**	**1.68**	**349**	*eP*	**Pn**	**02 51 12.3**	**+0.1**
ILAM	**Ilet Lapin Mar**	**1.86**	**355**	*eP*	**Pn**	**02 51 14.8**	**+0.1**
FDF	**Fort de France**	**1.86**	**347**	*ePn*	**Pn**	**02 51 15.3**	**+0.5**
FDF				*eSn*	**Sn**	**02 51 38.7**	**+1.1**
FDF	**Fort de France**	**1.86**	**347**	*eP*	**Pn**	**02 51 15.1**	**+0.2**
FDF				*eS*	**Sn**	**02 51 38.8**	**+1.3**
PML	**Morne Lenard**	**1.91**	**346**	*eP*	**Pn**	**02 51 16.5**	**+0.9**
GBMF	**Grand Be**	**1.92**	**347**	*eP*	**Pn**	**02 51 16.6**	**+0.8**
BAMF	**Morne Balai**	**1.94**	**347**	*eP*	**Pn**	**02 51 16.8**	**+0.8**
CXM	**Morne La Croix**	**1.94**	**347**	*eP*	**Pn**	**02 51 17.0**	**+0.9**
PCM	**Pelee Case Pet**	**1.95**	**345**	*eP*	**Pn**	**02 51 16.9**	**+0.8**
DSHT	**Scott's Head**	**2.38**	**344**	*eP*	**Pn**	**02 51 22.0**	**+0.1**
DSHT				*eS*	**Sn**	**02 51 51.1**	**+0.9**
DSTT	**Stowe**	**2.39**	**346**	*eP*	**Pn**	**02 51 22.5**	**+0.4**
DSTT				*eS*	**Sn**	**02 51 52.1**	**+1.5**
DBCT	**Belle View Cho**	**2.42**	**345**	*eP*	**Pn**	**02 51 23.4**	**+0.8**
DBCT				*eS*	**Sn**	**02 51 52.4**	**+0.9**
TBH	**Brigand Hill**	**2.44**	**188**	*eP*	**Pn**	**02 51 24.2**	**+1.4**
TBH				*eS*	**Sb**	**02 51 55.1**	**-2.4**
DLPL	**La Plaine**	**2.46**	**348**	*eP*	**Pn**	**02 51 23.4**	**+0.3**
DLPL				*eS*	**Sn**	**02 51 53.7**	**+1.3**
MDN	**Morne-Daniel**	**2.48**	**344**	*eP*	**Pn**	**02 51 24.4**	**+1.0**
MDN				*eS*	**Sn**	**02 51 53.8**	**+0.9**
TPP	**Pointe-a-Pierr**	**2.68**	**196**	*eP*	**Pn**	**02 51 27.9**	**+1.8**
TPP				*eS*	**Sn**	**02 52 00.2**	**+2.4**
BBL	**Barber's Block**	**2.70**	**344**	*eP*	**Pn**	**02 51 27.1**	**+0.7**
BBL				*eS*	**Sn**	**02 51 59.5**	**+1.2**
DWS	**Wesley**	**2.70**	**348**	*eP*	**Pn**	**02 51 27.4**	**+1.0**
DWS				*eS*	**Sn**	**02 51 58.7**	**+0.4**
MDPO	**Dominica; Chan**	**2.74**	**345**	*eP*	**Pn**	**02 51 28.0**	**+1.1**
MDPO				*eS*	**Sn**	**02 52 00.7**	**+1.4**
TDBA	**Terre de Bas,**	**3.05**	**343**	*eP*	**Pn**	**02 51 32.7**	**+1.5**
TBG	**Guadaloupe-3**	**3.06**	**343**	*eP*	**Pn**	**02 51 32.4**	**+1.1**
TBG				*eS*	**Sn**	**02 52 07.7**	**+0.6**
MAGL	**Barre de l'ile**	**3.07**	**350**	*eP*	**Pn**	**02 51 32.1**	**+0.7**
CBE	**Ff, Capester**	**3.26**	**345**	*eP*	**Pn**	**02 51 35.5**	**+1.5**
DEG	**La Desirade**	**3.40**	**354**	*eP*	**Pn**	**02 51 36.8**	**+0.7**
DEG				*eS*	**Sn**	**02 52 15.9**	**+0.4**
H05N1	**Guadeloupe/Mar**	**3.40**	**354**	Pn	**Pn**	**02 51 35.7**	**-0.3**
H05N1				Sn	**Sn**	**02 52 10.2**	**-5.3**
	SNR=321						
ABD	**La Joyeuse, An**	**3.62**	**348**	*eP*	**Pn**	**02 51 40.4**	**+1.3**
MLYT	**Lee's Yard**	**4.05**	**339**	*eP*	**Pn**	**02 51 46.6**	**+1.6**
MLYT	**Lee's Yard**	**4.05**	**339**	*eS*	**Sn**	**02 52 32.8**	**+1.3**
BPA	**Boggy Peak**	**4.26**	**345**	*eP*	**Pn**	**02 51 50.4**	**+2.5**
BPA	**Boggy Peak**	**4.26**	**345**	*eS*	**Sn**	**02 52 36.1**	**-0.6**
NEV	**Hard Times**	**4.57**	**337**	*eP*	**Pn**	**02 51 54.2**	**+2.1**
NEV	**Hard Times**	**4.57**	**337**	*eS*	**Sn**	**02 52 44.1**	**-0.2**
NVBH	**Bath Hotel, Ne**	**4.57**	**336**	*eP*	**Pn**	**02 51 55.4**	**+3.3**
NVBH	**Bath Hotel, Ne**	**4.57**	**336**	*eS*	**Sn**	**02 52 44.6**	**+0.2**
NVRH	**Round Hill, Ne**	**4.62**	**337**	*eP*	**Pn**	**02 51 53.8**	**+1.0**
NVRH	**Round Hill, Ne**	**4.62**	**337**	*eS*	**Sn**	**02 52 45.1**	**-0.6**
SKOC	**St. Kitts, UWI**	**4.77**	**336**	*eP*	**Pn**	**02 51 56.5**	**+1.7**
SKOC	**St. Kitts, UWI**	**4.77**	**336**	*eS*	**Sn**	**02 52 49.9**	**+0.5**
SKI	**Saint Kitts**	**4.81**	**336**	*ePn*	**Pn**	**02 51 57.5**	**+2.1**
SKI	**Saint Kitts**	**4.81**	**336**	*eP*	**Pn**	**02 51 57.5**	**+2.1**
SKI	**Saint Kitts**	**4.81**	**336**	*eS*	**Sn**	**02 52 50.3**	**-0.1**
ANWB	**Willy Bob**	**4.84**	**348**	*ePn*	**Pn**	**02 51 56.3**	**+0.5**
ANWB				*eSn*	**Sn**	**02 52 49.9**	**-1.1**
ANWB	**Willy Bob**	**4.84**	**348**	*eP*	**Pn**	**02 51 56.7**	**+0.9**
ANWB	**Willy Bob**	**4.84**	**348**	*eS*	**Sn**	**02 52 49.7**	**-1.4**
BSK	**Brimstone Hill**	**4.87**	**335**	*eP*	**Pn**	**02 51 58.9**	**+2.8**
BSK	**Brimstone Hill**	**4.87**	**335**	*eS*	**Sn**	**02 52 51.8**	**-0.2**
SKDB	**Saint Kitts 2**	**4.90**	**336**	*eP*	**Pn**	**02 51 58.7**	**+2.1**
SKDB	**Saint Kitts 2**	**4.90**	**336**	*eS*	**Sn**	**02 52 52.6**	**+0.2**
SEUS	**St. Eustatius**	**5.05**	**335**	*ePn*	**Pn**	**02 52 00.7**	**+2.0**
SEUS	**St. Eustatius**	**5.05**	**335**	*eP*	**Pn**	**02 52 00.3**	**+1.5**
SEUS	**St. Eustatius**	**5.05**	**335**	*eS*	**Sn**	**02 52 56.7**	**+0.4**
SMRT	**St. Maarten**	**5.59**	**336**	*eP*	**Pn**	**02 52 08.1**	**+1.9**
SMRT	**St. Maarten**	**5.59**	**336**	*eS*	**Sn**	**02 53 08.3**	**-1.3**
CDVI	**St. Croix**	**6.20**	**321**	*ePn*	**Pn**	**02 52 15.5**	**+1.0**
STVI	**Saint Thomas**	**6.78**	**323**	*ePn*	**Pn**	**02 52 23.8**	**+1.3**
CUPR	**Culebra, Puert**	**6.94**	**321**	*ePn*	**Pn**	**02 52 25.4**	**+0.7**
MTP	**Monte Pirata**	**6.96**	**318**	*ePn*	**Pn**	**02 52 25.7**	**+0.8**
HUMP	**Col San Antoni**	**7.18**	**317**	*ePn*	**Pn**	**02 52 28.7**	**+0.7**
CBYP	**Canovanas**	**7.28**	**318**	*ePn*	**Pn**	**02 52 30.3**	**+0.9**
SJG	**San Juan**	**7.36**	**315**	Pn	**Pn**	**02 52 30.9**	**+0.5**
	8.9nm,0.3s,baz=124,slow=17,SNR=20						
SJG				Sn	**Sn**	**02 53 46.4**	**-6.9**
	3.7nm,0.3s,baz=305,slow=19,SNR=3.1						
SJG	**San Juan**	**7.36**	**315**	*ePn*	**Pn**	**02 52 31.1**	**+0.6**
EMPR	**Esperanza - Ma**	**7.88**	**315**	*ePn*	**Pn**	**02 52 37.7**	**+0.2**
AOPR	**Arecibo Observ**	**7.94**	**314**	*ePn*	**Pn**	**02 52 39.2**	**+0.7**
CRPR	**Cabo Rojo, PR**	**7.98**	**310**	*ePn*	**Pn**	**02 52 42.8**	**+3.8**
MPR	**Mayaguez**	**8.13**	**311**	*ePn*	**Pn**	**02 52 42.7**	**+1.6**
AGP	**Aguadilla**	**8.26**	**312**	*ePn*	**Pn**	**02 52 44.8**	**+2.0**
SDV	**Santo Domingo**	**10.54**	**249**	Pn	**Pn**	**02 53 16.1**	**+1.8**
	0.3nm,0.3s,baz=60,slow=14,SNR=2.2						
SDV				Sn	**Sn**	**02 55 04.8**	**-6.8**
	0.5nm,0.3s,baz=180,slow=20,SNR=2.8						
MDP	**Montagnes des**	**11.12**	**134**	Pn	**Pn**	**02 53 18.2**	**-3.9**
	3.0nm,0.3s,baz=315,slow=15,SNR=47						
MDP				Sn	Sn	02 55 13.9	-12
	1.3nm,0.3s,baz=297,slow=15,SNR=4.5						
PTGA	**Pitinga**	**13.58**	**177**	Pn	**Pn**	**02 53 53.1**	**-2.5**
	3.3nm,0.3s,baz=359,slow=15,SNR=30						
PTGA				Sn	Sn	02 56 14.9	-11
	3.6nm,0.3s,baz=273,slow=22,SNR=4.9						
PTGA				LR	LR	03 00 22.5	
	comp=Z,83nm,20.9s,baz=342,slow=43						
PTGA	**Pitinga**	**13.58**	**177**	*ePn*	**Pn**	**02 53 53.6**	**-2.0**
SIV	**San Ignacio**	**28.72**	**181**	P	**P**	**02 56 40.2**	**+0.2**
	0.4nm,0.6s,baz=0.0,slow=10,SNR=3.8						
SIV				LR	LR	03 09 12.4	
	comp=Z,65nm,20.9s,baz=86,slow=39						
CPCT	**Cooper Cave**	**31.07**	**320**	*eP*	**P**	**02 57 01.4**	**+0.7**
	3.8nm,1.0s						
E46A	**Sault Ste Mari**	**38.84**	**334**	*eP*	**P**	**02 58 09.2**	**+1.7**
	2.2nm,0.8s						
CPUP	**Villa Florida**	**39.15**	**175**	P	**P**	**02 58 10.3**	**+0.1**
	1.5nm,0.8s,baz=12,slow=9.3,SNR=2.5						
C40A	**Isle Royale Na**	**42.18**	**331**	*eP*	**P**	**02 58 36.2**	**+1.1**
	6.7nm,0.9s						
H10N3	**ASCENSION HYDR**	**50.32**	**112**	T	T	03 54 23.8	
	baz=294,slow=75						
H10N2	**ASCENSION HYDR**	**50.33**	**112**	T	T	03 54 19.9	
	baz=294,slow=75						
H10N1	**ASCENSION HYDR**	**50.34**	**112**	T	T	03 54 20.9	
	baz=294,slow=75						
H10S3	**ASCENSION HYDR**	**50.63**	**113**	T	T	03 54 45.2	
	baz=295,slow=75						
H10S1	**ASCENSION HYDR**	**50.64**	**113**	T	T	03 54 41.2	
	baz=295,slow=75						
H10S2	**ASCENSION HYDR**	**50.65**	**113**	T	T	03 54 39.4	
	baz=295,slow=75						
PD31	**Pinedale Array**	**51.49**	**315**	*eP*	**P**	**02 59 48.4**	**+0.1**
	1.8nm,0.8s						
PDAR	**Pinedale Array**	**51.49**	**315**	P	**P**	**02 59 48.4**	**+0.1**
	0.2nm,0.3s,baz=111,slow=9.8,SNR=3.0						
PLCA	**Paso Flores**	**54.15**	**189**	LR	LR	03 26 33.4	
	comp=Z,194nm,18.3s,baz=154,slow=40						
ESDC	**Sonseca Array**	**56.37**	**51**	P	**P**	**03 00 25.4**	**+1.6**
	0.1nm,0.4s,baz=266,slow=8.5,SNR=4.3						
YKA	**Yellowknife Ar**	**62.39**	**335**	P	**P**	**03 01 05.7**	**+0.8**
	0.2nm,0.3s,baz=116,slow=7.0,SNR=3.5						
YKB5	**Yellowknife Ar**	**62.39**	**335**	*eP*	**P**	**03 01 05.7**	**+0.8**

IDC 07 02:51:57.0±1.1, 55°.61S×26°.57W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/25, mbtmp3.8/3, ML3.0/1, Error ellipse: s-maj=46.2km s-min=26.0km az=78.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**19.01**	**157**	P	Pn	02 56 21.1	+0.4
	0.0nm,0.3s,baz=318,slow=9.4,SNR=4.2						
VNDA	**Vanda**	**47.03**	**182**	P	P	03 00 28.9	-0.6
	0.9nm,0.6s,baz=190,slow=6.9,SNR=4.5						
LPAZ	**La Paz**	**50.41**	**304**	P	P	03 00 57.2	+0.4
	1.2nm,0.7s,baz=169,slow=4.7,SNR=5.5						
TORD	**Torodi Ar. Bea**	**72.50**	**29**	P	P	03 03 25.4	0.0
	0.4nm,0.7s,baz=201,slow=6.9,SNR=9.0						
ILAR	**Eielson Array**	**150.08**	**312**	PKPbc	PKPbc	03 11 47.1	-0.9
	0.4nm,0.7s,baz=113,slow=2.1,SNR=6.0						

MEX 07 02:57:56.0±0.4, 17°.74N×102°.43W, h5km, MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**1.03**	**302**	*eP*	Pg	02 58 13.3	-2.5
MMIG				*i* S	Sg	02 58 26.4	-2.7
ARIG	**Puente Sto Nin**	**2.06**	**74**	*i* P	Pn	02 58 24.8	-6.5
ARIG				*i* S	Sn	02 58 49.0	-8.4
EZ5V		**2.06**	**328**	*eP*	Pn	02 58 28.1	-3.4
EZ5V				*eS*	Sn	02 58 53.7	-4.1

IDC 07 03:02:48.2±1.3, 55°.33S×26°.57W, h0km, mb4.0/2, mb1 3.8/3, mb1mx3.6/21, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=47.0km s-min=33.9km az=59.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**19.27**	**157**	P	P	03 07 14.2	+0.2
	0.1nm,0.3s,baz=300,slow=13,SNR=9.1						
LPAZ	**La Paz**	**50.25**	**304**	P	P	03 11 46.9	+0.1
	1.4nm,0.8s,baz=145,slow=5.3,SNR=7.7						
TORD	**Torodi Ar. Bea**	**72.25**	**29**	P	P	03 14 15.2	+0.1
	0.8nm,0.6s,baz=202,slow=6.0,SNR=14						
ILAR	**Eielson Array**	**149.89**	**312**	PKPbc	PKPbc	03 22 38.0	-0.8
	0.6nm,0.7s,baz=126,slow=2.3,SNR=7.9						

*MAN **07** 03:06:31.7, 13°.37N×125°.81E, h33km, mb5.0, ML4.0, MS4.0*
*IDC **07** 03:06:32.4±1.3, 13°.22N×125°.85E, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.7/42, mbtmp4.0/6, ML4.3/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/43, Error ellipse: s-maj=55.9km s-min=19.3km az=62.0*
*ISCJB **07** 03:06:34.6±0.9, 13°.22N±0°.08×125°.9E±0°.2, h27km, mb4.3/6, MS3.4/1, Error ellipse: s-maj=22.5km s-min=10.8km az=5.4*

ISC 07 03:06:36.6±1.1, 13°.19N±0°.10×125°.8E±0°.2, h27km, n9, σ0°87/10, mb4.0/6, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**2.18**	**202**	*eP*	**Pn**	**03 07 10.7**	**-0.4**
PLP				*i* S	**Sn**	**03 07 37.7**	**+0.5**
KAPI	**Kappang**	**19.07**	**199**	P	**Pn**	**03 10 58.5**	**+0.5**
	1.0nm,0.3s,baz=224,slow=16,SNR=4.8						
CMAR	**Chiang Mai Arr**	**26.37**	**285**	P	**P**	**03 12 09.9**	**-1.0**
	0.9nm,0.3s,baz=94,slow=8.0,SNR=6.1						
PMG	**Port Moresby**	**30.87**	**136**	LR	LR	03 25 41.7	
	comp=Z,71nm,18.9s,baz=188,slow=37						
WRA	**Warramunga Arr**	**33.98**	**166**	P	**P**	**03 13 16.7**	**-1.4**
	1.34nm,0.3s,baz=336,slow=11,SNR=2.3						
ASAR	**Alice Springs**	**37.48**	**168**	P	**P**	**03 13 48.5**	**+0.3**
	1.7nm,0.5s,baz=347,slow=6.9,SNR=23						
ASAR				PcP	**PcP**	**03 16 05.9**	**-0.4**
	0.3nm,0.4s,baz=358,slow=2.8,SNR=3.7						
STKA	**Stephens Creek**	**47.30**	**162**	P	**P**	**03 15 08.6**	**+0.7**
	1.4nm,0.5s,baz=320,slow=12,SNR=3.0						
MKAR	**Makanchi Array**	**49.47**	**321**	P	**P**	**03 15 25.5**	**+0.9**
	1.2nm,0.8s,baz=113,slow=9.3,SNR=7.8						
FINES	**FINESS Array B**	**83.13**	**332**	P	**P**	**03 18 59.7**	**-0.2**
	0.5nm,0.6s,baz=91,slow=12,SNR=3.7						

*IDC **07** 03:07:19.4±0.8, 55°.49S×26°.44W, h0km, mb4.3/6, mb1 4.4/7, mb1mx4.1/23, mbtmp4.2/7, ML3.7/1, MS3.9/7, Ms1 3.9/7, ms1mx3.7/20, Error ellipse: s-maj=28.5km s-min=21.1km az=58.0*
*ISCJB **07** 03:07:23.4±0.5, 55°.48S±0°.08×26°.5W±0°.2, h38km, mb4.6/13, MS3.9/6, Error ellipse: s-maj=17.0km s-min=8.7km az=151.2*
*NEIC **07** 03:07:25.2±1.8, 55°.56S×26°.69W, h35km±3km, mb4.5/10, Error ellipse: s-maj=31.3km s-min=19.7km az=64.0*

ISC 07 03:07:24.9±0.7, 55°.5S±0°.1×26°.5W±0°.2, h38km, n35, σ0°60/26, mb4.7/11, MS3.9/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.15**	**159**	P	**P**	**03 11 22.9**	**+0.4**
VNA3	**Neumayer Olymp**	**17.37**	**162**	P	**P**	**03 11 25.0**	**+0.1**
VNA2	**Neumayer--Watz**	**17.55**	**159**	P	**P**	**03 11 27.8**	**+1.0**
	baz=321,slow=14						
SNAA	**Sanae**	**19.08**	**157**	P	**P**	**03 11 43.6**	**-0.2**
SNAA	**Sanae**	**19.08**	**157**	P	**P**	**03 11 43.2**	**-0.6**
	0.2nm,0.3s,baz=281,slow=12,SNR=17						
SNAA				LR	LR	03 17 33.1	
	comp=Z,296nm,19.3s,baz=288,slow=32						
SNAA	**Sanae**	**19.08**	**157**	*eP*	**Pn**	**03 11 45.6**	**+0.8**
	37nm,2.0s						
USHA	**Ushuaia**	**23.68**	**254**	LR	LR	03 19 39.8	
	comp=Z,397nm,20.8s,baz=49,slow=31						
QSPA	**South Pole Qui**	**34.73**	**180**	*eP*	**P**	**03 14 10.1**	**-0.8**
	35nm,1.8s						
CPUP	**Villa Florida**	**36.75**	**310**	P	**P**	**03 14 27.9**	**-0.4**
	1.9nm,0.6s,baz=149,slow=7.9,SNR=6.4						
CPUP				LR	LR	03 29 43.4	
	comp=Z,182nm,19.2s,baz=160,slow=36						
MAW	**Mawson**	**40.35**	**144**	LR	LR	03 30 02.1	
	comp=Z,148nm,20.8s,baz=246,slow=34						
BDFB	**Brasilia**	**43.10**	**329**	LR	LR	03 32 31.2	
	comp=Z,182nm,19.9s,baz=174,slow=35						
GO02	**Mina Guanaco**	**43.59**	**296**	*eP*	**P**	**03 15 26.1**	**+0.8**
	77nm,2.0s						
LVC	**Limon Verde**	**45.36**	**299**	*eP*	**P**	**03 15 40.1**	**+0.4**
	8.6nm,0.6s						
BOSA	**Boshof**	**45.48**	**76**	P	**P**	**03 15 40.5**	**+0.2**
	1.8nm,0.6s,baz=188,slow=10,SNR=5.0						
BOSA				LR	LR	03 31 45.7	
	comp=Z,360nm,18.7s,baz=201,slow=32						
VNDA	**Vanda**	**47.12**	**182**	P	**P**	**03 15 52.5**	**+0.2**
	2.2nm,0.6s,baz=180,slow=5.9,SNR=14						
VNDA				LR	LR	03 34 27.7	
	comp=Z,74nm,19.9s,baz=164,slow=34						
VNDA	**Vanda**	**47.12**	**182**	*eP*	**P**	**03 15 52.3**	**-0.1**
	4.3nm,1.0s						
H10S2	**ASCENSION HYDR**	**47.39**	**16**	T	T	04 07 05.8	
	baz=190,slow=75,SNR=7.6						
H10S3	**ASCENSION HYDR**	**47.39**	**16**	T	T	04 07 25.4	
	baz=190,slow=75,SNR=8.7						
H10S1	**ASCENSION HYDR**	**47.41**	**16**	T	T	04 07 10.2	
	baz=190,slow=75,SNR=7.4						
GO01	**Chusmiza**	**47.99**	**301**	*eP*	**P**	**03 16 00.6**	**+0.2**
	7.4nm,0.8s						
H10N1	**ASCENSION HYDR**	**48.51**	**16**	T	T	04 08 36.7	
	baz=189,slow=75,SNR=5.1						
H10N3	**ASCENSION HYDR**	**48.51**	**16**	T	T	04 08 33.3	
	baz=189,slow=75,SNR=6.8						
H10N2	**ASCENSION HYDR**	**48.52**	**16**	T	T	04 08 38.9	
	baz=189,slow=75,SNR=6.5						
MNMC	**Minye Minye**	**48.64**	**301**	*eP*	**P**	**03 16 06.1**	**+0.9**
	60nm,2.0s						
LPAZ	**La Paz**	**50.38**	**304**	P	**P**	**03 16 19.6**	**+0.7**
	5.4nm,0.6s,baz=150,slow=5.5,SNR=32						
LPAZ	**La Paz**	**50.38**	**304**	*eP*	**P**	**03 16 19.2**	**+0.4**
	6.0nm,0.6s						
TOA0	**Torodi Ar. Sit**	**72.41**	**29**	*eP*	**P**	**03 18 48.0**	**+1.1**
	5.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.41**	**29**	P	**P**	**03 18 46.4**	**-0.6**
	3.2nm,0.6s,baz=199,slow=6.1,SNR=42						
TOA1	**Torodi Ar. Sit**	**72.42**	**29**	*eP*	**P**	**03 18 46.4**	**-0.6**
ASAR	**Alice Springs**	**99.38**	**162**	P	**Pdif**	**03 21 02.7**	**-0.5**
	0.4nm,0.8s,baz=181,slow=4.2,SNR=2.8						
AS31	**Alice Springs**	**99.38**	**162**	*eP*	**Pdif**	**03 21 02.7**	**-0.5**
	5.9nm,1.8s						
ILAR	**Eielson Array**	**150.04**	**312**	PKPbc	**PKiKP**	**03 27 10.3**	**-0.2**
	1.9nm,0.7s,baz=130,slow=2.0,SNR=17						
ILB	**Eielson Array**	**150.04**	**312**	*e*PKPbc	**PKiKP**	**03 27 10.3**	**-0.2**
SONA0	**Songino Array**	**150.32**	**85**	*e*PKPbc	**PKiKP**	**03 27 11.4**	**-0.4**
SONM	**Songino Array**	**150.32**	**85**	PKPbc	**PKiKP**	**03 27 11.4**	**-0.4**
	0.6nm,0.6s,baz=197,slow=3.9,SNR=2.3						

*ATH **07** 03:17:19.8, 35°.90N×27°.95E, h53km±3km, ML2.5/2, Error ellipse: s-maj=4.1km s-min=1.3km az=1.0*
*ISCJB **07** 03:17:20.7±0.5, 35°.85N±0°.04×27°.95E±0°.04, h50km±9km, Error ellipse: s-maj=7.3km s-min=4.2km az=152.0*
*ISK **07** 03:17:20.8, 35°.84N×27°.97E, h31km, ML2.6/18*
*THE **07** 03:17:22.6, 35°.99N×27°.71E, h9km±2km, ML2.3/6, Error ellipse: s-maj=2.8km s-min=0.5km az=128.0*
*DDA **07** 03:17:24.3, 36°.77N×28°.55E, h7km±2km, ML2.6*

ISC 07 03:17:21.0±1.2, 35°.85N±0°.04×27°.95E±0°.03, h31km±12km, n48, σ0°68/62, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.40**	**21**	PG	**Pn**	**03 17 30.8**	**+0.2**
ARG				SG	**Sn**	**03 17 37.5**	**+0.5**
ARG	**Arkhangelos**	**0.40**	**21**	P	**Pn**	**03 17 30.6**	**0.0**
ARG				S	**Sn**	**03 17 37.1**	**+0.1**
ARG	**Arkhangelos**	**0.40**	**21**	P	**Pn**	**03 17 30.5**	**0.0**
ARG				S	**Sn**	**03 17 37.3**	**+0.3**
ARG				AML	AML	03 17 39.0	
	comp=E,772μm,0.3s						
ARG				AML	AML	03 17 41.1	
	comp=N,439μm,0.3s						
KARP	**Karpathos**	**0.71**	**245**	PG	**Pb**	**03 17 35.0**	**0.0**
KARP				SG	**Sn**	**03 17 45.3**	**+0.6**
KARP	**Karpathos**	**0.71**	**245**	P	**Pn**	**03 17 34.7**	**

MD4.7(MEX), Error ellipse: s-maj=14.8km s-min=9.2km az=48.0

ISC 07 03:17:53.6±0.4, 30°01'N±0'05×114°19'W±0'05, h10km, n480, σ1931/480, mb4.7/65, MS4.2/22, 11C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.51**	**313**	*eP*	**Pn**	**03 18 18.0**	**-3.0**
SPX				*eS*	**Sn**	**03 18 36.0**	**-4.9**
SPX	**San Pedro Mart**	**1.51**	**313**	⇑*eP*	**Pn**	**03 18 18.1**	**-3.0**
SPX				*eS*	**Sn**	**03 18 37.7**	**-3.2**
SPX	comp=E,6μm,1.7s			IAML		03 18 42.0	
SPX				⇑*e*		03 18 42.0	
SPIG	**San Pedro Mart**	**1.51**	**313**	*e*Pn	**Pn**	**03 18 18.0**	**-3.0**
SPIG				*e*Sn	**Sn**	**03 18 36.6**	**-4.3**
SPIG	**San Pedro Mart**	**1.51**	**313**	*e*P	**Pn**	**03 18 18.0**	**-3.0**
SPIG				*e*S	**Sn**	**03 18 36.6**	**-4.3**
SPIG	**San Pedro Mart**	**1.51**	**313**	⇑*e*P	**Pn**	**03 18 18.1**	**-3.0**
ECBX	**El Chinero**	**1.63**	**333**	⇓*e*P	**Pn**	**03 18 18.6**	**-3.8**
214A	**Organ Pipe Nat**	**2.27**	**31**	P	**Pn**	**03 18 28.4**	**-2.8**
	baz=212,SNR=279						
ZAX	**El Zacaton**	**2.34**	**310**	⇑*e*P	**Pn**	**03 18 29.8**	**-2.4**
ZAX				IAML		03 19 10.0	
	comp=N,6μm,0.8s						
MBIG	**Mexicali**	**2.54**	**340**	*e*Pn	**Pn**	**03 18 36.7**	**+1.9**
MBIG	**Mexicali**	**2.54**	**340**	*e*P	**Pn**	**03 18 36.7**	**+1.9**
CPBX	**Cerro Prieto**	**2.58**	**339**	*e*P	**Pn**	**03 18 33.1**	**-2.4**
ECNX	**Esteban Cantu**	**2.64**	**309**	*e*P	**Pn**	**03 18 34.2**	**-2.2**
113A	**Mohawk Valley,**	**2.77**	**7**	*e*Pn	**Pn**	**03 18 35.4**	**-2.7**
PBX	**Punta Banda**	**2.78**	**309**	*e*P	**Pn**	**03 18 36.0**	**-2.2**
HSIG		**2.99**	**109**	*e*Pn	**Pn**	**03 18 39.7**	**-1.5**
HSIG		**2.99**	**109**	*e*P	**Pn**	**03 18 37.6**	**-3.5**
HSIG				*e*S	**Sn**	**03 19 11.8**	**-5.2**
HSIG		**2.99**	**109**	*e*P	**Pn**	**03 18 39.0**	**-2.1**
GLA	**Glamis**	**3.08**	**350**	*e*Pn	**Pn**	**03 18 40.1**	**-2.2**
GLA	**Glamis**	**3.08**	**350**	*e*P	**Pn**	**03 18 40.1**	**-2.2**
GLA	**Glamis**	**3.08**	**350**	P	**Pn**	**03 18 39.7**	**-2.7**
	baz=169,SNR=16						
GLA	**Glamis**	**3.08**	**350**	*e*P	**Pn**	**03 18 39.8**	**-2.5**
IKP	**In-Ko-Pah, Jac**	**3.10**	**328**	P	**Pn**	**03 18 39.1**	**-3.6**
	baz=147,SNR=16						
IKP	**In-Ko-Pah, Jac**	**3.10**	**328**	*e*P	**Pn**	**03 18 39.5**	**-3.2**
CBX	**Cerro Bola**	**3.12**	**318**	*e*Pn	**Pn**	**03 18 40.9**	**-2.1**
CBX				*e*Sn	**Sn**	**03 19 18.3**	**-2.2**
CBX	**Cerro Bola**	**3.12**	**318**	*e*P	**Pn**	**03 18 40.9**	**-2.1**
CBX				*i* S	**Sn**	**03 19 18.3**	**-2.2**
CBX	**Cerro Bola**	**3.12**	**318**	IAML		03 19 40.2	
	comp=N,3μm,1.8s						
CBX				⇑*e*		03 19 40.2	
SRIG	**Santa Rosalia**	**3.18**	**147**	*e*Pn	**Pn**	**03 18 44.7**	**+1.0**
SRIG	**Santa Rosalia**	**3.18**	**147**	*i* S	**Sn**	**03 19 18.4**	**-3.4**
TJIG	**Tijuana**	**3.22**	**319**	*e*P	**Pn**	**03 18 42.1**	**-2.1**
TJIG				*i* S	**Sn**	**03 19 19.1**	**-3.6**
SWSC	**Sam W. Stewart**	**3.23**	**335**	P	**Pn**	**03 18 41.2**	**-3.2**
	baz=154,SNR=20						
BAR	**Barrett**	**3.40**	**322**	*e*Pn	**Pn**	**03 18 44.9**	**-1.9**
MONP2	**Monument Peak**	**3.45**	**327**	P	**Pn**	**03 18 44.9**	**-2.7**
	baz=145,SNR=25						
GUYB	**Guaymas**	**3.59**	**125**	*e*P	**Pn**	**03 18 47.4**	**-1.9**
GUYB				*e*S	**Sn**	**03 19 27.5**	**-4.2**
TUC	**Tucson**	**3.71**	**51**	P	**Pn**	**03 18 48.6**	**-2.5**
Y12C	**Blythe**	**3.74**	**356**	*e*Pn	**Pn**	**03 18 49.3**	**-2.1**
Y12C	**Blythe**	**3.74**	**356**	P	**Pn**	**03 18 49.0**	**-2.4**
	baz=175,SNR=21						
BC3	**Big Chuckawall**	**3.79**	**344**	P	**Pn**	**03 18 50.0**	**-2.2**
	baz=163,SNR=34						
109C	**Camp Elliot, M**	**3.80**	**320**	P	**Pn**	**03 18 50.0**	**-2.2**
	baz=138,SNR=18						
CPE	**Camp Elliot**	**3.80**	**320**	*e*Pn	**Pn**	**03 18 50.7**	**-1.5**
Y14A	**Wickenburg**	**4.04**	**14**	*e*Pn	**Pn**	**03 18 54.0**	**-1.6**
PFO	**Pinyon Flats O**	**4.08**	**332**	Pn	**Pn**	**03 18 53.8**	**-2.3**
	comp=N,2.0nm,0.3s,baz=149,slow=12,SNR=16						
PFO				Pg	**Pb**	**03 19 08.5**	**+2.9**
	comp=N,1.0nm,0.3s,baz=159,slow=11,SNR=7.8						
PFO				Lg	Lg	03 19 59.2	
	comp=N,20nm,0.3s,baz=92,slow=21,SNR=6.5						
PFO	**Pinyon Flats O**	**4.08**	**332**	P	**Pn**	**03 18 53.7**	**-2.5**
	baz=151,SNR=12						
IRM	**Iron Mountain**	**4.21**	**349**	P	**Pn**	**03 18 56.2**	**-1.7**
	baz=168,SNR=17						
BELC	**Belle Mtn. Jos**	**4.26**	**339**	P	**Pn**	**03 18 58.5**	**-0.2**
	baz=158,SNR=14						
PDMCI	**Parker Dam,Lak**	**4.28**	**1**	P	**Pn**	**03 18 57.4**	**-1.4**
	baz=180,SNR=18						
MURC	**Murrieta**	**4.40**	**325**	P	**Pn**	**03 18 58.8**	**-1.7**
	baz=143,SNR=7.1						
319A	**Douglas**	**4.44**	**71**	*e*Pn	**Pn**	**03 18 59.8**	**-1.3**
NEE2	**Needles Airpor**	**4.75**	**356**	P	**Pn**	**03 19 04.6**	**-0.8**
	baz=175						
BBRC	**Big Bear Solar**	**4.83**	**332**	P	**Pn**	**03 19 07.2**	**+0.6**
	baz=150						
GMRC	**Granite Mounta**	**4.92**	**346**	P	**Pn**	**03 19 06.6**	**-1.2**
	baz=165						
CIS	**Catalina Islan**	**4.94**	**314**	P	**Pn**	**03 19 08.2**	**+0.3**
	baz=132						
X16A	**Lo Mia Camp, P**	**4.97**	**27**	*e*Pn	**Pn**	**03 19 06.7**	**-1.8**
HEC	**Hector,Ludlow**	**5.13**	**340**	P	**Pn**	**03 19 11.6**	**+0.9**
	baz=158						
BFSC	**Mount Baldy Ra**	**5.14**	**326**	P	**Pn**	**03 19 12.4**	**+1.6**
	baz=144						
MWC	**Mount Wilson**	**5.33**	**323**	*e*Pn	**Pn**	**03 19 14.7**	**+1.3**
MWC	**Mount Wilson**	**5.33**	**323**	*e*P	**Pn**	**03 19 14.7**	**+1.3**
PAS	**Pasadena**	**5.33**	**322**	P	**Pn**	**03 19 15.6**	**+2.3**
PASC	**Pasadena Art C**	**5.36**	**322**	*e*Pn	**Pn**	**03 19 15.1**	**+1.5**
DECC	**Green Verdugo**	**5.50**	**321**	P	**Pn**	**03 19 15.2**	**-0.4**
	baz=139						
TUQ	**Turquoise Moun**	**5.60**	**345**	P	**Pn**	**03 19 15.7**	**-1.4**
	baz=164,SNR=6.2						
GSC	**Goldstone, Bar**	**5.72**	**338**	P	**Pn**	**03 19 19.0**	**+0.4**
	baz=156						
EDW2	**Edwards Air Fo**	**5.82**	**327**	P	**Pn**	**03 19 20.6**	**+0.5**
	baz=145						
WUAZ	**Wupatki**	**5.98**	**23**	*e*Pn	**Pn**	**03 19 21.6**	**-0.8**
WUAZ	**Wupatki**	**5.98**	**23**	P	**Pn**	**03 19 21.5**	**-0.8**
	baz=204,SNR=31						
OSI	**Osito Audit: C**	**5.98**	**321**	P	**Pn**	**03 19 22.8**	**+0.5**
	baz=138						
121A	**Cookes Peak, D**	**6.03**	**64**	P	**Pn**	**03 19 22.0**	**-1.0**
	baz=247,SNR=23						
SHOC	**Shoshone, Teco**	**6.13**	**344**	P	**Pn**	**03 19 24.6**	**+0.4**
	baz=162						
LRMC	**Laurel Mtn Rad**	**6.20**	**333**	P	**Pn**	**03 19 25.1**	**-0.2**
	baz=150						
W18A	**Petrified Fore**	**6.33**	**35**	*e*Pn	**Pn**	**03 19 26.4**	**-0.7**
W18A	**Petrified Fore**	**6.33**	**35**	P	**Pn**	**03 19 27.0**	**-0.1**
	baz=218,SNR=9.5						
ARVC	**Arvin**	**6.43**	**324**	P	**Pn**	**03 19 28.8**	**+0.4**
	baz=141						
MPMC	**Manual Prospec**	**6.63**	**336**	P	**Pn**	**03 19 32.1**	**+0.8**
	baz=154,SNR=8.7						
ISA	**Isabella, Lake**	**6.69**	**329**	P	**Pn**	**03 19 32.3**	**+0.3**
	baz=146,SNR=11						
PKM	**Mcpherson Peak**	**6.80**	**317**	P	**Pn**	**03 19 33.9**	**+0.3**
	baz=134,SNR=14						
FURC	**Furnace Creek,**	**6.81**	**342**	P	**Pn**	**03 19 34.8**	**+1.2**
	baz=160						
LCMT	**Little Creek M**	**7.03**	**6**	*e*Pn	**Pn**	**03 19 36.9**	**+0.2**
VES	**Vestal, Richgr**	**7.12**	**326**	P	**Pn**	**03 19 39.0**	**+1.2**
	baz=143,SNR=7.0						
TPNV	**Topopah Spring**	**7.13**	**347**	P	**Pn**	**03 19 38.4**	**+0.3**
	baz=165,SNR=21						
CWC	**Cottonwood Cre**	**7.19**	**334**	P	**Pn**	**03 19 39.4**	**+0.4**
	baz=152						
SMMC	**Simmler**	**7.20**	**319**	P	**Pn**	**03 19 40.3**	**+1.2**
	baz=135						
Y22D	**IRIS PASSCAL I**	**7.38**	**55**	P	**Pn**	**03 19 41.0**	**-0.5**
	baz=239						
GRAC	**Grapevine Rang**	**7.45**	**340**	P	**Pn**	**03 19 43.4**	**+1.0**
	baz=158,SNR=18						
MNTX	**Cornudas Mount**	**7.75**	**75**	P	**Pn**	**03 19 46.0**	**-0.6**
	baz=260,SNR=10						
TASM	**ASL Pad, Albuq**	**8.17**	**51**	P	**Pn**	**03 19 51.8**	**-0.7**
	baz=235,SNR=8.7						
TASM	**ASL Pad, Albuq**	**8.17**	**51**	P	**Pn**	**03 19 51.3**	**-1.2**
	baz=235						
ANMO	**Albuquerque**	**8.17**	**51**	Pn	**Pn**	**03 19 50.5**	**-2.0**
	comp=N,0.4nm,0.3s,baz=216,slow=13,SNR=12						
ANMO				Lg	Lg	03 22 13.1	
	comp=N,0.2nm,0.3s,baz=33,slow=16,SNR=3.0						
ANMO				LR	LR	03 23 25.6	
	comp=N,2μm,18.5s,baz=240,slow=41						
ANMO	**Albuquerque**	**8.17**	**51**	*e*P	**Pn**	**03 19 51.8**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ANMO	**Albuquerque**	**8.17**	**51**	P	**Pn**	**03 19 51.2**	**-1.3**
	baz=235						
R11A	**Troy Canyon, C**	**8.39**	**352**	P	**Pn**	**03 19 55.5**	**0.0**
	baz=172,SNR=20						
MVCO	**Mesa Verde**	**8.60**	**32**	P	**Pn**	**03 19 58.5**	**+0.1**
	baz=215,SNR=5.6						
NVAR	**Mina Array Bea**	**9.06**	**339**	Pn	**Pn**	**03 20 07.1**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=168,slow=12,SNR=30						
NVAR				Lg	Lg	03 22 40.7	
	baz=168,slow=27,SNR=2.6						
TXAR	**Lajitas Array**	**9.18**	**92**	Pn	**Pn**	**03 20 06.0**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=265,slow=13,SNR=29						
TXAR				Sn	**Sn**	**03 21 48.1**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=270,slow=19,SNR=9.3						
TXAR				Lg	Lg	03 22 40.5	
	comp=Z,1.0nm,0.3s,baz=292,slow=28,SNR=6.5						
S22A	**4UR Ranch, Cre**	**9.84**	**36**	P	**Pn**	**03 20 14.5**	**-0.9**
	baz=220						
DUG	**Dugway, Tooele**	**10.22**	**6**	P	**Pn**	**03 20 22.5**	**+2.0**
	baz=187,SNR=6.0						
MSTX	**Muleshoe**	**10.46**	**65**	P	**Pn**	**03 20 25.4**	**+1.6**
	baz=251						
SDCO	**Great Sand Dun**	**10.56**	**41**	P	**Pn**	**03 20 27.8**	**+2.5**
	baz=226,SNR=9.6						
ELK	**Elko**	**10.74**	**356**	Pn	**Pn**	**03 20 29.6**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=178,slow=11,SNR=6.3						
ELK				LR	LR	03 24 32.1	
	comp=Z,545nm,20.0s,baz=174,slow=37						
T25A	**Trinidad**	**10.81**	**46**	P	**Pn**	**03 20 31.2**	**+2.5**
	baz=232,SNR=16						
O20A	**White River Ci**	**11.21**	**24**	P	**Pn**	**03 20 36.5**	**+2.5**
	baz=207						
AMTX	**Amarillo**	**11.62**	**62**	P	**Pn**	**03 20 42.0**	**+2.3**
	baz=249						
O03E	**Paynes Creek**	**11.99**	**331**	P	Pn	03 20 50.2	+5.4
	baz=146						
ISCO	**Idaho Springs**	**12.03**	**33**	P	Pn	03 20 50.2	+4.8
	baz=218,SNR=13						
O02D	**Mt. Diablo Mer**	**12.34**	**328**	P	**Pn**	**03 20 54.1**	**+4.7**
	baz=142						
JCT	**Junction City**	**12.45**	**84**	P	**Pn**	**03 20 53.6**	**+2.6**
	baz=272,SNR=15						
ABTX	**Abilene, Hawle**	**12.71**	**74**	P	**Pn**	**03 20 56.6**	**+2.2**
	baz=262						
N23A	**Red Feather La**	**12.76**	**29**	P	**Pn**	**03 20 57.4**	**+2.1**
	baz=214						
N02D	**Trinity Center**	**12.94**	**330**	P	**Pn**	**03 21 01.3**	**+3.6**
	baz=145						
KSCO	**Kaye Shedlock'**	**13.08**	**44**	P	**Pn**	**03 21 01.4**	**+1.8**
	baz=230						
BW06	**Boulder Array**	**13.26**	**15**	P	**Pn**	**03 21 04.8**	**+2.7**
	baz=198,SNR=10						
PDAR	**Pinedale Array**	**13.26**	**15**	Pn	**Pn**	**03 21 03.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=182,slow=11,SNR=16						
M04C	**Macdoel**	**13.27**	**334**	P	**Pn**	**03 21 04.9**	**+2.7**
	baz=150,SNR=10						
M02C	**Callahan**	**13.35**	**331**	P	**Pn**	**03 21 05.6**	**+2.4**
	baz=145,SNR=6.3						
HLID	**Hailey**	**13.53**	**359**	P	**Pn**	**03 21 07.3**	**+1.6**
	baz=179,SNR=21						
YBH	**Yreka Blue Hor**	**13.57**	**332**	Pn	**Pn**	**03 21 08.9**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=158,slow=13,SNR=8.7						
YBH				LR	LR	03 26 11.8	
	comp=Z,556nm,18.1s,baz=158,slow=37						
L04D	**Klamath Falls**	**13.82**	**334**	P	**Pn**	**03 21 12.0**	**+2.3**
	baz=149,SNR=7.2						
WMOK	**Wichita Mounta**	**13.84**	**66**	P	**Pn**	**03 21 11.7**	**+1.7**
WMOK				pmax	pmax		
	comp=Z,19nm,1.5s						
WMOK	**Wichita Mounta**	**13.84**	**66**	P	**Pn**	**03 21 10.6**	**+0.7**
	baz=254,SNR=11						
K22A	**Casper**	**14.03**	**24**	P	**Pn**	**03 21 14.2**	**+1.5**
	baz=208,SNR=7.2						
J05D	**Fort Rock, OR**	**14.39**	**339**	P	**Pn**	**03 21 20.7**	**+3.2**
	baz=155,SNR=15						
WHTX	**Lake Whitney,**	**14.49**	**78**	P	**Pn**	**03 21 18.6**	**-0.1**
	baz=267						
J04D	**Umpqua Nationa**	**14.64**	**337**	P	**Pn**	**03 21 23.6**	**+2.6**
	baz=152,SNR=6.4						
K02D	**Willamette Mer**	**14.77**	**332**	P	**Pn**	**03 21 24.2**	**+1.6**
	baz=146						
CBKS	**Cedar Bluff**	**14.80**	**50**	P	**Pn**	**03 21 24.5**	**+1.5**
	baz=238						
J01E	**Myrtle Point**	**15.26**	**332**	P	**P**	**03 21 33.2**	**-0.8**
	baz=146						
I05D	**Terrebonne, OR**	**15.38**	**340**	P	**P**	**03 21 34.3**	**-1.1**
	baz=156,SNR=11						
RLMT	**Red Lodge**	**15.57**	**13**	P	**Pn**	**03 21 35.5**	**+2.1**
	baz=196,SNR=9.1						
BOZ	**Bozeman (W)**	**15.69**	**7**	P	**P**	**03 21 37.4**	**-1.5**
	baz=188,SNR=24						
HKT	**Hockley**	**15.91**	**86**	P	**P**	**03 21 44.1**	**+2.9**
I02D	**Swisshome**	**16.02**	**334**	P	**P**	**03 21 41.4**	**-1.1**
	baz=148						
G05D	**Wamic, OR**	**16.21**	**342**	P	**P**	**03 21 43.2**	**-1.3**
	baz=157,SNR=6.8						
RSSD	**Black Hills**	**16.23**	**27**	P	**Pn**	**03 21 42.2**	**+0.3**
	baz=213						
TUL1	**Leonard**	**16.51**	**64**	P	**P**	**03 21 46.9**	**-1.1**
	baz=254,SNR=7.8						
MSO	**Missoula**	**16.79**	**1**	P	**Pn**	**03 21 49.4**	**+0.5**
	baz=181,SNR=16						
F05D	**White Salmon**	**16.84**	**342**	P	**P**	**03 21 51.2**	**-0.4**
	baz=158						
NATX	**Nacogdoches**	**16.86**	**79**	P	**Pn**	**03 21 49.6**	**-0.1**
	baz=269						
KSU1	**Kansas State U**	**17.06**	**53**	P	**Pn**	**03 21 52.5**	**+0.3**
	baz=243						
BGNE	**Belgrade**	**17.26**	**44**	*e*Pn	**P**	**03 21 55.6**	**-0.6**
	comp=Z,148nm,1.6s						
BGNE	**Belgrade**	**17.26**	**44**	P	**Pn**	**03 21 54.9**	**+0.1**
	baz=234						
D08A	**Wollman Farm,**	**17.41**	**349**	*e*Pn	**P**	**03 21 57.4**	**-0.5**
	comp=Z,14nm,1.1s						
LON	**Longmire**	**17.73**	**343**	*e*Pn	**P**	**03 22 02.3**	**+0.8**
	comp=Z,46nm,1.3s						
LON	**Longmire**	**17.73**	**343**	*e*P	**P**	**03 22 02.3**	**+0.8**
LON				pmax	pmax		
	comp=Z,46nm,1.3s						
E04D	**Cinebar**	**17.76**	**341**	P	**P**	**03 22 02.2**	**+0.5**
	baz=156						
LAO	**LASA Array**	**17.77**	**18**	*e*Pn	**Pn**	**03 22 01.3**	**+0.3**
	comp=Z,40nm,1.1s						
LAO	**LASA Array**	**17.77**	**18**	P	**P**	**03 22 01.7**	**-0.2**
	baz=203,SNR=8.3						
LTY	**Liberty**	**17.94**	**346**	*e*Pn	**P**	**03 22 04.2**	**+0.5**
	comp=Z,17nm,1.1s						
W39A	**Magazine**	**17.94**	**68**	*e*Pn	**P**	**03 22 03.8**	**0.0**
	comp=Z,48nm,1.6s						
W39A	**Magazine**	**17.94**	**68**	P	**Pn**	**03 22 02.5**	**-0.7**
	baz=259						
MIAR	**Mount Ida**	**18.00**	**70**	*e*Pn	**P**	**03 22 04.5**	**+0.1**
	comp=Z,59nm,1.5s						
MIAR	**Mount Ida**	**18.00**	**70**	*e*P	**P**	**03 22 04.5**	**+0.1**
MIAR				pmax	pmax		
	comp=Z,59nm,1.5s						
MIAR	**Mount Ida**	**18.00**	**70**	P	**Pn**	**03 22 03.3**	**-0.7**
	baz=261						
C09A	**Chrisman Ranch**	**18.04**	**351**	*e*Pn	**P**	**03 22 05.2**	**+0.4**
	comp=Z,33nm,1.4s						
HHAR	**Hobbs**	**18.06**	**64**	*e*Pn	**Pn**	**03 22 04.5**	**-0.1**
	comp=Z,25nm,1.4s						
WLAR	**White Oak Lake**	**18.27**	**73**	*e*Pn	**P**	**03 22 07.8**	**+0.3**
	comp=Z,123nm,1.4s						
EGMT	**Eagleton**	**18.31**	**10**	*e*Pn	**P**	**03 22 08.7**	**+0.9**
	comp=Z,44nm,1.3s						
EGMT	**Eagleton**	**18.31**	**10**	P	**P**	**03 22 09.0**	**+1.1**
	baz=192,SNR=9.9						
NEW	**Newport**	**18.36**	**354**	P	**P**	**03 22 09.8**	**+1.4**
	comp=Z,0.0nm,0.3s,baz=177,slow=12,SNR=8.5						
NEW				LR	LR	03 29 24.0	
	comp=Z,577nm,19.0s,baz=184,slow=38						
NEW	**Newport**	**18.36**	**354**	*e*Pn	**P**	**03 22 09.0**	**+0.6**
	comp=Z,28nm,1.4s						
NEW	**Newport**	**18.36**	**354**	P	**P**	**03 22 09.8**	**+1.4**
	baz=172,SNR=5.7						
Z41A	**Richland Creek**	**18.49**	**74**	P	**P**	**03 22 09.1**	**-0.7**
	baz=266						
X40A	**Basin Creek Fa**	**18.60**	**71**	P	**Pn**	**03 22 11.3**	**0.0**
	baz=262						
SUSD	**Miller**	**18.78**	**36**	P	**Pn**	**03 22 13.5**	**0.0**
	baz=225						
D03D	**Eldon**	**18.80**	**341**	P	**Pn**	**03 22 14.8**	**+1.3**
	baz=155						
U40A	**Yellville**	**18.93**	**65**	P	**P**	**03 22 14.1**	**-0.6**
	baz=257,SNR=7.5						
WALA	**Waterton Lakes**	**19.02**	**1**	*e*P	**Pn**	**03 22 16.7**	**+0.2**
	comp=Z,50nm,1.5s						
W41B	**Gary Mavity, V**	**19.18**	**69**	P	**P**	**03 22 17.3**	**-0.1**
	baz=261,SNR=5.8						
ECSD	**EROS Data Cent**	**19.57**	**41**	*e*P	**P**	**03 22 22.1**	**+0.5**
	comp=Z,55nm,1.3s						
ECSD	**EROS Data Cent**	**19.57**	**41**	P	**Pn**	**03 22 22.5**	**-0.5**
	baz=231,SNR=29						
DGMT	**Dagmar**	**19.96**	**20**	P	**P**	**03 22 26.7**	**+0.8**
	baz=206						
X43A	**Marvell**	**20.20**	**71**	P	**P**	**03 22 28.8**	**+0.2**
	baz=264						
VBMS	**Vicksburg**	**20.38**	**78**	P	**P**	**03 22 30.3**	**-0.2**
	baz=270						
CCM	**Cathedral Cave**	**20.60**	**61**	*e*P	**P**	**03 22 33.3**	**+0.4**
	comp=Z,80nm,1.9s						
CCM	**Cathedral Cave**	**20.60**	**61**	*e*P	**P**	**03 22 33.3**	**+0.4**
CCM				pmax	pmax		
	comp=Z,80nm,1.9s						
CCM	**Cathedral Cave**	**20.60**	**61**	P	**P**	**03 22 32.4**	**-0.5**
	baz=254						
SCIA	**State Center**	**20.65**	**49**	P	**P**	**03 22 32.8**	**-0.7**
	baz=242						
MDND	**Maddock**	**21.05**	**28**	P	**P**	**03 22 37.4**	**-0.3**
	baz=217						
N40A	**Mertquake, Sal**	**21.31**	**53**	P	**P**	**03 22 40.1**	**-0.5**
	baz=246						
LLLB	**Lillooet**	**21.37**	**346**	*e*P	**P**	**03 22 42.7**	**+1.5**
	comp=Z,56nm,1.2s						
OXF	**Oxford**	**21.41**	**71**	P	**P**	**03 22 41.1**	**-0.5**
	baz=265						
N41A	**Harden Midland**	**21.75**	**54**	P	**P**	**03 22 45.2**	**-0.1**
	baz=248,SNR=16						
CMIG	**Matias Romero**	**21.83**	**122**	P	**P**	**03 22 46.8**	**+0.5**
	comp=Z,9.7nm,0.9s,baz=327,slow=7.5,SNR=6.6						
CMIG				LR	LR	03 31 34.9	
	comp=Z,1μm,21.1s,baz=291,slow=38						
S44A	**Carbondale**	**22.04**	**63**	P	**P**	**03 22 48.1**	**-0.3**
	baz=257,SNR=7.0						
L40A	**Anamosa**	**22.05**	**51**	P	**P**	**03 22 47.3**	**-1.1**
	baz=244,SNR=12						
X46A	**Booneville**	**22.09**	**72**	P	**P**	**03 22 48.4**	**-0.5**
	baz=265						
M41A	**Milan**	**22.23**	**53**	P	**P**	**03 22 50.1**	**-0.3**
	baz=247,SNR=5.7						
W46A	**Michie**	**22.32**	**70**	P	**P**	**03 22 51.3**	**-0.1**
	baz=264						
P43A	**Skaggs, Pawnee**	**22.35**	**58**	P	**P**	**03 22 51.2**	**-0.5**
	baz=252						
V46A	**Holladay**	**22.60**	**68**	P	**P**	**03 22 54.1**	**-0.4**
	baz=263,SNR=8.1						
U46A	**Springville**	**22.63**	**67**	P	**P**	**03 22 53.7**	**-1.0**
	baz=261						
SPMN	**Marine on St.**	**22.65**	**42**	P	**P**	**03 22 54.7**	**-0.1**
	baz=235,SNR=9.8						
X47A	**Russelville**	**22.69**	**72**	P	**P**	**03 22 55.4**	**0.0**
	baz=266,SNR=11						
HDIL	**Hopedale**	**22.81**	**56**	P	**P**	**03 22 56.3**	**-0.3**
	baz=250						
WVT	**Waverly**	**22.88**	**68**	*e*P	**P**	**03 22 58.0**	**+0.7**
	comp=Z,57nm,1.5s						
WVT	**Waverly**	**22.88**	**68**	*e*P	**P**	**03 22 58.0**	**+0.7**
WVT				pmax	pmax		
	comp=Z,57nm,1.5s						
WVT	**Waverly**	**22.88**	**68**	P	**P**	**03 22 56.8**	**-0.6**
	baz=262						
R45A	**Skylar, Fairfi**	**22.92**	**62**	P	**P**	**03 22 57.2**	**-0.5**
	baz=257						
N43A	**Stutzman Famil**	**23.03**	**55**	P	**P**	**03 22 58.4**	**-0.5**
	baz=250						
AGMN	**Agassiz Nation**	**23.04**	**32**	P	**P**	**03 22 59.0**	**+0.1**
	baz=224						
F37A	**Hinrichs Farm,**	**23.04**	**41**	P	**P**	**03 22 59.6**	**+0.7**
	baz=234						
JFWS	**Jewell Farm**	**23.07**	**50**	P	**P**	**03 22 59.0**	**-0.2**
	baz=244,SNR=6.3						
L42A	**Oliver, Polo**	**23.08**	**52**	P	**P**	**03 22 58.4**	**-0.9**
	baz=247						
V47A	**Nunnelly**	**23.09**	**68**	P	**P**	**03 22 59.2**	**-0.3**
	baz=263						
Q45A	**Warren Harvey,**	**23.16**	**61**	P	**P**	**03 23 00.2**	**-0.1**
	baz=255,SNR=6.7						
Y48A	**Jasper**	**23.22**	**73**	P	**P**	**03 23 01.0**	**0.0**
	baz=268						
S46A	**Don Dixon Farm**	**23.23**	**64**	P	**P**	**03 23 00.9**	**0.0**
	baz=259						
249A	**Camden**	**23.27**	**78**	P	**P**	**03 23 01.7**	**+0.4**
	baz=272,SNR=6.0						
O44A	**Mansfield**	**23.28**	**57**	P	**P**	**03 23 00.3**	**-1.1**
	baz=252						
LRAL	**Lakeview Retre**	**23.

comp=Z,36nm,1.3s
Y50A **Piedmont** 24.42 73 P P 03 23 12.5 +0.1
baz=269
WCI **Wyandotte Cave** 24.44 63 *e*P P 03 23 12.8 +0.3
comp=Z,15nm,0.9s
WCI **Wyandotte Cave** 24.44 63 P P 03 23 12.6 +0.1
baz=259
ULM **Lac du Bonnet** 24.47 29 P P 03 23 12.2 -0.4
comp=Z,20nm,1.1s,baz=229,slow=9.9,SNR=18
ULM LR LR 03 33 11.6
comp=Z,155nm,21.8s,baz=234,slow=38
ULM **Lac du Bonnet** 24.47 29 *e*P P 03 23 12.2 -0.4
comp=Z,65nm,1.4s
ULM **Lac du Bonnet** 24.47 29 *e*P P 03 23 12.2 -0.4
ULM pmax pmax
comp=Z,65nm,1.4s
J43A **Natural Harves** 24.48 50 P P 03 23 12.3 -0.5
baz=246
Q47A **Bedord North L** 24.48 61 P P 03 23 12.5 -0.4
baz=257
X50B **Fort Payne** 24.50 72 P P 03 23 13.6 +0.4
baz=268,SNR=7.1
S48A **Wiedeman Farm,** 24.52 64 P P 03 23 13.5 +0.2
baz=260,SNR=6.8
U49A **Red Boiling Sp** 24.57 67 P P 03 23 14.7 +1.0
baz=263,SNR=6.6
E39A **Mellen** 24.60 42 P P 03 23 13.4 -0.5
baz=237,SNR=7.0
F40A **Park Falls** 24.61 43 P P 03 23 13.4 -0.6
baz=238,SNR=16
251A **Midway** 24.71 78 P P 03 23 15.3 +0.2
baz=273,SNR=7.4
P47A **Martinsville** 24.73 60 P P 03 23 14.6 -0.6
baz=256,SNR=6.5
N46A **Monticello** 24.76 57 P P 03 23 15.6 +0.2
baz=253
151A **Opelika** 24.77 77 P P 03 23 15.7 +0.2
baz=272
R48A **Northridge Ran** 24.80 63 P P 03 23 15.4 -0.3
baz=259
G41A **Antigo** 24.82 45 P P 03 23 15.4 -0.4
baz=241
W50A **Signal Mountai** 24.82 70 P P 03 23 15.2 -0.9
baz=266,SNR=8.9
T49A **Edmonton** 24.84 66 P P 03 23 16.1 -0.1
baz=262,SNR=11
Z51A **Franklin** 24.88 75 P P 03 23 16.5 -0.1
baz=270
H42A **Shiocton** 24.89 47 P P 03 23 16.9 +0.3
baz=243
Y51A **Rockmart** 24.97 73 P P 03 23 17.9 +0.4
baz=269,SNR=9.8
EYMN **Ely** 24.99 38 *e*P P 03 23 17.1 -0.3
comp=Z,16nm,1.0s
EYMN **Ely** 24.99 38 P P 03 23 17.2 -0.3
baz=232,SNR=7.0
O47A **Sheridan** 24.99 58 P P 03 23 17.4 -0.1
baz=255
Q48A **North Vernon** 25.01 62 P P 03 23 17.1 -0.5
baz=258
E40A **Wakefield** 25.02 42 P P 03 23 17.7 +0.1
baz=238,SNR=19
F41A **Three Lakes** 25.12 44 P P 03 23 18.7 0.0
baz=240,SNR=7.8
352A **Blakely** 25.16 79 P P 03 23 18.9 -0.2
baz=274
X51A **Calhoun** 25.16 72 P P 03 23 18.8 -0.3
baz=268,SNR=6.1
W51A **Cleveland** 25.27 71 P P 03 23 20.2 +0.1
baz=267,SNR=5.6
152A **Waverly Hall** 25.27 76 P P 03 23 20.4 +0.3
baz=272,SNR=11
252A **Lumpkin** 25.29 78 P P 03 23 20.7 +0.5
baz=273
U50A **Jamestown** 25.31 68 P P 03 23 20.3 -0.1
baz=264
P48A **Milroy** 25.36 60 P P 03 23 20.5 -0.3
baz=257
H43A **Windswept, Lux** 25.36 48 P P 03 23 19.9 -0.9
baz=244
T50A **Nancy** 25.38 66 P P 03 23 21.5 +0.4
baz=263
Z52A **Williamson** 25.51 75 P P 03 23 22.3 0.0
baz=271
E41A **Kenton** 25.58 43 P P 03 23 22.2 -0.5
baz=239,SNR=8.8
M47A **Cromwell** 25.70 56 P P 03 23 23.7 -0.3
baz=253
O48A **Farmland** 25.75 59 P P 03 23 24.1 -0.3
baz=256
G43A **Wallace** 25.77 46 P P 03 23 24.3 -0.2
baz=243
253A **Americus** 25.80 78 P P 03 23 24.4 -0.5
baz=274
Y52A **Lilburn** 25.81 74 P P 03 23 25.1 +0.2
baz=270
S50A **Richmond** 25.82 65 P P 03 23 25.4 +0.4
baz=262
P49A **Miami Univ. Ec** 25.91 61 P P 03 23 26.9 +1.1
baz=258
W52A **Murphy** 25.95 71 P P 03 23 26.3 0.0
baz=267
X52A **Dahlonega** 25.96 72 P P 03 23 26.6 +0.2
baz=268
U51A **La Follette** 25.97 68 P P 03 23 25.6 -0.8
baz=265
R50A **Paris** 25.97 63 P P 03 23 26.1 -0.3
baz=260
K46A **Dorr** 26.01 53 P P 03 23 26.7 0.0
baz=250
D41A **Chassel** 26.12 42 P P 03 23 26.4 -1.2
baz=238,SNR=7.0
E42A **Champion** 26.18 44 P P 03 23 27.6 -0.7
baz=240,SNR=7.1
Y53A **Monroe** 26.20 74 P P 03 23 28.0 -0.6
baz=270
FFC **Flin Flon** 26.21 16 *e*P P 03 23 28.4 -0.1
comp=Z,23nm,1.3s
FFC **Flin Flon** 26.21 16 *e*P P 03 23 28.4 -0.1
FFC pmax pmax
comp=Z,23nm,1.3s
C40A **Isle Royale Na** 26.25 40 P P 03 23 28.0 -0.8
baz=236,SNR=7.4
O49A **Covington** 26.34 59 P P 03 23 29.4 -0.3
baz=257
F43A **Flat Rock, Esc** 26.36 46 P P 03 23 29.6 -0.2
baz=242
X53A **Estanollee** 26.45 72 P P 03 23 31.6 +0.9
baz=269
K47A **Vermontville** 26.55 54 P P 03 23 31.1 -0.5
baz=251
R51A **Hillsboro** 26.55 64 P P 03 23 31.8 +0.1
baz=261
W53A **Cullowhee** 26.58 71 P P 03 23 31.4 -0.7
baz=268
P50A **Jamestown** 26.62 61 P P 03 23 32.2 -0.1
baz=258
N49A **Columbus Grove** 26.63 58 P P 03 23 31.4 -1.0
baz=255
I46A **Reed City** 26.68 51 P P 03 23 32.1 -0.7
baz=248
E43A **Lone Tree Farm** 26.72 45 P P 03 23 32.6 -0.4
baz=242
Z54A **Sparta** 26.83 75 P P 03 23 34.6 +0.3
baz=272
J47A **Sunmer** 26.86 52 P P 03 23 33.0 -1.4
baz=250
F44A **Big Bay de Noc** 26.88 46 P P 03 23 33.1 -1.5
baz=243
M49A **Liberty Center** 26.93 57 P P 03 23 34.0 -1.0
baz=255
Y54A **Tignall** 26.95 74 P P 03 23 33.9 -1.4
baz=271
G45A **Suttons Bay** 26.97 48 P P 03 23 35.3 0.0
baz=246
H46A **Fife Lake** 27.07 50 P P 03 23 36.7 +0.5
baz=247
U53A **Fall Branch** 27.12 68 P P 03 23 36.5 -0.4
baz=266
P51A **Williamsport** 27.15 61 P P 03 23 37.0 -0.1
baz=259
I47A **Gladwin** 27.34 51 P P 03 23 38.4 -0.3
baz=249
N50A **Nevada** 27.36 58 P P 03 23 38.5 -0.4
baz=257
ACSO **Alum Creek Sta** 27.36 60 P P 03 23 38.8 -0.1
baz=258
O51A **Pataskala** 27.63 60 P P 03 23 41.9 +0.6
baz=258
R53A **Hurricane** 27.82 64 P P 03 23 41.6 -1.6
baz=262
L50A **Kingsville** 27.92 56 P P 03 23 43.1 -0.8
baz=255
KMSC **Kings Mountain** 28.08 71 P P 03 23 45.0 -0.4
baz=269
U55A **TA2, Sparta** 28.36 68 P P 03 23 46.9 -1.2
baz=266
E46A **Sault Ste Mari** 28.38 47 P P 03 23 47.0 -0.9
baz=245
P53A **Whipple** 28.43 62 P P 03 23 47.9 -0.6
baz=261
N52A **McGinn's Farm,** 28.45 59 P P 03 23 48.3 -0.4
baz=258
D46A **Sault St. Mari** 28.77 46 P P 03 23 51.0 -0.5
baz=245
Q54A **Coxs Mills** 28.78 63 P P 03 23 51.0 -0.6
baz=262
U56A **King** 28.89 68 P P 03 23 51.8 -0.9
baz=267
E47A **Iron Bridge** 29.07 47 P P 03 23 53.6 -0.5
baz=246
N53A **Lisbon** 29.08 59 P P 03 23 53.4 -0.9
baz=259
P54A **Burton** 29.14 62 P P 03 23 55.0 +0.2
baz=261,SNR=5.9
O54A **Avella** 29.31 61 P P 03 23 55.5 -0.8
baz=260
D47A **Chapleau** 29.42 46 P P 03 23 56.7 -0.5
baz=246
P55A **Reedsville** 29.63 62 P P 03 23 58.0 -1.1
baz=262
BWLO **Walkerton** 29.67 53 P P 03 23 58.7 -0.8
baz=253
N54A **Moraine State** 29.74 59 P P 03 23 60.0 -0.2
baz=259
Z59A **Georgetown, SC** 29.82 75 P P 03 23 59.1 -1.7
baz=273
O55A **Ligonier** 30.13 61 P P 03 24 02.7 -0.9
baz=261
DLBC **Dease Lake** 30.44 344 LR LR 03 37 30.3
comp=Z,701nm,19.9s,baz=187,slow=39
DLBC **Dease Lake** 30.44 344 *e*P P 03 24 07.7 +1.5
comp=Z,12nm,0.9s
R57A **Stanardsville** 30.50 65 P P 03 24 06.5 -0.4
baz=265
D49A **Beulah Townshi** 30.60 46 P P 03 24 06.9 -0.7
baz=248
O56A **Blue Knob Stat** 30.69 61 P P 03 24 07.7 -0.9
baz=262
M55A **Ridgway** 30.74 58 P P 03 24 08.1 -0.9
baz=260
N56A **West Decatur** 31.00 60 P P 03 24 10.3 -0.9
baz=261
P57A **Homestead Farm** 31.02 62 P P 03 24 11.2 -0.2
baz=264
SSPA **Standing Stone** 31.26 60 *e*P P 03 24 14.0 +0.5
comp=Z,19nm,1.3s
SSPA **Standing Stone** 31.26 60 P P 03 24 12.9 -0.7
baz=262
D50A **G1974 Best Tow** 31.52 47 P P 03 24 15.5 -0.3
baz=249
G53A **Haliburton** 31.68 52 P P 03 24 16.6 -0.6
baz=254
J55A **Hilton** 31.78 55 P P 03 24 18.0 -0.1
baz=258
E52A **Mattawa** 32.00 50 P P 03 24 19.8 -0.1
baz=252
BANO **Bancroft** 32.13 52 P P 03 24 20.5 -0.6
baz=255
ALGO **Algonquin Park** 32.30 50 P P 03 24 21.8 -0.8
baz=253
D52A **ZEK Kipawa Sen** 32.38 48 P P 03 24 22.7 -0.6
baz=251
YKA **Yellowknife Ar** 32.49 360 P P 03 24 24.4 +0.3
comp=Z,0.2nm,0.5s,baz=153,slow=9.0,SNR=4.4
YKA LR LR 03 39 15.7
comp=Z,60nm,19.9s,baz=198,slow=39
H55A **Tweed** 32.52 53 P P 03 24 24.2 -0.4
baz=256
E53A **Dumune, Ponti** 32.68 50 P P 03 24 25.6 -0.4
baz=253
PLVO **Plevna** 32.72 52 P P 03 24 26.6 +0.3
baz=256
PEMO **Pembroke** 32.77 51 P P 03 24 27.0 +0.3
baz=254
D53A **Lac Vacive, Po** 32.87 48 P P 03 24 27.7 +0.1
baz=252
BINY **Binghamton** 32.91 58 P P 03 24 28.0 0.0
baz=261
G55A **Calabogie** 33.01 52 P P 03 24 29.2 +0.3
baz=256
E54A **Lac Daplat, Po** 33.02 50 P P 03 24 28.3 -0.6
baz=253
D54A **Lac Fusel, La** 33.57 49 P P 03 24 33.6 -0.2
baz=253
MATQ **Matagami** 33.83 44 P P 03 24 36.1 +0.2
baz=248
LSQQ **Lebel-sur-Quev** 33.98 45 P P 03 24 37.5 +0.3
baz=250
LONY **Lake Ozonia** 34.35 54 P P 03 24 40.7 +0.1
baz=258
CHGQ **Chibougamau** 35.86 45 P P 03 24 53.5 0.0
baz=251
LBNH **Lisbon** 36.16 55 P P 03 24 56.4 +0.3
baz=261
EGAK **Eagle** 38.66 342 *e*P P 03 25 18.8 +1.8
comp=Z,16nm,1.3s
EPYK **Eagle Plains** 38.89 346 P P 03 25 20.5 +1.5
baz=148
HDA **Harding Lake** 40.09 339 P P 03 25 30.5 +1.5
baz=133
MCK **McKinley** 40.29 337 *e*P P 03 25 32.1 +1.5
comp=Z,32nm,1.4s
MCK **McKinley** 40.29 337 *e*P P 03 25 32.1 +1.5
MCK pmax pmax
comp=Z,32nm,1.4s
ILAR **Eielson Array** 40.32 339 P P 03 25 32.0 +1.2
comp=Z,7.4nm,0.9s,baz=152,slow=7.2,SNR=45
ILAR LR LR 03 41 41.4
comp=Z,143nm,19.6s,baz=148,slow=35
ILB **Eielson Array** 40.32 339 *e*P P 03 25 32.5 +1.6
comp=Z,15nm,1.0s
CCB **Clear Creek Bu** 40.52 338 *e*P P 03 25 33.3 +0.8
comp=Z,6.0nm,1.1s
COLA **College** 40.69 339 *i*P P 03 25 34.7 +0.8
COLA pmax pmax
comp=Z,10.0nm,1.0s
POKR **Poker Plat Res** 40.73 339 P P 03 25 35.8 +1.5
baz=133
SCHQ **Schefferville** 41.77 40 LR LR 03 42 44.7
comp=Z,370nm,19.1s,baz=286,slow=36
TOLK **Toolik Lake Re** 43.77 342 P P 03 26 00.2 +1.1
baz=133
OTAV **Otavalo** 45.08 124 *e*P P 03 26 12.3 +1.7
comp=Z,10nm,0.6s
OTAV **Otavalo** 45.08 124 *e*P P 03 26 12.4 +1.7
OTAV pmax pmax
comp=Z,11nm,0.6s
ROSC **El Rosal** 45.16 116 LR LR 03 45 58.9
comp=Z,89nm,20.0s,baz=234,slow=37
SUMG **Summit** 57.39 20 *e*P P 03 27 42.1 -0.1
comp=Z,14nm,1.3s
SUMG **Summit** 57.39 20 *e*P P 03 27 42.1 -0.1
SUMG pmax pmax
comp=Z,14nm,1.3s
PPT **Papeete** 58.31 220 LR LR 03 46 45.9
comp=Z,143nm,18.1s,baz=360,slow=30
BILL **Bilibino** 58.64 334 *e*P P 03 27 51.5 +0.8
comp=Z,22nm,1.1s
BILL **Bilibino** 58.64 334 *ce*P P 03 27 51.2 +0.6
BILL pmax pmax
comp=Z,27nm,1.3s
LPAZ **La Paz** 63.94 130 P P 03 28 26.4 -1.5
comp=Z,2.3nm,1.1s,baz=18,slow=8.4,SNR=4.3
LPAZ LR LR 03 55 07.0
comp=Z,156nm,19.1s,baz=289,slow=35
MNMC **Minye Minye** 65.05 133 *e*P P 03 28 35.0 +0.3
comp=Z,22nm,1.2s
SEY **Seymchan** 65.24 330 P P 03 28 35.4 +0.3
comp=Z,5.3nm,0.8s,baz=77,slow=5.4,SNR=8.0
PB11 **IPOC Station P** 65.48 133 *e*P P 03 28 37.4 +0.1
comp=Z,22nm,1.0s
PEA1 **Petropavlovsk-** 65.53 319 *e*P P 03 28 37.1 0.0
PETK **Petropavlovsk-** 65.53 319 P P 03 28 37.1 0.0
comp=Z,12nm,1.1s,baz=80,slow=17,SNR=7.8
PETK LR LR 03 51 50.4
comp=Z,77nm,20.9s,baz=80,slow=31
GO01 **Chusmiza** 65.70 133 *e*P P 03 28 39.6 +0.4
comp=Z,11nm,1.1s
PB01 **IPOC Station P** 66.53 134 *e*P P 03 28 44.7 +0.7
comp=Z,17nm,1.0s
MA2 **Magadan** 67.07 327 P P 03 28 47.2 +0.3
comp=Z,5.8nm,0.7s,baz=139,slow=9.3,SNR=3.6
MA2 **Magadan** 67.07 327 *ce*P P 03 28 45.8 -1.1
MA2 pmax pmax
comp=Z,29nm,1.7s
LVC **Limon Verde** 68.05 135 *e*P P 03 28 55.3 +1.3
comp=Z,10nm,1.0s
LVC **Limon Verde** 68.05 135 *e*P P 03 28 55.3 +1.3
LVC pmax pmax
comp=Z,10.0nm,1.0s
TIXI **Tiksi** 69.66 342 *e*P P 03 29 03.2 +0.4
comp=Z,13nm,1.2s
TIXI **Tiksi** 69.66 342 *ce*P P 03 29 02.4 -0.5
TIXI pmax pmax
comp=Z,13nm,1.3s
YAK **Yakutsk** 75.00 334 *i*P P 03 29 35.5 +0.6
YAK pmax pmax
comp=Z,49nm,0.8s
ARCES **ARCESS Array B** 76.51 14 P P 03 29 43.4 0.0
comp=Z,4.4nm,0.8s,baz=335,slow=5.4,SNR=11
ARCES LR LR 04 05 58.4
comp=Z,86nm,18.5s,baz=280,slow=38
CPUP **Villa Florida** 78.11 130 P P 03 29 53.3 +0.3
comp=Z,11nm,1.1s,baz=329,slow=5.2,SNR=9.3
BDFB **Brasilia** 78.22 116 P P 03 29 54.2 +0.3
comp=Z,1.9nm,0.8s,baz=310,slow=12,SNR=3.8
ERM **Erimo** 79.03 312 *i*P P 03 29 58.5 +0.5
ERM pmax pmax
comp=Z,16nm,1.3s
NB2 **NORSAR Subarra** 79.04 24 P P 03 29 57.8 +0.1
comp=Z,0.8nm,0.8s,baz=314,slow=5.9
NOA **NORSAR Array B** 79.04 24 P P 03 29 57.9 +0.1
comp=Z,2.0nm,0.9s,baz=317,slow=5.7,SNR=6.1
NOA LR LR 04 07 06.0
comp=Z,59nm,18.9s,baz=300,slow=37
KONO **Kongsberg** 79.41 25 *ce*P P 03 29 59.7 0.0
KONO pmax pmax
comp=Z,15nm,1.7s
NRIK **Noril'sk** 79.67 352 P P 03 30 01.1 +0.2
comp=Z,2.3nm,0.5s,baz=52,slow=5.4,SNR=4.2
NRIK LR LR 04 06 48.9
comp=Z,115nm,20.9s,baz=36,slow=37
HFS **Hagfors** 80.54 24 P P 03 30 06.1 +0.3
comp=Z,2.7nm,0.8s,baz=247,slow=1.1,SNR=7.9
ZEA **Zeya** 81.14 328 *e*P P 03 30 08.9 -0.3
ZEA pmax pmax
comp=Z,42nm,1.6s
PLCA **Paso Flores** 81.17 148 P P 03 30 10.3 +0.9
comp=Z,2.7nm,0.8s,baz=359,slow=5.7,SNR=4.0
PLCA **Paso Flores** 81.17 148 *e*P P 03 30 10.3 +0.9
comp=Z,20nm,1.4s
PLCA **Paso Flores** 81.17 148 *e*P P 03 30 10.3 +0.9
PLCA pmax pmax
comp=Z,20nm,1.4s
KLR **Kul'dur** 81.72 323 *i*P P 03 30 11.5 -0.8
KLR pmax pmax
comp=Z,3.0nm,1.3s
FIA0 **FINESS Array S** 83.34 18 *e*P P 03 30 20.4 -0.1
FIA0 **FINESS Array S** 83.34 18 *e*P P 03 30 20.4 -0.1
FINES **FINESS Array B** 83.34 18 P P 03 30 20.4 -0.1
comp=Z,1.2nm,0.7s,baz=356,slow=5.7,SNR=7.6
TMCR **Tamitsa** 83.62 12 *e*P P 03 30 22.4 +0.5
TMCR pmax pmax
comp=Z,12nm,0.6s
BOD **Bodaibo** 83.63 336 *e*P P 03 30 21.0 -1.1
BOD pmax pmax
comp=Z,12nm,1.5s
USRK **Ussuriysk Ar.** 84.62 319 P P 03 30 27.6 +0.2
comp=Z,2.1nm,0.8s,baz=69,slow=10,SNR=6.7
ESDC **Sonseca Array** 85.12 47 P P 03 30 29.1 -1.0
comp=Z,1.4nm,0.8s,baz=307,slow=5.3,SNR=9.4
MJAR **Matsushiro Arr** 85.19 310 P P 03 30 30.1 -0.4
comp=Z,1.8nm,0.7s,baz=348,slow=2.3,SNR=6.0
MAJO **Matsushiro** 85.19 310 *e*P P 03 30 30.1 -0.4
MAJO **Matsushiro** 85.19 310 *i*P P 03 30 30.2 -0.3
MAJO pmax pmax
comp=Z,8.0nm,1.1s
CLL **Collm** 86.66 30 *i*P P 03 30 36.4 -1.0
CLL LmV 04 12 00.0
comp=Z,100nm,18.3s
CLL **Collm** 86.66 30 *i*P P 03 30 36.4 -1.0
PRGR **Permogore** 87.22 9 *e*P P 03 30 33.6 -6.3
PRGR pmax pmax
comp=Z,4.0nm,0.4s
BRG **Berggiesshubel** 87.38 30 *e*P P 03 30 40.5 -0.4
comp=Z,2.9nm,1.0s
BRG **Berggiesshubel** 87.38 30 *e*P P 03 30 40.5 -0.4
BRG pmax pmax
comp=Z,3.0nm,1.0s
DAVOX **Davos/Dischmat** 88.42 35 LR LR 04 11 07.2
comp=Z,198nm,18.1s,baz=352,slow=36
GERES **GERESS Array B** 88.75 31 P P 03 30 46.7 -1.0
comp=Z,0.4nm,0.6s,baz=325,slow=6.5,SNR=4.4
GERES LR LR 04 13 50.3
comp=Z,51nm,18.5s,baz=294,slow=38
VRAC **Vranov** 89.69 30 LR LR 04 11 36.5
comp=Z,88nm,19.1s,baz=356,slow=36
MODS **Modra-Piesok** 90.69 30 *e*P P 03 30 59.0 +2.3
MODS **Modra-Piesok** 90.69 30 *e*P P 03 30 58.9 +2.3
OBN **Obninsk** 91.58 16 LR LR 04 13 27.8
comp=Z,27nm,20.0s,baz=360,slow=36
JNU **Nakatsue** 92.07 310 LR LR 04 05 20.5
comp=Z,100nm,21.7s,baz=150,slow=31
TLY **Talaya** 92.12 338 *i*P P 03 31 02.8 -0.4
TLY pmax pmax
comp=Z,13nm,0.9s
ZAK **Zakamensk** 93.35 337 *e*P P 03 31 09.4 +0.4
ZAK pmax pmax
comp=Z,4.0nm,1.3s
AKASG **Malin Array Be** 93.37 22 P P 03 31 07.6 -1.3
comp=Z,0.3nm,0.4s,baz=315,slow=3.3,SNR=4.8
AKASG **Malin Array Be** 93.37 22 *i*P P 03 31 08.0 -0.9
AKBB **Malin Array Si** 93.37 22 *e*P P 03 31 07.6 -1.3
comp=Z,3.0nm,0.8s
AKBB **Malin Array Si** 93.37 22 *e*P P 03 31 07.6 -1.3
AKBB pmax pmax
comp=Z,3.0nm,0.8s
KIEV **Kiev** 93.37 22 *i*P P 03 31 06.7 -2.2
KIEV pmax pmax
comp=Z,2.0nm,1.2s
ARU **Arti** 93.68 4 P P 03 31 10.3 0.0
comp=Z,3.0nm,0.2s,baz=9.3,slow=5.0,SNR=5.0
ARU **Arti** 93.68 4 *e*P P 03 31 10.3 0.0
comp=Z,15nm,1.4s
ARU **Arti** 93.68 4 *d i*P P 03 31 10.2 0.0
ARU 03 34 54.3
ARU S SKSac 03 41 44.3 -0.5
ARU SS SS 03 48 34.2 -0.9
ARU pmax pmax
comp=Z,8.0nm,1.0s
ULN **Ulaanbaatar** 94.08 334 *ce*P P 03 31 12.8 +0.3
ULN pmax pmax
comp=Z,5.0nm,1.1s
NVS **Novosibirsk** 94.17 350 *e*P P 03 31 13.2 +0.7
SONA0 **Songino Array** 94.36 334 *e*P P 03 31 14.6 +0.8
SONM **Songino Array** 94.36 334 P P 03 31 14.6 +0.8
comp=Z,2.8nm,0.9s,baz=37,slow=3.7,SNR=10
SONM LR LR 04 13 21.4
comp=Z,108nm,20.5s,baz=57,slow=35
ZALV **Zalesovo Beam** 94.78 349 P P 03 31 15.6 +0.3
comp=Z,0.6nm,0.3s,baz=356,slow=5.9,SNR=3.7
ZALV LR LR 04 20 20.7
comp=Z,45nm,18.8s,baz=70,slow=40
VSR **Storozhevoye** 95.78 16 *i*P P 03 31 18.5 -1.4
VSR pmax pmax
comp=Z,6.0nm,1.3s
BRVK **Borovoye** 97.19 357 *i*P P 03 31 26.2 -0.1
BRVK pmax pmax
comp=Z,2.0nm,1.1s
BVAR **Borovoye Array** 97.22 357 P P 03 31 26.2 -0.3
comp=Z,0.2nm,0.4s,baz=325,slow=2.3,SNR=2.7
HHC **Hu-ho-hao-te** 97.75 327 *e*P P 03 31 28.9 -0.3
HHC LR LR
comp=Z,130nm,13.6s
HHC LR LR
comp=Z,130nm,11.1s
HHC LR LR
comp=Z,320nm,15.3s
DGZ **Jazzator, Alta** 98.34 346 *i*P P 03 31 31.7 -0.1
DGZ pmax pmax
comp=Z,1.0nm,1.0s

KURK	Kurchatov	98.83	352	*i* P	P	03 31 32.9	-0.8
KURK				pmax	pmax		
comp=Z,1.0nm,1.2s							
AKTO	Aktyubinsk	99.61	5	LR	LR	04 22 19.5	
comp=Z,94nm,18.5s,baz=351,slow=39							
NJ2	Nanjing	100.37	316	*e*P	Pdif	03 31 41.6	+0.7
AS31	Alice Springs	119.69	258	*e*PKPdf	PKPdf	03 36 42.8	-1.6
ASAR	Alice Springs	119.69	258	PKP	PKPdf	03 36 42.8	-1.6
comp=Z,1.4nm,0.8s,baz=50,slow=2.0,SNR=8.9							
CM31	Chiang Mai Arr	122.20	322	*e*PKPdf	PKPdf	03 36 49.2	-0.2
CMAR	Chiang Mai Arr	122.20	322	PKP	PKPdf	03 36 49.2	-0.2
comp=Z,1.5nm,0.3s,baz=358,slow=2.8,SNR=6.6							
MAW	Mawson	142.34	178	PKP	PKPdf	03 37 23.7	-1.8
comp=Z,2.3nm,0.9s,baz=259,slow=3.9,SNR=4.4							
BOSA	Boshof	144.74	98	PKP	PKPab	03 37 28.4	-1.6
comp=Z,6.0nm,1.1s,baz=105,slow=2.6,SNR=3.6							

IDC 07 03:19:27.4±1.8, 28°.59S×177°.62W, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.8/33, mbtmp3.9/4, MS3.5/1, Ms1 3.5/1, ms1mx2.9/17, Error ellipse: s-maj=55.1km s-min=37.0km az=24.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	28.41	308	LR	LR	03 34 08.0	
comp=Z,93nm,19.9s,baz=111,slow=31							
STKA	Stephens Creek	35.25	254	P	P	03 26 25.0	+1.2
1.7nm,0.7s,baz=80,slow=8.4,SNR=3.6							
ASAR	Alice Springs	43.57	265	P	P	03 27 33.1	-0.4
0.6nm,0.5s,baz=97,slow=6.4,SNR=14							
WRA	Warramunga Arr	44.39	270	P	P	03 27 39.5	-0.6
2.0nm,0.8s,baz=102,slow=7.4,SNR=1.5							
MAW	Mawson	74.12	200	P	P	03 31 04.6	-0.5
0.8nm,0.6s,baz=126,slow=8.7,SNR=3.9							
FINES	FINESS Array B	143.55	341	PKP	PKPdf	03 39 02.5	-1.0
0.4nm,0.6s,baz=334,slow=32,SNR=3.1							
AKASG	Malin Array Be	150.04	325	PKPbc	PKPbc	03 39 19.4	-0.2
1.0nm,0.5s,baz=53,slow=3.2,SNR=5.0							
TORD	Torodi Ar. Bea	164.63	177	PKPab	PKPab	03 40 29.1	+0.3
0.2nm,0.5s,baz=184,slow=2.5,SNR=6.3							

*ISCJB **07** 03:21:12.8±0.3, 37°.30N±0°.06×134°.92E±0°.06, h390^{km}±4^{km}, mb3.4/14, Error ellipse: s-maj=9.8km s-min=6.6km az=161.7*
*JMA **07** 03:21:13.1±0.1, 37°.27N×134°.91E, h390^{km}±1^{km}, M3.5*
*IDC **07** 03:21:13.7±1.0, 37°.28N×134°.81E, h384^{km}±10^{km}, mb3.1/13, mb1 3.3/18, mb1mx3.1/61, mbtmp3.9/18, Error ellipse: s-maj=14.6km s-min=13.1km az=0.0*

ISC 07 03:21:13.3±0.6, 37°.33N±0°.08×134°.92E±0°.06, h381^{km}±7^{km}, n50, σ1.905/60, mb3.4/14, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	Hakui	1.54	104	P	Pn	03 22 05.7	+1.0
JJH				S	S	03 22 46.6	+0.5
JKG	Kaga	1.54	132	P	Pn	03 22 05.5	+0.8
JKG				*e*S	S	03 22 46.8	+0.6
JHG	Hegura jima	1.67	71	P	Pn	03 22 06.6	+1.3
JOI	OKI	1.69	233	P	Pn	03 22 06.2	+0.6
JKY	Yasaka	1.70	175	P	Pn	03 22 06.1	+0.4
JKY				S	S	03 22 47.5	-0.4
JKSM	Kasumi	1.75	187	S	S	03 22 47.8	-0.5
JSZ	Suzu	1.95	86	P	Pn	03 22 08.4	+1.4
JWT	Wachi	2.08	169	P	Pn	03 22 08.7	+0.7
JWT				S	S	03 22 51.8	-0.3
JYTA	Yamagatataniai	2.26	139	P	Pn	03 22 09.8	+0.5
JYTA				S	S	03 22 54.7	+0.3
JNG	Nsakai	2.71	109	P	Pn	03 22 13.5	+0.8
JSD	Sado	2.74	74	P	Pn	03 22 13.6	+0.8
JHS	Saijyo	2.74	213	P	Pn	03 22 13.1	+0.1
JHS				S	S	03 23 00.0	-1.1
MAT	Matsushiro	2.75	106	P	Pn	03 22 13.4	+0.5
MAT				S	S	03 23 03.1	+2.1
MAT	Matsushiro	2.75	106	P	Pn	03 22 13.7	+0.8
MJAR	Matsushiro Arr	2.75	106	P	Pn	03 22 14.2	+1.2
1.6nm,0.3s,baz=282,slow=10.0,SNR=157							
JHK	Hiroka	3.27	90	P	Pn	03 22 17.8	+0.5
JIE	Ise	3.27	153	P	Pn	03 22 18.2	+0.8
JRY	Ryogami san	3.46	111	P	Pn	03 22 19.5	+0.5
JAW	Awa`shima	3.60	70	P	Pn	03 22 21.2	+0.9
JOD2	Odawara 2	3.94	120	P	Pn	03 22 24.1	+0.4
JOD2				S	S	03 23 19.9	-0.7
JMM	Marumori	4.69	82	P	Pn	03 22 31.7	+0.6
JFK	Kawauchi	4.74	88	P	Pn	03 22 31.4	-0.2
JRG	Rokugo	4.94	64	P	Pn	03 22 34.6	+1.0
KSRS	Korea Array	5.58	273	P	Pn	03 22 41.2	+0.8
1.1nm,0.3s,baz=93,slow=12,SNR=40							
KSRS				S	S	03 23 52.4	+1.1
baz=96,slow=22,SNR=5.6							
USRK	Ussuriysk Ar.	7.22	343	P	P	03 23 00.3	+0.6
2.2nm,0.3s,baz=170,slow=11,SNR=32							
ASAJ	Asahikawa	8.94	38	P	Pn	03 23 18.3	-0.4
11nm,0.3s,baz=242,slow=8.9,SNR=64							
ASAJ				S	S	03 24 56.2	-5.4
2.4nm,0.3s,baz=335,slow=33,SNR=11							
KLR	Kul'dur	12.12	350	P	P	03 23 54.4	-0.3
0.4nm,0.3s,baz=236,slow=5.9,SNR=5.6							
SONM	Songino Array	23.36	306	P	P	03 25 48.3	-1.2
0.8nm,0.6s,baz=108,slow=9.3,SNR=3.3							
CMAR	Chiang Mai Arr	36.65	249	P	P	03 27 44.6	-0.8
0.8nm,0.3s,baz=50,slow=8.9,SNR=3.8							
ZALV	Zalesovo Beam	37.89	312	P	P	03 27 54.1	-1.0
0.7nm,0.3s,baz=108,slow=7.6,SNR=3.1							
MKAR	Makanchi Array	39.55	301	P	P	03 28 08.6	-0.4
1.8nm,0.7s,baz=87,slow=10,SNR=14							
RAMN	Ramite	41.81	270	*e*P	P	03 28 26.9	-0.9
11nm,0.4s							
JIRN	Jiri	41.83	271	*e*P	P	03 28 27.9	-0.1
10nm,0.3s							
GUN	Gumba	41.96	272	*e*P	P	03 28 28.9	-0.2
18nm,0.6s							
KKN	Kakani	42.49	272	*e*P	P	03 28 33.2	+0.1
10nm,0.5s							
PKIN	Phulchoki	42.49	272	*e*P	P	03 28 33.2	0.0
8.5nm,0.6s							
DANN	Dangsing	43.46	274	*e*P	P	03 28 40.7	-0.2
40nm,0.7s							
KOLN	Koldanda	43.84	273	*e*P	P	03 28 44.0	+0.2
3.1nm,0.2s							
PYUN	Piuthan	44.18	274	*e*P	P	03 28 46.5	0.0
19nm,0.5s							
ILAR	Eielson Array	52.02	32	P	P	03 29 46.2	+1.4
0.4nm,0.6s,baz=268,slow=5.9,SNR=9.5							
WRA	Warramunga Arr	56.96	181	P	P	03 30 20.0	-0.5
12nm,0.3s,baz=3.6,slow=7.2,SNR=2.7							
ASAR	Alice Springs	60.67	181	P	P	03 30 45.4	-0.3
0.3nm,0.3s,baz=19,slow=12,SNR=4.9							
FINES	FINESS Array B	66.06	330	P	P	03 31 20.0	-0.1
0.8nm,0.4s,baz=67,slow=4.2,SNR=6.5							
AKASG	Malin Array Be	70.80	320	P	P	03 31 49.2	-0.1
0.8nm,0.4s,baz=47,slow=6.9,SNR=4.7							
HFS	Hagfors	71.59	333	P	P	03 31 54.0	+0.2
1.0nm,0.4s,baz=73,slow=5.1,SNR=11							
NB2	NORSAR Subarra	71.81	335	P	P	03 31 55.0	-0.2
comp=Z,0.3nm,0.4s,baz=43,slow=5.6							
NOA	NORSAR Array B	71.81	335	P	P	03 31 55.3	+0.1
comp=Z,0.5nm,0.6s,baz=44,slow=5.8,SNR=4.7							
BRTR	Keskin Array B	74.69	308	P	P	03 32 12.9	+0.5
comp=Z,0.3nm,0.7s,baz=65,slow=3.8,SNR=3.2							
NVAR	Mina Array Bea	78.87	50	P	P	03 32 37.1	+1.5
comp=Z,0.4nm,0.6s,baz=313,slow=4.9,SNR=4.1							
EKA	Eskdalemuir Ar	80.99	337	P	P	03 32 46.1	-0.1
comp=Z,0.1nm,0.4s,baz=25,slow=5.5,SNR=3.7							

*SJA **07** 03:23:00.0±1.0, 33°.60S×71°.62W, h59^{km}±8^{km}, ML3.2, MW3.3*
*GUC **07** 03:23:02.0±0.5, 33°.66S×71°.19W, h73^{km}±6^{km}, ML3.6*

ISC 07 03:22:58.3±1.6, 33°.66S±0°.06×71°.39W±0°.07, h3^{km}±15^{km}, n28, σ1.962/34, 3C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTU	Antumapu	0.64	82	*e*P	Pn	03 23 14.8	+0.5
ANTU				*e*S	Sn	03 23 23.8	-1.2
ANTU				IAML		03 23 24.3	
comp=E,4μm,0.2s							
FSR	Penalolen	0.74	76	*e*P	Pn	03 23 16.2	+0.4
FSR				*e*S	Sn	03 23 26.5	-1.2
ROC1	El Roble	0.75	25	*i* P	Pn	03 23 17.0	+0.8
ROC1				*i* S	Sn	03 23 28.8	+0.6
ROCH	El Roble	0.76	25	⇑*i*P	Pn	03 23 17.0	+0.8
ROCH				*i* S	Sn	03 23 28.6	+0.4
ROCH				IAML		03 23 29.1	
comp=N,2μm,0.4s							
CLCH	Cerro Calan	0.76	70	⇑*i*P	Pn	03 23 15.8	-0.2
CLCH				*e*S	Sb	03 23 26.4	+1.3
CLCH				IAML		03 23 27.4	
comp=E,2μm,0.4s							
PEL	Peldehue	0.79	49	*i* P	Pn	03 23 16.5	+0.1
PEL				*e*S	Sn	03 23 27.3	-1.3
PEL	Peldehue	0.79	49	*e*P	Pn	03 23 16.4	+0.1
PEL				*i* S	Sn	03 23 27.4	-1.3
PEL				IAML		03 23 31.9	
comp=E,2μm,0.1s							
FCH	Farellones	0.98	70	*e*P	Pn	03 23 18.6	-0.7
FCH				*e*S	Sg	03 23 31.5	+1.7
FCH				IAML		03 23 32.7	
comp=N,4μm,0.2s							
LMEL	Las Melosas	1.01	101	⇑*i*P	Pb	03 23 18.6	+0.1
LMEL				*i* S	Sg	03 23 31.3	+0.6
LMEL				IAML		03 23 32.5	
comp=E,7μm,0.2s							
GO05	Huala	1.42	198	*i* P	Pg	03 23 25.1	-0.4
AUSP	Uspallata	2.21	50	*i* P	Pb	03 23 38.9	-0.3
AUSP				*i* S	Sb	03 24 07.3	+0.2
ARCO	CERRO ARCO	2.22	69	*e*P	Pb	03 23 39.3	+0.1
ARCO				IAML		03 23 56.4	
comp=Z,55nm,0.4s							
AAGR	Agrelo	2.22	76	*i* P	Pb	03 23 38.3	-0.9
ASAL	Salagasta	2.40	64	*i* P	Pb	03 23 40.6	-1.5
RTCV	Cerro Valdivia	3.00	54	*e*P	Pb	03 23 49.6	-2.8
ZON	Zonda	3.11	48	IAML		03 24 39.9	
comp=Z,26nm,0.4s							
RTLL	Cerro Villicun	3.39	47	IAML		03 23 58.5	
comp=Z,48nm,0.4s							
ACCO	Cerro Coronel	3.65	33	*e*P	Pn	03 23 58.1	+2.1
AMOG	MOGNA	3.66	43	*e*P	Pn	03 23 57.6	+1.7
ACAN	Cantantal	3.79	70	*e*P	Pn	03 23 59.1	+1.4
ACAN				⇓*e*S	Sn	03 24 47.2	+4.2
ACDV	Cuesta del Vie	3.98	30	*e*P	Pn	03 24 02.9	+2.5
AGUA	GUANDACOL	4.84	31	*e*P	Pn	03 24 13.6	+1.3
AGUA				*e*S	Sb	03 25 18.6	-4.0
APLL	PUNTA DE LOS L	5.26	53	IAML		03 25 25.4	
comp=Z,13nm,0.4s							
VCA	Vinchina	5.62	30	IAML		03 25 45.0	
comp=Z,30nm,0.7s							
ACLC	CERRO LA CRUZ	5.67	43	*e*P	Pn	03 24 25.1	+1.4
TCA	Tanti	6.19	70	*e*P	Pn	03 24 30.1	-0.6
CYA	Choya	7.08	44	IAML		03 24 45.1	
comp=Z,3.6nm,0.4s							
FSA	Cafayete	8.87	33	IAML		03 25 13.0	
comp=Z,1.9nm,0.6s							

*ROM **07** 03:30:03.6±0.3, 42°.09N±0°.02×15°.45E±0°.02, h5^{km}, ML2.3/18, Error ellipse: s-maj=2.8km s-min=1.1km az=32.0*
*ISCJB **07** 03:30:04.4±0.8, 42°.07N±0°.04×15°.35E±0°.03, h3^{km}±7^{km}, Error ellipse: s-maj=6.2km s-min=3.8km az=17.8*
*BEO **07** 03:30:04.6±1.1, 41°.61N×15°.29E, h10^{km}, ML2.6/5*

ISC 07 03:30:04.4±1.3, 42°.00N±0°.03×15°.31E±0°.02, h4^{km}±11^{km}, n36, σ1.903/46, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MELA	Melanico ??? S	0.32	205	P	Pb	03 30 12.6	0.0
MELA				S	Sb	03 30 19.8	+1.6
MELA				AML	AML		
comp=E,654μm,0.3s							
MELA				AML	AML		
comp=N,607μm,0.9s							
MELA				AML	AML		
comp=E,687μm,0.3s							
MELA				AML	AML		
comp=N,576μm,0.6s							
MELA				AML	AML		
comp=E,654μm,0.3s							
MELA				AML	AML		
comp=N,607μm,0.9s							
MELA				AML	AML		
comp=E,688μm,0.3s							
MELA				AML	AML		
comp=N,576μm,0.6s							
MELA				AML	AML		
comp=N,576μm,0.6s							
MELA				AML	AML		
comp=N,607μm,0.9s							
MELA				AML	AML		
comp=E,654μm,0.3s							
MELA				AML	AML		
comp=E,688μm,0.3s							
SGRT	San Giovanni R	0.41	127	P	Pg	03 30 11.6	-0.6
SGRT				S	Sb	03 30 19.1	-1.6
SGRT				AML	AML		
comp=E,884μm,0.2s							
SGRT				AML	AML		
comp=N,772μm,0.2s							
SGRT				AML	AML		
comp=N,772μm,0.2s							
SGRT				AML	AML		
comp=E,884μm,0.2s							
CIGN	Sant'Elia a Pi	0.46	221	P	Pn	03 30 15.9	-1.7
CIGN				AML	AML		
comp=E,89μm,0.6s							
CIGN				AML	AML		
comp=N,82μm,0.6s							
CIGN				AML	AML		
comp=E,89μm,0.6s							
CIGN				AML	AML		
comp=N,82μm,0.6s							
CIGN				AML	AML		
comp=E,89μm,0.6s							
CIGN				AML	AML		
comp=N,82μm,0.6s							
MSAG	Monte S. Angel	0.53	122	P	Pg	03 30 14.1	-0.5
MSAG				S	Sg	03 30 21.7	+0.1
MSAG				AML	AML		
comp=E,396μm,0.2s							
MSAG				AML	AML		
comp=N,914μm,0.2s							
MSAG				AML	AML		
comp=E,416μm,0.2s							
MSAG				AML	AML		
comp=N,957μm,0.2s							
MSAG				AML	AML		
comp=E,396μm,0.2s							
MSAG				AML	AML		
comp=N,912μm,0.2s							
MSAG				AML	AML		
comp=E,416μm,0.2s							
MSAG				AML	AML		
comp=N,957μm,0.2s							
MSAG				AML	AML		
comp=E,416μm,0.2s							
MSAG				AML	AML		
comp=E,396μm,0.2s							
MSAG				AML	AML		
comp=N,957μm,0.2s							
MSAG				AML	AML		
comp=N,912μm,0.2s							
GATE	Gambatesa	0.57	212	P	Pn	03 30 18.9	-0.3
TRIV	Trivento	0.61	248	P	Pb	03 30 17.8	+0.2
TRIV				AML	AML		
comp=E,122μm,0.6s							
TRIV				AML	AML		
comp=N,124μm,0.5s							
TRIV				AML	AML		
comp=E,122μm,0.6s							
TRIV				AML	AML		
comp=N,124μm,0.5s							
TRIV				AML	AML		
comp=E,122μm,0.6s							
TRIV				AML	AML		
comp=N,124μm,0.5s							
MOCO	Biccari - m.te	0.64	190	P	Pn	03 30 18.9	-1.3
BSSO	Busso	0.70	230	P	Pn	03 30 20.4	-0.7
BSSO				AML	AML		
comp=E,37μm,0.7s							
BSSO				AML	AML		
comp=N,30μm,0.3s							
BSSO				AML	AML		
comp=E,37μm,0.7s							
BSSO				AML	AML		
comp=N,30μm,0.3s							
BSSO				AML	AML		
comp=N,30μm,0.3s							
BSSO				AML	AML		
comp=E,37μm,0.7s							
LPEL	Lama del Pelig	0.84	274	P	Pb	03 30 21.6	+0.1
LPEL				AML	AML		
comp=E,292μm,0.2s							
LPEL				AML	AML		
comp=N,290μm,0.7s							
LPEL				AML	AML		
comp=N,290μm,0.7s							
LPEL				AML	AML		
comp=E,292μm,0.2s							
MIDA	Miranda	0.86	246	P	Pn	03 30 22.6	-0.7
MIDA				AML	AML		
comp=E,190μm,0.4s							
MIDA				AML	AML		
comp=N,154μm,0.4s							
MIDA				AML	AML		
comp=N,154μm,0.4s							
MIDA				AML	AML		
comp=E,190μm,0.4s							
CAFE	Carife	0.97	183	P	Pn	03 30 25.3	+0.5
INTR	Introdacqua	1.04	271	P	Pb	03 30 24.6	-0.4
INTR				AML	AML		
comp=E,64150μm,1.5s							
INTR				AML	AML		
comp=N,90500μm,1.6s							
INTR				AML	AML		
comp=E,226μm,0.6s							
INTR				AML	AML		
comp=N,323μm,0.7s							
INTR				AML	AML		
comp=E,226μm,0.6s							
INTR				AML	AML		
comp=N,90500μm,1.6s							
INTR				AML	AML		
comp=N,323μm,0.7s							
INTR				AML	AML		
comp=E,64150μm,1.5s							
VULT	Monte Vulture	1.07	167	P	Pn	03 30 27.0	+0.8
SNAL	S. Angelo Dei	1.07	184	P	Pn	03 30 26.2	0.0
SNAL				AML	AML		
comp=E,134μm,1.5s							
SNAL				AML	AML		
comp=N,87μm,1.5s							
SNAL				AML	AML		
comp=N,87μm,1.5s							
SNAL				AML	AML		
comp=E,134μm,1.5s							
MRVN	Minervino Murg	1.15	144	P	Pn	03 30 26.0	-1.2
MRVN				AML	AML		
comp=E,124μm,0.2s							
MRVN				AML	AML		
comp=N,116μm,0.3s							
MRVN				AML	AML		
comp=N,116μm,0.3s							
MRVN				AML	AML		
comp=E,124μm,0.2s							
VCEL	Villa Celiera	1.16	290	P	Pn	03 30 27.8	+0.3
PALZ	Palazzo San Ge	1.16	155	P	Pn	03 30 26.9	-0.5
PALZ				AML	AML		
comp=E,272μm,1.3s							
PALZ				AML	AML		
comp=N,246μm,0.9s							
PALZ				AML	AML		
comp=E,272μm,1.3s							
PALZ				AML	AML		
comp=N,246μm,0.9s							
MCRV	Calabrutti - M	1.22	185	AML	AML		
comp=N,91μm,0.9s							
MCRV				AML	AML		
comp=E,79μm,0.9s							
MCRV				AML	AML		
comp=N,91μm,0.9s							
MCRV				AML	AML		
comp=E,79μm,0.9s							
MRLC	Muro Lucano	1.25	174	P	Pn	03 30 29.5	+0.9
MRLC				AML	AML		
comp=E,87μm,0.3s							
MRLC				AML	AML		
comp=N,87μm,0.4s							
MRLC				AML	AML		
comp=N,87μm,0.4s							
MRLC				AML	AML		
comp=E,87μm,0.3s							
VVLD	Villa Vallelon	1.26	265	P	Pg	03 30 29.0	+0.4
VVLD				AML	AML		
comp=E,79μm,0.5s							
VVLD				AML	AML		
comp=N,58μm,0.6s							
VVLD				AML	AML		
comp=N,58μm,0.6s							
VVLD				AML	AML		
comp=E,79μm,0.5s							
ACER	Acerenza	1.30	158	P	Pg	03 30 30.1	+0.8
ACER				AML	AML		
comp=E,247μm,0.8s							
ACER				AML	AML		
comp=N,248μm,1.5s							
ACER				AML	AML		
comp=E,247μm,0.8s							
ACER				AML	AML		
comp=N,248μm,1.5s							
FAGN	Fagnano	1.31	282	P	Pn	03 30 28.0	-1.5
TERO	Teramo	1.41	297	P	Pg	03 30 31.7	+0.3
AMUR	Altamura	1.46	138	P	Pn	03 30 30.4	-1.1
AMUR				AML	AML		
comp=E,254μm,0.3s							
AMUR				AML	AML		
comp=N,158μm,1.1s							
AMUR				AML	AML		
comp=E,254μm,0.3s							
AMUR				AML	AML		
comp=N,158μm,1.1s							
MIGL	Miglionico	1.63	148	P	Pb	03 30 34.3	-0.7
FDMO	Fiordimonte	1.94	303	P	Pn	03 30 38.5	+0.4
FDMO				AML	AML		
comp=E,29μm,0.8s							
FDMO				AML	AML		
comp=N,29μm,0.7s							
FDMO				AML	AML		
comp=N,29μm,0.7s							
FDMO				AML	AML		
comp=E,29μm,0.8s							
STON	Ston	1.98	63	*e*Pn	Pb	03 30 41.3	+0.5
STON				*e*Sn	Sg	03 31 08.2	+0.4
STON	Ston	1.98	63	*e*Pn	Pn	03 30 38.1	-0.4
STON				Sn	Sn	03 31 02.5	-1.2
TREB	Trebinje	2.37	71	*e*Pn	Pb	03 30 46.2	-1.3
TREB				*e*Sn	Sb	03 31 17.2	+0.1
UDBI	Udbina	2.55	7	*e*Pn	Pn	03 30 46.4	-0.1
UDBI				Sn	Sn	03 31 16.9	-1.1
PIEI	Pieia	2.56	308	P	Pn	03 30 46.4	-0.2
NVLJ	Novalja	2.58	353	*e*Pn	Pn	03 30 45.4	-1.5
NVLJ				Sn	Sn	03 31 17.4	-1.4
PDG	Podgorica	2.96	80	*e*Pn	Pn	03 30 53.2	+1.1
PDG				*e*Sn	Sn	03 31 28.8	+0.7
BLY	Banja Luka	3.07	26	*e*Pn	Pb	03 30 58.7	-0.8
BLY				*e*Sn	Sb	03 31 38.5	+1.2
SJES	Sjenica	3.67	68	*e*Pn	Pn	03 31 03.3	+1.4
SJES				*e*Sn	Sn	03 31 48.2	+2.5
IVAS	Ivanjica	3.90	65	*e*Pn	Pn	03 31 06.6	+1.5

*DDA **07** 03:32:40.6, 36°.95N×26°.60E, h6^{km}±3^{km}, ML2.7*
*ISK **07** 03:32:40.9, 36°.94N×26°.63E, h12^{km}, ML2.8/20*
*ISCJB **07** 03:32:41.8±0.5, 36°.93N±0°.02×26°.66E±0°.02, h10^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=2.8km az=147.8*
*ATH **07** 03:32:41.3, 36°.93N×26°.67E, h29^{km}±1^{km}, ML2.9/7, Error ellipse: s-maj=1.6km s-min=1.0km az=359.0*
*THE **07** 03:32:41.8, 36°.94N×26°.67E, h6^{km}±3^{km}, ML2.9/6, Error ellipse: s-maj=3.8km s-min=0.6km az=108.0*

ISC 07 03:32:41.3±1.1, 36°.93N±0°.02×26°.66E±0°.02, h11^{km}±10^{km}, n62, σ0.970/82, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NISR	Nisiros	0.49	130	P	Pb	03 32 52.1	+0.2
NISR				S	Sb	03 32 58.7	-0.3
NISR	Nisiros	0.49	130	P	Pb	03 32 52.1	+0.2
NISR				S	Sb	03 32 59.3	+0.2
NISR				AML	AML	03 32 59.8	
comp=E,6712μm,0.3s							
NISR				AML	AML	03 33 00.0	
comp=N,1698μm,0.1s							
BODT	Bodrum	0.53	75	PG	Pb	03 32 52.3	-0.4

BODT				SG	Sb	03 33 00.4	0.0	
BODT	**Bodrum**	**0.53**	**75**	P	Pg	03 32 52.1	+0.4	
BODT				S	Sb	03 32 59.7	-0.7	
AMGA	**Amorgos Island**	**0.62**	**261**	P	Pb	03 32 53.9	-0.3	
AMGA				S	Sb	03 33 03.1	+0.2	
AMGA	**Amorgos Island**	**0.62**	**261**	P	Pb	03 32 53.9	-0.3	
AMGA				S	Sb	03 33 03.2	+0.2	
AMGA				AML	AML	03 33 06.0		
	comp=N,1881μm,0.2s							
AMGA				AML	AML	03 33 07.6		
	comp=E,2524μm,0.3s							
BDRM	**Kayabasi**	**0.64**	**78**	*i* P	Pb	03 32 54.9	+0.5	
BDRM				IAML_P				
	comp=Z,3μm,0.2s							
DAT	**Datca**	**0.76**	**105**	PG	Pb	03 32 56.8	+0.2	
DAT				SG	Sb	03 33 07.9	+1.0	
DAT	**Datca**	**0.76**	**105**	*i* P	Pn	03 32 57.3	-0.8	
DAT				IAML_P				
	comp=Z,974nm,0.2s							
SMG	**Samos**	**0.79**	**10**	P	Pb	03 32 56.8	-0.2	
SMG				S	Sb	03 33 08.0	+0.3	
SMG	**Samos**	**0.79**	**10**	P	Pb	03 32 57.0	0.0	
SMG				S	Sb	03 33 08.2	+0.5	
SMG				AML	AML	03 33 11.8		
	comp=N,2148μm,0.3s							
SMG				AML	AML	03 33 12.1		
	comp=E,1834μm,0.2s							
DATC	**Datca-Mugla**	**0.82**	**102**	PG	Pb	03 32 57.7	+0.2	
DATC				SG	Sn	03 33 09.9	-0.8	
GCAM	**G?zelcaml?**	**0.89**	**30**	PG	Pb	03 32 58.9	+0.1	
GCAM				SG	Sn	03 33 12.1	-0.5	
GCAM	**G?zelcaml?**	**0.89**	**30**	*i* P	Pn	03 32 59.2	-0.5	
GCAM				*i* S	Sn	03 33 12.7	+0.1	
ANAF	**Anafi Island**	**0.92**	**232**	P	Pb	03 32 59.4	+0.2	
ANAF				S	Sn	03 33 12.6	-0.6	
ANAF	**Anafi Island**	**0.92**	**232**	P	Pb	03 32 59.4	+0.2	
ANAF				AML	AML	03 33 16.2		
	comp=N,2108μm,0.2s							
ANAF				AML	AML	03 33 17.5		
	comp=E,3640μm,0.4s							
APE	**Apeiranthos**	**0.92**	**279**	P	Pn	03 32 59.6	-0.5	
APE				S	Sn	03 33 12.3	-1.0	
APE	**Apeiranthos**	**0.92**	**279**	P	Pg	03 32 58.9	-0.1	
APE				S	Sn	03 33 12.7	-0.7	
APE				AML	AML	03 33 15.4		
	comp=E,1004μm,0.3s							
APE				AML	AML	03 33 15.5		
	comp=N,1380μm,0.2s							
THR2	**Thira island,**	**1.10**	**244**	P	Pb	03 33 02.3	0.0	
THT2	**Imerovigli**	**1.11**	**244**	P	Pn	03 33 02.7	-0.1	
SANT	**Santorini**	**1.12**	**240**	PN	Pb	03 33 02.6	0.0	
SANT				SN	Sn	03 33 18.3	+0.1	
SANT	**Santorini**	**1.12**	**240**	P	Pn	03 33 02.8	-0.1	
SANT	**Santorini**	**1.12**	**240**	P	Pb	03 33 02.6	0.0	
IOSP	**Ios island**	**1.12**	**260**	P	Pb	03 33 02.7	0.0	
IOSP				S	Sg	03 33 17.7	+0.2	
IOSP	**Ios island**	**1.12**	**260**	P	Pb	03 33 02.7	0.0	
IOSP				AML	AML	03 33 17.9		
	comp=N,810μm,0.5s							
IOSP				AML	AML	03 33 21.9		
	comp=E,739μm,0.3s							
DGB	**zmir**	**1.13**	**9**	*i* P	Pg	03 33 03.7	+0.5	
DGB				*i* S	Sn	03 33 20.9	+2.3	
THR3	**Thira Island,**	**1.14**	**243**	P	Pb	03 33 02.9	-0.1	
BBRN	**Bozburun-Marma**	**1.15**	**102**	PN	Pg	03 33 03.6	+0.3	
GMLD	**Gumuldur**	**1.16**	**10**	PN	Pg	03 33 03.3	-0.4	
THR6	**Thira Island,**	**1.17**	**241**	P	Pn	03 33 03.5	0.0	
THR5	**Thira Island,**	**1.18**	**245**	P	Pg	03 33 04.1	+0.2	
THR9	**Santorini-Faro**	**1.20**	**242**	P	Pb	03 33 04.1	+0.2	
AYDN	**Tasoluk**	**1.21**	**53**	*i* P	Pg	03 33 04.4	-0.2	
AYDN				IAML_P				
	comp=Z,1μm,0.1s							
ZEY	**zmir**	**1.31**	**354**	*i* P	Pb	03 33 05.8	-0.1	
ARG	**Arkhangelos**	**1.38**	**121**	PN	Pb	03 33 06.8	-0.2	
ARG	**Arkhangelos**	**1.38**	**121**	P	Pb	03 33 06.7	-0.2	
AYDB	**Zeytinkoy-Aydi**	**1.41**	**44**	PN	Pb	03 33 07.1	-0.5	
URLA	**Izmir**	**1.43**	**358**	PN	Pn	03 33 07.1	-0.1	
URLA	**Izmir**	**1.43**	**358**	*i* P	Pb	03 33 07.8	-0.2	
URLA				IAML_P				
	comp=Z,1μm,0.5s							
KARP	**Karpathos**	**1.44**	**164**	PN	Pn	03 33 07.5	+0.2	
KARP				SN	Sb	03 33 27.1	+0.8	
KARP	**Karpathos**	**1.44**	**164**	P	Pn	03 33 07.1	-0.2	
BLCB	**Balcova**	**1.48**	**12**	PN	Pn	03 33 07.9	0.0	
BLCB				SN	Sg	03 33 28.1	-1.0	
CHOS	**Chios island**	**1.53**	**342**	PN	Pn	03 33 08.4	-0.3	
CHOS	**Chios island**	**1.53**	**342**	P	Pn	03 33 08.3	-0.3	
CHOS	**Chios island**	**1.53**	**342**	P	Pn	03 33 08.3	-0.3	
TURN	**Turunc**	**1.56**	**92**	PN	Pn	03 33 05.3	-3.5	
TURN	**Turunc**	**1.56**	**92**	*i* P	Pn	03 33 06.9	-1.9	
TURN				IAML_P				
	comp=Z,601nm,0.1s							
DALY	**Dalyan (Mula)**	**1.60**	**93**	PN	Pn	03 33 09.9	+0.5	
DALY	**Dalyan (Mula)**	**1.60**	**93**	*i* P	Pg	03 33 11.9	-0.1	
SERI	**Serifos**	**1.76**	**278**	P	Pb	03 33 12.6	-0.9	
SERI				AML	AML	03 33 39.3		
	comp=N,200μm,0.5s							
SERI				AML	AML	03 33 42.6		
	comp=E,139μm,0.3s							
ZKR	**Zakros**	**1.85**	**191**	PN	Pn	03 33 13.3	+0.4	
FETY	**Fethiye**	**1.96**	**98**	PN	Pn	03 33 15.2	+0.7	
FETY	**Fethiye**	**1.96**	**98**	*i* P	Pg	03 33 18.4	-0.5	
FETY				IAML_P				
	comp=Z,790nm,0.3s							
LAST	**Lasithi**	**2.01**	**209**	P	Pn	03 33 15.5	+0.3	
AKHS	**Akhisar**	**2.15**	**25**	*i* P	Pg	03 33 24.0	+1.5	
AKHS				IAML_P				
	comp=Z,304nm,0.2s							
KULA	**Kula-Manisa**	**2.24**	**44**	PN	Pn	03 33 18.8	+0.5	
SIGR	**SIGRI**	**2.37**	**345**	PN	Pn	03 33 20.3	+0.3	
SIGR	**SIGRI**	**2.37**	**345**	P	Pn	03 33 20.2	+0.3	
SIGR	**SIGRI**	**2.37**	**345**	P	Pn	03 33 20.1	+0.2	
AKAS	**Kas**	**2.47**	**105**	PN	Pn	03 33 22.5	+1.0	
USAK	**Uak-Merkez**	**2.58**	**46**	*i* P	Pg	03 33 31.6	+0.9	
USAK				IAML_P				
	comp=Z,84nm,0.3s							
DURS	**Dursunbey**	**3.02**	**28**	*i* P	Pg	03 33 39.7	+0.5	

*IDC **07** 03:40:20.7±0.6, 55°.46S×26°.66W, h0km, mb4.5/11, mb1 4.5/12, mb1mx4.3/22, mbtmp4.4/12, ML3.7/1, MS4.1/2, Ms1 4.1/2, ms1mx3.9/9, Error ellipse: s-maj=18.3km s-min=16.7km az=37.0*
*ISCJB **07** 03:40:24.6±0.4, 55°.50S±0°.06×26°.6W±0°.1, h38km, mb4.7/25, MS4.4/5, Error ellipse: s-maj=11.4km s-min=6.7km az=141.0*
*NEIC **07** 03:40:26.3±0.8, 55°.48S×26°.54W, h36km±5km, mb4.7/20, Error ellipse: s-maj=23.5km s-min=16.4km az=49.0*
*BJI **07** 03:40:27.5±0.0, 55°.60S×26°.70W, h36km, mB5.1/1, Ms5.1/1, Ms7 4.8/2*
ISC 07 03:40:26.3±0.4, 55°.51S±0°.09×26°.64W±0°.09, h38km, n87, σ0s67/77, mb4.8/23, MS4.3/5, 2C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.82**	**278**	*e*Pn	Pn	03 41 49.1	-0.7
VNA1	**Neumayer--Stat**	**17.18**	**159**	P	Pn	03 44 23.2	+0.2
VNA3	**Neumayer Olymp**	**17.40**	**162**	P	Pn	03 44 26.5	+0.8
VNA2	**Neumayer--Watz**	**17.58**	**159**	P	Pn	03 44 28.5	+0.6
	baz=322,slow=14						
SNAA	**Sanae**	**19.11**	**157**	P	P	03 44 45.3	-0.2
SNAA	**Sanae**	**19.11**	**157**	P	P	03 44 44.9	-0.6
	0.2nm,0.3s,baz=306,slow=12,SNR=6.1						
SNAA				LR	LR	03 52 19.1	
	comp=Z,361nm,18.2s,baz=318,slow=38						
SNAA	**Sanae**	**19.11**	**157**	*e*P	P	03 44 45.9	+0.3
	15nm,1.1s						
PMSA	**Palmer Station**	**20.49**	**228**	P	P	03 45 00.4	0.0
	32nm,0.9s,baz=101,slow=5.2,SNR=2.7						
USHA	**Ushuaia**	**23.62**	**254**	P	P	03 45 32.4	-1.1
	7.0nm,0.8s,baz=90,slow=8.1,SNR=3.1						
SYO	**Syowa Base**	**31.81**	**141⇑**	*e*P	P	03 46 44.1	-2.5
SYO	**Syowa Base**	**31.81**	**141⇑**	*e*pP	pP	03 46 53.2	-1.9
QSPA	**South Pole Qui**	**34.74**	**180**	*e*P	P	03 47 12.0	-0.5
	29nm,1.4s						
CPUP	**Villa Florida**	**36.70**	**310**	P	P	03 47 28.0	-1.4
	4.4nm,1.0s,baz=148,slow=6.0,SNR=6.1						
CFA	**Coronel Fontan**	**37.64**	**292**	P	P	03 47 36.1	-1.4
	10.0nm,0.6s,baz=153,slow=8.4,SNR=16						
MAW	**Mawson**	**40.40**	**144**	P	P	03 48 00.1	+0.1
	1.6nm,0.6s,baz=219,slow=7.8,SNR=4.5						
MAW	**Mawson**	**40.40**	**144**	*e*P	P	03 48 00.7	+0.7
	1.4nm,0.8s						
LCO	**Las Campanas**	**40.99**	**292**	*e*P	P	03 48 05.8	+0.2
	24nm,1.1s						
GO03	**Copiap**	**41.88**	**294**	*e*P	P	03 48 13.2	+0.5
	28nm,1.2s						
GO02	**Mina Guanaco**	**43.53**	**296**	*e*P	P	03 48 27.0	+0.7
	44nm,1.3s						
LVC	**Limon Verde**	**45.30**	**299**	*e*P	P	03 48 41.1	+0.4
	16nm,0.9s						
PB10	**IPOC Station P**	**45.38**	**297**	*e*P	P	03 48 41.6	+0.8
	58nm,1.4s						
BOSA	**Boshof**	**45.53**	**76**	P	P	03 48 41.5	-0.6
	4.8nm,0.9s,baz=201,slow=5.9,SNR=6.3						
SBA	**Scott Base**	**46.64**	**184**	*e*P	P	03 48 50.7	+0.6
	11nm,1.2s						
PB01	**IPOC Station P**	**46.91**	**300**	*e*P	P	03 48 53.7	+0.8
	44nm,1.2s						
VNDA	**Vanda**	**47.13**	**183**	P	P	03 48 53.9	0.0
	4.9nm,0.6s,baz=183,slow=5.5,SNR=22						
VNDA	**Vanda**	**47.13**	**183**	*e*P	P	03 48 53.9	0.0
	6.3nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.40**	**16**	T	T	04 40 09.4	
	baz=190,slow=75,SNR=9.8						
H10S3	**ASCENSION HYDR**	**47.40**	**16**	T	T	04 40 09.7	
	baz=190,slow=75,SNR=8.7						
H10S1	**ASCENSION HYDR**	**47.41**	**16**	T	T	04 40 10.8	
	baz=190,slow=75,SNR=8.3						
GO01	**Chusmiza**	**47.93**	**301**	*e*P	P	03 49 01.9	+0.5
	17nm,0.9s						
PB11	**IPOC Station P**	**48.08**	**300**	*e*P	P	03 49 02.9	+0.8
	57nm,1.2s						
H10N1	**ASCENSION HYDR**	**48.51**	**16**	T	T	04 41 33.8	
	baz=189,slow=75,SNR=8.3						
H10N3	**ASCENSION HYDR**	**48.51**	**16**	T	T	04 41 33.5	
	baz=189,slow=75,SNR=7.5						
H10N2	**ASCENSION HYDR**	**48.53**	**16**	T	T	04 41 34.7	
	baz=189,slow=75,SNR=7.8						
MNMC	**Minye Minye**	**48.58**	**301**	*e*P	P	03 49 06.9	+0.7
	34nm,1.3s						
LPAZ	**La Paz**	**50.33**	**304**	P	P	03 49 20.1	+0.3
	6.4nm,0.8s,baz=151,slow=7.1,SNR=23						
LPAZ	**La Paz**	**50.33**	**304**	*e*P	P	03 49 20.3	+0.4
	17nm,1.0s						
DBIC	**Dimbokro**	**64.55**	**24**	P	P	03 50 58.5	-0.7
	3.6nm,0.8s,baz=194,slow=8.3,SNR=3.2						
DBIC				LR	LR	04 13 30.7	
	comp=Z,224nm,19.8s,baz=228,slow=31						
DBIC	**Dimbokro**	**64.55**	**24**	*e*P	P	03 50 58.5	-0.7
	42nm,1.4s						
OTAV	**Otavalo**	**69.62**	**303**	*e*P	P	03 51 33.4	+1.4
	13nm,1.5s						
TOA0	**Torodi Ar. Sit**	**72.43**	**29**	*e*P	P	03 51 48.6	+0.1
	6.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.43**	**29**	P	P	03 51 48.0	-0.5
	3.8nm,0.5s,baz=261,slow=10,SNR=64						
TOA1	**Torodi Ar. Sit**	**72.44**	**29**	*e*P	P	03 51 48.0	-0.5
SDV	**Santo Domingo**	**73.85**	**314**	*e*P	P	03 51 57.9	+0.7
	8.1nm,0.8s						
TBI	**Tubuai**	**87.66**	**231**	*e*LR	LR	04 21 00.0	
	comp=Z,135nm,30.0s						
PPT2	**Papeete2**	**92.75**	**233**	*e*LR	LR	04 23 21.1	
	comp=Z,144nm,30.5s						
ASAR	**Alice Springs**	**99.41**	**162**	P	Pdif	03 54 05.2	+0.4
	0.2nm,0.4s,baz=187,slow=3.4,SNR=4.2						
AS31	**Alice Springs**	**99.41**	**162**	*e*P	Pdif	03 54 05.2	+0.4
	6.8nm,2.0s						
DZM	**Mont Dzumac**	**101.93**	**192**	*e*LR	LR	04 27 36.3	
	comp=Z,103nm,23.2s						
PV11	**David Mesa, Pa**	**116.56**	**299**	*e*PKPdf	PKPdf	03 59 04.0	-1.5
PV16	**Nyswonger Mesa**	**116.59**	**299**	*e*PKPdf	PKPdf	03 59 05.3	-0.4
U15A	**North Rim**	**116.84**	**296**	*e*PKPdf	PKiKP	03 59 06.8	+0.5
KKM	**Kota Kinabalu**	**122.47**	**135**	*e*PKPdf	PKiKP	03 59 18.7	+0.9
FIA0	**FINESS Array S**	**123.76**	**27**	*e*PKPdf	PKPdf	03 59 18.2	-0.2
FINES	**FINESS Array B**	**123.76**	**27**	PKP	PKPdf	03 59 18.2	-0.2
	1.3nm,0.7s,baz=253,slow=4.2,SNR=4.7						
CMAR	**Chiang Mai Arr**	**124.96**	**110**	PKP	PKPdf	03 59 22.0	-0.1
	0.6nm,0.3s,baz=240,slow=3.0,SNR=3.6						
KSH	**Kashi**	**128.12**	**74**	*e*PKP	PKiKP	03 59 29.2	+1.0
ARCES	**ARCESS Array B**	**130.33**	**21**	PKP	PKPdf	03 59 30.7	0.0
	8.5nm,0.4s,baz=132,slow=1.8,SNR=5.8						
YKA	**Yellowknife Ar**	**135.98**	**318**	PKP	PKPdf	03 59 42.1	+0.6
	0.6nm,0.7s,baz=123,slow=2.5,SNR=3.9						
YKB5	**Yellowknife Ar**	**135.98**	**318**	*e*PKPdf	PKPdf	03 59 42.1	+0.6
MK32	**Makanchi Array**	**136.42**	**71**	*e*PKPdf	PKPdf	03 59 42.6	-0.3
MKAR	**Makanchi Array**	**136.42**	**71**	PKP	PKPdf	03 59 42.6	-0.3
	0.2nm,0.4s,baz=186,slow=1.3,SNR=3.2						
WMQ	**Urumqi**	**137.49**	**77**	*e*PKP	PKiKP	03 59 46.3	-0.7
CD2	**Chengdu**	**137.50**	**104**	PKP	PKPdf	03 59 46.0	+0.5
INK	**Inuvik**	**145.58**	**321**	*e*PKPdf	PKPdf	03 59 59.0	+0.3
EPYK	**Eagle Plains**	**146.24**	**317**	*e*PKPdf	PKPbc	04 00 01.7	+0.6
NJ2	**Nanjing**	**146.35**	**120**	*e*PKPbc	PKPbc	04 00 02.1	-0.3
NRIK	**Noril'sk**	**148.39**	**38**	PKPbc	PKiKP	04 00 09.1	+0.6
	2.0nm,0.5s,baz=221,slow=3.7,SNR=4.6						
DOT	**Dot Lake**	**148.53**	**311**	*e*PKPbc	PKPbc	04 00 07.3	-0.2
SCRK	**Sand Creek**	**148.58**	**311**	*e*PKPbc	PKiKP	04 00 09.4	+0.2
DIV	**Divide**	**148.60**	**306**	*e*PKPbc	PKPbc	04 00 08.2	+0.5
RIDG	**Independent Ri**	**148.89**	**311**	*e*PKPbc	PKPbc	04 00 09.0	+0.6
PAX	**Paxson**	**148.97**	**309**	*e*PKPbc	PKPbc	04 00 08.3	-0.4
HHC	**Hu-ho-hao-te**	**149.04**	**101**	*e*PKPbc	PKPdf	04 00 06.5	+1.1
HHC				LR	LR		
	comp=N,79nm,10.2s						
HHC				LR	LR		
	comp=E,71nm,12.8s						
HHC				LR	LR		
	comp=Z,210nm,11.1s						
DHY	**Denali Highway**	**149.84**	**309**	*e*PKPbc	PKPbc	04 00 11.3	+0.4
ILAR	**Eielson Array**	**149.99**	**312**	PKPbc	PKiKP	04 00 11.8	-0.1
	4.6nm,0.8s,baz=129,slow=3.8,SNR=26						
ILB	**Eielson Array**	**149.99**	**312**	*e*PKPbc	PKPbc	04 00 11.5	+0.5
CCB	**Clear Creek Bu**	**150.35**	**312**	*e*PKPbc	PKPbc	04 00 11.6	-0.2
SONA0	**Songino Array**	**150.38**	**85**	*e*PKPbc	PKPbc	04 00 13.0	+0.3
SONM	**Songino Array**	**150.38**	**85**	PKPbc	PKPbc	04 00 13.0	+0.3
	1.0nm,0.5s,baz=227,slow=3.7,SNR=6.4						
WRH	**Wood River Hil**	**150.44**	**311**	*e*PKPbc	PKPbc	04 00 12.6	+0.6
RND	**Reindeer**	**150.57**	**309**	*e*PKPbc	PKiKP	04 00 13.5	+0.3
MCK	**McKinley**	**150.67**	**310**	*e*PKPbc	PKiKP	04 00 13.7	+0.3
BWN	**Browne**	**150.98**	**311**	*e*PKPbc	PKiKP	04 00 14.1	+0.1
TOLK	**Toolik Lake Re**	**151.47**	**320**	*e*PKPbc	PKPbc	04 00 14.8	+0.3
BPAW	**Bear Paw Mtn.**	**151.62**	**310**	*e*PKPbc	PKPbc	04 00 14.9	0.0
CAST	**Castle Rocks**	**152.00**	**309**	*e*PKPbc	PKPbc	04 00 15.9	+0.1

*IDC **07** 03:50:35.5±1.3, 56°.02S×26°.90W, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/23, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=54.2km s-min=25.4km az=58.0*
*ISCJB **07** 03:50:42.1±1.0, 56°.0S±0°.2×26°.8W±0°.5, h63km, mb3.5/3, Error ellipse: s-maj=45.8km s-min=14.8km az=156.8*
ISC 07 03:50:43.5±1.2, 56°.1S±0°.2×27°.0W±0°.3, h63km, n8, σ0s31/8, mb3.8/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.69**	**158**	P	P	03 54 34.7	+0.6
VNA3	**Neumayer Olymp**	**16.89**	**161**	P	P	03 54 36.3	-0.1
VNA2	**Neumayer--Watz**	**17.09**	**158**	P	P	03 54 38.7	+0.2
	baz=314,slow=13						
SNAA	**Sanae**	**18.63**	**156**	P	P	03 54 55.5	-0.2
SNAA	**Sanae**	**18.63**	**156**	P	P	03 54 55.8	+0.2
	0.5nm,0.3s,baz=301,slow=11,SNR=49						
MAW	**Mawson**	**40.03**	**143**	P	P	03 58 11.4	-0.2
	0.5nm,0.4s,baz=233,slow=7.5,SNR=5.0						
LPAZ	**La Paz**	**50.51**	**305**	P	P	03 59 35.8	0.0
	0.5nm,0.4s,baz=136,slow=6.7,SNR=5.7						
TORD	**Torodi Ar. Bea**	**73.06**	**29**	P	P	04 02 06.7	+0.1
	0.1nm,0.4s,baz=202,slow=6.1,SNR=5.3						

*ISK **07** 03:56:09.7, 37°.34N×32°.05E, h7km, ML2.5/8*
*ISCJB **07** 03:56:10.2±0.7, 37°.34N±0°.03×32°.05E±0°.06, h6km±6km, Error ellipse: s-maj=7.9km s-min=4.3km az=178.5*
*DDA **07** 03:56:10.2, 37°.36N×32°.08E, h7km±1km, ML2.6*
ISC 07 03:56:10.1±1.3, 37°.35N±0°.03×32°.05E±0°.04, h8km±11km, n21, σ0s45/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMER	**Konya-Meram**	**0.49**	**31**	*i* P	Pb	03 56 20.5	-0.6
KMER				*i* S	Sg	03 56 26.7	+0.7
KMER				IAML_P			
	comp=Z,741nm,0.1s						
KEPZ	**Antalya-Kepez**	**0.57**	**218**	*i* P	Pb	03 56 22.5	+0.1
KONT	**Konya--Tatoy**	**0.64**	**23**	PG	Pg	03 56 22.8	+0.2
KONT				SG	Sb	03 56 32.4	-0.4
KONT	**Konya--Tatoy**	**0.64**	**23**	*i* P	Pb	03 56 23.3	-0.4
KONT				*i* S	Sb	03 56 32.2	-0.6
ALAN	**Alanya-ANTALYA**	**0.79**	**181**	PG	Pg	03 56 25.2	-0.2
DOGA	**KONYA_Doganhis**	**0.81**	**338**	*i* P	Pg	03 56 25.2	-0.6
DOGA				IAML_P			
	comp=Z,694nm,0.2s						
LADK	**Ladik-KONYA**	**0.88**	**16**	PG	Pb	03 56 27.3	-0.5
LADK				SG	Sb	03 56 39.9	+0.1
GAZI	**Gazipasa**	**1.14**	**169**	PN	Pg	03 56 31.6	-0.3
GAZI				SN	Sn	03 56 47.6	-0.5
GAZI	**Gazipasa**	**1.14**	**169**	*i* P	Pn	03 56 32.8	+0.5
GAZI				IAML_P			
	comp=Z,758nm,0.2s						
KDHN	**Kadinhani**	**1.17**	**3**	*i* P	Pb	03 56 32.6	-0.1
KDHN				*i* S	Sb	03 56 48.6	+0.6
KDHN				IAML_P			
	comp=Z,199nm,0.2s						
BAGO	**Egridir - ISPA**	**1.19**	**303**	*i* P	Pn	03 56 33.4	+0.3
BAGO				IAML_P			
	comp=Z,1μm,0.2s						
BERE	**Bereket-Mersin**	**1.38**	**136**	PN	Pn	03 56 35.7	-0.1
BERE				SN	Sn	03 56 54.8	+0.6
CHBY	**Cihanbeyli**	**1.40**	**28**	PN	Pb	03 56 36.4	-0.2
TEVE	**Tevekalti-Mers**	**1.45**	**129**	PN	Pb	03 56 36.9	-0.4
TEKE	**Tekeli-Mersin**	**1.48**	**144**	PN	Pb	03 56 37.4	-0.5
KIZT	**Kizilcal**	**1.53**	**355**	PN	Pb	03 56 38.4	-0.5
KEBE	**Keben-Mersin**	**1.61**	**124**	PN	Pb	03 56 39.1	+0.2
SHUT	**Suhut-Afyon**	**1.69**	**316**	PN	Pn	03 56 40.3	+0.3
IKL	**Isikli**	**1.72**	**130**	PN	Pn	03 56 40.7	+0.3
KIZK	**Mersin**	**1.89**	**117**	PN	Pn	03 56 43.3	+0.6
MERS	**Mersin**	**2.04**	**103**	PN	Pn	03 56 45.2	+0.4

*ISCJB **07** 03:56:34.1±0.2, 40°.21N±0°.02×121°.05W±0°.03, h7km, Error ellipse: s-maj=3.8km s-min=2.5km az=41.8*
*NCEDC **07** 03:56:34.9, 40°.21N×121°.11W, h10km, ML3.7, MW3.7(BRK)*
*NEIC **07** 03:56:34.9±0.0, 40°.21N×121°.11W, h10km, ML3.7(NCEDC), MW3.7(BRK), After NCEDC.*
NEIC Felt [IV] at Chester and Westwood; [III] at Forest Ranch; [II] at Paradise. Also felt at Greenville, Magalia, Meadow Valley, Mineral, Nevada City and Susanville.
*ANF **07** 03:56:36.9±0.7, 40°.13N×121°.34W, h17km±6km, ML3.6/17, Error ellipse: s-maj=7.3km s-min=2.8km az=47.0*
ISC 07 03:56:34.9±0.8, 40°.21N±0°.03×121°.15W±0°.04, h7km, n78, σ1s18/83, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
O03E	**Paynes Creek**	**0.51**	**279**	P	Pg	03 56 44.8	+0.1
	baz=99,SNR=1000						
BEKR	**Beckworth**	**0.70**	**120**	*e*Pg	Pg	03 56 47.5	-0.8
ORV	**Oroville**	**0.71**	**203**	*e*Pg	Pg	03 56 47.5	-1.1
WDC	**Whiskeytown Da**	**1.13**	**289**	*e*Pg	Pg	03 56 54.7	-1.8
O02D	**Mt. Diablo Mer**	**1.26**	**269**	P	Pn	03 56 57.5	-1.4
	baz=88,SNR=300						
AFDM	**Forest Hills D**	**1.27**	**174**	*e*Pn	Pn	03 56 57.2	-1.9
RUBR	**Rubicon Trail**	**1.39**	**146**	*e*Pn	Pn	03 56 59.8	-1.1
N02D	**Trinity Center**	**1.41**	**303**	P	Pn	03 56 59.7	-1.4
	baz=122,SNR=46						
N02D				S	Sb	03 57 18.5	-1.3
	baz=122						
PAHR	**Pah Rah Range**	**1.45**	**110**	*e*Pn	Pn	03 57 00.3	-1.3
VCNR	**Virginia City**	**1.47**	**128**	*e*Pn	Pn	03 57 01.6	-0.4
PNTR	**Pine Nut**	**1.64**	**133**	*e*Pn	Pn	03 57 04.3	0.0
M04C	**Macdoel**	**1.65**	**342**	P	Pb	03 57 05.2	-0.6
	baz=160,SNR=105						
M04C				S	Sg	03 57 27.8	-0.2
	baz=160						
M02C	**Callahan**	**1.75**	**313**	P	Pn	03 57 05.9	+0.2
	baz=131,SNR=49						
M02C				Sb	Sb	03 57 30.5	+1.0
	baz=131						
MOD	**Modoc Plateau**	**1.80**	**20**	*e*Pn	Pn	03 57 06.2	-0.3
GDXM	**Geysers**	**1.90**	**223**	*e*Pn	Pn	03 57 08.4	+0.6
YERR	**Yerington**	**1.92**	**129**	*e*Pn	Pn	03 57 07.8	-0.3
HOPS	**Hopland Field**	**1.92**	**231**	*e*Pn	Pn	03 57 08.6	+0.6
YBH	**Yreka Blue Hor**	**1.92**	**323**	*e*Pn

WRA	**Warramunga Arr**	**17.48 161**	P		Pn	04 12 44.9	-1.5
	baz=343,slow=12,SNR=0.5						
WRA			S		S	04 16 06.2	-4.2
	43nm,0.3s,baz=338,slow=23,SNR=2.3						
ASAR	**Alice Springs**	**20.90 166**	P		Pn	04 13 26.4	-1.1
	6.7nm,0.6s,baz=348,slow=10,SNR=47						
ASAR			S		S	04 17 19.9	+0.8
	0.7nm,0.8s,baz=349,slow=23,SNR=4.3						
MKAR	**Makanchi Array**	**64.34 327**	P		P	04 19 19.0	+0.4
	0.2nm,0.4s,baz=122,slow=8.1,SNR=4.3						
KURBB	**Kurchatov Arra**	**68.61 328**	P		P	04 19 45.3	-0.5
	0.4nm,0.4s,baz=132,slow=6.1,SNR=5.4						

*ISCJB **07** 04:17:02.0±0.6, 39°.18N±0°.05×106°.37E±0°.09, h10km, mb3.6/4, MS3.0/1, Error ellipse: s-maj=10.2km s-min=6.7km az=162.8*
*IDC **07** 04:17:02.2±1.2, 39°.13N×106°.31E, h0km, mb3.6/5, mb1 3.6/8, mb1mx3.4/44, mbtmp3.5/8, ML3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/42, Error ellipse: s-maj=36.4km s-min=18.9km az=56.0*
ISC 07 04:17:04.7±0.8, 39°.19N±0°.06×106°.21E±0°.07, h10km, n12, σ1°69/17, mb3.7/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.62**	**212**	Pn	**Pn**	**04 18 00.6**	**-0.4**
LZH				Pg	**Pb**	**04 18 07.7**	**-1.2**
LZH				Sn	**Sn**	**04 18 44.9**	**+1.0**
LZH				Sg	**Sb**	**04 18 53.9**	**+0.9**
LZH				smax	smax		
	comp=N,220nm,1.1s						
LZH				smax	smax		
	comp=E,200nm,1.1s						
LZH				LR	LR		
	comp=N,220nm,6.0s						
LZH				LR	LR		
	comp=E,220nm,6.5s						
LZH				LR	LR		
	comp=Z,270nm,6.8s						
XAN	**Xi'an**	**5.58**	**156**	Pn	**Pn**	**04 18 25.2**	**-2.7**
XAN				Pg	**Pb**	**04 18 45.3**	**+3.0**
XAN				Sn	**Sn**	**04 19 30.7**	**-1.4**
XAN				Sg	**Sb**	**04 19 52.1**	**+2.8**
XAN				smax	smax		
	comp=N,27nm,0.9s						
XAN				smax	smax		
	comp=E,23nm,0.7s						
SONM	**Songino Array**	**8.64**	**1**	Pn	**Pn**	**04 19 11.1**	**+1.3**
	comp=E,0.3nm,0.3s,baz=182,slow=14,SNR=3.2						
SONM				Lg	Lg	04 21 34.7	
	comp=E,0.3nm,0.3s,baz=179,slow=30,SNR=2.4						
WMQ	**Urumqi**	**14.62**	**294**	*e*P	**Pn**	**04 20 32.6**	**+1.0**
KSRS	**Korea Array**	**17.13**	**89**	P	**Pn**	**04 21 02.5**	**-1.6**
	comp=E,0.3nm,0.3s,baz=280,slow=10,SNR=2.5						
MKAR	**Makanchi Array**	**19.03**	**301**	P	**P**	**04 21 26.6**	**-0.1**
	comp=E,0.1nm,0.3s,baz=104,slow=10,SNR=3.6						
ZALV	**Zalesovo Beam**	**20.71**	**322**	P	**P**	**04 21 44.8**	**-0.2**
	comp=E,0.9nm,0.5s,baz=111,slow=8.6,SNR=2.8						
CMAR	**Chiang Mai Arr**	**21.60**	**199**	P	**P**	**04 21 55.2**	**+0.4**
	comp=E,0.7nm,0.3s,baz=4.3,slow=8.7,SNR=4.3						
KURBB	**Kurchatov Arra**	**22.55**	**310**	P	**P**	**04 22 04.0**	**-0.8**
	comp=E,0.6nm,0.6s,baz=112,slow=10,SNR=3.5						
MJAR	**Matsushiro Arr**	**25.33**	**86**	LR	LR	04 32 35.6	
	comp=E,44nm,18.3s,baz=240,slow=37						
BVAR	**Borovoye Array**	**28.09**	**311**	P	**P**	**04 22 56.6**	**+0.3**
	comp=E,1.1nm,0.5s,baz=101,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**67.69**	**153**	P	**P**	**04 27 60.0**	**-2.1**
	comp=E,0.8nm,0.6s,baz=339,slow=6.8,SNR=10						

IDC 07 04:26:24.8±1.0, 21°.54S×178°.30W, h464km±253km, mb2.9/4, mb1 3.2/4, mb1mx3.0/26, mbtmp3.7/4, Error ellipse: s-maj=117.8km s-min=65.8km az=175.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.09**	**245**	P	P	04 32 53.5	-1.1
	1.6nm,0.7s,baz=81,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**44.02**	**258**	P	P	04 33 50.5	+0.2
	1.6nm,0.8s,baz=96,slow=8.2,SNR=12						
WRA	**Warramunga Arr**	**44.19**	**263**	P	P	04 33 51.8	+0.1
	130nm,0.3s,baz=96,slow=6.0,SNR=1.4						
TXAR	**Lajitas Array**	**87.85**	**57**	P	P	04 38 24.8	+0.4
	0.1nm,0.6s,baz=224,slow=3.8,SNR=2.8						
ILAR	**Eielson Array**	**89.39**	**13**	P	P	04 38 29.8	-0.8
	0.2nm,0.5s,baz=214,slow=5.2,SNR=4.1						
ARCES	**ARCESS Array B**	**129.89**	**349**	PKP	PKPdf	04 44 39.6	-0.6
	9.1nm,0.3s,baz=40,slow=3.5,SNR=5.8						

*ATH **07** 04:40:15.8, 39°.65N×25°.51E, h31km, ML3.4/25, Error ellipse: s-maj=1.3km s-min=0.6km az=72.0*
*DDA **07** 04:40:15.9, 39°.67N×25°.58E, h31km±1km, ML3.8*
*ISK **07** 04:40:15.5, 39°.68N×25°.54E, h12km, ML3.8/42*
*ISCJB **07** 04:40:15.5±0.4, 39°.66N±0°.01×25°.51E±0°.01, h11km±3km, Error ellipse: s-maj=2.1km s-min=1.9km az=174.2*
*THE **07** 04:40:16.5, 39°.67N×25°.54E, h12km, ML3.6/13, Error ellipse: s-maj=0.9km s-min=0.4km az=70.0*
*SOF **07** 04:40:18.0, 39°.76N×24°.31E, h10km*
*BEO **07** 04:40:18.0±0.8, 39°.80N×25°.49E, h0km, ML3.2/6*
ISC 07 04:40:16.4±0.9, 39°.67N±0°.02×25°.53E±0°.02, h13km±8km, n216, σ0°64/255, 11C-10D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.35**	**311**	P	**Pb**	**04 40 24.2**	**-0.3**
LIA				S	**Sg**	**04 40 29.2**	**+0.9**
LIA	**Limnos Island**	**0.35**	**311**	P	**Pb**	**04 40 24.2**	**-0.3**
LIA				S	**Sb**	**04 40 29.5**	**-0.5**
LIA				AML	AML	04 40 31.7	
	comp=N,13011μm,0.2s						
LIA				AML	AML	04 40 33.6	
	comp=E,13841μm,0.4s						
BOZC	**Bozcaada**	**0.44**	**66**	PG	**Pg**	**04 40 24.9**	**-0.2**
BOZC				SG	**Sg**	**04 40 30.9**	**0.0**
BOZC	**Bozcaada**	**0.44**	**66**	*i* P	**Pb**	**04 40 25.7**	**-0.3**
BOZC				*i* S	**Sg**	**04 40 31.0**	**0.0**
BOZC				IAML_P			
	comp=Z,38μm,0.2s						
GPNR	**Gulpinar-Canak**	**0.51**	**114**	PG	**Pg**	**04 40 26.0**	**-0.4**
SIGR	**SIGRI**	**0.52**	**151**	PG	**Pg**	**04 40 26.2**	**-0.3**
SIGR				SG	**Sg**	**04 40 34.0**	**+0.5**
SIGR	**SIGRI**	**0.52**	**151**	P	**Pg**	**04 40 26.4**	**-0.1**
SIGR				S	**Sg**	**04 40 33.6**	**+0.1**
SIGR	**SIGRI**	**0.52**	**151**	P	**Pg**	**04 40 26.4**	**-0.1**
SIGR				S	**Sg**	**04 40 34.2**	**+0.7**
SIGR				AML	AML	04 40 34.8	
	comp=N,31768μm,0.7s						
SIGR				AML	AML	04 40 34.8	
	comp=E,23673μm,0.8s						
EZN	**Ezine**	**0.63**	**75**	PG	**Pg**	**04 40 28.2**	**-0.5**
EZN				SG	**Sg**	**04 40 36.7**	**-0.4**
EZN	**Ezine**	**0.63**	**75**	P	**Pg**	**04 40 28.2**	**-0.5**
EZN				S	**Sg**	**04 40 36.6**	**-0.5**
EZN	**Ezine**	**0.63**	**75**	‖*i*P	**Pg**	**04 40 28.3**	**-0.5**
PRK	**Paraskevi**	**0.71**	**126**	P	**Pb**	**04 40 31.0**	**+0.4**
PRK				S	**Sb**	**04 40 40.6**	**+0.3**
PRK	**Paraskevi**	**0.71**	**126**	P	**Pb**	**04 40 31.1**	**+0.5**
PRK				S	**Sb**	**04 40 40.6**	**+0.3**
PRK				AML	AML	04 40 43.8	
	comp=N,8355μm,0.5s						
PRK				AML	AML	04 40 44.0	
	comp=E,8348μm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.79**	**84**	*i* P	**Pg**	**04 40 31.1**	**-0.5**
BAYC				*i* S	**Sb**	**04 40 42.4**	**-0.1**
BAYC				IAML_P			
	comp=Z,35μm,0.2s						
SMTH	**Samothraki Isl**	**0.80**	**0**	P	**Pg**	**04 40 32.0**	**+0.1**
SMTH				S	**Sb**	**04 40 43.1**	**+0.1**
SMTH	**Samothraki Isl**	**0.80**	**0**	P	**Pb**	**04 40 32.1**	**-0.1**
SMTH				S	**Sb**	**04 40 43.5**	**+0.5**
SMTH				AML	AML	04 40 45.5	
	comp=N,3998μm,0.3s						
SMTH				AML	AML	04 40 46.2	
	comp=E,5217μm,0.4s						
AYVA	**Ayvalik**	**0.97**	**111**	*i* P	**Pg**	**04 40 35.0**	**-0.1**
AYVA				*i* S	**Sn**	**04 40 49.0**	**-0.2**
AYVA				IAML_P			
	comp=Z,6μm,0.1s						
GELI	**Tayfur-Gelibol**	**1.03**	**44**	PG	**Pb**	**04 40 35.3**	**-0.7**
SKY	**Skiros Island**	**1.09**	**224**	P	**Pb**	**04 40 36.5**	**-0.6**
SKY				S	**Sg**	**04 40 52.4**	**+0.7**
SKY	**Skiros Island**	**1.09**	**224**	P	**Pb**	**04 40 36.6**	**-0.5**
SKY				S	**Sb**	**04 40 51.0**	**-0.4**
SKY				AML	AML	04 40 54.8	
	comp=E,10212μm,0.2s						
SKY				AML	AML	04 40 54.9	
	comp=N,11270μm,0.2s						
THAS	**Thassos island**	**1.12**	**327**	P	**Pb**	**04 40 37.1**	**-0.6**
THAS				S	**Sg**	**04 40 52.6**	**-0.1**
THAS	**Thassos island**	**1.12**	**327**	P	**Pb**	**04 40 37.2**	**-0.5**
THAS				S	**Sb**	**04 40 51.9**	**-0.3**
THAS				AML	AML	04 40 54.1	
	comp=E,4994μm,0.3s						
THAS				AML	AML	04 40 55.0	
	comp=N,4896μm,0.3s						
ENEZ	**Enez**	**1.17**	**24**	PN	**Pb**	**04 40 38.0**	**-0.4**
LPK	**Lapseki**	**1.18**	**53**	PN	**Pb**	**04 40 38.2**	**-0.4**
CAND	**Candarli**	**1.22**	**125**	PN	**Pn**	**04 40 38.8**	**-0.3**
ERIK	**Erikli-Kesan**	**1.25**	**37**	PN	**Pn**	**04 40 39.2**	**-0.4**
ALN	**Alexandroupoli**	**1.29**	**18**	PN	**Pn**	**04 40 39.8**	**-0.3**
ALN	**Alexandroupoli**	**1.29**	**18**	P	**Pn**	**04 40 39.4**	**-0.7**
ALN				S	**Sn**	**04 40 57.3**	**0.0**
ALN	**Alexandroupoli**	**1.29**	**18**	P	**Pn**	**04 40 39.5**	**-0.6**
ALN				S	**Sg**	**04 40 57.8**	**-0.2**
ALN				AML	AML	04 40 58.2	
	comp=N,1628μm,0.4s						
ALN				AML	AML	04 40 59.3	
	comp=E,1543μm,0.4s						
KRBN	**Karaburun**	**1.33**	**143**	PN	**Pn**	**04 40 40.6**	**-0.1**
CHOS	**Chios island**	**1.34**	**162**	PN	**Pn**	**04 40 40.7**	**-0.2**
CHOS	**Chios island**	**1.34**	**162**	P	**Pn**	**04 40 40.3**	**-0.5**
CHOS				S	**Sb**	**04 40 58.9**	**+0.4**
CHOS	**Chios island**	**1.34**	**162**	P	**Pn**	**04 40 40.4**	**-0.5**
CHOS				S	**Sb**	**04 40 57.4**	**-1.1**
CHOS				AML	AML	04 41 01.7	
	comp=E,10627μm,0.6s						
CHOS				AML	AML	04 41 02.1	
	comp=N,8876μm,0.6s						
OUR	**Ouranopolis**	**1.36**	**300**	PN	**Pn**	**04 40 40.9**	**-0.2**
OUR	**Ouranopolis**	**1.36**	**300**	P	**Pn**	**04 40 40.7**	**-0.4**
OUR				S	**Sb**	**04 40 59.6**	**+0.5**
OUR	**Ouranopolis**	**1.36**	**300**	P	**Pn**	**04 40 40.8**	**-0.2**
OUR				S	**Sn**	**04 40 58.3**	**-0.7**
OUR				AML	AML	04 41 03.6	
	comp=E,2135μm,0.3s						
OUR				AML	AML	04 41 06.9	
	comp=N,2172μm,0.3s						
ZEDA	**zmir-Bergama**	**1.39**	**120**	*i* P	**Pn**	**04 40 41.6**	**+0.1**
ZEDA				*i* S	**Sg**	**04 41 02.5**	**+1.4**
ZEDA				IAML_P			
	comp=Z,10μm,0.2s						
PAIG	**Paliouri**	**1.45**	**281**	P	**Pn**	**04 40 41.7**	**-0.6**
PAIG	**Paliouri**	**1.45**	**281**	P	**Pn**	**04 40 41.7**	**-0.6**
PAIG				AML	AML	04 41 07.3	
	comp=E,995μm,0.4s						
PAIG				AML	AML	04 41 14.2	
	comp=N,1204μm,0.6s						
KESN	**Edirne-Kesan**	**1.46**	**37**	*i* P	**Pn**	**04 40 42.6**	**-0.2**
KESN				IAML_P			
	comp=Z,3μm,0.3s						
RDO	**Rodhopi**	**1.48**	**0**	PN	**Pn**	**04 40 42.3**	**-0.3**
RDO	**Rodhopi**	**1.48**	**0**	P	**Pn**	**04 40 42.3**	**-0.3**
RDO	**Rodhopi**	**1.48**	**0**	P	**Pn**	**04 40 42.4**	**-0.3**
RDO				AML	AML	04 41 07.8	
	comp=E,1176μm,0.4s						
RDO				AML	AML	04 41 10.5	
	comp=N,1152μm,0.4s						
KAVA	**Kavala**	**1.54**	**330**	P	**Pn**	**04 40 43.1**	**-0.4**
KAVA	**Kavala**	**1.54**	**330**	P	**Pn**	**04 40 43.2**	**-0.4**
KAVA				AML	AML	04 41 07.0	
	comp=N,1308μm,0.3s						
KAVA				AML	AML	04 41 09.9	
	comp=E,2142μm,0.4s						
KRBG	**Karabiga-Canak**	**1.54**	**61**	PN	**Pn**	**04 40 43.3**	**-0.2**
URLA	**Izmir**	**1.55**	**147**	PN	**Pn**	**04 40 43.4**	**-0.2**
URLA	**Izmir**	**1.55**	**147**	*i* P	**Pn**	**04 40 43.6**	**-0.1**
URLA				IAML_P			
	comp=Z,5μm,0.2s						
ZEY	**zmir**	**1.61**	**152**	*i* P	**Pn**	**04 40 44.5**	**0.0**
ZEY				IAML_P			
	comp=Z,2μm,0.3s						
RKY	**Sarkoy-Tekirda**	**1.62**	**51**	PN	**Pn**	**04 40 44.5**	**-0.2**
SART	**Tekirdag**	**1.63**	**51**	*i* P	**Pn**	**04 40 45.2**	**+0.4**
SART				*i* S	**Sg**	**04 41 08.1**	**-0.6**
SART				IAML_P			
	comp=Z,8μm,0.2s						
KNL	**Balıkesir**	**1.65**	**68**	*i* P	**Pn**	**04 40 45.4**	**+0.4**
KNL				*i* S	**Sg**	**04 41 09.3**	**-0.2**
KNL				IAML_P			
	comp=Z,14μm,0.4s						
GONE	**Gonen-Balikesi**	**1.70**	**76**	PN	**Pn**	**04 40 45.6**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.72**	**99**	*i* P	**Pn**	**04 40 46.8**	**+0.8**
STEP				*i* S	**Sg**	**04 41 11.5**	**-0.1**
BLCB	**Balcova**	**1.74**	**137**	PN	**Pn**	**04 40 46.5**	**+0.2**
PLG	**Polygyros**	**1.75**	**294**	P	**Pn**	**04 40 46.4**	**0.0**
PLG	**Polygyros**	**1.75**	**294**	P	**Pn**	**04 40 46.5**	**0.0**
EREA	**Eretria**	**1.76**	**225**	P	**Pn**	**04 40 45.8**	**-0.8**
EREA				S	**Sn**	**04 41 08.3**	**-0.6**
EREA	**Eretria**	**1.76**	**225**	P	**Pn**	**04 40 45.8**	**-0.8**
EREA				AML	AML	04 41 16.1	
	comp=N,2219μm,0.4s						
EREA				AML	AML	04 41 16.9	
	comp=E,2130μm,0.5s						
MRKA	**Markates**	**1.79**	**238**	P	**Pn**	**04 40 46.2**	**-0.8**
MRKA				S	**Sn**	**04 41 09.9**	**+0.3**
MRKA	**Markates**	**1.79**	**238**	P	**Pn**	**04 40 46.1**	**-0.9**
MRKA				AML	AML	04 41 15.7	
	comp=N,2643μm,0.6s						
MRKA				AML	AML	04 41 17.0	
	comp=E,1837μm,0.4s						
BALB	**Balikesir**	**1.81**	**90**	PN	**Pn**	**04 40 47.1**	**-0.2**
NEO	**Neokhori**	**1.82**	**259**	P	**Pn**	**04 40 46.7**	**-0.7**
NEO				S	**Sn**	**04 41 11.0**	**+0.6**
NEO	**Neokhori**	**1.82**	**259**	P	**Pn**	**04 40 46.8**	**-0.6**
NEO				AML	AML	04 41 17.7	
	comp=E,2565μm,0.4s						
NEO				AML	AML	04 41 18.2	
	comp=N,3742μm,0.4s						
XOR	**Xorichti**	**1.83**	**261**	P	**Pn**	**04 40 46.8**	**-0.8**
XOR	**Xorichti**	**1.83**	**261**	P	**Pn**	**04 40 46.9**	**-0.6**
XOR				AML	AML	04 41 17.1	
	comp=E,1064μm,0.4s						
XOR				AML	AML	04 41 17.5	
	comp=N,1311μm,0.4s						
EDC	**Edincik**	**1.92**	**68**	PN	**Pn**	**04 40 48.6**	**-0.1**
GMLD	**Gumuldur**	**1.92**	**145**	PN	**Pn**	**04 40 48.9**	**+0.2**
AKS	**Akhisar**	**1.94**	**113**	PN	**Pn**	**04 40 49.0**	**0.0**
SMIA	**Simia**	**1.96**	**247**	P	**Pn**	**04 40 49.3**	**-0.1**
KDZ	**Kurdzhali**	**1.98**	**358**	PN	**Pn**	**04 40 49.4**	**-0.3**
KDZ	**Kurdzhali**	**1.98**	**358**	*i* P	**Pb**	**04 40 52.9**	**+0.6**
DION	**Dionisos Attik**	**2.02**	**219**	P	**Pn**	**04 40 49.3**	**-0.8**
DION	**Dionisos Attik**	**2.02**	**219**	P	**Pn**	**04 40 49.3**	**-0.8**
DION				AML	AML	04 41 24.8	
	comp=E,774μm,0.4s						
DION				AML	AML	04 41 29.5	
	comp=N,674μm,0.4s						
FYTO	**Fytoko, Volos**	**2.02**	**263**	P	**Pn**	**04 40 49.9**	**-0.2**
FYTO				AML	AML	04 41 25.3	
	comp=E,325μm,0.4s						
FYTO				AML	AML	04 41 27.5	
	comp=N,474μm,0.7s						
TKR	**Tekirdag**	**2.02**	**49**	PN	**Pn**	**04 40 50.2**	**0.0**
SOH	**Sokhos**	**2.03**	**305**	P	**Pn**	**04 40 50.4**	**+0.1**
SOH	**Sokhos**	**2.03**	**305**	P	**Pn**	**04 40 50.4**	**+0.1**
SRS	**Serrai**	**2.07**	**315**	*e*Pn	**Pn**	**04 40 51.6**	**+0.7**
SRS				*e*Sn	**Sn**	**04 41 16.6**	**+0.1**
SRS	**Serrai**	**2.07**	**315**	P	**Pn**	**04 40 50.6**	**-0.3**
SRS	**Serrai**	**2.07**	**315**	P	**Pn**	**04 40 50.9**	**0.0**
PTL	**Penteli**	**2.07**	**219**	P	**Pn**	**04 40 49.9**	**-1.0**
PTL	**Penteli**	**2.07**	**219**	P	**Pn**	**04 40 49.9**	**-1.0**
PTL				AML	AML	04 41 23.3	
	comp=N,742μm,0.7s						
PTL				AML	AML	04 41 24.9	
	comp=E,723μm,0.7s						
HORT	**Hortiatis**	**2.08**	**297**	PN	**Pn**	**04 40 51.3**	**+0.2**
HORT	**Hortiatis**	**2.08**	**297**	P	**Pn**	**04 40 51.2**	**+0.2**
HORT	**Hortiatis**	**2.08**	**297**	P	**Pn**	**04 40 51.0**	**0.0**
NVR	**Nevrokopi**	**2.11**	**323**	P	**Pn**	**04 40 51.3**	**-0.1**
NVR	**Nevrokopi**	**2.11**	**323**	P	**Pn**	**04 40 51.5**	**+0.1**
RZN	**Rozhen**	**2.11**	**343**	*i* P	**Pn**	**04 40 51.5**	**-0.1**
ATHU	**Athens Univers**	**2.18**	**219**	P	**Pn**	**04 40 51.5**	**-0.8**
ATAL	**Atalanti**	**2.18**	**244**	P	**Pn**	**04 40 52.1**	**-0.3**
ATAL				AML	AML	04 41 31.2	
	comp=N,640μm,0.9s						
ATAL				AML	AML	04 41 36.2	
	comp=E,441μm,1.0s						
ATH	**Athens Observa**	**2.21**	**220**	P	**Pn**	**04 40 52.4**	**-0.2**
ATH				AML	AML	04 41 27.2	
	comp=E,696μm,0.9s						
ATH				AML	AML	04 41 28.3	
	comp=N,710μm,0.5s						
SMG	**Samos**	**2.21**	**152**	P	**Pn**	**04 40 52.0**	**-0.7**
SMG				S	**Sn**	**04 41 19.4**	**-0.5**
SMG	**Samos**	**2.21**	**152**	P	**Pn**	**04 40 52.0**	**-0.7**
SMG				AML	AML	04 41 29.9	
	comp=N,1754μm,0.5s						
SMG				AML	AML	04 41 30.3	
	comp=E,1194μm,0.5s						
LKR	**Lokris**	**2.21**	**244**	P	**Pn**	**04 40 51.8**	**-1.0**
CRLT	**Corlu**	**2.23**	**48**	PN	**Pn**	**04 40 53.2**	**+0.2**
KCTX	**Karacabey (Bur**	**2.25**	**74**	PN	**Pn**	**04 40 53.2**	**-0.2**
VLY	**Voula,Athens**	**2.26**	**217**	P	**Pn**	**04 40 52.5**	**-1.0**
VLY	**Voula,Athens**	**2.26**	**217**	P	**Pn**	**04 40 52.2**	**-1.3**
DURS	**Dursunbey**	**2.27**	**91**	*i* P	**Pn**	**04 40 54.5**	**+0.7**
DURS				*i* S	**Sn**	**04 41 22.9**	**+1.2**
VIL2	**Platees**	**2.28**	**231**	P	**Pn**	**04 40 53.3**	**-0.5**
VILL	**Villia**	**2.29**	**230**	P	**Pn**	**04 40 53.3**	**-0.6**
EDRB	**Edirne**	**2.37**	**23**	PN	**Pn**	**04 40 54.9**	**0.0**
EDRB	**Edirne**	**2.37**	**23**	P	**Pn**	**04 40 54.2**	**-0.7**
GCAM	**G?zelcaml?**	**2.37**	**145**	PN	**Pn**	**04 40 55.3**	**+0.3**
LIT	**Litokhoron**	**2.38**	**281**	P	**Pn**	**04 40 55.5**	**+0.4**
LIT	**Litokhoron**	**2.38**	**281**	P	**Pn**	**04 40 54.9**	**-0.2**
KIRK	**Kırklareli**	**2.43**	**29**	*i* P	**Pn**	**04 40 55.9**	**+0.2**
PHSR	**Pinarhisar**	**2.48**	**37**	PN	**Pn**	**04 40 56.6**	**+0.1**
PHSR	**Pinarhisar**	**2.48**	**37**	‖*i*P	**Pn**	**04 40 56.5**	**+0.1**
PROD	**Prodromos**	**2.48**	**236**	P	**Pn**	**04 40 55.9**	**-0.6**
KNT	**Kendrikon**	**2.50**	**307**	PN	**Pn**	**04 40 57.3**	**+0.5**
KNT	**Kendrikon**	**2.50**	**307**	P	**Pn**	**04 40 57.3**	**+0.5**
KNT	**Kendrikon**	**2.50**	**307**	P	**Pn**	**04 40 57.4**	**+0.6**
PLD	**Plovdiv**	**2.52**	**346**	PN	**Pn**	**04 40 57.2**	**+0.3**
PLD	**Plovdiv**	**2.52**	**346**	*i* P	**Pn**	**04 40 58.1**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**2.52**	**132**	PN	**Pn**	**04 40 57.2**	**+0.1**
AGG	**Agios Georgios**	**2.56**	**256**	PN	**Pn**	**04 40 58.1**	**+0.5**
AGG	**Agios Georgios**	**2.56**	**256**	P	**Pn**	**04 40 57.8**	**+0.2**
AGG	**Agios Georgios**	**2.56**	**256**	P	**Pn**	**04 40 57.9**	**+0.2**
AGG				AML	AML	04 41 50.2	
	comp=N,420μm,1.0s						
AGG				AML	AML	04 41 50.3	
	comp=E,316μm,1.1s						
LTK	**Loutraki**	**2.59**	**231**	P	**Pn**	**04 40 57.5**	**-0.5**
LTK	**Loutraki**	**2.59**	**231**	P	**Pn**	**04 40 57.5**	**-0.5**
APE	**Apeiranthos**	**2.59**	**180**	P	**Pn**	**04 40 56.8**	**-1.3**
APE				AML	AML	04 41 43.5	
	comp=N,199μm,0.4s						
APE				AML	AML	04 41 48.7	
	comp=E,280μm,0.6s						
LOUT	**Loutraki**	**2.61**	**231**	P	**Pn**	**04 40 57.7**	**-0.5**
ORLT	**Orhaneli**	**2.62**	**81**	PN	**Pn**	**04 40 58.7**	**+0.3**
SERI	**Serifos**	**2.63**	**198**	P	**Pn**	**04 40 57.5**	**-1.0**
SERI				AML	AML	04 41 47.9	
	comp=N,160μm,0.4s						
SERI				AML	AML	04 41 48.9	
	comp=E,272μm,0.6s						
DSF	**Desfina**	**2.65**	**243**	P	**Pn**	**04 40 58.4**	**-0.5**
MDNY	**Mudanya-Bursa**	**2.67**	**74**	PN	**Pn**	**04 40 59.6**	**+0.5**
KULA	**Kula-Manisa**	**2.69**	**114**	PN	**Pn**	**04 40 59.8**	**+0.3**
KULA	**Kula-Manisa**	**2.69**	**114**	P	**Pn**	**04 40 59.5**	**0.0**
ARMT	**Armutlu**	**2.71**	**70**	PN	**Pn**	**04 40 59.9**	**+0.3**
GRG	**Griva**	**2.72**	**299**	PN	**Pn**	**04 41 00.1**	**+0.4**
GRG	**Griva**	**2.72**	**299**	P	**Pn**	**04 40 59.5**	**-0.2**
GRG	**Griva**	**2.72**	**299**	P	**Pn**	**04 41 00.6**	**+0.9**
THL	**Klokotos Trika**	**2.72**	**269**	P	**Pn**	**04 41 00.0**	**+0.3**
THL	**Klokotos Trika**	**2.72**	**269**	P	**Pn**	**04 40 59.9**	**+0.3**
CTKS	**Kestanelik-??a**	**2.76**	**54**	PN	**Pn**	**04 40 59.7**	**-0.6**
KIYI	**Yalıkoy-Catalc**	**2.78**	**48**	PN	**Pn**	**04 41 00.9**	**+0.3**
EPID	**Epidavros**	**2.79**	**223**	P	**Pn**	**04 40 59.9**	**-0.8**
VAY	**Valandovo**	**2.80**	**307**	*i* Pn	**Pg**	**04 41 09.9**	**-0.1**
DID	**Didima**	**2.81**	**221**	P	**Pn**	**04 41 00.1**	**-0.9**
DID	**Didima**	**2.81**	**221**	P	**Pn**	**04 41 00.1**	**-0.9**
AMGA	**Amorgos Island**	**2.84**	**174**	P	**Pn**	**04 41 00.6**	**-0.9**
KKB	**Krupnik**	**2.88**	**321**	*i* P	**Pn**	**04 41 03.2**	**+1.3**
BGKT	**Bogazkoy**	**2.90**	**58**	PN	**Pn**	**04 41 02.7**	**+0.5**
GEMT	**Gemlik**	**2.91**	**74**	PN	**Pn**	**04 41 02.9**	**+0.5**
KALE	**Kalithea**	**2.93**	**245**	P	**Pn**	**04 41 02.9**	**+0.1**
KALE	**Kalithea**	**2.93**	**245**	P	**Pn**	**04 41 02.9**	**-0.1**
SHAP	**Saphane-Kutahy**	**2.94**	**101**	PN	**Pn**	**04 41 03.1**	**+0.3**
IOSP	**Ios island**	**2.94**	**184**	P	**Pn**	**04 41 01.5**	**-1.3**
KRND	**KRANIDI**	**2.95**	**220**	P	**Pn**	**04 41 02.1**	**-0.7**
BODT	**Bodrum**	**2.95**	**151**	PN	**Pn**	**04 41 03.1**	**+0.1**
BODT	**Bodrum**	**2.95**	**151**	P	**Pn**	**04 41 02.9**	**-0.1**
SERG

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMON	**Piamonte**	**0.64**	**26**	*eP*	Pb	04 43 58.1	0.0
SNET	**Serv Nac Est T**	**0.66**	**33**	*eP*	Pn	04 43 58.2	0.0
SNET				*eS*	Sn	04 44 08.4	+1.0
SNET				IAML		04 44 10.8	
	comp=Z,2μm,0.2s						
LOMA	**San Marcos**	**0.66**	**39⇑**	*eP*	Pb	04 43 58.4	0.0
LOMA				IAML		04 44 10.7	
	comp=Z,2μm,0.1s						
UEES	**San Salvador**	**0.69**	**31⇑**	*iP*	Pn	04 43 58.6	0.0
CEVE	**Cerro Verde**	**0.69**	**358**	*eP*	Pb	04 43 59.1	+0.1
CEVE				IAML		04 44 21.6	
	comp=Z,2μm,0.3s						
CEDA	**San Andres**	**0.69**	**17⇑**	*eP*	Pb	04 43 58.9	0.0
CEDA				*eS*	Sb	04 44 09.5	+1.2
CEDA				IAML		04 44 13.8	
	comp=Z,2μm,0.2s						
OPAM	**San Salvador**	**0.70**	**34⇑**	*iP*	Pb	04 43 59.0	-0.1
OPAM				IAML		04 44 12.4	
	comp=Z,2μm,0.1s						
SBLS	**San Blas**	**0.70**	**358**	*eP*	Pb	04 43 59.2	+0.1
SNJE	**San Jose**	**0.73**	**360**	*eP*	Pb	04 43 59.6	0.0
UDBS	**Soyapango**	**0.73**	**36**	*eP*	Pn	04 43 59.2	+0.1
RTR	**El Retiro**	**0.76**	**357**	*eP*	Pb	04 43 60.0	-0.1
LFU	**La Fuente**	**0.78**	**38⇑**	*eP*	Pb	04 44 00.2	-0.1
UESV	**Ojushtada**	**0.83**	**73⇑**	*eP*	Pb	04 44 02.2	+1.0
UNIC	**Santa Ana**	**0.85**	**3**	*eP*	Pn	04 44 01.1	+0.2
PAVA	**Las Pavas**	**0.87**	**48⇑**	*iP*	Pb	04 44 01.7	-0.1
SNVI	**San Vicente**	**0.88**	**57**	*eP*	Pn	04 44 01.6	+0.2
TECA	**Tecapa**	**1.13**	**71**	*eP*	Pn	04 44 04.9	+0.1
LLGN	**La Laguna**	**1.21**	**32**	*eP*	Pn	04 44 06.1	+0.2
VICT	**Victoria**	**1.25**	**49**	*iP*	Pn	04 44 06.7	+0.4
MTO3	**Montecristo**	**1.28**	**11⇑**	*iP*	Pn	04 44 07.2	+0.3
PACA	**Pacayal**	**1.29**	**75**	*eP*	Pn	04 44 07.4	+0.5
LCY	**Lacayo**	**1.31**	**77**	*eP*	Pn	04 44 07.7	+0.6
LCND	**La Caada**	**1.68**	**84**	*eP*	Pn	04 44 12.6	+0.4

*IDC **07** 05:11:43.0±13.0, 42.°17N×144.°17E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/47, mbtmp3.6/5, MS3.3/1, Ms1 3.3/1, ms1mx2.4/41, Error ellipse: s-maj=350.4km s-min=28.1km az=171.0*
*JMA **07** 05:11:51.5, 43.°34N×143.°97E, h8km±1km, M3.1*
JMA Felt I J1.

ISC 07 05:11:51.0±1.0, 43.°33N±0.°04×144.°01E±0.°05, h13km±8km, n22, σ0°72/23, mb3.5/5, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.18**	**258**	P	**Pg**	**05 11 54.9**	**-0.1**
JAR				*eS*	**Sg**	**05 11 57.8**	**0.0**
JOB	**Onbets**	**0.45**	**196**	P	**Pg**	**05 12 00.3**	**+0.5**
JOB				*eS*	**Sb**	**05 12 07.6**	**+0.3**
JNK	**Nakash**	**0.58**	**64**	P	**Pb**	**05 12 02.8**	**-0.2**
JNK				S	**Sb**	**05 12 11.0**	**-0.1**
JAK	**Akkeshi**	**0.61**	**123**	P	**Pb**	**05 12 03.2**	**-0.2**
JMP	**Maruseppu**	**0.82**	**325**	P	**Pg**	**05 12 06.8**	**-0.1**
JMP				S	**Sg**	**05 12 17.9**	**+0.3**
JCH	**Churui**	**0.86**	**214**	P	**Pg**	**05 12 07.1**	**-0.5**
JKHN	**Kushirohamanak**	**0.88**	**106**	P	**Pb**	**05 12 07.9**	**-0.2**
JKHN				S	**Sn**	**05 12 20.6**	**-1.1**
JRA	**Rausu**	**1.01**	**53**	P	**Pn**	**05 12 10.8**	**-0.1**
JRA				S	**Sn**	**05 12 24.8**	**-0.2**
JFR	**Furan**	**1.05**	**261**	P	**Pg**	**05 12 10.4**	**-0.7**
JFR				S	**Sg**	**05 12 25.2**	**+0.5**
JKK2	**Kamakawa 2**	**1.06**	**301**	P	**Pg**	**05 12 11.2**	**-0.2**
JKK2				S	**Sg**	**05 12 25.4**	**+0.1**
H11N2	**WAKE ISLAND Hy 30.38**	**134**		T	T	05 49 16.2	
	baz=327,slow=75,SNR=34						
H11N1	**WAKE ISLAND Hy 30.39**	**134**		T	T	05 49 17.0	
	baz=327,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy 30.40**	**134**		T	T	05 49 17.6	
	baz=327,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy 31.29**	**135**		T	T	05 50 26.1	
	baz=328,slow=76,SNR=50						
H11S3	**WAKE ISLAND Hy 31.29**	**135**		T	T	05 50 25.4	
	baz=328,slow=76,SNR=33						
H11S2	**WAKE ISLAND Hy 31.31**	**135**		T	T	05 50 27.3	
	baz=328,slow=76,SNR=38						
ZALV	**Zalesovo Beam**	**39.42**	**307**	P	**P**	**05 19 21.0**	**+0.6**
	0.6nm,0.4s,baz=79,slow=7.5,SNR=3.1						
MKAR	**Makanchi Array**	**42.74**	**297**	P	**P**	**05 19 46.3**	**-1.5**
	0.3nm,0.5s,baz=79,slow=8.9,SNR=3.6						
ILAR	**Eielson Array**	**43.17**	**36**	P	**P**	**05 19 50.3**	**-0.7**
	0.8nm,0.9s,baz=252,slow=6.7,SNR=8.0						
KURBB	**Kurchatov Arra**	**43.94**	**303**	P	**P**	**05 19 57.6**	**+0.2**
	0.7nm,0.7s,baz=74,slow=8.9,SNR=4.6						
AAK	**Ala-Archa**	**49.46**	**295**	LR	LR	05 43 12.8	
	comp=Z,29nm,18.4s,baz=32,slow=38						
YKA	**Yellowknife Ar**	**57.40**	**33**	P	**P**	**05 21 40.7**	**+1.9**
	0.1nm,0.3s,baz=300,slow=6.5,SNR=2.4						

*IDC **07** 05:19:47.9±1.2, 15.°76S×175.°82W, h0km, mb4.2/6, mb1 4.5/6, mb1mx4.0/38, mbtmp4.3/6, Error ellipse: s-maj=47.2km s-min=23.8km az=136.0*
*ISCJB **07** 05:19:59.2±0.7, 15.°86S±0.°08×176.°0W±0.°1, h100km, mb4.4/16, Error ellipse: s-maj=16.6km s-min=11.2km az=7.0*
*NEIC **07** 05:20:02.9±1.0, 15.°80S×175.°95W, h122km±8km, mb4.4/13, Error ellipse: s-maj=32.3km s-min=17.2km az=128.0*

ISC 07 05:20:00.4±0.9, 15.°9S±0.°1×175.°9W±0.°2, h100km, n23, σ1°16/23, mb4.5/16, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNA	**Funafuti**	**8.79**	**326**	*ePn*	**Pn**	**05 22 05.0**	**+0.2**
URZ	**Urewera**	**23.08**	**194**	P	**P**	**05 24 56.9**	**-0.6**
	3.9nm,0.7s,baz=89,slow=18,SNR=6.6						
URZ				S	**S**	**05 28 57.5**	**-3.2**
	2.6nm,0.6s,baz=63,slow=18,SNR=2.0						
URZ	**Urewera**	**23.08**	**194**	*eP*	**P**	**05 24 58.0**	**+0.5**
	11nm,1.0s						
BKZ	**Black Stump Fm**	**24.09**	**195**	*eP*	**P**	**05 25 06.8**	**0.0**
	8.2nm,1.2s						
THZ	**Tophouse**	**27.50**	**198**	*eP*	**P**	**05 25 38.5**	**+1.0**
	14nm,1.1s						
KHZ	**Kahutara**	**27.91**	**197**	*eP*	**P**	**05 25 43.6**	**+2.5**
	14nm,1.0s						
WHZ	**Wether Hill Ro**	**32.80**	**201**	*eP*	**P**	**05 26 25.7**	**+1.6**
CAN	**Canberra**	**36.82**	**232**	*eP*	**P**	**05 27 00.3**	**+1.4**
	6.0nm,1.0s						
KHU	**Kahuku**	**40.24**	**30**	*eP*	P	05 27 22.2	-5.6
	176nm,1.2s						
STKA	**Stephens Creek**	**41.70**	**240**	P	**P**	**05 27 39.9**	**+0.3**
	1.2nm,0.3s,baz=86,slow=11,SNR=5.1						
STKA	**Stephens Creek**	**41.70**	**240**	*eP*	**P**	**05 27 40.1**	**+0.5**
	0.7nm,1.1s						
BBOO	**Buckleboo**	**46.48**	**240**	*eP*	**P**	**05 28 17.4**	**-0.3**
	14nm,1.1s						
WB2	**Warramunga Arr**	**47.38**	**257**	*eP*	**P**	**05 28 24.9**	**0.0**
	6.1nm,1.0s						
WR1	**Warramunga Arr**	**47.40**	**257**	*eP*	**P**	**05 28 25.1**	**0.0**
WRA	**Warramunga Arr**	**47.40**	**257**	P	**P**	**05 28 25.1**	**0.0**
	6.4nm,0.3s,baz=83,slow=7.1,SNR=5.6						
AS31	**Alice Springs**	**47.67**	**252**	*eP*	**P**	**05 28 27.3**	**+0.1**
	3.0nm,0.8s						
ASAR	**Alice Springs**	**47.67**	**252**	P	**P**	**05 28 27.2**	**+0.1**
	10nm,0.5s,baz=87,slow=8.0,SNR=139						
FORT	**Forrest**	**53.04**	**243**	*eP*	**P**	**05 29 06.3**	**-1.2**
	23nm,1.1s						
PSA00	**Pilbara Seismi**	**60.76**	**254**	*eP*	**P**	**05 30 01.0**	**-1.2**
	20nm,1.1s						
LTX	**Lajitas**	**82.90**	**57**	*eP*	**P**	**05 32 14.6**	**+0.1**
TXAR	**Lajitas Array**	**82.90**	**57**	P	**P**	**05 32 14.6**	**+0.1**
	0.4nm,0.9s,baz=223,slow=6.1,SNR=4.8						
ILAR	**Eielson Array**	**83.44**	**12**	P	**P**	**05 32 15.7**	**-0.7**
	0.3nm,0.5s,baz=220,slow=5.6,SNR=9.2						
ILB	**Eielson Array**	**83.44**	**12**	*eP*	**P**	**05 32 16.0**	**-0.4**
	1.9nm,1.1s						

MEX 07 05:24:45.2±0.3, 15.°09N×92.°98W, h93km±5km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.65**	**339**	*eP*	Pn	05 25 00.2	-1.3
PCIG				*eS*	Sn	05 25 12.1	-1.6
THIG		**0.71**	**105**	*eP*	Pn	05 25 03.0	+1.0
THIG				*eS*	Sn	05 25 12.7	-2.0
CCIG	**Comitan**	**1.43**	**34**	*eP*	Pn	05 25 09.1	-1.3
CCIG				*eS*	Sn	05 25 28.0	-1.4

*KRSC **07** 05:27:25.5±0.7, 54.°47N×160.°94E, h99km±14km, ML5.3, FELT [IV] at GMS Kronoki.*
*BJI **07** 05:27:25.0±0.0, 54.°91N×160.°30E, h97km, mb4.8/34, mB4.8/27*
*ISCJB **07** 05:27:27.2±0.1, 54.°59N±0.°02×160.°50E±0.°03, h116km±1km, mb4.7/191, Error ellipse: s-maj=3.4km s-min=2.1km az=38.3*
*MOS **07** 05:27:27.0±0.9, 54.°61N×160.°43E, h115km, mb4.7/59, Error ellipse: s-maj=7.7km s-min=3.1km az=79.2*
*NEIC **07** 05:27:28.6±1.4, 54.°68N×160.°42E, h109km±2km, mb4.6/225, Error ellipse: s-maj=12.9km s-min=10.4km az=157.0*
*IDC **07** 05:27:28.0±0.5, 54.°76N×160.°30E, h106km±4km, mb4.3/36, mb1 4.5/39, mb1mx4.4/48, mbtmp4.7/39, MS3.5/20, Ms1 3.5/20, ms1mx3.3/36, Error ellipse: s-maj=10.0km s-min=7.4km az=153.0*
*GCMT **07** 05:27:29.5±0.4, 54.°62N±0.°03×160.°79E±0.°05, h118km±6km, MW4.9/66, Moment Tensor Solution. s20,c24; s66,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.50±.17; $M_{\theta\theta}$1.23±.21; $M_{\phi\phi}$-1.73±.18; $M_{r\theta}$-2.03±.11; $M_{\theta\phi}$-1.11±.17; $M_{\phi r}$-1.34±.09; Best double couple: $M_0$3.07600×10^{16} NP1:ϕ_s237.00000°, δ84.00000°, λ126.00000°. NP2:ϕ_s335.00000°, δ36.00000°, λ10.00000°. Principal axes: T 2.9270, Plg40.0000°, Azm180.0000°; N 0.2960, Plg36.0000°, Azm53.0000°; P -3.2250, Plg30.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 05:27:27.1±0.4, 54.°55N±0.°02×160.°68E±0.°03, h104km±3km, h104km:pP-P, n620, σ1°35/706, mb4.7/191, 15C-16D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZV	**Kizimen**	**0.61**	**339**	*eP*	**Pn**	**05 27 44.2**	**-0.1**
KZV	**Kizimen**	**0.61**	**339**	PN	**Pn**	**05 27 44.2**	**-0.1**
MKZ	**Mys Kozlova**	**0.61**	**89**	*eP*	**Pn**	**05 27 42.6**	**-1.5**
MKZ	**Mys Kozlova**	**0.61**	**89**	PN	**Pn**	**05 27 42.6**	**-1.5**
TUMD	**Tumrok D**	**0.68**	**346**	*eP*	**Pn**	**05 27 44.1**	**-0.6**
TUMD				*eS*	**Sn**	**05 27 57.7**	**-0.3**
TUMR	**Tumrok**	**0.80**	**338**	*eP*	**Pn**	**05 27 46.5**	**+0.5**
TUMR	**Tumrok**	**0.80**	**338**	PN	**Pn**	**05 27 44.1**	**-1.9**
TUMR				S	**Sn**	**05 27 57.7**	**-2.4**
KMNR	**Kamenistaya**	**1.24**	**348**	*eP*	**Pn**	**05 27 51.6**	**+1.0**
KMNR	**Kamenistaya**	**1.24**	**348**	PN	**Pn**	**05 27 51.6**	**+1.0**
BZMR	**Bezymyannaya**	**1.40**	**356**	*eP*	**Pn**	**05 27 53.2**	**+0.7**
BZMR	**Bezymyannaya**	**1.40**	**356**	PN	**Pn**	**05 27 53.2**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**1.40**	**0**	*eP*	**Pn**	**05 27 53.1**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**1.40**	**0**	PN	**Pn**	**05 27 53.1**	**+0.7**
KIRR	**Kirishev**	**1.42**	**352**	*eP*	**Pn**	**05 27 53.7**	**+0.9**
KIRR				*eS*	**Sn**	**05 28 13.9**	**+1.7**
KIRR	**Kirishev**	**1.42**	**352**	PN	**Pn**	**05 27 53.7**	**+0.9**
KIRR				S	**Sn**	**05 28 13.9**	**+1.7**
BZWR	**Bezymyannyi-We**	**1.42**	**356**	*eP*	**Pn**	**05 27 53.5**	**+0.7**
BZWR	**Bezymyannyi-We**	**1.42**	**356**	PN	**Pn**	**05 27 53.5**	**+0.7**
KPT	**Kopyto**	**1.45**	**350**	*eP*	**Pn**	**05 27 53.6**	**+0.6**
KPT				*eS*	**Sn**	**05 28 13.8**	**+1.2**
KPT	**Kopyto**	**1.45**	**350**	PN	**Pn**	**05 27 53.6**	**+0.6**
KPT				S	**Sn**	**05 28 13.8**	**+1.2**
SPN	**Mys Shipunski**	**1.50**	**195**	*eP*	**Pn**	**05 27 52.3**	**-1.3**
SPN				*eS*	**Sn**	**05 28 11.2**	**-2.5**
SPN	**Mys Shipunski**	**1.50**	**195**	PN	**Pn**	**05 27 52.3**	**-1.3**
SPN				S	**Sn**	**05 28 11.2**	**-2.5**
LGNR	**Loginova**	**1.54**	**0**	*eP*	**Pn**	**05 27 55.7**	**+1.4**
LGNR				*eS*	**Sn**	**05 28 18.0**	**+3.0**
LGNR	**Loginova**	**1.54**	**0**	PN	**Pn**	**05 27 55.7**	**+1.4**
LGNR				S	**Sn**	**05 28 18.0**	**+3.0**
CIRR	**Tsirk**	**1.57**	**1**	*eP*	**Pn**	**05 27 55.5**	**+0.9**
CIRR	**Tsirk**	**1.57**	**1**	PN	**Pn**	**05 27 55.5**	**+0.9**
KOZ	**Kozyrevsk**	**1.58**	**343**	*eP*	**Pn**	**05 27 55.6**	**+1.0**
KOZ				*eS*	**Sn**	**05 28 17.3**	**+1.8**
KOZ	**Kozyrevsk**	**1.58**	**343**	PN	**Pn**	**05 27 55.6**	**+1.0**
KOZ				S	**Sn**	**05 28 17.3**	**+1.8**
NLC	**Nalytchevo**	**1.59**	**210**	*eP*	**Pn**	**05 27 54.4**	**-0.2**
NLC				*eS*	**Sn**	**05 28 15.3**	**-0.2**
NLC	**Nalytchevo**	**1.59**	**210**	PN	**Pn**	**05 27 54.4**	**-0.2**
NLC				S	**Sn**	**05 28 15.3**	**-0.2**
SDLR	**Sedlovina**	**1.66**	**221**	*iP*	**Pn**	**05 27 56.0**	**+0.4**
SDLR	**Sedlovina**	**1.66**	**221**	PN	**Pn**	**05 27 56.0**	**+0.4**
KRSR	**Krestovskiy**	**1.68**	**358**	*eP*	**Pn**	**05 27 56.3**	**+0.5**
KRSR				*eS*	**Sn**	**05 28 18.8**	**+1.2**
KRSR	**Krestovskiy**	**1.68**	**358**	PN	**Pn**	**05 27 56.3**	**+0.5**
KRSR				S	**Sn**	**05 28 18.8**	**+1.2**
KRER	**Koryakskii**	**1.69**	**223**	*eP*	**Pn**	**05 27 56.5**	**+0.4**
KRER				*eS*	**Sn**	**05 28 19.3**	**+1.2**
KRER	**Koryakskii**	**1.69**	**223**	PN	**Pn**	**05 27 56.5**	**+0.4**
KRER				S	**Sn**	**05 28 19.3**	**+1.2**
KRX	**Arik**	**1.69**	**226**	*eP*	**Pn**	**05 27 57.0**	**+0.9**
KRX	**Arik**	**1.69**	**226**	PN	**Pn**	**05 27 57.0**	**+0.9**
SMAR	**Somma**	**1.70**	**222**	*iP*	**Pn**	**05 27 56.7**	**+0.4**
SMAR				*iS*	**Sn**	**05 28 19.3**	**+0.9**
SMAR	**Somma**	**1.70**	**222**	PN	**Pn**	**05 27 56.7**	**+0.4**
SMAR				S	**Sn**	**05 28 19.3**	**+0.9**
AVH	**Avacha**	**1.72**	**223**	*eP*	**Pn**	**05 27 56.9**	**+0.5**
AVH				*eS*	**Sn**	**05 28 20.1**	**+1.4**
AVH	**Avacha**	**1.72**	**223**	PN	**Pn**	**05 27 56.9**	**+0.5**
AVH				S	**Sn**	**05 28 20.1**	**+1.4**
UGLR	**Uglovaya**	**1.73**	**220**	*eP*	**Pn**	**05 27 57.0**	**+0.4**
UGLR				*eS*	**Sn**	**05 28 20.5**	**+1.6**
UGLR	**Uglovaya**	**1.73**	**220**	PN	**Pn**	**05 27 57.0**	**+0.4**
UGLR				S	**Sn**	**05 28 20.5**	**+1.6**
KOK	**Koryaka**	**1.74**	**225**	*eP*	**Pn**	**05 27 57.9**	**+1.2**
KOK				*eS*	**Sn**	**05 28 20.5**	**+1.4**
KOK	**Koryaka**	**1.74**	**225**	PN	**Pn**	**05 27 57.9**	**+1.2**
KOK				S	**Sn**	**05 28 20.5**	**+1.4**
KLY	**Klyuchi**	**1.77**	**360**	*eP*	**Pn**	**05 27 57.8**	**+0.9**
KLY				*eS*	**Sn**	**05 28 21.4**	**+1.8**
KLY	**Klyuchi**	**1.77**	**360**	PN	**Pn**	**05 27 57.8**	**+0.9**
KLY				S	**Sn**	**05 28 21.4**	**+1.8**
ESO	**Esso**	**1.79**	**321**	*eP*	**Pn**	**05 27 58.1**	**+1.0**
ESO				*eS*	**Sn**	**05 28 21.3**	**+1.3**
ESO	**Esso**	**1.79**	**321**	PN	**Pn**	**05 27 58.1**	**+1.0**
ESO				S	**Sn**	**05 28 21.3**	**+1.3**
GNL	**Ganaly**	**1.82**	**243**	*eP*	**Pn**	**05 27 58.9**	**+1.2**
GNL	**Ganaly**	**1.82**	**243**	PN	**Pn**	**05 27 58.9**	**+1.2**
SRDR	**Sredinnyy**	**1.86**	**343**	*eP*	**Pn**	**05 27 58.7**	**+0.6**
SRDR				*eS*	**Sn**	**05 28 22.6**	**+1.0**
SRDR	**Sredinnyy**	**1.86**	**343**	PN	**Pn**	**05 27 58.7**	**+0.6**
SRDR				S	**Sn**	**05 28 22.6**	**+1.0**
DALK	**Dalny**	**1.90**	**218**	*eP*	**Pn**	**05 27 58.9**	**+0.4**
DALK				*eS*	**Sn**	**05 28 22.8**	**+0.3**
DALK	**Dalny**	**1.90**	**218**	PN	**Pn**	**05 27 58.9**	**+0.4**
DALK				S	**Sn**	**05 28 22.8**	**+0.3**
PET	**Petropavlovsk**	**1.94**	**219**	*ePn*	**Pn**	**05 27 59.5**	**+0.4**
PET				*eSn*	**Sn**	**05 28 23.6**	**+0.2**
PET	**Petropavlovsk**	**1.94**	**219**	*iP*	**Pn**	**05 27 59.5**	**+0.4**
PET				*eS*	**Sn**	**05 28 24.2**	**+0.8**
PET	**Petropavlovsk**	**1.94**	**219K**	*iPN*	**Pn**	**05 27 59.5**	**+0.4**
PET				*i S*	**Sn**	**05 28 24.1**	**+0.7**
PET				pmax	pmax		
	comp=Z,1μm,1.2s						
PET				pmax	pmax		
	comp=Z,1μm,0.7s						
PET				smax	smax		
	comp=N,14μm,0.7s						
PET				smax	smax		
	comp=N,2μm,0.8s						
PET				smax	smax		
	comp=E,9μm,0.5s						
PET				smax	smax		
	comp=E,9μm,0.5s						
PET				smax	smax		
	comp=N,21μm,0.7s						
BDR	**Baidarnaya**	**2.05**	**8**	*eP*	**Pn**	**05 28 01.6**	**+1.1**
BDR				*eS*	**Sn**	**05 28 28.3**	**+2.3**
BDR	**Baidarnaya**	**2.05**	**8**	PN	**Pn**	**05 28 01.6**	**+1.1**
BDR				S	**Sn**	**05 28 28.3**	**+2.3**
KBG	**Krutoberegovo**	**2.07**	**33**	*eP*	**Pn**	**05 28 00.4**	**-0.2**
KBG				*eS*	**Sn**	**05 28 26.5**	**+0.2**
KBG	**Krutoberegovo**	**2.07**	**33**	PN	**Pn**	**05 28 00.4**	**-0.2**
KBG				S	**Sn**	**05 28 26.5**	**+0.2**
KBTR	**Krutoberegovo**	**2.07**	**35**	*eP*	**Pn**	**05 28 00.4**	**-0.2**
KBTR				*eS*	**Sn**	**05 28 26.7**	**+0.4**
KBTR	**Krutoberegovo**	**2.07**	**35**	PN	**Pn**	**05 28 00.4**	**-0.2**
KBTR				S	**Sn**	**05 28 26.7**	**+0.4**
SMKR	**Semkarok**	**2.09**	**12**	*iP*	**Pn**	**05 28 02.0**	**+1.0**
SMKR				*eS*	**Sn**	**05 28 28.8**	**+1.9**
SMKR	**Semkarok**	**2.09**	**12**	PN	**Pn**	**05 28 02.0**	**+1.0**
SMKR				S	**Sn**	**05 28 28.8**	**+1.9**
SRKR	**Sorokina**	**2.13**	**7**	*eP*	**Pn**	**05 28 02.8**	**+1.2**
SRKR				*eS*	**Sn**	**05 28 30.1**	**+2.2**
SRKR	**Sorokina**	**2.13**	**7**	PN	**Pn**	**05 28 02.8**	**+1.2**
SRKR				S	**Sn**	**05 28 30.1**	**+2.2**
PEA1	**Petropavlovsk-**	**2.28**	**232**	*ePn*	**Pn**	**05 28 04.3**	**+0.9**
PEA1				*eSn*	**Sn**	**05 28 36.5**	**+5.3**
PEA0B	**Petropavlovsk-**	**2.28**	**232**	*ePn*	**Pn**	**05 28 05.0**	**+1.5**
PETK	**Petropavlovsk-**	**2.28**	**232**	P	**Pn**	**05 28 04.3**	**+0.8**
	comp=N,27nm,0.3s,baz=64,slow=16,SNR=143						
PETK				S	**Sn**	**05 28 36.5**	**+5.2**
	comp=N,57nm,0.3s,baz=68,slow=24,SNR=9.4						
PETK				LR	LR	05 29 24.8	
	comp=N,376nm,20.7s,baz=40,slow=52						
KRMR	**Karymshinskiy**	**2.29**	**222**	*eP*	**Pn**	**05 28 04.5**	**+0.9**
KRMR	**Karymshinskiy**	**2.29**	**222**	PN	**Pn**	**05 28 04.5**	**+0.9**
RUS	**Russkaya**	**2.48**	**212**	*iP*	**Pn**	**05 28 05.9**	**-0.2**
RUS	**Russkaya**	**2.48**	**212**	PN	**Pn**	**05 28 05.9**	**-0.2**
GRL	**Gorelyy**	**2.53**	**219**	*eP*	**Pn**	**05 28 07.5**	**+0.6**
GRL	**Gorelyy**	**2.53**	**219**	PN	**Pn**	**05 28 07.5**	**+0.6**
MTVR	**Mutnovka**	**2.55**	**217**	*eP*	**Pn**	**05 28 08.1**	**+1.0**
MTVR				*eS*	**Sn**	**05 28 39.2**	**+1.5**
MTVR	**Mutnovka**	**2.55**	**217**	PN	**Pn**	**05 28 08.1**	**+1.0**
MTVR				S	**Sn**	**05 28 39.2**	**+1.5**
APC	**Apacha**	**2.65**	**234**	*eP*	**Pn**	**05 28 10.0**	**+1.8**
APC	**Apacha**	**2.65**	**234**	PN	**Pn**	**05 28 10.0**	**+1.8**
ASAK	**Asacha**	**2.73**	**219**	*eP*	**Pn**	**05 28 10.8**	**+1.4**
ASAK	**Asacha**	**2.73**	**219**	PN	**Pn**	**05 28 10.8**	**+1.4**
BKI	**Bering**	**3.13**	**76**	*eP*	**Pn**	**05 28 13.4**	**-1.2**
BKI				*eS*	**Sn**	**05 28 46.0**	**-5.2**
BKI	**Bering**	**3.13**	**76**	PN	**Pn**	**05 28 13.4**	**-1.2**
KDTR	**Khodutka, Kamc**	**3.16**	**211**	*eP*	**Pn**	**05 28 14.6**	**-0.4**
KDTR	**Khodutka, Kamc**	**3.16**	**211**	PN	**Pn**	**05 28 14.6**	**-0.4**
PAU	**Pauzhetka**	**3.87**	**219**	*eP*	**Pn**	**05 28 25.7**	**+1.2**
PAU	**Pauzhetka**	**3.87**	**219**	PN	**Pn**	**05 28 25.7**	**+1.2**
PALN	**Palana**	**4.57**	**355**	*eP*	**Pn**	**05 28 34.9**	**+1.0**
PALN	**Palana**	**4.57**	**355**	PN	**Pn**	**05 28 34.9**	**+1.0**
SKR	**Severo-Kuril's**	**4.76**	**218**	*ePN*	**Pn**	**05 28 37.2**	**+0.6**
SKR				*eS*	**Sn**	**05 29 29.9**	**-0.7**
SKR				pmax	pmax		
	comp=Z,249nm,0.7s						
SKR				pmax	pmax		
	comp=Z,300nm,1.5s						
SKR				smax	smax		
	comp=N,567nm,0.7s						
SKR				smax	smax		
	comp=E,611nm,0.8s						
SKR				MLR	MLR		
	comp=Z,400nm,16.0s						
SKR				MLR	MLR		
	comp=Z,300nm,17.0s						
ALID	**Alaid**	**4.83**	**222**	*eP*	**Pn**	**05 28 38.7**	**+1.1**
ALID	**Alaid**	**4.83**	**222**	PN	**Pn**	**05 28 38.7**	**+1.1**
TILK	**Tilichiki**	**6.61**	**24**	*eP*	**Pn**	**05 29 03.8**	**+2.3**
TILK	**Tilichiki**	**6.61**	**24**	PN	**Pn**	**05 29 03.8**	**+2.3**
MA2	**Magadan**	**7.38**	**317**	P	**Pn**	**05 29 14.1**	**+2.0**
	comp=Z,19nm,0.3s,baz=125,slow=9.6,SNR=290						
MA2	**Magadan**	**7.38**	**317**	*ePn*	**Pn**	**05 29 13.5**	**+1.4**
MA2	**Magadan**	**7.38**	**317**	*cePn*	Pn	05 29 07.6	-4.5
MA2				pmax	pmax		
	comp=Z,639nm,0.8s						
SMY	**Shemya**	**8.18**	**97**	*ePn*	**Pn**	**05 29 22.1**	**-0.9**
SMY				*eSn*	Sn	05 30 47.7	-6.0
SMY	**Shemya**	**8.18**	**97**	*ePN*	**Pn**	**05 29 22.1**	**-0.9**
SEY	**Seymchan**	**9.44**	**336**	P	**Pn**	**05 29 39.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=336,slow=20,SNR=5.5						
SEY	**Seymchan**	**9.44**	**336**	*dPN*	**Pn**	**05 29 35.6**	**-4.4**
TYV	**Tymovskoe**	**11.53**	**259**	*ePN*	**Pn**	**05 30 11.7**	**+3.4**
TYV				pmax	pmax		
	comp=Z,400nm,2.6s						
TYV				pmax	pmax		
	comp=Z,45nm,1.1s						
KUR	**Kuril'sk**	**12.44**

CN2 pmax pmax
comp=Z,80nm,6.2s
CN2 LR LR
comp=Z,70nm,16.0s
CN2 LR LR
comp=Z,90nm,16.0s
CN2 LR LR
comp=Z,100nm,15.0s
INU Inuyama 25.26 230 *e*P **P 05 32 44.7 +1.3**
comp=Z,26nm,0.6s
CAST Castle Rocks 25.34 51 *e*P **P 05 32 45.1 +1.2**
comp=Z,5.2nm,1.0s
OHAK Old Harbor 25.58 65 *e*P **P 05 32 48.0 +1.9**
comp=Z,67nm,1.4s
BOD Bodaibo 25.77 296 *e*P **P 05 32 44.8 -3.1**
BOD pmax pmax
comp=Z,8.0nm,1.0s
BPAW Bear Paw Mtn. 25.81 49 *e*P **P 05 32 48.8 +0.7**
comp=Z,8.2nm,1.1s
KTH Kantishna Hill 25.85 50 *e*P **P 05 32 49.4 +0.8**
comp=Z,11nm,1.2s
MLY Manley 25.91 47 *e*P **P 05 32 50.1 +1.1**
comp=Z,4.6nm,0.9s
SUA Susitna One 26.10 55 *e*P **P 05 32 53.2 +2.2**
comp=Z,6.6nm,1.0s
TRF Thorofare Moun 26.14 50 *e*P **P 05 32 52.1 +0.8**
comp=Z,1.8nm,0.9s
CNPM China Poot 26.15 59 *e*P **P 05 32 54.5 +3.2**
comp=Z,33nm,1.4s
COLD Coldfoot 26.23 42 *e*P **P 05 32 53.6 +1.8**
comp=Z,5.8nm,1.1s
TOLK Toolik Lake Re 26.60 39 *e*P **P 05 32 55.7 +0.5**
comp=Z,8.2nm,0.8s
TOLK Toolik Lake Re 26.60 39 P **P 05 32 55.4 +0.1**
baz=264,SNR=14
MCK McKinley 26.73 50 *e*P **P 05 32 58.0 +1.6**
comp=Z,9.1nm,1.1s
RND Reindeer 26.79 50 *e*P **P 05 32 57.9 +0.9**
comp=Z,6.0nm,1.0s
RND Reindeer 26.79 50 *e*P **P 05 32 57.9 +0.9**
RND pmax pmax
comp=Z,6.0nm,1.0s
WRH Wood River Hil 27.06 48 *e*P **P 05 33 01.1 +1.8**
comp=Z,17nm,1.0s
TCOL CIGO, UAF Yank 27.14 47 P **P 05 33 01.2 +1.2**
baz=273
COLA College 27.14 47 *i*P **P 05 33 01.0 +1.0**
COLA pmax pmax
comp=Z,5.0nm,0.9s
POKR Poker Plat Res 27.31 47 P **P 05 33 02.9 +1.3**
baz=273
HDA Harding Lake 27.55 48 P **P 05 33 04.6 +0.8**
baz=274
ILAR Eielson Array 27.56 47 P **P 05 33 04.5 +0.7**
comp=Z,5.2nm,0.8s,baz=274,slow=8.4,SNR=70
ILAR ScP **ScP 05 39 47.9 -1.6**
comp=Z,0.4nm,0.9s,baz=256,slow=4.3,SNR=4.2
ILB Eielson Array 27.56 47 *e*P **P 05 33 04.0 +0.2**
comp=Z,6.4nm,0.8s
KSRS Korea Array 28.10 246 P **P 05 33 08.8 -0.1**
comp=Z,8.0nm,0.8s,baz=44,slow=8.9,SNR=43
KSRS PcP **PcP 05 36 21.6 +1.1**
comp=Z,2.0nm,0.8s,baz=48,slow=1.0,SNR=7.1
KSRS LR LR 05 43 23.9
comp=Z,47nm,21.1s,baz=72,slow=34
TJN Taejon 29.21 245 *c*e P **P 05 33 18.9 +0.2**
JNU Nakatsue 29.97 237 P **P 05 33 26.8 +1.3**
comp=Z,12nm,0.8s,baz=307,slow=0.7,SNR=7.2
EPYK Eagle Plains 31.59 43 P **P 05 33 40.2 +0.8**
baz=279,SNR=6.3
INK Inuvik 32.51 39 P **P 05 33 47.7 +0.3**
comp=Z,4.4nm,0.6s,baz=289,slow=9.6,SNR=10
INK Inuvik 32.51 39 *e*P **P 05 33 48.6 +1.2**
comp=Z,7.4nm,0.8s
INK Inuvik 32.51 39 *e*P **P 05 33 48.6 +1.2**
INK pmax pmax
comp=Z,7.0nm,0.8s
ULN Ulaanbaatar 33.53 281 *i*P **P 05 33 55.7 -1.1**
ULN pmax pmax
comp=Z,1.0nm,0.8s
TLY Talaya 33.55 289 *i*P **P 05 33 55.5 -1.2**
TLY pmax pmax
comp=Z,9.0nm,0.9s
SONA0 Songino Array 33.93 281 *e*P **P 05 33 58.2 -1.9**
SONM Songino Array 33.93 281 P **P 05 33 58.2 -1.9**
comp=Z,2.3nm,0.7s,baz=60,slow=8.7,SNR=11
SONM pP **pP 05 34 23.4 -0.3**
comp=Z,1.8nm,0.7s,baz=67,slow=8.0,SNR=3.9
SONM PcP **PcP 05 36 36.6 +0.6**
comp=Z,5.2nm,0.7s,baz=79,slow=1.8,SNR=17
SONM LR LR 05 48 19.7
comp=Z,90nm,20.0s,baz=79,slow=37
ZAK Zakamensk 34.38 287 *e*P **P 05 34 01.4 -2.5**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
NRIK Noril'sk 34.93 324 PcP **PcP 05 36 37.9 -0.4**
comp=Z,3.3nm,0.5s,baz=36,slow=4.6,SNR=5.6
NRIK LR LR 05 49 26.0
comp=Z,168nm,18.3s,baz=44,slow=38
HHC Hu-ho-hao-te 35.03 268 *e*P **P 05 34 10.2 +0.5**
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,120nm,4.1s
HHC LR LR
comp=Z,98nm,11.1s
HHC LR LR
comp=Z,85nm,11.1s
HHC LR LR
comp=Z,210nm,11.1s
H11N2 WAKE ISLAND Hy 35.08 170 T T 06 11 25.7
baz=354,slow=76,SNR=798
H11N3 WAKE ISLAND Hy 35.09 170 T T 06 11 27.5
baz=354,slow=76,SNR=2859
H11N1 WAKE ISLAND Hy 35.10 170 T T 06 11 24.6
baz=354,slow=76,SNR=1291
BTO Baotou 36.09 269 *e*P **P 05 34 16.5 -2.2**
H11S1 WAKE ISLAND Hy 36.27 170 T T 06 12 52.1
baz=352,slow=76,SNR=83
H11S3 WAKE ISLAND Hy 36.28 170 T T 06 12 55.3
baz=352,slow=76,SNR=76
H11S2 WAKE ISLAND Hy 36.29 170 T T 06 12 54.2
baz=352,slow=76,SNR=86
NJ2 Nanjing 37.07 250 *e*P **P 05 34 26.2 -0.8**
NJ2 pmax pmax
comp=Z,11nm,0.5s
RES Resolute Bay 41.84 23 P **P 05 35 06.5 +0.4**
comp=Z,12nm,0.8s,baz=309,slow=7.6,SNR=27
RES Resolute Bay 41.84 23 *e*P **P 05 35 06.7 +0.6**
comp=Z,14nm,0.8s
RES Resolute Bay 41.84 23 *e*P **P 05 35 06.7 +0.6**
RES pmax pmax
comp=Z,14nm,0.8s
YKA Yellowknife Ar 41.86 44 P **P 05 35 07.6 +1.2**
comp=Z,7.1nm,0.7s,baz=300,slow=8.1,SNR=37
YKA pP **pP 05 35 29.9 -0.7**
comp=Z,3.2nm,0.9s,baz=300,slow=8.3,SNR=3.2
YKA ScP **ScP 05 40 40.0 -0.6**
comp=Z,1.3nm,0.8s,baz=295,slow=4.6,SNR=5.9
ZALV Zalesovo Beam 42.29 302 LR LR 05 54 02.2
comp=Z,102nm,18.9s,baz=68,slow=38
LZH Lanzhou 42.71 268 *e*P **P 05 35 13.4 -0.4**
LZH pP pP 05 35 36.0 -2.1
LZH sP sP 05 35 48.4 -1.6
LZH PP **PP 05 36 58.5 +3.9**
LZH pmax pmax
comp=Z,21nm,1.1s
GTA Gaotai 42.80 275 P **P 05 35 13.2 -1.3**
GTA pP pP 05 35 34.7 -4.2
GTA sP sP 05 35 46.6 -4.2
GTA PcP **PcP 05 37 04.9 +1.1**
GTA ScS ScS 05 45 02.6 -1.9
GTA pmax pmax
comp=Z,10.0nm,1.0s
GTA pmax pmax
comp=Z,47nm,5.9s
GTA LR LR
comp=Z,110nm,18.2s
GTA LR LR
comp=Z,180nm,19.2s
GTA LR LR
comp=Z,84nm,18.6s
ENH Enshi 43.65 258 *e*P **P 05 35 20.6 -0.6**
comp=Z,9.9nm,0.6s
TULEG Thule 45.45 14 *e*P **P 05 35 34.8 -0.2**
comp=Z,19nm,0.8s
SPA0 Spitsbergen Ar 45.76 350 *e*P **P 05 35 37.2 -0.2**
comp=Z,24nm,1.0s
D03D Eldon 46.24 66 P **P 05 35 43.3 +1.8**
baz=309
B05A Bryant 46.31 64 P **P 05 35 43.7 +1.7**
baz=309
D04E Lakebay 46.63 66 P **P 05 35 46.6 +2.1**
baz=309
WMQ Urumqi 46.83 288 *e*P **P 05 35 45.4 -0.8**
WMQ pP pP 05 36 12.1 +1.1
WMQ PcP **PcP 05 37 17.9 +0.4**
WMQ pmax pmax
comp=Z,110nm,3.7s
WMQ LR LR
comp=Z,320nm,27.1s
WMQ LR LR
comp=Z,490nm,23.5s
WMQ LR LR
comp=Z,280nm,31.3s
E04D Cinebar 47.13 66 P **P 05 35 50.1 +1.6**
baz=310
KURK Kurchatov 47.27 301 *e*P **P 05 35 46.6 -2.9**
comp=Z,8.1nm,0.7s
KURK Kurchatov 47.27 301 *e*P **P 05 35 46.6 -2.9**
KURK pmax pmax
comp=Z,8.0nm,0.7s
KURBB Kurchatov Arra 47.37 301 P **P 05 35 47.8 -2.5**
comp=Z,6.1nm,0.6s,baz=56,slow=7.7,SNR=18
KURBB PcP **PcP 05 37 17.9 -1.3**
comp=Z,14nm,0.8s,baz=50,slow=3.4,SNR=11
B08A Colville Reser 47.69 63 *e*P **P 05 35 53.9 +1.0**
comp=Z,6.9nm,0.8s
MK31 Makanchi Array 47.85 295 *e*P **P 05 35 54.0 -0.1**
comp=Z,3.7nm,0.6s
MK31 Makanchi Array 47.85 295 *e*P **P 05 35 54.0 -0.1**
MK31 pmax pmax
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 47.85 295 LR LR 05 57 32.1
comp=Z,46nm,18.4s,baz=55,slow=38
I03D Drain, OR 48.55 70 P **P 05 36 01.3 +1.9**
baz=311
G05D Wamic, OR 48.65 67 P **P 05 36 01.5 +1.3**
baz=311
KULLO Kullorsuaq 48.69 13 ⇓ *i*P **P 05 36 00.2 +0.1**
KULLO pmax pmax
comp=Z,86nm,0.8s
KULLO Kullorsuaq 48.69 13 ⇓ *i*P **P 05 36 00.2 +0.1**
comp=Z,86nm,0.8s
NEW Newport 48.89 61 P **P 05 36 03.1 +1.1**
comp=Z,2.4nm,0.8s,baz=324,slow=8.6,SNR=6.0
NEW Newport 48.89 61 P **P 05 36 03.4 +1.3**
baz=310
DAG Danmarks Havn 48.95 360 ⇓ *i*P **P 05 36 01.1 -0.9**
DAG pmax pmax
comp=Z,7.0nm,0.8s
DAG Danmarks Havn 48.95 360 ⇓ *i*P **P 05 36 01.1 -0.9**
comp=Z,9.9nm,0.8s
I04A Tendick Farm, 49.00 69 P **P 05 36 04.6 +1.6**
baz=312
I05D Terrebonne, OR 49.22 68 P **P 05 36 06.5 +1.8**
baz=312
E09A Wood Farm, Sta 49.50 64 *e*P **P 05 36 08.3 +1.7**
comp=Z,11nm,0.8s
J04D Umpqua Nationa 49.53 70 P **P 05 36 09.1 +1.9**
baz=312
BVAR Borovoye Array 49.76 308 P **P 05 36 06.3 -2.2**
comp=Z,7.3nm,0.6s,baz=60,slow=7.9,SNR=34
BVAR PcP **PcP 05 37 27.6 -0.2**
comp=Z,10nm,0.6s,baz=64,slow=3.4,SNR=13
BRVK Borovoye 49.79 308 *e*P **P 05 36 07.0 -1.8**
comp=Z,8.9nm,0.7s
BRVK Borovoye 49.79 308 *e*P **P 05 36 07.0 -1.8**
BRVK pmax pmax
comp=Z,9.0nm,0.7s
PINE Pine Mountain 49.80 68 *e*P **P 05 36 10.6 +1.4**
comp=Z,5.9nm,0.9s
J05D Fort Rock, OR 49.98 69 P **P 05 36 12.2 +1.7**
baz=312,SNR=6.3
WALA Waterton Lakes 50.00 59 *e*P **P 05 36 11.7 +1.2**
comp=Z,7.8nm,0.8s
L04D Klamath Falls 50.11 71 P **P 05 36 13.4 +1.9**
baz=313
YBH Yreka Blue Hor 50.21 71 P **P 05 36 14.4 +2.1**
comp=Z,5.3nm,0.9s,baz=338,slow=1.2,SNR=5.9
YBH pP **pP 05 36 37.3 +0.1**
comp=Z,3.4nm,0.8s,baz=293,slow=2.5,SNR=3.4
YBH Yreka Blue Hor 50.21 71 *e*P **P 05 36 14.1 +1.8**
comp=Z,11nm,1.1s
YBH Yreka Blue Hor 50.21 71 *e*P **P 05 36 14.1 +1.8**
YBH pmax pmax
comp=Z,11nm,1.1s
M02C Callahan 50.36 72 P **P 05 36 15.5 +2.1**
baz=313
M04C Macdoel 50.66 71 P **P 05 36 17.9 +2.3**
baz=313
BMO Blue Mountains 51.04 65 *e*P **P 05 36 20.1 +1.7**
comp=Z,3.9nm,0.8s
BMO Blue Mountains 51.04 65 *e*P **P 05 36 20.1 +1.7**
BMO pmax pmax
comp=Z,4.0nm,0.8s
O02D Mt. Diablo Mer 51.23 73 P **P 05 36 21.8 +2.0**
baz=314
MSO Missoula 51.46 61 P **P 05 36 22.8 +1.2**
baz=312
PLID Pearl Lake 51.56 64 *e*P **P 05 36 23.9 +1.4**
comp=Z,6.1nm,0.8s
PDGK Podgornoye 51.62 293 P **P 05 36 23.6 +0.8**
PDGK pmax pmax
comp=Z,7.0nm,1.3s
O03E Paynes Creek 51.70 72 P **P 05 36 24.4 +1.0**
baz=314,SNR=5.6
FFC Flin Flon 51.77 47 *e*P **P 05 36 25.9 +2.3**
comp=Z,3.3nm,1.0s
FFC Flin Flon 51.77 47 *e*P **P 05 36 25.9 +2.3**
FFC pmax pmax
comp=Z,3.0nm,1.0s
WVOR Wild Horse Val 51.96 68 P **P 05 36 27.9 +2.5**
WVOR pmax pmax
comp=Z,10.0nm,0.9s
ARCES ARCESS Array B 52.01 342 P **P 05 36 23.7 -1.5**
comp=Z,8.6nm,0.3s,baz=28,slow=8.2,SNR=7.2
ARCES PcP **PcP 05 37 35.7 -0.3**
comp=Z,3.2nm,0.6s,baz=30,slow=3.4,SNR=14
FCC Fort Churchill 52.13 40 *e*P **P 05 36 26.7 +0.6**
comp=Z,21nm,1.1s
FCC Fort Churchill 52.13 40 *e*P **P 05 36 26.7 +0.6**
FCC pmax pmax
comp=Z,21nm,1.1s
SUMG Summit 52.47 7 *e*P **P 05 36 28.8 -0.2**
comp=Z,97nm,1.0s
SUMG Summit 52.47 7 *e*P **P 05 36 28.8 -0.2**
SUMG Summit 52.47 7 *i*P **P 05 36 29.4 +0.4**
comp=Z,191nm,0.8s
ARU Arti 52.56 317 P **P 05 36 27.4 -2.1**
comp=Z,3.0nm,0.2s,baz=23,slow=2.3,SNR=18
ARU pP **pP 05 36 53.9 -0.8**
comp=Z,1.9nm,0.3s,baz=359,slow=6.4,SNR=2.1
ARU PcP **PcP 05 37 37.4 -0.9**
comp=Z,2.2nm,0.2s,baz=24,slow=3.5,SNR=6.4
ARU Arti 52.56 317 *e*P **P 05 36 27.7 -1.7**
comp=Z,14nm,0.7s
ARU *e*PcP **PcP 05 37 37.6 -0.6**
ARU Arti 52.56 317 *c i*P **P 05 36 27.9 -1.5**
ARU *PP **pP 05 36 51.9 -2.7**
ARU 05 37 36.8
ARU 05 38 25.5
ARU S **S 05 43 47.3 -0.7**
ARU SS **SS 05 47 23.8 -2.9**
ARU pmax pmax
comp=Z,12nm,0.7s
EGMT Eagleton 52.75 57 P **P 05 36 32.0 +1.0**
baz=313
AFDM Forest Hills D 53.09 73 *e*P **P 05 36 35.5 +1.9**
comp=Z,8.8nm,1.1s
MCMT McKenzie Canyo 53.38 62 *e*P **P 05 36 37.2 +1.3**
HLID Hailey 53.44 64 P **P 05 36 37.8 +1.5**
baz=314
BOZ Bozeman (W) 53.47 61 *e*P **P 05 36 37.9 +1.4**
comp=Z,4.3nm,0.8s
BOZ Bozeman (W) 53.47 61 *e*P **P 05 36 37.9 +1.4**
BOZ pmax pmax
comp=Z,4.0nm,0.8s
BOZ Bozeman (W) 53.47 61 P **P 05 36 37.8 +1.4**
baz=314,SNR=7.5
SLVN Son La 53.73 255 *e*P **P 05 36 38.7 +0.2**
comp=Z,5.2nm,0.9s
PNTR Pine Nut 53.75 72 *e*P **P 05 36 41.2 +2.5**
comp=Z,27nm,0.8s
YERR Yerington 54.02 72 *e*P **P 05 36 42.6 +2.0**
comp=Z,16nm,0.9s
BOOM Boomskoye usch 54.09 295 *e*P **P 05 36 40.2 -0.8**
comp=Z,4.2nm,1.0s
BOOM Boomskoye usch 54.09 295 *e*P **P 05 36 40.2 -0.8**
BOOM pmax pmax
comp=Z,4.0nm,1.0s
BMN Battle Mountai 54.12 69 *e*P **P 05 36 43.3 +2.1**
comp=Z,8.7nm,0.8s
BMN Battle Mountai 54.12 69 *e*P **P 05 36 43.3 +2.1**
BMN pmax pmax
comp=Z,9.0nm,0.8s
WAKR Walker 54.26 72 *e*P **P 05 36 44.7 +2.4**
comp=Z,19nm,0.8s
ILULI Ilulissat 54.38 13 *i*P **P 05 36 42.0 -0.5**
ILULI pmax pmax
comp=Z,39nm,0.8s
ILULI Ilulissat 54.38 13 *i*P **P 05 36 42.0 -0.5**
comp=Z,39nm,0.8s
KIRV Kirov 54.43 323 PcP **PcP 05 37 44.5 -0.8**
comp=Z,18nm,0.7s,baz=185,slow=4.0,SNR=5.2
KVN Kaiserville 54.61 71 *e*P **P 05 36 47.2 +2.4**
comp=Z,14nm,0.8s
KVN Kaiserville 54.61 71 *e*P **P 05 36 47.2 +2.4**
KVN pmax pmax
comp=Z,14nm,0.8s
RYN Ryan 54.67 71 *e*P **P 05 36 47.4 +2.1**
comp=Z,14nm,0.7s
AAK Ala-Archa 54.75 296 P **P 05 36 42.9 -2.9**
comp=Z,4.0nm,0.7s,baz=152,slow=5.1,SNR=7.0
AAK PcP **PcP 05 37 46.3 -0.7**
comp=Z,4.6nm,0.6s,baz=156,slow=4.0,SNR=5.6
AAK Ala-Archa 54.75 296 *e*P **P 05 36 44.9 -0.9**
comp=Z,4.1nm,0.8s
AAK Ala-Archa 54.75 296 *e*P **P 05 36 44.9 -0.9**
AAK pmax pmax
comp=Z,4.0nm,0.8s
NRN Naryn 54.80 294 *e*PcP **PcP 05 37 47.4 0.0**
H17A Grant Village 54.85 61 P **P 05 36 48.6 +2.1**
baz=315,SNR=6.2
NV01 Mina Array Sit 54.94 71 *e*P **P 05 36 49.7 +2.5**
NVAR Mina Array Bea 54.94 71 P **P 05 36 49.7 +2.4**
comp=Z,10.0nm,0.7s,baz=300,slow=7.4,SNR=65
NVAR pP **pP 05 37 13.2 +0.6**
comp=Z,4.5nm,0.8s,baz=292,slow=7.6,SNR=5.9
RLMT Red Lodge 55.00 60 P **P 05 36 49.3 +1.7**
baz=315,SNR=8.1
MDPB Devils Postpil 55.07 73 *e*P **P 05 36 50.6 +2.3**
comp=Z,8.9nm,0.9s
MLAC Mammoth, Mammo 55.21 72 P **P 05 36 50.8 +1.5**
baz=316
LAO LASA Array 55.40 57 P **P 05 36 51.7 +1.4**
baz=315
KLMR Klimovskoe 55.87 330 *e*P **P 05 36 50.9 -2.4**
KLMR *e**PP **pP 05 37 18.4 -0.2**
KLMR pmax pmax
comp=Z,7.0nm,0.9s
TIN Tinemaha, Big 55.96 73 P **P 05 36 56.3 +1.8**
baz=316
BGU Big Grassy Mou 56.02 66 *e*P **P 05 36 56.7 +1.8**
comp=Z,2.6nm,0.7s
KSH Kashi 56.17 292 P **P 05 36 59.4 +3.4**
KSH PP **PP 05 39 06.2 +4.4**
KSH S **S 05 44 40.3 +3.1**
KSH SS **SS 05 48 28.5 +4.1**
KSH pmax pmax
comp=Z,8.0nm,0.5s
KSH pmax pmax
comp=Z,170nm,6.1s
KSH LR LR
comp=Z,770nm,15.7s
KSH LR LR
comp=Z,490nm,12.7s
KSH LR LR
comp=Z,210nm,12.0s
SMMC Simmler 56.22 75 P **P 05 36 58.4 +2.1**
baz=317
VES Vestal, Richgr 56.35 74 P **P 05 36 59.0 +1.8**
baz=317
JOF Joensuu 56.39 335 P **P 05 36 55.6 -1.4**
JOF pmax pmax
comp=Z,15nm,0.7s
GRAC Grapevine Rang 56.48 72 P **P 05 37 00.5 +2.4**
baz=317
CWC Cottonwood Cre 56.48 73 P **P 05 37 00.4 +2.1**
baz=317
R11A Troy Canyon, C 56.49 70 P **P 05 36 59.9 +1.6**
baz=316,SNR=7.6
SFJD Kangerlussuaq 56.52 14 *e*P **P 05 36 57.4 -0.4**
comp=Z,28nm,0.6s
SFJD Kangerlussuaq 56.52 14 ⇓ *i*P **P 05 36 57.4 -0.4**
SFJD pmax pmax
comp=Z,28nm,0.6s
SFJD Kangerlussuaq 56.52 14 ⇓ *i*P **P 05 36 57.4 -0.4**
comp=Z,28nm,0.6s
BW06 Boulder Array 56.52 62 *e*P **P 05 37 00.2 +1.7**
comp=Z,6.5nm,0.9s
BW06 Boulder Array 56.52 62 P **P 05 36 59.9 +1.3**
baz=316,SNR=9.6
PDAR Pinedale Array 56.52 62 P **P 05 37 00.5 +1.9**
comp=Z,4.1nm,0.8s,baz=329,slow=2.5,SNR=36
PDAR ScP **ScP 05 41 42.9 -0.6**
comp=Z,0.2nm,0.7s,baz=211,slow=1.6,SNR=2.9
PDAR LR LR 06 02 18.7
comp=Z,41nm,18.4s,baz=294,slow=37
PKM Mcpherson Peak 56.63 75 P **P 05 37 01.5 +2.1**
baz=317,SNR=5.5
DUG Dugway, Tooele 56.66 66 *e*P **P 05 37 01.1 +1.7**
comp=Z,9.2nm,0.8s
DUG Dugway, Tooele 56.66 66 *e*P **P 05 37 01.1 +1.7**
DUG pmax pmax
comp=Z,9.0nm,0.8s
DUG Dugway, Tooele 56.66 66 P **P 05 37 01.4 +2.0**
baz=316,SNR=14
ISA Isabella, Lake 56.83 74 P **P 05 37 01.7 +1.1**
baz=317,SNR=5.1
MPMC Manual Prospec 57.09 73 P **P 05 37 04.6 +2.0**
baz=317,SNR=9.4
AKTO Aktyubinsk 57.10 312 P **P 05 37 00.1 -2.1**
comp=Z,5.6nm,0.8s,baz=27,slow=4.5,SNR=14
AKTO PcP **PcP 05 37 55.4 -0.4**
comp=Z,18nm,0.6s,baz=62,slow=5.5,SNR=24
AKTO ScP **ScP 05 41 43.3 -2.3**
comp=Z,1.5nm,0.7s,baz=76,slow=2.7,SNR=3.8
ABKAR Akbulak array 57.12 310 *e*P **P 05 37 00.2 -2.1**
comp=Z,6.1nm,0.8s
TPNV Topopah Spring 57.13 71 P **P 05 37 04.8 +1.9**
baz=317,SNR=10
FURC Furnace Creek, 57.14 72 P **P 05 37 04.9 +2.2**
baz=317,SNR=16
LRMC Laurel Mtn Rad 57.40 73 P **P 05 37 06.4 +1.7**
baz=317,SNR=5.1
ULM Lac du Bonnet 57.58 48 P **P 05 37 06.7 +1.1**
comp=Z,2.8nm,0.5s,baz=346,slow=10,SNR=3.2
EDW2 Edwards Air Fo 57.66 74 P **P 05 37 08.4 +2.0**
baz=317,SNR=7.8
SHOC Shoshone, Teco 57.88 72 P **P 05 37 10.2 +2.3**
baz=317
GSC Goldstone, Bar 58.02 73 *e*P **P 05 37 11.1 +2.1**
comp=Z,11nm,0.8s
GSC Goldstone, Bar 58.02 73 *e*P **P 05 37 11.1 +2.1**
GSC pmax pmax
comp=Z,11nm,0.8s
GSC Goldstone, Bar 58.02 73 P **P 05 37 10.6 +1.7**
baz=317,SNR=6.1
K22A Casper 58.15 60 P **P 05 37 11.6 +1.7**
baz=317
RSSD Black Hills 58.32 57 *e*P **P 05 37 12.6 +1.5**
comp=Z,6.8nm,0.8s
RSSD Black Hills 58.32 57 *e*P **P 05 37 12.6 +1.5**
RSSD pmax pmax
comp=Z,7.0nm,0.8s
RSSD Black Hills 58.32 57 P **P 05 37 12.5 +1.5**
baz=317
BFSC Mount Baldy Ra 58.32 74 P **P 05 37 12.9 +1.8**
baz=318
TUQ Turquoise Moun 58.41 72 P **P 05 37 14.0 +2.3**
baz=318
CHTO Chiang Mai 58.54 258 *e*P **P 05 37 13.2 +0.5**
comp=Z,4.1nm,0.9s
CHTO Chiang Mai 58.54 258 *e*P **P 05 37 13.2 +0.5**
CHTO pmax pmax
comp=Z,4.0nm,0.9s
HEC Hector,Ludlow 58.63 73 P **P 05 37 15.2 +2.0**
baz=316
SRU San Rafael Swe 58.66 66 *e*P **P 05 37 15.1 +1.6**
comp=Z,11nm,0.8s

SRU San Rafael Swe 58.66 66 *eP* **P 05 37 15.1 +1.6**
SRU pmax pmax
comp=Z,11nm,0.8s
BBRC Big Bear Solar 58.72 74 P **P 05 37 16.0 +2.0**
baz=318
CMAR Chiang Mai Arr 58.83 258 P **P 05 37 14.1 -0.6**
comp=Z,2.3nm,0.6s,baz=24,slow=6.8,SNR=10
CMAR pP **pP 05 37 40.6 +0.3**
comp=Z,2.4nm,0.8s,baz=22,slow=6.1,SNR=1.9
CMAR PcP **PcP 05 38 00.8 -2.2**
comp=Z,3.3nm,0.8s,baz=19,slow=4.9,SNR=4.8
CMAR LR LR 06 04 19.8
comp=Z,41nm,18.9s,baz=53,slow=38
FIA1 FINESS Array S 58.92 336 *eP* **P 05 37 13.2 -1.5**
comp=Z,9.7nm,0.6s
FINES FINESS Array B 58.92 336 P **P 05 37 13.2 -1.6**
comp=Z,8.7nm,0.7s,baz=30,slow=8.8,SNR=26
FINES pP **pP 05 37 40.0 -0.4**
comp=Z,3.4nm,0.8s,baz=33,slow=7.3,SNR=2.4
FINES PcP **PcP 05 38 02.0 -0.7**
comp=Z,7.1nm,0.6s,baz=46,slow=5.5,SNR=9.0
FINES ScP **ScP 05 41 52.5 -0.9**
comp=Z,1.1nm,0.7s,baz=46,slow=8.2,SNR=4.6
FINES LR LR 06 07 28.7
comp=Z,31nm,19.2s,baz=36,slow=41
FINES FINESS Array B 58.92 336 *i* P **P 05 37 13.5 -1.2**
FINES pmax pmax
comp=Z,9.0nm,0.6s
RABL Rabaul 58.96 190 *eP* **P 05 37 16.9 +1.3**
comp=Z,66nm,0.6s
GMRC Granite Mounta 59.04 73 P **P 05 37 18.2 +2.1**
baz=318,SNR=6.1
AGMN Agassiz Nation 59.04 49 P **P 05 37 17.0 +1.3**
baz=319
MURC Murrieta 59.05 75 P **P 05 37 17.6 +1.5**
baz=318
O20A White River Ci 59.11 63 P **P 05 37 18.1 +1.5**
baz=318,SNR=5.5
ANGG Ammassalik, Gr 59.35 9 *eP* **P 05 37 16.6 -1.0**
comp=Z,52nm,1.1s
BELC Belle Mtn. Jos 59.43 73 P **P 05 37 20.3 +1.5**
baz=318
PFO Pinyon Flats O 59.46 74 P **P 05 37 20.6 +1.6**
baz=318
N23A Red Feather La 59.73 61 P **P 05 37 22.5 +1.5**
baz=318
IRM Iron Mountain 59.79 73 P **P 05 37 23.0 +1.8**
baz=318,SNR=8.2
PV09 Paradox Valley 59.85 65 *eP* **P 05 37 23.6 +1.8**
BC3 Big Chuckawall 59.99 73 P **P 05 37 24.2 +1.6**
baz=318
PDMCI Parker Dam,Lak 60.23 72 P **P 05 37 26.1 +2.0**
baz=318
IKP In-Ko-Pah, Jac 60.37 75 P **P 05 37 27.1 +1.9**
baz=319
Y12C Blythe 60.43 73 *eP* **P 05 37 27.5 +2.0**
comp=Z,13nm,1.1s
Y12C Blythe 60.43 73 P **P 05 37 27.4 +1.9**
baz=318
SMCO Snowmass 60.48 63 *eP* **P 05 37 27.9 +1.7**
comp=Z,4.8nm,0.9s
ISCO Idaho Springs 60.72 62 P **P 05 37 29.5 +1.7**
baz=318,SNR=6.3
GLA Glamis 60.78 73 P **P 05 37 30.0 +2.0**
baz=319
WUAZ Wupatki 60.85 69 P **P 05 37 30.4 +1.9**
baz=318,SNR=6.7
BORG Borgarnes 61.03 1 *eP* **P 05 37 30.5 +1.5**
BORG Borgarnes 61.03 1 *eP* **P 05 37 30.5 +1.5**
MVCO Mesa Verde 61.14 66 P **P 05 37 32.1 +1.5**
baz=319
EYMN Ely 61.20 47 P **P 05 37 31.5 +1.0**
baz=321
OBN Obninsk 61.48 327⇑ *eP* **P 05 37 28.8 -3.4**
OBN *e**PP **pP 05 37 58.0 0.0**
OBN *e* 05 39 46.2
OBN *eS* S 05 46 20.3 +35
OBN pmax pmax
comp=Z,5.0nm,0.7s
Q24A Divide 61.58 62 P **P 05 37 35.2 +1.6**
baz=319
S22A 4UR Ranch, Cre 61.62 64 P **P 05 37 35.7 +1.9**
baz=319,SNR=7.2
W18A Petrified Fore 62.04 68 P **P 05 37 38.6 +2.1**
baz=319
NC405 NORSAR Array S 62.09 344 *eP* **P 05 37 36.4 +0.1**
comp=Z,13nm,0.8s
ECSD EROS Data Cent 62.16 53 P **P 05 37 37.2 +0.2**
baz=320
E38A The Farm, Brul 62.22 48 P **P 05 37 37.9 +0.6**
baz=322
NB201 NORSAR Array S 62.22 344 *eP* **P 05 37 36.8 -0.3**
comp=Z,19nm,0.8s
NB2 NORSAR Subarra 62.24 344 P **P 05 37 36.3 -1.0**
comp=Z,4.6nm,0.6s,baz=20,slow=6.9
NOA NORSAR Array B 62.24 344 P **P 05 37 36.3 -1.0**
comp=Z,6.4nm,0.7s,baz=20,slow=6.7,SNR=41
NOA PcP **sP 05 38 14.8 0.0**
comp=Z,5.4nm,1.0s,baz=11,slow=2.3,SNR=18
NOA LR LR 06 08 21.3
comp=Z,8.2nm,18.3s,baz=20,slow=40
SDCO Great Sand Dun 62.31 63 P **P 05 37 39.3 +0.8**
baz=319
F37A Hinrichs Farm, 62.44 49 P **P 05 37 39.9 +1.1**
baz=321
F38A Pierce - Schro 62.58 49 P **P 05 37 41.0 +1.2**
baz=322
214A Organ Pipe Nat 62.73 73 P **P 05 37 42.7 +1.7**
baz=320
E39A Mellen 62.83 47 P **P 05 37 42.3 +0.9**
baz=322
F39A Loretta 63.03 48 P **P 05 37 43.7 +0.9**
baz=322
E40A Wakefield 63.05 47 P **P 05 37 44.0 +1.1**
baz=322
F40A Park Falls 63.37 48 P **P 05 37 45.8 +0.8**
baz=322
G39A Holcombe 63.42 49 P **P 05 37 46.3 +1.0**
baz=322
E41A Kenton 63.44 46 P **P 05 37 46.4 +1.0**
baz=323
KBL Kabul 63.58 293 *eP* **P 05 37 44.4 -2.4**
comp=Z,6.7nm,0.9s
KBL Kabul 63.58 293 *eP* **P 05 37 44.4 -2.4**
KBL pmax pmax
comp=Z,7.0nm,0.9s
G40A Rib Lake 63.85 48 P **P 05 37 49.1 +0.9**
baz=322
E42A Champion 63.90 46 P **P 05 37 49.4 +0.9**
baz=323
TASM ASL Pad, Albuq 63.93 66 P **P 05 37 50.6 +1.5**
baz=320,SNR=5.5
TASM ASL Pad, Albuq 63.93 66 P **P 05 37 50.8 +1.8**
baz=320
ANMO Albuquerque 63.93 66 *eP* **P 05 37 50.8 +1.7**
comp=Z,4.1nm,0.9s
ANMO Albuquerque 63.93 66 *eP* **P 05 37 50.8 +1.7**
ANMO pmax pmax
comp=Z,4.0nm,0.9s
ANMO Albuquerque 63.93 66 P **P 05 37 50.7 +1.7**
baz=320
F41A Three Lakes 63.95 47 P **P 05 37 49.8 +1.0**
baz=323
SCHQ Schefferville 64.20 28 P **P 05 37 48.8 -1.6**
comp=Z,8.1nm,0.7s,baz=290,slow=4.5,SNR=4.4
H40A Chili 64.28 49 P **P 05 37 51.7 +0.7**
baz=323
E43A Lone Tree Farm 64.33 45 P **P 05 37 51.6 +0.3**
baz=324
F44A Big Bay de Noc 64.89 45 P **P 05 37 55.2 +0.3**
baz=324
G43A Wallace 64.94 46 P **P 05 37 55.9 +0.7**
baz=324
121A Cookes Peak, D 65.05 69 P **P 05 37 57.6 +1.2**
baz=320
SBUM Sibu 65.13 236 *eP* **P 05 37 58.9 +2.1**
comp=Z,8.1nm,0.7s
MATQ Matagami 65.15 37 P **P 05 37 56.7 +0.2**
baz=327
SCIA State Center 65.16 52 P **P 05 37 57.9 +1.2**
baz=322
D47A Chapleau 65.35 42 P **P 05 37 57.5 -0.4**
baz=325
E46A Sault Ste Mari 65.43 44 P **P 05 37 58.5 0.0**
baz=325
I42A Draeger Farm, 65.51 48 P **P 05 37 59.0 +0.1**
baz=323
F46A Macinaw City C 65.73 44 P **P 05 37 60.0 -0.4**
baz=325
E47A Iron Bridge 65.77 43 P **P 05 38 00.2 -0.4**
baz=325
D49A Beulah Townshi 65.85 41 P **P 05 38 00.4 -0.8**
baz=326
J42A Columbus 65.87 49 P **P 05 38 01.9 +0.5**
baz=324
LSQQ Lebel-sur-Quev 65.98 37 P **P 05 38 01.7 -0.2**
baz=328
G46A Petoskey 66.06 45 P **P 05 38 02.6 +0.1**
baz=325
CHGQ Chibougamau 66.16 35 P **P 05 38 02.6 -0.4**
baz=329
E48A Lockeyer 66.19 42 P **P 05 38 02.0 -1.3**
baz=326
K42A Prairie Point, 66.21 49 P **P 05 38 03.6 +0.1**
baz=324
D50A G1974 Best Tow 66.52 40 P **P 05 38 04.6 -0.8**
baz=327
F48A Evansville 66.55 43 P **P 05 38 05.0 -0.5**
baz=326
H46A Fife Lake 66.56 45 P **P 05 38 04.6 -1.0**
baz=325
GEYT Alibeck 66.59 303 P **P 05 38 04.1 -1.9**
comp=Z,4.9nm,0.7s,baz=306,slow=2.8,SNR=7.3
GEYT LR LR 06 09 42.4
comp=Z,71nm,18.6s,baz=5.0,slow=38
GYA0B ALIBECK ARRAY 66.59 303 *eP* **P 05 38 04.4 -1.6**
comp=Z,7.7nm,0.9s
VLDQ Val d'Or 66.60 38 *eP* **P 05 38 04.7 -1.2**
comp=Z,12nm,0.8s
MSTX Muleshoe 66.62 64 P **P 05 38 07.3 +0.9**
baz=321
L42A Oliver, Polo 66.69 50 P **P 05 38 06.9 +0.4**
baz=324
E50A Wahnapitae 66.79 41 P **P 05 38 06.7 -0.4**
baz=326
KSM Kuching 66.91 237 *eP* **P 05 38 09.7 +1.5**
comp=Z,14nm,0.7s
MNTX Cornudas Mount 66.99 67 P **P 05 38 10.7 +2.1**
baz=321
E51A G1948 Merrick 67.18 41 P **P 05 38 09.2 -0.3**
baz=327
D52A ZEK Kipawa Sen 67.21 40 P **P 05 38 08.9 -0.9**
baz=328
I47A Gladwin 67.27 45 P **P 05 38 10.5 +0.3**
baz=325
L44A Lake County Fo 67.32 49 P **P 05 38 10.3 -0.2**
baz=324
D53A Lac Vacive, Po 67.39 39 P **P 05 38 10.9 0.0**
baz=328
AKASG Malin Array Be 67.54 329 P **P 05 38 10.5 -1.3**
comp=Z,1.3nm,0.5s,baz=34,slow=6.9,SNR=6.3
AKASG LR LR 06 11 02.9
comp=Z,51nm,18.3s,baz=45,slow=39
AKBB Malin Array Si 67.54 329 *eP* **P 05 38 10.0 -1.7**
comp=Z,3.1nm,0.8s
AKBB Malin Array Si 67.54 329 *eP* **P 05 38 10.0 -1.7**
AKBB pmax pmax
comp=Z,3.0nm,0.8s
KIEV Kiev 67.55 329 *i* P **P 05 38 08.8 -3.0**
KIEV pmax pmax
comp=Z,4.0nm,1.2s
E52A Mattawa 67.70 40 P **P 05 38 12.1 -0.7**
baz=328
D54A Lac Fusel, La 67.70 38 P **P 05 38 12.5 -0.4**
baz=328
F52A Sundridge 67.86 41 P **P 05 38 13.6 -0.3**
baz=327
WMOK Wichita Mounta 68.08 61 P **P 05 38 16.5 +1.0**
baz=322
E54A Lac Daplat, Po 68.12 39 P **P 05 38 14.7 -0.8**
baz=328
H52A Wyevale 68.61 42 P **P 05 38 18.3 -0.2**
baz=327
KIV Kislovodsk 68.61 317 *eP* **P 05 38 15.2 -3.5**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,98nm,17.0s
G53A Haliburton 68.69 41 P **P 05 38 18.8 -0.3**
baz=328
KBZ Khabaz 68.72 317 P **P 05 38 17.9 -1.3**
comp=Z,10nm,0.9s,baz=204,slow=2.5,SNR=14
KBZ LR LR 06 12 16.6
comp=Z,73nm,19.1s,baz=24,slow=39
PEMO Pembroke 68.74 40 P **P 05 38 18.6 -0.7**
baz=328
BANO Bancroft 69.04 40 P **P 05 38 21.1 -0.2**
baz=328
ZEI Tsey 69.09 315 *eP* **P 05 38 20.2 -1.6**
ZEI pmax pmax
comp=Z,3.0nm,0.4s
IPM Ipoh 69.11 247 *eP* **P 05 38 21.5 -0.5**
comp=Z,15nm,1.0s
G55A Calabogie 69.30 40 P **P 05 38 22.4 -0.4**
baz=329
ABTX Abilene, Hawle 69.30 63 P **P 05 38 23.9 +0.8**
baz=322
ORIO Orleans, Innes 69.57 39 P **P 05 38 23.4 -1.1**
baz=329
ESK Eskdalemuir 69.70 350 *eP* **P 05 38 24.6 -0.5**
comp=Z,12nm,0.8s
ESK Eskdalemuir 69.70 350 *eP* **P 05 38 24.6 -0.5**
ESK pmax pmax
comp=Z,12nm,0.8s
TX31 Lajitas Ar. Si 69.76 68 *eP* **P 05 38 27.6 +1.7**
comp=Z,5.4nm,0.7s
TXAR Lajitas Array 69.76 68 P **P 05 38 27.8 +1.8**
comp=Z,5.6nm,0.7s,baz=299,slow=4.8,SNR=70
I55A Frankford 69.81 41 P **P 05 38 25.6 -0.3**
baz=328
P47A Martinsville 70.23 49 P **P 05 38 29.0 +0.4**
baz=326
KWP Kalwaria Pacla 70.36 332 *eP* **P 05 38 28.9 -0.3**
comp=Z,141nm,1.1s
KWP Kalwaria Pacla 70.36 332 *eP* **P 05 38 28.9 -0.3**
KWP pmax pmax
comp=Z,141nm,1.1s
HPIG 70.55 71 *eP* **P 05 38 32.8 +1.9**
comp=Z,5.0nm,1.0s
OJC Ojcow 70.58 335 *eP* **P 05 38 30.1 -0.4**
comp=Z,16nm,1.5s
OJC Ojcow 70.58 335 *eP* **P 05 38 30.1 -0.4**
OJC pmax pmax
comp=Z,16nm,1.5s
LONY Lake Ozonia 70.62 38 P **P 05 38 30.6 -0.3**
baz=330
P48A Milroy 70.62 49 P **P 05 38 30.9 -0.1**
baz=326
ERPA Erie 70.69 43 P **P 05 38 30.9 -0.5**
baz=328
K54A Basiliko Farm, 70.79 42 P **P 05 38 32.0 0.0**
baz=328
MOQ Mont Orford 70.85 37 *eP* **P 05 38 32.7 +0.3**
JCT Junction City 70.91 64 P **P 05 38 34.1 +1.2**
baz=323
K55A Perry 70.93 42 P **P 05 38 32.4 -0.4**
baz=328
GNI Garni 70.93 313 *i* P **P 05 38 31.6 -1.5**
GNI pmax pmax
comp=Z,24nm,1.1s
KOLS Kolonicke sedl 71.11 332 *eP* **P 05 38 33.7 -0.1**
KOLS pmax pmax
comp=Z,4.0nm,1.3s
KOLS Kolonicke sedl 71.11 332 *eP* **P 05 38 33.7 -0.1**
CLL Collm 71.12 339 *eP* **P 05 38 33.3 -0.5**
comp=Z,15nm,1.2s
CLL Collm 71.12 339 *i* P **P 05 38 33.1 -0.7**
comp=Z,28nm,1.6s
CLL *i* 05 38 39.1
CLL *i* PcP **PcP 05 38 53.1 -0.2**
comp=Z,12nm,0.9s
CLL *i* pP **pP 05 39 00.6 +0.4**
CLL *e*PS PnS 05 48 48.0 +24
CLL Collm 71.12 339 *i* P **P 05 38 33.1 -0.7**
CLL pmax pmax
comp=Z,28nm,1.6s
CHVC Chvalec 71.13 337 *eP* **P 05 38 33.8 -0.1**
L55A Hinsdale 71.25 42 P **P 05 38 34.6 -0.2**
baz=328
DPC Dobruska-Polom 71.29 337 *eP* **P 05 38 34.9 0.0**
DPC *e* 05 38 54.5
DPC Dobruska-Polom 71.29 337 *eP* **P 05 38 34.9 0.0**
DPC *ex* x 05 38 40.3
DPC *ex* x 05 38 54.5
BRG Berggiesshubel 71.33 338 *eP* **P 05 38 34.3 -0.8**
comp=Z,11nm,1.4s
BRG *e* 05 38 53.9
comp=Z,4.1nm,0.7s
BRG *e*pP **pP 05 39 01.2 -0.3**
comp=Z,4.8nm,0.9s
BRG Berggiesshubel 71.33 338 *eP* **P 05 38 34.3 -0.8**
BRG *e* 05 38 53.9
BRG *e**PP **pP 05 39 01.2 -0.3**
BRG pmax pmax
comp=Z,11nm,1.4s
M54A Oil Creek Stat 71.33 44 P **P 05 38 35.6 +0.3**
baz=328
BUR08 Bucovina Ar. S 71.47 330 *eP* **P 05 38 35.0 -1.1**
comp=Z,5.0nm,1.1s
BURAR Bucovina Array 71.49 330⇓ *i* P **P 05 38 36.0 -0.2**
MORC Moravsky Berou 71.54 336 *eP* **P 05 38 36.1 -0.3**
comp=Z,5.5nm,0.9s
MORC Moravsky Berou 71.54 336⇑ *i* P **P 05 38 36.3 -0.1**
MORC Moravsky Berou 71.54 336 *eP* **P 05 38 36.1 -0.3**
MORC pmax pmax
comp=Z,6.0nm,0.9s
PSI Prapat 71.65 248 *eP* **P 05 38 37.5 -0.1**
comp=Z,11nm,0.9s
PSI Prapat 71.65 248 *eP* **P 05 38 37.5 -0.1**
PSI pmax pmax
comp=Z,11nm,0.9s
LANS Liptovska Anna 71.65 334 *eP* **P 05 38 38.4 +1.3**
LANS Liptovska Anna 71.65 334 *eP* **P 05 38 38.4 +1.3**
N54A Moraine State 71.66 44 P **P 05 38 37.3 0.0**
baz=328
R49A Shelbyville 71.70 49 P **P 05 38 37.9 +0.4**
baz=326
M55A Ridgway 71.73 43 P **P 05 38 37.7 +0.1**
baz=328
O53A New Philadelph 71.76 45 P **P 05 38 37.8 -0.1**
baz=328
TRPA Tarpa 71.78 332⇑ *i* P **P 05 38 38.1 +0.3**
PKME Peaks-Kenny Pk 71.89 35 *eP* **P 05 38 39.2 +0.7**
comp=Z,9.5nm,0.9s
PKME Peaks-Kenny Pk 71.89 35 P **P 05 38 38.5 0.0**
baz=332
LBNH Lisbon 71.90 37 P **P 05 38 38.8 +0.2**
baz=331
PRU Pruhonice 72.03 338 *eP* **P 05 38 39.9 +0.6**
PRU MLR MLR
comp=Z,100nm,21.4s
PRU Pruhonice 72.03 338 *eP* **P 05 38 39.9 +0.6**
PRU *ex* x 05 38 45.2
PRU AMS AMS 06 06 50.0
comp=Z,100nm,21.4s
GOPC GO Pecny, Ondr 72.05 338 *eP* **P 05 38 40.4 +1.0**
GOPC GO Pecny, Ondr 72.05 338 *eP* **P 05 38 40.4 +1.0**
S49A Springfield 72.07 50 P **P 05 38 39.8 +0.1**
baz=326
BINY Binghamton 72.18 41 P **P 05 38 39.8 -0.6**
baz=330
N55A Marion Center 72.22 43 P **P 05 38 40.9 +0.3**
baz=328
WVT Waverly 72.28 52 P **P 05 38 41.9 +0.9**
baz=326
N56A West Decatur 72.38 43 P **P 05 38 41.5 -0.1**
baz=329
R51A Hillsboro 72.39 48 P **P 05 38 42.2 +0.6**
baz=327
VYHS Vyhne 72.42 334 *eP* **P 05 38 41.0 -0.7**
VYHS Vyhne 72.42 334 *eP* **P 05 38 40.9 -0.7**
BKNI Bangkinang 72.60 245 *eP* **P 05 38 43.7 +0.6**
comp=Z,38nm,0.6s
VRI Vrincioaia 72.61 328⇑ *i* P **P 05 38 42.6 -0.2**
CFR Carcaliu 72.79 327⇓ *i* P **P 05 38 43.6 -0.2**
N57A Milroy 72.81 43 P **P 05 38 44.1 0.0**
baz=329
O56A Blue Knob Stat 72.83 43 P **P 05 38 44.2 -0.1**
baz=329
U49A Red Boiling Sp 72.90 51 P **P 05 38 44.6 -0.1**
baz=326
P55A Reedsville 72.96 45 P **P 05 38 45.4 +0.4**
baz=328
KHC Kasperske Hory 73.05 338 *eP* **P 05 38 45.1 -0.3**
comp=Z,5.5nm,1.4s
KHC Kasperske Hory 73.05 338 *eP* **P 05 38 45.1 -0.3**
KHC pmax pmax
comp=Z,6.0nm,1.4s
KHC Kasperske Hory 73.05 338 *eP* **P 05 38 45.6 +0.2**
KHC *ex* x 05 38 51.3
MEM Membach 73.09 343 P **P 05 38 45.1 -0.4**
comp=Z,17nm,0.9s
MEM x x 05 38 49.0
MEM PcP **PcP 05 39 01.4 -0.3**
MLR Muntele Rosu 73.19 329 *eP* **P 05 38 47.0 +0.6**
comp=Z,9.0nm,1.2s
MLR Muntele Rosu 73.19 329⇑ *i* P **P 05 38 47.0 +0.6**
X46A Booneville 73.22 54 P **P 05 38 47.0 +0.4**
baz=326
GEC2 GERESS Array S 73.29 338 *eP* **P 05 38 46.7 -0.2**
comp=Z,10nm,1.4s
GERES GERESS Array B 73.29 338 P **P 05 38 45.9 -1.0**
comp=Z,1.8nm,0.6s,baz=36,slow=5.0,SNR=13
GERES LR LR 06 14 44.9
comp=Z,26nm,19.5s,baz=26,slow=39
TIRR Tirgusor 73.34 326 *eP* **P 05 38 46.4 -0.7**
comp=Z,19nm,1.2s
TIRR Tirgusor 73.34 326 *eP* **P 05 38 46.4 -0.7**
TIRR pmax pmax
comp=Z,19nm,1.2s
P56A Dayton Farm, R 73.36 44 P **P 05 38 46.7 -0.6**
baz=329
N59A State Game Lan 73.37 41 P **P 05 38 46.7 -0.7**
baz=330
DIKM Dikmen 73.44 320⇓ *i* P **P 05 38 48.0 +0.3**
VOIR 73.50 329⇑ *i* P **P 05 38 48.8 +0.6**
HRV Adam Dziewonsk 73.54 38 P **P 05 38 48.1 -0.3**
baz=332
CONA Conrad Observa 73.67 336 *i* P **P 05 38 49.8 +0.7**
comp=Z,4.9nm,1.1s
ARR Arges 73.69 329⇓ *i* P **P 05 38 50.2 +0.9**
SIRR Siria 73.72 332⇑ *i* P **P 05 38 49.8 +0.4**
DOU Dourbes 73.81 344 P **P 05 38 49.1 -0.7**
DOU *x* x 05 38 59.1
DOU PcP **PcP 05 39 04.8 0.0**
TZTN Tazewell 73.87 49 P **P 05 38 50.7 +0.3**
baz=327
U52A Thorn Hill 74.08 49 P **P 05 38 51.7 +0.1**
baz=327
MOA Molln 74.11 337 *i* P **P 05 38 53.0 +1.4**
comp=Z,4.1nm,1.0s
GZR Gura Zlata 74.21 331⇑ *i* P **P 05 38 51.4 -0.9**
P59A Jarrettsville 74.23 42 P **P 05 38 52.2 -0.2**
baz=330
BZS Buzias 74.33 331⇑ *i* P **P 05 38 52.4 -0.5**
ARSA Arzberg 74.38 336 *i* P **P 05 38 53.8 +0.6**
comp=Z,4.5nm,0.7s
ILGA Ilgaz 74.53 321 *eP* **P 05 38 54.4 0.0**
comp=Z,14nm,0.8s
S57A Dark Hollow, R 74.80 45 P **P 05 38 55.7 0.0**
baz=329
BFO Black Forest 74.88 341 *i* P **P 05 38 56.4 +0.4**
SOKA Soboth 75.03 336 *i* P **P 05 38 57.6 +0.6**
comp=Z,13nm,1.9s
KBA Koelnbreinsper 75.04 338 *i* P **P 05 38 58.2 +1.0**
comp=Z,21nm,1.0s,SNR=16
CBN Corbin Frederi 75.07 44 P **P 05 38 57.2 0.0**
baz=330
MDVR Moldovita 75.07 331⇑ *i* P **P 05 38 56.6 -0.6**
GROS Grobnik 75.13 336 *i* P **P 05 38 57.3 -0.3**
ECH Echery 75.20 342 *eP* **P 05 38 57.6 -0.3**
comp=Z,7.7nm,1.0s
ECH Echery 75.20 342 *eP* **P 05 38 57.6 -0.3**
ECH pmax pmax
comp=Z,8.0nm,1.0s
RETA Reutte 75.21 339 *i* P **P 05 38 58.7 +0.7**
comp=Z,3.1nm,0.8s
WTTA Wattenberg 75.24 339 *i* P **P 05 38 59.1 +0.7**
comp=Z,9.4nm,1.0s
MOTA Moosalm 75.27 339 *i* P **P 05 38 59.0 +0.5**
comp=Z,7.8nm,1.0s
OBKA Obir 75.31 337 *i* P **P 05 38 59.2 +0.6**
comp=Z,14nm,1.1s,SNR=6.2
SQTA Sankt Quirin 75.37 339 *i* P **P 05 38 59.7 +0.7**
comp=Z,7.7nm,0.8s
MYKA Terra Mystica 75.40 337 *i* P **P 05 38 59.6 +0.5**
comp=Z,1.3nm,0.4s
ABTA Abfaltersbach 75.54 338 *i* P **P 05 39 00.2 +0.3**
comp=Z,13nm,0.9s,SNR=8.3
DAVA Damuels 75.58 340 *i* P **P 05 39 01.4 +1.2**
comp=Z,3.9nm,0.8s

FETA	Feichten	75.66 339	*i* P	P	05 39 01.4	+0.7
	comp=Z,11nm,1.1s					
BR131	Keskin Array S	75.72 321	*e*P	P	05 39 00.3	-0.9
	comp=Z,3.9nm,0.8s					
BRTR	Keskin Array B	75.72 321	P	P	05 39 00.7	-0.5
	comp=Z,2.8nm,0.7s,baz=60,slow=3.9,SNR=18					
ANTO	Ankara	75.90 321	*e*P	P	05 39 02.1	0.0
	comp=Z,10.0nm,0.6s					
ANTO	Ankara	75.90 321	*e*P	P	05 39 02.1	0.0
ANTO			pmax	pmax		
	comp=Z,10.0nm,0.6s					
KMSC	Kings Mountain	76.02 48	P	P	05 39 02.6	-0.1
	baz=328					
FUORN	Ofenpass-Fuorn	76.14 339	*e*P	P	05 39 04.1	+0.6
	comp=Z,10nm,0.8s					
GBRS	Gornja Briga	76.17 336	*i* P	P	05 39 02.7	-0.7
TUE	Stuetta	76.46 340	*e*P	P	05 39 05.7	+0.4
	comp=Z,9.4nm,0.9s					
DZM	Mont Dzumac	76.46 174	*e*LR	LR	06 02 40.3	
	comp=Z,116nm,35.0s					
VTS	Vitosha	76.61 329	*e*P	P	05 39 05.5	-0.6
	comp=Z,5.2nm,1.0s					
VTS	Vitosha	76.61 329	*e*P	P	05 39 05.6	-0.6
VTS			pmax	pmax		
	comp=Z,5.0nm,1.0s					
U60A	Pendleton	76.64 45	P	P	05 39 05.9	-0.3
	baz=330					
SSF	Saint Saulge	76.94 344	*e*P	P	05 39 06.7	-1.0
SSF			pmax	pmax		
	comp=Z,7.0nm,0.8s					
ALN	Alexandroupoli	77.30 326	*e*P	P	05 39 09.3	-0.6
	comp=Z,3.6nm,1.0s					
ALN	Alexandroupoli	77.30 326	*e*P	P	05 39 09.3	-0.6
ALN			pmax	pmax		
	comp=Z,4.0nm,1.0s					
WRAB	Tennant Creek	77.53 205	*i* P	P	05 39 10.7	-0.5
WRAB			pmax	pmax		
	comp=Z,9.0nm,0.9s					
WB2	Warramunga Arr	77.54 205	*e*P	P	05 39 11.2	-0.1
	comp=Z,9.3nm,0.7s					
WRA	Warramunga Arr	77.55 205	P	P	05 39 11.9	+0.6
	comp=Z,12nm,0.3s,baz=16,slow=7.5,SNR=0.9					
LPL	La Plagne	77.88 342	*e*P	P	05 39 13.5	+0.2
LPL			pmax	pmax		
	comp=Z,15nm,0.8s					
TTG	Podgorica	77.93 332	*e*P	P	05 39 12.5	-0.8
	comp=Z,12nm,0.8s					
TTG	Podgorica	77.93 332	*e*P	P	05 39 12.5	-0.8
TTG			pmax	pmax		
	comp=Z,12nm,0.8s					
BNI	Bardonecchia	78.34 342	*e*P	P	05 39 15.4	-0.2
	comp=Z,10nm,1.0s					
BNI	Bardonecchia	78.34 342	*e*P	P	05 39 15.5	-0.2
BNI			pmax	pmax		
	comp=Z,10.0nm,1.0s					
VLC	Villacollemand	78.46 339	*e*P	P	05 39 16.8	+0.6
	comp=Z,14nm,0.8s					
SSB	Saint Sauveur	78.50 343	*e*P	P	05 39 16.6	+0.1
	comp=Z,6.0nm,1.0s					
SSB	Saint Sauveur	78.50 343	*e*P	P	05 39 16.6	+0.1
SSB			pmax	pmax		
	comp=Z,6.0nm,1.0s					
LFF	La Frestale	79.43 346	*e*P	P	05 39 21.3	-0.2
LFF			pmax	pmax		
	comp=Z,10.0nm,0.7s					
AQU	L'Aquila	79.50 336	*e*P	P	05 39 23.1	+1.1
	comp=Z,14nm,0.7s					
AQU	L'Aquila	79.50 336	*e*P	P	05 39 23.1	+1.1
AQU			pmax	pmax		
	comp=Z,14nm,0.7s					
EIDS	Eidsvold	80.02 189	*e*P	P	05 39 26.5	+1.8
	comp=Z,10nm,0.6s					
TAOE	Nuku Hiva Isla	80.17 121	*e*LR	LR	06 04 26.6	
	comp=Z,108nm,30.3s					
AS31	Alice Springs	81.22 205	*e*P	P	05 39 32.8	+1.5
	comp=Z,2.4nm,0.8s					
ASAR	Alice Springs	81.23 205	P	P	05 39 32.5	+1.3
	comp=Z,7.9nm,0.8s,baz=16,slow=5.3,SNR=52					
ASAR			pP	pP	05 39 59.0	+1.0
	comp=Z,3.5nm,0.8s,baz=13,slow=5.2,SNR=3.9					
KARP	Karpathos	81.76 323	*e*P	P	05 39 33.0	-1.2
	comp=Z,47nm,1.4s					
PMOR	Pomariorio Ree	81.84 130	*e*T	T	07 09 35.2	
	comp=Z,9.3nm,0.2s					
PPT	Papeete	83.38 133	LR	LR	06 10 47.7	
	comp=Z,25nm,19.8s,baz=337,slow=31					
PPT2	Papeete2	83.40 133	*e*LR	LR	06 05 46.4	
	comp=Z,222nm,32.5s					
PBRG	Braganca	83.42 351	*e*P	P	05 39 43.0	+0.3
	comp=Z,26nm,1.6s					
POLO	Lamas de Olo	83.94 351	*e*P	P	05 39 46.0	+0.6
	comp=Z,16nm,1.9s					
PVRL	Vila Real	84.03 351	*e*P	P	05 39 46.7	+0.9
	comp=Z,69nm,1.0s					
MVO	Moncorvo	84.08 351	*e*P	P	05 39 47.0	+0.9
	comp=Z,49nm,1.1s					
PTO	Porto	84.25 352	*e*P	P	05 39 47.9	+1.1
PVIS	Viseu	84.60 351	*e*P	P	05 39 49.3	+0.6
	comp=Z,52nm,1.0s					
MTE	Manteigas	84.89 351	*e*P	P	05 39 50.9	+0.8
	comp=Z,76nm,1.0s					
MTE	Manteigas	84.89 351	*e*P	P	05 39 50.7	+0.5
	comp=Z,52nm,0.9s					
COI	Coimbra	85.15 352	*e*P	P	05 39 52.4	+1.0
	comp=Z,92nm,1.0s					
ESDC	Sonseca Array	85.23 348	P	P	05 39 52.4	+0.5
	comp=Z,22nm,0.8s,baz=3.0,slow=5.0,SNR=80					
PAB	San Pablo	85.40 348	*e*P	P	05 39 53.6	+0.9
	comp=Z,17nm,0.9s					
PAB	San Pablo	85.40 348	*e*P	P	05 39 53.6	+0.9
PAB			pmax	pmax		
	comp=Z,17nm,0.9s					
PCBR	Castelo Branco	85.44 351	*e*P	P	05 39 53.5	+0.7
	comp=Z,44nm,1.1s					
PTOM	Tomar	85.74 352	*e*P	P	05 39 55.0	+0.7
	comp=Z,33nm,1.2s					
PMRV	Marv??o	85.84 351	*e*P	P	05 39 55.5	+0.7
	comp=Z,26nm,1.6s					
PMTG	Montargil	86.27 351	*e*P	P	05 39 56.9	0.0
	comp=Z,17nm,1.9s					
KEST	Kesra	86.75 337	P	P	05 39 59.2	-0.3
	comp=Z,7.4nm,0.6s,baz=286,slow=2.0,SNR=10.0					
KEST			LR	LR	06 24 29.3	
	comp=Z,38nm,18.5s,baz=275,slow=40					
EVO	Evora	86.78 351	*e*P	P	05 39 59.5	+0.1
PNCL	Nicolau / Gran	87.24 351	*e*P	P	05 40 02.0	+0.3
PBEJ	Beja	87.27 351	*e*P	P	05 40 03.1	+1.3
MESJ	Messejana	87.49 351	*e*P	P	05 40 04.4	+1.6
STKA	Stephens Creek	87.63 196	P	P	05 40 04.6	+1.3
	comp=Z,6.1nm,0.9s,baz=355,slow=6.6,SNR=8.3					
STKA			LR	LR	06 22 26.1	
	comp=Z,32nm,18.0s,baz=208,slow=38					
PCVE	Castro Verde	87.68 351	*e*P	P	05 40 04.1	+0.3
PVAQ	Vaqueiros	87.87 351	*e*P	P	05 40 05.2	+0.5
	comp=Z,28nm,1.2s					
TBI	Tubuai	88.57 135	*e*LR	LR	06 07 56.4	
	comp=Z,103nm,34.5s					
LBTB	Lobatse	135.73 293	*e*PKPdf	PKiKP	05 46 37.8	+0.9
LBTB	Lobatse	135.73 293	*e*PKIKP	PKiKP	05 46 37.8	+0.9
TRQA	Tornquist	146.84 78	*e*PKPbc	PKPbc	05 46 57.6	+1.0
TRQA	Tornquist	146.84 78	*e*PKP2	PKPbc	05 46 57.6	+1.0
GO09	Cerro Castillo	148.49 106	*e*PKPab	PKPab	05 47 06.2	+1.9

*ISCJB **07** 05:33:21.0±0.8, 53°.73N±0°.05×90°.87E±0°.07, h10km, mb3.5/2, Error ellipse: s-maj=7.8km s-min=5.6km az=6.5*
*IDC **07** 05:33:22.9±1.2, 53°.84N×90°.95E, h0km, mb3.6/2, mb1 3.7/5, mb1mx3.4/46, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=20.8km s-min=11.6km az=146.0*
*ASRS **07** 05:33:22.7±1.4, 53°.74N×91°.03E, h15km, Ms3.8/2*
ISC 07 05:33:23.5±0.9, 53°.71N±0°.06×91°.00E±0°.05, h10km, n13, σ2°38/17, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERR	Cheremushki	0.89	164	*e*Pg	Pg	05 33 39.0	-1.7
CERR				*e*Sg	Sg	05 33 51.3	-1.0
TASR	Tashtagol	2.10	244	*e*Pg	Pb	05 34 02.1	+0.4
TASR				*e*Sg	Sg	05 34 31.1	+0.1
ELT	Eltsovka	2.88	263	*e*Sg	Sb	05 34 51.6	+1.4
I46RU	ZALESOVO INFRA	3.67	276	*i*		05 55 00.0	
	baz=95,slow=330,SNR=3.6						
ZALV	Zalesovo Beam	3.67	276	Pn	Pn	05 34 21.4	+1.1
	baz=89,slow=14,SNR=2.2						
ZALV				Pg	Pb	05 34 27.5	-0.9
	2.8nm,0.3s,baz=93,slow=16,SNR=16						
ZALV				Lg	Lg	05 35 17.3	
	5.9nm,0.3s,baz=96,slow=27,SNR=21						
AKAR	Aktash	3.98	213	*e*Sg	Sg	05 35 27.5	-3.9
NVS	Novosibirsk	4.69	287	*e*Pg	Pg	05 34 49.8	-3.5
NVS				*e*Sg	Sb	05 35 47.4	+5.2
KURBB	Kurchatov Arra	8.27	253	Pn	Pn	05 35 24.5	+1.1
	0.3nm,0.3s,baz=64,slow=14,SNR=16						
KURBB				Sn	Sn	05 36 54.9	-1.8
	baz=66,slow=25,SNR=4.8						
KURBB				Lg	Lg	05 37 41.6	
	0.2nm,0.3s,baz=64,slow=34,SNR=9.5						
MKAR	Makanchi Array	8.89	222	Pn	Pn	05 35 34.3	+2.4
	0.6nm,0.3s,baz=33,slow=11,SNR=33						
MKAR				Sn	Sn	05 37 14.6	+2.6
	0.2nm,0.3s,baz=39,slow=23,SNR=6.6						
MKAR				Lg	Lg	05 38 01.2	
	0.1nm,0.3s,baz=38,slow=31,SNR=3.5						
SONM	Songino Array	11.37	115	Pn	Pn	05 36 06.6	+0.5
	0.4nm,0.3s,baz=237,slow=7.9,SNR=4.3						
SONM				Lg	Lg	05 39 16.2	
	0.1nm,0.3s,baz=291,slow=25,SNR=9.2						
AAK	Ala-Archa	15.57	231	Lg	Lg	05 41 32.6	
	0.4nm,0.3s,baz=306,slow=23,SNR=3.9						
TIXI	Tiksi	24.30	28	P	P	05 38 40.6	-0.1
	2.7nm,0.8s,baz=295,slow=3.2,SNR=4.4						
ILAR	Eielson Array	53.77	27	P	P	05 42 45.2	-0.3
	0.4nm,0.8s,baz=327,slow=6.1,SNR=6.3						

JMA 07 06:02:49.1±0.2, 28°.98N×139°.78E, h437km, M3.6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.84	131	P	P	06 03 54.4	+0.4
CBIJ				S	S	06 04 45.7	-0.8
JHH2	Haha-jima-NKT2	3.16	137	P	P	06 03 56.7	+0.3
JHH2				*e*S	S	06 04 50.6	-0.4
BSO1	Boso 1	5.75	10	S	S	06 05 35.0	+1.3
BSO3	Boso 3	5.84	6	*e*S	S	06 05 35.4	-0.5
JAG	Ashikaga	7.43	358	P	P	06 04 38.9	+0.8
JAG				*e*S	S	06 06 05.6	-1.7

*IDC **07** 06:20:29.8±1.1, 2°.47N×127°.64E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/46, mbtmp3.9/7, Error ellipse: s-maj=103.0km s-min=15.7km az=71.0*
*ISCJB **07** 06:20:37.1±0.4, 2°.47N±0°.06×127°.5E±0°.1, h64km, mb4.3/17, Error ellipse: s-maj=16.1km s-min=7.7km az=162.2*
*NEIC **07** 06:20:40.2±1.1, 2°.42N×127°.47E, h76km±7km, mb4.4/12, Error ellipse: s-maj=22.9km s-min=5.6km az=94.0*
ISC 07 06:20:39.1±0.6, 2°.44N±0°.08×127°.5E±0°.1, h64km, n30, σ1°16/31, mb4.4/17, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.66	185	*e*Pn	Pn	06 21 07.6	+1.6
LUWI	Luwuk	5.86	234	*e*Pn	Pn	06 22 04.1	+0.7
FAKI	Fak Fak	7.13	138	*e*Pn	Pn	06 22 21.9	+1.0
FITZ	Fitzroy Crossi	20.49	185	P	P	06 25 11.1	-0.8
	1.5nm,0.6s,baz=8.1,slow=14,SNR=4.2						
FITZ	Fitzroy Crossi	20.49	185	*e*P	P	06 25 11.2	-0.8
	16nm,1.5s						
WR1	Warramunga Arr	23.23	163	*e*P	P	06 25 38.9	-2.1
WRA	Warramunga Arr	23.23	164	P	P	06 25 38.9	-2.1
	123nm,0.3s,baz=342,slow=12,SNR=1.2						
WB2	Warramunga Arr	23.24	163	*e*P	P	06 25 39.9	-1.1
	8.6nm,1.0s						
ASAR	Alice Springs	26.69	167	P	P	06 26 09.5	-2.9
	0.3nm,0.3s,baz=345,slow=7.8,SNR=7.0						
ASAR				PcP	PcP	06 29 34.4	-0.4
	1.1nm,0.8s,baz=3.4,slow=1.0,SNR=8.0						
BBOO	Buckleboo	35.98	168	*e*P	P	06 27 33.5	-0.4
	30nm,1.4s						
NWAO	Narrogin (SRO)	36.49	195	*e*P	P	06 27 39.4	+1.2
	34nm,1.4s						
STKA	Stephens Creek	36.66	160	P	P	06 27 39.4	-0.3
	2.2nm,0.6s,baz=339,slow=12,SNR=8.6						
STKA	Stephens Creek	36.66	160	*e*P	P	06 27 39.6	-0.1
	1.2nm,1.1s						
ARMA	Armidale	39.97	147	*e*P	P	06 28 08.3	+0.6
	9.2nm,1.4s						
SONA0	Songino Array	48.76	341	*e*P	P	06 29 17.0	-0.6
SONM	Songino Array	48.76	341	P	P	06 29 17.0	-0.6
	0.4nm,0.5s,baz=155,slow=7.9,SNR=2.1						
MK31	Makanchi Array	59.05	325	*e*P	P	06 30 32.4	-0.1
	1.9nm,0.6s						
MK32	Makanchi Array	59.05	325	*e*P	P	06 30 32.5	0.0
MKAR	Makanchi Array	59.05	325	P	P	06 30 32.5	0.0
	2.6nm,0.6s,baz=122,slow=8.2,SNR=25						
MAKZ	Makanchi	59.23	325	*e*P	P	06 30 33.9	0.0
	3.0nm,0.6s						
KURK	Kurchatov	63.23	328	*e*P	P	06 31 00.6	-0.2
	3.2nm,0.6s						
KIWB	Kanaga Island	67.33	34	*e*P	P	06 31 29.9	+2.6
BVAR	Borovoye Array	68.81	327	P	P	06 31 35.9	-0.7
	0.7nm,0.6s,baz=116,slow=9.8,SNR=2.8						
VNDA	Vanda	82.06	173	P	P	06 32 50.9	-1.1
	1.7nm,0.6s,baz=325,slow=7.4,SNR=11						
VNDA	Vanda	82.06	173	*e*P	P	06 32 51.4	-0.6
MAW	Mawson	82.82	200	*e*P	P	06 32 56.0	-0.1
	0.7nm,1.1s						
SBA	Scott Base	82.96	172	*e*P	P	06 32 56.8	+0.2
	0.8nm,0.8s						
PMR	Palmer	84.70	28	*e*P	P	06 33 05.8	-0.1
	9.5nm,1.3s						
TORD	Torodi Ar. Bea	124.04	288	PKP	PKPdf	06 39 30.4	-0.9
	0.9nm,1.1s,baz=35,slow=3.5,SNR=3.6						
TOA1	Torodi Ar. Sit	124.05	288	*e*PKPdf	PKPdf	06 39 30.4	-0.9

*ISCJB **07** 06:21:03.0±1.1, 37°.48N±0°.08×72°.25E±0°.10, h10km, mb3.4/6, MS2.8/1, Error ellipse: s-maj=13.8km s-min=8.4km az=140.1*
*IDC **07** 06:21:03.0±1.6, 37°.56N×72°.60E, h0km, mb3.6/5, mb1 3.7/12, mb1mx3.5/52, mbtmp3.7/12, ML3.4/7, MS2.8/3, Ms1 2.8/3, ms1mx2.5/30, Error ellipse: s-maj=30.3km s-min=17.9km az=145.0*
*NNC **07** 06:21:07.8±6.5, 37°.69N×72°.33E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=53.2km s-min=41.9km az=163.0*
ISC 07 06:21:04.0±1.3, 37°.4N±0°.1×72°.33E±0°.08, h10km, n26, σ2°40/30, mb3.5/6, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.80	12	P	Pn	06 22 19.3	+2.5
	SNR=21						
UCH	Uchtor	5.07	19	P	Pn	06 22 22.8	+2.3
	SNR=11						
KZA	Kyzart	5.15	25	P	Pn	06 22 24.3	+2.7
	SNR=8.6						
AAK	Ala-Archa	5.45	17	Pn	Pn	06 22 28.1	+2.6
	2.0nm,0.3s,baz=181,slow=8.5,SNR=20						
AAK				Sn	Sn	06 23 28.3	0.0
	3.0nm,0.3s,baz=207,slow=2.4,SNR=4.8						
AAK	Ala-Archa	5.45	17	P	Pn	06 22 28.6	+3.1
	SNR=9.9						
AAK	Ala-Archa	5.45	17	⇑Pn	Pn	06 22 28.3	+2.8
	15nm,0.7s						
AAK				Sn	Sn	06 23 31.8	+3.5
	27nm,0.8s						
KK31	Karatay Array	5.82	347	Pn	Pn	06 22 32.0	+1.6
	10nm,0.4s,baz=155,slow=12,SNR=157						
KK31				⇓Sn	Sn	06 23 37.4	+0.1
	18nm,0.6s,baz=159,slow=24						
CHMS	Chumysh	5.85	18	P	Pn	06 22 33.9	+3.0
	SNR=5.4						
TKM2	Tokmak 2	6.02	24	P	Pn	06 22 35.9	+2.6
	SNR=6.7						
TKM2	Tokmak 2	6.02	24	⇑Pn	Pn	06 22 37.0	+3.7
	12nm,0.8s						
TKM2				⇑Sn	Sn	06 23 41.6	-0.8
	12nm,0.8s						
PDGK	Podgornoye	8.03	41	⇑Pn	Pn	06 23 02.2	+1.4
	6.4nm,0.7s						
GEYT	Alibeck	11.27	277	Pn	Pn	06 23 46.5	+1.3
	0.4nm,0.3s,baz=96,slow=13,SNR=3.0						
GEYT				Sn	Sn	06 25 47.8	-3.5
	0.6nm,0.3s,baz=114,slow=18,SNR=3.2						
GEYT				LR	LR	06 29 39.8	
	comp=Z,55nm,18.6s,baz=160,slow=45						
MKAR	Makanchi Array	11.91	35	Pn	Pn	06 23 54.0	+0.2
	0.1nm,0.3s,baz=224,slow=13,SNR=4.4						
MKAR				LR	LR	06 27 57.5	
	comp=Z,38nm,18.3s,baz=224,slow=35						
KURBB	Kurchatov Arra	13.90	17	Pn	Pn	06 24 18.9	-2.1
	0.0nm,0.3s,baz=209,slow=12,SNR=5.1						
AB31	Akbulak array	14.83	327	P	Pn	06 24 31.0	-2.7
	1.3nm,0.5s,baz=142,slow=12,SNR=15						
BVAR	Borovoye Array	15.64	356	Pn	Pn	06 24 41.2	-3.2
	0.4nm,0.3s,baz=166,slow=9.7,SNR=4.1						
AKTO	Aktyubinsk	16.54	326	Pn	Pn	06 24 54.2	-1.8
	0.2nm,0.3s,baz=126,slow=14,SNR=3.2						
AKTO	Aktyubinsk	16.54	326	⇓P	Pn	06 24 57.3	+1.3
	5.8nm,0.8s						
ZALV	Zalesovo Beam	18.62	24	P	P	06 25 19.9	-1.6
	0.5nm,0.3s,baz=214,slow=11,SNR=8.4						
SONM	Songino Array	26.93	56	P	P	06 26 43.1	-2.4
	0.5nm,0.6s,baz=267,slow=7.2,SNR=3.3						
FINES	FINESS Array B	37.31	325	P	P	06 28 15.8	-0.3
	1.0nm,0.6s,baz=120,slow=11,SNR=3.6						
ARCES	ARCESS Array B	40.69	337	P	P	06 28 44.4	+0.1
	1.0nm,0.9s,baz=121,slow=9.7,SNR=3.9						
KSRS	Korea Array	43.58	72	LR	LR	06 49 29.0	
	comp=Z,13nm,21.6s,baz=150,slow=39						
NOA	NORSAR Array B	44.28	322	P	P	06 29 13.5	-0.1
	0.2nm,0.4s,baz=108,slow=7.7,SNR=2.5						
TORD	Torodi Ar. Bea	66.80	269	P	P	06 31 59.8	+3.6
	0.3nm,0.4s,baz=74,slow=5.6,SNR=3.6						
ILAR	Eielson Array	73.58	16	P	P	06 32 35.1	-1.8
	0.4nm,0.9s,baz=332,slow=3.6,SNR=3.2						

*ISCJB **07** 06:28:12.0±1.2, 32°.85S±0°.03×72°.07W±0°.04, h10km±7km, mb4.5/24, MS3.8/9, Error ellipse: s-maj=6.1km s-min=3.9km az=41.9*
*GUC **07** 06:28:15.3±0.5, 32°.45S×71°.51W, h39km±3km, ML4.2*
*SJA **07** 06:28:15.9±0.9, 32°.70S×71°.71W, h10km, ML4.4, MW4.1*
*NEIC **07** 06:28:15.0±0.0, 32°.52S×71°.51W, h29km, mb4.6/33, ML4.2(GUC), After GUC.*
NEIC Felt [IV] at Valparaiso, [III] at Vina del Mar and [II] at San Antonio and Zapallar.
*IDC **07** 06:28:21.9±4.2, 32°.65S×71°.46W, h73km±33km, mb3.9/7, mb1 4.1/11, mb1mx3.9/27, mbtmp4.2/11, ML4.0/4, MS3.7/11, Ms1 3.7/11, ms1mx3.6/20, Error ellipse: s-maj=32.8km s-min=21.6km az=55.0*
ISC 07 06:28:11.8±1.3, 32°.69S±0°.02×71°.85W±0°.04, h4km±7km, n109, σ1°80/114, mb4.6/24, MS3.9/9, 1C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	0.76	112	*e*Pg	Pb	06 28 28.2	+0.4
ROC1				*e*Sn	Sb	06 28 38.0	-0.6
ROC1	El Roble	0.76	112	*i* P	Pb	06 28 28.7	+0.9
ROC1				*i* S	Sb	06 28 38.7	+0.1
ROCH	El Roble	0.76	112	⇓*i*P	Pb	06 28 28.6	+0.8
ROCH				*e*S	Sb	06 28 38.1	-0.5
ROCH				IAML		06 28 39.6	
	comp=N,14μm,0.6s						
PEL	Peldehue	1.08	115	*e*Pn	Pn	06 28 33.7	-0.2
PEL				*e*Sn	Sg	06 28 46.5	-0.1
PEL	Peldehue	1.08	115	*i* P	Pn	06 28 33.7	-0.2
PEL	Peldehue	1.08	115	*e*P	Pb	06 28 32.9	-0.3
PEL				*e*S	Sg	06 28 46.6	0.0
PEL				IAML		06 28 49.5	
	comp=E,11μm,0.2s						
CLCH	Cerro Calan	1.31	123	⇓*i*P	Pn	06 28 37.2	+0.2
CLCH				*e*S	Sg	06 28 53.7	-0.3
CLCH				IAML		06 28 57.6	
	comp=N,11μm,0.3s						
ANTU	Antumapu	1.35	131	*e*P	Pb	06 28 38.8	+1.1
ANTU				*e*S	Sn	06 28 56.2	+0.3
ANTU				IAML		06 28 59.0	
	comp=E,11μm,0.4s						
FSR	Penalolen	1.36	126	*e*P	Pb	06 28 39.1	+1.2
FSR				*e*S	Sn	06 28 56.9	+0.7
FCH	Farellones	1.46	116	⇓*i*P	Pg	06 28 39.6	-0.2
FCH				*e*S	Sg	06 28 58.1	-0.6
FCH				IAML		06 28 59.7	
	comp=N,6μm,0.3s						
LMEL	Las Melosas	1.80	130	*e*P	Pb	06 28 45.0	-0.5
LMEL				*e*S	Sb	06 29 08.2	-0.3
LMEL				IAML		06 29 10.1	
	comp=E,5μm,0.5s						
AUSP	Uspallata	2.13	78	*i* P	Pg	06 28 52.9	+0.1
GO05	Huala	2.32	182	*e*Pn	Pn	06 28 49.6	-1.2
GO05				*e*Sn	Sg	06 29 24.8	-1.5
GO05	Huala	2.32	182	*e*P	Sg	06 29 23.9	-2.3
ARCO	CERRO ARCO	2.46	94	*i* P	Pb	06 28 57.1	+0.4
ARCO				IAML		06 29 04.8	
	comp=Z,898nm,0.4s						
ASAL	Salagasta	2.55	89	*i* P	Pb	06 28 58.5	+0.3
AAGR	Agrelo	2.57	100	*i* P	Pb	06 28 58.9	+0.2
GO04	Tololo Observa	2.67	20	*e*Pn	Pn	06 28 58.3	+2.5
GO04				*e*Lg	Lg	06 29 38.7	
AVIZ	Vizcacheras	2.91	107	*e*P	Pb	06 29 03.9	-0.4
RTCV	Cerro Valdivia	2.92	75	*e*P	Pb	06 29 03.7	-0.9
RTCV				*e*S	Sg	06 29 47.4	+1.6
ZON	Zonda	2.92	68	*e*P	Pb	06 29 03.8	-0.8
ZON				*e*S	Sb	06 29 44.2	+3.5
ZON				IAML		06 29 55.9	
	comp=Z,716nm,0.5s						
SJA	San Juan	3.02	68	*e*P	Pn	06 28 53.1	-7.4
SJA				IAML		06 29 56.6	
	comp=Z,955nm,0.9s						
ACCO	Cerro Coronel	3.17	49	*e*P	Pb	06 29 08.1	-0.8
ACCO				*e*S	Sg	06 29 55.0	+1.3
RTLL	Cerro Villicun	3.17	66	*e*P	Pb	06 29 06.5	-2.3
RTLL				IAML		06 29 59.7	
	comp=Z,1μm,0.6s						
AROD	Rodeo	3.23	40	*e*P	Pb	06 29 08.7	-1.3
AROD				*e*S	Sg	06 29 54.1	-1.7
CFA	Coronel Fontan	3.25	72	P	Pn	06 29 07.3	+3.7
	comp=Z,32nm,0.3s,baz=247,slow=6.1,SNR=178						
CFA				S	Sn	06 29 44.5	+1.6
	comp=Z,24nm,0.3s,baz=179,slow=22,SNR=4.0						
CFA				LR	LR	06 30 37.0	
	comp=Z,1μm,20.2s,baz=292,slow=46						
CFA	Coronel Fontan	3.25	72	*e*P	Pb	06 29 08.0	-2.2
CFA				*e*S	Sb	06 29 50.8	+0.7
AMOG	MOGNA	3.35	59	*e*P

MNMC	Minye Minye	13.65	9	ePn		Pn	06 31 29.9	+3.3
CPUP	Villa Florida	14.14	67	P		Pn	06 31 33.7	+0.8
	comp=Z,0.1nm,0.3s,baz=217,slow=17,SNR=2.7							
CPUP				S		Sn	06 34 02.4	-7.9
	comp=Z,0.1nm,0.3s,baz=264,slow=18,SNR=2.0							
CPUP				LR		LR	06 37 15.6	
	comp=Z,243nm,21.7s,baz=247,slow=39							
CPUP	Villa Florida	14.14	67	ePn		Pn	06 31 34.6	+1.7
LPAZ	La Paz	16.67	13	P		P	06 32 09.4	-0.1
	comp=Z,0.4nm,0.3s,baz=192,slow=7.4,SNR=30							
LPAZ	La Paz	16.67	13	ePn		Pn	06 32 03.7	-3.3
	comp=Z,4.1nm,0.7s							
SIV	San Ignacio	19.29	33	P		P	06 32 37.8	+0.1
	comp=Z,0.2nm,0.3s,baz=231,slow=11,SNR=18							
SIV				LR		LR	06 41 23.2	
	comp=Z,321nm,19.9s,baz=229,slow=41							
NNA	Nana	21.11	346	LR		LR	06 39 28.2	
	comp=Z,147nm,20.6s,baz=188,slow=32							
EFI	East Falkland	21.48	156	eP		P	06 33 00.5	-0.7
	comp=Z,129nm,1.3s							
SPB	Sao Paulo	23.32	73	eP		P	06 33 21.2	+0.2
	comp=Z,14nm,0.9s							
ATAH	Atahualpa	26.14	345	LR		LR	06 42 12.6	
	comp=Z,131nm,21.8s,baz=181,slow=32							
BDFB	Brasilia	27.48	58	P		P	06 33 58.3	-1.2
	comp=Z,8.9nm,0.9s,baz=216,slow=7.2,SNR=11							
BDFB	Brasilia	27.48	58	eP		P	06 33 58.9	-0.5
	comp=Z,15nm,1.1s							
PTGA	Pitinga	33.70	22	eP		P	06 34 54.2	0.0
	comp=Z,8.6nm,1.1s							
SNAA	Sanae	52.74	158	eP		P	06 37 27.3	-0.2
	comp=Z,4.9nm,1.0s							
RKT	Rikitea	55.89	263	eT		T	07 38 22.1	
	comp=Z,2.6nm,0.2s							
TLIG	Tlapa	56.13	329	eP		P	06 37 51.9	-0.9
	comp=Z,7.4nm,0.8s							
QSPA	South Pole Qui	57.54	180	eP		P	06 38 02.8	+0.5
	comp=Z,11nm,1.0s							
TAOE	Nuku Hiva Isla	67.02	274	eLR		LR	06 59 23.1	
	comp=Z,68nm,23.4s							
SYO	Syowa Base	67.03	159⇑	eP		P	06 39 00.6	-5.0
TBI	Tubuai	67.78	256	eLR		LR	06 59 41.2	
	comp=Z,94nm,24.5s							
TBI	Tubuai	67.78	256	eT		T	07 53 11.2	
	comp=Z,5.8nm,0.2s							
LTX	Lajitas	68.67	330	eP		P	06 39 18.2	+1.7
TXAR	Lajitas Array	68.67	330	P		P	06 39 18.2	+1.7
	comp=Z,0.7nm,0.7s,baz=157,slow=7.9,SNR=12							
TXAR				LR		LR	07 04 58.9	
	comp=Z,77nm,19.4s,baz=0.0,slow=32							
TX31	Lajitas Ar. Si	68.67	330	eP		P	06 39 18.4	+1.8
	comp=Z,2.2nm,1.0s							
WHTX	Lake Whitney,	68.73	337	eP		P	06 39 17.8	+1.1
	comp=Z,5.7nm,0.9s							
V48A	Smith Brothers	69.50	347	eP		P	06 39 22.0	+0.5
	comp=Z,7.4nm,0.8s							
WVT	Waverly	70.08	346	eP		P	06 39 25.7	+0.8
	comp=Z,14nm,0.8s							
MNTX	Cornudas Mount	71.45	330	eP		P	06 39 33.9	+0.5
	comp=Z,3.7nm,0.8s							
CCM	Cathedral Cave	72.67	344	eP		P	06 39 41.4	+0.8
	comp=Z,9.9nm,0.9s							
SLM	Saint Louis	72.99	345	eP		P	06 39 43.8	+1.4
	comp=Z,14nm,0.4s							
MAW	Mawson	74.39	164	P		P	06 39 50.6	+0.2
	comp=Z,5.3nm,1.1s,baz=211,slow=7.0,SNR=9.6							
MAW				LR		LR	07 14 46.6	
	comp=Z,66nm,18.8s,baz=232,slow=38							
MAW	Mawson	74.39	164	eP		P	06 39 50.2	-0.2
	comp=Z,1.2nm,1.1s							
ANMO	Albuquerque	74.71	331	eP		P	06 39 54.6	+1.7
	comp=Z,5.1nm,1.3s							
ECSD	EROS Data Cent	79.35	342	eP		P	06 40 19.6	+1.0
	comp=Z,6.3nm,0.8s							
BOSA	Boshof	80.54	118	P		P	06 40 25.1	-0.6
	comp=Z,3.8nm,0.9s,baz=262,slow=7.1,SNR=4.1							
BOSA				LR		LR	07 13 10.9	
	comp=Z,76nm,19.3s,baz=208,slow=34							
PD31	Pinedale Array	82.67	333	eP		P	06 40 35.5	-1.1
	comp=Z,2.1nm,1.1s							
PDAR	Pinedale Array	82.67	333	P		P	06 40 38.3	+1.7
	comp=Z,0.3nm,0.6s,baz=140,slow=7.1,SNR=3.8							
NV01	Mina Array Sit	82.90	325	eP		P	06 40 39.5	+1.6
NVAR	Mina Array Bea	82.90	325	P		P	06 40 39.5	+1.6
	comp=Z,1.3nm,0.8s,baz=157,slow=6.1,SNR=8.9							
TORD	Torodi Ar. Bea	83.62	70	P		P	06 40 40.8	-1.0
	comp=Z,3.2nm,0.9s,baz=284,slow=5.0,SNR=13							
TORD				LR		LR	07 14 20.4	
	comp=Z,47nm,21.7s,baz=320,slow=33							
TOA1	Torodi Ar. Sit	83.62	70	eP		P	06 40 40.8	-1.0
YHH	Holmes Hill	84.88	333	eP		P	06 40 49.8	+1.9
	comp=Z,2.5nm,0.8s							
J08A	Circle Bar Ran	86.86	328	eP		P	06 40 58.8	+1.2
	comp=Z,5.1nm,0.8s							
DZM	Mont Dzumac	102.14	234	eLR		LR	07 15 40.8	
	comp=Z,74nm,22.8s							
ZST	Bratislava	112.90	47	ePDIF		Pdif	06 42 59.0	+3.7
MODS	Modra-Piesok	113.08	46	ePDIF		Pdif	06 42 59.2	+3.1
H11S2	WAKE ISLAND Hyt	25.94	270	T		T	09 06 10.0	
	baz=118,slow=75,SNR=161							
H11S1	WAKE ISLAND Hyt	25.95	270	T		T	09 06 11.6	
	baz=118,slow=75,SNR=239							
H11S3	WAKE ISLAND Hyt	25.95	270	T		T	09 06 14.2	
	baz=118,slow=75,SNR=196							
H11N3	WAKE ISLAND Hyt	26.32	271	T		T	09 06 39.6	
	baz=118,slow=76,SNR=47							
H11N1	WAKE ISLAND Hyt	26.33	271	T		T	09 06 40.6	
	baz=118,slow=76,SNR=33							
H11N2	WAKE ISLAND Hyt	26.33	271	T		T	09 06 42.5	
	baz=118,slow=76,SNR=106							
BRVK	Borovoye	146.14	42	ePKPdf		PKPbc	06 47 52.6	-0.1
NIL	Nilore	150.85	78	ePKPbc		PKPbc	06 48 05.3	-0.5
AAK	Ala-Archa	151.73	60	ePKPbc		PKiKP	06 48 08.6	+0.5
ZAA1	Zalesovo Array	153.03	31	ePKPbc		PKiKP	06 48 10.3	+0.1
ZAA0	Zalesovo Array	153.03	31	ePKPbc		PKPbc	06 48 10.0	-0.1
ZALV	Zalesovo Beam	153.03	31	PKPbc		PKiKP	06 48 10.3	+0.1
	comp=Z,5.8nm,0.7s,baz=297,slow=2.9,SNR=16							
MK31	Makanchi Array	155.77	47	ePKPab		PKPab	06 48 33.4	0.0
MK32	Makanchi Array	155.77	47	ePKPab		PKPab	06 48 33.5	+0.1
MKAR	Makanchi Array	155.77	47	PKPab		PKPab	06 48 33.5	+0.1
	comp=Z,1.6nm,0.8s,baz=298,slow=4.7,SNR=12							

MAN 07 06:42:43.1, 7°.27N×124°.74E, h24km, mb4.4, ML3.2, MS3.0, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.49	264	⇓iP	Pn	06 42 54.3	-0.3
CTBH				i S	Sn	06 43 03.2	+0.9
DMPH	Davao City--Mi	0.79	104	⇑eP	Pb	06 42 57.1	-1.0
DMPH				eS	Sb	06 43 07.1	-1.4
CGP	Cagayan de Oro	1.17	358	⇑iP	Pn	06 43 04.0	0.0
CGP				i S	Sb	06 43 19.6	+0.1

GUC 07 06:45:24.0±0.6, 32°.51S×71°.56W, h40km±3km, ML3.6
SJA 07 06:45:24.0±0.5, 32°.78S×71°.74W, h14km±8km, ML3.5, MW3.4

ISC 07 06:45:20.7±2.4, 32°.73S±0°.06×71°.9W±0°.1, h8km±12km, n27, σ1°85/34, 10D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	0.79	109	⇓eP	Pn	06 45 37.3	-1.2
ROC1				eS	Sg	06 45 46.5	+0.3
ROCH	El Roble	0.79	108	⇓iP	Pb	06 45 37.0	+0.1
ROCH				eS	Sg	06 45 46.5	+0.1
PEL	Peldehue	1.11	112	⇓eP	Pg	06 45 42.4	+0.4
PEL				eS	Sb	06 45 56.5	-0.3
PEL	Peldehue	1.11	112	eP	Pb	06 45 41.5	-0.7
PEL				eS	Sb	06 45 55.7	-1.2
PEL				IAML		06 45 58.3	
	comp=N,4μm,0.2s						
CLCH	Cerro Calan	1.33	120	eP	Pg	06 45 45.7	-0.5
CLCH				eS	Sb	06 46 02.4	-0.8
CLCH				IAML		06 46 04.2	
	comp=N,2μm,0.4s						
ANTU	Antumapu	1.36	129	eP	Pg	06 45 47.3	+0.5
ANTU				eS	Sg	06 46 04.2	-0.2
ANTU				IAML		06 46 06.6	
	comp=E,2μm,0.3s						
FCH	Farellones	1.48	114	⇓iP	Pb	06 45 48.1	-0.6
FCH				eS	Sn	06 46 06.5	-1.3
FCH				IAML		06 46 07.3	
	comp=E,2μm,0.2s						
LMEL	Las Melosas	1.81	129	eP	Pb	06 45 53.7	-0.6
LMEL				eS	Sb	06 46 16.2	-1.0
LMEL				IAML		06 46 20.0	
	comp=E,1μm,0.2s						
AUSP	Uspallata	2.19	77	i P	Pb	06 46 01.2	+0.4
ARCO	CERRO ARCO	2.51	93	⇓eP	Pb	06 46 06.3	+0.1
ARCO				IAML		06 46 49.2	
	comp=Z,135nm,0.4s						
ASAL	Salagasta	2.59	88	i P	Pb	06 46 06.8	-0.8
AAGR	Agrelo	2.61	99	i P	Pb	06 46 07.0	-0.9
GO04	Tololo Observa	2.72	21	eP	Pb	06 46 07.7	-2.0
RTCV	Cerro Valdivia	2.98	74	eP	Pb	06 46 13.2	-0.9
ZON	Zonda	2.98	68	eP	Pb	06 46 14.3	+0.1
ZON				IAML		06 46 57.9	
	comp=Z,77nm,0.5s						
ACCO	Cerro Coronel	3.23	49	⇓eP	Pb	06 46 17.0	-1.5
RTLL	Cerro Villicun	3.23	65	IAML		06 47 07.6	
	comp=Z,123nm,0.5s						
AROD	Rodeo	3.29	40	eP	Pb	06 46 17.1	-2.5
AMOG	MOGNA	3.41	59	⇓eP	Pb	06 46 18.1	-3.3
ACDV	Cuesta del Vie	3.49	44	eP	Pb	06 46 20.4	-2.4
ACAN	Cantantal	4.01	85	eP	Pn	06 46 26.6	+4.1
AGUA	GUANDACOL	4.36	43	⇓eP	Pn	06 46 31.7	+4.3
VCA	Vinchina	5.10	40	eP	Pn	06 46 41.6	+4.0
VCA				IAML		06 47 55.4	
	comp=Z,75nm,0.5s						
APLL	PUNTA DE LOS L	5.15	65	⇓eP	Pn	06 46 40.0	+1.8
APLL				IAML		06 47 47.8	
	comp=Z,23nm,0.5s						
ACLC	CERRO LA CRUZ	5.38	54	⇓eP	Pn	06 46 44.1	+2.6
TCA	Tanti	6.36	79	eP	Pn	06 46 55.9	+1.0
TCA				IAML		06 48 30.3	
	comp=Z,18nm,0.6s						
CYA	Choya	6.78	53	eP	Pn	06 47 01.0	+0.4
CYA				IAML		06 47 07.2	
	comp=Z,9.5nm,0.5s						

MOS 07 07:05:02.6±0.0, 44°.67N×36°.34E, h38km, MPVA4.8
SIGU 07 07:05:02.2±0.2, 44°.59N×36°.37E, h27km±5km, mb3.2/7
IDC 07 07:05:03.1±1.1, 44°.80N×36°.32E, h37km±19km, mb3.7/4, mb1 3.9/10, mb1mx3.5/37, mbtmp3.8/10, ML3.6/6, MS3.1/4, Ms1 3.0/4, ms1mx2.3/48, Error ellipse: s-maj=10.5km s-min=6.7km az=15.0

ISC 07 07:05:02.4±1.2, 44°.72N±0°.04×36°.34E±0°.02, h38km±2km, n130, σ2°31/164, mb3.7/7, MS3.2/4, 22C-8D, Crimea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KERU	Kerch	0.60	8	i P	Pn	07 05 16.8	+2.3
KERU				pmax	pmax		
	comp=Z,85nm,0.3s						
KERU	Kerch	0.60	8	i Pg	Pn	07 05 16.8	+2.3
	baz=5.0						
KERU				eSg	Sn	07 05 27.6	+4.7
	baz=5.0						
KERU	Kerch	0.60	8	i Pg	Pn	07 05 16.8	+2.3
KERU				eSg	Sn	07 05 27.6	+4.7
FEO	Feodosiya	0.74	294	eP	Pn	07 05 18.6	+2.4
FEO				e		07 05 29.8	
FEO				pmax	pmax		
	comp=Z,229nm,0.1s						
FEO				smax	smax		
	comp=E,536nm,0.3s						
FEO				smax	smax		
	comp=N,535nm,0.3s						
FEO	Feodosiya	0.74	294	ePg	Pn	07 05 18.6	+2.4
	baz=302						
FEO				Pgm		07 05 18.9	
	baz=302						
FEO				eSg	Sn	07 05 29.8	+3.6
	baz=302						
FEO				Sgm		07 05 31.3	
	baz=302						
FEO				Sgm		07 05 31.3	
	baz=302						
FEO	Feodosiya	0.74	294	ePg	Pn	07 05 18.6	+2.4
FEO				eSg	Sn	07 05 29.8	+3.6
ANN	Anapa	0.79	84	⇑iP	Pn	07 05 17.1	+0.2
ANN				e		07 05 27.2	
ANN				pmax	pmax		
	comp=Z,343nm,0.6s						
ANN				smax	smax		
	comp=N,870nm,0.5s						
ANN				smax	smax		
	comp=E,720nm,0.3s						
ANN				smax	smax		
	comp=N,953μm,0.5s						
ANN	Anapa	0.79	84	⇑iPg	Pn	07 05 17.1	+0.2
	baz=66						
ANN				Pgm		07 05 17.9	
	baz=66						
ANN				eSg	Sn	07 05 27.2	-0.2
	baz=66						
ANN				Sgm		07 05 27.9	
	baz=66						
ANN				Sgm		07 05 27.9	
	baz=66						
ANN	Anapa	0.79	84	i Pg	Pn	07 05 17.1	+0.2
ANN				i Sg	Sn	07 05 27.2	-0.2
SUDU	Sudak	0.97	281	⇑iP	Pn	07 05 20.6	+1.3
SUDU				e		07 05 33.6	
SUDU				pmax	pmax		
	comp=Z,767nm,0.3s						
SUDU				smax	smax		
	comp=N,578nm,0.7s						
SUDU				smax	smax		
	comp=E,363nm,0.2s						
SUDU	Sudak	0.97	281	⇑iPg	Pn	07 05 20.6	+1.3
	baz=288						
SUDU				Pgm		07 05 21.0	
	baz=288						
SUDU				eSg	Sn	07 05 33.6	+1.8
	baz=288						
SUDU				Sgm		07 05 34.8	
	baz=288						
SUDU				Sgm		07 05 35.2	
	baz=288						
SUDU	Sudak	0.97	281	ePg	Pn	07 05 20.6	+1.3
SUDU				eSg	Sn	07 05 33.6	+1.8
ALU	Alushta	1.38	269	eP	Pn	07 05 26.8	+1.8
ALU				e		07 05 43.9	
ALU				pmax	pmax		
	comp=Z,169nm,0.3s						
ALU				smax	smax		
	comp=N,122nm,0.4s						
ALU				smax	smax		
	comp=E,191nm,0.2s						
ALU	Alushta	1.38	269	ePn	Pn	07 05 26.8	+1.8
	baz=275						
ALU				Pnm		07 05 27.9	
	baz=275						
ALU				eSn	Sn	07 05 43.9	+1.9
	baz=275						
ALU				Snm		07 05 47.0	
	baz=275						
ALU				Snm		07 05 47.0	
	baz=275						
ALU	Alushta	1.38	269	ePg	Pn	07 05 26.8	+1.8
ALU				eSg	Sn	07 05 43.9	+1.9
YAL	Yalta	1.57	262	⇑iP	Pn	07 05 29.2	+1.5
YAL				e		07 05 48.3	
YAL				pmax	pmax		
	comp=Z,592nm,0.1s						
YAL				smax	smax		
	comp=N,153nm,0.2s						
YAL				smax	smax		
	comp=E,336nm,0.3s						
YAL	Yalta	1.57	262	⇑iPn	Pn	07 05 29.2	+1.5
	baz=267						
YAL				Pnm		07 05 30.0	
	baz=267						
YAL				eSn	Sn	07 05 48.3	+1.5
	baz=267						
YAL				Snm		07 05 50.0	
	baz=267						
YAL				Snm		07 05 50.2	
	baz=267						
YAL	Yalta	1.57	262	ePg	Pn	07 05 29.2	+1.5
YAL				eSg	Sn	07 05 48.3	+1.5
SIM	Simferopol'	1.60	279	⇑iP	Pn	07 05 29.6	+1.6
SIM				e		07 05 49.0	
SIM				pmax	pmax		
	comp=Z,268nm,0.3s						
SIM				smax	smax		
	comp=E,190nm,0.2s						
SIM				smax	smax		
	comp=N,122nm,0.2s						
SIM	Simferopol'	1.60	279	⇑iPn	Pn	07 05 29.6	+1.6
	baz=284						
SIM				Pnm		07 05 29.8	
	baz=284						
SIM				eSn	Sn	07 05 49.0	+1.6
	baz=284						
SIM				Snm		07 05 49.6	
	baz=284						
SIM				Snm		07 05 49.8	
	baz=284						
SIM	Simferopol'	1.60	279	ePg	Pn	07 05 29.6	+1.6
SIM				eSg	Sn	07 05 49.0	+1.6
SEVA	Sevastopol	1.91	265	⇓iP	Pn	07 05 34.4	+2.2
SEVA	Sevastopol	1.91	265	S	Sn	07 05 56.5	+1.5
SEV	Sevastopol'	1.91	266	⇑eP	Pn	07 05 33.6	+1.3
SEV				e		07 05 56.6	
SEV				pmax	pmax		
	comp=Z,121nm,0.3s						
SEV				smax	smax		
	comp=N,161nm,0.4s						
SEV				smax	smax		
	comp=E,138nm,0.5s						
SEV	Sevastopol'	1.91	266	⇑ePn	Pn	07 05 33.6	+1.3
	baz=270						
SEV				Pnm		07 05 35.0	
	baz=270						
SEV				eSn	Sn	07 05 56.6	+1.5
	baz=270						
SEV				Snm		07 05 58.1	
	baz=270						
SEV				Snm		07 05 58.1	
	baz=270						
SEV	Sevastopol'	1.91	266	ePg	Pn	07 05 33.6	+1.3
SEV				eSg	Sn	07 05 56.6	+1.5
KGUR	Krasnodar	1.94	80	ePg	Pn	07 05 36.7	+4.0
KGUR				eSg	Sn	07 06 02.1	+6.4
LZRR	Lazarevskoye	2.32	109	ePn	Pn	07 05 39.8	+1.8
LZRR				eSn	Sn	07 06 06.1	+0.9
SOC	Sochi	2.69	114	eP	Pn	07 05 43.2	+0.2
SOC				e		07 06 16.0	
SOC				pmax	pmax		
	comp=Z,29nm,0.9s						
SOC				smax	smax		
	comp=E,52nm,0.4s						
SOC	Sochi	2.69	114	ePn	Pn	07 05 44.7	+1.7
	baz=112						
SOC	Sochi	2.69	114	ePn	Pn	07 05 45.4	+2.4
SOC				eSn	Sn	07 06 15.7	+1.5
GUZR	Guzeripl'	2.81	104	ePn	Pn	07 05 46.3	+1.6
GUZR				eSn	Sn	07 06 18.2	+0.9
RPOR	Krasnaya Polya	3.00	108	P	Pn	07 05 48.7	+1.3
RPOR				S	Sn	07 06 20.7	-1.4
RPOR	Krasnaya Polya	3.00	108	ePn	Pn	07 05 48.8	+1.3
RPOR				eSn	Sn	07 06 22.4	+0.2
ERBR	Yeremizino-Bor	3.10	70	ePn	Pn	07 05 50.4	+1.8
ERBR				eSn	Sn	07 06 25.9	+1.6
DIKM	Dikmen	3.17	195	⇓iP	Pn	07 05 49.3	-0.4
DIKM	Dikmen	3.17	195	S	Sn	07 06 27.2	+1.1
DIKM	Dikmen	3.17	195	ePn	Pn	07 05 49.2	-0.4
	baz=195						
HAVZ	Havza	3.67	187	i P	Pn	07 06 00.5	+3.9
HAVZ				IAML_P			
	comp=Z,2μm,0.2s						
ORDU	Ordu-Boztepe	3.89	163	i P	Pn	07 05 59.9	+0.3
ORDU				IAML_P			
	comp=Z,531nm,0.1s						
ERBA	Erbaa	4.05	175	i P	Pn	07 06 04.5	+2.8
ERBA				IAML_P			
	comp=Z,12μm,0.1s						
DOMR	Dombai	4.07	109	i P	Pn	07 06 02.8	+0.6
DOMR	Dombai	4.07	109	ePn	Pn	07 06 04.7	+2.5
DOMR				eSn	Sn	07 06 47.2	-1.4
ILGA	Ilgaz	4.14	209	i P	Pn	07 06 07.5	+4.3
ILGA				IAML_P			
	comp=Z,710nm,0.2s						
BTIN	Bartın	4.29	226	i P	Pn	07 06 08.6	+3.6
BTIN				IAML_P			
	comp=Z,10μm,0.1s						
KTUT	Trabzon	4.50	145	S	Sn	07 07 00.6	+1.6
MACK	Trabzon	4.54	145	i P	Pn	07 06 11.7	+3.2
COAL	Corum-Alaca	4.57	193	i P	Pn	07 06 13.9	+4.9
COAL				IAML_P			
	comp=Z,124nm,0.3s						
KIV	Kislovodsk	4.62	97	eP	Pn	07 06 10.0	+0.4
KIV	Kislovodsk	4.62	97	ePn	Pn	07 06 10.0	+0.4
	baz=95						
KIV	Kislovodsk	4.62	97	ePn	Pn	07 06 10.0	+0.4
KIV0	Kislovodsk Arr	4.63	97	ePn	Pn	07 06 10.9	+1.1
KIV0				eSn	Sn	07 07 01.0	-1.2
KVAR	Kislovodsk Arr	4.63	97	Pn	Pn	07 06 10.8	+1.1
	baz=53,slow=20,SNR=3.9						
KVAR				Sn	Sn	07 07 02.7	+0.5
	baz=76,slow=12,SNR=3.5						
SHA1	Shidzhatmaz	4.65	100	ePn	Pn	07 06 11.8	+1.6
SHA1				eSn	Sn	07 07 04.5	+1.6
SHAR	Shatzhatmas	4.66	100	eP	Pn	07 06 11.7	+1.4
SHAR	Shatzhatmas	4.66	100	ePn	Pn	07 06 11.7	+1.4
	baz=98						
ELDT	Eldivan	4.74	208	i P	Pn	07 06 15.0	+3.6
ELDT				IAML_P			
	comp=Z,395nm,0.1s						
KBZ	Khabaz	4.82	100	Pn	Pn	07 06 12.9	+0.6
	comp=Z,0.8nm,0.3s,baz=315,slow=13,SNR=10.0						
KBZ				Sn	Sn	07 07 08.4	+1.6
	comp=Z,0.7nm,0.3s,baz=82,slow=19,SNR=2.7						
KBZ				LR	LR	07 08 26.4	
	comp=Z,36nm,19.3s,baz=250,slow=42						
NEY	Neytrino	4.84	105	i P	Pn	07 06 13.0	+0.3
NEY	Neytrino	4.84	105	ePn	Pn	07 06 13.1	+0.3
	baz=103						
NEY	Neytrino	4.84	105	ePn	Pn	07 06 17.2	+4.5
NEY				eSn	Sn	07 07 09.1	+1.6
PYA1	Pyatigorsk	4.89	95	i P	Pn	07 06 13.5	+0.2
DELI	KIRIKKALE	5.04	202	i P	Pn	07 06 13.9	-1.6
DELI				IAML_P			
	comp=Z,46nm,0.1s						
KELT	Kelkit	5.05	154	i P	Pn	07 06 19.1	+3.4
BCA	Borcka	5.07	128	⇓iP	Pn	07 06 16.9	+1.1
YIGI	Dzce	5.20	225	i P	Pn	07 06 20.8	+3.3
YIGI				IAML_P			
	comp=Z,869nm,0.1s						
BAYB	BAYBURT	5.32	146	i P	Pn	07 06 23.5	+4.2
TLCR		5.36	278	⇑iP	Pn	07 06 19.2	-0.5
TLCR		5.36	278	S	Sn	07 07 17.8	-2.3
TLCR		5.36	278	P	Pn	07 06 19.2	-0.5
TLCR				S	Sn	07 07 17.7	-2.3
BRTR	Keskin Array B	5.38	203	Pn	Pn	07 06 23.5	+3.4
	comp=Z,0.8nm,0.3s,baz=25,slow=10,SNR=12						
BRTR				Sn	Sn	07 07 22.2	+1.5
	comp=Z,0.9nm,0.3s,baz=25,slow=14,SNR=8.0						
KIBS	BOLU	5.42	219	i P	Pn	07 06 23.2	+2.5
KIBS				IAML_P			
	comp=Z,210nm,0.1s						
SAHE	Sakarya_HENDEK	5.58	228	i P	Pn	07 06 25.9	+3.1
SAHE				IAML_P			
	comp=Z,104nm,0.1s						
KOPT	Kop Dagi	5.62	145	i P	Pn	07 06 27.1	+3.6
MANR	Mangalia	5.64	264	⇑iP	Pn	07 06 22.8	-0.7
TIRR	Tirgusor	5.67	270	⇓iP	Pn	07 06 22.7	-1.2
TIRR	Tirgusor	5.67	270	S	Sn	07 07 24.9	-2.7
TIRR	Tirgusor	5.67	270	P	Pn	07 06 22.7	-1.2
TIRR				S	Sn	07 07 24.8	-2.8
MILM	Milestii Mici	5.70	295	S	Sn	07 07 27.2	-

VSR				smax	smax		
	comp=E,70nm,0.9s						
VRI	**Vrincioaia**	**6.87 283**	⇑	*i*P	**Pn**	**07 06 40.5**	**0.0**
VRI	**Vrincioaia**	**6.87 283**		S	**Sn**	**07 07 56.1**	**-1.3**
VRI	**Vrincioaia**	**6.87 283**		P	**Pn**	**07 06 40.5**	**0.0**
VRI				S	**Sn**	**07 07 56.1**	**-1.3**
PLOR	**Plostina**	**6.93 283**	⇑	*i*P	**Pn**	**07 06 40.0**	**-1.3**
PLOR	**Plostina**	**6.93 283**		S	**Sn**	**07 07 56.6**	**-2.2**
PLOR	**Plostina**	**6.93 283**		P	**Pn**	**07 06 40.0**	**-1.3**
PLOR				S	**Sn**	**07 07 56.6**	**-2.2**
ISR	**Istrita**	**6.96 277**	⇑	*i*P	**Pn**	**07 06 40.3**	**-1.5**
ISR	**Istrita**	**6.96 277**		S	**Sn**	**07 07 59.4**	**-0.3**
TESR	**Tescani**	**7.03 288**	⇓	*i*P	**Pn**	**07 06 42.7**	**+0.1**
TESR	**Tescani**	**7.03 288**		S	**Sn**	**07 07 59.3**	**-1.8**
MLR	**Muntele Rosu**	**7.39 280**		Pn	**Pn**	**07 06 49.6**	**+1.8**
	comp=E,1.1nm,0.3s,baz=29,slow=4.2,SNR=12						
MLR				Sn	**Sn**	**07 08 08.8**	**-1.6**
	comp=E,3.4nm,0.3s,baz=188,slow=18,SNR=14						
MLR	**Muntele Rosu**	**7.39 280**	⇑	*i*P	**Pn**	**07 06 47.4**	**-0.4**
MLR	**Muntele Rosu**	**7.39 280**		S	**Sn**	**07 08 08.8**	**-1.6**
VRH	**Novokhopyorsk**	**7.42 27**		*e*P	Pn	07 06 43.4	-4.6
VRH				*e*S	**Sn**	**07 08 03.6**	**-7.3**
VRH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VRH				smax	smax		
	comp=E,50nm,0.8s						
AKASG	**Malin Array Be**	**7.67 324**		Pn	**Pn**	**07 06 50.8**	**-0.6**
	comp=E,4.7nm,0.3s,baz=229,slow=10,SNR=14						
AKASG				Sn	**Sn**	**07 08 10.0**	**-6.9**
	comp=E,7.1nm,0.3s,baz=137,slow=24,SNR=16						
KIEV	**Kiev**	**7.67 324**	⇑	*i*P	**Pn**	**07 06 50.1**	**-1.2**
KIEV	**Kiev**	**7.67 324**		*i* P	**Pn**	**07 06 50.6**	**-0.8**
VOIR		**8.02 279**	⇓	*i*P	**Pn**	**07 06 55.0**	**-1.4**
VOIR		**8.02 279**		S	**Sn**	**07 08 24.0**	**-1.8**
VOIR		**8.02 279**		P	**Pn**	**07 06 54.9**	**-1.4**
VOIR				S	**Sn**	**07 08 23.9**	**-1.8**
BURAR	**Bucovina Array**	**8.24 294**	⇓	*i*P	**Pn**	**07 06 59.6**	**+0.2**
BURAR	**Bucovina Array**	**8.24 294**		S	**Sn**	**07 08 31.3**	**+0.1**
BURAR	**Bucovina Array**	**8.24 294**		P	**Pn**	**07 06 59.5**	**+0.2**
BURAR				S	**Sn**	**07 08 31.3**	**+0.1**
AKTO	**Aktyubinsk**	**15.68 61**		Pn	**Pn**	**07 08 36.5**	**-3.9**
	comp=E,0.2nm,0.3s,baz=255,slow=15,SNR=4.1						
AKTO				Sn	Sn	07 11 15.6	-17
	comp=E,0.3nm,0.3s,baz=19,slow=23,SNR=8.0						
KLMR	**Klimovskoe**	**16.27 6**		*e*P	**Pn**	**07 08 47.6**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,11nm,1.1s						
FINES	**FINESS Array B**	**17.81 344**		P	**Pn**	**07 09 01.6**	**-5.4**
	comp=Z,0.5nm,0.3s,baz=154,slow=14,SNR=11						
FINES	**FINESS Array B**	**17.81 344**		*i* P	**Pn**	**07 09 05.0**	**-1.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS	**Hagfors**	**20.54 327**		P	**P**	**07 09 36.8**	**-0.5**
	comp=Z,1.8nm,0.4s,baz=128,slow=12,SNR=19						
NB2	**NORSAR Subarra**	**22.07 327**		P	**P**	**07 09 52.9**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=126,slow=11						
NOA	**NORSAR Array B**	**22.07 327**		P	**P**	**07 09 53.1**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=133,slow=10,SNR=4.8						
APA	**Apatity**	**22.96 357**	⇓	*i*P	**P**	**07 10 07.7**	**+4.7**
APA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,100nm,13.0s						
ARCES	**ARCESS Array B**	**25.48 351**		P	**P**	**07 10 26.2**	**-0.3**
	comp=Z,8.0nm,0.3s,baz=158,slow=7.3,SNR=7.9						
AAK	**Ala-Archa**	**27.51 81**		*i* P	**P**	**07 10 45.7**	**+0.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WSAR	**Wadi Sarin**	**28.13 132**		LR	LR	07 24 07.5	
	comp=Z,36nm,18.4s,baz=242,slow=41						
KURK	**Kurchatov**	**28.77 63**		*i* P	**P**	**07 10 55.5**	**-0.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,2.1s						
ZALV	**Zalesovo Beam**	**32.33 56**		LR	LR	07 26 03.0	
	comp=Z,29nm,18.3s,baz=70,slow=39						
ULN	**Ulaanbaatar**	**47.39 60**		*i* P	**P**	**07 13 33.8**	**+1.0**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**70.63 346**		P	**P**	**07 16 14.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=28,slow=6.4,SNR=2.5						
JHJ	**Hachijo jima 2**	**75.98 57**		LR	LR	07 51 53.5	
	comp=Z,73nm,18.2s,baz=242,slow=37						

*ISCJB **07** 07:10:30.3±0.5, 33°.11N±0°.03×104°.20E±0°.05, h10km, mb3.5/3, MS3.2/2, Error ellipse: s-maj=5.8km s-min=4.4km az=179.9*

*IDC **07** 07:10:30.2±4.6, 33°.08N×104°.43E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.5/38, mbtmp3.7/5, ML4.5/1, MS3.0/5, Ms1 3.0/5, ms1mx2.8/33, Error ellipse: s-maj=102.7km s-min=40.8km az=94.0*

*BJI **07** 07:10:31.9±0.0, 33°.04N×104°.02E, h21km, mb3.9/1, ML3.9/21, Ms3.6/8, Ms7 3.3/7*

ISC 07 07:10:32.5±0.6, 33°.13N±0°.03×104°.14E±0°.05, h10km, n15, σ1§90/25, mb3.6/3, 2D, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.23**	**188**	Pn	**Pn**	**07 11 10.0**	**+0.4**
CD2				Pg	**Pb**	**07 11 12.3**	**-0.7**
CD2				Sn	**Sn**	**07 11 37.2**	**-0.1**
CD2				Sg	**Sg**	**07 11 41.2**	**-3.1**
CD2				smax	smax		
	comp=N,2μm,1.2s						
CD2				smax	smax		
	comp=E,1μm,1.1s						
LZH	**Lanzhou**	**2.96**	**355**	Pn	**Pn**	**07 11 19.2**	**-0.5**
LZH				Pg	**Pg**	**07 11 28.4**	**-0.9**
LZH				Sn	**Sb**	**07 12 00.5**	**-1.3**
LZH				Sg	**Sg**	**07 12 08.9**	**+1.2**
LZH				smax	smax		
	comp=N,720nm,1.0s						
LZH				smax	smax		
	comp=E,730nm,1.1s						
LZH				LR	LR		
	comp=N,340nm,6.0s						
LZH				LR	LR		
	comp=E,310nm,6.0s						
LZH				LR	LR		
	comp=Z,490nm,6.5s						
XAN	**Xi'an**	**4.09**	**76**	Pn	**Pn**	**07 11 37.0**	**+1.8**
XAN				Pg	**Pg**	**07 11 49.4**	**-1.5**
XAN				Sn	**Sn**	**07 12 24.1**	**+0.9**
XAN				Sg	**Sg**	**07 12 43.0**	**-0.9**
XAN				smax	smax		
	comp=N,170nm,0.9s						
XAN				smax	smax		
	comp=E,250nm,1.0s						
GYA	**Guiyang**	**7.00**	**161**	⇓ *i*Pn	Pn	07 12 20.5	+5.3
GYA				Pg	**Pb**	**07 12 36.5**	**+2.2**
GYA				Sn	**Sn**	**07 13 39.5**	**+4.6**
GYA				Sg	**Sb**	**07 13 57.3**	**-0.6**
GYA				smax	smax		
	comp=N,60nm,0.8s						
GYA				smax	smax		
	comp=E,60nm,0.9s						
GTA	**Gaotai**	**7.18**	**332**	Pn	**Pn**	**07 12 20.7**	**+3.1**
GTA				smax	smax		
	comp=E,5.0nm,0.9s						
GTA				smax	smax		
	comp=E,8.0nm,1.0s						
BTO	**Baotou**	**8.82**	**31**	*e*P	**Pg**	**07 13 18.8**	**-2.6**
BTO				S	Sn	07 14 39.9	+20
BTO				LR	LR		
	comp=N,59μm,0.9s						
BTO				LR	LR		
	comp=E,35μm,0.7s						
BTO				LR	LR		
	comp=Z,31μm,0.6s						
WHN	**Wuhan**	**9.06**	**104**	⇓P	**Pn**	**07 12 44.7**	**+1.4**
WHN				S	**Sn**	**07 14 24.4**	**-1.0**
WHN				LR	LR		
	comp=Z,460nm,6.6s						
WHN				LR	LR		
	comp=Z,400nm,6.5s						
WHN				LR	LR		
	comp=Z,460nm,8.1s						
SONM	**Songino Array**	**14.79**	**6**	Pn	**Pn**	**07 14 00.4**	**-1.4**
	baz=184,slow=12,SNR=1.9						
SONM				Lg	Lg	07 18 24.1	
	baz=177,slow=29,SNR=1.7						
SONM				LR	LR	07 20 32.4	
	comp=Z,55nm,21.7s,baz=24,slow=41						
CMAR	**Chiang Mai Arr**	**15.34**	**199**	Pn	**Pn**	**07 14 08.1**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=22,slow=9.9,SNR=2.3						
CMAR				LR	LR	07 20 37.6	
	comp=Z,32nm,19.0s,baz=73,slow=40						
WMQ	**Urumqi**	**16.70**	**314**	*e*P	**Pn**	**07 14 24.6**	**-2.0**
KSRS	**Korea Array**	**19.87**	**71**	LR	LR	07 24 05.6	
	comp=Z,19nm,18.0s,baz=155,slow=42						
MKAR	**Makanchi Array**	**21.51**	**316**	P	**P**	**07 15 21.6**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=115,slow=11,SNR=12						
MKAR				LR	LR	07 24 45.0	
	comp=Z,39nm,19.7s,baz=8.5,slow=39						
ZALV	**Zalesovo Beam**	**24.93**	**332**	P	**P**	**07 15 55.9**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=152,slow=9.5,SNR=2.4						
KURBB	**Kurchatov Arra**	**25.67**	**321**	P	**P**	**07 16 04.5**	**+2.2**
	comp=Z,1.2nm,0.7s,baz=125,slow=11,SNR=11						
BOSA	**Boshof**	**96.71**	**240**	LR	LR	08 06 14.5	
	comp=Z,23nm,18.1s,baz=30,slow=34						

TRN 07 07:27:02.0, 14°.84N×60°.27W, h49km, MD3.6, 1C-4D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**0.58**	**264**	⇑ *e*P	Pn	07 27 15.2	+1.0
MPOM	**Morne Pois Mar**	**0.69**	**236**	⇓ *e*P	Pn	07 27 16.6	+1.0
LPMF	**Morne Lapointe**	**0.72**	**249**	⇓ *e*P	Pn	07 27 16.8	+0.8
ZAM	**Aeronautique**	**0.78**	**250**	⇓ *e*P	Pn	07 27 17.6	+0.9
TRMF	**Trois Ilets**	**0.81**	**249**	*e*P	Pn	07 27 18.4	+1.3
BIM	**Bigot**	**0.84**	**248**	⇓ *e*P	Pn	07 27 18.9	+1.3
BAMF	**Morne Balai**	**0.85**	**269**	*e*P	Pn	07 27 19.1	+1.4
FDF	**Fort de France**	**0.86**	**263**	*e*P	Pn	07 27 19.0	+1.2
FDF				*e*S	Sn	07 27 31.8	+2.4
GBMF	**Grand Be**	**0.86**	**268**	*e*P	Pn	07 27 19.2	+1.2
CXM	**Morne La Croix**	**0.87**	**268**	*e*P	Pn	07 27 19.5	+1.4
PML	**Morne Lenard**	**0.88**	**267**	*e*P	Pn	07 27 19.6	+1.4
PCM	**Pelee Case Pet**	**0.91**	**269**	*e*P	Pn	07 27 19.9	+1.4
SLW	**Petit Monier**	**1.04**	**219**	*e*P	Pn	07 27 21.8	+1.5
SLW				*e*S	Sn	07 27 36.1	+2.4
SLBI	**Saint Lucia, B**	**1.06**	**220**	*e*P	Pn	07 27 21.0	+0.5
SLBI				*e*S	Sn	07 27 36.0	+1.8
DLPL	**La Plaine**	**1.06**	**298**	*e*P	Pn	07 27 20.5	-0.1
DLPL				*e*S	Sn	07 27 37.2	+2.9
DWS	**Wesley**	**1.24**	**306**	*e*P	Pn	07 27 23.7	+0.7
DWS				*e*S	Sn	07 27 40.3	+1.7
SLB	**Belfond**	**1.25**	**217**	*e*P	Pn	07 27 24.7	+1.5
SLB				*e*S	Sn	07 27 41.1	+2.2
MCLT	**Moule a Chique**	**1.29**	**210**	*e*P	Pn	07 27 24.4	+0.7
MCLT				*e*S	Sn	07 27 41.1	+1.2
MDPO	**Dominica; Chan**	**1.35**	**303**	*e*P	Pn	07 27 26.6	+2.1
MDPO				*e*S	Sn	07 27 42.7	+1.3
MAGL	**Barre de l'ile**	**1.48**	**319**	*e*P	Pn	07 27 27.4	+1.3
TDBA	**Terre de Bas,**	**1.66**	**308**	*e*P	Pn	07 27 30.9	+2.3
TBG	**Guadaloupe-3**	**1.67**	**308**	*e*P	Pn	07 27 29.7	+0.9
TBG				*e*S	Sn	07 27 49.8	+0.8
SSV	**Crater Summit**	**1.75**	**211**	*e*P	Pn	07 27 31.8	+1.8
SSV				*e*S	Sn	07 27 53.0	+1.9
SVV	**Soufriere Volc**	**1.77**	**211**	*e*P	Pn	07 27 32.6	+2.4
SVCV	**St. Vincent, C**	**1.77**	**209**	*e*P	Pn	07 27 31.2	+1.0
SVCV				*e*S	Sn	07 27 52.9	+1.3
CBE	**Ff, Capester**	**1.78**	**314**	*e*P	Pn	07 27 31.3	+0.9
SVB	**Belmont**	**1.82**	**212**	*e*P	Pn	07 27 32.3	+1.4
SVB				*e*S	Sn	07 27 54.0	+1.1
FCV	**Fort Charlotte**	**1.92**	**210**	*e*P	Pn	07 27 34.5	+2.3
FCV				*e*S	Sn	07 27 56.3	+1.1

TRN 07 07:37:10.2, 14°.80N×60°.36W, h75km, MD3.5, 3C-3D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**0.50**	**267**	⇑ *e*P	Pn	07 37 23.6	+0.2
MVM	**Montagne Vaucl**	**0.57**	**245**	⇓ *e*P	Pn	07 37 24.8	+0.6
MPOM	**Morne Pois Mar**	**0.60**	**234**	*e*P	Pn	07 37 25.0	+0.5
LPMF	**Morne Lapointe**	**0.63**	**249**	⇓ *e*P	Pn	07 37 25.2	+0.4
ZAM	**Aeronautique**	**0.69**	**251**	⇓ *e*P	Pn	07 37 26.1	+0.7
TRMF	**Trois Ilets**	**0.72**	**249**	*e*P	Pn	07 37 26.9	+1.2
BIM	**Bigot**	**0.75**	**248**	*e*P	Pn	07 37 27.3	+1.3
BAMF	**Morne Balai**	**0.77**	**271**	*e*P	Pn	07 37 27.5	+1.2
FDF	**Fort de France**	**0.77**	**265**	*e*P	Pn	07 37 27.5	+1.2
FDF				*e*S	Sn	07 37 40.1	+1.9
GBMF	**Grand Be**	**0.78**	**270**	*e*P	Pn	07 37 27.7	+1.2
CXM	**Morne La Croix**	**0.79**	**271**	*e*P	Pn	07 37 28.0	+1.5
PML	**Morne Lenard**	**0.80**	**269**	⇑ *e*P	Pn	07 37 28.2	+1.6
PCM	**Pelee Case Pet**	**0.83**	**271**	⇑ *e*P	Pn	07 37 28.4	+1.5
SLW	**Petit Monier**	**0.96**	**216**	*e*P	Pn	07 37 30.3	+1.8
SLW				*e*S	Sn	07 37 44.5	+2.3
SLBI	**Saint Lucia, B**	**0.98**	**218**	*e*P	Pn	07 37 29.4	+0.8
SLBI				*e*S	Sn	07 37 44.9	+2.5
SLB	**Belfond**	**1.17**	**215**	*e*P	Pn	07 37 31.9	+0.7
SLB				*e*S	Sn	07 37 49.0	+2.1
SLDE	**Delcer**	**1.20**	**215**	*e*S	Sn	07 37 49.1	+1.7
MCLT	**Moule a Chique**	**1.22**	**208**	*e*P	Pn	07 37 33.6	+1.9
MCLT				*e*S	Sn	07 37 49.1	+1.1
BBL	**Barber's Block**	**1.29**	**304**	*e*P	Pn	07 37 32.9	+0.2
BBL				*e*S	Sn	07 37 52.2	+2.6
MDPO	**Dominica; Chan**	**1.31**	**306**	*e*P	Pn	07 37 34.2	+1.4
MDPO				*e*S	Sn	07 37 50.9	+1.1
MAGL	**Barre de l'ile**	**1.45**	**322**	*e*P	Pn	07 37 36.2	+1.5
TBG	**Guadaloupe-3**	**1.62**	**310**	*e*P	Pn	07 37 38.1	+1.1
TBG				*e*S	Sn	07 37 58.1	+0.9
SSV	**Crater Summit**	**1.67**	**209**	*e*P	Pn	07 37 38.8	+1.1
SSV				*e*S	Sn	07 37 59.5	+0.9
SVV	**Soufriere Volc**	**1.69**	**210**	*e*P	Pn	07 37 39.6	+1.7
SVV				*e*S	Sn	07 37 59.5	+0.7
SVCV	**St. Vincent, C**	**1.70**	**207**	*e*P	Pn	07 37 39.7	+1.7
SVCV				*e*S	Sn	07 38 00.2	+1.2
CBE	**Ff, Capester**	**1.75**	**316**	*e*P	Pn	07 37 39.6	+1.0
SVB	**Belmont**	**1.75**	**210**	*e*P	Pn	07 37 40.8	+2.1
SVB				*e*S	Sn	07 38 00.7	+0.5
FCV	**Fort Charlotte**	**1.85**	**208**	*e*P	Pn	07 37 40.6	+0.7
FCV				*e*S	Sn	07 38 04.5	+1.9

*IDC **07** 07:38:23.3±0.5, 10°.59N×126°.72E, h0km, mb4.4/25, mb1 4.5/26, mb1mx4.4/40, mbtmp4.4/26, MS3.0/5, Ms1 3.1/5, ms1mx2.8/39, Error ellipse: s-maj=21.6km s-min=10.8km az=84.0*

*MAN **07** 07:38:24.9, 10°.80N×126°.99E, h30km, mb5.5, ML4.5, MS4.8*

*BJI **07** 07:38:24.3±0.0, 10°.40N×126°.94E, h30km, mb4.9/44, mB4.9/25, Ms4.2/16, Ms7 4.1/14*

*ISCJB **07** 07:38:25.8±1.5, 10°.64N±0°.03×126°.91E±0°.03, h29km±10km, mb4.8/90, MS3.6/8, Error ellipse: s-maj=5.7km s-min=4.4km az=4.5*

*NEIC **07** 07:38:25.4±1.9, 10°.67N×126°.76E, h11km±4km, mb4.8/47, Error ellipse: s-maj=17.9km s-min=11.6km az=86.0*

*MOS **07** 07:38:26.5±1.0, 10°.60N×126°.79E, h33km, mb5.0/30, Error ellipse: s-maj=11.8km s-min=6.0km az=117.7*

*DJA **07** 07:38:29.3±1.7, 11°.N±7°.×12°.7E±°, h34km±13km, M4.5/18, mb4.8/18, mB5.1/7, Mw(mB)4.4/7*

*KLM **07** 07:38:41.0, 10°.96N×126°.05E, h93km, mb4.8*

ISC 07 07:38:28.1±1.9, 10°.72N±0°.04×126°.80E±0°.06, h31km±12km, n203, σ1§37/211, mb4.8/91, MS3.9/9, 22C-8D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.59**	**234**	*e*P	Pb	07 39 01.6	+4.8
SCPH				*e*S	**Sb**	**07 39 19.7**	**+3.1**
BESP	**Borongan**	**1.60**	**304**	*e*P	**Pn**	**07 38 50.0**	**-4.4**
BESP				*e*S	**Sn**	**07 39 10.8**	**-3.1**
PLP	**Palo**	**1.84**	**284**	⇓ *e*P	**Pn**	**07 38 57.3**	**-0.3**
PLP				*i* S	**Sb**	**07 39 21.6**	**-2.2**
MSLP	**Maasin**	**1.99**	**253**	*e*P	**Pn**	**07 38 59.3**	**-0.4**
MSLP				*e*S	**Sb**	**07 39 26.3**	**-1.9**
BUTP	**Butuan**	**2.09**	**214**	*e*P	**Pn**	**07 39 00.3**	**-0.7**
BUTP				*e*S	**Sn**	**07 39 24.2**	**-1.8**
OCLP	**Ormoc**	**2.18**	**279**	*e*P	**Pn**	**07 39 02.6**	**+0.3**
OCLP				*e*S	**Sb**	**07 39 30.7**	**-2.7**
LLP	**Lapu-Lapu**	**2.81**	**262**	⇓ *e*P	**Pn**	**07 39 10.9**	**-0.1**
CGP	**Cagayan de Oro**	**3.06**	**223**	⇓ *e*P	**Pn**	**07 39 16.8**	**+2.4**
BUKP	**Musuan**	**3.30**	**211**	*e*P	**Pn**	**07 39 17.7**	**0.0**
BUKP				*e*S	**Sn**	**07 39 53.8**	**-2.1**
SNPH	**Sibulan**	**3.76**	**249**	⇑ *e*P	**Pn**	**07 39 25.5**	**+1.3**
SNPH				*i* S	**Sn**	**07 40 10.5**	**+3.0**
DAV	**Davao City (W)**	**3.82**	**198**	LR	LR	07 40 25.8	
	comp=Z,65nm,21.0s,baz=336,slow=33						
DAV	**Davao City (W)**	**3.82**	**198**	*e*Pn	**Pn**	**07 39 22.7**	**-2.2**
DAV				*e*Sn	**Sn**	**07 40 07.7**	**-1.1**
PVCP	**Virac**	**3.86**	**318**	*e*P	**Pn**	**07 39 24.2**	**-1.2**
PVCP				*e*S	**Sn**	**07 40 06.8**	**-2.9**
TGY	**Tagaytay City**	**6.64**	**301**	LR	LR	07 42 52.3	
	comp=Z,209nm,19.6s,baz=178,slow=40						
TNTI	**Ternate**	**9.89**	**177**	*e*Pn	**Pn**	**07 40 47.4**	**-1.0**
TNTI	**Ternate**	**9.89**	**177**	P	**Pn**	**07 40 47.7**	**-0.6**
KKM	**Kota Kinabalu**	**11.45**	**247**	*e*Pn	**Pn**	**07 41 12.9**	**+3.2**
KKM	**Kota Kinabalu**	**11.45**	**247**	P	Pn	07 41 14.0	+4.2
LUWI	**Luwuk**	**12.35**	**199**	*e*Pn	P	07 41 28.4	-5.3
TTSI	**Tana Toraja**	**15.33**	**207**	P	**Pn**	**07 42 03.7**	**+1.2**
	50nm,1.0s,860nm						
SPSI	**Sidrap Palu**	**16.18**	**206**	P	**Pn**	**07 42 13.3**	**0.0**
	36nm,0.8s						
BNSI	**Bone**	**16.43**	**204**	P	**Pn**	**07 42 16.5**	**-0.1**
SBUM	**Sibu**	**16.64**	**241**	*e*Pn	**Pn**	**07 42 19.6**	**+0.4**
	11nm,0.8s						
SBUM	**Sibu**	**16.64**	**241**	P	**P**	**07 42 21.0**	**-0.4**
KAPI	**Kappang**	**17.13**	**205**	Pn	**Pn**	**07 42 24.0**	**-1.4**
	baz=2.2,slow=11,SNR=5.6						
KAPI	**Kappang**	**17.13**	**205**	*e*Pn	**Pn**	**07 42 25.0**	**-0.4**
	20nm,0.9s						
DLV	**T Lat**	**18.00**	**276**	*e*P	**P**	**07 42 36.6**	**-0.1**
	13nm,1.0s						
KSM	**Kuching**	**18.78**	**242**	*e*P	**Pn**	**07 42 45.0**	**-0.7**
KSM	**Kuching**	**18.78**	**242**	P	**Pn**	**07 42 48.0**	**+2.3**
MMRI	**Maumere**	**19.75**	**193**	*e*P	**Pn**	**07 42 58.1**	**+0.8**
	108nm,1.1s						
EDFI	**Ende, Flores**	**19.99**	**195**	P	**Pn**	**07 43 00.8**	**+0.5**
	25nm,0.8s,492nm						
SOEI	**Soe**	**20.49**	**187**	*e*P	Pn	07 43 05.7	-0.4
	42nm,0.7s						
BATI	**Baumata**	**21.02**	**189**	P	**P**	**07 43 08.8**	**-0.7**
	61nm,0.8s,baz=210,slow=1.0,SNR=6.3						
BATI	**Baumata**	**21.02**	**189**	P	**P**	**07 43 10.4**	**+1.0**
PLAI	**Plampang**	**21.39**	**205**	P	**P**	**07 43 14.1**	**+0.7**
NJ2	**Nanjing**	**22.47**	**342**	*e*P	**P**	**07 43 26.1**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	**Wuhan**	**22.88**	**331**	⇓P	**P**	**07 43 28.7**	**-0.5**
WHN				pmax	pmax		
	comp=Z,12nm,0.3s						
TPI	**Tanjungpandan**	**23.28**	**236**	P	**P**	**07 43 32.7**	**-0.8**
	35nm,1.4s						
PPBI	**Pangkal Pinang**	**24.21**	**239**	P	**P**	**07 43 42.2**	**-0.2**
MYKOM	**Kota Tinggi**	**24.45**	**250**	*e*P	**P**	**07 43 43.7**	**-0.8**
	28nm,1.1s						
MYKOM	**Kota Tinggi**	**24.45**	**250**	P	**P**	**07 43 45.0**	**+0.5**
CHAI	**Chaiyaphum**	**24.68**	**285**	P	**P**	**07 43 46.5**	**-0.1**
	19μm,0.8s,764μm						
ENH	**Enshi**	**25.26**	**323**	*e*P	**P**	**07 43 51.8**	**0.0**
	29nm,0.8s						
PBKT	**Sadao Pong**	**25.75**	**286**	P	**P**	**07 43 56.0**	**-0.3**
	6.8nm,0.8s						
IPM	**Ipoh**	**26.27**	**258**	*e*P	**P**	**07 43 59.7**	**-1.4**
	26nm,1.0s						
IPM	**Ipoh**	**26.27**	**258**	P	**P**	**07 44 01.0**	**-0.1**
KULM	**Kulim**	**26.44**	**260**	*e*P	**P**	**07 44 02.5**	**-0.1**
	10nm,0.8s						
KULM	**Kulim**	**26.44**	**260**	P	**P**	**07 44 03.0**	**+0.4**
NANT	**Nan**	**26.46**	**291**	P	**P**	**07 44 03.8**	**+1.1**
	10μm,0.7s						
KSRS	**Korea Array**	**26.64**	**2**	P	**P**	**07 44 05.5**	**+1.4**
	1.3nm,0.8s,baz=179,slow=9.0,SNR=8.1						
PHET	**Kaeng Krachan**	**26.68**	**277**	P	**P**	**07 44 04.8**	**+0.1**
	40μm,0.7s						
TRTT	**Trang**	**26.90**	**266**	P	**P**	**07 44 08.7**	**+2.0**
	19nm,0.5s,9μm						
KMI	**Kunming**	**26.94**	**305**	P	**P**	**07 44 09.2**	**+2.0**
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
MDSI	**Maura Dua**	**27.11**	**237**	P	**P**	**07 44 09.9**	**+1.3**
PAYA	**Payao**	**27.36**	**291**	P	**P**	**07 44 10.1**	**-0.7**
	28μm,0.8s						
LAMP	**Lampang**	**27.38**	**290**	P	**P**	**07 44 14.6**	**+3.6**
	51μm,0.8s						
MAJO	**Matsushiro**	**27.71**	**20**	*e*P	**P**	**07 44 14.0**	**+0.2**
MAJO	**Matsushiro**	**27.71**	**20**	*e*P	**P**	**07 44 14.0**	**+0.2**
MJAR	**Matsushiro Arr**	**27.71**	**20**	P	**P**	**07 44 14.0**	**+0.2**
	0.8nm,0.3s,baz=186,slow=9.9,SNR=4.4						
MJAR				LR	LR	07 55 26.9	
	comp=Z,45nm,19.0s,baz=205,slow=37						
MJAR	**Matsushiro Arr**	**27.71**	**20**	P	**P**	**07 44 14.0**	**+0.2**
SDSI	**Sungai Dareh**	**27.76**	**247**	P	**P**	**07 44 15.8**	**+1.4**
CM31	**Chiang Mai Arr**	**28.01**	**289**	*e*P	**P**	**07 44 15.6**	**-1.0**
	6.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.01**	**289**	P	**P**	**07 44 15.4**

comp=Z,20nm,0.8s
SHL Shillong 36.18 299 *e*P **P 07 45 26.0 -2.4**
GTA Gaotai 37.32 325 ⇑P **P 07 45 40.1 +2.3**
GTA PcP **PcP 07 47 57.2 +0.4**
GTA pmax pmax
comp=Z,15nm,1.1s
LSA Lhasa 38.20 305 *e*P **P 07 45 46.2 +0.4**
comp=Z,6.0nm,0.4s
LSA Lhasa 38.20 305 *e*P **P 07 45 46.2 +0.4**
LSA pmax pmax
comp=Z,6.0nm,0.4s
KLR Kul'dur 38.62 5 P **P 07 45 49.4 +1.0**
comp=Z,1.6nm,0.6s,baz=198,slow=6.2,SNR=6.0
KLR Kul'dur 38.62 5 *i* P **P 07 45 49.5 +1.0**
KLR pmax pmax
comp=Z,3.0nm,1.0s
ULN Ulaanbaatar 40.59 340 *ce*P **P 07 46 07.4 +2.3**
ULN pmax pmax
comp=Z,10.0nm,2.5s
SONA0 Songino Array 40.79 339 *e*P **P 07 46 07.6 +0.8**
SONM Songino Array 40.79 339 P **P 07 46 07.6 +0.8**
comp=Z,1.8nm,0.8s,baz=168,slow=9.8,SNR=7.6
STKA Stephens Creek 44.66 162 P **P 07 46 37.3 -0.8**
comp=Z,1.9nm,0.7s,baz=331,slow=8.8,SNR=4.4
WMQ Urumqi 47.20 322 *e*P **P 07 46 59.4 +1.2**
WMQ pP pwP 07 47 10.9 -4.4
WMQ sP sP 07 47 14.9 +7.2
WMQ pmax pmax
comp=Z,27nm,1.1s
WMQ pmax pmax
comp=Z,110nm,3.7s
WMQ LR LR
comp=Z,430nm,35.3s
WMQ LR LR
comp=Z,430nm,18.5s
WMQ LR LR
comp=Z,220nm,21.1s
PETK Petropavlovsk- 49.02 24 P **P 07 47 12.1 +0.1**
comp=Z,2.2nm,0.6s,baz=204,slow=3.2,SNR=3.6
PEA1 Petropavlovsk- 49.02 24 *e*P **P 07 47 12.1 0.0**
DGZ Jazzator, Alta 50.67 328 *i* P **P 07 47 25.1 +0.3**
DGZ pmax pmax
comp=Z,5.0nm,1.8s
MK31 Makanchi Array 51.99 322 *e*P **P 07 47 36.0 +1.4**
comp=Z,13nm,0.8s
MK31 Makanchi Array 51.99 322 *i* P **P 07 47 35.8 +1.2**
MK31 pmax pmax
comp=Z,18nm,0.8s
MKAR Makanchi Array 51.99 322 P **P 07 47 36.2 +1.5**
comp=Z,16nm,0.8s,baz=120,slow=7.9,SNR=159
MAKZ Makanchi 52.19 322 *e*P **P 07 47 37.8 +1.7**
comp=Z,20nm,1.0s
MAKZ Makanchi 52.19 322 P **P 07 47 36.9 +0.8**
MAKZ pmax pmax
comp=Z,23nm,1.0s
PDGK Podgornoye 52.22 317 P **P 07 47 37.6 +1.0**
PDGK pmax pmax
comp=Z,24nm,0.9s
KSH Kashi 53.32 312 P **P 07 47 47.5 +2.8**
KSH PP **PP 07 49 50.9 +5.7**
KSH S **S 07 55 11.5 -3.2**
KSH pmax pmax
comp=Z,35nm,1.1s
KSH pmax pmax
comp=Z,210nm,4.0s
KSH LR LR
comp=Z,310nm,8.9s
KSH LR LR
comp=Z,120nm,13.0s
NIL Nilore 53.91 304 *e*P **P 07 47 48.7 -0.4**
comp=Z,17nm,0.8s
NIL Nilore 53.91 304 *e*P **P 07 47 48.7 -0.4**
NIL pmax pmax
comp=Z,17nm,0.8s
ULHL Ulahol 54.03 315 P **P 07 47 51.5 +1.5**
SNR=7.5
BOOM Boomskoye usch 54.33 315 *e*P **P 07 47 52.9 +0.8**
comp=Z,4.3nm,0.8s
BOOM Boomskoye usch 54.33 315 *e*P **P 07 47 52.9 +0.8**
BOOM pmax pmax
comp=Z,4.0nm,0.8s
ZAA0 Zalesovo Array 54.49 331 *e*P **P 07 47 52.9 +0.1**
comp=Z,4.2nm,0.9s
ZALV Zalesovo Beam 54.49 331 P **P 07 47 53.3 +0.5**
comp=Z,3.0nm,0.7s,baz=127,slow=6.1,SNR=6.0
KZA Kyzart 54.67 314 P **P 07 47 56.4 +1.5**
SNR=26
TKM2 Tokmak 2 54.71 315 P **P 07 47 55.9 +0.9**
SNR=9.9
TKM2 Tokmak 2 54.71 315 P **P 07 47 55.4 +0.5**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s
KBK Karagaybulak 55.07 315 P **P 07 47 58.3 +0.8**
SNR=8.0
UCH Uchtor 55.23 314 P **P 07 48 00.5 +1.5**
SNR=40
AAK Ala-Archa 55.38 315 *e*P **P 07 48 00.6 +0.9**
comp=Z,6.5nm,1.0s
AAK Ala-Archa 55.38 315 *ce*P **P 07 47 59.4 -0.3**
AAK pmax pmax
comp=Z,13nm,1.7s
USP Ospenovka 55.59 316 P **P 07 48 02.2 +1.2**
SNR=7.3
NVS Novosibirsk 55.76 331 *e*P **P 07 48 01.6 -0.4**
NVS *e* 07 48 19.0
NVS pmax pmax
comp=Z,11nm,1.0s
NVS pmax pmax
comp=N,5.0nm,1.1s
NVS pmax pmax
comp=E,7.0nm,1.1s
AML Almayashu 55.78 314 P **P 07 48 05.0 +2.1**
SNR=16
EKS2 Erkin-Say 55.89 315 P **P 07 48 04.9 +1.5**
SNR=11
KURK Kurchatov 56.00 325 *e*P **P 07 48 04.8 +1.1**
comp=E,18nm,1.0s
KURK Kurchatov 56.00 325 *ce*P **P 07 48 04.5 +0.7**
KURK pmax pmax
comp=Z,32nm,1.7s
ARSB Arslanbob 56.05 313 *e*P **P 07 48 05.2 +0.7**
BTK Batken 57.29 311 *e*P **P 07 48 12.7 -0.5**
comp=Z,7.7nm,0.7s
BTK Batken 57.29 311 *e*P **P 07 48 12.7 -0.5**
BTK pmax pmax
comp=Z,8.0nm,0.7s
KBL Kabul 57.51 304 *e*P **P 07 48 14.3 -0.8**
comp=Z,5.7nm,0.6s
KBL Kabul 57.51 304 *e*P **P 07 48 14.3 -0.8**
KBL pmax pmax
comp=Z,6.0nm,0.6s
KK31 Karatay Array 58.31 314 *e*P **P 07 48 20.4 +0.2**
comp=Z,11nm,1.0s
KK31 Karatay Array 58.31 314 *e*P **P 07 48 20.5 +0.2**
KK31 pmax pmax
comp=Z,11nm,1.0s
KKAR Karatay Array 58.31 314 *e*P **P 07 48 20.7 +0.4**
comp=Z,11nm,1.0s
KKAR Karatay Array 58.31 314 *e*P **P 07 48 20.7 +0.4**
KKAR pmax pmax
comp=Z,11nm,1.0s
TIXI Tiksi 60.90 1 *e*P **P 07 48 37.5 -0.1**
comp=Z,5.0nm,1.1s
TIXI Tiksi 60.90 1 *ce*P **P 07 48 38.2 +0.6**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 61.67 325 *e*P **P 07 48 43.9 +0.8**
comp=Z,7.0nm,0.8s
BRVK Borovoye 61.67 325 *ce*P **P 07 48 44.5 +1.4**
BRVK pmax pmax
comp=Z,15nm,1.7s
BILL Bilibino 62.84 16 *i* P **P 07 48 49.3 -1.4**
BILL pmax pmax
comp=Z,5.0nm,1.7s
NRIK Noril'sk 63.72 345 P **P 07 48 56.8 +0.3**
comp=Z,3.2nm,0.8s,baz=119,slow=6.6,SNR=4.5
AB31 Akbulak array 66.88 319 *i* P **P 07 49 17.2 -0.2**
AB31 pmax pmax
comp=Z,5.0nm,0.8s
ABKAR Akbulak array 66.88 319 *e*P **P 07 49 17.8 +0.5**
comp=Z,8.8nm,0.8s
ARU Arti 69.14 326 *e*P **P 07 49 31.6 +0.1**
comp=Z,6.6nm,0.6s
ARU Arti 69.14 326 *ce*P **P 07 49 32.0 +0.6**
ARU pmax pmax
comp=Z,10.0nm,1.7s

MSEY Mahe Island 72.61 262 *ce*P **P 07 49 51.9 -1.5**
PRGR Permogore 76.45 331 *e*P **P 07 50 12.0 -2.6**
PRGR pmax pmax
comp=Z,18nm,0.4s
BPAW Bear Paw Mtn. 77.03 27 *e*P **P 07 50 20.1 +2.1**
comp=Z,2.8nm,1.0s
TBLG Delisi 77.05 310 *e*P **P 07 50 19.4 +0.8**
comp=Z,9.7nm,0.6s
TBLG Delisi 77.05 310 *e*P **P 07 50 19.4 +0.8**
TBLG pmax pmax
comp=Z,10.0nm,0.6s
ZEI Tsey 77.61 312 *e*P **P 07 50 21.7 -0.2**
ZEI pmax pmax
comp=Z,15nm,0.9s
CASY Casey 77.72 187 *e*P **P 07 50 20.6 -0.9**
comp=Z,13nm,1.0s
AKH Akhalkalaki 78.00 310 *e*P **P 07 50 25.6 +1.5**
comp=Z,15nm,0.8s
AKH Akhalkalaki 78.00 310 ⇑*i*P **P 07 50 25.7 +1.6**
AKH Akhalkalaki 78.00 310 *e*P **P 07 50 25.6 +1.5**
AKH pmax pmax
comp=Z,15nm,0.8s
KBZ Khabaz 78.29 313 P **P 07 50 25.7 +0.4**
comp=Z,5.7nm,0.9s,baz=140,slow=2.0,SNR=8.4
KIV Kislovodsk 78.43 313 *e*P **P 07 50 27.4 +1.1**
comp=Z,12nm,0.7s
KIV Kislovodsk 78.43 313 *e*P **P 07 50 27.1 +0.8**
KIV pmax pmax
comp=Z,43nm,1.0s
ILAR Eielson Array 78.82 26 P **P 07 50 28.9 +1.0**
comp=Z,0.1nm,0.5s,baz=260,slow=5.3,SNR=4.4
KLMR Klimovskoe 79.40 330 *e*P **P 07 50 30.6 -0.5**
KLMR pmax pmax
comp=Z,9.0nm,1.0s
OBN Obninsk 81.44 324 ⇓*e*P **P 07 50 42.7 +0.6**
OBN pmax pmax
comp=Z,8.0nm,1.0s
OBN MLR MLR
comp=Z,29nm,19.0s
ARCES ARCESS Array B 83.96 340 P **P 07 50 55.8 +0.7**
comp=Z,6.5nm,0.9s,baz=70,slow=7.0,SNR=15
BR131 Keskin Array S 85.65 309 *e*P **P 07 51 04.2 -0.2**
comp=Z,5.4nm,0.8s
BR131 Keskin Array S 85.65 309 *e*P **P 07 51 04.2 -0.2**
BR131 pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 85.65 309 P **P 07 51 04.0 -0.3**
comp=Z,4.7nm,0.8s,baz=102,slow=4.3,SNR=22
BRTR Keskin Array B 85.65 309 *ce*P **P 07 51 04.4 0.0**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
FIA1 FINESS Array S 85.75 332 *e*P **P 07 51 04.1 0.0**
comp=Z,9.3nm,0.9s
FINES FINESS Array B 85.75 332 P **P 07 51 04.6 +0.5**
comp=Z,12nm,1.1s,baz=71,slow=4.4,SNR=22
VSU Vasula 86.17 329 *ce*P **P 07 51 07.5 +1.3**
VSU pmax pmax
comp=Z,36nm,1.3s
AKASG Malin Array Be 86.55 321 P **P 07 51 08.3 0.0**
comp=Z,3.0nm,0.8s,baz=64,slow=4.6,SNR=6.3
AKBB Malin Array Si 86.55 321 *e*P **P 07 51 08.0 -0.3**
comp=Z,11nm,1.1s
AKBB Malin Array Si 86.55 321 *e*P **P 07 51 08.0 -0.3**
AKBB pmax pmax
comp=Z,11nm,1.1s
KIEV Kiev 86.56 321 *e*P **P 07 51 08.2 -0.2**
comp=Z,8.0nm,1.0s
KIEV Kiev 86.56 321 ⇓*i*P **P 07 51 08.8 +0.4**
KIEV Kiev 86.56 321 *e*P **P 07 51 08.2 -0.2**
KIEV pmax pmax
comp=Z,8.0nm,1.0s
TIRR Tirgusor 88.49 315 ⇑*i*P **P 07 51 18.4 +0.6**
TIRR Tirgusor 88.49 315 ⇑P **P 07 51 18.4 +0.6**
TLB Topalu 88.72 315 ⇑*i*P **P 07 51 19.5 +0.6**
TLB Topalu 88.72 315 ⇑P **P 07 51 19.5 +0.6**
TESR Tescani 89.20 317 ⇑*i*P **P 07 51 21.7 +0.6**
VRI Vrincioaia 89.31 317 ⇑*i*P **P 07 51 22.8 +1.1**
VRI Vrincioaia 89.31 317 ⇑P **P 07 51 22.8 +1.1**
BURAR Bucovina Array 89.86 318 ⇑*i*P **P 07 51 25.4 +1.1**
BURAR Bucovina Array 89.86 318 ⇑P **P 07 51 25.4 +1.1**
BUR08 Bucovina Ar. S 89.86 319 *e*P **P 07 51 24.6 +0.3**
comp=Z,3.3nm,0.7s
MLR Muntele Rosu 89.94 316 ⇓*i*P **P 07 51 25.8 +1.0**
MLR Muntele Rosu 89.94 316 ⇓P **P 07 51 25.8 +1.0**
MAW Mawson 90.29 200 P **P 07 51 25.5 -0.1**
comp=Z,3.1nm,0.8s,baz=72,slow=16,SNR=5.1
MAW Mawson 90.29 200 *e*P **P 07 51 25.4 -0.1**
comp=Z,0.8nm,0.9s
VNDA Vanda 90.30 173 P **P 07 51 25.4 -0.1**
comp=Z,1.1nm,0.8s,baz=114,slow=20,SNR=13
VNDA Vanda 90.30 173 *e*P **P 07 51 24.9 -0.6**
UZH Uzhgorod 91.44 320 ⇑*i*P **P 07 51 32.3 +0.8**
NOA NORSAR Array B 92.59 334 P **P 07 51 35.8 -0.8**
comp=Z,0.9nm,0.7s,baz=64,slow=4.5,SNR=3.6
TOA1 Torodi Ar. Sit 120.58 292 *e*PKPdf **PKPdf 07 57 16.1 -1.8**
TORD Torodi Ar. Bea 120.58 292 PKP **PKPdf 07 57 16.1 -1.7**
comp=Z,1.1nm,0.9s,baz=334,slow=6.5,SNR=5.1
PLCA Paso Flores 146.40 156 PKPbc **PKPab 07 58 07.4 0.0**
comp=Z,2.6nm,0.7s,baz=2.4,slow=2.0,SNR=7.9
PLCA Paso Flores 146.40 156 *e*PKPdf **PKPab 07 58 07.7 +0.3**
PLCA Paso Flores 146.40 156 *e*PKP2 **PKPab 07 58 07.7 +0.3**
HUMP Col San Antoni 148.73 24 *e*PKPbc **PKiKP 07 58 14.8 0.0**
STVI Saint Thomas 148.88 22 *e*PKPbc **PKiKP 07 58 15.0 -0.1**
MTP Monte Pirata 148.88 23 *ep*PKPab **PKPab 07 58 19.1 +1.4**
TRQA Tornquist 151.66 165 *e*PKPbc **PKiKP 07 58 20.4 0.0**
TRQA Tornquist 151.66 165 *e*PKIKP **PKiKP 07 58 20.4 0.0**

*NNC **07** 08:04:17.5±6.2, 54°.05N×87°.16E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=84.1km s-min=43.0km az=147.0, Suspected Mining explosion.*

KRAR 07 08:04:11.8±0.1, 54°.07N×87°.02E, M2.0, 6C-1D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.14**	**240**	⇑Pn	Pn	08 05 50.9	+7.2
	1.5nm,0.9s						
KURK				⇑Sn	Sn	08 07 02.1	+7.6
	1.5nm,0.9s						
KURK				⇑Lg	Lg	08 07 38.4	
	6.2nm,1.0s						
KURBB	**Kurchatov Arra**	**6.24**	**240**	⇓Pn	Pn	08 05 51.5	+6.4
	2.0nm,0.7s,baz=57,slow=13						
KURBB				⇑Sn	Sn	08 07 04.5	+7.4
	3.0nm,0.7s						
KURBB				⇑Lg	Lg	08 07 40.5	
	5.2nm,0.8s						
MK31	**Makanchi Array**	**7.88**	**204**	⇑Lg	Lg	08 08 34.1	
	1.6nm,0.8s,baz=31,slow=32,SNR=5.0						

MEX 07 08:14:46.3±0.6, 14°.37N×92°.65W, h56km±22km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.65**	**34**	*e*P	Pn	08 14 57.8	-1.9
THIG				*i* S	Sn	08 15 08.3	-1.2
PCIG		**1.44**	**337**	*e*P	Pn	08 15 09.1	-1.0
PCIG				*e*S	Sn	08 15 26.0	-1.9
CCIG	**Comitan**	**1.96**	**14**	*e*P	Pn	08 15 16.2	-1.3
CCIG				*e*P	Pn	08 15 16.2	-1.3

DJA 07 08:18:58.7±0.8, 1°S±3°×12°4E±°, h12km±6km, M4.1/12, mb4.5/4, mB4.6/3, MLv4.0/12, Mw(mB)3.8/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.98**	**259**	P	Pg	08 19 17.3	-0.4
LUWI				S	Sn	08 19 31.5	-0.7
APSI	**Ampana**	**2.09**	**269**	P	Pb	08 19 35.7	-0.9
APSI				S	Sn	08 20 00.4	+0.8
MRSI	**Marisa**	**2.24**	**306**	P	Pn	08 19 34.9	-0.7
MRSI				S	Sn	08 20 04.0	+0.8
KDI	**Kendari**	**3.27**	**200**	P	Pn	08 19 48.5	-1.4
MPSI	**Mapaga**	**4.02**	**287**	P	Pn	08 20 00.5	+0.3
TTSI	**Tana Toraja**	**4.48**	**241**	P	Pn	08 20 06.9	+0.4
SPSI	**Sidrap Palu**	**5.03**	**232**	P	Pn	08 20 13.7	-0.3
BNSI	**Bone**	**5.05**	**226**	P	Pn	08 20 15.0	+0.6
	46nm,0.7s						
BKSI	**Bulukumba**	**5.72**	**219**	P	Pn	08 20 23.4	-0.1
	8.1nm,0.5s,292nm						
BSSI	**Bau Bau, Buton**	**6.17**	**212**	P	Pn	08 20 30.0	+0.3

MAN 07 08:27:05.4, 7°.26N×124°.83E, h7km, mb4.1, ML2.9, MS2.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.58**	**266**	⇓*i*P	Pb	08 27 17.5	-0.4
CTBH				*i* S	Sb	08 27 25.8	-0.4
BUKP	**Musuan**	**0.66**	**21**	*e*P	Pg	08 27 18.3	+0.2
BUKP				*e*S	Sb	08 27 28.1	-0.6
DMPH	**Davao City--Mi**	**0.70**	**105**	⇑*e*P	Pn	08 27 22.6	+0.8
DMPH				*e*S	Sn	08 27 32.4	-0.5
SKMP	**Bagumbayan, Su**	**0.79**	**201**	*e*P	Pg	08 27 20.1	-0.4
SKMP				*e*S	Sg	08 27 31.6	+0.7
CGP	**Cagayan de Oro**	**1.19**	**354**	*e*S	Sn	08 27 52.7	+7.6
DDMP	**Don Marcelino,**	**1.45**	**142**	*e*P	Pn	08 27 31.8	-0.3
DDMP				*e*S	Sg	08 27 56.0	+4.0
MATI	**Mati**	**1.46**	**102**	*e*P	Pg	08 27 35.2	+1.9
PAGZ	**Pagadian**	**1.54**	**292**	*e*P	Pn	08 27 32.0	-1.4
PAGZ				*e*S	Sb	08 27 54.3	+1.1

IDC 07 08:29:27.5±3.1, 54°.30N×87°.04E, h0km, mb1 2.7/2, mb1mx2.7/51, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=26.8km s-min=19.3km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**256**	*i*		08 37 39.1	
	baz=78,slow=314,SNR=5.5						
ZALV	**Zalesovo Beam**	**1.35**	**256**	Pg	Pg	08 29 51.1	-2.3
	1.4nm,0.3s,baz=75,slow=16,SNR=11						
ZALV				Lg	Lg	08 30 10.1	
	1.6nm,0.3s,baz=70,slow=27,SNR=7.4						
KURBB	**Kurchatov Arra**	**6.37**	**238**	Pn	Pn	08 31 03.5	+1.1
	0.1nm,0.3s,baz=54,slow=13,SNR=7.1						
KURBB				Lg	Lg	08 32 52.9	
	0.0nm,0.3s,baz=51,slow=28,SNR=3.9						
MKAR	**Makanchi Array**	**8.09**	**204**	Pn	Pn	08 31 27.6	+1.4
	0.1nm,0.3s,baz=23,slow=14,SNR=3.1						
MKAR				Lg	Lg	08 33 44.0	
	0.0nm,0.3s,baz=25,slow=28,SNR=4.5						

MEX 07 08:30:08.9±0.3, 16°.26N×98°.28W, h3km±3km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**48**	*i* P	Pg	08 30 12.4	-0.2
PNIG				*i* S	Sg	08 30 15.3	+0.1
TLIG	**Tlapa**	**1.32**	**348**	*e*P	Pg	08 30 30.3	-4.0
TLIG				*e*S	Sg	08 30 47.4	-4.0

SJA 07 08:32:54.7±1.0, 31°.20S×68°.85W, h25km±2km, ML3.2, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.35**	**112**	*e*P	Pb	08 33 02.6	+0.1
RTLL				IAML		08 33 03.8	
RTLL				*e*S	Sb	08 33 08.6	+0.8
RTLL				IAML		08 33 10.2	
	comp=Z,3μm,0.3s						
ZON	**Zonda**	**0.38**	**157**	*e*P	Pb	08 33 03.7	+0.7
ZON				*e*S	Sn	08 33 09.9	-1.3
ZON				AMSG		08 33 10.8	
	comp=Z,17μm,0.3s						
AMOG	**MOGNA**	**0.40**	**50**	*e*P	Pb	08 33 04.2	+0.8
AMOG				*e*S	Sb	08 33 09.8	+0.6
SJA	**San Juan**	**0.41**	**143**	*e*P	Pb	08 33 04.1	+0.6
SJA				*e*S	Sb	08 33 10.8	+1.2
SJA				IAML		08 33 11.9	
	comp=Z,2μm,0.3s						
SJA				AMSG		08 33 12.1	
	comp=Z,31μm,0.2s						
ACCO	**Cerro Coronel**	**0.64**	**343**	*e*P	Pn	08 33 08.9	+0.4
ACCO				*e*S	Sn	08 33 20.1	+2.1
CFA	**Coronel Fontan**	**0.66**	**128**	*e*P	Pb	08 33 06.8	-0.9
CFA				*e*S	Sb	08 33 16.0	-0.6
RTCV	**Cerro Valdivia**	**0.71**	**158**	*e*P	Pb	08 33 08.2	-0.3
RTCV				*e*S	Sb	08 33 18.1	0.0
ACDV	**Cuesta del Vie**	**1.05**	**347**	*e*P	Pb	08 33 15.2	+0.9
ACDV				*e*S	Sn	08 33 30.3	+2.3
AUSP	**Uspallata**	**1.12**	**204**	*e*P	Pb	08 33 16.5	+0.9
AUSP				*e*S	Sn	08 33 31.6	+1.6
AROD	**Rodeo**	**1.16**	**332**	*e*P	Pb	08 33 17.6	+1.3
AROD				*e*S	Sb	08 33 34.1	+3.2
ASAL	**Salagasta**	**1.39**	**179**	*e*P	Pb	08 33 20.3	+0.2
ASAL				*e*S	Sb	08 33 40.0	+2.6
ARCO	**CERRO ARCO**	**1.64**	**182**	*e*P	Pb	08 33 23.8	-0.6
ARCO				*e*S	Sb	08 33 48.1	+3.4
ARCO				IAML		08 33 49.6	
	comp=Z,156nm,0.6s						
AGUA	**GUANDACOL**	**1.73**	**10**	*e*P	Pb	08 33 25.6	-0.3
AGUA				*e*S	Sb	08 33 49.0	+1.7
AGUA				IAML		08 33 49.2	
	comp=Z,201nm,0.6s						
ACAN	**Cantantal**	**1.78**	**128**	*e*P	Pn	08 33 24.6	+0.6
ACAN				*e*S	Sb	08 33 47.7	-0.9
AAGR	**Agrelo**	**1.88**	**179**	*e*		08 32 22.7	
AAGR				*e*P	Pb	08 33 27.5	-1.0
AAGR				*e*S	Sb	08 33 55.3	+3.7
GO04	**Tololo Observa**	**1.96**	**301**	*e*P	Pb	08 33 31.3	+1.4
GO04				*e*S	Sb	08 33 58.3	+4.2
APLL	**PUNTA DE LOS L**	**2.15**	**69**	*e*P	Pn	08 33 29.3	+0.2
APLL				*e*S	Sn	08 33 55.6	+0.6
APLL				IAML		08 33 58.5	
	comp=Z,134nm,0.6s						
ACLC	**CERRO LA CRUZ**	**2.41**	**43**	*e*P	Pn	08 33 34.0	+1.2
VCA	**Vinchina**	**2.52**	**13**	*e*P	Pb	08 33 38.2	-1.1
VCA				*e*S	Sb	08 34 11.1	+1.3
VCA				IAML		08 34 13.6	
	comp=Z,301nm,0.4s						
ROC1	**El Roble**	**2.55**	**225**	*e*P	Pb	08 33 37.7	-2.3
ROC1				*e*S	Sb	08 34 10.6	-0.5
TCA	**Tanti**	**3.65**	**93**	*e*P	Pn	08 33 48.8	-0.9
TCA				*e*S	Sb	08 34 40.6	-1.8
TCA				IAML		08 34 57.9	
	comp=Z,59nm,0.6s						
CYA	**Choya**	**3.81**	**45**	*e*P	Pn	08 33 51.8	-0.2
CYA				IAML		08 35 01.2	
	comp=Z,28nm,0.4s						
CYA				IAML		08 35 01.2	
	comp=Z,28nm,0.4s						
AHML	**Horco Molle**	**5.37**	**36**	*e*P	Pn	08 34 13.0	-0.3
FSA	**Cafayete**	**5.66**	**27**	*e*P	Pn	08 34 11.6	-5.9
FSA				IAML		08 35 54.6	
	comp=Z,5.6nm,0.8s						

*IDC **07** 08:32:58.3±4.6, 40°.55N×50°.79E, h18km±30km, mb4.0/17, mb1 4.2/28, mb1mx4.1/46, mbtmp4.2/28, ML3.8/8, MS3.1/18, Ms1 3.1/18, ms1mx3.0/50, Error ellipse: s-maj=17.0km s-min=8.4km az=169.0*

*MOS **07** 08:32:58.5±1.2, 40°.80N×51°.00E, h19km, mb4.5/19, Error ellipse: s-maj=5.3km s-min=3.9km az=44.6*

*AZER **07** 08:33:00.4±0.7, 40°.57N×51°.03E, h60km, ml4.2/28, Error ellipse: s-maj=11.5km s-min=10.9km az=242.0*

*TEH **07** 08:33:01.1, 40°.69N×50°.94E, h40km, ML4.2*

*ISCJB **07** 08:33:01.1±0.3, 40°.64N±0°.02×50°.95E±0°.02, h54km±4km, mb4.2/48, MS3.3/13, Error ellipse: s-maj=3.8km s-min=2.4km az=25.3*

*NEIC **07** 08:33:01.8±2.2, 40°.66N×50°.91E, h38km±9km, mb4.3/25, Error ellipse: s-maj=21.2km s-min=12.3km az=178.0*

*NNC **07** 08:33:05.7±2.4, 41°.21N×51°.61E, h0km, mb4.3, Error ellipse: s-maj=30.3km s-min=17.6km az=88.0*

ISC 07 08:33:02.1±0.6, 40°.71N±0°.03×50°.97E±0°.03, h48km±6km, n271, σ1≧92/319, mb4.3/52, MS3.1/13, 17C-4D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**0.69**	**245**	*e*Pg	**Pn**	**08 33 17.5**	**+1.8**
GALA	**Gala**	**0.69**	**245**	P	**Pn**	**08 33 17.4**	**+1.8**
	SNR=8.0						

GALA S Sn 08 33 28.8 +3.4
NDR Nardaran 0.76 261 *e*Pg Pn 08 33 18.5 +2.0
NDR Nardaran 0.76 261 P Pn 08 33 18.6 +2.0
SNR=14
NDR S Sn 08 33 31.5 +4.4
GOBA Gobu 0.99 252 *e*Pg Pn 08 33 21.7 +2.0
GOBA Gobu 0.99 252 P Pn 08 33 21.7 +2.0
SNR=12
GOBA S Sn 08 33 37.6 +4.9
ATGJ Altiaghaj 1.55 276 *e*Pn Pn 08 33 28.4 +1.0
ATGJ Altiaghaj 1.55 276 Pn Pn 08 33 28.4 +1.0
SNR=102
ATGJ Sn Sn 08 33 48.7 +2.2
GBS Qobustan 1.56 264 *e*Pn Pn 08 33 28.7 +1.3
GBS Qobustan 1.56 264 Pn Pn 08 33 28.8 +1.3
SNR=48
GBS Sn Sn 08 33 50.3 +3.8
SIZA Siyzn 1.61 284 *e*Pn Pn 08 33 30.3 +2.0
SIZA Siyzn 1.61 284 Pn Pn 08 33 30.3 +2.0
SNR=113
SIZA Sn Sn 08 33 51.3 +3.4
ALIB Äli-Bayra 1.68 244 *e*Pn Pn 08 33 30.5 +1.5
ALIB Äli-Bayra 1.68 244 Pn Pn 08 33 30.6 +1.5
SNR=6.5
ALIB Sn Sn 08 33 52.8 +3.4
PQL Pirkuli 1.81 273 *e*Pn Pn 08 33 31.8 +0.8
PQL Pirkuli 1.81 273 Pn Pn 08 33 31.8 +0.8
SNR=52
PQL Sn Sn 08 33 55.3 +2.5
QUBA Quba, Azerbaij 1.98 290 Pn Pn 08 33 35.0 +1.7
SNR=16
QUBA Sn Sn 08 33 59.1 +2.1
QUB Quba 2.09 290 *e*Pn Pn 08 33 34.9 +0.2
IML Ismayilli 2.12 273 *e*Pn Pn 08 33 35.6 +0.4
IML Ismayilli 2.12 273 Pn Pn 08 33 35.6 +0.4
SNR=13
IML Sn Sn 08 34 01.4 +1.0
XNQ Khinaliq 2.19 283 *e*Pn Pn 08 33 37.0 +0.7
XNQ Khinaliq 2.19 283 Pn Pn 08 33 37.1 +0.7
SNR=40
XNQ Sn Sn 08 34 02.4 0.0
QSAR Qusar 2.20 292 *e*Pn Pn 08 33 37.4 +1.2
QSAR Qusar 2.20 292 Pn Pn 08 33 37.5 +1.2
SNR=71
QSAR Sn Sn 08 34 03.7 +1.4
QBL Gabala 2.39 277 *e*Pn Pn 08 33 38.9 0.0
QBL Gabala 2.39 277 Pn Pn 08 33 38.8 -0.1
SNR=24
QBL Sn Sn 08 34 07.8 +0.8
GLBA Clilabad 2.46 234 *e*Pn Pn 08 33 38.9 -0.9
GLBA Clilabad 2.46 234 Pn Pn 08 33 39.0 -0.9
SNR=7.1
GLBA Sn Sn 08 34 06.5 -2.2
ZRD Zardab 2.54 261 *e*Pn Pn 08 33 40.6 -0.3
ZRD Zardab 2.54 261 Pn Pn 08 33 40.7 -0.3
ZRD Sn Sn 08 34 11.2 +0.6
AKT Akhty 2.57 289⇑ *i*PN Pn 08 33 41.8 +0.4
AKT *e* 08 33 47.0
AKT *e* 08 33 49.4
AKT *e*S Sn 08 34 14.0 +2.6
AKT *e* 08 34 20.0
AKT *e* 08 34 25.1
AKT pmax pmax
comp=Z,109nm,0.2s
AKT smax smax
comp=N,853nm,0.4s
AKT smax smax
comp=E,1μm,0.4s
AKT smax smax
comp=E,904nm,0.4s
LKRN Lenkeran, Azer 2.62 221 PN Pn 08 33 40.0 -1.9
LKRN Lenkeran, Azer 2.62 221 *e*Pn Pn 08 33 40.0 -1.9
LKRN Lenkeran, Azer 2.62 221 Pn Pn 08 33 40.0 -1.9
SNR=13
LKRN Sn Sn 08 34 09.4 -3.0
ASTR Astara 2.73 219 *e*Pn Pn 08 33 41.3 -2.1
ASTR Astara 2.73 219 Pn Pn 08 33 41.4 -2.1
SNR=20
ASTR Sn Sn 08 34 12.1 -3.1
LRK Lerik 2.90 225 *e*Pn Pn 08 33 43.5 -2.4
LRK Lerik 2.90 225 Pn Pn 08 33 43.5 -2.4
SNR=41
LRK Sn Sn 08 34 16.3 -3.3
SEKA Sheki 2.90 281 PN Pn 08 33 46.2 +0.3
SEKA Sheki 2.90 281 *e*Pn Pn 08 33 46.2 +0.3
SEKA Sheki 2.90 281 Pn Pn 08 33 46.3 +0.3
SNR=134
SEKA Sn Sn 08 34 20.1 +0.6
BRDA Brd 2.93 262 *e*Pn Pn 08 33 46.7 +0.5
BRDA Brd 2.93 262 Pn Pn 08 33 46.7 +0.5
SNR=3.2
BRDA Sn Sn 08 34 21.5 +1.4
MNGR Mingechevir, A 2.96 273 PN Pn 08 33 46.7 +0.2
MNGR Mingechevir, A 2.96 273 *e*Pn Pn 08 33 46.7 +0.2
MNGR Mingechevir, A 2.96 273 Pn Pn 08 33 46.8 +0.2
MNGR Sn Sn 08 34 21.7 +0.9
ZKTA Zakatala 3.41 287 PN Pn 08 33 53.0 +0.2
ZKTA Zakatala 3.41 287 Pn Pn 08 33 53.1 +0.2
SNR=16
ZKTA Sn Sn 08 34 34.7 +2.6
MAK Makhachkala 3.43 312 *e*PN Pn 08 33 51.5 -1.6
MAK *e* 08 34 00.1
MAK *e* 08 34 03.4
MAK *e* 08 34 31.5
MAK *e* 08 34 44.8
MAK *e* 08 34 52.8
MAK pmax pmax
comp=Z,170nm,0.3s
MAK smax smax
comp=E,926nm,0.4s
MAK smax smax
comp=E,748nm,0.6s
MAK MLR MLR
comp=Z,124nm,15.0s
GNBR Gunib 3.44 300 *i* PN Pn 08 33 55.1 +1.8
GANJ Ganja 3.54 270 PN Pn 08 33 53.0 -1.6
GANJ Ganja 3.54 270 *e*Pn Pn 08 33 53.0 -1.6
GANJ Ganja 3.54 270 Pn Pn 08 33 53.0 -1.6
SNR=9.8
GANJ Sn Sn 08 34 32.1 -3.1
LGD Lagodekhi 3.74 289 P Pn 08 33 59.9 +2.6
LGD Lagodekhi 3.74 289 P Pn 08 33 59.9 +2.6
LGD Lagodekhi 3.74 289 *e*PN Pn 08 33 59.9 +2.6
LGD *e*S Sn 08 35 02.2 +22
DDFL Dedoflistskaro 3.74 283 P Pn 08 33 54.9 -2.5
DDFL Dedoflistskaro 3.74 283 P Pn 08 33 54.9 -2.5
DDFL Dedoflistskaro 3.74 283 *e*PN Pn 08 33 54.9 -2.5
DDFL *e*S Sn 08 35 00.4 +20
ISRB Sarab 3.86 223 *e*Pn Pn 08 33 58.6 -0.6
ISRB IAMB IAmb 08 34 01.3
comp=Z,4μm,0.2s
IHRS Heris 3.87 233 *e*Pn Pn 08 33 58.3 -1.0
GDB GEDABAY 3.97 272 *e*Pn Pn 08 33 59.6 -1.0
GDB GEDABAY 3.97 272 Pn Pn 08 33 59.7 -1.0
SNR=20
GDB Sn Sn 08 34 42.9 -3.0
BTLR Botlikh 4.06 300 *i* PN Pn 08 34 03.8 +2.0
ORD Ordubad 4.23 247 *e*Pn Pn 08 34 03.8 -0.3
ORD Ordubad 4.23 247 Pn Pn 08 34 03.8 -0.3
SNR=10
ORD Sn Sn 08 34 49.0 -3.2
QZX Qazax, Azerbai 4.26 277 *e*Pn Pn 08 34 03.5 -1.0
QZX Qazax, Azerbai 4.26 277 Pn Pn 08 34 03.5 -1.0
SNR=15
QZX Sn Sn 08 34 50.7 -2.2
QALM Alamut, Qazvin 4.28 184 *e*Pn Pn 08 34 02.6 -2.4
SBZ Shahbuz 4.36 254 *e*Pn Pn 08 34 06.9 +1.0
SBZ Shahbuz 4.36 254 Pn Pn 08 34 07.0 +1.0
SNR=3.4
SBZ Sn Sn 08 34 56.0 +0.5
IBST Bostanabad 4.37 228 *e*Pn Pn 08 34 04.3 -1.9
ITBZ Tabriz 4.48 238 *e*Pn Pn 08 34 06.9 -0.7
NAX Nakhchivan 4.48 252 PN Pn 08 34 08.2 +0.6
NAX Nakhchivan 4.48 252 *e*Pn Pn 08 34 08.2 +0.6
NAX Nakhchivan 4.48 252 Pn Pn 08 34 08.3 +0.6
SNR=5.5
NAX Sn Sn 08 35 00.1 +1.6
IMRD Marand 4.53 246 *e*Pn Pn 08 34 07.4 -0.9
IMRD IAMB IAmb 08 35 05.3
comp=Z,2μm,0.5s
IPRN Peran 4.59 166 *e*Pn Pn 08 34 08.5 -0.6
GROC Groznyy 4.59 305 *e*PN Pn 08 34 08.9 -0.1
GROC *e* 08 34 19.8
GROC *e* 08 34 59.8
GROC pmax pmax
comp=Z,134nm,1.0s
GROC smax smax
comp=N,630nm,1.1s
GROC smax smax
comp=E,914nm,1.3s
GROC smax smax
comp=E,339nm,1.0s
BTNK Botanikuri 4.76 284 P Pn 08 34 10.6 -0.7
BTNK Botanikuri 4.76 284 P Pn 08 34 10.6 -0.7
BTNK Botanikuri 4.76 284 *e*PN Pn 08 34 10.6 -0.7
GNI Garni 4.79 265 Pn Pn 08 34 11.5 -0.3
comp=E,3.8nm,0.3s,baz=188,slow=4.8,SNR=5.1
GNI Sn Sn 08 35 06.7 +0.5
comp=E,5.0nm,0.3s,baz=96,slow=19,SNR=6.2
GNI LR LR 08 36 37.8
comp=E,71nm,20.1s,baz=94,slow=47
GNI Garni 4.79 265 *e*Pn Pn 08 34 11.7 -0.1
ISHB Shabestar 4.80 241 *e*Pn Pn 08 34 11.3 -0.8
TBLG Delisi 4.81 284 P Pn 08 34 11.4 -0.7
TBLG S Sn 08 35 02.1 -4.4
TBLG Delisi 4.81 284 P Pn 08 34 11.4 -0.7
TBLG S Sn 08 35 02.1 -4.4
TBLG Delisi 4.81 284 *e*Pn Pn 08 34 11.4 -0.7
TBLG *e*Sn Sn 08 35 04.2 -2.3
TBLG Delisi 4.81 284 *e*PN Pn 08 34 11.3 -0.7
IALA Alasht 4.84 162 *e*Pn Pn 08 34 12.9 +0.2
IMND Minoodasht 4.88 134 *e*Pn Pn 08 34 14.1 +1.1
IAZR Azarshahr 4.92 234 *e*Pn Pn 08 34 13.1 -0.7
IAZR IAMB IAmb 08 34 15.1
comp=Z,2μm,0.4s
IMHD Mahdasht 5.02 183 *e*Pn Pn 08 34 15.3 +0.3
QABG Abgarm-Qazvin 5.11 193 *e*Pn Pn 08 34 15.1 -1.3
GUDG Gudauri 5.18 292 P Pn 08 34 19.6 +2.4
GUDG Gudauri 5.18 292 P Pn 08 34 19.6 +2.4
GUDG Gudauri 5.18 292 *e*PN Pn 08 34 19.7 +2.4
IDMV Damavand 5.19 170 *e*Pn Pn 08 34 18.1 +0.6
ISHM Shahmirzad 5.22 159 *e*Pn Pn 08 34 18.6 +0.6
IFIR Firoozkooh 5.25 164 *e*Pn Pn 08 34 18.7 +0.4
IRAZ Razeghan 5.36 189 *e*Pn Pn 08 34 18.6 -1.2
ILAS Lasjerd 5.54 163 *e*Pn Pn 08 34 23.1 +0.8
ZEI Tsey 5.68 294 *e*P Pn 08 34 27.4 +3.2
ZEI pmax pmax
comp=Z,17nm,0.6s
AKH Akhalkalaki 5.70 279 *e*Pn Pn 08 34 24.9 +0.5
AKH Akhalkalaki 5.70 279 *e*P Pn 08 34 24.9 +0.5
IVRN Varamin 5.74 174 *e*Pn Pn 08 34 24.5 -0.3
IQOM Qom 5.86 179 *e*Pn Pn 08 34 26.4 -0.2
ONI Oni 5.94 291 P Pn 08 34 28.8 +1.3
ONI Oni 5.94 291 P Pn 08 34 28.8 +1.3
ONI Oni 5.94 291 *e*P Pn 08 34 28.8 +1.3
HAGD Aghdareh 6.05 194 *e*Pn Pn 08 34 28.6 -0.7
NCK Nalchik 6.15 299 *i* P Pn 08 34 31.2 +0.8
GEYT Alibeck 6.20 114 Pn Pn 08 34 31.1 0.0
comp=Z,1.8nm,0.3s,baz=309,slow=18,SNR=7.7
GEYT Sn Sn 08 35 38.5 -2.1
comp=Z,4.8nm,0.3s,baz=141,slow=18,SNR=4.2
GEYT LR LR 08 37 37.5
comp=Z,53nm,19.9s,baz=235,slow=45
GYA0 ALIBECK ARRAY 6.20 114 *e*Pn Pn 08 34 31.7 +0.6
GYA0B ALIBECK ARRAY 6.20 114 *e*Pn Pn 08 34 31.0 0.0
ISFR Sfrayin 6.58 121 *e*Pn Pn 08 34 37.4 +0.8
KBZ Khabaz 6.71 299 Pn Pn 08 34 37.0 -1.0
comp=Z,1.2nm,0.3s,baz=117,slow=6.0,SNR=17
KBZ Sn Sn 08 35 47.4 -5.7
comp=Z,1.7nm,0.3s,baz=128,slow=17,SNR=2.5
KBZ Khabaz 6.71 299 P Pn 08 34 37.0 -1.0
PYA1 Pyatigorsk 6.72 302 *i* P Pn 08 34 38.8 +0.5
HSAM Samen 6.75 197 *e*Pn Pn 08 34 38.8 -0.2
SBZV Sabzevar 6.76 128 *e*Pn Pn 08 34 40.0 +1.1
SHA1 Shidzhatmaz 6.87 299 *i* P Pn 08 34 40.8 +0.3
KIV Kislovodsk 6.94 301 *e*Pn Pn 08 34 42.6 +1.3
KIV Kislovodsk 6.94 301 *e*P Pn 08 34 41.6 +0.3
KIV *e* 08 35 59.2
KIV pmax pmax
comp=Z,55nm,0.9s
KIV MLR MLR
comp=Z,42nm,9.0s
GOF Gofitskoye 7.26 309⇑ *e*P Pn 08 34 45.4 -0.3
GOF pmax pmax
comp=Z,34nm,0.9s
ZNGN Zangian 8.57 181 *e*Pn Pn 08 35 05.4 +1.4
TKDS Koohdasht(Taba 8.61 143 *e*Pn Pn 08 35 04.8 +0.5
TPRV Parvadeh(Tabas 8.93 147 *e*Pn Pn 08 35 09.1 +0.5
ITEG Tejag 9.98 139 *e*Pn Pn 08 35 24.2 +1.1
AB31 Akbulak array 10.64 34 Pn Pn 08 35 30.7 -1.1
comp=Z,4.9nm,0.5s,baz=215,slow=13,SNR=93
AB31 ⇑Sn Sn 08 37 24.7 -4.7
comp=Z,7.5nm,0.4s,baz=226,slow=25,SNR=12
AB31 Akbulak array 10.64 34 P Pn 08 35 30.7 -1.1
AB31 SN Sn 08 37 24.7 -4.7
ABKAR Akbulak array 10.64 34 *e*Pn Pn 08 35 31.1 -0.7
AKTO Aktyubinsk 10.90 24 Pn Pn 08 35 35.3 -0.1
comp=Z,5.1nm,0.3s,baz=207,slow=12,SNR=60
AKTO Sn Sn 08 37 29.9 -6.0
comp=Z,4.9nm,0.3s,baz=311,slow=20,SNR=10
AKTO LR LR 08 41 08.2
comp=Z,105nm,18.9s,baz=204,slow=44
AKTO Aktyubinsk 10.90 24 ⇑Pn Pn 08 35 35.0 -0.5
comp=Z,15nm,0.6s
AKTO ⇑Sn Sn 08 37 28.3 -7.5
comp=Z,61nm,0.6s
AKTO Aktyubinsk 10.90 24 P Pn 08 35 34.9 -0.5
AKTO SN Sn 08 37 28.3 -7.5
VRH Novokhopyorsk 12.30 332 *e*P Pn 08 35 53.5 -0.9
VRH pmax pmax
comp=Z,20nm,0.6s
VORD Divnogorie 13.08 326 *e*P Pn 08 36 05.8 +0.7
VORD pmax pmax
comp=Z,10.0nm,1.3s
BR101 Keskin Array S 13.29 271 *e*Pn Pn 08 36 08.8 +0.7
BR131 Keskin Array S 13.29 271 *e*Pn Pn 08 36 07.7 -0.5
BRTR Keskin Array B 13.29 271 Pn Pn 08 36 08.9 +0.7
comp=Z,0.3nm,0.3s,baz=90,slow=10,SNR=3.6
VSR Storozhevoye 13.32 326 *e*P Pn 08 36 08.0 -0.3
VSR pmax pmax
comp=Z,10.0nm,0.4s
LPSR Galich'ya Gora 14.46 329 *e*P Pn 08 36 23.2 -0.6
LPSR pmax pmax
comp=Z,30nm,1.2s
MMAI Mount Meron Ar 14.63 243 Pn Pn 08 36 25.9 -0.3
comp=Z,1.3nm,0.3s,baz=64,slow=16,SNR=2.4
KK31 Karatay Array 14.74 74 *e*Pn Pn 08 36 26.9 -0.7
KK31 Karatay Array 14.74 74 Pn Pn 08 36 27.4 -0.3
comp=Z,3.6nm,0.6s,baz=280,slow=14,SNR=16
KK31 ⇑Sn Sn 08 39 07.0 -2.8
comp=Z,5.2nm,0.7s,baz=272,slow=24,SNR=4.0
KK31 Karatay Array 14.74 74 P Pn 08 36 27.4 -0.3
KK31 SN Sn 08 39 06.9 -2.8
KK31 Karatay Array 14.74 74 *e*Pn Pn 08 36 27.0 -0.7
KKAR Karatay Array 14.74 74 *e*Pn Pn 08 36 26.9 -0.7
KKAR Karatay Array 14.74 74 *e*P Pn 08 36 26.9 -0.7
BTK Batken 15.14 86 *e*Pn Pn 08 36 33.4 +0.5
comp=Z,16nm,1.4s
BTK *e*Sn Sn 08 39 20.0 +0.6
BTK Batken 15.14 86 *e*P Pn 08 36 33.4 +0.5
BTK *e* 08 39 20.0
BTK pmax pmax
comp=Z,16nm,1.4s
ARU Arti 16.50 15 Pn Pn 08 36 48.2 -1.8
comp=Z,0.0nm,0.3s,baz=196,slow=11,SNR=16
ARU Sn Sn 08 39 40.1 -12
comp=Z,0.0nm,0.3s,baz=276,slow=19,SNR=4.9
ARU LR LR 08 45 24.2
comp=Z,42nm,18.8s,baz=143,slow=45
ARU Arti 16.50 15 *e*Pn Pn 08 36 46.9 -3.1
comp=Z,22nm,0.6s
ARU Arti 16.50 15 *d i*P Pn 08 36 47.6 -2.4
ARU S Sn 08 39 48.9 -3.0
ARU pmax pmax
comp=Z,18nm,0.8s
ARSB Arslanbob 16.62 81 *e*Pn Pn 08 36 52.5 +0.7
comp=Z,8.2nm,0.8s
EIL Elat 17.08 235 Pn Pn 08 36 54.2 -3.3
comp=Z,0.3nm,0.3s,baz=35,slow=12,SNR=2.1
OBN Obninsk 17.29 331 P Pn 08 36 59.1 -0.8
comp=Z,2.4nm,0.3s,baz=149,slow=12,SNR=3.3
OBN LR LR 08 44 40.9
comp=Z,26nm,21.9s,baz=160,slow=40
OBN Obninsk 17.29 331 *e*Pn Pn 08 37 00.3 +0.4
comp=Z,32nm,0.4s
OBN Obninsk 17.29 331 *ce*P P 08 37 01.1 +0.3
OBN pmax pmax
comp=Z,14nm,0.5s
OBN MLR MLR
comp=Z,85nm,22.0s
SVE Sverdlovsk 17.31 18 *e*P Pn 08 36 59.2 -1.0
SVE *e*S Sn 08 40 01.8 -10
SVE pmax pmax
comp=Z,38nm,1.2s
MOS Moscow 17.42 334 *e*P Pn 08 37 00.8 -0.7
MOS *e*S Sn 08 40 12.0 -2.3
MOS pmax pmax
comp=Z,28nm,0.6s
AAK Ala-Archa 17.67 76 P P 08 37 08.8 +3.5
comp=Z,0.3nm,0.3s,baz=234,slow=9.3,SNR=4.0
AAK LR LR 08 44 54.3
comp=Z,51nm,19.6s,baz=278,slow=40
AAK Ala-Archa 17.67 76 *e*Pn P 08 37 07.4 +2.1
comp=Z,5.7nm,0.8s
AAK Ala-Archa 17.67 76 *ce*P P 08 37 09.6 +4.3
AAK pmax pmax
comp=Z,12nm,2.5s
KIRV Kirov 17.92 357 P P 08 37 08.4 +0.7
comp=Z,3.1nm,0.3s,baz=216,slow=4.5,SNR=8.1
KIRV LR LR 08 45 29.8
comp=Z,75nm,20.0s,baz=125,slow=42
BRVK Borovoye 18.00 40 *e*Pn P 08 37 09.7 +1.0
comp=Z,9.4nm,0.7s
BRVK Borovoye 18.00 40 *i* P P 08 37 09.7 +1.0
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BVA0 Borovoye Array 18.04 40 ⇑Pn Pn 08 37 09.7 +0.6
comp=Z,4.2nm,0.7s,baz=258,slow=9.7,SNR=50
BVA0 Borovoye Array 18.04 40 P Pn 08 37 09.7 +0.6
BVAR Borovoye Array 18.04 40 P P 08 37 08.8 -0.3
comp=Z,0.7nm,0.3s,baz=229,slow=9.0,SNR=29
AKASG Malin Array Be 18.12 311 P P 08 37 07.4 -2.6
comp=Z,18nm,0.3s,baz=121,slow=11,SNR=47
AKASG S Sn 08 40 28.1 -3.2
baz=118,slow=22,SNR=6.1
AKBB Malin Array Si 18.12 311 *e*Pn P 08 37 09.0 -1.0
AKBB Malin Array Si 18.12 311 *e*P P 08 37 09.0 -1.0
KIEV Kiev 18.12 311 *e*Pn P 08 37 09.7 -0.4
comp=Z,48nm,0.8s
ISR Istrita 18.40 292 P Pn 08 37 14.7 +1.0
BOOM Boomskoye usch 18.74 76 *e*P Pn 08 37 20.7 +2.8
comp=Z,6.1nm,0.8s
BOOM Boomskoye usch 18.74 76 P Pn 08 37 20.7 +2.8
MLR Muntele Rosu 18.86 293 P Pn 08 37 20.0 +0.7
comp=Z,0.4nm,0.3s,baz=123,slow=17,SNR=3.2
MLR Muntele Rosu 18.86 293 *e*P Pn 08 37 20.0 +0.7
comp=Z,4.6nm,0.9s
MLR Muntele Rosu 18.86 293 *e*P Pn 08 37 20.0 +0.7
MLR pmax pmax
comp=Z,5.0nm,0.9s
NIL Nilore 19.07 105 P Pn 08 37 23.5 +1.7
KSH Kashi 19.14 85 P Pn 08 37 23.1 +0.4
KSH pP P 08 37 25.6 +4.1
KSH PP sP 08 37 38.5 0.0
KSH S S 08 40 51.6 -4.5
KSH pmax pmax
comp=Z,17nm,0.9s
KSH pmax pmax
comp=Z,170nm,4.9s
KSH LR LR
comp=N,380nm,11.8s
KSH LR LR
comp=E,290nm,9.1s
KSH LR LR
comp=Z,120nm,13.0s
KARP Karpathos 19.41 262 *e*P P 08 37 23.3 -1.0
comp=Z,43nm,0.9s
VOIR 19.48 293 P Pn 08 37 27.9 +1.3
BURAR Bucovina Array 19.67 299⇑ *i*P P 08 37 26.1 -1.0
LVV L'vov 20.94 305 *e*P P 08 37 39.8 -1.0
PRGR Permogore 21.21 353 *e*P P 08 37 41.8 -1.7
PRGR *e*S S 08 41 34.5 -1.9
PRGR pmax pmax
comp=Z,27nm,0.6s
IDI Anoyia 21.22 264 P P 08 37 43.6 -0.3
comp=Z,3.3nm,0.3s,baz=11,slow=7.0,SNR=5.5
IDI LR LR 08 48 10.0
comp=Z,39nm,20.8s,baz=87,slow=43
PDGK Podgornoye 21.31 73 P P 08 37 46.0 +1.1
PDGK pmax pmax
comp=Z,6.0nm,0.8s
KLMR Klimovskoe 21.37 345 *e*P P 08 37 43.4 -1.8
KLMR *e*S S 08 41 37.2 -2.4
KLMR pmax pmax
comp=Z,22nm,0.7s
KURBB Kurchatov Arra 21.55 53 P P 08 37 49.0 +1.8
comp=Z,2.1nm,0.7s,baz=255,slow=11,SNR=9.4
KURBB Kurchatov Arra 21.55 53 ⇓P P 08 37 49.0 +1.8
comp=Z,5.9nm,0.6s
KURK Kurchatov 21.63 53 *e*P P 08 37 49.8 +1.7
comp=Z,12nm,0.6s
KURK Kurchatov 21.63 53 ⇓P P 08 37 49.9 +1.8
comp=Z,9.4nm,0.6s
KURK Kurchatov 21.63 53 *ce*P P 08 37 50.2 +2.1
KURK pmax pmax
comp=Z,7.0nm,1.0s
IDID Didziasalis 21.67 321 *e*P P 08 37 47.2 -1.2
IDID IAmb IAmb 08 37 47.9
comp=Z,7.9nm,0.4s
KWP Kalwaria Pacla 21.73 304 *e*P P 08 37 47.8 -1.4
comp=Z,136nm,0.7s
KWP Kalwaria Pacla 21.73 304 *e*P P 08 37 47.8 -1.4
UZH Uzhgorod 21.78 301 *e*P P 08 37 50.9 +1.1
UZH *e* 08 37 59.0
UZH *e* 08 38 17.0
UZH *e*S S 08 41 42.8 -5.2
KOLS Kolonicke sedl 21.86 302 *e*P P 08 37 53.0 +2.4
KOLS Kolonicke sedl 21.86 302 *e*P P 08 37 53.0 +2.4
IIGN Ignalina 21.94 320 *e*P P 08 37 50.3 -1.0
IIGN IAmb IAmb 08 37 52.3
comp=Z,9.1nm,0.6s
ISAL Salakas 22.10 321 *e*P P 08 37 52.1 -1.0
ISAL IAmb IAmb 08 37 53.2
comp=Z,19nm,1.1s
IZAR Zarasai 22.14 321 *e*P P 08 37 52.3 -1.2
IZAR IAmb IAmb 08 37 53.6
comp=Z,10nm,0.5s
MK31 Makanchi Array 23.33 64 *e*P P 08 38 08.0 +2.0
comp=Z,4.6nm,0.8s
MK31 Makanchi Array 23.33 64 P P 08 38 07.9 +2.0
comp=Z,4.9nm,0.7s,baz=263,slow=7.4,SNR=47
MK31 Makanchi Array 23.33 64 *e*P P 08 38 08.0 +2.0
MK31 pmax pmax
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 23.33 64 P P 08 38 08.0 +2.1
comp=Z,5.3nm,0.7s,baz=265,slow=7.4,SNR=51
MKAR LR LR 08 48 23.5
comp=Z,37nm,20.3s,baz=230,slow=39
MKAR Makanchi Array 23.33 64 *ce*P P 08 38 08.1 +2.1
MKAR pmax pmax
comp=Z,6.0nm,0.7s
VSU Vasula 23.50 327 *ce*P P 08 38 07.0 -0.4
VSU pmax pmax
comp=Z,29nm,0.8s
VSU Vasula 23.50 327 *e*P P 08 38 05.0 -2.5
VSU IAmb IAmb 08 38 06.8
comp=Z,35nm,0.7s
TTG Podgorica 23.72 285 *e*P P 08 38 09.8 +0.1
comp=Z,9.0nm,0.8s
TTG Podgorica 23.72 285 *e*P P 08 38 09.8 +0.1
TTG pmax pmax
comp=Z,9.0nm,0.8s
TMCR Tamitsa 24.68 346 *e*P P 08 38 18.0 -0.2
TMCR *e*S S 08 42 37.8 +1.5
TMCR pmax pmax
comp=Z,40nm,0.9s
MORC Moravsky Berou 25.05 302 *e*P P 08 38 23.5 +1.7
comp=Z,2.9nm,0.7s
MORC Moravsky Berou 25.05 302 *e*P P 08 38 23.5 +1.7
MORC pmax pmax
comp=Z,3.0nm,0.7s
MODS Modra-Piesok 25.05 299 *e*P P 08 38 22.9 +1.1
MODS Modra-Piesok 25.05 299 *e*P P 08 38 22.9 +1.1
JOF Joensuu 25.14 339 P P 08 38 22.3 -0.1
JOF pmax pmax
comp=Z,21nm,1.0s
VRAC Vranov 25.60 301 LR LR 08 50 01.3
comp=Z,57nm,21.2s,baz=80,slow=40
NVS Novosibirsk 25.60 46 *e*P P 08 38 42.1 +15
NVS pmax pmax
comp=Z,16nm,1.2s
NVS pmax pmax
comp=N,8.0nm,1.1s

NVS pmax pmax
comp=E,6.0nm,0.7s
FIA0 FINESS Array S 25.70 332 *e*P **P 08 38 27.1 -0.4**
FIA0 FINESS Array S 25.70 332 *e*P **P 08 38 27.1 -0.4**
FIA1 FINESS Array S 25.70 332 *e*P **P 08 38 27.5 +0.1**
comp=E,30nm,0.6s
FINES FINESS Array B 25.70 332 P **P 08 38 27.1 -0.4**
comp=E,24nm,0.6s,baz=134,slow=11,SNR=101
FINES LR LR 08 49 44.4
comp=E,66nm,20.8s,baz=82,slow=39
FINES FINESS Array B 25.70 332*ce*P **P 08 38 27.5 +0.1**
FINES pmax pmax
comp=Z,24nm,0.6s
ZAA0 Zalesovo Array 26.20 48 *e*P **P 08 38 34.3 +2.2**
comp=Z,7.1nm,0.9s
ZALV Zalesovo Beam 26.20 48 P **P 08 38 33.1 +0.9**
comp=Z,1.0nm,0.3s,baz=265,slow=12,SNR=5.4
ZALV LR LR 08 50 33.4
comp=Z,77nm,19.4s,baz=250,slow=40
SUF Sumiainen 26.55 334 P **P 08 38 35.3 +0.1**
SUF pmax pmax
comp=Z,16nm,0.9s
DGZ Jazzator, Alta 26.99 58 *i* P **P 08 38 41.1 +1.6**
DGZ pmax pmax
comp=Z,1.0nm,0.9s
WMQ Urumqi 27.21 71 *e*P **P 08 38 44.9 +3.5**
GERES GERESS Array B 27.45 300 P **P 08 38 44.6 +1.0**
comp=Z,0.5nm,0.4s,baz=94,slow=12,SNR=2.7
GERES LR LR 08 50 29.0
comp=Z,44nm,20.6s,baz=50,slow=38
APA Apatity 28.59 346 ⇓*i* P 08 38 59.5 +6.2
APA pmax pmax
comp=Z,3.0nm,0.9s
APA MLR MLR
comp=Z,100nm,12.0s
LVZ Lovozero 28.66 347*ce*P **P 08 38 55.7 +1.6**
LVZ pmax pmax
comp=Z,32nm,2.5s
HFS Hagfors 30.09 323 P **P 08 39 06.4 -0.4**
comp=Z,5.2nm,0.6s,baz=107,slow=10,SNR=20
HFS LR LR 08 51 29.4
comp=Z,41nm,20.6s,baz=138,slow=37
NORES NORESS Array B 31.31 323 *e*P **P 08 39 17.2 -0.3**
NB2 NORSAR Subarra 31.57 324 P **P 08 39 19.1 -0.8**
comp=Z,1.9nm,0.8s,baz=115,slow=8.6
NB200 NORSAR Array S 31.57 324 *e*P **P 08 39 19.3 -0.6**
NOA NORSAR Array B 31.57 324 P **P 08 39 19.3 -0.6**
comp=Z,3.3nm,0.8s,baz=118,slow=8.4,SNR=13
NOA LR LR 08 53 35.0
comp=Z,33nm,18.4s,baz=110,slow=39
ARCES ARCESS Array B 31.84 343 P **P 08 39 22.5 +0.5**
comp=Z,1.6nm,0.6s,baz=143,slow=9.0,SNR=11
ARCES LR LR 08 53 57.2
comp=Z,47nm,21.8s,baz=84,slow=39
NRIK Noril'sk 34.51 22 LR LR 08 56 26.2
comp=Z,52nm,18.9s,baz=198,slow=41
SONA0 Songino Array 39.58 61 *e*P **P 08 40 29.7 +1.0**
SONM Songino Array 39.58 61 P **P 08 40 29.7 +1.0**
comp=Z,0.4nm,0.5s,baz=281,slow=8.2,SNR=2.2
ULN Ulaanbaatar 40.01 60 *i* P **P 08 40 34.5 +2.2**
ULN pmax pmax
comp=Z,5.0nm,0.9s
SPA0 Spitsbergen Ar 40.12 350 *e*P **P 08 40 33.7 +1.0**
comp=Z,38nm,1.1s
SPITS Spitsbergen Ar 40.12 350 P **P 08 40 33.7 +1.0**
comp=Z,7.0nm,0.8s,baz=134,slow=10,SNR=11
ESDC Sonseca Array 41.39 287 P **P 08 40 44.2 +0.4**
comp=Z,0.2nm,0.3s,baz=66,slow=9.4,SNR=2.9
BOD Bodaibo 42.83 45 *e*P **P 08 40 55.6 +0.5**
BOD pmax pmax
comp=Z,9.0nm,1.5s
HHC Hu-ho-hao-te 45.05 69 *e*P **P 08 41 16.1 +2.8**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,100nm,5.5s
CMAR Chiang Mai Arr 46.56 104 P **P 08 41 25.8 +0.5**
comp=Z,2.2nm,0.3s,baz=300,slow=6.1,SNR=3.4
TIXI Tiksi 48.18 25 P **P 08 41 38.6 +1.4**
comp=Z,1.7nm,0.3s,baz=260,slow=3.2,SNR=4.1
TIXI Tiksi 48.18 25 *e*P **P 08 41 38.8 +1.6**
comp=Z,3.0nm,1.1s
TIXI Tiksi 48.18 25*ce*P **P 08 41 39.8 +2.6**
TIXI pmax pmax
comp=Z,1.0nm,0.8s
TOA1 Torodi Ar. Sit 50.95 252 *e*P **P 08 41 57.1 -2.0**
TORD Torodi Ar. Bea 50.95 252 P **P 08 41 57.1 -2.0**
comp=Z,0.7nm,0.6s,baz=62,slow=6.7,SNR=8.3
KLR Kul'dur 55.22 52 *i* P **P 08 42 31.5 +1.5**
KLR pmax pmax
comp=Z,1.0nm,1.0s
KSRS Korea Array 57.99 66 P **P 08 42 50.8 +0.9**
comp=Z,0.4nm,0.4s,baz=296,slow=6.6,SNR=2.7
BILL Bilibino 61.33 23⇑*e*P **P 08 43 14.1 +1.7**
BILL *e* 08 43 54.9
BILL *e* 08 45 30.0
BILL *e*S S 08 51 49.0 +20
BILL pmax pmax
comp=Z,6.0nm,2.5s
BILL MLR MLR
comp=Z,133nm,20.0s
JHJ Hachijo jima 2 68.50 64 LR LR 09 15 18.3
comp=Z,110nm,20.0s,baz=288,slow=37
TOLK Toolik Lake Re 69.89 8 *e*P **P 08 44 09.3 +1.7**
comp=Z,2.9nm,0.7s
INK Inuvik 71.25 2 *e*P **P 08 44 16.7 +0.9**
comp=Z,2.5nm,1.1s
INK Inuvik 71.25 2 *e*P **P 08 44 16.7 +0.9**
INK pmax pmax
comp=Z,3.0nm,1.1s
MLY Manley 73.23 9 *e*P **P 08 44 30.0 +2.2**
comp=Z,1.9nm,0.8s
ILAR Eielson Array 73.92 8 P **P 08 44 32.9 +1.1**
comp=Z,0.4nm,0.7s,baz=337,slow=5.4,SNR=5.2
BPAW Bear Paw Mtn. 74.09 10 *e*P **P 08 44 34.0 +1.2**
comp=Z,5.7nm,1.2s
CAST Castle Rocks 74.60 11 *e*P **P 08 44 37.4 +1.6**
comp=Z,6.1nm,1.0s
KTH Kantishna Hill 74.63 10 *e*P **P 08 44 37.5 +1.5**
comp=Z,5.2nm,1.1s
YKA Yellowknife Ar 76.49 353 P **P 08 44 46.5 -0.1**
comp=Z,0.9nm,0.6s,baz=14,slow=6.0,SNR=5.2
YKB5 Yellowknife Ar 76.49 353 *e*P **P 08 44 46.5 -0.1**
WR1 Warramunga Arr 97.91 109 *e*P **P 08 46 32.5 -0.5**
WRA Warramunga Arr 97.91 109 P **P 08 46 32.5 -0.5**
comp=Z,3.1nm,1.0s,baz=310,slow=5.1,SNR=4.6

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*ISK **07** 08:39:30.9, 37°.36N×32°.10E, h6km, ML2.4/11*
*ISCJB **07** 08:39:31.2±0.6, 37°.35N±0°.02×32°.07E±0°.04, h6km±5km, Error ellipse: s-maj=6.0km s-min=3.6km az=2.1*
*DDA **07** 08:39:31.0, 37°.37N×32°.03E, h7km±4km, ML2.7*
ISC 07 08:39:31.1±1.2, 37°.36N±0°.03×32°.03E±0°.04, h7km±11km, n20, σ0°.43/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMER	**Konya-Meram**	**0.49**	**33**	*i* P	**Pg**	**08 39 40.9**	**+0.3**
KMER				*i* S	**Sg**	**08 39 47.3**	**+0.2**
KEPZ	**Antalya-Kepez**	**0.57**	**217**	*i* P	**Pb**	**08 39 43.4**	**-0.1**
KEPZ				*i* S	**Sb**	**08 39 51.2**	**-0.6**
KEPZ				IAML_P			
	comp=Z,4μm,0.2s						
KONT	**Konya--Tatoy**	**0.64**	**24**	PG	**Pg**	**08 39 43.6**	**0.0**
KONT				SG	**Sb**	**08 39 52.9**	**-1.1**
KONT	**Konya--Tatoy**	**0.64**	**24**	*i* P	**Pb**	**08 39 44.8**	**0.0**
KONT				*i* S	**Sg**	**08 39 52.0**	**+0.1**
ALAN	**Alanya-ANTALYA**	**0.80**	**180**	PG	**Pg**	**08 39 46.7**	**+0.3**
DOGA	**KONYA_Doganhis**	**0.80**	**339**	*i* P	**Pg**	**08 39 46.8**	**+0.2**
DOGA				*i* S	**Sb**	**08 39 58.9**	**+0.2**
DOGA				IAML_P			
	comp=Z,942nm,0.2s						
LADK	**Ladik-KONYA**	**0.88**	**17**	PG	**Pg**	**08 39 48.0**	**-0.1**
LADK				SG	**Sb**	**08 40 00.5**	**-0.5**
ERMK	**Ermenek**	**1.00**	**135**	*i* P	**Pn**	**08 39 51.5**	**-0.3**
ERMK				*i* S	**Sn**	**08 40 07.5**	**+1.2**
ERMK				IAML_P			
	comp=Z,1μm,0.2s						
GAZI	**Gazipasa**	**1.14**	**168**	PN	**Pg**	**08 39 52.8**	**-0.2**
GAZI				SN	**Sn**	**08 40 09.2**	**-0.3**
KDHN	**Kadinhani**	**1.17**	**3**	*i* P	**Pn**	**08 39 54.1**	**+0.1**
KDHN				*i* S	**Sb**	**08 40 09.1**	**0.0**
KDHN				IAML_P			
	comp=Z,239nm,0.1s						
BAGO	**Egridir - ISPA**	**1.17**	**303**	*i* P	**Pg**	**08 39 53.3**	**-0.4**
BAGO				*i* S	**Sb**	**08 40 10.0**	**+0.8**
BAGO				IAML_P			
	comp=Z,1μm,0.2s						
BERE	**Bereket-Mersin**	**1.39**	**136**	PN	**Pn**	**08 39 56.8**	**-0.3**
CHBY	**Cihanbeyli**	**1.40**	**29**	PN	**Pn**	**08 39 57.1**	**-0.1**
SULT	**Sultanhani-AKS**	**1.45**	**54**	PN	**Pn**	**08 39 57.6**	**-0.2**
TEVE	**Tevekalti-Mers**	**1.46**	**129**	PN	**Pn**	**08 39 57.7**	**-0.2**
TEKE	**Tekeli-Mersin**	**1.49**	**144**	PN	**Pn**	**08 39 58.5**	**+0.2**
KIZT	**Kizilcal**	**1.53**	**356**	PN	**Pb**	**08 39 59.6**	**-0.3**
KEBE	**Keben-Mersin**	**1.62**	**123**	PN	**Pn**	**08 40 00.3**	**+0.1**
IKL	**Isikli**	**1.73**	**130**	PN	**Pn**	**08 40 01.8**	**+0.1**
KIZK	**Mersin**	**1.90**	**117**	PN	**Pn**	**08 40 04.0**	**0.0**

MEX 07 08:41:43.1±0.5, 17°.07N×101°.17W, h16km±103km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.61**	**332**	*e*P	**Pg**	08 41 53.0	-2.1
ZIIG				*e*S	Sg	08 42 00.9	-2.4
CAIG	**El Cayaco**	**0.86**	**91**	*e*P	Pb	08 41 56.5	-3.1
CAIG				*i* S	Sb	08 42 07.0	-3.9
ARIG	**Puente Sto Nin**	**1.44**	**33**	*i* P	Pn	08 42 04.7	-3.9
ARIG				*i* S	Sn	08 42 21.8	-5.4
MEIG	**Mezcala**	**1.71**	**60**	*i* P	Pn	08 42 09.4	-2.9
MEIG				*i* S	Sn	08 42 29.1	-4.7
PLIG	**Platanillo**	**2.06**	**50**	*e*P	Pn	08 42 13.0	-4.2
PLIG				*i* S	Sn	08 42 38.1	-4.5
MMIG	**Aquila**	**2.41**	**301**	*e*P	Pn	08 42 19.1	-2.8
MMIG				*e*S	Sn	08 42 47.2	-3.8
TLIG	**Tlapa**	**2.53**	**78**	*e*P	Pn	08 42 21.3	-2.4
TLIG				*e*S	Sn	08 42 50.4	-3.9

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*ASRS **07** 08:42:39.2, 53°.82N×91°.12E, M3.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*IDC **07** 08:42:48.8±3.5, 53°.52N×90°.66E, h0km, mb1 3.3/3, mb1mx3.1/45, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=33.6km s-min=24.0km az=33.0*
*NNC **07** 08:42:52.0±3.3, 53°.54N×90°.27E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=26.5km s-min=23.3km az=169.0, Suspected Mining explosion.*
ISC 07 08:42:32.5±4.0, 52°.10N±0°.08×90°.5E±0°.2, h0km, n8, σ1°.36/11, 4C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.88**	**301**	*i*		09 04 10.0	
	baz=95,slow=331,SNR=2.8						
ZALV	**Zalesovo Beam**	**3.88**	**301**	Pn	**Pg**	**08 43 45.9**	**-1.0**
	1.8nm,0.3s,baz=89,slow=15,SNR=14						
ZALV				Lg	Lg	08 44 38.5	
	3.5nm,0.3s,baz=95,slow=25,SNR=10						
MK31	**Makanchi Array**	**7.52**	**228**	Pn	**Pg**	**08 44 55.5**	**-1.1**
	0.4nm,0.4s,baz=34,slow=12,SNR=10						
MK31				⇓Sn	**Sg**	**08 46 33.5**	**-0.5**
	1.7nm,0.6s						
MK31				⇑Lg	Lg	08 47 21.9	
	12nm,1.0s,baz=35,slow=29,SNR=6.2						
MKAR	**Makanchi Array**	**7.52**	**228**	Pn	**Pg**	**08 44 55.3**	**-1.2**
	0.3nm,0.3s,baz=36,slow=12,SNR=8.6						
MKAR				Sn	**Sg**	**08 46 35.4**	**+1.5**
	0.2nm,0.3s,baz=36,slow=22,SNR=3.7						
MKAR				Lg	Lg	08 47 22.9	
	0.1nm,0.3s,baz=33,slow=24,SNR=4.0						
KURK	**Kurchatov**	**7.54**	**264**	⇓Pn	**Pb**	**08 44 46.3**	**+2.2**
	3.3nm,0.9s						
KURK				⇑Sn	**Sb**	**08 46 14.3**	**-0.2**
	9.6nm,1.0s						
KURK				⇓Lg	Lg	08 47 01.2	
	26nm,1.0s						
KURBB	**Kurchatov Arra**	**7.62**	**264**	Pn	**Pb**	**08 44 45.8**	**+0.3**
	0.2nm,0.3s,baz=64,slow=15,SNR=7.2						
KURBB				Sn	**Sb**	**08 46 17.0**	**+0.2**
	0.1nm,0.3s,baz=67,slow=24,SNR=3.8						
KURBB				Lg	Lg	08 47 03.0	
	0.1nm,0.3s,baz=71,slow=35,SNR=4.0						
KURBB	**Kurchatov Arra**	**7.62**	**264**	⇓Pn	**Pb**	**08 44 46.6**	**+1.1**
	2.6nm,0.5s						
KURBB				⇑Sn	**Sb**	**08 46 15.2**	**-1.6**
	26nm,0.9s						
KURBB				⇑Lg	Lg	08 47 04.2	
	15nm,0.7s						
SONM	**Songino Array**	**11.10**	**106**	Lg	Lg	08 48 40.7	
	0.3nm,0.3s,baz=300,slow=29,SNR=9.9						

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*ISCJB **07** 08:46:53.8±0.2, 15°.71S±0°.02×167°.89E±0°.04, h177km, mb4.8/97, Error ellipse: s-maj=5.5km s-min=3.2km az=165.8*
*NEIC **07** 08:46:56.5±1.5, 15°.76S×167°.98E, h193km±5km, mb5.0/63, Error ellipse: s-maj=15.3km s-min=10.4km az=63.0*
*IDC **07** 08:46:57.7±1.7, 15°.81S×167°.95E, h204km±14km, mb4.2/22, mb1 4.3/24, mb1mx4.1/37, mbtmp4.7/24, MS3.5/1, Ms1 3.5/1, ms1mx2.8/29, Error ellipse: s-maj=14.8km s-min=8.1km az=78.0*
*BJI **07** 08:46:57.1±0.0, 15°.26S×167°.83E, h188km, mb5.0/48, mB4.8/28*
*MOS **07** 08:46:59.6±0.8, 15°.81S×167°.86E, h229km, mb4.7/26, Error ellipse: s-maj=12.3km s-min=10.4km az=129.7*
ISC 07 08:46:54.8±0.3, 15°.81S±0°.04×168°.03E±0°.06, h177km, n254, σ1°.61/265, mb4.9/97, 10C-3D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.64**	**180**	*e*Pn	**Pn**	**08 48 19.2**	**+2.2**
MARNC				*e*Sn	**Sn**	**08 49 20.5**	**-1.2**
DZM	**Mont Dzumac**	**6.41**	**193**	P	**Pn**	**08 48 29.8**	**+2.6**
	11nm,0.3s,baz=84,slow=17,SNR=69						
DZM				S	**Sn**	**08 49 44.0**	**+4.0**
	1.9nm,0.3s,baz=314,slow=23,SNR=9.6						
DZM				LR	LR	08 50 01.8	
	comp=Z,371nm,18.6s,baz=210,slow=29						
DZM	**Mont Dzumac**	**6.41**	**193**	*e*Pn	**Pn**	**08 48 30.1**	**+2.9**
DZM				*e*Sn	**Sn**	**08 49 41.5**	**+1.4**
PINNC	**Pines Island,**	**6.79**	**185**	*e*Pn	**Pn**	**08 48 35.7**	**+3.6**
PINNC				*e*Sn	**Sn**	**08 49 51.7**	**+2.8**
HNR	**Honiara**	**10.12**	**308**	P	**Pn**	**08 49 19.2**	**+3.3**
	10nm,0.3s,baz=190,slow=12,SNR=2.3						
HNR				S	**S**	**08 51 15.2**	**+5.8**
	13nm,0.3s,baz=180,slow=17,SNR=2.9						
FUNA	**Funafuti**	**13.09**	**58**	*e*Pn	**Pn**	**08 49 55.6**	**+1.2**
TARA	**Tarawa**	**17.73**	**16**	*e*P	**P**	**08 50 50.1**	**+0.8**
	107nm,0.9s						
EIDS	**Eidsvold**	**18.48**	**236**	*e*P	**Pn**	**08 50 59.4**	**-0.4**
	93nm,0.7s						
EIDS	**Eidsvold**	**18.48**	**236**	P	**Pn**	**08 50 59.7**	**-0.1**
	baz=18,SNR=54						
OUZ	**Omahuta**	**19.96**	**167**	*e*P	**Pn**	**08 51 16.3**	**-0.8**
	144nm,0.9s						
OUZ	**Omahuta**	**19.96**	**167**	P	**Pn**	**08 51 16.4**	**-0.8**
WCZ	**Waipu Caves**	**20.82**	**165**	P	Pn	08 51 25.7	-2.1
RMQ	**Roma**	**20.85**	**236**	P	**P**	**08 51 24.5**	**+1.6**
	baz=21,SNR=19						
ARMA	**Armidale**	**20.91**	**223**	*e*P	**P**	**08 51 24.9**	**+1.3**
	103nm,1.0s						
ARMA	**Armidale**	**20.91**	**223**	P	**P**	**08 51 25.2**	**+1.6**
	baz=21,SNR=37						
CTA	**Charters Tower**	**21.14**	**255**	P	**P**	**08 51 26.5**	**+0.4**
	12nm,0.7s,baz=79,slow=11,SNR=13						
CTA	**Charters Tower**	**21.14**	**255**	P	**P**	**08 51 28.0**	**+1.9**
CTA				pmax	pmax		
	comp=Z,24nm,0.9s						
PMG	**Port Moresby**	**21.33**	**285**	P	**P**	**08 51 28.5**	**+0.4**
	comp=Z,40nm,0.9s,baz=72,slow=5.1,SNR=5.9						
PMG	**Port Moresby**	**21.33**	**285**	*e*P	**P**	**08 51 28.5**	**+0.4**
	comp=Z,49nm,0.9s						
PMG	**Port Moresby**	**21.33**	**285**	*e*P	**P**	**08 51 28.5**	**+0.4**
PMG				pmax	pmax		
	comp=Z,49nm,0.9s						
KMRZ	**Kaimai**	**23.04**	**164**	P	**P**	**08 51 47.4**	**+3.0**
MGCD	**Mangrove Creek**	**23.12**	**218**	P	**P**	**08 51 46.6**	**+1.4**
	baz=23,SNR=27						
TLZ	**Tolley Road**	**23.39**	**165**	P	**P**	**08 51 50.1**	**+2.5**
HIZ	**Hauiti**	**23.40**	**166**	*e*P	**P**	**08 51 50.4**	**+2.7**
	comp=Z,217nm,1.1s						
HAZ	**Te Kaha**	**23.50**	**160**	P	**P**	**08 51 50.9**	**+2.3**
HAZ				S	**S**	**08 55 49.3**	**+0.3**
RIV	**Riverview**	**23.53**	**217**	P	**P**	**08 51 50.1**	**+1.3**
	baz=24,SNR=3.9						
RUGZ	**Raukumara Rang**	**23.66**	**161**	P	**P**	**08 51 51.4**	**+1.3**
RUGZ				S	**S**	**08 55 51.4**	**-0.4**
URZ	**Urewera**	**23.75**	**162**	P	**P**	**08 51 52.5**	**+1.6**
	comp=Z,49nm,0.8s,baz=350,slow=5.6,SNR=15						
URZ				S	**S**	**08 55 53.1**	**-0.1**
	comp=Z,5.5nm,0.8s,baz=342,slow=20,SNR=4.5						
URZ	**Urewera**	**23.75**	**162**	*e*P	**P**	**08 51 52.6**	**+1.7**
	comp=Z,88nm,1.0s						
URZ	**Urewera**	**23.75**	**162**	P	**P**	**08 51 52.5**	**+1.6**
URZ				S	**S**	**08 55 53.2**	**+0.1**
MUGZ	**Murupara**	**23.86**	**163**	P	**P**	**08 51 54.4**	**+2.6**
TWGZ	**Tauwhareparae**	**23.95**	**160**	P	**P**	**08 51 54.3**	**+1.5**
TWGZ				S	**S**	**08 55 55.5**	**-0.9**
COEN	**Coen**	**24.09**	**271**	*e*P	**P**	**08 51 54.1**	**-0.1**
	comp=Z,32nm,1.1s						
COEN	**Coen**	**24.09**	**271**	P	**P**	**08 51 54.6**	**+0.3**
	baz=24,SNR=10						
MRHZ	**Matea Rd**	**24.09**	**164**	P	**P**	**08 51 57.0**	**+3.0**
TKGZ	**Te Karaka**	**24.14**	**161**	P	**P**	**08 51 55.6**	**+1.2**
NGZ	**Ngauruhoe**	**24.21**	**166**	P	**P**	**08 51 59.4**	**+4.2**
SNGZ	**Shannon Statio**	**24.30**	**162**	P	**P**	**08 52 01.7**	**+5.8**
TUVZ	**Tukino**	**24.31**	**166**	P	**P**	**08 52 01.7**	**+5.6**
RIGZ	**Rimuhau**	**24.36**	**161**	P	**P**	**08 51 57.5**	**+1.0**
RIGZ				S	**S**	**08 56 02.1**	**-0.8**
BKZ	**Black Stump Fm**	**24.42**	**164**	*e*P	**P**	**08 51 58.7**	**+1.7**
	comp=Z,49nm,1.1s						
KWHZ	**Kaweka Forest**	**24.65**	**164**	P	**P**	**08 52 00.9**	**+1.8**
KWHZ				S	**S**	**08 56 08.7**	**+1.3**
CNB	**Canberra Magne**	**25.62**	**217**	P	**P**	**08 52 09.1**	**+1.1**
	baz=26,SNR=12						
CMSA	**Cobar Meteorol**	**25.68**	**228**	P	**P**	**08 52 08.8**	**+0.3**
	baz=26,SNR=51						
BFZ	**Birch Farm**	**25.79**	**166**	*e*P	**P**	**08 52 09.7**	**+0.3**
	comp=Z,50nm,1.2s						
CAN	**Canberra**	**25.84**	**218**	*e*P	**P**	**08 52 10.8**	**+0.9**
	comp=Z,50nm,1.4s						
CAN	**Canberra**	**25.84**	**218**	*e*P	**P**	**08 52 10.8**	**+0.9**
CAN				pmax	pmax		
	comp=Z,50nm,1.4s						
SNZO	**South Karori**	**26.06**	**169**	*e*P	**P**	**08 52 10.7**	**-1.0**
	comp=Z,46nm,1.0s						
KHZ	**Kahutara**	**26.93**	**171**	*e*P	**P**	**08 52 20.2**	**+0.6**
	comp=Z,76nm,1.7s						
LTZ	**Lake Taylor**	**27.13**	**173**	*e*P	**P**	**08 52 22.0**	**+0.7**
	comp=Z,40nm,0.9s						
QIS	**Mount Isa**	**27.39**	**256**	P	**P**	**08 52 23.9**	**0.0**
	baz=27,SNR=5.2						
OXZ	**Oxford**	**27.64**	**174**	*e*P	**P**	**08 52 26.6**	**+0.7**
	comp=Z,30nm,0.8s						
FOZ	**Fox Glacier**	**27.67**	**177**	*e*P	**P**	**08 52 28.5**	**+2.4**
	comp=Z,55nm,0.9s						
RPZ	**Rata Peaks**	**27.93**	**175**	P	**P**	**08 52 29.6**	**+1.2**
	comp=Z,23nm,0.8s,baz=173,slow=3.6,SNR=8.7						
RPZ	**Rata Peaks**	**27.93**	**175**	*e*P	**P**	**08 52 29.1**	**+0.7**
	comp=Z,33nm,0.9s						
LBZ	**Lake Benmore**	**28.54**	**177**	*e*P	**P**	**08 52 34.9**	**+1.0**
	comp=Z,23nm,0.9s						
STKA	**Stephens Creek**	**28.88**	**232**	P	**P**	**08 52 37.6**	**+0.7**
	comp=Z,32nm,0.8s,baz=55,slow=8.3,SNR=60						
STKA				PcP	**PcP**	**08 55 41.0**	**-0.8**
	comp=Z,2.3nm,0.5s,baz=78,slow=1.9,SNR=5.6						
STKA	**Stephens Creek**	**28.88**	**232**	P	**P**	**08 52 37.8**	**+0.8**
	baz=29,SNR=44						
STKA	**Stephens Creek**	**28.88**	**232**	P	**P**	**08 52 37.7**	**+0.7**
STKA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WKZ	**Wanaka**	**28.94**	**179**	*e*P	**P**	**08 52 39.1**	**+1.7**
	comp=Z,120nm,1.5s						
TOO	**Toolangi**	**29.44**	**218**	*e*P	**P**	**08 52 42.9**	**+0.9**
	comp=Z,88nm,1.7s						
TOO	**Toolangi**	**29.44**	**218**	P	**P**	**08 52 42.8**	**+0.9**
	baz=30,SNR=6.1						
TOO	**Toolangi**	**29.44**	**218**	*e*P	**P**	**08 52 42.9**	**+0.9**
TOO				pmax	pmax		
	comp=Z,88nm,1.7s						
DCZ	**Deep Cove**	**29.57**	**181**	*e*P	**P**	**08 52 43.2**	**+0.3**
	comp=Z,111nm,1.5s						
WHZ	**Wether Hill Ro**	**29.99**	**180**	*e*P	**P**	**08 52 47.7**	**+1.1**
	comp=Z,136nm,1.7s						
HTT	**Hallett**	**31.59**	**231**	P	**P**	**08 53 01.4**	**+0.5**
	baz=32,SNR=11						
WB2	**Warramunga Arr**	**32.28**	**258**	*e*P	**P**	**08 53 05.2**	**-1.9**
	comp=Z,21nm,1.5s						
WRAB	**Tennant Creek**	**32.28**	**258**	*i* P	**P**	**08 53 06.2**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WR1	**Warramunga Arr**	**32.29**	**258**	*e*PcP	**PcP**	**08 55 50.6**	**-0.5**
WRA	**Warramunga Arr**	**32.29**	**258**	P	**P**	**08 53 05.6**	**-1.6**
	comp=Z,1.3nm,0.3s,baz=85,slow=8.6,SNR=30						
WRA				PcP	**PcP**	**08 55 50.6**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=95,slow=4.4,SNR=3.6						
WRA				S	**S**	**08 58 00.9**	**-7.0**
	comp=Z,2.6nm,0.7s,baz=91,slow=14,SNR=4.9						
AS31	**Alice Springs**	**32.99**	**251**	*e*P	**P**	**08 53 12.4**	**-0.9**
	comp=Z,6.4nm,0.4s						
ASAR	**Alice Springs**	**32.99**	**251**	P	**P**	**08 53 12.2**	**-1.1**
	comp=Z,9.2nm,0.5s,baz=78,slow=8.9,SNR=207						
ASAR				PcP	**PcP**	**08 55 52.2**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=93,slow=2.9,SNR=6.1						
ASAR				S	**S**	**08 58 13.7**	**-5.0**
	comp=Z,1.9nm,0.7s,baz=78,slow=16,SNR=8.2						
ASAR				ScP	**ScP**	**08 59 18.1**	**-2.6**
	comp=Z,2.6nm,0.9s,baz=74,slow=3.1,SNR=8.8						
BBOO	**Buckleboo**	**33.52**	**234**	*e*P	**P**	**08 53 17.7**	**0.0**
	comp=Z,38nm,0.8s						
BBOO	**Buckleboo**	**33.52**	**234**	P	**P**	**08 53 18.0**	**+0.3**
	baz=34,SNR=22						
KDU	**Kakadu**	**34.58**	**270**	P	**P**	**08 53 25.7**	**-1.3**
	baz=34,SNR=8.0						
MTN	**Manton Dam**	**35.84**	**270**	*e*P	**P**	**08 53 37.0**	**-0.8**
	comp=Z,40nm,1.4s						
MTN	**Manton Dam**	**35.84**	**270**	P	**P**	**08 53 37.0**	**-0.8**
	baz=36,SNR=5.3						
FAKI	**Fak Fak**	**37.47**	**286**	*e*P	**P**	**08 53 50.8**	**-0.8**
	comp=Z,30nm,0.8s						
KNRA	**Kununurra**	**37.76**	**265**	P	**P**	**08 53 52.8**	**-1.2**
	baz=38,SNR=3.7						
WRKA	**Warakurna**	**38.23**	**250**	P	**P**	**08 53 57.1**	**-0.9**
	baz=38,SNR=28						
BNDI	**Bandanaira**	**39.09**	**283**	P	**P**	**08 54 09.3**	**+4.2**
FORT	**Forrest**	**39.39**	**241**	*e*P	**P**	**08 54 07.0**	**-0.4**
	comp=Z,27nm,0.6s						
FORT	**Forrest**	**39.39**	**241**	P	**P**	**08 54 07.4**	**0.0**
	baz=39,SNR=32						
FITZ	**Fitzroy Crossi**	**40.55**	**261**	*e*P	**P**	**08 54 16.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**40.55**	**261**	P	**P**	**08 54 16.6**	**-0.5**
	baz=40,SNR=3.7						
KMBL	**Kambalda**	**44.71**	**241**	P	**P**	**08 54 50.0**	**-0.5**
	baz=45,

MAJO pmax pmax
comp=Z,23nm,0.9s
MAT Matsushiro 59.20 332 P **P 08 56 36.4 -0.9**
MJB9 Matsu-Tunnel 59.20 332 *eP* **P 08 56 37.3 0.0**
YOJ Yonaguni jima 59.43 312 *eP* **P 08 56 39.1 0.0**
comp=Z,72nm,1.0s
YOJ Yonaguni jima 59.43 312 *eP* **P 08 56 39.1 0.0**
YOJ pmax pmax
comp=Z,72nm,1.0s
KSM Kuching 59.53 281 P **P 08 56 39.0 -1.1**
JNU Nakatsue 60.22 324 P **P 08 56 44.0 -0.4**
comp=Z,28nm,0.9s,baz=94,slow=3.5,SNR=15
JNU Nakatsue 60.22 324 *eP* **P 08 56 44.2 -0.2**
comp=Z,40nm,1.0s
TPUB Ta-pu 60.49 309 *eP* **P 08 56 45.5 -0.9**
comp=Z,32nm,0.7s
SSLB Suanglung 60.53 310 *eP* **P 08 56 46.0 -0.6**
comp=Z,20nm,0.7s
YHNB Yeheng 60.74 311 *eP* **P 08 56 48.4 +0.3**
comp=Z,57nm,0.9s
CGJI Cibinong 61.64 271 P **P 08 56 53.1 -1.2**
comp=Z,49nm,0.6s,comp=Z,4μm
VNDA Vanda 61.81 182 P **P 08 56 54.0 -0.4**
comp=Z,3.2nm,0.9s,baz=3.0,slow=6.3,SNR=8.6
VNDA Vanda 61.81 182 *eP* **P 08 56 55.0 +0.6**
comp=Z,25nm,1.8s
VNDA Vanda 61.81 182 *eP* **P 08 56 55.0 +0.6**
VNDA pmax pmax
comp=Z,25nm,1.8s
SBA Scott Base 62.06 180 *eP* **P 08 56 57.5 +1.4**
comp=Z,25nm,0.9s
SBA Scott Base 62.06 180 *eP* **P 08 56 57.5 +1.4**
SBA pmax pmax
comp=Z,25nm,0.9s
PPBI Pangkal Pinang 62.40 276 P **P 08 56 59.0 -0.4**
CASY Casey 62.81 203 *eP* **P 08 57 01.3 +0.1**
comp=Z,18nm,1.0s
MDSI Maura Dua 63.64 273 P **P 08 57 05.9 -1.7**
ASAJ Asahikawa 64.00 340 P **P 08 57 09.5 +0.3**
comp=Z,7.9nm,0.7s,baz=200,slow=12,SNR=8.4
TJN Taejon 64.57 324 *ceP* **P 08 57 13.9 +0.8**
KSRS Korea Array 65.04 326 P **P 08 57 16.0 -0.1**
comp=Z,7.0nm,1.0s,baz=144,slow=6.8,SNR=31
KS15 Wonju Array Si 65.05 326 *eP* **P 08 57 16.2 0.0**
comp=Z,9.9nm,0.9s
YSS Yuzh-Sakhalins 66.48 341 *eP* **P 08 57 26.6 +1.5**
YSS pmax pmax
comp=Z,22nm,1.0s
NJ2 Nanjing 66.96 316 ⇑P **P 08 57 28.8 +0.3**
NJ2 pmax pmax
comp=Z,31nm,1.0s
USA0B Ussuriysk Arra 68.18 333 *eP* **P 08 57 35.5 -0.4**
comp=Z,44nm,1.2s
USRK Ussuriysk Ar. 68.18 333 P **P 08 57 36.2 +0.3**
comp=Z,24nm,1.1s,baz=151,slow=4.4,SNR=42
PETK Petropavlovsk- 69.21 353 P **P 08 57 42.3 +0.2**
comp=Z,2.6nm,0.8s,baz=134,slow=6.2,SNR=2.6
MDJ Mudanjiang 69.57 332 *eP* **P 08 57 45.0 +0.5**
comp=Z,37nm,0.9s
DL2 Dalian 69.60 323 P **P 08 57 44.8 +0.1**
DL2 pmax pmax
comp=Z,71nm,0.8s
KULM Kulim 69.89 282 P **P 08 57 45.0 -2.1**
CN2 Changchun 70.94 329 *eP* **P 08 57 52.8 0.0**
CN2 *eS* **S 09 06 55.5 +1.5**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,60nm,10.0s
CN2 LR LR
comp=Z,70nm,10.0s
CN2 LR LR
comp=Z,80nm,10.0s
KLR Kul'dur 72.29 336 P **P 08 58 01.4 +0.7**
comp=Z,14nm,1.1s,baz=118,slow=4.3,SNR=26
KLR Kul'dur 72.29 336 *d iP* **P 08 58 01.3 +0.6**
KLR pmax pmax
comp=Z,19nm,1.3s
GYA Guiyang 72.93 305 P **P 08 58 05.1 -0.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
BJT Baijiatuau 73.55 321 *eP* **P 08 58 08.4 0.0**
comp=Z,20nm,0.9s
BJT Baijiatuau 73.55 321 *eP* **P 08 58 08.4 0.0**
BJT pmax pmax
comp=Z,20nm,0.9s
PBKT Sadao Pong 73.56 293 P **P 08 58 10.8 +2.0**
BJI Beijing 73.56 321 ⇓*eP* **P 08 58 08.6 +0.2**
BJI pmax pmax
comp=Z,11nm,0.9s
QSPA South Pole Qui 74.22 180 *eP* **P 08 58 12.0 -0.1**
comp=Z,20nm,1.0s
TIY Taiyuan 74.55 317 *eP* **P 08 58 15.6 +1.3**
TIY sP sP 08 59 25.4 +11
TIY PP **PP 09 01 04.5 +0.8**
TIY S **S 09 07 31.9 -3.3**
TIY pmax pmax
comp=Z,22nm,0.6s
TIY pmax pmax
comp=Z,96nm,4.4s
NANT Nan 74.65 295 P **P 08 58 15.6 +0.4**
XAN Xi'an 74.96 312 P **P 08 58 16.3 -0.4**
XAN pP pP 08 59 04.0 +5.2
XAN sP sP 08 59 23.4 +6.0
XAN pmax pmax
comp=Z,18nm,0.8s
XAN pmax pmax
comp=Z,71nm,2.8s
XAN Xi'an 74.96 312 *eP* **P 08 58 16.7 0.0**
comp=Z,14nm,0.7s
XAN Xi'an 74.96 312 *eP* **P 08 58 16.7 0.0**
XAN pmax pmax
comp=Z,14nm,0.7s
LAMP Lampang 75.48 294 P **P 08 58 21.1 +1.2**
KMI Kunming 75.50 302 P **P 08 58 20.9 +0.7**
KMI pmax pmax
comp=Z,25nm,0.8s
CMAR Chiang Mai Arr 76.06 294 P **P 08 58 24.0 +0.7**
comp=Z,5.6nm,0.7s,baz=134,slow=4.3,SNR=17
CMAR Chiang Mai Arr 76.06 294 *ceP* **P 08 58 24.2 +1.0**
CMAR pmax pmax
comp=Z,6.0nm,0.7s
CMMT Chiang Mai 76.19 294 P **P 08 58 24.5 +0.5**
CHTO Chiang Mai 76.19 294 *eP* **P 08 58 23.9 0.0**
comp=Z,7.1nm,0.8s
CHTO Chiang Mai 76.19 294 *eP* **P 08 58 24.0 0.0**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
HHC Hu-ho-hao-te 76.88 320 *eP* **P 08 58 28.5 +1.0**
HHC pmax pmax
comp=Z,25nm,1.0s
HHC pmax pmax
comp=Z,58nm,4.0s
CD2 Chengdu 77.25 307 *eP* **P 08 58 30.0 +0.3**
ZEA Zeya 77.57 337 *eP* **P 08 58 31.2 +0.3**
ZEA pmax pmax
comp=Z,17nm,1.0s
HIA Hailar 77.58 330 *eP* **P 08 58 31.4 +0.3**
comp=Z,16nm,0.9s
HIA Hailar 77.58 330 *eP* **P 08 58 31.4 +0.3**
HIA pmax pmax
comp=Z,16nm,0.9s
SEY Seymchan 79.44 353 P **P 08 58 40.9 -0.1**
comp=Z,2.5nm,0.9s,baz=189,slow=9.0,SNR=4.2
SEY Seymchan 79.44 353 *ceP* **P 08 58 42.2 +1.3**
LZH Lanzhou 79.58 312 *eP* **P 08 58 43.6 +1.0**
LZH pP pwP 08 59 33.1 +5.5
LZH sP sP 08 59 54.0 +10
LZH PP **PP 09 01 49.1 +3.1**
LZH pmax pmax
comp=Z,24nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.3s
MAW Mawson 81.16 202 P **P 08 58 50.0 -0.2**
comp=Z,5.7nm,1.0s,baz=98,slow=6.8,SNR=8.5
MAW Mawson 81.16 202 *eP* **P 08 58 50.8 +0.6**
comp=Z,1.9nm,1.1s
MAW Mawson 81.16 202 P **P 08 58 49.3 -0.9**
baz=81,SNR=6.6
MAW Mawson 81.16 202 *eP* **P 08 58 50.8 +0.6**
MAW pmax pmax
comp=Z,2.0nm,1.1s
ULN Ulaanbaatar 83.44 324 *eP* **P 08 59 02.1 -0.4**
comp=Z,31nm,0.9s
ULN Ulaanbaatar 83.44 324 *eP* **P 08 59 02.1 -0.4**
ULN pmax pmax
comp=Z,31nm,0.9s
BILL Bilibino 83.62 359 *eP* **P 08 59 02.4 -0.5**
comp=Z,11nm,1.1s
BILL Bilibino 83.62 359 *d iP* **P 08 59 02.3 -0.5**
BILL *e*PP **pP 08 59 53.5 +7.3**
BILL *e* 09 02 18.0
BILL pmax pmax
comp=Z,11nm,1.1s
SUA Susitna One 83.67 19 *eP* **P 08 59 02.9 -0.5**
comp=Z,15nm,1.2s
RC01 Rabbit Creek A 83.70 19 *eP* **P 08 59 04.2 +0.8**
comp=Z,35nm,1.6s
SONA0 Songino Array 83.80 323 *eP* **P 08 59 04.2 -0.1**
SONM Songino Array 83.80 323 P **P 08 59 04.2 -0.1**
comp=Z,13nm,0.9s,baz=139,slow=5.3,SNR=48
GTA Gaotai 83.94 314 ⇑P **P 08 59 06.0 +0.8**
GTA pP pwP 08 59 54.6 +3.5
GTA pmax pmax
comp=Z,19nm,1.2s
SHL Shillong 84.72 298 *eP* **P 08 59 09.3 -0.3**
comp=Z,42nm,0.8s
SHL Shillong 84.72 298 *eP* **P 08 59 09.3 -0.3**
SHL pmax pmax
comp=Z,42nm,0.8s
CAST Castle Rocks 84.81 17 *eP* **P 08 59 07.8 -1.1**
comp=Z,5.7nm,0.8s
RDOG Red Dog Mine 86.25 11 *eP* **P 08 59 16.4 +0.5**
comp=Z,6.3nm,1.1s
LSA Lhasa 86.75 302 *eP* **P 08 59 19.5 -0.3**
comp=Z,7.3nm,0.8s
LSA Lhasa 86.75 302 *eP* **P 08 59 19.5 -0.3**
LSA pmax pmax
comp=Z,7.0nm,0.8s
ZAK Zakamensk 86.85 325 *eP* **P 08 59 17.8 -1.6**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
TLY Talaya 87.29 326 *ceP* **P 08 59 22.1 +0.8**
TLY pmax pmax
comp=Z,12nm,1.3s
ILAR Eielson Array 87.33 18 P **P 08 59 19.1 -2.0**
comp=Z,1.7nm,0.6s,baz=240,slow=5.0,SNR=31
NV01 Mina Array Sit 87.42 49 *eP* **P 08 59 22.0 -0.5**
NVAR Mina Array Bea 87.42 49 P **P 08 59 22.0 -0.5**
comp=Z,0.7nm,0.9s,baz=243,slow=6.0,SNR=3.2
SYO Syowa Base 87.88 196 ⇑*iP* **P 08 59 22.0 -1.9**
TIXI Tiksi 91.17 348 *ceP* **P 08 59 37.8 -1.2**
TIXI pmax pmax
comp=Z,4.0nm,1.4s
SNAA Sanae 92.51 183 P **P 08 59 44.2 -1.3**
VNA3 Neumayer Olymp 93.15 181 P **P 08 59 47.0 -1.4**
VNA2 Neumayer--Watz 93.43 182 P **P 08 59 48.7 -0.9**
baz=183,slow=4.0
WMQ Urumqi 94.00 314 *eP* **P 08 59 53.1 +0.3**
WMQ pmax pmax
comp=Z,29nm,0.7s
WMQ pmax pmax
comp=Z,120nm,5.3s
WMQ LR LR
comp=Z,390nm,21.7s
WMQ LR LR
comp=Z,350nm,26.3s
WMQ LR LR
comp=Z,160nm,24.1s
DGZ Jazzator, Alta 95.96 320 *i* P **P 09 00 01.0 -0.7**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
LTX Lajitas 96.15 61 *eP* **P 09 00 03.5 +0.5**
LTX Lajitas 96.15 61 *eP* **P 09 00 03.5 +0.5**
TXAR Lajitas Array 96.15 61 P **P 09 00 03.5 +0.5**
comp=Z,0.1nm,0.5s,baz=226,slow=4.8,SNR=2.5
MKAR Makanchi Array 98.49 316 *i* P Pdif 09 00 13.3 +0.3
MKAR pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 98.69 324 *i* P **P 09 00 13.1 -0.6**
ZALV pmax pmax
comp=Z,3.0nm,0.3s
MAKZ Makanchi 98.70 316 *eP* Pdif 09 00 14.1 +0.1
comp=Z,3.4nm,1.1s
MAKZ Makanchi 98.70 316 *eP* Pdif 09 00 14.1 +0.1
MAKZ pmax pmax
comp=Z,3.0nm,1.1s
KSH Kashi 101.44 308 *eP* **Pdif 09 00 27.7 +1.2**
KURK Kurchatov 101.69 320 *i* P **Pdif 09 00 26.2 -0.9**
ARCES ARCESS Array B 121.48 345 PKP **PKPdf 09 05 25.6 -0.9**
comp=Z,1.9nm,0.5s,baz=46,slow=0.9,SNR=24
KLMR Klimovskoe 121.97 333 *e*PKIKP **PKPdf 09 05 25.5 -2.1**
KLMR pmax pmax
comp=Z,5.0nm,0.8s
OBN Obninsk 126.00 328 ⇑*e*PKIKP **PKPdf 09 05 35.5 0.0**
OBN *e* 09 07 31.1
OBN pmax pmax
comp=Z,6.0nm,1.0s
KIV Kislovodsk 126.12 313 *e*PKIKP **PKPdf 09 05 35.1 -1.2**
KIV pmax pmax
comp=Z,16nm,1.0s
FIA0 FINESS Array S 126.99 338 *e*PKPdf **PKPdf 09 05 35.3 -1.9**
FIA0 FINESS Array S 126.99 338 *e*PKIKP **PKPdf 09 05 35.3 -1.9**
FINES FINESS Array B 126.99 338 PKP **PKPdf 09 05 35.3 -1.9**
comp=Z,0.7nm,0.6s,baz=48,slow=2.1,SNR=3.6
NB2 NORSAR Subarra 131.85 345 PKPdf **PKPdf 09 05 44.8 -1.8**
comp=Z,0.2nm,0.5s,baz=31,slow=1.9
NB200 NORSAR Array S 131.85 345 *e*PKPdf **PKPdf 09 05 45.9 -0.7**
NOA NORSAR Array B 131.85 345 PKP **PKPdf 09 05 45.9 -0.7**
comp=Z,0.5nm,0.6s,baz=29,slow=2.0,SNR=3.9
AKASG Malin Array Be 132.04 326 PKP **PKPdf 09 05 46.7 -0.5**
comp=Z,0.6nm,0.4s,baz=51,slow=2.1,SNR=3.2
AKBB Malin Array Si 132.04 326 *e*PKPdf **PKPdf 09 05 46.7 -0.5**
AKBB Malin Array Si 132.04 326 *e*PKIKP **PKPdf 09 05 46.7 -0.5**
KIEV Kiev 132.05 326 *i* PKIKP **PKPdf 09 05 46.7 -0.5**
OJC Ojcow 137.16 330 *e*PKPpre PKPpre 09 05 46.8
OJC Ojcow 137.16 330 *e*PKHKP PKPpre 09 05 46.8
CLL Collm 139.34 336 *e*PKPdf **PKPdf 09 06 02.0 +1.3**
CONA Conrad Observa 140.62 330 *i* PKPdf **PKPdf 09 06 00.4 -2.9**
comp=Z,5.2nm,0.8s
FNA Florina 141.89 317 *e*PKPdf **PKiKP 09 06 07.5 -1.2**
SOKA Soboth 141.90 330 *i* PKPdf **PKPdf 09 06 01.5 -4.1**
comp=Z,2.6nm,0.8s
OBKA Obir 142.25 330 *i* PKPdf **PKPdf 09 06 02.1 -4.2**
comp=Z,2.8nm,0.6s
KBA Koelnbreinsper 142.41 331 *i* PKPdf **PKPdf 09 06 02.4 -4.3**
comp=Z,6.3nm,1.1s
MYKA Terra Mystica 142.60 331 *i* PKPdf **PKPdf 09 06 03.2 -3.7**
comp=Z,4.1nm,0.9s
ABTA Abfaltersbach 143.04 332 *i* PKPdf **PKPdf 09 06 04.0 -3.6**
comp=Z,13nm,0.8s,SNR=8.0
WTTA Wettenberg 143.04 333 *i* PKPdf **PKPdf 09 06 05.2 -2.6**
comp=Z,9.8nm,1.2s
SKDS Skadanscina 143.20 329 *i* PKPbc PKPab 09 06 04.6 +0.6
MOTA Moosalm 143.21 334 *i* PKPdf PKPbc 09 06 05.3 -0.2
comp=Z,16nm,1.0s
RETA Reutte 143.24 334 *i* PKPdf PKPbc 09 06 05.6 +0.1
comp=Z,8.3nm,1.3s
SQTA Sankt Quirin 143.26 333 *i* PKPdf PKPbc 09 06 05.6 0.0
comp=Z,9.3nm,0.6s
BFO Black Forest 143.53 337 *c i* PKIKP PKPbc 09 06 06.9 +0.7
FETA Feichten 143.62 334 *i* PKPdf PKPbc 09 06 07.0 +0.3
comp=Z,18nm,1.0s,SNR=8.3
DAVA Damuels 143.76 335 *i* PKPdf PKPbc 09 06 07.6 +0.5
comp=Z,17nm,1.0s,SNR=6.4
ECH Echery 144.05 338 *e*PKPdf **PKPab 09 06 07.1 -0.1**
ECH Echery 144.05 338 *e*PKIKP **PKPab 09 06 07.1 -0.1**
FUORN Ofenpass-Fuorn 144.13 334 *e*PKPdf PKPbc 09 06 08.7 +0.4
TUE Stuetta 144.63 334 *e*PKPbc **PKPab 09 06 09.4 -0.3**
SENIN Lac Senin/Sane 145.55 336 *e*PKPdf **PKPbc 09 06 12.8 +0.1**
AQU L'Aquila 145.74 326 *e*PKPdf **PKPbc 09 06 13.1 -0.1**
AQU L'Aquila 145.74 326 *e*PKP2 **PKPbc 09 06 13.1 -0.1**
TIP Timpagrande 145.74 318 *e*PKPdf **PKPbc 09 06 13.1 -0.2**
CLF Chambon-Foret 145.80 343 *e*PKPdf **PKPbc 09 06 13.2 +0.1**
BNI Bardonecchia 146.88 335 *e*PKPbc **PKPbc 09 06 16.8 +0.3**
BNI Bardonecchia 146.88 335 *e*PKP2 **PKPbc 09 06 16.8 +0.3**
SSB Saint Sauveur 147.50 338 *e*PKPbc **PKPbc 09 06 18.4 +0.3**
SSB Saint Sauveur 147.50 338 *e*PKP2 **PKPbc 09 06 18.4 +0.3**
SHEL Horse Pasture 147.84 191 *i* PKP2 **PKiKP 09 06 21.8 +0.1**
TORD Torodi Ar. Bea 166.50 260 PKP **PKPdf 09 06 38.7 -1.2**
comp=Z,1.4nm,0.8s,baz=69,slow=1.6,SNR=6.0
TORD PKPab **PKPab 09 07 42.0 -0.9**
comp=Z,0.7nm,0.8s,baz=93,slow=3.6,SNR=5.4
TOA1 Torodi Ar. Sit 166.51 260 *e*PKPdf **PKPdf 09 06 38.7 -1.2**
TOA1 *e*PKPab **PKPab 09 07 42.0 -1.0**

IDC 07 08:48:45.4±3.0, 53°.56N×87°.74E, h0km, mb1 3.4/2, mb1mx3.1/46, mbtmp3.4/2, ML3.1/2, Error ellipse: s-maj=28.0km s-min=15.6km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.78**	**284**	*i*		09 00 09.1	
	baz=104,slow=334,SNR=3.6						
ZALV	**Zalesovo Beam**	**1.78**	**284**	Pg	Pn	08 49 17.1	-0.2
	5.7nm,0.3s,baz=102,slow=14,SNR=22						
ZALV				Lg	Lg	08 49 42.1	
	4.9nm,0.3s,baz=97,slow=24,SNR=9.6						
KURBB	**Kurchatov Arra**	**6.39**	**246**	Pn	Pn	08 50 21.2	+0.5
	0.2nm,0.3s,baz=62,slow=14,SNR=7.8						
KURBB				Lg	Lg	08 52 08.5	
	0.1nm,0.3s,baz=64,slow=31,SNR=6.1						
MKAR	**Makanchi Array**	**7.62**	**209**	Pn	Pn	08 50 39.1	+1.4
	0.5nm,0.3s,baz=26,slow=13,SNR=16						
MKAR				Lg	Lg	08 52 46.5	
	0.1nm,0.3s,baz=35,slow=28,SNR=5.6						

*ISCJB **07** 08:59:02.8±0.9, 37°.27N±0°.06×38°.55E±0°.05, h6km±6km, Error ellipse: s-maj=10.5km s-min=5.8km az=158.9*
*DDA **07** 08:59:02.4, 37°.26N×38°.52E, h7km±6km, ML2.9*
*ISK **07** 08:59:02.4, 37°.34N×38°.55E, h4km, ML2.5/8*
ISC 07 08:59:02.4±1.4, 37°.27N±0°.06×38°.55E±0°.03, h4km±11km, n15, σ0°.74/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.27**	**51**	PG	**Pg**	**08 59 07.8**	**+0.1**
URFA				SG	**Sg**	**08 59 11.9**	**+0.6**
ATAB	**Bozova**	**0.29**	**314**	*i* P	**Pg**	**08 59 08.0**	**+0.1**
ATAB				IAML_P			
	comp=Z,22μm,0.3s						
SANL	**SANLIURFA_Merk**	**0.36**	**106**	*i* P	**Pb**	**08 59 11.3**	**-0.1**
SANL				IAML_P			
	comp=Z,8μm,0.2s						
GZT	**Gaziantep**	**0.79**	**276**	*i* P	**Pb**	**08 59 18.6**	**-0.2**
GZT				*i* S	**Sn**	**08 59 34.6**	**+1.6**
GAZ	**Gaziantep**	**1.08**	**265**	PN	**Pn**	**08 59 23.7**	**-0.6**
GAZ				SN	**Sn**	**08 59 39.2**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.26**	**28**	PN	**Pg**	**08 59 25.9**	**-0.6**
SVRC				SN	**Sb**	**08 59 43.1**	**-0.3**
ELZG	**Elazig**	**1.27**	**15**	*i* P	**Pn**	**08 59 27.8**	**+0.6**
ELZG				*i* S	**Sn**	**08 59 45.1**	**+0.3**
KMRS	**Kahramanmaras**	**1.34**	**281**	PN	**Pg**	**08 59 28.3**	**+0.3**
DYBB	**Diyarbakir**	**1.43**	**61**	PN	**Pb**	**08 59 29.5**	**-0.2**
MAZI	**Mazidag**	**1.52**	**82**	PN	**Pb**	**08 59 31.2**	**0.0**
DARE	**Darende-Malaty**	**1.55**	**327**	PN	**Pn**	**08 59 30.6**	**-0.3**
HEKM	**Malatya_Hekimh**	**1.67**	**344**	*i* P	**Pg**	**08 59 33.9**	**-0.6**
HEKM				IAML_P			
	comp=Z,813nm,0.3s						
HANI	**Diyarbakir_Han**	**1.85**	**51**	*i* P	**Pn**	**08 59 33.5**	**-1.6**
HANI				IAML_P			
	comp=Z,352nm,0.1s						
KEMA	**Kemaliye**	**2.00**	**359**	*i* P	**Pn**	**08 59 37.6**	**+0.5**
KEMA				IAML_P			
	comp=Z,168nm,0.1s						
SVAN	**Silvan-Diyarba**	**2.27**	**66**	PN	**Pn**	**08 59 41.7**	**+0.9**

IDC 07 09:07:26.9±2.9, 55°.53N×86°.37E, h0km, mb1 3.1/3, mb1mx3.0/54, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=27.2km s-min=19.3km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.82**	**210**	*i*		09 19 10.0	
	baz=26,slow=302,SNR=3.5						
ZALV	**Zalesovo Beam**	**1.82**	**210**	Pg	Pn	09 07 58.7	-0.7
	8.4nm,0.3s,baz=29,slow=16,SNR=26						
ZALV				Lg	Lg	09 08 25.2	
	4.4nm,0.3s,baz=28,slow=26,SNR=7.5						
KURBB	**Kurchatov Arra**	**6.81**	**227**	Pn	Pn	09 09 07.5	-0.4
	0.1nm,0.3s,baz=42,slow=14,SNR=5.8						
KURBB				Lg	Lg	09 11 04.7	
	0.1nm,0.3s,baz=46,slow=32,SNR=4.1						
MKAR	**Makanchi Array**	**9.11**	**198**	Pn	Pn	09 09 39.8	+0.3
	0.1nm,0.3s,baz=16,slow=12,SNR=5.0						
MKAR				Lg	Lg	09 12 16.4	
	0.1nm,0.3s,baz=25,slow=27,SNR=3.2						
BVAR	**Borovoye Array**	**9.68**	**262**	Pn	Pn	09 09 46.7	-0.5
	0.3nm,0.3s,baz=76,slow=13,SNR=4.6						

*IDC **07** 09:09:43.4±2.2, 22°.95S×177°.15W, h135km±18km, mb4.2/22, mb1 4.4/23, mb1mx4.3/31, mbtmp4.6/23, MS3.3/2, Ms1 3.5/2, ms1mx3.0/21, Error ellipse: s-maj=14.3km s-min=12.1km az=122.0*
*ISCJB **07** 09:09:45.2±0.1, 23°.11S±0°.02×177°.23W±0°.03, h167km, mb4.9/175, Error ellipse: s-maj=4.3km s-min=2.8km az=20.5*
*GCMT **07** 09:09:46.4±0.4, 23°.15S±0°.03×176°.76W±0°.03, h195km±4km, MW5.0/69, Moment Tensor Solution. s15,c15; s69,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.36±.23; $M_{\theta\theta}$0.21±.25; $M_{\phi\phi}$-0.57±.23; $M_{r\theta}$-1.61±.19; $M_{\theta\phi}$1.23±.26; $M_{\phi r}$-3.52±.17; Best double couple: $M_0$4.03900×10^{16} NP1:ϕ_s200.00000°, δ89.00000°, λ107.00000°. NP2:ϕ_s292.00000°, δ17.00000°, λ2.00000°. Principal axes: T 4.4190, Plg43.0000°, Azm126.0000°; N -0.7590, Plg17.0000°, Azm19.0000°; P -3.6600, Plg42.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **07** 09:09:46.4±1.1, 22°.93S×177°.23W, h171km, mb4.7/23 Error ellipse: s-maj=9.9km s-min=8.7km az=51.3*
*NEIC **07** 09:09:47.4±1.5, 23°.00S×177°.20W, h175km±4km, mb4.8/148, Error ellipse: s-maj=14.0km s-min=11.9km az=104.0*
ISC 07 09:09:46.3±0.3, 23°.07S±0°.04×177°.15W±0°.05, h167km, n578, σ1°.46/599, mb4.9/174, 50C-28D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**6.20**	**186**	P	**Pn**	**09 11 16.8**	**+1.1**
RIZ				S	**Sn**	**09 12 25.9**	**-0.1**
RAO	**Raoul Island**	**6.20**	**186**	*e*Pn	**Pn**	**09 11 18.3**	**+2.5**
RAO				*e*Sn	**Sn**	**09 12 24.9**	**-1.2**
RAO	**Raoul Island**	**6.20**	**186**	*e*P	**Pn**	**09 11 18.3**	**+2.5**
RAO				*e*		09 12 24.9	
GLKZ	**Green Lake**	**6.21**	**186**	P	**Pn**	**09 11 16.7**	**+0.8**
GLKZ				S	**Sn**	**09 12 26.1**	**-0.2**
NIUE	**Niue**	**7.82**	**61**	*e*Pn	Pn	09 11 31.7	-5.6
NIUE				*e*Sn	Sn	09 12 48.0	-17
NIUE	**Niue**	**7.82**	**61**	P	Pn	09 11 31.7	-5.6
	baz=7.4,SNR=16						
MARNC	**Mare, Loyalty**	**13.81**	**274**	*e*Pn	**Pn**	**09 12 55.5**	**+0.2**
PINNC	**Pines Island,**	**14.21**	**269**	*e*Pn	**Pn**	**09 12 57.5**	**-2.7**
OUZ	**Omahuta**	**14.55**	**212**	*e*Pn	**P**	**09 13 07.0**	**+0.7**
OUZ	**Omahuta**	**14.55**	**212**	P	**P**	**09 13 08.7**	**+2.4**
WCZ	**Waipu Caves**	**14.80**	**208**	P	**P**	**09 13 10.4**	**+1.3**
MXZ	**Matakaoa Point**	**14.97**	**194**	P	**Pn**	**09 13 07.9**	**-1.6**
MXZ				S	Sn	09 15 39.3	-17
DZM	**Mont Dzumac**	**15.19**	**271**	P	**P**	**09 13 17.6**	**+3.9**
	2.8nm,0.3s,baz=85,slow=16,SNR=36						
DZM	**Mont Dzumac**	**15.19**	**271**	*e*P	**P**	**09 13 16.4**	**+2.8**
	216nm,0.8s						
DZM	**Mont Dzumac**	**15.19**	**271**	*e*Pn	**P**	**09 13 13.8**	**+0.2**
	111nm,0.9s						
WIAZ	**Waiheke Island**	**15.22**	**204**	P	**P**	**09 13 15.8**	**+2.1**
HAZ	**Te Kaha**	**15.28**	**195**	P	**Pn**	**09 13 10.8**	**-2.4**
HAZ				S	Sn	09 15 50.0	-14
MBAZ	**Motutapu North**	**15.29**	**205**	P	**P**	**09 13 15.7**	**+1.2**
PUZ	**Puketiti**	**15.47**	**194**	P	**Pn**	**09 13 13.7**	**-2.0**
PUZ				S	Sn	09 15 50.7	-18
MKAZ	**Moumakai**	**15.48**	**204**	P	**P**	**09 13 19.4**	**+2.7**
RUGZ	**Raukumara Rang**	**15.50**	**195**	P	**Pn**	**09 13 11.6**	**-4.5**
RUGZ				S	Sn	09 15 51.3	-18
TWGZ	**Tauwhareparae**	**15.63**	**194**	P	**Pn**	**09 13 16.4**	**-1.2**
TWGZ				S	Sn	09 15 56.0	-16
MARZ	**Manawahe**	**15.79**	**198**	P	**P**	**09 13 21.2**	**+1.2**
MWZ	**Matawai**	**15.89**	**195**	P	**Pn**	**09 13 18.9**	**-1.9**
MWZ				S	S	09 16 02.0	-15
TKGZ	**Te Karaka**	**15.91**	**194**	P	**Pn**	**09 13 17.4**	**-3.6**
TKGZ				S	S	09 16 00.8	-17
URZ	**Urewera**	**15.92**	**197**	P	**Pn**	**09 13 18.1**	**-3.1**
	5.5nm,0.3s,baz=272,slow=2.1,SNR=32						

URZ S S 09 16 02.8 -15
1.5nm,0.3s,baz=108,slow=19,SNR=5.0
URZ Urewera 15.92 197 *e*Pn **Pn 09 13 20.7 -0.5**
24nm,0.8s
URZ *e*S **S 09 16 13.2 -4.9**
URZ Urewera 15.92 197 P **Pn 09 13 18.1 -3.1**
URZ S S 09 16 02.8 -15
OMRZ Omania 15.99 199 P **P 09 13 23.9 +1.6**
RIGZ Rimuhau 16.19 194 P **P 09 13 22.7 -1.8**
RIGZ S S 09 16 06.9 -17
RAR Rarotonga 16.20 87 P **P 09 13 21.6 -3.1**
1.2nm,0.3s,baz=257,slow=13,SNR=3.9
RAR S S 09 16 11.4 -13
5.7nm,0.3s,baz=61,slow=19,SNR=4.6
RAR Rarotonga 16.20 87 *e*P **Pn 09 13 27.0 +2.3**
68nm,0.8s
RAR Rarotonga 16.20 87 *e*P **Pn 09 13 27.0 +2.3**
RAR pmax pmax
comp=Z,68nm,0.8s
MUGZ Murupara 16.22 197 P **P 09 13 17.7 -7.1**
MUGZ S S 09 16 09.8 -15
SNGZ Shannon Statio 16.36 195 P **P 09 13 23.8 -2.5**
SNGZ S S 09 16 11.9 -16
TLZ Tolley Road 16.45 201 P **Pn 09 13 28.1 +0.4**
RAHZ Arahi 16.55 196 P **P 09 13 26.6 -1.8**
MTHZ Maungataniwha 16.55 197 P **P 09 13 26.6 -1.9**
MRHZ Matea Rd 16.65 198 P **P 09 13 26.8 -2.8**
NMHZ Naumai 16.79 196 P **P 09 13 28.5 -2.6**
HIZ Hauiti 16.85 202 *e*P **Pn 09 13 32.7 +0.3**
comp=Z,28nm,0.6s
HIZ Hauiti 16.85 202 P **Pn 09 13 33.7 +1.4**
BKZ Black Stump Fm 16.94 197 *e*P **P 09 13 32.5 -0.3**
comp=Z,33nm,1.4s
BKZ Black Stump Fm 16.94 197 P **P 09 13 29.2 -3.5**
MCHZ McNeill Hill 17.15 196 P **P 09 13 33.5 -1.5**
KWHZ Kaweka Forest 17.20 197 P **P 09 13 33.0 -2.6**
FWVZ Far West T-bar 17.30 199 P **P 09 13 34.4 -2.4**
BHHZ Black Hill Sta 17.36 198 P **P 09 13 33.8 -3.5**
PKVZ Pokaka 17.39 200 P **P 09 13 35.5 -2.1**
KRHZ Kereru 17.42 197 P **P 09 13 34.7 -3.3**
KAHZ Kahuranaki 17.43 196 P **P 09 13 36.0 -2.1**
PXZ Pawanui 17.66 195 P **P 09 13 37.7 -2.9**
TSZ Takapari Road 17.92 197 P **P 09 13 40.7 -2.7**
BFZ Birch Farm 18.43 196 *e*P **P 09 13 49.5 +0.6**
comp=Z,45nm,1.1s
BFZ Birch Farm 18.43 196 P **P 09 13 46.8 -2.1**
MRZ Mangatainoka R 18.59 198 P **P 09 13 46.8 -3.8**
KIW Kapiti Island 18.96 199 P **P 09 13 52.1 -2.7**
SNZO South Karori 19.44 199 *e*P **P 09 13 58.9 -1.0**
comp=Z,80nm,1.4s
THZ Tophouse 20.42 202 *e*P **P 09 14 10.3 -0.1**
comp=Z,28nm,1.3s
KHZ Kahutara 20.80 200 *e*P **P 09 14 13.0 -1.4**
comp=Z,29nm,1.2s
KNTN Kanton 20.84 15 *e*P **P 09 14 15.9 +0.8**
comp=Z,21nm,0.6s
LTZ Lake Taylor 21.54 202 *e*P **P 09 14 23.3 +0.9**
comp=Z,16nm,0.5s
OXZ Oxford 22.10 201 *e*P **P 09 14 27.6 -0.4**
comp=Z,18nm,0.8s
CRLZ Canterbury Las 22.14 200 *e*P **P 09 14 29.9 +1.6**
comp=Z,93nm,1.4s
MQZ McQueen's Vall 22.24 200 *e*P **P 09 14 29.8 +0.4**
comp=Z,72nm,1.5s
LHI Lord Howe Isla 22.72 243 *e*P **P 09 14 33.2 -0.8**
comp=Z,70nm,0.8s
RPZ Rata Peaks 22.78 203 P **P 09 14 33.6 -0.9**
comp=Z,8.2nm,0.4s,baz=34,slow=3.2,SNR=17
RPZ LR LR 09 22 56.4
comp=Z,90nm,20.4s,baz=8.5,slow=35
RPZ Rata Peaks 22.78 203 *e*P **P 09 14 34.3 -0.2**
comp=Z,17nm,0.5s
FOZ Fox Glacier 23.08 205 *e*P **P 09 14 35.6 -1.5**
comp=Z,29nm,1.0s
LBZ Lake Benmore 23.68 203 *e*P **P 09 14 41.9 -0.7**
comp=Z,20nm,1.2s
ODZ Otahua Downs 24.09 202 *e*P **P 09 14 46.6 +0.3**
comp=Z,41nm,1.5s
WKZ Wanaka 24.49 204 *e*P **P 09 14 50.2 +0.2**
comp=Z,52nm,1.2s
MLZ Mavora Lakes 25.28 205 *e*P **P 09 14 57.9 +0.7**
comp=Z,18nm,0.8s
TBI Tubuai 25.43 96 *e*LR LR 09 21 25.5
comp=Z,178nm,29.5s
TBI Tubuai 25.43 96 *e*T T 09 39 51.8
comp=Z,7.5nm,0.3s
DCZ Deep Cove 25.75 206 *e*P **P 09 15 00.9 -0.4**
comp=Z,55nm,1.3s
HNR Honiara 25.78 298 P **P 09 15 02.6 +0.7**
comp=Z,126nm,0.6s,baz=272,slow=2.9,SNR=4.3
WHZ Wether Hill Ro 25.79 204 *e*P **P 09 15 00.8 -0.9**
comp=Z,27nm,1.0s
TARA Tarawa 26.13 337 *e*P **P 09 15 03.2 -1.9**
comp=Z,105nm,1.1s
PAE Paea 26.37 83 *e*T T 09 40 33.5
comp=Z,30nm,0.3s
PPT2 Papeete2 26.40 83 *e*LR LR 09 21 49.6
comp=Z,126nm,25.0s
PPT2 Papeete2 26.40 83 *e*T T 09 40 36.2
comp=Z,10nm,0.3s
PPT Papeete 26.40 83 *e*P **P 09 15 07.8 +0.3**
PPT Papeete 26.40 83 *e*P **P 09 15 07.8 +0.3**
PPTF Pamatai, Papee 26.41 83 *e*P **P 09 15 07.4 -0.2**
comp=Z,113nm,1.3s
TVO Taravao 26.64 84 *e*T T 09 40 52.6
comp=Z,1.4nm,0.3s
ARMA Armidale 28.77 249 *e*P **P 09 15 28.8 +0.2**
comp=Z,19nm,0.9s
ARMA Armidale 28.77 249 P **P 09 15 30.7 +2.1**
baz=29,SNR=13
EIDS Eidsvold 29.03 259 *e*P **P 09 15 31.1 +0.2**
comp=Z,27nm,0.8s
EIDS Eidsvold 29.03 259 P **P 09 15 32.7 +1.9**
baz=29,SNR=14
MGCD Mangrove Creek 29.66 243 P **P 09 15 38.6 +2.3**
baz=30,SNR=12
RMQ Roma 31.09 257 P **P 09 15 51.8 +2.8**
baz=32,SNR=30
CNB Canberra Magne 31.53 240 P **P 09 15 56.0 +3.2**
baz=32,SNR=6.0
CAN Canberra 31.82 240 *e*P **P 09 15 56.9 +1.5**
comp=Z,23nm,1.2s
CAN Canberra 31.82 240 *e*P **P 09 15 56.9 +1.5**
CAN pmax pmax
comp=Z,23nm,1.2s
MILA Mila 32.14 237 P **P 09 16 00.1 +2.0**
baz=32,SNR=3.6
CMSA Cobar Meteorol 33.96 247 P **P 09 16 14.6 +0.8**
baz=34,SNR=50
CTAO Charters Tower 34.11 268 *e*P **P 09 16 17.5 +2.1**
comp=Z,198nm,0.5s
CTAO Charters Tower 34.11 268 *e*P **P 09 16 17.5 +2.1**
TOO Toolangi 35.10 237 *e*P **P 09 16 25.1 +1.4**
comp=Z,8.7nm,0.8s
TOO Toolangi 35.10 237 P **P 09 16 24.7 +1.1**
baz=36,SNR=7.2
TOO Toolangi 35.10 237 *e*P **P 09 16 25.1 +1.4**
TOO pmax pmax
comp=Z,9.0nm,0.8s
TAU Tasmania Unive 35.42 227 *e*P **P 09 16 27.0 +0.8**
comp=Z,32nm,1.3s
TAU Tasmania Unive 35.42 227 *e*P **P 09 16 27.0 +0.8**
TAU pmax pmax
comp=Z,32nm,1.3s
PMG Port Moresby 36.74 286 *e*P **P 09 16 38.8 +0.9**
comp=Z,211nm,0.8s
PMG Port Moresby 36.74 286 *e*P **P 09 16 38.8 +0.9**
PMG pmax pmax
comp=Z,211nm,0.8s
STKA Stephens Creek 37.46 247 P **P 09 16 44.4 +0.6**
comp=Z,13nm,0.5s,baz=94,slow=10,SNR=47
STKA PcP **PcP 09 19 00.1 +1.4**
comp=Z,3.1nm,0.5s,baz=48,slow=2.7,SNR=3.9
STKA Stephens Creek 37.46 247 *e*P **P 09 16 44.5 +0.8**
comp=Z,9.6nm,1.4s
STKA *e*PcP **PcP 09 19 00.3 +1.6**
STKA Stephens Creek 37.46 247 P **P 09 16 44.7 +0.9**
baz=38,SNR=29
STKA Stephens Creek 37.46 247 *e*P **P 09 16 44.5 +0.8**
STKA *e* 09 19 00.3
STKA pmax pmax
comp=Z,10.0nm,1.4s
COEN Coen 38.60 276 *e*P **P 09 16 55.0 +1.5**
comp=Z,41nm,1.0s
COEN Coen 38.60 276 P **P 09 16 55.1 +1.7**
baz=39,SNR=16

RKT Rikitea 38.69 99 *e*T T 09 56 28.7
comp=Z,2.5nm,0.3s
HTT Hallett 39.80 245 P **P 09 17 03.5 +0.2**
baz=40,SNR=12
QIS Mount Isa 40.13 265 P **P 09 17 06.6 +0.6**
baz=40,SNR=15
BBOO Buckleboo 42.18 246 *e*P **P 09 17 22.1 -0.6**
comp=Z,47nm,1.3s
BBOO Buckleboo 42.18 246 P **P 09 17 22.4 -0.2**
baz=42,SNR=15
AS31 Alice Springs 44.76 259 *e*P **P 09 17 43.9 +0.4**
comp=Z,15nm,0.9s
AS31 *e*PcP **PcP 09 19 23.7 +0.9**
ASAR Alice Springs 44.76 259 P **P 09 17 43.8 +0.3**
comp=Z,45nm,0.8s,baz=92,slow=8.2,SNR=247
ASAR PcP **PcP 09 19 23.4 +0.7**
comp=Z,5.1nm,0.5s,baz=110,slow=3.9,SNR=9.2
ASAR ScP **ScP 09 23 03.1 +3.7**
comp=Z,2.3nm,0.9s,baz=110,slow=3.5,SNR=6.4
ASAR S **S 09 24 06.5 -1.5**
comp=Z,2.1nm,0.9s,baz=96,slow=15,SNR=7.5
WAKE Wake Island 44.97 338 *e*P **P 09 17 44.3 -0.6**
comp=Z,59nm,1.0s
WC3 Warramunga Arr 45.05 264 *e*P **P 09 17 46.1 +0.3**
comp=Z,96nm,0.6s
WB2 Warramunga Arr 45.08 264 *e*P **P 09 17 46.2 +0.2**
comp=Z,100nm,0.7s
WRAB Tennant Creek 45.08 264 *e*P **P 09 17 46.1 +0.1**
comp=Z,84nm,0.8s
WRAB Tennant Creek 45.08 264 *e*P **P 09 17 46.1 +0.1**
WRAB pmax pmax
comp=Z,84nm,0.8s
WR1 Warramunga Arr 45.09 264 *e*P **P 09 17 45.8 -0.3**
WR1 *e*S **S 09 24 08.5 -4.2**
WRA Warramunga Arr 45.09 264 P **P 09 17 45.8 -0.3**
comp=Z,79nm,0.6s,baz=94,slow=9.4,SNR=399
WRA S **S 09 24 08.5 -4.2**
comp=Z,2.9nm,0.9s,baz=104,slow=17,SNR=3.5
KDU Kakadu 48.84 273 P **P 09 18 15.1 -0.1**
baz=49,SNR=50
FORT Forrest 49.05 249 *e*P **P 09 18 16.0 -0.7**
comp=Z,43nm,0.7s
FORT Forrest 49.05 249 P **P 09 18 16.1 -0.5**
baz=49,SNR=17
WRKA Warakurna 49.58 256 P **P 09 18 20.5 -0.2**
baz=50,SNR=138
MTN Manton Dam 50.02 272 *e*P **P 09 18 23.8 -0.3**
comp=Z,41nm,0.6s
MTN Manton Dam 50.02 272 P **P 09 18 24.1 -0.1**
baz=50,SNR=10
KNRA Kununurra 51.32 268 P **P 09 18 34.2 +0.3**
baz=52,SNR=23
FAKI Fak Fak 52.88 285 *e*P **P 09 18 45.4 +0.1**
comp=Z,41nm,0.9s
FAKI Fak Fak 52.88 285 P **P 09 18 45.5 +0.1**
comp=Z,56nm,1.0s
FITZ Fitzroy Crossi 53.51 264 *e*P **P 09 18 50.9 +0.9**
comp=Z,77nm,0.8s
FITZ Fitzroy Crossi 53.51 264 P **P 09 18 50.4 +0.4**
baz=54,SNR=42
SARN Sarigan 53.63 314 *e*P **P 09 18 48.3 -2.5**
comp=Z,78nm,1.1s
BNDI Bandanaira 54.29 281 P **P 09 18 55.9 +0.3**
comp=Z,204nm,0.7s
SWI Sorong 54.70 286 P **P 09 18 59.7 +1.1**
comp=Z,238nm,0.7s,comp=Z,2μm
SBA Scott Base 55.38 184 *e*P **P 09 19 04.6 +2.1**
comp=Z,7.2nm,0.7s
VNDA Vanda 55.44 185 P **P 09 19 05.3 +2.4**
comp=Z,2.6nm,0.9s,baz=6.1,slow=6.9,SNR=7.7
VNDA Vanda 55.44 185 *e*P **P 09 19 04.1 +1.2**
comp=Z,4.3nm,1.0s
VNDA Vanda 55.44 185 *e*P **P 09 19 04.1 +1.2**
VNDA pmax pmax
comp=Z,4.0nm,1.0s
PALU Palau 56.13 297 P **P 09 19 09.9 +1.1**
baz=56,SNR=3.5
SOEI Soe 57.40 273 *e*P **P 09 19 18.0 +0.1**
comp=Z,191nm,0.8s
SOEI Soe 57.40 273 P **P 09 19 19.7 +1.8**
comp=Z,259nm,1.1s,comp=Z,2μm
KLBR Kellerberrin 57.72 246 P **P 09 19 19.5 -0.4**
baz=58,SNR=14
PSAD2 Pilbara Seismi 57.78 258 *e*P **P 09 19 20.2 -0.2**
comp=Z,17nm,0.5s
BATI Baumata 57.80 272 P **P 09 19 22.5 +1.9**
comp=Z,65nm,0.7s
PSAC2 Pilbara Seismi 57.85 258 *e*P **P 09 19 20.4 -0.4**
comp=Z,54nm,1.4s
PSAB3 Pilbara Seismi 57.88 258 *e*P **P 09 19 20.7 -0.4**
comp=Z,46nm,1.1s
PSAA3 Pilbara Seismi 57.88 258 *e*P **P 09 19 20.4 -0.7**
comp=Z,39nm,1.1s
PSAB2 Pilbara Seismi 57.88 258 *e*P **P 09 19 21.5 +0.4**
comp=Z,22nm,0.7s
PSA00 Pilbara Seismi 57.90 258 *e*P **P 09 19 20.9 -0.3**
comp=Z,24nm,0.8s
PSAA2 Pilbara Seismi 57.90 258 *e*P **P 09 19 19.0 -2.2**
comp=Z,22nm,0.7s
PSAC3 Pilbara Seismi 57.90 258 *e*P **P 09 19 20.0 -1.2**
comp=Z,72nm,1.4s
PSAA1 Pilbara Seismi 57.90 258 *e*P **P 09 19 20.8 -0.4**
comp=Z,22nm,0.8s
PSAB1 Pilbara Seismi 57.92 258 *e*P **P 09 19 21.7 +0.4**
comp=Z,66nm,1.3s
PSAC1 Pilbara Seismi 57.94 258 *e*P **P 09 19 20.2 -1.2**
comp=Z,29nm,0.8s
PSAD3 Pilbara Seismi 57.94 258 *e*P **P 09 19 21.3 -0.1**
comp=Z,79nm,1.4s
PSAD1 Pilbara Seismi 57.94 258 *e*P **P 09 19 21.7 +0.3**
comp=Z,44nm,1.0s
BLDU Ballidu 58.77 247 P **P 09 19 26.4 -0.6**
baz=59,SNR=17
TNTI Ternate 58.90 286 *e*P **P 09 19 28.2 0.0**
comp=Z,53nm,0.8s
TNTI Ternate 58.90 286 P **P 09 19 28.3 +0.1**
comp=Z,73nm,1.0s
MUN Mundaring 58.96 246 P **P 09 19 28.4 0.0**
baz=59,SNR=3.7
MORW Morawa 59.62 249 *e*P **P 09 19 32.6 -0.4**
comp=Z,16nm,0.7s
MORW Morawa 59.62 249 P **P 09 19 32.6 -0.4**
baz=60,SNR=14
MMRI Maumere 59.67 273 *e*P **P 09 19 33.9 +0.4**
comp=Z,60nm,0.6s
EDFI Ende, Flores 60.13 273 P **P 09 19 36.6 -0.2**
comp=Z,78nm,0.8s,comp=Z,715nm
WBSI Waikabubak, Su 61.93 271 P **P 09 19 49.1 +0.3**
comp=Z,46nm,0.8s
CASY Casey 62.00 206 *e*P **P 09 19 49.4 +1.0**
comp=Z,13nm,0.7s
LUWI Luwuk 62.20 282 *e*P **P 09 19 51.5 +0.9**
comp=Z,58nm,0.8s
BSSI Bau Bau, Buton 62.21 275 P **P 09 19 50.0 -0.6**
comp=Z,37nm,0.8s
GIRL Giralia 62.66 256 P **P 09 19 54.6 +1.1**
baz=63,SNR=7.1
BKSI Bulukumba 62.87 276 P **P 09 19 55.1 +0.1**
comp=Z,27nm,0.9s
BNSI Bone 63.24 277 P **P 09 19 58.4 +1.0**
comp=Z,34nm,0.6s
PLAI Plampang 63.71 271 P **P 09 20 00.0 -0.5**
comp=Z,85nm,0.9s
SPSI Sidrap Palu 63.73 277 P **P 09 19 57.4 -3.2**
MPSI Mapaga 65.39 282 P **P 09 20 10.4 -1.0**
comp=Z,21nm,0.9s
QSPA South Pole Qui 67.02 180 *e*P **P 09 20 22.8 +1.7**
comp=Z,25nm,1.0s
JAGI Jajag, Banyuwa 67.17 270 *e*P **P 09 20 23.2 +0.4**
comp=Z,56nm,1.2s
KKM Kota Kinabalu 71.19 285 *e*P **P 09 20 47.9 +0.3**
comp=Z,15nm,0.6s
MJAR Matsushiro Arr 72.74 324 P **P 09 20 54.9 -1.3**
comp=Z,3.8nm,0.6s,baz=162,slow=5.9,SNR=8.9
MAJO Matsushiro 72.74 324 *e*P **P 09 20 54.9 -1.3**
MAJO Matsushiro 72.74 324 *e*P **P 09 20 54.9 -1.3**
MAT Matsushiro 72.74 324 P **P 09 20 55.2 -1.0**
KSM Kuching 74.56 278 *e*P **P 09 21 07.1 -0.3**
comp=Z,27nm,0.7s
ADK Adak 74.62 0 *e*P **P 09 21 06.1 -0.6**
comp=Z,14nm,0.6s
ADK Adak 74.62 0 *e*P **P 09 21 06.1 -0.6**
ADK pmax pmax
comp=Z,14nm,0.6s
JNU Nakatsue 74.68 317 *e*P **P 09 21 07.5 -0.1**
comp=Z,11nm,1.0s
GSTR Great Sitkin T 74.84 1 *e*P **P 09 21 08.3 +0.2**
ATKA Atka Island 74.99 2 *e*P **P 09 21 07.7 -1.1**

comp=Z,28nm,1.3s
YULB Yu-li 75.57 303 *e*P **P 09 21 12.2 -0.7**
comp=Z,6.0nm,0.7s
TPUB Ta-pu 76.03 303 *e*P **P 09 21 14.4 -1.1**
comp=Z,24nm,0.7s
SSLB Suanglung 76.05 304 *e*P **P 09 21 14.9 -0.7**
comp=Z,14nm,1.0s
NIKH Nikolski High 76.06 5 *e*P **P 09 21 14.6 -0.4**
comp=Z,54nm,1.0s
ASAJ Asahikawa 76.35 331 P **P 09 21 18.0 +1.2**
comp=Z,6.4nm,0.7s,baz=196,slow=8.7,SNR=10
UNV Unalaska Valle 77.14 6 *e*P **P 09 21 20.7 -0.3**
comp=Z,18nm,0.6s
AKUT Akutan 77.50 7 *e*P **P 09 21 22.3 -0.7**
comp=Z,25nm,0.8s
PEA0B Petropavlovsk- 78.94 345 *e*P **P 09 21 29.7 -1.3**
comp=Z,20nm,1.1s
PEA0B Petropavlovsk- 78.94 345 *e*P **P 09 21 29.7 -1.3**
PEA0B pmax pmax
comp=Z,20nm,1.1s
PETK Petropavlovsk- 78.94 345 P **P 09 21 30.6 -0.4**
comp=Z,3.1nm,0.5s,baz=120,slow=6.9,SNR=8.9
PEA1 Petropavlovsk- 78.95 345 *e*P **P 09 21 30.6 -0.4**
KSRS Korea Array 79.33 318 P **P 09 21 33.5 +0.1**
comp=Z,2.8nm,0.9s,baz=138,slow=6.1,SNR=14
KS15 Wonju Array Si 79.34 318 *e*P **P 09 21 32.8 -0.7**
comp=Z,5.8nm,1.0s
MAW Mawson 79.43 200 P **P 09 21 35.4 +1.8**
comp=Z,6.3nm,0.6s,baz=141,slow=6.2,SNR=28
MAW Mawson 79.43 200 *e*P **P 09 21 35.5 +1.9**
comp=Z,3.0nm,0.6s
MAW Mawson 79.43 200 P **P 09 21 34.7 +1.2**
baz=80,SNR=19
MAW Mawson 79.43 200 *e*P **P 09 21 35.5 +1.9**
MAW pmax pmax
comp=Z,3.0nm,0.6s
MWC Mount Wilson 79.98 46 *e*P **P 09 21 38.0 +0.7**
comp=Z,7.4nm,0.9s
MWC Mount Wilson 79.98 46 *e*P **P 09 21 38.0 +0.7**
MWC pmax pmax
comp=Z,7.0nm,0.9s
KMRM Mail Ridge 80.24 39 *e*P **P 09 21 39.6 +1.2**
comp=Z,24nm,0.9s
ISA Isabella, Lake 80.57 45 *e*P **P 09 21 38.2 -2.0**
comp=Z,3.5nm,0.8s
ISA Isabella, Lake 80.57 45 *e*P **P 09 21 38.3 -2.0**
ISA pmax pmax
comp=Z,4.0nm,0.8s
MYKOM Kota Tinggi 80.59 276 *e*P **P 09 21 40.7 -0.1**
comp=Z,22nm,0.8s
DLV T Lat 80.63 287 *e*P **P 09 21 41.2 0.0**
comp=Z,9.2nm,0.6s
MDPB Devils Postpil 81.38 43 *e*P **P 09 21 45.1 +0.3**
comp=Z,10nm,1.4s
USA0B Ussuriysk Arra 81.52 326 *e*P **P 09 21 44.9 0.0**
comp=Z,10.0nm,0.9s
USA0B Ussuriysk Arra 81.52 326 *e*P **P 09 21 44.9 0.0**
USA0B pmax pmax
comp=Z,10.0nm,0.9s
USRK Ussuriysk Ar. 81.52 326 P **P 09 21 45.4 +0.4**
comp=Z,7.5nm,0.8s,baz=116,slow=3.2,SNR=28
PNTR Pine Nut 81.95 42 *e*P **P 09 21 48.4 +0.7**
comp=Z,6.8nm,0.8s
NJ2 Nanjing 82.12 310 *e*P **P 09 21 49.2 +0.8**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NV01 Mina Array Sit 82.35 43 *e*P **P 09 21 50.8 +1.0**
NVAR Mina Array Bea 82.35 43 P **P 09 21 50.8 +1.0**
comp=Z,1.3nm,0.7s,baz=220,slow=8.6,SNR=10
TPNV Topopah Spring 82.78 45 *e*P **P 09 21 51.8 -0.1**
comp=Z,2.1nm,0.8s
TPNV Topopah Spring 82.78 45 *e*P **P 09 21 51.8 -0.1**
TPNV pmax pmax
comp=Z,2.0nm,0.8s
KVN Kaiserville 82.85 42 *e*P **P 09 21 52.7 +0.4**
comp=Z,1.9nm,0.8s
KVN Kaiserville 82.85 42 *e*P **P 09 21 52.7 +0.4**
KVN pmax pmax
comp=Z,2.0nm,0.8s
MOD Modoc Plateau 83.29 39 *e*P **P 09 21 55.3 +0.9**
comp=Z,4.0nm,0.7s
W13A Hualapai Mount 83.29 48 *e*P **P 09 21 53.7 -1.0**
comp=Z,3.7nm,0.8s
R11A Troy Canyon, C 84.02 44 *e*P **P 09 21 58.6 +0.3**
comp=Z,0.8nm,0.8s
PINE Pine Mountain 84.13 37 *e*P **P 09 22 00.7 +2.0**
comp=Z,13nm,1.4s
BMN Battle Mountai 84.22 42 *e*P **P 09 21 59.7 +0.5**
comp=Z,3.5nm,0.8s
BMN Battle Mountai 84.22 42 *e*P **P 09 21 59.7 +0.5**
BMN pmax pmax
comp=Z,4.0nm,0.8s
IPM Ipoh 84.24 277 *e*P **P 09 21 60.0 +0.2**
comp=Z,51nm,0.7s
SYO Syowa Base 84.41 193⃝ *e*P **P 09 22 00.0 +0.5**
SYO Syowa Base 84.41 193⃝ *e*PcP **PcP 09 22 03.6 +0.8**
SYO Syowa Base 84.41 193⃝ *e*pP pP 09 22 40.4 +0.1
WVOR Wild Horse Val 84.59 39 *e*P **P 09 22 02.0 +1.1**
comp=Z,4.2nm,0.9s
WVOR Wild Horse Val 84.59 39 *e*P **P 09 22 02.1 +1.1**
WVOR pmax pmax
comp=Z,4.0nm,0.9s
X16A Lo Mia Camp, P 84.60 49 *e*P **P 09 22 01.0 -0.2**
comp=Z,4.9nm,0.9s
LCMT Little Creek M 84.79 46 *e*P **P 09 22 02.6 +0.5**
comp=Z,3.2nm,0.9s
CN2 Changchun 84.81 322 *e*P **P 09 22 02.1 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
KULM Kulim 84.91 278 *e*P **P 09 22 03.8 +0.8**
comp=Z,24nm,0.7s
CCUT Cedar City 85.01 46 *e*P **P 09 22 05.1 +1.8**
comp=Z,2.2nm,0.8s
HOM Homer 85.04 13 *e*P **P 09 22 03.1 +0.5**
comp=Z,109nm,1.1s
U15A North Rim 85.11 47 *e*P **P 09 22 05.3 +1.4**
comp=Z,4.7nm,0.8s
KLR Kul'dur 85.13 329 P **P 09 22 03.6 +0.3**
comp=Z,2.7nm,0.8s,baz=70,slow=1.4,SNR=13
KLR Kul'dur 85.13 329 *i* P **P 09 22 03.2 -0.1**
KLR pmax pmax
comp=Z,4.0nm,0.9s
J08A Circle Bar Ran 85.25 39 *e*P **P 09 22 04.9 +0.7**
comp=Z,7.4nm,1.5s
SNAA Sanae 85.44 178 P **P 09 22 05.0 +0.3**
SNAA Sanae 85.44 178 *e*P **P 09 22 04.8 +0.1**
comp=Z,8.2nm,1.2s
SNAA Sanae 85.44 178 *e*P **P 09 22 04.8 +0.1**
SNAA pmax pmax
comp=Z,8.0nm,1.2s
PSI Prapat 85.51 275 *e*P **P 09 22 06.0 -0.1**
comp=Z,20nm,0.8s
VNA3 Neumayer Olymp 85.54 176 P **P 09 22 05.5 +0.4**
ELK Elko 85.63 42 P **P 09 22 07.0 +0.7**
comp=Z,0.6nm,0.6s,baz=247,slow=7.7,SNR=4.8
ELK Elko 85.63 42 P **P 09 22 07.0 +0.7**
SKLT Songkhla 85.69 280 P **P 09 22 10.0 +3.1**
comp=Z,8.5nm,0.9s
SKLT Songkhla 85.69 280 P **P 09 22 10.0 +3.1**
comp=Z,8.5nm,0.9s,comp=Z,0.0nm
VNA2 Neumayer--Watz 85.99 177 P **P 09 22 08.2 +0.8**
baz=191,slow=3.1
MTPU Mount Pierson 86.06 46 *e*P **P 09 22 09.9 +1.3**
comp=Z,3.7nm,0.8s
GSI Gunungsitoli 86.16 273 *e*P **P 09 22 09.7 +0.4**
comp=Z,48nm,0.8s
VNA1 Neumayer--Stat 86.21 176 P **P 09 22 09.2 +0.7**
PANO Nakornpanom 86.26 290 P **P 09 22 11.1 +1.5**
comp=Z,0.9nm,0.9s,comp=Z,19nm
TRTT Trang 86.80 280 P **P 09 22 15.0 +2.7**
comp=Z,31nm,1.0s
TRTT Trang 86.80 280 P **P 09 22 15.0 +2.7**
comp=Z,31nm,1.0s,comp=Z,0.1nm
SUA Susitna One 86.88 12 *e*P **P 09 22 11.8 +0.1**
PLCA Paso Flores 86.94 133 P **P 09 22 13.6 +0.9**
comp=Z,4.4nm,1.0s,baz=286,slow=7.6,SNR=4.7
PLCA Paso Flores 86.94 133 *e*P **P 09 22 13.3 +0.5**
comp=Z,12nm,1.3s
PLCA Paso Flores 86.94 133 *e*P **P 09 22 13.3 +0.5**
PLCA pmax pmax
comp=Z,12nm,1.3s
GLI Glacier Island 87.12 14 *e*P **P 09 22 12.7 -0.1**
comp=Z,14nm,0.8s
D08A Wollman Farm, 87.29 36 *e*P **P 09 22 15.0 +1.1**
comp=Z,4.4nm,0.8s
PMR Palmer 87.32 13 *e*P **P 09 22 13.8 +0.1**
comp=Z,14nm,1.2s

PMR	Palmer	87.32	13	eP	P		09 22 13.8	+0.1
PMR				pmax	pmax			
	comp=Z,14nm,1.2s							
TMUT	Trail Mountain	87.38	45	eP	P		09 22 16.1	+1.1
	comp=Z,6.6nm,0.7s							
KHON	Khomkaen	87.47	289	P	P		09 22 19.1	+3.7
	comp=Z,89µm,1.0s							
GHO	Glory Hole Cre	87.53	13	eP	P		09 22 14.8	-0.1
	comp=Z,19nm,0.7s							
F10A	Beach Ranch, E	87.55	37	eP	P		09 22 15.6	+0.3
	comp=Z,4.9nm,0.8s							
MNTX	Cornudas Mount	87.59	54	eP	P		09 22 17.1	+1.3
	comp=Z,7.0nm,1.3s							
DIV	Divide	87.65	15	eP	P		09 22 14.8	-0.6
	comp=Z,10.0nm,0.8s							
SRU	San Rafael Swe	87.73	46	eP	P		09 22 17.4	+0.9
	comp=Z,6.0nm,0.8s							
SRU	San Rafael Swe	87.73	46	eP	P		09 22 17.4	+0.9
SRU				pmax	pmax			
	comp=Z,6.0nm,0.8s							
LTX	Lajitas	87.78	57	eP	P		09 22 18.1	+1.4
LTX	Lajitas	87.78	57	eP	P		09 22 18.2	+1.4
TX31	Lajitas Ar. Si	87.78	57	eP	P		09 22 18.2	+1.4
	comp=Z,4.4nm,1.3s							
TXAR	Lajitas Array	87.78	57	P	P		09 22 18.1	+1.4
	comp=Z,1.8nm,0.8s,baz=211,slow=7.2,SNR=17							
B08A	Colville Reser	87.88	34	eP	P		09 22 17.5	+0.8
CHAI	Chaiyaphum	88.02	288	P	P		09 22 20.4	+2.3
	comp=Z,20µm,0.9s,comp=Z,405µm							
ENH	Enshi	88.13	304	eP	P		09 22 17.6	-0.7
	comp=Z,22nm,1.0s							
BJI	Beijing	88.26	315⇑	eP	P		09 22 21.4	+2.7
BJI				pmax	pmax			
	comp=Z,4.0nm,0.7s							
ANMO	Albuquerque	88.39	51	eP	P		09 22 20.3	+0.6
	comp=Z,2.9nm,0.9s							
ANMO	Albuquerque	88.39	51	ceP	P		09 22 20.7	+1.0
ANMO				pmax	pmax			
	comp=Z,3.0nm,1.0s							
CAST	Castle Rocks	88.43	11	eP	P		09 22 18.4	-0.6
	comp=Z,14nm,0.8s							
KTH	Kantishna Hill	88.76	11	eP	P		09 22 19.8	-0.8
	comp=Z,14nm,0.9s							
TRF	Thorofare Moun	88.78	12	eP	P		09 22 20.6	-0.2
	comp=Z,7.4nm,0.7s							
PHET	Kaeng Krachan	88.88	284	P	P		09 22 25.2	+3.0
	comp=Z,49µm,1.0s,comp=Z,562µm							
RND	Reindeer	89.02	12	eP	P		09 22 22.3	+0.5
	comp=Z,18nm,0.7s							
RND	Reindeer	89.02	12	eP	P		09 22 22.3	+0.5
RND				pmax	pmax			
	comp=Z,18nm,0.7s							
SEY	Seymchan	89.04	347	P	P		09 22 21.7	-0.1
	comp=Z,5.8nm,0.5s,baz=155,slow=4.3,SNR=21							
SEY	Seymchan	89.04	347	ceP	P		09 22 22.0	+0.2
LNIG	Linares	89.12	63	eP	P		09 22 23.1	0.0
	comp=Z,11nm,1.5s							
PBKT	Sadao Pong	89.18	288	P	P		09 22 27.0	+3.5
MCK	McKinley	89.30	12	eP	P		09 22 23.0	0.0
	comp=Z,12nm,0.8s							
MCK	McKinley	89.30	12	eP	P		09 22 23.0	0.0
MCK				pmax	pmax			
	comp=Z,12nm,0.8s							
MENT	Mentasta	89.70	15	eP	P		09 22 25.8	+0.9
	comp=Z,7.1nm,0.8s							
DLMT	Dillon	89.84	40	eP	P		09 22 26.3	+0.1
	comp=Z,4.0nm,1.2s							
DLBC	Dease Lake	90.09	23	P	P		09 22 27.7	+0.8
	comp=Z,5.6nm,0.9s,baz=224,slow=7.7,SNR=7.4							
DLBC	Dease Lake	90.09	23	eP	P		09 22 25.1	-1.9
	comp=Z,8.7nm,1.0s							
WRH	Wood River Hil	90.13	12	eP	P		09 22 26.8	0.0
	comp=Z,9.1nm,0.8s							
RIDG	Independent Ri	90.15	14	eP	P		09 22 27.3	+0.2
	comp=Z,9.2nm,1.1s							
DOT	Dot Lake	90.24	14	eP	P		09 22 24.4	-3.0
	comp=Z,7.8nm,0.8s							
FLWY	Flagg Ranch	90.28	41	eP	P		09 22 28.8	+0.5
	comp=Z,3.9nm,0.9s							
PD31	Pinedale Array	90.28	43	eP	P		09 22 28.9	+0.5
	comp=Z,1.4nm,0.9s							
PDAR	Pinedale Array	90.28	43	P	P		09 22 28.5	+0.1
	comp=Z,1.4nm,0.8s,baz=202,slow=3.4,SNR=14							
XAN	Xi'an	90.31	307	P	P		09 22 29.3	+0.8
XAN				pmax	pmax			
	comp=Z,9.0nm,0.8s							
XAN				pmax	pmax			
	comp=Z,69nm,5.0s							
CCB	Clear Creek Bu	90.34	12	eP	P		09 22 27.6	-0.2
	comp=Z,6.6nm,0.6s							
COLA	College	90.53	12	eP	P		09 22 28.3	-0.3
	comp=Z,9.6nm,0.8s							
COLA	College	90.53	12	eP	P		09 22 28.3	-0.3
COLA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
BOZ	Bozeman (W)	90.54	40	eP	P		09 22 30.2	+0.8
	comp=Z,2.8nm,0.7s							
BOZ	Bozeman (W)	90.54	40	eP	P		09 22 30.2	+0.8
BOZ				pmax	pmax			
	comp=Z,3.0nm,0.7s							
ILAR	Eielson Array	90.63	12	P	P		09 22 28.9	-0.3
	comp=Z,3.4nm,0.9s,baz=225,slow=5.2,SNR=21							
ILB	Eielson Array	90.63	12	eP	P		09 22 28.9	-0.3
	comp=Z,4.7nm,0.9s							
PAYA	Payao	91.27	290	P	P		09 22 37.0	+3.8
	comp=Z,29µm,1.1s,comp=Z,84nm							
BILL	Bilibino	91.66	354	ceP	P		09 22 33.8	-0.1
BILL				pmax	pmax			
	comp=Z,9.0nm,0.9s							
HHC	Hu-ho-hao-te	91.70	314	eP	P		09 22 37.3	+2.4
HHC				pmax	pmax			
	comp=Z,19nm,1.0s							
HHC				pmax	pmax			
	comp=Z,69nm,4.5s							
HHC				LR	LR			
	comp=Z,120nm,12.8s							
HHC				LR	LR			
	comp=Z,94nm,11.1s							
HHC				LR	LR			
	comp=Z,470nm,12.8s							
CMAR	Chiang Mai Arr	91.71	289	P	P		09 22 37.0	+1.7
	comp=Z,9.3nm,0.9s,baz=137,slow=3.0,SNR=28							
CMAR				LR	LR		10 04 31.1	
	comp=Z,14nm,18.8s,baz=188,slow=36							
CMAR	Chiang Mai Arr	91.71	289	ceP	P		09 22 37.2	+1.9
CMAR				pmax	pmax			
	comp=Z,12nm,0.9s							
CMMT	Chiang Mai	91.85	290	P	P		09 22 38.4	+2.5
	comp=Z,9.2nm,1.2s,comp=Z,0.0nm							
CHTO	Chiang Mai	91.85	290	eP	P		09 22 35.3	-0.7
	comp=Z,14nm,0.8s							
CHTO	Chiang Mai	91.85	290	eP	P		09 22 35.3	-0.7
CHTO				pmax	pmax			
	comp=Z,14nm,0.8s							
EGAK	Eagle	91.87	15	eP	P		09 22 35.4	+0.5
	comp=Z,6.1nm,0.8s							
RSSD	Black Hills	94.45	44	eP	P		09 22 47.8	+0.2
	comp=Z,5.7nm,0.9s							
RSSD	Black Hills	94.45	44	eP	P		09 22 47.8	+0.2
RSSD				pmax	pmax			
	comp=Z,6.0nm,0.9s							
LZH	Lanzhou	94.95	307	eP	P		09 22 51.8	+1.8
LZH				pP	pwP		09 23 34.6	+0.1
LZH				sP	sP		09 23 53.9	+5.6
LZH				pmax	pmax			
	comp=Z,27nm,1.0s							
LZH				pmax	pmax			
	comp=Z,190nm,4.6s							
INK	Inuvik	96.53	15	P	P		09 22 56.2	0.0
	comp=Z,1.8nm,0.9s,baz=229,slow=6.6,SNR=3.5							
SONA0	Songino Array	98.20	319	eP	Pdif		09 23 05.5	+1.1
SONM	Songino Array	98.20	319	P	Pdif		09 23 05.5	+1.1
	comp=Z,0.4nm,0.3s,baz=129,slow=4.1,SNR=3.0							
LPAZ	La Paz	100.35	113	P	Pdif		09 23 17.9	+2.6
	comp=Z,1.2nm,0.8s,baz=195,slow=6.9,SNR=5.4							
LPAZ	La Paz	100.35	113	ePdif	Pdif		09 23 14.8	-0.5
TIXI	Tiksi	101.42	345	i P	Pdif		09 23 18.0	+0.1
TIXI				pmax	pmax			
	comp=Z,1.0nm,1.0s							
MK32	Makanchi Array	113.52	313	ePKiKP	PKiKP		09 28 04.7	+0.2
MK32				ePKPKbc	PKKPbc		09 38 49.8	-0.1
MKAR	Makanchi Array	113.52	313	PKiKP	PKiKP		09 28 04.7	+0.2
	comp=Z,1.9nm,0.6s,baz=108,slow=0.2,SNR=16							
MKAR				PKKPbc	PKKPbc		09 38 49.8	-0.1
	comp=Z,0.5nm,0.6s,baz=272,slow=2.7,SNR=5.2							
KURK	Kurchatov	116.40	317	i PKIKP	PKPdf		09 28 09.2	-0.6
TRIS	Tristan da Cun	118.50	166	ePKPdf	PKPdf		09 28 13.1	-1.4
FRB	Frobisher Bay	118.66	29	PKP	PKPdf		09 28 13.1	-0.6
	comp=Z,3.5nm,0.8s,baz=306,slow=3.4,SNR=8.6							
BTK	Batken	120.99	304	ePKPdf	PKPdf		09 28 18.9	-0.3
BTK	Batken	120.99	304	ePKIKP	PKPdf		09 28 18.9	-0.3
KK31	Karatay Array	121.44	307	ePKPdf	PKPdf		09 28 19.6	-0.2
KK31	Karatay Array	121.44	307	ePKIKP	PKPdf		09 28 19.6	-0.2
KKAR	Karatay Array	121.44	307	ePKPdf	PKPdf		09 28 19.1	-0.7
KKAR	Karatay Array	121.44	307	ePKIKP	PKPdf		09 28 19.1	-0.7
BVAR	Borovoye Array	121.54	319	PKP	PKPdf		09 28 19.2	-0.4
	comp=Z,4.3nm,0.4s,baz=132,slow=1.4,SNR=23							
BRVK	Borovoye	121.60	319	i PKIKP	PKPdf		09 28 19.7	-0.1
KBL	Kabul	121.79	297	ePKPdf	PKPdf		09 28 21.0	0.0
KBL	Kabul	121.79	297	ePKIKP	PKPdf		09 28 21.0	0.0
BOSA	Boshof	124.27	204	PKP	PKiKP		09 28 27.1	+0.9
	comp=Z,2.5nm,0.7s,baz=116,slow=3.3,SNR=4.8							
SPA0	Spitsbergen Ar	124.46	357	ePKPdf	PKiKP		09 28 24.8	-0.2
SPITS	Spitsbergen Ar	124.46	357	PKP	PKPdf		09 28 24.5	-0.1
	comp=Z,11nm,0.7s,baz=79,slow=4.3,SNR=10.0							
ARU	Arti	127.75	325	PKP	PKiKP		09 28 31.8	-0.2
	comp=Z,2.9nm,0.5s,baz=124,slow=3.3,SNR=5.2							
GEYT	Alibeck	130.80	301	SKPbc	SKPab		09 31 48.1	+1.3
	comp=Z,3.6nm,0.5s,baz=197,slow=1.5,SNR=7.2							
ARCES	ARCESS Array B	131.57	350	PKP	PKPdf		09 28 37.3	-1.0
	comp=Z,5.1nm,0.6s,baz=38,slow=1.6,SNR=37							
ARCES				SKPbc	SKPab		09 31 50.7	+1.7
	comp=Z,5.1nm,1.0s,baz=46,slow=3.9,SNR=5.9							
ARE0	ARCESS Array S	131.57	350	ePKPdf	PKPdf		09 28 38.7	+0.3
PRGR	Permogore	131.69	334	ePKIKP	PKPdf		09 28 37.8	-0.9
PRGR				pmax	pmax			
	comp=Z,7.0nm,0.6s							
KTK1	Kautokeino	132.41	350	ePKPdf	PKPdf		09 28 40.3	+0.4
KLMR	Klimovskoe	134.53	336	ePKIKP	PKPpre		09 28 40.9	
KLMR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
FIA0	FINESS Array S	138.44	343	ePKPpre	PKPpre		09 28 41.0	
FIA0				ePKPdf	PKPdf		09 28 51.0	-0.3
FIA0	FINESS Array S	138.44	343	ePKHKP	PKPpre		09 28 41.0	
FIA0				e			09 28 51.1	
FINES	FINESS Array B	138.44	343	PKhKP	PKPpre		09 28 41.0	
	comp=Z,1.8nm,0.7s,baz=45,slow=4.1,SNR=6.9							
FINES				PKP	PKPdf		09 28 51.0	-0.3
	comp=Z,2.5nm,0.5s,baz=68,slow=3.7,SNR=9.6							
OBN	Obninsk	139.38	331⇓	ePKIKP	PKPdf		09 28 52.0	-1.2
OBN				e			09 31 48.7	
OBN				e			09 35 47.9	
OBN				pmax	pmax			
	comp=Z,4.0nm,1.0s							
GNI	Garni	140.87	306	c i PKIKP	PKiKP		09 28 58.9	-0.5
GNI				pmax	pmax			
	comp=Z,103nm,1.7s							
KBZ	Khabaz	141.21	312	PKP	PKPdf		09 28 56.0	-0.9
	comp=Z,2.3nm,0.9s,baz=102,slow=6.6,SNR=3.8							
KBZ	Khabaz	141.21	312	ePKIKP	PKPdf		09 28 56.0	-0.9
KIV	Kislovodsk	141.28	312	ePKIKP	PKPdf		09 28 56.6	-0.6
KIV				pmax	pmax			
	comp=Z,23nm,1.0s							
NC303	NORSAR Array S	141.41	353	ePKPdf	PKPdf		09 28 57.0	+0.2
NB2	NORSAR Subarra	141.61	353	PKP	PKPdf		09 28 51.3	-5.9
	comp=Z,1.0nm,0.5s,baz=10,slow=3.2							
NB200	NORSAR Array S	141.61	353	ePKPpre	PKPdf		09 28 51.1	-6.1
NOA	NORSAR Array B	141.61	353	PKhKP	PKPdf		09 28 51.1	-6.1
	comp=Z,1.2nm,0.6s,baz=33,slow=3.1,SNR=10							
NBO00	NORSAR Array S	141.66	354	ePKPpre	PKPdf		09 28 53.6	-3.7
NBO00	NORSAR Array S	141.66	354	ePKPdf	PKPdf		09 28 51.6	-5.7
NAO01	NORSAR Array S	141.83	354	ePKPdf	PKPdf		09 28 52.7	-4.9
NC602	NORSAR Array S	141.87	353	ePKPpre	PKPdf		09 28 52.2	-5.4
NC602	NORSAR Array S	141.87	353	eP	PKPdf		09 28 52.0	-5.6
KONO	Kongsberg	143.13	354	ePKPpre	PKPab		09 28 56.7	+0.9
KONO	Kongsberg	143.13	354	ePKIKP	PKPbc		09 28 56.7	-0.6
KONO	Kongsberg	143.13	354	ePKPdf	PKPbc		09 28 56.6	-0.7
MBAR	Mbarara	144.09	233	ePKPdf	PKPdf		09 29 02.6	-0.6
MBAR	Mbarara	144.09	233	ePKIKP	PKPdf		09 29 02.6	-0.6
RSC	Scourie	144.28	7	eP	PKPbc		09 29 00.6	0.0
RRH	Rhenigidale	144.50	9	eP	PKPab		09 29 01.2	+0.1
HOMB	Homborsund	144.59	355	ePKPbc	PKPab		09 29 00.9	-0.5
RRR	Rubha Reidh	144.68	8	eP	PKPab		09 29 01.6	-0.1
KAC	Achnashellach	145.09	8	eP	PKPdf		09 29 03.3	-0.1
KPL	Plockton	145.21	8	eP	PKPbc		09 29 03.4	-0.1
SUW	Suwalki	145.51	339	ePKP	PKPbc		09 29 04.7	+0.1
SUW	Suwalki	145.51	339	ePKPdf	PKPab		09 29 04.9	-0.1
SUW	Suwalki	145.51	339	ePKP2	PKPbc		09 29 04.7	+0.1
AKASG	Malin Array Be	145.63	330	PKPbc	PKPdf		09 29 04.5	0.0
	comp=Z,25nm,0.5s,baz=41,slow=4.3,SNR=55							
AKBB	Malin Array Si	145.63	330	ePKPdf	PKPdf		09 29 04.6	+0.1
AKBB	Malin Array Si	145.63	330	ePKP2	PKPdf		09 29 04.6	+0.1
DRUM	Mains of Drumt	145.97	5	eP	PKPbc		09 29 05.8	-0.1
LAWE	Loch Awe, Argy	146.29	8	eP	PKPbc		09 29 06.8	0.0
INVG	Invergeldie, C	146.29	7	eP	PKPbc		09 29 06.5	-0.4
MUD	Monsted U'grnd	146.33	354	i PKP2	PKPbc		09 29 07.2	+0.3
SIM	Simferopol'	146.44	318	ePKP2	PKPbc		09 29 08.2	+0.5
SIM				pmax	pmax			
	comp=Z,36nm,0.6s							
EAB	Aberfoyle	146.49	7	eP	PKPbc		09 29 07.3	-0.1
COP	Copenhagen	146.66	350	ePKP2	PKPbc		09 29 08.3	+0.4
BSD	Bornholm Skovb	146.75	347	⇓i PKP2	PKPbc		09 29 08.1	-0.1
BSD				pmax	pmax			
	comp=Z,49nm,0.7s							
SEVA	Sevastopol	146.92	318	⇓i P	PKPbc		09 29 09.5	+0.5
EAU	Auchinoon	146.93	7	eP	PKPbc		09 29 09.1	+0.4
ESY	Stoneypath	146.94	6	eP	PKPbc		09 29 08.6	-0.1
EBL	Broad Law	147.04	6	eP	PKPbc		09 29 09.0	0.0
DIKM	Dikmen	147.21	312	⇓i P	PKPbc		09 29 09.8	-0.2
CLGH	Cloghs, Cushen	147.33	10	eP	PKPbc		09 29 10.4	+0.5
ESK	Eskdalemuir	147.47	6	ePKPbc	PKPbc		09 29 09.8	-0.4
ESK	Eskdalemuir	147.47	6	eP	PKPbc		09 29 09.9	-0.3
ESK	Eskdalemuir	147.47	6	ePKP2	PKPbc		09 29 09.8	-0.4
BHH	Howats Hill	147.69	7	eP	PKPbc		09 29 10.8	0.0
GAL1	Galloway	147.74	8	eP	PKPbc		09 29 10.8	-0.1
BBO1	Bothel	148.04	7	eP	PKPbc		09 29 11.8	+0.1
EDMD	Edmundbyers	148.07	5	eP	PKPbc		09 29 11.8	-0.1
BEL	Belsk	148.12	339	ePKP	PKiKP		09 29 13.0	-0.7
BEL	Belsk	148.12	339	ePKP2	PKiKP		09 29 13.0	-0.7
GMM	Mts of Mourne	148.17	10	eP	PKPbc		09 29 12.4	+0.3
KIS	Kishinev	148.30	325	ePKP	PKPbc		09 29 12.0	-0.6
	comp=Z,140nm,1.5s							
KIS	Kishinev	148.30	325	ePKP2	PKPbc		09 29 12.0	-0.6
KIS				pmax	pmax			
	comp=Z,140nm,1.5s							
MILM	Milestii Mici	148.35	325	⇑i P	PKPbc		09 29 12.6	-0.2
IOMK	Kirk Michael	148.35	8	eP	PKPbc		09 29 12.8	+0.2
ILGA	Ilgaz	148.51	312	ePKPbc	PKPbc		09 29 14.0	+0.3
LVV	L'vov	148.55	333	ePKP2	PKPbc		09 29 12.4	-0.8
GDLE	Glaisdale, N Y	148.57	4	eP	PKPbc		09 29 13.3	+0.2
BR101	Keskin Array S	149.11	310	ePKPbc	PKPbc		09 29 15.1	-0.1
BR131	Keskin Array S	149.11	310	ePKPbc	PKPbc		09 29 14.9	-0.3
BR131				ePKPab	PKPab		09 29 19.4	-0.6
BRTR	Keskin Array B	149.11	310	PKPbc	PKPbc		09 29 15.1	-0.1
	comp=Z,12nm,0.7s,baz=141,slow=4.6,SNR=43							
WPS	Cemaes, Angles	149.20	9	eP	PKPbc		09 29 12.8	-1.9
KWP	Kalwaria Pacla	149.23	334	ePKP	PKPbc		09 29 15.5	+0.5
KWP	Kalwaria Pacla	149.23	334	ePKPbc	PKPbc		09 29 15.2	+0.2
KWP				ePKPab	PKPab		09 29 20.1	+0.2
KWP	Kalwaria Pacla	149.23	334	ePKP2	PKPbc		09 29 15.5	+0.5
WME	Myndd Eilian	149.23	8	eP	PKPbc		09 29 15.2	+0.4
WLF1	Llynfaes	149.32	9	eP	PKPbc		09 29 14.7	-0.3
YRC	Rhoscolyn	149.34	9	eP	PKPbc		09 29 14.7	-0.3
TLCR		149.43	323	⇑i P	PKPbc		09 29 16.0	+0.5
TLCR		149.43	323	⇑PKP2	PKPbc		09 29 16.0	+0.5
ANTO	Ankara	149.65	311	ePKPbc	PKPbc		09 29 16.8	+0.4
ANTO				ePKPab	PKPab		09 29 21.2	-0.9
ANTO	Ankara	149.65	311	⇑i P	PKPbc		09 29 16.6	+0.2
ANTO	Ankara	149.65	311	⇑PKP2	PKPbc		09 29 16.6	+0.2
BUR08	Bucovina Ar. S	149.66	329	ePKPbc	PKiKP		09 29 16.8	-0.3
BUR08				ePKPab	PKPab		09 29 21.7	-0.2
BURAR	Bucovina Array	149.67	329	⇓i P	PKiKP		09 29 17.2	0.0
BURAR	Bucovina Array	149.67	329	⇓PKP2	PKiKP		09 29 17.2	0.0
BIZ	Bicaz	149.72	328	⇑i P	PKiKP		09 29 17.2	0.0
TESR	Tescani	149.74	326	⇑i P	PKPbc		09 29 16.6	+0.3
CFR	Carcaliu	149.81	323	⇑i P	PKPbc		09 29 16.7	+0.2
CFR	Carcaliu	149.81	323	⇑PKP2	PKPbc		09 29 16.7	+0.2
OJC	Ojcow	149.83	338	ePKP	PKiKP		09 29 17.0	-0.3
OJC	Ojcow	149.83	338	ePKPbc	PKPbc		09 29 16.7	+0.3
OJC				ePKPab	PKPab		09 29 22.0	-0.3
OJC	Ojcow	149.83	338	ePKP2	PKiKP		09 29 17.0	-0.3
FOEL	Foel Wylfa	149.87	7	eP	PKPbc		09 29 16.7	+0.3
KOLS	Kolonicke sedl	149.96	334	ePKP2	PKiKP		09 29 17.9	+0.3
KOLS	Kolonicke sedl	149.96	334	ePKP	PKiKP		09 29 17.9	+0.3
TIRR	Tirgusor	150.10	322	ePKPbc	PKPbc		09 29 16.8	-0.4
TIRR				ePKPab	PKPab		09 29 22.1	-1.6
TIRR	Tirgusor	150.10	322	⇓i P	PKPbc		09 29 17.0	-0.2
VRI	Vrincioaia	150.13	325	⇓i P	PKPbc		09 29 17.5	+0.2
VRI	Vrincioaia	150.13	325	⇓PKP2	PKPbc		09 29 17.5	+0.2
PLOR	Plostina	150.18	325	⇑i P	PKPbc		09 29 17.3	-0.1
PLOR	Plostina	150.18	325	⇑PKIKP	PKPbc		09 29 17.3	-0.1
UZH	Uzhgorod	150.19	334	⇓i PKIKP	PKiKP		09 29 18.2	+0.2
UZH				i			09 29 21.8	
UZH				i			09 30 18.6	
HARR	Harsova	150.23	322	⇓i P	PKPbc		09 29 17.4	-0.1
HARR	Harsova	150.23	322	⇓PKIKP	PKPbc		09 29 17.4	-0.1
TLB	Topalu	150.23	322	⇑i P	PKiKP		09 29 17.9	-0.3
TLB	Topalu	150.23	322	⇑PKIKP	PKiKP		09 29 17.9	-0.3
MFTR	Murfatlar	150.26	321	⇑i P	PKPbc		09 29 17.8	+0.2
NIE	Niedzica	150.32	337	ePKP	PKiKP		09 29 18.7	+0.4
NIE	Niedzica	150.32	337	ePKIKP	PKiKP		09 29 18.7	+0.4
KSP	Ksiaz	150.36	343	ePKP	PKiKP		09 29 18.7	+0.4
KSP	Ksiaz	150.36	343	ePKIKP	PKiKP		09 29 18.7	+0.4
MANR	Mangalia	150.38	321	⇑i P	PKiKP		09 29 18.6	0.0
ARCR	ARCALIA	150.46	329	⇑i P	PKiKP		09 29 18.4	-0.3
OZUR		150.46	327	⇓i P	PKiKP		09 29 18.8	0.0
TRPA	Tarpa	150.48	333	⇑i P	PKiKP		09 29 18.7	+0.1
EIL	Elat	150.56	290	PKPbc	PKiKP		09 29 19.9	+0.5
	comp=Z,16nm,0.7s,baz=34,slow=2.1,SNR=15							
OSTC	Ostas	150.64	343	⇑ePKP	PKiKP		09 29 19.4	+0.4
ICOR	Ion Corvin	150.66	322	⇓i P	PKiKP		09 29 19.3	+0.2
CHVC	Chvalec	150.66	343	⇑ePKP	PKiKP		09 29 19.2	+0.2
CHVC				ex	x		09 29 25.6	
OKC	Ostrava-Krasne	150.70	340	ePKIKP	PKiKP		09 29 19.4	+0.3
OKC	Ostrava-Krasne	150.70	340	ePKP	PKiKP		09 29 19.4	+0.3
ISR	Istrita	150.72	324	⇑i P	PKPab		09 29 24.0	-2.3
CLL	Collm	150.73	347	ePKPbc	PKiKP		09 29 18.8	-0.3
CLL				ePKPab	PKPab		09 29 25.7	-0.3
CLL	Collm	150.73	347	⇓i PKPbc	PKiKP		09 29 19.2	+0.1
	comp=Z,40nm,0.8s							
CLL				i PKPab	PKPab		09 29 26.0	0.0
	comp=Z,24nm,0.7s							
CLL				i pPKPbc	pPKPab		09 30 04.7	-2.9
	comp=Z,14nm,0.9s							
CLL	Collm	150.73	347	⇓i PKIKP	PKiKP		09 29 19.2	+0.1
CLL				i			09 29 26.0	
CLL				i			09 30 04.7	
CLL				pmax	pmax			
	comp=Z,40nm,0.8s							
CLL				pmax	pmax			
	comp=Z,24nm,0.7s							
UPC	Upice	150.74	343	ePKIKP	PKiKP		09 29 19.6	+0.4
UPC	Upice	150.74	343	⇑ePKP	PKiKP		09 29 19.6	+0.4
MCH1	Michaelchurch	150.77	7	eP	PKPbc		09 29 18.5	0.0
MLR	Muntele Rosu	150.79	326	ePKPbc	PKPbc		09 29 19.0	0.0
MLR				ePKPab	PKPab		09 29 24.8	-1.8
DPC	Dobruska-Polom	150.80	342	ePKIKP	PKiKP		09 29 19.9	+0.6
DPC	Dobruska-Polom	150.80	342	⇑ePKP	PKiKP		09 29 19.9	+0.6
LANS	Liptovska Anna	150.84	337	ePKIKP	PKiKP	

	comp=Z,7.5nm,0.8s						
VNDS	**Vrh nad Dolski**	**155.09 340**	*i* PKPbc	PKPdf	09 29 29.3	+10
VNDS			*i*		09 29 33.3	
ABTA	**Abfaltersbach**	**155.12 344**	*i* PKPdf	**PKPdf**	**09 29 19.1**	**-0.4**
	comp=Z,5.4nm,0.8s					
DAVA	**Damuels**	**155.18 349**	*i* PKPab	**PKPab**	**09 29 45.0**	**-0.1**
	comp=Z,11nm,1.1s					
FETA	**Feichten**	**155.27 347**	*i* PKPdf	**PKPdf**	**09 29 20.4**	**+0.7**
	comp=Z,4.3nm,1.0s					
BOJS	**Bojanci**	**155.44 339**	*i* PKPbc	PKPdf	09 29 29.8	+10
BOJS			*i*		09 29 34.5	
BOJS			*i*		09 29 46.2	
FUORN	**Ofenpass-Fuorn**	**155.75 348**	*e*PKPab	**PKPab**	**09 29 47.6**	**-0.1**
SENIN	**Lac Senin/Sane**	**156.48 352**	*e*PKPdf	**PKPdf**	**09 29 18.7**	**-2.7**
SENIN			*e*PKPab	**PKPab**	**09 29 50.0**	**-0.8**
BNI	**Bardonecchia**	**157.84 353**	*e*PKPdf	**PKPdf**	**09 29 20.6**	**-2.5**
BNI			*e*PKPab	**PKPab**	**09 29 56.4**	**-0.2**
BNI	**Bardonecchia**	**157.84 353**	*e*PKIKP	**PKPdf**	**09 29 20.6**	**-2.5**
BNI			*e*		09 29 56.4	
ESDC	**Sonseca Array**	**162.46 18**	PKPab	**PKPab**	**09 30 17.6**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=329,slow=4.1,SNR=7.3					
TORD	**Torodi Ar. Bea**	**170.07 173**	PKP	**PKPdf**	**09 29 34.8**	**0.0**
	comp=Z,0.8nm,0.9s,baz=180,slow=1.3,SNR=3.6					
TORD			PKPab	**PKPab**	**09 30 51.0**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=190,slow=4.7,SNR=9.4					
TOA1	**Torodi Ar. Sit**	**170.08 173**	*e*PKPdf	**PKPdf**	**09 29 34.8**	**0.0**
TOA1			*e*PKPab	**PKPab**	**09 30 51.0**	**+0.2**

JMA 07 09:16:18.0±0.6, 31°.07N×138°.75E, h440km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**3.73**	**333**	P	P	09 17 30.8	+0.8
BSO3	**Boso 3**	**4.00**	**21**	P	P	09 17 33.3	+1.2
BSO3				*e*S	S	09 18 33.9	+1.3
BSO1	**Boso 1**	**4.04**	**27**	P	P	09 17 33.7	+1.7
BSO1				*e*S	S	09 18 34.6	+2.0
BSO4	**Boso 4**	**4.13**	**18**	P	P	09 17 34.8	+1.4
JOD2	**Odawara 2**	**4.19**	**4**	P	P	09 17 35.1	+1.0
JHU	**Hanno**	**4.79**	**5**	P	P	09 17 40.4	+0.7
JRY	**Ryogami san**	**4.94**	**1**	P	P	09 17 42.4	+1.3
JYT	**Yasato**	**5.28**	**13**	P	P	09 17 44.9	+0.4
JAG	**Ashikaga**	**5.37**	**6**	P	P	09 17 45.6	+0.2
JHO	**Hitachi**	**5.73**	**15**	P	P	09 17 50.1	+1.1

IDC 07 09:18:58.8±3.0, 53°.90N×86°.98E, h0km, mb1 2.8/2, mb1mx2.7/51, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=26.2km s-min=17.1km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.28**	**273**	*i*		09 26 50.0	
	baz=90,slow=349,SNR=4.0						
ZALV	**Zalesovo Beam**	**1.28**	**273**	Pg	Pg	09 19 22.9	-0.3
	0.4nm,0.3s,baz=90,slow=19,SNR=3.9						
ZALV				Lg	Lg	09 19 39.4	
	1.5nm,0.3s,baz=98,slow=29,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.13**	**241**	Pn	Pn	09 20 31.6	+1.1
	0.1nm,0.3s,baz=57,slow=14,SNR=6.0						
KURBB				Lg	Lg	09 22 14.8	
	0.1nm,0.3s,baz=150,slow=33,SNR=4.5						
MKAR	**Makanchi Array**	**7.72**	**205**	Pn	Pn	09 20 53.3	+1.0
	0.1nm,0.3s,baz=27,slow=10.0,SNR=3.4						
MKAR				Lg	Lg	09 22 59.8	
	0.1nm,0.3s,baz=26,slow=30,SNR=4.7						

*ISK **07** 09:43:21.5, 39°.72N×30°.78E, h7km, ML1.9/9*
*DDA **07** 09:43:21.0, 39°.70N×30°.67E, h7km±3km, ML2.6*
ISC 07 09:43:21.7±1.0, 39°.71N±0°.03×30°.76E±0°.03, h11km±8km, n16, σ1°38/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESKT	**Eskisehir**	**0.20**	**159**	PG	**Pg**	**09 43 25.9**	**-0.2**
ESKT				SG	**Sg**	**09 43 29.6**	**+0.5**
BORA	**Eskisehir**	**0.29**	**306**	*i* P	**Pg**	**09 43 26.3**	**-1.4**
BORA				IAML_P			
	comp=Z,9μm,0.1s						
SRCK	**Saricakaya, Es**	**0.35**	**343**	PG	**Pg**	**09 43 27.9**	**-0.8**
SRCK				SG	**Sg**	**09 43 34.1**	**+0.7**
SRCK	**Saricakaya, Es**	**0.35**	**343**	*i* P	**Pg**	**09 43 28.8**	**+0.1**
SRCK				*i* S	**Sb**	**09 43 34.5**	**-1.0**
SRCK				IAML_P			
	comp=Z,3μm,0.1s						
AUMIH	**MIHALICIK**	**0.58**	**74**	*i* P	**Pb**	**09 43 33.2**	**-0.8**
AUMIH				*i* S	**Sn**	**09 43 44.0**	**-1.8**
SVRH	**Sivrihisar-ESK**	**0.65**	**114**	PG	**Pg**	**09 43 34.3**	**0.0**
AUSIV	**SIVRIHISAR**	**0.66**	**114**	*i* P	**Pb**	**09 43 34.8**	**-0.6**
GULT	**Gulveren**	**0.75**	**346**	PG	**Pb**	**09 43 36.3**	**-0.5**
BOLV	**Bolvadin**	**1.00**	**171**	*i* P	**Pn**	**09 43 41.8**	**-0.1**
BOLV				*i* S	**Sn**	**09 43 55.3**	**-0.7**
BOLV				IAML_P			
	comp=Z,2μm,0.2s						
KIBS	**BOLU**	**1.10**	**49**	*i* P	**Pn**	**09 43 43.3**	**0.0**
KIBS				*i* S	**Sn**	**09 44 02.3**	**+3.7**
KIBS				IAML_P			
	comp=Z,700nm,0.2s						
SHUT	**Suhut-Afyon**	**1.17**	**188**	PN	**Pn**	**09 43 44.5**	**+0.4**
KIZT	**Kizilcal**	**1.20**	**133**	PN	**Pg**	**09 43 44.9**	**+0.1**
ULDT	**Uludag**	**1.32**	**290**	*i* P	**Pn**	**09 43 45.6**	**-0.7**
ULDT				*i* S	**Sg**	**09 44 07.7**	**+3.4**
ULDT				IAML_P			
	comp=Z,285nm,0.3s						
YLV	**Yalova**	**1.36**	**309**	PN	**Pg**	**09 43 47.6**	**-0.3**
GEMT	**Gemlik**	**1.41**	**302**	PN	**Pb**	**09 43 48.2**	**+0.2**
ARMT	**Armutlu**	**1.69**	**301**	PN	**Pb**	**09 43 52.2**	**-0.6**

JMA 07 09:45:41.6±0.1, 24°.83N×123°.37E, h22km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.49**	**222**	P	Pb	09 45 51.3	-0.3
YOJ				*e*S	Sb	09 45 58.1	-0.2
JYNG	**Yonagunijimaku**	**0.54**	**226**	P	Pb	09 45 52.2	-0.2
JYNG				*e*S	Sb	09 46 00.0	+0.2
IRIF	**Iriomote-Funau**	**0.59**	**146**	P	Pb	09 45 52.9	-0.4
IRIF				S	Sb	09 46 00.9	-0.4
JKRS	**Kuro-shima**	**0.83**	**135**	P	Pb	09 45 57.0	-0.3
JKRS				S	Sb	09 46 07.7	-0.3
JIJ	**Ishigaki jima**	**0.84**	**123**	P	Pb	09 45 57.0	-0.6
JIJ				S	Sb	09 46 09.1	+0.7
HATJ	**Hateruma jima**	**0.87**	**153**	P	Pb	09 45 57.4	-0.5
HATJ				*e*S	Sb	09 46 09.2	+0.1
JISG	**Ishigakijimahi**	**0.89**	**106**	P	Pb	09 45 58.5	+0.2

TAP 07 09:46:02.1, 24°.66N×121°.83E, h8km, ML1.9, 3C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.05**	**160**	⇑*i*P	Pg	09 46 04.0	0.0
TWC				S	Sg	09 46 05.1	-0.1
	baz=151						
ILA	**Ilan**	**0.13**	**325**	*i* P	Pg	09 46 05.2	+0.2
	baz=327						
TWE	**Neicheng**	**0.16**	**292**	⇑*i*P	Pg	09 46 05.3	-0.2
	baz=293						
TWE				S	Sg	09 46 07.7	-0.1
	baz=293						
NTC	**Toucheng**	**0.19**	**0**	*e*P	Pg	09 46 06.1	-0.1
NTC				*e*S	Sg	09 46 08.6	-0.2
ENTT	**Nioudou**	**0.24**	**265**	⇑*i*P	Pg	09 46 06.8	-0.2
	baz=264						
ENTT				*e*S	Sg	09 46 09.9	-0.3
	baz=264						
NANB	**Nanao**	**0.24**	**197**	P	Pg	09 46 07.1	+0.1
	baz=197						
NANB				*e*S	Sg	09 46 10.6	+0.3
	baz=197						
ENA	**Nanau**	**0.24**	**199**	P	Pg	09 46 07.2	+0.1
	baz=197						
ENA				*e*S	Sg	09 46 10.6	+0.2
	baz=197						
NDT	**Datong Townshi**	**0.29**	**259**	*i* P	Pg	09 46 07.8	-0.1
	baz=258						
NDT				*e*S	Sg	09 46 11.8	-0.1
	baz=258						
EOS1	**EOS1**	**0.29**	**112**	P	Pg	09 46 08.4	+0.5
	baz=112						
EOS1				*e*S	Sb	09 46 14.8	+0.2
	baz=112						
TIPB	**Shuangxi**	**0.31**	**359**	P	Pg	09 46 08.2	-0.1
	baz=359						
TIPB				S	Sg	09 46 12.2	-0.3
	baz=359						
NWLT	**Wulai**	**0.32**	**292**	*i* P	Pg	09 46 08.4	-0.1
	baz=291						
NWLT				S	Sg	09 46 13.7	+1.0
	baz=291						
TWB1	**Santiao Chiao**	**0.38**	**23**	*e*P	Pb	09 46 11.1	0.0
	baz=23						
NWF	**Wu-fen Shan**	**0.41**	**354**	*e*P	Pg	09 46 10.8	+0.6
	baz=354						
NWF				*e*S	Sg	09 46 15.8	+0.1
	baz=354						
WFSB	**Wu-fen Shan**	**0.41**	**354**	*e*P	Pg	09 46 10.5	+0.3
	baz=353						
WFSB				*e*S	Sg	09 46 15.8	+0.2
	baz=353						
YHNB	**Yeheng**	**0.41**	**271**	*i* P	Pg	09 46 10.1	-0.2
	baz=271						
NSK	**Sanguang**	**0.43**	**272**	*i* P	Pg	09 46 10.3	-0.3
	baz=271						
NSK				S	Sg	09 46 16.8	+0.5
	baz=271						
NNSB	**Datong**	**0.47**	**241**	P	Pg	09 46 11.0	-0.3
	baz=240						
NNSB				*e*S	Sg	09 46 17.2	-0.2
	baz=240						
NACB	**Ninganchiao**	**0.53**	**204**	*e*P	Pg	09 46 12.7	+0.2
	baz=203						
NACB				*e*S	Sb	09 46 20.5	-0.9
	baz=203						
YM07	**YM07**	**0.55**	**340**	*e*P	Pb	09 46 13.5	-0.6
	baz=339						
ETLH	**Xiulin Townshi**	**0.55**	**215**	*i* P	Pg	09 46 12.7	-0.2
	baz=214						
WHF	**Hehuan Shan**	**0.73**	**225**	*e*P	Pg	09 46 15.8	-0.5
	baz=224						
CHGB	**Renai**	**0.84**	**225**	*e*P	Pg	09 46 18.1	-0.3
	baz=224						
OWD	**Renai**	**0.92**	**220**	*e*P	Pg	09 46 19.4	-0.5
	baz=220						
OWD				*e*S	Sg	09 46 32.3	+0.4
	baz=220						

*SOME **07** 09:49:20.9, 42°.97N×77°.10E, h15km*
*KRNET **07** 09:49:20.9±0.1, 42°.97N×77°.09E, h17km, mb3.7*
*NNC **07** 09:49:20.1±0.3, 42°.93N×77°.12E, h0km, mb3.8, mpv3.8,*
Error ellipse: s-maj=2.9km s-min=1.5km az=171.0
ISC 07 09:49:20.7±0.9, 42°.94N±0°.02×77°.11E±0°.01, h12km±6km, n82, σ0°95/149, 50C-26D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.16**	**309**	P	**Pg**	**09 49 24.2**	**-0.4**
	256nm,0.1s						
TNSS				S	**Sg**	**09 49 26.4**	**-1.0**
	3μm,0.3s						
TNSS	**Tian-Shan**	**0.16**	**309**	⇑*i*P	**Pg**	**09 49 24.2**	**-0.4**
	baz=3.0						
TNSS				⇓*i*S	**Sg**	**09 49 26.4**	**-1.0**
	baz=3.0						
TNSS	**Tian-Shan**	**0.16**	**309**	⇑*i*P	**Pg**	**09 49 24.2**	**-0.4**
	271nm,0.1s						
TNSS				⇓*i*S	**Sg**	**09 49 26.4**	**-1.0**
	3μm,0.3s						
KOTS	**Kotyrbulak**	**0.30**	**360**	P	**Pg**	**09 49 26.6**	**-0.2**
	141nm,0.2s						
KOTS				S	**Sg**	**09 49 30.7**	**-0.3**
	2μm,0.2s						
KOTS	**Kotyrbulak**	**0.30**	**360**	*e*P	**Pg**	**09 49 26.6**	**-0.2**
	baz=3.0						
KOTS				*e*S	**Sg**	**09 49 30.7**	**-0.3**
	baz=3.0						
KOTS	**Kotyrbulak**	**0.30**	**360**	*e*P	**Pg**	**09 49 26.6**	**-0.2**
	141nm,0.2s						
KOTS				*e*S	**Sg**	**09 49 30.6**	**-0.3**
	4μm,0.3s						
KNDC	**Almaty**	**0.30**	**339**	⇑P	**Pg**	**09 49 27.0**	**+0.1**
	22nm,0.2s						
KNDC				⇑S	**Sg**	**09 49 31.3**	**+0.3**
	81nm,0.2s						
AAA	**Alma-Ata**	**0.31**	**332**	P	**Pg**	**09 49 27.3**	**+0.3**
	91nm,0.1s						
AAA				S	**Sg**	**09 49 31.9**	**+0.7**
	2μm,0.2s						
AAA	**Alma-Ata**	**0.31**	**332**	*e*P	**Pg**	**09 49 27.3**	**+0.3**
	baz=32						
AAA				*e*S	**Sg**	**09 49 31.9**	**+0.7**
	baz=32						
AAA	**Alma-Ata**	**0.31**	**332**	*e*P	**Pg**	**09 49 27.3**	**+0.3**
	85nm,0.1s						
AAA				*e*S	**Sg**	**09 49 31.9**	**+0.7**
	2μm,0.2s						
KTBS	**Karatobe**	**0.83**	**338**	P	**Pg**	**09 49 36.4**	**-0.4**
	28nm,0.1s						
KTBS				S	**Sg**	**09 49 47.4**	**-0.4**
	283nm,0.2s						
KTBS	**Karatobe**	**0.83**	**338**	*e*P	**Pg**	**09 49 36.4**	**-0.4**
	baz=30						
KTBS				*e*S	**Sg**	**09 49 47.4**	**-0.4**
	baz=30						
KTBS	**Karatobe**	**0.83**	**338**	*e*P	**Pg**	**09 49 36.4**	**-0.4**
	22nm,0.1s						
KTBS				*e*S	**Sg**	**09 49 47.4**	**-0.4**
	247nm,0.3s						
KST	**Kastek**	**0.85**	**277**	P	**Pg**	**09 49 36.7**	**-0.5**
	153nm,0.2s						
KST				S	**Sg**	**09 49 48.1**	**-0.2**
	204nm,0.5s						
KST	**Kastek**	**0.85**	**277**	*e*P	**Pg**	**09 49 36.7**	**-0.5**
	baz=76						
KST				⇓*i*S	**Sg**	**09 49 48.1**	**-0.2**
	baz=76						
KST	**Kastek**	**0.85**	**277**	*e*P	**Pg**	**09 49 36.7**	**-0.5**
	149nm,0.2s						
KST				⇓*i*S	**Sg**	**09 49 48.1**	**-0.2**
	206nm,0.5s						
CHKK	**Chushkaly**	**0.92**	**354**	P	**Pg**	**09 49 37.8**	**-0.6**
	102nm,0.2s						
CHKK				S	**Sg**	**09 49 50.0**	**-0.5**
	260nm,0.2s						
CHKK	**Chushkaly**	**0.92**	**354**	⇓*i*P	**Pg**	**09 49 37.8**	**-0.6**
	baz=56						
CHKK				⇑*i*S	**Sg**	**09 49 49.9**	**-0.5**
	baz=56						
CHKK	**Chushkaly**	**0.92**	**354**	⇓*i*P	**Pg**	**09 49 37.8**	**-0.6**
	54nm,0.1s						
CHKK				⇑*i*S	**Sg**	**09 49 50.0**	**-0.5**
	260nm,0.3s						
ULHL	**Ulahol**	**0.94**	**223**	⇑P	**Pg**	**09 49 38.7**	**-0.2**
	38nm,0.1s,SNR=22						
ULHL	**Ulahol**	**0.94**	**223**	⇑*i*P	**Pg**	**09 49 38.7**	**-0.2**
	baz=21						
ULHL				⇑*i*S	**Sg**	**09 49 51.4**	**+0.1**
	baz=21						
KURS	**Kuram**	**0.95**	**54**	P	**Pg**	**09 49 38.5**	**-0.5**
	18nm,0.1s						
KURS				S	**Sg**	**09 49 50.7**	**-0.6**
	125nm,0.7s						
KURS	**Kuram**	**0.95**	**54**	⇓*i*P	**Pg**	**09 49 38.5**	**-0.5**
	baz=56						
KURS				⇑*i*S	**Sg**	**09 49 50.8**	**-0.6**
	baz=56						
KURS	**Kuram**	**0.95**	**54**	⇓*i*P	**Pg**	**09 49 38.5**	**-0.5**
	3.1nm,0.1s						
KURS				⇑*i*S	**Sg**	**09 49 50.7**	**-0.6**
	125nm,0.7s						
SATY	**Saty**	**0.95**	**82**	P	**Pg**	**09 49 38.3**	**-0.8**
	56nm,0.2s						
SATY				S	**Sg**	**09 49 50.8**	**-0.8**
	1μm,0.1s						
SATY	**Saty**	**0.95**	**82**	⇓*i*P	**Pg**	**09 49 38.3**	**-0.8**
	56nm,0.2s						
SATY				⇑*i*S	**Sg**	**09 49 50.8**	**-0.8**
	598nm,0.3s						
BOOM	**Boomskoye usch**	**0.97**	**243**	⇓*i*P	**Pg**	**09 49 38.9**	**-0.6**
	baz=41						
BOOM				⇓*i*S	**Sg**	**09 49 52.0**	**-0.2**
	baz=41						
DGS	**Degeres**	**1.03**	**288**	P	**Pb**	**09 49 40.2**	**-0.4**
	89nm,0.1s						
DGS				S	**Sb**	**09 49 53.8**	**-0.2**
	225nm,0.2s						
DGS	**Degeres**	**1.03**	**288**	*e*P	**Pb**	**09 49 40.2**	**-0.4**
	baz=86						
DGS				*e*S	**Sb**	**09 49 53.9**	**-0.2**
	baz=86						
DGS	**Degeres**	**1.03**	**288**	*e*P	**Pb**	**09 49 40.2**	**-0.4**
	63nm,0.2s						
DGS				*e*S	**Sb**	**09 49 53.8**	**-0.2**
	225nm,0.2s						
KUU	**Kurty**	**1.11**	**330**	P	**Pb**	**09 49 41.3**	**-0.6**
	15nm,0.1s						
KUU				S	**Sb**	**09 49 55.7**	**-0.6**
	472nm,0.3s						
KUU	**Kurty**	**1.11**	**330**	⇑*i*P	**Pb**	**09 49 41.3**	**-0.6**
	baz=30						
KUU				⇑*i*S	**Sb**	**09 49 55.7**	**-0.6**
	baz=30						
KUU	**Kurty**	**1.11**	**330**	⇑*i*P	**Pb**	**09 49 41.3**	**-0.6**
	6.3nm,0.1s						
KUU				⇑*i*S	**Sb**	**09 49 55.7**	**-0.6**
	596nm,0.4s						
TKM2	**Tokmak 2**	**1.11**	**270**	⇑P	**Pb**	**09 49 41.4**	**-0.6**
	36nm,0.1s,SNR=38						
TKM2	**Tokmak 2**	**1.11**	**270**	⇓P	**Pb**	**09 49 41.1**	**-0.9**
	6.7nm,0.3s						
TKM2				⇑S	**Sb**	**09 49 56.2**	**-0.4**
	16nm,0.1s						
TKM2	**Tokmak 2**	**1.11**	**270**	⇑*i*P	**Pb**	**09 49 41.2**	**-0.9**
	baz=68						
TKM2				⇑*i*S	**Sb**	**09 49 56.3**	**-0.4**
	baz=68						
KPKS	**Kokpek**	**1.26**	**65**	*e*P	**Pb**	**09 49 44.0**	**-0.5**
	baz=67						
KPKS				*e*S	**Sb**	**09 50 00.3**	**-0.5**
	baz=67						
KPKS	**Kokpek**	**1.26**	**65**	*e*P	**Pb**	**09 49 44.0**	**-0.5**
	163nm,0.2s						
KPKS				*e*S	**Sb**	**09 50 00.3**	**-0.5**
	287nm,0.2s						
ARXS	**Arharly**	**1.38**	**22**	P	**Pb**	**09 49 46.0**	**-0.5**
	79nm,0.1s						
ARXS				S	**Sb**	**09 50 03.7**	**-0.3**
	281nm,0.4s						
ARXS	**Arharly**	**1.38**	**22**	*e*P	**Pb**	**09 49 46.0**	**-0.5**
	34nm,0.1s						
ARXS				*e*S	**Sb**	**09 50 03.7**	**-0.3**
	281nm,0.4s						
MNBS	**Baschi**	**1.48**	**39**	P	**Pg**	**09 49 48.4**	**-0.7**
	58nm,0.2s						
MNBS				S	**Sg**	**09 50 07.8**	**-0.4**
	301nm,0.1s						
MNBS	**Baschi**	**1.48**	**39**	*e*P	**Pg**	**09 49 48.4**	**-0.7**
	baz=45						
MNBS				*e*S	**Sg**	**09 50 07.9**	**-0.4**
	baz=45						
MNBS	**Baschi**	**1.48**	**39**	*e*P	**Pg**	**09 49 48.4**	**-0.7**
	58nm,0.2s						
MNBS				*e*S	**Sg**	**09 50 07.8**	**-0.4**
	301nm,0.1s						
KBK	**Karagaybulak**	**1.62**	**261**	P	**Pb**	**09 49 50.7**	**+0.1**
	54nm,0.1s,SNR=44						
KBK	**Karagaybulak**	**1.62**	**261**	⇓*i*P	**Pb**	**09 49 50.5**	**-0.1**
	baz=60						
KBK				⇓*i*S	**Sg**	**09 50 12.2**	**-0.6**
	baz=60						
KZA	**Kyzart**	**1.62**	**239**	⇑P	**Pb**	**09 49 51.0**	**+0.2**
	20nm,0.1s,SNR=86						
KZA	**Kyzart**	**1.62**	**239**	⇑*i*P	**Pb**	**09 49 50.9**	**0.0**
	baz=38						
KZA				⇑*i*S	**Sg**	**09 50 13.0**	**0.0**
	baz=38						
NRN	**Naryn**	**1.72**	**209**	⇑*i*P	**Pb**	**09 49 52.7**	**+0.3**
	baz=9.0						
NRN				⇑*i*S	**Sg**	**09 50 16.2**	**+0.3**
	baz=9.0						
CHMS	**Chumysh**	**1.73**	**273**	⇑P	**Pb**	**09 49 52.0**	**-0.5**
	23nm,0.1s,SNR=9.5						
CHMS	**Chumysh**	**1.73**	**273**	⇑*i*P	**Pb**	**09 49 51.9**	**-0.6**
	baz=72						
CHMS				⇑*i*S	**Sb**	**09 50 15.3**	**+1.0**
	baz=72						
PDGK	**Podgornoye**	**1.78**	**77**	P	**Pb**	**09 49 53.4**	**0.0**
	26nm,0.3s						
PDGK				S	**Sg**	**09 50 16.5**	**-1.5**
	60nm,0.4s						
PDGK	**Podgornoye**	**1.78**	**77**	⇑P	**Pb**	**09 49 52.6**	**-0.8**
	22nm,0.4s						
PDGK				⇑S	**Sb**	**09 50 15.8**	**0.0**
	28nm,0.3s						
PDGK	**Podgornoye**	**1.78**	**77**	⇑*i*P	**Pb**	**09 49 52.9**	**-0.5**
	baz=78						
PDGK				⇑*i*S	**Sg**	**09 50 16.9**	**-1.1**
	baz=78						
FRU1	**Bishkek**	**1.83**	**267**	⇓*i*P	**Pb**	**09 49 53.9**	**-0.3**
	baz=66						
FRU1				⇓*i*S	**Sg**	**09 50 18.6**	**-0.9**
	baz=66						
USP	**Ospenovka**	**1.94**	**281**	⇑P	**Pb**	**09 49 55.7**	**-0.4**
	50nm,0.2s,SNR=28						
USP	**Ospenovka**	**1.94**	**281**	⇑*i*P	**Pb**	**09 49 55.7**	**-0.4**
	baz=80						
USP				⇑*i*S	**Sb**	**09 50 21.6**	**+1.3**
	baz=80						
AAK	**Ala-Archa**	**1.95**	**262**	⇑P	**Pb**	**09 49 56.2**	**-0.1**
	55nm,0.2s,SNR=48						
AAK	**Ala-Archa**	**1.95**	**262**	⇓P	**Pb**	**09 49 56.2**	**-0.1**
	12nm,0.2s						
AAK				⇑S	**Sb**	**09 50 21.7**	**+1.0**
	19nm,0.3s						
AAK	**Ala-Archa**	**1.95**	**262**	⇑*i*P	**Pb**	**09 49 56.1**	**-0.2**
	baz=61						
AAK				⇑*i*S	**Sg**	**09 50 22.2**	**-1.2**
	baz=61						
UCH	**Uchtor**	**2.05**	**251**	⇓P	**Pb**	**09 49 58.2**	**+0.1**
	38nm,0.2s,SNR=102						
UCH	**Uchtor**	**2.05**	**251**	⇓*i*P	**Pb**	**09 49 57.8**	**-0.3**
	baz=50						
UCH				⇓*i*S	**Sb**	**09 50 24.8**	**+1.1**
	baz=50						
TDK	**Taldyqorghan**	**2.26**	**24**	Pg	**Pb**	**09 50 02.0**	**+0.5**
	101nm,0.4s						
TDK				Lg	Lg	09 50 30.9	
	225nm,0.2s						
TDK	**Taldyqorghan**	**2.26**	**24**	*e*P	**Pb**	**09 50 02.0**	**+0.5**
	78nm,0.5s						
TDK				*e*S	**Sg**	**09 50 30.9**	**-2.5**
	225nm,0.2s						
ARLS	**Aral**	**2.33**	**243**	⇑*i*P	**Pb**	**09 50 01.9**	**-0.8**
	baz=43						
ARLS				⇑*i*S	**Sb**	**09 50 31.6**	**0.0**
	baz=43						
DJR	**Jarkent**	**2.39**	**53**	*e*P	**Pb**	**09 50 04.0**	**+0.3**
	13nm,0.2s						
DJR				*e*S	**Sb**	**09 50 34.6**	**+1.4**
	106nm,0.3s						
KTMS	**Ketmen**	**2.42**	**77**	Pg	**Pb**	**09 50 04.6**	**+0.3**
	27nm,0.2s						
KTMS				Lg	Lg	09 50 35.6	
	128nm,0.3s						
KTMS	**Ketmen**	**2.42**	**77**	*e*P	**Pb**	**09 50 04.6**	**+0.3**
	baz=77						
KTMS				*e*S	**Sb**	**09 50 35.6**	**+1.4**
	baz=77						
KTMS	**Ketmen**	**2.42**	**77**	*e*P	**Pb**	**09 50 04.6**	**+0.3**
	27nm,0.2s						
KTMS				*e*S	**Sb**	**09 50 35.6**	**+1.4**
	128nm,0.3s

MRKS	**Merke**	**2.87**	**267**	Pg	**Pb**	**09 50 12.2**	**+0.3**
	47nm,0.3s						
MRKS				Lg	Lg	09 50 49.6	
	41nm,0.3s						
MRKS	**Merke**	**2.87**	**267**	*e*P	**Pb**	**09 50 13.2**	**+1.4**
	baz=67						
MRKS				*e*S	**Sg**	**09 50 50.2**	**-2.5**
	baz=67						
MRKS	**Merke**	**2.87**	**267**	*e*P	**Pb**	**09 50 13.2**	**+1.4**
	20nm,0.4s						
MRKS				*e*S	**Sg**	**09 50 50.2**	**-2.5**
	41nm,0.3s						
BTLS	**Baital**	**3.05**	**315**	*e*P	**Pb**	**09 50 16.4**	**+1.5**
	baz=14						
BTLS				*e*S	**Sg**	**09 50 56.0**	**-2.7**
	baz=14						
BTLS	**Baital**	**3.05**	**315**	*e*P	**Pb**	**09 50 16.4**	**+1.5**
	1.9nm,0.1s						
BTLS				*e*S	**Sg**	**09 50 56.1**	**-2.7**
	40nm,0.4s						
KK31	**Karatay Array**	**4.84**	**274**	⇑Pg	**Pb**	**09 50 47.9**	**+2.4**
	0.7nm,0.3s,baz=89,slow=14,SNR=31						
KK31				⇓Lg	Lg	09 51 52.2	
	4.9nm,0.4s,baz=90,slow=29,SNR=10						
MAKZ	**Makanchi**	**5.19**	**40**	⇓Pn	**Pn**	**09 50 40.0**	**+1.8**
	1.7nm,0.4s						
MAKZ				⇑Pg	**Pg**	**09 50 57.5**	**-2.5**
	1.0nm,0.5s						
MAKZ				⇑Lg	Lg	09 51 58.9	
	2.3nm,0.3s						
MK31	**Makanchi Array**	**5.33**	**42**	⇑Pn	**Pn**	**09 50 42.1**	**+2.0**
	0.2nm,0.2s,baz=216,slow=15,SNR=15						
MK31				⇓Pg	**Pg**	**09 51 00.1**	**-2.6**
	0.4nm,0.3s,baz=222,slow=15,SNR=5.2						
MK31				⇓Lg	Lg	09 52 04.9	
	2.3nm,0.4s,baz=220,slow=33,SNR=9.7						

ISC 07 10:02:12.5±1.1,**48°.97N**±0°.04×**18°.27E**±0°.05,**h10**km,**n6**, σ**0°.34**/10,**Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOLL	**Kolacno**	**0.40**	**168**	*e*PG	**Pg**	**10 02 20.5**	**+0.2**
KOLL				*e*SG	**Sg**	**10 02 25.4**	**-0.2**
JAVC	**Velka Javorina**	**0.41**	**255**	*e*PG	**Pg**	**10 02 20.4**	**-0.2**
JAVC				*e*SG	**Sb**	**10 02 28.4**	**+0.2**
VYHS	**Vyhne**	**0.60**	**142**	*e*PG	**Pg**	**10 02 23.8**	**-0.4**
VYHS				*e*SG	**Sg**	**10 02 32.3**	**+0.2**
LANS	**Liptovska Anna**	**0.81**	**76**	*e*PG	**Pn**	**10 02 29.9**	**-0.1**
MODS	**Modra-Piesok**	**0.89**	**228**	*e*SG	**Sb**	**10 02 41.9**	**0.0**
MORC	**Moravsky Berou**	**0.94**	**330**	*e*PG	**Pg**	**10 02 30.3**	**-0.3**
MORC				*e*SG	**Sb**	**10 02 44.1**	**+0.6**

*IDC **07** 10:05:08.9±0.9,58°.97S×24°.97W,h0km,mb4.1/5, mb1 4.2/6,mb1mx3.9/23,mbtmp4.1/6,ML4.2/1,MS3.4/4, Ms1 3.4/4,ms1mx3.0/19,Error ellipse: s-maj=39.6km s-min=23.0km az=83.0*

*ISCJB **07** 10:05:12.8±0.7,59°.10S±0°.09×24°.9W±0°.3,h35km,mb4.0/6, MS3.2/2,Error ellipse: s-maj=26.5km s-min=10.5km az=162.9*

*NEIC **07** 10:05:13.6±1.6,59°.07S×25°.51W,h35km,mb4.0/4,Error ellipse: s-maj=87.0km s-min=19.8km az=270.0*

ISC 07 10:05:14.1±0.8,**59°.1S**±0°.1×**24°.9W**±0°.2,**h35**km,**n24**, σ**19°06**/22,**mb4.0/6**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.53**	**156**	P	**Pn**	**10 08 24.2**	**+1.0**
VNA3	**Neumayer Olymp**	**13.73**	**159**	P	**Pn**	**10 08 26.0**	**+0.1**
VNA3				S	Sn	10 10 49.0	-7.8
VNA2	**Neumayer--Watz**	**13.93**	**156**	P	**Pn**	**10 08 29.3**	**+0.7**
	baz=307,slow=15						
VNA2				S	Sn	10 10 53.7	-8.0
	baz=317,slow=26						
SNAA	**Sanae**	**15.48**	**154**	P	**Pn**	**10 08 50.3**	**+0.8**
SNAA				S	Sn	10 11 29.2	-10
SNAA	**Sanae**	**15.48**	**154**	Pn	**Pn**	**10 08 49.8**	**+0.3**
	1.1nm,0.3s,baz=312,slow=14,SNR=61						
SNAA				Sn	Sn	10 11 28.4	-11
	0.1nm,0.3s,baz=324,slow=18,SNR=4.7						
SNAA				LR	LR	10 13 18.7	
	comp=Z,75nm,19.4s,baz=7.5,slow=31						
SNAA	**Sanae**	**15.48**	**154**	*e*Pn	**Pn**	**10 08 50.1**	**+0.6**
	6.9nm,0.6s						
SNAA				*e*Sn	**Sn**	**10 11 36.9**	**-2.6**
PMSA	**Palmer Station**	**19.03**	**236**	LR	LR	10 15 55.5	
	comp=Z,341nm,18.0s,baz=198,slow=34						
QSPA	**South Pole Qui**	**31.17**	**180**	P	**P**	**10 11 30.3**	**+0.8**
	1.6nm,0.7s,baz=206,slow=3.2,SNR=10						
QSPA	**South Pole Qui**	**31.17**	**180**	*e*P	**P**	**10 11 30.2**	**+0.8**
	2.6nm,0.9s						
PLCA	**Paso Flores**	**33.79**	**282**	LR	LR	10 25 57.1	
	comp=Z,44nm,19.4s,baz=230,slow=37						
CFA	**Coronel Fontan**	**39.90**	**294**	P	**P**	**10 12 44.2**	**-0.1**
	1.7nm,0.7s,baz=186,slow=7.2,SNR=4.1						
VNDA	**Vanda**	**43.60**	**182**	P	**P**	**10 13 15.6**	**+1.5**
	1.7nm,0.8s,baz=186,slow=5.3,SNR=8.0						
VNDA	**Vanda**	**43.60**	**182**	*e*P	**P**	**10 13 14.0**	**-0.1**
	1.9nm,0.8s						
LPAZ	**La Paz**	**53.12**	**305**	LR	LR	10 37 56.1	
	comp=Z,19nm,19.1s,baz=275,slow=37						
TOA0	**Torodi Ar. Sit**	**75.15**	**27**	*e*P	**P**	**10 16 53.5**	**+1.1**
	3.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.15**	**27**	P	**P**	**10 16 53.0**	**+0.6**
	1.7nm,0.6s,baz=193,slow=5.5,SNR=11						
TOA1	**Torodi Ar. Sit**	**75.15**	**27**	*e*P	**P**	**10 16 53.0**	**+0.6**
ASAR	**Alice Springs**	**95.73**	**161**	P	**P**	**10 18 35.8**	**-0.5**
	0.6nm,0.8s,baz=201,slow=5.0,SNR=4.5						
YKA	**Yellowknife Ar**	**139.21**	**315**	PKP	**PKPdf**	**10 24 34.6**	**-0.9**
	1.1nm,0.7s,baz=126,slow=2.8,SNR=3.9						
YKB5	**Yellowknife Ar**	**139.21**	**315**	*e*PKPdf	**PKPdf**	**10 24 34.6**	**-0.9**
SONA0	**Songino Array**	**149.60**	**90**	*e*PKPbc	**PKPbc**	**10 24 58.7**	**-0.1**
SONM	**Songino Array**	**149.60**	**90**	PKPbc	**PKPbc**	**10 24 58.7**	**-0.1**
	0.6nm,0.4s,baz=219,slow=3.7,SNR=3.3						
ILAR	**Eielson Array**	**152.98**	**307**	PKPbc	**PKPbc**	**10 25 04.7**	**-1.3**
	1.0nm,0.9s,baz=132,slow=1.3,SNR=8.2						
ILB	**Eielson Array**	**152.98**	**307**	*e*PKPbc	**PKPbc**	**10 25 04.4**	**-1.5**

TRN 07 10:05:32.0,11°.81N×61°.97W,h181km,**MD3.7,Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRHS	**Sauteurs**	**0.52**	**39**	*e*P	Pn	10 05 57.6	+0.7
GRHS				*e*S	Sn	10 06 14.1	-2.2
GRSS	**Sisters**	**0.60**	**36**	*e*P	Pn	10 05 58.4	+1.1
GRSS				*e*S	Sn	10 06 15.7	-1.2
TOSP	**Speyside**	**1.50**	**110**	*i* P	Pn	10 06 02.2	-1.8
TOSP				*e*S	Sn	10 06 22.5	-6.2
FCV	**Fort Charlotte**	**1.51**	**28**	*e*P	Pn	10 06 06.8	+2.7
FCV				*e*S	Sn	10 06 29.1	-0.2
TPP	**Pointe-a-Pierr**	**1.57**	**161**	*e*P	Pn	10 06 03.7	-1.1
TPP				*e*S	Sn	10 06 24.4	-5.8
TBH	**Brigand Hill**	**1.59**	**146**	*e*P	Pn	10 06 03.7	-1.3
TBH				*e*S	Sn	10 06 24.7	-5.8
SVB	**Belmont**	**1.61**	**26**	*e*P	Pn	10 06 08.2	+3.1
SVB				*e*S	Sn	10 06 31.8	+0.8
SVCV	**St. Vincent, C**	**1.66**	**29**	*e*P	Pn	10 06 08.4	+2.8
SVCV				*e*S	Sn	10 06 31.8	0.0
SVV	**Soufriere Volc**	**1.67**	**26**	*e*P	Pn	10 06 08.6	+2.9
SVV				*e*S	Sn	10 06 33.0	+1.1
SSV	**Crater Summit**	**1.69**	**27**	*e*P	Pn	10 06 07.9	+2.0
SSV				*e*S	Sn	10 06 33.0	+0.6
SFAN	**Fancy Village**	**1.75**	**27**	*e*P	Pn	10 06 09.9	+3.4
SFAN				*e*S	Sn	10 06 34.4	+1.1
MCLT	**Moule a Chique**	**2.14**	**28**	*e*P	Pn	10 06 13.4	+2.7
MCLT				*e*S	Sn	10 06 42.4	+1.7
SLB	**Belfond**	**2.20**	**24**	*e*P	Pn	10 06 14.9	+3.5
SLB				*e*S	Sn	10 06 43.3	+1.2
SLPA	**Patience**	**2.27**	**27**	*e*S	Sn	10 06 45.1	+1.6
SLBI	**Saint Lucia, B**	**2.40**	**24**	*e*P	Pn	10 06 16.9	+3.2
SLBI				*e*S	Sn	10 06 47.6	+1.5
SLW	**Petit Monier**	**2.42**	**25**	*e*S	Sn	10 06 47.6	+1.2
BBGH	**Gun Hill**	**2.70**	**60**	*e*P	Pn	10 06 18.5	+1.3
BBGH				*e*S	Sn	10 06 50.5	-1.8
BBSP	**Saint Philip**	**2.77**	**62**	*e*P	Pn	10 06 19.5	+1.5
BBSP				*e*S	Sn	10 06 51.6	-2.1
FDF	**Fort de France**	**3.01**	**15**	*e*P	Pn	10 06 25.4	+4.5
FDF	**Fort de France**	**3.01**	**15**	*e*S	Sn	10 07 02.0	+2.9

*MDD **07** 10:07:17.7±0.3,43°.14N×0°.61W,h9km±2km,mbLg3.6/35, Error ellipse: s-maj=3.6km s-min=2.6km az=162.0, PRXIMO*

*STR **07** 10:07:18.6±0.3,43°.N±3°.×°.±°,h7km±2km,M3.8/7,mB4.7/1, mb4.1/2,MLv3.7/7,Mw(mB)3.9/1*

*INMG **07** 10:07:18.5±1.7,43°.17N×0°.63W,h9km±3km,MD3.4,ML3.3, Error ellipse: s-maj=4.5km s-min=2.5km az=28.0*

*LDG **07** 10:07:18.3±0.1,43°.12N×0°.60W,h6km,Md3.6/7,Ml3.8/73, Error ellipse: s-maj=1.5km s-min=1.1km az=138.0*

*SFS **07** 10:07:19.0,43°.12N×0°.66W,h6km,ML3.6,OLORON STE MARIE (FRANCIA)*

*IGIL **07** 10:07:20.4,43°.13N×0°.66W,h6km*

ISC 07 10:07:17.6±0.8,**43°.14N**±0°.02×**0°.60W**±0°.02,**h17**km±5km, **n217**,σ**2°31**/406,**2C-10D**,**Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.09**	**236**	⇓Pg	**Pg**	**10 07 20.6**	**-0.5**
	6μm,0.1s,SNR=18						
ATE				Lg	Lg	10 07 22.1	
	32μm,0.2s,SNR=7.9						
ATE	**Arette**	**0.09**	**236**	Pg	**Pg**	**10 07 20.6**	**-0.5**
ATE				Sg	**Sg**	**10 07 21.9**	**-1.6**
ETSF	**Etsaut**	**0.24**	**174**	*e*Pg	**Pg**	**10 07 22.7**	**-0.4**
ETSF				*e*Sg	**Sg**	**10 07 25.6**	**-1.3**
	18μm,0.3s						
ETSF	**Etsaut**	**0.24**	**174**	Pg	**Pg**	**10 07 22.7**	**-0.4**
ETSF				Lg	Lg	10 07 25.6	
	9μm,0.3s						
URDF	**Urds**	**0.30**	**0**	Pg	**Pb**	**10 07 25.8**	**+1.2**
URDF				Sg	**Sb**	**10 07 31.6**	**+2.4**
PYLO	**Lourdes**	**0.40**	**95**	Pg	**Pg**	**10 07 26.7**	**+0.8**
PYLO				Sg	**Sg**	**10 07 32.7**	**+1.2**
SJPF	**Ste Jean**	**0.46**	**267**	*e*Pg	**Pg**	**10 07 26.8**	**-0.1**
	SNR=1.0						
SJPF				*e*Sg	**Sg**	**10 07 33.0**	**-0.2**
	3μm,0.2s						
SJPF	**Ste Jean**	**0.46**	**267**	Pg	**Pg**	**10 07 26.8**	**-0.1**
SJPF				Lg	Lg	10 07 33.0	
	1μm,0.2s						
EORO	**Oroz-Betelu**	**0.58**	**245**	Pg	**Pg**	**10 07 28.8**	**-0.3**
	398nm,0.2s,SNR=1847						
EORO				Lg	Lg	10 07 36.0	
	14nm,0.4s						
TERF	**Tercis-les-Bai**	**0.66**	**325**	Pg	**Pb**	**10 07 32.0**	**+1.4**
TERF				Sg	**Sn**	**10 07 42.6**	**+0.4**
EALK	**Alkurruntz**	**0.67**	**277**	⇑Pg	**Pg**	**10 07 30.0**	**-0.8**
	78nm,0.1s,SNR=18						
EALK				Lg	Lg	10 07 38.7	
	2μm,0.2s						
EALK	**Alkurruntz**	**0.67**	**277**	Pg	**Pg**	**10 07 30.3**	**-0.5**
EPF	**Esparros**	**0.69**	**98**	*e*Pg	**Pg**	**10 07 31.7**	**+0.5**
	SNR=1.0						
EPF				*e*Sg	**Sg**	**10 07 40.5**	**0.0**
EPF				*e*Sn	**Sn**	**10 07 43.1**	**0.0**
	1μm,0.2s						
EPF	**Esparros**	**0.69**	**98**	Pg	**Pg**	**10 07 31.7**	**+0.5**
EPF				Lg	Lg	10 07 40.5	
EPF				Sn	**Sn**	**10 07 43.1**	**0.0**
	544nm,0.2s						
IUNC	**Unciti**	**0.77**	**240**	⇓Pg	**Pb**	**10 07 32.6**	**+0.1**
	96nm,0.1s,SNR=18						
IUNC				Lg	Lg	10 07 43.3	
	2μm,0.2s,SNR=7.9						
EARA	**Aranguren**	**0.81**	**244**	⇓Pg	**Pg**	**10 07 33.3**	**-0.1**
	117nm,0.1s,SNR=18						
EARA				Lg	Lg	10 07 44.5	
	532nm,0.1s,SNR=38						
EARA	**Aranguren**	**0.81**	**244**	Pg	**Pg**	**10 07 33.3**	**-0.1**
MLS	**Moulis**	**1.25**	**98**	Pn	**Pb**	**10 07 41.8**	**+1.0**
MLS				Pg	**Pg**	**10 07 42.3**	**+0.6**
MLS				Sg	**Sg**	**10 07 59.1**	**+1.0**
ESAC	**San Caprasio**	**1.42**	**176**	⇓Pg	**Pb**	**10 07 44.1**	**+0.5**
	447nm,0.3s,SNR=18						
ESAC				Lg	Lg	10 08 03.3	
	2μm,0.2s,SNR=18						
CSOR	**Sort**	**1.48**	**120**	⇓Pn	**Pb**	**10 07 45.9**	**+1.1**
	35nm,0.2s,SNR=18						
CSOR				Pg	**Pg**	**10 07 47.8**	**+1.6**
	212nm,0.2s,SNR=7.9						
CSOR				Lg	Lg	10 08 05.2	
	720nm,0.2s						
LRVF	**chteau la Riv**	**1.82**	**6**	Pg	**Pg**	**10 07 53.4**	**+0.7**
EMIR	**Miracle**	**1.99**	**127**	Pn	**Pb**	**10 07 53.1**	**-0.2**
	1.3nm,0.3s,SNR=7.9						
EMIR				Pg	**Pg**	**10 07 55.5**	**-0.3**
	145nm,0.2s,SNR=168						
EMIR				Lg	Lg	10 08 21.4	
	1μm,0.3s						
CLLI	**Llivia**	**2.00**	**108**	⇓Pn	**Pb**	**10 07 55.5**	**+1.9**
	5.4nm,0.2s,SNR=18						
CLLI				Pg	**Pg**	**10 07 57.0**	**+1.0**
	52nm,0.2s,SNR=7.9						
CLLI				Lg	Lg	10 08 22.1	
	487nm,0.3s,SNR=6.3						
LFF	**La Frestale**	**2.04**	**28**	*e*Pn	**Pn**	**10 07 51.9**	**+0.7**
	SNR=1.0						
LFF	**La Frestale**	**2.04**	**28**	*e*Pg	**Pg**	**10 07 57.3**	**+0.5**
LFF				*e*Sn	**Sn**	**10 08 17.1**	**+0.8**
	145nm,0.2s,SNR=1.0						
LFF				*e*Sg	**Sg**	**10 08 24.7**	**+1.3**
	605nm,0.4s						
LFF	**La Frestale**	**2.04**	**28**	Pn	**Pn**	**10 07 51.9**	**+0.7**
LFF				Pg	**Pg**	**10 07 57.3**	**+0.5**
LFF				Sn	**Sn**	**10 08 17.1**	**+0.8**
	72nm,0.2s						
LFF				Lg	Lg	10 08 24.7	
	303nm,0.4s						
MTLF	**Montolieu**	**2.06**	**83**	*e*Pn	**Pn**	**10 07 52.1**	**+0.6**
	SNR=1.0						
MTLF	**Montolieu**	**2.06**	**83**	*e*Pg	**Pb**	**10 07 56.3**	**+1.7**
MTLF				*e*Sn	**Sn**	**10 08 16.2**	**-0.7**
MTLF				*e*Sg	**Sb**	**10 08 23.4**	**+3.4**
	289nm,0.3s,SNR=1.0						
MTLF	**Montolieu**	**2.06**	**83**	Pn	**Pn**	**10 07 52.1**	**+0.6**
MTLF				Pg	**Pb**	**10 07 56.3**	**+1.7**
MTLF				Sn	**Sn**	**10 08 16.2**	**-0.7**
MTLF				Lg	Lg	10 08 23.4	
	144nm,0.3s						
MTLF	**Montolieu**	**2.06**	**83**	Pn	**Pn**	**10 07 52.3**	**+0.8**
EPOB	**Poblet**	**2.17**	**145**	⇓Pn	**Pn**	**10 07 54.5**	**+1.5**
	1.7nm,0.1s,SNR=18						
EPOB				Pg	**Pb**	**10 07 58.1**	**+1.6**
	16nm,0.1s,SNR=36						
EPOB				Lg	Lg	10 08 25.2	
	358nm,0.2s						
ERTA	**Horta de San J**	**2.29**	**162**	⇓Pn	**Pn**	**10 07 55.8**	**+1.2**
	1.6nm,0.2s,SNR=18						
ERTA				Pg	**Pb**	**10 07 59.9**	**+1.5**
	10nm,0.1s,SNR=7.9						
ERTA				Sn	**Sn**	**10 08 23.1**	**+0.8**
	56nm,0.2s,SNR=19						
ERTA				Lg	Lg	10 08 28.4	
	392nm,0.3s						
EBR	**Ebro Roquetas**	**2.45**	**160**	Pn	**Pb**	**10 08 00.6**	**-0.6**
	31nm,0.1s,SNR=7.9						
EBR				Pg	**Pg**	**10 08 04.3**	**-0.3**
	109nm,0.3s,SNR=7.9						
EBR				Lg	Lg	10 08 34.3	
	2μm,0.3s,SNR=7.9						
ETOR	**Torete**	**2.56**	**206**	Pn	**Pn**	**10 08 00.1**	**+1.7**
	2.7nm,0.1s,SNR=56						
ETOR				Sn	**Sn**	**10 08 31.1**	**+1.9**
	37nm,0.2s,SNR=7.7						
ETOR				Lg	Lg	10 08 38.3	
	91nm,0.3s,SNR=5.5						
CAF	**Calviac**	**2.62**	**46**	*e*P	**Pn**	**10 07 59.7**	**+0.5**
	SNR=1.0						
CAF	**Calviac**	**2.62**	**46**	*e*Pg	**Pg**	**10 08 07.8**	**-0.1**
CAF				*e*Sn	**Sn**	**10 08 30.2**	**-0.4**
	65nm,0.2s,SNR=1.0						
CAF				*e*Sg	**Sg**	**10 08 42.8**	**+0.9**
	213nm,0.3s						
CAF	**Calviac**	**2.62**	**46**	Pn	**Pn**	**10 07 59.7**	**+0.5**
CAF				Pg	**Pg**	**10 08 07.8**	**-0.1**
CAF				Sn	**Sn**	**10 08 30.2**	**-0.4**
	33nm,0.2s						
CAF				Lg	Lg	10 08 42.8	
	106nm,0.3s						
CFON	**Fontmartina**	**2.63**	**120**	⇓Pn	**Pn**	**10 08 02.1**	**+2.7**
	64nm,0.2s,SNR=18						
CFON				Pg	**Pb**	**10 08 06.7**	**+2.4**
	68nm,0.2s,SNR=9.0						
CFON				Lg	Lg	10 08 40.9	
	2μm,0.2s,SNR=11						
SJAF	**Saint Jean de**	**2.64**	**103**	Pn	**Pb**	**10 08 03.1**	**-1.3**
	2.9nm,0.3s,SNR=7.9						
SJAF				Pg	**Pg**	**10 08 07.5**	**-0.7**
	61nm,0.3s,SNR=7.9						
SJAF				Lg	Lg	10 08 42.3	
	65nm,0.2s,SNR=7.9						
RJF	**Les Rejaudoux**	**2.65**	**34**	*e*P	**Pn**	**10 08 00.0**	**+0.5**
	SNR=1.0						
RJF	**Les Rejaudoux**	**2.65**	**34**	*e*Pg	**Pg**	**10 08 08.2**	**-0.1**
RJF				*e*Sn	**Sn**	**10 08 30.5**	**-0.7**
	63nm,0.2s,SNR=1.0						
RJF				*e*Sg	**Sg**	**10 08 43.3**	**+0.7**
	197nm,0.2s						
RJF	**Les Rejaudoux**	**2.65**	**34**	Pn	**Pn**	**10 08 00.0**	**+0.5**
RJF				Pg	**Pg**	**10 08 08.2**	**-0.1**
RJF				Sn	**Sn**	**10 08 30.5**	**-0.7**
	32nm,0.2s						
RJF				Lg	Lg	10 08 43.3	
	99nm,0.2s						
EJON	**La Jonquera**	**2.66**	**104**	Pn	**Pb**	**10 08 03.3**	**-1.4**
	0.7nm,0.1s,SNR=54						
EJON				Pg	**Pg**	**10 08 07.6**	**-0.9**
	74nm,0.3s,SNR=7.9						
EJON				Lg	Lg	10 08 42.3	
	244nm,0.3s,SNR=5.1						
EMOS	**Mosqueruela**	**2.77**	**178**	Pn	**Pn**	**10 08 03.2**	**+1.8**
	0.8nm,0.1s,SNR=39						
EMOS				Sn	**Sn**	**10 08 34.5**	**0.0**
	32nm,0.3s,SNR=6.1						
EMOS				Lg	Lg	10 08 42.7	
	95nm,0.2s,SNR=11						
LASF	**Ste Croix**	**3.37**	**72**	*e*Pn	**Pn**	**10 08 09.9**	**+0.5**
	SNR=1.0						
LASF	**Ste Croix**	**3.37**	**72**	*e*Pg	**Pb**	**10 08 19.7**	**+2.9**
LASF				*e*Sn	**Sn**	**10 08 48.1**	**-0.9**
	61nm,0.2s,SNR=1.0						
LASF				*e*Sg	**Sg**	**10 09 04.4**	**-1.3**
	105nm,0.4s						
LASF	**Ste Croix**	**3.37**	**72**	Pn	**Pn**	**10 08 09.9**	**+0.5**
LASF				Pg	**Pb**	**10 08 19.7**	**+2.9**
LASF				Sn	**Sn**	**10 08 48.1**	**-0.9**
	30nm,0.2s						
LASF				Lg	Lg	10 09 04.4	
	52nm,0.4s						
EARI	**Arriondas**	**3.38**	**274**	Pn	**Pn**	**10 08 09.8**	**+0.3**
	0.1nm,0.1s,SNR=37						
EARI				Sn	**Sn**	**10 08 51.6**	**+2.3**
	29nm,0.3s,SNR=6.4						
UCM	**Universidad Co**	**3.45**	**216**	*e*P	**Pn**	**10 08 12.8**	**+2.2**
MFF	**Saint Martin d**	**3.48**	**5**	*e*Pn	**Pn**	**10 08 10.5**	**-0.4**
	SNR=1.0						
MFF	**Saint Martin d**	**3.48**	**5**	*e*Pg	**Pb**	**10 08 21.7**	**+3.0**
MFF				*e*Sn	**Sn**	**10 08 50.5**	**-1.2**
	46nm,0.3s						
MFF				*e*Sg	**Sg**	**10 09 09.2**	**-0.1**
	100nm,0.2s						
MFF	**Saint Martin d**	**3.48**	**5**	Pn	**Pn**	**10 08 10.5**	**-0.4**
MFF				Pg	**Pb**	**10 08 21.7**	**+3.0**
MFF				Sn	**Sn**	**10 08 50.5**	**-1.2**
	23nm,0.3s						
MFF				Lg	Lg	10 09 09.2	
	50nm,0.2s						
ECHE	**Chera**	**3.55**	**185**	Pn	**Pn**	**10 08 12.5**	**+0.5**
	0.8nm,0.1s,SNR=7.9						
ECHE				Pg	**Pg**	**10 08 23.7**	**-2.0**
	3.7nm,0.2s,SNR=7.9						
ECHE				Lg	Lg	10 09 07.1	
	30nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**3.64**	**228**	Pn	**Pn**	**10 08 14.9**	**+1.6**
	0.0nm,0.2s,SNR=34						
GUD				Sn	**Sn**	**10 08 56.3**	**+0.4**
	52nm,0.3s,SNR=9.1						
GUD				Lg	Lg	10 09 13.2	
	25nm,0.3s						
PYM	**Petit Puy Mans**	**3.67**	**43**	Pn	**Pn**	**10 08 14.6**	**+0.9**
TCF	**Toulx Ste Croi**	**3.73**	**31**	*e*Pn	**Pn**	**10 08 14.7**	**+0.3**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.73**	**31**	*e*P	**Pn**	**10 08 18.1**	**+3.7**
TCF				*e*Sn	**Sn**	**10 08 56.0**	**-2.0**
	33nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.73**	**31**	Pn	**Pn**	**10 08 14.7**	**+0.3**
TCF				Sn	**Sn**	**10 08 56.0**	**-2.0**
	16nm,0.2s						
VIVF	**Saint-Julien-l**	**4.17**	**64**	*e*Pn	**Pn**	**10 08 20.8**	**+0.3**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**4.17**	**64**	*e*P	**Pn**	**10 08 24.7**	**+4.2**
VIVF				*e*Sn	**Sn**	**10 09 07.2**	**-1.6**
	17nm,0.2s,SNR=1.0						
VIVF				*e*Sg	**Sg**	**10 09 30.5**	**-1.0**
	27nm,0.3s						
VIVF	**Saint-Julien-l**	**4.17**	**64**	Pn	**Pn**	**10 08 20.8**	**+0.3**
VIVF				Sn	**Sn**	**10 09 07.2**	**-1.6**
	8.4nm,0.2s						
VIVF				Lg	Lg	10 09 30.5	
	14nm,0.3s						
BGF	**Bois d'Agland**	**4.21**	**34**	*e*Pn	**Pn**	**10 08 20.9**	**0.0**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**10 09 07.8**	**-1.8**
	104nm,0.4s,SNR=1.0						
BGF				*e*Sg	**Sg**	**10 09 30.1**	**-2.5**
	373nm,0.3s						
BGF	**Bois d'Agland**	**4.21**	**34**	Pn	**Pn**	**10 08 20.9**	**0.0**
BGF				Sn	**Sn**	**10 09 07.8**	**-1.8**
	52nm,0.4s						
BGF				Lg	Lg	10 09 30.1	
	186nm,0.3s						
ESDC	**Sonseca Array**	**4.29**	**217**	Pn	**Pn**	**10 08 22.8**	**+0.7**
	16nm,0.2s,baz=39,slow=13,SNR=42						
ESDC				Sn	**Sn**	**10 09 11.2**	**-0.6**

SMF					*e*Sn	**Sn**	**10 09 20.4**	**-1.8**
	9.3nm,0.2s							
SMF					*e*Sg	**Sg**	**10 09 46.0**	**-2.9**
	25nm,0.3s							
SMF	**Signal de Mont**	**4.71**	**40**	Pn		**Pn**	**10 08 28.0**	**+0.1**
SMF				Sn		**Sn**	**10 09 20.4**	**-1.8**
	4.7nm,0.2s							
SMF				Lg		Lg	10 09 46.0	
	12nm,0.3s							
HYF	**Humbligny**	**4.72**	**28**	*e*Pn		**Pn**	**10 08 28.4**	**+0.4**
HYF	**Humbligny**	**4.72**	**28**	*e*P		**Pn**	**10 08 32.3**	**+4.3**
HYF				*e*Sn		**Sn**	**10 09 21.0**	**-1.3**
HYF				*e*Sg		**Sg**	**10 09 47.2**	**-1.9**
HYF	**Humbligny**	**4.72**	**28**	Pn		**Pn**	**10 08 28.4**	**+0.4**
HYF				Sn		**Sn**	**10 09 21.0**	**-1.3**
HYF				Lg		Lg	10 09 47.2	
PBRG	**Braganca**	**4.74**	**256**	*e*Pn		**Pn**	**10 08 29.8**	**+1.5**
PBRG				*e*Sn		**Sn**	**10 09 21.3**	**-1.5**
PBRG				A		A	10 09 51.1	
	35nm,0.5s							
PBRG	**Braganca**	**4.74**	**256**	Pn		**Pn**	**10 08 29.8**	**+1.5**
PBRG				Sn		**Sn**	**10 09 21.3**	**-1.5**
	17nm,0.5s							
EPON	**Pontenova**	**4.79**	**275**	Pn		**Pn**	**10 08 30.0**	**+1.0**
	0.9nm,0.2s,SNR=18							
EPON				Sn		**Sn**	**10 09 22.7**	**-1.4**
	4.0nm,0.2s,SNR=6.1							
EPON				Lg		Lg	10 09 54.2	
	15nm,0.3s,SNR=4.0							
SSF	**Saint Saulge**	**4.88**	**35**	*e*Pn		**Pn**	**10 08 29.6**	**-0.6**
	SNR=1.0							
SSF				*e*Sn		**Sn**	**10 09 24.6**	**-1.7**
	13nm,0.2s							
SSF				*e*Sg		**Sg**	**10 09 51.4**	**-2.8**
	90nm,0.6s							
SSF	**Saint Saulge**	**4.88**	**35**	Pn		**Pn**	**10 08 29.6**	**-0.6**
SSF				Sn		**Sn**	**10 09 24.6**	**-1.7**
	6.4nm,0.2s							
SSF				Lg		Lg	10 09 51.4	
	45nm,0.6s							
BLAF	**les Blancs**	**4.89**	**78**	Pn		**Pn**	**10 08 31.9**	**+1.4**
ORIF	**Oris-en-Rattie**	**5.00**	**67**	*e*Pn		**Pn**	**10 08 32.3**	**+0.4**
	SNR=1.0							
ORIF	**Oris-en-Rattie**	**5.00**	**67**	*e*P		**Pn**	**10 08 36.2**	**+4.3**
ORIF				*e*Sn		**Sn**	**10 09 26.2**	**-3.1**
	16nm,0.3s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**5.00**	**67**	Pn		**Pn**	**10 08 32.3**	**+0.4**
ORIF				Sn		**Sn**	**10 09 26.2**	**-3.1**
	7.9nm,0.3s							
OGDI	**Digne**	**5.10**	**77**	Pn		**Pn**	**10 08 33.9**	**+0.6**
QUIF	**Quistinic**	**5.11**	**340**	*e*Pn		**Pn**	**10 08 33.4**	**+0.1**
	SNR=1.0							
QUIF				*e*Sn		**Sn**	**10 09 27.7**	**-4.1**
	27nm,0.2s							
QUIF				*e*Sg		**Sg**	**10 10 00.4**	**-1.1**
	31nm,0.3s							
QUIF	**Quistinic**	**5.11**	**340**	Pn		**Pn**	**10 08 33.4**	**+0.1**
QUIF				Sn		**Sn**	**10 09 27.7**	**-4.1**
	14nm,0.2s							
QUIF				Lg		Lg	10 10 00.4	
	15nm,0.3s							
EPLA	**Plasencia**	**5.13**	**235**	Pn		**Pn**	**10 08 34.4**	**+0.7**
	2.3nm,0.2s,SNR=24							
EPLA				Sn		**Sn**	**10 09 29.6**	**-3.0**
	12nm,0.1s,SNR=7.1							
EPLA				Lg		Lg	10 09 57.4	
	12nm,0.2s							
MVO	**Moncorvo**	**5.17**	**250**	⇑*i*Pn		**Pn**	**10 08 35.5**	**+1.2**
MVO				*e*Sn		**Sn**	**10 09 31.7**	**-1.9**
MVO				*e*Sg		**Sb**	**10 09 56.0**	**+6.5**
MVO				A		A	10 10 02.8	
	64nm,0.5s							
MVO	**Moncorvo**	**5.17**	**250**	Pn		**Pn**	**10 08 35.1**	**+0.9**
	12nm,0.2s,SNR=37							
MVO				Sn		**Sn**	**10 09 31.0**	**-2.6**
	13nm,0.2s,SNR=5.8							
MVO				Lg		Lg	10 09 55.8	
	80nm,0.3s,SNR=6.0							
LOR	**Lormes**	**5.19**	**36**	*e*Pn		**Pn**	**10 08 34.8**	**+0.3**
	SNR=1.0							
LOR				*e*Sn		**Sn**	**10 09 31.5**	**-2.5**
	9.8nm,0.2s							
LOR				*e*Sg		**Sg**	**10 10 02.1**	**-2.1**
	60nm,0.5s							
LOR	**Lormes**	**5.19**	**36**	Pn		**Pn**	**10 08 34.8**	**+0.3**
LOR				Sn		**Sn**	**10 09 31.5**	**-2.5**
	4.9nm,0.2s							
LOR				Lg		Lg	10 10 02.1	
	30nm,0.5s							
LOR	**Lormes**	**5.19**	**36**	Pn		**Pn**	**10 08 35.0**	**+0.6**
LMR	**La Mourre**	**5.19**	**85**	*e*Pn		**Pn**	**10 08 34.4**	**-0.1**
	SNR=1.0							
LMR	**La Mourre**	**5.19**	**85**	*e*P		**Pn**	**10 08 38.2**	**+3.7**
LMR				*e*Sn		**Sn**	**10 09 31.0**	**-3.0**
	5.7nm,0.2s,SNR=1.0							
LMR				*e*Sg		**Sg**	**10 10 01.0**	**-3.3**
	6.8nm,0.3s,SNR=1.0							
LMR	**La Mourre**	**5.19**	**85**	Pn		**Pn**	**10 08 34.4**	**-0.1**
LMR				Sn		**Sn**	**10 09 31.0**	**-3.0**
	2.8nm,0.2s							
LMR				Lg		Lg	10 10 01.0	
	3.4nm,0.3s							
SESP	**Santiago Espad**	**5.23**	**197**	Pn		**Pn**	**10 08 36.9**	**+1.7**
	1.4nm,0.1s,SNR=7.9							
SESP				Sn		**Sn**	**10 09 33.6**	**-1.4**
	6.0nm,0.2s,SNR=7.9							
SESP				Lg		Lg	10 10 01.0	
	12nm,0.2s,SNR=7.9							
GRR	**Gorron**	**5.25**	**358**	*e*Pn		**Pn**	**10 08 34.8**	**-0.5**
	SNR=1.0							
GRR				*e*Sn		**Sn**	**10 09 32.7**	**-2.7**
	20nm,0.3s,SNR=1.0							
GRR				*e*Sg		**Sg**	**10 10 05.2**	**-1.0**
	43nm,0.4s							
GRR	**Gorron**	**5.25**	**358**	Pn		**Pn**	**10 08 34.8**	**-0.5**
GRR				Sn		**Sn**	**10 09 32.7**	**-2.7**
	9.9nm,0.3s							
GRR				Lg		Lg	10 10 05.2	
	22nm,0.4s							
FRF	**La Foret Royal**	**5.30**	**83**	*e*Pn		**Pn**	**10 08 35.9**	**0.0**
	SNR=1.0							
FRF	**La Foret Royal**	**5.30**	**83**	*e*P		**Pn**	**10 08 39.5**	**+3.6**
FRF				*e*Sn		**Sn**	**10 09 33.3**	**-3.2**
	13nm,0.3s							
FRF				*e*Sg		**Sg**	**10 10 04.9**	**-2.7**
	14nm,0.3s							
FRF	**La Foret Royal**	**5.30**	**83**	Pn		**Pn**	**10 08 35.9**	**0.0**
FRF				Sn		**Sn**	**10 09 33.3**	**-3.2**
	6.5nm,0.3s							
FRF				Lg		Lg	10 10 04.9	
	7.0nm,0.3s							
SGMF	**Saint Gilles**	**5.30**	**346**	*e*Pn		**Pn**	**10 08 35.7**	**-0.2**
	SNR=1.0							
SGMF				*e*Sn		**Sn**	**10 09 33.7**	**-2.8**
	10.0nm,0.2s							
SGMF				*e*Sg		**Sg**	**10 10 06.0**	**-1.6**
	50nm,0.4s							
SGMF	**Saint Gilles**	**5.30**	**346**	Pn		**Pn**	**10 08 35.7**	**-0.2**
SGMF				Sn		**Sn**	**10 09 33.7**	**-2.8**
	5.0nm,0.2s							
SGMF				Lg		Lg	10 10 06.0	
	25nm,0.4s							
EMUR	**La Murta**	**5.31**	**186**	Pn		**Pn**	**10 08 37.6**	**+1.5**
	2.3nm,0.2s,SNR=6.3							
EMUR				Lg		Lg	10 10 03.4	
	5.2nm,0.3s							
LDF	**La Druitiere**	**5.47**	**3**	*e*Pn		**Pn**	**10 08 37.8**	**-0.4**
LDF				*e*Sn		**Sn**	**10 09 35.8**	**-4.9**
	9.9nm,0.2s							
LDF				*e*Sg		**Sg**	**10 10 11.7**	**-1.3**
	60nm,0.5s							
EAGO	**Agolada(Pontev**	**5.51**	**269**	Pn		**Pn**	**10 08 39.5**	**+0.6**
	2.1nm,0.1s,SNR=7.9							
EAGO				Sn		**Sn**	**10 09 40.3**	**-1.5**
	2.5nm,0.1s,SNR=7.9							
EAGO				Lg		Lg	10 10 16.0	
	11nm,0.3s,SNR=4.0							
ROSF	**Rostrenen**	**5.53**	**341**	*e*Pn		**Pn**	**10 08 38.9**	**-0.1**
	SNR=1.0							
ROSF				*e*Sn		**Sn**	**10 09 38.2**	**-4.0**
	16nm,0.2s							
ROSF				*e*Sg		**Sg**	**10 10 13.2**	**-1.7**
	36nm,0.4s							
ROSF	**Rostrenen**	**5.53**	**341**	Pn		**Pn**	**10 08 38.9**	**-0.1**
ROSF				Sn		**Sn**	**10 09 38.2**	**-4.0**
	7.9nm,0.2s							
ROSF				Lg		Lg	10 10 13.2	
	18nm,0.4s							
MBDF	**Montbardon**	**5.55**	**71**	*e*P		**Pn**	**10 08 42.8**	**+3.2**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**10 09 40.3**	**-2.7**
	9.5nm,0.4s							
MBDF				*e*Sg		**Sg**	**10 10 13.6**	**-2.2**
	7.2nm,0.5s							
MBDF	**Montbardon**	**5.55**	**71**	Pn		**Pn**	**10 08 42.8**	**+3.2**
MBDF				Sn		**Sn**	**10 09 40.3**	**-2.7**
	4.8nm,0.4s							
MBDF				Lg		Lg	10 10 13.6	
	3.6nm,0.5s							
PVRL	**Vila Real**	**5.61**	**253**	*e*Pn		**Pn**	**10 08 41.3**	**+1.1**
PVRL				*e*Sn		**Sn**	**10 09 41.8**	**-2.4**
PVRL				*e*Sg		**Sb**	**10 10 08.7**	**+6.8**
PVRL				A		A	10 10 22.2	
	44nm,0.5s							
PVRL	**Vila Real**	**5.61**	**253**	Pn		**Pn**	**10 08 41.3**	**+1.1**
PVRL				Sn		**Sn**	**10 09 41.8**	**-2.4**
PVRL				Lg		Lg	10 10 08.7	
	22nm,0.5s							
POLO	**Lamas de Olo**	**5.62**	**254**	*e*Pn		**Pn**	**10 08 41.6**	**+1.1**
POLO				*e*Sn		**Sn**	**10 09 42.2**	**-2.6**
POLO				*e*Sg		**Sb**	**10 10 09.7**	**+7.2**
POLO				A		A	10 10 18.4	
	21nm,0.6s							
POLO	**Lamas de Olo**	**5.62**	**254**	Pn		**Pn**	**10 08 41.6**	**+1.1**
POLO				Sn		**Sn**	**10 09 42.2**	**-2.6**
POLO				Lg		Lg	10 10 09.7	
	21nm,0.6s							
FLN	**La Foliniere**	**5.63**	**1**	*e*Pn		**Pn**	**10 08 40.4**	**0.0**
	baz=189,SNR=1.0							
FLN				*e*Sn		**Sn**	**10 09 40.5**	**-4.1**
	21nm,0.3s,SNR=1.0							
FLN				*e*Sg		**Sg**	**10 10 15.9**	**-2.2**
	40nm,0.4s							
FLN	**La Foliniere**	**5.63**	**1**	Pn		**Pn**	**10 08 40.4**	**0.0**
FLN				Sn		**Sn**	**10 09 40.5**	**-4.1**
	10nm,0.3s							
FLN				Lg		Lg	10 10 15.9	
	20nm,0.4s							
EQES	**Quesada**	**5.65**	**200**	Pn		**Pn**	**10 08 42.7**	**+1.8**
	2.2nm,0.2s,SNR=17							
EQES				Lg		Lg	10 10 16.2	
	8.5nm,0.3s							
ELOB	**Lobios**	**5.66**	**260**	Pn		**Pn**	**10 08 41.9**	**+0.9**
	2.5nm,0.1s,SNR=18							
ELOB				Sn		**Sn**	**10 09 42.8**	**-2.9**
	4.9nm,0.2s,SNR=7.9							
ELOB				Lg		Lg	10 10 14.2	
	18nm,0.3s							
PCAB	**Cabril**	**5.68**	**258**	*e*Pn		**Pn**	**10 08 42.4**	**+1.2**
PCAB				*e*Sn		**Sn**	**10 09 44.9**	**-1.2**
PCAB				*e*Sg		**Sb**	**10 10 09.5**	**+5.4**
PCAB				A		A	10 10 18.4	
	27nm,0.4s							
PCAB	**Cabril**	**5.68**	**258**	Pn		**Pn**	**10 08 42.4**	**+1.2**
PCAB				Sn		**Sn**	**10 09 44.9**	**-1.2**
PCAB				Lg		Lg	10 10 09.5	
	14nm,0.4s							
LPL	**La Plagne**	**5.77**	**63**	*e*P		**Pn**	**10 08 47.0**	**+4.4**
LPL				*e*Sg		**Sg**	**10 10 20.5**	**-2.2**
	11nm,0.4s							
LPL	**La Plagne**	**5.77**	**63**	Pn		**Pn**	**10 08 47.0**	**+4.4**
LPL				Lg		Lg	10 10 20.5	
	5.7nm,0.4s							
LPG	**La Plagne**	**5.78**	**63**	*e*Pn		**Pn**	**10 08 42.5**	**-0.2**
LPG				*e*Sg		**Sg**	**10 10 21.0**	**-1.9**
	17nm,0.5s							
LPG	**La Plagne**	**5.78**	**63**	Pn		**Pn**	**10 08 42.5**	**-0.2**
LPG				Lg		Lg	10 10 21.0	
	8.6nm,0.5s							
PGAV	**Gavieira, Arco**	**5.79**	**261**	*e*Pn		**Pn**	**10 08 44.1**	**+1.3**
PGAV				*e*Sn		**Sn**	**10 09 47.6**	**-1.2**
PGAV				A		A	10 10 25.8	
	16nm,0.9s							
PGAV	**Gavieira, Arco**	**5.79**	**261**	Pn		**Pn**	**10 08 44.1**	**+1.3**
PGAV				Sn		**Sn**	**10 09 47.6**	**-1.2**
	16nm,0.9s							
MTE	**Manteigas**	**5.87**	**245**	*e*Pn		**Pn**	**10 08 45.1**	**+1.2**
MTE				*e*Sn		**Sn**	**10 09 48.3**	**-2.5**
MTE				*e*Sg		**Sb**	**10 10 17.0**	**+7.4**
MTE				A		A	10 10 28.3	
	42nm,0.6s							
MTE	**Manteigas**	**5.87**	**245**	Pn		**Pn**	**10 08 45.1**	**+1.2**
MTE				Sn		**Sn**	**10 09 48.3**	**-2.5**
MTE				Lg		Lg	10 10 17.0	
	21nm,0.6s							
CABF	**La Chapelle**	**5.88**	**52**	*e*Pn		**Pn**	**10 08 44.3**	**+0.3**
CABF	**La Chapelle**	**5.88**	**52**	*e*Pg		**Pg**	**10 09 07.8**	**-2.4**
CABF				*e*Sg		**Sg**	**10 10 22.7**	**-3.6**
	43nm,0.7s							
CABF	**La Chapelle**	**5.88**	**52**	Pn		**Pn**	**10 08 44.3**	**+0.3**
CABF				Pg		**Pg**	**10 09 07.8**	**-2.4**
CABF				Lg		Lg	10 10 22.7	
	21nm,0.7s							
SBF	**Sospel**	**5.89**	**80**	*e*Pn		**Pn**	**10 08 44.0**	**-0.1**
SBF	**Sospel**	**5.89**	**80**	*e*P		**Pn**	**10 08 48.2**	**+4.1**
SBF				*e*Sn		**Sn**	**10 09 47.9**	**-3.2**
	17nm,0.4s							
SBF				*e*Sg		**Sg**	**10 10 21.9**	**-4.5**
	25nm,0.6s							
SBF	**Sospel**	**5.89**	**80**	Pn		**Pn**	**10 08 44.0**	**-0.1**
SBF				Sn		**Sn**	**10 09 47.9**	**-3.2**
	8.4nm,0.4s							
SBF				Lg		Lg	10 10 21.9	
	12nm,0.6s							
PVIS	**Viseu**	**5.96**	**249**	*e*Pn		**Pn**	**10 08 46.1**	**+1.1**
PVIS				*e*Sn		**Sn**	**10 09 49.6**	**-3.3**
PVIS				*e*Sg		**Sb**	**10 10 19.1**	**+7.1**
PVIS				A		A	10 10 25.6	
	26nm,0.4s							
PVIS	**Viseu**	**5.96**	**249**	Pn		**Pn**	**10 08 46.1**	**+1.1**
PVIS				Sn		**Sn**	**10 09 49.6**	**-3.3**
PVIS				Lg		Lg	10 10 19.1	
	13nm,0.4s							
EZAM	**Zamans**	**6.05**	**263**	Pn		**Pn**	**10 08 47.2**	**+0.8**
	4.9nm,0.2s,SNR=7.9							
EZAM				Sn		**Sn**	**10 09 53.8**	**-1.4**
	12nm,0.2s,SNR=7.9							
PCBR	**Castelo Branco**	**6.13**	**240**	*e*Pn		**Pn**	**10 08 47.9**	**+0.6**
PCBR				*e*Sn		**Sn**	**10 09 54.0**	**-3.0**
PCBR				A		A	10 10 30.9	
	13nm,0.3s							
PCBR	**Castelo Branco**	**6.13**	**240**	Pn		**Pn**	**10 08 47.9**	**+0.6**
PCBR				Sn		**Sn**	**10 09 54.0**	**-3.0**
	6.7nm,0.3s							
EMAZ	**Mazaricos**	**6.14**	**271**	Pn		**Pn**	**10 08 48.2**	**+0.6**
	2.5nm,0.1s,SNR=7.9							
EMAZ				Sn		**Sn**	**10 09 54.6**	**-2.8**
	3.7nm,0.2s,SNR=7.9							
ECAB	**El Cabril**	**6.25**	**218**	Pn		**Pn**	**10 08 49.9**	**+0.9**
	0.6nm,0.1s,SNR=14							
ECAB				Sn		**Sn**	**10 09 55.6**	**-4.4**
	1.4nm,0.2s,SNR=7.9							
ECAB				Lg		Lg	10 10 36.3	
	11nm,0.4s,SNR=4.0							
PTO	**Porto**	**6.28**	**254**	*e*Pn		**Pn**	**10 08 51.0**	**+1.6**
PTO	**Porto**	**6.28**	**254**	Pn		**Pn**	**10 08 51.0**	**+1.6**
ENIJ	**Nijar**	**6.28**	**192**	Pn		**Pn**	**10 08 51.1**	**+1.6**
	2.6nm,0.3s,SNR=4.0							
EQUE	**Quentar**	**6.31**	**201**	Pn		**Pn**	**10 08 52.4**	**+2.5**
	2.1nm,0.2s,SNR=12							
EQUE				Lg		Lg	10 10 36.3	
	SNR=7.9							
PMRV	**Marv??o**	**6.32**	**236**	*e*Pn		**Pn**	**10 08 50.8**	**+0.8**
PMRV				*e*Sn		**Sn**	**10 09 58.6**	**-3.1**
PMRV				*e*Sg		**Sg**	**10 10 34.1**	**-6.2**
PMRV				A		A	10 10 49.9	
	20nm,0.4s							
PMRV	**Marv??o**	**6.32**	**236**	Pn		**Pn**	**10 08 50.8**	**+0.8**
PMRV				Sn		**Sn**	**10 09 58.6**	**-3.1**
PMRV				Lg		Lg	10 10 34.1	
	20nm,0.4s							
SFTF	**Sexfontaines**	**6.42**	**36**	*e*Pn		**Pn**	**10 08 51.1**	**-0.3**
SFTF				*e*Sn		**Sn**	**10 10 01.3**	**-2.9**
	7.3nm,0.2s							
SFTF				*e*Sg		**Sg**	**10 10 41.2**	**-2.4**
	35nm,0.4s							
SFTF	**Sexfontaines**	**6.42**	**36**	Pn		**Pn**	**10 08 51.1**	**-0.3**
SFTF				Sn		**Sn**	**10 10 01.3**	**-2.9**
	7.3nm,0.2s							
SFTF				Lg		Lg	10 10 41.2	
	35nm,0.4s							
EBER	**Berja**	**6.47**	**197**	Pn		**Pn**	**10 08 55.5**	**+3.2**
	1.0nm,0.3s,SNR=8.8							
EBER				Lg		Lg	10 10 42.6	
	14nm,0.4s,SNR=4.0							
EBAD	**Badajoz**	**6.54**	**230**	Pn		**Pn**	**10 08 52.7**	**-0.3**
	0.6nm,0.1s,SNR=9.1							
EBAD				Sn		**Sn**	**10 10 03.9**	**-3.2**
	11nm,0.2s,SNR=4.8							
EBAD				Lg		Lg	10 10 41.8	
	7.4nm,0.2s,SNR=4.0							
COI	**Coimbra**	**6.54**	**246**	*e*Sn		**Sn**	**10 10 03.5**	**-3.7**
COI	**Coimbra**	**6.54**	**246**	Sn		**Sn**	**10 10 03.5**	**-3.7**
EGOR	**Sierra Gorda,**	**6.59**	**205**	Pn		**Pn**	**10 08 56.5**	**+2.7**
	0.7nm,0.1s,SNR=7.9							
EGOR				Sn		**Sn**	**10 10 08.1**	**-0.6**
	2.7nm,0.3s,SNR=4.0							
EGOR				Lg		Lg	10 10 50.7	
	8.2nm,0.4s,SNR=4.0							
MEZF	**Maizieres J'vi**	**6.66**	**34**	*e*Pn		**Pn**	**10 08 54.2**	**-0.4**
MEZF				*e*Sn		**Sn**	**10 10 06.8**	**-3.2**
	5.7nm,0.3s							
MEZF				*e*Sg		**Sg**	**10 10 48.4**	**-2.7**
	27nm,0.4s							
MEZF	**Maizieres J'vi**	**6.66**	**34**	Pn		**Pn**	**10 08 54.2**	**-0.4**
MEZF				Sn		**Sn**	**10 10 06.8**	**-3.2**
	5.7nm,0.3s							
MEZF				Lg		Lg	10 10 48.4	
	27nm,0.4s							
ELGU	**Los Guajares,**	**6.68**	**201**	Pn		**Pn**	**10 08 57.6**	**+2.6**
	1.3nm,0.2s,SNR=7.9							
HAU	**Haudompre**	**6.89**	**43**	*e*Sg		**Sg**	**10 10 55.7**	**-2.7**
	19nm,0.4s							
HAU	**Haudompre**	**6.89**	**43**	Lg		Lg	10 10 55.7	
	9.5nm,0.4s							
PBAR	**Barrancos**	**6.97**	**227**	*e*Sn		**Sn**	**10 10 15.2**	**-2.5**
PBAR	**Barrancos**	**6.97**	**227**	Sn		**Sn**	**10 10 15.2**	**-2.5**
PAGF	**Fort de Pagny**	**6.99**	**37**	*e*Pn		**Pn**	**10 08 58.7**	**-0.4**
PAGF				*e*Sn		**Sn**	**10 10 14.8**	**-3.3**
	7.3nm,0.4s							
PAGF				*e*Sg		**Sg**	**10 10 59.2**	**-2.4**
	27nm,0.5s							
HINF	**Hinteralfeld**	**7.02**	**46**	*e*Sg		**Sg**	**10 10 58.3**	**-4.4**
	8.6nm,0.3s							
HINF	**Hinteralfeld**	**7.02**	**46**	Lg		Lg	10 10 58.3	
	4.3nm,0.3s							
PMTG	**Montargil**	**7.05**	**237**	*e*Pn		**Pn**	**10 09 01.3**	**+1.3**
PMTG				*e*Sn		**Sn**	**10 10 16.6**	**-3.1**
PMTG				A		A	10 11 08.1	
	15nm,0.6s							
PMTG	**Montargil**	**7.05**	**237**	Pn		**Pn**	**10 09 01.3**	**+1.3**
PMTG				Sn		**Sn**	**10 10 16.6**	**-3.1**
	15nm,0.6s							
PGF	**Pioggiola**	**7.08**	**92**	*e*P		**Pn**	**10 09 03.4**	**+2.9**
PGF				*e*Sn		**Sn**	**10 10 16.1**	**-4.4**
	18nm,0.4s							
PGF	**Pioggiola**	**7.08**	**92**	Pn		**Pn**	**10 09 03.4**	**+2.9**
PGF				Sn		**Sn**	**10 10 16.1**	**-4.4**
	9.2nm,0.4s							
EMIN	**Mina Concepcio**	**7.09**	**223**	Pn		**Pn**	**10 09 01.1**	**+0.6**
	0.7nm,0.1s,SNR=7.1							
EMIN				Sn		**Sn**	**10 10 14.9**	**-5.7**
	1.8nm,0.2s,SNR=7.9							
EMIN				Lg		Lg	10 11 02.1	
	3.7nm,0.3s,SNR=4.0							
EVO	**Evora**	**7.26**	**233**	*e*Pn		**Pn**	**10 09 04.9**	**+2.0**
EVO				*e*Sn		**Sn**	**10 10 21.5**	**-3.5**
EVO				A		A	10 11 20.6	
	11nm,0.4s							
EVO	**Evora**	**7.26**	**233**	Pn		**Pn**	**10 09 04.9**	**+2.0**
EVO				Sn		**Sn**	**10 10 21.5**	**-3.5**
	11nm,0.4s							
EVO	**Evora**	**7.26**	**233**	⇓*i*P		**Pn**	**10 09 03.5**	**+0.6**
EVO				*e*L		L	10 11 04.3	
EMIJ	**Mijas**	**7.31**	**207**	Pn		**Pn**	**10 09 07.8**	**+4.2**
	0.7nm,0.2s,SNR=4.0							
PBEJ	**Beja**	**7.53**	**230**	*e*Pn		**Pn**	**10 09 07.9**	**+1.4**
PBEJ				*e*Sn		**Sn**	**10 10 28.8**	**-2.7**
PBEJ				A		A	10 11 42.5	
	6.9nm,0.5s							
PBEJ	**Beja**	**7.53**	**230**	Pn		**Pn**	**10 09 07.9**	**+1.4**
PBEJ				Sn		**Sn**	**10 10 28.8**	**-2.7**
	3.5nm,0.5s							
CDF	**Champ du Feu**	**7.62**	**43**	*e*Pn		**Pn**	**10 09 08.4**	**+0.5**
CDF				*e*Sg		Sb	10 11 16.6	+17
	24nm,0.6s							
CDF	**Champ du Feu**	**7.62**	**43**	Pn		**Pn**	**10 09 08.4**	**+0.5**
CDF				Lg		Lg	10 11 16.6	
	12nm,0.6s							
BAIF	**Baives**	**7.67**	**24**	*e*Pn		**Pn**	**10 09 07.7**	**-0.8**
	SNR=1.0							
BAIF				*e*Sn		**Sn**	**10 10 31.2**	**-3.7**
	3.8nm,0.3s							
BAIF				*e*Sg		Sb	10 11 20.5	+19
	11nm,0.6s							
BAIF	**Baives**	**7.67**	**24**	Pn		**Pn**	**10 09 07.7**	**-0.8**
BAIF				Sn		**Sn**	**10 10 31.2**	**-3.7**
	1.9nm,0.3s							
BAIF				Lg		Lg	10 11 20.5	
	5.6nm,0.6s							
EGRO	**El Granado**	**7.68**	**226**	Pn		**Pn**	**10 09 09.1**	**+0.5**
	0.5nm,0.1s,SNR=7.9							
EGRO				Sn		**Sn**	**10 10 31.2**	**-3.9**
	2.5nm,0.2s,SNR=7.9							
PMAFR	**Mafra**	**7.78**	**240**	*e*Pn		**Pn**	**10 09 11.8**	**+1.8**
PMAFR				*e*Sn		**Sn**	**10 10 35.5**	**-2.2**
PMAFR	**Mafra**	**7.78**	**240**	Pn		**Pn**	**10 09 11.8**	**+1.8**
	1.8nm,0.1s,SNR=7.9							
PMAFR				Sn		**Sn**	**10 10 35.3**	**-2.4**

MORF	**Marmelete**	**8.48**	**229**	*e*Pn	**Pn**	**10 09 19.6**	**0.0**
MORF				*e*Sn	**Sn**	**10 10 50.4**	**-4.5**
MORF	**Marmelete**	**8.48**	**229**	Pn	**Pn**	**10 09 19.6**	**0.0**
MORF				Sn	**Sn**	**10 10 50.4**	**-4.5**
DAVA	**Damuels**	**8.48**	**57**	*i* Pn	**Pn**	**10 09 24.1**	**+4.4**
	0.7nm,0.1s						
DAVA				Sn	**Sn**	**10 10 56.3**	**+1.3**
	1.3nm,0.3s						
PFVI	**Vila Bisbo**	**8.70**	**229**	*e*Pn	**Pn**	**10 09 23.4**	**+0.8**
PFVI				*e*Sn	**Sn**	**10 10 56.5**	**-3.7**
PFVI	**Vila Bisbo**	**8.70**	**229**	Pn	**Pn**	**10 09 24.3**	**+1.7**
	1.2nm,0.1s,SNR=4.0						
PFVI				Sn	**Sn**	**10 10 54.7**	**-5.5**
	3.8nm,0.3s,SNR=4.0						
MEM	**Membach**	**8.73**	**29**	PnPn	Pn	10 09 31.0	+8.0
MEM				x	x	10 11 09.1	
FETA	**Feichten**	**8.90**	**60**	*e*Pn	Pn	10 09 32.3	+6.7
	1.0nm,0.2s						
MOTA	**Moosalm**	**9.26**	**59**	*i* Pn	Pn	10 09 37.1	+6.7
	1.8nm,0.2s						
WTTA	**Wattenberg**	**9.57**	**60**	*i* Pn	Pn	10 09 39.6	+4.9
	0.9nm,0.2s						

MAN 07 10:19:46.2, 7°.22N×124°.81E, h29km, mb4.8, ML3.7, MS3.6, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.56**	**270**	⇑*i*P	Pn	10 19 58.5	+0.3
CTBH				*i* S	Sn	10 20 07.2	+0.7
BUKP	**Musuan**	**0.70**	**21**	*e*P	Pb	10 19 59.1	-1.0
BUKP				*e*S	Sb	10 20 08.6	-0.9
DMPH	**Davao City--Mi**	**0.71**	**101**	⇓*i*P	Pn	10 20 01.0	+0.7
DMPH				*i* S	Sn	10 20 11.6	+1.3
SKMP	**Bagumbayan, Su**	**0.74**	**201**	*e*P	Pb	10 20 00.6	0.0
SKMP				*e*S	Sn	10 20 11.1	0.0
CGP	**Cagayan de Oro**	**1.23**	**355**	⇑*i*P	Pn	10 20 07.9	+0.3
CGP				*i* S	Sn	10 20 22.6	-0.7
DDMP	**Don Marcelino,**	**1.43**	**141**	*e*P	Pb	10 20 13.4	+1.2
DDMP				*e*S	Sb	10 20 34.5	+4.5
MATI	**Mati**	**1.47**	**100**	*e*P	Pb	10 20 12.1	-0.7
MATI				*e*S	Sn	10 20 27.2	-1.8
PAGZ	**Pagadian**	**1.54**	**294**	*e*P	Pn	10 20 12.6	+0.8
PAGZ				*e*S	Sb	10 20 32.5	-0.9
BUTP	**Butuan**	**1.92**	**25**	*e*P	Pb	10 20 20.5	-0.1
BUTP				*e*S	Sb	10 20 48.8	+4.6
DCPH	**Dipolog City**	**1.98**	**313**	⇑*e*P	Pb	10 20 28.0	+6.3
DCPH				*e*S	Sb	10 20 53.5	+7.7
IPIL	**Ipil**	**2.29**	**285**	*e*P	Pb	10 20 25.6	-1.3
IPIL				*e*S	Sb	10 20 53.4	-1.4
MSLP	**Maasin**	**2.90**	**1**	*e*P	Pn	10 20 32.9	+2.4

*BJI **07** 10:22:37.8±0.0, 3°.44S×129°.74E, h32km, mb4.7/11, mB4.8/8, Ms4.3/3, Ms7 4.2/1*
*IDC **07** 10:22:37.5±0.8, 2°.86S×129°.73E, h0km, mb4.2/7, mb1 4.5/9, mb1mx4.1/30, mbtmp4.3/9, ML4.4/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/29, Error ellipse: s-maj=48.5km s-min=16.7km az=64.0*
*ISCJB **07** 10:22:39.0±0.3, 2°.94S±0°.03×129°.61E±0°.04, h28km, mb4.5/22, MS3.6/5, Error ellipse: s-maj=5.3km s-min=3.9km az=158.4*
*DJA **07** 10:22:41.6±1.1, 3°.5±2°.×13°.0E±°, h27km±10km, M4.7/11, mb4.9/9, mB4.9/3, MLv4.6/11, Mw(mB)4.2/3*
*NEIC **07** 10:22:41.8±1.8, 2°.92S×129°.65E, h37km±7km, mb4.4/18, Error ellipse: s-maj=15.6km s-min=9.7km az=225.0*
ISC 07 10:22:41.2±0.5, 2°.92S±0°.04×129°.71E±0°.05, h28km, n63, σ1§77/63, mb4.5/22, MS3.5/5, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.60**	**173**	P	**Pb**	**10 23 11.0**	**+0.9**
BNDI				S	**Sb**	**10 23 32.8**	**+2.9**
FAKI	**Fak Fak**	**2.54**	**90**	*e*Pn	**Pn**	**10 23 21.3**	**+0.8**
FAKI				*e*Sn	**Sn**	**10 23 47.1**	**-3.5**
FAKI	**Fak Fak**	**2.54**	**90**	P	**Pn**	**10 23 22.3**	**+1.7**
FAKI				S	**Sb**	**10 23 53.6**	**-3.4**
SWI	**Sorong**	**2.57**	**37**	P	**Pn**	**10 23 20.4**	**-0.6**
SWI				S	**Sn**	**10 23 50.5**	**-0.8**
KMPI	**Kaimana, Papua**	**4.06**	**101**	P	**Pn**	**10 23 43.1**	**+1.6**
TNTI	**Ternate**	**4.35**	**327**	*e*Pn	**Pn**	**10 23 44.5**	**-1.0**
TNTI				*e*Sn	**Sn**	**10 24 33.8**	**-1.5**
TNTI	**Ternate**	**4.35**	**327**	P	**Pn**	**10 23 44.3**	**-1.2**
RKPI	**Ransiki, Papua**	**4.68**	**73**	P	**Pn**	**10 23 50.5**	**+0.4**
SAUI	**Saumlaki**	**5.27**	**163**	*e*Pn	**Pn**	**10 23 57.1**	**-1.0**
BAKI	**Biak**	**6.62**	**75**	P	**Pn**	**10 24 17.5**	**+0.7**
LUWI	**Luwuk**	**7.18**	**285**	*e*Pn	**Pn**	**10 24 22.2**	**-2.1**
LUWI				*e*Sn	**Sn**	**10 25 37.9**	**-7.2**
LUWI	**Luwuk**	**7.18**	**285**	P	**Pn**	**10 24 23.5**	**-0.8**
APSI	**Ampana**	**8.30**	**284**	P	**Pn**	**10 24 38.9**	**-0.8**
	91nm,0.8s,884nm						
MRSI	**Marisa**	**8.46**	**293**	P	**Pn**	**10 24 40.3**	**-1.7**
	47nm,0.4s,744nm						
SOEI	**Soe**	**8.68**	**218**	*e*Pn	**Pn**	**10 24 44.0**	**-1.1**
BATI	**Baumata**	**9.40**	**219**	LR	LR	10 28 44.2	
	comp=Z,382nm,18.0s,baz=70,slow=39						
BKSI	**Bulukumba**	**9.85**	**256**	P	Pn	10 25 15.2	+14
MTN	**Manton Dam**	**9.96**	**172**	*e*Pn	**Pn**	**10 25 04.7**	**+2.2**
SPSI	**Sidrap Palu**	**9.97**	**264**	P	Pn	10 25 17.8	+15
KAPI	**Kappang**	**10.14**	**258**	LR	LR	10 29 41.1	
	comp=Z,70nm,20.9s,baz=80,slow=42						
KAPI	**Kappang**	**10.14**	**258**	*e*Pn	**Pn**	**10 25 05.7**	**+0.6**
GENI	**Genyem**	**10.46**	**88**	P	Pn	10 25 18.4	+9.1
FITZ	**Fitzroy Crossi**	**15.60**	**195**	Pn	**Pn**	**10 26 18.1**	**-1.1**
	0.8nm,0.3s,baz=39,slow=8.6,SNR=17						
FITZ	**Fitzroy Crossi**	**15.60**	**195**	*e*Pn	**Pn**	**10 26 18.5**	**-0.7**
	22nm,1.5s						
COEN	**Coen**	**17.24**	**130**	*e*Pn	**Pn**	**10 26 40.6**	**+0.5**
	26nm,1.1s						
WRAB	**Tennant Creek**	**17.50**	**165**	*e*Pn	**Pn**	**10 26 42.8**	**-0.6**
	26nm,0.8s						
WR1	**Warramunga Arr**	**17.51**	**165**	*e*Pn	**Pn**	**10 26 42.0**	**-1.5**
WR1				*e*Sn	**Sn**	**10 29 54.4**	**-3.3**
WRA	**Warramunga Arr**	**17.51**	**165**	P	**Pn**	**10 26 42.0**	**-1.5**
	1.4nm,0.3s,baz=341,slow=13,SNR=39						
WRA				S	**Sn**	**10 29 54.4**	**-3.4**
	0.2nm,0.3s,baz=331,slow=22,SNR=2.6						
WB2	**Warramunga Arr**	**17.51**	**165**	*e*Pn	**Pn**	**10 26 42.4**	**-1.1**
	26nm,0.8s						
PSA00	**Pilbara Seismi**	**20.87**	**207**	*e*P	**P**	**10 27 21.2**	**0.0**
	32nm,1.3s						
AS31	**Alice Springs**	**21.02**	**169**	*e*P	**P**	**10 27 23.9**	**+1.1**
	13nm,0.7s						
ASAR	**Alice Springs**	**21.02**	**169**	P	**P**	**10 27 23.6**	**+0.7**
	42nm,0.8s,baz=349,slow=10,SNR=225						
ASAR				S	**S**	**10 31 12.7**	**-2.9**
	2.1nm,0.9s,baz=352,slow=20,SNR=2.9						
CTA	**Charters Tower**	**23.49**	**138**	P	**P**	**10 27 50.6**	**+1.7**
	12nm,0.8s,baz=331,slow=14,SNR=8.0						
YULB	**Yu-li**	**27.41**	**343**	*e*P	**P**	**10 28 23.9**	**-0.7**
	9.4nm,1.1s						
FORT	**Forrest**	**27.75**	**183**	*e*P	**P**	**10 28 27.1**	**-0.5**
	34nm,1.3s						
BBOO	**Buckleboo**	**30.32**	**169**	*e*P	**P**	**10 28 50.6**	**+0.2**
	40nm,1.4s						
STKA	**Stephens Creek**	**30.90**	**160**	P	**P**	**10 28 55.8**	**+0.3**
	3.2nm,0.8s,baz=340,slow=9.5,SNR=4.9						
STKA	**Stephens Creek**	**30.90**	**160**	*e*P	**P**	**10 28 56.0**	**+0.5**
	1.0nm,0.9s						
NJ2	**Nanjing**	**36.28**	**344**	*e*P	**P**	**10 29 46.1**	**+3.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR	**Chiang Mai Arr**	**37.00**	**306**	P	**P**	**10 29 50.2**	**+1.5**
	0.6nm,0.5s,baz=134,slow=7.6,SNR=4.8						
KSRS	**Korea Array**	**40.21**	**358**	LR	LR	10 46 44.8	
	comp=Z,18nm,21.0s,baz=195,slow=36						
LZH	**Lanzhou**	**45.71**	**330**	*e*P	**P**	**10 31 02.8**	**+2.6**
LZH				pP	sP	10 31 12.7	+0.7
LZH				sP	pP	10 31 17.6	+9.0
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC	**Hu-ho-hao-te**	**46.61**	**341**	*e*P	**P**	**10 31 07.9**	**+0.8**
HHC				pmax	pmax		
	comp=Z,39nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.2s						
LBZ	**Lake Benmore**	**54.55**	**145**	*e*P	**P**	**10 32 06.9**	**0.0**
	26nm,1.3s						
BKZ	**Black Stump Fm**	**55.70**	**137**	*e*P	**P**	**10 32 15.8**	**+0.5**
	15nm,1.2s						
WMQ	**Urumqi**	**59.86**	**326**	*e*P	**P**	**10 32 45.8**	**+1.4**
WMQ				pP	sP	10 32 56.6	+0.1
WMQ				sP	pP	10 33 00.2	+7.0
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,14nm,3.7s						
WMQ				LR	LR		
	comp=N,450nm,14.5s						
WMQ				LR	LR		
	comp=E,250nm,16.7s						
WMQ				LR	LR		
	comp=Z,190nm,23.5s						
MK31	**Makanchi Array**	**64.69**	**326**	*e*P	**P**	**10 33 16.1**	**-0.6**
	0.8nm,0.8s						
MK32	**Makanchi Array**	**64.69**	**326**	*e*P	**P**	**10 33 16.4**	**-0.3**
MKAR	**Makanchi Array**	**64.69**	**326**	P	**P**	**10 33 16.4**	**-0.3**
	1.0nm,0.5s,baz=121,slow=7.9,SNR=12						
MAKZ	**Makanchi**	**64.87**	**326**	*e*P	**P**	**10 33 17.3**	**-0.6**
	2.1nm,0.4s						
ZALV	**Zalesovo Beam**	**67.83**	**333**	P	**P**	**10 33 37.1**	**+0.5**
	1.1nm,0.5s,baz=106,slow=5.2,SNR=4.1						
ZAA1	**Zalesovo Array**	**67.83**	**333**	*e*P	**P**	**10 33 37.1**	**+0.5**
KURK	**Kurchatov**	**68.92**	**328**	*e*P	**P**	**10 33 43.5**	**0.0**
	4.3nm,0.9s						
TIXI	**Tiksi**	**74.44**	**360**	*e*P	**P**	**10 34 16.5**	**+0.2**
	1.6nm,0.5s						
VNDA	**Vanda**	**76.50**	**173**	*e*P	**P**	**10 34 28.1**	**-0.1**
	1.4nm,0.8s						
GEYT	**Alibeck**	**77.38**	**310**	LR	LR	11 12 35.0	
	comp=Z,25nm,21.1s,baz=15,slow=39						
NRIK	**Noril'sk**	**77.56**	**346**	LR	LR	11 13 43.5	
	comp=Z,20nm,19.0s,baz=49,slow=40						
AKTO	**Aktyubinsk**	**80.69**	**322**	LR	LR	11 14 51.9	
	comp=Z,21nm,19.8s,baz=55,slow=39						
ILAR	**Eielson Array**	**89.81**	**25**	P	**P**	**10 35 36.6**	**-0.4**
	0.5nm,0.8s,baz=237,slow=5.0,SNR=4.7						
ILB	**Eielson Array**	**89.81**	**25**	*e*P	**P**	**10 35 36.3**	**-0.6**
	0.8nm,0.7s						
PLCA	**Paso Flores**	**132.77**	**159**	PKP	**PKiKP**	**10 41 56.2**	**+0.9**
	1.7nm,0.7s,baz=323,slow=5.1,SNR=4.3						
PLCA	**Paso Flores**	**132.77**	**159**	*e*PKPdf	**PKPdf**	**10 41 53.0**	**-1.2**
CPUP	**Villa Florida**	**150.13**	**167**	PKPbc	**PKiKP**	**10 42 31.5**	**+0.4**
	3.2nm,0.8s,baz=236,slow=1.7,SNR=6.4						

MEX 07 10:24:17.7±0.4, 16°.09N×98°.30W, h1km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.34**	**30**	*e*P	Pg	10 24 23.9	-0.5
PNIG				*i* S	Sg	10 24 29.2	+0.4
TLIG	**Tlapa**	**1.48**	**350**	*e*P	Pn	10 24 42.0	-3.7
TLIG				*i* S	Sg	10 25 00.9	-4.5

NNC 07 10:35:51.3±7.8, 38°.78N×70°.73E, h0km, mb3.8, mpv3.3, 4C-4D, Error ellipse: s-maj=83.4km s-min=37.6km az=161.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.32**	**358**	⇑Pn	Pn	10 36 57.7	-0.6
	3.6nm,0.3s,baz=171,slow=11,SNR=71						
KK31				⇑Sn	Sn	10 37 50.2	+0.9
	9.6nm,0.8s,baz=188,slow=28,SNR=3.7						
AAK	**Ala-Archa**	**4.80**	**35**	⇓Pn	Pn	10 37 05.0	0.0
	1.9nm,0.4s						
AAK				⇑Sn	Sn	10 38 03.4	+2.1
	5.1nm,0.7s						
TKM2	**Tokmak 2**	**5.54**	**40**	⇓Pn	Pn	10 37 15.4	+0.2
	1.6nm,0.5s						
TKM2				⇑Sn	Sn	10 38 19.8	+0.1
	4.9nm,0.8s						
AB31	**Akbulak array**	**13.02**	**327**	⇓P	Pn	10 38 52.2	-5.1
	0.9nm,0.5s,baz=149,slow=12,SNR=14						
AKTO	**Aktyubinsk**	**14.73**	**326**	⇓P	P	10 39 27.6	+0.5
	1.4nm,0.8s						

*IDC **07** 10:37:10.2±2.3, 3°.16S×128°.98E, h0km, mb3.9/2, mb1 4.3/3, mb1mx3.7/22, mbtmp4.1/3, ML3.9/1, Error ellipse: s-maj=163.4km s-min=19.0km az=69.0*
*ISCJB **07** 10:37:12.0±0.5, 2°.87S±0°.05×129°.54E±0°.05, h28km, mb4.3/6, Error ellipse: s-maj=7.6km s-min=6.0km az=138.9*
*NEIC **07** 10:37:14.3±2.5, 2°.94S×129°.61E, h35km±2km, mb4.3/6, Error ellipse: s-maj=31.0km s-min=14.1km az=55.0*
*DJA **07** 10:37:15.5±1.4, 3°.5±3°.×13°.0E±°, h23km±12km, M4.5/6, mb5.0/5, mB5.5/4, MLv4.0/6, Mw(mB)5.0/4, Mwp6.1/1*
ISC 07 10:37:14.0±0.7, 2°.84S±0°.06×129°.63E±0°.07, h28km, n20, σ2§20/26, mb4.4/6, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.69**	**171**	P	**Pb**	**10 37 46.4**	**+1.9**
BNDI				S	**Sb**	**10 38 08.9**	**+3.5**
SWI	**Sorong**	**2.55**	**40**	P	**Pn**	**10 37 54.5**	**+0.9**
FAKI	**Fak Fak**	**2.61**	**92**	*e*Pn	**Pn**	**10 37 54.5**	**0.0**
FAKI				*e*Sn	**Sn**	**10 38 27.2**	**+1.9**
FAKI	**Fak Fak**	**2.61**	**92**	P	**Pn**	**10 37 57.2**	**+2.8**
APSI	**Ampana**	**8.21**	**283**	P	**Pn**	**10 39 11.1**	**-0.3**
MRSI	**Marisa**	**8.37**	**293**	P	**Pn**	**10 39 14.3**	**+0.8**
WSI	**Waingapu**	**11.49**	**233**	P	**Pn**	**10 39 57.0**	**+0.6**
WBSI	**Waikabubak, Su**	**12.21**	**236**	P	**Pn**	**10 40 10.4**	**+4.1**
COEN	**Coen**	**17.35**	**130**	*e*Pn	**Pn**	**10 41 13.5**	**-0.8**
	12nm,1.0s						
WR1	**Warramunga Arr**	**17.61**	**165**	*e*Pn	**Pn**	**10 41 14.4**	**-3.1**
WR1				*e*Sn	**Sn**	**10 44 31.2**	**-1.7**
WRA	**Warramunga Arr**	**17.61**	**165**	P	**Pn**	**10 41 14.4**	**-3.1**
	0.4nm,0.3s,baz=345,slow=13,SNR=12						
WRA				S	**Sn**	**10 44 31.2**	**-1.7**
	0.2nm,0.3s,baz=343,slow=19,SNR=3.2						
WB2	**Warramunga Arr**	**17.61**	**165**	*e*Pn	**Pn**	**10 41 14.8**	**-2.7**
	21nm,1.5s						
AS31	**Alice Springs**	**21.11**	**169**	*e*P	**P**	**10 41 55.0**	**-1.7**
	3.2nm,0.6s						
AS31				*e*S	**S**	**10 45 45.9**	**-4.4**
ASAR	**Alice Springs**	**21.11**	**169**	P	**P**	**10 41 56.5**	**-0.2**
	5.5nm,0.6s,baz=346,slow=9.9,SNR=72						
ASAR				S	**S**	**10 45 47.4**	**-3.0**
	1.3nm,1.0s,baz=349,slow=24,SNR=5.6						
CTAO	**Charters Tower**	**23.60**	**138**	*e*P	**P**	**10 42 23.1**	**+0.2**
	27nm,1.4s						
RGRI	**Rengat**	**27.40**	**275**	P	**P**	**10 42 57.4**	**-0.1**
MK32	**Makanchi Array**	**64.58**	**326**	*e*P	**P**	**10 47 48.5**	**-0.4**
MKAR	**Makanchi Array**	**64.58**	**326**	P	**P**	**10 47 48.5**	**-0.4**
	0.7nm,0.7s,baz=115,slow=6.8,SNR=7.1						
KURK	**Kurchatov**	**68.81**	**328**	*e*P	**P**	**10 48 15.9**	**+0.2**
	7.7nm,1.4s						
RDOG	**Red Dog Mine**	**84.36**	**20**	*e*P	**P**	**10 49 42.5**	**-0.9**
	11nm,0.6s						

*DDA **07** 10:38:06.2, 37°.66N×27°.00E, h7km±4km, ML2.6*
*ISCJB **07** 10:38:07.2±0.7, 37°.71N±0°.05×27°.08E±0°.05, h12km±5km, Error ellipse: s-maj=10.0km s-min=4.8km az=37.3*
*ISK **07** 10:38:07.3, 37°.76N×27°.11E, h12km, ML2.2/3*
ISC 07 10:38:06.9±1.0, 37°.68N±0°.05×27°.07E±0°.06, h17km±7km, n11, σ0§47/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.14**	**79**	PG	**Pg**	**10 38 10.8**	**0.0**
GCAM				SG	**Sg**	**10 38 13.3**	**-0.1**
GCAM	**G?zelcaml?**	**0.14**	**79**	*i* P	**Pg**	**10 38 11.1**	**+0.2**
GCAM				*i* S	**Sg**	**10 38 13.2**	**-0.1**
DGB	**zmir**	**0.40**	**339**	*i* P	**Pb**	**10 38 15.1**	**-0.6**
DGB				IAML_P			
	comp=Z,3μm,0.1s						
BODT	**Bodrum**	**0.64**	**162**	PG	**Pn**	**10 38 21.7**	**+0.3**
AYDN	**Tasoluk**	**0.65**	**91**	*i* P	**Pb**	**10 38 20.2**	**+0.4**
AYDN				IAML_P			
	comp=Z,966nm,0.1s						
BDRM	**Kayabasi**	**0.68**	**154**	*i* P	**Pg**	**10 38 19.5**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**0.71**	**67**	PG	**Pg**	**10 38 20.4**	**-0.4**
AYDB				SG	**Sg**	**10 38 29.8**	**-0.5**
ZEY	**zmir**	**0.72**	**322**	*i* P	**Pb**	**10 38 21.6**	**+0.6**
ZEY				*i* S	**Sb**	**10 38 30.8**	**+0.1**
ZEY				IAML_P			
	comp=Z,1μm,0.1s						
URLA	**Izmir**	**0.78**	**332**	PG	**Pb**	**10 38 21.7**	**-0.4**
URLA				SG	**Sb**	**10 38 32.1**	**-0.3**
URLA	**Izmir**	**0.78**	**332**	*i* P	**Pb**	**10 38 21.8**	**-0.4**
URLA				*i* S	**Sb**	**10 38 32.2**	**-0.2**
URLA				IAML_P			
	comp=Z,547nm,0.1s						
CHOS	**Chios island**	**1.07**	**312**	PG	**Pn**	**10 38 27.7**	**+0.4**
CHOS				SG	**Sn**	**10 38 42.5**	**+0.7**

*ISK **07** 10:38:49.1, 37°.24N×28°.19E, h2km, ML2.2/6*
*DDA **07** 10:38:50.1, 37°.31N×28°.15E, h7km±7km, ML2.6*
ISC 07 10:38:48.9±1.8, 37°.24N±0°.04×28°.18E±0°.04, h1km±19km, n11, σ0§77/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.33**	**280**	PG	**Pb**	**10 38 56.7**	**-0.9**
MLSB				SG	**Sb**	**10 39 02.4**	**-0.9**
AYDN	**Tasoluk**	**0.48**	**330**	*i* P	**Pb**	**10 38 59.9**	**-0.3**
AYDN				*i* S	**Sb**	**10 39 07.7**	**-0.2**
AYDN				IAML_P			
	comp=Z,3μm,0.1s						
TURN	**Turunc**	**0.50**	**137**	PG	**Pg**	**10 38 58.7**	**+0.2**
TURN				SG	**Sb**	**10 39 06.6**	**-1.6**
DALY	**Dalyan (Mula)**	**0.57**	**138**	PG	**Pb**	**10 39 01.0**	**-0.6**
DALY				SG	**Sb**	**10 39 09.6**	**-0.6**
BDRM	**Kayabasi**	**0.61**	**254**	*i* P	**Pb**	**10 39 01.5**	**-0.9**
BDRM				*i* S	**Sb**	**10 39 11.9**	**+0.3**
BDRM				IAML_P			
	comp=Z,827nm,0.1s						
DAT	**Datca**	**0.70**	**224**	PG	**Pb**	**10 39 03.8**	**-0.2**
BODT	**Bodrum**	**0.72**	**256**	PG	**Pb**	**10 39 04.0**	**-0.2**
BODT				SG	**Sb**	**10 39 15.1**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**0.74**	**342**	PG	**Pb**	**10 39 04.3**	**-0.4**
FETY	**Fethiye**	**0.94**	**130**	PG	**Pb**	**10 39 08.0**	**0.0**
FETY	**Fethiye**	**0.94**	**130**	*i* P	**Pn**	**10 39 10.3**	**+1.0**
AKAS	**Kas**	**1.52**	**131**	PN	**Pg**	**10 39 18.2**	**+0.1**

*NORS **07** 10:42:04.2±0.0, 43°.72N×43°.52E, h19km, MPVA3.6*
*ISCJB **07** 10:42:05.5±0.4, 43°.73N±0°.03×43°.49E±0°.03, h14km±4km, Error ellipse: s-maj=5.0km s-min=2.7km az=37.2*
ISC 07 10:42:06.1±0.9, 43°.73N±0°.03×43°.50E±0°.03, h16km±7km, n20, σ0§69/40, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTC	**Kuba-Taba**	**0.11**	**325**	*e*Pg	**Pb**	**10 42 09.2**	**-0.8**
KBTC				*e*Sg	**Sg**	**10 42 13.1**	**+1.0**
NCK	**Nalchik**	**0.24**	**163**	*e*Pg	**Pg**	**10 42 11.0**	**-0.5**
NCK				*e*Sg	**Sb**	**10 42 15.6**	**-0.4**
PYA1	**Pyatigorsk**	**0.45**	**319**	*e*Pg	**Pg**	**10 42 14.4**	**-0.7**
PYA1				*e*Sg	**Sg**	**10 42 21.1**	**-0.1**
LSNR	**Lesken**	**0.51**	**152**	*i* Pg	**Pg**	**10 42 15.7**	**-0.5**
LSNR				*e*Sg	**Sb**	**10 42 24.3**	**+0.5**
STDR	**Stavd-Durt**	**0.54**	**131**	*e*Pg	**Pg**	**10 42 16.4**	**-0.4**
STDR				*e*Sg	**Sb**	**10 42 25.0**	**+0.2**
PRTR	**Priterechnaya**	**0.57**	**87**	*e*Pg	**Pg**	**10 42 16.0**	**-1.3**
PRTR				*e*Sg	**Sg**	**10 42 25.1**	**+0.2**
SHA1	**Shidzhatmaz**	**0.61**	**272**	*e*Pg	**Pg**	**10 42 18.0**	**-0.2**
SHA1				*e*Sg	**Sg**	**10 42 26.4**	**+0.1**
KIV0	**Kislovodsk Arr**	**0.62**	**292**	*e*Pg	**Pb**	**10 42 17.9**	**-0.8**
KIV0				*e*Sg	**Sg**	**10 42 27.1**	**+0.4**
NEY	**Neytrino**	**0.74**	**230**	*e*Pg	**Pb**	**10 42 20.1**	**-0.5**
NEY				*e*Sg	**Sg**	**10 42 30.9**	**+0.6**
KORR	**Kora**	**0.76**	**147**	*e*Pg	**Pb**	**10 42 21.1**	**+0.2**
KORR				*e*Sg	**Sg**	**10 42 31.7**	**+0.7**
ARNR	**Ardon**	**0.79**	**133**	*e*Pg	**Pb**	**10 42 21.7**	**+0.3**
ARNR				*e*Sg	**Sb**	**10 42 31.9**	**0.0**
DIGR	**Digorskoe uzhe**	**0.83**	**176**	*e*Pg	**Pb**	**10 42 21.0**	**-1.1**
DIGR				*e*Sg	**Sb**	**10 42 32.0**	**-1.1**
BTKR	**Batakoyurt**	**0.84**	**115**	*e*Pg	**Pn**	**10 42 24.4**	**+1.2**
BTKR				*e*Sg	**Sg**	**10 42 34.2**	**+0.8**
ZEI	**Tsey**	**0.98**	**162**	*e*Pg	**Pb**	**10 42 23.7**	**-1.1**
ZEI				*e*Sg	**Sb**	**10 42 37.2**	**-0.4**
LACR	**Lac**	**1.07**	**147**	*e*Pg	**Pb**	**10 42 25.4**	**-0.9**
LACR				*e*Sg	**Sg**	**10 42 41.7**	**+0.9**
ONI	**Oni**	**1.13**	**182**	P	**Pn**	**10 42 27.2**	**-0.2**
ONI				S	**Sg**	**10 42 43.1**	**+0.3**
NVNR	**Nevinnomyssk**	**1.42**	**309**	*e*Pg	**Pn**	**10 42 31.9**	**+0.8**
NVNR				*e*Sg	**Sg**	**10 42 52.4**	**+0.6**
GUDG	**Gudauri**	**1.45**	**150**	P	**Pn**	**10 42 32.4**	**+0.6**
GUDG				S	**Sb**	**10 42 51.9**	**+0.8**
ARXR	**Arkhyz**	**1.62**	**265**	*e*Pg	**Pb**	**10 42 36.4**	**+0.7**
ARXR				*e*Sg	**Sb**	**10 42 56.0**	**+0.1**
BTLR	**Botlikh**	**2.26**	**117**	*e*Pn	**Pn**	**10 42 43.0**	**+0.2**
BTLR				*e*Sn	**Sn**	**10 43 10.4**	**+0.1**

*ISCJB **07** 10:48:28.1±0.8, 29°.56N±0°.04×51°.13E±0°.09, h20km, Error ellipse: s-maj=11.4km s-min=4.4km az=165.7*
*TEH **07** 10:48:29.9, 29°.72N×51°.28E, h20km, ML3.3*
*O

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDH	**Madha**	**6.20**	**132**	*e*Pn	**Pn**	**10 50 01.1**	**+1.3**
UOSS	**Minazif**	**6.39**	**135**	P	**Pn**	**10 50 03.0**	**+0.5**
UOSS	**Minazif**	**6.39**	**135**	P	**Pn**	**10 50 04.9**	**+2.5**
UOSS	**Minazif**	**6.39**	**135**	*e*Pn	**Pn**	**10 50 03.2**	**+0.7**
HATD	**Hatta, Dubai**	**6.44**	**136**	P	**Pn**	**10 50 04.6**	**+1.6**
HATD	**Hatta, Dubai**	**6.44**	**136**	P	**Pn**	**10 50 04.8**	**+1.7**
HATD	**Hatta, Dubai**	**6.44**	**136**	*e*Pn	**Pn**	**10 50 04.5**	**+1.4**
ASHO	**Ashiyiah**	**6.50**	**138**	P	**Pn**	**10 50 05.0**	**+1.1**
ASHO				S	**Sn**	**10 51 13.7**	**-3.9**
ASHO	**Ashiyiah**	**6.50**	**138**	*e*Pn	**Pn**	**10 50 05.3**	**+1.3**
ALNE	**Al Ain**	**6.82**	**143**	*i* P	**Pn**	**10 50 10.1**	**+1.6**
SNR=10							
ALNE	**Al Ain**	**6.82**	**143**	*e*Pn	**Pn**	**10 50 10.0**	**+1.6**
MZR	**Muzera**	**6.86**	**163**	*e*Pn	**Pn**	**10 50 11.3**	**+2.4**
SOHO	**SOHO**	**7.20**	**138**	P	**Pn**	**10 50 14.5**	**+1.0**
SNR=5.3							

*DDA **07** 10:57:18.8, 38°.08N×27°.20E, h7km±3km, ML2.7*
*ISCJB **07** 10:57:19.3±0.5, 38°.05N±0°.04×27°.17E±0°.05, h10km±9km, Error ellipse: s-maj=8.8km s-min=4.0km az=42.4*
*ISK **07** 10:57:19.0, 38°.08N×27°.19E, h8km±1km, ML2.1/8*

ISC 07 10:57:19.2±0.9, 38°.06N±0°.03×27°.19E±0°.03, h15km±8km, n17, σ0⁹30/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMLD	**Gumuldur**	**0.21**	**274**	PG	**Pg**	**10 57 23.9**	**-0.1**
GMLD				SG	**Sg**	**10 57 27.4**	**+0.1**
BLCB	**Balcova**	**0.34**	**341**	PG	**Pg**	**10 57 26.1**	**-0.1**
BLCB				SG	**Sg**	**10 57 31.1**	**+0.1**
GCAM	**G?zelcaml?**	**0.36**	**174**	PG	**Pg**	**10 57 26.6**	**0.0**
GCAM	**G?zelcaml?**	**0.36**	**174**	*i* P	**Pg**	**10 57 26.3**	**-0.3**
GCAM				IAML_P			
comp=Z,7μm,0.2s							
URLA	**Izmir**	**0.55**	**303**	PG	**Pg**	**10 57 30.1**	**0.0**
URLA				SG	**Sb**	**10 57 38.2**	**0.0**
URLA	**Izmir**	**0.55**	**303**	*i* P	**Pb**	**10 57 30.7**	**+0.1**
URLA				*i* S	**Sg**	**10 57 37.7**	**+0.3**
URLA				IAML_P			
comp=Z,1μm,0.1s							
ZEY	**zmir**	**0.56**	**288**	*i* P	**Pg**	**10 57 30.2**	**-0.1**
ZEY				*i* S	**Sb**	**10 57 38.7**	**+0.1**
ZEY				IAML_P			
comp=Z,4μm,0.1s							
AYDB	**Zeytinkoy-Aydi**	**0.57**	**102**	PG	**Pg**	**10 57 30.5**	**+0.1**
AYDN	**Tasoluk**	**0.68**	**126**	*i* P	**Pn**	**10 57 33.9**	**-0.4**
AYDN				*i* S	**Sb**	**10 57 42.2**	**+0.2**
AYDN				IAML_P			
comp=Z,2μm,0.1s							
KRBN	**Karaburun**	**0.73**	**317**	PG	**Pg**	**10 57 33.3**	**0.0**
MLSB	**Milas**	**0.90**	**148**	PG	**Pg**	**10 57 36.9**	**+0.3**
ZEDA	**zmir-Bergama**	**0.91**	**355**	*i* P	**Pg**	**10 57 36.9**	**+0.2**
ZEDA				IAML_P			
comp=Z,981nm,0.2s							
CHOS	**Chios island**	**0.95**	**290**	PG	**Pg**	**10 57 37.7**	**+0.2**
AKHS	**Akhisar**	**0.95**	**31**	*i* P	**Pn**	**10 57 38.0**	**0.0**
AKHS				*i* S	**Sn**	**10 57 50.8**	**-0.6**
AKHS				IAML_P			
comp=Z,1μm,0.1s							
BODT	**Bodrum**	**1.00**	**174**	PG	**Pg**	**10 57 38.9**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.38**	**17**	*i* P	**Pb**	**10 57 45.1**	**+0.5**
STEP				*i* S	**Sg**	**10 58 04.1**	**+0.5**
STEP				IAML_P			
comp=Z,681nm,0.1s							
DURS	**Dursunbey**	**1.84**	**33**	*i* P	**Pb**	**10 57 51.8**	**-0.6**
DURS				*i* S	**Sn**	**10 58 13.3**	**+0.1**
DURS				IAML_P			
comp=Z,117nm,0.1s							

KRSC 07 11:07:01.2±2.0, 54°.60N×165°.98E, h16km±20km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.61**	**360**	*e*P	Pg	11 07 11.5	-1.6
BKI				*e*S	Sg	11 07 19.0	-2.2
KBTR	**Krutoberegovo**	**2.42**	**313**	*e*P	Pb	11 07 43.2	-1.0
KBTR				*e*S	Sb	11 08 12.1	-1.7
MKZ	**Mys Kozlova**	**2.47**	**271**	*e*P	Pb	11 07 43.9	-1.3
MKZ				*e*S	Sb	11 08 13.1	-2.2
KBG	**Krutoberegovo**	**2.50**	**313**	*e*S	Sb	11 08 16.0	0.0
KZV	**Kizimen**	**3.33**	**281**	*e*P	Pb	11 07 57.2	-2.6
SRKR	**Sorokina**	**3.42**	**309**	*e*P	Pb	11 07 58.9	-2.4
SRKR				*e*S	Sn	11 08 37.6	+3.6
SPN	**Mys Shipunski**	**3.83**	**249**	*e*P	Pn	11 08 03.1	+3.7
SPN				*e*S	Sn	11 08 44.8	+0.7
SDLR	**Sedlovina**	**4.40**	**255**	*e*P	Pn	11 08 12.3	+5.0
SDLR				*e*S	Sn	11 09 02.8	+4.7
KRER	**Koryakskii**	**4.46**	**256**	*e*P	Pn	11 08 13.3	+5.0
AVH	**Avacha**	**4.48**	**256**	*e*P	Pn	11 08 13.1	+4.7
AVH				*e*S	Sn	11 09 04.1	+3.9
KRX	**Arik**	**4.50**	**257**	*e*P	Pn	11 08 13.8	+5.1
KRX				*e*S	Sn	11 09 05.2	+4.4
DALK	**Dalny**	**4.56**	**253**	*e*S	Sn	11 09 05.5	+3.5
PET	**Petropavlovsk**	**4.62**	**253**	*e*S	Sn	11 09 07.9	+4.5
GNL	**Ganaly**	**4.81**	**262**	*e*P	Pn	11 08 18.1	+5.1
MTVR	**Mutnovka**	**5.11**	**249**	*e*P	Pn	11 08 21.3	+4.2

*MEX **07** 11:15:23.1±0.3, 29°.95N×114°.22W, h13km, MD4.0*

ECX 07 11:15:20.5±0.4, 30°.03N×114°.15W, h12km, MD3.4, ML3.6, 1C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.52**	**312**	*e*P	Pn	11 15 46.7	-1.1
SPX				*e*S	Sn	11 16 04.6	-3.1
SPX	**San Pedro Mart**	**1.52**	**312**	*e*P	Pn	11 15 46.8	-1.0
SPX				⇓*e*		11 16 19.4	
SPX				IAML		11 16 19.4	
comp=E,432nm,1.4s							
SPIG	**San Pedro Mart**	**1.52**	**312**	*e*P	Pn	11 15 46.8	-1.1
SPIG				*e*S	Sn	11 16 05.6	-2.1
SPIG	**San Pedro Mart**	**1.52**	**312**	*e*P	Pn	11 15 46.8	-1.1
SPIG				*e*S	Sn	11 16 06.7	-1.0
ECBX	**El Chinero**	**1.63**	**332**	*e*P	Pn	11 15 47.1	-1.9
ECBX				*e*S	Sn	11 16 08.7	-1.3
CBX	**Cerro Bola**	**3.13**	**317**	*e*P	Pn	11 16 08.9	-0.9
CBX				*e*S	Sn	11 16 46.3	-1.0
CBX	**Cerro Bola**	**3.13**	**317**	IAML		11 17 09.0	
comp=N,194nm,1.2s							
CBX				⇑*e*		11 17 09.0	
CBX				⇓*e*		11 17 09.0	
CBX				IAML		11 17 09.0	
comp=E,262nm,1.5s							

MEX 07 11:18:18.2±0.5, 15°.12N×92°.57W, h116km±9km, MD3.6, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.36**	**126**	*e*P	Pn	11 18 33.7	-1.3
THIG				*e*S	Sn	11 18 46.3	-1.3
PCIG		**0.86**	**313**	*e*P	Pn	11 18 37.3	-1.2
PCIG				*e*S	Sn	11 18 52.1	-1.8
CCIG	**Comitan**	**1.23**	**20**	*i* P	Pn	11 18 41.6	-0.9
CCIG				*e*S	Sn	11 18 58.6	-2.3

*ISCJB **07** 11:24:52.5±0.9, 33°.78N±0°.05×35°.72E±0°.07, h14km±10km, Error ellipse: s-maj=10.0km s-min=6.7km az=149.0*
*GRAL **07** 11:24:53.2±0.3, 33°.78N×35°.77E, h5km±12km, MD2.6*
*NSSC **07** 11:24:53.4±0.3, 33°.63N×35°.70E, h30km±4km, MD0.7, ML1.3*

ISC 07 11:24:52.3±1.2, 33°.81N±0°.05×35°.75E±0°.09, h13km±15km, n7, σ0⁹50/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.12**	**322**	*e*P	**Pg**	**11 24 56.1**	**+0.4**
DQRL	**Deir Qamar**	**0.18**	**235**	*e*P	**Pg**	**11 24 56.6**	**+0.2**
DQRL				*e*S	**Sg**	**11 24 59.1**	**-0.2**
RCY	**Rachaya**	**0.32**	**166**	*e*P	**Pg**	**11 24 58.5**	**-0.3**
RCY				*e*S	**Sg**	**11 25 02.5**	**-0.8**
BRBR	**Barbar**	**0.43**	**157**	*e*P	**Pg**	**11 25 00.9**	**0.0**
BRBR				*e*S	**Sg**	**11 25 06.5**	**-0.2**
BRBR				AML	AML	11 25 09.3	
comp=N,28nm,0.2s							
BRBR				AML	AML	11 25 09.8	
comp=E,42nm,0.5s							
HWQ	**Hawqa**	**0.50**	**19**	*e*P	**Pb**	**11 25 02.5**	**-0.5**
QASN	**Qassioun**	**0.52**	**122**	*e*P	**Pb**	**11 25 04.1**	**+0.8**
QASN				*e*S	**Sb**	**11 25 11.0**	**+0.2**
QASN				AML	AML	11 25 16.4	
comp=E,30nm,0.4s							
QASN				AML	AML	11 25 18.0	
comp=N,67nm,0.3s							
TOTH	**TOTAH**	**0.72**	**128**	*e*P	**Pb**	**11 25 06.9**	**+0.1**
TOTH				*e*S	**Sg**	**11 25 15.6**	**-0.2**
TOTH				AML	AML	11 25 22.6	
comp=E,9.1nm,0.4s							
TOTH				AML	AML	11 25 28.5	
comp=N,3.8nm,0.3s							

*IDC **07** 11:37:34.4±3.2, 29°.23N×114°.36W, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/42, mbtmp3.2/4, ML3.1/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/16, Error ellipse: s-maj=46.3km s-min=11.8km az=28.0*
*ECX **07** 11:37:38.6±0.4, 30°.05N×114°.18W, h12km, MD3.1, ML3.3*
*MEX **07** 11:37:41.4±0.8, 30°.10N×114°.19W, h13km, MD3.9*

ISC 07 11:37:37.2±1.5, 29°.9N±0°.1×114°.40W±0°.09, h9km, n13, σ1⁹83/20, 1C-1D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.48**	**322**	*e*P	**Pn**	**11 38 04.4**	**+0.2**
SPX				*e*S	**Sn**	**11 38 21.1**	**-2.8**
SPX	**San Pedro Mart**	**1.48**	**322**	*e*P	**Pn**	**11 38 04.6**	**+0.3**
SPX				*e*S	**Sg**	**11 38 24.4**	**-0.3**
SPX				IAML		11 38 27.2	
comp=N,139nm,0.3s							
SPX				⇓*e*		11 38 27.2	
SPIG	**San Pedro Mart**	**1.48**	**322**	*e*P	**Pn**	**11 38 04.5**	**+0.3**
SPIG				*i* S	**Sn**	**11 38 21.1**	**-2.8**
SPIG	**San Pedro Mart**	**1.48**	**322**	*e*P	**Pn**	**11 38 04.5**	**+0.3**
ECBX	**El Chinero**	**1.68**	**341**	*e*P	**Pn**	**11 38 04.8**	**-1.9**
ECBX				*e*S	**Sn**	**11 38 26.1**	**-2.2**
CBX	**Cerro Bola**	**3.10**	**322**	*e*P	**Pn**	**11 38 27.3**	**+0.9**
CBX				*e*S	**Sn**	**11 39 02.3**	**-1.4**
CBX	**Cerro Bola**	**3.10**	**322**	*e*P	**Pn**	**11 38 27.4**	**+1.0**
CBX				IAML		11 39 26.8	
comp=N,245nm,1.4s							
CBX				⇑*e*		11 39 26.8	
GUYB	**Guaymas**	**3.67**	**122**	*e*P	**Pn**	**11 38 33.8**	**-0.3**
PFO	**Pinyon Flats O**	**4.11**	**335**	Pn	**Pn**	**11 38 42.6**	**+2.4**
comp=N,0.6nm,0.3s,baz=148,slow=13,SNR=5.6							
PFO				Pg	**Pg**	**11 38 54.3**	**-1.5**
comp=N,0.8nm,0.3s,baz=177,slow=15,SNR=7.6							
PFO				Sn	**Sg**	**11 39 49.9**	**+0.8**
comp=N,1.2nm,0.3s,baz=120,slow=6.8,SNR=7.2							
ANMO	**Albuquerque**	**8.39**	**51**	Pn	**Pn**	**11 39 41.4**	**+2.2**
comp=N,0.1nm,0.3s,baz=235,slow=16,SNR=3.1							
ANMO				Lg	Lg	11 42 08.7	
comp=N,0.1nm,0.3s,baz=341,slow=14,SNR=3.8							
ANMO				LR	LR	11 43 12.5	
comp=N,161nm,21.1s,baz=236,slow=38							
NVAR	**Mina Array Bea**	**9.11**	**340**	Pn	Pn	11 39 56.3	+7.3
comp=N,0.1nm,0.3s,baz=159,slow=13,SNR=3.6							
NVAR				Lg	Lg	11 42 43.6	
comp=N,0.1nm,0.3s,baz=163,slow=34,SNR=3.3							
TXAR	**Lajitas Array**	**9.36**	**91**	Pn	**Pn**	**11 39 51.9**	**-0.4**
comp=N,0.1nm,0.3s,baz=264,slow=14,SNR=3.9							
TXAR				Sn	**Sn**	**11 41 36.2**	**-1.6**
comp=N,0.2nm,0.3s,baz=276,slow=16,SNR=4.0							
TXAR				Lg	Lg	11 42 26.3	
comp=N,0.1nm,0.3s,baz=276,slow=34,SNR=2.9							
ILAR	**Eielson Array**	**40.37**	**339**	P	**P**	**11 45 18.6**	**+3.6**
comp=N,0.6nm,0.8s,baz=147,slow=7.3,SNR=5.2							

*IDC **07** 11:38:37.1±1.2, 28°.94N×142°.16E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.7/42, mbtmp3.7/7, ML2.9/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/41, Error ellipse: s-maj=38.1km s-min=24.7km az=61.0*
*ISCJB **07** 11:38:39.7±0.7, 29°.08N±0°.06×142°.1E±0°.1, h30km, mb4.1/11, Error ellipse: s-maj=18.2km s-min=8.1km az=164.9*
*NEIC **07** 11:38:41.7±1.2, 28°.95N×142°.12E, h33km±7km, mb4.2/9, Error ellipse: s-maj=17.6km s-min=13.0km az=160.0*

ISC 07 11:38:40.6±0.8, 28°.99N±0°.08×142°.2E±0°.1, h30km, n23, σ1⁹46/25, mb4.1/11, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**8.26**	**337**	Pn	**Pn**	**11 40 37.9**	**-0.4**
0.2nm,0.3s,baz=160,slow=9.8,SNR=12							
MJAR				Sn	**Sn**	**11 42 07.3**	**-3.3**
0.0nm,0.3s,baz=82,slow=32,SNR=2.9							
MJAR				LR	LR	11 43 48.3	
comp=Z,63nm,20.8s,baz=235,slow=38							
MAJO	**Matsushiro**	**8.26**	**337**	*e*Pn	**Pn**	**11 40 37.6**	**-0.8**
MAJO				*e*Sn	**Sn**	**11 42 09.5**	**-1.1**
ANA2	**Anatahan**	**12.99**	**165**	*e*Pn	**Pn**	**11 41 40.7**	**-2.6**
ERM	**Erimo**	**13.02**	**3**	*e*Pn	**Pn**	**11 41 42.2**	**-1.2**
KSRS	**Korea Array**	**14.64**	**309**	Pn	**Pn**	**11 42 07.3**	**+1.7**
0.1nm,0.3s,baz=122,slow=12,SNR=2.8							
MDJ	**Mudanjiang**	**18.56**	**331**	*e*P	**P**	**11 42 53.3**	**-1.6**
11nm,1.3s							
SSLB	**Suanglung**	**19.75**	**260**	*e*P	**P**	**11 43 06.3**	**-1.9**
7.6nm,0.8s							
SONA0	**Songino Array**	**33.41**	**314**	*e*P	**P**	**11 45 18.5**	**+1.9**
SONM	**Songino Array**	**33.41**	**314**	P	**P**	**11 45 18.5**	**+1.9**
0.8nm,0.7s,baz=111,slow=7.9,SNR=5.2							
TLY	**Talaya**	**36.52**	**319**	*e*P	**P**	**11 45 44.0**	**+0.7**
2.4nm,0.7s							
ZAA1	**Zalesovo Array**	**48.10**	**318**	*e*P	**P**	**11 47 17.4**	**0.0**
ZALV	**Zalesovo Beam**	**48.10**	**318**	P	**P**	**11 47 17.4**	**0.0**
0.6nm,0.3s,baz=114,slow=7.1,SNR=2.5							
WB2	**Warramunga Arr**	**49.24**	**190**	*e*P	**P**	**11 47 27.0**	**+0.5**
3.8nm,1.0s							
WR1	**Warramunga Arr**	**49.24**	**190**	*e*P	**P**	**11 47 27.0**	**+0.5**
WRA	**Warramunga Arr**	**49.24**	**190**	P	**P**	**11 47 27.0**	**+0.5**
0.8nm,0.4s,baz=2.1,slow=7.2,SNR=5.6							
MK31	**Makanchi Array**	**49.32**	**308**	*e*P	**P**	**11 47 27.2**	**+0.3**
0.9nm,0.8s							
MK32	**Makanchi Array**	**49.32**	**308**	*e*P	**P**	**11 47 27.4**	**+0.4**
MKAR	**Makanchi Array**	**49.32**	**308**	P	**P**	**11 47 27.4**	**+0.4**
0.9nm,0.7s,baz=95,slow=8.5,SNR=7.4							
KURK	**Kurchatov**	**51.71**	**313**	*e*P	**P**	**11 47 45.1**	**+0.3**
6.0nm,0.9s							
KK31	**Karatay Array**	**58.03**	**305**	*e*P	**P**	**11 48 31.2**	**+0.4**
1.6nm,0.6s							
ABKAR	**Akbulak array**	**63.82**	**314**	*e*P	**P**	**11 49 10.6**	**+0.7**
1.6nm,0.5s							
NV01	**Mina Array Sit**	**79.31**	**52**	*e*P	**P**	**11 50 45.8**	**+2.0**
NVAR	**Mina Array Bea**	**79.31**	**52**	P	**P**	**11 50 45.8**	**+2.0**
0.2nm,0.5s,baz=287,slow=6.3,SNR=3.2							

MAN 07 12:39:12.3, 11°.45N×124°.32E, h6km, mb4.4, ML3.3, MS3.1, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.48**	**145**	*e*P	Pg	12 39 22.1	+0.5
OCLP				*e*S	Sb	12 39 30.3	-0.3
PLP	**Palo**	**0.70**	**113**	⇓*e*P	Pg	12 39 26.1	+0.2
PLP				*e*S	Sg	12 39 35.2	+0.3
LLP	**Lapu-Lapu**	**1.18**	**197**	*e*S	Sn	12 39 59.9	+8.2
MSLP	**Maasin**	**1.41**	**158**	*e*P	Pn	12 39 38.3	-0.2
MSLP				*e*S	Sg	12 39 58.6	+1.1
GUIM	**Jordan**	**1.89**	**245**	*e*P	Pn	12 39 45.3	+0.2

IDC 07 12:41:36.6±9.6, 30°.42S×179°.90W, h363km±98km, mb2.9/2, mb1 3.4/3, mb1mx3.0/21, mbtmp4.0/3, Error ellipse: s-maj=100.7km s-min=51.5km az=15.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.20**	**197**	P	P	12 43 35.1	-0.2
8.2nm,0.3s,baz=288,slow=5.0,SNR=32							
URZ				S	S	12 45 05.5	-3.0
1.6nm,0.3s,baz=45,slow=23,SNR=7.8							
ASAR	**Alice Springs**	**41.47**	**268**	P	P	12 48 49.5	-0.1
0.3nm,0.5s,baz=102,slow=7.7,SNR=5.3							
WRA	**Warramunga Arr**	**42.46**	**273**	P	P	12 48 57.5	0.0
0.8nm,0.3s,baz=102,slow=8.5,SNR=15							
FINES	**FINESS Array B**	**144.58**	**339**	PKP	PKPbc	13 00 28.4	-0.8
0.8nm,0.5s,baz=44,slow=4.2,SNR=5.5							

NNC 07 12:50:06.8±7.1, 37°.14N×71°.10E, h100km±122km, mb3.1, mpv3.6, 4C-1D, Error ellipse: s-maj=68.6km s-min=50.1km az=144.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.97**	**356**	⇑P	Pn	12 51 33.0	+0.3
2.4nm,0.3s,baz=180,slow=13,SNR=25							
KK31				⇑S	Sn	12 52 41.8	+2.0
2.4nm,0.3s,baz=188,slow=27,SNR=6.1							
AAK	**Ala-Archa**	**6.08**	**24**	P	Pn	12 51 34.2	-0.1
1.6nm,0.3s							
AAK				⇓S	Sn	12 52 42.3	-0.2
2.4nm,0.5s							
AB31	**Akbulak array**	**14.57**	**330**	⇑P	Pn	12 53 26.8	-1.0
0.4nm,0.3s,baz=138,slow=13,SNR=32							
AKTO	**Aktyubinsk**	**16.27**	**329**	⇑P	P	12 53 50.3	-0.1
1.4nm,0.7s							

*MOS **07** 12:54:08.7±1.0, 23°.76S×179°.04E, h539km, mb5.5/57, Error ellipse: s-maj=7.4km s-min=6.5km az=84.6*
*ISCJB **07** 12:54:09.0±0.3, 23°.82S±0°.02×178°.99E±0°.02, h549km±4km, mb5.5/405, Error ellipse: s-maj=3.0km s-min=2.3km az=40.8*
*NEIC **07** 12:54:09.4±1.4, 23°.89S×179°.09E, h546km, mb5.5/332, MW5.9, MW5.9, Error ellipse: s-maj=12.3km s-min=11.6km az=126.0 Best double couple: NP1:φs1.00000°, δ77.00000°, λ-98.00000°. NP2:φs216.00000°, δ15.00000°, λ-57.00000°. Principal axes: T 1.0500, Plg32.0000°, Azm98.0000°; N -0.0500, Plg8.0000°, Azm3.0000°; P -1.0000, Plg57.0000°, Azm260.0000°;*
NEIC Broadband depth 546 km.
*IDC **07** 12:54:10.5±0.4, 23°.87S×179°.07E, h554km±4km, mb4.9/42, mb1 5.0/44, mb1mx5.0/44, mbtmp5.8/44 Error ellipse: s-maj=7.4km s-min=6.7km az=3.0*
*BJI **07** 12:54:10.3±0.0, 23°.44S×179°.00E, h550km, mb5.4/73, mB5.4/55*
*NEIC **07** 12:54:11.0±0.0, 23°.74S×179°.08E, h560km, Moment Tensor Solution. s72 Moment tensor: Scale 10^17Nm; Mrr=3.01; Mθθ=2.11; Mφφ=5.13; Mrθ=1.17; Mθφ=1.01; Mφr=7.42; Best double couple: Mo=8.80000×10^17 NP1:φs9.00000°, δ76.00000°, λ-88.00000°. NP2:φs185.00000°, δ14.00000°, λ-94.00000°. Principal axes: T 9.7000, Plg30.0000°, Azm98.0000°; N -2.2500, Plg1.0000°, Azm188.0000°; P -7.4500, Plg59.0000°, Azm280.0000°;*
*GCMT **07** 12:54:13.4±0.1, 23°.83S±0°.01×179°.07E±0°.01, h557km, MW5.9/130, Moment Tensor Solution. s130, c257; s81, c86; Duration: 2⁹2 Moment tensor: Scale 10^18Nm; Mrr=0.32±.01; Mθθ=0.20±.01; Mφφ=0.52±.01; Mrθ=0.05±.01; Mθφ=0.15±.01; Mφr=0.75±.01; Best double couple: Mo=0.87500×10^18 NP1:φs3.00000°, δ75.00000°, λ-97.00000°. NP2:φs209.00000°, δ16.00000°, λ-65.00000°. Principal axes: T 0.9850, Plg30.0000°, Azm99.0000°; N -0.2200, Plg7.0000°, Azm5.0000°; P -0.7650, Plg59.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

ISC 07 12:54:10.5±0.2, 23°.86S±0°.03×179°.10E±0°.03, h558km±2km, h559km; pP-P, n1631, σ1⁹41/1971, mb5.5/405, 70C-46D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.98**	**154**	P	**P**	**12 55 51.1**	**+1.9**
RIZ				S	**S**	**12 57 07.1**	**-2.9**
RAO	**Raoul Island**	**5.99**	**154**	*e*P	**P**	**12 55 49.1**	**-0.2**
RAO				*e*S	**S**	**12 57 10.3**	**+0.1**
RAO	**Raoul Island**	**5.99**	**154**	*e*P	**P**	**12 55 49.1**	**-0.2**
RAO				*e*S	**S**	**12 57 10.3**	**+0.1**
GLKZ	**Green Lake**	**6.00**	**154**	P	**P**	**12 55 51.1**	**+1.7**
GLKZ				S	**S**	**12 57 09.4**	**-0.9**
MARNC	**Mare, Loyalty**	**10.49**	**281**	*e*P	**P**	**12 56 33.9**	**+0.3**
PINNC	**Pines Island,**	**10.79**	**274**	*e*P	**P**	**12 56 37.3**	**+0.7**
PINNC				*e*S	**S**	**12 58 40.9**	**+4.2**
NFK	**Norfolk Island**	**11.25**	**240**	P	**P**	**12 56 43.7**	**+2.5**
baz=11,SNR=15							
NIUE	**Niue**	**11.27**	**67**	*e*P	**P**	**12 56 40.7**	**-0.9**
NIUE				*e*S	**S**	**12 58 47.5**	**+1.6**
NIUE	**Niue**	**11.27**	**67**	P	**P**	**12 56 40.4**	**-1.2**
baz=11,SNR=44							
ONTNC	**Ouen Toro**	**11.74**	**275**	*e*P	**P**	**12 56 47.0**	**+0.6**
DZM	**Mont Dzumac**	**11.79**	**276**	P	**P**	**12 56 47.5**	**+0.4**
29nm,0.3s,baz=149,slow=8.5,SNR=144							
DZM				S	**S**	**12 58 58.8**	**+2.9**
baz=337,slow=7.0,SNR=3.8							
DZM	**Mont Dzumac**	**11.79**	**276**	*e*P	**P**	**12 56 48.1**	**+1.0**
2μm,1.1s							
DZM	**Mont Dzumac**	**11.79**	**276**	*e*P	**P**	**12 56 47.5**	**+0.4**
DZM				*e*S	**S**	**12 58 58.2**	**+2.4**
OUZ	**Omahuta**	**12.29**	**202**	*e*P	**P**	**12 56 53.1**	**+1.3**
OUZ	**Omahuta**	**12.29**	**202**	P	**P**	**12 56 53.7**	**+1.9**
WCZ	**Waipu Caves**	**12.72**	**198**	P	**P**	**12 56 58.3**	**+2.1**
GRZ	**Great Barrier**	**12.74**	**193**	P	**P**	**12 56 57.9**	**+1.5**
ABAZ	**Army Bay**	**13.22**	**195**	P	**P**	**12 57 02.7**	**+1.4**
WIAZ	**Waiheke Island**	**13.33**	**194**	P	**P**	**12 57 03.9**	**+1.4**
MBAZ	**Motutapu North**	**13.36**	**195**	P	**P**	**12 57 04.5**	**+1.7**
MYRZ	**Mayor Island**	**13.60**	**190**	P	**P**	**12 57 08.1**	**+2.8**
MXZ	**Matakaoa Point**	**13.67**	**183**	*e*P	**P**	**12 57 04.3**	**-1.8**
MXZ				*e*S	**S**	**12 59 28.0**	**-2.6**
MXZ	**Matakaoa Point**	**13.67**	**183**	P	**P**	**12 57 04.1**	**-1.9**
MXZ				S	**S**	**12 59 28.2**	**-2.3**
HAZ	**Te Kaha**	**13.89**	**184**	P	**P**	**12 57 06.9**	**-1.4**
HAZ				S	**S**	**12 59 32.2**	**-2.4**
WHRZ	**Whale Island**	**14.07**	**187**	P	**P**	**12 57 10.7**	**+0.6**
OPRZ	**Ohinepanea**	**14.11**	**188**	P	**P**	**12 57 10.8**	**+0.3**
PUZ	**

RAHZ				S	S	12 59 54.4	-2.6
KNZ	Kokohu	15.16	184	P	P	12 57 19.3	-1.9
KNZ				S	S	12 59 53.8	-4.1
HATZ	Hinemaiaia	15.20	189	P	P	12 57 20.6	-1.1
HATZ				S	S	12 59 55.0	-3.6
RATZ	Rangitukua	15.22	190	P	P	12 57 22.4	+0.5
WHHZ	Waihua	15.25	186	P	P	12 57 20.0	-2.1
WHHZ				S	S	12 59 55.5	-4.0
FUNA	Funafuti 350nm,0.8s	15.25	0	eP	P	12 57 20.1	-2.4
MHGZ	Mahia Peninsul	15.28	184	P	P	12 57 20.8	-1.6
MHGZ				S	S	12 59 57.9	-2.0
NMHZ	Naumai	15.31	187	P	P	12 57 20.2	-2.6
NMHZ				S	S	12 59 58.8	-1.9
RITZ	Rihia Road	15.32	190	P	P	12 57 21.8	-1.1
RITZ				S	S	13 00 00.7	0.0
KATZ	Kakaramea	15.34	190	P	P	12 57 23.2	0.0
BKZ	Black Stump Fm	15.42	188	P	P	12 57 20.3	-3.6
BKZ				S	S	12 59 57.3	-5.1
ARHZ	Aropaoanui	15.46	186	P	P	12 57 22.2	-2.0
ARHZ				S	S	12 59 59.6	-3.4
KRVZ	Karewarewa	15.47	190	P	P	12 57 25.1	+0.6
TWVZ	Taurewa	15.48	191	P	P	12 57 24.9	+0.4
WTVZ	West Tongariro	15.49	190	P	P	12 57 24.1	-0.6
NGZ	Ngauruhoe	15.55	190	P	P	12 57 24.3	-1.0
NGZ				S	S	13 00 05.5	+0.6
TUVZ	Tukino	15.63	190	P	P	12 57 24.3	-1.8
TUVZ				S	S	13 00 04.6	-1.6
FWVZ	Far West T-bar	15.64	190	P	P	12 57 25.0	-1.3
FWVZ				S	S	13 00 04.6	-1.8
VRZ	Vera Road	15.65	193	P	P	12 57 27.4	+1.2
WHVZ	Whangaehu Hut	15.66	190	P	P	12 57 24.9	-1.6
WHVZ				S	S	13 00 04.2	-2.6
MCHZ	McNeill Hill	15.67	187	P	P	12 57 23.3	-3.0
MCHZ				S	S	13 00 03.3	-3.2
KWHZ	Kaweka Forest	15.68	188	P	P	12 57 23.0	-3.5
KWHZ				S	S	13 00 02.5	-4.3
PKVZ	Pokaka	15.71	191	P	P	12 57 26.6	-0.1
MOVZ	Moawhango	15.75	190	P	P	12 57 24.6	-2.7
MTVZ	Mangateitei	15.78	190	P	P	12 57 26.7	-0.7
BHHZ	Black Hill Sta	15.79	189	P	P	12 57 23.5	-4.1
BHHZ				S	S	13 00 05.0	-3.6
DREZ	Durham Road	15.83	194	P	P	12 57 30.8	+2.8
CKHZ	Cape Kidnapper	15.84	186	P	P	12 57 26.5	-1.5
CKHZ				S	S	13 00 05.7	-3.6
PKE	Pukeiti	15.89	195	P	P	12 57 30.8	+2.3
KRHZ	Kereru	15.90	188	P	P	12 57 25.2	-3.5
KHEZ	Kahui Hut	15.98	194	P	P	12 57 31.8	+2.4
PREZ	Palmer Road	15.99	194	P	P	12 57 32.1	+2.6
KAHZ	Kahuranaki	15.99	186	P	P	12 57 26.9	-2.6
LREZ	Lake Rotokare	16.05	193	P	P	12 57 31.3	+1.3
WAZ	Wanganui	16.22	191	P	P	12 57 31.2	-0.4
PXZ	Pawanui	16.23	186	P	P	12 57 29.0	-2.7
WPHZ	Waipukurau	16.31	187	P	P	12 57 30.3	-2.1
TSZ	Takapari Road	16.36	189	P	P	12 57 30.0	-3.0
PRHZ	Porangahau	16.49	187	P	P	12 57 32.2	-1.8
DVHZ	Dannevirke	16.57	188	P	P	12 57 32.3	-2.5
OHWZ	Ohakea	16.60	190	P	P	12 57 34.3	-0.7
ANWZ	Angora Road	16.70	187	P	P	12 57 33.7	-2.2
POWZ	Post Office Ro	16.72	189	P	P	12 57 34.3	-1.8
PRWZ	Pori Road	16.85	188	P	P	12 57 35.4	-1.8
BFZ	Birch Farm 310nm,1.0s	16.94	187	eP	P	12 57 35.7	-2.4
BFZ				eS	S	13 00 26.2	-1.2
BFZ	Birch Farm	16.94	187	P	P	12 57 35.4	-2.7
MRZ	Mangatainoka R	17.01	189	P	P	12 57 35.5	-3.2
TIWZ	Tintock	17.08	188	P	P	12 57 37.1	-2.2
CPWZ	Castlepoint	17.17	187	P	P	12 57 40.5	+0.3
OGWZ	Otaki Gorge	17.22	190	P	P	12 57 38.0	-2.6
HOWZ	Holdsworth Sta	17.25	189	P	P	12 57 38.1	-2.8
KIW	Kapiti Island	17.31	191	P	P	12 57 39.7	-1.8
TMWZ	Te Maipa	17.40	188	P	P	12 57 40.7	-1.7
MTW	Mount Morrison	17.51	189	P	P	12 57 41.4	-1.9
CAW	Cannon Point	17.52	190	P	P	12 57 41.5	-1.9
TRWZ	Traveller	17.72	188	P	P	12 57 43.4	-1.8
PAWZ	Paruwai Farm	17.74	189	P	P	12 57 43.5	-1.9
SNZO	South Karori 1µm,1.0s	17.78	191	eP	P	12 57 44.1	-1.7
SNZO				eS	S	13 00 41.8	+0.8
MSWZ	Moikau Station	17.80	190	P	P	12 57 44.0	-1.9
BHW	Baring Head	17.85	190	P	P	12 57 45.3	-1.1
PLWZ	Palliser	17.95	189	P	P	12 57 45.5	-1.9
THZ	Tophouse 336nm,0.8s	18.58	195	eP	P	12 57 52.0	-1.2
THZ				eS	S	13 00 50.7	-3.4
KHZ	Kahutara 350nm,0.8s	19.07	193	eP	P	12 57 55.9	-1.6
KHZ				eS	S	13 01 01.8	0.0
LHI	Lord Howe Isla 776nm,0.8s	19.30	242	eP	P	12 57 59.4	-0.3
LHI	Lord Howe Isla baz=19,SNR=43	19.30	242	P	P	12 58 01.8	+2.1
RAR	Rarotonga 11nm,0.3s,baz=242,slow=7.5,SNR=24	19.69	86	P	P	12 58 03.2	-0.3
RAR				ScP	ScP	13 04 39.8	+0.4
	3.5nm,0.3s,baz=158,slow=5.4,SNR=3.3						
RAR	Rarotonga 226nm,0.9s	19.69	86	eP	P	12 58 02.5	-1.0
LTZ	Lake Taylor 498nm,0.6s	19.70	195	eP	P	12 58 01.6	-1.6
LTZ				eS	S	13 01 12.3	+0.2
OXZ	Oxford 736nm,0.7s	20.27	195	eP	P	12 58 06.5	-1.9
OXZ				eS	S	13 01 19.9	-1.1
CRLZ	Canterbury Las 191nm,0.9s	20.37	194	eP	P	12 58 08.0	-1.2
MQZ	McQueen's Vall 145nm,0.7s	20.49	193	eP	P	12 58 09.0	-1.3
RPZ	Rata Peaks 129nm,0.5s,baz=338,slow=2.2,SNR=63	20.88	197	P	P	12 58 12.2	-1.7
RPZ				S	S	13 01 28.3	-2.4
	21nm,0.5s,baz=175,slow=21,SNR=3.2						
RPZ				ScP	ScP	13 04 42.9	+1.0
	9.8nm,0.5s,baz=91,slow=10,SNR=3.4						
FOZ	Fox Glacier 319nm,0.9s	21.06	199	eP	P	12 58 14.7	-0.7
LBZ	Lake Benmore 105nm,1.1s	21.73	197	eP	P	12 58 19.3	-2.3
WKZ	Wanaka 152nm,1.1s	22.47	199	eP	P	12 58 26.4	-1.8
WKZ				eS	S	13 01 54.5	-1.3
KNTN	Kanton 344nm,0.6s	22.77	24	eP	P	12 58 29.9	-1.3
MLZ	Mavora Lakes 244nm,0.8s	23.23	200	eP	P	12 58 34.8	-0.2
HNR	Honiara	23.25	305	eP	P	12 58 34.0	-1.5
HNR				eS	S	13 01 54.0	-15
HNR	Honiara 608nm,0.6s,baz=169,slow=2.2,SNR=39	23.25	305	P	P	12 58 34.8	-0.7
HNR				S	S	13 02 05.5	-3.2
	92nm,1.0s,baz=222,slow=18,SNR=3.0						
HNR	Honiara 586nm,0.6s	23.25	305	eP	P	12 58 34.5	-1.0
HNR	Honiara comp=Z,586nm,0.6s	23.25	305	eP	P	12 58 34.5	-1.0
HNR				pmax	pmax		
DCZ	Deep Cove comp=Z,450nm,1.4s	23.63	201	eP	P	12 58 37.8	-0.6
WHZ	Wether Hill Ro comp=Z,474nm,0.7s	23.76	200	eP	P	12 58 39.1	-0.5
ARMA	Armidale comp=Z,238nm,0.7s	25.26	249	eP	P	12 58 54.1	+0.8
ARMA	Armidale baz=25,SNR=229	25.26	249	P	P	12 58 54.8	+1.5
EIDS	Eidsvold comp=Z,172nm,0.8s	25.50	261	eP	P	12 58 55.5	+0.2
EIDS	Eidsvold baz=26,SNR=89	25.50	261	P	P	12 58 55.9	+0.6
TARA	Tarawa comp=Z,786nm,0.6s	25.78	346	eP	P	12 58 57.1	-0.8
MGCD	Mangrove Creek baz=26,SNR=141	26.23	243	P	P	12 59 03.3	+1.7
RIV	Riverview baz=26,SNR=18	26.34	242	P	P	12 59 03.9	+1.3
RMQ	Roma baz=28,SNR=306	27.55	258	P	P	12 59 14.8	+1.5
CNB	Canberra Magne baz=28,SNR=104	28.16	239	P	P	12 59 19.7	+1.1
CAN	Canberra comp=Z,587nm,0.8s	28.45	239	eP	P	12 59 21.3	+0.2
CAN	Canberra	28.45	239	eP	P	12 59 21.3	+0.2
YNG	Young baz=29,SNR=82	28.68	242	P	P	12 59 24.1	+1.1
TBI	Tubuai comp=Z,585nm,1.0s	28.79	95	eP	P	12 59 24.6	+0.5
TBI				eScP	ScP	13 05 05.5	+0.7
	comp=Z,198nm,0.9s						
MILA	Mila baz=29,SNR=26	28.84	236	P	P	12 59 25.4	+1.0
PAE	Paea comp=Z,46nm,0.9s	29.89	84	eP	P	12 59 33.4	-0.3
PAE				epP	pP	13 01 03.2	+0.2
	comp=Z,13nm,1.1s						
PPT2	Papeete2 comp=Z,307nm,1.1s	29.91	84	eP	P	12 59 34.2	+0.2
PPT2				epP	pP	13 01 03.6	+0.3
	comp=Z,178nm,1.2s						
PPT	Papeete comp=Z,216nm,0.9s,baz=54,slow=5.0,SNR=18	29.92	84	P	P	12 59 33.6	-0.4
PPTF	Pamatai, Papee comp=Z,419nm,1.2s	29.92	84	eP	P	12 59 33.9	-0.2
TIAR	Tiarei comp=Z,119nm,1.0s	30.13	84	eP	P	12 59 35.9	+0.1
TVO	Taravao comp=Z,59nm,0.8s	30.15	84	eP	P	12 59 35.9	-0.1
CMSA	Cobar Meteorol baz=31,SNR=1000	30.46	248	P	P	12 59 39.1	+0.6
CTA	Charters Tower comp=Z,811nm,0.5s,baz=96,slow=10,SNR=1509	30.65	271	P	P	12 59 41.1	+0.8
CTA				S	S	13 04 04.8	+0.8
	comp=Z,143nm,1.2s,baz=307,slow=20,SNR=23						
CTAO	Charters Tower comp=Z,691nm,0.5s	30.65	271	eP	P	12 59 40.7	+0.4
CTAO	Charters Tower	30.65	271	eP	P	12 59 40.7	+0.4
MEH	Mehetia comp=Z,155nm,1.3s	31.21	85	eP	P	12 59 45.2	+0.2
TOO	Toolangi comp=Z,394nm,0.8s	31.78	237	eP	P	12 59 49.5	-0.1
TOO	Toolangi baz=32,SNR=194	31.78	237	P	P	12 59 50.4	+0.8
TOO	Toolangi	31.78	237	eP	P	12 59 49.6	-0.1
TOO				pmax	pmax		
	comp=Z,394nm,0.8s						
MOO	Moorlands baz=32,SNR=10	32.25	227	P	P	12 59 54.3	+0.7
PMOR	Pomariorio Ree comp=Z,407nm,1.0s	32.28	80	eP	P	12 59 54.1	-0.1
PMOR				eScP	ScP	13 05 16.8	+0.2
	comp=Z,176nm,1.0s						
TAU	Tasmania Unive comp=Z,265nm,0.8s	32.36	226	eP	P	12 59 54.6	+0.1
TAU	Tasmania Unive comp=Z,265nm,0.8s	32.36	226	eP	P	12 59 54.6	+0.1
TAU				pmax	pmax		
VAH	Vaihoa comp=Z,398nm,1.1s	32.44	81	eP	P	12 59 55.3	-0.2
VAH				eScP	ScP	13 05 17.2	+0.1
	comp=Z,122nm,1.0s						
RABL	Rabaul comp=Z,186nm,0.6s	32.52	303	eP	P	12 59 54.7	-1.5
RABL				ePcP	PcP	13 02 27.2	+1.1
RABL				eScP	ScP	13 05 18.7	+1.2
PMG	Port Moresby comp=Z,538nm,0.7s,baz=100,slow=5.4,SNR=149	33.70	290	P	P	13 00 06.4	+0.2
PMG				S	S	13 04 49.3	-1.3
	comp=Z,30nm,1.0s,baz=325,slow=22,SNR=12						
PMG	Port Moresby comp=Z,584nm,0.8s	33.70	290	eP	P	13 00 06.1	-0.1
PMG				ePcP	PcP	13 02 31.3	+1.7
PMG				eS	S	13 04 49.3	-1.3
PMG	Port Moresby	33.70	290	eP	P	13 00 06.1	-0.1
PMG				e		13 02 31.3	
PMG				eS	S	13 04 49.3	-1.3
PMG				pmax	pmax		
	comp=Z,583nm,0.8s						
STKA	Stephens Creek comp=Z,254nm,0.8s,baz=80,slow=8.6,SNR=146	33.97	248	P	P	13 00 08.8	+0.6
STKA				S	S	13 04 54.7	+0.5
	comp=Z,9.2nm,0.8s,baz=239,slow=19,SNR=3.2						
STKA	Stephens Creek comp=Z,76nm,0.9s	33.97	248	eP	P	13 00 08.3	+0.1
STKA				ePcP	PcP	13 02 32.4	+2.3
STKA	Stephens Creek baz=34,SNR=332	33.97	248	P	P	13 00 08.9	+0.6
STKA	Stephens Creek	33.97	248	eP	P	13 00 08.4	+0.1
STKA				e		13 02 32.4	
STKA				pmax	pmax		
	comp=Z,76nm,0.9s						
XMAS	Kiritimati comp=Z,400nm,0.9s	34.40	45	eP	P	13 00 11.6	-0.5
ARPS	Mount Arapiles baz=35,SNR=88	34.43	239	P	P	13 00 12.1	+0.1
COEN	Coen comp=Z,230nm,0.6s	35.30	280	eP	P	13 00 19.5	0.0
COEN	Coen baz=35,SNR=214	35.30	280	P	P	13 00 20.1	+0.6
HTT	Hallett baz=36,SNR=154	36.34	246	P	P	13 00 28.0	+0.1
QIS	Mount Isa baz=37,SNR=68	36.63	267	P	P	13 00 30.2	-0.3
PATS	Pohnpei comp=Z,624nm,1.6s	36.65	324	eP	P	13 00 30.2	-0.4
PATS	Pohnpei baz=37,SNR=5.8	36.65	324	P	P	13 00 31.0	+0.4
MANU	Manus Island comp=Z,1µm,1.8s	37.59	300	eP	P	13 00 37.8	-0.6
BBOO	Buckleboo comp=Z,296nm,1.0s	38.70	247	eP	P	13 00 46.7	-0.5
BBOO				eS	S	13 06 03.5	-1.1
BBOO	Buckleboo baz=39,SNR=419	38.70	247	P	P	13 00 46.7	-0.5
MMPI	Merauke comp=Z,622nm,0.7s,comp=Z,10µm	40.05	286	P	P	13 00 58.0	-0.2
AS31	Alice Springs comp=Z,69nm,0.6s	41.23	261	eP	P	13 01 07.2	-0.3
AS31				eScP	ScP	13 05 51.9	+1.6
AS31				eS	S	13 06 41.4	-0.2
ASAR	Alice Springs comp=Z,76nm,0.3s,baz=92,slow=6.8,SNR=997	41.23	261	P	P	13 01 07.5	-0.1
ASAR				ScP	ScP	13 05 50.8	+0.6
	comp=Z,14nm,0.8s,baz=114,slow=3.7,SNR=6.5						
ASAR				S	S	13 06 40.3	-1.4
	comp=Z,45nm,1.0s,baz=97,slow=15,SNR=15						
ASAR				SS	ScS	13 10 09.6	+0.9
	comp=Z,8.2nm,0.8s,baz=103,slow=6.7,SNR=8.1						
ASAR				SKKS	SKKSdf	13 30 29.1	-22
	comp=Z,1.5nm,1.0s,baz=286,slow=4.2,SNR=8.5						
WB2	Warramunga Arr comp=Z,258nm,0.8s	41.58	266	eP	P	13 01 09.3	-1.0
WB2				eScP	ScP	13 05 52.9	+1.3
WB2				eS	S	13 06 43.8	-2.9
WRAB	Tennant Creek comp=Z,1µm,1.8s	41.58	266	eP	P	13 01 09.5	-0.9
WRAB				eScP	ScP	13 05 53.4	+1.7
WRAB				eS	S	13 06 43.1	-3.6
WRAB	Tennant Creek	41.58	266	deP	P	13 01 09.5	-0.9
WRAB				pmax	pmax		
	comp=Z,303nm,1.0s						
WR1	Warramunga Arr comp=Z,122nm,0.9s	41.59	266	eP	P	13 01 09.9	-0.5
WR1				eS	S	13 06 42.9	-4.0
WRA	Warramunga Arr comp=Z,149nm,0.3s	41.59	266	P	P	13 01 09.9	-0.5
WRA				ScP	ScP	13 05 54.4	+2.7
	comp=Z,31nm,1.0s,baz=108,slow=2.7,SNR=10						
WRA				S	S	13 06 42.9	-4.0
TAOE	Nuku Hiva Isla comp=Z,852nm,0.9s	41.68	76	eP	P	13 01 11.2	-0.1
TAOE	Nuku Hiva Isla comp=Z,344nm,0.8s	41.68	76	eP	P	13 01 11.0	-0.3
JOHN	Johnston Islan comp=Z,372nm,1.1s	41.85	16	eP	P	13 01 12.2	-0.1
RKT	Rikitea comp=Z,122nm,0.9s	41.98	99	eP	P	13 01 13.5	+0.1
JAY	Jayapura comp=Z,223nm,0.6s,baz=121,slow=3.9,SNR=109	42.74	294	P	P	13 01 19.2	-0.4
JAY				ScP	ScP	13 05 58.7	+2.3
	comp=Z,27nm,0.9s,baz=358,slow=1.8,SNR=3.6						
JAY				S	S	13 07 03.9	+0.3
	comp=Z,12nm,0.8s,baz=201,slow=21,SNR=5.6						
JAY	Jayapura comp=Z,2µm,1.3s,comp=Z,28µm	42.74	294	P	P	13 01 19.1	-0.4
GENI	Genyem comp=Z,415nm,1.1s,comp=Z,5µm	43.15	293	P	P	13 01 22.1	-0.6
WAKE	Wake Island comp=Z,2µm,1.8s	44.57	343	eP	P	13 01 32.8	-0.6
KDU	Kakadu baz=46,SNR=108	45.46	276	P	P	13 01 39.6	-0.8
FORT	Forrest comp=Z,1µm,0.6s	45.55	250	eP	P	13 01 40.1	-0.9
FORT				eS	S	13 07 42.2	-0.6
FORT	Forrest baz=46,SNR=756	45.55	250	P	P	13 01 40.2	-0.8
PTCN	Pitcairn Islan comp=Z,1µm,1.5s	46.04	102	eP	P	13 01 45.0	+0.3
WRKA	Warakurna baz=46,SNR=1000	46.04	258	P	P	13 01 44.3	-0.5
MTN	Manton Dam comp=Z,80nm,0.6s	46.63	275	eP	P	13 01 48.1	-1.2
MTN				ePcP	PcP	13 03 12.4	+0.5
MTN				eScP	ScP	13 06 14.1	+1.6
MTN	Manton Dam baz=47,SNR=168	46.63	275	P	P	13 01 48.1	-1.2
SRPI	Serui, Papua comp=Z,370nm,0.8s	46.86	291	P	P	13 01 51.0	-0.1
BAKI	Biak	47.33	292	P	P	13 01 54.7	+0.1
KNRA	Kununurra baz=48,SNR=239	47.86	270	P	P	13 01 58.4	-0.2
KMPI	Kaimana, Papua	48.16	287	P	P	13 01 59.4	-1.4
SAUI	Saumlaki comp=Z,474nm,0.9s	48.35	281	eP	P	13 02 01.7	-0.5
KHU	Kahuku comp=Z,320nm,1.5s	49.44	32	eP	P	13 02 10.2	-0.2
KHU	Kahuku comp=Z,321nm,1.5s	49.44	32	eP	P	13 02 10.2	-0.2
KHU				pmax	pmax		
KKH	Kailua Kona	49.59	31	eP	P	13 02 11.3	+0.1
KKH				ePcP	PcP	13 03 23.2	+0.7
KKH	Kailua Kona	49.59	31	eP	P	13 02 11.3	+0.1
KKH				e		13 03 23.2	
KHLU	Kahalu`u comp=Z,241nm,0.9s	49.60	32	eP	P	13 02 11.0	-0.4
AIN	Ainahou comp=Z,198nm,1.0s	49.62	32	eP	P	13 02 11.7	+0.1
HLP	Hilina Pali comp=Z,204nm,0.9s	49.63	32	eP	P	13 02 11.7	+0.1
MLOA	Mauna Loa Obse comp=Z,177nm,1.0s	49.70	32	eP	P	13 02 12.2	-0.4
HUH	Hualalai comp=Z,161nm,0.8s	49.70	32	eP	P	13 02 11.8	-0.6
PUH	Pauahi comp=Z,260nm,0.8s	49.74	32	eP	P	13 02 12.5	0.0
MLH	Mauna Loa comp=Z,314nm,0.9s	49.76	32	eP	P	13 02 12.8	+0.1
MLH	Mauna Loa comp=Z,314nm,0.9s	49.76	32	eP	P	13 02 12.9	+0.1
MLH				pmax	pmax		
FAKI	Fak Fak comp=Z,782nm,1.9s	49.78	287	eP	P	13 02 11.6	-1.2
FAKI				ePcP	PcP	13 03 24.4	+1.0
FAKI				eScP	ScP	13 06 27.9	+2.0
FAKI	Fak Fak comp=Z,167nm,1.5s,comp=Z,3µm	49.78	287	P	P	13 02 11.8	-1.0
HMH	Humu'ula Sheep comp=Z,875nm,1.1s	49.80	32	eP	P	13 02 13.3	+0.2
POHA	Pohakuloa comp=Z,220nm,1.0s	49.91	32	eP	P	13 02 14.0	+0.2
FITZ	Fitzroy Crossi comp=Z,228nm,0.8s,baz=101,slow=4.9,SNR=448	50.01	266	P	P	13 02 14.3	-0.1
KEKH	Kekaha comp=Z,277nm,0.9s	50.02	26	eP	P	13 02 14.2	0.0
GUMO	Guam comp=Z,295nm,0.6s,baz=156,slow=10,SNR=37	50.05	314	P	P	13 02 14.1	-0.6
GUMO	Guam comp=Z,1µm,1.5s	50.05	314	eP	P	13 02 13.6	-1.1
GUMO	Guam comp=Z,1µm,1.5s	50.05	314	eP	P	13 02 13.6	-1.1
GUMO				pmax	pmax		
HPAH	Hawaii Prepara comp=Z,455nm,0.8s	50.07	31	eP	P	13 02 14.7	-0.1
MHA	Mahukona	50.10	31	eP	P	13 02 15.1	+0.1
MHA	Mahukona	50.10	31	eP	P	13 02 15.1	+0.1
HON	Honolulu comp=Z,250nm,0.8s	50.14	28	eP	P	13 02 15.1	-0.1
HON	Honolulu comp=Z,250nm,0.8s	50.14	28	eP	P	13 02 15.1	-0.1
HON				pmax	pmax		
KIP	Kipapa comp=Z,91nm,0.8s	50.23	28	eP	P	13 02 15.8	0.0
KIP	Kipapa comp=Z,98nm,1.0s	50.23	28	ceP	P	13 02 16.9	+1.1
KIP				pmax	pmax		
OPA	Opana comp=Z,138nm,0.8s	50.46	28	eP	P	13 02 17.7	+0.2
OPA	Opana comp=Z,138nm,0.8s	50.46	28	eP	P	13 02 17.7	+0.2
OPA				pmax	pmax		
KHLH	Kahului Airpor comp=Z,135nm,0.8s	50.47	30	eP	P	13 02 17.7	+0.1
KMBL	Kambalda baz=51,SNR=73	50.77	248	P	P	13 02 18.6	-1.2
BNDI	Bandanaira comp=Z,714nm,0.8s,comp=Z,7µm	51.10	284	P	P	13 02 21.5	-0.9
ANA2	Anatahan comp=Z,514nm,0.7s	51.58	318	eP	P	13 02 24.7	-1.1
SWI	Sorong comp=Z,655nm,0.7s,comp=Z,5µm	51.65	289	P	P	13 02 25.9	-0.5
SARN	Sarigan comp=Z,105nm,0.6s	51.81	318	eP	P	13 02 25.9	-1.5
PALU	Palau baz=54,SNR=23	53.47	300	P	P	13 02 38.9	-0.4
SOEI	Soe comp=Z,706nm,0.9s	54.02	275	eP	P	13 02 43.5	+0.1
SOEI	Soe	54.02	275	P	P	13 02 44.2	+0.8
KLBR	Kellerberrin baz=54,SNR=150	54.24	247	P	P	13 02 43.8	-0.8
VNDA	Vanda comp=Z,36nm,0.8s,baz=354,slow=7.8,SNR=78	54.35	185	P	P	13 02 45.3	+0.8
VNDA				ScP	ScP	13 06 47.0	+2.3
	comp=Z,8.4nm,0.8s,baz=11,slow=1.3,SNR=4.3						
VNDA	Vanda comp=Z,51nm,0.9s	54.35	185	eP	P	13 02 45.1	+0.5
VNDA	Vanda comp=Z,51nm,0.9s	54.35	185	eP	P	13 02 45.1	+0.5
VNDA				pmax	pmax		
PSA00	Pilbara Seismi comp=Z,179nm,0.8s	54.36	260	eP	P	13 02 44.6	-0.9
SBA	Scott Base comp=Z,273nm,0.9s	54.37	183	eP	P	13 02 45.2	+0.5
SBA				eScP	ScP	13 06 47.4	+2.7
BATI	Baumata	54.40	274	P	P	13 02 46.9	+0.9
NWAO	Narrogin (SRO) comp=Z,32nm,0.3s,baz=111,slow=7.0,SNR=119	54.50	246	P	P	13 02 45.6	-0.7
NWAO				PcP	PcP	13 03 40.9	-0.2
	comp=Z,16nm,0.5s,baz=63,slow=2.3,SNR=3.4						
NWAO	Narrogin (SRO) comp=Z,442nm,1.5s	54.50	246	eP	P	13 02 45.2	-1.2
NWAO				ePcP	PcP	13 03 40.9	-0.2
NWAO	Narrogin (SRO) baz=55,SNR=84	54.50	246	P	P	13 02 45.7	-0.7
NWAO	Narrogin (SRO)	54.50	246	eP	P	13 02 45.2	-1.2
NWAO				e		13 03 40.9	
NWAO				pmax	pmax		
	comp=Z,442nm,1.5s						
NWAO	Narrogin (SRO) SNR=7.0	54.50	246	P	P	13 02 45.0	-1.4
RKGY	Rocky Gully baz=55,SNR=7.6	54.51	244	P	P	13 02 45.3	-1.1
MBWA	Marble Bar SNR=9.7	54.57	260	P	P	13 02 46.6	-0.4
BLDU	Ballidu baz=55,SNR=167	55.27	248	P	P	13 02 51.0	-0.9
MUN	Mundaring baz=56,SNR=37	55.49	247	P	P	13 02 52.8	-0.5
TNTI	Ternate comp=Z,364nm,1.1s	55.84	288	eP	P	13 02 55.4	-0.6
TNTI	Ternate comp=Z,390nm,1.1s,comp=Z,3µm	55.84	288	P	P	13 02 55.2	-0.7
MORW	Morawa comp=Z,236nm,1.0s	56.11	250	eP	P	13 02 56.6	-1.0
MORW				eScP	ScP	13 06 54.3	+0.8
MORW	Morawa baz=56,SNR=158	56.11	250	P	P	13 02 57.0	-0.7
MMRI	Maumere comp=Z,361nm,0.9s	56.30	276	eP

KDI	Kendari	57.86 281	P	P	13 03 09.5	-0.3
	comp=Z,155nm,1.1s,comp=Z,2µm					
WBSI	Waikabubak, Su	58.51 273	P	P	13 03 13.7	-0.6
	comp=Z,484nm,1.0s,comp=Z,6µm					
BSSI	Bau Bau, Buton	58.87 277	P	P	13 03 16.3	-0.3
	comp=Z,204nm,1.3s,comp=Z,4µm					
LUWI	Luwuk	59.02 284	eP	P	13 03 16.7	-0.9
	comp=Z,1µm,1.8s					
LUWI	Luwuk	59.02 284	P	P	13 03 17.2	-0.4
	comp=Z,364nm,1.4s,comp=Z,5µm					
GIRL	Giralia	59.12 257	eP	P	13 03 17.9	-0.2
	comp=Z,1µm,1.4s					
GIRL	Giralia	59.12 257	P	P	13 03 17.7	-0.5
	baz=59,SNR=51					
BKSI	Bulukumba	59.54 278	P	P	13 03 19.8	-1.3
	comp=Z,237nm,0.8s,comp=Z,2µm					
CASY	Casey	59.78 206	eP	P	13 03 21.2	-0.6
	comp=Z,212nm,0.8s					
BNSI	Bone	59.94 279	P	P	13 03 23.1	-0.6
	comp=Z,357nm,1.1s,comp=Z,4µm					
KAPI	Kappang	60.01 278	eP	P	13 03 23.7	-0.4
	comp=Z,122nm,0.9s					
KAPI	Kappang	60.01 278	eP	P	13 03 23.7	-0.4
KAPI			pmax	pmax		
	comp=Z,122nm,0.9s					
KAPI	Kappang	60.01 278	P	P	13 03 24.1	0.0
	SNR=36					
APSI	Ampana	60.08 283	P	P	13 03 24.7	+0.1
	comp=Z,274nm,1.2s,comp=Z,3µm					
PLAI	Plampang	60.30 273	P	P	13 03 25.2	-0.9
	comp=Z,751nm,0.9s,comp=Z,10µm					
SPSI	Sidrap Palu	60.43 279	P	P	13 03 25.2	-1.8
	comp=Z,81nm,0.7s,comp=Z,896nm					
MRSI	Marisa	60.45 285	P	P	13 03 25.6	-1.5
	comp=Z,93nm,0.6s,comp=Z,1µm					
DAV	Davao City (W)	60.59 294	⇑iP	P	13 03 27.5	-0.5
TTSI	Tana Toraja	60.77 280	P	P	13 03 29.1	-0.1
	comp=Z,109nm,1.0s,comp=Z,2µm					
CTBH	Cotabato--PC H	61.79 293	⇓iP	P	13 03 35.1	-0.7
MPSI	Mapaga	62.20 284	P	P	13 03 37.5	-1.0
	comp=Z,183nm,0.8s,comp=Z,3µm					
DNP	Denpasar	62.70 272	P	P	13 03 36.5	-5.3
IGBI	Denpasar	62.70 272	P	P	13 03 40.4	-1.4
SRBI	Singaraja	62.92 273	P	P	13 03 42.3	-0.9
	comp=Z,171nm,1.4s,comp=Z,3µm					
JAGI	Jajag, Banyuwa	63.74 272	eP	P	13 03 47.1	-1.4
	comp=Z,239nm,1.0s					
JAGI	Jajag, Banyuwa	63.74 272	P	P	13 03 47.2	-1.3
	comp=Z,270nm,1.4s,comp=Z,5µm					
RPN	Rapa Nui	63.87 110	P	P	13 03 51.2	+2.1
	comp=Z,89nm,0.5s,baz=289,slow=4.3,SNR=6.5					
RPN	Rapa Nui	63.87 110	eP	P	13 03 50.1	+1.0
	comp=Z,989nm,1.6s					
RPN	Rapa Nui	63.87 110	eP	P	13 03 50.1	+1.0
RPN			pmax	pmax		
	comp=Z,989nm,1.6s					
KMMI	Kalianget	64.46 274	P	P	13 03 53.4	+0.4
	comp=Z,200nm,0.9s,comp=Z,2µm					
GRJI	Gresik	65.87 273	P	P	13 04 01.8	-0.1
	comp=Z,711nm,0.7s,comp=Z,6µm					
PWJI	Pagerwojo	66.06 272	P	P	13 04 02.5	-0.6
	comp=Z,278nm,1.1s					
MTKI	Muara Teweh, K	66.11 280	P	P	13 04 03.4	0.0
	comp=Z,151nm,0.9s					
QSPA	South Pole Qui	66.22 180	P	P	13 04 03.9	+0.6
	comp=Z,331nm,1.0s,baz=4.0,slow=1.0,SNR=220					
QSPA	South Pole Qui	66.22 180	eP	P	13 04 03.6	+0.3
	comp=Z,409nm,1.0s					
QSPA			eS	S	13 12 08.8	+0.2
NGJI	Ngawi	66.63 272	P	P	13 04 05.7	-0.8
UGM	Wanagama	67.28 271	eP	P	13 04 09.6	-1.0
	comp=Z,280nm,0.8s					
UGM	Wanagama	67.28 271	P	P	13 04 08.9	-1.7
YOGI	Yogyakarta	67.52 271	P	P	13 04 07.0	-5.1
SMRI	Semarang	67.68 272	eP	P	13 04 12.8	-0.2
	comp=Z,151nm,0.8s					
SMRI	Semarang	67.68 272	P	P	13 04 12.5	-0.6
JHJ2	Mitsune	67.91 325	eP	P	13 04 14.0	0.0
	comp=Z,539nm,0.7s					
KKM	Kota Kinabalu	68.11 287	eP	P	13 04 15.1	-0.6
	comp=Z,649nm,1.5s					
KKM	Kota Kinabalu	68.11 287	P	P	13 04 16.0	+0.3
PBKI	Pangkalan Bun	68.29 277	P	P	13 04 16.7	0.0
CISI	Cisompet, Garu	69.89 271	eP	P	13 04 24.9	-1.5
	comp=Z,1µm,1.6s					
CISI	Cisompet, Garu	69.89 271	P	P	13 04 25.2	-1.2
	comp=Z,456nm,1.2s,comp=Z,4µm					
SBUM	Sibu	70.00 282	eP	P	13 04 26.5	-0.4
	comp=Z,70nm,1.3s					
SBUM	Sibu	70.00 282	P	P	13 04 27.0	+0.1
LEM	Lembang	70.35 271	P	P	13 04 29.3	0.0
LEM			pmax	pmax		
	comp=Z,222nm,0.8s					
LEM	Lembang	70.35 271	P	P	13 04 28.4	-0.9
JOW	Kunigami	70.36 313	eP	P	13 04 28.5	-0.3
	comp=Z,108nm,0.7s					
INU	Inuyama	71.11 325	eP	P	13 04 32.6	-0.4
	comp=Z,156nm,1.2s					
KSM	Kuching	71.29 280	eP	P	13 04 34.1	-0.5
	comp=Z,524nm,1.4s					
KSM	Kuching	71.29 280	P	P	13 04 34.0	-0.6
MJAR	Matsushiro Arr	71.41 326	P	P	13 04 34.3	-0.5
	comp=Z,106nm,0.7s,baz=165,slow=5.7,SNR=222					
MJAR			S	S	13 13 10.4	+1.6
	comp=Z,0.4nm,0.4s,baz=165,slow=10,SNR=3.6					
MAJO	Matsushiro	71.41 326	eP	P	13 04 34.5	-0.3
	comp=Z,123nm,0.8s					
MAJO			eS	S	13 13 10.4	+1.6
MAJO	Matsushiro	71.41 326	diP	P	13 04 34.5	-0.3
MAJO			pmax	pmax		
	comp=Z,99nm,0.8s					
MAT	Matsushiro	71.41 326	P	P	13 04 34.3	-0.5
MAT			S	S	13 13 11.4	+2.6
MJB9	Matsu-Tunnel	71.41 326	eP	P	13 04 34.5	-0.2
	comp=Z,127nm,0.8s					
YOJ	Yonaguni jima	72.55 308	eP	P	13 04 41.1	-0.5
	comp=Z,833nm,1.4s					
YOJ	Yonaguni jima	72.55 308	eP	P	13 04 41.1	-0.5
YOJ			pmax	pmax		
	comp=Z,833nm,1.4s					
JNU	Nakatsue	72.96 319	P	P	13 04 43.5	-0.3
	comp=Z,62nm,0.5s,baz=85,slow=2.1,SNR=85					
JNU			S	S	13 13 28.1	+1.9
	comp=Z,2.1nm,0.8s,baz=270,slow=23,SNR=2.6					
JNU	Nakatsue	72.96 319	eP	P	13 04 43.5	-0.3
	comp=Z,228nm,1.2s					
TWG	Pinlang	73.01 305	eP	P	13 04 42.4	-1.9
	comp=Z,267nm,0.6s					
NACB	Ningancliao	73.42 307	eP	P	13 04 45.5	-1.1
	comp=Z,233nm,1.1s					
ERM	Erimo	73.50 333	eP	P	13 04 47.2	+0.7
	comp=Z,56nm,0.8s					
ERM	Erimo	73.50 333	eP	P	13 04 47.3	+0.7
ERM			pmax	pmax		
	comp=Z,56nm,0.8s					
SSLB	Suanglung	73.66 306	eP	P	13 04 46.2	-1.8
	comp=Z,201nm,1.4s					
TATO	Taipei	73.97 307	eP	P	13 04 48.3	-1.4
	comp=Z,530nm,1.3s					
YUK	Yuzh-Kuril'sk	74.12 336	diP	P	13 04 50.5	+0.4
YUK			i*PP	pP	13 06 44.1	-1.1
YUK			i		13 07 43.3	
YUK			iS	S	13 13 43.4	+5.0
YUK			iSS	SS	13 18 42.0	+2.2
YUK			pmax	pmax		
	comp=Z,457nm,1.4s					
YUK			pmax	pmax		
	comp=Z,363nm,1.0s					
YUK			pmax	pmax		
	comp=N,139nm,0.7s					
YUK			pmax	pmax		
	comp=E,111nm,0.7s					
KUR	Kuril'sk	74.43 338	diP	P	13 04 52.7	+0.9
KUR			e		13 07 45.6	
KUR			ePPP	PPP	13 09 33.3	
KUR			iS	S	13 13 45.2	+3.5
KUR			eSS	SS	13 18 40.8	-3.6
KUR			eSSS	SSS	13 22 10.4	
KUR			pmax	pmax		
	comp=N,214nm,2.0s					
KUR			pmax	pmax		
	comp=E,77nm,2.0s					
KUR			pmax	pmax		
	comp=Z,544nm,2.0s					
KUR			pmax	pmax		
	comp=E,44nm,1.3s					
KUR			pmax	pmax		
	comp=Z,247nm,1.3s					
KUR			pmax	pmax		
	comp=N,112nm,1.6s					
KUR			pmax	pmax		
	comp=N,167nm,18.0s					
KUR			pmax	pmax		
	comp=Z,220nm,18.0s					
ASAJ	Asahikawa	75.46 334	P	P	13 04 59.4	+1.7
	comp=Z,146nm,0.8s,baz=207,slow=7.8,SNR=81					
ASAJ			S	S	13 13 58.7	+5.7
	comp=Z,3.1nm,1.1s,baz=12,slow=27,SNR=3.5					
ADK	Adak	75.51 3	eP	P	13 04 57.4	-0.3
	comp=Z,228nm,0.9s					
ADK	Adak	75.51 3	eP	P	13 04 57.4	-0.3
ADK			pmax	pmax		
	comp=Z,228nm,0.9s					
GSTR	Great Sitkin T	75.75 3	eP	P	13 04 59.0	-0.1
ATKA	Atka Island	75.97 4	eP	P	13 04 59.5	-0.7
	comp=Z,295nm,0.9s					
QZH	Quanzhou	76.09 306	⇓iP	P	13 05 01.6	+0.1
QZH			pP	pP	13 06 58.2	+0.9
QZH			sP	sP	13 07 52.8	-1.2
QZH			S	S	13 14 01.6	+1.2
QZH			pmax	pmax		
	comp=Z,60nm,0.8s					
QZH			pmax	pmax		
	comp=Z,750nm,4.1s					
SMY	Shemya	76.39 357	eP	P	13 05 02.5	0.0
	comp=Z,258nm,1.0s					
SMY	Shemya	76.39 357	eP	P	13 05 02.5	0.0
SMY			pmax	pmax		
	comp=Z,258nm,1.0s					
SKR	Severo-Kuril's	76.95 345	eP	P	13 05 02.5	-3.1
SKR			e		13 05 15.7	
SKR			e		13 08 07.6	
SKR			pmax	pmax		
	comp=Z,500nm,5.0s					
SKR			pmax	pmax		
	comp=Z,162nm,1.2s					
SKR			pmax	pmax		
	comp=Z,300nm,13.1s					
NIKH	Nikolski High	77.22 7	eP	P	13 05 06.7	-0.4
	comp=Z,408nm,0.7s					
MYKOM	Kota Tinggi	77.26 278	eP	P	13 05 07.0	-1.2
	comp=Z,545nm,1.9s					
MYKOM	Kota Tinggi	77.26 278	P	P	13 05 08.0	-0.2
TJN	Taejon	77.29 319	ceP	P	13 05 07.6	-0.2
MAW	Mawson	77.50 201	P	P	13 05 08.7	+0.3
	comp=Z,133nm,0.7s,baz=134,slow=5.0,SNR=255					
MAW	Mawson	77.50 201	eP	P	13 05 08.6	+0.1
	comp=Z,35nm,0.8s					
MAW	Mawson	77.50 201	P	P	13 05 08.7	+0.3
	baz=77,SNR=295					
MAW	Mawson	77.50 201	eP	P	13 05 08.6	+0.1
MAW			pmax	pmax		
	comp=Z,35nm,0.8s					
DLV	T Lat	77.60 289	eP	P	13 05 10.2	-0.1
	comp=Z,177nm,1.0s					
KSRS	Korea Array	77.69 321	P	P	13 05 10.6	+0.6
	comp=Z,51nm,0.7s,baz=133,slow=5.7,SNR=298					
KS15	Wonju Array Si	77.71 321	eP	P	13 05 10.4	+0.3
	comp=Z,69nm,0.8s					
YSS	Yuzh-Sakhalins	77.75 335	eP	P	13 05 10.5	+0.4
	comp=Z,195nm,0.7s					
YSS	Yuzh-Sakhalins	77.75 335	κiP	P	13 05 11.6	+1.5
YSS			e*PP	pP	13 07 08.8	+2.2
YSS			e*SP	sP	13 08 05.1	+2.0
YSS			e		13 08 17.7	
YSS			iS	S	13 14 22.5	+5.4
YSS			e		13 14 44.0	
YSS			pmax	pmax		
	comp=Z,240nm,0.7s					
YSS			pmax	pmax		
	comp=Z,700nm,3.3s					
HKPS	Hong Kong Po S	78.03 301	eP	P	13 05 11.8	-0.4
	comp=Z,210nm,1.3s					
UNV	Unalaska Valle	78.38 9	eP	P	13 05 12.6	-0.7
	comp=Z,104nm,0.7s					
PET	Petropavlovsk	78.60 348	eP	P	13 05 14.3	-0.1
	comp=Z,101nm,0.7s					
PET	Petropavlovsk	78.60 348	eP	P	13 05 14.0	-0.5
PET			e*PP	pwP	13 07 14.8	-1.4
PET			eS	S	13 14 25.1	-0.6
PET			eSP	SPn	13 15 11.1	-1.4
PET			pmax	pmax		
	comp=Z,400nm,4.9s					
PET			pmax	pmax		
	comp=Z,162nm,0.7s					
PET			pmax	pmax		
	comp=Z,300nm,16.0s					
TEY	Ternei	78.76 331	eP	P	13 05 17.5	+2.0
AKUT	Akutan	78.77 9	eP	P	13 05 15.0	-0.3
	comp=Z,80nm,0.8s					
PEA0B	Petropavlovsk-	78.88 347	eP	P	13 05 15.9	0.0
	comp=Z,332nm,1.2s					
PETK	Petropavlovsk-	78.88 347	P	P	13 05 16.2	+0.2
	comp=Z,80nm,0.7s,baz=120,slow=6.0,SNR=159					
PETK			PKiKP	PKiKP	13 10 43.9	-0.6
	comp=Z,4.3nm,0.9s,baz=78,slow=3.6,SNR=4.5					
PMSA	Palmer Station	79.27 157	P	P	13 05 18.9	+0.9
PMSA	Palmer Station	79.27 157	eP	P	13 05 18.4	+0.5
	comp=Z,176nm,1.3s					
PMSA	Palmer Station	79.27 157	eP	P	13 05 20.9	+2.9
MSHR	Mys Shultsa	79.53 326	iP	P	13 05 20.1	+0.5
VLA	Vladivostok	79.55 327	iP	P	13 05 20.1	+0.4
VLA			pmax	pmax		
	comp=Z,41nm,0.9s					
FALS	False Pass	79.82 10	eP	P	13 05 20.8	-0.1
	comp=Z,77nm,0.8s					
QIZ	Qiongzhong	79.84 296	P	P	13 05 21.8	0.0
QIZ			sP	sP	13 08 13.4	-1.9
QIZ			S	S	13 14 39.3	-0.7
QIZ			sS	sS	13 18 10.5	+1.2
QIZ			pmax	pmax		
	comp=Z,20nm,0.7s					
QIZ			pmax	pmax		
	comp=Z,390nm,7.5s					
QIZ	Qiongzhong	79.84 296	eP	P	13 05 21.4	-0.4
	comp=Z,34nm,0.9s					
NJ2	Nanjing	80.02 312	⇓P	P	13 05 22.8	+0.4
NJ2			pmax	pmax		
	comp=Z,71nm,0.8s					
USA0B	Ussuriysk Arra	80.29 328	eP	P	13 05 23.9	+0.3
	comp=Z,250nm,1.3s					
USRK	Ussuriysk Ar.	80.29 328	P	P	13 05 24.4	+0.8
	comp=Z,55nm,0.7s,baz=121,slow=4.1,SNR=90					
SDPT	Sand Point	80.80 12	eP	P	13 05 25.8	-0.1
	comp=Z,128nm,0.8s					
IPM	Ipoh	80.94 279	eP	P	13 05 27.1	-0.6
	comp=Z,120nm,0.8s					
IPM	Ipoh	80.94 279	P	P	13 05 27.0	-0.7
TYV	Tymovskoe	81.05 338	eP	P	13 05 28.6	+1.3
TYV			eS	S	13 14 45.7	-5.2
TYV			pmax	pmax		
	comp=Z,700nm,5.3s					
TYV			pmax	pmax		
	comp=Z,162nm,1.0s					
TYV			smax	smax		
	comp=N,500nm,5.1s					
SPIA	Saint Paul Isl	81.22 6	eP	P	13 05 28.2	+0.2
	comp=N,286nm,1.0s					
SNCC	San Nicolas Is	81.49 48	P	P	13 05 30.9	+0.9
	baz=234					
KULM	Kulim	81.62 280	eP	P	13 05 30.7	-0.5
	comp=N,292nm,1.5s					
KULM	Kulim	81.62 280	P	P	13 05 31.0	-0.2
MDJ	Mudanjiang	81.78 327	P	P	13 05 32.1	+0.9
MDJ			pP	pP	13 07 30.8	+1.6
MDJ			sP	sP	13 08 28.0	+2.6
MDJ			PP	PP	13 08 48.5	-0.6
MDJ			S	SKSac	13 14 57.5	-0.5
MDJ			SS	SS	13 20 28.6	-5.1
MDJ			pmax	pmax		
	comp=N,160nm,1.0s					
SCZ2	Santa Cruz Isl	81.85 47	P	P	13 05 32.8	+0.9
	baz=234					
SCI2	San Clemente I	82.00 49	P	P	13 05 33.4	+0.7
	baz=235					
SBC	Santa Barbara	82.06 47	P	P	13 05 34.0	+1.1
	baz=234					
PSI	Prapat	82.15 277	eP	P	13 05 32.1	-1.9
	comp=N,96nm,0.9s					
PSI	Prapat	82.15 277	eP	P	13 05 32.2	-1.9
PSI			pmax	pmax		
	comp=Z,96nm,0.9s					
PKM	Mcpherson Peak	82.25 47	P	P	13 05 35.2	+1.0
	baz=234					
BLG	Laguna Peak, P	82.30 48	P	P	13 05 34.5	+0.4
	baz=234					
GO10	Punta Arenas	82.30 145	eP	P	13 05 34.6	+0.6
	comp=Z,101nm,0.6s					
SAO	San Andreas Ge	82.31 44	eP	P	13 05 34.5	+0.4
	comp=Z,56nm,0.8s					
SAO	San Andreas Ge	82.31 44	eP	P	13 05 34.5	+0.4
SAO			pmax	pmax		
	comp=Z,56nm,0.8s					
WHN	Wuhan	82.33 308	⇓P	P	13 05 34.6	+0.3
WHN			sP	sP	13 08 23.6	-5.0
WHN			S	S	13 15 04.7	+0.1
WHN			pmax	pmax		
	comp=Z,150nm,0.6s					
WHN			pmax	pmax		
	comp=Z,1µm,8.7s					
CIS	Catalina Islan	82.34 48	P	P	13 05 34.9	+0.5
	baz=235					
SMMC	Simmler	82.38 46	P	P	13 05 35.6	+1.0
	baz=234					
DL2	Dalian	82.39 318	⇓iP	P	13 05 34.9	+0.5
DL2			pP	pP	13 07 32.2	-0.4
DL2			sP	sP	13 08 25.4	-3.4
DL2			S	SKSac	13 15 00.1	-2.2
DL2			pmax	pmax		
	comp=Z,33nm,0.7s					
DL2			pmax	pmax		
	comp=Z,240nm,4.1s					
SKLT	Songkhla	82.44 281	P	P	13 05 35.6	+0.3
	comp=Z,64nm,1.3s,comp=Z,809nm					
PAGB	Antelope Grade	82.46 46	eP	P	13 05 35.6	+0.6
	comp=Z,255nm,2.0s					
FMP	Fort Macarthur	82.60 48	P	P	13 05 36.3	+0.6
	baz=235					
HOPS	Hopland Field	82.66 42	eP	P	13 05 36.5	+0.7
	comp=Z,85nm,0.9s					
GDXM	Geysers	82.71 42	eP	P	13 05 37.3	+1.1
	comp=Z,34nm,0.9s					
GSI	Gunungsitoli	82.77 275	eP	P	13 05 36.7	-0.3
	comp=Z,559nm,1.5s					
USHA	Ushuaia	82.78 147	P	P	13 05 37.8	+1.5
	comp=Z,36nm,1.0s,baz=350,slow=4.9,SNR=4.1					
KCPM	Cahto Peak	82.78 41	eP	P	13 05 37.4	+0.8
	comp=Z,70nm,1.0s					
OSI	Osito Audit: C	82.82 47	eP	P	13 05 37.9	+1.0
	comp=Z,49nm,1.0s					
OSI	Osito Audit: C	82.82 47	P	P	13 05 37.5	+0.7
	baz=235					
DECC	Green Verdugo	82.88 48	P	P	13 05 37.4	+0.3
	baz=235					
PASC	Pasadena Art C	82.93 48	eP	P	13 05 37.7	+0.3
	comp=Z,42nm,0.9s					
109C	Camp Elliot, M	82.95 50	P	P	13 05 38.0	+0.5
	baz=236					
CPE	Camp Elliot	82.95 50	eP	P	13 05 37.9	+0.5
	comp=Z,96nm,1.3s					
ARVC	Arvin	83.05 47	P	P	13 05 38.2	+0.4
	baz=234,SNR=11					
KMRM	Mail Ridge	83.05 40	eP	P	13 05 38.8	+0.9
	comp=Z,72nm,0.8s					
MWC	Mount Wilson	83.05 48	eP	P	13 05 38.3	+0.1
	comp=Z,54nm,1.3s					
MWC	Mount Wilson	83.05 48	eP	P	13 05 38.3	+0.1
MWC			pmax	pmax		
	comp=Z,54nm,1.3s					
SNY	Shenyang	83.10 322	⇓P	P	13 05 37.9	-0.1
SNY			sP	sP	13 08 29.4	-3.1
SNY			pmax	pmax		
	comp=Z,41nm,1.5s					
BAR	Barrett	83.14 50	eP	P	13 05 38.8	+0.4
	comp=Z,102nm,1.8s					
SII	Sitkinak Islan	83.24 15	eP	P	13 05 39.0	+0.6
	comp=Z,205nm,0.8s					
MURC	Murrieta	83.29 49	P	P	13 05 39.8	+0.6
	baz=236,SNR=13					
VES	Vestal, Richgr	83.29 46	P	P	13 05 39.2	+0.2
	baz=234,SNR=28					
GRNR	Gornyy	83.30 334	⇓iP	P	13 05 39.2	+0.4
GRNR			e		13 07 39.2	
GRNR			pmax	pmax		
	comp=Z,110nm,1.0s					
BFSC	Mount Baldy Ra	83.33 48	P	P	13 05 39.9	+0.4
	baz=235,SNR=32					
CN2	Changchun	83.37 324	eP	P	13 05 39.4	+0.1
CN2			esP	sP	13 08 35.9	+2.0
CN2			eS	SKSac	13 15 05.6	-2.8
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
VOG	Valley Oaks Go	83.38 46	P	P	13 05 39.7	+0.2
	baz=234					
MONP2	Monument Peak	83.43 50	P	P	13 05 41.1	+1.0
	baz=236,SNR=35					
KHMM	Horse Mountain	83.45 40	eP	P	13 05 41.0	+1.1
	comp=Z,75nm,0.8s					
EDW2	Edwards Air Fo	83.47 47	P	P	13 05 40.6	+0.5
	baz=235,SNR=63					
SLBS	Sierra La Lagu	83.50 61	eP	P	13 05 41.1	+0.6
	comp=Z,113nm,0.9s					
IKP	In-Ko-Pah, Jac	83.52 50	P	P	13 05 41.5	+1.1
	baz=236,SNR=24					
SRIG	Santa Rosalia	83.53 57	eP	P	13 05 41.2	+0.8
	comp=Z,108nm,0.9s					
O02D	Mt. Diablo Mer	83.57 41	P	P	13 05 42.0	+1.5
	baz=231,SNR=29					
ISA	Isabella, Lake	83.59 47	eP	P	13 05 41.2	+0.5
	comp=Z,106nm,0.9s					
ISA	Isabella, Lake	83.59 47	eP	P	13 05 41.2	+0.5
ISA			pmax	pmax		
	comp=Z,106nm,0.9s					
ISA	Isabella, Lake	83.59 47	P	P	13 05 41.4	+0.7
	baz=235,SNR=111					
TIA	Tai'an	83.61 314	P	P	13 05 41.3	+0.6
TIA			S	SKSac	13 15 09.6	-0.7
TIA			pmax	pmax		
	comp=Z,190nm,0.8s					
CMB	Columbia Colle	83.74 44	eP	P	13 05 41.7	+0.4
	comp=Z,74nm,0.9s					
CMB			ePP	PP	13 09 03.7	-1.4
CMB	Columbia Colle	83.74 44	eP	P	13 05 41.7	+0.4
CMB			e		13 09 03.7	
CMB			pmax	pmax		
	comp=Z,74nm,0.9s					
PFO	Pinyon Flats O	83.80 49	P	P	13 05 42.4	+0.6
	comp=Z,15nm,0.8s,baz=256,slow=2.4,SNR=17					
PFO			pP	pP	13 07 44.3	+2.8
	comp=Z,6.5nm,1.1s,baz=249,slow=5.4,SNR=2.6					
PFO	Pinyon Flats O	83.80 49	eP	P	13 05 41.9	0.0
	comp=Z,110nm,1.6s					
PFO	Pinyon Flats O	83.80 49	eP	P	13 05 41.9	0.0
PFO			pmax	pmax		
	comp=Z,110nm,1.6s					
PFO	Pinyon Flats O	83.80 49	P	P	13 05 42.4	+0.6
	baz=236,SNR=18					
BBRC	Big Bear Solar	83.85 48	P	P	13 05 42.7	+0.5
	baz=236					
SWSC	Sam W. Stewart	83.89 50	P	P	13 05 42.9	+0.8
	baz=236,SNR=21					
AFDM	Forest Hills D	83.92 43	eP	P	13 05 42.0	-0.2
	comp=Z,80nm,1.1s					
ORV	Oroville	83.97 42	eP	P	13 05 42.8	+0.5
	comp=Z,57nm,0.9s					
ORV			ePP	PP	13 09 03.5	-3.3
ORV	Oroville	83.97 42	eP	P	13 05 42.8	+0.5
ORV			e		13 09 03.5	
ORV			pmax	pmax		
	comp=Z,57nm,0.9s					
WDC	Whiskeytown Da	83.97 41	eP	P	13 05 43.2	+1.0
	comp=Z,63nm,1.0s					
WDC	Whiskeytown Da	83.97 41	eP	P	13 05 43.3	+1.0
WDC			pmax	pmax		
	comp=Z,63nm,1.0s					
LRMC	Laurel Mtn Rad	84.02 47	P	P	13 05 43.3	+0.5
	baz=235,SNR=36					
OHAK	Old Harbor	84.05 15	eP	P	13 05 43.2	+1.0
	comp=Z,101nm,0.8s					
KLR	Kul'dur	84.10 331	PP	PP	13 09 06.5	-1.1
	comp=Z,4.3nm,1.0s,baz=118,slow=6.1,SNR=4.4					
KLR			PKiKP	PKiKP	13 10 54.4	+1.5
	comp=Z,1.2nm,0.6s,baz=112,slow=5.4,SNR=3.4					
KLR	Kul'dur	84.10 331	diP	P	13 05 43.3	+0.6
KLR			pmax	pmax		
	comp=Z,47nm,1.0s					
N02D	Trinity Center	84.11 40	P	P	13 05 44.2	+1.1
	baz=231					
RRX	Edison Barstow	84.14 48	P	P	13 05 43.8	+0.5

baz=236
O03E Paynes Creek 84.23 41 P **P 13 05 44.1 +0.3**
baz=232,SNR=25
M02C Callahan 84.29 40 P **P 13 05 45.1 +1.1**
baz=231,SNR=20
CWC Cottonwood Cre 84.30 46 P **P 13 05 44.7 +0.4**
baz=235
L02E Cave Junction 84.33 39 P **P 13 05 45.2 +1.1**
baz=231
BELC Belle Mtn. Jos 84.34 49 P **P 13 05 45.3 +0.8**
baz=236,SNR=86
MDPB Devils Postpil 84.34 45 *e*P **P 13 05 44.9 +0.4**
comp=Z,54nm,1.0s
KEBM Edson Butte 84.37 38 *e*P **P 13 05 45.1 +0.8**
comp=Z,152nm,1.3s
MPMC Manual Prospec 84.47 47 P **P 13 05 45.6 +0.4**
baz=235,SNR=52
KHON Khomkaen 84.49 290 P **P 13 05 46.3 +0.9**
comp=Z,156µm,1.2s
MLAC Mammoth, Mammo 84.50 45 P **P 13 05 46.0 +0.7**
baz=234
RUBR Rubicon Trail 84.50 43 *e*P **P 13 05 45.8 +0.5**
comp=Z,54nm,0.9s
GSC Goldstone, Bar 84.51 48 *e*P **P 13 05 45.6 +0.4**
comp=Z,48nm,0.9s
GSC Goldstone, Bar 84.51 48 P **P 13 05 45.6 +0.4**
baz=236,SNR=38
BC3 Big Chuckawall 84.53 50 P **P 13 05 46.4 +1.0**
baz=237,SNR=32
DAC Darwin (Calif) 84.53 46 *e*P **P 13 05 46.5 +1.0**
comp=Z,14nm,0.8s
TIN Tinemaha, Big 84.56 46 P **P 13 05 45.9 +0.5**
baz=235
HEC Hector,Ludlow 84.56 48 P **P 13 05 46.0 +0.5**
baz=236,SNR=52
YBH Yreka Blue Hor 84.58 40 P **P 13 05 46.5 +1.0**
comp=Z,35nm,0.9s,baz=195,slow=2.8,SNR=18
YBH pP **pwP 13 07 48.2 +0.6**
comp=Z,5.8nm,0.8s,baz=162,slow=5.7,SNR=3.2
YBH Yreka Blue Hor 84.58 40 *e*P **P 13 05 46.3 +0.9**
comp=Z,54nm,1.0s
WAKR Walker 84.62 44 *e*P **P 13 05 46.6 +0.7**
comp=Z,77nm,1.1s
WAKR *e*PP **PP 13 09 11.9 -0.5**
GLA Glamis 84.64 50 *e*P **P 13 05 46.9 +1.0**
comp=Z,117nm,0.9s
GLA Glamis 84.64 50 P **P 13 05 47.1 +1.2**
baz=237,SNR=53
K02D Willamette Mer 84.64 39 P **P 13 05 46.8 +1.1**
baz=230,SNR=9.1
SNAA Sanae 84.71 179 P **P 13 05 44.8 -0.9**
SNAA Sanae 84.71 179 pP pP 13 07 52.5 +7.9
SNAA Sanae 84.71 179 P **P 13 05 44.8 -0.9**
comp=Z,11nm,0.4s,baz=197,slow=9.7,SNR=49
SNAA Sanae 84.71 179 *e*P **P 13 05 44.9 -0.7**
comp=Z,46nm,1.3s
SNAA Sanae 84.71 179 *e*P **P 13 05 44.9 -0.7**
SNAA pmax pmax
comp=Z,46nm,1.3s
KDAK Kodiak Island 84.72 15 *e*P **P 13 05 46.2 +0.7**
comp=Z,66nm,0.8s
KDAK Kodiak Island 84.72 15 *ce*P **P 13 05 46.2 +0.7**
J01E Myrtle Point 84.78 38 P **P 13 05 47.4 +1.1**
baz=230,SNR=14
PKDT Phuket 84.80 281 P **P 13 05 49.9 +2.9**
comp=Z,54nm,1.2s
BEKR Beckworth 84.85 42 *e*P **P 13 05 47.3 +0.4**
comp=Z,29nm,0.7s
PNTR Pine Nut 84.86 43 *e*P **P 13 05 47.6 +0.6**
comp=Z,80nm,0.8s
LHMI Lhok Sumawe 84.95 278 *e*P **P 13 05 47.6 -0.1**
comp=Z,468nm,1.4s
LHMI *e*PP **PP 13 09 14.2 -0.8**
VNA3 Neumayer Olymp 84.95 177 P **P 13 05 46.0 -0.7**
VNA3 Neumayer Olymp 84.95 177 pP pP 13 07 50.2 +4.3
VCNR Virginia City 84.95 43 *e*P **P 13 05 47.9 +0.5**
comp=Z,18nm,0.8s
HUMO Hull Mountain 84.99 39 *e*P **P 13 05 48.0 +0.7**
comp=Z,66nm,1.0s
GMRC Granite Mounta 85.00 49 P **P 13 05 48.3 +0.6**
baz=236,SNR=44
CHAI Chaiyaphum 85.01 290 P **P 13 05 48.3 +0.3**
comp=Z,102µm,1.0s
IRM Iron Mountain 85.01 49 P **P 13 05 48.7 +1.1**
baz=237,SNR=59
YERR Yerington 85.03 44 *e*P **P 13 05 48.3 +0.5**
comp=Z,114nm,1.5s
GRAC Grapevine Rang 85.09 46 P **P 13 05 48.7 +0.7**
baz=235,SNR=9.7
L04D Klamath Falls 85.12 40 P **P 13 05 49.0 +0.8**
baz=232,SNR=22
FURC Furnace Creek, 85.12 47 P **P 13 05 48.5 +0.5**
baz=236
M04C Macdoel 85.12 40 P **P 13 05 49.1 +1.0**
baz=232
TUQ Turquoise Moun 85.18 48 P **P 13 05 49.0 +0.5**
baz=236,SNR=42
SHOC Shoshone, Teco 85.20 47 P **P 13 05 48.8 +0.3**
baz=236
Y12C Blythe 85.23 50 *e*P **P 13 05 49.1 +0.5**
comp=Z,52nm,1.0s
Y12C Blythe 85.23 50 P **P 13 05 49.6 +1.0**
baz=237,SNR=15
113A Mohawk Valley, 85.24 51 *e*P **P 13 05 49.2 +0.5**
comp=Z,58nm,1.0s
113A *e*PP **PP 13 09 17.0 -0.1**
RYN Ryan 85.28 44 *e*P **P 13 05 49.2 +0.2**
comp=Z,101nm,1.9s
NV01 Mina Array Sit 85.30 44 *e*P **P 13 05 49.5 +0.4**
NVAR Mina Array Bea 85.30 44 P **P 13 05 49.5 +0.4**
comp=Z,30nm,0.8s,baz=224,slow=8.2,SNR=76
NVAR pP **pP 13 07 50.6 +1.3**
comp=Z,8.7nm,1.0s,baz=223,slow=9.1,SNR=4.5
NVAR PKPPKP **P'P'df 13 31 55.6 -0.1**
comp=Z,1.4nm,1.0s,baz=123,slow=2.7,SNR=5.3
VNA2 Neumayer--Watz 85.36 178 P **P 13 05 48.0 -0.7**
baz=190,slow=4.6
VNA2 Neumayer--Watz 85.36 178 pP pP 13 07 56.6 +8.3
baz=154,slow=4.6
PAHR Pah Rah Range 85.36 43 *e*P **P 13 05 49.6 +0.2**
comp=Z,38nm,0.8s
HSIG 85.37 56 *e*P **P 13 05 49.8 +0.4**
comp=Z,90nm,0.8s
HSIG *e*PP **PP 13 09 18.3 +0.1**
NV11 Mina Array Sit 85.40 44 *e*P **P 13 05 49.8 +0.2**
comp=Z,3.9nm,1.0s
I02D Swisshome 85.43 37 P **P 13 05 50.6 +1.3**
baz=230
214A Organ Pipe Nat 85.50 52 P **P 13 05 51.2 +1.2**
baz=238
LDFC Landfair 85.54 49 *e*P **P 13 05 50.9 +0.6**
comp=Z,124nm,0.8s
VNA1 Neumayer--Stat 85.61 178 P **P 13 05 49.3 -0.5**
VNA1 Neumayer--Stat 85.61 178 pP pP 13 07 54.6 +5.1
K04D Chiloquin, OR 85.69 39 P **P 13 05 51.5 +0.6**
baz=232
NEE2 Needles Airpor 85.71 49 P **P 13 05 51.6 +0.7**
baz=237
ENH Enshi 85.75 306 *e*P **P 13 05 51.2 0.0**
PHET Kaeng Krachan 85.77 286 P **P 13 05 53.0 +1.4**
comp=Z,295µm,1.2s
KVN Kaiserville 85.79 44 *e*P **P 13 05 51.6 +0.1**
comp=Z,48nm,0.7s
KVN Kaiserville 85.79 44 *e*P **P 13 05 51.6 +0.1**
KVN pmax pmax
comp=Z,48nm,0.7s
PDMCI Parker Dam,Lak 85.79 50 P **P 13 05 52.2 +0.9**
baz=237,SNR=29
TPNV Topopah Spring 85.80 47 *e*P **P 13 05 51.7 +0.2**
comp=Z,54nm,0.9s
TPNV Topopah Spring 85.80 47 *e*P **P 13 05 51.7 +0.2**
TPNV pmax pmax
comp=Z,54nm,0.9s
TPNV Topopah Spring 85.80 47 P **P 13 05 51.9 +0.4**
baz=236,SNR=78
SLVN Son La 85.84 295 *e*P **P 13 05 52.1 +0.2**
comp=Z,86nm,1.3s
J04D Umpqua Nationa 85.87 39 P **P 13 05 52.6 +0.8**
baz=232,SNR=23
GYA Guiyang 86.02 301 ||*iP* **P 13 05 52.3 -0.5**
GYA pP pP 13 07 53.2 +1.0
GYA sP sP 13 08 45.9 -2.1
GYA PP **PP 13 09 22.8 -0.8**
GYA sS sS 13 19 10.7 -3.9
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,360nm,7.4s
I04A Tendick Farm, 86.04 38 P **P 13 05 52.8 +0.4**
baz=231,SNR=21
MOD Modoc Plateau 86.11 41 *e*P **P 13 05 53.2 +0.3**
comp=Z,54nm,0.8s
PBKT Sadao Pong 86.18 290 P **P 13 05 54.5 +1.0**
comp=Z,41nm,1.6s,comp=Z,599nm
K05A Summer Lake 86.26 40 *e*P **P 13 05 54.1 +0.5**
comp=Z,63nm,0.8s
SHPR Sheep Range 86.28 47 *e*P **P 13 05 54.0 +0.1**
comp=Z,24nm,0.8s
H04D Lebanon 86.31 38 P **P 13 05 54.5 +1.0**
baz=231,SNR=17
MA2 Magadan 86.34 346 P **P 13 05 53.5 +0.2**
comp=Z,131nm,0.8s,baz=144,slow=5.5,SNR=76
MA2 Magadan 86.34 346 *e*P **P 13 05 53.2 -0.1**
comp=Z,154nm,0.8s
MA2 Magadan 86.34 346 *de*P **P 13 05 52.9 -0.4**
MA2 pmax pmax
comp=Z,127nm,0.9s
W13A Hualapai Mount 86.40 49 *e*P **P 13 05 55.0 +0.6**
comp=Z,30nm,0.8s
Y14A Wickenburg 86.40 51 *e*P **P 13 05 54.7 +0.4**
comp=Z,21nm,0.8s
Y14A *e*PP **PP 13 09 26.1 -0.3**
J05D Fort Rock, OR 86.40 39 P **P 13 05 55.1 +1.0**
baz=232,SNR=78
BJT Baijiatuau 86.43 317 *e*P **P 13 05 54.4 +0.2**
comp=Z,62nm,1.0s
BJT Baijiatuau 86.43 317 *e*P **P 13 05 54.4 +0.2**
BJT pmax pmax
comp=Z,62nm,1.0s
BJI Beijing 86.44 317 P **P 13 05 54.7 +0.5**
BJI sP **sP 13 08 49.9 +0.3**
BJI SKS **SKSac 13 15 26.2 -1.4**
BJI S **S 13 15 44.8 +0.9**
BJI sS **sS 13 19 15.1 -3.1**
BJI pmax pmax
comp=Z,31nm,1.4s
G03D McMinnville, O 86.45 37 P **P 13 05 55.0 +0.8**
baz=231
CNPM China Poot 86.60 15 *e*P **P 13 05 55.1 +0.5**
comp=Z,116nm,0.7s
HOM Homer 86.62 14 *e*P **P 13 05 55.1 +0.5**
comp=Z,313nm,0.7s
H04A Detroit Lake 86.72 38 *e*P **P 13 05 55.7 +0.2**
comp=Z,56nm,0.9s
SRDT SRDT 86.83 287 P **P 13 05 58.0 +1.4**
comp=Z,96nm,1.5s
PINE Pine Mountain 86.88 39 *e*P **P 13 05 57.3 +0.8**
comp=Z,115nm,0.9s
PINE *e*PP **PP 13 09 29.5 -0.7**
I05D Terrebonne, OR 86.98 38 P **P 13 05 57.7 +0.9**
baz=232,SNR=35
R11A Troy Canyon, C 87.02 46 *e*P **P 13 05 57.2 -0.1**
comp=Z,14nm,1.3s
R11A *e*PP **PP 13 09 29.8 -1.6**
R11A Troy Canyon, C 87.02 46 P **P 13 05 57.4 +0.1**
baz=236,SNR=18
UTTA Uttaradit 87.05 291 P **P 13 05 58.9 +1.3**
comp=Z,61µm,0.8s,comp=Z,697µm
RSO Redoubt South 87.10 14 *e*P **P 13 05 57.0 -0.1**
BMN Battle Mountai 87.14 43 *e*P **P 13 05 58.1 +0.3**
comp=Z,56nm,0.9s
BMN *e*PP **PP 13 09 30.9 -1.3**
BMN Battle Mountai 87.14 43 *e*P **P 13 05 58.1 +0.3**
BMN *e* 13 09 30.9
BMN pmax pmax
comp=Z,56nm,0.9s
F04D Rainier, OR 87.14 36 P **P 13 05 58.2 +0.8**
baz=231
NANT Nan 87.39 292 P **P 13 06 00.2 +1.0**
comp=Z,86µm,0.8s,comp=Z,967µm
WVOR Wild Horse Val 87.42 41 *e*P **P 13 05 59.6 +0.6**
comp=Z,69nm,0.9s
WVOR Wild Horse Val 87.42 41 *e*P **P 13 05 59.6 +0.6**
WVOR pmax pmax
comp=Z,69nm,0.9s
DIB Dawson Inlet, 87.47 27 *e*P **P 13 05 59.8 +1.0**
comp=Z,120nm,0.9s
NLWA Neilton Lookou 87.52 35 *e*P **P 13 05 59.9 +0.8**
comp=Z,89nm,1.1s
SEW Seward 87.53 15 *e*P **P 13 05 59.6 +0.8**
comp=Z,73nm,1.0s
G05D Wamic, OR 87.55 38 P **P 13 05 59.9 +0.5**
baz=232,SNR=7.2
TIY Taiyuan 87.56 313 *e*P **P 13 06 00.8 +1.1**
TIY pP **pwP 13 08 02.4 -2.8**
TIY sP **sP 13 08 59.7 +4.3**
TIY SKS **SKSac 13 15 32.9 -1.7**
TIY S **S 13 15 53.4 -1.4**
TIY pmax pmax
comp=Z,220nm,1.1s
E04D Cinebar 87.68 36 P **P 13 06 00.9 +1.0**
baz=231,SNR=23
X16A Lo Mia Camp, P 87.75 51 *e*P **P 13 06 01.6 +0.8**
comp=Z,35nm,0.9s
319A Douglas 87.79 54 *e*P **P 13 06 01.9 +0.9**
comp=Z,158nm,0.9s
UMPA Umpang Tak 87.85 289 P **P 13 06 02.7 +1.3**
comp=Z,111µm,1.0s
LCMT Little Creek M 87.85 48 *e*P **P 13 06 01.6 +0.5**
comp=Z,30nm,0.9s
F05D White Salmon 87.86 37 P **P 13 06 01.4 +0.5**
baz=232
I07A Izee 87.88 39 *e*P **P 13 06 01.8 +0.7**
comp=Z,98nm,0.8s
G06A Carlson Farm, 87.93 38 *e*P **P 13 06 01.8 +0.6**
comp=Z,49nm,0.8s
D04E Lakebay 87.96 35 P **P 13 06 02.6 +1.4**
baz=231,SNR=6.3
D03D Eldon 88.02 35 P **P 13 06 02.4 +1.0**
baz=231,SNR=35
J08A Circle Bar Ran 88.06 40 *e*P **P 13 06 02.4 +0.5**
comp=Z,170nm,1.3s
CCUT Cedar City 88.06 47 *e*P **P 13 06 02.8 +0.5**
comp=Z,34nm,0.9s
CCUT *e*PP **PP 13 09 39.2 -0.5**
XAN Xi'an 88.07 309 P **P 13 06 02.9 +0.8**
XAN pP pP 13 08 02.4 +0.1
XAN sP sP 13 08 56.2 -1.7
XAN PP **PP 13 09 43.7 +4.1**
XAN SKS **SKSac 13 15 36.2 -1.6**
XAN S **S 13 16 00.4 +0.8**
XAN pmax pmax
comp=Z,140nm,1.4s
XAN pmax pmax
comp=Z,530nm,5.5s
XAN Xi'an 88.07 309 *e*P **P 13 06 02.5 +0.4**
XAN Xi'an 88.07 309 *e*P **P 13 06 02.5 +0.4**
KNB Kanab 88.14 48 *e*P **P 13 06 02.9 +0.3**
LAMP Lampang 88.18 291 P **P 13 06 04.2 +1.3**
comp=Z,238µm,0.8s
U15A North Rim 88.20 49 *e*P **P 13 06 03.5 +0.5**
comp=Z,79nm,1.0s
LON Longmire 88.21 36 *e*P **P 13 06 02.5 +0.1**
comp=Z,40nm,0.8s
LON Longmire 88.21 36 *e*P **P 13 06 02.5 +0.1**
LON pmax pmax
comp=Z,40nm,0.8s
PSUT Pine Spring 88.26 46 *e*P **P 13 06 03.4 +0.3**
comp=Z,54nm,1.3s
PSUT *e*PP **PP 13 09 40.9 -0.3**
SZCU Shurtz Canyon 88.27 47 *e*P **P 13 06 03.5 +0.3**
comp=Z,34nm,0.9s
RC01 Rabbit Creek A 88.33 15 *e*P **P 13 06 03.0 +0.4**
comp=Z,189nm,1.1s
WUAZ Wupatki 88.36 50 *e*P **P 13 06 04.0 +0.4**
comp=Z,77nm,1.2s
D05A Enumclaw 88.38 36 *e*P **P 13 06 04.1 +1.0**
comp=Z,284nm,1.0s
SUA Susitna One 88.44 14 *e*P **P 13 06 03.0 -0.2**
comp=Z,127nm,0.8s
SUA *e*PP **PP 13 09 40.9 -1.1**
HPIG 88.45 60 *e*P **P 13 06 04.2 -0.1**
comp=Z,74nm,0.9s
KMI Kunming 88.52 298 P **P 13 06 05.6 +1.0**
KMI pP pP 13 08 02.6 -2.3
KMI sP sP 13 08 59.4 -1.0
KMI SKS **SKSac 13 15 41.9 +0.7**
KMI S **S 13 16 04.0 -0.4**
KMI sS sS 13 19 30.9 -8.9
KMI pmax pmax
comp=Z,61nm,1.3s
KMI pmax pmax
comp=Z,390nm,5.7s
PGC Sidney 88.54 34 *e*P **P 13 06 04.2 +0.4**
comp=Z,86nm,0.8s
ELK Elko 88.56 44 P **P 13 06 04.9 +0.4**
comp=Z,45nm,0.9s,baz=239,slow=4.7,SNR=71
ELK pP **pwP 13 08 07.7 -0.3**
comp=Z,2.7nm,1.0s,baz=226,slow=3.4,SNR=2.2
ELK Elko 88.56 44 *e*P **P 13 06 04.8 +0.4**
comp=Z,58nm,1.0s
ELK *e*PP **PP 13 09 43.9 +0.3**
ELK Elko 88.56 44 *e*P **P 13 06 04.8 +0.3**
ELK *e* 13 09 43.9
ELK pmax pmax
comp=Z,58nm,1.0s
BBB Bella Bella 88.63 29 P **P 13 06 05.1 +0.9**
comp=Z,58nm,0.8s,baz=250,slow=6.4,SNR=12
BBB Bella Bella 88.63 29 *e*P **P 13 06 05.2 +1.0**
PKCU Pink Cliffs 88.71 48 *e*P **P 13 06 06.6 +1.2**
comp=Z,84nm,0.8s
F07A Phinny Hill Vi 88.72 38 *e*P **P 13 06 05.5 +0.7**
CM31 Chiang Mai Arr 88.74 291 *e*P **P 13 06 06.0 +0.5**
comp=Z,157nm,1.3s
CM31 *e*PP **PP 13 09 45.2 +0.2**
CM31 Chiang Mai Arr 88.74 291 P **P 13 06 07.0 +1.5**
SNR=34
CMAR Chiang Mai Arr 88.74 291 P **P 13 06 06.7 +1.1**
comp=Z,49nm,1.1s,baz=138,slow=3.4,SNR=104
CMAR pP **pP 13 08 08.5 +2.6**
comp=Z,2.6nm,0.8s,baz=120,slow=6.4,SNR=2.6
CMAR pP **PP 13 09 45.5 +0.4**
comp=Z,11nm,1.0s,baz=128,slow=6.0,SNR=7.8
CMAR PKKPbc **PKKPbc 13 23 42.2 +0.4**
comp=Z,4.0nm,0.6s,baz=281,slow=4.2,SNR=15
CMAR PKPPKP **P'P'df 13 31 49.3 -1.5**
comp=Z,0.6nm,0.5s,baz=277,slow=3.7,SNR=4.5
GLI Glacier Island 88.78 16 *e*P **P 13 06 04.2 -0.5**
comp=Z,196nm,0.8s
EYAK Cordova Ski Ar 88.84 17 *e*P **P 13 06 04.7 -0.2**
comp=Z,90nm,0.9s
X18A Snowflake 88.87 51 *e*P **P 13 06 06.5 +0.4**
comp=Z,24nm,0.8s
PLCA Paso Flores 88.88 135 P **P 13 06 06.5 +0.6**
comp=Z,16nm,0.9s,baz=257,slow=5.0,SNR=24
PLCA pP **pP 13 08 10.3 +3.1**
comp=Z,6.3nm,0.9s,baz=259,slow=5.2,SNR=4.0
PLCA Paso Flores 88.88 135 *e*P **P 13 06 06.1 +0.1**
comp=Z,17nm,0.9s
PLCA Paso Flores 88.88 135 *e*P **P 13 06 07.5 +1.6**
CMMT Chiang Mai 88.89 291 P **P 13 06 07.0 +0.8**
comp=Z,45nm,1.1s,comp=Z,529nm
CHTO Chiang Mai 88.89 291 *e*P **P 13 06 06.2 0.0**
comp=Z,139nm,1.3s
CHTO Chiang Mai 88.89 291 P **P 13 06 07.4 +1.2**
SNR=35
G08A Pilot Rock 88.91 39 *e*P **P 13 06 06.1 +0.3**
comp=Z,44nm,0.8s
KNK Knik Glacier 88.92 15 *e*P **P 13 06 05.5 +0.2**
comp=Z,103nm,0.9s
PMR Palmer 88.92 15 *e*P **P 13 06 05.1 -0.2**
comp=Z,82nm,0.8s
PMR Palmer 88.92 15 *e*P **P 13 06 05.1 -0.2**
PMR pmax pmax
comp=Z,83nm,0.8s
A04D Lummi Island 88.96 34 P **P 13 06 06.7 +0.9**
baz=231,SNR=11
ANM Nome 88.96 7 *e*P **P 13 06 06.3 +0.8**
comp=Z,8.8nm,0.8s
ANM Nome 88.96 7 *e*P **P 13 06 06.3 +0.8**
ANM pmax pmax
comp=Z,9.0nm,0.8s
B05A Bryant 88.99 35 P **P 13 06 06.7 +0.7**
baz=232,SNR=34
HMT Hamilton 89.06 17 *e*P **P 13 06 06.6 +0.5**
comp=Z,77nm,0.8s
SEY Seymchan 89.06 348 P **P 13 06 06.2 +0.3**
comp=Z,67nm,0.8s,baz=156,slow=5.3,SNR=94
SEY pP **pwP 13 08 12.5 +0.5**
comp=Z,6.3nm,0.8s,baz=149,slow=5.9,SNR=2.5
ZAIG Zacatecas 89.08 65 *e*P **P 13 06 08.4 +1.0**
comp=Z,42nm,1.0s
ZAIG *e*PP **PP 13 09 48.4 +0.4**
MTPU Mount Pierson 89.11 47 *e*P **P 13 06 08.1 +0.8**
comp=Z,64nm,0.9s
GHO Glory Hole Cre 89.12 15 *e*P **P 13 06 06.3 -0.1**
comp=Z,159nm,0.8s
LTY Liberty 89.14 36 *e*P **P 13 06 06.4 -0.4**
comp=Z,48nm,0.8s
TCRU Three Creeks R 89.23 47 *e*P **P 13 06 08.1 +0.4**
comp=Z,54nm,1.1s
HAWA Hanford 89.24 37 *e*P **P 13 06 07.5 +0.3**
comp=Z,64nm,0.9s
HAWA *e*PP **PP 13 09 48.5 +0.1**
SML Sawmill 89.29 15 *e*P **P 13 06 06.9 -0.2**
comp=Z,51nm,1.1s
SML Sawmill 89.29 15 *e*P **P 13 06 06.9 -0.2**
SML pmax pmax
comp=Z,51nm,1.1s
ZEA Zeya 89.29 332 *e*P **P 13 06 07.9 +0.7**
ZEA *e*S **SKSac 13 15 42.0 -1.8**
ZEA *e*PS 13 16 15.0
ZEA pmax pmax
comp=Z,400nm,5.0s
ZEA pmax pmax
comp=N,83nm,1.4s
ZEA pmax pmax
comp=Z,96nm,1.2s
ZEA smax smax
comp=E,300nm,3.0s
ZEA smax smax
comp=N,400nm,5.0s
W18A Petrified Fore 89.32 51 *e*P **P 13 06 08.8 +0.7**
comp=N,37nm,1.1s
W18A Petrified Fore 89.32 51 P **P 13 06 08.7 +0.6**
baz=240
DIV Divide 89.33 16 *e*P **P 13 06 07.2 -0.2**
comp=N,91nm,1.1s
MSU Marysvale 89.36 47 *e*P **P 13 06 09.2 +0.9**
C06D Leavenworth 89.42 36 P **P 13 06 08.4 +0.3**
baz=232
121A Cookes Peak, D 89.47 54 P **P 13 06 10.1 +1.3**
baz=241
B06A Marblemount 89.47 35 *e*P **P 13 06 08.7 +0.5**
comp=N,46nm,0.8s
E08A Dider Farm, El 89.56 38 *e*P **P 13 06 09.4 +0.8**
BMO Blue Mountains 89.61 40 *e*P **P 13 06 09.0 -0.1**
comp=N,51nm,1.7s
HHC Hu-ho-hao-te 89.81 315 *e*P **P 13 06 11.7 +1.6**
HHC sP sP 13 09 06.6 +0.4
HHC SKS **SKSac 13 15 48.6 +0.9**
HHC pmax pmax
comp=N,100nm,1.3s
HHC pmax pmax
comp=N,310nm,4.0s
DUG Dugway, Tooele 89.82 45 *e*P **P 13 06 10.3 0.0**
comp=N,61nm,1.4s
DUG Dugway, Tooele 89.82 45 *e*P **P 13 06 10.3 0.0**
DUG pmax pmax
comp=Z,61nm,1.4s
DUG Dugway, Tooele 89.82 45 P **P 13 06 10.6 +0.4**
baz=238
WRAK Wrangell Islan 89.87 25 *e*P **P 13 06 10.7 +0.9**
comp=Z,62nm,0.7s
HIA Hailar 89.90 326 *e*P **P 13 06 10.5 +0.2**
HIA Hailar 89.90 326 *e*P **P 13 06 10.5 +0.2**
CAST Castle Rocks 89.91 13 *e*P **P 13 06 08.7 -1.2**
comp=Z,82nm,0.9s
D08A Wollman Farm, 89.97 37 *e*P **P 13 06 10.4 -0.2**
comp=Z,45nm,1.0s
BGU Big Grassy Mou 90.07 45 *e*P **P 13 06 11.6 +0.2**
comp=Z,26nm,1.0s
BGU *e*PP **PP 13 09 54.4 -0.9**
E09A Wood Farm, Sta 90.09 38 *e*P **P 13 06 11.0 -0.1**
comp=Z,39nm,1.0s
BALM Baldy 90.17 18 *e*P **P 13 06 11.6 +0.3**
comp=Z,55nm,0.8s
BALM Baldy 90.17 18 *e*P **P 13 06 11.6 +0.3**
BALM pmax pmax
comp=Z,55nm,0.8s
NLU North Lily Min 90.18 46 *e*P **P 13 06 12.1 +0.1**
comp=Z,25nm,0.8s
NLU *e*PP **PP 13 09 54.2 -2.1**
TLIG Tlapa 90.24 71 *e*P **P 13 06 13.4 +0.7**
Q16A Castle Valley 90.24 47 *e*P **P 13 06 12.8 +0.5**
comp=Z,68nm,0.8s
Q16A *e*PP **PP 13 09 55.8 -1.0**
KTH Kantishna Hill 90.26 13 *e*P **P 13 06 11.0 -0.6**
comp=Z,63nm,0.9s
F10A Beach Ranch, E 90.30 39 *e*P **P 13 06 11.8 -0.4**

comp=Z,45nm,0.8s
TRF Thorofare Moun 90.30 13 eP P 13 06 11.3 -0.7
comp=Z,13nm,0.8s
CD2 Chengdu 90.37 304 P P 13 06 13.9 +1.0
CD2 pP pP 13 08 13.8 +0.2
CD2 sP sP 13 09 08.3 -0.6
CD2 S **S 13 16 21.4 +0.8**
CD2 sS sS 13 19 58.7 +1.5
CD2 pmax pmax
comp=Z,300nm,0.7s
CD2 pmax pmax
comp=Z,890nm,4.7s
CTGM Chitina Glacie 90.39 18 eP P 13 06 12.6 +0.2
comp=Z,52nm,0.8s
TMUT Trail Mountain 90.41 47 eP P 13 06 13.3 +0.1
comp=Z,153nm,0.8s
TMUT ePP **PP 13 09 57.7 -0.5**
MPU Maple Canyon 90.50 46 eP P 13 06 13.9 +0.5
comp=Z,50nm,0.9s
MPU ePP **PP 13 09 58.0 -0.7**
PLID Pearl Lake 90.51 40 eP P 13 06 13.3 -0.1
comp=Z,16nm,0.8s
B08A Colville Reser 90.52 36 eP P 13 06 13.1 -0.1
comp=Z,26nm,0.9s
LLLB Lilloоet 90.56 33 eP P 13 06 13.7 +0.5
comp=Z,26nm,0.8s
RND Reindeer 90.57 14 eP P 13 06 12.9 -0.2
comp=Z,65nm,0.9s
RND Reindeer 90.57 14 eP P 13 06 12.9 -0.2
RND pmax pmax
comp=Z,65nm,0.9s
DHY Denali Highway 90.61 15 eP P 13 06 13.3 -0.1
comp=Z,94nm,1.8s
HLID Hailey 90.62 42 eP P 13 06 14.0 +0.2
comp=Z,13nm,0.8s
HLID Hailey 90.62 42 P P 13 06 14.6 +0.7
baz=237,SNR=35
SPUT South Promonto 90.64 44 eP P 13 06 14.7 +0.6
comp=Z,71nm,1.0s
SPUT ePP **PP 13 09 58.7 -1.1**
BTO Baotou 90.68 315 eP P 13 06 15.1 +0.9
HVU Hansel Valley 90.68 44 eP P 13 06 14.3 +0.1
comp=Z,63nm,0.8s
HVU ePP **PP 13 09 57.8 -2.2**
BPAW Bear Paw Mtn. 90.74 13 eP P 13 06 12.6 -1.1
comp=Z,47nm,1.6s
C09A Chrisman Ranch 90.76 37 eP P 13 06 14.3 +0.1
comp=Z,16nm,0.8s
CTU Camp Tracy 90.77 45 eP P 13 06 14.9 +0.2
comp=Z,48nm,1.0s
SRU San Rafael Swe 90.78 47 eP P 13 06 15.2 +0.5
comp=Z,98nm,0.8s
P17A Butcher Ranch, 90.81 47 eP P 13 06 15.3 +0.4
comp=Z,76nm,1.1s
P17A ePP **PP 13 10 00.8 -0.4**
Y22D IRIS PASSCAL I 90.84 53 eP P 13 06 16.1 +1.0
comp=Z,120nm,1.3s
Y22D IRIS PASSCAL I 90.84 53 P P 13 06 15.8 +0.7
baz=242
MCK McKinley 90.84 14 eP P 13 06 14.1 -0.1
comp=Z,40nm,0.9s
MCK McKinley 90.84 14 eP P 13 06 14.1 -0.1
MCK pmax pmax
comp=Z,40nm,0.9s
MNTX Cornudas Mount 90.87 56 eP P 13 06 15.4 +0.3
comp=Z,36nm,0.8s
MNTX ePP **PP 13 10 01.9 +0.4**
MNTX Cornudas Mount 90.87 56 P P 13 06 15.8 +0.6
baz=242,SNR=75
JLU Jordanelle 90.92 45 eP P 13 06 15.4 0.0
comp=Z,157nm,1.8s
JLU ePP **PP 13 10 00.9 -1.2**
SKAG Skagway 91.07 21 eP P 13 06 16.3 +1.1
comp=Z,55nm,1.5s
TX31 Lajitas Ar. Si 91.11 58 eP P 13 06 16.7 +0.3
comp=Z,34nm,0.9s
TXAR Lajitas Array 91.11 58 P P 13 06 17.2 +0.8
comp=Z,26nm,0.8s,baz=214,slow=6.4,SNR=145
TXAR pP **pP 13 08 21.4 +3.1**
comp=Z,3.2nm,1.1s,baz=224,slow=3.3,SNR=3.2
TXAR PKKP **PKKPbc 13 23 36.8 +0.2**
comp=Z,1.8nm,0.6s,baz=145,slow=1.8,SNR=13
TXAR PKPPKP 13 31 45.8
comp=Z,1.5nm,1.1s,baz=177,slow=2.5,SNR=5.5
BWN Browne 91.11 13 eP P 13 06 15.6 +0.1
comp=Z,222nm,1.6s
TCUT Toone Canyon 91.22 45 eP P 13 06 17.5 +0.7
comp=Z,118nm,0.9s
TCUT ePP **PP 13 10 03.4 -0.9**
MVCO Mesa Verde 91.22 50 eP P 13 06 16.6 -0.3
comp=Z,9.5nm,0.8s
MVCO Mesa Verde 91.22 50 P P 13 06 16.8 -0.1
baz=241
HWUT Hardware Ranch 91.37 45 eP P 13 06 17.5 +0.1
comp=Z,12nm,0.8s
HWUT ePP **PP 13 10 04.2 -1.2**
MENT Mentasta 91.38 16 eP P 13 06 17.0 +0.3
comp=Z,32nm,0.8s
PV02 Paradox Valley 91.54 49 eP P 13 06 18.2 -0.2
comp=Z,22nm,0.8s
TASM ASL Pad, Albuq 91.58 52 P P 13 06 18.9 +0.2
baz=242,SNR=22
TASM ASL Pad, Albuq 91.58 52 P P 13 06 18.8 +0.2
baz=242,SNR=21
ANMO Albuquerque 91.59 52 P P 13 06 18.9 +0.3
comp=Z,16nm,1.0s,baz=214,slow=5.4,SNR=27
ANMO pP **pP 13 08 24.3 +3.9**
comp=Z,11nm,1.3s,baz=204,slow=3.3,SNR=4.1
ANMO Albuquerque 91.59 52 eP P 13 06 18.5 -0.1
comp=Z,16nm,0.9s
ANMO Albuquerque 91.59 52 eP P 13 06 18.5 -0.1
ANMO pmax pmax
comp=Z,16nm,0.9s
ANMO Albuquerque 91.59 52 P P 13 06 18.8 +0.2
baz=242
PV01 Paradox Valley 91.62 49 eP P 13 06 18.5 -0.2
comp=Z,22nm,0.8s
NEW Newport 91.66 37 P P 13 06 18.7 +0.2
comp=Z,5.4nm,0.7s,baz=195,slow=1.5,SNR=9.4
NEW pP **pwP 13 08 21.6 -0.9**
comp=Z,1.4nm,0.7s,baz=147,slow=3.7,SNR=1.5
NEW Newport 91.66 37 P P 13 06 17.6 -0.8
baz=235
WRH Wood River Hil 91.67 14 eP P 13 06 17.4 -0.5
comp=Z,85nm,1.4s
RIDG Independent Ri 91.78 15 eP P 13 06 18.3 -0.3
comp=Z,27nm,0.8s
HDA Harding Lake 91.86 14 P P 13 06 17.8 -1.1
baz=211,SNR=29
CCB Clear Creek Bu 91.88 14 eP P 13 06 18.1 -0.9
comp=Z,171nm,2.0s
DOT Dot Lake 91.89 16 eP P 13 06 19.0 0.0
comp=Z,30nm,0.8s
MDM Murphy Dome 92.06 13 eP P 13 06 19.7 -0.2
comp=Z,26nm,1.1s
TCOL CIGO, UAF Yank 92.07 13 P P 13 06 19.1 -0.7
baz=210,SNR=9.5
COLA College 92.07 13 eP P 13 06 19.4 -0.4
comp=Z,72nm,1.4s
COLA College 92.07 13 eP P 13 06 19.4 -0.4
COLA pmax pmax
comp=Z,71nm,1.4s
BILL Bilibino 92.12 355 eP P 13 06 19.9 0.0
comp=Z,46nm,0.9s
BILL Bilibino 92.12 355 ceP **P 13 06 19.9 0.0**
BILL pmax pmax
comp=Z,59nm,1.0s
WHY Whitehorse 92.12 21 eP P 13 06 20.0 -0.3
comp=Z,14nm,0.7s
WHY ePP **PP 13 10 09.9 -0.8**
ILAR Eielson Array 92.19 14 P P 13 06 19.3 -1.1
comp=Z,8.9nm,0.7s,baz=222,slow=5.0,SNR=64
ILAR pP **pP 13 08 21.8 +0.3**
comp=Z,6.2nm,1.0s,baz=230,slow=5.6,SNR=6.3
ILAR PP **PP 13 10 08.6 -2.4**
comp=Z,8.4nm,1.2s,baz=222,slow=7.1,SNR=4.2
ILAR PKiKP **PKiKP 13 11 04.2 -1.8**
comp=Z,0.6nm,0.5s,baz=240,slow=3.7,SNR=3.2
ILAR PKKPbc **PKKPdf 13 23 33.3 +0.5**
comp=Z,1.5nm,1.0s,baz=14,slow=1.9,SNR=5.6
ILAR PKPPKP **P'P'df 13 31 40.5 -0.4**
comp=Z,1.0nm,1.0s,baz=330,slow=1.1,SNR=5.7
ILB Eielson Array 92.19 14 eP P 13 06 19.8 -0.6
comp=Z,61nm,1.4s
DLBC Dease Lake 92.19 24 P P 13 06 21.8 +1.2
comp=Z,6.6nm,0.8s,baz=217,slow=5.6,SNR=12
MCMT McKenzie Canyo 92.24 41 eP P 13 06 21.2 -0.2

AHID Auburn Hatcher 92.26 44 eP P 13 06 21.8 +0.3
comp=Z,50nm,1.4s
AHID ePP **PP 13 10 10.5 -1.8**
POKR Poker Plat Res 92.37 14 P P 13 06 21.1 -0.1
baz=210
LNIG Linares 92.56 64 eP P 13 06 22.3 -0.8
comp=Z,26nm,0.9s
LNIG ePP **PP 13 10 14.3 -0.4**
RDOG Red Dog Mine 92.61 7 eP P 13 06 22.5 +0.3
comp=Z,39nm,0.7s
S22A 4UR Ranch, Cre 92.64 50 eP P 13 06 23.6 +0.1
comp=Z,39nm,1.0s
S22A 4UR Ranch, Cre 92.64 50 P P 13 06 23.6 +0.1
baz=242,SNR=64
MSO Missoula 92.66 39 P P 13 06 22.9 -0.2
baz=237
DLMT Dillon 92.68 41 eP P 13 06 23.5 +0.2
comp=Z,26nm,1.3s
LZH Lanzhou 92.70 308 eP P 13 06 24.9 +1.2
LZH pP pP 13 08 24.3 -0.3
LZH sP sP 13 09 22.5 +2.6
LZH PP **PP 13 10 20.9 +5.1**
LZH SKS **SKSac 13 16 01.0 -3.2**
LZH S **ScS 13 16 46.6 +4.4**
LZH pmax pmax
comp=Z,82nm,1.1s
LZH pmax pmax
comp=Z,490nm,4.9s
REDW Red Top Meadow 92.72 43 eP P 13 06 23.6 0.0
comp=Z,16nm,0.9s
TPAW Teton Pass 92.72 43 eP P 13 06 24.0 +0.3
comp=Z,33nm,1.7s
FXWY Fox Creek 92.75 43 eP P 13 06 24.6 +0.8
comp=Z,9.8nm,0.9s
O20A White River Ci 92.81 47 eP P 13 06 24.0 -0.1
comp=Z,26nm,0.8s
O20A White River Ci 92.81 47 P P 13 06 24.1 0.0
baz=241,SNR=18
SNOW Snow King Moun 92.83 43 eP P 13 06 24.6 +0.5
comp=Z,20nm,0.9s
IMW Indian Meadow 92.93 43 eP P 13 06 24.7 0.0
comp=Z,10nm,0.9s
LVIG Laguna Verde 92.98 70 eP P 13 06 25.1 +0.1
comp=Z,39nm,0.9s
LOHW Long Hollow 93.00 43 eP P 13 06 24.7 -0.2
comp=Z,7.2nm,0.8s
QLMT Earthquake Lak 93.11 42 eP P 13 06 26.1 +0.8
QLMT ePP **PP 13 10 18.0 -0.8**
FLWY Flagg Ranch 93.18 43 eP P 13 06 26.1 +0.4
comp=Z,30nm,1.4s
YHB Horse Butte 93.21 42 eP P 13 06 25.5 -0.3
comp=Z,17nm,1.2s
SMCO Snowmass 93.22 48 eP P 13 06 26.1 -0.2
comp=Z,20nm,0.8s
SMCO ePP **PP 13 10 18.2 -1.8**
BW06 Boulder Array 93.24 44 eP P 13 06 25.8 -0.2
comp=Z,8.8nm,0.8s
BW06 ePP **PP 13 10 15.0 -4.9**
BW06 Boulder Array 93.24 44 P P 13 06 25.5 -0.5
baz=240,SNR=20
PD31 Pinedale Array 93.24 44 eP P 13 06 25.6 -0.4
comp=Z,8.1nm,0.8s
PD31 ePP **PP 13 10 16.3 -3.6**
PDAR Pinedale Array 93.24 44 P P 13 06 26.0 0.0
comp=Z,7.8nm,0.7s,baz=204,slow=2.5,SNR=44
PDAR pP **pwP 13 08 28.9 -1.3**
comp=Z,1.7nm,0.8s,baz=245,slow=5.8,SNR=3.6
PDAR PP **PP 13 10 18.8 -1.1**
comp=Z,6.2nm,1.2s,baz=242,slow=6.4,SNR=5.2
PDAR PKKPbc **PKKPdf 13 23 30.1 -0.2**
comp=Z,1.0nm,0.7s,baz=134,slow=4.3,SNR=7.2
PDAR PKPPKP 13 31 40.3
comp=Z,1.0nm,0.9s,baz=122,slow=4.2,SNR=6.2
CMIG Matias Romero 93.25 73 P P 13 06 26.6 +0.3
comp=Z,7.6nm,0.8s,baz=261,slow=4.8,SNR=4.4
BOZ Bozeman (W) 93.38 41 eP P 13 06 26.4 0.0
comp=Z,11nm,0.8s
BOZ Bozeman (W) 93.38 41 eP P 13 06 26.5 0.0
BOZ pmax pmax
comp=Z,11nm,0.8s
BOZ Bozeman (W) 93.38 41 P P 13 06 26.5 0.0
baz=239,SNR=23
H17A Grant Village 93.41 43 eP P 13 06 27.5 +0.7
comp=Z,105nm,0.8s
YHH Holmes Hill 93.44 42 eP P 13 06 27.6 +0.6
comp=Z,46nm,1.9s
EGAK Eagle 93.55 16 eP P 13 06 26.3 -0.3
comp=Z,31nm,0.7s
SDCO Great Sand Dun 93.57 50 eP P 13 06 27.6 -0.1
comp=Z,19nm,0.8s
SDCO ePP **PP 13 10 20.6 -2.0**
SDCO Great Sand Dun 93.57 50 P P 13 06 27.6 -0.1
baz=242,SNR=39
LKWY Lake 93.61 42 eP P 13 06 28.5 +0.8
comp=Z,9.7nm,0.9s
LKWY Lake 93.61 42 eP P 13 06 28.5 +0.8
LKWY pmax pmax
comp=Z,10.0nm,0.9s
COLD Coldfoot 93.67 11 eP P 13 06 27.1 -0.1
comp=Z,18nm,1.4s
HRY Holter Researc 93.83 40 eP P 13 06 28.4 0.0
MSTX Muleshoe 93.85 55 eP P 13 06 28.7 -0.2
comp=Z,15nm,0.8s
MSTX Muleshoe 93.85 55 P P 13 06 28.4 -0.5
baz=244
WALA Waterton Lakes 93.88 37 eP P 13 06 27.5 -1.1
comp=Z,34nm,1.6s
833A Chaparral WMA, 94.05 61 P P 13 06 29.4 -0.4
baz=245
T25A Trinidad 94.07 51 eP P 13 06 28.9 -1.0
comp=Z,17nm,0.9s
T25A Trinidad 94.07 51 P P 13 06 29.8 -0.2
baz=243,SNR=11
RWWY Rawlins 94.24 46 eP P 13 06 30.3 -0.4
comp=Z,16nm,1.0s
YAK Yakutsk 94.24 339 eP P 13 06 29.2 -0.6
comp=Z,30nm,0.8s
YAK Yakutsk 94.24 339 eP P 13 06 29.3 -0.5
YAK eS **S 13 16 55.0 +2.2**
YAK eSS **SS 13 23 34.4 +2.5**
Q24A Divide 94.37 49 eP P 13 06 31.0 -0.4
comp=Z,22nm,0.9s
Q24A Divide 94.37 49 P P 13 06 31.2 -0.2
baz=243,SNR=18
ISCO Idaho Springs 94.44 48 eP P 13 06 31.9 +0.3
comp=Z,5.7nm,0.8s
ISCO Idaho Springs 94.44 48 eP P 13 06 32.0 +0.3
ISCO pmax pmax
comp=Z,6.0nm,0.8s
ISCO Idaho Springs 94.44 48 P P 13 06 31.6 0.0
baz=242,SNR=10
RLMT Red Lodge 94.58 42 eP P 13 06 32.5 +0.4
comp=Z,13nm,1.1s
RLMT ePP **PP 13 10 29.0 -1.1**
RLMT Red Lodge 94.58 42 P P 13 06 32.1 0.0
baz=241,SNR=5.9
JCT Junction City 94.63 59 P P 13 06 32.0 -0.4
baz=245
GCMT Greycliff 94.67 42 eP P 13 06 32.8 +0.4
GCMT ePP **PP 13 10 29.2 -1.5**
N23A Red Feather La 94.72 47 eP P 13 06 33.1 +0.2
comp=Z,11nm,0.9s
N23A Red Feather La 94.72 47 P P 13 06 32.7 -0.1
baz=242
LCO Las Campanas 94.75 124 eP P 13 06 34.3 +0.9
TOLK Toolik Lake Re 95.04 11 eP P 13 06 32.7 -0.7
comp=Z,88nm,1.8s
TOLK Toolik Lake Re 95.04 11 P P 13 06 33.4 +0.1
baz=208,SNR=13
AMTX Amarillo 95.06 54 P P 13 06 34.0 -0.4
baz=244
K22A Casper 95.14 46 eP P 13 06 33.5 -1.1
comp=Z,20nm,1.4s
K22A ePP **PP 13 10 30.9 -3.6**
K22A Casper 95.14 46 P P 13 06 34.2 -0.4
baz=242
PHWY Pilot Hill 95.23 47 eP P 13 06 34.5 -0.7
comp=Z,7.2nm,0.8s
PHWY ePP **PP 13 10 32.8 -2.5**
ABTX Abilene, Hawle 95.65 57 eP P 13 06 36.7 -0.2
comp=Z,15nm,0.8s
ABTX Abilene, Hawle 95.65 57 P P 13 06 36.5 -0.4
baz=245
EGMT Eagleton 95.71 40 eP P 13 06 37.2 +0.2
EGMT ePP **PP 13 10 36.2 -2.3**
EGMT Eagleton 95.71 40 P P 13 06 36.6 -0.3
baz=240

TRQA Tornquist 95.89 136 eP P 13 06 39.7 +1.7
EPYK Eagle Plains 95.94 16 eP P 13 06 37.1 -0.4
comp=Z,28nm,0.8s
EPYK Eagle Plains 95.94 16 P P 13 06 37.4 0.0
baz=220
KSCO Kaye Shedlock' 96.16 50 eP P 13 06 39.2 0.0
comp=Z,38nm,0.9s
KSCO Kaye Shedlock' 96.16 50 P P 13 06 38.8 -0.4
baz=244
ULN Ulaanbaatar 96.17 320 eP P 13 06 38.6 -0.5
comp=Z,89nm,1.6s
ULN ePP **PP 13 10 40.0 -2.0**
ULN Ulaanbaatar 96.17 320 eP P 13 06 38.6 -0.5
ULN e 13 10 40.0
ULN pmax pmax
comp=Z,89nm,1.6s
ULN Ulaanbaatar 96.17 320 P P 13 06 39.1 +0.1
SNR=19
SONA0 Songino Array 96.54 320 eP P 13 06 40.3 -0.4
SONA0 ePKKPbc **PKKPbc 13 23 21.9 -1.3**
SONM Songino Array 96.54 320 P P 13 06 40.3 -0.4
comp=Z,22nm,1.1s,baz=128,slow=4.4,SNR=33
SONM PP **PP 13 10 38.3 -6.5**
comp=Z,3.7nm,1.0s,baz=126,slow=7.3,SNR=3.5
SONM PKKPbc **PKKPbc 13 23 21.9 -1.3**
comp=Z,1.8nm,0.6s,baz=250,slow=2.8,SNR=7.3
SONM PKPPKP 13 31 33.1
comp=Z,0.3nm,0.3s,baz=222,slow=2.0,SNR=3.5
GTA Gaotai 97.04 310 P Pdif 13 06 43.5 +0.3
GTA pP pP 13 08 42.0 -2.5
GTA sP sP 13 09 40.8 +1.1
GTA SKS **SKSac 13 16 24.7 -2.0**
GTA S **ScS 13 17 20.7 +2.6**
GTA sS sS 13 20 56.2 -1.2
GTA pmax pmax
comp=Z,27nm,1.2s
GTA pmax pmax
comp=Z,220nm,5.2s
LAO LASA Array 97.19 42 eP P 13 06 44.1 +0.5
comp=Z,12nm,0.8s
LAO ePP **PP 13 10 47.4 -2.4**
LAO LASA Array 97.19 42 P P 13 06 43.7 +0.1
baz=243
OGNE Ogallala 97.40 49 P Pdif 13 06 44.3 -0.4
baz=245
RSSD Black Hills 97.43 45 eP Pdif 13 06 43.9 -1.0
comp=Z,15nm,0.9s
RSSD ePP **PP 13 10 48.6 -3.1**
RSSD Black Hills 97.43 45 eP Pdif 13 06 43.9 -1.0
RSSD e 13 10 48.6
RSSD pmax pmax
comp=Z,15nm,0.9s
RSSD Black Hills 97.43 45 P Pdif 13 06 44.5 -0.4
baz=244
SHL Shillong 97.61 294 eP Pdif 13 06 45.2 -0.9
comp=Z,12nm,0.8s
SHL Shillong 97.61 294 eP Pdif 13 06 45.2 -0.9
SHL pmax pmax
comp=Z,12nm,0.8s
BOD Bodaibo 97.67 331 eP Pdif 13 06 43.8 -1.5
BOD pmax pmax
comp=Z,6.0nm,1.6s
INK Inuvik 98.22 16 P Pdif 13 06 46.8 -0.7
comp=Z,13nm,0.8s,baz=223,slow=5.6,SNR=22
INK pP pwP 13 08 54.4 +0.5
comp=Z,12nm,1.2s,baz=223,slow=6.6,SNR=7.7
INK PP **PP 13 11 00.4 +3.6**
comp=Z,9.1nm,1.1s,baz=221,slow=9.0,SNR=4.8
INK Inuvik 98.22 16 ePdif Pdif 13 06 45.5 -2.0
comp=Z,16nm,0.8s
INK Inuvik 98.22 16 eP Pdif 13 06 45.5 -2.0
INK pmax pmax
comp=Z,16nm,0.8s
LVC Limon Verde 99.38 120 eP Pdif 13 06 55.3 +0.9
ZAK Zakamensk 99.52 321 eP Pdif 13 06 52.1 -1.8
ZAK pmax pmax
comp=Z,6.0nm,1.1s
YKA Yellowknife Ar 100.69 26 P Pdif 13 06 59.9 +1.3
comp=Z,1.4nm,0.7s,baz=244,slow=5.0,SNR=6.3
YKA PP **PP 13 11 12.3 -3.0**
comp=Z,1.9nm,0.8s,baz=241,slow=7.2,SNR=5.2
YKA PKiKP **PKiKP 13 11 20.7 -0.2**
comp=Z,1.4nm,0.6s,baz=225,slow=1.2,SNR=5.7
YKA PKKPbc **PKKPbc 13 23 09.9 -2.1**
comp=Z,1.0nm,0.6s,baz=40,slow=2.3,SNR=6.0
YKB5 Yellowknife Ar 100.69 26 ePdif **Pdif 13 06 59.9 +1.3**
YKB5 ePP **PP 13 11 12.3 -3.0**
YKB5 ePKiKP **PKiKP 13 11 20.7 -0.2**
YKB5 ePKKPbc **PKKPbc 13 23 09.9 -2.1**
TIXI Tiksi 101.31 346 P Pdif 13 07 00.7 -0.5
comp=Z,2.8nm,0.8s,baz=141,slow=6.9,SNR=7.3
TIXI PKiKP **PKiKP 13 11 22.6 +0.8**
comp=Z,4.0nm,0.7s,baz=103,slow=3.4,SNR=8.4
TIXI Tiksi 101.31 346 ePdif **Pdif 13 07 00.3 -0.9**
TIXI Tiksi 101.31 346 / P **Pdif 13 07 01.2 0.0**
TIXI pmax pmax
comp=Z,6.0nm,1.1s
LPAZ La Paz 103.19 115 Pdiff Pdif 13 07 17.1 +5.4
comp=Z,1.9nm,0.7s,baz=211,slow=3.3,SNR=8.0
LPAZ PKiKP **PKiKP 13 11 28.1 +0.4**
comp=Z,1.1nm,0.6s,baz=267,slow=5.6,SNR=4.2
LPAZ PKKPbc **PKKPbc 13 23 04.3 0.0**
comp=Z,0.9nm,0.6s,baz=313,slow=3.2,SNR=3.4
LPAZ La Paz 103.19 115 ePdif **Pdif 13 07 11.5 -0.2**
LPAZ La Paz 103.19 115 eP Pdif 13 07 11.5 -0.2
ULM Lac du Bonnet 104.92 41 PKiKP PKiKP 13 11 29.9 +0.8
comp=Z,4.2nm,0.7s,baz=163,slow=2.6,SNR=4.1
CPUP Villa Florida 106.07 129 PKKPbc PKKPbc 13 22 55.0 -0.4
comp=Z,1.9nm,0.7s,baz=144,slow=3.6,SNR=3.9
F39A Loretta 106.73 47 P PKiKP 13 11 31.8 -0.9
baz=253
EYMN Ely 106.94 45 P PKiKP 13 11 32.2 -0.8
baz=253
WMQ Urumqi 107.09 311 Pdif Pdif 13 07 28.1 +0.4
WMQ PP **PP 13 12 01.8 -1.0**
WMQ S **Sdif 13 18 46.7 +5.1**
WMQ SS **SS 13 26 29.7 +0.7**
WMQ AMB AMB
comp=Z,170nm,5.7s
P45A Graceland, Par 107.10 54 P PKiKP 13 11 33.1 -0.4
baz=253
S47A Hartford 107.18 56 P PKiKP 13 11 32.2 -1.5
baz=253
F40A Park Falls 107.26 47 P PKiKP 13 11 33.0 -0.7
baz=253
I42A Draeger Farm, 107.51 49 P PKiKP 13 11 34.1 0.0
baz=254
E40A Wakefield 107.56 46 P PKiKP 13 11 33.7 -0.5
baz=254
K43A Burlington 107.58 51 P PKiKP 13 11 34.2 -0.2
baz=254
R47A Wooly Knot Far 107.65 55 P PKiKP 13 11 34.4 -0.2
baz=253
W50A Signal Mountai 107.69 59 P PKiKP 13 11 34.1 -0.7
baz=253
454A Quitman 107.71 64 P PKiKP 13 11 32.6 -2.3
baz=252
V50A Pikevile 107.99 58 P PKiKP 13 11 34.2 -1.1
baz=253
656A Willston 108.21 65 P PKiKP 13 11 35.0 -0.8
baz=252
455A Stateville 108.22 64 P PKiKP 13 11 35.8 -0.1
baz=253
C40A Isle Royale Na 108.45 45 P PKiKP 13 11 34.7 -1.0
baz=255
Z53A Monticello 108.52 61 P PKiKP 13 11 35.5 -0.8
baz=253
D41A Chassel 108.61 46 P PKiKP 13 11 36.1 0.0
baz=255
E42A Champion 108.88 47 P PKiKP 13 11 36.4 -0.3
baz=255
U51A La Follette 109.03 58 P PKiKP 13 11 37.2 -0.1
baz=254
F43A Flat Rock, Esc 109.22 48 P PKiKP 13 11 37.6 +0.3
baz=255
N48A Decatur 109.47 53 P PKiKP 13 11 37.7 -0.2
baz=255
F44A Big Bay de Noc 109.77 48 P PKiKP 13 11 38.1 -0.2
baz=256
N49A Columbus Grove 110.10 53 P PKiKP 13 11 39.2 +0.1
baz=255
Q51A Peebles 110.25 55 P PKiKP 13 11 39.5 0.0
baz=255
E46A Sault Ste Mari 111.29 48 P PKiKP 13 11 40.3 -0.8
baz=257
U55A TA2, Sparta 111.38 58 P PKiKP 13 11 40.8 -1.0
baz=256

ZALV Zalesovo Beam 111.40 321 Pdiff **Pdif 13 07 47.4 +0.9**
comp=Z,0.7nm,0.4s,baz=114,slow=3.6,SNR=2.8
ZALV PKiKP **PKiKP 13 11 40.2 -0.9**
comp=Z,4.8nm,0.5s,baz=147,slow=2.8,SNR=17
ZALV PP **PP 13 12 29.5 -3.6**
comp=Z,3.3nm,0.7s,baz=101,slow=5.4,SNR=4.2
ZALV SKP 13 14 23.7
comp=Z,4.2nm,0.7s,baz=168,slow=1.7,SNR=5.7
ZAA1 Zalesovo Array 111.40 321 *e*Pdif **Pdif 13 07 47.4 +0.9**
ZAA1 *e*PKiKP **PKiKP 13 11 40.2 -0.9**
ZAA1 *e*PP **PP 13 12 29.5 -3.6**
MK31 Makanchi Array 111.52 313 *e*Pdif **Pdif 13 07 47.1 -0.1**
MK31 *e*PKiKP **PKiKP 13 11 40.2 -1.5**
MK31 Makanchi Array 111.52 313 *i* PKIKP **PKiKP 13 11 40.6 -1.1**
MK31 pmax pmax
comp=Z,5.0nm,0.6s
MK32 Makanchi Array 111.52 313 *e*Pdif **Pdif 13 07 49.7 +2.4**
MK32 *e*PKiKP **PKiKP 13 11 40.7 -1.0**
MK32 *e*PKKPbc **PKKPbc 13 22 38.3 -0.2**
MK32 *e*PKKPab **PKKPab 13 22 48.8 +0.8**
MKAR Makanchi Array 111.52 313 Pdiff **Pdif 13 07 49.7 +2.4**
comp=Z,2.4nm,0.6s,baz=93,slow=6.2,SNR=16
MKAR PKiKP **PKiKP 13 11 40.7 -1.0**
comp=Z,5.0nm,0.6s,baz=90,slow=1.1,SNR=28
MKAR SKP 13 14 24.8
comp=Z,5.2nm,0.8s,baz=83,slow=2.3,SNR=7.0
MKAR PKKPbc **PKKPbc 13 22 38.3 -0.2**
comp=Z,3.1nm,0.8s,baz=294,slow=3.9,SNR=4.7
MKAR PKKPab **PKKPab 13 22 48.8 +0.8**
comp=Z,7.1nm,0.7s,baz=280,slow=4.1,SNR=12
MKAR PKPPKP 13 31 05.7
comp=Z,0.5nm,0.8s,baz=336,slow=3.2,SNR=3.8
D46A Sault St. Mari 111.58 47 P **PKiKP 13 11 41.7 0.0**
baz=258
Q53A Leroy 111.58 56 P **PKiKP 13 11 41.8 -0.2**
baz=256
MAKZ Makanchi 111.74 313 PKIKP **PKiKP 13 11 40.3 -1.8**
MAKZ pmax pmax
comp=Z,16nm,1.3s
RES Resolute Bay 111.77 17 PKiKP **PKiKP 13 11 40.3 -1.0**
comp=Z,8.4nm,0.7s,baz=264,slow=1.0,SNR=15
P53A Whipple 111.83 55 P **PKiKP 13 11 42.0 -0.4**
baz=256
E47A Iron Bridge 112.00 48 P **PKiKP 13 11 42.3 -0.3**
baz=258
Q54A Coxs Mills 112.13 56 P **PKiKP 13 11 42.5 -0.5**
baz=257
O53A New Philadelph 112.14 55 P **PKiKP 13 11 43.2 +0.2**
baz=257
D47A Chapleau 112.24 47 P **PKiKP 13 11 42.1 -0.9**
baz=258
M52A Chesterland 112.32 53 P **PKiKP 13 11 42.3 -1.0**
baz=257
F48A Evansville 112.32 48 P **PKiKP 13 11 42.4 -0.7**
baz=258
NVS Novosibirsk 112.47 321 *e*PKIKP **PKiKP 13 11 41.9 -1.2**
NVS *e* 13 12 36.2
NVS *e* 13 17 30.8
NVS pmax pmax
comp=Z,18nm,1.0s
NVS pmax pmax
comp=N,4.0nm,0.8s
NVS pmax pmax
comp=E,6.0nm,1.1s
NRIK Noril'sk 112.64 337 PKiKP **PKiKP 13 11 42.1 -1.0**
comp=E,5.5nm,0.7s,baz=119,slow=3.5,SNR=8.9
NRIK SKP 13 14 26.1
comp=E,7.2nm,0.8s,baz=96,slow=5.1,SNR=7.0
U57A Blanch 112.70 59 P **PKiKP 13 11 43.9 -0.3**
baz=256
V58A Windy Hill, Pi 112.72 60 P **PKiKP 13 11 43.6 -0.6**
baz=256
PDGK Podgornoye 112.74 309 PKIKP **PKiKP 13 11 42.9 -1.3**
PDGK pmax pmax
comp=Z,8.0nm,0.6s
O54A Avella 112.75 55 P **PKiKP 13 11 43.8 -0.4**
baz=257
E48A Lockeyer 112.76 48 P **PKiKP 13 11 43.6 -0.4**
baz=259
T57A Hurt 112.89 58 P **PKiKP 13 11 44.4 -0.1**
baz=257
BWLO Walkerton 113.01 50 P **PKiKP 13 11 44.5 0.0**
baz=258
P55A Reedsville 113.01 56 P **PKiKP 13 11 44.1 -0.7**
baz=257
I51A Listowel 113.03 51 P **PKiKP 13 11 44.7 +0.1**
baz=258
N54A Moraine State 113.20 54 P **PKiKP 13 11 44.5 -0.5**
baz=258
Q56A Snyder Ridge, 113.40 56 P **PKiKP 13 11 44.8 -0.7**
baz=258
V59A Middlesex 113.41 60 P **PKiKP 13 11 44.6 -1.0**
baz=257
D49A Beulah Townshi 113.45 47 P **PKiKP 13 11 44.6 -0.7**
baz=260
O55A Ligonier 113.56 55 P **PKiKP 13 11 45.0 -0.8**
baz=258
E50A Wahnapitae 113.72 48 P **PKiKP 13 11 45.7 -0.2**
baz=260
KLBO Killbear Provi 113.89 49 P **PKiKP 13 11 45.9 -0.3**
baz=260
L54A Sinclairville 113.95 53 P **PKiKP 13 11 45.9 -0.6**
baz=259
S58A Poland Farm, P 113.97 58 P **PKiKP 13 11 46.3 -0.2**
baz=258
Q57A Strasburg 113.99 56 P **PKiKP 13 11 46.4 -0.2**
baz=258
O56A Blue Knob Stat 114.12 55 P PKPdf 13 11 46.8 -0.1
baz=258
R58B Mineral 114.17 58 P PKPdf 13 11 46.2 -0.8
baz=258
M55A Ridgway 114.21 54 P PKPdf 13 11 46.1 -0.9
baz=259
P57A Homestead Farm 114.38 56 P PKPdf 13 11 46.6 -0.8
baz=258
D50A G1974 Best Tow 114.45 47 P PKPdf 13 11 46.5 -0.7
baz=261
BUKO Buck Lake 114.47 49 P PKPdf 13 11 46.5 -0.8
baz=260
K54A Basiliko Farm, 114.47 52 P PKPdf 13 11 47.1 -0.3
baz=259
KSH Kashi 114.57 304 PKP **PKiKP 13 11 49.8 +1.9**
KSH PP **PP 13 13 02.7 +6.8**
KSH SKKS 13 18 59.3
KSH AMB AMB
comp=Z,290nm,5.7s
F52A Sundridge 114.58 49 P PKPdf 13 11 47.5 0.0
baz=260
L55A Hinsdale 114.58 53 P PKPdf 13 11 47.3 -0.4
baz=259
E51A G1948 Merrick 114.59 48 P PKPdf 13 11 47.4 -0.1
baz=261
KURK Kurchatov 114.61 317 *e*PKPdf PKPdf 13 11 46.3 -1.0
KURK Kurchatov 114.61 317 *e*PKIKP PKPdf 13 11 46.3 -1.1
KURK Kurchatov 114.61 317 P PKPdf 13 11 46.2 -1.1
SNR=20
M56A Emporium 114.64 54 P **PKiKP 13 11 47.9 +0.1**
baz=259
KURBB Kurchatov Arra 114.65 316 PKP PKPdf 13 11 46.7 -0.8
comp=Z,21nm,0.8s,baz=94,slow=1.9,SNR=14
KURBB PP **PP 13 12 54.2 -1.7**
comp=Z,7.1nm,1.0s,baz=95,slow=6.4,SNR=9.2
KURBB SKP 13 14 30.0
comp=Z,6.6nm,0.8s,baz=97,slow=1.9,SNR=8.8
KURBB PKKPbc **PKKPbc 13 22 28.3 +0.1**
comp=Z,3.1nm,0.7s,baz=278,slow=4.1,SNR=6.4
KURBB PKKPab **PKKPab 13 22 35.3 +1.3**
comp=Z,3.6nm,0.8s,baz=277,slow=5.0,SNR=5.5
KURBB SKKPbc SKKPbc 13 25 17.9 -4.0
comp=Z,1.5nm,0.8s,baz=283,slow=3.8,SNR=5.5
DRWO Darlington Wes 114.67 51 P PKPdf 13 11 47.5 -0.2
baz=260
SSPA Standing Stone 114.70 55 P PKPdf 13 11 47.7 -0.2
baz=259
O57A Amberson 114.81 55 P PKPdf 13 11 47.0 -1.1
baz=259
ULHL Ulahol 114.88 307 P PKPdf 13 11 48.4 -0.1
SNR=9.8
NRN Naryn 114.91 306 *e*PKPdf PKPdf 13 11 47.8 -0.9
NRN Naryn 114.91 306 *e*PKIKP PKPdf 13 11 47.8 -0.9
WLVO Wesleyville 114.92 51 P PKPdf 13 11 47.6 -0.6
baz=260
K55A Perry 114.95 52 P PKPdf 13 11 47.4 -0.9
baz=260
G53A Haliburton 114.96 50 P PKPdf 13 11 47.4 -0.8
baz=261
N57A Milroy 114.97 55 P PKPdf 13 11 47.5 -1.0
baz=259
E52A Mattawa 115.12 48 P **PKPdf 13 11 47.7 -0.8**
baz=261,SNR=5.5
D52A ZEK Kipawa Sen 115.39 48 P **PKPdf 13 11 47.8 -1.2**
baz=262
BANO Bancroft 115.43 50 P **PKPdf 13 11 48.2 -1.0**
baz=261
TKM2 Tokmak 2 115.47 308 P **PKPdf 13 11 48.6 -1.0**
SNR=26
TKM2 Tokmak 2 115.47 308 PKIKP **PKPdf 13 11 48.4 -1.2**
TKM2 pmax pmax
comp=Z,11nm,0.5s
I55A Frankford 115.47 51 P **PKPdf 13 11 48.8 -0.5**
baz=261
ALGO Algonquin Park 115.48 49 P **PKPdf 13 11 48.6 -0.7**
baz=261
NIL Nilore 115.49 297 *e*PKPdf **PKPdf 13 11 49.4 -0.3**
NIL Nilore 115.49 297 *e*PKIKP **PKPdf 13 11 49.4 -0.3**
KZA Kyzart 115.58 307 P **PKPdf 13 11 49.3 -0.8**
SNR=19
E53A Dumoine, Ponti 115.81 48 P **PKPdf 13 11 49.3 -0.6**
baz=262
H55A Tweed 115.88 51 P **PKPdf 13 11 49.0 -1.1**
baz=261
D53A Lac Vacive, Po 115.89 48 *e*PKPdf **PKPdf 13 11 49.1 -0.8**
D53A Lac Vacive, Po 115.89 48 P **PKPdf 13 11 48.8 -1.2**
baz=262,SNR=7.2
KBK Karagaybulak 115.89 307 P **PKiKP 13 11 52.2 +1.8**
SNR=8.6
O59A Robesonia 115.92 55 P **PKPdf 13 11 49.4 -0.9**
baz=260
PECO Prince Edward 115.92 51 P **PKPdf 13 11 49.3 -0.8**
baz=261
PEMO Pembroke 116.00 49 P **PKPdf 13 11 49.4 -0.8**
baz=262
PLVO Plevna 116.03 50 *e*PKPdf **PKPdf 13 11 49.6 -0.7**
PLVO Plevna 116.03 50 P **PKPdf 13 11 49.1 -1.2**
baz=262
CHMS Chumysh 116.09 308 P **PKiKP 13 11 52.2 +1.6**
SNR=10
UCH Uchtor 116.14 307 P **PKPdf 13 11 50.9 -0.3**
SNR=29
E54A Lac Daplat, Po 116.15 48 P **PKPdf 13 11 49.5 -1.0**
baz=262,SNR=7.2
AAK Ala-Archa 116.22 307 PKKPbc PKKPbc 13 22 23.5 +0.6
comp=Z,6.7nm,0.7s,baz=193,slow=3.0,SNR=5.5
AAK Ala-Archa 116.22 307 P **PKiKP 13 11 52.7 +1.7**
SNR=6.4
AAK Ala-Archa 116.22 307 *e*PKPdf **PKPdf 13 11 50.4 -0.6**
AAK Ala-Archa 116.22 307 PKPdf **PKPdf 13 11 50.1 -0.9**
AAK Ala-Archa 116.22 307 PKIKP **PKPdf 13 11 50.8 -0.2**
AAK pmax pmax
comp=Z,12nm,0.9s
AAK Ala-Archa 116.22 307 P **PKiKP 13 11 52.4 +1.4**
SNR=5.7
P60A Greenville 116.25 56 P **PKPdf 13 11 49.5 -1.3**
baz=260
MATQ Matagami 116.26 45 P **PKPdf 13 11 49.6 -1.0**
baz=264
G55A Calabogie 116.31 50 P **PKPdf 13 11 49.9 -0.9**
baz=262
USP Ospenovka 116.31 308 P **PKiKP 13 11 52.7 +1.7**
SNR=20
Q61A Milford 116.32 57 P **PKPdf 13 11 49.9 -1.1**
baz=260
N59A State Game Lan 116.33 55 P **PKPdf 13 11 50.2 -0.9**
baz=260
BINY Binghamton 116.38 53 P **PKPdf 13 11 50.4 -0.7**
baz=261
KSPA Keystone Colle 116.44 54 *e*PKPdf **PKPdf 13 11 50.9 -0.3**
O60A Telford 116.51 55 P **PKPdf 13 11 49.8 -1.5**
baz=260
H56A Elgin 116.54 51 P **PKPdf 13 11 49.5 -1.8**
baz=262
D54A Lac Fusel, La 116.60 48 P **PKPdf 13 11 50.0 -1.3**
baz=263,SNR=8.3
LSQQ Lebel-sur-Quev 116.61 46 P **PKPdf 13 11 49.5 -1.8**
baz=264
AML Almayashu 116.73 307 P **PKPdf 13 11 52.2 -0.1**
SNR=26
EKS2 Erkin-Say 116.75 307 P **PKiKP 13 11 53.9 +1.9**
SNR=12
ARSB Arslanbob 117.13 306 *e*PKPdf **PKPdf 13 11 52.0 -0.8**
ORIO Orleans, Innes 117.18 50 P **PKPdf 13 11 51.4 -1.0**
baz=263
LONY Lake Ozonia 117.73 51 P **PKPdf 13 11 52.8 -0.8**
baz=263
PTGA Pitinga 117.74 104 *e*PKPdf **PKPdf 13 11 53.6 -1.0**
M61A Granite Spring 117.89 55 P **PKPdf 13 11 52.9 -1.1**
baz=262
NCB Newcomb 117.91 52 *e*PKPdf **PKPdf 13 11 53.6 -0.4**
TULEG Thule 118.14 14 *e*PKPdf **PKiKP 13 11 54.1 +0.5**
CHGQ Chibougamau 118.38 45 P **PKPdf 13 11 53.6 -1.1**
baz=266
KBL Kabul 119.09 297 *e*PKPdf **PKPdf 13 11 56.5 -0.4**
KK31 Karatay Array 119.19 307 *e*PKPdf **PKPdf 13 11 55.7 -0.8**
KK31 Karatay Array 119.19 307 *i* PKIKP **PKPdf 13 11 55.9 -0.6**
KK31 pmax pmax
comp=Z,22nm,0.6s
KKAR Karatay Array 119.19 307 *e*PKPdf **PKPdf 13 11 55.7 -0.8**
KKAR Karatay Array 119.19 307 *e*PKIKP **PKPdf 13 11 55.7 -0.8**
SJG San Juan 119.27 82 *e*PKPdf **PKPdf 13 11 56.5 -0.8**
SJG San Juan 119.27 82 *e*PKIKP **PKPdf 13 11 56.5 -0.8**
BDFB Brasilia 119.50 126 PKP **PKPdf 13 11 57.2 -0.8**
comp=Z,9.8nm,0.7s,baz=182,slow=4.4,SNR=12
BDFB PKKPbc **PKKPbc 13 22 12.2 +1.0**
comp=Z,5.3nm,0.6s,baz=178,slow=3.5,SNR=4.5
HUMP Col San Antoni 119.55 82 *e*PKPdf **PKPdf 13 11 57.0 -0.8**
LBNH Lisbon 119.58 51 P **PKPdf 13 11 56.6 -0.6**
baz=265
BVAR Borovoye Array 119.87 319 PKP **PKPdf 13 11 57.0 -0.4**
baz=124,slow=2.3
BVAR SKP 13 14 40.9
comp=Z,9.3nm,0.7s,baz=96,slow=1.5,SNR=7.2
BVAR PKKPbc **PKKPbc 13 22 10.0 0.0**
comp=Z,1.0nm,0.5s,baz=259,slow=3.0,SNR=3.5
BRVK Borovoye 119.93 319 *e*PKPdf **PKPdf 13 11 56.8 -0.8**
BRVK Borovoye 119.93 319 *c i*PKIKP **PKPdf 13 11 56.8 -0.8**
BRVK pmax pmax
comp=Z,59nm,1.3s
BRVK Borovoye 119.93 319 P **PKPdf 13 11 57.0 -0.6**
SNR=19
SUR Sutherland 120.35 201 *e*PKPdf **PKPdf 13 11 58.9 -0.5**
FRB Frobisher Bay 121.01 29 PKP **PKPdf 13 11 58.2 -1.1**
comp=Z,37nm,0.7s,baz=312,slow=2.7,SNR=31
ALF01 Guarapari-ES 121.19 135 *e*P **PKiKP 13 12 03.6 +2.4**
PKME Peaks-Kenny Pk 121.53 50 *e*PKPdf **PKPdf 13 12 00.1 -0.8**
PKME Peaks-Kenny Pk 121.53 50 P **PKPdf 13 12 00.1 -0.8**
baz=267
KULLO Kullorsuaq 121.56 15 *i* PKIKP **PKPdf 13 11 59.4 -0.7**
KULLO pmax pmax
comp=Z,44nm,0.7s
KULLO Kullorsuaq 121.56 15 *i* P **PKPdf 13 11 59.4 -0.7**
comp=Z,44nm,0.7s
MCI6 Montes Claros 121.72 130 *e*P **PKiKP 13 12 04.1 +1.7**
MCI8 Montes Claros 121.80 130 *e*P **PKiKP 13 12 05.0 +2.4**
BOSA Boshof 122.06 207 PKP **PKPdf 13 12 02.8 +0.1**
comp=Z,20nm,0.9s,baz=131,slow=2.4,SNR=7.2
BOSA PKKPbc **PKKPbc 13 22 01.3 -1.2**
comp=Z,5.9nm,0.6s,baz=349,slow=1.8,SNR=11
BOSA Boshof 122.06 207 *e*PKPdf **PKPdf 13 12 02.0 -0.7**
BOSA Boshof 122.06 207 *e*PKIKP **PKPdf 13 12 02.0 -0.7**
PQI Presque Isle 122.47 49 *e*PKPdf **PKPdf 13 12 01.1 -1.5**
SCHQ Schefferville 122.97 39 PKP **PKPdf 13 12 02.6 -0.8**
comp=Z,22nm,1.0s,baz=341,slow=3.4,SNR=15
SCHQ Schefferville 122.97 39 *e*PKPdf **PKiKP 13 12 03.9 +0.2**
BATG Bathurst New B 123.81 48 *e*PKPdf **PKPdf 13 12 04.7 -0.5**
LMN Caledonia Moun 124.69 50 *e*PKPdf **PKPdf 13 12 06.2 -0.8**
SPA0 Spitsbergen Ar 125.02 356 *e*PKPdf **PKiKP 13 12 07.1 0.0**
SPITS Spitsbergen Ar 125.02 356 SKPbc SKPbc 13 14 32.1
comp=Z,10nm,0.9s,baz=64,slow=6.6,SNR=5.6
SPITS SKP 13 14 49.9
comp=Z,16nm,0.9s,baz=12,slow=2.1,SNR=3.6
LBTB Lobatse 125.04 210 *e*PKPdf **PKPdf 13 12 08.3 -0.1**
LBTB Lobatse 125.04 210 *e*PKIKP **PKPdf 13 12 08.4 -0.1**
SVE Sverdlovsk 125.16 324 *e*PKIKP **PKPdf 13 12 07.1 -0.4**
SVE pmax pmax
comp=Z,99nm,1.3s
HAL Halifax 125.56 51 *e*PKPdf **PKPdf 13 12 08.5 -0.1**
HAL Halifax 125.56 51 *e*PKIKP **PKPdf 13 12 08.5 -0.1**
ILULI Ilulissat 125.80 20 *i* PKIKP **PKPdf 13 12 07.7 -0.6**
ILULI pmax pmax
comp=Z,48nm,0.7s
ILULI Ilulissat 125.80 20 *i* P **PKPdf 13 12 07.7 -0.6**
comp=Z,48nm,0.7s
MHTO MHTO 125.84 279 P **PKPdf 13 12 09.9 0.0**
SNR=7.3
DQM DQM 125.95 278 P **PKiKP 13 12 10.5 -0.1**
SMDO Samad 126.27 282 P **PKiKP 13 12 16.1 +4.8**
SNR=6.4
BIDO Bidbid 126.31 282 P **PKiKP 13 12 13.1 +1.9**
SNR=7.4
DAG Danmarks Havn 126.32 5 *i* PKIKP **PKPdf 13 12 09.2 0.0**
DAG Danmarks Havn 126.32 5 *i* P **PKPdf 13 12 09.2 0.0**
ARU Arti 126.36 324 PKP **PKPdf 13 12 09.5 -0.3**
comp=Z,19nm,0.5s,baz=76,slow=1.4,SNR=52
ARU SKPbc SKPbc 13 14 19.7
comp=Z,2.4nm,0.7s,baz=158,slow=12,SNR=3.3
ARU SKP 13 14 53.0
comp=Z,4.9nm,0.7s,baz=349,slow=0.5,SNR=4.5
ARU Arti 126.36 324 *e*PKPdf **PKPdf 13 12 09.2 -0.6**
ARU Arti 126.36 324 *i* PKIKP **PKPdf 13 12 09.7 -0.1**
ARU 13 14 11.2
ARU 13 18 27.7
AB31 Akbulak array 126.59 315 *i* PKIKP **PKPdf 13 12 05.1 -5.4**
AB31 pmax pmax
comp=Z,38nm,1.1s
ABKAR Akbulak array 126.59 315 *e*PKPdf **PKPdf 13 12 09.6 -0.9**
GBN Guysborough 127.01 50 *e*PKPdf **PKPdf 13 12 11.6 +0.2**
SUMG Summit 127.03 13 *e*PKPdf **PKPdf 13 12 11.2 0.0**
SUMG Summit 127.03 13 *i* PKIKP **PKiKP 13 12 12.0 +0.3**
SUMG pmax pmax
comp=Z,140nm,1.0s
SUMG Summit 127.03 13 *i* P **PKiKP 13 12 12.0 +0.3**
comp=Z,135nm,1.0s
SFJD Kangerlussuaq 127.05 22 *e*PKPdf **PKPdf 13 12 10.5 -0.3**
SFJD Kangerlussuaq 127.05 22 *i* PKIKP **PKPdf 13 12 10.3 -0.5**
SFJD pmax pmax
comp=Z,26nm,0.7s
SFJD Kangerlussuaq 127.05 22 *i* P **PKPdf 13 12 10.3 -0.5**
comp=Z,26nm,0.7s
AKTO Aktyubinsk 127.70 316 PKP **PKPdf 13 12 12.3 -0.2**
comp=Z,39nm,0.9s,baz=105,slow=1.3,SNR=42
AKTO SKPbc SKPbc 13 14 39.7
comp=Z,5.7nm,0.7s,baz=57,slow=6.5,SNR=3.5
AKTO SKKPbc **SKKPbc 13 24 36.1 -3.3**
comp=Z,2.1nm,0.7s,baz=281,slow=5.0,SNR=4.9
SOHO SOHO 127.86 283 P **PKPdf 13 12 13.0 -0.6**
SNR=20
GEYT Alibeck 128.24 300 PKP **PKPdf 13 12 14.2 +0.2**
comp=Z,30nm,0.8s,baz=216,slow=1.3,SNR=32
GEYT SKPbc SKPbc 13 14 42.8
comp=Z,12nm,0.8s,baz=169,slow=1.5,SNR=7.6
GEYT SKKPbc **SKKPbc 13 24 34.4 -2.3**
comp=Z,1.2nm,0.5s,baz=220,slow=8.9,SNR=3.8
GYA0B ALIBECK ARRAY 128.24 300 *e*PKPdf **PKPdf 13 12 14.1 +0.1**
MDH Madha 128.31 284 PKPdf **PKPdf 13 12 13.4 -1.1**
UOSS Minazif 128.32 284 *e*PKPdf **PKPdf 13 12 13.8 -0.7**
UOSS Minazif 128.32 284 *i* PKPdf **PKPdf 13 12 13.5 -1.0**
SNR=10
UOSS Minazif 128.32 284 P **PKPdf 13 12 14.5 0.0**
SNR=6.7
HATD Hatta, Dubai 128.36 284 *i* PKiKP **PKPdf 13 12 14.5 -0.1**
SNR=15
HATD Hatta, Dubai 128.36 284 P **PKPdf 13 12 14.9 +0.3**
SNR=10.0
ASHO Ashiyiah 128.40 283 *i* PKiKP **PKPdf 13 12 14.6 -0.1**
SNR=14
ASHO Ashiyiah 128.40 283 P **PKPdf 13 12 14.8 +0.1**
SNR=9.3
MSFE Esma-Masafi 128.44 284 *i* PKiKP **PKPdf 13 12 14.7 -0.1**
SNR=8.4
ALNE Al Ain 128.55 282 *i* PKiKP **PKPdf 13 12 14.8 -0.1**
SNR=8.4
NAZ Nazwa, Dubai 128.81 284 *i* PKiKP **PKPdf 13 12 15.3 -0.1**
SNR=11
NAZ Nazwa, Dubai 128.81 284 P **PKiKP 13 12 16.1 -0.1**
SNR=5.0
FAQ Al Faqa, Dubai 128.83 283 PKiKP **PKPdf 13 12 15.6 +0.2**
ASUD Al Ashush, Dub 129.04 283 PKiKP **PKiKP 13 12 16.5 -0.2**
ASUD Al Ashush, Dub 129.04 283 P **PKiKP 13 12 16.4 -0.2**
MZR Muzera 130.36 281 *i* PKiKP **PKiKP 13 12 19.3 0.0**
SNR=10
KIRV Kirov 130.46 328 PKP **PKiKP 13 12 18.0 -0.4**
comp=Z,66nm,0.6s,baz=85,slow=1.7,SNR=26
KIRV SKPbc **SKPbc 13 14 49.2 -0.1**
comp=Z,204nm,0.7s,baz=94,slow=0.7,SNR=56
IVI Ivigtut 130.75 28 *e*PKPdf **PKPdf 13 12 17.7 -0.2**
LVZ Lovozero 130.86 343 *e*PKPdf **PKPdf 13 12 18.1 0.0**
LVZ Lovozero 130.86 343 *e*PKIKP **PKPdf 13 12 18.1 0.0**
PRGR Permogore 130.86 333 *e*PKIKP **PKPdf 13 12 18.5 +0.3**
PRGR *i* 13 14 50.3
PRGR pmax pmax
comp=Z,16nm,0.5s
KEV Kevo 131.20 347 *e*PKPdf **PKiKP 13 12 19.1 -0.5**
KEV Kevo 131.20 347 *e*PKIKP **PKiKP 13 12 19.2 -0.5**
APA Apatity 131.43 343 || *i* PKIKP **PKPdf 13 12 19.5 +0.4**
APA *i* 13 14 52.4
APA pmax pmax
comp=Z,10.0nm,0.7s
ARCES ARCESS Array B 131.68 348 PKhKP PKPpre 13 12 08.5
comp=Z,2.4nm,0.6s,baz=126,slow=1.6,SNR=7.3
ARCES PKP **PKPdf 13 12 19.5 0.0**
comp=Z,15nm,0.5s,baz=26,slow=2.3,SNR=25
ARCES SKPbc **SKPbc 13 14 53.7 +0.3**
comp=Z,40nm,0.7s,baz=38,slow=4.6,SNR=22
ARE0 ARCESS Array S 131.68 348 *e*PKPdf **PKPdf 13 12 18.4 -1.1**
SCO Scoresbysund 131.76 9 *e*PKPdf **PKPdf 13 12 19.9 +0.3**
SCO Scoresbysund 131.76 9 *i* PKIKP **PKiKP 13 12 20.6 -0.2**
SCO pmax pmax
comp=Z,18nm,0.9s
SCO Scoresbysund 131.76 9 *i* P **PKiKP 13 12 20.6 -0.2**
comp=Z,18nm,0.9s
LSZ Lusaka 131.82 219 *e*PKPdf **PKPdf 13 12 20.2 -1.4**
LSZ Lusaka 131.82 219 *e*PKIKP **PKPdf 13 12 20.2 -1.4**
NRS Narsarsuaq 131.94 27 *e*PKPdf **PKPdf 13 12 20.4 +0.2**
NRS Narsarsuaq 131.94 27 *e*PKIKP **PKPdf 13 12 20.4 +0.2**
TMCR Tamitsa 132.35 338 *e*PKIKP **PKiKP 13 12 22.1 0.0**
TMCR pmax pmax
comp=Z,31nm,0.9s
KLMR Klimovskoe 133.79 334 *e*PKIKP **PKPdf 13 12 22.9 -0.8**
KLMR *e* 13 14 58.6
KLMR pmax pmax
comp=Z,28nm,0.8s
KMBO Kilima Mbogo 135.39 242 PKP **PKPdf 13 12 28.9 +0.4**
comp=Z,28nm,1.2s,baz=4.0,slow=2.1,SNR=12
KMBO SKP 13 15 10.1
comp=Z,19nm,0.9s,baz=68,slow=3.4,SNR=9.1
KMBO Kilima Mbogo 135.39 242 *e*PKPdf **PKPdf 13 12 27.8 -0.7**
KMBO *e*SKPbc **SKPbc 13 15 09.0 +1.3**
KMBO Kilima Mbogo 135.39 242 *i* PKiKP **PKiKP 13 12 31.1 +0.9**
SNR=8.2
KMBO Kilima Mbogo 135.39 242 P **PKiKP 13 12 31.4 +1.2**
SNR=5.3
MAK Makhachkala 136.00 308 *e*P **Pdif 13 09 34.2 -1.9**
MAK *i* 13 12 29.0
MAK *e* 13 15 13.3
MAK *e* 13 18 45.4
MAK *e*SSS SSS 13 37 44.0
MAK pmax pmax
comp=Z,293nm,1.5s
AKT Akhty 136.06 306 *e*PKIKP **PKPdf 13 12 29.4 +0.7**
AKT *e* 13 15 17.9
AKT pmax pmax
comp=Z,64nm,1.0s
BORG Borgarnes 137.01 13 SKP **SKPdf 13 15 12.1 +0.2**
comp=Z,26nm,0.9s,baz=39,slow=2.9,SNR=6.1
GROC Groznyy 137.19 308 *e*PKIKP **PKPdf 13 12 28.6 -2.0**
GROC *e* 13 15 21.4
GROC pmax pmax
comp=Z,85nm,1.0s
VRH Novokhopyorsk 137.44 321 *e*PKIKP **PKPdf 13 12 30.4 -0.4**
VRH pmax pmax
comp=Z,60nm,0.7s
MOS Moscow 137.46 329 *i* PKIKP **PKiKP 13 12 32.1 -0.6**
MOS pmax pmax
comp=Z,45nm,0.9s
FIA1 FINESS Array S 138.14 341 *e*PKPpre PKPpre 13 12 22.9
FIA0 FINESS Array S 138.15 341 *e*SKPbc **SKPbc 13 15 13.8 0.0**
FINES FINESS Array B 138.15 341 PKhKP PKPpre 13 12 20.9
comp=Z,4.9nm,0.4s,baz=51,slow=4.9,SNR=24
FINES SKP 13 15 13.8
comp=Z,80nm,0.8s,baz=64,slow=4.4,SNR=29
FINES SKKPbc SKKPbc 13 23 59.8 -2.2
comp=Z,1.4nm,0.7s,baz=202,slow=2.1,SNR=4.0
TBLG Delisi 138.24 307 *e*PKPdf **PKPdf 13 12 32.7 +0.1**
OBN Obninsk 138.31 328 PKP **PKPdf 13 12 30.1 -2.1**
comp=Z,6.5nm,0.4s,baz=17,slow=2.8,SNR=5.4
OBN SKP 13 15 14.8
comp=Z,5.9nm,0.4s,baz=342,slow=10,SNR=5.9
OBN SKKPbc SKKPbc 13 23 57.3 -3.7

comp=Z,11nm,0.4s,baz=102,slow=3.1,SNR=4.2
OBN Obninsk 138.31 328 *e*PKPdf **PKPdf 13 12 31.6 -0.6**
OBN *e*SKPbc **SKPbc 13 15 14.4 0.0**
OBN Obninsk 138.31 328⇑*e*PKIKP **PKPdf 13 12 30.0 -2.2**
OBN *e* 13 15 31.2
OBN *e*PPP PPP 13 18 36.9
OBN *e*SS SS 13 32 53.8 -4.2
OBN pmax pmax
comp=Z,43nm,1.0s
LPSR Galich'ya Gora 138.38 324 *e*PKIKP **PKPdf 13 12 33.0 +0.5**
LPSR pmax pmax
comp=Z,50nm,1.8s
GNI Garni 138.50 304 SKiKP **SKiKP 13 15 17.9 -1.2**
comp=Z,6.0nm,0.4s,baz=313,slow=3.4,SNR=4.7
GNI Garni 138.50 304 P **PKiKP 13 12 35.6 0.0**
SNR=8.2
ZEI Tsey 138.63 308 *i* PKHKP PKPpre 13 12 24.8
ZEI pmax pmax
comp=Z,31nm,0.9s
GOF Gofitskoye 138.68 312⇑*e*PKIKP **PKiKP 13 12 36.3 +0.7**
VSR Storozhevoye 138.89 322 *e*PKIKP **PKPdf 13 12 33.2 -0.2**
VSR pmax pmax
comp=Z,30nm,0.8s
VORD Divnogorie 138.93 322 *e*PKIKP **PKPdf 13 12 33.7 +0.2**
VORD pmax pmax
comp=Z,20nm,0.8s
KBZ Khabaz 139.12 310 PKhKP PKPpre 13 12 28.1
KBZ comp=Z,3.6nm,0.7s,baz=62,slow=5.0,SNR=6.9
SKiKP **SKiKP 13 15 19.2 -0.7**
comp=Z,5.7nm,0.7s,baz=67,slow=3.1,SNR=5.4
KBZ SKKPbc **SKKPbc 13 23 55.1 -2.0**
comp=Z,2.7nm,0.8s,baz=218,slow=1.1,SNR=3.8
KVAR Kislovodsk Arr 139.21 310 PKhKP **PKPdf 13 12 31.7 -2.7**
comp=Z,2.4nm,0.4s,baz=268,slow=22,SNR=3.2
AKH Akhalkalaki 139.21 306 *e*PKPdf **PKPdf 13 12 34.4 -0.3**
AKH Akhalkalaki 139.21 306⇑*i*P **PKPdf 13 12 27.9 -6.7**
KIV Kislovodsk 139.22 310 *e*PKPdf **PKPdf 13 12 33.6 -0.8**
KIV Kislovodsk 139.22 310 *i* PKPdf **PKPdf 13 12 34.7 +0.3**
SNR=6.1
KIV Kislovodsk 139.22 310 *e*PKIKP **PKPdf 13 12 33.5 -0.9**
KIV *e* 13 18 47.9
KIV pmax pmax
comp=Z,96nm,1.1s
KIV Kislovodsk 139.22 310 P **PKPdf 13 12 34.2 -0.2**
SNR=8.2
VSU Vasula 140.22 338 *e*P **PKPdf 13 12 29.1 -6.6**
VSU IAmb IAmb 13 12 35.8
comp=Z,129nm,0.7s
BCA Borcka 140.58 307⇑*i*P **PKPdf 13 12 31.4 -5.5**
MBAR Mbarara 140.82 236 *e*PKPpre **PKPdf 13 12 32.4 -5.9**
MOL Molde 140.89 354 *e*PKPdf **PKPdf 13 12 33.2 -3.5**
DOMB Dombas 141.24 353 *e*PKPdf **PKPdf 13 12 32.6 -4.9**
AKN Aaknes 141.33 354 *e*PKPdf **PKPdf 13 12 34.8 -2.8**
SOC Sochi 141.38 311 *e*PKIKP **PKPdf 13 12 37.4 -0.8**
SOC *e* 13 15 45.4
SOC *e*PPP PPP 13 19 11.5
SOC *e*SS SS 13 33 38.9 +4.2
SOC pmax pmax
comp=Z,29nm,1.0s
NC303 NORSAR Array S 141.71 350 *e*PKPpre **PKPdf 13 12 33.5 -4.7**
NC204 NORSAR Array S 141.75 351 *e*PKPpre **PKPdf 13 12 33.8 -4.6**
NC405 NORSAR Array S 141.77 350 *e*PKPpre **PKPdf 13 12 33.6 -4.8**
NB201 NORSAR Array S 141.89 350 *e*PKPpre **PKPdf 13 12 33.7 -4.9**
NB2 NORSAR Subarra141.91 350 PKP **PKPdf 13 12 34.1 -4.6**
comp=Z,46nm,1.0s,baz=16,slow=3.2
NB2 NORSAR Subarra141.91 350 PKPab **PKPdf 13 12 34.1 -4.6**
baz=16,slow=3.2
NB200 NORSAR Array S 141.91 350 *e*PKPpre **PKPdf 13 12 34.5 -4.2**
NB200 *e*SKPbc **SKPbc 13 15 23.9 +0.1**
NOA NORSAR Array B 141.91 350 PKhKP **PKPdf 13 12 34.5 -4.2**
comp=Z,51nm,0.8s,baz=16,slow=4.7,SNR=84
NOA SKPbc **SKPbc 13 15 23.9 +0.1**
comp=Z,12nm,0.7s,baz=14,slow=4.2,SNR=14
NBO00 NORSAR Array S 141.99 351 *e*PKPpre **PKPdf 13 12 34.2 -4.5**
NAO01 NORSAR Array S 142.15 351 *e*PKPpre **PKPdf 13 12 34.8 -4.3**
NAO01 NORSAR Array S 142.15 351 *e*PKPdf **PKPdf 13 12 35.1 -4.0**
NC602 NORSAR Array S 142.15 350 *e*PKPpre **PKPdf 13 12 34.5 -4.5**
HFS Hagfors 142.34 348 PKhKP **PKPdf 13 12 35.3 -4.1**
comp=Z,134nm,0.5s,baz=67,slow=3.9,SNR=329
HFS SKPbc **SKPbc 13 15 24.6 -0.2**
comp=Z,42nm,0.8s,baz=270,slow=0.1,SNR=11
HFS SKKPbc **SKKPab 13 23 43.3 -1.0**
comp=Z,2.8nm,0.7s,baz=222,slow=2.0,SNR=5.0
SLIT Slitere, Latvi 142.36 340 *e*P **PKPdf 13 12 33.8 -5.6**
SLIT IAmb IAmb 13 12 38.1
comp=Z,150nm,0.6s
HYA Hoyanger 142.40 354 *e*PKPdf **PKPdf 13 12 36.1 -3.3**
IZAR Zarasai 142.41 335 *e*P **PKPdf 13 12 36.1 -3.5**
IZAR IAmb IAmb 13 12 40.8
comp=Z,49nm,0.8s
IDID Didziasalis 142.53 334 *e*P **PKPdf 13 12 37.3 -2.5**
IDID IAmb IAmb 13 12 40.7
comp=Z,37nm,0.7s
ANN Anapa 142.54 313 *e*PKHKP **PKPdf 13 12 37.0 -3.2**
ANN *i* 13 12 40.5
ANN *e* 13 18 53.9
ANN pmax pmax
comp=Z,219nm,1.3s
ANN pmax pmax
comp=Z,75nm,1.2s
ISAL Salakas 142.59 335 *e*P **PKPdf 13 12 37.2 -2.7**
ISAL IAmb IAmb 13 12 40.4
comp=Z,26nm,0.6s
SUE Sulen 142.62 355 *e*PKPdf **PKPdf 13 12 36.7 -3.1**
MICGM Minsk 142.63 332⇑*e*P **PKPdf 13 12 36.0 -4.1**
MICGM PM 13 12 39.0
comp=Z,0.9nm,1.0s
MICGM PM 13 12 40.0
comp=E,0.4nm,1.0s
MICGM PM 13 12 41.0
comp=N,0.2nm,1.0s
MICGM *e* 13 15 26.0
MNK Minsk 142.63 332 *e*PKHKP **PKPdf 13 12 36.0 -4.1**
MNK pmax pmax
comp=Z,870nm,1.0s
NACGM Naroch 142.81 334 *e* **PKPdf 13 12 37.0 -3.3**
OSL Oslo 143.04 350 *e*PKPdf PKPab 13 12 38.2 0.0
ASK Askoy 143.16 355 *e*PKPdf PKPab 13 12 38.5 -0.1
BER Bergen 143.25 355 *e*PKPdf PKPab 13 12 38.7 -0.3
PABE Paberze 143.46 336 *e*P PKPab 13 12 39.6 -0.4
PABE IAmb IAmb 13 12 42.8
comp=Z,787nm,0.9s
KONO Kongsberg 143.48 351 *e*PKPbc PKPab 13 12 39.2 -0.7
KONO Kongsberg 143.48 351 *e*PKIKP PKPab 13 12 39.2 -0.8
KONO Kongsberg 143.48 351 *e*PKPdf PKPab 13 12 39.4 -0.6
ODD1 Odda 143.59 354 *e*PKPdf PKPab 13 12 39.9 -0.5
PBUR Paburg 143.77 338 *e*P PKPbc 13 12 40.5 -0.6
PBUR IAmb IAmb 13 12 43.7
comp=Z,987nm,0.7s
BLS5 Blasjo 144.09 354 *e*PKPdf PKPbc 13 12 41.7 -0.3
KMY Karmoy 144.41 355 *e*PKPdf PKPbc 13 12 42.3 -0.7
AKASG Malin Array Be 144.49 327 PKP **PKPdf 13 12 42.9 -0.5**
comp=Z,160nm,0.7s,baz=44,slow=4.2,SNR=220
AKASG SKPbc **SKPbc 13 15 30.6 +0.4**
comp=Z,37nm,0.9s,baz=52,slow=2.5,SNR=10
AKASG SKKPbc **SKKPab 13 23 34.1 -0.7**
comp=Z,2.1nm,0.6s,baz=249,slow=3.7,SNR=8.9
AKBB Malin Array Si 144.49 327 *e*PKPdf **PKPdf 13 12 42.7 -0.7**
AKBB *e*SKPbc **SKPbc 13 15 30.4 +0.2**
AKBB Malin Array Si 144.49 327 *e*PKIKP **PKPdf 13 12 42.7 -0.7**
KIEV Kiev 144.50 327⇓*i*P **PKPdf 13 12 42.9 -0.5**
KIEV Kiev 144.50 327 *i* PKPbc **PKPdf 13 12 42.6 -0.8**
SNR=122
KIEV Kiev 144.50 327⇓PKIKP **PKPdf 13 12 42.9 -0.5**
STAV Stavanger 144.64 354 *e*PKPdf **PKPdf 13 12 43.2 -0.2**
SIM Simferopol' 144.66 315 *ce*PKIKP PKPbc 13 12 44.3 +0.1
SIM pmax pmax
comp=Z,163nm,0.7s
SUW Suwalki 144.89 335 *e*PKP **PKPab 13 12 45.4 -0.1**
SUW Suwalki 144.89 335 *e*PKPdf **PKPdf 13 12 44.1 +0.1**
SUW Suwalki 144.89 335 *e*PKIKP **PKPdf 13 12 44.1 +0.1**
HOMB Homborsund 144.97 351 *e*PKPdf PKPbc 13 12 44.4 -0.3
SEVA Sevastopol 145.11 315⇓*i*P **PKPbc 13 12 46.0 +0.4**
DIKM Dikmen 145.12 309⇑*i*P **PKPab 13 12 46.3 -0.5**
BIGH Upper Bighouse 145.33 3 *e*P **PKPdf 13 12 44.8 +0.2**
RSC Scourie 145.41 4 *e*P **PKPdf 13 12 45.1 +0.4**
RRH Rhenigidale 145.72 5 *e*P **PKPbc 13 12 46.2 -0.7**
ASF Jabal al Asfar 145.76 293 PKPbc **PKPbc 13 12 48.2 +0.2**
comp=Z,64nm,0.8s,baz=76,slow=2.1,SNR=52
ASF SKPbc **SKiKP 13 15 35.0 +0.8**
comp=Z,7.3nm,0.8s,baz=96,slow=4.5,SNR=3.0
ASF SKKPbc **SKKPab 13 23 29.7 +0.2**
comp=Z,5.0nm,0.9s,baz=186,slow=0.6,SNR=9.2
ASF Jabal al Asfar 145.76 293 P **PKPbc 13 12 48.6 +0.6**

RRR Rubha Reidh 145.85 5 *e*P **PKPdf 13 12 46.4 +0.9**
BZK Bozkurt 145.89 310⇓*i*P **PKPbc 13 12 48.3 +0.4**
TOTH TOTAH 146.04 295 *e*P **PKPbc 13 12 49.2 +0.5**
QASN Qassioun 146.15 295 *e*P **PKPbc 13 12 49.7 +0.6**
KAC Achnashellach 146.25 4 *e*P **PKPbc 13 12 47.6 -0.8**
HSUJ Al Zarqa 146.36 292 P **PKPbc 13 12 49.1 -0.5**
KPL Plockton 146.38 5 *e*P **PKPdf 13 12 47.5 +1.1**
ILGA Ilgaz 146.41 309 *e*PKPdf **PKPdf 13 12 47.7 +0.4**
BRBR Barbar 146.43 295 *e*P **PKPbc 13 12 49.8 -0.3**
RCY Rachaya 146.52 295 *e*P **PKPdf 13 12 48.2 +0.5**
SHBL Chebaa 146.61 295 *e*P **PKPdf 13 12 48.0 +0.2**
BHL Bhannes 146.62 296 *e*P **PKPdf 13 12 48.1 +0.4**
MUD Monsted U'grnd 146.62 350 *e*PKIKP **PKPbc 13 12 49.3 -0.1**
MUD Monsted U'grnd 146.62 350 *i* P **PKPbc 13 12 49.3 -0.1**
QRWL Qaraoun 146.64 295 *e*P **PKPbc 13 12 49.2 -1.2**
BSD Bornholm Skovb 146.65 343 *i* PKIKP **PKPbc 13 12 49.0 -0.6**
BSD pmax pmax
comp=Z,270nm,1.0s
BSD Bornholm Skovb 146.65 343 *i* P **PKPbc 13 12 49.0 -0.6**
comp=Z,270nm,1.0s
DQRL Deir Qamar 146.71 295 *e*P **PKPbc 13 12 50.0 -0.6**
WALJ Wala 146.72 292 P **PKPbc 13 12 51.2 +0.7**
COP Copenhagen 146.73 346 *i* PKP2 **PKPbc 13 12 50.0 +0.3**
COP Copenhagen 146.73 346 *i* P **PKPbc 13 12 50.0 +0.3**
KIS Kishinev 146.88 322 *e*PKP **PKPdf 13 12 48.0 +0.4**
comp=Z,500nm,1.2s
KIS Kishinev 146.88 322 *e*PKP2 **PKPab 13 12 55.0 +1.4**
KIS *ep*PKP **pPKPdf 13 14 56.0 -0.8**
KIS Kishinev 146.88 322 *e*PKIKP **PKPdf 13 12 48.0 +0.4**
KIS *e* 13 12 55.0
KIS *e* 13 14 56.0
KIS pmax pmax
comp=Z,500nm,1.2s
KIS MLR MLR
comp=Z,200nm,25.0s
BR101 Keskin Array S 146.90 307 *e*PKPbc **PKPbc 13 12 50.8 -0.2**
BR101 *e*SKPbc **SKiKP 13 15 37.4 +1.1**
BR131 Keskin Array S 146.90 307 *e*PKPdf **PKPdf 13 12 48.0 -0.1**
BR131 Keskin Array S 146.90 307 P **PKPbc 13 12 49.7 -1.3**
SNR=145
BRTR Keskin Array B 146.90 307 PKPbc **PKPbc 13 12 50.8 -0.2**
comp=Z,49nm,0.7s,baz=128,slow=2.0,SNR=80
BRTR SKPbc **SKiKP 13 15 37.4 +1.1**
comp=Z,8.0nm,0.9s,baz=120,slow=3.5,SNR=4.0
MILM Milestii Mici 146.93 321⇑*i*P **PKPdf 13 12 48.9 +1.3**
MMAI Mount Meron Ar 146.94 294 PKPbc **PKPbc 13 12 51.8 +0.6**
comp=Z,80nm,0.5s,baz=78,slow=6.1,SNR=151
MMAI SKKPbc SKKPbc 13 23 24.0 -1.1
comp=Z,6.9nm,0.9s,baz=285,slow=2.8,SNR=6.5
DRUM Mains of Drumt 146.97 2 *e*P **PKPdf 13 12 48.5 +1.1**
MMLI Mount Malkishu 146.98 293 P **PKPbc 13 12 50.5 -0.8**
LISJ El Lisan 147.03 291 P **PKiKP 13 12 52.5 -0.6**
EDU Dundee 147.31 2 *e*P **PKPbc 13 12 50.9 -0.4**
INVG Invergeldie, C 147.39 3 *e*P **PKPbc 13 12 50.2 -1.3**
ANTO Ankara 147.47 307 *e*PKPdf **PKPdf 13 12 49.0 +0.2**
ANTO Ankara 147.47 307⇑*i*P **PKPbc 13 12 52.8 +0.4**
ANTO Ankara 147.47 307 *e*PKIKP **PKPdf 13 12 49.1 +0.2**
ANTO Ankara 147.47 307 P **PKPdf 13 12 50.4 +1.5**
SNR=73
LAWE Loch Awe, Argy 147.47 5 *e*P **PKPdf 13 12 49.6 +1.4**
BEL Belsk 147.49 335 *e*PKP **PKPbc 13 12 52.3 +0.4**
BEL Belsk 147.49 335 *e*PKP2 **PKPbc 13 12 52.3 +0.4**
EIL Elat 147.56 288 PKPbc **PKPbc 13 12 52.7 -0.2**
comp=Z,102nm,0.9s,baz=345,slow=3.5,SNR=40
EIL SKKPbc 13 23 21.7
comp=Z,10.0nm,1.0s,baz=237,slow=3.4,SNR=6.5
RGN Rugen 147.56 345 *e*PKPdf **PKPdf 13 12 49.8 +1.4**
RGN Rugen 147.56 345 *e*P **PKPbc 13 12 51.0 -1.0**
RGN IAmb IAmb 13 12 55.2
comp=Z,132nm,0.8s
GKP Gorka Klasztor 147.59 340 *e*PKP **PKiKP 13 12 54.2 +0.6**
GKP Gorka Klasztor 147.59 340 *e*PKP2 **PKiKP 13 12 54.2 +0.6**
LVV L'vov 147.59 329 *e*PKP2 **PKPbc 13 12 52.0 -0.3**
EAB Aberfoyle 147.61 4 *e*P **PKPdf 13 12 49.8 +1.3**
PHNC Paralimni 147.77 298 P **PKiKP 13 12 55.1 +0.5**
TLCR 147.86 319⇓*i*P **PKPbc 13 12 52.9 -0.1**
TLCR 147.86 319⇓PKP2 **PKPbc 13 12 52.9 -0.1**
ESY Stoneypath 147.96 2 *e*P **PKPdf 13 12 50.4 +1.3**
PGBU Glenifferbraes 147.98 4 *e*P **PKPbc 13 12 51.3 -1.8**
EAU Auchinoon 148.00 3 *e*P **PKPbc 13 12 52.4 -0.7**
EBL Broad Law 148.09 2 *e*P **PKPdf 13 12 49.5 +0.2**
PRAR RASCA 148.10 324⇑*i*P **PKPbc 13 12 54.2 +0.6**
CFR Carcaliu 148.27 319⇑*i*P **PKPdf 13 12 51.8 +1.9**
KWP Kalwaria Pacla 148.33 330 *e*PKP **PKPbc 13 12 54.3 +0.2**
KWP Kalwaria Pacla 148.33 330 *e*PKPdf **PKPdf 13 12 50.7 +0.8**
CSS Mathiatis 148.34 298 P **PKPbc 13 12 54.2 -0.5**
TESR Tescani 148.38 322⇑*i*P **PKPbc 13 12 54.5 +0.1**
MAMC Mammari 148.39 299 P **PKPdf 13 12 51.0 +0.6**
BIZ Bicaz 148.42 324⇓*i*P **PKPdf 13 12 52.0 +1.9**
BUR08 Bucovina Ar. S 148.46 325 *e*PKPdf **PKPdf 13 12 51.8 +1.5**
BURAR Bucovina Array 148.47 325⇓*i*P **PKPbc 13 12 53.2 -1.5**
TIRR Tirgusor 148.48 318 *e*PKPdf **PKPdf 13 12 51.5 +1.3**
TIRR Tirgusor 148.48 318⇓*i*P **PKPbc 13 12 54.9 +0.3**
PETR Petresti 148.50 321⇑*i*P **PKiKP 13 12 55.8 +0.1**
EKA Eskdalemuir Ar 148.52 2 PKPbc **PKPbc 13 12 53.8 -0.7**
comp=Z,25nm,0.6s,baz=347,slow=1.8,SNR=32
EKA pPKPab **pPKPab 13 15 07.5 +4.0**
comp=Z,8.3nm,0.7s,baz=340,slow=2.6,SNR=5.6
EFOR EFORIE 148.54 317⇑*i*P **PKPdf 13 12 50.9 +0.5**
ESK Eskdalemuir 148.54 3 *e*PKPdf **PKPdf 13 12 50.1 +0.1**
ESK Eskdalemuir 148.54 3 *e*P **PKPdf 13 12 50.4 +0.4**
CLGH Cloghs, Cushen 148.58 6 *e*P **PKPdf 13 12 50.0 -0.1**
ODBI Odobesti 148.58 321⇓*i*P **PKiKP 13 12 55.9 0.0**
MFTR Murfatlar 148.62 317⇑*i*P **PKPbc 13 12 53.4 -1.6**
TLB Topalu 148.64 318⇑*i*P **PKPbc 13 12 53.0 -2.0**
HARR Harsova 148.65 319⇓*i*P **PKPbc 13 12 53.7 -1.4**
LEF Lefka 148.66 299⇑*i*P **PKPbc 13 12 55.6 +0.2**
MANR Mangalia 148.69 317⇑*i*P **PKPbc 13 12 54.7 -0.5**
VRI Vrincioaia 148.71 321⇑*i*P **PKPbc 13 12 55.2 0.0**
SZAC Souni 148.74 298 P **PKPbc 13 12 55.5 -0.2**
BHH Howats Hill 148.76 3 *e*P **PKPdf 13 12 52.0 +1.6**
GRER 148.84 320⇑*i*P **PKiKP 13 12 57.5 +1.0**
ALFC Alefka 148.89 299 P **PKPbc 13 12 55.5 -0.5**
GAL1 Galloway 148.91 4 *e*P **PKPdf 13 12 51.8 +1.2**
PSN Preselentsi 149.02 317 P **PKPbc 13 12 56.2 +0.2**
KOLS Kolonicke sedl 149.03 330 *e*PKP **PKPdf 13 12 52.2 +1.1**
KOLS *e* 13 12 56.8
ICOR Ion Corvin 149.03 318⇑*i*P **PKiKP 13 12 56.7 -0.2**
AMRR Amara 149.05 319⇑*i*P **PKiKP 13 12 57.7 +0.8**
AMRR Amara 149.05 319⇑PKP2 **PKiKP 13 12 57.7 +0.8**
OZUR 149.11 323⇓*i*P **PKiKP 13 12 57.8 +0.7**
BBO1 Bothel 149.12 3 *e*P **PKPdf 13 12 52.5 +1.6**
OJC Ojcow 149.14 334 *e*PKP **PKPbc 13 12 56.3 +0.2**
OJC Ojcow 149.14 334 *e*PKPdf **PKPdf 13 12 51.6 +0.5**
PPCY Paphos 149.15 298 P **PKPbc 13 12 55.8 -0.8**
SILT Sile 149.22 311⇑*i*P **PKPbc 13 12 56.7 +0.2**
UZH Uzhgorod 149.24 329 *e*PKHKP **PKPdf 13 12 52.2 +0.9**
ARCR ARCALIA 149.26 325⇑*i*P **PKiKP 13 12 57.0 -0.3**
KESW Keswick, Cumbr 149.27 3 *e*P **PKPdf 13 12 52.7 +1.5**
RUE Ruedersdorf 149.31 342 *e*P **PKPbc 13 12 55.1 -1.2**
RUE IAmb IAmb 13 12 59.4
comp=Z,246nm,0.9s
MLR Muntele Rosu 149.38 321 PKPbc **PKPbc 13 12 56.9 -0.1**
comp=Z,47nm,0.6s,baz=16,slow=1.1,SNR=26
MLR Muntele Rosu 149.38 321 *e*PKPdf **PKPdf 13 12 51.4 -0.5**
MLR Muntele Rosu 149.38 321⇑*i*P **PKPdf 13 12 53.0 +1.1**
MLR Muntele Rosu 149.38 321 *e*PKIKP **PKPdf 13 12 51.4 -0.5**
LEHL Lehliu 149.44 319⇑*i*P **PKiKP 13 12 57.8 +0.1**
TRPA Tarpa 149.47 328⇓*i*P **PKPbc 13 12 56.9 0.0**
TRPA Tarpa 149.47 328 EP **PKPbc 13 12 56.1 -0.8**
GDLE Glaisdale, N Y 149.48 360 *e*P **PKPdf 13 12 53.3 +1.7**
IOMK Kirk Michael 149.52 4 *e*P **PKPdf 13 12 52.7 +1.1**
NIE Niedzica 149.55 332 *e*PKP **PKiKP 13 12 58.0 +0.2**
SECR 149.57 321⇓*i*P **PKPbc 13 12 56.8 -0.5**
YLV Yalova 149.65 311⇑*i*P **PKPbc 13 12 57.6 -0.1**
ISK Istanbul-Kandi 149.66 312 P **PKPbc 13 12 57.5 -0.1**
SULR 149.66 320⇓*i*P **PKPbc 13 12 57.5 0.0**
PRD Provadia 149.75 317 P **PKPbc 13 12 57.8 +0.1**
ISP Isparta 149.81 305 *e*PKPdf **PKPdf 13 12 53.3 +0.5**
ISP *e*PKPbc **PKPbc 13 12 57.8 -0.5**
ISP Isparta 149.81 305 P **PKPdf 13 12 55.2 +2.4**
ISP Isparta 149.81 305⇑*i*P **PKPbc 13 12 57.6 -0.6**
MDB Medias 149.85 324⇑*i*P **PKiKP 13 12 59.0 +0.4**
CJR Cluj-Napoca 149.90 325⇑*i*P **PKiKP 13 12 58.5 -0.2**
KSP Ksiaz 149.95 338 *e*PKP **PKiKP 13 12 58.5 -0.1**
H07N1 FLORES T-PHASB 150.03 51 *e*PKP **PKPdf 13 12 53.4 +0.5**
H07N1 *e*P **pPKPbc 13 15 08.0 +1.1**
H07S1 FLORES T-PHASB 150.09 52 *e*PKP **PKPdf 13 12 54.4 +1.4**
H07S1 *e*P **pPKPab 13 15 09.1 -1.8**
OKC Ostrava-Krasne 150.10 335⇑*e*PKP **PKiKP 13 12 58.8 -0.1**
OKC *ep*PKP **pPKPab 13 15 14.3 +4.5**

OKC *ex* x 13 38 16.2
LANS Liptovska Anna 150.11 333 *e*PKP **PKPdf 13 12 54.8 +2.0**
LANS *e* 13 12 59.7
ARR Arges 150.19 322⇓*i*P **PKPdf 13 12 53.8 +0.7**
OSTC Ostas 150.22 338 *e*PKPDF **PKPdf 13 12 55.1 +2.2**
OSTC ⇑*e*PKP **PKiKP 13 12 59.4 +0.2**
CHVC Chvalec 150.25 338 *e*PKPDF **PKPdf 13 12 54.9 +2.0**
CHVC ⇑*e*PKP **PKiKP 13 12 59.3 0.0**
UPC Upice 150.33 338 *e*PKIKP **PKPdf 13 12 55.0 +2.0**
UPC *e* 13 35 14.1
UPC Upice 150.33 338 *e*PKPDF **PKPdf 13 12 55.0 +2.0**
UPC ⇑*e*PKP **PKiKP 13 12 59.5 +0.1**
UPC *ep*PKP **pPKPab 13 15 13.7 +3.0**
UPC *e*SS SS 13 35 14.1 +0.8
DPC Dobruska-Polom 150.35 337 *e*PKIKP **PKPdf 13 12 54.7 +1.6**
DPC *e* 13 13 08.5
DPC Dobruska-Polom 150.35 337 *e*PKPDF **PKPdf 13 12 54.7 +1.6**
DPC ⇑*e*PKP **PKiKP 13 12 59.6 +0.1**
DPC *e*PKPAB **PKPab 13 13 08.5 +0.6**
DPC *ep*PKP **pPKPab 13 15 13.5 +2.6**
DPC *ex* x 13 34 58.2
DSB Dublin 150.37 7 *e*PKPdf **PKPdf 13 12 53.0 +0.1**
DSB *e*PKPbc **PKiKP 13 13 00.5 +1.1**
DSB *e*PKPab **PKPab 13 13 09.4 +1.7**
WPS Cemaes, Angles 150.38 4 *e*P **PKPdf 13 12 54.3 +1.3**
MORC Moravsky Berou 150.38 335 *e*PKPdf **PKPdf 13 12 53.3 +0.2**
MORC *e*PKPbc **PKiKP 13 12 59.8 +0.2**
MORC Moravsky Berou 150.38 335⇑*i*P **PKPdf 13 12 55.0 +1.8**
MORC Moravsky Berou 150.38 335 *e*PKIKP **PKPdf 13 12 53.3 +0.2**
MORC Moravsky Berou 150.38 335 *e*PKP **PKPdf 13 12 53.4 +0.2**
MORC *e* 13 15 09.6
HUMR Humele 150.49 321⇓*i*P **PKPbc 13 12 57.5 -1.9**
LBWR Ladybower, Pea 150.50 1 *e*P **PKPdf 13 12 54.4 +1.2**
WLF1 Llynfaes 150.50 4 *e*P **PKPdf 13 12 54.1 +0.9**
CLL Collm 150.57 342 *e*PKPdf **PKPdf 13 12 54.2 +0.8**
CLL *e*PKPbc **PKiKP 13 12 59.8 -0.1**
CLL *e*PKPab **PKPab 13 13 10.3 +1.6**
CLL Collm 150.57 342 *e*PKPdf **PKPdf 13 12 55.0 +1.7**
comp=Z,17nm,2.7s
CLL *i* PKPbc **PKPbc 13 12 59.4 0.0**
comp=Z,349nm,0.8s
CLL *i* PKPab **PKPab 13 13 08.6 -0.1**
comp=Z,117nm,0.8s
CLL *ep*PKPbc **pPKPbc 13 15 06.0 -1.4**
CLL *i* pPKPab **pPKPab 13 15 10.1 -1.5**
comp=Z,51nm,1.2s
CLL *es*PKPbc **sPKPdf 13 15 58.0 +1.7**
CLL *e*PP **PP 13 16 42.0 +0.8**
CLL *e*SKSdf **SKSdf 13 19 10.0 +1.7**
CLL *e*PPP PPP 13 20 12.0
CLL *e*SKKSac **SKKSac 13 22 40.0 +3.7**
CLL *e*PPS PPS 13 29 44.0
CLL *ep*PPS 13 31 24.0
CLL *e* 13 33 54.0
CLL *e*SS **SS 13 35 17.0 +1.3**
CLL *es*SS 13 38 47.0
CLL *e*SSS SSS 13 41 06.0
CLL *es*SSS 13 44 12.0
CLL *e*SSPrev 13 46 12.0
CLL Collm 150.57 342 *e*PKIKP **PKPdf 13 12 54.2 +0.8**
LOT Lotru 150.62 323⇓*i*P **PKPbc 13 12 59.1 -0.8**
JMB Yambol 150.64 316 P **PKPbc 13 13 00.0 +0.1**
YLL Llanberis 150.66 4 *e*P **PKPdf 13 12 54.3 +0.9**
BRG Berggiesshubel 150.69 341 *i* PKP **PKPdf 13 12 54.2 +0.7**
comp=Z,45nm,1.5s
BRG Berggiesshubel 150.69 341 *i* PKP **PKiKP 13 12 59.9 -0.2**
comp=Z,194nm,0.8s
BRG Berggiesshubel 150.69 341 *i* PKP **PKPab 13 13 06.0 -3.2**
comp=Z,36nm,0.8s
BRG *i* pPKP **pPKPab 13 15 15.6 +3.5**
comp=Z,64nm,1.4s
BRG Berggiesshubel 150.69 341 *i* PKIKP **PKPdf 13 12 54.2 +0.7**
BRG *i* 13 13 06.0
BRG pmax pmax
comp=Z,45nm,1.5s
BRG pmax pmax
comp=Z,36nm,0.8s
ZIMR 150.76 319⇓*i*P **PKiKP 13 13 00.9 +0.4**
ZIMR 150.76 319⇓PKIKP **PKiKP 13 13 00.9 +0.4**
PVCC Panska Ves 150.79 340 *e*PKIKP **PKPdf 13 12 55.8 +2.1**
PVCC Panska Ves 150.79 340 *e*PKPDF **PKPdf 13 12 55.8 +2.1**
PVCC ⇑*e*PKP **PKiKP 13 13 00.6 +0.3**
PVCC *e*PKPAB **PKPab 13 13 12.7 +3.1**
PVCC *ep*PKP **pPKPab 13 15 15.4 +2.9**
DEV Deva 150.81 325⇓*i*P **PKPbc 13 13 00.0 -0.1**
DEV Deva 150.81 325⇓PKIKP **PKPbc 13 13 00.0 -0.1**
EDRB Edirne 150.85 315 P **PKPbc 13 12 59.8 -0.5**
PSZ Piszkesteto 150.85 331 *e*PKPdf **PKPdf 13 12 54.5 +0.5**
PSZ *e*PKPbc **PKiKP 13 13 01.1 +0.4**
PSZ Piszkesteto 150.85 331⇑*i*P **PKPbc 13 13 00.4 +0.1**
PSZ Piszkesteto 150.85 331 *e*PKIKP **PKPdf 13 12 54.5 +0.5**
PSZ Piszkesteto 150.85 331 EP **PKPdf 13 12 54.1 +0.1**
VYHS Vyhne 150.88 333 *e*PKIKP **PKPdf 13 12 53.9 0.0**
VYHS Vyhne 150.88 333 *e*PKP **PKPdf 13 12 53.9 0.0**
VYHS *e* 13 13 00.4
KULA Kula-Manisa 150.95 307 P **PKPdf 13 12 56.3 +1.8**
FOEL Foel Wylfa 150.96 3 *e*P **PKPdf 13 12 55.3 +1.4**
LLW Llanuwychllyn 150.98 3 *e*P **PKPdf 13 12 54.9 +1.0**
KSL Kastellorizon 151.02 302 P **PKiKP 13 13 02.2 +0.9**
PVL Pavlikeni 151.03 318 P **PKiKP 13 13 01.2 +0.2**
JAVC Velka Javorina 151.07 334 *e*PKP **PKPdf 13 12 56.4 +2.1**
JAVC *e* 13 15 12.9
BALB Balikesir 151.07 310 *e*PKPdf **PKPdf 13 12 55.9 +0.5**
BALB *e*PKPbc **PKiKP 13 13 01.9 +0.7**
VRAC Vranov 151.12 336 PKP **PKPdf 13 12 54.3 0.0**
comp=Z,2.8nm,0.4s,baz=37,slow=1.2,SNR=12
VRAC PKPbc **PKiKP 13 13 01.1 +0.1**
comp=Z,37nm,0.9s,baz=61,slow=0.9,SNR=35
VRAC Vranov 151.12 336⇑*i*P **PKiKP 13 13 01.2 +0.1**
VRAC Vranov 151.12 336 *e*PKP **PKPdf 13 12 55.1 +0.8**
VRAC *e* 13 15 11.5
CWF Charnwood Fore 151.17 1 *e*P **PKPdf 13 12 55.5 +1.3**
SIRR Siria 151.19 326⇓*i*P **PKPbc 13 13 01.0 0.0**
GOPC GO Pecny, Ondr 151.25 339 *e*PKIKP **PKPbc 13 13 01.2 +0.2**
GOPC *e* 13 13 11.1
GOPC *e* 13 35 25.5
GOPC GO Pecny, Ondr 151.25 339⇑*e*PKP **PKPbc 13 13 01.2 +0.2**
GOPC *e*PKPAB **PKPab 13 13 11.1 -0.5**
GOPC *ep*PKP **pPKPab 13 15 16.3 +1.8**
GOPC *ex* x 13 35 25.5
FETY Fethiye 151.27 303 *e*PKPbc **PKiKP 13 13 03.1 +1.3**
FETY Fethiye 151.27 303 P **PKiKP 13 13 03.1 +1.3**
PRU Pruhonice 151.27 339 *e*PKIKP **PKiKP 13 13 01.3 0.0**
PRU *e* 13 13 10.0
PRU Pruhonice 151.27 339⇑*e*PKP **PKiKP 13 13 01.3 0.0**
PRU *e*PKPAB **PKPab 13 13 10.0 -1.7**
PRU *ep*PKP **pPKPab 13 15 16.1 +1.6**
PRU *e*SS SS 13 35 34.9 +11
WTSB Winterswijk 151.33 350 *e*PKPbc **PKPbc 13 13 00.9 -0.1**
comp=Z,285nm,0.7s
KRUC Moravsky 151.40 336 *e*PKP **PKPdf 13 12 54.7 0.0**
KRUC *e* 13 15 12.3
DIM Dimitrovgrad 151.53 316 P **PK

ZST			*e*			13 13 03.7
ZST			*e*			13 13 14.0
MCH1	**Michaelchurch**	**151.87 3**	*e*P		**PKPdf**	**13 12 57.4 +2.2**
MPEP	**Malo Peshtene**	**151.91 320**	P		**PKPdf**	**13 12 57.9 +2.3**
RDO	**Rodhopi**	**151.98 314**	*e*PKPbc		**PKPbc**	**13 13 02.1 -0.8**
RDO	**Rodhopi**	**151.98 314**	P		**PKPbc**	**13 13 02.1 -0.8**
CSKK	**Cskako**	**152.00 332**	EP		**PKiKP**	**13 13 04.0 +1.1**
PLD	**Plovdiv**	**152.02 317**	P		**PKiKP**	**13 13 03.1 0.0**
MONM	**Monmouth**	**152.03 3**	*e*P		**PKPdf**	**13 12 57.4 +1.9**
EZN	**Ezine**	**152.07 311**	*e*PKPbc		**PKPbc**	**13 13 02.8 -0.3**
EZN	**Ezine**	**152.07 311**	P		**PKPbc**	**13 13 02.8 -0.3**
EZN	**Ezine**	**152.07 311**	⇑*i*P		**PKPbc**	**13 13 02.8 -0.3**
EZN	**Ezine**	**152.07 311**	⇑PKIKP		**PKPbc**	**13 13 02.9 -0.2**
PGB	**Panagyurishte**	**152.11 318**	P		**PKiKP**	**13 13 04.6 +1.2**
ARG	**Arkhangelos**	**152.13 303**	*e*PKPbc		**PKiKP**	**13 13 05.3 +1.7**
ARG	**Arkhangelos**	**152.13 303**	P		**PKiKP**	**13 13 05.3 +1.7**
MDVR	**Moldovita**	**152.16 324**	⇑*i*P		**PKPdf**	**13 12 52.6 -3.4**
GADA	**Gvkgeada**	**152.20 312**	*e*PKPbc		**PKiKP**	**13 13 04.5 +0.9**
GADA	**Gvkgeada**	**152.20 312**	P		**PKiKP**	**13 13 04.5 +0.9**
RZN	**Rozhen**	**152.23 316**	P		**PKPbc**	**13 13 03.1 -0.6**
BMOL	**Mol**	**152.31 352**	PKPbc		**PKiKP**	**13 13 04.1 +0.7**
BMOL			PKPab		**PKPab**	**13 13 16.0 +0.1**
SMTH	**Samothraki Isl**	**152.31 313**	*e*PKPbc		**PKPbc**	**13 13 02.5 -1.2**
SMTH	**Samothraki Isl**	**152.31 313**	P		**PKPbc**	**13 13 02.5 -1.2**
KHC	**Kasperske Hory**	**152.32 339**	*e*PKPdf		**PKPdf**	**13 12 56.4 +0.3**
KHC			*e*PKPbc		**PKiKP**	**13 13 04.8 +1.1**
KHC			*e*PKPab		**PKPab**	**13 13 17.4 +1.2**
KHC	**Kasperske Hory**	**152.32 339**	*e*PKIKP		**PKPdf**	**13 12 56.4 +0.3**
KHC			*e*			13 13 17.4
KHC	**Kasperske Hory**	**152.32 339**	*e*PKPDF		**PKPdf**	**13 12 57.3 +1.2**
KHC			⇑*e*PKP		**PKiKP**	**13 13 04.1 +0.5**
KHC			*e*pPKP		**pPKPab**	**13 15 19.8 +0.9**
KHC			*ex*		x	13 39 06.9
PRK	**Paraskevi**	**152.37 310**	P		**PKiKP**	**13 13 06.2 +2.3**
SOP	**Sopron**	**152.46 334**	EP		**PKPdf**	**13 12 57.1 +0.8**
BODT	**Bodrum**	**152.47 305**	*e*PKPbc		**PKPbc**	**13 13 03.0 -1.2**
BODT	**Bodrum**	**152.47 305**	P		**PKPbc**	**13 13 03.0 -1.2**
ROSA	**Rosais**	**152.47 51**	*e*P		sPKPdf	13 16 04.9 +4.8
TIH	**Tihany**	**152.51 331**	EP		**PKPdf**	**13 12 55.1 -1.3**
GRFO	**Grafenberg**	**152.53 343**	*e*PKPdf		**PKPdf**	**13 12 57.6 +1.3**
GRFO			*e*PKPbc		**PKiKP**	**13 13 05.1 +1.1**
GRFO			*e*PKPab		**PKPab**	**13 13 18.1 +1.1**
CONA	**Conrad Observa**	**152.53 335**	*i* PKPdf		**PKPdf**	**13 12 57.1 +0.6**
	comp=Z,17nm,1.0s,SNR=15					
CONA			*e*PKiKP		**PKiKP**	**13 13 05.3 +1.1**
	comp=Z,64nm,0.9s					
CONA			*e*PKPab		**PKPab**	**13 13 18.2 +0.9**
	comp=Z,44nm,0.8s					
GEC2	**GERESS Array S**	**152.53 339**	*e*PKPdf		**PKPdf**	**13 12 57.1 +0.7**
GEC2			*e*PKPbc		**PKiKP**	**13 13 05.0 +0.8**
GEC2			*e*PKPab		**PKPab**	**13 13 18.5 +1.3**
GEC2	**GERESS Array S**	**152.53 339**	*e*PKIKP		**PKPdf**	**13 12 57.2 +0.7**
GERES	**GERESS Array B**	**152.53 339**	PKP		**PKPdf**	**13 12 56.1 -0.3**
	comp=Z,4.4nm,0.8s,baz=66,slow=1.6,SNR=29					
GERES			PKPbc		**PKPbc**	**13 13 03.7 -0.3**
	comp=Z,22nm,0.8s,baz=29,slow=3.0,SNR=32					
GERES			PKPab		**PKPab**	**13 13 17.2 0.0**
	comp=Z,16nm,0.8s,baz=37,slow=3.3,SNR=9.4					
GERES			pPKPbc		**pPKPbc**	**13 15 13.4 +1.1**
	comp=Z,4.0nm,0.9s,baz=29,slow=3.0,SNR=2.4					
SMG	**Samos**	**152.58 307**	P		**PKiKP**	**13 13 05.7 +1.2**
HGN	**Heimansgroeve**	**152.63 351**	*e*PKPdf		**PKPdf**	**13 12 57.3 +0.9**
HGN			*e*PKPbc		**PKiKP**	**13 13 04.7 +0.6**
HGN			*e*PKPab		**PKPab**	**13 13 16.0 -1.4**
	comp=Z,114nm,0.9s					
VTS	**Vitosha**	**152.64 319**	*e*PKPdf		**PKPdf**	**13 12 57.3 +0.4**
VTS			*e*PKPbc		**PKiKP**	**13 13 05.6 +1.0**
VTS			*e*PKPbc		**PKiKP**	**13 13 06.2 +1.6**
VTS			*e*PKPab		**PKPab**	**13 13 19.0 +1.0**
VTS	**Vitosha**	**152.64 319**	P		**PKiKP**	**13 13 06.2 +1.6**
VTS	**Vitosha**	**152.64 319**	⇓*i*P		**PKPbc**	**13 13 04.4 -0.1**
VTS	**Vitosha**	**152.64 319**	*e*PKIKP		**PKPdf**	**13 12 57.3 +0.4**
VTS			*e*			13 13 19.0
VTS	**Vitosha**	**152.64 319**	P		**PKPbc**	**13 13 04.1 -0.4**
KAVA	**Kavala**	**152.72 315**	*e*PKPbc		**PKiKP**	**13 13 05.9 +1.3**
KAVA	**Kavala**	**152.72 315**	P		**PKiKP**	**13 13 05.9 +1.3**
MEM	**Membach**	**152.77 350**	PKPdf		**PKPdf**	**13 12 56.9 +0.3**
MEM	**Membach**	**152.77 350**	PKPbc		**PKiKP**	**13 13 04.8 +0.4**
MEM	**Membach**	**152.77 350**	PKPab		**PKPab**	**13 13 18.4 +0.4**
MEM	**Membach**	**152.77 350**	PKPdf		**PKPdf**	**13 12 57.4 +0.8**
MEM			PKPbc		**PKiKP**	**13 13 05.9 +1.5**
MEM			PKPab		**PKPab**	**13 13 19.4 +1.4**
HTL	**Hartland**	**152.77 5**	*e*P		**PKPdf**	**13 12 58.1 +1.5**
BLCH	**La Chartreuse**	**152.80 351**	PKPdf		**PKPdf**	**13 12 58.3 +1.7**
BLCH			PKPbc		**PKiKP**	**13 13 06.6 +2.2**
BLCH			PKPab		**PKPab**	**13 13 19.0 +0.9**
UCC	**Uccle**	**152.80 353**	*e*PKPbc		**PKiKP**	**13 13 05.3 +0.9**
UCC			*e*PKPab		**PKPab**	**13 13 18.8 +0.7**
LIA	**Limnos Island**	**152.82 312**	P		**PKPbc**	**13 13 03.7 -1.1**
CHOS	**Chios island**	**152.88 309**	P		**PKPbc**	**13 13 04.2 -0.9**
NVR	**Nevrokopi**	**152.96 316**	P		**PKiKP**	**13 13 06.3 +1.1**
BRQR	**Ronquire**	**153.01 353**	PKPdf		**PKPdf**	**13 12 58.2 +1.3**
BRQR			PKPbc		**PKiKP**	**13 13 06.1 +1.2**
BRQR			PKPab		**PKPab**	**13 13 18.8 -0.2**
BHOU	**Houvegnez**	**153.01 350**	PKPdf		**PKPdf**	**13 12 58.7 +1.7**
BHOU			PKPbc		**PKiKP**	**13 13 07.0 +2.0**
BHOU			PKPab		**PKPab**	**13 13 19.2 +0.1**
BCLA	**Clavier**	**153.05 351**	PKPbc		**PKiKP**	**13 13 06.8 +1.8**
BCLA			PKPab		**PKPab**	**13 13 18.9 -0.3**
KARP	**Karpathos**	**153.08 302**	*e*PKPbc		**PKiKP**	**13 13 06.0 +0.4**
KARP			*e*PKPab		**PKPab**	**13 13 21.0 +1.0**
KARP	**Karpathos**	**153.08 302**	P		**PKPbc**	**13 13 05.3 -0.3**
SNF	**Seneffe**	**153.10 353**	PKPdf		**PKPdf**	**13 12 58.6 +1.6**
SNF			PKPbc		**PKiKP**	**13 13 05.8 +0.7**
SNF			PKPab		**PKPab**	**13 13 19.1 -0.3**
BGES	**Gesves**	**153.12 352**	PKPdf		**PKPdf**	**13 12 57.4 +0.2**
BGES			PKPbc		**PKiKP**	**13 13 05.4 +0.3**
BGES			PKPab		**PKPab**	**13 13 18.8 -0.7**
KKB	**Krupnik**	**153.16 318**	P		**PKPbc**	**13 13 05.2 -0.3**
MOA	**Molln**	**153.19 337**	*i* PKPdf		**PKPdf**	**13 12 57.7 +0.3**
	comp=Z,9.3nm,0.9s,SNR=6.3					
MOA			*i* PKiKP		**PKiKP**	**13 13 06.4 +1.0**
	comp=Z,24nm,1.1s					
MOA			*e*PKPab		**PKPab**	**13 13 21.3 +1.3**
	comp=Z,59nm,1.4s					
ARSA	**Arzberg**	**153.22 335**	*e*PKPdf		**PKPdf**	**13 12 57.7 +0.3**
	comp=Z,10nm,1.2s					
BMRD	**Maredsous**	**153.24 352**	PKPbc		**PKiKP**	**13 13 05.4 0.0**
BMRD			PKPab		**PKPab**	**13 13 19.9 -0.1**
LKLB	**Kalborn**	**153.24 350**	PKPdf		**PKPdf**	**13 12 59.2 +1.9**
LKLB			PKPbc		**PKiKP**	**13 13 06.1 +0.7**
LKLB			PKPab		**PKPab**	**13 13 20.2 +0.2**
SRS	**Serrai**	**153.25 316**	P		**PKPab**	**13 13 19.7 -0.8**
BBOU	**Bougnies**	**153.25 353**	PKPbc		**PKiKP**	**13 13 07.9 +2.5**
BBOU			PKPab		**PKPab**	**13 13 19.9 -0.2**
BEHE	**Becsehely**	**153.33 332**	⇓EP		**PKiKP**	**13 13 07.0 +1.3**
OUR	**Ouranopolis**	**153.41 314**	*e*PKPbc		**PKiKP**	**13 13 07.2 +1.1**
OUR	**Ouranopolis**	**153.41 314**	P		**PKiKP**	**13 13 07.2 +1.1**
DOU	**Dourbes**	**153.47 352**	PKPbc		**PKiKP**	**13 13 07.0 +1.1**
DOU			PKPab		**PKPab**	**13 13 21.0 0.0**
SOH	**Sokhos**	**153.56 316**	P		**PKPab**	**13 13 21.4 -0.5**
KOGS	**Kog**	**153.57 333**	*i* PKPdf		**PKPdf**	**13 12 58.5 +0.6**
KOGS			*i* PKPdif		**PKiKP**	**13 13 06.7 +0.5**
KOGS			*i* PKPab		**PKPab**	**13 13 22.2 +0.6**
AMGA	**Amorgos Island**	**153.61 306**	P		**PKiKP**	**13 13 07.3 +0.7**
WLF	**Walferdange**	**153.66 350**	*e*PKPdf		**PKPdf**	**13 12 58.8 +0.9**
WLF			*e*PKPbc		**PKiKP**	**13 13 08.1 +1.8**
WLF			*e*PKPab		**PKPab**	**13 13 22.1 +0.2**
WLF	**Walferdange**	**153.66 350**	PKPdf		**PKPdf**	**13 12 59.6 +1.6**
WLF			PKPbc		**PKiKP**	**13 13 06.7 +0.4**
WLF			PKPab		**PKPab**	**13 13 21.8 0.0**
KNT	**Kendrikon**	**153.67 317**	P		**PKPab**	**13 13 22.6 +0.4**
PLG	**Polygyros**	**153.74 315**	P		**PKPab**	**13 13 21.8 -0.8**
VAY	**Valandovo**	**153.78 317**	*e*PKPab		**PKPab**	**13 13 22.8 +0.1**
VAY	**Valandovo**	**153.78 317**	P		**PKPab**	**13 13 22.8 +0.1**
VAY	**Valandovo**	**153.78 317**	*i* P		**PKPdf**	**13 12 57.1 -1.2**
APE	**Apeiranthos**	**153.79 306**	*e*PKPbc		**PKiKP**	**13 13 07.1 +0.1**
APE	**Apeiranthos**	**153.79 306**	P		**PKiKP**	**13 13 07.1 +0.1**
STIP	**Stip**	**153.81 318**	*e*P		**PKiKP**	**13 13 07.2 +0.3**
PAIG	**Paliouri**	**153.82 314**	P		**PKiKP**	**13 13 07.3 +0.4**
SOKA	**Soboth**	**153.88 335**	*i* PKPdf		**PKPdf**	**13 12 58.7 +0.2**
	comp=Z,21nm,1.0s,SNR=14					
SOKA			*e*PKiKP		**PKiKP**	**13 13 08.3 +1.3**
	comp=Z,27nm,1.0s					
SOKA			*e*PKPab		**PKPab**	**13 13 23.8 +0.8**
	comp=Z,56nm,1.0s					
STU	**Stuttgart**	**153.89 345**	*e*PKPdf		**PKPdf**	**13 12 58.4 +0.1**
STU			*e*PKPbc		**PKiKP**	**13 13 08.3 +1.4**
STU			*e*PKPab		**PKPab**	**13 13 23.3 +0.4**
STU	**Stuttgart**	**153.89 345**	*e*PKIKP		**PKPdf**	**13 12 58.4 +0.1**
STU			*e*			13 13 23.3
SKO	**Skopje**	**154.09 320**	*e*PKPab		**PKPab**	**13 13 25.2 +1.2**
SKO	**Skopje**	**154.09 320**	P		**PKPab**	**13 13 25.2 +1.2**
SKO	**Skopje**	**154.09 320**	*i* P		**PKPdf**	**13 13 00.5 +1.6**
KBA	**Koelnbreinsper**	**154.18 337**	*i* PKPdf		**PKPdf**	**13 12 59.1 +0.1**
	comp=Z,18nm,1.2s,SNR=13					
OBKA	**Obir**	**154.21 335**	*i* PKPdf		**PKPdf**	**13 12 59.2 +0.3**
	comp=Z,11nm,1.1s					
OBKA			*i* PKiKP		**PKiKP**	**13 13 08.2 +0.5**
	comp=Z,11nm,0.8s					
OBKA			*e*PKPab		**PKPab**	**13 13 24.9 +0.5**
	comp=Z,24nm,0.7s					
PLE	**Pljevlja**	**154.38 324**	⇑*i*PKP		**PKPdf**	**13 13 01.4 +2.1**
IVA	**Berane**	**154.41 323**	⇑*i*PKP		**PKPdf**	**13 13 02.1 +2.8**
MYKA	**Terra Mystica**	**154.45 336**	*i* PKPdf		**PKPdf**	**13 12 59.3 +0.1**
	comp=Z,14nm,1.2s,SNR=6.1					
MYKA			*i* PKiKP		**PKPbc**	**13 13 09.3 +1.1**
	comp=Z,16nm,0.8s					
MYKA			*i* PKPab		**PKPab**	**13 13 25.0 -0.4**
	comp=Z,54nm,0.8s					
BLY	**Banja Luka**	**154.47 329**	*e*PKPdf		**PKPdf**	**13 12 60.0 +0.8**
BLY			*e*PKPbc		**PKPbc**	**13 13 09.7 +1.5**
BLY			*e*PKPab		**PKPab**	**13 13 26.5 +1.0**
LIT	**Litokhoron**	**154.51 315**	P		**PKPab**	**13 13 25.4 -0.5**
BFO	**Black Forest**	**154.51 346**	*e*PKPdf		**PKPdf**	**13 12 59.5 +0.3**
BFO			*e*PKPbc		**PKPbc**	**13 13 09.7 +1.5**
BFO			*e*PKPab		**PKPab**	**13 13 26.3 +0.8**
LAST	**Lasithi**	**154.51 302**	P		**PKPbc**	**13 13 08.8 +0.1**
DION	**Dionisos Attik**	**154.52 310**	P		**PKPbc**	**13 13 09.1 +0.6**
WATA	**Walderalm**	**154.54 340**	*e*PKPdf		**PKPdf**	**13 13 00.3 +0.9**
	comp=Z,6.1nm,0.6s					
WATA			*i* PKiKP		**PKPbc**	**13 13 09.0 +0.6**
	comp=Z,23nm,0.8s					
WATA			*i* PKPab		**PKPab**	**13 13 25.7 -0.2**
	comp=Z,42nm,0.5s					
PVY	**Plav**	**154.56 322**	⇑*i*PKP		**PKPdf**	**13 13 02.3 +2.7**
KRUS	**Krusevo**	**154.57 319**	*i* P		**PKPdf**	**13 13 01.1 +1.5**
PTL	**Penteli**	**154.59 310**	*e*PKPbc		**PKPbc**	**13 13 09.1 +0.4**
PTL	**Penteli**	**154.59 310**	P		**PKPbc**	**13 13 09.1 +0.4**
WTTA	**Wattenberg**	**154.59 340**	*i* PKPdf		**PKPdf**	**13 13 00.0 +0.5**
	comp=Z,42nm,1.3s,SNR=14					
WTTA			*i* PKiKP		**PKPbc**	**13 13 09.5 +1.0**
	comp=Z,27nm,0.6s					
WTTA			*i* PKPab		**PKPab**	**13 13 26.0 -0.2**
	comp=Z,42nm,0.6s					
LJU	**Ljubljana**	**154.60 334**	*e*PKPdf		**PKPdf**	**13 13 00.3 +0.9**
LJU			*e*PKPdif		**PKPbc**	**13 13 09.0 +0.6**
LJU			*e*PKPab		**PKPab**	**13 13 25.8 -0.2**
LJU			*e*			13 15 16.7
LJU			*i*			13 15 24.6
LJU			*e*			13 16 25.3
LJU			*e*PP		**PP**	**13 17 03.7 -0.2**
LJU			*e*			13 19 53.2
KOME	**Kolasin**	**154.63 323**	⇑*i*PKP		**PKPdf**	**13 13 02.3 +2.7**
RETA	**Reutte**	**154.65 341**	*e*PKPdf		**PKPdf**	**13 12 59.7 +0.3**
	comp=Z,9.1nm,0.8s					
RETA			*i* PKPab		**PKPab**	**13 13 26.5 +0.2**
	comp=Z,118nm,1.0s,SNR=8.3					
MOTA	**Moosalm**	**154.68 341**	*i* PKPdf		**PKPdf**	**13 12 59.6 0.0**
	comp=Z,24nm,1.0s,SNR=8.1					
MOTA			*i* PKPab		**PKPab**	**13 13 26.7 +0.2**
	comp=Z,43nm,0.8s					
UPM	**Unac-Piva**	**154.72 325**	⇑*i*PKP		**PKPdf**	**13 13 03.0 +3.1**
ABTA	**Abfaltersbach**	**154.75 338**	*i* PKPdf		**PKPdf**	**13 12 58.7 -1.0**
	comp=Z,44nm,1.1s,SNR=26					
ABTA			*i* PKPab		**PKPab**	**13 13 26.4 -0.4**
	comp=Z,46nm,0.7s					
SQTA	**Sankt Quirin**	**154.76 340**	*i* PKPdf		**PKPdf**	**13 12 59.6 -0.1**
	comp=Z,27nm,1.0s,SNR=7.4					
SQTA			*i* PKPab		**PKPab**	**13 13 27.2 +0.4**
	comp=Z,63nm,0.8s					
FNA	**Florina**	**154.83 317**	P		**PKPbc**	**13 13 10.0 +0.9**
PHP	**Peshkopia**	**154.86 320**	P		**PKPab**	**13 13 27.6 +0.2**
ECH	**Echery**	**154.87 347**	*e*PKPdf		**PKPdf**	**13 12 59.4 -0.3**
ECH			*e*PKPab		**PKPab**	**13 13 27.1 0.0**
ECH	**Echery**	**154.87 347**	*e*PKIKP		**PKPdf**	**13 12 59.4 -0.3**
ECH			*e*			13 13 27.2
CEY	**Cerknica**	**154.89 334**	*e*PKPdf		**PKPdf**	**13 13 00.3 +0.5**
CEY			*e*PKPdif		**PKPbc**	**13 13 09.8 +0.7**
CEY			*i* PKPab		**PKPab**	**13 13 27.0 -0.3**
LKR	**Lokris**	**154.91 312**	P		**PKPbc**	**13 13 09.8 +0.5**
IDI	**Anoyia**	**154.92 303**	PKP		**PKPdf**	**13 12 59.9 -0.3**
	comp=Z,17nm,1.0s,baz=97,slow=5.1,SNR=4.8					
IDI			PKPab		**PKPab**	**13 13 27.4 -0.5**
	comp=Z,9.4nm,0.4s,baz=63,slow=6.8,SNR=5.6					
NKY	**Niksic**	**154.94 324**	⇑*i*PKP		**PKPdf**	**13 13 03.6 +3.5**
OHR	**Ohrid**	**154.99 319**	*i* P		**PKPbc**	**13 13 09.5 0.0**
NKME	**Niksic**	**155.00 324**	⇑*i*PKP		**PKPdf**	**13 13 02.5 +2.4**
PDG	**Podgorica**	**155.06 323**	⇓*i*P		**PKPab**	**13 13 28.5 +0.4**
TTG	**Podgorica**	**155.06 323**	⇑*i*PKP		**PKPdf**	**13 13 03.5 +3.4**
TTG	**Podgorica**	**155.06 323**	*e*PKPdf		**PKPdf**	**13 13 00.0 0.0**
TTG			*e*PKPab		**PKPab**	**13 13 28.8 +0.7**
TTG	**Podgorica**	**155.06 323**	*e*PKIKP		**PKPdf**	**13 13 00.0 0.0**
TTG			*e*			13 13 28.8
FETA	**Feichten**	**155.08 341**	*i* PKPdf		**PKPdf**	**13 12 59.9 -0.3**
	comp=Z,38nm,0.9s,SNR=21					
FETA			*i* PKPab		**PKPab**	**13 13 27.8 -0.5**
	comp=Z,63nm,1.3s					
DAVA	**Damuels**	**155.09 342**	*i* PKPdf		**PKPdf**	**13 13 00.8 +0.6**
	comp=Z,17nm,1.0s,SNR=6.6					
DAVA			*i* PKPab		**PKPab**	**13 13 28.2 0.0**
	comp=Z,81nm,0.9s,SNR=6.6					
BRY	**Bratogost**	**155.13 324**	⇑*i*PKP		**PKPdf**	**13 13 03.6 +3.2**
CEME	**Cevo**	**155.16 323**	⇑*i*PKP		**PKPdf**	**13 13 02.9 +2.6**
AGG	**Agios Georgios**	**155.18 313**	*e*PKPdf		**PKPdf**	**13 13 00.4 0.0**
AGG			*e*PKPab		**PKPab**	**13 13 28.9 +0.1**
AGG	**Agios Georgios**	**155.18 313**	P		PKPbc	13 13 10.8
AGG	**Agios Georgios**	**155.18 313**	*e*PKIKP		PKPbc	13 13 00.4
AGG			*e*			13 13 28.9
DRME	**Dracevica, Mon**	**155.26 322**	⇑*i*PKP		**PKPdf**	**13 13 04.0 +3.6**
DID	**Didima**	**155.27 309**	*e*PKPdif		PKPbc	13 13 10.7
DID	**Didima**	**155.27 309**	P		PKPbc	13 13 10.7
BUM	**Brajici-Budva**	**155.34 323**	⇑*i*PKP		**PKPdf**	**13 13 03.1 +2.5**
ULC	**Ulcinj**	**155.37 322**	⇑*i*PKP		**PKPdf**	**13 13 03.8 +3.2**
TIR	**Tirane**	**155.41 320**	*e*PKPab		**PKPab**	**13 13 30.2 +0.5**
TIR	**Tirane**	**155.41 320**	⇑*i*P		**PKPab**	**13 13 29.6 -0.1**
HCY	**Herceg Novi**	**155.46 324**	⇑*i*PKP		**PKPdf**	**13 13 03.8 +3.2**
PSMN	**Pico do Norte,**	**155.47 52**	*e*PKP		**PKPdf**	**13 12 58.8 -2.0**
DAVOS	**Davos/Dischmat**	**155.55 342**	PKP		**PKPdf**	**13 13 00.4 -0.5**
	comp=Z,11nm,0.8s,baz=236,slow=4.2,SNR=19					
DAVOX			PKPab		**PKPab**	**13 13 30.8 +0.5**
	comp=Z,52nm,0.7s,baz=309,slow=1.8,SNR=15					
FUORN	**Ofenpass-Fuorn**	**155.58 341**	*e*PKPdf		**PKPdf**	**13 13 00.3 -0.7**
FUORN			*e*PKPab		**PKPab**	**13 13 31.5 +0.9**
SERG	**Sergoula**	**155.67 312**	P		PKPbc	13 13 10.2
ANX	**Ano Chora**	**155.67 312**	P		PKPbc	13 13 11.4
GUR	**Goura**	**155.70 311**	*e*PKPdif		PKPbc	13 13 10.4
GUR	**Goura**	**155.70 311**	P		PKPbc	13 13 10.4
CLF	**Chambon-Foret**	**155.76 355**	*e*PKPdf		**PKPdf**	**13 13 01.3 +0.5**
CLF			*e*PKPab		**PKPab**	**13 13 31.7 +0.8**
EFP	**Efpalio**	**155.76 312**	P		PKPbc	13 13 12.3
TUE	**Stuetta**	**155.98 342**	*e*PKPdf		**PKPdf**	**13 13 01.4 -0.1**
TUE			*e*PKPab		**PKPab**	**13 13 33.2 +1.0**
LKD2	**Lefkada island**	**156.41 314**	P		**PKPab**	**13 13 34.0 -0.1**
SSF	**Saint Saulge**	**156.58 352**	*e*PKIKP		**PKPdf**	**13 13 02.8 +0.9**
SSF			pmax		pmax	
	comp=Z,25nm,1.0s					
SENIN	**Lac Senin/Sane**	**156.60 346**	*e*PKPdf		**PKPdf**	**13 13 02.8 +0.6**
KFL	**Anninata**	**156.68 313**	P		**PKPab**	**13 13 35.0 -0.3**
MFF	**Saint Martin d**	**157.30 359**	*e*PKIKP		**PKPdf**	**13 13 02.6 -0.2**
MFF			pmax		pmax	
	comp=Z,47nm,1.1s					
LPG	**La Plagne**	**157.54 346**	*e*PKIKP		**PKPdf**	**13 13 04.9 +1.3**
LPG			pmax		pmax	
	comp=Z,17nm,1.3s					
BNI	**Bardonecchia**	**157.98 346**	*e*PKPdf		**PKPdf**	**13 13 04.4 +0.5**
BNI	**Bardonecchia**	**157.98 346**	*e*PKIKP		**PKPdf**	**13 13 04.4 +0.5**
SSB	**Saint Sauveur**	**158.18 350**	*e*PKPdf		**PKPdf**	**13 13 05.2 +1.2**
SSB			*e*PKPab		**PKPab**	**13 13 41.9 +0.3**
SSB	**Saint Sauveur**	**158.18 350**	*e*PKIKP		**PKPdf**	**13 13 05.2 +1.2**
SSB			*e*			13 13 41.9
TIP	**Timpagrande**	**158.62 320**	*e*PKPdf		**PKPdf**	**13 13 05.2 +0.4**
TIP			*e*PKPab		**PKPab**	**13 13 44.7 +1.0**
TIP	**Timpagrande**	**158.62 320**	P		**PKPab**	**13 13 43.1 -0.7**
TIP	**Timpagrande**	**158.62 320**	⇑*i*P		**PKPab**	**13 13 44.6 +0.8**
LFF	**La Frestale**	**158.93 357**	*e*PKIKP		**PKPdf**	**13 13 06.6 +1.8**
LFF			pmax		pmax	
	comp=Z,4.0nm,0.5s					
CEL	**Celeste**	**159.73 319**	*e*PKPab		**PKPab**	**13 13 49.2 +0.6**
PGAV	**Gavieira, Arco**	**160.93 17**	*e*PKPdf		**PKPdf**	**13 13 06.6 -0.7**
PGAV	**Gavieira, Arco**	**160.93 17**	*e*PKPab		**PKPab**	**13 13 56.1 +2.4**
PCAB	**Cabril**	**161.24 17**	*e*PKPdf		**PKPdf**	**13 13 09.3 +1.8**
PCAB	**Cabril**	**161.24 17**	*e*PKPab		**PKPab**	**13 13 55.7 +0.7**
PBRG	**Braganca**	**161.46 14**	*e*PKPdf		**PKPdf**	**13 13 09.4 +1.6**
PBRG	**Braganca**	**161.46 14**	*e*PKPab		**PKPab**	**13 13 58.0 +2.0**
POLO	**Lamas de Olo**	**161.61 17**	*e*PKPdf		**PKPdf**	**13 13 09.8 +1.8**
POLO	**Lamas de Olo**	**161.61 17**	*e*PKPab		**PKPab**	**13 13 57.4 +0.7**
PVRL	**Vila Real**	**161.72 17**	*e*PKPdf		**PKPdf**	**13 13 10.5 +2.4**
PVRL	**Vila Real**	**161.72 17**	*e*PKPab		**PKPab**	**13 13 59.8 +2.6**
MVO	**Moncorvo**	**162.00 15**	*e*PKPdf		**PKPdf**	**13 13 10.4 +2.0**
MVO	**Moncorvo**	**162.00 15**	*e*PKPab		**PKPab**	**13 13 57.9 -0.5**
LIC	**Lamto**	**162.02 167**	*e*PKIKP		**PKPdf**	**13 13 09.5 +0.4**
	comp=Z,144nm,1.2s					
LIC	**Lamto**	**162.02 167**	*e*P		**PKPab**	**13 13 59.4 +0.4**
	comp=Z,127nm,1.1s					
PVIS	**Viseu**	**162.20 18**	*e*PKPdf		**PKPdf**	**13 13 08.3 -0.3**
PVIS	**Viseu**	**162.20 18**	*e*PKPab		**PKPab**	**13 13 59.7 +0.4**
KIC	**Kosan Boka**	**162.21 167**	*e*PKIKP		**PKPdf**	**13 13 09.9 +0.6**
	comp=Z,117nm,1.2s					
KIC	**Kosan Boka**	**162.21 167**	*e*P		**PKPab**	**13 14 00.3 +0.5**
	comp=Z,100nm,1.0s					
TIC	**Toumodi**	**162.43 166**	*e*PKIKP		**PKPdf**	**13 13 10.0 +0.5**
TIC	**Toumodi**	**162.43 166**	*e*P		**PKPab**	**13 14 01.9 +1.1**
DBIC	**Dimbokro**	**162.49 167**	PKP		**PKPdf**	**13 13 09.7 +0.1**
	comp=Z,25nm,1.0s,baz=173,slow=2.7,SNR=8.4					
DBIC			PKPab		**PKPab**	**13 14 01.0 0.0**
	comp=Z,20nm,1.0s,baz=145,slow=3.7,SNR=3.6					
DBIC	**Dimbokro**	**162.49 167**	*e*PKPdf		**PKPdf**	**13 13 08.7 -0.8**
DBIC			*e*PKPab		**PKPab**	**13 14 02.1 +1.1**
DBIC	**Dimbokro**	**162.49 167**	*e*PKIKP		**PKPdf**	**13 13 08.7 -0.8**
DBIC			*e*			13 14 02.1
MTE	**Manteigas**	**162.59 17**	*e*

NRIK	**Noril'sk**	**22.01**	**71**	P	**P**	**13 01 23.3 +4.9**
	comp=Z,2.7nm,0.7s,baz=356,slow=14,SNR=4.4					
HFS	**Hagfors**	**22.08**	**161**	P	**P**	**13 01 20.3 +1.0**
	comp=Z,0.9nm,0.7s,baz=302,slow=8.3,SNR=3.2					
HFS	**Hagfors**	**22.08**	**161**	P	**P**	**13 01 20.1 +0.9**
HFS	**Hagfors**	**22.08**	**161**	P	**P**	**13 01 20.1 +0.9**
TIXI	**Tiksi**	**24.52**	**36**	P	**P**	**13 01 42.0 -1.6**
	comp=Z,1.7nm,0.3s,baz=340,slow=7.5,SNR=7.6					
ARU	**Arti**	**30.20**	**109**	LR	LR	13 17 29.6
	comp=Z,42nm,19.2s,baz=250,slow=41					
GERES	**GERESS Array B**	**33.36**	**163**	P	**P**	**13 03 02.1 -0.3**
	comp=Z,0.9nm,0.7s,baz=20,slow=13,SNR=4.3					
MKAR	**Makanchi Array**	**42.96**	**89**	P	**P**	**13 04 25.3 +2.1**
	comp=Z,0.4nm,0.6s,baz=3.8,slow=7.3,SNR=4.2					
USRK	**Ussuriysk Ar.**	**51.84**	**43**	LR	LR	13 27 45.8
	comp=Z,312nm,21.2s,baz=342,slow=36					
TORD	**Torodi Ar. Bea**	**68.66**	**178**	P	**P**	**13 07 24.9 -2.8**
	comp=Z,1.5nm,0.8s,baz=349,slow=7.3,SNR=7.8					

*ISK **07** 13:07:01.6, 39°.72N×32°.61E, h5km, ML2.0/9*
*DDA **07** 13:07:02.3, 39°.74N×32°.59E, h7km±3km, ML2.6*
ISC 07 13:07:02.4±1.2, 39°.71N±0°.04×32°.59E±0°.03, h6km±10km, n16, σ0°89/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.22**	**44**	PG	**Pg**	**13 07 06.6**	**-0.1**
ANTO				SG	**Sg**	13 07 10.4	+0.7
LOD	**Lodumlu**	**0.22**	**36**	PG	**Pg**	**13 07 06.5**	**-0.2**
LOD				SG	**Sg**	**13 07 10.5**	**+0.8**
BBAL	**Bala**	**0.44**	**112**	*i* P	**Pb**	**13 07 11.9**	**-0.8**
BBAL				IAML_P			
	comp=Z,2μm,0.2s						
AFSR	**Afar-Bala (An**	**0.45**	**125**	PG	**Pg**	**13 07 11.6**	**+0.5**
KKUL	**Konya-Kulu**	**0.59**	**155**	*i* P	**Pb**	**13 07 15.5**	**+0.2**
KKUL				*i* S	**Sn**	**13 07 26.4**	**-1.2**
KKUL				IAML_P			
	comp=Z,533nm,0.2s						
SVRH	**Sivrihisar-ESK**	**0.87**	**253**	PG	**Pb**	**13 07 19.7**	**-0.2**
KIBS	**BOLU**	**0.91**	**321**	*i* P	**Pn**	**13 07 21.0**	**-0.9**
KIBS				*i* S	**Sn**	**13 07 37.9**	**+2.5**
KIZT	**Kizilcal**	**1.00**	**214**	PG	**Pb**	**13 07 22.0**	**-0.2**
ELDT	**Eldivan**	**1.01**	**39**	*i* P	**Pb**	**13 07 21.3**	**-1.1**
ELDT				*i* S	**Sn**	**13 07 39.0**	**+1.1**
DELI	**KIRIKKALE**	**1.06**	**74**	*i* P	**Pn**	**13 07 23.6**	**-0.3**
DELI				*i* S	**Sn**	**13 07 39.5**	**+0.4**
SERE	**Sereflikochisa**	**1.07**	**135**	PG	**Pb**	**13 07 23.1**	**-0.3**
KIRS	**Kırehir-Merke**	**1.18**	**119**	*i* P	**Pn**	**13 07 25.2**	**-0.3**
KIRS				*i* S	**Sn**	**13 07 42.1**	**+0.1**
KIRS				IAML_P			
	comp=Z,464nm,0.2s						
YAYX	**Yaylak**	**1.22**	**129**	PN	**Pn**	**13 07 25.9**	**-0.2**
CDAG	**Cicekdag**	**1.38**	**93**	*i* P	**Pg**	**13 07 28.7**	**0.0**
CDAG				*i* S	**Sn**	**13 07 48.2**	**+1.3**
CDAG				IAML_P			
	comp=Z,529nm,0.2s						
SRCK	**Saricakaya, Es**	**1.55**	**283**	PN	**Pg**	**13 07 31.6**	**-0.5**
CORM	**Corum**	**1.63**	**73**	PN	**Pb**	**13 07 32.4**	**-0.6**

WEL 07 13:09:27.6±1.1, 32°.S±24°.×17°.9E±4°.6, h421km±46km, M3.8/5, mB4.2/4, MLv4.0/5, Mw(mB)3.2/4, Error ellipse: s-maj=0.1km s-min=0.0km az=115.1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**5.72**	**190**	P	P	13 10 58.5	+0.8
HAZ				S	S	13 12 11.4	-0.1
RUGZ	**Raukumara Rang**	**5.94**	**191**	P	P	13 11 00.3	+0.2
RUGZ				S	S	13 12 15.3	-0.7
PUZ	**Puketiti**	**5.98**	**186**	P	P	13 11 00.7	+0.3
PUZ				S	S	13 12 16.2	-0.3
TWGZ	**Tauwhareparae**	**6.11**	**188**	P	P	13 11 03.4	+1.5
TWGZ				S	S	13 12 20.7	+1.6
MWZ	**Matawai**	**6.33**	**191**	P	P	13 11 04.1	-0.1
MWZ				S	S	13 12 24.0	+0.6
URZ	**Urewera**	**6.33**	**194**	P	P	13 11 04.6	+0.5
URZ				S	S	13 12 23.4	0.0
TKGZ	**Te Karaka**	**6.38**	**189**	P	P	13 11 03.8	-0.9
MUGZ	**Murupara**	**6.61**	**196**	P	P	13 11 06.9	-0.8
MUGZ				S	S	13 12 29.9	+0.9
MTHZ	**Maungataniwha**	**6.96**	**194**	P	P	13 11 10.2	-1.2
MTHZ				S	S	13 12 36.1	+0.2
RAHZ	**Arahi**	**6.97**	**193**	P	P	13 11 11.9	+0.4
RAHZ				S	S	13 12 37.0	+0.8
MRHZ	**Matea Rd**	**7.04**	**197**	P	P	13 11 12.4	+0.1
MRHZ				S	S	13 12 39.0	+1.5
BKZ	**Black Stump Fm**	**7.33**	**196**	P	P	13 11 15.0	-0.5
BKZ				S	S	13 12 42.8	-0.7

NNC 07 13:17:00.2±0.4, 49°.99N×78°.61E, h0km, mb3.5, mpv3.2, 23C-5D, Error ellipse: s-maj=4.0km s-min=1.7km az=68.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.59**	**354**	↑P	Pg	13 17 11.8	+0.2
KUR07				↑S	Sb	13 17 21.0	-1.5
KUR06	**Kurchatov Arra**	**0.61**	**355**	↑P	Pg	13 17 12.2	+0.2
KUR06				↑S	Sb	13 17 21.5	-1.4
KUR14	**Kurchatov Arra**	**0.62**	**359**	↓P	Pg	13 17 12.1	-0.1
KUR14				↑S	Sg	13 17 21.0	+0.8
KUR15	**Kurchatov Arra**	**0.63**	**357**	↑P	Pg	13 17 12.4	+0.1
KUR15				↓S	Sg	13 17 21.3	+1.0
KURBB	**Kurchatov Arra**	**0.63**	**355**	↑P	Pg	13 17 12.6	+0.2
	25nm,0.2s						
KURBB				↓S	Sg	13 17 21.6	+1.0
	179nm,0.6s						
KUR16	**Kurchatov Arra**	**0.64**	**354**	↑P	Pg	13 17 12.8	+0.3
KUR16				↑S	Sg	13 17 21.7	+1.0
KUR17	**Kurchatov Arra**	**0.65**	**352**	↑P	Pg	13 17 13.1	+0.5
KUR17				↑S	Sg	13 17 22.3	+1.3
KUR05	**Kurchatov Arra**	**0.65**	**356**	↑P	Pg	13 17 12.9	+0.1
KUR05				↑S	Sg	13 17 22.0	+0.8
KUR04	**Kurchatov Arra**	**0.67**	**356**	↑P	Pg	13 17 13.2	+0.1
KUR04				↑S	Sg	13 17 22.4	+0.6
KURK	**Kurchatov**	**0.72**	**1**	↑P	Pg	13 17 13.9	-0.2
	12nm,0.3s						
KURK				↑S	Sg	13 17 23.8	+0.3
	26nm,0.6s						
SEM	**Semipalatinsk**	**1.13**	**68**	P	Pg	13 17 21.4	-0.5
	7.7nm,0.2s						
SEM				S	Sb	13 17 37.8	-0.4
	89nm,0.4s						
MAKZ	**Makanchi**	**3.90**	**144**	↑Pg	Pb	13 18 12.2	+2.3
	1.5nm,0.3s						
MAKZ				↓Lg	Lg	13 19 02.2	
	4.7nm,0.4s						
MK31	**Makanchi Array**	**4.03**	**141**	Pn	Pn	13 18 04.9	+1.6
	0.4nm,0.2s,baz=329,slow=11,SNR=119						
MK31				↑Pg	Pb	13 18 14.0	+1.8
	0.5nm,0.2s,baz=321,slow=14,SNR=25						
MK31				↑Lg	Lg	13 19 06.3	
	8.1nm,0.4s,baz=327,slow=26,SNR=17						
KAPS	**Kapalarasan**	**4.74**	**174**	Pg	Pb	13 18 26.0	+1.8
	3.1nm,0.4s						
KAPS				Lg	Lg	13 19 29.2	
	11nm,0.6s						
ZSN	**Zaisan**	**4.86**	**119**	Pg	Pb	13 18 25.5	-0.7
	1.4nm,0.4s						
ZSN				Lg	Lg	13 19 27.6	
	3.1nm,0.6s						
KUU	**Kurty**	**6.30**	**195**	Pg	Pb	13 18 53.8	+3.1
	1.8nm,0.4s						
KUU				Lg	Lg	13 20 16.5	
	11nm,0.6s						
PDGK	**Podgornoye**	**6.70**	**174**	↑Lg	Lg	13 20 34.0	
	5.8nm,0.6s						
TKM2	**Tokmak 2**	**7.37**	**198**	↓Lg	Lg	13 20 56.6	
	6.5nm,0.7s						
AAK	**Ala-Archa**	**7.89**	**203**	↑Lg	Lg	13 21 14.6	
	4.5nm,0.7s						
KK31	**Karatay Array**	**8.86**	**222**	↑Lg	Lg	13 21 47.3	
	3.6nm,0.7s,baz=33,slow=28,SNR=5.2						

*ISCJB **07** 13:29:20.8±0.4, 37°.16N±0°.02×138°.15E±0°.04, h21km±3km, mb4.0/19, MS3.3/2, Error ellipse: s-maj=5.0km s-min=3.6km az=15.8*

*JMA **07** 13:29:21.0, 37°.17N×138°.18E, h11km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs201.00000°, δ59.00000°, λ106.00000°. NP2: φs351.00000°, δ35.00000°, λ65.00000°. Principal axes: T Plg71.0000°, Azm149.0000°; N Plg14.0000°, Azm12.0000°; P Plg13.0000°, Azm279.0000°;*
JMA Felt IV J1.
*NEIC **07** 13:29:21.3±1.9, 37°.12N×138°.03E, h16km±5km, mb4.2/8 Error ellipse: s-maj=15.5km s-min=8.6km az=88.0*
NEIC Recorded [4 JMA] in Niigata.
*IDC **07** 13:29:21.9±2.3, 37°.09N×137°.99E, h18km±16km, mb3.8/15, mb1 4.0/17, mb1mx3.8/48, mbtmp3.9/17, ML3.6/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/38, Error ellipse: s-maj=20.4km s-min=11.8km az=87.0*
ISC 07 13:29:20.9±0.8, 37°.14N±0°.03×138°.19E±0°.03, h12km±5km, n58, σ1°24/65, mb4.1/19, 3C-5D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJN	**Nakama**	**0.04**	**207**	↑P	**Pg**	**13 29 22.9**	**-0.3**
JJN				S	**Sg**	**13 29 24.7**	**-0.1**
JIZZ	**Izumozaki**	**0.57**	**47**	↓P	**Pg**	**13 29 32.4**	**+0.3**
JIZZ				*e*S	**Sb**	**13 29 41.7**	**+0.8**
MJB9	**Matsu-Tunnel**	**0.59**	**179**	*e*Pg	**Pg**	**13 29 32.7**	**+0.2**
MJB9				*e*Sg	**Sb**	**13 29 41.6**	**+0.1**
MAJO	**Matsushiro**	**0.60**	**178**	*e*Pg	**Pg**	**13 29 32.6**	**+0.1**
MAJO				*e*Sg	**Sb**	**13 29 41.5**	**-0.1**
MAT	**Matsushiro**	**0.60**	**178**	P	**Pg**	**13 29 32.5**	**0.0**
MAT				S	**Sb**	**13 29 41.2**	**-0.4**
MAT	**Matsushiro**	**0.60**	**178**	P	**Pg**	**13 29 32.5**	**0.0**
MAT				S	**Sb**	**13 29 41.2**	**-0.4**
MJAR	**Matsushiro Arr**	**0.60**	**178**	Pg	**Pb**	**13 29 33.3**	**+0.1**
	20nm,0.3s,baz=342,slow=15,SNR=548						
MJAR				Lg	Lg	13 29 42.6	
	44nm,0.3s,baz=0.1,slow=27,SNR=65						
JHK	**Hiroka**	**0.67**	**80**	↓P	**Pg**	**13 29 33.5**	**-0.5**
JHK				S	**Sg**	**13 29 43.0**	**+0.2**
JGK	**Kuni**	**0.68**	**148**	P	**Pg**	**13 29 34.5**	**+0.4**
JGK				S	**Sb**	**13 29 44.5**	**+0.4**
JSZ	**Suzu**	**0.72**	**295**	↓P	**Pg**	**13 29 34.7**	**-0.3**
JNG	**Nsakai**	**0.73**	**185**	↑P	**Pg**	**13 29 35.0**	**-0.1**
JNG				S	**Sb**	**13 29 45.6**	**-0.1**
JTT	**Ttatey**	**0.87**	**232**	↓P	**Pg**	**13 29 37.9**	**+0.1**
JTT				S	**Sn**	**13 29 50.1**	**-1.3**
JSD	**Sado**	**0.90**	**4**	↑P	**Pg**	**13 29 37.1**	**-1.2**
JSD				*e*S	**Sg**	**13 29 49.1**	**-0.9**
JKT	**Katashina**	**0.93**	**113**	↓P	**Pg**	**13 29 38.1**	**-0.7**
JKT				S	**Sg**	**13 29 50.7**	**-0.3**
INU	**Inuyama**	**2.02**	**208**	*e*Pn	**Pb**	**13 29 56.4**	**-1.2**
ERM	**Erimo**	**6.20**	**37**	*e*Pn	**Pn**	**13 30 48.0**	**-4.2**
JNU	**Nakatsue**	**7.20**	**238**	Pn	**Pn**	**13 31 08.0**	**+2.0**
	0.2nm,0.3s,baz=205,slow=18,SNR=2.1						
JNU	**Nakatsue**	**7.20**	**238**	*e*Pn	Pn	13 30 57.4	-8.6
ASAJ	**Asahikawa**	**7.73**	**24**	Pn	**Pn**	**13 31 16.7**	**+3.4**
	0.9nm,0.3s,baz=223,slow=14,SNR=13						
KSRS	**Korea Array**	**8.19**	**275**	Pn	**Pn**	**13 31 21.6**	**+2.1**
	0.4nm,0.3s,baz=87,slow=14,SNR=5.8						
KSRS				LR	LR	13 34 21.2	
	comp=Z,152nm,18.2s,baz=145,slow=37						
KS15	**Wonju Array Si**	**8.22**	**275**	*e*Pn	**Pn**	**13 31 18.8**	**-1.1**
USRK	**Ussuriysk Ar.**	**8.48**	**328**	Pn	**Pn**	**13 31 24.2**	**+0.8**
	0.1nm,0.3s,baz=148,slow=47,SNR=2.1						
YSS	**Yuzh-Sakhalins**	**10.38**	**18**	*e*Pn	**Pn**	**13 31 49.5**	**+0.1**
KLR	**Kul'dur**	**12.96**	**341**	Pn	**Pn**	**13 32 28.9**	**+4.2**
	0.1nm,0.3s,baz=147,slow=11,SNR=7.9						
YOJ	**Yonaguni jima**	**18.12**	**230**	*e*Pn	Pn	13 33 22.7	-10
	53nm,1.0s						
PETK	**Petropavlovsk-**	**20.98**	**34**	P	Pn	13 34 06.1	-0.2
	4.3nm,0.9s,baz=234,slow=4.8,SNR=3.7						
PEA1	**Petropavlovsk-**	**20.98**	**34**	*e*P	Pn	13 34 06.1	-0.2
MA2	**Magadan**	**23.88**	**16**	P	**P**	**13 34 33.7**	**-0.3**
	4.9nm,0.8s,baz=187,slow=10,SNR=3.7						
GUMO	**Guam**	**24.20**	**164**	P	**P**	**13 34 36.9**	**-0.4**
	64nm,1.0s,baz=49,slow=22,SNR=2.0						
GUMO				LR	LR	13 41 49.9	
	comp=Z,42nm,21.9s,baz=142,slow=31						
YAK	**Yakutsk**	**25.48**	**351**	*e*P	**P**	**13 34 48.5**	**0.0**
	8.3nm,0.6s						
SONA0	**Songino Array**	**25.59**	**305**	*e*P	**P**	**13 34 49.5**	**-0.5**
SONM	**Songino Array**	**25.59**	**305**	P	**P**	**13 34 49.5**	**-0.5**
	0.4nm,0.4s,baz=108,slow=9.3,SNR=2.8						
SEY	**Seymchan**	**27.25**	**14**	P	**P**	**13 35 06.8**	**+2.2**
	4.5nm,0.9s,baz=181,slow=5.7,SNR=8.0						
TIXI	**Tiksi**	**34.91**	**355**	*e*P	**P**	**13 36 10.8**	**-1.2**
	4.2nm,1.1s						
GSTR	**Great Sitkin T**	**35.20**	**50**	*e*P	**P**	**13 36 15.1**	**+0.4**
ZALV	**Zalesovo Beam**	**39.94**	**312**	LR	LR	13 52 35.2	
	comp=Z,129nm,20.7s,baz=68,slow=35						
MK32	**Makanchi Array**	**41.87**	**302**	*e*P	**P**	**13 37 09.7**	**-1.0**
MKAR	**Makanchi Array**	**41.87**	**302**	P	**P**	**13 37 09.7**	**-1.0**
	0.2nm,0.6s,baz=95,slow=7.2,SNR=2.9						
SUA	**Susitna One**	**49.32**	**37**	*e*P	**P**	**13 38 09.5**	**-0.1**
	12nm,0.8s						
ILAR	**Eielson Array**	**50.79**	**32**	P	**P**	**13 38 20.3**	**-0.2**
	0.6nm,0.7s,baz=281,slow=7.0,SNR=7.9						
ILB	**Eielson Array**	**50.79**	**32**	*e*P	**P**	**13 38 20.3**	**-0.2**
	1.0nm,0.7s						
INK	**Inuvik**	**55.46**	**27**	P	**P**	**13 38 55.9**	**+1.0**
	0.8nm,0.6s,baz=286,slow=4.6,SNR=4.2						
WR1	**Warramunga Arr**	**56.89**	**184**	*e*P	**P**	**13 39 05.2**	**-0.5**
WRA	**Warramunga Arr**	**56.89**	**184**	P	**P**	**13 39 05.2**	**-0.5**
	1.9nm,0.6s						
AS31	**Alice Springs**	**60.61**	**185**	*e*P	**P**	**13 39 28.1**	**-3.5**
	0.8nm,1.1s						
ASAR	**Alice Springs**	**60.61**	**185**	P	**P**	**13 39 30.9**	**-0.6**
	0.7nm,0.8s,baz=13,slow=14,SNR=11						
FIA0	**FINESS Array S**	**67.50**	**331**	*e*P	**P**	**13 40 16.1**	**-0.2**
FINES	**FINESS Array B**	**67.50**	**331**	P	**P**	**13 40 16.1**	**-0.2**
	1.4nm,0.7s,baz=126,slow=3.3,SNR=5.0						
STKA	**Stephens Creek**	**68.73**	**177**	P	**P**	**13 40 25.0**	**+0.7**
	2.8nm,0.9s,baz=355,slow=11,SNR=2.6						
STKA	**Stephens Creek**	**68.73**	**177**	*e*P	**P**	**13 40 25.0**	**+0.7**
	0.9nm,1.1s						
NB200	**NORSAR Array S**	**73.07**	**336**	*e*P	**P**	**13 40 49.9**	**-0.6**
NOA	**NORSAR Array B**	**73.07**	**336**	P	**P**	**13 40 49.9**	**-0.6**
	0.4nm,0.7s,baz=43,slow=5.5,SNR=1.9						
NV01	**Mina Array Sit**	**76.97**	**52**	*e*P	**P**	**13 41 14.7**	**+1.0**
NVAR	**Mina Array Bea**	**76.97**	**52**	P	**P**	**13 41 14.7**	**+1.0**
	0.5nm,0.7s,baz=286,slow=6.2,SNR=5.2						
PDAR	**Pinedale Array**	**79.41**	**44**	P	**P**	**13 41 27.9**	**+0.8**
	1.2nm,0.6s,baz=289,slow=2.0,SNR=15						
CLL	**Collm**	**79.69**	**329**	*e*P	**P**	**13 41 27.0**	**-1.2**
LTX	**Lajitas**	**92.07**	**50**	*e*P	**P**	**13 42 30.9**	**+0.6**
TXAR	**Lajitas Array**	**92.07**	**50**	P	**P**	**13 42 30.9**	**+0.6**
	0.5nm,0.6s,baz=291,slow=3.5,SNR=4.8						

TAP 07 13:33:25.5, 24°.28N×121°.45E, h8km, ML1.5, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.07**	**157**	↑P	Pg	13 33 27.6	-0.1
	baz=156						
ETLH				S	Sg	13 33 29.1	0.0
	baz=156						
NNSB	**Datong**	**0.16**	**338**	P	Pg	13 33 29.1	0.0
	baz=338						
NNSB				S	Sg	13 33 31.3	-0.1
	baz=338						
NACB	**Ninganchiao**	**0.17**	**127**	P	Pg	13 33 29.1	+0.1
	baz=127						
NACB				*i* S	Sg	13 33 31.5	+0.1
	baz=127						
NNS	**Nan Shan**	**0.18**	**337**	*i* P	Pg	13 33 29.3	0.0
	baz=339						
NNS				*e*S	Sg	13 33 31.9	0.0
	baz=339						
WHF	**Hehuan Shan**	**0.21**	**232**	P	Pg	13 33 29.7	-0.3
	baz=230						
WHF				S	Sg	13 33 32.8	-0.3
	baz=230						
ENA	**Nanau**	**0.31**	**60**	*e*P	Pg	13 33 31.5	-0.1
	baz=61						
NANB	**Nanao**	**0.31**	**61**	*e*P	Pg	13 33 31.5	-0.2
	baz=61						
NANB				*e*S	Sg	13 33 35.7	-0.2
	baz=61						
NDT	**Datong Townshi**	**0.33**	**10**	*e*P	Pg	13 33 32.2	+0.2
	baz=10.0						
NDT				S	Sg	13 33 36.5	0.0
	baz=10.0						
CHGB	**Renai**	**0.33**	**230**	*e*P	Pg	13 33 31.9	-0.3
	baz=229						
ENTT	**Nioudou**	**0.38**	**16**	P	Pg	13 33 33.1	+0.1
	baz=17						
ENTT				*e*S	Sg	13 33 38.1	+0.1
	baz=17						
YHNB	**Yeheng**	**0.40**	**350**	*e*P	Pg	13 33 33.5	+0.1
	11nm,0.7s						
YHNB	**Yeheng**	**0.40**	**350**	*e*P	Pg	13 33 33.7	+0.4
	baz=350						
YHNB				*e*S	Sg	13 33 38.5	-0.1
	baz=350						
OWD	**Renai**	**0.41**	**218**	*e*P	Pg	13 33 32.9	-0.6
	baz=217						
NSK	**Sanguang**	**0.41**	**348**	*e*P	Pg	13 33 33.8	+0.3
	baz=349						
NSK				*e*S	Sg	13 33 39.0	+0.1
	baz=349						
TWC	**Suao**	**0.49**	**48**	*e*P	Pg	13 33 34.9	-0.2
	baz=48						
TWC				*e*S	Sg	13 33 41.9	+0.3
	baz=48						
NWLT	**Wulai**	**0.50**	**6**	P	Pg	13 33 35.5	+0.2
	baz=5.0						
NWLT				*e*S	Sg	13 33 41.5	-0.4
	baz=5.0						
SLBB	**Yuanshan**	**0.51**	**20**	P	Pg	13 33 35.5	+0.2
	baz=19						
SLBB				*e*S	Sb	13 33 43.2	-1.0
	baz=19						
VWDT	**VWDT**	**0.59**	**208**	*e*P	Pg	13 33 36.4	-0.6
	baz=208						
SSLB	**Suanglung**	**0.66**	**223**	*e*P	Pg	13 33 37.7	-0.7
	baz=222						
EOS1	**EOS1**	**0.68**	**66**	*e*P	Pg	13 33 39.0	+0.4
	baz=66						

*SJA **07** 13:42:32.9±0.9, 21°.79S×68°.51W, h158km±10km, MD3.2*
*ISCJB **07** 13:42:33.7±0.7, 21°.78S±0°.03×68°.45W±0°.08, h144km±8km, mb3.9/1, Error ellipse: s-maj=12.1km s-min=5.1km az=177.7*
*GUC **07** 13:42:34.5±0.6, 21°.77S×68°.34W, h129km±4km, ML3.6*
*IDC **07** 13:42:41.9±8.5, 21°.18S×68°.02W, h182km±75km, mb3.9/1, mb1 3.4/2, mb1mx3.1/17, mbtmp3.9/2, Error ellipse: s-maj=88.4km s-min=55.6km az=155.0*
ISC 07 13:42:33.9±1.0, 21°.77S±0°.03×68°.39W±0°.07, h138km±8km, n33, σ0°88/57, 11C-6D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.97**	**210**	↓*i*P	**Pn**	**13 42 57.2**	**-0.5**
LVC				*i* S	**Sn**	**13 43 14.7**	**-1.1**
PB01	**IPOC Station P**	**1.25**	**305**	*e*P	**Pn**	**13 43 00.1**	**-0.1**
PB01				↓*e*S	**Sn**	**13 43 20.4**	**+0.3**
PB01	**IPOC Station P**	**1.25**	**305**	↑*e*P	**Pn**	**13 42 60.0**	**-0.1**
PB01				*e*S	**Sn**	**13 43 19.2**	**-0.8**
PB01				IAML		13 43 21.3	
	comp=E,957nm,0.2s						
PB03	**IPOC Station P**	**1.30**	**257**	*e*P	**Pn**	**13 43 00.5**	**-0.2**
PB03				*e*S	**Sn**	**13 43 20.7**	**-0.3**
PB03	**IPOC Station P**	**1.30**	**257**	↑*e*P	**Pn**	**13 43 00.5**	**-0.2**
PB03				*i* S	**Sn**	**13 43 20.4**	**-0.6**
PB03				IAML		13 43 24.6	
	comp=E,507nm,0.3s						
PB07	**IPOC Station P**	**1.40**	**271**	*e*P	**Pn**	**13 43 01.8**	**+0.1**
PB07				↓*e*S	**Sn**	**13 43 23.4**	**+0.6**
PB07	**IPOC Station P**	**1.40**	**271**	↑*e*P	**Pn**	**13 43 01.6**	**-0.1**
PB07				*i* S	**Sn**	**13 43 22.8**	**0.0**
PB07				IAML		13 43 23.9	
	comp=N,654nm,0.4s						
PB06	**IPOC Station P**	**1.44**	**229**	*e*P	**Pn**	**13 43 02.4**	**+0.1**
PB06				*e*S	**Sn**	**13 43 23.8**	**+0.1**
PB06	**IPOC Station P**	**1.44**	**229**	↑*i*P	**Pn**	**13 43 02.3**	**+0.1**
PB06				*e*S	**Sn**	**13 43 23.6**	**-0.1**
PB06				IAML		13 43 25.9	
	comp=E,630nm,0.2s						
PB02	**IPOC Station P**	**1.48**	**287**	*e*P	**Pn**	**13 43 02.6**	**+0.1**
PB02				*e*S	**Sn**	**13 43 24.9**	**+0.7**
PB02	**IPOC Station P**	**1.48**	**287**	↑*e*P	**Pn**	**13 43 02.3**	**-0.1**
PB02				*i* S	**Sn**	**13 43 24.0**	**-0.2**
PB02				IAML		13 43 29.9	
	comp=E,792nm,0.1s						
PB04	**IPOC Station P**	**1.73**	**251**	↓*e*P	**Pn**	**13 43 05.2**	**-0.1**
PB04	**IPOC Station P**	**1.73**	**251**	↑*e*P	**Pn**	**13 43 05.3**	**-0.1**
PB04				IAML		13 43 36.4	
	comp=N,393nm,0.3s						
PB15	**IPOC Station P**	**1.75**	**215**	*e*P	**Pn**	**13 43 06.0**	**+0.3**
PB15				*e*S	**Sn**	**13 43 30.6**	**+0.6**
PB15	**IPOC Station P**	**1.75**	**215**	*e*P	**Pn**	**13 43 06.0**	**+0.3**
PB15				*i* S	**Sn**	**13 43 30.4**	**+0.5**
PB08	**IPOC Station P**	**1.77**	**336**	*e*P	**Pn**	**13 43 07.2**	**+1.1**
PB08				↓*e*S	**Sn**	**13 43 31.7**	**+1.1**
PB08	**IPOC Station P**	**1.77**	**336**	↑*e*P	**Pn**	**13 43 06.7**	**+0.6**
PB08				*e*S	**Sn**	**13 43 30.9**	**+0.3**
PB08				IAML		13 43 35.5	
	comp=N,551nm,0.7s						
PB05	**IPOC Station P**	**2.00**	**237**	*e*P	**Pn**	**13 43 08.4**	**-0.1**
PB05				*e*S	**Sn**	**13 43 34.0**	**-0.9**
PB05	**IPOC Station P**	**2.00**	**237**	↑*e*P	**Pn**	**13 43 08.4**	**-0.1**
PB05				*i* S	**Sn**	**13 43 35.1**	**+0.2**
PB05				IAML		13 43 41.2	
	comp=E,254nm,0.5s						
GO01	**Chusmiza**	**2.22**

UNV				*e*Sn	Sn	14 11 13.6	+0.5
AKRB	**Akutan Reef Bi**	**2.26**	**55**	*e*Pn	Pn	14 10 54.2	+1.6
AKUT	**Akutan**	**2.42**	**58**	*e*Pn	Pn	14 10 55.0	+0.5
AKUT				*e*Sn	Sn	14 11 24.6	0.0
ATKA	**Atka Island**	**3.10**	**259**	*e*Pn	Pn	14 11 04.1	+0.7
WEBT	**Westdahl Beart**	**3.16**	**56**	*e*Pn	Pn	14 11 04.9	+0.8
HOM	**Homer**	**11.87**	**48**	*e*Pn	Pn	14 12 59.5	-0.9

NEIC 07 14:10:31.0±0.0,52°.19N×179°.88E,h184km,ML2.5(AEIC), After AEIC., Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**1.87**	**99**	*e*Pn	Pn	14 11 06.7	-0.3
KIWB				*e*Sn	Sn	14 11 34.2	-0.6
ADK	**Adak**	**2.15**	**97**	*e*Pn	Pn	14 11 09.6	-0.4
ADK				*e*Sn	Sn	14 11 39.6	-0.6
GSTR	**Great Sitkin T**	**2.51**	**91**	*e*Pn	Pn	14 11 13.9	-0.1
GSTR	**Great Sitkin T**	**2.51**	**91**	*e*Pn	Pn	14 11 13.9	-0.1
NIKH	**Nikolski High**	**6.91**	**79**	*e*Pn	Pn	14 12 11.2	+1.4
UNV	**Unalaska Valle**	**8.38**	**73**	*e*Pn	Pn	14 12 32.2	+3.1

IDC 07 14:13:27.5±4.6,3°.57S×104°.27E,h0km,mb3.5/3, mb1 3.6/3,mb1mx3.3/46,mbtmp3.5/3,Error ellipse: s-maj=248.5km s-min=29.6km az=52.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.53**	**121**	P	P	14 20 09.4	+0.2
	1.2nm,0.8s,baz=295,slow=11,SNR=3.4						
ASAR	**Alice Springs**	**34.91**	**128**	P	P	14 20 20.9	-0.3
	0.2nm,0.7s,baz=298,slow=8.0,SNR=4.8						
MKAR	**Makanchi Array**	**53.77**	**341**	P	P	14 22 51.7	-0.1
	0.3nm,0.5s,baz=160,slow=5.9,SNR=4.1						

*JMA **07** 14:39:01.5±0.4,32°.65N×138°.43E,h344km,M3.3*
*ISCJB **07** 14:39:04.9±0.7,32°.75N±0°.08×138°.38E±0°.07,h300km, mb3.4/7,Error ellipse: s-maj=11.4km s-min=6.9km az=149.5*
*IDC **07** 14:39:06.8±0.9,32°.86N×138°.16E,h310km±7km,mb3.0/6, mb1 3.1/12,mb1mx2.9/40,mbtmp3.7/12,Error ellipse: s-maj=18.1km s-min=14.7km az=68.0*
ISC 07 14:39:06.4±0.9,32°.92N±0°.08×138°.22E±0°.07,h300km,n38, σ1§46/43,mb3.3/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**1.09**	**339**	P	**Pn**	**14 39 49.0**	**+2.1**
JHJ	**Hachijo jima 2**	**1.33**	**81**	P	**Pn**	**14 39 50.6**	**+2.1**
	17nm,0.3s,baz=306,slow=8.0,SNR=5.0						
JHJ				S	**S**	**14 40 25.3**	**+3.3**
	39nm,0.3s,baz=245,slow=23,SNR=2.0						
TTO5	**TONANKAI O.B.S**	**1.39**	**343**	P	**Pn**	**14 39 50.7**	**+2.1**
JMKN	**Mikurajimanish**	**1.50**	**49**	P	**Pn**	**14 39 50.8**	**+1.3**
JHMK	**Hamakita**	**1.93**	**349**	P	**Pn**	**14 39 54.1**	**+1.7**
JIE	**Ise**	**1.94**	**320**	P	**Pn**	**14 39 54.5**	**+1.9**
HMMJ	**Hamamatsu 2**	**1.97**	**348**	P	**Pn**	**14 39 54.6**	**+1.7**
JKN2	**Miekihoku**	**2.09**	**309**	P	**Pn**	**14 39 55.2**	**+1.4**
JTNC	**Tanabenakahech**	**2.36**	**293**	P	**Pn**	**14 39 57.2**	**+1.0**
JOD2	**Odawara 2**	**2.44**	**17**	P	**Pn**	**14 39 58.1**	**+1.2**
JNY	**Yasuok**	**2.45**	**353**	P	**Pn**	**14 39 58.7**	**+1.7**
JWY	**Kouya**	**2.55**	**301**	P	**Pn**	**14 39 59.4**	**+1.5**
JYN	**Shimob**	**2.58**	**6**	P	**Pn**	**14 40 00.3**	**+2.1**
BSO3	**Boso 3**	**2.67**	**45**	P	**Pn**	**14 39 58.1**	**-0.5**
BSO4	**Boso 4**	**2.71**	**40**	P	**Pn**	**14 39 59.0**	**-0.2**
BSO1	**Boso 1**	**2.87**	**52**	P	**Pn**	**14 39 59.2**	**-1.0**
BSO1				*e*S	**S**	**14 40 43.1**	**-0.2**
JHU	**Hanno**	**3.05**	**16**	P	**Pn**	**14 40 03.3**	**+0.7**
JHU				*e*S	**S**	**14 40 48.1**	**+0.6**
JRY	**Ryogami san**	**3.14**	**10**	P	**Pn**	**14 40 05.1**	**+1.6**
JAI	**Aioi**	**3.27**	**286**	P	**Pn**	**14 40 05.9**	**+1.0**
JWT	**Wachi**	**3.32**	**316**	P	**Pn**	**14 40 06.6**	**+1.3**
MJAR	**Matsushiro Arr**	**3.61**	**360**	P	**Pn**	**14 40 09.5**	**+1.2**
	0.2nm,0.3s,baz=176,slow=11,SNR=17						
MJAR				S	**S**	**14 41 00.9**	**+3.0**
	0.1nm,0.3s,baz=74,slow=14,SNR=4.4						
MAT	**Matsushiro**	**3.61**	**360**	P	**Pn**	**14 40 10.0**	**+1.6**
JAG	**Ashikaga**	**3.64**	**16**	P	**Pn**	**14 40 08.5**	**-0.1**
JAG				*e*S	**S**	**14 40 56.1**	**-2.4**
JYT	**Yasato**	**3.68**	**26**	P	**Pn**	**14 40 08.0**	**-1.0**
JMN	**Monobe**	**3.72**	**284**	P	**Pn**	**14 40 10.7**	**+1.1**
JHO	**Hitachi**	**4.16**	**27**	P	**Pn**	**14 40 12.8**	**-1.5**
JNU	**Nakatsue**	**6.17**	**274**	P	**Pn**	**14 40 38.4**	**+0.6**
	0.8nm,0.3s,baz=80,slow=3.7,SNR=9.7						
KSRS	**Korea Array**	**9.56**	**301**	P	**Pn**	**14 41 19.3**	**+0.2**
	0.1nm,0.3s,baz=116,slow=14,SNR=4.6						
ASAJ	**Asahikawa**	**11.69**	**16**	P	**Pn**	**14 41 45.7**	**+0.7**
	0.7nm,0.3s,baz=205,slow=6.3,SNR=8.8						
USRK	**Ussuriysk Ar.**	**12.27**	**338**	P	**P**	**14 41 53.5**	**+0.4**
	0.5nm,0.3s,baz=159,slow=7.9,SNR=7.3						
KLR	**Kul'dur**	**17.00**	**345**	P	**P**	**14 42 44.7**	**-0.3**
	0.5nm,0.3s,baz=181,slow=8.1,SNR=11						
MKAR	**Makanchi Array**	**44.21**	**305**	P	**P**	**14 46 45.9**	**-0.5**
	0.5nm,0.4s,baz=86,slow=9.5,SNR=10						
WRA	**Warramunga Arr**	**52.70**	**185**	P	**P**	**14 47 49.4**	**-1.4**
	1.4nm,0.9s,baz=0.0,slow=7.0,SNR=3.6						
ILAR	**Eielson Array**	**54.36**	**31**	P	**P**	**14 48 02.0**	**-0.3**
	0.5nm,0.7s,baz=282,slow=6.5,SNR=6.3						
INK	**Inuvik**	**59.23**	**26**	P	**P**	**14 48 37.0**	**+0.8**
	0.6nm,0.5s,baz=264,slow=6.0,SNR=3.3						
ARCES	**ARCESS Array B**	**66.91**	**339**	P	**P**	**14 49 26.3**	**-0.1**
	5.0nm,0.3s,baz=74,slow=8.9,SNR=5.8						
FINES	**FINESS Array B**	**71.21**	**332**	P	**P**	**14 49 52.0**	**-0.8**
	0.3nm,0.5s,baz=83,slow=11,SNR=3.1						
NOA	**NORSAR Array B**	**76.93**	**336**	P	**P**	**14 50 24.9**	**-0.9**
	0.3nm,0.4s,baz=44,slow=5.6,SNR=3.6						

*NIED **07** 14:42:00,30°.40N×140°.90E,h77km,Mw4.2 Best double couple: M0=2.19000×10^15 NP1:φs=93.00000°,δ65.00000°, λ-27.00000°. NP2:φs=195.00000°,δ66.00000°, λ-152.00000°.*
*NEIC **07** 14:42:55.6±1.7,30°.36N×140°.65E,h119km±6km,mb4.4/29, Error ellipse: s-maj=19.4km s-min=15.3km az=99.0*
*IDC **07** 14:42:55.3±1.8,30°.34N×140°.54E,h117km±13km, mb3.9/22,mb1 4.1/26,mb1mx4.0/36,mbtmp4.3/26,Error ellipse: s-maj=16.8km s-min=13.2km az=83.0*
*JMA **07** 14:42:55.8±0.1,30°.45N×140°.93E,h80km,M4.2*
*ISCJB **07** 14:42:57.0±0.3,30°.44N±0°.03×140°.68E±0°.05,h150km, mb4.2/58,Error ellipse: s-maj=6.3km s-min=4.1km az=16.3*
*MOS **07** 14:42:59.4±0.9,30°.63N×140°.57E,h158km,mb4.5/24, Error ellipse: s-maj=12.4km s-min=5.3km az=103.9*
ISC 07 14:42:58.0±0.4,30°.45N±0°.04×140°.71E±0°.06,h150km, n143,σ2§10/157,mb4.3/58,8C-2D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.77**	**344**	*e*Pn	**Pn**	**14 43 41.2**	**-1.2**
JHJ2				*e*Sn	**Sn**	**14 44 10.5**	**-6.2**
JHJ	**Hachijo jima 2**	**2.78**	**344**	P	**Pn**	**14 43 41.2**	**-1.3**
	20nm,0.3s,baz=62,slow=17,SNR=4.9						
JHJ				S	**Sn**	**14 44 13.2**	**-3.9**
	65nm,0.3s,baz=64,slow=23,SNR=6.4						
JMKN	**Mikurajimanish**	**3.57**	**345**	P	**Pn**	**14 43 51.2**	**-1.3**
CBIJ	**Chichi jima**	**3.58**	**158**	P	**Pn**	**14 43 49.1**	**-3.7**
CBIJ				*e*S	**Sn**	**14 44 28.4**	**-6.9**
JHH2	**Haha-jima-NKT2**	**4.01**	**161**	P	**Pn**	**14 43 56.2**	**-2.2**
JHH2				*e*S	**Sn**	**14 44 40.8**	**-4.5**
BSO1	**Boso 1**	**4.20**	**3**	P	**Pn**	**14 43 59.5**	**-0.8**
BSO3	**Boso 3**	**4.35**	**358**	P	**Pn**	**14 44 00.3**	**-2.2**
BSO4	**Boso 4**	**4.54**	**356**	P	**Pn**	**14 44 04.8**	**-0.4**
JOD2	**Odawara 2**	**5.00**	**345**	P	**Pn**	**14 44 09.9**	**-1.4**
HMMJ	**Hamamatsu 2**	**5.07**	**331**	P	**Pn**	**14 44 12.1**	**-0.2**
JIE	**Ise**	**5.19**	**320**	P	**Pn**	**14 44 14.2**	**+0.3**
JTNC	**Tanabenakahech**	**5.48**	**309**	P	**Pn**	**14 44 18.9**	**+1.2**
JHU	**Hanno**	**5.52**	**348**	P	**Pn**	**14 44 16.8**	**-1.5**
JAO	**Obara**	**5.62**	**330**	P	**Pn**	**14 44 19.9**	**+0.3**
JRY	**Ryogami san**	**5.76**	**345**	P	**Pn**	**14 44 20.4**	**-1.0**
INU	**Inuyama**	**5.79**	**329**	*e*Pn	**Pn**	**14 44 21.8**	**0.0**
JAG	**Ashikaga**	**6.06**	**350**	P	**Pn**	**14 44 22.7**	**-2.7**
MJAR	**Matsushiro Arr**	**6.43**	**342**	P	**Pn**	**14 44 29.7**	**-0.6**
	0.6nm,0.3s,baz=166,slow=14,SNR=29						
MJAR				S	**Sn**	**14 45 40.6**	**-2.2**
	0.4nm,0.3s,baz=170,slow=18,SNR=6.5						
MAJO	**Matsushiro**	**6.43**	**342**	*e*Pn	**Pn**	**14 44 30.6**	**+0.2**
MAJO	**Matsushiro**	**6.43**	**342**	*e*P	**Pn**	**14 44 30.6**	**+0.2**
MJB9	**Matsu-Tunnel**	**6.43**	**342**	*e*Pn	**Pn**	**14 44 30.6**	**+0.1**
JNU	**Nakatsue**	**8.79**	**290**	*e*Pn	**Pn**	**14 45 02.3**	**+0.5**
ERM	**Erimo**	**11.71**	**9**	*e*Pn	**Pn**	**14 45 38.6**	**-1.7**
ERM				*e*Sn	**Sn**	**14 47 48.8**	**-1.0**
ERM	**Erimo**	**11.71**	**9**	*e*P	**Pn**	**14 45 38.7**	**-1.7**
ERM				*e*		14 47 48.8	
TJN	**Taejon**	**12.62**	**301**	*i* P	**P**	**14 45 54.1**	**-3.5**
KSRS	**Korea Array**	**12.71**	**307**	P	**P**	**14 45 54.1**	**-4.4**
	0.1nm,0.3s,baz=121,slow=14,SNR=6.8						
KS15	**Wonju Array Si**	**12.73**	**307**	*e*Pn	**Pn**	**14 45 51.5**	**-2.0**
ASAJ	**Asahikawa**	**13.73**	**6**	P	**Pn**	**14 46 05.1**	**-1.2**
	0.6nm,0.3s,baz=226,slow=12,SNR=4.5						
YUK	**Yuzh-Kuril'sk**	**14.17**	**15**	*e*P	**Pn**	**14 46 12.1**	**+0.3**
YUK				*e*S	**Sn**	**14 48 44.7**	**-4.0**
YUK				pmax	pmax		
	comp=Z,41nm,0.8s						
YUK				pmax	pmax		
	comp=E,49nm,0.6s						
YUK				pmax	pmax		
	comp=N,14nm,0.4s						
TEY	**Ternei**	**14.92**	**349⇑**	*e*P	**Pn**	**14 46 19.9**	**-1.3**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
USA0B	**Ussuriysk Arra**	**15.37**	**336**	*e*Pn	**P**	**14 46 25.8**	**-2.3**
	comp=Z,16nm,0.9s						
USRK	**Ussuriysk Ar.**	**15.37**	**336**	P	**P**	**14 46 26.4**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=154,slow=12,SNR=20						
KUR	**Kuril'sk**	**15.80**	**19**	*e*P	**P**	**14 46 33.5**	**+0.7**
KUR				*e*S	**Sn**	**14 49 24.1**	**-3.7**
KUR				pmax	pmax		
	comp=Z,12nm,0.5s						
YSS	**Yuzh-Sakhalins**	**16.56**	**5**	*e*Pn	**Pn**	**14 46 41.9**	**+0.5**
	comp=Z,27nm,0.9s						
YSS	**Yuzh-Sakhalins**	**16.56**	**5**	*e*P	**Pn**	**14 46 42.1**	**+0.8**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
MDJ	**Mudanjiang**	**16.65**	**331**	*e*Pn	**Pn**	**14 46 41.4**	**-1.1**
	comp=Z,22nm,0.9s						
YULB	**Yu-li**	**18.67**	**253**	*e*P	**Pn**	**14 47 04.9**	**-1.8**
	comp=Z,8.7nm,0.9s						
SSLB	**Suanglung**	**18.78**	**254**	*e*P	**Pn**	**14 47 08.2**	**+0.1**
	comp=Z,18nm,1.0s						
TWG	**Pinlang**	**19.11**	**251**	*e*P	**Pn**	**14 47 08.1**	**-3.7**
	comp=Z,21nm,0.7s						
TPUB	**Ta-pu**	**19.26**	**253**	*e*P	**Pn**	**14 47 10.0**	**-3.6**
	comp=Z,15nm,1.0s						
KLR	**Kul'dur**	**19.96**	**343**	P	Pn	14 47 18.1	-3.5
	comp=Z,11nm,0.6s,baz=145,slow=9.0,SNR=18						
TYV	**Tymovskoe**	**20.45**	**4**	*e*P	Pn	14 47 24.6	-2.7
TYV				*e*S	**S**	**14 51 04.4**	**+0.3**
TYV				pmax	pmax		
	comp=Z,13nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
TYV				smax	smax		
	comp=E,11nm,1.2s						
GRNR	**Gornyy**	**20.56**	**352**	*e*P	Pn	14 47 25.2	-3.4
BJI	**Beijing**	**22.15**	**302**	P	**P**	**14 47 40.4**	**-1.2**
BJI				S	**S**	**14 51 37.5**	**+2.7**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZEA	**Zeya**	**25.24**	**341**	*e*P	**P**	**14 48 11.0**	**+1.2**
ZEA				pmax	pmax		
	comp=N,41nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,44nm,1.0s						
HHC	**Hu-ho-hao-te**	**25.75**	**302**	*e*P	**P**	**14 48 15.9**	**+1.1**
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=N,68nm,8.3s						
HHC				LR	LR		
	comp=E,65nm,8.3s						
H11S3	**WAKE ISLAND Hy**	**26.40**	**111**	T	T	15 16 29.3	
	baz=306						
H11S1	**WAKE ISLAND Hy**	**26.40**	**111**	T	T	15 16 29.1	
	baz=306						
H11S2	**WAKE ISLAND Hy**	**26.41**	**111**	T	T	15 16 28.2	
	baz=306						
MA2	**Magadan**	**29.91**	**10**	P	**P**	**14 48 53.3**	**+1.9**
	comp=E,6.5nm,0.9s,baz=186,slow=11,SNR=4.1						
MA2	**Magadan**	**29.91**	**10**	*ce*P	**P**	**14 48 52.6**	**+1.2**
MA2				pmax	pmax		
	comp=Z,23nm,2.5s						
ULN	**Ulaanbaatar**	**31.04**	**314**	*e*P	**P**	**14 49 02.9**	**+1.2**
	comp=Z,4.2nm,0.9s						
ULN	**Ulaanbaatar**	**31.04**	**314**	*ce*P	**P**	**14 49 03.3**	**+1.6**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LZH	**Lanzhou**	**31.21**	**290**	*e*P	P	14 49 05.1	+1.8
LZH				pP	pwP	14 49 35.0	-2.1
LZH				sP	sP	14 49 51.0	-0.6
LZH				pmax	pmax		
	comp=Z,17nm,0.9s						
SONA0	**Songino Array**	**31.45**	**313**	*e*P	**P**	**14 49 05.8**	**+0.6**
SONM	**Songino Array**	**31.45**	**313**	P	**P**	**14 49 05.8**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=113,slow=8.6,SNR=8.8						
YAK	**Yakutsk**	**32.41**	**350**	*e*P	**P**	**14 49 14.2**	**+1.1**
	comp=Z,16nm,1.0s						
YAK	**Yakutsk**	**32.41**	**350**	*e*P	**P**	**14 49 14.3**	**+1.1**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s						
SEY	**Seymchan**	**33.36**	**10**	P	**P**	**14 49 23.4**	**+1.9**
	comp=Z,2.7nm,0.8s,baz=208,slow=6.1,SNR=5.4						
ZAK	**Zakamensk**	**34.27**	**316**	*e*P	**P**	**14 49 29.4**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA	**Gaotai**	**34.46**	**296**	⇓P	**P**	**14 49 31.4**	**-0.1**
GTA				pP	pwP	14 50 01.4	-4.3
GTA				sP	sP	14 50 15.8	-4.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CM31	**Chiang Mai Arr**	**39.64**	**262**	*e*PcP	**PcP**	**14 52 21.0**	**+1.7**
CMAR	**Chiang Mai Arr**	**39.64**	**262**	PcP	**PcP**	**14 52 21.0**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=194,slow=0.4,SNR=4.7						
BILL	**Bilibino**	**40.52**	**14⇑**	*e*P	**P**	**14 50 22.2**	**+0.3**
BILL				*e**PP	**pwP**	**14 50 54.7**	**-2.8**
BILL				*e*S	**S**	**14 56 14.6**	**-4.7**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.7s						
TIXI	**Tiksi**	**41.76**	**354**	*e*P	**P**	**14 50 32.8**	**+0.8**
	comp=Z,5.5nm,1.1s						
TIXI	**Tiksi**	**41.76**	**354**	*i* P	**P**	**14 50 32.7**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WMQ	**Urumqi**	**43.62**	**303**	*e*P	P	14 50 49.3	+1.8
WMQ				LR	LR		
	comp=N,190nm,32.3s						
WMQ				LR	LR		
	comp=Z,160nm,24.1s						
DGZ	**Jazzator, Alta**	**44.05**	**312**	*i* P	**P**	**14 50 51.6**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,11nm,1.0s						
ZAA1	**Zalesovo Array**	**46.14**	**317**	*e*PcP	**PcP**	**14 52 41.6**	**+1.1**
ZALV	**Zalesovo Beam**	**46.14**	**317**	P	**P**	**14 51 07.5**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=101,slow=7.7,SNR=14						
ZALV				PcP	**PcP**	**14 52 41.6**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=108,slow=3.3,SNR=5.4						
ZALV	**Zalesovo Beam**	**46.14**	**317**	*i* P	**P**	**14 51 08.3**	**+1.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVS	**Novosibirsk**	**47.17**	**318**	*e*P	**P**	**14 51 16.2**	**+1.1**
NVS				pmax	pmax		
	comp=N,6.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,15nm,1.1s						
NVS				pmax	pmax		
	comp=E,11nm,1.2s						
JIRN	**Jiri**	**47.36**	**281**	*e*P	**P**	**14 51 17.8**	**+0.4**
	comp=E,26nm,0.3s						
MK32	**Makanchi Array**	**47.39**	**307**	*e*PcP	**PcP**	**14 52 46.5**	**+1.4**
MKAR	**Makanchi Array**	**47.39**	**307**	P	**P**	**14 51 16.9**	**-0.1**
	comp=E,2.1nm,0.8s,baz=87,slow=10,SNR=17						
MKAR				PcP	**PcP**	**14 52 46.5**	**+1.4**
	comp=E,0.5nm,0.3s,baz=81,slow=7.2,SNR=7.8						
MKAR	**Makanchi Array**	**47.39**	**307**	*i* P	**P**	**14 51 17.2**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GUN	**Gumba**	**47.55**	**281**	*e*P	**P**	**14 51 19.2**	**+0.3**
	comp=Z,8.4nm,0.3s						
MAKZ	**Makanchi**	**47.60**	**307**	*e*P	**P**	**14 51 19.3**	**+0.7**
	comp=Z,2.8nm,0.9s						
MAKZ	**Makanchi**	**47.60**	**307**	*e*P	**P**	**14 51 19.3**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PKI	**Pulchoki**	**48.05**	**281**	*e*P	**P**	**14 51 22.2**	**-0.5**
	comp=Z,3.6nm,0.4s						
PKIN	**Phulchoki**	**48.05**	**281**	*e*P	**P**	**14 51 22.4**	**-0.3**
	comp=Z,3.4nm,0.4s						
LEM	**Lembang**	**48.78**	**226**	P	**P**	**14 51 28.8**	**+0.6**
LEM				pmax	pmax		
	comp=Z,13nm,2.1s						
NRIK	**Noril'sk**	**49.07**	**338**	P	**P**	**14 51 30.5**	**+1.0**
	comp=Z,3.5nm,0.4s,baz=117,slow=8.9,SNR=12						
DANN	**Dangsing**	**49.21**	**283**	*e*P	**P**	**14 51 32.1**	**+0.6**
	comp=Z,9.7nm,0.3s						
KOLN	**Koldanda**	**49.52**	**282**	*e*P	**P**	**14 51 33.6**	**-0.2**
	comp=Z,13nm,0.6s						
PDGK	**Podgornoye**	**49.60**	**303**	P	**P**	**14 51 34.2**	**+0.1**
PDGK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK	**Kurchatov**	**49.75**	**313**	*e*P	**P**	**14 51 36.2**	**+1.3**
	comp=Z,11nm,0.9s						
KURK	**Kurchatov**	**49.75**	**313**	*ce*P	**P**	**14 51 35.7**	**+0.8**
KURK				pmax	pmax		
	comp=Z,17nm,1.3s						
PYUN	**Piuthan**	**49.93**	**283**	*e*P	**P**	**14 51 36.7**	**-0.2**
	comp=Z,30nm,0.7s						
WR1	**Warramunga Arr**	**50.47**	**188**	*e*P	**P**	**14 51 39.8**	**-0.8**
WR1				*e*ScP	**ScP**	**14 56 42.0**	**+3.6**
WRA	**Warramunga Arr**	**50.47**	**188**	P	**P**	**14 51 39.8**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=357,slow=6.7,SNR=14						
WRA				ScP	**ScP**	**14 56 42.0**	**+3.6**
	comp=Z,1.4nm,0.7s,baz=7.0,slow=3.4,SNR=4.6						
KSH	**Kashi**	**52.80**	**299**	*e*P	P	14 52 03.3	+5.3
AAK	**Ala-Archa**	**53.33**	**303**	*ce*P	**P**	**14 52 01.5**	**-0.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AS31	**Alice Springs**	**54.20**	**188**	*e*P	**P**	**14 52 07.5**	**-0.6**
	comp=Z,0.8nm,1.0s						
AS31				*e*ScP	**ScP**	**14 56 57.8**	**+3.2**
ASAR	**Alice Springs**	**54.20**	**188**	P	**P**	**14 52 07.5**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=1.7,slow=5.5,SNR=20						
ASAR				ScP	**ScP**	**14 56 57.8**	**+3.2**
	comp=Z,0.2nm,0.6s,baz=353,slow=4.1,SNR=4.2						
BRVK	**Borovoye**	**54.79**	**316**	*e*P	**P**	**14 52 13.4**	**+1.4**
	comp=Z,20nm,1.1s						
BRVK	**Borovoye**	**54.79**	**316**	*ce*P	**P**	**14 52 13.3**	**+1.3**
BRVK				pmax	pmax		
	comp=Z,23nm,1.3s						
ILAR	**Eielson Array**	**55.43**	**30**	P	**P**	**14 52 17.5**	**+1.1**
	comp=Z,1.8nm,1.0s,baz=265,slow=5.7,SNR=15						
ILB	**Eielson Array**	**55.43**	**30**	*e*P	**P**	**14 52 18.4**	**+1.9**
	comp=Z,3.3nm,0.9s						
DOT	**Dot Lake**	**56.67**	**31**	*e*P	**P**	**14 52 27.3**	**+2.0**
	comp=Z,2.8nm,0.9s						
SVE	**Sverdlovsk**	**59.80**	**321**	*e*P	**P**	**14 52 48.9**	**+1.8**
SVE				pmax	pmax		
	comp=Z,18nm,1.2s						
ARU	**Arti**	**61.00**	**321**	*e*P	**P**	**14 52 56.4**	**+1.1**
	comp=Z,18nm,1.0s						
ARU	**Arti**	**61.00**	**321**	*d i*P	**P**	**14 52 56.1**	**+0.8**
ARU				S	**S**	**15 01 04.6**	**+2.9**
ARU				SS	**SS**	**15 05 04.1**	**+0.9**
ARU				pmax	pmax		
	comp=Z,23nm,1.1s						
ABKAR	**Akbulak array**	**61.86**	**313**	*e*P	**P**	**14 53 02.1**	**+1.0**
	comp=Z,12nm,1.0s						
GEYT	**Alibeck**	**66.63**	**301**	P	**P**	**14 53 33.1**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=111,slow=11,SNR=4.1						
KLMR	**Klimovskoe**	**69.05**	**329**	*e*P	**P**	**14 53 47.0**	**-0.1**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
YKA	**Yellowknife Ar**	**69.82**	**29**	P	**P**	**14 53 52.6**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=283,slow=4.6,SNR=4.6						
YKB5	**Yellowknife Ar**	**69.82**	**29**	*e*P	**P**	**14 53 52.5**	**+0.7**
ARCES	**ARCESS Array B**	**69.96**	**340**	P	**P**	**14 53 54.1**	**+1.5**
	comp=Z,3.3nm,0.8s,baz=45,slow=6.7,SNR=7.9						
MSF	**Maaselka**	**70.80**	**336**	P	P	14 53 51.0	-6.7
MSF				pmax	pmax		
	comp=Z,6.0nm,1.2s						
JOF	**Joensuu**	**71.52**	**333**	P	**P**	**14 54 03.5**	**+1.4**
JOF				pmax	pmax		
	comp=Z,14nm,1.1s						
AKT	**Akhty**	**72.61**	**308**	*e*P	**P**	**14 54 10.3**	**+1.2**
AKT				*e*		14 54 26.1	
AKT				*e**PP	**pwP**	**14 54 45.3**	**-2.0**
AKT				pmax	pmax		
	comp=Z,22nm,1.0s						
OBN	**Obninsk**	**73.06**	**324⇑**	*e*P	**P**	**14 54 12.4**	**+1.1**
OBN				*e**PP	**pwP**

ASAR	**Alice Springs**	**25.91 171**	P	P	15 16 44.9	-0.3
	0.4nm,0.4s,baz=346,slow=11,SNR=14					
MKAR	**Makanchi Array**	**60.61 325**	P	P	15 21 23.9	0.0
	0.2nm,0.3s,baz=118,slow=7.1,SNR=5.9					

*NEIC **07** 15:11:39.2±0.0, 18°.76N×67°.81W, h2km, MD2.8(RSPR), After RSPR.*
RSPR 07 15:11:39.2, 18°.76N×67°.81W, h2km, MD2.8/9, 4C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.49 139**	⇓	*e*P		Pg	15 11 48.9	+0.3
IDE	**Isla Desecheo**	**0.49 139**		*e*Pg		Pg	15 11 48.9	+0.3
IDE				*e*Pg		Pg	15 11 48.9	+0.3
PCDR	**Punta Cana, DR**	**0.59 246**	⇑	*e*P		Pg	15 11 50.9	+0.3
PCDR	**Punta Cana, DR**	**0.59 246**	⇑	*e*P		Pg	15 11 51.0	+0.4
PCDR				*e*S		Sb	15 11 60.0	-1.2
PCDR	**Punta Cana, DR**	**0.59 246**		*e*Pg		Pg	15 11 51.0	+0.4
PCDR				*e*Sg		Sb	15 11 60.0	-1.2
AGPR	**Aguadilla, PR**	**0.72 113**	⇓	*e*P		Pg	15 11 52.1	-1.0
AGPR	**Aguadilla, PR**	**0.72 113**		*e*S		Sg	15 12 03.6	+1.1
AGP	**Aguadilla**	**0.72 119**		*e*Pg		Pg	15 11 52.1	-1.0
AGP				*e*Sg		Sg	15 12 03.6	+1.1
MPR	**Mayaguez**	**0.84 130**		*e*Pg		Pg	15 11 53.9	-1.4
CRPR	**Cabo Rojo, PR**	**1.00 138**	⇓	*e*P		Pg	15 11 57.3	-1.1
CRPR	**Cabo Rojo, PR**	**1.00 138**		*e*Pn		Pg	15 11 56.3	-2.1
CRPR				*e*			15 12 17.3	
MLPR	**Magueyes Islan**	**1.07 137**	⇓	*e*P		Pg	15 11 58.0	-1.8
AOPR	**Arecibo Observ**	**1.08 112**	⇓	*e*P		Pg	15 11 58.2	-1.8
AOPR	**Arecibo Observ**	**1.08 112**		*e*S		Sg	15 12 13.0	-1.1
AOPR	**Arecibo Observ**	**1.08 112**		*e*Pg		Pg	15 11 58.2	-1.8
AOPR				*e*Sg		Sg	15 12 13.0	-1.1
EMPR	**Esperanza - Ma**	**1.25 103**	⇑	*e*P		Pg	15 12 00.5	-2.7
EMPR	**Esperanza - Ma**	**1.25 103**		*e*S		Sg	15 12 17.2	-2.1
EMPR	**Esperanza - Ma**	**1.25 103**		*e*Pg		Pg	15 12 00.5	-2.7
EMPR				*e*Sg		Sg	15 12 17.2	-2.1
OBIP	**Obispado Ponce**	**1.35 122**	⇓	*e*P		Pn	15 12 01.9	-3.1
OBIP	**Obispado Ponce**	**1.35 122**		*e*S		Sg	15 12 20.1	-2.4
OBIP	**Obispado Ponce**	**1.35 122**		*e*Pn		Pn	15 12 01.9	-3.1
OBIP				*e*Sn		Sg	15 12 20.1	-2.4
CELP	**Cerrillos**	**1.35 120**	⇑	*e*P		Pn	15 12 01.7	-3.4
CELP				*e*S		Sg	15 12 19.7	-3.0
CELP	**Cerrillos**	**1.35 120**		*e*Pn		Pn	15 12 01.7	-3.4
CELP				*e*Sn		Sg	15 12 19.7	-3.0
ICMP	**Isla Caja de M**	**1.50 125**		*e*Pn		Pn	15 12 05.3	-1.7
SJG	**San Juan**	**1.70 112**		*e*Pn		Pn	15 12 07.1	-2.8
SJG				*e*Sn		Sn	15 12 21.8	-10
CBYP	**Canovanas**	**1.92 104**		*e*Pn		Pn	15 12 10.8	-2.1
SDD	**Santo Domingo**	**2.02 262**		*e*Pn		Pn	15 12 11.6	-2.7
MTP	**Monte Pirata**	**2.24 107**		*e*Pn		Pn	15 12 14.5	-2.8
STVI	**Saint Thomas**	**2.74 98**		*e*Pn		Pn	15 12 21.8	-2.4
SDDR	**Presa de Saban**	**3.30 274**		*e*Pn		Pn	15 12 31.4	-0.6

*GRAL **07** 15:15:11.5±0.3, 33°.79N×35°.77E, h0km±35km, MD2.5*
*NSSC **07** 15:15:12.1±0.3, 33°.59N×35°.71E, h25km±4km, MD1.2, ML1.7*
ISC 07 15:15:07.7±2.5, 33°.72N±0°.09×35°.5E±0°.2, h24km±12km, n7, σ0°85/11, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DQRL	**Deir Qamar**	**0.04 114**		*e*P		Pb	15 15 14.9	+2.9
BHL	**Bhannes**	**0.21 29**		*e*P		**Pb**	**15 15 14.2**	**+0.7**
BHL				*e*S		**Sb**	**15 15 16.2**	**-1.2**
RCY	**Rachaya**	**0.34 131**		*e*P		**Pn**	**15 15 16.8**	**-0.5**
RCY				*e*S		**Sb**	**15 15 20.7**	**+0.1**
BRBR	**Barbar**	**0.47 131**		*e*P		**Pn**	**15 15 18.7**	**-0.4**
BRBR				*e*S		**Sb**	**15 15 23.7**	**-0.4**
BRBR				AML		AML	15 15 28.8	
	comp=E,97nm,0.6s							
BRBR				AML		AML	15 15 28.9	
	comp=N,121nm,0.6s							
QASN	**Qassioun**	**0.65 107**		*e*P		**Pn**	**15 15 22.2**	**+0.6**
QASN				*e*S		**Sb**	**15 15 28.8**	**-0.4**
QASN				AML		AML	15 15 33.0	
	comp=N,108nm,0.3s							
QASN				AML		AML	15 15 34.3	
	comp=E,47nm,0.4s							
HWQ	**Hawqa**	**0.65 32**		*e*P		**Pb**	**15 15 20.6**	**0.0**
TOTH	**TOTAH**	**0.83 115**		*e*P		**Pn**	**15 15 25.0**	**+1.0**
TOTH				*e*S		**Sb**	**15 15 33.3**	**-1.0**
TOTH				AML		AML	15 15 41.2	
	comp=E,22nm,0.7s							
TOTH				AML		AML	15 15 44.4	
	comp=N,9.4nm,0.5s							

*ISCJB **07** 15:29:36.5±1.8, 33°.80N±0°.05×35°.7E±0°.1, h21km±13km, Error ellipse: s-maj=14.8km s-min=8.5km az=171.8*
*NSSC **07** 15:29:36.0±0.3, 33°.80N×35°.65E, h17km±4km, MD1.1, ML1.4*
*GRAL **07** 15:29:37.8±0.3, 33°.78N×35°.77E, h5km±12km, MD2.7*
ISC 07 15:29:36.7±1.1, 33°.78N±0°.05×35°.71E±0°.04, h15km±10km, n7, σ0°14/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHL	**Bhannes**	**0.13 339**		*e*P		**Pg**	**15 29 40.7**	**+0.1**
BHL				*e*S		**Sg**	**15 29 43.0**	**-0.1**
DQRL	**Deir Qamar**	**0.14 237**		*e*P		**Pb**	**15 29 41.2**	**+0.1**
DQRL				*e*S		**Sb**	**15 29 43.9**	**-0.1**
RCY	**Rachaya**	**0.30 160**		*e*P		**Pg**	**15 29 43.1**	**-0.1**
BRBR	**Barbar**	**0.42 151**		*e*P		**Pg**	**15 29 45.1**	**-0.2**
BRBR				*e*S		**Sb**	**15 29 52.3**	**+0.1**
BRBR				AML		AML	15 29 55.1	
	comp=E,34nm,0.3s							
BRBR				AML		AML	15 29 57.1	
	comp=N,32nm,0.3s							
QASN	**Qassioun**	**0.53 117**		*e*P		**Pb**	**15 29 47.9**	**0.0**
QASN				*e*S		**Sb**	**15 29 55.5**	**+0.1**
QASN				AML		AML	15 30 00.4	
	comp=E,22nm,0.3s							
QASN				AML		AML	15 30 01.3	
	comp=N,52nm,0.3s							
HWQ	**Hawqa**	**0.53 22**		*e*P		**Pg**	**15 29 47.2**	**-0.2**
TOTH	**TOTAH**	**0.73 125**		*e*P		**Pg**	**15 29 51.0**	**0.0**
TOTH				*e*S		**Sb**	**15 30 01.1**	**+0.1**
TOTH				AML		AML	15 30 07.4	
	comp=N,6.4nm,0.5s							
TOTH				AML		AML	15 30 09.4	
	comp=E,8.0nm,0.6s							

*ISCJB **07** 15:39:32.0±0.7, 12°.14N±0°.02×125°.89E±0°.03, h30km±5km, mb5.0/129, MS4.1/45, Error ellipse: s-maj=4.6km s-min=3.0km az=170.1*
*MAN **07** 15:39:32.3, 12°.13N×125°.80E, h23km, mb5.4, ML4.4, MS4.6*
*MOS **07** 15:39:32.9±1.1, 12°.07N×125°.87E, h40km, mb5.1/42, Error ellipse: s-maj=9.9km s-min=5.5km az=108.1*
*IDC **07** 15:39:34.8±2.0, 12°.07N×125°.85E, h42km±18km, mb4.4/26, mb1 4.5/29, mb1mx4.4/35, mbtmp4.6/29, ML3.4/2, MS4.0/31, Ms1 4.0/31, ms1mx3.8/52, Error ellipse: s-maj=15.5km s-min=8.4km az=81.0*
*DJA **07** 15:39:35.8±0.4, 12°.N±3°.×12°.6E±°., h60km±3km, M5.0/48, mB5.3/26, mb5.0/48, MLv6.0/1, Mw(mB)4.8/26*
*NEIC **07** 15:39:36.0±2.5, 12°.12N×125°.79E, h50km±7km, mb4.9/62, Error ellipse: s-maj=15.0km s-min=11.7km az=87.0*
*KLM **07** 15:39:44.0, 12°.04N×125°.68E, h112km, mb4.9*
ISC 07 15:39:35.9±0.6, 12°.08N±0°.03×125°.85E±0°.04, h48km±5km, n317, σ2°14/326, mb4.9/129, MS4.2/45, 20C-4D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.62 220**		*e*P		**Pn**	**15 39 44.8**	**-3.7**
BESP				*e*S		**Sn**	**15 39 56.7**	**-0.9**
CNP	**Cataman**	**1.24 291**		*e*P		**Pn**	**15 39 53.0**	**-3.7**
CNP				*e*S		**Sn**	**15 40 10.2**	**-2.1**
PLP	**Palo**	**1.24 223**	⇑	*e*P		**Pn**	**15 39 54.1**	**-2.8**
PLP				*i* S		**Sn**	**15 40 12.7**	**+0.2**
OCLP	**Ormoc**	**1.59 230**		*e*P		**Pn**	**15 39 59.4**	**-2.1**
MSLP	**Maasin**	**2.16 207**		*e*P		**Pn**	**15 40 08.3**	**-1.1**
MMPH	**Masbate**	**2.19 278**		*e*P		**Pn**	**15 40 08.7**	**-1.2**
MMPH				*e*S		**Sn**	**15 40 37.7**	**+2.0**
PVCP	**Virac**	**2.24 313**		*e*P		**Pn**	**15 40 06.9**	**-3.6**
PVCP				*e*S		**Sn**	**15 40 42.7**	**+5.8**
SCPH	**Surigao**	**2.31 189**	⇑	*i*P		Pn	15 40 17.3	+5.9
SCPH				*i* S		**Sn**	**15 40 46.1**	**+7.4**
LLP	**Lapu-Lapu**	**2.54 227**	⇑	*i*P		**Pn**	**15 40 13.1**	**-1.6**
LLP				*e*S		**Sn**	**15 40 40.4**	**-4.1**
TBP	**Tagbilaran**	**3.07 220**		*e*P		**Pn**	**15 40 20.2**	**-1.8**
BUTP	**Butuan**	**3.10 184**		*e*P		**Pn**	**15 40 20.8**	**-1.5**
BUTP				*e*S		**Sn**	**15 40 59.5**	**+1.5**
AUQP	**San Andres**	**3.33 292**		*e*P		**Pn**	**15 40 24.4**	**-1.1**
AUQP	**San Andres**	**3.33 292**		*e*P		**Pn**	**15 40 24.4**	**-1.1**
GUIM	**Jordan**	**3.51 246**		*e*P		**Pn**	**15 40 25.4**	**-2.5**
SNPH	**Sibulan**	**3.74 224**	⇓	*e*P		**Pn**	**15 40 30.9**	**-0.2**
OTRP	**Odiongan**	**3.75 275**		*e*P		**Pn**	**15 40 28.5**	**-2.8**
CGP	**Cagayan de Oro**	**3.77 198**	⇓	*e*P		**Pn**	**15 40 30.7**	**-0.9**
CGP				*e*S		**Sn**	**15 41 16.8**	**+2.0**
JAP	**San Jose, Anti**	**4.05 251**	⇓	*e*P		**Pn**	**15 40 37.9**	**+2.6**
JAP				*e*S		Sn	15 41 33.7	+12
BOAC	**Boac**	**4.14 290**		*e*P		**Pn**	**15 40 34.1**	**-2.5**
BUKP	**Musuan**	**4.24 191**		*e*P		**Pn**	**15 40 37.2**	**-0.9**
POLP	**Polilio Island**	**4.63 305**		*e*P		**Pn**	**15 40 42.2**	**-1.0**
SJMP	**San Jose**	**4.64 275**		*e*P		**Pn**	**15 40 42.1**	**-1.3**
PAGZ	**Pagadian**	**4.85 210**		*e*P		**Pn**	**15 40 44.6**	**-1.8**
CUYO	**Cuyo Island**	**4.89 256**		*e*P		**Pn**	**15 40 45.0**	**-1.9**
DMPH	**Davao City--Mi**	**4.97 184**	⇑	*e*P		Pn	15 40 53.5	+5.4
DAV	**Davao City (W)**	**4.98 183**		P		Pn	15 40 55.9	+7.7
	51nm,0.3s,baz=4.8,slow=7.9,SNR=5.8							
DAV	**Davao City (W)**	**4.98 183**		*e*Pn		**Pn**	**15 40 52.8**	**+4.6**
DAV	**Davao City (W)**	**4.98 183**		P		**Pn**	**15 40 52.0**	**+3.8**
	SNR=7.6							
CTBH	**Cotabato--PC H**	**5.08 198**	⇑	*i*P		**Pn**	**15 40 49.2**	**-0.3**
MATI	**Mati**	**5.12 175**		*e*P		**Pn**	**15 40 48.6**	**-1.4**
TGY	**Tagaytay City**	**5.19 293**		P		**Pn**	**15 40 52.9**	**+1.8**
	22nm,0.3s,baz=106,slow=7.4,SNR=9.6							
TGY				LR		LR	15 42 59.3	
	comp=Z,3μm,18.3s,baz=112,slow=39							
IPIL	**Ipil**	**5.35 217**		*e*P		**Pn**	**15 40 53.0**	**-0.2**
BALP	**Baler**	**5.52 312**		*e*P		**Pn**	**15 40 52.8**	**-2.8**
BALP				*e*S		Sn	15 41 47.7	-10
BUSP	**Coron**	**5.53 270**		*e*P		**Pn**	**15 40 54.9**	**-0.7**
SKMP	**Bagumbayan, Su**	**5.67 193**		*e*P		**Pn**	**15 40 55.6**	**-2.1**
LUBP	**Lubang**	**5.71 287**		*e*P		**Pn**	**15 40 56.6**	**-1.5**
DDMP	**Don Marcelino,**	**5.94 181**		*e*P		**Pn**	**15 41 02.4**	**+1.1**
CAUP	**Cauayan**	**6.21 322**		*e*P		**Pn**	**15 41 02.5**	**-2.5**
ENPP	**El Nido**	**6.35 263**		*e*P		**Pn**	**15 41 06.5**	**-0.5**
SMPP	**San Manuel, Pa**	**6.44 310**		*e*P		**Pn**	**15 41 06.2**	**-2.0**
SCZP	**Santa Cruz**	**6.84 303**		*e*P		**Pn**	**15 41 13.2**	**-0.5**
BOLP	**Bolinao**	**7.17 307**		*e*P		**Pn**	**15 41 15.3**	**-2.9**
APYP	**Conner**	**7.27 323**		*e*P		**Pn**	**15 41 16.1**	**-3.4**
KKM	**Kota Kinabalu**	**11.24 239**		*e*Pn		**Pn**	**15 42 10.9**	**-3.2**
KKM	**Kota Kinabalu**	**11.24 239**		P		Pn	15 42 20.0	+5.9
TNTI	**Ternate**	**11.33 172**		*e*Pn		Pn	15 42 20.1	+4.9
TNTI	**Ternate**	**11.33 172**		P		**Pn**	**15 42 17.8**	**+2.6**
YULB	**Yu-li**	**12.06 340**		*e*Pn		**Pn**	**15 42 24.1**	**-1.0**
MRSI	**Marisa**	**12.16 199**		P		**Pn**	**15 42 29.1**	**+2.6**
MPSI	**Mapaga**	**13.07 207**		P		**Pn**	**15 42 41.1**	**+2.1**
LUWI	**Luwuk**	**13.39 193**		P		**Pn**	**15 42 46.0**	**+2.7**
APSI	**Ampana**	**13.56 198**		P		**P**	**15 42 50.7**	**-2.8**
JOW	**Kunigami**	**14.86 8**		P		**Pn**	**15 43 02.6**	**-0.3**
	0.1nm,0.3s,baz=190,slow=14,SNR=4.7							
JOW	**Kunigami**	**14.86 8**		*e*Pn		Pn	15 42 57.5	-5.5
TTSI	**Tana Toraja**	**16.18 202**		P		**P**	**15 43 22.6**	**+0.1**
FAKI	**Fak Fak**	**16.20 156**		*e*Pn		**Pn**	**15 43 20.6**	**+0.2**
	42nm,1.1s							
SBUM	**Sibu**	**16.55 236**		*e*Pn		**P**	**15 43 26.1**	**-0.6**
	25nm,1.0s							
SBUM	**Sibu**	**16.55 236**		P		**P**	**15 43 27.0**	**+0.3**
BAKI	**Biak**	**16.66 142**		P		**P**	**15 43 29.0**	**+1.0**
	62nm,0.9s							
QIZ	**Qiongzhong**	**16.89 296**		P		**P**	**15 43 30.8**	**+0.3**
QIZ				S		**Sn**	**15 46 28.0**	**-7.9**
QIZ				LR		LR		
	comp=N,820nm,15.2s							
QIZ				LR		LR		
	comp=E,790nm,16.2s							
QIZ				LR		LR		
	comp=Z,980nm,13.7s							
DLV	**T Lat**	**16.98 271**		*e*P		**P**	**15 43 32.6**	**+0.8**
	29nm,1.1s							
SPSI	**Sidrap Palu**	**17.05 201**		P		**P**	**15 43 35.1**	**+2.9**
	82nm,0.8s,683nm							
BNSI	**Bone**	**17.34 200**		P		**P**	**15 43 38.0**	**+2.6**
	200nm,0.9s,2μm							
KAPI	**Kappang**	**18.03 200**		P		**Pn**	**15 43 44.0**	**+0.9**
	1.1nm,0.3s,baz=30,slow=9.0,SNR=22							
KAPI	**Kappang**	**18.03 200**		*e*P		**Pn**	**15 43 44.0**	**+0.9**
	82nm,1.0s							
KAPI	**Kappang**	**18.03 200**		*e*P		**Pn**	**15 43 44.0**	**+0.9**
KAPI				pmax		pmax		
	comp=Z,82nm,1.0s							
KAPI	**Kappang**	**18.03 200**		P		**Pn**	**15 43 44.7**	**+1.6**
	SNR=11							
BKSI	**Bulukumba**	**18.20 199**		P		**Pn**	**15 43 47.9**	**+2.8**
	comp=Z,48nm,0.8s,comp=Z,454nm							
GUMO	**Guam**	**18.61 83**		P		**Pn**	**15 43 50.4**	**+0.3**
	comp=Z,2.7nm,0.3s,baz=202,slow=9.5,SNR=4.7							
GUMO				LR		LR	15 50 03.3	
	comp=Z,268nm,21.6s,baz=257,slow=34							
GUMO	**Guam**	**18.61 83**		*e*P		**Pn**	**15 43 51.2**	**+1.1**
	comp=Z,188nm,1.0s							
GUMO	**Guam**	**18.61 83**		*e*P		**Pn**	**15 43 51.2**	**+1.1**
GUMO				pmax		pmax		
	comp=Z,188nm,1.0s							
KSM	**Kuching**	**18.67 237**		*e*P		**P**	**15 43 48.8**	**-1.3**
	comp=Z,53nm,1.1s							
KSM	**Kuching**	**18.67 237**		P		**Pn**	**15 43 51.0**	**+0.2**
GENI	**Genyem**	**20.37 135**		P		**P**	**15 44 09.4**	**+0.7**
JAY	**Jayapura**	**20.69 134**		P		**P**	**15 44 11.6**	**-0.6**
	comp=Z,20nm,0.9s,baz=302,slow=13,SNR=5.7							
JAY	**Jayapura**	**20.69 134**		P		**P**	**15 44 10.0**	**-2.2**
NJ2	**Nanjing**	**20.90 343**		*e*P		Pn	15 44 17.5	+0.3
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
PANO	**Nakornpanom**	**21.15 286**		P		**P**	**15 44 17.1**	**0.0**
	comp=Z,0.6nm,1.3s,comp=Z,24nm							
WHN	**Wuhan**	**21.24 332**	⇓	P		**P**	**15 44 19.0**	**+1.1**
WHN				S		**S**	**15 48 15.5**	**+4.0**
WHN				pmax		pmax		
	comp=Z,210nm,1.6s							
WHN				LR		LR		
	comp=Z,1μm,10.9s							
WHN				LR		LR		
	comp=Z,750nm,10.9s							
WHN				LR		LR		
	comp=Z,2μm,13.3s							
JNU	**Nakatsue**	**21.45 12**		P		**P**	**15 44 19.0**	**-1.2**
	comp=Z,24nm,1.0s,baz=144,slow=3.5,SNR=8.5							
JNU				LR		LR	15 51 52.6	
	comp=Z,216nm,20.2s,baz=175,slow=34							
JNU	**Nakatsue**	**21.45 12**		*e*P		**P**	**15 44 17.8**	**-2.4**
	comp=Z,38nm,1.1s							
SKNT	**Sakolnakorn**	**21.71 286**		P		**P**	**15 44 30.3**	**+7.2**
SOEI	**Soe**	**21.75 184**		*e*P		**P**	**15 44 24.3**	**+0.7**
	comp=Z,134nm,0.8s							
BATI	**Baumata**	**22.25 186**		P		**P**	**15 44 28.0**	**-0.8**
	comp=Z,336nm,0.8s,baz=0.0,slow=7.1,SNR=34							
BATI				LR		LR	15 53 41.5	
	comp=Z,341nm,19.8s,baz=82,slow=38							
BATI	**Baumata**	**22.25 186**		P		**P**	**15 44 29.4**	**+0.6**
	comp=Z,178nm,0.9s,comp=Z,1μm							
PLAI	**Plampang**	**22.27 201**		P		**P**	**15 44 28.7**	**-0.3**
KMMI	**Kalianget**	**22.38 212**		P		**P**	**15 44 32.2**	**+2.0**
	comp=Z,38nm,0.7s							
SRBI	**Singaraja**	**22.65 208**		P		**P**	**15 44 34.1**	**+0.9**
KHON	**Khomkaen**	**22.71 283**		P		**P**	**15 44 33.8**	**-0.1**
	comp=Z,59μm,0.8s							
SLVN	**Son La**	**22.92 297**		*e*P		**P**	**15 44 34.7**	**-1.3**
	comp=Z,14nm,1.0s							
GYA	**Guiyang**	**23.03 311**		P		**P**	**15 44 37.8**	**+0.6**
GYA				pP		sP	15 44 53.8	-0.5
GYA				sP		pP	15 45 07.0	+19
GYA				PP		**PnPn**	**15 45 10.0**	**+6.3**
GYA				S		**S**	**15 48 46.1**	**+1.5**
GYA				pmax		pmax		
	comp=Z,20nm,0.8s							
GYA				pmax		pmax		
	comp=Z,120nm,7.5s							
GYA				LR		LR		
	comp=Z,850nm,16.4s							
GYA				LR		LR		
	comp=Z,540nm,15.8s							
GYA				LR		LR		
	comp=Z,880nm,18.0s							
GRJI	**Gresik**	**23.08 216**		P		**P**	**15 44 37.9**	**+0.3**
TPI	**Tanjungpandan**	**23.33 232**		P		**P**	**15 44 39.1**	**-0.9**
	comp=Z,92nm,1.1s							
CHAI	**Chaiyaphum**	**23.46 282**		P		**P**	**15 44 38.3**	**-3.0**
	comp=Z,34μm,0.8s							
JAGI	**Jajag, Banyuwa**	**23.49 210**		*e*P		**P**	**15 44 42.1**	**+0.4**
	comp=Z,62nm,0.8s							
JAGI	**Jajag, Banyuwa**	**23.49 210**		P		**P**	**15 44 42.0**	**+0.4**
TPRI	**Tanjung Pinang**	**23.88 244**		P		**P**	**15 44 44.4**	**-0.9**
NGJI	**Ngawi**	**24.04 217**		P		**P**	**15 44 48.8**	**+2.1**
	comp=Z,344nm,1.0s							
MYKOM	**Kota Tinggi**	**24.08 247**		*e*P		**P**	**15 44 45.6**	**-1.5**
	comp=Z,49nm,0.9s							
MYKOM	**Kota Tinggi**	**24.08 247**		P		**P**	**15 44 46.0**	**-1.1**
PPBI	**Pangkal Pinang**	**24.16 235**		P		**P**	**15 44 47.8**	**0.0**
	comp=Z,11nm,1.0s,comp=Z,3μm							
TJN	**Taejon**	**24.23 3**		*c*eP		**P**	**15 44 47.9**	**-0.3**
PWJI	**Pagerwojo**	**24.37 216**		P		**P**	**15 44 51.1**	**+1.5**
	comp=Z,55nm,1.5s							
SMRI	**Semarang**	**24.41 220**		P		**P**	**15 44 50.9**	**+0.8**
PBKT	**Sadao Pong**	**24.51 283**		P		**P**	**15 44 51.0**	**+0.1**
	comp=Z,11nm,1.2s,comp=Z,321nm							
JHJ	**Hachijo jima 2**	**24.53 29**		LR		LR	15 51 56.9	
	comp=Z,412nm,21.4s,baz=287,slow=30							
JHJ2	**Mitsune**	**24.54 29**		*e*P		**P**	**15 44 53.0**	**+1.9**
	comp=Z,557nm,1.1s							
UGM	**Wanagama**	**25.03 218**		*e*P		**P**	**15 44 56.9**	**+1.2**
	comp=Z,169nm,1.0s							
UTTA	**Uttaradit**	**25.07 286**		P		**P**	**15 44 56.5**	**+0.4**
	comp=Z,19μm,0.9s							
NANT	**Nan**	**25.13 289**		P		**P**	**15 44 54.9**	**-1.7**
	comp=Z,34μm,0.9s,comp=Z,360μm							
INU	**Inuyama**	**25.28 22**		*e*P		**P**	**15 44 57.7**	**-0.1**
	comp=Z,32nm,1.0s							
MTN	**Manton Dam**	**25.31 168**		*e*P		**P**	**15 44 58.9**	**+0.7**
	comp=Z,24nm,0.9s							
KSRS	**Korea Array**	**25.34 4**		P		**P**	**15 44 57.2**	**-1.0**
	comp=Z,7.8nm,0.9s,baz=183,slow=10,SNR=38							
KSRS				LR		LR	15 54 44.1	
	comp=Z,228nm,20.3s,slow=36							
SKLT	**Songkhla**	**25.34 261**		P		**P**	**15 45 04.7**	**+6.2**
KMI	**Kunming**	**25.40 304**		P		**P**	**15 44 59.7**	**+0.4**
KMI				pP		sP	15 45 18.9	+2.4
KMI				sP		pwP	15 45 27.8	+14
KMI				PP		**PnPn**	**15 45 41.7**	**+5.5**
KMI				S		**S**	**15 49 14.7**	**-8.3**
KMI				SS		**SnSn**	**15 50 29.8**	**+11**
KMI				pmax		pmax		
	comp=Z,24nm,0.9s							
KMI				pmax		pmax		
	comp=Z,82nm,3.3s							
KMI				LR		LR		
	comp=Z,710nm,17.9s							
KMI				LR		LR		
	comp=Z,490nm,20.7s							
KMI				LR		LR		
	comp=Z,660nm,14.3s							
IPM	**Ipoh**	**25.68 255**		*e*P		**P**	**15 45 03.0**	**+1.3**
IPM	**Ipoh**	**25.68 255**		P		**P**	**15 45 04.0**	**+2.3**
KULM	**Kulim**	**25.79 257**		*e*P		**P**	**15 45 02.4**	**-0.2**
	comp=Z,16nm,1.1s							
KULM	**Kulim**	**25.79 257**		P		**P**	**15 45 03.0**	**+0.3**
JMBI	**JAMBI**	**25.93 240**		P		**P**	**15 45 04.7**	**+0.8**
PAYA	**Payao**	**26.01 289**		P		**P**	**15 45 04.6**	**-0.1**
	comp=Z,47μm,1.2s,comp=Z,540μm							
LAMP	**Lampang**	**26.07 287**		P		**P**	**15 45 05.3**	**+0.2**
	comp=Z,27μm,0.9s,comp=Z,247μm							
LEM	**Lembang**	**26.10 225**		P		**P**	**15 45 06.0**	**+0.4**
	comp=Z,51nm,0.9s,baz=41,slow=6.2,SNR=10							
LEM				LR		LR	15 55 56.5	
	comp=Z,346nm,20.9s,baz=359,slow=38							
CBJI	**Citeko**	**26.36 227**		P		**P**	**15 45 09.1**	**+1.4**
CBJI				pP		**sP**	**15 45 23.0**	**-2.6**
RGRI	**Rengat**	**26.41 244**		P		**P**	**15 45 07.1**	**-1.1**
	comp=Z,333nm,0.4s,comp=Z,94μm							
CISI	**Cisompet, Garu**	**26.50 223**		*e*P		**P**	**15 45 06.8**	**-2.3**
	comp=Z,87nm,1.1s							
CISI	**Cisompet, Garu**	**26.50 223**		P		**P**	**15 45 15.4**	**+6.4**
CM31	**Chiang Mai Arr**	**26.70 287**		*e*PcP		**PcP**	**15 48 34.6**	**+1.0**
CM31	**Chiang Mai Arr**	**26.70 287**		P		**P**	**15 45 10.

FITZ	Fitzroy Crossi	29.98	180	P	P	15 45 39.5 -0.5
	comp=Z,18nm,1.1s,baz=11,slow=10,SNR=13					
GSI	Gunungsitoli	30.01	251	P	P	15 45 41.1 +0.7
	comp=Z,28nm,1.2s					
LZH	Lanzhou	31.07	324	eP	P	15 45 53.3 +3.6
LZH				pP	pwP	15 46 11.9 +5.5
LZH				sP	sP	15 46 21.9 +16
LZH				S	S	15 50 53.8 +1.8
LZH				pmax	pmax	
	comp=Z,19nm,1.0s					
LZH				pmax	pmax	
	comp=Z,120nm,4.9s					
LZH				LR	LR	
	comp=Z,630nm,13.6s					
LZH				LR	LR	
	comp=Z,500nm,13.6s					
LZH				LR	LR	
	comp=Z,690nm,15.7s					
HHC	Hu-ho-hao-te	31.29	339	eP	P	15 45 58.2 +6.7
HHC				eS	S	15 50 57.6 +2.5
HHC				sS	sS	15 51 29.0 +15
HHC				pmax	pmax	
	comp=Z,23nm,1.1s					
HHC				pmax	pmax	
	comp=Z,150nm,5.1s					
HHC				LR	LR	
	comp=Z,410nm,12.8s					
HHC				LR	LR	
	comp=Z,190nm,11.9s					
HHC				LR	LR	
	comp=Z,330nm,14.5s					
CN2	Changchun	31.61	359	eP	P	15 45 56.3 +2.1
CN2				eS	S	15 50 59.2 -0.6
CN2				pmax	pmax	
	comp=Z,10.0nm,0.4s					
CN2				pmax	pmax	
	comp=Z,200nm,4.0s					
CN2				LR	LR	
	comp=Z,400nm,12.0s					
CN2				LR	LR	
	comp=Z,200nm,12.0s					
CN2				LR	LR	
	comp=Z,400nm,10.0s					
USA0B	Ussuriysk Arra	32.44	8	eP	P	15 46 01.1 -0.3
	comp=Z,9.2nm,1.1s					
USA0B	Ussuriysk Arra	32.44	8	eP	P	15 46 01.1 -0.3
USA0B				pmax	pmax	
	comp=Z,9.0nm,1.1s					
USRK	Ussuriysk Ar.	32.44	8	P	P	15 46 00.7 -0.8
	comp=Z,3.6nm,1.0s,baz=187,slow=9.4,SNR=9.2					
USRK				LR	LR	15 57 34.0
	comp=Z,180nm,21.9s,baz=192,slow=33					
WRAB	Tennant Creek	32.89	165	eP	P	15 46 03.5 -2.2
	comp=Z,8.2nm,0.9s					
WRAB	Tennant Creek	32.89	165	ceP	P	15 46 03.6 -2.0
WRAB				pmax	pmax	
	comp=Z,9.0nm,1.0s					
WRA	Warramunga Arr	32.90	165	P	P	15 46 04.0 -1.7
	comp=Z,7.2nm,1.0s,baz=352,slow=12,SNR=11					
WB2	Warramunga Arr	32.90	165	eP	P	15 46 04.5 -1.3
	comp=Z,9.0nm,0.9s					
WC3	Warramunga Arr	32.92	165	eP	P	15 46 04.6 -1.3
	comp=Z,18nm,1.1s					
MBWA	Marble Bar	33.57	190	P	P	15 46 09.4 -2.1
PSAC1	Pilbara Seismi	33.92	190	eP	P	15 46 13.6 -1.0
	comp=Z,33nm,1.0s					
PSAB2	Pilbara Seismi	33.94	190	eP	P	15 46 13.3 -1.4
	comp=Z,24nm,0.9s					
PSAC2	Pilbara Seismi	33.94	190	eP	P	15 46 14.0 -0.7
	comp=Z,26nm,0.9s					
PSAB1	Pilbara Seismi	33.96	190	eP	P	15 46 13.4 -1.5
	comp=Z,20nm,0.9s					
SHL	Shillong	34.72	298	eP	P	15 46 20.0 -1.7
GTA	Gaotai	35.67	324	eP	P	15 46 30.4 +0.7
GTA				pP	pwP	15 46 48.6 +2.1
GTA				sP	sP	15 46 58.0 +12
GTA				PcP	PcP	15 48 57.2 -0.2
GTA				S	S	15 52 06.2 +3.1
GTA				pmax	pmax	
	comp=Z,4.0nm,1.2s					
GTA				pmax	pmax	
	comp=Z,87nm,5.5s					
GTA				LR	LR	
	comp=Z,340nm,14.4s					
GTA				LR	LR	
	comp=Z,280nm,14.9s					
GTA				LR	LR	
	comp=Z,690nm,14.8s					
YUK	Yuzh-Kuril'sk	36.21	25	eP	P	15 46 27.9 -6.1
YUK				eS	S	15 52 03.4 -7.4
YUK				MLR	MLR	
	comp=Z,136nm,17.0s					
AS31	Alice Springs	36.39	167	eP	P	15 46 36.1 +0.2
	comp=Z,2.2nm,0.7s					
ASAR	Alice Springs	36.39	167	P	P	15 46 34.7 -1.1
	comp=Z,4.5nm,0.8s,baz=339,slow=6.9,SNR=68					
ASAR				S	S	15 52 14.5 +0.4
	comp=Z,2.8nm,0.9s,baz=351,slow=18,SNR=9.0					
ASAR				LR	LR	16 04 17.6
	comp=Z,110nm,19.2s,baz=353,slow=41					
LSA	Lhasa	36.66	304	eP	P	15 46 38.9 +0.2
	comp=Z,25nm,1.0s					
LSA	Lhasa	36.66	304	eP	P	15 46 38.9 +0.2
LSA				pmax	pmax	
	comp=Z,25nm,1.0s					
KLR	Kul'dur	37.36	6	i P	P	15 46 43.4 -0.4
KLR				pmax	pmax	
	comp=Z,5.0nm,1.1s					
ULN	Ulaanbaatar	38.99	340	ceP	P	15 46 58.3 +0.5
ULN				pmax	pmax	
	comp=Z,17nm,2.5s					
ULN	Ulaanbaatar	38.99	340	P	P	15 46 58.6 +0.9
	SNR=5.1					
SONA0	Songino Array	39.19	339	eP	P	15 46 58.7 -0.7
SONM	Songino Array	39.19	339	P	P	15 46 58.7 -0.7
	comp=Z,3.0nm,0.9s,baz=157,slow=8.9,SNR=13					
SONM				LR	LR	16 03 36.4
	comp=Z,172nm,21.2s,baz=144,slow=37					
GRNR	Gornyy	39.54	11	eP	P	15 47 01.0 -1.1
GRNR				pmax	pmax	
	comp=Z,21nm,1.0s					
RAMN	Ramite	39.66	298	eP	P	15 47 03.2 -0.5
	comp=Z,149nm,1.2s					
H11S3	WAKE ISLAND Hy	39.84	76	T	T	16 29 57.5
	baz=267,slow=76,SNR=24					
H11S1	WAKE ISLAND Hy	39.85	76	T	T	16 30 00.7
	baz=267,slow=76,SNR=11					
H11S2	WAKE ISLAND Hy	39.86	76	T	T	16 29 59.0
	baz=267,slow=76,SNR=17					
HNR	Honiara	40.06	121	LR	LR	16 01 02.1
	comp=Z,260nm,21.4s,baz=284,slow=32					
H11N1	WAKE ISLAND Hy	40.12	74	T	T	16 30 11.8
	baz=266,slow=74,SNR=60					
H11N2	WAKE ISLAND Hy	40.12	74	T	T	16 30 12.3
	baz=266,slow=74,SNR=44					
H11N3	WAKE ISLAND Hy	40.13	74	T	T	16 30 12.9
	baz=266,slow=74,SNR=50					
JIRN	Jiri	40.19	299	eP	P	15 47 07.5 -0.7
	comp=Z,87nm,0.8s					
GUN	Gumba	40.52	299	eP	P	15 47 10.0 -0.9
	comp=Z,128nm,1.1s					
PKI	Pulchoki	40.84	298	eP	P	15 47 12.1 -1.5
	comp=Z,41nm,1.0s					
PKIN	Phulchoki	40.85	298	eP	P	15 47 12.1 -1.5
	comp=Z,24nm,0.9s					
KKN	Kakani	41.00	299	eP	P	15 47 13.6 -1.2
	comp=Z,46nm,0.9s					
DMN	Daman	41.11	298	eP	P	15 47 14.8 -0.9
	comp=Z,70nm,1.0s					
ZEA	Zeya	41.57	1	eP	P	15 47 17.7 -1.1
ZEA				pmax	pmax	
	comp=Z,15nm,1.0s					
MORW	Morawa	41.99	193	eP	P	15 47 20.2 -2.2
	comp=Z,17nm,0.9s					
DANN	Dangsing	42.44	299	eP	P	15 47 25.4 -1.2
	comp=Z,96nm,0.9s					
ZAK	Zakamensk	42.44	339	eP	P	15 47 21.4 -4.7
ZAK				pmax	pmax	
	comp=Z,3.0nm,1.9s					
KOLN	Koldanda	42.44	298	eP	P	15 47 25.4 -1.2
	comp=Z,85nm,1.0s					
FORT	Forrest	42.66	177	eP	P	15 47 27.9 0.0
	comp=Z,42nm,0.8s					
PYUN	Piuthan	43.04	298	eP	P	15 47 30.4 -1.0
	comp=Z,140nm,1.0s					
MOY	Mondy	44.32	338	eP	P	15 47 43.7 +2.5
EIDS	Eidsvold	44.61	147	eP	P	15 47 44.1 +0.4
	comp=Z,13nm,1.1s					
NWAO	Narrogin (SRO)	45.50	190	LR	LR	16 11 13.4
	comp=Z,51nm,18.9s,baz=359,slow=42					
NWAO	Narrogin (SRO)	45.50	190	eP	P	15 47 49.4 -1.3
	comp=Z,19nm,0.9s					
NWAO	Narrogin (SRO)	45.50	190	eP	P	15 47 49.4 -1.3
NWAO				pmax	pmax	
	comp=Z,19nm,0.9s					
WMQ	Urumqi	45.56	321	eP	P	15 47 52.9 +1.8
WMQ				pP	pwP	15 48 08.5 +0.1
WMQ				sP	sP	15 48 20.8 +13
WMQ				PcS	PcS	15 53 23.3 +0.1
WMQ				S	S	15 54 29.4 -0.7
WMQ				SS	ScS	15 57 46.5 +3.0
WMQ				pmax	pmax	
	comp=Z,15nm,1.1s					
WMQ				pmax	pmax	
	comp=Z,160nm,4.1s					
WMQ				LR	LR	
	comp=Z,1μm,16.9s					
WMQ				LR	LR	
	comp=Z,910nm,15.3s					
WMQ				LR	LR	
	comp=Z,750nm,15.3s					
BBOO	Buckleboo	45.69	168	eP	P	15 47 52.5 +0.4
	comp=Z,26nm,0.9s					
STKA	Stephens Creek	46.24	161	P	P	15 47 56.1 -0.4
	comp=Z,11nm,0.7s,baz=339,slow=8.7,SNR=18					
STKA				LR	LR	16 09 34.2
	comp=Z,70nm,21.0s,baz=9.7,slow=39					
STKA	Stephens Creek	46.24	161	eP	P	15 47 57.0 +0.6
	comp=Z,4.1nm,0.9s					
STKA	Stephens Creek	46.24	161	eP	P	15 47 57.1 +0.6
STKA				pmax	pmax	
	comp=Z,4.0nm,0.9s					
PETK	Petropavlovsk-	48.18	25	P	P	15 48 11.9 +0.5
	comp=Z,12nm,0.9s,baz=218,slow=4.2,SNR=8.5					
PETK				LR	LR	16 09 40.2
	comp=Z,188nm,18.7s,baz=222,slow=38					
PEA1	Petropavlovsk-	48.18	25	eP	P	15 48 11.9 +0.5
DGZ	Jazzator, Alta	49.02	328	i P	P	15 48 18.1 0.0
DGZ				pmax	pmax	
	comp=Z,5.0nm,1.3s					
YAK	Yakutsk	49.95	2	eP	P	15 48 23.2 -1.5
YAK				e		15 48 31.8
MK31	Makanchi Array	50.35	322	i P	P	15 48 28.0 -0.1
MK31				pmax	pmax	
	comp=Z,14nm,0.7s					
MKAR	Makanchi Array	50.35	322	P	P	15 48 28.4 +0.3
	comp=Z,10nm,0.8s,baz=116,slow=7.5,SNR=73					
MKAR				LR	LR	16 10 02.6
	comp=Z,176nm,19.0s,baz=127,slow=36					
MKAR	Makanchi Array	50.35	322	ceP	P	15 48 28.7 +0.6
MKAR				pmax	pmax	
	comp=Z,10.0nm,0.8s					
MAKZ	Makanchi	50.55	322	eP	P	15 48 30.1 +0.5
	comp=Z,12nm,0.8s					
MAKZ	Makanchi	50.55	322	P	P	15 48 29.8 +0.2
MAKZ				pmax	pmax	
	comp=Z,17nm,1.0s					
PDGK	Podgornoye	50.60	317	P	P	15 48 29.3 -0.9
PDGK				pmax	pmax	
	comp=Z,23nm,1.0s					
MA2	Magadan	50.92	16	i P	P	15 48 32.2 +0.1
MA2				pmax	pmax	
	comp=Z,37nm,2.7s					
KSH	Kashi	51.73	311	P	P	15 48 40.9 +2.2
KSH				pP	sP	15 49 00.8 +4.8
KSH				PP	PP	15 50 41.2 +4.5
KSH				S	S	15 55 54.4 -2.9
KSH				SS	SS	15 59 30.7 -3.5
KSH				pmax	pmax	
	comp=Z,120nm,1.6s					
KSH				pmax	pmax	
	comp=Z,210nm,4.0s					
KSH				LR	LR	
	comp=Z,710nm,15.2s					
KSH				LR	LR	
	comp=Z,910nm,14.4s					
KSH				LR	LR	
	comp=Z,930nm,15.6s					
DZM	Mont Dzumac	52.32	130	LR	LR	16 10 05.6
	comp=Z,45nm,20.4s,baz=0.5,slow=35					
DZM	Mont Dzumac	52.32	130	eP	P	15 48 43.1 -0.1
	comp=Z,57nm,1.4s					
ULHL	Ulahol	52.42	314	P	P	15 48 44.6 +0.7
	SNR=11					
ZALV	Zalesovo Beam	52.85	331	P	P	15 48 46.5 -0.2
	comp=Z,2.9nm,0.7s,baz=118,slow=8.6,SNR=10					
ZALV				LR	LR	16 11 47.2
	comp=Z,144nm,20.1s,baz=70,slow=37					
KZA	Kyzart	53.06	314	P	P	15 48 50.1 +1.2
	SNR=17					
TKM2	Tokmak 2	53.09	315	P	P	15 48 49.5 +0.7
	SNR=8.8					
TKM2	Tokmak 2	53.09	315	P	P	15 48 49.0 +0.1
TKM2				pmax	pmax	
	comp=Z,10.0nm,1.1s					
UCH	Uchtor	53.62	314	P	P	15 48 54.2 +1.2
	SNR=26					
CHMS	Chumysh	53.70	315	P	P	15 48 48.5 -4.7
	SNR=5.7					
AAK	Ala-Archa	53.77	314	ceP	P	15 48 55.2 +1.4
AAK				pmax	pmax	
	comp=Z,14nm,2.5s					
AAK	Ala-Archa	53.77	314	P	P	15 48 53.7 -0.1
	SNR=5.7					
USP	Ospenovka	53.97	315	P	P	15 48 55.5 +0.4
	SNR=5.8					
NVS	Novosibirsk	54.13	331	eP	P	15 48 56.2 +0.3
NVS				pmax	pmax	
	comp=Z,50nm,2.8s					
NVS				pmax	pmax	
	comp=N,10.0nm,1.7s					
NVS				pmax	pmax	
	comp=E,10.0nm,1.5s					
AML	Almayashu	54.17	314	P	P	15 48 58.0 +0.9
	SNR=12					
SEY	Seymchan	54.18	15	ceP	P	15 48 58.0 +1.8
EKS2	Erkin-Say	54.28	314	P	P	15 48 57.4 -0.1
	SNR=12					
KURK	Kurchatov	54.36	325	eP	P	15 48 58.5 +0.9
	comp=E,52nm,0.7s					
KURK	Kurchatov	54.36	325	eP	P	15 48 58.5 +0.9
KURK				pmax	pmax	
	comp=Z,52nm,0.7s					
KURK	Kurchatov	54.36	325	P	P	15 48 58.6 +0.9
	SNR=27					
KK31	Karatay Array	56.70	314	eP	P	15 49 14.8 +0.1
	comp=Z,16nm,0.9s					
KK31	Karatay Array	56.70	314	i P	P	15 49 14.9 +0.2
KK31				pmax	pmax	
	comp=Z,17nm,1.1s					
KKAR	Karatay Array	56.70	314	eP	P	15 49 14.8 +0.1
	comp=Z,16nm,0.9s					
KKAR	Karatay Array	56.70	314	eP	P	15 49 14.8 +0.1
KKAR				pmax	pmax	
	comp=Z,16nm,0.9s					
TIXI	Tiksi	59.56	1	eP	P	15 49 33.5 -0.7
	comp=Z,19nm,1.0s					
TIXI	Tiksi	59.56	1	eP	P	15 49 33.5 -0.7
TIXI				pmax	pmax	
	comp=Z,19nm,1.0s					
BRVK	Borovoye	60.03	325	eP	P	15 49 38.0 +0.3
	comp=Z,30nm,0.8s					
BRVK	Borovoye	60.03	325	P	P	15 49 37.3 -0.4
BRVK				pmax	pmax	
	comp=Z,32nm,0.9s					
BRVK	Borovoye	60.03	325	P	P	15 49 38.4 +0.7
	SNR=17					
BILL	Bilibino	61.79	16	ceP	P	15 49 49.7 +0.3
BILL				pmax	pmax	
	comp=Z,28nm,2.5s					
NRIK	Noril'sk	62.17	346	P	P	15 49 51.9 0.0
	comp=Z,3.7nm,1.0s,baz=115,slow=6.9,SNR=7.9					
NRIK				LR	LR	16 19 48.1
	comp=Z,184nm,18.5s,baz=180,slow=39					
ATKA	Atka Island	62.27	37	eP	P	15 49 52.7 -0.1
	comp=Z,30nm,0.9s					
GEYT	Alibeck	65.14	306	P	P	15 50 12.3 +0.2
	comp=Z,5.7nm,0.9s,baz=184,slow=3.9,SNR=13					
GEYT				LR	LR	16 22 30.6
	comp=Z,235nm,18.2s,baz=90,slow=40					
AB31	Akbulak array	65.25	319	P	P	15 50 12.4 -0.2
AB31				pmax	pmax	
	comp=Z,5.0nm,0.7s					
ABKAR	Akbulak array	65.25	319	eP	P	15 50 12.9 +0.3
	comp=Z,8.9nm,0.8s					
SVE	Sverdlovsk	66.48	327	eP	P	15 50 21.1 +0.8
SVE				pmax	pmax	
	comp=Z,23nm,1.0s					
AKTO	Aktyubinsk	66.68	320	LR	LR	16 19 46.3
	comp=Z,193nm,18.3s,baz=116,slow=36					
ARU	Arti	67.50	326	LR	LR	16 22 24.8
	comp=Z,96nm,18.8s,baz=90,slow=38					
ARU	Arti	67.50	326	eP	P	15 50 26.2 -0.6
	comp=Z,14nm,0.7s					
ARU	Arti	67.50	326	c iP	P	15 50 26.6 -0.2
ARU				S	S	15 59 23.4 +3.8
ARU				SS	SS	16 03 45.1 +4.7
ARU				pmax	pmax	
	comp=Z,7.0nm,1.1s					
ARU				MLR	MLR	
	comp=Z,182nm,16.0s					
KIRV	Kirov	72.70	328	LR	LR	16 24 54.1
	comp=Z,185nm,21.0s,baz=158,slow=37					
AKT	Akhty	73.23	310	eP	P	15 51 02.7 +0.4
AKT				e		15 51 18.9
AKT				pmax	pmax	
	comp=Z,22nm,1.0s					
MAK	Makhachkala	73.37	311	eP	P	15 51 02.2 -0.7
MAK				e		15 53 49.1
MAK				eS	S	16 00 31.7 +3.3
MAK				eSS	SS	16 05 12.7 +1.6
GNI	Garni	75.56	309	LR	LR	16 28 33.6
	comp=Z,64nm,20.8s,baz=94,slow=39					
ZEI	Tsey	76.02	311	eP	P	15 51 18.1 -0.5
ZEI				pmax	pmax	
	comp=Z,16nm,1.1s					
BPAW	Bear Paw Mtn.	76.24	27	eP	P	15 51 19.5 +0.3
	comp=Z,32nm,1.0s					
AKH	Akhalkalaki	76.42	310	P	P	15 51 22.4 +1.6
AKH				pmax	pmax	
	comp=Z,18nm,1.1s					
KBZ	Khabaz	76.69	312	P	P	15 51 22.2 +0.2
	comp=Z,7.3nm,1.2s,baz=63,slow=6.8,SNR=5.9					
KIV	Kislovodsk	76.83	313	eP	P	15 51 23.0 0.0
KIV				pmax	pmax	
	comp=Z,28nm,1.1s					
KIV				MLR	MLR	
	comp=Z,407nm,18.0s					
KLMR	Klimovskoe	77.76	330	eP	P	15 51 25.4 -2.3
KLMR				pmax	pmax	
	comp=Z,32nm,1.4s					
ILAR	Eielson Array	78.00	26	P	P	15 51 27.6 -1.4
	comp=Z,2.5nm,1.0s,baz=259,slow=4.3,SNR=20					
TMCR	Tamitsa	78.27	333	eP	P	15 51 29.4 -1.1
TMCR				pmax	pmax	
	comp=Z,20nm,1.0s					
VORD	Divnogorie	78.57	320	eP	P	15 51 31.5 -0.8
VORD				pmax	pmax	
	comp=Z,10.0nm,1.0s					
VSR	Storozhevoye	78.62	320	i P	P	15 51 31.8 -0.9
VSR				pmax	pmax	
	comp=Z,19nm,1.2s					
LPSR	Galich'ya Gora	78.65	322	eP	P	15 51 32.3 -0.5
LPSR				pmax	pmax	
	comp=Z,10.0nm,0.7s					
LVZ	Lovozero	79.36	337	i P	P	15 51 37.1 +0.7
LVZ				pmax	pmax	
	comp=Z,9.0nm,1.2s					
OBN	Obninsk	79.79	324	LR	LR	16 30 19.0
	comp=Z,28nm,19.3s,baz=20,slow=38					
OBN	Obninsk	79.79	324	deP	P	15 51 39.3 +0.4
OBN				e		15 51 48.4
OBN				e		15 54 41.1
OBN				i S	S	16 01 31.9 -6.3
OBN				pmax	pmax	
	comp=Z,27nm,1.7s					
OBN				MLR	MLR	
	comp=Z,169nm,16.0s					
MSF	Maaselka	81.84	336	P	P	15 51 50.9 +1.2
MSF				pmax	pmax	
	comp=Z,32nm,1.1s					
SPA0	Spitsbergen Ar	82.17	349	eP	P	15 51 51.5 +0.2
	comp=Z,64nm,1.1s					
ARCES	ARCESS Array B	82.37	340	P	P	15 51 52.6 +0.2
	comp=Z,11nm,0.4s,baz=79,slow=6.3,SNR=16					
ARE0	ARCESS Array S	82.37	340	eP	P	15 51 53.1 +0.7
	comp=Z,2.2nm,1.0s					
INK	Inuvik	82.77	22	eP	P	15 51 54.1 -0.4
	comp=Z,13nm,1.0s					
INK	Inuvik	82.77	22	eP	P	15 51 54.1 -0.4
INK				pmax	pmax	
	comp=Z,13nm,1.0s					
ASF	Jabal al Asfar	82.80	301	LR	LR	16 33 01.3
	comp=Z,157nm,21.7s,baz=138,slow=39					
SUF	Sumiainen	83.77	333	P	P	15 52 00.8 +1.1
SUF				pmax	pmax	
	comp=Z,41nm,1.0s					
MMAI	Mount Meron Ar	83.89	302	LR	LR	16 34 23.3
	comp=Z,51nm,18.5s,baz=65,slow=39					
BR101	Keskin Array S	84.07	309	eP	P	15 52 01.5 -0.5
BRTR	Keskin Array B	84.07	309	P	P	15 52 01.5 -0.5
	comp=Z,1.7nm,0.8s,baz=99,slow=4.5,SNR=6.8					
BRTR	Keskin Array B	84.07	309	ceP	P	15 52 01.9 -0.1
BRTR				pmax	pmax	
	comp=Z,2.0nm,0.8s					
FINES	FINESS Array B	84.11	332	P	P	15 52 01.2 -0.3
	comp=Z,13nm,1.0s,baz=88,slow=6.5,SNR=25					
FINES	FINESS Array B	84.11	332	ceP	P	15 52 01.5 0.0
FINES				pmax	pmax	
	comp=Z,13nm,1.0s					
VSU	Vasula	84.52	329	ceP	P	15 52 04.2 +0.5
VSU				pmax	pmax	
	comp=Z,60nm,0.8s					
AKASG	Malin Array Be	84.91	321	P	P	15 52 05.2 -0.5
	comp=Z,7.6nm,1.0s,baz=62,slow=4.9,SNR=16					
AKASG	Malin Array Be	84.91	321	ceP	P	15 52 05.4 -0.4
AKASG				pmax	pmax	
	comp=Z,8.0nm,0.9s					
KIEV	Kiev	84.92	321	i P	P	15 52 05.4 -0.4
KIEV				pmax	pmax	
	comp=Z,14nm,1.1s					
KIS	Kishinev	86.01	317	eP	P	15 52 13.0 +1.7
KIS				e		15 52 20.0
PPT	Papeete	88.52	108	LR	LR	16 24 26.1
	comp=Z,57nm,21.1s,baz=346,slow=30					
PPT2	Papeete2	88.52	108	eS	S	16 03 02.5 -4.6
	comp=Z,76nm,25.8s					
PPT2	Papeete2	88.52	108	eLR	LR	16 20 30.3
	comp=Z,111nm,23.2s					
UZH	Uzhgorod	89.80	320	eP	P	15 52 29.6 +0.2
UZH				e		15 52 37.5
TBI	Tubuai	89.93	114	eLR	LR	16 21 13.3
	comp=Z,164nm,27.8s					
NB2	NORSAR Subarra	90.96	334	P	P	15 52 33.0 -1.7
	comp=Z,6.4nm,1.1s,baz=65,slow=4.6					
NOA	NORSAR Array B	90.96	334	P	P	15 52 33.6 -1.1
	comp=Z,1.8nm,0.9s,baz=65,slow=4.6,SNR=5.9					
JMIC	Jan Mayen	91.59	346	LR	LR	16 38 18.1
	comp=Z,77nm,19.1s,baz=60,slow=38					
VNDA	Vanda	91.76	173	P	P	15 52 36.7 -1.2
	comp=Z,2.6nm,1.0s,baz=306,slow=5.7,SNR=9.1					
VYHS	Vyhne	92.01	320	eP	P	15 52 41.8 +2.0
VYHS	Vyhne	92.01	320	eP	P	15 52 41.8 +2.0
NV01	Mina Array Sit	101.90	46	ePdif	Pdif	15 53 25.5 +0.5
NVAR	Mina Array Bea	101.90	46	P	Pdif	15 53 25.5 +0.5
	comp=Z,0.6nm,0.7s,baz=273,slow=1.7,SNR=4.8					
PLCA	Paso Flores	148.02	156	PKPbc	PKiKP	15 59 17.8 -0.5
	comp=Z,3.1nm,0.9s,baz=205,slow=11,SNR=3.6					
LPAZ	La Paz	165.82	109	PKP	PKPdf	15 59 36.5 -0.7
	comp=Z,0.4nm,0.4s,baz=298,slow=3.1,SNR=3.1					

ISCJB ***07*** *15:47:43.2±1.0, 37°.02N±0°.05×39°.25E±0°.03, h0km±6km,*
Error ellipse: s-maj=9.1km s-min=4.1km az=177.5
ISK ***07*** *15:47:43.3, 37°.07N×39°.24E, h6km, ML2.4/9*
DDA ***07*** *15:47:43.6, 37°.02N×39°.23E, h7km±5km, ML3.1*
ISC 07 15:47:43.4±1.6, 37°.03N±0°.06×39°.25E±0°.03, h3km±11km, n14, σ0.64/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANL	SANLIURFA_Merk	0.25	305	i P	Pg	15 47 48.3	0.0
SANL				i S	Sg	15 47 52.4	+0.7
SANL				IAML_P			
	comp=Z,10μm,0.2s						
URFA	Urfa	0.54	321	PG	Pg	15 47 53.4	-0.3
URFA				SG	Sg	15 48 00.9	+0.2
MAZI	Mazidag	1.05	65	PG	Pg	15 48 03.6	+0.1
MAZI				SG	Sb	15 48 18.2	-0.3

DIYA	**Diyarbakir**	**1.13**	**37**	*i* P		**Pn**	**15 48 07.0**	**+0.8**
DIYA				*i* S		**Sn**	**15 48 23.7**	**+1.3**
DIYA				IAML_P				
	comp=Z,3μm,0.2s							
DYBB	**Diyarbakir**	**1.17**	**37**	PN		**Pb**	**15 48 05.8**	**-0.5**
DYBB				SN		**Sb**	**15 48 21.7**	**-0.1**
MARD	**Mardin**	**1.26**	**76**	*i* P		**Pg**	**15 48 07.2**	**-0.3**
MARD				*i* S		**Sn**	**15 48 25.7**	**+0.2**
MARD				IAML_P				
	comp=Z,2μm,0.4s							
SVRC	**Sivrice-ELAZID**	**1.35**	**2**	PN		**Pn**	**15 48 08.6**	**-0.8**
SVRC				SN		**Sn**	**15 48 27.1**	**-0.8**
GZT	**Gaziantep**	**1.39**	**284**	*i* P		**Pg**	**15 48 10.0**	**+0.1**
GZT				*i* S		**Sn**	**15 48 29.8**	**+1.1**
GZT				IAML_P				
	comp=Z,1μm,0.2s							
ELZG	**Elazig**	**1.48**	**352**	*i* P		**Pg**	**15 48 12.0**	**+0.1**
ELZG				*i* S		**Sg**	**15 48 32.0**	**+0.9**
ELZG				IAML_P				
	comp=Z,900nm,0.2s							
GAZ	**Gaziantep**	**1.64**	**276**	PN		**Pb**	**15 48 13.3**	**-1.0**
GAZ				SN		**Sb**	**15 48 35.0**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.91**	**53**	PN		**Pn**	**15 48 17.0**	**0.0**
KMRS	**Kahramanmaras**	**1.93**	**285**	PN		**Pn**	**15 48 17.4**	**+0.2**
DARE	**Darende-Malaty**	**2.08**	**318**	PN		**Pn**	**15 48 19.2**	**-0.1**
KOZT	**Kozan**	**2.77**	**280**	PN		**Pn**	**15 48 29.2**	**+0.5**

*ISK **07** 16:00:38.9, 38°.81N×30°.15E, h6km, ML2.0/8*
*ISCJB **07** 16:00:39.4±0.6, 38°.81N±0°.04×30°.13E±0°.05, h7km±7km, Error ellipse: s-maj=7.7km s-min=4.5km az=138.3*
*DDA **07** 16:00:39.0, 38°.71N×30°.14E, h7km±5km, ML2.6*
ISC 07 16:00:39.8±1.0, 38°.76N±0°.04×30°.17E±0°.04, h18km±6km, n14, σ0=92/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFYO	**Afyonkarahisar**	**0.11**	**76**	*i* P		**Pg**	**16 00 44.6**	**+1.1**
AFYO				*i* S		**Sg**	**16 00 45.5**	**-0.6**
SHUT	**Suhut-Afyon**	**0.36**	**125**	PG		**Pb**	**16 00 47.5**	**-0.3**
SHUT				SG		**Sb**	**16 00 53.3**	**0.0**
AUKIR	**Kırka- Seyitga**	**0.59**	**29**	*i* P		**Pb**	**16 00 51.2**	**-0.4**
BOLV	**Bolvadin**	**0.61**	**94**	*i* P		**Pg**	**16 00 51.2**	**-0.7**
BOLV				*i* S		**Sb**	**16 01 01.1**	**+0.7**
BOLV				IAML_P				
	comp=Z,1μm,0.1s							
KHAL	**Karahalli**	**0.66**	**234**	*i* P		**Pg**	**16 00 51.2**	**-1.5**
KHAL				*i* S		**Sb**	**16 01 02.8**	**+1.1**
KHAL				IAML_P				
	comp=Z,750nm,0.1s							
CIFT	**Cifteler, Eski**	**0.92**	**49**	PG		**Pg**	**16 00 56.6**	**-1.1**
CIFT				SG		**Sg**	**16 01 09.5**	**-0.3**
CIFT	**Cifteler, Eski**	**0.92**	**49**	*i* P		**Pn**	**16 00 58.8**	**+0.9**
CIFT				IAML_P				
	comp=Z,678nm,0.2s							
ESKT	**Eskisehir**	**0.93**	**35**	PG		**Pg**	**16 00 56.5**	**-1.3**
ESKT				SG		**Sg**	**16 01 09.5**	**-0.5**
ISP	**Isparta**	**0.98**	**163**	PG		**Pn**	**16 00 59.0**	**+0.3**
KULA	**Kula-Manisa**	**1.21**	**259**	PN		**Pn**	**16 01 02.2**	**+0.3**
KULA				SN		**Sn**	**16 01 19.3**	**+1.5**
SVRH	**Sivrihisar-ESK**	**1.26**	**57**	PN		**Pn**	**16 01 03.2**	**+0.6**
SRCK	**Saricakaya, Es**	**1.33**	**15**	PN		**Pn**	**16 01 03.9**	**+0.4**
KIZT	**Kizilcal**	**1.34**	**84**	PN		**Pg**	**16 01 05.0**	**-0.7**
GULT	**Gulveren**	**1.69**	**9**	PN		**Pn**	**16 01 09.2**	**+0.7**

MAN 07 16:04:08.0, 12°.22N×125°.84E, h1km, mb4.6, ML3.5, MS3.4, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.34**	**219**	⇑*e*P		Pg	16 04 33.4	-0.4
PLP				*i* S		Sb	16 04 52.0	+0.3

*ISCJB **07** 16:13:31.3±0.5, 43°.61S±0°.09×16°.2W±0°.1, h10km, mb4.3/17, MS3.7/6, Error ellipse: s-maj=12.9km s-min=11.1km az=148.4*
*IDC **07** 16:13:31.7±1.0, 43°.81S×16°.33W, h0km, mb4.2/5, mb1 4.2/5, mb1mx3.9/29, mbtmp4.1/5, MS3.7/6, Ms1 3.7/6, ms1mx3.5/16, Error ellipse: s-maj=39.7km s-min=27.7km az=103.0*
*NEIC **07** 16:13:33.1±3.0, 43°.66S×16°.35W, h10km, mb4.5/15, Error ellipse: s-maj=20.6km s-min=16.5km az=58.0*
ISC 07 16:13:33.2±0.6, 43°.7S±0°.1×16°.32W±0°.10, h10km, n35, σ1=77/26, mb4.3/17, MS3.7/6, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**16.89**	**224**	*e*Pn		**P**	**16 17 32.1**	**+0.7**
	85nm,1.1s							
SNAA	**Sanae**	**28.81**	**171**	*e*P		**P**	**16 19 32.1**	**+1.0**
	3.7nm,1.1s							
SUR	**Sutherland**	**31.11**	**81**	*e*P		**P**	**16 19 51.6**	**-0.3**
	10nm,1.0s							
H10S2	**ASCENSION HYDR**	**34.64**	**3**	T		T	16 57 03.4	
	baz=182,slow=75,SNR=4.3							
H10S3	**ASCENSION HYDR**	**34.64**	**3**	T		T	16 57 02.2	
	baz=182,slow=75,SNR=7.0							
H10S1	**ASCENSION HYDR**	**34.65**	**3**	T		T	16 57 03.4	
	baz=182,slow=75,SNR=5.6							
BOSA	**Boshof**	**36.38**	**80**	LR		LR	16 34 09.5	
	comp=Z,66nm,18.2s,baz=200,slow=34							
CPUP	**Villa Florida**	**37.36**	**284**	P		**P**	**16 20 46.7**	**+0.8**
	3.9nm,1.0s,baz=128,slow=7.1,SNR=5.6							
CPUP				LR		LR	16 35 34.2	
	comp=Z,118nm,19.7s,baz=176,slow=35							
CPUP	**Villa Florida**	**37.36**	**284**	*e*P		**P**	**16 20 46.6**	**+0.7**
TSUM	**Tsumeb**	**37.44**	**60**	*e*P		**P**	**16 20 44.1**	**-2.7**
	2.9nm,1.0s							
BDFB	**Brasilia**	**38.83**	**306**	LR		LR	16 34 37.6	
	comp=Z,113nm,19.0s,baz=129,slow=32							
BDFB	**Brasilia**	**38.83**	**306**	*e*P		**P**	**16 21 00.1**	**+1.6**
PLCA	**Paso Flores**	**39.68**	**255**	LR		LR	16 34 23.4	
	comp=Z,138nm,21.3s,baz=166,slow=32							
PLCA	**Paso Flores**	**39.68**	**255**	*e*P		**P**	**16 21 04.3**	**-1.1**
	2.2nm,0.9s							
RCBR	**Riachuelo**	**41.47**	**330**	*e*P		**P**	**16 21 20.7**	**+0.4**
	12nm,1.1s							
ROC1	**El Roble**	**43.51**	**265**	*e*P		**P**	**16 21 37.0**	**-0.1**
GO03	**Copiap**	**45.87**	**272**	*e*P		**P**	**16 21 55.4**	**-0.4**
	5.8nm,0.6s							
MAW	**Mawson**	**46.53**	**149**	*e*P		**P**	**16 22 01.2**	**+0.9**
	0.5nm,1.0s							
QSPA	**South Pole Qui**	**46.56**	**180**	P		**P**	**16 21 59.8**	**-1.0**
	5.0nm,0.9s,baz=212,slow=6.2,SNR=13							
QSPA	**South Pole Qui**	**46.56**	**180**	*e*P		**P**	**16 22 00.2**	**-0.6**
	8.8nm,1.0s							
PB01	**IPOC Station P**	**49.32**	**280**	*e*P		P	16 22 17.5	-5.1
	23nm,0.2s							
GO01	**Chusmiza**	**50.00**	**281**	*e*P		**P**	**16 22 25.3**	**-3.0**
	2.1nm,0.7s							
PB11	**IPOC Station P**	**50.27**	**281**	*e*P		**P**	**16 22 25.4**	**-4.6**
	9.8nm,1.1s							
MNMC	**Minye Minye**	**50.63**	**281**	*e*P		**P**	**16 22 32.3**	**-0.6**
	2.2nm,0.8s							
LPAZ	**La Paz**	**51.50**	**285**	LR		LR	16 43 59.8	
	comp=Z,152nm,19.9s,baz=140,slow=36							
TOA0	**Torodi Ar. Sit**	**58.91**	**21**	*e*P		**P**	**16 23 30.6**	**-1.8**
	4.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**58.91**	**21**	P		**P**	**16 23 32.2**	**-0.2**
	2.3nm,0.9s,baz=209,slow=5.2,SNR=7.4							
TOA1	**Torodi Ar. Sit**	**58.92**	**21**	*e*P		**P**	**16 23 32.2**	**-0.3**
NNA	**Nana**	**60.58**	**282**	LR		LR	16 48 00.9	
	comp=Z,59nm,21.3s,baz=162,slow=34							
ESDC	**Sonseca Array**	**83.74**	**10**	P		**P**	**16 26 04.0**	**+2.0**
	0.1nm,0.3s,baz=173,slow=6.0,SNR=4.0							
BRTR	**Keskin Array B**	**94.49**	**36**	P		**P**	**16 26 55.7**	**+2.3**
	1.5nm,0.9s,baz=174,slow=5.8,SNR=7.0							
BR101	**Keskin Array S**	**94.49**	**36**	*e*P		**P**	**16 26 55.7**	**+2.3**
BR131	**Keskin Array S**	**94.49**	**36**	*e*P		**P**	**16 26 55.5**	**+2.1**
	2.8nm,1.0s							
ILAR	**Eielson Array**	**145.50**	**325**	PKPbc		**PKPdf**	**16 33 08.4**	**-1.9**
	2.0nm,0.8s,baz=66,slow=1.9,SNR=17							
ILB	**Eielson Array**	**145.50**	**325**	*e*PKPdf		**PKPab**	**16 33 11.3**	**+0.6**

*IDC **07** 16:37:57.7±0.3, 24°.17N×122°.62E, h0km, mb4.9/37, mb1 5.0/38, mb1mx5.0/45, mbtmp4.9/38, ML3.7/2, MS5.3/46, Ms1 5.3/46, ms1mx5.3/49, Error ellipse: s-maj=12.6km s-min=8.6km az=75.0*
*NIED **07** 16:38:00, 24°.00N×122°.60E, h47km, Mw5.9 Best double couple: M0 7.47000×10^17 NP1:φs302.00000°, δ20.00000°, λ147.00000°. NP2:φs64.00000°, δ79.00000°, λ73.00000°.*
*BJI **07** 16:38:00.6±0.0, 24°.03N×122°.67E, h40km, mb5.2/60, mB5.7/72, ML5.9/6, Ms5.8/89, Ms7 5.8/85*
*JMA **07** 16:38:01.9±0.1, 23°.95N×122°.58E, h25km±3km, M5.8*
JMA Felt III J1.
*ISCJB **07** 16:38:02.9±0.2, 24°.02N±0°.01×122°.66E±0°.01, h49km±1km, mb5.3/177, MS5.6/569, Error ellipse: s-maj=2.2km s-min=1.7km az=147.0*
*NEIC **07** 16:38:02.9±2.1, 24°.10N×122°.67E, h33km, mb5.3/155, ME5.2, MS5.6/535, MW5.6, MW5.8, Error ellipse: s-maj=9.8km s-min=6.7km az=170.0, Moment Tensor Solution. s45 Moment tensor: Scale 10^17Nm; Mrr2.36; Mθθ-1.69; Mφφ-0.67; Mrθ1.67; Mθφ-0.27; Mφr1.33; Best double couple: M0 3.00000×10^17 NP1:φs260.00000°, δ23.00000°, λ109.00000°. NP2:φs59.00000°, δ68.00000°, λ82.00000°. Principal axes: T 3.3100, Plg66.0000°, Azm316.0000°; N -0.7200, Plg7.0000°, Azm62.0000°; P -2.5900, Plg23.0000°, Azm155.0000°; Broadband fault plane solution: P waves. NP1:φs259.00000°, δ21.00000°, λ103.00000°. NP2:φs65.00000°, δ70.00000°, λ85.00000°. Principal axes: T Plg65.0000°, Azm327.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm159.0000°; Apparent Stress 0.13 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [V] at Yungho; [IV] at Changhua and Danshui; [III] at Taipei. Also felt at Xindian, Hualien, Kaohsiung, Sanxia, Shulin and Taoyuan. Recorded [III TAP] in Yilan; [II TAP] in Changhua, Chiayi, Hualien, Nantou, Taoyuan and Yunlin; [I TAP] in Miaoli, Nantou, Pingtung and Taitung. Recorded [3 JMA] on Yonaguni-jima, Ryukyu Islands.
*TAP **07** 16:38:02.4, 23°.98N×122°.65E, h35km, ML6.2, C*
*MOS **07** 16:38:03.0±1.2, 24°.35N×122°.71E, h41km, mb5.4/65, MS5.5/54, Error ellipse: s-maj=7.1km s-min=4.5km az=115.5*
*NEIC **07** 16:38:03.0±0.0, 23°.86N×122°.78E, h35km, Moment Tensor Solution. s47 Moment tensor: Scale 10^17Nm; Mrr3.07; Mθθ-3.12; Mφφ0.04; Mrθ5.18; Mθφ0.46; Mφr2.29; Best double couple: M0 6.50000×10^17 NP1:φs71.00000°, δ77.00000°, λ77.00000°. NP2:φs296.00000°, δ18.00000°, λ133.00000°. Principal axes: T 6.7500, Plg56.0000°, Azm325.0000°; N -0.6000, Plg12.0000°, Azm74.0000°; P -6.1400, Plg30.0000°, Azm171.0000°;*
*GCMT **07** 16:38:04.9±0.1, 23°.93N±0°.01×122°.46E±0°.01, h39km, MW5.7/124, Moment Tensor Solution. s120, c237; s124, c334; Duration: 1s8 Moment tensor: Scale 10^17 Nm; Mrr3.44±.05; Mθθ-4.32±.03; Mφφ0.88±.04; Mrθ2.65±.05; Mθφ0.18±.03; Mφr1.77±.05; Best double couple: M0 5.08000×10^17 NP1:φs69.00000°, δ66.00000°, λ67.00000°. NP2:φs295.00000°, δ33.00000°, λ131.00000°. Principal axes: T 4.9990, Plg62.0000°, Azm303.0000°; N 0.1660, Plg21.0000°, Azm79.0000°; P -5.1610, Plg18.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 07 16:38:04.3±0.4, 24°.06N±0°.02×122°.64E±0°.02, h47km±2km, h46km: pP-P, n1256, σ1=85/1031, mb5.2/194, MS5.6/571, 122C-44D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.48**	**36**	P		**Pn**	**16 38 13.6**	**-1.6**
JYNG				S		**Sn**	**16 38 21.7**	**-1.2**
YOJ	**Yonaguni jima**	**0.53**	**40**	*e*Pn		**Pn**	**16 38 14.2**	**-1.6**
YOJ	**Yonaguni jima**	**0.53**	**40**	⇓*i*P		**Pn**	**16 38 14.3**	**-1.5**
	baz=34							
YOJ				S		**Sn**	**16 38 22.6**	**-1.4**
	baz=34							
YOJ	**Yonaguni jima**	**0.53**	**40**	*e*P		**Pn**	**16 38 14.2**	**-1.6**
YOJ	**Yonaguni jima**	**0.53**	**40**	P		**Pn**	**16 38 14.3**	**-1.5**
YOJ				S		**Sn**	**16 38 23.1**	**-0.8**
EOS1	**EOS1**	**0.68**	**317**	⇓*i*P		**Pn**	**16 38 16.5**	**-1.1**
	baz=320							
EOS1				*i* S		**Sn**	**16 38 27.6**	**+0.5**
	baz=320							
NANB	**Nanao**	**0.89**	**295**	⇑*i*P		**Pn**	**16 38 19.4**	**-1.1**
	baz=299							
NANB				*e*S		**Sn**	**16 38 32.9**	**+0.5**
	baz=299							
ENA	**Nanau**	**0.90**	**295**	⇑*i*P		**Pn**	**16 38 19.4**	**-1.2**
	baz=298							
ENA				*e*S		**Sn**	**16 38 33.0**	**+0.5**
	baz=298							
TWC	**Suao**	**0.91**	**308**	⇓*i*P		**Pn**	**16 38 19.5**	**-1.2**
	baz=300							
TWC				S		**Sn**	**16 38 32.9**	**+0.2**
	baz=300							
HWA	**Hwalien**	**0.95**	**265**	⇑P		**Pn**	**16 38 19.3**	**-1.9**
	baz=258							
HWA				*e*S		**Sn**	**16 38 32.8**	**-0.8**
	baz=258							
TWD	**Chiawan**	**0.95**	**272**	⇑*i*P		**Pn**	**16 38 19.1**	**-2.2**
	baz=276							
TWD				*e*S		**Sn**	**16 38 32.0**	**-1.8**
	baz=276							
ENLB	**Shoufeng**	**0.96**	**261**	⇑P		**Pn**	**16 38 18.8**	**-2.6**
	baz=255							
ENLB				*e*S		**Sn**	**16 38 32.0**	**-2.0**
	baz=255							
NACB	**Ninganchiao**	**0.96**	**277**	*e*Pn		**Pn**	**16 38 19.5**	**-1.9**
NACB	**Ninganchiao**	**0.96**	**277**	⇑P		**Pn**	**16 38 19.6**	**-1.9**
	baz=269							
NACB				*e*S		**Sn**	**16 38 33.4**	**-0.6**
	baz=269							
IRIF	**Iriomote-Funau**	**1.04**	**74**	P		**Pn**	**16 38 22.0**	**-0.5**
IRIF				S		**Sn**	**16 38 36.6**	**+0.7**
ETLH	**Xiulin Townshi**	**1.06**	**278**	⇑P		**Pn**	**16 38 21.4**	**-1.6**
	baz=272							
ETLH				*e*S		**Sn**	**16 38 35.8**	**-0.9**
	baz=272							
HATJ	**Hateruma jima**	**1.07**	**90**	P		**Pn**	**16 38 22.6**	**-0.3**
HATJ				*e*S		**Sn**	**16 38 36.5**	**-0.1**
ILA	**Ilan**	**1.07**	**311**	⇑P		**Pn**	**16 38 22.9**	**-0.1**
	baz=314							
ILA				S		**Sn**	**16 38 38.7**	**+1.9**
	baz=314							
NTC	**Toucheng**	**1.08**	**317**	P		**Pn**	**16 38 23.3**	**+0.2**
	baz=320							
NTC				S		**Sn**	**16 38 39.0**	**+2.0**
	baz=320							
TWE	**Neicheng**	**1.10**	**307**	⇑*i*P		**Pn**	**16 38 23.1**	**-0.3**
	baz=310							
TWE				S		**Sn**	**16 38 39.5**	**+2.0**
	baz=310							
TWB1	**Santiao Chiao**	**1.12**	**328**	⇓*i*P		**Pn**	**16 38 23.0**	**-0.5**
	baz=330							
TWB1				S		**Sn**	**16 38 37.8**	**0.0**
	baz=330							
ESL	**Shilin**	**1.13**	**258**	⇑*i*P		**Pn**	**16 38 21.0**	**-2.7**
	baz=252							
ESL				*e*S		**Sn**	**16 38 36.3**	**-1.8**
	baz=252							
ENTT	**Nioudou**	**1.14**	**301**	⇑*i*P		**Pn**	**16 38 23.4**	**-0.4**
	baz=291							
ENTT				*e*S		**Sn**	**16 38 38.8**	**+0.5**
	baz=291							
NDT	**Datong Townshi**	**1.16**	**298**	⇑P		**Pn**	**16 38 23.7**	**-0.4**
	baz=289							
NDT				*e*S		**Sn**	**16 38 41.0**	**+2.1**
	baz=289							
EGFH	**Guangfu**	**1.17**	**251**	*e*P		**Pn**	**16 38 21.9**	**-2.4**
	baz=255							
TIPB	**Shuangxi**	**1.17**	**321**	⇑*i*P		**Pn**	**16 38 24.0**	**-0.3**
	baz=337							
TIPB				S		**Sn**	**16 38 39.1**	**-0.2**
	baz=337							
NNSB	**Datong**	**1.20**	**288**	⇑P		**Pn**	**16 38 23.9**	**-0.9**
	baz=281							
NNS	**Nan Shan**	**1.22**	**289**	⇑*i*P		**Pn**	**16 38 24.0**	**-1.0**
	baz=281							
HGSD	**Ruisui**	**1.24**	**243**	⇓P		**Pn**	**16 38 22.7**	**-2.6**
	baz=246							
HGSD				*e*S		**Sn**	**16 38 38.1**	**-2.8**
	baz=246							
WHF	**Hehuan Shan**	**1.26**	**274**	⇑*i*P		**Pn**	**16 38 24.2**	**-1.7**
	baz=277							
WHF				S		**Sn**	**16 38 40.2**	**-1.6**
	baz=277							
NWLT	**Wulai**	**1.26**	**305**	*e*P		**Pn**	**16 38 25.6**	**0.0**
	baz=308							
NWLT				*e*S		**Sn**	**16 38 43.1**	**+1.7**
	baz=308							
JKRS	**Kuro-shima**	**1.27**	**81**	P		**Pn**	**16 38 25.7**	**+0.1**
NWF	**Wu-fen Shan**	**1.28**	**323**	⇑*i*P		**Pn**	**16 38 25.6**	**-0.2**
	baz=325							
NWF				S		**Sn**	**16 38 43.4**	**+1.6**
	baz=325							
WFSB	**Wu-fen Shan**	**1.28**	**323**	⇑P		**Pn**	**16 38 25.6**	**-0.1**
	baz=325							
WFSB				*e*S		**Sn**	**16 38 43.5**	**+1.8**
	baz=325							
YHNB	**Yeheng**	**1.30**	**298**	*e*Pn		**Pn**	**16 38 25.6**	**-0.6**
YHNB	**Yeheng**	**1.30**	**298**	⇑P		**Pn**	**16 38 25.8**	**-0.4**
	baz=301							
YHNB				*e*S		**Sn**	**16 38 43.9**	**+1.4**
	baz=301							
NSK	**Sanguang**	**1.32**	**298**	⇑*i*P		**Pn**	**16 38 25.9**	**-0.4**
	baz=289							
EHY	**Hungye**	**1.32**	**246**	⇑*i*P		**Pn**	**16 38 24.1**	**-2.3**
	baz=248							
EHY				*e*S		**Sn**	**16 38 40.5**	**-2.4**
	baz=248							
TWA	**Mucha**	**1.33**	**314**	⇑*i*P		**Pn**	**16 38 26.4**	**-0.1**
	baz=316							
TWA				*e*S		**Sn**	**16 38 45.0**	**+1.9**
	baz=316							
CHGB	**Renai**	**1.34**	**271**	⇑P		**Pn**	**16 38 25.4**	**-1.4**
	baz=273							
CHGB				S		**Sn**	**16 38 42.6**	**-0.9**
	baz=273							
OWD	**Renai**	**1.34**	**266**	⇑P		**Pn**	**16 38 24.8**	**-1.9**
	baz=269							
TWT	**Tachien**	**1.35**	**279**	⇑P		**Pn**	**16 38 26.1**	**-0.8**
	baz=282							
NHDH	**Xindian Distri**	**1.36**	**312**	⇑*e*P		**Pn**	**16 38 26.8**	**0.0**
	baz=330							
NHDH				*e*S		**Sn**	**16 38 46.0**	**+2.3**
	baz=330							
TDCB	**Techi**	**1.36**	**279**	⇑P		**Pn**	**16 38 26.1**	**-0.9**
	baz=282							
TATO	**Taipei**	**1.39**	**311**	*e*Pn		**Pn**	**16 38 27.5**	**+0.2**
TATO				*e*Sn		**Sn**	**16 38 41.1**	**-3.4**
TATO	**Taipei**	**1.39**	**311**	⇑P		**Pn**	**16 38 27.2**	**-0.1**
	baz=329							
TATO				*e*S		**Sn**	**16 38 47.1**	**+2.6**
	baz=329							
TATO	**Taipei**	**1.39**	**311**	P		**Pn**	**16 38 27.3**	**0.0**
	SNR=292							
YULB	**Yu-li**	**1.39**	**242**	*e*Pn		**Pn**	**16 38 25.5**	**-1.8**
YULB				*e*Sn		**Sn**	**16 38 41.8**	**-2.8**
YULB	**Yu-li**	**1.39**	**242**	⇓P		**Pn**	**16 38 25.1**	**-2.2**
	baz=235							
YULB				S		**Sn**	**16 38 41.5**	**-3.1**
	baz=235							
VWDT	**VWDT**	**1.40**	**258**	⇑P		**Pn**	**16 38 26.0**	**-1.4**
	baz=261							
VWDT				S		**Sn**	**16 38 41.8**	**-3.0**
	baz=261							
JIJ	**Ishigaki jima**	**1.41**	**77**	P		**Pn**	**16 38 27.2**	**-0.3**
JIJ				*e*S		**Sn**	**16 38 46.2**	**+1.2**
TWF1	**Yuli**	**1.41**	**241**	⇓P		**Pn**	**16 38 25.3**	**-2.3**
	baz=233							
TWF1				*e*S		**Sn**	**16 38 42.4**	**-2.7**
	baz=233							
TAP	**Taipei**	**1.42**	**314**	*e*P		**Pn**	**16 38 27.1**	**-0.6**
	baz=316							
TAP				*e*S		**Sn**	**16 38 47.2**	**+2.0**
	baz=316							
YM07	**YM07**	**1.45**	**321**	⇑P		**Pn**	**16 38 27.5**	**-0.6**
	baz=322							
YM07				*e*S		**Sn**	**16 38 45.6**	**-0.4**
	baz=322							
YM10	**YM10**	**1.47**	**318**	⇑P		**Pn**	**16 38 27.8**	**-0.6**
	baz=320							
YM10				*e*S		**Sn**	**16 38 47.8**	**+1.3**
	baz=320							
YM08	**YM08**	**1.48**	**320**	⇑P		**Pn**	**16 38 27.6**	**-0.9**
	baz=322							
CHKT	**Chengkung**	**1.50**	**231**	⇓*e*P		**Pn**	**16 38 25.7**	**-3.2**
	baz=222							
CHKT				*e*S		**Sn**	**16 38 42.9**	**-4.4**
	baz=222							
TWS1	**Kuangyinshan**	**1.52**	**313**	⇑P		**Pn**	**16 38 28.9**	**-0.2**
	baz=330							
TWY	**Chenhua**	**1.54**	**322**	⇑P		**Pn**	**16 38 29.0**	**-0.3**
	baz=324							
NTST	**Danshui**	**1.54**	**316**	*e*P		**Pn**	**16 38 29.6**	**+0.2**
	baz=318							
WHP	**Taichung City**	**1.56**	**279**	⇑*i*P		**Pn**	**16 38 29.4**	**-0.3**
	baz=273							
SSLB	**Suanglung**	**1.56**	**261**	*e*Pn		**Pn**	**16 38 28.8**	**-0.9**
SSLB				*e*Sn		**Sn**	**16 38 49.9**	**+1.1**
SSLB	**Suanglung**	**1.56**	**261**	⇑P		**Pn**	**16 38 28.2**	**-1.5**
	baz=263							
SSLB				*e*S		**Sn**	**16 38 48.5**	**-0.3**
	baz=263							
DPDB	**Guoxing**	**1.56**	**270**	⇑P		**Pn**	**16 38 29.0**	**-0.7**
	baz=272							
DPDB				*e*S		**Sn**	**16 38 47.2**	**-1.7**
	baz=272							
LIOB	**Emei**	**1.59**	**292**	⇑*i*P		**Pn**	**16 38 30.5**	**+0.5**
	baz=294							
LIOB				*e*S		**Sn**	**16 38 49.5**	**0.0**
	baz=294							
SMLT	**Sun Moon Lake**	**1.60**	**264**	⇑*i*P		**Pn**	**16 38 29.3**	**-0.9**
	baz=266							
SMLT				S		**Sn**	**16 38 48.8**	**-0.9**
	baz=266							
NSTT	**Nanjuang**	**1.60**	**291**	⇑*i*P		**Pn**	**16 38 30.6**	**+0.4**
	baz=294							
NCU	**National Centr**	**1.60**	**305**	P		**Pn**	**16 38 30.3**	**+0.1**
	baz=307							
NCUH	**Zhongli**	**1.60**	**305**	*e*P		**Pn**	**16 38 30.2**	**-0.1**
	baz=307							
JISG	**Ishigakijimahi**	**1.62**	**71**	P		**Pn**	**16 38 29.9**	**-0.5**
JISG				*e*S		**Sn**	**16 38 50.6**	**+0.6**
TYC	**Yuchr**	**1.63**	**265**	⇑*i*P		**Pn**	**16 38 29.7**	**-0.9**
	baz=268							
YUS	**Yu-Shan**	**1.64**	**250**	*e*P		**Pn**	**16 38 29.3**	**-1.9**
	baz=253							
PCYT	**Pengchaiyu**	**1.65**	**342**	⇓*i*P		**Pn**	**16 38 30.5**	**-0.4**
	baz=343							
WHYT	**Xinyi Township**	**1.67**	**258**	*e*P		**Pn**	**16 38 30.5**	**-0.7**
	baz=249							
WHYT				*e*S		**Sn**	**16 38 51.7**	**+0.2**

TWG				eSn	Sn	16 38 56.4	-0.4
TWG	Pinlang	1.89	230	⇓iP	Pn	16 38 31.4	-2.8
	baz=222						
TWG				eS	Sn	16 38 54.5	-2.3
	baz=222						
WCHH	Zhanghua	1.90	271	⇑P	Pn	16 38 34.7	+0.4
	baz=288						
WGK	Gukeng	1.93	259	⇑eP	Pn	16 38 34.8	+0.1
	baz=261						
WGK				eS	Sn	16 38 59.1	+1.2
	baz=261						
STYT	Tauyuan	1.94	243	eP	Pn	16 38 33.6	-1.3
	baz=237						
STYT				eS	Sn	16 38 57.4	-0.6
	baz=237						
WDLH	Douliu	1.96	260	eP	Pn	16 38 35.1	+0.1
	baz=261						
WDLH				eS	Sn	16 39 00.3	+2.0
	baz=261						
JTJ	Tarama	1.97	72	P	Pn	16 38 35.3	0.0
JTJ				S	Sn	16 39 00.5	+1.7
TPUB	Ta-pu	1.99	248	ePn	Pn	16 38 35.8	+0.3
TPUB	Ta-pu	1.99	248	⇑P	Pn	16 38 35.3	-0.2
	baz=240						
TPUB				eS	Sn	16 38 58.4	-0.8
	baz=240						
CHN4	Tsaushan	2.00	250	⇑eP	Pn	16 38 35.6	0.0
	baz=242						
CHN4				eS	Sn	16 39 00.1	+0.6
	baz=242						
WTP	Ta-pu	2.02	247	P	Pn	16 38 35.7	-0.3
	baz=241						
WTP				eS	Sn	16 39 01.1	+1.0
	baz=241						
CHN2	Minshiung	2.05	256	⇑eP	Pn	16 38 37.0	+0.7
	baz=258						
RLNB	Erlin	2.09	266	⇑P	Pn	16 38 37.0	+0.1
	baz=280						
RLNB				S	Sn	16 39 02.5	+0.9
	baz=280						
CHY	Chiayi	2.10	255	eP	Pn	16 38 36.7	-0.3
	baz=256						
CHY				eS	Sn	16 39 01.7	-0.3
	baz=256						
SLGT	Liugui	2.11	240	eP	Pn	16 38 36.9	-0.3
	baz=235						
SGST	Jiashian	2.12	243	eP	Pn	16 38 37.4	+0.2
	baz=236						
CHN1	Nanshi	2.12	246	⇑eP	Pn	16 38 37.7	+0.4
	baz=247						
CHN1				eS	Sn	16 39 03.4	+1.0
	baz=247						
TWK	Hsinying	2.12	249	⇑eP	Pn	16 38 37.1	-0.3
	baz=250						
TWK				S	Sn	16 39 02.8	+0.2
	baz=250						
ECL	Taimali	2.12	227	⇓P	Pn	16 38 34.4	-2.9
	baz=239						
ECL				eS	Sn	16 38 58.8	-3.6
	baz=239						
SNST	Tainan City	2.13	247	eP	Pn	16 38 37.7	+0.2
	baz=248						
SNST				eS	Sn	16 39 01.4	-1.3
	baz=248						
WTCT	Ta-ch'eng	2.16	265	⇑P	Pn	16 38 38.1	+0.2
	baz=279						
WTCT				eS	Sn	16 39 06.0	+2.5
	baz=279						
WLGB	Puzi	2.22	255	⇑P	Pn	16 38 38.6	0.0
	baz=256						
WLGB				eS	Sn	16 39 06.4	+1.6
	baz=256						
WMLT	Mailiao	2.22	264	eP	Pn	16 38 38.8	+0.1
	baz=281						
WMLT				eS	Sn	16 39 06.5	+1.6
	baz=281						
LAY	Lan-yu	2.24	207	⇓eP	Pn	16 38 35.2	-3.8
	baz=206						
LAY				eS	Sn	16 39 02.4	-3.1
	baz=206						
WSF	Szhu	2.25	260	P	Pn	16 38 39.2	+0.2
	baz=261						
WSF				eS	Sn	16 39 07.0	+1.5
	baz=261						
SSD	Sandimen	2.26	235	eP	Pn	16 38 37.8	-1.4
	baz=230						
CHN3	Shinhua	2.30	245	eP	Pn	16 38 40.9	+1.1
	baz=246						
CHN3				eS	Sn	16 39 09.8	+3.0
	baz=246						
TAW	Tawu	2.33	224	⇓P	Pn	16 38 37.5	-2.7
	baz=234						
CHN8	Yiju	2.33	253	⇑P	Pn	16 38 40.2	0.0
	baz=255						
MASBT	Mashibuluo	2.33	232	⇓P	Pn	16 38 38.6	-1.6
	baz=227						
MASBT				eS	Sn	16 39 05.4	-2.4
	baz=227						
EAST	Anshuo	2.34	225	⇓iP	Pn	16 38 37.9	-2.4
	baz=235						
SGLT	Jiouru	2.37	237	eP	Pn	16 38 41.7	+1.0
	baz=233						
SGLT				eS	Sn	16 39 11.2	+2.6
	baz=233						
SCLT	Jiali	2.41	249	eP	Pn	16 38 41.0	-0.2
	baz=249						
SCLT				eS	Sn	16 39 09.9	+0.5
	baz=249						
TAI1	Yung-k'ang	2.43	246	eP	Pn	16 38 42.2	+0.7
	baz=257						
TAI1				eS	Sn	16 39 11.2	+1.2
	baz=257						
SSPT	Xinbi	2.46	231	⇓eP	Pn	16 38 41.3	-0.7
	baz=227						
SNJT	Kaohsiung City	2.48	239	eP	Pn	16 38 43.3	+1.1
	baz=239						
SNJT				eS	Sn	16 39 14.2	+2.9
	baz=239						
SCZT	Fangliau	2.50	228	⇓eP	Pn	16 38 40.9	-1.6
	baz=222						
SCZT				eS	Sn	16 39 11.2	-0.6
	baz=222						
JMJ	Miyako jima 2	2.54	72	eP	Pn	16 38 43.1	+0.1
	baz=70						
KAU	Kaohsiung	2.60	236	eP	Pn	16 38 46.0	+2.0
	baz=250						
TSEB	Hengchuen, Pin	2.68	217	P	Pn	16 38 43.7	-1.2
	baz=225						
TSEB				eS	Sn	16 39 13.6	-2.5
	baz=225						
WLCH	Liuqiu	2.68	231	⇓eP	Pn	16 38 47.0	+2.0
	baz=229						
HEN	Hengchun	2.69	221	eP	Pn	16 38 44.0	-1.1
	baz=222						
TWKBT	Hengchun	2.69	219	⇓P	Pn	16 38 43.2	-2.0
	baz=220						
TWK1	Hengchun	2.69	219	eP	Pn	16 38 43.3	-1.9
	baz=220						
TWP	Hsiaoliuchiu	2.70	231	⇓eP	Pn	16 38 46.5	+1.3
	baz=246						
WDGT	Dungji	2.84	254	⇑P	Pn	16 38 46.5	-0.7
	baz=254						
WDGT				S	Sn	16 39 18.6	-1.6
	baz=254						
PHUB	P'eng-hu	2.86	260	⇑P	Pn	16 38 46.7	-0.7
	baz=275						
PHUB				eS	Sn	16 39 18.8	-1.8
	baz=275						
PNG	Penghu	2.86	261	⇑P	Pn	16 38 46.7	-0.7
	baz=276						
PNG				eS	Sn	16 39 18.6	-2.2
	baz=276						
PTTC	Pingtan	2.98	299	⇑eP	Pn	16 38 47.8	-1.3
	baz=301						
VCHM	Qimei	3.06	255	⇑P	Pn	16 38 49.4	-0.8
	baz=256						
MATB	Ma-tsu	3.21	311	⇑eP	Pn	16 38 51.3	-1.0
	baz=312						
PTMZ	Houxiangcun	3.35	288	⇑eP	Pn	16 38 52.9	-1.2
	baz=289						
LYJJ	Jianjiangzhen	3.60	314	⇑eP	Pn	16 38 56.7	-0.8
	baz=325						
XPSS	Dashiqiu	3.62	323	eP	Pn	16 38 56.5	-1.4
	baz=324						
QZH	Quanzhou	3.79	284	iP	Pn	16 38 58.8	-1.4
QZH				S	Sn	16 39 39.8	-3.7
MHZQ	Yeshan	3.85	303	eP	Pn	16 38 59.9	-1.1
	baz=304						
KNM	Kinmen	3.85	276	⇑eP	Pn	16 39 01.4	+0.3
	baz=276						
KNM				eS	Sn	16 39 45.2	+0.1
	baz=276						
KNMB	Chin-men Tao	3.90	277	ePn	Pn	16 39 00.3	-1.4
KNMB				eSn	Sn	16 39 46.0	-0.2
KNMB	Chin-men Tao	3.90	277	⇑eP	Pn	16 39 00.2	-1.4
	baz=278						
AXDP	Jialang	4.33	282	⇑eP	Pn	16 39 06.6	-1.1
	baz=283						
ZPLA	Ao Xicun	4.47	269	⇑eP	Pn	16 39 08.3	-1.3
	baz=280						
ZZJH	Jiuhuzhen	4.59	276	⇑eP	Pn	16 39 09.5	-1.7
	baz=277						
JOW	Kunigami	5.80	60	Pn	Pn	16 39 26.5	-1.3
	4.8nm,0.3s,baz=194,slow=14,SNR=29						
JOW				Sn	Sn	16 40 38.1	+5.1
	4.0nm,0.3s,baz=189,slow=15,SNR=1.9						
JOW	Kunigami	5.80	60	ePn	Pn	16 39 26.7	-1.1
JOW	Kunigami	5.80	60	eP	Pn	16 39 26.3	-1.5
	baz=62						
VDOS	Pratas Island	6.40	240	⇓eP	Pn	16 39 36.4	+0.3
	baz=236						
SSE	Sheshan	7.13	350	P	Pn	16 39 45.6	-0.4
SSE				S	Sn	16 41 14.2	+8.5
SSE	Sheshan	7.13	350	ePn	Pn	16 39 46.0	0.0
HKPS	Hong Kong Po S	8.01	259	ePn	Pn	16 39 57.7	-0.5
GZH	Guangzhou	8.58	265	P	Pn	16 40 00.9	-5.0
GZH				smax	smax		
	comp=N,2μm,1.1s						
GZH				smax	smax		
	comp=E,2μm,1.1s						
NJ2	Nanjing	8.64	338	⇓iP	Pn	16 40 05.5	-1.2
NJ2				S	Sn	16 41 40.2	-2.5
NJ2				pmax	pmax		
	comp=Z,100nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,260nm,3.8s						
NJ2				smax	smax		
	comp=N,1μm,1.4s						
NJ2				smax	smax		
	comp=E,1μm,1.3s						
NJ2				LR	LR		
	comp=N,56μm,15.2s						
NJ2				LR	LR		
	comp=E,24μm,20.6s						
NJ2				LR	LR		
	comp=Z,65μm,18.4s						
WHN	Wuhan	9.80	313	⇑P	Pn	16 40 20.8	-1.8
WHN				S	Sn	16 42 10.8	-0.4
WHN				pmax	pmax		
	comp=Z,160nm,0.6s						
WHN				LR	LR		
	comp=N,77μm,12.7s						
WHN				LR	LR		
	comp=E,68μm,12.3s						
WHN				LR	LR		
	comp=Z,132μm,16.5s						
TGY	Tagaytay City	10.03	190	Pn	Pn	16 40 30.1	+4.1
	37nm,0.3s,baz=326,slow=7.2,SNR=5.2						
TGY				LR	LR	16 44 29.9	
	comp=Z,14μm,21.9s,baz=42,slow=39						
JNU	Nakatsue	11.57	37	Pn	Pn	16 40 49.8	+2.9
	1.1nm,0.3s,baz=326,slow=3.2,SNR=7.8						
JNU				LR	LR	16 45 27.2	
	comp=Z,19μm,20.0s,baz=218,slow=39						
JNU	Nakatsue	11.57	37	ePn	Pn	16 40 48.5	+1.6
QIZ	Qiongzhong	12.91	250	P	Pn	16 41 06.8	+1.6
QIZ				S	Sn	16 43 27.6	+0.1
QIZ				pmax	pmax		
	comp=Z,18nm,1.2s						
QIZ				LR	LR		
	comp=N,11μm,22.5s						
QIZ				LR	LR		
	comp=E,7μm,16.2s						
QIZ				LR	LR		
	comp=Z,7μm,23.5s						
QIZ	Qiongzhong	12.91	250	ePn	Pn	16 41 05.4	+0.2
TJN	Taejon	12.94	17	ceP	Pn	16 41 07.7	+2.2
PLP	Palo	13.01	170	⇓eP	Pn	16 41 07.5	+0.8
TIA	Tai'an	13.02	340	P	Pn	16 41 06.9	+0.3
TIA				S	Sn	16 43 38.3	+8.4
TIA				pmax	pmax		
	comp=Z,19nm,0.8s						
TIA				pmax	pmax		
	comp=Z,2μm,4.9s						
TIA				LR	LR		
	comp=N,20μm,18.5s						
TIA				LR	LR		
	comp=E,12μm,16.1s						
TIA				LR	LR		
	comp=Z,34μm,19.1s						
LLP	Lapu-Lapu	13.72	174	⇑eP	Pn	16 41 15.6	-0.8
KSRS	Korea Array	14.10	18	Pn	Pn	16 41 23.4	+2.1
	4.2nm,0.3s,baz=199,slow=12,SNR=146						
KSRS				LR	LR	16 47 21.6	
	comp=Z,23μm,19.0s,baz=198,slow=40						
SNPH	Sibulan	14.64	178	eP	P	16 41 36.7	+2.6
GYA	Guiyang	14.65	283	⇓iP	Pn	16 41 28.2	-0.6
GYA				pP	P	16 41 37.1	+2.9
GYA				PP	PnPn	16 41 40.7	+3.6
GYA				S	Sn	16 44 09.1	-0.9
GYA				sS	S	16 44 18.6	-8.5
GYA				pmax	pmax		
	comp=Z,50nm,0.9s						
GYA				LR	LR		
	comp=N,20μm,9.0s						
GYA				LR	LR		
	comp=E,30μm,13.9s						
GYA				LR	LR		
	comp=Z,39μm,16.1s						
DL2	Dalian	14.83	357	⇑iP	Pn	16 41 32.2	+1.2
DL2				sP	P	16 41 43.9	+8.0
DL2				S	Sn	16 44 21.3	+7.3
DL2				pmax	pmax		
	comp=Z,28nm,1.4s						
DL2				pmax	pmax		
	comp=Z,1μm,5.8s						
DL2				LR	LR		
	comp=N,23μm,16.0s						
DL2				LR	LR		
	comp=E,6μm,16.3s						
DL2				LR	LR		
	comp=Z,30μm,17.3s						
XAN	Xi'an	15.57	313	P	Pn	16 41 40.0	-0.7
XAN				S	Sn	16 44 29.3	-2.8
XAN				pmax	pmax		
	comp=Z,2μm,6.5s						
XAN				LR	LR		
	comp=N,14μm,14.7s						
XAN				LR	LR		
	comp=E,31μm,15.2s						
XAN				LR	LR		
	comp=Z,37μm,15.5s						
XAN	Xi'an	15.57	313	ePn	Pn	16 41 40.4	-0.3
	481nm,1.8s						
XAN	Xi'an	15.57	313	eP	Pn	16 41 40.4	-0.3
XAN				pmax	pmax		
	comp=Z,481nm,1.8s						
CGP	Cagayan de Oro	15.64	172	⇓eP	P	16 41 49.9	+4.8
TIY	Taiyuan	16.17	330	eP	P	16 41 50.0	-0.9
TIY				PP	pP	16 42 01.7	+0.1
TIY				S	Sn	16 44 47.4	+0.7
TIY				SS	S	16 45 05.7	+7.7
TIY				pmax	pmax		
	comp=Z,72nm,0.8s						
TIY				pmax	pmax		
	comp=Z,3μm,5.1s						
TIY				LR	LR		
	comp=Z,32μm,12.4s						
TIY				LR	LR		
	comp=Z,11μm,9.2s						
TIY				LR	LR		
	comp=Z,38μm,14.8s						
INU	Inuyama	16.79	45	ePn	P	16 41 56.8	-1.0
	comp=Z,59nm,1.1s						
CTBH	Cotabato--PC H	16.81	174	⇑iP	P	16 41 59.4	+1.3
DAV	Davao City (W)	17.12	170	P	P	16 42 05.7	+4.2
	comp=Z,27nm,0.3s,baz=354,slow=8.8,SNR=3.4						
DAV				LR	LR	16 48 29.4	
	comp=Z,9μm,21.1s,baz=4.0,slow=37						
DAV	Davao City (W)	17.12	170	⇓eP	Pn	16 42 00.3	-0.2
SLVN	Son La	17.50	265	ePn	P	16 42 06.8	+1.0
	comp=Z,97nm,1.1s						
JHJ	Hachijo jima 2	17.54	55	P	P	16 42 09.7	+3.6
	comp=Z,29nm,0.3s,baz=231,slow=22,SNR=4.6						
JHJ				LR	LR	16 48 33.6	
	comp=Z,5μm,21.4s,baz=258,slow=36						
SNY	Shenyang	17.74	2	⇑P	P	16 42 08.8	+0.6
SNY				PP	PnPn	16 42 20.2	+0.8
SNY				S	S	16 45 27.2	-2.6
SNY				pmax	pmax		
	comp=Z,43nm,0.6s						
SNY				LR	LR		
	comp=Z,21μm,18.5s						
SNY				LR	LR		
	comp=Z,10μm,15.7s						
SNY				LR	LR		
	comp=Z,36μm,17.4s						
CD2	Chengdu	18.08	296	⇑P	P	16 42 11.7	-0.3
CD2				sP	sP	16 42 26.6	-1.5
CD2				S	Sn	16 45 31.8	-1.2
CD2				PcP	PcP	16 46 48.8	+4.2
CD2				pmax	pmax		
	comp=Z,290nm,0.7s						
CD2				pmax	pmax		
	comp=Z,10μm,7.3s						
CD2				LR	LR		
	comp=Z,34μm,9.4s						
CD2				LR	LR		
	comp=Z,55μm,12.4s						
CD2				LR	LR		
	comp=Z,72μm,12.9s						
KMI	Kunming	18.13	277	P	Pn	16 42 13.2	+0.3
KMI				pP	pP	16 42 18.3	-4.6
KMI				PP	PnPn	16 42 25.3	+0.3
KMI				S	Sn	16 45 31.6	-2.9
KMI				SS	S	16 45 55.2	+17
KMI				pmax	pmax		
	comp=Z,3μm,8.0s						
KMI				LR	LR		
	comp=Z,8μm,16.1s						
KMI				LR	LR		
	comp=Z,30μm,15.5s						
KMI				LR	LR		
	comp=Z,34μm,14.4s						
PANO	Nakornpanom	18.21	251	P	Pn	16 42 17.4	+3.7
	comp=Z,2.1nm,1.1s,comp=Z,50nm						
MAJO	Matsushiro	18.29	44	eP	P	16 42 13.3	-1.0
	comp=Z,27nm,0.8s						
MAJO	Matsushiro	18.29	44	iP	Pn	16 42 14.8	+0.2
MAT	Matsushiro	18.29	44	P	P	16 42 13.9	-0.4
MAT				S	S	16 45 39.4	-1.7
MJAR	Matsushiro Arr	18.29	44	P	P	16 42 13.8	-0.5
	comp=Z,0.2nm,0.3s,baz=232,slow=10,SNR=16						
MJAR				LR	LR	16 50 20.6	
	comp=Z,6μm,18.8s,baz=230,slow=41						
KKM	Kota Kinabalu	18.94	200	eP	Pn	16 42 23.8	+1.1
	comp=Z,466nm,1.3s						
KKM	Kota Kinabalu	18.94	200	P	Pn	16 42 27.0	+4.3
HHC	Hu-ho-hao-te	19.15	334	eP	Pn	16 42 25.5	+0.5
HHC				pP	pP	16 42 31.3	-3.3
HHC				sP	sP	16 42 39.1	-1.3
HHC				PP	PnPn	16 42 41.7	+2.9
HHC				S	Sn	16 46 01.7	+3.0
HHC				SS	SnSn	16 46 22.0	+8.6
HHC				pmax	pmax		
	comp=Z,41nm,0.8s						
HHC				pmax	pmax		
	comp=Z,3μm,4.1s						
HHC				LR	LR		
	comp=Z,35μm,14.3s						
HHC				LR	LR		
	comp=Z,15μm,12.8s						
HHC				LR	LR		
	comp=Z,48μm,15.9s						
BTO	Baotou	19.61	330	eP	Pn	16 42 30.8	+0.3
MSHR	Mys Shultsa	19.78	19	iP	P	16 42 30.4	-0.1
CN2	Changchun	19.83	6	eP	P	16 42 31.2	+0.1
CN2				eS	Sn	16 46 13.4	-1.6
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				pmax	pmax		
	comp=Z,1μm,10.0s						
CN2				LR	LR		
	comp=Z,29μm,16.0s						
CN2				LR	LR		
	comp=Z,17μm,16.0s						
CN2				LR	LR		
	comp=Z,33μm,17.0s						
KHON	Khomkaen	20.10	251	P	Pn	16 42 37.4	+1.0
	comp=Z,147μm,0.9s						
LZH	Lanzhou	20.16	311	⇑P	Pn	16 42 36.7	-0.5
LZH				pP	pP	16 42 43.9	-1.6
LZH				sP	sP	16 42 50.3	-1.0
LZH				S	S	16 46 20.8	+1.9
LZH				pmax	pmax		
	comp=Z,220nm,1.1s						
LZH				pmax	pmax		
	comp=Z,3μm,4.3s						
LZH				LR	LR		
	comp=Z,15μm,11.9s						
LZH				LR	LR		
	comp=Z,34μm,13.0s						
LZH				LR	LR		
	comp=Z,42μm,13.9s						
VLA	Vladivostok	20.49	20	iP	P	16 42 38.4	+0.2
CHAI	Chaiyaphum	21.02	251	P	P	16 42 45.7	+1.6
	comp=Z,112μm,0.8s						
MDJ	Mudanjiang	21.28	14	P	P	16 42 45.8	-1.0
MDJ				pP	pP	16 42 55.5	-2.1
MDJ				sP	sP	16 43 00.6	-2.8
MDJ				PP	PnPn	16 43 06.2	-1.7
MDJ				S	S	16 46 41.0	+0.4
MDJ				PcP	PcP	16 46 49.5	-0.5
MDJ				sS	sS	16 46 55.6	-1.3
MDJ				ScP	ScP	16 50 17.4	-5.8
MDJ				PcS	PcS	16 50 28.0	0.0
MDJ				ScS	ScS	16 54 09.1	+2.2
MDJ				pmax	pmax		
	comp=Z,40nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,970nm,4.6s						
MDJ				LR	LR		
	comp=Z,20μm,15.2s						
MDJ				LR	LR		
	comp=Z,14μm,15.2s						
MDJ				LR	LR		
	comp=Z,30μm,14.0s						
MDJ	Mudanjiang	21.28	14	eP	P	16 42 46.0	-0.8
	comp=Z,118nm,1.1s						
MDJ				LR	LR		
	comp=Z,19μm,20.0s						
USA0B	Ussuriysk Arra	21.50	19	PFAKE		16 43 00.0	+11
USA0B				LR	LR		
	comp=Z,14μm,18.0s						
USRK	Ussuriysk Ar.	21.50	19	P	P	16 42 47.6	-1.5
	comp=Z,48nm,0.7s,baz=201,slow=10,SNR=62						
USRK				LR	LR	16 51 52.8	
	comp=Z,13μm,18.2s,baz=187,slow=39						
UTTA	Uttaradit	21.55	257	P	P	16 42 54.0	+4.2
	comp=Z,75μm,1.2s,comp=Z,629μm						
PAYA	Payao	21.65	262	P	P	16 42 53.9	+2.9
	comp=Z,121μm,1.0s						
LAMP	Lampang	22.12	260	P	P	16 42 58.2	+2.2
	comp=Z,144μm,1.0s						
CMMT	Chiang Mai	22.65	261	P	P	16 43 03.5	+1.8
	comp=Z,42nm,1.5s,comp=Z,837nm						
CHTO	Chiang Mai	22.65	261	eP	P	16 43 03.0	+1.3
	comp=Z,66nm,1.0s						
CHTO				ePcP	PcP	16 46 54.6	+1.4
CHTO				LR	LR		
	comp=Z,8μm,19.0s						
CHTO	Chiang Mai	22.65	261	eP	P	16 43 03.0	+1.3
CHTO				e		16 46 54.6	
CHTO				pmax	pmax		
	comp=Z,66nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,8μm,19.0s						
CHTO	Chiang Mai	22.65	261	P	P	16 43 03.3	+1.6
	SNR=29						
CHTO				P	P	16 43 03.3	+1.6
	SNR=29						
CM31	Chiang Mai Arr	22.76	260	eP	P	16 43 04.0	+1.1
	comp=Z,296nm,1.9s						
CM31				ePcP	PcP	16 46 55.3	+1.8
CM31	Chiang Mai Arr	22.76	260	P	P	16 43 04.7	+1.8
	SNR=14						
CMAR	Chiang Mai Arr	22.76	260	P	P	16 43 03.8	+1.0
	comp=Z,13nm,0.9s,baz=66,slow=8.8,SNR=38						
CMAR				PcP	PcP	16 46 54.8	+1.4
	comp=Z,5.9nm,0.6s,baz=38,slow=1.1,SNR=30						

CMAR LR LR 16 52 39.6
comp=Z,7μm,19.0s,baz=72,slow=39
SARN Sarigan 22.88 104 PFAKE 16 43 10.0 +5.9
SARN LR LR
comp=Z,4μm,20.0s
GUMO Guam 23.44 112 P **P** **16 43 10.7 +1.1**
comp=Z,55nm,0.8s,baz=206,slow=18,SNR=4.4
GUMO LR LR 16 50 35.3
comp=Z,7μm,21.9s,baz=288,slow=32
GUMO Guam 23.44 112 *e*P **P** **16 43 08.4 -1.2**
comp=Z,686nm,1.3s
GUMO LR LR
comp=Z,6μm,20.0s
GUMO Guam 23.44 112 *e*P **P** **16 43 08.4 -1.2**
GUMO pmax pmax
comp=Z,686nm,1.3s
GUMO MLR MLR
comp=Z,6μm,20.0s
MRSI Marisa 23.45 182 P **P** **16 43 08.9 -0.7**
TNTI Ternate 23.60 168 P **P** **16 43 09.6 -1.4**
UMPA Umpang Tak 23.62 255 P **P** **16 43 17.8 +6.4**
comp=Z,100μm,1.2s
SBUM Sibu 23.72 207 *e*PcP **PcP** **16 46 58.5 +3.0**
SBUM LR LR
comp=Z,2μm,22.0s
MPSI Mapaga 23.73 187 P **P** **16 43 16.9 +4.6**
comp=Z,55nm,1.1s,comp=Z,1μm
TEY Ternei 23.82 25⇑ *e*P **P** **16 43 10.3 -2.5**
TEY pmax pmax
comp=N,10.0nm,0.4s
TEY pmax pmax
comp=Z,20nm,0.5s
TEY MLR MLR
comp=E,100nm,11.0s
TEY MLR MLR
comp=N,300nm,18.0s
TEY MLR MLR
comp=Z,300nm,17.0s
SRDT SRDT 24.18 251 P **P** **16 43 21.0 +4.5**
comp=Z,29nm,2.0s,comp=Z,919nm
LKP Lekhapani 24.34 283 *e*P **P** **16 43 18.5 +0.6**
LKP IAmb IAmb 16 43 21.4
comp=Z,519nm,1.5s
PHET Kaeng Krachan 24.43 247 P **P** **16 43 21.9 +3.1**
comp=Z,105μm,0.8s,comp=Z,764μm
GTA Gaotai 24.62 314 ⇑P **P** **16 43 20.0 -0.5**
GTA pP pP 16 43 30.3 -1.8
GTA sP pwP 16 43 34.5 -0.3
GTA PcP **PcP** **16 46 58.5 +1.3**
GTA S **S** **16 47 42.9 +4.2**
GTA sS sS 16 47 58.7 +1.3
GTA ScP **ScP** **16 50 32.9 +0.6**
GTA pmax pmax
comp=Z,30nm,0.7s
GTA pmax pmax
comp=Z,1μm,6.4s
GTA LR LR
comp=Z,8μm,13.7s
GTA LR LR
comp=Z,16μm,14.4s
GTA LR LR
comp=Z,25μm,15.5s
ERM Erimo 24.73 39 PFAKE 16 43 30.0 +8.8
ERM LR LR
comp=Z,6μm,20.0s
ERM Erimo 24.73 39 *i* P **P** **16 43 18.0 -3.2**
ERM pmax pmax
comp=Z,23nm,0.6s
APSI Ampana 24.84 182 P **P** **16 43 19.7 -2.7**
LUWI Luwuk 24.95 180 *e*P **P** **16 43 22.5 -0.9**
comp=Z,294nm,1.0s
LUWI Luwuk 24.95 180 P **P** **16 43 19.5 -3.9**
DIBR DIBRUGARH 25.18 284 *e*P **P** **16 43 26.5 +1.0**
DIBR IAmb IAmb 16 43 31.5
comp=Z,11μm,3.4s
HIA Hailar 25.27 356 *e*P **P** **16 43 22.4 -3.7**
comp=Z,63nm,1.1s
HIA LR LR
comp=Z,13μm,19.0s
HIA Hailar 25.27 356 *e*P **P** **16 43 22.4 -3.7**
HIA pmax pmax
comp=Z,63nm,1.1s
HIA MLR MLR
comp=Z,13μm,19.0s
KSM Kuching 25.43 210 P **P** **16 43 28.0 +0.2**
MOKO MOKOCHONG 25.53 281 *e*P **P** **16 43 30.2 +1.4**
BKB Balikpapan 25.77 193 P **P** **16 43 32.5 +1.6**
ASAJ Asahikawa 25.83 34 P **P** **16 43 29.2 -2.0**
comp=Z,26nm,0.7s,baz=222,slow=11,SNR=42
ASAJ LR LR 16 53 34.1
comp=Z,10μm,21.6s,baz=242,slow=36
KOHI KOHIMA 25.91 280 *e*P **P** **16 43 30.4 -1.9**
KOHI IAmb IAmb 16 43 37.2
comp=Z,79nm,1.6s
ZIRO ZIRO 26.12 284 *e*P **P** **16 43 34.5 +0.3**
ZIRO ⇑x x 16 43 37.6
comp=Z,2μm,5.6s
KLR Kul'dur 26.13 14 P **P** **16 43 32.8 -1.0**
comp=Z,20nm,0.6s,baz=220,slow=6.9,SNR=25
KLR PcP **PcP** **16 47 00.7 +0.4**
comp=Z,7.9nm,0.6s,baz=187,slow=3.8,SNR=9.2
KLR LR LR 16 54 48.6
comp=Z,17μm,19.1s,baz=197,slow=39
KLR Kul'dur 26.13 14*c i*P **P** **16 43 31.5 -2.4**
KLR pmax pmax
comp=Z,24nm,0.9s
ULN Ulaanbaatar 26.80 336 *e*P **P** **16 43 39.1 -1.0**
comp=Z,130nm,1.2s
ULN *e*PcP **PcP** **16 47 03.1 +1.0**
ULN LR LR
comp=Z,22μm,19.0s
ULN Ulaanbaatar 26.80 336 *e*P **P** **16 43 39.1 -1.0**
ULN *e* 16 47 03.1
ULN pmax pmax
comp=Z,130nm,1.2s
ULN MLR MLR
comp=Z,22μm,19.0s
ULN Ulaanbaatar 26.80 336 P **P** **16 43 39.3 -0.8**
SNR=32
ULN P **P** **16 43 39.3 -0.8**
SNR=32
SONA0 Songino Array 27.02 335 *e*P **P** **16 43 41.0 -1.1**
SONA0 *e*PcP **PcP** **16 47 03.2 +0.6**
SONA0 *e*ScP **ScP** **16 50 40.4 +1.4**
SONM Songino Array 27.02 335 P **P** **16 43 41.0 -1.1**
comp=Z,42nm,0.7s,baz=150,slow=11,SNR=56
SONM PcP **PcP** **16 47 03.2 +0.6**
comp=Z,3.5nm,0.6s,baz=162,slow=3.8,SNR=4.1
SONM ScP **ScP** **16 50 40.4 +1.4**
comp=Z,3.4nm,1.0s,baz=162,slow=3.7,SNR=5.1
SONM LR LR 16 55 37.1
comp=Z,27μm,19.9s,baz=160,slow=39
TEZP TEZPUR 27.06 282 *e*P **P** **16 43 42.4 -0.1**
TEZP IAmb IAmb 16 43 44.9
comp=Z,382nm,2.1s
YUK Yuzh-Kuril'sk 27.54 38*d i*P **P** **16 43 42.8 -3.8**
YUK *i* S **S** **16 48 20.2 -4.3**
YUK pmax pmax
comp=N,36nm,1.2s
YUK pmax pmax
comp=Z,106nm,1.2s
YUK pmax pmax
comp=E,68nm,1.3s
YUK MLR MLR
comp=Z,4μm,19.0s
YUK MLR MLR
comp=N,5μm,17.0s
YUK MLR MLR
comp=E,6μm,18.0s
TAWA Tawang 27.88 284 *e*P **P** **16 43 49.9 -0.4**
TAWA IAmb IAmb 16 43 54.0
comp=Z,56nm,0.8s
SHL Shillong 27.93 280 *e*P **P** **16 43 49.9 -0.6**
YSS Yuzh-Sakhalins 27.95 30 *e*P **P** **16 43 50.1 -0.2**
comp=Z,55nm,0.8s
YSS *e*PcP **PcP** **16 47 05.4 +0.8**
YSS LR LR
comp=Z,4μm,19.0s
YSS Yuzh-Sakhalins 27.95 30 *e*P **P** **16 43 50.8 +0.5**
YSS *e* 16 43 58.4
YSS *e**SP **sP** **16 44 08.0 +0.2**
YSS *e* 16 44 50.8
YSS *e*S **S** **16 48 31.8 +0.9**
YSS MLR MLR
comp=Z,6μm,15.0s
YSS MLR MLR
comp=N,7μm,16.0s
YSS MLR MLR
comp=E,3μm,14.0s
KULM Kulim 28.21 232 PFAKE 16 44 10.0 +17
KULM LR LR
comp=Z,5μm,19.0s
PKDT Phuket 28.28 239 P **P** **16 43 57.8 +4.3**
comp=Z,36nm,1.2s
BNSI Bone 28.39 185 P **P** **16 43 53.2 -1.2**
FAKI Fak Fak 28.40 159 *e*P **P** **16 43 54.2 -0.3**
comp=Z,74nm,1.0s
FAKI LR LR
comp=Z,4μm,22.0s
FAKI Fak Fak 28.40 159 P **P** **16 43 53.5 -1.0**
BRDH Bariadhala 28.46 274 LR LR 16 56 18.3
comp=Z,5μm,18.9s,baz=109,slow=39
IPM Ipoh 28.50 230 PFAKE 16 44 10.0 +15
IPM LR LR
comp=Z,4μm,20.0s
BELO BELONIA 28.55 275 *e*P **P** **16 43 57.8 +1.9**
LSA Lhasa 28.59 288 P **P** **16 43 58.1 +1.5**
LSA LR LR
comp=Z,16μm,17.9s
LSA LR LR
comp=Z,37μm,18.9s
LSA LR LR
comp=Z,54μm,18.7s
LSA Lhasa 28.59 288 *e*P **P** **16 43 58.2 +1.5**
comp=Z,40nm,0.8s
LSA *e*PcP **PcP** **16 47 09.1 +2.0**
LSA LR LR
comp=Z,16μm,18.0s
LSA Lhasa 28.59 288 *i* P **P** **16 43 57.7 +1.1**
SNR=26
LSA Lhasa 28.59 288 *e*P **P** **16 43 58.2 +1.5**
LSA *e* 16 47 09.1
LSA pmax pmax
comp=Z,40nm,0.8s
LSA MLR MLR
comp=Z,16μm,18.0s
MYKOM Kota Tinggi 28.64 222 P **P** **16 43 58.0 +1.3**
GRNR Gornyy 28.73 18 *e*P **P** **16 43 53.8 -3.4**
TPRI Tanjung Pinang 28.93 220 P **P** **16 43 59.6 +0.4**
KAPI Kappang 29.03 186 P **P** **16 44 03.7 +3.6**
comp=Z,3.8nm,0.3s,baz=351,slow=2.7,SNR=4.3
KAPI LR LR 16 56 51.0
comp=Z,2μm,20.5s,baz=8.5,slow=39
KAPI Kappang 29.03 186 PFAKE 16 44 10.0 +10
KAPI LR LR
comp=Z,2μm,22.0s
KUR Kuril'sk 29.41 38 *e*P **P** **16 44 01.4 -1.8**
KUR *e*S **S** **16 48 47.5 -6.3**
KUR pmax pmax
comp=Z,95nm,1.3s
KUR MLR MLR
comp=N,6μm,17.0s
KUR MLR MLR
comp=Z,6μm,17.0s
KUR MLR MLR
comp=E,2μm,19.0s
ZEA Zeya 29.84 6 *e*P **P** **16 44 05.0 -2.0**
ZEA *e* 16 45 12.0
ZEA *e*S **S** **16 48 52.0 -8.5**
ZEA pmax pmax
comp=N,37nm,1.4s
ZEA pmax pmax
comp=Z,42nm,1.6s
ZEA pmax pmax
comp=Z,600nm,12.0s
ZEA smax smax
comp=N,700nm,12.0s
ZEA MLR MLR
comp=N,13μm,17.0s
ZEA MLR MLR
comp=Z,13μm,17.0s
ZEA MLR MLR
comp=E,3μm,12.0s
DGPR DIGLIPUR 30.09 254 *e*P **P** **16 44 08.9 -0.7**
DGPR IAmb IAmb 16 44 14.8
comp=Z,123nm,0.2s
ZAK Zakamensk 30.28 335 *e*P **P** **16 44 08.1 -2.9**
ZAK *e* 16 50 42.0
ZAK pmax pmax
comp=Z,19nm,1.2s
PPBI Pangkal Pinang 30.60 214 P **P** **16 44 18.3 +4.3**
comp=Z,9.5nm,0.6s,comp=Z,3μm
GTK Tadong 30.79 283 *e*P **P** **16 44 15.8 0.0**
GTK IAmb IAmb 16 44 18.4
comp=Z,447nm,2.7s
TYV Tymovskoe 30.92 25 *e*P **P** **16 44 18.5 +2.0**
TYV *e*S **S** **16 49 22.0 +4.6**
TYV pmax pmax
comp=Z,200nm,3.9s
TYV pmax pmax
comp=Z,15nm,0.8s
TYV smax smax
comp=N,300nm,8.8s
TYV smax smax
comp=E,7.0nm,1.1s
TYV MLR MLR
comp=N,4μm,16.0s
TYV MLR MLR
comp=Z,4μm,16.0s
PBA Port Blair 30.93 252 PFAKE 16 44 30.0 +13
PBA LR LR
comp=Z,6μm,19.0s
TSI Tuntungan 30.94 232 P **P** **16 44 17.9 +0.9**
LHMI Lhok Sumawe 31.00 237 *e*P **P** **16 44 15.7 -1.9**
comp=Z,58nm,0.8s
LHMI LR LR
comp=Z,3μm,21.0s
PSI Prapat 31.16 231 PFAKE 16 44 30.0 +11
PSI LR LR
comp=Z,4μm,18.0s
TLY Talaya 31.20 337 *e*P **P** **16 44 17.7 -1.3**
comp=Z,97nm,1.3s
TLY *e*PcP **PcP** **16 47 13.7 +0.8**
TLY LR LR
comp=Z,18μm,21.0s
TLY Talaya 31.20 337*c e*P **P** **16 44 18.1 -0.9**
TLY pmax pmax
comp=Z,51nm,0.8s
TLY Talaya 31.20 337 P **P** **16 44 18.1 -0.9**
SNR=26
TLY P **P** **16 44 18.1 -0.9**
SNR=26
IRK Irkutsk 31.45 338 *e*P **P** **16 44 19.5 -1.7**
IRK pmax pmax
comp=Z,106nm,1.6s
KCSI Kotacane, Aceh 31.50 233 P **P** **16 44 26.0 +4.0**
comp=Z,26nm,0.9s,comp=Z,681nm
JMBI JAMBI 31.51 219 P **P** **16 44 24.2 +2.2**
BKNI Bangkinang 31.54 225 PFAKE 16 44 30.0 +7.7
BKNI LR LR
comp=Z,2μm,18.0s
JAY Jayapura 31.72 144 LR LR 16 54 46.6
comp=Z,7μm,21.4s,baz=338,slow=32
MLSI Meulaboh, Aceh 32.03 236 P P 16 44 32.0 +5.3
comp=Z,98nm,0.6s
MNSI Mandailing Nat 32.15 227 P **P** **16 44 28.4 +0.7**
comp=Z,78nm,0.9s,comp=Z,932nm
MOY Mondy 32.19 334 *e*P **P** **16 44 26.0 -1.8**
MOY pmax pmax
comp=Z,79nm,1.8s
SDSI Sungai Dareh 32.27 223 P **P** **16 44 30.3 +1.6**
comp=Z,24nm,0.9s,comp=Z,1μm
GRJI Gresik 32.34 199 P **P** **16 44 32.4 +3.1**
MMRI Maumere 32.49 181 PFAKE 16 44 40.0 +9.4
MMRI LR LR
comp=Z,2μm,20.0s
MMRI Maumere 32.49 181 P **P** **16 44 27.7 -2.9**
RAMN Ramite 32.59 283 *e*P **P** **16 44 32.6 +0.8**
comp=Z,108nm,0.8s
EDFI Ende, Flores 32.62 182 P **P** **16 44 30.1 -1.8**
SRBI Singaraja 32.76 194 P P 16 44 48.3 +15
PDSI Padang 32.85 224 P **P** **16 44 35.3 +1.4**
JIRN Jiri 32.92 284 *e*P **P** **16 44 35.7 +0.9**
comp=Z,176nm,0.7s
PLAI Plampang 33.02 189 P **P** **16 44 34.8 -0.5**
NGJI Ngawi 33.08 201 P **P** **16 44 39.3 +3.5**
comp=Z,196nm,1.0s,comp=Z,3μm
SMRI Semarang 33.13 203 P **P** **16 44 36.1 -0.1**
KRJI Kerinci 33.16 221 P **P** **16 44 39.0 +2.4**
comp=Z,150nm,1.1s,comp=Z,2μm
GSI Gunungsitoli 33.17 231 *e*P **P** **16 44 36.5 -0.1**
comp=Z,84nm,1.3s
GSI *e*PcP **PcP** **16 47 19.9 +1.1**
GSI LR LR
comp=Z,4μm,18.0s
GSI Gunungsitoli 33.17 231 P P 16 44 42.5 +5.9
comp=Z,48nm,0.8s
GUN Gumba 33.19 285 *e*P **P** **16 44 37.9 +0.8**
comp=Z,86nm,0.7s
DNP Denpasar 33.33 193 P **P** **16 44 37.0 -1.0**
JAGI Jajag, Banyuwa 33.37 195 PFAKE 16 44 50.0 +12
JAGI LR LR
comp=Z,2μm,21.0s
LHSI Lahat 33.38 216 P P 16 44 54.7 +16
IGBI Denpasar 33.48 194 P **P** **16 44 36.2 -3.1**
BOK Bokaro 33.53 277 *e*P **P** **16 44 39.9 +0.1**
MDSI Maura Dua 33.59 215 P **P** **16 44 42.6 +2.4**
comp=Z,41nm,0.9s,comp=Z,1μm
PKI Pulchoki 33.61 284 *e*P **P** **16 44 41.0 +0.2**
comp=Z,79nm,0.8s
PKIN Phulchoki 33.62 284 *e*P **P** **16 44 41.1 +0.2**
comp=Z,85nm,0.8s
SOEI Soe 33.64 177 *e*P **P** **16 44 41.1 +0.3**
comp=Z,135nm,0.9s
SOEI Soe 33.64 177 P P 16 44 46.7 +5.9
comp=Z,162nm,1.0s,comp=Z,1μm
KKN Kakani 33.72 284 *e*P **P** **16 44 42.1 +0.5**
comp=Z,119nm,0.7s
DMN Daman 33.88 284 *e*P **P** **16 44 43.5 +0.4**
comp=Z,123nm,0.8s
YOGI Yogyakarta 33.89 202 P **P** **16 44 40.8 -2.1**
UGM Wanagama 33.90 202 *e*P **P** **16 44 43.7 +0.7**
comp=Z,243nm,1.0s
UGM Wanagama 33.90 202 P **P** **16 44 46.3 +3.3**
LEM Lembang 34.01 207 P **P** **16 44 45.6 +1.5**
SISI Saibi 34.05 225 P **P** **16 44 43.8 -0.5**
BATI Baumata 34.07 178 P **P** **16 44 43.9 -0.5**
comp=Z,69nm,0.6s,baz=79,slow=0.8,SNR=7.8
BATI Baumata 34.07 178 P **P** **16 44 42.3 -2.1**
BWNR Bhubaneshwar 34.25 271 *ex* **P** **16 44 41.9 -4.1**
GKN Gorkha 34.28 285 *e*P **P** **16 44 46.6 +0.2**
comp=Z,94nm,0.6s
KASI Kota Agung 34.31 213 P **P** **16 44 47.6 +1.1**
CISI Cisompet, Garu 34.59 207 P **P** **16 44 51.1 +2.1**
WMQ Urumqi 34.70 313 P **P** **16 44 49.8 0.0**
WMQ pP pP 16 45 01.6 0.0
WMQ sP sP 16 45 09.4 +2.4
WMQ PP **PP** **16 46 10.3 +1.3**
WMQ S **S** **16 50 12.1 -4.5**
WMQ ScS **ScS** **16 55 10.2 +2.5**
WMQ pmax pmax
comp=Z,35nm,1.3s
WMQ pmax pmax
comp=Z,690nm,5.1s
WMQ LR LR
comp=Z,12μm,12.7s
WMQ LR LR
comp=Z,14μm,13.7s
WMQ LR LR
comp=Z,12μm,15.5s
WMQ Urumqi 34.70 313 PFAKE 16 45 00.0 +10
WMQ LR LR
comp=Z,6μm,19.0s
DANN Dangsing 35.04 286 *e*P **P** **16 44 53.7 +0.6**
comp=Z,94nm,0.5s
KOLN Koldanda 35.21 285 *e*P **P** **16 44 55.0 +0.5**
comp=Z,131nm,0.8s
MANU Manus Island 35.37 134 PFAKE 16 45 10.0 +14
MANU LR LR
comp=Z,5μm,21.0s
PYUN Piuthan 35.73 285 *e*P **P** **16 44 59.7 +0.7**
comp=Z,138nm,0.6s
SKR Severo-Kuril's 37.08 36 *e*P **P** **16 45 07.8 -2.1**
SKR *e* 16 46 35.4
SKR *e*PPP PPP 16 47 29.7
SKR *e*S **S** **16 50 49.6 -2.9**
SKR *e*SS **SS** **16 53 44.3 +8.2**
SKR pmax pmax
comp=Z,300nm,2.5s
SKR MLR MLR
comp=Z,4μm,18.0s
SKR MLR MLR
comp=Z,4μm,18.0s
DGZ Jazzator, Alta 37.51 322 *i* P **P** **16 45 12.7 -1.0**
DGZ pmax pmax
comp=Z,13nm,1.6s
MTN Manton Dam 37.60 166 *e*PcP **PcP** **16 47 32.9 +1.2**
PATS Pohnpei 38.25 111 PFAKE 16 45 30.0 +10
PATS LR LR
comp=Z,6μm,22.0s
YAK Yakutsk 38.26 5 *e*P **P** **16 45 17.2 -2.5**
comp=Z,78nm,1.0s
YAK LR LR
comp=Z,7μm,19.0s
YAK Yakutsk 38.26 5 *e*P **P** **16 45 15.7 -4.0**
YAK *e**PP **pP** **16 45 25.3 -6.7**
YAK *e*PPP PPP 16 46 53.6
YAK *e*S **S** **16 51 08.4 -1.8**
YAK *e**SS **sS** **16 51 28.7 -0.7**
PEA0B Petropavlovsk- 39.24 33 PFAKE 16 45 40.0 +12
PEA0B LR LR
comp=Z,5μm,19.0s
PETK Petropavlovsk- 39.24 33 P **P** **16 45 26.2 -1.8**
comp=Z,3.3nm,0.6s,baz=224,slow=3.5,SNR=11
PETK LR LR 17 02 32.3
comp=Z,5μm,19.1s,baz=230,slow=38
MK31 Makanchi Array 39.36 315 *e*P **P** **16 45 28.7 -0.5**
comp=Z,56nm,1.0s
MK31 *e*PcP **PcP** **16 47 37.0 +0.1**
MK31 Makanchi Array 39.36 315 *i* P **P** **16 45 28.7 -0.5**
MK31 pmax pmax
comp=Z,83nm,1.1s
MK32 Makanchi Array 39.36 315 *e*PcP **PcP** **16 47 36.4 -0.5**
MK32 *e*ScP **ScP** **16 51 22.9 +1.1**
MK32 *e*ScS **ScS** **16 55 35.1 +1.5**
MKAR Makanchi Array 39.36 315 P **P** **16 45 28.4 -0.8**
comp=Z,24nm,0.6s,baz=100,slow=11,SNR=179
MKAR PcP **PcP** **16 47 36.4 -0.5**
comp=Z,7.5nm,0.6s,baz=86,slow=4.1,SNR=5.4
MKAR ScP **ScP** **16 51 22.8 +1.1**
comp=Z,1.4nm,0.8s,baz=115,slow=5.5,SNR=4.4
MKAR ScS **ScS** **16 55 35.1 +1.5**
comp=Z,1.0nm,0.9s,baz=97,slow=7.4,SNR=4.1
MKAR LR LR 17 03 07.4
comp=Z,11μm,18.8s,baz=100,slow=38
MKAR Makanchi Array 39.36 315 *i* P **P** **16 45 28.6 -0.6**
MKAR pmax pmax
comp=Z,24nm,0.6s
MAKZ Makanchi 39.56 315 *e*P **P** **16 45 30.0 -0.9**
comp=Z,63nm,1.0s
MAKZ *e*PcP **PcP** **16 47 37.9 +0.4**
MAKZ LR LR
comp=Z,13μm,19.0s
MAKZ Makanchi 39.56 315 P **P** **16 45 30.0 -0.9**
MAKZ pmax pmax
comp=Z,84nm,1.2s
PET Petropavlovsk 39.67 34 *e*P **P** **16 45 30.0 -1.6**
comp=Z,71nm,1.0s
PET LR LR
comp=Z,3μm,20.0s
PET Petropavlovsk 39.67 34*c i*P **P** **16 45 29.4 -2.2**
PET *e*S **S** **16 51 28.3 -3.4**
PET pmax pmax
comp=Z,300nm,6.1s
PET pmax pmax
comp=Z,300nm,15.8s
PET MLR MLR
comp=Z,4μm,20.0s
PET MLR MLR
comp=Z,3μm,19.0s
DDI Dehra Dun 39.95 289 *e*P **P** **16 45 32.7 -1.7**
RABL Rabaul 40.19 130 *e*P **P** **16 45 36.3 -0.1**
comp=Z,226nm,1.1s
RABL LR LR
comp=Z,4μm,22.0s
PDGK Podgornoye 40.19 309 P **P** **16 45 35.8 -0.5**
PDGK pmax pmax
comp=Z,130nm,0.9s
NGP Nagpur 40.23 275 *e*P **P** **16 45 36.4 -0.3**
NGP IAmb IAmb 16 45 39.1
comp=Z,2μm,4.6s
MA2 Magadan 40.61 22 P **P** **16 45 39.4 +0.1**
comp=Z,5.7nm,0.8s,baz=190,slow=9.7,SNR=3.4
MA2 PcP **PcP** **16 47 40.4 -0.1**
comp=Z,4.2nm,0.5s,baz=147,slow=3.8,SNR=5.0
MA2 Magadan 40.61 22 *e*P **P** **16 45 39.4 +0.1**
MA2 *e*PcP **PcP** **16 47 40.4 -0.1**

MA2				LR	LR		
	comp=Z,9μm,20.0s						
MA2	**Magadan**	**40.61**	**22**	*e*P	**P**	**16 45 39.4**	**+0.1**
MA2				*e*		16 47 40.4	
MA2				MLR	MLR		
	comp=Z,9μm,20.0s						
SMLA	**Simla**	**40.69**	**290**	*e*P	**P**	**16 45 39.5**	**-0.8**
PMG	**Port Moresby**	**40.99**	**141**	P	**P**	**16 45 44.1**	**+1.1**
	comp=Z,26nm,0.9s,baz=254,slow=7.5,SNR=3.3						
PMG				LR	LR	17 02 20.8	
	comp=Z,3μm,19.9s,baz=311,slow=36						
PMG	**Port Moresby**	**40.99**	**141**	PFAKE		16 45 50.0	+7.1
PMG				LR	LR		
	comp=Z,4μm,20.0s						
PMG	**Port Moresby**	**40.99**	**141**	*i* P	**P**	**16 45 43.0**	**+0.1**
PMG				pmax	pmax		
	comp=Z,202nm,1.1s						
WAKE	**Wake Island**	**41.06**	**88**	PFAKE		16 45 50.0	+6.5
WAKE				LR	LR		
	comp=Z,2μm,22.0s						
ZAA0	**Zalesovo Array**	**41.08**	**327**	*e*P	**P**	**16 45 41.5**	**-1.7**
	comp=Z,35nm,0.8s						
ZAA0				*e*PcP	**PcP**	**16 47 41.4**	**-0.8**
ZAA0				LR	LR		
	comp=Z,15μm,21.0s						
ZALV	**Zalesovo Beam**	**41.08**	**327**	P	**P**	**16 45 41.3**	**-2.0**
	comp=Z,23nm,0.5s,baz=113,slow=8.1,SNR=57						
ZALV				PcP	**PcP**	**16 47 40.5**	**-1.7**
	comp=Z,12nm,0.6s,baz=121,slow=3.7,SNR=6.8						
ZALV				ScP	**ScP**	**16 51 30.5**	**+2.3**
	comp=Z,1.9nm,0.6s,baz=113,slow=3.4,SNR=4.0						
ZALV				PKiKP	**PKiKP**	**16 54 49.0**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=226,slow=1.3,SNR=3.7						
ZALV				LR	LR	17 04 05.3	
	comp=Z,19μm,18.0s,baz=130,slow=38						
ZAA1	**Zalesovo Array**	**41.08**	**327**	*e*PcP	**PcP**	**16 47 40.5**	**-1.7**
ZAA1				*e*ScP	**ScP**	**16 51 30.5**	**+2.3**
BHPL	**Bhopal**	**41.29**	**278**	*e*P	**P**	**16 45 45.5**	**0.0**
BHPL				IAmb	IAmb	16 45 48.8	
	comp=Z,16nm,0.9s						
DHRM	**DHARAMSHALA**	**41.40**	**292**	*e*P	**P**	**16 45 46.8**	**+0.3**
DHRM				IAmb	IAmb	16 45 48.8	
	comp=Z,51nm,1.0s						
HYB	**Hyderabad**	**41.62**	**269**	*i* P	**P**	**16 45 50.0**	**+1.7**
HYB				*e*S	**S**	**16 52 00.0**	**-1.6**
AAA	**Alma-Ata**	**42.00**	**309**	*e*P	**P**	**16 45 52.2**	**+1.1**
AAA				*e*S	**S**	**16 52 08.5**	**+1.8**
AAA				pmax	pmax		
	comp=Z,500nm,5.2s						
AAA				smax	smax		
	comp=N,300nm,10.4s						
AAA				MLR	MLR		
	comp=Z,4μm,14.0s						
FITZ	**Fitzroy Crossi**	**42.00**	**176**	P	**P**	**16 45 50.4**	**-0.7**
	comp=Z,38nm,1.2s,baz=1.7,slow=6.4,SNR=15						
FITZ				LR	LR	17 05 56.9	
	comp=Z,491nm,18.4s,baz=346,slow=40						
KSH	**Kashi**	**42.08**	**303**	P	**P**	**16 45 55.6**	**+3.7**
KSH				sP	sP	16 46 09.8	+0.3
KSH				PP	**PP**	**16 47 37.0**	**+7.2**
KSH				S	**S**	**16 52 14.1**	**+5.9**
KSH				SS	**SS**	**16 55 17.9**	**+1.1**
KSH				pmax	pmax		
	comp=Z,100nm,1.0s						
KSH				pmax	pmax		
	comp=Z,2μm,8.0s						
KSH				LR	LR		
	comp=Z,8μm,13.0s						
KSH				LR	LR		
	comp=Z,27μm,19.8s						
KSH				LR	LR		
	comp=Z,25μm,17.0s						
ULHL	**Ulahol**	**42.30**	**307**	P	**P**	**16 45 54.8**	**+1.1**
	SNR=48						
NVS	**Novosibirsk**	**42.33**	**327**	*e*P	**P**	**16 45 51.8**	**-1.7**
NVS				*e*S	**S**	**16 52 05.4**	**-5.7**
NVS				*e*		16 55 47.8	
NVS				pmax	pmax		
	comp=Z,41nm,1.3s						
NVS				pmax	pmax		
	comp=N,24nm,1.8s						
NVS				pmax	pmax		
	comp=E,25nm,1.2s						
NVS				smax	smax		
	comp=E,26nm,1.9s						
NRN	**Naryn**	**42.34**	**306**	*e*PcP	**PcP**	**16 47 48.3**	**+1.3**
NRN				LR	LR		
	comp=Z,10μm,21.0s						
BOOM	**Boomskoye usch**	**42.56**	**307**	*e*P	**P**	**16 45 56.2**	**+0.4**
	comp=Z,39nm,1.2s						
BOOM				*e*PcP	**PcP**	**16 47 48.9**	**+1.3**
BOOM	**Boomskoye usch**	**42.56**	**307**	*e*P	**P**	**16 45 56.2**	**+0.4**
BOOM				*e*		16 47 48.9	
BOOM				pmax	pmax		
	comp=Z,39nm,1.2s						
COEN	**Coen**	**42.78**	**150**	*e*P	**P**	**16 45 59.0**	**+1.5**
	comp=Z,88nm,1.1s						
COEN				LR	LR		
	comp=Z,4μm,21.0s						
TKM2	**Tokmak 2**	**42.89**	**308**	P	**P**	**16 45 59.6**	**+1.1**
	SNR=80						
TKM2	**Tokmak 2**	**42.89**	**308**	P	**P**	**16 45 59.3**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,78nm,1.0s						
KZA	**Kyzart**	**42.99**	**307**	P	**P**	**16 46 01.2**	**+1.6**
	SNR=53						
KURK	**Kurchatov**	**43.04**	**320**	*e*P	**P**	**16 45 59.2**	**-0.1**
	comp=Z,57nm,1.2s						
KURK				LR	LR		
	comp=Z,6μm,19.0s						
KURK	**Kurchatov**	**43.04**	**320**	*c*e*P	**P**	**16 45 58.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,66nm,1.7s						
KURK	**Kurchatov**	**43.04**	**320**	P	**P**	**16 45 58.7**	**-0.7**
	SNR=27						
KURK				P	**P**	**16 45 58.7**	**-0.7**
	SNR=27						
KURBB	**Kurchatov Arra**	**43.06**	**320**	P	**P**	**16 45 58.1**	**-1.4**
	comp=Z,15nm,0.6s,baz=112,slow=8.5,SNR=53						
KURBB				PcP	**PcP**	**16 47 48.4**	**-0.5**
	comp=Z,7.1nm,0.6s,baz=113,slow=3.7,SNR=6.2						
KBK	**Karagaybulak**	**43.31**	**307**	P	**P**	**16 46 03.1**	**+1.2**
	SNR=27						
PALK	**Pallekele**	**43.48**	**254**	PFAKE		16 46 20.0	+17
PALK				LR	LR		
	comp=Z,3μm,21.0s						
CHMS	**Chumysh**	**43.51**	**308**	P	**P**	**16 46 04.0**	**+0.7**
	SNR=19						
UCH	**Uchtor**	**43.56**	**307**	P	**P**	**16 46 05.9**	**+1.7**
	SNR=54						
FRU1	**Bishkek**	**43.57**	**307**	PFAKE		16 46 20.0	+16
FRU1				LR	LR		
	comp=Z,9μm,18.0s						
AAK	**Ala-Archa**	**43.64**	**307**	P	**P**	**16 46 05.5**	**+1.0**
	SNR=10						
AAK	**Ala-Archa**	**43.64**	**307**	*e*P	**P**	**16 46 05.5**	**+1.0**
	comp=Z,33nm,1.0s						
AAK				LR	LR		
	comp=Z,12μm,19.0s						
AAK	**Ala-Archa**	**43.64**	**307**	*i* P	**P**	**16 46 04.8**	**+0.3**
	SNR=12						
AAK	**Ala-Archa**	**43.64**	**307**	*e*P	**P**	**16 46 05.5**	**+1.0**
AAK				pmax	pmax		
	comp=Z,33nm,1.0s						
AAK				MLR	MLR		
	comp=Z,12μm,19.0s						
AAK	**Ala-Archa**	**43.64**	**307**	P	**P**	**16 46 05.5**	**+1.0**
	SNR=28						
AAK				P	**P**	**16 46 05.5**	**+1.0**
	SNR=28						
SEY	**Seymchan**	**43.65**	**19**	P	**P**	**16 46 03.1**	**-0.9**
	comp=Z,4.1nm,0.6s,baz=213,slow=3.7,SNR=18						
SEY				PcP	**PcP**	**16 47 51.0**	**+0.4**
	comp=Z,3.6nm,0.5s,baz=218,slow=5.3,SNR=6.1						
SEY	**Seymchan**	**43.65**	**19**	*i* P	**P**	**16 46 03.5**	**-0.6**
USP	**Ospenovka**	**43.74**	**308**	P	**P**	**16 46 05.8**	**+0.6**
	SNR=10						
NIL	**Nilore**	**43.95**	**294**	*e*P	**P**	**16 46 07.5**	**+0.6**
	comp=Z,73nm,0.7s						
NIL				LR	LR		
	comp=Z,3μm,19.0s						
NIL	**Nilore**	**43.95**	**294**	*e*P	**P**	**16 46 07.5**	**+0.6**
NIL				pmax	pmax		
	comp=Z,73nm,0.7s						
NIL				MLR	MLR		
	comp=Z,3μm,19.0s						
AML	**Almayashu**	**44.15**	**306**	P	**P**	**16 46 10.2**	**+1.4**
	SNR=27						
EKS2	**Erkin-Say**	**44.16**	**307**	P	**P**	**16 46 09.5**	**+0.9**
	SNR=18						
WRAB	**Tennant Creek**	**45.19**	**164**	*e*P	**P**	**16 46 15.4**	**-1.4**
	comp=Z,58nm,0.8s						
WRAB	**Tennant Creek**	**45.19**	**164**	*e*P	**P**	**16 46 15.4**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,58nm,0.8s						
WRA	**Warramunga Arr**	**45.19**	**164**	P	**P**	**16 46 17.4**	**+0.5**
	comp=Z,22nm,0.7s,baz=341,slow=9.1,SNR=12						
WB2	**Warramunga Arr**	**45.20**	**164**	*e*P	**P**	**16 46 17.0**	**+0.1**
	comp=Z,76nm,0.9s						
PSA00	**Pilbara Seismi**	**45.44**	**184**	*e*P	**P**	**16 46 18.3**	**-0.4**
	comp=Z,43nm,0.8s						
POO	**Poona**	**45.61**	**273**	*e*P	**P**	**16 46 19.0**	**-1.4**
POO				IAmb	IAmb	16 46 23.1	
	comp=Z,55nm,1.2s						
KK31	**Karatay Array**	**46.60**	**307**	*e*P	**P**	**16 46 28.1**	**+0.3**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KBL	**Kabul**	**47.42**	**296**	*e*P	**P**	**16 46 35.6**	**+1.1**
	comp=Z,110nm,0.8s						
KBL				LR	LR		
	comp=Z,3μm,19.0s						
TIXI	**Tiksi**	**47.75**	**3**	P	**P**	**16 46 33.5**	**-2.8**
	comp=Z,8.0nm,0.6s,baz=139,slow=5.8,SNR=4.8						
TIXI				ScP	**ScP**	**16 52 02.2**	**+6.9**
	comp=Z,1.2nm,0.3s,baz=92,slow=6.5,SNR=3.3						
TIXI	**Tiksi**	**47.75**	**3**	*e*P	**P**	**16 46 34.5**	**-1.8**
	comp=Z,29nm,0.9s						
TIXI				*e*PcP	**PcP**	**16 48 05.2**	**+0.5**
TIXI				LR	LR		
	comp=Z,23μm,18.0s						
TIXI	**Tiksi**	**47.75**	**3**	*c*e*P	**P**	**16 46 34.0**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,16nm,0.8s						
SMY	**Shemya**	**48.08**	**40**	PFAKE		16 46 50.0	+11
SMY				LR	LR		
	comp=Z,2μm,21.0s						
BHJ	**Bhuj**	**48.29**	**280**	*e*P	**P**	**16 46 41.1**	**-0.1**
BVAR	**Borovoye Array**	**48.62**	**320**	P	**P**	**16 46 42.0**	**-1.3**
	comp=Z,9.4nm,0.5s,baz=107,slow=7.8,SNR=49						
BVAR				PcP	**PcP**	**16 48 08.0**	**-0.2**
	comp=Z,15nm,0.6s,baz=103,slow=3.7,SNR=7.5						
BVAR				ScP	**ScP**	**16 52 02.3**	**+3.0**
	comp=Z,1.6nm,0.6s,baz=98,slow=4.4,SNR=4.9						
ASAR	**Alice Springs**	**48.68**	**166**	P	**P**	**16 46 44.6**	**+0.6**
	comp=Z,16nm,0.9s,baz=353,slow=12,SNR=111						
ASAR				S	**S**	**16 53 47.5**	**+4.2**
	comp=Z,2.7nm,1.1s,baz=352,slow=22,SNR=7.1						
ASAR				LR	LR	17 07 39.7	
	comp=Z,1μm,20.3s,baz=338,slow=36						
ASAR				PKKP	**PKKPdf**	**17 09 24.1**	**-5.3**
	comp=Z,0.9nm,1.1s,baz=147,slow=12,SNR=4.7						
ASAR				P4KPbc		17 24 22.8	
	comp=Z,0.5nm,0.9s,baz=357,slow=4.1,SNR=4.7						
BRVK	**Borovoye**	**48.69**	**320**	*e*P	**P**	**16 46 43.1**	**-0.7**
	comp=Z,38nm,0.8s						
BRVK				LR	LR		
	comp=Z,4μm,19.0s						
BRVK	**Borovoye**	**48.69**	**320**	*e*P	**P**	**16 46 43.1**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,37nm,0.8s						
BRVK				MLR	MLR		
	comp=Z,4μm,19.0s						
BRVK	**Borovoye**	**48.69**	**320**	P	**P**	**16 46 43.2**	**-0.6**
	SNR=21						
BRVK				P	**P**	**16 46 43.2**	**-0.6**
	SNR=21						
HNR	**Honiara**	**49.35**	**128**	LR	LR	17 05 58.2	
	comp=Z,2μm,20.7s,baz=298,slow=34						
HNR	**Honiara**	**49.35**	**128**	PFAKE		16 47 00.0	+11
HNR				LR	LR		
	comp=Z,2μm,20.0s						
CTA	**Charters Tower**	**49.54**	**150**	P	**P**	**16 46 53.0**	**+2.3**
	comp=Z,6.5nm,0.9s,baz=322,slow=9.8,SNR=3.9						
CTA				LR	LR	17 05 48.8	
	comp=Z,3μm,21.5s,baz=348,slow=34						
CTAO	**Charters Tower**	**49.54**	**150**	*e*P	**P**	**16 46 52.3**	**+1.6**
	comp=Z,53nm,1.1s						
CTAO				LR	LR		
	comp=Z,5μm,22.0s						
CTAO	**Charters Tower**	**49.54**	**150**	*e*P	**P**	**16 46 52.3**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,53nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,5μm,22.0s						
NRIK	**Noril'sk**	**49.88**	**345**	P	**P**	**16 46 50.2**	**-2.4**
	comp=Z,13nm,0.8s,baz=120,slow=8.9,SNR=12						
NRIK				PcP	**PcP**	**16 48 13.8**	**+1.3**
	comp=Z,15nm,0.7s,baz=124,slow=8.2,SNR=3.8						
NRIK				LR	LR	17 10 30.4	
	comp=Z,11μm,18.6s,baz=141,slow=39						
BILL	**Bilibino**	**51.36**	**19**	*e*P	**P**	**16 47 03.1**	**-0.7**
BILL				*e*PcP	**PcP**	**16 48 19.0**	**+1.1**
BILL				LR	LR		
	comp=Z,9μm,19.0s						
BILL	**Bilibino**	**51.36**	**19⇓**	*e*P	**P**	**16 47 02.4**	**-1.4**
BILL				*e*		16 48 17.7	
BILL				*e*		16 48 57.6	
BILL				*i* S	**S**	**16 54 12.5**	**-7.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BILL				MLR	MLR		
	comp=Z,8μm,18.0s						
ADK	**Adak**	**53.45**	**42**	*e*P	**P**	**16 47 18.9**	**-0.6**
	comp=Z,25nm,1.0s						
ADK				LR	LR		
	comp=Z,2μm,22.0s						
ADK	**Adak**	**53.45**	**42**	*e*P	**P**	**16 47 18.9**	**-0.6**
ADK				pmax	pmax		
	comp=Z,25nm,1.0s						
ADK				MLR	MLR		
	comp=Z,2μm,22.0s						
TARA	**Tarawa**	**53.60**	**107**	PFAKE		16 47 30.0	+8.8
TARA				LR	LR		
	comp=Z,2μm,21.0s						
GSTR	**Great Sitkin T**	**53.86**	**42**	*e*P	**P**	**16 47 22.9**	**+0.4**
AB31	**Akbulak array**	**54.48**	**314**	P	**P**	**16 47 26.0**	**-1.1**
AB31				pmax	pmax		
	comp=Z,32nm,0.9s						
ABKAR	**Akbulak array**	**54.48**	**314**	*e*P	**P**	**16 47 27.2**	**+0.1**
	comp=Z,40nm,1.0s						
FORT	**Forrest**	**54.77**	**174**	*e*P	**P**	**16 47 30.5**	**+1.2**
	comp=Z,118nm,0.9s						
SVE	**Sverdlovsk**	**54.93**	**324⇓**	*e*P	**P**	**16 47 29.2**	**-1.1**
SVE				*e*		16 49 30.4	
SVE				*e*PPP	PPP	16 50 50.3	
SVE				*e*S	**S**	**16 55 06.8**	**-1.7**
SVE				pmax	pmax		
	comp=Z,40nm,1.1s						
SVE				MLR	MLR		
	comp=Z,8μm,17.0s						
ATKA	**Atka Island**	**55.01**	**42**	*e*P	**P**	**16 47 30.2**	**-0.7**
	comp=Z,48nm,0.9s						
ATKA				LR	LR		
	comp=Z,1μm,20.0s						
GEYT	**Alibeck**	**56.01**	**301**	P	**P**	**16 47 39.5**	**+1.1**
	comp=Z,38nm,0.7s,baz=86,slow=2.1,SNR=97						
GEYT				LR	LR	17 15 52.8	
	comp=Z,6μm,19.3s,baz=150,slow=41						
GYA0B	**ALIBECK ARRAY**	**56.01**	**301**	PFAKE		16 47 50.0	+12
GYA0B				LR	LR		
	comp=Z,6μm,20.0s						
ARU	**Arti**	**56.01**	**323**	*e*P	**P**	**16 47 36.6**	**-1.4**
	comp=Z,31nm,1.0s						
ARU				LR	LR		
	comp=Z,6μm,21.0s						
ARU	**Arti**	**56.01**	**323**	*c i*P	**P**	**16 47 36.5**	**-1.4**
ARU						16 48 31.8	
ARU						16 49 42.9	
ARU				PPP	PPP	16 50 54.2	
ARU				S	**S**	**16 55 22.7**	**-0.1**
ARU				pmax	pmax		
	comp=Z,12nm,0.6s						
ARU				MLR	MLR		
	comp=Z,5μm,21.0s						
EIDS	**Eidsvold**	**56.33**	**149**	*e*P	**P**	**16 47 41.2**	**+0.6**
	comp=Z,21nm,1.0s						
EIDS				LR	LR		
	comp=Z,2μm,19.0s						
SPIA	**Saint Paul Isl**	**57.75**	**36**	PFAKE		16 48 00.0	+10
SPIA				LR	LR		
	comp=Z,2μm,20.0s						
WSAR	**Wadi Sarin**	**58.16**	**283**	P	**P**	**16 47 55.3**	**+1.5**
	SNR=5.6						
NIKH	**Nikolski High**	**58.31**	**41**	*e*P	**P**	**16 47 52.3**	**-2.0**
	comp=Z,80nm,0.9s						
NIKH				LR	LR		
	comp=Z,2μm,22.0s						
STKA	**Stephens Creek**	**58.50**	**161**	P	**P**	**16 47 56.8**	**+1.0**
	comp=Z,8.3nm,0.7s,baz=329,slow=7.9,SNR=14						
STKA				LR	LR	17 14 07.0	
	comp=Z,2μm,20.5s,baz=333,slow=37						
BIDO	**Bidbid**	**58.53**	**284**	P	**P**	**16 47 58.6**	**+2.2**
	SNR=12						
BIDO				P	**P**	**16 47 58.6**	**+2.2**
	SNR=12						
BIDO				P	**P**	**16 47 58.6**	**+2.2**
	SNR=12						
SMDO	**Samad**	**58.72**	**283**	P	**P**	**16 48 00.4**	**+2.6**
MHTO	**MHTO**	**59.35**	**281**	P	**P**	**16 48 03.2**	**+1.1**
MHTO				P	**P**	**16 48 03.2**	**+1.1**
MHTO				P	**P**	**16 48 03.2**	**+1.1**
MHTO				P	**P**	**16 48 03.2**	**+1.1**
MHTO				P	**P**	**16 48 03.2**	**+1.1**
MHTO				P	**P**	**16 48 03.2**	**+1.1**
BANOM	**Banah**	**59.56**	**287**	P	**P**	**16 48 04.7**	**+1.2**
BANOM				P	**P**	**16 48 04.7**	**+1.2**
SHME	**Shamm**	**59.67**	**287**	P	**P**	**16 48 05.6**	**+1.4**
MDH	**Madha**	**59.71**	**286**	P	**P**	**16 48 04.2**	**-0.3**
SOHO	**SOHO**	**59.79**	**285**	P	**P**	**16 48 06.0**	**+1.0**
	SNR=9.5						
SOHO				P	**P**	**16 48 06.0**	**+1.0**
	SNR=9.5						
SOHO				P	**P**	**16 48 06.0**	**+1.0**
	SNR=9.5						
MSFE	**Esma-Masafi**	**59.82**	**286**	P	**P**	**16 48 06.3**	**+1.1**
UOSS	**Minazif**	**59.88**	**286**	*e*P	**P**	**16 48 04.7**	**-1.0**
	comp=Z,86nm,1.9s						
UOSS				LR	LR		
	comp=Z,2μm,21.0s						
UOSS	**Minazif**	**59.88**	**286**	P	**P**	**16 48 06.3**	**+0.7**
UOSS	**Minazif**	**59.88**	**286**	P	**P**	**16 48 06.3**	**+0.7**
UOSS				P	**P**	**16 48 06.3**	**+0.7**
UOSS				P	**P**	**16 48 06.3**	**+0.7**
HATD	**Hatta, Dubai**	**59.97**	**286**	*i* P	**P**	**16 48 07.3**	**+1.0**
	SNR=7.5						
HATD	**Hatta, Dubai**	**59.97**	**286**	P	**P**	**16 48 07.9**	**+1.5**
	SNR=6.9						
HATD				P	**P**	**16 48 07.9**	**+1.5**
	SNR=6.9						
HATD				P	**P**	**16 48 07.9**	**+1.5**
	SNR=6.9						
ARQ	**Araqi**	**60.01**	**284**	P	**P**	**16 48 09.1**	**+2.5**
ASHO	**Ashiyiah**	**60.07**	**286**	*i* P	**P**	**16 48 07.8**	**+0.8**
	SNR=14						
ASHO	**Ashiyiah**	**60.07**	**286**	P	**P**	**16 48 08.4**	**+1.3**
	SNR=7.6						
ASHO				P	**P**	**16 48 08.4**	**+1.3**
	SNR=7.6						
NAZ	**Nazwa, Dubai**	**60.34**	**286**	P	**P**	**16 48 09.6**	**+0.8**
FAQ	**Al Faqa, Dubai**	**60.47**	**286**	*i* P	**P**	**16 48 09.8**	**+0.1**
	SNR=7.5						
ALNE	**Al Ain**	**60.50**	**285**	*i* P	**P**	**16 48 11.4**	**+1.4**
	SNR=13						
ASUD	**Al Ashush, Dub**	**60.73**	**286**	P	**P**	**16 48 12.6**	**+1.2**
ASUD	**Al Ashush, Dub**	**60.73**	**286**	P	**P**	**16 48 12.7**	**+1.2**
ASUD				P	**P**	**16 48 12.7**	**+1.2**
ANM	**Nome**	**60.81**	**28**	*e*P	**P**	**16 48 11.6**	**+0.2**
	comp=Z,15nm,0.9s						
ANM				LR	LR		
	comp=Z,2μm,18.0s						
ANM	**Nome**	**60.81**	**28**	*e*P	**P**	**16 48 11.6**	**+0.2**
ANM				pmax	pmax		
	comp=Z,15nm,0.9s						
ANM				MLR	MLR		
	comp=Z,2μm,18.0s						
ARMA	**Armidale**	**60.89**	**151**	PFAKE		16 48 20.0	+7.6
ARMA				LR	LR		
	comp=Z,3μm,22.0s						
FALS	**False Pass**	**61.52**	**39**	PFAKE		16 48 30.0	+14
FALS				LR	LR		
	comp=Z,2μm,22.0s						
RDOG	**Red Dog Mine**	**62.12**	**24**	PFAKE		16 48 30.0	+10
RDOG				LR	LR		
	comp=Z,3μm,19.0s						
DZM	**Mont Dzumac**	**62.58**	**134**	P	**P**	**16 48 27.4**	**+3.5**
	comp=Z,6.2nm,0.8s,baz=258,slow=20,SNR=2.4						
DZM	**Mont Dzumac**	**62.58**	**134**	*e*S	**S**	**16 56 48.5**	**-0.2**
	comp=Z,6μm,28.5s						
DZM				*e*SS	**SS**	**17 00 54.2**	**+0.2**
	comp=Z,2μm,24.9s						
DZM				*e*LR	LR	17 07 05.9	
	comp=Z,12μm,25.1s						
DZM	**Mont Dzumac**	**62.58**	**134**	*e*P	**P**	**16 48 22.6**	**-1.4**
	comp=Z,52nm,1.3s						
DZM				LR	LR		
	comp=Z,4μm,22.0s						
PRGR	**Permogore**	**62.98**	**329**	*e*P	**P**	**16 48 24.0**	**-1.9**
PRGR				pmax	pmax		
	comp=Z,28nm,0.6s						
MAK	**Makhachkala**	**63.42**	**307**	*e*P	**P**	**16 48 28.3**	**-0.9**
MAK				*e*		16 50 50.3	
MAK				*e*S	**S**	**16 56 58.2**	**-0.4**
MAK				*e*SS	**SS**	**17 01 04.9**	**-0.9**
MAK				pmax	pmax		
	comp=Z,180nm,0.9s						
MAK				MLR	MLR		
	comp=Z,2μm,17.0s						
AKT	**Akhty**	**63.49**	**306**	*e*P	**P**	**16 48 30.4**	**+0.5**
AKT				*e*		16 49 06.7	
AKT				pmax	pmax		
	comp=Z,33nm,0.8s						
PINNC	**Pines Island,**	**63.62**	**133**	PFAKE		16 48 40.0	+9.3
PINNC				LR	LR		
	comp=Z,4μm,22.0s						
GROC	**Groznyy**	**64.62**	**308**	*e*P	**P**	**16 48 36.1**	**-1.0**
GROC				*e*		16 49 11.5	
GROC				*e*		16 50 56.3	
GROC				*e*S	**S**	**16 57 15.3**	**+1.8**
GROC				pmax	pmax		
	comp=Z,92nm,1.3s						
SVW2	**Sparrevohn**	**65.31**	**32**	*e*P	**P**	**16 48 42.6**	**+1.4**
	comp=Z,27nm,1.4s						
GNI	**Garni**	**65.97**	**305**	LR	LR	17 22 37.3	
	comp=Z,1μm,19.8s,baz=94,slow=41						
GNI	**Garni**	**65.97**	**305**	PFAKE		16 49 00.0	+14
GNI				LR	LR		
	comp=Z,1μm,18.0s						
GNI	**Garni**	**65.97**	**305**	P	**P**	**16 48 47.0**	**+0.9**
GNI	**Garni**	**65.97**	**305**	*i* P	**P**	**16 48 47.2**	**+1.1**
GNI				pmax	pmax		
	comp=Z,36nm,1.2s						
KLMR	**Klimovskoe**	**65.98**	**328**	*e*P	**P**	**16 48 44.6**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,37nm,1.3s						
VRH	**Novokhopyorsk**	**66.05**	**317**	*e*P	**P**	**16 48 47.4**	**+1.2**
VRH				pmax	pmax		
	comp=Z,50nm,0.9s						
VRH				MLR	MLR		
	comp=Z,3μm,16.0s						
ZEI	**Tsey**	**66.06**	**308**	*e*P	**P**	**16 48 45.6**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,34nm,1.1s						
GOF	**Gofitskoye**	**66.23**	**310⇑**	*e*P	**P**	**16 48 51.3**	**+3.8**
GOF				pmax	pmax		
	comp=Z,37nm,0.9s						
TMCR	**Tamitsa**	**66.29**	**332**	*e*P	**P**	**16 48 47.8**	**+0.3**
TMCR				pmax	pmax		
	comp=Z,33nm,0.6s						
KBZ	**Khabaz**	**66.59**	**309**	P	**P**	**16 48 50.0**	**+0.2**
	comp=Z,16nm,1.1s,baz=101,slow=7.1,SNR=7.8						
KBZ				LR	LR	17 21 35.2	
	comp=Z,4μm,19.2s,baz=65,slow=39						
AKH	**Akhalkalaki**	**66.63**	**306**

KIV				P	P	16 48 51.2	+0.6
	SNR=15						
NEY	**Neytrino**	**66.81**	**309**	*i* P	**P**	**16 48 51.3**	**-0.2**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OHAK	**Old Harbor**	**66.96**	**36**	PFAKE		16 49 00.0	+8.2
OHAK				LR	LR		
	comp=Z,2μm,22.0s						
TOLK	**Toolik Lake Re**	**67.04**	**23**	PFAKE		16 49 00.0	+7.7
TOLK				LR	LR		
	comp=Z,4μm,19.0s						
TOLK	**Toolik Lake Re**	**67.04**	**23**	P	**P**	**16 48 52.7**	**+0.4**
	baz=277						
BPAW	**Bear Paw Mtn.**	**67.08**	**28**	PFAKE		16 49 00.0	+7.4
BPAW				LR	LR		
	comp=Z,2μm,20.0s						
LVZ	**Lovozero**	**67.21**	**336**	PFAKE		16 49 10.0	+17
LVZ				LR	LR		
	comp=Z,5μm,21.0s						
KDAK	**Kodiak Island**	**67.24**	**35**	*e*P	**P**	**16 48 53.8**	**+0.2**
	comp=Z,110nm,1.5s						
KDAK				LR	LR		
	comp=Z,2μm,21.0s						
KDAK	**Kodiak Island**	**67.24**	**35**	*e*P	**P**	**16 48 53.8**	**+0.2**
KDAK				pmax	pmax		
	comp=Z,110nm,1.5s						
KDAK				MLR	MLR		
	comp=Z,2μm,21.0s						
TRF	**Thorofare Moun**	**67.48**	**29**	PFAKE		16 49 10.0	+15
TRF				LR	LR		
	comp=Z,400nm,20.0s						
LPSR	**Galich'ya Gora**	**67.52**	**319**	*e*P	**P**	**16 48 54.7**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LPSR				MLR	MLR		
	comp=Z,2μm,17.0s						
SUA	**Susitna One**	**67.58**	**31**	PFAKE		16 49 10.0	+14
SUA				LR	LR		
	comp=Z,2μm,18.0s						
VORD	**Divnogorie**	**67.60**	**317**	*e*P	**P**	**16 48 54.8**	**-1.3**
VORD				pmax	pmax		
	comp=Z,20nm,1.6s						
VORD				MLR	MLR		
	comp=Z,2μm,16.0s						
VSR	**Storozhevoye**	**67.63**	**317**	*i* P	**P**	**16 48 55.5**	**-0.8**
VSR				pmax	pmax		
	comp=Z,52nm,1.6s						
MOS	**Moscow**	**67.71**	**322**	*e*P	**P**	**16 48 55.5**	**-1.2**
MOS				*e*		16 51 24.5	
MOS				*e*S	**S**	**16 57 47.8**	**-2.8**
MOS				pmax	pmax		
	comp=Z,37nm,0.6s						
MOS				MLR	MLR		
	comp=N,2μm,17.0s						
MOS				MLR	MLR		
	comp=Z,4μm,17.0s						
MOS				MLR	MLR		
	comp=E,3μm,16.0s						
BWN	**Browne**	**67.72**	**28**	PFAKE		16 49 10.0	+13
BWN				LR	LR		
	comp=Z,2μm,18.0s						
APA	**Apatity**	**67.73**	**336**	⇓*i*P	**P**	**16 48 55.2**	**-1.4**
APA				*i*		16 49 08.0	
APA				*i* PPP	PPP	16 53 06.0	
APA				*i* S	**S**	**16 57 46.0**	**-4.5**
APA				*i* PS		16 58 06.0	
APA				*i*		16 58 28.0	
APA				*i* SS	**SS**	**17 02 04.0**	**-7.6**
APA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,5μm,18.0s						
MCK	**McKinley**	**68.03**	**29**	PFAKE		16 49 10.0	+11
MCK				LR	LR		
	comp=Z,2μm,18.0s						
RND	**Reindeer**	**68.12**	**29**	PFAKE		16 49 10.0	+11
RND				LR	LR		
	comp=Z,2μm,19.0s						
RC01	**Rabbit Creek A**	**68.12**	**32**	PFAKE		16 49 10.0	+11
RC01				LR	LR		
	comp=Z,2μm,19.0s						
WRH	**Wood River Hil**	**68.26**	**28**	PFAKE		16 49 10.0	+10
WRH				LR	LR		
	comp=Z,2μm,19.0s						
TCOL	**CIGO, UAF Yank**	**68.29**	**27**	P	**P**	**16 49 00.2**	**+0.1**
	baz=280						
COLA	**College**	**68.29**	**27**	PFAKE		16 49 10.0	+10
COLA				LR	LR		
	comp=Z,2μm,19.0s						
PMR	**Palmer**	**68.32**	**31**	PFAKE		16 49 10.0	+10
PMR				LR	LR		
	comp=Z,2μm,22.0s						
CCB	**Clear Creek Bu**	**68.35**	**28**	PFAKE		16 49 10.0	+9.5
CCB				LR	LR		
	comp=Z,2μm,18.0s						
GHO	**Glory Hole Cre**	**68.38**	**31**	PFAKE		16 49 10.0	+9.1
GHO				LR	LR		
	comp=Z,2μm,20.0s						
OBN	**Obninsk**	**68.42**	**322**	PFAKE		16 49 10.0	+8.9
OBN				LR	LR		
	comp=Z,5μm,19.0s						
OBN	**Obninsk**	**68.42**	**322**	⇑*e*P	**P**	**16 49 01.1**	**0.0**
OBN				*e*		16 49 24.8	
OBN				*e*		16 51 35.1	
OBN				*i* S	**S**	**16 57 51.2**	**-7.9**
OBN				pmax	pmax		
	comp=Z,13nm,0.6s						
OBN				MLR	MLR		
	comp=Z,5μm,19.0s						
POKR	**Poker Plat Res**	**68.42**	**27**	P	**P**	**16 49 01.2**	**+0.2**
	baz=281						
SML	**Sawmill**	**68.65**	**31**	PFAKE		16 49 10.0	+7.5
SML				LR	LR		
	comp=Z,2μm,22.0s						
KNK	**Knik Glacier**	**68.67**	**31**	PFAKE		16 49 10.0	+7.4
KNK				LR	LR		
	comp=Z,2μm,22.0s						
ILAR	**Eielson Array**	**68.72**	**27**	P	**P**	**16 49 01.5**	**-1.4**
	comp=Z,2.4nm,0.5s,baz=263,slow=5.5,SNR=44						
HDA	**Harding Lake**	**68.76**	**28**	PFAKE		16 49 20.0	+17
HDA				LR	LR		
	comp=Z,2μm,19.0s						
HDA	**Harding Lake**	**68.76**	**28**	P	**P**	**16 49 02.2**	**-0.9**
	baz=281						
DHY	**Denali Highway**	**68.84**	**29**	PFAKE		16 49 20.0	+16
DHY				LR	LR		
	comp=Z,2μm,19.0s						
SOC	**Sochi**	**68.88**	**309**	*e*P	**P**	**16 49 03.8**	**-0.4**
SOC				*e*		16 51 36.0	
SOC				*e*PPP	PPP	16 53 16.6	
SOC				*e*S	**S**	**16 58 02.2**	**-2.8**
SOC				*e*SS	**SS**	**17 02 24.0**	**-6.5**
SOC				pmax	pmax		
	comp=Z,14nm,0.5s						
SOC				MLR	MLR		
	comp=Z,3μm,17.0s						
FYU	**Fort Yukon**	**69.03**	**25**	PFAKE		16 49 20.0	+15
FYU				LR	LR		
	comp=Z,1μm,20.0s						
GLI	**Glacier Island**	**69.42**	**31**	PFAKE		16 49 20.0	+13
GLI				LR	LR		
	comp=Z,2μm,20.0s						
KEV	**Kevo**	**69.59**	**338**	*e*P	**P**	**16 49 07.6**	**-0.5**
	comp=Z,34nm,1.2s						
KEV				LR	LR		
	comp=Z,4μm,20.0s						
KEV	**Kevo**	**69.59**	**338**	*e*P	**P**	**16 49 07.6**	**-0.5**
KEV				pmax	pmax		
	comp=Z,33nm,1.2s						
KEV				MLR	MLR		
	comp=Z,4μm,20.0s						
SPA0	**Spitsbergen Ar**	**69.89**	**348**	*e*P	**P**	**16 49 08.7**	**-1.2**
HARP	**HAARP**	**69.98**	**30**	PFAKE		16 49 20.0	+9.3
HARP				LR	LR		
	comp=Z,1μm,20.0s						
ARCES	**ARCESS Array B**	**70.15**	**338**	P	**P**	**16 49 10.4**	**-1.2**
	comp=Z,8.6nm,0.8s,baz=64,slow=7.0,SNR=26						
ARCES				LR	LR	17 23 27.9	
	comp=Z,4μm,19.9s,baz=84,slow=39						
ARE0	**ARCESS Array S**	**70.15**	**338**	PFAKE		16 49 20.0	+8.4
ARE0				LR	LR		
	comp=Z,200nm,18.0s						
ARE0	**ARCESS Array S**	**70.15**	**338**	*e*P	**P**	**16 49 10.4**	**-1.2**
ANN	**Anapa**	**70.18**	**311**	*e*P	**P**	**16 49 10.9**	**-1.3**
ANN				*e**PP	**pP**	**16 49 21.9**	**-2.7**
ANN				*e*		16 51 49.3	
ANN				*e*PPP	PPP	16 53 33.0	
ANN				*e*S	**S**	**16 58 20.2**	**0.0**
ANN				pmax	pmax		
	comp=Z,70nm,1.5s						
KBS	**Kingsbay**	**70.41**	**349**	PFAKE		16 49 30.0	+17
KBS				LR	LR		
	comp=Z,7μm,20.0s						
KBS	**Kingsbay**	**70.41**	**349**	*e*P	**P**	**16 49 13.1**	**+0.1**
HAMF	**Hammerfest**	**70.44**	**340**	*e*P	**P**	**16 49 14.5**	**+1.1**
MENT	**Mentasta**	**70.50**	**29**	PFAKE		16 49 30.0	+16
MENT				LR	LR		
	comp=Z,2μm,21.0s						
HMT	**Hamilton**	**70.91**	**32**	PFAKE		16 49 30.0	+14
HMT				LR	LR		
	comp=Z,2μm,19.0s						
KTK1	**Kautokeino**	**71.08**	**338**	*e*P	**P**	**16 49 17.1**	**-0.1**
EGAK	**Eagle**	**71.10**	**27**	PFAKE		16 49 30.0	+13
EGAK				LR	LR		
	comp=Z,2μm,18.0s						
MSEY	**Mahe Island**	**71.28**	**256**	PFAKE		16 49 30.0	+11
MSEY				LR	LR		
	comp=Z,2μm,21.0s						
BALM	**Baldy**	**71.63**	**31**	PFAKE		16 49 30.0	+9.1
BALM				LR	LR		
	comp=Z,2μm,22.0s						
CTGM	**Chitina Glacie**	**72.12**	**31**	PFAKE		16 49 40.0	+16
CTGM				LR	LR		
	comp=Z,2μm,20.0s						
FINES	**FINESS Array B**	**72.22**	**330**	P	**P**	**16 49 23.5**	**-0.8**
	comp=Z,7.5nm,0.5s,baz=62,slow=5.9,SNR=53						
FINES				LR	LR	17 24 37.4	
	comp=Z,13μm,18.9s,baz=74,slow=39						
FINES	**FINESS Array B**	**72.22**	**330**	*i* P	**P**	**16 49 23.7**	**-0.5**
FINES				pmax	pmax		
	comp=Z,9.0nm,0.4s						
TRO	**Tromso**	**72.31**	**339**	*e*P	**P**	**16 49 23.4**	**-1.3**
EPYK	**Eagle Plains**	**72.37**	**25**	PFAKE		16 49 40.0	+15
EPYK				LR	LR		
	comp=Z,3μm,19.0s						
EPYK	**Eagle Plains**	**72.37**	**25**	P	**P**	**16 49 24.9**	**-0.3**
	baz=290						
SIM	**Simferopol'**	**72.41**	**312**	*e*P	**P**	**16 49 25.7**	**0.0**
SIM				*e*PPP	PPP	16 53 55.0	
SIM				*e*S	**S**	**16 58 46.0**	**-0.1**
SIM				*e*SSS	SSS	17 06 31.0	
SIM				pmax	pmax		
	comp=Z,22nm,0.8s						
SIM				pmax	pmax		
	comp=Z,150nm,9.7s						
VSU	**Vasula**	**72.82**	**327**	*c*eP	**P**	**16 49 29.1**	**+1.3**
VSU				pmax	pmax		
	comp=Z,66nm,1.0s						
VSU	**Vasula**	**72.82**	**327**	*e*P	**P**	**16 49 26.9**	**-0.9**
VSU				IAmb	IAmb	16 49 30.4	
	comp=Z,45nm,0.6s						
INK	**Inuvik**	**72.84**	**22**	P	**P**	**16 49 27.5**	**-0.3**
	comp=Z,6.9nm,0.5s,baz=293,slow=5.7,SNR=48						
INK	**Inuvik**	**72.84**	**22**	PFAKE		16 49 40.0	+12
INK				LR	LR		
	comp=Z,3μm,20.0s						
BZK	**Bozkurt**	**73.36**	**309**	⇓*i*P	**P**	**16 49 31.9**	**+0.5**
MICGM	**Minsk**	**73.44**	**323**	*e*	**P**	**16 49 32.0**	**+0.4**
MICGM				*e*LR	LR	17 19 00.0	
MICGM				LRM	MLR	17 26 00.0	
	comp=Z,4.5nm,18.0s						
MICGM				LRM	MLR	17 26 16.0	
	comp=E,2.4nm,18.0s						
MNK	**Minsk**	**73.44**	**323**	*e*P	**P**	**16 49 32.0**	**+0.4**
MNK				MLR	MLR		
	comp=Z,4μm,18.0s						
DAMY	**Dhamar**	**73.64**	**279**	PFAKE		16 49 50.0	+16
DAMY				LR	LR		
	comp=Z,1μm,20.0s						
IDID	**Didziasalis**	**73.81**	**324**	*e*P	**P**	**16 49 34.4**	**+0.7**
IDID				IAmb	IAmb	16 49 41.1	
	comp=Z,12nm,0.9s						
AKASG	**Malin Array Be**	**73.84**	**319**	P	**P**	**16 49 32.9**	**-1.1**
	comp=Z,2.8nm,0.4s,baz=56,slow=6.6,SNR=17						
AKASG				LR	LR	17 25 12.6	
	comp=Z,2μm,18.7s,baz=65,slow=38						
AKBB	**Malin Array Si**	**73.84**	**319**	PFAKE		16 49 50.0	+16
AKBB				LR	LR		
	comp=Z,3μm,19.0s						
ILGA	**Ilgaz**	**73.85**	**308**	PFAKE		16 49 50.0	+15
ILGA				LR	LR		
	comp=Z,1μm,20.0s						
KIEV	**Kiev**	**73.86**	**319**	*e*P	**P**	**16 49 33.3**	**-0.8**
	comp=Z,20nm,1.2s						
KIEV				LR	LR		
	comp=Z,3μm,19.0s						
KIEV	**Kiev**	**73.86**	**319**	⇓*i*P	**P**	**16 49 33.5**	**-0.6**
KIEV	**Kiev**	**73.86**	**319**	*i* P	**P**	**16 49 32.3**	**-1.8**
	SNR=10						
KIEV	**Kiev**	**73.86**	**319**	*e*P	**P**	**16 49 33.3**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,20nm,1.2s						
KIEV				MLR	MLR		
	comp=Z,3μm,19.0s						
NACGM	**Naroch**	**73.92**	**323**	*e*P	**P**	**16 49 34.0**	**-0.4**
NACGM				*e*S	**S**	**16 59 02.0**	**-0.7**
NACGM				*e*LQ	LQ	17 15 26.0	
NACGM				*e*LR	LR	17 20 30.0	
NACGM				LRM	MLR	17 25 18.0	
IZAR	**Zarasai**	**73.93**	**324**	*e*P	**P**	**16 49 35.0**	**+0.5**
IZAR				IAmb	IAmb	16 49 40.7	
	comp=Z,9.2nm,0.9s						
HYT	**Haines Junctio**	**73.94**	**30**	PFAKE		16 49 50.0	+15
HYT				LR	LR		
	comp=Z,2μm,18.0s						
ISAL	**Salakas**	**74.05**	**324**	*e*P	**P**	**16 49 35.8**	**+0.6**
ISAL				IAmb	IAmb	16 49 40.5	
	comp=Z,9.7nm,0.8s						
IIGN	**Ignalina**	**74.07**	**324**	*e*P	**P**	**16 49 35.9**	**+0.6**
IIGN				IAmb	IAmb	16 49 42.7	
	comp=Z,6.9nm,0.8s						
ASF	**Jabal al Asfar**	**74.19**	**298**	LR	LR	17 28 31.9	
	comp=Z,1μm,19.2s,baz=33,slow=41						
ASF	**Jabal al Asfar**	**74.19**	**298**	P	**P**	**16 49 37.7**	**+1.1**
	comp=Z,36nm,1.6s						
ASF	**Jabal al Asfar**	**74.19**	**298**	P	**P**	**16 49 37.9**	**+1.3**
	comp=Z,36nm,1.6s						
STEI	**Steigen**	**74.22**	**338**	*e*P	**P**	**16 49 34.9**	**-1.0**
BR131	**Keskin Array S**	**74.31**	**307**	P	**P**	**16 49 37.3**	**+0.1**
	SNR=34						
BRTR	**Keskin Array B**	**74.31**	**307**	P	**P**	**16 49 36.8**	**-0.4**
	comp=Z,9.0nm,0.7s,baz=93,slow=5.8,SNR=58						
BRTR				LR	LR	17 27 32.1	
	comp=Z,1μm,18.8s,baz=68,slow=40						
BRTR	**Keskin Array B**	**74.31**	**307**	*i* P	**P**	**16 49 37.0**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LOF	**Lofoten**	**74.70**	**338**	*e*P	**P**	**16 49 38.3**	**-0.4**
HUH	**Hualalai**	**74.77**	**75**	PFAKE		16 49 50.0	+10
HUH				LR	LR		
	comp=Z,3μm,18.0s						
HSUJ	**Al Zarqa**	**74.78**	**299**	P	**P**	**16 49 43.2**	**+3.3**
	comp=Z,52nm,1.4s						
HSUJ	**Al Zarqa**	**74.78**	**299**	P	**P**	**16 49 41.6**	**+1.7**
	comp=Z,39nm,0.7s						
ANTO	**Ankara**	**74.89**	**307**	*e*P	**P**	**16 49 40.7**	**+0.3**
	comp=Z,34nm,0.6s						
ANTO				LR	LR		
	comp=Z,1μm,19.0s						
ANTO	**Ankara**	**74.89**	**307**	*e*P	**P**	**16 49 40.7**	**+0.3**
ANTO				pmax	pmax		
	comp=Z,34nm,0.6s						
ANTO				MLR	MLR		
	comp=Z,1μm,19.0s						
ANTO	**Ankara**	**74.89**	**307**	P	**P**	**16 49 40.7**	**+0.3**
	SNR=13						
ANTO				P	**P**	**16 49 40.7**	**+0.3**
	SNR=13						
SHMJ	**Saham**	**74.92**	**299**	P	**P**	**16 49 42.4**	**+1.7**
	comp=Z,454nm,0.4s						
MMAI	**Mount Meron Ar**	**75.11**	**300**	LR	LR	17 29 03.5	
	comp=Z,3μm,18.5s,baz=60,slow=41						
WHY	**Whitehorse**	**75.20**	**30**	PFAKE		16 49 50.0	+8.1
WHY				LR	LR		
	comp=Z,2μm,20.0s						
PABE	**Paberze**	**75.23**	**324**	*e*P	**P**	**16 49 39.1**	**-2.8**
PABE				IAmb	IAmb	16 49 52.1	
	comp=Z,27nm,0.7s						
WALJ	**Wala**	**75.27**	**298**	P	**P**	**16 49 44.6**	**+2.0**
	comp=Z,41nm,0.8s						
WALJ	**Wala**	**75.27**	**298**	P	**P**	**16 49 44.3**	**+1.7**
	comp=Z,41nm,0.8s						
MMLI	**Mount Malkishu**	**75.29**	**299**	P	**P**	**16 49 43.5**	**+0.6**
MMLI	**Mount Malkishu**	**75.29**	**299**	P	**P**	**16 49 43.4**	**+0.6**
	comp=Z,32nm,1.6s						
KIS	**Kishinev**	**75.30**	**315**	*e*P	**P**	**16 49 44.0**	**+1.5**
KIS	**Kishinev**	**75.30**	**315**	*e*PP	PP	16 52 33.0	+1.8
KIS	**Kishinev**	**75.30**	**315**	*e*P	**P**	**16 49 44.0**	**+1.5**
KIS				*e*		16 52 33.0	
KIS				*e*PPP	PPP	16 54 16.0	
KIS				*e*S	**S**	**16 59 16.0**	**-2.4**
KIS				*e*SS	**SS**	**17 04 05.0**	**-3.4**
KIS				MLR	MLR		
	comp=Z,3μm,19.0s						
KIS				MLR	MLR		
	comp=N,2μm,19.0s						
SLIT	**Slitere, Latvi**	**75.32**	**327**	*e*P	**P**	**16 49 41.5**	**-1.0**
SLIT				IAmb	IAmb	16 49 44.3	
	comp=Z,78nm,0.6s						
UWB	**Uwekahuna B**	**75.36**	**75**	PFAKE		16 50 00.0	+16
UWB				LR	LR		
	comp=Z,4μm,19.0s						
RIM	**Rim**	**75.37**	**75**	PFAKE		16 50 00.0	+16
RIM				LR	LR		
	comp=Z,2μm,22.0s						
SKAG	**Skagway**	**75.45**	**31**	PFAKE		16 49 50.0	+6.8
SKAG				LR	LR		
	comp=Z,2μm,19.0s						
STCH	**Steam Cracks**	**75.51**	**75**	PFAKE		16 50 00.0	+16
STCH				LR	LR		
	comp=Z,2μm,21.0s						
KONS	**Konsvik**	**75.59**	**337**	*e*P	**P**	**16 49 44.3**	**+0.5**
LISJ	**El Lisan**	**75.64**	**298**	P	**P**	**16 49 47.7**	**+3.0**
	comp=Z,40nm,1.4s						
LISJ	**El Lisan**	**75.64**	**298**	P	**P**	**16 49 46.2**	**+1.5**
	comp=Z,40nm,1.4s						
JDRJ	**Daraweish**	**75.66**	**297**	P	**P**	**16 49 45.5**	**+0.4**
	comp=Z,50nm,0.8s						
JDRJ	**Daraweish**	**75.66**	**297**	P	**P**	**16 49 46.1**	**+1.0**
	comp=Z,50nm,0.8s,comp=Z,0.3nmcomp=Z,0.1nm						
STOK	**Stokkvaagen**	**75.70**	**337**	*e*P	**P**	**16 49 43.7**	**-0.8**
TLCR		**75.91**	**313**	⇓*i*P	**P**	**16 49 45.8**	**-0.2**
TLCR		**75.91**	**313**	⇓P	**P**	**16 49 45.8**	**-0.2**
AMAZ	**Amatzia**	**76.00**	**298**	P	**P**	**16 49 47.5**	**+0.6**
	comp=Z,89nm,1.4s						
PBUR	**Paburg**	**76.11**	**325**	*e*P	**P**	**16 49 45.7**	**-1.3**
PBUR				IAmb	IAmb	16 49 51.1	
	comp=Z,37nm,0.9s						
ATD	**Arta Tunnel**	**76.15**	**277**	PFAKE		16 50 00.0	+12
ATD				LR	LR		
	comp=Z,800nm,21.0s						
OUZ	**Omahuta**	**76.19**	**139**	PFAKE		16 50 00.0	+12
OUZ				LR	LR		
	comp=Z,3μm,21.0s						
SUW	**Suwalki**	**76.20**	**323**	PFAKE		16 50 00.0	+12
SUW				LR	LR		
	comp=Z,6μm,20.0s						
CFR	**Carcaliu**	**76.36**	**313**	⇑*i*P	**P**	**16 49 48.8**	**+0.2**
CFR	**Carcaliu**	**76.36**	**313**	⇑P	**P**	**16 49 48.8**	**+0.2**
HRFI	**Mount Harif**	**76.40**	**297**	P	**P**	**16 49 49.9**	**+0.7**
	comp=Z,53nm,1.5s						
TIRR	**Tirgusor**	**76.42**	**313**	PFAKE		16 50 00.0	+11
TIRR				LR	LR		
	comp=Z,7μm,20.0s						
AQBJ	**Aqaba**	**76.50**	**297**	P	**P**	**16 49 51.0**	**+1.3**
	comp=Z,60nm,0.8s						
EIL	**Elat**	**76.60**	**297**	LR	LR	17 28 41.0	
	comp=Z,2μm,20.3s,baz=74,slow=40						
KZIT	**Kziot**	**76.62**	**298**	P	**P**	**16 49 50.9**	**+0.5**
	comp=Z,44nm,1.4s						
KZIT	**Kziot**	**76.62**	**298**	P	**P**	**16 49 50.3**	**-0.1**
	comp=Z,44nm,1.4s,comp=Z,0.3nm						
TLB	**Topalu**	**76.63**	**313**	⇑*i*P	**P**	**16 49 50.3**	**+0.1**
TLB	**Topalu**	**76.63**	**313**	⇑P	**P**	**16 49 50.3**	**+0.1**
HARR	**Harsova**	**76.67**	**313**	⇑*i*P	**P**	**16 49 49.1**	**-1.3**
HARR	**Harsova**	**76.67**	**313**	⇑P	**P**	**16 49 49.1**	**-1.3**
TESR	**Tescani**	**76.86**	**315**	⇓*i*P	**P**	**16 49 51.4**	**-0.1**
NSS	**Namsos**	**76.94**	**335**	*e*P	**P**	**16 49 50.1**	**-1.4**
VRI	**Vrincioaia**	**77.04**	**315**	⇑*i*P	**P**	**16 49 53.4**	**+0.9**
VRI	**Vrincioaia**	**77.04**	**315**	⇑P	**P**	**16 49 53.4**	**+0.9**
BIZ	**Bicaz**	**77.06**	**316**	⇑*i*P	**P**	**16 49 53.0**	**+0.4**
PLOR	**Plostina**	**77.10**	**315**	⇑*i*P	**P**	**16 49 53.7**	**+0.8**
PLOR	**Plostina**	**77.10**	**315**	⇑P	**P**	**16 49 53.7**	**+0.8**
ISP	**Isparta**	**77.24**	**306**	PFAKE		16 50 10.0	+16
ISP				LR	LR		
	comp=Z,1μm,20.0s						
LVV	**L'vov**	**77.28**	**319**	*e*P	**P**	**16 49 56.0**	**+2.3**
LVV				*e*S	**S**	**16 59 41.0**	**+0.9**
LVV				MLR	MLR		
	comp=Z,2μm,19.0s						
BURAR	**Bucovina Array**	**77.37**	**317**	⇑*i*P	**P**	**16 49 55.0**	**+0.6**
BURAR	**Bucovina Array**	**77.37**	**317**	⇑P	**P**	**16 49 55.0**	**+0.6**
PRD	**Provadia**	**77.56**	**312**	*i* P	**P**	**16 49 55.5**	**+0.1**
CTYL	**Yalikoy Yolu**	**77.56**	**310**	⇑*i*P	**P**	**16 49 55.5**	**0.0**
OZUR		**77.57**	**315**	⇑*i*P	**P**	**16 49 53.4**	**-2.1**
MLR	**Muntele Rosu**	**77.69**	**314**	*e*P	**P**	**16 49 55.7**	**-0.6**
	comp=Z,19nm,1.0s						
MLR				LR	LR		
	comp=Z,3μm,22.0s						
MLR	**Muntele Rosu**	**77.69**	**314**	⇑*i*P	**P**	**16 49 55.8**	**-0.6**
MLR	**Muntele Rosu**	**77.69**	**314**	*e*P	**P**	**16 49 55.7**	**-0.6**
MLR				pmax	pmax		
	comp=Z,19nm,1.0s						
MLR				MLR	MLR		
	comp=Z,3μm,22.0s						
KWP	**Kalwaria Pacla**	**78.14**	**319**	PFAKE		16 50 10.0	+11
KWP				LR	LR		
	comp=Z,29μm,18.0s						
TBLU	**Trondheim**	**78.23**	**335**	*e*P	**P**	**16 49 57.6**	**-1.2**
JMB	**Yambol**	**78.38**	**311**	*i* P	**P**	**16 49 59.2**	**-0.8**
BALB	**Balikesir**	**78.52**	**308**	PFAKE		16 50 10.0	+9.2
BALB				LR	LR		
	comp=Z,4μm,19.0s						
RES	**Resolute Bay**	**78.57**	**10**	PFAKE		16 50 10.0	+10
RES				LR	LR		
	comp=Z,3μm,20.0s						
HUMR	**Humele**	**78.69**	**314**	⇑*i*P	**P**	**16 50 01.6**	**-0.1**
UZH	**Uzhgorod**	**78.79**	**318**	*e*P	**P**	**16 50 04.4**	**+2.3**
UZH				*i*		16 50 13.3	
UZH				*i*		16 50 16.9	
UZH				*i* S	**S**	**16 59 57.4**	**+1.0**
UZH				*i* PS	**PnS**	**17 00 40.4**	**-2.9**
UZH				MLR	MLR		
	comp=Z,400nm,17.0s						
TRPA	**Tarpa**	**78.84**	**318**	⇑*i*P	**P**	**16 50 03.1**	**+0.7**
TRPA	**Tarpa**	**78.84**	**318**	⇓EP	**P**	**16 50 04.1**	**+1.7**
TRPA				⇓EPP		16 53 08.1	
TRPA				ES	**S**	**17 00 03.1**	**+6.2**
NB2	**NORSAR Subarra**	**78.95**	**333**	P	**P**	**16 50 01.3**	**-1.6**
	comp=Z,21nm,1.1s,baz=61,slow=5.6						
NB2	**NORSAR Subarra**	**78.95**	**333**	P	**P**	**16 50 01.3**	**-1.6**
	baz=61,slow=5.6						
NOA	**NORSAR Array B**	**78.95**	**333**	P	**P**	**16 50 01.3**	**-1.6**
	comp=Z,6.8nm,0.7s,baz=55,slow=5.6,SNR=54						
NOA				LR	LR	17 28 33.0	
	comp=Z,8μm,19.5s,baz=60,slow=38						
LOT	**Lotru**	**79.12**	**315**	⇑*i*P	**P**	**16 50 04.9**	**+0.7**
HIZ	**Hauiti**	**79.16**	**141**	PFAKE		16 50 20.0	+16
HIZ				LR	LR		
	comp=Z,1μm,19.0s						
NAO01	**NORSAR Array S**

comp=Z,1μm,20.0s
KONO Kongsberg 80.36 332 PFAKE 16 50 20.0 +10
KONO LR LR
comp=Z,13μm,19.0s
KONO Kongsberg 80.36 332 *e*P P 16 50 04.3 -6.1
PSZ Piszkesteto 80.54 318 PFAKE 16 50 20.0 +8.2
PSZ LR LR
comp=Z,3μm,19.0s
PSZ Piszkesteto 80.54 318⇑*i*P **P 16 50 12.6 +0.8**
PSZ Piszkesteto 80.54 318⇑P **P 16 50 12.6 +0.8**
PSZ Piszkesteto 80.54 318⇓EP **P 16 50 13.0 +1.3**
PSZ EPP 16 53 20.1
PSZ ES **S 17 00 13.1 -2.1**
BKZ Black Stump Fm 80.55 140 PFAKE 16 50 20.0 +8.3
BKZ LR LR
comp=Z,2μm,22.0s
MXZ Matakaoa Point 80.58 138 PFAKE 16 50 20.0 +8.1
MXZ LR LR
comp=Z,2μm,22.0s
KARP Karpathos 80.59 305 PFAKE 16 50 20.0 +7.8
KARP LR LR
comp=Z,2μm,20.0s
VTS Vitosha 80.61 312 PFAKE 16 50 20.0 +7.7
VTS LR LR
comp=Z,2μm,20.0s
VTS Vitosha 80.61 312⇑*i*P **P 16 50 12.5 +0.2**
VTS Vitosha 80.61 312⇑P **P 16 50 12.5 +0.2**
VTS Vitosha 80.61 312 *i* P **P 16 50 12.2 -0.1**
MMB Musomiste 80.69 311 *i* P **P 16 50 11.3 -1.3**
MDVR Moldovita 80.72 315⇓*i*P **P 16 50 12.8 0.0**
OKC Ostrava-Krasne 80.75 321 *e*P P 16 50 18.6 +5.9
OKC *e* 17 00 15.7
OKC MLR MLR
comp=Z,2μm,17.3s
OKC Ostrava-Krasne 80.75 321 *e*P P 16 50 18.6 +5.9
OKC *e*S **S 17 00 15.7 -1.3**
OKC AMS AMS 17 31 20.0
comp=Z,2μm,17.3s
VYHS Vyhne 80.93 319 *e*P **P 16 50 14.3 +0.5**
VYHS Vyhne 80.93 319 *e*P **P 16 50 14.2 +0.5**
FURI Furi 80.95 276 PFAKE 16 50 30.0 +15
FURI LR LR
comp=Z,600nm,21.0s
HYA Hoyanger 80.96 334 *e*P **P 16 50 12.8 -0.7**
OXZ Oxford 80.97 146 PFAKE 16 50 30.0 +16
OXZ LR LR
comp=Z,2μm,20.0s
KKB Krupnik 81.01 312 *i* P **P 16 50 13.1 -1.2**
COP Copenhagen 81.07 327 *e*P **P 16 50 16.5 +2.2**
COP MLR MLR
comp=Z,5μm,19.0s
COP Copenhagen 81.07 327 *i* P **P 16 50 16.5 +2.2**
comp=Z,5μm,19.0s
MORC Moravsky Berou 81.12 321 PFAKE 16 50 30.0 +15
MORC LR LR
comp=Z,2μm,19.0s
MORC Moravsky Berou 81.12 321⇓*i*P **P 16 50 15.1 +0.3**
MORC Moravsky Berou 81.12 321⇓P **P 16 50 15.1 +0.3**
MORC Moravsky Berou 81.12 321 *e*P **P 16 50 13.8 -1.0**
RGN Rugen 81.18 326 PFAKE 16 50 30.0 +15
RGN LR LR
comp=Z,9μm,19.0s
RGN Rugen 81.18 326 *e*P **P 16 50 13.4 -1.5**
BFZ Birch Farm 81.42 142 PFAKE 16 50 30.0 +14
BFZ LR LR
comp=Z,2μm,21.0s
JAVC Velka Javorina 81.46 320 *e*P **P 16 50 17.4 +0.8**
OSTC Ostas 81.53 322 *e*SKS **S 17 00 23.9 -1.3**
OSTC AMS AMS 17 29 50.0
comp=Z,4μm,19.4s
SANT Santorini 81.54 306 PFAKE 16 50 30.0 +13
SANT LR LR
comp=Z,2μm,20.0s
DPC Dobruska-Polom 81.56 322 *e*P **P 16 50 17.7 +0.6**
DPC *e* 17 00 23.9
DPC MLR MLR
comp=Z,4μm,16.8s
DPC Dobruska-Polom 81.56 322 *e*P **P 16 50 17.7 +0.6**
DPC *e*S **S 17 00 23.9 -1.7**
DPC AMS AMS 17 30 00.0
comp=Z,4μm,16.8s
VAY Valandovo 81.59 311 *i* P **P 16 50 14.6 -2.7**
CHVC Chvalec 81.60 322 *e*P P 16 50 12.0 -5.3
CHVC *e*SKS **S 17 00 23.9 -2.1**
CHVC AMS AMS 17 29 50.0
comp=Z,4μm,19.5s
KULLO Kullorsuaq 81.61 360 *i* P **P 16 50 17.1 +0.3**
KULLO MLR MLR
comp=Z,2μm,16.0s
KULLO Kullorsuaq 81.61 360 *i* P **P 16 50 17.1 +0.3**
comp=Z,2μm,16.0s
UPC Upice 81.67 322 *e*P **P 16 50 19.2 +1.6**
UPC *e* 16 50 28.2
UPC *e* 17 00 25.5
UPC MLR MLR
comp=Z,5μm,20.6s
UPC Upice 81.67 322 *e*P **P 16 50 19.2 +1.6**
UPC *e*pP **pP 16 50 28.2 -2.8**
UPC *e*S **S 17 00 25.5 -1.1**
UPC AMS AMS 17 29 50.0
comp=Z,5μm,20.6s
STIP Stip 81.70 312 *i* P **P 16 50 16.1 -1.8**
BER Bergen 81.75 334 *e*P **P 16 50 17.5 -0.2**
CSKK Cskako 81.78 318 EP P 16 50 26.1 +7.8
BLS5 Blasjo 81.83 332 *e*P **P 16 50 18.1 -0.2**
VRAC Vranov 81.89 321⇑*i*P **P 16 50 19.8 +1.0**
VRAC Vranov 81.89 321⇑P **P 16 50 19.8 +1.0**
VRAC Vranov 81.89 321 *e*P **P 16 50 18.8 0.0**
MODS Modra-Piesok 81.92 320 *e*P **P 16 50 23.4 +4.4**
MODS Modra-Piesok 81.92 320 *e*P **P 16 50 23.4 +4.4**
RUE Ruedersdorf 81.95 324 *e*P **P 16 50 18.4 -0.6**
SKO Skopje 82.08 312 *i* P **P 16 50 19.7 -0.3**
KRUC Moravsky 82.12 320 *e*P **P 16 50 19.8 -0.2**
TIH Tihany 82.21 318 EP **P 16 50 21.0 +0.5**
MUD Monsted U'grnd 82.24 329 *i* P **P 16 50 21.8 +1.4**
MUD MLR MLR
comp=Z,13μm,17.0s
MUD Monsted U'grnd 82.24 329 *i* P **P 16 50 21.8 +1.4**
comp=Z,13μm,17.0s
IDI Anoyia 82.40 305 LR LR 17 33 46.5
comp=Z,715nm,19.6s,baz=66,slow=41
SCO Scoresbysund 82.45 349 PFAKE 16 50 30.0 +8.7
SCO LR LR
comp=Z,3μm,18.0s
SCO Scoresbysund 82.45 349 *i* P **P 16 50 22.4 +1.1**
SCO MLR MLR
comp=Z,3μm,17.0s
SCO Scoresbysund 82.45 349 *i* P **P 16 50 22.4 +1.1**
comp=Z,3μm,17.0s
PVCC Panska Ves 82.47 322 *e*S **S 17 00 33.7 -1.1**
PVCC AMS AMS 17 31 20.0
comp=Z,6μm,18.5s
KRUS Krusevo 82.47 312 *i* P **P 16 50 23.1 +1.0**
YKW3 Yellowknife Ar 82.52 23 PFAKE 16 50 30.0 +8.2
YKW3 LR LR
comp=Z,2μm,20.0s
TREC Trest 82.53 321 AMS AMS 17 30 40.0
comp=Z,5μm,15.2s
YKA Yellowknife Ar 82.57 23 P **P 16 50 21.4 -0.7**
comp=Z,7.3nm,0.6s,baz=310,slow=5.0,SNR=36
YKA LR LR 17 30 59.4
comp=Z,124nm,19.1s,baz=314,slow=39
FNA Florina 82.63 311 PFAKE 16 50 30.0 +7.1
FNA LR LR
comp=Z,1μm,21.0s
GOPC GO Pecny, Ondr 82.64 322 *e*P **P 16 50 22.0 -0.7**
GOPC MLR MLR
comp=Z,4μm,18.5s
GOPC GO Pecny, Ondr 82.64 322 *e*P **P 16 50 22.0 -0.7**
GOPC AMS AMS 17 30 30.0
comp=Z,4μm,18.5s
BRG Berggiesshubel 82.65 323 *e*P **P 16 50 22.1 -0.6**
comp=Z,5.1nm,0.8s
BRG PP **PP 16 53 29.0 -3.3**
BRG S **S 17 00 39.0 +2.4**
BRG SS **SS 17 06 03.0 +4.7**
comp=N,4μm,16.7s
comp=E,3μm,17.2s
comp=Z,7μm,16.7s
BRG Berggiesshubel 82.65 323 *e*P **P 16 50 22.1 -0.6**
BRG 16 53 29.0
BRG S **S 17 00 39.0 +2.4**
BRG SS **SS 17 06 03.0 +4.7**
BRG pmax pmax
comp=Z,5.0nm,0.8s
BRG MLR MLR
comp=N,4μm,16.7s
BRG MLR MLR
comp=E,3μm,17.2s
BRG MLR MLR
comp=Z,7μm,16.7s
SOP Sopron 82.66 319⇓EP **P 16 50 25.0 +2.2**
SOP EPP 16 53 37.1
AGG Agios Georgios 82.72 309 PFAKE 16 50 30.0 +6.6
AGG LR LR
comp=Z,1μm,21.0s
PRU Pruhonice 82.74 322 *e*P **P 16 50 25.0 +1.8**
PRU *e* 17 00 35.4
PRU MLR MLR
comp=Z,4μm,19.9s
PRU Pruhonice 82.74 322 *e*P **P 16 50 25.0 +1.8**
PRU *e*S **S 17 00 35.4 -2.2**
PRU AMS AMS 17 30 40.0
comp=Z,4μm,19.9s
SUMG Summit 82.76 354 *e*P **P 16 50 22.9 -0.5**
comp=Z,14nm,0.7s
SUMG LR LR
comp=Z,2μm,19.0s
SUMG Summit 82.76 354 *e*P **P 16 50 22.9 -0.5**
SUMG pmax pmax
comp=Z,14nm,0.7s
SUMG MLR MLR
comp=Z,2μm,19.0s
SUMG Summit 82.76 354 *i* P **P 16 50 20.1 -3.3**
comp=Z,5μm,18.0s
CLL Collm 82.95 323 PFAKE 16 50 40.0 +16
CLL LR LR
comp=Z,7μm,18.0s
CLL Collm 82.95 323⇑*i*P **P 16 50 23.4 -0.9**
comp=Z,15nm,1.2s
CLL *i* 16 50 49.4
CLL *e*PP **PP 16 53 32.0 -2.8**
comp=Z,11nm,1.6s
CLL *e*PPlp 16 53 36.0
CLL *e*PPP PPP 16 55 23.0
CLL *e*S **S 17 00 39.0 -0.6**
comp=N,200nm,13.1s
CLL *e*SKSac **SKKSac 17 00 46.0 -0.3**
CLL *e*PS **PnS 17 01 38.0 +3.1**
CLL *e*SS **SS 17 06 06.0 +3.2**
CLL Lm MLR 17 31 00.0
comp=Z,7μm,18.8s
CLL Collm 82.95 323⇑*i*P **P 16 50 23.4 -0.9**
CLL pmax pmax
comp=Z,15nm,1.2s
CLL MLR MLR
comp=Z,7μm,18.8s
CONA Conrad Observa 82.96 320 *i* P **P 16 50 25.4 +0.9**
SNR=13
BEHE Becsehely 83.09 318 EP **P 16 50 27.0 +1.9**
TTG Podgorica 83.35 314 PFAKE 16 50 40.0 +14
TTG LR LR
comp=Z,2μm,19.0s
TIR Tirane 83.42 312 PFAKE 16 50 40.0 +13
TIR LR LR
comp=Z,2μm,21.0s
ARSA Arzberg 83.48 319 *e*P **P 16 50 26.9 -0.3**
comp=Z,19nm,2.0s
BLY Banja Luka 83.64 316 PFAKE 16 50 40.0 +12
BLY LR LR
comp=Z,2μm,19.0s
KHC Kasperske Hory 83.71 321 PFAKE 16 50 40.0 +12
KHC LR LR
comp=Z,2μm,20.0s
KHC Kasperske Hory 83.71 321 *e*P **P 16 50 28.3 0.0**
KHC *e* 16 50 39.4
KHC *e* 17 00 47.3
KHC MLR MLR
comp=Z,4μm,23.1s
KHC Kasperske Hory 83.71 321 *e*P **P 16 50 28.3 0.0**
KHC *e*pP **pP 16 50 39.4 -1.6**
KHC *e*S **S 17 00 47.3 -0.2**
KHC AMS AMS 17 31 00.0
comp=Z,4μm,23.1s
GEC2 GERESS Array S 83.78 321 PFAKE 16 50 40.0 +11
GEC2 LR LR
comp=Z,5μm,19.0s
GERES GERESS Array B 83.78 321 P **P 16 50 28.6 -0.2**
comp=Z,2.7nm,0.6s,baz=58,slow=5.7,SNR=30
GERES LR LR 17 31 58.1
comp=Z,4μm,18.7s,baz=61,slow=39
ITM Ithomi 83.79 308 PFAKE 16 50 40.0 +11
ITM LR LR
comp=Z,800nm,21.0s
NKC Novy Kostel 83.79 323 *e*P **P 16 50 28.6 -0.1**
NKC MLR MLR
comp=Z,5μm,16.9s
NKC Novy Kostel 83.79 323 *e*P **P 16 50 28.6 -0.1**
NKC AMS AMS 17 32 20.0
comp=Z,5μm,16.9s
GROS Grobnik 83.87 318 *i* P **P 16 50 28.5 -0.7**
MOA Molln 83.94 320 *i* P **P 16 50 30.0 +0.5**
SNR=9.2
PERS Pernice 84.02 319 *i* P **P 16 50 29.4 -0.6**
SOKA Soboth 84.05 319 *i* P **P 16 50 29.9 -0.3**
SNR=12
OBKA Obir 84.43 319 *e*P **P 16 50 32.0 -0.1**
comp=Z,12nm,0.7s
BOJS Bojanci 84.49 318 *i* P **P 16 50 32.1 -0.2**
GRA1 Grafenberg Arr 84.75 323 PFAKE 16 50 40.0 +6.5
GRA1 LR LR
comp=Z,5μm,18.0s
GRFO Grafenberg 84.75 323 PFAKE 16 50 40.0 +6.5
GRFO LR LR
comp=Z,5μm,18.0s
KBA Koelnbreinsper 84.87 320 *e*P **P 16 50 33.6 -0.8**
comp=Z,9.6nm,0.7s
ABPO Ambohimpanom 85.03 247 *e*P **P 16 50 37.0 +1.4**
comp=Z,37nm,0.9s
ABPO Ambohimpanom 85.03 247 *e*P **P 16 50 37.0 +1.4**
ABPO pmax pmax
comp=Z,37nm,0.9s
ABTA Abfaltersbach 85.53 320 *i* P **P 16 50 36.5 -1.1**
comp=Z,8.6nm,0.9s
WTTA Wattenberg 85.78 320 *e*P **P 16 50 38.6 -0.3**
comp=Z,21nm,1.1s
MOTA Moosalm 86.04 321 *e*P **P 16 50 39.9 -0.4**
comp=Z,9.1nm,1.1s
SQTA Sankt Quirin 86.05 321 *i* P **P 16 50 39.9 -0.3**
SNR=6.5
RETA Reute 86.17 321 *e*P **P 16 50 39.4 -1.3**
comp=Z,5.6nm,1.2s
KMBO Kilima Mbogo 86.24 267 P **P 16 50 43.4 +1.5**
comp=Z,14nm,0.8s,baz=55,slow=7.9,SNR=29
KMBO LR LR 17 31 28.0
comp=Z,592nm,18.6s,baz=88,slow=37
KMBO Kilima Mbogo 86.24 267 *e*P **P 16 50 43.8 +2.0**
comp=Z,117nm,1.8s
KMBO LR LR
comp=Z,800nm,20.0s
KMBO Kilima Mbogo 86.24 267 *i* P **P 16 50 43.2 +1.4**
SNR=16
KMBO Kilima Mbogo 86.24 267 P **P 16 50 43.8 +2.0**
SNR=11
KMBO P **P 16 50 43.8 +2.0**
SNR=11
STU Stuttgart 86.37 323 PFAKE 16 50 50.0 +8.4
STU LR LR
comp=Z,6μm,18.0s
FETA Feichten 86.43 321 *e*P **P 16 50 41.4 -0.8**
comp=Z,6.5nm,1.0s
TIP Timpagrande 86.52 311 PFAKE 16 50 50.0 +7.4
TIP LR LR
comp=Z,1μm,22.0s
NAI Nairobi 86.70 267 PFAKE 16 51 00.0 +16
NAI LR LR
comp=Z,700nm,20.0s
DAVA Damuels 86.78 321 *e*PcP **P 16 50 44.4 +0.5**
comp=Z,11nm,1.4s
ILULI Ilulissat 86.89 358 PFAKE 16 50 50.0 +6.3
ILULI LR LR
comp=Z,2μm,19.0s
ILULI Ilulissat 86.89 358 *i* P **P 16 50 44.6 +0.9**
ILULI MLR MLR
comp=Z,2μm,16.0s
ILULI Ilulissat 86.89 358 *i* P **P 16 50 44.6 +0.9**
comp=Z,2μm,16.0s
FUORN Ofenpass-Fuorn 86.91 320 PFAKE 16 51 00.0 +15
FUORN LR LR
comp=Z,4μm,18.0s
MEM Membach 87.06 325 P **P 16 50 44.0 -0.9**
MEM PcP **PcP 16 50 46.1 -0.9**
MEM sP **pP 16 50 58.2 +0.6**
MEM x x 16 51 10.5
BFO Black Forest 87.09 322 PFAKE 16 51 00.0 +15
BFO LR LR
comp=Z,6μm,18.0s
BFO Black Forest 87.09 322 *i* P **P 16 50 46.3 +1.1**
BORG Borgarnes 87.19 345 PFAKE 16 51 00.0 +15
BORG LR LR
comp=Z,3μm,19.0s
AQU L'Aquila 87.20 316 PFAKE 16 51 00.0 +14
AQU LR LR
comp=Z,2μm,21.0s
D03D Eldon 87.51 38 P **P 16 50 47.9 +0.7**
baz=304
WLF Walferdange 87.52 324 PFAKE 16 51 00.0 +13
WLF LR LR
comp=Z,24μm,20.0s
WLF Walferdange 87.52 324 P **P 16 50 46.1 -1.1**
WLF PcP **PcP 16 50 48.3 -0.8**
TUE Stuetta 87.53 321 PFAKE 16 51 00.0 +12
TUE LR LR
comp=Z,4μm,19.0s
BCLA Clavier 87.53 325 P **P 16 50 46.4 -0.8**
BCLA PcP **PcP 16 50 48.1 -1.0**
CEL Celeste 87.56 311 PFAKE 16 51 00.0 +12
CEL LR LR
comp=Z,2μm,20.0s
B05A Bryant 87.66 37 P **P 16 50 48.4 +0.6**
baz=304
UCC Uccle 87.80 326 PFAKE 16 51 00.0 +12
UCC LR LR
comp=Z,8μm,18.0s
ECH Echery 87.80 323 PFAKE 16 51 00.0 +11
ECH LR LR
comp=Z,5μm,18.0s
B06A Marblemount 87.85 37 PFAKE 16 51 00.0 +11
B06A LR LR
comp=Z,1μm,20.0s
DOU Dourbes 88.09 325 P **P 16 50 49.3 -0.6**
DOU PcP **PcP 16 50 51.1 -0.5**
VLC Villacollemand 88.15 318 PFAKE 16 51 00.0 +10
VLC LR LR
comp=Z,3μm,20.0s
E04D Cinebar 88.35 39 P **P 16 50 51.9 +0.7**
baz=304
ESK Eskdalemuir 88.47 332 PFAKE 16 51 00.0 +8.4
ESK LR LR
comp=Z,6μm,18.0s
LON Longmire 88.67 38 PFAKE 16 51 00.0 +7.2
LON LR LR
comp=Z,1μm,20.0s
SENIN Lac Senin/Sane 88.77 321 PFAKE 16 51 00.0 +6.6
SENIN LR LR
comp=Z,5μm,20.0s
SFJD Kangerlussuaq 89.09 357 *e*P **P 16 50 53.3 -0.9**
comp=Z,74nm,1.7s
SFJD LR LR
comp=Z,2μm,18.0s
SFJD Kangerlussuaq 89.09 357 *e*P **P 16 50 53.3 -0.9**
SFJD pmax pmax
comp=Z,74nm,1.7s
SFJD MLR MLR
comp=Z,2μm,18.0s
ANGG Ammassalik, Gr 89.34 352 PFAKE 16 51 10.0 +15
ANGG LR LR
comp=Z,3μm,19.0s
F05D White Salmon 89.36 39 P **P 16 50 56.5 +0.5**
baz=305
H04D Lebanon 89.38 41 P **P 16 50 57.3 +1.2**
baz=304
I03D Drain, OR 89.47 41 P **P 16 50 57.5 +1.0**
baz=304
LPL La Plagne 89.57 321 *e*P **P 16 50 56.6 -0.6**
LPL pmax pmax
comp=Z,11nm,0.6s
H04A Detroit Lake 89.62 40 PFAKE 16 51 10.0 +13
H04A LR LR
comp=Z,800nm,22.0s
WDD Wied Dalam 89.69 309 PFAKE 16 51 10.0 +12
WDD LR LR
comp=Z,1μm,21.0s
CLTB Caltabellotta 89.73 311 PFAKE 16 51 10.0 +12
CLTB LR LR
comp=Z,2μm,19.0s
G05D Wamic, OR 89.81 39 P **P 16 50 58.5 +0.3**
baz=305
K02D Willamette Mer 89.83 42 P **P 16 50 58.4 +0.1**
baz=303
BNI Bardonecchia 89.87 320 PFAKE 16 51 10.0 +11
BNI LR LR
comp=Z,6μm,19.0s
I04A Tendick Farm, 89.98 41 P **P 16 50 59.3 +0.3**
baz=304
F07A Phinny Hill Vi 90.23 38 PFAKE 16 51 10.0 +10
F07A LR LR
comp=Z,1μm,18.0s
HUMO Hull Mountain 90.31 42 PFAKE 16 51 10.0 +9.5
HUMO LR LR
comp=Z,700nm,20.0s
I05D Terrebonne, OR 90.31 40 P **P 16 51 00.8 +0.3**
baz=305
NEW Newport 90.35 35 PFAKE 16 51 10.0 +9.4
NEW LR LR
comp=Z,1μm,18.0s
NEW Newport 90.35 35 P **P 16 51 00.6 0.0**
baz=308
E08A Dider Farm, El 90.37 37 PFAKE 16 51 10.0 +9.4
E08A LR LR
comp=Z,1μm,19.0s
J04D Umpqua Nationa 90.48 41 P **P 16 51 01.3 -0.2**
baz=304
SSF Saint Saulge 90.48 323 *e*P **P 16 51 04.6 +3.4**
SSF pmax pmax
comp=Z,16nm,1.2s
CLF Chambon-Foret 90.56 325 PFAKE 16 51 10.0 +8.5
CLF LR LR
comp=Z,9μm,18.0s
L04D Klamath Falls 90.93 42 P **P 16 51 03.4 -0.1**
baz=304
SSB Saint Sauveur 90.97 321 PFAKE 16 51 10.0 +6.5
SSB LR LR
comp=Z,4μm,18.0s
J05D Fort Rock, OR 90.98 41 P **P 16 51 04.3 +0.6**
baz=305
K04D Chiloquin, OR 91.04 42 P **P 16 51 03.1 -0.9**
baz=305
G08A Pilot Rock 91.14 38 PFAKE 16 51 20.0 +16
G08A LR LR
comp=Z,800nm,21.0s
DSB Dublin 91.25 332 PFAKE 16 51 20.0 +15
DSB LR LR
comp=Z,4μm,19.0s
M04C Macdoel 91.46 42 P **P 16 51 05.9 -0.1**
baz=304
WALA Waterton Lakes 91.50 33 PFAKE 16 51 20.0 +14
WALA LR LR
comp=Z,2μm,20.0s
I07A Izee 91.54 40 PFAKE 16 51 20.0 +14
I07A LR LR
comp=Z,1μm,18.0s
F10A Beach Ranch, E 91.69 37 PFAKE 16 51 20.0 +13
F10A LR LR
comp=Z,1μm,18.0s
WDC Whiskeytown Da 91.70 44 PFAKE 16 51 20.0 +13
WDC LR LR
comp=Z,900nm,20.0s
MBAR Mbarara 91.98 270 PFAKE 16 51 20.0 +11
MBAR LR LR
comp=Z,1μm,20.0s
FCC Fort Churchill 92.06 18 PFAKE 16 51 20.0 +12
FCC LR LR
comp=Z,3μm,19.0s
HOPS Hopland Field 92.24 45 PFAKE 16 51 20.0 +11
HOPS LR LR
comp=Z,1μm,20.0s
O03E Paynes Creek 92.33 44 P **P 16 51 10.6 +0.6**
baz=304
BMO Blue Mountains 92.34 38 PFAKE 16 51 20.0 +10
BMO LR LR
comp=Z,800nm,20.0s
FFC Flin Flon 92.71 24 *e*P **P 16 51 10.9 -0.4**
comp=Z,26nm,0.8s
FFC LR LR
comp=Z,2μm,18.0s

FFC	**Flin Flon**	**92.71**	**24**	*e*P	**P**	**16 51 10.9**	**-0.4**
FFC	comp=Z,26nm,0.8s			pmax	pmax		
FFC	comp=Z,2μm,18.0s			MLR	MLR		
MFF	**Saint Martin d**	**92.73**	**325**	*e*P	**P**	**16 51 14.9**	**+3.3**
MFF	comp=Z,6.0nm,0.9s			pmax	pmax		
MSO	**Missoula**	**92.93**	**35**	PFAKE		16 51 20.0	+7.4
MSO	comp=Z,2μm,19.0s			LR	LR		
MSO	**Missoula**	**92.93**	**35**	P	**P**	**16 51 12.7**	**0.0**
	baz=310						
WVOR	**Wild Horse Val**	**93.03**	**41**	*e*P	**P**	**16 51 14.0**	**+0.8**
	comp=Z,13nm,1.1s						
WVOR	**Wild Horse Val**	**93.03**	**41**	*e*P	**P**	**16 51 14.0**	**+0.8**
WVOR	comp=Z,13nm,1.1s			pmax	pmax		
KEST	**Kesra**	**93.35**	**312**	P	**P**	**16 51 15.2**	**+0.5**
	comp=Z,9.3nm,0.9s,baz=108,slow=3.2,SNR=7.0						
KEST				LR	LR	17 40 30.7	
	comp=Z,2μm,18.9s,baz=344,slow=40						
KEST	**Kesra**	**93.35**	**312**	PFAKE		16 51 30.0	+15
KEST	comp=Z,2μm,20.0s			LR	LR		
AFDM	**Forest Hills D**	**93.62**	**44**	PFAKE		16 51 30.0	+14
AFDM	comp=Z,800nm,21.0s			LR	LR		
RUBR	**Rubicon Trail**	**94.08**	**44**	PFAKE		16 51 30.0	+12
RUBR	comp=Z,1μm,19.0s			LR	LR		
EGMT	**Eagleton**	**94.25**	**32**	PFAKE		16 51 30.0	+11
EGMT	comp=Z,2μm,20.0s			LR	LR		
EGMT	**Eagleton**	**94.25**	**32**	P	**P**	**16 51 18.4**	**-0.3**
	baz=314						
VCNR	**Virginia City**	**94.26**	**44**	PFAKE		16 51 30.0	+11
VCNR	comp=Z,700nm,20.0s			LR	LR		
PNTR	**Pine Nut**	**94.41**	**44**	PFAKE		16 51 30.0	+10
PNTR	comp=Z,800nm,20.0s			LR	LR		
CMB	**Columbia Colle**	**94.52**	**45**	*e*P	**P**	**16 51 20.6**	**+0.5**
	comp=Z,6.7nm,0.8s						
CMB	**Columbia Colle**	**94.52**	**45**	*e*P	**P**	**16 51 20.6**	**+0.5**
CMB	comp=Z,7.0nm,0.8s			pmax	pmax		
NRS	**Narsarsuaq**	**94.54**	**354**	PFAKE		16 51 30.0	+10
NRS	comp=Z,4μm,20.0s			LR	LR		
DLMT	**Dillon**	**94.59**	**36**	PFAKE		16 51 30.0	+10
DLMT	comp=Z,1μm,20.0s			LR	LR		
IVI	**Ivigtut**	**94.72**	**356**	PFAKE		16 51 30.0	+10
IVI	comp=Z,3μm,19.0s			LR	LR		
HLID	**Hailey**	**94.77**	**38**	*e*P	**P**	**16 51 21.5**	**+0.3**
	comp=Z,9.2nm,0.8s						
HLID	**Hailey**	**94.77**	**38**	P	**P**	**16 51 21.7**	**+0.4**
	baz=310						
MCMT	**McKenzie Canyo**	**94.81**	**36**	*e*P	**P**	**16 51 21.8**	**+0.3**
WAKR	**Walker**	**94.85**	**44**	*e*P	**P**	**16 51 21.5**	**-0.3**
WAKR	comp=Z,12nm,1.3s			LR	LR		
BOZ	**Bozeman (W)**	**94.95**	**35**	*e*P	**P**	**16 51 21.0**	**-1.0**
	comp=Z,4.3nm,0.9s						
BOZ				LR	LR		
	comp=Z,1μm,20.0s						
BOZ	**Bozeman (W)**	**94.95**	**35**	*e*P	**P**	**16 51 21.0**	**-1.0**
BOZ	comp=Z,4.0nm,0.9s			pmax	pmax		
BOZ				MLR	MLR		
	comp=Z,1μm,20.0s						
BOZ	**Bozeman (W)**	**94.95**	**35**	P	**P**	**16 51 21.6**	**-0.4**
	baz=312						
PPT	**Papeete**	**95.05**	**107**	LR	LR	17 26 28.6	
	comp=Z,1μm,21.4s,baz=278,slow=31						
PPT2	**Papeete2**	**95.05**	**107**	*e*S	**S**	**17 02 31.0**	**-3.4**
	comp=Z,2μm,27.8s						
PPT2				*e*SS	**SS**	**17 09 03.2**	**+1.9**
	comp=Z,392nm,26.0s						
PPT2	**Papeete2**	**95.05**	**107**	*e*LR	LR	17 22 01.6	
	comp=Z,4μm,23.5s,baz=290						
MDPB	**Devils Postpil**	**95.59**	**45**	PFAKE		16 51 40.0	+15
MDPB	comp=Z,700nm,22.0s			LR	LR		
NVAR	**Mina Array Bea**	**95.61**	**44**	P	**P**	**16 51 25.6**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=308,slow=5.6,SNR=24						
NVAR				LR	LR	17 31 02.6	
	comp=Z,499nm,21.0s,baz=310,slow=33						
PAGB	**Antelope Grade**	**95.93**	**47**	PFAKE		16 51 40.0	+13
PAGB	comp=Z,1μm,21.0s			LR	LR		
ELK	**Elko**	**96.07**	**40**	PFAKE		16 51 40.0	+13
ELK	comp=Z,1μm,18.0s			LR	LR		
LKWY	**Lake**	**96.28**	**35**	PFAKE		16 51 40.0	+12
LKWY	comp=Z,2μm,20.0s			LR	LR		
H17A	**Grant Village**	**96.31**	**35**	PFAKE		16 51 40.0	+12
H17A	comp=Z,2μm,20.0s			LR	LR		
IMW	**Indian Meadow**	**96.45**	**36**	PFAKE		16 51 40.0	+11
IMW	comp=Z,800nm,20.0s			LR	LR		
FLWY	**Flagg Ranch**	**96.45**	**36**	PFAKE		16 51 40.0	+11
FLWY	comp=Z,700nm,19.0s			LR	LR		
RLMT	**Red Lodge**	**96.49**	**34**	PFAKE		16 51 40.0	+11
RLMT	comp=Z,2μm,19.0s			LR	LR		
RLMT	**Red Lodge**	**96.49**	**34**	P	**P**	**16 51 29.7**	**+0.6**
	baz=314						
DGMT	**Dagmar**	**96.53**	**29**	PFAKE		16 51 40.0	+11
DGMT	comp=Z,2μm,20.0s			LR	LR		
TPAW	**Teton Pass**	**96.72**	**36**	PFAKE		16 51 40.0	+10
TPAW	comp=Z,1μm,20.0s			LR	LR		
LOHW	**Long Hollow**	**96.82**	**36**	PFAKE		16 51 40.0	+9.3
LOHW	comp=Z,900nm,20.0s			LR	LR		
SNOW	**Snow King Moun**	**96.84**	**36**	PFAKE		16 51 40.0	+9.2
SNOW	comp=Z,1μm,20.0s			LR	LR		
CWC	**Cottonwood Cre**	**96.94**	**45**	P	**P**	**16 51 31.1**	**-0.2**
	baz=307						
AHID	**Auburn Hatcher**	**97.12**	**37**	PFAKE		16 51 40.0	+7.9
AHID	comp=Z,1μm,20.0s			LR	LR		
R11A	**Troy Canyon, C**	**97.36**	**42**	P	Pdif	16 51 33.3	+0.1
	baz=308						
TBI	**Tubuai**	**97.41**	**112**	*e*SKSac	**SKSac**	**17 02 08.3**	**+1.2**
	comp=Z,574nm,27.2s						
TBI				*e*S	**S**	**17 02 50.9**	**-3.5**
	comp=Z,787nm,28.0s						
TBI	**Tubuai**	**97.41**	**112**	*e*PS	PS	17 04 19.9	-2.8
	comp=Z,497nm,30.0s						
TBI				*e*SS	SS	17 09 34.0	-0.4
	comp=Z,464nm,30.2s						
TBI				*e*LQ	LQ	17 19 03.3	
	comp=Z,533nm,32.8s						
TBI				*e*LR	LR	17 23 14.0	
	comp=Z,2μm,24.8s,baz=297						
HWUT	**Hardware Ranch**	**97.64**	**38**	PFAKE		16 51 50.0	+16
HWUT	comp=Z,1μm,20.0s			LR	LR		
FURC	**Furnace Creek,**	**97.71**	**44**	P	Pdif	16 51 35.5	+1.0
	baz=308						
TPNV	**Topopah Spring**	**97.81**	**44**	P	Pdif	16 51 35.5	+0.3
	baz=308						
BW06	**Boulder Array**	**97.96**	**36**	PFAKE		16 51 50.0	+14
BW06	comp=Z,1μm,18.0s			LR	LR		
BW06	**Boulder Array**	**97.96**	**36**	P	**P**	**16 51 35.3**	**-0.5**
	baz=313						
PDAR	**Pinedale Array**	**97.96**	**36**	P	**P**	**16 51 35.4**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=291,slow=3.5,SNR=3.2						
PDAR				LR	LR	17 39 51.9	
	comp=Z,289nm,18.0s,baz=341,slow=38						
ULM	**Lac du Bonnet**	**98.54**	**24**	LR	LR	17 40 31.5	
	comp=Z,2μm,19.6s,baz=336,slow=38						
ULM	**Lac du Bonnet**	**98.54**	**24**	PFAKE		16 51 50.0	+12
ULM	comp=Z,2μm,18.0s			LR	LR		
MDND	**Maddock**	**98.99**	**27**	PFAKE		16 51 50.0	+10
MDND				LR	LR		
	comp=Z,2μm,18.0s						
ESDC	**Sonseca Array**	**99.38**	**321**	LR	LR	17 42 00.5	
	comp=Z,2μm,18.2s,baz=10.0,slow=39						
ESLA	**Sonseca Array**	**99.38**	**321**	PFAKE		16 51 50.0	+8.0
ESLA	comp=Z,3μm,18.0s			LR	LR		
PAB	**San Pablo**	**99.68**	**321**	PFAKE		16 51 50.0	+6.6
PAB	comp=Z,3μm,19.0s			LR	LR		
LDFC	**Landfair**	**99.69**	**45**	PFAKE		16 51 50.0	+6.5
LDFC	comp=Z,1μm,19.0s			LR	LR		
RSSD	**Black Hills**	**99.82**	**32**	PFAKE		16 52 00.0	+16
RSSD	comp=Z,2μm,22.0s			LR	LR		
LSZ	**Lusaka**	**100.05**	**258**	PFAKE		16 52 00.0	+15
LSZ	comp=Z,1μm,22.0s			LR	LR		
AGMN	**Agassiz Nation**	**100.14**	**25**	PFAKE		16 52 00.0	+15
AGMN	comp=Z,2μm,19.0s			LR	LR		
O20A	**White River Ci**	**100.48**	**37**	PFAKE		16 52 00.0	+13
O20A	comp=Z,1μm,20.0s			LR	LR		
U15A	**North Rim**	**100.60**	**42**	PFAKE		16 52 00.0	+12
U15A	comp=Z,800nm,19.0s			LR	LR		
MTE	**Manteigas**	**100.88**	**324**	PFAKE		16 52 00.0	+11
MTE	comp=Z,4μm,21.0s			LR	LR		
SCHQ	**Schefferville**	**101.02**	**6**	PFAKE		16 52 00.0	+11
SCHQ	comp=Z,3μm,19.0s			LR	LR		
GLA	**Glamis**	**101.12**	**46**	PFAKE		16 52 00.0	+10
GLA	comp=Z,1μm,21.0s			LR	LR		
PV21	**Cone Mtn., Par**	**101.15**	**39**	PFAKE		16 52 00.0	+10
PV21	comp=Z,2μm,18.0s			LR	LR		
PHWY	**Pilot Hill**	**101.16**	**35**	PFAKE		16 52 00.0	+10
PHWY	comp=Z,1μm,21.0s			LR	LR		
N23A	**Red Feather La**	**101.19**	**35**	PFAKE		16 52 00.0	+10
N23A	comp=Z,1μm,19.0s			LR	LR		
PV20	**West Nyswonger**	**101.31**	**39**	PFAKE		16 52 00.0	+9.2
PV20	comp=Z,2μm,20.0s			LR	LR		
PV04	**Paradox Valley**	**101.31**	**39**	PFAKE		16 52 00.0	+9.2
PV04	comp=Z,2μm,21.0s			LR	LR		
PV16	**Nyswonger Mesa**	**101.36**	**39**	PFAKE		16 52 00.0	+8.9
PV16	comp=Z,1μm,21.0s			LR	LR		
MAW	**Mawson**	**101.42**	**200**	PFAKE		16 52 00.0	+10
MAW	comp=Z,100nm,21.0s			LR	LR		
PV03	**Paradox Valley**	**101.44**	**39**	PFAKE		16 52 00.0	+8.6
PV03	comp=Z,2μm,20.0s			LR	LR		
COI	**Coimbra**	**101.48**	**324**	PFAKE		16 52 00.0	+8.7
COI	comp=Z,5μm,21.0s			LR	LR		
PV01	**Paradox Valley**	**101.68**	**39**	PFAKE		16 52 00.0	+7.5
PV01	comp=Z,1μm,20.0s			LR	LR		
113A	**Mohawk Valley,**	**102.00**	**46**	PFAKE		16 52 00.0	+6.3
113A	comp=Z,1μm,20.0s			LR	LR		
EYMN	**Ely**	**102.05**	**23**	PFAKE		16 52 00.0	+6.4
EYMN	comp=Z,3μm,20.0s			LR	LR		
ISCO	**Idaho Springs**	**102.15**	**36**	PFAKE		16 52 10.0	+15
ISCO	comp=Z,1μm,18.0s			LR	LR		
C40A	**Isle Royale Na**	**102.87**	**21**	PFAKE		16 52 10.0	+13
C40A	comp=Z,2μm,20.0s			LR	LR		
Q24A	**Divide**	**103.00**	**36**	PFAKE		16 52 10.0	+12
Q24A	comp=Z,1μm,19.0s			LR	LR		
W18A	**Petrified Fore**	**103.03**	**42**	PFAKE		16 52 10.0	+11
W18A	comp=Z,1μm,20.0s			LR	LR		
PVAQ	**Vaqueiros**	**103.07**	**321**	PFAKE		16 52 10.0	+12
PVAQ	comp=Z,3μm,18.0s			LR	LR		
E38A	**The Farm, Brul**	**103.16**	**23**	PFAKE		16 52 10.0	+11
E38A	comp=Z,2μm,20.0s			LR	LR		
OGNE	**Ogallala**	**103.17**	**33**	PFAKE		16 52 10.0	+11
OGNE	comp=Z,1μm,20.0s			LR	LR		
TAM	**Tamanrasset**	**103.20**	**302**	PFAKE		16 52 10.0	+11
TAM	comp=Z,1μm,19.0s			LR	LR		
X18A	**Snowflake**	**103.29**	**42**	PFAKE		16 52 10.0	+10
X18A	comp=Z,1μm,19.0s			LR	LR		
ECSD	**EROS Data Cent**	**103.53**	**28**	PFAKE		16 52 10.0	+10
ECSD	comp=Z,2μm,19.0s			LR	LR		
SDCO	**Great Sand Dun**	**103.68**	**37**	PFAKE		16 52 10.0	+8.5
SDCO	comp=Z,1μm,19.0s			LR	LR		
D41A	**Chassel**	**103.81**	**21**	PFAKE		16 52 10.0	+8.5
D41A	comp=Z,2μm,20.0s			LR	LR		
SPMN	**Marine on St.**	**103.86**	**25**	PFAKE		16 52 10.0	+8.3
SPMN	comp=Z,2μm,22.0s			LR	LR		
PFVI	**Vila Bisbo**	**103.89**	**322**	PFAKE		16 52 10.0	+8.0
PFVI	comp=Z,4μm,18.0s			LR	LR		
VNDA	**Vanda**	**103.98**	**172**	PP	**PP**	**16 56 18.8**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=326,slow=8.7,SNR=4.2						
KSCO	**Kaye Shedlock'**	**104.31**	**35**	PFAKE		16 52 20.0	+16
KSCO	comp=Z,2μm,21.0s			LR	LR		
COWI	**Conover**	**104.46**	**22**	PFAKE		16 52 20.0	+16
COWI	comp=Z,3μm,19.0s			LR	LR		
BGNE	**Belgrade**	**104.69**	**31**	PFAKE		16 52 20.0	+14
BGNE	comp=Z,2μm,19.0s			LR	LR		
T25A	**Trinidad**	**104.72**	**37**	PFAKE		16 52 20.0	+14
T25A	comp=Z,1μm,22.0s			LR	LR		
F41A	**Three Lakes**	**104.78**	**22**	PFAKE		16 52 20.0	+14
F41A	comp=Z,3μm,19.0s			LR	LR		
G40A	**Rib Lake**	**104.80**	**23**	PFAKE		16 52 20.0	+14
G40A	comp=Z,2μm,19.0s			LR	LR		
E43A	**Lone Tree Farm**	**104.93**	**21**	PFAKE		16 52 20.0	+14
E43A	comp=Z,2μm,20.0s			LR	LR		
E44A	**Grand Marais A**	**105.06**	**20**	PFAKE		16 56 30.0	+8.6
E44A	comp=Z,2μm,18.0s			LR	LR		
H41A	**Junction City**	**105.56**	**23**	PFAKE		16 56 30.0	+7.6
H41A	comp=Z,2μm,18.0s			LR	LR		
G43A	**Wallace**	**105.69**	**22**	PFAKE		16 56 30.0	+7.4
G43A	comp=Z,2μm,21.0s			LR	LR		
E46A	**Sault Ste Mari**	**105.78**	**19**	PFAKE		16 56 30.0	+7.2
E46A	comp=Z,2μm,19.0s			LR	LR		
VLDQ	**Val d'Or**	**105.93**	**14**	PFAKE		16 56 30.0	+7.0
VLDQ	comp=Z,3μm,20.0s			LR	LR		
CBKS	**Cedar Bluff**	**105.94**	**33**	PFAKE		16 56 40.0	+17
CBKS	comp=Z,2μm,20.0s			LR	LR		
I41A	**Arkdale**	**105.96**	**24**	PFAKE		16 56 30.0	+6.8
I41A	comp=Z,2μm,18.0s			LR	LR		
H42A	**Shiocton**	**106.05**	**23**	PFAKE		16 56 40.0	+17
H42A	comp=Z,3μm,19.0s			LR	LR		
HSIG		**106.24**	**47**	PFAKE		16 56 40.0	+16
HSIG	comp=Z,700nm,20.0s			LR	LR		
H43A	**Windswept, Lux**	**106.35**	**22**	PFAKE		16 56 40.0	+16
H43A	comp=Z,2μm,22.0s			LR	LR		
I42A	**Draeger Farm,**	**106.45**	**23**	PFAKE		16 56 40.0	+16
I42A	comp=Z,3μm,19.0s			LR	LR		
SCIA	**State Center**	**106.46**	**27**	PFAKE		16 56 40.0	+16
SCIA	comp=Z,2μm,21.0s			LR	LR		
G45A	**Suttons Bay**	**106.55**	**21**	PFAKE		16 56 40.0	+16
G45A	comp=Z,2μm,19.0s			LR	LR		
JFWS	**Jewell Farm**	**106.80**	**25**	PFAKE		16 56 40.0	+15
JFWS	comp=Z,2μm,20.0s			LR	LR		
D53A	**Lac Vacive, Po**	**106.85**	**14**	PFAKE		16 56 40.0	+15
D53A	comp=Z,4μm,20.0s			LR	LR		
DRLN	**Deer Lake**	**107.02**	**0**	PFAKE		16 56 40.0	+15
DRLN	comp=Z,2μm,21.0s			LR	LR		
GLMI	**Grayling**	**107.07**	**20**	PFAKE		16 56 40.0	+15
GLMI	comp=Z,2μm,22.0s			LR	LR		
L40A	**Anamosa**	**107.14**	**26**	PFAKE		16 56 40.0	+15
L40A	comp=Z,1μm,20.0s			LR	LR		
KSU1	**Kansas State U**	**107.23**	**31**	PFAKE		16 56 40.0	+14
KSU1	comp=Z,2μm,18.0s			LR	LR		
I45A	**Fountain**	**107.25**	**21**	PFAKE		16 56 40.0	+14
I45A	comp=Z,2μm,19.0s			LR	LR		
H48A	**Harrisville**	**107.58**	**19**	PFAKE		16 56 40.0	+14
H48A	comp=Z,2μm,19.0s			LR	LR		
K43A	**Burlington**	**107.69**	**23**	PFAKE		16 56 40.0	+14
K43A	comp=Z,2μm,18.0s			LR	LR		
J45A	**Montague**	**107.73**	**22**	PFAKE		16 56 40.0	+13
J45A	comp=Z,2μm,21.0s			LR	LR		
L42A	**Oliver, Polo**	**107.80**	**25**	PFAKE		16 56 40.0	+13
L42A	comp=Z,2μm,19.0s			LR	LR		
I47A	**Gladwin**	**107.83**	**20**	PFAKE		16 56 40.0	+13
I47A	comp=Z,2μm,19.0s			LR	LR		
AMTX	**Amarillo**	**107.88**	**37**	PFAKE		16 56 40.0	+13
AMTX	comp=Z,1μm,19.0s			LR	LR		
MSTX	**Muleshoe**	**107.94**	**38**	PFAKE		16 56 40.0	+13
MSTX	comp=Z,1μm,20.0s			LR	LR		
U32A	**Winter Ranch,**	**108.18**	**34**	PFAKE		16 56 40.0	+12
U32A	comp=Z,2μm,21.0s			LR	LR		
I49A	**Point Hope**	**108.42**	**19**	PFAKE		16 56 40.0	+12
I49A	comp=Z,2μm,18.0s			LR	LR		
J47A	**Sunmer**	**108.43**	**21**	PFAKE		16 56 40.0	+12
J47A	comp=Z,2μm,21.0s			LR	LR		
N41A	**Harden Midland**	**108.44**	**26**	PFAKE		16 56 40.0	+12
N41A	comp=Z,2μm,19.0s			LR	LR		
BATG	**Bathurst New B**	**108.57**	**6**	PFAKE		16 56 40.0	+12
BATG	comp=Z,3μm,19.0s			LR	LR		
SADO	**Sadowa**	**108.67**	**16**	PFAKE		16 56 40.0	+12
SADO	comp=Z,2μm,20.0s			LR	LR		
J48A	**Bridge Port**	**108.71**	**20**	PFAKE		16 56 40.0	+12
J48A	comp=Z,3μm,20.0s			LR	LR		
PLVO	**Plevna**	**108.92**	**15**	PFAKE		16 56 40.0	+11
PLVO	comp=Z,3μm,20.0s			LR	LR		
M44A	**Midewin, Midew**	**108.94**	**24**	PFAKE		16 56 40.0	+11
M44A	comp=Z,2μm,22.0s			LR	LR		
PQI	**Presque Isle**	**108.95**	**8**	PFAKE		16 56 40.0	+11
PQI	comp=Z,2μm,20.0s			LR	LR		
L46A	**Eue Claire**	**109.02**	**22**	PFAKE		16 56 40.0	+11
L46A	comp=Z,2μm,20.0s			LR	LR		
HDIL	**Hopedale**	**109.19**	**25**	PFAKE		16 56 40.0	+11
HDIL	comp=Z,2μm,20.0s			LR	LR		
DELO	**Deloro Mine**	**109.29**	**15**	PFAKE		16 56 40.0	+11
DELO	comp=Z,4μm,21.0s			LR	LR		
M46A	**Old House Fiel**	**109.54**	**23**	PFAKE		16 56 40.0	+10
M46A	comp=Z,2μm,20.0s			LR	LR		
K50A	**Casco**	**109.54**	**19**	PFAKE		16 56 40.0	+10
K50A	comp=Z,2μm,18.0s			LR	LR		
WMOK	**Wichita Mounta**	**109.55**	**35**	PFAKE		16 56 40.0	+10
WMOK	comp=Z,2μm,18.0s			LR	LR		
AAM	**Ann Arbor**	**109.65**	**20**	PFAKE		16 56 40.0	+10
AAM	comp=Z,3μm,20.0s			LR	LR		
RKT	**Rikitea**	**109.81**	**107**	*e*LR	LR	17 28 54.0	
	comp=Z,3μm,25.2s						
FRNY	**Flat Rock**	**109.86**	**12**	PFAKE		16 56 40.0	+10
FRNY	comp=Z,2μm,20.0s			LR	LR		
LONY	**Lake Ozonia**	**109.87**	**13**	PFAKE		16 56 40.0	+9.5
LONY	comp=Z,2μm,19.0s			LR	LR		
PECO	**Prince Edward**	**109.99**	**15**	PFAKE		16 56 40.0	+9.3
PECO	comp=Z,3μm,20.0s			LR	LR		
M48A	**Edgerton**	**110.03**	**22**	PFAKE		16 56 40.0	+9.1
M48A	comp=Z,2μm,18.0s			LR	LR		
LMN	**Caledonia Moun**	**110.10**	**6**	PFAKE		16 56 40.0	+9.1
LMN	comp=Z,2μm,22.0s			LR	LR		
PKME	**Peaks-Kenny Pk**	**110.16**	**9**	PFAKE		16 56 40.0	+9.0
PKME	comp=Z,2μm,20.0s			LR	LR		
SFIN	**Lafayette**	**110.17**	**24**	PFAKE		16 56 40.0	+8.8
SFIN	comp=Z,2μm,18.0s			LR	LR		
J54A	**Appleton**	**110.20**	**16**	PFAKE		16 56 40.0	+8.9
J54A	comp=Z,2μm,20.0s			LR	LR		
MEDO	**Medina**	**110.35**	**16**	PFAKE		16 56 40.0	+8.6
MEDO	comp=Z,2μm,20.0s			LR	LR		
J55A	**Hilton**	**110.42**	**16**	PFAKE		16 56 40.0	+8.5
J55A	comp=Z,4μm,20.0s			LR	LR		
VT1	**Waterbury**	**110.50**	**12**	PFAKE		16 56 40.0	+8.3
VT1	comp=Z,2μm,21.0s			LR	LR		
CCM	**Cathedral Cave**	**110.51**	**28**	PFAKE		16 56 40.0	+8.1
CCM	comp=Z,2μm,19.0s			LR	LR		
NCB	**Newcomb**	**110.56**	**13**	PFAKE		16 56 40.0	+8.2
NCB	comp=Z,2μm,20.0s			LR	LR		
GGN	**Saint George**	**110.62**	**7**	PFAKE		16 56 40.0	+8.2
GGN	comp=Z,2μm,19.0s			LR	LR		
M50A	**Fremont**	**110.65**	**20**	PFAKE		16 56 40.0	+8.0
M50A	comp=Z,2μm,20.0s			LR	LR		
P45A	**Graceland, Par**	**110.67**	**25**	PFAKE		16 56 40.0	+7.9
P45A	comp=Z,2μm,21.0s			LR	LR		
ABTX	**Abilene, Hawle**	**110.69**	**37**	PFAKE		16 56 40.0	+7.6
ABTX	comp=Z,2μm,19.0s			LR	LR		
N49A	**Columbus Grove**	**110.72**	**21**	PFAKE		16 56 40.0	+7.8
N49A	comp=Z,2μm,18.0s			LR	LR		
LTX	**Lajitas**	**110.72**	**42**	*e*Pdif	**Pdif**	**16 52 32.7**	**0.0**
LTX	**Lajitas**	**110.72**	**42**	*e*P	**Pdif**	**16 52 32.7**	**0.0**
TXAR	**Lajitas Array**	**110.73**	**42**	Pdiff	**Pdif**	**16 52 32.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=264,slow=2.7,SNR=3.0						

TXAR				PKiKP	**PKiKP**	**16 56 32.9**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=227,slow=0.8,SNR=14						
TXAR				PKKPab	**PKKPab**	**17 07 40.8**	**-3.0**
	comp=Z,0.3nm,0.8s,baz=184,slow=7.0,SNR=3.0						
LBNH	**Lisbon**	**110.74**	**11**	PFAKE		16 56 40.0	+7.8
LBNH				LR	LR		
	comp=Z,3μm,20.0s						
HHAR	**Hobbs**	**110.75**	**31**	PFAKE		16 56 40.0	+7.6
HHAR				LR	LR		
	comp=Z,2μm,19.0s						
WVL	**Waterville**	**110.79**	**9**	PFAKE		16 56 40.0	+7.8
WVL				LR	LR		
	comp=Z,2μm,21.0s						
MMNY	**Mt. Morris Dam**	**110.90**	**16**	PFAKE		16 56 40.0	+7.5
MMNY				LR	LR		
	comp=Z,3μm,20.0s						
TSUM	**Tsumeb**	**110.91**	**258**	PFAKE		16 56 50.0	+17
TSUM				LR	LR		
	comp=Z,1μm,20.0s						
ERPA	**Erie**	**110.91**	**18**	PFAKE		16 56 40.0	+7.5
ERPA				LR	LR		
	comp=Z,2μm,21.0s						
FVM	**French Village**	**110.91**	**27**	PFAKE		16 56 40.0	+7.3
FVM				LR	LR		
	comp=Z,2μm,19.0s						
EMMW	**East Machias**	**110.95**	**8**	PFAKE		16 56 40.0	+7.5
EMMW				LR	LR		
	comp=Z,2μm,18.0s						
M52A	**Chesterland**	**111.05**	**19**	PFAKE		16 56 40.0	+7.2
M52A				LR	LR		
	comp=Z,2μm,18.0s						
HNH	**Hanover**	**111.19**	**12**	PFAKE		16 56 40.0	+7.0
HNH				LR	LR		
	comp=Z,2μm,21.0s						
OLIL	**Olney**	**111.22**	**25**	PFAKE		16 56 40.0	+6.8
OLIL				LR	LR		
	comp=Z,2μm,20.0s						
ACCN	**Adirondack Com**	**111.24**	**13**	PFAKE		16 56 40.0	+6.9
ACCN				LR	LR		
	comp=Z,2μm,21.0s						
ALLY	**Alegheny Colle**	**111.30**	**18**	PFAKE		16 56 50.0	+17
ALLY				LR	LR		
	comp=Z,3μm,19.0s						
N51A	**Ashland**	**111.31**	**20**	PFAKE		16 56 50.0	+17
N51A				LR	LR		
	comp=Z,2μm,22.0s						
O49A	**Covington**	**111.32**	**22**	PFAKE		16 56 50.0	+17
O49A				LR	LR		
	comp=Z,2μm,19.0s						
HAL	**Halifax**	**111.41**	**5**	PFAKE		16 56 50.0	+17
HAL				LR	LR		
	comp=Z,2μm,19.0s						
X37A	**Clayton**	**111.42**	**33**	PFAKE		16 56 50.0	+16
X37A				LR	LR		
	comp=Z,2μm,18.0s						
TOB2	**Torodi Ar. Sit**	**111.47**	**296**	PFAKE		16 56 50.0	+16
TOB2				LR	LR		
	comp=Z,500nm,20.0s						
TOB3	**Torodi Ar. Sit**	**111.48**	**296**	PFAKE		16 56 50.0	+16
TOB3				LR	LR		
	comp=Z,1μm,18.0s						
TOA1	**Torodi Ar. Sit**	**111.48**	**296**	PFAKE		16 56 50.0	+16
TOA1				LR	LR		
	comp=Z,1μm,19.0s						
TOA0	**Torodi Ar. Sit**	**111.48**	**296**	PFAKE		16 56 50.0	+16
TOA0				LR	LR		
	comp=Z,1μm,19.0s						
TORD	**Torodi Ar. Bea**	**111.48**	**296**	PKiKP	**PKiKP**	**16 56 34.0**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=87,slow=1.8,SNR=9.8						
TORD				PKKPab	**PKKPab**	**17 07 38.3**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=196,slow=2.8,SNR=4.0						
TOA3	**Torodi Ar. Sit**	**111.49**	**296**	PFAKE		16 56 50.0	+16
TOA3				LR	LR		
	comp=Z,1μm,19.0s						
TOC7	**Torodi Ar. Sit**	**111.49**	**296**	PFAKE		16 56 50.0	+16
TOC7				LR	LR		
	comp=Z,1μm,19.0s						
TOB5	**Torodi Ar. Sit**	**111.49**	**296**	PFAKE		16 56 50.0	+16
TOB5				LR	LR		
	comp=Z,1μm,19.0s						
TOC4	**Torodi Ar. Sit**	**111.50**	**296**	PFAKE		16 56 50.0	+16
TOC4				LR	LR		
	comp=Z,1μm,19.0s						
TOB4	**Torodi Ar. Sit**	**111.50**	**296**	PFAKE		16 56 50.0	+16
TOB4				LR	LR		
	comp=Z,1μm,19.0s						
TOC5	**Torodi Ar. Sit**	**111.51**	**296**	PFAKE		16 56 50.0	+16
TOC5				LR	LR		
	comp=Z,2μm,19.0s						
FFD	**Franklin Falls**	**111.54**	**11**	PFAKE		16 56 50.0	+16
FFD				LR	LR		
	comp=Z,3μm,20.0s						
M54A	**Oil Creek Stat**	**111.57**	**18**	PFAKE		16 56 50.0	+16
M54A				LR	LR		
	comp=Z,2μm,20.0s						
P48A	**Milroy**	**111.59**	**23**	PFAKE		16 56 50.0	+16
P48A				LR	LR		
	comp=Z,2μm,19.0s						
CMLA	**Cha da Macela**	**111.61**	**333**	PFAKE		16 56 50.0	+16
CMLA				LR	LR		
	comp=Z,2μm,20.0s						
SIUC	**Southern Illin**	**111.65**	**27**	PFAKE		16 56 50.0	+16
SIUC				LR	LR		
	comp=Z,2μm,18.0s						
W39A	**Magazine**	**111.71**	**32**	PFAKE		16 56 50.0	+16
W39A				LR	LR		
	comp=Z,2μm,20.0s						
ACSO	**Alum Creek Sta**	**111.73**	**21**	PFAKE		16 56 50.0	+16
ACSO				LR	LR		
	comp=Z,2μm,20.0s						
ROSA	**Rosais**	**111.85**	**336**	PFAKE		16 56 50.0	+16
ROSA				LR	LR		
	comp=Z,3μm,20.0s						
BINY	**Binghamton**	**111.87**	**15**	PFAKE		16 56 50.0	+16
BINY				LR	LR		
	comp=Z,2μm,18.0s						
TRY	**Troy**	**111.87**	**13**	PFAKE		16 56 50.0	+16
TRY				LR	LR		
	comp=Z,2μm,20.0s						
N53A	**Lisbon**	**111.88**	**19**	PFAKE		16 56 50.0	+16
N53A				LR	LR		
	comp=Z,2μm,22.0s						
FCAR	**Ozark Folk Cen**	**111.92**	**30**	PFAKE		16 56 50.0	+15
FCAR				LR	LR		
	comp=Z,2μm,20.0s						
PBMO	**Poplar Bluff**	**111.93**	**28**	PFAKE		16 56 50.0	+15
PBMO				LR	LR		
	comp=Z,2μm,21.0s						
N54A	**Moraine State**	**111.98**	**18**	PFAKE		16 56 50.0	+15
N54A				LR	LR		
	comp=Z,3μm,20.0s						
USIN	**University of**	**112.06**	**25**	PFAKE		16 56 50.0	+15
USIN				LR	LR		
	comp=Z,2μm,18.0s						
JCT	**Junction City**	**112.20**	**39**	PFAKE		16 56 50.0	+15
JCT				LR	LR		
	comp=Z,1μm,18.0s						
O52A	**Adamsville**	**112.20**	**20**	PFAKE		16 56 50.0	+15
O52A				LR	LR		
	comp=Z,2μm,21.0s						
PARMO	**Parma**	**112.32**	**28**	PFAKE		16 56 50.0	+15
PARMO				LR	LR		
	comp=Z,2μm,19.0s						
MIAR	**Mount Ida**	**112.33**	**32**	PFAKE		16 56 50.0	+15
MIAR				LR	LR		
	comp=Z,2μm,20.0s						
WHAR	**Wooly Hollow**	**112.34**	**30**	PFAKE		16 56 50.0	+15
WHAR				LR	LR		
	comp=Z,2μm,20.0s						
WCI	**Wyandotte Cave**	**112.35**	**24**	PFAKE		16 56 50.0	+15
WCI				LR	LR		
	comp=Z,2μm,21.0s						
WHTX	**Lake Whitney,**	**112.37**	**36**	PFAKE		16 56 50.0	+14
WHTX				LR	LR		
	comp=Z,1μm,20.0s						
P51A	**Williamsport**	**112.39**	**21**	PFAKE		16 56 50.0	+15
P51A				LR	LR		
	comp=Z,2μm,22.0s						
N55A	**Marion Center**	**112.43**	**18**	PFAKE		16 56 50.0	+14
N55A				LR	LR		
	comp=Z,2μm,20.0s						
W41B	**Gary Mavity, V**	**112.45**	**30**	PFAKE		16 56 50.0	+14
W41B				LR	LR		
	comp=Z,2μm,20.0s						
T45A	**Paducah**	**112.48**	**27**	PFAKE		16 56 50.0	+14
T45A				LR	LR		
	comp=Z,2μm,19.0s						
HRV	**Adam Dziewonsk**	**112.49**	**11**	PFAKE		16 56 50.0	+15
HRV				LR	LR		
	comp=Z,2μm,19.0s						
KSPA	**Keystone Colle**	**112.53**	**15**	PFAKE		16 56 50.0	+14
KSPA				LR	LR		
	comp=Z,2μm,19.0s						
PVMO	**Portageville**	**112.55**	**28**	PFAKE		16 56 50.0	+14
PVMO				LR	LR		
	comp=Z,1μm,20.0s						
QUA2	**Belchertown**	**112.56**	**12**	PFAKE		16 56 50.0	+14
QUA2				LR	LR		
	comp=Z,2μm,21.0s						
WES	**Weston**	**112.65**	**11**	PFAKE		16 56 50.0	+14
WES				LR	LR		
	comp=Z,2μm,19.0s						
Q51A	**Peebles**	**112.70**	**22**	PFAKE		16 56 50.0	+14
Q51A				LR	LR		
	comp=Z,2μm,19.0s						
R49A	**Shelbyville**	**112.72**	**23**	PFAKE		16 56 50.0	+14
R49A				LR	LR		
	comp=Z,1μm,19.0s						
UALR	**University of**	**112.73**	**31**	PFAKE		16 56 50.0	+14
UALR				LR	LR		
	comp=Z,3μm,20.0s						
X40A	**Basin Creek Fa**	**112.74**	**31**	PFAKE		16 56 50.0	+14
X40A				LR	LR		
	comp=Z,2μm,20.0s						
GNAR	**Gosnell**	**112.79**	**28**	PFAKE		16 56 50.0	+14
GNAR				LR	LR		
	comp=Z,2μm,20.0s						
HBAR	**Harrisburg**	**112.86**	**29**	PFAKE		16 56 50.0	+14
HBAR				LR	LR		
	comp=Z,2μm,18.0s						
SSPA	**Standing Stone**	**112.87**	**17**	PFAKE		16 56 50.0	+14
SSPA				LR	LR		
	comp=Z,2μm,18.0s						
KSCT	**Kent School, K**	**112.87**	**13**	PFAKE		16 56 50.0	+14
KSCT				LR	LR		
	comp=Z,2μm,19.0s						
P53A	**Whipple**	**112.92**	**20**	PFAKE		16 56 50.0	+14
P53A				LR	LR		
	comp=Z,2μm,21.0s						
O56A	**Blue Knob Stat**	**113.03**	**17**	PFAKE		16 56 50.0	+13
O56A				LR	LR		
	comp=Z,2μm,19.0s						
R50A	**Paris**	**113.03**	**23**	PFAKE		16 56 50.0	+13
R50A				LR	LR		
	comp=Z,2μm,18.0s						
BRYW	**Bryant College**	**113.06**	**11**	PFAKE		16 56 50.0	+13
BRYW				LR	LR		
	comp=Z,2μm,20.0s						
T47A	**Sharon Grove**	**113.12**	**26**	PFAKE		16 56 50.0	+13
T47A				LR	LR		
	comp=Z,2μm,19.0s						
HALT	**Halls**	**113.13**	**28**	PFAKE		16 56 50.0	+13
HALT				LR	LR		
	comp=Z,2μm,19.0s						
N59A	**State Game Lan**	**113.13**	**15**	PFAKE		16 56 50.0	+13
N59A				LR	LR		
	comp=Z,2μm,20.0s						
435B	**Jarrell**	**113.22**	**37**	PFAKE		16 56 50.0	+13
435B				LR	LR		
	comp=Z,2μm,18.0s						
MCWV	**Mont Chateau**	**113.23**	**19**	PFAKE		16 56 50.0	+13
MCWV				LR	LR		
	comp=Z,1μm,20.0s						
ODNJ	**Ogdensburg**	**113.24**	**14**	PFAKE		16 56 50.0	+13
ODNJ				LR	LR		
	comp=Z,3μm,21.0s						
WLAR	**White Oak Lake**	**113.26**	**32**	PFAKE		16 56 50.0	+13
WLAR				LR	LR		
	comp=Z,2μm,18.0s						
PAL	**Palisades**	**113.47**	**14**	PFAKE		16 56 50.0	+13
PAL				LR	LR		
	comp=Z,2μm,19.0s						
LUPA	**Lehigh Univers**	**113.53**	**15**	PFAKE		16 56 50.0	+12
LUPA				LR	LR		
	comp=Z,200nm,19.0s						
MET	**Memphis--Engin**	**113.54**	**29**	PFAKE		16 56 50.0	+12
MET				LR	LR		
	comp=Z,2μm,19.0s						
PAGS	**Pennsylvania G**	**113.55**	**16**	PFAKE		16 56 50.0	+12
PAGS				LR	LR		
	comp=Z,4μm,20.0s						
Q54A	**Coxs Mills**	**113.55**	**20**	PFAKE		16 56 50.0	+12
Q54A				LR	LR		
	comp=Z,2μm,20.0s						
WVT	**Waverly**	**113.58**	**27**	PFAKE		16 56 50.0	+12
WVT				LR	LR		
	comp=Z,2μm,20.0s						
X43A	**Marvell**	**113.62**	**30**	PFAKE		16 56 50.0	+12
X43A				LR	LR		
	comp=Z,2μm,20.0s						
T49A	**Edmonton**	**113.63**	**24**	PFAKE		16 56 50.0	+12
T49A				LR	LR		
	comp=Z,2μm,19.0s						
BRNJ	**Basking Ridge**	**113.64**	**14**	PFAKE		16 56 50.0	+12
BRNJ				LR	LR		
	comp=Z,3μm,20.0s						
CCAR	**Cane Creek**	**113.71**	**31**	PFAKE		16 56 50.0	+12
CCAR				LR	LR		
	comp=Z,2μm,19.0s						
Z41A	**Richland Creek**	**113.75**	**32**	PFAKE		16 56 50.0	+12
Z41A				LR	LR		
	comp=Z,2μm,20.0s						
R53A	**Hurricane**	**113.79**	**21**	PFAKE		16 56 50.0	+12
R53A				LR	LR		
	comp=Z,2μm,19.0s						
S51A	**Beattyville**	**113.86**	**23**	PFAKE		16 56 50.0	+12
S51A				LR	LR		
	comp=Z,2μm,18.0s						
NATX	**Nacogdoches**	**114.03**	**34**	PFAKE		16 56 50.0	+11
NATX				LR	LR		
	comp=Z,2μm,18.0s						
833A	**Chaparral WMA,**	**114.04**	**40**	PFAKE		16 56 50.0	+11
833A				LR	LR		
	comp=Z,2μm,19.0s						
PSUB	**Penn St. - Bra**	**114.15**	**15**	PFAKE		16 56 50.0	+11
PSUB				LR	LR		
	comp=Z,2μm,20.0s						
CLTN	**Cedars of Leba**	**114.21**	**25**	PFAKE		16 56 50.0	+11
CLTN				LR	LR		
	comp=Z,1μm,21.0s						
OXF	**Oxford**	**114.28**	**29**	PFAKE		16 56 50.0	+11
OXF				LR	LR		
	comp=Z,2μm,20.0s						
SDMD	**Soldier's Deli**	**114.29**	**16**	PFAKE		16 56 50.0	+11
SDMD				LR	LR		
	comp=Z,2μm,20.0s						
V48A	**Smith Brothers**	**114.32**	**26**	PFAKE		16 56 50.0	+11
V48A				LR	LR		
	comp=Z,2μm,21.0s						
PLAL	**Pickwick Lake**	**114.46**	**27**	PFAKE		16 56 50.0	+11
PLAL				LR	LR		
	comp=Z,2μm,20.0s						
T52A	**Hallie**	**114.55**	**22**	PFAKE		16 56 50.0	+10
T52A				LR	LR		
	comp=Z,2μm,18.0s						
HKT	**Hockley**	**114.83**	**37**	PFAKE		16 56 50.0	+10
HKT				LR	LR		
	comp=Z,1μm,20.0s						
TZTN	**Tazewell**	**114.86**	**23**	PFAKE		16 56 50.0	+10
TZTN				LR	LR		
	comp=Z,2μm,18.0s						
SWET	**Sewanee**	**115.13**	**26**	PFAKE		16 56 50.0	+9.2
SWET				LR	LR		
	comp=Z,2μm,20.0s						
V51A	**Loudon**	**115.22**	**24**	PFAKE		16 56 50.0	+9.1
V51A				LR	LR		
	comp=Z,2μm,19.0s						
S57A	**Dark Hollow, R**	**115.25**	**19**	PFAKE		16 56 50.0	+9.1
S57A				LR	LR		
	comp=Z,2μm,19.0s						
CBN	**Corbin Frederi**	**115.28**	**17**	PFAKE		16 56 50.0	+9.0
CBN				LR	LR		
	comp=Z,3μm,20.0s						
BLA	**Blacksburg**	**115.31**	**20**	PFAKE		16 56 50.0	+8.9
BLA				LR	LR		
	comp=Z,2μm,20.0s						
X48A	**Hartselle**	**115.34**	**27**	PFAKE		16 56 50.0	+8.8
X48A				LR	LR		
	comp=Z,2μm,20.0s						
R58B	**Mineral**	**115.37**	**18**	PFAKE		16 56 50.0	+8.9
R58B				LR	LR		
	comp=Z,3μm,20.0s						
W50A	**Signal Mountai**	**115.39**	**25**	PFAKE		16 56 50.0	+8.7
W50A				LR	LR		
	comp=Z,2μm,20.0s						
V52A	**Sevierville**	**115.47**	**23**	PFAKE		16 56 50.0	+8.6
V52A				LR	LR		
	comp=Z,2μm,19.0s						
CPCT	**Cooper Cave**	**115.47**	**24**	PFAKE		16 56 50.0	+8.6
CPCT				LR	LR		
	comp=Z,2μm,19.0s						
U54A	**Nelsons Funny**	**115.48**	**22**	PFAKE		16 56 50.0	+8.5
U54A				LR	LR		
	comp=Z,2μm,20.0s						
S58A	**Poland Farm, P**	**115.65**	**18**	PFAKE		16 56 50.0	+8.3
S58A				LR	LR		
	comp=Z,3μm,19.0s						
VBMS	**Vicksburg**	**115.70**	**31**	PFAKE		16 56 50.0	+8.1
VBMS				LR	LR		
	comp=Z,2μm,19.0s						
T57A	**Hurt**	**115.86**	**19**	PFAKE		16 56 50.0	+7.9
T57A				LR	LR		
	comp=Z,2μm,20.0s						
V53A	**Saluda**	**115.90**	**23**	PFAKE		16 56 50.0	+7.7
V53A				LR	LR		
	comp=Z,2μm,19.0s						
W52A	**Murphy**	**116.01**	**24**	PFAKE		16 56 50.0	+7.5
W52A				LR	LR		
	comp=Z,2μm,20.0s						
Y49A	**Blount Mountai**	**116.12**	**27**	PFAKE		16 56 50.0	+7.3
Y49A				LR	LR		
	comp=Z,2μm,21.0s						
X51A	**Calhoun**	**116.12**	**25**	PFAKE		16 56 50.0	+7.3
X51A				LR	LR		
	comp=Z,2μm,19.0s						
S61A	**Accomac**	**116.22**	**16**	PFAKE		16 56 50.0	+7.2
S61A				LR	LR		
	comp=Z,4μm,21.0s						
T59A	**Double "B" Far**	**116.39**	**18**	PFAKE		16 56 50.0	+6.9
T59A				LR	LR		
	comp=Z,3μm,20.0s						
T60A	**Surry**	**116.45**	**17**	PFAKE		16 57 00.0	+17
T60A				LR	LR		
	comp=Z,3μm,20.0s						
LNIG	**Linares**	**116.50**	**43**	*e*PKPdf	**PKPdf**	**16 56 43.3**	**-0.4**
V56A	**Mocksville**	**116.56**	**21**	PFAKE		16 57 00.0	+16
V56A				LR	LR		
	comp=Z,2μm,21.0s						
Z50A	**Ashland**	**116.84**	**27**	PFAKE		16 57 00.0	+16
Z50A				LR	LR		
	comp=Z,2μm,19.0s						
KMSC	**Kings Mountain**	**116.89**	**22**	PFAKE		16 57 00.0	+16
KMSC				LR	LR		
	comp=Z,2μm,20.0s						
U59A	**Littleton**	**116.89**	**18**	PFAKE		16 57 00.0	+16
U59A				LR	LR		
	comp=Z,3μm,20.0s						
PAULI	**Pauline**	**117.02**	**22**	PFAKE		16 57 00.0	+16
PAULI				LR	LR		
	comp=Z,3μm,19.0s						
Y52A	**Lilburn**	**117.05**	**25**	PFAKE		16 57 00.0	+15
Y52A				LR	LR		
	comp=Z,2μm,19.0s						
U61A	**Possum Corner**	**117.29**	**17**	PFAKE		16 57 00.0	+15
U61A				LR	LR		
	comp=Z,3μm,20.0s						
W57A	**Gilead**	**117.33**	**21**	PFAKE		16 57 00.0	+15
W57A				LR	LR		
	comp=Z,2μm,19.0s						
HODGE	**Hodges**	**117.39**	**23**	PFAKE		16 57 00.0	+15
HODGE				LR	LR		
	comp=Z,2μm,21.0s						
V60A	**Jim Taylor Roa**	**117.59**	**18**	PFAKE		16 57 00.0	+15
V60A				LR	LR		
	comp=Z,3μm,20.0s						
BIRD	**Birdtown, Kers**	**117.64**	**21**	PFAKE		16 57 00.0	+14
BIRD				LR	LR		
	comp=Z,2μm,18.0s						
GOGA	**Godfrey**	**117.68**	**25**	PFAKE		16 57 00.0	+14
GOGA				LR	LR		
	comp=Z,2μm,20.0s						
JSC	**Jenkinsville**	**117.70**	**22**	PFAKE		16 57 00.0	+14
JSC				LR	LR		
	comp=Z,2μm,22.0s						
250A	**Grady**	**117.81**	**28**	PFAKE		16 57 00.0	+14
250A				LR	LR		
	comp=Z,2μm,20.0s						
152A	**Waverly Hall**	**117.84**	**26**	PFAKE		16 57 00.0	+14
152A				LR	LR		
	comp=Z,2μm,20.0s						
X58A	**Rowland**	**118.09**	**20**	PFAKE		16 57 00.0	+14
X58A				LR	LR		
	comp=Z,2μm,20.0s						
Y57A	**Sumter**	**118.23**	**22**	PFAKE		16 57 00.0	+13
Y57A				LR	LR		
	comp=Z,2μm,22.0s						
154A	**Montrose**	**118.52**	**25**	PFAKE		16 57 00.0	+13
154A				LR	LR		
	comp=Z,4μm,19.0s						
Z56A	**Williston**	**118.53**	**23**	PFAKE		16 57 00.0	+13
Z56A				LR	LR		
	comp=Z,2μm,19.0s						
Y58A	**Scranton**	**118.58**	**21**	PFAKE		16 57 00.0	+13
Y58A				LR	LR		
	comp=Z,3μm,22.0s						
253A	**Americus**	**118.61**	**26**	PFAKE		16 57 00.0	+12
253A				LR	LR		
	comp=Z,2μm,21.0s						
352A	**Blakely**	**118.80**	**27**	PFAKE		16 57 00.0	+12
352A				LR	LR		
	comp=Z,2μm,20.0s						
Y60A	**Bolivia**	**118.95**	**20**	PFAKE		16 57 00.0	+12
Y60A				LR	LR		
	comp=Z,3μm,20.0s						
255A	**Hazlehurst**	**119.38**	**24**	PFAKE		16 57 00.0	+11
255A				LR	LR		
	comp=Z,3μm,22.0s						
DBIC	**Dimbokro**	**120.39**	**294**	PKP	**PKiKP**	**16 56 51.5**	**0.0**
	comp=Z,4.8nm,0.5s,baz=125,slow=1.4,SNR=9.2						
KIC	**Kosan Boka**	**120.46**	**294**	*e*PKP1	**PKPdf**	**16 56 50.8**	**-0.8**
	comp=Z,47nm,1.1s						
TIC	**Toumodi**	**120.54**	**294**	*e*PKP1	**PKiKP**	**16 56 51.8**	**0.0**
LIC	**Lamto**	**120.78**	**294**	*e*PKP1	**PKPdf**	**16 56 51.4**	**-0.7**
	comp=Z,137nm,1.9s						
DWPF	**Disney Wildern**	**123.18**	**25**	PFAKE		16 57 10.0	+13
DWPF				LR	LR		
	comp=Z,2μm,21.0s						
BBSR	**BB Station**	**123.45**	**7**	PFAKE		16 57 10.0	+13
BBSR				LR	LR		
	comp=Z,1μm,20.0s						
VNA2	**Neumayer--Watz**	**125.18**	**198**	PKPdf	**PKiKP**	**16 56 59.3**	**0.0**
	baz=67,slow=1.1						
VNA1	**Neumayer--Stat**	**125.57**	**198**	PKPdf	**PKPdf**	**16 56 59.3**	**-0.3**
VNA3	**Neumayer Olymp**	**125.63**	**197**	PKPdf	**PKPdf**	**16 56 59.7**	**0.0**
GRTK	**Grand Turk**	**132.77**	**18**	PFAKE		16 57 30.0	+14
GRTK				LR	LR		
	comp=Z,1μm,20.0s						
GTBY	**Guantanamo Bay**	**132.99**	**23**	PFAKE		16 57 30.0	+14
GTBY				LR	LR		
	comp=Z,1μm,20.0s						
ESTN	**Estel**	**133.44**	**41**	PFAKE		16 57 30.0	+12
ESTN				LR	LR		
	comp=Z,1μm,20.0s						
MTDJ	**Mount Denham**	**133.60**	**27**	PFAKE		16 57 30.0	+12
MTDJ				LR	LR		
	comp=Z,1μm,22.0s						
SDDR	**Presa de Saban**	**135.12**	**19**	PFAKE		16 57 30.0	+9.1
SDDR				LR	LR		
	comp=Z,2μm,21.0s						
SDD	**Santo Domingo**	**136.01**	**17**	PFAKE		16 57 30.0	+7.4
SDD				LR	LR		
	comp=Z,1μm,21.0s						
EMPR	**Esperanza - Ma**	**136.79**	**13**	PFAKE		16 57 30.0	+5.8
EMPR				LR	LR		
	comp=Z,2μm,22.0s						
AOPR	**Arecibo Observ**	**136.87**	**13**	PFAKE		16 57 30.0	+5.6
AOPR				LR	LR		
	comp=Z,3μm,21.0s						
CBYP	**Canovanas**	**137.12**	**12**	PFAKE		16 57 40.0	+15
CBYP				LR	LR		
	comp=Z,800nm,20.0s						
CRPR	**Cabo Rojo, PR**	**137.13**	**14**	PFAKE		16 57 30.0	+5.1
CRPR				LR	LR		
	comp=Z,1μm,20.0s						
CUPR	**Culebra, Puert**	**137.19**	**11**	PFAKE		16 57 40.0	+15

CUPR				LR	LR		
	comp=Z,1μm,21.0s						
SJG	**San Juan**	**137.22**	**12**	PFAKE		16 57 40.0	+15
SJG				LR	LR		
	comp=Z,1μm,20.0s						
HUMP	**Col San Antoni**	**137.25**	**12**	PFAKE		16 57 40.0	+15
HUMP				LR	LR		
	comp=Z,900nm,20.0s						
MTP	**Monte Pirata**	**137.35**	**12**	PFAKE		16 57 40.0	+15
MTP				LR	LR		
	comp=Z,800nm,21.0s						
SMRT	**St. Maarten**	**137.78**	**8**	PFAKE		16 57 40.0	+14
SMRT				LR	LR		
	comp=Z,1μm,22.0s						
ANWB	**Willy Bob**	**138.31**	**6**	PFAKE		16 57 40.0	+13
ANWB				LR	LR		
	comp=Z,600nm,20.0s						
SEUS	**St. Eustatius**	**138.34**	**8**	PFAKE		16 57 40.0	+13
SEUS				LR	LR		
	comp=Z,1μm,21.0s						
BCIP	**Isla Barro Col**	**140.35**	**36**	*e*P	**PKPdf**	**16 57 23.6**	**-5.5**
FDF	**Fort de France**	**141.27**	**6**	PFAKE		16 57 40.0	+6.5
FDF				LR	LR		
	comp=Z,900nm,21.0s						
URIC	**Uribia, Colomb**	**141.69**	**24**	*e*P	PKiKP	16 57 44.9	+11
SMLC	**San Martn de**	**143.49**	**29**	*e*P	PKPab	16 57 30.2	-0.7
GRGR	**Grenville**	**143.79**	**7**	PFAKE		16 57 50.0	+11
GRGR				LR	LR		
	comp=Z,600nm,21.0s						
SDV	**Santo Domingo**	**144.79**	**23**	*e*PKPdf	**PKPdf**	**16 57 36.7**	**-0.5**
SDV				LR	LR		
	comp=Z,2μm,21.0s						
SDV	**Santo Domingo**	**144.79**	**23**	*e*P	PKPbc	16 57 36.2	+0.1
HELC	**Santa Helena**	**145.10**	**33**	*e*P	**PKPbc**	**16 57 36.9**	**-0.5**
PTBC	**PUERTO BERRIO**	**145.32**	**31**	*e*P	**PKPbc**	**16 57 33.6**	**-4.1**
GIRC	**Giron, Santand**	**145.41**	**28**	*e*P	**PKPab**	**16 57 38.2**	**-0.1**
PLMC	**San Jos del P**	**145.81**	**35**	*e*P	**PKPab**	**16 57 39.6**	**-0.2**
BARC	**Barichara**	**145.85**	**29**	*e*P	**PKPab**	**16 57 40.2**	**+0.2**
NORC	**Norcasia**	**145.97**	**32**	*e*P	**PKPdf**	**16 57 38.9**	**-0.2**
MALC	**Bahia Malaga**	**145.99**	**38**	*e*P	**PKPbc**	**16 57 39.6**	**-0.2**
GUY2C	**Guyana, Caldas**	**146.02**	**33**	*e*P	**PKPdf**	**16 57 39.6**	**-0.1**
GRGC	**Isla de Gorgon**	**146.34**	**40**	*e*P	**PKPab**	**16 57 42.2**	**+0.6**
RUSC	**La Rusia**	**146.52**	**29**	*e*P	**PKPdf**	**16 57 38.2**	**-2.3**
YOTC	**Yotoco, Valle**	**146.56**	**36**	*e*P	**PKPdf**	**16 57 40.2**	**+0.1**
TAMC	**Tame, Arauca**	**146.59**	**27**	*e*P	**PKPab**	**16 57 42.2**	**-0.4**
ROSC	**El Rosal**	**146.86**	**32**	PKPbc	**PKPab**	**16 57 43.7**	**-0.5**
	comp=Z,33nm,0.6s,baz=46,slow=19,SNR=14						
ROSC	**El Rosal**	**146.86**	**32**	PFAKE		16 57 50.0	+4.5
ROSC				LR	LR		
	comp=Z,600nm,20.0s						
ROSC	**El Rosal**	**146.86**	**32**	*e*P	**PKiKP**	**16 57 45.6**	**+0.1**
YOPC	**Yopal, Colombi**	**147.29**	**29**	*e*P	**PKPab**	**16 57 45.6**	**+0.1**
CHIC	**Chingaza**	**147.33**	**31**	*e*P	**PKPbc**	**16 57 44.2**	**0.0**
PRAC	**Prado**	**147.55**	**34**	*e*P	**PKPbc**	**16 57 43.6**	**-0.8**
POPC	**Popayan, Colom**	**147.57**	**38**	*e*P	**PKPbc**	**16 57 43.6**	**-1.1**
VILC	**Villavicencio,**	**147.80**	**32**	*e*P	**PKPbc**	**16 57 44.9**	**-0.2**
BETC	**Betania**	**148.13**	**36**	*e*P	**PKiKP**	**16 57 46.9**	**-0.8**
CRUC	**La Cruz**	**148.20**	**39**	*e*P	**PKPab**	**16 57 50.2**	**+0.8**
OTAV	**Otavalo**	**148.35**	**43**	*e*P	**PKiKP**	**16 57 48.9**	**+0.2**
FLOC	**Florencia**	**148.93**	**37**	*e*P	**PKiKP**	**16 57 48.9**	**-0.4**
MACC	**Macarena, Meta**	**149.42**	**34**	*e*P	**PKPbc**	**16 57 48.9**	**-0.3**
PTLC	**Puerto Leguiza**	**150.57**	**38**	*e*P	**PKPbc**	**16 57 51.5**	**-0.4**
RCBR	**Riachuelo**	**152.54**	**308**	*e*PKPbc	**PKiKP**	**16 57 57.4**	**+0.7**
RCBR				LR	LR		
	comp=Z,900nm,20.0s						
RCBR	**Riachuelo**	**152.54**	**308**	*e*PKIKP	**PKiKP**	**16 57 57.4**	**+0.7**
RCBR				MLR	MLR		
	comp=Z,900nm,20.0s						
LPAZ	**La Paz**	**167.28**	**55**	PKP	**PKPdf**	**16 58 07.9**	**+1.2**
	comp=Z,6.0nm,1.1s,baz=16,slow=2.6,SNR=16						
LPAZ	**La Paz**	**167.28**	**55**	*e*PKPdf	**PKPdf**	**16 58 08.3**	**+1.7**
PB11	**IPOC Station P**	**167.82**	**72**	*e*PKPdf	**PKPdf**	**16 58 08.0**	**+1.6**
BDFB	**Brasilia**	**167.86**	**312**	PKP	**PKPdf**	**16 58 06.4**	**-0.1**
	comp=Z,4.7nm,0.6s,baz=90,slow=3.0,SNR=6.2						
BDFB				PKPab			
	comp=Z,4.8nm,0.7s,baz=50,slow=6.1,SNR=3.7				**PKPab**	**16 59 13.3**	**-0.2**
GO01	**Chusmiza**	**168.18**	**71**	*e*PKPdf	**PKPdf**	**16 58 08.8**	**+1.8**

MAN 07 16:45:19.1, 13°.63N×120°.63E, h113km, mb4.7, ML3.6, MS3.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.33**	**111**	⇑*i*P	Pn	16 45 36.8	+1.4
PGP				*i* S	Sn	16 45 50.8	+3.2
LUBP	**Lubang**	**0.39**	**286**	*e*P	Pn	16 45 36.7	+1.1
LUBP				*e*S	Sn	16 45 50.1	+2.1
LUBP	**Lubang**	**0.39**	**286**	*e*P	Pn	16 45 38.0	+2.4
LUBP				*e*S	Sn	16 45 51.4	+3.4
BOAC	**Boac**	**1.19**	**98**	*e*P	Pn	16 45 43.2	+0.8
BOAC				*e*S	Sn	16 45 58.1	-2.1
BOAC	**Boac**	**1.19**	**98**	*e*P	Pn	16 45 44.1	+1.7
BOAC				*e*S	Sn	16 46 01.7	+1.5
SJMP	**San Jose**	**1.25**	**158**	*e*P	Pn	16 45 44.6	+1.4
SJMP				*e*S	Sn	16 46 03.6	+2.2
SJMP	**San Jose**	**1.25**	**158**	*e*P	Pn	16 45 46.0	+2.8
SJMP				*e*S	Sn	16 46 03.8	+2.3
BUSP	**Coron**	**1.67**	**195**	*e*P	Pn	16 45 49.0	+0.9
BUSP				*e*S	Sn	16 46 11.3	+1.1
POLP	**Polilio Island**	**1.68**	**49**	*e*P	Pn	16 45 49.1	+1.0
OTRP	**Odiongan**	**1.84**	**133**	*e*P	Pn	16 45 50.6	+0.3
OTRP				*e*S	Sn	16 46 12.9	-1.1
BALP	**Baler**	**2.29**	**23**	*e*P	Pn	16 45 56.9	+1.0
CUYO	**Cuyo Island**	**2.78**	**172**	*e*P	Pn	16 46 02.8	+0.5

GUC 07 16:49:01.0±0.6, 19°.62S×69°.53W, h93km±3km, ML3.5, 4C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB11	**IPOC Station P**	**0.19**	**221**	⇓*i*P	Pn	16 49 14.0	-0.6
PB11				*i* S	Sn	16 49 24.1	-0.6
PB11				IAML		16 49 24.5	
	comp=E,6μm,0.3s						
GO01	**Chusmiza**	**0.32**	**99**	⇑*i*P	Pn	16 49 15.2	-0.3
GO01				*i* S	Sn	16 49 26.2	0.0
GO01				IAML		16 49 28.2	
	comp=N,7μm,0.1s						
MNMC	**Minye Minye**	**0.49**	**352**	⇑*i*P	Pn	16 49 16.3	-0.1
MNMC				*i* S	Sn	16 49 27.9	+0.1
MNMC				IAML		16 49 29.6	
	comp=N,8μm,0.2s						
PSGC	**Pisagua**	**0.56**	**272**	⇑*i*P	Pn	16 49 15.9	-0.8
PSGC				*i* S	Sn	16 49 27.2	-1.2
PSGC				IAML		16 49 27.7	
	comp=E,685nm,0.3s						
PB08	**IPOC Station P**	**0.62**	**146**	⇓*i*P	Pn	16 49 17.3	-0.3
PB08				*i* S	Sn	16 49 29.7	-0.2
PB08				IAML		16 49 30.5	
	comp=N,1μm,0.4s						
PB12	**IPOC Station P**	**1.26**	**323**	⇑*i*P	Pn	16 49 23.5	-0.6
PB12				*i* S	Sn	16 49 41.0	-0.3
PB12				IAML		16 49 42.6	
	comp=E,1μm,0.3s						
PB16	**IPOC Station P**	**1.28**	**1**	⇓*i*P	Pn	16 49 25.6	+0.8
PB16				*i* S	Sn	16 49 43.9	+1.2
PB01	**IPOC Station P**	**1.42**	**179**	*e*P	Pn	16 49 25.7	-0.3
PB01				*i* S	Sn	16 49 45.1	+0.3
PB01				IAML		16 49 46.1	
	comp=E,893nm,0.4s						
PB02	**IPOC Station P**	**1.73**	**192**	IAML		16 49 55.8	
	comp=E,415nm,0.4s						
PB07	**IPOC Station P**	**2.12**	**189**	IAML		16 50 05.8	
	comp=E,252nm,0.2s						

*IDC **07** 16:56:59.1±3.1, 0°.51S×132°.49E, h0km, mb3.1/2, mb1 3.3/2, mb1mx3.1/26, mbtmp3.2/2, ML5.0/2, Error ellipse: s-maj=157.6km s-min=23.3km az=71.0*
*ISCJB **07** 16:57:00.0±0.5, 0°.44S±0°.06×132°.71E±0°.09, h33km, mb4.1/9, Error ellipse: s-maj=13.6km s-min=8.2km az=167.4*
*NEIC **07** 16:57:03.0±1.7, 0°.48S×132°.70E, h46km±13km, mb4.1/10, Error ellipse: s-maj=17.0km s-min=3.5km az=127.0*
ISC 07 16:57:01.8±0.8, 0°.52S±0°.07×132°.7E±0°.1, h33km, n20, σ1§38/21, mb4.2/9, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.43**	**191**	*e*Pn	**Pb**	**16 57 43.1**	**-1.8**
DAV	**Davao City (W)**	**10.38**	**317**	Pn	**Pn**	**16 59 28.0**	**-0.6**
	92nm,0.3s,baz=133,slow=22,SNR=13						
MTN	**Manton Dam**	**12.35**	**187**	*e*Pn	**Pn**	**16 59 57.0**	**+1.7**
BATI	**Baumata**	**13.19**	**223**	*e*Pn	**Pn**	**17 00 08.1**	**+1.2**
BATI				*e*Pn	**Pn**	**17 00 08.1**	**+1.2**
WRAB	**Tennant Creek**	**19.36**	**175**	*e*P	**P**	**17 01 22.0**	**-2.8**
	4.3nm,0.8s						
WR1	**Warramunga Arr**	**19.36**	**175**	*e*P	**Pn**	**17 01 27.0**	**+0.9**
WRA	**Warramunga Arr**	**19.36**	**175**	P	**Pn**	**17 01 27.0**	**+0.9**
	2.0nm,0.3s,baz=350,slow=11,SNR=3.2						
WB2	**Warramunga Arr**	**19.37**	**175**	*e*P	**P**	**17 01 25.4**	**+0.6**
	1.9nm,0.9s						
SBUM	**Sibu**	**20.72**	**278**	*e*P	**P**	**17 01 39.1**	**-0.6**
	6.0nm,0.7s						
ANA2	**Anatahan**	**21.09**	**37**	*e*P	**P**	**17 01 42.0**	**-1.6**
	140nm,0.4s						
SARN	**Sarigan**	**21.41**	**36**	*e*P	**P**	**17 01 47.0**	**-0.1**
	34nm,1.1s						
AS31	**Alice Springs**	**23.03**	**177**	*e*P	**P**	**17 02 05.3**	**+1.0**
	1.0nm,1.1s						
ASAR	**Alice Springs**	**23.04**	**177**	P	**P**	**17 02 06.3**	**+2.0**
	0.3nm,0.6s,baz=358,slow=11,SNR=7.4						
CTAO	**Charters Tower**	**23.52**	**147**	*e*P	**P**	**17 02 09.3**	**+0.1**
	9.3nm,1.1s						
EIDS	**Eidsvold**	**30.40**	**146**	*e*P	**P**	**17 03 12.6**	**+1.5**
	7.8nm,1.1s						
FORT	**Forrest**	**30.42**	**188**	*e*P	**P**	**17 03 09.5**	**-1.7**
	10nm,0.9s						
BBOO	**Buckleboo**	**32.27**	**175**	*e*P	**P**	**17 03 27.2**	**-0.3**
CHTO	**Chiang Mai**	**38.34**	**302**	*e*P	**P**	**17 04 20.0**	**0.0**
	3.0nm,1.1s						
MK32	**Makanchi Array**	**64.47**	**324**	*e*P	**P**	**17 07 36.5**	**+1.2**
MKAR	**Makanchi Array**	**64.47**	**324**	P	**P**	**17 07 36.5**	**+1.2**
	0.2nm,0.6s,baz=130,slow=7.3,SNR=3.1						

MAN 07 17:13:48.1, 7°.29N×124°.72E, h17km, mb4.9, ML3.9, MS3.9, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.47**	**262**	⇓*i*P	Pn	17 13 59.8	-0.2
CTBH				*i* S	Sn	17 14 08.7	+0.7
BUKP	**Musuan**	**0.68**	**30**	*e*P	Pg	17 14 00.9	-0.6
BUKP				*e*S	Sg	17 14 09.7	-0.9
SKMP	**Bagumbayan, Su**	**0.78**	**193**	*e*P	Pb	17 14 03.3	0.0
SKMP				*e*S	Sn	17 14 15.8	+0.1
DMPH	**Davao City--Mi**	**0.81**	**104**	⇑*e*P	Pn	17 14 06.3	+1.5
DMPH				*e*S	Sn	17 14 17.7	+1.2
CGP	**Cagayan de Oro**	**1.16**	**359**	⇑*i*P	Pb	17 14 09.7	0.0
CGP				*i* S	Sb	17 14 23.9	-0.6
PAGZ	**Pagadian**	**1.43**	**293**	*e*P	Pg	17 14 15.2	-0.5
PAGZ				*e*S	Sg	17 14 35.8	+1.4
DDMP	**Don Marcelino,**	**1.54**	**140**	*e*P	Pb	17 14 16.4	+0.3
DDMP				*e*S	Sg	17 14 41.2	+3.5
MATI	**Mati**	**1.57**	**102**	*e*P	Pb	17 14 16.8	+0.1
BUTP	**Butuan**	**1.90**	**28**	*e*P	Pb	17 14 23.3	+1.0
BUTP				*e*S	Sg	17 14 50.5	+1.2
IPIL	**Ipil**	**2.18**	**283**	*e*P	Pb	17 14 26.3	-0.8
IPIL				*e*S	Sb	17 14 54.7	+0.8
SNPH	**Sibulan**	**2.51**	**324**	*e*P	Pg	17 14 34.9	-1.5

MAN 07 17:44:40.8, 11°.48N×125°.54E, h31km, mb4.4, ML3.3, MS3.1, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.63**	**240**	⇓*i*P	Pn	17 44 53.8	+0.1
PLP				*i* S	Sn	17 45 03.0	+0.4

*IDC **07** 18:00:20.9±1.8, 9°.96N×125°.68E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/39, mbtmp3.3/3, Error ellipse: s-maj=91.9km s-min=22.4km az=57.0*
*ISCJB **07** 18:00:25.4±0.9, 10°.29N±0°.03×126°.29E±0°.07, h67km±10km, mb3.9/4, Error ellipse: s-maj=11.4km s-min=5.7km az=176.9*
*MAN **07** 18:00:25.8, 10°.28N×126°.24E, h27km, mb4.7, ML3.6, MS3.5*
ISC 07 18:00:28.2±1.3, 10°.29N±0°.04×126°.21E±0°.09, h74km±11km, n26, σ1§78/32, mb3.2/4, 4C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.87**	**235**	⇑*i*P	**Pn**	**18 00 48.8**	**+3.5**
SCPH				*i* S	**Sn**	**18 01 01.3**	**+3.2**
MSLP	**Maasin**	**1.33**	**263**	*e*P	**Pn**	**18 00 48.6**	**-2.6**
MSLP				*e*S	**Sn**	**18 01 06.2**	**-2.2**
BUTP	**Butuan**	**1.43**	**204**	*e*P	**Pn**	**18 00 49.1**	**-3.4**
BUTP				*e*S	**Sn**	**18 01 07.5**	**-3.2**
PLP	**Palo**	**1.49**	**306**	⇑*e*P	**Pn**	**18 00 51.7**	**-1.5**
PLP				*e*S	**Sn**	**18 01 11.4**	**-0.6**
BESP	**Borongan**	**1.51**	**330**	*e*P	**Pn**	**18 00 51.5**	**-1.9**
BESP				*e*S	**Sn**	**18 01 14.6**	**+2.2**
OCLP	**Ormoc**	**1.74**	**296**	*e*P	**Pn**	**18 00 55.1**	**-1.5**
LLP	**Lapu-Lapu**	**2.21**	**271**	⇓*e*P	**Pn**	**18 01 01.9**	**-0.8**
LLP				*e*S	**Sn**	**18 01 27.9**	**-1.2**
CGP	**Cagayan de Oro**	**2.36**	**219**	⇑*e*P	**Pn**	**18 01 03.9**	**-0.9**
CGP				*e*S	**Sn**	**18 01 31.6**	**-1.1**
TBP	**Tagbilaran**	**2.38**	**256**	*e*P	**Pn**	**18 01 04.8**	**-0.3**
TBP				*i* S	**Sn**	**18 01 34.4**	**+0.9**
BUKP	**Musuan**	**2.65**	**205**	*e*P	**Pn**	**18 01 08.0**	**-0.8**
BUKP				*e*S	**Sn**	**18 01 40.7**	**+0.8**
CNP	**Cataman**	**2.68**	**326**	*e*P	**Pn**	**18 01 07.9**	**-1.1**
CNP				*e*S	**Sn**	**18 01 39.9**	**-0.6**
SNPH	**Sibulan**	**3.08**	**252**	⇓*i*P	**Pn**	**18 01 15.2**	**+0.6**
SNPH				*i* S	**Sn**	**18 01 51.0**	**+0.7**
GUIM	**Jordan**	**3.57**	**276**	*e*P	**Pn**	**18 01 20.0**	**-1.3**
CTBH	**Cotabato--PC H**	**3.61**	**213**	⇑*i*P	**Pn**	**18 01 22.0**	**+0.2**
PVCP	**Virac**	**3.85**	**329**	*e*P	**Pn**	**18 01 25.4**	**+0.3**
CAUP	**Cauayan**	**7.87**	**328**	*e*P	**Pn**	**18 02 19.1**	**-0.8**
CMAR	**Chiang Mai Arr**	**27.60**	**290**	P	**P**	**18 06 07.5**	**-1.3**
	0.5nm,0.8s,baz=104,slow=7.2,SNR=4.4						
WRA	**Warramunga Arr**	**31.09**	**165**	P	**P**	**18 06 39.0**	**-0.6**
	105nm,0.3s,baz=338,slow=12,SNR=1.5						
ASAR	**Alice Springs**	**34.58**	**168**	P	**P**	**18 07 10.2**	**+0.1**
	0.2nm,0.6s,baz=356,slow=6.9,SNR=8.9						
ASAR				PcP	**PcP**	**18 09 45.7**	**+2.4**
	0.4nm,1.0s,baz=343,slow=2.7,SNR=2.9						
H11S3	**WAKE ISLAND Hy**	**39.98**	**74**	T	T	18 50 47.4	
	baz=262,slow=75,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**39.99**	**74**	T	T	18 50 51.1	
	baz=262,slow=75,SNR=8.5						
H11S2	**WAKE ISLAND Hy**	**39.99**	**74**	T	T	18 50 52.9	
	baz=262,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**40.31**	**72**	T	T	18 51 18.3	
	baz=264,slow=74,SNR=40						
H11N2	**WAKE ISLAND Hy**	**40.32**	**72**	T	T	18 51 17.2	
	baz=264,slow=74,SNR=20						
H11N3	**WAKE ISLAND Hy**	**40.33**	**72**	T	T	18 51 16.6	
	baz=264,slow=74,SNR=33						
MKAR	**Makanchi Array**	**51.97**	**323**	P	**P**	**18 09 31.0**	**+1.1**
	0.1nm,0.3s,baz=116,slow=9.4,SNR=3.9						

*JMA **07** 18:22:17.4±0.1, 24°.23N×121°.54E, h28km±1km, M2.7*
*ISCJB **07** 18:22:18.7±0.2, 24°.30N±0°.01×121°.67E±0°.01, h22km±2km, Error ellipse: s-maj=2.3km s-min=1.5km az=33.5*
*TAP **07** 18:22:18.3, 24°.30N×121°.63E, h23km, ML3.5, B*
ISC 07 18:22:18.3±0.9, 24°.29N±0°.02×121°.63E±0°.02, h23km±4km, n128, σ1§25/195, 9C-14D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.12**	**197**	⇑P	**Pb**	**18 22 23.0**	**+0.2**
	baz=194						
NACB				S	**Sb**	**18 22 26.2**	**+0.3**
	baz=194						
ETLH	**Xiulin Townshi**	**0.16**	**240**	⇑P	**Pn**	**18 22 23.7**	**-1.8**
	baz=235						
ETLH				S	**Sb**	**18 22 26.9**	**+0.1**
	baz=235						
ENA	**Nanau**	**0.17**	**35**	⇑*i*P	**Pb**	**18 22 23.6**	**+0.2**
	baz=41						
ENA				S	**Sb**	**18 22 27.0**	**+0.1**
	baz=41						
NANB	**Nanao**	**0.18**	**37**	⇑P	**Pb**	**18 22 23.6**	**+0.1**
	baz=41						
NANB				S	**Sb**	**18 22 26.8**	**-0.1**
	baz=41						
TWD	**Chiawan**	**0.21**	**189**	⇑*i*P	**Pb**	**18 22 24.0**	**+0.2**
	baz=180						
TWD				S	**Sb**	**18 22 28.3**	**+0.8**
	baz=180						
NNSB	**Datong**	**0.27**	**302**	⇓P	**Pb**	**18 22 24.9**	**+0.1**
	baz=305						
NNSB				S	**Sb**	**18 22 29.2**	**-0.1**
	baz=305						
NNS	**Nan Shan**	**0.28**	**303**	⇓*i*P	**Pb**	**18 22 25.1**	**0.0**
	baz=306						
NNS				*e*S	**Sb**	**18 22 29.7**	**+0.2**
	baz=306						
HWA	**Hwalien**	**0.31**	**185**	⇑*i*P	**Pn**	**18 22 26.1**	**-1.3**
	baz=190						
HWA				S	**Sn**	**18 22 32.0**	**-1.3**
	baz=190						
NDT	**Datong Townshi**	**0.33**	**341**	⇓*i*P	**Pb**	**18 22 25.8**	**0.0**
	baz=344						
NDT				S	**Sb**	**18 22 30.9**	**+0.2**
	baz=344						
ENTT	**Nioudou**	**0.36**	**350**	⇓*i*P	**Pb**	**18 22 26.0**	**-0.1**
	baz=355						
ENTT				S	**Sb**	**18 22 31.3**	**-0.1**
	baz=355						
WHF	**Hehuan Shan**	**0.36**	**247**	⇑*i*P	**Pn**	**18 22 26.8**	**-1.8**
	baz=244						
WHF				S	**Sn**	**18 22 32.1**	**-3.2**
	baz=244						
TWC	**Suao**	**0.38**	**31**	⇓P	**Pb**	**18 22 26.4**	**0.0**
	baz=34						
TWC				S	**Sb**	**18 22 31.7**	**-0.2**
	baz=34						
ENLB	**Shoufeng**	**0.38**	**184**	P	**Pb**	**18 22 26.6**	**+0.1**
	baz=190						
ENLB				*e*S	**Sn**	**18 22 34.0**	**-1.0**
	baz=190						
TWT	**Tachien**	**0.42**	**266**	P	**Pn**	**18 22 27.9**	**-1.2**
	baz=260						
TWT				S	**Sn**	**18 22 33.7**	**-2.5**
	baz=260						
TDCB	**Techi**	**0.43**	**266**	⇓P	**Pn**	**18 22 27.9**	**-1.4**
	baz=261						
TDCB				S	**Sb**	**18 22 33.3**	**-0.3**
	baz=261						
TWE	**Neicheng**	**0.43**	**4**	⇓*i*P	**Pb**	**18 22 27.3**	**0.0**
	baz=9.0						
TWE				S	**Sb**	**18 22 33.0**	**-0.6**
	baz=9.0						
YHNB	**Yeheng**	**0.45**	**329**	⇓P	**Pb**	**18 22 27.7**	**+0.1**
	baz=328						
YHNB				S	**Sb**	**18 22 33.6**	**-0.4**
	baz=328						
NSK	**Sanguang**	**0.46**	**327**	⇓*i*P	**Pb**	**18 22 27.9**	**0.0**
	baz=327						
NSK				*i* S	**Sb**	**18 22 34.1**	**-0.2**
	baz=327						
CHGB	**Renai**	**0.47**	**242**	⇑P	**Pn**	**18 22 28.6**	**-1.3**
	baz=240						
CHGB				S	**Sn**	**18 22 35.3**	**-2.4**
	baz=240						
ILA	**Ilan**	**0.49**	**12**	P	**Pb**	**18 22 28.4**	**+0.1**
	baz=10.0						
ILA				S	**Sb**	**18 22 34.9**	**-0.2**
	baz=10.0						
ESL	**Shilin**	**0.50**	**201**	⇓P	**Pb**	**18 22 28.0**	**-0.5**
	baz=199						
NWLT	**Wulai**	**0.50**	**346**	P	**Pb**	**18 22 28.4**	**-0.1**
	baz=340						
NWLT				S	**Sb**	**18 22 35.1**	**-0.4**
	baz=340						
EOS1	**EOS1**	**0.52**	**60**	*e*P	**Pn**	**18 22 29.8**	**-0.5**
	baz=56						
OWD	**Renai**	**0.53**	**232**	⇑P	**Pn**	**18 22 29.2**	**-1.4**
	baz=230						
OWD				*e*S	**Sn**	**18 22 36.2**	**-2.8**
	baz=230						
NTC	**Toucheng**	**0.59**	**18**	*e*P	**Pb**	**18 22 29.7**	**-0.4**
	baz=18						
WHP	**Taichung City**	**0.63**	**269**	⇓P	**Pn**	**18 22 31.2**	**-0.7**
	baz=268						
WHP				*e*S	**Sn**	**18 22 39.3**	**-2.0**
	baz=268						
EGFH	**Guangfu**	**0.64**	**197**	*e*P	**Pb**	**18 22 30.1**	**-0.7**
	baz=196						
LIOB	**Emei**	**0.67**	**303**	⇓*i*P	**Pn**	**18 22 32.0**	**-0.4**
	baz=302						
LIOB				S	**Sn**	**18 22 40.8**	**-1.4**
	baz=302						
NSTT	**Nanjuang**	**0.67**	**301**	⇓*i*P	**Pn**	**18 22 31.9**	**-0.5**
	baz=300						
NSTT				*i* S	**Sn**	**18 22 40.2**	**-2.1**
	baz=300						
NHDH	**Xindian Distri**	**0.68**	**352**	*e*P	**Pb**	**18 22 31.7**	**+0.1**
	baz=356						
DPDB	**Guoxing**	**0.69**	**249**	*e*P	**Pn**	**18 22 32.0**	**-0.8**
	baz=248						
DPDB				*e*S	**Sn**	**18 22 41.1**	**-1.7**
	baz=248						
TWA	**Mucha**	**0.69**	**356**	*e*P	**Pb**	**18 22 31.7**	**0.0**
	baz=3.0						
TWA				S	**Sb**	**18 22 41.1**	**+0.2**
	baz=3.0						
VWDT	**VWDT**	**0.69**	**220**	P	**Pn**	**18 22 32.1**	**-0.6**
	baz=224						
VWDT				S	**Sn**	**18 22 41.8**	**-1.0**
	baz=224						
TATO	**Taipei**	**0.70**	**349**	P	**Pb**	**18 22 31.9**	**+0.1**
	baz=353						
TATO				S	**Sb**	**18 22 40.7**	**-0.3**
	baz=353						
TIPB	**Shuangxi**	**0.71**	**14**	⇓P	**Pb**	**18 22 31.8**	**-0.2**
	baz=8.0						
TIPB				S	**Sb**	**18 22 40.2**	**-1.1**
	baz=8.0						
TAP	**Taipei**	**0.76**	**351**	*e*P	**Pn**	**18 22 33.1**	**-0.5**
	baz=351						
TAP				*e*S	**Sb**	**18 22 42.9**	**+0.2**
	baz=351						
SBCB	**Hsin

YM04	**YM04** baz=354	**0.87 354**	*e*P	**Pn**	**18 22 34.8**	**-0.4**
YM04	baz=354		*e*S	**Sb**	**18 22 46.1**	**+0.1**
YM10	**YM10** baz=355	**0.87 356**	*e*P	**Pn**	**18 22 35.2**	**0.0**
YM10	baz=355		*e*S	**Sb**	**18 22 46.1**	**+0.1**
YM05	**YM05** baz=355	**0.88 356**	*e*P	**Pb**	**18 22 34.8**	**-0.1**
YM05	baz=355		*e*S	**Sb**	**18 22 46.4**	**+0.1**
YM11	**YM11** baz=345	**0.88 357**	*e*P	**Pb**	**18 22 34.8**	**-0.2**
YM11	baz=345		*e*S	**Sn**	**18 22 47.1**	**-0.4**
TCU	**Taichung** baz=259	**0.88 261**	*e*P	**Pn**	**18 22 37.2**	**+1.8**
YM07	**YM07** baz=348	**0.89 359**	*e*P	**Pn**	**18 22 35.1**	**-0.4**
YM07	baz=348		*e*S	**Sb**	**18 22 46.5**	**0.0**
NTST	**Danshui** baz=360	**0.89 349**	*e*P	**Pn**	**18 22 35.5**	**0.0**
NTST	baz=360		*e*S	**Sn**	**18 22 48.3**	**+0.7**
YM03	**YM03** baz=354	**0.89 355**	*e*P	**Pn**	**18 22 35.1**	**-0.4**
YM03	baz=354		*e*S	**Sb**	**18 22 46.6**	**-0.1**
YM08	**YM08** baz=346	**0.90 358**	*e*P	**Pb**	**18 22 34.7**	**-0.5**
YM08	baz=346		*e*S	**Sb**	**18 22 46.3**	**-0.6**
WDJ	**Dajia District** baz=272	**0.91 274**	P	**Pn**	**18 22 37.2**	**+1.5**
WHYT	**Xinyi Township** baz=229	**0.92 231**	*e*P	**Pn**	**18 22 36.5**	**+0.6**
YULB	**Yu-li** baz=198	**0.94 199**	*e*P	**Pb**	**18 22 33.6**	**-2.3**
WJS	**Zhushan** baz=233	**0.95 241**	*e*P	**Pn**	**18 22 37.7**	**+1.4**
WNT	**Mingjian** baz=244	**0.96 245**	*e*P	**Pn**	**18 22 37.9**	**+1.5**
WNT	baz=244		*e*S	**Sn**	**18 22 52.5**	**+3.2**
TWF1	**Yuli** baz=197	**0.98 198**	*e*P	**Pn**	**18 22 34.3**	**-2.3**
TWY	**Chenhua** baz=347	**0.99 358**	*e*P	**Pb**	**18 22 37.7**	**+1.0**
WCHH	**Zhanghua** baz=258	**1.00 258**	*e*P	**Pb**	**18 22 38.4**	**+1.4**
WCHH	baz=258		*e*S	**Sn**	**18 22 53.2**	**+2.8**
YUS	**Yu-Shan** baz=224	**1.01 218**	*e*P	**Pb**	**18 22 37.2**	**-0.1**
CHN5	**Tsauling** baz=231	**1.11 232**	*e*P	**Pb**	**18 22 40.1**	**+1.3**
CHN5	baz=231		S	**Sn**	**18 22 56.3**	**+3.1**
WGK	**Gukeng** baz=238	**1.15 239**	P	**Pb**	**18 22 40.8**	**+1.3**
WGK	baz=238		*e*S	**Sb**	**18 22 57.0**	**+3.0**
WDLH	**Douliu** baz=251	**1.16 240**	*e*P	**Pb**	**18 22 40.9**	**+1.2**
WDLH	baz=251		*e*S	**Sb**	**18 22 58.4**	**+3.9**
CHKT	**Chengkung** baz=190	**1.21 192**	*e*P	**Pn**	**18 22 38.8**	**-1.0**
JYNG	**Yonagunijimaku**	**1.21 82**	P	**Pn**	**18 22 40.3**	**+0.5**
JYNG			*e*S	**Sb**	**18 22 56.8**	**+1.1**
RLNB	**Erlin** baz=263	**1.23 252**	*e*P	**Pb**	**18 22 41.8**	**+0.9**
RLNB	baz=263		*e*S	**Sb**	**18 22 58.9**	**+2.7**
ELDTW	**Lidau** baz=192	**1.23 207**	*e*P	**Pn**	**18 22 38.7**	**-1.5**
YOJ	**Yonaguni jima** baz=84	**1.27 82**	*e*P	**Pn**	**18 22 41.0**	**+0.4**
YOJ	**Yonaguni jima**	**1.27 82**	P	**Pn**	**18 22 41.1**	**+0.4**
YOJ			*e*S	**Sb**	**18 22 58.2**	**+0.8**
CHN2	**Minshiung** baz=234	**1.30 235**	*e*P	**Pb**	**18 22 43.3**	**+1.2**
CHN2	baz=234		*e*S	**Sb**	**18 23 01.3**	**+3.0**
WTCT	**Ta-ch'eng** baz=264	**1.30 252**	*e*P	**Pb**	**18 22 42.7**	**+0.5**
WTCT	baz=264		*e*S	**Sb**	**18 23 00.7**	**+2.2**
CHN4	**Tsaushan** baz=225	**1.33 226**	*e*P	**Pb**	**18 22 43.8**	**+1.2**
CHN4	baz=225		*e*S	**Sb**	**18 23 02.1**	**+2.9**
TPUB	**Ta-pu** baz=210	**1.34 223**	*e*P	**Pb**	**18 22 43.7**	**+0.8**
TPUB	baz=210		*e*S	**Sb**	**18 23 01.7**	**+2.1**
CHY	**Chiayi** baz=221	**1.36 235**	*e*P	**Pb**	**18 22 44.7**	**+1.7**
STYT	**Tauyuan** baz=202	**1.38 216**	*e*P	**Pb**	**18 22 42.8**	**-0.6**
WTP	**Ta-pu** baz=233	**1.39 222**	*e*P	**Pb**	**18 22 43.9**	**+0.2**
PCYT	**Pengchaiyu** baz=15	**1.40 16**	*e*P	**Pn**	**18 22 41.7**	**-0.7**
WSF	**Szhu** baz=256	**1.44 244**	*e*P	**Pb**	**18 22 44.8**	**+0.3**
WSF	baz=256		*e*S	**Sb**	**18 23 04.7**	**+2.3**
SNST	**Tainan City** baz=222	**1.49 225**	*e*P	**Pb**	**18 22 45.9**	**+0.7**
SGST	**Jiashian** baz=203	**1.54 219**	*e*P	**Pb**	**18 22 45.6**	**-0.5**
TWG	**Pinlang** baz=185	**1.55 200**	*e*P	**Pb**	**18 22 44.7**	**-1.6**
TWGBT	**Beinan** baz=185	**1.55 199**	*e*P	**Pn**	**18 22 43.8**	**-0.7**
SLGT	**Liugui** baz=200	**1.57 215**	*e*P	**Pb**	**18 22 46.2**	**-0.5**
CHN8	**Yiju** baz=234	**1.60 235**	*e*P	**Pb**	**18 22 47.5**	**+0.3**
CHN8	baz=234		*e*S	**Sb**	**18 23 08.9**	**+1.9**
SSD	**Sandimen** baz=193	**1.79 211**	*e*P	**Pb**	**18 22 49.6**	**-0.7**
ECL	**Taimali** baz=187	**1.79 200**	*e*P	**Pb**	**18 22 49.3**	**-1.2**
MASBT	**Mashibuluo** baz=191	**1.90 209**	*e*P	**Pb**	**18 22 51.1**	**-1.2**
IRIF	**Iriomote-Funau**	**1.91 88**	P	**Pn**	**18 22 49.8**	**+0.3**
IRIF			*e*S	**Sn**	**18 23 13.3**	**+0.4**
HATJ	**Hateruma jima**	**2.00 96**	*e*S	**Sn**	**18 23 16.3**	**+1.3**
EAST	**Anshuo** baz=189	**2.03 201**	*e*P	**Pb**	**18 22 52.6**	**-1.9**
PNG	**Penghu** baz=246	**2.03 250**	*e*P	**Pn**	**18 22 51.3**	**+0.2**
TAW	**Tawu** baz=188	**2.04 200**	*e*P	**Pb**	**18 22 52.2**	**-2.4**
PHUB	**P'eng-hu** baz=244	**2.04 248**	*e*P	**Pn**	**18 22 51.5**	**+0.3**
SSPT	**Xinbi** baz=191	**2.04 209**	*e*P	**Pb**	**18 22 53.6**	**-1.1**
WDGT	**Dungji** baz=237	**2.08 241**	*e*P	**Pb**	**18 22 52.9**	**-2.4**
PTTC	**Pingtan** baz=306	**2.08 306**	*e*P	**Pn**	**18 22 51.6**	**-0.2**
SCZT	**Fangliau** baz=189	**2.12 206**	*e*P	**Pb**	**18 22 55.5**	**-0.5**
JKRS	**Kuro-shima**	**2.17 91**	P	**Pn**	**18 22 54.2**	**+1.2**
JKRS			S	**Sn**	**18 23 20.6**	**+1.4**
WLCH	**Liuqiu** baz=207	**2.24 211**	*e*P	**Pb**	**18 22 57.9**	**-0.3**
TWP	**Hsiaoliuchiu** baz=207	**2.26 211**	*e*P	**Pb**	**18 22 58.9**	**+0.5**
VCHM	**Qimei** baz=238	**2.29 242**	*e*P	**Pb**	**18 22 55.5**	**-3.4**
JIJ	**Ishigaki jima**	**2.29 88**	P	**Pn**	**18 22 55.1**	**+0.4**
JIJ			S	**Sn**	**18 23 22.6**	**+0.4**
MATB	**Ma-tsu** baz=321	**2.41 321**	*e*P	**Pn**	**18 22 56.3**	**0.0**
PTMZ	**Houxiangcun** baz=288	**2.41 289**	*e*P	**Pn**	**18 22 56.3**	**0.0**
TWK1	**Hengchun** baz=184	**2.45 198**	*e*P	**Pb**	**18 22 59.7**	**-2.1**
TWKBT	**Hengchun** baz=184	**2.45 198**	*e*P	**Pb**	**18 22 58.8**	**-2.9**
JISG	**Ishigakijimahi**	**2.46 82**	P	**Pn**	**18 22 57.3**	**+0.3**
JISG			*e*S	**Sn**	**18 23 26.1**	**-0.3**
JTJ	**Tarama**	**2.82 82**	*e*S	**Sn**	**18 23 36.9**	**+1.6**
LYJJ	**Jianjiangzhen** baz=325	**2.82 323**	*e*P	**Pn**	**18 23 02.1**	**+0.2**
KNM	**Kinmen** baz=272	**2.92 273**	*e*P	**Pb**	**18 23 05.6**	**-4.1**
XPSS	**Dashiqiu** baz=335	**2.94 334**	*e*P	**Pn**	**18 23 03.4**	**-0.2**
KNMB	**Chin-men Tao** baz=273	**2.96 274**	*e*P	**Pn**	**18 23 04.0**	**+0.1**
MHZQ	**Yeshan** baz=308	**2.97 308**	*e*P	**Pn**	**18 23 04.4**	**+0.3**
JIRB	**Irabujima**	**3.27 80**	*e*S	**Sn**	**18 23 48.8**	**+2.5**
AXDP	**Jialang** baz=280	**3.39 281**	*e*P	**Pn**	**18 23 10.2**	**+0.4**
ZPLA	**Ao Xicun** baz=264	**3.57 265**	*e*P	**Pn**	**18 23 12.8**	**+0.6**
ZZJH	**Jiuhuzhen** baz=273	**3.66 274**	*e*P	**Pn**	**18 23 14.0**	**+0.5**

*ISCJB **07** 18:33:08.8±0.5, 17.°33N±0.°07×95.°55W±0.°05, h106km±8km, mb3.9/2, Error ellipse: s-maj=12.1km s-min=7.1km az=21.0*
*MEX **07** 18:33:10.8±0.9, 17.°28N×95.°54W, h111km±10km, MD4.0*
*NEIC **07** 18:33:11.2±0.0, 17.°26N×95.°58W, h105km, mb4.1/5, MD4.0(MEX), After MEX.*

ISC 07 18:33:09.1±0.9, 17.°37N±0.°06×95.°61W±0.°04, h103km±10km, n15, σ1§57/24, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.75**	**112**	*e*Pn	**Pn**	**18 33 27.6**	**+0.4**
CMIG				*e*Sn	**Sn**	**18 33 40.5**	**-0.3**
CMIG	**Matias Romero**	**0.75**	**112**	*i* P	**Pn**	**18 33 27.6**	**+0.4**
CMIG				*i* S	**Sn**	**18 33 40.5**	**-0.3**
OXBJ	**Oaxaca**	**1.11**	**254**	*e*P	**Pn**	**18 33 32.5**	**+1.4**
OXBJ				*e*S	**Sn**	**18 33 49.0**	**+1.2**
HUIG	**Huatulco**	**1.66**	**197**	*e*Pn	**Pn**	**18 33 36.7**	**-0.9**
HUIG				*e*Sn	**Sn**	**18 33 57.6**	**-1.6**
HUIG	**Huatulco**	**1.66**	**197**	*e*P	**Pn**	**18 33 36.7**	**-0.9**
HUIG				*i* S	**Sn**	**18 33 58.9**	**-0.3**
LVIG	**Laguna Verde**	**2.46**	**342**	*e*Pn	**Pn**	**18 33 47.2**	**-0.6**
LVIG				*e*Sn	**Sn**	**18 34 14.8**	**-2.8**
PCIG		**2.83**	**125**	*e*Pn	**Pn**	**18 33 52.9**	**+0.2**
PCIG				*e*Sn	**Sn**	**18 34 25.2**	**-1.0**
PCIG		**2.83**	**125**	*e*P	**Pn**	**18 33 52.9**	**+0.2**
PCIG				*i* S	**Sn**	**18 34 24.2**	**-1.9**
TLIG	**Tlapa**	**2.83**	**274**	*e*Pn	**Pn**	**18 33 54.0**	**+1.2**
TLIG				*e*Sn	**Sn**	**18 34 22.3**	**-4.1**
CCIG	**Comitan**	**3.50**	**108**	*e*Pn	**Pn**	**18 34 01.9**	**+0.2**
CCIG				*e*Sn	Sn	18 34 31.2	-11
LNIG	**Linares**	**8.31**	**335**	*e*Pn	**Pn**	**18 35 09.2**	**+2.3**
JTS	**Las Juntas de**	**12.51**	**123**	*e*Pn	**Pn**	**18 36 02.7**	**-0.9**
W39A	**Magazine** 6.3nm,0.9s	**17.83**	**5**	*e*P	**P**	**18 37 10.6**	**+0.7**
SMCO	**Snowmass** 11nm,1.7s	**23.88**	**338**	*e*P	**P**	**18 38 14.8**	**+1.1**
ISCO	**Idaho Springs** 7.8nm,1.5s	**23.98**	**341**	*e*P	**P**	**18 38 15.9**	**+1.4**

*ISCJB **07** 18:37:55.8±0.7, 17.°2S±0.°2×178.°9W±0.°1, h539km, mb3.8/9, Error ellipse: s-maj=26.3km s-min=14.1km az=145.9*
*IDC **07** 18:37:57.7±2.5, 17.°29S×178.°90W, h552km±28km, mb3.4/8, mb1 3.6/9, mb1mx3.2/25, mbtmp4.3/9, Error ellipse: s-maj=30.4km s-min=16.5km az=152.0*

ISC 07 18:37:56.4±0.9, 17.°2S±0.°2×178.°9W±0.°2, h539km, n12, σ0§82/13, mb3.9/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 0.3nm,0.3s,baz=84,slow=18,SNR=2.9	**14.64**	**248**	P	**P**	**18 41 03.0**	**+0.5**
URZ	**Urewera** 11nm,1.0s,baz=5.8,slow=7.2,SNR=3.0	**21.24**	**189**	P	**P**	**18 42 04.7**	**+0.7**
STKA	**Stephens Creek** 1.2nm,0.4s,baz=83,slow=9.8,SNR=11	**38.57**	**240**	P	**P**	**18 44 32.8**	**-0.5**
JAY	**Jayapura** 16nm,1.1s,baz=166,slow=9.2,SNR=5.1	**42.30**	**286**	P	**P**	**18 45 04.1**	**+0.8**
WRA	**Warramunga Arr** 1.6nm,0.3s,baz=90,slow=8.4,SNR=31	**44.32**	**259**	P	**P**	**18 45 18.5**	**-0.5**
ASAR	**Alice Springs** 19nm,0.6s,baz=89,slow=7.9,SNR=676	**44.55**	**254**	P	**P**	**18 45 20.6**	**0.0**
ASAR	0.5nm,0.4s,baz=102,slow=3.9,SNR=4.7			PcP	**PcP**	**18 46 51.0**	**-1.2**
ASAR	0.3nm,0.9s,baz=101,slow=3.7,SNR=2.8			ScP	**ScP**	**18 49 51.5**	**-1.6**
NVAR	**Mina Array Bea** 0.7nm,0.7s,baz=223,slow=10.0,SNR=6.8	**79.25**	**44**	P	**P**	**18 49 07.0**	**+0.7**
ILAR	**Eielson Array** 0.2nm,0.4s,baz=223,slow=5.6,SNR=4.6	**85.34**	**13**	P	**P**	**18 49 35.9**	**-0.2**
TXAR	**Lajitas Array** 0.6nm,0.6s,baz=217,slow=6.1,SNR=9.3	**86.01**	**58**	P	**P**	**18 49 40.2**	**-0.2**
PDAR	**Pinedale Array** 0.5nm,0.5s,baz=206,slow=2.8,SNR=6.6	**87.17**	**44**	P	**P**	**18 49 45.8**	**+0.1**
BRTR	**Keskin Array B** 0.4nm,0.4s,baz=120,slow=1.6,SNR=5.1	**144.00**	**315**	PKP	PKPbc	18 56 30.4	0.0
MMAI	**Mount Meron Ar** 0.8nm,0.5s,baz=42,slow=6.8,SNR=3.8	**145.41**	**304**	PKPbc	**PKPbc**	**18 56 35.1**	**+0.3**

*ISCJB **07** 18:55:42.5±0.7, 11.°52S±0.°08×166.°13E±0.°09, h35km, mb4.3/14, Error ellipse: s-maj=13.9km s-min=8.7km az=143.3*
*IDC **07** 18:55:47.4±3.8, 11.°34S×166.°12E, h69km±30km, mb3.8/6, mb1 4.0/8, mb1mx3.6/42, mbtmp4.2/8, ML4.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.7/25, Error ellipse: s-maj=29.7km s-min=22.1km az=53.0*
*NEIC **07** 18:55:49.4±1.7, 11.°52S×166.°01E, h81km±9km, mb4.5/10, Error ellipse: s-maj=24.3km s-min=13.4km az=97.0*

ISC 07 18:55:44.1±0.9, 11.°41S±0.°09×166.°3E±0.°1, h35km, n23, σ2§02/28, mb4.4/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.54**	**287**	*e*P	**Pn**	**18 57 20.0**	**+2.0**
HNR				*e*S	**Sn**	**18 58 34.0**	**+2.6**
HNR	**Honiara** 24nm,0.3s,baz=167,slow=8.1,SNR=4.3	**6.54**	**287**	P	**Pn**	**18 57 20.1**	**+2.2**
HNR	baz=168,slow=20,SNR=1.3			S	**Sn**	**18 58 29.5**	**-2.0**
HNR	**Honiara** 18nm,1.4s	**6.54**	**287**	*e*Pn	**Pn**	**18 57 20.6**	**+2.7**
HNR				*e*Sn	**Sn**	**18 58 31.4**	**-0.1**
DZM	**Mont Dzumac** 0.2nm,0.3s,baz=353,slow=17,SNR=22	**10.61**	**179**	P	**Pn**	**18 58 17.6**	**+3.8**
DZM	0.2nm,0.3s,baz=307,slow=20,SNR=1.9			S	**Sn**	**19 00 09.1**	**-2.3**
DZM	comp=Z,87nm,20.3s,baz=218,slow=32			LR	LR	19 01 27.9	
DZM	**Mont Dzumac**	**10.61**	**179**	*e*Pn	**Pn**	**18 58 17.0**	**+3.2**
PINNC	**Pines Island,**	**11.20**	**175**	*e*Pn	**Pn**	**18 58 25.1**	**+3.3**
ARMA	**Armidale** 24nm,1.4s	**23.31**	**214**	*e*P	**P**	**19 00 46.3**	**-2.9**
BKZ	**Black Stump Fm** 19nm,1.3s	**29.10**	**164**	*e*P	**P**	**19 01 41.5**	**-0.1**
THZ	**Tophouse** 44nm,1.4s	**30.79**	**170**	*e*P	**P**	**19 01 57.9**	**+1.4**
WB2	**Warramunga Arr** 18nm,1.4s	**31.86**	**251**	*e*P	**P**	**19 02 03.4**	**-2.8**
WR1	**Warramunga Arr**	**31.87**	**251**	*e*P	**P**	**19 02 04.8**	**-1.4**
WRA	**Warramunga Arr** 0.9nm,0.8s,baz=75,slow=9.9,SNR=3.8	**31.87**	**251**	P	**P**	**19 02 04.8**	**-1.4**
ASAR	**Alice Springs** 1.7nm,0.7s,baz=68,slow=10.0,SNR=26	**33.12**	**244**	P	**P**	**19 02 16.3**	**-0.9**
ASAR	1.0nm,0.9s,baz=87,slow=1.9,SNR=6.6			PcP	**PcP**	**19 04 59.3**	**-0.7**
FITZ	**Fitzroy Crossi** 5.5nm,1.1s,baz=68,slow=5.4,SNR=4.2	**39.81**	**255**	P	**P**	**19 03 12.7**	**-1.6**
FITZ	**Fitzroy Crossi** 21nm,1.4s	**39.81**	**255**	*e*P	**P**	**19 03 12.5**	**-1.8**
VNDA	**Vanda** 2.2nm,1.4s	**66.14**	**181**	*e*P	**P**	**19 06 28.2**	**+0.6**
CASY	**Casey** 5.1nm,1.1s	**66.24**	**201**	*e*P	**P**	**19 06 27.8**	**-0.5**
SBA	**Scott Base** 1.6nm,1.1s	**66.44**	**180**	*e*P	**P**	**19 06 28.9**	**-0.5**
QSPA	**South Pole Qui** 2.8nm,0.9s,baz=317,slow=1.6,SNR=9.2	**78.60**	**180**	P	**P**	**19 07 41.3**	**-0.8**
QSPA	**South Pole Qui** 5.0nm,1.0s	**78.60**	**180**	*e*P	**P**	**19 07 41.7**	**-0.5**
SUA	**Susitna One** 7.6nm,1.2s	**80.08**	**19**	*e*P	**P**	**19 07 51.2**	**+1.0**
ILAR	**Eielson Array**	**83.68**	**18**	P	**P**	**19 08 07.8**	**-1.2**
	0.4nm,0.6s,baz=227,slow=7.1,SNR=7.8						
MKAR	**Makanchi Array** 1.2nm,0.8s,baz=92,slow=6.5,SNR=12	**94.15**	**317**	P	**P**	**19 08 58.6**	**-0.8**

*IDC **07** 18:57:10.5±4.1, 33.°85N×25.°46E, h0km, mb3.6/4, mb1 3.4/8, mb1mx3.2/48, mbtmp3.4/8, ML3.3/4, MS3.8/2, Ms1 3.8/2, ms1mx2.7/59, Error ellipse: s-maj=76.0km s-min=28.2km az=43.0*
*THE **07** 18:57:20.0, 34.°10N×25.°89E, h6km±2km, ML2.6/3, Error ellipse: s-maj=3.2km s-min=1.0km az=218.0*

ISC 07 18:57:13.4±2.0, 33.°85N±0.°08×25.°74E±0.°09, h15km±11km, n18, σ1§69/21, mb3.5/5, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.32**	**17**	P	**Pg**	**18 57 39.2**	**+0.4**
ZKR				S	**Sn**	**18 57 54.5**	**-0.2**
LAST	**Lasithi**	**1.32**	**351**	P	**Pg**	**18 57 40.2**	**+1.2**
LAST				S	**Sg**	**18 57 56.1**	**-0.1**
STIA	**Sitia Lasithi**	**1.38**	**12**	P	**Pg**	**18 57 40.4**	**+0.5**
STIA				S	**Sb**	**18 57 55.9**	**-0.4**
NPS	**Neapolis**	**1.41**	**356**	P	**Pg**	**18 57 41.5**	**+0.9**
IDI	**Anoyia** 0.5nm,0.3s,baz=126,slow=18,SNR=4.4	**1.60**	**334**	Pn	**Pg**	**18 57 44.0**	**-0.2**
IDI	2.0nm,0.3s,baz=191,slow=19,SNR=7.2			Sn	**Sg**	**18 58 02.3**	**-2.6**
IDI	comp=Z,94nm,18.1s,baz=348,slow=58			LR	LR	18 58 37.9	
KARP	**Karpathos**	**2.05**	**34**	P	**Pb**	**18 57 49.6**	**-0.9**
KARP				S	**Sn**	**18 58 12.9**	**0.0**
MMAI	**Mount Meron Ar** 0.5nm,0.3s,baz=268,slow=13,SNR=4.6	**8.12**	**93**	Pn	**Pn**	**18 59 11.2**	**+0.4**
MMAI	2.2nm,0.3s,baz=262,slow=23,SNR=8.0			Sn	**Sn**	**19 00 37.8**	**-4.5**
BRTR	**Keskin Array B** 0.1nm,0.3s,baz=250,slow=11,SNR=3.3	**8.63**	**45**	Pn	**Pn**	**18 59 19.7**	**+1.8**
EIL	**Elat** 0.4nm,0.3s,baz=320,slow=19,SNR=3.9	**8.88**	**116**	Pn	**Pn**	**18 59 22.1**	**+0.9**
EIL	0.4nm,0.3s,baz=0.0,slow=5.1,SNR=4.2			Sn	Sn	19 00 53.9	-7.1
ASF	**Jabal al Asfar** 0.2nm,0.3s,baz=212,slow=7.0,SNR=2.2	**9.52**	**97**	Sn	Sn	19 01 09.0	-7.7
AKASG	**Malin Array Be** 0.3nm,0.3s,baz=190,slow=11,SNR=4.0	**17.03**	**8**	P	**P**	**19 01 11.8**	**-0.8**
FINES	**FINESS Array B** 0.4nm,0.4s,baz=148,slow=11,SNR=6.1	**27.61**	**0**	P	**P**	**19 02 59.5**	**-0.4**
ARCES	**ARCESS Array B** 8.7nm,0.3s,baz=170,slow=7.4,SNR=4.6	**35.73**	**360**	P	**P**	**19 04 08.6**	**-2.6**
KMBO	**Kilima Mbogo** comp=Z,79nm,18.4s,slow=40	**36.44**	**160**	LR	LR	19 21 26.0	
KURBB	**Kurchatov Arra** 0.5nm,0.6s,baz=280,slow=8.7,SNR=6.0	**41.58**	**50**	P	**P**	**19 05 01.6**	**+1.1**
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=282,slow=6.6,SNR=9.1	**44.10**	**55**	P	**P**	**19 05 22.6**	**+1.5**
SONM	**Songino Array** 0.3nm,0.5s,baz=293,slow=7.4,SNR=2.3	**59.95**	**50**	P	**P**	**19 07 20.6**	**+1.5**
BBB	**Bella Bella** comp=Z,82nm,19.6s,baz=334,slow=36	**91.32**	**344**	LR	LR	19 51 31.8	

*IDC **07** 19:06:14.2±1.4, 28.°27N×55.°79E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.3/47, mbtmp3.7/6, ML3.2/1, MS3.3/3, Ms1 3.3/3, ms1mx2.7/52, Error ellipse: s-maj=32.5km s-min=24.4km az=153.0*
*ISCJB **07** 19:06:17.0±0.5, 28.°28N±0.°05×56.°01E±0.°06, h10km, mb3.5/5, MS3.7/2, Error ellipse: s-maj=8.2km s-min=6.3km az=155.1*
*TEH **07** 19:06:17.1, 28.°36N×55.°98E, h10km, ML3.3*

ISC 07 19:06:15.5±0.8, 28.°21N±0.°04×56.°00E±0.°05, h10km, n26, σ2§14/25, mb3.7/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.82**	**169**	*e*Pg	**Pg**	**19 06 28.8**	**-2.6**
GENO	**Geno**	**0.82**	**169**	*e*Pg	**Pn**	**19 06 35.7**	**+2.4**
GENO	comp=Z,0.0nm,0.4s			IAMB	IAmb	19 07 02.3	
NIAN	**Nian**	**0.98**	**131**	*e*Pg	**Pn**	**19 06 38.3**	**+2.9**
NIAN	comp=Z,0.0nm,0.3s			IAMB	IAmb	19 06 59.0	
NGRK	**Negar Kerman**	**1.56**	**24**	*e*Pg	**Pb**	**19 06 43.9**	**-0.9**
NGRK	comp=Z,0.0nm,0.3s			IAMB	IAmb	19 07 11.6	
KRBR	**Kerman**	**1.89**	**20**	*e*Pn	**Pn**	**19 06 48.7**	**+0.6**
TVBK	**TV Kerman**	**1.89**	**20**	*e*Pn	**Pb**	**19 06 49.4**	**-0.9**
TVBK	comp=Z,0.0nm,0.5s			IAMB	IAmb	19 07 30.8	
CHMN	**Cheshme madani**	**2.13**	**39**	*e*Pn	**Pb**	**19 06 53.9**	**-0.4**
CHMN	comp=N,0.0nm,0.4s			IAMB	IAmb	19 07 34.4	
JHRM	**Jahrom**	**2.15**	**278**	*e*Pn	**Pb**	**19 06 54.7**	**0.0**
KHGB	**Koh Gabri**	**2.20**	**11**	*e*Pn	**Pb**	**19 06 54.5**	**-1.0**
KHGB	comp=E,0.0nm,0.6s			IAMB	IAmb	19 07 30.0	
ISRV	**Sarvestan**	**2.79**	**295**	*e*Pn	**Pn**	**19 07 02.8**	**+2.3**
IBAF	**Bafgh**	**3.39**	**354**	*e*Pn	**Pn**	**19 07 11.2**	**+2.6**
IBAF	comp=N,539nm,0.4s			IAMB	IAmb	19 07 21.0	
IKAZ	**Kazeroun**	**3.96**	**294**	*e*Pn	**Pn**	**19 07 19.0**	**+2.3**
ISAD	**Sadrabad**	**4.20**	**332**	*e*Pn	**Pn**	**19 07 22.2**	**+2.3**
YZKH	**Yazd**	**4.34**	**344**	*e*Pn	**Pn**	**19 07 23.1**	**+1.5**
IRAM	**Ramesheh**	**4.76**	**320**	*e*Pn	**Pn**	**19 07 30.1**	**+2.5**
TPRV	**Parvadeh(Tabas**	**4.84**	**7**	*e*Pn	**Pn**	**19 07 32.1**	**+3.6**
IKOO	**Kooshah**	**4.94**	**31**	*e*Pn	**Pn**	**19 07 33.3**	**+3.3**
WSAR	**Wadi Sarin** comp=N,0.6nm,0.3s,baz=353,slow=13,SNR=8.1	**5.49**	**154**	Pn	**Pn**	**19 07 40.6**	**+3.3**
WSAR	comp=N,0.3nm,0.3s,baz=31,slow=19,SNR=2.2			Sn	**Sn**	**19 08 40.5**	**0.0**
WSAR	comp=N,84nm,21.6s,baz=264,slow=46			LR	LR	19 10 34.2	
IPIR	**Pirpir** comp=N,1.8nm,0.6s,baz=133,slow=14,SNR=14	**6.27**	**317**	*e*Pn	**Pn**	**19 07 50.4**	**+2.1**
BRTR	**Keskin Array B** comp=N,0.3nm,0.6s,baz=226,slow=8.3,SNR=4.6	**21.75**	**308**	P	**P**	**19 11 07.2**	**-0.2**
MKAR	**Makanchi Array** comp=N,0.3nm,0.8s,baz=232,slow=9.2,SNR=3.6	**27.71**	**41**	P	**P**	**19 12 04.6**	**+0.7**
KURBB	**Kurchatov Arra** comp=N,1.5nm,0.6s,baz=240,slow=9.1,SNR=8.2	**28.15**	**31**	P	**P**	**19 12 08.5**	**+0.8**
ZALV	**Zalesovo Beam** comp=N,0.7nm,0.5s,baz=54,slow=9.1,SNR=6.8	**33.24**	**31**	P	**P**	**19 12 52.8**	**+0.2**
TORD	**Torodi Ar. Bea** comp=N,0.7nm,0.5s,baz=54,slow=9.1,SNR=6.8	**52.56**	**265**	P	**P**	**19 15 27.4**	**-2.2**
TGY	**Tagaytay City** comp=N,54nm,19.7s,baz=76,slow=38	**61.54**	**89**	LR	LR	19 45 09.2	
MJAR	**Matsushiro Art** comp=N,41nm,20.6s,baz=205,slow=38	**67.97**	**59**	LR	LR	19 49 50.6	

*IDC **07** 19:06:38.8±4.8, 34.°48N×22.°63E, h0km, mb3.6/4, mb1 3.5/7, mb1mx3.3/45, mbtmp3.5/7, ML3.1/3, Error ellipse: s-maj=86.0km s-min=27.2km az=26.0*
*ATH **07** 19:06:50.2, 34.°90N×23.°16E, h35km±5km, ML3.1/3, Error ellipse: s-maj=6.3km s-min=2.1km az=47.0*
*THE **07** 19:06:53.2, 35.°01N×23.°28E, h22km±1km, ML2.9/4, Error ellipse: s-maj=1.6km s-min=0.4km az=61.0*

ISC 07 19:06:50.5±2.1, 34.°9N±0.°1×23.°2E±0.°1, h60km±13km, n31, σ1§67/40, mb3.5/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.74**	**94**	P	**Pn**	**19 07 05.8**	**+0.5**
GVD				S	**Sn**	**19 07 16.4**	**+0.3**

comp=E,1282um,0.5s
ANKY Antikythira Is 0.98 5 P Pn 19 07 08.8 +0.5
ANKY S Sn 19 07 21.1 -0.4
ANKY Antikythira Is 0.98 5 P Pn 19 07 08.8 +0.5
PRNS Prines Rethymn 1.18 66 P Pn 19 07 11.1 +0.2
SIVA Sivas 1.34 84 P Pn 19 07 14.4 +1.4
KTHR Kythira 1.38 354 P Pn 19 07 14.5 +0.9
KTHR S Sn 19 07 31.1 +0.2
KYTH Kithira 1.38 355 P Pn 19 07 14.6 +1.0
KYTH S Sn 19 07 31.0 +0.1
KYTH Kithira 1.38 355 P Pn 19 07 14.7 +1.1
IDI Anoyia 1.45 74 Pn **Pn 19 07 15.4 +0.8**
comp=E,13nm,0.3s,baz=246,slow=13,SNR=49
IDI Sn **Sn 19 07 37.8 +5.1**
comp=E,14nm,0.3s,baz=319,slow=16,SNR=6.1
KSTL Kastelli Herak 1.60 75 P Pn 19 07 20.8 +4.3
VLI Veliai 1.83 354 P Pn 19 07 21.0 +1.2
VLI Veliai 1.83 354 P Pn 19 07 22.1 +2.3
LAST Lasithi 1.90 81 P Pn 19 07 22.5 +1.8
LAST Lasithi 1.90 81 P Pn 19 07 22.3 +1.6
NPS Neapolis 2.02 79 P Pn 19 07 24.3 +2.0
NPS Neapolis 2.02 79 P Pn 19 07 24.4 +2.0
STIA Sitia Lasithi 2.40 82 P Pn 19 07 29.6 +2.1
ZKR Zakros 2.50 84 P Pn 19 07 30.7 +1.9
BRTR Keskin Array B 9.62 57 Pn **Pn 19 09 08.7 +2.3**
comp=E,0.0nm,0.3s,baz=237,slow=15,SNR=2.5
MMAI Mount Meron Ar 10.32 97 Pn **Pn 19 09 14.3 -1.6**
comp=E,0.5nm,0.3s,baz=316,slow=9.2,SNR=4.9
MMAI Sn **Sn 19 11 05.4 -4.6**
comp=E,0.6nm,0.3s,baz=263,slow=23,SNR=4.1
HFS Hagfors 26.00 349 P P 19 12 16.8 -0.7
comp=E,0.7nm,0.5s,baz=162,slow=8.5,SNR=5.4
FINES FINESS Array B 26.64 3 P P 19 12 22.6 -0.6
comp=E,0.6nm,0.8s,baz=171,slow=9.8,SNR=3.3
ARCES ARCESS Array B 34.72 1 P P 19 13 33.3 -1.1
comp=E,0.5nm,0.7s,baz=190,slow=6.2,SNR=4.3
KURBB Kurchatov Arra 42.55 51 P P 19 14 40.0 0.0
comp=E,0.4nm,0.5s,baz=272,slow=8.8,SNR=4.7
MKAR Makanchi Array 45.27 56 P P 19 15 03.0 +1.0
comp=E,0.4nm,0.4s,baz=270,slow=7.9,SNR=14

*KRNET **07** 19:11:53.5±0.1,40°.21N×74°.91E, h27km, mb3.1*
*ISCJB **07** 19:11:54.1±0.9,40°.18N±0°.05×74°.99E±0°.06, h10km, Error ellipse: s-maj=7.9km s-min=4.7km az=139.5*
*NNC **07** 19:11:55.1±3.1,40°.33N×74°.89E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=21.2km s-min=15.5km az=7.0*
*SOME **07** 19:11:56.6,40°.53N×74°.82E, h0km*
ISC 07 19:11:54.1±1.3,**40°.25N**±0°.06×**74°.97E**±0°.04,**h10km,n39,**
σ1$43/64,**19C-21D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.42**	**33**	⇑*iP*	**Pb**	**19 12 20.2**	**-0.6**
	baz=33						
NRN				⇑*iS*	**Sg**	**19 12 40.2**	**+0.6**
	baz=33						
ARLS	**Aral**	**1.68**	**343**	⇓*iP*	**Pb**	**19 12 24.7**	**-0.5**
	baz=45						
ARLS				⇓*iS*	**Sg**	**19 12 48.1**	**0.0**
	baz=45						
KZA	**Kyzart**	**1.84**	**6**	P	**Pb**	**19 12 27.9**	**-0.1**
	SNR=33						
KZA	**Kyzart**	**1.84**	**6**	⇑*iP*	**Pb**	**19 12 27.1**	**-0.9**
	baz=8.0						
KZA				⇑*iS*	**Sg**	**19 12 52.1**	**-1.0**
	baz=8.0						
ARSB	**Arslanbob**	**1.85**	**306**	⇑*iP*	**Pb**	**19 12 26.8**	**-1.3**
	baz=8.0						
ARSB				⇑*iS*	**Sb**	**19 12 51.7**	**+0.3**
	baz=8.0						
UCH	**Uchtor**	**2.00**	**350**	P	**Pb**	**19 12 30.4**	**-0.5**
	SNR=48						
UCH	**Uchtor**	**2.00**	**350**	⇓*iP*	**Pb**	**19 12 29.5**	**-1.4**
	baz=52						
UCH				⇓*iS*	**Sb**	**19 12 56.6**	**+0.5**
	baz=52						
AML	**Almayashu**	**2.11**	**333**	P	**Pb**	**19 12 32.7**	**+0.1**
	SNR=10						
AML	**Almayashu**	**2.11**	**333**	⇑*eP*	**Pb**	**19 12 30.9**	**-1.8**
	baz=35						
AML				⇑*iS*	**Sb**	**19 12 58.9**	**-0.2**
	baz=35						
ULHL	**Ulahol**	**2.21**	**25**	P	**Pg**	**19 12 34.9**	**-1.5**
	SNR=27						
ULHL	**Ulahol**	**2.21**	**25**	⇑*iP*	**Pn**	**19 12 31.7**	**+0.7**
	baz=26						
ULHL				⇑*iS*	**Sb**	**19 13 00.2**	**-1.6**
	baz=26						
BOOM	**Boomskoye usch**	**2.35**	**18**	⇑*iP*	**Pn**	**19 12 34.2**	**+1.3**
	baz=19						
BOOM				⇑*iS*	**Sb**	**19 13 03.6**	**-2.2**
	baz=19						
KBK	**Karagaybulak**	**2.40**	**360**	P	**Pb**	**19 12 37.6**	**+0.1**
	SNR=11						
KBK	**Karagaybulak**	**2.40**	**360**	⇑*iP*	**Pn**	**19 12 34.9**	**+1.3**
	baz=1.0						
KBK				⇑*iS*	**Sb**	**19 13 05.5**	**-1.8**
	baz=1.0						
AAK	**Ala-Archa**	**2.41**	**352**	P	**Pb**	**19 12 37.9**	**-0.2**
	SNR=7.8						
AAK	**Ala-Archa**	**2.41**	**352**	⇓*Pg*	**Pb**	**19 12 37.5**	**-0.1**
	3.8nm,0.4s						
AAK				Lg	Lg	19 13 10.2	
	12nm,0.5s						
AAK	**Ala-Archa**	**2.41**	**352**	⇓*eP*	**Pn**	**19 12 35.1**	**+1.4**
	baz=53						
AAK				⇓*iS*	**Sb**	**19 13 06.1**	**-1.4**
	baz=53						
DRK	**Karamyk**	**2.56**	**253**	⇓*iP*	**Pn**	**19 12 36.5**	**+0.6**
	baz=54						
DRK				⇓*iS*	**Sn**	**19 13 07.6**	**+0.4**
	baz=54						
EKS2	**Erkin-Say**	**2.57**	**340**	P	**Sb**	**19 13 13.4**	**+1.4**
	SNR=5.9						
EKS2	**Erkin-Say**	**2.57**	**340**	⇑*iP*	**Pn**	**19 12 37.2**	**+1.3**
	baz=41						
EKS2				⇑*iS*	**Sb**	**19 13 09.9**	**-2.1**
	baz=41						
FRU1	**Bishkek**	**2.57**	**354**	⇓*eP*	**Pn**	**19 12 37.1**	**+1.3**
	baz=56						
FRU1				⇓*iS*	**Sb**	**19 13 09.5**	**-2.4**
	baz=56						
TKM2	**Tokmak 2**	**2.71**	**10**	P	**Pb**	**19 12 42.2**	**-0.6**
	SNR=18						
TKM2	**Tokmak 2**	**2.71**	**10**	⇓*Pg*	**Pb**	**19 12 42.4**	**-0.4**
	9.5nm,0.3s						
TKM2				⇓*Lg*	Lg	19 13 19.2	
	15nm,0.4s						
TKM2	**Tokmak 2**	**2.71**	**10**	⇓*eP*	**Pn**	**19 12 39.0**	**+1.2**
	baz=11						
TKM2				⇓*eS*	**Sn**	**19 13 12.7**	**+1.9**
	baz=11						
CHMS	**Chumysh**	**2.75**	**357**	P	**Pb**	**19 12 44.4**	**+1.1**
	SNR=10						
CHMS	**Chumysh**	**2.75**	**357**	⇓*eP*	**Pn**	**19 12 39.7**	**+1.4**
	baz=58						
CHMS				⇓*iS*	**Sn**	**19 13 13.8**	**+2.2**
	baz=58						
ARK	**Arkit**	**2.75**	**305**	⇓*iP*	**Pn**	**19 12 38.7**	**+0.4**
	baz=6.0						
ARK				⇓*iS*	**Sn**	**19 13 12.3**	**+0.6**
	baz=6.0						
MRKS	**Merke**	**2.81**	**333**	*eP*	**Pb**	**19 12 45.0**	**+0.5**
	8.1nm,0.6s						
MRKS				*eS*	**Sb**	**19 13 18.8**	**-0.3**
	18nm,0.4s						
KST	**Kastek**	**2.89**	**15**	*eP*	**Pg**	**19 12 47.6**	**-1.8**
	19nm,0.4s						
KST				*eS*	**Sb**	**19 13 23.4**	**+2.3**
	22nm,0.5s						
USP	**Ospenovka**	**3.03**	**353**	P	**Pb**	**19 12 49.0**	**+0.8**
	SNR=10						
USP	**Ospenovka**	**3.03**	**353**	⇑*iP*	**Pn**	**19 12 43.4**	**+1.2**
	baz=54						
USP				⇑*iS*	**Sn**	**19 13 20.8**	**+2.2**
	baz=54						
DGS	**Degeres**	**3.05**	**11**	*eP*	**Pg**	**19 12 50.6**	**-1.9**
	33nm,0.5s						
DGS				*eS*	**Sb**	**19 13 28.4**	**+2.7**
	15nm,0.8s						
TNSS	**Tian-Shan**	**3.15**	**27**	*eP*	**Pg**	**19 12 54.6**	**+0.2**
	9.8nm,0.4s						
TNSS				*eS*	**Sg**	**19 13 35.1**	**-0.2**
	13nm,0.7s						
KOTS	**Kotyrbulak**	**3.38**	**28**	*eP*	**Pg**	**19 12 57.7**	**-1.1**
	7.0nm,0.6s						
KOTS				*eS*	**Sg**	**19 13 40.6**	**-2.1**
	17nm,0.6s						
KTBS	**Karatobe**	**3.69**	**20**	*eP*	**Pb**	**19 13 00.9**	**+1.6**
	7.5nm,0.3s						
KTBS				*eS*	**Sb**	**19 13 45.9**	**+1.9**
	15nm,0.8s						
SATY	**Saty**	**3.81**	**41**	*eP*	**Pg**	**19 13 06.0**	**-0.9**
	4.3nm,0.9s						
SATY				*eS*	**Sg**	**19 13 55.0**	**-1.3**
	5.4nm,0.7s						
CHKK	**Chushkaly**	**3.90**	**22**	*eP*	**Pg**	**19 13 06.5**	**-2.3**
	2.2nm,0.3s						
CHKK				*eS*	**Sg**	**19 13 56.0**	**-3.3**
	5.5nm,0.6s						
KK31	**Karatay Array**	**4.39**	**312**	⇓*Pg*	**Pb**	**19 13 13.7**	**+2.4**
	0.7nm,0.5s,baz=136,slow=15,SNR=5.9						
KK31				Lg	Lg	19 14 11.4	
	1.3nm,0.5s,baz=128,slow=28,SNR=4.3						
PDGK	**Podgornoye**	**4.57**	**46**	⇑*Pg*	**Pg**	**19 13 20.2**	**-1.3**
	3.5nm,0.8s						
PDGK				⇓*Lg*	Lg	19 14 18.5	
	5.4nm,0.7s						

*ISCJB **07** 19:19:58.9±0.5,4°.46S×0°.03×133°.68E±0°.08, h21km, mb3.6/1, Error ellipse: s-maj=10.8km s-min=4.8km az=4.7*
*IDC **07** 19:19:59.1±1.7,4°.28S×133°.64E, h0km, mb3.6/1, mb1 4.1/3, mb1mx3.5/24, mbtmp4.0/3, ML4.9/3, MS3.9/1, Ms1 3.9/1, ms1mx2.9/26, Error ellipse: s-maj=91.0km s-min=25.4km az=67.0*
*NEIC **07** 19:20:02.1±2.8,4°.42S×133°.74E, h31km±15km, mb4.4/3, Error ellipse: s-maj=45.6km s-min=21.1km az=77.0*
*DJA **07** 19:20:04.2±1.0,4°.5S×133°.4E±°, h17km±6km, M4.4/6, mb4.8/1, mB4.9/1, MLv4.1/6, Mw(mB)4.1/1*
ISC 07 19:20:00.1±0.8,**4°.44S**±0°.05×**133°.62E**±0°.06,**h21km,n19,**
σ3$29/25,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**0.78**	**7**	P	**Pb**	**19 20 11.8**	**-3.1**
FAKI	**Fak Fak**	**2.03**	**318**	*e*Pn	**Pn**	**19 20 33.4**	**+0.3**
FAKI	**Fak Fak**	**2.03**	**318**	P	**Pn**	**19 20 33.3**	**+0.2**
RKPI	**Ransiki, Papua**	**2.96**	**11**	P	**Pn**	**19 20 43.7**	**-2.2**
SRPI	**Serui, Papua**	**3.66**	**46**	P	**Pn**	**19 20 55.6**	**+0.1**
BNDI	**Bandanaira**	**3.70**	**269**	P	**Pb**	**19 21 01.2**	**-3.6**
BAKI	**Biak**	**4.07**	**38**	P	**Pn**	**19 21 01.0**	**-0.2**
MTN	**Manton Dam**	**8.71**	**196**	*e*Pn	**Pn**	**19 22 08.4**	**+3.5**
MTN				*e*Sn	**Sn**	**19 23 44.0**	**+1.5**
SOEI	**Soe**	**10.67**	**240**	*e*Pn	**Pn**	**19 22 35.0**	**+3.0**
COEN	**Coen**	**13.36**	**136**	*e*Pn	**Pn**	**19 23 09.9**	**+1.3**
WR1	**Warramunga Arr**	**15.43**	**177**	*e*Pn	**Pn**	**19 23 38.2**	**+1.5**
WR1				*e*Sn	**Sn**	**19 26 24.6**	**-2.5**
WRA	**Warramunga Arr**	**15.43**	**177**	Pn	**Pn**	**19 23 38.2**	**+1.5**
	25nm,0.3s,baz=357,slow=12,SNR=1.4						
WRA				Sn	**Sn**	**19 26 24.6**	**-2.5**
	0.5nm,0.3s,baz=358,slow=23,SNR=7.9						
WB2	**Warramunga Arr**	**15.43**	**177**	*e*Pn	**Pn**	**19 23 37.6**	**+1.0**
	18nm,1.4s						
WB2				*e*Sn	**Sn**	**19 26 19.0**	**-8.1**
FITZ	**Fitzroy Crossi**	**15.66**	**209**	*e*Pn	**Pn**	**19 23 41.3**	**+1.6**
	35nm,1.4s						
FITZ				*e*Sn	**Sn**	**19 26 28.7**	**-4.0**
AS31	**Alice Springs**	**19.12**	**179**	*e*Sn	**Sn**	**19 27 51.8**	**-4.7**
ASAR	**Alice Springs**	**19.12**	**179**	P	**Pn**	**19 24 26.5**	**+3.7**
	0.6nm,0.3s,baz=1.3,slow=12,SNR=49						
ASAR				S	**Sn**	**19 27 50.4**	**-6.2**
	0.2nm,0.3s,baz=359,slow=28,SNR=6.1						
CTA	**Charters Tower**	**19.84**	**143**	P	**Pn**	**19 24 32.8**	**+1.4**
	0.6nm,0.3s,baz=313,slow=12,SNR=7.9						
CTA				LR	LR	19 33 19.8	
	comp=Z,416nm,21.7s,baz=252,slow=40						
MK32	**Makanchi Array**	**68.15**	**325**	*e*P	**P**	**19 31 00.4**	**+1.6**
MKAR	**Makanchi Array**	**68.15**	**325**	P	**P**	**19 31 00.4**	**+1.6**
	0.4nm,0.6s,baz=114,slow=7.5,SNR=10						

*SIGU **07** 19:20:45.9±0.2,45°.N±2°×2°.3E±°, h2km, mb2.2/5*
*BEO **07** 19:20:45.2±0.4,45°.03N×23°.25E, h2km±2km, ML2.7/16*
*SOF **07** 19:20:46.8,45°.00N×23°.16E, h14km*
*BUC **07** 19:20:46.0±0.3,45°.07N×23°.16E, h8km±2km, MD3.6/8, Error ellipse: s-maj=2.7km s-min=2.5km az=334.0*
ISC 07 19:20:46.0±1.1,**45°.03N**±0°.02×**23°.14E**±0°.02,**h4km**±10km,
n84,σ1$**02**/126,**32C-17D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HERR	**Herculane**	**0.54**	**254**	⇑*iP*	**Pb**	**19 20 57.9**	**-0.1**
HERR				*i* S	**Sb**	**19 21 05.1**	**-1.1**
HERR	**Herculane**	**0.54**	**254**	⇑*iP*	**Pb**	**19 20 57.9**	**-0.1**
LOT	**Lotru**	**0.61**	**47**	⇑*iP*	**Pg**	**19 20 57.5**	**-0.2**
LOT				*i* S	**Sg**	**19 21 05.2**	**-0.3**
LOT	**Lotru**	**0.61**	**47**	⇑*iP*	**Pg**	**19 20 57.5**	**-0.2**
PUNG	**Punghina**	**0.77**	**191**	⇑*iP*	**Pb**	**19 21 02.7**	**+0.7**
PUNG				*i* S	**Sb**	**19 21 13.3**	**+0.5**
PUNG	**Punghina**	**0.77**	**191**	⇑*iP*	**Pb**	**19 21 02.7**	**+0.7**
CRAR	**CRAIOVA**	**0.85**	**146**	⇑*iP*	**Pn**	**19 21 04.2**	**-0.6**
CRAR				*i* S	**Sn**	**19 21 16.9**	**-0.7**
CRAR	**CRAIOVA**	**0.85**	**146**	⇑*iP*	**Pn**	**19 21 04.2**	**-0.6**
DEV	**Deva**	**0.87**	**349**	⇑*iP*	**Pg**	**19 21 02.6**	**0.0**
DEV				*i* S	**Sg**	**19 21 13.7**	**-0.2**
DEV	**Deva**	**0.87**	**349**	⇑*iP*	**Pg**	**19 21 02.6**	**0.0**
MDVR	**Moldovita**	**1.05**	**257**	⇓*iP*	**Pb**	**19 21 06.9**	**+0.1**
MDVR				*i* S	**Sb**	**19 21 21.1**	**+0.2**
MDVR	**Moldovita**	**1.05**	**257**	⇓*iP*	**Pb**	**19 21 06.9**	**+0.1**
ARR	**Arges**	**1.10**	**72**	⇓*iP*	**Pb**	**19 21 07.6**	**-0.2**
ARR				*i* S	**Sb**	**19 21 21.8**	**-0.8**
ARR	**Arges**	**1.10**	**72**	⇓*iP*	**Pb**	**19 21 07.6**	**-0.2**
KUBS	**Kucevo**	**1.22**	**240**	*e*Pg	**Pg**	**19 21 09.0**	**-0.3**
KUBS				*e*Sg	**Sg**	**19 21 25.5**	**+0.4**
BZS	**Buzias**	**1.23**	**299**	*e*Pg	**Pg**	**19 21 09.3**	**-0.2**
BZS				*e*Sg	**Sg**	**19 21 25.4**	**0.0**
BZS	**Buzias**	**1.23**	**299**	⇓*iP*	**Pg**	**19 21 09.1**	**-0.4**
BZS				*i* S	**Sg**	**19 21 25.2**	**-0.2**
BZS	**Buzias**	**1.23**	**299**	⇓*iP*	**Pg**	**19 21 09.1**	**-0.4**
VLAD	**Vladila**	**1.37**	**138**	⇓*iP*	**Pn**	**19 21 11.8**	**-0.1**
VLAD				*i* S	**Sn**	**19 21 31.7**	**+1.1**
VLAD	**Vladila**	**1.37**	**138**	⇓*iP*	**Pn**	**19 21 11.8**	**-0.1**
ZAGS	**Zajecar**	**1.38**	**208**	*e*Pg	**Pn**	**19 21 10.3**	**-1.8**
ZAGS				*e*Sn	**Sg**	**19 21 31.5**	**+1.1**
HUMR	**Humele**	**1.40**	**110**	⇑*iP*	**Pg**	**19 21 12.6**	**-0.3**
HUMR				*i* S	**Sg**	**19 21 31.6**	**+0.6**
HUMR	**Humele**	**1.40**	**110**	⇑*iP*	**Pg**	**19 21 12.6**	**-0.3**
MDB	**Medias**	**1.41**	**38**	⇑*iP*	**Pb**	**19 21 12.4**	**-0.5**
MDB				*i* S	**Sg**	**19 21 31.9**	**+0.6**
MDB	**Medias**	**1.41**	**38**	⇑*iP*	**Pb**	**19 21 12.4**	**-0.5**
SVIS	**Svilajnac**	**1.58**	**242**	*e*Pg	**Pb**	**19 21 15.6**	**-0.1**
SVIS				*e*Sg	**Sg**	**19 21 36.9**	**+0.3**
SIRR	**Siria**	**1.61**	**320**	⇓*iP*	**Pb**	**19 21 16.3**	**-0.1**
SIRR				*i* S	**Sb**	**19 21 37.0**	**-0.2**
SIRR	**Siria**	**1.61**	**320**	⇓*iP*	**Pb**	**19 21 16.3**	**-0.1**
CJR	**Cluj-Napoca**	**1.71**	**11**	⇓*iP*	**Pn**	**19 21 16.7**	**0.0**
CJR				*i* S	**Sb**	**19 21 40.0**	**0.0**
CJR	**Cluj-Napoca**	**1.71**	**11**	⇓*iP*	**Pn**	**19 21 16.7**	**0.0**
MPEP	**Malo Peshtene**	**1.73**	**165**	P	**Pn**	**19 21 16.5**	**-0.4**
BOVS	**Bovan**	**1.74**	**217**	*e*Pn	**Pn**	**19 21 17.0**	**0.0**
BOVS				*e*Sn	**Sb**	**19 21 40.7**	**+0.1**
DRGR		**1.79**	**350**	*e*Pg	**Pn**	**19 21 17.8**	**+0.1**
DRGR				*e*Sg	**Sb**	**19 21 41.7**	**-0.4**
DRGR		**1.79**	**350**	⇑*iP*	**Pn**	**19 21 17.3**	**-0.4**
DRGR		**1.79**	**350**	⇑*iP*	**Pn**	**19 21 17.3**	**-0.4**
ZAPS	**Zavoj**	**1.80**	**192**	*e*Pn	**Pn**	**19 21 16.6**	**-1.2**
ZAPS				*e*Sn	**Sn**	**19 21 41.2**	**+0.1**
MLR	**Muntele Rosu**	**2.03**	**76**	⇓*iP*	**Pn**	**19 21 20.7**	**-0.5**
MLR	**Muntele Rosu**	**2.03**	**76**	⇓*iP*	**Pn**	**19 21 20.7**	**-0.5**
GRUS	**Gruza**	**2.08**	**238**	*e*Pn	**Pn**	**19 21 22.2**	**+0.5**
GRUS				*e*Sn	**Sn**	**19 21 48.8**	**+0.7**
TRUS	**Trudelj**	**2.12**	**248**	*e*Pn	**Pn**	**19 21 22.2**	**0.0**
TRUS				*e*Sn	**Sb**	**19 21 50.3**	**-1.2**
OZUR		**2.14**	**59**	⇑*iP*	**Pn**	**19 21 22.4**	**-0.2**
OZUR		**2.14**	**59**	⇑*iP*	**Pn**	**19 21 22.4**	**-0.2**
SGRR	**Singureni**	**2.18**	**111**	⇑*iP*	**Pn**	**19 21 23.2**	**+0.2**
SGRR				*i* S	**Sn**	**19 21 50.3**	**-0.1**
SGRR	**Singureni**	**2.18**	**111**	⇑*iP*	**Pn**	**19 21 23.2**	**+0.2**
SGRR				S	**Sn**	**19 21 50.3**	**-0.1**
ARCR	**ARCALIA**	**2.22**	**22**	⇑*iP*	**Pn**	**19 21 24.4**	**+0.8**
ARCR				*i* S	**Sn**	**19 21 51.2**	**-0.3**
ARCR	**ARCALIA**	**2.22**	**22**	⇑*iP*	**Pn**	**19 21 24.4**	**+0.8**
SULR		**2.24**	**98**	⇑*iP*	**Pn**	**19 21 24.8**	**+0.9**
SULR		**2.24**	**98**	⇑*iP*	**Pn**	**19 21 24.8**	**+0.9**
SELS	**Selova**	**2.33**	**220**	*e*Pn	**Pn**	**19 21 25.4**	**+0.3**
SELS				*e*Sn	**Sn**	**19 21 54.6**	**+0.4**
FRGS	**Fruska Gora**	**2.36**	**274**	*e*Pn	**Pn**	**19 21 26.3**	**+0.7**
PVL	**Pavlikeni**	**2.41**	**138**	P	**Pn**	**19 21 25.4**	**-0.7**
BARS	**Barje**	**2.42**	**204**	*e*Sg	**Pn**	**19 21 26.2**	**-0.1**
BARS	**Barje**	**2.42**	**204**	*e*Pn	**Pn**	**19 21 26.9**	**+0.6**
BARS				*e*Sn	**Sn**	**19 21 56.4**	**+0.1**
VTS	**Vitosha**	**2.42**	**178**	*e*Pn	**Pn**	**19 21 25.8**	**-0.7**
VTS				*e*Sn	**Sn**	**19 21 55.8**	**-0.8**
VTS	**Vitosha**	**2.42**	**178**	P	**Pn**	**19 21 25.6**	**-0.9**
DIVS	**Divibare**	**2.44**	**249**	*e*Pn	**Pn**	**19 21 26.8**	**+0.1**
DIVS				*e*Sn	**Sb**	**19 21 59.1**	**-1.8**
BOSS	**Bosilegrad**	**2.58**	**191**	*e*Pn	**Pn**	**19 21 28.1**	**-0.5**
BOSS				*e*Sn	**Sn**	**19 22 00.9**	**+0.4**
PGB	**Panagyurishte**	**2.59**	**163**	P	**Pn**	**19 21 28.7**	**-0.1**
IVAS	**Ivanjica**	**2.59**	**237**	*e*Pn	**Pn**	**19 21 28.4**	**-0.4**
IVAS				*e*Sn	**Sn**	**19 22 01.1**	**+0.2**
PLOR	**Plostina**	**2.60**	**70**	⇑*iP*	**Pn**	**19 21 28.6**	**-0.3**
PLOR	**Plostina**	**2.60**	**70**	⇑*iP*	**Pn**	**19 21 28.6**	**-0.3**
VRI	**Vrincioaia**	**2.66**	**70**	⇑*iP*	**Pn**	**19 21 29.9**	**+0.2**
VRI	**Vrincioaia**	**2.66**	**70**	⇑*iP*	**Pn**	**19 21 29.9**	**+0.2**
TESR	**Tescani**	**2.86**	**58**	⇓*iP*	**Pn**	**19 21 31.8**	**-0.7**
TESR	**Tescani**	**2.86**	**58**	⇓*iP*	**Pn**	**19 21 31.8**	**-0.7**
SJES	**Sjenica**	**2.89**	**233**	*e*Pn	**Pn**	**19 21 33.2**	**+0.3**
SJES				*e*Sn	**Sn**	**19 22 09.7**	**+1.5**
BURAR	**Bucovina Array**	**2.96**	**28**	⇑*iP*	**Pn**	**19 21 34.8**	**+1.0**
BURAR	**Bucovina Array**	**2.96**	**28**	⇑*iP*	**Pn**	**19 21 34.8**	**+1.0**
TRSU	**Trosnyk**	**3.07**	**358**	*e*P	**Pb**	**19 21 40.2**	**-0.9**
TRSU				Pm		19 21 46.6	
TRSU				*e*S	**Sb**	**19 22 21.0**	**+2.1**
TRSU				Sm		19 22 26.0	
KORU	**Korolevo**	**3.13**	**360**	*e*P	**Pb**	**19 21 39.2**	**-2.9**
KORU				Pm		19 21 46.2	
KORU				*e*S	**Sb**	**19 22 20.9**	**+0.3**
KORU				Sm		19 22 26.9	
TRPA	**Tarpa**	**3.13**	**353**	EPg	**Pb**	**19 21 44.0**	**+1.9**
TRPA				EPn	**Sn**	**19 22 12.0**	**-1.8**
TRPA				Sn	**Sg**	**19 22 25.0**	**-1.4**
TRPA				⇓ESg		19 22 27.1	
KKB	**Krupnik**	**3.17**	**181**	P	**Pn**	**19 21 38.9**	**+2.3**
NSLU	**Nyzhne Selyshc**	**3.29**	**15**	*e*P	**Pn**	**19 21 40.6**	**+2.2**
NSLU				Pm		19 21 53.8	
NSLU				*e*S	**Sb**	**19 22 23.4**	**-2.0**
NSLU				Sm		19 22 30.2	
BRIU	**Brid**	**3.31**	**359**	*e*P	**Pn**	**19 21 41.0**	**+2.4**
BRIU				Pm		19 21 53.0	
BRIU				*e*S	**Sb**	**19 22 23.6**	**-2.2**
BRIU				Sm		19 22 33.4	
MUKU	**Mukachevo**	**3.44**	**355**	*e*P	**Pb**	**19 21 48.6**	**+1.2**
MUKU				Pm		19 21 58.9	
MUKU				*e*S	**Sn**	**19 22 23.4**	**+1.9**
MUKU				Sm		19 22 45.1	
MMB	**Musomiste**	**3.47**	**173**	P	**Pn**	**19 21 41.3**	**+0.5**
MEZ	**Mezhgor'ye**	**3.49**	**4**	*e*S	**Sn**	**19 22 26.4**	**+3.5**
RZN	**Rozhen**	**3.53**	**161**	P	**Pn**	**19 21 41.0**	**-0.9**
CFR	**Carcaliu**	**3.54**	**86**	⇑*iP*	**Pn**	**19 21 41.4**	**-0.3**
CFR	**Carcaliu**	**3.54**	**86**	⇑*iP*	**Pn**	**19 21 41.4**	**-0.3**
PSZ	**Piszkesteto**	**3.66**	**323**	EPn	**Pn**	**19 21 43.1**	**-0.4**
PSZ				Sn	**Sn**	**19 22 23.1**	**-4.0**
KOLS	**Kolonicke sedl**	**3.95**	**352**	*e*PN	**Pn**	**19 21 47.4**	**0.0**
KOLS				*e*PG	**Pg**	**19 22 04.0**	**+2.4**
KOLS				*e*SG	**Sg**	**19 22 51.2**	**-1.5**
KOLS				*e*LG	Lg	19 23 01.7	
STZU	**Stuzhytsa**	**4.00**	**355**	*e*S	**Sb**	**19 22 47.6**	**+1.8**
VYHS	**Vyhne**	**4.55**	**321**	*e*PN	**Pn**	**19 21 55.2**	**-0.5**

MAN 07 19:37:48.6,7°.28N×124°.77E, h2km, mb4.5, ML3.3, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.67**	**26**	*e*P	Pg	19 38 01.8	+0.4
BUKP				*e*S	Sg	19 38 11.2	+1.1
DMPH	**Davao City--Mi**	**0.76**	**105**	⇑*e*P	Pn	19 38 06.2	-0.2
DMPH				*e*S	Sb	19 38 15.0	-0.4
SKMP	**Bagumbayan, Su**	**0.79**	**196**	*e*P	Pg	19 38 04.0	+0.3
SKMP				*e*S	Sb	19 38 15.9	-0.2
PAGZ	**Pagadian**	**1.48**	**293**	*e*P	Pn	19 38 15.3	-1.0
PAGZ				*e*S	Sb	19 38 35.8	-

LEM	Lembang	17.70 239	P	P	19 45 39.4 +0.6
	1.1nm,0.3s,baz=60,slow=13,SNR=4.2				
CISI	Cisompet, Garu	17.91 236	eP	P	19 45 40.5 -0.2
	128nm,1.7s				
GENI	Genyem	18.07 106	P	P	19 45 41.3 -0.8
TPRI	Tanjung Pinang	18.31 266	P	P	19 45 45.7 +1.4
	34nm,0.9s				
JAY	Jayapura	18.56 105	P	P	19 45 47.5 +0.8
	1.9nm,0.3s,baz=253,slow=19,SNR=7.5				
MYKOM	Kota Tinggi	18.93 269	eP	P	19 45 51.4 +1.3
	21nm,0.9s				
MYKOM	Kota Tinggi	18.93 269	P	P	19 45 51.0 +1.0
MDSI	Maura Dua	19.81 250	P	P	19 46 00.0 +2.0
	13nm,0.9s				
TWG	Pinlang	20.37 355	eP	P	19 46 02.6 -0.4
	129nm,1.5s				
FITZ	Fitzroy Crossi	20.56 172	P	P	19 46 05.3 +0.6
	17nm,1.0s,baz=15,slow=7.4,SNR=33				
FITZ			S	S	19 49 32.1 +9.1
	2.4nm,0.6s,baz=353,slow=17,SNR=2.7				
FITZ	Fitzroy Crossi	20.56 172	eP	P	19 46 05.2 +0.4
QIZ	Qiongzhong	20.83 323	eP	P	19 46 07.2 -0.1
	90nm,2.0s				
TPUB	Ta-pu	20.89 354	eP	P	19 46 08.7 +1.0
	10nm,1.0s				
MNAI	Manna	20.92 251	eP	P	19 46 08.6 +0.4
	123nm,1.1s				
YULB	Yu-li	20.92 356	eP	P	19 46 07.4 -0.7
	21nm,1.3s				
HKPS	Hong Kong Po S	21.48 338	eP	P	19 46 12.1 -0.9
	68nm,1.3s				
SDSI	Sungai Dareh	21.61 261	P	P	19 46 15.7 +1.3
IPM	Ipoh	21.82 276	eP	P	19 46 16.8 +0.5
	12nm,0.5s				
YOJ	Yonaguni jima	21.94 1	eP	P	19 46 15.9 -1.2
	326nm,1.7s				
KULM	Kulim	22.27 278	eP	P	19 46 20.8 +0.4
	5.8nm,0.8s				
PANO	Nakornpanom	23.11 311	P	P	19 46 28.8 +1.0
	0.3nm,0.8s,46nm				
PSI	Prapat	23.84 272	P	P	19 46 34.7 +0.1
	2.6nm,0.3s,baz=98,slow=12,SNR=4.5				
PSI	Prapat	23.84 272	eP	P	19 46 35.4 +0.9
	5.6nm,0.7s				
PSA00	Pilbara Seismi	23.99 187	eP	P	19 46 35.4 -0.2
	27nm,0.6s				
KHON	Khomkaen	24.04 306	P	P	19 46 37.0 +0.9
	40μm,0.8s				
KRAB	Krabi	24.18 285	P	P	19 46 35.3 -2.1
CHAI	Chaiyaphum	24.49 304	P	P	19 46 41.0 +0.9
	17μm,1.0s				
GUMO	Guam	24.50 62	eP	P	19 46 38.5 -1.7
	244nm,1.4s				
WRA	Warramunga Arr	24.93 153	P	P	19 46 43.6 -0.3
	116nm,0.3s,baz=342,slow=11,SNR=1.6				
WRA			PcP	PcP	19 50 03.2 -0.1
	1.4nm,0.4s,baz=284,slow=3.0,SNR=4.0				
WRA			S	S	19 50 28.4 -3.8
	1.5nm,0.4s,baz=328,slow=22,SNR=5.0				
WB2	Warramunga Arr	24.93 153	eP	P	19 46 43.9 -0.2
	6.3nm,0.6s				
GSI	Gunungsitoli	25.22 268	eP	P	19 46 46.4 -0.2
	24nm,0.4s				
LHMI	Lhok Sumawe	25.93 277	eP	P	19 46 53.9 +1.0
	44nm,1.0s				
GIRL	Giralia	26.25 198	eP	P	19 46 56.6 +1.1
	941nm,1.9s				
UTTA	Uttaradit	26.62 306	P	P	19 47 00.4 +1.4
	14μm,0.8s				
NANT	Nan	27.09 309	P	P	19 47 04.5 +1.4
	52μm,0.5s,585μm				
AS31	Alice Springs	28.07 158	eP	P	19 47 11.9 +0.2
	1.2nm,0.7s				
ASAR	Alice Springs	28.07 158	P	P	19 47 11.9 +0.2
	1.6nm,0.3s,baz=338,slow=7.3,SNR=36				
ASAR			PcP	PcP	19 50 10.7 -0.1
	1.2nm,0.5s,baz=350,slow=2.5,SNR=9.3				
ASAR			S	S	19 51 19.3 -2.1
	1.9nm,0.8s,baz=347,slow=17,SNR=8.4				
ASAR			ScP	ScP	19 53 04.2 -0.7
	1.3nm,0.6s,baz=342,slow=2.8,SNR=7.0				
CMAR	Chiang Mai Arr	28.30 306	P	P	19 47 14.6 +0.9
	2.1nm,0.6s,baz=126,slow=7.3,SNR=18				
CMAR			PcP	PcP	19 50 11.2 -0.3
	1.0nm,0.7s,baz=126,slow=0.9,SNR=6.9				
CMAR			ScP	ScP	19 53 05.7 -0.1
	0.5nm,0.5s,baz=148,slow=2.6,SNR=4.4				
CMMT	Chiang Mai	28.48 307	P	P	19 47 16.3 +1.0
	5.9nm,0.8s				
CHTO	Chiang Mai	28.48 307	eP	P	19 47 16.0 +0.7
	8.4nm,0.9s				
NJ2	Nanjing	29.73 353	eP	P	19 47 28.8 +2.8
NJ2			pmax	pmax	
	comp=Z,14nm,0.5s				
ENH	Enshi	30.46 337	eP	P	19 47 32.6 +0.3
	10nm,0.8s				
MORW	Morawa	31.95 191	eP	P	19 47 45.2 +0.1
	51nm,1.7s				
FORT	Forrest	33.37 172	eP	P	19 47 57.2 0.0
	40nm,0.6s				
CD2	Chengdu	33.59 330	P	P	19 47 59.8 +0.6
CD2			pmax	pmax	
	comp=Z,50nm,0.5s				
XAN	Xi'an	34.04 339	P	P	19 48 03.2 +0.3
XAN			pmax	pmax	
	comp=Z,10.0nm,0.8s				
XAN	Xi'an	34.04 339	eP	P	19 48 03.4 +0.4
	7.4nm,0.6s				
KSRS	Korea Array	35.21 7	P	P	19 48 13.2 +0.6
	1.3nm,0.6s,baz=186,slow=9.3,SNR=6.4				
KSRS			ScP	ScP	19 53 28.8 -0.2
	1.0nm,0.6s,baz=182,slow=2.9,SNR=5.0				
NWAO	Narrogin (SRO)	35.52 188	eP	P	19 48 15.7 +0.4
	41nm,1.3s				
MJAR	Matsushiro Arr	36.84 21	P	P	19 48 25.0 -1.2
	1.4nm,0.6s,baz=195,slow=9.9,SNR=5.2				
BBOO	Buckleboo	37.20 161	eP	P	19 48 30.0 +0.8
	102nm,2.0s				
SHL	Shillong	37.62 311	eP	P	19 48 32.8 -0.1
	15nm,0.8s				
LZH	Lanzhou	37.83 335	eP	P	19 48 37.5 +3.0
LZH			pP	pP	19 50 04.2 +1.7
LZH			sP	sP	19 50 54.4 -4.6
LZH			pmax	pmax	
	comp=Z,25nm,1.0s				
STKA	Stephens Creek	38.48 154	P	P	19 48 40.9 +1.2
	5.9nm,0.3s,baz=341,slow=7.9,SNR=42				
STKA	Stephens Creek	38.48 154	eP	P	19 48 40.6 +0.9
	3.0nm,1.0s				
HHC	Hu-ho-hao-te	39.60 347	eP	P	19 48 50.8 +2.0
HHC			pmax	pmax	
	comp=Z,14nm,1.0s				
HHC			pmax	pmax	
	comp=Z,69nm,3.6s				
LSA	Lhasa	40.48 315	eP	P	19 48 57.9 +1.4
	8.4nm,0.6s				
PALK	Pallekele	42.20 278	eP	P	19 49 10.1 +0.2
	79nm,1.4s				
GTA	Gaotai	42.36 333	P	P	19 49 12.0 +1.1
GTA			pP	pP	19 50 41.0 -0.5
GTA			PcP	PcP	19 50 53.6 +0.4
GTA			sP	sP	19 51 36.0 -1.2
GTA			pmax	pmax	
	comp=Z,10.0nm,0.8s				
GTA			pmax	pmax	
	comp=Z,76nm,6.3s				
RAMN	Ramite	42.39 309	eP	P	19 49 12.3 +0.8
	31nm,0.7s				
USRK	Ussuriysk Ar.	42.42 10	P	P	19 49 10.9 -0.1
	3.4nm,0.5s,baz=196,slow=7.3,SNR=19				
MDJ	Mudanjiang	42.47 7	eP	P	19 49 12.1 +0.7
	9.6nm,0.4s				
ARMA	Armidale	42.68 142	eP	P	19 49 15.9 +2.4
	33nm,1.5s				
JIRN	Jiri	43.06 309	eP	P	19 49 17.4 +0.6
	28nm,0.5s				
GUN	Gumba	43.42 309	eP	P	19 49 20.0 +0.4
	28nm,0.4s				
ERM	Erimo	43.47 22	eP	P	19 49 19.4 0.0
	23nm,1.3s				
PKI	Pulchoki	43.62 309	eP	P	19 49 21.1 -0.1
	11nm,0.5s				
PKIN	Phulchoki	43.63 309	eP	P	19 49 21.3 +0.1
	6.3nm,0.3s				
KKN	Kakani	43.83 309	eP	P	19 49 23.0 +0.3
	11nm,0.4s				
CAN	Canberra	44.84 149	eP	P	19 49 32.1 +2.0
	43nm,1.5s				
CAN			eP	PcP	19 51 02.0 +0.3
TOO	Toolangi	44.99 154	eP	P	19 49 32.6 +1.3
	44nm,1.8s				
TOO			ePcP	PcP	19 51 02.3 +0.2
ASAJ	Asahikawa	45.10 20	P	P	19 49 32.1 +0.1
	2.9nm,0.5s,baz=238,slow=5.3,SNR=9.3				
KOLN	Koldanda	45.13 308	eP	P	19 49 33.5 +0.7
	29nm,0.6s				
DANN	Dangsing	45.27 309	eP	P	19 49 34.4 +0.5
	37nm,0.6s				
PYUN	Piuthan	45.76 308	eP	P	19 49 38.4 +0.8
	31nm,0.5s				
WAKE	Wake Island	46.05 65	eP	P	19 49 40.6 +1.0
	153nm,1.1s				
WAKE			ePcP	PcP	19 51 05.0 -1.2
KLR	Kul'dur	47.29 8	P	P	19 49 48.4 -0.1
	0.6nm,0.4s,baz=242,slow=4.6,SNR=4.1				
ULN	Ulaanbaatar	47.29 346	eP	P	19 49 49.0 +0.2
	3.5nm,0.6s				
SONM	Songino Array	47.43 345	P	P	19 49 50.4 +0.6
	3.7nm,0.6s,baz=161,slow=9.2,SNR=18				
SONM			ScP	ScP	19 54 16.8 -0.8
	0.8nm,0.8s,baz=161,slow=3.1,SNR=4.1				
LHI	Lord Howe Isla	48.22 137	eP	P	19 49 54.5 -1.3
	158nm,1.3s				
WMQ	Urumqi	51.66 328	eP	P	19 50 21.6 +0.6
WMQ			pmax	pmax	
	comp=Z,14nm,0.7s				
NIL	Nilore	55.68 310	eP	P	19 50 50.1 +0.3
	11nm,0.4s				
KSH	Kashi	56.27 317	eP	P	19 50 56.1 +2.2
MK31	Makanchi Array	56.48 328	eP	P	19 50 55.0 -0.1
	3.2nm,0.5s				
MK31			ePcP	PcP	19 51 44.4 -0.6
MKAR	Makanchi Array	56.48 328	P	P	19 50 55.6 +0.5
	4.5nm,0.3s,baz=128,slow=8.0,SNR=108				
MKAR			PcP	PcP	19 51 44.4 -0.6
	1.1nm,0.5s,baz=116,slow=4.1,SNR=6.0				
MKAR			ScP	ScP	19 54 55.8 -1.1
	0.4nm,0.6s,baz=117,slow=4.5,SNR=4.0				
MAKZ	Makanchi	56.66 327	eP	P	19 50 56.1 -0.2
	3.5nm,0.5s				
MAKZ			ePcP	PcP	19 51 44.8 -0.8
NRN	Naryn	57.20 319	eP	P	19 51 00.4 -0.1
	2.1nm,0.6s				
BOOM	Boomskoye usch	57.77 320	eP	P	19 51 04.9 +0.8
	9.9nm,1.5s				
PETK	Petropavlovsk-	58.19 24	P	P	19 51 06.6 0.0
	3.6nm,0.9s,baz=278,slow=1.4,SNR=4.5				
ARSB	Arslanbob	59.14 318	eP	P	19 51 14.2 +0.7
KBL	Kabul	59.26 309	eP	P	19 51 14.5 +0.1
	5.5nm,0.8s				
YAK	Yakutsk	59.72 4	eP	P	19 51 16.3 -0.3
	9.2nm,0.8s				
ZALV	Zalesovo Beam	60.06 335	P	P	19 51 17.7 -1.5
	1.6nm,0.4s,baz=133,slow=6.0,SNR=7.7				
KURBB	Kurchatov Arra	60.80 329	P	P	19 51 24.0 -0.1
	1.5nm,0.3s,baz=127,slow=6.3,SNR=36				
KURK	Kurchatov	60.81 330	eP	P	19 51 23.6 -0.5
	9.8nm,0.5s				
MA2	Magadan	61.00 16	P	P	19 51 25.8 +0.5
	4.4nm,0.6s,baz=229,slow=6.7,SNR=5.5				
DCZ	Deep Cove	61.76 146	eP	P	19 51 31.3 +0.8
	128nm,1.6s				
WHZ	Wether Hill Ro	62.46 146	eP	P	19 51 35.4 +0.3
	207nm,1.9s				
LBZ	Lake Benmore	62.87 144	eP	P	19 51 38.1 +0.3
	94nm,1.6s				
RPZ	Rata Peaks	63.02 143	eP	P	19 51 39.1 +0.4
	72nm,1.5s				
THZ	Tophouse	63.14 140	eP	P	19 51 40.6 +0.9
	95nm,1.7s				
LTZ	Lake Taylor	63.27 141	eP	P	19 51 42.0 +1.5
	108nm,1.8s				
KHZ	Kahutara	63.88 140	eP	P	19 51 44.6 +0.3
	46nm,1.2s				
MQZ	McQueen's Vall	63.99 142	eP	P	19 51 47.1 +2.1
	102nm,1.5s				
SNZO	South Karori	64.09 139	eP	P	19 51 44.8 -0.8
	153nm,1.5s				
BKZ	Black Stump Fm	64.30 136	eP	P	19 51 47.5 +0.3
	24nm,1.4s				
URZ	Urewera	64.33 135	eP	P	19 51 45.4 -1.9
	107nm,2.0s				
BVAR	Borovoye Array	66.34 328	P	P	19 51 59.2 -0.4
	0.8nm,0.5s,baz=118,slow=7.4,SNR=8.7				
BRVK	Borovoye	66.41 328	eP	P	19 51 59.6 -0.4
	3.2nm,1.1s				
GEYT	Alibeck	68.69 310	P	P	19 52 14.2 -0.3
	1.3nm,0.7s,baz=167,slow=8.5,SNR=5.4				
CASY	Casey	69.08 185	eP	P	19 52 16.4 +0.3
	8.6nm,1.0s				
TIXI	Tiksi	69.26 2	eP	P	19 52 15.8 -1.4
	3.6nm,0.6s				
ADK	Adak	70.29 35	eP	P	19 52 23.9 +0.3
	81nm,2.0s				
ABKAR	Akbulak array	70.72 322	eP	P	19 52 25.6 -0.7
	4.0nm,1.3s				
GSTR	Great Sitkin T	70.73 35	eP	P	19 52 26.3 0.0
NRIK	Noril'sk	70.83 347	P	P	19 52 25.0 -1.5
	1.6nm,0.4s,baz=135,slow=4.3,SNR=3.6				
ARU	Arti	73.99 329	P	P	19 52 44.0 -1.0
	0.5nm,0.2s,baz=188,slow=6.2,SNR=4.5				
ARU	Arti	73.99 329	eP	P	19 52 43.9 -1.2
	3.0nm,0.9s				
AKUT	Akutan	77.25 35	eP	P	19 53 02.7 -0.5
	84nm,1.3s				
MAW	Mawson	81.17 200	P	P	19 53 24.0 +0.3
	1.7nm,0.5s,baz=55,slow=4.2,SNR=7.4				
MAW	Mawson	81.17 200	eP	P	19 53 24.3 +0.6
	1.8nm,1.4s				
VNDA	Vanda	82.63 172	P	P	19 53 31.4 +0.3
	1.9nm,0.5s,baz=320,slow=6.2,SNR=17				
SBA	Scott Base	83.58 171	eP	P	19 53 36.8 +0.9
	20nm,1.9s				
SII	Sitkinak Islan	84.16 34	eP	P	19 53 40.4 +1.2
	274nm,1.7s				
OHAK	Old Harbor	84.70 33	eP	P	19 53 41.9 +0.1
	61nm,1.5s				
BPAW	Bear Paw Mtn.	86.20 26	eP	P	19 53 48.5 -0.4
	23nm,1.9s				
SUA	Susitna One	86.22 29	eP	P	19 53 48.7 -0.5
	34nm,1.8s				
MLY	Manley	86.35 25	eP	P	19 53 49.7 0.0
	6.1nm,1.4s				
TRF	Thorofare Moun	86.49 27	eP	P	19 53 50.5 0.0
	6.6nm,1.9s				
COLD	Coldfoot	86.64 23	eP	P	19 53 50.2 -0.8
	3.8nm,0.5s				
BRTR	Keskin Array B	87.83 309	P	P	19 53 56.0 -1.3
	0.5nm,0.7s,baz=82,slow=5.9,SNR=3.5				
ILAR	Eielson Array	87.99 25	P	P	19 53 55.2 -2.2
	0.2nm,0.4s,baz=239,slow=5.3,SNR=5.4				
RIDG	Independent Ri	88.92 26	eP	P	19 54 01.3 -0.5
	22nm,1.8s				
ARCES	ARCESS Array B	90.33 340	P	P	19 54 06.0 -2.1
	9.9nm,0.4s,baz=91,slow=5.1,SNR=6.4				
SPITS	Spitsbergen Ar	91.01 349	P	P	19 54 09.7 -1.4
	2.4nm,0.6s,baz=113,slow=7.4,SNR=11				
FINES	FINESS Array B	91.13 331	P	P	19 54 10.4 -1.5
	0.5nm,0.5s,baz=63,slow=6.0,SNR=7.3				
VYHS	Vyhne	97.43 319	ePDIF	P	19 54 43.1 +2.2
TMUT	Trail Mountain	115.44 44	ePKPdf	PKiKP	19 59 47.0 +0.2
PV17	East Wray Mesa	117.47 44	ePdif	Pdif	19 56 11.4 +0.9
PV03	Paradox Valley	117.56 44	ePKPdf	PKPdf	19 59 50.8 0.0
TORD	Torodi Ar. Bea	119.55 286	PKP	PKPdf	19 59 52.1 -2.8
	0.5nm,0.3s,baz=51,slow=1.9,SNR=13				
TXAR	Lajitas Array	125.51 51	PKP	PKPdf	20 00 05.0 -1.1
	0.2nm,0.5s,baz=317,slow=0.4,SNR=4.1				
ROC1	El Roble	146.94 158	ePKPbc	PKPbc	20 00 48.8 +0.5
LCO	Las Campanas	150.58 155	ePKPbc	PKiKP	20 00 57.7 -0.2

NIED ***07*** *19:49:00, 35.80N×141.00E, h11km, Mw3.7 Best double couple: M0 3.85000×10^14 NP1:φ=231.00000°, δ=33.00000°, λ=-47.00000°. NP2:φ=3.00000°, δ=67.00000°, λ=-114.00000°.*
IDC ***07*** *19:49:15.7±1.1, 35.70N×141.01E, h0km, mb3.7/8, mb1 3.7/10, mb1mx3.5/47, mbtmp3.6/10, ML3.3/2, Error ellipse: s-maj=26.8km s-min=21.2km az=71.0*
ISCJB ***07*** *19:49:17.0±1.0, 35.76N±0.04×141.15E±0.08, h23km±6km, mb3.7/8, Error ellipse: s-maj=10.3km s-min=5.9km az=7.8*
JMA ***07*** *19:49:19.0±0.2, 35.76N×141.00E, h14km±1km, M3.9*
JMA Felt I J1.
ISC 07 19:49:17.7±1.6, 35.74N±0.04×141.06E±0.07, h13km±8km, n26, σ0.71/29, mb3.7/8, 3C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.17	256	↑P	Pb	19 49 22.5	-0.1
CHOJ				S	Sg	19 49 24.9	+0.5
JIHU	Itakohorinouch	0.49	297	P	Pb	19 49 28.3	+0.2
JSMT	Sammumatsuo	0.51	259	P	Pb	19 49 28.7	+0.3
JSMT				S	Sg	19 49 35.0	+0.6
JHYU	Hitachinakayam	0.71	327	P	Pb	19 49 32.3	+0.5
JHYU				S	Sg	19 49 41.5	+0.7
JCN	Nagara	0.77	245	↑P	Pn	19 49 33.8	-0.4
JCN				S	Sn	19 49 44.5	-1.1
JYT	Yasato	0.85	305	↑P	Pg	19 49 33.7	-0.5
JYT				eS	Sg	19 49 44.1	-1.2
JHO	Hitachi	0.95	335	P	Pb	19 49 35.7	-0.3
JHO				S	Sb	19 49 48.2	-0.3
BSO4	Boso 4	0.96	218	P	Pn	19 49 36.5	-0.1
BSO3	Boso 3	1.04	206	P	Pn	19 49 37.9	+0.2
MJAR	Matsushiro Arr	2.44	290	Pn	Pn	19 49 56.8	-0.4
	1.4nm,0.3s,baz=119,slow=4.0,SNR=53						
MJAR				Sn	Sn	19 50 27.9	+1.0
	1.6nm,0.3s,baz=96,slow=25,SNR=5.1						
MAT	Matsushiro	2.44	290	P	Pn	19 49 57.5	+0.3
MAT				S	Sb	19 50 32.3	+0.9
ASAJ	Asahikawa	8.45	8	Pn	Pn	19 51 18.6	-1.0
	0.7nm,0.3s,baz=215,slow=9.3,SNR=6.8						
ASAJ				Sn	Sn	19 52 54.8	+0.1
	0.2nm,0.3s,baz=295,slow=32,SNR=2.3						
H11N2	WAKE ISLAND Hy 27.76 118			T	T	20 24 04.7	
	baz=311,slow=75,SNR=80						
H11N1	WAKE ISLAND Hy 27.77 118			T	T	20 24 05.2	
	baz=311,slow=75,SNR=76						
H11N3	WAKE ISLAND Hy 27.78 118			T	T	20 24 06.0	
	baz=311,slow=75,SNR=108						
H11S1	WAKE ISLAND Hy 28.43 120			T	T	20 24 53.6	
	baz=312,slow=75,SNR=77						
H11S3	WAKE ISLAND Hy 28.43 120			T	T	20 24 53.9	
	baz=312,slow=75,SNR=81						
H11S2	WAKE ISLAND Hy 28.44 120			T	T	20 24 55.1	
	baz=312,slow=75,SNR=63						
TIXI	Tiksi	36.53	354	P	P	19 56 22.1	-0.3
	1.1nm,0.3s,baz=103,slow=0.9,SNR=4.7						
ZALV	Zalesovo Beam	42.58	313	P	P	19 57 12.0	-1.1
	0.4nm,0.4s,baz=97,slow=7.4,SNR=3.4						
MKAR	Makanchi Array	44.57	303	P	P	19 57 28.8	-0.5
	1.1nm,0.8s,baz=90,slow=8.5,SNR=7.7						
KURBB	Kurchatov Arra	46.58	309	P	P	19 57 45.4	+0.4
	1.1nm,0.7s,baz=85,slow=7.9,SNR=8.4						
ILAR	Eielson Array	50.74	32	P	P	19 58 18.4	+1.5
	0.3nm,0.8s,baz=269,slow=6.9,SNR=4.5						
BVAR	Borovoye Array	51.23	313	P	P	19 58 21.3	+0.6
	0.2nm,0.3s,baz=67,slow=8.0,SNR=2.9						
WRA	Warramunga Arr	55.75	188	P	P	19 58 53.6	-0.5
	1.3nm,0.8s,baz=4.7,slow=6.3,SNR=3.0						
ASAR	Alice Springs	59.47	188	P	P	19 59 20.1	-0.2
	0.3nm,0.8s,baz=20,slow=11,SNR=3.5						

ISCJB ***07*** *19:59:33.7±0.7, 38.32N±0.03×27.21E±0.05, h7km±10km, Error ellipse: s-maj=7.1km s-min=5.6km az=3.4*
DDA ***07*** *19:59:33.4, 38.32N×27.19E, h7km±1km, ML2.5*
ISK ***07*** *19:59:33.3, 38.33N×27.18E, h7km, ML1.9/7*
ISC 07 19:59:33.7±1.2, 38.34N±0.05×27.21E±0.05, h6km±13km, n12, σ0.32/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.14	288	PG	Pg	19 59 36.5	-0.2
BLCB				SG	Sg	19 59 38.7	0.0
GMLD	Gumuldur	0.35	222	PG	Pg	19 59 40.3	-0.3
GMLD				SG	Sg	19 59 45.4	+0.2
DGB	zmir	0.39	222	*i* P	Pg	19 59 41.4	+0.1
DGB				*i* S	Sg	19 59 46.7	+0.4
DGB				IAML_P			
	comp=Z,2μm,0.1s						
URLA	Izmir	0.49	273	PG	Pg	19 59 42.8	-0.3
URLA				SG	Sg	19 59 49.7	+0.2
URLA	Izmir	0.49	273	*i* P	Pg	19 59 43.5	+0.3
ZEY	zmir	0.57	260	*i* P	Pg	19 59 44.8	+0.1
ZEY				*i* S	Sg	19 59 52.5	+0.4
ZEY				IAML_P			
	comp=Z,2μm,0.1s						
ZEDA	zmir-Bergama	0.63	350	*i* P	Pb	19 59 46.9	-0.3
ZEDA				*i* S	Sb	19 59 56.6	+0.3
ZEDA				IAML_P			
	comp=Z,402nm,0.2s						
GCAM	G?zelcaml?	0.64	179	PG	Pg	19 59 45.5	-0.5
AYDB	Zeytinkoy-Aydi	0.66	126	PG	Pg	19 59 46.7	+0.2
CHOS	Chios island	0.91	273	PG	Pg	19 59 50.8	-0.4
KULA	Kula-Manisa	1.15	81	PN	Pn	19 59 56.3	-0.1
SIGR	SIGRI	1.37	310	PN	Pn	19 59 59.4	+0.1

ISCJB ***07*** *20:01:06.8±0.7, 33.04N±0.04×104.27E±0.06, h9km, mb3.3/2, MS4.2/1, Error ellipse: s-maj=7.2km s-min=5.1km az=11.5*
IDC ***07*** *20:01:10.6±4.9, 33.22N×104.21E, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.1/49, mbtmp3.4/4, ML3.6/2, MS4.1/1, Ms1 4.1/1, ms1mx2.6/30, Error ellipse: s-maj=106.5km s-min=41.4km az=92.0*
BJI ***07*** *20:01:13.6±0.0, 33.02N×104.01E, h13km, ML3.8/14, Ms3.5/1*
ISC 07 20:01:09.2±0.8, 33.07N±0.04×104.13E±0.06, h9km, n9, σ1.76/14, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.17	189	Pg	Pg	20 01 50.2	-0.7
CD2				Sg	Sg	20 02 18.1	-1.0
CD2				smax	smax		
	comp=N,1μm,0.8s						
CD2				smax	smax		
	comp=E,890nm,0.9s						
LZH	Lanzhou	3.02	356	Pn	Pb	20 02 00.8	-2.5
LZH				Pg	Pg	20 02 06.5	-0.6
LZH				Sn	Sb	20 02 38.4	-2.0
LZH				Sg	Sg	20 02 47.5	+1.2
LZH				smax	smax		
	comp=N,330nm,1.0s						
LZH				smax	smax		
	comp=E,410nm,1.1s						
LZH				LR	LR		
	comp=N,380nm,4.3s						
LZH				LR	LR		
	comp=E,190nm,4.9s						
XAN	Xi'an	4.12	75	Pn	Pn	20 02 15.4	+3.1
XAN				Pg	Pg	20 02 26.9	-1.2
XAN				Sg	Sg	20 03 20.6	-0.8
XAN				smax	smax		
	comp=N,120nm,1.0s						
XAN				smax	smax		
	comp=E,150nm,0.9s						
SONM	Songino Array	14.85	6	Pn	Pn	20 04 39.5	0.0
	0.1nm,0.3s,baz=187,slow=10,SNR=3.7						
CMAR	Chiang Mai Arr	15.28	199	Pn	P	20 04 49.7	-0.4
	0.2nm,0.3s,baz=11,slow=11,SNR=3.4						
WMQ	Urumqi	16.73	315	*e*P	Pn	20 05 04.0	+0.1
MKAR	Makanchi Array	21.55	316	P	P	20 06 00.3	+1.5
	1.0nm,0.8s,baz=121,slow=12,SNR=8.3						
KURBB	Kurchatov Arra	25.71	321	P	P	20 06 42.2	+2.6
	1.1nm,1.0s,baz=126,slow=11,SNR=6.4						
ATD	Arta Tunnel	59.78	264	LR	LR	20 40 10.6	
	comp=Z,147nm,18.7s,baz=193,slow=39						

MAN 07 20:07:02.5, 13.72N×120.43E, h69km, mb4.0, ML2.8, MS2.4, 1C-1D, Mindoro

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

BUSP	**Coron**	**1.72 188**	*e*P	Pn	20 07 31.2	+0.8
BUSP			*e*S	Sn	20 07 52.2	+0.7
OTRP	**Odiongan**	**2.06 131**	*e*P	Pn	20 07 36.8	+1.9
BALP	**Baler**	**2.30 29**	*e*P	Pn	20 07 39.1	+1.0
BALP			*e*S	Sn	20 08 05.9	+0.5
ENPP	**El Nido**	**2.68 202**	*e*P	Pn	20 07 43.0	-0.4
ENPP			*e*S	Sn	20 08 13.3	-1.5

MOS ***07*** *20:13:12.8±1.2, 43°.89S×16°.29W, h10km, mb6.0/47, MS5.4/57, Error ellipse: s-maj=11.8km s-min=7.4km az=75.9*

ISCJB ***07*** *20:13:12.9±0.2, 43°.85S±0°.04×16°.46W±0°.03, h10km, mb5.7/155, MS5.5/537, Error ellipse: s-maj=5.8km s-min=3.1km az=166.9*

IDC ***07*** *20:13:12.4±0.4, 43°.76S×16°.20W, h0km, mb5.0/19, mb1 5.1/19, mb1mx5.0/25, mbtmp5.0/19, MS5.4/21, Ms1 5.4/21, ms1mx5.4/21, Error ellipse: s-maj=14.8km s-min=12.2km az=177.0*

NEIC ***07*** *20:13:13.3±1.9, 43°.75S×16°.18W, h7km±3km, mb5.8/129, MS5.5/532, MW5.6, Error ellipse: s-maj=13.6km s-min=13.0km az=145.0*

NEIC ***07*** *20:13:13.0±0.0, 43°.72S×16°.07W, h25km, Moment Tensor Solution. s23 Moment tensor: Scale 10^17^Nm; Mrr-3.03; Mθθ0.13; Mφφ2.90; Mrθ-0.19; Mθφ-0.64; Mφr-0.46; Best double couple: M0=3.10000×10^17^ NP1:φs=353.00000°, δ49.00000°, λ-83.00000°. NP2:φs=162.00000°, δ41.00000°, λ-97.00000°. Principal axes: T 3.0600, Plg3.0000°, Azm77.0000°; N 0.0200, Plg5.0000°, Azm168.0000°; P -3.0800, Plg83.0000°, Azm311.0000°;*

GCMT ***07*** *20:13:16.3±0.1, 43°.93S±0°.01×15°.93W±0°.01, h12km, MW5.7/134, Moment Tensor Solution. s109,c206; s134,c407; Duration: 1s8 Moment tensor: Scale 10^17^ Nm; Mrr-4.78±.04; Mθθ0.15±.04; Mφφ4.63±.04; Mrθ0.28±.13; Mθφ-0.46±.04; Mφr0.19±.11; Best double couple: M0=4.74000×10^17^ NP1:φs=178.00000°, δ46.00000°, λ-85.00000°. NP2:φs=351.00000°, δ44.00000°, λ-95.00000°. Principal axes: T 4.6800, Plg1.0000°, Azm264.0000°; N 0.1240, Plg3.0000°, Azm354.0000°; P -4.8010, Plg86.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 07 20:13:14.0±0.2, 43°.85S±0°.05×16°.30W±0°.04, h10km, n1207, σ1.968/858, mb5.8/155, MS5.5/537, 45C-18D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIS	**Tristan da Cun**	**7.42**	**25**	*e*Pn	Pn	20 14 53.2	-9.1
HOPE	**Hope Point**	**16.79**	**224**	*e*Pn	**P**	**20 17 13.9**	**+2.7**
	1μm,1.5s						
VNA1	**Neumayer--Stat**	**27.17**	**174**	P	**P**	**20 18 59.1**	**+1.9**
VNA2	**Neumayer--Watz**	**27.51**	**174**	P	**P**	**20 19 01.0**	**+0.8**
	baz=344,slow=11						
VNA3	**Neumayer Olymp**	**27.66**	**175**	P	**P**	**20 19 02.5**	**+0.9**
SNAA	**Sanae**	**28.66**	**171**	P	**P**	**20 19 11.7**	**+1.2**
SNAA	**Sanae**	**28.66**	**171**	P	**P**	**20 19 11.0**	**+0.4**
	23nm,1.3s,baz=338,slow=9.2,SNR=26						
SNAA				PcP	**PcP**	**20 22 20.7**	**-0.1**
	11nm,1.0s,baz=72,slow=4.9,SNR=4.1						
SNAA				LR	LR	20 27 40.5	
	comp=Z,4μm,21.0s,baz=38,slow=30						
SNAA	**Sanae**	**28.66**	**171**	*e*P	**P**	**20 19 10.8**	**+0.4**
	214nm,1.7s						
SNAA				LR	LR		
	comp=Z,4μm,21.0s						
SNAA	**Sanae**	**28.66**	**171**	*e*P	**P**	**20 19 10.9**	**+0.4**
SNAA				pmax	pmax		
	comp=Z,214nm,1.7s						
SNAA				MLR	MLR		
	comp=Z,4μm,21.0s						
EFI	**East Falkland**	**28.81**	**239**	PFAKE		20 19 20.0	+8.0
EFI				LR	LR		
	comp=Z,17μm,22.0s						
SHEL	**Horse Pasture**	**29.21**	**21**	PFAKE		20 19 30.0	+14
SHEL				LR	LR		
	comp=Z,6μm,18.0s						
CAM01	**Campos-RJ**	**30.39**	**308**	*e*P	**P**	**20 19 27.5**	**+1.3**
CNLB	**Canela**	**31.06**	**286**	*e*P	**P**	**20 19 31.8**	**-0.4**
VAS01	**Vassouras-RJ**	**31.07**	**305**	*e*P	**P**	**20 19 34.7**	**+2.4**
ESAR	**Angra dos Reis**	**31.11**	**303**	*e*P	**P**	**20 19 33.5**	**+0.9**
SUR	**Sutherland**	**31.12**	**81**	*e*P	**P**	**20 19 32.5**	**-0.4**
	comp=Z,270nm,1.5s						
SUR				LR	LR		
	comp=Z,13μm,22.0s						
PARB	**Paraibuna**	**31.60**	**301**	*e*P	**P**	**20 19 38.1**	**+1.1**
RIB01	**Linhares ES**	**31.71**	**313**	*e*P	**P**	**20 19 38.5**	**+0.6**
BSFB	**Barra de Sao F**	**32.35**	**313**	*e*P	**P**	**20 19 44.7**	**+1.2**
TIJ01	**Guaruva-PR**	**32.37**	**294**	*e*P	**P**	**20 19 44.4**	**+0.6**
SPB	**Sao Paulo**	**32.56**	**298**	*e*P	**P**	**20 19 46.0**	**+0.7**
	comp=Z,37nm,1.2s						
SPB				LR	LR		
	comp=Z,10μm,20.0s						
SPB	**Sao Paulo**	**32.56**	**298**	*e*P	**P**	**20 19 46.6**	**+1.3**
SJMB	**Sao Joao De Ma**	**32.64**	**312**	*e*P	**P**	**20 19 46.3**	**+0.3**
BSCB	**Bom Sucesso**	**32.84**	**305**	*e*P	**P**	**20 19 48.9**	**+0.9**
LPA	**La Plata**	**33.10**	**271**	*e*P	**P**	**20 19 51.0**	**+1.0**
LPA				*e*PPP	PPP	20 21 00.0	
LPA				*e*PP	**PP**	**20 21 06.0**	**+1.3**
LPA				*e*PPP	PPP	20 21 11.0	
LPA				*e*PCP	**PcP**	**20 22 31.0**	**-2.1**
LPA				*e*S	**S**	**20 25 12.0**	**+3.0**
LPA				*e*SS	**SnSn**	**20 27 13.0**	**+5.5**
LPA				*e*SSS	SSS	20 27 28.0	
LPA				*e*PKIKP	**PKiKP**	**20 29 58.0**	**-1.0**
LPA				*e*SCS	**ScS**	**20 30 17.0**	**-0.6**
ITAB	**Concordia**	**33.23**	**288**	*e*P	**P**	**20 19 53.2**	**+2.0**
RCLB	**Rio Claro- Sao**	**33.47**	**300**	*e*P	**P**	**20 19 54.8**	**+1.4**
PMSA	**Palmer Station**	**33.67**	**215**	P	**P**	**20 19 55.2**	**+0.6**
	comp=Z,26nm,0.8s,baz=73,slow=20,SNR=8.4						
PMSA	**Palmer Station**	**33.67**	**215**	*e*P	**P**	**20 19 55.6**	**+1.0**
	comp=Z,184nm,1.3s						
PMSA	**Palmer Station**	**33.67**	**215**	*e*P	**P**	**20 19 56.0**	**+1.4**
FRTB	**Fartura**	**34.10**	**296**	*e*P	**P**	**20 20 01.6**	**+2.7**
TRQA	**Tornquist**	**34.63**	**264**	*e*P	**P**	**20 20 04.4**	**+1.1**
	comp=Z,199nm,1.8s						
TRQA				LR	LR		
	comp=Z,15μm,21.0s						
TRQA	**Tornquist**	**34.63**	**264**	*e*P	**P**	**20 20 04.4**	**+1.1**
TRQA				pmax	pmax		
	comp=Z,199nm,1.8s						
TRQA				MLR	MLR		
	comp=Z,15μm,21.0s						
TRQA	**Tornquist**	**34.63**	**264**	*e*P	**P**	**20 20 04.7**	**+1.3**
H10S2	**ASCENSION HYDR**	**34.79**	**3**	T	T	20 56 53.9	
	baz=182,slow=75,SNR=126						
H10S3	**ASCENSION HYDR**	**34.79**	**3**	T	T	20 56 52.2	
	baz=182,slow=75,SNR=132						
H10S1	**ASCENSION HYDR**	**34.81**	**3**	T	T	20 56 52.8	
	baz=182,slow=75,SNR=115						
PTGB	**Pitanga**	**34.82**	**291**	*e*P	**P**	**20 20 06.5**	**+1.4**
BB19B	**Bebedouro**	**35.09**	**300**	*e*P	**P**	**20 20 08.2**	**+0.8**
MCI6	**Montes Claros**	**35.66**	**310**	*e*P	**P**	**20 20 11.7**	**-0.7**
PMNB	**Patos De Minas**	**35.73**	**305**	*e*P	**P**	**20 20 13.7**	**+0.7**
MCI9	**Montes Claros**	**35.74**	**311**	*e*P	**P**	**20 20 13.8**	**+0.7**
MCI8	**Montes Claros**	**35.79**	**311**	*e*P	**P**	**20 20 13.1**	**-0.4**
ASCN	**Ascension**	**35.82**	**3**	PFAKE		20 20 20.0	+6.4
ASCN				LR	LR		
	comp=Z,5μm,18.0s						
H10N1	**ASCENSION HYDR**	**35.90**	**3**	T	T	20 58 19.1	
	baz=189,slow=78,SNR=8.8						
H10N3	**ASCENSION HYDR**	**35.90**	**3**	T	T	20 58 14.6	
	baz=189,slow=78,SNR=79						
H10N2	**ASCENSION HYDR**	**35.92**	**3**	T	T	20 58 18.1	
	baz=189,slow=78,SNR=37						
BOSA	**Boshof**	**36.40**	**79**	P	**P**	**20 20 16.8**	**-2.0**
	comp=Z,18nm,0.9s,baz=224,slow=7.7,SNR=18						
BOSA				PcP	**PcP**	**20 22 42.7**	**-0.3**
	comp=Z,3.8nm,1.1s,baz=295,slow=5.5,SNR=1.6						
BOSA				LR	LR	20 32 42.9	
	comp=Z,5μm,19.1s,baz=234,slow=32						
BOSA	**Boshof**	**36.40**	**79**	*e*P	**P**	**20 20 16.9**	**-1.9**
	comp=Z,286nm,1.5s						
BOSA	**Boshof**	**36.40**	**79**	*e*P	**P**	**20 20 16.9**	**-1.9**
BOSA				pmax	pmax		
	comp=Z,286nm,1.5s						
GO10	**Punta Arenas**	**36.62**	**236**	*e*P	**P**	**20 20 20.2**	**-0.1**
	comp=Z,971nm,1.8s						
ITRB	**Iturama**	**37.24**	**299**	*e*P	**P**	**20 20 27.3**	**+1.5**
JANB	**Januaria**	**37.32**	**312**	*e*P	**P**	**20 20 26.3**	**-0.2**
CPUP	**Villa Florida**	**37.41**	**284**	P	**P**	**20 20 28.1**	**+0.9**
	comp=Z,55nm,1.1s,baz=122,slow=7.7,SNR=30						
CPUP				LR	LR	20 35 05.3	
	comp=Z,9μm,18.3s,baz=141,slow=35						
CPUP	**Villa Florida**	**37.41**	**284**	*e*P	**P**	**20 20 27.7**	**+0.6**
TSUM	**Tsumeb**	**37.51**	**60**	*e*P	**P**	**20 20 25.6**	**-2.6**
	comp=Z,202nm,1.8s						
TSUM				LR	LR		
	comp=Z,11μm,19.0s						
GO09	**Cerro Castillo**	**37.72**	**238**	PFAKE		20 20 40.0	+10
GO09				LR	LR		
	comp=Z,13μm,21.0s						
SYO	**Syowa Base**	**37.80**	**151⇑**	*e*P	**P**	**20 20 26.0**	**-4.0**
SYO	**Syowa Base**	**37.80**	**151⇑**	*e*pP	**P**	**20 20 27.8**	**-2.2**
SYO	**Syowa Base**	**37.80**	**151⇓**	*i/s*P	**P**	**20 20 28.6**	**-1.4**
LBTB	**Lobatse**	**38.84**	**75**	P	**P**	**20 20 38.0**	**-1.4**
	comp=Z,19nm,0.9s,baz=223,slow=9.3,SNR=21						
LBTB				LR	LR	20 33 34.1	
	comp=Z,12μm,20.7s,baz=226,slow=32						
LBTB	**Lobatse**	**38.84**	**75**	*e*P	**P**	**20 20 37.5**	**-1.9**
	comp=Z,220nm,1.4s						
LBTB	**Lobatse**	**38.84**	**75**	*e*P	**P**	**20 20 37.5**	**-1.9**
LBTB				pmax	pmax		
	comp=Z,220nm,1.4s						
BDFB	**Brasilia**	**38.93**	**306**	P	**P**	**20 20 40.8**	**+0.6**
	comp=Z,35nm,1.1s,baz=128,slow=8.7,SNR=26						
BDFB				LR	LR	20 33 51.6	
	comp=Z,9μm,19.6s,baz=139,slow=32						
BDFB	**Brasilia**	**38.93**	**306**	*e*P	**P**	**20 20 40.6**	**+0.4**
	comp=Z,314nm,1.8s						
BDFB				*e*P	**P**	**20 20 40.8**	**+0.6**
BDFB				LR	LR		
	comp=Z,9μm,21.0s						
BDFB	**Brasilia**	**38.93**	**306**	*e*P	**P**	**20 20 40.6**	**+0.4**
BDFB				*e*		20 20 40.8	
BDFB				pmax	pmax		
	comp=Z,315nm,1.8s						
BDFB				MLR	MLR		
	comp=Z,9μm,21.0s						
PLCA	**Paso Flores**	**39.65**	**255**	P	**P**	**20 20 47.6**	**+1.5**
	comp=Z,31nm,1.2s,baz=146,slow=7.8,SNR=12						
PLCA				LR	LR	20 34 27.7	
	comp=Z,9μm,21.9s,baz=145,slow=32						
PLCA	**Paso Flores**	**39.65**	**255**	*e*P	**P**	**20 20 47.5**	**+1.5**
	comp=Z,177nm,1.7s						
PLCA	**Paso Flores**	**39.65**	**255**	*e*P	**P**	**20 20 47.5**	**+1.5**
PLCA				pmax	pmax		
	comp=Z,177nm,1.7s						
PLCA	**Paso Flores**	**39.65**	**255**	*e*P	**P**	**20 20 48.0**	**+2.0**
AQDB	**Aquidauana**	**40.16**	**293**	*e*P	**P**	**20 20 51.7**	**+1.4**
NBLI	**Livramento-PB**	**40.59**	**327**	*e*P	**P**	**20 20 54.3**	**+0.3**
GO07	**Milladeo Hill,**	**40.90**	**250**	PFAKE		20 21 10.0	+14
GO07				LR	LR		
	comp=Z,9μm,22.0s						
RCBR	**Riachuelo**	**41.61**	**330**	*e*P	**P**	**20 21 01.5**	**-0.8**
	comp=Z,132nm,1.4s						
RCBR				LR	LR		
	comp=Z,5μm,19.0s						
RCBR	**Riachuelo**	**41.61**	**330**	*e*P	**P**	**20 21 01.5**	**-0.8**
RCBR				pmax	pmax		
	comp=Z,132nm,1.4s						
RCBR				MLR	MLR		
	comp=Z,5μm,19.0s						
RCBR	**Riachuelo**	**41.61**	**330**	*e*P	**P**	**20 21 01.4**	**-0.8**
APLL	**PUNTA DE LOS L**	**41.63**	**272**	*i* P	**P**	**20 21 01.2**	**-1.3**
NBPA	**Parau_RN**	**42.13**	**328**	*e*P	**P**	**20 21 06.8**	**+0.2**
ASAL	**Salagasta**	**42.13**	**267**	*i* P	**P**	**20 21 05.3**	**-1.2**
CYA	**Choya**	**42.20**	**274**	*i* P	**P**	**20 21 05.7**	**-1.3**
CFA	**Coronel Fontan**	**42.22**	**269**	P	**P**	**20 21 07.3**	**+0.1**
	comp=Z,80nm,1.3s,baz=125,slow=11,SNR=23						
CFA	**Coronel Fontan**	**42.22**	**269**	*i* P	**P**	**20 21 06.9**	**-0.3**
RTCV	**Cerro Valdivia**	**42.30**	**268**	*i* P	**P**	**20 21 06.5**	**-1.4**
ACLC	**CERRO LA CRUZ**	**42.47**	**272**	*i* P	**P**	**20 21 08.0**	**-1.4**
RTLL	**Cerro Villicun**	**42.53**	**269**	*i* P	**P**	**20 21 09.2**	**-0.7**
ZON	**Zonda**	**42.57**	**269**	*i* P	**P**	**20 21 09.5**	**-0.5**
AUSP	**Usallata**	**42.72**	**267**	*i* P	**P**	**20 21 11.4**	**-0.2**
AMOG	**MOGNA**	**42.76**	**269**	*i* P	**P**	**20 21 14.5**	**+2.8**
AHML	**Horco Molle**	**42.83**	**277**	*i* P	**P**	**20 21 11.4**	**-0.8**
RTLS	**Leoncito**	**42.88**	**268**	*i* P	**P**	**20 21 12.9**	**0.0**
GO05	**Huala**	**43.15**	**262**	*e*P	**P**	**20 21 15.1**	**+0.4**
	comp=Z,140nm,1.6s						
GO05				LR	LR		
	comp=Z,5μm,20.0s						
GO05	**Huala**	**43.15**	**262**	*i* P	**P**	**20 21 14.8**	**+0.1**
PEL	**Peldehue**	**43.19**	**265**	*e*P	**P**	**20 21 15.3**	**+0.2**
	comp=Z,381nm,1.5s						
PEL				LR	LR		
	comp=Z,7μm,20.0s						
PEL	**Peldehue**	**43.19**	**265**	*i* P	P	20 21 10.3	-4.8
PEL	**Peldehue**	**43.19**	**265**	*e*P	**P**	**20 21 15.3**	**+0.2**
PEL				pmax	pmax		
	comp=Z,381nm,1.5s						
PEL				MLR	MLR		
	comp=Z,7μm,20.0s						
ACCO	**Cerro Coronel**	**43.36**	**269**	*i* P	**P**	**20 21 17.1**	**+0.3**
ROC1	**El Roble**	**43.51**	**265**	*e*P	**P**	**20 21 18.2**	**+0.3**
ROC1	**El Roble**	**43.51**	**265**	*i* P	**P**	**20 21 16.5**	**-1.5**
FSA	**Cafayete**	**43.69**	**277**	*i* P	**P**	**20 21 18.3**	**-1.1**
VCA	**Vinchina**	**43.77**	**272**	*i* P	**P**	**20 21 20.2**	**+0.3**
MATP	**Matopo**	**43.87**	**72**	LR	LR	20 37 35.2	
	comp=Z,10μm,18.2s,baz=224,slow=33						
AROD	**Rodeo**	**43.88**	**270**	*i* P	**P**	**20 21 22.1**	**+1.0**
AZAP	**Zapla**	**44.19**	**280**	*i* P	**P**	**20 21 22.8**	**-0.6**
SLA	**San Lorenzo**	**44.19**	**279**	*i* P	**P**	**20 21 24.3**	**+0.9**
GO04	**Tololo Observa**	**44.84**	**269**	*e*P	**P**	**20 21 29.4**	**+0.8**
	comp=Z,211nm,1.6s						
GO04				LR	LR		
	comp=Z,8μm,20.0s						
GO04	**Tololo Observa**	**44.84**	**269**	*i* P	**P**	**20 21 27.8**	**-0.9**
HJA	**Humahuaca**	**45.07**	**281**	*i* P	**P**	**20 21 31.2**	**+0.5**
LCO	**Las Campanas**	**45.41**	**270**	*e*P	**P**	**20 21 33.6**	**+0.4**
	comp=Z,274nm,1.8s						
LCO				LR	LR		
	comp=Z,9μm,21.0s						
LCO	**Las Campanas**	**45.41**	**270**	*i* P	**P**	**20 21 33.1**	**-0.1**
LCO	**Las Campanas**	**45.41**	**270**	*e*P	**P**	**20 21 33.6**	**+0.4**
LCO				pmax	pmax		
	comp=Z,274nm,1.8s						
LCO				MLR	MLR		
	comp=Z,9μm,21.0s						
LCO	**Las Campanas**	**45.41**	**270**	*e*P	**P**	**20 21 34.0**	**+0.8**
NBMO	**Morrinhos-CE**	**45.51**	**326**	*e*P	**P**	**20 21 34.3**	**+0.6**
YJA	**Yavi**	**45.80**	**282**	*i* P	**P**	**20 21 36.9**	**+0.3**
GO03	**Copiap**	**45.88**	**272**	*e*P	**P**	**20 21 37.1**	**+0.4**
	comp=Z,101nm,1.6s						
GO03				LR	LR		
	comp=Z,6μm,20.0s						
MAW	**Mawson**	**46.39**	**149**	P	**P**	**20 21 40.5**	**+0.4**
	comp=Z,48nm,1.1s,baz=265,slow=7.2,SNR=42						
MAW				LR	LR	20 37 12.9	
	comp=Z,5μm,21.5s,baz=269,slow=31						
MAW	**Mawson**	**46.39**	**149**	*e*P	**P**	**20 21 39.8**	**-0.2**
	comp=Z,50nm,1.5s						
MAW				LR	LR		
	comp=Z,900nm,20.0s						
MAW	**Mawson**	**46.39**	**149**	*e*P	**P**	**20 21 39.8**	**-0.2**
MAW				pmax	pmax		
	comp=Z,50nm,1.5s						
MAW				MLR	MLR		
	comp=Z,900nm,20.0s						
QSPA	**South Pole Qui**	**46.41**	**180**	*e*P	**P**	**20 21 41.8**	**+1.3**
	comp=Z,323nm,1.1s						
QSPA				LR	LR		
	comp=Z,2μm,22.0s						
CRZF	**Crozet Islands**	**46.79**	**118**	PFAKE		20 21 50.0	+6.6
CRZF				LR	LR		
	comp=Z,7μm,21.0s						
GO02	**Mina Guanaco**	**46.86**	**275**	*e*P	**P**	**20 21 44.9**	**+0.2**
	comp=Z,257nm,1.5s						
GO02				LR	LR		
	comp=Z,8μm,21.0s						
LSZ	**Lusaka**	**47.24**	**67**	LR	LR	20 38 21.0	
	comp=Z,12μm,21.3s,baz=227,slow=32						
LSZ	**Lusaka**	**47.24**	**67**	*e*P	**P**	**20 21 45.7**	**-1.8**
	comp=Z,74nm,1.5s						
LSZ				LR	LR		
	comp=Z,11μm,22.0s						
LSZ	**Lusaka**	**47.24**	**67**	*e*P	**P**	**20 21 45.7**	**-1.8**
LSZ				pmax	pmax		
	comp=Z,74nm,1.5s						
LSZ				MLR	MLR		
	comp=Z,11μm,22.0s						
CLDB	**Colider**	**47.33**	**302**	*e*P	**P**	**20 21 48.9**	**+0.9**
LVC	**Limon Verde**	**47.94**	**279**	*e*P	**P**	**20 21 53.3**	**+0.1**
	comp=Z,33nm,1.4s						
LVC				LR	LR		
	comp=Z,4μm,21.0s						
LVC	**Limon Verde**	**47.94**	**279**	*e*P	**P**	**20 21 53.3**	**+0.1**
LVC				pmax	pmax		
	comp=Z,33nm,1.4s						
LVC				MLR	MLR		
	comp=Z,4μm,21.0s						
LVC	**Limon Verde**	**47.94**	**279**	*e*P	**P**	**20 21 53.1**	**-0.1**
PB15	**IPOC Station P**	**47.97**	**278**	*i* P	**P**	**20 21 52.0**	**-1.2**
PB06	**IPOC Station P**	**48.36**	**278**	*i* P	**P**	**20 21 56.2**	**+0.1**
PB10	**IPOC Station P**	**48.56**	**276**	*e*P	**P**	**20 21 57.5**	**0.0**
	comp=Z,212nm,1.7s						
PB10				LR	LR		
	comp=Z,12μm,21.0s						
PB10	**IPOC Station P**	**48.56**	**276**	*i* P	**P**	**20 21 58.5**	**+1.0**
PB09	**IPOC Station P**	**48.70**	**279**	*i* P	**P**	**20 21 59.6**	**+0.9**
PB05	**IPOC Station P**	**48.72**	**277**	*i* P	**P**	**20 22 00.0**	**+1.1**
PB03	**IPOC Station P**	**48.90**	**278**	*i* P	**P**	**20 21 58.9**	**-1.5**
PB04	**IPOC Station P**	**49.01**	**278**	*e*P	**P**	**20 22 01.7**	**+0.6**
	comp=Z,366nm,1.8s						
PB04				LR	LR		
	comp=Z,5μm,20.0s						
PB04	**IPOC Station P**	**49.01**	**278**	*i* P	**P**	**20 22 00.0**	**-1.1**
PB07	**IPOC Station P**	**49.20**	**279**	*i* P	**P**	**20 22 02.7**	**0.0**
PB01	**IPOC Station P**	**49.35**	**280**	*e*P	**P**	**20 22 04.4**	**+0.6**
	comp=Z,244nm,1.6s						
PB01				LR	LR		
	comp=Z,4μm,20.0s						
PB01	**IPOC Station P**	**49.35**	**280**	*i* P	**P**	**20 22 04.2**	**+0.5**
PB02	**IPOC Station P**	**49.47**	**279**	*i* P	**P**	**20 22 01.5**	**-3.1**
PB08	**IPOC Station P**	**49.70**	**281**	*i* P	**P**	**20 22 05.0**	**-1.8**
GO01	**Chusmiza**	**50.04**	**281**	*e*P	**P**	**20 22 09.7**	**+0.3**
	comp=Z,208nm,1.5s						
GO01				LR	LR		
	comp=Z,5μm,22.0s						
PB11	**IPOC Station P**	**50.30**	**281**	*e*P	**P**	**20 22 10.8**	**-0.3**
	comp=Z,148nm,1.4s						
PB11				LR	LR		
	comp=Z,4μm,20.0s						
PB11	**IPOC Station P**	**50.30**	**281**	*i* P	**P**	**20 22 08.8**	**-2.3**
MNMC	**Minye Minye**	**50.67**	**282**	*e*P	**P**	**20 22 13.7**	**-0.3**
	comp=Z,130nm,1.7s						
MNMC				LR	LR		
	comp=Z,3μm,21.0s						
MNMCX	**Minye Minye**	**50.67**	**282**	*i* P	**P**	**20 22 13.3**	**-0.7**
PSGCX	**Pisagua**	**50.74**	**281**	*i* P	**P**	**20 22 11.0**	**-3.3**
LIC	**Lamto**	**50.87**	**15**	*e*P	**P**	**20 22 15.1**	**0.0**
	comp=Z,257nm,1.5s						
KIC	**Kosan Boka**	**51.06**	**15**	*e*P	**P**	**20 22 16.4**	**-0.1**
	comp=Z,228nm,1.5s						
PB16	**IPOC Station P**	**51.14**	**282**	*i* P	**P**	**20 22 16.0**	**-1.9**
TIC	**Toumodi**	**51.29**	**14**	*e*P	**P**	**20 22 17.4**	**-0.8**
DBIC	**Dimbokro**	**51.34**	**15**	P	**P**	**20 22 17.3**	**-1.3**
	comp=Z,9.0nm,1.0s,baz=159,slow=9.4,SNR=5.7						
DBIC				LR	LR	20 38 33.9	
	comp=Z,3μm,21.8s,baz=168,slow=30						
DBIC	**Dimbokro**	**51.34**	**15**	*e*P	**P**	**20 22 17.7**	**-0.9**
	comp=Z,125nm,1.6s						
DBIC	**Dimbokro**	**51.34**	**15**	*e*P	**P**	**20 22 17.7**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,125nm,1.6s						
LPAZ	**La Paz**	**51.55**	**285**	P	**P**	**20 22 19.9**	**-1.2**
	comp=Z,17nm,1.2s,baz=118,slow=7.1,SNR=22						
LPAZ				LR	LR	20 44 00.4	
	comp=Z,14μm,19.0s,baz=124,slow=36						
LPAZ	**La Paz**	**51.55**	**285**	*e*P	**P**	**20 22 19.8**	**-1.2**
	comp=Z,60nm,1.4s						
LPAZ	**La Paz**	**51.55**	**285**	*i* P	**P**	**20 22 17.9**	**-3.1**
LPAZ	**La Paz**	**51.55**	**285**	*e*P	**P**	**20 22 19.8**	**-1.2**
LPAZ				pmax	pmax		
	comp=Z,60nm,1.4s						
LPAZ	**La Paz**	**51.55**	**285**	*e*P	**P**	**20 22 19.8**	**-1.2**
PTGA	**Pitinga**	**57.86**	**305**	*e*P	**P**	**20 23 06.3**	**+0.3**
	comp=Z,225nm,2.0s						
PTGA				LR	LR		
	comp=Z,8μm,19.0s						
PTGA	**Pitinga**	**57.86**	**305**	*e*P	**P**	**20 23 05.9**	**-0.1**
ABPO	**Ambohimpanom**	**58.08**	**86**	*e*P	**P**	**20 23 07.2**	**-0.6**
	comp=Z,49nm,1.5s						
ABPO				LR	LR		
	comp=Z,7μm,21.0s						
ABPO	**Ambohimpanom**	**58.08**	**86**	*e*P	**P**	**20 23 07.2**	**-0.6**
ABPO				pmax	pmax		
	comp=Z,49nm,1.5s						
ABPO				MLR	MLR		
	comp=Z,7μm,21.0s						
OPO	**Ambohidratompo**	**58.34**	**86**	P	**P**	**20 23 10.0**	**+0.4**
	comp=Z,9.4nm,1.1s,baz=243,slow=6.0,SNR=6.0						
SBA	**Scott Base**	**58.56**	**181**	*e*P	**P**	**20 23 11.7**	**+1.6**
	comp=Z,341nm,1.8s						
SBA				LR	LR		
	comp=Z,2μm,20.0s						
SBA	**Scott Base**	**58.56**	**181**	*e*P	**P**	**20 23 11.7**	**+1.6**
SBA				pmax	pmax		
	comp=Z,341nm,1.8s						
SBA				MLR	MLR		
	comp=Z,2μm,20.0s						
VNDA	**Vanda**	**58.90**	**180**	P	**P**	**20 23 13.6**	**+1.1**
	comp=Z,17nm,1.1s,baz=200,slow=6.7,SNR=47						
VNDA				LR	LR	20 45 27.2	
	comp=Z,2μm,21.4s,baz=176,slow=33						
VNDA				PKP2bc		20 52 55.6	
	comp=Z,0.7nm,0.8s,baz=334,slow=7.4,SNR=3.6						
VNDA	**Vanda**	**58.90**	**180**	*e*P	**P**	**20 23 13.8**	**+1.3**
	comp=Z,376nm,1.9s						
VNDA	**Vanda**	**58.90**	**180**	*e*P	**P**	**20

TAM	**Tamanrasset**	**69.27**	**22**	*e*P	**P**	**20 24 21.3**	**-0.1**
	comp=Z,139nm,1.8s						
TAM				LR	LR		
	comp=Z,2μm,22.0s						
TAM	**Tamanrasset**	**69.27**	**22**	*e*P	**P**	**20 24 21.3**	**-0.1**
TAM				pmax	pmax		
	comp=Z,139nm,1.8s						
TAM				MLR	MLR		
	comp=Z,2μm,22.0s						
GRGR	**Grenville**	**69.33**	**312**	*e*P	**P**	**20 24 22.2**	**+0.5**
	comp=Z,210nm,1.1s						
GRGR				LR	LR		
	comp=Z,1μm,20.0s						
FLOC	**Florencia**	**69.53**	**293**	*e*P	**P**	**20 24 21.5**	**-1.6**
ELOV	**Elorza**	**69.71**	**302**	*e*P	**P**	**20 24 23.8**	**-0.3**
AGZ	**La Independenc**	**69.98**	**298**	*e*P	**P**	**20 24 24.6**	**-1.2**
SVB	**Belmont**	**70.06**	**313**	*e*P	**P**	**20 24 27.1**	**+0.9**
	comp=Z,113nm,1.2s						
VILC	**Villavicencio,**	**70.14**	**297**	*e*P	**P**	**20 24 26.9**	**-0.1**
BETC	**Betania**	**70.21**	**294**	*e*P	**P**	**20 24 27.2**	**-0.1**
YOPC	**Yopal, Colombi**	**70.27**	**299**	*e*P	**P**	**20 24 26.1**	**-1.7**
CRUC	**La Cruz**	**70.38**	**292**	*e*P	**P**	**20 24 27.7**	**-1.1**
GCUF	**Volcan Galeras**	**70.40**	**292**	*e*P	**P**	**20 24 29.3**	**+0.3**
OTAV	**Otavalo**	**70.42**	**290**	*e*P	**P**	**20 24 28.9**	**-0.2**
	comp=Z,92nm,1.5s						
OTAV				LR	LR		
	comp=Z,6μm,20.0s						
OTAV	**Otavalo**	**70.42**	**290**	*e*P	**P**	**20 24 28.9**	**-0.2**
OTAV				pmax	pmax		
	comp=Z,92nm,1.5s						
OTAV				MLR	MLR		
	comp=Z,6μm,20.0s						
OTAV	**Otavalo**	**70.42**	**290**	*e*P	**P**	**20 24 29.7**	**+0.6**
OTAV	**Otavalo**	**70.42**	**290**	*e*P	**P**	**20 24 28.3**	**-0.8**
CHIC	**Chingaza**	**70.56**	**297**	*e*P	**P**	**20 24 29.3**	**-0.5**
SOTA	**Rioblanco**	**70.58**	**293**	*e*P	**P**	**20 24 28.9**	**-1.2**
PCON	**Cinco Dias**	**70.58**	**293**	*e*P	**P**	**20 24 30.9**	**+0.7**
PRAC	**Prado**	**70.62**	**295**	*e*P	**P**	**20 24 28.7**	**-1.1**
MARP	**Paez Belalcaza**	**70.67**	**294**	*e*P	**P**	**20 24 29.0**	**-1.4**
TAMC	**Tame, Arauca**	**70.70**	**300**	*e*P	**P**	**20 24 29.9**	**-0.4**
BBAC	**Balboa, Cauca**	**70.92**	**292**	*e*P	**P**	**20 24 30.6**	**-1.2**
POPC	**Popayan, Colom**	**70.92**	**293**	*e*P	**P**	**20 24 29.9**	**-2.0**
ROSC	**El Rosal**	**71.10**	**297**	P	**P**	**20 24 32.5**	**-0.6**
	comp=Z,4.1nm,0.3s,baz=172,slow=3.2,SNR=13						
ROSC				LR	LR	20 54 49.6	
	comp=Z,6μm,18.6s,baz=175,slow=35						
ROSC	**El Rosal**	**71.10**	**297**	*e*P	**P**	**20 24 32.9**	**-0.3**
	comp=Z,163nm,1.9s						
ROSC	**El Rosal**	**71.10**	**297**	*e*P	**P**	**20 24 32.5**	**-0.6**
RUSC	**La Rusia**	**71.10**	**298**	*e*P	**P**	**20 24 31.6**	**-1.7**
FDF	**Fort de France**	**71.23**	**314**	*e*P	**P**	**20 24 34.9**	**+1.5**
	comp=Z,332nm,1.7s						
FDF				LR	LR		
	comp=Z,1μm,22.0s						
FDF	**Fort de France**	**71.23**	**314**	*e*P	**P**	**20 24 34.9**	**+1.5**
FDF				pmax	pmax		
	comp=Z,332nm,1.7s						
FDF				MLR	MLR		
	comp=Z,1μm,22.0s						
BARC	**Barichara**	**71.70**	**299**	*e*P	**P**	**20 24 33.7**	**-2.8**
MACI	**Morro de la Ar**	**71.75**	**360**	*e*P	**P**	**20 24 36.8**	**+0.4**
	comp=Z,123nm,1.1s						
YOTC	**Yotoco, Valle**	**71.78**	**294**	*e*P	**P**	**20 24 33.4**	**-3.5**
RREF	**El Recreo**	**71.81**	**296**	*e*P	**P**	**20 24 37.1**	**-0.6**
SDV	**Santo Domingo**	**71.89**	**302**	*e*P	**P**	**20 24 36.9**	**-0.8**
	comp=Z,51nm,1.4s						
SDV				LR	LR		
	comp=Z,6μm,18.0s						
SDV	**Santo Domingo**	**71.89**	**302**	*e*P	**P**	**20 24 36.6**	**-1.0**
PAMC	**Pamplona, Colo**	**71.97**	**300**	*e*P	**P**	**20 24 37.7**	**-0.8**
NORC	**Norcasia**	**72.00**	**297**	*e*P	**P**	**20 24 34.6**	**-3.5**
GUY2C	**Guyana, Caldas**	**72.06**	**296**	*e*P	**P**	**20 24 36.7**	**-2.4**
GIRC	**Giron, Santand**	**72.08**	**299**	*e*P	**P**	**20 24 34.7**	**-4.1**
CAPV	**Capacho**	**72.13**	**300**	*e*P	**P**	**20 24 39.2**	**+0.1**
GRGC	**Isla de Gorgon**	**72.26**	**292**	*e*P	**P**	**20 24 37.5**	**-2.1**
FURI	**Furi**	**72.29**	**58**	*e*P	**P**	**20 24 38.5**	**-1.7**
	comp=Z,162nm,1.9s						
FURI				LR	LR		
	comp=Z,9μm,19.0s						
PLMC	**San Jos del P**	**72.42**	**295**	*e*P	**P**	**20 24 39.5**	**-1.2**
BRRC	**Barranca, Sant**	**72.43**	**299**	*e*P	**P**	**20 24 38.7**	**-1.9**
PTBC	**PUERTO BERRIO,**	**72.47**	**298**	*e*P	**P**	**20 24 37.5**	**-3.4**
HELC	**Santa Helena**	**72.90**	**297**	*e*P	**P**	**20 24 40.0**	**-3.9**
OCAC	**Ocana**	**73.05**	**300**	*e*P	**P**	**20 24 42.8**	**-1.8**
ZARC	**Zaragoza, Cauc**	**73.45**	**298**	*e*P	**P**	**20 24 45.1**	**-1.6**
ANKE	**Ethiopia-Afar**	**73.48**	**59**	*e*P	**P**	**20 24 43.5**	**-3.9**
MSEY	**Mahe Island**	**73.66**	**81**	PFAKE		20 25 00.0	+12
MSEY				LR	LR		
	comp=Z,3μm,22.0s						
SMLC	**San Martn de**	**73.95**	**300**	*e*P	**P**	**20 24 46.0**	**-3.7**
DBBC	**Dabeiba**	**73.96**	**297**	*e*P	**P**	**20 24 48.8**	**-1.0**
ANWB	**Willy Bob**	**74.02**	**315**	PFAKE		20 25 00.0	+10
ANWB				LR	LR		
	comp=Z,1μm,20.0s						
SKI	**Saint Kitts**	**74.23**	**314**	*e*P	**P**	**20 24 50.9**	**-0.3**
	comp=Z,153nm,1.2s						
SKI				LR	LR		
	comp=Z,1μm,20.0s						
SKI	**Saint Kitts**	**74.23**	**314**	*e*P	**P**	**20 24 50.9**	**-0.3**
SKI				pmax	pmax		
	comp=Z,153nm,1.2s						
SKI				MLR	MLR		
	comp=Z,1μm,20.0s						
VIRV	**Villa del Rosa**	**74.23**	**302**	*e*P	P	20 24 44.9	-6.4
SEUS	**St. Eustatius**	**74.49**	**314**	*e*P	**P**	**20 24 52.0**	**-0.6**
	comp=Z,248nm,1.0s						
SEUS				LR	LR		
	comp=Z,2μm,20.0s						
ARGC	**Ariguani, Magd**	**74.87**	**300**	*e*P	**P**	**20 24 54.8**	**-0.2**
SMRT	**St. Maarten**	**75.00**	**314**	*e*P	**P**	**20 24 54.8**	**-0.8**
	comp=Z,138nm,1.5s						
SMRT				LR	LR		
	comp=Z,800nm,19.0s						
CDVI	**St. Croix**	**75.64**	**313**	*e*P	**P**	**20 24 59.5**	**+0.2**
	comp=Z,54nm,0.9s						
SMRC	**Santa Marta, M**	**75.86**	**301**	*e*P	P	20 24 51.6	-9.0
STVI	**Saint Thomas**	**76.24**	**313**	*e*P	**P**	**20 25 00.9**	**-1.8**
	comp=Z,226nm,1.9s						
PMOZ	**Porto Moniz, M**	**76.31**	**359**	*e*LR	LR	20 48 48.7	
	comp=Z,892nm,20.0s						
PMOZ	**Porto Moniz, M**	**76.31**	**359**	*e*P	**P**	**20 25 01.5**	**-1.4**
MTP	**Monte Pirata**	**76.35**	**312**	*e*P	**P**	**20 25 02.8**	**-0.5**
	comp=Z,129nm,1.8s						
CUPR	**Culebra, Puert**	**76.38**	**312**	*e*P	**P**	**20 25 02.4**	**-1.1**
	comp=Z,176nm,1.5s						
HUMP	**Col San Antoni**	**76.55**	**312**	*e*P	**P**	**20 25 03.7**	**-0.7**
	comp=Z,124nm,1.6s						
HUMP				LR	LR		
	comp=Z,2μm,21.0s						
CBYP	**Canovanas**	**76.66**	**312**	*e*P	**P**	**20 25 03.5**	**-1.6**
	comp=Z,86nm,1.6s						
CBYP				LR	LR		
	comp=Z,2μm,21.0s						
SJG	**San Juan**	**76.68**	**312**	*e*P	**P**	**20 25 03.7**	**-1.5**
	comp=Z,123nm,1.8s						
SJG				LR	LR		
	comp=Z,2μm,20.0s						
SJG	**San Juan**	**76.68**	**312**	*e*P	**P**	**20 25 03.7**	**-1.5**
SJG				pmax	pmax		
	comp=Z,123nm,1.8s						
SJG				MLR	MLR		
	comp=Z,2μm,20.0s						
ICMP	**Isla Caja de M**	**76.70**	**311**	*e*P	**P**	**20 25 04.8**	**-0.5**
	comp=Z,243nm,1.8s						
OBIP	**Obispado Ponce**	**76.87**	**311**	*e*P	**P**	**20 25 05.5**	**-0.8**
	comp=Z,180nm,1.8s						
ATD	**Arta Tunnel**	**76.91**	**60**	*e*P	**P**	**20 25 08.2**	**+1.5**
	comp=Z,91nm,1.7s						
ATD				LR	LR		
	comp=Z,6μm,19.0s						
CRPR	**Cabo Rojo, PR**	**77.12**	**311**	*e*P	**P**	**20 25 06.7**	**-0.9**
	comp=Z,258nm,2.0s						
EMPR	**Esperanza - Ma**	**77.19**	**312**	*e*P	**P**	**20 25 04.8**	**-3.2**
	comp=Z,320nm,1.4s						
AOPR	**Arecibo Observ**	**77.20**	**311**	*e*P	**P**	**20 25 06.0**	**-2.2**
	comp=Z,89nm,1.5s						
MPR	**Mayaguez**	**77.30**	**311**	PFAKE		20 25 20.0	+11
MPR				LR	LR		
	comp=Z,2μm,22.0s						
AGP	**Aguadilla**	**77.46**	**311**	*e*P	**P**	**20 25 07.7**	**-1.9**
	comp=Z,234nm,1.3s						
IFR	**Ifrane**	**77.67**	**10**	*i* P	P	20 25 20.3	+10
IFR				*e*S	**S**	**20 35 06.3**	**+3.8**
BCIP	**Isla Barro Col**	**77.93**	**295**	*e*P	**P**	**20 25 12.5**	**+0.2**
	comp=Z,151nm,1.6s						
BCIP				LR	LR		
	comp=Z,2μm,20.0s						
BCIP	**Isla Barro Col**	**77.93**	**295**	*e*P	**P**	**20 25 12.5**	**+0.2**
BCIP				pmax	pmax		
	comp=Z,151nm,1.6s						
BCIP				MLR	MLR		
	comp=Z,2μm,20.0s						
PAYG	**Puerto Ayora**	**78.02**	**281**	*e*P	**P**	**20 25 12.4**	**-0.5**
	comp=Z,82nm,1.3s						
SDD	**Santo Domingo**	**79.04**	**309**	PFAKE		20 25 30.0	+12
SDD				LR	LR		
	comp=Z,3μm,21.0s						
PVLZ	**Peæn de**	**79.41**	**10**	*i* P	P	20 25 27.1	+7.2
MELI	**Melilla**	**79.71**	**11**	*i* P	P	20 25 30.8	+9.2
CEU	**Ceuta**	**80.00**	**9**	*i* P	**P**	**20 25 22.8**	**-0.3**
CEU				*e*S	S	20 35 14.6	-12
DAMY	**Dhamar**	**80.20**	**59**	*e*P	**P**	**20 25 22.7**	**-2.4**
	comp=Z,120nm,1.6s						
DAMY				LR	LR		
	comp=Z,10μm,20.0s						
SDDR	**Presa de Saban**	**80.24**	**308**	*e*P	**P**	**20 25 24.8**	**-0.1**
	comp=Z,174nm,1.8s						
SDDR				LR	LR		
	comp=Z,2μm,22.0s						
SFS	**San Fernando**	**80.47**	**8**	*i* P	**P**	**20 25 28.9**	**+3.3**
LGNH	**Logne**	**80.62**	**307**	*e*P	**P**	**20 25 25.1**	**-1.7**
	comp=Z,111nm,1.0s						
PFVI	**Vila Bisbo**	**80.89**	**6**	*e*SKS	**SKSac**	**20 35 44.6**	**-1.6**
PFVI	**Vila Bisbo**	**80.89**	**6**	*e*P	**P**	**20 25 25.4**	**-2.5**
	comp=Z,91nm,1.3s						
PFVI				LR	LR		
	comp=Z,2μm,22.0s						
EMAL	**Malaga-Limoner**	**80.96**	**10**	*i* P	**P**	**20 25 28.9**	**+0.7**
EMAL				*e*S	S	20 35 22.6	-14
LIJA	**Lijar**	**80.99**	**9**	*e*P	**P**	**20 25 29.0**	**+0.4**
PBDV	**Barranco-do-Ve**	**81.07**	**7**	*e*P	**P**	**20 25 29.2**	**+0.3**
	comp=Z,138nm,1.5s						
PBDV	**Barranco-do-Ve**	**81.07**	**7**	*e*SKS	**SKSac**	**20 35 48.0**	**+0.5**
MORF	**Marmelete**	**81.08**	**6**	*e*P	**P**	**20 25 28.8**	**-0.2**
MORF				AMb	AMB	20 25 33.2	
	comp=Z,80nm,1.7s						
MORF				*e*S	**S**	**20 35 38.5**	**+0.2**
MORF	**Marmelete**	**81.08**	**6**	*e*P	**P**	**20 25 27.2**	**-1.8**
	comp=Z,100nm,1.7s						
MORF	**Marmelete**	**81.08**	**6**	*e*SKS	**SKSac**	**20 35 47.1**	**-0.5**
PVAQ	**Vaqueiros**	**81.25**	**7**	*e*P	**P**	**20 25 30.7**	**+0.9**
	comp=Z,166nm,1.7s						
PVAQ	**Vaqueiros**	**81.25**	**7**	*e*SKS	**SKSac**	**20 35 47.4**	**-1.3**
PVAQ				*e*SS	**SS**	**20 41 01.7**	**+5.3**
PVAQ				*e*LQ	LQ	20 46 54.7	
PVAQ				*e*LR	LR	20 52 07.3	
	comp=Z,921nm,22.0s						
PVAQ	**Vaqueiros**	**81.25**	**7**	*e*P	**P**	**20 25 29.9**	**+0.1**
	comp=Z,135nm,1.4s						
PVAQ				LR	LR		
	comp=Z,900nm,20.0s						
HDC	**Heredia**	**81.37**	**293**	PFAKE		20 25 40.0	+8.8
HDC				LR	LR		
	comp=Z,3μm,20.0s						
PCVE	**Castro Verde**	**81.45**	**7**	*e*P	**P**	**20 25 32.1**	**+1.2**
	comp=Z,64nm,1.8s						
MESJ	**Messejana**	**81.64**	**6**	*e*P	**P**	**20 25 31.5**	**-0.4**
MESJ				AMb	AMB	20 25 39.2	
	comp=Z,95nm,0.8s						
MESJ				*e*S	**S**	**20 35 44.3**	**+0.4**
CMLA	**Cha da Macela**	**81.67**	**353**	*e*P	**P**	**20 25 33.7**	**+1.7**
	comp=Z,346nm,1.9s						
CMLA				LR	LR		
	comp=Z,1μm,19.0s						
CMLA	**Cha da Macela**	**81.67**	**353**	*e*P	**P**	**20 25 33.7**	**+1.7**
CMLA				pmax	pmax		
	comp=Z,346nm,1.9s						
CMLA				MLR	MLR		
	comp=Z,1μm,19.0s						
PBEJ	**Beja**	**81.86**	**7**	*e*P	**P**	**20 25 34.3**	**+1.3**
	comp=Z,102nm,2.0s						
PNCL	**Nicolau / Gran**	**81.89**	**6**	*e*P	**P**	**20 25 35.4**	**+2.2**
	comp=Z,84nm,1.8s						
PNCL	**Nicolau / Gran**	**81.89**	**6**	*e*SKS	**SKKSac**	**20 35 56.6**	**+0.5**
PNCL				*e*SS	SS	20 41 25.4	+20
CKHR	**Kef el Ahmar**	**81.93**	**18**	P	**P**	**20 25 37.0**	**+3.4**
PRVC	**Isla de Provid**	**82.06**	**297**	*e*P	**P**	**20 25 36.0**	**+1.4**
SET	**Setif**	**82.08**	**18**	P	**P**	**20 25 35.0**	**+0.6**
JTS	**Las Juntas de**	**82.14**	**292**	*e*P	**P**	**20 25 35.5**	**+0.3**
	comp=Z,134nm,1.7s						
JTS				LR	LR		
	comp=Z,2μm,20.0s						
JTS	**Las Juntas de**	**82.14**	**292**	*e*P	**P**	**20 25 35.5**	**+0.3**
JTS				pmax	pmax		
	comp=Z,134nm,1.7s						
JTS				MLR	MLR		
	comp=Z,2μm,20.0s						
GRTK	**Grand Turk**	**82.16**	**310**	*e*P	**P**	**20 25 33.8**	**-1.2**
	comp=Z,219nm,1.1s						
GRTK				LR	LR		
	comp=Z,1μm,20.0s						
EVO	**Evora**	**82.34**	**7**	*e*P	**P**	**20 25 37.2**	**+1.6**
	comp=Z,58nm,2.0s						
EVO	**Evora**	**82.34**	**7**	*i* P	P	20 25 41.0	+5.4
EVO				*e*S	**S**	**20 35 56.2**	**+5.0**
CASM	**Ain Smara**	**82.38**	**18**	P	**P**	**20 25 40.0**	**+4.1**
LIS	**Lisbon**	**82.44**	**6**	*e*P	**P**	**20 25 35.9**	**-0.1**
LIS				AMb	AMB	20 25 43.4	
	comp=Z,239nm,2.0s						
DFRA	**Djebel Bou Aff**	**82.52**	**18**	P	**P**	**20 25 38.6**	**+1.9**
CKFL	**Kef-Lekhel**	**82.57**	**19**	P	**P**	**20 25 38.2**	**+1.2**
KEST	**Kesra**	**82.57**	**21**	P	**P**	**20 25 37.5**	**+0.6**
	comp=Z,44nm,1.1s,baz=133,slow=3.8,SNR=22						
KEST				LR	LR	20 57 59.4	
	comp=Z,2μm,21.1s,baz=163,slow=33						
KEST	**Kesra**	**82.57**	**21**	*e*P	**P**	**20 25 37.4**	**+0.4**
	comp=Z,171nm,1.5s						
ABSA	**Djebel Ababsia**	**82.63**	**19**	P	**P**	**20 25 38.4**	**+1.2**
PMAFR	**Mafra**	**82.67**	**6**	*e*SKS	**SKKSac**	**20 36 04.4**	**+2.4**
PMAFR				*e*SS	SS	20 41 32.8	+15
PMTG	**Montargil**	**82.86**	**6**	*e*P	**P**	**20 25 39.4**	**+1.2**
	comp=Z,130nm,2.0s						
PMTG	**Montargil**	**82.86**	**6**	*e*SKS	**SKKSac**	**20 36 04.9**	**+1.5**
PMTG				*e*SS	SS	20 41 33.5	+13
ROSA	**Rosais**	**82.90**	**351**	*e*P	**P**	**20 25 37.7**	**-0.7**
	comp=Z,244nm,1.8s						
ROSA				LR	LR		
	comp=Z,900nm,18.0s						
CMAH	**Djebel Manchou**	**82.95**	**19**	P	**P**	**20 25 40.6**	**+1.7**
GTBY	**Guantanamo Bay**	**83.19**	**306**	PFAKE		20 25 50.0	+10
GTBY				LR	LR		
	comp=Z,2μm,22.0s						
PMRV	**Marv??o**	**83.29**	**7**	*e*P	**P**	**20 25 40.5**	**0.0**
	comp=Z,180nm,1.8s						
PMRV	**Marv??o**	**83.29**	**7**	*e*SKS	**SKKSac**	**20 36 09.8**	**+3.1**
PMRV	**Marv??o**	**83.29**	**7**	*e*LR	LR	20 53 26.7	
	comp=Z,1μm,18.0s						
MTDJ	**Mount Denham**	**83.32**	**303**	PFAKE		20 25 50.0	+8.8
MTDJ				LR	LR		
	comp=Z,3μm,19.0s						
PTOM	**Tomar**	**83.39**	**6**	*e*P	**P**	**20 25 42.1**	**+1.1**
	comp=Z,124nm,2.1s						
PCBR	**Castelo Branco**	**83.69**	**7**	*e*P	**P**	**20 25 43.5**	**+1.0**
	comp=Z,94nm,1.9s						
PAB	**San Pablo**	**83.72**	**9**	*e*P	**P**	**20 25 43.3**	**+0.6**
	comp=Z,73nm,1.4s						
PAB				LR	LR		
	comp=Z,900nm,19.0s						
PAB	**San Pablo**	**83.72**	**9**	*e*P	**P**	**20 25 43.3**	**+0.6**
PAB				pmax	pmax		
	comp=Z,73nm,1.4s						
PAB				MLR	MLR		
	comp=Z,900nm,19.0s						
H08S1	**Diego Carcia H**	**83.88**	**95**	T	T	21 58 02.9	
	baz=223						
ESDC	**Sonseca Array**	**83.89**	**10**	P	**P**	**20 25 43.9**	**+0.3**
	comp=Z,15nm,1.0s,baz=183,slow=4.9,SNR=46						
ESDC				LR	LR	20 59 40.7	
	comp=Z,598nm,19.2s,baz=125,slow=33						
ESLA	**Sonseca Array**	**83.89**	**10**	*e*P	**P**	**20 25 44.2**	**+0.6**
	comp=Z,134nm,1.7s						
H08S2	**Diego Garcia H**	**83.90**	**95**	T	T	21 58 03.2	
	baz=223						
H08S3	**Diego Garcia H**	**83.90**	**95**	T	T	21 58 01.9	
	baz=223						
COI	**Coimbra**	**83.98**	**6**	*e*P	**P**	**20 25 44.9**	**+1.0**
	comp=Z,153nm,1.6s						
COI	**Coimbra**	**83.98**	**6**	*e*SKS	**SKKSac**	**20 36 15.2**	**+3.5**
COI				*e*SS	SS	20 41 49.2	+12
COI	**Coimbra**	**83.98**	**6**	*e*P	**P**	**20 25 45.0**	**+1.0**
	comp=Z,321nm,1.9s						
COI				LR	LR		
	comp=Z,2μm,22.0s						
COI	**Coimbra**	**83.98**	**6**	*e*P	**P**	**20 25 45.0**	**+1.0**
COI				pmax	pmax		
	comp=Z,321nm,1.9s						
COI				MLR	MLR		
	comp=Z,2μm,22.0s						
WDD	**Wied Dalam**	**84.12**	**25**	PFAKE		20 26 00.0	+15
WDD				LR	LR		
	comp=Z,1μm,21.0s						
MTE	**Manteigas**	**84.24**	**7**	*e*P	**P**	**20 25 47.0**	**+1.6**
	comp=Z,115nm,1.6s						
MTE	**Manteigas**	**84.24**	**7**	*e*SKS	**SKKSac**	**20 36 16.7**	**+2.8**
MTE				*e*SS	SS	20 41 55.8	+15
MTE				*e*LQ	LQ	20 47 59.5	
MTE				*e*LR	LR	20 54 00.5	
	comp=Z,1μm,22.0s						
MTE	**Manteigas**	**84.24**	**7**	*e*P	**P**	**20 25 44.4**	**-1.0**
	comp=Z,186nm,1.8s						
MTE				LR	LR		
	comp=Z,2μm,22.0s						
PVIS	**Viseu**	**84.52**	**6**	*e*P	**P**	**20 25 47.4**	**+0.6**
	comp=Z,107nm,1.8s						
UCM	**Universidad Co**	**84.60**	**10**	*i* P	P	20 25 56.8	+10
MVO	**Moncorvo**	**85.04**	**7**	*e*P	**P**	**20 25 50.8**	**+1.4**
	comp=Z,113nm,1.9s						
MVO	**Moncorvo**	**85.04**	**7**	*e*SKS	**SKKSac**	**20 36 22.0**	**+2.1**
MVO				*e*SS	SS	20 42 06.1	+13
MVO				*e*LQ	LQ	20 48 30.5	
MVO				*e*LR	LR	20 54 19.1	
	comp=Z,993nm,20.0s						
PVRL	**Vila Real**	**85.09**	**6**	*e*P	**P**	**20 25 50.8**	**+1.1**
	comp=Z,64nm,2.0s						
ESTN	**Estel**	**85.14**	**293**	*e*P	**P**	**20 25 49.9**	**-0.7**
	comp=Z,38nm,1.1s						
ESTN				LR	LR		
	comp=Z,4μm,19.0s						
POLO	**Lamas de Olo**	**85.19**	**6**	*e*P	**P**	**20 25 50.8**	**+0.6**
	comp=Z,33nm,2.0s						
POLO	**Lamas de Olo**	**85.19**	**6**	*e*SKS	**SKKSac**	**20 36 25.8**	**+4.8**
POLO				*e*SS	SS	20 42 07.7	+13
CLTB	**Caltabellotta**	**85.36**	**23**	PFAKE		20 26 00.0	+8.9
CLTB				LR	LR		
	comp=Z,1μm,18.0s						
PCAB	**Cabril**	**85.50**	**6**	*e*P	**P**	**20 25 52.5**	**+0.8**
	comp=Z,124nm,1.7s						
PBRG	**Braganca**	**85.70**	**7**	*e*P	**P**	**20 25 54.4**	**+1.7**
	comp=Z,113nm,1.9s						
PGAV	**Gavieira, Arco**	**85.74**	**6**	*e*P	**P**	**20 25 54.2**	**+1.3**
	comp=Z,92nm,1.9s						
PGAV	**Gavieira, Arco**	**85.74**	**6**	*e*SKS	**ScS**	**20 36 35.6**	**+0.9**
PGAV				*e*SS	SS	20 42 17.0	+14
PGAV	**Gavieira, Arco**	**85.74**	**6**	*e*LR	LR	20 54 14.4	
	comp=Z,1μm,22.0s						
CSGN	**Cosiguina Volc**	**85.84**	**292**	PFAKE		20 26 10.0	+16
CSGN				LR	LR		
	comp=Z,3μm,21.0s						
TGUH	**Tegucigalpa,Un**	**86.43**	**293**	*e*P	**P**	**20 25 56.6**	**-0.3**
	comp=Z,141nm,1.8s						
TGUH				LR	LR		
	comp=Z,3μm,18.0s						
CEL	**Celeste**	**86.78**	**25**	*e*P	**P**	**20 25 57.7**	**-0.4**
	comp=Z,197nm,2.0s						
CEL				LR	LR		
	comp=Z,1μm,20.0s						
HRFI	**Mount Harif**	**87.24**	**43**	P	**P**	**20 26 02.0**	**+1.5**
LAST	**Lasithi**	**87.35**	**33**	P	**P**	**20 26 02.6**	**+1.6**
NPS	**Neapolis**	**87.49**	**33**	P	**P**	**20 26 02.4**	**+0.8**
ZKR	**Zakros**	**87.60**	**34**	*e*P	**P**	**20 26 03.3**	**+1.2**
ZKR				*e*P	**P**	**20 26 03.3**	**+1.2**
ZKR	**Zakros**	**87.60**	**34**	P	**P**	**20 26 03.3**	**+1.2**
KZIT	**Kziot**	**87.65**	**42**	P	**P**	**20 26 03.8**	**+1.4**
VLI	**Veliai**	**87.75**	**31**	*e*P	**P**	**20 26 03.3**	**+0.6**
VLI	**Veliai**	**87.75**	**31**	P	**P**	**20 26 03.3**	**+0.6**
BBSR	**BB Station**	**87.78**	**321**	PFAKE		20 26 10.0	+7.0
BBSR				LR	LR		
	comp=Z,1μm,21.0s						
ITM	**Ithomi**	**87.79**	**30**	*e*P	**P**	**20 26 03.4**	**+0.5**
	comp=Z,193nm,1.6s						
ITM				LR	LR		
	comp=Z,1μm,19.0s						
ITM	**Ithomi**	**87.79**	**30**	P	**P**	**20 26 03.6**	**+0.6**
TIP	**Timpagrande**	**87.88**	**25**	*e*P	**P**	**20 26 02.4**	**-1.0**
	comp=Z,193nm,1.9s						
TIP				LR	LR		
	comp=Z,1μm,22.0s						
TIP	**Timpagrande**	**87.88**	**25**	P	**P**	**20 26 02.5**	**-0.9**
TIP	**Timpagrande**	**87.88**	**25**	⇑ *i* P	**P**	**20 26 04.5**	**+1.1**
JDRJ	**Daraweish**	**88.12**	**43**	P	**P**	**20 26 07.0**	**+2.1**
VLX	**Vlachokerasia**	**88.13**	**30**	*e*P	**P**	**20 26 06.2**	**+1.5**
VLX	**Vlachokerasia**	**88.13**	**30**	P	**P**	**20 26 06.2**	**+1.5**
TRIP	**Tripoli**	**88.23**	**30**	P	**P**	**20 26 07.7**	**+2.6**
KARP	**Karpathos**	**88.36**	**34**	*e*P	**P**	**20 26 04.8**	**-1.0**
	comp=Z,227nm,1.4s						
KARP				LR	LR		
	comp=Z,2μm,20.0s						
KARP	**Karpathos**	**88.36**	**34**	P	**P**	**20 26 06.3**	**+0.6**
SANT	**Santorini**	**88.40**	**33**	*e*P	**P**	**20 26 05.6**	**-0.3**
	comp=Z,108nm,1.3s						
SANT				LR	LR		
	comp=Z,800nm,18.0s						
DRO	**Drossia**	**88.41**	**29**	P	**P**	**20 26 06.5**	**+0.6**
**AMAZ

AQU pmax pmax
comp=Z,152nm,1.5s
AQU MLR MLR
comp=Z,2μm,22.0s
CAF Calviac 89.89 13 *e*P **P 20 26 13.9 +1.2**
CAF pmax pmax
comp=Z,104nm,1.4s
THL Klokotos Trika 89.95 29 P **P 20 26 13.5 +0.5**
PPCY Paphos 90.00 38 P **P 20 26 15.2 +1.8**
KPRO Kipourio 90.08 28 P **P 20 26 14.3 +0.6**
FETY Fethiye 90.08 35 *e*P **P 20 26 13.8 0.0**
FETY Fethiye 90.08 35 P **P 20 26 13.8 0.0**
SMG Samos 90.10 33 P **P 20 26 13.9 +0.1**
SZAC Souni 90.14 39 P **P 20 26 16.7 +2.6**
YER Yerkesik 90.18 34 *e*P **P 20 26 14.6 +0.3**
YER Yerkesik 90.18 34 P **P 20 26 14.6 +0.3**
YER Yerkesik 90.18 34 *e*P **P 20 26 14.6 +0.3**
XOR Xorichti 90.19 30 P **P 20 26 14.2 0.0**
PENT Pentalofos 90.22 28 P **P 20 26 15.2 +0.8**
SHBL Chebaa 90.30 41 *e*P **P 20 26 15.6 +0.5**
ALFC Alefka 90.34 38 P **P 20 26 16.9 +1.8**
CHOS Chios island 90.39 32 P **P 20 26 13.9 -1.3**
BRBR Barbar 90.45 41 *e*P **P 20 26 18.3 +2.5**
CSS Mathiatis 90.51 39 P **P 20 26 17.4 +1.6**
KZN Kozani 90.53 28 P **P 20 26 16.1 +0.2**
LIT Litokhoron 90.60 29 P **P 20 26 15.5 -0.6**
MAMC Mammari 90.64 39 P **P 20 26 19.1 +2.7**
TOTH TOTAH 90.64 42 *e*P **P 20 26 17.9 +1.4**
SSB Saint Sauveur 90.66 15 *e*P **P 20 26 16.3 0.0**
comp=Z,96nm,1.6s
SSB LR LR
comp=Z,1μm,20.0s
QASN Qassioun 90.71 42 *e*P P 20 26 09.4 -7.4
BHL Bhannes 90.72 41 *e*P **P 20 26 17.4 +0.5**
VLC Villacollemand 90.80 19 PFAKE 20 26 30.0 +13
VLC LR LR
comp=Z,2μm,22.0s
FNA Florina 90.83 28 *e*P **P 20 26 17.0 -0.1**
comp=Z,158nm,2.0s
FNA LR LR
comp=Z,1μm,19.0s
FNA Florina 90.83 28 P **P 20 26 17.1 -0.1**
TIR Tirane 90.84 26 *e*P **P 20 26 15.7 -1.4**
comp=Z,194nm,1.3s
TIR LR LR
comp=Z,800nm,19.0s
TIR Tirane 90.84 26 *e*P **P 20 26 15.7 -1.4**
TIR pmax pmax
comp=Z,194nm,1.3s
TIR MLR MLR
comp=Z,800nm,19.0s
BNI Bardonecchia 90.85 16 *e*P **P 20 26 15.9 -1.4**
comp=Z,38nm,1.4s
BNI LR LR
comp=Z,3μm,19.0s
BNI Bardonecchia 90.85 16 *e*P **P 20 26 15.9 -1.4**
BNI pmax pmax
comp=Z,38nm,1.4s
BNI MLR MLR
comp=Z,3μm,19.0s
PAIG Paliouri 90.86 30 P **P 20 26 17.7 +0.4**
OHR Ohrid 90.93 27 *i*P **P 20 26 18.4 +0.7**
BIA Bitola 91.02 28 *i*P **P 20 26 20.6 +2.6**
SIGR SIGRI 91.03 31 P **P 20 26 18.4 +0.3**
061Z Ochoppi 91.15 306 PFAKE 20 26 30.0 +11
061Z LR LR
comp=Z,2μm,22.0s
PLG Polygyros 91.17 29 P **P 20 26 18.8 0.0**
ULC Ulcinj 91.20 26⇑*i*P **P 20 26 20.2 +1.4**
PRK Paraskevi 91.22 32 P **P 20 26 20.5 +1.6**
HORT Hortiatis 91.25 29 P **P 20 26 20.9 +1.7**
LPL La Plagne 91.31 16 *e*P **P 20 26 20.5 +1.0**
LPL pmax pmax
comp=Z,91nm,1.4s
KRUS Krusevo 91.31 27 *i*P **P 20 26 20.6 +1.2**
PHP Peshkopia 91.33 27 P **P 20 26 21.4 +1.9**
DRME Dracevica, Mon 91.38 26⇑*i*P **P 20 26 20.5 +0.9**
LIA Limnos Island 91.38 31 P **P 20 26 19.8 +0.1**
BUM Brajici-Budva 91.39 25⇑*i*P **P 20 26 20.2 +0.4**
HCY Herceg Novi 91.40 25⇑*i*P **P 20 26 21.3 +1.6**
KULA Kula-Manisa 91.52 34 P **P 20 26 21.5 +1.0**
SOH Sokhos 91.54 29 P **P 20 26 22.1 +1.6**
PDG Podgorica 91.62 26⇑*i*P **P 20 26 22.0 +1.3**
TTG Podgorica 91.62 26⇑*i*P **P 20 26 21.4 +0.7**
TTG Podgorica 91.62 26 *e*P **P 20 26 20.9 +0.2**
comp=Z,103nm,1.5s
TTG LR LR
comp=Z,600nm,19.0s
TTG Podgorica 91.62 26 *e*P **P 20 26 20.9 +0.2**
TTG pmax pmax
comp=Z,103nm,1.5s
TTG MLR MLR
comp=Z,600nm,19.0s
CEME Cevo 91.62 25⇑*i*P **P 20 26 21.3 +0.5**
KNT Kendrikon 91.68 29 P **P 20 26 21.7 +0.6**
ISP Isparta 91.69 35 *e*P **P 20 26 22.7 +1.4**
ISP LR LR
comp=Z,2μm,20.0s
ISP Isparta 91.69 35 P **P 20 26 22.7 +1.4**
VAY Valandovo 91.71 28 *e*P **P 20 26 21.6 +0.4**
VAY Valandovo 91.71 28 P **P 20 26 21.6 +0.4**
VAY Valandovo 91.71 28 *i*P **P 20 26 21.8 +0.6**
VAY Valandovo 91.71 28 *e*P **P 20 26 21.6 +0.4**
EZN Ezine 91.75 31 *e*P **P 20 26 21.7 +0.3**
EZN Ezine 91.75 31 P **P 20 26 21.7 +0.3**
EZN Ezine 91.75 31⇑*i*P **P 20 26 22.7 +1.3**
EZN Ezine 91.75 31⇑⇑P **P 20 26 22.7 +1.3**
THAS Thassos island 91.83 30 P **P 20 26 21.8 0.0**
NKME Niksic 91.83 25⇑*i*P **P 20 26 23.2 +1.4**
SRS Serrai 91.88 29 P **P 20 26 21.1 -0.9**
NKY Niksic 91.89 25⇑*i*P **P 20 26 22.9 +0.8**
GADA Gvkgeada 91.90 31 *e*P **P 20 26 21.5 -0.6**
GADA Gvkgeada 91.90 31 P **P 20 26 21.5 -0.6**
SKO Skopje 91.91 27 *e*P **P 20 26 23.4 +1.3**
SKO Skopje 91.91 27 P **P 20 26 23.4 +1.3**
SKO Skopje 91.91 27 *e*P **P 20 26 22.6 +0.5**
SKO Skopje 91.91 27 *e*P **P 20 26 23.4 +1.3**
STIP Stip 91.91 28 *i*P **P 20 26 24.0 +1.9**
LBZ Lake Benmore 91.96 185 *e*P **P 20 26 23.9 +1.3**
comp=Z,155nm,1.6s
PVY Plav 91.99 26⇑*i*P **P 20 26 23.5 +0.9**
SMTH Samothraki Isl 92.01 31 *e*P **P 20 26 20.7 -1.9**
SMTH Samothraki Isl 92.01 31 P **P 20 26 20.7 -1.9**
KOME Kolasin 92.08 26⇑*i*P **P 20 26 24.1 +1.1**
059A Moore Haven 92.11 306 PFAKE 20 26 30.0 +6.6
059A LR LR
comp=Z,2μm,21.0s
BALB Balikesir 92.18 33 *e*P **P 20 26 23.6 +0.2**
comp=Z,338nm,1.5s
BALB LR LR
comp=Z,3μm,21.0s
NVR Nevrokopi 92.18 29 P **P 20 26 23.4 0.0**
SSF Saint Saulge 92.20 13 *e*P **P 20 26 24.2 +0.9**
SSF pmax pmax
comp=Z,119nm,1.8s
UPM Unac-Piva 92.22 25⇑*i*P **P 20 26 24.6 +0.9**
IVA Berane 92.22 26⇑*i*P **P 20 26 24.7 +1.1**
SENIN Lac Senin/Sane 92.23 16 *e*P **P 20 26 23.8 +0.1**
comp=Z,50nm,1.6s
SENIN LR LR
comp=Z,4μm,18.0s
MMB Musomiste 92.35 29 *i*P **P 20 26 23.3 -0.9**
KKB Krupnik 92.37 28 *i*P **P 20 26 24.2 -0.1**
PLE Pljevlja 92.48 25⇑*i*P **P 20 26 26.1 +1.2**
ALN Alexandroupoli 92.57 31 *e*P **P 20 26 25.3 +0.1**
comp=Z,65nm,1.4s
ALN LR LR
comp=Z,500nm,20.0s
ALN Alexandroupoli 92.57 31 P **P 20 26 24.9 -0.3**
ALN Alexandroupoli 92.57 31 *e*P **P 20 26 25.3 +0.1**
ALN pmax pmax
comp=Z,65nm,1.4s
ALN MLR MLR
comp=Z,500nm,20.0s
RDO Rodhopi 92.60 30 *e*P **P 20 26 25.0 -0.3**
RDO Rodhopi 92.60 30 P **P 20 26 25.0 -0.3**
TUE Stuetta 92.76 17 *e*P **P 20 26 26.4 +0.2**
comp=Z,99nm,2.0s
TUE LR LR
comp=Z,1μm,21.0s
RZN Rozhen 92.78 29 *i*P **P 20 26 25.5 -0.9**
CLF Chambon-Foret 92.94 12 *e*P **P 20 26 27.5 +0.9**
comp=Z,148nm,1.6s
CLF LR LR
comp=Z,1μm,22.0s
KDZ Kurdzhali 93.00 30 *i*P **P 20 26 30.5 +3.3**
VTS Vitosha 93.09 28 *e*P **P 20 26 27.0 -0.8**
VTS *e*P **P 20 26 27.2 -0.5**
VTS LR LR
comp=Z,1μm,20.0s
VTS Vitosha 93.09 28 P **P 20 26 27.0 -0.8**
VTS Vitosha 93.09 28⇓*i*P **P 20 26 28.9 +1.2**
VTS Vitosha 93.09 28 *e*P **P 20 26 27.0 -0.8**
VTS *e* 20 26 27.2
VTS MLR MLR
comp=Z,1μm,20.0s
VTS Vitosha 93.09 28 *i*P **P 20 26 26.9 -0.8**
FUORN Ofenpass-Fuorn 93.10 18 *e*P **P 20 26 27.4 -0.4**
comp=Z,26nm,1.3s
FUORN LR LR
comp=Z,1μm,19.0s
BLY Banja Luka 93.12 23 *e*P **P 20 26 27.5 -0.1**
comp=Z,77nm,1.6s
BLY LR LR
comp=Z,700nm,21.0s
BLY Banja Luka 93.12 23⇓*i*P **P 20 26 27.9 +0.3**
DWPF Disney Wildern 93.14 307 PFAKE 20 26 40.0 +12
DWPF LR LR
comp=Z,3μm,21.0s
DAVOX Davos/Dischmat 93.17 18 LR LR 21 04 49.4
comp=Z,1μm,21.1s,baz=196,slow=33
957A Wimauma 93.28 306 PFAKE 20 26 40.0 +11
957A LR LR
comp=Z,2μm,20.0s
PGB Panagyurishte 93.35 29 *i*P **P 20 26 28.1 -0.7**
FETA Feichten 93.59 18 *e*P **P 20 26 29.8 -0.1**
comp=Z,16nm,1.3s
LJU Ljubljana 93.59 21 *i*P **P 20 26 30.6 +0.8**
DAVA Damuels 93.65 18 *i*P **P 20 26 30.7 +0.5**
SNR=11
EDRB Edirne 93.66 31 P **P 20 26 28.8 -1.4**
ABTA Abfaltersbach 93.75 19 *i*PcP **P 20 26 32.6 +2.0**
SNR=15
PHSR Pinarhisar 93.76 31⇓*i*P **P 20 26 32.1 +1.4**
ISK Istanbul-Kandi 93.86 33 P **P 20 26 31.0 -0.1**
SQTA Sankt Quirin 93.88 18 *i*P **P 20 26 31.5 +0.3**
SNR=12
MYKA Terra Mystica 93.91 20 *i*PcP **P 20 26 33.2 +1.9**
SNR=7.8
MPEP Malo Peshtene 93.91 28 P **P 20 26 32.2 +0.9**
CTYL Yalikoy Yolu 93.92 32⇑*i*P **P 20 26 31.9 +0.5**
ECH Echery 93.98 15 *e*P **P 20 26 32.7 +1.2**
comp=Z,40nm,1.8s
ECH LR LR
comp=Z,2μm,19.0s
ECH Echery 93.98 15 *e*P **P 20 26 32.7 +1.2**
ECH pmax pmax
comp=Z,40nm,1.8s
ECH MLR MLR
comp=Z,2μm,19.0s
MOTA Moosalm 93.98 18 *i*P **P 20 26 32.7 +1.0**
SNR=8.5
WTTA Wattenberg 94.02 19 *i*P **P 20 26 32.5 +0.6**
SNR=21
658A Bunnell 94.03 308 PFAKE 20 26 40.0 +7.8
658A LR LR
comp=Z,3μm,19.0s
OBKA Obir 94.03 21 *i*pP **P 20 26 34.7 +2.8**
SNR=10
RETA Reutte 94.03 18 *i*P **P 20 26 33.1 +1.2**
SNR=8.1
WATA Walderalm 94.08 19 *i*P **P 20 26 32.8 +0.7**
SNR=10.0
JMB Yambol 94.14 30 *i*P **P 20 26 31.4 -1.0**
SILT Sile 94.17 33⇑*i*P P 20 26 39.8 +7.3
KBA Koelnbreinsper 94.26 20 *i*PcP **P 20 26 34.3 +1.3**
SNR=7.9
PERS Pernice 94.29 21 *e*P **P 20 26 33.7 +0.7**
SOKA Soboth 94.31 21 *i*PcP **P 20 26 35.3 +2.1**
SNR=23
BFO Black Forest 94.32 16 *e*P **P 20 26 33.3 +0.2**
comp=Z,50nm,1.9s
BFO LR LR
comp=Z,2μm,19.0s
BFO Black Forest 94.32 16 *e*P **P 20 26 33.3 +0.2**
BFO pmax pmax
comp=Z,50nm,1.9s
BFO MLR MLR
comp=Z,2μm,19.0s
ANTO Ankara 94.37 36 *e*P **P 20 26 34.6 +1.0**
comp=Z,156nm,1.6s
ANTO LR LR
comp=Z,2μm,19.0s
ANTO Ankara 94.37 36⇓*i*P **P 20 26 36.0 +2.4**
ANTO Ankara 94.37 36 *e*P **P 20 26 34.6 +1.0**
ANTO pmax pmax
comp=Z,156nm,1.6s
ANTO MLR MLR
comp=Z,2μm,19.0s
ANTO Ankara 94.37 36 P **P 20 26 35.2 +1.6**
SNR=32
ANTO P **P 20 26 35.2 +1.6**
SNR=32
KOGS Kog 94.42 22 *i*P **P 20 26 34.2 +0.6**
KOGS *e*PP **PP 20 30 20.2 -1.4**
KOGS *e* 20 32 28.1
PUNG Punghina 94.46 27⇑*i*P **P 20 26 34.8 +1.0**
MDVR Moldovita 94.51 26⇑*i*P **P 20 26 34.6 +0.5**
BEHE Becsehely 94.58 22⇑EP **P 20 26 36.0 +1.7**
BEHE EPP 20 30 30.1
BR131 Keskin Array S 94.61 36 *e*P **P 20 26 34.5 -0.3**
comp=Z,108nm,1.4s
BR131 Keskin Array S 94.61 36 P **P 20 26 35.1 +0.3**
SNR=53
BRTR Keskin Array B 94.61 36 P **P 20 26 35.6 +0.8**
comp=Z,30nm,1.1s,baz=186,slow=6.4,SNR=74
BRTR LR LR 21 07 57.7
comp=Z,1μm,20.5s,baz=186,slow=35
BRTR Keskin Array B 94.61 36 *e*P **P 20 26 35.2 +0.4**
BRTR pmax pmax
comp=Z,17nm,1.0s
656A Willston 94.72 307 PFAKE 20 26 50.0 +15
656A LR LR
comp=Z,3μm,21.0s
HERR Herculane 94.83 27⇑*i*P **P 20 26 35.1 -0.4**
SOHO SOHO 94.91 61 P **P 20 26 36.9 +0.5**
SNR=14
SOHO P **P 20 26 36.9 +0.5**
SNR=14
STU Stuttgart 94.92 17 PFAKE 20 26 50.0 +14
STU LR LR
comp=Z,2μm,20.0s
ARSA Arzberg 94.97 21 *i*PcP **P 20 26 38.1 +2.0**
SNR=11
PRD Provadia 95.07 30 *i*P **P 20 26 35.5 -1.1**
BFZ Birch Farm 95.09 190 PFAKE 20 26 50.0 +13
BFZ LR LR
comp=Z,2μm,19.0s
HATD Hatta, Dubai 95.15 60 P **P 20 26 38.1 +0.6**
SNR=5.2
HATD P **P 20 26 38.1 +0.6**
SNR=5.2
WLF Walferdange 95.18 14 PFAKE 20 26 50.0 +13
WLF LR LR
comp=Z,6μm,18.0s
WLF Walferdange 95.18 14 P **P 20 26 38.8 +1.9**
MOA Molln 95.20 20 *i*P **P 20 26 38.4 +1.3**
SNR=6.8
BZS Buzias 95.23 26⇑*i*P **P 20 26 38.0 +0.7**
BZS Buzias 95.23 26⇑P **P 20 26 38.0 +0.7**
UOSS Minazif 95.28 60 PFAKE 20 26 50.0 +12
UOSS LR LR
comp=Z,5μm,18.0s
TIH Tihany 95.29 23⇑EP **P 20 26 38.1 +0.6**
TIH EPP 20 30 31.0
BMRD Maredsous 95.55 13 P **P 20 26 40.4 +1.8**
SOP Sopron 95.64 22⇑EP **P 20 26 40.0 +0.9**
SOP EPP 20 30 34.0
CONA Conrad Observa 95.68 21 *i*pP **P 20 26 42.3 +2.9**
SNR=19
ILGA Ilgaz 95.74 36 *e*P **P 20 26 40.5 +0.4**
comp=Z,122nm,1.7s
ILGA LR LR
comp=Z,2μm,20.0s
BCLA Clavier 95.76 14 P **P 20 26 41.2 +1.6**
LOT Lotru 95.77 27⇑*i*P **P 20 26 40.2 +0.3**
CSKK Cskako 95.81 23 EP **P 20 26 41.0 +1.1**
UCC Uccle 95.97 13 PFAKE 20 26 50.0 +10
UCC LR LR
comp=Z,1μm,19.0s
ARR Arges 95.99 28⇓*i*P **P 20 26 41.3 +0.4**
GEC2 GERESS Array S 95.99 19 *e*P **P 20 26 41.5 +0.7**
comp=Z,21nm,1.8s
GEC2 GERESS Array S 95.99 19 *e*P **P 20 26 41.5 +0.7**
GEC2 pmax pmax
comp=Z,21nm,1.8s
GERES GERESS Array B 95.99 19 P **P 20 26 41.1 +0.3**
comp=Z,0.2nm,0.3s,baz=212,slow=3.5,SNR=7.7
GERES PP **PP 20 30 30.9 -3.0**
comp=Z,0.3nm,0.4s,baz=210,slow=10,SNR=5.3
GERES LR LR 21 05 54.1
comp=Z,864nm,21.3s,baz=196,slow=33
GRFO Grafenberg 96.22 18 *e*P **P 20 26 41.7 0.0**
comp=Z,46nm,1.5s
GRFO LR LR
comp=Z,1μm,19.0s
GRA1 Grafenberg Arr 96.22 18 *e*P **P 20 26 41.6 -0.1**
comp=Z,51nm,1.5s
GRA1 LR LR
comp=Z,1μm,19.0s
GRF Grafenberg Arr 96.22 18 *e*P **P 20 26 41.6 -0.1**
GRF pmax pmax
comp=Z,51nm,1.5s
GRF MLR MLR
comp=Z,1μm,19.0s
KHC Kasperske Hory 96.23 19 *e*P **P 20 26 41.6 -0.2**
comp=Z,7.1nm,1.5s
KHC LR LR
comp=Z,600nm,21.0s
KHC Kasperske Hory 96.23 19 *e*P **P 20 26 42.3 +0.5**
KHC *e* 20 26 48.1
KHC *e* 20 30 40.6
KHC *e* 20 37 19.2
KHC MLR MLR
comp=Z,2μm,21.3s
KHC Kasperske Hory 96.23 19 *e*P **P 20 26 42.3 +0.5**
KHC *ex* x 20 26 48.1
KHC *e*PP **PP 20 30 40.6 +4.9**
KHC *e*SKS **SKSac 20 37 19.2 +1.3**
KHC AMS AMS 21 06 00.0
comp=Z,2μm,21.3s
SRO Srobarova 96.24 23 *e*P **P 20 26 44.4 +2.6**
SRO Srobarova 96.24 23 *e*P **P 20 26 44.4 +2.6**
ZST Bratislava 96.26 22 *e*P **P 20 26 43.8 +1.9**
ZST Bratislava 96.26 22 *e*P **P 20 26 43.8 +1.9**
MODS Modra-Piesok 96.47 22 *e*P **P 20 26 44.0 +1.1**
MODS Modra-Piesok 96.47 22 *e*P **P 20 26 44.0 +1.1**
TIRR Tirgusor 96.53 30 *e*P **P 20 26 43.0 -0.2**
comp=Z,57nm,1.3s
TIRR LR LR
comp=Z,2μm,18.0s
MLR Muntele Rosu 96.54 28 *e*P **P 20 26 42.5 -1.0**
comp=Z,81nm,1.3s
MLR LR LR
comp=Z,300nm,19.0s
MLR Muntele Rosu 96.54 28⇓*i*P **P 20 26 44.3 +0.8**
MLR Muntele Rosu 96.54 28 *e*P **P 20 26 42.5 -1.0**
MLR pmax pmax
comp=Z,81nm,1.3s
MLR MLR MLR
comp=Z,300nm,19.0s
BKZ Black Stump Fm 96.56 190 *e*P **P 20 26 43.6 -0.4**
comp=Z,113nm,1.8s
BKZ LR LR
comp=Z,1μm,21.0s
LVIG Laguna Verde 96.58 291 PFAKE 20 27 00.0 +16
LVIG LR LR
comp=Z,2μm,20.0s
255A Hazlehurst 96.59 308 *e*P **P 20 26 42.4 -1.5**
comp=Z,366nm,1.9s
255A LR LR
comp=Z,2μm,22.0s
PSZ Piszkesteto 96.78 24 *e*P **P 20 26 44.4 0.0**
comp=Z,35nm,1.4s
PSZ LR LR
comp=Z,700nm,20.0s
PSZ Piszkesteto 96.78 24 *e*P **P 20 26 44.4 0.0**
PSZ pmax pmax
comp=Z,35nm,1.4s
PSZ MLR MLR
comp=Z,700nm,20.0s
PSZ Piszkesteto 96.78 24⇑EP **P 20 26 44.1 -0.3**
PSZ EPP 20 30 40.1
X58A Rowland 96.84 312 PFAKE 20 27 00.0 +15
X58A LR LR
comp=Z,2μm,21.0s
TREC Trest 96.85 20 *e*P **P 20 26 45.5 +0.9**
TREC *e* 20 37 18.7
TREC MLR MLR
comp=Z,1μm,19.1s
TREC Trest 96.85 20 *e*P **P 20 26 45.5 +0.9**
TREC *e*SKS **SKSac 20 37 18.7 -2.3**
TREC AMS AMS 21 08 00.0
comp=Z,1μm,19.1s
KRUC Moravsky 96.86 21 *e*P **P 20 26 45.1 +0.4**
DIKM Dikmen 96.89 36⇓*i*P **P 20 26 47.4 +2.4**
NKC Novy Kostel 97.00 18 *e*PP **PP 20 30 46.8 +5.2**
NKC AMS AMS 21 08 20.0
comp=Z,900nm,18.6s
Y57A Sumter 97.00 311 PFAKE 20 27 00.0 +14
Y57A LR LR
comp=Z,1μm,19.0s
VYHS Vyhne 97.00 23 *e*P Pdif 20 26 47.3 +1.9
VYHS Vyhne 97.00 23 *e*P Pdif 20 26 47.3 +1.9
JAVC Velka Javorina 97.02 22 *e*P Pdif 20 26 47.1 +1.6
OZUR 97.02 28⇑*i*P **P 20 26 44.3 -1.2**
Z56A Williston 97.02 310 PFAKE 20 27 00.0 +14
Z56A LR LR
comp=Z,2μm,20.0s
DSB Dublin 97.09 6 PFAKE 20 27 00.0 +14
DSB LR LR
comp=Z,700nm,20.0s
PLOR Plostina 97.10 29⇑*i*P **P 20 26 46.0 +0.1**
PLOR Plostina 97.10 29⇑⇑P **P 20 26 46.0 +0.1**
VRI Vrincioaia 97.14 29⇑*i*P **P 20 26 44.9 -1.1**
VRI Vrincioaia 97.14 29⇑⇑P **P 20 26 44.9 -1.1**
VRAC Vranov 97.14 21 *e*P Pdif 20 26 46.6 +0.6
GOPC GO Pecny, Ondr 97.25 20 *e*P Pdif 20 26 48.3 +1.8
GOPC MLR MLR
comp=Z,900nm,20.5s
GOPC GO Pecny, Ondr 97.25 20 *e*P Pdif 20 26 48.3 +1.8
GOPC AMS AMS 21 05 20.0
comp=Z,900nm,20.5s
PRU Pruhonice 97.26 19 *e*P Pdif 20 26 47.0 +0.5
PRU *e* 20 26 53.3
PRU *e* 20 30 46.8
PRU MLR MLR
comp=Z,1μm,18.6s
PRU Pruhonice 97.26 19 *e*P Pdif 20 26 47.0 +0.5
PRU *ex* x 20 26 53.3
PRU *e*PP **PP 20 30 46.8 +3.2**
PRU *e*SKS **SKSac 20 37 13.2 -10**
PRU AMS AMS 21 08 10.0
comp=Z,1μm,18.6s
URZ Urewera 97.37 191 PFAKE 20 27 00.0 +12
URZ LR LR
comp=Z,1μm,18.0s
U59A Littleton 97.39 314 PFAKE 20 27 00.0 +13
U59A LR LR
comp=Z,2μm,20.0s
HIZ Hauiti 97.40 189 PFAKE 20 27 00.0 +12
HIZ LR LR
comp=Z,1μm,20.0s
ARCR ARCALIA 97.41 27⇓*i*P Pdif 20 26 48.4 +1.1
154A Montrose 97.46 309 PFAKE 20 27 00.0 +12
154A LR LR
comp=Z,2μm,20.0s
BIRD Birdtown, Kers 97.51 312 PFAKE 20 27 00.0 +12
BIRD LR LR
comp=Z,2μm,20.0s
253A Americus 97.64 308 PFAKE 20 27 00.0 +11
253A LR LR
comp=Z,2μm,18.0s
W57A Gilead 97.64 312 PFAKE 20 27 00.0 +11
W57A LR LR
comp=Z,2μm,22.0s
352A Blakely 97.67 307 PFAKE 20 27 00.0 +11
352A LR LR
comp=Z,3μm,21.0s
JSC Jenkinsville 97.67 311 PFAKE 20 27 00.0 +11
JSC LR LR
comp=Z,2μm,19.0s
T59A Double "B" Far 97.74 315 PFAKE 20 27 00.0 +11

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T59A                                  LR      LR
    comp=Z,2µm,22.0s
TRPA Tarpa          97.76  25⇓iP       Pdif    20 26 50.6 +1.9
TRPA Tarpa          97.76  25 ⇓EP       P       20 26 47.0 -1.7
TRPA                              EPP         20 30 50.0
PVCC Panska Ves     97.77  19 ePP       PP      20 30 50.0 +2.6
PVCC                              AMS     AMS     21 09 30.0
    comp=Z,1µm,17.6s
LANS Liptovska Anna 97.78  23 eP        Pdif    20 26 51.3 +2.4
LANS Liptovska Anna 97.78  23 eP        Pdif    20 26 51.3 +2.4
MORC Moravsky Berou 97.82  21 eP        Pdif    20 26 49.5 +0.4
    comp=Z,20nm,1.4s
MORC                              LR      LR
    comp=Z,600nm,21.0s
MORC Moravsky Berou 97.82  21 eP        Pdif    20 26 49.5 +0.4
MORC                              pmax    pmax
    comp=Z,20nm,1.4s
MORC                              MLR     MLR
    comp=Z,600nm,21.0s
MORC Moravsky Berou 97.82  21 eP        Pdif    20 26 50.1 +1.0
BIZ  Bicaz          97.86  28⇓iP        Pdif    20 26 50.5 +1.2
BRG  Berggiesshubel 97.94  19 ePDIFF    Pdif    20 26 56.4 +6.9
    comp=Z,7.3nm,1.4s
BRG                               ePP     PP      20 30 13.7  -35
    comp=Z,8.5nm,1.4s
BRG  Berggiesshubel 97.94  19 ePKP      PKiKP   20 31 07.9  -15
    comp=Z,27nm,2.1s
BRG                               SKS     SKSac   20 37 26.0 -0.5
BRG                               SDIFF   Sdif    20 38 19.0 +3.4
BRG                               SS      SS      20 44 58.0 -0.1
    comp=N,1µm,23.7s
    comp=E,675nm,17.8s
    comp=Z,1µm,18.8s
BRG  Berggiesshubel 97.94  19 eP        Pdif    20 26 56.3 +6.8
BRG                               pmax    pmax
    comp=Z,7.0nm,1.4s
DPC  Dobruska-Polom 98.03  20 eP        Pdif    20 26 51.4 +1.4
DPC                               MLR     MLR
    comp=Z,1µm,18.8s
DPC  Dobruska-Polom 98.03  20 eP        Pdif    20 26 51.4 +1.4
DPC                               AMS     AMS     21 08 50.0
    comp=Z,1µm,18.8s
OKC  Ostrava-Krasne 98.04  22 eP        Pdif    20 26 52.1 +2.2
OKC                               e               20 26 58.1
OKC                               MLR     MLR
    comp=Z,600nm,21.2s
OKC  Ostrava-Krasne 98.04  22 eP        Pdif    20 26 52.1 +2.2
OKC                               ex      x       20 26 58.1
OKC                               AMS     AMS     21 07 20.0
    comp=Z,600nm,21.2s
UPC  Upice          98.10  20 eSKS      SKSac   20 37 29.3 +1.9
UPC                               AMS     AMS     21 08 40.0
    comp=Z,1µm,19.2s
CLL  Collm          98.13  18 PFAKE                20 27 00.0 +10
CLL                               LR      LR
    comp=Z,800nm,19.0s
CLL  Collm          98.13  18 ePdif      Pdif    20 26 53.0 +2.7
    comp=Z,200nm,10.4s
CLL                               ePP     PP      20 30 54.0 +3.8
CLL                               eSKSac  SKSac   20 37 29.0 +1.6
CLL                               eS      ScS     20 38 19.0 +1.9
CLL                               ePS     PS      20 39 42.0  -0.6
CLL                               eSS     SS      20 44 57.0  -3.8
CLL                               eSSS    SSS     20 48 52.0
CLL                               Lm      MLR     21 08 00.0
    comp=Z,800nm,19.6s
CLL  Collm          98.13  18 eP        Pdif    20 26 53.0 +2.7
CLL                               eS      ScS     20 38 19.0 +1.9
CLL                               MLR     MLR
    comp=Z,800nm,19.6s
UZH  Uzhgorod       98.13  25⇓iP        Pdif    20 26 51.4 +1.0
UZH                               e               20 26 55.4
BURAR Bucovina Array 98.16 27⇓iP        Pdif    20 26 51.5 +0.8
BURAR Bucovina Array 98.16 27 ⇓P        Pdif    20 26 51.5 +0.8
BUR08 Bucovina Ar. S 98.17 27 eP        P       20 26 49.5 -1.3
    comp=Z,30nm,1.4s
CHVC Chvalec        98.18  20 eP        Pdif    20 26 51.9 +1.3
CHVC                              AMS     AMS     21 08 50.0
    comp=Z,800nm,16.4s
HODGE Hodges        98.19 310 PFAKE                 20 27 00.0 +9.0
HODGE                             LR      LR
    comp=Z,2µm,20.0s
OSTC Ostas          98.19  20 eP        Pdif    20 26 52.3 +1.6
OSTC                              eSKS    SKSac   20 37 30.5 +2.6
OSTC                              AMS     AMS     21 08 40.0
    comp=Z,1µm,18.2s
GOGA Godfrey        98.25 309 PFAKE                 20 27 00.0 +8.7
GOGA                              LR      LR
    comp=Z,2µm,20.0s
KMSC Kings Mountain 98.36 311 PFAKE                 20 27 00.0 +8.2
KMSC                              LR      LR
    comp=Z,2µm,19.0s
PAULI Pauline       98.38 311 PFAKE                 20 27 00.0 +8.1
PAULI                             LR      LR
    comp=Z,2µm,18.0s
KOLS Kolonicke sedl 98.39  25 eP        Pdif    20 26 54.0 +2.4
KOLS Kolonicke sedl 98.39  25 eP        Pdif    20 26 54.0 +2.4
V56A Mocksville     98.40 312 PFAKE                 20 27 00.0 +8.0
V56A                              LR      LR
    comp=Z,2µm,20.0s
152A Waverly Hall   98.42 308 PFAKE                 20 27 00.0 +7.9
152A                              LR      LR
    comp=Z,2µm,20.0s
S58A Poland Farm, P 98.49 315 PFAKE                 20 27 00.0 +7.7
S58A                              LR      LR
    comp=Z,2µm,21.0s
T57A Hurt           98.64 314 PFAKE                 20 27 00.0 +7.0
T57A                              LR      LR
    comp=Z,1µm,21.0s
R58B Mineral        98.67 315 PFAKE                 20 27 00.0 +6.9
R58B                              LR      LR
    comp=Z,1µm,19.0s
BRAL Brewton        98.69 305 PFAKE                 20 27 00.0 +6.7
BRAL                              LR      LR
    comp=Z,2µm,18.0s
BRYW Bryant College 98.72 322 PFAKE                 20 27 00.0 +6.8
BRYW                              LR      LR
    comp=Z,1µm,21.0s
250A Grady          98.81 306 PFAKE                 20 27 00.0 +6.1
250A                              LR      LR
    comp=Z,3µm,21.0s
KIS  Kishinev       98.85  29 eP        P       20 26 53.0 -0.6
KIS  Kishinev       98.85  29 ePP       PKiKP   20 31 20.0 -4.5
KIS                               eSKS    SKSac   20 37 30.0 -1.3
KIS  Kishinev       98.85  29 ePS       PS      20 39 47.0 -3.5
KIS                               eL      L       21 00 18.0
KIS                               LRM     MLR     21 15 00.0
    comp=Z,700nm,22.0s
KIS  Kishinev       98.85  29 eP        P       20 26 53.0 -0.6
KIS                               e               20 37 30.0
KIS                               ePS     PS      20 39 47.0 -3.5
KIS                               MLR     MLR
    comp=Z,700nm,22.0s
YLE  Yale           98.88 320 PFAKE                 20 27 00.0 +6.1
YLE                               LR      LR
    comp=Z,1µm,22.0s
Y52A Lilburn        98.92 309 PFAKE                 20 27 10.0 +16
Y52A                              LR      LR
    comp=Z,2µm,21.0s
PSUB Penn St. - Bra 98.98 318 PFAKE                 20 27 10.0 +16
PSUB                              LR      LR
    comp=Z,1µm,20.0s
WES  Weston         99.00 322 PFAKE                 20 27 10.0 +16
WES                               LR      LR
    comp=Z,1µm,19.0s
S57A Dark Hollow, R 99.07 315 PFAKE                 20 27 10.0 +15
S57A                              LR      LR
    comp=Z,2µm,20.0s
PAL  Palisades      99.08 320 PFAKE                 20 27 10.0 +15
PAL                               LR      LR
    comp=Z,1µm,21.0s
SIM  Simferopol'    99.13  34 eP        Pdif    20 27 00.5 +5.5
SIM                               e               20 37 32.0
SIM                               S       S       20 38 33.0 +7.2
SIM                               pmax    pmax
    comp=Z,90nm,9.3s
SIM                               MLR     MLR
    comp=Z,630nm,19.7s
BRNJ Basking Ridge  99.14 319 PFAKE                 20 27 10.0 +15
BRNJ                              LR      LR
    comp=Z,2µm,19.0s
KWP  Kalwaria Pacla 99.15  24 eP        Pdif    20 26 56.3 +1.4
    comp=Z,221nm,1.4s
KWP                               LR      LR
    comp=Z,9µm,19.0s
KWP  Kalwaria Pacla 99.15  24 eP        Pdif    20 26 56.3 +1.4
KWP                               pmax    pmax
    comp=Z,221nm,1.4s
KWP                               MLR     MLR
    comp=Z,9µm,19.0s
HRV  Adam Dziewonsk 99.20 322 PFAKE                 20 27 10.0 +15
HRV                               LR      LR
    comp=Z,1µm,20.0s
EMMW East Machias   99.23 326 PFAKE                 20 27 10.0 +15
EMMW                              LR      LR
    comp=Z,1µm,19.0s
SDMD Soldier's Deli 99.26 317 PFAKE                 20 27 10.0 +14
SDMD                              LR      LR
    comp=Z,800nm,19.0s
QUA2 Belchertown    99.38 321 PFAKE                 20 27 10.0 +14
QUA2                              LR      LR
    comp=Z,2µm,20.0s
ESK  Eskdalemuir    99.42   8 PFAKE                 20 27 10.0 +14
ESK                               LR      LR
    comp=Z,800nm,20.0s
KSCT Kent School, K 99.45 320 PFAKE                 20 27 10.0 +14
KSCT                              LR      LR
    comp=Z,1µm,21.0s
LUPA Lehigh Univers 99.46 319 PFAKE                 20 27 10.0 +13
LUPA                              LR      LR
    comp=Z,100nm,21.0s
ODNJ Ogdensburg     99.47 319 PFAKE                 20 27 10.0 +13
ODNJ                              LR      LR
    comp=Z,2µm,21.0s
Z50A Ashland        99.54 307 PFAKE                 20 27 10.0 +13
Z50A                              LR      LR
    comp=Z,2µm,20.0s
V53A Saluda         99.55 311 PFAKE                 20 27 10.0 +13
V53A                              LR      LR
    comp=Z,1µm,20.0s
U54A Nelsons Funny  99.65 312 PFAKE                 20 27 10.0 +12
U54A                              LR      LR
    comp=Z,2µm,19.0s
LVV  L'vov          99.71  25 eP        Pdif    20 26 58.9 +1.5
W52A Murphy         99.75 310 PFAKE                 20 27 10.0 +12
W52A                              LR      LR
    comp=Z,2µm,19.0s
PAGS Pennsylvania G 99.83 317 PFAKE                 20 27 10.0 +12
PAGS                              LR      LR
    comp=Z,1µm,20.0s
X51A Calhoun        99.88 309 PFAKE                 20 27 10.0 +11
X51A                              LR      LR
    comp=Z,2µm,20.0s
LRAL Lakeview Retre 100.00 306 PFAKE                20 27 10.0 +11
LRAL                              LR      LR
    comp=Z,3µm,22.0s
FFD  Franklin Falls 100.01 323 PFAKE                20 27 10.0 +11
FFD                               LR      LR
    comp=Z,1µm,19.0s
PALK Pallekele      100.04  90 PFAKE                20 27 10.0 +10
PALK                              LR      LR
    comp=Z,2µm,18.0s
GNI  Garni          100.07  43 LR      LR          21 09 30.4
    comp=Z,583nm,22.0s,baz=214,slow=34
GNI  Garni          100.07  43 PFAKE                20 27 10.0 +11
GNI                               LR      LR
    comp=Z,2µm,20.0s
V52A Sevierville    100.11 310 PFAKE                20 27 10.0 +10
V52A                              LR      LR
    comp=Z,2µm,22.0s
Y49A Blount Mountai 100.25 307 PFAKE                20 27 10.0 +10
Y49A                              LR      LR
    comp=Z,2µm,20.0s
TRY  Troy           100.33 321 PFAKE                20 27 10.0 +10
TRY                               LR      LR
    comp=Z,1µm,21.0s
CPCT Cooper Cave    100.34 310 PFAKE                20 27 10.0 +9.4
CPCT                              LR      LR
    comp=Z,2µm,20.0s
ANN  Anapa          100.38  36 eP        Pdif    20 27 01.8 +1.3
ANN                               pmax    pmax
    comp=Z,40nm,1.4s
KSPA Keystone Colle 100.39 319 PFAKE                20 27 10.0 +9.3
KSPA                              LR      LR
    comp=Z,2µm,22.0s
SOC  Sochi          100.39  38 eP        Pdif    20 27 00.7 +0.1
SOC                               e               20 31 07.2
SOC                               ePPP    PPP     20 33 21.2
SOC                               eS      SKSac   20 37 39.6 +0.5
SOC                               eSSS    SSS     20 49 17.7
SOC                               MLR     MLR
    comp=Z,778nm,18.0s
AKH  Akhalkalaki    100.43  41 PFAKE                20 27 10.0 +8.9
AKH                               LR      LR
    comp=Z,2µm,20.0s
PKME Peaks-Kenny Pk 100.44 325 PFAKE                20 27 10.0 +9.3
PKME                              LR      LR
    comp=Z,800nm,20.0s
147A Livingston     100.49 305 PFAKE                20 27 10.0 +8.7
147A                              LR      LR
    comp=Z,441µm,22.0s
V51A Loudon         100.50 310 PFAKE                20 27 10.0 +8.7
V51A                              LR      LR
    comp=Z,2µm,21.0s
TBI  Tubuai         100.53 223 eSP      SP          20 40 07.8 +0.4
    comp=Z,398nm,27.8s
TBI                               eSS     SS      20 45 36.7 +3.5
    comp=Z,520nm,27.5s
TBI  Tubuai         100.53 223 eLR      LR          20 59 54.3
    comp=Z,4µm,29.0s
W50A Signal Mountai 100.60 309 PFAKE                20 27 10.0 +8.2
W50A                              LR      LR
    comp=Z,2µm,21.0s
TZTN Tazewell       100.60 311 PFAKE                20 27 10.0 +8.3
TZTN                              LR      LR
    comp=Z,2µm,22.0s
T52A Hallie         100.71 312 PFAKE                20 27 10.0 +7.8
T52A                              LR      LR
    comp=Z,2µm,22.0s
SSPA Standing Stone 100.71 317 PFAKE                20 27 10.0 +7.9
SSPA                              LR      LR
    comp=Z,1µm,20.0s
O56A Blue Knob Stat 100.77 316 PFAKE                20 27 10.0 +7.6
O56A                              LR      LR
    comp=Z,2µm,21.0s
ACCN Adirondack Com 100.84 321 PFAKE                20 27 10.0 +7.4
ACCN                              LR      LR
    comp=Z,2µm,21.0s
MCWV Mont Chateau   100.95 315 PFAKE                20 27 10.0 +6.8
MCWV                              LR      LR
    comp=Z,700nm,18.0s
SWET Sewanee        100.96 309 PFAKE                20 27 10.0 +6.6
SWET                              LR      LR
    comp=Z,2µm,19.0s
BINY Binghamton     100.99 319 PFAKE                20 27 10.0 +6.7
BINY                              LR      LR
    comp=Z,1µm,18.0s
X48A Hartselle      101.05 307 PFAKE                20 27 10.0 +6.2
X48A                              LR      LR
    comp=Z,1µm,20.0s
PQI  Presque Isle   101.06 327 PFAKE                20 27 10.0 +6.5
PQI                               LR      LR
    comp=Z,900nm,20.0s
VT1  Waterbury      101.18 322 PFAKE                20 27 20.0 +16
VT1                               LR      LR
    comp=Z,1µm,18.0s
RGN  Rugen          101.23  17 PFAKE                20 27 10.0 +6.0
RGN                               LR      LR
    comp=Z,800nm,19.0s
N55A Marion Center  101.37 317 PFAKE                20 27 20.0 +15
N55A                              LR      LR
    comp=Z,2µm,20.0s
S51A Beattyville    101.43 312 PFAKE                20 27 20.0 +15
S51A                              LR      LR
    comp=Z,2µm,21.0s
VBMS Vicksburg      101.51 304 PFAKE                20 27 20.0 +14
VBMS                              LR      LR
    comp=Z,2µm,20.0s
NCB  Newcomb        101.55 321 PFAKE                20 27 20.0 +14
NCB                               LR      LR
    comp=Z,1µm,22.0s
CLTN Cedars of Leba 101.82 309 PFAKE                20 27 20.0 +13
CLTN                              LR      LR
    comp=Z,900nm,21.0s
V48A Smith Brothers 101.84 308 PFAKE                20 27 20.0 +13
V48A                              LR      LR
    comp=Z,2µm,22.0s
N54A Moraine State  102.00 316 PFAKE                20 27 20.0 +12
N54A                              LR      LR
    comp=Z,2µm,19.0s
PLAL Pickwick Lake  102.02 307 PFAKE                20 27 20.0 +12
PLAL                              LR      LR
    comp=Z,1µm,19.0s
KIV  Kislovodsk     102.02  39 PFAKE                20 27 20.0 +12
KIV                               LR      LR
    comp=Z,1µm,21.0s
KIV  Kislovodsk     102.02  39 iP        Pdif    20 27 05.8 -2.2
KIV                               pmax    pmax
    comp=Z,18nm,1.1s
T49A Edmonton       102.10 310 PFAKE                20 27 20.0 +12
T49A                              LR      LR
    comp=Z,2µm,21.0s
KIEV Kiev           102.14  28 PFAKE                20 27 20.0 +12
KIEV                              LR      LR
    comp=Z,500nm,21.0s
AKASG Malin Array Be 102.15 28 P        Pdif    20 27 08.0 -0.2
    comp=Z,0.5nm,0.5s,baz=221,slow=4.7,SNR=12
AKASG                             PP      PP      20 31 17.9 -2.9
    comp=Z,0.1nm,0.3s,baz=193,slow=2.9,SNR=4.2
LONY Lake Ozonia    102.22 322 PFAKE                20 27 20.0 +11
LONY                              LR      LR
    comp=Z,1µm,22.0s
Q51A Peebles        102.31 313 PFAKE                20 27 20.0 +11
Q51A                              LR      LR
    comp=Z,1µm,22.0s
MMNY Mt. Morris Dam 102.31 318 PFAKE                20 27 20.0 +11
MMNY                              LR      LR
    comp=Z,2µm,22.0s
N53A Lisbon         102.32 315 PFAKE                20 27 20.0 +11
N53A                              LR      LR
    comp=Z,2µm,22.0s
O52A Adamsville     102.32 314 PFAKE                20 27 20.0 +11
O52A                              LR      LR
    comp=Z,1µm,20.0s
OXF  Oxford         102.46 306 PFAKE                20 27 20.0 +10
OXF                               LR      LR
    comp=Z,2µm,20.0s
P51A Williamsport   102.49 313 PFAKE                20 27 20.0 +10
P51A                              LR      LR
    comp=Z,1µm,20.0s
J55A Hilton         102.68 319 PFAKE                20 27 20.0 +9.3
J55A                              LR      LR
    comp=Z,2µm,21.0s
WVT  Waverly        102.69 308 PFAKE                20 27 20.0 +9.0
WVT                               LR      LR
    comp=Z,2µm,21.0s
ZAIG Zacatecas      102.84 289 PFAKE                20 27 20.0 +7.6
ZAIG                              LR      LR
    comp=Z,2µm,18.0s
ERPA Erie           102.87 317 PFAKE                20 27 20.0 +8.3
ERPA                              LR      LR
    comp=Z,2µm,22.0s
T47A Sharon Grove   102.89 309 PFAKE                20 27 20.0 +8.1
T47A                              LR      LR
    comp=Z,2µm,19.0s
MEDO Medina         102.90 318 PFAKE                20 27 20.0 +8.2
MEDO                              LR      LR
    comp=Z,2µm,22.0s
ACSO Alum Creek Sta 103.00 314 PFAKE                20 27 20.0 +7.7
ACSO                              LR      LR
    comp=Z,1µm,19.0s
GOF  Gofitskoye     103.03  39⇑eP        Pdif    20 27 16.7 +4.4
J54A Appleton       103.07 318 PFAKE                20 27 20.0 +7.5
J54A                              LR      LR
    comp=Z,2µm,22.0s
M52A Chesterland    103.12 316 PFAKE                20 27 20.0 +7.2
M52A                              LR      LR
    comp=Z,1µm,20.0s
SUW  Suwalki        103.16  23 PFAKE                20 27 20.0 +7.4
SUW                               LR      LR
    comp=Z,700nm,20.0s
MET  Memphis--Engin 103.20 306 PFAKE                20 27 20.0 +6.7
MET                               LR      LR
    comp=Z,2µm,22.0s
HKT  Hockley        103.23 299 PFAKE                20 27 20.0 +6.5
HKT                               LR      LR
    comp=Z,1µm,20.0s
WCI  Wyandotte Cave 103.33 310 PFAKE                20 27 30.0 +16
WCI                               LR      LR
    comp=Z,2µm,20.0s
X43A Marvell        103.33 305 PFAKE                20 27 30.0 +16
X43A                              LR      LR
    comp=Z,3µm,21.0s
HALT Halls          103.40 307 PFAKE                20 27 30.0 +16
HALT                              LR      LR
    comp=Z,1µm,20.0s
CCAR Cane Creek     103.44 304 PFAKE                20 27 30.0 +16
CCAR                              LR      LR
    comp=Z,2µm,22.0s
PSAD2 Pilbara Seismi 103.51 139 PFAKE               20 27 30.0 +15
PSAD2                             LR      LR
    comp=Z,2µm,18.0s
MAK  Makhachkala    103.55  43 eP        Pdif    20 27 08.9 -5.7
MAK                               i               20 31 29.9
MAK                               e               20 37 47.2
MAK                               eSS     SS      20 46 15.9 -0.7
MAK                               eSSS    SSS     20 50 12.0
MAK                               pmax    pmax
    comp=Z,246nm,1.2s
MAK                               MLR     MLR
    comp=Z,1µm,17.0s
Z41A Richland Creek 103.61 303 PFAKE                20 27 30.0 +15
Z41A                              LR      LR
    comp=Z,2µm,20.0s
GLAT Glass          103.62 307 PFAKE                20 27 30.0 +15
GLAT                              LR      LR
    comp=Z,1µm,21.0s
O49A Covington      103.68 313 PFAKE                20 27 30.0 +15
O49A                              LR      LR
    comp=Z,2µm,20.0s
NATX Nacogdoches    103.73 301 PFAKE                20 27 30.0 +14
NATX                              LR      LR
    comp=Z,1µm,20.0s
T45A Paducah        103.78 308 PFAKE                20 27 30.0 +14
T45A                              LR      LR
    comp=Z,2µm,22.0s
GNAR Gosnell        103.83 307 PFAKE                20 27 30.0 +14
GNAR                              LR      LR
    comp=Z,2µm,19.0s
M50A Fremont        103.88 315 PFAKE                20 27 30.0 +14
M50A                              LR      LR
    comp=Z,2µm,21.0s
USIN University of  103.90 310 PFAKE                20 27 30.0 +14
USIN                              LR      LR
    comp=Z,2µm,19.0s
HBAR Harrisburg     103.92 306 PFAKE                20 27 30.0 +14
HBAR                              LR      LR
    comp=Z,2µm,21.0s
PVMO Portageville   103.96 307 PFAKE                20 27 30.0 +13
PVMO                              LR      LR
    comp=Z,1µm,22.0s
WLAR White Oak Lake 104.09 303 PFAKE                20 27 30.0 +13
WLAR                              LR      LR
    comp=Z,2µm,21.0s
BLO  Bloomington    104.12 311 PFAKE                20 27 30.0 +13
BLO                               LR      LR
    comp=Z,1µm,21.0s
N49A Columbus Grove 104.13 314 PFAKE                20 27 30.0 +13
N49A                              LR      LR
    comp=Z,1µm,20.0s
PARMO Parma         104.17 307 PFAKE                20 27 30.0 +12
PARMO                             LR      LR
    comp=Z,1µm,20.0s
UALR University of  104.38 304 PFAKE                20 27 30.0 +11
UALR                              LR      LR
    comp=Z,2µm,20.0s
833A Chaparral WMA, 104.43 295 PFAKE                20 27 30.0 +11
833A                              LR      LR
    comp=Z,700nm,19.0s
X40A Basin Creek Fa 104.47 304 PFAKE                20 27 30.0 +11
X40A                              LR      LR
    comp=Z,2µm,21.0s
W41B Gary Mavity, V 104.59 305 PFAKE                20 27 30.0 +11
W41B                              LR      LR
    comp=Z,3µm,21.0s
SIUC Southern Illin 104.60 308 PFAKE                20 27 30.0 +11
SIUC                              LR      LR
    comp=Z,1µm,20.0s
PBMO Poplar Bluff   104.64 307 PFAKE                20 27 30.0 +10
PBMO                              LR      LR
    comp=Z,2µm,21.0s
OLIL Olney          104.68 310 PFAKE                20 27 30.0 +10
OLIL                              LR      LR
    comp=Z,2µm,19.0s
WHAR Wooly Hollow   104.70 305 PFAKE                20 27 30.0 +10
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WHAR LR LR
comp=Z,2μm,20.0s
M48A Edgerton 104.81 314 PFAKE 20 27 30.0 +10
M48A LR LR
comp=Z,1μm,19.0s
435B Jarrell 104.91 298 PFAKE 20 27 30.0 +9.0
435B LR LR
comp=Z,2μm,18.0s
MIAR Mount Ida 104.96 304 PFAKE 20 27 30.0 +8.8
MIAR LR LR
comp=Z,1μm,20.0s
P45A Graceland, Par 105.04 311 PFAKE 20 31 50.0 +14
P45A LR LR
comp=Z,2μm,21.0s
SFIN Lafayette 105.29 312 PFAKE 20 31 50.0 +14
SFIN LR LR
comp=Z,2μm,22.0s
KONO Kongsberg 105.32 13 PFAKE 20 31 50.0 +14
KONO LR LR
comp=Z,800nm,18.0s
PPT2 Papeete2 105.41 226 *e*PP **PP** **20 31 41.7 -2.9**
comp=Z,64nm,25.5s
PPT2 *e*SP SP 20 40 55.7 -3.5
comp=Z,656nm,26.2s
PPT2 *e*SS **SS** **20 46 47.0 +6.1**
comp=Z,753nm,25.8s
PPT2 Papeete2 105.41 226 *e*LR LR 21 02 06.4
comp=Z,5μm,31.2s
FVM French Village 105.47 308 PFAKE 20 31 50.0 +13
FVM LR LR
comp=Z,1μm,22.0s
W39A Magazine 105.53 304 PFAKE 20 31 50.0 +13
W39A LR LR
comp=Z,2μm,21.0s
GEYT Alibeck 105.60 52 Pdiff **Pdif** **20 27 27.6 +3.6**
comp=Z,0.5nm,0.6s,baz=274,slow=7.0,SNR=4.8
GYA0B ALIBECK ARRAY 105.60 52 PFAKE 20 31 50.0 +13
GYA0B LR LR
comp=Z,4μm,20.0s
I49A Point Hope 105.61 317 PFAKE 20 31 50.0 +13
I49A LR LR
comp=Z,2μm,21.0s
M46A Old House Fiel 105.62 313 PFAKE 20 31 50.0 +13
M46A LR LR
comp=Z,2μm,20.0s
CCM Cathedral Cave 105.99 308 PFAKE 20 31 50.0 +12
CCM LR LR
comp=Z,1μm,20.0s
L46A Eue Claire 106.02 313 PFAKE 20 31 50.0 +12
L46A LR LR
comp=Z,1μm,19.0s
X37A Clayton 106.08 303 PFAKE 20 31 50.0 +12
X37A LR LR
comp=Z,2μm,21.0s
JCT Junction City 106.12 297 PFAKE 20 31 50.0 +12
JCT LR LR
comp=Z,1μm,22.0s
HHAR Hobbs 106.36 305 PFAKE 20 31 50.0 +11
HHAR LR LR
comp=Z,2μm,21.0s
H48A Harrisville 106.41 317 PFAKE 20 31 50.0 +12
H48A LR LR
comp=Z,2μm,22.0s
M44A Midewin, Midew 106.51 312 PFAKE 20 31 50.0 +11
M44A LR LR
comp=Z,1μm,22.0s
I47A Gladwin 106.52 316 PFAKE 20 31 50.0 +11
I47A LR LR
comp=Z,2μm,22.0s
HDIL Hopedale 106.61 311 PFAKE 20 31 50.0 +11
HDIL LR LR
comp=Z,2μm,19.0s
TAOE Nuku Hiva Isla 107.02 239 *e*SS SS 20 47 08.4 +4.9
comp=Z,677nm,27.5s
TAOE Nuku Hiva Isla 107.02 239 *e*LR LR 21 02 56.0
comp=Z,4μm,31.2s
J45A Montague 107.07 314 PFAKE 20 31 50.0 +10
J45A LR LR
comp=Z,1μm,18.0s
GLMI Grayling 107.14 316 PFAKE 20 31 50.0 +10
GLMI LR LR
comp=Z,2μm,21.0s
TUL1 Leonard 107.22 303 PFAKE 20 31 50.0 +10
TUL1 LR LR
comp=Z,2μm,20.0s
I45A Fountain 107.41 315 PFAKE 20 31 50.0 +10
I45A LR LR
comp=Z,1μm,22.0s
ABTX Abilene, Hawle 107.44 299 PFAKE 20 31 50.0 +9.3
ABTX LR LR
comp=Z,1μm,21.0s
ASAR Alice Springs 107.46 151 PP **PP** **20 31 55.0 -4.3**
comp=Z,1.5nm,1.0s,baz=202,slow=5.4,SNR=4.2
MNAI Manna 107.48 114 PFAKE 20 31 50.0 +8.6
MNAI LR LR
comp=Z,3μm,20.0s
K43A Burlington 107.58 313 PFAKE 20 31 50.0 +9.4
K43A LR LR
comp=Z,1μm,20.0s
N41A Harden Midland 107.58 310 PFAKE 20 31 50.0 +9.3
N41A LR LR
comp=Z,2μm,20.0s
HPIG 107.69 290 PFAKE 20 31 50.0 +8.4
HPIG LR LR
comp=Z,2μm,18.0s
L42A Oliver, Polo 107.81 311 PFAKE 20 31 50.0 +8.9
L42A LR LR
comp=Z,2μm,19.0s
G45A Suttons Bay 107.82 316 PFAKE 20 31 50.0 +9.0
G45A LR LR
comp=Z,1μm,20.0s
TXAR Lajitas Array 107.91 294 PP **PP** **20 32 00.7 -3.2**
comp=Z,0.3nm,0.7s,baz=159,slow=12,SNR=4.1
TXAR PKKP **PKKPdf** **20 43 08.4 +0.6**
comp=Z,0.7nm,1.0s,baz=256,slow=3.5,SNR=4.6
GSI Gunungsitoli 107.96 106 PFAKE 20 31 50.0 +7.7
GSI LR LR
comp=Z,1μm,20.0s
E46A Sault Ste Mari 108.08 318 PFAKE 20 31 50.0 +8.6
E46A LR LR
comp=Z,2μm,22.0s
CISI Cisompet, Garu 108.19 120 PFAKE 20 31 50.0 +7.2
CISI LR LR
comp=Z,1μm,20.0s
WMOK Wichita Mounta 108.28 301 PFAKE 20 31 50.0 +7.8
WMOK LR LR
comp=Z,1μm,20.0s
OBN Obninsk 108.31 29 PFAKE 20 31 50.0 +8.5
OBN LR LR
comp=Z,800nm,21.0s
BORG Borgarnes 108.33 358 PFAKE 20 31 50.0 +8.7
BORG LR LR
comp=Z,800nm,22.0s
H43A Windswept, Lux 108.50 314 PFAKE 20 31 50.0 +7.7
H43A LR LR
comp=Z,2μm,20.0s
I42A Draeger Farm, 108.70 313 PFAKE 20 31 50.0 +7.3
I42A LR LR
comp=Z,2μm,22.0s
H42A Shiocton 108.92 314 PFAKE 20 31 50.0 +7.0
H42A LR LR
comp=Z,1μm,21.0s
G43A Wallace 109.00 315 PFAKE 20 31 50.0 +6.8
G43A LR LR
comp=Z,2μm,20.0s
I41A Arkdale 109.32 313 PFAKE 20 32 00.0 +16
I41A LR LR
comp=Z,2μm,20.0s
E43A Lone Tree Farm 109.42 316 PFAKE 20 32 00.0 +16
E43A LR LR
comp=Z,1μm,21.0s
U32A Winter Ranch, 109.48 302 PFAKE 20 32 00.0 +16
U32A LR LR
comp=Z,2μm,20.0s
H41A Junction City 109.58 313 PFAKE 20 32 00.0 +16
H41A LR LR
comp=Z,2μm,19.0s
BKNI Bangkinang 109.64 109 PFAKE 20 32 00.0 +15
BKNI LR LR
comp=Z,2μm,20.0s
SCIA State Center 109.70 309 PFAKE 20 32 00.0 +15
SCIA LR LR
comp=Z,2μm,22.0s
KSU1 Kansas State U 109.81 305 PFAKE 20 32 00.0 +15
KSU1 LR LR
comp=Z,2μm,21.0s
KBL Kabul 109.95 61 PFAKE 20 32 00.0 +14
KBL LR LR
comp=Z,2μm,19.0s
PSI Prapat 109.97 106 PFAKE 20 32 00.0 +14
PSI LR LR
comp=Z,1μm,20.0s
LHMI Lhok Sumawe 110.30 103 PFAKE 20 32 00.0 +13
LHMI LR LR
comp=Z,2μm,20.0s
MSTX Muleshoe 110.30 298 PFAKE 20 32 00.0 +14
MSTX LR LR
comp=Z,1μm,19.0s
G40A Rib Lake 110.31 314 PFAKE 20 32 00.0 +14
G40A LR LR
comp=Z,1μm,21.0s
COWI Conover 110.32 315 PFAKE 20 32 00.0 +14
COWI LR LR
comp=Z,2μm,20.0s
FINES FINESS Array B 110.40 20 PP **PP** **20 32 18.2 -3.2**
comp=Z,1.8nm,1.0s,baz=262,slow=6.7,SNR=3.2
FINES PKKP **PKKPdf** **20 43 02.1 -2.2**
comp=Z,1.1nm,0.9s,baz=100,slow=9.9,SNR=4.0
FINES FINESS Array B 110.40 20 *i*PKIKP **PKiKP** **20 31 52.0 +6.7**
FINES pmax pmax
comp=Z,1.0nm,0.8s
MNTX Cornudas Mount 110.55 294 PFAKE 20 32 00.0 +13
MNTX LR LR
comp=Z,1μm,20.0s
D41A Chassel 110.68 316 PFAKE 20 32 00.0 +14
D41A LR LR
comp=Z,1μm,21.0s
JAGI Jajag, Banyuwa 111.31 126 PFAKE 20 32 00.0 +11
JAGI LR LR
comp=Z,1μm,22.0s
EPT El Paso 111.34 294 PFAKE 20 32 00.0 +12
EPT LR LR
comp=Z,2μm,19.0s
CBKS Cedar Bluff 111.49 303 PFAKE 20 32 00.0 +12
CBKS LR LR
comp=Z,2μm,21.0s
PBA Port Blair 111.70 95 PFAKE 20 32 00.0 +11
PBA LR LR
comp=Z,2μm,21.0s
E38A The Farm, Brul 111.91 314 PFAKE 20 32 00.0 +11
E38A LR LR
comp=Z,2μm,19.0s
NIL Nilore 112.09 64 PFAKE 20 32 00.0 +11
NIL LR LR
comp=Z,900nm,20.0s
BGNE Belgrade 112.19 306 PFAKE 20 32 00.0 +11
BGNE LR LR
comp=Z,2μm,22.0s
HSIG 112.61 289 PFAKE 20 32 00.0 +9.5
HSIG LR LR
comp=Z,3μm,20.0s
MYKOM Kota Tinggi 112.62 111 PFAKE 20 32 00.0 +9.0
MYKOM LR LR
comp=Z,2μm,20.0s
IPM Ipoh 112.62 106 PFAKE 20 32 00.0 +8.9
IPM LR LR
comp=Z,1μm,19.0s
EYMN Ely 112.75 315 PFAKE 20 32 00.0 +10
EYMN LR LR
comp=Z,1μm,20.0s
ECSD EROS Data Cent 112.79 309 PFAKE 20 32 00.0 +10
ECSD LR LR
comp=Z,2μm,22.0s
KULM Kulim 112.94 105 PFAKE 20 32 00.0 +8.4
KULM LR LR
comp=Z,900nm,19.0s
319A Douglas 112.94 292 PFAKE 20 32 00.0 +8.7
319A LR LR
comp=Z,2μm,19.0s
Y22D IRIS PASSCAL I 113.05 296 PFAKE 20 32 00.0 +8.6
Y22D LR LR
comp=Z,1μm,20.0s
ANMO Albuquerque 113.28 297 PFAKE 20 32 00.0 +8.1
ANMO LR LR
comp=Z,2μm,22.0s
ANMO Albuquerque 113.28 297 *c i*PKIKP **PKiKP** **20 31 50.2 -1.7**
ANMO pmax pmax
comp=Z,3.0nm,1.3s
T25A Trinidad 113.33 300 PFAKE 20 32 00.0 +8.1
T25A LR LR
comp=Z,1μm,20.0s
KSCO Kaye Shedlock' 113.37 302 PFAKE 20 32 00.0 +8.2
KSCO LR LR
comp=Z,1μm,19.0s
SCO Scoresbysund 114.09 358 PFAKE 20 32 00.0 +8.0
SCO LR LR
comp=Z,500nm,20.0s
OGNE Ogallala 114.20 304 PFAKE 20 32 00.0 +6.7
OGNE LR LR
comp=Z,1μm,21.0s
DZM Mont Dzumac 114.36 183 *e*PS PS 20 42 24.6 -2.2
comp=Z,200nm,25.5s
DZM Mont Dzumac 114.36 183 *e*LR LR 21 06 22.7
comp=Z,2μm,23.9s
DZM Mont Dzumac 114.36 183 PFAKE 20 32 10.0 +16
DZM LR LR
comp=Z,1μm,18.0s
SDCO Great Sand Dun 114.38 300 PFAKE 20 32 10.0 +16
SDCO LR LR
comp=Z,1μm,19.0s
CTAO Charters Tower 114.39 162 PFAKE 20 32 10.0 +16
CTAO LR LR
comp=Z,1μm,18.0s
BTK Batken 114.50 57 PFAKE 20 32 10.0 +16
BTK LR LR
comp=Z,1μm,20.0s
TUC Tucson 114.53 292 PFAKE 20 32 10.0 +16
TUC LR LR
comp=Z,4μm,18.0s
Q24A Divide 114.90 301 PFAKE 20 32 10.0 +15
Q24A LR LR
comp=Z,1μm,20.0s
S22A 4UR Ranch, Cre 115.22 299 PFAKE 20 32 10.0 +14
S22A LR LR
comp=Z,2μm,21.0s
X18A Snowflake 115.31 294 PFAKE 20 32 10.0 +14
X18A LR LR
comp=Z,2μm,21.0s
W18A Petrified Fore 115.52 295 PFAKE 20 32 10.0 +14
W18A LR LR
comp=Z,2μm,18.0s
ILULI Ilulissat 115.64 347 PFAKE 20 32 10.0 +15
ILULI LR LR
comp=Z,700nm,18.0s
MMRI Maumere 115.67 133 PFAKE 20 32 10.0 +13
MMRI LR LR
comp=Z,1μm,21.0s
ISCO Idaho Springs 115.69 301 PFAKE 20 32 10.0 +13
ISCO LR LR
comp=Z,2μm,21.0s
SOEI Soe 115.76 136 PFAKE 20 32 10.0 +13
SOEI LR LR
comp=Z,2μm,19.0s
X16A Lo Mia Camp, P 116.23 293 PFAKE 20 32 10.0 +12
X16A LR LR
comp=Z,2μm,18.0s
MTN Manton Dam 116.24 144 PFAKE 20 32 10.0 +12
MTN LR LR
comp=Z,2μm,20.0s
PHWY Pilot Hill 116.48 303 PFAKE 20 32 10.0 +12
PHWY LR LR
comp=Z,2μm,21.0s
N23A Red Feather La 116.54 302 PFAKE 20 32 10.0 +12
N23A LR LR
comp=Z,2μm,22.0s
PV01 Paradox Valley 116.56 298 PFAKE 20 32 10.0 +12
PV01 LR LR
comp=Z,500nm,18.0s
KSM Kuching 116.67 116 PFAKE 20 32 10.0 +11
KSM LR LR
comp=Z,2μm,21.0s
PV02 Paradox Valley 116.71 298 PFAKE 20 32 10.0 +12
PV02 LR LR
comp=Z,2μm,20.0s
113A Mohawk Valley, 116.81 291 PFAKE 20 32 10.0 +12
113A LR LR
comp=Z,3μm,18.0s
WUAZ Wupatki 116.84 294 PFAKE 20 32 10.0 +11
WUAZ LR LR
comp=Z,1μm,20.0s
PV05 Paradox Valley 116.86 298 PFAKE 20 32 10.0 +11
PV05 LR LR
comp=Z,1μm,20.0s
PV19 Morning Glory 116.92 298 PFAKE 20 32 10.0 +11
PV19 LR LR
comp=Z,2μm,20.0s
PV22 Blue Mesa, Par 116.93 298 PFAKE 20 32 10.0 +11
PV22 LR LR
comp=Z,500nm,18.0s
PV14 Lion Creek, Pa 116.99 298 PFAKE 20 32 10.0 +11
PV14 LR LR
comp=Z,2μm,21.0s
Y14A Wickenburg 116.99 292 PFAKE 20 32 10.0 +11
Y14A LR LR
comp=Z,1μm,20.0s
SUMG Summit 117.16 353 PFAKE 20 32 10.0 +12
SUMG LR LR
comp=Z,600nm,22.0s
ARCES ARCESS Array B 117.17 15 PKP **PKPdf** **20 31 57.4 -0.6**
comp=Z,1.2nm,0.8s,baz=219,slow=3.1,SNR=4.6
RSSD Black Hills 117.28 306 PFAKE 20 32 10.0 +11
RSSD LR LR
comp=Z,2μm,22.0s
KAPI Kappang 117.32 129 PFAKE 20 32 10.0 +10
KAPI LR LR
comp=Z,700nm,20.0s
KSH Kashi 117.37 60 PKP **PKiKP** **20 32 00.0 +0.5**
KSH PP **PP** **20 33 13.5 +2.0**
KSH SKKS 20 40 03.7
KSH Kashi 117.37 60 SS SS 20 49 19.9 -2.2
KSH AMB AMB
comp=Z,370nm,7.4s
KSH LR LR
comp=N,2μm,15.0s
KSH LR LR
comp=E,900nm,15.2s
KSH LR LR
comp=Z,4μm,18.8s
KSH Kashi 117.37 60 *e*PKP **PKiKP** **20 32 00.1 +0.5**
KSH PP **PP** **20 33 13.7 +2.2**
KSH SKKS 20 40 04.3
KSH SS **SS** **20 49 19.9 -2.2**
KSH AMB AMB
comp=Z,370nm,7.4s
KSH LR LR
comp=Z,4μm,19.9s
KSH LR LR
comp=Z,2μm,18.3s
KSH LR LR
comp=Z,5μm,23.2s
O20A White River Ci 117.52 300 PFAKE 20 32 10.0 +10
O20A LR LR
comp=Z,1μm,20.0s
KEV Kevo 117.64 16 PFAKE 20 32 10.0 +11
KEV LR LR
comp=Z,800nm,20.0s
GLA Glamis 117.70 290 PFAKE 20 32 10.0 +10
GLA LR LR
comp=Z,2μm,21.0s
RWWY Rawlins 117.78 302 PFAKE 20 32 10.0 +10
RWWY LR LR
comp=Z,2μm,21.0s
LVZ Lovozero 117.81 19 PFAKE 20 32 10.0 +11
LVZ LR LR
comp=Z,1μm,18.0s
Y12C Blythe 117.90 291 PFAKE 20 32 10.0 +9.4
Y12C LR LR
comp=Z,2μm,22.0s
K22A Casper 117.91 303 PFAKE 20 32 10.0 +9.5
K22A LR LR
comp=Z,2μm,21.0s
ARU Arti 117.97 37 PFAKE 20 32 10.0 +10
ARU LR LR
comp=Z,2μm,20.0s
ARU Arti 117.97 37 *i*PKIKP **PKPdf** **20 31 58.7 -1.2**
ARU 20 39 10.7
ARU SP SP 20 42 54.8 -3.5
ARU PS PKKPdf 20 43 04.0 +14
U15A North Rim 117.97 295 PFAKE 20 32 10.0 +9.0
U15A LR LR
comp=Z,2μm,18.0s
AAK Ala-Archa 118.25 57 PFAKE 20 32 10.0 +8.8
AAK LR LR
comp=Z,2μm,21.0s
AAK Ala-Archa 118.25 57 *c i*PKIKP **PKiKP** **20 32 02.3 +1.1**
AAK pmax pmax
comp=Z,11nm,2.5s
W13A Hualapai Mount 118.26 293 PFAKE 20 32 10.0 +8.5
W13A LR LR
comp=Z,1μm,20.0s
FRU1 Bishkek 118.43 57 PFAKE 20 32 10.0 +8.6
FRU1 LR LR
comp=Z,2μm,21.0s
NRN Naryn 118.49 59 PFAKE 20 32 10.0 +8.1
NRN LR LR
comp=Z,2μm,19.0s
SBUM Sibu 118.65 117 PFAKE 20 32 10.0 +7.3
SBUM LR LR
comp=Z,600nm,20.0s
BAR Barrett 118.74 289 PFAKE 20 32 10.0 +7.7
BAR LR LR
comp=Z,5μm,20.0s
BOOM Boomskoye usch 119.05 58 PFAKE 20 32 10.0 +7.2
BOOM LR LR
comp=Z,2μm,22.0s
PFO Pinyon Flats O 119.13 290 PFAKE 20 32 10.0 +6.9
PFO LR LR
comp=Z,2μm,22.0s
CPE Camp Elliot 119.16 289 PFAKE 20 32 10.0 +7.0
CPE LR LR
comp=Z,5μm,22.0s
CCUT Cedar City 119.32 295 *e*PKPdf **PKPdf** **20 32 03.6 +0.1**
COEN Coen 119.49 157 PFAKE 20 32 20.0 +16
COEN LR LR
comp=Z,2μm,18.0s
BW06 Boulder Array 119.82 302 PFAKE 20 32 20.0 +16
BW06 LR LR
comp=Z,2μm,22.0s
PD31 Pinedale Array 119.82 302 *e*PKPdf **PKPdf** **20 32 02.3 -2.0**
PD31 *e*PP **PP** **20 33 27.8 -0.8**
PDAR Pinedale Array 119.82 302 PKP **PKPdf** **20 32 02.5 -1.8**
comp=Z,1.1nm,1.0s,baz=116,slow=3.4,SNR=6.3
PDAR PP **PP** **20 33 27.1 -1.4**
comp=Z,2.0nm,1.1s,baz=145,slow=8.5,SNR=6.8
NLU North Lily Min 119.84 298 *e*PKPdf **PKPdf** **20 32 04.2 -0.2**
SHPR Sheep Range 119.91 293 *e*PKPdf **PKPdf** **20 32 03.3 -1.3**
SHL Shillong 120.02 82 PFAKE 20 32 20.0 +15
SHL LR LR
comp=Z,2μm,20.0s
PSUT Pine Spring 120.19 296 *e*PKPdf **PKPdf** **20 32 05.2 +0.1**
GSC Goldstone, Bar 120.33 291 PFAKE 20 32 20.0 +15
GSC LR LR
comp=Z,2μm,19.0s
DUG Dugway, Tooele 120.44 298 *e*PKPdf **PKiKP** **20 32 06.2 +0.6**
DUG LR LR
comp=Z,1μm,20.0s
MWC Mount Wilson 120.57 290 PFAKE 20 32 20.0 +14
MWC LR LR
comp=Z,3μm,18.0s
PASC Pasadena Art C 120.63 289 PFAKE 20 32 20.0 +14
PASC LR LR
comp=Z,2μm,19.0s
CM31 Chiang Mai Arr 120.67 93 *e*PP PP 20 33 35.1 +0.9
CMAR Chiang Mai Arr 120.67 93 PKP **PKPdf** **20 32 05.6 -0.7**
comp=Z,1.1nm,0.9s,baz=244,slow=4.0,SNR=6.7
CMAR PP **PP** **20 33 36.5 +2.3**
comp=Z,2.7nm,1.1s,baz=234,slow=6.6,SNR=7.2
CMAR Chiang Mai Arr 120.67 93 *c i*PKIKP **PKiKP** **20 32 07.8 +1.4**
AHID Auburn Hatcher 120.77 301 PFAKE 20 32 20.0 +14
AHID LR LR
comp=Z,2μm,21.0s
TPNV Topopah Spring 120.89 293 *e*PKPdf **PKPdf** **20 32 05.8 -0.6**
TPNV *e*PP **PP** **20 33 35.3 -0.5**
TPNV LR LR
comp=Z,1μm,20.0s
CHTO Chiang Mai 120.90 93 *e*PKPdf **PKPdf** **20 32 06.4 -0.4**
CHTO LR LR
comp=Z,1μm,22.0s
CMMT Chiang Mai 120.90 93 PKP PKiKP 20 32 14.7 +7.8
LOHW Long Hollow 120.93 302 *e*PKPdf **PKiKP** **20 32 07.1 +0.6**
LOHW *e*PP **PP** **20 33 32.9 -3.2**
BGU Big Grassy Mou 120.98 299 *e*PKPdf **PKPdf** **20 32 06.7 +0.2**
TPAW Teton Pass 121.07 302 *e*PKPdf **PKiKP** **20 32 07.1 +0.3**
TPAW *e*PP **PP** **20 33 35.1 -2.0**
TPAW LR LR
comp=Z,2μm,19.0s

MOOW	Moose Ponds	121.09	302	ePKPdf	PKPdf	20 32 06.2	-0.5
MOOW				ePP	PP	20 33 31.3	-5.8
FXWY	Fox Creek	121.20	302	ePKPdf	PKPdf	20 32 06.4	-0.5
FXWY				ePP	PP	20 33 33.5	-4.5
R11A	Troy Canyon, C	121.22	295	ePKPdf	PKPdf	20 32 06.0	-1.0
R11A				ePP	PP	20 33 34.0	-4.2
R11A				LR	LR		
comp=Z,2μm,19.0s							
FLWY	Flagg Ranch	121.24	303	PFAKE		20 32 20.0	+13
FLWY				LR	LR		
comp=Z,2μm,21.0s							
IMW	Indian Meadow	121.28	303	PFAKE		20 32 20.0	+13
IMW				LR	LR		
comp=Z,2μm,19.0s							
H17A	Grant Village	121.33	303	PFAKE		20 32 20.0	+13
H17A				LR	LR		
comp=Z,2μm,20.0s							
UTTA	Uttaradit	121.37	95	PKP	PKiKP	20 32 16.2	+8.4
BRVK	Borovoye	121.63	45	ePKPdf	PKPdf	20 32 06.5	-0.6
BRVK				LR	LR		
comp=Z,1μm,21.0s							
BRVK	Borovoye	121.63	45c	iPKIKP	PKiKP	20 32 08.0	+0.8
BRVK				pmax	pmax		
comp=Z,14nm,2.5s							
BRVK	Borovoye	121.63	45	P	PKPdf	20 32 06.8	-0.2
SNR=5.6							
ISA	Isabella, Lake	121.66	291	ePKPdf	PKPdf	20 32 05.6	-2.2
ISA				ePP	PP	20 33 36.3	-4.7
ISA				LR	LR		
comp=Z,2μm,20.0s							
ISA	Isabella, Lake	121.66	291	ePKIKP	PKPdf	20 32 05.6	-2.2
ISA				MLR	MLR		
comp=Z,2μm,20.0s							
LSA	Lhasa	121.94	78	ePKPdf	PKPdf	20 32 07.7	-1.3
LSA				LR	LR		
comp=Z,1μm,20.0s							
FFC	Flin Flon	122.05	317	ePKPdf	PKPdf	20 32 07.5	-0.3
FFC	Flin Flon	122.05	317	ePKIKP	PKPdf	20 32 07.5	-0.3
LUWI	Luwuk	122.28	129	PFAKE		20 32 20.0	+10
LUWI				LR	LR		
comp=Z,900nm,20.0s							
ELK	Elko	122.29	297	ePKPdf	PKPdf	20 32 07.7	-1.4
ELK	Elko	122.29	297	ePKIKP	PKPdf	20 32 07.7	-1.4
BOZ	Bozeman (W)	122.60	304	ePKPdf	PKPdf	20 32 09.1	-0.3
BOZ				ePP	PP	20 33 38.9	-8.4
BOZ				LR	LR		
comp=Z,2μm,22.0s							
EGMT	Eagleton	122.75	307	ePKPpre	PKPpre	20 31 59.1	
EGMT				ePKPdf	PKPdf	20 32 08.6	-0.9
EGMT				LR	LR		
comp=Z,1μm,18.0s							
NV11	Mina Array Sit	122.96	294	ePKPdf	PKiKP	20 32 10.9	+0.3
NVAR	Mina Array Bea	123.06	294	PKP	PKiKP	20 32 11.8	+0.9
comp=Z,1.3nm,1.0s,baz=150,slow=3.7,SNR=7.1							
NVAR				PKKPbc	PKKPbc	20 42 02.0	+1.0
comp=Z,0.3nm,0.6s,baz=245,slow=1.7,SNR=3.6							
DLMT	Dillon	123.06	303	ePKPdf	PKPdf	20 32 10.1	-0.2
DLMT				ePP	PP	20 33 48.4	-2.1
DLMT				LR	LR		
comp=Z,1μm,21.0s							
DLV	T Lat	123.09	106	PFAKE		20 32 20.0	+8.5
DLV				LR	LR		
comp=Z,800nm,19.0s							
MDPB	Devils Postpil	123.15	292	PFAKE		20 32 20.0	+8.9
MDPB				LR	LR		
comp=Z,2μm,20.0s							
HLID	Hailey	123.25	301	PFAKE		20 32 20.0	+9.0
HLID				LR	LR		
comp=Z,2μm,21.0s							
KVN	Kaiserville	123.25	294	ePKPdf	PKPdf	20 32 08.4	-2.5
KVN				LR	LR		
comp=Z,1μm,20.0s							
KVN	Kaiserville	123.25	294	ePKIKP	PKPdf	20 32 08.5	-2.5
KVN				MLR	MLR		
comp=Z,1μm,20.0s							
RYN	Ryan	123.31	294	ePKPdf	PKPdf	20 32 10.3	-0.7
RYN				LR	LR		
comp=Z,1μm,20.0s							
KBS	Kingsbay	123.65	6	PFAKE		20 32 20.0	+9.5
KBS				LR	LR		
comp=Z,700nm,22.0s							
WAKR	Walker	123.85	293	ePKPdf	PKPdf	20 32 10.8	-1.3
WAKR				LR	LR		
comp=Z,2μm,20.0s							
PANO	Nakornpanom	123.89	99	PKP	PKiKP	20 32 19.7	+6.9
KKM	Kota Kinabalu	123.95	118	PFAKE		20 32 20.0	+6.8
KKM				LR	LR		
comp=Z,2μm,21.0s							
YERR	Yerington	123.97	294	ePKPdf	PKPdf	20 32 12.4	+0.1
YERR				LR	LR		
comp=Z,2μm,20.0s							
CMB	Columbia Colle	124.24	292	ePKPdf	PKPdf	20 32 11.4	-1.2
PNTR	Pine Nut	124.27	294	PFAKE		20 32 20.0	+6.8
PNTR				LR	LR		
comp=Z,2μm,18.0s							
VCNR	Virginia City	124.41	294	PFAKE		20 32 20.0	+6.5
VCNR				LR	LR		
comp=Z,1μm,19.0s							
PAHR	Pah Rah Range	124.44	294	PFAKE		20 32 20.0	+6.6
PAHR				LR	LR		
comp=Z,2μm,19.0s							
MSO	Missoula	124.61	304	ePKPdf	PKPdf	20 32 12.5	-0.7
MSO				ePP	PP	20 33 56.2	-4.5
TULEG	Thule	124.61	347	ePKPdf	PKPdf	20 32 12.3	+0.2
TULEG				LR	LR		
comp=Z,700nm,21.0s							
RUBR	Rubicon Trail	124.61	293	PFAKE		20 32 30.0	+16
RUBR				LR	LR		
comp=Z,1μm,20.0s							
KURK	Kurchatov	124.91	51	ePKPdf	PKPdf	20 32 12.8	-0.6
KURK				LR	LR		
comp=Z,2μm,19.0s							
KURK	Kurchatov	124.91	51	P	PKPdf	20 32 13.1	-0.3
SNR=10							
MAKZ	Makanchi	124.98	56	ePKPdf	PKPdf	20 32 12.3	-1.5
MAKZ				LR	LR		
comp=Z,900nm,19.0s							
PLID	Pearl Lake	125.00	302	ePKPdf	PKPdf	20 32 13.3	-0.9
AFDM	Forest Hills D	125.11	293	ePKPdf	PKPdf	20 32 13.5	-0.8
AFDM				LR	LR		
comp=Z,1μm,21.0s							
MK31	Makanchi Array	125.16	56	ePKPdf	PKPdf	20 32 12.1	-2.0
MKAR	Makanchi Array	125.16	56	PKP	PKPdf	20 32 13.1	-1.0
comp=Z,3.3nm,1.1s,baz=261,slow=2.3,SNR=14							
MKAR				PP	PP	20 34 09.6	+5.2
comp=Z,1.2nm,1.0s,baz=260,slow=6.0,SNR=3.6							
MKAR				PKKPbc	PKKPbc	20 41 55.3	+2.6
comp=Z,0.4nm,0.8s,baz=64,slow=5.6,SNR=3.6							
BEKR	Beckworth	125.17	294	ePKPdf	PKPdf	20 32 13.9	-0.7
BEKR				LR	LR		
comp=Z,2μm,22.0s							
WVOR	Wild Horse Val	125.35	298	ePKPdf	PKPdf	20 32 13.4	-1.4
WVOR				LR	LR		
comp=Z,2μm,22.0s							
FAKI	Fak Fak	125.55	140	PFAKE		20 32 30.0	+14
FAKI				LR	LR		
comp=Z,400nm,19.0s							
WALA	Waterton Lakes	125.66	307	ePKPdf	PKPdf	20 32 12.6	-2.5
BMO	Blue Mountains	125.70	301	ePKPdf	PKPdf	20 32 14.6	-0.7
BMO				LR	LR		
comp=Z,2μm,22.0s							
J08A	Circle Bar Ran	125.70	299	ePKPdf	PKPdf	20 32 15.4	+0.1
J08A				LR	LR		
comp=Z,2μm,21.0s							
ORV	Oroville	125.77	293	PFAKE		20 32 30.0	+14
ORV				LR	LR		
comp=Z,1μm,19.0s							
SLVN	Son La	126.09	94	PFAKE		20 32 30.0	+13
SLVN				LR	LR		
comp=Z,1μm,19.0s							
MOD	Modoc Plateau	126.16	296	ePKPdf	PKPdf	20 32 15.5	-0.8
MOD				LR	LR		
comp=Z,1μm,21.0s							
GDXM	Geysers	126.25	292	PFAKE		20 32 30.0	+13
GDXM				LR	LR		
comp=Z,2μm,20.0s							
TNTI	Ternate	126.30	133	PFAKE		20 32 30.0	+12
TNTI				LR	LR		
comp=Z,300nm,22.0s							
HOPS	Hopland Field	126.53	292	PFAKE		20 32 30.0	+13
HOPS				LR	LR		
comp=Z,2μm,19.0s							
I07A	Izee	126.70	299	ePKPdf	PKPdf	20 32 15.6	-1.7
I07A				LR	LR		
comp=Z,3μm,22.0s							
G08A	Pilot Rock	126.94	300	ePKPdf	PKPdf	20 32 17.4	-0.3
G08A				LR	LR		
comp=Z,2μm,21.0s							
K05A	Summer Lake	126.94	297	ePKPdf	PKPdf	20 32 17.8	-0.1
K05A				LR	LR		
comp=Z,1μm,20.0s							
E09A	Wood Farm, Sta	127.00	302	ePKPdf	PKPdf	20 32 17.9	+0.3
E09A				LR	LR		
comp=Z,2μm,21.0s							
WMQ	Urumqi	127.08	62	PKP	PKiKP	20 32 18.5	+0.1
WMQ				PP	PP	20 34 22.2	+4.9
WMQ				AMB	AMB		
comp=Z,380nm,8.9s							
WMQ				LR	LR		
comp=Z,3μm,21.3s							
WMQ				LR	LR		
comp=Z,3μm,26.5s							
WMQ				LR	LR		
comp=Z,4μm,24.7s							
WMQ	Urumqi	127.08	62	PFAKE		20 32 30.0	+12
WMQ				LR	LR		
comp=Z,1μm,20.0s							
KCPM	Cahto Peak	127.22	292	PFAKE		20 32 30.0	+11
KCPM				LR	LR		
comp=Z,2μm,21.0s							
PINE	Pine Mountain	127.48	298	ePKPdf	PKPdf	20 32 18.4	-0.5
PINE				LR	LR		
comp=Z,2μm,21.0s							
KMI	Kunming	127.58	90	PKP	PKiKP	20 32 20.4	+0.2
KMI				sPKP		20 32 26.1	
KMI				PP	PP	20 34 27.1	+6.2
KMI				PKS		20 35 51.2	
KMI				SS	SS	20 51 36.4	+4.0
KMI				AMB	AMB		
comp=Z,150nm,5.6s							
KMI				LR	LR		
comp=Z,300nm,26.6s							
KMI				LR	LR		
comp=Z,810nm,16.8s							
KMI				LR	LR		
comp=Z,870nm,26.6s							
KMI	Kunming	127.58	90	PFAKE		20 32 30.0	+10
KMI				LR	LR		
comp=Z,900nm,21.0s							
YBH	Yreka Blue Hor	127.65	295	PFAKE		20 32 30.0	+10
YBH				LR	LR		
comp=Z,900nm,19.0s							
C09A	Chrisman Ranch	127.67	304	PFAKE		20 32 30.0	+11
C09A				LR	LR		
comp=Z,1μm,22.0s							
F07A	Phinny Hill Vi	127.82	301	PFAKE		20 32 30.0	+10
F07A				LR	LR		
comp=Z,2μm,21.0s							
KHMM	Horse Mountain	127.91	294	PFAKE		20 32 30.0	+10
KHMM				LR	LR		
comp=Z,1μm,20.0s							
G06A	Carlson Farm,	127.96	300	ePKPdf	PKPdf	20 32 19.3	-0.3
G06A				LR	LR		
comp=Z,2μm,22.0s							
HUMO	Hull Mountain	128.22	296	ePKPdf	PKPdf	20 32 18.8	-1.3
HUMO				LR	LR		
comp=Z,900nm,21.0s							
B08A	Colville Reser	128.55	304	ePKPdf	PKPdf	20 32 19.1	-1.4
H04A	Detroit Lake	128.69	298	PFAKE		20 32 30.0	+8.4
H04A				LR	LR		
comp=Z,2μm,22.0s							
QIZ	Qiongzhong	128.86	101	PFAKE		20 32 30.0	+7.3
QIZ				LR	LR		
comp=Z,2μm,19.0s							
RES	Resolute Bay	128.87	340	ePKPpre	PKPpre	20 32 12.5	
RES				ePKPdf	PKPdf	20 32 19.4	-0.9
LTY	Liberty	128.88	302	PFAKE		20 32 30.0	+8.1
LTY				LR	LR		
comp=Z,1μm,19.0s							
NVS	Novosibirsk	129.23	47	ePKIKP	PKPdf	20 32 20.3	-1.2
NVS				pmax	pmax		
comp=Z,58nm,2.0s							
NVS				pmax	pmax		
comp=N,10.0nm,1.4s							
NVS				pmax	pmax		
comp=E,11nm,1.4s							
COR	Corvallis	129.35	298	PFAKE		20 32 30.0	+7.2
COR				LR	LR		
comp=Z,1μm,22.0s							
LON	Longmire	129.37	301	ePKPpre	PKPpre	20 32 09.8	
LON				ePKPdf	PKPdf	20 32 21.5	-0.7
LON				LR	LR		
comp=Z,2μm,22.0s							
LON	Longmire	129.37	301	ePKHKP	PKPpre	20 32 09.8	
LON				e		20 32 21.5	
LON				MLR	MLR		
comp=Z,2μm,22.0s							
D05A	Enumclaw	129.66	301	PFAKE		20 32 30.0	+6.6
D05A				LR	LR		
comp=Z,2μm,19.0s							
ZAA0	Zalesovo Array	129.74	49	ePKPpre	PKPpre	20 32 11.3	
ZAA0				ePKPdf	PKPdf	20 32 21.9	-0.6
ZALV	Zalesovo Beam	129.74	49	PKP	PKPdf	20 32 22.1	-0.4
comp=Z,3.6nm,1.2s,baz=273,slow=2.6,SNR=4.9							
ZALV				SKPbc	SKPab	20 35 43.5	-0.6
comp=Z,0.9nm,0.6s,baz=224,slow=10,SNR=4.4							
F03A	Seaside	130.11	299	PFAKE		20 32 30.0	+5.7
F03A				LR	LR		
comp=Z,2μm,22.0s							
NLWA	Neilton Lookou	130.91	301	PFAKE		20 32 40.0	+14
NLWA				LR	LR		
comp=Z,2μm,22.0s							
GYA	Guiyang	131.21	91	iPKP	PKiKP	20 32 27.5	+0.2
GYA				SKKS		20 41 43.5	
GYA				AMB	AMB		
comp=Z,160nm,9.0s							
GYA				LR	LR		
comp=Z,680nm,23.6s							
GYA				LR	LR		
comp=Z,580nm,22.9s							
GYA				LR	LR		
comp=Z,1μm,26.9s							
YKA	Yellowknife Ar	131.30	322	PKP	PKPdf	20 32 24.8	-0.4
comp=Z,5.6nm,0.9s,baz=102,slow=1.9,SNR=13							
YKW3	Yellowknife Ar	131.32	322	ePKPdf	PKPdf	20 32 23.7	-1.6
CD2	Chengdu	131.63	84	PKP	PKPdf	20 32 27.0	0.0
CD2				PP	PP	20 34 51.4	+4.3
CD2				AMB	AMB		
comp=Z,280nm,8.6s							
CD2				LR	LR		
comp=Z,1μm,27.0s							
CD2				LR	LR		
comp=Z,2μm,20.6s							
CD2				LR	LR		
comp=Z,2μm,26.5s							
MANU	Manus Island	132.02	158	PFAKE		20 32 40.0	+11
MANU				LR	LR		
comp=Z,1μm,19.0s							
GTA	Gaotai	133.10	72	PKP	PKPdf	20 32 29.0	-0.6
GTA				LR	LR		
comp=Z,740nm,21.0s							
GTA				LR	LR		
comp=Z,850nm,19.9s							
GTA				LR	LR		
comp=Z,1μm,21.6s							
HKPS	Hong Kong Po S	134.02	101	PFAKE		20 32 40.0	+7.0
HKPS				LR	LR		
comp=Z,1μm,19.0s							
LZH	Lanzhou	134.36	78	ePKP	PKPdf	20 32 32.8	+0.7
LZH				PP	PP	20 35 09.5	+4.8
LZH				SKKS		20 41 57.8	
LZH				SS	SS	20 52 57.1	+1.8
LZH				AMB	AMB		
comp=Z,310nm,7.6s							
LZH				LR	LR		
comp=Z,740nm,17.4s							
LZH				LR	LR		
comp=Z,760nm,15.7s							
LZH				LR	LR		
comp=Z,600nm,18.4s							
NRIK	Noril'sk	134.98	29	PKP	PKPdf	20 32 31.8	-0.2
comp=Z,4.0nm,0.6s,baz=197,slow=1.1,SNR=9.8							
ENH	Enshi	135.42	89	PFAKE		20 32 50.0	+14
ENH				LR	LR		
comp=Z,1μm,21.0s							
XAN	Xi'an	136.98	84	PFAKE		20 32 50.0	+11
XAN				LR	LR		
comp=Z,701nm,21.0s							
DLBC	Dease Lake	137.75	314	ePKPdf	PKPdf	20 32 34.4	-3.2
JCUZ	Jacuzzi	137.87	248	PFAKE		20 32 50.0	+9.0
JCUZ				LR	LR		
comp=Z,2μm,18.0s							
NPOC	North of Pu'u	137.88	248	PFAKE		20 32 50.0	+9.0
NPOC				LR	LR		
comp=Z,2μm,18.0s							
STCH	Steam Cracks	137.89	248	PFAKE		20 32 50.0	+9.0
STCH				LR	LR		
comp=Z,2μm,18.0s							
SDHHI	Sand Hill	138.00	248	PFAKE		20 32 50.0	+8.7
SDHHI				LR	LR		
comp=Z,2μm,18.0s							
AIN	Ainahou	138.10	248	PFAKE		20 32 50.0	+8.4
AIN				LR	LR		
comp=Z,2μm,18.0s							
MWH	Moku'aweowe	138.27	248	PFAKE		20 32 50.0	+7.6
MWH				LR	LR		
comp=Z,2μm,19.0s							
MOY	Mondy	138.31	56	ePKHKP	PKPpre	20 32 31.5	
MOY				pmax	pmax		
comp=Z,55nm,1.4s							
KNMB	Chin-men Tao	138.41	103	PFAKE		20 32 50.0	+8.2
KNMB				LR	LR		
comp=Z,1μm,22.0s							
WHN	Wuhan	139.09	92	PKP	PKPdf	20 32 40.8	0.0
WHN				PP	PP	20 35 36.8	+2.7
WHN				SKP		20 36 23.3	
WHN				AMB	AMB		
comp=Z,510nm,15.2s							
WHN				LR	LR		
comp=Z,2μm,20.3s							
WHN				LR	LR		
comp=Z,3μm,21.2s							
WHN				LR	LR		
comp=Z,4μm,37.0s							
TWG	Pinlang	139.23	107	PFAKE		20 32 50.0	+6.4
TWG				LR	LR		
comp=Z,3μm,20.0s							
TPUB	Ta-pu	139.24	106	PFAKE		20 32 50.0	+6.4
TPUB				LR	LR		
comp=Z,800nm,21.0s							
ZAK	Zakamensk	139.37	59	ePKHKP	PKPpre	20 32 34.1	
ZAK				pmax	pmax		
comp=Z,12nm,1.8s							
YULB	Yu-li	139.76	106	PFAKE		20 32 50.0	+5.3
YULB				LR	LR		
comp=Z,800nm,22.0s							
SSLB	Suanglung	139.78	106	PFAKE		20 32 50.0	+5.3
SSLB				LR	LR		
comp=Z,1μm,19.0s							
INK	Inuvik	139.81	329	ePKPpre	PKPpre	20 32 32.1	
INK				LR	LR		
comp=Z,2μm,18.0s							
INK	Inuvik	139.81	329	ePKHKP	PKPpre	20 32 32.1	
INK				MLR	MLR		
comp=Z,2μm,18.0s							
TLY	Talaya	139.91	57	PFAKE		20 32 50.0	+5.9
TLY				LR	LR		
comp=Z,1μm,20.0s							
TLY	Talaya	139.91	57c	iPKIKP	PKiKP	20 32 45.3	+1.2
TLY				pmax	pmax		
comp=Z,68nm,1.7s							
TLY	Talaya	139.91	57	P	PKPdf	20 32 39.0	-2.7
SNR=11							
WHY	Whitehorse	140.47	317	ePKPpre	PKPpre	20 32 35.0	
WHY				ePKPdf	PKPdf	20 32 42.5	0.0
NACB	Ninganchiao	140.48	106	PFAKE		20 32 50.0	+3.9
NACB				LR	LR		
comp=Z,1μm,21.0s							
YHNB	Yeheng	140.64	105	PFAKE		20 33 00.0	+13
YHNB				LR	LR		
comp=Z,900nm,21.0s							
SONM	Songino Array	140.66	63	PKhKP	PKPpre	20 32 36.0	
comp=Z,4.6nm,1.1s,baz=217,slow=2.5,SNR=11							
BTO	Baotou	140.70	76	ePKP	PKPdf	20 32 41.5	-2.1
ULN	Ulaanbaatar	141.10	64	ePKPpre	PKPpre	20 32 37.0	
ULN				ePKPdf	PKPdf	20 32 43.6	-0.5
ULN				LR	LR		
comp=Z,1μm,20.0s							
ULN	Ulaanbaatar	141.10	64	ePKHKP	PKPpre	20 32 37.0	
ULN				e		20 32 43.6	
ULN				MLR	MLR		
comp=Z,1μm,20.0s							
ULN	Ulaanbaatar	141.10	64	P	PKPdf	20 32 43.9	-0.3
SNR=19							
EPYK	Eagle Plains	141.21	326	ePKPpre	PKPpre	20 32 37.2	
EPYK				ePKPdf	PKPdf	20 32 43.2	-0.4
TIY	Taiyuan	141.22	81	ePKP	PKPdf	20 32 42.6	-2.0
TIY				PP	PP	20 35 50.4	+3.1
TIY				SKKS		20 42 40.4	
TIY				SS	SS	20 54 16.1	-0.3
TIY				AMB	AMB		
comp=Z,200nm,5.0s							
TIY				LR	LR		
comp=Z,270nm,13.6s							
TIY				LR	LR		
comp=Z,260nm,14.8s							
TIY				LR	LR		
comp=Z,500nm,19.5s							
YOJ	Yonaguni jima	141.65	107	PFAKE		20 33 00.0	+12
YOJ				LR	LR		
comp=Z,900nm,21.0s							
HYT	Haines Junctio	141.76	317	ePKPdf	PKPdf	20 32 42.6	-2.2
HHC	Hu-ho-hao-te	141.88	76	ePKP	PKPdf	20 32 39.2	-6.5
HHC				sPKP		20 32 54.0	
HHC				PP	PP	20 35 56.6	+5.3
NJ2	Nanjing	143.15	93	ePKP	PKPdf	20 32 49.3	+1.2
EGAK	Eagle	143.22	324	ePKPpre	PKPpre	20 32 44.9	
CTGM	Chitina Glacie	143.63	318	ePKPpre	PKPpre	20 32 45.7	
TIA	Tai'an	143.93	86	PKP	PKPab	20 32 45.6	-1.0
BALM	Baldy	144.12	318	ePKPdf	PKPab	20 32 46.5	-0.2
BALM				LR	LR		
comp=Z,1μm,22.0s							
BALM	Baldy	144.12	318	ePKIKP	PKPab	20 32 46.5	-0.2
BALM				MLR	MLR		
comp=Z,1μm,22.0s							
FYU	Fort Yukon	144.54	328	ePKPdf	PKPab	20 32 47.6	-0.3
MENT	Mentasta	144.59	321	ePKPdf	PKPab	20 32 48.1	-0.1
DOT	Dot Lake	144.64	322	ePKPdf	PKPab	20 32 48.1	-0.3
DOT				LR	LR		
comp=Z,1μm,18.0s							
BJT	Baijiatuau	144.82	79	ePKPdf	PKPab	20 32 49.0	-0.7
BJT				LR	LR		
comp=Z,800nm,18.0s							
BJT	Baijiatuau	144.82	79	ePKIKP	PKPab	20 32 49.0	-0.7
BJT				MLR	MLR		
comp=Z,800nm,18.0s							
BJI	Beijing	144.83	79	PKP	PKPab	20 32 49.2	-0.6
PRP	Porcupine Dome	144.90	326	ePKPdf	PKPab	20 32 49.2	-0.3
RIDG	Independent Ri	144.97	323	ePKPdf	PKPab	20 32 49.6	-0.1
RIDG				LR	LR		
comp=Z,1μm,20.0s							
HMT	Hamilton	145.11	317	ePKPbc	PKPbc	20 32 50.2	0.0
HARP	HAARP	145.31	320	ePKPbc	PKPbc	20 32 50.7	-0.1
PAX	Paxson	145.37	321	ePKPbc	PKPbc	20 32 50.6	-0.4
PAX	Paxson	145.37	321	ePKIKP	PKPbc	20 32 50.6	-0.4
TOLK	Toolik Lake Re	145.49	332	ePKPbc	PKPdf	20 32 50.2	-0.9
ILAR	Eielson Array	145.63	325	PKPbc	PKPdf	20 32 50.8	-0.6
comp=Z,44nm,1.0s,baz=106,slow=1.2,SNR=76							
ILB	Eielson Array	145.63	325	ePKPdf	PKPdf	20 32 50.5	-0.9
DIV	Divide	145.77	318	ePKPdf	PKPdf	20 32 52.0	+0.2
EYAK	Cordova Ski Ar	145.83	317	ePKPdf	PKPab	20 32 52.7	-0.1
COLA	College	146.01	325	ePKPdf	PKPdf	20 32 51.9	0.0
COLA				LR	LR		
comp=Z,1μm,22.0s							
COLA	College	146.01	325	ePKP2	PKPdf	20 32 51.9	0.0
COLA				MLR	MLR		
comp=Z,1μm,22.0s							
CIT	Chita	146.02	58	ePKP2	PKPdf	20 32 52.9	+0.4
CIT				pmax	pmax		
comp=Z,256nm,1.6s							
CCB	Clear Creek Bu	146.05	325	ePKPdf	PKPdf	20 32 51.9	-0.2
CCB				LR	LR		
comp=Z,1μm,21.0s							
MDM	Murphy Dome	146.15	325	ePKPdf	PKPdf	20 32 52.6	+0.3
MDM				LR	LR		
comp=Z,1μm,20.0s							
DHY	Denali Highway	146.21	322	ePKPdf	PKPdf	20 32 53.2	+0.6
DHY				LR	LR		
comp=Z,800nm,20.0s							
WRH	Wood River Hil	146.21	324	ePKPdf	PKPdf	20 32 51.7	-0.6
COLD	Coldfoot	146.22	330	ePKPdf	PKPdf	20 32 52.5	+0.2
GLI	Glacier Island	146.44	318	ePKPdf	PKPdf	20 32 53.6	+0.8
GLI				LR	LR		
comp=Z,1μm,21.0s							

BOD	**Bodaibo**	**146.47**	**48**	*e*PKIKP	**PKPdf**	**20 32 52.6**	**-0.4**
BOD				pmax	pmax		
	comp=Z,191nm,2.2s						
MCK	**McKinley**	**146.75**	**323**	*e*PKPdf	**PKPdf**	**20 32 53.3**	**0.0**
MCK	**McKinley**	**146.75**	**323**	*e*PKIKP	**PKPdf**	**20 32 53.3**	**0.0**
RND	**Reindeer**	**146.79**	**323**	*e*PKPdf	**PKPdf**	**20 32 53.5**	**+0.1**
BWN	**Browne**	**146.87**	**324**	*e*PKPdf	**PKPdf**	**20 32 53.4**	**-0.1**
SML	**Sawmill**	**146.88**	**320**	*e*PKPdf	**PKPdf**	**20 32 54.1**	**+0.5**
KNK	**Knik Glacier**	**147.01**	**319**	*e*PKPdf	**PKPdf**	**20 32 54.6**	**+0.8**
KNK				LR	LR		
	comp=Z,1μm,18.0s						
GHO	**Glory Hole Cre**	**147.17**	**320**	*e*PKPdf	**PKPbc**	**20 32 55.8**	**-0.6**
PMR	**Palmer**	**147.30**	**320**	*e*PKPdf	**PKPdf**	**20 32 55.1**	**+0.9**
PMR				LR	LR		
	comp=Z,1μm,21.0s						
TRF	**Thorofare Moun**	**147.41**	**323**	*e*PKPdf	**PKPdf**	**20 32 55.6**	**+1.0**
TIXI	**Tiksi**	**147.45**	**20**	*e*PKPdf	**PKPdf**	**20 32 53.3**	**-0.9**
TIXI				LR	LR		
	comp=Z,1μm,21.0s						
TIXI	**Tiksi**	**147.45**	**20**	*e*PKIKP	**PKPdf**	**20 32 53.3**	**-0.9**
TIXI				MLR	MLR		
	comp=Z,1μm,21.0s						
BPAW	**Bear Paw Mtn.**	**147.53**	**324**	*e*PKPdf	**PKPdf**	**20 32 54.3**	**-0.3**
KTH	**Kantishna Hill**	**147.65**	**323**	*e*PKPdf	**PKPdf**	**20 32 52.0**	**-2.9**
KTH				*e*PKPbc	**pPKPdf**	**20 32 57.7**	**+0.2**
RC01	**Rabbit Creek A**	**147.68**	**319**	*e*PKPbc	**PKPbc**	**20 32 58.4**	**+0.7**
SUA	**Susitna One**	**148.08**	**320**	*e*PKPdf	**PKPdf**	**20 32 55.3**	**-0.4**
SUA				*e*PKPbc	**sPKPdf**	**20 32 59.9**	**+0.8**
CAST	**Castle Rocks**	**148.19**	**323**	*e*PKPdf	**PKPdf**	**20 32 54.6**	**-1.1**
CAST				*e*PKPbc	**PKPbc**	**20 32 58.9**	**-0.2**
DL2	**Dalian**	**148.30**	**84**	⇓PKPbc	**PKPdf**	**20 32 54.7**	**-1.9**
DL2				PP	**PP**	**20 36 28.5**	**-0.9**
DL2				SS	SS	20 55 36.5	-0.9
DL2				AMB	AMB		
	comp=Z,390nm,7.9s						
DL2				LR	LR		
	comp=Z,370nm,19.8s						
DL2				LR	LR		
	comp=Z,690nm,18.6s						
DL2				LR	LR		
	comp=Z,1μm,18.1s						
BRLK	**Bradley Lake**	**148.48**	**316**	*e*PKPbc	**PKPbc**	**20 33 00.1**	**+0.1**
CNPM	**China Poot**	**148.69**	**316**	*e*PKPbc	**PKPbc**	**20 33 00.5**	**+0.1**
RSO	**Redoubt South**	**149.26**	**318**	*e*PKPdf	**PKPdf**	**20 32 58.3**	**+0.5**
RSO				*e*PKPbc	**PKPbc**	**20 33 02.8**	**+0.7**
HIA	**Hailar**	**149.63**	**64**	PFAKE		20 33 10.0	+1.6
HIA				LR	LR		
	comp=Z,800nm,20.0s						
KDAK	**Kodiak Island**	**149.66**	**313**	*e*PKPbc	**PKiKP**	**20 33 04.3**	**+0.4**
RDOG	**Red Dog Mine**	**150.09**	**335**	*e*PKPdf	**PKPdf**	**20 32 57.2**	**-1.4**
RDOG				*e*PKPbc	**PKPbc**	**20 33 03.9**	**+0.2**
RDOG				LR	LR		
	comp=Z,800nm,22.0s						
OHAK	**Old Harbor**	**150.12**	**312**	*e*PKPdf	**PKPdf**	**20 32 57.8**	**-1.1**
OHAK				*e*PKPbc	**PKPbc**	**20 33 04.5**	**+0.5**
OHAK				LR	LR		
	comp=Z,1μm,18.0s						
SNY	**Shenyang**	**150.71**	**80**	⇓PKPbc	**PKPdf**	**20 33 03.2**	**+2.8**
SNY				AMB	AMB		
	comp=Z,490nm,8.2s						
SNY				LR	LR		
	comp=Z,760nm,21.4s						
SNY				LR	LR		
	comp=Z,470nm,21.4s						
SNY				LR	LR		
	comp=Z,1μm,24.6s						
TJN	**Taejon**	**151.40**	**93***c*	*i*PKIKP	**PKiKP**	**20 33 10.1**	**+1.9**
KS15	**Wonju Array Si**	**152.24**	**91**	*e*PKPdf	**PKPdf**	**20 33 01.0**	**-1.9**
KS15				*e*PKPbc	**PKPbc**	**20 33 09.3**	**-0.3**
KS15				*e*PKPab	**PKPab**	**20 33 19.8**	**+0.3**
KSRS	**Korea Array**	**152.27**	**91**	PKP	**PKPdf**	**20 33 01.6**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=204,slow=27,SNR=5.3						
KSRS				PKPbc	**PKPbc**	**20 33 09.4**	**-0.2**
	comp=Z,3.2nm,1.0s,baz=266,slow=1.8,SNR=12						
KSRS				PKPab	**PKPab**	**20 33 18.6**	**-1.0**
	comp=Z,18nm,1.1s,baz=251,slow=4.5,SNR=17						
CN2	**Changchun**	**152.56**	**77**	PKPbc	**PKPdf**	**20 33 03.1**	**0.0**
CN2				*e*PP	**PP**	**20 36 57.6**	**+3.6**
CN2				*e*SS	SS	20 56 24.2	-0.5
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,500nm,21.0s						
CN2				LR	LR		
	comp=Z,900nm,21.0s						
CN2				LR	LR		
	comp=Z,900nm,19.0s						
ANM	**Nome**	**152.96**	**331**	*e*PKPdf	**PKPdf**	**20 32 60.0**	**-3.1**
ANM				*e*PKPbc	**PKiKP**	**20 33 10.6**	**+0.1**
ANM				LR	LR		
	comp=Z,1μm,22.0s						
ANM	**Nome**	**152.96**	**331**	*e*PKIKP	**PKPdf**	**20 33 00.0**	**-3.1**
ANM				MLR	MLR		
	comp=Z,1μm,22.0s						
YAK	**Yakutsk**	**153.07**	**36**	*e*PKPdf	**PKPdf**	**20 33 02.2**	**-1.0**
YAK				*e*PKPbc	**sPKPdf**	**20 33 08.5**	**+1.8**
YAK				LR	LR		
	comp=Z,999nm,20.0s						
YAK	**Yakutsk**	**153.07**	**36**	*e*PKIKP	**PKPdf**	**20 33 01.6**	**-1.6**
ZEA	**Zeya**	**154.30**	**54**	*i* PKIKP	**PKPdf**	**20 33 04.2**	**-1.1**
ZEA				pmax	pmax		
	comp=N,64nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,73nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,600nm,9.0s						
MDJ	**Mudanjiang**	**155.65**	**76**	PKP	**PKPdf**	**20 33 06.1**	**-1.4**
MDJ				AMB	AMB		
	comp=Z,620nm,6.9s						
MDJ	**Mudanjiang**	**155.65**	**76**	PFAKE		20 33 20.0	+13
MDJ				LR	LR		
	comp=Z,900nm,21.0s						
BILL	**Bilibino**	**155.72**	**358**	*e*PKPdf	**PKPdf**	**20 33 04.9**	**-1.9**
BILL	**Bilibino**	**155.72**	**358**	*e*PKIKP	**PKPdf**	**20 33 04.9**	**-1.9**
FALS	**False Pass**	**156.14**	**309**	PFAKE		20 33 20.0	+12
FALS				LR	LR		
	comp=Z,700nm,19.0s						
USRK	**Ussuriysk Ar.**	**157.26**	**78**	PKPab	**PKPab**	**20 33 39.6**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=238,slow=4.9,SNR=7.3						
INU	**Inuyama**	**157.83**	**103**	PFAKE		20 33 20.0	+9.4
INU				LR	LR		
	comp=Z,800nm,21.0s						
SPIA	**Saint Paul Isl**	**158.90**	**318**	PFAKE		20 33 20.0	+8.9
SPIA				LR	LR		
	comp=Z,1μm,18.0s						
MJB9	**Matsu-Tunnel**	**159.25**	**102**	*e*PKPdf	**PKPdf**	**20 33 10.7**	**-1.6**
MJB9				*e*PKPab	**PKPab**	**20 33 49.7**	**+0.1**
MAJO	**Matsushiro**	**159.26**	**102**	*e*PKPdf	**PKPdf**	**20 33 10.5**	**-1.8**
MAJO				*e*PKPab	**PKPab**	**20 33 49.9**	**+0.2**
MAJO				*e*PP	**PP**	**20 37 29.2**	**-2.0**
MAJO				LR	LR		
	comp=Z,1μm,21.0s						
MAJO	**Matsushiro**	**159.26**	**102**	*e*PKIKP	**PKPdf**	**20 33 10.5**	**-1.8**
MAJO				*e*		20 33 49.9	
MAJO				*e*		20 37 29.2	
MAJO				MLR	MLR		
	comp=Z,1μm,21.0s						
MAT	**Matsushiro**	**159.26**	**102**	PKP	**PKPdf**	**20 33 11.3**	**-1.0**
MJAR	**Matsushiro Arr**	**159.26**	**102**	PKP	**PKPdf**	**20 33 11.4**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=246,slow=1.0,SNR=5.6						
MJAR				PKPab	**PKPab**	**20 33 49.6**	**0.0**
	comp=Z,10.0nm,1.1s,baz=240,slow=4.6,SNR=10						
MJAR				PP	**PP**	**20 37 28.3**	**-2.9**
	comp=Z,5.0nm,1.1s,baz=234,slow=7.4,SNR=8.8						
NIKH	**Nikolski High**	**159.73**	**306**	PFAKE		20 33 20.0	+7.8
NIKH				LR	LR		
	comp=Z,1μm,21.0s						
MA2	**Magadan**	**162.39**	**22**	*e*PKPdf	**PKPdf**	**20 33 14.7**	**-0.2**
MA2				*e*PKPab	**PKPab**	**20 34 01.4**	**-1.1**
ATKA	**Atka Island**	**163.07**	**307**	*e*PKPdf	**PKPdf**	**20 33 14.4**	**-1.3**
ADK	**Adak**	**164.61**	**308**	*e*PKPdf	**PKPdf**	**20 33 14.3**	**-2.9**
ADK	**Adak**	**164.61**	**308**	*e*PKIKP	**PKPdf**	**20 33 14.3**	**-2.9**
YSS	**Yuzh-Sakhalins**	**164.97**	**71**	*e*PKIKP	**PKPdf**	**20 33 11.8**	**-5.8**
YSS				*e*		20 34 09.4	
YSS				*e*		21 04 59.0	
YUK	**Yuzh-Kuril'sk**	**167.14**	**83***c*	*i*PKIKP	**PKPdf**	**20 33 18.0**	**-1.5**

ROM 07 20:24:41.7±0.2, 43°.13N±0°.02×11°.07E±0°.02, h8km, Md0.8/2, Error ellipse: s-maj=2.1km s-min=0.8km az=322.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FROS	**Frosini**	**0.10**	**41**	P	Pg	20 24 44.6	+0.5
FROS				S	Sg	20 24 46.2	+0.4
FROS				END			
FROS				END			
FROS				END			
FROS				END			
TRIF	**Trifonti**	**0.12**	**261**	P	Pg	20 24 45.0	+0.6
TRIF				S	Sg	20 24 47.0	+0.6
TRIF				END			
TRIF				END			
TRIF				END			
TRIF				END			
CASP	**Castiglione de**	**0.37**	**203**	P	Pb	20 24 50.2	-0.3
CASP				S	Sg	20 24 55.2	+1.3
CAVE	**Cavezzo**	**1.73**	**358**	AML	AML		
	comp=N,633μm,1.0s						
CAVE				AML	AML		
	comp=E,678μm,1.1s						
CAVE				AML	AML		
	comp=N,633μm,1.0s						
CAVE				AML	AML		
	comp=E,678μm,1.1s						

*ISCJB **07** 20:29:11.3±0.5, 24°.22S±0°.05×67°.20W±0°.03, h186km±6km, mb3.0/1, Error ellipse: s-maj=7.5km s-min=4.5km az=14.7*
*SJA **07** 20:29:11.1±0.4, 24°.23S×67°.14W, h187km±3km, ML2.6, MW3.1*
*GUC **07** 20:29:13.2±0.5, 24°.21S×67°.42W, h204km±7km, ML4.1*
*IDC **07** 20:29:14.2±1.3, 23°.88S×67°.13W, h195km±14km, mb3.0/1, mb1 3.3/7, mb1mx3.2/26, mbtmp3.7/7, Error ellipse: s-maj=24.8km s-min=19.2km az=179.0*

ISC 07 20:29:12.3±0.8, 24°.15S±0°.05×67°.19W±0°.04, h186km±8km, n43, σ1§42/58, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.64**	**111**	*e*P	**Pn**	**20 29 45.2**	**-1.1**
SLA				*e*S	**Sn**	**20 30 10.7**	**-1.8**
SLA				IAML		20 30 11.8	
	comp=Z,45nm,0.6s						
HJA	**Humahuaca**	**1.88**	**60**	*e*P	**Pn**	**20 29 48.9**	**0.0**
HJA				IAML		20 29 51.2	
	comp=Z,27nm,0.4s						
HJA				*e*S	**Sn**	**20 30 16.9**	**-0.4**
AZAP	**Zapla**	**1.94**	**93**	*e*P	**Pn**	**20 29 48.6**	**-0.8**
AZAP				IAML		20 29 49.7	
	comp=Z,33nm,0.6s						
AZAP				*e*S	**Sn**	**20 30 16.4**	**-1.7**
LVC	**Limon Verde**	**2.20**	**314**	P	**Pn**	**20 29 53.4**	**+1.0**
	comp=Z,18nm,0.3s,baz=150,slow=7.2,SNR=77						
LVC				S	**Sn**	**20 30 23.9**	**+0.4**
	comp=Z,30nm,0.3s,baz=302,slow=22,SNR=56						
LVC	**Limon Verde**	**2.20**	**314**	*e*P	**Pn**	**20 29 53.1**	**+0.6**
LVC				IAML		20 30 30.9	
	comp=Z,57nm,0.3s						
LVC	**Limon Verde**	**2.20**	**314**	*e*P	**Pn**	**20 29 53.2**	**+0.8**
LVC				*e*S	**Sn**	**20 30 23.6**	**0.0**
FSA	**Cafayete**	**2.24**	**151**	*e*P	**Pn**	**20 29 51.2**	**-1.4**
PB15	**IPOC Station P**	**2.29**	**294**	*e*P	**Pn**	**20 29 53.6**	**+0.3**
PB15				*e*S	**Sn**	**20 30 24.8**	**-0.2**
PB15	**IPOC Station P**	**2.29**	**294**	⇑*e*P	**Pn**	**20 29 53.9**	**+0.6**
PB15				*e*S	**Sn**	**20 30 24.4**	**-0.6**
GO02	**Mina Guanaco**	**2.41**	**245**	⇑*e*P	**Pn**	**20 29 54.2**	**-0.4**
GO02				*i* S	**Sn**	**20 30 26.2**	**-1.3**
YJA	**Yavi**	**2.50**	**38**	*e*P	**Pn**	**20 29 56.4**	**+0.5**
YJA				*e*S	**Sn**	**20 30 29.8**	**+0.3**
YJA				IAML		20 30 33.8	
	comp=Z,5.4nm,0.6s						
PB06	**IPOC Station P**	**2.62**	**303**	*e*P	**Pn**	**20 29 57.4**	**+0.5**
PB06				*e*S	**Sn**	**20 30 31.3**	**-0.3**
PB06	**IPOC Station P**	**2.62**	**303**	⇑*e*P	**Pn**	**20 29 57.6**	**+0.6**
PB06				*e*S	**Sn**	**20 30 31.0**	**-0.6**
PB06				IAML		20 30 32.8	
	comp=N,768nm,0.3s						
PB14	**IPOC Station P**	**2.97**	**260**	*e*P	Pn	20 29 52.8	-8.4
PB09	**IPOC Station P**	**3.01**	**321**	*e*P	**Pn**	**20 30 02.3**	**+0.6**
PB09	**IPOC Station P**	**3.01**	**321**	*e*P	**Pn**	**20 30 03.0**	**+1.4**
PB09				IAML		20 30 41.7	
	comp=N,214nm,0.4s						
PB05	**IPOC Station P**	**3.06**	**294**	*e*P	**Pn**	**20 30 02.3**	**+0.2**
PB05	**IPOC Station P**	**3.06**	**294**	⇑*e*P	**Pn**	**20 30 01.9**	**-0.1**
PB05				*i* S	**Sn**	**20 30 38.8**	**-2.0**
PB05				IAML		20 30 40.5	
	comp=N,241nm,0.3s						
PB10	**IPOC Station P**	**3.15**	**281**	*e*P	**Pn**	**20 30 03.5**	**+0.4**
PB10	**IPOC Station P**	**3.15**	**281**	*e*P	**Pn**	**20 30 02.8**	**-0.2**
PB10				*e*S	**Sn**	**20 30 40.5**	**-2.1**
PB10				IAML		20 30 46.0	
	comp=N,210nm,0.3s						
PB03	**IPOC Station P**	**3.16**	**311**	*e*P	**Pn**	**20 30 03.8**	**+0.5**
PB03	**IPOC Station P**	**3.16**	**311**	⇓*e*P	**Pn**	**20 30 04.0**	**+0.6**
PB03				*e*S	**Sn**	**20 30 42.1**	**-1.0**
PB03				IAML		20 30 44.2	
	comp=N,373nm,0.2s						
PB04	**IPOC Station P**	**3.27**	**303**	*e*P	**Pn**	**20 30 05.2**	**+0.5**
PB04	**IPOC Station P**	**3.27**	**303**	*e*P	**Pn**	**20 30 05.1**	**+0.4**
PB04				*e*S	**Sn**	**20 30 44.0**	**-1.6**
PB07	**IPOC Station P**	**3.46**	**314**	*e*P	**Pn**	**20 30 07.7**	**+0.5**
PB07	**IPOC Station P**	**3.46**	**314**	*e*P	**Pn**	**20 30 07.5**	**+0.3**
PB01	**IPOC Station P**	**3.75**	**325**	*e*P	**Pn**	**20 30 11.0**	**+0.4**
PB01				*i* S	**Sn**	**20 30 55.2**	**-1.0**
PB02	**IPOC Station P**	**3.77**	**318**	*e*P	**Pn**	**20 30 11.7**	**+0.9**
PB08	**IPOC Station P**	**4.39**	**335**	*e*P	**Pn**	**20 30 19.8**	**+0.8**
GO03	**Copiap**	**4.39**	**218**	*e*P	**Pn**	**20 30 16.1**	**-2.5**
PB11	**IPOC Station P**	**4.93**	**332**	*e*P	**Pn**	**20 30 26.1**	**+0.3**
MNMCX	**Minye Minye**	**5.47**	**335**	*e*P	**Pn**	**20 30 33.4**	**+0.5**
PB16	**IPOC Station P**	**6.18**	**339**	*e*P	**Pn**	**20 30 43.1**	**+0.8**
PB12	**IPOC Station P**	**6.24**	**331**	*e*P	**Pn**	**20 30 43.0**	**+0.3**
CFA	**Coronel Fontan**	**7.49**	**187**	S	Sn	20 32 13.8	-10
	comp=N,0.5nm,0.3s,baz=90,slow=20,SNR=3.3						
LPAZ	**La Paz**	**7.87**	**353**	P	**Pn**	**20 31 04.9**	**+0.3**
	comp=N,0.7nm,0.3s,baz=148,slow=5.7,SNR=15						
LPAZ				S	**Sn**	**20 32 27.4**	**-6.1**
	comp=N,0.1nm,0.3s,baz=177,slow=2.3,SNR=1.8						
CPUP	**Villa Florida**	**9.19**	**106**	P	**Pn**	**20 31 23.9**	**+2.8**
	comp=N,0.1nm,0.3s,baz=270,slow=6.1,SNR=2.3						
SIV	**San Ignacio**	**9.94**	**36**	P	**Pn**	**20 31 29.1**	**-2.0**
	comp=N,0.5nm,0.3s,baz=220,slow=12,SNR=9.6						
PLCA	**Paso Flores**	**16.77**	**189**	P	**Pn**	**20 33 00.6**	**+3.9**
	comp=N,0.2nm,0.3s,baz=26,slow=10,SNR=6.6						
BDFB	**Brasília**	**19.90**	**68**	P	**P**	**20 33 29.0**	**-0.9**
	comp=N,0.7nm,0.3s,baz=248,slow=15,SNR=5.3						
TORD	**Torodi Ar. Bea**	**76.78**	**69**	P	**P**	**20 40 43.8**	**0.0**
	comp=N,0.2nm,0.5s,baz=235,slow=6.1,SNR=3.8						
ASAR	**Alice Springs**	**128.25**	**205**	PKP	**PKPdf**	**20 47 57.9**	**+0.6**
	comp=N,0.3nm,0.7s,baz=140,slow=1.6,SNR=4.7						
MKAR	**Makanchi Array**	**146.75**	**40**	PKPbc	**PKPbc**	**20 48 32.1**	**-0.2**
	comp=N,0.5nm,0.6s,baz=322,slow=3.3,SNR=5.3						

IDC 07 20:34:57.5±6.6, 2°.25N×95°.75E, h0km, mb3.6/3, mb1 3.6/5, mb1mx3.4/37, mbtmp3.5/5, ML3.6/2, Error ellipse: s-maj=130.7km s-min=39.9km az=21.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.22**	**80**	Pn	Pn	20 35 49.6	0.0
	1.3nm,0.3s,baz=304,slow=7.3,SNR=3.0						
PSI				Sn	Sn	20 36 25.9	-2.9
	1.9nm,0.3s,baz=295,slow=6.4,SNR=4.5						
CMAR	**Chiang Mai Arr**	**16.41**	**11**	Pn	Pn	20 38 49.7	+0.3
	0.3nm,0.3s,baz=197,slow=12,SNR=4.6						
H08S2	**Diego Garcia H**	**25.19**	**247**	T	T	21 06 52.4	
	baz=67,slow=76,SNR=53						
H08S3	**Diego Garcia H**	**25.20**	**247**	T	T	21 06 52.6	
	baz=67,slow=76,SNR=48						
H08S1	**Diego Garcia H**	**25.21**	**247**	T	T	21 06 53.8	
	baz=67,slow=76,SNR=63						
H01W3	**Cape Leeuwin H**	**40.77**	**157**	T	T	21 26 06.0	
	baz=332,slow=76,SNR=32						
H01W2	**Cape Leeuwin H**	**40.78**	**157**	T	T	21 26 06.6	
	baz=332,slow=76,SNR=38						
H01W1	**Cape Leeuwin H**	**40.78**	**157**	T	T	21 26 07.7	
	baz=332,slow=76,SNR=41						
MKAR	**Makanchi Array**	**45.89**	**347**	P	P	20 43 22.4	+0.5
	0.5nm,0.7s,baz=158,slow=8.7,SNR=6.7						
SONM	**Songino Array**	**46.34**	**10**	P	P	20 43 25.1	-0.3
	0.4nm,0.4s,baz=188,slow=8.7,SNR=3.4						
ZALV	**Zalesovo Beam**	**52.31**	**352**	P	P	20 44 10.2	-0.6
	0.5nm,0.4s,baz=189,slow=6.7,SNR=2.5						

*YARS **07** 20:37:59.6, 58°.37N×121°.59E, h23km*
*BYKL **07** 20:38:00.2±1.4, 58°.34N×121°.52E*

ISC 07 20:37:58.7±1.3, 58°.37N±0°.02×121°.57E±0°.02, h5km±11km, n21, σ2§40/59, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNR	**Khani**	**1.68**	**211**	*e*Pg	**Pn**	**20 38 29.8**	**+1.0**
KHNR				*e*Sg	**Sg**	**20 38 52.3**	**-0.3**
KHN	**Khani**	**1.73**	**214**	*i* Pn	**Pn**	**20 38 28.9**	**-0.6**
KHN				*i* Pg	**Pb**	**20 38 31.1**	**+0.1**
	64nm,0.2s						
KHN				*i* Sn	**Sn**	**20 38 49.4**	**-2.6**
KHN				*i* Sg	**Sb**	**20 38 52.5**	**-0.5**
	224nm,0.5s						
YKLR	**Yuktali**	**1.78**	**178**	*i* Pn	**Pn**	**20 38 30.2**	**+0.1**
YKLR				*i* Pg	**Pb**	**20 38 32.7**	**+1.0**
	111nm,0.2s						
YKLR				*i* Pg	**Pb**	**20 38 32.7**	**+1.0**
	119nm,0.2s						
YKLR				*i* Pg	**Pb**	**20 38 32.7**	**+1.0**
	73nm,0.2s						
YKLR				*i* Sn	**Sn**	**20 38 51.9**	**-1.1**
YKLR				*i* Sg	**Sg**	**20 38 55.9**	**+0.1**
	301nm,0.3s						
ALDR	**Aldan**	**2.03**	**81**	*i* Pn	**Pn**	**20 38 33.1**	**-0.5**
ALDR				*i* Pg	**Pb**	**20 38 35.7**	**-0.4**
	14nm,0.1s						
ALDR				*i* Sn	**Sn**	**20 38 57.6**	**-1.8**
ALDR				*i* Sg	**Sb**	**20 39 02.5**	**+0.8**
	268nm,0.2s						
ALDR				*i* Sg	**Sb**	**20 39 02.5**	**+0.8**
	182nm,0.2s						
OLMR	**Olekminsk**	**2.10**	**345**	*i* Pn	**Pn**	**20 38 32.8**	**-1.6**
	31nm,0.2s						
OLMR				*i* Pg	**Pb**	**20 38 38.2**	**+1.1**
	102nm,0.2s						
OLMR				*i* Sn	**Sn**	**20 39 00.2**	**-0.6**
	209nm,0.3s						
OLMR				*i* Sg	**Sb**	**20 39 05.5**	**+2.2**
	202nm,0.2s						
CRS	**Chara**	**2.30**	**232**	*e*Pg	**Pb**	**20 38 40.8**	**+0.1**
CRS				*e*Sg	**Sb**	**20 39 09.6**	**+0.2**
CRS				Pmax			
	19nm,0.6s						
CRS				Smax			
	71nm,0.7s						
CRS	**Chara**	**2.30**	**232**	*i* Pg	**Pg**	**20 38 44.0**	**+1.2**
	17nm,0.3s						
CRS				*i* Sg	**Sb**	**20 39 09.1**	**-0.4**
	63nm,0.4s						
IENR	**Iengra**	**2.79**	**139**	*e*Pn	**Pn**	**20 38 44.5**	**+0.4**
IENR				*e*Pg	**Pb**	**20 38 50.0**	**+0.9**
IENR				*e*Sn	**Sn**	**20 39 17.5**	**-0.7**
IENR				*e*Sg	**Sb**	**20 39 26.3**	**+2.8**
IENR	**Iengra**	**2.79**	**139**	*i* Pn	**Pn**	**20 38 44.4**	**+0.4**
	9.4nm,0.3s						
IENR				*i* Pg	**Pb**	**20 38 50.4**	**+1.3**
	21nm,0.3s						
IENR				*i* Sn	**Sn**	**20 39 17.4**	**-0.7**
	35nm,0.8s						
IENR				*i* Sg	**Sg**	**20 39 27.9**	**-0.4**
	169nm,0.5s						
TNDR	**Tynda**	**3.66**	**150**	*i* Pn	**Pn**	**20 38 56.5**	**+0.5**
	7.7nm,0.2s						
TNDR				*i* Pg	**Pb**	**20 39 06.7**	**+2.8**
	22nm,0.3s						
TNDR				*i* Sn	**Sn**	**20 39 38.1**	**-1.4**
	18nm,0.3s						
TNDR				*i* Sg	**Sg**	**20 39 54.7**	**-1.6**
	70nm,0.3s						
NLYR	**Nelyaty**	**3.68**	**242**	*e*Pg	**Pb**	**20 39 06.2**	**+2.0**
NLYR				*e*Sg	**Sg**	**20 39 53.9**	**-3.0**
NLYR				Pmax			
	18nm,0.5s						
NLYR				Smax			
	115nm,0.7s						
TUP	**Tupik**	**4.05**	**193**	*e*Sg	**Sb**	**20 40 03.4**	**+3.7**
TUP				Smax			
	71nm,0.9s						
TUP	**Tupik**	**4.05**	**193**	*i* Pn	**Pn**	**20 38 59.5**	**-1.8**
TUP				*i* Pg	**Pb**	**20 39 09.2**	**-1.2**
	8.6nm,0.3s						
TUP				*i* Sn	**Sn**	**20 39 45.2**	**-3.9**
TUP				*i* Sg	**Sb**	**20 40 02.9**	**+3.2**
	67nm,0.7s						
BOD	**Bodaibo**	**4.05**	**265**	*e*Sg	**Sb**	**20 40 03.0**	**+3.3**
BOD				Smax			
	45nm,0.7s						
BOD	**Bodaibo**	**4.05**	**265**	*e*S	**Sb**	**20 40 03.3**	**+3.6**
CGD	**Chagda**	**4.76**	**81**	*i* Pg	**Pb**	**20 39 25.8**	**+3.3**
	9.5nm,0.8s						
CGD				*i* Sg	**Sg**	**20 40 28.6**	**-2.7**
	63nm,0.4s						
BLSR	**Buluus**	**4.81**	**48**	*i* Pg	**Pb**	**20 39 27.0**	**+3.6**
	38nm,0.4s						
BLSR				*i* Sg	**Sg**	**20 40 30.8**	**-2.3**
	98nm,1.0s						
KROS	**Kirovskiy**	**4.95**	**140**	*i* Pn	**Pn**	**20 39 12.8**	**-0.9**
	3.0nm,0.3s						
KROS				*i* Sg	**Sg**	**20 40 35.8**	**-1.8**
	40nm,0.3s						
UKT	**Uakit**	**5.22**	**240**	*e*Pg	**Pb**	**20 39 34.2**	**+3.8**
UKT				*e*Sg	**Sg**	**20 40 41.3**	**-4.8**
UKT				Pmax			
	3.0nm,0.6s						
UKT				Smax			
	15nm,0.9s						
TBGR	**Tabaga**	**5.32**

baz=211,SNR=106
214A S Sn 21 14 44.6 -3.5
baz=211
ECNX Esteban Cantu 2.62 310 *e*P **Pn 21 14 22.9 -0.7**
113A Mohawk Valley, 2.81 8 *e*Pn **Pn 21 14 24.9 -1.3**
HSIG 3.03 108 *e*Pn **Pn 21 14 27.1 -2.1**
HSIG 3.03 108 *e*P **Pn 21 14 28.1 -1.1**
HSIG 3.03 108 *e*P **Pn 21 14 27.8 -1.4**
GLA Glamis 3.10 351 *e*Pn **Pn 21 14 29.2 -1.0**
GLA Glamis 3.10 351 P **Pn 21 14 28.8 -1.4**
baz=169,SNR=9.6
IKP In-Ko-Pah, Jac 3.10 330 P **Pn 21 14 29.3 -0.9**
baz=147
CBX Cerro Bola 3.12 319 *e*Pn **Pn 21 14 29.7 -0.8**
CBX Cerro Bola 3.12 319 *e*P **Pn 21 14 29.7 -0.8**
CBX Cerro Bola 3.12 319 *e*P **Pn 21 14 29.9 -0.5**
CBX ⇑*e* 21 15 29.2
CBX IAML 21 15 29.2
comp=N,2μm,1.1s
SRIG Santa Rosalia 3.18 146 *e*Pg **Pb 21 14 37.1 -0.7**
SRIG Santa Rosalia 3.18 146 *e*P **Pg 21 14 40.7 -1.5**
SRIG *i*S **Sb 21 15 17.2 +0.5**
SRIG Santa Rosalia 3.18 146 *e*P **Pn 21 14 30.3 -0.9**
TJIG Tijuana 3.21 320 *i*P **Pn 21 14 30.9 -0.7**
TJIG *i*S **Sn 21 15 06.8 -3.2**
SWSC Sam W. Stewart 3.24 336 P **Pn 21 14 30.9 -1.1**
baz=154
BAR Barrett 3.40 323 *e*Pn **Pn 21 14 33.9 -0.3**
MONP2 Monument Peak 3.45 328 P **Pn 21 14 34.1 -1.0**
baz=146,SNR=11
GUYB Guaymas 3.61 124 *e*P **Pn 21 14 35.8 -1.4**
Y12C Blythe 3.77 356 *e*Pn **Pn 21 14 39.3 +0.1**
TUC Tucson 3.77 51 *e*Pn **Pn 21 14 38.1 -1.3**
TUC Tucson 3.77 51 P **Pn 21 14 38.1 -1.3**
baz=232
109C Camp Elliot, M 3.79 321 P **Pn 21 14 39.9 +0.3**
baz=138
109C Sb **Sb 21 15 35.9 +1.8**
baz=138
CPE Camp Elliot 3.79 321 *e*Pn **Pn 21 14 40.3 +0.7**
BC3 Big Chuckawall 3.81 345 P **Pn 21 14 39.0 -1.0**
baz=163,SNR=7.8
PFO Pinyon Flats O 4.08 333 Pn **Pn 21 14 43.0 -0.7**
comp=N,1.0nm,0.3s,baz=144,slow=10,SNR=6.8
PFO Lg Lg 21 15 49.8
comp=N,8.8nm,0.3s,baz=89,slow=23,SNR=8.0
PFO Pinyon Flats O 4.08 333 *e*Pn **Pn 21 14 43.3 -0.5**
PFO *e*Pg **Pn 21 14 46.4 +2.6**
PFO Pinyon Flats O 4.08 333 P **Pn 21 14 42.9 -0.9**
baz=151
PFO Sg **Sg 21 15 51.0 -1.2**
baz=151
Y14A Wickenburg 4.09 15 *e*Pn **Pn 21 14 43.4 -0.3**
MURC Murrieta 4.40 326 Sb **Sb 21 15 52.1 +0.5**
baz=144
319A Douglas 4.50 71 *e*Pn **Pn 21 14 49.3 -0.2**
BBRC Big Bear Solar 4.83 333 Sg **Sg 21 16 14.4 -2.0**
baz=150
CIS Catalina Islan 4.92 315 Sb **Sb 21 16 10.4 +3.6**
baz=132
X16A Lo Mia Camp, P 5.02 28 *e*Pn **Pn 21 14 56.6 -0.2**
W13A Hualapai Mount 5.11 3 *e*Pn **Pn 21 14 57.0 -1.0**
LDFC Landfair 5.14 352 *e*Pn **Pn 21 15 01.1 +2.9**
MWC Mount Wilson 5.33 324 *e*Pn **Pn 21 14 56.3 -4.6**
PASC Pasadena Art C 5.35 322 *e*Pn **Pn 21 15 00.9 -0.2**
GSC Goldstone, Bar 5.73 339 *e*Pn **Pn 21 15 03.2 -3.1**
X18A Snowflake 5.82 38 *e*Pn **Pn 21 15 07.9 +0.3**
WUAZ Wupatki 6.03 23 *e*Pn **Pn 21 15 11.4 +0.8**
121A Cookes Peak, D 6.09 64 P **Pn 21 15 11.5 +0.1**
baz=247
121A Sg **Sg 21 16 57.2 +0.5**
baz=247
SHPR Sheep Range 6.55 354 *e*Pn **Pn 21 15 13.6 -4.2**
LCMT Little Creek M 7.06 7 *e*Pn **Pn 21 15 24.9 +0.2**
SLBS Sierra La Lagu 7.35 147 *e*Pn **Pn 21 15 31.4 +2.7**
LAZ Ladron 7.46 52 *e*Pn **Pn 21 15 33.0 +2.7**
PKCU Pink Cliffs 7.62 12 *e*Pn **Pn 21 15 35.1 +2.6**
SZCU Shurtz Canyon 7.66 7 *e*Pn **Pn 21 15 30.2 -2.7**
MNTX Cornudas Mount 7.81 75 *e*Pn **Pn 21 15 34.4 -0.5**
MNTX Cornudas Mount 7.81 75 P **Pn 21 15 35.0 +0.1**
baz=260,SNR=6.2
MTPU Mount Pierson 8.22 11 *e*Pn **Pn 21 15 38.9 -1.9**
ANMO Albuquerque 8.23 51 Pn **Pn 21 15 42.7 +1.9**
comp=N,0.2nm,0.3s,baz=238,slow=10,SNR=7.2
ANMO Sn **Sn 21 17 13.9 -0.2**
comp=N,0.2nm,0.3s,baz=228,slow=13,SNR=2.3
ANMO Lg Lg 21 18 02.2
comp=N,0.2nm,0.3s,baz=36,slow=19,SNR=2.9
ANMO Albuquerque 8.23 51 *e*Pn **Pn 21 15 37.0 -3.9**
ANMO Albuquerque 8.23 51 P **Pn 21 15 39.4 -1.4**
baz=235
R11A Troy Canyon, C 8.42 353 *e*Pn **Pn 21 15 44.8 +1.4**
R11A Troy Canyon, C 8.42 353 P **Pn 21 15 42.9 -0.5**
baz=172
PSUT Pine Spring 8.54 2 *e*Pn **Pn 21 15 42.7 -2.4**
OMMB Old Mammoth Mi 8.58 334 *e*Pn **Pn 21 15 43.9 -1.8**
MVCO Mesa Verde 8.66 32 *e*Pn **Pn 21 15 43.4 -3.3**
MSU Marysvale 8.68 11 *e*Pn **Pn 21 15 43.9 -3.1**
SAO San Andreas Ge 9.05 320 *e*Pn **Pn 21 15 51.2 -0.7**
NVAR Mina Array Bea 9.07 339 Pn Pn 21 15 58.4 +6.1
comp=N,0.1nm,0.3s,baz=167,slow=12,SNR=12
NVAR Lg Lg 21 18 33.2
comp=N,0.1nm,0.3s,baz=161,slow=30,SNR=2.3
PV05 Paradox Valley 9.14 26 *e*Pn **Pn 21 15 51.8 -1.4**
TX31 Lajitas Ar. Si 9.23 91 *e*Pn **Pn 21 15 54.4 0.0**
TXAR Lajitas Array 9.23 91 Pn **Pn 21 15 55.6 +1.2**
comp=N,0.4nm,0.3s,baz=265,slow=12,SNR=16
TXAR Sn **Sn 21 17 37.2 -1.2**
comp=N,0.5nm,0.3s,baz=276,slow=19,SNR=7.1
TXAR Lg Lg 21 18 30.1
comp=N,0.3nm,0.3s,baz=301,slow=32,SNR=3.6
PV13 Radium Mtn., P 9.32 27 *e*Pn **Pn 21 15 52.1 -3.6**
RYN Ryan 9.32 339 *e*Pn **Pn 21 15 58.5 +2.7**
KVN Kaiserville 9.59 342 *e*Pn Pn 21 15 54.3 -5.1
PV07 Paradox Valley 9.62 27 *e*Pn **Pn 21 15 56.7 -3.2**
PV22 Blue Mesa, Par 9.65 26 *e*Pn **Pn 21 15 56.6 -3.7**
ELK Elko 10.77 356 Pn **Pn 21 16 18.9 +3.2**
comp=N,0.1nm,0.3s,baz=343,slow=19,SNR=5.4
PDAR Pinedale Array 13.30 15 Pn **Pn 21 16 53.9 +3.6**
comp=N,0.1nm,0.3s,baz=182,slow=12,SNR=6.7
YBH Yreka Blue Hor 13.58 332 Pn **P 21 16 59.1 -3.9**
comp=N,0.2nm,0.3s,baz=113,slow=15,SNR=4.1
FXWY Fox Creek 13.87 10 *e*Pn **Pn 21 16 55.6 -2.4**
DLMT Dillon 15.41 4 *e*Pn **Pn 21 17 18.5 -0.2**
comp=N,11nm,1.1s
CCAR Cane Creek 19.46 73 *e*Pn **P 21 18 07.6 -0.4**
comp=N,155nm,1.7s
ECSD EROS Data Cent 19.63 41 *e*Pn **P 21 18 09.8 0.0**
comp=N,22nm,1.3s
ULM Lac du Bonnet 24.52 29 P **P 21 19 01.0 +0.4**
comp=N,1.9nm,0.4s,baz=219,slow=7.9,SNR=5.3
DLBC Dease Lake 30.46 344 P **P 21 19 57.0 +3.2**
comp=N,4.2nm,0.8s,baz=161,slow=11,SNR=6.2
DLBC Dease Lake 30.46 344 *e*P **P 21 19 55.6 +1.8**
comp=N,8.6nm,1.0s
INK Inuvik 40.00 349 P **P 21 21 17.4 +1.7**
comp=N,0.9nm,0.8s,baz=133,slow=19,SNR=2.6
INK Inuvik 40.00 349 *e*P **P 21 21 17.4 +1.7**
comp=N,8.2nm,1.4s
ILAR Eielson Array 40.33 339 P **P 21 21 21.3 +2.8**
comp=N,3.0nm,0.9s,baz=151,slow=7.4,SNR=16
ILAR LR LR 21 37 33.4
comp=N,1μm,21.2s,baz=110,slow=36
ILB Eielson Array 40.33 339 *e*P **P 21 21 19.8 +1.3**
comp=N,5.0nm,1.0s
PPT Papeete 58.26 220 LR LR 21 42 36.4
comp=N,162nm,18.8s,baz=360,slow=30
LPAZ La Paz 63.96 130 LR LR 21 50 33.0
comp=N,121nm,18.2s,baz=32,slow=35
LPAZ La Paz 63.96 130 *e*P **P 21 24 13.6 -2.0**
TIXI Tiksi 69.68 342 P **P 21 24 50.9 +0.4**
comp=N,0.8nm,0.3s,baz=21,slow=5.6,SNR=4.3
CPUP Villa Florida 78.13 130 P **P 21 25 41.2 +0.6**
comp=N,8.0nm,1.1s,baz=324,slow=5.6,SNR=6.3
NB200 NORSAR Array S 79.09 24 *e*P **P 21 25 46.1 +0.6**
NOA NORSAR Array B 79.09 24 P **P 21 25 46.1 +0.6**
comp=N,0.6nm,0.8s,baz=312,slow=5.3,SNR=2.7
FIA0 FINESS Array S 83.39 18 *e*P **P 21 26 09.5 +1.2**
FINES FINESS Array B 83.39 18 P **P 21 26 09.5 +1.2**
comp=N,0.9nm,0.7s,baz=316,slow=3.8,SNR=3.2
ESDC Sonseca Array 85.18 47 P **P 21 26 18.7 +0.8**
comp=N,0.6nm,0.7s,baz=318,slow=6.4,SNR=4.1
SONA0 Songino Array 94.37 334 *e*P **P 21 27 03.6 +2.3**
SONM Songino Array 94.37 334 P **P 21 27 03.6 +2.3**
comp=N,1.0nm,0.9s,baz=26,slow=3.8,SNR=6.8

ZALV Zalesovo Beam 94.80 349 LR LR 22 16 36.3
comp=N,305nm,18.9s,baz=70,slow=40
ASAR Alice Springs 119.64 258 PKP **PKiKP 21 32 31.8 -0.1**
comp=N,0.6nm,0.9s,baz=85,slow=2.1,SNR=4.1
CMAR Chiang Mai Arr 122.19 322 PKP **PKiKP 21 32 38.6 +1.5**
comp=N,0.5nm,0.6s,baz=338,slow=2.2,SNR=4.5

IDC 07 21:21:21.2±9.9, 17°.49S×174°.16W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.6/31, mbtmp3.9/3, Error ellipse: s-maj=438.7km s-min=37.4km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.69**	**259**	P	P	21 30 08.2	+0.6
	1.7nm,0.9s,baz=93,slow=7.5,SNR=4.2						
ASAR	**Alice Springs**	**48.80**	**254**	P	P	21 30 07.8	-0.7
	1.2nm,0.6s,baz=92,slow=7.8,SNR=16						
ILAR	**Eielson Array**	**84.62**	**11**	P	P	21 33 56.1	0.0
	0.5nm,0.6s,baz=219,slow=5.6,SNR=6.0						

*IDC **07** 21:30:00.2±1.0, 13°.89S×166°.76E, h0km, mb4.4/11, mb1 4.5/12, mb1mx4.2/38, mbtmp4.4/12, ML4.0/1, MS3.8/1, Ms1 3.8/1, ms1mx3.3/29, Error ellipse: s-maj=33.0km s-min=18.4km az=109.0*
*ISCJB **07** 21:30:04.1±0.5, 13°.92S±0°.05×166°.6E±0°.1, h33km, mb4.6/25, MS4.9/1, Error ellipse: s-maj=20.5km s-min=6.7km az=173.4*
*NEIC **07** 21:30:05.8±1.3, 13°.94S×166°.58E, h35km±3km, mb4.8/13, Error ellipse: s-maj=27.0km s-min=11.3km az=78.0*
*BJI **07** 21:30:05.6±0.0, 13°.66S×167°.65E, h52km, mb4.6/11, mB5.1/7, Ms5.0/3, Ms7 4.8/3*
ISC 07 21:30:05.9±0.6, 13°.88S±0°.07×166°.7E±0°.1, h35km, n51, σ1°11/54, mb4.8/25, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.16**	**182**	Pn	**Pn**	21 32 01.9	**0.0**
	1.8nm,0.3s,baz=182,slow=22,SNR=14						
DZM				Sn	**Sn**	21 33 33.3	**+0.3**
	1.9nm,0.3s,baz=180,slow=20,SNR=2.4						
DZM				LR	LR	21 34 47.8	
	comp=Z,724nm,20.0s,baz=336,slow=35						
DZM	**Mont Dzumac**	**8.16**	**182**	*e*Pn	**Pn**	21 32 03.2	**+1.3**
PINNC	**Pines Island,**	**8.72**	**175**	*e*Pn	**Pn**	21 32 12.0	**+2.5**
EIDS	**Eidsvold**	**18.61**	**230**	*e*S	**Sn**	21 37 48.4	**+0.3**
STKA	**Stephens Creek**	**29.14**	**228**	P	**P**	21 36 03.9	**+0.2**
	5.6nm,0.7s,baz=32,slow=7.2,SNR=13						
STKA	**Stephens Creek**	**29.14**	**228**	*e*P	**P**	21 36 02.8	**-0.9**
	6.3nm,1.6s						
WR1	**Warramunga Arr**	**31.51**	**254**	*e*P	**P**	21 36 23.6	**-1.2**
WRA	**Warramunga Arr**	**31.51**	**254**	P	**P**	21 36 23.6	**-1.2**
	3.8nm,1.1s,baz=79,slow=8.6,SNR=3.5						
ASAR	**Alice Springs**	**32.48**	**248**	P	**P**	21 36 32.5	**-0.8**
	1.9nm,0.6s,baz=74,slow=9.5,SNR=40						
INU	**Inuyama**	**56.46**	**331**	*e*P	**P**	21 39 44.5	**+0.1**
	26nm,1.3s						
MJAR	**Matsushiro Arr**	**56.90**	**333**	P	**P**	21 39 47.0	**-0.5**
	7.4nm,1.0s,baz=166,slow=6.8,SNR=16						
MAJO	**Matsushiro**	**56.90**	**333**	*e*P	**P**	21 39 47.4	**-0.1**
	14nm,1.0s						
MAT	**Matsushiro**	**56.90**	**333**	P	**P**	21 39 48.0	**+0.6**
MJB9	**Matsu-Tunnel**	**56.90**	**333**	*e*P	**P**	21 39 46.3	**-1.2**
	14nm,1.0s						
KSRS	**Korea Array**	**62.73**	**326**	P	**P**	21 40 26.1	**-1.3**
	1.7nm,0.9s,baz=136,slow=7.2,SNR=7.7						
VNDA	**Vanda**	**63.70**	**181**	*e*P	**P**	21 40 33.0	**-0.4**
	16nm,2.0s						
SBA	**Scott Base**	**63.99**	**180**	*e*P	**P**	21 40 34.9	**-0.4**
	15nm,1.6s						
USRK	**Ussurisk Ar.**	**65.88**	**333**	P	**P**	21 40 49.3	**+1.3**
	7.8nm,1.0s,baz=134,slow=5.5,SNR=19						
KIWB	**Kanaga Island**	**66.94**	**11**	*e*S	**S**	21 49 45.9	**+0.7**
ENH	**Enshi**	**70.40**	**309**	*e*P	**P**	21 41 16.8	**0.0**
	16nm,1.1s						
CMAR	**Chiang Mai Arr**	**74.10**	**294**	P	**P**	21 41 40.3	**+1.3**
	1.6nm,0.7s,baz=123,slow=4.9,SNR=10						
CMMT	**Chiang Mai**	**74.22**	**294**	P	**P**	21 41 44.2	**+4.4**
	2.3nm,1.5s						
QSPA	**South Pole Qui**	**76.15**	**180**	*e*P	**P**	21 41 49.5	**-0.7**
	7.6nm,0.9s						
ULN	**Ulaanbaatar**	**81.13**	**324**	*e*P	**P**	21 42 18.4	**+0.6**
	11nm,1.1s						
SONA0	**Songino Array**	**81.49**	**324**	*e*P	**P**	21 42 20.6	**+0.8**
SONM	**Songino Array**	**81.49**	**324**	P	**P**	21 42 20.6	**+0.8**
	3.0nm,0.9s,baz=135,slow=5.5,SNR=15						
GTA	**Gaotai**	**81.68**	**314**	P	**P**	21 42 22.9	**+1.9**
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA				pmax	pmax		
	comp=Z,86nm,5.2s						
GTA				LR	LR		
	comp=N,240nm,18.9s						
GTA				LR	LR		
	comp=E,320nm,18.6s						
GTA				LR	LR		
	comp=Z,650nm,20.3s						
ILAR	**Eielson Array**	**85.89**	**18**	P	**P**	21 42 41.4	**-0.3**
	0.7nm,0.6s,baz=234,slow=4.8,SNR=8.8						
SNAA	**Sanae**	**94.37**	**183**	*e*P	**P**	21 43 20.9	**-0.9**
	12nm,1.3s						
MK31	**Makanchi Array**	**96.21**	**317**	*e*P	**P**	21 43 30.4	**-0.1**
	4.6nm,1.1s						
MK32	**Makanchi Array**	**96.21**	**317**	*e*P	**P**	21 43 31.2	**+0.7**
MKAR	**Makanchi Array**	**96.21**	**317**	P	**P**	21 43 31.2	**+0.7**
	3.3nm,1.0s,baz=99,slow=6.6,SNR=16						
ZAA0	**Zalesovo Array**	**96.38**	**324**	*e*P	**P**	21 43 30.2	**-0.8**
	5.0nm,1.0s						
ZALV	**Zalesovo Beam**	**96.38**	**324**	P	**P**	21 43 29.9	**-1.0**
	1.7nm,0.6s,baz=116,slow=4.4,SNR=10						
ZAA1	**Zalesovo Array**	**96.38**	**324**	*e*P	**P**	21 43 29.9	**-1.1**
MAKZ	**Makanchi**	**96.42**	**317**	*e*P	**P**	21 43 30.4	**-1.0**
	6.8nm,1.3s						
ARCES	**ARCESS Array B**	**119.29**	**345**	PKP	**PKPdf**	21 48 50.2	**-0.6**
	1.5nm,0.5s,baz=80,slow=2.1,SNR=13						
FIA0	**FINESS Array S**	**124.73**	**338**	*e*PKPdf	**PKPdf**	21 49 00.8	**-0.7**
FINES	**FINESS Array B**	**124.73**	**338**	PKP	**PKPdf**	21 49 00.8	**-0.7**
	1.5nm,0.8s,baz=79,slow=2.0,SNR=11						
NB200	**NORSAR Array S**	**129.66**	**345**	*e*PKPdf	**PKPdf**	21 49 09.8	**-1.2**
NOA	**NORSAR Array B**	**129.66**	**345**	PKP	**PKPdf**	21 49 09.8	**-1.2**
	1.2nm,0.9s,baz=32,slow=2.1,SNR=3.4						
KOLS	**Kolonicke sedl**	**134.43**	**328**	*e*PKP	**PKiKP**	21 49 21.5	**-0.2**
CLL	**Collm**	**137.06**	**336**	*e*PKPdf	**PKiKP**	21 49 26.0	**-0.9**
GERES	**GERESS Array B**	**138.64**	**333**	PKP	**PKPdf**	21 49 27.8	**-0.5**
	0.4nm,0.8s,baz=0.0,slow=1.0,SNR=3.2						
BNI	**Bardonecchia**	**144.60**	**335**	*e*PKPdf	**PKPdf**	21 49 38.6	**-0.4**
SSB	**Saint Sauveur**	**145.23**	**338**	*e*PKPbc	**PKPdf**	21 49 40.4	**+0.4**
KEST	**Kesra**	**150.21**	**321**	PKPbc	**PKPbc**	21 49 54.0	**+0.2**
	10nm,0.9s,baz=259,slow=1.8,SNR=10						
KEST	**Kesra**	**150.21**	**321**	*e*PKPbc	**PKPbc**	21 49 53.7	**0.0**
ESDC	**Sonseca Array**	**153.02**	**344**	PKPbc	**PKPbc**	21 49 59.8	**-0.2**
	0.4nm,0.6s,baz=31,slow=2.0,SNR=5.6						
TORD	**Torodi Ar. Bea**	**165.40**	**269**	PKP	**PKPdf**	21 50 07.5	**-0.2**
	1.5nm,1.1s,baz=107,slow=1.1,SNR=3.6						
TORD				PKPab	**PKPab**	21 51 04.3	**-1.5**
	0.6nm,1.0s,baz=119,slow=4.7,SNR=4.5						
TOA1	**Torodi Ar. Sit**	**165.41**	**269**	*e*PKPdf	**PKPdf**	21 50 07.5	**-0.2**
TOA1				*e*PKPab	**PKPab**	21 51 04.3	**-1.5**

MEX 07 21:31:47.2±0.3, 16°.22N×98°.03W, h12km±2km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**331**	*i*P	Pg	21 31 50.9	-0.5
PNIG				*i*S	Sg	21 31 54.2	-0.2
TLIG	**Tlapa**	**1.43**	**339**	*e*P	Pn	21 32 09.7	-3.4
TLIG				*e*S	Sn	21 32 26.6	-5.3

*IDC **07** 21:34:12.5±2.5, 28°.98N×113°.71W, h0km, mb3.6/1, mb1 3.6/5, mb1mx3.4/39, mbtmp3.2/5, ML3.2/4, MS3.3/1, Ms1 3.3/1, ms1mx2.9/38, Error ellipse: s-maj=40.1km s-min=12.9km az=32.0*
*ECX **07** 21:34:18.8±0.4, 30°.21N×114°.01W, h10km, MD3.2, ML3.4*
ISC 07 21:34:18.7±1.8, 30°.0N±0°.1×114°.3W±0°.1, h10km, n9, σ2°54/8, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.48**	**316**	*e*P	**Pn**	21 34 45.0	**-0.8**
SPX				IAML		21 35 10.3	
	comp=N,507nm,1.0s						
SPX				*e*		21 35 10.3	
CPBX	**Cerro Prieto**	**2.58**	**340**	*e*P	**Pn**	21 34 58.3	**-2.3**
CPBX				IAML		21 36 22.0	
	comp=E,850nm,0.7s						
CPBX				*e*		21 36 22.0	
HSIG		**3.04**	**108**	*e*P	**Pn**	21 35 05.4	**-1.5**
CBX	**Cerro Bola**	**3.10**	**319**	*e*P	**Pn**	21 35 08.0	**+0.2**
PFO	**Pinyon Flats O**	**4.07**	**333**	Pn	**Pg**	21 35 33.6	**-3.1**
	comp=E,0.8nm,0.3s,baz=164,slow=17,SNR=4.2						
PFO				Sn	**Sg**	21 36 31.1	**+1.7**
	comp=E,2.5nm,0.3s,baz=107,slow=1.4,SNR=11						
ANMO	**Albuquerque**	**8.24**	**51**	Pn	**Pn**	21 36 18.9	**+0.5**
	comp=E,0.1nm,0.3s,baz=212,slow=16,SNR=3.7						
ANMO				Lg	Lg	21 38 44.3	
	comp=E,0.1nm,0.3s,baz=2.8,slow=16,SNR=3.8						
ANMO				LR	LR	21 39 25.8	
	comp=E,225nm,21.2s,baz=188,slow=37						
NVAR	**Mina Array Bea**	**9.06**	**339**	Pn	Pn	21 36 38.9	+9.1
	comp=E,0.1nm,0.3s,baz=162,slow=12,SNR=4.6						
TXAR	**Lajitas Array**	**9.24**	**91**	Pn	Pn	21 36 22.1	-10
	comp=E,0.1nm,0.3s,baz=267,slow=13,SNR=3.1						
TXAR				Lg	Lg	21 38 56.8	
	baz=280,slow=25,SNR=2.3						
ILAR	**Eielson Array**	**40.32**	**339**	P	**P**	**21 41 59.4**	**+3.4**
	comp=E,0.8nm,0.8s,baz=150,slow=7.9,SNR=6.8						

*TIF **07** 21:39:16.5, 43°.20N×41°.55E, h11km±3km*
*ISK **07** 21:39:19.0, 43°.28N×41°.55E, h29km, ML3.1/10*
*NORS **07** 21:39:21.2±0.0, 43°.31N×41°.80E, h4km, MPVA3.8*
ISC 07 21:39:19.2±0.9, 43°.24N±0°.03×41°.66E±0°.02, h10km±6km, n46, σ1°36/77, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOMR	**Dombai**	**0.06**	**335**	*i*Pg	**Pg**	**21 39 21.5**	**0.0**
DOMR				*i*Sg	**Sg**	**21 39 23.5**	**+0.4**
ARXR	**Arkhyz**	**0.43**	**319**	*i*Pg	**Pb**	**21 39 28.5**	**-0.5**
ARXR				*i*Sg	**Sb**	**21 39 35.8**	**+0.1**
NEY	**Neytrino**	**0.78**	**89**	*i*Pg	**Pg**	**21 39 32.0**	**-2.2**
NEY				*i*Sg	**Sg**	**21 39 41.1**	**-3.3**
SHA1	**Shidzhatmaz**	**0.88**	**55**	*i*Pg	**Pg**	**21 39 35.3**	**-1.0**
SHA1				*i*Sg	**Sg**	**21 39 46.7**	**-1.0**
KIV	**Kislovodsk**	**1.04**	**46**	PG	**Pg**	**21 39 38.3**	**-0.8**
KIV				SG	**Sg**	**21 39 52.4**	**-0.2**
KIV0	**Kislovodsk Arr**	**1.04**	**46**	*i*Pg	**Pg**	**21 39 38.4**	**-0.8**
KIV0				*i*Sg	**Sg**	**21 39 52.3**	**-0.5**
RPOR	**Krasnaya Polya**	**1.11**	**295**	*e*Pg	**Pn**	**21 39 41.5**	**+0.5**
RPOR				*e*Sg	**Sn**	**21 39 59.2**	**+2.8**
TKB	**Tkibuli**	**1.32**	**132**	P	**Pn**	**21 39 42.1**	**-1.7**
TKB				S	**Sb**	**21 40 01.6**	**+0.4**
PYA1	**Pyatigorsk**	**1.33**	**51**	*i*Pg	**Pn**	**21 39 43.8**	**-0.1**
PYA1				*i*Sg	**Sb**	**21 40 01.1**	**-0.4**
GUZR	**Guzeripl'**	**1.35**	**305**	*i*Pg	**Pg**	**21 39 45.0**	**-0.2**
GUZR				*e*Sg	**Sg**	**21 40 04.6**	**+1.8**
NCK	**Nalchik**	**1.44**	**79**	*e*Pg	**Pg**	**21 39 46.6**	**-0.1**
NCK				*e*Sg	**Sg**	**21 40 05.3**	**0.0**
DIGR	**Digorskoe uzhe**	**1.45**	**103**	*e*Pg	**Pg**	**21 39 47.1**	**+0.1**
DIGR				*e*Sg	**Sg**	**21 40 06.1**	**+0.3**
SOC	**Sochi**	**1.46**	**284**	*i*Pg	**Pg**	**21 39 47.0**	**-0.2**
SOC				*e*Sg	**Sg**	**21 40 07.7**	**+1.6**
ONI	**Oni**	**1.47**	**116**	PN	**Pn**	**21 39 45.4**	**-0.4**
ONI				SN	**Sn**	**21 40 04.6**	**-0.5**
ONI	**Oni**	**1.47**	**116**	P	**Pn**	**21 39 45.1**	**-0.7**
ONI				S	**Sb**	**21 40 06.3**	**+0.9**
LABN	**Labinsk**	**1.56**	**335**	*e*Pg	**Pg**	**21 39 49.0**	**-0.1**
LABN				*e*Sg	**Sg**	**21 40 10.4**	**+1.1**
LSNR	**Lesken**	**1.58**	**88**	*e*Pg	**Pg**	**21 39 49.6**	**+0.1**
LSNR				*e*Sg	**Sb**	**21 40 09.1**	**+0.4**
BATM	**Batumi**	**1.63**	**179**	PN	**Pn**	**21 39 47.1**	**-0.9**
BATM				SN	**Sn**	**21 40 07.5**	**-1.6**
BATM	**Batumi**	**1.63**	**179**	P	**Pn**	**21 39 47.0**	**-1.0**
BATM				S	**Sn**	**21 40 07.3**	**-1.8**
ZEI	**Tsey**	**1.70**	**104**	*e*Pg	**Pg**	**21 39 53.2**	**+1.3**
ZEI				*e*Sg	**Sg**	**21 40 15.0**	**+1.0**
STDR	**Stavd-Durt**	**1.76**	**85**	*e*Pg	**Pg**	**21 39 53.6**	**+0.7**
STDR				*e*Sg	**Sg**	**21 40 15.4**	**-0.4**
BCA	**Borcka**	**1.79**	**181**	PN	**Pn**	**21 39 49.4**	**-0.8**
BCA				SN	**Sn**	**21 40 11.4**	**-1.6**
LZRR	**Lazarevskoye**	**1.80**	**294**	*i*Pg	**Pg**	**21 39 52.7**	**-1.0**
LZRR				*i*Sg	**Sg**	**21 40 18.8**	**+1.8**
DBOC	**Borcka**	**1.89**	**180**	*i*P	**Pn**	**21 39 49.9**	**-1.8**
DBOC				IAML_P			
	comp=Z,3μm,0.1s						
EPOS	**Posof**	**1.90**	**155**	*i*P	**Pn**	**21 39 51.6**	**-0.3**
EPOS				*i*S	**Sb**	**21 40 18.5**	**+0.5**
ARTV	**Artvin**	**2.06**	**174**	*i*P	**Pn**	**21 39 52.2**	**-1.9**
ARTV				IAML_P			
	comp=Z,8μm,0.2s						
DAGI	**Agillar**	**2.17**	**175**	*i*P	**Pn**	**21 39 53.0**	**-2.4**
DAGI				IAML_P			
	comp=Z,282nm,0.1s						
GUDG	**Gudauri**	**2.21**	**109**	P	**Sg**	**21 40 33.5**	**+3.3**
DBAD	**Bademkaya**	**2.22**	**179**	*i*P	**Pn**	**21 39 54.2**	**-1.9**
DBAD				IAML_P			
	comp=Z,2μm,0.1s						
AKH	**Akhalkalaki**	**2.28**	**143**	PN	**Pn**	**21 39 56.8**	**-0.2**
AKH				SN	**Sn**	**21 40 24.4**	**-0.8**
AKH	**Akhalkalaki**	**2.28**	**143**	P	**Pn**	**21 39 58.3**	**+1.2**
AKH				S	**Sb**	**21 40 28.3**	**-0.5**
BGD	**Bogdanovka**	**2.44**	**143**	P	**Pn**	**21 40 00.2**	**+0.8**
BGD				S	**Sn**	**21 40 31.1**	**+1.8**
ERBR	**Yeremizino-Bor**	**2.62**	**342**	*e*Pn	**Pb**	**21 40 04.1**	**-2.1**
ERBR				*e*Sn

RAHZ	Arahi	0.70	33	P	Pg	21 52 14.1	0.0
RAHZ				S	Sn	21 52 24.8	-0.7
HATZ	Hinemaiaia	0.73	327	P	Pg	21 52 14.8	+0.3
TSZ	Takapari Road	0.74	221	P	Pg	21 52 14.6	-0.1
PRHZ	Porangahau	0.76	178	P	Pg	21 52 15.5	+0.3
TUVZ	Tukino	0.77	288	P	Pn	21 52 15.9	-0.2
RITZ	Rihia Road	0.78	313	P	Pn	21 52 16.2	0.0
WHVZ	Whangaehu Hut	0.81	286	P	Pn	21 52 16.6	-0.2
DRZ	Dome Shelter	0.83	286	P	Pn	21 52 17.4	+0.2
TRVZ	Turoa	0.83	284	P	Pn	21 52 17.1	-0.1
NGZ	Ngauruhoe	0.84	293	P	Pn	21 52 17.0	-0.1
FWVZ	Far West T-bar	0.84	287	P	Pn	21 52 17.1	-0.2
KRVZ	Karewarewa	0.84	299	P	Pn	21 52 17.2	0.0
DVHZ	Dannevirke	0.86	202	P	Pg	21 52 16.9	-0.2
WTVZ	West Tongariro	0.87	296	P	Pn	21 52 17.6	+0.1
KATZ	Kakaratnea	0.88	307	P	Pn	21 52 17.7	+0.1
MTVZ	Mangateitei	0.88	278	P	Pn	21 52 17.8	+0.2
RATZ	Rangitukua	0.90	315	P	Pn	21 52 18.4	+0.5
SNGZ	Shannon Statio	0.93	39	P	Pn	21 52 18.2	-0.1
RTZ	Ruatahuna	0.94	19	P	Pb	21 52 18.0	+0.1
ANWZ	Angora Road	0.96	185	P	Pb	21 52 18.2	0.0
ALRZ	Allen Road	0.96	348	P	Pg	21 52 19.4	+0.4
KNZ	Kokohu	0.97	60	P	Pb	21 52 18.2	-0.2
WHTZ	Whakaora	0.97	329	P	Pg	21 52 20.1	+1.0
PKVZ	Pokaka	0.99	282	P	Pg	21 52 19.8	+0.3
TWVZ	Taurewa	0.99	295	P	Pg	21 52 20.0	+0.4
PRRZ	Plateau Road	1.02	351	P	Pg	21 52 20.1	+0.1
MUGZ	Murupara	1.03	8	P	Pn	21 52 19.8	+0.1
WATZ	Wairara	1.04	320	P	Pg	21 52 20.7	+0.3
WPRZ	Whakapapatarin	1.04	341	P	Pg	21 52 20.9	+0.5
MHGZ	Mahia Peninsul	1.08	71	P	Pb	21 52 20.0	-0.3
POWZ	Post Office Ro	1.09	215	P	Pg	21 52 21.1	-0.3
HRRZ	Handcock Road	1.11	348	P	Pg	21 52 22.4	+0.1
PRWZ	Pori Road	1.15	204	P	Pn	21 52 21.4	0.0
PRGZ	Paritu Road	1.16	60	P	Pn	21 52 20.9	-0.5
RRRZ	Republican Roa	1.17	357	P	Pb	21 52 22.2	+0.4
KUTZ	Kaahu Road	1.18	329	P	Pg	21 52 23.0	-0.1
BFZ	Birch Farm	1.21	193	P	Pn	21 52 21.2	-0.8
OHWZ	Ohakea	1.21	234	P	Pg	21 52 23.9	+0.3
RIGZ	Rimuhau	1.21	49	P	Pn	21 52 21.8	-0.3
GRRZ	Galatos Road	1.21	342	P	Pg	21 52 23.7	0.0
HSRZ	Hossack Road	1.22	347	P	Pg	21 52 23.4	-0.4
HLRZ	Highlands Stat	1.27	351	P	Pg	21 52 24.7	0.0
WAZ	Wanganui	1.27	258	P	Pg	21 52 25.4	+0.7
TARZ	Mount Tarawera	1.27	357	P	Pb	21 52 23.8	+0.2
URZ	Urewera	1.31	18	P	Pn	21 52 23.5	0.0
UTU	Utuhina	1.36	347	P	Pb	21 52 25.4	+0.3
MKRZ	Makatiti	1.37	356	P	Pb	21 52 25.6	+0.4
MWZ	Matawai	1.38	32	P	Pn	21 52 24.4	-0.1
TIWZ	Tintock	1.38	203	P	Pn	21 52 24.2	-0.5
MRZ	Mangatainoka R	1.39	214	P	Pn	21 52 24.2	-0.5
EDRZ	Edgecumbe	1.40	5	P	Pb	21 52 25.4	-0.3
OMRZ	Omania	1.41	353	P	Pb	21 52 25.5	-0.4
TLZ	Tolley Road	1.43	325	P	Pb	21 52 25.8	-0.5
CPWZ	Castlepoint	1.44	192	P	Pn	21 52 24.8	-0.4
TKGZ	Te Karaka	1.45	43	P	Pn	21 52 25.0	-0.3
VRZ	Vera Road	1.47	284	P	Pg	21 52 28.1	-0.6
KARZ	Kaharoa	1.51	349	P	Pb	21 52 27.2	-0.4
MARZ	Manawahe	1.52	2	P	Pb	21 52 27.4	-0.4
HOWZ	Holdsworth Sta	1.62	210	P	Pn	21 52 26.7	-1.0
CNGZ	Carnagh Statio	1.62	52	P	Pn	21 52 27.3	-0.4
OPRZ	Ohinepanea	1.66	359	P	Pn	21 52 28.8	+0.5
WHRZ	Whale Island	1.67	10	P	Pn	21 52 29.3	+0.8
HIZ	Hauiti	1.68	306	P	Pb	21 52 29.6	-0.8
TMWZ	Te Maipa	1.69	198	P	Pn	21 52 27.5	-1.2
OGWZ	Otaki Gorge	1.70	219	P	Pn	21 52 28.3	-0.6
TWGZ	Tauwhareparae	1.71	40	P	Pn	21 52 29.0	-0.1
KMRZ	Kaimai	1.73	343	P	Pn	21 52 30.2	+0.8
RUGZ	Raukumara Rang	1.76	29	P	Pn	21 52 29.6	-0.1
TGRZ	Tauranga	1.79	352	P	Pn	21 52 31.3	+1.2
MTW	Mount Morrison	1.85	206	P	Pn	21 52 29.6	-1.4
KIW	Kapiti Island	1.87	223	P	Pn	21 52 30.7	-0.5
PUZ	Puketiti	1.93	43	P	Pn	21 52 31.1	-1.0
TOZ	Tahuroa Road	1.97	334	P	Pn	21 52 33.4	+0.9
HAZ	Te Kaha	1.98	28	P	Pn	21 52 32.3	-0.4
CAW	Cannon Point	1.98	216	P	Pn	21 52 31.5	-1.2
TRWZ	Traveller	2.01	200	P	Pn	21 52 31.5	-1.7
PAWZ	Paruwai Farm	2.08	205	P	Pn	21 52 32.3	-1.7
MSWZ	Moikau Station	2.17	208	P	Pn	21 52 33.3	-1.9
PLWZ	Palliser	2.30	206	P	Pn	21 52 34.9	-2.2
BHW	Baring Head	2.31	214	P	Pn	21 52 35.5	-1.8
MXZ	Matakaoa Point	2.36	35	P	Pn	21 52 37.8	-0.1
DUWZ	D'Urville Isla	2.42	237	P	Pn	21 52 39.3	+0.5
TCW	Tory Channel	2.46	225	P	Pn	21 52 37.9	-1.3
MKAZ	Moumakai	2.65	334	P	Pn	21 52 44.2	+2.4
TUWZ	Tuamarina	2.79	226	P	Pn	21 52 42.0	-1.8
AWAZ	Awhitu Peninsu	2.88	327	P	Pn	21 52 47.2	+2.2
NNZ	Nelson	2.99	234	P	Pn	21 52 46.1	-0.5
BSWZ	Blackbirch Sta	3.02	222	P	Pn	21 52 45.3	-1.8
QRZ	Quartz Range	3.38	246	P	Pn	21 52 51.3	-0.7
THZ	Tophouse	3.60	230	P	Pn	21 52 54.0	-1.1
KHZ	Kahutara	3.71	217	P	Pn	21 52 53.6	-2.9
GVZ	Greta Valley S	4.38	217	P	Pn	21 53 04.5	-1.1
OUZ	Omahuta	4.90	330	P	Pn	21 53 15.0	+2.2
INZ	Inchbonnie	5.05	229	P	Pn	21 53 12.5	-2.3
MQZ	McQueen's Vall	5.13	214	P	Pn	21 53 10.7	-5.3
AKCZ	Akaroa Harbour	5.16	211	P	Pn	21 53 13.2	-3.3
CTZ	Chatham Island	6.61	132	P	Pn	21 53 35.1	-1.3

*IDC **07** 21:55:10.2±0.8, 42°.94N×80°.23E, h0^km^, mb3.9/11, mb1 4.0/19, mb1mx3.8/46, mbtmp3.8/19, ML3.2/7, Error ellipse: s-maj=12.8km s-min=10.5km az=123.0*
*BJI **07** 21:55:11.5±0.0, 43°.11N×80°.13E, h4^km^, mb3.9/3, mB4.3/2, ML4.0/9*
*MOS **07** 21:55:14.6±1.2, 43°.11N×80°.32E, h32^km^, mb4.3/4, Error ellipse: s-maj=7.5km s-min=6.1km az=79.4*
*NNC **07** 21:55:14.4±1.3, 43°.10N×80°.24E, h0^km^, mb4.3, mpv4.1, Error ellipse: s-maj=13.6km s-min=5.8km az=6.0*
*NEIC **07** 21:55:16.8±2.4, 43°.16N×80°.26E, h35^km^±3^km^, mb4.5/3, Error ellipse: s-maj=11.6km s-min=9.0km az=139.0*
*SOME **07** 21:55:18.2, 43°.22N×80°.07E, h20^km^, MS3.1*
*KRNET **07** 21:55:18.6±0.1, 43°.11N×79°.98E, h6^km^, mb4.2*

ISC 07 21:55:13.2±1.2, 43°.18N±0°.04×80°.36E±0°.03, h8^km^±7km, n146, σ1°87/193, mb4.0/14, 37C-18D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	0.65	283	⇑P	Pg	21 55 25.9	0.0
	461nm,0.3s						
PDGK				⇑S	Sg	21 55 34.6	+0.2
	578nm,0.2s						
PDGK	Podgornoye	0.65	283	PG	Pg	21 55 25.8	0.0
PDGK				S	Sg	21 55 34.6	+0.2
UZB	Uzynbulak	0.98	268	*e*P	Pg	21 55 32.3	+0.3
	baz=73						
UZB				*e*S	Sg	21 55 42.4	-2.4
	baz=73						
UZB	Uzynbulak	0.98	268	*e*P	Pg	21 55 32.3	+0.3
	274nm,0.2s						
UZB				*e*S	Sg	21 55 42.4	-2.4
	4μm,0.3s						
DJR	Jarkent	1.22	340	*e*P	Pn	21 55 40.6	+3.9
	511nm,0.2s						
DJR				*e*S	Sn	21 55 56.6	+3.1
	2μm,0.3s						
KPKS	Kokpek	1.26	284	*e*P	Pn	21 55 38.0	+0.8
	baz=89						
KPKS				*e*S	Sg	21 55 52.1	-1.5
	baz=89						
KPKS	Kokpek	1.26	284	*e*P	Pn	21 55 38.0	+0.8
	2μm,0.2s						
KPKS				*e*S	Sg	21 55 52.1	-1.5
	11μm,0.4s						
SATY	Saty	1.44	266	*e*P	Pb	21 55 40.6	+0.3
	1μm,0.1s						
SATY				*e*S	Sb	21 55 57.4	-1.4
	3μm,0.1s						
KURS	Kuram	1.63	282	*e*P	Pg	21 55 44.9	+0.5
	baz=86						
KURS				*e*S	Sg	21 56 04.5	-1.0
	baz=86						
KURS	Kuram	1.63	282	*e*P	Pg	21 55 44.9	+0.5
	224nm,0.4s						
KURS				*e*S	Sg	21 56 04.5	-1.0
	623nm,0.5s						
ARXS	Arharly	2.11	300	*e*P	Pg	21 55 53.3	-0.2
	227nm,0.3s						
ARXS				*e*S	Sb	21 56 18.6	+0.5
	2μm,0.7s						
KAPS	Kapalarasan	2.22	341	*e*P	Pg	21 55 56.8	+1.0
	140nm,0.3s						
KAPS				*e*S	Sg	21 56 24.9	+0.4
	926nm,0.4s						
TDK	Taldyqorghan	2.30	323	*e*P	Pg	21 55 57.6	+0.4
	524nm,0.3s						
TDK				*e*S	Sg	21 56 25.8	-1.3
	3μm,0.4s						
KOTS	Kotyrbulak	2.38	272	*e*P	Pb	21 55 57.2	+0.9
	baz=74						
KOTS				*e*S	Sb	21 56 25.2	-0.7
	baz=74						
KOTS	Kotyrbulak	2.38	272	*e*P	Pb	21 55 57.2	+0.9
	113nm,0.4s						
KOTS				*e*S	Sb	21 56 25.2	-0.7
	3μm,0.5s						
KNDC	Almaty	2.48	272	⇑Pn	Pn	21 55 56.3	+2.3
	113nm,0.3s						
KNDC				⇑Lg	Lg	21 56 28.1	
	505nm,0.3s						
TNSS	Tian-Shan	2.50	268	*e*P	Pb	21 55 58.6	-0.1
	baz=69						
TNSS				*e*S	Sb	21 56 27.7	-2.2
	baz=69						
TNSS	Tian-Shan	2.50	268	*e*P	Pb	21 55 58.6	-0.1
	114nm,0.4s						
TNSS				*e*S	Sb	21 56 27.6	-2.2
	1μm,0.5s						
AAA	Alma-Ata	2.52	272	*e*PN	Pb	21 55 57.5	-1.2
AAA				*e*S	Sb	21 56 30.1	+0.1
AAA				pmax	pmax		
	comp=Z,156nm,0.2s						
AAA				smax	smax		
	comp=E,992nm,0.4s						
AAA	Alma-Ata	2.52	272	*e*P	Pb	21 55 59.8	+1.1
	baz=73						
AAA				*e*S	Sb	21 56 30.0	+0.1
	baz=73						
AAA	Alma-Ata	2.52	272	*e*P	Pb	21 55 59.8	+1.1
	comp=E,132nm,0.3s						
AAA				*e*S	Sb	21 56 30.0	+0.1
	comp=E,593nm,0.5s						
CHKK	Chushkaly	2.54	286	*e*P	Pb	21 56 00.0	+0.9
	baz=90						
CHKK				*e*S	Sb	21 56 30.3	-0.3
	baz=90						
CHKK	Chushkaly	2.54	286	*e*P	Pb	21 55 60.0	+0.9
	comp=E,80nm,0.4s						
CHKK				*e*S	Sb	21 56 30.2	-0.3
	comp=E,1μm,0.3s						
KTBS	Karatobe	2.73	282	*e*P	Pb	21 56 03.3	+1.0
	baz=85						
KTBS				*e*S	Sb	21 56 35.6	-0.4
	baz=85						
KTBS	Karatobe	2.73	282	*e*P	Pb	21 56 03.3	+1.0
	comp=E,86nm,0.5s						
KTBS				*e*S	Sb	21 56 35.6	-0.4
	comp=E,2μm,0.6s						
ULHL	Ulahol	3.18	254	P	Pn	21 56 03.4	-0.3
	SNR=44						
KST	Kastek	3.22	269	*e*P	Pb	21 56 11.0	+0.2
	baz=70						
KST				*e*S	Sb	21 56 48.8	-1.5
	baz=70						
KST	Kastek	3.22	269	*e*P	Pb	21 56 11.0	+0.2
	comp=E,55nm,0.3s						
KST				*e*S	Sb	21 56 48.8	-1.5
	comp=E,542nm,0.7s						
BOOM	Boomskoye usch	3.33	259	*e*Pn	Pn	21 56 05.5	-0.2
BOOM	Boomskoye usch	3.33	259	*e*PN	Pn	21 56 05.5	-0.2
BOOM	Boomskoye usch	3.33	259	⇑*i*P	Pn	21 56 05.4	-0.2
	baz=60						
BOOM				⇑*i*S	Sn	21 56 48.1	+2.6
	baz=60						
DGS	Degeres	3.36	273	*e*P	Pb	21 56 13.7	+0.7
	baz=74						
DGS				*e*S	Sb	21 56 53.3	-0.7
	baz=74						
DGS	Degeres	3.36	273	*e*P	Pb	21 56 13.7	+0.7
	comp=E,20nm,0.3s						
DGS				*e*S	Sb	21 56 53.3	-0.7
	comp=E,614nm,0.4s						
TKM2	Tokmak 2	3.50	267	P	Pb	21 56 17.2	+1.7
	SNR=7.4						
TKM2	Tokmak 2	3.50	267	⇓Pn	Pn	21 56 09.6	+1.4
	comp=E,35nm,0.4s						
TKM2				⇓Lg	Lg	21 56 59.1	
	comp=E,120nm,0.3s						
TKM2	Tokmak 2	3.50	267	PN	Pn	21 56 09.6	+1.4
TKM2				LG	Lg	21 56 59.7	
TKM2	Tokmak 2	3.50	267	⇑*i*P	Pn	21 56 08.6	+0.4
	baz=68						
TKM2				⇑*i*S	Sn	21 56 53.3	+3.4
	baz=68						
NRN	Naryn	3.68	243	*e*Pn	Pn	21 56 10.6	-0.1
NRN	Naryn	3.68	243	*e*PN	Pn	21 56 10.6	-0.1
NRN	Naryn	3.68	243	⇑*e*P	Pn	21 56 10.1	-0.6
	baz=42						
NRN				⇑*i*S	Sn	21 56 55.4	+1.0
	baz=42						
MAKZ	Makanchi	3.80	17	*e*Pn	Pn	21 56 14.5	+2.4
MAKZ	Makanchi	3.80	17	⇑Pn	Pn	21 56 16.1	+4.0
	comp=E,8.6nm,0.3s						
MAKZ				⇑Lg	Lg	21 57 14.4	
	comp=E,98nm,0.6s						
MAKZ	Makanchi	3.80	17	*e*PN	Pn	21 56 14.5	+2.4
MK31	Makanchi Array	3.86	20	*e*Pn	Pn	21 56 16.6	+3.7
MK31	Makanchi Array	3.86	20	⇓Pn	Pn	21 56 17.1	+4.2
	comp=E,4.3nm,0.2s,baz=196,slow=14,SNR=1360						
MK31				⇑Lg	Lg	21 57 18.4	
	comp=E,102nm,0.6s,baz=194,slow=26,SNR=6.7						
MK31	Makanchi Array	3.86	20	*e*PN	Pn	21 56 16.6	+3.7
MKAR	Makanchi Array	3.86	20	Pn	Pn	21 56 17.6	+4.7
	comp=E,28nm,0.3s,baz=201,slow=12,SNR=1141						
MKAR				Sn	Sb	21 57 04.1	-4.4
	comp=E,18nm,0.3s,baz=213,slow=14,SNR=5.8						
MKAR				Lg	Lg	21 57 19.0	
	comp=E,34nm,0.3s,baz=194,slow=29,SNR=6.1						
KZA	Kyzart	3.93	255	P	Pn	21 56 15.0	+0.8
	SNR=14						
KZA	Kyzart	3.93	255	⇑*e*P	Pn	21 56 14.0	-0.2
	baz=55						
KZA				⇑*i*S	Sn	21 57 02.4	+1.7
	baz=55						
KBK	Karagaybulak	4.01	264	P	Pb	21 56 23.9	-0.3
	SNR=11						
KBK	Karagaybulak	4.01	264	⇑*i*P	Pn	21 56 15.7	+0.6
	baz=65						
KBK				⇑*i*S	Sn	21 57 05.0	+2.6
	baz=65						
CHMS	Chumysh	4.11	269	⇓*e*P	Pn	21 56 16.8	+0.4
	baz=70						
CHMS				⇓*i*S	Sn	21 57 08.0	+3.3
	baz=70						
FRU1	Bishkek	4.22	267	*e*Pn	Pn	21 56 18.2	+0.3
FRU1	Bishkek	4.22	267	*e*PN	Pn	21 56 18.2	+0.3
FRU1	Bishkek	4.22	267	⇓*e*P	Pn	21 56 18.2	+0.3
	baz=67						
FRU1				⇓*i*S	Sn	21 57 10.2	+2.8
	baz=67						
USP	Ospenovka	4.29	273	P	Pb	21 56 30.0	+1.2
	SNR=10.0						
USP	Ospenovka	4.29	273	⇓*i*P	Pn	21 56 19.5	+0.7
	baz=74						
USP				⇓*i*S	Sn	21 57 12.2	+3.2
	baz=74						
AAK	Ala-Archa	4.34	265	Pn	Pn	21 56 18.6	-1.1
	comp=E,0.8nm,0.3s,baz=160,slow=7.3,SNR=4.1						
AAK				Lg	Lg	21 57 24.1	
	comp=E,19nm,0.3s,baz=221,slow=23,SNR=6.0						
AAK	Ala-Archa	4.34	265	P	Pb	21 56 28.0	-1.9
	SNR=12						
AAK	Ala-Archa	4.34	265	Lg	Lg	21 57 24.2	
	comp=E,52nm,0.6s						
AAK	Ala-Archa	4.34	265	*ce*PN	Pn	21 56 23.1	+3.4
AAK				pmax	pmax		
	comp=Z,18nm,0.8s						
AAK	Ala-Archa	4.34	265	⇑*i*P	Pn	21 56 20.1	+0.4
	baz=65						
AAK				⇑*e*S	Sn	21 57 13.0	+2.4
	baz=65						
UCH	Uchtor	4.42	260	P	Pn	21 56 21.5	+0.6
	SNR=18						
UCH	Uchtor	4.42	260	⇓*i*P	Pn	21 56 20.7	-0.2
	baz=59						
UCH				⇓*i*S	Sn	21 57 15.0	+2.3
	baz=59						
ARLS	Aral	4.65	256	⇓*i*P	Pn	21 56 23.8	-0.1
	baz=55						
ARLS				⇓*i*S	Sn	21 57 19.5	+1.2
	baz=55						
EKS2	Erkin-Say	4.86	266	P	Pb	21 56 40.3	+1.6
	SNR=6.8						
EKS2	Erkin-Say	4.86	266	⇑*e*P	Pn	21 56 27.1	+0.3
	baz=66						
EKS2				⇑*i*S	Sn	21 57 25.2	+1.8
	baz=66						
KSH	Kashi	4.93	224	Pn	Pg	21 56 49.9	+2.3
KSH				Sn	Sb	21 57 43.7	+4.3
KSH				smax	smax		
	comp=N,180nm,0.7s						
KSH				smax	smax		
	comp=E,230nm,0.8s						
AML	Almayashu	5.03	260	P	Pb	21 56 40.3	-1.4
	SNR=11						
AML	Almayashu	5.03	260	⇑*e*P	Pn	21 56 29.2	-0.1
	baz=60						
AML				⇑*i*S	Sn	21 57 29.3	+1.5
	baz=60						
MRKS	Merke	5.25	268	*e*P	Pb	21 56 47.7	+2.3
	baz=68						
MRKS				*e*S	Sb	21 57 51.7	+3.1
	baz=68						
MRKS	Merke	5.25	268	*e*P	Pb	21 56 47.7	+2.3
	comp=E,14nm,0.5s						
MRKS				*e*S	Sb	21 57 51.7	+3.1
	comp=E,118nm,0.3s						
ZSN	Zaisan	5.32	35	*e*P	Pg	21 56 52.9	-2.1
	comp=E,9.9nm,0.5s						
ZSN				*e*S	Sg	21 58 00.7	-3.2
	comp=E,67nm,0.5s						
WMQ	Urumqi	5.37	81	*e*Pn	Pn	21 56 37.4	+3.7
WMQ				Sn	Sn	21 57 42.4	+6.6
WMQ				smax	smax		
	comp=E,90nm,1.3s						
WMQ				smax	smax		
	comp=E,80nm,0.9s						
WMQ	Urumqi	5.37	81	*e*Pn	Pn	21 56 36.1	+2.4
WMQ	Urumqi	5.37	81	*e*PN	Pn	21 56 36.1	+2.4
ARSB	Arslanbob	5.78	254	⇓*i*P	Pn	21 56 39.2	-0.2
	baz=53						
ARSB				⇓*i*S	Sn	21 57 46.3	+0.3
	baz=53						
KK31	Karatay Array	7.21	273	*e*Pn	Pn	21 56 57.8	-1.0
KK31	Karatay Array	7.21	273	⇓Pg	Pg	21 57 25.9	-5.2
	comp=E,5.0nm,0.5s,baz=82,slow=16,SNR=10.0						
KK31				⇑Lg	Lg	21 59 00.2	
	comp=E,14nm,0.5s,baz=82,slow=27,SNR=7.1						
KK31	Karatay Array	7.21	273	*e*PN	Pn	21 56 57.8	-1.0
KKAR	Karatay Array	7.21	273	*e*Pn	Pn	21 56 59.3	+0.5
KKAR	Karatay Array	7.21	273	*e*PN	Pn	21 56 59.3	+0.5
KURBB	Kurchatov Arra	7.55	351	Pn	Pn	21 57 04.0	+0.5
	comp=E,0.3nm,0.3s,baz=196,slow=12,SNR=29						
KURBB				Lg	Lg	21 59 14.6	
	comp=E,1.4nm,0.3s,baz=162,slow=32,SNR=8.5						
KURBB	Kurchatov Arra	7.55	351	⇑Pn	Pn	21 57 04.8	+1.3
	comp=E,0.7nm,0.3s						
KURBB				⇑Lg	Lg	21 59 14.7	
	comp=E,209nm,0.7s						
KURK	Kurchatov	7.63	352	*e*Pn	Pn	21 57 05.9	+1.3
KURK	Kurchatov	7.63	352	⇑Pn	Pn	21 57 11.5	+7.0
	comp=E,7.2nm,0.5s						
KURK				⇑Lg	Lg	21 59 16.7	
	comp=E,63nm,0.7s						
KURK	Kurchatov	7.63	352	*ce*P	Pn	21 57 05.8	+1.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BTK	Batken	7.80	250	*e*Pn	Pn	21 57 07.9	+0.8
BTK	Batken	7.80	250	*e*P	Pn	21 57 07.9	+0.8
DGZ	Jazzator, Alta	8.14	34	*i*P	Pn	21 57 15.2	+3.4
CHCP	Chirah Chowk	11.01	213	P	Pn	21 57 51.3	+0.2
NIL	Nilore	11.03	213	*e*Pn	Pn	21 57 51.2	0.0
NIL	Nilore	11.03	213	*e*P	Pn	21 57 51.2	0.0
ZAA0	Zalesovo Array	11.17	14	*e*Pn	Pn	21 57 55.2	+2.1
ZALV	Zalesovo Beam	11.17	14	Pn	Pn	21 57 54.8	+1.8
	comp=Z,0.7nm,0.3s,baz=197,slow=13,SNR=11						
ZALV				Sn	Sn	21 59 56.5	-1.5
	comp=Z,1.3nm,0.3s,baz=206,slow=23,SNR=8.3						
ZALV				Lg	Lg	22 01 10.9	
	baz=182,slow=26,SNR=2.3						
ZAA1	Zalesovo Array	11.17	14	*e*Pn	Pn	21 57 54.8	+1.7
ZAA1				*e*Sn	Sn	21 59 56.5	-1.6
NVS	Novosibirsk	11.82	8	*e*P	Pn	21 58 03.5	+1.6
NVS				*e*		22 00 07.8	
BVA2	Borovoye Array	11.87	329	⇓Pn	Pn	21 58 05.0	+2.3
	comp=Z,1.5nm,0.4s						
BVA2				⇑Lg	Lg	22 01 24.5	
	comp=Z,10nm,0.5s						
BVAR	Borovoye Array	11.88	329	Pn	Pn	21 58 02.4	-0.4
	comp=Z,0.4nm,0.3s,baz=154,slow=15,SNR=6.3						
BVAR				Sn	Sn	22 00 12.2	-3.2
	comp=Z,0.9nm,0.3s,baz=144,slow=18,SNR=4.3						
BVAR				Lg	Lg	22 01 30.2	
	comp=Z,1.0nm,0.3s,baz=125,slow=26,SNR=5.6						
BRVK	Borovoye	11.95	329	*ce*P	Pn	21 58 09.8	+6.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA	Gaotai	15.10	98	*e*P	P	21 58 52.6	+0.4
GTA				pP	pP	21 58 55.7	+0.5
GTA				sP	sP	21 58 58.6	+2.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AB31	Akbulak array	15.36	300	⇑Pn	Pn	21 58 50.4	+0.2
	comp=Z,1.6nm,0.5s,baz=106,slow=10,SNR=19						
AB31	Akbulak array	15.36	300	P	Pn	21 58 50.4	+0.2
AKTO	Aktyubinsk	16.89	303	Pn	Pn	21 59 07.8	-2.0
	comp=Z,0.2nm,0.3s,baz=95,slow=13,SNR=7.8						
AKTO				Lg	Lg	22 04 08.3	
	comp=Z,0.1nm,0.3s,ba

KDAK	Kodiak Island	70.14	27	*c*eP	P	22 06 25.7	-0.1
TOA1	Torodi Ar. Sit	72.89	272	*e*P	P	22 06 39.6	-3.5
TOA0	Torodi Ar. Sit	72.89	272	*e*P	P	22 06 38.6	-4.5
	comp=Z,4.9nm,1.1s						
TORD	Torodi Ar. Bea	72.89	272	P	P	22 06 39.6	-3.5
	comp=Z,0.7nm,0.5s,baz=37,slow=6.1,SNR=11						
YKA	Yellowknife Ar	73.99	7	P	P	22 06 47.8	-0.9
	comp=Z,2.1nm,0.6s,baz=345,slow=6.1,SNR=6.2						
YKB5	Yellowknife Ar	73.99	7	*e*P	P	22 06 47.9	-0.9
WR1	Warramunga Arr	80.01	129	*e*P	P	22 07 21.3	-1.9
WRA	Warramunga Arr	80.01	129	P	P	22 07 21.3	-1.9
	comp=Z,0.3nm,0.3s,baz=220,slow=6.8,SNR=5.7						
FFC	Flin Flon	82.45	1	*c*eP	P	22 07 35.6	-0.1
ASAR	Alice Springs	82.74	132	P	P	22 07 35.4	-2.3
	comp=Z,0.3nm,0.5s,baz=320,slow=5.2,SNR=5.4						
T47A	Sharon Grove	99.39	350	*e*P	Pdif	22 08 54.5	-1.7
	comp=Z,14nm,1.5s						

TRN 07 22:07:22.1, 16°.14N×61°.49W, h159km, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBE	Ff, Capester	0.13	241	*e*P	Pn	22 07 44.5	+1.1
MAGL	Barre de l'ile	0.27	133	*e*P	Pn	22 07 44.9	+1.2
TDBA	Terre de Bas,	0.32	207	*e*P	Pn	22 07 44.8	+1.0
TBG	Guadaloupe-3	0.32	209	*e*P	Pn	22 07 44.8	+0.9
TBG				*e*S	Sn	22 08 01.9	+1.5
ABD	La Joyeuse, An	0.34	360	*e*P	Pn	22 07 44.9	+1.0
DEG	La Desirade	0.45	67	*e*P	Pn	22 07 45.1	+0.8
MDPO	Dominica; Chan	0.56	177	*e*P	Pn	22 07 45.7	+0.9
MDPO				*e*S	Sn	22 08 02.8	+0.7
DWS	Wesley	0.59	163	*e*P	Pn	22 07 45.8	+0.8
DWS				*e*S	Sn	22 08 02.4	-0.1
BBL	Barber's Block	0.61	179	*e*P	Pn	22 07 45.9	+0.8
BBL				*e*S	Sn	22 08 04.2	+1.4
MDN	Morne-Daniel	0.82	174	*e*P	Pn	22 07 47.5	+1.1
MDN				*e*S	Sn	22 08 06.6	+1.6
DLPL	La Plaine	0.83	164	*e*P	Pn	22 07 47.3	+0.7
DLPL				*e*S	Sn	22 08 06.0	+0.8
DBCT	Belle View Cho	0.87	171	*e*P	Pn	22 07 48.0	+1.1
DBCT				*e*S	Sn	22 08 07.0	+1.1
MLYT	Lee's Yard	0.89	311	*e*P	Pn	22 07 48.0	+1.0
MLYT				*e*S	Sn	22 08 06.6	+0.6
BPA	Boggy Peak	0.97	339	*e*P	Pn	22 07 50.2	+2.7
BPA				*e*S	Sn	22 08 08.2	+1.0
PCM	Pelee Case Pet	1.34	169	*e*P	Pn	22 07 51.2	+0.4
CXM	Morne La Croix	1.35	167	*e*P	Pn	22 07 52.1	+1.0
BAMF	Morne Balai	1.35	166	*e*P	Pn	22 07 51.8	+0.8
GBMF	Grand Be	1.37	167	*e*P	Pn	22 07 52.1	+0.9
PML	Morne Lenard	1.38	168	*e*P	Pn	22 07 52.3	+1.1
FDF	Fort de France	1.43	167	*e*P	Pn	22 07 52.4	+0.6
FDF				*e*S	Sn	22 08 14.7	+0.2
NEV	Hard Times	1.44	314	*e*P	Pn	22 07 52.9	+1.2
NEV				*e*S	Sn	22 08 15.4	+0.8
NVBH	Bath Hotel, Ne	1.46	312	*e*P	Pn	22 07 53.1	+1.1
NVBH				*e*S	Sn	22 08 16.5	+1.6
NVRH	Round Hill, Ne	1.49	314	*e*S	Sn	22 08 16.8	+1.2
ANWB	Willy Bob	1.55	349	*e*P	Pn	22 07 54.0	+1.1
ANWB				*e*S	Sn	22 08 16.4	-0.3
ZAM	Aeronautique	1.61	164	*e*P	Pn	22 07 55.3	+1.7
LPMF	Morne Lapointe	1.63	162	*e*P	Pn	22 07 55.1	+1.3
TRMF	Trois Ilets	1.64	165	*e*P	Pn	22 07 55.1	+1.2
MVM	Montagne Vaucl	1.67	160	*e*P	Pn	22 07 56.2	+2.0
SKI	Saint Kitts	1.69	315	*e*P	Pn	22 07 55.7	+1.3
SKI				*e*S	Sn	22 08 19.4	+0.1
BSK	Brimstone Hill	1.77	313	*e*P	Pn	22 07 55.5	+0.3
BSK				*e*S	Sn	22 08 22.2	+1.4
MPOM	Morne Pois Mar	1.79	160	*e*P	Pn	22 07 56.4	+1.0
SEUS	St. Eustatius	1.97	314	*e*P	Pn	22 07 57.8	+0.4
SEUS				*e*S	Sn	22 08 25.1	+0.5
SLBI	Saint Lucia, B	2.16	167	*e*P	Pn	22 07 59.7	0.0
SLBI				*e*S	Sn	22 08 29.3	+0.7
SLW	Petit Monier	2.17	166	*e*P	Pn	22 08 01.4	+1.6
SLPA	Patience	2.33	166	*e*P	Pn	22 08 02.8	+1.0
SLB	Belfond	2.33	169	*e*P	Pn	22 08 03.4	+1.6
SMRT	St. Maarten	2.44	322	*e*	Sn	22 08 32.2	-2.3
MCLT	Moule a Chique	2.47	168	*e*P	Pn	22 08 04.5	+1.1
MCLT				*e*S	Sn	22 08 34.6	-0.6

ISCJB ***07*** *22:13:48.8±0.8, 19°.48S±0°.09×176°.3W±0°.1, h250km, mb4.1/8, Error ellipse: s-maj=19.5km s-min=12.0km az=14.6*

IDC ***07*** *22:13:48.5±6.0, 19°.42S×176°.32W, h234km±56km, mb3.8/7, mb1 4.0/8, mb1mx3.6/28, mbtmp4.5/8, Error ellipse: s-maj=23.7km s-min=20.0km az=48.0*

ISC 07 22:13:49.3±0.7, 19°.5S±0°.1×176°.3W±0°.1, h250km, n34, σ1§42/35, mb4.2/8, 13C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.33	258	P	Pn	22 17 27.7	+2.3
	1.0nm,0.3s,baz=79,slow=19,SNR=9.9						
URZ	Urewera	19.52	196	P	P	22 17 58.6	+0.6
	6.1nm,0.3s,baz=246,slow=1.9,SNR=13						
URZ				S	S	22 21 21.6	-3.3
	0.6nm,0.3s,baz=52,slow=15,SNR=2.5						
STKA	Stephens Creek	39.64	243	P	P	22 20 58.4	+1.2
	0.9nm,0.4s,baz=102,slow=10,SNR=2.9						
JAY	Jayapura	45.27	286	P	P	22 21 44.0	+1.4
	8.1nm,0.5s,baz=95,slow=5.6,SNR=5.6						
ASAR	Alice Springs	46.30	256	P	P	22 21 51.2	+0.7
	5.5nm,0.6s,baz=85,slow=8.3,SNR=52						
ASAR				S	S	22 28 14.9	-3.5
	0.8nm,0.9s,baz=98,slow=14,SNR=5.4						
WRA	Warramunga Arr	46.32	261	P	P	22 21 50.9	+0.1
	114nm,0.3s,baz=92,slow=7.5,SNR=1.2						
QSPA	South Pole Qui	70.53	180	P	P	22 24 39.3	+2.3
	4.7nm,0.7s,baz=224,slow=1.7,SNR=32						
PETK	Petropavlovsk-	75.76	344	P	P	22 25 07.7	+0.4
	5.3nm,0.8s,baz=96,slow=6.7,SNR=4.6						
NVAR	Mina Array Bea	79.23	43	P	P	22 25 28.4	+1.3
	0.9nm,0.7s,baz=219,slow=8.9,SNR=8.1						
ILAR	Eielson Array	87.03	12	P	P	22 26 05.7	-0.3
	0.5nm,0.6s,baz=226,slow=5.9,SNR=13						
MKAR	Makanchi Array	111.69	314	PKiKP	PKiKP	22 31 53.5	-0.7
	0.5nm,0.4s,baz=101,slow=1.5,SNR=14						
ARCES	ARCESS Array B	128.25	350	PKP	PKiKP	22 32 25.0	-0.8
	8.6nm,0.5s,baz=22,slow=3.9,SNR=7.8						
FINES	FINESS Array B	135.27	345	PKhKP	PKPpre	22 32 33.4	
	0.4nm,0.4s,baz=48,slow=2.8,SNR=7.1						
FINES				PKP	PKiKP	22 32 39.6	-0.6
	0.4nm,0.4s,baz=80,slow=1.9,SNR=7.6						
AKASG	Malin Array Be	142.91	333	PKhKP	PKPpre	22 32 49.1	
	1.1nm,0.3s,baz=44,slow=4.2,SNR=7.0						
MILM	Milestii Mici	145.83	329	⇑*i*P	PKPab	22 32 58.9	-1.0
BURAR	Bucovina Array	146.97	333	⇑*i*P	PKPab	22 33 03.5	-1.0
BIZ	Bicaz	147.09	331	⇑*i*P	PKiKP	22 33 04.1	-0.8
TESR	Tescani	147.15	330	⇓*i*P	PKPab	22 33 03.4	-1.8
BRTR	Keskin Array B	147.33	314	PKPbc	PKPbc	22 33 03.2	-0.6
	1.1nm,0.7s,baz=133,slow=4.5,SNR=9.0						
CFR	Carcaliu	147.38	327	⇑*i*P	PKiKP	22 33 03.7	-1.8
CLL	Collm	147.45	349	*i* PKP	PKiKP	22 33 04.2	-1.3
	comp=Z,5.0nm,1.2s						
VRI	Vrincioaia	147.59	329	⇑*i*P	PKiKP	22 33 04.5	-1.5
TRPA	Tarpa	147.64	336	⇑*i*P	PKiKP	22 33 04.8	-1.1
TLB	Topalu	147.83	326	⇑*i*P	PKiKP	22 33 05.6	-0.8
OZUR		147.86	331	⇓*i*P	PKPbc	22 33 03.0	-1.9
MLR	Muntele Rosu	148.24	330	⇑*i*P	PKiKP	22 33 06.3	-1.2
SECR		148.51	329	⇑*i*P	PKiKP	22 33 07.4	-0.5
DRGR		148.66	334	⇓*i*P	PKiKP	22 33 08.0	-0.2
ARR	Arges	148.94	331	⇑*i*P	PKiKP	22 33 09.1	+0.2
SIRR	Siria	149.51	335	⇑*i*P	PKiKP	22 33 09.9	0.0
GERES	GERESS Array B	149.66	347	PKPbc	PKiKP	22 33 09.9	-0.3
	comp=Z,0.5nm,0.6s,baz=40,slow=2.3,SNR=5.6						
BZS	Buzias	150.06	334	⇑*i*P	PKiKP	22 33 09.9	-1.1
HERR	Herculane	150.31	333	⇓*i*P	PKiKP	22 33 11.2	-0.4
MDVR	Moldovita	150.69	333	⇑*i*P	PKPbc	22 33 10.8	-1.1

IDC ***07*** *22:14:41.6±2.1, 78°.33N×7°.33E, h0km, mb3.6/2, mb1 3.7/6, mb1mx3.4/45, mbtmp3.7/6, ML2.4/4, MS3.4/3, Ms1 3.3/3, ms1mx3.0/34, Error ellipse: s-maj=26.9km s-min=17.1km az=147.0*

ISCJB ***07*** *22:14:42.4±1.2, 78°.24N±0°.05×8°.4E±0°.2, h7km±6km, mb3.5/2, MS3.3/3, Error ellipse: s-maj=8.8km s-min=7.5km az=37.9*

NAO ***07*** *22:14:43.8±3.0, 78°.22N×8°.50E, h1km±16km, ML2.9*

BER ***07*** *22:14:45.7±3.4, 78°.25N×8°.54E, h5km±18km, ML2.3,*

ML2.9(NAO), Confirmed Earthquake

IEPN ***07*** *22:14:45.0, 78°.30N×8°.14E, h15km*

ISC 07 22:14:43.4±1.9, 78°.29N±0°.05×8°.24E±0°.08, h13km±10km, n31, σ1§88/40, MS3.7/3, 2C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	0.97	47	Pg	Pg	22 15 02.0	-0.2
KBS				Lg	Lg	22 15 14.6	
KBS	Kingsbay	0.97	47	⇑*i*P	Pg	22 15 01.8	-0.3
KBS				*e*S	Sg	22 15 14.3	-0.5
KBS	Kingsbay	0.97	47	*e*P	Pg	22 15 01.9	-0.2
KBS				*e*S	Sg	22 15 14.5	-0.3
KBS				IAML		22 15 17.1	
	comp=Z,181nm,0.3s						
BRBA	Barentsburg A	1.25	98	Pg	Pg	22 15 06.7	-0.7
BRBA				Lg	Lg	22 15 22.7	
BRBA	Barentsburg A	1.25	98	Pg	Pg	22 15 06.7	-0.7
BRBA				Sg	Sg	22 15 22.7	-1.0
SPA0	Spitsbergen Ar	1.67	90	Pn	Pn	22 15 13.7	+1.3
	baz=267,slow=12						
SPA0				Pg	Pb	22 15 14.5	+0.5
	baz=268,slow=14						
SPA0				Lg	Lg	22 15 35.4	
SPA0	Spitsbergen Ar	1.67	90	⇑*i*P	Pn	22 15 13.7	+1.3
SPA0				*e*S	Sn	22 15 35.0	+1.3
SPA0	Spitsbergen Ar	1.67	90	*e*P	Pn	22 15 13.7	+1.3
SPA0				Pg	Pb	22 15 14.5	+0.5
	baz=268,slow=14						
SPA0				*e*Sg	Sn	22 15 36.6	+3.0
SPA0				IAML		22 15 38.2	
	comp=Z,84nm,0.4s						
SPITS	Spitsbergen Ar	1.67	90	Pn	Pn	22 15 13.5	+1.2
	baz=263,slow=13,SNR=1053						
SPITS				Sn	Sn	22 15 35.9	+2.3
	baz=239,slow=17,SNR=19						
SPITS				LR	LR	22 16 02.2	
	comp=Z,728nm,20.4s,baz=5.0,slow=43						
HSP	Hornsund	2.03	126	Pn	Pn	22 15 17.0	-0.3
HSP				Sn	Sn	22 15 41.5	-1.0
HSPB	Hornsund (broa	2.03	126	*e*P	Pn	22 15 17.2	-0.1
HSPB				*e*S	Sn	22 15 41.4	-1.1
HSPB				IAML		22 15 44.1	
	comp=Z,23nm,0.3s						
HOPEN	Hopen	4.08	108	*e*P	Pn	22 15 45.6	+0.3
HOPEN				*e*S	Sn	22 16 32.3	-0.5
BJO1	Bjornoya	4.57	141	Pn	Pn	22 15 54.0	+1.9
BJO1				Sn	Sn	22 16 41.7	-3.2
BJO	Bjornoya	4.59	140	Pn	Pn	22 15 54.0	+1.6
BJO				*e*S	Sn	22 16 41.8	-3.6
DAG	Danmarks Havn	5.98	269	*i* P	Pn	22 16 06.0	-5.4
DAG				*i* S	Sn	22 17 05.8	-14
ZFI2	Zemlya Franca-	7.45	52	*e*P	Pn	22 16 31.1	-0.5
ZFI2				*e*S	Sn	22 17 50.8	-5.1
	comp=Z,6.6nm,1.2s						
ARA0	ARCESS Array S	9.94	143	Sn	Sn	22 18 47.8	-9.2
	baz=346,slow=22						
ARA0	ARCESS Array S	9.94	143	Sn	Sn	22 18 47.8	-9.2
	baz=346,slow=22						
ARCES	ARCESS Array B	9.94	143	Pn	Pn	22 17 07.0	+1.2
	comp=Z,0.2nm,0.3s,baz=345,slow=11,SNR=6.5						
ARCES				Sn	Sn	22 18 52.4	-4.6
	comp=Z,0.3nm,0.3s,baz=329,slow=33,SNR=5.7						
SUMG	Summit	12.67	268	*i* P	Pn	22 17 37.8	-5.6
NOA	NORSAR Array B	17.36	175	P	Pn	22 18 44.7	-0.4
	comp=Z,0.0nm,0.3s,baz=331,slow=9.8,SNR=2.5						
FIA0	FINESS Array S	17.84	151	P	Pn	22 18 52.0	+1.1
	baz=350,slow=18						
FIA0	FINESS Array S	17.84	151	P	Pn	22 18 52.0	+1.1
	baz=350,slow=18						
FINES	FINESS Array B	17.84	151	P	Pn	22 18 52.1	+1.3
	comp=Z,0.1nm,0.3s,baz=344,slow=13,SNR=4.1						
HFS	Hagfors	18.33	171	P	Pn	22 18 58.9	+2.0
	comp=Z,0.1nm,0.3s,baz=352,slow=7.9,SNR=5.2						
HFS	Hagfors	18.33	171	P	Pn	22 18 59.0	+2.1
	baz=349,slow=10						
HFS	Hagfors	18.33	171	P	Pn	22 18 59.0	+2.1
	baz=349,slow=10						
YKA	Yellowknife Ar	35.36	318	LR	LR	22 35 04.9	
	comp=Z,9.5nm,18.4s,baz=274,slow=35						
BRTR	Keskin Array B	40.05	149	LR	LR	22 40 38.0	
	comp=Z,106nm,20.0s,baz=60,slow=39						
MKAR	Makanchi Array	41.42	93	P	P	22 22 30.9	+1.8
	comp=Z,0.3nm,0.7s,baz=352,slow=7.5,SNR=4.8						
MKAR				LR	LR	22 44 57.9	
	comp=Z,94nm,18.1s,baz=44,slow=44						
TORD	Torodi Ar. Bea	65.23	187	P	P	22 25 22.9	-1.4
	comp=Z,1.3nm,1.1s,baz=356,slow=6.8,SNR=3.7						

SJA ***07*** *22:15:26.9±1.4, 27°.34S×69°.58W, h124km±8km, ML3.5, MW3.4*

ISCJB ***07*** *22:15:27.5±0.7, 27°.39S±0°.03×69°.50W±0°.06, h126km±9km, Error ellipse: s-maj=8.9km s-min=5.1km az=169.4*

GUC ***07*** *22:15:27.3±0.8, 27°.34S×69°.65W, h122km±6km, ML3.7*

ISC 07 22:15:27.5±1.5, 27°.36S±0°.04×69°.54W±0°.05, h126km±12km, n24, σ1§25/37, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	Copiap	0.67	249	*i* P	Pn	22 15 47.3	0.0
GO03				*i* S	Sn	22 16 01.1	-1.2
GO03	Copiap	0.67	249	*e*P	Pn	22 15 47.1	-0.2
GO03				*i* S	Sn	22 16 01.1	-1.2
GO03				IAML		22 16 02.0	
	comp=N,3μm,0.3s						
VCA	Vinchina	1.81	140	*i* P	Pn	22 16 00.7	+1.5
VCA				*i* S	Sn	22 16 24.3	+1.0
VCA				IAML		22 16 26.9	
	comp=Z,402nm,0.3s						
VCA	Vinchina	1.81	140	*e*P	Pn	22 16 00.7	+1.5
VCA				*e*S	Sn	22 16 24.1	+0.8
VCA				IAML		22 16 26.0	
	comp=E,703nm,0.3s						
LCO	Las Campanas	1.94	212	*i* P	Pn	22 16 01.4	+0.5
LCO				*i* S	Sn	22 16 26.5	+0.2
LCO	Las Campanas	1.94	212	*e*P	Pn	22 16 01.3	+0.4
LCO				*i* S	Sn	22 16 26.6	+0.2
GO02	Mina Guanaco	2.18	359	⇑*e*P	Pn	22 16 04.9	+1.0
GO02				*i* S	Sn	22 16 32.4	+0.7
GO02				IAML		22 16 34.0	
	comp=N,534nm,0.3s						
AGUA	GUANDACOL	2.31	157	*i* P	Pn	22 16 07.0	+1.6
AGUA				*i* S	Sn	22 16 34.5	+0.1
AGUA				IAML		22 16 38.2	
	comp=Z,139nm,0.4s						
AROD	Rodeo	2.80	179	*i* P	Pn	22 16 14.1	+2.3
PB14	IPOC Station P	2.83	344	*e*P	Pn	22 16 12.9	+0.8
LSCH	La Serena	2.95	210	*e*P	Pn	22 16 13.2	-0.2
GO04	Tololo Observa	3.02	201	*i* P	Pn	22 16 14.5	0.0
GO04	Tololo Observa	3.02	201	⇑*i*P	Pn	22 16 14.6	+0.1
ACLC	CERRO LA CRUZ	3.07	133	*i* P	Pn	22 16 15.9	+0.8
ACLC				*i* S	Sn	22 16 50.5	-1.3
ACCO	Cerro Coronel	3.25	173	*i* P	Pn	22 16 19.3	+1.7
ACCO				*i* S	Sn	22 16 56.8	+0.6
CYA	Choya	3.48	109	*i* P	Pn	22 16 20.2	-0.1
CYA				IAML		22 16 20.9	
	comp=Z,73nm,0.2s						
CYA				*i* S	Sn	22 16 58.0	-3.1
CYA	Choya	3.48	109	IAML		22 16 59.4	
	comp=N,47nm,0.2s						
AMOG	MOGNA	3.69	166	*i* P	Pn	22 16 24.1	+1.0
AMOG				*i* S	Sn	22 17 04.7	-1.5
RTLL	Cerro Villicun	4.07	167	*i* S	Sn	22 17 13.2	-2.0
RTLS	Leoncito	4.43	177	*i* P	Pn	22 16 34.6	+1.3
RTLS				*i* S	Sn	22 17 23.4	-0.8
RTLS				IAML		22 17 23.8	
	comp=Z,45nm,0.3s						
RTCV	Cerro Valdivia	4.57	169	*i* P	Pn	22 16 35.5	+0.6
RTCV				*i* S	Sn	22 17 25.2	-2.1
LVC	Limon Verde	4.76	7	*i* P	Pn	22 16 37.6	-0.1
ACAN	Cantantal	5.31	158	*i* P	Pn	22 16 45.8	+1.0
TCA	Tanti	5.86	134	*i* P	Pn	22 16 51.2	-1.0
TCA				IAML		22 17 53.1	
	comp=Z,16nm,0.5s						

ISCJB ***07*** *22:29:41.0±0.9, 36°.65N±0°.04×141°.35E±0°.08, h45km±8km, mb3.5/4, Error ellipse: s-maj=10.6km s-min=5.5km az=14.1*

IDC ***07*** *22:29:42.3±2.3, 36°.65N×141°.42E, h44km±25km, mb3.4/4, mb1 3.6/8, mb1mx3.3/35, mbtmp3.7/8, ML3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx2.4/25, Error ellipse: s-maj=20.0km s-min=14.5km az=61.0*

JMA ***07*** *22:29:42.6±0.1, 36°.67N×141°.20E, h49km±1km, M3.8*

JMA Felt I J1.

ISC 07 22:29:41.5±1.8, 36°.66N±0°.04×141°.34E±0°.08, h31km±11km, n26, σ1§94/32, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.62	315	P	Pb	22 29 53.9	0.0
ONAJ				*e*S	Sb	22 30 02.2	-0.2
JHO	Hitachi	0.62	266	P	Pn	22 29 53.9	-0.3
JHO				*e*S	Sb	22 30 02.1	-0.4
JHYU	Hitachinakayam	0.69	242	P	Pn	22 29 55.0	-0.1
JHYU				*e*S	Sb	22 30 03.9	-0.3
JFFD	Fukushimafurud	0.76	305	P	Pn	22 29 55.7	-0.4
JFFD				*e*S	Sn	22 30 05.2	-1.3
JFK	Kawauchi	0.80	332	P	Pn	22 29 56.6	0.0
JFK				*e*S	Sn	22 30 07.0	-0.5
JYT	Yasato	1.02	245	P	Pn	22 29 59.3	-0.4
JYT				*e*S	Sn	22 30 11.4	-1.5
JFT	Otama	1.17	317	P	Pn	22 30 02.6	+0.8
JFT				*e*S	Sn	22 30 16.9	+0.2
JMM	Marumori	1.28	340	P	Pn	22 30 03.9	+0.7
JMM				*e*S	Sn	22 30 19.7	+0.4
JFY	Yanaizu	1.50	300	P	Pn	22 30 06.7	+0.3
JAG	Ashikaga	1.54	262	P	Pn	22 30 06.5	-0.3
JAG				*e*S	Sn	22 30 24.6	-1.1
JKT	Katashina	1.68	274	P	Pn	22 30 09.2	+0.3
MJAR	Matsushiro Arr	2.52	268	P	Pn	22 30 21.2	+0.8
	3.1nm,0.3s,baz=89,slow=14,SNR=158						
MJAR				S	Sn	22 30 51.9	+1.8
	2.9nm,0.3s,baz=44,slow=23,SNR=7.2						
MAT	Matsushiro	2.52	268	P	Pn	22 30 21.6	+1.2
MAT				S	Sn	22 30 51.3	+1.2
JHJ	Hachijo jima 2	3.76	200	P	Pn	22 30 37.8	+0.4
	9.7nm,0.3s,baz=66,slow=20,SNR=3.0						
JHJ				S	Sn	22 31 21.1	+0.6
	11nm,0.3s,baz=253,slow=19,SNR=4.0						
ASAJ	Asahikawa	7.51	7	P	Pn	22 31 27.7	-1.1
	1.0nm,0.3s,baz=255,slow=11,SNR=4.7						
KSRS	Korea Array	10.75	278	P	Pn	22 32 15.8	+2.5
	baz=80,slow=12,SNR=2.4						
KSRS				LR	LR	22 36 00.0	
	comp=Z,55nm,20.8s,baz=135,slow=35						
SONM	Songino Array	27.95	305	P	P	22 35 29.6	+0.5
	0.4nm,0.5s,baz=104,slow=9.6,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.01	120	T	T	23 05 36.3	
	baz=312,slow=75						
H11N1	WAKE ISLAND Hy	28.02	120	T	T	23 05 03.1	
	baz=312						
H11N3	WAKE ISLAND Hy	28.03	120	T	T	23 05 35.9	
	baz=312,slow=75						
H11S1	WAKE ISLAND Hy	28.71	122	T	T	23 06 25.1	
	baz=314,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	28.71	122	T	T	23 05 53.6	
	baz=314,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	28.73	122	T	T	23 06 14.8	
	baz=314,slow=76,SNR=25						
ZALV	Zalesovo Beam	42.12	313	P	P	22 37 29.6	-1.0
	0.7nm,0.5s,baz=83,slow=9.6,SNR=3.2						
MKAR	Makanchi Array	44.27	302	P	P	22 37 47.0	-1.1
	0.3nm,0.6s,baz=87,slow=9.7,SNR=4.1						
ILAR	Eielson Array	49.84	32	P	P	22 38 31.1	-0.1
	0.6nm,0.7s,baz=274,slow=6.9,SNR=7.7						

SJA ***07*** *22:35:12.2±1.2, 17°.69S×69°.76W, h146km±6km, MD3.2*

ISCJB ***07*** *22:35:13.2±0.8, 17°.83S±0°.05×69°.81W±0°.09, h157km±5km, mb3.7/2, Error ellipse: s-maj=14.5km s-min=7.3km az=9.2*

GUC ***07*** *22:35:14.4±0.6, 17°.72S×69°.65W, h137km±3km, ML3.4*

IDC ***07*** *22:35:15.6±2.9, 17°.61S×69°.32W, h148km±17km, mb3.5/3, mb1 3.6/3, mb1mx3.2/18, mbtmp4.0/3, Error ellipse: s-maj=79.7km s-min=26.9km az=123.0*

ISC 07 22:35:12.1±1.2, 17°.64S±0°.06×69°.84W±0°.08, h148km±7km, n32, σ1§83/54, mb3.8/3, 4C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.76	155	*i* P	Pn	22 35 35.8	+0.4
PB16				*i* S	Sn	22 35 52.0	-1.2
PB16	IPOC Station P	0.76	155	*e*P	Pn	22 35 35.8	+0.4
PB16				*i* S	Sn	22 35 52.0	-1.2
PB12	IPOC Station P	1.07	206	*i* P	Pn	22 35 38.3	+0.9
PB12				*i* S	Sn	22 35 56.8	0.0
PB12	IPOC Station P	1.07	206	⇑*e*P	Pn	22 35 38.2	+0.9
PB12				*i* S	Sn	22 35 56.7	-0.1
PB12				IAML		22 35 58.0	
	comp=N,504nm,0.3s						
MNMC	Minye Minye	1.50	171	*e*P	Pn	22 35 42.3	+0.5
MNMC				*e*S	Sn	22 36 03.1	-1.3
MNMC				IAML	

n26,σ0$67/41,1C-1D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.40**	**81**	*i* Pg	**Pg**	**22 41 56.7**	**-0.1**
OHR				*i* Sg	**Sb**	**22 42 03.6**	**-0.9**
OHR				*e*Lg	Lg	22 42 04.3	
	comp=N,79nm,0.3s						
OHR				*e*Lg	Lg	22 42 04.8	
	comp=E,43nm,0.5s						
TIR	**Tirane**	**0.43**	**314**	P	**Pg**	**22 41 57.7**	**+0.2**
TIR				S	**Sg**	**22 42 03.7**	**+0.5**
TIR	**Tirane**	**0.43**	**314**	*i* Pg	**Pg**	**22 41 57.3**	**-0.2**
TIR	**Tirane**	**0.43**	**314**	*i* PG	**Pg**	**22 41 57.6**	**+0.2**
TIR				*i* SG	**Sb**	**22 42 04.9**	**-0.6**
TIR	**Tirane**	**0.43**	**314**	P	**Pg**	**22 41 57.2**	**-0.2**
TIR				S	**Sg**	**22 42 03.7**	**+0.5**
TIR				AML	AML	22 42 07.5	
	comp=N,444μm,0.4s						
TIR				AML	AML	22 42 09.9	
	comp=E,264μm,0.4s						
PHP	**Peshkopia**	**0.65**	**11**	P	**Pg**	**22 42 01.3**	**-0.2**
PHP				S	**Sb**	**22 42 10.7**	**-1.0**
PHP	**Peshkopia**	**0.65**	**11**	*i* PG	**Pg**	**22 42 01.3**	**-0.2**
PHP				*i* SG	**Sb**	**22 42 11.3**	**-0.4**
BIA	**Bitola**	**0.79**	**92⇓**	*i* Pg	**Pg**	**22 42 04.0**	**-0.2**
BIA				*i* Sg	**Sb**	**22 42 15.6**	**-0.2**
BIA				*e*Lg	Lg	22 42 16.2	
	comp=E,17nm,0.3s						
BIA				*e*Lg	Lg	22 42 16.7	
	comp=N,20nm,0.6s						
KRUS	**Krusevo**	**0.80**	**66**	*i* Pg	**Pg**	**22 42 03.7**	**-0.7**
KRUS				*i* Sg	**Sb**	**22 42 16.0**	**-0.1**
KRUS				*e*Lg	Lg	22 42 17.4	
	comp=N,13nm,0.4s						
KRUS				*e*Lg	Lg	22 42 17.5	
	comp=E,11nm,0.3s						
NEST	**Nestorio**	**0.86**	**137**	P	**Pg**	**22 42 05.3**	**-0.2**
NEST				S	**Sb**	**22 42 18.2**	**+0.3**
NEST	**Nestorio**	**0.86**	**137**	P	**Pg**	**22 42 05.0**	**-0.6**
NEST				S	**Sg**	**22 42 17.5**	**+0.8**
NEST				AML	AML	22 42 21.6	
	comp=N,123μm,0.4s						
NEST				AML	AML	22 42 21.9	
	comp=E,131μm,0.3s						
FNA	**Florina**	**0.87**	**107**	P	**Pg**	**22 42 04.9**	**-0.8**
FNA				S	**Sb**	**22 42 18.0**	**-0.1**
FNA	**Florina**	**0.87**	**107**	*i* Pg	**Pg**	**22 42 04.7**	**-1.0**
FNA				*i* Sg	**Sb**	**22 42 19.1**	**+1.0**
FNA	**Florina**	**0.87**	**107**	*i* PG	**Pg**	**22 42 05.2**	**-0.6**
FNA				*i* SG	**Sb**	**22 42 18.4**	**+0.2**
FNA	**Florina**	**0.87**	**107**	P	**Pg**	**22 42 04.6**	**-1.0**
FNA				S	**Sg**	**22 42 17.3**	**+0.2**
FNA				AML	AML	22 42 21.7	
	comp=E,154μm,0.3s						
FNA				AML	AML	22 42 23.6	
	comp=N,188μm,0.3s						
PUK	**Puka**	**1.04**	**344**	*i* PG	**Pb**	**22 42 09.1**	**-0.1**
PUK				*i* SG	**Sn**	**22 42 25.3**	**+0.8**
PENT	**Pentalofos**	**1.07**	**142**	P	**Pg**	**22 42 09.2**	**-0.4**
PENT	**Pentalofos**	**1.07**	**142**	P	**Pg**	**22 42 09.3**	**-0.3**
ULC	**Ulcinj**	**1.20**	**320⇓**	*i* Pg	**Pb**	**22 42 11.6**	**-0.4**
KPRO	**Kipourio**	**1.37**	**143**	P	**Pn**	**22 42 14.4**	**+0.1**
KEK	**Kerkira**	**1.38**	**196**	P	**Pn**	**22 42 14.8**	**+0.3**
IGT	**Igoumenitsa**	**1.51**	**178**	*i* Pg	**Pg**	**22 42 18.4**	**+0.4**
IGT	**Igoumenitsa**	**1.51**	**178**	P	**Pn**	**22 42 15.4**	**-0.9**
STIP	**Stip**	**1.57**	**65**	*i* Pg	**Pg**	**22 42 21.4**	**+2.3**
PDG	**Podgorica**	**1.58**	**331**	*i* Pg	**Pg**	**22 42 18.8**	**-0.5**
VAY	**Valandovo**	**1.75**	**80**	*i* Pg	**Pb**	**22 42 21.0**	**-0.3**

NIED ***07*** *23:34:00,37°.90N×144°.50E,h5km,Mw3.7 Best double couple: M₀4.18000×10¹⁴ NP1:φs17.00000°,δ20.00000°, λ-90.00000°. NP2:φs198.00000°,δ70.00000°, λ-90.00000°.*
IDC ***07*** *23:34:48.4±2.6,37°.72N×144°.67E,h0km,mb3.7/2, mb1 4.0/4,mb1mx3.5/37,mbtmp3.9/4,ML3.2/2,MS2.3/3, Ms1 2.3/3,ms1mx2.2/47,Error ellipse: s-maj=46.2km s-min=36.1km az=50.0*
ISCJB ***07*** *23:34:50.7±0.8,37°.93N±0°.04×144°.60E±0°.06,h33km, mb3.8/2,Error ellipse: s-maj=7.1km s-min=5.0km az=19.6*
JMA ***07*** *23:34:52.5±0.2,37°.91N×144°.46E,h39km,M4.0*
ISC 07 23:34:52.7±1.4,37°.93N±0°.06×144°.58E±0°.10,h35km,n28, σ1$90/40,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.49**	**280**	P	**Pn**	**23 35 30.5**	**-0.1**
JIKH				S	**Sn**	**23 35 58.7**	**-1.1**
OFUJ	**Ofunato**	**2.56**	**298**	P	**Pn**	**23 35 32.0**	**+0.4**
JKMT	**Kesennumamotoy**	**2.60**	**291**	P	**Pn**	**23 35 32.4**	**+0.2**
JKMT				S	**Sn**	**23 36 02.0**	**-0.5**
JIO	**Ouri**	**2.60**	**283**	P	**Pn**	**23 35 32.4**	**+0.2**
JIO				S	**Sn**	**23 36 01.8**	**-0.8**
JMK	**Ichinoseki**	**2.83**	**292**	P	**Pn**	**23 35 36.1**	**+0.7**
JOM	**Ohasama**	**3.00**	**302**	P	**Pn**	**23 35 38.7**	**+1.0**
JOM				S	**Sn**	**23 36 12.5**	**0.0**
JFT	**Otama**	**3.39**	**264**	P	**Pn**	**23 35 43.9**	**+0.8**
JFT				S	**Sn**	**23 36 21.7**	**-0.4**
JANG	**Nango**	**3.41**	**317**	P	**Pn**	**23 35 44.4**	**+1.0**
JANG				S	**Sn**	**23 36 23.2**	**+0.6**
JYK	**Kaneyama**	**3.46**	**288**	P	**Pn**	**23 35 45.8**	**+1.8**
JYK				S	**Sn**	**23 36 25.1**	**+1.3**
BSO1	**Boso 1**	**4.38**	**223**	P	**Pn**	**23 35 54.6**	**-1.5**
BSO1				*e*S	**Sn**	**23 36 42.9**	**-2.7**
JOT	**Ohata**	**4.40**	**323**	P	**Pn**	**23 35 58.6**	**+1.7**
JOT				*e*S	**Sn**	**23 36 46.0**	**-0.9**
JCH	**Churui**	**4.77**	**349**	P	**Pn**	**23 36 02.0**	**-0.1**
JCH				*e*S	**Sn**	**23 36 55.1**	**-1.0**
JKB	**Kayabe**	**4.81**	**327**	S	**Sn**	**23 36 55.5**	**-1.4**
JRY	**Ryogami san**	**4.93**	**249**	P	**Pn**	**23 36 03.9**	**-0.4**
JRY				S	**Sn**	**23 36 56.9**	**-3.2**
JOD2	**Odawara 2**	**5.16**	**241**	P	**Pn**	**23 36 07.7**	**+0.3**
JOD2				*e*S	**Sn**	**23 37 01.1**	**-4.6**
MJAR	**Matsushiro Arr**	**5.27**	**257**	Pn	**Pn**	**23 36 10.2**	**+1.2**
	0.2nm,0.3s,baz=69,slow=9.3,SNR=11						
MJAR				Sn	**Sn**	**23 37 08.8**	**+0.4**
	0.2nm,0.3s,baz=38,slow=25,SNR=4.8						
MJAR				LR	LR	23 38 53.1	
	comp=Z,44nm,18.1s,baz=0.0,slow=46						
MAT	**Matsushiro**	**5.27**	**257**	P	**Pn**	**23 36 10.7**	**+1.8**
MAT				S	**Sn**	**23 37 08.6**	**+0.1**
NEM2	**Nemuro 2**	**5.50**	**9**	P	**Pn**	**23 36 08.9**	**-3.2**
NEM2				*e*S	**Sn**	**23 37 08.6**	**-5.5**
JOSM	**Okushiri--Mats**	**5.71**	**318**	P	**Pn**	**23 36 17.1**	**+2.2**
JTKR	**Abashiri--Toko**	**6.06**	**355**	P	**Pn**	**23 36 19.1**	**-0.6**
JTKR				*e*S	**Sn**	**23 37 23.8**	**-4.0**
JHJ	**Hachijo jima 2**	**6.19**	**221**	Pn	**Pn**	**23 36 19.3**	**-2.2**
	7.1nm,0.3s,baz=105,slow=20,SNR=2.6						
ASAJ	**Asahikawa**	**6.36**	**347**	Sn	**Sn**	**23 37 35.5**	**+0.3**
	1.0nm,0.3s,baz=54,slow=32,SNR=6.4						
ASAJ				LR	LR	23 39 15.2	
	comp=Z,10nm,19.8s,baz=235,slow=41						
KSRS	**Korea Array**	**13.21**	**273**	LR	LR	23 42 26.4	
	comp=Z,24nm,20.9s,baz=78,slow=34						
H11N2	**WAKE ISLAND Hy**	**26.55**	**127**	T	T	00 08 02.9	
	baz=318						
H11N1	**WAKE ISLAND Hy**	**26.56**	**127**	T	T	00 08 05.9	
	baz=318						
H11N3	**WAKE ISLAND Hy**	**26.57**	**127**	T	T	00 08 02.1	
	baz=318						
MKAR	**Makanchi Array**	**45.78**	**302**	P	**P**	**23 43 12.6**	**+1.9**
	0.7nm,0.9s,baz=90,slow=6.2,SNR=4.0						
WRA	**Warramunga Arr**	**58.36**	**191**	P	**P**	**23 44 44.0**	**-0.4**
	0.5nm,0.3s,baz=1.0,slow=9.2,SNR=3.2						

SKO ***07*** *23:38:15.2,41°.48N×20°.27E,h7km,M0.4,ML1.6*
TIR ***07*** *23:38:18.4,41°.48N×20°.57E,h15km,Md2.6/4*
ISC 07 23:38:17.4±1.3,41°.37N±0°.04×20°.34E±0.03,h2km±13km, n11,σ2$19/20,1D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.32**	**14**	*i* PG	**Pg**	**23 38 23.6**	**0.0**
PHP				*i* SG	**Sg**	**23 38 27.9**	**0.0**
TIR	**Tirane**	**0.36**	**266**	*i* Pg	**Pg**	**23 38 21.9**	**-2.3**
TIR	**Tirane**	**0.36**	**266**	*i* PG	**Pn**	**23 38 30.0**	**+0.3**
TIR				*i* SG	**Sb**	**23 38 37.9**	**+5.3**
OHR	**Ohrid**	**0.43**	**127**	*i* Pg	**Pg**	**23 38 25.1**	**-0.6**
OHR				*i* Sg	**Sb**	**23 38 34.0**	**-0.9**
OHR				*e*Lg	Lg	23 38 34.8	
	comp=N,14nm,0.3s						
KRUS	**Krusevo**	**0.69**	**90**	*i* Pg	**Pg**	**23 38 29.4**	**-1.2**
PUK	**Puka**	**0.75**	**334**	*i* PG	**Pb**	**23 38 33.3**	**0.0**
PUK				*i* SG	**Sn**	**23 38 45.0**	**-2.1**
BIA	**Bitola**	**0.82**	**115**	*i* Pg	**Pg**	**23 38 33.5**	**+0.3**
BIA				*i* Sg	**Sb**	**23 38 45.4**	**-0.7**
BIA				*e*Lg	Lg	23 38 45.8	
	comp=N,3.6nm,0.5s						
BIA				*e*Lg	Lg	23 38 50.0	
	comp=E,4.9nm,0.3s						
FNA	**Florina**	**0.98**	**126⇓**	*i* Pg	**Pb**	**23 38 36.8**	**-0.3**
FNA				*i* Sg	**Sb**	**23 38 50.9**	**+0.3**
FNA	**Florina**	**0.98**	**126**	*i* PG	**Pb**	**23 38 36.9**	**-0.3**
FNA				*i* SG	**Sb**	**23 38 50.2**	**-0.4**
SKO	**Skopje**	**1.02**	**54**	*e*Pg	**Pg**	**23 38 35.1**	**-1.8**
SKO				*i* Sg	**Sg**	**23 38 48.2**	**-2.1**
SKO				*e*Lg	Lg	23 38 49.1	
	comp=E,0.9nm,0.5s						
SKO				*e*Lg	Lg	23 38 49.1	
	comp=N,2.5nm,0.4s						
STIP	**Stip**	**1.43**	**76**	*i* Pg	**Pg**	**23 38 46.4**	**+1.7**
STIP				*i* Sg	**Sg**	**23 39 08.2**	**+5.0**
STIP				*e*Lg	Lg	23 39 08.7	
	comp=E,1.3nm,0.5s						
STIP				*e*Lg	Lg	23 39 09.3	
	comp=N,0.7nm,0.5s						

MEX 07 23:53:58.5±0.7,16°.91N×100°.08W,h26km±7km,MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.19**	**101**	*e*P	Pb	23 54 03.0	-1.1
ACP2				*i* S	Sb	23 54 06.7	-1.3
CAIG	**El Cayaco**	**0.23**	**307**	*e*P	Pb	23 54 02.9	-1.7
CAIG				*i* S	Sb	23 54 07.2	-1.6
MEIG	**Mezcala**	**1.10**	**23**	*e*P	Pn	23 54 15.6	-2.8
MEIG				*i* S	Sn	23 54 29.2	-3.5
ZIIG	**Zihuatanejo**	**1.49**	**298**	*e*P	Pn	23 54 21.9	-1.7
ZIIG				*e*S	Sn	23 54 38.4	-3.9
PLIG	**Platanillo**	**1.57**	**20**	*e*P	Pn	23 54 23.1	-1.7
PLIG				*i* S	Sn	23 54 41.4	-3.0
PNIG	**Pinotepa**	**1.94**	**105**	*e*P	Pn	23 54 27.9	-1.9
PNIG				*e*S	Sn	23 54 49.5	-3.9

ISCJB ***07*** *23:57:25.8±0.5,21°.33S±0°.03×178°.85W±0°.04, h582km±7km,mb4.7/110,Error ellipse: s-maj=6.4km s-min=4.9km az=25.3*
BJI ***07*** *23:57:26.6±0.0,21°.20S×178°.90W,h584km,mb5.0/34, mB4.9/18*
IDC ***07*** *23:57:26.2±1.2,21°.23S×178°.79W,h568km±12km, mb4.1/28,mb1 4.3/29,mb1mx4.2/39,mbtmp5.0/29,Error ellipse: s-maj=12.4km s-min=9.7km az=98.0*
MOS ***07*** *23:57:28.0±2.7,20°.94S×179°.17W,h561km,mb4.9/24, Error ellipse: s-maj=11.8km s-min=8.7km az=115.3*
NEIC ***07*** *23:57:28.4±1.5,21°.22S×178°.87W,h597km±6km, mb4.8/108,Error ellipse: s-maj=15.2km s-min=12.9km az=112.0*
ISC 07 23:57:27.1±0.5,21°.33S±0°.05×178°.84W±0°.05, h586km±5km,h587km:pP-P,n425,σ1$27/493,mb4.8/109, 65C-19D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**7.92**	**174**	P	**P**	**23 59 22.7**	**-2.3**
RIZ				S	**S**	**00 00 59.9**	**-2.0**
RAO	**Raoul Island**	**7.93**	**174**	*e*P	**P**	**23 59 27.2**	**+2.2**
RAO	**Raoul Island**	**7.93**	**174**	*e*P	**P**	**23 59 27.3**	**+2.2**
GLKZ	**Green Lake**	**7.94**	**174**	P	**P**	**23 59 23.3**	**-1.9**
GLKZ				S	**S**	**00 01 01.3**	**-0.8**
NIUE	**Niue**	**8.66**	**77**	*e*P	**P**	**23 59 31.3**	**-1.1**
DZM	**Mont Dzumac**	**13.70**	**264**	P	**P**	**00 00 23.0**	**-0.3**
	5.6nm,0.3s,baz=155,slow=10,SNR=24						
DZM				S	**S**	**00 02 46.3**	**-1.5**
	0.1nm,0.3s,baz=127,slow=20,SNR=1.8						
DZM	**Mont Dzumac**	**13.70**	**264**	*e*P	**P**	**00 00 21.4**	**-1.9**
	17nm,0.3s						
OUZ	**Omahuta**	**15.35**	**204**	*e*P	**P**	**00 00 39.8**	**+1.0**
	84nm,1.0s						
OUZ	**Omahuta**	**15.35**	**204**	P	**P**	**00 00 40.4**	**+1.6**
GRZ	**Great Barrier**	**15.68**	**197**	P	**P**	**00 00 41.9**	**0.0**
WCZ	**Waipu Caves**	**15.73**	**201**	P	**P**	**00 00 44.6**	**+2.3**
WIAZ	**Waiheke Island**	**16.28**	**197**	P	**P**	**00 00 49.1**	**+1.7**
MBAZ	**Motutapu North**	**16.32**	**198**	P	**P**	**00 00 49.8**	**+2.0**
MXZ	**Matakaoa Point**	**16.36**	**188**	P	**P**	**00 00 48.5**	**+0.3**
HAZ	**Te Kaha**	**16.63**	**189**	P	**P**	**00 00 50.2**	**-0.4**
HAZ				S	**S**	**00 03 32.2**	**-4.2**
RUGZ	**Raukumara Rang**	**16.85**	**190**	P	**P**	**00 00 51.4**	**-1.4**
PUZ	**Puketiti**	**16.87**	**188**	P	**P**	**00 00 52.0**	**-0.8**
PUZ				S	**S**	**00 03 36.4**	**-4.0**
TGRZ	**Tauranga**	**16.88**	**193**	P	**P**	**00 00 54.1**	**+1.1**
TWGZ	**Tauwhareparae**	**17.01**	**189**	P	**P**	**00 00 53.3**	**-0.9**
TWGZ				S	**S**	**00 03 40.1**	**-2.6**
TOZ	**Tahuroa Road**	**17.06**	**195**	P	**P**	**00 00 56.1**	**+1.5**
URZ	**Urewera**	**17.23**	**191**	P	**P**	**00 00 53.6**	**-2.4**
	5.8nm,0.3s,baz=36,slow=2.7,SNR=15						
URZ				S	**S**	**00 03 41.0**	**-5.1**
	1.0nm,0.3s,baz=51,slow=21,SNR=6.6						
URZ	**Urewera**	**17.23**	**191**	*e*P	**P**	**00 00 54.7**	**-1.3**
	34nm,0.6s						
URZ				*e*S	**S**	**00 03 45.9**	**-0.2**
URZ	**Urewera**	**17.23**	**191**	P	**P**	**00 00 53.3**	**-2.8**
URZ				S	**S**	**00 03 40.6**	**-5.5**
MWZ	**Matawai**	**17.23**	**190**	P	**P**	**00 00 54.5**	**-1.7**
MWZ				S	**S**	**00 03 41.6**	**-4.7**
TKGZ	**Te Karaka**	**17.29**	**189**	P	**P**	**00 00 56.0**	**-0.6**
MUGZ	**Murupara**	**17.50**	**192**	P	**P**	**00 00 57.2**	**-1.3**
TLZ	**Tolley Road**	**17.62**	**195**	P	**P**	**00 01 01.1**	**+1.4**
SNGZ	**Shannon Statio**	**17.70**	**190**	P	**P**	**00 00 59.3**	**-1.1**
MRHZ	**Matea Rd**	**17.91**	**192**	P	**P**	**00 01 00.3**	**-2.1**
BKZ	**Black Stump Fm**	**18.22**	**192**	*e*P	**P**	**00 01 03.3**	**-1.9**
	98nm,1.9s						
BKZ				*e*S	**S**	**00 04 01.1**	**-1.2**
KNTN	**Kanton**	**19.70**	**22**	*e*P	**P**	**00 01 16.4**	**-2.5**
	88nm,0.8s						
DUWZ	**D'Urville Isla**	**20.36**	**196**	P	**P**	**00 01 24.1**	**-0.4**
TCW	**Tory Channel**	**20.66**	**195**	P	**P**	**00 01 27.8**	**+0.6**
QRZ	**Quartz Range**	**20.77**	**199**	P	**P**	**00 01 28.8**	**+0.6**
PLWZ	**Palliser**	**20.79**	**193**	P	**P**	**00 01 32.1**	**+3.7**
NNZ	**Nelson**	**20.89**	**197**	P	**P**	**00 01 29.0**	**-0.2**
TUWZ	**Tuamarina**	**20.95**	**195**	P	**P**	**00 01 29.3**	**-0.4**
THZ	**Tophouse**	**21.53**	**197**	P	**P**	**00 01 35.3**	**+0.2**
DSZ	**Denniston Nort**	**21.83**	**199**	P	**P**	**00 01 38.6**	**+0.9**
KHZ	**Kahutara**	**21.98**	**195**	P	**P**	**00 01 37.9**	**-1.0**
GVZ	**Greta Valley S**	**22.62**	**196**	P	**P**	**00 01 43.7**	**-1.0**
LTZ	**Lake Taylor**	**22.65**	**197**	P	**P**	**00 01 43.6**	**-1.4**
INZ	**Inchbonnie**	**22.83**	**199**	P	**P**	**00 01 46.0**	**-0.6**
OXZ	**Oxford**	**23.22**	**197**	P	**P**	**00 01 50.4**	**+0.4**
WVZ	**Waitaha Valley**	**23.37**	**200**	P	**P**	**00 01 51.1**	**-0.2**
HNR	**Honiara**	**23.59**	**297**	P	**P**	**00 01 52.6**	**-1.1**
	84nm,0.5s,baz=253,slow=2.3,SNR=6.0						
RPZ	**Rata Peaks**	**23.85**	**198**	P	**P**	**00 01 57.3**	**+1.7**
	20nm,0.6s,baz=333,slow=3.3,SNR=9.8						
RPZ	**Rata Peaks**	**23.85**	**198**	*e*P	**P**	**00 01 56.4**	**+0.7**
	150nm,1.8s						
RPZ	**Rata Peaks**	**23.85**	**198**	P	**P**	**00 01 58.4**	**+2.7**
TARA	**Tarawa**	**23.94**	**339**	*e*P	**P**	**00 01 56.4**	**-0.4**
	244nm,0.8s						
WHZ	**Wether Hill Ro**	**26.78**	**201**	*e*P	**P**	**00 02 22.4**	**+1.0**
	88nm,0.6s						
EIDS	**Eidsvold**	**27.88**	**256**	*e*P	**P**	**00 02 31.7**	**+0.4**
	34nm,0.6s						
ARMA	**Armidale**	**28.00**	**245**	*e*P	**P**	**00 02 33.3**	**+0.8**
	23nm,0.8s						
TIAR	**Tiarei**	**28.04**	**87**	*e*P	**P**	**00 02 32.9**	**+0.1**
	11nm,0.8s						
PMOR	**Pomariorio Ree**	**30.04**	**83**	*e*P	**P**	**00 02 49.5**	**-0.5**
	78nm,1.2s						
VAH	**Vaihoa**	**30.22**	**84**	*e*P	**P**	**00 02 50.6**	**-1.0**
	74nm,1.1s						
CTA	**Charters Tower**	**32.64**	**266**	ScP	**ScP**	**00 08 33.0**	**+3.6**
	8.0nm,0.9s,baz=321,slow=20,SNR=4.5						
CTAO	**Charters Tower**	**32.64**	**266**	*e*P	**P**	**00 03 12.7**	**+0.5**
	50nm,0.6s						
CTAO	**Charters Tower**	**32.64**	**266**	*e*P	**P**	**00 03 12.7**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,50nm,0.6s						
PMG	**Port Moresby**	**34.78**	**285**	*e*P	**P**	**00 03 30.2**	**+0.1**
	comp=Z,96nm,0.8s						
PMG	**Port Moresby**	**34.78**	**285**	*e*P	**P**	**00 03 30.3**	**+0.1**
PMG				pmax	pmax		
	comp=Z,96nm,0.8s						
STKA	**Stephens Creek**	**36.72**	**245**	P	**P**	**00 03 47.5**	**+1.5**
	comp=Z,10nm,0.5s,baz=95,slow=10,SNR=29						
STKA				ScP	**S**	**00 08 47.8**	**-1.1**
	comp=Z,2.1nm,0.3s,baz=253,slow=6.9,SNR=5.8						
STKA	**Stephens Creek**	**36.72**	**245**	*e*P	**P**	**00 03 46.9**	**+0.9**
	comp=Z,6.1nm,1.1s						
STKA				*e*S	**S**	**00 08 47.8**	**-1.1**
STKA	**Stephens Creek**	**36.72**	**245**	*e*P	**P**	**00 03 46.9**	**+0.9**
STKA				*e*S	**S**	**00 08 47.8**	**-1.1**
STKA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
COEN	**Coen**	**36.86**	**275**	*e*P	**P**	**00 03 48.2**	**+0.8**
	comp=Z,36nm,0.8s						
BBOO	**Buckleboo**	**41.48**	**244**	*e*P	**P**	**00 04 24.4**	**+0.3**
	comp=Z,24nm,0.8s						
AS31	**Alice Springs**	**43.57**	**258**	*e*P	**P**	**00 04 41.1**	**+0.5**
	comp=Z,28nm,1.1s						
AS31				*e*ScP	**ScP**	**00 09 15.3**	**+4.0**
ASAR	**Alice Springs**	**43.57**	**258**	P	**P**	**00 04 41.6**	**+0.9**
	comp=Z,66nm,0.8s,baz=96,slow=7.9,SNR=505						
ASAR				PcP	**PcP**	**00 06 15.3**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=102,slow=3.5,SNR=6.1						
ASAR				ScP	**ScP**	**00 09 15.3**	**+4.0**
	comp=Z,4.3nm,0.9s,baz=106,slow=3.8,SNR=8.2						
ASAR				S	**S**	**00 10 27.9**	**-0.6**
	comp=Z,6.4nm,0.8s,baz=94,slow=16,SNR=22						
WB2	**Warramunga Arr**	**43.70**	**263**	*e*P	**P**	**00 04 41.2**	**-0.5**
	comp=Z,76nm,0.9s						
WRAB	**Tennant Creek**	**43.71**	**263**	*de*P	**P**	**00 04 41.5**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,72nm,0.9s						
WRA	**Warramunga Arr**	**43.71**	**263**	P	**P**	**00 04 41.6**	**-0.2**
	comp=Z,38nm,0.5s,baz=90,slow=8.4,SNR=121						
WRA				S	**S**	**00 10 27.4**	**-3.1**
	comp=Z,2.7nm,0.8s,baz=94,slow=16,SNR=3.7						
FORT	**Forrest**	**48.25**	**247**	*e*P	**P**	**00 05 15.6**	**-0.3**
	comp=Z,41nm,0.6s						
MTN	**Manton Dam**	**48.39**	**272**	*e*P	**P**	**00 05 17.2**	**0.0**
	comp=Z,59nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.14**	**263**	*e*P	**P**	**00 05 45.0**	**+0.5**
SOEI	**Soe**	**55.75**	**273**	*e*P	**P**	**00 06 11.4**	**+1.4**
	comp=Z,160nm,0.8s						
TNTI	**Ternate**	**56.92**	**286**	*e*P	**P**	**00 06 17.5**	**-0.4**
	comp=Z,95nm,0.9s						
SBA	**Scott Base**	**56.99**	**184**	*e*P	**P**	**00 06 20.1**	**+2.8**
	comp=Z,44nm,1.0s						
SBA	**Scott Base**	**56.99**	**184**	*e*P	**P**	**00 06 20.1**	**+2.8**
SBA				pmax	pmax		
	comp=Z,44nm,1.0s						
VNDA	**Vanda**	**57.02**	**185**	P	**P**	**00 06 19.8**	**+2.3**
	comp=Z,7.9nm,0.7s,baz=359,slow=7.7,SNR=70						
VNDA	**Vanda**	**57.02**	**185**	*e*P	**P**	**00 06 19.6**	**+2.1**
	comp=Z,62nm,1.8s						
VNDA	**Vanda**	**57.02**	**185**	*e*P	**P**	**00 06 19.6**	**+2.1**
VNDA				pmax	pmax		
	comp=Z,62nm,1.8s						
MORW	**Morawa**	**58.79**	**248**	*e*P	**P**	**00 06 30.2**	**-0.1**
	comp=Z,24nm,1.1s						
LUWI	**Luwuk**	**60.32**	**281**	*e*P	**P**	**00 06 41.4**	**+0.7**
	comp=Z,86nm,0.9s						
CASY	**Casey**	**62.88**	**205**	*e*P	**P**	**00 06 57.0**	**+0.6**
	comp=Z,28nm,1.0s						
JAGI	**Jajag, Banyuwa**	**65.60**	**270**	*e*P	**P**	**00 07 12.9**	**-1.6**
	comp=Z,52nm,1.0s						
QSPA	**South Pole Qui**	**68.74**	**180**	*e*P	**P**	**00 07 34.2**	**+1.3**
	comp=Z,54nm,0.8s						
QSPA				*e*pP	**pP**	**00 09 33.8**	**+2.7**
JOW	**Kunigami**	**70.10**	**311**	P	**P**	**00 07 41.5**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=160,slow=12,SNR=4.1						
JOW	**Kunigami**	**70.10**	**311**	*e*P	**P**	**00 07 40.7**	**-0.9**
	comp=Z,35nm,1.1s						
INU	**Inuyama**	**70.21**	**323**	*e*P	**P**	**00 07 41.9**	**-0.1**
	comp=Z,18nm,0.9s						
MJA0	**Matsu Arr-Jizo**	**70.40**	**324**	*e*P	**P**	**00 07 43.1**	**-0.1**
MJA0				pmax	pmax		
	comp=Z,20nm,0.7s						
MJAR	**Matsushiro Arr**	**70.42**	**324**	P	**P**	**00 07 43.2**	**-0.1**
	comp=Z,20nm,0.7s,baz=162,slow=6.0,SNR=56						
MAJO	**Matsushiro**	**70.42**	**324**	*e*P	**P**	**00 07 43.3**	**0.0**
	comp=Z,22nm,0.8s						
MAJO	**Matsushiro**	**70.42**	**324**	*e*P	**P**	**00 07 43.3**	**0.0**
MAJO				pmax	pmax		
	comp=Z,22nm,0.8s						
MAT	**Matsushiro**	**70.42**	**324**	P	**P**	**00 07 42.9**	**-0.4**
MAT				*e*S	**S**	**00 16 07.0**	**-3.2**

comp=Z,3.0nm,1.1s
TPNV Topopah Spring 82.68 46 *e*P **P 00 08 50.7 +0.3**
TPNV pmax pmax
comp=Z,3.0nm,1.1s
KLR Kul'dur 82.84 330 P **P 00 08 51.9 +1.2**
comp=Z,12nm,0.9s,baz=104,slow=3.1,SNR=35
KLR Kul'dur 82.84 330*d i*P **P 00 08 51.5 +0.8**
KLR pmax pmax
comp=Z,14nm,0.9s
K05A Summer Lake 83.10 39 *e*P **P 00 08 52.6 +0.2**
comp=Z,8.7nm,0.9s
KULM Kulim 83.11 278 *e*P **P 00 08 53.6 +0.8**
comp=Z,24nm,0.8s
PINE Pine Mountain 83.72 38 *e*P **P 00 08 56.1 +0.7**
comp=Z,11nm,0.9s
PSI Prapat 83.78 275 *e*P **P 00 08 55.9 -0.4**
comp=Z,24nm,0.8s
PSI Prapat 83.78 275 *e*P **P 00 08 55.9 -0.4**
PSI pmax pmax
comp=Z,24nm,0.8s
BRLK Bradley Lake 83.98 14 *e*P **P 00 08 56.2 +0.1**
comp=Z,30nm,0.9s
RSO Redoubt South 84.22 13 *e*P **P 00 08 57.4 0.0**
MA2 Magadan 84.38 345 P **P 00 08 58.1 +0.1**
comp=Z,14nm,0.8s,baz=150,slow=5.5,SNR=11
MA2 Magadan 84.38 345 *e*P **P 00 08 58.0 0.0**
comp=Z,18nm,1.0s
MA2 Magadan 84.38 345 *e*P **P 00 08 58.0 0.0**
MA2 pmax pmax
comp=Z,19nm,1.0s
GSI Gunungsitoli 84.49 274 *e*P **P 00 09 00.9 +1.2**
comp=Z,71nm,0.6s
RC01 Rabbit Creek A 85.42 14 *e*P **P 00 09 03.2 +0.2**
comp=Z,38nm,1.4s
SYO Syowa Base 85.75 193⇓*e*P **P 00 09 03.0 -1.6**
G08A Pilot Rock 85.75 38 *e*P **P 00 09 05.9 +0.8**
comp=Z,5.4nm,0.9s
ENH Enshi 85.86 305 *e*P **P 00 09 06.8 +0.9**
comp=Z,42nm,0.9s
BJT Baijiatuau 85.93 316 *e*P **P 00 09 05.9 0.0**
comp=Z,9.2nm,0.8s
BJT Baijiatuau 85.93 316 *e*P **P 00 09 05.9 0.0**
BJT pmax pmax
comp=Z,9.0nm,0.8s
LTY Liberty 85.98 35 *e*pP pP 00 11 14.3 +3.0
KNK Knik Glacier 86.00 14 *e*P **P 00 09 04.7 -1.1**
comp=Z,18nm,0.7s
PMR Palmer 86.01 14 *e*P **P 00 09 05.4 -0.4**
comp=Z,19nm,1.1s
PMR Palmer 86.01 14 *e*P **P 00 09 05.4 -0.4**
PMR pmax pmax
comp=Z,19nm,1.1s
HAWA Hanford 86.08 37 *e*P **P 00 09 07.3 +0.8**
comp=Z,7.8nm,0.9s
DIV Divide 86.39 15 *e*P **P 00 09 07.6 -0.1**
comp=Z,21nm,1.0s
SEY Seymchan 87.00 347 P **P 00 09 10.3 -0.1**
comp=Z,22nm,0.9s,baz=146,slow=5.2,SNR=41
SEY Seymchan 87.00 347*e*P **P 00 09 11.0 +0.5**
F10A Beach Ranch, E 87.14 38 *e*P **P 00 09 12.1 +0.4**
comp=Z,10.0nm,0.9s
SNAA Sanae 87.20 179 P **P 00 09 11.5 0.0**
SNAA Sanae 87.20 179 *e*P **P 00 09 11.7 +0.1**
comp=Z,10nm,1.3s
SNAA Sanae 87.20 179 *e*P **P 00 09 11.7 +0.1**
SNAA pmax pmax
comp=Z,10.0nm,1.3s
B08A Colville Reser 87.36 35 *e*P **P 00 09 12.6 +0.1**
comp=Z,6.6nm,0.8s
VNA3 Neumayer Olymp 87.37 177 P **P 00 09 12.4 +0.1**
VNA3 Neumayer Olymp 87.37 177 P pP 00 11 18.3 -0.2
DHY Denali Highway 87.71 14 *e*P **P 00 09 13.8 -0.2**
comp=Z,14nm,1.2s
VNA2 Neumayer--Watz 87.80 177 P **P 00 09 14.7 +0.4**
baz=173,slow=3.2
VNA2 Neumayer--Watz 87.80 177 P pP 00 11 19.5 -1.0
baz=181,slow=5.2
MCK McKinley 87.95 13 *e*P **P 00 09 14.3 -0.6**
comp=Z,18nm,0.8s
MCK McKinley 87.95 13 *e*P **P 00 09 14.3 -0.6**
MCK pmax pmax
comp=Z,18nm,0.8s
ZEA Zeya 87.97 331 *e*P **P 00 09 15.9 +0.7**
ZEA pmax pmax
comp=Z,29nm,1.0s
XAN Xi'an 88.01 308 P **P 00 09 17.8 +1.8**
XAN pmax pmax
comp=Z,26nm,1.1s
XAN Xi'an 88.01 308 *e*P **P 00 09 16.6 +0.7**
comp=Z,22nm,0.9s
XAN Xi'an 88.01 308 *e*P **P 00 09 16.6 +0.7**
XAN pmax pmax
comp=Z,22nm,0.9s
VNA1 Neumayer--Stat 88.03 177 P **P 00 09 15.8 +0.5**
VNA1 Neumayer--Stat 88.03 177 P pP 00 11 21.2 -0.4
TX31 Lajitas Ar. Si 88.16 58 *e*P **P 00 09 18.1 +1.3**
comp=Z,17nm,2.0s
TXAR Lajitas Array 88.16 58 P **P 00 09 18.1 +1.3**
comp=Z,2.8nm,1.0s,baz=224,slow=5.2,SNR=8.6
HYT Haines Junctio 88.41 19 *e*P **P 00 09 17.1 -0.2**
comp=Z,6.8nm,0.9s
ANMO Albuquerque 88.53 52 *e*P **P 00 09 18.2 -0.4**
comp=Z,2.1nm,0.9s
ANMO Albuquerque 88.53 52 *i*P **P 00 09 18.7 +0.1**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
DOT Dot Lake 88.96 15 *e*P **P 00 09 19.0 -0.6**
comp=Z,11nm,0.8s
MCMT McKenzie Canyo 89.09 41 *e*P **P 00 09 20.9 -0.1**
WHY Whitehorse 89.10 20 *e*P **P 00 09 20.7 +0.2**
comp=Z,7.6nm,0.8s
DLBC Dease Lake 89.12 23 P **P 00 09 21.4 +0.9**
comp=Z,4.6nm,0.9s,baz=187,slow=4.5,SNR=6.9
DLBC Dease Lake 89.12 23 *e*P **P 00 09 21.1 +0.5**
comp=Z,5.5nm,0.9s
PLCA Paso Flores 89.27 134 P **P 00 09 21.9 +0.1**
comp=Z,7.8nm,0.9s,baz=244,slow=5.0,SNR=11
PLCA Paso Flores 89.27 134 *e*P **P 00 09 21.4 -0.5**
comp=Z,33nm,1.8s
PLCA Paso Flores 89.27 134 *e*P **P 00 09 23.0 +1.1**
PLCA pmax pmax
comp=Z,8.0nm,0.9s
ILAR Eielson Array 89.30 13 P **P 00 09 20.1 -1.1**
comp=Z,6.7nm,0.9s,baz=223,slow=5.3,SNR=45
HHC Hu-ho-hao-te 89.37 315 *e*P **P 00 09 21.6 -0.6**
HHC pmax pmax
comp=Z,17nm,1.1s
HHC pmax pmax
comp=Z,79nm,4.4s
CMAR Chiang Mai Arr 89.65 290 P **P 00 09 25.9 +2.0**
comp=Z,14nm,0.9s,baz=130,slow=3.1,SNR=55
CMAR Chiang Mai Arr 89.65 290 *e*P **P 00 09 26.5 +2.6**
CMAR pmax pmax
comp=Z,15nm,0.9s
LNIG Linares 89.73 63 *e*P **P 00 09 24.3 +0.2**
comp=Z,5.9nm,0.9s
BILL Bilibino 89.78 354*d i*P **P 00 09 23.5 +0.2**
BILL *e**PP **pP 00 11 28.9 -1.2**
BILL *e* 00 13 07.9
BILL *e*S **SKSac 00 18 55.6 -2.2**
BILL pmax pmax
comp=Z,10.0nm,0.9s
CHTO Chiang Mai 89.79 290 *e*P **P 00 09 26.1 +1.6**
comp=Z,15nm,0.8s
CHTO Chiang Mai 89.79 290 *e*P **P 00 09 26.1 +1.6**
CHTO pmax pmax
comp=Z,15nm,0.8s
PD31 Pinedale Array 90.10 44 *e*P **P 00 09 26.6 +0.9**
comp=Z,7.1nm,1.3s
PDAR Pinedale Array 90.10 44 P **P 00 09 26.2 +0.5**
comp=Z,1.1nm,0.6s,baz=215,slow=3.0,SNR=13
LZH Lanzhou 92.65 308 *e*P **P 00 09 37.8 +0.3**
LZH pP pP 00 11 44.0 +0.1
LZH sP sP 00 12 43.3 +1.4
LZH pmax pmax
comp=Z,18nm,0.9s
EPYK Eagle Plains 92.99 16 *e*P **P 00 09 38.2 0.0**
comp=Z,8.7nm,0.9s
INK Inuvik 95.28 15 P **P 00 09 47.4 -1.0**
comp=Z,3.3nm,1.1s,baz=208,slow=9.9,SNR=9.4
ULN Ulaanbaatar 95.48 319 *e*P **P 00 09 50.2 +0.2**
comp=Z,2.5nm,0.7s
ULN Ulaanbaatar 95.48 319 *e*P **P 00 09 50.2 +0.2**
ULN pmax pmax
comp=Z,3.0nm,0.7s
SONM Songino Array 95.86 319 P **P 00 09 51.7 -0.1**
comp=Z,0.4nm,0.5s,baz=112,slow=4.0,SNR=4.0

GTA Gaotai 96.89 310 *e*P **P 00 09 58.0 +1.4**
GTA pmax pmax
comp=Z,2.0nm,1.1s
YKA Yellowknife Ar 97.59 25 P Pdif 00 09 58.4 -0.5
comp=Z,1.3nm,0.8s,baz=236,slow=3.0,SNR=3.5
TIXI Tiksi 99.35 345 *i* P **Pdif 00 10 05.8 -0.7**
TIXI pmax pmax
comp=Z,1.0nm,1.0s
X43A Marvell 100.17 57 *e*pP pP 00 12 22.0 +3.5
ZALV Zalesovo Beam 110.64 321 PKiKP **PKiKP 00 14 52.5 -1.1**
comp=Z,1.1nm,0.6s,baz=94,slow=4.1,SNR=5.2
MKAR Makanchi Array 111.19 313 PKiKP **PKiKP 00 14 54.0 -0.9**
comp=Z,0.3nm,0.4s,baz=72,slow=1.3,SNR=5.3
MKAR PKKPbc **PKKPbc 00 25 53.4 -0.2**
comp=Z,1.1nm,0.8s,baz=275,slow=4.5,SNR=9.1
KURK Kurchatov 114.07 317*c i*PKIKP **PKiKP 00 15 00.4 +0.2**
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURBB Kurchatov Arra 114.12 317 PKKPbc PKKPbc 00 25 43.7 -0.3
comp=Z,0.7nm,0.9s,baz=278,slow=3.4,SNR=5.1
BRVK Borovoye 119.27 320 *e*PKPdf **PKPdf 00 15 09.5 -0.7**
BRVK Borovoye 119.27 320*c i*PKIKP **PKiKP 00 15 10.3 +0.1**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
SPITS Spitsbergen Ar 122.64 356 PKP **PKPdf 00 15 15.2 -0.8**
comp=Z,5.7nm,0.7s,baz=98,slow=5.5,SNR=6.8
SVE Sverdlovsk 124.22 325 *e*PKIKP **PKiKP 00 15 19.9 0.0**
SVE pmax pmax
comp=Z,7.0nm,0.8s
ARU Arti 125.43 325 *e*PKPdf **PKPdf 00 15 21.4 -0.4**
ARU Arti 125.43 325 *i* PKIKP **PKiKP 00 15 22.1 -0.2**
ARU 00 17 23.4
ARU 00 21 36.7
ARU SP SP 00 26 23.7 -2.3
ARU SS **SS 00 33 31.4 -5.1**
ABKAR Akbulak array 126.14 316 *e*PKPdf **PKPdf 00 15 23.3 -0.2**
GEYT Alibeck 128.56 302 PKP **PKiKP 00 15 29.6 +0.4**
comp=Z,2.2nm,0.7s,baz=203,slow=3.1,SNR=7.3
GEYT SKPbc SKiKP 00 17 56.7 -13
comp=Z,2.4nm,0.8s,baz=194,slow=3.1,SNR=8.7
ARCES ARCESS Array B 129.59 349 PKP **PKPdf 00 15 28.7 -0.8**
comp=Z,3.9nm,0.6s,baz=23,slow=1.2,SNR=22
ARCES SKPbc SKPab 00 18 00.2 +2.7
comp=Z,15nm,0.9s,baz=45,slow=5.3,SNR=24
ARCES ARCESS Array B 129.59 349 *e*PKIKP **PKPdf 00 15 29.3 -0.2**
ARCES pmax pmax
comp=Z,4.0nm,0.6s
KLMR Klimovskoe 132.32 336 *e*PKIKP **PKPdf 00 15 34.6 -0.2**
KLMR *e* 00 18 07.5
KLMR pmax pmax
comp=Z,3.0nm,0.6s
FIA0 FINESS Array S 136.34 343 *e*PKPdf **PKPdf 00 15 41.5 -0.7**
FIA0 FINESS Array S 136.34 343 *e*PKIKP **PKPdf 00 15 41.6 -0.7**
FINES FINESS Array B 136.34 343 PKiKP PKPpre 00 15 29.2
comp=Z,1.0nm,0.7s,baz=19,slow=2.6,SNR=6.7
FINES PKP **PKPdf 00 15 41.5 -0.7**
comp=Z,3.2nm,0.7s,baz=90,slow=3.8,SNR=10
FINES SKPbc **SKPbc 00 18 21.9 +1.7**
comp=Z,6.6nm,0.8s,baz=64,slow=4.4,SNR=18
GNBR Gunib 136.42 310 *i* PKIKP **PKiKP 00 15 45.4 +0.4**
GNBR pmax pmax
comp=Z,14nm,1.0s
OBN Obninsk 137.10 331⇑*e*PKIKP **PKPdf 00 15 43.8 -0.1**
OBN *e* 00 18 32.6
OBN *e* 00 21 51.1
OBN pmax pmax
comp=Z,5.0nm,0.5s
KMBO Kilima Mbogo 138.26 242 SKPbc **SKiKP 00 18 30.4 -0.6**
comp=Z,2.1nm,0.8s,baz=204,slow=11,SNR=4.9
NB2 NORSAR Subarra139.70 352 PKP **PKPdf 00 15 41.2 -7.4**
comp=Z,1.1nm,0.6s,baz=9.0,slow=3.8
NB2 NORSAR Subarra139.70 352 PKP **PKPdf 00 15 41.4 -7.2**
comp=Z,0.5nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B139.70 352 PKhKP PKPdf 00 15 40.4 -8.2
comp=Z,1.2nm,0.7s,baz=53,slow=4.5,SNR=9.6
NOA PKP **PKiKP 00 15 48.8 -2.3**
comp=Z,0.6nm,0.7s,baz=14,slow=4.0,SNR=4.2
NOA SKPbc **SKiKP 00 18 31.8 -0.4**
comp=Z,5.0nm,0.9s,baz=14,slow=4.3,SNR=12
NOA NORSAR Array B139.70 352 *e*PKIKP **PKiKP 00 15 51.0 -0.1**
NOA pmax pmax
comp=Z,1.0nm,0.4s
SUW Suwalki 143.33 338 *e*PKP PKPab 00 15 53.6 +0.1
AKASG Malin Array Be 143.35 330 PKP PKPab 00 15 53.1 -0.6
comp=Z,28nm,0.6s,baz=42,slow=4.6,SNR=101
AKASG SKPbc **SKiKP 00 18 40.0 +0.1**
comp=Z,4.3nm,0.9s,baz=46,slow=2.7,SNR=14
SIM Simferopol' 144.11 319*de*PKHKP PKPbc 00 15 57.0 +0.5
SIM pmax pmax
comp=Z,41nm,0.7s
SEVA Sevastopol 144.59 318⇓*i*P **PKPab 00 15 59.0 +0.3**
BSD Bornholm Skovb 144.71 346⇓*i*P **PKPdf 00 15 57.7 +0.2**
comp=Z,4.1nm,1.0s
DIKM Dikmen 144.89 313⇓*i*P **PKPab 00 16 00.1 +0.2**
BZK Bozkurt 145.60 314⇓*i*P **PKPab 00 16 01.9 -0.8**
GKP Gorka Klasztor 145.81 343 *e*PKP **PKPbc 00 16 01.4 +0.2**
GKP Gorka Klasztor 145.81 343 *e*PKIKP **PKPbc 00 16 01.4 +0.2**
ESK Eskdalemuir 145.91 4 *e*PKPdf **PKPbc 00 16 01.5 0.0**
ESK Eskdalemuir 145.91 4 *e*PKIKP **PKPbc 00 16 01.5 0.0**
BEL Belsk 145.94 338 *e*PKP **PKPbc 00 16 02.4 +0.8**
BEL Belsk 145.94 338 *e*PKIKP **PKPbc 00 16 02.4 +0.8**
KIS Kishinev 145.98 325 *e*P **PKPdf 00 16 00.0 +0.1**
MILM Milestii Mici 146.04 325⇑*i*P **PKPbc 00 16 01.5 -0.6**
ILGA Ilgaz 146.19 313 *i* P **PKiKP 00 16 04.2 -1.1**
ILGA IAML_P
comp=Z,543nm,0.3s
LVV L'vov 146.30 333 *e*PKIKP **PKPbc 00 16 02.3 -0.4**
DELI KIRIKKALE 146.49 311 *i* P **PKPbc 00 16 02.7 -1.0**
DELI IAML_P
comp=Z,1μm,0.5s
ELDT Eldivan 146.63 312 *i* P **PKiKP 00 16 05.4 -0.8**
ELDT IAML_P
comp=Z,540nm,0.5s
BR131 Keskin Array S 146.80 311 *e*PKPbc **PKPbc 00 16 04.2 -0.3**
BR131 Keskin Array S 146.80 311 *e*PKIKP **PKPbc 00 16 04.3 -0.3**
BRTR Keskin Array B 146.80 311 PKPbc **PKPbc 00 16 04.3 -0.3**
comp=Z,7.5nm,0.7s,baz=99,slow=3.0,SNR=64
KWP Kalwaria Pacla 146.99 334 *e*PKP **PKPbc 00 16 04.8 +0.2**
KWP Kalwaria Pacla 146.99 334 *e*PKIKP **PKPbc 00 16 04.8 +0.2**
PRAR RASCA 147.07 328⇑*i*P **PKiKP 00 16 05.8 -0.9**
BIR Birlad 147.08 325⇑*i*P **PKiKP 00 16 06.4 -0.3**
BIR Birlad 147.08 325⇑⇑PKIKP **PKiKP 00 16 06.4 -0.3**
TLCR 147.11 323⇑*i*P **PKPbc 00 16 05.5 +0.5**
TLCR 147.11 323⇑PKIKP **PKPbc 00 16 05.5 +0.5**
ANTO Ankara 147.33 312 *e*PKPbc **PKPbc 00 16 06.2 +0.3**
ANTO Ankara 147.33 312⇑*i*P **PKPbc 00 16 06.7 +0.8**
ANTO Ankara 147.33 312 *e*PKIKP **PKPbc 00 16 06.2 +0.3**
BURAR Bucovina Array 147.38 329⇑*i*P **PKiKP 00 16 06.7 -0.7**
BURAR Bucovina Array 147.38 329⇑PKIKP **PKiKP 00 16 06.7 -0.7**
BCAM Yenicaga 147.42 314 *i* P **PKPbc 00 16 06.8 +0.7**
BCAM IAML_P
comp=Z,316nm,0.7s
BIZ Bicaz 147.42 328⇑*i*P **PKPbc 00 16 06.6 +0.8**
TESR Tescani 147.43 326⇑*i*P **PKPbc 00 16 05.8 -0.1**
CFR Carcaliu 147.49 323⇑*i*P **PKPbc 00 16 05.8 -0.2**
CFR Carcaliu 147.49 323⇑PKIKP **PKPbc 00 16 05.8 -0.2**
KKUL Konya-Kulu 147.53 310 *i* P **PKiKP 00 16 07.8 -0.2**
KKUL IAML_P
comp=Z,196nm,0.7s
OJC Ojcow 147.63 337 *e*PKP **PKPbc 00 16 06.5 +0.2**
OJC Ojcow 147.63 337 *e*PKPbc **PKPbc 00 16 06.7 +0.4**
OJC Ojcow 147.63 337 *e*PKIKP **PKPbc 00 16 06.7 +0.4**
ODBI Odobesti 147.71 325⇑*i*P **PKiKP 00 16 08.0 0.0**
KOLS Kolonicke sedl 147.72 334 *e*PKIKP **PKPbc 00 16 07.1 +0.6**
KIBS BOLU 147.74 313 *i* P **PKPbc 00 16 07.3 +0.3**
KIBS IAML_P
comp=Z,279nm,0.9s
YIGI Dzce 147.76 314 *i* P **PKPbc 00 16 06.1 -0.8**
YIGI IAML_P
comp=Z,569nm,0.8s
TIRR Tirgusor 147.77 322 *e*PKPbc **PKPbc 00 16 06.7 -0.1**
TIRR Tirgusor 147.77 322⇓*i*P **PKPbc 00 16 06.7 -0.1**
TIRR Tirgusor 147.77 322 *e*PKIKP **PKPbc 00 16 06.7 -0.1**
VRI Vrincioaia 147.82 326⇑*i*P **PKPbc 00 16 06.8 -0.1**
VRI Vrincioaia 147.82 326⇑PKIKP **PKPbc 00 16 06.8 -0.1**
PLOR Plostina 147.87 326⇑*i*P **PKPbc 00 16 06.8 -0.2**
PLOR Plostina 147.87 326⇑PKIKP **PKPbc 00 16 06.8 -0.2**
HARR Harsova 147.91 323⇑*i*P **PKiKP 00 16 08.0 -0.4**
HARR Harsova 147.91 323⇑PKIKP **PKiKP 00 16 08.0 -0.4**
TLB Topalu 147.91 323⇑*i*P **PKPbc 00 16 07.4 +0.3**
TLB Topalu 147.91 323⇑PKIKP **PKPbc 00 16 07.4 +0.3**
MFTR Murfatlar 147.94 322⇑*i*P **PKPbc 00 16 07.6 +0.4**
UZH Uzhgorod 147.94 333⇑*i*PKIKP **PKiKP 00 16 08.0 -0.4**
UZH *e* 00 16 13.1

MANR Mangalia 148.05 321⇑*i*P **PKPbc 00 16 08.0 +0.5**
TSMN Mangalia Port- 148.06 321⇓*i*P **PKPbc 00 16 07.6 +0.1**
NIE Niedzica 148.11 336 *e*PKP **PKiKP 00 16 08.3 -0.4**
NIE Niedzica 148.11 336 *e*PKIKP **PKiKP 00 16 08.4 -0.4**
BMR Baia Mare 148.14 331⇑*i*P **PKiKP 00 16 08.6 -0.2**
BMR Baia Mare 148.14 331⇑PKIKP **PKiKP 00 16 08.6 -0.2**
OZUR 148.16 327⇑*i*P **PKiKP 00 16 08.7 -0.3**
ARCR ARCALIA 148.17 329⇓*i*P **PKiKP 00 16 08.4 -0.5**
TRPA Tarpa 148.22 332⇑*i*P **PKPbc 00 16 07.8 0.0**
TRPA Tarpa 148.22 332⇓*e*P **PKPbc 00 16 07.1 -0.7**
KSP Ksiaz 148.24 342 *e*PKP **PKiKP 00 16 08.5 -0.4**
AUMIH MIHALICIK 148.24 312 *i* P **PKPbc 00 16 08.1 -0.2**
AMRR Amara 148.29 323⇑*i*P **PKPbc 00 16 08.1 +0.1**
ISR Istrita 148.40 325⇑*i*P **PKiKP 00 16 09.3 -0.2**
MLR Muntele Rosu 148.48 326 *e*PKPbc **PKPbc 00 16 08.3 -0.4**
MLR Muntele Rosu 148.48 326⇓*i*P **PKPbc 00 16 09.0 +0.3**
OSTC Ostas 148.52 342⇑*e*PKP **PKiKP 00 16 10.9 +1.3**
KAND Kocaeli-Kandir 148.53 315 *i* P **PKPbc 00 16 08.4 -0.4**
KAND IAML_P
comp=Z,136nm,0.5s
OKC Ostrava-Krasne 148.53 339⇑*e*PKP **PKiKP 00 16 09.2 -0.4**
OKC *e*PKPAB **PKPab 00 16 14.9 +0.6**
CHVC Chvalec 148.54 342⇑*e*PKP **PKiKP 00 16 09.2 -0.4**
CHVC *e*PKPAB **PKPab 00 16 15.1 +0.8**
CHVC *ep*PKP **pPKPab 00 18 26.3 +2.7**
UPC Upice 148.62 342⇑*e*PKP **PKiKP 00 16 09.6 -0.1**
UPC *e*PKPAB **PKPab 00 16 15.7 +1.0**
UPC *ep*PKP **pPKPab 00 18 29.5 +5.6**
LANS Liptovska Anna 148.64 337 *e*PKHKP **PKiKP 00 16 10.4 +0.5**
LANS *e* 00 16 16.6
DPC Dobruska-Polom 148.67 341⇑*e*PKP **PKPbc 00 16 09.3 +0.4**
DPC *e*PKPAB **PKPab 00 16 15.7 +0.8**
DPC *ep*PKP **pPKPab 00 18 25.8 +1.7**
CLL Collm 148.68 346 *e*PKPdf **PKPdf 00 16 05.0 +0.8**
comp=Z,7.0nm,1.7s
CLL *i* PKPbc **PKPbc 00 16 08.7 -0.1**
comp=Z,27nm,1.0s
CLL *i* PKPab **PKPab 00 16 15.0 +0.2**
comp=Z,16nm,0.7s
CLL *i* pPKPbc **pPKPab 00 18 23.6 -0.5**
CLL *i* SKPbc **SKiKP 00 18 53.4 +2.5**
comp=Z,4.0nm,1.1s
CLL *e*PKSdf **PP 00 19 42.0 -2.6**
MORC Moravsky Berou 148.78 339 *e*PKPbc **PKPbc 00 16 09.4 +0.2**
MORC Moravsky Berou 148.78 339⇑*i*P **PKPbc 00 16 09.6 +0.4**
MORC Moravsky Berou 148.78 339 *e*PKP **PKPbc 00 16 09.4 +0.2**
MORC *e* 00 16 16.1
KECS Kecovo 148.80 335 *e*PKHKP **PKiKP 00 16 10.5 +0.3**
KECS *e* 00 16 16.6
CJR Cluj-Napoca 148.80 330⇑*i*P **PKiKP 00 16 10.1 -0.2**
MDB Medias 148.83 328⇓*i*P **PKiKP 00 16 10.5 +0.2**
BRG Berggiesshubel 148.85 344 *i* PKP **PKPbc 00 16 09.3 +0.1**
comp=Z,39nm,1.6s
BRG Berggiesshubel 148.85 344 *i* PKP **PKPab 00 16 15.9 +0.3**
comp=Z,11nm,0.9s
BRG *ep*PKP **pPKPdf 00 18 17.3 -3.1**
comp=Z,6.9nm,1.5s
SILT Sile 148.86 316⇑*i*P **PKiKP 00 16 10.2 -0.3**
BORA Eskisehir 148.94 313 *i* P **PKiKP 00 16 10.9 0.0**
BORA IAML_P
comp=Z,692nm,0.6s
LEF Lefka 149.00 303⇓*i*P **PKPbc 00 16 09.9 -0.2**
PVCC Panska Ves 149.01 343⇑*e*PKP **PKiKP 00 16 10.2 -0.3**
PVCC *e*PKPAB **PKPab 00 16 17.3 +1.1**
PVCC *ep*PKP **pPKPab 00 18 32.2 +6.8**
DRGR 149.16 331⇑*i*P **PKPbc 00 16 10.2 0.0**
ARR Arges 149.24 327⇑*i*P **PKiKP 00 16 12.1 +0.8**
VYHS Vyhne 149.42 337 *e*PKHKP **PKPbc 00 16 10.9 +0.2**
VYHS *e* 00 16 19.1
PSZ Piszkesteto 149.49 335⇓*i*P **PKiKP 00 16 11.7 0.0**
PSZ Piszkesteto 149.49 335 EP **PKPbc 00 16 11.0 0.0**
VRAC Vranov 149.50 340⇑*i*P **PKiKP 00 16 11.7 +0.1**
VRAC Vranov 149.50 340 *e*PKP **PKPbc 00 16 11.0 +0.1**
VRAC *e* 00 16 19.4
GOPC GO Pecny, Ondr 149.50 343⇑*e*PKP **PKPbc 00 16 11.1 +0.2**
GOPC *e*PKPAB **PKPab 00 16 19.2 +0.8**
PRU Pruhonice 149.50 343⇑*e*PKP **PKiKP 00 16 11.3 -0.3**
PRU *e*PKPAB **PKPab 00 16 18.4 +0.1**
JAVC Velka Javorina 149.53 338 *e*PKP **PKiKP 00 16 12.2 +0.5**
JAVC *e* 00 16 20.4
LOT Lotru 149.62 328⇑*i*P **PKPbc 00 16 11.4 0.0**
HUMR Humele 149.63 325⇓*i*P **PKPbc 00 16 11.2 -0.1**
KRUC Moravsky 149.78 340 *e*PKP **PKPbc 00 16 11.5 0.0**
KRUC *e* 00 16 20.2
NKC Novy Kostel 149.81 346⇑*e*PKP **PKiKP 00 16 12.0 -0.2**
NKC *e*PKPAB **PKPab 00 16 20.2 +0.6**
TREC Trest 149.85 341⇑*e*PKP **PKPbc 00 16 11.5 -0.2**
TREC *e*PKPAB **PKPab 00 16 20.1 +0.3**
TREC *ep*PKP **pPKPab 00 18 31.6 +2.9**
PHSR Pinarhisar 149.95 318⇑*i*P **PKPbc 00 16 12.0 -0.2**
SIRR Siria 150.03 331⇑*i*P **PKPbc 00 16 12.5 +0.3**
MODS Modra-Piesok 150.08 338 *e*PKHKP **PKPbc 00 16 12.4 +0.1**
MODS *e* 00 16 21.2
SRO Srobarova 150.18 336 *e*PKHKP **PKPbc 00 16 13.4 +0.9**
SRO *e* 00 16 22.5
SRO2 Moca 150.19 336 *e*PKHKP **PKPbc 00 16 12.3 -0.2**
SRO2 *e* 00 16 21.2
ZST Bratislava 150.29 338 *e*PKP2 **PKPab 00 16 22.3 +0.6**
MEM Membach 150.53 354 PKPbc **PKPbc 00 16 13.1 -0.1**
MEM PKPab **PKPab 00 16 21.5 -1.1**
BZS Buzias 150.54 330⇑*i*P **PKPbc 00 16 13.4 0.0**
BZS Buzias 150.54 330⇑PKIKP **PKPbc 00 16 13.4 0.0**
KHC Kasperske Hory 150.54 343 *e*PKPbc **PKPbc 00 16 13.1 -0.3**
KHC *e*PKPab **PKPab 00 16 23.5 +0.8**
KHC Kasperske Hory 150.54 343 *e*PKIKP **PKPbc 00 16 13.1 -0.3**
KHC *e* 00 16 23.5
KHC Kasperske Hory 150.54 343⇑*e*PKP **PKPbc 00 16 13.1 -0.3**
KHC *e*PKPAB **PKPab 00 16 23.0 +0.2**
CSKK Cskako 150.57 336⇑EP **PKPbc 00 16 13.1 -0.4**
GRA1 Grafenberg Arr 150.59 347 *e*PKPab **PKPab 00 16 23.4 +0.6**
GRF Grafenberg Arr 150.59 347 *e*PKIKP **PKPab 00 16 23.5 +0.6**
GRFO Grafenberg 150.59 347 *e*PKPbc **PKiKP 00 16 14.3 +0.5**
GRFO *e*PKPab **PKPab 00 16 23.3 +0.4**
GRFO Grafenberg 150.59 347 *e*PKIKP **PKiKP 00 16 14.3 +0.5**
GRFO *e* 00 16 23.3
BRQR Ronquire 150.68 356 PKPbc **PKiKP 00 16 13.7 -0.2**
BRQR x x 00 16 17.5
BRQR PKPab **PKPab 00 16 23.1 -0.1**
BRQR x x 00 16 39.3
HERR Herculane 150.70 328⇑*i*P **PKPbc 00 16 13.6 -0.2**
GEC2 GERESS Array S 150.77 343 *e*PKPbc **PKiKP 00 16 14.2 -0.2**
GEC2 GERESS Array S 150.77 343 *e*PKIKP **PKiKP 00 16 14.2 -0.2**
GERES GERESS Array B 150.77 343 PKPbc **PKPbc 00 16 13.6 -0.4**
comp=Z,7.5nm,0.8s,baz=42,slow=2.2,SNR=55
GERES PKPab **PKPab 00 16 23.9 +0.1**
comp=Z,3.2nm,0.9s,baz=46,slow=5.8,SNR=8.5
BHOU Houvegnez 150.78 354 PKPbc **PKiKP 00 16 14.2 -0.1**
BHOU PKPab **PKPab 00 16 23.8 +0.1**
BCLA Clavier 150.79 355 PKPbc **PKiKP 00 16 14.2 0.0**
BALB Balikesir 150.79 315 *e*PKPbc **PKiKP 00 16 14.6 0.0**
BALB *e*PKPab **PKPab 00 16 25.0 +0.9**
BGES Gesves 150.84 355 PKPab **PKPab 00 16 23.1 -0.7**
SOP Sopron 150.92 338 EP **PKPbc 00 16 14.0 -0.2**
BANR Banloc 150.94 330⇑*i*P **PKiKP 00 16 15.0 +0.4**
CONA Conrad Observa 150.94 339 *i* PKiKP **PKiKP 00 16 15.3 +0.6**
SNR=14
CONA *i* PKPab **PKPab 00 16 25.8 +1.3**
comp=Z,26nm,1.7s
BMRD Maredsous 150.95 355 PKPbc **PKiKP 00 16 14.7 +0.2**
BMRD PKPab **PKPab 00 16 24.2 -0.1**
TIH Tihany 151.10 336⇑EP **PKPbc 00 16 14.1 -0.5**
MDVR Moldovita 151.11 329⇓*i*P **PKPbc 00 16 14.5 -0.3**
DOU Dourbes 151.17 355 PKPbc **PKiKP 00 16 15.2 +0.2**
WLF Walferdange 151.45 353 PKPbc **PKiKP 00 16 15.9 +0.3**
WLF PKPab **PKPab 00 16 26.4 0.0**
MOA Molln 151.51 341 *i* PKPbc **PKPbc 00 16 15.2 -0.4**
comp=Z,3.9nm,0.6s
MOA *i* PKPab **PKPab 00 16 27.9 +1.0**
comp=Z,8.0nm,1.0s
ARSA Arzberg 151.65 339 *i* PKPbc **PKPbc 00 16 15.1 -0.8**
comp=Z,2.1nm,0.7s
ARSA *i* PKPab **PKPab 00 16 28.3 +0.8**
comp=Z,2.7nm,0.8s
VTS Vitosha 151.85 324⇑*i*P **PKPbc 00 16 15.6 -1.1**
VTS Vitosha 151.85 324⇑PKIKP **PKPbc 00 16 15.7 -1.0**
BEHE Becsehely 151.88 337⇑EP **PKPbc 00 16 16.1 -0.3**
PRK Paraskevi 152.06 315 P **PKPab 00 16 31.2 +1.8**
SOKA Soboth 152.31 339 *i* PKiKP **PKPbc 00 16 17.5 0.0**
SNR=5.1
SOKA *i* PKPab **PKPab 00 16 30.8 +0.5**
comp=Z,11nm,1.0s

PERS	**Pernice**	**152.32**	**339**	*i* PKPdf	**PKPbc**	**00 16 17.0**	**-0.5**
PERS				*i*		00 16 30.6	
NVR	**Nevrokopi**	**152.32**	**321**	P	**PKPab**	**00 16 31.4**	**+0.8**
BFO	**Black Forest**	**152.45**	**350**	*e*PKPbc	**PKiKP**	**00 16 17.8**	**0.0**
BFO				*e*PKPab	**PKPab**	**00 16 29.6**	**-1.2**
BFO	**Black Forest**	**152.45**	**350**	*e*PKIKP	**PKiKP**	**00 16 17.8**	**0.0**
BFO				*e*		00 16 29.7	
KBA	**Koelnbreinsper**	**152.48**	**342**	*i* PKPbc	**PKPbc**	**00 16 16.8**	**-1.1**
	comp=Z,4.7nm,1.0s						
KBA				*i* PKPab	**PKPab**	**00 16 31.3**	**+0.1**
	comp=Z,7.1nm,0.7s						
OBKA	**Obir**	**152.62**	**340**	*i* PKPbc	**PKPbc**	**00 16 17.3**	**-0.9**
	comp=Z,2.9nm,0.8s						
OBKA				*i* PKPab	**PKPab**	**00 16 31.3**	**-0.4**
	comp=Z,5.8nm,0.7s						
SRS	**Serrai**	**152.62**	**321**	P	**PKPab**	**00 16 32.2**	**+0.4**
WATA	**Walderalm**	**152.72**	**344**	*e*PKiKP	**PKPbc**	**00 16 18.4**	**0.0**
	comp=Z,8.0nm,1.1s						
WATA				*i* PKPab	**PKPab**	**00 16 32.5**	**+0.4**
	comp=Z,21nm,1.2s						
WTTA	**Wattenberg**	**152.77**	**344**	*i* PKPbc	**PKPbc**	**00 16 18.2**	**-0.4**
	comp=Z,8.7nm,0.9s						
WTTA				*e*PKPab	**PKPab**	**00 16 33.1**	**+0.7**
	comp=Z,9.2nm,0.6s						
RETA	**Reutte**	**152.77**	**346**	*e*PKPbc	**PKPbc**	**00 16 18.3**	**-0.2**
	comp=Z,2.3nm,0.6s						
RETA				*i* PKPab	**PKPab**	**00 16 32.6**	**+0.3**
	comp=Z,6.9nm,0.6s						
MYKA	**Terra Mystica**	**152.79**	**341**	*i* PKPbc	**PKPbc**	**00 16 17.4**	**-1.1**
	comp=Z,4.7nm,0.8s						
MYKA				*i* PKPab	**PKPab**	**00 16 32.2**	**-0.2**
	comp=Z,5.4nm,0.8s						
MOTA	**Moosalm**	**152.83**	**345**	*i* PKiKP	**PKPbc**	**00 16 18.4**	**-0.2**
	SNR=5.8						
MOTA				*i* PKPab	**PKPab**	**00 16 33.0**	**+0.3**
	comp=Z,7.2nm,0.7s						
SQTA	**Sankt Quirin**	**152.92**	**345**	*i* PKiKP	**PKiKP**	**00 16 19.1**	**+0.2**
	comp=Z,6.0nm,0.8s						
SQTA				*i* PKPab	**PKPab**	**00 16 33.6**	**+0.6**
	comp=Z,8.2nm,1.0s						
SOH	**Sokhos**	**152.95**	**321**	P	**PKPab**	**00 16 33.6**	**+0.3**
KNT	**Kendrikon**	**153.00**	**322**	P	**PKPab**	**00 16 34.1**	**+0.7**
ABTA	**Abfaltersbach**	**153.02**	**343**	*i* PKPbc	**PKPbc**	**00 16 18.5**	**-0.5**
	SNR=5.7						
ABTA				*i* PKPab	**PKPab**	**00 16 33.3**	**0.0**
	comp=Z,8.4nm,0.8s						
VAY	**Valandovo**	**153.08**	**323**	P	**PKPab**	**00 16 34.6**	**+0.9**
VAY	**Valandovo**	**153.08**	**323**	*i* P	**PKPab**	**00 16 34.6**	**+0.9**
VISS	**Visnje**	**153.14**	**339**	*i* PKPdf	**PKiKP**	**00 16 19.2**	**0.0**
VISS				*i*		00 16 33.4	
BLY	**Banja Luka**	**153.16**	**334**	⇑*i* P	**PKiKP**	**00 16 20.0**	**+0.7**
DAVA	**Damuels**	**153.16**	**347**	*i* PKiKP	**PKiKP**	**00 16 20.0**	**+0.6**
	comp=Z,7.8nm,1.3s						
DAVA				*i* PKPab	**PKPab**	**00 16 34.2**	**+0.2**
	comp=Z,10nm,0.7s						
PLG	**Polygyros**	**153.18**	**320**	P	**PKPab**	**00 16 34.3**	**+0.1**
FETA	**Feichten**	**153.22**	**345**	*i* PKiKP	**PKiKP**	**00 16 19.9**	**+0.3**
	comp=Z,5.3nm,0.8s						
FETA				*i* PKPab	**PKPab**	**00 16 34.7**	**+0.4**
	comp=Z,10.0nm,1.1s						
BOJS	**Bojanci**	**153.26**	**338**	*i* PKPdf	**PKiKP**	**00 16 19.7**	**+0.3**
BOJS				*i*		00 16 34.0	
JAVS	**Javornik**	**153.32**	**340**	*i* PKPdf	**PKPbc**	**00 16 19.4**	**-0.3**
JAVS				*i*		00 16 34.0	
FUORN	**Ofenpass-Fuorn**	**153.71**	**346**	*e*PKPbc	**PKiKP**	**00 16 21.3**	**+0.6**
FUORN				*e*PKPab	**PKPab**	**00 16 37.1**	**+0.6**
KRUS	**Krusevo**	**153.78**	**324**	*i* P	**PKPab**	**00 16 36.6**	**-0.3**
LIT	**Litokhoron**	**153.92**	**321**	P	**PKPab**	**00 16 37.7**	**+0.3**
TUE	**Stuetta**	**154.05**	**347**	*e*PKPbc	**PKiKP**	**00 16 21.4**	**0.0**
FNA	**Florina**	**154.11**	**323**	*e*PKPbc	**PKPbc**	**00 16 21.3**	**-0.1**
FNA				*e*PKPab	**PKPab**	**00 16 38.1**	**-0.1**
FNA	**Florina**	**154.11**	**323**	*e*PKIKP	**PKPbc**	**00 16 21.3**	**-0.1**
FNA				*e*		00 16 38.2	
KZN	**Kozani**	**154.21**	**322**	P	**PKPab**	**00 16 38.8**	**+0.1**
VLY	**Voula,Athens**	**154.44**	**315**	P	**PKPab**	**00 16 39.0**	**-0.7**
BNI	**Bardonecchia**	**155.91**	**350**	*e*PKPab	**PKPab**	**00 16 46.4**	**+0.5**
BNI	**Bardonecchia**	**155.91**	**350**	*e*PKP2	**PKPab**	**00 16 46.4**	**+0.5**
ESDC	**Sonseca Array**	**161.20**	**12**	PKPab	**PKPab**	**00 17 08.4**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=352,slow=3.9,SNR=11						
KEST	**Kesra**	**163.96**	**335**	PKPab	**PKPab**	**00 17 21.9**	**+0.7**
	comp=Z,11nm,0.9s,baz=296,slow=5.2,SNR=15						
DBIC	**Dimbokro**	**164.31**	**157**	PKPab	**PKPab**	**00 17 23.7**	**+0.6**
	comp=Z,8.2nm,0.9s,baz=181,slow=6.5,SNR=4.9						
TORD	**Torodi Ar. Bea**	**171.85**	**184**	PKP	**PKPdf**	**00 16 29.0**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=100,slow=3.3,SNR=4.1						
TORD				PKPab	**PKPab**	**00 17 55.0**	**-1.4**
	comp=Z,3.6nm,1.0s,baz=175,slow=1.6,SNR=12						
TOA1	**Torodi Ar. Sit**	**171.85**	**184**	*e*PKPdf	**PKPdf**	**00 16 29.0**	**-1.0**
TOA1				*e*PKPab	**PKPab**	**00 17 55.0**	**-1.4**

NIED ***08*** *00:08:00, 38°.80N×142°.40E, h32km, Mw3.4 Best double couple: M0 1.31000×10^14 NP1:φ=261.00000°, δ38.00000°, λ-132.00000°. NP2:φs=130.00000°, δ63.00000°, λ-63.00000°.*

JMA 08 00:08:53.4±0.1, 38°.80N×142°.45E, h30km±2km, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.67**	**295**	P	Pb	00 09 06.5	-0.1
OFUJ				S	Sb	00 09 15.3	-0.3
JKMT	**Kesennumamotoy**	**0.76**	**271**	P	Pn	00 09 07.7	-0.4
JKMT				S	Sb	00 09 17.5	-0.7
JIO	**Ouri**	**0.93**	**249**	P	Pn	00 09 10.0	-0.4
JIO				S	Sn	00 09 21.4	-1.3
JMK	**Ichinoseki**	**0.97**	**279**	P	Pn	00 09 11.0	0.0
JMK				S	Sn	00 09 23.3	-0.5
JOM	**Ohasama**	**1.12**	**307**	P	Pn	00 09 13.4	+0.3
JOM				S	Sn	00 09 27.7	+0.2
JTH	**Tanohata**	**1.23**	**338**	P	Pn	00 09 14.6	+0.1
JTH				S	Sn	00 09 30.1	+0.1
JOU	**Okura**	**1.47**	**253**	P	Pn	00 09 18.5	+0.7
JOU				S	Sb	00 09 37.2	-1.1
JRG	**Rokugo**	**1.53**	**293**	P	Pb	00 09 20.0	-1.2
JRG				*e*S	Sb	00 09 40.0	-0.2
JMM	**Marumori**	**1.60**	**235**	P	Pn	00 09 20.1	+0.4
JMM				S	Sn	00 09 39.7	+0.4
JYK	**Kaneyama**	**1.64**	**275**	P	Pn	00 09 21.2	+1.1
JYK				*e*S	Sb	00 09 42.5	-0.7
JANG	**Nango**	**1.73**	**336**	P	Pn	00 09 21.7	+0.3
JANG				S	Sn	00 09 43.3	+0.8
MAT	**Matsushiro**	**4.05**	**238**	P	Pn	00 09 56.5	+3.1
MAT				*e*S	Sb	00 10 47.4	-5.1

IDC 08 00:20:06.9±2.9, 0°.18S×20°.20W, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.4/52, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=88.6km s-min=52.0km az=126.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**16.75**	**66**	Pn	Pn	00 24 02.8	-0.4
	0.3nm,0.3s,baz=242,slow=15,SNR=6.8						
DBIC				Sn	Sn	00 26 53.9	-16
	0.2nm,0.3s,baz=220,slow=7.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**25.42**	**58**	P	P	00 25 36.6	+0.1
	1.7nm,0.7s,baz=243,slow=9.9,SNR=14						
GERES	**GERESS Array B**	**56.91**	**26**	P	P	00 29 53.7	-0.1
	0.2nm,0.4s,baz=239,slow=5.5,SNR=1.9						
ASAR	**Alice Springs**	**145.44**	**135**	PKPbc	PKPbc	00 39 47.0	-0.9
	0.6nm,0.9s,baz=224,slow=2.2,SNR=3.9						

ISCJB ***08*** *00:39:12.5±0.3, 36°.07S±0°.05×108°.69W±0°.09, h10km, mb4.7/85, MS4.1/15, Error ellipse: s-maj=10.5km s-min=6.8km az=166.9*

IDC ***08*** *00:39:12.3±0.5, 36°.03S×108°.87W, h0km, mb4.5/14, mb1 4.6/14, mb1mx4.4/28, mbtmp4.5/14, MS4.0/11, Ms1 4.0/11, ms1mx3.8/20, Error ellipse: s-maj=18.4km s-min=16.4km az=97.0*

NEIC ***08*** *00:39:14.2±1.2, 36°.05S×108°.75W, h10km±1km, mb4.8/109, Error ellipse: s-maj=24.2km s-min=17.0km az=95.0*

BJI ***08*** *00:39:15.0±0.0, 36°.00S×108°.80W, h10km, mB5.2/2, Ms5.3/1*

GCMT ***08*** *00:39:18.2±0.4, 36°.12S±0°.02×108°.92W±0°.03, h24km±1km, MW5.0/76, Moment Tensor Solution. s21,c23; s76,c100; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.59±.34; Mθθ0.38±.23; Mφφ1.21±.23; Mrθ1.95±.36; Mφφ-3.13±.12; Mφr0.69±.34; Best double couple: M0 4.01800×10^16*

NP1:φ=281.00000°, δ70.00000°, λ-144.00000°. NP2: φs=177.00000°, δ56.00000°, λ-25.00000°. Principal axes: T 4.0690, Plg9.0000°, Azm46.0000°; N -0.0990, Plg49.0000°, Azm306.0000°; P -3.9660, Plg40.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 08 00:39:13.6±0.4, 36°.07S±0°.09×108°.8W±0°.1, h10km, n392, σ0=81/381, mb4.8/85, MS4.2/15, 3C, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**30.16**	**111**	P	P	**00 45 24.8**	**+0.8**
	8.0nm,0.9s,baz=270,slow=11,SNR=8.5						
PLCA	**Paso Flores**	**30.16**	**111**	*e*P	P	**00 45 24.1**	**+0.2**
	34nm,1.6s						
CFA	**Coronel Fontan**	**33.80**	**94**	P	P	**00 45 55.7**	**-0.2**
	2.5nm,0.7s,baz=254,slow=7.5,SNR=5.5						
LVC	**Limon Verde**	**37.01**	**80**	P	P	**00 46 24.8**	**+0.9**
	5.2nm,0.9s,baz=253,slow=4.9,SNR=3.6						
TBI	**Tubuai**	**37.27**	**278**	*e*LQ	LQ	00 54 58.0	
	260nm,29.8s						
TBI				*e*LR	LR	00 56 28.5	
	comp=Z,2μm,49.5s						
MNMC	**Minye Minye**	**38.32**	**75**	*e*P	P	**00 46 33.5**	**-1.4**
	17nm,1.1s						
TAOE	**Nuku Hiva Isla**	**39.34**	**306**	*e*LR	LR	00 57 39.6	
	comp=Z,548nm,26.5s						
PPT2	**Papeete2**	**40.43**	**286**	*e*LQ	LQ	00 56 11.0	
	757nm,29.0s						
PPT2				*e*LR	LR	00 57 54.3	
	comp=Z,428nm,26.2s,baz=119						
LPAZ	**La Paz**	**41.10**	**72**	P	P	**00 46 59.9**	**+1.4**
	2.7nm,0.8s,baz=236,slow=4.5,SNR=14						
LPAZ				LR	LR	01 00 38.9	
	comp=Z,111nm,21.6s,baz=236,slow=31						
LPAZ	**La Paz**	**41.10**	**72**	*e*P	P	**00 46 56.9**	**-1.6**
LPAZ				*es*P	**pP**	**00 46 57.2**	**-3.3**
CPUP	**Villa Florida**	**44.63**	**92**	LR	LR	01 02 43.2	
	comp=Z,119nm,20.8s,baz=244,slow=32						
ROSC	**El Rosal**	**51.94**	**46**	P	P	**00 48 24.6**	**+1.2**
	4.3nm,0.4s,baz=258,slow=20,SNR=2.5						
ROSC				LR	LR	01 06 14.9	
	comp=Z,155nm,21.4s,baz=193,slow=31						
ROSC	**El Rosal**	**51.94**	**46**	*e*P	P	**00 48 24.6**	**+1.2**
	14nm,1.3s						
SBA	**Scott Base**	**53.88**	**195**	*e*P	P	**00 48 37.6**	**+1.2**
	7.5nm,0.9s						
QSPA	**South Pole Qui**	**54.13**	**180**	P	P	**00 48 39.5**	**+0.9**
	3.7nm,0.8s,baz=123,slow=2.6,SNR=16						
QSPA	**South Pole Qui**	**54.13**	**180**	*e*P	P	**00 48 39.8**	**+1.2**
	6.1nm,0.8s						
VNDA	**Vanda**	**54.96**	**195**	P	P	**00 48 45.6**	**+1.3**
	1.7nm,0.8s,baz=96,slow=6.3,SNR=7.9						
VNDA				LR	LR	01 06 34.9	
	comp=Z,113nm,21.8s,baz=92,slow=30						
VNDA	**Vanda**	**54.96**	**195**	*e*P	P	**00 48 45.2**	**+0.9**
VNDA				*es*P	**pP**	**00 48 45.5**	**-0.9**
BDFB	**Brasilia**	**57.44**	**86**	LR	LR	01 12 03.8	
	comp=Z,155nm,18.2s,baz=120,slow=34						
URZ	**Urewera**	**57.57**	**244**	P	P	**00 49 02.8**	**-0.7**
	11nm,1.1s,baz=143,slow=5.1,SNR=3.1						
VNA3	**Neumayer Olymp**	**59.13**	**158**	P	P	**00 49 14.0**	**+0.1**
VNA1	**Neumayer--Stat**	**59.78**	**158**	P	P	**00 49 20.1**	**+1.8**
VNA2	**Neumayer--Watz**	**59.94**	**158**	P	P	**00 49 19.8**	**+0.4**
	baz=262,slow=6.2						
SNAA	**Sanae**	**60.95**	**160**	P	P	**00 49 26.6**	**+0.1**
SNAA	**Sanae**	**60.95**	**160**	*e*P	P	**00 49 27.2**	**+0.7**
	15nm,1.0s						
LNIG	**Linares**	**61.28**	**10**	*e*P	P	**00 49 29.6**	**+0.6**
	10.0nm,1.0s						
833A	**Chaparral WMA,**	**64.66**	**9**	P	P	**00 49 52.2**	**+0.7**
	baz=188						
LTX	**Lajitas**	**65.24**	**5**	*e*P	P	**00 49 56.4**	**+1.0**
TXAR	**Lajitas Array**	**65.24**	**5**	P	P	**00 49 56.4**	**+1.0**
	3.1nm,0.9s,baz=182,slow=8.8,SNR=14						
TXAR				LR	LR	01 12 46.1	
	comp=Z,72nm,18.8s,baz=0.0,slow=31						
TX31	**Lajitas Ar. Si**	**65.24**	**5**	*e*P	P	**00 49 56.3**	**+0.9**
	4.4nm,0.9s						
JCT	**Junction City**	**66.74**	**8**	*e*P	P	**00 50 05.3**	**+0.4**
	34nm,0.8s						
JCT	**Junction City**	**66.74**	**8**	P	P	**00 50 05.2**	**+0.3**
	baz=188						
HKT	**Hockley**	**66.79**	**12**	*e*P	P	**00 50 04.9**	**-0.2**
	34nm,1.8s						
061Z	**Ochoppi**	**66.99**	**27**	P	P	**00 50 07.0**	**+0.5**
	baz=204						
319A	**Douglas**	**67.09**	**360**	*e*P	P	**00 50 06.0**	**-1.3**
	14nm,1.0s						
059Z	**Ave Maria**	**67.23**	**27**	P	P	**00 50 08.7**	**+0.7**
	baz=204						
435B	**Jarrell**	**67.33**	**10**	*e*P	P	**00 50 09.6**	**+0.9**
	31nm,1.0s						
435B	**Jarrell**	**67.33**	**10**	P	P	**00 50 09.9**	**+1.3**
	baz=190						
MNTX	**Cornudas Mount**	**67.49**	**3**	*e*P	P	**00 50 09.0**	**-0.7**
	17nm,1.4s						
MNTX	**Cornudas Mount**	**67.49**	**3**	P	P	**00 50 10.1**	**+0.4**
	baz=183						
058A	**Arcadia**	**67.75**	**26**	P	P	**00 50 12.0**	**+0.7**
	baz=203						
214A	**Organ Pipe Nat**	**67.78**	**356**	P	P	**00 50 12.4**	**+1.0**
	baz=176						
TUC	**Tucson**	**68.05**	**358**	P	P	**00 50 14.1**	**+0.8**
	baz=178						
121A	**Cookes Peak, D**	**68.25**	**1**	P	P	**00 50 15.6**	**+0.9**
	baz=181						
WHTX	**Lake Whitney,**	**68.54**	**10**	*e*P	P	**00 50 16.9**	**+0.6**
	34nm,0.8s						
WHTX	**Lake Whitney,**	**68.54**	**10**	P	P	**00 50 16.8**	**+0.6**
	baz=190						
IKP	**In-Ko-Pah, Jac**	**68.71**	**353**	P	P	**00 50 18.6**	**+1.2**
	baz=174						
857A	**Zephyrhills**	**68.71**	**25**	P	P	**00 50 18.0**	**+0.6**
	baz=203						
NATX	**Nacogdoches**	**68.77**	**13**	*e*P	P	**00 50 18.6**	**+0.9**
	51nm,0.8s						
NATX	**Nacogdoches**	**68.77**	**13**	P	P	**00 50 18.7**	**+1.1**
	baz=192						
ABTX	**Abilene, Hawle**	**68.87**	**8**	P	P	**00 50 18.8**	**+0.5**
	baz=188						
MONP2	**Monument Peak**	**68.98**	**353**	P	P	**00 50 20.4**	**+1.3**
	baz=173						
GLA	**Glamis**	**69.00**	**355**	P	P	**00 50 20.0**	**+0.9**
	baz=175						
BC3	**Big Chuckawall**	**69.64**	**354**	P	P	**00 50 24.4**	**+1.2**
	baz=174,SNR=5.1						
Y12C	**Blythe**	**69.67**	**355**	P	P	**00 50 24.2**	**+1.1**
	baz=175						
PFO	**Pinyon Flats O**	**69.69**	**353**	P	P	**00 50 25.0**	**+1.4**
	baz=173						
CIS	**Catalina Islan**	**69.70**	**351**	P	P	**00 50 24.3**	**+0.9**
	baz=172						
MURC	**Murrieta**	**69.75**	**353**	P	P	**00 50 24.7**	**+0.9**
	baz=173						
Y22D	**IRIS PASSCAL I**	**69.81**	**2**	P	P	**00 50 24.3**	**+0.1**
	baz=182						
MSTX	**Muleshoe**	**69.91**	**5**	P	P	**00 50 25.0**	**+0.2**
	baz=185						
554A	**Perry**	**69.91**	**23**	P	P	**00 50 25.1**	**+0.4**
	baz=201						
FMP	**Fort Macarthur**	**69.99**	**352**	P	P	**00 50 26.0**	**+0.9**
	baz=172						
BELC	**Belle Mtn. Jos**	**70.03**	**354**	P	P	**00 50 27.2**	**+1.6**
	baz=174						
IRM	**Iron Mountain**	**70.12**	**354**	P	P	**00 50 27.1**	**+1.1**
	baz=174						
PDMCI	**Parker Dam,Lak**	**70.19**	**355**	P	P	**00 50 27.4**	**+1.0**
	baz=175						
BFSC	**Mount Baldy Ra**	**70.44**	**352**	P	P	**00 50 29.1**	**+1.0**
	baz=172,SNR=6.3						
BLG	**Laguna Peak, P**	**70.47**	**351**	P	P	**00 50 29.4**	**+1.2**
	baz=171						
DECC	**Green Verdugo**	**70.53**	**352**	P	P	**00 50 29.4**	**+0.9**
	baz=172						
Z41A	**Richland Creek**	**70.57**	**14**	P	P	**00 50 29.7**	**+1.0**
	baz=194						
249A	**Camden**	**70.67**	**19**	P	P	**00 50 30.5**	**+1.1**
	baz=198						
TASM	**ASL Pad, Albuq**	**70.69**	**2**	P	P	**00 50 30.2**	**+0.5**
	baz=182						
TASM	**ASL Pad, Albuq**	**70.69**	**2**	P	P	**00 50 30.2**	**+0.5**
	baz=182						
ANMO	**Albuquerque**	**70.69**	**2**	*e*P	P	**00 50 30.4**	**+0.8**
	16nm,1.9s						
ANMO	**Albuquerque**	**70.69**	**2**	P	P	**00 50 30.1**	**+0.5**
	baz=182						
455A	**Stateville**	**70.73**	**23**	P	P	**00 50 29.6**	**-0.1**
	baz=202						
GMRC	**Granite Mounta**	**70.78**	**354**	P	P	**00 50 31.4**	**+1.2**
	baz=174,SNR=7.0						
HEC	**Hector,Ludlow**	**70.89**	**353**	P	P	**00 50 32.2**	**+1.5**
	baz=174						
AMTX	**Amarillo**	**70.90**	**6**	P	P	**00 50 31.8**	**+0.9**
	baz=186						
W13A	**Hualapai Mount**	**70.97**	**356**	*e*P	P	**00 50 32.3**	**+0.9**
	3.4nm,1.0s						
LDFC	**Landfair**	**71.03**	**355**	*e*P	P	**00 50 33.6**	**+2.0**
	30nm,1.0s						
WMOK	**Wichita Mounta**	**71.06**	**9**	P	P	**00 50 32.2**	**+0.5**
	baz=188						
EDW2	**Edwards Air Fo**	**71.11**	**352**	P	P	**00 50 32.7**	**+0.6**
	baz=172						
WUAZ	**Wupatki**	**71.26**	**358**	*e*P	P	**00 50 34.0**	**+0.9**
	18nm,1.7s						
WUAZ	**Wupatki**	**71.26**	**358**	P	P	**00 50 34.4**	**+1.3**
	baz=178						
PKM	**Mcpherson Peak**	**71.34**	**350**	P	P	**00 50 34.7**	**+1.0**
	baz=171						
GSC	**Goldstone, Bar**	**71.40**	**353**	P	P	**00 50 35.2**	**+1.4**
	baz=173,SNR=9.1						
X37A	**Clayton**	**71.41**	**12**	*e*P	P	**00 50 33.6**	**-0.1**
	11nm,1.0s						
ARVC	**Arvin**	**71.45**	**351**	P	P	**00 50 35.1**	**+1.1**
	baz=171						
TUQ	**Turquoise Moun**	**71.45**	**354**	P	P	**00 50 35.6**	**+1.4**
	baz=174,SNR=8.2						
150A	**Eclectic**	**71.57**	**20**	P	P	**00 50 35.4**	**+0.6**
	baz=199						
LRMC	**Laurel Mtn Rad**	**71.67**	**352**	P	P	**00 50 36.9**	**+1.4**
	baz=172,SNR=5.2						
MIAR	**Mount Ida**	**71.67**	**13**	P	P	**00 50 35.7**	**+0.3**
	baz=193						
LRAL	**Lakeview Retre**	**71.71**	**19**	P	P	**00 50 36.5**	**+0.9**
	baz=198						
X40A	**Basin Creek Fa**	**71.76**	**14**	P	P	**00 50 36.4**	**+0.5**
	baz=194						
ISA	**Isabella, Lake**	**71.94**	**352**	P	P	**00 50 38.5**	**+1.4**
	baz=172,SNR=9.2						
SHOC	**Shoshone, Teco**	**71.94**	**354**	P	P	**00 50 38.1**	**+1.1**
	baz=174						
VES	**Vestal, Richgr**	**72.19**	**351**	P	P	**00 50 39.3**	**+0.9**
	baz=171						
MPMC	**Manual Prospec**	**72.22**	**353**	P	P	**00 50 40.1**	**+1.2**
	baz=173,SNR=16						
W39A	**Magazine**	**72.27**	**13**	*e*P	P	**00 50 39.0**	**0.0**
	65nm,1.8s						
W39A	**Magazine**	**72.27**	**13**	P	P	**00 50 39.8**	**+0.8**
	baz=193						
OXF	**Oxford**	**72.51**	**17**	P	P	**00 50 40.2**	**-0.2**
	baz=196						
257A	**Skidaway Islan**	**72.52**	**25**	P	P	**00 50 40.2**	**-0.3**
	baz=203						
W41B	**Gary Mavity, V**	**72.54**	**14**	P	P	**00 50 41.5**	**+0.9**
	baz=194,SNR=6.2						
FURC	**Furnace Creek,**	**72.56**	**353**	P	P	**00 50 41.6**	**+1.0**
	baz=173,SNR=7.8						
Z52A	**Williamson**	**72.58**	**21**	P	P	**00 50 41.8**	**+0.9**
	baz=200						
TUL1	**Leonard**	**72.63**	**11**	P	P	**00 50 41.5**	**+0.4**
	baz=191						
WHAR	**Wooly Hollow**	**72.64**	**14**	*e*P	P	00 50 36.2	-4.9
	19nm,1.2s						
SYO	**Syowa Base**	**72.65**	**169**	⇑*e*P	P	**00 50 40.8**	**-0.1**
SYO	**Syowa Base**	**72.65**	**169**	⇑*e*pP	pP	00 50 43.4	+0.3
SYO	**Syowa Base**	**72.65**	**169**	⇑*e*PcP	**PcP**	**00 50 54.2**	**-4.1**
CWC	**Cottonwood Cre**	**72.66**	**352**	P	P	**00 50 42.6**	**+1.1**
	baz=172						
KNB	**Kanab**	**72.82**	**357**	*e*P	P	**00 50 43.1**	**+0.7**
	31nm,1.8s						
LCMT	**Little Creek M**	**72.83**	**356**	*e*P	P	**00 50 43.2**	**+0.7**
	3.4nm,1.1s						
X47A	**Russelville**	**72.89**	**18**	P	P	**00 50 42.6**	**0.0**
	baz=198						
MVCO	**Mesa Verde**	**72.91**	**0**	*e*P	P	**00 50 43.0**	**-0.1**
	10nm,0.9s						
MVCO	**Mesa Verde**	**72.91**	**0**	P	P	**00 50 43.8**	**+0.7**
	baz=180						
T25A	**Trinidad**	**72.95**	**4**	*e*P	P	**00 50 43.6**	**+0.4**
	9.2nm,1.1s						
T25A	**Trinidad**	**72.95**	**4**	P	P	**00 50 43.9**	**+0.7**
	baz=184						
TPNV	**Topopah Spring**	**72.98**	**354**	*e*P	P	**00 50 44.5**	**+1.1**
	7.1nm,0.9s						
TPNV	**Topopah Spring**	**72.98**	**354**	P	P	**00 50 44.9**	**+1.6**
	baz=174,SNR=9.4						
Y51A	**Rockmart**	**73.06**	**20**	P	P	**00 50 44.2**	**+0.5**
	baz=200						
GRAC	**Grapevine Rang**	**73.13**	**353**	P	P	**00 50 45.2**	**+1.0**
	baz=173						
DZM	**Mont Dzumac**	**73.29**	**255**	*e*LR	LR	01 13 02.2	
	comp=Z,176nm,24.6s						
CCUT	**Cedar City**	**73.38**	**356**	*e*P	P	**00 50 46.6**	**+0.9**
	10nm,1.0s						
SZCU	**Shurtz Canyon**	**73.41**	**356**	*e*P	P	**00 50 46.9**	**+1.0**
	7.3nm,1.1s						
S22A	**4UR Ranch, Cre**	**73.47**	**2**	*e*P	P	**00 50 47.2**	**+0.8**
	24nm,1.8s						
S22A	**4UR Ranch, Cre**	**73.47**	**2**	P	P	**00 50 47.4**	**+1.0**
	baz=182,SNR=7.6						
SDCO	**Great Sand Dun**	**73.51**	**3**	*e*P	P	**00 50 47.1**	**+0.4**
	3.8nm,0.8s						
SDCO	**Great Sand Dun**	**73.51**	**3**	P	P	**00 50 47.4**

	baz=201						
SRU	San Rafael Swe	74.83	359	eP	P	00 50 54.5	+0.4
	7.3nm,1.1s						
WAKR	Walker	74.86	351	eP	P	00 50 55.9	+1.5
	24nm,1.6s						
U47A	Clarksville	74.86	18	P	P	00 50 54.3	+0.1
	baz=198						
RYN	Ryan	74.87	352	eP	P	00 50 55.8	+1.4
	8.2nm,1.0s						
SMCO	Snowmass	74.90	1	eP	P	00 50 55.8	+1.0
	6.1nm,1.1s						
W54A	Cherokee Point	75.01	22	P	P	00 50 55.5	+0.4
	baz=202						
V51A	Loudon	75.04	20	P	P	00 50 56.4	+1.2
	baz=200						
P17A	Butcher Ranch,	75.19	358	eP	P	00 50 56.1	-0.2
	12nm,1.3s						
KVN	Kaiserville	75.24	353	eP	P	00 50 57.2	+0.6
	17nm,1.2s						
T46A	Princeton	75.29	17	P	P	00 50 57.0	+0.4
	baz=197						
YERR	Yerington	75.31	352	eP	P	00 50 57.9	+1.0
	16nm,1.4s						
U49A	Red Boiling Sp	75.32	19	P	P	00 50 57.0	+0.2
	baz=199						
KMSC	Kings Mountain	75.33	23	P	P	00 50 57.6	+0.6
	baz=203						
V53A	Saluda	75.36	22	P	P	00 50 58.0	+0.8
	baz=201						
T47A	Sharon Grove	75.43	18	eP	P	00 50 57.7	+0.2
	14nm,0.8s						
T47A	Sharon Grove	75.43	18	P	P	00 50 57.7	+0.2
	baz=198,SNR=5.0						
PNTR	Pine Nut	75.45	351	eP	P	00 50 58.7	+0.9
	10nm,0.8s						
U50A	Jamestown	75.48	20	P	P	00 50 57.9	+0.1
	baz=200						
AFDM	Forest Hills D	75.49	350	eP	P	00 50 58.3	+0.5
	7.1nm,1.0s						
CCM	Cathedral Cave	75.53	14	eP	P	00 50 58.4	+0.5
	11nm,1.1s						
CCM	Cathedral Cave	75.53	14	P	P	00 50 58.2	+0.3
	baz=194						
S44A	Carbondale	75.60	16	P	P	00 50 59.0	+0.7
	baz=196						
NLU	North Lily Min	75.71	357	eP	P	00 50 59.7	+0.4
	8.3nm,1.1s						
T48A	Bowling Green	75.72	18	P	P	00 50 59.5	+0.4
	baz=198,SNR=5.1						
T49A	Edmonton	75.94	19	P	P	00 51 00.3	0.0
	baz=199						
TZTN	Tazewell	75.96	21	P	P	00 51 01.6	+1.1
	baz=201						
DUG	Dugway, Tooele	75.98	357	eP	P	00 51 00.8	+0.1
	3.0nm,0.9s						
DUG	Dugway, Tooele	75.98	357	P	P	00 51 01.5	+0.8
	baz=177						
PAHR	Pah Rah Range	76.03	352	eP	P	00 51 01.8	+0.7
	6.6nm,1.1s						
T50A	Nancy	76.05	20	P	P	00 51 01.5	+0.5
	baz=200						
S47A	Hartford	76.06	18	P	P	00 51 01.1	+0.1
	baz=198						
U53A	Fall Branch	76.08	22	P	P	00 51 01.1	-0.1
	baz=202						
T51A	Gray	76.24	20	P	P	00 51 02.2	+0.1
	baz=200						
BEKR	Beckworth	76.31	351	eP	P	00 51 03.4	+0.8
	6.6nm,1.1s						
S48A	Wiedeman Farm,	76.33	18	P	P	00 51 02.9	+0.3
	baz=199						
R45A	Skylar, Fairfi	76.39	16	P	P	00 51 03.3	+0.4
	baz=197						
MAW	Mawson	76.45	177	P	P	00 51 04.3	+1.3
	3.2nm,1.0s,baz=144,slow=5.0,SNR=4.5						
BMN	Battle Mountai	76.52	353	eP	P	00 51 04.5	+0.6
	8.9nm,0.9s						
N23A	Red Feather La	76.64	2	P	P	00 51 05.7	+1.1
	baz=182						
ELK	Elko	76.67	355	eP	P	00 51 05.2	+0.4
	2.1nm,0.9s						
Q45A	Warren Harvey,	76.99	16	P	P	00 51 06.7	+0.4
	baz=197						
T54A	Tazewell	77.02	22	P	P	00 51 07.1	+0.5
	baz=202						
R49A	Shelbyville	77.15	19	P	P	00 51 07.8	+0.6
	baz=199						
P43A	Skaggs, Pawnee	77.41	15	P	P	00 51 09.7	+1.1
	baz=196						
R51A	Hillsboro	77.59	20	P	P	00 51 10.5	+0.9
	baz=201						
P46A	Rosedale	77.90	17	P	P	00 51 11.7	+0.3
	baz=198						
MOD	Modoc Plateau	78.31	351	eP	P	00 51 14.5	+0.7
	6.1nm,0.8s						
HDIL	Hopedale	78.33	15	P	P	00 51 14.4	+0.7
	baz=196						
Q51A	Peebles	78.33	20	eP	P	00 51 14.1	+0.3
	28nm,1.2s						
Q51A	Peebles	78.33	20	P	P	00 51 14.3	+0.5
	baz=201						
K22A	Casper	78.37	2	eP	P	00 51 14.5	+0.4
	11nm,1.1s						
K22A	Casper	78.37	2	P	P	00 51 14.8	+0.7
	baz=182						
M04C	Macdoel	78.40	350	P	P	00 51 15.0	+0.8
	baz=169						
P49A	Miami Univ. Ec	78.44	19	P	P	00 51 14.3	0.0
	baz=200						
BW06	Boulder Array	78.47	359	P	P	00 51 14.9	+0.1
	baz=179						
PD31	Pinedale Array	78.47	359	eP	P	00 51 13.8	-0.9
	6.2nm,0.9s						
PDAR	Pinedale Array	78.47	359	P	P	00 51 14.6	-0.1
	5.3nm,0.8s,baz=166,slow=5.8,SNR=38						
PDAR				LR	LR	01 20 53.6	
	comp=Z,108nm,18.1s,baz=288,slow=32						
YBH	Yreka Blue Hor	78.47	349	LR	LR	01 17 42.7	
	comp=Z,130nm,19.7s,baz=273,slow=30						
S57A	Dark Hollow, R	78.49	24	P	P	00 51 15.2	+0.6
	baz=204						
Q53A	Leroy	78.70	21	P	P	00 51 16.6	+0.8
	baz=202						
N44A	Piper City	78.81	16	P	P	00 51 16.7	+0.3
	baz=197						
P51A	Williamsport	78.84	20	P	P	00 51 17.1	+0.5
	baz=201						
L04D	Klamath Falls	78.89	350	P	P	00 51 17.0	+0.1
	baz=169						
REDW	Red Top Meadow	79.08	358	eP	P	00 51 18.4	+0.3
	9.0nm,1.4s						
K05A	Summer Lake	79.20	351	eP	P	00 51 19.9	+1.3
	52nm,2.0s						
TPAW	Teton Pass	79.21	358	eP	P	00 51 19.0	+0.1
	5.5nm,0.9s						
N46A	Monticello	79.23	17	P	P	00 51 19.0	+0.4
	baz=198						
P52A	Corning	79.24	21	P	P	00 51 19.2	+0.5
	baz=202						
R58A	Rapidan	79.29	24	P	P	00 51 19.1	+0.1
	baz=205						
O50A	Cable	79.31	19	P	P	00 51 19.3	+0.2
	baz=200						
L40A	Anamosa	79.41	13	P	P	00 51 19.8	+0.2
	baz=194						
HLID	Hailey	79.42	356	eP	P	00 51 20.1	+0.2
	7.7nm,0.9s						
HLID	Hailey	79.42	356	P	P	00 51 20.7	+0.9
	baz=175,SNR=14						
N47A	Urbana	79.46	18	P	P	00 51 19.8	-0.1
	baz=199						
J08A	Circle Bar Ran	79.55	353	eP	P	00 51 21.4	+0.9
	12nm,1.4s						
K02D	Willamette Mer	79.56	349	P	P	00 51 21.3	+0.7
	baz=168						
O51A	Pataskala	79.58	20	P	P	00 51 20.8	+0.1
	baz=201						
N48A	Decatur	79.61	18	P	P	00 51 20.9	+0.2
	baz=199						
P54A	Burton	79.70	22	P	P	00 51 21.7	+0.5
	baz=203						
O52A	Adamsville	79.77	21	P	P	00 51 22.2	+0.6
	baz=202,SNR=6.7						
J05D	Fort Rock, OR	79.79	351	P	P	00 51 22.7	+0.8
	baz=170						
N49A	Columbus Grove	79.88	19	P	P	00 51 23.0	+0.8
	baz=200						
L43A	Garden Prairie	80.01	15	P	P	00 51 23.5	+0.6
	baz=196						
N50A	Nevada	80.02	19	P	P	00 51 23.6	+0.6
	baz=201						
O53A	New Philadelph	80.08	21	P	P	00 51 24.2	+0.9
	baz=202						
ECSD	EROS Data Cent	80.20	9	P	P	00 51 24.0	+0.1
	baz=190						
P57A	Homestead Farm	80.36	24	P	P	00 51 25.4	+0.6
	baz=205						
N51A	Ashland	80.36	20	eP	P	00 51 25.6	+0.8
	42nm,1.2s						
N51A	Ashland	80.36	20	P	P	00 51 25.3	+0.4
	baz=201						
I07A	Izee	80.37	352	eP	P	00 51 26.3	+1.4
	6.9nm,1.0s						
I04A	Tendick Farm,	80.45	350	P	P	00 51 25.7	+0.5
	baz=169						
M49A	Liberty Center	80.45	19	P	P	00 51 26.0	+0.7
	baz=200						
K42A	Prairie Point,	80.46	14	P	P	00 51 26.0	+0.7
	baz=196						
N52A	McGinn's Farm,	80.46	21	P	P	00 51 26.2	+0.8
	baz=202						
K43A	Burlington	80.60	15	P	P	00 51 26.8	+0.8
	baz=197						
L47A	Sherwood	80.62	18	P	P	00 51 26.8	+0.7
	baz=199						
M50A	Fremont	80.64	19	P	P	00 51 27.3	+1.1
	baz=201						
N53A	Lisbon	80.70	21	P	P	00 51 27.7	+1.1
	baz=202						
L48A	N Adams	80.78	18	P	P	00 51 27.7	+0.6
	baz=200						
RLMT	Red Lodge	80.82	360	P	P	00 51 27.9	+0.5
	baz=180						
O56A	Blue Knob Stat	80.90	23	P	P	00 51 28.6	+0.8
	baz=204						
J42A	Columbus	81.02	14	P	P	00 51 29.0	+0.7
	baz=196						
PLIO	Pelee Island,	81.07	20	P	P	00 51 29.2	+0.6
	baz=201						
N54A	Moraine State	81.09	22	P	P	00 51 29.9	+1.2
	baz=203						
H04D	Lebanon	81.21	350	P	P	00 51 30.1	+0.9
	baz=169						
J43A	Natural Harves	81.23	15	P	P	00 51 30.0	+0.6
	baz=196						
AAM	Ann Arbor	81.31	19	P	P	00 51 30.7	+0.9
	baz=200						
K47A	Vermontville	81.32	18	P	P	00 51 30.6	+0.7
	baz=199						
M53A	WI Miller and	81.33	21	P	P	00 51 30.4	+0.5
	baz=203						
BOZ	Bozeman (W)	81.33	358	P	P	00 51 30.7	+0.6
	baz=178						
I41A	Arlale	81.59	14	P	P	00 51 31.7	+0.4
	baz=195						
I42A	Draeger Farm,	81.61	14	P	P	00 51 32.3	+0.9
	baz=196						
K48A	Perry	81.67	18	P	P	00 51 32.8	+1.1
	baz=200						
K49A	Clarkson	81.82	19	P	P	00 51 33.3	+0.7
	baz=200						
K50A	Casco	82.03	19	P	P	00 51 34.1	+0.5
	baz=201						
H40A	Chili	82.03	13	P	P	00 51 34.3	+0.7
	baz=195						
H41A	Junction City	82.17	14	eP	P	00 51 34.2	-0.1
	7.0nm,0.8s						
H41A	Junction City	82.17	14	P	P	00 51 34.6	+0.3
	baz=196						
SPMN	Marine on St.	82.20	11	P	P	00 51 34.6	+0.1
	baz=195						
J48A	Bridge Port	82.22	18	P	P	00 51 35.6	+1.1
	baz=200						
H43A	Windswept, Lux	82.40	15	P	P	00 51 35.2	-0.3
	baz=197						
L54A	Sinclairville	82.46	22	P	P	00 51 36.2	+0.3
	baz=204						
G39A	Holcombe	82.54	12	P	P	00 51 36.5	+0.3
	baz=194						
K52A	Tillsonburg	82.56	20	P	P	00 51 36.7	+0.3
	baz=202						
MSO	Missoula	82.66	356	P	P	00 51 38.1	+1.2
	baz=176						
L55A	Hinsdale	82.68	22	P	P	00 51 37.4	+0.3
	baz=204						
G40A	Rib Lake	82.69	13	eP	P	00 51 36.8	-0.2
	8.3nm,0.9s						
G40A	Rib Lake	82.69	13	P	P	00 51 37.6	+0.5
	baz=195,SNR=6.0						
I47A	Gladwin	82.71	17	eP	P	00 51 37.9	+0.7
	28nm,0.8s						
I47A	Gladwin	82.71	17	P	P	00 51 38.2	+1.0
	baz=200						
J52A	Paris	83.05	20	P	P	00 51 39.4	+0.5
	baz=203						
F38A	Pierce - Schro	83.07	12	P	P	00 51 39.1	+0.2
	baz=194						
I48A	Sherman Twp	83.07	18	P	P	00 51 39.9	+0.9
	baz=200						
TYNO	Tyneside	83.09	21	P	P	00 51 39.4	+0.2
	baz=203						
PAL	Palisades	83.12	26	P	P	00 51 39.0	-0.3
	baz=208						
G43A	Wallace	83.17	15	P	P	00 51 40.0	+0.5
	baz=197						
E04D	Cinebar	83.18	350	P	P	00 51 39.7	+0.2
	baz=169						
F39A	Loretta	83.19	12	P	P	00 51 40.0	+0.3
	baz=194						
K55A	Perry	83.29	22	P	P	00 51 39.9	-0.3
	baz=204						
F40A	Park Falls	83.33	13	P	P	00 51 40.7	+0.3
	baz=195,SNR=7.0						
F41A	Three Lakes	83.35	14	P	P	00 51 41.1	+0.6
	baz=196						
I51A	Listowel	83.41	20	P	P	00 51 41.4	+0.6
	baz=202,SNR=5.3						
BWLO	Walkerton	83.67	20	P	P	00 51 42.6	+0.5
	baz=202						
E39A	Mellen	83.70	13	P	P	00 51 42.6	+0.3
	baz=195						
E38A	The Farm, Brul	83.75	12	P	P	00 51 42.8	+0.3
	baz=194						
F43A	Flat Rock, Esc	83.83	15	P	P	00 51 43.3	+0.5
	baz=197						
J55A	Hilton	83.85	22	P	P	00 51 43.1	+0.1
	baz=205						
E40A	Wakefield	83.88	13	P	P	00 51 43.3	+0.2
	baz=195,SNR=6.0						
G47A	Hillman	83.96	17	P	P	00 51 44.6	+1.1
	baz=200,SNR=6.4						
F45A	CMU Biological	84.05	16	P	P	00 51 45.0	+1.0
	baz=199						
E41A	Kenton	84.08	14	P	P	00 51 44.4	+0.2
	baz=196,SNR=5.4						
BMRO	Meriville Lake	84.09	19	P	P	00 51 44.6	+0.4
	baz=202						
F44A	Big Bay de Noc	84.12	15	P	P	00 51 44.8	+0.5
	baz=198						
D03D	Eldon	84.21	350	P	P	00 51 45.2	+0.4
	baz=168						
E42A	Champion	84.25	14	P	P	00 51 45.2	+0.2
	baz=197						
WLVO	Wesleyville	84.28	22	P	P	00 51 45.2	0.0
	baz=204						
NEW	Newport	84.29	354	P	P	00 51 45.0	-0.2
	4.3nm,0.9s,baz=149,slow=4.4,SNR=6.2						
NEW	Newport	84.29	354	eP	P	00 51 45.1	-0.2
	8.7nm,1.1s						
NEW	Newport	84.29	354	P	P	00 51 46.2	+1.0
	baz=173						
F46A	Macinaw City C	84.31	17	P	P	00 51 46.4	+1.1
	baz=199						
E43A	Lone Tree Farm	84.39	15	eP	P	00 51 46.0	+0.3
	17nm,0.8s						
E43A	Lone Tree Farm	84.39	15	P	P	00 51 46.5	+0.8
	baz=198,SNR=11						
TOBO	Tobermory, Bru	84.60	19	P	P	00 51 47.2	+0.4
	baz=202						
PECO	Prince Edward	84.71	22	P	P	00 51 47.1	-0.3
	baz=205						
D41A	Chassel	84.72	14	P	P	00 51 48.0	+0.6
	baz=196						
E45A	Wooded Hills,	84.76	16	P	P	00 51 48.9	+1.3
	baz=199						
F48A	Evansville	84.88	18	P	P	00 51 48.5	+0.3
	baz=201						
F49A	Sandfield	84.96	18	P	P	00 51 48.9	+0.3
	baz=201						
E46A	Sault Ste Mari	84.97	17	eP	P	00 51 48.9	+0.2
	20nm,0.9s						
E46A	Sault Ste Mari	84.97	17	P	P	00 51 48.8	+0.2
	baz=200,SNR=7.2						
DELO	Deloro Mine	85.05	22	P	P	00 51 49.2	+0.1
	baz=205						
EYMN	Ely	85.06	12	P	P	00 51 49.0	-0.1
	baz=194						
KLBO	Killbear Provi	85.07	20	P	P	00 51 49.1	-0.1
	baz=203						
H55A	Tweed	85.21	22	P	P	00 51 50.4	+0.5
	baz=205						
E47A	Iron Bridge	85.30	17	P	P	00 51 51.0	+0.7
	baz=200						
G53A	Haliburton	85.30	21	P	P	00 51 50.9	+0.5
	baz=204						
BUKO	Buck Lake	85.38	20	P	P	00 51 51.2	+0.5
	baz=203						
BANO	Bancroft	85.41	21	P	P	00 51 51.3	+0.4
	baz=205						
D46A	Sault St. Mari	85.53	17	P	P	00 51 51.7	+0.3
	baz=200						
E48A	Lockeyer	85.60	18	P	P	00 51 52.3	+0.5
	baz=201,SNR=6.3						
STKA	Stephens Creek	85.60	233	LR	LR	01 22 59.6	
	comp=Z,134nm,20.0s,baz=196,slow=31						
F52A	Sundridge	85.72	20	P	P	00 51 52.0	-0.4
	baz=204						
D47A	Chapleau	85.90	17	P	P	00 51 53.5	+0.1
	baz=200,SNR=7.4						
E50A	Wahnapitae	85.91	19	P	P	00 51 53.8	+0.4
	baz=202						
LONY	Lake Ozonia	86.09	24	P	P	00 51 54.2	-0.1
	baz=207						
D49A	Beulah Townshi	86.54	18	P	P	00 51 57.2	+0.8
	baz=202						
ULM	Lac du Bonnet	86.70	8	P	P	00 51 56.4	-0.8
	1.2nm,0.4s,baz=220,slow=4.3,SNR=3.1						
E53A	Dumoine, Ponti	86.72	21	P	P	00 51 57.4	0.0
	baz=205						
D50A	G1974 Best Tow	86.84	19	P	P	00 51 58.1	+0.2
	baz=203						
E54A	Lac Daplat, Po	86.91	21	P	P	00 51 58.4	+0.1
	baz=205						
D52A	ZEK Kipawa Sen	87.06	20	P	P	00 51 58.8	-0.2
	baz=204						
D53A	Lac Vacive, Po	87.35	21	P	P	00 52 00.0	-0.4
	baz=205						
D54A	Lac Fusel, La	87.72	21	P	P	00 52 01.8	-0.4
	baz=206						
LSQQ	Lebel-sur-Quev	89.35	20	P	P	00 52 09.6	-0.2
	baz=205						
MATQ	Matagami	89.80	20	P	P	00 52 11.6	-0.3
	baz=205						
CHGQ	Chibougamau	90.87	21	P	P	00 52 16.3	-0.6
	baz=207						
PMG	Port Moresby	95.67	254	LR	LR	01 26 14.3	
	comp=Z,64nm,20.6s,baz=64,slow=30						
ASAR	Alice Springs	96.13	235	LR	LR	01 31 55.0	
	comp=Z,117nm,19.7s,baz=128,slow=33						
H11S2	WAKE ISLAND Hy	96.38	288	T	T	02 39 48.9	
	baz=126,slow=75,SNR=5.0						
H11S1	WAKE ISLAND Hy	96.39	288	T	T	02 39 50.1	
	baz=126,slow=75,SNR=5.0						
H11S3	WAKE ISLAND Hy	96.40	288	T	T	02 39 50.5	
	baz=126,slow=75,SNR=4.1						
PETK	Petropavlovsk-	119.84	316	PKP	PKPdf	00 58 02.0	-1.6
	5.0nm,1.0s,baz=128,slow=46,SNR=3.2						
PEA1	Petropavlovsk-	119.84	316	ePKPdf	PKPdf	00 58 01.9	-1.6
ESDC	Sonseca Array	122.19	62	PKP	PKPdf	00 58 07.4	-1.1
	0.3nm,0.6s,baz=248,slow=5.0,SNR=3.0						
NB200	NORSAR Array S	135.18	37	ePKPdf	PKPdf	00 58 32.1	-0.4
NOA	NORSAR Array B	135.18	37	PKP	PKPdf	00 58 32.1	-0.4
	0.4nm,0.7s,baz=282,slow=2.3,SNR=3.3						
ARCES	ARCESS Array B	138.40	22	PKP	PKPdf	00 58 38.0	-0.3
	1.5nm,0.8s,baz=306,slow=3.1,SNR=3.5						
FIA0	FINESS Array S	142.07	34	ePKPpre	PKPpre	00 58 39.8	
FINES	FINESS Array B	142.07	34	PKhKP	PKPpre	00 58 39.8	
	0.8nm,0.7s,baz=264,slow=3.8,SNR=4.3						
BUR08	Bucovina Ar. S	144.33	57	ePKPdf	PKPbc	00 58 48.2	+0.1
MLR	Muntele Rosu	144.86	60	ePKPdf	PKPab	00 58 48.0	-1.8
NRIK	Norilsk	145.48	350	PKPbc	PKPdf	00 58 49.5	-1.3
	1.0nm,0.4s,baz=69,slow=2.3,SNR=6.5						
AKASG	Malin Array Be	146.65	51	PKPbc	PKPdf	00 58 52.9	-0.5
	0.5nm,0.5s,baz=276,slow=3.4,SNR=5.7						
ENH	Enshi	147.59	271	ePKPdf	PKPbc	00 58 58.0	-0.3
HHC	Hu-ho-hao-te	148.24	291	ePKPbc	PKPdf	00 58 58.0	+1.5
XAN	Xi'an	149.19	277	PKPbc	PKPbc	00 59 01.8	-0.6
XAN	Xi'an	149.19	277	ePKPdf	PKPbc	00 59 01.5	-0.9
CMAR	Chiang Mai Arr	149.90	242	PKP	PKPdf	00 58 58.5	-1.3
	0.5nm,0.3s,baz=195,slow=1.4,SNR=2.8						
CMAR				PKPbc	PKPbc	00 59 05.0	+0.5
	0.7nm,0.3s,baz=171,slow=1.2,SNR=12						
BR101	Keskin Array S	150.27	71	ePKPdf	PKPdf	00 58 60.0	+0.1
BR131	Keskin Array S	150.27	71	ePKPdf	PKPdf	00 59 02.4	+2.6
BRTR	Keskin Array B	150.27	71	PKP	PKPdf	00 58 60.0	+0.1
	0.8nm,1.0s,baz=204,slow=3.2,SNR=3.1						
BRTR				PKPbc	PKPbc	00 59 04.5	-0.5
	1.5nm,1.0s,baz=191,slow=2.9,SNR=8.9						
ULN	Ulaanbaatar	151.12	305	ePKPbc	PKPbc	00 59 06.2	-0.6
SONA0	Songino Array	151.56	305	ePKPdf	PKPdf	00 59 02.2	+0.7
SONA0				ePKPab	PKPab	00 59 16.8	+0.5
SONM	Songino Array	151.56	305	PKP	PKPdf	00 59 02.2	+0.7
	8.0nm,1.0s,baz=112,slow=1.6,SNR=2.9						
SONM				PKPbc	PKPbc	00 59 07.3	-0.5
	6.5nm,0.9s,baz=109,slow=2.0,SNR=27						
SONM				PKPab	PKPab	00 59 16.8	+0.5
	6.2nm,0.9s,baz=95,slow=4.4,SNR=12						
KBZ	Khabaz	157.05	62	PKP	PKPdf	00 59 10.1	+0.9
	2.1nm,0.9s,baz=256,slow=8.3,SNR=4.2						
GTA	Gaotai	157.18	287	eP	PKPab	00 59 40.5	0.0
GTA				pP	sPKPab	00 59 45.9	+2.4
GTA				sP	pPKPab	00 59 48.9	+6.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZAA1	Zalesovo Array	159.76	336	ePKPab	PKPab	00 59 50.5	-0.5
ZAA0	Zalesovo Array	159.76	336	ePKPab	PKPab	00 59 50.9	-0.1
ZALV	Zalesovo Beam	159.76	336	PKPab	PKPab	00 59 50.5	-0.5
	comp=Z,2.1nm,0.8s,baz=18,slow=5.3,SNR=8.0						
WMQ	Urumqi	165.19	307	ePKP	PKPdf	00 59 19.3	+1.3
MK32	Makanchi Array	166.46	326	ePKPab	PKPab	01 00 19.6	-1.1
MKAR	Makanchi Array	166.46	326	PKPab	PKPab	01 00 19.6	-1.1
	comp=Z,0.4nm,0.8s,baz=20,slow=4.6,SNR=3.2						

NNC ***08*** *01:10:35.0±4.0, 35°.25N×76°.79E, h0km, mb4.2, mpv4.3, Error ellipse: s-maj=44.1km s-min=29.2km az=110.0*

ISCJB ***08*** *01:10:40.7±0.3, 36°.10N±0°.03×77°.15E±0°.05, h10km, mb3.9/14, MS3.0/4, Error ellipse: s-maj=6.7km s-min=3.2km az=153.0*

BJI ***08*** *01:10:40.4±0.0, 36°.11N×77°.27E, h5km, mb3.9/2, ML3.9/5, Ms3.5/2*

IDC ***08*** *01:10:40.5±0.9, 36°.21N×77°.05E, h0km, mb3.8/10, mb1 3.9/17, mb1mx3.7/59, mbtmp3.8/17, ML3.6/7, MS3.1/6, Ms1 3.0/6, ms1mx2.7/38, Error ellipse: s-maj=18.1km s-min=16.2km az=68.0*

NEIC ***08*** *01:10:48.4±1.5, 36°.21N×77°.17E, h62km±8km, mb4.2/9, Error ellipse: s-maj=17.1km s-min=14.6km az=97.0*

ISC 08 01:10:41.8±0.5, 36°.16N±0°.03×77°.08E±0°.05, h10km, n80, σ2°.31/86, mb4.0/14, MS2.9/4, 5C-5D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.46**	**346**	Pn	**Pn**	**01 11 36.5**	**+0.5**
KSH				Sn	**Sn**	**01 12 18.2**	**+1.1**
KSH				smax	smax		
	comp=N,980nm,0.6s						
KSH				smax	smax		
	comp=E,2μm,0.8s						
DHRM	**DHARAMSHALA**	**3.95**	**190**	eP	**Pb**	**01 11 51.7**	**0.0**
DHRM				eS	**Sg**	**01 12 48.6**	**-0.2**
DHRM				IAML		01 12 57.3	
	comp=E,78nm,1.4s						
DHRM				IAML		01 12 57.9	
	comp=N,70nm,0.5s

NRN Naryn 5.33 351 ePn Pn 01 12 05.0 +3.2
JOSI Joshimath 5.96 159 eP Pn 01 12 10.2 -0.2
JOSI eS Sn 01 13 19.8 +1.0
JOSI IAML 01 13 26.8
comp=N,60nm,0.1s
JOSI IAML 01 13 27.2
comp=E,74nm,0.6s
ARSB Arslanbob 6.07 329 ePn Pn 01 12 16.2 +4.4
KZA Kyzart 6.08 347 P Pn 01 12 15.6 +3.5
SNR=10
ULHL Ulahol 6.11 354 P Pn 01 12 15.9 +3.5
SNR=10
BTK Batken 6.29 310 ePn Pn 01 12 19.0 +4.3
UCH Uchtor 6.38 343 P Pn 01 12 20.0 +3.7
SNR=12
BOOM Boomskoye usch 6.38 352 ePn Pn 01 12 19.2 +3.1
KBK Karagaybulak 6.70 346 P Pn 01 12 24.5 +4.1
SNR=6.8
KBL Kabul 6.76 259 ePn Pn 01 12 24.9 +3.6
AAK Ala-Archa 6.77 344 Pn Pn 01 12 25.0 +3.6
comp=E,1.5nm,0.3s,baz=149,slow=15,SNR=9.3
AAK Sn Sn 01 13 41.0 +2.4
comp=E,0.8nm,0.3s,baz=180,slow=9.1,SNR=3.2
AAK Lg Lg 01 14 12.4
comp=E,2.1nm,0.3s,baz=72,slow=20,SNR=6.3
AAK Ala-Archa 6.77 344 P Pn 01 12 25.5 +4.1
SNR=6.5
AAK Ala-Archa 6.77 344 eP Pn 01 12 25.3 +3.9
AAK Ala-Archa 6.77 344 ⇑P Pn 01 12 25.4 +3.9
comp=E,14nm,1.0s
AAK ⇑S Sb 01 13 56.2 -4.5
comp=E,33nm,1.0s
TKM2 Tokmak 2 6.85 351 ⇓P Pn 01 12 29.8 +7.2
comp=E,5.7nm,0.8s
TKM2 ⇑S Sb 01 13 57.8 -5.2
comp=E,27nm,0.7s
FRU1 Bishkek 6.91 345 ePn Pn 01 12 26.6 +3.4
CHMS Chumysh 7.06 346 P Pn 01 12 29.3 +4.0
SNR=6.0
PDGK Podgornoye 7.40 14 ⇓P Pn 01 12 34.4 +4.4
comp=E,25nm,0.5s
PDGK ⇑S Sb 01 14 15.7 -3.0
comp=E,33nm,0.9s
KUDL Kundal 8.01 184 eP Pn 01 12 31.3 -7.0
KUDL eS Sn 01 14 07.1 -1.7
KUDL IAML 01 14 14.5
comp=E,4.8nm,0.6s
KK31 Karatay Array 8.59 326 ePn Pn 01 12 49.6 +3.4
KK31 Karatay Array 8.59 326 ⇓P Pn 01 12 50.0 +3.9
comp=E,1.4nm,0.4s,baz=133,slow=14,SNR=19
KK31 ⇓S Sn 01 14 32.8 +10
comp=E,3.2nm,0.6s,baz=131,slow=30,SNR=4.0
KKAR Karatay Array 8.59 326 ePn Pn 01 12 50.2 +4.1
KKAR eSn Sn 01 14 26.9 +3.8
PYUN Piuthan 9.47 146 eP Pn 01 12 58.7 +0.2
comp=E,32nm,0.5s
DANN Dangsing 9.62 142 eP Pn 01 13 01.4 +0.7
comp=E,19nm,0.4s
KOLN Koldanda 10.03 145 eP Pn 01 13 06.0 -0.2
comp=E,12nm,0.4s
KKN Kakani 10.86 138 eP Pn 01 13 17.9 +0.3
PKIN Phulchoki 11.09 138 eP Pn 01 13 20.8 0.0
comp=E,7.5nm,0.4s
GUN Gumba 11.10 135 eP Pn 01 13 22.2 +1.2
comp=E,6.7nm,0.3s
PKI Pulchoki 11.11 138 eP Pn 01 13 20.7 -0.3
comp=E,7.1nm,0.4s
WMQ Urumqi 11.17 44 eP Pn 01 13 23.4 +1.8
WMQ Urumqi 11.17 44 ePn Pn 01 13 20.1 -1.5
MAKZ Makanchi 11.25 17 ePn Pn 01 13 23.0 +0.3
MK31 Makanchi Array 11.32 19 eP Pn 01 13 23.1 -0.5
MK32 Makanchi Array 11.32 19 ePn Pn 01 13 23.5 -0.1
MK32 eSn Sn 01 15 27.3 -2.8
MKAR Makanchi Array 11.32 19 Pn Pn 01 13 23.5 -0.1
comp=E,1.3nm,0.3s,baz=204,slow=14,SNR=49
MKAR Sn Sn 01 15 27.3 -2.8
comp=E,0.4nm,0.3s,baz=198,slow=22,SNR=3.2
MKAR LR LR 01 18 11.7
comp=E,50nm,21.2s,baz=172,slow=40
JIRN Jiri 11.47 135 eP Pn 01 13 26.5 +0.4
comp=E,23nm,0.4s
RAMN Ramite 12.25 136 eP Pn 01 13 32.8 -3.8
KURBB Kurchatov Arra 14.50 4 Pn Pn 01 14 05.5 -1.4
comp=E,0.1nm,0.3s,baz=186,slow=12,SNR=8.0
KURBB Lg Lg 01 18 20.1
baz=193,slow=33,SNR=4.2
KURK Kurchatov 14.59 4 ePn Pn 01 14 08.5 +0.2
GEYT Alibeck 15.25 282 Pn Pn 01 14 16.9 -0.3
comp=E,0.2nm,0.3s,baz=104,slow=12,SNR=3.2
GEYT Sn Sn 01 17 04.2 -2.0
comp=E,0.2nm,0.3s,baz=110,slow=21,SNR=3.7
GEYT LR LR 01 21 31.6
comp=E,60nm,19.5s,baz=170,slow=43
BVAR Borovoye Array 17.51 346 P P 01 14 46.6 -0.5
comp=E,0.5nm,0.3s,baz=155,slow=11,SNR=11
BRVK Borovoye 17.56 346 ePn P 01 14 49.2 +1.6
comp=E,3.8nm,0.8s
AB31 Akbulak array 18.11 322 ⇑P P 01 14 55.9 +2.2
comp=E,0.9nm,0.5s,baz=126,slow=12,SNR=32
ABKAR Akbulak array 18.11 322 eP P 01 14 55.2 +1.5
comp=E,2.2nm,0.7s
GTA Gaotai 18.25 73 eP P 01 14 58.0 +2.4
GTA pP sP 01 15 02.0 +0.2
GTA sP pP 01 15 04.8 +4.9
GTA pmax pmax
comp=E,3.0nm,1.3s
ZAA0 Zalesovo Array 18.59 14 eP Pn 01 15 00.1 +0.9
comp=E,2.1nm,0.8s
ZALV Zalesovo Beam 18.59 14 P P 01 14 57.7 -1.3
comp=E,0.3nm,0.3s,baz=201,slow=12,SNR=7.9
ZAA1 Zalesovo Array 18.59 14 eP P 01 14 57.7 -1.3
AKTO Aktyubinsk 19.82 322 P Pn 01 15 13.4 -0.7
comp=E,0.5nm,0.3s,baz=147,slow=7.6,SNR=9.6
AKTO Aktyubinsk 19.82 322 ⇓P Pn 01 15 13.7 -0.3
comp=E,1.4nm,0.5s
ARU Arti 23.83 334 P P 01 15 55.5 +0.6
comp=E,1.0nm,0.6s,baz=119,slow=6.4,SNR=3.8
ARU LR LR 01 24 58.6
comp=E,33nm,19.6s,baz=130,slow=36
ARU Arti 23.83 334 eP P 01 15 55.5 +0.6
comp=E,2.6nm,0.6s
SONA0 Songino Array 24.56 53 eP P 01 16 03.0 +1.0
SONM Songino Array 24.56 53 P P 01 16 03.0 +1.0
comp=E,2.3nm,0.7s,baz=250,slow=10.0,SNR=9.5
ULN Ulaanbaatar 25.00 53 eP P 01 16 06.8 +0.9
comp=E,4.9nm,1.3s
CM31 Chiang Mai Arr 26.14 127 eP P 01 16 16.5 +0.3
comp=E,6.3nm,0.9s
CMAR Chiang Mai Arr 26.14 127 P P 01 16 17.3 +1.1
comp=E,0.9nm,0.3s,baz=321,slow=8.4,SNR=4.0
KBZ Khabaz 27.13 297 LR LR 01 30 21.5
comp=E,40nm,20.9s,baz=274,slow=44
KVAR Kislovodsk Arr 27.29 297 P P 01 16 26.2 -0.4
comp=E,3.0nm,0.8s,baz=72,slow=16,SNR=2.5
KIV Kislovodsk 27.30 297 eP P 01 16 27.6 +0.9
comp=E,15nm,1.6s
KIRV Kirov 28.86 330 LR LR 01 27 49.8
comp=E,28nm,18.7s,baz=198,slow=36
BR101 Keskin Array S 34.20 289 eP P 01 17 27.7 +0.1
BRTR Keskin Array B 34.20 289 P P 01 17 27.7 +0.1
comp=E,0.4nm,0.4s,baz=102,slow=7.7,SNR=5.1
FIA0 FINESS Array S 40.55 325 eP P 01 18 21.9 +1.0
FINES FINESS Array B 40.55 325 P P 01 18 21.9 +1.0
comp=E,0.8nm,0.3s,baz=109,slow=8.7,SNR=25
ARCES ARCESS Array B 43.38 336 P P 01 18 45.0 +0.9
comp=E,6.5nm,0.3s,baz=112,slow=9.3,SNR=10.0
NB2 NORSAR Subarra 47.60 323 P P 01 19 19.4 +1.7
comp=Z,0.6nm,0.6s,baz=91,slow=7.9
NB200 NORSAR Array S 47.60 323 eP P 01 19 18.0 +0.3
NOA NORSAR Array B 47.60 323 P P 01 19 18.0 +0.3
comp=Z,0.6nm,0.6s,baz=91,slow=7.6,SNR=5.2
MJAR Matsushiro Arr 48.48 70 LR LR 01 40 04.6
comp=Z,53nm,22.0s,baz=60,slow=36
TOA1 Torodi Ar. Sit 70.63 272 eP P 01 21 56.4 -1.5
TORD Torodi Ar. Bea 70.63 272 P P 01 21 56.4 -1.5
comp=Z,0.4nm,0.5s,baz=50,slow=5.6,SNR=12
INK Inuvik 73.36 11 P P 01 22 12.7 -0.7
comp=Z,0.7nm,0.6s,baz=308,slow=1.4,SNR=3.9
INK Inuvik 73.36 11 eP P 01 22 12.7 -0.7
comp=Z,11nm,1.9s
ILAR Eielson Array 73.67 18 P P 01 22 14.7 -0.7
comp=Z,0.5nm,0.8s,baz=326,slow=4.6,SNR=5.2
ILB Eielson Array 73.67 18 eP P 01 22 14.7 -0.7
comp=Z,5.3nm,1.4s

*ISCJB **08** 01:13:36.5±0.2, 63°.21N±0°.02×150°.65W±0°.05, h132km±2km, mb3.8/19, Error ellipse: s-maj=4.0km s-min=3.2km az=7.6*
*NEIC **08** 01:13:37.9±0.0, 63°.18N×150°.57W, h126km, ML3.5(AEIC), After AEIC.*
*IDC **08** 01:13:37.1±2.5, 63°.37N×150°.78W, h119km±19km, mb3.6/18, mb1 3.7/21, mb1mx3.5/55, mbtmp3.9/21, MS3.2/3, Ms1 3.2/3, ms1mx2.7/32, Error ellipse: s-maj=24.7km s-min=10.9km az=45.0*
ISC 08 01:13:37.7±0.7, 63°.22N±0°.04×150°.60W±0°.04, h129km±5km, n125, σ0°92/138, mb3.8/19, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAST	Castle Rocks	0.70	287	ePn	Pn	01 13 57.9	-0.1
CAST				eSn	Sn	01 14 12.5	-0.8
RND	Reindeer	0.81	76	ePn	Pn	01 13 58.7	-0.2
RND				eSn	Sn	01 14 14.7	-0.3
BPAW	Bear Paw Mtn.	0.90	349	ePn	Pn	01 13 59.5	-0.1
BPAW				eSn	Sn	01 14 15.6	-0.7
MCK	McKinley	0.91	55	ePn	Pn	01 13 59.8	+0.1
MCK				eSn	Sn	01 14 16.2	-0.1
CHUM	Lake Minchumin	1.02	312	ePn	Pn	01 14 00.9	+0.3
CHUM				eSn	Sn	01 14 17.6	-0.4
BWN	Browne	1.08	27	ePn	Pn	01 14 01.9	+0.6
BWN				ePn	Pn	01 14 01.9	+0.7
BWN				eSn	Sn	01 14 19.9	+0.7
DHY	Denali Highway	1.47	94	ePn	Pn	01 14 05.2	-0.3
DHY				eSn	Sn	01 14 26.4	-0.4
WRH	Wood River Hil	1.68	40	ePn	Pn	01 14 07.8	+0.1
SUA	Susitna One	1.77	182	ePn	Pn	01 14 08.3	-0.7
SUA				eSn	Sn	01 14 32.1	-0.6
PMR	Palmer	1.77	157	ePn	Pn	01 14 07.8	-1.0
PMR				eSn	Sn	01 14 31.3	-1.3
MLY	Manley	1.82	358	ePn	Pn	01 14 09.5	+0.1
CCB	Clear Creek Bu	1.89	40	ePn	Pn	01 14 10.2	0.0
MDM	Murphy Dome	2.03	30	ePn	Pn	01 14 12.0	0.0
COLA	College	2.05	35	ePn	Pn	01 14 12.2	0.0
KNK	Knik Glacier	2.07	150	ePn	Pn	01 14 11.6	-0.9
FIB	Fire Island	2.07	174	ePn	Pn	01 14 12.5	+0.1
SPCP	Crater Peak Br	2.09	201	ePn	Pn	01 14 12.5	-0.4
PS08	TAPS Pump Stn8	2.13	50	ePn	Pn	01 14 13.1	-0.1
SPU	Mount Spurr	2.16	199	ePn	Pn	01 14 12.4	-1.2
SPWE	Spurr West	2.16	206	ePn	Pn	01 14 14.0	+0.3
RC01	Rabbit Creek A	2.18	169	ePn	Pn	01 14 12.6	-1.2
PS10	TAPS Pump St10	2.19	83	ePn	Pn	01 14 14.5	+0.6
ILAR	Eielson Array	2.26	45	P	Pn	01 14 14.5	-0.2
	24nm,0.3s,baz=226,slow=12,SNR=1063						
ILAR				S	Sn	01 14 40.9	-2.3
	11nm,0.3s,baz=229,slow=15,SNR=10.0						
ILB	Eielson Array	2.26	45	ePn	Pn	01 14 14.6	-0.2
ILB				eSn	Sn	01 14 40.9	-2.3
PS07	TAPS Pump Stn7	2.33	25	ePn	Pn	01 14 15.7	+0.1
PAX	Paxson	2.35	94	ePn	Pn	01 14 16.0	0.0
TT01	Tatalina	2.49	265	ePn	Pn	01 14 17.4	-0.3
TT01				ePn	Pn	01 14 17.4	-0.3
PS11	TAPS Pump St11	2.63	114	ePn	Pn	01 14 19.5	0.0
HARP	HAARP	2.63	106	ePn	Pn	01 14 19.6	+0.1
RIDG	Independent Ri	2.64	76	ePn	Pn	01 14 19.6	0.0
PS06	TAPS Pump Stn6	2.67	8	ePn	Pn	01 14 20.4	+0.5
SLKM	Skilak Lake	2.73	176	ePn	Pn	01 14 20.0	-0.8
RDJH	Redoubt Jeurge	2.84	203	ePn	Pn	01 14 22.0	-0.3
GLI	Glacier Island	2.87	143	ePn	Pn	01 14 21.1	-1.5
RDWB	Redoubt West	2.94	202	ePn	Pn	01 14 23.0	-0.6
RSO	Redoubt South	2.95	201	ePn	Pn	01 14 23.6	-0.3
DOT	Dot Lake	2.97	79	ePn	Pn	01 14 23.3	-0.6
IM3	Indian Mountai	3.09	335	ePn	Pn	01 14 25.2	-0.1
PS12	TAPS Pump St12	3.09	122	ePn	Pn	01 14 24.4	-1.1
MENT	Mentasta	3.14	92	ePn	Pn	01 14 26.0	-0.2
SVW2	Sparrevohn	3.16	230	ePn	Pn	01 14 25.8	-0.6
SEW	Seward	3.18	170	ePn	Pn	01 14 25.5	-1.0
PRP	Porcupine Dome	3.19	41	ePn	Pn	01 14 26.6	-0.2
BRLK	Bradley Lake	3.47	182	ePn	Pn	01 14 29.7	-0.8
ILS	Iliamna Low So	3.48	201	ePn	Pn	01 14 30.3	-0.3
EYAK	Cordova Ski Ar	3.53	137	ePn	Pn	01 14 30.2	-1.0
PS05	TAPS Pump Stn5	3.60	360	ePn	Pn	01 14 32.6	+0.5
HOM	Homer	3.61	188	ePn	Pn	01 14 31.9	-0.4
CNPM	China Poot	3.72	185	ePn	Pn	01 14 33.0	-0.8
SGAM	Sherman Glacie	3.74	134	ePn	Pn	01 14 32.5	-1.4
BCA3	Beaver Creek A	4.00	88	ePn	Pn	01 14 36.5	-1.0
COLD	Coldfoot	4.03	2	ePn	Pn	01 14 38.1	+0.4
FYU	Fort Yukon	4.06	32	ePn	Pn	01 14 38.2	+0.1
AUE	Augustine Isla	4.10	200	ePn	Pn	01 14 37.9	-0.8
AUW	Augustine West	4.11	201	ePn	Pn	01 14 38.5	-0.3
HMT	Hamilton	4.17	131	ePn	Pn	01 14 38.3	-1.4
MIDI	Middleton Isla	4.32	150	ePn	Pn	01 14 40.9	-0.8
NICHA	Nichawak Mount	4.35	131	ePn	Pn	01 14 40.8	-1.3
EGAK	Eagle	4.44	65	ePn	Pn	01 14 42.6	-0.6
BALM	Baldy	4.45	116	ePn	Pn	01 14 42.3	-1.2
FONW	Fourpeaked Sta	4.69	202	ePn	Pn	01 14 46.2	-0.4
SNH	Sunshine Point	4.79	126	ePn	Pn	01 14 46.8	-1.2
BM3	Burnt Mountain	4.91	28	ePn	Pn	01 14 49.3	-0.1
KAHC	Katmai Hardscr	5.07	207	ePn	Pn	01 14 50.7	-1.0
KELA	Mount Kelaz	5.42	210	ePn	Pn	01 14 56.1	-0.3
TOLK	Toolik Lake Re	5.46	4	ePn	Pn	01 14 57.8	+1.0
KABU	Katmai Buttres	5.47	207	ePn	Pn	01 14 57.1	0.0
CHX	Chaix Hills	5.52	121	ePn	Pn	01 14 57.7	0.0
KDAK	Kodiak Island	5.54	191	ePn	Pn	01 14 56.0	-2.0
YUK4	Talbot Arm	5.89	103	ePn	Pn	01 15 03.0	+0.2
BCPM	Bancas Point	6.17	117	ePn	Pn	01 15 05.7	-0.7
YUK6	Outpost Mounta	6.18	106	ePn	Pn	01 15 06.0	-0.8
PNL	Peninsula	6.44	119	ePn	Pn	01 15 09.4	-0.7
YUK7	Dusty Glacier	6.48	109	ePn	Pn	01 15 10.4	-0.3
EPYK	Eagle Plains	6.71	56	ePn	Pn	01 15 12.7	-1.0
RDOG	Red Dog Mine	7.02	319	ePn	Pn	01 15 19.3	+1.5
INK	Inuvik	8.66	46	P	Pn	01 15 39.5	-0.3
	0.3nm,0.3s,baz=237,slow=16,SNR=12						
INK	Inuvik	8.66	46	ePn	Pn	01 15 39.8	+0.1
YKA	Yellowknife Ar	16.31	76	P	P	01 17 19.9	+0.5
	0.2nm,0.3s,baz=286,slow=9.4,SNR=7.1						
YKB5	Yellowknife Ar	16.31	76	ePn	P	01 17 19.9	+0.5
RES	Resolute Bay	21.98	36	P	P	01 18 21.1	+0.4
	0.7nm,0.3s,baz=254,slow=13,SNR=15						
NEW	Newport	23.69	113	P	P	01 18 38.1	+0.8
	2.6nm,0.8s,baz=307,slow=11,SNR=3.8						
SEY	Seymchan	25.10	295	P	P	01 18 49.4	-0.5
	2.0nm,0.6s,baz=89,slow=6.6,SNR=6.9						
MA2	Magadan	27.45	289	LR	LR	01 30 56.9	
	comp=Z,32nm,20.5s,baz=96,slow=38						
YHH	Holmes Hill	29.08	110	eP	P	01 19 27.3	+1.3
PD31	Pinedale Array	31.27	111	eP	P	01 19 47.0	+1.8
PD31				ePcP	PcP	01 22 36.1	-0.2
PDAR	Pinedale Array	31.27	111	P	P	01 19 46.6	+1.4
	1.4nm,0.8s,baz=319,slow=6.5,SNR=12						
PDAR				PcP	PcP	01 22 36.1	-0.2
	0.3nm,0.5s,baz=56,slow=2.3,SNR=2.9						
NV01	Mina Array Sit	31.51	127	eP	P	01 19 48.9	+1.5
NV01				ePcP	PcP	01 22 38.1	+1.2
NVAR	Mina Array Bea	31.51	127	P	P	01 19 48.9	+1.5
	0.9nm,0.7s,baz=317,slow=8.7,SNR=8.8						
NVAR				PcP	PcP	01 22 38.1	+1.2
	0.3nm,0.4s,baz=310,slow=3.2,SNR=4.4						
ULM	Lac du Bonnet	31.63	88	P	P	01 19 50.0	+1.9
	3.0nm,0.6s,baz=334,slow=4.4,SNR=3.3						
RSSD	Black Hills	32.56	104	eP	P	01 19 58.0	+1.4
SRU	San Rafael Swe	33.92	116	eP	P	01 20 10.4	+2.1
PHWY	Pilot Hill	34.22	108	eP	P	01 20 10.3	-0.7
LCMT	Little Creek M	34.66	121	eP	P	01 20 16.8	+2.2
EYMN	Ely	35.28	87	eP	P	01 20 20.9	+1.1
WUAZ	Wupatki	36.69	120	eP	P	01 20 33.2	+1.1
E46A	Sault Ste Mari	39.71	83	eP	P	01 20 57.8	+0.8
NRIK	Noril'sk	41.52	333	P	P	01 21 10.3	-1.2
	1.6nm,0.5s,baz=69,slow=5.3,SNR=3.9						
MSTX	Muleshoe	41.53	112	eP	P	01 21 13.7	+1.5
TX31	Lajitas Ar. Si	45.20	116	eP	P	01 21 43.4	+1.8
LTX	Lajitas	45.20	116	eP	P	01 21 43.3	+1.7
TXAR	Lajitas Array	45.20	116	P	P	01 21 43.3	+1.7
	1.1nm,0.5s,baz=324,slow=5.7,SNR=9.3						
JCT	Junction City	45.80	111	eP	P	01 21 46.7	+0.3
ARCES	ARCESS Array B	47.50	2	P	P	01 21 58.5	-0.4
	0.8nm,0.5s,baz=357,slow=7.7,SNR=13						
Z50A	Ashland	49.54	95	eP	P	01 22 14.8	-0.2
KSRS	Korea Array	53.61	282	LR	LR	01 46 38.4	
	comp=Z,30nm,19.7s,baz=145,slow=37						
NB200	NORSAR Array S	55.29	11	eP	P	01 22 56.9	-0.2
NOA	NORSAR Array B	55.29	11	P	P	01 22 56.9	-0.2
	0.2nm,0.5s,baz=353,slow=7.2,SNR=2.6						
ZAA1	Zalesovo Array	55.45	324	eP	P	01 22 56.8	-1.5
ZALV	Zalesovo Beam	55.45	324	P	P	01 22 56.8	-1.5
	0.6nm,0.4s,baz=66,slow=4.9,SNR=2.9						
FIA0	FINESS Array S	55.63	2	eP	P	01 22 58.0	-1.4
FINES	FINESS Array B	55.63	2	P	P	01 22 58.0	-1.4
	0.9nm,0.6s,baz=2.6,slow=9.6,SNR=8.1						
ARU	Arti	58.56	342	P	P	01 23 19.8	-0.3
	0.8nm,0.3s,baz=315,slow=19,SNR=5.9						
ARU	Arti	58.56	342	eP	P	01 23 19.7	-0.4
BVAR	Borovoye Array	59.74	333	P	P	01 23 27.6	-0.7
	1.1nm,0.5s,baz=48,slow=7.6,SNR=8.7						
MK32	Makanchi Array	62.61	322	eP	P	01 23 46.9	-0.8
MKAR	Makanchi Array	62.61	322	P	P	01 23 46.9	-0.9
	0.7nm,0.5s,baz=50,slow=7.2,SNR=8.7						
AKTO	Aktyubinsk	64.46	340	P	P	01 23 59.5	-0.4
	1.4nm,0.5s,baz=2.8,slow=4.8,SNR=3.9						
AKASG	Malin Array Be	66.42	0	P	P	01 24 11.2	-1.2
	0.7nm,0.3s,baz=2.7,slow=6.4,SNR=7.9						
AKBB	Malin Array Si	66.42	0	eP	P	01 24 11.2	-1.2
GERES	GERESS Array B	67.59	11	LR	LR	01 53 51.0	
	comp=Z,24nm,20.3s,baz=274,slow=36						
KBZ	Khabaz	72.85	350	P	P	01 24 51.5	-0.4
	2.5nm,0.9s,baz=333,slow=1.7,SNR=4.6						
BR101	Keskin Array S	77.34	357	eP	P	01 25 18.0	+0.1
BRTR	Keskin Array B	77.34	357	P	P	01 25 18.0	+0.1
	0.2nm,0.5s,baz=343,slow=3.0,SNR=2.6						
BOSA	Boshof	145.28	6	PKPbc	PKPbc	01 32 59.2	-0.5
	3.7nm,1.1s,baz=335,slow=4.7,SNR=4.2						

*IDC **08** 01:17:05.9±0.9, 16°.83N×146°.09E, h0km, mb3.6/9, mb1 3.9/10, mb1mx3.7/50, mbtmp3.7/10, ML3.7/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/32, Error ellipse: s-maj=33.7km s-min=17.6km az=94.0*
ISC 08 01:17:07.0±0.9, 16°.78N±0°.09×146°.1E±0°.2, h10km, n19, σ1°12/11, mb3.7/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.39	201	Pn	Pn	01 18 01.3	+1.3
	7.0nm,0.3s,baz=327,slow=16,SNR=2.2						
GUMO				Sn	Sb	01 18 46.7	-1.8
	3.2nm,0.3s,baz=99,slow=20,SNR=1.6						
H11S3	WAKE ISLAND Hy 19.69	82		T	T	01 42 05.2	
	baz=268,slow=75,SNR=151						
H11S1	WAKE ISLAND Hy 19.70	82		T	T	01 42 08.0	
	baz=268,slow=75,SNR=206						
H11S2	WAKE ISLAND Hy 19.70	82		T	T	01 42 07.4	
	baz=268,slow=75,SNR=328						
H11N1	WAKE ISLAND Hy 19.95	78		T	T	01 42 26.6	
	baz=265,slow=75,SNR=362						
H11N2	WAKE ISLAND Hy 19.96	78		T	T	01 42 27.1	
	baz=265,slow=75,SNR=332						
H11N3	WAKE ISLAND Hy 19.97	78		T	T	01 42 27.9	
	baz=265,slow=75,SNR=358						
MJAR	Matsushiro Arr	20.89	342	P	Pn	01 21 50.4	-1.7
	0.7nm,0.3s,baz=129,slow=11,SNR=2.0						
DAV	Davao City (W)	22.26	247	LR	LR	01 29 28.0	
	comp=Z,64nm,19.9s,baz=70,slow=33						
KSRS	Korea Array	26.10	326	P	P	01 22 41.3	+0.3
	0.9nm,0.7s,baz=143,slow=9.5,SNR=7.2						
PETK	Petropavlovsk-	37.38	12	LR	LR	01 38 24.8	
	comp=Z,48nm,22.0s,baz=109,slow=34						
WRA	Warramunga Arr	38.28	198	P	P	01 24 28.3	+0.5
	1.0nm,0.5s,baz=1.3,slow=7.5,SNR=4.5						
FITZ	Fitzroy Crossi	40.09	211	P	P	01 24 43.5	+0.5
	2.0nm,0.9s,baz=12,slow=9.3,SNR=2.9						
ASAR	Alice Springs	41.93	197	P	P	01 24 58.2	+0.1
	0.4nm,0.8s,baz=21,slow=11,SNR=4.7						
SONM	Songino Array	44.88	322	P	P	01 25 22.0	+0.1
	0.4nm,0.5s,baz=145,slow=3.5,SNR=2.6						
MKAR	Makanchi Array	60.07	315	P	P	01 27 14.1	-0.3
	0.3nm,0.6s,baz=97,slow=10,SNR=2.9						
ILAR	Eielson Array	65.19	26	P	P	01 27 46.7	-1.6
	0.4nm,0.6s,baz=269,slow=5.0,SNR=4.7						
NVAR	Mina Array Bea	84.01	52	P	P	01 29 39.4	+1.1
	0.2nm,0.4s,baz=280,slow=5.1,SNR=3.3						
LPAZ	La Paz	147.20	94	PKPbc	PKiKP	01 36 53.9	-0.8
	1.7nm,0.9s,baz=297,slow=2.8,SNR=6.8						

MAN 08 01:20:38.2, 7°.30N×124°.85E, h6km, mb4.3, ML3.2, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.60	263	⇓iP	Pg	01 20 50.5	+0.6
CTBH				iS	Sg	01 20 58.7	+0.9
DMPH	Davao City--Mi	0.69	108	⇑eP	Pn	01 20 54.7	+0.1
DMPH				eS	Sb	01 21 03.0	+0.6
SKMP	Bagumbayan, Su	0.83	201	eP	Pg	01 20 53.5	-0.7
SKMP				eS	Sg	01 21 05.3	+0.2
DDMP	Don Marcelino,	1.46	144	eP	Pn	01 21 04.7	-0.5
DDMP				eS	Sg	01 21 25.6	+0.2
PAGZ	Pagadian	1.55	291	eP	Pn	01 21 06.1	-0.4
PAGZ				eS	Sb	01 21 27.4	0.0
IPIL	Ipil	2.31	282	eP	Pn	01 21 18.0	+1.1
IPIL				eS	Sn	01 21 47.1	+1.5

*IDC **08** 01:22:01.3±1.1, 7°.79N×94°.24E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.6/44, mbtmp3.7/10, ML4.1/2, MS3.1/4, Ms1 3.1/4, ms1mx2.9/34, Error ellipse: s-maj=47.5km s-min=18.5km az=56.0*
*ISCJB **08** 01:22:03.1±0.6, 7°.89N±0°.09×94°.5E±0°.1, h21km, mb4.0/13, MS3.1/1, Error ellipse: s-maj=19.0km s-min=5.5km az=141.5*
*NEIC **08** 01:22:06.2±0.6, 7°.88N×94°.43E, h32km±8km, mb4.2/5, Error ellipse: s-maj=24.1km s-min=15.6km az=74.0*
ISC 08 01:22:04.9±0.8, 7°.9N±0°.1×94°.4E±0°.1, h21km, n27, σ0°92/27, mb3.9/13, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.64	136	ePn	Pn	01 23 00.3	+0.2
KULM	Kulim	6.71	112	ePn	Pn	01 23 42.4	+0.1
PSI	Prapat	6.75	138	Pn	Pn	01 23 44.8	+1.9
	0.7nm,0.3s,baz=321,slow=13,SNR=5.0						
PSI				Sn	Sn	01 24 59.8	+0.5
	0.8nm,0.3s,baz=323,slow=20,SNR=3.2						
PSI				LR	LR	01 26 42.5	

ML3.1, 2D, Error ellipse: s-maj=16.3km s-min=2.2km az=79.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	**0.43**	**309**	⇓*i*P	Pg	01 52 31.8	-0.9
BART				*e*S	Sg	01 52 38.0	-0.3
BART				A	A	01 52 39.1	
	1μm,0.2s						
PSMN	**Pico do Norte,**	**0.56**	**207**	*e*P	Pg	01 52 34.4	-0.8
PSMN				*e*S	Sg	01 52 42.1	-0.4
PSMN				A	A	01 52 46.0	
	116nm,0.5s						
PSMA	**Santa Maria**	**0.60**	**211**	*e*P	Pg	01 52 34.9	-0.9
PSMA				*e*S	Sg	01 52 42.7	-0.9
PSMA				A	A	01 52 46.2	
	171nm,0.4s						
PCALD	**Caldeiras da R**	**0.66**	**296**	*e*P	Pg	01 52 35.6	-1.4
PCALD				*e*S	Sg	01 52 44.3	-1.3
PCALD				A	A	01 52 46.3	
	247nm,0.2s						
CMLA	**Cha da Macela**	**0.67**	**293**	*e*P	Pg	01 52 36.0	-1.3
CMLA				*e*S	Sg	01 52 45.2	-0.8
CMLA				A	A	01 52 48.0	
	948nm,0.3s						
GRON	**Grota Negra**	**0.68**	**293**	*e*P	Pg	01 52 34.4	-3.0
GRON				*e*S	Sg	01 52 42.4	-3.9
GRON				A	A	01 52 43.9	
	448nm,0.3s						
PDA	**Ponta Delgada**	**0.77**	**288**	*e*P	Pg	01 52 37.6	-1.6
PDA				*e*S	Sg	01 52 47.6	-1.5
PDA				A	A	01 52 48.8	
	247nm,0.2s						
PSET	**Sete Cidades**	**0.84**	**292**	⇓*i*P	Pg	01 52 38.6	-1.9
PSET				*e*S	Sg	01 52 49.4	-1.9
PSET				A	A	01 52 52.3	
	386nm,0.4s						
PSCM	**Serra do Cume**	**2.22**	**303**	*e*P	Pn	01 52 57.3	-5.2
PSCM				*e*S	Sn	01 53 22.9	-7.8
PSCM				A	A	01 53 25.5	
	31nm,0.1s						
ADH	**Angra Heroismo**	**2.28**	**301**	*e*P	Pn	01 52 58.3	-4.9
ADH				*e*S	Sn	01 53 23.7	-8.3
ADH				A	A	01 53 28.1	
	36nm,0.5s						
PMAN	**Manadas**	**2.87**	**294**	*e*P	Pn	01 53 06.6	-4.8
PMAN				*e*S	Sn	01 53 38.4	-8.3
PMAN				A	A	01 53 42.7	
	18nm,0.3s						
PPNO	**Prainha do Nor**	**2.94**	**290**	*e*P	Pn	01 53 08.2	-4.3
PPNO				*e*S	Sn	01 53 40.2	-8.4
PPNO				A	A	01 53 44.1	
	19nm,0.1s						
PGRA	**Graciosa**	**2.97**	**302**	*e*P	Pn	01 53 08.1	-4.7
PGRA				*e*S	Sn	01 53 41.0	-8.1
PGRA				A	A	01 53 44.5	
	8.9nm,0.4s						
ROSA	**Rosais**	**3.01**	**295**	*e*P	Pn	01 53 09.1	-4.3
ROSA				*e*S	Sn	01 53 42.4	-7.8
ROSA				A	A	01 53 44.6	
	15nm,0.2s						
PICO	**Pico**	**3.07**	**290**	*e*P	Pn	01 53 10.0	-4.3
PICO				*e*S	Sn	01 53 43.8	-8.0
PICO				A	A	01 53 46.3	
	29nm,0.2s						
PCAN	**Candelaria**	**3.11**	**289**	*e*P	Pn	01 53 10.6	-4.1
PCAN				*e*S	Sn	01 53 44.5	-8.1
PCAN				A	A	01 53 48.9	
	28nm,0.3s						
HOR	**Horta**	**3.23**	**290**	*e*P	Pn	01 53 12.1	-4.3
CALA	**Caldeira**	**3.31**	**290**	*e*P	Pn	01 53 13.4	-4.1
CALA				*e*S	Sn	01 53 49.4	-8.1
PCED	**Cedros**	**3.32**	**291**	*e*P	Pn	01 53 13.2	-4.4
PCED				*e*S	Sn	01 53 49.0	-8.7
PCED				A	A	01 53 54.1	
	22nm,0.4s						

IDC ***08*** *02:11:52.7±0.3, 10°.63N×126°.79E, h0km, mb5.1/45, mb1 5.1/49, mb1mx5.1/56, mbtmp5.1/49, ML4.4/4, MS4.1/32, Ms1 4.1/32, ms1mx4.1/36, Error ellipse: s-maj=13.5km s-min=8.0km az=77.0*

ISCJB ***08*** *02:11:54.4±0.7, 10°.67N±0°.02×126°.85E±0°.02, h21km±4km, mb5.4/194, MS4.4/62, Error ellipse: s-maj=3.3km s-min=2.5km az=164.7*

MAN ***08*** *02:11:54.3, 10°.80N×126°.97E, h40km, mb6.1, ML5.1, MS5.1*

BJI ***08*** *02:11:54.6±0.0, 10°.29N×126°.95E, h45km, mb5.2/81, mB5.3/63, Ms4.9/84, Ms7 4.6/77*

GCMT ***08*** *02:11:56.5±0.2, 10°.61N±0°.01×126°.97E±0°.01, h12km, MW5.2/117, Moment Tensor Solution. s57,c76; s117,c195; Duration: 1ᵗ0 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.73±.01; Mθθ0.19±.01; Mφφ0.54±.01; Mrθ-0.04±.04; Mφφ-0.19±.01; Mφr-0.34±.03; Best double couple: M0 0.75600×10¹⁷ NP1:φ348.00000°, δ58.00000°, λ-79.00000°. NP2:φ148.00000°, δ34.00000°, λ-107.00000°. Principal axes: T 0.6890, Plg12.0000°, Azm70.0000°; N 0.1350, Plg9.0000°, Azm162.0000°; P -0.8240, Plg75.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***08*** *02:11:56.0±1.0, 10°.66N×126°.72E, h30km, mb5.7/80 Error ellipse: s-maj=8.7km s-min=4.4km az=115.9*

DJA ***08*** *02:11:56.9±1.0, 11°.N±2°×12°.7E±°, h20km±7km, M5.3/63, mb5.3/63, mB5.8/37, Mw(mB)5.3/37, Mwp6.2/1*

NEIC ***08*** *02:11:57.5±1.4, 10°.64N×126°.79E, h29km±3km, mb5.5/174, Error ellipse: s-maj=13.9km s-min=10.4km az=83.0*

KLM ***08*** *02:12:05.0, 11°.10N×126°.35E, h69km, mb5.3*

ISC 08 02:11:57.7±0.3, 10°.66N±0°.02×126°.89E±0°.03, h32km±2km, h33km:pP-P, n878, σ1ˢ64/1008, mb5.5/212, MS4.5/63, 53C-34D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.63**	**238**	⇓*i*P	**Pb**	**02 12 30.9**	**+3.7**
SCPH				*i* S	**Sb**	**02 12 50.2**	**+2.8**
BESP	**Borongan**	**1.70**	**303**	*e*P	**Pn**	**02 12 21.5**	**-3.6**
BESP				*e*S	**Sn**	**02 12 43.1**	**-2.8**
PLP	**Palo**	**1.94**	**285**	⇓*e*P	**Pn**	**02 12 26.8**	**-1.7**
PLP				*i* S	**Sn**	**02 12 49.8**	**-1.9**
MSLP	**Maasin**	**2.06**	**255**	*e*P	**Pn**	**02 12 28.9**	**-1.3**
MSLP				*e*S	**Sn**	**02 12 54.4**	**-0.4**
BUTP	**Butuan**	**2.09**	**217**	*e*P	**Pn**	**02 12 29.7**	**-1.0**
BUTP				*e*S	**Sn**	**02 12 52.8**	**-2.8**
OCLP	**Ormoc**	**2.27**	**280**	*e*P	**Pn**	**02 12 32.5**	**-0.5**
OCLP				*e*S	**Sn**	**02 13 01.8**	**+1.9**
BIPH	**Bislig**	**2.52**	**192**	⇑*i*P	**Pn**	**02 12 34.7**	**-1.8**
BIPH				*i* S	**Sn**	**02 13 01.2**	**-4.8**
CNP	**Cataman**	**2.85**	**310**	*e*P	**Pn**	**02 12 38.8**	**-2.2**
CNP				*e*S	**Sn**	**02 13 11.5**	**-2.7**
LLP	**Lapu-Lapu**	**2.89**	**263**	⇑*e*P	**Pn**	**02 12 41.0**	**-0.5**
LLP				*e*S	**Sn**	**02 13 14.4**	**-0.9**
TBP	**Tagbilaran**	**3.13**	**252**	*e*P	**Pn**	**02 12 44.6**	**-0.3**
TBP				*i* S	**Sn**	**02 13 20.7**	**-0.4**
BUKP	**Musuan**	**3.30**	**213**	*e*P	**Pn**	**02 12 47.7**	**+0.4**
BUKP				*e*S	**Sn**	**02 13 27.6**	**+2.2**
MMPH	**Masbate**	**3.61**	**298**	*e*P	**Pn**	**02 12 53.2**	**+1.7**
MATI	**Mati**	**3.75**	**190**	*e*P	**Pn**	**02 12 56.3**	**+3.0**
DAV	**Davao City (W)**	**3.80**	**200**	Pn	**Pn**	**02 12 53.2**	**-0.8**
	74nm,0.3s,baz=28,slow=4.3,SNR=7.2						
DAV				Sn	**Sn**	**02 13 39.3**	**+1.7**
	70nm,0.3s,baz=52,slow=12,SNR=6.3						
DAV				LR	LR	02 14 27.2	
	comp=Z,7μm,20.5s,baz=40,slow=41						
DAV	**Davao City (W)**	**3.80**	**200**	*e*Pn	**Pn**	**02 12 55.4**	**+1.4**
DAV				*e*Sn	**Sn**	**02 13 39.3**	**+1.7**
DMPH	**Davao City--Mi**	**3.81**	**201**	⇑*e*P	**Pn**	**02 12 55.4**	**+1.2**
DMPH				*e*S	**Sb**	**02 13 47.6**	**-2.4**
SNPH	**Sibulan**	**3.83**	**250**	*i* P	**Pn**	**02 12 55.5**	**+0.9**
SNPH				*i* S	**Sn**	**02 13 38.9**	**+0.5**
PVCP	**Virac**	**3.95**	**318**	*e*P	**Pn**	**02 12 53.0**	**-3.3**
GUIM	**Jordan**	**4.22**	**270**	*e*P	**Pn**	**02 12 56.5**	**-3.4**
GUIM				*e*S	**Sn**	**02 13 46.6**	**-1.6**
CTBH	**Cotabato--PC H**	**4.30**	**218**	⇓*i*P	**Pn**	**02 13 01.4**	**+0.5**
PAGZ	**Pagadian**	**4.45**	**231**	*e*P	**Pn**	**02 13 03.2**	**+0.2**
DDMP	**Don Marcelino,**	**4.67**	**194**	*e*P	**Pn**	**02 13 05.4**	**-0.8**
SKMP	**Bagumbayan, Su**	**4.72**	**210**	*e*P	**Pn**	**02 13 06.2**	**-0.6**
JAP	**San Jose, Anti**	**4.86**	**271**	⇑*e*P	Pb	02 13 16.1	-6.0
AUQP	**San Andres**	**4.89**	**303**	*e*P	Pn	02 13 03.0	-6.2
OTRP	**Odiongan**	**5.06**	**290**	*e*P	**Pn**	**02 13 10.8**	**-0.5**
IPIL	**Ipil**	**5.13**	**237**	*e*P	**Pn**	**02 13 13.2**	**+0.9**
BOAC	**Boac**	**5.66**	**300**	*e*P	**Pn**	**02 13 18.4**	**-1.3**
SJMP	**San Jose**	**5.93**	**288**	*e*P	**Pn**	**02 13 22.7**	**-0.6**
TGY	**Tagaytay City**	**6.74**	**301**	Pn	**Pn**	**02 13 34.2**	**-0.4**
	baz=108,slow=3.3,SNR=13						
TGY				Sn	**Sn**	**02 14 48.8**	**-1.6**
	33nm,0.3s,baz=105,slow=10,SNR=3.3						
TGY				LR	LR	02 16 12.2	
	comp=Z,3μm,21.8s,baz=144,slow=39						
LUBP	**Lubang**	**7.17**	**296**	*e*P	**Pn**	**02 13 39.6**	**-0.9**
BALP	**Baler**	**7.22**	**315**	*e*P	**Pn**	**02 13 39.8**	**-1.4**
PALP	**Palanan**	**7.70**	**326**	*e*P	**Pn**	**02 13 45.3**	**-2.4**
CAUP	**Cauayan**	**7.95**	**322**	*e*P	Pn	02 13 46.2	-4.9
SMPP	**San Manuel, Pa**	**8.14**	**313**	*e*P	**Pn**	**02 13 51.7**	**-2.0**
PALU	**Palau**	**8.19**	**113**	P	Pn	02 13 47.3	-7.1
	baz=8.0,SNR=4.5						
BATP	**Bataraza**	**9.14**	**259**	*e*P	**Pn**	**02 14 09.4**	**+1.8**
TNTI	**Ternate**	**9.84**	**177**	*e*Pn	**Pn**	**02 14 16.7**	**-0.4**
TNTI	**Ternate**	**9.84**	**177**	P	**Pn**	**02 14 15.3**	**-1.7**
MRSI	**Marisa**	**11.25**	**206**	P	**Pn**	**02 14 35.4**	**-1.0**
	32nm,0.9s,575nm						
KKM	**Kota Kinabalu**	**11.51**	**247**	*e*Pn	**Pn**	**02 14 39.0**	**-1.1**
KKM	**Kota Kinabalu**	**11.51**	**247**	P	**Pn**	**02 14 43.0**	**+2.9**
SWI	**Sorong**	**12.25**	**159**	P	**Pn**	**02 14 51.0**	**+0.9**
LUWI	**Luwuk**	**12.33**	**200**	*e*Pn	**Pn**	**02 14 52.3**	**+1.1**
LUWI	**Luwuk**	**12.33**	**200**	P	**Pn**	**02 14 54.0**	**+2.9**
MPSI	**Mapaga**	**12.39**	**215**	P	**P**	**02 15 01.8**	**-1.8**
APSI	**Ampana**	**12.62**	**205**	P	**P**	**02 15 05.3**	**-0.9**
YULB	**Yu-li**	**13.74**	**338**	*e*Pn	**Pn**	**02 15 11.3**	**+0.9**
TPUB	**Ta-pu**	**13.91**	**335**	*e*Pn	**Pn**	**02 15 11.3**	**-1.5**
SSLB	**Suanglung**	**14.22**	**337**	*e*Pn	**Pn**	**02 15 17.5**	**+0.4**
SGKI	**Sangatta, Kali**	**14.45**	**220**	P	**Pn**	**02 15 19.3**	**-0.9**
FAKI	**Fak Fak**	**14.51**	**158**	*e*Pn	**Pn**	**02 15 20.8**	**-0.2**
FAKI	**Fak Fak**	**14.51**	**158**	P	**Pn**	**02 15 20.3**	**-0.7**
YHNB	**Yeheng**	**14.88**	**340**	*e*Pn	**Pn**	**02 15 27.0**	**+1.0**
TTSI	**Tana Toraja**	**15.33**	**208**	P	**Pn**	**02 15 32.5**	**+0.6**
BKB	**Balikpapan**	**15.46**	**221**	P	**Pn**	**02 15 34.5**	**+0.9**
SRPI	**Serui, Papua**	**15.54**	**143**	P	**Pn**	**02 15 36.8**	**+2.1**
KNMB	**Chin-men Tao**	**15.93**	**331**	*e*Pn	**Pn**	**02 15 38.8**	**-0.8**
	133nm,1.2s						
JOW	**Kunigami**	**16.14**	**4**	Pn	**Pn**	**02 15 43.4**	**+1.2**
	1.2nm,0.3s,baz=180,slow=14,SNR=14						
JOW	**Kunigami**	**16.14**	**4**	*e*Pn	**Pn**	**02 15 42.6**	**+0.3**
	200nm,1.6s						
SPSI	**Sidrap Palu**	**16.17**	**206**	P	**Pn**	**02 15 42.9**	**+0.2**
QZH	**Quanzhou**	**16.24**	**332**	P	**Pn**	**02 15 44.0**	**+0.4**
QZH				S	**Sn**	**02 18 44.2**	**+1.4**
QZH				LR	LR		
	comp=N,850nm,12.2s						
QZH				LR	LR		
	comp=E,1μm,13.1s						
QZH				LR	LR		
	comp=Z,2μm,13.8s						
BNSI	**Bone**	**16.42**	**205**	P	**Pn**	**02 15 46.6**	**+0.7**
SBUM	**Sibu**	**16.69**	**242**	*e*Pn	**Pn**	**02 15 48.4**	**-1.0**
	48nm,0.6s						
SBUM	**Sibu**	**16.69**	**242**	P	**P**	**02 15 52.0**	**+0.6**
KAPI	**Kappang**	**17.12**	**205**	Pn	**Pn**	**02 15 54.6**	**-0.1**
	3.9nm,0.3s,baz=35,slow=8.0,SNR=21						
KAPI				LR	LR	02 22 43.3	
	comp=Z,1μm,21.1s,baz=22,slow=38						
KAPI	**Kappang**	**17.12**	**205**	P	**Pn**	**02 15 55.0**	**+0.3**
KAPI	**Kappang**	**17.12**	**205**	P	**Pn**	**02 15 54.9**	**+0.3**
	SNR=11						
BKSI	**Bulukumba**	**17.25**	**203**	P	**Pn**	**02 15 54.0**	**-2.3**
GUMO	**Guam**	**17.82**	**79**	LR	LR	02 21 21.9	
	comp=Z,1μm,20.7s,baz=260,slow=32						
BSSI	**Bau Bau, Buton**	**17.87**	**201**	P	**Pn**	**02 16 02.1**	**-1.9**
GZH	**Guangzhou**	**17.89**	**315**	P	**P**	**02 16 07.9**	**+3.3**
GZH				S	**S**	**02 19 32.6**	**+4.1**
GZH				SS	**SnSn**	**02 19 48.8**	**+12**
GZH				pmax	pmax		
	comp=Z,1μm,5.1s						
GZH				LR	LR		
	comp=N,2μm,13.7s						
GZH				LR	LR		
	comp=E,3μm,14.5s						
DLV	**T Lat**	**18.09**	**276**	*e*Pn	**P**	**02 16 06.7**	**-0.4**
	76nm,1.2s						
QIZ	**Qiongzhong**	**18.44**	**299**	P	**P**	**02 16 10.0**	**-0.8**
QIZ				pP	**sP**	**02 16 21.6**	**+1.2**
QIZ				S	**Sn**	**02 19 36.9**	**+0.6**
QIZ				pmax	pmax		
	comp=Z,27nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,700nm,9.5s						
QIZ				LR	LR		
	comp=N,800nm,14.2s						
QIZ				LR	LR		
	comp=E,1μm,16.2s						
QIZ				LR	LR		
	comp=Z,1μm,14.7s						
GENI	**Genyem**	**18.66**	**134**	P	**P**	**02 16 13.4**	**+0.2**
KSM	**Kuching**	**18.83**	**242**	*e*P	**P**	**02 16 14.6**	**-0.4**
	165nm,1.1s						
KSM	**Kuching**	**18.83**	**242**	P	**Pn**	**02 16 17.0**	**+1.3**
JAY	**Jayapura**	**18.99**	**133**	P	**P**	**02 16 16.4**	**-0.5**
	0.5nm,0.3s,baz=309,slow=5.9,SNR=9.8						
JAY				LR	LR	02 23 19.9	
	comp=Z,1μm,18.4s,baz=324,slow=36						
JAY	**Jayapura**	**18.99**	**133**	P	**P**	**02 16 16.6**	**-0.2**
SAUI	**Saumlaki**	**19.04**	**166**	P	**Pn**	**02 16 19.3**	**+1.1**
MMRI	**Maumere**	**19.72**	**194**	*e*P	**P**	**02 16 25.3**	**+0.5**
	420nm,1.1s						
MMRI	**Maumere**	**19.72**	**194**	P	**Pn**	**02 16 25.7**	**-0.7**
EDFI	**Ende, Flores**	**19.97**	**195**	P	**Pn**	**02 16 28.7**	**-0.7**
SOEI	**Soe**	**20.45**	**187**	P	Pn	02 16 34.8	-0.3
BATI	**Baumata**	**20.98**	**189**	P	**P**	**02 16 37.9**	**-0.6**
	297nm,0.7s,baz=323,slow=1.9,SNR=26						
BATI				S	**S**	**02 20 27.9**	**-2.7**
	15nm,0.4s,baz=3.2,slow=19,SNR=2.2						
BATI				LR	LR	02 25 31.7	
	comp=Z,523nm,20.8s,baz=336,slow=39						
BATI	**Baumata**	**20.98**	**189**	P	**P**	**02 16 38.5**	**0.0**
PLAI	**Plampang**	**21.38**	**205**	P	**P**	**02 16 42.9**	**+0.2**
WBSI	**Waikabubak, Su**	**21.50**	**201**	P	**P**	**02 16 41.9**	**-2.2**
BASI	**Baing, Sumba**	**21.67**	**197**	P	**P**	**02 16 43.9**	**-2.0**
KMMI	**Kalianget**	**21.80**	**217**	P	**P**	**02 16 47.3**	**+0.1**
SRBI	**Singaraja**	**21.95**	**212**	P	**P**	**02 16 50.0**	**+1.1**
DNP	**Denpasar**	**22.45**	**212**	P	**P**	**02 16 53.7**	**-0.6**
NJ2	**Nanjing**	**22.54**	**342**	*e*P	**P**	**02 16 56.4**	**+1.3**
NJ2				pP	**pwP**	**02 17 07.8**	**-2.9**
NJ2				sP	sP	02 17 14.3	+9.2
NJ2				pmax	pmax		
	comp=Z,57nm,1.2s						
PANO	**Nakornpanom**	**22.55**	**289**	P	**P**	**02 16 54.2**	**-1.1**
	0.7nm,1.2s,20nm						
GRJI	**Gresik**	**22.60**	**220**	P	**P**	**02 17 00.5**	**+4.7**
JNU	**Nakatsue**	**22.65**	**9**	P	**P**	**02 16 56.2**	**-0.1**
	22nm,0.8s,baz=192,slow=5.2,SNR=11						
JNU				LR	LR	02 24 44.0	
	comp=Z,394nm,19.4s,baz=167,slow=34						
JAGI	**Jajag, Banyuwa**	**22.84**	**214**	*e*P	**P**	**02 16 57.4**	**-1.1**
	317nm,1.4s						
JAGI	**Jajag, Banyuwa**	**22.84**	**214**	P	**P**	**02 16 58.7**	**+0.3**
WHN	**Wuhan**	**22.96**	**331**	⇑P	**P**	**02 17 00.1**	**+0.6**
WHN				S	**S**	**02 21 09.7**	**+2.0**
WHN				pmax	pmax		
	comp=Z,170nm,0.9s						
WHN				pmax	pmax		
	comp=Z,2μm,3.7s						
WHN				LR	LR		
	comp=N,1μm,11.2s						
WHN				LR	LR		
	comp=E,2μm,13.6s						
WHN				LR	LR		
	comp=Z,2μm,13.7s						
SKNT	**Sakolnakorn**	**23.10**	**288**	P	**P**	**02 16 58.8**	**-2.3**
	32nm,0.9s						
TPI	**Tanjungpandan**	**23.33**	**236**	P	**P**	**02 17 01.7**	**-1.6**
	123nm,1.1s,6μm						
NGJI	**Ngawi**	**23.59**	**221**	P	**P**	**02 17 08.8**	**+2.9**
MTN	**Manton Dam**	**23.73**	**170**	P	**P**	**02 17 06.3**	**-0.9**
	baz=24,SNR=21						
KDU	**Kakadu**	**23.85**	**166**	P	**P**	**02 17 07.6**	**-0.7**
	baz=24,SNR=17						
PWJI	**Pagerwojo**	**23.87**	**220**	P	**P**	**02 17 10.8**	**+2.3**
SMRI	**Semarang**	**24.03**	**224**	*e*P	**P**	**02 17 09.3**	**-0.8**
	726nm,1.5s						
SMRI	**Semarang**	**24.03**	**224**	P	**P**	**02 17 12.9**	**+2.8**
	226nm,1.2s						
KHON	**Khomkaen**	**24.06**	**286**	P	**P**	**02 17 10.4**	**+0.1**
	96μm,0.9s						
PPBI	**Pangkal Pinang**	**24.26**	**239**	P	**P**	**02 17 11.5**	**-0.7**
SLVN	**Son La**	**24.47**	**299**	*e*P	**P**	**02 17 11.8**	**-2.4**
	183nm,2.0s						
MYKOM	**Kota Tinggi**	**24.52**	**250**	P	**P**	**02 17 14.0**	**-0.5**
UGM	**Wanagama**	**24.61**	**222**	P	**P**	**02 17 17.4**	**+2.0**
YOGI	**Yogyakarta**	**24.69**	**223**	P	**P**	**02 17 17.1**	**+1.0**
GYA	**Guiyang**	**24.73**	**312**	⇑*i*P	**P**	**02 17 15.7**	**-0.8**
GYA				pP	sP	02 17 27.2	+0.7
GYA				sP	pwP	02 17 35.7	+2.9
GYA				PP	**PnPn**	**02 17 59.2**	**+10**
GYA				S	**S**	**02 21 42.0**	**+5.3**
GYA				pmax	pmax		
	comp=Z,50nm,0.8s						
GYA				pmax	pmax		
	comp=Z,460nm,6.2s						
GYA				LR	LR		
	comp=N,850nm,15.2s						
GYA				LR	LR		
	comp=E,890nm,13.9s						
GYA				LR	LR		
	comp=Z,1μm,15.5s						
CHAI	**Chaiyaphum**	**24.78**	**285**	P	**P**	**02 17 14.3**	**-2.6**
	106μm,0.9s,809μm						
JHJ	**Hachijo jima 2**	**25.30**	**26**	LR	LR	02 25 11.5	
	comp=Z,952nm,21.3s,baz=244,slow=32						
ENH	**Enshi**	**25.36**	**323**	*e*P	**P**	**02 17 21.8**	**-0.3**
	310nm,1.2s						
TJN	**Taejon**	**25.61**	**1**	*c*eP	**P**	**02 17 25.8**	**+1.7**
LEM	**Lembang**	**25.88**	**229**	LR	LR	02 29 18.2	
	comp=Z,961nm,18.1s,baz=51,slow=40						
LEM	**Lembang**	**25.88**	**229**	P	**P**	**02 17 29.2**	**+2.1**
JMBI	**JAMBI**	**26.16**	**244**	P	**P**	**02 17 35.7**	**+6.3**
SKLT	**Songkhla**	**26.17**	**265**	P	**P**	**02 17 30.8**	**+1.2**
	25nm,1.8s,838nm						
CBJI	**Citeko**	**26.19**	**230**	P	**P**	**02 17 32.9**	**+3.2**
CISI	**Cisompet, Garu**	**26.23**	**227**	*e*P	**P**	**02 17 30.6**	**+0.5**
	126nm,1.0s						
CISI	**Cisompet, Garu**	**26.23**	**227**	P	**P**	**02 17 31.9**	**+1.8**
KNRA	**Kununurra**	**26.24**	**176**	P	**P**	**02 17 28.8**	**-1.2**
	baz=26,SNR=9.0						
IPM	**Ipoh**	**26.35**	**258**	P	**P**	**02 17 30.0**	**-1.2**
UTTA	**Uttaradit**	**26.46**	**288**	P	**P**	**02 17 30.1**	**-2.0**
	24μm,0.9s						
KULM	**Kulim**	**26.51**	**260**	*e*P	**P**	**02 17 31.8**	**-0.9**
	175nm,1.6s						
KULM	**Kulim**	**26.51**	**260**	P	**P**	**02 17 32.0**	**-0.7**
NANT	**Nan**	**26.56**	**291**	P	**P**	**02 17 30.3**	**-2.7**
	40μm,0.7s						
KS15	**Wonju Array Si**	**26.68**	**2**	*e*P	**P**	**02 17 34.1**	**+0.2**
	91nm,1.5s						
KS15				*e*PcP	**PcP**	**02 20 57.4**	**+0.3**
KS15				*e*ScP	**ScP**	**02 24 38.7**	**+3.8**
KSRS	**Korea Array**	**26.69**	**2**	P	**P**	**02 17 34.2**	**+0.3**
	7.1nm,0.9s,baz=176,slow=9.5,SNR=24						
KSRS				PcP	**PcP**	**02 20 57.4**	**+0.3**
	3.5nm,1.1s,baz=189,slow=2.7,SNR=4.3						
KSRS				ScP	**ScP**	**02 24 38.7**	**+3.8**
	0.7nm,0.4s,baz=188,slow=2.7,SNR=4.7						
KSRS				LR	LR	02 29 48.0	
	comp=Z,568nm,18.2s,baz=174,slow=40						
PHET	**Kaeng Krachan**	**26.77**	**278**	P	**P**	**02 17 33.8**	**-1.2**
	148μm,0.7s						
BLSI	**Bandar Lampung**	**26.79**	**235**	P	**P**	**02 17 37.1**	**+1.9**
	158nm,1.0s,3μm						
TIA	**Tai'an**	**26.93**	**342**	P	**P**	**02 17 36.0**	**-0.2**
TIA				S	**S**	**02 22 11.8**	**+0.6**
TIA				pmax	pmax		
	comp=Z,31nm,0.8s						
TIA				LR	LR		
	comp=N,600nm,14.7s						
TIA				LR	LR		
	comp=E,570nm,14.2s						
TIA				LR	LR		
	comp=Z,820nm,12.6s						
KMI	**Kunming**	**27.04**	**305**	P	**P**	**02 17 38.2**	**+0.6**
KMI				pP	sP	02 17 48.8	+1.2
KMI				sP	pwP	02 17 54.8	+1.0
KMI				S	**S**	**02 22 07.4**	**-6.2**
KMI				sS	sS	02 22 31.4	+6.3
KMI				SS	**SnSn**	**02 23 28.5**	**+7.3**
KMI				pmax	pmax		
	comp=Z,43nm,0.8s						
KMI				pmax	pmax		
	comp=Z,250nm,6.7s						
KMI				LR	LR		
	comp=N,480nm,16.0s						
KMI				LR	LR		
	comp=E,1μm,16.0s						
KMI				LR	LR		
	comp=Z,1μm,16.0s						
MDSI	**Maura Dua**	**27.16**	**237**	P	**P**	**02 17 37.6**	**-0.8**
CGJI	**Cibinong**	**27.20**	**232**	P	**P**	**02 17 40.7**	**+1.9**
SRDT	**SRDT**	**27.34**	**281**	P	**P**	**02 17 39.1**	**-1.0**
	13nm,0.7s						
LHSI	**Lahat**	**27.35**	**239**	P	**P**	**02 17 42.4**	**+2.2**
	103nm,1.2s						
PAYA	**Payao**	**27.46**	**292**	P	**P**	**02 17 39.1**	**-2.0**
	68μm,0.7s						
LAMP	**Lampang**	**27.48**	**290**	P	**P**	**02 17 40.2**	**-1.1**
	29μm,1.0s,472μm						
KASI	**Kota Agung**	**27.49**	**235**	P	**P**	**02 17 41.5**	**+0.1**
	67nm,2.3s						
LWLI	**Liwa**	**27.55**	**237**	P	**P**	**02 17 42.2**	**+0.1**
	87nm,1.1s,10μm						
MAJO	**Matsushiro**	**27.73**	**20**	*e*P	**P**	**02 17 42.1**	**-1.2**
	37nm,1.3s						
MAJO				*e*PcP	**PcP**	**02 20 59.6**	**-0.1**
MAJO	**Mats

comp=Z,740nm,11.8s
XAN LR LR
comp=Z,940nm,14.5s
XAN Xi'an 28.49 328 *e*P **P 02 17 50.0 -0.3**
comp=Z,148nm,1.2s
XAN Xi'an 28.49 328 *e*P **P 02 17 50.0 -0.3**
XAN pmax pmax
comp=Z,148nm,1.2s
DL2 Dalian 28.52 351 P **P 02 17 51.4 +1.1**
DL2 pP **sP 02 18 02.7 +2.0**
DL2 S **S 02 22 37.4 +1.4**
DL2 pmax pmax
comp=Z,32nm,1.1s
DL2 pmax pmax
comp=Z,240nm,3.9s
DL2 LR LR
comp=Z,520nm,12.5s
DL2 LR LR
comp=Z,800nm,10.1s
DL2 LR LR
comp=Z,770nm,14.0s
FITZ Fitzroy Crossi 28.60 182 P **P 02 17 50.1 -1.2**
comp=Z,8.2nm,0.6s,baz=0.4,slow=8.9,SNR=16
FITZ Fitzroy Crossi 28.60 182 P **P 02 17 50.1 -1.2**
baz=29,SNR=16
PDSI Padang 28.69 248 P **P 02 17 51.4 -0.8**
comp=Z,65nm,0.7s,comp=Z,2μmcomp=Z,37μm
PSI Prapat 28.82 256 PcP **PcP 02 21 02.7 -0.3**
comp=Z,16nm,1.0s,baz=358,slow=0.7,SNR=6.1
PSI LR LR 02 30 47.4
comp=Z,860nm,19.4s,baz=74,slow=40
PSI Prapat 28.82 256 *e*P **P 02 17 51.4 -2.1**
comp=Z,68nm,1.4s
PSI *e*PcP **PcP 02 21 02.7 -0.3**
PSI Prapat 28.82 256 *e*P **P 02 17 51.4 -2.1**
PSI *e* 02 21 02.7
PSI pmax pmax
comp=Z,68nm,1.4s
MNSI Mandailing Nat 28.85 252 P **P 02 17 52.8 -0.8**
comp=Z,63nm,0.6s
COEN Coen 29.32 146 *e*P **P 02 17 58.2 +0.6**
comp=Z,82nm,1.3s
COEN Coen 29.32 146 P **P 02 17 54.6 -3.1**
baz=29,SNR=4.8
CD2 Chengdu 29.44 317 ⇓P **P 02 17 58.0 -0.7**
CD2 pP sP 02 18 09.0 +0.3
CD2 sP pwP 02 18 18.3 +3.1
CD2 S **S 02 22 53.6 +2.7**
CD2 sS sS 02 23 14.0 +12
CD2 pmax pmax
comp=Z,110nm,0.9s
CD2 pmax pmax
comp=Z,500nm,5.5s
CD2 LR LR
comp=Z,3μm,17.2s
CD2 LR LR
comp=Z,4μm,16.2s
CD2 LR LR
comp=Z,6μm,17.2s
KCSI Kotacane, Aceh 29.73 258 P **P 02 17 59.5 -1.9**
comp=Z,33nm,0.6s,comp=Z,765nm
TIY Taiyuan 29.90 337 *e*P **P 02 18 05.2 +2.4**
TIY pP **pwP 02 18 18.0 -1.6**
TIY sP sP 02 18 24.5 +11
TIY S **S 02 22 57.1 -1.0**
TIY pmax pmax
comp=Z,230nm,6.3s
TIY LR LR
comp=Z,620nm,11.1s
TIY LR LR
comp=Z,610nm,13.3s
TIY LR LR
comp=Z,610nm,12.7s
SISI Saibi 30.11 248 P **P 02 18 04.3 -0.4**
comp=Z,56nm,1.1s
LHMI Lhok Sumawe 30.12 262 P **P 02 18 05.9 +1.0**
comp=Z,239nm,1.1s,comp=Z,3μm
GSI Gunungsitoli 30.57 254 *e*P **P 02 18 06.3 -2.5**
comp=Z,54nm,0.7s
GSI *e*PcP **PcP 02 21 07.5 +0.2**
GSI Gunungsitoli 30.57 254 P **P 02 18 07.1 -1.7**
comp=Z,81nm,0.8s
BJI Beijing 30.76 344 P **P 02 18 10.6 +0.4**
BJI S **S 02 23 12.4 +1.1**
BJI pmax pmax
comp=Z,13nm,2.1s
BJI LR LR
comp=Z,250nm,15.1s
WRAB Tennant Creek 31.28 166 *ce*P **P 02 18 11.5 -3.5**
WRAB pmax pmax
comp=Z,33nm,1.7s
WR1 Warramunga Arr 31.29 166 *e*P **P 02 18 13.3 -1.7**
WR1 *e*PcP **PcP 02 21 09.7 +0.7**
WRA Warramunga Arr 31.29 166 P **P 02 18 13.3 -1.7**
comp=Z,6.8nm,0.7s,baz=351,slow=10,SNR=14
WRA PcP **PcP 02 21 09.7 +0.7**
comp=Z,7.6nm,0.7s,baz=334,slow=2.3,SNR=7.4
WB2 Warramunga Arr 31.29 166 *e*P **P 02 18 13.6 -1.5**
comp=Z,31nm,1.1s
MBWA Marble Bar 32.40 193 P **P 02 18 23.3 -1.4**
PSA00 Pilbara Seismi 32.77 192 *e*P **P 02 18 27.0 -1.0**
comp=Z,34nm,0.8s
LZH Lanzhou 32.81 324 *e*P **P 02 18 28.8 +0.3**
LZH pP sP 02 18 40.2 +1.7
LZH sP pwP 02 18 48.2 +3.1
LZH PP **PP 02 19 45.0 +2.0**
LZH S **S 02 23 43.4 -0.4**
LZH sS sS 02 24 04.8 +9.2
LZH pmax pmax
comp=Z,130nm,1.4s
LZH pmax pmax
comp=Z,250nm,4.9s
LZH LR LR
comp=Z,1μm,12.5s
LZH LR LR
comp=Z,960nm,11.4s
LZH LR LR
comp=Z,2μm,12.9s
HHC Hu-ho-hao-te 32.97 338 *e*P **P 02 18 30.2 +0.4**
HHC pP sP 02 18 41.7 +1.3
HHC sP pwP 02 18 47.7 +1.1
HHC S **S 02 23 44.2 -1.8**
HHC sS sS 02 24 02.4 +4.2
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,260nm,5.5s
HHC LR LR
comp=Z,490nm,13.6s
HHC LR LR
comp=Z,930nm,14.8s
HHC LR LR
comp=Z,450nm,15.3s
CN2 Changchun 33.04 358 *e*P **P 02 18 29.9 -0.3**
CN2 *e*S **S 02 23 44.5 -2.3**
CN2 LR LR
comp=Z,410nm,11.0s
CN2 LR LR
comp=Z,690nm,11.0s
CN2 LR LR
comp=Z,330nm,14.0s
DGPR DIGLIPUR 33.30 278 *e*P **P 02 18 33.2 +0.4**
DGPR IAmb IAmb 02 18 35.0
comp=Z,39nm,0.7s
BTO Baotou 33.34 336 *e*P **P 02 18 33.9 +0.9**
BTO S **S 02 23 52.3 +0.5**
QIS Mount Isa 33.45 158 P **P 02 18 32.9 -1.1**
baz=34,SNR=8.7
USRK Ussuriysk Ar. 33.70 7 P **P 02 18 36.4 +0.4**
comp=Z,17nm,0.7s,baz=186,slow=6.3,SNR=32
USRK LR LR 02 30 47.0
comp=Z,418nm,21.8s,baz=177,slow=34
MDJ Mudanjiang 33.91 3 P **P 02 18 39.2 +1.4**
MDJ pP pwP 02 18 50.6 -3.5
MDJ sP sP 02 18 56.5 +8.3
MDJ S **S 02 24 02.0 +1.7**
MDJ SS **SnSn 02 26 15.1 +7.3**
MDJ pmax pmax
comp=Z,60nm,1.6s
MDJ LR LR
comp=Z,580nm,13.3s
MDJ LR LR
comp=Z,490nm,11.8s
MDJ LR LR
comp=Z,700nm,18.3s
MOKO MOKOCHONG 34.29 301 *e*P **P 02 18 38.8 -2.7**
MOKO IAmb IAmb 02 18 40.1
comp=Z,246nm,0.1s
KOHI KOHIMA 34.43 300 *e*P **P 02 18 39.1 -3.6**
KOHI IAmb IAmb 02 18 40.2
comp=Z,25nm,0.6s
SAIH SAIHA 34.46 294 *e*P **P 02 18 39.7 -3.3**
SAIH IAmb IAmb 02 18 43.6
comp=Z,53nm,0.3s
AS31 Alice Springs 34.80 169 *e*P **P 02 18 44.6 -1.1**
comp=Z,12nm,1.4s
AS31 *e*PcP **PcP 02 21 18.9 +0.1**
AS31 *e*ScP **ScP 02 25 03.3 +1.3**
ASAR Alice Springs 34.80 169 P **P 02 18 44.4 -1.3**
comp=Z,9.8nm,0.6s,baz=349,slow=7.3,SNR=71
ASAR PcP **PcP 02 21 18.9 +0.1**
comp=Z,6.8nm,0.6s,baz=345,slow=2.6,SNR=12
ASAR ScP **ScP 02 25 03.3 +1.3**
comp=Z,1.5nm,0.9s,baz=346,slow=3.4,SNR=5.1
ASAR LR LR 02 35 24.4
comp=Z,97nm,22.0s,baz=356,slow=41
SILR SILCHAR 35.25 298 *e*P **P 02 18 50.1 +0.5**
TEY Ternei 35.26 12⇓*e*P **P 02 18 49.7 +0.4**
TEY *e* 02 19 01.3
ZIRO ZIRO 35.28 303 *e*P **P 02 18 48.3 -1.8**
WRKA Warakurna 35.51 178 P **P 02 18 51.1 -0.7**
baz=36,SNR=44
TEZP TEZPUR 35.84 301 *e*P **P 02 18 52.0 -2.6**
TEZP IAmb IAmb 02 18 54.4
comp=Z,36nm,0.6s
ASAJ Asahikawa 36.00 19 P **P 02 18 56.5 +0.7**
comp=Z,7.3nm,0.6s,baz=230,slow=18,SNR=8.0
CTAO Charters Tower 36.02 148 *e*P **P 02 18 56.0 -0.2**
comp=Z,76nm,1.4s
CTAO Charters Tower 36.02 148 *e*P **P 02 18 56.0 -0.2**
CTAO pmax pmax
comp=Z,76nm,1.4s
SHL Shillong 36.28 299 *e*P **P 02 18 56.1 -2.6**
SHL IAmb IAmb 02 18 57.6
comp=Z,38nm,0.7s
GUWA GUWAHATI 36.64 300 *e*P **P 02 18 58.3 -3.1**
GUWA IAmb IAmb 02 18 59.4
TAWA Tawang 36.95 302 *e*P **P 02 19 02.9 -1.6**
YUK Yuzh-Kuril'sk 37.08 23*d i*P **P 02 19 06.0 +1.0**
YUK *i* *PP **sP 02 19 15.9 +0.1**
YUK *i* 02 20 30.1
YUK *i* 02 21 27.5
YUK *i* S **S 02 24 51.7 +2.8**
YUK *e**SS **ScP 02 25 09.3 -0.6**
YUK *i* 02 29 14.4
YUK pmax pmax
comp=Z,207nm,2.0s
YUK pmax pmax
comp=Z,70nm,1.1s
YUK pmax pmax
comp=N,63nm,0.7s
YUK pmax pmax
comp=E,34nm,0.6s
GTA Gaotai 37.41 325 P **P 02 19 08.4 +0.4**
GTA pP sP 02 19 19.7 +0.9
GTA sP pwP 02 19 24.8 0.0
GTA PP **PnPn 02 20 36.3 +1.7**
GTA PcP **PcP 02 21 26.3 -0.2**
GTA S **S 02 24 57.4 +3.0**
GTA sS ScP 02 25 18.4 +6.9
GTA SS **SS 02 27 36.1 -3.0**
GTA pmax pmax
comp=E,68nm,1.3s
GTA pmax pmax
comp=E,610nm,5.1s
GTA LR LR
comp=E,410nm,14.1s
GTA LR LR
comp=E,510nm,14.8s
GTA LR LR
comp=E,570nm,15.1s
LSA Lhasa 38.30 305 *e*P **P 02 19 15.7 -0.4**
comp=E,64nm,1.4s
LSA Lhasa 38.30 305 *i* P **P 02 19 15.3 -0.8**
SNR=7.9
LSA Lhasa 38.30 305 *e*P **P 02 19 15.7 -0.4**
LSA pmax pmax
comp=Z,64nm,1.4s
YSS Yuzh-Sakhalins 38.59 17 *e*P **P 02 19 17.6 -0.1**
comp=Z,69nm,1.4s
YSS Yuzh-Sakhalins 38.59 17 *e*P **P 02 19 18.3 +0.6**
YSS *e* 02 19 30.8
YSS *e* 02 20 54.0
YSS *e*PPP PPP 02 21 17.0
YSS *e*S **S 02 25 10.1 -1.6**
YSS *e*SS **SnSn 02 28 00.0 -0.9**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,300nm,18.0s
YSS MLR MLR
comp=N,300nm,17.0s
KLR Kul'dur 38.66 5 P **P 02 19 18.8 +0.5**
comp=N,24nm,0.8s,baz=208,slow=6.2,SNR=55
KLR Kul'dur 38.66 5*d i*P **P 02 19 18.6 +0.3**
KLR pmax pmax
comp=Z,41nm,1.0s
KUR Kuril'sk 38.87 24*c i*P **P 02 19 21.8 +1.8**
KUR *e* 02 20 54.5
KUR *e*S **S 02 25 14.3 -1.6**
KUR *e*SS **SnSn 02 28 02.4 -5.2**
KUR pmax pmax
comp=N,201nm,3.0s
KUR pmax pmax
comp=Z,537nm,3.0s
KUR pmax pmax
comp=Z,103nm,1.4s
HIA Hailar 38.94 353 *e*P **P 02 19 22.0 +1.4**
comp=Z,68nm,1.5s
HIA Hailar 38.94 353 *e*P **P 02 19 22.0 +1.4**
HIA pmax pmax
comp=Z,68nm,1.5s
GTK Tadong 39.61 300 *e*P **P 02 19 25.0 -1.8**
GTK IAmb IAmb 02 19 25.7
ULN Ulaanbaatar 40.67 339 *e*P **P 02 19 34.7 -0.5**
comp=Z,123nm,1.7s
ULN Ulaanbaatar 40.67 339 *e*P **P 02 19 34.7 -0.5**
ULN pmax pmax
comp=Z,123nm,1.7s
ULN Ulaanbaatar 40.67 339 P **P 02 19 36.2 +1.0**
SNR=39
GRNR Gornyy 40.75 9 *e*P **P 02 19 36.0 +0.3**
GRNR pmax pmax
comp=Z,38nm,1.0s
MORW Morawa 40.86 195 P **P 02 19 35.6 -1.2**
baz=41,SNR=21
SONA0 Songino Array 40.87 339 *e*P **P 02 19 36.8 -0.1**
SONA0 *e*PP **PP 02 21 07.8 -3.6**
SONA0 *e*PcP **PcP 02 21 38.1 +0.9**
SONA0 *e*ScP **ScP 02 25 28.6 +4.0**
SONM Songino Array 40.87 339 P **P 02 19 36.8 -0.1**
comp=Z,13nm,0.9s,baz=154,slow=8.3,SNR=30
SONM PP **PP 02 21 07.8 -3.6**
comp=Z,6.4nm,1.1s,baz=149,slow=15,SNR=2.0
SONM PcP **PcP 02 21 38.1 +0.9**
comp=Z,6.3nm,1.0s,baz=160,slow=10,SNR=3.1
SONM ScP **ScP 02 25 28.6 +4.0**
comp=Z,1.0nm,0.8s,baz=180,slow=10,SNR=3.7
SONM LR LR 02 39 37.0
comp=Z,166nm,18.2s,baz=142,slow=41
BOK Bokaro 41.12 294 *e*P **P 02 19 37.2 -1.9**
BOK IAmb IAmb 02 19 37.9
comp=Z,8.9nm,1.1s
FORT Forrest 41.22 178 *e*P **P 02 19 38.9 -0.8**
comp=Z,56nm,0.8s
RAMN Ramite 41.22 299 *e*P **P 02 19 38.4 -1.8**
comp=Z,79nm,0.7s
JIRN Jiri 41.76 300 *e*P **P 02 19 42.8 -1.9**
comp=Z,220nm,1.1s
KMBL Kambalda 42.06 186 P **P 02 19 45.7 -0.9**
baz=42,SNR=11
GUN Gumba 42.09 300 *e*P **P 02 19 45.5 -1.9**
comp=Z,151nm,0.9s
TYV Tymovskoe 42.12 15 *e*P **P 02 19 46.5 -0.4**
TYV pmax pmax
comp=Z,300nm,2.6s
TYV pmax pmax
comp=Z,22nm,1.7s
BLDU Ballidu 42.19 193 P **P 02 19 47.9 +0.2**
baz=42,SNR=11
PKI Pulchoki 42.41 299 *e*P **P 02 19 47.1 -2.9**
comp=Z,43nm,1.0s
PKIN Phulchoki 42.42 299 *e*P **P 02 19 47.5 -2.5**
comp=Z,18nm,0.6s
KKN Kakani 42.57 300 *e*P **P 02 19 48.7 -2.5**
comp=Z,65nm,0.9s
RMQ Roma 42.61 150 P **P 02 19 49.8 -1.4**
baz=43,SNR=4.8
CIT Chita 42.65 348 *e*P **P 02 19 52.2 +1.0**
CIT *e* 02 20 01.8
DMN Daman 42.67 299 *e*P **P 02 19 49.9 -2.2**
comp=Z,60nm,1.0s
EIDS Eidsvold 42.88 147 *e*P **P 02 19 52.9 -0.4**
comp=Z,53nm,1.4s
EIDS Eidsvold 42.88 147 P **P 02 19 51.8 -1.5**
baz=43,SNR=3.8
KLBR Kellerberrin 42.91 191 P **P 02 19 52.7 -0.8**
baz=43,SNR=14
ZEA Zeya 42.96 0 *e*P **P 02 19 53.2 -0.5**
ZEA *e* 02 29 47.0
ZEA pmax pmax
comp=N,96nm,1.8s
ZEA pmax pmax
comp=Z,110nm,1.8s
KOLN Koldanda 44.01 299 *e*P **P 02 20 00.6 -2.2**
comp=Z,110nm,1.2s
DANN Dangsing 44.02 300 *e*P **P 02 20 00.5 -2.4**
comp=Z,39nm,0.7s
BBOO Buckleboo 44.11 169 P **P 02 20 03.2 +0.1**
baz=44,SNR=5.6
ZAK Zakamensk 44.12 338 *e*P **P 02 20 01.5 -1.7**
ZAK *e* 02 21 45.9
ZAK pmax pmax
comp=Z,13nm,1.4s
ZAK pmax pmax
comp=Z,11nm,1.3s
NWAO Narrogin (SRO) 44.31 192 *e*P **P 02 20 03.8 -1.0**
comp=Z,124nm,1.4s
NWAO Narrogin (SRO) 44.31 192 P **P 02 20 04.4 -0.4**
baz=44,SNR=7.9
NWAO Narrogin (SRO) 44.31 192 *e*P **P 02 20 03.8 -1.0**
NWAO pmax pmax
comp=Z,124nm,1.4s
STKA Stephens Creek 44.58 162 P **P 02 20 06.6 -0.3**
comp=Z,16nm,0.7s,baz=336,slow=8.2,SNR=31
STKA PcP **PcP 02 21 49.9 +0.3**
comp=Z,8.2nm,0.7s,baz=346,slow=9.2,SNR=4.1
STKA LR LR 02 41 03.5
comp=Z,153nm,21.8s,baz=359,slow=39
STKA Stephens Creek 44.58 162 *e*P **P 02 20 06.7 -0.3**
comp=Z,16nm,1.5s
STKA *e*PcP **PcP 02 21 49.9 +0.3**
STKA Stephens Creek 44.58 162 P **P 02 20 06.7 -0.2**
baz=45,SNR=22
STKA Stephens Creek 44.58 162 *e*P **P 02 20 06.7 -0.2**
STKA *e* 02 21 49.9
STKA pmax pmax
comp=Z,17nm,1.5s
PYUN Piuthan 44.61 299 *e*P **P 02 20 05.6 -2.0**
comp=Z,124nm,1.0s
TLY Talaya 45.08 340 *e*P **P 02 20 11.2 +0.5**
comp=Z,29nm,1.0s
TLY Talaya 45.08 340*ce*P **P 02 20 11.8 +1.1**
TLY pmax pmax
comp=Z,136nm,1.7s
TLY Talaya 45.08 340 P **P 02 20 11.3 +0.7**
SNR=15
HTT Hallett 45.32 166 P **P 02 20 12.4 -0.4**
baz=45,SNR=3.1
IRK Irkutsk 45.34 341 *e*P **P 02 20 13.2 +0.4**
IRK pmax pmax
comp=Z,93nm,2.1s
MDRS Chennai 45.66 278 *e*P **P 02 20 14.8 -1.0**
MDRS IAmb IAmb 02 20 17.9
comp=Z,41nm,1.1s
CMSA Cobar Meteorol 45.67 157 P **P 02 20 15.9 +0.3**
baz=46,SNR=30
PALK Pallekele 45.71 270 P **P 02 20 15.7 -0.6**
comp=Z,11nm,1.0s,baz=118,slow=6.0,SNR=2.1
PALK PcP **PcP 02 21 54.5 +0.5**
comp=Z,15nm,0.9s,baz=119,slow=1.2,SNR=4.1
PALK Pallekele 45.71 270 *e*P **P 02 20 15.7 -0.6**
comp=Z,102nm,1.4s
PALK *e*PcP **PcP 02 21 54.5 +0.5**
PALK Pallekele 45.71 270 *e*P **P 02 20 15.7 -0.6**
PALK *e* 02 21 54.5
PALK pmax pmax
comp=Z,102nm,1.4s
MOY Mondy 46.01 338 *e*P **P 02 20 18.6 +0.4**
MOY pmax pmax
comp=Z,108nm,2.1s
SKR Severo-Kuril's 46.57 25 *e*P **P 02 20 24.1 +1.7**
SKR *e*S **S 02 27 09.3 +0.3**
SKR pmax pmax
comp=Z,70nm,0.9s
SKR pmax pmax
comp=Z,500nm,3.1s
SKR MLR MLR
comp=Z,500nm,14.0s
NGP Nagpur 47.01 289 *e*P **P 02 20 23.7 -2.7**
NGP IAmb IAmb 02 20 29.2
comp=Z,126nm,2.3s
ARMA Armidale 47.27 151 *e*P **P 02 20 29.1 +0.8**
comp=Z,115nm,1.7s
ARMA Armidale 47.27 151 P **P 02 20 29.7 +1.4**
baz=47,SNR=3.6
WMQ Urumqi 47.29 322 P **P 02 20 28.7 +0.4**
WMQ pP sP 02 20 40.4 +1.2
WMQ sP pwP 02 20 49.3 +4.1
WMQ PP **PP 02 22 21.9 +2.2**
WMQ S **S 02 27 24.2 +4.4**
WMQ sS sS 02 27 39.8 +7.8
WMQ SS **SS 02 30 38.2 -9.3**
WMQ pmax pmax
comp=Z,95nm,1.3s
WMQ pmax pmax
comp=Z,980nm,3.8s
WMQ LR LR
comp=Z,2μm,15.9s
WMQ LR LR
comp=Z,950nm,15.9s
WMQ LR LR
comp=Z,920nm,15.9s
BOD Bodaibo 48.08 351 *e*P **P 02 20 34.8 +0.7**
BOD pmax pmax
comp=Z,62nm,1.7s
BHPL Bhopal 48.72 292 *e*P **P 02 20 37.7 -1.9**
BHPL IAmb IAmb 02 20 40.1
comp=Z,48nm,1.8s
PETK Petropavlovsk- 49.03 24 P **P 02 20 42.2 +0.7**
comp=Z,18nm,0.8s,baz=194,slow=3.6,SNR=18
PETK LR LR 02 42 11.6
comp=Z,301nm,18.8s,baz=208,slow=37
ARPS Mount Arapiles 49.23 164 P **P 02 20 43.9 +0.7**
baz=49,SNR=14
DDI Dehra Dun 49.32 301 *e*P **P 02 20 42.9 -1.3**
DDI IAmb IAmb 02 20 46.4
comp=Z,93nm,1.2s
PET Petropavlovsk 49.36 25 *e*P **P 02 20 45.2 +1.3**
comp=Z,105nm,1.5s
PET Petropavlovsk 49.36 25 *e*P **P 02 20 46.5 +2.5**
PET *e*S **S 02 27 49.8 +1.3**
PET pmax pmax
comp=Z,48nm,1.5s
PET MLR MLR
comp=Z,300nm,19.0s
SMLA Simla 50.24 302 *e*P **P 02 20 49.7 -1.4**
SMLA IAmb IAmb 02 20 52.9
CAN Canberra 50.29 156 *e*P **P 02 20 52.0 +0.6**
comp=Z,62nm,1.3s
CAN Canberra 50.29 156 *e*P **P 02 20 52.0 +0.6**
CAN pmax pmax
comp=Z,62nm,1.3s
CNB Canberra Magne 50.43 156 P **P 02 20 53.4 +1.0**
baz=50,SNR=4.5
DZM Mont Dzumac 50.63 130 *e*P **P 02 20 55.8 +1.6**
comp=Z,110nm,1.4s
DGZ Jazzator, Alta 50.76 328*d i*P **P 02 20 55.5 +0.6**
DGZ pmax pmax
comp=Z,24nm,1.2s
TOO Toolangi 51.05 161 P **P 02 20 55.9 -1.1**
baz=51,SNR=14
DHRM DHARAMSHALA 51.21 303 *e*P **P 02 20 57.1 -1.6**
DHRM IAmb IAmb 02 20 59.3
comp=Z,42nm,0.3s
YAK Yakutsk 51.32 2 *e*P **P 02 21 00.6 +1.9**
comp=Z,90nm,1.2s

YAK	Yakutsk	51.32	2	eP		P	02 20 58.9 +0.3
YAK				e*PP		sP	02 21 08.0 -1.2
YAK				eS		S	02 28 13.0 -2.4
YAK				e			02 30 40.5
MILA	Mila	51.87	157	P		P	02 21 02.1 -1.1
baz=52,SNR=5.2							
MA2	Magadan	52.00	15	P		P	02 21 04.3 +0.5
comp=Z,12nm,0.7s,baz=192,slow=6.9,SNR=10							
MA2				PcP		PcP	02 22 16.0 +0.1
comp=Z,11nm,0.8s,baz=165,slow=5.5,SNR=4.5							
MA2	Magadan	52.00	15	eP		P	02 21 04.2 +0.3
comp=Z,31nm,1.1s							
MA2				ePcP		PcP	02 22 16.0 +0.1
MA2	Magadan	52.00	15	ceP		P	02 21 05.1 +1.3
MA2				pmax	pmax		
comp=Z,72nm,2.5s							
MK31	Makanchi Array	52.09	322	i P		P	02 21 04.8 +0.1
MK31				pmax	pmax		
comp=Z,75nm,0.8s							
MKAR	Makanchi Array	52.09	322	P		P	02 21 04.9 +0.2
comp=Z,73nm,0.8s,baz=115,slow=8.6,SNR=237							
MKAR				LR		LR	02 42 13.2
comp=Z,105nm,21.5s,baz=116,slow=35							
MKAR				P4KPbc			02 58 32.0
comp=Z,1.2nm,1.0s,baz=135,slow=2.7,SNR=6.1							
MAKZ	Makanchi	52.28	322	P		P	02 21 06.4 +0.2
MAKZ				pmax	pmax		
comp=Z,123nm,1.1s							
PDGK	Podgornoye	52.32	317	P		P	02 21 06.4 -0.3
PDGK				pmax	pmax		
comp=Z,87nm,1.1s							
KSH	Kashi	53.42	312	P		P	02 21 16.8 +1.9
KSH				pP		pwP	02 21 32.9 +0.7
KSH				PP		PP	02 23 19.5 +4.0
KSH				S		S	02 28 42.5 -2.8
KSH				ScS		ScS	02 30 55.4 -7.0
KSH				SS		SS	02 32 23.7 -2.0
KSH				pmax	pmax		
comp=Z,170nm,1.0s							
KSH				pmax	pmax		
comp=Z,580nm,5.0s							
KSH				LR	LR		
comp=Z,640nm,9.0s							
KSH				LR	LR		
comp=Z,1μm,16.0s							
KSH				LR	LR		
comp=Z,1μm,18.0s							
NIL	Nilore	54.02	304	eP		P	02 21 18.2 -1.0
comp=Z,140nm,1.0s							
NIL	Nilore	54.02	304	eP		P	02 21 18.2 -1.0
NIL				pmax	pmax		
comp=Z,140nm,1.0s							
ULHL	Ulahol	54.13	315	P		P	02 21 20.3 +0.2
SNR=60							
ZALV	Zalesovo Beam	54.58	331	P		P	02 21 22.1 -0.8
comp=Z,14nm,0.6s,baz=118,slow=6.5,SNR=49							
ZALV				LR		LR	02 46 54.3
comp=Z,247nm,18.3s,baz=68,slow=38							
KZA	Kyzart	54.77	314	P		P	02 21 25.4 +0.4
SNR=129							
TKM2	Tokmak 2	54.81	315	P		P	02 21 25.1 +0.1
SNR=17							
TKM2	Tokmak 2	54.81	315	P		P	02 21 24.5 -0.5
TKM2				pmax	pmax		
comp=Z,52nm,1.0s							
KBK	Karagaybulak	55.17	315	P		P	02 21 27.9 +0.3
SNR=49							
SEY	Seymchan	55.30	14	ceP		P	02 21 29.9 +2.0
UCH	Uchtor	55.33	314	P		P	02 21 29.8 +0.7
SNR=143							
CHMS	Chumysh	55.42	315	P		P	02 21 29.6 +0.4
SNR=22							
AAK	Ala-Archa	55.48	315	P		P	02 21 29.6 -0.2
comp=Z,15nm,0.9s,baz=98,slow=7.0,SNR=37							
AAK				PcP		PcP	02 22 30.4 +0.7
comp=Z,6.2nm,0.6s,baz=135,slow=0.8,SNR=4.3							
AAK	Ala-Archa	55.48	315	P		P	02 21 30.1 +0.3
SNR=16							
AAK	Ala-Archa	55.48	315	eP		P	02 21 30.1 +0.3
comp=Z,48nm,1.3s							
AAK	Ala-Archa	55.48	315	i P		P	02 21 29.7 -0.2
SNR=17							
AAK	Ala-Archa	55.48	315	ceP		P	02 21 30.2 +0.3
AAK				pmax	pmax		
comp=Z,80nm,1.7s							
AAK	Ala-Archa	55.48	315	P		P	02 21 30.1 +0.3
SNR=45							
AAK				P		P	02 21 30.1 +0.3
SNR=45							
USP	Ospenovka	55.68	316	P		P	02 21 31.0 -0.1
SNR=43							
NVS	Novosibirsk	55.85	331	eP		P	02 21 30.1 -1.9
NVS				e			02 22 31.3
NVS				pmax	pmax		
comp=N,58nm,1.6s							
NVS				pmax	pmax		
comp=Z,102nm,1.6s							
NVS				pmax	pmax		
comp=E,67nm,1.5s							
AML	Almayashu	55.88	314	P		P	02 21 33.2 +0.3
SNR=61							
EKS2	Erkin-Say	55.99	315	P		P	02 21 33.6 +0.1
SNR=53							
KURK	Kurchatov	56.09	325	eP		P	02 21 34.0 +0.2
comp=E,216nm,1.2s							
KURK	Kurchatov	56.09	325	eP		P	02 21 34.0 +0.2
KURK				pmax	pmax		
comp=Z,216nm,1.2s							
KURK	Kurchatov	56.09	325	P		P	02 21 34.1 +0.3
SNR=82							
KURK				P		P	02 21 34.1 +0.3
SNR=82							
KURBB	Kurchatov Arra	56.10	325	P		P	02 21 33.8 0.0
comp=Z,30nm,0.5s,baz=126,slow=7.0,SNR=74							
KBL	Kabul	57.61	304	eP		P	02 21 44.0 -1.2
comp=Z,40nm,0.9s							
KBL	Kabul	57.61	304	eP		P	02 21 44.0 -1.2
KBL				pmax	pmax		
comp=Z,40nm,0.9s							
KK31	Karatay Array	58.41	314	i P		P	02 21 50.2 -0.2
KK31				pmax	pmax		
comp=Z,27nm,0.7s							
TIXI	Tiksi	60.95	1	eP		P	02 22 06.9 -0.4
comp=Z,50nm,1.0s							
TIXI	Tiksi	60.95	1	ceP		P	02 22 07.2 -0.1
TIXI				pmax	pmax		
comp=Z,97nm,1.7s							
TIXI				MLR	MLR		
comp=Z,363nm,18.0s							
KIWB	Kanaga Island	60.96	36	eP		P	02 22 09.4 +1.7
ADK	Adak	61.24	36	eP		P	02 22 11.3 +1.7
comp=Z,100nm,1.7s							
ADK	Adak	61.24	36	eP		P	02 22 11.3 +1.7
ADK				pmax	pmax		
comp=Z,100nm,1.7s							
BVAR	Borovoye Array	61.69	325	P		P	02 22 12.3 -0.4
comp=Z,30nm,0.7s,baz=118,slow=8.6,SNR=112							
BVAR				PcP		PcP	02 22 54.8 +0.9
comp=Z,18nm,0.9s,baz=107,slow=5.0,SNR=4.6							
BRVK	Borovoye	61.76	325	eP		P	02 22 13.2 +0.1
comp=Z,66nm,0.8s							
BRVK	Borovoye	61.76	325	eP		P	02 22 13.2 +0.1
BRVK				pmax	pmax		
comp=Z,66nm,0.8s							
BRVK	Borovoye	61.76	325	P		P	02 22 13.3 +0.1
SNR=52							
BILL	Bilibino	62.87	16	eP		P	02 22 21.0 +0.7
comp=Z,66nm,1.4s							
BILL	Bilibino	62.87	16	d iP		P	02 22 19.8 -0.5
BILL				e			02 24 39.2
BILL				ePPP		PPP	02 26 14.0
BILL				pmax	pmax		
comp=Z,65nm,1.7s							
NRIK	Noril'sk	63.79	345	P		P	02 22 26.4 +0.1
comp=Z,44nm,1.2s,baz=126,slow=7.2,SNR=30							
NRIK				LR		LR	02 52 29.9
comp=Z,189nm,18.3s,baz=158,slow=38							
GEYT	Alibeck	66.80	307	P		P	02 22 46.0 -0.5
comp=Z,13nm,0.9s,baz=139,slow=2.9,SNR=25							
GEYT				PcP		PcP	02 23 16.2 +1.0
comp=Z,14nm,0.9s,baz=90,slow=1.7,SNR=7.6							
GEYT				LR		LR	02 56 27.7
comp=Z,167nm,19.1s,baz=120,slow=40							
AB31	Akbulak array	66.98	319	i P		P	02 22 47.1 -0.3
AB31				pmax	pmax		
comp=Z,23nm,0.7s							
BKZ	Black Stump Fm	67.69	140	eP		P	02 22 52.6 +0.6
comp=Z,96nm,1.4s							
UOSS	Minazif	68.14	293	P		P	02 22 53.8 -1.4
SHME	Shamm	68.17	294	P		P	02 22 53.0 -2.4
SVE	Sverdlovsk	68.21	327	ceP		P	02 22 54.7 -0.3
SVE				pmax	pmax		
comp=Z,97nm,1.2s							
HATD	Hatta, Dubai	68.21	293	P		P	02 22 54.4 -1.2
ASHO	Ashiyiah	68.28	292	P		P	02 22 54.3 -1.8
AKTO	Aktyubinsk	68.41	320	P		P	02 22 56.0 -0.4
comp=Z,21nm,0.8s,baz=96,slow=6.8,SNR=88							
ASUD	Al Ashush, Dub	68.95	292	P		P	02 23 00.6 +0.4
ARU	Arti	69.23	326	P		P	02 23 00.6 -0.8
comp=Z,11nm,0.6s,baz=117,slow=2.9,SNR=46							
ARU	Arti	69.23	326	eP		P	02 23 00.2 -1.2
comp=Z,40nm,1.0s							
ARU	Arti	69.23	326	d iP		P	02 23 00.5 -0.9
ARU							02 23 27.1
ARU							02 25 29.7
ARU				eS		S	02 32 04.5 -0.8
ARU							02 32 52.9
ARU				SS		SS	02 36 26.0 -6.0
ARU				pmax	pmax		
comp=Z,132nm,2.3s							
ARU				MLR	MLR		
comp=Z,271nm,16.0s							
LKRN	Lenkeran, Azer	74.16	307	P		P	02 23 32.0 +0.6
KIRV	Kirov	74.44	328	P		P	02 23 32.1 -0.5
comp=Z,73nm,0.8s,baz=108,slow=2.5,SNR=40							
AKT	Akhty	74.92	310	eP		P	02 23 35.3 -0.6
AKT				e			02 23 50.5
AKT				pmax	pmax		
comp=Z,61nm,1.0s							
MAK	Makhachkala	75.06	312	eP		P	02 23 32.8 -3.7
MAK				e			02 26 23.5
MAK				eS		S	02 33 06.8 -5.8
MAK				eSS		SS	02 38 07.4 +5.7
MAK				pmax	pmax		
comp=Z,366nm,1.7s							
SEKA	Sheki	75.32	310	P		P	02 23 38.2 0.0
MNGR	Mingechevir, A	75.42	309	P		P	02 23 39.1 +0.5
ZKTA	Zakatala	75.74	310	P		P	02 23 40.8 +0.3
GANJ	Ganja	76.00	309	P		P	02 23 42.1 +0.1
KDAK	Kodiak Island	76.00	33	eP		P	02 23 42.2 +0.6
comp=Z,35nm,1.1s							
KDAK	Kodiak Island	76.00	33	eP		P	02 23 42.2 +0.6
KDAK				pmax	pmax		
comp=Z,35nm,1.1s							
BTLR	Botlikh	76.01	311	i P		P	02 23 41.7 -0.4
DDFL	Dedoflistskaro	76.13	310	P		P	02 23 40.2 -2.6
GROC	Groznyy	76.31	312	eP		P	02 23 40.9 -2.8
GROC				e			02 23 51.9
GROC				e*PP		PcP	02 23 56.5 +1.0
GROC				e			02 26 34.1
GROC				eS		S	02 33 21.6 -4.8
GROC				e*SS		SKSac	02 33 49.0 -3.8
GROC				pmax	pmax		
comp=Z,98nm,1.2s							
PRGR	Permogore	76.53	331⇑	i P		P	02 23 44.2 -0.3
PRGR				e			02 23 54.2
PRGR				e*PP		PcP	02 23 58.5 +2.5
PRGR				e			02 26 36.2
PRGR				pmax	pmax		
comp=Z,51nm,1.0s							
NAX	Nakhchivan	76.70	308	P		P	02 23 46.6 +0.5
BTNK	Botanikuri	77.11	310	P		P	02 23 48.4 +0.1
TBLG	Delisi	77.15	310	P		P	02 23 48.2 -0.3
TBLG	Delisi	77.15	310	eP		P	02 23 48.2 -0.3
GNI	Garni	77.23	309	P		P	02 23 49.3 +0.2
comp=Z,15nm,1.0s,baz=144,slow=1.9,SNR=21							
GNI	Garni	77.23	309	eP		P	02 23 49.4 +0.2
comp=Z,234nm,1.9s							
GNI	Garni	77.23	309	i P		P	02 23 49.4 +0.2
SNR=8.9							
GNI	Garni	77.23	309	eP		P	02 23 49.4 +0.2
GNI				pmax	pmax		
comp=Z,234nm,1.9s							
GNI	Garni	77.23	309	P		P	02 23 49.4 +0.2
SNR=17							
GNI				P		P	02 23 49.4 +0.2
SNR=17							
GUDG	Gudauri	77.31	311	P		P	02 23 49.9 +0.3
KZRT	Kazreti	77.42	310	P		P	02 23 50.4 +0.3
CASY	Casey	77.67	187	eP		P	02 23 50.5 -0.2
comp=Z,49nm,0.8s							
ZEI	Tsey	77.71	312	eP		P	02 23 49.5 -2.4
ZEI				pmax	pmax		
comp=Z,63nm,0.9s							
TOLK	Toolik Lake Re	77.79	22	P		P	02 23 52.3 +0.7
baz=268							
BGD	Bogdanovka	78.03	310	P		P	02 23 54.2 +0.6
ONI	Oni	78.06	311	P		P	02 23 54.0 +0.3
ONI	Oni	78.06	311	eP		P	02 23 53.9 +0.3
AKH	Akhalkalaki	78.10	310	P		P	02 23 54.5 +0.5
AKH	Akhalkalaki	78.10	310	eP		P	02 23 54.5 +0.5
GOF	Gofitskoye	78.21	314⇓	i P		P	02 23 53.9 -0.4
GOF				pmax	pmax		
comp=Z,79nm,1.5s							
KBZ	Khabaz	78.39	313	P		P	02 23 54.9 -0.4
comp=Z,33nm,1.1s,baz=75,slow=3.0,SNR=26							
KBZ				LR		LR	03 03 50.7
comp=Z,143nm,18.2s,baz=86,slow=40							
TCOL	CIGO, UAF Yank	78.41	26	P		P	02 23 55.4 +0.5
baz=270							
TKB	Tkibuli	78.41	311	P		P	02 23 55.4 -0.1
KIV	Kislovodsk	78.53	313	eP		P	02 23 56.1 -0.1
comp=Z,40nm,0.8s							
KIV	Kislovodsk	78.53	313	i P		P	02 23 55.5 -0.7
SNR=17							
KIV	Kislovodsk	78.53	313	eP		P	02 23 55.1 -1.1
KIV				pmax	pmax		
comp=Z,173nm,1.1s							
KIV	Kislovodsk	78.53	313	P		P	02 23 56.7 +0.5
SNR=19							
KIV				P		P	02 23 56.7 +0.5
SNR=19							
NEY	Neytrino	78.55	312	eP		P	02 23 56.8 +0.4
NEY				pmax	pmax		
comp=Z,3.0nm,0.7s							
SHA1	Shidzhatmaz	78.56	313	i P		P	02 23 55.7 -0.9
POKR	Poker Plat Res	78.59	25	P		P	02 23 58.3 +2.3
baz=271							
VRH	Novokhopyorsk	78.75	320	eP		P	02 23 56.1 -1.0
VRH				e*PP		sP	02 24 06.5 -1.7
VRH				eS		S	02 33 43.9 -8.6
VRH				pmax	pmax		
comp=Z,120nm,1.2s							
VRH				smax	smax		
comp=N,110nm,8.6s							
ILAR	Eielson Array	78.83	26	P		P	02 23 57.0 -0.2
comp=N,3.4nm,0.8s,baz=242,slow=5.8,SNR=30							
ILAR				LR		LR	02 57 17.2
comp=N,120nm,21.8s,baz=270,slow=34							
BATM	Batumi	79.43	311	P		P	02 23 52.1 -9.0
KLMR	Klimovskoe	79.49	330	eP		P	02 23 58.5 -2.5
KLMR				e			02 26 56.8
KLMR				pmax	pmax		
comp=Z,125nm,1.4s							
TMCR	Tamitsa	79.99	334	eP		P	02 24 02.7 -0.9
TMCR				pmax	pmax		
comp=Z,52nm,1.1s							
VORD	Divnogorie	80.30	320	eP		P	02 24 04.2 -1.3
VORD				e*PP		sP	02 24 15.3 -1.3
VORD				pmax	pmax		
comp=Z,60nm,1.2s							
VSR	Storozhevoye	80.36	320	d iP		P	02 24 04.4 -1.5
VSR				pmax	pmax		
comp=Z,101nm,1.0s							
LPSR	Galich'ya Gora	80.38	322	eP		P	02 24 05.0 -1.0
LPSR				e*PP		sP	02 24 16.3 -0.8
LPSR				eS		S	02 34 04.8 -5.0
LPSR				pmax	pmax		
comp=Z,80nm,1.0s							
LPSR				smax	smax		
comp=E,80nm,10.7s							
SOC	Sochi	80.70	313	eP		P	02 24 06.5 -1.4
SOC				e*PP		sP	02 24 17.3 -1.7
SOC				e			02 27 13.8
SOC				eS		S	02 34 10.3 -3.2
SOC				pmax	pmax		
comp=Z,86nm,2.2s							
MOS	Moscow	80.86	325	eP		P	02 24 04.6 -3.9
MOS				e			02 24 17.2
MOS				eS		S	02 34 06.4 -8.2
MOS				pmax	pmax		
comp=Z,141nm,1.3s							
LVZ	Lovozero	81.05	337	eP		P	02 24 09.6 +0.3
comp=Z,42nm,1.2s							
LVZ	Lovozero	81.05	337	ceP		P	02 24 09.0 -0.3
LVZ				pmax	pmax		
comp=Z,24nm,1.1s							
OBN	Obninsk	81.53	324	P		P	02 24 10.1 -1.9
comp=Z,9.3nm,0.9s,baz=60,slow=1.8,SNR=25							
OBN	Obninsk	81.53	324	eP		P	02 24 11.2 -0.9
comp=Z,126nm,1.3s							
OBN	Obninsk	81.53	324	d iP		P	02 24 11.1 -0.9
OBN				e			02 27 27.1
OBN				i S		S	02 34 12.5 -9.0
OBN				pmax	pmax		
comp=Z,61nm,1.3s							
OBN				MLR	MLR		
comp=Z,176nm,17.0s							
APA	Apatity	81.56	337⇓	i P		P	02 24 11.0 -0.9
APA				pmax	pmax		
comp=Z,13nm,0.9s							
APA				MLR	MLR		
comp=Z,200nm,15.0s							
ANN	Anapa	82.20	314	d iP		P	02 24 14.5 -1.3
ANN				e			02 24 20.8
ANN				e*PP		pwP	02 24 29.6 -3.9
ANN				eS		S	02 34 27.6 -1.3
ANN				pmax	pmax		
comp=E,32nm,0.9s							
ANN				pmax	pmax		
comp=N,25nm,0.9s							
ANN				pmax	pmax		
comp=Z,111nm,0.9s							
EPYK	Eagle Plains	82.87	24	P		P	02 24 19.7 +0.8
baz=280							
CUGUR	Gurin_SVAS	83.12	308	i P		P	02 24 22.8 +1.9
KEV	Kevo	83.48	340	eP		P	02 24 21.9 0.0
comp=Z,55nm,1.0s							
KEV	Kevo	83.48	340	eP		P	02 24 21.9 0.0
KEV				pmax	pmax		
comp=Z,55nm,1.0s							
SPA0	Spitsbergen Ar	83.75	349	eP		P	02 24 23.7 +0.4
CUSAR	Sarkisla-SIVAS	83.81	309	i P		P	02 24 25.1 +0.7
ANDN	Andirin	84.02	307	i P		P	02 24 26.7 +1.2
ANDN				IAML_P			
comp=Z,641nm,0.4s							
ARCES	ARCESS Array B	84.04	340	P		P	02 24 24.5 -0.3
comp=Z,22nm,0.7s,baz=65,slow=5.8,SNR=69							
ARCES				LR		LR	03 06 11.8
comp=Z,139nm,20.0s,baz=120,slow=39							
ARE0	ARCESS Array S	84.04	340	eP		P	02 24 24.9 +0.1
SAIM	ADANA	84.16	307	i P		P	02 24 27.2 +1.0
SAIM				IAML_P			
comp=Z,984nm,0.6s							
DIKM	Dikmen	84.22	311⇑	i P		P	02 24 27.0 +0.7
HAMF	Hammerfest	84.35	341	eP		P	02 24 26.0 -0.4
ASF	Jabal al Asfar	84.40	302	P		P	02 24 27.9 +0.3
comp=Z,12nm,0.9s,baz=90,slow=0.6,SNR=24							
ASF	Jabal al Asfar	84.40	302	P		P	02 24 28.1 +0.6
comp=Z,45nm,2.0s							
SIM	Simferopol'	84.51	315	deP		P	02 24 27.2 -0.5
SIM				e*PP		sP	02 24 38.0 -0.8
SIM				eS		S	02 34 48.0 -4.3
SIM				pmax	pmax		
comp=Z,50nm,1.0s							
COAL	Corum-Alaca	84.64	310	i P		P	02 24 29.2 +0.6
COAL				IAML_P			
comp=Z,272nm,0.9s							
SIRC	Yozgat	84.67	309	i P		P	02 24 29.1 +0.3
SIRC				IAML_P			
comp=Z,48nm,0.1s							
YAHY	KAYSERI_Yahyal	84.70	308	i P		P	02 24 29.9 +1.0
YAHY				IAML_P			
comp=Z,344nm,0.7s							
AKO	Adana	84.74	307	i P		P	02 24 29.5 +0.5
AKO				IAML_P			
comp=Z,1μm,0.9s							
SEVA	Sevastopol	84.89	314⇓	i P		P	02 24 29.3 -0.3
KTK1	Kautokeino	84.96	339	eP		P	02 24 29.7 +0.2
AVNS	Nevsehir-Avano	84.98	308	i P		P	02 24 30.8 +0.4
HSUJ	Al Zarqa	85.00	302	P		P	02 24 31.4 +0.9
BHL	Bhannes	85.15	303	eP		P	02 24 31.3 0.0
SHBL	Chebaa	85.17	303	eP		P	02 24 31.5 +0.1
CDAG	Cicekdag	85.21	309	i P		P	02 24 31.1 -0.4
CDAG				IAML_P			
comp=Z,13nm,0.4s							
SHMJ	Saham	85.26	302	P		P	02 24 33.2 +1.5
GULE	Gulek	85.30	307	i P		P	02 24 32.2 +0.1
GULE				IAML_P			
comp=Z,2μm,0.8s							
DED	Mersin	85.33	307	i P		P	02 24 32.5 +0.5
DED				IAML_P			
comp=Z,151nm,0.3s							
WALJ	Wala	85.41	301	P		P	02 24 33.1 +0.6
comp=Z,54nm,1.5s							
DELI	KIRIKKALE	85.49	310	i P		P	02 24 33.4 +0.5
DELI				IAML_P			
comp=Z,1μm,0.8s							
MMAI	Mount Meron Ar	85.51	303	P		P	02 24 33.3 +0.2
comp=Z,58nm,1.1s,baz=80,slow=5.2,SNR=40							
MMLI	Mount Malkishu	85.59	302	P		P	02 24 34.1 +0.7
comp=Z,92nm,1.9s							
KARJ		85.62	301	P		P	02 24 33.7 +0.2
comp=Z,81nm,1.1s							
KIRS	Kırehir-Merke	85.64	309	i P		P	02 24 33.8 +0.2
KIRS				IAML_P			
comp=Z,986nm,0.7s							
JDRJ	Daraweish	85.67	300	P		P	02 24 33.5 -0.5
comp=Z,94nm,1.9s							
LISJ	El Lisan	85.74	301	P		P	02 24 34.5 +0.4
comp=Z,68nm,1.5s							
BR131	Keskin Array S	85.75	309	P		P	02 24 33.4 -0.8
SNR=35							
BRTR	Keskin Array B	85.75	309	P		P	02 24 33.2 -1.0
comp=Z,21nm,0.8s,baz=113,slow=4.2,SNR=124							
BRTR				PP		PP	02 27 50.9 -2.7
comp=Z,2.3nm,1.0s,baz=100,slow=6.8,SNR=4.3							
BRTR				LR		LR	03 09 28.4
comp=Z,35nm,18.1s,baz=78,slow=40							
ELDT	Eldivan	85.78	310	i P		P	02 24 34.6 +0.2
ELDT				IAML_P			
comp=Z,513nm,0.4s							
FINES	FINESS Array B	85.83	332	P		P	02 24 33.2 -0.7
comp=Z,27nm,0.7s,baz=76,slow=4.8,SNR=259							
FINES				LR		LR	03 06 54.5
comp=Z,83nm,18.7s,baz=74,slow=38							
FINES	FINESS Array B	85.83	332	ceP		P	02 24 33.5 -0.4
FINES				pmax	pmax		
comp=Z,27nm,0.7s							
AKSY	AKSARAY - Alti	85.85	308	i P		P	02 24 34.6 -0.1
AKSY				IAML_P			
comp=Z,329nm,0.6s							
AMAZ	Amatzia	86.17	301	P		P	02 24 36.4 +0.1
comp=Z,159nm,1.1s							
VSU	Vasula	86.25	329	ceP		P	02 24 35.4 -0.7
VSU				pmax	pmax		
comp=Z,253nm,1.1s							
VSU	Vasula	86.25	329	eP		P	02 24 34.9 -1.2
VSU				IAmb	IAmb		02 24 38.5
comp=Z,234nm,0.9s							
HRFI	Mount Harif	86.33	300	P		P	02 24 37.8 +0.7
comp=Z,128nm,1.5s							
ANTO	Ankara	86.37	310	eP		P	02 24 36.7 -0.4
comp=Z,136nm,1.5s							
ANTO	Ankara	86.37	310⇑	i P		P	02 24 36.8 -0.4
ANTO	Ankara	86.37	310	eP		P	02 24 36.7 -0.4
ANTO				pmax	pmax		
comp=Z,136nm,1.5s							
ANTO	Ankara	86.37	310	P		P	02 24 36.8 -0.4
SNR=21							
ANTO				P		P	02 24 36.8 -0.4
SNR=21							
AQBJ	Aqaba	86.37	299	P		P	02 24 37.6 +0.3
KKUL	Konya-Kulu	86.40	309	i P		P	02 24 37.4 -0.1
KKUL				IAML_P			
comp=Z,726nm,0.8s							
EIL	Elat	86.47	299	P		P	02 24 37.7 -0.1
comp=Z,30nm,1.0s,baz=48,slow=1.6,SNR=29							
MICGM	Minsk	86.58	325⇓	eP		P	02 24 37.0 -0.8
MICGM				PM			02 24 38.0
comp=Z,0.2nm,1.0s							
MNK	Minsk	86.58	325	eP		P	02 24 37.0 -0.8
MNK				pmax	pmax		
comp=Z,150nm,1.0s							
AKASG	Malin Array Be	86.64	321	P		P	02 24 37.1 -1.1
comp=Z,26nm,1.0s,baz=62,slow=5.1,SNR=45							
AKASG

AKASG pmax pmax
comp=Z,30nm,0.9s
KIEV Kiev 86.66 321⇑ *i*P **P 02 24 37.9 -0.3**
KIEV Kiev 86.66 321 *i* P **P 02 24 37.2 -1.0**
SNR=22
KIEV Kiev 86.66 321 *d* *i*P **P 02 24 37.1 -1.1**
KIEV pmax pmax
comp=Z,73nm,1.3s
KZIT Kziot 86.72 301 P **P 02 24 39.0 0.0**
comp=Z,97nm,1.3s
CSS Mathiatis 86.86 305 P **P 02 24 39.7 +0.1**
MAMC Mammari 86.91 305 P **P 02 24 39.8 0.0**
IDID Didziasalis 87.03 326 *e*P **P 02 24 39.3 -0.7**
IDID IAmb IAmb 02 24 42.0
comp=Z,12nm,0.8s
NACGM Naroch 87.11 325 *e* **P 02 24 39.0 -1.3**
PPT2 Papeete2 87.12 108 *e*S **S 02 35 19.2 +0.3**
comp=Z,140nm,24.2s
PPT2 Papeete2 87.12 108 *e*LR LR 02 52 18.2
comp=Z,205nm,22.0s
IZAR Zarasai 87.19 326 *e*P **P 02 24 40.4 -0.3**
IZAR IAmb IAmb 02 24 42.8
comp=Z,13nm,0.9s
SZAC Souni 87.26 305 P **P 02 24 42.1 +0.5**
ISAL Salakas 87.30 326 *e*P **P 02 24 40.2 -1.1**
ISAL IAmb IAmb 02 24 43.3
comp=Z,6.9nm,0.8s
IIGN Ignalina 87.31 326 *e*P **P 02 24 40.5 -0.8**
IIGN IAmb IAmb 02 24 42.5
comp=Z,9.7nm,0.9s
ALFC Alefka 87.41 305 P **P 02 24 41.8 -0.5**
PPCY Paphos 87.67 305 P **P 02 24 42.1 -1.4**
KIS Kishinev 87.73 317 *e*P **P 02 24 42.0 -1.5**
comp=Z,170nm,2.0s
KIS Kishinev 87.73 317 *e*PP PP 02 28 10.0 +0.9
KIS *e*S **S 02 35 20.0 -3.7**
KIS LRM MLR 03 09 55.0
comp=Z,300nm,17.0s
KIS Kishinev 87.73 317 *e*P **P 02 24 42.0 -1.5**
KIS *e* 02 24 53.0
KIS *e* 02 28 10.0
KIS *e*S **S 02 35 20.0 -3.7**
KIS pmax pmax
comp=Z,170nm,2.0s
MILM Milestii Mici 87.75 317⇓ *i*P **P 02 24 43.0 -0.6**
STEI Steigen 88.10 339 *e*P **P 02 24 43.9 -0.9**
TLCR 88.14 316⇓ *i*P **P 02 24 45.7 +0.2**
TLCR 88.14 316 P **P 02 24 45.7 +0.2**
TBI Tubuai 88.43 114 *e*S **S 02 35 30.5 -0.6**
comp=Z,144nm,25.5s
TBI Tubuai 88.43 114 *e*LR LR 02 53 04.4
comp=Z,498nm,23.8s
PABE Paberze 88.50 326 *e*P **P 02 24 45.4 -1.5**
PABE IAmb IAmb 02 24 48.7
comp=Z,82nm,1.1s
ISP Isparta 88.51 308 P **P 02 24 45.7 -1.9**
ISP Isparta 88.51 308⇑ *i*P **P 02 24 45.5 -2.1**
TIRR Tirgusor 88.59 315⇑ *i*P **P 02 24 46.8 -0.8**
CFR Carcaliu 88.61 316⇑ *i*P **P 02 24 47.6 -0.1**
MANR Mangalia 88.62 314⇑ *i*P **P 02 24 47.3 -0.5**
SLIT Slitere, Latvi 88.76 329 *e*P **P 02 24 45.8 -2.3**
SLIT IAmb IAmb 02 24 49.4
comp=Z,188nm,0.9s
TLB Topalu 88.82 315⇓ *i*P **P 02 24 48.8 +0.1**
ISK Istanbul-Kandi 88.91 311 P **P 02 24 48.0 -1.2**
MOR8 Moi Rana 89.11 338 *e*P **P 02 24 47.0 -2.7**
TESR Tescani 89.30 317⇑ *i*P **P 02 24 50.8 -0.2**
SUW Suwalki 89.37 325 *e*P **P 02 24 50.3 -0.8**
SUW Suwalki 89.37 325 *e*P **P 02 24 50.3 -0.8**
VRI Vrincioaia 89.41 317⇑ *i*P **P 02 24 51.7 +0.2**
PBUR Paburg 89.44 327 *e*P **P 02 24 49.6 -1.8**
PBUR IAmb IAmb 02 24 53.3
comp=Z,64nm,0.9s
PLOR Plostina 89.46 317⇑ *i*P **P 02 24 51.7 -0.1**
BIZ Bicaz 89.55 318⇑ *i*P **P 02 24 52.2 +0.1**
PRD Provadia 89.60 314 *i* P **P 02 24 51.8 -0.6**
KULA Kula-Manisa 89.79 309 P **P 02 24 52.2 -1.3**
KMBO Kilima Mbogo 89.85 269 P **P 02 24 54.2 -0.3**
comp=Z,5.4nm,1.1s,baz=95,slow=7.4,SNR=5.5
KMBO Kilima Mbogo 89.85 269 *e*P **P 02 24 54.4 -0.1**
comp=Z,21nm,1.4s
KMBO Kilima Mbogo 89.85 269 *e*P **P 02 24 54.4 -0.1**
KMBO pmax pmax
comp=Z,21nm,1.4s
FETY Fethiye 89.89 307 P **P 02 24 52.2 -1.8**
PHSR Pinarhisar 89.90 312⇑ *i*P **P 02 24 53.7 -0.2**
BURAR Bucovina Array 89.95 319⇓ *i*P **P 02 24 54.2 +0.1**
OZUR 89.98 317⇑ *i*P **P 02 24 53.7 -0.5**
MLR Muntele Rosu 90.03 316 P **P 02 24 53.6 -1.0**
comp=Z,24nm,1.1s,baz=57,slow=1.7,SNR=24
MLR Muntele Rosu 90.03 316⇑ *i*P **P 02 24 53.9 -0.7**
LVV L'vov 90.09 321 *e*P **P 02 24 54.2 -0.4**
LVV *e* 02 28 27.9
LVV *e* 02 35 20.6
LVV *e*S **S 02 35 43.8 -2.0**
LVV *e*PS **PnS 02 36 50.0 -5.6**
VNDA Vanda 90.24 173 P **P 02 24 54.2 -0.4**
comp=Z,8.6nm,0.9s,baz=315,slow=6.0,SNR=25
VNDA LR LR 03 07 57.1
comp=Z,82nm,18.8s,baz=340,slow=37
MAW Mawson 90.27 200 P **P 02 24 54.3 -0.6**
comp=Z,29nm,1.2s,baz=66,slow=4.3,SNR=28
MAW LR LR 03 03 29.1
comp=Z,60nm,19.9s,baz=54,slow=34
MAW Mawson 90.27 200 *e*P **P 02 24 54.6 -0.3**
comp=Z,13nm,1.4s
MAW Mawson 90.27 200 P **P 02 24 54.9 +0.1**
baz=90,SNR=18
MAW Mawson 90.27 200 *e*P **P 02 24 54.6 -0.3**
MAW pmax pmax
comp=Z,13nm,1.4s
JMB Yambol 90.37 313 *i* P **P 02 24 53.5 -2.5**
YER Yerkesik 90.40 308 P **P 02 24 55.4 -1.0**
EDRB Edirne 90.41 313 P **P 02 24 55.1 -1.1**
DAG Danmarks Havn 90.44 353 *i* P **P 02 24 54.0 -1.7**
DAG pmax pmax
comp=Z,40nm,1.1s
DAG Danmarks Havn 90.44 353 *i* P **P 02 24 54.0 -1.7**
comp=Z,32nm,1.1s
NSS Namsos 90.76 337 *e*P **P 02 24 55.9 -1.5**
HUMR Humele 90.95 316⇓ *i*P **P 02 24 58.6 -0.1**
ARR Arges 90.95 316⇑ *i*P **P 02 24 59.2 +0.4**
KWP Kalwaria Pacla 90.97 321 *e*P **P 02 24 58.8 +0.1**
KWP Kalwaria Pacla 90.97 321 *e*P **P 02 24 58.8 +0.1**
SBA Scott Base 91.14 172 *e*P **P 02 24 59.2 +0.4**
comp=Z,74nm,1.9s
SBA Scott Base 91.14 172 *e*P **P 02 24 59.2 +0.4**
SBA pmax pmax
comp=Z,74nm,1.9s
BODT Bodrum 91.17 308 P **P 02 24 58.2 -1.7**
EZN Ezine 91.23 311 P **P 02 24 58.6 -1.5**
EZN Ezine 91.23 311⇑ *i*P **P 02 24 58.8 -1.3**
CJR Cluj-Napoca 91.27 318⇑ *i*P **P 02 25 01.1 +0.9**
SMG Samos 91.38 309 P **P 02 24 59.5 -1.4**
KDZ Kurdzhali 91.42 313 *i* P **P 02 25 03.9 +2.9**
PRK Paraskevi 91.42 310 P **P 02 25 00.5 -0.5**
BEL Belsk 91.43 323 *e*P **P 02 25 00.9 +0.1**
BEL Belsk 91.43 323 *e*P **P 02 25 00.9 +0.1**
KOLS Kolonicke sedl 91.45 320 *e*P **P 02 25 01.0 0.0**
KOLS pmax pmax
comp=Z,15nm,1.0s
KOLS Kolonicke sedl 91.45 320 *e*P **P 02 25 01.0 0.0**
KOLS *e* 02 26 20.3
RDO Rodhopi 91.47 312 P **P 02 24 59.1 -2.1**
VLAD Vladila 91.49 315⇑ *i*P **P 02 25 01.5 +0.3**
LOT Lotru 91.52 317⇓ *i*P **P 02 25 01.2 -0.3**
TRPA Tarpa 91.53 320⇑ *i*P **P 02 25 01.3 0.0**
TRPA Tarpa 91.53 320 ⇓EP **P 02 25 00.1 -1.2**
UZH Uzhgorod 91.53 320⇑ *i*P **P 02 25 02.0 +0.7**
UZH *i* 02 25 08.2
UZH *e* 02 25 15.8
SIGR SIGRI 91.74 310 P **P 02 25 00.9 -1.6**
DRGR 91.82 318⇓ *i*P **P 02 25 02.6 -0.2**
DRGR 91.82 318 P **P 02 25 02.6 -0.2**
RZN Rozhen 91.91 313 *i* P **P 02 25 02.1 -1.4**
TBLU Trondheim 92.03 336 *e*P **P 02 25 02.3 -1.0**
THAS Thassos island 92.21 312 P **P 02 25 03.1 -1.5**
NIE Niedzica 92.52 321 *e*P **P 02 25 05.7 -0.3**
NIE Niedzica 92.52 321 *e*P **P 02 25 05.7 -0.3**
OJC Ojcow 92.56 322 *e*P **P 02 25 06.0 0.0**
OJC Ojcow 92.56 322 *e*P **P 02 25 06.0 0.0**
MMB Musomiste 92.65 313 *i* P **P 02 25 05.0 -1.7**
NB2 NORSAR Subarra 92.67 334 P **P 02 25 04.8 -1.6**
comp=Z,23nm,1.0s,baz=64,slow=4.6
NB2 NORSAR Subarra 92.67 334 P **P 02 25 04.8 -1.6**
baz=64,slow=4.6
NOA NORSAR Array B 92.67 334 P **P 02 25 04.7 -1.7**
comp=Z,7.7nm,0.8s,baz=64,slow=4.6,SNR=41
NOA PP **PP 02 28 42.6 -5.3**
comp=Z,1.7nm,1.0s,baz=65,slow=8.1,SNR=3.5
NOA LR LR 03 14 19.9
comp=Z,139nm,18.2s,baz=55,slow=40
SIRR Siria 92.68 318⇑ *i*P **P 02 25 06.7 0.0**
VTS Vitosha 92.71 314 P **P 02 25 06.1 -1.0**
VTS Vitosha 92.71 314⇑ *i*P **P 02 25 06.8 -0.3**
VTS Vitosha 92.71 314 *i* P **P 02 25 06.3 -0.8**
KECS Kecovo 92.72 320 *e*P **P 02 25 07.1 +0.3**
KECS pmax pmax
comp=Z,110nm,1.4s
KECS Kecovo 92.72 320 *e*P **P 02 25 07.1 +0.3**
NAO01 NORSAR Array S 92.91 334 *e*P **P 02 25 06.3 -1.1**
BZS Buzias 92.91 317⇑ *i*P **P 02 25 07.1 -0.6**
GKP Gorka Klasztor 92.95 326 *e*P **P 02 25 07.3 -0.5**
GKP Gorka Klasztor 92.95 326 *e*P **P 02 25 07.3 -0.5**
KKB Krupnik 93.03 313 *i* P **P 02 25 05.5 -2.9**
DOMB Dombas 93.10 335 *e*P **P 02 25 07.5 -0.8**
MDVR Moldovita 93.11 317⇑ *i*P **P 02 25 07.9 -0.9**
LANS Liptovska Anna 93.13 321 *e*P **P 02 25 09.7 +1.0**
LANS Liptovska Anna 93.13 321 *e*P **P 02 25 09.7 +1.0**
YKA Yellowknife Ar 93.15 24 P **P 02 25 08.8 +0.3**
comp=Z,6.1nm,0.8s,baz=302,slow=4.6,SNR=17
YKA LR LR 03 05 31.6
comp=Z,12nm,21.9s,baz=282,slow=34
PAIG Paliouri 93.16 311 P **P 02 25 06.8 -2.2**
PLG Polygyros 93.21 312 P P 02 25 04.0 -5.3
PSZ Piszkesteto 93.28 320⇑ *i*P **P 02 25 09.5 0.0**
PSZ Piszkesteto 93.28 320 ⇓EP **P 02 25 08.1 -1.4**
KNT Kendrikon 93.38 313 P **P 02 25 07.6 -2.4**
MOL Molde 93.45 336 *e*P **P 02 25 09.8 0.0**
BSD Bornholm Skovb 93.49 328 *i* P **P 02 25 08.8 -1.4**
BSD pmax pmax
comp=Z,36nm,0.9s
BSD Bornholm Skovb 93.49 328 *i* P **P 02 25 08.8 -1.4**
comp=Z,36nm,0.9s
VAY Valandovo 93.56 313 P **P 02 25 09.2 -1.7**
VAY Valandovo 93.56 313 *i* P **P 02 25 09.7 -1.1**
OKC Ostrava-Krasne 93.69 322 *e*P **P 02 25 11.8 +0.5**
OKC *e* 02 36 20.9
OKC Ostrava-Krasne 93.69 322 *e*P **P 02 25 11.8 +0.5**
OKC *e*S **S 02 36 20.9 +2.7**
STIP Stip 93.73 313 *i* P **P 02 25 09.6 -2.0**
VYHS Vyhne 93.75 321 *e*P **P 02 25 11.6 0.0**
VYHS pmax pmax
comp=Z,64nm,2.3s
VYHS Vyhne 93.75 321 *e*P **P 02 25 11.6 0.0**
AKN Aaknes 93.87 336 *e*P **P 02 25 11.6 -0.2**
KONO Kongsberg 94.04 333 *c*e*P **P 02 25 13.3 +0.7**
KONO pmax pmax
comp=Z,13nm,1.0s
MORC Moravsky Berou 94.08 322 *e*P **P 02 25 12.9 -0.2**
KTI Kastanea 94.17 312 P **P 02 25 12.1 -1.8**
SKO Skopje 94.17 314 *i* P **P 02 25 13.9 +0.2**
SRO2 Moca 94.28 320 *e*P **P 02 25 13.2 -0.8**
SRO2 Moca 94.28 320 *e*P **P 02 25 13.2 -0.8**
SRO Srobarova 94.31 320 *e*P **P 02 25 14.6 +0.5**
SRO Srobarova 94.31 320 *e*P **P 02 25 14.6 +0.5**
JAVC Velka Javorina 94.34 321 *e*P **P 02 25 15.4 +1.1**
KSP Ksiaz 94.42 323 *e*P **P 02 25 14.8 +0.2**
KSP Ksiaz 94.42 323 *e*P **P 02 25 14.8 +0.2**
KRUS Krusevo 94.50 313 *i* P **P 02 25 12.7 -2.5**
CSKK Cskako 94.51 320 EP **P 02 25 15.0 -0.1**
BIA Bitola 94.55 313 *i* P **P 02 25 14.1 -1.4**
RGN Rugen 94.56 328 *e*P **P 02 25 14.3 -0.8**
DPC Dobruska-Polom 94.59 323 *e*P **P 02 25 15.7 +0.2**
DPC *e* 02 36 28.1
DPC MLR MLR
comp=Z,200nm,14.8s
DPC Dobruska-Polom 94.59 323 *e*P **P 02 25 15.7 +0.2**
DPC *e*S **S 02 36 28.1 +1.9**
DPC AMS AMS 03 16 30.0
comp=Z,200nm,14.8s
CHVC Chvalec 94.66 323 *e*P **P 02 25 15.8 +0.1**
CHVC AMS AMS 03 13 30.0
comp=Z,200nm,16.9s
UPC Upice 94.71 323 *e*P **P 02 25 16.2 +0.2**
UPC MLR MLR
comp=Z,200nm,17.6s
UPC Upice 94.71 323 *e*P **P 02 25 16.2 +0.2**
UPC *e*S **S 02 36 33.4 +6.3**
UPC AMS AMS 03 16 30.0
comp=Z,200nm,17.6s
MODS Modra-Piesok 94.76 321 *e*P **P 02 25 15.8 -0.4**
MODS pmax pmax
comp=Z,66nm,2.1s
MODS Modra-Piesok 94.76 321 *e*P **P 02 25 15.8 -0.4**
VRAC Vranov 94.83 322 *e*P **P 02 25 16.7 +0.2**
KULLO Kullorsuaq 94.89 1 *i* P **P 02 25 15.5 -0.7**
KULLO pmax pmax
comp=Z,19nm,1.0s
KULLO Kullorsuaq 94.89 1 *i* P **P 02 25 15.5 -0.7**
comp=Z,19nm,1.0s
TIH Tihany 94.91 319 ⇓EP **P 02 25 16.0 -0.9**
ZST Bratislava 94.93 321 *e*P **P 02 25 16.0 -1.0**
ZST Bratislava 94.93 321 *e*P **P 02 25 16.0 -1.0**
PHP Peshkopia 94.97 314 P **P 02 25 15.4 -2.0**
KRUC Moravsky 95.04 322 *e*P **P 02 25 17.5 0.0**
RUE Ruedersdorf 95.19 326 *e*P **P 02 25 16.5 -1.5**
D03D Eldon 95.33 40 P **P 02 25 19.7 +0.9**
baz=292
SOP Sopron 95.46 320 ⇓EP **P 02 25 18.1 -1.3**
TREC Trest 95.50 322 *e*S S 02 36 43.4 +9.3
TREC AMS AMS 03 14 50.0
comp=Z,200nm,18.3s
BLS5 Blasjo 95.54 334 *e*P **P 02 25 19.5 0.0**
PVCC Panska Ves 95.55 324 *e*P **P 02 25 20.4 +0.6**
PVCC MLR MLR
comp=Z,200nm,14.3s
PVCC Panska Ves 95.55 324 *e*P **P 02 25 20.4 +0.6**
PVCC AMS AMS 03 13 00.0
comp=Z,200nm,14.3s
PDG Podgorica 95.56 315⇑ *i*P **P 02 25 18.8 -1.2**
GOPC GO Pecny, Ondr 95.67 323 *e*P **P 02 25 20.4 0.0**
GOPC MLR MLR
comp=Z,200nm,18.2s
GOPC GO Pecny, Ondr 95.67 323 *e*P **P 02 25 20.4 0.0**
GOPC *e*x x 02 36 44.7
GOPC AMS AMS 03 13 50.0
comp=Z,200nm,18.2s
BRG Berggiesshubel 95.77 324 *i* P **P 02 25 20.5 -0.3**
BRG *i* 02 25 31.7
BRG *e* 02 29 14.9
BRG S **S 02 36 41.0 +4.7**
BRG pmax pmax
comp=Z,20nm,1.2s
BRG pmax pmax
comp=Z,10.0nm,1.6s
BRG MLR MLR
comp=N,119nm,16.7s
BRG MLR MLR
comp=E,256nm,13.9s
BRG MLR MLR
comp=Z,339nm,14.8s
BEHE Becsehely 95.78 319 ⇓EP **P 02 25 21.0 +0.1**
PRU Pruhonice 95.79 323 *e*P **P 02 25 20.8 0.0**
PRU *e* 02 25 32.2
PRU MLR MLR
comp=Z,200nm,18.3s
PRU Pruhonice 95.79 323 *e*P **P 02 25 20.8 0.0**
PRU *e*P **sP 02 25 32.2 +0.2**
PRU *e*S **S 02 36 42.8 +6.4**
PRU AMS AMS 03 14 00.0
comp=Z,200nm,18.3s
CONA Conrad Observa 95.80 321 *i* PcP **P 02 25 21.6 +0.5**
SNR=19
CLL Collm 96.13 325 *i* Pdif **P 02 25 21.6 -0.8**
comp=Z,21nm,1.2s
CLL *e*P **sP 02 25 33.0 -0.5**
CLL *e*PP **PP 02 29 20.0 +5.0**
comp=Z,16nm,1.4s
CLL *e*SKSac **SKSac 02 35 58.0 +1.4**
CLL *e*S **S 02 36 39.0 -0.3**
CLL LmH 03 05 00.0
comp=N,100nm,21.9s
CLL LmH 03 05 00.0
comp=E,100nm,20.9s
CLL L L 03 12 00.0
comp=Z,100nm,18.7s
CLL Collm 96.13 325 *i* P **P 02 25 21.6 -0.8**
CLL *e*S **S 02 36 39.0 -0.3**
CLL pmax pmax
comp=Z,21nm,1.2s
BLY Banja Luka 96.15 318⇑ *i*P **P 02 25 22.6 0.0**
ARSA Arzberg 96.28 320 *i* PcP **P 02 25 23.4 +0.2**
SNR=9.7
SUMG Summit 96.39 356 *i* P **P 02 25 23.2 -0.4**
SUMG pmax pmax
comp=Z,23nm,1.1s
SUMG Summit 96.39 356 *i* P **P 02 25 23.2 -0.4**
comp=Z,23nm,1.1s
KHC Kasperske Hory 96.71 323 *e*P **P 02 25 25.2 +0.1**
KHC *e* 02 25 36.2
KHC *e* 02 36 47.5
KHC MLR MLR
comp=Z,200nm,15.1s
KHC Kasperske Hory 96.71 323 *e*P **P 02 25 25.2 +0.1**
KHC *e*pP **sP 02 25 36.2 -0.1**
KHC *e*S **S 02 36 47.5 +2.9**
KHC AMS AMS 03 16 40.0
comp=Z,200nm,15.1s
GERES GERESS Array B 96.76 322 P **P 02 25 25.3 -0.1**
comp=Z,4.2nm,1.0s,baz=57,slow=4.9,SNR=24
GERES LR LR 03 12 54.1
comp=Z,68nm,19.9s,baz=72,slow=38
PERS Pernice 96.78 320 *i* P **P 02 25 25.5 0.0**
SOKA Soboth 96.81 320 *i* PcP **P 02 25 25.7 0.0**
SNR=9.8
MOA Molln 96.82 321 *i* PcP **P 02 25 26.0 +0.3**
SNR=22
NKC Novy Kostel 96.91 324 *e*P **P 02 25 26.2 +0.2**
NKC *e* 02 25 38.1
NKC MLR MLR
comp=Z,300nm,15.4s
NKC Novy Kostel 96.91 324 *e*P **P 02 25 26.2 +0.2**
NKC *e*pP **sP 02 25 38.1 +1.0**
NKC AMS AMS 03 14 20.0
comp=Z,300nm,15.4s
BOJS Bojanci 97.13 319 *i* P Pdif 02 25 27.3 +0.1
OBKA Obir 97.19 320 *i* PcP **P 02 25 27.3 -0.1**
SNR=13
VISS Visnje 97.28 319 *i* P **P 02 25 27.6 -0.1**
KBA Koelnbreinsper 97.71 321 *i* PcP **P 02 25 29.5 -0.4**
SNR=9.7
MYKA Terra Mystica 97.71 320 *e*PcP **P 02 25 28.9 -0.9**
comp=Z,7.7nm,0.9s
JAVS Javornik 97.74 319 *e*P **P 02 25 29.0 -0.9**
M02C Callahan 97.76 45 P **P 02 25 29.5 -0.6**
baz=292
GRFO Grafenberg 97.86 324 *e*P **P 02 25 30.0 -0.2**
comp=Z,18nm,1.4s
GRFO Grafenberg 97.86 324 *e*P **P 02 25 30.0 -0.2**
GRFO pmax pmax
comp=Z,18nm,1.4s
ABTA Abfaltersbach 98.36 321 *i* PcP **P 02 25 31.9 -0.8**
SNR=15
WTTA Wattenberg 98.68 321 *i* Pdiff Pdif 02 25 34.2 -0.1
SNR=8.2
SYO Syowa Base 98.90 201⇓ *e*Pdiff **P 02 25 32.8 -1.5**
SYO Syowa Base 98.90 201⇓ *e*pPdiff Pdif 02 25 49.4 +15
SQTA Sankt Quirin 98.96 322 *i* Pdiff **P 02 25 35.3 -0.1**
SNR=9.8
MOTA Moosalm 98.97 322 *i* Pdiff Pdif 02 25 35.5 0.0
SNR=7.9
FETA Feichten 99.35 322 *e*Pdiff **Pdif 02 25 36.8 -0.4**
comp=Z,18nm,1.2s
DAVA Damuels 99.74 322 *e*Pdiff **Pdif 02 25 38.7 -0.2**
comp=Z,13nm,1.1s
BFO Black Forest 100.17 323 *e*Pdif **Pdif 02 25 40.6 -0.1**
BFO Black Forest 100.17 323 *c*e*P **Pdif 02 25 42.3 +1.6**
MEM Membach 100.36 326 ⇑Pdif **Pdif 02 25 41.3 0.0**
TUE Stuetta 100.44 321 *e*Pdif **Pdif 02 25 42.4 +0.3**
QSPA South Pole Qui 100.52 180 *e*Pdif **Pdif 02 25 42.4 +0.6**
WLF Walferdange 100.76 325 ⇓Pdif **Pdif 02 25 43.9 +0.7**
comp=Z,22nm,1.0s
BCLA Clavier 100.84 326 ⇑Pdif **Pdif 02 25 42.1 -1.4**
comp=Z,12nm,1.9s
DOU Dourbes 101.39 326 ⇑Pdif **Pdif 02 25 45.1 -0.9**
comp=Z,8.5nm,1.4s
NVAR Mina Array Bea 102.13 47 Pdiff **Pdif 02 25 51.0 +1.1**
comp=Z,0.6nm,0.7s,baz=294,slow=4.4,SNR=6.2
NVAR PP **PP 02 30 01.5 0.0**
comp=Z,0.2nm,0.5s,baz=310,slow=6.9,SNR=3.7
NVAR PKKPbc **PKKPbc 02 41 53.9 -0.2**
comp=Z,1.2nm,0.8s,baz=133,slow=4.0,SNR=7.0
EKA Eskdalemuir Ar 102.15 333 P **Pdif 02 25 48.5 -0.7**
EKA pmax pmax
comp=Z,4.0nm,1.2s
PKM Mcpherson Peak 102.41 51 P **Pdif 02 25 52.8 +1.7**
baz=293
HLID Hailey 102.53 41 P **Pdif 02 25 53.8 +2.4**
baz=298
BNI Bardonecchia 102.76 321 *e*Pdif **Pdif 02 25 52.0 -0.4**
BNI Bardonecchia 102.76 321 *e*P **Pdif 02 25 52.0 -0.4**
PDAR Pinedale Array 106.01 40 PKKP 02 41 54.9
comp=Z,0.3nm,0.5s,baz=111,slow=5.2,SNR=5.0
SNAA Sanae 111.91 195 PKiKP **PKiKP 02 30 28.3 -0.8**
ANMO Albuquerque 112.17 45 *c* *i*PKIKP **PKiKP 02 30 32.5 +1.6**
ANMO pmax pmax
comp=Z,6.0nm,2.5s
ANMO Albuquerque 112.17 45 P **PKiKP 02 30 32.3 +1.4**
baz=302
ESDC Sonseca Array 112.29 321 PP **PP 02 31 14.7 -0.8**
comp=Z,1.3nm,0.9s,baz=57,slow=7.2,SNR=5.3
T25A Trinidad 112.37 42 P **PKiKP 02 30 32.2 +0.9**
baz=304
121A Cookes Peak, D 112.44 48 P **PKiKP 02 30 32.8 +1.4**
baz=300
C40A Isle Royale Na 113.50 26 P **PKiKP 02 30 32.8 0.0**
baz=321
VNA2 Neumayer--Watz 113.53 195 PKiKP **PKiKP 02 30 32.3 +0.1**
VNA3 Neumayer Olymp 113.88 194 PKiKP **PKiKP 02 30 32.7 -0.1**
VNA1 Neumayer--Stat 113.93 195 PKiKP **PKiKP 02 30 33.2 +0.4**
E39A Mellen 114.06 27 P **PKiKP 02 30 32.9 -1.0**
baz=319
F39A Loretta 114.24 28 P **PKiKP 02 30 33.4 -0.8**
baz=319
E40A Wakefield 114.30 27 P PKPdf 02 30 35.1 +0.7
baz=320
D41A Chassel 114.41 26 P **PKiKP 02 30 34.1 -0.5**
baz=321
F40A Park Falls 114.60 28 P **PKiKP 02 30 34.9 -0.1**
baz=320
G40A Rib Lake 115.06 28 P **PKPdf 02 30 35.9 +0.1**
baz=319
F41A Three Lakes 115.20 27 P **PKiKP 02 30 35.9 -0.3**
baz=320
H40A Chili 115.46 29 P **PKPdf 02 30 36.7 +0.1**
baz=319
E43A Lone Tree Farm 115.62 25 P **PKiKP 02 30 36.4 -0.5**
baz=323
F44A Big Bay de Noc 116.18 25 P **PKiKP 02 30 37.6 -0.4**
baz=322
I42A Draeger Farm, 116.70 28 P **PKPdf 02 30 38.6 -0.4**
baz=320
E46A Sault Ste Mari 116.72 24 P **PKPdf 02 30 38.9 -0.1**
baz=325
L40A Anamosa 116.95 31 P **PKPdf 02 30 39.4 -0.2**
baz=317
TX31 Lajitas Ar. Si 117.11 49 *e*PKPdf **PKiKP 02 30 41.2 +0.8**
TXAR Lajitas Array 117.11 49 PKP **PKiKP 02 30 41.0 +0.6**
comp=Z,1.4nm,0.9s,baz=163,slow=1.3,SNR=8.7
TXAR PP **PP 02 31 48.8 -1.2**
comp=Z,0.9nm,1.0s,baz=262,slow=2.7,SNR=2.6
M41A Milan 117.80 31 P **PKPdf 02 30 41.0 -0.3**
baz=318
G47A Hillman 117.88 24 P **PKiKP 02 30 41.6 +0.3**
baz=326
E50A Wahnapitae 118.02 21 P **PKiKP 02 30 41.9 +0.4**
baz=329
D52A ZEK Kipawa Sen 118.33 19 P **PKPdf 02 30 42.0 -0.1**
baz=332
E51A G1948 Merrick 118.36 20 P **PKiKP 02 30 42.7 +0.5**
baz=330
M43A Waltham Townsh 118.55 30 P **PKiKP 02 30 43.0 +0.3**
baz=319
K46A Dorr 119.07 27 P **PKiKP 02 30 44.1 +0.4**
baz=323
JCT Junction City 119.30 46 P **PKiKP 02 30 45.4 +0.8**
baz=305
K47A Vermontville 119.44 27 P **PKPdf 02 30 43.5 -0.9**
baz=324
CCM Cathedral Cave 119.84 34 *e*PKPdf **PKiKP 02 30 45.7 +0.4**
CCM Cathedral Cave 119.84 34 *e*PKIKP **PKiKP 02 30 45.7 +0.4**

CCM	Cathedral Cave	119.84	34	P	PKPdf	02 30 45.2	-0.1
	baz=316						
G53A	Haliburton	119.88	21	P	PKiKP	02 30 45.3	+0.1
	baz=331						
U40A	Yellville	120.11	37	P	PKiKP	02 30 46.0	+0.1
	baz=314						
I51A	Listowel	120.14	23	P	PKiKP	02 30 45.8	0.0
	baz=328						
L48A	N Adams	120.27	27	P	PKiKP	02 30 46.1	0.0
	baz=324						
PLVO	Plevna	120.48	20	P	PKiKP	02 30 46.6	+0.2
	baz=333						
TOA0	Torodi Ar. Sit	120.68	292	*e*PKPdf	PKPdf	02 30 47.1	-0.3
TOA0	Torodi Ar. Sit	120.68	292	P	PKPdf	02 30 47.0	-0.5
TORD	Torodi Ar. Bea	120.68	292	PKP	PKPdf	02 30 46.0	-1.5
	comp=Z,7.1nm,0.9s,baz=53,slow=1.6,SNR=35						
TORD				PKKPbc	PKKPab	02 40 53.6	-0.3
	comp=Z,2.3nm,1.1s,baz=310,slow=5.6,SNR=5.0						
833A	Chaparral WMA,	120.81	48	P	PKiKP	02 30 48.5	+1.0
	baz=304						
Q45A	Warren Harvey,	120.87	31	P	PKiKP	02 30 48.0	+0.7
	baz=319						
MIAR	Mount Ida	120.90	39	P	PKiKP	02 30 49.1	+1.6
	baz=312						
H56A	Elgin	121.14	19	P	PKiKP	02 30 49.4	+1.7
	baz=333						
S44A	Carbondale	121.18	33	P	PKiKP	02 30 49.6	+1.6
	baz=318						
R45A	Skylar, Fairfi	121.25	32	P	PKiKP	02 30 48.6	+0.5
	baz=319						
P47A	Martinsville	121.36	30	P	PKPdf	02 30 47.9	-0.2
	baz=321						
O50A	Cable	122.08	27	P	PKiKP	02 30 50.1	+0.4
	baz=324						
R47A	Wooly Knot Far	122.15	31	P	PKiKP	02 30 50.1	+0.3
	baz=320						
M53A	Wt Miller and	122.28	24	P	PKiKP	02 30 50.0	0.0
	baz=328						
ACSO	Alum Creek Sta	122.30	27	P	PKPdf	02 30 49.4	-0.5
	baz=325						
WCI	Wyandotte Cave	122.32	31	P	PKiKP	02 30 50.5	+0.3
	baz=321						
HKT	Hockley	122.38	44	*e*PKPdf	PKiKP	02 30 50.8	+0.4
HKT	Hockley	122.38	44	*e*PKIKP	PKiKP	02 30 50.8	+0.4
N52A	McGinn's Farm,	122.38	25	P	PKiKP	02 30 50.4	+0.1
	baz=326						
T46A	Princeton	122.39	33	P	PKiKP	02 30 50.6	+0.2
	baz=319						
R48A	Northridge Ran	122.40	30	P	PKiKP	02 30 50.9	+0.5
	baz=321						
P50A	Jamestown	122.43	28	P	PKPdf	02 30 49.9	-0.3
	baz=324						
O51A	Pataskala	122.53	27	P	PKPdf	02 30 50.0	-0.4
	baz=325						
LNIG	Linares	122.63	51	*e*PKPdf	PKPdf	02 30 50.8	-0.2
U46A	Springville	122.75	33	P	PKiKP	02 30 51.2	+0.1
	baz=318						
T47A	Sharon Grove	122.85	32	P	PKPdf	02 30 51.2	+0.1
	baz=319						
P51A	Williamsport	122.87	27	P	PKPdf	02 30 50.9	-0.1
	baz=324						
S48A	Wiedeman Farm,	122.88	31	P	PKiKP	02 30 51.4	+0.1
	baz=321						
O52A	Adamsville	122.89	26	P	PKiKP	02 30 51.4	+0.1
	baz=326						
O53A	New Philadelph	123.05	25	P	PKPdf	02 30 51.4	0.0
	baz=327						
WVT	Waverly	123.11	33	*e*PKPdf	PKPdf	02 30 51.4	-0.2
WVT	Waverly	123.11	33	*e*PKIKP	PKPdf	02 30 51.4	-0.2
WVT	Waverly	123.11	33	P	PKPdf	02 30 51.6	0.0
	baz=318						
T48A	Bowling Green	123.13	32	P	PKPdf	02 30 51.7	+0.1
	baz=320						
U47A	Clarksville	123.16	33	P	PKiKP	02 30 52.1	+0.2
	baz=319						
S49A	Springfield	123.17	30	P	PKPdf	02 30 51.4	-0.3
	baz=322						
V46A	Holladay	123.19	34	P	PKPdf	02 30 51.6	-0.2
	baz=318						
M56A	Emporium	123.21	22	P	PKiKP	02 30 52.8	+0.9
	baz=330						
R50A	Paris	123.24	29	P	PKPdf	02 30 51.5	-0.3
	baz=323						
BINY	Binghamton	123.36	20	P	PKPdf	02 30 52.1	+0.1
	baz=333						
OXF	Oxford	123.40	36	P	PKiKP	02 30 52.4	0.0
	baz=316						
V47A	Nunnelly	123.50	33	P	PKiKP	02 30 52.9	+0.3
	baz=318						
U48A	Cassie Pea, Po	123.51	32	P	PKPdf	02 30 52.0	-0.3
	baz=320						
W46A	Michie	123.54	35	P	PKPdf	02 30 52.1	-0.3
	baz=317						
T49A	Edmonton	123.57	31	P	PKPdf	02 30 52.1	-0.3
	baz=321						
R51A	Hillsboro	123.58	29	P	PKPdf	02 30 52.0	-0.5
	baz=323						
P53A	Whipple	123.61	26	P	PKPdf	02 30 52.4	0.0
	baz=326						
Q52A	Bidwell	123.65	27	P	PKPdf	02 30 52.4	-0.2
	baz=325						
S50A	Richmond	123.68	30	P	PKPdf	02 30 52.3	-0.3
	baz=322						
PLAL	Pickwick Lake	123.82	34	*e*PKPdf	PKPdf	02 30 52.6	-0.4
U49A	Red Boiling Sp	123.90	32	P	PKiKP	02 30 53.5	+0.1
	baz=320						
T50A	Nancy	123.98	31	P	PKiKP	02 30 53.5	-0.1
	baz=322						
S51A	Beattyville	124.11	29	P	PKPdf	02 30 53.4	-0.1
	baz=323						
W48A	Pulaski	124.33	34	P	PKPdf	02 30 54.0	+0.1
	baz=319						
U50A	Jamestown	124.45	31	P	PKPdf	02 30 54.1	-0.1
	baz=321						
Q55A	Buckhannon	124.58	25	P	PKPdf	02 30 54.6	+0.2
	baz=327						
N59A	State Game Lan	124.58	21	P	PKiKP	02 30 54.7	0.0
	baz=333						
P56A	Dayton Farm, R	124.66	24	P	PKPdf	02 30 54.4	0.0
	baz=329						
X48A	Hartselle	124.78	34	P	PKPdf	02 30 54.8	-0.1
	baz=318						
V50A	Pikeville	124.90	32	P	PKPdf	02 30 55.1	0.0
	baz=321						
X49A	Woodville	125.13	34	P	PKPdf	02 30 55.3	-0.2
	baz=319						
T54A	Tazewell	125.52	28	P	PKPdf	02 30 56.4	+0.1
	baz=325						
V52A	Sevierville	125.53	30	P	PKiKP	02 30 56.9	+0.2
	baz=322						
R57A	Stanardsville	125.81	25	P	PKiKP	02 30 57.8	+0.7
	baz=329						
LRAL	Lakeview Retre	125.85	35	P	PKiKP	02 30 57.4	0.0
	baz=318						
W52A	Murphy	125.95	31	P	PKiKP	02 30 58.0	+0.4
	baz=322						
Z49A	Columbiana	126.00	35	P	PKPdf	02 30 57.4	+0.2
	baz=318						
V53A	Saluda	126.05	30	P	PKiKP	02 30 58.6	+0.8
	baz=323						
S57A	Dark Hollow, R	126.09	25	P	PKiKP	02 30 59.2	+1.5
	baz=328						
W53A	Cullowhee	126.28	31	P	PKiKP	02 30 58.7	+0.4
	baz=323						
149A	Jones	126.29	36	P	PKPdf	02 30 57.6	-0.1
	baz=318						
Z50A	Ashland	126.30	34	P	PKPdf	02 30 57.9	+0.1
	baz=319						
X52A	Dahlonega	126.35	32	P	PKiKP	02 30 58.4	+0.1
	baz=322						
249A	Camden	126.56	36	P	PKiKP	02 30 58.7	0.0
	baz=317						
150A	Eclectic	126.72	35	P	PKPdf	02 30 58.7	+0.1
	baz=318						
X53A	Estanollee	126.73	31	P	PKiKP	02 30 59.6	+0.5
	baz=322						
Y52A	Lilburn	126.83	32	P	PKiKP	02 30 59.4	+0.1
	baz=321						
T58A	Grand View Acr	126.96	25	P	PKiKP	02 31 00.5	+1.1
	baz=328						
250A	Grady	127.05	36	P	PKiKP	02 30 59.8	0.0
	baz=318						
X54A	Belton	127.16	30	P	PKiKP	02 31 00.1	+0.2
	baz=323						
Z52A	Williamson	127.17	33	P	PKiKP	02 31 00.1	+0.2
	baz=320						
152A	Waverly Hall	127.40	34	P	PKiKP	02 31 00.6	+0.1
	baz=320						
251A	Midway	127.45	35	P	PKiKP	02 31 00.4	-0.1
	baz=319						
Y54A	Tignall	127.55	31	P	PKiKP	02 31 01.8	+1.1
	baz=322						
W57A	Gilead	127.81	28	P	PKiKP	02 31 02.7	+1.6
	baz=326						
252A	Lumpkin	127.90	34	P	PKiKP	02 31 02.3	+0.8
	baz=319						
Z54A	Sparta	127.96	32	P	PKiKP	02 31 02.3	+0.8
	baz=322						
253A	Americus	128.18	34	P	PKiKP	02 31 03.8	+1.8
	baz=320						
DBIC	Dimbokro	128.97	288	PKP	PKPdf	02 31 03.5	+0.2
	comp=Z,15nm,1.1s,baz=27,slow=4.1,SNR=5.7						
SDDR	Presa de Saban	145.52	31	*e*PKPdf	PKPab	02 31 34.4	+0.5
PLCA	Paso Flores	146.32	156	PKPbc	PKPbc	02 31 35.7	0.0
	comp=Z,34nm,0.9s,baz=247,slow=2.8,SNR=42						
PLCA	Paso Flores	146.32	156	*e*PKPdf	PKPab	02 31 36.7	+0.3
PLCA	Paso Flores	146.32	156	*e*PKP2	PKPab	02 31 36.7	+0.3
BCIP	Isla Barro Col	146.91	54	*e*PKPdf	PKPbc	02 31 37.6	-0.4
BCIP	Isla Barro Col	146.91	54	*e*PKP2	PKPbc	02 31 37.6	-0.4
EMPR	Esperanza - Ma	148.16	25	*e*PKPbc	PKPbc	02 31 41.2	0.0
OBIP	Obispado Ponce	148.52	25	*e*PKPbc	PKPbc	02 31 42.1	-0.1
HUMP	Col San Antoni	148.74	24	*e*PKPbc	PKPbc	02 31 43.5	+0.8
DBBC	Dabeiba	151.07	54	*e*P	PKPab	02 31 58.9	+2.6
TRQA	Tornquist	151.59	165	*e*PKPbc	PKPbc	02 31 49.2	0.0
TRQA	Tornquist	151.59	165	*e*PKIKP	PKPbc	02 31 49.2	0.0
ZARC	Zaragoza, Cauc	151.83	51	*e*P	PKPdf	02 31 45.0	+1.0
PLMC	San Jos del P	152.23	57	*e*P	PKiKP	02 31 52.3	+0.6
OCAC	Ocana	152.49	48	*e*P	PKiKP	02 31 53.0	+0.6
OTAV	Otavalo	152.58	68	*e*P	PKiKP	02 31 55.4	+2.5
PTBC	PUERTO BERRIO	152.73	52	*e*P	PKPbc	02 31 51.6	-0.8
GUY2C	Guyana, Caldas	152.80	56	*e*P	PKPbc	02 31 52.3	-0.9
BBAC	Balboa, Cauca	152.88	64	*e*P	PKiKP	02 31 55.0	+1.7
BRRC	Barranca, Sant	152.94	50	*e*P	PKPbc	02 31 52.3	-0.6
NORC	Norcasia	153.00	54	*e*P	PKPbc	02 31 51.6	-1.5
CAPV	Capacho	153.47	47	*e*P	PKiKP	02 31 55.0	+0.5
BARC	Barichara	153.68	50	*e*P	PKiKP	02 31 56.3	+1.4
ROSC	El Rosal	153.87	55	PKP	PKPdf	02 31 48.8	+1.3
	comp=Z,2.6nm,0.4s,baz=129,slow=4.3,SNR=7.3						
SDV	Santo Domingo	153.90	43	*e*PKPdf	PKPdf	02 31 47.2	0.0
SDV				*e*PKPbc	pPKPdf	02 31 55.0	-0.5
SDV	Santo Domingo	153.90	43	*e*P	PKiKP	02 31 55.7	+0.4
RUSC	La Rusia	154.20	51	*e*P	PKPbc	02 31 56.3	0.0
CHIC	Chingaza	154.46	55	*e*P	PKPdf	02 31 50.3	+2.0
FLOC	Florencia	154.49	63	*e*P	PKPdf	02 31 49.0	+1.1
PB11	IPOC Station P	161.67	122	*e*PKPdf	PKPdf	02 31 57.4	+0.8
PB11				*e*PKPab	PKPab	02 32 42.6	+0.9
MNMC	Minye Minye	162.00	120	*e*PKPdf	PKPdf	02 31 57.7	+0.6
MNMC				*e*PKPab	PKPab	02 32 44.7	+1.3
GO01	Chusmiza	162.10	122	*e*PKPdf	PKPdf	02 31 58.0	+0.5
RCBR	Riachuelo	162.31	284	*e*P	PKPdf	02 32 06.0	+8.7
NBPA	Parau_RN	163.43	286	*e*P	PKPdf	02 32 07.6	+9.3
CPUP	Villa Florida	163.91	166	PKP	PKPdf	02 31 58.5	+0.1
	comp=Z,8.0nm,1.1s,baz=324,slow=2.6,SNR=7.9						
CPUP				PKPab	PKPab	02 32 50.2	-0.8
	comp=Z,7.0nm,1.0s,baz=244,slow=5.8,SNR=4.9						
LPAZ	La Paz	164.37	113	PKP	PKPdf	02 32 00.5	+0.6
	comp=Z,6.5nm,1.1s,baz=42,slow=0.5,SNR=14						
LPAZ				PKPab	PKPab	02 32 55.7	+1.5
	comp=Z,4.9nm,1.0s,baz=256,slow=4.7,SNR=5.5						
LPAZ	La Paz	164.37	113	*e*PKPdf	PKPdf	02 32 00.3	+0.4
LPAZ				*e*PKPab	PKPab	02 32 55.5	+1.3
LPAZ	La Paz	164.37	113	*e*PKIKP	PKPdf	02 32 00.3	+0.4
CAM01	Campos-RJ	164.38	223	*e*P	PKPdf	02 32 10.4	+11
PTGB	Pitanga	165.99	184	*e*P	PKPdf	02 32 11.7	+11
SPB	Sao Paulo	166.05	202	*e*P	PKPdf	02 32 12.0	+12
RCLB	Rio Claro- Sao	167.15	204	*e*P	PKPdf	02 32 12.9	+12
PTGA	Pitinga	168.01	35	*e*PKPab	PKPab	02 33 09.4	0.0
MCI9	Montes Claros	169.22	235	*e*P	PKPdf	02 32 14.2	+11
BDFB	Brasilia	172.99	225	PKP	PKPdf	02 32 05.3	+0.5
	comp=Z,3.3nm,0.8s,baz=143,slow=5.1,SNR=4.8						
BDFB				PKPab	PKPab	02 33 31.5	-0.1
	comp=Z,0.9nm,0.4s,baz=157,slow=7.7,SNR=2.0						

IDC 08 02:25:25.4±3.1, 19°.70S×179°.15E, h0km, mb3.9/3, mb1 4.3/3, mb1mx3.8/19, mbtmp3.9/3, Error ellipse: s-maj=337.9km s-min=35.5km az=161.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.06	262	P	P	02 33 20.9	+1.6
	2.3nm,0.4s,baz=91,slow=8.6,SNR=15						
ASAR	Alice Springs	42.10	256	P	P	02 33 17.8	-1.8
	0.6nm,0.5s,baz=94,slow=7.4,SNR=8.5						
TXAR	Lajitas Array	88.90	58	P	P	02 38 22.2	0.0
	0.2nm,0.6s,baz=217,slow=5.7,SNR=3.6						

WEL 08 02:29:01.4±1.4, 46°.S±8°.×16°.6E±°, h12km, M3.9/10, ML4.1/7, MLv3.9/10, Error ellipse: s-maj=0.0km s-min=0.0km az=59.2, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	1.20	38	P	Pn	02 29 20.1	-3.9
DCZ				S	Sb	02 29 33.9	-5.6
APZ	The Paps	1.35	108	P	Pb	02 29 26.5	-0.2
APZ				S	Sb	02 29 43.6	-0.5
WHZ	Wether Hill Ro	1.38	68	P	Pn	02 29 25.5	-1.0
WHZ				S	Sn	02 29 44.0	-0.6
MLZ	Mavora Lakes	1.75	54	P	Pn	02 29 31.4	-0.3
MLZ				S	Sb	02 29 55.0	-0.5
SYZ	Scrubby Hill	2.09	94	P	Pn	02 29 36.8	+0.5
SYZ				S	Sn	02 30 02.0	-0.3
MSZ	Milford Sound	2.16	37	P	Pn	02 29 35.7	-1.5
TUZ	Tuapeka	2.49	80	P	Pn	02 29 42.3	+0.6
TUZ				S	Sn	02 30 13.4	+1.4
EAZ	Earnscleugh	2.53	63	P	Pn	02 29 42.6	+0.3
EAZ				S	Sn	02 30 14.5	+1.4
WKZ	Wanaka	2.59	53	P	Pn	02 29 43.5	+0.4
HHSZ	Highcliff Hill	3.16	82	P	Pn	02 29 50.7	-0.4

NNC 08 02:33:17.8±4.2, 37°.40N×71°.43E, h0km, mb3.8, mpv3.5, 3C-2D, Error ellipse: s-maj=34.1km s-min=26.6km az=159.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.74	23	⇓Pn	Pn	02 34 44.8	+0.4
	1.4nm,0.4s						
AAK				⇑Sn	Sn	02 35 52.1	+1.1
	9.4nm,0.8s						
KK31	Karatay Array	5.74	353	⇓Pn	Pn	02 34 44.4	+0.1
	4.3nm,0.4s,baz=181,slow=13,SNR=62						
KK31				⇑Sn	Sn	02 35 52.1	+1.2
	7.4nm,0.7s,baz=171,slow=23,SNR=11						
AB31	Akbulak array	14.48	329	⇑Pn	Pn	02 36 42.2	-1.7
	0.5nm,0.5s,baz=145,slow=13,SNR=12						

*SKO **08** 02:52:49.9, 41°.48N×21°.00E, h15km, M1.1, ML1.8*
*TIR **08** 02:52:49.1, 41°.45N×20°.94E, h7km, Md2.6/4*
ISC 08 02:52:50.0±1.1, 41°.45N±0°.03×20°.93E±0°.03, h4km±11km, n13, σ0°.74/24, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	Krusevo	0.26	109	*i* Pg	Pg	02 52 55.2	+0.3
KRUS				*i* Sg	Sg	02 52 59.3	+1.0
KRUS				*e*Lg	Lg	02 52 59.4	
	comp=E,67nm,0.3s						
KRUS				*e*Lg	Lg	02 52 59.4	
	comp=N,43nm,0.2s						
OHR	Ohrid	0.35	196	*i* Pg	Pg	02 52 57.7	+0.9
OHR				*i* Sg	Sb	02 53 04.1	-0.6
OHR				*e*Lg	Lg	02 53 04.2	
	comp=N,74nm,0.3s						
OHR				*e*Lg	Lg	02 53 05.9	
	comp=E,91nm,0.5s						
PHP	Peshkopia	0.43	303	*i* PG	Pg	02 52 58.3	0.0
PHP				*i* SG	Sg	02 53 05.0	+1.0
BIA	Bitola	0.53	145	*i* Pg	Pb	02 53 01.1	-0.6
BIA				*i* Sg	Sb	02 53 09.7	0.0
BIA				*e*Lg	Lg	02 53 10.1	
	comp=E,20nm,0.3s						
BIA				*e*Lg	Lg	02 53 10.6	
	comp=N,15nm,0.4s						
SKO	Skopje	0.65	36	*e*Pg	Pg	02 53 02.0	-0.4
SKO				*i* Sg	Sg	02 53 10.6	-0.1
SKO				*e*Lg	Lg	02 53 11.0	
	comp=E,1.6nm,0.3s						
SKO				*e*Lg	Lg	02 53 12.3	
	comp=N,4.0nm,0.3s						
FNA	Florina	0.75	153	*i* Pg	Pg	02 53 04.1	-0.3
FNA				*i* Sg	Sb	02 53 15.7	-0.5
FNA	Florina	0.75	153	*i* PG	Sb	02 53 15.3	-0.8
FNA				*i* SG	Pg	02 53 04.0	-0.3
TIR	Tirane	0.81	263	*i* Pg	Pn	02 53 07.5	-0.5
PUK	Puka	0.97	308	*i* PG	Pg	02 53 08.6	-0.1
PUK				*i* SG	Sg	02 53 21.0	-0.2
STIP	Stip	0.97	75	*i* Pg	Pn	02 53 11.2	+0.8
STIP				*i* Sg	Sn	02 53 26.6	+2.0
STIP				*e*Lg	Lg	02 53 27.4	
	comp=E,4.1nm,0.2s						
STIP				*e*Lg	Lg	02 53 28.5	
	comp=N,3.2nm,0.3s						
BCI	Bajram Curri	1.12	325	*i* PG	Pn	02 53 12.5	+0.1
BCI				*i* SG	Sn	02 53 37.9	+10
VAY	Valandovo	1.24	95	*i* Pg	Pg	02 53 12.9	-0.8
VAY				*i* Sg	Sg	02 53 29.2	-0.7
VAY				*e*Lg	Lg	02 53 29.9	
	comp=E,7.0nm,0.4s						
VAY				*e*Lg	Lg	02 53 30.6	
	comp=N,8.6nm,0.5s						
KNT	Kendrikon	1.51	100	*i* Pg	Pn	02 53 17.7	-0.1
KNT				*i* Sg	Sb	02 53 37.8	-0.3

*ZUR **08** 03:06:05.0, 47°.78N×7°.86E, h22km, MLh2.6/38, Error ellipse: s-maj=1.1km s-min=0.6km az=301.0*
*STR **08** 03:06:04.7±0.3, 48°.N±2°.×±°., h21km±2km, M2.5/6, MLv2.5/6*
*LDG **08** 03:06:04.7±0.1, 47°.78N×7°.89E, h20km, Md2.9/3, Ml2.5/31, Error ellipse: s-maj=1.3km s-min=1.0km az=16.0*
*BGR **08** 03:06:05.3±0.3, 47°.78N×7°.89E, h20km, ML2.4/16, Error ellipse: s-maj=2.2km s-min=2.2km az=72.0*
*PRU **08** 03:06:14.1±0.0, 47°.85N×8°.39E, h21km*
ISC 08 03:06:03.0±0.7, 47°.78N±0°.01×7°.84E±0°.01, h14km, n147, σ1.9 90/229, 31C-19D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENDD	Endenburg	0.10	229	⇑*i* Pg	Pb	03 06 09.5	+3.3
ENDD				*i* Sg	Sb	03 06 12.4	+4.1
KIZ	Kirchzarten	0.19	16	Pg	Pb	03 06 10.3	+2.1
KIZ	Kirchzarten	0.19	16	⇑Pg	Pb	03 06 10.1	+1.8
KIZ				Sg	Sb	03 06 13.9	+2.1
KIZ	Kirchzarten	0.19	16	⇓*i* Pg	Pb	03 06 10.4	+2.1
KIZ				*i* Sg	Sb	03 06 13.8	+2.1
FBB	Freiburg im Br	0.22	2	⇑*i* Pg	Pb	03 06 10.9	+2.0
FBB				Sg	Sb	03 06 14.9	+2.1
FBB				SmS		03 06 16.5	
SBEG	Bettingen Gewe	0.24	210	⇑Pg	Pb	03 06 11.0	+1.9
SBEG				Sg	Sb	03 06 15.1	+1.9
BERGE	Lenzkirch (DE)	0.24	67	⇑Pg	Pb	03 06 11.0	+1.7
BERGE				Sg	Sb	03 06 14.9	+1.4
BERGE	Lenzkirch (DE)	0.24	67	⇑*i* Pg	Pb	03 06 10.9	+1.7
BERGE				Sg	Sb	03 06 14.9	+1.4
SKAF	Kaiseraugst-Fr	0.25	199	⇑Pg	Pb	03 06 11.2	+1.8
SKAF				Sg	Sb	03 06 15.3	+1.7
OTER2	Otterbach 2 (B	0.26	219	⇑Pg	Pb	03 06 10.9	+1.5
OTER2				Sg	Sb	03 06 14.8	+1.1
OTER1	Otterbach 1 (B	0.26	219	⇑Pg	Pb	03 06 11.4	+1.9
SAUR	Augst-Roemermu	0.26	199	⇑Pg	Pb	03 06 11.3	+1.8
SMZW	Muttenz-Waldha	0.27	210	⇑Pg	Pb	03 06 11.4	+1.9
METMA	Mettma DE	0.28	103	⇑Pg	Pb	03 06 11.3	+1.4
METMA				Sg	Sb	03 06 15.4	+0.9
SFRA	Frenkendorf	0.29	198	⇓Pg	Pb	03 06 11.8	+1.9
MATTE	Schuetzenmatte	0.29	219	Pg	Pb	03 06 11.9	+1.8
SBIS2	Binningen	0.29	217	⇑Pg	Pb	03 06 12.1	+2.1
ROTHE	Rothenfluh	0.31	170	⇓Pg	Pb	03 06 12.0	+1.7
SULZ	Cheisacher	0.31	144	⇓Pg	Pb	03 06 11.8	+1.5
SULZ	Cheisacher	0.31	144	⇓⇓*i* Pg	Pb	03 06 11.8	+1.5
SULZ				*i* Sg	Sb	03 06 16.3	+1.1
ACHB	Acheberg	0.34	124	⇑Pg	Pb	03 06 12.2	+1.4
ACHB				Sg	Sb	03 06 17.0	+0.9
EMMET	Emmethof	0.36	161	⇓Pg	Pb	03 06 12.8	+1.6
SLE	Schleitheim	0.44	91	⇑Pg	Pb	03 06 13.8	+1.2
SLE				Sg	Sb	03 06 19.8	+0.7
SLE	Schleitheim	0.44	91	⇑*i* Pg	Pb	03 06 13.8	+1.2
SLE				PmP		03 06 14.5	
SLE				*i* Sg	Sb	03 06 19.7	+0.7
SLE				SmS		03 06 20.5	
BALST	Balsthal	0.45	193	⇓Pg	Pb	03 06 14.4	+1.6
BALST	Balsthal	0.45	193	⇓*e*Pg	Pb	03 06 14.4	+1.6
BALST				PmP		03 06 15.1	
BALST				Sg	Sb	03 06 20.9	+1.5
MOF	Molkenrain	0.48	279	Pg	Pb	03 06 15.3	+1.9
MOF				Sg	Sb	03 06 22.8	+2.4
MOF	Molkenrain	0.48	279	⇑*e*Pg	Pb	03 06 15.3	+1.9
FLACH	Flaach	0.53	113	⇑Pg	Pb	03 06 15.5	+1.4
DAGMA	Lutertal, Dagm	0.56	168	⇓Pg	Pb	03 06 16.1	+1.6
DAGMA				Sg	Sb	03 06 23.9	+1.4
BOURR	Bourrignon	0.57	227	⇑Pn	Pb	03 06 16.5	+1.8
BOURR	Bourrignon	0.57	227	⇑*e*Pg	Pb	03 06 16.5	+1.8
TRULL	Truellikon	0.58	103	⇑Pg	Pb	03 06 16.3	+1.4
STIEG	Stiegenhof Hun	0.61	117	⇑Pn	Pb	03 06 16.9	+1.3
EWZT2	Wettswil, ZR	0.62	135	⇓Pn	Pb	03 06 17.1	+1.5
ECH	Echery	0.64	314	Pg	Pb	03 06 17.3	+1.4
ECH	Echery	0.64	314	*e*Pn	Pb	03 06 17.4	+1.4
ECH				*e*Sg	Sb	03 06 26.4	+1.7
BFO	Black Forest	0.64	30	⇓Pn	Pb	03 06 17.0	+1.0
BFO	Black Forest	0.64	30	⇓*e*Pn	Pb	03 06 17.0	+1.0
B

baz=122
PAGF eSn Sn 03 06 49.5 -2.3
baz=120
PAGF eSg Sg 03 06 57.0 +1.9
26nm,0.2s,baz=118
CABF La Chapelle 1.67 226 ePn Pn 03 06 31.5 -0.4
CABF La Chapelle 1.67 226 ePg Pg 03 06 36.4 +1.3
CABF eSn Sn 03 06 51.2 -2.0
CABF eSg Sg 03 06 59.2 +2.4
9.4nm,0.2s
VDL Val di Lei 1.70 139 ⇓Pn Pn 03 06 33.9 +1.5
DIX Grande Dixence 1.72 190 Pn Pn 03 06 33.2 +0.4
MMK Mattmark 1.73 177 Pn Pn 03 06 33.6 +0.7
SFTF Sexfontaines 1.93 284 ePn Pn 03 06 35.5 +0.1
baz=106
SFTF Sexfontaines 1.93 284 ePg Pg 03 06 41.4 +1.3
baz=104
SFTF eSn Sn 03 06 57.1 -2.4
SFTF eSg Sg 03 07 07.0 +1.9
17nm,0.2s
MEZF Maizieres J'vi 2.00 292 ePn Pn 03 06 36.2 -0.2
MEZF Maizieres J'vi 2.00 292 ePg Pg 03 06 42.9 +1.4
baz=113
MEZF eSn Sn 03 06 58.4 -2.9
MEZF eSg Sg 03 07 09.3 +1.8
8.6nm,0.3s
MUGIO Muggio 2.03 156 Pn Pn 03 06 37.7 +0.8
FETA Feichten 2.10 110 ePg Pg 03 06 45.1 +1.8
1.6nm,0.3s
FETA Sg Sg 03 07 11.2 +0.7
2.7nm,0.2s
ABH Alteburg 2.12 355 Pn Pn 03 06 38.6 +0.6
WLF Walferdange 2.20 330 eSg Sg 03 07 15.2 +1.6
MOTA Moosalm 2.25 100 ePn Pn 03 06 40.9 +0.9
0.2nm,0.1s
MOTA eSg Sg 03 07 14.1 -1.2
2.8nm,0.1s
RSL Roselend 2.25 202 Pn Pn 03 06 39.8 -0.2
FUR Furstenfeldbru 2.34 79 eSg Sg 03 07 19.7 +1.5
SQTA Sankt Quirin 2.35 102 ePn Pn 03 06 43.4 +2.1
0.6nm,0.1s
SQTA eSg Sg 03 07 17.5 -0.9
1.8nm,0.1s
LPL La Plagne 2.39 199 ePn Pn 03 06 40.7 -1.2
LPL La Plagne 2.39 199 ePg Pg 03 06 50.0 +1.2
LPL eSn Sn 03 07 07.6 -3.5
LPL eSg Sg 03 07 20.5 +0.8
3.8nm,0.4s
LPG La Plagne 2.40 199 ePn Pn 03 06 41.5 -0.7
LPG La Plagne 2.40 199 ePg Pg 03 06 50.7 +1.6
LPG eSg Sg 03 07 21.4 +1.2
2.7nm,0.3s
TNS Taunus Mts 2.48 9 eSn Sn 03 07 13.3 +0.2
TNS eSg Sg 03 07 24.2 +1.5
WATA Walderalm 2.57 99 ePn Pn 03 06 46.2 +1.9
0.9nm,0.1s
GRC2 Grafenberg Arr 2.60 64 eSg Sg 03 07 26.1 -0.3
WTTA Wattenberg 2.62 100 ePn Pn 03 06 46.9 +1.8
0.8nm,0.1s
WTTA eSn Sn 03 07 17.0 +0.2
0.5nm,0.1s
GRC3 Grafenberg Arr 2.73 65 eSg Sg 03 07 30.5 -0.3
LOR Lormes 2.75 261 ePn Pn 03 06 46.7 0.0
LOR Lormes 2.75 261 ePg Pg 03 06 56.6 +0.9
LOR eSg Sg 03 07 31.6 +0.3
5.9nm,0.2s
GRF Grafenberg Arr 2.94 48 eSg Sg 03 07 37.4 -0.1
SMF Signal de Mont 2.95 249 ePn Pn 03 06 49.6 +0.1
SMF Signal de Mont 2.95 249 ePg Pg 03 07 00.7 +1.1
SMF eSn Sn 03 07 21.3 -3.4
SMF eSg Sg 03 07 38.8 +0.9
5.7nm,0.3s
SSF Saint Saulge 3.03 258 ePn Pn 03 06 50.7 +0.2
SSF Saint Saulge 3.03 258 ePg Pg 03 07 02.1 +1.0
SSF eSg Sg 03 07 41.2 +0.9
2.3nm,0.2s
GIVF Givet 3.06 321 ePn Pn 03 06 49.6 -1.4
GIVF eSn Sn 03 07 23.0 -4.4
GIVF eSg Sg 03 07 41.2 -0.1
5.1nm,0.3s
MBDF Montbardon 3.14 194 eSn Sn 03 07 26.7 -2.8
0.8nm,0.2s
ORIF Oris-en-Rattie 3.17 206 ePg Pg 03 07 03.8 +0.1
ORIF eSn Sn 03 07 26.0 -4.1
ORIF eSg Sg 03 07 45.3 +0.6
2.7nm,0.2s
AVF Avril sur Loir 3.21 254 ePn Pn 03 06 52.8 -0.2
AVF Avril sur Loir 3.21 254 ePg Pg 03 07 05.6 +1.1
AVF eSg Sg 03 07 46.6 +0.5
1.2nm,0.3s
BAIF Baives 3.31 315 ePn Pn 03 06 53.2 -1.2
BAIF Baives 3.31 315 eP Pn 03 06 56.2 +1.8
BAIF eSn Sn 03 07 29.6 -3.9
BAIF eSg Sg 03 07 49.6 +0.3
2.3nm,0.3s
RJOB Jochberg 3.34 89 ePn Pn 03 06 56.2 +1.4
ABTA Abfaltersbach 3.34 106 i Pn Pn 03 06 57.3 +2.4
0.2nm,0.1s
ABTA i Sn Sn 03 07 36.3 +1.8
0.4nm,0.1s
ROTZ Rotzenmuhle 3.51 54 eSg Sg 03 07 54.3 -1.2
HYF Humbligny 3.56 264 ePn Pn 03 06 57.5 -0.4
HYF Humbligny 3.56 264 ePg Pg 03 07 11.1 -0.1
HYF eSg Sg 03 07 57.6 +0.2
MANZ Manzenberg 3.58 50 eSg Sg 03 07 56.6 -1.3
WET Wettzell 3.62 66 eSg Sg 03 07 57.9 -1.2
BGF Bois d'Agland 3.62 252 ePn Pn 03 06 57.9 -0.7
BGF Bois d'Agland 3.62 252 ePg Pg 03 07 12.3 0.0
BGF eSg Sg 03 07 59.8 +0.6
5.7nm,0.4s
VIVF Saint-Julien-l 3.66 218 ePn Pn 03 06 57.7 -1.5
VIVF Saint-Julien-l 3.66 218 ePg Pg 03 07 13.8 +0.8
VIVF eSn Sn 03 07 38.7 -3.4
VIVF eSg Sg 03 07 59.3 -1.1
2.6nm,0.2s
KBA Koelnbreinsper 3.80 99 i Pn Pn 03 07 03.1 +1.9
0.6nm,0.1s,SNR=4.8
KBA i Sn Sn 03 07 44.6 -1.2
0.7nm,0.1s
NKC Novy Kostel 3.90 49 eSG Sg 03 08 06.9 -1.3
comp=Z,7.9nm,0.4s
SBF Sospel 3.92 184 ePn Pn 03 07 01.9 -1.0
SBF eSn Sn 03 07 44.5 -4.3
1.8nm,0.3s
KHC Kasperske Hory 4.05 68 ePN Pn 03 07 09.8 +5.2
KHC eSG Sg 03 08 11.3 -1.7
comp=Z,2.6nm,0.3s
GEC2 GERESS Array S 4.05 73 eSn Sn 03 07 49.7 -2.2
SMRF Simiane la Rot 4.12 203 ePn Pn 03 07 04.7 -0.8
SMRF eSn Sn 03 07 49.6 -3.9
0.9nm,0.3s
TCF Toulx Ste Croi 4.13 251 ePn Pn 03 07 05.1 -0.6
TCF eSn Sn 03 07 50.4 -3.4
0.8nm,0.3s
TCF eSg Sg 03 08 14.5 -1.1
0.9nm,0.2s
FRF La Foret Royal 4.30 192 ePn Pn 03 07 06.9 -1.1
FRF eSn Sn 03 07 53.7 -4.2
0.4nm,0.2s
MOA Molln 4.33 87 i Pn Pn 03 07 09.0 +0.6
0.4nm,0.1s
LMR La Mourre 4.54 192 ePn Pn 03 07 09.6 -1.7
LMR eSn Sn 03 07 59.1 -4.7
0.4nm,0.2s
LASF Ste Croix 4.63 218 ePn Pn 03 07 10.9 -1.6
LASF eSn Sn 03 08 02.2 -3.9
LASF eSg Sg 03 08 31.6 0.0
1.3nm,0.4s
LDF La Druitiere 5.39 282 ePn Pn 03 07 22.2 -0.7
LDF eSg Sg 03 08 55.8 -0.1
0.8nm,0.2s
CONA Conrad Observa 5.40 85 i Pn Pn 03 07 23.2 +0.1
0.5nm,0.3s
CONA eSn Sn 03 08 22.1 -3.0
1.0nm,0.3s
MFF Saint Martin d 5.57 261 ePn Pn 03 07 24.9 -0.5
MFF eSn Sn 03 08 23.8 -5.4
0.3nm,0.2s
FLN La Foliniere 5.65 283 ePn Pn 03 07 25.4 -1.0
baz=101
KRUC Moravsky 5.84 74 ePN Pn 03 07 28.7 -0.4
KRUC eSN Sn 03 08 31.2 -4.5
KRUC e 03 09 08.9
GRR Gorron 5.86 279 ePn Pn 03 07 28.2 -1.2
GRR eSn Sn 03 08 29.7 -6.7
0.5nm,0.2s
VRAC Vranov 6.01 72 ePN Pn 03 07 31.0 -0.5
VRAC eSN Sn 03 08 35.9 -4.1
VRAC e 03 09 13.2
SGMF Saint Gilles 6.99 278 ePn Pn 03 07 44.6 -0.3
QUIF Quistinic 7.41 275 ePn Pn 03 07 49.3 -1.3
QUIF eSn Sn 03 09 07.3 -7.1
0.1nm,0.1s
ROSF Rostrenen 7.47 278 ePn Pn 03 07 49.8 -1.7
ROSF eSn Sn 03 09 08.5 -7.5
0.9nm,0.3s

*DDA **08** 03:08:30.9, 38.°74N×43.°19E, h7km±4km, ML2.8*
*ISK **08** 03:08:30.4, 38.°74N×43.°21E, h8km, ML2.3/7*
*ISCJB **08** 03:08:31.3±0.4, 38.°76N±0.°02×43.°18E±0.°04, h9km±6km,*
Error ellipse: s-maj=5.6km s-min=4.2km az=6.2
ISC 08 03:08:30.8±1.1, 38.°74N±0.°03×43.°20E±0.°03, h16km±12km, n17, σ0.°44/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.20**	**135**		PG	**Pb**	**03 08 36.4**	**+0.1**
VANB					SG	**Sb**	**03 08 40.7**	**+0.7**
TVAN	**Van**	**0.26**	**143**	*i* P	PG	**Pg**	**03 08 36.5**	**-0.2**
TVAN				*i* S	SG	**Sb**	**03 08 41.1**	**-0.6**
VMUR	**Van-Muradiye**	**0.38**	**49**	*i* P	PG	**Pb**	**03 08 39.2**	**-0.1**
VMUR				*i* S	SG	**Sb**	**03 08 45.3**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.38**	**280**	*i* P	PG	**Pb**	**03 08 39.1**	**-0.3**
ADCV					IAML_P			
comp=Z,1μm,0.1s								
AKDM	**Akdamar-Van**	**0.45**	**203**		PG	**Pg**	**03 08 39.8**	**-0.1**
AKDM					SG	**Sb**	**03 08 46.7**	**-0.3**
MLAZ	**Malazgirt-MUS**	**0.65**	**308**		PG	**Pg**	**03 08 43.4**	**-0.2**
CLDR	**Caldiran**	**0.69**	**54**		PG	**Pg**	**03 08 44.1**	**-0.2**
CLDR					SG	**Sb**	**03 08 54.1**	**+0.1**
TUTA	**Tutak**	**0.73**	**335**	*i* P		**Pb**	**03 08 45.5**	**+0.2**
AGRB	**Hanur-Agry**	**0.85**	**349**		PG	**Pb**	**03 08 46.9**	**-0.5**
AGRB					SG	**Sg**	**03 08 59.3**	**+0.6**
BLIS	**Bitlis-Merkez**	**0.91**	**249**	*i* P		**Pg**	**03 08 48.6**	**0.0**
BLIS				*i* S		**Sg**	**03 09 00.9**	**+0.3**
BLIS					IAML_P			
comp=Z,1μm,0.2s								
BASK	**Baskale_VAN**	**0.93**	**137**	*i* P		**Pg**	**03 08 48.8**	**-0.1**
EATA	**Eleskirt**	**1.25**	**334**	*i* P		**Pb**	**03 08 54.4**	**+0.2**
EATA					IAML_P			
comp=Z,869nm,0.2s								
SRTM	**Siirt_Merkez**	**1.25**	**234**	*i* P		**Pg**	**03 08 55.9**	**+0.9**
CUKT	**Cukurca**	**1.52**	**168**		PN	**Pb**	**03 08 58.6**	**-0.2**
CUKT	**Cukurca**	**1.52**	**168**	*i* P		**Pg**	**03 09 00.2**	**0.0**
CUKT					IAML_P			
comp=Z,739nm,0.3s								
KOPR	**Koprukoy-ERZUR**	**1.63**	**320**		PN	**Pb**	**03 09 00.0**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.68**	**250**		PN	**Pb**	**03 09 00.8**	**-0.7**

*ISCJB **08** 03:11:47.0±2.0, 14.°54N±0.°09×92.°92W±0.°07, h21km±12km,*
Error ellipse: s-maj=17.2km s-min=6.7km az=31.3
*MEX **08** 03:11:50.8±0.6, 14.°60N×92.°87W, h14km±20km, MD3.8*
*GCG **08** 03:11:52.3±0.5, 15.°11N×92.°53W, h36km±999km, MD4.0*
ISC 08 03:11:47.9±2.9, 14.°6N±0.°1×92.°89W±0.°09, h23km±18km, n7, σ1.°35/13, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
THIG		**0.70**	**60**	*eP*		**Pb**	**03 12 01.6**	**+0.2**
THIG				*eS*		**Sb**	**03 12 10.5**	**-0.1**
PCIG		**1.18**	**345**	*eP*		**Pn**	**03 12 09.1**	**+0.1**
PCIG				*eS*		**Sn**	**03 12 22.0**	**-2.4**
STG3	**Santiaguito 3,**	**1.29**	**83**	*eP*		**Pn**	**03 12 10.6**	**-0.1**
CCIG	**Comitan**	**1.86**	**23**	*eP*		**Pb**	**03 12 20.7**	**-0.6**
CCIG				*eS*		**Sn**	**03 12 43.7**	**+2.2**
FUG	**Fuego 3**	**1.99**	**93**	*eP*		**Pn**	**03 12 20.8**	**+0.4**
FUG				*eS*		**Sn**	**03 12 43.5**	**-1.2**
PCG	**Pacaya**	**2.22**	**94**	*eP*		**Pn**	**03 12 24.8**	**+1.2**
PCG				*eS*		**Sn**	**03 12 49.5**	**-0.9**
CMIG	**Matias Romero**	**3.16**	**323**	*eP*		**Pn**	**03 12 37.4**	**+1.1**
CMIG				*i* S		**Sn**	**03 13 13.2**	**-0.1**

*ISCJB **08** 03:18:25.6±0.2, 8.°03S±0.°03×32.°12E±0.°04, h10km,*
mb4.9/125, MS4.1/10, Error ellipse: s-maj=5.4km
s-min=4.4km az=162.7
*IDC **08** 03:18:25.4±0.5, 8.°05S×32.°16E, h0km, mb4.6/21,*
mb1 4.8/26, mb1mx4.7/34, mbtmp4.7/26, ML4.0/3, Error
ellipse: s-maj=16.4km s-min=11.4km az=100.0
*MOS **08** 03:18:26.0±0.8, 8.°02S×32.°13E, h13km, mb5.0/61, Error*
ellipse: s-maj=10.6km s-min=4.6km az=89.3
*BJI **08** 03:18:26.6±0.0, 8.°00S×32.°20E, h10km, mb5.0/27,*
mB4.9/16, Ms4.9/9, Ms7 4.6/6
*NEIC **08** 03:18:27.6±1.3, 8.°05S×32.°19E, h10km±2km, mb4.9/57,*
Error ellipse: s-maj=13.3km s-min=12.0km az=146.0
ISC 08 03:18:27.0±0.3, 8.°03S±0.°04×32.°15E±0.°05, h10km, n326, σ1.°77/347, mb4.9/128, MS4.0/12, 33C-10D, Tanzania

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KOND	**Kondoa**	**4.77**	**50**	*i* P		**Pn**	**03 19 39.1**	**-0.1**
KOND				*i* S		**Sn**	**03 20 29.5**	**-5.1**
KIBA	**Kibaya**	**5.16**	**59**	*i* P		**Pn**	**03 19 44.6**	**-0.1**
KIBA				*i* S		**Sn**	**03 20 39.7**	**-4.7**
SINGM	**SINGM**	**7.20**	**160**	*i* S		**Pn**	**03 20 14.2**	**+1.7**
MBAR	**Mbarara**	**7.51**	**349**	Pn		**Pn**	**03 20 17.7**	**+0.8**
301nm,0.3s,baz=336,slow=16,SNR=274								
MBAR					Sn	**Sn**	**03 21 36.2**	**-6.1**
552nm,0.3s,baz=142,slow=20,SNR=8.1								
MBAR					Lg	Lg	03 22 19.7	
764nm,0.3s,baz=78,slow=19,SNR=7.0								
MBAR	**Mbarara**	**7.51**	**349**	*e*Pn		**Pn**	**03 20 18.1**	**+1.2**
MBAR				*e*Sn		**Sn**	**03 21 36.2**	**-6.1**
MBAR				*e*Lg		Lg	03 22 19.7	
MBAR	**Mbarara**	**7.51**	**349**	*e*P		**Pn**	**03 20 18.1**	**+1.2**
MBAR				*e*SN		**Sn**	**03 21 36.2**	**-6.1**
MBAR	**Mbarara**	**7.51**	**349⇑**	*e*P		**Pn**	**03 20 18.7**	**+1.8**
MBAR			⇑	*e*S		**Sn**	**03 21 36.6**	**-5.8**
NAI	**Nairobi**	**8.16**	**35**	*e*Pn		**Pn**	**03 20 26.2**	**+0.3**
LSZ	**Lusaka**	**8.18**	**208**	*i* P		**Pn**	**03 20 23.7**	**-2.3**
LSZ	**Lusaka**	**8.18**	**208**	Pn		**Pn**	**03 20 25.6**	**-0.4**
43nm,0.3s,baz=15,slow=13,SNR=182								
LSZ					Sn	**Sn**	**03 21 52.6**	**-6.0**
166nm,0.3s,baz=77,slow=3.4,SNR=16								
LSZ					Lg	Lg	03 22 40.0	
134nm,0.3s,baz=132,slow=20,SNR=3.9								
LSZ	**Lusaka**	**8.18**	**208**	*e*Pn		**Pn**	**03 20 26.0**	**0.0**
LSZ				*e*Sn		**Sn**	**03 21 52.6**	**-6.0**
LSZ				*e*Lg		Lg	03 22 40.0	
LSZ	**Lusaka**	**8.18**	**208**	*e*P		**Pn**	**03 20 26.0**	**0.0**
LSZ				*e*			03 21 52.6	
LSZ	**Lusaka**	**8.18**	**208**	*i* P		**Pn**	**03 20 23.7**	**-2.3**
KMBO	**Kilima Mbogo**	**8.54**	**37**	*i* P		**Pn**	**03 20 31.3**	**+0.2**
KMBO	**Kilima Mbogo**	**8.54**	**37**	Pn		**Pn**	**03 20 30.9**	**-0.1**
76nm,0.3s,baz=208,slow=15,SNR=686								
KMBO					Sn	**Sn**	**03 21 59.6**	**-8.1**
298nm,0.3s,baz=115,slow=22,SNR=20								
KMBO					Lg	Lg	03 22 57.3	
39nm,0.3s,baz=267,slow=19,SNR=3.2								
KMBO	**Kilima Mbogo**	**8.54**	**37**	*e*P		**Pn**	**03 20 31.0**	**-0.1**
KMBO	**Kilima Mbogo**	**8.54**	**37**	*i* P		**Pn**	**03 20 31.3**	**+0.2**
BLWY	**Bulawayo**	**12.52**	**196**	*i* P		**Pn**	**03 21 22.8**	**-2.7**
BLWY	**Bulawayo**	**12.52**	**196**	*i* P		**Pn**	**03 21 22.8**	**-2.7**
MATP	**Matopo**	**12.82**	**196**	*i* P		**Pn**	**03 21 27.1**	**-2.5**
MATP	**Matopo**	**12.82**	**196**	Pn		**Pn**	**03 21 26.8**	**-2.7**
22nm,0.3s,baz=13,slow=15,SNR=233								
MATP					Sn	Sn	03 23 42.2	-10
26nm,0.3s,baz=73,slow=24,SNR=8.1								
MATP					Lg	Lg	03 25 05.5	
21nm,0.3s,baz=266,slow=19,SNR=4.9								
MATP	**Matopo**	**12.82**	**196**	*i* P		**Pn**	**03 21 27.1**	**-2.5**
MSNA	**Messina**	**14.38**	**188**	*i* P		**Pn**	**03 21 49.2**	**-1.6**
MSNA	**Messina**	**14.38**	**188**	*i* P		**Pn**	**03 21 49.2**	**-1.6**
TSUM	**Tsumeb**	**17.97**	**230**	*i* P		**Pn**	**03 22 34.0**	**-3.3**
TSUM	**Tsumeb**	**17.97**	**230**	P		**Pn**	**03 22 35.8**	**-1.5**
10.0nm,0.3s,baz=40,slow=12,SNR=218								
TSUM					S	Sn	03 25 43.5	-14
1.4nm,0.3s,baz=252,slow=11,SNR=7.1								
TSUM					Lg	Lg	03 27 57.0	
1.8nm,0.3s,baz=257,slow=11,SNR=3.2								
TSUM	**Tsumeb**	**17.97**	**230**	*e*Pn		**Pn**	**03 22 36.1**	**-1.3**
91nm,0.8s								
TSUM	**Tsumeb**	**17.97**	**230**	*i* P		**Pn**	**03 22 34.0**	**-3.3**
OPO	**Ambohidratompo**	**17.98**	**127**	P		**P**	**03 22 38.2**	**+0.1**
1.1nm,0.3s,baz=276,slow=13,SNR=10.0								
OPO	**Ambohidratompo**	**17.98**	**127**	*e*Pn		**P**	**03 22 38.2**	**+0.1**
LBTB	**Lobatse**	**18.01**	**200**	P		**Pn**	**03 22 36.1**	**-1.6**
3.0nm,0.3s,baz=15,slow=14,SNR=34								
LBTB					S	Sn	03 25 44.1	-15
10.0nm,0.3s,baz=281,slow=20,SNR=7.4								
LBTB					Lg	Lg	03 27 47.4	
2.0nm,0.3s,baz=292,slow=18,SNR=2.4								
LBTB	**Lobatse**	**18.01**	**200**	*e*Pn		**Pn**	**03 22 35.6**	**-2.1**
48nm,0.6s								
LBTB				*e*Sn		Sn	03 25 44.1	-15
LBTB	**Lobatse**	**18.01**	**200**	*e*P		**Pn**	**03 22 35.6**	**-2.1**
LBTB				pmax		pmax		
comp=Z,48nm,0.6s								
ABPO	**Ambohimpanom**	**18.26**	**128**	*e*Pn		**P**	**03 22 41.4**	**+0.3**
comp=Z,47nm,1.0s								
ABPO	**Ambohimpanom**	**18.26**	**128**	*e*P		**P**	**03 22 41.4**	**+0.3**
ABPO				pmax		pmax		
comp=Z,47nm,1.0s								
BOSA	**Boshof**	**21.48**	**197**	*i* P		**P**	**03 23 15.9**	**-0.1**
BOSA	**Boshof**	**21.48**	**197**	P		**P**	**03 23 15.0**	**-1.0**
comp=Z,13nm,0.5s,baz=18,slow=11,SNR=39								
BOSA					S	S	03 27 03.6	-11
comp=Z,42nm,1.0s,baz=145,slow=4.3,SNR=4.1								
BOSA					Lg	Lg	03 29 30.8	
comp=Z,46nm,0.8s,baz=285,slow=20,SNR=2.0								
BOSA	**Boshof**	**21.48**	**197**	*e*P		**P**	**03 23 16.2**	**+0.1**
comp=Z,56nm,1.0s								
BOSA	**Boshof**	**21.48**	**197**	*e*P		**P**	**03 23 16.2**	**+0.1**
BOSA				pmax		pmax		
comp=Z,56nm,1.0s								
BOSA	**Boshof**	**21.48**	**197**	*i* P		**P**	**03 23 15.9**	**-0.1**
TOA0	**Torodi Ar. Sit**	**36.85**	**305**	*e*P		**P**	**03 25 36.4**	**+0.5**
comp=Z,19nm,0.9s								
TORD	**Torodi Ar. Bea**	**36.85**	**305**	P		**P**	**03 25 35.1**	**-0.7**
comp=Z,6.8nm,1.0s,baz=111,slow=7.4,SNR=20								
TORD					PP	**PP**	**03 27 02.5**	**+2.6**
comp=Z,5.2nm,1.1s,baz=129,slow=8.2,SNR=2.8								
TOA1	**Torodi Ar. Sit**	**36.85**	**305**	*e*P		**P**	**03 25 35.1**	**-0.8**
TOA1				*e*PP		**PP**	**03 27 02.5**	**+2.6**
TOA1				*e*			03 28 08.9	
DBIC	**Dimbokro**	**39.69**	**291**	P		**P**	**03 25 59.0**	**-0.8**
comp=Z,3.1nm,0.6s,baz=127,slow=6.6,SNR=5.6								
DBIC	**Dimbokro**	**39.69**	**291**	*e*P		**P**	**03 25 59.0**	**-0.8**
TAM	**Tamanrasset**	**40.22**	**320**	*e*P		**P**	**03 26 05.7**	**+1.4**
comp=Z,6.6nm,1.1s								
TAM	**Tamanrasset**	**40.22**	**320**	*e*P		**P**	**03 26 05.7**	**+1.4**
TAM				pmax		pmax		
comp=Z,7.0nm,1.1s								
BR101	**Keskin Array S**	**47.53**	**2**	*e*P		**P**	**03 27 02.6**	**-0.2**
BR131	**Keskin Array S**	**47.53**	**2**	*e*P		**P**	**03 27 03.4**	**+0.6**
comp=Z,15nm,1.6s								
BR131	**Keskin Array S**	**47.53**	**2**	*e*P		**P**	**03 27 03.4**	**+0.6**
BR131				pmax		pmax		
comp=Z,15nm,1.6s								
BRTR	**Keskin Array B**	**47.53**	**2**	P		**P**	**03 27 02.6**	**-0.2**
comp=Z,1.4nm,0.9s,baz=188,slow=7.5,SNR=11								
BRTR	**Keskin Array B**	**47.53**	**2**	*ce*P		**P**	**03 27 03.7**	**+0.9**
BRTR				pmax		pmax		
comp=Z,1.0nm,0.9s								
AGG	**Agios Georgios**	**47.69**	**350**	*e*P		**P**	**03 27 05.0**	**+1.1**
comp=Z,15nm,0.9s								
AGG	**Agios Georgios**	**47.69**	**350**	*e*P		**P**	**03 27 05.0**	**+1.1**
AGG				pmax		pmax		
comp=Z,15nm,0.9s								
KEST	**Kesra**	**48.54**	**335**	P		**P**	**03 27 10.8**	**+0.2**
comp=Z,7.8nm,1.0s,baz=294,slow=3.0,SNR=7.1								
KEST	**Kesra**	**48.54**	**335**	*e*P		**P**	**03 27 12.1**	**+1.5**
comp=Z,17nm,0.9s								
ALN	**Alexandroupoli**	**49.01**	**354**	*e*P		**P**	**03 27 14.2**	**+0.2**
comp=Z,12nm,0.9s								
ALN	**Alexandroupoli**	**49.01**	**354**	*e*P		**P**	**03 27 14.2**	**+0.2**
ALN				pmax		pmax		
comp=Z,13nm,0.9s								
GNI	**Garni**	**49.33**	**13**	*ce*P		**P**	**03 27 15.2**	**-1.5**
GNI				pmax		pmax		
comp=Z,73nm,1.3s								
FNA	**Florina**	**49.58**	**349**	*e*P		**P**	**03 27 19.4**	**+1.0**
comp=Z,25nm,1.2s								
FNA	**Florina**	**49.58**	**349**	*e*P		**P**	**03 27 19.4**	**+1.0**
FNA				pmax		pmax		
comp=Z,25nm,1.2s								
VAY	**Valandovo**	**49.89**	**351**	*i* P		**P**	**03 27 21.6**	**+0.9**
KRUS	**Krusevo**	**50.17**	**349**	*i* P		**P**	**03 27 23.9**	**+1.0**
STIP	**Stip**	**50.32**	**350**	*i* P		**P**	**03 27 25.7**	**+1.7**
VTS	**Vitosha**	**51.06**	**352**	*e*P		**P**	**03 27 29.9**	**+0.2**
comp=Z,3.6nm,0.8s								
VTS	**Vitosha**	**51.06**	**352**	*e*P		**P**	**03 27 29.9**	**+0.2**
VTS				pmax		pmax		
comp=Z,4.0nm,0.8s								
ZEI	**Tsey**	**51.70**	**11**	*e*P		**P**	**03 27 35.5**	**+0.9**
ZEI				pmax		pmax		
comp=Z,15nm,0.9s								
NEY	**Neytrino**	**51.94**	**10**	*i* P		**P**	**03 27 36.6**	**+0.3**
KBZ	**Khabaz**	**52.43**	**10**	P		**P**	**03 27 40.3**	**+0.6**
comp=Z,1.4nm,0.8s,baz=234,slow=3.7,SNR=3.6								
KBZ					PcP	**PcP**	**03 28 51.4**	**+1.0**
comp=Z,1.5nm,0.6s,baz=193,slow=5.8,SNR=5.3								
KBZ	**Khabaz**	**52.43**	**10**	*e*P		**P**	**03 27 40.3**	**+0.6**
KBZ				*e*PcP		**PcP**	**03 28 51.4**	**+1.0**
GROC	**Groznyy**	**52.48**	**13**	*e*P		**P**	**03 27 40.0**	**-0.1**
GROC				*e*			03 29 39.3	
GROC				pmax		pmax		
comp=Z,36nm,1.2s								
KIV	**Kislovodsk**	**52.62**	**10**	*e*P		**P**	**03 27 40.2**	**-1.1**
KIV				pmax		pmax		
comp=Z,12nm,1.0s								
KIV				MLR		MLR		
comp=Z,238nm,16.0s								
HERR	**Herculane**	**53.39**	**351⇑**	*i* P		**P**	**03 27 47.8**	**+0.9**
MLR	**Muntele Rosu**	**53.57**	**355**	*e*P		**P**	**03 27 49.3**	**+1.0**
comp=Z,13nm,1.2s								
MLR	**Muntele Rosu**	**53.57**	**355⇑**	*i* P		**P**	**03 27 49.4**	**+1.1**
MLR	**Muntele Rosu**	**53.57**	**355**	*e*P		**P**	**03 27 49.3**	**+1.0**
MLR				pmax		pmax		
comp=Z,13nm,1.2s								
GOF	**Gofitskoye**	**53.75**	**10⇑**	*e*P		**P**	**03 27 50.2**	**+0.7**
GOF				pmax		pmax		
comp=Z,43nm,1.3s								
LOT	**Lotru**	**53.77**	**353⇓**	*i* P		**P**	**03 27 50.4**	**+0.7**
PLOR	**Plostina**	**53.86**	**355⇑**	*i* P		**P**	**03 27 51.1**	**+0.7**
PLOR	**Plostina**	**53.86**	**355**	P		**P**	**03 27 51.1**	**+0.7**
VRI	**Vrincioaia**	**53.87**	**355⇓**	*i* P		**P**	**03 27 52.1**	**+1.7**
BZS	**Buzias**	**54.23**	**351⇑**	*i* P		**P**	**03 27 54.1**	**+1.1**
BLY	**Banja Luka**	**54.24**	**347**	*e*P		**P**	**03 27 54.0**	**+0.9**
comp=Z,19nm,1.6s								
SIRR	**Siria**	**54.86**	**351⇑**	*i* P		**P**	**03 27 58.9**	**+1.3**
BIZ	**Bicaz**	**54.99**	**355⇑**	*i* P		**P**	**03 27 59.7**	**+1.2**
DRGR		**55.22**	**352**	*i* P		**P**	**03 28 01.4**	**+1.1**
DRGR		**55.22**	**352**	P		**P**	**03 28 01.3**	**+1.0**
BOJS	**Bojanci**	**55.41**	**346**	*i* P		**P**	**03 28 02.1**	**+0.6**
BURAR	**Bucov

VYHS **Vyhne** 57.49 350 *eP* **P** **03 28 17.1 +0.8**
CONA **Conrad Observa** 57.55 347 *i* P **P** **03 28 18.1 +1.3**
comp=Z,11nm,1.0s,SNR=7.9
BNI **Bardonecchia** 57.60 339 *eP* **P** **03 28 18.9 +1.6**
comp=Z,7.8nm,0.9s
BNI **Bardonecchia** 57.60 339 *eP* **P** **03 28 18.9 +1.6**
BNI pmax pmax
comp=Z,8.0nm,0.9s
MODS **Modra-Piesok** 57.67 348 *eP* **P** **03 28 17.3 -0.3**
MODS pmax pmax
comp=Z,11nm,1.1s
MODS **Modra-Piesok** 57.67 348 *eP* **P** **03 28 17.3 -0.3**
FUORN **Ofenpass-Fuorn** 57.80 342 *eP* **P** **03 28 20.3 +1.4**
comp=Z,5.5nm,0.9s
MOA **Molln** 57.84 346 *i* P **P** **03 28 20.0 +1.1**
comp=Z,12nm,0.8s,SNR=9.0
TUE **Stuetta** 57.95 342 *eP* **P** **03 28 20.7 +0.9**
comp=Z,15nm,0.8s
LPL **La Plagne** 57.98 339 *eP* **P** **03 28 20.2 +0.1**
LPL pmax pmax
comp=Z,7.0nm,0.9s
WTTA **Wattenberg** 57.99 344 *eP* **P** **03 28 21.4 +1.3**
comp=Z,20nm,1.1s,SNR=9.4
LANS **Liptovska Anna** 58.02 350 *eP* **P** **03 28 21.9 +1.8**
LANS **Liptovska Anna** 58.02 350 *eP* **P** **03 28 21.9 +1.8**
FETA **Feichten** 58.03 343 *i* P **P** **03 28 20.7 +0.4**
comp=Z,8.1nm,1.0s
ESDC **Sonseca Array** 58.05 328 P **P** **03 28 21.3 +0.8**
comp=Z,7.5nm,0.9s,baz=139,slow=7.2,SNR=32
ESDC PcP **PcP** **03 29 13.6 +1.3**
comp=Z,1.7nm,0.8s,baz=151,slow=2.9,SNR=2.3
ESDC **Sonseca Array** 58.05 328 *eP* **P** **03 28 21.3 +0.8**
ESDC *e*PcP **PcP** **03 29 13.6 +1.3**
ESLA **Sonseca Array** 58.05 328 *eP* **P** **03 28 22.0 +1.5**
comp=Z,17nm,0.8s
JAVC **Velka Javorina** 58.06 349 *eP* **P** **03 28 21.3 +0.9**
SQTA **Sankt Quirin** 58.07 343 *eP* **P** **03 28 21.8 +1.3**
comp=Z,10nm,0.9s,SNR=6.0
WATA **Walderalm** 58.07 344 *eP* **P** **03 28 21.5 +0.9**
comp=Z,6.3nm,0.9s
PAB **San Pablo** 58.16 327 *eP* **P** **03 28 22.3 +1.0**
comp=Z,8.3nm,0.8s
PAB **San Pablo** 58.16 327 *eP* **P** **03 28 22.3 +1.0**
PAB pmax pmax
comp=Z,8.0nm,0.8s
MOTA **Moosalm** 58.21 343 *eP* **P** **03 28 22.3 +0.7**
comp=Z,10.0nm,0.8s,SNR=7.7
RETA **Reutte** 58.44 343 *i* P **P** **03 28 23.8 +0.7**
comp=Z,15nm,1.2s
KRUC **Moravsky** 58.51 348 *eP* **P** **03 28 23.5 +0.1**
DAVA **Damuels** 58.52 342 *i* P **P** **03 28 24.6 +0.8**
comp=Z,14nm,0.8s,SNR=9.3
SENIN **Lac Senin/Sane** 58.52 340 *eP* **P** **03 28 24.9 +1.0**
comp=Z,18nm,1.5s
KIEV **Kiev** 58.54 358 *i* P **P** **03 28 23.4 -0.2**
KIEV pmax pmax
comp=Z,8.0nm,1.2s
AKASG **Malin Array Be** 58.55 358 P **P** **03 28 23.2 -0.5**
comp=Z,2.9nm,0.8s,baz=183,slow=6.3,SNR=12
AKBB **Malin Array Si** 58.55 358 *eP* **P** **03 28 23.9 +0.2**
comp=Z,8.0nm,0.9s
AKBB **Malin Array Si** 58.55 358 *eP* **P** **03 28 23.9 +0.2**
AKBB pmax pmax
comp=Z,8.0nm,0.9s
SSB **Saint Sauveur** 58.58 337 *eP* **P** **03 28 25.2 +1.1**
comp=Z,12nm,1.1s
SSB **Saint Sauveur** 58.58 337 *eP* **P** **03 28 25.2 +1.1**
SSB pmax pmax
comp=Z,12nm,1.1s
VRAC **Vranov** 58.70 348 ‖ *i* P **P** **03 28 25.0 +0.2**
VRAC **Vranov** 58.70 348 *eP* **P** **03 28 24.8 0.0**
GEC2 **GERESS Array S** 58.91 346 *eP* **P** **03 28 27.3 +0.9**
comp=Z,14nm,1.1s
GERES **GERESS Array B** 58.91 346 P **P** **03 28 26.7 +0.4**
comp=Z,6.0nm,0.9s,baz=156,slow=7.0,SNR=46
OKC **Ostrava-Krasne** 58.91 349 ⇑ *i* P **P** **03 28 26.8 +0.6**
OKC **Ostrava-Krasne** 58.91 349 ⇑ *i* P **P** **03 28 26.8 +0.6**
TREC **Trest** 58.92 347 ⇑ *i* P **P** **03 28 26.6 +0.2**
TREC MLR MLR
comp=Z,100nm,20.4s
TREC **Trest** 58.92 347 ⇑ *i* P **P** **03 28 26.6 +0.2**
TREC AMS AMS 03 56 40.0
comp=Z,100nm,20.4s
MORC **Moravsky Berou** 58.96 349 *eP* **P** **03 28 27.3 +0.7**
comp=Z,12nm,0.8s
MORC **Moravsky Berou** 58.96 349 ⇑ *i* P **P** **03 28 27.5 +0.8**
MORC **Moravsky Berou** 58.96 349 *eP* **P** **03 28 27.1 +0.4**
OJC **Ojcow** 59.00 351 *eP* **P** **03 28 27.0 +0.2**
comp=Z,6.1nm,1.0s
OJC **Ojcow** 59.00 351 *eP* **P** **03 28 27.0 +0.2**
OJC pmax pmax
comp=Z,6.0nm,1.0s
KHC **Kasperske Hory** 59.21 346 *eP* **P** **03 28 28.9 +0.6**
comp=Z,5.5nm,0.9s
KHC **Kasperske Hory** 59.21 346 *eP* **P** **03 28 28.9 +0.6**
KHC pmax pmax
comp=Z,6.0nm,0.9s
KHC **Kasperske Hory** 59.21 346 ⇑ *i* P **P** **03 28 28.8 +0.5**
KHC AMS AMS 03 55 50.0
comp=Z,100nm,21.0s
CAF **Calviac** 59.27 336 *eP* **P** **03 28 30.0 +1.2**
CAF pmax pmax
comp=Z,20nm,1.4s
VSR **Storozhevoye** 59.32 5 *eP* **P** **03 28 31.7 +2.7**
VSR pmax pmax
comp=Z,2.0nm,0.4s
VRH **Novokhopyorsk** 59.57 7 *eP* **P** **03 28 30.7 0.0**
VRH pmax pmax
comp=Z,10.0nm,1.0s
GOPC **GO Pecny, Ondr** 59.66 347 ⇑ AMS AMS 03 56 40.0
comp=Z,100nm,18.4s
DPC **Dobruska-Polom** 59.75 348 ⇑ *i* P **P** **03 28 32.4 +0.3**
DPC MLR MLR
comp=Z,100nm,22.7s
DPC **Dobruska-Polom** 59.75 348 ⇑ *i* P **P** **03 28 32.4 +0.3**
DPC AMS AMS 03 57 20.0
comp=Z,100nm,22.7s
PRU **Pruhonice** 59.78 347 *eP* **P** **03 28 32.0 -0.3**
PRU **Pruhonice** 59.78 347 ⇑ *eP* **P** **03 28 32.0 -0.3**
LFF **La Frestale** 59.83 335 *eP* **P** **03 28 34.0 +1.3**
LFF pmax pmax
comp=Z,17nm,0.8s
BFO **Black Forest** 59.92 342 *ceP* **P** **03 28 35.8 +2.5**
UPC **Upice** 59.96 348 *eP* **P** **03 28 33.7 +0.2**
UPC MLR MLR
comp=Z,100nm,21.1s
UPC **Upice** 59.96 348 ⇑ *eP* **P** **03 28 33.7 +0.2**
UPC AMS AMS 03 57 20.0
comp=Z,100nm,21.1s
CHVC **Chvalec** 60.03 348 ⇑ *i* P **P** **03 28 34.3 +0.3**
GRFO **Grafenberg** 60.32 345 *eP* **P** **03 28 36.9 +0.9**
comp=Z,17nm,1.1s
GRFO **Grafenberg** 60.32 345 *eP* **P** **03 28 36.9 +0.9**
GRFO pmax pmax
comp=Z,17nm,1.1s
GRA1 **Grafenberg Arr** 60.32 345 *eP* **P** **03 28 36.8 +0.8**
comp=Z,16nm,1.0s
GRF **Grafenberg Arr** 60.32 345 *eP* **P** **03 28 36.8 +0.8**
GRF pmax pmax
comp=Z,16nm,1.0s
SSF **Saint Saulge** 60.47 338 *eP* **P** **03 28 37.6 +0.6**
SSF pmax pmax
comp=Z,14nm,1.4s
NKC **Novy Kostel** 60.50 346 *eP* **P** **03 28 38.3 +1.1**
NKC MLR MLR
comp=Z,100nm,15.0s
NKC **Novy Kostel** 60.50 346 ⇑ *eP* **P** **03 28 38.3 +1.1**
NKC AMS AMS 03 56 40.0
comp=Z,100nm,15.0s
LPSR **Galich'ya Gora** 60.67 5 *eP* **P** **03 28 36.4 -1.9**
LPSR pmax pmax
comp=Z,8.0nm,0.6s
BRG **Berggiesshubel** 60.75 347 *i* P **P** **03 28 38.9 +0.1**
comp=Z,6.2nm,1.1s
BRG **Berggiesshubel** 60.75 347 *i* P **P** **03 28 38.9 +0.1**
BRG pmax pmax
comp=Z,6.0nm,1.1s
PYUN **Piuthan** 60.83 52 *eP* **P** **03 28 39.4 -0.7**
comp=Z,42nm,1.0s
SYO **Syowa Base** 61.10 177 ‖ *eP* **P** **03 28 41.2 +0.2**
KOLN **Koldanda** 61.15 52 *eP* **P** **03 28 41.3 -1.0**
comp=Z,68nm,1.3s
CLL **Collm** 61.37 346 *eP* **P** **03 28 43.4 +0.4**
comp=Z,13nm,1.4s
CLL **Collm** 61.37 346 *i* P **P** **03 28 43.0 0.0**
comp=Z,10.0nm,1.3s
CLL *i* 03 29 01.2
CLL L L 03 57 00.0
comp=Z,100nm,19.3s
CLL **Collm** 61.37 346 *eP* **P** **03 28 43.4 +0.4**
CLL pmax pmax
comp=Z,13nm,1.4s
MFF **Saint Martin d** 61.53 335 *eP* **P** **03 28 45.4 +1.1**
MFF pmax pmax
comp=Z,34nm,1.6s
DANN **Dangsing** 61.55 52 *eP* **P** **03 28 44.5 -0.6**
comp=Z,34nm,0.9s
KK31 **Karatay Array** 61.69 31 *eP* **P** **03 28 46.4 +0.9**
comp=Z,10nm,0.8s
KK31 **Karatay Array** 61.69 31 *eP* **P** **03 28 46.4 +0.9**
KK31 pmax pmax
comp=Z,10.0nm,0.8s
KKAR **Karatay Array** 61.69 31 *eP* **P** **03 28 46.4 +0.9**
comp=Z,10nm,0.8s
KKAR **Karatay Array** 61.69 31 *eP* **P** **03 28 46.4 +0.9**
KKAR pmax pmax
comp=Z,10.0nm,0.8s
ABKAR **Akbulak array** 62.02 20 *eP* **P** **03 28 47.8 +0.3**
comp=Z,11nm,1.4s
DMN **Daman** 62.26 53 *eP* **P** **03 28 49.5 -0.4**
SUW **Suwalki** 62.27 354 *eP* **P** **03 28 49.8 +0.7**
comp=Z,42nm,1.0s
SUW **Suwalki** 62.27 354 *eP* **P** **03 28 49.8 +0.7**
SUW pmax pmax
comp=Z,42nm,1.0s
KSH **Kashi** 62.31 37 P **P** **03 28 52.8 +3.0**
KSH S **S** **03 37 11.4 -5.0**
KSH ScS **SKSac** **03 38 32.6 -10**
KSH pmax pmax
comp=Z,17nm,1.1s
KSH pmax pmax
comp=Z,290nm,8.1s
KSH LR LR
comp=Z,750nm,11.9s
KSH LR LR
comp=Z,440nm,12.8s
KSH LR LR
comp=Z,400nm,18.2s
KKN **Kakani** 62.48 53 *eP* **P** **03 28 50.8 -0.5**
PKI **Pulchoki** 62.49 53 *eP* **P** **03 28 50.8 -0.7**
MAW **Mawson** 62.97 167 P **P** **03 28 54.6 +1.0**
comp=Z,15nm,0.6s,baz=328,slow=6.3,SNR=63
MAW **Mawson** 62.97 167 *eP* **P** **03 28 55.3 +1.7**
comp=Z,3.7nm,0.6s
MAW **Mawson** 62.97 167 *eP* **P** **03 28 55.3 +1.7**
MAW pmax pmax
comp=Z,4.0nm,0.6s
GUN **Gumba** 63.01 53 *eP* **P** **03 28 54.5 -0.5**
comp=Z,56nm,0.9s
OBN **Obninsk** 63.02 3 *d i* P **P** **03 28 53.7 -0.3**
OBN *e* 03 31 12.1
OBN *e*S **S** **03 37 30.6 +6.3**
OBN pmax pmax
comp=Z,21nm,1.3s
OBN MLR MLR
comp=Z,45nm,19.0s
JIRN **Jiri** 63.15 54 *eP* **P** **03 28 55.4 -0.5**
RAMN **Ramite** 63.17 54 *eP* **P** **03 28 55.4 -0.5**
UCH **Uchtor** 63.22 34 P **P** **03 28 57.1 +0.8**
SNR=6.8
IDID **Didziasalis** 63.27 357 *eP* **P** **03 28 56.6 +0.9**
IDID IAmb IAmb 03 29 09.5
comp=Z,9.9nm,1.0s
IIGN **Ignalina** 63.34 356 *eP* **P** **03 28 57.1 +0.9**
IIGN IAmb IAmb 03 29 10.0
comp=Z,7.1nm,1.0s
AAK **Ala-Archa** 63.49 34 *ceP* **P** **03 28 59.1 +1.5**
AAK pmax pmax
comp=Z,9.0nm,1.7s
KZA **Kyzart** 63.54 35 P **P** **03 28 59.3 +1.0**
SNR=9.1
NRN **Naryn** 63.55 36 *eP* **P** **03 28 59.5 +1.2**
comp=Z,16nm,1.4s
NRN **Naryn** 63.55 36 *eP* **P** **03 28 59.5 +1.2**
NRN pmax pmax
comp=Z,16nm,1.4s
ISAL **Salakas** 63.57 356 *eP* **P** **03 28 58.2 +0.5**
ISAL IAmb IAmb 03 29 06.8
comp=Z,12nm,1.2s
MOS **Moscow** 63.70 3 *eP* **P** **03 28 58.2 -0.3**
KBK **Karagaybulak** 63.75 34 P **P** **03 29 00.6 +1.2**
SNR=7.1
BOOM **Boomskoye usch** 64.19 35 *eP* **P** **03 29 03.4 +1.1**
comp=Z,22nm,1.6s
BOOM **Boomskoye usch** 64.19 35 *eP* **P** **03 29 03.4 +1.1**
BOOM pmax pmax
comp=Z,23nm,1.6s
ULHL **Ulahol** 64.21 35 P **P** **03 29 04.1 +1.6**
SNR=7.0
TKM2 **Tokmak 2** 64.28 34 P **P** **03 29 03.7 +0.7**
SNR=6.7
BSD **Bornholm Skovb** 64.54 349 *i* P **P** **03 29 04.1 0.0**
BSD pmax pmax
comp=Z,8.0nm,0.9s
BSD **Bornholm Skovb** 64.54 349 *i* P **P** **03 29 04.1 0.0**
comp=Z,7.8nm,0.9s
GSI **Gunungsitoli** 65.89 85 P **P** **03 29 17.0 +3.3**
comp=Z,26nm,1.1s
KCSI **Kotacane, Aceh** 66.45 83 P **P** **03 29 18.4 +1.1**
comp=Z,29nm,1.8s
SNAA **Sanae** 67.15 191 P **P** **03 29 22.6 +1.8**
SNAA **Sanae** 67.15 191 *eP* **P** **03 29 22.8 +2.0**
comp=Z,15nm,1.3s
SNAA **Sanae** 67.15 191 *eP* **P** **03 29 22.8 +2.0**
SNAA pmax pmax
comp=Z,15nm,1.3s
PSI **Prapat** 67.46 84 *eP* **P** **03 29 24.5 +0.6**
comp=Z,12nm,0.7s
PSI **Prapat** 67.46 84 *eP* **P** **03 29 24.5 +0.6**
PSI pmax pmax
comp=Z,12nm,0.7s
VNA1 **Neumayer--Stat** 67.53 194 P **P** **03 29 25.6 +2.5**
VNA2 **Neumayer--Watz** 67.53 193 P **P** **03 29 25.0 +1.8**
baz=32,slow=6.0
MNSI **Mandailing Nat** 67.78 86 P **P** **03 29 28.1 +2.3**
ARU **Arti** 67.83 15 *eP* **P** **03 29 24.8 -0.4**
comp=Z,23nm,1.0s
ARU **Arti** 67.83 15 *d i* P **P** **03 29 25.5 +0.3**
ARU S **S** **03 38 25.0 +1.7**
ARU SS **SS** **03 42 40.8 -4.4**
ARU pmax pmax
comp=Z,24nm,0.9s
VNA3 **Neumayer Olymp** 68.28 193 P **P** **03 29 29.0 +1.1**
PDSI **Padang** 68.40 88 P **P** **03 29 32.0 +2.3**
SVE **Sverdlovsk** 68.74 16 *eP* **P** **03 29 30.6 -0.3**
KLMR **Klimovskoe** 68.92 4 *eP* **P** **03 29 30.3 -1.6**
KLMR pmax pmax
comp=Z,23nm,1.5s
BRVK **Borovoye** 68.93 24 *eP* **P** **03 29 32.6 +0.5**
comp=Z,6.0nm,1.0s
BRVK **Borovoye** 68.93 24 *eP* **P** **03 29 32.6 +0.5**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
SDSI **Sungai Dareh** 69.36 88 P **P** **03 29 36.3 +0.7**
comp=Z,30nm,0.9s,comp=Z,2μm
FIA0 **FINESS Array S** 69.42 357 *eP* **P** **03 29 34.7 -0.3**
FIA0 **FINESS Array S** 69.42 357 *eP* **P** **03 29 34.7 -0.3**
FINES **FINESS Array B** 69.42 357 P **P** **03 29 34.7 -0.3**
comp=Z,4.1nm,0.7s,baz=143,slow=6.7,SNR=18
FINES **FINESS Array B** 69.42 357 *ceP* **P** **03 29 35.5 +0.5**
FINES pmax pmax
comp=Z,4.0nm,0.7s
EKA **Eskdalemuir Ar** 69.64 339 P **P** **03 29 37.2 +0.7**
EKA pmax pmax
comp=Z,3.0nm,0.4s
PRGR **Permogore** 70.25 7 *eP* **P** **03 29 36.4 -3.7**
PRGR pmax pmax
comp=Z,25nm,0.9s
MK31 **Makanchi Array** 70.42 34 *eP* **P** **03 29 41.7 +0.2**
comp=Z,15nm,0.9s
MK31 **Makanchi Array** 70.42 34 *eP* **P** **03 29 41.7 +0.2**
MK31 pmax pmax
comp=Z,15nm,0.9s
MK32 **Makanchi Array** 70.42 34 *eP* **P** **03 29 41.7 +0.2**
MKAR **Makanchi Array** 70.42 34 P **P** **03 29 41.7 +0.2**
comp=Z,14nm,0.7s,baz=230,slow=6.1,SNR=137
MKAR **Makanchi Array** 70.42 34 *ceP* **P** **03 29 41.9 +0.4**
MKAR pmax pmax
comp=Z,14nm,0.6s
NB201 **NORSAR Array S** 70.79 349 *eP* **P** **03 29 44.4 +0.9**
comp=Z,44nm,1.1s
NB2 **NORSAR Subarra** 70.80 349 P **P** **03 29 43.7 +0.2**
comp=Z,16nm,1.0s,baz=160,slow=5.6
NB200 **NORSAR Array S** 70.80 349 *eP* **P** **03 29 43.6 +0.1**
NOA **NORSAR Array B** 70.80 349 P **P** **03 29 43.6 +0.1**
comp=Z,5.8nm,0.9s,baz=160,slow=5.6,SNR=23
NBO00 **NORSAR Array S** 70.87 349 *eP* **P** **03 29 45.1 +1.1**
comp=Z,32nm,0.9s
CM31 **Chiang Mai Arr** 70.93 67 *eP* **P** **03 29 44.6 -0.5**
comp=Z,12nm,1.1s
CMAR **Chiang Mai Arr** 70.93 67 P **P** **03 29 44.6 -0.5**
comp=Z,4.4nm,0.8s,baz=258,slow=7.4,SNR=17
CMAR **Chiang Mai Arr** 70.93 67 *ceP* **P** **03 29 45.4 +0.2**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
NC303 **NORSAR Array S** 70.94 350 *eP* **P** **03 29 45.1 +0.8**
comp=Z,25nm,1.1s
KURK **Kurchatov** 70.95 29 *eP* **P** **03 29 45.4 +0.8**
comp=Z,16nm,1.1s
KURK **Kurchatov** 70.95 29 *ceP* **P** **03 29 45.3 +0.8**
KURK pmax pmax
comp=Z,24nm,1.7s
CHTO **Chiang Mai** 71.03 67 *eP* **P** **03 29 46.0 +0.2**
comp=Z,8.9nm,1.0s
CHTO **Chiang Mai** 71.03 67 *eP* **P** **03 29 46.0 +0.2**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CMMT **Chiang Mai** 71.03 67 P **P** **03 29 46.2 +0.4**
comp=Z,4.9nm,1.1s,comp=Z,239nm
LAMP **Lampang** 71.58 67 P **P** **03 29 50.0 +0.9**
comp=Z,29μm,0.9s
MDSI **Maura Dua** 71.62 92 P **P** **03 29 49.7 +0.3**
comp=Z,17nm,1.1s
WMQ **Urumqi** 71.96 39 *eP* **P** **03 29 52.1 +1.1**
WMQ pP sP 03 29 55.4 -0.4
WMQ sP pP 03 29 59.6 +5.1
WMQ pmax pmax
comp=Z,30nm,1.1s
WMQ pmax pmax
comp=Z,17nm,3.7s
WMQ LR LR
comp=Z,970nm,39.3s
WMQ LR LR
comp=Z,260nm,31.9s
PAYA **Payao** 72.02 67 P **P** **03 29 53.5 +1.7**
comp=Z,14μm,0.7s
UTTA **Uttaradit** 72.22 69 P **P** **03 29 53.8 +0.8**
comp=Z,15μm,1.1s
NANT **Nan** 72.63 67 P **P** **03 29 58.3 +2.9**
comp=Z,31μm,0.9s
DGZ **Jazzator, Alta** 74.89 34 *i* P **P** **03 30 08.6 +0.4**
DGZ pmax pmax
comp=Z,5.0nm,0.8s
SKNT **Sakolnakorn** 75.22 70 P **P** **03 30 11.1 +0.5**
NVS **Novosibirsk** 75.72 28 *eP* **P** **03 30 13.6 +0.9**
NVS pmax pmax
comp=Z,23nm,1.2s
NVS pmax pmax
comp=N,13nm,1.0s
PANO **Nakornpanom** 75.84 70 P **P** **03 30 14.7 +0.5**
ZAA0 **Zalesovo Array** 75.94 29 *eP* **P** **03 30 13.8 -0.1**
comp=N,7.2nm,0.9s
ZALV **Zalesovo Beam** 75.94 29 P **P** **03 30 13.4 -0.5**
comp=N,3.5nm,0.6s,baz=266,slow=4.9,SNR=13
ZALV **Zalesovo Beam** 75.94 29 *i* P **P** **03 30 13.8 -0.1**
ZALV pmax pmax
comp=Z,4.0nm,0.6s
ZAA1 **Zalesovo Array** 75.94 29 *eP* **P** **03 30 13.4 -0.5**
KMI **Kunming** 76.13 62 P **P** **03 30 18.0 +2.0**
KMI pmax pmax
comp=Z,15nm,0.5s
ARCES **ARCESS Array B** 77.53 358 P **P** **03 30 22.7 +0.1**
comp=Z,8.4nm,0.3s,baz=177,slow=4.9,SNR=18
GTA **Gaotai** 78.24 47 *eP* **P** **03 30 28.4 +1.0**
GTA pP sP 03 30 34.5 +2.2
GTA sP PcP 03 30 37.6 +0.7
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA pmax pmax
comp=Z,56nm,4.4s
GTA LR LR
comp=Z,140nm,19.9s
GTA LR LR
comp=Z,190nm,18.2s
BDFB **Brasilia** 78.45 256 P **P** **03 30 30.5 +1.4**
comp=Z,6.9nm,0.9s,baz=112,slow=7.0,SNR=9.1
BDFB **Brasilia** 78.45 256 *eP* **P** **03 30 30.5 +1.4**
BDFB *eP* **P** **03 30 30.9 +1.8**
BDFB **Brasilia** 78.45 256 *eP* **P** **03 30 30.5 +1.4**
BDFB *e* **P** **03 30 30.9 +1.8**
KSM **Kuching** 78.49 87 *eP* **P** **03 30 29.4 +0.3**
comp=Z,24nm,0.9s
LZH **Lanzhou** 80.18 51 *eP* **P** **03 30 39.1 +0.9**
LZH pP sP 03 30 44.2 +1.2
LZH sP PcP 03 30 47.0 +1.6
LZH pmax pmax
comp=Z,16nm,1.0s
QSPA **South Pole Qui** 82.05 180 *eP* **P** **03 30 48.4 +0.9**
comp=Z,7.9nm,0.9s
ZAK **Zakamensk** 84.35 38 *eP* **P** **03 30 59.4 -0.2**
ZAK pmax pmax
comp=Z,4.0nm,1.5s
SONA0 **Songino Array** 85.49 41 *eP* **P** **03 31 05.9 +0.4**
SONM **Songino Array** 85.49 41 P **P** **03 31 05.9 +0.4**
comp=Z,4.0nm,0.8s,baz=246,slow=4.8,SNR=12
ULN **Ulaanbaatar** 85.93 41 *eP* **P** **03 31 08.8 +1.2**
comp=Z,6.3nm,0.9s
ULN **Ulaanbaatar** 85.93 41 *eP* **P** **03 31 08.8 +1.2**
ULN pmax pmax
comp=Z,6.0nm,0.9s
WBSI **Waikabubak, Su** 85.98 99 P **P** **03 31 11.0 +2.5**
comp=Z,50nm,1.0s
NRIK **Noril'sk** 86.00 17 P **P** **03 31 08.2 +0.9**
comp=Z,2.2nm,0.6s,baz=245,slow=4.3,SNR=6.4
HHC **Hu-ho-hao-te** 87.28 48 *eP* **P** **03 31 10.7 -3.6**
HHC pmax pmax
comp=Z,20nm,0.9s
HHC pmax pmax
comp=Z,58nm,5.4s
MPSI **Mapaga** 87.82 89 P **P** **03 31 18.3 +0.9**
VNDA **Vanda** 90.12 170 P **P** **03 31 27.0 0.0**
comp=Z,1.5nm,0.9s,baz=294,slow=5.2,SNR=6.0
NJ2 **Nanjing** 91.43 58 *eP* **P** **03 31 36.2 +2.3**
NJ2 pmax pmax
comp=Z,16nm,0.5s
PTGA **Pitinga** 91.99 269 *eP* **P** **03 31 39.3 +2.3**
comp=Z,6.1nm,0.8s
ASAR **Alice Springs** 97.45 115 P **P** **03 32 00.4 -1.4**
comp=Z,0.7nm,0.6s,baz=261,slow=4.4,SNR=19
AS31 **Alice Springs** 97.45 115 *eP* **P** **03 32 00.4 -1.4**
TIXI **Tiksi** 99.69 19 *eP* **Pdif** **03 32 10.8 +0.2**
TIXI pmax pmax
comp=Z,1.0nm,0.7s
BILL **Bilibino** 112.83 17 ⇑ *i* PKIKP **PKiKP** **03 37 01.1 -2.6**
BILL *e* 03 37 53.9
BILL pmax pmax
comp=Z,1.0nm,1.0s
PETK **Petropavlovsk-** 117.25 33 Pn **Pdif** **03 33 21.4 -7.8**
comp=Z,0.4nm,0.3s,baz=14,slow=17,SNR=4.8
PETK **Petropavlovsk-** 117.25 33 P **Pdif** **03 33 21.4 -7.8**
INK **Inuvik** 119.05 354 PKP **PKiKP** **03 37 15.9 +0.2**
comp=Z,2.4nm,1.2s,baz=67,slow=0.7,SNR=4.0
INK **Inuvik** 119.05 354 *e*PKPdf **PKiKP** **03 37 15.9 +0.2**
EPYK **Eagle Plains** 121.25 355 *e*PKPdf **PKiKP** **03 37 20.3 +0.2**
EGAK **Eagle** 123.15 357 *e*PKPdf **PKiKP** **03 37 24.0 +0.1**
ILAR **Eielson Array** 123.35 360 PKP **PKPdf** **03 37 23.7 -0.3**
comp=Z,1.9nm,0.8s,baz=334,slow=3.2,SNR=18
ILB **Eielson Array** 123.35 360 *e*PKPdf **PKPdf** **03 37 24.0 0.0**
CCB **Clear Creek Bu** 123.48 360 *e*PKPdf **PKPdf** **03 37 24.3 0.0**
WRH **Wood River Hil** 123.66 0 *e*PKPdf **PKPdf** **03 37 24.5 -0.2**
DOT **Dot Lake** 124.42 358 *e*PKPdf **PKiKP** **03 37 26.7 +0.2**
KTH **Kantishna Hill** 124.53 2 *e*PKPdf **PKPdf** **03 37 26.1 -0.3**
WMOK **Wichita Mounta** 127.81 308 *e*PKPdf **PKiKP** **03 37 33.9 -0.2**
WMOK **Wichita Mounta** 127.81 308 *e*PKIKP **PKiKP** **03 37 33.9 -0.2**
PD31 **Pinedale Array** 131.78 322 *e*PKPdf **PKPdf** **03 37 41.4 +0.3**
PDAR **Pinedale Array** 131.78 322 PKP **PKPdf** **03 37 41.2 +0.1**
comp=Z,0.1nm,0.3s,baz=118,slow=5.5,SNR=4.3
TXAR **Lajitas Array** 133.45 303 PKP **PKPdf** **03 37 43.8 -0.7**
comp=Z,0.8nm,0.9s,baz=108,slow=2.0,SNR=5.9
PV04 **Paradox Valley** 133.72 317 *e*PKPdf **PKPdf** **03 37 45.4 +0.5**
MNTX **Cornudas Mount** 134.05 307 *e*PKPdf **PKPdf** **03 37 46.0 +0.6**
NV01 **Mina Array Sit** 139.69 323 *e*PKPpre PKPpre 03 37 48.5
NV01 *e*PKPdf **PKPdf** **03 37 55.3 -0.6**
NVAR **Mina Array Bea** 139.69 323 PKhKP PKPpre 03 37 48.5
comp=Z,0.1nm,0.3s,baz=195,slow=22,SNR=3.8
NVAR PKP **PKPdf** **03 37 55.3 -0.6**
comp=Z,0.7nm,0.8s,baz=64,slow=2.1,SNR=5.1

*ISCJB **08** 03:18:36.8±0.4, 8.°16S±0.°05×32.°03E±0.°08, h10km, mb4.8/23, Error ellipse: s-maj=10.8km s-min=6.8km az=8.3*
*IDC **08** 03:18:37.4±0.8, 8.°06S×32.°04E, h0km, mb4.6/16, mb1 4.8/18, mb1mx4.6/30, mbtmp4.7/18, ML4.9/2, Error ellipse: s-maj=24.0km s-min=18.6km az=51.0*
ISC 08 03:18:38.5±0.5, 8.°17S±0.°06×32.°0E±0.°1, h10km, n71, σ1§30/74, mb4.8/22, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**7.62**	**350**	Pn	**Pn**	**03 20 28.8**	**-1.0**
	885nm,0.3s,baz=171,slow=13,SNR=28						
MBAR				Sn	**Sn**	**03 21 53.4**	**-3.1**
	682nm,0.3s,baz=169,slow=23,SNR=5.7						
LSZ	**Lusaka**	**8.00**	**208**	Sn	**Sn**	**03 22 07.1**	**+1.5**
	161nm,0.3s,baz=94,slow=14,SNR=6.9						
MATP	**Matopo**	**12.65**	**195**	Pn	**Pn**	**03 21 38.4**	**-0.3**
	18nm,0.3s,baz=15,slow=13,SNR=19						
OPO	**Ambohidratompo**	**18.01**	**127**	P	**P**	**03 22 50.4**	**+0.6**
	1.2nm,0.3s,baz=312,slow=18,SNR=6.9						
OPO	**Ambohidratompo**	**18.01**	**127**	*e*sP	**P**	**03 22 50.4**	**+0.6**
BOSA	**Boshof**	**21.31**	**197**	S	**S**	**03 27 16.4**	**-6.3**
	27nm,0.8s,baz=296,slow=3.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**36.82**	**305**	P	**P**	**03 25 46.1**	**-0.9**
	11nm,0.9s,baz=108,slow=8.0,SNR=19						
TORD				PcP	**PcP**	**03 28 08.9**	**-0.3**
	5.4nm,1.1s,baz=130,slow=6.4,SNR=4.1						
TOA1	**Torodi Ar. Sit**	**36.82**	**305**	*e*sP	**P**	**03 25 46.1**	**-0.9**
KIC	**Kosan Boka**	**39.39**	**290**	*e*P	**P**	**03 26 09.2**	**+0.4**
	244nm,1.9s						
DBIC	**Dimbokro**	**39.61**	**291**	P	**P**	**03 26 11.4**	**+0.8**
	9.1nm,0.9s,baz=127,slow=13,SNR=3.8						
DBIC	**Dimbokro**	**39.61**	**291**	*e*sP	**P**	**03 26 11.4**	**+0.8**
LIC	**Lamto**	**39.61**	**290**	*e*P	**P**	**03 26 11.1**	**+0.5**
	92nm,1.3s						
TIC	**Toumodi**	**39.75**	**291**	*e*P	**P**	**03 26 12.5**	**+0.7**
BR101	**Keskin Array S**	**47.67**	**2**	*e*PP	**PcP**	**03 28 45.1**	**+0.3**
BRTR	**Keskin Array B**	**47.67**	**2**	P	**P**	**03 27 15.0**	**-0.3**
	2.5nm,0.9s,baz=178,slow=8.3,SNR=7.6						
BRTR				PcP	**PcP**	**03 28 45.1**	**+0.3**
	0.9nm,0.9s,baz=160,slow=3.9,SNR=4.0						
KEST	**Kesra**	**48.61**	**335**	P	**P**	**03 27 23.2**	**+0.7**
	12nm,0.9s,baz=224,slow=0.8,SNR=9.1						
KBZ	**Khabaz**	**52.59**	**10**	P	**P**	**03 27 53.1**	**+0.8**
	3.4nm,0.8s,baz=221,slow=5.1,SNR=4.7						
KBZ				PcP	**PcP**	**03 29 03.9**	**+1.5**
	5.6nm,0.8s,baz=192,slow=3.5,SNR=6.6						
KBZ	**Khabaz**	**52.59**	**10**	*e*	**PcP**	**03 29 03.9**	**+1.5**
BOJS	**Bojanci**	**55.51**	**346**	*i*	**P**	**03 28 12.0**	**-1.6**
JAVS	**Javornik**	**56.17**	**345**	*i*	**P**	**03 28 19.2**	**+0.6**
PERS	**Pernice**	**56.60**	**346**	*i*	**P**	**03 28 23.0**	**+1.5**
VYHS	**Vyhne**	**57.60**	**350**	*e*	**P**	**03 28 29.2**	**+0.7**
MODS	**Modra-Piesok**	**57.78**	**348**	*e*	**P**	**03 28 31.3**	**+1.5**
ESDC	**Sonseca Array**	**58.09**	**328**	P	**P**	**03 28 31.7**	**-0.6**
	13nm,0.7s,baz=140,slow=7.1,SNR=28						
ESDC				PcP	**PcP**	**03 29 25.4**	**+1.4**
	3.5nm,0.9s,baz=128,slow=2.7,SNR=4.1						
ESDC	**Sonseca Array**	**58.09**	**328**	*e*	**PcP**	**03 29 25.4**	**+1.4**
LANS	**Liptovska Anna**	**58.13**	**350**	*e*	**P**	**03 28 33.4**	**+1.1**
JAVC	**Velka Javorina**	**58.17**	**349**	*e*	**P**	**03 28 32.9**	**+0.3**
KRUC	**Moravsky**	**58.61**	**348**	*e*	**P**	**03 28 35.4**	**-0.2**
AKASG	**Malin Array Be**	**58.68**	**358**	P	**P**	**03 28 35.2**	**-0.7**
	5.2nm,0.8s,baz=182,slow=6.3,SNR=8.4						
VRAC	**Vranov**	**58.81**	**348**	*e*	**P**	**03 28 36.8**	**-0.2**
GERES	**GERESS Array B**	**59.01**	**346**	P	**P**	**03 28 38.4**	**-0.1**
	5.8nm,0.8s,baz=157,slow=7.2,SNR=15						
OKC	**Ostrava-Krasne**	**59.02**	**350**	*ex*	**P**	**03 28 38.4**	**0.0**
TREC	**Trest**	**59.02**	**347**	*ex*	**P**	**03 28 38.4**	**-0.1**
MORC	**Moravsky Berou**	**59.07**	**349**	*e*	**P**	**03 28 38.8**	**0.0**
KHC	**Kasperske Hory**	**59.30**	**346**	*ex*	**P**	**03 28 40.7**	**+0.2**
EVO	**Evora**	**59.54**	**324**	*e*P	**P**	**03 28 43.6**	**+1.4**
PMRV	**Marv??o**	**59.79**	**325**	*e*P	**P**	**03 28 45.5**	**+1.5**
DPC	**Dobruska-Polom**	**59.85**	**348**	*ex*	**P**	**03 28 44.2**	**0.0**
PMTG	**Montargil**	**60.02**	**325**	*e*P	**P**	**03 28 48.0**	**+2.5**
PCBR	**Castelo Branco**	**60.12**	**326**	*e*P	**P**	**03 28 47.6**	**+1.4**
MTE	**Manteigas**	**60.54**	**326**	*e*P	**P**	**03 28 48.5**	**-0.7**
	37nm,1.6s						
MVO	**Moncorvo**	**60.79**	**327**	*e*P	**P**	**03 28 52.7**	**+1.8**
	30nm,1.3s						
BRG	**Berggiesshubel**	**60.85**	**347**	*e*	**P**	**03 28 50.9**	**-0.1**
	4.2nm,1.0s						
PVIS	**Viseu**	**60.95**	**326**	*e*P	**P**	**03 28 53.5**	**+1.5**
	38nm,2.0s						
PBRG	**Braganca**	**61.09**	**328**	*e*P	**P**	**03 28 54.3**	**+1.4**
PVRL	**Vila Real**	**61.24**	**327**	*e*P	**P**	**03 28 55.6**	**+1.7**
POLO	**Lamas de Olo**	**61.35**	**327**	*e*P	**P**	**03 28 56.4**	**+1.7**
CLL	**Collm**	**61.47**	**347**	*e*	**P**	**03 28 55.0**	**-0.1**
	comp=Z,11nm,1.3s						
PGAV	**Gavieira, Arco**	**62.02**	**327**	*e*P	**P**	**03 29 01.2**	**+2.0**
BSD	**Bornholm Skovb**	**64.65**	**349**	*i*	**P**	**03 29 16.4**	**+0.2**
FIA0	**FINESS Array S**	**69.55**	**357**	*e*PcP	**P**	**03 29 47.1**	**-0.1**
FINES	**FINESS Array B**	**69.55**	**357**	P	**P**	**03 29 47.1**	**-0.1**
	comp=Z,5.3nm,0.9s,baz=190,slow=7.7,SNR=6.4						
MK32	**Makanchi Array**	**70.60**	**34**	*e*PcP	**P**	**03 29 53.2**	**-0.9**
MKAR	**Makanchi Array**	**70.60**	**34**	P	**P**	**03 29 53.2**	**-0.9**
	comp=Z,8.4nm,0.8s,baz=228,slow=6.1,SNR=13						
NB200	**NORSAR Array S**	**70.91**	**349**	*e*PcP	**P**	**03 29 54.5**	**-1.2**
NOA	**NORSAR Array B**	**70.91**	**349**	P	**P**	**03 29 54.4**	**-1.2**
	comp=Z,9.4nm,1.0s,baz=160,slow=5.6,SNR=19						
CM31	**Chiang Mai Arr**	**71.11**	**67**	*e*PcP	**P**	**03 29 56.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**71.11**	**67**	P	**P**	**03 29 56.8**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=257,slow=7.6,SNR=2.6						
NVS	**Novosibirsk**	**75.91**	**28**	*e*	**P**	**03 30 25.3**	**+0.2**
ARCES	**ARCESS Array B**	**77.65**	**358**	P	**P**	**03 30 35.4**	**+0.6**
	comp=Z,9.2nm,1.0s,baz=182,slow=4.7,SNR=7.2						
SONA0	**Songino Array**	**85.68**	**41**	*e*PcP	**P**	**03 31 18.0**	**+0.2**
SONM	**Songino Array**	**85.68**	**41**	P	**P**	**03 31 18.0**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=240,slow=5.5,SNR=8.6						
NRIK	**Noril'sk**	**86.17**	**17**	P	**P**	**03 31 20.7**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=209,slow=4.2,SNR=2.4						
MPSI	**Mapaga**	**87.95**	**89**	pP	**P**	**03 31 28.3**	**-1.2**
ASAR	**Alice Springs**	**97.51**	**115**	P	Pdif	03 32 13.6	0.0
	comp=Z,1.2nm,0.8s,baz=249,slow=5.6,SNR=6.1						
AS31	**Alice Springs**	**97.51**	**115**	*e*sP	Pdif	03 32 13.6	0.0
INK	**Inuvik**	**119.17**	**354**	PKP	**PKiKP**	**03 37 28.7**	**+1.3**
	comp=Z,2.3nm,1.0s,baz=77,slow=3.4,SNR=5.6						
INK	**Inuvik**	**119.17**	**354**	*e*pPKPdf	**PKiKP**	**03 37 29.1**	**+1.8**
ILAR	**Eielson Array**	**123.49**	**359**	PKP	**PKiKP**	**03 37 36.2**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=334,slow=3.5,SNR=14						
PDAR	**Pinedale Array**	**131.81**	**322**	PKP	**PKiKP**	**03 37 53.9**	**+0.3**
	comp=Z,1.3nm,1.0s,baz=111,slow=3.3,SNR=5.3						
TXAR	**Lajitas Array**	**133.41**	**303**	PKP	**PKPdf**	**03 37 55.9**	**+0.1**
	comp=Z,2.2nm,1.1s,baz=103,slow=4.0,SNR=8.0						

GUC 08 03:19:30.2±0.7, 36.°17S×72.°56W, h41km±7km, ML3.8, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**0.58**	**138**	‖*e*P	Pn	03 19 42.1	0.0
CCHI				*e*S	Sn	03 19 50.0	-0.6
CCHI				IAML		03 19 53.4	
	comp=E,5μm,0.3s						
GO05	**Huala**	**1.27**	**24**	*e*P	Pn	03 19 51.8	+0.3
GO05				*i* S	Sn	03 20 08.4	+1.1
LMEL	**Las Melosas**	**3.02**	**41**	*e*P	Pn	03 20 16.6	+0.9
LMEL				IAML		03 21 13.5	
	comp=E,282nm,0.6s						
FCH	**Farellones**	**3.40**	**34**	*e*P	Pn	03 20 21.8	+0.8
FCH				IAML		03 21 25.6	
	comp=N,171nm,0.5s						
ROCH	**El Roble**	**3.44**	**22**	*e*P	Pn	03 20 22.1	+0.6

*JMA **08** 03:21:40.6±0.2, 24.°38N×121.°96E, h34km, M2.3*
*TAP **08** 03:21:40.4, 24.°40N×121.°95E, h32km, ML3.3, C*
*ISCJB **08** 03:21:41.0±0.2, 24.°38N±0.°01×122.°00E±0.°02, h23km±3km, Error ellipse: s-maj=2.7km s-min=2.0km az=136.8*
ISC 08 03:21:40.8±0.9, 24.°39N±0.°02×121.°96E±0.°02, h31km±5km, n78, σ0§81/131, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.20**	**282**	P	**Pb**	**03 21 46.9**	**-0.2**
	baz=277						
NANB				*e*S	**Sb**	**03 21 51.5**	**+0.1**
	baz=277						
ENA	**Nanau**	**0.21**	**281**	*i* P	**Pb**	**03 21 46.9**	**-0.3**
	baz=277						
ENA				S	**Sb**	**03 21 51.8**	**+0.2**
	baz=277						
EOS1	**EOS1**	**0.22**	**43**	P	**Pb**	**03 21 47.6**	**+0.3**
	baz=49						
EOS1				S	**Sb**	**03 21 52.8**	**+1.1**
	baz=49						
TWC	**Suao**	**0.24**	**335**	*i* P	**Pn**	**03 21 47.3**	**-1.0**
	baz=338						
TWC				*i* S	**Sb**	**03 21 52.0**	**-0.2**
	baz=338						
NACB	**Ningnchiao**	**0.40**	**238**	*e*P	**Pb**	**03 21 49.6**	**-0.1**
	baz=235						
NACB				*e*S	**Sn**	**03 21 57.0**	**+0.1**
	baz=235						
TWE	**Neicheng**	**0.43**	**321**	P	**Pn**	**03 21 50.1**	**-0.7**
	baz=322						
TWE				S	**Sn**	**03 21 56.9**	**-0.8**
	baz=322						
ENTT	**Nioudou**	**0.44**	**305**	P	**Pn**	**03 21 50.5**	**-0.6**
	baz=304						
ENTT				S	**Sn**	**03 21 56.9**	**-1.0**
	baz=304						
TWD	**Chiawan**	**0.45**	**228**	*i* P	**Pb**	**03 21 50.1**	**-0.4**
	baz=225						
TWD				*i* S	**Sn**	**03 21 58.6**	**+0.3**
	baz=225						
NDT	**Datong Townshi**	**0.46**	**298**	P	**Pn**	**03 21 50.6**	**-0.8**
	baz=296						
NDT				S	**Sn**	**03 21 58.0**	**-0.6**
	baz=296						
ETLH	**Xiulin Townshi**	**0.47**	**248**	P	**Pb**	**03 21 50.6**	**-0.3**
	baz=245						
ETLH				*e*S	**Sn**	**03 21 58.6**	**-0.3**
	baz=245						
NTC	**Toucheng**	**0.48**	**345**	*e*P	**Pb**	**03 21 50.6**	**-0.3**
	baz=345						
NTC				*e*S	**Sn**	**03 21 58.0**	**-0.9**
	baz=345						
HWA	**Hwalien**	**0.52**	**219**	*e*P	**Pn**	**03 21 51.7**	**-0.4**
	baz=215						
NNSB	**Datong**	**0.53**	**275**	*e*P	**Pb**	**03 21 51.5**	**-0.3**
	baz=273						
NNSB				S	**Sb**	**03 21 59.2**	**-0.2**
	baz=273						
NNS	**Nan Shan**	**0.54**	**276**	*i* P	**Pn**	**03 21 51.9**	**-0.6**
	baz=274						
NNS				*i* S	**Sb**	**03 21 59.5**	**-0.2**
	baz=274						
NWLT	**Wulai**	**0.57**	**313**	P	**Pb**	**03 21 52.1**	**-0.3**
	baz=312						
NWLT				S	**Sb**	**03 22 00.2**	**-0.3**
	baz=312						
ENLB	**Shoufeng**	**0.58**	**215**	*e*P	**Pb**	**03 21 52.5**	**-0.1**
	baz=211						
ENLB				*e*S	**Sn**	**03 22 02.8**	**+1.4**
	baz=211						
TIPB	**Shuangxi**	**0.60**	**348**	P	**Pb**	**03 21 52.6**	**-0.2**
	baz=351						
TIPB				*e*S	**Sn**	**03 22 01.3**	**-0.5**
	baz=351						
YHNB	**Yeheng**	**0.60**	**298**	P	**Pb**	**03 21 52.9**	**-0.1**
	baz=297						
YHNB				S	**Sn**	**03 22 01.2**	**-0.9**
	baz=297						
TWB1	**Santiao Chiao**	**0.62**	**2**	*e*P	**Pb**	**03 21 53.6**	**+0.4**
	baz=4.0						
TWB1				*e*S	**Sn**	**03 22 02.3**	**0.0**
	baz=4.0						
NSK	**Sanguang**	**0.62**	**298**	*i* P	**Pb**	**03 21 53.0**	**-0.3**
	baz=297						
NSK				*i* S	**Sn**	**03 22 01.7**	**-0.8**
	baz=297						
WHF	**Hehuan Shan**	**0.68**	**249**	*i* P	**Pn**	**03 21 54.0**	**-0.7**
	baz=247						
WHF				*i* S	**Sn**	**03 22 03.8**	**-0.7**
	baz=247						
NHDH	**Xindian Distri**	**0.70**	**325**	P	**Pb**	**03 21 54.7**	**+0.1**
	baz=320						
NHDH				S	**Sb**	**03 22 04.6**	**+0.7**
	baz=320						
NWF	**Wu-fen Shan**	**0.70**	**346**	P	**Pb**	**03 21 55.2**	**+0.5**
	baz=340						
NWF				*e*S	**Sb**	**03 22 05.1**	**+1.0**
	baz=340						
WFSB	**Wu-fen Shan**	**0.70**	**346**	*e*P	**Pb**	**03 21 55.3**	**+0.7**
	baz=340						
WFSB				*e*S	**Sb**	**03 22 05.1**	**+1.1**
	baz=340						
TATO	**Taipei**	**0.73**	**324**	P	**Pb**	**03 21 55.3**	**+0.3**
	baz=323						
TATO				*e*S	**Sn**	**03 22 03.9**	**-1.1**
	baz=323						
TDCB	**Techi**	**0.75**	**260**	P	**Pb**	**03 21 55.2**	**-0.2**
	baz=258						
TDCB				S	**Sb**	**03 22 05.6**	**+0.2**
	baz=258						
ESL	**Shilin**	**0.75**	**220**	P	**Pn**	**03 21 54.3**	**-0.9**
	baz=232						
ESL				*e*S	**Sn**	**03 22 04.9**	**-0.6**
	baz=232						
CHGB	**Renai**	**0.79**	**246**	*e*P	**Pb**	**03 21 55.7**	**-0.5**
	baz=244						
CHGB				*e*S	**Sb**	**03 22 07.1**	**+0.4**
	baz=244						
WLTB	**Daxi**	**0.80**	**306**	*e*P	**Pb**	**03 21 56.5**	**+0.4**
	baz=296						
WLTB				*e*S	**Sb**	**03 22 08.2**	**+1.6**
	baz=296						
YM01	**YM01**	**0.84**	**335**	*e*P	**Pb**	**03 21 56.9**	**0.0**
	baz=344						
YM01				*e*S	**Sb**	**03 22 08.6**	**+0.8**
	baz=344						
OWD	**Renai**	**0.84**	**239**	P	**Pn**	**03 21 56.2**	**-0.4**
	baz=229						
OWD				*e*S	**Sb**	**03 22 07.7**	**-0.3**
	baz=229						
YM07	**YM07**	**0.84**	**338**	P	**Pb**	**03 21 56.8**	**-0.2**
	baz=338						
YM07				*e*S	**Sb**	**03 22 08.6**	**+0.6**
	baz=338						
YM10	**YM10**	**0.85**	**335**	*e*P	**Pb**	**03 21 56.6**	**-0.4**
	baz=344						
YM10				*e*S	**Sb**	**03 22 08.7**	**+0.5**
	baz=344						
YM11	**YM11**	**0.85**	**336**	*e*P	**Pb**	**03 21 56.9**	**-0.3**
	baz=321						
YM05	**YM05**	**0.85**	**335**	*e*P	**Pb**	**03 21 57.0**	**-0.1**
	baz=344						
YM05				*e*S	**Sb**	**03 22 08.0**	**-0.4**
	baz=344						
YM04	**YM04**	**0.86**	**333**	P	**Pb**	**03 21 56.8**	**-0.4**
	baz=332						
YM04				*e*S	**Sb**	**03 22 08.0**	**-0.3**
	baz=332						
EGFH	**Guangfu**	**0.87**	**215**	*e*P	**Pb**	**03 21 56.8**	**-0.5**
	baz=200						
TWS1	**Kuangyinshan**	**0.87**	**325**	*e*S	**Sb**	**03 22 10.5**	**+1.9**
	baz=333						
YM08	**YM08**	**0.87**	**337**	*e*P	**Pb**	**03 21 56.8**	**-0.6**
	baz=336						
YM03	**YM03**	**0.88**	**334**	*e*S	**Sb**	**03 22 10.1**	**+1.1**
	baz=343						
JYNG	**Yonagunijimaku**	**0.90**	**86**	P	**Pn**	**03 21 57.2**	**-0.1**
JYNG				*e*S	**Sb**	**03 22 09.7**	**+0.2**
LIOB	**Emei**	**0.90**	**287**	P	**Pb**	**03 21 58.3**	**+0.4**
	baz=285						
LIOB				S	**Sb**	**03 22 10.6**	**+1.0**
	baz=285						
NSTT	**Nanjuang**	**0.91**	**286**	P	**Pb**	**03 21 58.2**	**+0.1**
	baz=284						
NSTT				S	**Sb**	**03 22 10.8**	**+0.9**
	baz=284						
NCU	**National Centr**	**0.91**	**310**	*e*S	**Sb**	**03 22 12.2**	**+2.2**
	baz=309						
NCUH	**Zhongli**	**0.91**	**309**	*e*S	**Sb**	**03 22 12.1**	**+2.1**
	baz=308						
WHP	**Taichung City**	**0.94**	**264**	*e*S	**Sb**	**03 22 10.6**	**0.0**
	baz=262						
TWY	**Chenhua**	**0.94**	**340**	*e*P	**Pb**	**03 21 58.4**	**-0.2**
	baz=339						
TWY				*e*S	**Sb**	**03 22 10.9**	**+0.1**
	baz=339						
YOJ	**Yonaguni jima**	**0.96**	**85**	P	**Pn**	**03 21 58.0**	**-0.1**
	baz=82						
YOJ				S	**Sb**	**03 22 11.5**	**+0.3**
	baz=82						
YOJ	**Yonaguni jima**	**0.96**	**85**	P	**Pn**	**03 21 58.0**	**-0.1**
YOJ				*e*S	**Sb**	**03 22 11.6**	**+0.4**
SBCB	**Hsinchu**	**0.98**	**295**	*e*P	**Pb**	**03 21 58.8**	**-0.4**
	baz=309						
SBCB				*e*S	**Sb**	**03 22 12.7**	**+0.9**
	baz=309						
VWDT	**VWDT**	**0.98**	**230**	P	**Pn**	**03 21 58.1**	**-0.3**
	baz=229						
VWDT				*e*S	**Sb**	**03 22 11.4**	**-0.4**
	baz=229						
HGSD	**Ruisui**	**1.02**	**209**	*e*P	**Pb**	**03 22 00.1**	**+0.2**
	baz=221						
HGSD				*e*S	**Sb**	**03 22 14.5**	**+1.6**
	baz=221						
EHY	**Hungye**	**1.05**	**214**	*e*P	**Pb**	**03 21 60.0**	**-0.5**
	baz=212						
NMLH	**Miaoli**	**1.08**	**278**	*e*S	**Sb**	**03 22 16.7**	**+2.0**
	baz=277						
SMLT	**Sun Moon Lake**	**1.09**	**243**	*e*P	**Pb**	**03 22 01.9**	**+0.7**
	baz=236						
SMLT				*e*S	**Sb**	**03 22 15.7**	**+0.5**
	baz=236						
NSY	**Sanyi**	**1.10**	**272**	*e*S	**Sb**	**03 22 17.7**	**+2.6**
	baz=264						
SSLB	**Suanglung**	**1.10**	**237**	*e*P	**Pn**	**03 21 59.9**	**-0.2**
	baz=229						
SSLB				*e*S	**Sb**	**03 22 15.0**	**-0.2**
	baz=229						
PTSB	**Yuanli**	**1.15**	**273**	*e*S	**Sb**	**03 22 18.3**	**+1.6**
	baz=271						
YULB	**Yu-li**	**1.16**	**212**	*e*P	**Pn**	**03 21 59.9**	**-1.1**
	baz=210						
TWF1	**Yuli**	**1.20**	**211**	*e*P	**Pb**	**03 22 02.4**	**-0.5**
	baz=221						
TCU	**Taichung**	**1.20**	**259**	*e*S	**Sb**	**03 22 18.9**	**+0.9**
	baz=257						
WDJ	**Dajia District**	**1.21**	**268**	*e*S	**Sb**	**03 22 19.3**	**+1.0**
	baz=267						
WHYT	**Xinyi Township**	**1.23**	**236**	*e*P	**Pb**	**03 22 03.4**	**0.0**
	baz=231						
WHYT				*e*S	**Sb**	**03 22 19.6**	**+0.7**
	baz=231						
WJS	**Zhushan**	**1.26**	**244**	*e*P	**Pb**	**03 22 03.9**	**-0.1**
	baz=243						
WJS				*e*S	**Sb**	**03 22 21.8**	**+1.9**
	baz=243						
CHN5	**Tsauling**	**1.41**	**236**	*e*P	**Pb**	**03 22 06.4**	**-0.2**
	baz=236						
CHN5				*e*S	**Sb**	**03 22 25.4**	**+1.1**
	baz=236						
WDLH	**Douliu**	**1.48**	**242**	*e*S	**Sb**	**03 22 26.1**	**+0.1**
	baz=241						
RLNB	**Erlin**	**1.55**	**252**	*e*S	**Sb**	**03 22 28.0**	**+0.1**
	baz=265						
IRIF	**Iriomote-Funau**	**1.61**	**91**	S	**Sb**	**03 22 28.4**	**-1.5**
WTP	**Ta-pu**	**1.68**	**228**	*e*P	**Pb**	**03 22 10.7**	**-0.3**
	baz=214						
WTP				*e*S	**Sb**	**03 22 31.1**	**-0.7**
	baz=214						
SNST	**Tainan City**	**1.78**	**229**	*e*S	**Sb**	**03 22 35.0**	**+0.4**
	baz=229						
CHN1	**Nanshi**	**1.78**	**228**	*e*P	**Pb**	**03 22 12.8**	**+0.1**
	baz=228						
CHN1				*e*S	**Sb**	**03 22 35.8**	**+1.1**
	baz=228						
SGST	**Jiashian**	**1.81**	**225**	*e*S	**Sb**	**03 22 36.7**	**+1.1**
	baz=212						
SLGT	**Liugui**	**1.84**	**221**	*e*S	**Sb**	**03 22 35.8**	**-0.6**
	baz=221						
JKRS	**Kuro-shima**	**1.87**	**94**	P	**Pn**	**03 22 11.3**	**+0.6**
JKRS				S	**Sb**	**03 22 35.5**	**-1.8**
JIJ	**Ishigaki jima**	**1.99**	**90**	P	**Pn**	**03 22 12.5**	**+0.2**
JIJ				*e*S	**Sn**	**03 22 36.7**	**+0.6**
JISG	**Ishigakijimahi**	**2.15**	**84**	P	**Pn**	**03 22 14.7**	**+0.2**
JISG				*e*S	**Sn**	**03 22 40.7**	**+0.6**
MASBT	**Mashibuluo**	**2.15**	**215**	*e*S	**Sn**	**03 22 42.0**	**+1.9**
	baz=215						
WDGT	**Dungji**	**2.39**	**242**	*e*S	**Sn**	**03 22 46.4**	**+0.3**
	baz=241						

*ISCJB **08** 03:33:12.3±0.8, 52.°3N±0.°3×179.°9W±0.°1, h191km±12km, mb3.2/2, Error ellipse: s-maj=56.8km s-min=10.4km az=179.5*
*NEIC **08** 03:33:12.5±0.0, 52.°88N×179.°91W, h148km, ML3.5, ML2.9(AEIC), After AEIC.*
ISC 08 03:33:13.0±1.3, 52.°4N±0.°4×179.°92W±0.°08, h184km±16km, n22, σ0§50/30, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAEA	**Gareloi East**	**0.95**	**130**	*e*Pn	**Pn**	**03 33 40.6**	**-0.1**
GAEA				*e*Sn	**Sn**	**03 34 02.9**	**+0.8**
GALAA	**Gareloi Lava P**	**0.95**	**132**	*e*Pn	**Pn**	**03 33 40.5**	**-0.2**
GALAA				*e*Sn	**Sn**	**03 34 03.0**	**+0.9**
TANO	**Tanaga North**	**1.21**	**113**	*e*Pn	**Pn**	**03 33 42.8**	**+0.1**
TASE	**Tanaga Southea**	**1.29**	**115**	*e*Pn	**Pn**	**03 33 43.2**	**-0.3**
TAFP	**Tanaga Falls P**	**1.29**	**112**	*e*Pn	**Pn**	**03 33 43.1**	**-0.4**
TAFP				*e*Sn	**Sn**	**03 34 06.3**	**-0.6**
TAPA	**Tanaga Point A**	**1.43**	**113**	*e*Pn	**Pn**	**03 33 44.3**	**-0.3**
TAPA				*e*Sn	**Sn**	**03 34 08.6**	**-0.4**
KIKV	**Kanaga Island**	**1.77**	**106**	*e*Pn	**Pn**	**03 33 47.8**	**-0.1**
KIKV				*e*Sn	**Sn**	**03 34 15.7**	**+0.7**
KIMD	**Kanaga Island**	**1.77**	**110**	*e*Pn	**Pn**	**03 33 47.5**	**-0.4**
KINC	**Kanaga Island**	**1.78**	**104**	*e*Pn	**Pn**	**03 33 47.9**	**-0.1**
KIWB	**Kanaga Island**	**1.79**	**107**	*e*Pn	**Pn**	**03 33 47.8**	**-0.3**
KIRH	**Kanaga Island**	**1.81**	**105**	*e*Pn	**Pn**	**03 33 48.5**	**+0.2**
ADK	**Adak**	**2.06**	**103**	*e*Pn	**Pn**	**03 33 50.4**	**-0.5**
ADK				*e*Sn	**Sn**	**03 34 19.4**	**-1.0**
ETKA	**Kagalaska Isla**	**2.23**	**103**	*e*Pn	**Pn**	**03 33 52.7**	**-0.1**
GSTD	**Great Sitkin T**	**2.35**	**97**	*e*Pn	**Pn**	**03 33 54.7**	**+0.5**
GSTD				*e*Sn	**Sn**	**03 34 26.

139nm,1.2s
LBZ Lake Benmore 19.36 36 *e*P **Pn 03 50 37.3 +1.5**
64nm,1.1s
CASY Casey 19.63 236 *e*P **Pn 03 50 38.5 -0.4**
195nm,1.8s
RPZ Rata Peaks 20.23 37 P **P 03 50 43.6 -0.5**
33nm,0.9s,baz=153,slow=2.3,SNR=4.6
RPZ LR LR 03 57 19.9
comp=Z,3μm,19.7s,baz=186,slow=33
RPZ Rata Peaks 20.23 37 *e*P **P 03 50 46.0 +1.8**
120nm,1.1s
KHZ Kahutara 22.16 40 *e*P **P 03 51 06.5 +1.6**
98nm,1.2s
BKZ Black Stump Fm 26.05 42 *e*P **P 03 51 43.3 +0.9**
38nm,1.3s
CAN Canberra 26.22 350 *e*P **P 03 51 43.7 -0.3**
22nm,1.0s
URZ Urewera 27.07 42 P **P 03 51 51.2 -0.4**
31nm,0.8s,baz=247,slow=5.4,SNR=16
URZ LR LR 04 00 48.5
comp=Z,783nm,19.9s,baz=212,slow=33
URZ Urewera 27.07 42 *e*P **P 03 51 53.3 +1.7**
32nm,0.8s
QSPA South Pole Qui 28.79 180 *e*P **P 03 52 09.7 +2.7**
76nm,1.6s
STKA Stephens Creek 30.59 338 P **P 03 52 22.6 -0.3**
14nm,0.8s,baz=161,slow=9.3,SNR=24
STKA LR LR 04 01 54.1
comp=Z,1μm,22.0s,baz=159,slow=31
STKA Stephens Creek 30.59 338 *e*P **P 03 52 22.9 0.0**
6.0nm,1.3s
BBOO Buckleboo 30.87 329 *e*P **P 03 52 25.3 -0.2**
30nm,0.9s
MAW Mawson 36.47 220 P **P 03 53 14.6 +0.9**
4.9nm,0.8s,baz=122,slow=11,SNR=9.8
MAW LR LR 04 08 18.9
comp=Z,2μm,18.1s,baz=112,slow=36
MAW Mawson 36.47 220 *e*P **P 03 53 15.1 +1.4**
7.2nm,1.8s
H01W1 Cape Leeuwin H 36.69 297 T T 04 32 18.3
baz=147,slow=75,SNR=2011
H01W2 Cape Leeuwin H 36.69 297 T T 04 32 18.3
baz=147,slow=75,SNR=2166
H01W3 Cape Leeuwin H 36.70 297 T T 04 32 19.5
baz=147,slow=75,SNR=1870
DZM Mont Dzumac 40.09 18 P **P 03 53 43.9 -0.8**
22nm,0.9s,baz=198,slow=13,SNR=7.3
DZM Mont Dzumac 40.09 18 *e*S **ScP 03 59 35.4 -2.6**
324nm,27.1s
DZM *e*LR LR 04 04 15.1
comp=Z,3μm,25.8s
DZM Mont Dzumac 40.09 18 *e*P **P 03 53 44.7 -0.1**
32nm,1.1s
ASAR Alice Springs 40.15 330 P **P 03 53 43.6 -1.6**
11nm,0.9s,baz=167,slow=8.6,SNR=50
ASAR PcP **PcP 03 55 47.8 -1.6**
3.6nm,0.8s,baz=156,slow=3.0,SNR=7.7
AS31 Alice Springs 40.15 330 *e*P **P 03 53 44.3 -0.9**
4.7nm,1.0s
AS31 *e*PcP **PcP 03 55 47.8 -1.7**
MORW Morawa 40.98 304 *e*P **P 03 53 51.2 -0.7**
14nm,0.9s
CTAO Charters Tower 41.56 349 *e*P **P 03 53 56.9 +0.1**
34nm,1.1s
WB2 Warramunga Arr 43.64 332 *e*P **P 03 54 12.3 -1.4**
25nm,1.3s
WR1 Warramunga Arr 43.64 332 *e*P **P 03 54 11.6 -2.1**
WRA Warramunga Arr 43.64 332 P **P 03 54 11.6 -2.1**
11nm,1.0s,baz=161,slow=7.8,SNR=12
WRA PcP **PcP 03 55 58.9 -2.0**
5.8nm,0.8s,baz=167,slow=3.9,SNR=5.7
PSA00 Pilbara Seismi 46.33 313 *e*P **P 03 54 35.1 0.0**
27nm,1.0s
SNAA Sanae 46.37 190 P **P 03 54 35.6 +0.7**
SNAA Sanae 46.37 190 P **P 03 54 35.1 +0.2**
2.2nm,0.6s,baz=189,slow=7.3,SNR=10
SNAA Sanae 46.37 190 *e*P **P 03 54 37.5 +2.5**
59nm,1.8s
VNA3 Neumayer Olymp 47.27 187 P **P 03 54 42.2 +0.3**
VNA2 Neumayer--Watz 47.44 188 P **P 03 54 43.6 +0.4**
baz=162,slow=5.5
FITZ Fitzroy Crossi 47.69 322 P **P 03 54 43.6 -2.1**
8.6nm,0.8s,baz=172,slow=11,SNR=9.9
FITZ PcP **PcP 03 56 13.8 -1.2**
3.5nm,0.8s,baz=146,slow=3.6,SNR=3.6
VNA1 Neumayer--Stat 47.77 188 P **P 03 54 46.3 +0.6**
TBI Tubuai 53.71 71 *e*S **S 04 03 02.8 -2.1**
252nm,32.0s
TBI *e*LQ LQ 04 08 02.8
869nm,28.2s
TBI *e*LR LR 04 10 47.6
comp=Z,636nm,28.0s,baz=198
TBI Tubuai 53.71 71 *e*T T 04 53 11.2
93nm,0.3s
PAE Paea 58.61 68 *e*T T 04 59 18.4
3.4nm,0.3s
TVO Taravao 58.65 68 *e*T T 04 59 22.0
3.2nm,0.3s
PPT2 Papeete2 58.67 68 *e*S **S 04 04 08.0 -3.1**
267nm,25.0s
PPT2 *e*LQ LQ 04 10 42.6
1μm,24.8s
PPT2 *e*LR LR 04 13 14.0
comp=Z,720nm,27.5s,baz=204
PPT2 Papeete2 58.67 68 *e*T T 04 59 23.6
6.4nm,0.3s
PPT Papeete 58.69 68 LR LR 04 18 10.7
comp=Z,266nm,18.2s,baz=209,slow=33
MEH Mehetia 59.10 70 *e*T T 04 59 55.5
14nm,0.2s
JAY Jayapura 59.55 344 LR LR 04 21 05.0
comp=Z,624nm,19.1s,baz=142,slow=35
RKT Rikitea 60.73 85 *e*T T 05 02 02.6
45nm,0.2s
VAH Vaihoa 61.62 69 *e*T T 05 03 03.6
106nm,0.2s
PMOR Pomariorio Ree 61.70 68 *e*T T 05 03 10.3
1.9nm,0.3s
LEM Lembang 64.40 307 LR LR 04 20 15.6
comp=Z,367nm,22.0s,baz=84,slow=32
DAV Davao City (W) 71.76 330 LR LR 04 30 46.6
comp=Z,63nm,19.0s,baz=209,slow=37
PLCA Paso Flores 71.98 146 P **P 03 57 32.6 -0.1**
3.6nm,0.7s,baz=257,slow=6.0,SNR=8.1
PLCA LR LR 04 22 08.2
comp=Z,407nm,21.8s,baz=229,slow=30
PLCA Paso Flores 71.98 146 *e*P **P 03 57 32.6 -0.1**
34nm,1.8s
PSI Prapat 76.63 302 LR LR 04 26 57.0
comp=Z,242nm,20.8s,baz=122,slow=32
H08S2 Diego Garcia H 79.42 273 T T 05 25 52.4
baz=151,slow=76,SNR=84
H08S1 Diego Garcia H 79.43 273 T T 05 25 53.4
baz=151,slow=76,SNR=85
H08S3 Diego Garcia H 79.44 273 T T 05 25 55.0
baz=151,slow=76,SNR=149
BOSA Boshof 81.39 224 P **P 03 58 26.8 +0.7**
3.6nm,0.9s,baz=170,slow=8.5,SNR=2.7
BOSA LR LR 04 32 48.0
comp=Z,255nm,18.7s,baz=166,slow=34
PALK Pallekele 88.58 288 LR LR 04 32 06.6
comp=Z,234nm,20.0s,baz=116,slow=31
CPUP Villa Florida 88.99 152 P **P 03 59 04.3 +0.3**
1.1nm,0.6s,baz=200,slow=8.8,SNR=3.8
CPUP LR LR 04 35 39.6
comp=Z,296nm,18.9s,baz=195,slow=33
LVC Limon Verde 89.44 141 LR LR 04 31 38.7
comp=Z,216nm,19.5s,baz=207,slow=30
CM31 Chiang Mai Arr 90.88 309 *e*P **P 03 59 12.4 -0.2**
7.2nm,0.4s
CMAR Chiang Mai Arr 90.88 309 P **P 03 59 12.4 -0.2**
0.5nm,0.3s,baz=186,slow=4.3,SNR=5.9
CMAR LR LR 04 38 53.6
comp=Z,172nm,19.0s,baz=160,slow=35
LPAZ La Paz 95.62 139 P **P 03 59 35.5 0.0**
0.9nm,0.9s,baz=177,slow=8.7,SNR=4.2
LPAZ LR LR 04 33 11.7
comp=Z,188nm,22.0s,baz=154,slow=30
KMI Kunming 95.62 314 P **P 03 59 37.2 +2.5**
JNU Nakatsue 96.01 340 P **P 03 59 34.7 -1.3**
6.7nm,0.9s,baz=212,slow=9.5,SNR=3.5
NNA Nana 96.63 130 LR LR 04 30 49.7
comp=Z,46nm,20.8s,baz=271,slow=28
NJ2 Nanjing 97.39 330 *e*P Pdif 03 59 44.9 +2.6
MJAR Matsushiro Arr 98.38 347 LR LR 04 41 32.1
comp=Z,102nm,21.1s,baz=140,slow=34
WMQ Urumqi 117.76 311 *e*PKP **PKiKP 04 04 57.2 +2.5**
WMQ LR LR
comp=Z,270nm,26.3s
NV01 Mina Array Sit 121.64 67 *e*PKPdf **PKPdf 04 05 01.9 -0.6**
NVAR Mina Array Bea 121.64 67 PKP **PKPdf 04 05 01.9 -0.6**
1.0nm,0.8s,baz=206,slow=4.6,SNR=9.3
KVN Kaiserville 122.25 67 *e*PKPdf **PKPdf 04 05 03.7 +0.1**
MK32 Makanchi Array 122.28 309 *e*PKPdf **PKPdf 04 05 01.3 -1.9**
MKAR Makanchi Array 122.28 309 PKP **PKPdf 04 05 01.3 -1.9**
1.2nm,1.0s,baz=146,slow=2.8,SNR=6.3
PV12 Saucer Basin, 125.88 75 *e*PKPdf **PKiKP 04 05 11.8 +0.7**
KURBB Kurchatov Arra 126.85 309 PKP **PKPdf 04 05 10.7 -1.1**
1.0nm,0.8s,baz=156,slow=1.4,SNR=8.7
TORD Torodi Ar. Bea 127.99 215 PKP **PKPdf 04 05 14.6 -0.5**
0.6nm,0.9s,baz=153,slow=0.6,SNR=2.7
TOA1 Torodi Ar. Sit 128.00 215 *e*PKPdf **PKPdf 04 05 14.6 -0.5**
PD31 Pinedale Array 129.07 71 *e*PKPdf **PKPdf 04 05 16.8 +0.2**
PDAR Pinedale Array 129.07 71 PKP **PKPdf 04 05 16.8 +0.2**
0.3nm,0.7s,baz=251,slow=2.8,SNR=3.0
RND Reindeer 131.54 30 *e*PKPdf **PKPdf 04 05 20.7 +0.3**
ILAR Eielson Array 133.16 30 PKP **PKPdf 04 05 21.6 -1.7**
0.9nm,0.9s,baz=264,slow=3.5,SNR=7.1
ILB Eielson Array 133.16 30 *e*PKPdf **PKPdf 04 05 21.6 -1.7**
BR101 Keskin Array S 138.38 267 *e*PKPdf **PKPdf 04 05 33.0 -1.1**
BRTR Keskin Array B 138.38 267 PKP **PKPdf 04 05 33.0 -1.1**
0.3nm,0.6s,baz=183,slow=5.8,SNR=2.4
NRIK Noril'sk 138.69 330 PKP **PKPdf 04 05 33.4 -0.1**
3.8nm,0.5s,baz=118,slow=9.0,SNR=3.6
COWI Conover 141.17 83 *e*PKPdf **PKPdf 04 05 39.2 +0.4**
YKA Yellowknife Ar 141.24 48 PKP **PKPdf 04 05 39.7 +1.4**
0.6nm,0.7s,baz=157,slow=1.7,SNR=3.3
YKB5 Yellowknife Ar 141.24 48 *e*PKPdf **PKPdf 04 05 39.7 +1.4**
EYMN Ely 141.37 79 *e*PKPdf **PKPdf 04 05 41.0 +2.0**
TIRR Tirgusor 144.50 267 *e*PKPdf **PKPab 04 05 42.7 -0.3**
FNA Florina 145.05 256 *e*PKPdf **PKPdf 04 05 46.3 +0.5**
VTS Vitosha 145.59 260 *e*PKPbc **PKPdf 04 05 46.8 0.0**
VTS Vitosha 145.59 260][*i*P **PKPdf 04 05 46.7 -0.1**
KEST Kesra 146.19 237 PKPbc **PKPdf 04 05 47.7 -0.3**
2.8nm,0.8s,baz=288,slow=3.2,SNR=2.3
MLR Muntele Rosu 146.44 266 *e*PKPdf **PKPbc 04 05 49.0 -0.6**
HERR Herculane 147.69 262][*i*P **PKPbc 04 05 52.7 -0.2**
MDVR Moldovita 147.95 261][*i*P **PKPbc 04 05 52.8 -0.9**
BURAR Bucovina Array 148.31 268][*i*P **PKiKP 04 05 56.8 +0.6**
BUR08 Bucovina Ar. S 148.34 268 *e*PKPbc **PKiKP 04 05 57.0 +0.7**
AKASG Malin Array Be 148.48 276 PKPbc **PKPdf 04 05 52.9 +1.8**
2.4nm,0.7s,baz=102,slow=2.6,SNR=6.7
AKBB Malin Array Si 148.48 276 *e*PKPbc **PKPbc 04 05 55.0 +0.2**
KIEV Kiev 148.48 276][*i*P **PKPbc 04 05 53.8 -0.9**
DRGR 148.94 265][*i*P **PKPbc 04 05 55.8 -0.4**
BLY Banja Luka 150.07 256 *e*PKPbc **PKPbc 04 05 59.4 +0.4**
KOLS Kolonicke sedl 150.65 267 *e*PKP **PKPab 04 06 05.4 -1.8**
KWP Kalwaria Pacla 150.91 269 *e*PKPbc **PKPbc 04 06 00.2 -0.6**
VYHS Vyhne 152.00 263 *e*PKP **PKiKP 04 06 06.3 +2.6**
RES Resolute Bay 152.84 33 *e*PKPab **PKPab 04 06 15.6 -0.1**
ESDC Sonseca Array 154.56 222 PKPbc **PKPbc 04 06 07.9 -1.4**
0.2nm,0.6s,baz=144,slow=1.4,SNR=3.6
GEC2 GERESS Array S 154.69 259 *e*PKPbc **PKPbc 04 06 07.2 -2.1**
GERES GERESS Array B 154.69 259 PKPbc **PKPbc 04 06 07.2 -2.1**
0.1nm,0.3s,baz=97,slow=2.5,SNR=3.3
FIA0 FINESS Array S 155.74 293 *e*PKPdif **PKPdf 04 06 09.2 +7.6**
FINES FINESS Array B 155.74 293 PKPbc **PKPdf 04 06 09.2 +7.6**
1.6nm,1.0s,baz=209,slow=31,SNR=2.6
ARCES ARCESS Array B 157.86 313 PKPab **PKPab 04 06 35.2 -2.1**
4.5nm,0.9s,baz=80,slow=1.4,SNR=10

RSNC 08 04:02:48.9±0.9, 2°31'N×79°72'W, h0km±22km, ML3.1, Mw3.7, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMC	**Tumaco**	**1.10**	**116**	*e*P	Pg	04 03 08.1	-1.9
GRGC	**Isla de Gorgon**	**1.69**	**66**	*e*P	Pn	04 03 18.1	-1.7
GRGC				*e*S	Sn	04 03 41.0	-1.2
GRGC				*i*		04 03 45.3	
comp=N,134nm,0.2s							
OTAV	**Otavalo**	**2.42**	**148**	*e*P	Pn	04 03 23.1	-7.0
OTAV				*e*S	Sn	04 03 49.2	-11
BBAC	**Balboa, Cauca**	**2.48**	**97**	*e*P	Pn	04 03 30.5	-0.3
BBAC				*i*		04 04 13.8	
comp=N,171nm,0.3s							
GCUF	**Volcan Galeras**	**2.60**	**114**	*e*P	Pn	04 03 31.1	-1.7
GCUF				*e*S	Sn	04 04 05.7	+0.4
GCUF				*i*		04 04 12.8	
comp=E,56nm,0.4s							
CRUC	**La Cruz**	**2.86**	**105**	*e*P	Pn	04 03 35.5	-0.7
MALC	**Bahia Malaga**	**2.92**	**54**	*e*P	Pn	04 03 36.6	-0.1
MALC				*e*S	Sn	04 04 11.9	-0.6
MALC				*i*		04 04 25.6	
comp=N,68nm,0.3s							
POPC	**Popayan, Colom**	**3.05**	**86**	*e*P	Pn	04 03 37.7	-0.9
POPC				*i*		04 03 44.9	
comp=N,62nm,0.3s							
YOTC	**Yotoco, Valle**	**3.76**	**64**	*e*P	Pn	04 03 46.9	-1.4
YOTC				*e*S	Sn	04 04 31.8	-1.5
FLOC	**Florencia**	**4.12**	**100**	*e*P	Pn	04 03 53.6	+0.3
PRAC	**Prado**	**5.02**	**74**	*e*P	Pn	04 04 06.9	+1.3

IDC 08 04:16:41.2±1.6, 5°46'S×150°88'E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/40, mbtmp3.7/5, ML2.3/1, Error ellipse: s-maj=91.5km s-min=26.7km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.38**	**223**	Pn	Pn	04 18 04.9	+2.2
6.8nm,0.3s,baz=59,slow=8.6,SNR=8.9							
PMG				Sn	Sn	04 19 01.0	-4.5
2.9nm,0.3s,baz=205,slow=19,SNR=2.5							
WRA	**Warramunga Arr**	**21.59**	**227**	P	P	04 21 32.7	-0.1
2.5nm,1.0s,baz=52,slow=9.6,SNR=3.5							
ASAR	**Alice Springs**	**24.39**	**220**	P	P	04 22 00.1	-1.3
0.6nm,0.8s,baz=54,slow=8.4,SNR=6.8							
STKA	**Stephens Creek**	**27.68**	**197**	P	P	04 22 31.5	+0.4
1.0nm,0.5s,baz=11,slow=16,SNR=3.7							
ILAR	**Eielson Array**	**83.49**	**22**	P	P	04 29 11.0	+0.3
0.3nm,0.7s,baz=216,slow=5.6,SNR=3.8							
TORD	**Torodi Ar. Bea**	**148.67**	**286**	PKPbc	PKPbc	04 36 30.8	-0.7
0.5nm,0.9s,baz=73,slow=1.8,SNR=6.9							

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*GCG **08** 04:19:39.6±0.7, 13°72'N×91°80'W, h13km±12km, MD4.5*
*IDC **08** 04:19:40.9±2.5, 14°33'N×91°03'W, h33km±17km, mb3.6/11, mb1 3.9/13, mb1mx3.7/31, mbtmp3.8/13, ML4.1/2, Error ellipse: s-maj=31.1km s-min=13.7km az=48.0*
*ISCJB **08** 04:19:41.4±0.6, 13°88'N±0°05'×91°72'W±0°04, h85km±3km, mb4.1/33, Error ellipse: s-maj=9.4km s-min=3.5km az=36.6*
*SNET **08** 04:19:44.6±0.9, 14°08'N×91°45'W, h96km±20km, ML4.2*
*UCR **08** 04:19:44.4±1.7, 13°89'N×91°53'W, h27km±15km, MD4.1, ML3.9, mb4.3(NEIC)*
*MEX **08** 04:19:45.0±0.5, 14°07'N×91°65'W, h61km±18km, MD4.3*
*NEIC **08** 04:20:03.0±1.6, 14°38'N×89°66'W, h171km±13km, mb4.3/28, MD4.1(MEX), Error ellipse: s-maj=31.2km s-min=17.3km az=50.0*
NEIC Felt at Antigua Guatemala, Mixco and Quetzaltenango.

ISC 08 04:19:41.8±1.2, 13°89N±0°07×91°71W±0°05, h56km±9km, n319, σ2°01/314, mb4.2/33, 7C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.56**	**14**	][*i*P	Pn	04 19 55.9	+1.7
STG3	**Santiaguito 3,**	**0.83**	**9**	][*i*P	Pn	04 19 58.3	+0.6
FUG	**Fuego 3**	**1.01**	**56**	][*i*P	Pn	04 20 01.0	+1.1
FUG	**Fuego 3**	**1.01**	**56**	][*i*P	Pn	04 20 01.0	+1.1
THIG		**1.15**	**332**	*e*P	Pn	04 20 02.0	+0.3
THIG				*e*S	Sn	04 20 15.2	-1.2
PCG	**Pacaya**	**1.18**	**65**	][*i*P	Pn	04 20 03.7	+1.4
PCG	**Pacaya**	**1.18**	**65**	][*i*P	Pn	04 20 03.7	+1.4
NBG	**Las Nubes**	**1.49**	**62**	][*i*P	Pn	04 20 09.2	+2.6
NBG	**Las Nubes**	**1.49**	**62**	][*i*P	Pn	04 20 09.2	+2.6
RTR	**El Retiro**	**2.00**	**90**	*e*P	Pn	04 20 14.8	+1.4
RTR	**El Retiro**	**2.00**	**90**	*e*P	Pn	04 20 14.8	+1.4
SBLS	**San Blas**	**2.03**	**91**	*e*P	Pn	04 20 14.7	+1.0
SBLS				*e*S	Sn	04 20 39.2	+1.1
SBLS	**San Blas**	**2.03**	**91**	*e*P	Pn	04 20 14.7	+1.0
SBLS				*e*S	Sn	04 20 39.2	+1.1
SNJE	**San Jose**	**2.04**	**90**	*e*P	Pn	04 20 14.9	+0.9
SNJE				*e*S	Sn	04 20 39.1	+0.6
SNJE	**San Jose**	**2.04**	**90**	*e*P	Pn	04 20 14.9	+0.9
SNJE				*e*S	Sn	04 20 39.1	+0.6
UNIC	**Santa Ana**	**2.09**	**87**	*e*P	Pn	04 20 15.4	+0.9
UNIC				*e*S	Sn	04 20 39.4	0.0
UNIC	**Santa Ana**	**2.09**	**87**	*e*P	Pn	04 20 15.4	+0.9
UNIC				*e*S	Sn	04 20 39.4	0.0
CEDA	**San Andres**	**2.25**	**92**	*e*P	Pn	04 20 17.7	+1.0
CEDA	**San Andres**	**2.25**	**92**	*e*P	Pn	04 20 17.7	+1.0
MRL	**Marmol**	**2.29**	**59**	*e*P	Pn	04 20 19.4	+2.0
MRL	**Marmol**	**2.29**	**59**	*e*P	Pn	04 20 19.4	+2.0
MRL				*e*S	Sn	04 20 51.2	+6.6
PCIG		**2.32**	**321**	*e*P	Pn	04 20 18.0	+0.4
PCIG				*e*S	Sn	04 20 44.5	-0.5
PMON	**Piamonte**	**2.33**	**94**	*e*P	Pn	04 20 19.0	+1.1
PMON	**Piamonte**	**2.33**	**94**	*e*P	Pn	04 20 19.0	+1.1
MTO3	**Montecristo**	**2.33**	**77**	][*e*P	Pn	04 20 18.5	+0.6
MTO3	**Montecristo**	**2.33**	**77**	][*e*P	Pn	04 20 18.5	+0.6
UEES	**San Salvador**	**2.40**	**94**	*e*P	Pn	04 20 19.9	+1.1
UEES				IAML		04 20 54.7	
comp=Z,1μm,0.3s							
UEES	**San Salvador**	**2.40**	**94**	*e*P	Pn	04 20 19.9	+1.1
UEES				IAML		04 20 54.7	
comp=Z,1μm,0.3s							
CCIG	**Comitan**	**2.42**	**350**	*e*P	Pn	04 20 21.7	+2.7
CCIG				*e*S	Sn	04 20 48.3	+0.7
SNET	**Serv Nac Est T**	**2.42**	**94**	*e*P	Pn	04 20 20.1	+1.1
SNET	**Serv Nac Est T**	**2.42**	**94**	*e*P	Pn	04 20 20.1	+1.1
OPAM	**San Salvador**	**2.44**	**94**	*e*P	Pn	04 20 20.8	+1.5
OPAM				*e*S	Sn	04 20 47.5	-0.6
OPAM				IAML		04 20 53.5	
comp=Z,2μm,0.2s							
OPAM	**San Salvador**	**2.44**	**94**	*e*P	Pn	04 20 20.8	+1.5
OPAM				*e*S	Sn	04 20 47.5	-0.6
OPAM				IAML		04 20 53.5	
comp=Z,2μm,0.2s							
UESS	**San Salvador**	**2.44**	**94**	*e*P	Pn	04 20 20.9	+1.6
UESS	**San Salvador**	**2.44**	**94**	*e*P	Pn	04 20 20.9	+1.6
LOMA	**San Marcos**	**2.47**	**95**	*e*P	Pn	04 20 21.1	+1.5
LOMA				*e*S	Sn	04 20 49.5	+0.8
LOMA	**San Marcos**	**2.47**	**95**	*e*P	Pn	04 20 21.1	+1.5
LOMA				*e*S	Sn	04 20 49.5	+0.8
LFU	**La Fuente**	**2.52**	**93**	*e*P	Pn	04 20 21.6	+1.2
LFU	**La Fuente**	**2.52**	**93**	*e*P	Pn	04 20 21.6	+1.2
LFRS	**El Faro**	**2.59**	**96**	*e*P	Pn	04 20 22.4	+1.1
LFRS				*e*S	Sn	04 20 52.5	+0.9
LBRS	**Las Brisas**	**2.59**	**93**	*e*P	Pn	04 20 22.5	+1.1
LLGN	**La Laguna**	**2.69**	**84**	*e*P	Pn	04 20 23.2	+0.5
LLGN	**La Laguna**	**2.69**	**84**	*e*P	Pn	04 20 23.2	+0.5
PAVA	**Las Pavas**	**2.70**	**93**	*e*P	Pn	04 20 24.0	+1.2
PAVA	**Las Pavas**	**2.70**	**93**	*e*P	Pn	04 20 24.0	+1.2
SNVI	**San Vicente**	**2.80**	**95**	*e*P	Pn	04 20 26.0	+1.7
SNVI	**San Vicente**	**2.80**	**95**	*e*P	Pn	04 20 25.2	+0.9
VICT	**Victoria**	**2.98**	**88**	*e*P	Pn	04 20 27.3	+0.5
VICT	**Victoria**	**2.98**	**88**	*e*P	Pn	04 20 27.3	+0.5
PACA	**Pacayal**	**3.32**	**97**	*e*P	Pn	04 20 31.6	+0.3
PACA	**Pacayal**	**3.32**	**97**	*e*P	Pn	04 20 31.6	+0.3
CAHU	**Cacacuatique**	**3.40**	**92**	*e*P	Pn	04 20 33.5	+1.0
CAHU	**Cacacuatique**	**3.40**	**92**	*e*P	Pn	04 20 33.4	+0.9
LCND	**La Caada**	**3.76**	**98**	*e*P	Pn	04 20 38.7	+1.4
LCND				*e*S	Sn	04 21 19.9	-0.4
LCND	**La Caada**	**3.76**	**98**	*e*P	Pn	04 20 38.7	+1.4
LCND				*e*S	Sn	04 21 19.9	-0.4
CNCH	**Conchagua**	**3.82**	**99**	*e*P	Pn	04 20 39.8	+1.7
CSGN	**Cosiguina Volc**	**4.14**	**102**	*e*Pn	Pn	04 20 45.5	+3.0
CSGN	**Cosiguina Volc**	**4.14**	**102**	*e*P	Pn	04 20 45.6	+3.0
TGUH	**Tegucigalpa,Un**	**4.31**	**87**	*e*Pn	Pn	04 20 44.1	-0.7
TGUH	**Tegucigalpa,Un**	**4.31**	**87**	*e*P	Pn	04 20 45.5	+0.7
CMIG	**Matias Romero**	**4.42**	**317**	Pn	Pn	04 20 47.4	+1.1
comp=Z,11nm,0.3s,baz=132,slow=8.6,SNR=56							
CMIG				Sn	Sn	04 21 37.5	+1.0
comp=Z,20nm,0.3s,baz=72,slow=20,SNR=3.7							
CMIG				Lg	Lg	04 21 51.4	
comp=Z,50nm,0.3s,baz=15,slow=15,SNR=6.1							
CMIG	**Matias Romero**	**4.42**	**317**	*e*P	Pn	04 20 47.3	+1.1
CRIN	**San Cristobal**	**4.69**	**104**	*e*P	Pn	04 20 52.7	+2.6
CNGN	**Cerro Negro**	**5.07**	**105**	*e*P	Pn	04 20 56.4	+1.1
MOMN	**Momotombo**	**5.25**	**106**	*e*P	Pn	04 20 59.6	+1.9
ESTN	**Estel**	**5.25**	**98**	*e*Pn	Pn	04 20 58.8	+1.0
ESTN	**Estel**	**5.25**	**98**	*e*P	Pn	04 20 59.6	+1.8
COPN	**Copaltepe**	**5.27**	**108**	*e*P	Pn	04 20 59.0	+1.0
APYN	**Apoyeque**	**5.47**	**107**	*e*P	Pn	04 21 03.6	+2.8
MATN	**Matagalpa**	**5.71**	**99**	*e*P	Pn	04 21 05.6	+1.5
MATN				IAML		04 22 14.3	
comp=N,141nm,1.3s							
ACON	**Acoyapa**	**6.65**	**106**	*e*Pn	Pn	04 21 17.3	+0.4
ACON	**Acoyapa**	**6.65**	**106**	*e*P	Pn	04 21 17.6	+0.7
ESPN	**Las Esperanzas**	**7.41**	**102**	*e*Pn	Pn	04 21 25.7	-1.7
JTS	**Las Juntas de**	**7.51**	**118**	Pn	Pn	04 21 31.1	+2.3
comp=N,1.9nm,0.3s,baz=177,slow=24,SNR=8.6							
JTS				Sn	Sn	04 22 45.1	-7.5
baz=351,slow=18,SNR=1.2							
JTS				Lg	Lg	04 23 11.1	
comp=N,0.8nm,0.3s,baz=0.0,slow=20,SNR=2.4							
JTS	**Las Juntas de**	**7.51**	**118**	*e*Pn	Pn	04 21 31.5	+2.7
JTS				*e*Sn	Sn	04 22 43.5	-9.1
857A	**Zephyrhills**	**16.81**	**30**	P	Pn	04 23 32.8	-0.5
baz=208							
449A	**Pace**	**17.29**	**13**	P	P	04 23 44.7	+4.6
baz=188							
655A	**Horseshoe Beac**	**17.41**	**25**	P	P	04 23 41.0	-0.3
baz=203							
757A	**Oxford**	**17.45**	**29**	P	Pn	04 23 41.2	0.0
baz=207							
554A	**Perry**	**17.74**	**23**	P	Pn	04 23 48.7	+3.9
baz=201							
349A	**Repton**	**17.87**	**13**	P	Pn	04 23 51.1	+4.7
baz=188							
555A	**McAlpin**	**18.06**	**25**	P	Pn	04 23 51.4	+2.7
baz=203,SNR=9.6							
350A	**Dozier**	**18.13**	**15**	P	Pn	04 23 53.6	+3.9
baz=191							
556A	**Lake Butler**	**18.19**	**27**	P	Pn	04 23 51.9	+1.5
baz=205							
453A	**Whigham**	**18.20**	**21**	P	Pn	04 23 53.0	+2.5
baz=198							
454A	**Quitman**	**18.32**	**23**	P	Pn	04 23 54.7	+2.8
baz=200							
249A	**Camden**	**18.49**	**12**	P	Pn	04 23 54.6	+0.7
baz=188							
352A	**Blakely**	**18.58**	**18**	P	Pn	04 23 55.2	+0.1
baz=195							
250A	**Grady**	**18.68**	**15**	P	Pn	04 23 57.7	+1.5
baz=191							
353A	**Camilla**	**18.69**	**20**	P	Pn	04 23 56.8	+0.4
baz=198							
WHTX	**Lake Whitney,**	**18.77**	**345**	*e*P	Pn	04 24 09.5	+12
comp=N,9.1nm,0.6s							
TXAR	**Lajitas Array**	**18.95**	**326**	P	P	04 24 01.0	+2.6
comp=N,0.1nm,0.3s,baz=153,slow=13,SNR=11							
TXAR				PcP	PcP	04 28 24.8	+2.4
comp=N,0.2nm,0.3s,baz=151,slow=2.1,SNR=6.7							
TXAR				ScP	ScP	04 31 59.0	+5.4
comp=N,0.0nm,0.3s,baz=148,slow=5.3,SNR=5.7							
TIGA	**Tifton**	**18.99**	**22**	P	Pn	04 23 59.4	-

Y49A	Blount Mountai	20.45	13	P	Pn	04 24 16.9	-0.4
	baz=189						
155A	Kite	20.47	23	P	P	04 24 14.4	-0.4
	baz=201						
OXF	Oxford	20.64	5	eP	Pn	04 24 22.0	+2.6
	comp=N,35nm,1.0s						
Y50A	Piedmont	20.64	14	P	Pn	04 24 19.2	-0.2
	baz=191						
Y51A	Rockmart	20.82	16	P	P	04 24 18.5	-0.1
	baz=193,SNR=5.8						
GOGA	Godfrey	20.83	20	P	P	04 24 19.0	+0.2
	baz=198						
X48A	Hartselle	20.90	11	eP	Pn	04 24 22.8	+0.2
	comp=N,26nm,0.8s						
X48A	Hartselle	20.90	11	P	Pn	04 24 21.6	-1.0
	baz=187						
Y52A	Lilburn	21.06	18	eP	P	04 24 21.7	+0.4
	comp=N,14nm,0.5s						
Y52A	Lilburn	21.06	18	P	P	04 24 21.6	+0.4
	baz=196						
X49A	Woodville	21.10	12	P	P	04 24 23.5	+1.8
	baz=189						
W41B	Gary Mavity, V	21.20	359	P	P	04 24 24.1	+1.4
	baz=173						
Y53A	Monroe	21.20	19	P	P	04 24 22.7	-0.1
	baz=197						
X50B	Fort Payne	21.20	14	P	P	04 24 23.0	+0.2
	baz=191						
SDV	Santo Domingo	21.24	101	P	P	04 24 19.8	-3.8
	comp=N,3.0nm,0.6s,baz=253,slow=5.0,SNR=4.4						
W39A	Magazine	21.30	355	P	P	04 24 26.6	+2.9
	baz=169						
Y54A	Tignall	21.50	21	P	P	04 24 25.5	-0.4
	baz=200						
W47A	Westpoint	21.59	9	P	P	04 24 26.1	-0.8
	baz=186						
W48A	Pulaski	21.59	11	P	P	04 24 26.1	-0.8
	baz=187						
W49A	Belvidere	21.70	12	P	P	04 24 28.2	+0.1
	baz=189						
WMOK	Wichita Mounta	21.72	344	eP	P	04 24 41.2	+13
	comp=N,5.3nm,0.9s						
WMOK	Wichita Mounta	21.72	344	P	P	04 24 28.0	-0.3
	baz=156						
X52A	Dahlonega	21.80	18	P	P	04 24 28.7	-0.4
	baz=196						
Y55A	Saluda	21.87	22	P	P	04 24 30.3	+0.4
	baz=202						
X53A	Estanollee	21.89	19	P	P	04 24 29.4	-0.7
	baz=198						
W50A	Signal Mountai	21.99	14	eP	P	04 24 34.4	+3.2
	comp=N,20nm,0.7s						
W50A	Signal Mountai	21.99	14	P	P	04 24 31.4	+0.2
	baz=192						
V46A	Holladay	22.06	8	P	P	04 24 29.7	-2.1
	baz=184,SNR=5.1						
W51A	Cleveland	22.09	15	P	P	04 24 32.3	+0.1
	baz=193						
V47A	Nunnelly	22.17	9	P	P	04 24 31.4	-1.7
	baz=186						
V48A	Smith Brothers	22.20	11	P	P	04 24 31.8	-1.6
	baz=188						
X54A	Belton	22.23	21	P	P	04 24 33.4	-0.4
	baz=200						
W52A	Murphy	22.25	17	P	P	04 24 33.7	-0.3
	baz=195						
U40A	Yellville	22.40	358	P	P	04 24 35.3	-0.2
	baz=172,SNR=5.9						
V49A	McMinnville	22.40	12	P	P	04 24 35.8	+0.2
	baz=190						
WVT	Waverly	22.42	8	P	P	04 24 34.0	-1.8
	baz=185						
X55A	Gracelyn & Ava	22.43	22	P	P	04 24 35.3	-0.6
	baz=202						
Y57A	Sumter	22.52	25	P	P	04 24 36.0	-0.9
	baz=205						
W53A	Cullowhee	22.55	19	P	P	04 24 37.8	+0.5
	baz=197						
U46A	Springville	22.60	7	P	P	04 24 35.7	-2.0
	baz=184						
X56A	White Oak	22.68	23	P	P	04 24 37.6	-0.9
	baz=203						
AMTX	Amarillo	22.76	338	P	P	04 24 39.3	-0.2
	baz=149						
W54A	Cherokee Point	22.79	21	P	P	04 24 40.0	+0.3
	baz=200						
U47A	Clarksville	22.80	9	P	P	04 24 38.2	-1.6
	baz=186						
U48A	Cassie Pea, Po	23.00	11	P	P	04 24 39.9	-2.0
	baz=188						
V52A	Sevierville	23.05	17	P	P	04 24 41.5	-0.8
	baz=196						
V53A	Saluda	23.12	19	eP	P	04 24 42.9	-0.2
	comp=N,15nm,0.9s						
V53A	Saluda	23.12	19	P	P	04 24 42.7	-0.4
	baz=198						
KMSC	Kings Mountain	23.14	22	P	P	04 24 42.4	-0.8
	baz=202						
U49A	Red Boiling Sp	23.15	12	P	P	04 24 41.9	-1.4
	baz=190						
U50A	Jamestown	23.26	14	P	P	04 24 43.0	-1.4
	baz=192						
T46A	Princeton	23.31	8	P	P	04 24 43.1	-1.7
	baz=184						
T47A	Sharon Grove	23.37	9	P	P	04 24 44.0	-1.4
	baz=186						
W56A	Indian Trail	23.41	23	P	P	04 24 44.5	-1.3
	baz=204						
U51A	La Follette	23.43	16	P	P	04 24 45.5	-0.5
	baz=194						
121A	Cookes Peak, D	23.66	324	P	P	04 25 02.9	+14
	baz=134						
TZTN	Tazewell	23.71	17	P	P	04 24 47.4	-1.2
	baz=195						
T49A	Edmonton	23.77	12	P	P	04 24 47.8	-1.4
	baz=190						
S44A	Carbondale	23.81	5	P	P	04 24 48.1	-1.3
	baz=181,SNR=6.8						
U53A	Fall Branch	23.83	18	P	P	04 24 48.5	-1.3
	baz=198,SNR=5.2						
T50A	Nancy	23.84	14	P	P	04 24 48.3	-1.4
	baz=192						
T51A	Gray	24.01	15	P	P	04 24 50.3	-1.0
	baz=194						
X60A	Albert Glenn T	24.05	29	P	P	04 24 50.6	-1.1
	baz=210						
CCM	Cathedral Cave	24.07	1	P	P	04 24 50.3	-1.6
	baz=176						
U54A	Nelsons Funny	24.22	20	P	P	04 24 52.2	-1.1
	baz=200						
V57A	Coltrane Farms	24.39	24	P	P	04 24 53.8	-0.9
	baz=205						
T52A	Hallie	24.40	17	P	P	04 24 53.9	-1.1
	baz=196						
T53A	Wise	24.42	18	P	P	04 24 53.6	-1.5
	baz=198						
U55A	TA2, Sparta	24.46	21	P	P	04 24 54.5	-1.1
	baz=201						
S49A	Springfield	24.48	12	P	P	04 24 54.5	-1.1
	baz=191						
R45A	Skylar, Fairfi	24.50	7	P	P	04 24 54.9	-0.8
	baz=183						
U56A	King	24.56	22	P	P	04 24 55.8	-0.5
	baz=203						
W60A	Pink Hill	24.57	29	P	P	04 24 55.4	-1.0
	baz=210						
S50A	Richmond	24.57	14	P	P	04 24 55.3	-1.1
	baz=193						
V58A	Windy Hill, Pi	24.58	25	P	P	04 24 55.3	-1.2
	baz=206						
CNNC	Cliffs of the	24.64	28	P	P	04 24 55.9	-1.2
	baz=210,SNR=5.9						
WCI	Wyandotte Cave	24.71	10	P	P	04 24 56.3	-1.4
	baz=188						
R47A	Wooly Knot Far	24.74	10	P	P	04 24 56.1	-1.8
	baz=188						
T54A	Tazewell	24.79	20	P	P	04 24 54.4	-4.1
	baz=200						
ANMO	Albuquerque	24.84	330	P	P	04 25 00.5	+1.4
	comp=N,0.7nm,0.5s,baz=143,slow=10,SNR=4.6						
ANMO	Albuquerque	24.84	330	P	P	04 24 59.6	+0.5
	baz=140						
TASM	ASL Pad, Albuq	24.84	330	P	P	04 24 59.7	+0.6
	baz=140						
TASM	ASL Pad, Albuq	24.84	330	P	P	04 25 00.1	+0.9
	baz=140						
V59A	Middlesex	24.92	27	P	P	04 24 57.9	-1.7
	baz=208						
R49A	Shelbyville	24.99	12	P	P	04 25 00.1	-0.1
	baz=191						
Q45A	Warren Harvey,	25.11	7	P	P	04 25 00.4	-0.9
	baz=184						
R50A	Paris	25.16	14	P	P	04 24 60.0	-1.8
	baz=193						
S53A	Williamson	25.18	18	P	P	04 25 00.4	-1.6
	baz=198						
R51A	Hillsboro	25.36	15	P	P	04 24 57.3	-6.3
	baz=194						
V60A	Jim Taylor Roa	25.36	28	P	P	04 25 00.8	-2.8
	baz=211						
S54A	Dingess, Beckl	25.55	19	P	P	04 25 00.7	-4.7
	baz=200						
U59A	Littleton	25.61	27	P	P	04 25 04.6	-1.3
	baz=209						
P43A	Skaggs, Pawnee	25.73	4	P	P	04 25 04.9	-1.9
	baz=180						
P45A	Graceland, Par	25.78	7	P	P	04 25 05.7	-1.7
	baz=184						
P46A	Rosedale	25.93	8	P	P	04 25 06.9	-1.8
	baz=186						
U60A	Pendleton	25.99	28	P	P	04 25 03.9	-5.4
	baz=210						
R54A	Victor	26.00	20	P	P	04 25 05.4	-4.0
	baz=200						
Q51A	Peebles	26.11	15	P	P	04 25 08.6	-1.8
	baz=194						
T59A	Double "B" Far	26.24	26	P	P	04 25 05.0	-6.5
	baz=209						
O44A	Mansfield	26.32	6	P	P	04 25 10.1	-2.2
	baz=183						
HDIL	Hopedale	26.65	4	P	P	04 25 12.3	-2.9
	baz=181						
O47A	Sheridan	26.69	9	P	P	04 25 13.1	-2.5
	baz=188						
Q54A	Coxs Mills	26.78	19	P	P	04 25 15.1	-1.3
	baz=200						
O48A	Farmland	26.89	11	P	P	04 25 15.3	-2.1
	baz=190						
O49A	Covington	26.99	13	P	P	04 25 16.7	-1.6
	baz=192						
N44A	Piper City	26.99	6	P	P	04 25 16.9	-1.4
	baz=183						
N43A	Stutzman Famil	27.04	4	P	P	04 25 17.1	-1.6
	baz=181						
R58A	Rapidan	27.18	24	P	P	04 25 10.6	-9.4
	baz=206						
ACSO	Alum Creek Sta	27.34	15	P	P	04 25 19.5	-1.9
	baz=195						
O51A	Pataskala	27.35	15	P	P	04 25 19.9	-1.6
	baz=196						
M41A	Milan	27.40	2	P	P	04 25 20.4	-1.5
	baz=178						
P54A	Burton	27.46	19	P	P	04 25 19.1	-3.4
	baz=200						
N48A	Decatur	27.50	11	P	P	04 25 20.4	-2.4
	baz=190						
M43A	Waltham Townsh	27.55	4	P	P	04 25 21.8	-1.5
	baz=182						
N49A	Columbus Grove	27.72	12	P	P	04 25 22.5	-2.4
	baz=192						
L42A	Oliver, Polo	28.07	3	P	P	04 25 26.2	-1.8
	baz=180						
L40A	Anamosa	28.07	1	P	P	04 25 26.6	-1.4
	baz=177						
N53A	Lisbon	28.45	17	P	P	04 25 26.6	-4.7
	baz=199						
N54A	Moraine State	28.85	19	P	P	04 25 33.3	-1.6
	baz=200						
K42A	Prairie Point,	28.86	4	P	P	04 25 32.8	-2.1
	baz=181						
JFWS	Jewell Farm	28.95	2	P	P	04 25 35.0	-0.7
	baz=179						
J42A	Columbus	29.41	4	P	P	04 25 37.9	-1.9
	baz=181						
M54A	Oil Creek Stat	29.45	19	P	P	04 25 35.6	-4.6
	baz=201						
KNB	Kanab	29.76	324	eP	P	04 26 00.7	+17
	comp=N,4.7nm,0.8s						
LDFC	Landfair	29.84	319	eP	P	04 26 02.9	+19
	comp=N,12nm,0.9s						
LCMT	Little Creek M	30.00	324	eP	P	04 26 03.2	+18
	comp=N,2.3nm,1.0s						
L54A	Sinclairville	30.21	18	P	P	04 25 45.5	-1.5
	baz=201						
CCUT	Cedar City	30.44	325	eP	P	04 26 06.9	+18
	comp=N,5.2nm,1.1s						
H40A	Chili	30.65	2	P	P	04 25 48.2	-2.6
	baz=179						
SHPR	Sheep Range	30.78	321	eP	P	04 26 10.2	+18
	comp=N,2.7nm,0.9s						
J52A	Paris	30.81	16	P	P	04 25 50.5	-1.7
	baz=198						
TYNO	Tyneside	30.84	17	P	P	04 25 50.1	-2.3
	baz=199						
SPMN	Marine on St.	31.25	359	P	P	04 25 54.3	-1.7
	baz=174						
G39A	Holcombe	31.30	1	P	P	04 25 54.9	-1.6
	baz=177						
G40A	Rib Lake	31.30	2	P	P	04 25 54.9	-1.6
	baz=179						
G43A	Wallace	31.45	5	P	P	04 25 56.0	-1.8
	baz=184						
BWLO	Walkerton	31.45	15	P	P	04 25 55.8	-2.0
	baz=196						
I52A	Shelburne	31.65	16	P	P	04 25 55.0	-4.6
	baz=198						
TPNV	Topopah Spring	31.74	321	eP	P	04 26 19.2	+18
	comp=N,8.7nm,1.8s						
TPNV	Topopah Spring	31.74	321	P	P	04 26 14.6	+14
	baz=127						
FURC	Furnace Creek,	31.82	319	P	P	04 26 17.0	+16
	baz=125						
F41A	Three Lakes	31.82	3	P	P	04 25 59.2	-1.9
	baz=181						
BMRO	Meriville Lake	31.89	14	P	P	04 25 58.8	-2.9
	baz=196						
F42A	Maple Grove Fa	31.91	5	P	P	04 25 59.9	-2.0
	baz=183						
F39A	Loretta	31.93	1	P	P	04 25 59.3	-2.7
	baz=178						
F40A	Park Falls	31.95	2	P	P	04 26 00.4	-1.9
	baz=179						
F38A	Pierce - Schro	31.97	360	P	P	04 26 00.1	-2.2
	baz=176						
WLVO	Wesleyville	32.03	18	P	P	04 26 00.6	-2.3
	baz=202						
F43A	Flat Rock, Esc	32.07	6	P	P	04 26 00.9	-2.3
	baz=185						
F45A	CMU Biological	32.12	8	P	P	04 26 01.4	-2.3
	baz=188						
R11A	Troy Canyon, C	32.26	323	eP	P	04 26 23.4	+18
	comp=N,3.2nm,1.0s						
R11A	Troy Canyon, C	32.26	323	P	P	04 26 21.9	+17
	baz=129						
F44A	Big Bay de Noc	32.29	7	P	P	04 26 03.4	-1.8
	baz=186						
E39A	Mellen	32.40	1	P	P	04 26 03.6	-2.6
	baz=178						
TOBO	Tobermory, Bru	32.41	13	P	P	04 26 01.6	-4.7
	baz=195						
PECO	Prince Edward	32.49	20	P	P	04 26 02.1	-4.8
	baz=204						
E40A	Wakefield	32.49	2	P	P	04 26 02.7	-4.2
	baz=180						
I55A	Frankford	32.52	19	P	P	04 26 05.2	-2.0
	baz=203						
E41A	Kenton	32.55	4	P	P	04 26 04.9	-2.6
	baz=181						
E42A	Champion	32.59	5	P	P	04 26 05.9	-2.0
	baz=183						
E38A	The Farm, Brul	32.61	0	P	P	04 26 06.0	-2.0
	baz=177						
E43A	Lone Tree Farm	32.63	6	P	P	04 26 06.3	-1.9
	baz=185						
PDAR	Pinedale Array	32.64	335	P	P	04 26 07.5	-1.1
	comp=N,0.3nm,0.5s,baz=134,slow=12,SNR=2.6						
PDAR				PcP	PcP	04 28 54.0	+0.4
	comp=N,0.4nm,0.8s,baz=154,slow=7.0,SNR=3.3						
PDAR				ScP	ScP	04 32 35.8	+2.9
	comp=N,0.5nm,0.7s,baz=158,slow=2.9,SNR=4.5						
F48A	Evansville	32.75	12	P	P	04 26 07.0	-2.2
	baz=193						
F49A	Sandfield	32.81	13	P	P	04 26 06.3	-3.4
	baz=194						
DELO	Deloro Mine	32.81	19	P	P	04 26 05.5	-4.2
	baz=202						
KLBO	Killbear Provi	32.85	15	P	P	04 26 07.3	-2.7
	baz=198						
H55A	Tweed	32.97	19	P	P	04 26 07.2	-4.0
	baz=203						
G53A	Haliburton	33.06	17	P	P	04 26 06.0	-5.9
	baz=200						
BUKO	Buck Lake	33.14	16	P	P	04 26 10.4	-2.2
	baz=199						
H56A	Elgin	33.31	20	P	P	04 26 10.9	-3.2
	baz=205						
PLVO	Plevna	33.45	19	P	P	04 26 13.2	-2.1
	baz=203						
F52A	Sundridge	33.48	16	P	P	04 26 12.4	-3.2
	baz=199						
D46A	Sault St. Mari	33.52	10	P	P	04 26 13.4	-2.5
	baz=190						
NV11	Mina Array Sit	33.85	321	eP	P	04 26 36.9	+18
	comp=N,0.6nm,0.8s						
MDPB	Devils Postpil	33.93	319	eP	P	04 26 38.5	+19
	comp=N,4.0nm,0.8s						
NVAR	Mina Array Bea	33.94	321	P	P	04 26 22.6	+2.7
	comp=N,0.9nm,0.6s,baz=138,slow=8.6,SNR=11						
NVAR				PcP	PcP	04 28 59.7	+2.4
	comp=N,1.2nm,0.7s,baz=123,slow=3.3,SNR=8.4						
NVAR				ScP	ScP	04 32 41.3	+3.8
	comp=N,0.6nm,0.9s,baz=97,slow=5.6,SNR=4.1						
EYMN	Ely	33.96	0	P	P	04 26 16.8	-2.9
	baz=177						
PEMO	Pembroke	33.97	18	P	P	04 26 17.2	-2.5
	baz=202						
ALGO	Algonquin Park	33.98	17	P	P	04 26 17.8	-2.1
	baz=201						
C40A	Isle Royale Na	33.99	3	P	P	04 26 15.9	-4.0
	baz=181						
E51A	G1948 Merrick	34.12	15	P	P	04 26 16.5	-4.7
	baz=198						
RYN	Ryan	34.19	321	eP	P	04 26 40.0	+18
	comp=N,3.4nm,0.8s						
KVN	Kaiserville	34.20	322	eP	P	04 26 40.0	+18
	comp=N,5.8nm,0.9s						
E53A	Dumoine, Ponti	34.48	17	P	P	04 26 20.0	-4.2
	baz=201						
E54A	Lac Daplat, Po	34.67	18	P	P	04 26 23.8	-2.0
	baz=202						
D52A	ZEK Kipawa Sen	34.82	16	P	P	04 26 24.3	-2.9
	baz=200						
YERR	Yerington	34.85	321	eP	P	04 26 46.2	+18
	comp=N,5.5nm,0.8s						
D53A	Lac Vacive, Po	35.11	17	P	P	04 26 26.6	-3.0
	baz=201						
PNTR	Pine Nut	35.14	321	eP	P	04 26 49.0	+19
	comp=N,7.6nm,0.8s						
PAHR	Pah Rah Range	35.39	322	eP	P	04 26 50.6	+18
	comp=N,5.0nm,0.9s						
D54A	Lac Fusel, La	35.47	18	P	P	04 26 30.8	-2.0
	baz=203						
BEKR	Beckworth	36.08	321	eP	P	04 26 56.5	+18
	comp=N,6.0nm,0.9s						
LSQQ	Lebel-sur-Quev	37.11	16	P	P	04 26 44.9	-1.9
	baz=201						
J08A	Circle Bar Ran	37.29	327	eP	P	04 27 05.4	+17
	comp=N,10nm,0.9s						
MATQ	Matagami	37.58	15	P	P	04 26 48.0	-2.7
	baz=200,SNR=5.1						
LPAZ	La Paz	37.97	141	P	P	04 26 55.5	+0.4
	comp=N,0.8nm,0.8s,baz=333,slow=9.0,SNR=3.5						
CHGQ	Chibougamau	38.62	18	P	P	04 26 56.8	-2.6
	baz=205						
SIV	San Ignacio	42.41	133	P	P	04 27 31.8	+0.6
	comp=N,1.5nm,0.6s,baz=312,slow=7.8,SNR=10						
SIV				PcP	PcP	04 29 24.0	+0.4
	comp=N,1.1nm,0.5s,baz=286,slow=4.3,SNR=6.1						
SCHQ	Schefferville	45.23	20	P	P	04 27 50.5	-2.8
	comp=N,10nm,0.6s,baz=225,slow=5.9,SNR=16						
YKA	Yellowknife Ar	51.20	347	P	P	04 28 38.6	-0.5
	comp=N,0.9nm,0.5s,baz=147,slow=7.7,SNR=4.4						
ILAR	Eielson Array	63.05	337	P	P	04 30 03.1	+0.3
	comp=N,0.9nm,0.9s,baz=132,slow=4.4,SNR=10.0						
TOLK	Toolik Lake Re	65.72	340	P	P	04 30 21.1	+0.8
	baz=113						
ESDC	Sonseca Array	79.56	52	P	P	04 31 39.8	-3.3
	comp=N,0.3nm,0.4s,baz=287,slow=4.9,SNR=5.9						
NOA	NORSAR Array B	84.11	28	P	P	04 32 05.1	-1.5
	comp=N,0.5nm,0.7s,baz=289,slow=5.3,SNR=2.9						
ARCES	ARCESS Array B	86.15	18	P	P	04 32 14.8	-1.7
	comp=N,8.5nm,0.3s,baz=316,slow=3.8,SNR=7.0						
TORD	Torodi Ar. Bea	90.13	77	P	P	04 32 34.4	-2.1
	comp=N,0.7nm,1.2s,baz=298,slow=5.8,SNR=3.5						
MKAR	Makanchi Array	119.36	5	PKP	PKPdf	04 38 25.2	+0.2
	comp=N,0.3nm,0.6s,baz=316,slow=4.0,SNR=3.4						
WRA	Warramunga Arr	135.64	256	PKP	PKiKP	04 39 01.0	+2.7
	comp=N,0.4nm,0.4s,baz=73,slow=3.7,SNR=4.9						
CMAR	Chiang Mai Arr	146.19	342	PKPbc	PKPab	04 39 17.5	+0.1
	comp=N,4.5nm,0.8s,baz=334,slow=3.0,SNR=14						

NNC 08 04:45:11.4±6.3, 37°.00N×70°.85E, h0km, mb3.9, mpv3.5, 4C-3D, Error ellipse: s-maj=50.5km s-min=46.0km az=11.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.10	358	⇓P	Pn	04 46 44.4	+1.6
	1.5nm,0°.2s,baz=175,slow=12,SNR=91						
KK31				⇑S	Sn	04 47 55.2	+1.8
	3.4nm,0.6s,baz=191,slow=25,SNR=5.8						
AAK	Ala-Archa	6.29	25	⇓P	Pn	04 46 45.4	-0.1
	2.2nm,0.4s						
AAK				⇑S	Sn	04 47 58.4	+0.2
	3.8nm,0.6s						
TKM2	Tokmak 2	6.95	30	⇑P	Pn	04 46 54.6	0.0
	1.3nm,0.5s						
AB31	Akbulak array	14.59	331	⇑P	Pn	04 48 36.3	-2.7
	0.7nm,0.5s,baz=167,slow=12,SNR=16						
AB31				⇓S	Sn	04 51 21.1	-0.3
	1.0nm,0.6s,baz=164,slow=23,SNR=3.9						

MAN 08 04:58:30.2, 7°.75N×124°.63E, h67km, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.44	73	eP	Pn	04 58 44.5	+2.3
BUKP				eS	Sn	04 58 54.2	+3.1
CTBH	Cotabato--PC H	0.65	216	⇑P	Pn	04 58 46.0	+1.7
DDMP	Don Marcelino,	1.96	147	eP	Pn	04 59 01.6	+0.4
DDMP				eS	Sn	04 59 26.1	+1.3

*DDA **08** 05:06:59.9, 37°.75N×32°.09E, h7km±2km, ML2.8*
*ISK **08** 05:07:00.3, 37°.77N×32°.12E, h5km, ML2.1/7*
ISC 08 05:07:00.3±1.1, 37°.75N±0°.03×32°.10E±0°.04, h13km±9km, n13, σ0°.44/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMER	Konya-Meram	0.21	85	iP	Pg	05 07 05.2	+0.1
KMER				iS	Sg	05 07 08.0	-0.3
KMER				IAML_P			
	comp=Z,3μm,0.1s						
KONT	Konya--Tatoy	0.28	47	PG	Pg	05 07 06.1	-0.1
KONT				SG	Sg	05 07 10.4	+0.2
KONT	Konya--Tatoy	0.28	47	iP	Pb	05 07 06.9	-0.4
KONT				iS	Sb	05 07 11.4	-0.5
KONT				IAML_P			
	comp=Z,3μm,0.1s						
DOGA	KONYA_Doganhis	0.49	316	iP	Pg	05 07 09.5	-0.5
DOGA				iS	Sg	05 07 17.3	+0.6
DOGA				IAML_P			
	comp=Z,6μm,0.2s						
LADK	Ladik-KONYA	0.49	25	PG	Pg	05 07 10.1	0.0
LADK				SG	Sg	05 07 17.1	+0.4
KDHN	Kadinhani	0.77	1	iP	Pg	05 07 14.4	-0.8
KDHN				iS	Sb	05 07 26.6	+0.6
KEPZ	Antalya-Kepez	0.94	205	iP	Pg	05 07 18.2	-0.2
CHBY	Cihanbeyli	1.04	37	PG	Pb	05 07 20.3	+0.1
KIZT	Kizilcal	1.14	351	PN	Pn	05 07 22.4	+0.3
BERE	Bereket-Mersin	1.66	147	PN	Pb	05 07 30.9	0.0
TEVE	Tevekalti-Mers	1.70	140	PN	Pb	05 07 31.6	+0.2
TEKE	Tekeli-Mersin	1.80	153	PN	Pb	05 07 32.8	-0.3
KEBE	Keben-Mersin	1.83	135	PN	Pb	05 07 33.3	-0.4

MAN 08 05:08:49.1, 7°.42N×124°.80E, h1km, mb4.1, ML2.9, MS2.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.53**	**30**	*eP*	**Pg**	05 09 00.0	+0.7
BUKP				*eS*	Sb	05 09 08.1	-1.4
CTBH	**Cotabato--PC H**	**0.58**	**251**	‖ *iP*	**Pg**	05 09 00.4	+0.2
CTBH				*i* S	Sb	05 09 09.9	-0.9
CGP	**Cagayan de Oro**	**1.04**	**354**	‖ *eP*	**Pg**	05 09 09.3	+0.2
CGP				*eS*	Sb	05 09 23.8	-0.2
DDMP	**Don Marcelino,**	**1.59**	**145**	*eP*	**Pn**	05 09 17.8	-0.7
DDMP				*eS*	**Sg**	05 09 40.7	+0.4
IPIL	**Ipil**	**2.24**	**280**	*eP*	**Pn**	05 09 27.7	+0.4
IPIL				*eS*	Sb	05 09 58.0	-0.6

*ISCJB **08** 05:20:05.5±0.3, 59.°62N×0.°02×152.°69W±0.°05, h96km±3km, mb3.1/2, Error ellipse: s-maj=4.4km s-min=3.0km az=33.4*
*IDC **08** 05:20:06.4±6.3, 59.°80N×152.°87W, h75km±56km, mb3.1/2, mb1 3.7/6, mb1mx3.3/45, mbtmp3.7/6, ML3.7/4, MS3.5/1, Ms1 3.5/1, ms1mx2.8/19, Error ellipse: s-maj=50.6km s-min=22.5km az=53.0*
*NEIC **08** 05:20:08.0±0.0, 59.°64N×152.°73W, h79km, ML3.3(AEIC), After AEIC.*
ISC 08 05:20:06.6±0.8, 59.°62N±0.°03×152.°70W±0.°04, h87km±6km, n90, σ1§04/113, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILS	**Iliamna Low So**	**0.39**	**332**	*e*Pn	**Pn**	**05 20 20.0**	**-0.4**
IVE	**Iliamna Volcan**	**0.43**	**339**	*e*Pn	**Pn**	**05 20 20.2**	**-0.5**
AUL	**Augustine Lava**	**0.44**	**238**	*e*Pn	**Pn**	**05 20 20.8**	**+0.3**
AUH	**Augustine H**	**0.46**	**237**	*e*Pn	**Pn**	**05 20 20.9**	**+0.2**
AUW	**Augustine West**	**0.46**	**238**	*e*Pn	**Pn**	**05 20 21.1**	**+0.3**
AUI	**Augustine Isla**	**0.47**	**233**	*e*Pn	**Pn**	**05 20 20.9**	**+0.1**
AUI				*e*Sn	**Sn**	**05 20 31.3**	**+0.1**
HOM	**Homer**	**0.54**	**85**	*e*Pn	**Pn**	**05 20 22.0**	**+0.7**
HOM				*e*Sn	**Sn**	**05 20 33.8**	**+1.6**
CNPM	**China Poot**	**0.75**	**96**	*e*Pn	**Pn**	**05 20 23.7**	**+0.4**
CNPM				*e*Sn	**Sn**	**05 20 36.1**	**+0.3**
RDSO	**Redoubt South**	**0.84**	**359**	*e*Pn	**Pn**	**05 20 24.4**	**-0.1**
RDSO				*e*Sn	**Sn**	**05 20 37.6**	**-0.2**
RSO	**Redoubt South**	**0.85**	**358**	*e*Pn	**Pn**	**05 20 24.5**	**-0.1**
RDWB	**Redoubt West**	**0.88**	**356**	*e*Pn	**Pn**	**05 20 24.6**	**-0.3**
RDWB				*e*Sn	**Sn**	**05 20 38.0**	**-0.5**
BRLK	**Bradley Lake**	**0.93**	**80**	*e*Pn	**Pn**	**05 20 25.2**	**-0.1**
BRLK				*e*Sn	**Sn**	**05 20 38.9**	**-0.4**
RDJH	**Redoubt Jeurge**	**0.98**	**357**	*e*Pn	**Pn**	**05 20 26.0**	**+0.1**
RDJH				*e*Sn	**Sn**	**05 20 40.1**	**-0.4**
FONW	**Fourpeaked Sta**	**1.00**	**219**	*e*Pn	**Pn**	**05 20 26.2**	**+0.1**
KAHG	**Katmai Hook Gl**	**1.48**	**221**	*e*Pn	**Pn**	**05 20 32.5**	**+0.6**
KARR	**Katmai Rainbow**	**1.53**	**224**	*e*Pn	**Pn**	**05 20 33.2**	**+0.7**
SLKM	**Skilak Lake**	**1.53**	**53**	*e*Pn	**Pn**	**05 20 33.1**	**+0.5**
KAHC	**Katmai Hardscr**	**1.53**	**232**	*e*Pn	**Pn**	**05 20 33.0**	**+0.2**
SPU	**Mount Spurr**	**1.60**	**11**	*e*Pn	**Pn**	**05 20 33.5**	**-0.1**
SPWE	**Spurr West**	**1.67**	**2**	*e*Pn	**Pn**	**05 20 34.9**	**+0.5**
SEW	**Seward**	**1.71**	**72**	*e*Pn	**Pn**	**05 20 35.4**	**+0.5**
SEW				*e*Sn	**Sn**	**05 20 55.2**	**-1.1**
KDAK	**Kodiak Island**	**1.84**	**178**	*e*Pn	**Pn**	**05 20 36.5**	**-0.1**
KDAK				*e*Sn	**Sn**	**05 20 58.9**	**-0.4**
KABU	**Katmai Buttres**	**1.90**	**226**	*e*Pn	**Pn**	**05 20 38.2**	**+0.7**
KABU				*e*Sn	**Sn**	**05 21 01.5**	**+0.6**
ACHA	**Angle Creek He**	**1.96**	**225**	*e*Pn	**Pn**	**05 20 39.1**	**+0.9**
KELA	**Mount Kelaz**	**1.96**	**234**	*e*Pn	**Pn**	**05 20 38.7**	**+0.4**
FIB	**Fire Island**	**2.00**	**38**	*e*Pn	**Pn**	**05 20 40.0**	**+1.4**
SVW2	**Sparrevohn**	**2.06**	**317**	*e*Pn	**Pn**	**05 20 39.2**	**-0.3**
SVW2				*e*Sn	**Sn**	**05 21 02.0**	**-2.6**
RC01	**Rabbit Creek A**	**2.09**	**44**	*e*Pn	**Pn**	**05 20 40.4**	**+0.6**
RC01				*e*Sn	**Sn**	**05 21 05.3**	**+0.1**
SUA	**Susitna One**	**2.09**	**27**	*e*Pn	**Pn**	**05 20 40.4**	**+0.4**
SUA				*e*Sn	**Sn**	**05 21 07.9**	**+2.5**
PTE	**Portage**	**2.22**	**54**	*e*Pn	**Pn**	**05 20 41.9**	**+0.3**
OHAK	**Old Harbor**	**2.42**	**188**	*e*Pn	**Pn**	**05 20 43.7**	**-0.5**
OHAK				*e*Sn	**Sn**	**05 21 11.7**	**-1.3**
PMR	**Palmer**	**2.65**	**40**	*e*Pn	**Pn**	**05 20 47.2**	**-0.1**
PMR				*e*Sn	**Sn**	**05 21 18.4**	**-0.2**
KNK	**Knik Glacier**	**2.77**	**47**	*e*Pn	**Pn**	**05 20 48.7**	**-0.2**
KNK				*e*Sn	**Sn**	**05 21 20.8**	**-0.6**
GHO	**Glory Hole Cre**	**2.85**	**39**	*e*Pn	**Pn**	**05 20 50.2**	**+0.1**
GHO				*e*Sn	**Sn**	**05 21 23.3**	**-0.3**
GLI	**Glacier Island**	**3.07**	**63**	*e*Pn	**Pn**	**05 20 51.9**	**-1.1**
GLI				*e*Sn	**Sn**	**05 21 25.4**	**-3.3**
SII	**Sitkinak Islan**	**3.17**	**195**	*e*Pn	**Pn**	**05 20 53.7**	**-0.6**
SII				*e*Sn	**Sn**	**05 21 28.9**	**-2.1**
MID	**Middleton Isla**	**3.25**	**91**	*e*Pn	**Pn**	**05 20 55.2**	**-0.1**
JPK	**Jack Peak**	**3.36**	**62**	*e*Pn	**Pn**	**05 20 56.1**	**-0.8**
SCM	**Sheep Creek Mo**	**3.45**	**48**	*e*Pn	**Pn**	**05 20 58.1**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.61**	**72**	*e*Pn	**Pn**	**05 21 00.5**	**+0.3**
TT01	**Tatalina**	**3.67**	**336**	*e*Pn	**Pn**	**05 21 01.1**	**0.0**
TT01				*e*Pn	**Pn**	**05 21 01.1**	**0.0**
HUR	**Hurricane**	**3.68**	**22**	*e*Pn	**Pn**	**05 21 02.3**	**+1.0**
DIV	**Divide**	**3.76**	**63**	*e*Pn	**Pn**	**05 21 02.7**	**+0.4**
CAST	**Castle Rocks**	**3.83**	**4**	*e*Pn	**Pn**	**05 21 03.6**	**+0.4**
SGAM	**Sherman Glacie**	**3.86**	**73**	*e*Pn	**Pn**	**05 21 03.6**	**-0.1**
TRF	**Thorofare Moun**	**4.02**	**16**	*e*Pn	**Pn**	**05 21 07.1**	**+1.2**
TRF				*e*Sn	**Sn**	**05 21 53.2**	**+1.4**
KTH	**Kantishna Hill**	**4.04**	**11**	*e*Pn	**Pn**	**05 21 06.4**	**+0.3**
RND	**Reindeer**	**4.23**	**24**	*e*Pn	**Pn**	**05 21 09.0**	**+0.3**
HMT	**Hamilton**	**4.30**	**77**	*e*Pn	**Pn**	**05 21 10.4**	**+0.8**
HMT				*e*Sn	**Sn**	**05 21 55.5**	**-3.1**
DHY	**Denali Highway**	**4.32**	**34**	*e*Pn	**Pn**	**05 21 10.1**	**+0.1**
NICHA	**Nichawak Mount**	**4.44**	**78**	*e*Pn	**Pn**	**05 21 11.8**	**+0.3**
MCK	**McKinley**	**4.50**	**22**	*e*Pn	**Pn**	**05 21 13.2**	**+0.8**
CHGN	**Chignik**	**4.50**	**225**	*e*Pn	**Pn**	**05 21 12.1**	**-0.2**
BPAW	**Bear Paw Mtn.**	**4.57**	**9**	*e*Pn	**Pn**	**05 21 13.7**	**+0.3**
HARP	**HAARP**	**4.61**	**50**	*e*Pn	**Pn**	**05 21 14.5**	**+0.6**
BWN	**Browne**	**4.82**	**17**	*e*Pn	**Pn**	**05 21 17.5**	**+0.9**
BWN				*e*Pn	Pn	05 21 17.6	+1.0
PAX	**Paxson**	**4.84**	**43**	*e*Pn	**Pn**	**05 21 16.9**	**-0.1**
CRQM	**Cirque**	**4.91**	**72**	*e*Pn	**Pn**	**05 21 18.0**	**0.0**
SNH	**Sunshine Point**	**5.00**	**79**	*e*Pn	**Pn**	**05 21 19.8**	**+0.7**
WRH	**Wood River Hil**	**5.33**	**22**	*e*Pn	**Pn**	**05 21 23.0**	**-0.6**
BALM	**Baldy**	**5.34**	**70**	*e*Pn	**Pn**	**05 21 24.0**	**+0.2**
MLY	**Manley**	**5.51**	**9**	*e*Pn	**Pn**	**05 21 26.3**	**+0.2**
CCB	**Clear Creek Bu**	**5.55**	**22**	*e*Pn	**Pn**	**05 21 25.9**	**-0.5**
RIDG	**Independent Ri**	**5.58**	**39**	*e*Pn	**Pn**	**05 21 27.1**	**+0.1**
PS08	**TAPS Pump Stn8**	**5.66**	**27**	*e*Pn	**Pn**	**05 21 28.1**	**0.0**
COLA	**College**	**5.74**	**21**	*e*Pn	**Pn**	**05 21 29.1**	**0.0**
DOT	**Dot Lake**	**5.77**	**42**	*e*Pn	**Pn**	**05 21 30.0**	**+0.4**
ILAR	**Eielson Array**	**5.84**	**25**	P	**Pn**	**05 21 29.9**	**-0.6**
	2.9nm,0.3s,baz=207,slow=14,SNR=138						
ILAR				S	**Sn**	**05 22 32.9**	**-3.2**
	2.8nm,0.3s,baz=214,slow=17,SNR=9.1						
ILB	**Eielson Array**	**5.84**	**25**	*e*Pn	**Pn**	**05 21 30.3**	**-0.3**
BCA3	**Beaver Creek A**	**6.29**	**52**	*e*Pn	**Pn**	**05 21 36.7**	**+0.1**
IM3	**Indian Mountai**	**6.41**	**356**	*e*Pn	**Pn**	**05 21 38.0**	**-0.2**
BCPM	**Bancas Point**	**6.61**	**81**	*e*Pn	**Pn**	**05 21 42.3**	**+1.3**
PNL	**Peninsula**	**6.75**	**84**	*e*Pn	**Pn**	**05 21 43.0**	**+0.1**
PRP	**Porcupine Dome**	**6.78**	**26**	*e*Pn	**Pn**	**05 21 43.2**	**-0.3**
HYT	**Haines Junctio**	**7.67**	**74**	*e*Pn	**Pn**	**05 21 56.5**	**+1.0**
COLD	**Coldfoot**	**7.72**	**7**	*e*Pn	**Pn**	**05 21 56.7**	**+0.5**
FYU	**Fort Yukon**	**7.75**	**23**	*e*Pn	**Pn**	**05 21 55.4**	**-1.0**
BM3	**Burnt Mountain**	**8.62**	**21**	*e*Pn	**Pn**	**05 22 07.2**	**-1.2**
WHY	**Whitehorse**	**8.95**	**76**	*e*Pn	**Pn**	**05 22 13.5**	**+0.5**
TOLK	**Toolik Lake Re**	**9.16**	**7**	*e*Pn	**Pn**	**05 22 18.1**	**+2.3**
DLBC	**Dease Lake**	**11.73**	**86**	P	**Pn**	**05 22 51.0**	**+0.3**
	0.3nm,0.3s,baz=287,slow=11,SNR=3.6						
DLBC				S	**Sn**	**05 24 55.8**	**-3.7**
	0.2nm,0.3s,baz=173,slow=16,SNR=4.1						
INK	**Inuvik**	**12.06**	**36**	P	**Pn**	**05 22 53.8**	**-1.2**
	0.1nm,0.3s,baz=236,slow=15,SNR=5.7						
INK	**Inuvik**	**12.06**	**36**	*e*Pn	**Pn**	**05 22 54.9**	**-0.1**
YKA	**Yellowknife Ar**	**18.48**	**65**	P	**P**	**05 24 15.0**	**-0.2**
	0.4nm,0.3s,baz=278,slow=9.9,SNR=9.8						
YKB5	**Yellowknife Ar**	**18.48**	**65**	*e*P	**P**	**05 24 15.1**	**-0.2**
YBH	**Yreka Blue Hor**	**25.76**	**121**	LR	LR	05 33 07.5	
	comp=Z,104nm,18.6s,baz=356,slow=30						
NV01	**Mina Array Sit**	**30.40**	**119**	*e*P	**P**	**05 26 13.5**	**+2.9**
NVAR	**Mina Array Bea**	**30.40**	**119**	P	**P**	**05 26 13.5**	**+2.9**
	0.2nm,0.5s,baz=316,slow=5.1,SNR=3.0						
MK32	**Makanchi Array**	**64.83**	**322**	*e*P	**P**	**05 30 35.4**	**-0.4**
MKAR	**Makanchi Array**	**64.83**	**322**	P	**P**	**05 30 35.4**	**-0.4**
	0.2nm,0.5s,baz=33,slow=6.2,SNR=2.8						

*IDC **08** 05:41:54.1±0.6, 52.°22N×160.°18E, h0km, mb4.2/27, mb1 4.4/31, mb1mx4.3/41, mbtmp4.2/31, ML4.3/3, MS4.0/17, Ms1 4.0/17, ms1mx3.7/48, Error ellipse: s-maj=15.1km s-min=11.5km az=154.0*
*KRSC **08** 05:41:54.1±2.7, 51.°92N×160.°64E, h60km±24km, ML4.6*
*MOS **08** 05:41:57.1±1.1, 51.°99N×160.°42E, h40km, mb5.0/47, MS4.1/7, Error ellipse: s-maj=6.6km s-min=3.6km az=103.5*
*ISCJB **08** 05:41:57.7±0.5, 52.°03N±0.°03×160.°41E±0.°04, h40km±3km, mb4.6/133, MS4.2/34, Error ellipse: s-maj=5.5km s-min=3.4km az=145.9*
*BJI **08** 05:41:57.5±0.0, 52.°62N×159.°99E, h24km, mb4.7/39, mB4.9/25, Ms4.6/23, Ms7 4.3/23*
*NEIC **08** 05:41:59.5±2.0, 52.°08N×160.°37E, h36km±5km, mb4.6/73, Error ellipse: s-maj=15.8km s-min=11.0km az=179.0*
ISC 08 05:41:57.9±0.8, 52.°08N±0.°04×160.°43E±0.°03, h29km±5km, n333, σ1§43/349, mb4.6/133, MS4.3/34, 19C-22D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.05**	**346**	*e*P	**Pn**	**05 42 15.8**	**-0.8**
SPN				*e*S	**Sb**	**05 42 31.4**	**+0.6**
SPN	**Mys Shipunski**	**1.05**	**346**	PN	**Pn**	**05 42 15.8**	**-0.8**
SPN				S	**Sb**	**05 42 31.4**	**+0.6**
RUS	**Russkaya**	**1.23**	**287**	*e*P	**Pn**	**05 42 18.9**	**-0.2**
RUS				*e*S	**Sb**	**05 42 37.3**	**+1.4**
RUS	**Russkaya**	**1.23**	**287**	PN	**Pn**	**05 42 18.9**	**-0.2**
RUS				S	**Sb**	**05 42 37.3**	**+1.4**
NLC	**Nalytchevo**	**1.28**	**329**	*e*P	**Pn**	**05 42 20.3**	**+0.6**
NLC	**Nalytchevo**	**1.28**	**329**	PN	**Pn**	**05 42 20.3**	**+0.6**
DALK	**Dalny**	**1.40**	**314**	*e*P	**Pn**	**05 42 22.1**	**+0.7**
DALK				*e*S	**Sb**	**05 42 41.9**	**+1.2**
DALK	**Dalny**	**1.40**	**314**	PN	**Pn**	**05 42 22.1**	**+0.7**
DALK				S	**Sb**	**05 42 41.9**	**+1.2**
MTVR	**Mutnovka**	**1.44**	**287**	*e*P	**Pn**	**05 42 21.7**	**-0.4**
MTVR	**Mutnovka**	**1.44**	**287**	PN	**Pn**	**05 42 21.7**	**-0.4**
PET	**Petropavlovsk**	**1.44**	**312**	*e*Pn	**Pn**	**05 42 22.4**	**+0.4**
PET				*e*Sn	**Sb**	**05 42 43.7**	**+1.8**
PET	**Petropavlovsk**	**1.44**	**312**	*e*P	**Pn**	**05 42 22.8**	**+0.8**
PET				*e*S	**Sb**	**05 42 42.7**	**+0.8**
PET	**Petropavlovsk**	**1.44**	**312**	*a i*PN	**Pn**	**05 42 22.8**	**+0.8**
PET				*e*S	**Sb**	**05 42 41.9**	**0.0**
PET				pmax	pmax		
	comp=Z,700nm,0.7s						
PET				smax	smax		
	comp=N,4μm,0.7s						
PET				smax	smax		
	comp=E,4μm,0.8s						
KDTR	**Khodutka, Kamc**	**1.48**	**260**	*e*P	**Pn**	**05 42 21.3**	**-1.2**
KDTR				*e*S	**Sn**	**05 42 40.5**	**-0.4**
KDTR	**Khodutka, Kamc**	**1.48**	**260**	PN	**Pn**	**05 42 21.3**	**-1.2**
KDTR				S	**Sn**	**05 42 40.5**	**-0.4**
UGLR	**Uglovaya**	**1.50**	**320**	*e*P	**Pn**	**05 42 23.4**	**+0.5**
UGLR	**Uglovaya**	**1.50**	**320**	PN	**Pn**	**05 42 23.4**	**+0.5**
GRL	**Gorelyy**	**1.52**	**289**	*e*P	**Pb**	**05 42 24.8**	**-0.7**
GRL	**Gorelyy**	**1.52**	**289**	PN	**Pb**	**05 42 24.8**	**-0.7**
SDLR	**Sedlovina**	**1.53**	**322**	*e*P	**Pn**	**05 42 24.2**	**+0.9**
SDLR	**Sedlovina**	**1.53**	**322**	PN	**Pn**	**05 42 24.2**	**+0.9**
SMAR	**Somma**	**1.55**	**321**	*e*P	**Pn**	**05 42 23.7**	**+0.1**
SMAR	**Somma**	**1.55**	**321**	PN	**Pn**	**05 42 23.7**	**+0.1**
AVH	**Avacha**	**1.57**	**320**	*e*P	**Pn**	**05 42 25.2**	**+1.3**
AVH	**Avacha**	**1.57**	**320**	PN	**Pn**	**05 42 25.2**	**+1.3**
ASAK	**Asacha**	**1.59**	**282**	*e*P	**Pn**	**05 42 24.5**	**+0.4**
ASAK	**Asacha**	**1.59**	**282**	PN	**Pn**	**05 42 24.5**	**+0.4**
KRMR	**Karymshinskiy**	**1.60**	**299**	*e*P	**Pn**	**05 42 24.7**	**+0.6**
KRMR	**Karymshinskiy**	**1.60**	**299**	PN	**Pn**	**05 42 24.7**	**+0.6**
KRER	**Koryakskii**	**1.60**	**321**	*e*P	**Pn**	**05 42 25.6**	**+1.3**
KRER	**Koryakskii**	**1.60**	**321**	PN	**Pn**	**05 42 25.6**	**+1.3**
KOK	**Koryaka**	**1.63**	**319**	*e*P	**Pb**	**05 42 26.2**	**-1.2**
KOK	**Koryaka**	**1.63**	**319**	PN	**Pb**	**05 42 26.2**	**-1.2**
KRX	**Arik**	**1.68**	**320**	*e*P	**Pn**	**05 42 26.7**	**+1.3**
KRX	**Arik**	**1.68**	**320**	PN	**Pn**	**05 42 26.7**	**+1.3**
PEA0B	**Petropavlovsk-**	**1.96**	**303**	*e*Pn	**Pn**	**05 42 30.1**	**+1.0**
PEA0B				*e*Sn	**Sn**	**05 42 49.4**	**-3.4**
PETK	**Petropavlovsk-**	**1.96**	**303**	Pn	**Pn**	**05 42 30.0**	**+0.9**
	comp=E,20nm,0.3s,baz=108,slow=18,SNR=290						
PETK				Sn	**Sn**	**05 42 48.1**	**-4.7**
	comp=E,72nm,0.3s,baz=110,slow=23,SNR=15						
PETK				LR	LR	05 43 03.6	
	comp=E,997nm,19.6s,baz=127,slow=40						
PEA1	**Petropavlovsk-**	**1.96**	**303**	*e*Pn	**Pn**	**05 42 30.0**	**+0.8**
PEA1				*e*Sn	**Sn**	**05 42 48.1**	**-4.8**
APC	**Apacha**	**2.17**	**294**	*e*P	**Pn**	**05 42 33.8**	**+1.8**
APC	**Apacha**	**2.17**	**294**	PN	**Pn**	**05 42 33.8**	**+1.8**
GNL	**Ganaly**	**2.21**	**318**	*e*P	**Pn**	**05 42 34.4**	**+1.7**
GNL	**Ganaly**	**2.21**	**318**	PN	**Pn**	**05 42 34.4**	**+1.7**
PAU	**Pauzhetka**	**2.33**	**256**	*e*P	**Pn**	**05 42 33.9**	**-0.3**
PAU	**Pauzhetka**	**2.33**	**256**	PN	**Pn**	**05 42 33.9**	**-0.3**
MKZ	**Mys Kozlova**	**2.60**	**17**	*e*P	**Pn**	**05 42 37.3**	**-0.6**
MKZ				*e*S	**Sn**	**05 43 08.4**	**-0.1**
MKZ	**Mys Kozlova**	**2.60**	**17**	PN	**Pn**	**05 42 37.3**	**-0.6**
MKZ				S	**Sn**	**05 43 08.4**	**-0.1**
KZV	**Kizimen**	**3.04**	**359**	*e*P	**Pn**	**05 42 45.4**	**+1.3**
KZV	**Kizimen**	**3.04**	**359**	PN	**Pn**	**05 42 45.4**	**+1.3**
SKR	**Severo-Kuril's**	**3.04**	**244**	*e*P	**Pn**	**05 42 43.3**	**-0.7**
SKR				*e*S	**Sn**	**05 43 17.9**	**-1.5**
SKR	**Severo-Kuril's**	**3.04**	**244**	*e*PN	**Pn**	**05 42 42.5**	**-1.5**
SKR				pmax	pmax		
	comp=Z,192nm,0.8s						
SKR				pmax	pmax		
	comp=Z,200nm,2.5s						
SKR				MLR	MLR		
	comp=Z,3μm,13.0s						
SKR				MLR	MLR		
	comp=Z,2μm,13.0s						
TUMD	**Tumrok D**	**3.13**	**360**	*e*P	**Pn**	**05 42 45.9**	**+0.7**
TUMD				*e*S	**Sn**	**05 43 23.2**	**+1.6**
TUMR	**Tumrok**	**3.21**	**357**	*e*P	**Pn**	**05 42 48.2**	**+1.7**
TUMR	**Tumrok**	**3.21**	**357**	PN	**Pn**	**05 42 45.9**	**-0.6**
TUMR				S	**Sn**	**05 43 23.2**	**-0.6**
ALID	**Alaid**	**3.28**	**250**	*e*P	**Pn**	**05 42 47.2**	**-0.3**
ALID	**Alaid**	**3.28**	**250**	PN	**Pn**	**05 42 47.2**	**-0.3**
ESO	**Esso**	**3.99**	**346**	*e*P	**Pn**	**05 42 58.5**	**+1.5**
ESO	**Esso**	**3.99**	**346**	PN	**Pn**	**05 42 58.5**	**+1.5**
CIRR	**Tsirk**	**4.05**	**3**	*e*P	**Pb**	**05 43 07.4**	**-1.1**
CIRR	**Tsirk**	**4.05**	**3**	PN	**Pb**	**05 43 07.4**	**-1.1**
KBTR	**Krutoberegovo**	**4.37**	**18**	*e*P	**Pn**	**05 43 02.8**	**+0.6**
KBTR	**Krutoberegovo**	**4.37**	**18**	PN	**Pn**	**05 43 02.8**	**+0.6**
BDR	**Baidarnaya**	**4.52**	**5**	*e*P	**Pn**	**05 43 06.5**	**+2.1**
BDR	**Baidarnaya**	**4.52**	**5**	PN	**Pn**	**05 43 06.5**	**+2.1**
BKI	**Bering**	**4.55**	**44**	*e*P	**Pn**	**05 43 03.3**	**-1.3**
BKI				*e*S	**Sn**	**05 43 50.6**	**-5.8**
BKI	**Bering**	**4.55**	**44**	PN	**Pn**	**05 43 03.3**	**-1.3**
SMKR	**Semkarok**	**4.55**	**7**	*e*P	**Pn**	**05 43 06.3**	**+1.5**
SMKR	**Semkarok**	**4.55**	**7**	PN	**Pn**	**05 43 06.3**	**+1.5**
SRKR	**Sorokina**	**4.61**	**5**	*e*P	**Pn**	**05 43 07.6**	**+2.1**
SRKR	**Sorokina**	**4.61**	**5**	PN	**Pn**	**05 43 07.6**	**+2.1**
SMY	**Shemya**	**8.39**	**80**	*e*Pn	**Pn**	**05 43 55.6**	**-1.7**
SMY				*e*Sn	**Sn**	**05 45 23.6**	**-7.3**
SMY	**Shemya**	**8.39**	**80**	*e*PN	**Pn**	**05 43 55.6**	**-1.7**
MA2	**Magadan**	**9.26**	**328**	Pn	**Pn**	**05 44 08.6**	**-0.8**
	comp=Z,1.6nm,0.3s,baz=173,slow=19,SNR=2.7						
MA2	**Magadan**	**9.26**	**328**	‖ *e*PN	**Pn**	**05 44 11.2**	**+1.9**
TYV	**Tymovskoe**	**11.16**	**271**	*e*PN	Pn	05 44 27.5	-7.7
TYV				pmax	pmax		
	comp=Z,12nm,1.3s						
SEY	**Seymchan**	**11.70**	**342**	Pn	**Pn**	**05 44 41.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=164,slow=19,SNR=1.9						
SEY	**Seymchan**	**11.70**	**342**	‖ *e*PN	**Pn**	**05 44 45.2**	**+2.6**
YSS	**Yuzh-Sakhalins**	**12.57**	**253**	*e*PN	**Pn**	**05 44 53.8**	**-0.8**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS				MLR	MLR		
	comp=N,800nm,14.0s						
YUK	**Yuzh-Kuril'sk**	**12.62**	**236**	*c i*PN	**P**	**05 45 05.0**	**-1.4**
YUK				MLR	MLR		
	comp=N,610nm,15.0s						
YUK				MLR	MLR		
	comp=Z,606nm,15.0s						
YUK				MLR	MLR		
	comp=E,1μm,16.0s						
ADK	**Adak**	**14.10**	**82**	*e*Pn	**Pn**	**05 45 14.9**	**-0.5**
ADK	**Adak**	**14.10**	**82**	*e*P	**Pn**	**05 45 14.9**	**-0.5**
ASAJ	**Asahikawa**	**14.31**	**243**	Pn	**Pn**	**05 45 16.7**	**-1.6**
	comp=E,0.8nm,0.3s,baz=52,slow=11,SNR=13						
ASAJ				LR	LR	05 51 51.5	
	comp=E,406nm,18.6s,baz=38,slow=42						
GSTR	**Great Sitkin T**	**14.44**	**81**	*e*Pn	**Pn**	**05 45 21.1**	**+1.0**
ERM	**Erimo**	**15.45**	**236**	*e*Pn	**Pn**	**05 45 31.9**	**-1.6**
	comp=E,20nm,0.8s						
ERM	**Erimo**	**15.45**	**236**	*e*P	**Pn**	**05 45 32.0**	**-1.6**
ERM				pmax	pmax		
	comp=Z,20nm,0.8s						
BILL	**Bilibino**	**16.26**	**8**	*d i*P	**Pn**	**05 45 44.7**	**+0.9**
BILL				pmax	pmax		
	comp=Z,28nm,1.0s						
TEY	**Ternei**	**17.23**	**255**	‖ *e*P	**Pn**	**05 45 56.2**	**+0.1**
TEY				pmax	pmax		
	comp=E,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
KLR	**Kul'dur**	**18.36**	**272**	P	**P**	**05 46 09.2**	**-0.7**
	comp=N,0.3nm,0.3s,baz=61,slow=9.9,SNR=9.4						
KLR				LR	LR	05 54 10.8	
	comp=N,423nm,18.5s,baz=74,slow=40						
YAK	**Yakutsk**	**19.27**	**313**	*e*P	**P**	**05 46 19.5**	**-0.3**
	comp=N,92nm,0.8s						
YAK	**Yakutsk**	**19.27**	**313**	*e*P	**P**	**05 46 18.0**	**-1.8**
YAK				*e*S	**Sn**	**05 49 48.3**	**-7.6**
USA0B	**Ussuriysk Arra**	**20.45**	**259**	*e*P	**P**	**05 46 32.1**	**-0.7**
	comp=N,18nm,1.0s						
USRK	**Ussuriysk Ar.**	**20.45**	**259**	P	**P**	**05 46 30.8**	**-2.0**
	comp=N,13nm,0.9s,baz=56,slow=11,SNR=17						
USRK				LR	LR	05 55 45.4	
	comp=N,290nm,18.3s,baz=58,slow=41						
MDJ	**Mudanjiang**	**21.69**	**262**	P	**P**	**05 46 44.5**	**-1.6**
MDJ				PP	**PnPn**	**05 47 08.2**	**+0.9**
MDJ				pmax	pmax		
	comp=N,19nm,0.8s						
MDJ				pmax	pmax		
	comp=N,59nm,3.1s						
MDJ				LR	LR		
	comp=N,540nm,12.9s						
MDJ				LR	LR		
	comp=N,380nm,14.6s						
MDJ				LR	LR		
	comp=N,720nm,14.5s						
MJAR	**Matsushiro Arr**	**22.10**	**234**	P	**P**	**05 46 50.4**	**-0.2**
	comp=N,8.8nm,0.9s,baz=25,slow=9.1,SNR=22						
MJB9	**Matsu-Tunnel**	**22.10**	**234**	*e*P	**P**	**05 46 51.4**	**+0.8**
	comp=N,31nm,1.0s						
MAJO	**Matsushiro**	**22.10**	**234**	*e*P	**P**	**05 46 51.2**	**+0.6**
	comp=N,31nm,1.0s						
MAJO	**Matsushiro**	**22.10**	**234**	*de*P	**P**	**05 46 50.6**	**0.0**
MAJO				pmax	pmax		

comp=Z,27nm,1.1s
NVS pmax pmax
comp=E,15nm,1.0s
RES Resolute Bay 44.19 22 P **P 05 50 03.9 +0.4**
comp=E,1.3nm,0.8s,baz=338,slow=10.0,SNR=3.5
RES Resolute Bay 44.19 22 *e*P **P 05 50 05.2 +1.7**
comp=E,3.2nm,1.0s
RES Resolute Bay 44.19 22 *e*P **P 05 50 05.2 +1.7**
RES pmax pmax
comp=Z,3.0nm,1.0s
DGZ Jazzator, Alta 44.31 297*c i*P **P 05 50 04.2 -0.8**
DGZ pmax pmax
comp=Z,7.0nm,0.8s
WMQ Urumqi 47.51 290 *e*P **P 05 50 31.2 +1.0**
WMQ pP pwP 05 50 41.8 +0.2
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,130nm,4.3s
WMQ LR LR
comp=Z,460nm,17.1s
WMQ LR LR
comp=Z,630nm,18.5s
WMQ LR LR
comp=Z,920nm,17.1s
KBS Kingsbay 47.91 352 *e*P **P 05 50 35.0 +2.2**
comp=Z,20nm,0.8s
KBS Kingsbay 47.91 352 *e*P **P 05 50 35.0 +2.2**
KBS pmax pmax
comp=Z,20nm,0.8s
SPA0 Spitsbergen Ar 48.17 351 *e*P **P 05 50 35.5 +0.7**
comp=Z,51nm,1.5s
KURK Kurchatov 48.45 303 *e*P **P 05 50 35.4 -1.9**
comp=Z,18nm,0.8s
KURK Kurchatov 48.45 303*ce*P **P 05 50 35.5 -1.8**
KURK pmax pmax
comp=Z,30nm,1.3s
MK31 Makanchi Array 48.79 297 *e*P **P 05 50 39.0 -1.0**
comp=Z,3.3nm,0.6s
MK31 Makanchi Array 48.79 297 *e*P **P 05 50 39.0 -1.0**
MK31 pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 48.79 297 P **P 05 50 38.0 -2.0**
comp=Z,3.1nm,0.6s,baz=53,slow=6.6,SNR=28
MKAR LR LR 06 12 43.2
comp=Z,180nm,19.3s,baz=50,slow=38
MKAR Makanchi Array 48.79 297 P **P 05 50 38.0 -2.0**
KMI Kunming 50.86 261 P **P 05 50 57.3 +1.1**
KMI pmax pmax
comp=Z,20nm,0.5s
BRVK Borovoye 51.22 309 *e*P **P 05 50 57.7 -0.5**
comp=Z,17nm,0.8s
BRVK Borovoye 51.22 309 *e*P **P 05 50 57.7 -0.5**
BRVK pmax pmax
comp=Z,17nm,0.8s
QIZ Qiongzhong 51.27 250 P **P 05 50 59.6 +0.6**
QIZ S **S 05 58 15.9 -0.1**
QIZ pmax pmax
comp=Z,120nm,2.3s
QIZ LR LR
comp=Z,180nm,18.6s
QIZ LR LR
comp=Z,210nm,14.7s
QIZ LR LR
comp=Z,220nm,16.7s
DAG Danmarks Havn 51.42 360⇑ *i*P **P 05 50 59.7 +0.2**
DAG pmax pmax
comp=Z,5.0nm,0.8s
DAG Danmarks Havn 51.42 360⇑ *i*P **P 05 50 59.7 +0.2**
comp=Z,7.1nm,0.8s
MOD Modoc Plateau 52.46 68 *e*P **P 05 51 09.0 +1.2**
comp=Z,3.5nm,0.8s
PDGK Podgornoye 52.49 295 P **P 05 51 05.1 -3.0**
PDGK pmax pmax
comp=Z,8.0nm,1.1s
SVE Sverdlovsk 53.16 317 *e*P **P 05 51 12.8 +0.2**
KEV Kevo 53.84 342 *e*P **P 05 51 18.1 +0.6**
comp=Z,34nm,1.5s
KEV Kevo 53.84 342 *e*P **P 05 51 18.1 +0.6**
KEV pmax pmax
comp=Z,34nm,1.5s
ARU Arti 54.29 318 *e*P **P 05 51 21.0 +0.2**
comp=Z,10nm,0.7s
ARU Arti 54.29 318*c i*P **P 05 51 20.5 -0.4**
ARU S **S 05 58 58.5 +2.2**
ARU SS **SS 06 02 34.8 -2.9**
ARU pmax pmax
comp=Z,10.0nm,0.7s
ARU MLR MLR
comp=Z,261nm,16.0s
ARCES ARCESS Array B 54.32 342 P **P 05 51 20.3 -0.6**
comp=Z,6.9nm,0.3s,baz=43,slow=9.0,SNR=14
ARCES LR LR 06 18 57.5
comp=Z,85nm,18.1s,baz=58,slow=41
ARE0 ARCESS Array S 54.32 342 *e*P **P 05 51 21.6 +0.7**
comp=Z,0.7nm,1.3s
PAHR Pah Rah Range 54.42 69 *e*P **P 05 51 23.4 +1.1**
comp=Z,4.6nm,0.9s
SUMG Summit 54.94 7 *e*P **P 05 51 29.4 +3.5**
comp=Z,12nm,1.0s
SUMG Summit 54.94 7 *i*P **P 05 51 27.0 +1.1**
SUMG pmax pmax
comp=Z,34nm,1.1s
SUMG Summit 54.94 7 *i*P **P 05 51 27.0 +1.1**
comp=Z,34nm,1.1s
YERR Yerington 54.98 70 *e*P **P 05 51 27.7 +1.2**
comp=Z,5.6nm,1.0s
WAKR Walker 55.19 70 *e*P **P 05 51 30.0 +2.1**
comp=Z,4.9nm,0.7s
PRGR Permogore 55.41 328 *e*P **P 05 51 28.5 -0.4**
PRGR pmax pmax
comp=Z,6.0nm,0.6s
KVN Kaiserville 55.60 69 *e*P **P 05 51 32.7 +1.9**
comp=Z,5.6nm,1.0s
RYN Ryan 55.64 70 *e*P **P 05 51 32.5 +1.4**
comp=Z,2.9nm,0.8s
AAK Ala-Archa 55.72 297 *e*P **P 05 51 30.7 -0.9**
comp=Z,10nm,1.3s
AAK Ala-Archa 55.72 297*ce*P **P 05 51 30.7 -0.9**
AAK pmax pmax
comp=Z,4.0nm,0.8s
TMCR Tamitsa 55.78 333 *e*P **P 05 51 31.5 0.0**
TMCR pmax pmax
comp=Z,25nm,1.0s
NVAR Mina Array Bea 55.90 70 P **P 05 51 33.8 +0.7**
comp=Z,2.4nm,0.8s,baz=293,slow=7.4,SNR=18
NV11 Mina Array Sit 55.98 70 *e*P **P 05 51 33.8 +0.2**
comp=Z,0.2nm,0.9s
MDPB Devils Postpil 55.99 71 *e*P **P 05 51 34.7 +0.9**
comp=Z,5.5nm,1.1s
ELK Elko 56.09 66 *e*P **P 05 51 35.8 +1.4**
comp=Z,3.1nm,1.0s
ELK Elko 56.09 66 *e*P **P 05 51 35.8 +1.4**
ELK pmax pmax
comp=Z,3.0nm,1.0s
KSH Kashi 56.99 293 *e*P **P 05 51 45.0 +4.3**
SPUT South Promonto 57.26 63 *e*P **P 05 51 44.0 +1.4**
comp=Z,6.5nm,1.4s
R11A Troy Canyon, C 57.52 68 *e*P **P 05 51 45.5 +1.0**
comp=Z,2.2nm,1.0s
KK31 Karatay Array 57.56 300 *e*P **P 05 51 42.7 -1.9**
comp=Z,4.6nm,1.0s
KK31 Karatay Array 57.56 300 *e*P **P 05 51 42.7 -1.9**
KK31 pmax pmax
comp=Z,5.0nm,1.0s
KKAR Karatay Array 57.56 300 *e*P **P 05 51 42.6 -2.0**
comp=Z,4.6nm,1.0s
KKAR Karatay Array 57.56 300 *e*P **P 05 51 42.6 -2.0**
KKAR pmax pmax
comp=Z,5.0nm,1.0s
UTTA Uttaradit 57.76 257 P **P 05 51 48.3 +2.1**
comp=Z,11μm,0.8s
DUG Dugway, Tooele 57.82 65 *e*P **P 05 51 46.5 -0.1**
DUG Dugway, Tooele 57.82 65 *e*P **P 05 51 46.5 -0.1**
BW06 Boulder Array 57.84 60 *e*P **P 05 51 48.1 +1.3**
comp=Z,2.8nm,0.8s
PD31 Pinedale Array 57.84 60 *e*P **P 05 51 47.5 +0.7**
comp=Z,2.7nm,0.9s
PDAR Pinedale Array 57.84 60 P **P 05 51 48.0 +1.2**
comp=Z,1.4nm,0.8s,baz=324,slow=2.4,SNR=10
CMMT Chiang Mai 57.91 259 P **P 05 51 48.4 +1.2**
comp=Z,6.2nm,0.9s
CHTO Chiang Mai 57.91 259 *e*P **P 05 51 47.9 +0.7**
comp=Z,9.3nm,0.8s
CHTO Chiang Mai 57.91 259 *e*P **P 05 51 47.9 +0.7**
CHTO pmax pmax
comp=Z,9.0nm,0.8s

KLMR Klimovskoe 57.93 330 *e*P **P 05 51 45.8 -1.0**
KLMR pmax pmax
comp=Z,12nm,1.0s
TPNV Topopah Spring 58.10 70 *e*P **P 05 51 49.5 +0.9**
comp=Z,3.8nm,1.0s
TPNV Topopah Spring 58.10 70 *e*P **P 05 51 49.5 +0.9**
TPNV pmax pmax
comp=Z,4.0nm,1.0s
CM31 Chiang Mai Arr 58.18 259 *e*P **P 05 51 50.6 +1.4**
comp=Z,9.0nm,0.8s
CMAR Chiang Mai Arr 58.18 259 P **P 05 51 49.5 +0.3**
comp=Z,5.6nm,0.9s,baz=25,slow=7.0,SNR=23
MPU Maple Canyon 58.60 64 *e*P **P 05 51 53.4 +1.4**
comp=Z,8.4nm,1.4s
AB31 Akbulak array 58.61 311 *i*P **P 05 51 49.9 -1.9**
AB31 pmax pmax
comp=Z,5.0nm,0.8s
ABKAR Akbulak array 58.61 311 *e*P **P 05 51 50.8 -1.0**
comp=Z,5.9nm,0.8s
AKTO Aktyubinsk 58.66 313 P **P 05 51 49.9 -2.2**
AKTO pmax pmax
comp=Z,3.0nm,0.7s
LCMT Little Creek M 59.78 68 *e*P **P 05 52 01.3 +1.1**
comp=Z,3.9nm,1.1s
SRU San Rafael Swe 59.84 64 *e*P **P 05 52 01.3 +0.6**
comp=Z,7.9nm,1.1s
SRU San Rafael Swe 59.84 64 *e*P **P 05 52 01.3 +0.6**
SRU pmax pmax
comp=Z,8.0nm,1.1s
SUF Sumiainen 60.01 338 P **P 05 52 02.2 +1.0**
SUF pmax pmax
comp=Z,45nm,0.8s
GAR Garm 60.51 296 *e*P **P 05 52 04.3 -0.9**
comp=Z,15nm,0.7s
GAR Garm 60.51 296 *e*P **P 05 52 04.3 -0.9**
GAR pmax pmax
comp=Z,15nm,0.7s
VAF Ylistaro 60.52 339 P **P 05 52 06.4 +1.8**
VAF pmax pmax
comp=Z,17nm,1.0s
FIA1 FINESS Array S 61.13 337 *e*P **P 05 52 08.9 0.0**
comp=Z,17nm,0.8s
FINES FINESS Array B 61.13 337 P **P 05 52 08.8 -0.1**
comp=Z,12nm,0.8s,baz=38,slow=7.5,SNR=48
FINES LR LR 06 22 42.4
comp=Z,149nm,18.5s,baz=26,slow=40
FINES FINESS Array B 61.13 337 *i*P **P 05 52 09.6 +0.7**
FINES pmax pmax
comp=Z,13nm,0.8s
PV03 Paradox Valley 61.38 64 *e*P **P 05 52 12.2 +1.0**
comp=Z,5.0nm,1.0s
CHGR Chuyangaron 61.40 297 *e*P **P 05 52 12.2 +1.0**
comp=Z,10nm,0.7s
NIL Nilore 62.66 290 *e*P **P 05 52 19.3 -0.3**
comp=Z,14nm,0.8s
NIL Nilore 62.66 290 *e*P **P 05 52 19.3 -0.3**
NIL pmax pmax
comp=Z,14nm,0.8s
VSU Vasula 63.56 335*ce*P **P 05 52 25.4 +0.3**
VSU pmax pmax
comp=Z,19nm,1.0s
NC204 NORSAR Array S 64.43 344 *e*P **P 05 52 31.2 +0.3**
comp=Z,23nm,1.1s
NB2 NORSAR Subarra 64.58 344 P **P 05 52 32.0 +0.2**
comp=Z,1.6nm,0.7s,baz=20,slow=6.9
NOA NORSAR Array B 64.58 344 P **P 05 52 31.6 -0.3**
comp=Z,3.7nm,0.8s,baz=21,slow=6.5,SNR=14
NOA LR LR 06 22 38.3
comp=Z,96nm,20.7s,baz=15,slow=38
LPSR Galich'ya Gora 64.73 325 *e*P **P 05 52 32.3 -0.6**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
VRH Novokhopyorsk 64.84 322 *e*P **P 05 52 32.6 -1.1**
VRH pmax pmax
comp=Z,10.0nm,0.6s
ANMO Albuquerque 65.09 65⇓ *e*P **P 05 52 36.4 +0.6**
ANMO pmax pmax
comp=Z,1.0nm,1.1s
VSR Storozhevoye 65.78 324 *e*P **P 05 52 38.9 -0.8**
VSR pmax pmax
comp=Z,20nm,1.2s
VORD Divnogorie 65.93 324 *e*P **P 05 52 40.4 -0.3**
VORD pmax pmax
comp=Z,10.0nm,0.8s
GEYT Alibeck 67.82 303 P **P 05 52 52.8 -0.3**
comp=Z,4.2nm,0.7s,baz=45,slow=4.4,SNR=6.8
AKASG Malin Array Be 69.59 329 P **P 05 53 03.2 -0.6**
comp=Z,12nm,0.8s,baz=30,slow=6.3,SNR=26
AKBB Malin Array Si 69.59 329 *e*P **P 05 53 03.5 -0.3**
comp=Z,15nm,0.9s
AKBB Malin Array Si 69.59 329 *e*P **P 05 53 03.5 -0.3**
AKBB pmax pmax
comp=Z,15nm,0.9s
KIEV Kiev 69.60 329 *e*P **P 05 53 03.6 -0.2**
comp=Z,13nm,0.8s
KIEV Kiev 69.60 329*c i*P **P 05 53 03.2 -0.6**
KIEV pmax pmax
comp=Z,16nm,0.9s
KIV Kislovodsk 70.32 317 *e*P **P 05 53 09.2 +0.7**
KIV pmax pmax
comp=Z,19nm,1.0s
KBZ Khabaz 70.42 317 P **P 05 53 09.2 +0.3**
comp=Z,8.2nm,0.9s,baz=221,slow=1.6,SNR=15
ZEI Tsey 70.75 316 *e*P **P 05 53 09.2 -2.1**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
TX31 Lajitas Ar. Si 70.84 67 *e*P **P 05 53 12.2 +0.2**
comp=Z,3.2nm,0.9s
LTX Lajitas 70.85 67 *e*P **P 05 53 12.5 +0.6**
LTX Lajitas 70.85 67 *e*P **P 05 53 12.5 +0.6**
TXAR Lajitas Array 70.85 67 P **P 05 53 12.5 +0.6**
comp=Z,0.9nm,0.6s,baz=300,slow=4.6,SNR=11
ANN Anapa 71.74 321 *e*P P 05 53 24.4 +7.4
ANN MLR MLR
comp=N,150nm,15.0s
ANN MLR MLR
comp=Z,151nm,15.0s
AKH Akhalkalaki 72.05 315 *e*P **P 05 53 20.3 +1.2**
comp=Z,16nm,1.1s
AKH Akhalkalaki 72.05 315⇓ *i*P **P 05 53 19.8 +0.7**
AKH Akhalkalaki 72.05 315 *e*P **P 05 53 20.3 +1.2**
AKH pmax pmax
comp=Z,16nm,1.1s
GNI Garni 72.52 314⇑ *e*P **P 05 53 23.8 +1.8**
GNI pmax pmax
comp=Z,20nm,0.9s
KOLS Kolonicke sedl 73.24 333 *e*P **P 05 53 26.8 +0.9**
KOLS pmax pmax
comp=Z,4.0nm,1.0s
KOLS Kolonicke sedl 73.24 333 *e*P **P 05 53 26.8 +0.9**
CHVC Chvalec 73.35 337 *e*P **P 05 53 27.7 +1.2**
CHVC AMS AMS 06 32 10.0
comp=Z,200nm,14.3s
CLL Collm 73.38 339 *e*P **P 05 53 27.2 +0.6**
comp=Z,5.7nm,0.9s
CLL Collm 73.38 339 *i*P **P 05 53 27.4 +0.8**
comp=Z,9.0nm,1.2s
CLL *i*pP **pwP 05 53 39.1 0.0**
CLL LmV 06 27 00.0
comp=Z,100nm,19.2s
CLL Collm 73.38 339 *i*P **P 05 53 27.4 +0.8**
CLL pmax pmax
comp=Z,9.0nm,1.2s
UPC Upice 73.44 337 AMS AMS 06 30 10.0
comp=Z,200nm,13.4s
DPC Dobruska-Polom 73.51 337 *e*P **P 05 53 28.5 +1.0**
DPC *e* 05 53 40.9
DPC MLR MLR
comp=Z,200nm,14.4s
DPC Dobruska-Polom 73.51 337 *e*P **P 05 53 28.5 +1.0**
DPC *e*pP **pwP 05 53 40.9 +0.9**
DPC AMS AMS 06 32 20.0
comp=Z,200nm,14.4s
OKC Ostrava-Krasne 73.53 336 AMS AMS 06 30 00.0
comp=Z,200nm,14.2s
BUR08 Bucovina Ar. S 73.54 330 *e*P **P 05 53 27.8 +0.1**
comp=Z,5.6nm,0.8s
BURAR Bucovina Array 73.56 330⇓ *i*P **P 05 53 27.7 -0.2**
BRG Berggiesshubel 73.58 339 *e*P **P 05 53 28.1 +0.3**
comp=Z,4.5nm,1.3s
comp=N,134nm,15.3s
comp=E,50nm,14.4s
comp=Z,203nm,16.5s
BRG Berggiesshubel 73.58 339 *e*P **P 05 53 28.1 +0.3**
BRG pmax pmax
comp=Z,5.0nm,1.3s

BRG MLR MLR
comp=E,134nm,14.4s
BRG MLR MLR
comp=Z,50nm,16.5s
MORC Moravsky Berou 73.74 336 *e*P **P 05 53 29.9 +1.1**
comp=Z,4.9nm,0.9s
MORC Moravsky Berou 73.74 336⇓ *i*P **P 05 53 29.3 +0.4**
MORC Moravsky Berou 73.74 336 *e*P **P 05 53 29.9 +1.1**
MORC pmax pmax
comp=Z,5.0nm,0.9s
MORC Moravsky Berou 73.74 336 *e*P **P 05 53 29.2 +0.4**
PVCC Panska Ves 73.75 338 AMS AMS 06 31 20.0
comp=Z,200nm,15.2s
LANS Liptovska Anna 73.81 334 *e*P **P 05 53 30.7 +1.4**
LANS *e* 05 53 43.5
LANS Liptovska Anna 73.81 334 *e*P **P 05 53 30.7 +1.4**
LANS *e*PCP **PcP 05 53 43.5 -1.3**
BIZ Bicaz 73.88 329⇓ *i*P **P 05 53 29.8 +0.1**
TRPA Tarpa 73.89 332⇑ *i*P **P 05 53 30.6 +1.0**
TESR Tescani 74.09 329⇑ *i*P **P 05 53 30.4 -0.5**
PRU Pruhonice 74.27 338 AMS AMS 06 31 30.0
comp=Z,200nm,17.3s
GOPC GO Pecny, Ondr 74.28 338 AMS AMS 06 31 40.0
comp=Z,200nm,19.3s
VRAC Vranov 74.41 336 LR LR 06 30 57.5
comp=Z,186nm,18.1s,baz=40,slow=40
VRAC Vranov 74.41 336⇓ *i*P pP 05 53 41.6 +0.9
VRAC Vranov 74.41 336 *e*P **P 05 53 33.7 +1.0**
JAVC Velka Javorina 74.55 336 *e*P **P 05 53 35.2 +1.6**
VYHS Vyhne 74.58 335 *e*P **P 05 53 34.7 +1.0**
VYHS *e* 05 53 46.9
VYHS pmax pmax
comp=Z,4.0nm,1.4s
VYHS Vyhne 74.58 335 *e*P **P 05 53 34.7 +1.0**
VYHS *e*pP **pwP 05 53 46.9 +0.6**
VRI Vrincioaia 74.64 328⇓ *i*P **P 05 53 34.3 +0.2**
VRI Vrincioaia 74.64 328 P **P 05 53 38.1 +4.0**
VRI pmax pmax
comp=Z,6.0nm,1.1s
PLOR Plostina 74.67 328⇓ *i*P **P 05 53 34.4 +0.1**
KRUC Moravsky 74.68 336 *e*P **P 05 53 34.8 +0.5**
TREC Trest 74.69 337 AMS AMS 06 30 50.0
comp=Z,200nm,18.7s
OZUR 74.73 329⇓ *i*P **P 05 53 35.4 +0.7**
CFR Carcaliu 74.78 327⇓ *i*P **P 05 53 35.0 +0.1**
PSZ Piszkesteto 74.83 334 *e*P **P 05 53 36.5 +1.3**
comp=Z,11nm,1.3s
PSZ Piszkesteto 74.83 334 *e*P **P 05 53 36.5 +1.3**
PSZ pmax pmax
comp=Z,11nm,1.3s
DRGR 75.05 331⇓ *i*P **P 05 53 36.8 +0.3**
DRGR 75.05 331 P **P 05 53 36.8 +0.3**
MODS Modra-Piesok 75.10 336 *e*pP pP 05 53 48.6 +3.8
MLR Muntele Rosu 75.22 329 *e*P **P 05 53 37.5 -0.1**
comp=Z,5.8nm,0.8s
MLR Muntele Rosu 75.22 329⇓ *i*P **P 05 53 38.3 +0.7**
MLR Muntele Rosu 75.22 329 *e*P **P 05 53 37.5 -0.1**
MLR pmax pmax
comp=Z,6.0nm,0.8s
WR1 Warramunga Arr 75.25 205 *e*P **P 05 53 38.0 +0.3**
WRA Warramunga Arr 75.25 205 P **P 05 53 38.0 +0.3**
comp=Z,0.9nm,0.7s,baz=12,slow=5.4,SNR=2.0
DIKM Dikmen 75.25 321⇓ *i*P **P 05 53 38.9 +1.2**
KHC Kasperske Hory 75.29 338 *e*P **P 05 53 39.4 +1.5**
comp=Z,2.4nm,1.0s
KHC Kasperske Hory 75.29 338 *e*P **P 05 53 39.1 +1.3**
KHC *e* 05 53 51.3
KHC MLR MLR
comp=Z,200nm,15.0s
KHC Kasperske Hory 75.29 338 *e*P **P 05 53 39.1 +1.3**
KHC *e*pP **PcP 05 53 51.3 +0.2**
KHC AMS AMS 06 32 20.0
comp=Z,200nm,15.0s
TIRR Tirgusor 75.32 327 *e*P **P 05 53 38.2 +0.2**
comp=Z,22nm,1.0s
TIRR Tirgusor 75.32 327⇑ *i*P **P 05 53 38.4 +0.4**
TIRR Tirgusor 75.32 327 *e*P **P 05 53 38.2 +0.2**
TIRR pmax pmax
comp=Z,22nm,1.0s
TLB Topalu 75.33 327⇓ *i*P **P 05 53 38.3 +0.2**
ISR Istrita 75.36 328⇑ *i*P **P 05 53 39.3 +1.0**
MEM Membach 75.42 343 P **P 05 53 39.5 +1.0**
comp=Z,11nm,1.2s
MEM pP **pwP 05 53 50.6 -0.4**
GEC2 GERESS Array S 75.53 338 *e*P **P 05 53 40.3 +1.0**
comp=Z,1.9nm,0.8s
GEC2 GERESS Array S 75.53 338 *e*P **P 05 53 40.3 +1.0**
GEC2 pmax pmax
comp=Z,2.0nm,0.8s
GERES GERESS Array B 75.53 338 P **P 05 53 39.9 +0.6**
comp=Z,0.7nm,0.6s,baz=48,slow=4.0,SNR=7.1
GERES LR LR 06 31 46.6
comp=Z,83nm,18.2s,baz=26,slow=40
ARR Arges 75.75 330⇑ *i*P **P 05 53 41.8 +1.2**
CONA Conrad Observa 75.87 336 *i*P **P 05 53 41.9 +0.6**
comp=Z,3.7nm,0.5s
MOA Molln 76.33 337 *i*P **P 05 53 43.8 +0.1**
comp=Z,5.3nm,1.6s
ILGA Ilgaz 76.36 321 *e*P **P 05 53 45.3 +0.9**
comp=Z,14nm,0.9s
BZS Buzias 76.44 332⇓ *i*P **P 05 53 44.3 -0.1**
SOKA Soboth 77.24 336 *e*P **P 05 53 50.7 +1.7**
comp=Z,4.9nm,1.3s
KBA Koelnbreinsper 77.27 338 *e*P **P 05 53 51.4 +2.1**
comp=Z,9.3nm,0.9s
WTTA Wattenberg 77.49 339 *e*P **P 05 53 52.9 +2.3**
comp=Z,5.8nm,1.4s
MOTA Moosalm 77.53 339 *i*P **P 05 53 52.6 +1.9**
comp=Z,9.8nm,1.3s
BR131 Keskin Array S 77.54 321 *e*P **P 05 53 51.0 +0.1**
comp=Z,6.3nm,1.2s
BRTR Keskin Array B 77.54 321 P **P 05 53 51.1 +0.3**
comp=Z,2.7nm,0.9s,baz=43,slow=2.4,SNR=14
BRTR LR LR 06 33 46.9
comp=Z,70nm,18.3s,baz=59,slow=40
SQTA Sankt Quirin 77.62 339 *i*P **P 05 53 53.4 +2.2**
comp=Z,1.9nm,0.5s
ABTA Abfaltersbach 77.78 338 *i*P **P 05 53 53.7 +1.7**
comp=Z,3.1nm,0.8s
FETA Feichten 77.92 339 *e*P **P 05 53 55.0 +2.1**
comp=Z,4.4nm,0.9s
ASAR Alice Springs 78.92 205 P **P 05 53 58.8 +0.5**
comp=Z,0.6nm,0.7s,baz=13,slow=5.2,SNR=6.4
PPT Papeete 81.81 132 LR LR 06 30 17.7
comp=Z,44nm,18.0s,baz=340,slow=35
ESDC Sonseca Array 87.61 348 P **P 05 54 43.2 0.0**
comp=Z,0.2nm,0.4s,baz=353,slow=4.5,SNR=4.6
KEST Kesra 88.97 337 LR LR 06 40 17.4
comp=Z,63nm,19.8s,baz=258,slow=40
VNDA Vanda 129.33 180 *e*PKPdf **PKiKP 06 01 03.0 +0.6**
VNDA Vanda 129.33 180 *e*PKIKP **PKiKP 06 01 03.0 +0.6**
GO01 Chusmiza 129.79 69 *e*PKPdf **PKPdf 06 01 04.6 -0.2**
LVC Limon Verde 132.25 71 *e*PKPdf **PKPdf 06 01 08.3 -1.0**
LVC Limon Verde 132.25 71 *e*PKIKP **PKPdf 06 01 08.3 -1.0**

*IDC **08** 05:53:45.7±1.7, 48°.69N×155°.96E, h0km, mb3.5/3, mb1 3.9/5, mb1mx3.4/58, mbtmp3.7/5, ML3.4/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/36, Error ellipse: s-maj=67.1km s-min=23.5km az=147.0*
*ISCJB **08** 05:53:47.5±0.8, 49°.07N±0°.07×155°.6E±0°.1, h10km, mb3.4/3, MS3.5/1, Error ellipse: s-maj=15.7km s-min=6.6km az=29.4*
*KRSC **08** 05:53:48.9±1.7, 49°.10N×156°.20E, h18km±25km, ML4.3*
*MOS **08** 05:53:49.0±1.0, 49°.01N×155°.63E, h29km, mb4.0/1, Error ellipse: s-maj=31.1km s-min=5.4km az=74.1*
ISC 08 05:53:49.2±1.3, 49°.1N±0°.1×155°.6E±0°.1, h10km, n40, σ19 23/46, mb3.6/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.61**	**12**	*e*P	**Pn**	**05 54 16.6**	**-1.0**
SKR				*e*S	**Sn**	**05 54 36.9**	**-1.6**
SKR	**Severo-Kuril's**	**1.61**	**12**	*e*PN	Pn	05 54 14.9	-2.7
SKR				*e*S	**Sn**	**05 54 36.7**	**-1.8**
SKR				smax	smax		
	comp=N,444nm,0.4s						
SKR				smax	smax		
	comp=E,432nm,0.4s						
ALID	**Alaid**	**1.77**	**359**	*e*P	**Pn**	**05 54 19.9**	**0.0**
ALID				*e*S	**Sn**	**05 54 42.3**	**-0.2**
ALID	**Alaid**	**1.77**	**359**	PN	**Pn**	**05 54 19.9**	**0.0**
ALID				S	**Sn**	**05 54 42.3**	**-0.2**
PAU	**Pauzhetka**	**2.48**	**18**	*e*P	**Pn**	**05 54 29.6**	**-0.1**

PAU				*e*S	**Sn**	05 54 59.2	-0.8
PAU	**Pauzhetka**	**2.48**	**18**	PN	**Pn**	05 54 29.6	-0.1
PAU				S	**Sn**	05 54 59.2	-0.8
KDTR	**Khodutka, Kamc**	**3.13**	**29**	*e*P	**Pn**	05 54 38.4	-0.1
KDTR				*e*S	**Sn**	05 55 14.2	-1.7
KDTR	**Khodutka, Kamc**	**3.13**	**29**	PN	**Pn**	05 54 38.4	-0.1
ASAK	**Asacha**	**3.59**	**23**	*e*P	**Pn**	05 54 45.4	+0.5
ASAK	**Asacha**	**3.59**	**23**	PN	**Pn**	05 54 45.4	+0.5
MTVR	**Mutnovka**	**3.75**	**25**	*e*P	**Pn**	05 54 46.8	-0.4
MTVR				*e*S	**Sn**	05 55 29.6	-1.9
MTVR	**Mutnovka**	**3.75**	**25**	PN	**Pn**	05 54 46.8	-0.4
PETK	**Petropavlovsk-**	**4.22**	**17**	Pn	**Pn**	05 54 54.5	+1.0
	comp=E,1.5nm,0.3s,baz=178,slow=11,SNR=22						
PETK				Sn	**Sn**	05 55 45.2	+2.4
	comp=E,0.0nm,0.3s,baz=141,slow=15,SNR=1.9						
DALK	**Dalny**	**4.40**	**26**	*e*P	**Pn**	05 54 56.5	+0.5
DALK	**Dalny**	**4.40**	**26**	PN	**Pn**	05 54 56.5	+0.5
UGLR	**Uglovaya**	**4.58**	**25**	*e*P	**Pn**	05 55 00.4	+1.9
UGLR	**Uglovaya**	**4.58**	**25**	PN	**Pn**	05 55 00.4	+1.9
KOK	**Koryaka**	**4.60**	**23**	*e*P	**Pn**	05 55 00.1	+1.3
KOK	**Koryaka**	**4.60**	**23**	PN	**Pn**	05 55 00.1	+1.3
AVH	**Avacha**	**4.61**	**24**	*e*P	**Pn**	05 55 00.0	+1.1
AVH	**Avacha**	**4.61**	**24**	PN	**Pn**	05 55 00.0	+1.1
SMAR	**Somma**	**4.62**	**25**	*e*P	**Pn**	05 55 00.8	+1.6
SMAR	**Somma**	**4.62**	**25**	PN	**Pn**	05 55 00.8	+1.6
KRER	**Koryakskii**	**4.64**	**24**	*e*P	**Pn**	05 55 01.2	+1.7
KRER	**Koryakskii**	**4.64**	**24**	PN	**Pn**	05 55 01.2	+1.7
SDLR	**Sedlovina**	**4.66**	**25**	*e*P	**Pn**	05 55 00.8	+1.2
SDLR	**Sedlovina**	**4.66**	**25**	PN	**Pn**	05 55 00.8	+1.2
KRX	**Arik**	**4.67**	**23**	*e*P	**Pn**	05 55 01.7	+1.9
KRX	**Arik**	**4.67**	**23**	PN	**Pn**	05 55 01.7	+1.9
GNL	**Ganaly**	**4.82**	**17**	*e*P	**Pn**	05 55 02.9	+1.0
GNL	**Ganaly**	**4.82**	**17**	PN	**Pn**	05 55 02.9	+1.0
SPN	**Mys Shipunski**	**4.87**	**33**	*e*P	**Pn**	05 55 02.3	-0.1
SPN	**Mys Shipunski**	**4.87**	**33**	PN	**Pn**	05 55 02.3	-0.1
MKZ	**Mys Kozlova**	**6.64**	**32**	*e*P	**Pn**	05 55 26.9	+0.2
MKZ	**Mys Kozlova**	**6.64**	**32**	PN	**Pn**	05 55 26.9	+0.2
ASAJ	**Asahikawa**	**10.25**	**246**	Pn	**Pn**	05 56 16.6	+0.4
	comp=E,0.8nm,0.3s,baz=67,slow=12,SNR=15						
KSRS	**Korea Array**	**23.14**	**250**	P	**P**	05 58 53.5	-1.9
	comp=E,1.2nm,0.6s,baz=51,slow=11,SNR=6.0						
YKA	**Yellowknife Ar**	**48.03**	**39**	P	**P**	06 02 29.4	+1.4
	comp=E,0.2nm,0.3s,baz=297,slow=9.1,SNR=2.4						
PFO	**Pinyon Flats O**	**64.21**	**68**	LR	LR	06 30 26.3	
	comp=E,32nm,18.2s,baz=293,slow=34						
TXAR	**Lajitas Array**	**74.89**	**63**	P	P	06 05 27.7	-2.6
	comp=E,0.1nm,0.4s,baz=308,slow=5.3,SNR=5.6						

*IDC **08** 06:00:54.7±0.5, 10°.57N×126°.81E, h0km, mb4.3/26, mb1 4.4/26, mb1mx4.3/40, mbtmp4.3/26, MS3.2/8, Ms1 3.2/8, ms1mx2.9/38, Error ellipse: s-maj=24.1km s-min=10.8km az=84.0*
*BJI **08** 06:00:55.6±0.0, 10°.33N×127°.20E, h32km, mb4.6/23, mB5.0/15, Ms4.5/5, Ms7 4.2/4*
*ISCJB **08** 06:00:56.6±0.2, 10°.60N±0°.03×126°.84E±0°.03, h20km, mb4.5/72, Error ellipse: s-maj=4.7km s-min=3.7km az=4.3*
*DJA **08** 06:00:57.0±1.0, 11°.N±10°.×12°.7E±°, h10km, M4.7/11, mb4.6/11, mB5.4/3, Mw(mB)4.9/3*
*NEIC **08** 06:00:57.6±1.7, 10°.64N×126°.87E, h14km±4km, mb4.6/53, Error ellipse: s-maj=18.4km s-min=12.2km az=80.0*
*MAN **08** 06:00:58.1, 10°.74N×126°.77E, h94km, mb5.2, ML4.2, MS4.3*

ISC 08 06:00:58.4±0.3, 10°.65N±0°.04×126°.91E±0°.05, h20km, n123, σ1°50/128, mb4.5/72, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.64**	**238**	*e*P	Pb	06 01 33.6	+5.7
SCPH				*e*S	**Sb**	**06 01 53.6**	**+5.5**
BESP	**Borongan**	**1.72**	**303**	*e*P	**Pn**	**06 01 24.3**	**-2.9**
BESP				*e*S	**Sn**	**06 01 46.6**	**-2.1**
PLP	**Palo**	**1.96**	**285**	*e*P	**Pn**	**06 01 28.6**	**-1.9**
PLP				*i* S	**Sn**	**06 01 51.3**	**-3.2**
MSLP	**Maasin**	**2.08**	**256**	*e*P	**Pn**	**06 01 30.9**	**-1.2**
MSLP				*e*S	**Sb**	**06 02 00.5**	**-0.3**
BUTP	**Butuan**	**2.10**	**217**	*e*P	Pn	06 01 27.4	-5.0
OCLP	**Ormoc**	**2.29**	**280**	*e*P	**Pn**	**06 01 33.3**	**-1.7**
LLP	**Lapu-Lapu**	**2.91**	**264**	*e*P	**Pn**	**06 01 42.7**	**-0.9**
LLP				*e*S	**Sn**	**06 02 14.2**	**-3.7**
BUKP	**Musuan**	**3.30**	**214**	*e*P	**Pn**	**06 01 49.2**	**+0.2**
BUKP				*e*S	**Sn**	**06 02 25.0**	**-2.7**
DAV	**Davao City (W)**	**3.79**	**200**	Sn	**Sn**	**06 02 37.5**	**-2.2**
	34nm,0.3s,baz=0.0,slow=20,SNR=2.3						
DAV				LR	LR	06 03 48.2	
	comp=Z,265nm,18.8s,baz=48,slow=47						
PVCP	**Virac**	**3.98**	**318**	*e*P	**Pn**	**06 01 56.2**	**-2.0**
TGY	**Tagaytay City**	**6.76**	**301**	LR	LR	06 06 02.7	
	comp=Z,212nm,19.3s,baz=194,slow=46						
TNTI	**Ternate**	**9.82**	**177**	*e*Pn	**Pn**	**06 03 18.5**	**-0.1**
TNTI	**Ternate**	**9.82**	**177**	P	**Pn**	**06 03 17.7**	**-0.9**
TTSI	**Tana Toraja**	**15.32**	**208**	P	**Pn**	**06 04 35.4**	**+1.7**
	21nm,1.2s						
SPSI	**Sidrap Palu**	**16.16**	**206**	P	**P**	**06 04 47.3**	**-0.3**
BNSI	**Bone**	**16.41**	**205**	P	**P**	**06 04 49.7**	**-0.7**
SBUM	**Sibu**	**16.70**	**242**	*e*Pn	**P**	**06 04 56.7**	**+3.1**
	5.6nm,0.7s						
KAPI	**Kappang**	**17.11**	**205**	P	**Pn**	**06 04 57.0**	**+0.4**
	0.7nm,0.3s,baz=36,slow=5.7,SNR=3.9						
KAPI				LR	LR	06 12 16.1	
	comp=Z,40nm,18.9s,baz=7.0,slow=40						
GUMO	**Guam**	**17.80**	**79**	LR	LR	06 11 43.8	
	comp=Z,151nm,19.2s,baz=0.5,slow=36						
KSM	**Kuching**	**18.84**	**242**	*e*P	**Pn**	**06 05 18.9**	**+1.1**
	25nm,0.8s						
EDFI	**Ende, Flores**	**19.96**	**195**	P	**Pn**	**06 05 34.0**	**+2.7**
BATI	**Baumata**	**20.97**	**189**	P	**P**	**06 05 39.8**	**-0.7**
	43nm,0.5s,baz=333,slow=2.3,SNR=5.8						
BATI	**Baumata**	**20.97**	**189**	*e*P	**P**	**06 05 39.8**	**-0.7**
BATI				*e*P	**P**	**06 05 39.8**	**-0.7**
MTN	**Manton Dam**	**23.71**	**170**	*e*P	**P**	**06 06 08.8**	**-0.4**
	20nm,0.6s						
PPBI	**Pangkal Pinang**	**24.27**	**240**	P	**P**	**06 06 14.7**	**+0.2**
MYKOM	**Kota Tinggi**	**24.53**	**251**	*e*P	**P**	**06 06 17.4**	**+0.5**
	12nm,0.9s						
ENH	**Enshi**	**25.38**	**323**	*e*P	**P**	**06 06 26.6**	**+2.2**
	44nm,1.3s						
LEM	**Lembang**	**25.89**	**229**	LR	LR	06 17 02.4	
	comp=Z,58nm,20.2s,baz=182,slow=38						
KSRS	**Korea Array**	**26.70**	**2**	P	**P**	**06 06 36.6**	**+0.3**
	1.1nm,0.6s,baz=178,slow=11,SNR=9.7						
KSRS				LR	LR	06 15 38.7	
	comp=Z,30nm,21.9s,baz=70,slow=33						
MDSI	**Maura Dua**	**27.17**	**238**	P	P	06 06 54.9	+14
MAJO	**Matsushiro**	**27.73**	**20**	*e*P	**P**	**06 06 44.4**	**-1.3**
MJAR	**Matsushiro Arr**	**27.73**	**20**	P	**P**	**06 06 44.4**	**-1.2**
	1.8nm,0.7s,baz=203,slow=9.1,SNR=4.8						
MJAR				LR	LR	06 18 04.9	
	comp=Z,53nm,18.4s,baz=65,slow=37						
CMAR	**Chiang Mai Arr**	**28.13**	**289**	P	**P**	**06 06 47.2**	**-2.1**
	1.0nm,0.4s,baz=102,slow=8.6,SNR=4.9						
XAN	**Xi'an**	**28.52**	**328**	P	**P**	**06 06 52.7**	**0.0**
XAN				pP	pwP	06 07 03.2	-2.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN				LR	LR		
	comp=E,180nm,10.8s						
XAN	**Xi'an**	**28.52**	**328**	*e*P	**P**	**06 06 52.7**	**0.0**
	7.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**28.59**	**183**	P	**P**	**06 06 50.8**	**-2.6**
	2.7nm,0.8s,baz=14,slow=12,SNR=3.1						
FITZ				LR	LR	06 18 32.0	
	comp=Z,48nm,19.4s,baz=63,slow=37						
PSI	**Prapat**	**28.84**	**256**	*e*P	**P**	**06 06 56.0**	**+0.2**
	8.1nm,1.2s						
WRAB	**Tennant Creek**	**31.26**	**166**	*e*P	**P**	**06 07 13.3**	**-3.8**
	24nm,0.5s						
WR1	**Warramunga Arr**	**31.27**	**166**	*e*P	**P**	**06 07 14.9**	**-2.2**
WR1				*e*PcP	**PcP**	**06 10 11.3**	**-0.1**
WRA	**Warramunga Arr**	**31.27**	**166**	P	**P**	**06 07 14.9**	**-2.2**
	1.8nm,0.7s,baz=346,slow=11,SNR=6.7						
WRA				PcP	**PcP**	**06 10 11.3**	**-0.1**
	1.8nm,0.8s,baz=349,slow=3.2,SNR=5.9						
WB2	**Warramunga Arr**	**31.27**	**166**	*e*P	**P**	**06 07 15.4**	**-1.8**
	6.3nm,1.0s						
PSA00	**Pilbara Seismi**	**32.76**	**192**	*e*P	**P**	**06 07 28.9**	**-1.3**
	22nm,1.3s						
LZH	**Lanzhou**	**32.83**	**324**	*e*P	**P**	**06 07 32.3**	**+1.4**
LZH				pP	pwP	06 07 42.8	-0.6
LZH				sP	sP	06 07 49.0	+12
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
USRK	**Ussuriysk Ar.**	**33.72**	**7**	P	**P**	**06 07 36.9**	**-1.4**
	4.1nm,0.8s,baz=189,slow=8.6,SNR=8.5						
MDJ	**Mudanjiang**	**33.92**	**3**	*e*P	**P**	**06 07 39.9**	**-0.2**
	16nm,1.2s						
AS31	**Alice Springs**	**34.78**	**169**	*e*P	**P**	**06 07 46.6**	**-1.2**
	1.3nm,0.6s						
ASAR	**Alice Springs**	**34.78**	**169**	P	**P**	**06 07 46.0**	**-1.8**
	2.0nm,0.6s,baz=350,slow=7.7,SNR=27						
GTA	**Gaotai**	**37.43**	**325**	*e*P	**P**	**06 08 12.1**	**+1.6**
GTA				pP	pwP	06 08 22.4	-0.7
GTA				sP	sP	06 08 26.6	+10
GTA				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KLR	**Kul'dur**	**38.67**	**5**	P	**P**	**06 08 21.4**	**+0.7**
	3.2nm,0.6s,baz=211,slow=5.8,SNR=12						
SONA0	**Songino Array**	**40.89**	**339**	*e*P	**P**	**06 08 39.5**	**+0.2**
SONM	**Songino Array**	**40.89**	**339**	P	**P**	**06 08 39.5**	**+0.2**
	0.8nm,0.5s,baz=166,slow=7.7,SNR=3.9						
FORT	**Forrest**	**41.20**	**178**	*e*P	**P**	**06 08 41.5**	**-0.3**
	18nm,0.8s						
EIDS	**Eidsvold**	**42.86**	**147**	*e*P	**P**	**06 08 55.3**	**-0.1**
	12nm,1.1s						
BBOO	**Buckleboo**	**44.09**	**169**	*e*P	**P**	**06 09 05.0**	**-0.2**
	24nm,0.8s						
NWAO	**Narrogin (SRO)**	**44.30**	**192**	*e*P	**P**	**06 09 06.0**	**-1.0**
	37nm,1.2s						
STKA	**Stephens Creek**	**44.56**	**162**	P	**P**	**06 09 08.3**	**-0.8**
	3.7nm,0.7s,baz=333,slow=8.9,SNR=11						
STKA	**Stephens Creek**	**44.56**	**162**	*e*P	**P**	**06 09 08.8**	**-0.3**
	3.4nm,1.5s						
PEA0B	**Petropavlovsk-**	**49.04**	**24**	*e*P	**P**	**06 09 45.7**	**+1.8**
	23nm,1.3s						
PETK	**Petropavlovsk-**	**49.04**	**24**	P	**P**	**06 09 44.7**	**+0.8**
	3.7nm,0.6s,baz=200,slow=2.5,SNR=6.1						
PEA1	**Petropavlovsk-**	**49.04**	**24**	*e*P	**P**	**06 09 44.7**	**+0.8**
TOO	**Toolangi**	**51.03**	**161**	*e*P	**P**	**06 10 00.1**	**+0.9**
	25nm,1.5s						
MK31	**Makanchi Array**	**52.11**	**322**	*e*P	**P**	**06 10 09.0**	**+1.8**
	7.2nm,0.8s						
MK32	**Makanchi Array**	**52.11**	**322**	*e*P	**P**	**06 10 07.8**	**+0.6**
MKAR	**Makanchi Array**	**52.11**	**322**	P	**P**	**06 10 07.8**	**+0.6**
	3.8nm,0.6s,baz=117,slow=7.9,SNR=28						
KSH	**Kashi**	**53.45**	**312**	P	**P**	**06 10 19.7**	**+2.3**
KSH				pP	sP	06 10 26.1	+2.7
KSH				PP	**PP**	**06 12 23.0**	**+5.1**
KSH				S	**S**	**06 17 51.7**	**+2.6**
KSH				pmax	pmax		
	comp=Z,14nm,0.6s						
KSH				pmax	pmax		
	comp=Z,210nm,6.3s						
KSH				LR	LR		
	comp=N,180nm,6.1s						
KSH				LR	LR		
	comp=E,250nm,8.8s						
KSH				LR	LR		
	comp=Z,260nm,14.1s						
ZAA0	**Zalesovo Array**	**54.60**	**331**	*e*P	**P**	**06 10 25.2**	**-0.1**
	2.5nm,0.7s						
ZALV	**Zalesovo Beam**	**54.60**	**331**	P	**P**	**06 10 25.0**	**-0.3**
	1.1nm,0.5s,baz=104,slow=6.3,SNR=4.8						
ZAA1	**Zalesovo Array**	**54.60**	**331**	*e*P	**P**	**06 10 25.0**	**-0.4**
SEY	**Seymchan**	**55.30**	**14**	P	**P**	**06 10 31.9**	**+1.6**
	2.3nm,0.6s,baz=206,slow=12						
KURK	**Kurchatov**	**56.11**	**325**	*e*P	**P**	**06 10 37.0**	**+0.7**
	15nm,1.1s						
GAR	**Garm**	**57.53**	**310**	*e*P	**P**	**06 10 46.2**	**-0.5**
	35nm,1.3s						
KK31	**Karatay Array**	**58.43**	**314**	*e*P	**P**	**06 10 52.7**	**-0.2**
	6.8nm,1.0s						
KKAR	**Karatay Array**	**58.43**	**314**	*e*P	**P**	**06 10 52.1**	**-0.8**
	6.8nm,1.0s						
TIXI	**Tiksi**	**60.97**	**1**	*e*P	**P**	**06 11 09.5**	**-0.2**
	3.6nm,0.8s						
BRVK	**Borovoye**	**61.78**	**325**	*e*P	**P**	**06 11 15.6**	**0.0**
	6.8nm,1.0s						
BILL	**Bilibino**	**62.87**	**16**	*e*P	**P**	**06 11 23.5**	**+0.8**
	3.7nm,1.1s						
NRIK	**Noril'sk**	**63.80**	**345**	P	**P**	**06 11 28.8**	**0.0**
	1.5nm,0.3s,baz=158,slow=5.5,SNR=5.1						
ABKAR	**Akbulak array**	**67.00**	**319**	*e*P	**P**	**06 11 49.2**	**-0.6**
	4.4nm,0.9s						
BKZ	**Black Stump Fm**	**67.67**	**140**	*e*P	**P**	**06 11 54.8**	**+0.5**
	30nm,1.5s						
ARU	**Arti**	**69.26**	**326**	*e*P	**P**	**06 12 03.5**	**-0.4**
	4.1nm,0.6s						
KDAK	**Kodiak Island**	**76.00**	**33**	*e*P	**P**	**06 12 45.6**	**+1.6**
	36nm,1.5s						
BPAW	**Bear Paw Mtn.**	**77.04**	**27**	*e*P	**P**	**06 12 50.6**	**+0.8**
	17nm,1.4s						
MLY	**Manley**	**77.19**	**26**	*e*P	**P**	**06 12 51.0**	**+0.3**
	3.3nm,1.0s						
CASY	**Casey**	**77.66**	**187**	*e*P	**P**	**06 12 53.1**	**+0.1**
	6.5nm,0.8s						
TOLK	**Toolik Lake Re**	**77.79**	**22**	*e*P	**P**	**06 12 55.3**	**+1.3**
	8.2nm,1.4s						
MCK	**McKinley**	**77.94**	**27**	*e*P	**P**	**06 12 55.6**	**+0.8**
RND	**Reindeer**	**77.97**	**27**	*e*P	**P**	**06 12 55.2**	**+0.1**
	8.8nm,1.3s						
CCB	**Clear Creek Bu**	**78.44**	**26**	*e*P	**P**	**06 12 58.4**	**+0.8**
	3.3nm,1.4s						
DHY	**Denali Highway**	**78.65**	**28**	*e*P	**P**	**06 13 00.9**	**+2.0**
	2.6nm,1.1s						
SCM	**Sheep Creek Mo**	**78.69**	**29**	*e*P	**P**	**06 13 00.5**	**+1.4**
	9.3nm,1.0s						
ILAR	**Eielson Array**	**78.83**	**26**	P	**P**	**06 12 59.4**	**-0.3**
	0.7nm,0.7s,baz=242,slow=5.0,SNR=10						
ILB	**Eielson Array**	**78.83**	**26**	*e*P	**P**	**06 13 00.4**	**+0.7**
	2.5nm,1.1s						
RIDG	**Independent Ri**	**79.76**	**27**	*e*P	**P**	**06 13 05.6**	**+0.7**
	6.1nm,1.1s						
INK	**Inuvik**	**83.70**	**22**	*e*P	**P**	**06 13 25.9**	**+0.5**
	2.5nm,1.3s						
ARCES	**ARCESS Array B**	**84.06**	**340**	P	**P**	**06 13 27.0**	**-0.3**
	8.2nm,0.3s,baz=72,slow=7.8,SNR=12						
ARE0	**ARCESS Array S**	**84.06**	**340**	*e*P	**P**	**06 13 27.4**	**+0.1**
	0.5nm,1.3s						
WHY	**Whitehorse**	**84.80**	**29**	*e*P	**P**	**06 13 33.0**	**+1.6**
	6.5nm,0.9s						
MMAI	**Mount Meron Ar**	**85.53**	**303**	P	**P**	**06 13 36.7**	**+1.1**
	0.6nm,0.5s,baz=72,slow=6.2,SNR=4.6						
BR101	**Keskin Array S**	**85.77**	**309**	*e*P	**P**	**06 13 35.5**	**-1.2**
BR131	**Keskin Array S**	**85.77**	**309**	*e*P	**P**	**06 13 35.6**	**-1.2**
	1.9nm,0.8s						
BRTR	**Keskin Array B**	**85.78**	**309**	P	**P**	**06 13 35.5**	**-1.2**
	1.2nm,0.7s,baz=114,slow=5.3,SNR=7.7						
FIA0	**FINESS Array S**	**85.86**	**332**	*e*P	**P**	**06 13 35.9**	**-0.6**
FINES	**FINESS Array B**	**85.86**	**332**	P	**P**	**06 13 35.9**	**-0.6**
	2.2nm,0.5s,baz=85,slow=4.4,SNR=39						
AKASG	**Malin Array Be**	**86.67**	**321**	P	**P**	**06 13 39.5**	**-1.2**
	1.0nm,0.5s,baz=59,slow=4.8,SNR=12						
AKBB	**Malin Array Si**	**86.67**	**321**	*e*P	**P**	**06 13 39.9**	**-0.8**
	13nm,1.4s						
BUR08	**Bucovina Ar. S**	**89.98**	**319**	*e*P	**P**	**06 13 56.3**	**-0.4**
	1.8nm,0.6s						
VNDA	**Vanda**	**90.22**	**173**	P	**P**	**06 13 56.6**	**-0.3**
	0.9nm,0.6s,baz=326,slow=6.5,SNR=5.1						
VNDA	**Vanda**	**90.22**	**173**	*e*P	**P**	**06 13 56.1**	**-0.9**
	2.4nm,1.0s						
MAW	**Mawson**	**90.27**	**200**	P	**P**	**06 13 57.2**	**-0.1**
	1.6nm,0.7s,baz=27,slow=8.0,SNR=4.2						
MAW	**Mawson**	**90.27**	**200**	*e*P	**P**	**06 13 57.4**	**+0.1**
	1.1nm,1.3s						
RES	**Resolute Bay**	**91.02**	**10**	*e*P	**P**	**06 14 01.5**	**+0.7**
	4.1nm,0.8s						
NB2	**NORSAR Subarra**	**92.69**	**334**	P	**P**	**06 14 07.5**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=64,slow=4.4						
NB200	**NORSAR Array S**	**92.69**	**334**	*e*P	**P**	**06 14 07.2**	**-1.7**
NOA	**NORSAR Array B**	**92.69**	**334**	P	**P**	**06 14 07.2**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=65,slow=4.5,SNR=5.6						
YKA	**Yellowknife Ar**	**93.16**	**24**	P	**P**	**06 14 11.4**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=299,slow=4.7,SNR=3.7						
YKB5	**Yellowknife Ar**	**93.16**	**24**	*e*P	**P**	**06 14 11.3**	**+0.4**
VYHS	**Vyhne**	**93.77**	**321**	*e*P	**P**	**06 14 17.6**	**+3.5**
LTX	**Lajitas**	**117.11**	**49**	*e*PKPdf	**PKPdf**	**06 19 42.8**	**-0.1**
TXAR	**Lajitas Array**	**117.11**	**49**	PKP	**PKPdf**	**06 19 42.8**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=222,slow=1.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**120.70**	**292**	PKP	**PKPdf**	**06 19 48.9**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=41,slow=1.6,SNR=5.0						
TOA1	**Torodi Ar. Sit**	**120.71**	**292**	*e*PKPdf	**PKPdf**	**06 19 48.9**	**-1.1**
PLCA	**Paso Flores**	**146.30**	**156**	PKPbc	**PKPab**	**06 20 38.5**	**-0.3**
	comp=Z,3.6nm,0.7s,baz=264,slow=3.6,SNR=18						
PLCA	**Paso Flores**	**146.30**	**156**	*e*PKPdf	**PKPab**	**06 20 38.8**	**0.0**

*IDC **08** 06:03:16.1±2.7, 23°.93S×179°.95E, h498km±28km, mb3.4/9, mb1 3.6/10, mb1mx3.3/35, mbtmp4.3/10, Error ellipse: s-maj=21.6km s-min=18.6km az=21.0*
*ISCJB **08** 06:03:17.8±0.8, 24°.01S±0°.10×179°.9E±0°.1, h526km, mb3.8/8, Error ellipse: s-maj=17.3km s-min=12.7km az=177.6*

ISC 08 06:03:18.6±0.8, 24°.1S±0°.1×180°.0E±0°.1, h526km, n16, σ1°29/18, mb3.9/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.62**	**277**	P	**P**	**06 06 04.6**	**+0.8**
	0.5nm,0.3s,baz=94,slow=22,SNR=5.8						
URZ	**Urewera**	**14.32**	**189**	P	**P**	**06 06 20.6**	**-0.6**
	2.8nm,0.3s,baz=42,slow=17,SNR=20						
URZ				S	**S**	**06 08 50.6**	**-1.1**
	0.9nm,0.3s,baz=28,slow=23,SNR=16						
RPZ	**Rata Peaks**	**20.89**	**198**	P	**P**	**06 07 24.2**	**+0.5**
	17nm,0.9s,baz=342,slow=3.2,SNR=2.9						
STKA	**Stephens Creek**	**34.63**	**248**	P	**P**	**06 09 23.2**	**-0.5**
	2.1nm,0.6s,baz=90,slow=10,SNR=4.3						
ASAR	**Alice Springs**	**41.98**	**261**	P	**P**	**06 10 23.6**	**-0.2**
	5.2nm,0.8s,baz=94,slow=7.8,SNR=25						
ASAR				ScP	**ScP**	**06 15 10.6**	**+3.4**
	1.8nm,0.7s,baz=112,slow=4.1,SNR=11						
WRA	**Warramunga Arr**	**42.38**	**266**	P	**P**	**06 10 25.9**	**-1.0**
	9.7nm,0.5s,baz=91,slow=8.9,SNR=65						
FITZ	**Fitzroy Crossi**	**50.80**	**266**	P	**P**	**06 11 30.1**	**-0.4**
	2.1nm,0.4s,baz=110,slow=5.6,SNR=16						
VNDA	**Vanda**	**54.18**	**185**	P	**P**	**06 11 55.5**	**+1.7**
	1.1nm,0.7s,baz=352,slow=7.6,SNR=5.1						
MAW	**Mawson**	**77.55**	**200**	P	**P**	**06 14 20.4**	**+0.8**
	2.3nm,0.5s,baz=151,slow=14,SNR=9.0						
NVAR	**Mina Array Bea**	**84.91**	**44**	P	**P**	**06 14 58.9**	**+0.7**
	0.2nm,0.5s,baz=239,slow=5.1,SNR=3.6						
TXAR	**Lajitas Array**	**90.55**	**58**	P	**P**	**06 15 24.4**	**-0.4**
	0.6nm,0.7s,baz=216,slow=5.8,SNR=6.1						
ARCES	**ARCESS Array B**	**132.08**	**348**	PKP	**PKPdf**	**06 21 29.9**	**-1.6**
	8.8nm,0.4s,baz=8.5,slow=2.5,SNR=5.1						
FINES	**FINESS Array B**	**138.63**	**341**	PKhKP	PKPpre	06 21 34.1	
	0.6nm,0.9s,baz=60,slow=2.7,SNR=2.6						
FINES				PKP	**PKPdf**	**06 21 43.6**	**-0.3**
	0.7nm,0.8s,baz=45,slow=2.2,SNR=3.5						
AKASG	**Malin Array Be**	**145.13**	**327**	PKP	**PKPdf**	**06 21 54.9**	**-0.9**
	0.8nm,0.5s,baz=43,slow=4.0,SNR=2.8						
BRTR	**Keskin Array B**	**147.69**	**307**	PKPbc	**PKPbc**	**06 22 03.0**	**-1.2**
	0.4nm,0.6s,baz=111,slow=4.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**168.98**	**189**	PKPab	**PKPab**	**06 23 40.1**	**-0.5**
	0.6nm,0.5s,baz=156,slow=5.0,SNR=4.8						

*ISCJB **08** 06:05:10.1±0.5, 39°.36N±0°.03×18°.66E±0°.04, h8km, Error ellipse: s-maj=5.6km s-min=3.0km az=40.7*
*BEO **08** 06:05:11.2±0.9, 39°.44N×18°.67E, h0km, ML3.0/6*
*THE **08** 06:05:12.0, 39°.26N×18°.81E, h0km±2km, ML2.9/10, Error ellipse: s-maj=3.2km s-min=1.2km az=308.0*

ISC 08 06:05:12.0±0.9, 39°.30N±0°.04×18°.83E±0°.03, h8km, n37, σ2°14/60, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.86**	**61**	P	**Pg**	**06 05 28.6**	**+0.1**
KEK				S	**Sn**	**06 05 42.9**	**-0.2**
SRN	**Sarande**	**1.07**	**57**	P	**Pg**	**06 05 32.7**	**0.0**
SRN				S	**Sb**	**06 05 48.3**	**+1.3**
IGT	**Igoumenitsa**	**1.19**	**78**	*e*

JKN2				S	Sg	06 19 06.8	-0.9
JWY	**Kouya**	**0.78**	**200**	‖P	Pg	06 18 57.5	-0.4
JWY				S	Sg	06 19 07.9	-0.2
JIE	**Ise**	**0.85**	**130**	‖P	Pg	06 18 58.2	-1.2
JIE				S	Sg	06 19 09.4	-1.1
JKS	**Kasai**	**0.88**	**272**	‖P	Pg	06 18 59.6	-0.4
JKS				S	Sg	06 19 11.2	-0.3
JYTA	**Yamagatataniai**	**0.93**	**46**	P	Pg	06 19 00.5	-0.3
JYTA				S	Sg	06 19 12.4	-0.4
JKY	**Yasaka**	**0.95**	**316**	‖P	Pg	06 19 00.9	-0.3
JAJ2	**Tsuna**	**1.00**	**238**	‖P	Pg	06 19 01.3	-0.9
JAJ2				S	Sg	06 19 14.7	-0.6
MAT	**Matsushiro**	**2.45**	**49**	P	Pn	06 19 23.6	+0.8
MAT				eS	Sb	06 19 55.5	-1.6

IDC 08 06:20:11.5±34.0, 7°.63N×104°.13W, h0km, mb3.3/3, mb1 3.8/3, mb1mx3.5/22, mbtmp3.3/3 Error ellipse: s-maj=1051.0km s-min=111.8km az=117.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**21.59**	**1**	P	P	06 25 02.7	-0.5
	0.3nm,0.8s,baz=182,slow=12,SNR=4.1						
PDAR	**Pinedale Array**	**35.32**	**353**	P	P	06 27 09.3	+0.6
	0.3nm,0.7s,baz=163,slow=9.1,SNR=3.6						
ILAR	**Eielson Array**	**64.46**	**341**	P	P	06 30 49.4	-0.2
	1.1nm,1.2s,baz=142,slow=4.6,SNR=4.5						

*MEX **08** 06:37:55.7±0.8, 16°.40N×94°.81W, h93km±11km, MD4.6*
*NEIC **08** 06:37:55.7±0.0, 16°.40N×94°.81W, h93km, mb4.1/94, MD4.6(MEX), After MEX.*
NEIC Felt at Acayucan, Veracruz.
*IDC **08** 06:37:55.4±0.7, 16°.49N×94°.53W, h74km±5km, mb3.8/13, mb1 4.0/15, mb1mx3.8/39, mbtmp4.1/15, MS3.4/6, Ms1 3.4/6, ms1mx3.2/23, Error ellipse: s-maj=36.1km s-min=9.2km az=54.0*

ISC 08 06:37:55.3±0.5, 16°.39N±0°.04×94°.73W±0°.03, h81km±4km, h81km; pP-P, n256, σ1°51/277, mb4.1/63, 1D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.71**	**348**	P	**Pn**	**06 38 11.0**	**-0.2**
	2μm,0.3s,baz=177,slow=9.9						
CMIG				S	**Sn**	**06 38 22.7**	**-0.4**
	2μm,0.3s,baz=285,slow=20,SNR=150						
CMIG	**Matias Romero**	**0.71**	**348**	*i* P	**Pn**	**06 38 11.3**	**0.0**
CMIG				*e*S	**Sn**	**06 38 22.7**	**-0.4**
HUIG	**Huatulco**	**1.46**	**245**	*e*Pn	**Pn**	**06 38 18.8**	**-1.4**
HUIG				*e*Sn	**Sn**	**06 38 38.0**	**-1.0**
HUIG	**Huatulco**	**1.46**	**245**	*e*P	**Pn**	**06 38 18.8**	**-1.4**
HUIG				*i* S	**Sn**	**06 38 38.0**	**-1.0**
PCIG		**1.60**	**115**	*e*Pn	**Pn**	**06 38 22.5**	**+0.5**
PCIG				*e*Sn	**Sn**	**06 38 43.5**	**+1.2**
PCIG		**1.60**	**115**	*e*P	**Pn**	**06 38 22.5**	**+0.5**
PCIG				*i* S	**Sn**	**06 38 43.5**	**+1.2**
PANG	**Puerto Angel**	**1.82**	**247**	*e*P	**Pn**	**06 38 23.2**	**-1.7**
PANG				*e*S	**Sn**	**06 38 44.8**	**-2.6**
CCIG	**Comitan**	**2.49**	**92**	*e*Pn	**Pn**	**06 38 34.2**	**+0.3**
CCIG				*e*Pn	Pn	06 38 34.3	+0.3
CCIG				*e*Sn	**Sn**	**06 39 01.8**	**-1.8**
CCIG	**Comitan**	**2.49**	**92**	*e*P	**Pn**	**06 38 34.2**	**+0.3**
THIG		**2.79**	**121**	*e*Pn	**Pn**	**06 38 38.7**	**+0.8**
THIG				*e*Sn	**Sn**	**06 39 11.9**	**+1.3**
THIG		**2.79**	**121**	*i* P	**Pn**	**06 38 38.7**	**+0.8**
THIG				*e*S	**Sn**	**06 39 11.9**	**+1.3**
LVIG	**Laguna Verde**	**3.69**	**334**	*e*Pn	**Pn**	**06 38 47.5**	**-2.5**
TLIG	**Tlapa**	**3.85**	**288**	*e*Pn	**Pn**	**06 38 53.9**	**+1.5**
TLIG				*e*Sn	**Sn**	**06 39 34.1**	**-2.5**
SCIG	**Sabancuy**	**4.24**	**52**	*e*Pn	**Pn**	**06 38 56.2**	**-1.3**
SCIG				*e*Sn	**Sn**	**06 39 43.7**	**-2.1**
SCIG	**Sabancuy**	**4.24**	**52**	*e*P	**Pn**	**06 38 56.2**	**-1.3**
SCIG				*i* S	**Sn**	**06 39 43.7**	**-2.1**
MYIG	**Mrida**	**6.56**	**45**	*e*Pn	**Pn**	**06 39 28.0**	**-1.2**
MYIG				*e*Sn	**Sn**	**06 40 40.3**	**-2.2**
TGUH	**Tegucigalpa,Un**	**7.56**	**107**	*e*Pn	**Pn**	**06 39 42.9**	**-0.1**
ESTN	**Estel**	**8.72**	**111**	*e*Pn	**Pn**	**06 39 59.4**	**+0.6**
LNIG	**Linares**	**9.56**	**333**	*e*Pn	**Pn**	**06 40 13.1**	**+3.1**
ZAIG	**Zacatecas**	**9.74**	**312**	*e*Pn	**Pn**	**06 40 14.8**	**+2.0**
ACON	**Acoyapa**	**10.25**	**114**	*e*Pn	**Pn**	**06 40 19.2**	**-0.4**
ESPN	**Las Esperanzas**	**10.93**	**111**	*e*Pn	**Pn**	**06 40 29.1**	**+0.2**
JTS	**Las Juntas de**	**11.28**	**121**	P	**Pn**	**06 40 33.4**	**-0.2**
	1.9nm,0.3s,baz=0.6,slow=7.2,SNR=15						
JTS				S	**Sn**	**06 42 36.4**	**-1.5**
	0.4nm,0.3s,baz=342,slow=19,SNR=2.2						
JTS	**Las Juntas de**	**11.28**	**121**	*e*Pn	**Pn**	**06 40 34.3**	**+0.7**
HDC	**Heredia**	**12.13**	**120**	*e*Pn	**Pn**	**06 40 46.6**	**+1.3**
833A	**Chaparral WMA,**	**12.63**	**341**	*e*Pn	**Pn**	**06 40 55.0**	**+3.0**
833A	**Chaparral WMA,**	**12.63**	**341**	P	**Pn**	**06 40 53.4**	**+1.5**
	baz=160,SNR=16						
FSCY	**Frank Sound, G**	**13.22**	**75**	*e*Pn	**Pn**	**06 41 01.0**	**+1.2**
HKT	**Hockley**	**13.54**	**356**	*e*P	**P**	**06 41 10.6**	**+0.5**
435B	**Jarrell**	**14.56**	**350**	*e*Pn	**Pn**	**06 41 19.4**	**+2.1**
435B	**Jarrell**	**14.56**	**350**	P	**Pn**	**06 41 19.2**	**+1.9**
	baz=169,SNR=15						
HPIG		**14.60**	**318**	*e*P	**P**	**06 41 24.2**	**+2.0**
JCT	**Junction City**	**14.77**	**343**	*e*Pn	**P**	**06 41 22.4**	**-1.5**
JCT	**Junction City**	**14.77**	**343**	P	**P**	**06 41 22.6**	**-1.3**
	baz=161						
TXAR	**Lajitas Array**	**15.28**	**329**	P	**Pn**	**06 41 27.9**	**+1.3**
	0.1nm,0.3s,baz=152,slow=10,SNR=10						
TXAR				LR	LR	06 47 42.2	
	comp=Z,48nm,20.2s,baz=0.0,slow=38						
LTX	**Lajitas**	**15.28**	**329**	*e*P	**Pn**	**06 41 27.9**	**+1.3**
TX31	**Lajitas Ar. Si**	**15.28**	**329**	*e*P	**P**	**06 41 28.6**	**-1.1**
	4.4nm,1.1s						
WHTX	**Lake Whitney,**	**15.73**	**351**	*e*Pn	**P**	**06 41 35.2**	**+0.7**
	26nm,0.6s						
WHTX	**Lake Whitney,**	**15.73**	**351**	P	**P**	**06 41 34.5**	**0.0**
	baz=171,SNR=5.0						
449A	**Pace**	**15.87**	**24**	P	**Pn**	**06 41 34.5**	**+0.6**
	baz=208						
349A	**Repton**	**16.40**	**23**	P	**Pn**	**06 41 40.5**	**0.0**
	baz=207						
ABTX	**Abilene, Hawle**	**16.77**	**345**	*e*Pn	**P**	**06 41 47.3**	**+1.3**
	15nm,0.8s						
ABTX	**Abilene, Hawle**	**16.77**	**345**	P	**P**	**06 41 47.0**	**+1.1**
	baz=164,SNR=9.1						
350A	**Dozier**	**16.80**	**26**	P	**Pn**	**06 41 45.2**	**-0.3**
	baz=209						
Z41A	**Richland Creek**	**16.89**	**6**	*e*Pn	**P**	**06 41 48.2**	**+1.0**
	26nm,0.8s						
249A	**Camden**	**16.99**	**23**	P	**Pn**	**06 41 47.8**	**+0.1**
	baz=206,SNR=5.2						
352A	**Blakely**	**17.48**	**29**	*e*P	**P**	**06 41 56.4**	**+2.6**
	35nm,1.1s						
352A	**Blakely**	**17.48**	**29**	P	**Pn**	**06 41 53.4**	**-0.3**
	baz=213						
454A	**Quitman**	**17.50**	**33**	P	**Pn**	**06 41 53.5**	**-0.6**
	baz=218						
556A	**Lake Butler**	**17.64**	**38**	P	**P**	**06 41 55.2**	**-0.4**
	baz=223						
353A	**Camilla**	**17.71**	**31**	P	**P**	**06 41 55.9**	**-0.4**
	baz=215						
251A	**Midway**	**17.78**	**27**	P	**P**	**06 41 57.0**	**-0.1**
	baz=211						
150A	**Eclectic**	**17.97**	**24**	P	**P**	**06 41 58.9**	**-0.4**
	baz=208						
LRAL	**Lakeview Retre**	**17.99**	**21**	*e*P	**P**	**06 41 59.2**	**-0.2**
	4.4nm,1.1s						
LRAL	**Lakeview Retre**	**17.99**	**21**	P	**P**	**06 41 59.0**	**-0.4**
	baz=205						
557A	**Orange Park**	**18.05**	**39**	P	**P**	**06 41 60.0**	**-0.2**
	baz=224						
MNTX	**Cornudas Mount**	**18.06**	**329**	*e*P	**Pn**	**06 42 03.9**	**+3.0**
	2.2nm,0.8s						
MNTX	**Cornudas Mount**	**18.06**	**329**	P	**Pn**	**06 42 01.3**	**+0.4**
	baz=145						
TIGA	**Tifton**	**18.09**	**32**	*e*P	**Pn**	**06 42 05.7**	**+4.4**
	11nm,0.6s						
TIGA	**Tifton**	**18.09**	**32**	P	**P**	**06 42 00.3**	**-0.3**
	baz=217						
MIAR	**Mount Ida**	**18.11**	**3**	P	**P**	**06 42 00.9**	**+0.2**
	baz=184						
X37A	**Clayton**	**18.13**	**358**	*e*P	**Pn**	**06 42 04.1**	**+2.4**
	22nm,1.1s						
151A	**Opelika**	**18.19**	**26**	P	**P**	**06 42 01.8**	**+0.2**
	baz=210						
Z49A	**Columbiana**	**18.30**	**22**	P	**Pn**	**06 42 04.6**	**+0.9**
	baz=206						
152A	**Waverly Hall**	**18.57**	**27**	*e*P	**Pn**	**06 42 07.2**	**+0.2**
	9.1nm,1.1s						
152A	**Waverly Hall**	**18.57**	**27**	P	**Pn**	**06 42 06.9**	**-0.1**
	baz=212						
Z50A	**Ashland**	**18.58**	**24**	*e*P	**Pn**	**06 42 06.8**	**-0.3**
	6.1nm,1.0s						
Z50A	**Ashland**	**18.58**	**24**	P	**P**	**06 42 06.5**	**+0.6**
	baz=208						
WMOK	**Wichita Mounta**	**18.63**	**350**	*e*P	**P**	**06 42 06.4**	**-0.1**
	6.7nm,1.1s						
WMOK	**Wichita Mounta**	**18.63**	**350**	P	**Pn**	**06 42 07.5**	**-0.2**
	baz=168						
254A	**Abbeville**	**18.65**	**32**	P	**P**	**06 42 05.8**	**-0.9**
	baz=217						
OXF	**Oxford**	**18.67**	**14**	*e*P	**P**	**06 42 06.1**	**-0.7**
	23nm,1.1s						
OXF	**Oxford**	**18.67**	**14**	P	**P**	**06 42 06.6**	**-0.3**
	baz=196						
W39A	**Magazine**	**18.75**	**2**	*e*P	**Pn**	**06 42 08.7**	**-0.3**
	10nm,1.0s						
W41B	**Gary Mavity, V**	**18.84**	**6**	P	**Pn**	**06 42 09.6**	**-0.5**
	baz=188						
X46A	**Booneville**	**18.91**	**16**	P	**P**	**06 42 09.5**	**0.0**
	baz=199						
Y49A	**Blount Mountai**	**18.94**	**22**	*e*P	**P**	**06 42 08.9**	**-0.9**
	8.8nm,1.1s						
Y49A	**Blount Mountai**	**18.94**	**22**	P	**P**	**06 42 09.5**	**-0.4**
	baz=206						
MSTX	**Muleshoe**	**18.94**	**339**	*e*P	**Pn**	**06 42 12.0**	**+0.5**
	12nm,1.0s						
MSTX	**Muleshoe**	**18.94**	**339**	P	**Pn**	**06 42 11.6**	**0.0**
	baz=156,SNR=5.6						
153A	**Fort Valley**	**18.96**	**29**	P	**P**	**06 42 09.5**	**-0.6**
	baz=214						
255A	**Hazlehurst**	**19.06**	**34**	*e*P	**P**	**06 42 10.0**	**-1.1**
	21nm,1.1s						
255A	**Hazlehurst**	**19.06**	**34**	P	**P**	**06 42 10.4**	**-0.7**
	baz=219						
X47A	**Russelville**	**19.08**	**18**	P	**P**	**06 42 11.0**	**-0.4**
	baz=201						
Y50A	**Piedmont**	**19.22**	**23**	P	**P**	**06 42 11.8**	**-1.1**
	baz=207						
AMTX	**Amarillo**	**19.44**	**343**	*e*P	**Pn**	**06 42 18.2**	**+0.8**
	13nm,0.7s						
AMTX	**Amarillo**	**19.44**	**343**	P	**Pn**	**06 42 16.6**	**-0.8**
	baz=160						
PLAL	**Pickwick Lake**	**19.45**	**17**	*e*P	**P**	**06 42 14.9**	**-0.5**
	1.9nm,0.9s						
TUL1	**Leonard**	**19.47**	**357**	P	**P**	**06 42 15.4**	**-0.1**
	baz=177						
HSIG		**19.51**	**313**	*e*P	**Pn**	**06 42 18.8**	**+0.7**
	8.5nm,0.8s						
X49A	**Woodville**	**19.56**	**21**	P	**P**	**06 42 15.2**	**-1.5**
	baz=205						
Z53A	**Monticello**	**19.61**	**29**	P	**P**	**06 42 16.3**	**-0.8**
	baz=214						
155A	**Kite**	**19.61**	**32**	P	**P**	**06 42 17.1**	**-0.1**
	baz=218						
GOGA	**Godfrey**	**19.76**	**29**	P	**P**	**06 42 18.5**	**-0.3**
	baz=214						
HHAR	**Hobbs**	**19.83**	**2**	*e*P	**Pn**	**06 42 23.6**	**+1.8**
	4.1nm,0.6s						
121A	**Cookes Peak, D**	**19.96**	**326**	P	**Pn**	**06 42 23.4**	**-0.1**
	baz=141,SNR=6.5						
U40A	**Yellville**	**19.96**	**4**	P	**Pn**	**06 42 22.8**	**-0.5**
	baz=186						
W49A	**Belvidere**	**20.13**	**21**	P	**P**	**06 42 22.3**	**-0.5**
	baz=204						
X51A	**Calhoun**	**20.15**	**24**	P	**P**	**06 42 22.4**	**-0.6**
	baz=209						
SWET	**Sewanee**	**20.33**	**21**	*e*P	**P**	**06 42 23.4**	**-1.6**
	8.6nm,1.2s						
V47A	**Nunnelly**	**20.40**	**17**	P	**P**	**06 42 24.9**	**-0.8**
	baz=200						
V48A	**Smith Brothers**	**20.52**	**19**	P	**P**	**06 42 24.8**	**-2.2**
	baz=202						
W50A	**Signal Mountai**	**20.54**	**22**	*e*P	**P**	**06 42 25.5**	**-1.7**
	4.1nm,0.7s						
W50A	**Signal Mountai**	**20.54**	**22**	P	**P**	**06 42 25.3**	**-1.9**
	baz=207						
X52A	**Dahlonega**	**20.58**	**26**	P	**P**	**06 42 26.1**	**-1.6**
	baz=211						
WVT	**Waverly**	**20.60**	**16**	*e*P	**P**	**06 42 26.1**	**-1.7**
	3.4nm,1.0s						
WVT	**Waverly**	**20.60**	**16**	P	**P**	**06 42 27.1**	**-0.7**
	baz=199						
U46A	**Springville**	**20.73**	**15**	P	**P**	**06 42 27.3**	**-1.8**
	baz=198,SNR=7.5						
Z56A	**Williston**	**20.73**	**33**	P	**P**	**06 42 28.4**	**-0.9**
	baz=219						
X53A	**Estanollee**	**20.75**	**28**	P	**P**	**06 42 27.9**	**-1.6**
	baz=213						
V49A	**McMinnville**	**20.84**	**21**	P	**P**	**06 42 29.1**	**-1.4**
	baz=205						
HODGE	**Hodges**	**21.01**	**30**	*e*P	**P**	**06 42 29.9**	**-2.3**
	4.6nm,1.0s						
CPCT	**Cooper Cave**	**21.06**	**24**	*e*P	**P**	**06 42 30.9**	**-1.9**
	4.3nm,1.2s						
ANMO	**Albuquerque**	**21.26**	**333**	P	**P**	**06 42 36.0**	**+0.9**
	1.6nm,0.8s,baz=145,slow=12,SNR=10						
ANMO	**Albuquerque**	**21.26**	**333**	*e*P	**P**	**06 42 40.4**	**+5.2**
	2.9nm,0.9s						
ANMO	**Albuquerque**	**21.26**	**333**	P	**P**	**06 42 36.9**	**+1.7**
	baz=148						
TASM	**ASL Pad, Albuq**	**21.26**	**333**	P	**P**	**06 42 37.0**	**+1.8**
	baz=148						
TASM	**ASL Pad, Albuq**	**21.26**	**333**	P	**P**	**06 42 37.4**	**+2.3**
	baz=148						
SMLC	**San Martn de**	**21.51**	**108**	*e*P	**P**	**06 42 36.8**	**-1.0**
TUC	**Tucson**	**21.52**	**320**	P	**P**	**06 42 39.6**	**+1.7**
	baz=134						
U49A	**Red Boiling Sp**	**21.56**	**20**	P	**P**	**06 42 36.4**	**-1.7**
	baz=204						
T47A	**Sharon Grove**	**21.60**	**17**	*e*P	**P**	**06 42 39.0**	**+0.5**
	6.9nm,1.1s						
T47A	**Sharon Grove**	**21.60**	**17**	P	**P**	**06 42 37.4**	**-1.2**
	baz=200						
V52A	**Sevierville**	**21.77**	**25**	*e*P	**P**	**06 42 38.5**	**-1.8**
	6.1nm,1.1s						
CCM	**Cathedral Cave**	**21.80**	**7**	*e*P	**P**	**06 42 39.4**	**-1.3**
	2.3nm,0.6s						
CCM	**Cathedral Cave**	**21.80**	**7**	P	**P**	**06 42 41.2**	**+0.5**
	baz=189						
GUY2C	**Guyana, Caldas**	**21.99**	**118**	*e*P	**P**	**06 42 44.1**	**+0.7**
S46A	**Don Dixon Farm**	**22.10**	**15**	P	**P**	**06 42 40.9**	**-2.9**
	baz=198						
T49A	**Edmonton**	**22.18**	**20**	*e*P	**P**	**06 42 42.2**	**-2.6**
	6.4nm,1.1s						
T49A	**Edmonton**	**22.18**	**20**	P	**P**	**06 42 42.1**	**-2.6**
	baz=204						
S47A	**Hatford**	**22.23**	**17**	P	**P**	**06 42 43.6**	**-1.7**
	baz=200						
NORC	**Norcasia**	**22.24**	**117**	*e*P	**P**	**06 42 44.1**	**-1.6**
U52A	**Thorn Hill**	**22.34**	**25**	P	**P**	**06 42 44.0**	**-2.5**
	baz=210						
T25A	**Trinidad**	**22.38**	**339**	*e*P	**P**	**06 42 48.2**	**+1.1**
	5.7nm,0.9s						
T25A	**Trinidad**	**22.38**	**339**	P	**P**	**06 42 48.0**	**+0.9**
	baz=155,SNR=12						
TZTN	**Tazewell**	**22.40**	**24**	*e*P	**P**	**06 42 44.1**	**-3.0**
	14nm,1.1s						
POPC	**Popayan, Colom**	**22.47**	**126**	*e*P	**P**	**06 42 45.5**	**-2.9**
S48A	**Wiedeman Farm,**	**22.53**	**18**	P	**P**	**06 42 46.7**	**-1.8**
	baz=202						
T51A	**Gray**	**22.61**	**23**	P	**P**	**06 42 47.5**	**-1.9**
	baz=208						
V55A	**Taylorsville**	**22.82**	**29**	P	**P**	**06 42 47.2**	**-4.4**
	baz=215						
S49A	**Springfield**	**22.88**	**20**	P	**P**	**06 42 48.6**	**-3.5**
	baz=204						
R47A	**Wooly Knot Far**	**22.98**	**17**	P	**P**	**06 42 49.8**	**-3.4**
	baz=201						
WCI	**Wyandotte Cave**	**22.99**	**17**	*e*P	**P**	**06 42 50.5**	**-2.7**
	9.8nm,1.1s						
WCI	**Wyandotte Cave**	**22.99**	**17**	P	**P**	**06 42 49.8**	**-3.4**
	baz=201						
ROSC	**El Rosal**	**23.08**	**118**	*e*P	**P**	**06 42 53.8**	**-1.0**
	5.6nm,1.0s						
T52A	**Hallie**	**23.11**	**24**	*e*P	**P**	**06 42 51.6**	**-2.8**
	14nm,1.1s						
PRAC	**Prado**	**23.21**	**121**	‖*e*P	**P**	**06 42 52.1**	**-3.5**
SDCO	**Great Sand Dun**	**23.30**	**338**	*e*P	**P**	**06 42 57.8**	**+1.3**
	7.9nm,1.0s						
SDCO	**Great Sand Dun**	**23.30**	**338**	P	**P**	**06 42 57.5**	**+1.0**
	baz=153,SNR=15						
X16A	**Lo Mia Camp, P**	**23.39**	**323**	*e*P	**P**	**06 42 59.0**	**+1.7**
	6.6nm,1.0s						
Q47A	**Bedord North L**	**23.61**	**16**	P	**P**	**06 42 57.0**	**-2.0**
	baz=200						
S22A	**4UR Ranch, Cre**	**23.80**	**336**	P	**P**	**06 43 01.6**	**+0.6**
	baz=150						
MVCO	**Mesa Verde**	**24.05**	**332**	P	**P**	**06 43 04.0**	**+0.7**
	baz=146						
P46A	**Rosedale**	**24.06**	**14**	P	**P**	**06 43 02.0**	**-0.9**
	baz=198						
WUAZ	**Wupatki**	**24.16**	**325**	*e*P	**P**	**06 43 06.8**	**+2.8**
	15nm,0.9s						
WUAZ	**Wupatki**	**24.16**	**325**	P	**P**	**06 43 06.9**	**+2.8**
	baz=138,SNR=12						
P48A	**Milroy**	**24.38**	**18**	P	**P**	**06 43 04.8**	**-1.0**
	baz=202						
N41A	**Harden Midland**	**24.46**	**7**	*e*P	**P**	**06 43 06.3**	**-0.3**
	6.6nm,0.4s						
N41A	**Harden Midland**	**24.46**	**7**	P	**P**	**06 43 05.0**	**-1.6**
	baz=189						
HDIL	**Hopedale**	**24.54**	**10**	P	**P**	**06 43 06.5**	**-0.8**
	baz=193						
O45A	**Potomac**	**24.54**	**13**	P	**P**	**06 43 06.4**	**-0.9**
	baz=196						
PV01	**Paradox Valley**	**24.85**	**333**	*e*P	**P**	**06 43 12.5**	**+2.0**
	6.4nm,1.0s						
MACC	**Macarena, Meta**	**24.95**	**122**	*e*P	**P**	**06 43 11.4**	**0.0**
PV03	**Paradox Valley**	**25.07**	**333**	*e*P	**P**	**06 43 13.5**	**+1.0**
	5.2nm,0.9s						
PV12	**Saucer Basin,**	**25.11**	**333**	*e*P	**P**	**06 43 14.5**	**+1.7**
	7.9nm,0.9s						
ISCO	**Idaho Springs**	**25.18**	**340**	*e*P	**P**	**06 43 14.4**	**+0.9**
	2.2nm,1.1s						
PV23	**Carpenter Ridg**	**25.31**	**333**	*e*P	**P**	**06 43 16.5**	**+1.8**
	7.6nm,1.0s						
U15A	**North Rim**	**25.33**	**325**	*e*P	**P**	**06 43 19.2**	**+4.3**
	4.3nm,1.0s						
BC3	**Big Chuckawall**	**25.38**	**316**	P	**P**	**06 43 17.2**	**+2.0**
	baz=128						
SCIA	**State Center**	**25.46**	**3**	*e*P	**P**	**06 43 15.1**	**-0.6**
	12nm,0.6s						
SCIA	**State Center**	**25.46**	**3**	P	**P**	**06 43 15.6**	**-0.1**
	baz=184						
IRM	**Iron Mountain**	**25.49**	**318**	P	**P**	**06 43 20.0**	**+3.9**
	baz=129						
P52A	**Corning**	**25.64**	**23**	P	**P**	**06 43 17.9**	**+0.6**
	baz=209						
O52A	**Adamsville**	**26.17**	**23**	*e*P	**P**	**06 43 19.6**	**-2.5**
	12nm,1.1s						
O52A	**Adamsville**	**26.17**	**23**	P	**P**	**06 43 19.1**	**-3.0**
	baz=209						
GMRC	**Granite Mounta**	**26.21**	**318**	P	**P**	**06 43 23.8**	**+1.1**
	baz=129						
K42A	**Prairie Point,**	**26.70**	**9**	P	**P**	**06 43 26.1**	**-0.7**
	baz=192						
JFWS	**Jewell Farm**	**26.71**	**7**	*e*P	**P**	**06 43 26.4**	**-0.6**
	4.2nm,0.5s						
JFWS	**Jewell Farm**	**26.71**	**7**	P	**P**	**06 43 27.2**	**+0.2**
	baz=190						
TUQ	**Turquoise Moun**	**26.79**	**319**	P	**P**	**06 43 28.4**	**+0.5**
	baz=130						
K43A	**Burlington**	**26.79**	**10**	*e*P	**P**	**06 43 27.1**	**-0.6**
	7.9nm,1.1s						
J42A	**Columbus**	**27.26**	**9**	P	**P**	**06 43 30.7**	**-1.2**
	baz=192						
ECSD	**EROS Data Cent**	**27.30**	**357**	*e*P	**P**	**06 43 32.2**	**0.0**
	2.3nm,0.7s						
ECSD	**EROS Data Cent**	**27.30**	**357**	P	**P**	**06 43 32.3**	**0.0**
	baz=176						
I42A	**Draeger Farm,**	**27.86**	**9**	*e*P	**P**	**06 43 36.5**	**-0.7**
	6.0nm,1.1s						
I42A	**Draeger Farm,**	**27.86**	**9**	P	**P**	**06 43 36.4**	**-0.7**
	baz=192						
MPMC	**Manual Prospec**	**28.17**	**318**	P	**P**	**06 43 41.8**	**+1.4**
	baz=128						
CWC	**Cottonwood Cre**	**28.78**	**318**	P	**P**	**06 43 46.8**	**+1.0**
	baz=128						
SPMN	**Marine on St.**	**28.79**	**3**	*e*P	**P**	**06 43 45.8**	**+0.3**
	6.0nm,0.4s						
SPMN	**Marine on St.**	**28.79**	**3**	P	**P**	**06 43 45.9**	**+0.3**
	baz=184						
G39A	**Holcombe**	**28.96**	**5**	P	**P**	**06 43 46.0**	**-1.1**
	baz=187						
F37A	**Hinrichs Farm,**	**29.30**	**3**	P	**P**	**06 43 49.9**	**-0.1**
	baz=184						
G43A	**Wallace**	**29.38**	**10**	*e*P	**P**	**06 43 49.6**	**-1.1**
	2.4nm,0.4s						
G43A	**Wallace**	**29.38**	**10**	P	**P**	**06 43 49.5**	**-1.1**
	baz=194						
H47A	**Mio**	**29.49**	**15**	P	**P**	**06 43 49.9**	**-1.8**
	baz=201						
G45A	**Suttons Bay**	**29.57**	**13**	*e*P	**P**	**06 43 51.2**	**-1.1**
	3.7nm,0.8s						
F38A	**Pierce - Schro**	**29.58**	**4**	P	**P**	**06 43 51.9**	**-0.6**
	baz=186						
F40A	**Park Falls**	**29.69**	**6**	P	**P**	**06 43 52.4**	**-1.1**
	baz=189						
AHID	**Auburn Hatcher**	**29.78**	**335**	*e*P	**P**	**06 43 55.3**	**+0.7**
	2.3nm,0.5s						
F43A	**Flat Rock, Esc**	**30.03**	**11**	P	**P**	**06 43 55.2**	**-1.2**
	baz=195						
NV11	**Mina Array Sit**	**30.08**	**321**	*e*P	**P**	**06 43 59.6**	**+2.4**
	0.2nm,1.0s						
E39A	**Mellen**	**30.10**	**6**	P	**P**	**06 43 56.5**	**-0.6**
	baz=188						
NVAR	**Mina Array Bea**	**30.17**	**321**	P	**P**	**06 44 00.7**	**+2.6**
	3.2nm,0.9s,baz=137,slow=9.6,SNR=19						
NVAR				pP	**pP**	**06 44 16.7**	**-0.3**
	2.1nm,1.0s,baz=135,slow=8.9,SNR=4.7						
NVAR				LR	LR	06 58 52.5	
	com

4.9nm,1.1s
INK eP pP 06 47 57.1 +1.4
RES Resolute Bay 58.30 360 eP P 06 47 41.0 -0.3
1.9nm,0.8s
RES eP pP 06 48 03.0 +1.0
KDAK Kodiak Island 59.31 328 eP P 06 47 50.8 +2.3
8.2nm,1.1s
ILAR Eielson Array 59.62 337 P P 06 47 50.9 +0.3
0.6nm,0.9s,baz=148,slow=5.3,SNR=7.6
ILAR pP pP 06 48 10.9 -0.3
1.4nm,0.7s,baz=153,slow=4.4,SNR=9.1
ILB Eielson Array 59.62 337 eP P 06 47 50.6 +0.1
0.9nm,0.8s
ILB eP pP 06 48 12.6 +1.3
SUA Susitna One 59.76 333 eP P 06 47 52.8 +1.1
7.2nm,1.0s
RND Reindeer 59.76 335 eP P 06 47 53.3 +1.6
8.1nm,1.2s
PLCA Paso Flores 61.11 159 P P 06 48 01.4 +0.4
3.5nm,1.0s,baz=350,slow=7.1,SNR=4.1
PLCA Paso Flores 61.11 159 eP P 06 48 01.4 +0.4
5.1nm,1.1s
ANGG Ammassalik, Gr 61.86 23 eP P 06 48 04.1 -1.6
8.6nm,0.7s
PPT Papeete 63.70 240 LR LR 07 07 58.6
comp=Z,62nm,20.5s,baz=24,slow=28
SUMG Summit 64.66 16 eP P 06 48 25.4 +0.8
0.9nm,0.8s
SCO Scoresbysund 68.92 20 eP P 06 48 50.9 -0.3
9.8nm,1.0s
NB2 NORSAR Subarra 83.30 28 P P 06 50 14.3 +1.3
comp=Z,2.2nm,1.0s,baz=293,slow=5.1
NOA NORSAR Array B 83.30 28 P P 06 50 14.5 +1.5
comp=Z,0.4nm,0.6s,baz=295,slow=5.0,SNR=3.4
NOA LR LR 07 26 05.8
comp=Z,19nm,21.6s,baz=275,slow=35
NB201 NORSAR Array S 83.33 28 eP P 06 50 15.2 +2.1
ARCES ARCESS Array B 84.69 18 P P 06 50 19.6 -0.2
comp=Z,1.3nm,0.7s,baz=319,slow=5.3,SNR=8.3
ARCES pP pP 06 50 40.4 -1.4
comp=Z,1.6nm,0.7s,baz=272,slow=5.7,SNR=3.3
GERES GERESS Array B 89.42 39 LR LR 07 30 15.2
comp=Z,20nm,21.1s,baz=296,slow=35
FINES FINESS Array B 89.44 24 P P 06 50 43.7 +0.7
comp=Z,1.8nm,1.0s,baz=320,slow=5.0,SNR=3.9
FINES LR LR 07 31 30.4
comp=Z,20nm,18.9s,baz=340,slow=36
WB2 Warmunga Array 133.36 258 ePKPdf PKiKP 06 57 03.9 -0.1
ABPO Ambohimpanom 143.71 100 ePKPdf PKiKP 06 57 24.2 -1.3
PSAA3 Pilbara Seismi 146.94 256 ePKPbc PKPbc 06 57 29.4 +0.1
PSAD3 Pilbara Seismi 147.00 255 ePKPbc PKPab 06 57 30.9 -0.2
JAGI Jajag, Banyuwa 150.75 282 ePKPab PKPab 06 57 46.9 +0.4

*ISCJB **08** 07:09:59.2±0.5,34°.20N±0°.03×135°.21E±0°.03,h10km, mb3.1/2,Error ellipse: s-maj=4.3km s-min=3.7km az=135.5*
*JMA **08** 07:09:59.1,34°.21N×135°.21E,h4km±1km,M3.3 Broadband fault plane solution: P waves. NP1: φ±206.00000°,δ46.00000°,λ108.00000°. NP2:φ±0.00000°, δ46.00000°,λ72.00000°. Principal axes: T Plg77.0000°, Azm193.0000°; N Plg13.0000°, Azm13.0000°; P Plg0.0000°, Azm283.0000°;*
JMA Felt III J1.
*IDC **08** 07:10:00.3±3.6,34°.17N×135°.22E,h0km,mb3.3/2, mb1 3.2/4,mb1mx3.1/32,mbtmp3.1/4,ML2.4/2 Error ellipse: s-maj=62.7km s-min=18.4km az=158.0*
ISC 08 07:10:00.2±0.9,34°.22N±0°.03×135°.22E±0°.03,h10km,n18, σ1§65/21,5D,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWY	**Kouya**	**0.31**	**89**	‖P	**Pg**	**07 10 05.2**	**-1.3**
JWY				S	**Sg**	**07 10 09.9**	**-0.7**
JAJ2	**Tsuna**	**0.34**	**306**	‖P	**Pg**	**07 10 05.9**	**-1.2**
JAJ2				S	**Sg**	**07 10 10.7**	**-1.0**
JWM	**Minabe**	**0.38**	**163**	‖P	**Pg**	**07 10 06.7**	**-1.1**
JWM				S	**Sg**	**07 10 11.8**	**-1.0**
JTNC	**Tanabenakahech**	**0.51**	**141**	P	**Pg**	**07 10 09.4**	**-0.8**
JTNC				S	**Sg**	**07 10 16.3**	**-0.6**
JHE	**Heguri**	**0.58**	**41**	P	**Pg**	**07 10 10.7**	**-0.8**
JHE				S	**Sg**	**07 10 18.8**	**-0.4**
JAI	**Aioi**	**0.77**	**237**	‖P	**Pg**	**07 10 13.1**	**-1.9**
JAI				S	**Sg**	**07 10 23.6**	**-1.4**
JKS	**Kasai**	**0.83**	**338**	‖P	**Pg**	**07 10 14.9**	**-1.3**
JKS				S	**Sg**	**07 10 25.8**	**-1.2**
MAT	**Matsushiro**	**3.37**	**46**	P	**Pn**	**07 10 54.4**	**+1.5**
MAT				eS	**Sb**	**07 11 37.0**	**-4.1**
MJAR	**Matsushiro Arr**	**3.37**	**46**	Pn	**Pn**	**07 10 54.6**	**+1.7**
0.1nm,0.3s,baz=223,slow=14,SNR=5.2							
MJAR				Pg	**Pg**	**07 11 03.6**	**-1.2**
0.3nm,0.3s,baz=228,slow=16,SNR=14							
MJAR				Lg	Lg	07 11 48.0	
0.1nm,0.3s,baz=227,slow=25,SNR=5.7							
KSRS	**Korea Array**	**6.75**	**301**	Pn	**Pn**	**07 11 40.9**	**+1.6**
0.2nm,0.3s,baz=116,slow=15,SNR=3.2							
SONM	**Songino Array**	**25.48**	**311**	P	**P**	**07 15 30.4**	**+1.8**
0.8nm,0.7s,baz=120,slow=8.5,SNR=3.0							
H11N2	**WAKE ISLAND Hy**	**31.55**	**109**	T	T	07 48 49.1	
baz=303							
H11N1	**WAKE ISLAND Hy**	**31.56**	**109**	T	T	07 48 44.4	
baz=303							
H11N3	**WAKE ISLAND Hy**	**31.57**	**109**	T	T	07 48 46.8	
baz=303							
H11S3	**WAKE ISLAND Hy**	**32.09**	**111**	T	T	07 49 37.3	
baz=304							
H11S1	**WAKE ISLAND Hy**	**32.09**	**111**	T	T	07 49 29.6	
baz=304							
H11S2	**WAKE ISLAND Hy**	**32.10**	**111**	T	T	07 49 32.9	
baz=304							
MKAR	**Makanchi Array**	**41.42**	**304**	P	**P**	**07 17 48.7**	**+1.9**
0.1nm,0.4s,baz=90,slow=9.3,SNR=2.4							

*NIED **08** 07:17:00,34°.20N×135°.20E,h5km,Mw4.0 Best double couple: Mo1.03000×10^15 NP1:φ±350.00000°,δ44.00000°, λ46.00000°. NP2:φ±223.00000°,δ60.00000°,λ124.00000°.*
*ISCJB **08** 07:17:53.4±0.5,34°.19N±0°.02×135°.22E±0°.03,h4km±3km, mb4.2/36,Error ellipse: s-maj=4.1km s-min=3.7km az=21.3*
*JMA **08** 07:17:53.8,34°.21N×135°.21E,h4km±1km,M4.0 Broadband fault plane solution: P waves. NP1: φ±1.00000°,δ49.00000°,λ74.00000°. NP2:φ±204.00000°, δ43.00000°,λ107.00000°. Principal axes: T Plg78.0000°, Azm205.0000°; N Plg12.0000°, Azm11.0000°; P Plg3.0000°, Azm102.0000°;*
JMA Felt IV J1.
*IDC **08** 07:17:53.5±0.7,34°.10N×135°.19E,h0km,mb3.9/9, mb1 4.1/13,mb1mx3.9/42,mbtmp3.9/13,ML3.5/4,MS2.9/2, Ms1 2.9/2,ms1mx2.6/43 Error ellipse: s-maj=19.1km s-min=13.0km az=157.0*
*NEIC **08** 07:17:56.4±2.0,33°.99N×135°.30E,h16km±4km,mb4.3/27, Error ellipse: s-maj=13.5km s-min=6.9km az=139.0*
ISC 08 07:17:54.9±1.1,34°.13N±0°.03×135°.24E±0°.03,h4km±7km, n78,σ1§39/80,mb4.3/36,6D,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.29**	**161**	‖P	**Pg**	**07 18 01.4**	**+0.9**
JWM				S	**Sg**	**07 18 06.4**	**+2.1**
JWY	**Kouya**	**0.30**	**72**	‖P	**Pg**	**07 17 59.9**	**-0.9**
JAJ2	**Tsuna**	**0.42**	**315**	‖P	Pg	07 18 00.6	-2.3
JAJ2				S	**Sg**	**07 18 05.7**	**-2.7**
JTNC	**Tanabenakahech**	**0.43**	**135**	P	**Pb**	**07 18 04.1**	**-1.0**
JTNC				S	**Sb**	**07 18 11.2**	**-0.8**
JHE	**Heguri**	**0.64**	**35**	‖P	Pg	07 18 05.4	-1.8
JHE				S	**Sg**	**07 18 13.7**	**-1.8**
JAI	**Aioi**	**0.74**	**243**	‖P	**Pg**	**07 18 07.8**	**-1.2**
JAI				S	**Sg**	**07 18 18.2**	**-0.4**
JKN2	**Miekihoku**	**0.86**	**82**	P	**Pg**	**07 18 10.5**	**-0.9**
JKS	**Kasai**	**0.92**	**339**	‖P	Pg	07 18 09.7	-2.8
JKS				S	Sg	07 18 20.7	-3.7
INU	**Inuyama**	**1.90**	**50**	ePn	**Pn**	**07 18 27.6**	**-0.5**
MAJO	**Matsushiro**	**3.42**	**44**	ePn	**Pn**	**07 18 48.3**	**-0.7**
MAJO				ePg	**Pb**	**07 18 58.3**	**+2.3**
MAJO				eLg	Lg	07 19 41.0	
MAT	**Matsushiro**	**3.42**	**44**	P	**Pn**	**07 18 48.5**	**-0.5**
MAT				eS	**Sn**	**07 19 31.4**	**+1.4**
MJAR	**Matsushiro Arr**	**3.42**	**44**	Pn	**Pn**	**07 18 48.7**	**-0.3**
0.6nm,0.3s,baz=237,slow=15,SNR=17							
MJAR				Pg	**Pb**	**07 18 58.3**	**+2.3**
1.3nm,0.3s,baz=216,slow=17,SNR=45							
MJAR				Lg	Lg	07 19 41.0	
0.7nm,0.3s,baz=217,slow=30,SNR=5.8							
MJB9	**Matsu-Tunnel**	**3.42**	**44**	ePn	**Pn**	**07 18 48.5**	**-0.5**
JNU	**Nakatsue**	**3.78**	**256**	Pn	**Pn**	**07 18 53.0**	**-1.0**
7.4nm,0.3s,baz=86,slow=2.9,SNR=30							
JNU				Pg	**Pb**	**07 19 02.6**	**+0.5**
7.9nm,0.3s,baz=70,slow=6.8,SNR=34							
JNU				Lg	Lg	07 19 52.2	
2.9nm,0.3s,baz=30,slow=20,SNR=3.0							
JNU	**Nakatsue**	**3.78**	**256**	ePn	**Pn**	**07 18 53.2**	**-0.8**
JNU				ePg	**Pb**	**07 19 03.3**	**+1.2**
JNU				eLg	Lg	07 19 52.2	
JHJ	**Hachijo jima 2**	**3.92**	**104**	Pn	**Pn**	**07 18 55.0**	**-0.8**
36nm,0.3s,baz=270,slow=20,SNR=5.5							
JHJ				Sn	**Sn**	**07 19 41.2**	**-1.0**
baz=252,slow=20,SNR=2.3							
JHJ				LR	LR	07 20 19.7	
comp=Z,144nm,20.2s,baz=280,slow=37							
JHJ2	**Mitsune**	**3.95**	**104**	ePn	**Pn**	**07 18 53.5**	**-2.8**
KSRS	**Korea Array**	**6.81**	**301**	Pn	**Pn**	**07 19 35.3**	**-0.3**
0.5nm,0.3s,baz=121,slow=14,SNR=28							
KSRS				Sn	Sn	07 20 46.7	-6.9
baz=128,slow=27,SNR=2.3							
KSRS				LR	LR	07 22 16.3	
comp=Z,106nm,20.0s,baz=127,slow=39							
KS15	**Wonju Array Si**	**6.83**	**301**	ePn	**Pn**	**07 19 37.2**	**+1.3**
KS15				eSn	Sn	07 20 46.7	-7.5
KLR	**Kul'dur**	**15.31**	**351**	Pn	**Pn**	**07 21 33.7**	**+1.9**
0.4nm,0.3s,baz=192,slow=7.6,SNR=8.5							
HIA	**Hailar**	**18.99**	**327**	eP	**P**	**07 22 18.0**	**+0.6**
6.3nm,0.4s							
HHC	**Hu-ho-hao-te**	**19.92**	**297**	eP	**P**	**07 22 29.1**	**+1.4**
HHC				pmax	pmax		
comp=Z,23nm,0.9s							
HHC				pmax	pmax		
comp=Z,150nm,5.5s							
XAN	**Xi'an**	**21.79**	**277**	P	**P**	**07 22 50.7**	**+2.8**
XAN				pP	sP	07 23 04.7	+15
XAN				pmax	pmax		
comp=Z,7.0nm,1.0s							
XAN	**Xi'an**	**21.79**	**277**	eP	**P**	**07 22 51.0**	**+3.2**
comp=Z,18nm,1.4s							
ENH	**Enshi**	**22.11**	**267**	eP	**P**	**07 22 52.7**	**+1.3**
comp=Z,10nm,0.6s							
ULN	**Ulaanbaatar**	**25.15**	**312**	eP	**P**	**07 23 20.1**	**-1.1**
comp=Z,5.0nm,0.8s							
SONA0	**Songino Array**	**25.55**	**311**	eP	**P**	**07 23 23.1**	**-1.8**
SONM	**Songino Array**	**25.55**	**311**	P	**P**	**07 23 23.1**	**-1.8**
comp=Z,2.3nm,0.6s,baz=132,slow=9.3,SNR=6.8							
LZH	**Lanzhou**	**25.71**	**283**	eP	**P**	**07 23 26.2**	**-0.2**
LZH				pP	pP	07 23 29.8	+2.2
LZH				sP	sP	07 23 32.2	+4.1
LZH				pmax	pmax		
comp=Z,15nm,1.0s							
GTA	**Gaotai**	**28.75**	**291**	eP	**P**	**07 23 52.7**	**-1.0**
GTA				pP	pP	07 23 57.3	+2.5
GTA				sP	sP	07 23 59.8	+4.5
GTA				pmax	pmax		
comp=Z,3.0nm,0.7s							
KMI	**Kunming**	**29.55**	**261**	P	**P**	**07 24 02.2**	**+1.2**
KMI				pmax	pmax		
comp=Z,12nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**31.50**	**109**	T	T	07 56 54.8	
baz=303,slow=75,SNR=10							
H11N1	**WAKE ISLAND Hy**	**31.51**	**109**	T	T	07 56 55.4	
baz=303,slow=75,SNR=8.9							
H11N3	**WAKE ISLAND Hy**	**31.52**	**109**	T	T	07 56 56.3	
baz=303,slow=75,SNR=11							
H11S3	**WAKE ISLAND Hy**	**32.04**	**111**	T	T	07 57 29.5	
baz=304							
H11S1	**WAKE ISLAND Hy**	**32.04**	**111**	T	T	07 57 23.0	
baz=304							
H11S2	**WAKE ISLAND Hy**	**32.05**	**111**	T	T	07 57 23.2	
baz=304							
WMQ	**Urumqi**	**37.76**	**299**	eP	**P**	**07 25 14.3**	**+2.3**
MK31	**Makanchi Array**	**41.48**	**304**	eP	**P**	**07 25 43.4**	**+0.4**
comp=Z,2.0nm,0.7s							
MK32	**Makanchi Array**	**41.48**	**304**	eP	**P**	**07 25 41.5**	**-1.4**
MKAR	**Makanchi Array**	**41.48**	**304**	P	**P**	**07 25 41.5**	**-1.4**
comp=Z,1.5nm,0.7s,baz=90,slow=10,SNR=11							
MAKZ	**Makanchi**	**41.70**	**304**	eP	**P**	**07 25 45.3**	**+0.5**
comp=Z,4.4nm,0.6s							
KURK	**Kurchatov**	**43.85**	**310**	eP	**P**	**07 26 01.9**	**-0.2**
comp=Z,2.7nm,0.8s							
MTN	**Manton Dam**	**46.87**	**185**	eP	**P**	**07 26 25.4**	**-1.0**
comp=Z,28nm,1.5s							
RDOG	**Red Dog Mine**	**48.35**	**26**	eP	**P**	**07 26 37.7**	**+0.4**
comp=Z,5.2nm,0.5s							
KK31	**Karatay Array**	**50.24**	**301**	eP	**P**	**07 26 53.2**	**+1.0**
comp=Z,3.7nm,0.8s							
KKAR	**Karatay Array**	**50.24**	**301**	eP	**P**	**07 26 53.1**	**+0.9**
comp=Z,3.7nm,0.8s							
NIL	**Nilore**	**50.73**	**288**	eP	**P**	**07 26 56.9**	**+0.9**
comp=Z,4.1nm,0.6s							
BWN	**Browne**	**53.54**	**32**	eP	**P**	**07 27 17.9**	**+1.5**
comp=Z,6.8nm,0.6s							
WB2	**Warramunga Arr**	**53.77**	**181**	eP	**P**	**07 27 17.8**	**-0.7**
comp=Z,3.8nm,1.1s							
WR1	**Warramunga Arr**	**53.77**	**181**	eP	**P**	**07 27 17.3**	**-1.2**
WRA	**Warramunga Arr**	**53.77**	**181**	P	**P**	**07 27 17.3**	**-1.2**
comp=Z,4.6nm,0.9s,baz=8.8,slow=7.6,SNR=7.0							
DHY	**Denali Highway**	**54.57**	**33**	eP	**P**	**07 27 23.8**	**-0.4**
comp=Z,1.9nm,1.0s							
ILAR	**Eielson Array**	**54.60**	**31**	P	**P**	**07 27 22.9**	**-1.3**
comp=Z,0.7nm,0.6s,baz=275,slow=7.1,SNR=11							
ABKAR	**Akbulak array**	**55.96**	**310**	eP	**P**	**07 27 34.7**	**+0.6**
comp=Z,1.6nm,0.6s							
DOT	**Dot Lake**	**55.97**	**32**	eP	**P**	**07 27 34.7**	**+0.6**
comp=Z,1.2nm,0.7s							
EGAK	**Eagle**	**57.03**	**31**	eP	**P**	**07 27 41.8**	**+0.3**
comp=Z,1.6nm,0.9s							
ASAR	**Alice Springs**	**57.49**	**181**	P	**P**	**07 27 44.3**	**-0.9**
comp=Z,0.5nm,0.6s,baz=11,slow=13,SNR=8.5							
EPYK	**Eagle Plains**	**58.50**	**28**	eP	**P**	**07 27 52.1**	**+0.2**
comp=Z,6.0nm,0.8s							
INK	**Inuvik**	**59.22**	**26**	P	**P**	**07 27 57.1**	**+0.3**
comp=Z,1.1nm,0.6s,baz=299,slow=7.4,SNR=9.9							
INK	**Inuvik**	**59.22**	**26**	eP	**P**	**07 27 57.8**	**+1.0**
comp=Z,4.4nm,1.4s							
RES	**Resolute Bay**	**66.61**	**13**	eP	**P**	**07 28 46.6**	**+0.7**
comp=Z,3.3nm,1.4s							
FIA0	**FINESS Array S**	**68.97**	**331**	eP	**P**	**07 28 57.7**	**-3.2**
FINES	**FINESS Array B**	**68.97**	**331**	P	**P**	**07 28 57.7**	**-3.2**
comp=Z,1.1nm,0.6s,baz=41,slow=6.1,SNR=7.7							
PINE	**Pine Mountain**	**76.02**	**46**	eP	**P**	**07 29 46.1**	**+2.5**
comp=Z,5.0nm,0.9s							
BR101	**Keskin Array S**	**76.89**	**309**	eP	**P**	**07 29 47.5**	**-1.0**
BR131	**Keskin Array S**	**76.89**	**309**	eP	**P**	**07 29 50.6**	**+2.0**
comp=Z,2.1nm,1.0s							
BRTR	**Keskin Array B**	**76.89**	**309**	P	**P**	**07 29 47.5**	**-1.0**
comp=Z,0.9nm,0.9s,baz=93,slow=4.2,SNR=4.3							
PNTR	**Pine Nut**	**79.52**	**50**	eP	**P**	**07 30 04.6**	**+1.3**
comp=Z,7.3nm,1.3s							
DLMT	**Dillon**	**79.90**	**42**	eP	**P**	**07 30 05.4**	**+0.3**
comp=Z,2.8nm,0.8s							
VYHS	**Vyhne**	**80.12**	**323**	eP	**P**	**07 30 05.6**	**-0.5**
KVN	**Kaiserville**	**80.49**	**49**	eP	**P**	**07 30 08.5**	**0.0**
comp=Z,3.7nm,1.1s							
NV01	**Mina Array Sit**	**80.73**	**50**	eP	**P**	**07 30 09.5**	**-0.3**
NVAR	**Mina Array Bea**	**80.73**	**50**	P	**P**	**07 30 09.5**	**-0.3**
comp=Z,1.5nm,0.8s,baz=309,slow=4.1,SNR=12							
PDAR	**Pinedale Array**	**83.24**	**42**	P	**P**	**07 30 22.2**	**-0.8**
comp=Z,0.7nm,0.8s,baz=292,slow=4.7,SNR=5.3							
QSPA	**South Pole Qui**	**123.88**	**180**	ePKPdf	**PKPdf**	**07 36 52.2**	**-1.2**
PB11	**IPOC Station P**	**153.68**	**63**	ePKPbc	**PKPbc**	**07 37 56.3**	**+0.5**
PB01	**IPOC Station P**	**154.58**	**66**	ePKPbc	**PKPbc**	**07 37 58.0**	**+0.5**

*ISCJB **08** 07:19:05.8±1.0,24°.7S±0°.1×179°.8E±0°.2,h501km,mb3.2/4, Error ellipse: s-maj=24.2km s-min=13.9km az=12.1*
*IDC **08** 07:19:07.6±6.8,24°.84S×179°.90E,h516km±82km,mb2.8/4, mb1 3.3/5,mb1mx2.9/38,mbtmp3.8/5,Error ellipse: s-maj=70.1km s-min=26.1km az=179.0*
ISC 08 07:19:06.4±0.9,24°.8S±0°.1×179°.9E±0°.2,h501km,n9, σ0§57/10,mb3.3/4,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.66**	**189**	P	**P**	**07 22 02.0**	**-0.3**
baz=24,slow=4.0							
URZ				S	**S**	**07 24 27.7**	**+0.3**
0.2nm,0.3s,baz=306,slow=19,SNR=3.4							
ASAR	**Alice Springs**	**41.79**	**262**	P	**P**	**07 26 12.0**	**+0.3**
0.3nm,0.6s,baz=96,slow=8.9,SNR=3.5							
WRA	**Warramunga Arr**	**42.24**	**267**	P	**P**	**07 26 15.5**	**+0.2**
0.4nm,0.3s,baz=93,slow=8.6,SNR=4.6							
NVAR	**Mina Array Bea**	**85.44**	**44**	P	**P**	**07 30 50.6**	**-0.3**
0.3nm,0.6s,baz=241,slow=5.0,SNR=2.6							
TXAR	**Lajitas Array**	**90.98**	**58**	P	**P**	**07 31 17.5**	**+0.7**
0.6nm,0.6s,baz=213,slow=6.5,SNR=3.9							
ARCES	**ARCESS Array B**	**132.70**	**348**	PKP	**PKPdf**	**07 37 22.3**	**-0.8**
7.2nm,0.3s,baz=56,slow=2.6,SNR=3.8							
FINES	**FINESS Array B**	**139.22**	**341**	PKhKP	PKPpre	07 37 26.8	
0.8nm,0.6s,baz=49,slow=4.2,SNR=4.6							
FINES				PKP	**PKPdf**	**07 37 36.1**	**+0.8**
0.7nm,0.7s,baz=66,slow=2.1,SNR=4.5							
AKASG	**Malin Array Be**	**145.62**	**326**	PKPbc	**PKPdf**	**07 37 46.7**	**-0.3**
0.5nm,0.4s,baz=46,slow=4.0,SNR=3.2							
BRTR	**Keskin Array B**	**148.00**	**306**	PKPbc	**PKPbc**	**07 37 54.9**	**-0.4**
0.2nm,0.3s,baz=21,slow=1.3,SNR=2.4							

*ISCJB **08** 07:27:16.7±0.8,10°.69N±0°.07×126°.90E±0°.06,h10km, mb3.9/6,Error ellipse: s-maj=9.4km s-min=8.7km az=8.3*
*IDC **08** 07:27:17.0±1.1,10°.53N×126°.66E,h0km,mb3.8/6, mb1 3.9/6,mb1mx3.6/38,mbtmp3.8/6,Error ellipse: s-maj=61.1km s-min=20.6km az=78.0*
*MAN **08** 07:27:19.4,10°.85N×126°.89E,h34km,mb4.4,ML3.3, MS3.1*
ISC 08 07:27:18.5±0.9,10°.75N±0°.07×126°.81E±0°.09,h10km,n10, σ1§36/13,mb3.9/6,1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.59**	**302**	eP	**Pn**	**07 27 46.1**	**-0.8**
PLP	**Palo**	**1.85**	**283‖**	eP	**Pn**	**07 27 50.5**	**+0.1**
PLP				eS	**Sn**	**07 28 12.8**	**-0.9**
MSLP	**Maasin**	**2.01**	**253**	eP	**Pn**	**07 27 52.4**	**-0.2**
MSLP				eS	**Sn**	**07 28 19.3**	**+1.4**
BUKP	**Musuan**	**3.33**	**211**	eP	**Pn**	**07 28 12.4**	**+1.7**
BUKP				eS	**Sn**	**07 28 50.0**	**-0.5**
WRA	**Warramunga Arr**	**31.38**	**166**	P	**P**	**07 33 38.6**	**-1.2**
1.1nm,1.0s,baz=347,slow=11,SNR=3.3							
ASAR	**Alice Springs**	**34.90**	**169**	P	**P**	**07 34 08.5**	**-2.0**
0.4nm,0.5s,baz=353,slow=7.4,SNR=7.4							
STKA	**Stephens Creek**	**44.68**	**162**	P	**P**	**07 35 30.5**	**-1.3**
1.4nm,0.6s,baz=336,slow=12,SNR=3.0							
PETK	**Petropavlovsk-**	**48.99**	**24**	P	**P**	**07 36 07.2**	**+1.9**
2.4nm,0.9s,baz=244,slow=6.3,SNR=3.3							
MKAR	**Makanchi Array**	**51.98**	**322**	P	**P**	**07 36 29.0**	**+1.0**
0.3nm,0.4s,baz=114,slow=7.0,SNR=3.6							
FINES	**FINESS Array B**	**85.73**	**332**	P	**P**	**07 39 57.8**	**+0.1**
1.2nm,0.9s,baz=60,slow=4.7,SNR=4.0							

*IDC **08** 07:29:17.0±0.7,12°.21N×143°.79E,h0km,mb4.1/11, mb1 4.3/11,mb1mx3.9/40,mbtmp4.1/11,MS4.2/3, Ms1 4.1/3,ms1mx3.2/38,Error ellipse: s-maj=26.0km s-min=15.8km az=101.0*
*ISCJB **08** 07:29:19.4±0.4,12°.14N±0°.07×143°.65E±0°.08,h26km, mb4.3/26,MS3.9/2,Error ellipse: s-maj=13.2km s-min=7.4km az=34.2*
*NEIC **08** 07:29:23.1±1.6,12°.11N×143°.71E,h44km±6km,mb4.4/16, Error ellipse: s-maj=16.4km s-min=14.4km az=168.0*
ISC 08 07:29:20.8±0.6,12°.10N±0°.08×143°.83E±0°.09,h26km,n48, σ1§17/40,mb4.3/26,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.80**	**34**	Pn	**Pn**	**07 29 49.8**	**-0.3**
171nm,0.3s,baz=263,slow=2.8,SNR=59							
GUMO				Sn	**Sn**	**07 30 12.6**	**+0.5**
189nm,0.3s,baz=343,slow=19,SNR=37							
GUMO				LR	LR	07 30 22.9	
comp=Z,108nm,21.2s,baz=194,slow=38							
GUMO	**Guam**	**1.80**	**34**	ePn	**Pn**	**07 29 49.8**	**-0.3**
GUMO				eSn	**Sb**	**07 30 14.2**	**-1.0**
SARN	**Sarigan**	**4.95**	**22**	ePn	**Pn**	**07 30 35.3**	**+1.8**
PATS	**Pohnpei**	**15.21**	**109**	ePn	**Pn**	**07 32 51.7**	**-2.3**
126nm,1.4s							
DAV	**Davao City (W)**	**18.67**	**256**	LR	LR	07 40 27.6	
comp=Z,4μm,19.5s,baz=36,slow=36							
H11S3	**WAKE ISLAND Hy**	**22.93**	**71**	T	T	07 58 22.2	
baz=252,slow=74							
H11S1	**WAKE ISLAND Hy**	**22.95**	**71**	T	T	07 58 21.5	
baz=252							
H11S2	**WAKE ISLAND Hy**	**22.95**	**71**	T	T	07 58 23.1	
baz=252,slow=74							
H11N1	**WAKE ISLAND Hy**	**23.42**	**68**	T	T	07 59 04.4	
baz=255,slow=75,SNR=4.8							
H11N2	**WAKE ISLAND Hy**	**23.43**	**68**	T	T	07 59 02.3	
baz=255,slow=75,SNR=4.9							
H11N3	**WAKE ISLAND Hy**	**23.44**	**68**	T	T	07 59 00.1	
baz=255,slow=75,SNR=3.5							
MJAR	**Matsushiro Arr**	**24.86**	**349**	P	**P**	**07 34 41.4**	**+0.1**
0.5nm,0.3s,baz=175,slow=9.2,SNR=3.5							
MAJO	**Matsushiro**	**24.86**	**349**	eP	**P**	**07 34 41.4**	**+0.1**
KSRS	**Korea Array**	**29.00**	**333**	P	**P**	**07 35 21.6**	**+3.2**
1.2nm,0.7s,baz=137,slow=9.9,SNR=5.4							
WR1	**Warramunga Arr**	**33.18**	**196**	eP	**P**	**07 35 56.8**	**+1.3**
WRA	**Warramunga Arr**	**33.18**	**196**	P	**P**	**07 35 56.8**	**+1.3**
0.8nm,0.4s,baz=7.0,slow=7.6,SNR=3.2							
ASAR	**Alice Springs**	**36.84**	**195**	P	**P**	**07 36 28.2**	**+1.1**
0.4nm,0.7s,baz=15,slow=12,SNR=4.8							
DZM	**Mont Dzumac**	**40.56**	**147**	P	**P**	**07 36 59.0**	**+0.6**
5.2nm,0.8s,baz=294,slow=20,SNR=3.9							
DZM	**Mont Dzumac**	**40.56**	**147**	eP	**P**	**07 36 59.3**	**+0.9**
26nm,1.2s							
GSI	**Gunungsitoli**	**47.09**	**260**	eP	**P**	**07 37 48.9**	**-2.1**
28nm,1.1s							
SHL	**Shillong

ISCJB ***08*** *07:37:02.6±0.9, 10°.64N×0°.02×126°.85E±0°.02, h23km±6km, mb5.0/172, MS4.4/46, Error ellipse: s-maj=3.8km s-min=3.1km az=161.6*

MAN ***08*** *07:37:02.2, 10°.84N×126°.86E, h28km, mb5.8, ML4.8, MS5.2*

BJI ***08*** *07:37:02.3±0.0, 10°.22N×126°.95E, h50km, mb4.9/66, mB5.3/50, Ms4.7/65, Ms7 4.5/60*

MOS ***08*** *07:37:04.4±1.3, 10°.67N×126°.60E, h33km, mb5.4/62, MS4.4/9, Error ellipse: s-maj=8.7km s-min=4.4km az=111.0*

NEIC ***08*** *07:37:06.2±2.5, 10°.69N×126°.76E, h35km, mb5.1/110, Error ellipse: s-maj=16.9km s-min=13.0km az=256.0*

GCMT ***08*** *07:37:06.2±0.2, 10°.74N±0°.02×126°.91E±0°.01, h12km, MW5.1/113, Moment Tensor Solution. s48,c56; s113,c165; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}-5.32±.09; $M_{\theta\theta}$1.73±.08; $M_{\phi\phi}$3.59±.10; $M_{r\theta}$2.12±.40; $M_{\theta\phi}$-2.02±.07; $M_{\phi r}$-2.12±.34; Best double couple: $M_0$5.91500×10^16^ NP1:ϕ_s321.00000°, δ60.00000°, λ-95.00000°. NP2:ϕ_s152.00000°, δ30.00000°, λ-81.00000°. Principal axes: T 5.6700, Plg15.0000°, Azm55.0000°; N 0.4890, Plg5.0000°, Azm324.0000°; P -6.1590, Plg74.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***08*** *07:37:08.0±0.9, 10°N±5°×12°7E±°, h53km±7km, M5.0/37, mb5.0/37, mB5.5/25, Mw(mB)5.0/25*

KLM ***08*** *07:37:12.0, 11°.30N×126°.53E, h82km, mb5.1*

ISC 08 07:37:05.6±0.5, 10°.62N±0°.03×126°.85E±0°.04, h33km±2km, h34km:pP-P, n481, σ1°76/514, mb5.1/177, MS4.4/47, 37C-27D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.57**	**238**	↑*i*P		**Pb**	**07 37 37.4**	**+3.2**
SCPH				*i*S		**Sb**	**07 37 53.6**	**0.0**
BESP	**Borongan**	**1.69**	**305**	*e*P		**Pn**	**07 37 29.0**	**-3.9**
BESP				*e*S		**Sn**	**07 37 53.0**	**-0.5**
PLP	**Palo**	**1.92**	**287**	↓*e*P		**Pn**	**07 37 31.8**	**-4.1**
PLP				*i*S		**Sn**	**07 37 56.6**	**-2.3**
MSLP	**Maasin**	**2.01**	**256**	*e*P		**Pn**	**07 37 34.3**	**-3.0**
MSLP				*e*S		**Sn**	**07 38 02.2**	**+0.9**
BUTP	**Butuan**	**2.04**	**217**	*e*P		**Pn**	**07 37 37.2**	**-0.3**
BUTP				*e*S		**Sn**	**07 38 01.0**	**-0.8**
OCLP	**Ormoc**	**2.24**	**281**	*e*P		**Pn**	**07 37 37.3**	**-3.1**
BIPH	**Bislig**	**2.46**	**191**	↓*i*P		**Pn**	**07 37 44.0**	**+0.5**
BIPH				*i*S		**Sn**	**07 38 11.6**	**-0.9**
LLP	**Lapu-Lapu**	**2.85**	**264**	↑*e*P		**Pn**	**07 37 49.2**	**+0.4**
LLP				*e*S		**Sn**	**07 38 20.6**	**-1.4**
CNP	**Catarman**	**2.85**	**312**	*e*P		**Pn**	**07 37 45.5**	**-3.3**
CNP				*e*S		**Sn**	**07 38 16.6**	**-5.4**
CGP	**Cagayan de Oro**	**3.02**	**225**	↓*e*P		**Pn**	**07 37 52.5**	**+1.4**
CGP				*e*S		**Sn**	**07 38 29.1**	**+2.8**
BUKP	**Musuan**	**3.24**	**213**	*e*P		**Pn**	**07 37 54.4**	**+0.1**
BUKP				*e*S		**Sb**	**07 38 39.5**	**-2.1**
MMPH	**Masbate**	**3.60**	**299**	*e*P		**Pn**	**07 38 01.9**	**+2.7**
MMPH				*e*S		**Sn**	**07 38 42.2**	**+1.6**
MATI	**Mati**	**3.69**	**189**	*e*P		**Pn**	**07 38 02.6**	**+2.2**
DAV	**Davao City (W)**	**3.74**	**200**	Pn		**Pn**	**07 37 59.4**	**-1.6**
	52nm,0.3s,baz=72,slow=16,SNR=1.6							
DAV	**Davao City (W)**	**3.74**	**200**	*e*Pn		**Pb**	**07 38 06.8**	**-4.2**
DAV	**Davao City (W)**	**3.74**	**200**	P		**Pn**	**07 38 02.9**	**+1.9**
	SNR=8.5							
DMPH	**Davao City--Mi**	**3.75**	**201**	↑*e*P		Pn	07 37 53.9	-7.4
DMPH				*e*S		Sb	07 39 12.8	+17
SNPH	**Sibulan**	**3.78**	**251**	*e*P		**Pn**	**07 38 02.9**	**+1.3**
PVCP	**Virac**	**3.96**	**319**	*e*P		Pn	07 37 58.7	-5.4
PVCP				*e*S		**Sn**	**07 38 49.7**	**+0.2**
DCPH	**Dipolog City**	**4.00**	**240**	↑*e*P		**Pn**	**07 38 07.7**	**+3.2**
DCPH				*e*S		**Sn**	**07 38 54.1**	**+3.9**
GUIM	**Jordan**	**4.19**	**271**	*e*P		**Pn**	**07 38 06.3**	**-0.9**
CTBH	**Cotabato--PC H**	**4.24**	**218**	↑*i*P		**Pb**	**07 38 15.7**	**-3.8**
PAGZ	**Pagadian**	**4.39**	**231**	*e*P		**Pn**	**07 38 10.8**	**+0.8**
DDMP	**Don Marcelino,**	**4.62**	**194**	*e*P		**Pn**	**07 38 14.1**	**+0.9**
SKMP	**Bagumbayan, Su**	**4.67**	**209**	*e*P		**Pn**	**07 38 16.4**	**+2.7**
OTRP	**Odiongan**	**5.04**	**291**	*e*P		Pn	07 38 13.7	-5.2
IPIL	**Ipil**	**5.07**	**237**	*e*P		**Pn**	**07 38 20.6**	**+1.3**
TGY	**Tagaytay City**	**6.74**	**302**	Pn		**Pn**	**07 38 40.9**	**-1.4**
	85nm,0.3s,baz=135,slow=16,SNR=2.5							
SMPP	**San Manuel, Pa**	**8.14**	**313**	*e*P		**Pn**	**07 39 02.3**	**+0.7**
TNTI	**Ternate**	**9.79**	**177**	*e*Pn		**Pn**	**07 39 25.7**	**+1.5**
TNTI	**Ternate**	**9.79**	**177**	P		**Pn**	**07 39 22.8**	**-1.4**
MRSI	**Marisa**	**11.19**	**206**	P		**Pn**	**07 39 43.0**	**-0.4**
	12nm,0.5s,1μm							
KKM	**Kota Kinabalu**	**11.46**	**247**	*e*Pn		**Pn**	**07 39 49.7**	**+2.6**
KKM	**Kota Kinabalu**	**11.46**	**247**	P		Pn	07 39 53.0	+5.9
LUWI	**Luwuk**	**12.27**	**200**	*e*Pn		Pn	07 40 03.1	+5.0
MPSI	**Mapaga**	**12.33**	**215**	P		Pn	07 39 51.8	-7.1
APSI	**Ampana**	**12.56**	**205**	P		**Pn**	**07 40 03.1**	**+0.9**
YULB	**Yu-li**	**13.77**	**338**	*e*Pn		**Pn**	**07 40 22.4**	**+3.8**
SSLB	**Suanglung**	**14.25**	**338**	*e*Pn		**Pn**	**07 40 27.4**	**+2.2**
FAKI	**Fak Fak**	**14.48**	**158**	*e*Pn		**Pn**	**07 40 30.2**	**+1.9**
FAKI	**Fak Fak**	**14.48**	**158**	P		**Pn**	**07 40 28.4**	**0.0**
	61nm,1.2s,2μm							
BAKI	**Biak**	**14.91**	**141**	P		**Pn**	**07 40 33.8**	**-0.4**
TTSI	**Tana Toraja**	**15.27**	**208**	P		**Pn**	**07 40 39.7**	**+0.8**
	125nm,1.6s,3μm							
SPSI	**Sidrap Palu**	**16.11**	**206**	P		**Pn**	**07 40 48.2**	**-1.5**
QZH	**Quanzhou**	**16.26**	**332**	*e*P		**P**	**07 40 53.7**	**-0.7**
QZH				S		**Sn**	**07 43 54.6**	**+3.5**
QZH				LR		LR		
	comp=N,890nm,12.4s							
QZH				LR		LR		
	comp=E,940nm,12.6s							
QZH				LR		LR		
	comp=Z,1μm,12.4s							
BNSI	**Bone**	**16.36**	**205**	P		**Pn**	**07 40 52.2**	**-0.7**
	159nm,1.8s,4μm							
MTKI	**Muara Teweh, K**	**16.53**	**227**	P		**P**	**07 40 57.9**	**+0.5**
SBUM	**Sibu**	**16.63**	**242**	*e*Pn		**Pn**	**07 40 57.3**	**+0.9**
	58nm,1.4s							
SBUM	**Sibu**	**16.63**	**242**	P		**P**	**07 41 00.0**	**+1.4**
KAPI	**Kappang**	**17.06**	**205**	Pn		**Pn**	**07 41 01.3**	**-0.4**
	1.9nm,0.3s,baz=36,slow=11,SNR=11							
KAPI				LR		LR	07 47 51.6	
	comp=Z,1μm,20.8s,baz=20,slow=38							
KAPI	**Kappang**	**17.06**	**205**	*e*Pn		**Pn**	**07 41 01.8**	**+0.1**
	56nm,1.0s							
KAPI	**Kappang**	**17.06**	**205**	*e*P		**Pn**	**07 41 01.8**	**+0.1**
KAPI				pmax		pmax		
	comp=Z,56nm,1.0s							
KAPI	**Kappang**	**17.06**	**205**	P		**P**	**07 41 02.9**	**-0.4**
	SNR=11							
BKSI	**Bulukumba**	**17.19**	**203**	P		**Pn**	**07 41 02.8**	**-0.6**
	comp=Z,28nm,1.0s,comp=Z,716nm							
GUMO	**Guam**	**17.87**	**79**	LR		LR	07 46 30.3	
	comp=Z,922nm,21.0s,baz=256,slow=32							
GZH	**Guangzhou**	**17.89**	**316**	P		**P**	**07 41 16.5**	**+4.1**
GZH				LR		LR		
	comp=Z,2μm,15.2s							
GZH				LR		LR		
	comp=Z,2μm,15.1s							
DLV	**T Lat**	**18.06**	**276**	*e*Pn		**Pn**	**07 41 14.4**	**+0.1**
	comp=Z,42nm,1.1s							
QIZ	**Qiongzhong**	**18.43**	**299**	P		**P**	**07 41 17.7**	**-0.7**
QIZ				pP		**sP**	**07 41 29.4**	**+1.3**
QIZ				S		**Sn**	**07 44 43.0**	**-0.8**
QIZ				pmax		pmax		
	comp=Z,510nm,5.9s							
QIZ				LR		LR		
	comp=Z,610nm,13.7s							
QIZ				LR		LR		
	comp=Z,800nm,15.2s							
QIZ				LR		LR		
	comp=Z,1μm,15.2s							
GENI	**Genyem**	**18.65**	**134**	P		**P**	**07 41 19.6**	**-1.3**
	comp=Z,138nm,0.7s,comp=Z,4μm							
KSM	**Kuching**	**18.77**	**242**	*e*P		**P**	**07 41 21.8**	**-0.4**
	comp=Z,57nm,0.9s							
KSM	**Kuching**	**18.77**	**242**	P		**Pn**	**07 41 26.0**	**+3.2**
JAY	**Jayapura**	**18.98**	**133**	P		**Pn**	**07 41 25.8**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=284,slow=13,SNR=4.2							
JAY				LR		LR	07 48 28.4	
	comp=Z,927nm,18.6s,baz=354,slow=36							
MMRI	**Maumere**	**19.67**	**194**	*e*P		**P**	**07 41 32.9**	**+0.9**
	comp=Z,137nm,1.0s							
MMRI	**Maumere**	**19.67**	**194**	P		**P**	**07 41 31.7**	**-0.3**
	comp=Z,153nm,1.8s							
SOEI	**Soe**	**20.40**	**187**	*e*P		Pn	07 41 41.5	-0.8
	comp=Z,296nm,1.3s							
SOEI	**Soe**	**20.40**	**187**	P		**P**	**07 41 38.8**	**-1.3**
BATI	**Baumata**	**20.93**	**189**	LR		LR	07 50 40.2	
	comp=Z,482nm,20.7s,baz=334,slow=39							
BATI	**Baumata**	**20.93**	**189**	P		**P**	**07 41 43.8**	**-1.9**
	comp=Z,100nm,0.8s,comp=Z,1μm							
PLAI	**Plampang**	**21.32**	**205**	P		**P**	**07 41 46.8**	**-3.1**
	comp=Z,61nm,0.8s,comp=Z,1μm							
PANO	**Nakornpanom**	**22.53**	**289**	P		**P**	**07 42 06.7**	**+3.8**
	comp=Z,0.5nm,1.4s,comp=Z,17nm							
GRJI	**Gresik**	**22.54**	**220**	P		**P**	**07 42 03.2**	**+0.3**
	comp=Z,63nm,0.9s,comp=Z,871nm							
NJ2	**Nanjing**	**22.58**	**342**	*e*P		**P**	**07 42 04.6**	**+1.4**
NJ2				pmax		pmax		
	comp=Z,16nm,0.5s							
JNU	**Nakatsue**	**22.70**	**9**	P		**P**	**07 42 03.8**	**-0.9**
	comp=Z,14nm,0.9s,baz=148,slow=1.9,SNR=8.4							
JNU				LR		LR	07 49 51.5	
	comp=Z,442nm,21.3s,baz=170,slow=34							
WHN	**Wuhan**	**22.98**	**331**	↓P		**P**	**07 42 07.9**	**+0.4**
WHN				S		**S**	**07 46 18.8**	**+3.0**
WHN				pmax		pmax		
	comp=Z,140nm,1.5s							
WHN				pmax		pmax		
	comp=Z,1μm,6.2s							
WHN				LR		LR		
	comp=Z,2μm,12.1s							
WHN				LR		LR		
	comp=Z,2μm,13.3s							
WHN				LR		LR		
	comp=Z,2μm,12.1s							
SKNT	**Sakolnakorn**	**23.08**	**288**	P		**P**	**07 42 09.1**	**+0.5**
	comp=Z,21nm,1.3s							
TPI	**Tanjungpandan**	**23.27**	**236**	P		**P**	**07 42 09.6**	**-0.9**
	comp=Z,65nm,1.1s,comp=Z,2μm							
NGJI	**Ngawi**	**23.53**	**221**	P		**P**	**07 42 15.3**	**+2.2**
	comp=Z,120nm,1.1s							
MTN	**Manton Dam**	**23.69**	**170**	*e*P		**P**	**07 42 14.0**	**-0.6**
	comp=Z,223nm,1.4s							
SMRI	**Semarang**	**23.98**	**224**	*e*P		**P**	**07 42 19.8**	**+2.5**
	comp=Z,249nm,1.4s							
SMRI	**Semarang**	**23.98**	**224**	P		P	07 42 31.6	+14
KHON	**Khomkaen**	**24.03**	**286**	P		**P**	**07 42 21.0**	**+3.2**
	comp=Z,42μm,0.9s							
TPRI	**Tanjung Pinang**	**24.18**	**248**	P		**P**	**07 42 16.9**	**-2.3**
PPBI	**Pangkal Pinang**	**24.21**	**240**	P		**P**	**07 42 18.8**	**-0.7**
SLVN	**Son La**	**24.46**	**299**	*e*P		**P**	**07 42 20.4**	**-1.4**
	comp=Z,7.1nm,0.7s							
MYKOM	**Kota Tinggi**	**24.46**	**251**	*e*P		**P**	**07 42 20.8**	**-1.0**
	comp=Z,97nm,1.2s							
GYA	**Guiyang**	**24.73**	**312**	↑*i*P		**P**	**07 42 23.9**	**-0.4**
GYA				pP		sP	07 42 35.0	+0.1
GYA				PP		**PnPn**	**07 43 04.2**	**+7.2**
GYA				S		**S**	**07 46 44.5**	**+0.1**
GYA				pmax		pmax		
	comp=Z,30nm,0.8s							
GYA				pmax		pmax		
	comp=Z,260nm,6.5s							
GYA				LR		LR		
	comp=Z,690nm,15.9s							
GYA				LR		LR		
	comp=Z,630nm,16.8s							
GYA				LR		LR		
	comp=Z,910nm,13.9s							
DSRI	**Dabo**	**24.74**	**245**	P		**P**	**07 42 23.4**	**-0.9**
CHAI	**Chaiyaphum**	**24.75**	**285**	P		**P**	**07 42 24.2**	**-0.2**
	comp=Z,29μm,0.7s							
JHJ	**Hachijo jima 2**	**25.36**	**26**	LR		LR	07 50 30.4	
	comp=Z,680nm,21.7s,baz=224,slow=32							
ENH	**Enshi**	**25.37**	**323**	*e*P		**P**	**07 42 28.2**	**-1.7**
	comp=Z,152nm,1.3s							
TJN	**Taejon**	**25.65**	**1**	↑*e*P		**P**	**07 42 32.2**	**-0.1**
PBKT	**Sadao Pong**	**25.82**	**286**	P		**P**	**07 42 34.0**	**-0.1**
	comp=Z,9.0nm,2.6s							
SKLT	**Songkhla**	**26.13**	**265**	P		**P**	**07 42 41.5**	**+4.6**
	comp=Z,15nm,2.5s							
IPM	**Ipoh**	**26.30**	**259**	*e*P		**P**	**07 42 38.3**	**-0.2**
	comp=Z,40nm,1.0s							
IPM	**Ipoh**	**26.30**	**259**	P		**P**	**07 42 39.0**	**+0.5**
INU	**Inuyama**	**26.30**	**19**	*e*P		**P**	**07 42 37.9**	**-0.4**
	comp=Z,22nm,1.1s							
KULM	**Kulim**	**26.47**	**261**	*e*P		**P**	**07 42 38.0**	**-2.0**
	comp=Z,18nm,0.9s							
PHET	**Kaeng Krachan**	**26.74**	**278**	P		**P**	**07 42 42.9**	**+0.5**
	comp=Z,40μm,0.6s							
KSRS	**Korea Array**	**26.74**	**2**	P		**P**	**07 42 41.6**	**-0.5**
	comp=Z,2.8nm,0.8s,baz=176,slow=10,SNR=13							
KSRS				LR		LR	07 54 55.4	
	comp=Z,478nm,18.4s,baz=170,slow=40							
TRTT	**Trang**	**26.94**	**266**	P		**P**	**07 42 47.4**	**+3.1**
	comp=Z,24nm,1.0s,comp=Z,2μm							
KMI	**Kunming**	**27.04**	**305**	P		**P**	**07 42 47.1**	**+1.8**
KMI				S		**S**	**07 47 18.5**	**-2.7**
KMI				sS		sS	07 47 39.9	+7.4
KMI				pmax		pmax		
	comp=Z,15nm,0.6s							
KMI				pmax		pmax		
	comp=Z,160nm,5.6s							
KMI				LR		LR		
	comp=Z,490nm,13.4s							
KMI				LR		LR		
	comp=Z,610nm,14.3s							
KMI				LR		LR		
	comp=Z,810nm,15.4s							
MDSI	**Maura Dua**	**27.10**	**238**	P		P	07 42 36.4	-9.3
PAYA	**Payao**	**27.44**	**292**	P		**P**	**07 42 50.9**	**+2.2**
	comp=Z,28μm,0.8s							
LWLI	**Liwa**	**27.50**	**237**	P		**P**	**07 42 49.6**	**+0.2**
	comp=Z,56nm,0.9s,comp=Z,14μm							
BKNI	**Bangkinang**	**27.62**	**250**	*e*P		**P**	**07 42 50.0**	**-0.3**
	comp=Z,100nm,0.4s							
BKNI	**Bangkinang**	**27.62**	**250**	P		**P**	**07 42 50.0**	**-0.3**
	comp=Z,121nm,0.5s							
SDSI	**Sungai Dareh**	**27.77**	**247**	P		**P**	**07 42 52.6**	**+1.0**
	comp=Z,16nm,1.5s							
MAJO	**Matsushiro**	**27.78**	**20**	*e*P		**P**	**07 42 51.8**	**+0.2**
	comp=Z,7.4nm,0.9s							
MAJO	**Matsushiro**	**27.78**	**20**	↑*e*P		**P**	**07 42 52.2**	**+0.6**
MAJO				pmax		pmax		
	comp=Z,22nm,2.5s							
MAT	**Matsushiro**	**27.78**	**20**	P		**P**	**07 42 50.4**	**-1.2**
MAT				S		**S**	**07 47 32.0**	**-0.3**
MJAR	**Matsushiro Arr**	**27.78**	**20**	P		**P**	**07 42 50.1**	**-1.4**
	comp=Z,4.1nm,0.9s,baz=198,slow=9.7,SNR=7.8							
MJAR				LR		LR	07 52 06.7	
	comp=Z,668nm,21.4s,baz=195,slow=32							
MJB9	**Matsu-Tunnel**	**27.79**	**20**	*e*P		**P**	**07 42 52.5**	**+0.9**
	comp=Z,8.4nm,1.0s							
CM31	**Chiang Mai Arr**	**28.08**	**289**	*e*P		**P**	**07 42 51.9**	**-2.6**
	comp=Z,12nm,1.0s							
CMAR	**Chiang Mai Arr**	**28.08**	**289**	P		**P**	**07 42 50.5**	**-4.0**
	comp=Z,1.2nm,0.4s,baz=95,slow=6.8,SNR=5.5							
XAN	**Xi'an**	**28.51**	**328**	P		**P**	**07 42 58.2**	**0.0**
XAN				PP		**PnPn**	**07 43 48.4**	**-0.1**
XAN				S		**S**	**07 47 43.6**	**-0.3**
XAN				SS		**SnSn**	**07 49 15.0**	**+10**
XAN				pmax		pmax		
	comp=Z,20nm,1.0s							
XAN				LR		LR		
	comp=Z,580nm,15.3s							
XAN				LR		LR		
	comp=Z,500nm,17.2s							
XAN				LR		LR		
	comp=Z,750nm,16.5s							
XAN	**Xi'an**	**28.51**	**328**	*e*P		**P**	**07 42 57.0**	**-1.2**
	comp=Z,72nm,1.4s							
XAN	**Xi'an**	**28.51**	**328**	*e*P		**P**	**07 42 57.0**	**-1.2**
XAN				pmax		pmax		
	comp=Z,72nm,1.4s							
DL2	**Dalian**	**28.55**	**351**	P		**P**	**07 43 00.6**	**+2.2**
DL2				S		**S**	**07 47 44.9**	**+0.6**
DL2				pmax		pmax		
	comp=Z,21nm,0.6s							
DL2				LR		LR		
	comp=Z,300nm,11.5s							
DL2				LR		LR		
	comp=Z,650nm,11.5s							
DL2				LR		LR		
	comp=Z,620nm,12.1s							
PDSI	**Padang**	**28.64**	**248**	P		**P**	**07 42 56.2**	**-3.2**
	comp=Z,29nm,0.5s,comp=Z,6μm							
PSI	**Prapat**	**28.78**	**256**	P		**P**	**07 42 58.4**	**-2.4**
	comp=Z,12nm,0.9s,baz=58,slow=11,SNR=12							
PSI				PcP		**PcP**	**07 46 10.8**	**+0.3**
	comp=Z,6.5nm,0.8s,baz=110,slow=2.6,SNR=5.6							
PSI	**Prapat**	**28.78**	**256**	*e*P		**P**	**07 43 00.5**	**-0.3**
	comp=Z,21nm,1.0s							
PSI	**Prapat**	**28.78**	**256**	*e*P		**P**	**07 43 00.5**	**-0.3**
PSI				pmax		pmax		
	comp=Z,21nm,1.0s							
MNSI	**Mandailing Nat**	**28.80**	**252**	P		**P**	**07 42 56.5**	**-4.4**
	comp=Z,51nm,0.5s							
CD2	**Chengdu**	**29.44**	**317**	P		**P**	**07 43 05.6**	**-0.9**
CD2				pP		sP	07 43 16.5	-0.7
CD2				S		**S**	**07 48 02.3**	**+3.6**
CD2				pmax		pmax		
	comp=Z,30nm,0.6s							
CD2				pmax		pmax		
	comp=Z,470nm,4.3s							
CD2				LR		LR		
	comp=Z,2μm,12.8s							
CD2				LR		LR		
	comp=Z,3μm,16.7s							
CD2				LR		LR		
	comp=Z,4μm,16.2s							
KCSI	**Kotacane, Aceh**	**29.68**	**258**	P		**P**	**07 43 06.3**	**-2.4**
	comp=Z,20nm,2.1s							
TIY	**Taiyuan**	**29.93**	**337**	*e*P		**P**	**07 43 10.6**	**-0.1**
TIY				S		**S**	**07 48 04.1**	**-2.1**
TIY				pmax		pmax		
	comp=Z,23nm,0.5s							
TIY				LR		LR		
	comp=Z,400nm,12.9s							
TIY				LR		LR		
	comp=Z,650nm,14.2s							
TIY				LR		LR		
	comp=Z,470nm,15.2s							
LHMI	**Lhok Sumawe**	**30.08**	**262**	*e*P		**P**	**07 43 14.9**	**+2.7**
	comp=Z,145nm,0.9s							
GSI	**Gunungsitoli**	**30.52**	**254**	*e*P		**P**	**07 43 16.3**	**+0.2**
	comp=Z,42nm,0.9s							
BJT	**Baijiatuau**	**30.78**	**344**	*e*P		**P**	**07 43 17.8**	**-0.3**
	comp=Z,6.8nm,0.8s							
BJT	**Baijiatuau**	**30.78**	**344**	*e*P		**P**	**07 43 17.8**	**-0.3**
BJT				pmax		pmax		
	comp=Z,7.0nm,0.8s							
WRAB	**Tennant Creek**	**31.24**	**166**	↑*e*P		**P**	**07 43 21.8**	**-0.6**
WRAB				pmax		pmax		
	comp=Z,36nm,2.5s							
WRA	**Warramunga Arr**	**31.25**	**166**	P		**P**	**07 43 21.1**	**-1.3**
	comp=Z,5.6nm,0.8s,baz=342,slow=10,SNR=17							
WB2	**Warramunga Arr**	**31.25**	**166**	*e*P		**P**	**07 43 23.1**	**+0.7**
	comp=Z,26nm,1.4s							
LZH	**Lanzhou**	**32.83**	**324**	*e*P		**P**	**07 43 37.7**	**+1.3**
LZH				pP		sP	07 43 49.4	+2.3
LZH				PP		**PP**	**07 44 53.6**	**+2.7**
LZH				S		**S**	**07 48 53.4**	**+1.7**
LZH				pmax		pmax		
	comp=Z,38nm,1.1s							
LZH				pmax		pmax		
	comp=Z,410nm,5.4s							
LZH				LR		LR		
	comp=Z,510nm,13.0s							
LZH				LR		LR		
	comp=Z,750nm,13.6s							
LZH				LR		LR		
	comp=Z,830nm,14.6s							
HHC	**Hu-ho-hao-te**	**33.00**	**338**	*e*P		**P**	**07 43 37.6**	**-0.2**
HHC				S		**S**	**07 48 52.0**	**-2.2**
HHC				pmax		pmax		
	comp=Z,19nm,0.9s							
HHC				pmax		pmax		
	comp=Z,190nm,5.7s							
HHC				LR		LR		
	comp=Z,420nm,14.5s							
HHC				LR		LR		
	comp=Z,740nm,12.8s							
HHC				LR		LR		
	comp=Z,560nm,15.3s							
CN2	**Changchun**	**33.09**	**358**	*e*P		**P**	**07 43 39.7**	**+1.4**
BTO	**Baotou**	**33.37**	**336**	*e*P		**P**	**07 43 41.0**	**0.0**
QIS	**Mount Isa**	**33.42**	**158**	P		**P**	**07 43 41.1**	**-0.5**
	baz=34,SNR=4.4							
USRK	**Ussuriysk Ar.**	**33.76**	**7**	P		**P**	**07 43 43.8**	**-0.3**
	comp=Z,9.9nm,0.8s,baz=195,slow=7.5,SNR=14							
USRK				LR		LR	07 55 54.3	
	comp=Z,387nm,21.5s,baz=173,slow=34							
MDJ	**Mudanjiang**	**33.96**	**4**	P		**P**	**07 43 47.7**	**+1.8**
MDJ				S		**S**	**07 49 12.8**	**+4.1**
MDJ				pmax		pmax		
	comp=Z,12nm,0.7s							
MDJ				pmax		pmax		
	comp=Z,170nm,3.3s							
MDJ				LR		LR		
	comp=Z,470nm,16.3s							
MDJ				LR		LR		
	comp=Z,320nm,12.0s							
MDJ				LR		LR		
	comp=Z,600nm,20.2s							
MDJ	**Mudanjiang**	**33.96**	**4**	*e*P		**P**	**07 43 48.5**	**+2.6**
	comp=Z,19nm,1.0s							
AS31	**Alice Springs**	**34.76**	**169**	*e*P		**P**	**07 43 52.2**	**-0.9**
	comp=Z,3.0nm,0.6s							
ASAR	**Alice Springs**	**34.76**	**169**	P		**P**	**07 43 50.9**	**-2.2**
	comp=Z,4.4nm,0.4s,baz=352,slow=6.7,SNR=54							
ASAR				PcP		**PcP**	**07 46 26.8**	**+0.4**
	comp=Z,3.8nm,0.7s,baz=346,slow=2.9,SNR=6.9							
TEY	**Ternei**	**35.31**	**12**	↑*e*P		**P**	**07 43 58.4**	**+0.9**
TEY				pmax		pmax		
	comp=Z,10.0nm,0.8s							
WRKA	**Warakurna**	**35.47**	**178**	P		**P**	**07 43 59.6**	**+0.5**
	baz=36,SNR=37							
ASAJ	**Asahikawa**	**36.05**	**19**	P		**P**	**07 44 05.3**	**+1.4**
	comp=Z,4.6nm,0.7s,baz=204,slow=6.8							
SHL	**Shillong**	**36.27**	**299**	*e*P		**P**	**07 44 03.0**	**-3.3**
	comp=Z,45nm,1.1s							
SHL	**Shillong**	**36.27**	**299**	*e*P		**P**	**07 44 03.0**	**-3

GRNR pmax pmax
comp=Z,42nm,1.0s
MORW Morawa 40.81 195 P **P** **07 44 44.7 +0.6**
baz=41,SNR=8.9
SONM Songino Array 40.90 339 P **P** **07 44 45.0 +0.2**
comp=Z,4.1nm,0.8s,baz=156,slow=9.2,SNR=9.1
SONM LR LR 08 02 25.1
comp=Z,145nm,20.6s,baz=98,slow=37
SONM Songino Array 40.90 339 P **P** **07 44 45.0 +0.2**
FORT Forrest 41.17 178 *e*P **P** **07 44 47.6 +0.6**
comp=Z,113nm,1.4s
BLDU Ballidu 42.14 193 P **P** **07 44 56.0 +1.1**
baz=42,SNR=5.5
EIDS Eidsvold 42.86 147 *e*P **P** **07 45 01.1 +0.1**
comp=Z,15nm,0.9s
EIDS Eidsvold 42.86 147 P **P** **07 45 01.6 +0.7**
baz=43,SNR=3.4
KLBR Kellerberrin 42.86 191 P **P** **07 45 02.6 +1.7**
baz=43,SNR=5.9
ZEA Zeya 43.01 0 *e*P **P** **07 45 00.5 -1.3**
ZEA *e* 07 55 00.5
ZEA pmax pmax
comp=Z,21nm,1.2s
ZEA MLR MLR
comp=Z,600nm,17.0s
ZEA MLR MLR
comp=N,500nm,19.0s
MUN Mundaring 43.56 193 P **P** **07 45 06.9 +0.4**
baz=44,SNR=3.5
BBOO Buckleboo 44.07 169 *e*P **P** **07 45 11.1 +0.6**
comp=N,68nm,0.8s
BBOO Buckleboo 44.07 169 P **P** **07 45 09.5 -1.0**
baz=44,SNR=12
ZAK Zakamensk 44.15 338 *e*P **P** **07 45 10.5 -0.7**
ZAK *e* 07 46 56.2
ZAK pmax pmax
comp=Z,5.0nm,1.6s
STKA Stephens Creek 44.55 162 P **P** **07 45 13.4 -1.0**
comp=Z,13nm,0.8s,baz=335,slow=8.7,SNR=25
STKA LR LR 08 06 33.1
comp=Z,76nm,21.1s,baz=7.7,slow=40
STKA Stephens Creek 44.55 162 *e*P **P** **07 45 14.7 +0.3**
comp=Z,5.5nm,1.1s
STKA Stephens Creek 44.55 162 P **P** **07 45 14.1 -0.4**
baz=45,SNR=19
STKA Stephens Creek 44.55 162 *e*P **P** **07 45 14.7 +0.3**
STKA pmax pmax
comp=Z,6.0nm,1.1s
TLY Talaya 45.10 340 *e*P **P** **07 45 19.2 +0.6**
comp=Z,14nm,1.3s
TLY Talaya 45.10 340 *e*P **P** **07 45 18.3 -0.4**
TLY *e*S **S** **07 51 53.7 -2.0**
TLY pmax pmax
comp=Z,51nm,1.5s
TLY MLR MLR
comp=Z,340nm,12.0s
TLY Talaya 45.10 340 P **P** **07 45 20.2 +1.6**
SNR=9.3
HTT Hallett 45.29 166 P **P** **07 45 21.1 +0.8**
baz=46,SNR=6.5
IRK Irkutsk 45.37 341 *e*P **P** **07 45 19.4 -1.4**
IRK *e* 07 47 02.9
IRK pmax pmax
comp=Z,105nm,3.0s
CMSA Cobar Meteorol 45.64 157 P **P** **07 45 22.3 -0.8**
baz=46,SNR=11
MOY Mondy 46.04 338 *e*P **P** **07 45 27.5 +1.3**
MOY pmax pmax
comp=Z,53nm,2.0s
SKR Severo-Kuril's 46.62 25 *e*P **P** **07 45 33.9 +3.3**
SKR *e*S **S** **07 52 15.6 -1.9**
SKR pmax pmax
comp=Z,106nm,1.4s
SKR MLR MLR
comp=Z,200nm,16.0s
SKR MLR MLR
comp=Z,400nm,16.0s
WMQ Urumqi 47.30 322 P **P** **07 45 36.3 +0.1**
WMQ PcP **PcP** **07 47 07.9 +1.0**
WMQ PP **PP** **07 47 27.8 +0.2**
WMQ S **S** **07 52 32.0 +4.4**
WMQ pmax pmax
comp=Z,48nm,1.7s
WMQ pmax pmax
comp=Z,570nm,3.6s
WMQ LR LR
comp=Z,1μm,15.9s
WMQ LR LR
comp=Z,650nm,20.3s
WMQ LR LR
comp=Z,960nm,16.7s
BOD Bodaibo 48.12 351 *e*P **P** **07 45 42.8 +0.7**
BOD pmax pmax
comp=Z,25nm,1.8s
PETK Petropavlovsk- 49.09 24 P **P** **07 45 49.5 -0.2**
comp=Z,8.2nm,0.7s,baz=198,slow=2.9,SNR=16
PETK LR LR 08 06 03.0
comp=Z,278nm,20.7s,baz=212,slow=35
PEA1 Petropavlovsk- 49.09 24 *e*P **P** **07 45 49.5 -0.3**
YNG Young 49.13 156 P **P** **07 45 50.6 +0.4**
baz=49,SNR=5.0
ARPS Mount Arapiles 49.20 164 P **P** **07 45 51.6 +1.0**
baz=49,SNR=11
CAN Canberra 50.26 156 *e*P **P** **07 46 00.2 +1.3**
comp=Z,40nm,1.2s
CAN Canberra 50.26 156 *e*P **P** **07 46 00.2 +1.3**
CAN pmax pmax
comp=Z,40nm,1.2s
CNB Canberra Magne 50.40 156 P **P** **07 45 60.0 0.0**
baz=51,SNR=9.8
DZM Mont Dzumac 50.63 130 *e*LR LR 08 00 40.0
comp=Z,298nm,26.1s
DGZ Jazzator, Alta 50.78 328⇑ *e*P **P** **07 46 02.7 -0.1**
DGZ pmax pmax
comp=Z,4.0nm,1.1s
TOO Toolangi 51.02 161 *e*P **P** **07 46 06.6 +2.0**
comp=Z,24nm,1.1s
TOO Toolangi 51.02 161 P **P** **07 46 04.8 +0.2**
baz=51,SNR=7.8
TOO Toolangi 51.02 161 *e*P **P** **07 46 06.6 +2.0**
TOO pmax pmax
comp=Z,25nm,1.1s
YAK Yakutsk 51.37 2 *e*P **P** **07 46 07.5 +0.8**
YAK *e**PP **pwP** **07 46 23.2 +0.2**
YAK *e*S **S** **07 53 20.0 -3.8**
YAK *e* 07 55 46.6
YAK *e*SS **SS** **07 56 52.2 -7.5**
MILA Mila 51.84 157 P **P** **07 46 10.7 0.0**
baz=52,SNR=3.8
MA2 Magadan 52.05 15 *e*P **P** **07 46 10.8 -1.1**
comp=Z,9.3nm,0.8s
MA2 Magadan 52.05 15 *d*P **P** **07 46 13.4 +1.4**
MA2 pmax pmax
comp=Z,9.0nm,0.7s
MK31 Makanchi Array 52.10 322 *e*P **P** **07 46 11.7 -0.9**
comp=Z,36nm,1.1s
MK31 Makanchi Array 52.10 322 *i*P **P** **07 46 11.4 -1.2**
MK31 pmax pmax
comp=Z,47nm,1.2s
MKAR Makanchi Array 52.10 322 P **P** **07 46 11.3 -1.3**
comp=Z,14nm,0.7s,baz=115,slow=8.1,SNR=54
MKAR LR LR 08 07 21.7
comp=Z,92nm,21.9s,baz=114,slow=35
MAKZ Makanchi 52.30 322 *e*P **P** **07 46 12.8 -1.2**
comp=Z,80nm,1.4s
MAKZ Makanchi 52.30 322 *e*P **P** **07 46 12.8 -1.2**
MAKZ pmax pmax
comp=Z,80nm,1.4s
PDGK Podgornoye 52.33 317 P **P** **07 46 12.4 -2.1**
PDGK pmax pmax
comp=Z,51nm,1.0s
KSH Kashi 53.43 312 P **P** **07 46 25.0 +2.4**
KSH PP **PP** **07 48 27.4 +4.2**
KSH S **S** **07 53 49.4 -3.6**
KSH pmax pmax
comp=Z,130nm,1.5s
KSH pmax pmax
comp=Z,280nm,4.6s
KSH LR LR
comp=Z,660nm,12.1s
KSH LR LR
comp=Z,1μm,16.0s
KSH LR LR
comp=Z,890nm,16.8s
NIL Nilore 54.01 304 *e*P **P** **07 46 24.5 -2.4**
comp=Z,64nm,1.3s
NIL Nilore 54.01 304 *e*P **P** **07 46 24.5 -2.4**
NIL pmax pmax
comp=Z,64nm,1.3s
NRN Naryn 54.03 314 *e*P **P** **07 46 25.9 -1.4**
comp=Z,36nm,1.2s
NRN Naryn 54.03 314 *e*P **P** **07 46 25.9 -1.4**
NRN pmax pmax
comp=Z,36nm,1.2s
ULHL Ulahol 54.13 315 P **P** **07 46 29.0 +1.1**
SNR=12
ZAA0 Zalesovo Array 54.60 331 *e*P **P** **07 46 29.9 -0.8**
comp=Z,14nm,1.0s
ZALV Zalesovo Beam 54.60 331 P **P** **07 46 28.7 -2.0**
comp=Z,7.8nm,0.8s,baz=114,slow=5.7,SNR=17
ZALV LR LR 08 11 53.3
comp=Z,192nm,18.6s,baz=70,slow=38
KZA Kyzart 54.77 314 P **P** **07 46 32.1 -0.6**
SNR=32
TKM2 Tokmak 2 54.82 315 P **P** **07 46 33.4 +0.6**
SNR=15
TKM2 Tokmak 2 54.82 315 P **P** **07 46 30.5 -2.3**
TKM2 pmax pmax
comp=Z,28nm,1.3s
KBK Karagaybulak 55.17 315 P **P** **07 46 36.7 +1.3**
SNR=13
UCH Uchtor 55.34 314 P **P** **07 46 36.3 -0.6**
SNR=51
SEY Seymchan 55.35 14⇓ *e*P **P** **07 46 35.6 -0.4**
SEY *i**PP **pwP** **07 46 50.8 -1.9**
CHMS Chumysh 55.43 315 P **P** **07 46 37.7 +0.7**
SNR=6.7
AAK Ala-Archa 55.48 315 *e*P **P** **07 46 38.1 +0.5**
comp=Z,36nm,1.4s
AAK Ala-Archa 55.48 315 *e*P **P** **07 46 38.1 +0.5**
AAK pmax pmax
comp=Z,36nm,1.4s
AAK Ala-Archa 55.48 315 P **P** **07 46 38.9 +1.3**
SNR=20
AAK P **P** **07 46 38.9 +1.3**
SNR=20
USP Ospenovka 55.69 316 P **P** **07 46 39.7 +0.8**
SNR=14
NVS Novosibirsk 55.87 331 *e*P **P** **07 46 40.0 +0.1**
NVS pmax pmax
comp=Z,41nm,1.5s
NVS pmax pmax
comp=N,39nm,1.8s
NVS pmax pmax
comp=E,22nm,1.4s
AML Almayashu 55.88 314 P **P** **07 46 42.5 +1.7**
SNR=11
EKS2 Erkin-Say 55.99 315 P **P** **07 46 42.4 +1.2**
SNR=19
KURK Kurchatov 56.11 325 *e*P **P** **07 46 40.3 -1.4**
comp=E,71nm,1.1s
KURK Kurchatov 56.11 325 *ce*P **P** **07 46 40.3 -1.4**
KURK *i**PP **sP** **07 46 54.4 +1.7**
KURK pmax pmax
comp=Z,109nm,1.7s
KURK Kurchatov 56.11 325 P **P** **07 46 40.7 -1.0**
SNR=48
KURK P **P** **07 46 40.7 -1.0**
SNR=48
ARSB Arslanbob 56.15 313 *e*P **P** **07 46 41.6 -0.7**
comp=Z,34nm,1.1s
BTK Batken 57.39 311 *e*P **P** **07 46 50.2 -0.9**
comp=Z,30nm,1.1s
BTK Batken 57.39 311 *e*P **P** **07 46 50.2 -0.9**
BTK pmax pmax
comp=Z,30nm,1.1s
GAR Garm 57.51 310 *e*P **P** **07 46 50.3 -1.7**
comp=Z,64nm,0.8s
GAR Garm 57.51 310 *e*P **P** **07 46 50.3 -1.7**
GAR pmax pmax
comp=Z,64nm,0.8s
KBL Kabul 57.61 304 *e*P **P** **07 46 52.0 -0.9**
comp=Z,12nm,1.1s
KBL Kabul 57.61 304 *e*P **P** **07 46 52.0 -0.9**
KBL pmax pmax
comp=Z,12nm,1.1s
KK31 Karatay Array 58.42 314 *e*P **P** **07 46 56.4 -1.8**
comp=Z,24nm,1.0s
KK31 Karatay Array 58.42 314 *e*P **P** **07 46 56.4 -1.8**
KK31 pmax pmax
comp=Z,24nm,1.0s
KKAR Karatay Array 58.42 314 *e*P **P** **07 46 56.4 -1.8**
comp=Z,24nm,1.0s
KKAR Karatay Array 58.42 314 *e*P **P** **07 46 56.4 -1.8**
KKAR pmax pmax
comp=Z,24nm,1.0s
TIXI Tiksi 61.00 1 *e*P **P** **07 47 15.0 -0.4**
comp=Z,21nm,0.9s
TIXI Tiksi 61.00 1 *ce*P **P** **07 47 15.6 +0.2**
TIXI pmax pmax
comp=Z,22nm,0.8s
BRVK Borovoye 61.78 325 *e*P **P** **07 47 20.6 -0.4**
comp=Z,30nm,1.0s
BRVK Borovoye 61.78 325 *e*P **P** **07 47 20.6 -0.4**
BRVK pmax pmax
comp=Z,30nm,1.0s
BRVK Borovoye 61.78 325 P **P** **07 47 21.6 +0.6**
SNR=19
ATKA Atka Island 62.85 36 *e*P **P** **07 47 28.8 +0.6**
comp=Z,16nm,0.9s
BILL Bilibino 62.92 16 *e*P **P** **07 47 29.6 +1.2**
comp=Z,18nm,1.3s
BILL Bilibino 62.92 16 *ce*P **P** **07 47 29.1 +0.7**
BILL *e* 07 49 46.1
BILL pmax pmax
comp=Z,34nm,2.5s
NRIK Noril'sk 63.82 345 P **P** **07 47 34.8 +0.5**
comp=Z,10nm,0.9s,baz=138,slow=8.0,SNR=16
GEYT Alibeck 66.79 307 P **P** **07 47 52.5 -1.8**
comp=Z,3.6nm,0.8s,baz=104,slow=3.1,SNR=7.5
GYA0B ALIBECK ARRAY 66.79 307 *e*P **P** **07 47 54.8 +0.6**
comp=Z,16nm,1.3s
AB31 Akbulak array 66.99 319 *i*P **P** **07 47 53.5 -1.7**
AB31 pmax pmax
comp=Z,17nm,1.0s
ABKAR Akbulak array 66.99 319 *e*P **P** **07 47 52.8 -2.4**
comp=Z,32nm,1.3s
BKZ Black Stump Fm 67.68 140 *e*P **P** **07 47 59.5 -0.3**
comp=Z,63nm,1.4s
SVE Sverdlovsk 68.23 327⇓ *i*P **P** **07 48 03.6 +0.7**
SVE pmax pmax
comp=Z,57nm,1.9s
AKTO Aktyubinsk 68.42 320 LR LR 08 20 11.4
comp=Z,100nm,18.8s,baz=112,slow=38
ARU Arti 69.25 327 *e*P **P** **07 48 08.5 -0.8**
comp=Z,20nm,1.1s
ARU Arti 69.25 327 *d*P **P** **07 48 08.6 -0.6**
ARU 07 50 38.3
ARU S **S** **07 57 13.4 +0.2**
ARU pmax pmax
comp=Z,51nm,1.8s
ARU MLR MLR
comp=Z,180nm,16.0s
MAK Makhachkala 75.06 312 *e*P **P** **07 48 41.2 -3.0**
MAK *e*S **S** **07 58 17.0 -3.3**
MAK pmax pmax
comp=Z,198nm,2.0s
KDAK Kodiak Island 76.06 33 *e*P **P** **07 48 51.6 +1.9**
comp=Z,25nm,1.3s
KDAK Kodiak Island 76.06 33 *e*P **P** **07 48 51.6 +1.9**
KDAK pmax pmax
comp=Z,25nm,1.3s
GROC Groznyy 76.31 312 *e*P **P** **07 48 50.1 -1.3**
GROC *e* 07 48 59.8
GROC *e*S **S** **07 58 27.0 -7.1**
GROC pmax pmax
comp=Z,19nm,0.5s
PRGR Permogore 76.56 331 *e*P **P** **07 48 51.8 -0.6**
PRGR *e**PP **pP** **07 48 59.7 -0.6**
PRGR pmax pmax
comp=Z,18nm,0.6s
CAST Castle Rocks 76.58 27 *e*P **P** **07 48 53.9 +1.3**
comp=Z,11nm,1.1s
BPAW Bear Paw Mtn. 77.10 27 *e*P **P** **07 48 55.4 -0.1**
comp=Z,15nm,1.1s
GNI Garni 77.23 309 *d*P **P** **07 48 57.4 +0.5**
GNI pmax pmax
comp=Z,47nm,1.7s
GNI Garni 77.23 309 P **P** **07 48 58.7 +1.8**
SNR=7.5
COLD Coldfoot 77.55 23 *e*P **P** **07 48 59.3 +1.3**
comp=Z,7.5nm,1.4s
CASY Casey 77.62 187 *e*P **P** **07 48 57.9 -0.3**
comp=Z,28nm,0.8s
ZEI Tsey 77.72 312 *e*P **P** **07 48 57.5 -2.1**
ZEI pmax pmax
comp=Z,25nm,1.0s
TOLK Toolik Lake Re 77.84 22 *e*P **P** **07 48 59.0 -0.6**
comp=Z,21nm,1.4s
TOLK Toolik Lake Re 77.84 22 P **P** **07 49 00.7 +1.1**
baz=268
MCK McKinley 78.00 27 *e*P **P** **07 49 01.0 +0.5**
comp=Z,20nm,1.0s
RND Reindeer 78.03 27 *e*P **P** **07 49 03.1 +2.3**
comp=Z,15nm,1.2s
RND Reindeer 78.03 27 *e*P **P** **07 49 03.1 +2.3**
RND pmax pmax
comp=Z,15nm,1.2s
AKH Akhalkalaki 78.10 310 *e*P **P** **07 49 00.7 -1.1**
comp=Z,21nm,0.9s
AKH Akhalkalaki 78.10 310⇓ *i*P **P** **07 49 02.9 +1.2**
AKH Akhalkalaki 78.10 310 *e*P **P** **07 49 00.7 -1.1**
AKH pmax pmax
comp=Z,21nm,0.9s
KNK Knik Glacier 78.22 29 *e*P **P** **07 49 03.1 +1.3**
comp=Z,18nm,1.0s
WRH Wood River Hil 78.37 26 *e*P **P** **07 49 03.9 +1.4**
comp=Z,14nm,1.3s
KBZ Khabaz 78.39 313 P **P** **07 49 02.0 -1.0**
comp=Z,9.6nm,1.0s,baz=99,slow=5.1,SNR=13
TCOL CIGO, UAF Yank 78.46 26 P **P** **07 49 04.0 +1.0**
baz=270
COLA College 78.47 26⇓ *e*P **P** **07 49 03.7 +0.7**
COLA pmax pmax
comp=Z,6.0nm,1.1s
CCB Clear Creek Bu 78.49 26 *e*P **P** **07 49 03.4 +0.3**
KIV Kislovodsk 78.53 313 *e*P **P** **07 49 03.9 -0.1**
comp=Z,24nm,1.1s
KIV Kislovodsk 78.53 313 *e*P **P** **07 49 03.9 -0.1**
KIV pmax pmax
comp=Z,53nm,1.1s
KIV Kislovodsk 78.53 313 P **P** **07 49 05.1 +1.1**
SNR=5.8
KIV P **P** **07 49 05.1 +1.1**
SNR=5.8
NEY Neytrino 78.55 312⇑ *e*P **P** **07 49 05.6 +1.4**
NEY pmax pmax
comp=Z,4.0nm,1.1s
POKR Poker Plat Res 78.64 25 P **P** **07 49 06.0 +1.9**
baz=271
DHY Denali Highway 78.70 28 *e*P **P** **07 49 06.5 +1.9**
comp=Z,6.4nm,1.0s
VRH Novokhopyorsk 78.77 320 *e*P **P** **07 49 04.2 -0.7**
VRH pmax pmax
comp=Z,10.0nm,0.4s
ILAR Eielson Array 78.88 26 P **P** **07 49 03.9 -1.5**
comp=Z,1.8nm,0.9s,baz=241,slow=6.1,SNR=15
KLMR Klimovskoe 79.51 330 *e*P **P** **07 49 06.8 -2.0**
KLMR pmax pmax
comp=Z,37nm,1.5s
TMCR Tamitsa 80.01 334 *e*P **P** **07 49 11.8 +0.4**
TMCR pmax pmax
comp=Z,10.0nm,0.6s
VORD Divnogorie 80.31 320 *e*P **P** **07 49 12.0 -1.3**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 80.37 320 *e*P **P** **07 49 12.5 -1.2**
VSR pmax pmax
comp=Z,30nm,1.2s
LPSR Galich'ya Gora 80.40 322 *e*P **P** **07 49 12.4 -1.4**
LPSR pmax pmax
comp=Z,30nm,1.0s
MOS Moscow 80.88 325 *e*P **P** **07 49 13.8 -2.5**
MOS *e* 07 52 20.2
MOS pmax pmax
comp=Z,52nm,1.0s
OBN Obninsk 81.54 324⇑ *i*P **P** **07 49 19.9 +0.1**
OBN *e* 07 52 28.9
OBN *e*S **S** **07 59 23.2 -6.2**
OBN pmax pmax
comp=Z,65nm,1.7s
OBN MLR MLR
comp=Z,126nm,16.0s
ANN Anapa 82.20 314 *e*P **P** **07 49 23.2 -0.3**
ANN *e*S **S** **07 59 35.6 -1.0**
ANN pmax pmax
comp=Z,48nm,1.1s
EPYK Eagle Plains 82.93 24 P **P** **07 49 27.9 +0.9**
baz=280
INK Inuvik 83.76 22 *e*P **P** **07 49 33.6 +2.5**
comp=Z,15nm,1.4s
INK Inuvik 83.76 22 *e*P **P** **07 49 33.6 +2.5**
INK pmax pmax
comp=Z,15nm,1.4s
ARCES ARCESS Array B 84.07 340 P **P** **07 49 31.5 -1.2**
comp=Z,21nm,0.9s,baz=72,slow=5.5,SNR=38
SIM Simferopol' 84.51 315 P **P** **07 49 36.4 +0.9**
WHY Whitehorse 84.86 29 *e*P **P** **07 49 38.2 +1.2**
comp=Z,24nm,1.0s
SKAG Skagway 84.89 31 *e*P **P** **07 49 39.4 +2.4**
comp=Z,16nm,0.9s
ILGA Ilgaz 85.46 311 *e*P **P** **07 49 40.8 +0.1**
comp=Z,22nm,1.2s
BR131 Keskin Array S 85.75 309 *e*P **P** **07 49 39.4 -2.6**
comp=Z,12nm,0.9s
BR131 Keskin Array S 85.75 309 P **P** **07 49 42.1 +0.2**
SNR=13
BRTR Keskin Array B 85.75 309 P **P** **07 49 39.9 -2.1**
comp=Z,6.3nm,0.8s,baz=111,slow=4.4,SNR=24
BRTR LR LR 08 32 17.2
comp=Z,29nm,18.9s,baz=82,slow=39
FIA1 FINESS Array S 85.86 332 *e*P **P** **07 49 41.5 -0.3**
comp=Z,32nm,1.0s
FINES FINESS Array B 85.86 332 P **P** **07 49 39.9 -1.9**
comp=Z,13nm,0.7s,baz=79,slow=3.5,SNR=59
VSU Vasula 86.28 329⇓ *e*P **P** **07 49 43.9 0.0**
VSU pmax pmax
comp=Z,118nm,1.0s
VSU Vasula 86.28 329 *e*P **P** **07 49 43.4 -0.5**
VSU IAmb IAmb 07 49 46.7
comp=Z,82nm,0.8s
ANTO Ankara 86.37 310 P **P** **07 49 45.6 +0.7**
SNR=7.6
ANTO P **P** **07 49 45.6 +0.7**
SNR=7.6
AKASG Malin Array Be 86.66 321 P **P** **07 49 43.9 -2.1**
comp=Z,8.6nm,0.9s,baz=62,slow=5.0,SNR=32
AKBB Malin Array Si 86.66 321 *e*P **P** **07 49 44.7 -1.3**
comp=Z,45nm,1.2s
AKBB Malin Array Si 86.66 321 *e*P **P** **07 49 44.7 -1.3**
AKBB pmax pmax
comp=Z,45nm,1.2s
KIEV Kiev 86.67 321 *e*P **P** **07 49 45.3 -0.7**
comp=Z,44nm,1.2s
KIEV Kiev 86.67 321⇓ *i*P **P** **07 49 45.6 -0.4**
KIEV Kiev 86.67 321 *e*P **P** **07 49 45.3 -0.7**
KIEV pmax pmax
comp=Z,44nm,1.2s
IDID Didziasalis 87.05 326 *e*P **P** **07 49 47.8 +0.1**
IDID IAmb IAmb 07 49 49.4
comp=Z,4.9nm,0.8s
PPT2 Papeete2 87.14 108 *e*S **S** **08 00 27.4 +0.6**
comp=Z,92nm,24.5s
PPT2 Papeete2 87.14 108 *e*LR LR 08 17 24.2
comp=Z,152nm,23.2s
IIGN Ignalina 87.32 326 *e*P **P** **07 49 49.4 +0.2**
IIGN IAmb IAmb 07 49 50.8
comp=Z,3.9nm,0.9s
TLCR 88.15 316⇓ *i*P **P** **07 49 53.9 +0.6**
TLCR 88.15 316 ⇓P **P** **07 49 53.9 +0.6**
TBI Tubuai 88.44 114 *e*S **S** **08 00 41.2 +2.3**
comp=Z,153nm,26.0s
TBI Tubuai 88.44 114 *e*LR LR 08 18 09.1
comp=Z,292nm,23.8s,baz=290
PABE Paberze 88.52 326 *e*P **P** **07 49 53.6 -1.2**
PABE IAmb IAmb 07 49 55.5
comp=Z,18nm,0.5s
TIRR Tirgusor 88.60 315⇑ *i*P **P** **07 49 55.3 -0.1**
TIRR Tirgusor 88.60 315 ⇑P **P** **07 49 55.3 -0.1**
CFR Carcaliu 88.62 316⇑ *i*P **P** **07 49 56.1 +0.6**
CFR Carcaliu 88.62 316 ⇑P **P** **07 49 56.1 +0.6**
SLIT Slitere, Latvi 88.78 329 *e*P **P** **07 49 55.1 -0.8**
SLIT IAmb IAmb 07 49 56.7
comp=Z,134nm,1.1s
TLB Topalu 88.83 315⇓ *i*P **P** **07 49 55.1 -1.4**
TLB Topalu 88.83 315 ⇓P **P** **07 49 55.1 -1.4**
TESR Tescani 89.30 317⇑ *i*P **P** **07 49 57.8 -0.9**
VRI Vrincioaia 89.41 317⇑ *i*P **P** **07 49 58.9 -0.4**
VRI Vrincioaia 89.41 317 ⇑P **P** **07 49 58.9 -0.4**

PLOR	Plostina	89.47 317	⇑	*i* P	P	07 50 00.0	+0.4
PLOR	Plostina	89.47 317	⇑	P	P	07 50 00.0	+0.4
BIZ	Bicaz	89.56 318	⇓	*i* P	P	07 50 01.1	+1.2
KMBO	Kilima Mbogo	89.81 269		LR	LR	08 31 32.5	
	comp=Z,239nm,18.0s,baz=96,slow=36						
KMBO	Kilima Mbogo	89.81 269		*e*P	P	07 50 02.6	+0.6
KMBO				*e*pP	P	07 50 02.8	+0.8
KMBO	Kilima Mbogo	89.81 269		*i* P	P	07 50 03.2	+1.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BURAR	Bucovina Array	89.96 318	⇑	*i* P	P	07 50 00.6	-1.3
BURAR	Bucovina Array	89.96 318	⇑	P	P	07 50 00.6	-1.3
BUR08	Bucovina Ar. S	89.96 319		*e*P	P	07 50 00.2	-1.7
	comp=Z,14nm,0.9s						
MLR	Muntele Rosu	90.04 316		*e*P	P	07 50 02.3	-0.1
	comp=Z,30nm,1.4s						
MLR	Muntele Rosu	90.04 316	⇓	*i* P	P	07 50 02.3	-0.1
MLR	Muntele Rosu	90.04 316	⇓	P	P	07 50 02.3	-0.1
LVV	L'vov	90.10 321		*e*P	P	07 50 02.5	+0.1
VNDA	Vanda	90.20 173		P	P	07 50 01.5	-0.6
	comp=Z,3.3nm,0.8s,baz=301,slow=6.4,SNR=14						
VNDA	Vanda	90.20 173		*e*P	P	07 50 01.9	-0.2
	comp=Z,12nm,1.2s						
VNDA	Vanda	90.20 173		*e*P	P	07 50 02.0	-0.2
VNDA				pmax	pmax		
	comp=Z,12nm,1.2s						
MAW	Mawson	90.22 200		P	P	07 50 01.0	-1.3
	comp=Z,10nm,1.0s,baz=52,slow=5.7,SNR=13						
MAW	Mawson	90.22 200		*e*P	P	07 50 03.1	+0.8
	comp=Z,7.6nm,1.4s						
MAW	Mawson	90.22 200		P	P	07 50 03.3	+0.9
	baz=90,SNR=8.7						
ARR	Arges	90.96 316	⇑	*i* P	P	07 50 07.6	+1.0
RES	Resolute Bay	91.06 10		*e*P	P	07 50 05.5	-0.8
	comp=Z,12nm,0.9s						
RES	Resolute Bay	91.06 10		*e*P	P	07 50 05.5	-0.8
RES				pmax	pmax		
	comp=Z,12nm,0.9s						
SBA	Scott Base	91.10 172		*e*P	P	07 50 08.3	+2.0
	comp=Z,11nm,1.2s						
SBA	Scott Base	91.10 172		*e*P	P	07 50 08.3	+2.0
SBA				pmax	pmax		
	comp=Z,11nm,1.2s						
KOLS	Kolonicke sedl	91.46 320		*e*P	P	07 50 09.6	+0.8
KOLS	Kolonicke sedl	91.46 320		*e*P	P	07 50 09.6	+0.8
TRPA	Tarpa	91.54 320	⇑	*i* P	P	07 50 09.6	+0.5
TRPA	Tarpa	91.54 320	⇑	EP	P	07 50 09.0	0.0
UZH	Uzhgorod	91.54 320		*i* P	P	07 50 10.0	+0.9
UZH				*i*		07 50 19.3	
UZH				*e*		07 50 25.3	
DRGR		91.83 318	⇓	*i* P	P	07 50 10.4	-0.1
DRGR		91.83 318	⇓	P	P	07 50 10.5	-0.1
NC405	NORSAR Array S	92.45 334		*e*P	P	07 50 12.5	-0.5
	comp=Z,34nm,1.1s						
NIE	Niedzica	92.54 321		*e*P	P	07 50 15.0	+1.2
NIE	Niedzica	92.54 321		*e*P	P	07 50 15.0	+1.2
OJC	Ojcow	92.57 322		*e*P	P	07 50 14.3	+0.5
OJC	Ojcow	92.57 322		*e*P	P	07 50 14.3	+0.5
NB2	NORSAR Subarra	92.70 334		P	P	07 50 12.7	-1.5
	comp=Z,7.8nm,0.9s,baz=65,slow=4.4						
NB2	NORSAR Subarra	92.70 334		P	P	07 50 12.7	-1.5
	baz=65,slow=4.4						
NB200	NORSAR Array S	92.70 334		*e*P	P	07 50 11.2	-3.1
NOA	NORSAR Array B	92.70 334		P	P	07 50 11.2	-3.1
	comp=Z,4.0nm,0.8s,baz=64,slow=4.5,SNR=15						
NOA				LR	LR	08 38 10.9	
	comp=Z,108nm,18.3s,baz=40,slow=40						
VTS	Vitosha	92.71 314		*e*P	P	07 50 14.8	0.0
	comp=Z,8.3nm,1.1s						
VTS	Vitosha	92.71 314	⇓	*i* P	P	07 50 15.2	+0.3
VTS	Vitosha	92.71 314		*e*P	P	07 50 14.8	0.0
VTS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MDVR	Moldovita	93.11 316	⇑	*i* P	P	07 50 16.5	0.0
YKA	Yellowknife Ar	93.21 24		P	P	07 50 16.7	+0.3
	comp=Z,3.4nm,0.9s,baz=298,slow=4.6,SNR=11						
PSZ	Piszkesteto	93.29 320	⇑	EP	P	07 50 17.1	-0.2
OKC	Ostrava-Krasne	93.70 322		AMS	AMS	08 42 20.0	
	comp=Z,200nm,20.4s						
VYHS	Vyhne	93.76 321		*e*P	P	07 50 21.0	+1.6
VYHS	Vyhne	93.76 321		*e*P	P	07 50 21.0	+1.6
MORC	Moravsky Berou	94.09 322		*e*P	P	07 50 21.5	+0.6
JAVC	Velka Javorina	94.35 321		*e*P	P	07 50 24.1	+2.0
KSP	Ksiaz	94.43 323		*e*P	P	07 50 23.2	+0.8
KSP	Ksiaz	94.43 323		*e*P	P	07 50 23.2	+0.8
DPC	Dobruska-Polom	94.61 323		*e*P	P	07 50 23.0	-0.3
DPC				MLR	MLR		
	comp=Z,200nm,17.1s						
DPC	Dobruska-Polom	94.61 323		*e*P	P	07 50 23.0	-0.3
DPC				AMS	AMS	08 41 40.0	
	comp=Z,200nm,17.1s						
CHVC	Chvalec	94.67 323		*e*P	P	07 50 25.9	+2.4
CHVC				AMS	AMS	08 38 40.0	
	comp=Z,200nm,21.5s						
UPC	Upice	94.73 323		*e*P	P	07 50 24.2	+0.4
UPC				MLR	MLR		
	comp=Z,200nm,16.3s						
UPC	Upice	94.73 323		*e*P	P	07 50 24.2	+0.4
UPC				AMS	AMS	08 38 40.0	
	comp=Z,200nm,16.3s						
VRAC	Vranov	94.84 322	⇑	*i* P	P	07 50 11.9	-12
VRAC	Vranov	94.84 322	⇑	P	P	07 50 11.9	-12
VRAC	Vranov	94.84 322		*e*P	P	07 50 25.1	+0.8
KRUC	Moravsky	95.05 322		*e*P	P	07 50 26.1	+0.8
SOP	Sopron	95.47 320	⇓	EP	P	07 50 26.0	-1.2
PDG	Podgorica	95.56 315	⇑	*i* P	P	07 50 27.5	-0.2
PVCC	Panska Ves	95.56 324		AMS	AMS	08 41 10.0	
	comp=Z,200nm,16.8s						
BRG	Berggiesshubel	95.79 324		*i* P	P	07 50 29.1	+0.5
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG	Berggiesshubel	95.79 324		*i* PDIFF	P	07 50 29.1	+0.5
	comp=Z,5.1nm,0.9s						
PRU	Pruhonice	95.80 323		AMS	AMS	08 39 10.0	
	comp=Z,200nm,19.3s						
CONA	Conrad Observa	95.82 321		*e*PcP	P	07 50 29.7	+0.9
	comp=Z,15nm,1.5s						
CLL	Collm	96.14 325		*e*P	P	07 50 29.9	-0.2
	comp=Z,9.9nm,1.2s						
CLL	Collm	96.14 325	⇓	*i* P	P	07 50 30.0	-0.2
CLL				*i* pP	sP	07 50 40.5	-1.1
CLL				*e*PP	PP	07 54 27.0	+4.1
	comp=Z,13nm,1.6s						
CLL				L	L	08 38 00.0	
	comp=Z,100nm,18.8s						
CLL	Collm	96.14 325		*e*P	P	07 50 29.9	-0.2
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ARSA	Arzberg	96.29 320		*e*PcP	P	07 50 30.7	-0.3
	comp=Z,12nm,1.6s						
KHC	Kasperske Hory	96.72 323		*e*P	P	07 50 33.2	+0.2
	comp=Z,4.3nm,1.4s						
KHC	Kasperske Hory	96.72 323		*e*P	P	07 50 32.6	-0.3
KHC				MLR	MLR		
	comp=Z,200nm,16.0s						
KHC	Kasperske Hory	96.72 323		*e*P	P	07 50 32.6	-0.3
KHC				AMS	AMS	08 40 20.0	
	comp=Z,200nm,16.0s						
GEC2	GERESS Array S	96.77 322		*e*P	P	07 50 32.3	-0.9
	comp=Z,8.7nm,1.3s						
GEC2	GERESS Array S	96.77 322		*e*P	P	07 50 32.3	-0.9
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GERES	GERESS Array B	96.77 322		P	P	07 50 32.3	-0.9
	comp=Z,0.4nm,0.3s,baz=51,slow=5.3,SNR=9.1						
PERS	Pernice	96.79 320		*i* P	P	07 50 33.8	+0.6
PERS				*i*		07 50 44.9	
SOKA	Soboth	96.82 320		*e*PcP	P	07 50 34.0	+0.5
	comp=Z,6.7nm,0.9s,SNR=6.8						
MOA	Molln	96.83 321		*e*PcP	P	07 50 34.4	+1.0
	comp=Z,15nm,1.2s,SNR=6.3						
NKC	Novy Kostel	96.92 324		AMS	AMS	08 39 10.0	
	comp=Z,200nm,16.6s						
BOJS	Bojanci	97.14 319		*i* P	Pdif	07 50 37.7	+2.8
BOJS				*i*		07 50 47.7	
OBKA	Obir	97.20 320		*e*PcP	Pdif	07 50 35.3	+0.1
	comp=Z,8.2nm,0.9s						
I04A	Tendick Farm,	97.23 43		P	P	07 50 34.4	-0.9
	baz=292						
VISS	Visnje	97.29 319		*i* P	Pdif	07 50 36.2	+0.6
VISS				*i*		07 50 46.9	
KBA	Koelnbreinsper	97.72 321		*e*PcP	Pdif	07 50 37.5	-0.2
	comp=Z,5.4nm,0.9s						
JAVS	Javornik	97.75 319		*i* P	Pdif	07 50 38.1	+0.4
JAVS				*i*		07 50 49.1	
ABTA	Abfaltersbach	98.38 321		*e*PcP	Pdif	07 50 40.0	-0.6
	comp=Z,6.1nm,1.0s						
WTTA	Wattenberg	98.70 321		*e*Pdiff	Pdif	07 50 42.3	+0.2
	comp=Z,17nm,1.7s						
SYO	Syowa Base	98.85 201	⇓	*e*X	P	07 50 40.8	-1.0
SQTA	Sankt Quirin	98.98 322		*e*Pdiff	Pdif	07 50 43.4	+0.2
	comp=Z,7.5nm,1.3s						
FETA	Feichten	99.36 321		*e*Pdiff	Pdif	07 50 45.3	+0.3
	comp=Z,5.9nm,1.2s						
FUORN	Ofenpass-Fuorn	99.83 321		*e*Pdif	Pdif	07 50 47.5	+0.3
	comp=Z,23nm,1.4s						
NV01	Mina Array Sit	102.19 47		*e*Pdif	Pdif	07 50 58.8	+0.9
NVAR	Mina Array Bea	102.19 47		P	Pdif	07 50 58.8	+0.9
	comp=Z,0.5nm,0.8s,baz=328,slow=5.3,SNR=4.0						
NVAR				PKKPbc	PKKPbc	08 06 60.0	-1.6
	comp=Z,0.7nm,0.9s,baz=111,slow=4.9,SNR=4.0						
VNA2	Neumayer--Watz	113.47 195		PKiKP	PKiKP	07 55 40.7	+1.0
	baz=122,slow=1.7						
VNA3	Neumayer Olymp	113.83 194		PKiKP	PKiKP	07 55 41.0	+0.6
VNA1	Neumayer--Stat	113.87 195		PKiKP	PKiKP	07 55 39.1	-1.4
LTX	Lajitas	117.17 49		*e*PKPdif	PKPdf	07 55 47.4	-0.8
LTX	Lajitas	117.17 49		*e*PKIKP	PKPdf	07 55 47.4	-0.8
TXAR	Lajitas Array	117.17 49		PKP	PKPdf	07 55 47.4	-0.9
	comp=Z,0.8nm,0.9s,baz=328,slow=1.4,SNR=6.1						
JCT	Junction City	119.36 46		*e*PKPdf	PKPdf	07 55 51.0	-1.3
JCT	Junction City	119.36 46		*e*PKIKP	PKPdf	07 55 51.0	-1.3
TORD	Torodi Ar. Bea	120.67 292		PKP	PKPdf	07 55 54.0	-1.1
	comp=Z,3.4nm,0.9s,baz=12,slow=4.5,SNR=12						
TORD				PKKPab	PKKPab	08 06 01.4	-0.4
	comp=Z,0.7nm,0.7s,baz=245,slow=3.4,SNR=3.5						
TOA1	Torodi Ar. Sit	120.67 292		*e*PKPdf	PKPdf	07 55 54.0	-1.1
WVT	Waverly	123.17 33		*e*PKPdf	PKiKP	07 56 00.5	+0.9
WVT	Waverly	123.17 33		*e*PKIKP	PKiKP	07 56 00.5	+0.9
SDDR	Presa de Saban	145.58 31		*e*PKPdf	PKPab	07 56 43.3	+1.4
PLCA	Paso Flores	146.29 156		PKPbc	PKPdf	07 56 42.8	+0.6
	comp=Z,18nm,0.9s,baz=231,slow=4.9,SNR=24						
PLCA	Paso Flores	146.29 156		*e*PKPdf	PKPab	07 56 44.5	+0.4
PLCA	Paso Flores	146.29 156		*e*PKP2	PKPab	07 56 44.5	+0.4
CAPC	Capurgana	149.25 52		*e*P	PKiKP	07 56 54.6	+1.5
CODC	Agustn Codazz	151.29 45		*e*P	PKPdf	07 56 52.6	+1.7
TRQA	Tornquist	151.55 165		*e*PKPbc	PKiKP	07 56 58.3	+1.0
TRQA	Tornquist	151.55 165		*e*PKIKP	PKiKP	07 56 58.3	+1.0
SMLC	San Martn de	151.62 48		*e*P	PKiKP	07 57 00.6	+2.5
OCAC	Ocana	152.55 48		*e*P	PKiKP	07 57 03.3	+3.1
GUY2C	Guyana, Caldas	152.86 56		*e*P	PKPbc	07 56 59.9	-1.1
NORC	Norcasia	153.06 54		*e*P	PKiKP	07 57 01.9	+0.8
GCUF	Volcan Galeras	153.21 65		*e*P	PKPdf	07 56 54.6	+0.2
BARC	Barichara	153.73 50		*e*P	PKPbc	07 57 01.9	-0.7
SDV	Santo Domingo	153.96 43		*e*PKPbc	PKiKP	07 57 03.6	+0.5
RUSC	La Rusia	154.25 51		*e*P	PKiKP	07 57 05.9	+1.8
CHIC	Chingaza	154.52 55		*e*P	PKPdf	07 56 51.3	-4.9
FLOC	Florencia	154.54 63		*e*P	PKPdf	07 56 56.0	+0.2
YOPC	Yopal, Colombi	155.10 51		*e*P	PKPdf	07 56 58.6	+2.0
ELOV	Elorza	156.11 44		*e*P	PKPdf	07 56 57.3	-0.5
CPUP	Villa Florida	163.88 166		PKP	PKPdf	07 57 05.1	-1.0
	comp=Z,2.9nm,1.0s,baz=94,slow=3.8,SNR=4.3						
CPUP				PKPab	PKPab	07 57 58.5	-0.1
	comp=Z,4.1nm,1.1s,baz=230,slow=6.1,SNR=3.8						
LPAZ	La Paz	164.38 113		PKP	PKPdf	07 57 08.8	+1.2
	comp=Z,3.3nm,1.1s,baz=342,slow=2.1,SNR=7.1						
LPAZ				PKPab	PKPab	07 58 04.3	+2.2
	comp=Z,2.7nm,1.0s,baz=306,slow=2.8,SNR=5.0						
LPAZ	La Paz	164.38 113		*e*PKPab	PKPab	07 58 03.7	+1.6
PTGA	Pitinga	168.07 35		*e*PKPab	PKPab	07 58 17.4	0.0

IDC ***08*** *07:40:38.3±1.2, 8.21°S×127.64°E, h0km, mb4.1/3, mb1 4.3/5, mb1mx3.8/31, mbtmp4.2/5, ML4.2/2, MS3.8/2, Ms1 3.7/2, ms1mx3.0/38, Error ellipse: s-maj=44.2km s-min=29.3km az=68.0*

ISCJB ***08*** *07:40:39.9±0.8, 8.65°S±0.07°×127.46°E±0.09, h33km, mb4.0/3, MS3.9/1, Error ellipse: s-maj=15.2km s-min=7.3km az=146.1*

ISC 08 07:40:43.0±0.9, 8.71°S±0.07°×127.61°E±0.07, h35km, n17, σ2°87/22, mb4.1/3, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	4.17 249		Pn	Pn	07 41 46.8	+2.6
	21nm,0.3s,baz=120,slow=1.4,SNR=15						
BATI				Sn	Sn	07 42 37.5	+5.8
	34nm,0.3s,baz=53,slow=17,SNR=7.7						
MTN	Manton Dam	5.37 140		P	Pn	07 42 05.9	+5.1
	baz=24,SNR=61						
MTN				S	Sn	07 43 05.7	+4.2
	baz=24						
KDU	Kakadu	6.20 130		P	Pn	07 42 13.9	+1.7
	baz=24,SNR=26						
KDU				S	Sn	07 43 24.9	+3.0
	baz=24						
KNRA	Kununurra	7.02 171		P	Pn	07 42 26.1	+2.8
	baz=26,SNR=7.9						
KNRA				S	Sn	07 43 44.1	+2.1
	baz=26						
FITZ	Fitzroy Crossi	9.53 191		Pn	Pn	07 42 58.4	+0.6
	1.2nm,0.3s,baz=13,slow=6.1,SNR=22						
FITZ				Sn	Sn	07 44 42.3	-1.4
	2.7nm,0.3s,baz=270,slow=20,SNR=6.0						
FITZ	Fitzroy Crossi	9.53 191		*e*P	Pn	07 42 58.9	+1.1
	46nm,1.5s						
FITZ	Fitzroy Crossi	9.53 191		P	Pn	07 42 58.5	+0.7
	baz=29,SNR=9.2						
FITZ				S	Sn	07 44 39.7	-4.0
	baz=29						
WRA	Warramunga Arr	12.93 150		Pn	Pn	07 43 44.5	+0.1
	1.4nm,0.3s,baz=326,slow=13,SNR=26						
WRA				Sn	Sn	07 46 02.1	-5.0
	1.5nm,0.3s,baz=329,slow=22,SNR=5.5						
ASAR	Alice Springs	16.05 159		Pn	P	07 44 29.8	+0.5
	0.5nm,0.3s,baz=335,slow=11,SNR=9.0						
ASAR				Sn	Sn	07 47 19.7	-3.4
	0.2nm,0.3s,baz=320,slow=19,SNR=3.3						
PMG	Port Moresby	19.32 94		LR	LR	07 54 12.6	
	comp=Z,257nm,18.9s,baz=274,slow=42						
CMAR	Chiang Mai Arr	39.10 314		P	P	07 48 05.4	-1.8
	1.3nm,0.3s,baz=155,slow=7.5,SNR=4.8						
MKAR	Makanchi Array	68.39 328		P	P	07 51 39.1	-2.0
	1.1nm,0.9s,baz=126,slow=7.3,SNR=3.4						
ZALV	Zalesovo Beam	72.09 335		P	P	07 52 01.3	-2.3
	1.3nm,0.7s,baz=135,slow=8.3,SNR=2.8						
BOSA	Boshof	96.56 240		LR	LR	08 33 01.5	
	comp=Z,39nm,20.0s,baz=32,slow=32						
TORD	Torodi Ar. Bea	126.79 280		PKP	PKPdf	07 59 43.7	-0.3
	0.5nm,0.9s,baz=104,slow=2.5,SNR=2.4						
TXAR	Lajitas Array	127.83 60		PKP	PKiKP	07 59 47.1	+0.8
	0.5nm,0.9s,baz=247,slow=1.9,SNR=3.7						
CPUP	Villa Florida	144.84 172		PKPbc	PKPdf	08 00 18.6	+1.5
	0.7nm,0.6s,baz=141,slow=2.8,SNR=3.5						

PRU 08 07:44:06.7±0.0, 51.39°N×16.14°E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.56 170		*e*Pg	Pg	07 44 17.1	-0.2
KSP				*e*Sg	Sg	07 44 25.5	+1.0
CHVC	Chvalec	0.81 184		*e*PG	Pg	07 44 22.0	-0.1
CHVC				*e*SG	Sg	07 44 33.3	+0.8
UPC	Upice	0.89 185		*e*PG	Pg	07 44 23.7	0.0
UPC				*e*SG	Sg	07 44 35.4	+0.2
	comp=Z,7.6nm,0.3s						
DPC	Dobruska-Polom	1.05 174		*e*PG	Pg	07 44 25.9	-0.8
DPC				*e*SG	Sg	07 44 40.2	-0.1
	comp=Z,3.4nm,0.3s						
PVCC	Panska Ves	1.32 230		*e*PG	Pg	07 44 31.5	-0.4
PVCC				*e*SG	Sb	07 44 49.5	-0.2
	comp=Z,11nm,0.2s						
BRG	Berggiesshubel	1.48 250		PG	Pn	07 44 32.9	-1.7
BRG				SG	Sg	07 44 54.1	-0.1
	4.2nm,0.5s						
PRU	Pruhonice	1.73 217		*e*SG	Sb	07 45 01.5	-0.2
	comp=Z,3.1nm,0.4s						
CLL	Collm	1.97 269		*e*Pg	Pb	07 44 43.0	-0.4
CLL				*i*		07 44 46.1	
CLL				*i* Sg	Sg	07 45 10.9	+1.0
NKC	Novy Kostel	2.61 245		*e*SG	Sg	07 45 30.4	-0.2
	comp=Z,3.5nm,0.4s						
KHC	Kasperske Hory	2.80 217		*e*SG	Sb	07 45 34.3	+2.0

ISCJB ***08*** *07:44:25.6±0.5, 10.80N±0.04×126.90E±0.06, h10km, mb4.3/18, Error ellipse: s-maj=8.4km s-min=6.0km az=155.9*

IDC ***08*** *07:44:25.2±0.8, 10.72N×126.93E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/36, mbtmp3.9/7, Error ellipse: s-maj=56.1km s-min=20.4km az=69.0*

MAN ***08*** *07:44:30.1, 10.81N×126.59E, h15km, mb4.5, ML3.4, MS3.2*

NEIC ***08*** *07:44:32.1±2.8, 10.64N×126.47E, h35km, mb4.4/11, Error ellipse: s-maj=26.0km s-min=9.8km az=280.0*

ISC 08 07:44:27.1±0.6, 10.85N±0.05×126.87E±0.06, h10km, n30, σ1°50/36, mb4.4/18, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	1.59 298		*e*P	Pn	07 44 54.6	-0.7
BESP				*e*S	Sb	07 45 17.8	+1.0
SCPH	Surigao	1.73 232	⇑	*i* P	Pg	07 45 03.2	+3.0
SCPH				*i* S	Sg	07 45 22.7	+0.1
MSLP	Maasin	2.10 250		*e*P	Pn	07 45 01.2	-1.1
MSLP				*e*S	Sn	07 45 25.4	-3.2
CNP	Catarman	2.72 308		*e*P	Pn	07 45 10.7	-0.1
CNP				*e*S	Sn	07 45 43.2	-0.6
BUKP	Musuan	3.45 211		*e*P	Pn	07 45 22.7	+1.7
BUKP				*e*S	Sn	07 46 01.4	-0.6
DAV	Davao City (W)	3.97 199		*e*Pn	Pn	07 45 29.2	+1.2
MTN	Manton Dam	23.92 170		*e*P	P	07 49 40.6	-0.8
	20nm,0.8s						
MYKOM	Kota Tinggi	24.57 250		*e*P	P	07 49 43.6	-3.8
	5.8nm,0.7s						
ASAR	Alice Springs	34.99 169		P	P	07 51 17.4	-2.4
	0.8nm,0.8s,baz=350,slow=6.6,SNR=4.9						
ASAR				PcP	PcP	07 53 51.5	-0.7
	0.7nm,0.5s,baz=348,slow=2.9,SNR=8.3						
BBOO	Buckleboo	44.29 169		*e*P	P	07 52 36.0	-1.2
	21nm,1.3s						
STKA	Stephens Creek	44.77 162		P	P	07 52 39.6	-1.3
	1.3nm,0.5s,baz=331,slow=7.5,SNR=4.0						
STKA	Stephens Creek	44.77 162		*e*P	P	07 52 39.5	-1.5
	1.2nm,1.2s						
TOO	Toolangi	51.24 161		*e*P	P	07 53 31.4	+0.3
	18nm,1.4s						
MK31	Makanchi Array	51.93 322		*e*P	P	07 53 38.2	+2.1
	2.1nm,0.8s						
MK32	Makanchi Array	51.93 322		*e*P	P	07 53 37.8	+1.7
MKAR	Makanchi Array	51.93 322		P	P	07 53 37.8	+1.6
	2.2nm,0.6s,baz=118,slow=7.9,SNR=15						
KURK	Kurchatov	55.93 325		*e*P	P	07 54 07.1	+1.8
	3.0nm,0.6s						
KK31	Karatay Array	58.27 314		*e*P	P	07 54 22.8	+0.7
	2.2nm,0.8s						
BRVK	Borovoye	61.60 325		*e*P	P	07 54 45.9	+1.2
	3.1nm,0.6s						
ABKAR	Akbulak array	66.83 319		*e*P	P	07 55 19.5	+0.4
	2.1nm,0.8s						
CASY	Casey	77.86 187		*e*P	P	07 56 24.3	-0.2
	6.6nm,1.3s						
ILAR	Eielson Array	78.66 26		P	P	07 56 29.2	0.0
	0.1nm,0.6s,baz=277,slow=7.0,SNR=3.0						
ARCES	ARCESS Array B	83.86 340		P	P	07 56 57.3	+0.6
	6.2nm,0.3s,baz=75,slow=6.9,SNR=3.8						
BR101	Keskin Array S	85.62 309		*e*P	P	07 57 05.8	-0.6
BRTR	Keskin Array B	85.62 309		P	P	07 57 05.8	-0.6
	1.0nm,0.7s,baz=98,slow=4.2,SNR=5.1						
FIA0	FINESS Array S	85.66 332		*e*P	P	07 57 06.1	+0.2
FINES	FINESS Array B	85.66 332		P	P	07 57 06.1	+0.2
	1.3nm,0.4s,baz=83,slow=4.6,SNR=25						
AKASG	Malin Array Be	86.49 321		P	P	07 57 10.4	+0.2
	0.2nm,0.3s,baz=72,slow=4.0,SNR=3.8						
PLCA	Paso Flores	146.50 156		PKPbc	PKPdf	08 04 09.4	+1.7
	2.9nm,0.9s,baz=228,slow=2.2,SNR=4.2						
PLCA	Paso Flores	146.50 156		*e*PKPdf	PKPbc	08 04 09.6	+0.5

ISCJB ***08*** *07:47:05.0±0.5, 34.10N±0.03×135.19E±0.04, h13km±4km, mb3.6/7, Error ellipse: s-maj=5.8km s-min=4.4km az=36.5*

IDC ***08*** *07:47:04.3±0.8, 34.10N×135.19E, h0km, mb3.8/7, mb1 3.9/11, mb1mx3.7/36, mbtmp3.7/11, ML3.3/4, Error ellipse: s-maj=20.9km s-min=14.3km az=161.0*

JMA ***08*** *07:47:05.3, 34.21N×135.21E, h4km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs4.00000°, δ47.00000°, λ78.00000°. NP2: φs202.00000°, δ45.00000°, λ103.00000°. Principal axes: T Plg81.0000°, Azm199.0000°; N Plg9.0000°, Azm13.0000°; P Plg1.0000°, Azm103.0000°;*

JMA Felt III J1.

ISC 08 07:47:04.7±1.3, 34.14N±0.05×135.20E±0.03, h2km±9km, n26, σ1°03/30, mb3.6/7, 6D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWM	Minabe	0.32 155		⇓ P	Pb	07 47 13.0	-0.2
JWM				S	Sb	07 47 18.1	-0.7
JWY	Kouya	0.34 76		⇓ P	Pg	07 47 11.3	+0.1
JWY				S	Sg	07 47 16.0	+0.4
JAJ2	Tsuna	0.38 317		⇓ P	Pg	07 47 12.2	+0.2
JAJ2				S	Sg	07 47 17.0	0.0
JTNC	Tanabenakahech	0.47 133		P	Pb	07 47 15.6	-0.2
JTNC				S	Sb	07 47 22.6	-0.6
J

comp=E,157μm,0.3s
SIGR AML AML 07 48 45.5
comp=N,257μm,0.6s
PRK Paraskevi 0.71 130 P Pb 07 48 40.6 -0.1
PRK S Sn 07 48 51.4 +0.6
PRK AML AML 07 48 51.7
comp=E,80μm,0.4s
PRK AML AML 07 48 54.8
comp=N,80μm,0.4s
SMTH Samothraki Isl 0.76 358 P Pn 07 48 42.3 +0.7
SMTH S Sn 07 48 52.7 +0.5
SMTH AML AML 07 48 55.0
comp=N,46μm,0.3s
SMTH AML AML 07 48 55.3
comp=E,55μm,0.3s
THAS Thassos island 1.11 324 P Pb 07 48 47.9 +0.5
THAS S Sb 07 49 02.5 +1.1
ALN Alexandroupoli 1.24 17 P Pb 07 48 50.3 +0.7
ALN S Sb 07 49 06.7 +1.5
CHOS Chios island 1.37 164 P Pb 07 48 52.9 +1.0
CHOS S Sb 07 49 09.6 +0.6

NEIC 08 07:50:31.9±1.5, 9°.70N×83°.97W, h11km±14km, MW3.5(UCR), Error ellipse: s-maj=27.4km s-min=8.4km az=48.0, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HDC	**Heredia**	**0.33**	**335**	*e*Pg	Pg	07 50 38.2	-0.4
HDC				*e*Sg	Sg	07 50 43.6	+0.5
JTS	**Las Juntas de**	**1.13**	**301**	*e*Pg	Pb	07 50 53.0	-0.5
JTS				*e*Sn	Sn	07 51 09.4	+0.1
ESPN	**Las Esperanzas**	**2.50**	**353**	*e*Pn	Pn	07 51 14.4	+1.8
ESPN				*e*Sn	Sn	07 51 44.6	+1.5
ACON	**Acoyapa**	**2.54**	**332**	*e*Pn	Pn	07 51 13.8	+0.5
ACON				*e*Sn	Sn	07 51 44.2	0.0
BCIP	**Isla Barro Col**	**4.11**	**97**	*e*Pn	Pn	07 51 34.7	-0.1
ESTN	**Estel**	**4.12**	**325**	*e*Pn	Pn	07 51 34.9	-0.1
ESTN				*e*Sn	Sn	07 52 26.1	+2.9
SDDR	**Presa de Saban**	**15.36**	**52**	*e*Sn	Sn	07 56 53.6	-5.5

*IDC **08** 08:08:43.1±1.4, 10°.60N×126°.80E, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.7/54, mbtmp4.1/6, Error ellipse: s-maj=140.3km s-min=19.7km az=66.0*
*MAN **08** 08:08:45.1, 11°.00N×126°.26E, h177km, mb4.6, ML3.5, MS3.5*
*ISCJB **08** 08:08:46.5±0.5, 10°.76N±0°.04×126°.90E±0°.05, h33km, mb4.3/17, Error ellipse: s-maj=7.8km s-min=5.9km az=10.2*
*NEIC **08** 08:08:48.6±1.6, 10°.92N×127°.20E, h43km±5km, mb4.3/13, Error ellipse: s-maj=24.8km s-min=12.6km az=64.0*
ISC 08 08:08:48.0±0.6, 10°.81N±0°.06×126°.95E±0°.08, h35km, n30, σ1°.64/33, mb4.4/17, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**1.68**	**298**	*e*P	**Pn**	**08 09 12.3**	**-2.6**
BESP				*e*S	**Sn**	**08 09 34.1**	**-1.1**
SCPH	**Surigao**	**1.77**	**235**	*e*P	Pn	08 09 21.2	+5.0
SCPH				*e*S	**Sn**	**08 09 41.0**	**+3.7**
MSLP	**Maasin**	**2.16**	**252**	*e*P	**Pn**	**08 09 19.4**	**-2.2**
MSLP				*e*S	**Sn**	**08 09 44.8**	**-2.4**
BUTP	**Butuan**	**2.25**	**216**	*e*P	Pn	08 09 37.1	+14
BUTP				*e*S	**Sn**	**08 09 46.7**	**-2.7**
CGP	**Cagayan de Oro**	**3.23**	**224**	↓*e*P	Pn	08 09 45.3	+9.0
BUKP	**Musuan**	**3.46**	**213**	*e*P	**Pn**	**08 09 38.2**	**-1.3**
BUKP				*e*S	**Sn**	**08 10 18.0**	**-1.4**
TWG	**Pinlang**	**13.20**	**336**	*e*Pn	**Pn**	**08 11 53.1**	**+0.1**
SBUM	**Sibu**	**16.82**	**241**	*e*Pn	**P**	**08 12 45.0**	**+2.2**
2.6nm,0.5s							
KSM	**Kuching**	**18.95**	**242**	*e*P	**Pn**	**08 13 08.2**	**+1.0**
8.4nm,0.9s							
MTN	**Manton Dam**	**23.87**	**170**	*e*P	**P**	**08 13 58.4**	**-0.1**
32nm,1.3s							
ASAR	**Alice Springs**	**34.94**	**169**	P	**P**	**08 15 35.3**	**-1.5**
0.4nm,0.5s,baz=351,slow=6.6,SNR=8.6							
ASAR				PcP	**PcP**	**08 18 09.4**	**+0.4**
0.3nm,0.5s,baz=338,slow=2.8,SNR=6.3							
MORW	**Morawa**	**41.02**	**195**	*e*P	**P**	**08 16 29.4**	**+1.4**
13nm,1.3s							
BBOO	**Buckleboo**	**44.24**	**169**	*e*P	**P**	**08 16 54.3**	**+0.2**
10nm,1.3s							
STKA	**Stephens Creek**	**44.70**	**162**	P	**P**	**08 16 56.9**	**-0.9**
1.7nm,0.7s,baz=326,slow=16,SNR=3.5							
STKA	**Stephens Creek**	**44.70**	**162**	*e*P	**P**	**08 16 57.7**	**-0.1**
2.0nm,1.4s							
MK31	**Makanchi Array**	**52.01**	**322**	*e*P	**P**	**08 17 56.1**	**+2.0**
1.6nm,0.8s							
MK32	**Makanchi Array**	**52.01**	**322**	*e*P	**P**	**08 17 55.7**	**+1.6**
MKAR	**Makanchi Array**	**52.01**	**322**	P	**P**	**08 17 55.7**	**+1.6**
2.0nm,0.6s,baz=115,slow=8.2,SNR=19							
KURK	**Kurchatov**	**56.00**	**325**	*e*P	**P**	**08 18 24.4**	**+1.4**
2.6nm,0.6s							
KURBB	**Kurchatov Arra**	**56.01**	**325**	P	**P**	**08 18 24.2**	**+1.0**
1.8nm,0.5s,baz=125,slow=6.7,SNR=24							
KKAR	**Karatay Array**	**58.35**	**314**	*e*P	**P**	**08 18 40.4**	**+0.5**
2.3nm,1.0s							
ABKAR	**Akbulak array**	**66.90**	**319**	*e*P	**P**	**08 19 37.1**	**+0.3**
1.4nm,0.8s							
CASY	**Casey**	**77.83**	**187**	*e*P	**P**	**08 20 41.4**	**-0.1**
4.1nm,0.9s							
SML	**Sawmill**	**78.05**	**29**	*e*P	**P**	**08 20 42.7**	**-0.4**
8.0nm,0.7s							
SCM	**Sheep Creek Mo**	**78.53**	**29**	*e*P	**P**	**08 20 42.4**	**-3.3**
4.9nm,0.6s							
ARCES	**ARCESS Array B**	**83.92**	**340**	P	**P**	**08 21 15.5**	**+1.4**
7.0nm,0.3s,baz=57,slow=5.9,SNR=3.2							
BR101	**Keskin Array S**	**85.70**	**309**	*e*P	**P**	**08 21 23.8**	**0.0**
BRTR	**Keskin Array B**	**85.70**	**309**	P	**P**	**08 21 23.8**	**0.0**
0.6nm,0.3s,baz=98,slow=4.5,SNR=3.4							
FIA0	**FINESS Array S**	**85.73**	**332**	*e*P	**P**	**08 21 24.0**	**+0.7**
FINES	**FINESS Array B**	**85.73**	**332**	P	**P**	**08 21 24.0**	**+0.7**
1.0nm,0.4s,baz=74,slow=5.2,SNR=19							

*TIF **08** 08:13:51.6, 42°.37N×41°.00E, h25km±3km*
*NORS **08** 08:13:53.3±0.0, 42°.54N×41°.27E, h5km, MPVA3.2*
*DDA **08** 08:13:54.0, 42°.19N×41°.08E, h7km±3km, ML3.0*
ISC 08 08:13:51.8±1.2, 42°.40N±0°.02×41°.11E±0°.04, h13km±11km, n18, σ0°.43/35, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATM	**Batumi**	**0.91**	**151**	P	**Pn**	**08 14 10.4**	**+0.1**
BATM				S	**Sn**	**08 14 23.8**	**+0.5**
DOMR	**Dombai**	**0.97**	**23**	*i* Pg	**Pb**	**08 14 10.1**	**-0.5**
DOMR				*i* Sg	**Sb**	**08 14 22.4**	**-0.9**
DBOC	**Borcka**	**1.13**	**158**	*i* P	**Pg**	**08 14 14.0**	**+0.4**
DBOC				*i* S	**Sn**	**08 14 28.9**	**0.0**
DBOC				IAML_P			
comp=Z,1μm,0.1s							
ARXR	**Arkhyz**	**1.17**	**6**	*i* Pg	**Pg**	**08 14 14.3**	**0.0**
ARXR				*i* Sg	**Sg**	**08 14 29.3**	**-0.2**
ARTV	**Artvin**	**1.36**	**153**	*i* P	**Pg**	**08 14 17.7**	**-0.3**
ARTV				*i* S	**Sg**	**08 14 35.4**	**-0.2**
ARTV				IAML_P			
comp=Z,3μm,0.2s							
TKB	**Tkibuli**	**1.40**	**91**	P	**Pg**	**08 14 18.4**	**-0.2**
TKB				S	**Sg**	**08 14 37.8**	**+1.0**
RPOR	**Krasnaya Polya**	**1.44**	**335**	*i* Pg	**Pn**	**08 14 18.1**	**+0.5**
RPOR				*e*Sg	**Sb**	**08 14 37.1**	**+0.4**
DBAD	**Bademkaya**	**1.45**	**162**	*i* P	**Pb**	**08 14 18.8**	**+0.1**
DBAD				*i* S	**Sn**	**08 14 36.0**	**-0.8**
DBAD				IAML_P			
comp=Z,898nm,0.1s							
DAGI	**Agillar**	**1.45**	**155**	*i* P	**Pb**	**08 14 18.6**	**-0.2**
DAGI				*i* S	**Sb**	**08 14 36.9**	**-0.3**
DAGI				IAML_P			
comp=Z,423nm,0.1s							
NEY	**Neytrino**	**1.46**	**54**	*i* Pg	**Pg**	**08 14 19.5**	**-0.3**
NEY				*e*Sg	**Sg**	**08 14 38.4**	**-0.4**
EPOS	**Posof**	**1.50**	**126**	*i* P	**Pg**	**08 14 20.3**	**-0.4**
EPOS				*i* S	**Sg**	**08 14 40.6**	**+0.4**
SOC	**Sochi**	**1.56**	**320**	*e*Pg	**Pb**	**08 14 20.5**	**-0.1**
SOC				*e*Sg	**Sb**	**08 14 40.4**	**+0.2**
ONI	**Oni**	**1.74**	**83**	P	**Pb**	**08 14 24.1**	**+0.4**
ONI				S	**Sg**	**08 14 48.1**	**+0.2**
GUZR	**Guzeripl'**	**1.75**	**336**	*i* Pg	**Pb**	**08 14 23.4**	**-0.5**
GUZR				*i* Sg	**Sb**	**08 14 46.3**	**+0.5**
SHA1	**Shidzhatmaz**	**1.75**	**40**	*i* Pg	**Pg**	**08 14 25.5**	**+0.1**
SHA1				*i* Sg	**Sg**	**08 14 48.1**	**-0.1**
LZRR	**Lazarevskoye**	**1.99**	**321**	*e*Pg	**Pb**	**08 14 27.6**	**-0.2**
LZRR				*e*Sg	**Sb**	**08 14 52.8**	**+0.3**
AKH	**Akhalkalaki**	**2.04**	**118**	P	**Sg**	**08 14 57.7**	**+0.5**
KRIK	**Erzurum-spir**	**2.07**	**184**	*i* P	**Pb**	**08 14 28.8**	**-0.5**
KRIK				*i* S	**Sb**	**08 14 55.0**	**0.0**

*IDC **08** 08:18:38.9±0.7, 10°.62N×126°.57E, h0km, mb4.1/13, mb1 4.1/13, mb1mx3.9/47, mbtmp4.1/13, MS2.9/4, Ms1 2.9/4, ms1mx2.6/40, Error ellipse: s-maj=40.3km s-min=16.1km az=78.0*
*MAN **08** 08:18:39.5, 10°.90N×126°.93E, h43km, mb5.1, ML4.1, MS4.1*
*ISCJB **08** 08:18:43.6±0.4, 10°.72N±0°.05×126°.69E±0°.06, h44km, mb4.4/26, Error ellipse: s-maj=7.8km s-min=6.7km az=14.6*
*NEIC **08** 08:18:44.4±1.5, 10°.69N×126°.73E, h35km, mb4.6/14, Error ellipse: s-maj=25.5km s-min=15.4km az=92.0*
ISC 08 08:18:45.1±0.5, 10°.71N±0°.06×126°.68E±0°.08, h44km, n45, σ1°.18/44, mb4.5/26, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**1.51**	**306**	*e*P	**Pn**	**08 19 06.4**	**-3.3**
BESP				*e*S	**Sn**	**08 19 31.2**	**+3.1**
PLP	**Palo**	**1.73**	**285**	↓*e*P	**Pn**	**08 19 11.0**	**-1.7**
PLP				*e*S	**Sn**	**08 19 31.9**	**-1.7**
MSLP	**Maasin**	**1.88**	**252**	*e*P	**Pn**	**08 19 13.8**	**-1.0**
MSLP				*e*S	**Sn**	**08 19 40.4**	**+3.0**
BUTP	**Butuan**	**2.02**	**211**	*e*S	**Sn**	**08 19 40.5**	**-0.4**
CGP	**Cagayan de Oro**	**2.98**	**221**	*e*P	Pn	08 19 39.4	+9.5
BUKP	**Musuan**	**3.24**	**210**	*e*P	**Pn**	**08 19 33.3**	**-0.2**
DAV	**Davao City (W)**	**3.78**	**197**	*e*Pn	Pn	08 19 46.8	+5.8
TPUB	**Ta-pu**	**13.79**	**336**	*e*Pn	**P**	**08 22 05.2**	**-0.3**
SBUM	**Sibu**	**16.54**	**241**	*e*Pn	**P**	**08 22 36.2**	**+0.1**
MANU	**Manus Island**	**24.17**	**120**	*e*P	**P**	**08 23 57.2**	**-0.4**
72nm,0.2s							
JHJ	**Hachijo jima 2**	**25.35**	**26**	LR	LR	08 33 38.1	
comp=Z,18nm,20.6s,baz=284,slow=35							
KSRS	**Korea Array**	**26.65**	**2**	P	**P**	**08 24 20.2**	**+0.5**
0.6nm,0.6s,baz=171,slow=9.6,SNR=3.7							
KSRS				LR	LR	08 35 56.1	
comp=Z,23nm,19.1s,baz=68,slow=39							
MJAR	**Matsushiro Arr**	**27.75**	**20**	LR	LR	08 33 56.8	
comp=Z,28nm,20.8s,baz=85,slow=33							
ASAR	**Alice Springs**	**34.89**	**168**	P	**P**	**08 25 30.8**	**-1.9**
1.1nm,0.8s,baz=345,slow=7.3,SNR=7.8							
ASAR				PcP	**PcP**	**08 28 04.3**	**-0.6**
1.0nm,0.9s,baz=2.7,slow=3.9,SNR=5.2							
KLR	**Kul'dur**	**38.63**	**5**	P	**P**	**08 26 04.2**	**+0.2**
1.4nm,0.7s,baz=171,slow=3.4,SNR=4.5							
BBOO	**Buckleboo**	**44.20**	**169**	*e*P	**P**	**08 26 49.4**	**-0.5**
15nm,1.1s							
STKA	**Stephens Creek**	**44.69**	**162**	P	**P**	**08 26 54.6**	**+0.7**
1.9nm,0.8s,baz=330,slow=12,SNR=2.9							
MK31	**Makanchi Array**	**51.92**	**322**	*e*P	**P**	**08 27 50.7**	**+1.2**
7.2nm,1.1s							
MK32	**Makanchi Array**	**51.92**	**322**	*e*P	**P**	**08 27 50.9**	**+1.4**
MKAR	**Makanchi Array**	**51.92**	**322**	P	**P**	**08 27 50.9**	**+1.4**
3.6nm,0.9s,baz=116,slow=8.2,SNR=26							
MA2	**Magadan**	**52.00**	**15**	LR	LR	08 51 33.2	
comp=Z,19nm,18.2s,baz=154,slow=38							
MAKZ	**Makanchi**	**52.12**	**322**	*e*P	**P**	**08 27 51.9**	**+0.9**
11nm,1.1s							
NIL	**Nilore**	**53.82**	**304**	*e*P	**P**	**08 28 03.9**	**+0.1**
11nm,1.2s							
NRN	**Naryn**	**53.84**	**314**	*e*P	**P**	**08 28 05.7**	**+1.5**
7.7nm,1.1s							
SEY	**Seymchan**	**55.30**	**14**	P	**P**	**08 28 15.5**	**+1.6**
0.5nm,0.4s,baz=194,slow=7.7,SNR=3.3							
KURK	**Kurchatov**	**55.94**	**325**	*e*P	**P**	**08 28 19.4**	**+0.7**
9.9nm,1.3s							
KURBB	**Kurchatov Arra**	**55.94**	**325**	P	**P**	**08 28 19.4**	**+0.6**
2.5nm,0.9s,baz=120,slow=7.1,SNR=13							
GAR	**Garm**	**57.32**	**310**	*e*P	**P**	**08 28 29.8**	**+0.9**
16nm,1.0s							
KK31	**Karatay Array**	**58.23**	**314**	*e*P	**P**	**08 28 35.4**	**+0.2**
5.5nm,1.0s							
TIXI	**Tiksi**	**60.91**	**1**	P	**P**	**08 28 53.2**	**+0.2**
1.1nm,0.3s,baz=161,slow=3.6,SNR=5.5							
TIXI	**Tiksi**	**60.91**	**1**	*e*P	**P**	**08 28 53.7**	**+0.7**
5.0nm,1.1s							
BVAR	**Borovoye Array**	**61.53**	**325**	P	**P**	**08 28 57.7**	**+0.1**
1.4nm,0.8s,baz=126,slow=12,SNR=6.0							
ABKAR	**Akbulak array**	**66.81**	**319**	*e*P	**P**	**08 29 32.2**	**-0.1**
2.9nm,1.0s							
ARCES	**ARCESS Array B**	**83.92**	**340**	P	**P**	**08 31 10.5**	**+0.3**
7.1nm,0.3s,baz=62,slow=4.6,SNR=6.5							
BR101	**Keskin Array S**	**85.56**	**309**	*e*P	**P**	**08 31 18.7**	**-0.5**
BRTR	**Keskin Array B**	**85.56**	**309**	P	**P**	**08 31 18.7**	**-0.5**
1.0nm,0.9s,baz=130,slow=4.5,SNR=4.5							
FIA0	**FINESS Array S**	**85.69**	**332**	*e*P	**P**	**08 31 18.6**	**-0.6**
FINES	**FINESS Array B**	**85.69**	**332**	P	**P**	**08 31 18.6**	**-0.6**
4.5nm,0.9s,baz=60,slow=4.5,SNR=11							
AKASG	**Malin Array Be**	**86.48**	**321**	P	**P**	**08 31 23.4**	**+0.2**
1.3nm,0.7s,baz=63,slow=4.3,SNR=7.1							
AKBB	**Malin Array Si**	**86.48**	**321**	*e*P	**P**	**08 31 22.6**	**-0.6**
5.4nm,1.3s							
BUR08	**Bucovina Ar. S**	**89.78**	**318**	*e*P	**P**	**08 31 39.6**	**+0.4**
2.6nm,0.9s							
MAW	**Mawson**	**90.25**	**200**	P	**P**	**08 31 40.7**	**+0.1**
2.7nm,1.0s,baz=73,slow=4.8,SNR=3.9							
MAW	**Mawson**	**90.25**	**200**	*e*P	**P**	**08 31 40.8**	**+0.1**
1.1nm,1.2s							
PLCA	**Paso Flores**	**146.45**	**156**	PKPbc	**PKPab**	**08 38 22.6**	**-0.2**
2.3nm,0.8s,baz=235,slow=4.5,SNR=5.8							
PLCA	**Paso Flores**	**146.45**	**156**	*e*PKPdf	**PKPab**	**08 38 22.9**	**+0.1**

MEX 08 08:38:37.7±0.4, 16°.18N×98°.71W, h33km±18km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.60**	**70**	*e*P	Pn	08 38 47.8	-2.1
PNIG				*e*S	Sb	08 38 55.8	-2.4
TLIG	**Tlapa**	**1.38**	**6**	*e*P	Pn	08 38 58.8	-2.0
TLIG				*e*S	Sn	08 39 15.5	-2.4
CAIG	**El Cayaco**	**1.72**	**300**	*e*P	Pn	08 39 03.5	-1.9

*ISCJB **08** 08:40:03.6±0.6, 8°.91S±0°.05×118°.54E±0°.04, h100km, mb4.0/1, Error ellipse: s-maj=6.7km s-min=6.0km az=28.1*
*DJA **08** 08:40:05.3±0.4, 9°.S±4°.×11°.9E±°, h82km±5km, M3.9/10, MLv3.9/10*
*IDC **08** 08:40:05.2±3.2, 9°.04S×118°.56E, h94km±34km, mb3.7/2, mb1 3.6/6, mb1mx3.3/49, mbtmp3.9/6, Error ellipse: s-maj=47.7km s-min=22.5km az=40.0*
ISC 08 08:40:03.6±0.9, 8°.97S±0°.05×118°.52E±0°.05, h100km, n14, σ2°.74/22, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.75**	**281**	P	**Pn**	**08 40 22.3**	**+0.8**
PLAI				S	**Sn**	**08 40 35.6**	**+0.7**
WBSI	**Waikabubak, Su**	**1.09**	**128**	P	**Pn**	**08 40 25.5**	**+0.4**
WSI	**Waingapu**	**1.89**	**112**	P	**Pn**	**08 40 36.5**	**+1.8**
BASI	**Baing, Sumba**	**2.38**	**122**	P	**Pn**	**08 40 43.7**	**+2.6**
EDFI	**Ende, Flores**	**3.14**	**86**	P	**Pn**	**08 40 53.0**	**+1.7**
EDFI				S	**Sn**	**08 41 29.9**	**+1.8**
BSSI	**Bau Bau, Buton**	**3.42**	**35**	P	**Pn**	**08 40 55.4**	**+0.4**
BSSI				S	**Sn**	**08 41 33.6**	**-1.1**
BKSI	**Bulukumba**	**3.96**	**24**	P	**Pn**	**08 41 02.9**	**+0.7**
KAPI	**Kappang**	**4.11**	**17**	P	**Pn**	**08 41 06.2**	**+1.8**
1.4nm,0.3s,baz=199,slow=7.1,SNR=5.2							
KAPI				S	**Sn**	**08 41 49.9**	**-1.5**
4.1nm,0.3s,baz=91,slow=23,SNR=13							
JAGI	**Jajag, Banyuwa**	**4.35**	**276**	P	**Pn**	**08 41 08.4**	**+0.8**
BATI	**Baumata**	**5.22**	**104**	P	**Pn**	**08 41 21.2**	**+1.9**
8.7nm,0.3s,baz=297,slow=4.5,SNR=2.3							
BATI				S	**Sn**	**08 42 18.7**	**+0.4**
8.4nm,0.3s,baz=24,slow=19,SNR=4.3							
FITZ	**Fitzroy Crossi**	**11.41**	**143**	P	**Pn**	**08 42 44.4**	**+0.9**
0.2nm,0.3s,baz=342,slow=13,SNR=2.3							
FITZ				S	**Sn**	**08 44 42.1**	**-6.9**
0.8nm,0.3s,baz=72,slow=20,SNR=7.7							
WRA	**Warramunga Arr**	**18.79**	**127**	P	**P**	**08 44 15.4**	**+0.2**
0.2nm,0.3s,baz=299,slow=11,SNR=6.4							
WRA				S	**S**	**08 47 36.3**	**-7.6**
0.1nm,0.3s,baz=304,slow=21,SNR=3.1							
ASAR	**Alice Springs**	**20.74**	**137**	P	**P**	**08 44 37.9**	**+1.4**
1.1nm,0.3s,baz=315,slow=9.3,SNR=27							
ASAR				S	**S**	**08 48 24.1**	**+1.5**
0.5nm,0.8s,baz=306,slow=22,SNR=2.5							
STKA	**Stephens Creek**	**31.28**	**140**	P	**P**	**08 46 15.9**	**+1.7**
1.9nm,0.5s,baz=328,slow=9.2,SNR=6.0							

JSN 08 08:49:06.0±1.1, 19°.60N×77°.68W, h30km±999km, MD3.6, 4D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBJ	**Bamboo Saint A**	**1.27**	**162**	↓↓*i* P	Pn	08 49 26.9	-0.9
MCJ	**Malvern**	**1.66**	**180**	↓↓*i* P	Pn	08 49 31.9	-1.4
MCJ				*i* S	Sn	08 49 52.2	-1.5
STH	**Stony Hill**	**1.72**	**151**	↓↓*i* P	Pn	08 49 33.3	-0.7
STH				*i* S	Sn	08 49 53.0	-2.1
GWJ	**Greenwich**	**1.76**	**149**	↓↓*i* P	Pn	08 49 34.1	-0.6
PCJ	**Portland Cotta**	**1.91**	**165**	*i* P	Pn	08 49 36.2	-0.4
PCJ				*i* S	Sn	08 49 59.0	-0.6

*ISCJB **08** 08:57:37.6±0.8, 40°.82N±0°.03×25°.55E±0°.05, h3km±6km, Error ellipse: s-maj=6.6km s-min=4.0km az=158.8*
*DDA **08** 08:57:37.5, 40°.83N×25°.63E, h7km±3km, ML2.5*
*SOF **08** 08:57:38.3, 40°.89N×25°.50E, h85km*
*ISK **08** 08:57:38.4, 40°.81N×25°.63E, h5km, ML2.0/6*
ISC 08 08:57:37.8±1.2, 40°.85N±0°.03×25°.55E±0°.04, h11km±10km, n20, σ1°.00/29, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALN	**Alexandroupoli**	**0.38**	**82**	PG	**Pg**	**08 57 45.3**	**-0.1**
ALN				SG	**Sg**	**08 57 50.5**	**+0.1**
GADA	**Gvkgeada**	**0.71**	**158**	PG	**Pg**	**08 57 51.6**	**+0.1**
GADA				SG	**Sg**	**08 58 00.7**	**-0.1**
ERIK	**Erikli-Kesan**	**0.75**	**103**	PG	**Pg**	**08 57 52.2**	**-0.2**
ERIK				SG	**Sb**	**08 58 02.1**	**-1.0**
KDZ	**Kurdzhali**	**0.81**	**353**	PG	**Pn**	**08 57 55.6**	**+0.5**
KDZ				SG	**Sn**	**08 58 07.2**	**+0.1**
KDZ	**Kurdzhali**	**0.81**	**353**	P	**Pn**	**08 57 56.4**	**+1.3**
GELI	**Tayfur-Gelibol**	**0.83**	**122**	PG	**Pg**	**08 57 53.6**	**-0.3**
GELI				SG	**Sb**	**08 58 04.6**	**-0.9**
KESN	**Edirne-Kesan**	**0.86**	**91**	*i* P	**Pb**	**08 57 55.3**	**+0.4**
KESN				*i* S	**Sn**	**08 58 07.8**	**-1.0**
LPK	**Lapseki**	**1.04**	**117**	PG	**Pg**	**08 57 57.4**	**-0.4**
LPK				SG	**Sb**	**08 58 11.1**	**-0.2**
RZN	**Rozhen**	**1.05**	**324**	P	**Pg**	**08 57 57.1**	**-0.9**
BOZC	**Bozcaada**	**1.07**	**159**	PG	**Pg**	**08 57 58.1**	**-0.4**
BOZC	**Bozcaada**	**1.07**	**159**	*i* P	**Pg**	**08 57 58.2**	**-0.2**
BOZC				*i* S	**Sn**	**08 58 13.9**	**+0.3**
BOZC				IAML_P			
comp=Z,619nm,0.1s							
EZN	**Ezine**	**1.18**	**150**	PN	**Pg**	**08 58 00.5**	**0.0**
DIM	**Dimitrovgrad**	**1.20**	**359**	P	**Pn**	**08 57 59.1**	**-1.4**
BAYC	**CANAKKALE_Bayr**	**1.34**	**145**	*i* P	**Pn**	**08 58 02.4**	**0.0**
BAYC				*i* S	**Sg**	**08 58 21.0**	**-0.1**
PLD	**Plovdiv**	**1.41**	**333**	PN	**Pg**	**08 58 06.0**	**+1.2**
PLD	**Plovdiv**	**1.41**	**333**	P	**Pn**	**08 58 04.1**	**+0.8**
KIRK	**Kırklareli**	**1.50**	**51**	*i* P	**Pb**	**08 58 05.2**	**-0.3**
KIRK				*i* S	**Sg**	**08 58 25.9**	**0.0**
KIRK				IAML_P			
comp=Z,86nm,0.2s							
MMB	**Musomiste**	**1.56**	**299**	P	Pn	08 58 00.6	-4.9
JMB	**Yambol**	**1.79**	**25**	P	**Pn**	**08 58 08.1**	**-0.6**
DURS	**Dursunbey**	**2.56**	**118**	*i* S	**Pg**	**08 58 30.7**	**+3.8**

IDC 08 09:00:35.5±2.3, 4°.23S×151°.60E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/23, mbtmp3.6/3, Error ellipse: s-maj=166.7km s-min=27.9km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.95**	**226**	P	P	09 05 40.7	-1.0
0.8nm,0.7s,baz=55,slow=10,SNR=6.5							
ASAR	**Alice Springs**	**25.79**	**220**	P	P	09 06 10.0	+1.5
0.9nm,1.0s,baz=50,slow=8.7,SNR=4.3							
ILAR	**Eielson Array**	**82.09**	**22**	P	P	09 12 58.4	+0.7
0.7nm,0.7s,baz=243,slow=5.6,SNR=6.1							
TORD	**Torodi Ar. Bea**	**148.99**	**289**	PKPbc	PKPbc	09 20 24.8	-1.9
0.4nm,0.6s,baz=83,slow=2.4,SNR=3.6							

*UCR **08** 09:32:35.9±1.1, 13°.74N×91°.33W, h16km±6km, MD3.8, ML3.7*
*SNET **08** 09:32:36.1±1.0, 13°.64N×91°.31W, h17km±6km, ML3.9*
*GCG **08** 09:32:42.4±0.3, 14°.52N×91°.55W, h70km±21km, MD4.0*
ISC 08 09:32:33.8±3.0, 13°.6N±0°.1×91°.44W±0°.09, h15km±13km, n33, σ0°.60/44, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.85**	**351**	*e*P	**Pn**	**09 32 52.6**	**+1.3**
STG3	**Santiaguito 3,**	**1.12**	**353**	*e*P	**Pb**	**09 32 53.6**	**-1.4**
NBG	**Las Nubes**	**1.45**	**47**	*e*P	**Pg**	**09 33 01.8**	**+0.1**
NBG				*e*S	**Sg**	**09 33

ellipse: s-maj=5.4km s-min=3.7km az=9.0

ISC 08 09:38:05.2±1.0, 38°.39N±0°.03×45°.51E±0°.02, h18km±4km, n41, σ1§18/61, 1C-1D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.14**	**141**	IAMB	IAmb	09 38 13.6	
	comp=Z,17μm,0.3s						
ISHB				*e*Pg	**Pg**	**09 38 09.9**	**+0.4**
IMRD	**Marand**	**0.36**	**25**	*e*Pg	**Pb**	**09 38 13.4**	**+0.2**
IMRD				*e*Sg	**Sb**	**09 38 19.4**	**+0.8**
IMRD				IAMB	IAmb	09 38 20.7	
	comp=Z,11μm,0.2s						
ITBZ	**Tabriz**	**0.53**	**107**	*e*Pg	**Pn**	**09 38 17.3**	**-0.7**
ITBZ				IAMB	IAmb	09 38 17.7	
	comp=Z,25μm,0.1s						
ORD	**Ordubad**	**0.66**	**35**	P	**Pn**	**09 38 19.3**	**-0.5**
	SNR=786						
ORD				S	**Sn**	**09 38 29.5**	**-0.2**
NAX	**Nakhchivan**	**0.79**	**359**	P	**Pb**	**09 38 20.6**	**+0.2**
	SNR=68						
NAX				S	**Sg**	**09 38 31.7**	**+0.7**
IAZR	**Azarshahr**	**0.80**	**152**	*e*Pg	**Pn**	**09 38 21.3**	**-0.6**
IAZR				IAMB	IAmb	09 38 36.4	
	comp=Z,31μm,0.2s						
SBZ	**Shahbuz**	**1.01**	**2**	P	**Pb**	**09 38 24.6**	**+0.3**
	SNR=73						
SBZ				S	**Sn**	**09 38 38.8**	**+0.4**
MAKU	**Maku**	**1.16**	**327**	*e*Pg	**Pn**	**09 38 25.0**	**-1.8**
IHRS	**Heris**	**1.21**	**93**	*e*Pg	**Pg**	**09 38 29.8**	**+1.2**
IHRS				IAMB	IAmb	09 38 30.9	
	comp=Z,19μm,0.2s						
BASK	**Baskale_VAN**	**1.23**	**255**	*i* P	**Pn**	**09 38 26.8**	**-1.0**
BASK				*i* S	**Sn**	**09 38 44.6**	**+0.6**
HYR	**Heyderabad**	**1.42**	**339**	P	**Pb**	**09 38 32.0**	**+0.7**
HYR				S	**Sg**	**09 38 51.1**	**-0.2**
CLDR	**Caldiran**	**1.46**	**302**	*i* P	**Pn**	**09 38 31.5**	**+0.7**
CLDR				*i* S	**Sb**	**09 38 51.1**	**+0.9**
CLDR				IAML_P			
	comp=Z,2μm,0.2s						
MAHB	**Mahabad**	**1.63**	**174**	*e*Pn	**Pb**	**09 38 35.0**	**+0.2**
MAHB				IAMB	IAmb	09 38 38.0	
	comp=Z,0.0nm,0.2s						
VMUR	**Van-Muradiye**	**1.63**	**292**	*i* P	**Pb**	**09 38 36.0**	**+1.1**
VMUR				*i* S	**Sg**	**09 38 57.7**	**-0.3**
HAKT	**HAKKARI**	**1.65**	**240**	*i* P	**Pb**	**09 38 35.8**	**+0.6**
HAKT				IAML_P			
	comp=Z,770nm,0.3s						
TVAN	**Van**	**1.66**	**276**	*i* P	**Pn**	**09 38 33.8**	**+0.2**
ISRB	**Sarab**	**1.79**	**108**	*e*Pn	**Pg**	**09 38 40.4**	**+0.7**
ISRB				IAMB	IAmb	09 39 10.4	
	comp=N,4μm,0.3s						
IGDI	**IGDIR**	**1.85**	**323**	*i* P	**Pb**	**09 38 39.1**	**+0.5**
GNI	**Garni**	**1.86**	**342**	⇓*i* P	**Pb**	**09 38 38.4**	**-0.3**
GNI				⇑*i* S	**Sb**	**09 39 02.9**	**+1.2**
GRMI	**Germi**	**1.92**	**77**	*e*Pn	**Pg**	**09 38 41.4**	**-0.6**
GEVA	**Gevas**	**1.93**	**269**	*i* P	**Pn**	**09 38 35.1**	**-2.2**
GEVA				*i* S	**Sg**	**09 39 07.9**	**+0.5**
KAPZ	**Kaputan**	**2.03**	**342**	*i* P	**Pb**	**09 38 41.8**	**+0.1**
KAPZ				*i* S	**Sg**	**09 39 10.7**	**0.0**
ADCV	**BITLIS_Adilcev**	**2.22**	**282**	*i* P	**Pb**	**09 38 44.5**	**-0.5**
LRK	**Lerik**	**2.23**	**83**	P	**Pg**	**09 38 47.8**	**-0.3**
	SNR=6.5						
LRK				S	**Sg**	**09 39 20.2**	**+3.0**
BRDA	**Brd**	**2.28**	**34**	S	**Sg**	**09 39 20.9**	**+2.4**
TUTA	**Tutak**	**2.33**	**297**	*i* P	**Pb**	**09 38 47.4**	**+0.4**
TUTA				*i* S	**Sg**	**09 39 19.1**	**-1.3**
GDB	**GEDABAY**	**2.34**	**5**	P	**Pb**	**09 38 47.0**	**+0.1**
	SNR=11						
GDB				S	**Sb**	**09 39 18.0**	**+2.5**
GANJ	**Ganja**	**2.34**	**15**	P	**Pb**	**09 38 48.5**	**+1.6**
	SNR=7.8						
GANJ				S	**Sg**	**09 39 19.6**	**-1.0**
GLBA	**Cililabad**	**2.41**	**68**	P	**Pg**	**09 38 50.7**	**-0.8**
	SNR=4.1						
GLBA				S	**Sg**	**09 39 23.5**	**+0.8**
ASTR	**Astara**	**2.58**	**85**	P	**Pg**	**09 38 52.8**	**-1.9**
	SNR=4.9						
ASTR				S	**Sg**	**09 39 30.0**	**+1.8**
LKRN	**Lenkeran, Azer**	**2.58**	**82**	P	**Pg**	**09 38 52.9**	**-1.9**
LKRN				S	**Sg**	**09 39 27.8**	**-0.5**
QZX	**Qazax, Azerbai**	**2.67**	**358**	P	**Pb**	**09 38 52.7**	**+0.2**
	SNR=7.8						
QZX				S	**Sb**	**09 39 23.3**	**-1.6**
EAK	**Akyaka**	**2.73**	**328**	*i* P	**Pb**	**09 38 53.8**	**+0.2**
EATA	**Eleskirt**	**2.77**	**303**	*i* P	**Pb**	**09 38 55.7**	**+1.3**
ZNJK	**Zanjan**	**3.05**	**123**	*e*Pn	**Pn**	**09 38 52.1**	**-0.7**
DDFL	**Dedoflistskaro**	**3.09**	**9**	P	**Pb**	**09 39 00.3**	**+0.7**
SEKA	**Sheki**	**3.10**	**24**	P	**Pb**	**09 38 59.4**	**-0.6**
KZRT	**Kazreti**	**3.11**	**344**	P	**Pb**	**09 39 01.9**	**+1.8**
XNQ	**Khinaliq**	**3.44**	**35**	P	**Pb**	**09 39 03.2**	**-2.6**
XNQ				S	**Sb**	**09 39 48.1**	**+0.8**
LGD	**Lagodekhi**	**3.49**	**9**	P	**Pg**	**09 39 12.1**	**0.0**
SNGE	**Sanandaj**	**3.60**	**155**	*e*Pn	**Pn**	**09 38 58.2**	**-2.2**

*ISCJB **08** 09:49:25.0±0.8, 18°.84N±0°.08×145°.4E±0°.3, h214km, mb3.4/7, Error ellipse: s-maj=35.3km s-min=11.0km az=2.2*

*IDC **08** 09:49:27.3±3.1, 18°.89N×145°.50E, h223km±31km, mb3.2/7, mb1 3.5/8, mb1mx3.2/48, mbtmp3.8/8, Error ellipse: s-maj=30.8km s-min=18.1km az=95.0*

ISC 08 09:49:26.4±0.9, 18°.82N±0°.09×145°.4E±0°.3, h214km, n8, σ1§84/9, mb3.5/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.23**	**186**	P	**Pn**	**09 50 46.2**	**+2.1**
	2.1nm,0.3s,baz=272,slow=18,SNR=2.6						
GUMO				S	**S**	**09 51 42.2**	**-3.3**
	5.4nm,0.3s,baz=25,slow=19,SNR=2.9						
WRA	**Warramunga Arr**	**40.03**	**196**	P	**P**	**09 56 41.5**	**+0.7**
	0.9nm,0.3s,baz=13,slow=7.8,SNR=32						
ASAR	**Alice Springs**	**43.70**	**195**	P	**P**	**09 57 11.1**	**+0.5**
	0.4nm,0.6s,baz=7.5,slow=7.3,SNR=6.3						
ZALV	**Zalesovo Beam**	**57.76**	**322**	P	**P**	**09 58 55.3**	**+0.4**
	0.6nm,0.4s,baz=113,slow=8.3,SNR=3.0						
MKAR	**Makanchi Array**	**58.19**	**314**	P	**P**	**09 58 58.5**	**+0.5**
	0.4nm,0.5s,baz=89,slow=8.5,SNR=4.7						
ILAR	**Eielson Array**	**63.65**	**26**	P	**P**	**09 59 33.2**	**-1.3**
	0.3nm,0.6s,baz=254,slow=5.5,SNR=3.5						
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**10 01 30.5**	**+1.0**
	0.7nm,0.7s,baz=268,slow=6.1,SNR=6.7						
FINES	**FINESS Array B**	**86.66**	**335**	P	**P**	**10 01 44.2**	**-1.4**
	0.6nm,0.3s,baz=61,slow=4.9,SNR=14						

*JMA **08** 10:01:22.0±0.6, 46°.30N×152°.67E, h30km, M4.2*

*SKHL **08** 10:01:22.4±0.8, 45°.96N×152°.79E, h47km±3km, mb4.6/3*

*MOS **08** 10:01:24.4±1.1, 46°.37N×152°.37E, h50km, mb4.3/1, Error ellipse: s-maj=20.1km s-min=11.0km az=54.4*

*IDC **08** 10:01:27.1±3.3, 46°.34N×152°.44E, h57km±28km, mb3.3/11, mb1 3.5/13, mb1mx3.3/55, mbtmp3.6/13, ML3.1/2, MS2.8/4, Ms1 2.8/4, ms1mx2.5/23, Error ellipse: s-maj=31.9km s-min=18.9km az=143.0*

ISC 08 10:01:22.7±0.9, 45°.9N±0°.1×152°.7E±0°.1, h35km, n46, σ2§26/52, mb3.5/10, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.49**	**260**	⇑*i* PN	**Pn**	**10 02 15.9**	**+1.5**
KUR				*i* S	**Sn**	**10 02 55.5**	**+1.0**
KUR				pmax	pmax		
	comp=E,28nm,0.3s						
KUR				pmax	pmax		
	comp=Z,65nm,0.3s						
KUR				pmax	pmax		
	comp=N,23nm,0.1s						
KUR				smax	smax		
	comp=N,134nm,0.3s						
KUR				smax	smax		
	comp=E,199nm,0.5s						
KUR	**Kuril'sk**	**3.49**	**260**	*i* P	**Pn**	**10 02 15.0**	**+0.6**
KUR				AMB	AMB	10 02 20.0	
	comp=E,23nm,0.3s						
KUR				AMB	AMB	10 02 20.0	
	comp=E,59nm,0.3s						
KUR				*i* S	**Sn**	**10 02 55.0**	**+0.5**
KUR				A	A	10 03 05.0	
	comp=E,124nm,0.4s						
KUR				A	A	10 03 05.0	
	comp=E,191nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.23**	**251**	*e*PN	**Pn**	**10 02 40.5**	**+2.2**
YUK				*i* S	**Sn**	**10 03 39.3**	**+1.9**
YUK				pmax	pmax		
	comp=Z,76nm,0.4s						
YUK				pmax	pmax		
	comp=E,23nm,0.1s						
YUK				pmax	pmax		
	comp=N,19nm,0.2s						
YUK				smax	smax		
	comp=N,92nm,0.6s						
YUK				smax	smax		
	comp=E,33nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.23**	**251**	*e*P	**Pn**	**10 02 40.2**	**+1.9**
YUK				AMB	AMB	10 02 43.0	
	comp=E,19nm,0.5s						
YUK				AMB	AMB	10 02 43.0	
	comp=E,23nm,0.5s						
YUK				AMB	AMB	10 02 43.0	
	comp=E,38nm,0.5s						
YUK				*i* S	**Sn**	**10 03 38.0**	**+0.6**
YUK				A	A	10 03 46.0	
	comp=E,40nm,0.5s						
YUK				A	A	10 03 46.0	
	comp=E,33nm,0.5s						
LAGR	**Lagunnoye**	**5.27**	**252**	*e*S	**Sn**	**10 03 39.0**	**+0.6**
SKR	**Severo-Kuril's**	**5.28**	**24**	*e*PN	**Pn**	**10 02 38.8**	**-0.1**
SKR				*e*S	**Sn**	**10 03 34.8**	**-3.6**
SKR				smax	smax		
	comp=N,45nm,0.4s						
SKR				smax	smax		
	comp=E,56nm,0.4s						
SKR	**Severo-Kuril's**	**5.28**	**24**	*e*P	**Pn**	**10 02 38.0**	**-0.9**
SKR				*e*S	**Sn**	**10 03 35.2**	**-3.2**
SKR				A	A	10 03 39.0	
	comp=E,125nm,0.4s						
SKR				A	A	10 03 39.0	
	comp=E,56nm,0.4s						
GRPR	**Tuman**	**5.31**	**251**	*e*PN	**Pn**	**10 02 41.5**	**+2.1**
GRPR				*e*S	**Sn**	**10 03 41.1**	**+1.8**
GRPR				pmax	pmax		
	comp=Z,68nm,0.6s						
GRPR				smax	smax		
	comp=N,127nm,0.4s						
GRPR				smax	smax		
	comp=E,106nm,0.4s						
GRPR	**Tuman**	**5.31**	**251**	*e*P	**Pn**	**10 02 41.0**	**+1.6**
GRPR				AMB	AMB	10 02 45.0	
	comp=E,68nm,0.6s						
GRPR				*e*S	**Sn**	**10 03 39.5**	**+0.2**
GRPR				A	A	10 03 46.0	
	comp=E,127nm,0.6s						
GRPR				A	A	10 03 46.0	
	comp=E,106nm,0.6s						
GLVR	**Golovnino**	**5.58**	**250**	*e*S	**Sn**	**10 03 46.6**	**+0.7**
NEM2	**Nemuro 2**	**5.61**	**245**	P	**Pn**	**10 02 44.1**	**+0.6**
NEM2				*e*S	**Sn**	**10 03 44.9**	**-1.7**
JRA	**Rausu**	**5.76**	**253**	P	**Pn**	**10 02 48.9**	**+3.3**
JNK	**Nakash**	**6.17**	**251**	P	**Pn**	**10 02 53.6**	**+2.4**
JNK				*e*S	**Sn**	**10 04 00.6**	**+0.1**
JAK	**Akkeshi**	**6.45**	**246**	P	**Pn**	**10 02 55.7**	**+0.6**
JAK				*e*S	**Sn**	**10 04 05.1**	**-2.4**
JTKR	**Abashiri--Toko**	**6.56**	**256**	P	**Pn**	**10 02 59.4**	**+2.8**
JAR	**Ashorobuto**	**6.92**	**251**	P	**Pn**	**10 03 04.2**	**+2.7**
JOB	**Onbets**	**7.05**	**248**	P	**Pn**	**10 03 04.4**	**+1.0**
JOB				*e*S	**Sn**	**10 04 21.3**	**-0.9**
JKK2	**Kamakawa 2**	**7.38**	**258**	P	**Pn**	**10 03 11.6**	**+3.7**
JKA	**Kamikawa-asahi**	**7.41**	**260**	*e*P	**Pn**	**10 03 11.6**	**+3.3**
ASAJ	**Asahikawa**	**7.41**	**260**	P	**Pn**	**10 03 11.6**	**+3.3**
	comp=E,0.9nm,0.3s,baz=79,slow=22,SNR=4.7						
ASAJ				LR	LR	10 05 53.6	
	comp=E,45nm,20.1s,baz=132,slow=36						
JCH	**Churui**	**7.50**	**247**	P	**Pn**	**10 03 10.7**	**+1.2**
JCH				*e*S	**Sn**	**10 04 30.8**	**-2.4**
PETK	**Petropavlovsk-**	**7.89**	**22**	P	**Pn**	**10 03 14.2**	**-0.6**
	comp=E,0.2nm,0.3s,baz=195,slow=10,SNR=4.2						
JNBK	**Urakawa-nobuka**	**8.05**	**247**	P	**Pn**	**10 03 17.7**	**+0.6**
JNBK				*e*S	**Sn**	**10 04 44.2**	**-2.7**
JKB	**Kayabe**	**9.36**	**249**	P	**Pn**	**10 03 35.5**	**+0.5**
JKB				*e*S	**Sn**	**10 05 13.9**	**-5.0**
JANG	**Nango**	**9.89**	**240**	P	**Pn**	**10 03 40.8**	**-1.5**
JANG				*e*S	**Sn**	**10 05 25.0**	**-7.1**
KLR	**Kul'dur**	**14.54**	**291**	LR	LR	10 09 41.9	
	comp=E,27nm,19.8s,baz=107,slow=35						
KSRS	**Korea Array**	**20.31**	**254**	P	Pn	10 05 58.4	+0.8
	comp=E,0.4nm,0.5s,baz=56,slow=12,SNR=2.5						
JNU	**Nakatsue**	**21.08**	**240**	LR	LR	10 14 03.7	
	comp=E,26nm,18.0s,baz=130,slow=36						
TIXI	**Tiksi**	**28.20**	**344**	LR	LR	10 18 03.5	
	comp=E,42nm,18.7s,baz=207,slow=36						
H11N2	**WAKE ISLAND Hy**	**28.60**	**151**	T	T	10 37 42.7	
	baz=339,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.62**	**151**	T	T	10 37 45.5	
	baz=339,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.62**	**151**	T	T	10 37 49.0	
	baz=339						
H11S1	**WAKE ISLAND Hy**	**29.68**	**152**	T	T	10 39 16.5	
	baz=339,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.69**	**152**	T	T	10 39 20.3	
	baz=339						
H11S2	**WAKE ISLAND Hy**	**29.70**	**152**	T	T	10 39 17.7	
	baz=339,slow=76						
ILAR	**Eielson Array**	**37.36**	**38**	P	**P**	**10 08 31.6**	**+0.1**
	comp=E,0.3nm,0.8s,baz=257,slow=8.2,SNR=4.6						
INK	**Inuvik**	**42.49**	**32**	P	**P**	**10 09 14.6**	**+0.7**
	comp=E,0.5nm,0.8s,baz=283,slow=8.2,SNR=3.2						
MKAR	**Makanchi Array**	**47.10**	**298**	P	**P**	**10 09 48.9**	**-2.1**
	comp=E,0.4nm,0.7s,baz=54,slow=7.8,SNR=3.3						
NOA	**NORSAR Array B**	**68.93**	**341**	P	**P**	**10 12 22.4**	**-1.3**
	comp=E,0.7nm,0.7s,baz=29,slow=6.5,SNR=3.6						
HFS	**Hagfors**	**69.15**	**339**	P	**P**	**10 12 22.9**	**-2.1**
	comp=E,1.3nm,0.8s,baz=52,slow=8.0,SNR=5.1						
KBZ	**Khabaz**	**71.25**	**314**	P	**P**	**10 12 38.3**	**+0.2**
	comp=E,1.7nm,0.8s,baz=58,slow=3.4,SNR=3.5						
ASAR	**Alice Springs**	**71.33**	**198**	P	**P**	**10 12 42.0**	**+3.3**
	comp=E,0.4nm,0.9s,baz=19,slow=5.9,SNR=3.7						
EKA	**Eskdalemuir Ar**	**77.09**	**346**	P	**P**	**10 13 12.0**	**+0.1**
	comp=E,0.1nm,0.3s,baz=23,slow=3.8,SNR=2.9						
EKA	**Eskdalemuir Ar**	**77.09**	**346**	P	**P**	**10 13 12.0**	**+0.1**
TXAR	**Lajitas Array**	**78.13**	**60**	P	**P**	**10 13 20.3**	**+2.0**
	comp=E,0.1nm,0.4s,baz=296,slow=5.1,SNR=4.4						
BRTR	**Keskin Array B**	**78.82**	**317**	P	**P**	**10 13 21.4**	**-0.6**
	comp=E,0.3nm,0.4s,baz=28,slow=3.4,SNR=4.0						

MAN 08 10:01:30.9, 6°.78N×126°.19E, h34km, mb4.7, ML3.6, MS3.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.18**	**22**	*e*P	Pb	10 01 38.8	+1.3
MATI				*e*S	Sb	10 01 43.9	+2.0
DMPH	**Davao City--Mi**	**0.74**	**294**	⇑*i*P	Pb	10 01 45.8	+0.3
DMPH				*e*S	Sb	10 01 56.3	+0.9
DDMP	**Don Marcelino,**	**0.82**	**215**	*e*P	Pb	10 01 47.0	+0.2
DDMP				*e*S	Sn	10 01 57.2	+0.2
BUKP	**Musuan**	**1.56**	**315**	*e*P	Pn	10 01 56.0	-0.4
BUKP				*e*S	Sn	10 02 16.1	+0.6

WEL 08 10:08:13.3±0.9, 31°S±19°×18°0W±4°7, h318km±27km, M4.0/7, mB4.4/7, MLv4.4/6, Mw(mB)3.5/7, Error ellipse: s-maj=0.1km s-min=0.0km az=111.2, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.84**	**40**	P	Pn	10 09 07.9	-0.9
MXZ	**Matakaoa Point**	**6.23**	**193**	P	Pn	10 09 47.3	+1.6
HAZ	**Te Kaha**	**6.53**	**196**	P	Pn	10 09 50.1	+0.8
HAZ				S	S	10 11 09.5	+2.7
RUGZ	**Raukumara Rang**	**6.75**	**196**	P	Pn	10 09 53.1	+1.0
MWZ	**Matawai**	**7.14**	**196**	P	Pn	10 09 56.8	+0.2
MWZ				S	S	10 11 20.9	+0.5
TKGZ	**Te Karaka**	**7.17**	**194**	P	Pn	10 09 57.5	+0.6
URZ	**Urewera**	**7.17**	**199**	P	Pn	10 09 56.2	-0.8
URZ				S	S	10 11 21.8	+0.8
MUGZ	**Murupara**	**7.47**	**200**	P	Pn	10 09 59.7	-0.8
RTZ	**Ruatahuna**	**7.54**	**198**	P	Pn	10 10 01.9	+0.4
SNGZ	**Shannon Statio**	**7.61**	**196**	P	Pn	10 10 02.0	-0.3
KNZ	**Kokohu**	**7.77**	**194**	P	Pn	10 10 04.1	0.0
KNZ				S	S	10 11 34.7	+0.6
RAHZ	**Arahi**	**7.80**	**197**	P	Pn	10 10 04.8	+0.2
RAHZ				S	S	10 11 34.6	-0.3
MTHZ	**Maungataniwha**	**7.80**	**199**	P	Pn	10 10 04.8	+0.2
MTHZ				S	S	10 11 34.7	-0.3
WHHZ	**Waihua**	**7.92**	**196**	P	Pn	10 10 06.9	+1.0
NMHZ	**Naumai**	**8.04**	**198**	P	Pn	10 10 07.2	-0.3
NMHZ				S	S	10 11 40.0	-0.3
ARHZ	**Aropaoanui**	**8.15**	**197**	P	Pn	10 10 08.6	-0.1
ARHZ				S	S	10 11 42.5	-0.1
BKZ	**Black Stump Fm**	**8.19**	**200**	P	Pn	10 10 07.8	-1.5
BKZ				S	S	10 11 43.0	-0.7
HIZ	**Hauiti**	**8.19**	**210**	P	Pn	10 10 10.6	+1.3
MCHZ	**McNeill Hill**	**8.40**	**198**	P	Pn	10 10 11.7	-0.1
MCHZ				S	S	10 11 42.4	-5.7
KWHZ	**Kaweka Forest**	**8.45**	**199**	P	Pn	10 10 11.2	-1.2
KWHZ				S	S	10 11 48.3	-1.2
BHHZ	**Black Hill Sta**	**8.62**	**201**	P	Pn	10 10 11.7	-2.8
BHHZ				S	S	10 11 50.7	-2.5
KRHZ	**Kereru**	**8.67**	**199**	P	Pn	10 10 13.3	-1.8
KRHZ				S	S	10 11 51.9	-2.4
KAHZ	**Kahuranaki**	**8.68**	**196**	P	Pn	10 10 13.9	-1.4
PXZ	**Pawanui**	**8.91**	**196**	P	Pn	10 10 16.8	-1.2
PNHZ	**Pukenui**	**8.97**	**199**	P	Pn	10 10 15.9	-2.9
PNHZ				S	S	10 11 57.8	-3.2
BFZ	**Birch Farm**	**9.68**	**197**	P	Pn	10 10 25.5	-1.8
BFZ				S	S	10 12 13.6	-3.2

IDC 08 10:13:22.4±3.3, 7°.42S×151°.11E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.4/31, mbtmp3.5/3, ML1.4/1, Error ellipse: s-maj=120.7km s-min=46.0km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.38**	**243**	Pn	Pn	10 14 29.5	-0.7
	1.5nm,0.3s,baz=56,slow=9.4,SNR=4.4						
PMG				Sn	Sn	10 15 13.8	-8.1
	9.8nm,0.3s,baz=177,slow=22,SNR=10						
WRA	**Warramunga Arr**	**20.48**	**231**	P	P	10 18 00.8	-1.3
	1.6nm,0.6s,baz=57,slow=10.0,SNR=8.6						
ASAR	**Alice Springs**	**23.10**	**224**	P	P	10 18 31.0	+0.9
	0.7nm,1.1s,baz=56,slow=8.8,SNR=6.1						
TORD	**Torodi Ar. Bea**	**149.39**	**283**	PKPbc	PKPbc	10 33 14.3	-0.2
	0.5nm,0.8s,baz=73,slow=2.6,SNR=4.6						

MEX 08 10:18:36.7±0.6, 14°.97N×92°.70W, h88km±8km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.42**	**98**	*e*P	Pn	10 18 49.3	-1.4
THIG				*e*S	Sn	10 18 59.5	-1.6
PCIG		**0.89**	**326**	*e*P	Pn	10 18 54.0	-1.0
PCIG				*e*S	Sn	10 19 06.5	-2.1
CCIG	**Comitan**	**1.42**	**22**	*e*P	Pn	10 19 00.6	-0.9
CCIG				*i* S	Sn	10 19 18.9	-1.2

JMA 08 11:13:37.8±0.1, 35°.87N×140°.48E, h37km±1km, M3.2, 1C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIHU	**Itakohorinouch**	**0.10**	**21**	P	Pn	11 13 44.6	-6.8
JIHU				S	Sn	11 13 49.6	-15
JSMT	**Sammumatsuo**	**0.23**	**186**	P	Pn	11 13 45.4	-1.1
JSMT				S	Sn	11 13 51.2	-3.6
CHOJ	**Chosi**	**0.35**	**118**	⇑P	Pn	11 13 46.2	0.0
CHOJ				S	Sn	11 13 51.9	-1.1
JYT	**Yasato**	**0.43**	**327**	⇓P	Pn	11 13 47.6	+0.4
JYT				S	Sn	11 13 54.1	0.0
JHO	**Hitachi**	**0.74**	**6**	⇓P	Pn	11 13 51.6	-0.2
JHO				S	Sn	11 14 01.3	-0.5
MAT	**Matsushiro**	**1.96**	**291**	P	Pn	11 14 10.1	+1.7
MAT				*e*S	Sn	11 14 32.8	+1.0

*IDC **08** 11:32:10.6±0.5, 10°.66N×126°.81E, h0km, mb4.3/21, mb1 4.4/22, mb1mx4.2/62, mbtmp4.3/22, ML3.6/1, MS3.0/8, Ms1 3.1/8, ms1mx2.8/45, Error ellipse: s-maj=27.7km s-min=11.5km az=76.0*

*ISCJB **08** 11:32:11.6±0.3, 10°.72N±0°.03×126°.89E±0°.04, h20km, mb4.4/47, MS3.0/4, Error ellipse: s-maj=5.5km s-min=4.2km az=141.7*

*MAN **08** 11:32:11.9, 10°.86N×126°.99E, h62km, mb4.9, ML3.8, MS3.8*

*NEIC **08** 11:32:15.0±0.9, 10°.68N×126°.79E, h30km±5km, mb4.5/32, Error ellipse: s-maj=22.1km s-min=13.7km az=73.0*

ISC 08 11:32:13.6±0.4, 10°.75N±0°.04×126°.82E±0°.06, h20km, n79, σ1§12/83, mb4.5/47, MS3.0/4, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.60**	**302**	*e*P	**Pn**	**11 32 40.4**	**-0.4**
BESP				*e*S	**Sn**	**11 33 01.4**	**+0.5**
SCPH	**Surigao**	**1.63**	**234**	⇓*i*P	Pb	11 32 49.2	+6.3
SCPH				*i* S	**Sb**	**11 33 08.5**	**+5.4**
PLP	**Palo**	**1.86**	**283**	⇓*e*P	**Pn**	**11 32 43.8**	**-0.6**
PLP				*i* S	**Sn**	**11 33 05.8**	**-1.5**
MSLP	**Maasin**	**2.03**	**253**	*e*P	**Pn**	**11 32 47.1**	**+0.5**
MSLP				*e*S	**Sb**	**11 33 13.1**	**-1.5**
BUTP	**Butuan**	**2.13**	**214**	*e*P	**Pn**	**11 32 48.0**	**0.0**
BUTP				*e*S	**Sn**	**11 33 09.8**	**-4.1**
OCLP	**Ormoc**	**2.20**	**278**	*e*P	**Pn**	**11 32 49.7**	**+0.8**
OCLP				*e*S	**Sb**	**11 33 18.5**	**-0.9**
CNP	**Cataman**	**2.75**	**310**	*e*P	**Pn**	**11 32 56.3**	**-0.2**
CNP				*e*S	**Sn**	**11 33 28.3**	**-0.8**
BUKP	**Musuan**	**3.34**	**212**	*e*P	**Pn**	**11 33 06.7**	**+1.9**
PVCP	**Virac**	**3.85**	**318**	*e*P	**Pn**	**11 33 10.0**	**-1.7**
DAV	**Davao City (W)**	**3.86**	**199**	LR	LR	11 34 45.9	
	comp=Z,310nm,20.3s,baz=32,slow

STKA	Stephens Creek	44.68	162	P		P	11 40 24.9	-0.4
	2.6nm,0.6s,baz=338,slow=8.1,SNR=10							
STKA	Stephens Creek	44.68	162	eP		P	11 40 25.0	-0.2
	1.9nm,1.3s							
PETK	Petropavlovsk-	48.98	24	P		P	11 40 59.7	+1.1
	2.6nm,0.9s,baz=220,slow=3.8,SNR=3.5							
PEA1	Petropavlovsk-	48.98	24	eP		P	11 40 59.7	+1.1
CAN	Canberra	50.39	156	eP		P	11 41 09.9	+0.2
	13nm,1.2s							
TOO	Toolangi	51.16	161	eP		P	11 41 15.2	-0.2
	14nm,1.4s							
MA2	Magadan	51.93	15	LR		LR	12 03 44.7	
	comp=Z,24nm,18.7s,baz=93,slow=36							
MK31	Makanchi Array	51.98	322	eP		P	11 41 21.6	+0.1
	4.3nm,0.8s							
MK32	Makanchi Array	51.98	322	eP		P	11 41 23.1	+1.7
MKAR	Makanchi Array	51.98	322	P		P	11 41 23.1	+1.7
	5.1nm,0.8s,baz=119,slow=8.2,SNR=39							
MKAR				LR		LR	12 06 27.4	
	comp=Z,24nm,19.7s,baz=60,slow=40							
MAKZ	Makanchi	52.18	322	eP		P	11 41 23.6	+0.6
	4.9nm,0.6s							
NIL	Nilore	53.92	304	eP		P	11 41 35.4	-0.6
	8.4nm,0.8s							
NRN	Naryn	53.92	314	eP		P	11 41 35.8	-0.5
	4.9nm,1.0s							
ZAA0	Zalesovo Array	54.47	331	eP		P	11 41 40.0	+0.3
	2.5nm,0.9s							
ZALV	Zalesovo Beam	54.47	331	P		P	11 41 40.1	+0.5
	1.7nm,0.6s,baz=128,slow=7.4,SNR=5.8							
AAK	Ala-Archa	55.38	315	P		P	11 41 48.0	+1.4
	1.3nm,0.2s,baz=126,slow=6.6,SNR=5.2							
AAK	Ala-Archa	55.38	315	eP		P	11 41 46.5	-0.1
	4.9nm,1.0s							
KURK	Kurchatov	55.99	325	eP		P	11 41 51.1	+0.5
	10nm,1.1s							
BTK	Batken	57.28	311	eP		P	11 42 00.2	0.0
	3.7nm,0.6s							
KKAR	Karatay Array	58.31	314	eP		P	11 42 07.3	0.0
	4.3nm,0.9s							
TIXI	Tiksi	60.87	1	eP		P	11 42 24.5	+0.2
	1.5nm,0.7s							
BRVK	Borovoye	61.66	325	eP		P	11 42 30.4	+0.4
	3.9nm,0.7s							
GEYT	Alibeck	66.70	307	P		P	11 43 03.9	+0.5
	1.1nm,0.3s,baz=138,slow=8.8,SNR=3.0							
ABKAR	Akbulak array	66.87	319	eP		P	11 43 04.5	+0.2
	3.3nm,0.8s							
BKZ	Black Stump Fm	67.80	140	eP		P	11 43 10.2	-0.1
	38nm,1.5s							
ARU	Arti	69.13	326	eP		P	11 43 18.2	-0.1
	3.6nm,0.8s							
ARCES	ARCESS Array B	83.94	340	P		P	11 44 43.2	+1.2
	3.5nm,0.8s,baz=69,slow=7.9,SNR=8.3							
ARE0	ARCESS Array S	83.94	340	eP		P	11 44 42.9	+1.0
	1.0nm,1.4s							
BR131	Keskin Array S	85.65	309	eP		P	11 44 51.2	-0.1
	2.1nm,0.8s							
BRTR	Keskin Array B	85.65	309	P		P	11 44 51.6	+0.2
	1.7nm,0.7s,baz=96,slow=4.3,SNR=7.4							
FIA1	FINESS Array S	85.73	332	eP		P	11 44 51.5	+0.4
	4.9nm,1.1s							
FINES	FINESS Array B	85.73	332	P		P	11 44 51.4	+0.3
	1.6nm,0.4s,baz=86,slow=5.6,SNR=22							
AKASG	Malin Array Be	86.54	321	P		P	11 44 55.7	+0.4
	0.6nm,0.4s,baz=62,slow=4.5,SNR=5.0							
KIEV	Kiev	86.55	321	eP		P	11 44 55.0	-0.3
	4.6nm,1.1s							
BUR08	Bucovina Ar. S	89.85	319	eP		P	11 45 11.6	+0.3
	2.6nm,0.9s							
MAW	Mawson	90.33	200	P		P	11 45 12.4	-0.4
	4.0nm,1.0s,baz=64,slow=11,SNR=5.5							
VNDA	Vanda	90.33	173	P		P	11 45 11.9	-0.8
	1.2nm,0.9s,baz=298,slow=3.3,SNR=5.2							
VNDA	Vanda	90.33	173	eP		P	11 45 12.3	-0.4
HFS	Hagfors	91.88	333	P		P	11 45 19.7	-0.6
	1.3nm,0.6s,baz=90,slow=3.0,SNR=8.9							
NB2	NORSAR Subarra	92.57	334	P		P	11 45 22.8	-0.8
	comp=Z,0.4nm,0.7s,baz=65,slow=4.8							
NB200	NORSAR Array S	92.57	334	eP		P	11 45 22.9	-0.6
NOA	NORSAR Array B	92.57	334	P		P	11 45 22.9	-0.6
	comp=Z,0.7nm,0.7s,baz=65,slow=4.7,SNR=4.2							
TOA1	Torodi Ar. Sit	120.59	292	ePKPdf		PKPdf	11 51 04.8	-0.2
TORD	Torodi Ar. Bea	120.59	292	PKP		PKPdf	11 51 04.8	-0.2
	comp=Z,0.7nm,0.8s,baz=22,slow=1.6,SNR=3.3							
PLCA	Paso Flores	146.42	156	PKPbc		PKPbc	11 51 54.6	+0.9
	comp=Z,2.7nm,0.7s,baz=189,slow=3.4,SNR=8.4							

*MDD **08** 11:38:20.7±1.6, 36°.59N×9°.72W, h43km±39km, mb3.6/1, Error ellipse: s-maj=14.1km s-min=12.3km az=13.0, PRXIMO*
*INMG **08** 11:38:21.1±1.0, 36°.56N×9°.71W, h31km, ML1.5, Error ellipse: s-maj=4.9km s-min=3.0km az=79.0*
*IGIL **08** 11:38:21.1, 36°.56N×9°.69W, h31km, ML1.4*

ISC 08 11:38:20.1±3.5, 36°.6N±0°.1×9°.7W±0°.1, h35km, n28, σ0°.71/55, 5C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.86	53	⇑iP	Pn	11 38 36.4	+0.6
PFVI				eS	Sn	11 38 47.6	+0.4
PFVI				A	A	11 38 48.3	
	3.9nm,0.2s						
PFVI	Vila Bisbo	0.86	53	⇑P	Pn	11 38 36.4	+0.6
	1.1nm,0.0s,SNR=18						
PFVI				S	Sn	11 38 47.5	+0.4
	11nm,0.2s,SNR=7.9						
MORF	Marmelete	1.08	50	eP	Pn	11 38 39.4	+0.5
MORF				eS	Sn	11 38 52.6	-0.1
MORF				AML	AML	11 38 54.5	
	comp=E,6.4nm,0.1s						
MORF	Marmelete	1.08	50	eP	Pn	11 38 39.3	+0.5
MORF				eS	Sn	11 38 52.0	-0.7
MORF				A	A	11 38 54.8	
	comp=E,5.1nm,0.3s						
MORF	Marmelete	1.08	50	P	Pn	11 38 39.3	+0.5
MORF				S	Sn	11 38 52.6	-0.1
	comp=E,6.4nm,0.1s						
PTEO	Sao Teotonio	1.21	39	eP	Pn	11 38 41.2	+0.6
PTEO				eS	Sn	11 38 56.5	+0.8
PTEO				A	A	11 38 56.9	
	comp=E,3.9nm,0.3s						
PTEO	Sao Teotonio	1.21	39	P	Pn	11 38 41.2	+0.6
PTEO				S	Sn	11 38 56.5	+0.8
	comp=E,1.9nm,0.3s						
PBDV	Barranco-do-Ve	1.54	65	⇑iP	Pn	11 38 45.8	+0.7
PBDV				eS	Sn	11 39 03.7	-0.3
PBDV				A	A	11 39 06.1	
	comp=E,2.1nm,0.1s						
PBDV	Barranco-do-Ve	1.54	65	P	Pn	11 38 45.8	+0.7
PBDV				S	Sn	11 39 03.7	-0.3
	comp=E,2.1nm,0.1s						
PCVE	Castro Verde	1.67	52	ePn	Pn	11 38 47.8	+1.0
PCVE				eSn	Sn	11 39 07.5	+0.5
PCVE				A	A	11 39 08.8	
	comp=E,1.3nm,0.1s						
PCVE	Castro Verde	1.67	52	P	Pn	11 38 47.8	+1.0
PCVE				S	Sn	11 39 07.5	+0.5
	comp=E,1.3nm,0.1s						
MESJ	Messejana	1.70	43	eP	Pn	11 38 47.8	+0.5
MESJ				eS	Sn	11 39 07.4	-0.3
MESJ				AML	AML	11 39 09.7	
	comp=N,3.0nm,0.3s						
MESJ	Messejana	1.70	43	P	Pn	11 38 47.8	+0.5
MESJ				S	Sn	11 39 07.4	-0.3
	comp=N,3.0nm,0.3s						
PNCL	Nicolau / Gran	1.76	31	ePn	Pn	11 38 48.4	+0.3
PNCL				eSn	Sn	11 39 09.5	+0.2
PNCL				A	A	11 39 13.4	
	comp=N,3.1nm,0.7s						
PNCL	Nicolau / Gran	1.76	31	P	Pn	11 38 48.4	+0.3
PNCL				S	Sn	11 39 09.5	+0.2
	comp=N,3.1nm,0.7s						
PVAQ	Vaqueiros	1.76	63	⇑ePn	Pn	11 38 48.8	+0.6
PVAQ				eSn	Sn	11 39 09.0	-0.4
PVAQ				A	A	11 39 11.7	
	comp=N,2.9nm,0.1s						
PVAQ	Vaqueiros	1.76	63	P	Pn	11 38 48.8	+0.6
PVAQ				S	Sn	11 39 09.0	-0.4
	comp=N,2.9nm,0.1s						
EGRO	El Granado	1.99	62	P	Pn	11 38 52.3	+1.1
	comp=N,0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	11 39 14.8	-0.1
	comp=N,2.0nm,0.1s,SNR=7.9						
PMAFR	Mafra	2.36	8	ePn	Pn	11 38 56.8	+0.4
PMAFR				eSn	Sn	11 39 24.0	-0.2
PMAFR	Mafra	2.36	8	P	Pn	11 38 56.6	+0.2
	comp=N,0.8nm,0.1s,SNR=7.9						
PMAFR				S	Sn	11 39 23.5	-0.7
	comp=N,4.2nm,0.1s,SNR=5.6						
EMIN	Mina Concepcio	2.67	63	P	Pn	11 39 00.7	+0.1
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	11 39 30.8	-1.0
	comp=N,0.1nm,0.1s,SNR=7.9						
PMTG	Montargil	2.71	25	ePn	Pn	11 39 01.9	+0.7
PMTG				eSn	Sn	11 39 31.8	-1.0
PMTG				A	A	11 39 33.4	
	comp=N,1.3nm,0.1s						
PMTG	Montargil	2.71	25	P	Pn	11 39 01.9	+0.7
PMTG				S	Sn	11 39 31.8	-1.0
	comp=N,1.3nm,0.1s						
EBAD	Badajoz	3.01	44	P	Pn	11 39 05.4	0.0
	comp=N,0.5nm,0.2s,SNR=7.9						
EBAD				S	Sn	11 39 39.3	-0.9
	comp=N,0.7nm,0.1s,SNR=7.9						
ESPR	Espera	3.09	84	S	Sn	11 39 40.3	-1.7
	comp=N,6.4nm,0.3s,SNR=7.9						
PMRV	Marv??o	3.35	32	⇑ePn	Pn	11 39 10.1	+0.1
PMRV				eSn	Sn	11 39 47.1	-1.4
PMRV				A	A	11 39 49.6	
	comp=N,1.8nm,0.6s						
PMRV	Marv??o	3.35	32	P	Pn	11 39 10.1	+0.1
PMRV				S	Sn	11 39 47.1	-1.4
	comp=N,1.8nm,0.6s						
ECAB	El Cabril	3.70	65	P	Pn	11 39 15.3	+0.5
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	11 39 55.5	-1.7
	comp=N,0.1nm,0.2s,SNR=7.9						

*IDC **08** 11:38:58.3±1.0, 33°.84N×135°.21E, h0km, mb4.0/12, mb1 4.1/15, mb1mx3.9/60, mbtmp3.9/15, ML3.4/3, MS2.8/3, Ms1 2.9/3, ms1mx2.5/44, Error ellipse: s-maj=26.7km s-min=13.9km az=161.0*
*ISCJB **08** 11:39:00.6±0.5, 34°.19N±0°.03×135°.19E±0°.03, h12km±3km, mb4.1/22, MS2.6/1, Error ellipse: s-maj=4.8km s-min=3.5km az=19.5*
*JMA **08** 11:39:00.8, 34°.21N×135°.21E, h4km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs215.00000°, δ71.00000°, λ129.00000°. NP2: φs327.00000°, δ42.00000°, λ29.00000°. Principal axes: T Plg49.0000°, Azm167.0000°; N Plg36.0000°, Azm20.0000°; P Plg17.0000°, Azm277.0000°;*
JMA Felt IV J1.
*NIED **08** 11:39:00, 34°.20N×135°.20E, h5km, Mw3.8 Best double couple: M0:6.26000×10^14 NP1:φs208.00000°, δ47.00000°, λ125.00000°. NP2:φs343.00000°, δ53.00000°, λ59.00000°.*
*NEIC **08** 11:39:00.4±1.2, 33°.84N×135°.28E, h14km±5km, mb4.2/11, Error ellipse: s-maj=14.5km s-min=11.4km az=188.0*
NEIC Recorded [4 JMA] in Wakayama.

ISC 08 11:39:00.4±1.1, 34°.18N±0°.04×135°.22E±0°.02, h5km±7km, n56, σ1°.10/61, mb4.0/22, 2C-6D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWY	Kouya	0.31	82	⇓P	Pg	11 39 06.8	+0.3
JWY				S	Sg	11 39 11.5	+0.9
JWM	Minabe	0.34	161	⇑P	Pb	11 39 08.4	-0.6
JWM				S	Sb	11 39 13.4	-1.4
JAJ2	Tsuna	0.37	311	⇓P	Pg	11 39 07.7	+0.1
JAJ2				S	Sg	11 39 12.5	0.0
JTNC	Tanabenakahech	0.48	138	P	Pb	11 39 11.1	-0.3
JTNC				S	Sb	11 39 17.9	-0.8
JHE	Heguri	0.61	39	⇓P	Pg	11 39 12.3	+0.1
JHE				S	Sg	11 39 20.3	+0.2
JAI	Aioi	0.75	239	⇓P	Pg	11 39 14.9	+0.1
JAI				S	Sb	11 39 25.4	-1.0
JKS	Kasai	0.86	339	⇓P	Pg	11 39 16.7	-0.3
JKS				S	Sg	11 39 27.6	-0.6
JKN2	Miekihoku	0.87	86	⇓P	Pg	11 39 17.4	+0.2
JKN2				S	Sb	11 39 29.7	-0.3
INU	Inuyama	1.88	51	ePn	Pn	11 39 34.1	+0.8
MAJO	Matsushiro	3.39	45	ePn	Pn	11 39 55.5	+1.5
MAT	Matsushiro	3.39	45	P	Pn	11 39 55.3	+1.3
MAT				eS	Sb	11 40 39.4	-3.2
MJAR	Matsushiro Arr	3.40	45	Pn	Pn	11 39 55.8	+1.7
	0.8nm,0.3s,baz=261,slow=15,SNR=49						
MJAR				Pg	Pg	11 40 04.7	-0.8
	2.1nm,0.3s,baz=215,slow=15,SNR=55						
MJAR				Lg	Lg	11 40 48.8	
	0.7nm,0.3s,baz=213,slow=29,SNR=6.1						
MJB9	Matsu-Tunnel	3.40	45	ePn	Pn	11 39 55.6	+1.5
JNU	Nakatsue	3.77	255	Pn	Pn	11 40 00.6	+1.3
	7.4nm,0.3s,baz=73,slow=2.6,SNR=71						
JNU				Pg	Pb	11 40 07.3	-0.3
	8.4nm,0.3s,baz=90,slow=17,SNR=18						
JNU				Lg	Lg	11 40 58.0	
	1.9nm,0.3s,baz=294,slow=20,SNR=2.6						
JNU				LR	LR	11 41 34.2	
	comp=Z,190nm,19.5s,baz=346,slow=42						
JNU	Nakatsue	3.77	255	ePn	Pn	11 39 59.9	+0.7
JHJ	Hachijo jima 2	3.95	104	Pn	Pn	11 40 02.2	+0.6
	29nm,0.3s,baz=115,slow=19,SNR=7.3						
JHJ				Sn	Sn	11 40 47.9	-0.4
	5.5nm,0.3s,baz=76,slow=19,SNR=3.2						
JHJ				LR	LR	11 41 24.7	
	comp=Z,126nm,19.2s,baz=294,slow=37						
JHJ2	Mitsune	3.98	104	ePn	Pn	11 39 59.0	-3.0
KSRS	Korea Array	6.77	301	Pn	Pn	11 40 42.4	+2.0
	0.9nm,0.3s,baz=121,slow=14,SNR=17						
KSRS				Sn	Sn	11 41 57.2	-0.6
	0.5nm,0.3s,baz=117,slow=24,SNR=6.6						
KS15	Wonju Array Si	6.79	301	ePn	Pn	11 40 41.8	+1.1
KS15				eSn	Sn	11 41 58.7	+0.3
KLR	Kul'dur	15.26	351	Pn	P	11 42 39.7	-1.8
	0.3nm,0.3s,baz=131,slow=8.0,SNR=7.6						
ULN	Ulaanbaatar	25.11	311	eP	P	11 44 27.0	+0.8
	3.9nm,0.6s						
SONA0	Songino Array	25.50	311	eP	P	11 44 30.8	+1.0
SONM	Songino Array	25.50	311	P	P	11 44 30.8	+1.0
	2.0nm,0.6s,baz=133,slow=10.0,SNR=6.8						
TLY	Talaya	28.68	317	eP	P	11 44 60.0	+1.8
	8.8nm,0.7s						
H11N2	WAKE ISLAND Hy	31.54	109	T	T	12 18 01.0	
	baz=303,slow=74,SNR=36						
H11N1	WAKE ISLAND Hy	31.54	109	T	T	12 18 03.6	
	baz=303,slow=74,SNR=26						
H11N3	WAKE ISLAND Hy	31.55	109	T	T	12 18 00.9	
	baz=303,slow=74,SNR=29						
H11S3	WAKE ISLAND Hy	32.07	111	T	T	12 18 39.0	
	baz=305,slow=75,SNR=80						
H11S1	WAKE ISLAND Hy	32.07	111	T	T	12 18 38.6	
	baz=305,slow=75,SNR=83						
H11S2	WAKE ISLAND Hy	32.09	111	T	T	12 18 35.6	
	baz=305,slow=75,SNR=40						
CM31	Chiang Mai Arr	35.87	253	eP	P	11 45 59.3	-2.1
	4.3nm,0.9s						
CMAR	Chiang Mai Arr	35.87	253	LR	LR	11 59 58.6	
	comp=Z,11nm,19.5s,baz=245,slow=35						
MK31	Makanchi Array	41.44	304	eP	P	11 46 48.3	+0.4
	1.2nm,0.6s						
MK32	Makanchi Array	41.44	304	eP	P	11 46 48.5	+0.5
MKAR	Makanchi Array	41.44	304	P	P	11 46 48.5	+0.5
	1.3nm,0.7s,baz=91,slow=11,SNR=8.2						
KAPI	Kappang	41.63	204	P	P	11 46 44.3	-5.3
	5.0nm,0.4s,baz=63,slow=11,SNR=4.1						
KK31	Karatay Array	50.20	300	eP	P	11 47 57.1	0.0
	2.2nm,0.9s						
ILAR	Eielson Array	54.57	31	P	P	11 48 30.3	+1.1
	0.9nm,0.8s,baz=283,slow=7.3,SNR=12						
ILB	Eielson Array	54.57	31	eP	P	11 48 29.7	+0.5
	2.0nm,1.0s						
ABKAR	Akbulak array	55.91	310	eP	P	11 48 39.0	-0.1
	1.4nm,0.9s						
INK	Inuvik	59.18	26	P	P	11 49 02.6	+0.7
	1.0nm,0.6s,baz=321,slow=8.0,SNR=8.8						
INK	Inuvik	59.18	26	eP	P	11 49 02.4	+0.6
	1.4nm,0.8s						
FIA1	FINESS Array S	68.92	331	eP	P	11 50 07.1	+1.1
	14nm,1.5s						
FINES	FINESS Array B	68.92	331	P	P	11 50 05.0	-0.9
	1.9nm,0.7s,baz=86,slow=5.9,SNR=8.2						
AKASG	Malin Array Be	73.37	320	P	P	11 50 32.2	-0.9
	0.5nm,0.5s,baz=55,slow=6.8,SNR=3.3						
HFS	Hagfors	74.51	334	P	P	11 50 39.1	-0.5
	1.0nm,0.7s,baz=68,slow=8.4,SNR=3.7						
KIS	Kishinev	75.68	317	⇑iP	P	11 50 39.0	-7.6
	110nm,1.0s						
BR101	Keskin Array S	76.85	309	eP	P	11 50 54.0	+0.3
BRTR	Keskin Array B	76.85	309	P	P	11 50 54.0	+0.3
	0.4nm,0.7s,baz=100,slow=3.5,SNR=5.5						
DLMT	Dillon	79.87	42	eP	P	11 51 10.6	+0.4
	2.1nm,0.8s						
KVN	Kaiserville	80.47	49	eP	P	11 51 13.2	-0.5
	1.9nm,0.7s						
NV01	Mina Array Sit	80.71	50	eP	P	11 51 16.4	+1.4
NVAR	Mina Array Bea	80.71	50	P	P	11 51 16.4	+1.4
	1.2nm,0.8s,baz=281,slow=4.4,SNR=9.1						
PDAR	Pinedale Array	83.21	42	P	P	11 51 28.8	+0.7
	0.5nm,0.8s,baz=298,slow=3.2,SNR=4.9						
LTX	Lajitas	95.83	49	eP	P	11 52 28.7	+0.5
TXAR	Lajitas Array	95.83	49	P	P	11 52 28.7	+0.5
	0.2nm,0.8s,baz=267,slow=3.4,SNR=2.9						

KRSC 08 11:41:30.7±1.5, 50°.85N×157°.56E, h46km±21km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.78	323	eP	Pn	11 41 47.3	+2.0
PAU				eS	Sn	11 41 58.7	+2.8
SKR	Severo-Kuril's	0.93	260	eP	Pn	11 41 48.4	+1.0
SKR				eS	Sn	11 42 00.4	+0.8
KDTR	Khodutka, Kamc	1.01	18	eP	Pn	11 41 50.4	+1.9
KDTR				eS	Sn	11 42 03.4	+1.8
ALID	Alaid	1.27	272	eP	Pn	11 41 53.5	+1.3
ALID				eS	Sn	11 42 08.7	+0.5
ASAK	Asacha	1.55	8	eP	Pn	11 41 57.7	+1.8
MTVR	Mutnovka	1.68	13	eP	Pn	11 42 00.2	+2.4
MTVR				eS	Sn	11 42 20.3	+2.1
RUS	Russkaya	1.69	20	eP	Pn	11 41 59.3	+1.5
RUS				eS	Sn	11 42 19.3	+1.0
KRMR	Karymshinskiy	2.02	10	eP	Pn	11 42 05.1	+2.9
KRMR				eS	Sn	11 42 29.3	+3.1
APC	Apacha	2.10	353	eP	Pn	11 42 05.8	+2.5
PET	Petropavlovsk	2.28	17	eP	Pn	11 42 08.4	+2.6
PET				eS	Sn	11 42 35.4	+2.7
DALK	Dalny	2.31	18	eP	Pn	11 42 08.7	+2.5
DALK				eS	Sn	11 42 36.0	+2.7
UGLR	Uglovaya	2.49	18	eP	Pn	11 42 13.1	+4.3
AVH	Avacha	2.53	16	eP	Pn	11 42 12.9	+3.6
AVH				eS	Sn	11 42 42.5	+3.6
KOK	Koryaka	2.54	15	eP	Pn	11 42 13.3	+3.9
KOK				eS	Sn	11 42 43.9	+4.8
SMAR	Somma	2.54	17	eP	Pn	11 42 13.8	+4.2
KRER	Koryakskii	2.57	16	eP	Pn	11 42 13.5	+3.6
SDLR	Sedlovina	2.57	18	eP	Pn	11 42 12.4	+2.5
NLC	Nalytchevo	2.58	25	eS	Sn	11 42 39.6	-0.3
KRX	Arik	2.60	15	eP	Pn	11 42 14.0	+3.6
SPN	Mys Shipunski	2.72	33	eP	Pn	11 42 14.4	+2.6
SPN				eS	Sn	11 42 45.1	+1.6
GNL	Ganaly	2.86	5	eP	Pn	11 42 16.8	+2.9
GNL				eS	Sn	11 42 49.8	+2.7
MKZ	Mys Kozlova	4.50	33	eP	Pn	11 42 40.4	+4.2

*ISCJB **08** 11:41:39.5±0.4, 43°.78S±0°.07×82°.11W±0°.08, h10km, mb4.7/58, MS4.1/6, Error ellipse: s-maj=9.4km s-min=8.1km az=172.7*
*IDC **08** 11:41:39.6±1.3, 44°.00S×82°.25W, h0km, mb4.2/7, mb1 4.4/9, mb1mx4.1/29, mbtmp4.2/9, ML3.0/2, MS4.0/4, Ms1 4.0/4, ms1mx3.5/26, Error ellipse: s-maj=36.0km s-min=27.3km az=154.0*
*NEIC **08** 11:41:41.2±0.9, 43°.73S×82°.22W, h10km, mb4.8/61, Error ellipse: s-maj=26.9km s-min=18.2km az=277.0*

ISC 08 11:41:41.1±0.6, 43°.77S±0°.08×82°.23W±0°.09, h10km, n87, σ0°.92/83, mb4.8/58, MS4.0/6, 2C, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	6.27	87	ePn	Pn	11 43 11.7	-1.9
PLCA	Paso Flores	9.17	75	Pn	Pn	11 43 56.0	+2.5
	0.0nm,0.3s,baz=270,slow=16,SNR=2.9						
PLCA	Paso Flores	9.17	75	ePn	Pn	11 43 54.4	+0.8
GO09	Cerro Castillo	10.05	142	ePn	Pn	11 44 04.6	-0.8
GO05	Huala	11.82	46	ePn	Pn	11 44 28.1	-1.6
TRQA	Tornquist	16.32	76	ePn	Pn	11 45 30.4	+0.1
	42nm,1.4s						
GO04	Tololo Observa	16.33	38	ePn	Pn	11 45 30.6	-0.1
	29nm,1.3s						
CFA	Coronel Fontan	16.40	47	Pn	P	11 45 35.3	+1.1
	0.1nm,0.3s,baz=225,slow=11,SNR=6.6						
CFA				LR	LR	11 50 45.1	
	comp=Z,427nm,19.4s,baz=229,slow=33						
LCO	Las Campanas	17.38	36	ePn	Pn	11 45 42.7	-1.2
	20nm,1.1s						
GO03	Copiap	18.82	35	eP	P	11 46 00.4	-0.5
	19nm,1.3s						
GO02	Mina Guanaco	21.24	33	eP	P	11 46 27.2	-0.3
	37nm,1.4s						
PB10	IPOC Station P	22.37	29	eP	P	11 46 39.4	0.0
	59nm,1.4s						
PB04	IPOC Station P	23.60	29	eP	P	11 46 52.0	-0.2
	77nm,1.4s						
LVC	Limon Verde	23.80	32	P	P	11 46 56.1	+1.6
	6.2nm,0.9s,baz=227,slow=8.8,SNR=4.1						
LVC	Limon Verde	23.80	32	eP	P	11 46 54.1	-0.4
	24nm,1.4s						
PB01	IPOC Station P	25.02	29	eP	P	11 47 05.8	+0.4
	15nm,1.0s						
GO01	Chusmiza	26.39	29	eP	P	11 47 17.9	-0.3
	10nm,1.2s						
MNMC	Minye Minye	26.75	27	eP	P	11 47 21.9	+0.6
	9.3nm,1.0s						
RPN	Rapa Nui	27.45	298	LR	LR	11 55 19.3	
	comp=Z,383nm,21.2s,baz=120,slow=30						
LPAZ	La Paz	29.89	28	P	P	11 47 51.8	+2.2
	8.6nm,1

AMTX	**Amarillo**	80.26	344	*e*P	P	11 53 51.6	-0.2
	10nm,1.2s						
ANMO	**Albuquerque**	81.39	340	*e*P	P	11 53 58.8	+0.8
	10nm,1.3s						
CCM	**Cathedral Cave**	81.85	353	*e*P	P	11 54 00.1	0.0
	14nm,0.9s						
BOSA	**Boshof**	82.12	122	P	P	11 54 01.2	-1.0
	3.2nm,0.8s,baz=194,slow=4.2,SNR=4.7						
Q54A	**Coxs Mills**	82.38	1	*e*P	P	11 54 02.4	-0.4
	35nm,1.1s						
W18A	**Petrified Fore**	82.41	338	*e*P	P	11 54 03.8	+0.4
	10nm,1.3s						
T25A	**Trinidad**	83.01	342	*e*P	P	11 54 06.4	-0.1
	14nm,1.4s						
WUAZ	**Wupatki**	83.25	336	*e*P	P	11 54 07.5	-0.2
KNB	**Kanab**	85.07	336	*e*P	P	11 54 17.0	+0.1
	2.7nm,1.3s						
SHPR	**Sheep Range**	85.32	334	*e*P	P	11 54 17.6	-0.5
	12nm,1.5s						
SZCU	**Shurtz Canyon**	85.69	336	*e*P	P	11 54 19.9	-0.1
	0.5nm,0.7s						
JFWS	**Jewell Farm**	86.59	354	*e*P	P	11 54 23.8	-0.3
	16nm,0.9s						
P17A	**Butcher Ranch,**	86.77	338	*e*P	P	11 54 24.8	-0.5
	4.1nm,1.5s						
R11A	**Troy Canyon, C**	87.14	334	*e*P	P	11 54 26.5	-0.6
	6.0nm,1.5s						
I42A	**Draeger Farm,**	87.48	355	*e*P	P	11 54 28.3	0.0
	17nm,1.2s						
MPU	**Maple Canyon**	87.52	338	*e*P	P	11 54 28.9	-0.1
	8.7nm,1.4s						
NLU	**North Lily Min**	87.59	337	*e*P	P	11 54 29.0	-0.2
	8.3nm,1.5s						
H43A	**Windswept, Lux**	87.99	356	*e*P	P	11 54 30.6	-0.2
	21nm,1.1s						
DUG	**Dugway, Tooele**	88.02	337	*e*P	P	11 54 30.6	-0.6
	7.2nm,1.3s						
ECSD	**EROS Data Cent**	88.06	350	*e*P	P	11 54 30.9	-0.3
	4.3nm,0.9s						
G45A	**Suttons Bay**	88.47	358	*e*P	P	11 54 32.5	-0.6
	31nm,1.1s						
K22A	**Casper**	88.75	342	*e*P	P	11 54 34.8	+0.2
	13nm,1.4s						
G40A	**Rib Lake**	88.93	354	*e*P	P	11 54 35.0	-0.3
	7.3nm,1.0s						
HWUT	**Hardware Ranch**	88.99	338	*e*P	P	11 54 35.4	-0.4
	5.8nm,1.4s						
DZM	**Mont Dzumac**	89.25	240	*e*LR	LR	12 23 06.7	
	comp=Z,167nm,23.1s						
F41A	**Three Lakes**	89.33	355	*e*P	P	11 54 36.8	-0.3
	9.5nm,1.1s						
HVU	**Hansel Valley**	89.48	338	*e*P	P	11 54 38.2	+0.1
	5.5nm,1.0s						
PD31	**Pinedale Array**	89.56	340	*e*P	P	11 54 38.8	+0.2
	3.7nm,1.4s						
PDAR	**Pinedale Array**	89.56	340	P	P	11 54 40.0	+1.4
	0.7nm,1.0s,baz=148,slow=5.3,SNR=5.4						
RSSD	**Black Hills**	89.64	344	*e*P	P	11 54 38.8	-0.1
	5.5nm,1.4s						
E46A	**Sault Ste Mari**	89.77	359	*e*P	P	11 54 38.1	-0.9
	20nm,1.4s						
E43A	**Lone Tree Farm**	89.86	357	*e*P	P	11 54 39.8	+0.3
	9.9nm,1.3s						
AHID	**Auburn Hatcher**	89.95	339	*e*P	P	11 54 40.4	+0.1
	5.7nm,0.4s						
YHH	**Holmes Hill**	91.78	340	*e*P	P	11 54 48.5	-0.4
	4.9nm,1.3s						
TIXI	**Tiksi**	148.25	342	*e*PKPdf	PKPdf	12 01 22.6	-0.1
MJAR	**Matsushiro Arr**	148.51	271	PKPbc	PKiKP	12 01 28.3	-1.0
	1.1nm,0.8s,baz=146,slow=2.1,SNR=4.0						
MAJO	**Matsushiro**	148.51	271	*e*PKPbc	PKiKP	12 01 28.3	-1.0
NJ2	**Nanjing**	159.73	242	*e*PKP	PKPdf	12 01 39.1	-0.9
HHC	**Hu-ho-hao-te**	169.38	259	*e*PKP	PKPdf	12 01 47.3	-1.1
LZH	**Lanzhou**	171.03	213	*e*PKP	PKPdf	12 01 51.3	+1.8
WMQ	**Urumqi**	172.71	86	*e*PKP	PKPdf	12 01 50.1	+0.2
WMQ				LR	LR		
	comp=Z,150nm,30.7s						

IDC ***08*** *11:41:51.4±1.4,9.°17S×125.°56E,h0km,mb4.1/1, mb1 4.1/5,mb1mx3.7/43,mbtmp3.9/5,ML3.7/4,Error ellipse: s-maj=31.2km s-min=26.2km az=85.0*
ISCJB ***08*** *11:41:53.5±1.2,9.°36S±0.°10×125.°74E±0.°06,h33km, mb4.2/1,Error ellipse: s-maj=14.6km s-min=6.6km az=22.8*
DJA ***08*** *11:41:57.6±1.7,9.°S±4.°×12.°5E±.°,h23km±17km,M4.1/6, mb4.8/1,MLv3.7/6*
ISC 08 11:41:55.6±1.2,9.°4S±0.°1×125.°66E±0.°08,h35km,n9, σ1°69/15,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	1.42	255	P	Pn	11 42 19.6	+0.5
SOEI				S	Sn	11 42 37.4	+0.7
BATI	**Baumata**	2.13	247	Pn	Pn	11 42 29.4	+0.6
	19nm,0.3s,baz=82,slow=15,SNR=16						
BATI				Sn	Sn	11 42 54.6	+0.5
	27nm,0.3s,baz=71,slow=13,SNR=6.7						
BATI	**Baumata**	2.13	247	P	Pn	11 42 28.7	-0.1
EDFI	**Ende, Flores**	3.97	279	P	Pn	11 42 53.6	-0.5
EDFI				S	Sn	11 43 37.7	-1.8
FITZ	**Fitzroy Crossi**	8.67	180	Pn	Pn	11 44 00.7	+2.1
	1.8nm,0.3s,baz=0.8,slow=10,SNR=38						
FITZ				Sn	Sn	11 45 34.1	-1.1
	2.5nm,0.3s,baz=120,slow=19,SNR=8.5						
WRA	**Warramunga Arr**	13.44	142	Pn	Pn	11 45 06.6	+2.7
	0.3nm,0.3s,baz=322,slow=15,SNR=15						
WRA				Sn	Sn	11 47 30.0	-2.2
	0.3nm,0.3s,baz=200,slow=34,SNR=5.2						
ASAR	**Alice Springs**	16.25	152	Pn	P	11 45 43.2	-0.8
	0.2nm,0.3s,baz=320,slow=11,SNR=24						
ASAR				Sn	Sn	11 48 37.8	-2.8
	0.2nm,0.3s,baz=332,slow=25,SNR=4.7						
MKAR	**Makanchi Array**	67.96	329	P	P	11 52 50.3	-0.8
	1.5nm,0.6s,baz=125,slow=7.6,SNR=7.9						
TORD	**Torodi Ar. Bea**	125.00	279	PKP	PKiKP	12 00 55.1	+1.6
	0.5nm,0.8s,baz=77,slow=1.3,SNR=2.8						

ISCJB ***08*** *11:42:32.5±0.6,17.°5S±0.°1×178.°5W±0.°1,h547km, mb4.0/13,Error ellipse: s-maj=17.5km s-min=12.5km az=167.6*
IDC ***08*** *11:42:33.2±2.5,17.°65S×178.°41W,h548km±30km, mb3.5/13,mb1 3.6/14,mb1mx3.4/42,mbtmp4.4/14,Error ellipse: s-maj=18.5km s-min=14.1km az=163.0*
ISC 08 11:42:33.3±0.8,17.°6S±0.°2×178.°5W±0.°1,h547km,n19, σ0°71/20,mb4.2/13,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	14.87	250	P	P	11 45 41.5	-0.1
	0.8nm,0.3s,baz=127,slow=14,SNR=12						
URZ	**Urewera**	20.93	190	P	P	11 46 36.1	-1.6
	4.8nm,0.5s,baz=348,slow=1.9,SNR=11						
CTA	**Charters Tower**	33.44	260	P	P	11 48 27.4	0.0
	5.5nm,0.6s,baz=103,slow=11,SNR=8.7						
PMG	**Port Moresby**	34.35	279	P	P	11 48 34.9	-0.2
	22nm,0.6s,baz=83,slow=5.4,SNR=7.3						
STKA	**Stephens Creek**	38.72	241	P	P	11 49 11.6	+0.8
	4.7nm,0.4s,baz=86,slow=7.6,SNR=21						
JAY	**Jayapura**	42.77	286	P	P	11 49 43.5	+0.2
	19nm,0.8s,baz=157,slow=7.0,SNR=6.1						
WRA	**Warramunga Arr**	44.63	259	P	P	11 49 57.4	-0.3
	4.0nm,0.3s,baz=87,slow=8.4,SNR=38						
ASAR	**Alice Springs**	44.81	254	P	P	11 49 59.6	+0.5
	40nm,0.5s,baz=89,slow=7.6,SNR=305						
ASAR				S	S	11 55 56.3	-0.7
	0.9nm,0.9s,baz=90,slow=15,SNR=4.4						
FITZ	**Fitzroy Crossi**	53.02	260	P	P	11 51 00.6	+0.8
	3.4nm,0.3s,baz=72,slow=6.0,SNR=24						
MJAR	**Matsushiro Arr**	67.63	323	P	P	11 52 35.5	-0.5
	1.2nm,0.8s,baz=159,slow=4.9,SNR=4.9						
NVAR	**Mina Array Bea**	79.25	44	P	P	11 53 41.6	-0.8
	0.7nm,0.7s,baz=226,slow=8.8,SNR=4.9						
MAW	**Mawson**	84.12	200	P	P	11 54 07.0	+0.5
	0.9nm,0.4s,baz=110,slow=7.3,SNR=6.7						
TXAR	**Lajitas Array**	85.89	58	P	P	11 54 16.6	+0.8
	0.5nm,0.7s,baz=215,slow=6.4,SNR=4.8						
PDAR	**Pinedale Array**	87.18	43	P	P	11 54 21.4	-0.5
	0.2nm,0.4s,baz=201,slow=4.8,SNR=3.2						
SNAA	**Sanae**	90.90	179	P	P	11 54 38.3	-0.2
SNAA	**Sanae**	90.90	179	P	P	11 54 38.2	-0.2
	1.5nm,0.7s,baz=193,slow=13,SNR=5.3						
VNA3	**Neumayer Olymp**	91.04	176	P	P	11 54 39.2	+0.1
VNA2	**Neumayer--Watz**	91.48	177	P	P	11 54 42.0	+1.0
	baz=192,slow=3.9						
VNA1	**Neumayer--Stat**	91.71	177	P	P	11 54 42.8	+0.7

ISCJB ***08*** *11:55:37.5±0.3,21.°37S±0.°02×68.°13W±0.°03,h107km±2km, mb5.1/208,Error ellipse: s-maj=5.1km s-min=3.3km az=160.1*
NEIC ***08*** *11:55:39.9±1.6,21.°50S×68.°19W,h113km±1km,mb5.1/208, ML4.4(GUC),Error ellipse: s-maj=12.9km s-min=9.0km az=83.0*
IDC ***08*** *11:55:39.6±0.8,21.°47S×68.°20W,h109km±8km,mb4.6/20, mb1 4.6/25,mb1mx4.5/37,mbtmp4.8/25,MS3.3/1, Ms1 3.3/1,ms1mx2.8/22,Error ellipse: s-maj=12.8km s-min=9.5km az=81.0*
SJA ***08*** *11:55:39.1±1.2,21.°53S×68.°49W,h137km±7km,ML4.2, MW4.3*
GUC ***08*** *11:55:40.5±0.6,21.°54S×68.°54W,h141km±4km,ML4.5*
MOS ***08*** *11:55:40.8±1.4,21.°45S×68.°26W,h128km,mb5.0/38, Error ellipse: s-maj=12.7km s-min=6.0km az=109.1*
ISC 08 11:55:40.5±0.6,21.°52S±0.°03×68.°41W±0.°03,h120km±5km, n936,σ1°12/987,mb5.1/208,20C-8D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	1.11	295	*e*Pn	Pn	11 56 03.9	+0.2
PB01				*e*Sn	Sn	11 56 22.5	+1.3
PB01	**IPOC Station P**	1.11	295	⇑*i*P	Pn	11 56 03.9	+0.2
PB01				*e*S	Sn	11 56 21.9	+0.7
PB01				IAML		11 56 23.4	
	comp=E,6μm,0.3s						
LVC	**Limon Verde**	1.19	203	P	Pn	11 56 05.0	+0.2
	comp=E,647nm,0.3s,baz=32,slow=8.8,SNR=2519						
LVC				S	Sn	11 56 23.3	+0.2
	comp=E,501nm,0.3s,baz=201,slow=16,SNR=91						
LVC	**Limon Verde**	1.19	203	*e*Pn	Pn	11 56 05.0	+0.2
LVC				*e*Sn	Sn	11 56 24.1	+1.0
LVC	**Limon Verde**	1.19	203	*i* P	Pn	11 56 05.0	+0.2
LVC				*i* S	Sn	11 56 23.4	+0.2
LVC	**Limon Verde**	1.19	203	⇓*i*P	Pn	11 56 05.0	+0.2
PB03	**IPOC Station P**	1.36	247	*i* P	Pn	11 56 06.4	-0.1
PB03				*i* S	Sn	11 56 26.5	+0.3
PB03	**IPOC Station P**	1.36	247	⇑*i*P	Pn	11 56 06.3	-0.1
PB03				*e*S	Sn	11 56 26.1	0.0
PB03				IAML		11 56 27.7	
	comp=E,7μm,0.8s						
PB07	**IPOC Station P**	1.39	261	*i* P	Pn	11 56 06.8	0.0
PB07				*i* S	Sn	11 56 27.1	+0.3
PB07	**IPOC Station P**	1.39	261	⇑*i*P	Pn	11 56 06.8	0.0
PB07				*e*S	Sn	11 56 27.2	+0.4
PB07				IAML		11 56 28.2	
	comp=E,6μm,0.7s						
PB02	**IPOC Station P**	1.40	278	*i* P	Pn	11 56 06.9	0.0
PB02				*i* S	Sn	11 56 27.5	+0.6
PB02	**IPOC Station P**	1.40	278	⇑*i*P	Pn	11 56 06.8	0.0
PB02				*e*S	Sn	11 56 27.2	+0.3
PB02				IAML		11 56 31.2	
	comp=E,9μm,0.5s						
PB08	**IPOC Station P**	1.54	333	*i* P	Pn	11 56 10.0	+1.3
PB08				*i* S	Sn	11 56 30.9	+0.8
PB08	**IPOC Station P**	1.54	333	⇑*i*P	Pn	11 56 10.0	+1.3
PB08				*e*S	Sn	11 56 32.0	+1.8
PB06	**IPOC Station P**	1.60	222	*i* P	Pn	11 56 09.3	0.0
PB06				*i* S	Sn	11 56 31.5	+0.3
PB06	**IPOC Station P**	1.60	222	⇑*i*P	Pn	11 56 09.2	0.0
PB06				*e*S	Sn	11 56 31.5	+0.3
PB06				IAML		11 56 32.6	
	comp=E,8μm,0.3s						
PB04	**IPOC Station P**	1.81	243	*e*Pn	Pn	11 56 11.4	-0.3
PB04				*e*Sn	Sn	11 56 35.9	+0.3
PB04	**IPOC Station P**	1.81	243	*i* P	Pn	11 56 11.3	-0.4
PB04				*i* S	Sn	11 56 35.4	-0.2
PB04	**IPOC Station P**	1.81	243	⇑*i*P	Pn	11 56 11.3	-0.4
PB15	**IPOC Station P**	1.95	210	*i* P	Pn	11 56 13.6	+0.1
PB15				*i* S	Sn	11 56 40.3	+1.5
PB15	**IPOC Station P**	1.95	210	⇑*i*P	Pn	11 56 13.6	+0.1
PB15				*e*S	Sn	11 56 39.4	+0.6
GO01	**Chusmiza**	1.98	338	*e*Pn	Pn	11 56 14.9	+0.7
GO01				*e*Sn	Sn	11 56 40.9	+1.1
GO01	**Chusmiza**	1.98	338	⇑*i*P	Pn	11 56 15.1	+0.9
GO01				*e*S	Sn	11 56 41.6	+1.8
GO01				IAML		11 56 45.3	
	comp=N,3μm,0.1s						
PB11	**IPOC Station P**	2.10	326	*e*Pn	Pn	11 56 15.6	+0.2
PB11				*e*Sn	Sn	11 56 42.7	+0.7
PB11	**IPOC Station P**	2.10	326	*i* P	Pn	11 56 15.5	+0.2
PB11				*i* S	Sn	11 56 41.8	-0.2
PB11	**IPOC Station P**	2.10	326	⇑*i*P	Pn	11 56 15.4	+0.1
PB11				*e*S	Sn	11 56 42.6	+0.5
PB11				IAML		11 56 46.6	
	comp=E,3μm,0.6s						
PB05	**IPOC Station P**	2.13	231	*i* P	Pn	11 56 15.0	-0.6
PB05				*i* S	Sn	11 56 42.0	-0.6
PB05	**IPOC Station P**	2.13	231	⇑*i*P	Pn	11 56 15.0	-0.6
PB05				*i* S	Sn	11 56 41.6	-1.0
PB05				IAML		11 56 50.9	
	comp=N,3μm,0.3s						
PSGC	**Pisagua**	2.50	320	⇑*i*P	Pn	11 56 19.7	-0.6
PSGC				*i* S	Sn	11 56 50.5	-0.4
PSGCX	**Pisagua**	2.50	320	*i* P	Pn	11 56 19.7	-0.7
PSGCX				*i* S	Sn	11 56 48.9	-2.0
MNMC	**Minye Minye**	2.62	335	*e*Pn	Pn	11 56 22.6	+0.5
MNMC				*e*Sn	Sn	11 56 55.8	+1.7
MNMC	**Minye Minye**	2.62	335	⇑*i*P	Pn	11 56 22.6	+0.5
MNMCX	**Minye Minye**	2.62	335	*i* P	Pn	11 56 22.6	+0.5
MNMCX				*i* S	Sn	11 56 53.9	-0.2
YJA	**Yavi**	2.77	104	*i* P	Pn	11 56 25.4	+1.3
YJA				IAML		11 56 27.3	
	comp=Z,282nm,0.5s						
YJA				*i* S	Sn	11 57 01.3	+3.7
PB10	**IPOC Station P**	2.81	225	*e*Pn	Pn	11 56 24.9	+0.6
PB10				*e*Sn	Sn	11 56 55.1	-2.9
PB10	**IPOC Station P**	2.81	225	*i* P	Pn	11 56 23.7	-0.5
PB10	**IPOC Station P**	2.81	225	*e*P	Pn	11 56 23.6	-0.7
HJA	**Humahuaca**	3.25	122	*i* P	Pn	11 56 31.6	+1.3
HJA				IAML		11 56 34.0	
	comp=Z,829nm,0.5s						
HJA				*i* S	Sn	11 57 11.6	+2.8
PB16	**IPOC Station P**	3.33	342	*i* P	Pn	11 56 32.5	+0.8
PB12	**IPOC Station P**	3.41	328	*i* P	Pn	11 56 31.0	-1.1
PB12	**IPOC Station P**	3.41	328	*e*P	Pn	11 56 31.1	-1.1
PB14	**IPOC Station P**	3.60	210	*i* P	Pn	11 56 34.6	-0.4
PB14	**IPOC Station P**	3.60	210	*e*P	Pn	11 56 34.5	-0.4
GO02	**Mina Guanaco**	3.79	196	*e*Pn	Pn	11 56 36.6	-0.8
GO02				*e*Sn	Sn	11 57 21.3	-0.3
GO02	**Mina Guanaco**	3.79	196	⇑*i*P	Pn	11 56 36.4	-1.0
GO02				*i* S	Sn	11 57 19.9	-1.7
AZAP	**Zapla**	4.09	132	*i* P	Pn	11 56 41.6	+0.2
AZAP				IAML		11 56 43.4	
	comp=Z,254nm,0.4s						
AZAP				*i* S	Sn	11 57 32.6	+3.9
SLA	**San Lorenzo**	4.16	141	*i* P	Pn	11 56 43.7	+1.4
SLA				IAML		11 56 44.5	
	comp=Z,249nm,0.5s						
SLA				*i* S	Sn	11 57 31.7	+1.4
FSA	**Cafayete**	5.09	155	*i* P	Pn	11 56 56.0	+1.3
LPAZ	**La Paz**	5.21	3	P	Pn	11 56 58.4	+1.5
	comp=Z,10nm,0.3s,baz=171,slow=7.1,SNR=85						
LPAZ				S	Sn	11 57 47.5	-8.6
	comp=Z,1.0nm,0.3s,baz=192,slow=9.0,SNR=3.7						
LPAZ	**La Paz**	5.21	3	*e*Pn	Pn	11 56 58.1	+1.3
LPAZ	**La Paz**	5.21	3	*i* P	Pn	11 56 58.3	+1.5
LPAZ	**La Paz**	5.21	3	*e*P	Pn	11 56 58.1	+1.3
AHML	**Horco Molle**	5.95	152	*i* P	Pn	11 57 06.7	+0.5
AHML				IAML		11 57 17.2	
	comp=Z,51nm,0.4s						
AHML				*i* S	Sn	11 58 13.6	+0.5
GO03	**Copiap**	6.28	195	*e*Pn	Pn	11 57 07.5	-3.1
GO03				*e*Sn	Sn	11 58 18.2	-2.8
VCA	**Vinchina**	7.19	179	*i* P	Pn	11 57 22.1	-1.0
VCA				IAML		11 59 05.7	
	comp=Z,51nm,0.4s						
CYA	**Choya**	7.29	162	*i* P	Pn	11 57 23.3	-1.0
CYA				IAML		11 57 33.9	
	comp=Z,20nm,0.4s						
LCO	**Las Campanas**	7.75	195	*e*Pn	Pn	11 57 26.0	-4.7
LCO				*e*Sn	Sn	11 58 53.7	-3.3
LCO	**Las Campanas**	7.75	195	*e*P	Pn	11 57 26.0	-4.7
LCO				*e*		11 58 53.7	
SIV	**San Ignacio**	8.86	53	P	Pn	11 57 42.3	-3.3
	comp=Z,10.0nm,0.3s,baz=249,slow=11,SNR=553						
SIV				S	Sn	11 59 14.9	-8.8
	baz=315,slow=19,SNR=12						
GO04	**Tololo Observa**	8.88	194	*e*Pn	Pn	11 57 40.9	-5.2
GO04				*e*Sn	Sn	11 59 19.4	-5.2
CFA	**Coronel Fontan**	10.05	179	P	Pn	11 57 59.0	-2.6
	comp=Z,1.9nm,0.3s,baz=6.0,slow=14,SNR=10						
CFA				S	Sn	11 59 43.0	-9.5
	comp=Z,3.1nm,0.3s,baz=251,slow=18,SNR=3.4						
CFA				LR	LR	12 02 16.1	
	comp=Z,183nm,22.0s,baz=356,slow=39						
ROC1	**El Roble**	11.65	191	*e*Pn	Pn	11 58 17.9	-5.4
NNA	**Nana**	12.45	318	P	Pn	11 58 36.1	+2.5
	comp=Z,0.6nm,0.3s,baz=159,slow=14,SNR=2.0						
ATAH	**Atahualpa**	17.25	325	P	Pn	11 59 36.2	+1.7
	comp=Z,0.4nm,0.3s,baz=174,slow=8.3,SNR=4.2						
TRQA	**Tornquist**	17.39	163	*e*P	P	11 59 34.5	-0.7
	comp=Z,35nm,0.8s						
TRQA	**Tornquist**	17.39	163	*e*P	P	11 59 34.5	-0.7
TRQA				pmax	pmax		
	comp=Z,35nm,0.8s						
PLCA	**Paso Flores**	19.24	185	P	P	11 59 55.3	-0.2
	comp=Z,0.8nm,0.3s,baz=17,slow=13,SNR=24						
PLCA	**Paso Flores**	19.24	185	*e*P	P	11 59 55.5	0.0
	comp=Z,24nm,0.9s						
PLCA	**Paso Flores**	19.24	185	*e*P	P	11 59 55.5	0.0
PLCA				pmax	pmax		
	comp=Z,24nm,0.9s						
SPB	**Sao Paulo**	19.48	100	*e*P	P	11 59 56.1	-2.0
	comp=Z,41nm,0.7s						
BDFB	**Brasilia**	20.19	77	P	P	12 00 04.1	-1.8
	comp=Z,1.3nm,0.3s,baz=271,slow=11,SNR=16						
BDFB	**Brasilia**	20.19	77	*e*P	P	12 00 03.2	-2.7
	comp=Z,73nm,1.4s						
PTGA	**Pitinga**	22.24	23	P	P	12 00 26.0	-1.6
	comp=Z,5.9nm,0.3s,baz=342,slow=23,SNR=8.9						
PTGA				S	S	12 04 17.8	-6.6
	comp=Z,7.1nm,0.8s,baz=305,slow=23,SNR=8.6						
PTGA	**Pitinga**	22.24	23	*e*P	P	12 00 25.4	-2.2
	comp=Z,15nm,1.2s						
OTAV	**Otavalo**	23.74	334	*e*P	P	12 00 43.1	+0.7
	comp=Z,44nm,1.4s						
OTAV	**Otavalo**	23.74	334	*e*P	P	12 00 43.1	+0.7
OTAV				pmax	pmax		
	comp=Z,44nm,1.4s						
OTAV	**Otavalo**	23.74	334	*e*P	P	12 00 46.2	+3.9
FLOC	**Florencia**	24.03	342	*e*P	P	12 00 44.9	+0.4
GCUF	**Volcan Galeras**	24.23	338	*e*P	P	12 00 50.2	+3.4
BBAC	**Balboa, Cauca**	24.94	339	*e*P	P	12 00 54.2	+1.2
POPC	**Popayan, Colom**	25.24	340	*e*P	P	12 00 57.6	+1.8
PRAC	**Prado**	25.86	345	*e*P	P	12 01 00.9	-0.3
CHIC	**Chingaza**	26.50	348	*e*P	P	12 01 04.9	-2.4
GUY2C	**Guyana, Caldas**	27.44	345	*e*P	P	12 01 15.5	-0.2
RUSC	**La Rusia**	27.62	350	*e*P	P	12 01 17.5	+0.1
NORC	**Norcasia**	27.65	346	*e*P	P	12 01 15.5	-1.6
BARC	**Barichara**	28.32	350	*e*P	P	12 01 21.5	-1.8
HELC	**Santa Helena**	28.41	345	*e*P	P	12 01 22.9	-1.4
PTBC	**PUERTO BERRIO,**	28.51	347	*e*P	P	12 01 22.2	-2.5
SDV	**Santo Domingo**	30.29	356	P	P	12 01 39.7	-1.0
	comp=Z,7.5nm,0.4s,baz=193,slow=6.8,SNR=11						
SDV	**Santo Domingo**	30.29	356	*e*P	P	12 01 39.4	-1.3
	comp=Z,23nm,1.0s						
SMLC	**San Martn de**	30.64	349	*e*P	P	12 01 38.8	-4.7
RCBR	**Riachuelo**	35.11	68	*e*P	P	12 02 20.3	-2.3
	comp=Z,20nm,1.1s						
RCBR	**Riachuelo**	35.11	68	*e*P	P	12 02 20.3	-2.3
RCBR				pmax	pmax		
	comp=Z,20nm,1.1s						
FDF	**Fort de France**	36.72	12	*e*P	P	12 02 35.1	-1.2
	comp=Z,61nm,1.2s						
FDF	**Fort de France**	36.72	12	*e*P	P	12 02 35.1	-1.2
FDF				pmax	pmax		
	comp=Z,61nm,1.2s						
OBIP	**Obispado Ponce**	39.35	3	*e*P	P	12 02 56.2	-2.0
	comp=Z,33nm,0.7s						
SJG	**San Juan**	39.45	3	*e*P	P	12 02 56.9	-2.1
	comp=Z,40nm,0.8s						
SJG	**San Juan**	39.45	3	*e*P	P	12 02 56.9	-2.1
SJG				pmax	pmax		
	comp=Z,40nm,0.8s						
HOPE	**Hope Point**	40.64	152	*e*P	P	12 03 09.6	+1.1
	comp=Z,56nm,1.0s						
061Z	**Ochoppi**	48.64	345	P	P	12 04 13.0	+0.8
	baz=164						
TLIG	**Tiapa**	48.80	320	*e*P	P	12 04 15.1	+1.2
	comp=Z,23nm,0.8s						
060Z	**West Palm Beac**	49.07	346	P	P	12 04 16.4	+0.8
	baz=165						
059Z	**Ave Maria**	49.22	344	P	P	12 04 17.2	+0.5
	baz=164						
060A	**Indiantown**	49.63	346	P	P	12 04 20.7	+0.9
	baz=165						
059A	**Moore Haven**	49.75	345	*e*P	P	12 04 21.2	+0.5
	comp=Z,140nm,0.8s						

LNIG	Linares comp=Z,31nm,1.2s	55.13 325	eP	P	12 05 00.6	0.0
ZAIG	Zacatecas comp=Z,37nm,0.9s	55.19 321	eP	P	12 05 02.8	+1.5
157A	Early Branch baz=166	55.22 347	P	P	12 05 01.4	+0.5
156A	Sylvania baz=165	55.30 347	P	P	12 05 02.0	+0.5
BRAL	Brewton baz=159	55.35 341	P	P	12 05 01.9	0.0
253A	Americus baz=162	55.36 344	P	P	12 05 01.6	-0.4
350A	Dozier baz=160	55.37 341	P	P	12 05 01.9	-0.2
252A	Lumpkin baz=161,SNR=6.8	55.46 343	P	P	12 05 02.6	-0.1
NHSC	New Hope comp=Z,208nm,1.0s	55.47 348	eP	P	12 05 02.9	+0.2
NHSC	New Hope baz=166,SNR=7.2	55.47 348	P	P	12 05 03.3	+0.6
155A	Kite baz=164	55.49 346	P	P	12 05 02.6	-0.3
349A	Repton baz=158,SNR=6.8	55.57 340	P	P	12 05 03.7	+0.2
Z58A	St. Stephen baz=167	55.62 348	P	P	12 05 04.2	+0.4
154A	Montrose baz=163	55.63 345	P	P	12 05 03.8	-0.1
251A	Midway baz=161,SNR=8.7	55.74 343	P	P	12 05 04.4	-0.3
Z57A	Bowman baz=166,SNR=6.2	55.76 348	P	P	12 05 05.2	+0.4
153A	Fort Valley baz=162	55.84 344	P	P	12 05 05.2	-0.3
250A	Grady baz=160,SNR=5.5	55.87 342	P	P	12 05 05.2	-0.4
Z56A	Williston baz=165	55.92 347	P	P	12 05 06.1	+0.1
152A	Waverly Hall comp=Z,21nm,1.0s	56.09 343	eP	P	12 05 07.0	-0.2
152A	Waverly Hall baz=162,SNR=5.6	56.09 343	P	P	12 05 06.9	-0.4
151A	Opelika baz=161	56.12 343	P	P	12 05 07.0	-0.5
249A	Camden baz=159	56.13 341	P	P	12 05 07.3	-0.1
Y58A	Scranton baz=167	56.15 349	P	P	12 05 07.8	+0.2
Z54A	Sparta baz=164	56.16 345	P	P	12 05 07.6	-0.1
Y56A	Pelion baz=165	56.36 347	P	P	12 05 09.0	-0.1
Z53A	Monticello baz=163	56.38 345	P	P	12 05 08.6	-0.7
150A	Eclectic baz=160,SNR=14	56.39 342	P	P	12 05 09.0	-0.3
Y57A	Sumter comp=Z,71nm,1.1s	56.39 348	eP	P	12 05 09.4	+0.1
Y57A	Sumter baz=166	56.39 348	P	P	12 05 09.4	+0.1
GOGA	Godfrey baz=163	56.48 345	P	P	12 05 09.8	-0.2
Z52A	Williamson baz=162	56.51 344	P	P	12 05 09.8	-0.3
X60A	Albert Glenn T baz=169	56.52 351	P	P	12 05 10.0	-0.2
149A	Jones baz=159,SNR=8.4	56.61 341	P	P	12 05 10.3	-0.6
X59A	McDuffie Farm, baz=168	56.61 350	P	P	12 05 10.7	-0.1
Y55A	Saluda baz=165,SNR=5.7	56.61 347	P	P	12 05 11.2	+0.3
X58A	Rowland baz=168	56.72 349	P	P	12 05 11.4	-0.2
Y54A	Tignall baz=164	56.73 346	P	P	12 05 11.5	-0.2
JSC	Jenkinsville comp=Z,29nm,1.0s	56.82 347	eP	P	12 05 12.7	+0.4
JSC JSC	Jenkinsville comp=Z,29nm,1.0s	56.82 347	eP pmax	P pmax	12 05 12.7	+0.4
Z51A	Franklin baz=161	56.83 343	P	P	12 05 11.9	-0.5
148A	Greensboro baz=158	56.89 341	P	P	12 05 12.3	-0.5
Y53A	Monroe baz=163	56.93 345	P	P	12 05 12.8	-0.4
W61A	Ground Anchor baz=170	56.97 352	P	P	12 05 13.3	-0.1
Z50A	Ashland comp=Z,39nm,0.8s	56.97 342	eP	P	12 05 12.9	-0.5
Z50A	Ashland baz=160,SNR=18	56.97 342	P	P	12 05 13.1	-0.3
X56A	White Oak baz=166,SNR=8.3	56.98 348	P	P	12 05 13.7	+0.2
BIRD	Birdtown, Kers comp=Z,52nm,0.9s	57.01 348	eP	P	12 05 13.9	+0.2
Y52A	Lilburn baz=162	57.06 344	P	P	12 05 13.6	-0.4
LRAL	Lakeview Retre comp=Z,23nm,1.0s	57.08 341	eP	P	12 05 13.8	-0.4
LRAL	Lakeview Retre baz=159,SNR=7.6	57.08 341	P	P	12 05 13.6	-0.5
X55A	Gracelyn & Ava baz=165,SNR=6.1	57.08 347	P	P	12 05 14.5	+0.4
Z49A	Columbiana baz=160,SNR=8.7	57.09 342	P	P	12 05 13.9	-0.3
W58A	Raeford baz=168,SNR=6.2	57.16 349	P	P	12 05 14.8	+0.1
V62A	Hyde County Ai baz=171	57.21 353	P	P	12 05 15.6	+0.6
X54A	Belton baz=164,SNR=6.3	57.31 346	P	P	12 05 16.0	+0.2
Y51A	Rockmart baz=161,SNR=12	57.35 344	P	P	12 05 15.7	-0.4
W57A	Gilead baz=167	57.42 349	P	P	12 05 16.2	-0.4
PAULI	Pauline comp=Z,58nm,1.4s	57.46 347	eP	P	12 05 17.2	+0.4
X53A	Estanollee baz=163	57.48 345	P	P	12 05 16.9	-0.1
W56A	Indian Trail baz=166,SNR=5.2	57.51 348	P	P	12 05 17.4	+0.2
Y50A	Piedmont baz=161,SNR=7.1	57.52 343	P	P	12 05 16.7	-0.6
HKT	Hockley comp=Z,17nm,1.1s	57.58 332	eP	P	12 05 18.0	+0.3
HKT HKT	Hockley comp=Z,17nm,1.1s	57.58 332	eP pmax	P pmax	12 05 18.0	+0.3
V60A	Jim Taylor Roa baz=170	57.58 351	P	P	12 05 17.4	-0.3
KMSC	Kings Mountain comp=Z,24nm,0.9s	57.67 347	eP	P	12 05 18.3	0.0
KMSC	Kings Mountain baz=166,SNR=6.5	57.67 347	P	P	12 05 18.6	+0.3
Y49A	Blount Mountai baz=160,SNR=5.1	57.68 342	P	P	12 05 17.9	-0.5
X52A	Dahlonega baz=163	57.72 345	P	P	12 05 18.3	-0.4
V59A	Middlesex baz=169	57.73 351	P	P	12 05 18.6	-0.1
W54A	Cherokee Point baz=165,SNR=8.6	57.79 347	P	P	12 05 19.6	+0.5
833A	Chaparral WMA, comp=Z,53nm,1.0s	57.88 328	eP	P	12 05 20.9	+0.9
833A	Chaparral WMA, baz=145,SNR=8.5	57.88 328	P	P	12 05 20.6	+0.6
V58A	Windy Hill, Pi baz=168	57.89 350	P	P	12 05 19.6	-0.2
X51A	Calhoun comp=Z,48nm,0.9s	57.92 344	eP	P	12 05 20.1	0.0
X51A	Calhoun baz=162,SNR=8.2	57.92 344	P	P	12 05 19.8	-0.3
X50B	Fort Payne baz=161,SNR=6.7	58.03 343	P	P	12 05 20.4	-0.5
W53A	Cullowhee baz=164,SNR=10	58.09 346	P	P	12 05 21.4	0.0
V57A	Coltrane Farms baz=167	58.10 349	P	P	12 05 21.3	0.0
V56A	Mocksville comp=Z,48nm,0.9s	58.15 348	eP	P	12 05 22.1	+0.4
V56A	Mocksville baz=167,SNR=10	58.15 348	P	P	12 05 22.2	+0.6
W52A	Murphy baz=163	58.20 345	P	P	12 05 22.0	0.0
U59A	Littleton baz=170	58.23 351	P	P	12 05 21.7	-0.5
U60A	Pendleton baz=170	58.26 352	P	P	12 05 22.1	-0.3
X49A	Woodville baz=160,SNR=6.0	58.27 343	P	P	12 05 22.2	-0.3
V55A	Taylorsville baz=166,SNR=10	58.33 348	P	P	12 05 23.5	+0.6
U58A	Oxford baz=169	58.39 350	P	P	12 05 22.9	-0.4
V54A	Nebo baz=165,SNR=15	58.41 347	P	P	12 05 23.5	0.0
X48A	Hartselle comp=Z,52nm,0.9s	58.41 342	eP	P	12 05 23.0	-0.5
X48A	Hartselle baz=159,SNR=16	58.41 342	P	P	12 05 23.2	-0.3
W51A	Cleveland baz=162,SNR=9.3	58.46 344	P	P	12 05 23.8	0.0
V53A	Saluda baz=164,SNR=5.4	58.49 346	P	P	12 05 24.1	0.0
U57A	Blanch baz=168	58.55 350	P	P	12 05 24.5	+0.1
W50A	Signal Mountai baz=161,SNR=15	58.64 344	P	P	12 05 25.0	-0.2
NATX	Nacogdoches comp=Z,60nm,1.0s	58.64 334	eP	P	12 05 26.1	+0.9
NATX	Nacogdoches baz=151	58.64 334	P	P	12 05 26.3	+1.1
U56A	King baz=167,SNR=7.5	58.65 349	P	P	12 05 25.8	+0.6
CPCT	Cooper Cave comp=Z,33nm,1.0s	58.68 345	eP	P	12 05 25.0	-0.3
X47A	Russelville baz=159,SNR=13	58.71 341	P	P	12 05 24.7	-0.9
T59A	Double "B" Far baz=170	58.81 351	P	P	12 05 26.1	-0.1
W49A	Belvidere baz=160,SNR=7.9	58.82 343	P	P	12 05 25.9	-0.4
SWET	Sewanee comp=Z,48nm,0.8s	58.82 343	eP	P	12 05 26.1	-0.3
V52A	Sevierville comp=Z,56nm,0.9s	58.83 346	eP	P	12 05 26.2	-0.2
V52A	Sevierville baz=163,SNR=16	58.83 346	P	P	12 05 26.1	-0.2
T60A	Surry baz=171	58.87 352	P	P	12 05 27.6	+1.1
T58A	Grand View Acr baz=169	58.93 351	P	P	12 05 26.8	-0.2
U55A	TA2, Sparta baz=166,SNR=8.7	58.93 348	P	P	12 05 27.5	+0.3
X46A	Booneville baz=158	58.97 341	P	P	12 05 26.4	-0.9
V51A	Loudon baz=162	58.97 345	P	P	12 05 27.0	-0.4
W48A	Pulaski baz=160,SNR=15	59.02 342	P	P	12 05 27.3	-0.4
V50A	Pikevile baz=162,SNR=20	59.03 344	P	P	12 05 27.6	-0.2
435B	Jarrell baz=148	59.07 331	P	P	12 05 28.1	0.0
T57A	Hurt baz=168	59.09 350	P	P	12 05 28.3	+0.1
U54A	Nelsons Funny comp=Z,62nm,0.8s	59.10 347	eP	P	12 05 28.4	+0.2
U54A	Nelsons Funny baz=165,SNR=11	59.10 347	P	P	12 05 28.5	+0.2
U53A	Fall Branch baz=164,SNR=7.4	59.10 347	P	P	12 05 28.0	-0.3
OXF	Oxford baz=157,SNR=11	59.19 340	P	P	12 05 28.0	-0.9
PLAL	Pickwick Lake comp=Z,40nm,1.0s	59.21 341	eP	P	12 05 28.7	-0.3
Z41A	Richland Creek comp=Z,35nm,1.0s	59.23 336	eP	P	12 05 29.9	+0.7
Z41A	Richland Creek baz=153	59.23 336	P	P	12 05 29.6	+0.4
T56A	Rocky Mt baz=167,SNR=7.3	59.25 349	P	P	12 05 29.8	+0.5
U52A	Thorn Hill baz=164	59.31 346	P	P	12 05 29.2	-0.5
W47A	Westpoint baz=159,SNR=6.2	59.32 342	P	P	12 05 29.0	-0.7
V49A	McMinnville baz=161,SNR=20	59.33 343	P	P	12 05 29.4	-0.5
S60A	Water View baz=171	59.41 352	P	P	12 05 28.7	-1.6
U51A	La Follette baz=163	59.44 345	P	P	12 05 30.3	-0.4
W46A	Michie baz=158	59.44 341	P	P	12 05 29.7	-0.9
CCAR	Cane Creek comp=Z,42nm,0.9s	59.45 337	eP	P	12 05 31.4	+0.7
T55A	Pulaski baz=166,SNR=10	59.48 349	P	P	12 05 31.7	+0.8
TZTN	Tazewell baz=163,SNR=6.5	59.49 346	P	P	12 05 30.6	-0.3
S58A	Poland Farm, P baz=169	59.51 351	P	P	12 05 30.9	-0.1
V48A	Smith Brothers comp=Z,48nm,0.9s	59.56 343	eP	P	12 05 31.2	-0.2
V48A	Smith Brothers baz=160,SNR=23	59.56 343	P	P	12 05 31.0	-0.4
T54A	Tazewell baz=166,SNR=6.1	59.57 348	P	P	12 05 31.6	+0.1
U50A	Jamestown baz=162,SNR=14	59.68 345	P	P	12 05 31.8	-0.4
X43A	Marvell baz=156	59.68 339	P	P	12 05 32.3	0.0
T53A	Wise baz=165,SNR=11	59.69 347	P	P	12 05 32.3	-0.1
WLAR	White Oak Lake comp=Z,106nm,0.9s	59.73 336	eP	P	12 05 33.7	+1.1
CLTN	Cedars of Leba comp=Z,28nm,0.9s	59.75 343	eP	P	12 05 32.5	-0.2
S57A	Dark Hollow, R baz=168	59.79 350	P	P	12 05 33.1	+0.2
S56A	Natural Bridge baz=168	59.81 350	P	P	12 05 33.5	+0.4
R58B	Mineral baz=170	59.83 351	P	P	12 05 33.6	+0.4
V47A	Nunnelly baz=159,SNR=8.1	59.84 342	P	P	12 05 32.6	-0.7
JCT	Junction City comp=Z,26nm,0.8s	59.86 329	eP	P	12 05 34.0	+0.3
JCT JCT	Junction City comp=Z,26nm,0.8s	59.86 329	eP pmax	P pmax	12 05 34.0	+0.3
JCT	Junction City baz=146,SNR=13	59.86 329	P	P	12 05 34.0	+0.3
R61A	Willards baz=172	59.88 354	P	P	12 05 34.7	+1.2
T52A	Hallie baz=164,SNR=6.9	59.91 347	P	P	12 05 33.5	-0.3
VNA3	Neumayer Olymp	59.91 161	P	P	12 05 34.0	+0.5
R60A	Leonardtown, M baz=171	59.96 353	P	P	12 05 35.1	+1.1
V46A	Holladay baz=159,SNR=7.9	59.98 342	P	P	12 05 33.1	-1.2
T51A	Gray baz=163,SNR=8.5	59.99 346	P	P	12 05 34.1	-0.2
U49A	Red Boiling Sp baz=161,SNR=10	60.01 344	P	P	12 05 33.9	-0.5
WHTX	Lake Whitney, comp=Z,26nm,0.8s	60.04 332	eP	P	12 05 35.2	+0.5
WHTX	Lake Whitney, baz=148,SNR=7.7	60.04 332	P	P	12 05 35.2	+0.5
S55A	Lewisburg baz=167,SNR=13	60.06 349	P	P	12 05 35.5	+0.7
VNA1	Neumayer--Stat	60.11 161	P	P	12 05 35.7	+0.9
HPIG	comp=Z,22nm,1.1s	60.18 321	eP	P	12 05 36.8	+0.7
U48A	Cassie Pea, Po baz=160,SNR=14	60.20 343	P	P	12 05 35.4	-0.3
WVT	Waverly comp=Z,56nm,0.9s	60.21 342	eP	P	12 05 35.0	-0.8
WVT WVT	Waverly comp=Z,56nm,0.9s	60.21 342	eP pmax	P pmax	12 05 35.0	-0.8
WVT	Waverly baz=159	60.21 342	P	P	12 05 35.0	-0.8
S54A	Dingess, Beckl baz=166,SNR=11	60.24 348	P	P	12 05 36.3	+0.2
R57A	Stanardsville baz=169	60.25 351	P	P	12 05 36.4	+0.3
T50A	Nancy baz=162,SNR=12	60.25 345	P	P	12 05 35.6	-0.5
S53A	Williamson baz=165,SNR=5.4	60.28 347	P	P	12 05 36.1	-0.2
U47A	Clarksville baz=160,SNR=26	60.34 343	P	P	12 05 36.1	-0.6
X40A	Basin Creek Fa baz=154	60.34 337	P	P	12 05 36.2	-0.5
UALR	University of comp=Z,34nm,1.0s	60.42 337	eP	P	12 05 37.3	0.0
S52A	Salyersville baz=164,SNR=6.1	60.48 347	P	P	12 05 37.2	-0.4
VNA2	Neumayer--Watz baz=281,slow=8.5	60.48 161	P	P	12 05 37.8	+0.5
T49A	Edmonton comp=Z,55nm,0.9s	60.50 344	eP	P	12 05 37.5	-0.3
T49A	Edmonton baz=162,SNR=19	60.50 344	P	P	12 05 37.3	-0.5
U46A	Springville baz=159,SNR=8.2	60.52 342	P	P	12 05 37.4	-0.6
R54A	Victor baz=166,SNR=8.9	60.55 349	P	P	12 05 38.5	+0.4
S51A	Beattyville baz=164,SNR=5.6	60.55 346	P	P	12 05 37.8	-0.3
Q59A	Harwood baz=171	60.56 353	P	P	12 05 38.5	+0.4
MIAR	Mount Ida comp=Z,38nm,1.0s	60.67 336	eP	P	12 05 39.2	+0.2
MIAR MIAR	Mount Ida comp=Z,38nm,1.0s	60.67 336	eP pmax	P pmax	12 05 39.2	+0.2
MIAR	Mount Ida baz=153,SNR=17	60.67 336	P	P	12 05 39.2	+0.2
UTMT	University of comp=Z,238nm,1.3s	60.71 341	eP	P	12 05 39.9	+0.7
T48A	Bowling Green baz=161,SNR=9.1	60.73 344	P	P	12 05 38.8	-0.6
W41B	Gary Mavity, V baz=154,SNR=10	60.75 338	P	P	12 05 39.2	-0.3
S50A	Richmond baz=163,SNR=13	60.77 345	P	P	12 05 39.3	-0.3
T47A	Sharon Grove comp=Z,83nm,0.9s	60.81 343	eP	P	12 05 39.5	-0.3
T47A	Sharon Grove baz=160,SNR=24	60.81 343	P	P	12 05 39.4	-0.5
WHAR	Wooly Hollow comp=Z,28nm,1.0s	60.87 338	eP	P	12 05 40.4	+0.1
R53A	Hurricane baz=165,SNR=5.4	60.87 348	P	P	12 05 40.3	0.0
TX31	Lajitas Ar. Si comp=Z,12nm,1.3s	60.91 325	eP	P	12 05 41.5	+0.6
TXAR	Lajitas Array comp=Z,3.9nm,0.8s,baz=148,slow=8.6,SNR=46	60.91 325	P	P	12 05 41.4	+0.5
Q57A	Strasburg baz=169	60.96 351	P	P	12 05 41.3	+0.4
R52A	Catlettsburg baz=165	61.02 347	P	P	12 05 40.6	-0.7
T46A	Princeton baz=159,SNR=24	61.08 342	P	P	12 05 41.2	-0.5
Q56A	Snyder Ridge, baz=165	61.08 350	P	P	12 05 42.4	+0.7
S49A	Springfield baz=162,SNR=7.5	61.09 345	P	P	12 05 41.0	-0.8
S48A	Wiedeman Farm, baz=161,SNR=16	61.16 344	P	P	12 05 41.3	-0.9
Q55A	Buckhannon baz=167,SNR=5.6	61.18 350	P	P	12 05 43.2	+0.8
R51A	Hillsboro baz=164,SNR=8.9	61.18 346	P	P	12 05 42.0	-0.3
T45A	Paducah baz=158,SNR=5.5	61.27 342	P	P	12 05 42.7	-0.3
Q54A	Coxs Mills baz=167	61.30 349	P	P	12 05 43.2	+0.1
Q53A	Leroy baz=166,SNR=10	61.30 348	P	P	12 05 43.4	+0.2
S47A	Hartford baz=160,SNR=11	61.31 343	P	P	12 05 42.4	-0.9
W39A	Magazine comp=Z,41nm,0.9s	61.33 336	eP	P	12 05 44.0	+0.6
W39A	Magazine baz=153,SNR=22	61.33 336	P	P	12 05 44.1	+0.6
R50A	Paris baz=163,SNR=7.4	61.33 346	P	P	12 05 43.0	-0.4
X37A	Clayton comp=Z,35nm,0.9s	61.40 335	eP	P	12 05 44.4	+0.4
R49A	Shelbyville baz=162	61.54 345	P	P	12 05 44.3	-0.5
Q52A	Bidwell baz=165	61.55 348	P	P	12 05 44.6	-0.2
O61A	Allentown baz=173	61.56 355	P	P	12 05 45.0	+0.1
ABTX	Abilene, Hawle comp=Z,31nm,1.0s	61.56 330	eP	P	12 05 45.6	+0.5
ABTX	Abilene, Hawle baz=147,SNR=9.1	61.56 330	P	P	12 05 45.4	+0.3
PBMO	Poplar Bluff comp=Z,37nm,1.0s	61.60 340	eP	P	12 05 44.9	-0.3
S46A	Don Dixon Farm baz=159,SNR=8.7	61.63 343	P	P	12 05 44.5	-0.8
P55A	Reedsville baz=168,SNR=5.5	61.64 350	P	P	12 05 45.9	+0.4
WCI	Wyandotte Cave comp=Z,28nm,0.8s	61.76 344	eP	P	12 05 45.5	-0.8
WCI WCI	Wyandotte Cave comp=Z,28nm,0.8s	61.76 344	eP pmax	P pmax	12 05 45.5	-0.8
WCI	Wyandotte Cave baz=161	61.76 344	P	P	12 05 45.4	-0.8
MCWV	Mont Chateau baz=168,SNR=5.2	61.79 350	P	P	12 05 47.0	+0.6
Q50A	Georgetown baz=163,SNR=8.3	61.79 346	P	P	12 05 45.9	-0.6
R48A	Northridge Ran baz=161	61.81 344	P	P	12 05 46.0	-0.6
Q51A	Peebles comp=Z,25nm,1.0s	61.83 347	eP	P	12 05 46.3	-0.4
Q51A	Peebles baz=164,SNR=6.0	61.83 347	P	P	12 05 46.3	-0.4
USIN	University of comp=Z,39nm,0.9s	61.88 343	eP	P	12 05 46.3	-0.7
R47A	Wooly Knot Far baz=161,SNR=8.9	61.88 344	P	P	12 05 46.1	-1.0
P53A	Whipple baz=166,SNR=9.6	61.89 349	P	P	12 05 47.4	+0.3
O57A	Amberson baz=170	62.01 352	P	P	12 05 49.0	+1.1
U40A	Yellville baz=154,SNR=16	62.03 338	P	P	12 05 47.9	-0.3
R46A	Gibon Southern baz=160,SNR=5.8	62.06 343	P	P	12 05 47.0	-1.3
S44A	Carbondale baz=158,SNR=9.5	62.08 341	P	P	12 05 48.0	-0.4
SIUC	Southern Illin comp=Z,39nm,0.9s	62.09 341	eP	P	12 05 48.0	-0.4
SNAA	Sanae	62.11 161	P	P	12 05 48.7	+0.3
SNAA	Sanae comp=Z,21nm,0.8s,baz=284,slow=7.0,SNR=49	62.11 161	P	P	12 05 48.3	-0.1
SNAA	Sanae comp=Z,24nm,0.8s	62.11 161	eP	P	12 05 48.2	-0.1
SNAA	Sanae	62.11 161	*d iP*	P	12 05 48.4	+0.1
Q49A	Aurora baz=162,SNR=6.2	62.15 346	P	P	12 05 48.2	-0.7
P52A	Corning baz=165,SNR=5.4	62.17 348	P	P	12 05 48.7	-0.3
O56A	Blue Knob Stat baz=169	62.19 351	P	P	12 05 49.1	0.0
P51A	Williamsport comp=Z,47nm,1.3s	62.21 347	eP	P	12 05 48.7	-0.5
P51A	Williamsport baz=164	62.21 347	P	P	12 05 48.6	-0.6
O55A	Ligonier baz=168	62.24 351	P	P	12 05 49.7	+0.2
Q48A	North Vernon baz=162,SNR=6.9	62.28 345	P	P	12 05 49.1	-0.6
HHAR	Hobbs comp=Z,34nm,1.0s	62.35 337	eP	P	12 05 50.4	+0.1
R45A	Skylar, Fairfi baz=159,SNR=13	62.35 342	P	P	12 05 49.4	-0.8
O54A	Avella baz=167	62.38 350	P	P	12 05 50.3	-0.1
SSPA	Standing Stone baz=170	62.46 352	P	P	12 05 50.7	-0.2
Q47A	Bedord North L baz=161,SNR=8.5	62.46 344	P	P	12 05 50.1	-0.8
P50A	Jamestown baz=164,SNR=7.2	62.48 347	P	P	12 05 50.6	-0.5
N57A	Milroy baz=170	62.53 352	P	P	12 05 51.4	0.0
O52A	Adamsville baz=166,SNR=5.3	62.58 348	P	P	12 05 51.6	-0.1
O53A	New Philadelph baz=166	62.59 349	P	P	12 05 51.8	0.0
P49A	Miami Univ. Ec baz=163,SNR=8.5	62.62 346	P	P	12 05 51.1	-0.8

FVM	French Village comp=Z,73nm,1.0s	62.70	341	eP	P	12 05 52.5 -0.1
FVM FVM	French Village comp=Z,73nm,1.0s	62.70	341	eP pmax	P pmax	12 05 52.5 -0.1
BLO	Bloomington comp=Z,27nm,0.8s	62.71	344	eP	P	12 05 51.8 -0.7
BLO BLO	Bloomington comp=Z,27nm,0.8s	62.71	344	eP pmax	P pmax	12 05 51.8 -0.7
P48A	Milroy baz=162	62.71	345	P	P	12 05 51.3 -1.2
OLIL	Olney comp=Z,24nm,0.9s	62.71	343	eP	P	12 05 51.5 -1.1
TUL1	Leonard comp=Z,29nm,1.1s	62.72	335	eP	P	12 05 52.8 0.0
TUL1	Leonard baz=151,SNR=5.4	62.72	335	P	P	12 05 52.5 -0.2
N55A	Marion Center baz=169	62.75	351	P	P	12 05 53.4 +0.5
O51A	Pataskala baz=165,SNR=7.8	62.76	348	P	P	12 05 52.5 -0.4
Q45A	Warren Harvey, baz=159,SNR=13	62.88	343	P	P	12 05 52.7 -1.0
ACSO	Alum Creek Sta comp=Z,43nm,0.9s	62.91	348	eP	P	12 05 53.6 -0.4
ACSO	Alum Creek Sta baz=165,SNR=11	62.91	348	P	P	12 05 53.5 -0.4
P47A	Martinsville baz=161,SNR=7.1	62.94	345	P	P	12 05 53.1 -1.0
WMOK	Wichita Mounta comp=Z,5.0nm,1.0s	62.95	332	eP	P	12 05 54.0 -0.3
WMOK WMOK	Wichita Mounta comp=Z,5.0nm,1.0s	62.95	332	eP pmax	P pmax	12 05 54.0 -0.3
WMOK	Wichita Mounta baz=148	62.95	332	P	P	12 05 53.8 -0.6
O50A	Cable baz=164,SNR=5.1	62.96	347	P	P	12 05 53.7 -0.6
CCM	Cathedral Cave comp=Z,45nm,0.9s	63.02	340	eP	P	12 05 54.4 -0.3
CCM CCM	Cathedral Cave comp=Z,45nm,0.9s	63.02	340	eP pmax	P pmax	12 05 54.4 -0.3
CCM	Cathedral Cave baz=156	63.02	340	P	P	12 05 54.2 -0.5
N53A	Lisbon baz=167,SNR=5.7	63.07	349	P	P	12 05 55.1 +0.1
N54A	Moraine State comp=Z,51nm,1.2s	63.08	350	eP	P	12 05 55.3 +0.3
N54A	Moraine State baz=168,SNR=5.8	63.08	350	P	P	12 05 55.4 +0.4
O49A	Covington comp=Z,38nm,1.1s	63.16	346	eP	P	12 05 54.9 -0.6
O49A	Covington baz=163,SNR=8.5	63.16	346	P	P	12 05 54.9 -0.6
N52A	McGinn's Farm, baz=166	63.23	349	P	P	12 05 55.7 -0.3
P46A	Rosedale baz=160	63.30	344	P	P	12 05 55.2 -1.2
M56A	Emporium baz=170	63.33	352	P	P	12 05 56.6 0.0
P45A	Graceland, Par comp=Z,48nm,0.9s	63.36	343	eP	P	12 05 55.9 -1.0
P45A	Graceland, Par baz=160,SNR=8.2	63.36	343	P	P	12 05 55.7 -1.2
M55A	Ridgway baz=169	63.40	351	P	P	12 05 57.3 +0.1
O48A	Farmland baz=162,SNR=8.2	63.41	346	P	P	12 05 56.3 -0.9
N51A	Ashland baz=165	63.46	348	P	P	12 05 57.0 -0.5
N50A	Nevada baz=164	63.47	348	P	P	12 05 56.7 -0.9
M54A	Oil Creek Stat baz=168,SNR=6.0	63.57	351	P	P	12 05 58.4 +0.1
O47A	Sheridan baz=161	63.63	345	P	P	12 05 57.7 -1.0
M53A	WI Miller and baz=167	63.66	350	P	P	12 05 58.5 -0.3
MNTX	Cornudas Mount comp=Z,16nm,1.0s	63.68	325	eP	P	12 05 59.2 0.0
MNTX	Cornudas Mount baz=141,SNR=28	63.68	325	P	P	12 05 59.0 -0.2
BINY	Binghamton baz=172	63.78	354	P	P	12 05 59.7 +0.1
M51A	Elyria baz=166	63.82	348	P	P	12 05 59.4 -0.5
N49A	Columbus Grove comp=Z,54nm,0.9s	63.83	347	eP	P	12 05 59.3 -0.6
N49A	Columbus Grove baz=163,SNR=13	63.83	347	P	P	12 05 59.4 -0.5
M52A	Chesterland baz=166	63.88	349	P	P	12 05 60.0 -0.2
N48A	Decatur baz=163,SNR=5.7	63.95	346	P	P	12 05 59.9 -0.9
P43A	Skaggs, Pawnee baz=158	63.96	342	P	P	12 05 59.9 -0.9
SFIN	Lafayette comp=Z,18nm,0.9s	63.99	344	eP	P	12 05 59.9 -1.1
SFIN	Lafayette baz=160,SNR=5.8	63.99	344	P	P	12 05 59.6 -1.3
O45A	Potomac baz=160,SNR=6.9	64.03	344	P	P	12 05 59.8 -1.4
M50A	Fremont baz=165	64.06	348	P	P	12 06 01.0 -0.4
L53A	Girard baz=168,SNR=6.1	64.09	350	P	P	12 06 01.6 -0.1
N47A	Urbana baz=162,SNR=7.1	64.12	345	P	P	12 06 00.8 -1.1
O44A	Mansfield baz=159	64.14	343	P	P	12 06 00.5 -1.5
MSTX	Muleshoe comp=Z,54nm,1.0s	64.15	329	eP	P	12 06 02.6 +0.2
MSTX	Muleshoe baz=144,SNR=24	64.15	329	P	P	12 06 02.4 0.0
ERPA	Erie baz=168,SNR=5.8	64.21	350	P	P	12 06 02.3 -0.1
L54A	Sinclairville baz=168,SNR=5.9	64.23	351	P	P	12 06 02.6 +0.1
PLIO	Pelee Island, baz=165	64.31	348	P	P	12 06 02.4 -0.6
M49A	Liberty Center baz=164	64.31	347	P	P	12 06 02.3 -0.8
AMTX	Amarillo comp=Z,25nm,1.3s	64.38	330	eP	P	12 06 03.6 -0.1
AMTX	Amarillo baz=145	64.38	330	P	P	12 06 03.8 +0.1
U32A	Winter Ranch, comp=Z,23nm,1.0s	64.44	333	eP	P	12 06 04.3 +0.3
K54A	Basiliko Farm, baz=169	64.51	352	P	P	12 06 04.6 +0.3
K55A	Perry baz=170	64.54	352	P	P	12 06 04.2 -0.4
M47A	Cromwell baz=162	64.56	346	P	P	12 06 03.8 -0.9
L50A	Kingsville baz=165	64.63	348	P	P	12 06 04.1 -1.0
N44A	Piper City baz=160	64.65	344	P	P	12 06 04.0 -1.3
HDIL	Hopedale comp=Z,30nm,1.1s	64.74	343	eP	P	12 06 05.3 -0.6
HDIL	Hopedale baz=158	64.74	343	P	P	12 06 04.7 -1.2
M46A	Old House Fiel baz=161	64.78	345	P	P	12 06 05.1 -1.0
L48A	N Adams baz=163	64.86	347	P	P	12 06 05.8 -0.9
K52A	Tillsonburg baz=167	64.97	350	P	P	12 06 07.3 0.0
MEDO	Medina baz=170	65.02	352	P	P	12 06 07.5 -0.1
J55A	Hilton baz=170	65.04	352	P	P	12 06 07.3 -0.4
K51A	Iona Station baz=166	65.05	349	P	P	12 06 07.3 -0.5
L47A	Sherwood baz=163,SNR=5.5	65.06	346	P	P	12 06 07.0 -0.9
N43A	Stutzman Famil baz=158	65.07	343	P	P	12 06 06.9 -1.1
TYNO	Tyneside baz=168	65.15	351	P	P	12 06 08.0 -0.5
J54A	Appleton baz=169	65.15	352	P	P	12 06 08.3 -0.1
K50A	Casco baz=165	65.30	349	P	P	12 06 08.3 -1.1
N41A	Harden Midland comp=Z,25nm,0.9s	65.33	341	eP	P	12 06 09.2 -0.5
N41A	Harden Midland baz=157	65.33	341	P	P	12 06 08.8 -0.9
J52A	Paris baz=167,SNR=6.7	65.39	350	P	P	12 06 09.5 -0.5
M43A	Waltham Townsh baz=159	65.47	343	P	P	12 06 09.1 -1.4
319A	Douglas comp=Z,38nm,0.8s	65.59	322	eP	P	12 06 13.1 +1.4
PECO	Prince Edward baz=171	65.60	353	P	P	12 06 10.9 -0.4
121A	Cookes Peak, D baz=140,SNR=14	65.62	324	P	P	12 06 13.7 +1.8
K48A	Perry baz=164,SNR=7.3	65.62	347	P	P	12 06 10.6 -0.9
K47A	Vermontville baz=163	65.67	347	P	P	12 06 10.7 -1.2
ACTO	Acton baz=168	65.68	351	P	P	12 06 11.4 -0.5
N40A	Mertquake, Sal baz=156	65.72	341	P	P	12 06 11.5 -0.6
DRWO	Darlington Wes baz=169	65.75	352	P	P	12 06 12.4 +0.1
WLVO	Wesleyville baz=170	65.76	352	P	P	12 06 12.3 0.0
M41A	Milan baz=157	65.86	342	P	P	12 06 11.9 -1.1
K46A	Dorr baz=162	65.86	346	P	P	12 06 11.4 -1.7
PKRO	Pickering baz=169	65.89	352	P	P	12 06 12.6 -0.6
L44A	Lake County Fo baz=160	65.89	344	P	P	12 06 12.1 -1.2
I55A	Frankford baz=170	65.96	353	P	P	12 06 13.5 -0.1
J49A	Marlette baz=165	65.96	348	P	P	12 06 12.7 -1.0
I51A	Listowel baz=167,SNR=5.7	66.02	350	P	P	12 06 13.2 -0.9
J48A	Bridge Port comp=Z,35nm,0.9s	66.03	348	eP	P	12 06 13.6 -0.5
J48A	Bridge Port baz=164	66.03	348	P	P	12 06 13.4 -0.7
LONY	Lake Ozonia baz=174	66.06	355	P	P	12 06 14.2 -0.1
L43A	Garden Prairie baz=159,SNR=9.8	66.11	344	P	P	12 06 14.1 -0.6
I52A	Shelburne baz=168	66.15	351	P	P	12 06 14.7 -0.2
H56A	Elgin baz=172	66.18	354	P	P	12 06 15.0 0.0
J47A	Sunmer baz=163	66.18	347	P	P	12 06 14.3 -0.8
H55A	Tweed baz=171	66.23	353	P	P	12 06 15.4 0.0
BNM	Barren Site	66.24	326	eP	P	12 06 17.9 +1.9
DELO	Deloro Mine baz=170	66.25	353	P	P	12 06 14.9 -0.6
BASO	Ashfield baz=166	66.33	350	P	P	12 06 15.5 -0.5
BWLO	Walkerton baz=167,SNR=6.3	66.35	350	P	P	12 06 15.6 -0.5
I49A	Point Hope baz=165	66.46	349	P	P	12 06 16.2 -0.7
K43A	Burlington comp=Z,39nm,0.8s	66.49	344	eP	P	12 06 16.6 -0.5
K43A	Burlington baz=160,SNR=7.2	66.49	344	P	P	12 06 16.2 -0.9
BRCO	Bruce Peninsul baz=167	66.52	350	P	P	12 06 16.9 -0.3
H52A	Wyevale baz=168	66.67	351	P	P	12 06 17.7 -0.5
L40A	Anamosa comp=Z,33nm,1.0s	66.69	342	eP	P	12 06 17.8 -0.5
L40A	Anamosa baz=157,SNR=9.8	66.69	342	P	P	12 06 17.7 -0.7
PLVO	Plevna baz=171	66.70	353	P	P	12 06 18.7 +0.3
ANMO	Albuquerque comp=Z,13nm,0.8s	66.77	327	eP	P	12 06 20.2 +0.9
ANMO ANMO ANMO	Albuquerque comp=Z,16nm,0.9s	66.77	327⇓	eP i *PP pmax	P pP pmax	12 06 19.5 +0.2 12 06 49.2 -1.0
ANMO	Albuquerque baz=141	66.77	327	P	P	12 06 20.4 +1.1
TASM	ASL Pad, Albuq baz=141,SNR=24	66.77	327	P	P	12 06 20.6 +1.3
TASM	ASL Pad, Albuq baz=141,SNR=25	66.77	327	P	P	12 06 20.6 +1.3
CBKS	Cedar Bluff comp=Z,51nm,0.9s	66.81	334	eP	P	12 06 20.1 +0.8
CBKS CBKS	Cedar Bluff comp=Z,51nm,0.9s	66.81	334	eP pmax	P pmax	12 06 20.1 +0.8
CBKS	Cedar Bluff baz=148,SNR=6.5	66.81	334	P	P	12 06 20.1 +0.8
BMRO	Meriville Lake baz=167,SNR=6.2	66.82	350	P	P	12 06 18.7 -0.4
K42A	Prairie Point, baz=159,SNR=12	66.83	343	P	P	12 06 18.8 -0.5
I47A	Gladwin baz=164	66.86	347	P	P	12 06 18.7 -0.7
I48A	Sherman Twp baz=164,SNR=6.7	66.87	348	P	P	12 06 18.4 -1.0
G55A	Calabogie baz=171	66.88	354	P	P	12 06 19.2 -0.2
ORIO	Orleans, Innes baz=173	66.96	355	P	P	12 06 19.9 -0.1
G53A	Haliburton baz=170	66.97	352	P	P	12 06 19.2 -0.9
I46A	Reed City baz=163	66.98	347	P	P	12 06 18.8 -1.4
TUC	Tucson comp=Z,34nm,1.4s	67.14	322	eP	P	12 06 22.8 +1.3
TUC TUC	Tucson comp=Z,34nm,1.4s	67.14	322	eP pmax	P pmax	12 06 22.8 +1.3
TUC	Tucson baz=137	67.14	322	P	P	12 06 23.0 +1.5
J43A	Natural Harves baz=160,SNR=6.9	67.15	344	P	P	12 06 20.7 -0.6
SCIA	State Center comp=Z,25nm,0.9s	67.15	340	eP	P	12 06 21.2 -0.1
SCIA	State Center baz=155	67.15	340	P	P	12 06 21.0 -0.3
JFWS	Jewell Farm comp=Z,26nm,0.8s	67.20	343	eP	P	12 06 21.1 -0.5
JFWS JFWS	Jewell Farm comp=Z,26nm,0.8s	67.20	343	eP pmax	P pmax	12 06 21.1 -0.5
JFWS	Jewell Farm baz=158,SNR=8.2	67.20	343	P	P	12 06 21.1 -0.5
J42A	Columbus baz=159	67.27	344	P	P	12 06 21.4 -0.6
H48A	Harrisville baz=165	67.29	349	P	P	12 06 21.3 -0.8
PEMO	Pembroke baz=171	67.35	353	P	P	12 06 22.2 -0.2
BUKO	Buck Lake baz=169,SNR=5.2	67.38	352	P	P	12 06 22.7 0.0
KLBO	Killbear Provi baz=168,SNR=7.4	67.41	351	P	P	12 06 22.5 -0.3
F55A	Otter Lake baz=172	67.42	354	P	P	12 06 22.9 +0.1
TOBO	Tobermory, Bru baz=167	67.49	350	P	P	12 06 22.6 -0.7
T25A	Trinidad comp=Z,15nm,1.0s	67.50	329	eP	P	12 06 24.9 +1.1
T25A	Trinidad baz=144,SNR=6.9	67.50	329	P	P	12 06 24.4 +0.5
H46A	Fife Lake baz=163,SNR=7.9	67.51	347	P	P	12 06 22.5 -1.0
ALGO	Algonquin Park baz=170	67.72	353	P	P	12 06 24.3 -0.4
F52A	Sundridge baz=169	67.72	352	P	P	12 06 24.7 -0.1
I42A	Draeger Farm, baz=159,SNR=7.7	67.75	344	P	P	12 06 24.7 -0.4
G47A	Hillman baz=164	67.85	348	P	P	12 06 25.7 +0.1
LIC	Lamto comp=Z,78nm,1.4s	67.94	74	eP	P	12 06 25.8 -1.1
H43A	Windswept, Lux comp=Z,26nm,0.8s	68.01	345	eP	P	12 06 26.2 -0.4
H43A	Windswept, Lux baz=160,SNR=7.5	68.01	345	P	P	12 06 26.2 -0.4
214A	Organ Pipe Nat baz=135,SNR=12	68.07	320	P	P	12 06 29.5 +2.1
G45A	Suttons Bay baz=162	68.08	347	P	P	12 06 26.4 -0.6
E53A	Dumoine, Ponti baz=170	68.09	353	P	P	12 06 26.8 -0.3
E54A	Lac Daplat, Po baz=171	68.09	353	P	P	12 06 26.7 -0.4
F49A	Sandfield baz=166,SNR=5.2	68.09	350	P	P	12 06 26.2 -0.9
E52A	Mattawa baz=170	68.12	352	P	P	12 06 26.6 -0.7
TIC	Toumodi	68.13	73	eP	P	12 06 27.0 -1.1
G46A	Petoskey baz=163	68.18	348	P	P	12 06 27.0 -0.7
KSCO	Kaye Shedlock' comp=Z,46nm,1.3s	68.21	332	eP	P	12 06 28.9 +0.8
KSCO	Kaye Shedlock' baz=146	68.21	332	P	P	12 06 29.0 +0.8
H42A	Shiocton baz=160,SNR=5.6	68.23	345	P	P	12 06 27.6 -0.4
F48A	Evansville baz=166,SNR=7.1	68.25	349	P	P	12 06 27.7 -0.5
KIC	Kosan Boka comp=Z,41nm,0.7s	68.26	74	eP	P	12 06 27.9 -1.0
DBIC	Dimbokro comp=Z,18nm,0.6s,baz=222,slow=6.3,SNR=19	68.29	73	P	P	12 06 28.4 -0.7
DBIC	Dimbokro comp=Z,19nm,0.8s	68.29	73	eP	P	12 06 28.1 -0.9
DBIC DBIC	Dimbokro comp=Z,19nm,0.8s	68.29	73	eP pmax	P pmax	12 06 28.1 -0.9
X18A	Snowflake comp=Z,25nm,1.4s	68.31	324	eP	P	12 06 30.4 +1.4
BGNE	Belgrade comp=Z,158nm,1.2s	68.42	336	eP	P	12 06 29.6 +0.3
BGNE	Belgrade baz=150,SNR=8.6	68.42	336	P	P	12 06 29.5 +0.3
E51A	G1948 Merrick baz=169	68.47	352	P	P	12 06 29.5 0.0
SDCO	Great Sand Dun comp=Z,21nm,0.9s	68.50	329	eP	P	12 06 30.8 +0.5
SDCO	Great Sand Dun baz=143,SNR=29	68.50	329	P	P	12 06 31.6 +1.3
E50A	Wahnapitae baz=168	68.53	351	P	P	12 06 29.9 +0.1
F46A	Macinaw City C baz=164	68.60	348	P	P	12 06 29.9 -0.4
H41A	Junction City baz=159	68.62	344	P	P	12 06 29.6 -0.8
W18A	Petrified Fore comp=Z,53nm,1.4s	68.63	324	eP	P	12 06 32.0 +1.0
W18A	Petrified Fore baz=139,SNR=11	68.63	324	P	P	12 06 32.6 +1.6
F45A	CMU Biological baz=163	68.66	347	P	P	12 06 30.0 -0.7
QSPA	South Pole Qui comp=Z,21nm,0.5s,baz=252,slow=0.2,SNR=224	68.68	180	P	P	12 06 31.2 +0.4
QSPA	South Pole Qui comp=Z,42nm,1.0s	68.68	180	eP	P	12 06 31.6 +0.8
G43A	Wallace baz=161	68.74	346	P	P	12 06 30.4 -0.7
D54A	Lac Fusel, La baz=172	68.75	354	P	P	12 06 30.4 -0.8
D52A	ZEK Kipawa Sen baz=170,SNR=5.5	68.77	353	P	P	12 06 31.6 +0.3
D53A	Lac Vacive, Po baz=170,SNR=5.8	68.79	353	P	P	12 06 31.4 0.0
E48A	Lockeyer baz=166,SNR=6.5	68.81	350	P	P	12 06 31.4 -0.2
H40A	Chili baz=158,SNR=13	68.82	343	P	P	12 06 31.2 -0.4
E47A	Iron Bridge baz=165,SNR=6.0	68.98	349	P	P	12 06 32.0 -0.6
X16A	Lo Mia Camp, P comp=Z,24nm,1.0s	69.05	323	eP	P	12 06 35.1 +1.5
G41A	Antigo baz=159	69.05	344	P	P	12 06 32.6 -0.5
E46A	Sault Ste Mari baz=164	69.08	348	P	P	12 06 32.5 -0.7
F44A	Big Bay de Noc baz=162	69.13	347	P	P	12 06 32.8 -0.7
S22A	4UR Ranch, Cre comp=Z,5.2nm,0.9s	69.14	328	eP	P	12 06 35.1 +0.9
S22A	4UR Ranch, Cre baz=142,SNR=8.2	69.14	328	P	P	12 06 35.5 +1.3
F43A	Flat Rock, Esc baz=161,SNR=7.3	69.16	346	P	P	12 06 33.1 -0.7
113A	Mohawk Valley, comp=Z,14nm,0.9s	69.22	320	eP	P	12 06 36.0 +1.6
E45A	Wooded Hills, baz=163	69.24	348	P	P	12 06 34.0 -0.2
Q24A	Divide comp=Z,25nm,0.9s	69.31	330	eP	P	12 06 36.0 +0.8
Q24A	Divide baz=143,SNR=13	69.31	330	P	P	12 06 36.4 +1.1
F42A	Maple Grove Fa baz=160	69.31	345	P	P	12 06 34.3 -0.5
G40A	Rib Lake baz=158	69.37	344	P	P	12 06 34.7 -0.4
D49A	Beulah Townshi baz=167,SNR=9.0	69.46	351	P	P	12 06 35.4 -0.1
D47A	Chapleau baz=165,SNR=6.9	69.53	349	P	P	12 06 35.4 -0.6
F41A	Three Lakes baz=159,SNR=15	69.53	345	P	P	12 06 35.7 -0.3
D46A	Sault St. Mari baz=164	69.53	349	P	P	12 06 35.1 -0.9
OGNE	Ogallala baz=146	69.56	333	P	P	12 06 37.1 +0.7
MVCO	Mesa Verde comp=Z,24nm,0.9s	69.56	327	eP	P	12 06 37.8 +1.1
MVCO	Mesa Verde baz=140,SNR=22	69.56	327	P	P	12 06 38.2 +1.4
Y14A	Wickenburg comp=Z,21nm,1.0s	69.60	321	eP	P	12 06 37.9 +1.1
E43A	Lone Tree Farm baz=161,SNR=7.0	69.64	346	P	P	12 06 36.2 -0.4
G39A	Holcombe baz=157,SNR=6.8	69.64	343	P	P	12 06 36.4 -0.3
WUAZ	Wupatki comp=Z,43nm,1.0s	69.82	324	eP	P	12 06 39.8 +1.5
WUAZ	Wupatki baz=137,SNR=34	69.82	324	P	P	12 06 40.4 +2.1
E42A	Champion baz=160,SNR=5.5	69.90	346	P	P	12 06 38.0 -0.3
ECSD	EROS Data Cent comp=Z,26nm,1.4s	69.90	339	eP	P	12 06 38.2 -0.2
ECSD	EROS Data Cent baz=152,SNR=8.4	69.90	339	P	P	12 06 38.3 -0.2
F40A	Park Falls baz=158,SNR=27	69.95	344	P	P	12 06 38.6 0.0
SPMN	Marine on St. baz=156	70.04	342	P	P	12 06 38.9 -0.3
GLA	Glamis baz=134,SNR=7.0	70.05	320	P	P	12 06 41.5 +2.0
F39A	Loretta baz=158,SNR=6.9	70.16	343	P	P	12 06 39.7 -0.2
E41A	Kenton baz=160	70.17	345	P	P	12 06 39.1 -0.9
ISCO	Idaho Springs comp=Z,10nm,1.0s	70.19	330	eP	P	12 06 41.3 +0.7
ISCO ISCO	Idaho Springs comp=Z,10.0nm,1.0s	70.19	330	eP pmax	P pmax	12 06 41.3 +0.7
ISCO	Idaho Springs baz=143,SNR=9.2	70.19	330	P	P	12 06 41.9 +1.2
PV01	Paradox Valley comp=Z,17nm,1.0s	70.31	327	eP	P	12 06 42.2 +0.9
SMCO	Snowmass comp=Z,13nm,0.9s	70.34	329	eP	P	12 06 43.1 +1.4
Y12C	Blythe comp=Z,36nm,1.0s	70.36	320	eP	P	12 06 43.3 +1.9
Y12C	Blythe baz=134,SNR=12	70.36	320	P	P	12 06 43.6 +2.2
E40A	Wakefield baz=159,SNR=16	70.39	344	P	P	12 06 41.4 +0.2
F37A	Hinrichs Farm, baz=156,SNR=5.6	70.45	342	P	P	12 06 41.3 -0.3
F38A	Pierce - Schro baz=157,SNR=6.5	70.45	343	P	P	12 06 41.7 0.0
E39A	Mellen baz=158,SNR=13	70.49	344	P	P	12 06 41.8 -0.1
PDMCI	Parker Dam,Lak baz=135	70.52	321	P	P	12 06 44.2 +1.9
IKP	In-Ko-Pah, Jac baz=133,SNR=12	70.56	319	P	P	12 06 45.0 +2.3
SWSC	Sam W. Stewart baz=133	70.57	319	P	P	12 06 44.1 +1.5
D41A	Chassel	70.64	346	P	P	12 06 42.9 +0.1

baz=160,SNR=9.0
LSQQ Lebel-sur-Quev 70.67 354 P P 12 06 42.8 -0.1
baz=171
BC3 Big Chuckawall 70.85 320 P P 12 06 46.5 +2.0
baz=134,SNR=24
MONP2 Monument Peak 70.92 319 P P 12 06 47.1 +2.1
baz=133,SNR=10
W13A Hualapai Mount 70.94 322 eP P 12 06 47.0 +1.9
comp=Z,14nm,0.8s
E38A The Farm, Brul 70.96 343 eP P 12 06 44.6 -0.1
comp=Z,23nm,1.2s
E38A The Farm, Brul 70.96 343 P P 12 06 44.1 -0.6
baz=157,SNR=6.9
U15A North Rim 70.99 324 eP P 12 06 47.7 +2.2
comp=Z,34nm,1.0s
IRM Iron Mountain 71.01 320 P P 12 06 47.5 +2.1
baz=134,SNR=25
N23A Red Feather La 71.22 331 P P 12 06 48.2 +1.4
baz=143,SNR=8.2
CHGQ Chibougamau 71.30 356 P P 12 06 46.6 -0.1
baz=174,SNR=6.9
PHWY Pilot Hill 71.33 331 eP P 12 06 48.2 +0.7
comp=Z,23nm,1.4s
109C Camp Elliot, M 71.33 318 P P 12 06 49.0 +1.8
baz=132
BELC Belle Mtn. Jos 71.41 320 P P 12 06 49.9 +2.0
baz=134,SNR=15
MATQ Matagami 71.43 354 P P 12 06 47.0 -0.5
baz=171,SNR=5.9
PFO Pinyon Flats O 71.43 319 eP P 12 06 49.7 +1.7
comp=Z,18nm,0.9s
PFO Pinyon Flats O 71.43 319 eP P 12 06 49.7 +1.7
PFO pmax pmax
comp=Z,18nm,0.9s
PFO Pinyon Flats O 71.43 319 P P 12 06 49.8 +1.8
baz=133,SNR=11
C40A Isle Royale Na 71.58 345 eP P 12 06 48.2 -0.2
comp=Z,15nm,0.8s
C40A Isle Royale Na 71.58 345 P P 12 06 48.3 -0.2
baz=160,SNR=14
LDFC Landfair 71.63 321 eP P 12 06 51.6 +2.4
comp=Z,42nm,0.9s
O20A White River Ci 71.70 329 eP P 12 06 50.4 +0.8
comp=Z,27nm,0.9s
O20A White River Ci 71.70 329 P P 12 06 51.2 +1.6
baz=141,SNR=20
KNB Kanab 71.71 324 eP P 12 06 51.0 +1.3
comp=Z,75nm,1.0s
KNB Kanab 71.71 324 eP P 12 06 51.1 +1.3
KNB pmax pmax
comp=Z,75nm,1.0s
GMRC Granite Mounta 71.75 320 P P 12 06 52.1 +2.2
baz=134,SNR=38
MURC Murrieta 71.87 319 P P 12 06 52.6 +2.1
baz=132,SNR=5.6
SRU San Rafael Swe 72.05 327 eP P 12 06 52.8 +1.1
comp=Z,32nm,0.8s
SRU San Rafael Swe 72.05 327 eP P 12 06 52.8 +1.1
SRU pmax pmax
comp=Z,32nm,0.8s
BBRC Big Bear Solar 72.15 319 P P 12 06 54.9 +2.4
baz=133,SNR=7.2
HEC Hector,Ludlow 72.18 320 P P 12 06 55.0 +2.5
baz=133,SNR=6.6
EYMN Ely 72.19 344 eP P 12 06 51.5 -0.6
comp=Z,15nm,0.8s
EYMN Ely 72.19 344 P P 12 06 51.4 -0.6
baz=157,SNR=15
SCI2 San Clemente I 72.30 317 P P 12 06 55.2 +2.1
baz=131
TUQ Turquoise Moun 72.36 321 P P 12 06 55.6 +2.0
baz=134,SNR=13
P17A Butcher Ranch, 72.43 327 eP P 12 06 55.3 +1.4
comp=Z,35nm,0.9s
CIS Catalina Islan 72.49 318 P P 12 06 55.7 +1.5
baz=132
BFSC Mount Baldy Ra 72.58 319 P P 12 06 56.8 +1.9
baz=132,SNR=15
RRX Edison Barstow 72.61 320 P P 12 06 56.9 +2.0
baz=133
FMP Fort Macarthur 72.62 318 P P 12 06 57.0 +2.1
baz=132
SHPR Sheep Range 72.66 322 eP P 12 06 57.0 +1.6
comp=Z,17nm,0.9s
GSC Goldstone, Bar 72.79 320 eP P 12 06 57.2 +1.1
comp=Z,22nm,1.0s
GSC Goldstone, Bar 72.79 320 eP P 12 06 57.2 +1.1
GSC pmax pmax
comp=Z,22nm,1.0s
GSC Goldstone, Bar 72.79 320 P P 12 06 58.2 +2.2
baz=133,SNR=18
K22A Casper 72.88 332 eP P 12 06 57.3 +0.7
comp=Z,10.0nm,1.0s
K22A Casper 72.88 332 P P 12 06 57.7 +1.2
baz=143,SNR=5.9
SHOC Shoshone, Teco 72.89 321 P P 12 06 58.3 +1.8
baz=134,SNR=8.9
DECC Green Verdugo 73.01 318 P P 12 06 59.3 +2.0
baz=132
RSSD Black Hills 73.02 334 eP P 12 06 57.8 +0.5
comp=Z,12nm,1.0s
RSSD Black Hills 73.02 334 eP P 12 06 57.8 +0.5
RSSD pmax pmax
comp=Z,12nm,1.0s
RSSD Black Hills 73.02 334 P P 12 06 58.3 +1.0
baz=145
EDW2 Edwards Air Fo 73.22 319 P P 12 07 00.2 +1.7
baz=132,SNR=19
BLG Laguna Peak, P 73.37 318 P P 12 07 00.9 +1.5
baz=131
PSUT Pine Spring 73.38 324 eP P 12 07 00.7 +1.1
comp=Z,20nm,0.8s
LRMC Laurel Mtn Rad 73.43 320 P P 12 07 01.6 +1.7
baz=132,SNR=12
OSI Osito Audit: C 73.49 319 P P 12 07 01.6 +1.5
baz=132
TPNV Topopah Spring 73.60 322 eP P 12 07 02.3 +1.4
comp=Z,28nm,0.9s
TPNV Topopah Spring 73.60 322 eP P 12 07 02.3 +1.4
TPNV pmax pmax
comp=Z,28nm,0.9s
TPNV Topopah Spring 73.60 322 P P 12 07 03.1 +2.3
baz=134,SNR=32
FURC Furnace Creek, 73.62 321 P P 12 07 03.0 +2.2
baz=133,SNR=36
JLU Jordanelle 73.63 327 eP P 12 07 02.2 +1.1
comp=Z,20nm,0.8s
SCZ2 Santa Cruz Isl 73.65 318 P P 12 07 02.5 +1.5
baz=131
MPMC Manual Prospec 73.71 320 P P 12 07 03.2 +1.7
baz=133,SNR=18
AGMN Agassiz Nation 73.72 341 eP P 12 07 01.1 0.0
comp=Z,12nm,0.8s
AGMN Agassiz Nation 73.72 341 P P 12 07 00.8 -0.3
baz=153,SNR=6.8
ARVC Arvin 73.89 319 P P 12 07 04.3 +1.9
baz=132
TCUT Toone Canyon 74.00 328 eP P 12 07 04.7 +1.4
comp=Z,18nm,0.8s
DUG Dugway, Tooele 74.03 326 eP P 12 07 04.8 +1.5
comp=Z,17nm,0.9s
DUG Dugway, Tooele 74.03 326 P P 12 07 05.2 +1.9
baz=137,SNR=18
ISA Isabella, Lake 74.03 319 eP P 12 07 04.7 +1.4
comp=Z,28nm,0.8s
ISA Isabella, Lake 74.03 319 eP P 12 07 04.7 +1.4
ISA pmax pmax
comp=Z,28nm,0.8s
ISA Isabella, Lake 74.03 319 P P 12 07 05.5 +2.1
baz=132,SNR=35
R11A Troy Canyon, C 74.20 323 eP P 12 07 06.0 +1.6
comp=Z,21nm,1.1s
R11A Troy Canyon, C 74.20 323 P P 12 07 06.5 +2.1
baz=135,SNR=30
GRAC Grapevine Rang 74.28 321 P P 12 07 06.8 +2.1
baz=133
CWC Cottonwood Cre 74.32 320 P P 12 07 06.8 +1.7
baz=132
PKM Mcpherson Peak 74.34 318 P P 12 07 07.4 +2.1
baz=131,SNR=24
BW06 Boulder Array 74.36 330 eP P 12 07 05.9 +0.6
comp=Z,12nm,1.4s
BW06 Boulder Array 74.36 330 P P 12 07 05.9 +0.6
baz=140,SNR=8.4
PD31 Pinedale Array 74.36 330 eP P 12 07 06.0 +0.8
comp=Z,11nm,1.4s
PDAR Pinedale Array 74.36 330 P P 12 07 05.5 +0.3
comp=Z,2.4nm,0.7s,baz=152,slow=6.7,SNR=20

HWUT Hardware Ranch 74.44 328 eP P 12 07 06.7 +0.9
comp=Z,11nm,0.8s
MDND Maddock 74.51 339 eP P 12 07 06.5 +0.8
comp=Z,62nm,0.9s
MDND Maddock 74.51 339 P P 12 07 06.4 +0.6
baz=150
VES Vestal, Richgr 74.52 319 P P 12 07 08.0 +2.0
baz=132,SNR=16
BGU Big Grassy Mou 74.68 327 eP P 12 07 08.3 +1.3
comp=Z,15nm,1.0s
SMMC Simmler 74.73 318 P P 12 07 09.7 +2.4
baz=131,SNR=14
TIN Tinemaha, Big 74.82 321 P P 12 07 09.8 +1.9
baz=132
AHID Auburn Hatcher 75.09 329 eP P 12 07 10.4 +1.0
comp=Z,28nm,0.8s
PAGB Antelope Grade 75.16 319 eP P 12 07 11.1 +1.3
comp=Z,22nm,0.8s
REDW Red Top Meadow 75.42 329 eP P 12 07 12.4 +1.1
comp=Z,17nm,0.9s
ULM Lac du Bonnet 75.47 342 P P 12 07 10.8 -0.4
comp=Z,8.5nm,0.6s,baz=160,slow=5.5,SNR=9.8
MLAC Mammoth, Mammo 75.57 321 P P 12 07 14.0 +1.7
baz=132
TPAW Teton Pass 75.57 329 eP P 12 07 13.7 +1.4
comp=Z,18nm,0.9s
ELK Elko 75.70 325 P P 12 07 14.4 +1.3
comp=Z,10nm,0.9s,baz=136,slow=4.2,SNR=44
ELK Elko 75.70 325 eP P 12 07 14.3 +1.3
comp=Z,12nm,0.9s
ELK Elko 75.70 325 eP P 12 07 14.3 +1.3
ELK pmax pmax
comp=Z,12nm,0.9s
NV11 Mina Array Sit 75.71 322 eP P 12 07 14.2 +1.2
comp=Z,1.0nm,1.0s
FXWY Fox Creek 75.72 330 eP P 12 07 14.1 +1.0
comp=Z,9.9nm,1.0s
NV01 Mina Array Sit 75.80 322 eP P 12 07 15.3 +1.7
NVAR Mina Array Bea 75.80 322 P P 12 07 15.3 +1.7
comp=Z,9.8nm,0.9s,baz=152,slow=6.8,SNR=56
FLWY Flagg Ranch 75.90 330 eP P 12 07 15.3 +1.2
comp=Z,34nm,0.9s
LAO LASA Array 76.00 334 P P 12 07 15.3 +0.9
baz=144
SCHQ Schefferville 76.05 1 P P 12 07 14.1 -0.3
comp=Z,13nm,0.8s,baz=170,slow=3.4,SNR=6.8
RLMT Red Lodge 76.05 331 P P 12 07 16.0 +1.2
baz=141
RYN Ryan 76.06 322 eP P 12 07 16.5 +1.6
comp=Z,16nm,1.0s
H17A Grant Village 76.08 330 P P 12 07 17.0 +1.9
baz=140
KVN Kaiserville 76.10 322 eP P 12 07 16.4 +1.2
comp=Z,25nm,0.8s
KVN Kaiserville 76.10 322 eP P 12 07 16.4 +1.2
KVN pmax pmax
comp=Z,25nm,0.8s
LKWY Lake 76.13 330 eP P 12 07 17.0 +1.6
comp=Z,20nm,0.9s
LKWY Lake 76.13 330 eP P 12 07 17.0 +1.6
LKWY pmax pmax
comp=Z,20nm,0.9s
WAKR Walker 76.50 321 eP P 12 07 19.3 +1.7
comp=Z,35nm,1.5s
YHH Holmes Hill 76.51 330 eP P 12 07 19.2 +1.6
comp=Z,32nm,1.1s
DGMT Dagmar 76.67 336 eP P 12 07 19.4 +1.3
comp=Z,28nm,0.9s
DGMT Dagmar 76.67 336 P P 12 07 19.1 +1.0
baz=146
GCMT Greycliff 76.75 332 eP P 12 07 20.0 +1.3
CMB Columbia Colle 76.75 320 eP P 12 07 19.9 +1.1
comp=Z,8.2nm,1.1s
CMB Columbia Colle 76.75 320 eP P 12 07 19.9 +1.1
CMB pmax pmax
comp=Z,8.0nm,1.1s
QLMT Earthquake Lak 76.81 330 eP P 12 07 20.6 +1.4
VNDA Vanda 76.92 190 P P 12 07 20.1 +1.0
comp=Z,3.5nm,0.9s,baz=136,slow=5.9,SNR=10
VNDA Vanda 76.92 190 eP P 12 07 20.6 +1.5
comp=Z,4.5nm,0.9s
VNDA Vanda 76.92 190 eP P 12 07 20.6 +1.5
VNDA pmax pmax
comp=Z,5.0nm,0.9s
TOA0 Torodi Ar. Sit 76.92 70 eP P 12 07 19.3 -0.8
comp=Z,46nm,0.8s
TORD Torodi Ar. Bea 76.92 70 P P 12 07 18.5 -1.7
comp=Z,38nm,0.8s,baz=251,slow=3.8,SNR=115
PNTR Pine Nut 76.99 322 eP P 12 07 22.4 +2.1
comp=Z,28nm,0.8s
PAHR Pah Rah Range 77.28 322 eP P 12 07 23.7 +1.9
comp=Z,56nm,0.8s
HLID Hailey 77.31 328 eP P 12 07 23.1 +1.2
comp=Z,31nm,0.9s
HLID Hailey 77.31 328 P P 12 07 24.1 +2.2
baz=137,SNR=64
BOZ Bozeman (W) 77.48 330 eP P 12 07 23.7 +0.9
comp=Z,14nm,1.4s
BOZ Bozeman (W) 77.48 330 eP P 12 07 23.7 +0.9
BOZ pmax pmax
comp=Z,14nm,1.4s
BOZ Bozeman (W) 77.48 330 P P 12 07 24.1 +1.3
baz=139,SNR=12
AFDM Forest Hills D 77.70 321 eP P 12 07 25.2 +1.2
comp=Z,16nm,0.9s
DLMT Dillon 77.75 330 eP P 12 07 25.6 +1.2
comp=Z,29nm,1.4s
ORV Oroville 78.40 321 eP P 12 07 29.5 +1.7
comp=Z,46nm,1.1s
ORV Oroville 78.40 321 eP P 12 07 29.5 +1.7
ORV pmax pmax
comp=Z,46nm,1.1s
HRY Holter Researc 78.42 331 eP P 12 07 29.2 +1.3
EGMT Eagleton 78.52 333 eP P 12 07 29.1 +0.7
comp=Z,27nm,1.3s
EGMT Eagleton 78.52 333 P P 12 07 29.2 +0.7
baz=141,SNR=7.5
O03E Paynes Creek 79.06 321 P P 12 07 32.1 +0.5
baz=130,SNR=8.2
PLID Pearl Lake 79.19 328 eP P 12 07 33.4 +1.1
comp=Z,29nm,0.8s
MOD Modoc Plateau 79.26 323 eP P 12 07 34.1 +1.4
comp=Z,26nm,0.9s
MSO Missoula 79.47 330 P P 12 07 35.3 +1.7
baz=137,SNR=11
O02D Mt. Diablo Mer 79.56 321 P P 12 07 35.0 +0.7
baz=130
TSUM Tsumeb 79.59 107 eP P 12 07 34.3 -0.7
comp=Z,22nm,0.9s
WDC Whiskeytown Da 79.67 321 eP P 12 07 34.8 0.0
comp=Z,20nm,0.6s
WDC Whiskeytown Da 79.67 321 eP P 12 07 34.8 0.0
WDC pmax pmax
comp=Z,20nm,0.6s
BMO Blue Mountains 79.68 327 eP P 12 07 35.6 +0.8
comp=Z,26nm,0.9s
N02D Trinity Center 80.02 321 P P 12 07 37.1 +0.4
baz=130,SNR=5.6
M04C Macdoel 80.05 322 P P 12 07 38.2 +1.3
baz=130,SNR=15
I07A Izee 80.29 325 eP P 12 07 39.6 +1.4
comp=Z,22nm,1.0s
M02C Callahan 80.38 322 P P 12 07 39.6 +0.9
baz=130
YBH Yreka Blue Hor 80.51 322 P P 12 07 39.6 +0.2
comp=Z,6.5nm,0.7s,baz=95,slow=2.1,SNR=19
K04D Chiloquin, OR 80.55 323 P P 12 07 40.9 +1.4
baz=131
L04D Klamath Falls 80.59 323 P P 12 07 40.7 +0.9
baz=130
J05D Fort Rock, OR 80.69 324 P P 12 07 41.9 +1.6
baz=131,SNR=14
G08A Pilot Rock 80.83 326 eP P 12 07 41.9 +0.8
comp=Z,8.7nm,0.8s
PINE Pine Mountain 80.87 324 eP P 12 07 42.9 +1.6
comp=Z,42nm,0.8s
WALA Waterton Lakes 81.11 332 eP P 12 07 43.3 +1.0
comp=Z,14nm,0.8s
J04D Umpqua Nationa 81.15 323 P P 12 07 44.1 +1.2
baz=130,SNR=6.7
FFC Flin Flon 81.20 341 eP P 12 07 42.8 +0.2
comp=Z,17nm,1.2s
FFC Flin Flon 81.20 341 eP P 12 07 42.8 +0.2
FFC pmax pmax
comp=Z,17nm,1.2s
L02E Cave Junction 81.30 322 P P 12 07 44.6 +1.2
baz=129
I05D Terrebonne, OR 81.44 325 P P 12 07 46.1 +1.9

baz=131,SNR=20
K02D Willamette Mer 81.67 322 P P 12 07 47.1 +1.6
baz=129,SNR=5.2
I04A Tendick Farm, 81.67 324 P P 12 07 46.0 +0.6
baz=130
PCVE Castro Verde 81.73 44 eP P 12 07 47.1 +1.3
HAWA Hanford 81.88 327 eP P 12 07 47.6 +1.3
comp=Z,24nm,0.9s
NEW Newport 82.00 330 P P 12 07 47.3 +0.4
comp=Z,3.4nm,0.9s,baz=152,slow=5.1,SNR=6.5
NEW Newport 82.00 330 eP P 12 07 47.4 +0.4
comp=Z,16nm,1.4s
NEW Newport 82.00 330 eP P 12 07 47.4 +0.4
NEW pmax pmax
comp=Z,16nm,1.4s
NEW Newport 82.00 330 P P 12 07 47.4 +0.4
baz=135,SNR=5.7
G05D Wamic, OR 82.03 325 P P 12 07 49.2 +1.9
baz=131,SNR=5.3
J01E Myrtle Point 82.12 322 P P 12 07 48.8 +1.2
baz=129
C09A Chrisman Ranch 82.22 329 eP P 12 07 49.1 +1.0
comp=Z,44nm,0.8s
H04D Lebanon 82.32 324 P P 12 07 49.3 +0.6
baz=130
PMTG Montargil 82.44 43 eP P 12 07 50.4 +1.0
F05D White Salmon 82.53 326 P P 12 07 51.3 +1.6
baz=131
I02D Swisshome 82.67 323 P P 12 07 51.9 +1.4
baz=129
BOSA Boshof 83.03 118 P P 12 07 52.4 -0.7
comp=Z,19nm,0.8s,baz=246,slow=4.1,SNR=24
BOSA Boshof 83.03 118 eP P 12 07 52.6 -0.5
comp=Z,24nm,0.9s
BOSA Boshof 83.03 118 eP P 12 07 52.6 -0.5
BOSA pmax pmax
comp=Z,24nm,0.9s
LTY Liberty 83.04 327 eP P 12 07 53.2 +0.8
comp=Z,16nm,1.0s
MTE Manteigas 83.64 42 eP P 12 07 56.4 +0.7
D05A Enumclaw 83.66 326 eP P 12 07 56.5 +0.9
comp=Z,30nm,0.9s
PVRL Vila Real 84.03 41 eP P 12 07 58.2 +0.5
POLO Lamas de Olo 84.04 41 eP P 12 07 58.1 +0.3
comp=Z,12nm,1.6s
D04E Lakebay 84.06 326 P P 12 07 58.9 +1.4
baz=130
PCAB Cabril 84.09 41 eP P 12 07 58.4 +0.5
comp=Z,36nm,1.8s
MAW Mawson 84.18 163 P P 12 07 58.6 +0.7
comp=Z,15nm,0.8s,baz=213,slow=6.4,SNR=36
MAW Mawson 84.18 163 eP P 12 07 58.5 +0.5
comp=Z,2.8nm,0.8s
MAW Mawson 84.18 163 eP P 12 07 58.5 +0.5
MAW pmax pmax
comp=Z,3.0nm,0.8s
B06A Marblemount 84.29 328 eP P 12 07 59.1 +0.5
comp=Z,22nm,0.8s
MVO Moncorvo 84.39 42 eP P 12 07 59.8 +0.3
comp=Z,24nm,1.3s
TAM Tamanrasset 84.41 63 eP P 12 07 59.4 -0.7
comp=Z,8.2nm,1.0s
TAM Tamanrasset 84.41 63 eP P 12 07 59.4 -0.7
TAM pmax pmax
comp=Z,8.0nm,1.0s
B05A Bryant 84.42 327 P P 12 07 59.7 +0.3
baz=131,SNR=6.8
D03D Eldon 84.46 326 P P 12 07 59.5 0.0
baz=130
LBTB Lobatse 84.59 115 eP P 12 08 00.8 -0.2
comp=Z,30nm,0.7s
LBTB Lobatse 84.59 115 eP P 12 08 00.8 -0.2
LBTB pmax pmax
comp=Z,30nm,0.7s
PBRG Braganca 84.94 41 eP P 12 08 02.6 +0.4
comp=Z,24nm,1.2s
PAB San Pablo 85.20 44 eP P 12 08 03.7 +0.1
comp=Z,17nm,0.8s
PAB San Pablo 85.20 44 eP P 12 08 03.7 +0.1
PAB pmax pmax
comp=Z,17nm,0.8s
ESDC Sonseca Array 85.52 44 P P 12 08 05.1 0.0
comp=Z,7.7nm,0.9s,baz=245,slow=4.9,SNR=26
ESLA Sonseca Array 85.52 44 eP P 12 08 05.2 0.0
comp=Z,12nm,1.0s
LLLB Lillooet 85.87 329 eP P 12 08 07.1 +0.6
comp=Z,21nm,0.9s
LSZ Lusaka 90.44 107 eP P 12 08 29.2 -0.1
comp=Z,11nm,1.0s
LSZ Lusaka 90.44 107 eP P 12 08 29.3 -0.1
LSZ pmax pmax
comp=Z,11nm,1.0s
YKA Yellowknife Ar 91.36 340 P P 12 08 32.7 +0.5
comp=Z,26nm,0.7s,baz=133,slow=4.5,SNR=116
YKB5 Yellowknife Ar 91.36 340 eP P 12 08 32.7 +0.5
YKW3 Yellowknife Ar 91.41 340 eP P 12 08 32.9 +0.4
comp=Z,33nm,0.7s
CASY Casey 92.47 180 eP P 12 08 38.4 +0.9
comp=Z,16nm,0.9s
KEST Kesra 92.94 53 P P 12 08 40.3 0.0
comp=Z,3.3nm,0.8s,baz=287,slow=6.7,SNR=4.0
DLBC Dease Lake 94.44 332 P P 12 08 46.8 +0.2
comp=Z,3.8nm,0.8s,baz=88,slow=6.2,SNR=7.2
DOU Dourbes 95.95 38 pP pP 12 09 21.1 -4.8
KIP Kipapa 97.27 290⇑ eP P 12 09 00.3 0.0
MBAR Mbarara 98.29 94⇑ eP P 12 09 03.5 -1.8
MBAR pmax pmax
comp=Z,4.0nm,1.2s
INK Inuvik 101.12 340 P Pdif 12 09 16.8 +0.5
comp=Z,2.2nm,0.8s,baz=106,slow=6.2,SNR=12
VYHS Vyhne 104.03 43 eP Pdif 12 09 29.6 -0.2
VYHS Vyhne 104.03 43 ePDIF Pdif 12 09 29.6 -0.2
KLMR Klimovskoe 117.27 32 ePKIKP PKPdf 12 14 10.3 -0.8
KLMR pmax pmax
comp=Z,5.0nm,1.0s
KIV Kislovodsk 119.62 51 ePKIKP PKPdf 12 14 15.5 -0.8
KIV pmax pmax
comp=Z,17nm,1.1s
STKA Stephens Creek 119.63 209 PKP PKPdf 12 14 16.5 -0.2
comp=Z,2.0nm,0.7s,baz=319,slow=3.9,SNR=4.1
STKA Stephens Creek 119.63 209 ePKPdf PKPdf 12 14 16.3 -0.5
KBZ Khabaz 119.76 51 PKP PKiKP 12 14 16.8 +0.3
comp=Z,3.9nm,0.9s,baz=56,slow=1.7,SNR=6.4
BILL Bilibino 122.71 339⇑ iPKIKP PKiKP 12 14 22.3 +0.7
ARU Arti 127.90 34 ePKPdf PKPdf 12 14 31.7 +0.1
ARU Arti 127.90 34 i PKIKP PKiKP 12 14 32.5 +0.2
ARU 12 16 35.3
ARU 12 21 32.0
ARU SS SS 12 33 34.8 -4.1
TIXI Tiksi 128.87 353 ePKPdf PKPdf 12 14 32.8 -0.3
TIXI Tiksi 128.87 353⇑ iPKIKP PKPdf 12 14 33.1 0.0
TIXI pmax pmax
comp=Z,7.0nm,2.5s
ASAR Alice Springs 130.11 207 PKP PKPdf 12 14 37.4 +0.3
comp=Z,6.8nm,0.9s,baz=149,slow=2.4,SNR=39
AS31 Alice Springs 130.11 207 ePKPdf PKPdf 12 14 37.2 +0.1
SEY Seymchan 130.30 337 PKP PKiKP 12 14 36.6 -0.2
comp=Z,5.8nm,0.8s,baz=153,slow=2.9,SNR=18
SEY Seymchan 130.30 337⇑ iPKIKP PKiKP 12 14 37.5 +0.6
ABKAR Akbulak array 130.84 43 ePKPdf PKiKP 12 14 38.4 0.0
GEYT Alibeck 131.41 58 PKP PKPdf 12 14 39.4 +0.4
comp=Z,1.1nm,0.3s,baz=47,slow=20,SNR=5.0
PEA1 Petropavlovsk- 132.85 324 ePKPdf PKiKP 12 14 42.2 -0.2
PETK Petropavlovsk- 132.85 324 PKP PKiKP 12 14 42.2 -0.2
comp=Z,5.2nm,0.9s,baz=98,slow=7.6,SNR=5.2
MA2 Magadan 132.94 334⇓ i PKIKP PKiKP 12 14 42.2 -0.1
MA2 pmax pmax
comp=Z,18nm,2.5s
WR1 Warramunga Arr 133.18 210 ePKPdf PKPdf 12 14 43.1 +0.2
WRA Warramunga Arr 133.18 210 PKP PKPdf 12 14 43.1 +0.2
comp=Z,4.7nm,0.7s
WRAB Tennant Creek 133.18 210⇑ iPKIKP PKiKP 12 14 44.6 +0.5
WRAB pmax pmax
comp=Z,26nm,2.5s
BRVK Borovoye 135.47 35 ePKPdf PKPdf 12 14 46.9 +0.8
BRVK Borovoye 135.47 35 d iPKIKP PKiKP 12 14 47.2 -0.5
NVS Novosibirsk 140.48 26 ePKIKP PKPdf 12 14 55.9 +0.7
KURK Kurchatov 141.08 33 ePKPdf PKPdf 12 14 56.2 -0.2
KURK Kurchatov 141.08 33 d iPKIKP PKPdf 12 14 57.3 +0.8
KURK pmax pmax
comp=Z,3.0nm,0.8s
ZAA0 Zalesovo Array 141.77 25 ePKPdf PKPdf 12 14 57.3 -0.2
ZALV Zalesovo Beam 141.77 25 PKhKP PKPpre 12 14 52.0
comp=Z,3.5nm,0.7s,baz=294,slow=4.6,SNR=11
ZALV PKP PKPdf 12 14 58.9 +1.3
comp=Z,10nm,0.8s,baz=298,slow=2.4,SNR=14

AAK	Ala-Archa	142.57	47	*e*PKPdf	PKPdf	12 14 60.0	+0.3
AAK	Ala-Archa	142.57	47	*e*PKIKP	PKPdf	12 15 00.0	+0.3
NIL	Nilore	144.13	62	*e*PKPdf	PKPab	12 15 00.3	-0.1
NIL	Nilore	144.13	62	*e*PKIKP	PKPab	12 15 00.3	-0.1
YSS	Yuzh-Sakhalins	144.24	323	PKIKP	PKPbc	12 15 01.2	+0.5
KSH	Kashi	144.75	51	PKP	PKPbc	12 15 02.8	+0.1
KSH				pPKP	pPKPdf	12 15 29.7	-7.5
KSH				PP	PP	12 18 22.9	+1.1
KSH				SKKS		12 25 02.7	
KSH				AMB	AMB		
	comp=Z,260nm,5.5s						
KSH				LR	LR		
	comp=Z,97nm,8.3s						
KSH				LR	LR		
	comp=Z,190nm,7.2s						
KSH				LR	LR		
	comp=Z,190nm,17.0s						
GRNR	Gornyy	144.92	332	*e*PKIKP	PKPdf	12 15 03.8	+0.5
GRNR				pmax	pmax		
	comp=Z,78nm,1.0s						
MAKZ	Makanchi	145.19	36	*e*PKPbc	PKPdf	12 15 03.9	0.0
MAKZ	Makanchi	145.19	36	*e*PKIKP	PKPdf	12 15 03.9	0.0
MK31	Makanchi Array	145.37	36	*e*PKPbc	PKPab	12 15 04.8	+0.2
MK31	Makanchi Array	145.37	36	*e*PKIKP	PKPab	12 15 04.8	+0.2
MK32	Makanchi Array	145.37	36	*e*PKPbc	PKPab	12 15 04.8	+0.2
MKAR	Makanchi Array	145.37	36	PKPbc	PKPab	12 15 04.8	+0.2
	comp=Z,34nm,0.9s,baz=316,slow=4.3,SNR=105						
ZEA	Zeya	145.69	343	*e*PKP2	PKPab	12 15 05.5	0.0
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
DGZ	Jazzator, Alta	145.99	28*d*	*i*PKP2	PKPab	12 15 07.1	+0.1
SOEI	Soe	146.52	203	PKP	PKPbc	12 15 09.2	+0.4
SOEI				PKP	PKiKP	12 15 21.1	+9.4
ERM	Erimo	146.55	315*d*	*i*PKP2	PKPab	12 15 09.4	+0.2
ERM				pmax	pmax		
	comp=Z,86nm,1.0s						
EDFI	Ende, Flores	148.33	199	PKP	PKPdf	12 15 11.1	+0.9
EDFI				PKP	PKPbc	12 15 14.0	+0.2
FAKI	Fak Fak	148.40	222	PKP	PKiKP	12 15 16.0	+0.6
FAKI				PKP	PKiKP	12 15 16.0	+0.6
MOY	Mondy	148.79	13	*e*PKP2	PKPab	12 15 27.5	+10
MOY				pmax	pmax		
	comp=Z,53nm,2.0s						
PLAI	Plampang	149.24	192	PKP	PKiKP	12 15 17.1	0.0
TLY	Talaya	149.26	10	*e*PKHKP	PKPbc	12 15 13.7	-1.2
TLY				pmax	pmax		
	comp=Z,46nm,1.4s						
WMQ	Urumqi	150.20	36	*e*PKPbc	PKPdf	12 15 11.8	-0.5
WMQ				LR	LR		
	comp=Z,1μm,39.3s						
WMQ				LR	LR		
	comp=Z,340nm,34.7s						
WMQ				LR	LR		
	comp=Z,350nm,27.3s						
ZAK	Zakamensk	150.46	11	*e*PKIKP	PKPdf	12 15 13.3	+0.8
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CISI	Cisompet, Garu	150.87	172	*e*PKPbc	PKiKP	12 15 20.4	-0.1
USA0B	Ussuriysk Arra	151.77	328	*e*PKPbc	PKiKP	12 15 22.0	+0.6
USRK	Ussuriysk Ar.	151.77	328	PKPbc	PKiKP	12 15 21.7	+0.3
	comp=Z,11nm,0.8s,baz=54,slow=1.6,SNR=20						
BKSI	Bulukumba	152.05	198	PKP	PKPbc	12 15 19.9	-2.7
BKSI				PKP	PKiKP	12 15 24.2	+1.3
MJAR	Matsushiro Arr	152.45	309	PKPbc	PKiKP	12 15 23.1	0.0
	comp=Z,12nm,1.0s,baz=114,slow=0.7,SNR=24						
MJAR				PKPab	PKPab	12 15 33.7	+0.2
	comp=Z,0.9nm,0.6s,baz=360,slow=29,SNR=4.9						
MAJO	Matsushiro	152.45	309	*e*PKPbc	PKiKP	12 15 23.4	+0.3
MAJO				*e*PKPab	PKPab	12 15 34.8	+1.3
MAJO	Matsushiro	152.45	309	*e*PKIKP	PKiKP	12 15 23.4	+0.3
MAJO				*e*		12 15 34.8	
MAT	Matsushiro	152.45	309	PKP	PKPbc	12 15 22.7	-0.2
BNSI	Bone	152.93	199	PKP	PKiKP	12 15 26.4	+1.7
BNSI				PKP	PKPbc	12 15 29.6	+5.1
SONA0	Songino Array	153.41	8	*e*PKPdf	PKPdf	12 15 18.3	+1.2
SONA0				*e*PKPbc	PKiKP	12 15 25.5	+0.6
SONA0				*e*PKPab	PKPab	12 15 37.1	-0.1
SONM	Songino Array	153.41	8	PKP	PKPdf	12 15 18.3	+1.2
	comp=Z,2.2nm,0.8s,baz=268,slow=0.4,SNR=8.8						
SONM				PKPbc	PKiKP	12 15 25.5	+0.6
	comp=Z,3.1nm,0.6s,baz=345,slow=1.2,SNR=10						
SONM				PKPab	PKPab	12 15 37.1	-0.1
	comp=Z,2.6nm,0.9s,baz=315,slow=3.8,SNR=5.5						
SPSI	Sidrap Palu	153.44	198	PKP	PKPbc	12 15 22.8	-2.9
SPSI				PKP	PKiKP	12 15 29.4	+3.6
PPBI	Pangkal Pinang	155.87	167	PKP	PKPdf	12 15 29.6	+8.3
MNSI	Mandailing Nat	156.31	149	PKP	PKPab	12 15 38.0	-12
PSI	Prapat	157.69	145	*e*pPKPdf	PKPab	12 15 56.3	-0.2
PSI	Prapat	157.69	145	*e*PKP2	PKPab	12 15 56.3	-0.2
KSRS	Korea Array	158.74	322	PKP	PKPdf	12 15 25.4	+1.2
	comp=Z,2.9nm,0.8s,baz=80,slow=0.9,SNR=17						
KSRS				PKPab	PKPab	12 16 01.6	+1.3
	comp=Z,3.1nm,0.9s,baz=70,slow=5.4,SNR=8.9						
GTA	Gaotai	159.51	27	PKP	PKPdf	12 15 26.6	+1.4
GTA				PKPab	PKPab	12 16 03.9	+0.1
GTA				LR	LR		
	comp=Z,81nm,19.2s						
GTA				LR	LR		
	comp=Z,110nm,22.7s						
GTA				LR	LR		
	comp=Z,100nm,19.9s						
HHC	Hu-ho-hao-te	160.73	0	*e*PKP	PKPdf	12 15 26.0	-0.5
LZH	Lanzhou	163.98	23	*e*PKP	PKPdf	12 15 29.1	-0.9
LZH				pPKP	pPKPdf	12 15 59.8	-4.1
LZH				sPKP		12 16 11.6	
NJ2	Nanjing	167.67	330	*e*PKP	PKPdf	12 15 31.6	-1.2
CMAR	Chiang Mai Arr	167.72	102	PKP	PKPdf	12 15 33.9	+0.6
	comp=Z,1.3nm,0.8s,baz=262,slow=2.2,SNR=8.1						
CMAR				PKPab	PKPab	12 16 40.6	+0.2
	comp=Z,1.7nm,0.7s,baz=258,slow=5.7,SNR=8.7						
CD2	Chengdu	168.30	35	PKP	PKPdf	12 15 31.5	-1.9

DDA ***08*** *12:08:55.5,40°.72N×30°.55E,h7km±3km,ML2.6*
ISCJB ***08*** *12:08:56.1±0.4,40°.70N±0°.02×30°.52E±0°.02,h3km±4km, Error ellipse: s-maj=4.3km s-min=2.8km az=15.9*
ISK ***08*** *12:08:56.5,40°.66N×30°.46E,h8km,ML2.1/15*
ISC 08 12:08:56.2±0.9,40°.70N±0°.03×30°.52E±0°.02,h11km±7km, n28,σ0°.60/41,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUV	Serdivan-Sakar	0.16	287	PG	Pg	12 08 59.7	-0.1
SAUV				SG	Sg	12 09 02.3	0.0
SPNC	Sapanca-Adapaz	0.16	267	PG	Pg	12 09 00.0	+0.1
GULT	Gulveren	0.26	181	PG	Pg	12 09 01.6	-0.1
GULT				SG	Sg	12 09 05.3	0.0
GEYV	SAKARYA_Geyve	0.27	220	*i* P	Pb	12 09 02.2	-0.9
SAHE	Sakarya_HENDEK	0.30	58	*i* P	Pg	12 09 02.1	-0.2
SAHE				*i* S	Sg	12 09 07.0	+0.6
SAHE				IAML_P			
	comp=Z,2μm,0.1s						
BTAS	Tasksti	0.38	109	*i* P	Pg	12 09 04.0	+0.1
BTAS				*i* S	Sg	12 09 08.2	-0.8
KAND	Kocaeli-Kandir	0.47	328	*i* P	Pg	12 09 05.6	+0.1
KAND				*i* S	Sb	12 09 13.0	-0.5
KAND				IAML_P			
	comp=Z,263nm,0.1s						
ADVT	Abdulvahap	0.65	247	PG	Pg	12 09 08.4	-0.5
SRCK	Saricakaya, Es	0.66	173	PG	Pg	12 09 09.0	0.0
SRCK	Saricakaya, Es	0.66	173	*i* P	Pb	12 09 09.3	-0.4
SRCK				IAML_P			
	comp=Z,396nm,0.1s						
HRT	Hereke	0.66	281	PG	Pg	12 09 08.9	-0.2
HRT				SG	Sg	12 09 17.7	-0.1
YIGI	Dzce	0.75	69	*i* P	Pg	12 09 10.0	-0.8
YIGI				IAML_P			
	comp=Z,821nm,0.2s						
SILT	Sile	0.81	305	PG	Pb	12 09 12.1	-0.2
BORA	Eskisehir	0.81	184	*i* P	Pb	12 09 12.5	0.0
BORA				*i* S	Sb	12 09 24.2	+0.7
BORA				IAML_P			
	comp=Z,964nm,0.1s						
YLV	Yalova	0.89	262	PG	Pg	12 09 12.9	-0.4
GEMT	Gemlik	1.05	256	PG	Pg	12 09 15.4	-1.0
KIBS	BOLU	1.05	105	*i* P	Pg	12 09 16.1	-0.4
KIBS				*i* S	Sb	12 09 31.0	+0.7
KIBS				IAML_P			
	comp=Z,748nm,0.2s						
BUY	Buyukada	1.08	279	PG	Pb	12 09 16.9	0.0
BUY	Buyukada	1.08	279	*i* P	Pg	12 09 16.5	-0.5
BUY				*i* S	Sn	12 09 32.1	0.0
BUY				IAML_P			
	comp=Z,594nm,0.1s						
IGD	Bursa	1.10	247	*i* P	Pg	12 09 16.6	-0.7
IGD				IAML_P			
	comp=Z,574nm,0.2s						
AUMIH	MIHALICIK	1.10	138	*i* P	Pb	12 09 17.5	0.0
AUMIH				*i* S	Sn	12 09 33.3	+0.3
ISK	Istanbul-Kandi	1.17	289	PN	Pn	12 09 18.5	0.0
BCAM	Yenicaga	1.18	84	*i* P	Pg	12 09 17.3	-1.7
BCAM				*i* S	Sb	12 09 34.7	+0.7
BCAM				IAML_P			
	comp=Z,402nm,0.1s						
ULDT	Uludag	1.19	243	*i* P	Pn	12 09 19.1	+0.1
ULDT				*i* S	Sn	12 09 35.6	+0.3
ULDT				IAML_P			
	comp=Z,702nm,0.2s						
KLYT	Kilyos	1.25	297	PN	Pg	12 09 20.2	-0.1
KLYT				SN	Sn	12 09 38.1	+1.7
ARMT	Armutlu	1.27	265	PN	Pg	12 09 20.1	-0.6
BGKT	Bogazkoy	1.41	291	PN	Pb	12 09 22.4	-0.2
SVRH	Sivrihisar-ESK	1.46	148	PN	Pb	12 09 23.8	+0.3

MOS ***08*** *12:25:03.8±1.2,22°.54S×66°.76W,h177km,mb5.6/39, Error ellipse: s-maj=10.1km s-min=6.0km az=98.6*
BJI ***08*** *12:25:05.7±0.0,22°.70S×66°.88W,h191km,mB5.2/25*
SJA ***08*** *12:25:05.6,22°.62S×66°.81W,h221km,ML5.2,MW5.1*
NEIC ***08*** *12:25:05.0±0.0,22°.83S×66°.61W,h190km,Moment Tensor Solution. s14 Moment tensor: Scale 10^17^Nm; Mrr=1.16; Mθθ=0.87; Mφφ=2.03; Mrθ=1.16; Mθφ=0.40; Mφr=-1.69; Best double couple: M0=2.70000×10^17^ NP1:φs=335.00000°, δ=75.00000°,λ=-121.00000°. NP2:φs=221.00000°, δ=34.00000°,λ=-27.00000°. Principal axes: T 2.7600, Plg=23.0000°, Azm=88.0000°; N -0.0600, Plg=29.0000°, Azm=343.0000°; P -2.7000, Plg=50.0000°, Azm=210.0000°;*
ISCJB ***08*** *12:25:05.1±0.2,22°.55S±0°.02×66°.72W±0°.02,h199km±1km, mb5.4/322 Error ellipse: s-maj=3.3km s-min=2.2km az=147.2*
VAO ***08*** *12:25:06.7±0.2,22°.59S×66°.70W,h197km,mb5.4*
GUC ***08*** *12:25:07.3±0.4,22°.67S×67°.12W,h243km±5km,ML5.8*
NEIC ***08*** *12:25:08.6±1.4,22°.59S×66°.69W,h215km,mb5.5/270, MW5.6,MW5.6,MD5.5(SJA),ML5.8(GUC),Error ellipse: s-maj=10.9km s-min=4.4km az=169.0,Moment Tensor Solution. s50 Moment tensor: Scale 10^17^Nm; Mrr=2.72; Mθθ=0.88; Mφφ=1.84; Mrθ=0.77; Mθφ=-1.37; Mφr=-1.84; Best double couple: M0=3.40000×10^17^ NP1:φs=332.00000°, δ=63.00000°,λ=-83.00000°. NP2:φs=137.00000°,δ=28.00000°, λ=-104.00000°. Principal axes: T 3.4300, Plg=18.0000°, Azm=57.0000°; N -0.0400, Plg=6.0000°, Azm=149.0000°; P -3.3900, Plg=71.0000°, Azm=258.0000°;*
NEIC Felt [III] at Huara, Oficina Maria Elena and Tocopilla; [II] at Arica and Pica, Chile. Broadband depth 215 km.
IDC ***08*** *12:25:09.1±0.3,22°.52S×66°.59W,h213km±2km,mb5.0/28, mb1 5.1/34,mb1mx5.0/35,mbtmp5.6/34 Error ellipse: s-maj=8.3km s-min=6.1km az=81.0*
GCMT ***08*** *12:25:10.6±0.1,22°.62S±0°.01×66°.86W±0°.01,h215km, MW5.6/125,Moment Tensor Solution. s107,c183; s125,c273; Duration: 1s6 Moment tensor: Scale 10^17^ Nm; Mrr=2.06±.04; Mθθ=0.24±.05; Mφφ=1.82±.06; Mrθ=0.84±.04; Mθφ=-1.11±.04; Mφr=-2.77±.04; Best double couple: M0=3.65500×10^17^ NP1:φs=341.00000°,δ71.00000°, λ=-83.00000°. NP2:φs=142.00000°,δ20.00000°, λ=-109.00000°. Principal axes: T 3.7930, Plg=26.0000°, Azm=66.0000°; N -0.2740, Plg=6.0000°, Azm=159.0000°; P -3.5170, Plg=63.0000°, Azm=262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 08 12:25:07.6±0.2,22°.61S±0°.03×66°.76W±0°.03,h206km±2km, h207km:pP-P,n1449,σ1§42/1649,mb5.5/322,61C-20D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	1.23	70	⇓*i*P	Pn	12 25 40.5	+0.2
HJA	Humahuaca	1.38	116	⇓*i*P	Pn	12 25 41.8	+0.4
HJA				IAML		12 25 43.0	
	comp=Z,58μm,0.5s						
HJA				*e*S	S	12 26 08.4	+1.1
LVC	Limon Verde	1.98	270	P	Pn	12 25 46.1	-0.8
	comp=Z,2μm,0.3s,baz=96,slow=5.7						
LVC				S	S	12 26 15.5	-1.4
	comp=Z,1μm,0.3s,baz=238,slow=20,SNR=5.1						
LVC	Limon Verde	1.98	270	*e*Pn	Pn	12 25 46.2	-0.7
LVC				*e*S	S	12 26 15.9	-1.0
LVC	Limon Verde	1.98	270	⇑*i*P	Pn	12 25 46.4	-0.5
LVC				*i* S	S	12 26 16.1	-0.8
LVC	Limon Verde	1.98	270	*e*P	Pn	12 25 46.2	-0.7
LVC				*e*S	S	12 26 15.9	-1.0
LVC	Limon Verde	1.98	270	⇓*i*P	Pn	12 25 46.3	-0.5
LVC				*i* S	S	12 26 15.8	-1.1
LVC	Limon Verde	1.98	270	*e*P	Pn	12 25 46.2	-0.7
AZAP	Zapla	2.24	136	⇓*e*P	Pn	12 25 48.9	-0.5
AZAP				IAML		12 25 50.5	
	comp=Z,9μm,0.4s						
SLA	San Lorenzo	2.40	152	⇓*i*P	Pn	12 25 51.3	+0.4
SLA				*i* S	S	12 26 22.7	-1.7
PB15	IPOC Station P	2.57	256	⇑*i*P	Pn	12 25 52.1	-0.8
PB15				*e*S	S	12 26 26.0	-1.7
PB15	IPOC Station P	2.57	256	⇑*e*P	Pn	12 25 51.8	-1.1
PB15				*i* S	S	12 26 25.8	-1.9
PB06	IPOC Station P	2.60	267	⇑*i*P	Pn	12 25 52.3	-0.9
PB06				*i* S	S	12 26 26.7	-1.5
PB06	IPOC Station P	2.60	267	⇑*i*P	Pn	12 25 51.9	-1.3
PB06				*e*S	S	12 26 26.0	-2.2
PB06				IAML		12 26 30.4	
	comp=E,26μm,0.5s						
PB03	IPOC Station P	2.83	281	⇑*i*P	Pn	12 25 54.8	-1.0
PB03				*i* S	S	12 26 30.3	-2.5
PB03	IPOC Station P	2.83	281	⇑*i*P	Pn	12 25 54.5	-1.2
PB03				*e*S	S	12 26 30.1	-2.8
PB01	IPOC Station P	2.97	301	*e*Pn	Pn	12 25 56.4	-1.1
PB01				*e*S	S	12 26 34.4	-1.5
PB01	IPOC Station P	2.97	301	⇑*i*P	Pn	12 25 56.9	-0.6
PB01				*e*S	S	12 26 34.4	-1.5
PB01	IPOC Station P	2.97	301	⇑*i*P	Pn	12 25 56.6	-0.8
PB01				*e*S	S	12 26 34.3	-1.5
PB07	IPOC Station P	3.03	286	⇑*i*P	Pn	12 25 57.3	-0.9
PB07				*i* S	S	12 26 34.2	-2.8
PB07	IPOC Station P	3.03	286	⇑*e*P	Pn	12 25 56.9	-1.2
PB07				*i* S	S	12 26 34.1	-2.9
PB04	IPOC Station P	3.15	274	*e*Pn	Pn	12 25 58.3	-1.2
PB04				*e*S	S	12 26 36.1	-3.3
PB04	IPOC Station P	3.15	274	⇑*i*P	Pn	12 25 58.4	-1.1
PB04				*e*S	S	12 26 36.2	-3.3
PB04	IPOC Station P	3.15	274	⇑*i*P	Pn	12 25 58.0	-1.5
PB04				*e*S	S	12 26 35.9	-3.6
PB02	IPOC Station P	3.18	293	⇑*i*P	Pn	12 25 58.8	-1.1
PB02				*e*S	S	12 26 36.8	-3.4
PB05	IPOC Station P	3.19	265	⇑*i*P	Pn	12 25 58.6	-1.3
PB05				*i* S	S	12 26 36.9	-3.4
PB05	IPOC Station P	3.19	265	⇑*i*P	Pn	12 25 58.1	-1.8
PB05				*e*S	S	12 26 36.5	-3.7
PB05				IAML		12 26 47.5	
	comp=E,12μm,0.7s						
PB08	IPOC Station P	3.32	317	⇑*i*P	Pn	12 26 02.4	+0.6
PB08				*i* S	S	12 26 43.5	0.0
PB08	IPOC Station P	3.32	317	⇑*i*P	Pn	12 26 02.2	+0.4
PB08				*i* S	S	12 26 43.6	0.0
FSA	Cafayete	3.56	169	⇑*e*P	Pn	12 26 04.6	+0.1
PB10	IPOC Station P	3.61	255	*e*Pn	Pn	12 26 02.8	-2.0
PB10				*e*S	S	12 26 46.7	-2.5
PB10	IPOC Station P	3.61	255	⇑*i*P	Pn	12 26 03.5	-1.4
PB10				*e*S	S	12 26 44.5	-4.7
PB10	IPOC Station P	3.61	255	⇑*i*P	Pn	12 26 02.8	-2.0
PB10				*i* S	S	12 26 45.0	-4.3
GO02	Mina Guanaco	3.63	225	*e*Pn	Pn	12 26 04.2	-1.2
GO02				*e*S	S	12 26 48.1	-2.2
GO02	Mina Guanaco	3.63	225	⇑*i*P	Pn	12 26 04.2	-1.2
GO02				*i* S	S	12 26 47.8	-2.4
GO01	Chusmiza	3.70	322	*e*Pn	Pn	12 26 06.5	0.0
GO01				*e*S	S	12 26 51.2	-1.0
GO01	Chusmiza	3.70	322	⇑*i*P	Pn	12 26 06.5	0.0
GO01				*e*S	S	12 26 51.9	-0.3
PB14	IPOC Station P	3.90	238	⇑*i*P	Pn	12 26 07.1	-1.6
PB14				*i* S	S	12 26 52.0	-4.2
PB14	IPOC Station P	3.90	238	⇑*i*P	Pn	12 26 06.9	-1.8
PB14				*i* S	S	12 26 52.1	-4.1
PB11	IPOC Station P	3.92	316	*e*Pn	Pn	12 26 07.6	-1.2
PB11				*e*S	S	12 26 52.8	-3.6
PB11	IPOC Station P	3.92	316	⇑*i*P	Pn	12 26 07.6	-1.2
PB11				*e*S	S	12 26 55.1	-1.2
PB11	IPOC Station P	3.92	316	⇑*i*P	Pn	12 26 07.4	-1.4
PB11				*i* S	S	12 26 53.6	-2.8
PSGC	Pisagua	4.34	313	⇑*i*P	Pn	12 26 11.6	-2.5
PSGC				*i* S	S	12 27 01.3	-4.5
PSGCX	Pisagua	4.34	313	⇑*e*P	Pn	12 26 11.9	-2.1
PSGCX				*i* S	S	12 27 00.6	-5.2
AHML	Horco Molle	4.36	163	⇑*i*P	Pn	12 26 14.1	0.0
AHML				*i* S	S	12 27 05.1	-1.0
AHML				IAML		12 27 08.7	
	comp=Z,280nm,0.8s						
MNMC	Minye Minye	4.36	322	*e*Pn	Pn	12 26 13.8	-0.6
MNMC				*e*S	S	12 27 04.1	-2.4
MNMCX	Minye Minye	4.36	322	⇑*e*P	Pn	12 26 13.9	-0.6
MNMCX				*e*S	S	12 27 04.3	-2.2
PB16	IPOC Station P	4.97	328	⇑*i*P	Pn	12 26 22.5	0.0
PB16				*e*S	S	12 27 17.3	-3.7
PB12	IPOC Station P	5.19	319	⇑*e*P	Pn	12 26 21.9	-2.9
PB12				*e*S	S	12 27 15.6	-10
PB12	IPOC Station P	5.19	319	⇑*i*P	Pn	12 26 21.8	-3.0
CYA	Choya	5.87	172	⇑*i*P	Pn	12 26 33.2	-0.1
CYA				IAML		12 26 35.3	
	comp=Z,216nm,0.7s						
CYA				*i* S	S	12 27 36.1	-4.9
GO03	Copiap	5.88	212	*e*Pn	Pn	12 26 30.1	-3.4
GO03				*e*S	S	12 27 35.6	-5.6
GO03	Copiap	5.88	212	⇑*i*P	Pn	12 26 30.1	-3.4
GO03				*i* S	S	12 27 35.3	-5.9
VCA	Vinchina	6.24	192	⇑*i*P	Pn	12 26 37.7	-0.5
VCA				*i* S	S	12 27 46.0	-3.8
VCA				IAML		12 28 06.2	
	comp=Z,275nm,0.4s						
LPAZ	La Paz	6.42	348	P	Pn	12 26 41.3	+0.2
	comp=Z,58nm,0.3s,baz=163,slow=8.0,SNR=542						
LPAZ				S	S	12 27 52.0	-2.9
	comp=Z,17nm,0.3s,baz=272,slow=21,SNR=5.8						
LPAZ	La Paz	6.42	348	*e*Pn	Pn	12 26 41.6	+0.6
LPAZ				*e*S	S	12 27 53.7	-1.2
LPAZ	La Paz	6.42	348	⇑*i*P	Pn	12 26 41.7	+0.6
LPAZ				*i* S	S	12 27 48.8	-6.1
LPAZ	La Paz	6.42	348	*e*P	Pn	12 26 41.6	+0.6
LPAZ				*e*S	S	12 27 53.7	-1.2
AGUA	GUANDACOL	7.02	192	⇑*e*P	Pn	12 26 46.4	-1.9
AGUA				IAML		12 26 48.4	
	comp=Z,288nm,0.6s						
AGUA				*i* S	S	12 28 04.6	-3.6
LCO	Las Campanas	7.29	208	*e*Pn	Pn	12 26 47.8	-4.2
LCO				*e*S	S	12 28 09.9	-5.0
LCO	Las Campanas	7.29	208	⇑*i*P	Pn	12 26 48.0	-3.9
LCO	Las Campanas	7.29	208	*e*P	Pn	12 26 47.8	-4.2
LCO				*e*S	S	12 28 09.9	-5.0
GO04	Tololo Observa	8.36	205	*e*Pn	Pn	12 27 01.7	-4.0
GO04				*e*S	S	12 28 33.3	-6.7
GO04	Tololo Observa	8.36	205	⇑*e*P	Pn	12 27 01.4	-4.3
GO04				*i* S	S	12 28 31.6	-8.4
AMOG	MOGNA	8.44	190	⇓*e*P	Pn	12 27 03.9	-2.7
AMOG				*i* S	S	12 28 34.8	-6.9
SIV	San Ignacio	8.50	40	P	Pn	12 27 04.9	-2.5
	comp=Z,188nm,0.3s,baz=232,slow=14,SNR=2579						
SIV				S	S	12 28 28.7	-14
	comp=Z,2.2nm,0.3s,baz=242,slow=15,SNR=4.3						
RTLL	Cerro Villicun	8.82	190	⇑*e*P	Pn	12 27 09.1	-2.4
RTLL				IAML		12 27 11.2	
	comp=Z,363nm,0.3s						
RTLL				*i* S	S	12 28 42.1	-8.6
TCA	Tanti	8.90	168	⇑*e*P	Pn	12 27 10.2	-2.4
TCA				IAML		12 27 11.5	
	comp=Z,109nm,0.3s						
TCA				*i* S	S	12 28 45.1	-7.7
SJA	San Juan	9.03	190	*e*P	Pn	12 27 12.3	-1.9
CFA	Coronel Fontan	9.06	188	P	Pn	12 27 12.5	-2.1
	comp=Z,34nm,0.3s,baz=10,slow=12,SNR=181						
CFA				S	S	12 28 48.0	-8.4
	comp=Z,68nm,0.3s,baz=222,slow=14,SNR=11						
CFA	Coronel Fontan	9.06	188	⇑*i*P	Pn	12 27 11.5	-3.1
CFA				*i* S	S	12 28 46.1	-10
ZON	Zonda	9.06	190	⇑*i*P	Pn	12 27 12.9	-1.7
ZON				IAML		12 28 52.6	
	comp=Z,78nm,0.6s						
RTCV	Cerro Valdivia	9.35	189	⇑*e*P	Pn	12 27 15.2	-3.2
RTLS	Leoncito	9.43	193	⇑*e*P	Pn	12 27 17.8	-1.9
ACAN	Cantantal	9.63	182	⇑*e*P	Pn	12 27 19.0	-3.1
AUSP	Uspallata	9.86	193	⇑*e*P	Pn	12 27 22.9	-2.3
ASAL	Salagasta	10.11	190	⇓*e*P	Pn	12 27 25.9	-2.3
ARCO	CERRO ARCO	10.37	190	⇑*e*P	Pn	12 27 29.0	-2.7
ARCO				IAML		12 27 31.9	
	comp=Z,108nm,0.4s						
ARCO				*i* S	S	12 29 06.2	-22
AQDB	Aquidauana	10.51	80	*e*P	Pn	12 27 32.6	-0.9
AAGR	Agrelo	10.59	189	*e*P	Pn	12 27 32.1	-2.4
AVIZ	Vizcacheras	10.93	188

comp=Z,389nm,0.8s
VAS01 **Vassouras-RJ** 21.55 94 eP P 12 29 40.1 -1.0
MCI6 **Montes Claros** 22.28 79 eP P 12 29 46.2 -1.9
MCI8 **Montes Claros** 22.30 79 eP P 12 29 46.2 -2.1
MCI9 **Montes Claros** 22.31 79 eP P 12 29 46.6 -1.8
PTGA **Pitinga** 22.73 18 P P 12 29 50.2 -2.0
comp=Z,324nm,1.0s,baz=199,slow=11,SNR=203
PTGA S S 12 33 42.9 -2.2
comp=Z,135nm,1.1s,baz=199,slow=18,SNR=11
PTGA **Pitinga** 22.73 18 eP P 12 29 50.1 -2.0
comp=Z,429nm,1.0s
PTGA **Pitinga** 22.73 18 eP P 12 29 50.2 -2.0
CAM01 **Campos-RJ** 23.25 93 eP P 12 29 55.6 -1.1
SJMB **Sao Joao De Ma** 24.23 85 eP P 12 30 04.3 -1.5
BSFB **Barra de Sao F** 24.52 86 eP P 12 30 06.8 -1.5
RIB01 **Linhares ES** 24.83 87 eP P 12 30 09.6 -1.6
OTAV **Otavalo** 25.40 332 eP P 12 30 18.1 +1.2
comp=Z,76nm,1.1s
OTAV **Otavalo** 25.40 332 eP P 12 30 18.1 +1.2
OTAV pmax pmax
comp=Z,76nm,1.1s
OTAV **Otavalo** 25.40 332 eP P 12 30 18.4 +1.5
FLOC **Florencia** 25.56 339 eP P 12 30 15.0 -2.8
GCUF **Volcan Galeras** 25.84 335 eP P 12 30 22.3 +1.4
BETC **Betania** 26.53 340 eP P 12 30 26.9 +0.5
BBAC **Balboa, Cauca** 26.53 336 eP P 12 30 26.9 +0.2
POPC **Popayan, Colom** 26.80 338 eP P 12 30 28.9 -0.2
TUMC **Tumaco** 26.94 333 eP P 12 30 30.3 +0.1
VILC **Villavicencio,** 27.41 345 eP P 12 30 34.3 -0.2
GRGC **Isla de Gorgon** 27.79 335 eP P 12 30 36.9 -0.7
GRGC eP P 12 30 37.6 0.0
CHIC **Chingaza** 27.92 345 eP P 12 30 38.3 -1.0
YOTC **Yotoco, Valle** 28.04 339 eP P 12 30 38.3 -1.8
ROSC **El Rosal** 28.27 344 P P 12 30 43.0 +0.7
comp=Z,12nm,0.5s,baz=179,slow=10,SNR=6.7
ROSC **El Rosal** 28.27 344 eP P 12 30 42.9 +0.6
comp=Z,72nm,1.3s
YOPC **Yopal, Colombi** 28.34 348 eP P 12 30 42.3 -0.4
RREF **El Recreo** 28.60 342 eP P 12 30 48.2 +2.7
GUY2C **Guyana, Caldas** 28.91 342 eP P 12 30 45.6 -2.6
RUSC **La Rusia** 28.99 347 eP P 12 30 48.9 +0.1
NORC **Norcasia** 29.10 343 eP P 12 30 46.9 -2.4
BARC **Barichara** 29.70 347 eP P 12 30 53.6 -1.2
EFI **East Falkland** 29.79 169 eP P 12 30 54.6 -0.3
comp=Z,136nm,0.6s
EFI **East Falkland** 29.79 169 ceP P 12 30 55.1 +0.2
EFI pmax pmax
comp=Z,141nm,1.1s
HELC **Santa Helena** 29.88 342 eP P 12 30 53.6 -3.0
PTBC **PUERTO BERRIO,** 29.93 345 eP P 12 30 52.9 -3.7
MDP **Montagnes des** 30.81 28 P P 12 31 03.0 -1.3
comp=Z,263nm,0.9s,baz=207,slow=9.7,SNR=85
SDV **Santo Domingo** 31.53 353 P P 12 31 10.0 -0.9
comp=Z,63nm,0.7s,baz=205,slow=6.4,SNR=32
SDV S S 12 36 05.9 +1.9
comp=Z,17nm,0.9s,baz=289,slow=19,SNR=3.1
SDV **Santo Domingo** 31.53 353 eP P 12 31 09.9 -0.9
comp=Z,186nm,1.0s
SDV **Santo Domingo** 31.53 353 eP P 12 31 09.9 -0.9
PAYG **Puerto Ayora** 31.61 310 eP P 12 31 13.1 +1.7
comp=Z,175nm,0.9s
SMLC **San Martn de** 32.03 346 eP P 12 31 11.6 -3.4
USHA **Ushuaia** 32.20 182 P P 12 31 16.2 +0.2
comp=Z,16nm,0.5s,baz=347,slow=8.2,SNR=14
USHA PcP PcP 12 34 00.6 +1.1
comp=Z,7.4nm,0.6s,baz=2.5,slow=7.7,SNR=3.9
NBMO **Morrinhos-CE** 32.23 57 eP P 12 31 15.1 -1.6
NBLI **Livramento-PB** 32.44 67 eP P 12 31 17.6 -1.1
ARGC **Ariguani, Magd** 33.09 346 eP P 12 31 20.2 -4.0
NBPA **Parau_RN** 33.16 64 eP P 12 31 23.4 -1.5
BCIP **Isla Barro Col** 34.08 337 eP P 12 31 33.1 +0.4
comp=Z,117nm,0.9s
BCIP **Isla Barro Col** 34.08 337 eP P 12 31 33.1 +0.4
BCIP pmax pmax
comp=Z,117nm,0.9s
RCBR **Riachuelo** 34.13 65 P P 12 31 32.4 -0.9
comp=Z,368nm,1.2s,baz=85,slow=0.4,SNR=26
RCBR pP pP 12 32 16.8 -0.1
comp=Z,100nm,0.7s,baz=225,slow=0.5,SNR=3.1
RCBR **Riachuelo** 34.13 65 eP P 12 31 32.5 -0.9
comp=Z,331nm,1.0s
RCBR **Riachuelo** 34.13 65 eP P 12 31 32.5 -0.9
RCBR pmax pmax
comp=Z,331nm,1.0s
RCBR **Riachuelo** 34.13 65 eP P 12 31 32.2 -1.1
TOSP **Speyside** 34.25 11 eP P 12 31 34.3 +0.2
SMRC **Santa Marta, M** 34.35 347 eP P 12 31 31.5 -3.5
GRGR **Grenville** 34.89 9 eP P 12 31 39.2 -0.4
comp=Z,2µm,1.1s
FCV **Fort Charlotte** 35.95 9 eP P 12 31 48.3 -0.4
SVB **Belmont** 36.07 9 eP P 12 31 48.9 -0.8
comp=Z,359nm,0.9s
SVB **Belmont** 36.07 9 eP P 12 31 48.8 -0.9
SVCV **St. Vincent, C** 36.08 9 eP P 12 31 49.4 -0.4
BBGH **Gun Hill** 36.23 12 eP P 12 31 50.6 -0.5
comp=Z,1µm,1.2s
BBGH **Gun Hill** 36.23 12 eP P 12 31 50.4 -0.6
MCLT **Moule a Chique** 36.54 10 eP P 12 31 50.6 -3.1
SLB **Belfond** 36.64 9 eP P 12 31 54.0 -0.6
SLBI **Saint Lucia, B** 36.84 9 eP P 12 31 55.5 -0.7
MPOM **Morne Pois Mar** 37.28 9 eP P 12 31 58.8 -1.1
BIM **Bigot** 37.32 9 eP P 12 31 59.1 -1.2
TRMF **Trois Ilets** 37.34 9 eP P 12 31 59.3 -1.1
ZAM **Aeronautique** 37.38 9 eP P 12 32 00.1 -0.6
MVM **Montagne Vaucl** 37.38 9 eP P 12 31 59.8 -1.0
LPMF **Morne Lapointe** 37.39 9 eP P 12 31 59.7 -1.1
FDF **Fort de France** 37.52 9 eP P 12 32 01.2 -0.8
comp=Z,534nm,0.9s
FDF **Fort de France** 37.52 9 eP P 12 32 00.8 -1.2
FDF **Fort de France** 37.52 9 eP P 12 32 01.2 -0.8
FDF pmax pmax
comp=Z,534nm,0.9s
PML **Morne Lenard** 37.56 9 eP P 12 32 01.9 -0.4
GBMF **Grand Be** 37.58 9 eP P 12 32 01.7 -0.8
PCM **Pelee Case Pet** 37.59 9 eP P 12 32 01.9 -0.6
CXM **Morne La Croix** 37.59 9 eP P 12 32 02.1 -0.6
BAMF **Morne Balai** 37.60 9 eP P 12 32 02.3 -0.4
ILAM **Ilet Lapin Mar** 37.60 9 eP P 12 32 01.9 -0.7
DLPL **La Plaine** 38.09 9 eP P 12 32 06.5 -0.2
BBL **Barber's Block** 38.25 8 eP P 12 32 06.2 -1.8
DWS **Wesley** 38.32 8 eP P 12 32 06.9 -1.6
ESPN **Las Esperanzas** 38.62 332 eP P 12 32 11.8 +0.6
comp=Z,146nm,1.0s
RPN **Rapa Nui** 38.75 254 P P 12 32 14.5 +2.3
comp=Z,327nm,1.1s,baz=149,slow=4.6,SNR=5.0
RPN **Rapa Nui** 38.75 254 eP P 12 32 13.2 +1.0
comp=Z,756nm,1.5s
RPN **Rapa Nui** 38.75 254 eP P 12 32 13.2 +1.0
RPN pmax pmax
comp=Z,755nm,1.5s
ACON **Acoyapa** 38.81 330 eP P 12 32 13.5 +0.7
comp=Z,67nm,1.0s
BPA **Boggy Peak** 39.70 7 eP P 12 32 18.6 -1.5
SKI **Saint Kitts** 39.89 6 eP P 12 32 20.5 -1.1
comp=Z,360nm,1.2s
SKI **Saint Kitts** 39.89 6 eP P 12 32 21.7 +0.1
SKI **Saint Kitts** 39.89 6 eP P 12 32 20.5 -1.1
SKI pmax pmax
comp=Z,360nm,1.2s
SEUS **St. Eustatius** 40.03 6 eP P 12 32 33.0 +10
CDVI **St. Croix** 40.16 3 eP P 12 32 23.0 -0.8
comp=Z,141nm,0.9s
ICMP **Isla Caja de M** 40.25 0 eP P 12 32 23.8 -0.7
comp=Z,203nm,1.1s
ANWB **Willy Bob** 40.33 7 eP P 12 32 16.7 -8.5
ESTN **Estel** 40.36 330 eP P 12 32 26.2 +0.6
comp=Z,169nm,0.9s
SJG **San Juan** 40.48 1 eP P 12 32 23.4 -2.9
SMRT **St. Maarten** 40.57 5 eP P 12 32 23.9 -3.3
CSGN **Cosiguina Volc** 40.82 328 eP P 12 32 30.4 +1.0
comp=Z,780nm,1.6s
SDDR **Presa de Saban** 41.57 354 eP P 12 32 35.0 -0.4
comp=Z,34nm,0.9s
TGUH **Tegucigalpa,Un** 41.61 329 eP P 12 32 36.3 +0.4
comp=Z,384nm,1.0s
PMSA **Palmer Station** 42.19 178 P P 12 32 40.8 +1.1
comp=Z,39nm,0.6s,baz=20,slow=8.0,SNR=13
PMSA **Palmer Station** 42.19 178 eP P 12 32 40.5 +0.8
comp=Z,168nm,1.5s
PMSA **Palmer Station** 42.19 178 eP P 12 32 38.9 -0.8
FSCY **Frank Sound, G** 43.98 340 eP P 12 32 54.8 +0.2
comp=Z,764nm,1.3s
GRTK **Grand Turk** 44.06 354 eP P 12 32 54.3 -0.9
comp=Z,211nm,1.0s

CCIG **Comitan** 45.95 325 eP P 12 33 10.8 +0.4
comp=Z,243nm,1.1s
CMIG **Matias Romero** 48.10 323 P P 12 33 27.7 +0.8
comp=Z,104nm,0.9s,baz=127,slow=5.2,SNR=96
062Z **Marathon** 49.06 343 P P 12 33 34.3 +0.3
baz=162
061Z **Ochoppi** 50.10 343 eP P 12 33 42.2 +0.4
comp=Z,416nm,1.3s
061Z **Ochoppi** 50.10 343 P P 12 33 42.2 +0.4
baz=163
060Z **West Palm Beac** 50.52 344 P P 12 33 45.1 +0.1
baz=163
TLIG **Tlapa** 50.62 319 eP P 12 33 47.4 +1.4
comp=Z,152nm,1.0s
059Z **Ave Maria** 50.69 343 P P 12 33 46.7 +0.4
baz=162,SNR=7.6
060A **Indiantown** 51.08 344 P P 12 33 49.2 +0.1
baz=164
LVIG **Laguna Verde** 51.08 323 eP P 12 33 49.6 +0.4
comp=Z,96nm,1.1s
059A **Moore Haven** 51.21 343 P P 12 33 50.3 +0.2
baz=163,SNR=6.2
058A **Arcadia** 51.47 343 P P 12 33 51.8 -0.2
baz=162,SNR=11
959A **Okeechobee** 51.67 344 P P 12 33 53.9 +0.4
baz=163
958A **Wauchula** 51.96 343 P P 12 33 55.7 +0.1
baz=162
957A **Wimauma** 52.17 343 P P 12 33 57.2 0.0
baz=162
DWPF **Disney Wildern** 52.38 344 P P 12 33 58.9 +0.2
baz=163
858A **St. Cloud** 52.45 344 P P 12 33 59.5 +0.2
baz=163
857A **Zephyrhills** 52.74 343 P P 12 34 01.7 +0.4
baz=162
758A **Lake Helen** 53.13 344 P P 12 34 04.8 +0.6
baz=163
757A **Oxford** 53.33 343 P P 12 34 05.9 +0.2
baz=162,SNR=5.3
658A **Bunnell** 53.58 344 P P 12 34 07.5 +0.1
baz=163
656A **Willston** 53.86 343 P P 12 34 09.8 +0.3
baz=162
657A **Interlachen** 53.89 344 P P 12 34 09.7 0.0
baz=163
655A **Horseshoe Beac** 54.20 342 P P 12 34 12.0 +0.1
baz=161
655A S S 12 41 31.2 -1.6
baz=161
557A **Orange Park** 54.27 344 P P 12 34 12.6 +0.2
baz=163
556A **Lake Butler** 54.43 343 P P 12 34 13.5 0.0
baz=162
555A **McAlpin** 54.69 343 P P 12 34 15.4 0.0
baz=162
457A **Yulee** 54.80 344 P P 12 34 16.4 +0.2
baz=163
554A **Perry** 54.86 342 P P 12 34 16.9 +0.3
baz=161
456A **Hilliard** 55.02 344 P P 12 34 18.3 +0.5
baz=163
455A **Stateville** 55.30 343 P P 12 34 19.8 0.0
baz=162
552A **Lynn Haven** 55.38 340 P P 12 34 20.7 +0.3
baz=159
454A **Quitman** 55.44 342 P P 12 34 20.6 -0.2
baz=161,SNR=5.3
357A **Townsend** 55.55 345 P P 12 34 21.1 -0.5
baz=163
356A **Blackshear** 55.61 344 P P 12 34 22.0 0.0
baz=163
453A **Whigham** 55.77 342 eP P 12 34 23.2 +0.1
comp=Z,267nm,1.3s
453A **Whigham** 55.77 342 P P 12 34 23.2 +0.1
baz=160,SNR=7.2
355A **Pearson** 55.82 343 P P 12 34 23.3 -0.2
baz=162
257A **Skidaway Islan** 55.97 345 P P 12 34 25.1 +0.6
baz=164
452A **Marianna** 56.02 341 P P 12 34 25.0 +0.1
baz=159
TIGA **Tifton** 56.11 343 P P 12 34 25.3 -0.2
baz=161
256A **Glennville** 56.18 345 P P 12 34 25.8 -0.2
baz=163
353A **Camilla** 56.20 342 P P 12 34 26.0 -0.2
baz=160,SNR=8.5
255A **Hazlehurst** 56.27 344 P P 12 34 26.8 +0.1
baz=162,SNR=5.8
450A **Crestview** 56.41 339 P P 12 34 27.7 0.0
baz=158
254A **Abbeville** 56.51 343 P P 12 34 28.1 -0.2
baz=162,SNR=8.8
158A **Hollywood** 56.51 346 P P 12 34 28.4 0.0
baz=165
352A **Blakely** 56.53 341 eP P 12 34 28.2 -0.3
comp=Z,223nm,1.2s
352A **Blakely** 56.53 341 P P 12 34 28.5 0.0
baz=160,SNR=13
351A **Pinckard** 56.54 341 P P 12 34 29.0 +0.4
baz=159
449A **Pace** 56.58 339 P P 12 34 28.7 -0.2
baz=157
157A **Early Branch** 56.63 346 P P 12 34 29.3 +0.1
baz=164
156A **Sylvania** 56.73 345 P P 12 34 30.5 +0.6
baz=164,SNR=5.5
Z59A **Georgetown, SC** 56.81 347 P P 12 34 30.5 +0.1
baz=166
253A **Americus** 56.85 342 eP P 12 34 30.7 -0.1
comp=Z,196nm,1.4s
253A **Americus** 56.85 342 P P 12 34 30.4 -0.3
baz=161
NHSC **New Hope** 56.87 347 P P 12 34 31.3 +0.5
baz=165,SNR=5.9
LNIG **Linares** 56.90 324 eP P 12 34 31.3 0.0
comp=Z,196nm,1.3s
BRAL **Brewton** 56.90 339 P P 12 34 31.2 +0.1
baz=158,SNR=11
350A **Dozier** 56.90 340 P P 12 34 31.1 -0.1
baz=158
155A **Kite** 56.93 344 P P 12 34 31.3 -0.1
baz=163,SNR=6.9
252A **Lumpkin** 56.96 342 P P 12 34 31.1 -0.5
baz=160,SNR=10
ZAIG **Zacatecas** 57.00 320 eP P 12 34 33.6 +1.3
comp=Z,170nm,1.0s
Z58A **St. Stephen** 57.01 347 P P 12 34 31.6 -0.2
baz=166
154A **Montrose** 57.09 344 P P 12 34 32.3 -0.1
baz=162,SNR=9.9
349A **Repton** 57.12 339 P P 12 34 32.6 0.0
baz=157,SNR=19
Z57A **Bowman** 57.16 346 P P 12 34 33.1 +0.2
baz=165,SNR=6.9
251A **Midway** 57.24 341 P P 12 34 32.9 -0.6
baz=159,SNR=8.3
153A **Fort Valley** 57.32 343 P P 12 34 33.5 -0.5
baz=161
Z56A **Williston** 57.34 345 P P 12 34 34.3 +0.2
baz=164
Y60A **Bolivia** 57.35 349 P P 12 34 34.0 -0.1
baz=167
250A **Grady** 57.40 340 P P 12 34 34.0 -0.6
baz=158,SNR=12
Z55A **Blythe** 57.42 345 P P 12 34 34.6 -0.1
baz=163
Y58A **Scranton** 57.53 347 P P 12 34 35.2 -0.2
baz=166
152A **Waverly Hall** 57.58 342 P P 12 34 35.0 -0.9
baz=160,SNR=13
Z54A **Sparta** 57.61 344 P P 12 34 35.7 -0.4
baz=162,SNR=9.4
151A **Opelika** 57.63 341 P P 12 34 35.5 -0.7
baz=160,SNR=8.7
249A **Camden** 57.67 340 P P 12 34 36.3 -0.2
baz=158
Y56A **Pelion** 57.77 346 P P 12 34 37.3 +0.2
baz=164
Y57A **Sumter** 57.79 347 P P 12 34 37.5 +0.2
baz=165,SNR=5.5
Z53A **Monticello** 57.84 343 P P 12 34 37.1 -0.5
baz=162,SNR=9.3
X60A **Albert Glenn T** 57.86 349 P P 12 34 37.6 -0.1
baz=168
150A **Eclectic** 57.91 341 P P 12 34 37.6 -0.5
baz=159,SNR=18

GOGA **Godfrey** 57.94 344 eP P 12 34 37.7 -0.6
comp=Z,62nm,1.3s
GOGA **Godfrey** 57.94 344 eP P 12 34 37.7 -0.6
GOGA pmax pmax
comp=Z,62nm,1.3s
GOGA **Godfrey** 57.94 344 P P 12 34 37.9 -0.5
baz=162,SNR=11
X59A **McDuffie Farm,** 57.97 348 P P 12 34 38.1 -0.4
baz=167
Z52A **Williamson** 57.99 343 P P 12 34 38.1 -0.6
baz=161,SNR=12
Y55A **Saluda** 58.04 345 P P 12 34 39.0 0.0
baz=164,SNR=20
X58A **Rowland** 58.09 348 eP P 12 34 39.4 0.0
comp=Z,77nm,1.1s
X58A **Rowland** 58.09 348 P P 12 34 39.3 0.0
baz=166,SNR=8.4
149A **Jones** 58.14 340 P P 12 34 38.9 -0.9
baz=158,SNR=15
X57A **Johnson Farm,** 58.16 347 P P 12 34 39.8 -0.1
baz=166
Y54A **Tignall** 58.17 344 P P 12 34 39.7 -0.2
baz=163,SNR=16
JSC **Jenkinsville** 58.23 346 eP P 12 34 40.5 +0.2
comp=Z,89nm,1.2s
JSC **Jenkinsville** 58.23 346 eP P 12 34 40.5 +0.2
JSC pmax pmax
comp=Z,89nm,1.2s
W60A **Pink Hill** 58.28 349 P P 12 34 40.8 +0.2
baz=168
W61A **Ground Anchor** 58.28 350 P P 12 34 40.2 -0.5
baz=169
Z51A **Franklin** 58.32 342 P P 12 34 40.6 -0.4
baz=160,SNR=5.4
X56A **White Oak** 58.38 346 P P 12 34 41.7 +0.3
baz=164,SNR=19
VNA3 **Neumayer Olymp** 58.39 161 P P 12 34 41.8 +0.7
Y53A **Monroe** 58.39 344 P P 12 34 40.9 -0.5
baz=162,SNR=12
BIRD **Birdtown, Kers** 58.41 347 eP P 12 34 41.7 +0.1
comp=Z,119nm,1.2s
148A **Greensboro** 58.43 339 P P 12 34 40.9 -0.9
baz=157
Z50A **Ashland** 58.48 341 eP P 12 34 41.7 -0.4
comp=Z,135nm,1.2s
Z50A **Ashland** 58.48 341 P P 12 34 41.5 -0.6
baz=159,SNR=37
X55A **Gracelyn & Ava** 58.50 346 P P 12 34 42.3 +0.1
baz=164,SNR=16
V62A **Hyde County Ai** 58.51 351 P P 12 34 42.7 +0.5
baz=170
W59A **Clinton** 58.52 349 P P 12 34 41.7 -0.6
baz=167
W58A **Raeford** 58.52 348 P P 12 34 42.5 +0.2
baz=166,SNR=12
Y52A **Lilburn** 58.53 343 P P 12 34 41.9 -0.5
baz=161,SNR=15
VNA1 **Neumayer--Stat** 58.58 161 P P 12 34 43.6 +1.3
LRAL **Lakeview Retre** 58.61 340 eP P 12 34 42.3 -0.7
comp=Z,106nm,1.3s
LRAL **Lakeview Retre** 58.61 340 P P 12 34 42.3 -0.7
baz=158,SNR=20
Z49A **Columbiana** 58.61 341 P P 12 34 42.3 -0.7
baz=158,SNR=24
X54A **Belton** 58.75 345 P P 12 34 43.9 0.0
baz=163,SNR=18
W57A **Gilead** 58.80 347 P P 12 34 44.4 +0.1
baz=166,SNR=7.6
V61A **Roper** 58.82 351 P P 12 34 44.5 +0.1
baz=169
Y51A **Rockmart** 58.84 342 P P 12 34 43.7 -0.8
baz=160,SNR=38
PAULI **Pauline** 58.88 346 eP P 12 34 45.0 +0.2
comp=Z,285nm,1.7s
V60A **Jim Taylor Roa** 58.90 350 P P 12 34 44.6 -0.3
baz=169
W56A **Indian Trail** 58.91 347 P P 12 34 45.1 +0.1
baz=165,SNR=12
X53A **Estanollee** 58.93 344 P P 12 34 45.1 -0.1
baz=162,SNR=19
VNA2 **Neumayer--Watz** 58.95 161 P P 12 34 45.7 +0.8
Y50A **Piedmont** 59.02 342 P P 12 34 45.1 -0.7
baz=160
VBMS **Vicksburg** 59.06 337 P P 12 34 46.0 -0.1
baz=154
V59A **Middlesex** 59.06 349 P P 12 34 45.9 -0.2
baz=168,SNR=6.3
KMSC **Kings Mountain** 59.08 346 eP P 12 34 46.2 +0.1
comp=Z,138nm,1.3s
KMSC **Kings Mountain** 59.08 346 P P 12 34 46.2 +0.1
baz=164,SNR=22
X52A **Dahlonega** 59.18 344 P P 12 34 46.4 -0.5
baz=162,SNR=16
Y49A **Blount Mountai** 59.19 341 P P 12 34 46.2 -0.8
baz=159,SNR=9.5
W54A **Cherokee Point** 59.22 345 P P 12 34 47.4 +0.2
baz=163,SNR=29
V58A **Windy Hill, Pi** 59.25 348 P P 12 34 47.3 -0.1
baz=167,SNR=7.3
HKT **Hockley** 59.26 331 eP P 12 34 48.0 +0.5
comp=Z,134nm,1.3s
HKT **Hockley** 59.26 331 eP P 12 34 48.0 +0.5
HKT pmax pmax
comp=Z,134nm,1.3s
U61A **Possum Corner** 59.33 351 P P 12 34 47.8 0.0
baz=170
X51A **Calhoun** 59.40 343 eP P 12 34 48.2 -0.2
comp=Z,130nm,0.9s
X51A **Calhoun** 59.40 343 P P 12 34 48.1 -0.3
baz=160,SNR=13
V57A **Coltrane Farms** 59.47 348 P P 12 34 48.7 -0.2
baz=166,SNR=10
Y48A **Jasper** 59.47 340 P P 12 34 47.9 -1.0
baz=158,SNR=7.2
X50B **Fort Payne** 59.53 342 P P 12 34 48.6 -0.7
baz=160,SNR=6.8
W53A **Cullowhee** 59.53 344 P P 12 34 49.3 -0.2
baz=162,SNR=26
V56A **Mocksville** 59.54 347 eP P 12 34 49.5 +0.2
comp=Z,115nm,0.9s
V56A **Mocksville** 59.54 347 P P 12 34 49.7 +0.4
baz=165,SNR=27
U59A **Littleton** 59.56 350 P P 12 34 49.1 -0.3
baz=168,SNR=6.1
U60A **Pendleton** 59.58 350 P P 12 34 49.5 0.0
baz=169
833A **Chaparral WMA,** 59.63 327 eP P 12 34 50.7 +0.6
comp=Z,385nm,0.8s
833A **Chaparral WMA,** 59.63 327 P P 12 34 50.7 +0.6
baz=145,SNR=94
W52A **Murphy** 59.65 344 P P 12 34 50.2 +0.1
baz=162,SNR=15
V55A **Taylorsville** 59.73 346 P P 12 34 50.9 +0.3
baz=164,SNR=36
U58A **Oxford** 59.73 349 P P 12 34 50.3 -0.3
baz=167,SNR=6.7
X49A **Woodville** 59.77 341 P P 12 34 50.2 -0.7
baz=159,SNR=16
V54A **Nebo** 59.82 346 P P 12 34 51.3 0.0
baz=164,SNR=24
U57A **Blanch** 59.91 348 P P 12 34 51.7 -0.2
baz=166,SNR=12
V53A **Saluda** 59.92 345 P P 12 34 51.8 -0.2
baz=163,SNR=17
X48A **Hartselle** 59.93 341 eP P 12 34 51.7 -0.4
comp=Z,215nm,1.3s
X48A **Hartselle** 59.93 341 P P 12 34 51.5 -0.5
baz=158,SNR=38
W51A **Cleveland** 59.94 343 P P 12 34 51.9 -0.1
baz=161,SNR=19
U56A **King** 60.03 347 P P 12 34 53.2 +0.5
baz=165,SNR=14
W50A **Signal Mountai** 60.13 343 eP P 12 34 53.0 -0.3
comp=Z,155nm,1.2s
W50A **Signal Mountai** 60.13 343 P P 12 34 53.0 -0.3
baz=160,SNR=31
T59A **Double "B" Far** 60.13 350 P P 12 34 53.1 -0.2
baz=168,SNR=6.1
CPCT **Cooper Cave** 60.15 343 eP P 12 34 52.7 -0.7
comp=Z,108nm,1.3s
T60A **Surry** 60.17 351 P P 12 34 53.3 -0.2
baz=169
X47A **Russelville** 60.25 340 P P 12 34 53.3 -0.9
baz=158,SNR=28
T58A **Grand View Acr** 60.27 349 P P 12 34 54.2 0.0
baz=167,SNR=8.4
V52A **Sevierville** 60.28 344 P P 12 34 53.8 -0.6
baz=162,SNR=26

NATX	Nacogdoches	60.30 333	eP	P	12 34 55.4	+0.8
	comp=Z,268nm,0.9s					
NATX	Nacogdoches	60.30 333	P	P	12 34 55.6	+1.0
	baz=150,SNR=19					
SWET	Sewanee	60.32 342	eP	P	12 34 54.3	-0.4
	comp=Z,168nm,1.1s					
W49A	Belvidere	60.32 342	P	P	12 34 54.1	-0.6
	baz=159,SNR=20					
U55A	TA2, Sparta	60.32 347	P	P	12 34 54.9	+0.2
	baz=165,SNR=15					
V51A	Loudon	60.44 344	P	P	12 34 54.8	-0.7
	baz=161,SNR=8.0					
T57A	Hurt	60.45 349	P	P	12 34 55.6	+0.1
	baz=167,SNR=5.7					
U54A	Nelsons Funny	60.51 346	eP	P	12 34 56.0	0.0
	comp=Z,211nm,1.1s					
U54A	Nelsons Funny	60.51 346	P	P	12 34 56.0	0.0
	baz=164,SNR=23					
V50A	Pikevile	60.51 343	P	P	12 34 55.5	-0.4
	baz=160,SNR=31					
X46A	Booneville	60.52 339	P	P	12 34 55.1	-0.8
	baz=157					
U53A	Fall Branch	60.53 345	P	P	12 34 55.8	-0.3
	baz=163,SNR=14					
W48A	Pulaski	60.54 341	P	P	12 34 55.7	-0.5
	baz=158,SNR=43					
S61A	Accomac	60.55 352	P	P	12 34 56.1	0.0
	baz=170					
SNAA	Sanae	60.59 161	P	P	12 34 56.7	+0.6
SNAA	Sanae	60.59 161	P	P	12 34 56.7	+0.6
	comp=Z,56nm,0.7s,baz=277,slow=7.2,SNR=88					
SNAA			PcP	PcP	12 35 38.7	+0.4
	comp=Z,12nm,0.5s,baz=247,slow=7.7,SNR=5.1					
SNAA	Sanae	60.59 161	eP	P	12 34 56.4	+0.3
	comp=Z,80nm,0.8s					
SNAA	Sanae	60.59 161	eP	P	12 34 56.4	+0.3
SNAA			pmax	pmax		
	comp=Z,80nm,0.8s					
T56A	Rocky Mt	60.62 348	P	P	12 34 57.3	+0.6
	baz=166,SNR=19					
S60A	Water View	60.71 351	P	P	12 34 55.3	-1.9
	baz=170					
PLAL	Pickwick Lake	60.74 340	eP	P	12 34 56.3	-1.2
	comp=Z,89nm,1.1s					
U52A	Thorn Hill	60.75 345	P	P	12 34 57.0	-0.6
	baz=162,SNR=10					
OXF	Oxford	60.75 339	eP	P	12 34 56.8	-0.8
	comp=Z,123nm,0.8s					
OXF	Oxford	60.75 339	eP	P	12 34 56.8	-0.8
OXF			pmax	pmax		
	comp=Z,123nm,0.8s					
OXF	Oxford	60.75 339	P	P	12 34 56.5	-1.1
	baz=156,SNR=20					
435B	Jarrell	60.77 330	P	P	12 34 58.0	+0.2
	baz=147,SNR=8.7					
V49A	McMinnville	60.82 342	P	P	12 34 57.3	-0.8
	baz=160,SNR=36					
S58A	Poland Farm, P	60.84 350	P	P	12 34 57.7	-0.3
	baz=168					
W47A	Westpoint	60.84 341	P	P	12 34 57.4	-0.7
	baz=158,SNR=16					
Z41A	Richland Creek	60.86 335	P	P	12 34 58.5	+0.2
	baz=152					
T55A	Pulaski	60.86 347	P	P	12 34 58.8	+0.5
	baz=165,SNR=19					
U51A	La Follette	60.89 344	P	P	12 34 58.0	-0.6
	baz=162,SNR=6.9					
TZTN	Tazewell	60.93 345	eP	P	12 34 58.4	-0.4
	comp=Z,51nm,1.1s					
TZTN	Tazewell	60.93 345	P	P	12 34 58.0	-0.8
	baz=162,SNR=10					
T54A	Tazewell	60.97 346	P	P	12 34 58.9	-0.2
	baz=164,SNR=15					
W46A	Michie	60.98 340	P	P	12 34 57.8	-1.3
	baz=157,SNR=5.8					
CCAR	Cane Creek	61.05 336	eP	P	12 34 60.0	+0.4
	comp=Z,77nm,0.9s					
V48A	Smith Brothers	61.06 341	eP	P	12 34 59.2	-0.4
	comp=Z,213nm,1.5s					
V48A	Smith Brothers	61.06 341	P	P	12 34 59.0	-0.6
	baz=159,SNR=36					
T53A	Wise	61.11 346	P	P	12 34 59.7	-0.3
	baz=163,SNR=16					
S57A	Dark Hollow, R	61.13 349	P	P	12 35 00.0	0.0
	baz=167,SNR=7.9					
U50A	Jamestown	61.14 343	P	P	12 34 59.4	-0.8
	baz=161,SNR=17					
R58B	Mineral	61.15 350	P	P	12 35 00.5	+0.3
	baz=168,SNR=7.5					
S56A	Natural Bridge	61.16 348	P	P	12 35 00.2	-0.1
	baz=166,SNR=6.5					
CLTN	Cedars of Leba	61.25 342	eP	P	12 35 00.3	-0.5
	comp=Z,41nm,0.9s					
R60A	Leonardtown, M	61.25 351	P	P	12 35 00.9	+0.1
	baz=170					
R59A	King George, V	61.26 351	P	P	12 35 01.2	+0.3
	baz=169					
X43A	Marvell	61.26 337	P	P	12 35 00.9	-0.1
	baz=154,SNR=6.8					
CBN	Corbin Frederi	61.31 350	P	P	12 35 00.8	-0.4
	baz=169					
T52A	Hallie	61.34 345	P	P	12 35 00.8	-0.7
	baz=163,SNR=5.3					
V47A	Nunnelly	61.35 341	P	P	12 35 00.6	-1.0
	baz=158,SNR=25					
WLAR	White Oak Lake	61.35 335	eP	P	12 35 02.3	+0.7
	comp=Z,282nm,1.0s					
T51A	Gray	61.43 344	P	P	12 35 01.4	-0.7
	baz=162,SNR=11					
S55A	Lewisburg	61.44 348	P	P	12 35 02.4	+0.3
	baz=166,SNR=21					
U49A	Red Boiling Sp	61.49 343	P	P	12 35 01.6	-0.9
	baz=160,SNR=16					
V46A	Holladay	61.51 340	P	P	12 35 01.2	-1.4
	baz=158,SNR=15					
R57A	Stanardsville	61.58 349	P	P	12 35 03.1	+0.1
	baz=168,SNR=6.5					
JCT	Junction City	61.59 328	eP	P	12 35 03.5	+0.2
	comp=Z,161nm,0.9s					
JCT	Junction City	61.59 328	P	P	12 35 03.5	+0.2
	baz=145,SNR=92					
S54A	Dingess, Beckl	61.63 347	P	P	12 35 03.5	0.0
	baz=165,SNR=22					
S53A	Williamson	61.69 346	P	P	12 35 03.1	-0.8
	baz=164,SNR=10					
U48A	Cassie Pea, Po	61.70 342	P	P	12 35 03.2	-0.6
	baz=159,SNR=23					
T50A	Nancy	61.71 344	P	P	12 35 03.1	-0.9
	baz=161,SNR=15					
WVT	Waverly	61.73 341	eP	P	12 35 03.1	-0.9
	comp=Z,122nm,0.8s					
WVT	Waverly	61.73 341	eP	P	12 35 03.1	-0.9
WVT			pmax	pmax		
	comp=Z,122nm,0.8s					
WVT	Waverly	61.73 341	P	P	12 35 03.1	-0.9
	baz=158					
WHTX	Lake Whitney,	61.73 330	eP	P	12 35 04.6	+0.4
	comp=Z,130nm,0.9s					
WHTX	Lake Whitney,	61.73 330	P	P	12 35 04.5	+0.3
	baz=148,SNR=40					
Q59A	Harwood	61.85 351	P	P	12 35 04.0	-0.8
	baz=170					
U47A	Clarksville	61.85 341	P	P	12 35 03.9	-1.0
	baz=158,SNR=45					
Q60A	Greensboro	61.88 352	P	P	12 35 05.2	+0.3
	baz=170					
S52A	Salyersville	61.90 345	P	P	12 35 04.7	-0.5
	baz=163,SNR=5.7					
R54A	Victor	61.93 347	P	P	12 35 05.4	0.0
	baz=165,SNR=22					
X40A	Basin Creek Fa	61.95 336	P	P	12 35 04.9	-0.7
	baz=153,SNR=5.8					
T49A	Edmonton	61.98 343	P	P	12 35 04.8	-0.9
	baz=160,SNR=24					
HPIG		61.98 321	eP	P	12 35 06.9	+0.6
	comp=Z,119nm,1.3s					
S51A	Beattyville	61.99 345	P	P	12 35 05.2	-0.6
	baz=162,SNR=6.9					
U46A	Springville	62.05 341	P	P	12 35 05.3	-0.9
	baz=158,SNR=15					
T48A	Bowling Green	62.22 342	P	P	12 35 06.4	-0.9
	baz=160,SNR=8.1					
S50A	Richmond	62.22 344	P	P	12 35 06.7	-0.6
	baz=162,SNR=20					
UTMT	University of	62.24 340	eP	P	12 35 07.4	-0.1
	comp=Z,394nm,1.1s					
R53A	Hurricane	62.27 347	P	P	12 35 07.9	+0.2
	baz=164,SNR=9.0					
Q57A	Strasburg	62.28 350	P	P	12 35 08.2	+0.5
	baz=168,SNR=7.4					
RKT	Rikitea	62.29 255	eP	P	12 35 11.0	+2.8
	comp=Z,155nm,1.2s					
MIAR	Mount Ida	62.29 335	eP	P	12 35 07.8	-0.1
	comp=Z,168nm,1.4s					
MIAR	Mount Ida	62.29 335	eP	P	12 35 07.8	-0.1
MIAR			pmax	pmax		
	comp=Z,168nm,1.4s					
MIAR	Mount Ida	62.29 335	P	P	12 35 07.8	-0.1
	baz=152,SNR=30					
T47A	Sharon Grove	62.31 342	P	P	12 35 07.0	-0.9
	baz=159,SNR=28					
W41B	Gary Mavity, V	62.35 337	eP	P	12 35 08.0	-0.2
	comp=Z,97nm,1.4s					
W41B	Gary Mavity, V	62.35 337	P	P	12 35 07.5	-0.7
	baz=153,SNR=12					
Q56A	Snyder Ridge,	62.42 349	P	P	12 35 09.4	+0.7
	baz=167,SNR=7.5					
R52A	Catlettsburg	62.43 346	P	P	12 35 08.0	-0.7
	baz=163					
Q55A	Buckhannon	62.54 348	P	P	12 35 09.7	+0.2
	baz=166,SNR=8.6					
S49A	Springfield	62.55 344	P	P	12 35 08.4	-1.1
	baz=161,SNR=9.7					
P59A	Jarrettsville	62.55 352	P	P	12 35 10.0	+0.5
	baz=170,SNR=5.5					
T46A	Princeton	62.59 341	P	P	12 35 08.9	-0.8
	baz=158,SNR=29					
R51A	Hillsboro	62.61 345	P	P	12 35 09.3	-0.6
	baz=162,SNR=20					
S48A	Wiedeman Farm,	62.64 343	P	P	12 35 08.7	-1.4
	baz=160,SNR=14					
P60A	Greenville	62.65 352	P	P	12 35 09.5	-0.6
	baz=171					
P57A	Homestead Farm	62.66 350	P	P	12 35 10.8	+0.6
	baz=168,SNR=5.2					
Q54A	Coxs Mills	62.67 348	P	P	12 35 10.2	-0.1
	baz=165,SNR=7.4					
TX31	Lajitas Ar. Si	62.69 324	eP	P	12 35 11.1	+0.3
	comp=Z,51nm,1.3s					
TXAR	Lajitas Array	62.69 324	P	P	12 35 11.1	+0.3
	comp=Z,12nm,0.7s,baz=149,slow=8.3,SNR=141					
Q53A	Leroy	62.69 347	P	P	12 35 10.0	-0.4
	baz=165,SNR=23					
R50A	Paris	62.77 345	P	P	12 35 10.3	-0.7
	baz=162,SNR=8.6					
T45A	Paducah	62.80 340	P	P	12 35 10.2	-1.0
	baz=157,SNR=6.5					
O61A	Allentown	62.80 353	P	P	12 35 11.2	+0.2
	baz=172					
S47A	Hartford	62.81 342	P	P	12 35 09.8	-1.4
	baz=159,SNR=16					
P56A	Dayton Farm, R	62.81 350	P	P	12 35 12.0	+0.8
	baz=167					
FCAR	Ozark Folk Cen	62.94 337	eP	P	12 35 11.5	-0.7
	comp=Z,119nm,1.5s					
W39A	Magazine	62.95 335	eP	P	12 35 12.5	+0.3
	comp=Z,74nm,0.8s					
W39A	Magazine	62.95 335	P	P	12 35 12.4	+0.3
	baz=152,SNR=38					
Q52A	Bidwell	62.95 346	P	P	12 35 11.5	-0.6
	baz=164,SNR=13					
P55A	Reedsville	62.99 349	P	P	12 35 12.6	+0.2
	baz=166,SNR=6.2					
R49A	Shelbyville	63.00 344	P	P	12 35 11.1	-1.4
	baz=161,SNR=5.9					
X37A	Clayton	63.05 334	eP	P	12 35 13.2	+0.3
	comp=Z,159nm,1.0s					
S46A	Don Dixon Farm	63.13 341	P	P	12 35 12.0	-1.4
	baz=158,SNR=11					
MCWV	Mont Chateau	63.14 349	eP	P	12 35 13.7	+0.3
	comp=Z,21nm,0.7s					
MCWV	Mont Chateau	63.14 349	P	P	12 35 13.6	+0.2
	baz=166,SNR=9.0					
PBMO	Poplar Bluff	63.15 339	eP	P	12 35 13.0	-0.5
	comp=Z,125nm,0.8s					
PBMO			eS	S	12 43 25.1	-2.9
P54A	Burton	63.20 348	P	P	12 35 14.1	+0.3
	baz=166					
O59A	Robesonia	63.21 352	P	P	12 35 14.2	+0.4
	baz=170					
Q50A	Georgetown	63.22 345	P	P	12 35 13.1	-0.8
	baz=162,SNR=9.3					
WCI	Wyandotte Cave	63.24 343	eP	P	12 35 12.9	-1.1
	comp=Z,129nm,1.4s					
WCI	Wyandotte Cave	63.24 343	eP	P	12 35 12.9	-1.1
WCI			pmax	pmax		
	comp=Z,129nm,1.4s					
WCI	Wyandotte Cave	63.24 343	P	P	12 35 13.0	-1.0
	baz=160					
Q51A	Peebles	63.25 346	eP	P	12 35 13.6	-0.6
	comp=Z,68nm,1.2s					
Q51A	Peebles	63.25 346	P	P	12 35 13.5	-0.6
	baz=163,SNR=10					
P53A	Whipple	63.27 347	eP	P	12 35 14.5	+0.3
	comp=Z,122nm,0.9s					
P53A	Whipple	63.27 347	P	P	12 35 14.3	0.0
	baz=165,SNR=23					
ABTX	Abilene, Hawle	63.27 329	eP	P	12 35 14.6	+0.2
	comp=Z,159nm,1.1s					
ABTX	Abilene, Hawle	63.27 329	P	P	12 35 14.5	+0.1
	baz=146,SNR=30					
R48A	Northridge Ran	63.28 343	P	P	12 35 13.4	-0.9
	baz=160,SNR=6.3					
O57A	Amberson	63.31 351	P	P	12 35 15.1	+0.6
	baz=169,SNR=5.3					
R47A	Wooly Knot Far	63.36 343	P	P	12 35 13.4	-1.4
	baz=160,SNR=13					
USIN	University of	63.38 342	eP	P	12 35 13.8	-1.2
	comp=Z,55nm,0.9s					
O56A	Blue Knob Stat	63.51 350	eP	P	12 35 15.4	-0.4
	comp=Z,48nm,1.1s					
O56A	Blue Knob Stat	63.51 350	P	P	12 35 16.2	+0.3
	baz=168					
R46A	Gibon Southern	63.56 342	P	P	12 35 14.6	-1.5
	baz=159,SNR=6.2					
P52A	Corning	63.56 347	P	P	12 35 15.6	-0.6
	baz=164,SNR=14					
O55A	Ligonier	63.58 349	P	P	12 35 16.4	+0.1
	baz=167,SNR=9.3					
Q49A	Aurora	63.60 344	P	P	12 35 15.4	-1.0
	baz=161,SNR=11					
S44A	Carbondale	63.61 340	P	P	12 35 15.5	-0.9
	baz=157,SNR=12					
SIUC	Southern Illin	63.62 340	eP	P	12 35 15.7	-0.8
	comp=Z,82nm,1.2s					
P51A	Williamsport	63.62 346	eP	P	12 35 16.0	-0.5
	comp=Z,85nm,1.2s					
P51A	Williamsport	63.62 346	P	P	12 35 15.9	-0.6
	baz=163,SNR=5.7					
U40A	Yellville	63.62 337	P	P	12 35 16.1	-0.5
	baz=153,SNR=26					
PAL	Palisades	63.64 354	P	P	12 35 16.1	-0.4
	baz=173					
O54A	Avella	63.74 348	P	P	12 35 16.9	-0.5
	baz=166					
Q48A	North Vernon	63.74 344	P	P	12 35 16.5	-0.9
	baz=160,SNR=17					
SSPA	Standing Stone	63.77 351	P	P	12 35 17.9	+0.4
	baz=168					
N57A	Milroy	63.83 351	P	P	12 35 18.1	+0.3
	baz=169,SNR=5.3					
R45A	Skylar, Fairfi	63.86 341	P	P	12 35 16.9	-1.2
	baz=158,SNR=20					
P50A	Jamestown	63.91 345	P	P	12 35 17.6	-0.8
	baz=162,SNR=13					
Q47A	Bedord North L	63.94 343	P	P	12 35 17.4	-1.2
	baz=160,SNR=12					
HHAR	Hobbs	63.96 336	eP	P	12 35 18.4	-0.5
	comp=Z,75nm,1.0s					
O52A	Adamsville	63.97 347	eP	P	12 35 18.4	-0.4
	comp=Z,60nm,0.8s					
O52A	Adamsville	63.97 347	P	P	12 35 18.3	-0.4
	baz=164,SNR=13					
O53A	New Philadelph	63.97 348	P	P	12 35 18.4	-0.4
	baz=165,SNR=12					
P49A	Miami Univ. Ec	64.06 345	P	P	12 35 18.2	-1.1
	baz=162,SNR=15					
N55A	Marion Center	64.08 350	eP	P	12 35 19.7	+0.2
	comp=Z,188nm,1.5s					
N55A	Marion Center	64.08 350	P	P	12 35 19.6	0.0
	baz=167,SNR=13					
N56A	West Decatur	64.10 350	P	P	12 35 19.1	-0.6
	baz=168					
O51A	Pataskala	64.16 347	P	P	12 35 19.3	-0.7
	baz=164,SNR=17					
P48A	Milroy	64.17 344	eP	P	12 35 18.8	-1.3
	comp=Z,31nm,0.6s					
P48A	Milroy	64.17 344	P	P	12 35 18.6	-1.5
	baz=161,SNR=11					
BLO	Bloomington	64.18 343	eP	P	12 35 19.2	-1.0
	comp=Z,58nm,0.6s					
BLO	Bloomington	64.18 343	eP	P	12 35 19.2	-1.0
BLO			pmax	pmax		
	comp=Z,58nm,0.6s					
OLIL	Olney	64.22 342	eP	P	12 35 19.2	-1.2
	comp=Z,59nm,1.2s					
FVM	French Village	64.25 339	eP	P	12 35 20.1	-0.6
	comp=Z,152nm,1.1s					
FVM			eS	S	12 43 38.7	-2.8
FVM	French Village	64.25 339	eP	P	12 35 20.1	-0.6
FVM			eS	S	12 43 38.7	-2.8
FVM			pmax	pmax		
	comp=Z,152nm,1.1s					
Q46A	CEJHS Indians,	64.27 342	P	P	12 35 19.3	-1.5
	baz=159					
ACSO	Alum Creek Sta	64.32 346	eP	P	12 35 20.8	-0.3
	comp=Z,106nm,0.9s					
ACSO	Alum Creek Sta	64.32 346	P	P	12 35 20.3	-0.8
	baz=163,SNR=24					
TUL1	Leonard	64.36 334	eP	P	12 35 21.4	0.0
	comp=Z,241nm,1.4s					
TUL1	Leonard	64.36 334	P	P	12 35 21.3	-0.1
	baz=150,SNR=24					
O50A	Cable	64.38 346	P	P	12 35 20.5	-1.0
	baz=163,SNR=14					
Q45A	Warren Harvey,	64.38 342	P	P	12 35 20.1	-1.4
	baz=158,SNR=18					
P47A	Martinsville	64.41 343	P	P	12 35 20.4	-1.3
	baz=160,SNR=12					
N54A	Moraine State	64.43 349	eP	P	12 35 22.0	+0.3
	comp=Z,168nm,1.4s					
N54A	Moraine State	64.43 349	P	P	12 35 22.0	+0.3
	baz=166,SNR=11					
N53A	Lisbon	64.44 348	eP	P	12 35 21.9	+0.1
	comp=Z,72nm,1.1s					
N53A	Lisbon	64.44 348	P	P	12 35 21.7	-0.1
	baz=166,SNR=10					
CCM	Cathedral Cave	64.58 339	eP	P	12 35 22.2	-0.6
	comp=Z,115nm,0.8s					
CCM			ePcP	PcP	12 35 55.6	+0.6
CCM			eS	S	12 43 43.0	-2.6
CCM	Cathedral Cave	64.58 339	eP	P	12 35 22.2	-0.6
CCM			e		12 35 55.6	
CCM			eS	S	12 43 43.0	-2.6
CCM			pmax	pmax		
	comp=Z,115nm,0.8s					
CCM	Cathedral Cave	64.58 339	P	P	12 35 22.3	-0.6
	baz=155					
O49A	Covington	64.59 345	eP	P	12 35 22.1	-0.7
	comp=Z,74nm,1.0s					
O49A			ePcP	PcP	12 35 55.6	+0.6
O49A	Covington	64.59 345	P	P	12 35 21.8	-1.0
	baz=162,SNR=12					
N52A	McGinn's Farm,	64.61 348	P	P	12 35 22.5	-0.4
	baz=165,SNR=11					
WMOK	Wichita Mounta	64.63 331	eP	P	12 35 22.7	-0.6
	comp=Z,111nm,1.5s					
WMOK			ePcP	PcP	12 35 56.2	+0.9
WMOK	Wichita Mounta	64.63 331	eP	P	12 35 22.7	-0.6
WMOK			e		12 35 56.2	
WMOK			pmax	pmax		
	comp=Z,111nm,1.5s					
WMOK	Wichita Mounta	64.63 331	P	P	12 35 22.7	-0.6
	baz=147,SNR=34					
M56A	Emporium	64.64 351	P	P	12 35 23.2	+0.1
	baz=168,SNR=7.0					
M55A	Ridgway	64.72 350	P	P	12 35 23.6	-0.1
	baz=168,SNR=7.7					
P46A	Rosedale	64.78 343	P	P	12 35 22.6	-1.4
	baz=159,SNR=9.9					
N51A	Ashland	64.85 347	eP	P	12 35 24.1	-0.4
	comp=Z,74nm,1.0s					
N51A	Ashland	64.85 347	P	P	12 35 23.5	-1.0
	baz=164,SNR=9.8					
O48A	Farmland	64.85 345	P	P	12 35 23.3	-1.2
	baz=161,SNR=17					
P45A	Graceland, Par	64.85 342	eP	P	12 35 23.2	-1.3
	comp=Z,73nm,0.9s					
P45A	Graceland, Par	64.85 342	P	P	12 35 23.0	-1.5
	baz=159,SNR=10					
N50A	Nevada	64.87 346	P	P	12 35 23.8	-0.8
	baz=163,SNR=12					
M54A	Oil Creek Stat	64.90 349	eP	P	12 35 24.7	-0.2
	comp=Z,136nm,1.3s					
M54A	Oil Creek Stat	64.90 349	P	P	12 35 24.7	-0.2
	baz=167,SNR=10					
HRV	Adam Dziewonsk	64.94 356	P	P	12 35 25.6	+0.6
	baz=175					
M53A	WI Miller and	65.02 348	P	P	12 35 25.6	0.0
	baz=166,SNR=11					
BINY	Binghamton	65.04 352	eP	P	12 35 26.3	+0.5
	comp=Z,174nm,1.4s					
BINY	Binghamton	65.04 352	P	P	12 35 26.1	+0.4
	baz=171,SNR=6.8					
O47A	Sheridan	65.09 344	P	P	12 35 24.8	-1.2
	baz=160,SNR=15					
ALLY	Alegheny Colle	65.12 349	eP	P	12 35 26.0	-0.2
	comp=Z,72nm,0.9s					
M51A	Elyria	65.21 347	P	P	12 35 26.3	-0.4
	baz=164,SNR=7.9					
M52A	Chesterland	65.24 348	eP	P	12 35 26.5	-0.5
	comp=Z,69nm,1.0s					
M52A	Chesterland	65.24 348	P	P	12 35 26.7	-0.3
	baz=165,SNR=7.1					
N49A	Columbus Grove	65.25 346	eP	P	12 35 26.3	-0.7
	comp=Z,135nm,0.9s					
N49A	Columbus Grove	65.25 346	P	P	12 35 26.3	-0.7
	baz=162,SNR=30					
TRY	Troy	65.32 354	eP	P	12 35 28.3	+0.8
	comp=Z,151nm,1.3s					
L55A	Hinsdale	65.36 350	P	P	12 35 27.9	+0.1
	baz=168,SNR=7.6					
N48A	Decatur	65.39 345	P	P	12 35 27.1	-0.8
	baz=161,SNR=14					
L53A	Girard	65.44 349	P	P	12 35 28.2	0.0
	baz=166,SNR=14					
MNTX	Cornudas Mount	65.45 324	eP	P	12 35 28.2	-0.3
	comp=Z,99nm,1.0s					
MNTX	Cornudas Mount	65.45 324	P	P	12 35 28.2	-0.3
	baz=141,SNR=155					
M50A	Fremont	65.45 347	eP	P	12 35 28.0	-0.3
	comp=Z,64nm,0.9s					
M50A	Fremont	65.45 347	P	P	12 35 27.7	-0.7
	baz=163,SNR=6.0					
SFIN	Lafayette	65.47 343	eP	P	12 35 27.3	-1.1
	comp=Z,57nm,0.7s					
SFIN	Lafayette	65.47 343	P	P	12 35 26.8	-1.6
	baz=159,SNR=17					
P43A	Skaggs, Pawnee	65.48 341	P	P	12 35 27.3	-1.2
	baz=157,SNR=7.5					
O45A	Potomac	65.52 342	P	P	12 35 27.2	-1.6
	baz=159,SNR=11					
ERPA	Erie	65.55 349	eP	P	12 35 28.8	-0.2
	comp=Z,98nm,0.7s					
ERPA	Erie	65.55 349	P	P	12 35 28.9	0.0
	baz=166,SNR=7.5					
L54A	Sinclairville	65.55 350	P	P	12 35 29.1	+0.2
	baz=167,SNR=16					
N47A	Urbana	65.57 344	P	P	12 35 27.9	-1.2
	baz=161,SNR=22					
O44A	Mansfield	65.64 342	P	P	12 35 27.7	-1.8
	baz=158					
PLIO	Pelee Island,	65.70 347	P	P	12 35 29.1	-0.8
	baz=164,SNR=12					
M49A	Liberty Center	65.73 346	P	P	12 35 29.4	-0.7
	baz=162,SNR=17					
K54A	Basiliko Farm,	65.82 350	P	P	12 35 30.9	+0.3
	baz=168,SNR=8.8					
MMNY	Mt. Morris Dam	65.82 351	eP	P	12 35 31.0	+0.3
	comp=Z,226nm,1.5s					
K55A	Perry	65.84 351	P	P	12 35 30.6	-0.2
	baz=168,SNR=7.8					
MSTX	Muleshoe	65.88 328	eP	P	12 35 31.5	+0.1
	comp=Z,316nm,0.9s					
MSTX	Muleshoe	65.88 328	P	P	12 35 31.2	-0.2
	baz=144,SNR=90					
M48A	Edgerton	65.91 345	eP	P	12 35 30.3	-0.9
	comp=Z,68nm,1.1s					
M48A	Edgerton	65.91 345	P	P	12 35 30.3	-0.9
	baz=162,SNR=8.1					
M47A	Cromwell	66.01 345	P	P	12 35 30.9	-0.9
	baz=161,SNR=12					
L50A	Kingsville	66.02 347	P	P	12 35 30.9	-1.0
	baz=164,SNR=6.9					

AMTX	Amarillo	66.09	329	eP	P	12 35 32.6	-0.1
	comp=Z,152nm,1.2s						
AMTX	Amarillo	66.09	329	P	P	12 35 32.6	-0.1
	baz=145						
U32A	Winter Ranch,	66.11	332	eP	P	12 35 33.1	+0.4
	comp=Z,94nm,0.9s						
N44A	Piper City	66.14	342	P	P	12 35 31.3	-1.4
	baz=158,SNR=10						
M46A	Old House Fiel	66.23	344	eP	P	12 35 32.6	-0.7
	comp=Z,94nm,1.1s						
M46A	Old House Fiel	66.23	344	P	P	12 35 32.0	-1.3
	baz=160,SNR=7.8						
HDIL	Hopedale	66.25	341	eP	P	12 35 32.6	-0.9
	comp=Z,73nm,0.8s						
HDIL	Hopedale	66.25	341	P	P	12 35 32.2	-1.3
	baz=157,SNR=7.7						
L48A	N Adams	66.28	346	P	P	12 35 32.7	-0.9
	baz=162,SNR=14						
L49A	Milan	66.29	346	P	P	12 35 33.0	-0.6
	baz=163,SNR=7.9						
K52A	Tillsonburg	66.32	349	P	P	12 35 33.3	-0.6
	baz=166						
MEDO	Medina	66.33	351	eP	P	12 35 34.0	+0.1
	comp=Z,56nm,1.3s						
MEDO	Medina	66.33	351	P	P	12 35 33.9	0.0
	baz=168						
J55A	Hilton	66.33	351	eP	P	12 35 33.8	-0.1
	comp=Z,198nm,1.6s						
J55A	Hilton	66.33	351	P	P	12 35 33.5	-0.4
	baz=169,SNR=6.0						
K51A	Iona Station	66.41	348	P	P	12 35 33.7	-0.7
	baz=165						
AAM	Ann Arbor	66.45	346	P	P	12 35 33.9	-0.8
	baz=163						
J54A	Appleton	66.46	351	eP	P	12 35 35.0	+0.3
	comp=Z,56nm,1.1s						
J54A	Appleton	66.46	351	P	P	12 35 34.8	+0.1
	baz=168,SNR=5.9						
STCO	Saint Catharin	66.48	350	P	P	12 35 34.6	-0.2
	baz=168						
TYNO	Tyneside	66.48	350	P	P	12 35 34.5	-0.4
	baz=167,SNR=11						
L47A	Sherwood	66.49	345	P	P	12 35 33.8	-1.2
	baz=161,SNR=18						
N43A	Stutzman Famil	66.57	342	P	P	12 35 34.4	-1.1
	baz=157,SNR=13						
NCB	Newcomb	66.61	354	eP	P	12 35 35.7	0.0
	comp=Z,58nm,1.1s						
M44A	Midewin, Midew	66.66	343	P	P	12 35 34.6	-1.5
	baz=159,SNR=5.8						
HSIG		66.68	318	eP	P	12 35 37.7	+1.2
	comp=Z,183nm,1.3s						
K50A	Casco	66.68	347	eP	P	12 35 35.4	-0.8
	comp=Z,131nm,1.0s						
K50A	Casco	66.68	347	P	P	12 35 35.3	-0.8
	baz=164,SNR=7.9						
LBNH	Lisbon	66.69	356	P	P	12 35 37.2	+1.1
	baz=175						
J52A	Paris	66.73	349	P	P	12 35 36.0	-0.4
	baz=166,SNR=28						
L46A	Eue Claire	66.79	344	eP	P	12 35 36.1	-0.7
	comp=Z,90nm,0.8s						
L46A	Eue Claire	66.79	344	P	P	12 35 35.4	-1.5
	baz=160						
LIC	Lamto	66.80	72	ePKP1	P	12 35 37.5	0.0
	comp=Z,104nm,0.7s						
LIC	Lamto	66.80	72	eP	pP	12 36 26.8	-0.1
	comp=Z,352nm,1.4s						
N41A	Harden Midland	66.86	340	P	P	12 35 36.1	-1.2
	baz=156,SNR=14						
K49A	Clarkson	66.86	347	P	P	12 35 36.0	-1.2
	baz=163						
PECO	Prince Edward	66.88	352	eP	P	12 35 37.4	+0.1
	comp=Z,112nm,1.0s						
PECO	Prince Edward	66.88	352	P	P	12 35 36.9	-0.4
	baz=170,SNR=20						
TORO	Toronto--Lesli	66.90	350	P	P	12 35 37.3	-0.2
	baz=167						
M43A	Waltham Townsh	66.97	342	P	P	12 35 36.8	-1.2
	baz=158,SNR=30						
TIC	Toumodi	67.00	72	ePKP1	P	12 35 39.0	+0.2
TIC	Toumodi	67.00	72	eP	pP	12 36 28.4	+0.2
ACTO	Acton	67.02	350	P	P	12 35 37.8	-0.5
	baz=167,SNR=6.9						
K48A	Perry	67.03	346	P	P	12 35 37.4	-0.9
	baz=163,SNR=23						
DRCO	St. Marys Ceme	67.06	351	P	P	12 35 38.3	-0.2
	baz=168,SNR=8.9						
DRWO	Darlington Wes	67.06	351	P	P	12 35 38.4	-0.1
	baz=168,SNR=12						
WLVO	Wesleyville	67.06	351	P	P	12 35 38.5	0.0
	baz=168,SNR=13						
K47A	Vermontville	67.10	345	P	P	12 35 37.7	-1.1
	baz=162,SNR=8.3						
KIC	Kosan Boka	67.12	72	ePKP1	P	12 35 38.1	-1.4
	comp=Z,146nm,0.7s						
KIC	Kosan Boka	67.12	72	eP	pP	12 36 29.1	+0.2
	comp=Z,384nm,1.1s						
I53A	Kortright Cn E	67.15	350	P	P	12 35 38.8	-0.2
	baz=167						
DBIC	Dimbokro	67.16	72	P	P	12 35 38.6	-1.2
	comp=Z,84nm,0.9s,baz=224,slow=5.0,SNR=55						
DBIC				pP	pP	12 36 30.0	+0.9
	comp=Z,148nm,1.1s,baz=219,slow=6.9,SNR=15						
DBIC	Dimbokro	67.16	72	eP	P	12 35 38.5	-1.2
	comp=Z,91nm,0.9s						
DBIC				epP	pP	12 36 29.8	+0.7
DBIC	Dimbokro	67.16	72	eP	P	12 35 38.5	-1.2
DBIC				pmax	pmax		
	comp=Z,91nm,0.9s						
PKRO	Pickering	67.20	350	P	P	12 35 39.4	0.0
	baz=168,SNR=6.6						
I55A	Frankford	67.25	352	P	P	12 35 39.5	-0.2
	baz=169,SNR=35						
N40A	Mertquake, Sal	67.25	340	P	P	12 35 38.8	-0.9
	baz=155,SNR=16						
LONY	Lake Ozonia	67.28	354	eP	P	12 35 40.1	+0.2
	comp=Z,101nm,1.1s						
LONY	Lake Ozonia	67.28	354	P	P	12 35 40.1	+0.2
	baz=172,SNR=16						
K46A	Dorr	67.30	345	P	P	12 35 38.5	-1.5
	baz=161,SNR=5.8						
J49A	Marlette	67.35	347	P	P	12 35 38.9	-1.5
	baz=164,SNR=11						
L44A	Lake County Fo	67.36	343	P	P	12 35 39.2	-1.2
	baz=159						
I51A	Listowel	67.37	349	P	P	12 35 40.0	-0.4
	baz=166,SNR=21						
M41A	Milan	67.38	341	P	P	12 35 39.4	-1.1
	baz=156,SNR=15						
319A	Douglas	67.39	321	eP	P	12 35 42.2	+1.2
	comp=Z,107nm,0.9s						
121A	Cookes Peak, D	67.40	323	P	P	12 35 42.7	+1.6
	baz=139,SNR=82						
FRNY	Flat Rock	67.41	355	eP	P	12 35 41.0	+0.4
	comp=Z,25nm,0.8s						
J48A	Bridge Port	67.43	347	eP	P	12 35 39.9	-1.0
	comp=Z,152nm,1.1s						
J48A				epP	pP	12 36 31.3	+1.1
J48A	Bridge Port	67.43	347	P	P	12 35 39.8	-1.0
	baz=163,SNR=18						
H56A	Elgin	67.44	353	P	P	12 35 40.9	+0.1
	baz=170,SNR=18						
I52A	Shelburne	67.48	350	P	P	12 35 41.0	-0.2
	baz=167,SNR=22						
H55A	Tweed	67.51	352	P	P	12 35 41.3	0.0
	baz=170,SNR=20						
DELO	Deloro Mine	67.53	352	eP	P	12 35 41.3	-0.1
	comp=Z,258nm,1.6s						
DELO	Deloro Mine	67.53	352	P	P	12 35 41.3	-0.1
	baz=169,SNR=15						
PKME	Peaks-Kenny Pk	67.58	358	eP	P	12 35 41.5	-0.2
	comp=Z,102nm,1.3s						
PKME	Peaks-Kenny Pk	67.58	358	P	P	12 35 41.7	0.0
	baz=177,SNR=5.5						
QSPA	South Pole Qui	67.59	180	eP	P	12 35 42.7	+0.9
	comp=Z,127nm,0.8s						
L43A	Garden Prairie	67.60	342	P	P	12 35 41.1	-0.8
	baz=158,SNR=34						
J47A	Sunmer	67.60	346	eP	P	12 35 41.0	-0.8
	comp=Z,165nm,1.3s						
J47A				epP	pP	12 36 32.6	+1.1
J47A	Sunmer	67.60	346	P	P	12 35 40.9	-0.9
	baz=162,SNR=10.0						
BASO	Ashfield	67.69	348	P	P	12 35 41.9	-0.5
	baz=165,SNR=21						
L42A	Oliver, Polo	67.69	342	eP	P	12 35 41.7	-0.8
	comp=Z,48nm,0.8s						
L42A	Oliver, Polo	67.69	342	P	P	12 35 41.5	-1.0
	baz=157,SNR=13						
BWLO	Walkerton	67.69	349	P	P	12 35 42.2	-0.3
	baz=166,SNR=28						
I49A	Point Hope	67.84	348	eP	P	12 35 42.1	-1.3
	comp=Z,110nm,1.0s						
I49A	Point Hope	67.84	348	P	P	12 35 42.5	-0.9
	baz=164,SNR=12						
BRCO	Bruce Peninsul	67.87	349	P	P	12 35 43.4	-0.1
	baz=165,SNR=13						
J46A	Howard City	67.89	345	P	P	12 35 42.4	-1.3
	baz=161						
K43A	Burlington	67.97	343	eP	P	12 35 43.4	-0.8
	comp=Z,133nm,0.9s						
K43A				epP	pP	12 36 35.2	+1.4
K43A	Burlington	67.97	343	P	P	12 35 43.4	-0.8
	baz=158,SNR=24						
PLVO	Plevna	67.98	352	eP	P	12 35 44.1	-0.1
	comp=Z,80nm,1.0s						
PLVO	Plevna	67.98	352	P	P	12 35 44.3	+0.1
	baz=170,SNR=16						
H52A	Wyevale	67.99	350	P	P	12 35 44.0	-0.3
	baz=167,SNR=23						
SADO	Sadowa	68.00	351	eP	P	12 35 43.9	-0.5
	comp=Z,90nm,1.1s						
BANO	Bancroft	68.07	351	P	P	12 35 44.5	-0.2
	baz=169,SNR=14						
Y22D	IRIS PASSCAL I	68.10	325	P	P	12 35 47.0	+1.6
	baz=140						
G55A	Calabogie	68.14	352	P	P	12 35 45.1	-0.1
	baz=170,SNR=13						
J45A	Montague	68.15	345	P	P	12 35 44.1	-1.2
	baz=160						
LMN	Caledonia Moun	68.16	1	eP	P	12 35 44.9	-0.4
	comp=Z,53nm,1.3s						
BMRO	Meriville Lake	68.17	349	P	P	12 35 45.1	-0.3
	baz=166,SNR=59						
ORIO	Orleans, Innes	68.20	353	P	P	12 35 45.6	+0.1
	baz=171,SNR=11						
L40A	Anamosa	68.21	341	eP	P	12 35 44.7	-1.1
	comp=Z,243nm,1.3s						
L40A	Anamosa	68.21	341	P	P	12 35 44.9	-0.9
	baz=156,SNR=35						
I48A	Sherman Twp	68.26	347	P	P	12 35 45.3	-0.7
	baz=163,SNR=19						
G53A	Haliburton	68.27	351	P	P	12 35 45.9	-0.1
	baz=168,SNR=43						
I47A	Gladwin	68.27	346	eP	P	12 35 45.5	-0.5
	comp=Z,114nm,1.1s						
I47A				epP	pP	12 36 36.9	+1.2
I47A	Gladwin	68.27	346	P	P	12 35 45.3	-0.8
	baz=162						
K42A	Prairie Point,	68.32	342	P	P	12 35 45.7	-0.7
	baz=158,SNR=28						
I46A	Reed City	68.41	346	P	P	12 35 45.8	-1.1
	baz=161,SNR=12						
CBKS	Cedar Bluff	68.47	333	eP	P	12 35 48.1	+0.6
	comp=Z,258nm,0.9s						
CBKS	Cedar Bluff	68.47	333	eP	P	12 35 48.1	+0.6
CBKS				pmax	pmax		
	comp=Z,258nm,0.9s						
CBKS	Cedar Bluff	68.47	333	P	P	12 35 48.0	+0.6
	baz=147,SNR=22						
ANMO	Albuquerque	68.52	326	eP	P	12 35 48.9	+0.8
	comp=Z,113nm,0.9s						
ANMO				epP	pP	12 36 39.2	+1.5
ANMO	Albuquerque	68.52	326	d iP	P	12 35 49.1	+1.0
ANMO				pmax	pmax		
	comp=Z,138nm,1.0s						
ANMO	Albuquerque	68.52	326	P	P	12 35 49.3	+1.2
	baz=141						
TASM	ASL Pad, Albuq	68.52	326	P	P	12 35 49.2	+1.1
	baz=141,SNR=168						
TASM	ASL Pad, Albuq	68.52	326	P	P	12 35 49.2	+1.1
	baz=141,SNR=151						
J43A	Natural Harves	68.62	343	P	P	12 35 47.7	-0.5
	baz=158,SNR=28						
PEMO	Pembroke	68.62	352	P	P	12 35 48.1	-0.1
	baz=170,SNR=13						
F55A	Otter Lake	68.67	353	P	P	12 35 48.4	-0.1
	baz=170,SNR=7.0						
H48A	Harrisville	68.67	347	eP	P	12 35 48.0	-0.5
	comp=Z,129nm,1.1s						
H48A	Harrisville	68.67	347	P	P	12 35 47.3	-1.2
	baz=164,SNR=12						
I45A	Fountain	68.68	345	P	P	12 35 47.4	-1.1
	baz=161						
BUKO	Buck Lake	68.70	350	P	P	12 35 48.5	-0.1
	baz=167,SNR=31						
JFWS	Jewell Farm	68.70	342	eP	P	12 35 48.2	-0.5
	comp=Z,102nm,0.8s						
JFWS	Jewell Farm	68.70	342	eP	P	12 35 48.2	-0.5
JFWS				pmax	pmax		
	comp=Z,102nm,0.8s						
JFWS	Jewell Farm	68.70	342	P	P	12 35 48.1	-0.6
	baz=157,SNR=34						
SCIA	State Center	68.70	339	eP	P	12 35 48.1	-0.6
	comp=Z,100nm,0.9s						
SCIA	State Center	68.70	339	P	P	12 35 48.2	-0.6
	baz=154,SNR=15						
KLBO	Killbear Provi	68.74	350	P	P	12 35 48.6	-0.3
	baz=167,SNR=46						
J42A	Columbus	68.75	343	P	P	12 35 48.4	-0.6
	baz=158,SNR=18						
H47A	Mio	68.76	347	P	P	12 35 48.4	-0.7
	baz=163						
TOBO	Tobermory, Bru	68.84	349	P	P	12 35 48.9	-0.6
	baz=165,SNR=40						
H46A	Fife Lake	68.92	346	P	P	12 35 49.0	-1.0
	baz=162,SNR=16						
TUC	Tucson	68.94	321	eP	P	12 35 51.3	+0.7
	comp=Z,128nm,1.2s						
TUC	Tucson	68.94	321	eP	P	12 35 51.3	+0.7
TUC				pmax	pmax		
	comp=Z,128nm,1.2s						
TUC	Tucson	68.94	321	P	P	12 35 51.8	+1.2
	baz=137						
PQI	Presque Isle	68.96	359	eP	P	12 35 50.4	+0.2
	comp=Z,33nm,1.0s						
ALGO	Algonquin Park	69.00	352	P	P	12 35 49.9	-0.6
	baz=169,SNR=16						
F52A	Sundridge	69.03	351	P	P	12 35 50.5	-0.2
	baz=168,SNR=21						
GLMI	Grayling	69.06	346	eP	P	12 35 50.8	-0.1
	comp=Z,114nm,1.0s						
GLMI	Grayling	69.06	346	P	P	12 35 50.3	-0.6
	baz=162,SNR=5.4						
H45A	Beulah	69.19	345	P	P	12 35 50.6	-1.1
	baz=161						
T25A	Trinidad	69.22	329	eP	P	12 35 53.3	+1.0
	comp=Z,117nm,1.0s						
T25A	Trinidad	69.22	329	P	P	12 35 53.5	+1.2
	baz=143,SNR=57						
I42A	Draeger Farm,	69.23	343	eP	P	12 35 51.7	-0.2
	comp=Z,75nm,0.8s						
I42A	Draeger Farm,	69.23	343	P	P	12 35 51.5	-0.5
	baz=158,SNR=26						
G47A	Hillman	69.23	347	P	P	12 35 51.4	-0.5
	baz=163,SNR=12						
E54A	Lac Daplat, Po	69.36	352	P	P	12 35 52.5	-0.2
	baz=170,SNR=19						
E53A	Dumoine, Ponti	69.37	352	P	P	12 35 52.7	-0.1
	baz=169						
E52A	Mattawa	69.41	351	P	P	12 35 52.5	-0.5
	baz=168,SNR=13						
F49A	Sandfield	69.45	349	P	P	12 35 52.7	-0.6
	baz=165,SNR=39						
H43A	Windswept, Lux	69.47	344	eP	P	12 35 52.9	-0.5
	comp=Z,72nm,0.8s						
H43A	Windswept, Lux	69.47	344	P	P	12 35 52.6	-0.8
	baz=159,SNR=27						
G45A	Suttons Bay	69.50	346	eP	P	12 35 53.1	-0.4
	comp=Z,60nm,1.0s						
G45A	Suttons Bay	69.50	346	P	P	12 35 52.7	-0.9
	baz=161,SNR=6.9						
G46A	Petoskey	69.58	346	P	P	12 35 53.3	-0.8
	baz=162,SNR=8.8						
F48A	Evansville	69.62	348	P	P	12 35 53.9	-0.4
	baz=164,SNR=35						
I41A	Arkdale	69.64	342	eP	P	12 35 54.0	-0.5
	comp=Z,92nm,1.1s						
I41A	Arkdale	69.64	342	P	P	12 35 53.5	-1.0
	baz=157,SNR=5.4						
H42A	Shiocton	69.70	344	eP	P	12 35 54.6	-0.2
	comp=Z,267nm,1.5s						
H42A	Shiocton	69.70	344	P	P	12 35 54.2	-0.6
	baz=159,SNR=16						
E51A	G1948 Merrick	69.78	351	P	P	12 35 55.1	-0.2
	baz=167,SNR=15						
E50A	Wahnapitae	69.86	350	P	P	12 35 55.5	-0.3
	baz=166,SNR=18						
214A	Organ Pipe Nat	69.89	319	P	P	12 35 57.9	+1.6
	baz=135,SNR=35						
KSCO	Kaye Shedlock'	69.89	331	eP	P	12 35 57.1	+0.8
	comp=Z,223nm,1.2s						
KSCO	Kaye Shedlock'	69.89	331	P	P	12 35 57.2	+0.8
	baz=145,SNR=14						
F46A	Macinaw City C	70.00	347	P	P	12 35 56.1	-0.5
	baz=162,SNR=15						
D54A	Lac Fusel, La	70.01	353	P	P	12 35 57.2	+0.5
	baz=170,SNR=8.1						
BGNE	Belgrade	70.03	335	eP	P	12 35 57.2	+0.3
	comp=Z,446nm,0.8s						
BGNE				epP	pP	12 36 49.2	+2.3
BGNE	Belgrade	70.03	335	P	P	12 35 57.3	+0.3
	baz=149,SNR=39						
D52A	ZEK Kipawa Sen	70.05	352	P	P	12 35 56.8	-0.1
	baz=168,SNR=17						
H07S1	FLORES T-PHASE	70.06	29	eP	P	12 35 57.3	+0.1
D53A	Lac Vacive, Po	70.06	352	eP	P	12 35 57.0	0.0
	comp=Z,101nm,1.3s						
D53A	Lac Vacive, Po	70.06	352	P	P	12 35 56.7	-0.3
	baz=169,SNR=14						
F45A	CMU Biological	70.08	346	P	P	12 35 56.5	-0.5
	baz=162,SNR=26						
X18A	Snowflake	70.09	323	eP	P	12 35 58.9	+1.2
	comp=Z,63nm,1.0s						
H41A	Junction City	70.10	343	eP	P	12 35 56.6	-0.7
	comp=Z,68nm,1.0s						
H41A	Junction City	70.10	343	P	P	12 35 56.6	-0.7
	baz=158,SNR=13						
E48A	Lockeyer	70.17	349	P	P	12 35 57.3	-0.3
	baz=165,SNR=52						
G43A	Wallace	70.18	344	eP	P	12 35 56.7	-1.0
	comp=Z,55nm,1.1s						
G43A	Wallace	70.18	344	P	P	12 35 56.9	-0.8
	baz=159,SNR=17						
SDCO	Great Sand Dun	70.22	328	eP	P	12 35 59.8	+1.2
	comp=Z,125nm,0.9s						
SDCO	Great Sand Dun	70.22	328	P	P	12 35 59.7	+1.2
	baz=142,SNR=189						
H40A	Chili	70.31	342	P	P	12 35 57.9	-0.6
	baz=157,SNR=40						
E47A	Iron Bridge	70.35	348	P	P	12 35 58.2	-0.5
	baz=164,SNR=59						
H07N1	FLORES T-PHASE	70.35	29	eP	P	12 35 59.8	+0.9
W18A	Petrified Fore	70.41	324	eP	P	12 36 00.7	+1.1
	comp=Z,161nm,1.0s						
W18A	Petrified Fore	70.41	324	P	P	12 36 00.9	+1.3
	baz=138,SNR=49						
E46A	Sault Ste Mari	70.47	347	eP	P	12 35 58.9	-0.6
	comp=Z,124nm,0.9s						
E46A	Sault Ste Mari	70.47	347	P	P	12 35 59.1	-0.4
	baz=163,SNR=49						
G41A	Antigo	70.52	343	P	P	12 35 59.2	-0.6
	baz=158,SNR=6.8						
F44A	Big Bay de Noc	70.55	346	P	P	12 35 59.2	-0.8
	baz=161,SNR=26						
PCAN	Candelaria	70.57	31	eP	P	12 36 01.1	+0.8
	comp=Z,89nm,1.0s						
F43A	Flat Rock, Esc	70.59	345	P	P	12 35 59.6	-0.7
	baz=160,SNR=26						
PICO	Pico	70.63	31	eP	P	12 36 01.4	+0.7
	comp=Z,94nm,1.1s						
E45A	Wooded Hills,	70.64	347	P	P	12 36 00.3	-0.2
	baz=162,SNR=16						
PPNO	Prainha do Nor	70.68	31	eP	P	12 36 01.2	+0.2
	comp=Z,152nm,1.1s						
F42A	Maple Grove Fa	70.76	344	P	P	12 36 00.7	-0.6
	baz=159						
D49A	Beulah Townshi	70.79	350	P	P	12 36 01.3	-0.1
	baz=166,SNR=39						
X16A	Lo Mia Camp, P	70.84	322	eP	P	12 36 03.6	+1.3
	comp=Z,100nm,1.0s						
G40A	Rib Lake	70.85	343	eP	P	12 36 01.5	-0.3
	comp=Z,135nm,1.6s						
G40A	Rib Lake	70.85	343	P	P	12 36 01.5	-0.3
	baz=157,SNR=24						
S22A	4UR Ranch, Cre	70.88	327	eP	P	12 36 03.4	+0.8
	comp=Z,40nm,0.9s						
S22A	4UR Ranch, Cre	70.88	327	P	P	12 36 03.7	+1.1
	baz=141,SNR=66						
ROSA	Rosais	70.89	31	eP	P	12 36 02.9	+0.7
	comp=Z,95nm,1.3s						
PMAN	Manadas	70.89	31	eP	P	12 36 03.1	+0.9
	comp=Z,166nm,1.1s						
D47A	Chapleau	70.89	348	P	P	12 36 01.4	-0.7
	baz=164,SNR=31						
D46A	Sault St. Mari	70.92	348	P	P	12 36 01.4	-0.7
	baz=163,SNR=19						
F41A	Three Lakes	70.99	344	eP	P	12 36 02.3	-0.3
	comp=Z,101nm,1.0s						
F41A				epP	pP	12 36 54.8	+2.1
F41A	Three Lakes	70.99	344	P	P	12 36 02.4	-0.2
	baz=158,SNR=58						
Q24A	Divide	71.02	329	eP	P	12 36 04.3	+0.9
	comp=Z,182nm,1.0s						
Q24A	Divide	71.02	329	P	P	12 36 04.5	+1.1
	baz=143,SNR=70						
113A	Mohawk Valley,	71.03	319	eP	P	12 36 04.2	+1.0
	comp=Z,33nm,0.9s						
VLDQ	Val d'Or	71.05	352	eP	P	12 36 03.3	+0.4
	comp=Z,86nm,1.4s						
VLDQ				epP	pP	12 36 55.8	+2.8
E44A	Grand Marais A	71.05	346	eP	P	12 36 03.3	+0.3
	comp=Z,291nm,1.5s						
E44A	Grand Marais A	71.05	346	P	P	12 36 02.8	-0.2
	baz=161,SNR=9.9						
E43A	Lone Tree Farm	71.07	345	eP	P	12 36 02.5	-0.5
	comp=Z,54nm,0.9s						
E43A	Lone Tree Farm	71.07	345	P	P	12 36 02.6	-0.5
	baz=160,SNR=32						
PSMA	Santa Maria	71.10	34	eP	P	12 36 03.4	-0.1
	comp=Z,109nm,1.6s						
G39A	Holcombe	71.14	342	P	P	12 36 02.8	-0.7
	baz=156,SNR=24						
PSMN	Pico do Norte,	71.14	34	eP	P	12 36 03.5	-0.2
	comp=Z,92nm,2.0s						
OGNE	Ogallala	71.22	332	eP	P	12 36 04.9	+0.7
	comp=Z,127nm,0.9s						
OGNE	Ogallala	71.22	332	P	P	12 36 05.0	+0.7
	baz=146,SNR=19						
MVCO	Mesa Verde	71.32	326	eP	P	12 36 06.1	+1.0
	comp=Z,169nm,1.0s						
MVCO	Mesa Verde	71.32	326	P	P	12 36 06.2	+1.1
	baz=140,SNR=126						
ADH	Angra Heroismo	71.32	32	eP	P	12 36 05.8	+1.1
	comp=Z,113nm,0.9s						
COWI	Conover	71.34	344	eP	P	12 36 04.4	-0.3
	comp=Z,71nm,1.3s						
E42A	Champion	71.34	345	P	P	12 36 04.4	-0.3
	baz=159,SNR=28						
TAOE	Nuku Hiva Isla	71.36	268	eP	P	12 36 07.7	+1.9
	comp=Z,248nm,1.2s						
TAOE				epP	pP	12 36 58.5	+2.4
Y14A	Wickenburg	71.40	321	eP	P	12 36 06.5	+1.0
	comp=Z,80nm,1.1s						
PSCM	Serra do Cume	71.41	32	eP	P	12 36 05.9	+0.5
	comp=Z,155nm,1.3s						
F40A	Park Falls	71.43	343	P	P	12 36 05.2	-0.1
	baz=157,SNR=115						
ECSD	EROS Data Cent	71.48	338	eP	P	12 36 05.3	-0.3
	comp=Z,111nm,1.3s						
ECSD				eS	S	12 45 04.8	-2.3
ECSD	EROS Data Cent	71.48	338	P	P	12 36 05.3	-0.3
	baz=151,SNR=46						
GRON	Grota Negra	71.48	33	eP	P	12 36 06.5	+0.7
	comp

baz=158,SNR=78
GLA Glamis 71.87 319 *e*P **P 12 36 09.5 +1.2**
comp=Z,69nm,1.0s
GLA Glamis 71.87 319 P **P 12 36 09.6 +1.4**
baz=134,SNR=18
ISCO Idaho Springs 71.90 329 *e*P **P 12 36 09.4 +0.8**
comp=Z,101nm,1.1s
ISCO Idaho Springs 71.90 329 *e*P **P 12 36 09.4 +0.8**
ISCO pmax pmax
comp=Z,101nm,1.1s
ISCO Idaho Springs 71.90 329 P **P 12 36 09.7 +1.1**
baz=142,SNR=64
LSQQ Lebel-sur-Quev 71.92 353 P **P 12 36 07.8 -0.3**
baz=170
F38A Pierce - Schro 71.95 342 P **P 12 36 08.1 -0.3**
baz=156,SNR=27
F37A Hinrichs Farm, 71.96 341 P **P 12 36 08.3 -0.2**
baz=155,SNR=18
E39A Mellen 71.97 343 P **P 12 36 08.4 -0.1**
baz=157,SNR=52
DRLN Deer Lake 72.02 6 *e*P **P 12 36 08.2 -0.5**
comp=Z,26nm,0.8s
DRLN *e*pP **pP 12 37 00.2 +1.3**
PV01 Paradox Valley 72.06 326 *e*P **P 12 36 10.6 +1.1**
comp=Z,106nm,1.0s
SMCO Snowmass 72.06 328 *e*P **P 12 36 10.8 +1.1**
comp=Z,100nm,0.9s
D41A Chassel 72.09 345 *e*P **P 12 36 09.3 +0.2**
comp=Z,149nm,0.8s
D41A Chassel 72.09 345 P **P 12 36 09.3 +0.2**
baz=159,SNR=62
Y12C Blythe 72.17 320 P **P 12 36 11.6 +1.6**
baz=134,SNR=17
PDMCI Parker Dam,Lak 72.33 320 P **P 12 36 12.2 +1.3**
baz=134,SNR=12
IKP In-Ko-Pah, Jac 72.39 318 P **P 12 36 12.9 +1.6**
baz=133,SNR=28
SWSC Sam W. Stewart 72.39 318 P **P 12 36 12.8 +1.5**
baz=133,SNR=11
E38A The Farm, Brul 72.45 342 *e*P **P 12 36 11.0 -0.4**
comp=Z,75nm,1.0s
E38A The Farm, Brul 72.45 342 P **P 12 36 10.9 -0.4**
baz=156,SNR=27
CHGQ Chibougamau 72.51 355 P **P 12 36 11.2 -0.4**
baz=173,SNR=8.7
PMOZ Porto Moniz, M 72.64 42 *e*P **P 12 36 13.7 +0.8**
comp=Z,142nm,2.0s
PMOZ *e*S **SKiKP 12 45 27.2 +1.5**
BC3 Big Chuckawall 72.67 319 P **P 12 36 14.5 +1.5**
baz=133,SNR=60
MATQ Matagami 72.69 353 P **P 12 36 12.2 -0.4**
baz=169,SNR=11
W13A Hualapai Mount 72.74 321 *e*P **P 12 36 14.7 +1.1**
comp=Z,73nm,1.3s
MONP2 Monument Peak 72.74 318 P **P 12 36 15.1 +1.5**
baz=133,SNR=25
PMAR Madeira 72.75 42 *e*P **P 12 36 11.8 -1.8**
comp=Z,159nm,1.6s
BAR Barrett 72.76 318 *e*P **P 12 36 14.5 +1.0**
comp=Z,92nm,1.1s
IRM Iron Mountain 72.83 320 P **P 12 36 15.5 +1.7**
baz=134,SNR=61
N23A Red Feather La 72.92 330 P **P 12 36 15.9 +1.3**
baz=142,SNR=50
NEE2 Needles Airpor 72.94 320 P **P 12 36 15.8 +1.3**
baz=134
SUSD Miller 72.94 336 P **P 12 36 14.0 -0.3**
baz=149,SNR=7.2
PHWY Pilot Hill 73.02 330 *e*P **P 12 36 16.0 +0.8**
comp=Z,102nm,1.2s
PHWY *e*pP **pP 12 37 07.4 +1.9**
C40A Isle Royale Na 73.03 344 *e*P **P 12 36 14.4 -0.3**
comp=Z,173nm,1.6s
C40A Isle Royale Na 73.03 344 P **P 12 36 14.3 -0.3**
baz=158,SNR=28
109C Camp Elliot, M 73.17 317 P **P 12 36 17.1 +1.3**
baz=132
BELC Belle Mtn. Jos 73.23 319 P **P 12 36 17.9 +1.5**
baz=133,SNR=38
PFO Pinyon Flats O 73.25 318 *i*P **P 12 36 18.4 +1.9**
PFO Pinyon Flats O 73.25 318 P **P 12 36 18.0 +1.5**
baz=133,SNR=38
O20A White River Ci 73.42 328 P **P 12 36 18.8 +1.4**
baz=140,SNR=93
GMRC Granite Mounta 73.56 320 P **P 12 36 20.1 +1.8**
baz=134,SNR=102
EYMN Ely 73.66 343 *e*P **P 12 36 18.1 -0.3**
comp=Z,37nm,0.9s
EYMN Ely 73.66 343 P **P 12 36 17.7 -0.7**
baz=156,SNR=31
MURC Murrieta 73.70 318 P **P 12 36 20.5 +1.6**
baz=132,SNR=18
BBRC Big Bear Solar 73.97 319 P **P 12 36 22.7 +1.9**
baz=132,SNR=10
HEC Hector,Ludlow 74.00 319 P **P 12 36 22.6 +1.9**
baz=133,SNR=21
SCI2 San Clemente I 74.14 317 P **P 12 36 22.9 +1.5**
baz=131,SNR=7.6
TUQ Turquoise Moun 74.17 320 P **P 12 36 23.2 +1.4**
baz=133,SNR=47
CIS Catalina Islan 74.33 317 P **P 12 36 24.1 +1.4**
baz=131,SNR=9.5
BFSC Mount Baldy Ra 74.41 318 P **P 12 36 24.5 +1.3**
baz=132,SNR=42
RRX Edison Barstow 74.43 319 P **P 12 36 25.0 +1.8**
baz=133,SNR=5.3
FMP Fort Macarthur 74.46 317 P **P 12 36 24.6 +1.3**
baz=131
K22A Casper 74.57 331 *e*P **P 12 36 25.1 +1.1**
comp=Z,127nm,1.1s
K22A Casper 74.57 331 P **P 12 36 25.2 +1.1**
baz=142,SNR=46
GSC Goldstone, Bar 74.60 319 P **P 12 36 25.9 +1.6**
baz=133,SNR=68
RSSD Black Hills 74.67 333 *e*P **P 12 36 25.2 +0.6**
comp=Z,75nm,1.0s
RSSD Black Hills 74.67 333 *e*P **P 12 36 25.2 +0.6**
RSSD pmax pmax
comp=Z,75nm,1.0s
RSSD Black Hills 74.67 333 P **P 12 36 25.4 +0.8**
baz=145
SHOC Shoshone, Teco 74.69 320 P **P 12 36 25.9 +1.3**
baz=133,SNR=24
SYO Syowa Base 74.76 159⇑ *i*P **P 12 36 24.0 -0.5**
SYO Syowa Base 74.76 159⇑ *e*X **PcP 12 36 39.4 +1.8**
DECC Green Verdugo 74.84 318 P **P 12 36 27.0 +1.5**
baz=132,SNR=6.4
SNCC San Nicolas Is 74.93 316 P **P 12 36 27.2 +1.2**
baz=130
TBI Tubuai 75.02 251 *e*P **P 12 36 29.0 +2.2**
comp=Z,657nm,1.6s
TBI *e*S **S 12 45 51.0 +3.2**
comp=Z,1μm,30.8s
EDW2 Edwards Air Fo 75.04 318 P **P 12 36 27.9 +1.1**
baz=132,SNR=35
BLG Laguna Peak, P 75.20 317 P **P 12 36 28.9 +1.3**
baz=131
AGMN Agassiz Nation 75.25 340 *e*P **P 12 36 27.3 -0.2**
comp=Z,49nm,0.9s
AGMN Agassiz Nation 75.25 340 P **P 12 36 27.4 -0.2**
baz=152,SNR=27
LRMC Laurel Mtn Rad 75.25 319 P **P 12 36 29.4 +1.4**
baz=132,SNR=16
OSI Osito Audit: C 75.32 318 P **P 12 36 29.5 +1.2**
baz=131
TPNV Topopah Spring 75.40 321 P **P 12 36 30.8 +2.0**
baz=134,SNR=117
FURC Furnace Creek, 75.43 320 P **P 12 36 30.6 +1.8**
baz=133,SNR=100
SCZ2 Santa Cruz Isl 75.48 317 P **P 12 36 30.4 +1.2**
baz=130,SNR=8.5
MPMC Manual Prospec 75.52 320 P **P 12 36 30.9 +1.2**
baz=132,SNR=69
MEH Mehetia 75.54 256 *e*P **P 12 36 32.6 +2.6**
comp=Z,40nm,1.2s
ARVC Arvin 75.72 318 P **P 12 36 31.9 +1.4**
baz=131
DUG Dugway, Tooele 75.79 325 *e*P **P 12 36 31.7 +0.7**
comp=Z,104nm,1.1s
DUG Dugway, Tooele 75.79 325 *e*P **P 12 36 31.7 +0.7**
DUG pmax pmax
comp=Z,104nm,1.1s
DUG Dugway, Tooele 75.79 325 P **P 12 36 32.5 +1.6**
baz=137,SNR=79
SBC Santa Barbara 75.82 317 P **P 12 36 32.2 +1.1**
baz=130
ISA Isabella, Lake 75.86 319 P **P 12 36 33.0 +1.7**
baz=132,SNR=84

TOA0 Torodi Ar. Sit 75.87 69 *e*P **P 12 36 30.6 -1.2**
comp=Z,85nm,0.7s
TOA0 *e*pP **pP 12 37 22.6 +0.3**
TOA0 Torodi Ar. Sit 75.87 69 P **P 12 36 31.0 -0.7**
SNR=23
TORD Torodi Ar. Bea 75.87 69 P **P 12 36 29.7 -2.1**
comp=Z,41nm,0.5s,baz=211,slow=2.7,SNR=188
TORD pP **pP 12 37 21.6 -0.7**
comp=Z,76nm,0.8s,baz=256,slow=5.0,SNR=11
TORD PP PP 12 39 11.5 -14
comp=Z,5.3nm,0.7s,baz=232,slow=8.1,SNR=2.9
R11A Troy Canyon, C 75.99 322 P **P 12 36 34.0 +1.8**
baz=134,SNR=136
VAH Vaihoa 76.03 259 *e*P **P 12 36 35.2 +2.5**
comp=Z,252nm,1.2s
BW06 Boulder Array 76.07 329 *e*P **P 12 36 32.9 +0.3**
comp=Z,60nm,1.4s
BW06 Boulder Array 76.07 329 P **P 12 36 33.2 +0.6**
baz=140,SNR=57
PD31 Pinedale Array 76.07 329 *e*P **P 12 36 32.9 +0.2**
comp=Z,55nm,1.4s
PDAR Pinedale Array 76.07 329 P **P 12 36 33.2 +0.6**
comp=Z,8.7nm,0.6s,baz=139,slow=7.0,SNR=96
GRAC Grapevine Rang 76.08 320 P **P 12 36 34.4 +1.8**
baz=133,SNR=31
MDND Maddock 76.09 338 P **P 12 36 33.0 +0.7**
baz=149,SNR=11
VNDA Vanda 76.10 190 P **P 12 36 33.5 +1.4**
comp=Z,24nm,1.1s,baz=134,slow=5.4,SNR=42
VNDA Vanda 76.10 190 *e*P **P 12 36 32.7 +0.7**
comp=Z,40nm,1.1s
VNDA Vanda 76.10 190 *e*P **P 12 36 32.7 +0.7**
VNDA pmax pmax
comp=Z,40nm,1.1s
CWC Cottonwood Cre 76.13 320 P **P 12 36 34.6 +1.6**
baz=132
PKM McPherson Peak 76.17 317 P **P 12 36 34.9 +1.6**
baz=131,SNR=69
HWUT Hardware Ranch 76.18 327 *e*P **P 12 36 33.6 +0.4**
comp=Z,40nm,0.8s
VES Vestal, Richgr 76.35 319 P **P 12 36 35.4 +1.4**
baz=131,SNR=15
PMOR Pomariorio Ree 76.35 259 *e*P **P 12 36 36.9 +2.4**
comp=Z,339nm,1.3s
SMMC Simmler 76.56 318 P **P 12 36 37.2 +1.9**
baz=130,SNR=34
TIN Tinemaha, Big 76.63 320 P **P 12 36 37.5 +1.7**
baz=132,SNR=14
TVO Taravao 76.64 256 *e*P **P 12 36 38.7 +2.5**
comp=Z,53nm,1.3s
TIAR Tiarei 76.80 256 *e*P **P 12 36 39.0 +2.0**
comp=Z,20nm,1.1s
AHID Auburn Hatcher 76.81 328 *e*P **P 12 36 37.1 +0.3**
comp=Z,132nm,0.9s
VOG Valley Oaks Go 76.84 319 P **P 12 36 37.2 +0.5**
baz=131
PAE Paea 76.97 256 *e*P **P 12 36 40.1 +2.1**
comp=Z,25nm,1.2s
PPTF Pamatai, Papee 76.98 256 *e*P **P 12 36 38.3 +0.1**
comp=Z,138nm,1.0s
ULM Lac du Bonnet 76.99 341 P **P 12 36 36.9 -0.4**
comp=Z,46nm,0.6s,baz=152,slow=6.0,SNR=40
ULM Lac du Bonnet 76.99 341 *e*P **P 12 36 36.8 -0.4**
comp=Z,62nm,0.8s
ULM Lac du Bonnet 76.99 341 *e*P **P 12 36 36.8 -0.4**
ULM pmax pmax
comp=Z,62nm,0.8s
PAGB Antelope Grade 76.99 318 *e*P **P 12 36 38.3 +0.7**
comp=Z,170nm,1.2s
PPT2 Papeete2 76.99 256 *e*P **P 12 36 40.6 +2.4**
comp=Z,174nm,1.3s
PPT2 *e*S **S 12 46 12.3 +2.5**
comp=Z,1μm,29.2s
PPT2 Papeete2 76.99 256 *e*LR LR 13 00 53.8
comp=Z,605nm,24.0s
PPT Papeete 77.00 256 P **P 12 36 39.7 +1.5**
comp=Z,92nm,1.0s,baz=114,slow=7.8,SNR=7.3
PPT Papeete 77.00 256 *e*P **P 12 36 38.6 +0.4**
SCHQ Schefferville 77.12 360 P **P 12 36 37.6 -0.3**
comp=Z,17nm,0.7s,baz=172,slow=3.6,SNR=8.7
SCHQ pP **pP 12 37 30.6 +1.8**
comp=Z,16nm,0.8s,baz=187,slow=4.5,SNR=3.9
SCHQ Schefferville 77.12 360 *e*P **P 12 36 37.6 -0.3**
comp=Z,39nm,1.1s
MLAC Mammoth, Mammo 77.38 320 P **P 12 36 41.6 +1.6**
baz=132,SNR=16
FXWY Fox Creek 77.43 329 *e*P **P 12 36 40.6 +0.4**
comp=Z,33nm,0.9s
NV11 Mina Array Sit 77.51 321 *e*P **P 12 36 41.6 +1.0**
comp=Z,5.0nm,1.1s
NV01 Mina Array Sit 77.60 321 *e*P **P 12 36 42.6 +1.4**
NVAR Mina Array Bea 77.60 321 P **P 12 36 42.6 +1.3**
comp=Z,29nm,0.9s,baz=147,slow=5.9,SNR=128
LAO LASA Array 77.65 333 *e*P **P 12 36 41.6 +0.5**
comp=Z,133nm,1.1s
LAO LASA Array 77.65 333 P **P 12 36 41.8 +0.7**
baz=143,SNR=6.9
RLMT Red Lodge 77.74 331 *e*P **P 12 36 42.8 +0.9**
comp=Z,75nm,0.9s
RLMT *e*pP **pP 12 37 34.1 +1.3**
RLMT Red Lodge 77.74 331 P **P 12 36 43.0 +1.1**
baz=140,SNR=27
H17A Grant Village 77.79 329 P **P 12 36 43.9 +1.7**
baz=139,SNR=25
YPP Pitchstone Pla 77.80 329 *e*P **P 12 36 43.2 +0.9**
comp=Z,76nm,1.6s
TSUM Tsumeb 77.82 106 P **P 12 36 43.1 +0.2**
comp=Z,34nm,0.9s,baz=229,slow=7.9,SNR=36
TSUM pP **pP 12 37 34.9 +1.4**
comp=Z,38nm,1.0s,baz=241,slow=6.5,SNR=7.8
TSUM Tsumeb 77.82 106 *e*P **P 12 36 42.3 -0.6**
comp=Z,30nm,0.8s
TSUM *e*pP **pP 12 37 34.4 +0.9**
DGMT Dagmar 78.29 336 P **P 12 36 45.8 +1.3**
baz=145,SNR=14
GCMT Greycliff 78.44 331 *e*P **P 12 36 46.3 +0.7**
CMB Columbia Colle 78.57 320 *e*P **P 12 36 46.9 +0.5**
comp=Z,44nm,1.4s
CMB Columbia Colle 78.57 320 *e*P **P 12 36 46.9 +0.5**
CMB pmax pmax
comp=Z,44nm,1.4s
HLID Hailey 79.05 327 P **P 12 36 50.7 +1.7**
baz=136,SNR=250
PAHR Pah Rah Range 79.08 321 *e*P **P 12 36 50.4 +1.2**
comp=Z,229nm,1.0s
BOZ Bozeman (W) 79.19 330 *e*P **P 12 36 50.0 +0.4**
comp=Z,55nm,1.4s
BOZ Bozeman (W) 79.19 330 *e*P **P 12 36 50.1 +0.4**
BOZ pmax pmax
comp=Z,55nm,1.4s
BOZ Bozeman (W) 79.19 330 P **P 12 36 50.6 +1.0**
baz=138,SNR=53
MCMT McKenzie Canyo 79.19 329 *e*P **P 12 36 50.9 +1.0**
DLMT Dillon 79.47 329 *e*P **P 12 36 51.2 0.0**
comp=Z,176nm,1.4s
AFDM Forest Hills D 79.51 320 *e*P **P 12 36 51.9 +0.5**
comp=Z,76nm,1.1s
EGMT Eagleton 80.19 332 *e*P **P 12 36 55.3 +0.4**
comp=Z,142nm,1.0s
EGMT Eagleton 80.19 332 P **P 12 36 55.3 +0.4**
baz=140,SNR=50
ORV Oroville 80.21 320 *e*P **P 12 36 55.6 +0.5**
comp=Z,224nm,1.3s
ORV Oroville 80.21 320 *e*P **P 12 36 55.6 +0.5**
ORV pmax pmax
comp=Z,225nm,1.3s
WVOR Wild Horse Val 80.48 324 *e*P **P 12 36 56.8 +0.1**
comp=Z,53nm,1.4s
WVOR Wild Horse Val 80.48 324 *e*P **P 12 36 56.8 +0.1**
WVOR pmax pmax
comp=Z,53nm,1.4s
PFVI Vila Bisbo 80.66 43 *e*P **P 12 36 58.1 +0.5**
comp=Z,206nm,1.4s
PFVI *e*S **S 12 46 49.0 +1.5**
PFVI Vila Bisbo 80.66 43 *e*P **P 12 36 57.3 -0.3**
comp=Z,147nm,1.2s
O03E Paynes Creek 80.87 321 P **P 12 36 58.9 +0.2**
baz=130,SNR=26
MORF Marmelete 80.88 43 *e*P **P 12 36 57.8 -1.0**
MORF AMb AMB 12 37 01.7
comp=Z,111nm,1.3s
MORF *e*S **S 12 46 50.4 +0.4**
MORF Marmelete 80.88 43 *e*P **P 12 36 59.6 +0.8**
comp=Z,114nm,1.3s
MORF *i*LQ LQ 12 37 48.7
MORF *e*S **S 12 46 51.0 +1.1**
MORF Marmelete 80.88 43 *e*P **P 12 36 57.7 -1.0**

MORF *e*S **S 12 46 50.3 +0.4**
MDT Midelt 80.95 49 P **P 12 36 59.8 +0.4**
comp=Z,78nm,1.0s,baz=246,slow=5.2,SNR=59
PTEO Sao Teotonio 80.98 43 *e*P **P 12 37 00.3 +1.1**
comp=Z,245nm,1.3s
PTEO *i*LQ LQ 12 37 50.5
IFR Ifrane 80.99 48 *e*S **S 12 46 49.8 -1.7**
J08A Circle Bar Ran 81.02 325 *e*P **P 12 37 00.4 +0.9**
comp=Z,139nm,1.0s
MOD Modoc Plateau 81.05 323 *e*P **P 12 37 00.3 +0.6**
comp=Z,111nm,1.1s
BOSA Boshof 81.17 117 P **P 12 37 00.7 -0.1**
comp=Z,8.8nm,0.4s,baz=244,slow=3.5,SNR=23
BOSA pP **pP 12 37 52.2 +0.2**
comp=Z,6.5nm,0.8s,baz=257,slow=9.1,SNR=3.0
BOSA Boshof 81.17 117 *e*P **P 12 37 00.3 -0.5**
comp=Z,27nm,1.1s
BOSA Boshof 81.17 117 *e*P **P 12 37 00.3 -0.5**
BOSA pmax pmax
comp=Z,27nm,1.1s
MSO Missoula 81.18 329 *e*P **P 12 37 00.8 +0.6**
comp=Z,75nm,1.3s
MSO Missoula 81.18 329 P **P 12 37 01.5 +1.3**
baz=137,SNR=38
PBDV Barranco-do-Ve 81.30 44 *e*P **P 12 37 01.8 +0.8**
comp=Z,159nm,1.2s
PBDV *i*LQ LQ 12 37 46.1
PBDV *e*S **S 12 46 55.1 +0.9**
O02D Mt. Diablo Mer 81.37 320 P **P 12 37 02.0 +0.6**
baz=129,SNR=9.0
LIS Lisbon 81.42 42 *e*S **S 12 46 55.8 +0.5**
BMO Blue Mountains 81.43 326 *e*P **P 12 37 02.0 +0.4**
comp=Z,161nm,1.3s
PNCL Nicolau / Gran 81.44 43 *e*P **P 12 37 02.3 +0.7**
comp=Z,66nm,2.3s
PNCL *i*LQ LQ 12 37 51.9
PNCL *e*S **S 12 46 57.5 +2.0**
PCVE Castro Verde 81.46 43 *e*P **P 12 37 02.7 +0.9**
comp=Z,77nm,1.2s
PCVE *i*LQ LQ 12 37 51.9
PCVE *e*S **S 12 46 57.9 +2.1**
MESJ Messejana 81.47 43 *e*P **P 12 37 00.9 -1.0**
MESJ AMb AMB 12 37 04.2
comp=Z,115nm,1.2s
MESJ *e*S **S 12 46 56.3 +0.4**
MESJ Messejana 81.47 43 *e*P **P 12 37 00.8 -1.0**
MESJ *e*S **S 12 46 56.3 +0.4**
WDC Whiskeytown Da 81.48 320 *e*P **P 12 37 01.3 -0.5**
comp=Z,39nm,0.8s
WDC Whiskeytown Da 81.48 320 *e*P **P 12 37 01.3 -0.5**
WDC pmax pmax
comp=Z,39nm,0.8s
PMAFR Mafra 81.49 42 *e*P **P 12 37 02.7 +0.8**
comp=Z,132nm,1.1s
PMAFR *e*S **S 12 46 57.3 +1.2**
PVAQ Vaqueiros 81.53 44 *e*P **P 12 37 02.5 +0.4**
comp=Z,81nm,1.4s
PVAQ *i*LQ LQ 12 37 51.9
PVAQ *e*S **S 12 46 58.2 +1.7**
PVAQ Vaqueiros 81.53 44 *e*P **P 12 37 02.0 -0.2**
comp=Z,98nm,1.5s
PBEJ Beja 81.81 43 *e*P **P 12 37 05.2 +1.6**
comp=Z,86nm,1.2s
PBEJ *i*LQ LQ 12 37 52.9
N02D Trinity Center 81.83 321 P **P 12 37 03.8 +0.1**
baz=129,SNR=6.0
M04C Macdoel 81.84 322 P **P 12 37 04.8 +1.0**
baz=130,SNR=21
SFS San Fernando 81.95 45 *e*P **pP 12 37 53.7 -2.0**
SFS *e*S **S 12 47 03.6 +2.7**
CEU Ceuta 82.18 46 *e*P **pP 12 37 56.9 0.0**
CEU *e*S **S 12 47 02.8 -0.4**
M02C Callahan 82.18 321 P **P 12 37 06.1 +0.5**
baz=129,SNR=7.9
PMTG Montargil 82.21 42 *e*P **P 12 37 06.1 +0.5**
comp=Z,126nm,1.3s
PMTG *i*LQ LQ 12 37 56.6
PMTG *e*S **S 12 47 03.8 +0.4**
YBH Yreka Blue Hor 82.31 321 *e*P **P 12 37 06.1 -0.1**
comp=Z,33nm,1.0s
YBH Yreka Blue Hor 82.31 321 *e*P **P 12 37 06.1 -0.1**
YBH pmax pmax
comp=Z,33nm,1.0s
K04D Chiloquin, OR 82.34 322 P **P 12 37 07.4 +1.0**
baz=130
L04D Klamath Falls 82.39 322 P **P 12 37 07.1 +0.4**
baz=130,SNR=10
PTOM Tomar 82.43 42 *e*P **P 12 37 07.5 +0.7**
comp=Z,238nm,1.3s
PTOM *i*LQ LQ 12 37 56.1
J05D Fort Rock, OR 82.47 323 P **P 12 37 08.3 +1.2**
baz=131,SNR=50
PVLZ Peæn de 82.48 47 *e*S **S 12 47 04.2 -2.0**
G08A Pilot Rock 82.58 326 *e*P **P 12 37 08.1 +0.5**
comp=Z,134nm,1.6s
G08A *e*pP **pP 12 38 01.1 +1.9**
PINE Pine Mountain 82.64 324 *e*P **P 12 37 09.2 +1.2**
comp=Z,115nm,0.9s
MAW Mawson 82.69 163 P **P 12 37 08.5 +0.8**
comp=Z,31nm,0.8s,baz=213,slow=6.4,SNR=57
MAW pP **pP 12 38 01.6 +2.5**
comp=Z,24nm,1.1s,baz=224,slow=5.5,SNR=4.7
MAW Mawson 82.69 163 *e*P **P 12 37 08.4 +0.8**
comp=Z,12nm,1.0s
MAW *e*pP **pP 12 38 01.7 +2.6**
FFC Flin Flon 82.73 340 *e*P **P 12 37 07.9 -0.1**
comp=Z,542nm,1.3s
FFC Flin Flon 82.73 340 *e*P **P 12 37 07.9 -0.1**
FFC pmax pmax
comp=Z,542nm,1.3s
LBTB Lobatse 82.75 114 P **P 12 37 09.1 +0.1**
comp=Z,7.9nm,0.6s,baz=252,slow=5.6,SNR=15
LBTB pP **pP 12 38 01.3 +0.9**
comp=Z,12nm,1.1s,baz=244,slow=8.9,SNR=3.3
LBTB Lobatse 82.75 114 *e*P **P 12 37 08.7 -0.4**
comp=Z,54nm,1.4s
LBTB *e*pP **pP 12 38 02.7 +2.3**
COI Coimbra 82.79 41 *e*P **P 12 37 09.7 +1.1**
comp=Z,143nm,1.2s
COI Coimbra 82.79 41 *e*S **S 12 47 10.1 +0.9**
J04D Umpqua Nationa 82.93 323 P **P 12 37 10.4 +0.9**
baz=130,SNR=18
PMRV Marv??o 82.94 42 *e*P **P 12 37 09.3 -0.2**
comp=Z,40nm,1.9s
PMRV *i*LQ LQ 12 37 58.7
PMRV *e*S **S 12 47 11.0 +0.2**
HUMO Hull Mountain 83.01 322 *e*P **P 12 37 09.8 +0.1**
comp=Z,35nm,1.2s
L02E Cave Junction 83.10 321 P **P 12 37 11.3 +1.1**
baz=129,SNR=8.3
PCBR Castelo Branco 83.14 42 *e*P **P 12 37 10.5 +0.1**
comp=Z,41nm,1.4s
PCBR *i*LQ LQ 12 38 04.1
I05D Terrebonne, OR 83.22 324 P **P 12 37 12.2 +1.4**
baz=131,SNR=24
PTO Porto 83.24 40 *e*P **P 12 37 12.0 +1.1**
comp=Z,91nm,1.5s
PVIS Viseu 83.41 41 *e*P **P 12 37 11.7 -0.2**
comp=Z,55nm,1.4s
PVIS *i*LQ LQ 12 38 03.4
MTE Manteigas 83.43 41 *e*P **P 12 37 12.5 +0.5**
comp=Z,92nm,1.2s
MTE Manteigas 83.43 41 *e*S **S 12 47 16.6 +0.8**
MTE Manteigas 83.43 41 *e*P **P 12 37 11.7 -0.3**
comp=Z,82nm,1.2s
I04A Tendick Farm, 83.46 323 P **P 12 37 12.2 +0.2**
baz=130,SNR=9.2
K02D Willamette Mer 83.47 322 P **P 12 37 13.2 +1.1**
baz=129,SNR=18
TAM Tamanrasset 83.56 62 *e*P **P 12 37 12.8 -0.4**
comp=Z,77nm,1.0s
TAM Tamanrasset 83.56 62 *e*P **P 12 37 12.8 -0.4**
TAM pmax pmax
comp=Z,77nm,1.0s
HAWA Hanford 83.62 326 *e*P **P 12 37 13.7 +1.0**
comp=Z,90nm,0.9s
NEW Newport 83.71 329 *e*P **P 12 37 13.3 +0.1**
comp=Z,19nm,0.8s
NEW Newport 83.71 329 *e*P **P 12 37 13.3 +0.1**
NEW pmax pmax
comp=Z,19nm,0.8s
NEW Newport 83.71 329 P **P 12 37 13.2 +0.1**
baz=134,SNR=19
G05D Wamic, OR 83.80 325 P **P 12 37 15.0 +1.3**
baz=131,SNR=13
PVRL Vila Real 83.86 41 *e*P **P 12 37 14.7 +0.6**

comp=Z,95nm,1.3s
PVRL *i* LQ LQ 12 38 06.0
POLO Lamas de Olo 83.87 40 *e*P **P 12 37 14.6 +0.4**
comp=Z,38nm,1.7s
POLO Lamas de Olo 83.87 40 *e*S **S 12 47 20.2 0.0**
J01E Myrtle Point 83.91 322 P **P 12 37 15.4 +1.2**
baz=129,SNR=7.2
I03D Drain, OR 83.92 322 P **P 12 37 15.3 +1.0**
baz=129,SNR=5.5
PCAB Cabril 83.93 40 *e*P **P 12 37 14.7 +0.2**
comp=Z,63nm,2.1s
PGAV Gavieira, Arco 83.94 40 *e*P **P 12 37 14.8 +0.2**
comp=Z,72nm,1.5s
PGAV Gavieira, Arco 83.94 40 *e*S **S 12 47 18.5 -2.4**
H04D Lebanon 84.10 323 P **P 12 37 15.6 +0.4**
baz=130
FCC Fort Churchill 84.17 346 *e*P **P 12 37 15.1 0.0**
comp=Z,72nm,0.8s
FCC Fort Churchill 84.17 346 *e*P **P 12 37 15.1 0.0**
FCC pmax pmax
comp=Z,71nm,0.8s
MVO Moncorvo 84.20 41 *e*P **P 12 37 16.4 +0.5**
comp=Z,95nm,1.2s
MVO *i* LQ LQ 12 38 05.8
MVO *e*S **S 12 47 20.4 -3.1**
F05D White Salmon 84.29 325 P **P 12 37 16.9 +0.8**
baz=131,SNR=7.2
COR Corvallis 84.45 323 *e*P **P 12 37 16.9 -0.1**
comp=Z,182nm,1.3s
COR Corvallis 84.45 323 *e*P **P 12 37 16.9 -0.1**
COR pmax pmax
comp=Z,182nm,1.3s
I02D Swisshome 84.46 323 P **P 12 37 18.1 +1.2**
baz=129
PBRG Braganca 84.76 41 *e*P **P 12 37 19.1 +0.5**
comp=Z,60nm,1.7s
PBRG *i* LQ LQ 12 38 09.3
G03D McMinnville, O 84.83 324 P **P 12 37 19.9 +1.1**
baz=129,SNR=8.6
IVI Ivigtut 84.86 9 *e*P **P 12 37 18.6 0.0**
comp=Z,133nm,1.5s
IVI *e*pP **pP 12 38 11.6 +1.2**
PAB San Pablo 84.92 43 *e*P **P 12 37 19.5 0.0**
comp=Z,136nm,1.3s
PAB San Pablo 84.92 43 *e*P **P 12 37 19.5 0.0**
PAB pmax pmax
comp=Z,136nm,1.3s
ESDC Sonseca Array 85.24 44 P **P 12 37 21.6 +0.5**
comp=Z,36nm,0.9s,baz=235,slow=5.0,SNR=92
ESDC pP **pP 12 38 13.1 +0.2**
comp=Z,26nm,1.2s,baz=239,slow=4.6,SNR=3.0
ESDC PP PP 12 40 33.7 -8.4
comp=Z,0.4nm,0.6s,baz=243,slow=5.6,SNR=2.4
ESLA Sonseca Array 85.24 44 *e*P **P 12 37 20.9 -0.2**
comp=Z,101nm,1.3s
F04D Rainier, OR 85.25 324 P **P 12 37 22.0 +1.2**
baz=130
E04D Cinebar 85.31 325 P **P 12 37 21.7 +0.5**
baz=130,SNR=7.4
D04E Lakebay 85.82 325 P **P 12 37 24.8 +1.2**
baz=130,SNR=6.2
UCM Universidad Co 86.06 43 *e*P **pP 12 38 13.4 -3.5**
UCM *e*S **S 12 47 39.9 -1.7**
B05A Bryant 86.17 327 P **P 12 37 25.4 +0.1**
baz=130,SNR=27
D03D Eldon 86.21 326 P **P 12 37 26.4 +0.8**
baz=130,SNR=16
NLWA Neilton Lookou 86.53 325 *e*P **P 12 37 27.6 +0.4**
comp=Z,108nm,1.3s
A04D Lummi Island 86.77 327 P **P 12 37 29.1 +0.8**
baz=130
LSZ Lusaka 88.67 106 P **P 12 37 39.8 +1.6**
comp=Z,22nm,0.9s,baz=239,slow=3.7,SNR=22
LSZ pP **pP 12 38 31.9 +1.6**
comp=Z,14nm,1.1s,baz=232,slow=3.7,SNR=3.3
LSZ Lusaka 88.67 106 *e*P **P 12 37 38.0 -0.3**
comp=Z,48nm,1.1s
LSZ Lusaka 88.67 106 *e*P **P 12 37 38.0 -0.3**
LSZ pmax pmax
comp=Z,47nm,1.1s
CASY Casey 91.37 179 *e*P **P 12 37 50.2 +0.6**
comp=Z,94nm,0.8s
MFF Saint Martin d 91.38 39 *e*P **P 12 37 49.1 -0.8**
MFF pmax pmax
comp=Z,23nm,1.1s
CAF Calviac 91.83 42 *e*P **P 12 37 53.2 +1.1**
CAF pmax pmax
comp=Z,5.0nm,0.8s
KEST Kesra 92.39 52 P **P 12 37 54.6 -0.4**
comp=Z,6.4nm,0.8s,baz=278,slow=7.0,SNR=5.8
KEST Kesra 92.39 52 *e*P **P 12 37 54.2 -0.8**
comp=Z,12nm,1.0s
YKA Yellowknife Ar 92.90 340 P **P 12 37 56.7 +0.2**
comp=Z,10nm,0.7s,baz=132,slow=4.6,SNR=57
YKA pP **pP 12 38 49.4 +0.4**
comp=Z,19nm,0.8s,baz=129,slow=4.4,SNR=4.1
YKB5 Yellowknife Ar 92.90 340 *e*P **P 12 37 56.7 +0.2**
YKW3 Yellowknife Ar 92.95 340 *e*P **P 12 37 57.0 +0.2**
comp=Z,70nm,1.6s
YKW3 *e*pP **pP 12 38 49.6 +0.3**
LPL La Plagne 95.00 43 *e*P **P 12 38 06.9 0.0**
LPL pmax pmax
comp=Z,19nm,1.2s
DOU Dourbes 95.86 38 P **P 12 38 10.3 -0.1**
DOU Dourbes 95.86 38 pP pP 12 39 01.9 -0.9
SNF Seneffe 95.89 37 P **P 12 38 13.1 +2.6**
SNF pP **pP 12 39 00.7 -2.1**
BMRD Maredsous 96.06 38 pP pP 12 39 03.5 -0.3
BGES Gesves 96.28 38 pP **pP 12 39 04.1 -0.5**
BGES sP sP 12 39 19.9 -6.6
WLF Walferdange 96.56 39 P **P 12 38 16.5 +2.9**
WLF pP **pP 12 39 05.6 -0.4**
LKLB Kalborn 96.73 38 P **P 12 38 16.8 +2.5**
LKLB pP **pP 12 39 05.8 -1.0**
BHOU Houvegnez 96.79 38 P **P 12 38 17.6 +3.0**
BHOU pP **pP 12 39 06.9 -0.2**
BEBN Eben Emael 96.80 38 pP pP 12 39 06.9 -0.1
SUMG Summit 96.86 8 *e*P **P 12 38 14.6 -0.3**
comp=Z,18nm,1.1s
SUMG *e*pP **pP 12 39 08.7 +1.3**
SUMG Summit 96.86 8 *e*P **P 12 38 14.6 -0.3**
SUMG pmax pmax
comp=Z,19nm,1.1s
SUMG Summit 96.86 8⇓ *i*P pP 12 39 09.1 +1.7
comp=Z,83nm,1.2s
MEM Membach 96.90 38 P **P 12 38 19.6 +4.5**
MEM pP **pP 12 39 06.6 -0.9**
MEM sP **sP 12 39 22.1 -7.3**
TUE Stuetta 97.06 43 *e*P **P 12 38 15.2 -1.0**
comp=Z,8.8nm,1.1s
TUE *e*pP **pP 12 39 08.1 -0.5**
BFO Black Forest 97.24 41 *i* P Pdif 12 38 19.8 +3.0
FUORN Ofenpass-Fuorn 97.70 43 *e*P **P 12 38 17.9 -1.3**
comp=Z,11nm,1.0s
FUORN *e*pP **pP 12 39 11.1 -0.4**
DAVA Damuels 97.74 42 *e*Pdiff **P 12 38 19.0 -0.1**
comp=Z,13nm,0.9s
DAVA *e*pP **pP 12 39 12.3 +0.7**
comp=Z,11nm,1.2s
FETA Feichten 98.16 42 *e*Pdiff Pdif 12 38 22.0 +0.9
comp=Z,12nm,1.1s
FETA *e*pP pP 12 39 14.0 +0.5
comp=Z,13nm,1.1s
RETA Reutte 98.37 42 *e*Pdiff Pdif 12 38 22.4 +0.5
comp=Z,10nm,1.2s
RETA *e*pP pP 12 39 14.2 -0.1
comp=Z,13nm,0.9s
MOTA Moosalm 98.52 42 *e*Pdiff Pdif 12 38 23.2 +0.6
comp=Z,7.4nm,0.7s
MOTA *e*pP pP 12 39 15.2 +0.1
comp=Z,11nm,1.0s
SQTA Sankt Quirin 98.53 42 *e*Pdiff Pdif 12 38 23.2 +0.5
comp=Z,15nm,0.8s
SQTA *e*pP pP 12 39 15.6 +0.5
comp=Z,26nm,1.2s
RES Resolute Bay 98.74 353 PKKPbc PKKPbc 12 54 50.4 -2.8
comp=Z,1.7nm,0.6s,baz=339,slow=1.5,SNR=9.7
WATA Walderalm 98.81 42 *e*Pdiff Pdif 12 38 24.2 +0.2
comp=Z,4.3nm,0.8s
WATA *e*pP pP 12 39 16.1 -0.3
comp=Z,20nm,1.5s
WTTA Wattenberg 98.82 42 *e*Pdiff Pdif 12 38 24.4 +0.3
comp=Z,16nm,1.2s
WTTA *e*pP pP 12 39 17.2 +0.7
comp=Z,25nm,1.2s
KIP Kipapa 99.07 289⇑ *e*P **Pdif 12 38 26.0 +0.5**
KIP pmax pmax
comp=Z,56nm,1.1s
ABTA Abfaltersbach 99.17 43 *e*Pdiff **Pdif 12 38 26.0 +0.5**
comp=Z,10.0nm,1.2s
ABTA *e*pPdiff **pP 12 39 16.7 -1.2**
comp=Z,14nm,1.4s
KBA Koelnbreinsper 99.82 43 *e*Pdiff **Pdif 12 38 28.9 +0.4**
comp=Z,7.2nm,1.1s
KBA *e*pPdiff **pP 12 39 21.4 +0.5**
comp=Z,4.3nm,0.8s
JAVS Javornik 99.83 44 *i* PP **PP 12 42 31.7 -4.5**
MYKA Terra Mystica 99.84 44 *e*Pdiff **Pdif 12 38 29.0 +0.6**
comp=Z,4.4nm,0.9s
MYKA *e*pPdiff **pP 12 39 21.6 +0.7**
comp=Z,3.4nm,0.5s
VISS Visnje 100.30 45 *i* PP **PP 12 42 36.0 -3.7**
OBKA Obir 100.37 44 *e*Pdiff **Pdif 12 38 31.1 +0.3**
comp=Z,2.2nm,0.8s
BOJS Bojanci 100.46 45 *i* PP **PP 12 42 35.1 -5.8**
MOA Molln 100.69 43 *e*Pdiff **Pdif 12 38 31.2 -0.9**
comp=Z,7.6nm,1.2s
MOA *e*pPdiff pP 12 39 25.0 +0.3
comp=Z,4.8nm,0.8s
GERES GERESS Array B 100.71 42 P **Pdif 12 38 32.5 +0.2**
comp=Z,0.7nm,0.7s,baz=197,slow=4.2,SNR=6.0
GERES pP **pPdif 12 39 23.2 -1.5**
comp=Z,0.6nm,0.7s,baz=211,slow=2.3,SNR=2.8
GERES PP PP 12 42 21.8 -21
comp=Z,2.6nm,1.2s,baz=201,slow=5.2,SNR=3.4
GERES PKKPbc **PKKPbc 12 54 47.3 +0.4**
comp=Z,0.9nm,0.6s,baz=52,slow=2.2,SNR=8.0
PERS Pernice 100.78 44 *i* PP **PP 12 42 37.7 -5.6**
CLL Collm 101.22 39 *i* Pdif **Pdif 12 38 36.6 +2.3**
CLL *e*pPdif **pPdif 12 39 27.0 +0.2**
comp=Z,20nm,1.7s
CLL *e*PP **PP 12 42 41.0 -5.4**
comp=Z,31nm,2.1s
CLL *e*SKSac **SKSac 12 48 57.0 +3.7**
CLL *e*SP **SP 12 51 26.0 -1.9**
CLL L L 13 20 00.0
comp=Z,100nm,20.3s
CLL Collm 101.22 39 *i* P **Pdif 12 38 36.6 +2.3**
CLL *e* 12 48 57.0
ARSA Arzberg 101.26 43 *e*Pdiff **Pdif 12 38 35.5 +0.8**
comp=Z,2.0nm,0.8s
ARSA *e*pPdiff pP 12 39 27.7 +0.5
comp=Z,4.9nm,1.5s
BRG Berggiesshubel 101.61 40 *e*PDIFF **Pdif 12 38 40.3 +4.2**
comp=Z,8.3nm,1.9s
BRG pPDIFF 12 39 27.8
comp=Z,14nm,1.7s
BRG *e*PP **PP 12 42 44.9 -4.4**
comp=Z,30nm,1.9s
BRG Berggiesshubel 101.61 40 *e*PKP **PKiKP 12 43 03.9 +5.2**
comp=Z,5.1nm,1.2s
BRG SKS 12 49 00.0
BRG SDIFF **Sdif 12 50 00.0 +1.5**
BRG *e*PKKP **PKKPbc 12 54 44.0 -0.2**
comp=Z,3.3nm,0.9s
BRG SS **SS 12 57 01.0 -5.1**
BRG *e*PKPPKP 13 03 04.4
comp=Z,3.3nm,1.4s
BRG Berggiesshubel 101.61 40 *e*P **Pdif 12 38 40.3 +4.2**
BRG *e* 12 42 44.9
BRG pmax pmax
comp=Z,5.0nm,1.9s
BRG pmax pmax
comp=Z,14nm,1.9s
CONA Conrad Observa 101.72 43 *e*Pdiff **Pdif 12 38 36.7 -0.1**
comp=Z,3.3nm,1.2s
CONA *e*pPdiff pP 12 39 29.9 +0.6
comp=Z,5.6nm,1.6s
KRUC Moravsky 102.44 42 *e*PP **PP 12 42 51.0 -4.7**
VRAC Vranov 102.65 42 *e*PP **PP 12 42 53.0 -4.2**
INK Inuvik 102.67 340 PKKPbc PKKPbc 12 54 40.5 -1.1
comp=Z,2.6nm,0.7s,baz=338,slow=4.6,SNR=14
EPYK Eagle Plains 102.84 337 P **Pdif 12 38 41.4 +0.2**
baz=117
JAVC Velka Javorina 103.17 42 *e*PP **PP 12 42 57.6 -3.6**
MORC Moravsky Berou 103.39 42 *e*PP **PP 12 42 57.2 -5.6**
VYHS Vyhne 103.78 43 *e*P **Pdif 12 38 50.3 +4.4**
VYHS Vyhne 103.78 43 *e*PDIF **Pdif 12 38 50.3 +4.4**
ILAR Eelson Array 106.11 334 Pdiff **Pdif 12 38 55.9 +0.1**
comp=Z,0.5nm,0.9s,baz=97,slow=5.1,SNR=6.4
ILAR PKiKP **PKiKP 12 43 06.6 +0.1**
comp=Z,1.2nm,0.9s,baz=92,slow=2.3,SNR=7.4
ILAR PKKPbc **PKKPbc 12 54 29.2 -2.0**
comp=Z,0.4nm,0.6s,baz=314,slow=4.1,SNR=4.9
POKR Poker Plat Res 106.44 334 P **PKiKP 12 43 06.6 -0.5**
baz=108
TCOL CIGO, UAF Yank 106.54 334 P **PKiKP 12 43 07.6 +0.4**
baz=108
TOLK Toolik Lake Re 108.26 337 P **PKiKP 12 43 10.9 +0.4**
baz=105
VSU Vasula 110.78 34*d* *i*PKIKP **PKiKP 12 43 16.1 +0.7**
VSU pmax pmax
comp=Z,13nm,1.0s
KIEV Kiev 110.86 43*d* *i*PKIKP **PKiKP 12 43 16.0 +0.2**
AKASG Malin Array Be 110.87 43 PKiKP **PKiKP 12 43 15.5 -0.3**
comp=Z,2.0nm,0.6s,baz=257,slow=2.4,SNR=8.8
AKASG PP PP 12 43 45.5 -12
comp=Z,0.5nm,0.3s,baz=257,slow=7.4,SNR=5.1
AKASG PKKPbc **PKKPbc 12 54 15.2 -0.4**
comp=Z,2.9nm,0.7s,baz=65,slow=3.2,SNR=8.8
FINES FINESS Array B 110.93 31 PP **PP 12 43 51.2 -6.1**
comp=Z,12nm,1.1s,baz=218,slow=6.5,SNR=14
FINES PKKPbc **PKKPbc 12 54 14.4 -1.3**
comp=Z,1.2nm,0.5s,baz=75,slow=4.1,SNR=14
ARCES ARCESS Array B 111.76 22 PKKPbc PKKPbc 12 54 11.8 -1.5
comp=Z,0.8nm,0.4s,baz=86,slow=2.9,SNR=7.1
ARCES PKKPab **PKKPab 12 54 20.6 +1.6**
comp=Z,4.8nm,0.6s,baz=97,slow=5.1,SNR=11
BRTR Keskin Array B 111.84 55 PKiKP **PKiKP 12 43 18.3 0.0**
comp=Z,1.9nm,0.8s,baz=195,slow=3.7,SNR=8.8
BRTR PP PP 12 43 56.0 -8.6
comp=Z,1.8nm,0.9s,baz=285,slow=2.4,SNR=6.8
BRTR PKKPab **PKKPab 12 54 22.7 +2.8**
comp=Z,1.9nm,0.7s,baz=95,slow=3.4,SNR=9.7
ANN Anapa 115.45 50 *e*P **Pdif 12 39 45.1 +7.3**
ANN *e* 12 44 26.0
ANN *e* 12 49 55.0
ANN *e*PS **PKKPab 12 54 06.0 +2.5**
OBN Obninsk 115.80 38⇓ *i*PKIKP **PKiKP 12 43 26.1 +1.0**
OBN *e* 12 44 34.9
OBN pmax pmax
comp=Z,33nm,1.7s
SOC Sochi 116.94 51 *i* PKIKP **PKiKP 12 43 29.3 +1.6**
SOC *e* 12 44 40.7
LPSR Galich'ya Gora 117.09 41 *e*PKIKP **PKPdf 12 43 26.7 -1.0**
LPSR pmax pmax
comp=Z,20nm,1.1s
VSR Storozhevoye 117.17 43 *e*PKIKP **PKPdf 12 43 26.6 -1.3**
VSR pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 117.40 32 *e*PKIKP **PKPdf 12 43 26.3 -1.7**
KLMR pmax pmax
comp=Z,20nm,1.0s
DOMR Dombai 118.29 52 *e*PKIKP **PKiKP 12 43 31.6 +1.0**
VRH Novokhopyorsk 118.78 43 *e*PKIKP **PKPdf 12 43 29.7 -1.3**
VRH pmax pmax
comp=Z,20nm,1.0s
NEY Neytrino 119.09 52⇑ *i*PKIKP **PKiKP 12 43 32.9 +0.7**
KIV Kislovodsk 119.12 51 *e*PKPdf **PKPdf 12 43 31.8 -0.3**
KIV Kislovodsk 119.12 51 *e*PKIKP **PKiKP 12 43 32.8 +0.7**
KIV *e* 12 54 22.9
KIV pmax pmax
comp=Z,49nm,1.0s
KBZ Khabaz 119.25 51 PKP **PKiKP 12 43 32.8 +0.6**
comp=Z,12nm,0.9s,baz=109,slow=1.0,SNR=17
STKA Stephens Creek 119.40 208 PKP **PKiKP 12 43 33.1 +0.1**
comp=Z,3.9nm,0.7s,baz=122,slow=2.9,SNR=7.7
STKA PKKPbc **PKKPbc 12 53 45.4 -0.6**
comp=Z,1.0nm,0.4s,baz=314,slow=5.8,SNR=3.0
STKA Stephens Creek 119.40 208 *e*PKPdf **PKPdf 12 43 32.9 0.0**
NCK Nalchik 119.74 52⇓ *i*PKIKP **PKiKP 12 43 34.6 +1.4**
ZEI Tsey 119.92 53 *i* PKIKP **PKPdf 12 43 33.5 -0.2**
ZEI pmax pmax
comp=Z,14nm,1.1s
PRGR Permogore 120.26 31 *e*PKIKP **PKPdf 12 43 32.8 -0.7**
GNI Garni 120.34 56⇑ *i*PKIKP **PKiKP 12 43 35.5 +0.8**
GNI pmax pmax
comp=Z,122nm,1.7s
BILL Biiibino 124.28 339 *e*PKPdf **PKiKP 12 43 41.5 +0.2**
BILL Biiibino 124.28 339⇓ *i*PKIKP **PKPdf 12 43 41.2 +0.1**
BILL *e* 12 44 28.5
BILL *e* 12 45 26.0
BILL pmax pmax
comp=Z,15nm,2.5s
FORT Forrest 125.04 196 *e*PKPdf **PKPdf 12 43 43.4 -0.4**
CTAO Charters Tower 126.71 220 *e*PKPdf **PKPdf 12 43 46.9 -0.4**
CTAO Charters Tower 126.71 220 *e*PKIKP **PKPdf 12 43 46.9 -0.4**
ARU Arti 127.93 35 *e*PKPdf **PKiKP 12 43 48.8 -0.1**
ARU Arti 127.93 35 *i* PKIKP **PKiKP 12 43 49.2 +0.2**
ARU 12 45 49.7
ARU 12 50 40.9
SVE Sverdlovsk 128.89 34 *e*PKIKP **PKiKP 12 43 51.5 +0.6**
SVE pmax pmax
comp=Z,20nm,1.3s
AKTO Aktyubinsk 129.12 43 PKIKP **PKiKP 12 43 51.5 -0.1**
AKTO pmax pmax
comp=Z,23nm,1.1s
AS31 Alice Springs 129.80 205 *e*PKPdf **PKPdf 12 43 52.9 -0.2**
ASAR Alice Springs 129.80 205 PKP **PKPdf 12 43 53.0 -0.1**
comp=Z,20nm,0.8s,baz=147,slow=2.3,SNR=69
ASAR pPKP **pPKPdf 12 44 48.9 +0.8**
comp=Z,5.8nm,0.9s,baz=154,slow=2.3,SNR=3.9
ASAR PP **PP 12 46 07.1 +1.7**
comp=Z,5.4nm,1.1s,baz=144,slow=5.8,SNR=6.6
ASAR SKPbc SKPbc 12 46 56.2 +0.3
comp=Z,3.8nm,0.9s,baz=138,slow=3.6,SNR=5.9
H11S2 WAKE ISLAND Hyl29.98 276 T T 15 05 05.9
baz=101,slow=74,SNR=137
H11S1 WAKE ISLAND Hyl29.99 276 T T 15 05 09.4
baz=101,slow=74,SNR=124
H11S3 WAKE ISLAND Hyl30.00 276 T T 15 05 05.8
baz=101,slow=74,SNR=84
H11N3 WAKE ISLAND Hyl30.09 277 T T 15 05 08.9
baz=101,slow=74,SNR=34
H11N2 WAKE ISLAND Hyl30.10 277 T T 15 05 10.9
baz=101,slow=74,SNR=33
H11N1 WAKE ISLAND Hyl30.10 277 T T 15 05 07.3
baz=101,slow=74,SNR=27
TIXI Tiksi 130.12 354 PKP **PKPdf 12 43 52.0 -0.1**
comp=Z,5.6nm,0.9s,baz=31,slow=2.5,SNR=10
TIXI SKPbc **SKPab 12 46 55.8 +0.3**
comp=Z,18nm,1.1s,baz=29,slow=3.8,SNR=14
TIXI Tiksi 130.12 354 PKiKP **PKPdf 12 43 52.0 -0.1**
AB31 Akbulak array 130.59 44 *i* PKIKP **PKiKP 12 43 54.6 +0.1**
AB31 pmax pmax
comp=Z,33nm,1.1s
ABKAR Akbulak array 130.59 44 *e*PKPdf **PKiKP 12 43 54.2 -0.4**
GEYT Alibeck 130.68 59 PKP **PKPdf 12 43 54.3 0.0**
comp=Z,2.4nm,0.6s,baz=285,slow=2.9,SNR=7.5
GEYT pPKP **pPKPdf 12 44 49.6 +0.6**
comp=Z,3.4nm,0.8s,baz=267,slow=3.0,SNR=2.4
GEYT SKPbc **SKPab 12 46 59.6 +0.6**
comp=Z,12nm,1.2s,baz=270,slow=7.0,SNR=12
NRIK Noril'sk 130.76 12 PKP **PKiKP 12 43 53.9 -0.4**
comp=Z,4.6nm,0.5s,baz=39,slow=2.6,SNR=11
NRIK SKPbc **SKPab 12 46 59.0 +0.7**
comp=Z,8.8nm,1.1s,baz=8.3,slow=2.4,SNR=16
SEY Seymchan 131.89 337 PKP **PKiKP 12 43 56.3 -0.5**
comp=Z,9.4nm,0.6s,baz=97,slow=2.4,SNR=22
SEY SKPbc **SKPbc 12 47 02.1 -0.1**
comp=Z,4.3nm,0.8s,baz=68,slow=3.8,SNR=3.5
SEY Seymchan 131.89 337*d* *i*PKIKP **PKiKP 12 43 56.5 -0.3**
WB2 Warramunga Arr 132.95 208 *e*PKPdf **PKPdf 12 43 59.2 +0.1**
WR1 Warramunga Arr 132.96 208 *e*PKPdf **PKPdf 12 43 59.7 +0.5**
WR1 *e*SKPbc **SKPbc 12 47 08.3 +0.9**
WRA Warramunga Arr 132.96 208 PKP **PKPdf 12 43 59.7 +0.5**
comp=Z,12nm,0.4s,baz=200,slow=1.8,SNR=62
WRA SKPbc **SKPbc 12 47 08.3 +0.9**
WRAB Tennant Creek 132.96 208 *e*PKPdf **PKPdf 12 43 59.0 -0.1**
WRAB Tennant Creek 132.96 208*c* *i*PKIKP **PKiKP 12 44 00.1 -0.2**
WRAB pmax pmax
comp=Z,68nm,1.7s
MA2 Magadan 134.59 334⇓⇓ *i*PKIKP **PKPdf 12 44 01.0 +0.1**
PEA1 Petropavlovsk- 134.63 324 *e*PKPdf **PKPdf 12 44 01.3 +0.1**
PEA1 *e*SKPbc **SKPbc 12 47 12.7 +0.9**
PETK Petropavlovsk- 134.63 324 PKhKP PKPpre 12 43 53.0
comp=Z,3.7nm,0.8s,baz=47,slow=5.4,SNR=6.0
PETK PKP **PKPdf 12 44 01.3 +0.1**
comp=Z,4.3nm,0.7s,baz=83,slow=2.6,SNR=6.4
PETK SKPbc **SKPbc 12 47 12.7 +0.9**
comp=Z,12nm,1.0s,baz=80,slow=9.2,SNR=7.2
BRVK Borovoye 135.48 36 *e*PKPdf **PKPdf 12 44 03.0 +0.2**
BRVK Borovoye 135.48 36 PKIKP **PKPdf 12 44 03.1 +0.4**
BRVK pmax pmax
comp=Z,6.0nm,0.6s
BRVK Borovoye 135.48 36 P **PKiKP 12 44 03.9 -0.4**
SNR=8.9
BVAR Borovoye Array 135.55 36 SKPbc **SKPbc 12 47 16.5 +1.8**
comp=Z,1.9nm,0.9s,baz=298,slow=3.2,SNR=6.2
PSA00 Pilbara Seismi 135.62 189 *e*PKPdf **PKPdf 12 44 03.9 -0.2**
FITZ Fitzroy Crossi 137.76 198 PKhKP PKPpre 12 43 57.1
comp=Z,4.4nm,0.9s,baz=244,slow=2.4,SNR=14
FITZ PKP **PKiKP 12 44 09.2 -0.9**
comp=Z,13nm,0.6s,baz=182,slow=7.5,SNR=18
YAK Yakutsk 139.02 348 *e*PKIKP **PKPdf 12 44 09.6 +0.6**
KK31 Karatay Array 139.24 50 *e*PKPdf **PKPdf 12 44 09.8 -0.2**
KK31 Karatay Array 139.24 50 *i* PKIKP **PKPdf 12 44 10.5 +0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
BTK Batken 140.23 54 *e*PKPdf **PKPdf 12 44 12.1 +0.1**
BTK Batken 140.23 54 *e*PKIKP **PKPdf 12 44 12.1 +0.1**
NVS Novosibirsk 140.78 27 *e*PKIKP **PKiKP 12 44 14.3 -0.8**
NVS pmax pmax
comp=E,17nm,1.4s
NVS pmax pmax
comp=Z,61nm,1.4s
NVS pmax pmax
comp=N,7.0nm,1.5s
KURK Kurchatov 141.12 35 *e*PKPdf **PKPdf 12 44 12.8 -0.3**
KURK Kurchatov 141.12 35*de*PKIKP **PKPdf 12 44 11.5 -1.6**
KURK pmax pmax
comp=Z,27nm,1.7s
KURK Kurchatov 141.12 35 P **PKPdf 12 44 12.1 -1.0**
SNR=8.6
KURBB Kurchatov Arra 141.13 35 SKPbc **SKiKP 12 47 31.9 -0.6**
comp=Z,9.3nm,1.2s,baz=302,slow=4.1,SNR=8.9
EKS2 Erkin-Say 141.66 49 P **PKiKP 12 44 17.4 -0.1**
SNR=5.5
USP Ospenovka 141.96 48 P **PKiKP 12 44 16.8 -1.2**
SNR=8.3
ZAA0 Zalesovo Array 142.06 27 *e*PKPdf **PKPdf 12 44 14.7 0.0**
ZALV Zalesovo Beam 142.06 27 PKP **PKPdf 12 44 13.7 -1.1**
comp=Z,21nm,0.6s,baz=302,slow=3.4,SNR=22
ZALV SKPbc **SKPbc 12 47 32.8 0.0**
comp=Z,7.7nm,0.8s,baz=289,slow=4.5,SNR=4.5
GOA Goa 142.16 94 *e*P **PKPdf 12 44 12.9 -3.1**
AAK Ala-Archa 142.17 49 SKPbc **SKPbc 12 47 33.0 -0.6**
comp=Z,3.2nm,0.5s,baz=89,slow=6.0,SNR=5.6
AAK Ala-Archa 142.17 49 *e*PKPdf **PKPdf 12 44 14.5 -1.0**
AAK Ala-Archa 142.17 49 PKIKP **PKPdf 12 44 12.8 -2.7**
AAK pmax pmax
comp=Z,10.0nm,0.8s
AAK Ala-Archa 142.17 49 P **PKPdf 12 44 13.6 -1.9**
SNR=6.3
UCH Uchtor 142.32 49 P **PKPdf 12 44 13.6 -2.6**
SNR=14
TKM2 Tokmak 2 142.83 48 P **PKPdf 12 44 16.5 -0.2**
SNR=12
KZA Kyzart 142.88 49 P **PKPdf 12 44 15.4 -1.7**
SNR=11
BOOM Boomskoye usch 143.22 48 *e*PKPdf PKPbc 12 44 15.9 +0.9
NIL Nilore 143.26 64 *e*PKPdf PKPbc 12 44 15.1 -0.2
NIL Nilore 143.26 64 *e*PKIKP PKPbc 12 44 15.1 -0.2
JAY Jayapura 143.37 231 PKP **PKPdf 12 44 17.5 -0.9**
comp=Z,33nm,1.1s,baz=185,slow=5.5,SNR=6.7
ULHL Ulahol 143.52 49 P **PKPdf 12 44 17.2 -0.8**
SNR=12
NRN Naryn 143.63 50 *e*PKPdf PKPbc 12 44 16.9 +0.5
NRN Naryn 143.63 50 *e*PKIKP PKPbc 12 44 16.9 +0.5
GENI Genyem 143.69 230 PKP PKPbc 12 44 16.8 -0.1
GENI PKP **PKPdf 12 44 18.7 -0.2**
KUR Kuril'sk 143.88 317*d* *i*PKIKP PKPbc 12 44 16.8 +0.3
KSH Kashi 144.21 53 PKP PKPbc 12 44 18.0 +0.1
KSH PP **PP 12 47 36.9 +0.6**
KSH SS SS 13 06 04.8 -0.2
KSH AMB AMB
comp=Z,480nm,4.9s
KSH LR LR
comp=Z,150nm,6.0s
KSH LR LR
comp=Z,150nm,7.3s
KSH LR LR
comp=Z,220nm,18.3s
BOD Bodaibo 144.82 359 *e*PKIKP PKPbc 12 44 18.1 -0.9
BOD pmax pmax
comp=Z,191nm,1.2s
MAKZ Makanchi 145.12 39 *e*PKPbc **PKPbc 12 44 20.2 -0.2**

MAKZ Makanchi 145.12 39 PKIKP **PKPab 12 44 20.7 +0.1**
MAKZ pmax pmax
comp=Z,137nm,1.5s
PDGK Podgornoye 145.29 45 PKP2 **PKPab 12 44 22.2 +0.7**
PDGK pmax pmax
comp=Z,78nm,0.8s
MK31 Makanchi Array 145.31 38 *e*PKPdf **PKPbc 12 44 20.9 -0.1**
MK31 Makanchi Array 145.31 38 *i* PKP2 **PKPab 12 44 21.5 +0.2**
MK31 pmax pmax
comp=Z,27nm,0.6s
MK32 Makanchi Array 145.31 38 *e*PKPdf **PKPab 12 44 21.3 0.0**
MK32 *ep*PKPdf **pPKPdf 12 45 15.9 +0.2**
MKAR Makanchi Array 145.31 38 PKPbc **PKPab 12 44 21.3 0.0**
comp=Z,25nm,0.7s,baz=321,slow=3.0,SNR=95
MKAR pPKPbc **pPKPdf 12 45 15.9 +0.2**
comp=Z,47nm,1.0s,baz=304,slow=2.8,SNR=9.0
YUK Yuzh-Kuril'sk 145.70 316 *e*PKHKP **PKPdf 12 44 14.4 -7.0**
YUK *e* 12 51 10.2
YUK *e*SSS SSS 13 11 50.5
BATI Baumata 145.82 198 PKPbc **PKPab 12 44 24.5 +0.4**
comp=Z,135nm,0.7s,baz=222,slow=1.6,SNR=19
BATI Baumata 145.82 198 PKP **PKiKP 12 44 25.6 -1.2**
DHRM DHARAMSHALA 145.98 66 *e*P **PKPdf 12 44 22.1 -0.5**
DHRM IAMs_20 IAMs_20 13 16 45.3
comp=Z,2μm,0.8s
YSS Yuzh-Sakhalins 146.03 323 *e*PKPdf **PKPdf 12 44 21.9 +0.1**
YSS Yuzh-Sakhalins 146.03 323 *e*PKP2 **PKPbc 12 44 22.7 -0.4**
YSS pmax pmax
comp=Z,70nm,0.9s
SOEI Soe 146.07 200 PKP **PKiKP 12 44 26.8 -0.6**
DGZ Jazzator, Alta 146.19 31 *i* PKP2 **PKPbc 12 44 23.2 -0.5**
GRNR Gornyy 146.58 333 *e*PKIKP **PKPdf 12 44 23.2 +0.5**
GRNR pmax pmax
comp=Z,99nm,1.1s
SMLA Simla 146.84 67 *e*P **PKPbc 12 44 25.1 -0.8**
SRPI Serui, Papua 146.90 226 PKP **PKiKP 12 44 29.3 +0.3**
HYB Hyderabad 147.05 93 *i* PKP **PKPbc 12 44 26.0 -0.9**
BHPL Bhopal 147.06 82 *e*P **PKPdf 12 44 24.0 -0.4**
BHPL IAmb IAmb 12 44 28.2
comp=Z,33nm,0.5s
BHPL IAMs_20 IAMs_20 13 19 49.1
comp=Z,354nm,5.0s
ZEA Zeya 147.15 345 *e*PKIKP **PKPdf 12 44 23.4 -0.1**
ZEA pmax pmax
comp=Z,150nm,1.4s
ZEA pmax pmax
comp=Z,600nm,6.0s
WBSI Waikabubak, Su 147.39 191 PKP **PKiKP 12 44 29.9 -0.1**
DDI Dehra Dun 147.68 69 *e*P **PKPdf 12 44 25.0 -0.3**
DDI IAMs_20 IAMs_20 13 20 01.5
comp=Z,2μm,1.1s
ASAJ Asahikawa 147.70 319 PKPbc **PKPbc 12 44 26.8 -1.1**
comp=Z,90nm,1.1s,baz=217,slow=3.3,SNR=28
MMRI Maumere 147.72 197 *e*PKPdf **PKPdf 12 44 25.6 -0.1**
MMRI Maumere 147.72 197 PKP **PKPbc 12 44 29.7 +0.9**
EDFI Ende, Flores 147.75 196 PKP **PKPdf 12 44 24.3 -1.6**
EDFI PKP **PKPbc 12 44 27.1 -1.9**
NGP Nagpur 148.28 86 *e*P **PKPdf 12 44 25.2 -1.2**
ERM Erimo 148.40 315 *e*PKPdf **PKPdf 12 44 26.1 +0.2**
ERM *e*PKPbc **PKiKP 12 44 31.1 0.0**
ERM Erimo 148.40 315 *e*PKIKP **PKPdf 12 44 26.1 +0.2**
ERM *e* 12 44 31.1
PLAI Plampang 148.44 189 PKP **PKiKP 12 44 31.5 -0.6**
FAKI Fak Fak 148.56 219 *e*PKPdf **PKPdf 12 44 26.3 -0.8**
FAKI Fak Fak 148.56 219 PKP **PKiKP 12 44 31.9 -0.5**
GUMO Guam 148.68 259 PKPbc **PKPbc 12 44 30.3 -0.9**
comp=Z,439nm,0.9s,baz=180,slow=4.6,SNR=12
GUMO Guam 148.68 259 *e*PKPbc **PKPbc 12 44 31.5 +0.3**
DNP Denpasar 148.85 184 PKP **PKPab 12 44 35.2 -0.8**
JAGI Jajag, Banyuwa 149.10 182 *e*PKPdf **PKPdf 12 44 27.2 -0.8**
JAGI *e*PKPbc **PKPbc 12 44 32.8 +0.4**
JAGI Jajag, Banyuwa 149.10 182 PKP **PKiKP 12 44 33.1 -0.4**
SRBI Singaraja 149.43 184 PKP **PKiKP 12 44 34.1 0.0**
MOY Mondy 149.48 15 *e*PKHKP **PKPdf 12 44 29.3 +1.7**
MOY pmax pmax
comp=Z,225nm,1.7s
CISI Cisompet, Garu 149.55 169 PKP **PKPbc 12 44 33.8 +0.3**
IRK Irkutsk 149.62 11 *e*PKHKP **PKPdf 12 44 28.7 +1.1**
IRK pmax pmax
comp=Z,191nm,1.8s
KLR Kul'dur 149.66 336 PKP **PKPdf 12 44 27.5 -0.3**
comp=Z,10nm,1.0s,baz=49,slow=2.4,SNR=11
KLR PKPbc **PKPbc 12 44 32.5 -0.2**
comp=Z,25nm,0.9s,baz=80,slow=2.1,SNR=43
CGJI Cibinong 150.03 165 PKP **PKiKP 12 44 35.8 +0.4**
TLY Talaya 150.04 12 *e*PKPdf **PKPdf 12 44 28.1 -0.2**
TLY Talaya 150.04 12 P **PKPdf 12 44 30.2 +1.8**
SNR=31
WMQ Urumqi 150.14 39 *e*PKPbc **PKPdf 12 44 28.2 -0.6**
WMQ Urumqi 150.14 39 *e*PKPdf **PKPdf 12 44 28.5 -0.3**
WMQ *e*PKPbc **PKiKP 12 44 35.5 +0.7**
WMQ Urumqi 150.14 39 *e*PKIKP **PKPdf 12 44 28.5 -0.3**
NGJI Ngawi 150.16 176 PKP **PKiKP 12 44 37.6 +2.0**
LEM Lembang 150.23 169 PKP **PKPdf 12 44 30.0 0.0**
comp=Z,82nm,1.2s,baz=140,slow=9.6,SNR=4.1
LEM PKPbc **PKiKP 12 44 36.4 +0.4**
comp=Z,293nm,0.7s,baz=148,slow=1.3,SNR=46
LEM Lembang 150.23 169 PKIKP **PKPdf 12 44 30.0 0.0**
SMRI Semarang 150.40 174 *e*PKPbc **PKiKP 12 44 36.1 -0.1**
SMRI Semarang 150.40 174 PKP **PKiKP 12 44 37.3 +1.1**
KMMI Kalianget 150.51 181 PKP **PKiKP 12 44 37.6 +1.2**
BSSI Bau Bau, Buton 150.56 195 PKP **PKiKP 12 44 36.9 +0.4**
TEY Ternei 150.58 325 ‖ *i* PKIKP **PKiKP 12 44 35.4 -0.1**
TEY pmax pmax
comp=Z,90nm,0.9s
TEY pmax pmax
comp=E,30nm,0.8s
TEY pmax pmax
comp=N,10.0nm,1.5s
GRJI Gresik 150.65 178 PKP **PKiKP 12 44 37.9 +1.2**
KASI Kota Agung 150.76 162 PKP **PKiKP 12 44 38.0 +1.1**
SWI Sorong 150.80 219 PKP **PKiKP 12 44 38.1 +1.1**
LWLI Liwa 151.11 161 PKP **PKiKP 12 44 39.5 +1.7**
ZAK Zakamensk 151.20 13 *e*PKIKP **PKPdf 12 44 30.7 +0.4**
ZAK *e* 12 45 20.8
ZAK pmax pmax
comp=Z,29nm,1.3s
BKSI Bulukumba 151.44 194 PKP **PKiKP 12 44 38.3 0.0**
KLI Kotabumi 151.49 162 PKP **PKiKP 12 44 40.9 +2.5**
MDSI Maura Dua 151.65 161 PKP **PKPdf 12 44 32.5 +0.6**
KAPI Kappang 151.82 194 PKPbc **PKiKP 12 44 39.8 +0.7**
comp=Z,48nm,0.5s,baz=249,slow=3.2,SNR=21
KAPI PKPab **PKPab 12 44 48.8 +0.5**
comp=Z,71nm,0.8s,baz=201,slow=5.9,SNR=11
KAPI Kappang 151.82 194 *e*PKPbc **PKiKP 12 44 39.6 +0.5**
KAPI *e*PKPab **PKPab 12 44 49.6 +1.3**
KAPI Kappang 151.82 194 P **PKPbc 12 44 36.9 -1.8**
SNR=7.8
KDI Kendari 152.05 200 PKP **PKiKP 12 44 40.8 +1.2**
LHSI Lahat 152.06 159 PKP **PKiKP 12 44 40.7 +1.1**
PYUN Piuthan 152.17 72 *e*P **PKPdf 12 44 32.5 -0.1**
BNSI Bone 152.33 195 PKP **PKPdf 12 44 35.8 +2.9**
BNSI PKP **PKiKP 12 44 40.7 +0.6**
KOLN Koldanda 152.73 73 *e*P **PKPdf 12 44 33.2 -0.2**
DANN Dangsing 152.82 72 *e*P **PKPdf 12 44 34.2 +0.6**
SPSI Sidrap Palu 152.83 194 PKP **PKPbc 12 44 38.3 -2.7**
KRJI Kerinci 152.89 153 PKP **PKiKP 12 44 43.4 +2.0**
HIA Hailar 152.90 351 *e*PKPdf **PKPdf 12 44 32.8 +0.1**
HIA *e*PKPbc **PKPbc 12 44 40.0 -0.1**
HIA *e*PKPab **PKPab 12 44 52.4 +0.3**
HIA Hailar 152.90 351 *e*PKIKP **PKPdf 12 44 32.8 +0.1**
HIA *e* 12 44 52.4
USA0B Ussuriysk Arra 153.50 329 *e*PKPdf **PKPdf 12 44 33.6 -0.1**
USA0B *e*PKPbc **PKPbc 12 44 41.5 0.0**
USA0B *e*PKPab **PKPab 12 44 55.2 +0.5**
USRK Ussuriysk Ar. 153.50 329 PKP **PKPdf 12 44 34.6 +0.9**
comp=Z,2.5nm,0.9s,baz=104,slow=0.8,SNR=12
USRK PKPbc **PKiKP 12 44 42.1 +0.5**
comp=Z,8.6nm,0.7s,baz=270,slow=0.6,SNR=17
USRK PKPab **PKPab 12 44 55.1 +0.4**
comp=Z,8.4nm,0.9s,baz=29,slow=4.4,SNR=8.2
PDSI Padang 153.51 150 PKP **PKPdf 12 44 32.9 -1.8**
PDSI PKP **PKiKP 12 44 43.2 +0.6**
TTSI Tana Toraja 153.70 195 PKP **PKiKP 12 44 44.5 +1.5**
DMN Daman 154.07 73 *e*P **PKPdf 12 44 35.6 +0.2**
TPI Tanjungpandan 154.21 167 PKP **PKPdf 12 44 36.3 +0.6**
TPI PKP **PKiKP 12 44 46.1 +2.1**
KKN Kakani 154.21 73 *e*P **PKPdf 12 44 35.6 +0.1**
SONA0 Songino Array 154.24 11 *e*PKPdf **PKPdf 12 44 35.5 +0.7**
SONA0 *e*PKPbc **PKiKP 12 44 44.4 +1.1**
SONA0 *e*PKPab **PKPab 12 44 57.7 -0.1**
SONM Songino Array 154.24 11 PKP **PKPdf 12 44 35.5 +0.7**
comp=Z,11nm,1.1s,baz=297,slow=0.7,SNR=33
SONM PKPbc **PKiKP 12 44 44.4 +1.1**
comp=Z,11nm,0.8s,baz=331,slow=1.4,SNR=22
SONM PKPab **PKPab 12 44 57.7 -0.1**
comp=Z,10nm,0.7s,baz=322,slow=3.8,SNR=11
MDJ Mudanjiang 154.26 332 PKPbc **PKPdf 12 44 34.6 -0.2**
ULN Ulaanbaatar 154.32 10 *e*PKPdf **PKPdf 12 44 34.5 -0.5**
ULN *e*PKPbc **PKiKP 12 44 44.4 +0.9**
ULN *e*PKPab **PKPab 12 44 59.4 +1.2**
ULN Ulaanbaatar 154.32 10 *e*PKIKP **PKPdf 12 44 34.5 -0.5**
ULN *e* 12 44 59.4
ULN Ulaanbaatar 154.32 10 P **PKPdf 12 44 36.1 +1.1**
SNR=11
MJAR Matsushiro Arr 154.32 308 PKP **PKPdf 12 44 35.7 +0.5**
comp=Z,1.8nm,0.7s,baz=241,slow=2.9,SNR=8.2
MJAR PKPbc **PKiKP 12 44 44.2 +0.6**
comp=Z,14nm,0.8s,baz=137,slow=1.0,SNR=24
MJAR PKPab **PKPab 12 44 59.0 +0.5**
comp=Z,18nm,1.0s,baz=56,slow=1.8,SNR=14
MAJO Matsushiro 154.32 308 *e*PKPdf **PKPdf 12 44 35.0 -0.2**
MAJO *e*PKPbc **PKiKP 12 44 44.0 +0.3**
MAJO *e*PKPab **PKPab 12 44 59.1 +0.6**
MAJO Matsushiro 154.32 308 *e*PKIKP **PKPdf 12 44 35.0 -0.2**
MAJO *e* 12 44 59.1
MAT Matsushiro 154.32 308 *e*PKP **PKPbc 12 44 43.4 -0.2**
PKIN Phulchoki 154.33 73 *e*P **PKPdf 12 44 35.8 0.0**
PKI Pulchoki 154.34 73 *e*P **PKPdf 12 44 36.0 +0.1**
BWNR Bhubaneshwar 154.38 90 *ex* pPKPdf 12 45 29.7 -1.1
PPBI Pangkal Pinang 154.42 163 PKP **PKPdf 12 44 38.4 +2.4**
LUWI Luwuk 154.72 203 *e*PKPdf **PKPdf 12 44 36.2 -0.2**
LUWI *e*PKPab **PKPab 12 45 01.8 +1.2**
LUWI Luwuk 154.72 203 PKP **PKPdf 12 44 37.2 +0.8**
LUWI PKP **PKiKP 12 44 48.1 +3.0**
GUN Gumba 154.73 72 *e*P **PKPdf 12 44 36.6 +0.2**
BOK Bokaro 154.84 82 *e*P **PKPdf 12 44 34.6 -1.6**
BOK IAmb IAmb 12 44 38.3
comp=Z,20nm,0.4s
BOK IAMs_20 IAMs_20 13 16 19.1
comp=Z,347nm,4.4s
JIRN Jiri 155.03 73 *e*P **PKPdf 12 44 36.9 0.0**
RAMN Ramite 155.45 74 *e*P **PKPdf 12 44 37.4 +0.1**
INU Inuyama 155.70 307 *e*PKPdf **PKPdf 12 44 37.0 0.0**
PSI Prapat 155.91 143 PKP **PKPdf 12 44 38.0 -0.1**
comp=Z,13nm,1.1s,baz=268,slow=4.7,SNR=8.5
PSI PKPab **PKPab 12 45 05.6 -0.3**
comp=Z,10.0nm,0.7s,baz=68,slow=2.1,SNR=7.0
PSI Prapat 155.91 143 *e*PKPdf **PKPdf 12 44 37.6 -0.5**
CN2 Changchun 156.58 337 *e*P **PKPab 12 45 05.0 -2.9**
MPSI Mapaga 156.93 197 PKP **PKPdf 12 44 37.7 -1.6**
MPSI PKP PKPab 12 44 54.7 -1.5
GTK Tadong 157.19 73 *e*P **PKPdf 12 44 38.5 -0.9**
KSM Kuching 158.80 172 *e*PKPab **PKPab 12 45 18.6 +0.5**
KULM Kulim 158.92 143 *e*PKPdf **PKPdf 12 44 41.6 -0.1**
LSA Lhasa 158.97 66 *e*PKPdf **PKPdf 12 44 42.0 +0.1**
LSA *e*PKPab **PKPab 12 45 20.1 +0.7**
LSA Lhasa 158.97 66 *e*PKIKP **PKPdf 12 44 42.1 +0.1**
LSA *e* 12 45 20.1
GTA Gaotai 159.72 31 PKP **PKPdf 12 44 42.6 +0.5**
GTA PKPab **PKPab 12 45 22.3 +0.5**
GTA SKKS 12 55 32.2
GTA LR LR
comp=Z,190nm,22.3s
GTA LR LR
comp=Z,250nm,21.3s
GTA LR LR
comp=Z,78nm,20.3s
SBUM Sibu 159.94 177 *e*PKPdf **PKPdf 12 44 42.7 -0.2**
SBUM *e*PKPab **PKPab 12 45 24.1 +1.1**
SHL Shillong 160.28 77 *e*PKPdf **PKPdf 12 44 42.7 -0.5**
SHL *e*PKPab **PKPab 12 45 24.3 -0.6**
SHL Shillong 160.28 77 *e*PKIKP **PKPdf 12 44 42.7 -0.5**
SHL *e* 12 45 24.3
KSRS Korea Array 160.53 323 PKP **PKPdf 12 44 44.0 +1.2**
comp=Z,14nm,1.2s,baz=42,slow=0.9,SNR=36
KSRS PKPab **PKPab 12 45 26.3 +1.1**
comp=Z,28nm,1.2s,baz=44,slow=3.9,SNR=21
KSRS PP **PP 12 49 08.6 +0.7**
comp=Z,4.1nm,1.1s,baz=18,slow=4.9,SNR=4.0
SAIH SAIHA 161.29 86 *e*P **PKPdf 12 44 45.8 +1.6**
HHC Hu-ho-hao-te 161.76 4 *e*PKP **PKPdf 12 44 46.3 +2.1**
BTO Baotou 161.85 8 *e*PKP **PKPdf 12 44 44.8 +0.5**
DL2 Dalian 162.24 338 ‖ PKP **PKPdf 12 44 45.2 +0.7**
DL2 pPKP **PKPab 12 45 32.8 +0.2**
DL2 PP **PP 12 49 16.6 +0.1**
DL2 SS SS 13 09 19.5 +0.4
DL2 AMB AMB
comp=Z,200nm,4.8s
KOHI KOHIMA 162.27 76 *e*P **PKPdf 12 44 45.2 0.0**
KKM Kota Kinabalu 163.28 190 *e*PKPdf **PKPdf 12 44 46.0 -0.4**
KKM *e*PKPab **PKPab 12 45 38.6 +0.8**
LZH Lanzhou 164.28 29 *e*PKP **PKPdf 12 44 48.6 +1.8**
LZH SKKS 12 55 53.9
LZH AMB AMB
comp=Z,330nm,7.0s
LZH LR LR
comp=Z,210nm,14.7s
LZH LR LR
comp=Z,270nm,14.3s
LZH LR LR
comp=Z,380nm,15.6s
TIY Taiyuan 164.93 2 *e*PKP **PKPdf 12 44 47.7 +0.5**
TIY PKPab **PKPab 12 45 46.3 +1.8**
TIY sPKP 12 45 55.5
TIY PP **PP 12 49 34.2 +3.8**
TIY SKKS 12 55 58.4
TIY SS **SS 13 09 46.1 -0.3**
TIY AMB AMB
comp=Z,110nm,6.7s
UMPA Umpang Tak 165.02 113 PKP **PKPdf 12 44 51.0 +3.2**
CM31 Chiang Mai Arr 165.99 105 *e*PKPdf **PKPdf 12 44 48.4 -0.1**
CM31 *e*PKPab **PKPab 12 45 49.4 -0.5**
CM31 Chiang Mai Arr 165.99 105 P **PKPdf 12 44 49.8 +1.2**
SNR=5.0
CMAR Chiang Mai Arr 165.99 105 PKP **PKPdf 12 44 49.5 +0.9**
comp=Z,4.0nm,0.9s,baz=259,slow=2.4,SNR=28
CMAR PKPab **PKPab 12 45 49.3 -0.6**
comp=Z,5.8nm,0.9s,baz=250,slow=4.3,SNR=12
CMAR PP **PP 12 49 39.3 +1.3**
comp=Z,3.2nm,1.1s,baz=263,slow=4.8,SNR=6.2
CHTO Chiang Mai 166.10 103 *e*PKPdf **PKPdf 12 44 48.2 -0.4**
CHTO *e*PKPab **PKPab 12 45 49.4 -1.0**
CHTO Chiang Mai 166.10 103 *e*PKIKP **PKPdf 12 44 48.2 -0.4**
CHTO *e* 12 45 49.4
CHTO Chiang Mai 166.10 103 P **PKPdf 12 44 49.7 +1.1**
SNR=6.5
CMMT Chiang Mai 166.11 103 PKP **PKPdf 12 44 49.5 +0.9**
CMMT Chiang Mai 166.11 103 P **PKPab 12 45 49.7 -0.7**
comp=Z,7.6nm,1.4s
LAMP Lampang 166.62 105 PKP **PKPdf 12 44 50.9 +1.9**
LAMP Lampang 166.62 105 P **PKPab 12 45 53.8 +1.1**
comp=Z,43μm,1.1s,comp=Z,382μm
PBKT Sadao Pong 166.97 115 PKP **PKPdf 12 44 50.4 +1.1**
PBKT Sadao Pong 166.97 115 P **PKPab 12 45 52.0 -2.2**
comp=Z,2.0nm,0.8s,comp=Z,431nm
UTTA Uttaradit 167.15 110 PKP **PKPdf 12 44 51.1 +1.7**
UTTA Uttaradit 167.15 110 P **PKPab 12 45 56.5 +1.5**
comp=Z,22μm,1.1s
XAN Xi'an 168.00 17 PKP **PKPdf 12 44 50.3 +0.7**
XAN PKPab **PKPab 12 45 58.5 +0.3**
XAN SKKS 12 56 14.3
XAN LR LR
comp=Z,190nm,26.0s
XAN LR LR
comp=Z,120nm,27.5s
XAN LR LR
comp=Z,170nm,25.5s
XAN Xi'an 168.00 17 *e*PKPdf **PKPdf 12 44 49.3 -0.4**
XAN Xi'an 168.00 17 *e*PKIKP **PKPdf 12 44 49.3 -0.4**
CD2 Chengdu 168.17 44 PKP **PKPdf 12 44 48.5 -1.4**
NJ2 Nanjing 169.35 333 *e*PKP **PKPdf 12 44 50.4 -0.1**
SKNT Sakolnakorn 169.64 121 PKP **PKPdf 12 44 52.5 +1.4**
KMI Kunming 170.07 73 PKP **PKPdf 12 44 49.3 -2.1**
SLVN Son La 171.25 97 *e*PKPdf **PKPdf 12 44 51.5 -0.5**
GYA Guiyang 172.89 56 *i* PKP **PKPdf 12 44 52.8 +0.2**
GYA AMB AMB
comp=Z,160nm,7.9s
TPUB Ta-pu 173.15 277 *e*PKPdf **PKPdf 12 44 52.0 -0.7**
TPUB *e*PKPab **PKPab 12 46 20.8 -0.8**

IDC 08 12:27:21.4±1.9, 10°.80N×127°.55E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/38, mbtmp3.9/5, MS3.6/4, Ms1 3.6/4, ms1mx2.8/47, Error ellipse: s-maj=194.1km

s-min=21.3km az=68.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.27**	**168**	P	P	12 33 42.3	-1.0
	0.9nm,0.8s,baz=352,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**34.82**	**170**	P	P	12 34 14.0	-0.2
	0.6nm,0.6s,baz=349,slow=6.6,SNR=19						
ASAR				PcP	PcP	12 36 47.7	-0.1
	0.2nm,0.5s,baz=333,slow=2.4,SNR=8.3						
HNR	**Honiara**	**37.99**	**121**	LR	LR	12 48 51.9	
	comp=Z,49nm,18.5s,baz=224,slow=34						
STKA	**Stephens Creek**	**44.52**	**163**	P	P	12 35 36.0	+1.1
	0.8nm,0.5s,baz=329,slow=15,SNR=3.5						
MKAR	**Makanchi Array**	**52.37**	**322**	P	P	12 36 35.7	+0.2
	1.3nm,0.7s,baz=120,slow=8.3,SNR=8.5						
ARCES	**ARCESS Array B**	**84.13**	**340**	LR	LR	13 21 46.1	
	comp=Z,60nm,20.2s,baz=112,slow=39						
FINES	**FINESS Array B**	**86.02**	**332**	P	P	12 40 03.2	-0.5
	0.6nm,0.4s,baz=76,slow=5.9,SNR=9.1						
MAW	**Mawson**	**90.63**	**200**	LR	LR	13 18 08.6	
	comp=Z,81nm,20.4s,baz=216,slow=34						
YKA	**Yellowknife Ar**	**92.76**	**24**	LR	LR	13 23 12.0	
	comp=Z,12nm,21.6s,baz=124,slow=36						

TRN 08 12:49:48.1, 11°.12N×63°.77W, h2km, MD4.3, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRHS	**Sauteurs**	**2.36**	**62**	*e*S	Sn	12 50 58.7	+1.2
TPP	**Pointe-a-Pierr**	**2.42**	**109**	*e*P	Pn	12 50 30.1	+1.4
TPP				*e*S	Sn	12 50 58.9	+0.1
GRSS	**Sisters**	**2.42**	**61**	*e*S	Sn	12 51 00.2	+1.3
TOSP	**Speyside**	**3.18**	**86**	*e*P	Pn	12 50 39.6	+0.4
TOSP				*e*S	Sn	12 51 17.7	-0.1
FCV	**Fort Charlotte**	**3.20**	**50**	*e*P	Pn	12 50 39.9	+0.4
FCV				*e*S	Sn	12 51 17.7	-0.4
SVB	**Belmont**	**3.27**	**49**	*e*P	Pn	12 50 40.7	+0.3
SVB				*e*S	Sn	12 51 19.7	-0.2
SVV	**Soufriere Volc**	**3.32**	**49**	*e*P	Pn	12 50 41.8	+0.6
SVV				*e*S	Sn	12 51 21.4	+0.2
SSV	**Crater Summit**	**3.35**	**49**	*e*P	Pn	12 50 42.0	+0.5
SSV				*e*S	Sn	12 51 21.2	-0.7
SFAN	**Fancy Village**	**3.40**	**48**	*e*P	Pn	12 50 42.4	+0.2
MCLT	**Moule a Chique**	**3.78**	**47**	*e*P	Pn	12 50 47.4	-0.1
MCLT	**Moule a Chique**	**3.78**	**47**	*e*S	Sn	12 51 32.5	-0.1
SLB	**Belfond**	**3.79**	**44**	*e*P	Pn	12 50 49.0	+1.3
SLB				*e*S	Sn	12 51 32.0	-0.9
SLPA	**Patience**	**3.90**	**45**	*e*P	Pn	12 50 49.6	+0.6
SLBI	**Saint Lucia, B**	**3.98**	**43**	*e*P	Pn	12 50 50.3	+0.2
SLBI	**Saint Lucia, B**	**3.98**	**43**	*e*S	Sn	12 51 37.0	-0.3
SLW	**Petit Monier**	**4.00**	**44**	*e*P	Pn	12 50 51.7	+1.2
BIM	**Bigot**	**4.29**	**38**	*e*P	Pn	12 50 55.6	+1.2
TRMF	**Trois Ilets**	**4.31**	**38**	*e*P	Pn	12 50 55.5	+0.8
ZAM	**Aeronautique**	**4.36**	**38**	*e*P	Pn	12 50 56.5	+1.1
MPOM	**Morne Pois Mar**	**4.36**	**40**	*e*P	Pn	12 50 55.9	+0.5
LPMF	**Morne Lapointe**	**4.39**	**38**	*e*P	Pn	12 50 57.3	+1.4
FDF	**Fort de France**	**4.41**	**35**	*e*P	Pn	12 50 57.5	+1.4
FDF	**Fort de France**	**4.41**	**35**	*e*S	Sn	12 51 46.9	-1.3
MVM	**Montagne Vaucl**	**4.42**	**39**	*e*P	Pn	12 50 57.2	+0.9
PML	**Morne Lenard**	**4.43**	**34**	*e*P	Pn	12 50 57.6	+1.2
PCM	**Pelee Case Pet**	**4.45**	**34**	*e*P	Pn	12 50 57.9	+1.3
GBMF	**Grand Be**	**4.46**	**35**	*e*P	Pn	12 50 58.2	+1.4
CXM	**Morne La Croix**	**4.46**	**34**	*e*P	Pn	12 50 58.3	+1.3
BAMF	**Morne Balai**	**4.48**	**35**	*e*P	Pn	12 50 58.6	+1.5
BBGH	**Gun Hill**	**4.59**	**64**	*e*P	Pn	12 50 58.2	-0.4
MDN	**Morne-Daniel**	**4.78**	**29**	*e*P	Pn	12 51 02.4	+1.2
BBL	**Barber's Block**	**4.92**	**27**	*e*P	Pn	12 51 03.7	+0.5
DWS	**Wesley**	**5.03**	**28**	*e*P	Pn	12 51 05.5	+0.8
TBG	**Guadaloupe-3**	**5.14**	**24**	*e*P	Pn	12 51 07.0	+0.9
BPA	**Boggy Peak**	**6.18**	**17**	*e*P	Pn	12 51 21.9	+1.4

*ISCJB **08** 12:58:47.8±0.9, 33°.79N±0°.04×35°.73E±0°.07, h12km±9km, Error ellipse: s-maj=10.0km s-min=6.0km az=160.4*
*NSSC **08** 12:58:47.9±0.4, 33°.75N×35°.69E, h18km±9km, ML1.8*
*GRAL **08** 12:58:48.4±0.3, 33°.79N×35°.77E, h5km±6km, MD2.8*

ISC 08 12:58:47.7±1.3, 33°.79N±0°.04×35°.75E±0°.08, h13km±13km, n7, σ0°38/13, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.14**	**326**	*e*P	**Pg**	**12 58 51.3**	**+0.1**
BHL				*e*S	**Sg**	**12 58 53.4**	**-0.3**
DQRL	**Deir Qamar**	**0.17**	**240**	*e*P	**Pg**	**12 58 51.9**	**+0.2**
DQRL				*e*S	**Sg**	**12 58 54.5**	**0.0**
RCY	**Rachaya**	**0.30**	**166**	*e*P	**Pg**	**12 58 53.8**	**-0.2**
RCY				*e*S	**Sg**	**12 58 57.8**	**-0.4**
BRBR	**Barbar**	**0.42**	**156**	*e*P	**Pg**	**12 58 56.0**	**-0.1**
BRBR				*e*S	**Sb**	**12 59 02.7**	**-0.7**
BRBR				AML	AML	12 59 05.3	
	comp=E,81nm,0.5s						
BRBR				AML	AML	12 59 05.4	
	comp=N,102nm,0.5s						
QASN	**Qassioun**	**0.51**	**120**	*e*P	**Pb**	**12 58 58.9**	**+0.3**
QASN				*e*S	**Sb**	**12 59 06.1**	**0.0**
QASN				AML	AML	12 59 11.7	
	comp=N,138nm,0.4s						
QASN				AML	AML	12 59 12.1	
	comp=E,67nm,0.3s						
HWQ	**Hawqa**	**0.51**	**19**	*e*P	**Pg**	**12 58 57.6**	**-0.2**
TOTH	**TOTAH**	**0.71**	**127**	*e*P	**Pb**	**12 59 02.4**	**+0.3**
TOTH				*e*S	**Sg**	**12 59 11.5**	**+0.5**
TOTH				AML	AML	12 59 19.7	
	comp=E,24nm,0.4s						
TOTH				AML	AML	12 59 21.9	
	comp=N,21nm,0.4s						

*IDC **08** 13:15:35.7±1.9, 10°.71N×126°.99E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.6/51, mbtmp3.9/6, Error ellipse: s-maj=209.0km s-min=19.1km az=66.0*
*ISCJB **08** 13:15:36.1±0.8, 10°.77N±0°.06×126°.83E±0°.06, h10km, mb4.0/6, Error ellipse: s-maj=9.9km s-min=7.2km az=138.4*
*MAN **08** 13:15:39.6, 10°.81N×126°.60E, h13km, mb4.6, ML3.4, MS3.3*

ISC 08 13:15:37.5±0.9, 10°.83N±0°.05×126°.87E±0°.08, h10km, n16, σ1°82/21, mb4.0/6, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.60**	**299**	*e*P	**Pn**	**13 16 05.3**	**-0.5**
BESP				*e*S	**Sn**	**13 16 27.5**	**+0.9**
SCPH	**Surigao**	**1.71**	**233**	‖ *i* P	**Pg**	**13 16 13.7**	**+3.5**
SCPH				*i* S	**Sg**	**13 16 33.4**	**+1.0**
PLP	**Palo**	**1.89**	**280**	‖ *e*P	Pn	13 16 01.0	-8.7
PLP				*e*S	**Sn**	**13 16 29.9**	**-3.7**
MSLP	**Maasin**	**2.09**	**251**	*e*P	**Pn**	**13 16 10.7**	**-1.9**
MSLP				*e*S	**Sn**	**13 16 35.4**	**-3.3**
BUTP	**Butuan**	**2.22**	**214**	*e*P	**Pn**	**13 16 14.8**	**+0.5**
OCLP	**Ormoc**	**2.23**	**276**	*e*P	**Pn**	**13 16 12.7**	**-1.8**
CNP	**Catarman**	**2.73**	**308**	*e*P	**Pn**	**13 16 21.9**	**+0.5**
CNP				*e*S	**Sn**	**13 16 52.5**	**-2.0**
BUKP	**Musuan**	**3.43**	**211**	*e*P	**Pn**	**13 16 31.2**	**+0.2**
PVCP	**Virac**	**3.82**	**316**	*e*P	**Pn**	**13 16 36.6**	**+0.2**
GUIM	**Jordan**	**4.21**	**268**	*e*P	**Pn**	**13 16 42.4**	**+0.7**
ASAR	**Alice Springs**	**34.96**	**169**	P	**P**	**13 22 28.1**	**-1.9**
	0.3nm,0.5s,baz=353,slow=6.9,SNR=13

ISC 08 13:24:36.7±1.0, 67.87N±0.04×141.05W±0.04, h10km, n52, σ2.95/75, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BM3	Burnt Mountain	1.44	253	ePn	Pn	13 25 03.2	+0.5
FYU	Fort Yukon	2.09	233	ePn	Pn	13 25 12.9	+1.2
FYU				eSn	Sb	13 25 41.8	+1.2
EPYK	Eagle Plains	2.27	130	ePn	Pn	13 25 15.0	+0.9
INK	Inuvik	2.86	78	ePn	Pn	13 25 24.1	+1.9
INK				eSn	Sn	13 25 58.8	+2.2
INK	Inuvik	2.86	78	Pn	Pn	13 25 23.4	+1.2
INK				Sn	Sn	13 25 57.7	+1.2
PRP	Porcupine Dome	2.96	219	ePn	Pn	13 25 23.8	0.0
EGAK	Eagle	3.11	181	ePn	Pn	13 25 26.5	+0.8
EGAK				eSn	Sn	13 26 03.7	+1.0
TOLK	Toolik Lake Re	3.27	288	ePn	Pn	13 25 30.4	+2.5
COLD	Coldfoot	3.57	264	ePn	Pn	13 25 33.0	+1.0
COLD				eSn	Sn	13 26 15.4	+1.2
COLD	Coldfoot	3.57	264	Pn	Pn	13 25 33.0	+1.0
COLD				Sg	Sg	13 26 30.7	-0.5
PS01	TAPS Pump Stn	3.62	315	ePn	Pn	13 25 34.5	+1.9
ILB	Eielson Array	3.90	220	ePn	Pn	13 25 37.0	+0.4
COLA	College	4.07	225	ePn	Pn	13 25 39.7	+0.9
CCB	Clear Creek Bu	4.23	223	ePn	Pn	13 25 41.2	+0.1
DOT	Dot Lake	4.42	198	ePn	Pn	13 25 45.0	+1.4
DOT				eSn	Sn	13 26 35.0	-0.1
DOT	Dot Lake	4.42	198	Pn	Pn	13 25 44.7	+1.0
DOT				Sg	Sg	13 26 54.6	-3.7
RIDG	Independent Ri	4.43	202	ePn	Pn	13 25 45.3	+1.4
WRH	Wood River Hil	4.45	223	ePn	Pn	13 25 44.8	+0.7
MLY	Manley	4.82	238	ePn	Pn	13 25 49.6	+0.4
BCA3	Beaver Creek A	4.83	184	ePn	Pn	13 25 50.5	+1.1
PAX	Paxson	5.25	203	Pn	Pn	13 25 57.1	+1.9
PAX				Sg	Sg	13 27 21.3	-3.8
IM3	Indian Mountai	5.34	255	ePn	Pn	13 25 57.0	+0.6
DHY	Denali Highway	5.49	212	ePn	Pn	13 25 59.8	+1.3
DHY				eSn	Sn	13 27 02.6	+1.0
RND	Reindeer	5.52	219	ePn	Pn	13 25 59.8	+0.9
BPAW	Bear Paw Mtn.	5.55	232	ePn	Pn	13 25 59.1	-0.1
HARP	HAARP	5.75	199	ePn	Pn	13 26 04.2	+2.2
HARP	HAARP	5.75	199	Pn	Pn	13 26 04.2	+2.2
HARP				Sg	Sg	13 27 40.7	-0.4
TRF	Thorofare Moun	5.85	225	ePn	Pn	13 26 04.8	+1.3
YUK2	White River	6.11	179	ePn	Pn	13 26 07.1	+0.1
YUK2				eSg	Sg	13 27 46.0	-6.6
YUK2	White River	6.11	179	Pn	Pn	13 26 07.1	+0.1
YUK2				Sg	Sg	13 27 46.0	-6.6
YUK3	Moose Creek	6.13	177	ePn	Pn	13 26 07.2	-0.1
YUK3				eSg	Sg	13 27 48.1	-5.0
YUK3	Moose Creek	6.13	177	Pn	Pn	13 26 07.2	-0.1
YUK3				Sg	Sg	13 27 48.1	-5.0
YUK4	Talbot Arm	6.63	170	ePn	Pn	13 26 13.8	-0.5
YUK4				eSg	Sb	13 27 59.3	+8.0
YUK4	Talbot Arm	6.63	170	Pn	Pn	13 26 13.8	-0.5
YUK4				Sg	Sb	13 27 59.3	+8.0
BALM	Baldy	6.88	185	Pn	Pn	13 26 19.5	+1.9
YUK5	Granite Creek	6.90	167	ePn	Pn	13 26 18.3	+0.4
YUK5				eSg	Sb	13 28 06.3	+7.2
YUK5	Granite Creek	6.90	167	Pn	Pn	13 26 18.3	+0.4
YUK5				Sg	Sb	13 28 06.3	+7.2
CTGM	Chitina Glacie	6.94	181	Pn	Pn	13 26 17.2	-1.1
KIAG	Kiagna River	7.00	185	Pn	Pn	13 26 21.7	+2.5
YUK6	Outpost Mounta	7.05	169	ePn	Pn	13 26 20.8	+0.8
YUK6	Outpost Mounta	7.05	169	Pn	Pn	13 26 20.8	+0.8
YUK6				Sg	Sg	13 28 22.7	-0.1
HYT	Haines Junctio	7.24	166	Pn	Pn	13 26 22.9	+0.4
HYT				Sg	Sg	13 28 22.6	-6.0
YUK7	Dusty Glacier	7.48	169	ePn	Pn	13 26 27.9	+2.1
YUK7	Dusty Glacier	7.48	169	Pn	Pn	13 26 27.9	+2.1
YUK7				Sg	Sg	13 28 32.8	-3.6
WHY	Whitehorse	7.72	157	Sg	Sg	13 28 42.4	-1.6
DHRN	Dharma Camp	8.31	86	Pn	Pn	13 26 36.1	-0.8
DHRN				Sn	Sn	13 28 05.4	-5.2
PLBC	Pleasant Camp	8.70	164	Sg	Sg	13 29 10.1	-5.3
KUKN	Kugluktuk,NWT	9.77	78	Pn	Pn	13 26 57.9	+0.9
KUKN				Sn	Sn	13 28 40.4	-6.2
DLBC	Dease Lake	10.67	147	Sg		13 30 09.5	
YKW3	Yellowknife Ar	12.22	103	ePn	Pn	13 27 29.6	-1.0
YKW3				eSn	Sn	13 29 36.4	-10
YKW3	Yellowknife Ar	12.22	103	Pn	Pn	13 27 29.6	-1.0
YKW3				Sn	Sn	13 29 36.4	-10
YKW1	Yellowknife Ar	12.30	103	Pn	Pn	13 27 33.5	+1.9
YKW1				Sn	Sn	13 29 38.3	-10

*IDC **08** 13:25:57.7±1.6, 1.87S×139.00E, h0km, mb3.9/4, mb1 4.2/5, mb1mx3.7/37, mbtmp4.0/5, ML4.4/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/26, Error ellipse: s-maj=28.1km s-min=15.8km az=14.0*

*ISCJB **08** 13:25:59.0±0.5, 1.76S±0.05×138.88E±0.04, h29km, mb4.3/11, MS3.1/1, Error ellipse: s-maj=7.5km s-min=5.6km az=8.4*

*DJA **08** 13:26:00.6±1.3, 1.S±6.×13.9E±., h31km±19km, M4.9/6, MLv4.9/6*

*NEIC **08** 13:26:01.5±2.4, 1.87S×138.96E, h34km±7km, mb4.2/16, Error ellipse: s-maj=15.5km s-min=12.6km az=98.0*

ISC 08 13:25:59.9±0.6, 1.80S±0.07×138.98E±0.05, h29km, n33, σ2.11/36, mb4.3/11, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	1.42	124	P	Pb	13 26 25.9	+0.1
GENI				S	Sb	13 26 48.4	+4.8
JAY	Jayapura	1.86	113	Pn	Pb	13 26 31.7	-1.6
	28nm,0.3s,baz=246,slow=9.1,SNR=93						
JAY				Lg	Lg	13 26 54.5	
	36nm,0.3s,baz=276,slow=20,SNR=6.2						
JAY	Jayapura	1.86	113	P	Pn	13 26 31.2	+1.3
JAY				S	Sb	13 26 57.0	+0.8
SRPI	Serui, Papua	2.74	268	P	Pn	13 26 45.4	+3.4
SRPI				S	Sn	13 27 14.8	+0.6
BAKI	Biak	2.94	282	P	Pn	13 26 44.7	0.0
MMPI	Merauke	6.77	168	P	Pn	13 27 41.6	+4.2
FAKI	Fak Fak	6.82	260	ePn	Pn	13 27 39.6	+1.5
FAKI				eSn	Sn	13 28 54.2	-0.6
SAUI	Saumlaki	9.81	231	ePn	Pn	13 28 19.1	-0.1
PMG	Port Moresby	11.10	133	LR	LR	13 32 49.4	
	comp=Z,85nm,20.3s,baz=274,slow=37						
MTN	Manton Dam	13.45	215	ePn	Pn	13 29 09.8	+0.9
GUMO	Guam	16.36	21	ePn	Pn	13 29 46.5	-1.2
	114nm,1.1s						
WRAB	Tennant Creek	18.59	194	eP	Pn	13 30 16.6	+1.3
	9.6nm,0.6s						
WB2	Warramunga Arr	18.59	194	eP	Pn	13 30 15.7	+0.3
	9.4nm,0.7s						
WR1	Warramunga Arr	18.60	194	eP	Pn	13 30 15.2	-0.3
WRA	Warramunga Arr	18.60	194	P	Pn	13 30 15.2	-0.3
	1.3nm,0.3s,baz=13,slow=11,SNR=54						
CTAO	Charters Tower	19.52	159	eP	P	13 30 20.2	-5.0
	9.4nm,1.1s						
SARN	Sarigan	19.57	20	eP	P	13 30 25.4	-0.3
	48nm,1.1s						
FITZ	Fitzroy Crossi	20.83	218	P	Pn	13 30 41.2	-0.8
	2.9nm,0.7s,baz=59,slow=15,SNR=5.3						
FITZ				S	S	13 34 26.4	-4.0
	3.2nm,0.8s,baz=220,slow=18,SNR=3.9						
FITZ	Fitzroy Crossi	20.83	218	eP	P	13 30 39.6	+0.3
	7.6nm,1.1s						
AS31	Alice Springs	22.29	192	eP	P	13 30 56.2	+1.1
	3.0nm,0.8s						
ASAR	Alice Springs	22.29	192	P	P	13 30 56.2	+1.1
	5.9nm,0.8s,baz=19,slow=11,SNR=47						
ASAR				S	S	13 34 57.6	-1.2
	0.7nm,0.8s,baz=3.0,slow=21,SNR=4.0						
STKA	Stephens Creek	30.02	176	P	P	13 32 07.6	+1.3
	1.1nm,0.6s,baz=0.0,slow=14,SNR=3.1						
STKA	Stephens Creek	30.02	176	eP	P	13 32 04.1	-2.2
	0.6nm,1.1s						
FORT	Forrest	30.62	199	eP	P	13 32 11.4	-0.3
	12nm,1.0s						
ARMA	Armidale	30.89	158	eP	P	13 32 11.3	-2.9
	5.6nm,1.0s						
BBOO	Buckleboo	30.97	185	eP	P	13 32 16.7	+2.0
	7.6nm,1.1s						
YHNB	Yeheng	31.37	328	eP	P	13 32 18.9	+0.4
	3.4nm,0.7s						
CISI	Cisompet, Garu	31.57	259	eP	P	13 32 20.1	-0.3
	36nm,0.8s						
MARNC	Mare, Loyalty	34.39	127	eP	P	13 32 42.6	-2.2
	67nm,1.0s						
MORW	Morawa	34.83	217	eP	P	13 32 49.5	+1.0
	2.6nm,0.9s						
KSRS	Korea Array	40.38	346	LR	LR	13 47 47.9	
	comp=Z,30nm,20.7s,baz=15,slow=32						
MK32	Makanchi Array	69.24	322	eP	P	13 37 06.8	+2.5
MKAR	Makanchi Array	69.24	322	P	P	13 37 06.8	+2.5
	0.6nm,0.7s,baz=117,slow=6.9,SNR=3.7						

*ISCJB **08** 13:42:39.2±0.6, 24.14N±0.01×122.50E±0.01, h14km±4km, Error ellipse: s-maj=2.4km s-min=2.2km az=145.0*

*JMA **08** 13:42:40.2, 24.15N×122.48E, h39km±2km, M2.3*

*TAP **08** 13:42:40.5, 24.21N×122.48E, h39km, ML3.0, D*

ISC 08 13:42:38.2±1.0, 24.18N±0.02×122.53E±0.02, h16km±8km, n94, σ0.80/171, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.47	54	P	Pn	13 42 51.2	+0.9
JYNG				eS	Sn	13 42 58.8	+0.6
EOS1	EOS1	0.52	316	i P	Pn	13 42 51.1	+0.2
	baz=316						
EOS1				S	Sn	13 42 59.2	-0.2
	baz=316						
YOJ	Yonaguni jima	0.53	57	i P	Pn	13 42 52.0	+1.0
	baz=62						
YOJ				S	Sn	13 43 00.5	+0.9
	baz=62						
YOJ	Yonaguni jima	0.53	57	P	Pn	13 42 52.0	+1.0
YOJ				eS	Sn	13 43 00.2	+0.6
NANB	Nanao	0.75	290	P	Pn	13 42 54.1	0.0
	baz=288						
NANB				S	Sb	13 43 04.0	+1.1
	baz=288						
TWC	Suao	0.76	305	i P	Pn	13 42 53.8	-0.3
	baz=305						
TWC				S	Sb	13 43 02.9	-0.1
	baz=305						
ENA	Nanau	0.76	290	P	Pn	13 42 54.2	-0.1
	baz=288						
ENA				S	Sb	13 43 04.2	+1.1
	baz=288						
NACB	Ninganchiao	0.85	270	i P	Pn	13 42 55.3	-0.2
	baz=254						
NACB				S	Sg	13 43 06.5	+0.5
	baz=254						
TWD	Chiawan	0.86	264	P	Pg	13 42 55.3	+0.4
	baz=248						
TWD				S	Sb	13 43 06.2	+0.3
	baz=248						
HWA	Hwalien	0.87	257	eS	Sn	13 43 08.3	+0.4
	baz=253						
ENLB	Shoufeng	0.89	252	P	Pg	13 42 55.7	+0.2
	baz=238						
ENLB				S	Sg	13 43 08.2	+1.0
	baz=238						
ILA	Ilan	0.92	310	S	Sn	13 43 09.2	-0.1
	baz=310						
NTC	Toucheng	0.93	317	P	Pn	13 42 56.7	+0.2
	baz=317						
NTC				S	Sn	13 43 08.9	-0.7
	baz=317						
TWE	Neicheng	0.95	305	i P	Pn	13 42 57.4	+0.5
	baz=305						
TWE				S	Sg	13 43 09.4	+0.1
	baz=305						
ETLH	Xiulin Townshi	0.95	272	i P	Pn	13 42 57.3	+0.2
	baz=269						
ETLH				S	Sb	13 43 09.2	+0.4
	baz=269						
TWB1	Santiao Chiao	0.96	330	P	Pn	13 42 57.1	0.0
	baz=344						
TWB1				S	Sg	13 43 09.0	-0.6
	baz=344						
ENTT	Nioudou	0.99	298	i P	Pn	13 42 58.1	+0.7
	baz=297						
ENTT				S	Sn	13 43 11.2	0.0
	baz=297						
SLBB	Yuanshan	1.00	306	i P	Pn	13 42 58.6	+1.1
	baz=311						
SLBB				eS	Sn	13 43 11.4	+0.1
	baz=311						
NDT	Datong Townshi	1.02	295	i P	Pg	13 42 58.8	+0.8
	baz=294						
NDT				S	Sn	13 43 11.7	-0.1
	baz=294						
TIPB	Shuangxi	1.02	321	P	Pg	13 42 58.0	0.0
	baz=333						
TIPB				S	Sn	13 43 11.5	-0.3
	baz=333						
ESL	Shilin	1.06	250	P	Pb	13 42 58.0	-0.2
	baz=237						
ESL				S	Sb	13 43 11.0	-0.8
	baz=237						
NNSB	Datong	1.07	284	i P	Pn	13 42 58.9	+0.2
	baz=282						
NNSB				S	Sb	13 43 12.1	-0.2
	baz=282						
NNS	Nan Shan	1.09	284	P	Pg	13 42 59.6	+0.3
	baz=272						
NNS				S	Sb	13 43 12.9	+0.3
	baz=272						
IRIF	Iriomote-Funau	1.11	82	P	Pg	13 43 00.6	+0.9
IRIF				S	Sn	13 43 13.9	-0.1
NWLT	Wulai	1.11	303	P	Pg	13 42 59.8	+0.1
	baz=313						
NWLT				S	Sg	13 43 14.1	-0.2
	baz=313						
NWF	Wu-fen Shan	1.12	323	P	Pg	13 42 59.6	-0.4
	baz=324						
NWF				S	Sn	13 43 13.9	-0.5
	baz=324						
WFSB	Wu-fen Shan	1.12	323	P	Pg	13 42 59.6	-0.3
	baz=324						
WFSB				S	Sn	13 43 13.9	-0.4
	baz=324						
EGFH	Guangfu	1.12	244	P	Pn	13 42 58.8	-0.5
	baz=240						
EGFH				S	Sb	13 43 13.2	-0.5
	baz=240						
WHF	Hehuan Shan	1.15	269	i P	Pn	13 43 00.3	+0.2
	baz=254						
WHF				S	Sb	13 43 14.5	-0.4
	baz=254						
YHNB	Yeheng	1.16	295	i P	Pg	13 43 00.4	-0.2
	baz=281						
YHNB				S	Sn	13 43 15.2	-0.2
	baz=281						
TWA	Mucha	1.18	313	P	Pg	13 43 00.6	-0.3
	baz=327						
TWA				eS	Sn	13 43 15.6	0.0
	baz=327						
NSK	Sanguang	1.18	295	i P	Pb	13 43 00.5	+0.3
	baz=281						
NSK				S	Sb	13 43 15.2	0.0
	baz=281						
NHDH	Xindian Distri	1.20	311	eP	Pg	13 43 01.0	-0.5
	baz=325						
NHDH				eS	Sn	13 43 16.5	+0.2
	baz=325						
HGSD	Ruisui	1.22	236	P	Pb	13 43 01.1	+0.2
	baz=233						
HGSD				eS	Sb	13 43 16.2	-0.2
	baz=233						
TWT	Tachien	1.24	274	eP	Pg	13 43 02.1	0.0
	baz=263						
TATO	Taipei	1.24	310	P	Pb	13 43 01.5	+0.3
	baz=324						
TATO				S	Sg	13 43 17.8	-0.5
	baz=324						
CHGB	Renai	1.24	265	P	Pb	13 43 01.6	+0.2
	baz=251						
CHGB				S	Sb	13 43 16.6	-0.6
	baz=251						
TDCB	Techi	1.25	274	eP	Pn	13 43 00.6	-0.5
	baz=272						
TDCB				S	Sb	13 43 17.0	-0.5
	baz=272						
OWD	Renai	1.25	260	P	Pn	13 43 01.4	+0.2
	baz=258						
OWD				S	Sb	13 43 15.7	-1.8
	baz=258						
EHY	Hungye	1.29	239	P	Pn	13 43 01.6	0.0
	baz=248						
EHY				eS	Sn	13 43 17.4	-1.1
	baz=248						
YM07	YM07	1.29	321	P	Pb	13 43 02.0	-0.2
	baz=321						
YM07				eS	Sb	13 43 18.1	-0.5
	baz=321						
YM01	YM01	1.30	318	P	Pb	13 43 02.0	-0.3
	baz=318						
YM01				eS	Sb	13 43 17.7	-1.1
	baz=318						
YM11	YM11	1.31	319	eP	Pb	13 43 02.4	-0.2
	baz=319						
YM10	YM10	1.31	318	P	Pn	13 43 01.9	0.0
	baz=318						
YM10				eS	Sb	13 43 18.3	-0.9
	baz=318						
YM05	YM05	1.32	319	eP	Pb	13 43 02.1	-0.5
	baz=319						
YM08	YM08	1.32	320	eP	Pb	13 43 02.9	+0.3
	baz=320						
VWDT	VWDT	1.33	252	P	Pb	13 43 02.9	0.0
	baz=249						
VWDT				S	Sn	13 43 18.7	-0.9
	baz=249						
WLTB	Daxi	1.34	300	eP	Pb	13 43 03.2	+0.2
	baz=289						
WLTB				S	Sg	13 43 21.1	-0.6
	baz=289						
JKRS	Kuro-shima	1.35	87	P	Pg	13 43 05.0	+0.7
TWS1	Kuangyinshan	1.37	313	eP	Pb	13 43 03.2	-0.2
	baz=326						
TWS1				eS	Sb	13 43 20.6	0.0
	baz=326						
YULB	Yu-li	1.37	236	P	Pn	13 43 02.7	+0.1
	baz=246						
YULB				S	Sn	13 43 19.1	-1.4
	baz=246						
TWF1	Yuli	1.39	234	P	Pn	13 43 03.2	+0.3
	baz=246						
TWF1				S	Sn	13 43 20.2	-0.8
	baz=246						
WHP	Taichung City	1.45	274	P	Pb	13 43 05.5	+0.7
	baz=273						
WHP				eS	Sn	13 43 22.8	+0.4
	baz=273						
LIOB	Emei	1.46	289	P	Pb	13 43 05.2	+0.3
	baz=288						
LIOB				S	Sb	13 43 23.1	-0.1
	baz=288						
NSTT	Nanjuang	1.46	288	P	Pb	13 43 05.2	+0.1
	baz=287						
NSTT				S	Sb	13 43 23.2	-0.2
	baz=287						
DPDB	Guoxing	1.47	265	eP	Pb	13 43 04.9	-0.3
	baz=254						
DPDB				eS	Sn	13 43 22.0	-1.0
	baz=254						
JIJ	Ishigaki jima	1.49	82	P	Pg	13 43 05.9	-1.0
JIJ				S	Sg	13 43 25.5	-0.7
SSLB	Suanglung	1.49	255	P	Pb	13 43 05.5	-0.1
	baz=253						
SSLB				eS	Sn	13 43 22.6	-0.9
	baz=253						
PCYT	Pengchaiyu	1.51	344	eP	Pn	13 43 04.8	+0.2
	baz=346						
PCYT				eS	Sn	13 43 23.3	-0.5
	baz=346						
CHKT	Chengkung	1.51	225	eP	Pn	13 43 04.8	+0.3
	baz=212						
CHKT				i S	Sn	13 43 21.6	-2.3
	baz=212						
SMLT	Sun Moon Lake	1.52	259	P	Pb	13 43 05.7	-0.3
	baz=257						
SMLT				S	Sn	13 43 24.4	+0.1
	baz=257						
TYC	Yuchr	1.55	260	P	Pb	13 43 06.1	-0.5
	baz=258						
TYC				eS	Sn	13 43 24.9	0.0
	baz=258						
YUS	Yu-Shan	1.60	245	eS	Sn	13 43 25.8	-0.9
	baz=242						
WHYT	Xinyi Township	1.60	253	P	Pb	13 43 07.3	-0.2
	baz=241						
WHYT				S	Sn	13 43 26.9	+0.6
	baz=241						
NMLH	Miaoli	1.62	283	eP	Pb	13 43 07.6	-0.2
	baz=282						
NMLH				eS	Sb	13 43 28.1	0.0
	baz=282						
JISG	Ishigakijimahi	1.68	75	P	Pb	13 43 08.1	-0.6
JISG				S	Sb	13 43 29.7	+0.1
WJS	Zhushan	1.68	258	eP	Pb	13 43 08.7	-0.1
	baz=256						
WJS				S	Sb	13 43 30.7	+0.9
	baz=256						
TCU	Taichung	1.69	269	eS	Sb	13 43 30.6	+0.7
	baz=267						
ELDTW	Lidau	1.70	235	eP	Pn	13 43 07.2	-0.1
	baz=232						
ELDTW				eS	Sn	13 43 26.8	-1.9
	baz=232						
WNT	Mingjian	1.71	260	eS	Sb	13 43 30.5	0.0
	baz=258						
WDJ	Dajia District	1.73	276	eS	Sb	13 43 30.9	-0.2
	baz=274						
WGK	Gukeng	1.86	255	eS	Sb	13 43 34.5	-0.4
	baz=253						
WDLH	Douliu	1.88	256	eP	Pb	13 43 11.6	-0.6
	baz=253						
WDLH				S	Sb	13 43 35.3	-0.2
	baz=253						
TWGBT	Beinan	1.90	225	eP	Pn	13 43 10.1	+0.2
	baz=232						
TWGBT				S	Sn	13 43 32.2	-1.2
	baz=232						
TWG	Pinlang	1.90	225	eP	Pn	13 43 10.8	+0.8
	baz=232						
TWG				S	Sn	13 43 32.0	-1.4
	baz=232						
STYT	Tauyuan	1.91	239	P	Pn	13 43 11.6	+1.5
	baz=236						
STYT				S	Sn	13 43 34.7	+0.9
	baz=236						
TPUB	Ta-pu	1.94	244	P	Pb	13 43 12.9	-0.4
	baz=241						
TPUB				S	Sn	13 43 36.4	+1.8
	baz=241						
WTP	Ta-pu	1.98	243	i P	Pb	13 43 13.4	-0.5
	baz=240						
WTP				S	Sn	13 43 37.5	+1.9
	baz=240						
RLNB	Erlin	2.00	262	eP	Pn	13 43 12.9	+1.6
	baz=260						
RLNB				S	Sb	13 43 38.0	-0.9
	baz=260						
JTJ	Tarama	2.04	76	P	Pb	13 43 14.4	-0.4
JTJ				S	Sb	13 43 38.8	-1.1
CHY	Chiayi	2.04	251	eS	Sn	13 43 38.4	+1.4
	baz=249						
TWK	Hsinying	2.08	245	P	Pb	13 43 15.2	-0.4
	baz=242						
TWK				S	Sb	13 43 40.2	-0.9
	baz=242						
WTCT	Ta-ch'eng	2.08	262	eS	Sb	13 43 40.0	-1.1
	baz=260						
CHN1	Nanshi	2.08	242	P	Pb	13 43 15.1	-0.6
	baz=240						
CHN1				S	Sn	13 43 40.1	+2.1
	baz=240						
SLGT	Liugui	2.09	236	i P	Pb	13 43 15.1	-0.7
	baz=225						
SLGT				S	Sb	13 43 40.5	-0.9
	baz=225						
SGST	Jiashian	2.09	239	eP	Pb	13 43 14.9	-0.8
	baz=237						
SGST				eS	Sn	13 43 40.3	+2.1
	baz=237						
SNST	Tainan City	2.09	243	eP	Pb	13 43 15.2	-0.6
	baz=241						
SNST				S	Sn	13 43 40.3	+2.1
	baz=241						
ECL	Taimali	2.13	223	eP	Pn	13 43 12.8	-0.4
	baz=220						
ECL				S	Sn	13 43 37.7	-1.6
	baz=220						
WSF	Szhu	2.18	256	S	Sb	13 43 42.9	-1.0
	baz=267						
SSD	Sandimen	2.25	231	eP	Pn	13 43 16.7	+1.9
	baz=224						
SSD				eS	Sn	13 43 43.2	+1.1
	baz=224						
CHN8	Yiju	2.28	249	eS	Sn	13 43 45.0	+2.2
	baz=247						

MASBT	Mashibuluo	2.33	229	*i* P	Pn	13 43 17.6	+1.7
	baz=223						
MASBT				*e*S	Sn	13 43 44.8	+0.5
	baz=223						
EAST	Anshuo	2.36	221	*e*P	Pn	13 43 17.1	+0.8
	baz=218						
EAST				*e*S	Sn	13 43 43.8	-1.2
	baz=218						
SSPT	Xinbi	2.46	227	*e*P	Pn	13 43 19.8	+2.1
	baz=220						

NNC ***08*** *13:42:40.8±0.4, 43°.18N×78°.29E, h0km, mb3.0, mpv3.1, Error ellipse: s-maj=3.9km s-min=2.1km az=1.0*
SOME ***08*** *13:42:41.6, 43°.18N×78°.28E, h10km*
KRNET ***08*** *13:42:41.3±0.1, 43°.19N×78°.28E, h17km, mb2.9*
ISC 08 13:42:41.3±0.9, 43°.18N±0°.02×78°.27E±0°.02, h10km±7km, n52, σ0.87/101, 18C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	Saty	0.16	142	P	Pg	13 42 45.1	+0.2
	360nm,0.1s						
SATY				S	Sg	13 42 47.6	+0.2
	857nm,0.1s						
SATY	Saty	0.16	142	*e*P	Pg	13 42 45.1	+0.2
	360nm,0.1s						
SATY				*e*S	Sg	13 42 47.6	+0.2
	857nm,0.1s						
KURS	Kuram	0.31	346	P	Pg	13 42 47.5	-0.1
	21nm,0.1s						
KURS				S	Sg	13 42 51.8	0.0
	13nm,0.2s						
KURS	Kuram	0.31	346	*e*P	Pg	13 42 47.5	-0.1
	baz=44						
KURS				*e*S	Sg	13 42 51.8	0.0
	baz=44						
KURS	Kuram	0.31	346	*e*P	Pg	13 42 47.5	-0.1
	21nm,0.1s						
KURS				*e*S	Sg	13 42 51.8	0.0
	13nm,0.2s						
KPKS	Kokpek	0.41	47	*e*P	Pg	13 42 49.3	-0.1
	baz=49						
KPKS				*e*S	Sg	13 42 54.9	0.0
	baz=49						
KPKS	Kokpek	0.41	47	*e*P	Pg	13 42 49.3	-0.1
	79nm,0.1s						
KPKS				*e*S	Sg	13 42 54.9	0.0
	109nm,0.1s						
UZB	Uzynbulak	0.55	94	*e*P	Pg	13 42 51.9	-0.1
	baz=95						
UZB				*e*S	Sg	13 42 59.1	-0.2
	baz=95						
UZB	Uzynbulak	0.55	94	*e*P	Pg	13 42 51.9	-0.1
	11nm,0.1s						
UZB				*e*S	Sg	13 42 59.0	-0.2
	90nm,0.1s						
KOTS	Kotyrbulak	0.85	274	P	Pg	13 42 57.9	+0.2
	5.8nm,0.1s						
KOTS				S	Sb	13 43 09.7	-0.1
	39nm,0.2s						
KOTS	Kotyrbulak	0.85	274	*e*P	Pg	13 42 57.9	+0.2
	baz=73						
KOTS				*e*S	Sb	13 43 09.7	-0.1
	baz=73						
KOTS	Kotyrbulak	0.85	274	*e*P	Pg	13 42 57.9	+0.2
	5.8nm,0.1s						
KOTS				*e*S	Sb	13 43 09.7	-0.1
	39nm,0.2s						
MNBS	Baschi	0.90	6	P	Pg	13 42 58.7	0.0
	3.6nm,0.1s						
MNBS				S	Sb	13 43 10.9	-0.4
	40nm,0.3s						
MNBS	Baschi	0.90	6	*e*P	Pg	13 42 58.7	0.0
	3.6nm,0.1s						
MNBS				*e*S	Sb	13 43 10.9	-0.4
	40nm,0.3s						
PDGK	Podgornoye	0.90	80	P	Pg	13 42 57.7	-1.0
	2.9nm,0.2s						
PDGK				S	Sg	13 43 09.3	-1.2
	6.6nm,0.2s						
PDGK	Podgornoye	0.90	80	⇓P	Pg	13 42 57.8	-0.8
	2.3nm,0.4s						
PDGK				⇑S	Sg	13 43 09.7	-0.7
	7.0nm,0.3s						
PDGK	Podgornoye	0.90	80	⇑*i*P	Pg	13 42 58.0	-0.7
	baz=81						
PDGK				⇑*i*S	Sg	13 43 09.7	-0.7
	baz=81						
TNSS	Tian-Shan	0.98	262	P	Pg	13 42 59.3	-1.0
	7.8nm,0.3s						
TNSS				S	Sg	13 43 12.0	-1.1
	9.5nm,0.2s						
TNSS	Tian-Shan	0.98	262	*e*P	Pg	13 42 59.3	-1.0
	baz=61						
TNSS				*e*S	Sg	13 43 12.0	-1.1
	baz=61						
TNSS	Tian-Shan	0.98	262	*e*P	Pg	13 42 59.3	-1.0
	7.8nm,0.3s						
TNSS				*e*S	Sg	13 43 12.0	-1.1
	9.5nm,0.2s						
ARXS	Arharly	1.08	343	P	Pg	13 43 01.4	-0.6
	2.8nm,0.1s						
ARXS				S	Sg	13 43 15.6	-0.5
	3.8nm,0.1s						
ARXS	Arharly	1.08	343	*e*P	Pg	13 43 01.4	-0.6
	2.8nm,0.1s						
ARXS				*e*S	Sg	13 43 15.6	-0.5
	3.8nm,0.1s						
CHKK	Chushkaly	1.15	306	P	Pb	13 43 02.6	-0.8
	3.2nm,0.1s						
CHKK				S	Sb	13 43 17.6	-0.8
	15nm,0.2s						
CHKK	Chushkaly	1.15	306	*e*P	Pb	13 43 02.6	-0.8
	baz=6.0						
CHKK				*e*S	Sb	13 43 17.6	-0.8
	baz=6.0						
CHKK	Chushkaly	1.15	306	*e*P	Pb	13 43 02.6	-0.8
	3.2nm,0.1s						
CHKK				*e*S	Sb	13 43 17.6	-0.8
	15nm,0.2s						
IZV	Izvestkoviy	1.23	264	P	Pn	13 43 04.4	-0.3
	6.8nm,0.1s						
IZV				S	Sg	13 43 21.1	+0.3
	19nm,0.2s						
IZV	Izvestkoviy	1.23	264	*e*P	Pn	13 43 04.4	-0.3
	baz=63						
IZV				*e*S	Sg	13 43 21.1	+0.3
	baz=63						
IZV	Izvestkoviy	1.23	264	*e*P	Pn	13 43 04.4	-0.3
	6.8nm,0.1s						
IZV				*e*S	Sg	13 43 21.1	+0.3
	19nm,0.2s						
KTBS	Karatobe	1.27	295	P	Pb	13 43 05.6	+0.1
	2.5nm,0.1s						
KTBS				S	Sn	13 43 22.8	+0.3
	68nm,0.2s						
KTBS	Karatobe	1.27	295	*e*P	Pb	13 43 05.6	+0.1
	2.5nm,0.1s						
KTBS				*e*S	Sn	13 43 22.8	+0.3
	68nm,0.2s						
KTMS	Ketmen	1.54	79	P	Pb	13 43 09.3	-0.7
	0.2nm,0.1s						
KTMS				S	Sb	13 43 29.5	-0.2
	12nm,0.1s						
KTMS	Ketmen	1.54	79	*e*P	Pb	13 43 09.4	-0.7
	baz=79						
KTMS				*e*S	Sb	13 43 29.5	-0.2
	baz=79						
KTMS	Ketmen	1.54	79	*e*P	Pb	13 43 09.3	-0.7
	0.2nm,0.1s						
KTMS				*e*S	Sb	13 43 29.5	-0.2
	12nm,0.1s						
KUU	Kurty	1.58	297	P	Pb	13 43 10.4	-0.2
	2.1nm,0.1s						
KUU				S	Sb	13 43 31.1	+0.5
	17nm,0.2s						
KUU	Kurty	1.58	297	*e*P	Pb	13 43 10.4	-0.2
	baz=97						
KUU				*e*S	Sb	13 43 31.1	+0.5
	baz=97						
KUU	Kurty	1.58	297	*e*P	Pb	13 43 10.4	-0.2
	2.1nm,0.1s						
KUU				*e*S	Sb	13 43 31.1	+0.5
	17nm,0.2s						
ULHL	Ulahol	1.77	239	⇑*i*P	Pb	13 43 14.0	0.0
	baz=38						
ULHL				⇑*i*S	Sg	13 43 37.7	-0.4
	baz=38						
DGS	Degeres	1.83	273	P	Pb	13 43 14.8	-0.2
	2.7nm,0.1s						
DGS				S	Sb	13 43 38.6	+0.6
	16nm,0.2s						
DGS	Degeres	1.83	273	*e*P	Pb	13 43 14.8	-0.2
	baz=72						
DGS				*e*S	Sb	13 43 38.5	+0.6
	baz=72						
DGS	Degeres	1.83	273	*e*P	Pb	13 43 14.8	-0.2
	2.7nm,0.1s						
DGS				*e*S	Sb	13 43 38.6	+0.6
	16nm,0.2s						
BOOM	Boomskoye usch	1.85	249	⇓*i*P	Pb	13 43 15.6	+0.2
	baz=49						
BOOM				⇓*i*S	Sg	13 43 40.7	-0.1
	baz=49						
TKM2	Tokmak 2	1.98	263	⇑Pg	Pb	13 43 17.1	-0.5
	1.8nm,0.5s						
TKM2				⇓Lg	Lg	13 43 44.8	
	2.5nm,0.2s						
TKM2	Tokmak 2	1.98	263	⇑*i*P	Pb	13 43 17.8	+0.2
	baz=63						
TKM2				⇑*i*S	Sg	13 43 44.5	-0.5
	baz=63						
KAPS	Kapalarasan	2.24	20	Pg	Pb	13 43 22.3	+0.4
	1.6nm,0.3s						
KAPS				Lg	Lg	13 43 51.5	
	4.7nm,0.2s						
KAPS	Kapalarasan	2.24	20	*e*P	Pb	13 43 22.3	+0.4
	1.6nm,0.3s						
KAPS				*e*S	Sg	13 43 51.5	-1.8
	4.7nm,0.2s						
NRN	Naryn	2.43	225	⇑*i*P	Pb	13 43 23.6	-1.7
	baz=25						
NRN				⇑*i*S	Sb	13 43 54.8	-0.7
	baz=25						
KZA	Kyzart	2.49	245	⇓*i*P	Pb	13 43 24.7	-1.7
	baz=45						
KZA				⇓*i*S	Sb	13 43 56.5	-0.8
	baz=45						
CHMS	Chumysh	2.59	267	⇑*i*P	Pb	13 43 26.2	-1.6
	baz=67						
CHMS				⇑*i*S	Sb	13 43 58.9	-0.8
	baz=67						
USP	Ospenovka	2.76	273	⇑*i*P	Pb	13 43 28.7	-2.1
	baz=73						
USP				⇑*i*S	Sb	13 44 03.1	-1.6
	baz=73						
AAK	Ala-Archa	2.83	260	⇑Pg	Pb	13 43 32.0	0.0
	1.9nm,0.5s						
AAK				⇑Lg	Lg	13 44 10.3	
	2.4nm,0.4s						
UCH	Uchtor	2.93	252	⇓*i*P	Pn	13 43 31.0	+2.6
	baz=52						
UCH				⇓*i*S	Sb	13 44 07.2	-2.8
	baz=52						
ARLS	Aral	3.21	247	⇑*i*P	Pn	13 43 34.5	+2.6
	baz=47						
ARLS				⇑*i*S	Sn	13 44 13.5	+3.2
	baz=47						

ARO ***08*** *13:58:02.3, 9°N±309°×3°9E±10°0, h15km±99km, Ml3.6*
ISC 08 13:58:02.4±3.2, 9°.1N±0°.1×39°.3E±0°.1, h10km, n12, σ1.04/17, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKE	Ethiopia-Afar	0.66	36	*i* P	Pn	13 58 17.7	-0.5
ANKE				*i* S	Sg	13 58 22.9	-1.1
ANKE	Ethiopia-Afar	0.66	36	*i* P	Pn	13 58 17.7	-0.5
ANKE				*i* S	Sg	13 58 22.9	-1.1
DESE	Dese	2.07	8	*i* P	Pg	13 58 42.1	0.0
DESE				*i* S	Sn	13 59 04.6	+1.1
DESE	Dese	2.07	8	*i* P	Pg	13 58 42.1	0.0
DESE				*i* S	Sn	13 59 04.6	+1.1
GBR	Grand-Bara	3.71	56	*e*P	Pn	13 58 58.3	-1.6
KSDD	Koussour	3.92	51	*e*P	Pn	13 59 02.1	-0.7
SGH	Sud-Ghoubbet	4.01	54	*e*P	Pn	13 59 04.0	-0.1
MAOD	Malaho	4.14	43	*e*P	Pn	13 59 05.6	-0.2
DAY	Day	4.21	50	*e*P	Pn	13 59 07.4	+0.8
ATD	Arta Tunnel	4.24	54	*e*P	Pn	13 59 06.5	-0.6
ATD	Arta Tunnel	4.24	54	*e*P	Pn	13 59 06.5	-0.6
ATD				*e*S	Sn	13 59 59.1	+2.3
ATA	Atar	4.49	58	*e*P	Pn	13 59 10.7	+0.1

IDC 08 14:02:19.0±2.4, 0°.51N×127°.06E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/34, mbtmp3.4/3, Error ellipse: s-maj=235.1km s-min=25.0km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.54	161	P	P	14 07 09.8	-0.3
	1.8nm,1.0s,baz=340,slow=12,SNR=9.2						
ASAR	Alice Springs	24.93	165	P	P	14 07 44.4	+0.2
	0.5nm,0.4s,baz=344,slow=11,SNR=21						
MKAR	Makanchi Array	60.39	326	P	P	14 12 30.2	-0.1
	0.1nm,0.3s,baz=123,slow=6.5,SNR=2.0						

NEIC ***08*** *14:47:55.6±1.8, 4°.75N×32°.77W, h10km, mb4.5/8, Error ellipse: s-maj=24.3km s-min=17.3km az=209.0*
BJI ***08*** *14:47:56.0±0.0, 4°.70N×32°.70W, h10km, mB5.1/1, Ms5.5/2, Ms7 5.2/2*
IDC ***08*** *14:47:59.4±0.7, 5°.66N×32°.83W, h0km, mb4.1/15, mb1 4.3/15, mb1mx4.1/38, mbtmp4.1/15, MS3.9/33, Ms1 3.9/33, ms1mx3.8/50, Error ellipse: s-maj=24.6km s-min=16.2km az=165.0*
ISCJB ***08*** *14:48:00.2±0.3, 5°.71N±0°.06×32°.82W±0°.05, h12km, mb4.3/21, MS4.0/32, Error ellipse: s-maj=8.9km s-min=6.8km az=3.2*
ISC 08 14:48:00.9±0.5, 5°.6N±0°.1×32°.78W±0°.08, h12km, n293, σ1.23/254, mb4.2/21, MS3.9/32, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	Riachuelo	11.79	195	*e*Pn	Pn	14 50 37.0	-12
SACV	Santiago Islan	12.94	43	*e*Pn	Pn	14 51 02.0	-2.8
SACV				*e*Sn	Sn	14 53 32.1	+3.2
MDP	Montagnes des	19.78	269	LR	LR	14 58 28.9	
	comp=Z,210nm,20.5s,baz=96,slow=32						
H10N3	ASCENSION HYDR	22.61	126	T	T	15 16 28.3	
	baz=305,slow=75,SNR=136						
H10N2	ASCENSION HYDR	22.61	126	T	T	15 16 26.0	
	baz=305,slow=75,SNR=185						
H10N1	ASCENSION HYDR	22.63	126	T	T	15 16 29.9	
	baz=305,slow=75,SNR=186						
ASCN	Ascension	22.78	126	*e*P	P	14 52 53.1	-10
	122nm,1.0s						
H10S3	ASCENSION HYDR	23.15	129	T	T	15 17 10.7	
	baz=308,slow=74,SNR=134						
H10S1	ASCENSION HYDR	23.15	129	T	T	15 17 11.0	
	baz=308,slow=74,SNR=121						
H10S2	ASCENSION HYDR	23.16	129	T	T	15 17 12.0	
	baz=308,slow=74,SNR=124						
BDFB	Brasilia	25.96	215	LR	LR	15 02 43.4	
	comp=Z,661nm,20.4s,baz=64,slow=34						
DBIC	Dimbokro	27.78	86	P	P	14 53 49.4	-0.5
	6.7nm,1.0s,baz=263,slow=15,SNR=3.2						
DBIC				LR	LR	15 02 27.8	
	comp=Z,221nm,21.8s,baz=246,slow=31						
PTGA	Pitinga	27.87	258	LR	LR	15 04 19.2	
	comp=Z,373nm,18.7s,baz=70,slow=35						
H05S1	Guadeloupe/Mar	28.95	290	T	T	15 24 10.8	
	SNR=30						
H05N1	Guadeloupe/Mar	29.68	293	T	T	15 25 02.2	
FUL	Funchal	30.70	27	*i* T	T	15 25 58.9	
PMOZ	Porto Moniz, M	30.71	26	*i* T	T	15 26 07.3	
PMAR	Madeira	30.76	27	*i* T	T	15 26 02.9	
ANWB	Willy Bob	30.77	295	*e*P	P	14 54 13.9	-2.6
	44nm,0.8s						
TOA0	Torodi Ar. Sit	34.79	75	*e*P	P	14 54 47.7	-4.0
	11nm,1.0s						
TORD	Torodi Ar. Bea	34.79	75	P	P	14 54 51.5	-0.2
	2.9nm,0.8s,baz=270,slow=8.5,SNR=12						
TORD				LR	LR	15 07 16.5	
	comp=Z,331nm,20.1s,baz=300,slow=33						
SIV	San Ignacio	35.29	232	P	P	14 54 55.3	-0.8
	3.7nm,1.1s,baz=76,slow=7.9,SNR=7.3						
SDD	Santo Domingo	38.40	293	*e*P	P	14 55 20.1	-2.4
	104nm,0.8s						
SDDR	Presa de Saban	39.79	293	*e*P	P	14 55 32.0	-2.2
	7.9nm,1.0s						
LPAZ	La Paz	41.20	238	P	P	14 55 47.0	+0.5
	1.4nm,0.8s,baz=308,slow=5.1,SNR=3.5						
LPAZ				LR	LR	15 12 19.1	
	comp=Z,413nm,19.0s,baz=72,slow=36						
LPAZ	La Paz	41.20	238	*e*P	P	14 55 38.4	-8.1
ROSC	El Rosal	41.37	271	LR	LR	15 13 17.6	
	comp=Z,169nm,19.6s,baz=98,slow=37						
ESDC	Sonseca Array	42.70	33	LR	LR	15 10 51.0	
	comp=Z,112nm,20.2s,baz=270,slow=32						
PB11	IPOC Station P	44.19	234	*e*P	P	14 56 01.1	-9.1
	8.8nm,0.8s						
KEST	Kesra	48.91	46	LR	LR	15 17 17.1	
	comp=Z,391nm,19.7s,baz=268,slow=36						
X59A	McDuffie Farm,	51.15	311	P	P	14 57 04.5	+0.5
	baz=114						
V59A	Middlesex	51.37	312	P	P	14 57 06.5	+0.9
	baz=116						
T59A	Double "B" Far	51.38	314	P	P	14 57 06.5	+0.9
	baz=117						
O60A	Telford	51.49	319	P	P	14 57 07.5	+1.1
	baz=121						
W58A	Raeford	51.80	311	P	P	14 57 10.6	+1.8
	baz=114						
NHSC	New Hope	51.81	308	P	P	14 57 08.6	-0.3
	baz=112						
V58A	Windy Hill, Pi	52.03	312	P	P	14 57 12.1	+1.6
	baz=115						
U57A	Blanch	52.45	312	P	P	14 57 15.3	+1.6
	baz=115						
R57A	Stanardsville	52.66	315	P	P	14 57 16.3	+1.1
	baz=117						
256A	Glennville	52.77	306	P	P	14 57 16.5	+0.4
	baz=110						
W56A	Indian Trail	52.87	310	P	P	14 57 17.7	+0.9
	baz=113						
O57A	Amberson	52.92	317	P	P	14 57 18.7	+1.6
	baz=119						
V56A	Mocksville	53.06	311	P	P	14 57 19.2	+1.0
	baz=114						
U56A	King	53.19	312	P	P	14 57 20.2	+1.0
	baz=114						
Y55A	Saluda	53.41	309	P	P	14 57 22.7	+1.9
	baz=111						
X55A	Gracelyn & Ava	53.43	309	P	P	14 57 23.4	+2.5
	baz=112						
KMSC	Kings Mountain	53.44	310	P	P	14 57 22.6	+1.6
	baz=113						
155A	Kite	53.45	307	P	P	14 57 22.5	+1.5
	baz=110						
Q56A	Snyder Ridge,	53.45	315	P	P	14 57 22.2	+1.1
	baz=117						
S55A	Lewisburg	53.85	313	P	P	14 57 24.9	+0.9
	baz=115						
Y54A	Tignall	54.03	308	P	P	14 57 26.2	+0.8
	baz=111						
O55A	Ligonier	54.06	317	P	P	14 57 27.2	+1.7
	baz=118						
N55A	Marion Center	54.10	317	P	P	14 57 26.8	+1.0
	baz=118						
V54A	Nebo	54.14	311	P	P	14 57 26.5	+0.3
	baz=113						
R54A	Victor	54.37	314	P	P	14 57 29.2	+1.4
	baz=115						
K55A	Perry	54.43	320	P	P	14 57 29.9	+1.8
	baz=120						
GOGA	Godfrey	54.50	307	P	P	14 57 30.0	+1.2
	baz=110						
Y53A	Monroe	54.73	308	P	P	14 57 31.2	+0.7
	baz=110						
V53A	Saluda	54.76	310	P	P	14 57 31.6	+0.9
	baz=112						
W53A	Cullowhee	54.85	309	P	P	14 57 32.5	+1.0
	baz=111						
N54A	Moraine State	54.86	317	P	P	14 57 32.0	+0.7
	baz=118						
M54A	Oil Creek Stat	54.89	318	P	P	14 57 32.8	+1.3
	baz=118						
P53A	Whipple	55.19	315	P	P	14 57 35.4	+1.8
	baz=115						
X52A	Dahlonega	55.22	309	P	P	14 57 35.6	+1.5
	baz=110						
N53A	Lisbon	55.37	317	P	P	14 57 36.6	+1.7
	baz=117						
TSUM	Tsumeb	55.38	118	P	P	14 57 37.4	+2.0
	1.6nm,0.7s,baz=295,slow=14,SNR=2.6						
TSUM				LR	LR	15 15 40.6	
	comp=Z,95nm,21.5s,baz=330,slow=30						
O53A	New Philadelph	55.39	316	P	P	14 57 36.4	+1.3
	baz=116						
T52A	Hallie	55.41	312	P	P	14 57 37.2	+1.9
	baz=113						
DRWO	Darlington Wes	55.41	321	P	P	14 57 36.5	+1.4
	baz=120						
V52A	Sevierville	55.41	310	P	P	14 57 36.6	+1.2
	baz=111						
PEMO	Pembroke	55.43	323	P	P	14 57 37.1	+1.9
	baz=123						
U52A	Thorn Hill	55.44	311	P	P	14 57 37.0	+1.5
	baz=112						
Q52A	Bidwell	55.60	314	P	P	14 57 38.8	+2.1
	baz=114						
E54A	Lac Daplat, Po	55.80	324	P	P	14 57 39.3	+1.4
	baz=123						
Y51A	Rockmart	55.92	307	P	P	14 57 40.1	+1.1
	baz=109						
N52A	McGinn's Farm,	55.95	316	P	P	14 57 41.5	+2.3
	baz=116						
G53A	Haliburton	55.98	322	P	P	14 57 41.1	+1.9
	baz=121						
V51A	Loudon	55.98	310	P	P	14 57 39.3	-0.1
	baz=111						
S51A	Beattyville	56.06	312	P	P	14 57 41.3	+1.4
	baz=112						
T51A	Gray	56.08	311	P	P	14 57 41.4	+1.3
	baz=112						
W51A	Cleveland	56.08	309	P	P	14 57 41.2	+1.1
	baz=110						
R51A	Hillsboro	56.29	313	P	P	14 57 43.3	+1.7
	baz=113						
150A	Eclectic	56.30	306	P	P	14 57 42.4	+0.7
	baz=108						
Q51A	Peebles	56.40	314	P	P	14 57 43.7	+1.3
	baz=114						
Z50A	Ashland	56.41	306	P	P	14 57 42.8	+0.2
	baz=108						
D53A	Lac Vacive, Po	56.45	325	P	P	14 57 44.4	+1.9
	baz=123						
W50A	Signal Mountai	56.52	309	P	P	14 57 44.6	+1.2
	baz=110						
X50B	Fort Payne	56.55	308	P	P	14 57 44.2	+0.6
	baz=109						
U50A	Jamestown	56.56	310	P	P	14 57 44.2	+0.7
	baz=111						
ACSO	Alum Creek Sta	56.61	315	P	P	14 57 45.3	+1.5
	baz=114						
S50A	Richmond	56.67	312	P	P	14 57 46.1	+1.8
	baz=112						
F52A	Sundridge	56.74	323	P	P	14 57 45.3	+0.7
	baz=121						
BRAL	Brewton	56.75	304	P	P	14 57 45.2	+0.2
	baz=106						
T50A	Nancy	56.76	311	P	P	14 57 46.0	+1.0
	baz=111						
D52A	ZEK Kipawa Sen	56.81	324	P	P	14 57 46.2	+1.1
	baz=122						
R50A	Paris	56.83	313	P	P	14 57 46.9	+1.4
	baz=112						
Z49A	Columbiana	56.88	306	P	P	14 57 46.3	+0.5
	baz=108						
N50A	Nevada	56.95	316	P	P	14 57 47.5	+1.2
	baz=115						
P50A	Jamestown	56.95	314	P	P	14 57 47.3	+1.1
	baz=113						
BWLO	Walkerton	57.06	320	P	P	14 57 48.4	+1.4
	baz=118						
KLBO	Killbear Provi	57.06	322	P	P	14 57 48.1	+1.1
	baz=120						
X49A	Woodville	57.10	308	P	P	14 57 48.3	+0.9
	baz=108						
M50A	Fremont	57.13	316	P	P	14 57 48.3	+0.8
	baz=115						
LSQQ	Lebel-sur-Quev	57.14	327	P	P	14 57 48.7	+1.3
	baz=125						
V49A	McMinnville	57.16	309	P	P	14 57 49.1	+1.3
	baz=110						
LRAL	Lakeview Retre	57.21	306	P	P	14 57 49.1	+0.9
	baz=107						

W49A	Belvidere	57.23 308	P	P	14 57 49.6 +1.2
	baz=109				
L50A	Kingsville	57.24 317	P	P	14 57 49.4 +1.1
	baz=116				
U49A	Red Boiling Sp	57.30 310	P	P	14 57 49.2 +0.4
	baz=110				
T49A	Edmonton	57.31 311	P	P	14 57 49.6 +0.7
	baz=111				
BMRO	Meriville Lake	57.33 321	P	P	14 57 50.0 +1.1
	baz=118				
BASO	Ashfield	57.35 320	P	P	14 57 50.1 +1.1
	baz=118				
S49A	Springfield	57.36 312	P	P	14 57 49.7 +0.5
	baz=111				
Q49A	Aurora	57.51 313	P	P	14 57 51.3 +1.1
	baz=112				
O49A	Covington	57.55 315	P	P	14 57 51.8 +1.3
	baz=113				
P49A	Miami Univ. Ec	57.57 314	P	P	14 57 51.4 +0.8
	baz=113				
Y48A	Jasper	57.59 307	P	P	14 57 51.5 +0.6
	baz=108				
X48A	Hartselle	57.65 307	P	P	14 57 52.4 +1.1
	baz=108				
PLCA	Paso Flores	57.69 213	LR	LR	15 22 15.1
	comp=Z,436nm,21.4s,baz=72,slow=36				
N49A	Columbus Grove	57.73 316	P	P	14 57 52.1 +0.4
	baz=114				
W48A	Pulaski	57.76 308	P	P	14 57 52.7 +0.6
	baz=108				
M49A	Liberty Center	57.80 316	P	P	14 57 54.0 +1.8
	baz=114				
TOBO	Tobermory, Bru	57.82 321	P	P	14 57 53.0 +0.7
	baz=119				
V48A	Smith Brothers	57.86 309	P	P	14 57 54.0 +1.2
	baz=105				
U48A	Cassie Pea, Po	57.88 310	P	P	14 57 53.7 +0.8
	baz=110				
MATQ	Matagami	57.89 327	P	P	14 57 53.4 +0.8
	baz=125				
S48A	Wiedeman Farm,	57.89 311	P	P	14 57 53.2 +0.2
	baz=110				
T48A	Bowling Green	57.97 311	P	P	14 57 54.0 +0.5
	baz=110				
Q48A	North Vernon	58.09 313	P	P	14 57 55.2 +0.9
	baz=112				
GERES	GERESS Array B	58.28 34	P	P	14 57 56.4 +0.8
	1.0nm,0.9s,baz=242,slow=5.6,SNR=6.1				
GERES			LR	LR	15 20 27.0
	comp=Z,152nm,20.0s,baz=260,slow=33				
N48A	Decatur	58.29 315	P	P	14 57 57.1 +1.4
	baz=113				
F49A	Sandfield	58.39 321	P	P	14 57 57.5 +1.2
	baz=118				
J48A	Bridge Port	58.42 318	P	P	14 57 54.1 -2.4
	baz=116				
V47A	Nunnelly	58.43 309	P	P	14 57 57.4 +0.7
	baz=108				
U47A	Clarksville	58.44 310	P	P	14 57 57.8 +1.0
	baz=109				
R47A	Wooly Knot Far	58.46 312	P	P	14 57 58.2 +1.3
	baz=110				
T47A	Sharon Grove	58.47 310	P	P	14 57 58.1 +1.1
	baz=109				
S47A	Hartford	58.49 311	P	P	14 57 58.3 +1.2
	baz=110				
WVT	Waverly	58.76 309	P	P	14 57 59.2 +0.2
	baz=108				
N47A	Urbana	58.77 315	P	P	14 58 00.1 +1.1
	baz=113				
E48A	Lockeyer	58.80 322	P	P	14 58 00.1 +1.0
	baz=119				
L47A	Sherwood	58.84 316	P	P	14 58 00.7 +1.2
	baz=114				
O47A	Sheridan	58.88 314	P	P	14 58 00.7 +1.0
	baz=112				
T46A	Princeton	59.08 310	P	P	14 58 02.3 +1.0
	baz=109				
G47A	Hillman	59.26 320	P	P	14 58 03.7 +1.3
	baz=116				
P46A	Rosedale	59.40 313	P	P	14 58 04.5 +1.1
	baz=111				
E47A	Iron Bridge	59.47 322	P	P	14 58 05.5 +1.7
	baz=118				
SFIN	Lafayette	59.59 314	P	P	14 58 05.6 +0.9
	baz=111				
D47A	Chapleau	59.64 322	P	P	14 58 06.0 +1.0
	baz=118				
R45A	Skylar, Fairfi	59.76 311	P	P	14 58 05.6 -0.3
	baz=109				
Q45A	Warren Harvey,	59.86 312	P	P	14 58 07.3 +0.7
	baz=110				
D46A	Sault St. Mari	60.13 322	P	P	14 58 08.5 +0.2
	baz=117				
N44A	Piper City	60.47 314	P	P	14 58 11.9 +1.1
	baz=110				
F45A	CMU Biological	60.54 320	P	P	14 58 11.8 +0.7
	baz=115				
VYHS	Vyhne	61.07 37	eP	P	14 58 15.0 +0.3
F44A	Big Bay de Noc	61.24 320	P	P	14 58 16.3 +0.4
	baz=115,SNR=7.0				
K43A	Burlington	61.27 316	P	P	14 58 16.5 +0.4
	baz=111				
L43A	Garden Prairie	61.37 315	P	P	14 58 16.8 -0.1
	baz=111				
H43A	Windswept, Lux	61.53 318	P	P	14 58 18.3 +0.4
	baz=113				
F43A	Flat Rock, Esc	61.66 320	P	P	14 58 19.6 +0.9
	baz=114				
E43A	Lone Tree Farm	61.76 320	P	P	14 58 20.0 +0.6
	baz=114,SNR=7.3				
G43A	Wallace	61.77 319	P	P	14 58 20.3 +0.8
	baz=113				
CCM	Cathedral Cave	61.92 310	P	P	14 58 20.5 -0.1
	baz=107				
L42A	Oliver, Polo	61.96 315	P	P	14 58 20.9 +0.1
	baz=110				
W41B	Gary Mavity, V	61.97 307	P	P	14 58 20.3 -0.7
	baz=105				
K42A	Prairie Point,	61.99 316	P	P	14 58 21.6 +0.5
	baz=111				
J42A	Columbus	62.02 317	P	P	14 58 22.0 +0.8
	baz=111				
I42A	Draeger Farm,	62.08 317	P	P	14 58 22.0 +0.4
	baz=112,SNR=5.5				
E42A	Champion	62.37 320	P	P	14 58 24.2 +0.7
	baz=114				
N41A	Harden Midland	62.40 313	P	P	14 58 23.5 -0.3
	baz=108				
JFWS	Jewell Farm	62.66 316	P	P	14 58 25.7 +0.1
	baz=110				
U40A	Yellville	62.73 308	P	P	14 58 25.3 -0.8
	baz=105				
H41A	Junction City	62.84 318	P	P	14 58 27.2 +0.5
	baz=111				
F41A	Three Lakes	62.88 319	P	P	14 58 27.1 +0.2
	baz=112,SNR=7.2				
D41A	Chassel	63.02 321	P	P	14 58 28.6 +0.8
	baz=113				
E41A	Kenton	63.05 320	P	P	14 58 28.8 +0.7
	baz=113				
L40A	Anamosa	63.08 315	P	P	14 58 28.2 -0.1
	baz=109				
W39A	Magazine	63.20 307	P	P	14 58 29.2 0.0
	baz=104				
G40A	Rib Lake	63.43 318	P	P	14 58 30.7 +0.1
	baz=111				
F40A	Park Falls	63.60 319	P	P	14 58 31.9 +0.2
	baz=111				
E40A	Wakefield	63.65 320	P	P	14 58 32.1 +0.1
	baz=112,SNR=7.3				
MBAR	Mbarara	63.72 93	LR	LR	15 22 30.2
	comp=Z,79nm,21.5s,baz=268,slow=32				
C40A	Isle Royale Na	63.72 321	P	P	14 58 32.6 +0.2
	baz=113				
LSZ	Lusaka	63.85 110	LR	LR	15 22 51.2
	comp=Z,57nm,18.3s,baz=262,slow=33				
F39A	Loretta	64.12 319	P	P	14 58 34.8 -0.4
	baz=111				
NB2	NORSAR Subarra	64.31 22	P	P	14 58 38.7 +2.6
	comp=Z,14nm,1.7s,baz=231,slow=6.9				
NB200	NORSAR Array S	64.31 22	eP	P	14 58 36.9 +0.8
NOA	NORSAR Array B	64.31 22	P	P	14 58 36.9 +0.8
	comp=Z,2.6nm,0.9s,baz=230,slow=6.2,SNR=7.3				
NOA			LR	LR	15 24 21.3
	comp=Z,140nm,18.9s,baz=240,slow=34				
LBTB	Lobatse	64.37 121	LR	LR	15 22 17.7
	comp=Z,57nm,18.1s,baz=294,slow=32				
F38A	Pierce - Schro	64.77 319	P	P	14 58 40.2 +0.8
	baz=110				
TUL1	Leonard	64.95 307	P	P	14 58 40.7 -0.1
	baz=103				
SPMN	Marine on St.	65.15 318	P	P	14 58 42.6 +0.7
	baz=109				
EYMN	Ely	65.20 321	P	P	14 58 43.1 +1.0
	baz=111				
BOSA	Boshof	65.36 125	LR	LR	15 21 39.7
	comp=Z,36nm,20.8s,baz=216,slow=31				
MATP	Matopo	65.49 115	LR	LR	15 21 59.4
	comp=Z,45nm,18.5s,baz=286,slow=31				
WMOK	Wichita Mounta	67.14 305	P	P	14 58 53.9 -1.0
	baz=100				
ECSD	EROS Data Cent	67.35 315	P	P	14 58 56.1 +0.1
	baz=105				
JCT	Junction City	67.39 301	P	P	14 58 56.6 +0.1
	baz=98				
EIL	Elat	67.90 60	LR	LR	15 29 48.1
	comp=Z,130nm,18.0s,baz=256,slow=37				
BGNE	Belgrade	67.91 312	P	P	14 59 00.1 +0.5
	baz=103				
AGMN	Agassiz Nation	68.08 320	P	P	14 59 00.5 0.0
	baz=108				
AKASG	Malin Array Be	68.15 37	P	P	14 59 01.2 +0.4
	comp=Z,0.3nm,0.3s,baz=246,slow=5.9,SNR=3.8				
AKASG			LR	LR	15 28 23.6
	comp=Z,69nm,19.9s,baz=270,slow=36				
BRTR	Keskin Array B	68.34 50	P	P	14 59 03.6 +1.1
	comp=Z,0.7nm,0.7s,baz=258,slow=7.2,SNR=3.6				
CBKS	Cedar Bluff	68.59 309	P	P	14 59 04.9 +0.9
	baz=101				
MMAI	Mount Meron Ar	68.68 57	LR	LR	15 33 17.4
	comp=Z,48nm,18.1s,baz=260,slow=40				
AMTX	Amarillo	69.52 305	P	P	14 59 09.9 +0.1
	baz=98				
KMBO	Kilima Mbogo	70.25 93	LR	LR	15 27 45.3
	comp=Z,80nm,19.0s,baz=29,slow=34				
MSTX	Muleshoe	70.30 304	P	P	14 59 14.7 -0.1
	baz=97				
MDND	Maddock	70.38 319	P	P	14 59 16.0 +1.2
	baz=104				
FIA0	FINESS Array S	70.57 26	eP	P	14 59 16.0 +0.4
FINES	FINESS Array B	70.57 26	P	P	14 59 16.0 +0.4
	comp=Z,3.2nm,0.8s,baz=202,slow=4.1,SNR=9.1				
FINES			LR	LR	15 30 13.9
	comp=Z,43nm,18.1s,baz=252,slow=36				
LTX	Lajitas	70.61 299	eP	P	14 59 16.7 0.0
TXAR	Lajitas Array	70.61 299	P	P	14 59 16.7 0.0
	comp=Z,1.3nm,1.0s,baz=99,slow=7.7,SNR=8.6				
OGNE	Ogallala	70.70 311	P	P	14 59 17.7 +0.7
	baz=100				
KSCO	Kaye Shedlock'	70.84 309	P	P	14 59 19.4 +1.4
	baz=99				
T25A	Trinidad	71.99 307	P	P	14 59 26.6 +1.5
	baz=97				
MNTX	Cornudas Mount	72.27 301	P	P	14 59 26.6 0.0
	baz=95				
Q24A	Divide	72.79 309	P	P	14 59 30.7 +0.8
	baz=98				
SDCO	Great Sand Dun	72.92 308	P	P	14 59 31.7 +1.0
	baz=97,SNR=7.8				
ISCO	Idaho Springs	73.24 310	P	P	14 59 33.8 +1.2
	baz=98,SNR=7.0				
ANMO	Albuquerque	73.43 305	P	P	14 59 34.1 +0.5
	baz=96				
TASM	ASL Pad, Albuq	73.43 305	P	P	14 59 34.1 +0.5
	baz=96				
TASM	ASL Pad, Albuq	73.43 305	P	P	14 59 34.4 +0.7
	baz=96				
DGMT	Dagmar	73.52 319	P	P	14 59 35.4 +1.7
	baz=101				
N23A	Red Feather La	73.62 311	P	P	14 59 35.8 +1.1
	baz=98,SNR=6.8				
OBN	Obninsk	73.66 34	LR	LR	15 29 33.6
	comp=Z,23nm,20.7s,baz=190,slow=34				
S22A	4UR Ranch, Cre	73.97 308	P	P	14 59 37.5 +0.6
	baz=96,SNR=5.9				
ARCES	ARCESS Array B	74.03 18	LR	LR	15 28 41.5
	comp=Z,43nm,19.7s,baz=228,slow=33				
K22A	Casper	74.26 313	P	P	14 59 39.1 +0.7
	baz=98				
121A	Cookes Peak, D	74.36 302	P	P	14 59 39.6 +0.5
	baz=94				
ATD	Arta Tunnel	74.84 80	LR	LR	15 31 52.1
	comp=Z,86nm,19.4s,baz=221,slow=35				
MVCO	Mesa Verde	75.25 307	P	P	14 59 45.3 +1.1
	baz=95				
O20A	White River Ci	75.29 310	P	P	14 59 45.2 +0.8
	baz=96,SNR=5.4				
KVAR	Kislovodsk Arr	75.66 46	LR	LR	15 34 21.9
	comp=Z,67nm,21.4s,baz=108,slow=37				
BW06	Boulder Array	76.50 313	P	P	14 59 52.0 +0.7
	baz=96				
PD31	Pinedale Array	76.50 313	eP	P	14 59 48.5 -2.8
	comp=Z,3.7nm,1.1s				
PDAR	Pinedale Array	76.50 313	P	P	14 59 50.9 -0.4
	comp=Z,1.3nm,0.8s,baz=98,slow=6.4,SNR=8.6				
RLMT	Red Lodge	76.51 315	P	P	14 59 52.5 +1.2
	baz=96				
GNI	Garni	76.86 50	LR	LR	15 35 51.1
	comp=Z,54nm,19.8s,baz=258,slow=37				
TUC	Tucson	76.89 302	P	P	14 59 54.4 +0.9
	baz=92				
H17A	Grant Village	77.37 314	P	P	14 59 58.0 +1.8
	baz=95				
WUAZ	Wupatki	77.48 305	P	P	14 59 58.3 +1.5
	baz=93,SNR=5.6				
VNA1	Neumayer--Stat	77.87 172	P	P	15 00 00.4 +2.4
BOZ	Bozeman (W)	78.20 315	P	P	15 00 01.7 +1.0
	baz=95				
VNA3	Neumayer Olymp	78.23 173	P	P	15 00 01.6 +1.6
VNA2	Neumayer--Watz	78.25 172	P	P	15 00 02.2 +2.1
	baz=321,slow=4.9				
DUG	Dugway, Tooele	78.79 310	P	P	15 00 04.6 +0.6
	baz=93				
SNAA	Sanae	79.60 171	P	P	15 00 09.6 +2.0
MSO	Missoula	79.88 316	P	P	15 00 09.8 +0.1
	baz=93				
HLID	Hailey	80.09 313	P	P	15 00 12.2 +1.1
	baz=92				
IRM	Iron Mountain	80.56 304	P	P	15 00 14.1 +0.5
	baz=90				
BC3	Big Chuckawall	80.82 303	P	P	15 00 15.0 -0.2
	baz=90				
R11A	Troy Canyon, C	80.90 308	P	P	15 00 15.9 +0.4
	baz=91				
GMRC	Granite Mounta	80.98 304	P	P	15 00 16.6 +0.6
	baz=90				
SWSC	Sam W. Stewart	81.12 302	P	P	15 00 17.7 +1.1
	baz=90				
KIRV	Kirov	81.16 32	LR	LR	15 34 51.3
	comp=Z,46nm,18.6s,baz=118,slow=35				
TUQ	Turquoise Moun	81.19 305	P	P	15 00 18.0 +0.9
	baz=90				
YKA	Yellowknife Ar	81.26 332	P	P	15 00 16.8 +0.1
	comp=Z,1.7nm,1.0s,baz=97,slow=6.0,SNR=6.2				
YKB5	Yellowknife Ar	81.26 332	eP	P	15 00 16.8 +0.1
BELC	Belle Mtn. Jos	81.27 303	P	P	15 00 18.6 +1.0
	baz=90				
TPNV	Topopah Spring	81.44 306	P	P	15 00 19.2 +0.7
	baz=90				
SHOC	Shoshone, Teco	81.47 305	P	P	15 00 20.3 +1.8
	baz=90				
HEC	Hector,Ludlow	81.53 304	P	P	15 00 19.3 +0.4
	baz=90				
GSC	Goldstone, Bar	81.91 305	P	P	15 00 21.5 +0.7
	baz=90				
FURC	Furnace Creek,	81.94 306	P	P	15 00 22.2 +1.4
	baz=90				
NEW	Newport	82.07 318	P	P	15 00 21.9 +0.5
	baz=91				
MPMC	Manual Prospec	82.45 306	P	P	15 00 24.4 +0.6
	baz=89				
BFSC	Mount Baldy Ra	82.64 304	P	P	15 00 25.1 +0.3
	baz=89				
EDW2	Edwards Air Fo	82.90 304	P	P	15 00 26.8 +0.9
	baz=89				
CWC	Cottonwood Cre	82.92 306	P	P	15 00 26.3 +0.1
	baz=89				
NVAR	Mina Array Bea	83.04 308	P	P	15 00 28.1 +1.3
	comp=Z,1.9nm,1.0s,baz=100,slow=5.9,SNR=7.9				
ISA	Isabella, Lake	83.26 305	P	P	15 00 28.8 +0.9
	baz=89				
SMMC	Simmler	84.52 305	P	P	15 00 35.3 +1.1
	baz=88				
J05D	Fort Rock, OR	85.06 313	P	P	15 00 38.5 +1.5
	baz=88				
I05D	Terrebonne, OR	85.08 314	P	P	15 00 38.1 +1.1
	baz=88				
F05D	White Salmon	85.09 316	P	P	15 00 37.9 +1.1
	baz=88				
M04C	Macdoel	85.60 311	P	P	15 00 40.5 +0.9
	baz=87				
J04D	Umpqua Nationa	85.70 313	P	P	15 00 40.9 +0.6
	baz=87				
E04D	Cinebar	85.82 316	P	P	15 00 40.4 0.0
	baz=87				
I04A	Tendick Farm,	85.89 313	P	P	15 00 40.2 -0.8
	baz=87				
D03D	Eldon	86.11 317	P	P	15 00 42.3 +0.5
	baz=87				
AKTO	Aktyubinsk	86.22 40	LR	LR	15 37 44.1
	comp=Z,49nm,21.8s,baz=277,slow=35				
I03D	Drain, OR	86.57 313	P	P	15 00 44.9 +0.7
	baz=86				
L02E	Cave Junction	86.88 312	P	P	15 00 46.8 +1.0
	baz=86				
DLBC	Dease Lake	89.04 329	LR	LR	15 35 57.8
	comp=Z,62nm,20.1s,baz=180,slow=32				
WSAR	Wadi Sarin	89.10 67	LR	LR	15 41 56.3
	comp=Z,165nm,19.8s,baz=281,slow=36				
ILAR	Eielson Array	94.95 337	P	P	15 01 23.4 +0.4
	comp=Z,0.7nm,1.1s,baz=61,slow=4.2,SNR=5.4				
NRIK	Noril'sk	95.01 18	LR	LR	15 43 37.1
	comp=Z,47nm,20.0s,baz=29,slow=35				
HHC	Hu-ho-hao-te	123.37 32	ePKP	PKPdf	15 06 54.8 -3.7
CD2	Chengdu	124.83 46	PKP	PKPdf	15 06 57.0 -4.5
CMAR	Chiang Mai Arr	126.73 62	PKP	PKiKP	15 07 06.5 +0.6
	comp=Z,0.8nm,0.8s,baz=298,slow=3.5,SNR=4.6				
NJ2	Nanjing	133.81 34	ePKP	PKPdf	15 07 15.1 -3.3
ASAR	Alice Springs	157.95 146	PKP	PKPdf	15 07 58.3 -0.3
	comp=Z,1.6nm,1.1s,baz=64,slow=2.9,SNR=5.4				

MAN 08 14:53:06.8, 4°.25N×125°.78E, h13km, mb4.3, ML3.2, MS2.9, 3C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.84	358	eP		Pn	14 53 37.5	-0.7
DDMP				eS		Sn	14 54 01.6	+0.3
SKMP	Bagumbayan, Su	2.57	331	eP		Pn	14 53 50.5	+2.3
SKMP				eS		Sb	14 54 24.2	-0.1
MATI	Mati	2.72	10	eP		Pn	14 53 46.9	-3.3
MATI				eS		Sb	14 54 26.4	-2.2
DMPH	Davao City--Mi	2.83	354	↑iP		Pb	14 53 56.3	-0.9
DMPH				iS		Sb	14 54 29.2	-2.6
CTBH	Cotabato--PC H	3.32	333	↑iP		Pn	14 53 60.0	+1.4
BUKP	Musuan	3.67	349	eP		Pn	14 54 04.6	+1.2
BUKP				eS		Sn	14 54 49.4	+2.7
CGP	Cagayan de Oro	4.31	346	↑eP		Pn	14 54 15.8	+3.6
IPIL	Ipil	4.75	318	eP		Pn	14 54 19.8	+1.7
IPIL				eS		Sn	14 55 15.8	+2.7

PRE 08 14:57:20.0±1.9, 26°.42S×27°.63E, h2km, ML1.9, South Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
WDLM	Western Deep L	0.19	268	eP		Pg	14 57 24.1	+0.5
WDLM				eS		Sg	14 57 26.2	+0.1
WDLM					AML	AML	14 57 26.5	
	comp=Z,629nm,0.3s							
ERPM	east rand prop	0.55	83	eP		Pb	14 57 32.3	-0.2
ERPM				eS		Sg	14 57 38.5	+0.6
ERPM					AML	AML	14 57 39.8	
	comp=Z,35nm,0.1s							
PRYS	Parys	0.56	205	eP		Pg	14 57 30.6	-0.2
PRYS				eS		Sg	14 57 38.0	-0.1
PRYS					AML	AML	14 57 43.5	
	comp=Z,54nm,0.7s							
KSR	Koster	0.86	310	eP		Pg	14 57 36.0	-0.6
KSR				eS		Sg	14 57 47.7	-0.1
KSR					AML	AML	14 57 51.7	
	comp=Z,13nm,0.3s							
SWZ	Schweizer	2.19	249	eP		Pn	14 57 57.4	-0.2
SWZ				eS		Sn	14 58 26.2	+0.9
SWZ					AML	AML	14 58 28.1	
	comp=Z,14nm,0.5s							
LBTB	Lobatse	2.30	307	eP		Sb	14 58 29.9	-1.5
	comp=Z,12nm,0.6s							
LBTB	Lobatse	2.30	307	eP		Pn	14 57 59.6	+0.5
LBTB				eS		Sb	14 58 29.7	-1.6
LBTB					AML	AML	14 58 32.0	
	comp=Z,15nm,0.3s							
BOSA	Boshof	3.04	223	eP		Pn	14 58 09.0	-0.3
BOSA				eS		Sn	14 58 47.5	+1.2
BOSA					AML	AML	14 58 56.4	
	comp=Z,6.0nm,0.6s							

EAF 08 15:02:10.8±0.5, 4°.57S×35°.99E, h0km±873km, Tanzania

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KOND	Kondoa	0.39	210	iP		Pg	15 02 17.9	-0.4
KOND				iS		Sg	15 02 22.9	-0.5
KIBA	Kibaya	0.94	141	iP		Pg	15 02 27.4	-1.4
KIBA				iS		Sg	15 02 40.1	-0.8

*IDC **08** 15:11:46.0±0.8, 51°.39N×179°.87W, h0km, mb4.3/24, mb1 4.4/25, mb1mx4.2/53, mbtmp4.3/25, MS3.5/7, Ms1 3.5/7, ms1mx3.2/51, Error ellipse: s-maj=24.3km s-min=12.5km az=174.0*

*BJI **08** 15:11:48.3±0.0, 51°.19N×179°.65W, h43km, mb4.8/22, mB4.9/19, Ms4.7/12, Ms7 4.4/10*

*NEIC **08** 15:11:50.1±0.0, 51°.12N×179°.92W, h19km, mb4.5/74, ML4.3(AEIC), After AEIC.*

*MOS **08** 15:11:50.2±1.0, 51°.34N×179°.92W, h42km, mb4.8/35, MS4.2/5, Error ellipse: s-maj=10.1km s-min=6.7km az=101.5*

*ISCJB **08** 15:11:51.4±0.6, 51°.20N±0°.06×179°.94W±0°.04, h55km±4km, mb4.5/84, MS4.2/23, Error ellipse: s-maj=10.4km s-min=4.0km az=173.2*

ISC 08 15:11:51.9±0.8, 51°.15N±0°.08×179°.91W±0°.04, h45km±5km, n235, σ1§42/231, mb4.5/84, MS4.3/24, 25C-12D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	0.94	49	ePg		Pn	15 12 07.9	-0.8
GAEA	Gareloi East	0.96	49	ePg		Pn	15 12 08.1	-0.9
TANO	Tanaga North	1.35	55	ePn		Pn	15 12 13.9	-0.4
TANO				eSn		Sn	15 12 32.6	+1.5
TASE	Tanaga Southea	1.36	59	ePn		Pn	15 12 13.7	-0.7
TAFP	Tanaga Falls P	1.42	57	ePn		Pn	15 12 14.6	-0.6
TAFP				eSn		Sn	15 12 35.3	+2.6
KIMD	Kanaga Island	1.78	69	ePn		Pn	15 12 19.5	-0.7
KIMD				eSn		Sn	15 12 42.1	+0.5
KIKV	Kanaga Island	1.86	66	ePn		Pn	15 12 21.5	+0.2
KIKV				eSn		Sn	15 12 45.8	+2.3
KIWB	Kanaga Island	1.86	67	ePn		Pn	15 12 21.5	+0.2
KIWB				eSn		Sn	15 12 45.1	+1.5
KIRH	Kanaga Island	1.91	66	ePn		Pn	15 12 22.6	+0.6
ADK	Adak	2.15	69	ePn		Pn	15 12 25.2	+0.1
ADK				ePg		Pn	15 12 25.3	+0.1
ADK				eSn		Sn	15 12 51.3	+0.8
ADK				eLg		Lg	15 12 52.0	
ADK	Adak	2.15	69	eP		Pn	15 12 25.2	+0.1
ADK				e			15 12 51.3	
ADAG	Mount Adagdak	2.23	67	ePn		Pn	15 12 26.7	+0.5
ETKA	Kagalaska Isla	2.30	71	ePn		Pn	15 12 27.5	+0.2
ETKA				eSn		Sn	15 12 55.4	+1.0
GSMY	Great Sitkin M	2.56	68	ePn		Pn	15 12 30.7	-0.2
GSTR	Great Sitkin T	2.58	67	ePn		Pn	15 12 31.6	+0.4
ATKA	Atka Island	3.71	71	ePn		Pn	15 12 46.7	+0.1
ATKA				eSn		Sn	15 13 31.6	+2.6
KOKL	Mount Kliuchef	3.74	70	ePn		Pn	15 12 48.2	+1.1
KOKL				eSn		Sn	15 13 32.4	+2.6
KOFP	Korovin Flat P	3.79	71	ePn		Pn	15 12 49.1	+1.4
SMY	Shemya	4.03	295	ePn		Pn	15 12 52.1	+1.2
SMY				eSn		Sn	15 13 40.7	+4.0
SMY	Shemya	4.03	295	eP		Pn	15 12 52.1	+1.2
SMY				e			15 13 40.7	
NIKH	Nikolski High	7.06	71	ePn		Pn	15 13 33.3	+0.8
OKAK	Okmok	7.48	67	ePn		Pn	15 13 39.5	+1.2
OKTU	Okmok Mt. Tuli	7.62	68	ePn		Pn	15 13 41.6	+1.3

SPIA **Saint Paul Isl** 8.28 39 *e*Pn **Pn** 15 13 51.2 +2.1
SPIA *e*Sn **Sn** 15 15 24.9 +3.8
MSW **Makushin Switc** 8.47 66 *e*Pn **Pn** 15 13 53.4 +1.6
UNV **Unalaska Valle** 8.62 67 *e*Pn **Pn** 15 13 54.5 +0.6
AKUT **Akutan** 9.10 65 *e*Pn **Pn** 15 14 02.1 +1.6
PEA1 **Petropavlovsk-** 13.88 287 *e*Pn **Pn** 15 15 07.0 +1.3
PETK **Petropavlovsk-** 13.88 287 Pn **Pn** 15 15 07.0 +1.3
0.1nm,0.3s,baz=93,slow=15,SNR=3.2
PETK LR LR 15 21 10.1
comp=Z,78nm,18.7s,baz=96,slow=41
SKR **Severo-Kuril's** 15.11 278⇓ *e*P **Pn** 15 15 21.8 -0.3
OHAK **Old Harbor** 16.66 58 *e*Pn **Pn** 15 15 37.8 -4.0
21nm,0.6s
SVW2 **Sparrevohn** 16.72 44 *e*Pn **Pn** 15 15 39.1 -3.5
13nm,0.9s
KDAK **Kodiak Island** 17.13 57 *e*Pn **Pn** 15 15 44.1 -3.6
15nm,1.0s
KDAK **Kodiak Island** 17.13 57 *e*P **Pn** 15 15 44.1 -3.6
KDAK pmax pmax
comp=Z,15nm,1.0s
RSO **Redoubt South** 17.76 48 *e*Pn **P** 15 15 56.3 +0.3
CNPM **China Poot** 18.21 52 *e*Pn **P** 15 16 00.6 -0.2
comp=Z,17nm,0.7s
BILL **Bilibino** 18.24 343 *e*Pn **Pn** 15 16 02.4 +1.1
comp=Z,20nm,1.1s
BILL **Bilibino** 18.24 343 *i* P **Pn** 15 16 02.6 +1.3
SPU **Mount Spurr** 18.33 46 *e*P **Pn** 15 16 03.8 +1.4
RDOG **Red Dog Mine** 18.88 20 *e*P **Pn** 15 16 10.2 +1.2
comp=Z,20nm,1.0s
SEY **Seymchan** 18.95 319 P **P** 15 16 06.3 -2.6
baz=124,slow=14,SNR=1.6
SEY **Seymchan** 18.95 319⇑ *e*P **P** 15 16 07.9 -1.0
CAST **Castle Rocks** 19.22 40 *e*P **Pn** 15 16 13.1 0.0
comp=Z,26nm,0.6s
SEW **Seward** 19.23 50 *e*P **P** 15 16 11.3 -0.6
comp=Z,9.0nm,0.7s
KTH **Kantishna Hill** 19.74 40 *e*P **P** 15 16 18.2 +0.6
PMR **Palmer** 19.79 46 *e*P **Pn** 15 16 19.3 -0.6
comp=Z,4.2nm,0.7s
PMR **Palmer** 19.79 46 *e*P **Pn** 15 16 19.3 -0.6
PMR pmax pmax
comp=Z,4.0nm,0.7s
SML **Sawmill** 20.22 46 *e*P **P** 15 16 21.7 -1.1
comp=Z,12nm,0.7s
SML **Sawmill** 20.22 46 *e*P **P** 15 16 21.7 -1.1
SML pmax pmax
comp=Z,12nm,0.7s
MLY **Manley** 20.49 36 *e*P **P** 15 16 25.6 0.0
comp=Z,8.9nm,0.8s
RND **Reindeer** 20.54 41 *e*P **P** 15 16 24.8 -1.4
comp=Z,8.5nm,0.6s
RND **Reindeer** 20.54 41 *e*P **P** 15 16 24.8 -1.4
RND pmax pmax
comp=Z,9.0nm,0.6s
GLI **Glacier Island** 20.55 49 *e*P **P** 15 16 26.8 +0.5
comp=Z,12nm,0.6s
CCB **Clear Creek Bu** 21.45 39 *e*P **P** 15 16 34.9 -1.0
comp=Z,7.2nm,0.8s
COLA **College** 21.52 38⇑ *e*P **P** 15 16 37.1 +0.4
COLA pmax pmax
comp=Z,5.0nm,0.9s
ILAR **Eielson Array** 21.86 39 P **P** 15 16 37.2 -3.1
comp=Z,1.1nm,0.5s,baz=232,slow=7.8,SNR=25
ILB **Eielson Array** 21.86 39 *e*P **P** 15 16 38.5 -1.9
comp=Z,6.3nm,1.0s
RIDG **Independent Ri** 22.34 42 *e*P **P** 15 16 43.4 -2.1
comp=Z,6.9nm,0.6s
MENT **Mentasta** 22.60 45 *e*P **P** 15 16 48.7 +0.4
comp=Z,7.2nm,0.7s
FYU **Fort Yukon** 23.21 35 *e*P **P** 15 16 54.2 -0.2
comp=Z,13nm,1.0s
YSS **Yuzh-Sakhalins** 24.64 275 *e*P **P** 15 17 05.3 -2.7
YSS *e* 15 22 25.0
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS MLR MLR
comp=Z,200nm,14.0s
HYT **Haines Junctio** 25.18 51 *e*P **P** 15 17 12.7 -0.2
comp=Z,4.1nm,0.6s
ASAJ **Asahikawa** 26.00 269 P **P** 15 17 21.3 +1.0
comp=Z,1.8nm,0.7s,baz=42,slow=16,SNR=3.3
INK **Inuvik** 28.05 35 P **P** 15 17 36.6 -1.8
comp=Z,0.9nm,0.4s,baz=248,slow=13,SNR=6.1
TIXI **Tiksi** 30.49 331 LR LR 15 31 08.5
comp=Z,157nm,18.3s,baz=69,slow=38
KLR **Kul'dur** 30.57 286 P **P** 15 18 00.9 0.0
comp=Z,9.0nm,0.6s,baz=62,slow=8.4,SNR=29
KLR **Kul'dur** 30.57 286*c* *i*P **P** 15 18 00.6 -0.4
KLR pmax pmax
comp=Z,9.0nm,0.9s
ZEA **Zeya** 31.69 296 *e*P **P** 15 18 09.2 -1.6
ZEA pmax pmax
comp=Z,12nm,1.0s
USRK **Ussuriysk Ar.** 32.63 277 P **P** 15 18 18.5 -0.6
comp=Z,0.9nm,0.6s,baz=92,slow=4.8,SNR=5.2
H11N2 **WAKE ISLAND Hy** 33.04 203 T T 15 53 37.3
baz=18,slow=76,SNR=21
H11N3 **WAKE ISLAND Hy** 33.05 203 T T 15 53 37.3
baz=18,slow=76,SNR=17
MJAR **Matsushiro Arr** 33.06 260 LR LR 15 31 14.5
comp=Z,32nm,20.2s,baz=90,slow=35
H11N1 **WAKE ISLAND Hy** 33.06 203 T T 15 53 37.3
baz=18,slow=76,SNR=16
YKW3 **Yellowknife Ar** 35.87 46 *e*P **P** 15 18 45.8 -1.1
comp=Z,5.8nm,0.7s
YKA **Yellowknife Ar** 35.89 46 P **P** 15 18 45.2 -2.0
comp=Z,3.5nm,0.5s,baz=281,slow=7.3,SNR=16
BOD **Bodaibo** 37.55 307 *e*P **P** 15 19 00.5 -0.8
BOD pmax pmax
comp=Z,11nm,0.8s
MSO **Missoula** 42.20 69 *e*P **P** 15 19 40.1 -0.1
comp=Z,6.2nm,1.0s
KVN **Kaiserville** 44.03 81 *e*P **P** 15 19 55.5 +0.3
comp=Z,2.6nm,1.0s
KVN **Kaiserville** 44.03 81 *e*P **P** 15 19 55.5 +0.3
KVN pmax pmax
comp=Z,3.0nm,1.0s
NVAR **Mina Array Bea** 44.27 82 P **P** 15 19 57.8 +0.6
comp=Z,0.8nm,0.6s,baz=300,slow=7.3,SNR=6.5
ELK **Elko** 44.79 77 LR LR 15 35 09.0
comp=Z,43nm,21.8s,baz=294,slow=31
YHH **Holmes Hill** 45.12 70 *e*P **P** 15 20 04.1 +0.1
comp=Z,10nm,0.7s
YFT **Old Faithful** 45.32 70 *e*P **P** 15 20 06.8 +1.4
comp=Z,11nm,1.0s
TLY **Talaya** 45.59 302 *e*P **P** 15 20 07.5 +0.3
comp=Z,4.1nm,0.7s
TLY **Talaya** 45.59 302 *e*P **P** 15 20 06.9 -0.3
TLY pmax pmax
comp=Z,14nm,1.1s
FLWY **Flagg Ranch** 45.61 71 *e*P **P** 15 20 08.9 +1.3
comp=Z,7.9nm,0.8s
ULN **Ulaanbaatar** 45.73 296⇑ *e*P **P** 15 20 08.6 +0.1
ULN pmax pmax
comp=Z,4.0nm,1.0s
R11A **Troy Canyon, C** 46.02 80 *e*P **P** 15 20 11.5 +0.6
comp=Z,2.9nm,0.9s
SONM **Songino Array** 46.12 296 P **P** 15 20 12.2 +0.6
comp=Z,1.8nm,0.6s,baz=56,slow=9.0,SNR=9.4
ZAK **Zakamensk** 46.47 301 *e*P **P** 15 20 13.4 -0.8
ZAK pmax pmax
comp=Z,4.0nm,1.2s
TPNV **Topopah Spring** 46.47 82 *e*P **P** 15 20 15.4 +0.9
comp=Z,8.0nm,0.9s
TPNV **Topopah Spring** 46.47 82 *e*P **P** 15 20 15.4 +0.9
TPNV pmax pmax
comp=Z,8.0nm,0.9s
PDAR **Pinedale Array** 47.04 71 P **P** 15 20 19.1 +0.1
comp=Z,4.9nm,0.8s,baz=308,slow=3.6,SNR=33
HHC **Hu-ho-hao-te** 47.08 285 *e*P **P** 15 20 15.0 -4.1
HHC S **S** 15 27 01.1 -6.8
HHC pmax pmax
comp=Z,22nm,0.8s
HHC pmax pmax
comp=Z,180nm,5.7s
NJ2 **Nanjing** 48.12 271 *e*P **P** 15 20 27.4 +0.3
NJ2 pmax pmax
comp=Z,11nm,0.5s
SRU **San Rafael Swe** 48.66 76 *e*P **P** 15 20 32.3 +0.8
comp=Z,4.9nm,1.0s
SRU **San Rafael Swe** 48.66 76 *e*P **P** 15 20 32.3 +0.8
SRU pmax pmax
comp=Z,5.0nm,1.0s
U15A **North Rim** 49.26 80 *e*P **P** 15 20 36.7 +0.5
comp=Z,4.1nm,0.8s
ULM **Lac du Bonnet** 50.39 56 LR LR 15 41 50.3
comp=Z,71nm,20.9s,baz=284,slow=36

ZALV **Zalesovo Beam** 53.67 313 P **P** 15 21 07.4 -1.2
comp=Z,1.4nm,0.5s,baz=64,slow=10,SNR=6.2
ZALV LR LR 15 44 07.8
comp=Z,66nm,21.7s,baz=74,slow=36
SUMG **Summit** 53.68 13 *e*P **P** 15 21 09.5 +0.6
comp=Z,5.5nm,0.9s
SUMG **Summit** 53.68 13 *i* P **P** 15 21 08.6 -0.3
SUMG pmax pmax
comp=Z,8.0nm,0.6s
SUMG **Summit** 53.68 13 *i* P **P** 15 21 08.6 -0.3
comp=Z,8.0nm,0.6s
ANMO **Albuquerque** 53.83 77⇑ *e*P **P** 15 21 10.1 -0.1
ANMO pmax pmax
comp=Z,1.0nm,0.9s
LZH **Lanzhou** 54.77 286 *e*P **P** 15 21 20.7 +3.6
LZH pP sP 15 21 32.6 -1.2
LZH sP pwP 15 21 38.1 +6.2
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.2s
LZH LR LR
comp=Z,320nm,12.6s
LZH LR LR
comp=Z,380nm,13.6s
LZH LR LR
comp=Z,420nm,13.6s
GTA **Gaotai** 55.00 291 P **P** 15 21 19.1 +0.5
GTA pP sP 15 21 32.4 -2.9
GTA sP pwP 15 21 37.1 +3.5
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,52nm,6.5s
GTA LR LR
comp=Z,180nm,15.8s
GTA LR LR
comp=Z,220nm,15.1s
GTA LR LR
comp=Z,200nm,17.5s
DGZ **Jazzator, Alta** 55.12 308*c* *i*P **P** 15 21 19.2 -0.2
DGZ pmax pmax
comp=Z,4.0nm,1.1s
ARCES **ARCESS Array B** 58.19 350 P **P** 15 21 39.6 -1.1
comp=Z,6.4nm,0.3s,baz=30,slow=8.4,SNR=11
LVZ **Lovozero** 58.48 345 *e*P **P** 15 21 41.5 -1.3
comp=Z,14nm,0.9s
LVZ **Lovozero** 58.48 345*de*P **P** 15 21 41.3 -1.5
LVZ pmax pmax
comp=Z,33nm,2.5s
KURK **Kurchatov** 58.67 313 *e*P **P** 15 21 44.3 +0.1
comp=Z,9.8nm,0.8s
KURK **Kurchatov** 58.67 313*ce*P **P** 15 21 43.8 -0.4
KURK pmax pmax
comp=Z,18nm,1.3s
KURBB **Kurchatov Arra** 58.77 313 P **P** 15 21 45.1 +0.1
comp=Z,9.3nm,0.8s,baz=43,slow=6.5,SNR=72
WMQ **Urumqi** 58.87 302 *e*P **P** 15 21 48.5 +2.6
WMQ pmax pmax
comp=Z,130nm,4.7s
WMQ LR LR
comp=Z,210nm,20.5s
WMQ LR LR
comp=Z,280nm,30.9s
WMQ LR LR
comp=Z,270nm,26.7s
TX31 **Lajitas Ar. Si** 59.38 80 *e*P **P** 15 21 49.4 -0.3
comp=Z,2.7nm,1.1s
TXAR **Lajitas Array** 59.38 80 P **P** 15 21 49.5 -0.2
comp=Z,0.5nm,0.6s,baz=311,slow=4.7,SNR=8.9
MK31 **Makanchi Array** 59.62 308 *e*P **P** 15 21 50.5 -0.5
comp=Z,4.6nm,0.8s
MK31 **Makanchi Array** 59.62 308 *e*P **P** 15 21 50.5 -0.5
MK31 pmax pmax
comp=Z,5.0nm,0.8s
MKAR **Makanchi Array** 59.62 308 P **P** 15 21 50.5 -0.5
comp=Z,6.7nm,0.8s,baz=53,slow=7.0,SNR=40
BVAR **Borovoye Array** 60.60 319 P **P** 15 21 56.9 -0.6
comp=Z,6.0nm,0.7s,baz=52,slow=7.7,SNR=32
BRVK **Bovoye** 60.62 319 *e*P **P** 15 21 57.5 -0.2
comp=Z,5.2nm,0.6s
BRVK **Borovoye** 60.62 319*c* *i*P **P** 15 21 57.9 +0.2
BRVK pmax pmax
comp=Z,5.0nm,1.0s
MSF **Maaselka** 61.17 347 P **P** 15 22 01.3 +0.1
MSF pmax pmax
comp=Z,9.0nm,0.8s
ARU **Arti** 62.42 328*d* *i*P **P** 15 22 08.7 -1.0
ARU 15 22 43.5
ARU 15 24 25.5
ARU S **S** 15 30 34.0 +1.0
ARU SS **SS** 15 34 35.2 -1.1
ARU pmax pmax
comp=Z,7.0nm,2.4s
ARU MLR MLR
comp=Z,143nm,18.0s
QIZ **Qiongzhong** 63.05 267 P **P** 15 22 13.9 -0.6
QIZ LR LR
comp=Z,210nm,22.6s
QIZ LR LR
comp=Z,190nm,20.6s
KMI **Kunming** 63.06 277 P **P** 15 22 15.8 +1.1
KMI pmax pmax
comp=Z,18nm,0.5s
PDGK **Podgornoye** 63.47 307 P **P** 15 22 17.7 +0.6
PDGK pmax pmax
comp=Z,9.0nm,1.0s
JOF **Joensuu** 63.63 345 P **P** 15 22 16.8 -0.8
JOF pmax pmax
comp=Z,10.0nm,0.8s
KLMR **Klimovskoe** 63.95 340 *e*P **P** 15 22 16.7 -3.0
KLMR pmax pmax
comp=Z,5.0nm,1.1s
SUF **Sumiainen** 64.61 347 P **P** 15 22 24.6 +0.5
SUF pmax pmax
comp=Z,10.0nm,1.1s
TKM2 **Tokmak 2** 65.71 309 P **P** 15 22 32.4 +0.5
SNR=10
FIA1 **FINESS Array S** 65.84 347 *e*P **P** 15 22 30.9 -1.1
comp=Z,8.5nm,1.0s
FINES **FINESS Array B** 65.84 347 P **P** 15 22 30.8 -1.3
comp=Z,5.3nm,0.7s,baz=35,slow=7.0,SNR=19
ULHL **Ulahol** 65.89 308 P **P** 15 22 34.0 +0.9
SNR=8.4
USP **Ospenovka** 65.99 310 P **P** 15 22 34.2 +0.8
SNR=14
AAK **Ala-Archa** 66.46 309 P **P** 15 22 37.2 +0.6
comp=Z,8.1nm,0.7s,baz=98,slow=4.1,SNR=17
AAK **Ala-Archa** 66.46 309 P **P** 15 22 37.6 +1.0
SNR=6.5
AAK **Ala-Archa** 66.46 309 *e*P **P** 15 22 37.3 +0.7
comp=Z,9.3nm,0.8s
AAK **Ala-Archa** 66.46 309*c* *i*P **P** 15 22 37.0 +0.4
AAK pmax pmax
comp=Z,16nm,1.3s
KZA **Kyzart** 66.51 308 P **P** 15 22 38.4 +1.2
SNR=5.8
UCH **Uchtor** 66.76 309 P **P** 15 22 39.2 +0.4
SNR=6.5
EKS2 **Erkin-Say** 66.80 310 P **P** 15 22 38.8 +0.1
SNR=5.4
AML **Almayashu** 67.23 309 P **P** 15 22 43.1 +1.3
SNR=7.8
AKTO **Aktyubinsk** 67.46 324 P **P** 15 22 41.9 -0.7
comp=Z,1.3nm,0.5s,baz=63,slow=8.4,SNR=6.4
NC204 **NORSAR Array S** 67.59 354 *e*P **P** 15 22 42.8 -0.5
comp=Z,20nm,1.0s
NB2 **NORSAR Subarra** 67.80 354 P **P** 15 22 43.4 -1.2
comp=Z,7.8nm,0.9s,baz=6.4,slow=6.2
NOA **NORSAR Array B** 67.80 354 P **P** 15 22 43.8 -0.8
comp=Z,5.3nm,0.8s,baz=7.2,slow=6.2,SNR=18
KKAR **Karatay Array** 68.02 312 *e*P **P** 15 22 46.9 +0.7
comp=Z,5.7nm,0.8s
KKAR **Karatay Array** 68.02 312 *e*P **P** 15 22 46.9 +0.7
KKAR pmax pmax
comp=Z,6.0nm,0.8s
KSH **Kashi** 68.07 306 P P 15 22 51.4 +4.6
KSH sP PcP 15 23 09.7 -2.9
KSH PP **PP** 15 25 22.0 +5.2
KSH S **S** 15 31 46.7 +3.7
KSH pmax pmax
comp=Z,43nm,1.2s
KSH pmax pmax
comp=Z,140nm,5.6s
KSH LR LR
comp=Z,140nm,6.7s
KSH LR LR
comp=Z,200nm,8.5s
KSH LR LR
comp=Z,300nm,18.8s
TAOE **Nuku Hiva Isla** 68.92 137 *e*S **S** 15 31 56.8 +3.4
comp=Z,148nm,25.0s
TAOE **Nuku Hiva Isla** 68.92 137 *e*LR LR 15 43 51.7
comp=Z,149nm,22.9s
CMAR **Chiang Mai Arr** 70.34 275 P **P** 15 23 01.0 +0.1
comp=Z,1.0nm,0.8s,baz=22,slow=5.7,SNR=6.5
GUN **Gumba** 71.29 291 *e*P **P** 15 23 07.5 +0.5
comp=Z,38nm,0.9s
JIRN **Jiri** 71.29 291 *e*P **P** 15 23 07.8 +0.7
comp=Z,29nm,0.8s
PMOR **Pomariorio Ree** 71.57 147 *e*T T 16 41 18.7
comp=Z,2.6nm,0.2s
RAMN **Ramite** 71.58 290 *e*P **P** 15 23 09.0 +0.3
comp=Z,20nm,0.8s
KKN **Kakani** 71.73 292 *e*P **P** 15 23 10.1 +0.6
comp=Z,9.2nm,0.7s
PKI **Pulchoki** 71.82 291 *e*P **P** 15 23 10.4 +0.2
PKIN **Phulchoki** 71.82 291 *e*P **P** 15 23 10.3 +0.2
DMN **Daman** 71.97 292 *e*P **P** 15 23 11.8 +0.8
DANN **Dangsing** 72.19 293 *e*P **P** 15 23 12.4 0.0
comp=Z,17nm,0.7s
PYUN **Piuthan** 72.83 293 *e*P **P** 15 23 16.5 +0.4
comp=Z,28nm,0.9s
PPT2 **Papeete2** 73.43 150 *e*LR LR 15 45 39.9
comp=Z,154nm,29.8s
PPT2 **Papeete2** 73.43 150 *e*T T 16 43 38.3
comp=Z,3.6nm,0.4s
EKA **Eskdalemuir Ar** 73.85 2 P **P** 15 23 20.6 -0.7
EKA pmax pmax
comp=Z,7.0nm,0.6s
ESK **Eskdalemuir** 73.86 2 *i* P **P** 15 23 21.9 +0.5
DZM **Mont Dzumac** 73.89 193 LR LR 15 49 53.3
comp=Z,98nm,21.8s,baz=30,slow=31
DZM **Mont Dzumac** 73.89 193 *e*LR LR 15 46 05.2
comp=Z,189nm,26.4s
KBL **Kabul** 75.42 307 P **P** 15 23 31.0 -0.1
KBL pmax pmax
comp=Z,18nm,0.9s
AKASG **Malin Array Be** 75.54 341 P **P** 15 23 30.2 -1.0
comp=Z,2.1nm,0.6s,baz=22,slow=5.9,SNR=10
KIEV **Kiev** 75.55 341⇑ *i*P **P** 15 23 29.3 -2.0
KIEV **Kiev** 75.55 341*de*P **P** 15 23 30.4 -0.9
KIEV pmax pmax
comp=Z,3.0nm,0.9s
CLL **Collm** 77.33 352 *e*P **P** 15 23 41.0 -0.3
CHVC **Chvalec** 77.73 350 AMS AMS 16 08 30.0
comp=Z,200nm,14.5s
UPC **Upice** 77.81 350 AMS AMS 16 08 20.0
comp=Z,200nm,14.9s
DPC **Dobruska-Polom** 77.93 349 *e*P **P** 15 23 44.1 -0.7
DPC MLR MLR
comp=Z,100nm,15.8s
DPC **Dobruska-Polom** 77.93 349 *e*P **P** 15 23 44.1 -0.7
DPC AMS AMS 16 08 10.0
comp=Z,100nm,15.8s
PVCC **Panska Ves** 77.95 351 AMS AMS 16 13 00.0
comp=Z,100nm,10.9s
OKC **Ostrava-Krasne** 78.21 348 AMS AMS 16 07 40.0
comp=Z,100nm,13.9s
KIV **Kislovodsk** 78.32 330 *e*P **P** 15 23 44.5 -2.6
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,156nm,19.0s
MORC **Moravsky Berou** 78.35 349⇑ *i*P **P** 15 23 46.1 -1.0
MORC **Moravsky Berou** 78.35 349 ⇑P **P** 15 23 46.1 -1.0
NCK **Nalchik** 78.44 329⇑ *e*P **P** 15 23 48.2 +0.5
NCK pmax pmax
comp=Z,7.0nm,1.1s
PRU **Pruhonice** 78.48 351 AMS AMS 16 09 10.0
comp=Z,200nm,10.5s
MEM **Membach** 78.49 356 P **P** 15 23 46.9 -0.8
MEM pP **sP** 15 24 00.8 -4.1
MEM sP **pwP** 15 24 06.9 +3.6
KOLS **Kolonicke sedl** 78.50 345 *e*P **P** 15 23 48.1 +0.2
KOLS pmax pmax
comp=Z,8.0nm,1.6s
KOLS **Kolonicke sedl** 78.50 345 *e*P **P** 15 23 48.1 +0.2
GOPC **GO Pecny, Ondr** 78.53 350 AMS AMS 16 09 10.0
comp=Z,200nm,14.2s
LANS **Liptovska Anna** 78.71 347 *e*P **P** 15 23 49.9 +0.8
LANS **Liptovska Anna** 78.71 347 *e*P **P** 15 23 49.9 +0.8
TBI **Tubuai** 78.88 152 *e*LR LR 15 48 11.2
comp=Z,109nm,21.8s
VRAC **Vranov** 78.93 349 ⇓ *i*P **P** 15 23 49.8 -0.4
VRAC **Vranov** 78.93 349 ⇓P **P** 15 23 49.8 -0.4
ZEI **Tsey** 78.98 329 *e*P **P** 15 23 48.3 -2.6
ZEI pmax pmax
comp=Z,6.0nm,0.9s
TRPA **Tarpa** 79.23 345⇑ *i*P **P** 15 23 52.2 +0.3
BURAR **Bucovina Array** 79.27 343⇑ *i*P **P** 15 23 52.2 -0.1
BURAR **Bucovina Array** 79.27 343 ⇑P **P** 15 23 52.2 -0.1
KHC **Kasperske Hory** 79.43 351 *e*P **P** 15 23 52.7 -0.3
KHC MLR MLR
comp=Z,100nm,7.4s
KHC **Kasperske Hory** 79.43 351 *e*P **P** 15 23 52.7 -0.3
KHC AMS AMS 16 09 10.0
comp=Z,100nm,7.4s
VYHS **Vyhne** 79.44 347 *e*P **P** 15 23 52.4 -0.7
VYHS pmax pmax
comp=Z,2.0nm,0.9s
VYHS **Vyhne** 79.44 347 *e*P **P** 15 23 52.4 -0.7
GERES **GERESS Array B** 79.70 351 P **P** 15 23 54.1 -0.5
comp=Z,0.9nm,0.5s,baz=22,slow=4.6,SNR=10
BIZ **Bicaz** 79.75 342⇑ *i*P **P** 15 23 54.4 -0.4
ARCR **ARCALIA** 79.93 343⇑ *i*P **P** 15 23 56.4 +0.6
CONA **Conrad Observa** 80.37 349 *i* P **P** 15 23 58.3 +0.1
comp=Z,1.9nm,0.6s
DRGR 80.50 344⇑ *i*P **P** 15 23 58.3 -0.6
DRGR 80.50 344 ⇑P **P** 15 23 58.3 -0.6
VRI **Vrincioaia** 80.66 341 ⇓ *i*P P 15 24 05.7 +6.0
VRI **Vrincioaia** 80.66 341 ⇓P P 15 24 05.7 +6.0
CFR **Carcaliu** 81.02 340 ⇓ *i*P **P** 15 24 01.2 -0.4
CFR **Carcaliu** 81.02 340 ⇓P **P** 15 24 01.2 -0.4
MLR **Muntele Rosu** 81.17 342 ⇓ *i*P **P** 15 24 03.3 +0.7
MLR **Muntele Rosu** 81.17 342 ⇓P **P** 15 24 03.3 +0.7
WATA **Valderalm** 81.39 352 *i* P **P** 15 24 03.5 -0.2
comp=Z,3.2nm,0.7s
MOTA **Moosalm** 81.42 352 *i* P **P** 15 24 04.2 +0.2
comp=Z,4.7nm,1.0s
WTTA **Wattenberg** 81.46 352 *e*P **P** 15 24 04.1 0.0
comp=Z,5.4nm,0.6s
KBA **Koelnbreinsper** 81.48 351 *i* P **P** 15 24 04.6 +0.3
comp=Z,12nm,0.7s
SQTA **Sankt Quirin** 81.54 352 *e*P **P** 15 24 04.2 -0.3
comp=Z,3.9nm,0.6s
SOKA **Soboth** 81.70 350 *e*P **P** 15 24 04.6 -0.7
comp=Z,6.3nm,0.9s
FETA **Feichten** 81.78 353 *i* P **P** 15 24 05.3 -0.5
comp=Z,4.6nm,0.8s
BZS **Buzias** 81.83 345⇑ *i*P **P** 15 24 05.4 -0.5
BZS **Buzias** 81.83 345 ⇑P **P** 15 24 05.4 -0.5
OBKA **Obir** 81.92 350 *i* P **P** 15 24 06.1 -0.3
comp=Z,4.5nm,0.7s
VTS **Vitosha** 84.46 343⇑ *i*P **P** 15 24 19.5 -0.2
VTS **Vitosha** 84.46 343 ⇑P **P** 15 24 19.5 -0.2
ASAR **Alice Springs** 84.85 222 P **P** 15 24 21.9 +0.4
comp=Z,0.4nm,0.7s,baz=36,slow=5.1,SNR=4.8
ASAR **Alice Springs** 84.85 222 P **P** 15 24 22.0 +0.4
BR101 **Keskin Array S** 84.85 335 *e*P **P** 15 24 20.0 -1.7
BRTR **Keskin Array B** 84.85 335 P **P** 15 24 20.0 -1.7
comp=Z,1.6nm,0.8s,baz=26,slow=3.1,SNR=7.7
BRTR **Keskin Array B** 84.85 335 *i* P **P** 15 24 21.7 0.0
BRTR pmax pmax
comp=Z,2.0nm,0.8s
PDG **Podgorica** 85.31 346⇑ *i*P **P** 15 24 23.4 -0.4
TSUM **Tsumeb** 145.24 330 PKPbc **PKPbc** 15 31 24.2 -0.2
comp=Z,4.3nm,0.9s,baz=356,slow=4.1,SNR=5.6
LBTB **Lobatse** 147.39 314 PKPbc **PKPbc** 15 31 31.6 +1.0
comp=Z,5.9nm,0.8s,baz=16,slow=3.6,SNR=7.1
BOSA **Boshof** 150.60 310 PKPbc **PKPbc** 15 31 38.7 0.0
comp=Z,3.8nm,0.8s,baz=314,slow=2.2,SNR=4.2

NIED ***08*** *15:16:00, 36°.80N×138°.70E, h5km, Mw4.4 Best double couple: M0:4.60000×10^15 NP1:φ0=78.00000°, δ=72.00000°, λ=169.00000°. NP2:φ0=172.00000°, δ=80.00000°, λ=18.00000°.*
ISCJB ***08*** *15:16:57.6±0.4, 36°.83N±0°.02×138°.67E±0°.03, h10km±3km, mb4.0/31, MS3.8/6, Error ellipse: s-maj=4.7km s-min=3.2km az=135.4*
IDC ***08*** *15:16:57.9±0.5, 36°.89N×138°.58E, h0km, mb3.9/23,*

mb1 4.0/29, mb1mx3.9/59, mbtmp3.9/29, ML2.9/5, MS3.8/10, Ms1 3.8/10, ms1mx3.4/46, Error ellipse: s-maj=14.7km s-min=6.3km az=118.0

JMA ***08*** *15:16:58.0±0.1, 36°.82N×138°.71E, h4km±3km, M4.5 Broadband fault plane solution: P waves. NP1: ϕs172.00000°, δ85.00000°, λ32.00000°. NP2:ϕs79.00000°, δ58.00000°, λ174.00000°. Principal axes: T Plg26.0000°, Azm40.0000°; N Plg58.0000°, Azm180.0000°; P Plg18.0000°, Azm301.0000°;*

JMA Felt II J1.

NEIC ***08*** *15:17:00.3±2.0, 36°.81N×138°.53E, h15km±4km, mb4.2/11 Error ellipse: s-maj=14.8km s-min=8.0km az=134.0*

NEIC Recorded [2 JMA] in Gumma, Nagano and Niigata.

ISC 08 15:16:58.3±1.1, 36°.83N±0°.03×138°.69E±0°.03, h5km±7km, n75, σ1§07/88, mb3.9/31, MS3.9/7, 5C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGK	**Kuni**	**0.27**	**189**	⇑P	**Pg**	**15 17 03.5**	**0.0**
JGK				S	**Sg**	**15 17 07.7**	**+0.7**
JKT	**Katashina**	**0.45**	**98**	⇓P	**Pg**	**15 17 06.4**	**-0.6**
JKT				S	**Sg**	**15 17 12.4**	**-0.5**
MJAR	**Matsushiro Arr**	**0.48**	**234**	Pg	**Pg**	**15 17 06.6**	**-0.9**
	59nm,0.3s,baz=40,slow=12,SNR=6065						
MJAR				Lg	Lg	15 17 13.2	
	106nm,0.3s,baz=49,slow=15,SNR=84						
MJAR				LR	LR	15 17 27.9	
	comp=Z,2μm,20.8s,baz=35,slow=67						
MAJO	**Matsushiro**	**0.48**	**234**	*e*Pg	**Pg**	**15 17 07.3**	**-0.2**
MAT	**Matsushiro**	**0.48**	**234**	P	**Pg**	**15 17 07.2**	**-0.4**
MAT				S	**Sg**	**15 17 13.6**	**-0.3**
MAT	**Matsushiro**	**0.48**	**234**	P	**Pg**	**15 17 07.2**	**-0.4**
MAT				S	**Sg**	**15 17 13.5**	**-0.3**
MJB9	**Matsu-Tunnel**	**0.48**	**235**	*e*Pg	**Pg**	**15 17 07.3**	**-0.2**
MJB9				*e*Sg	**Sg**	**15 17 13.7**	**-0.1**
JHK	**Hiroka**	**0.49**	**32**	⇑P	**Pg**	**15 17 07.3**	**-0.5**
JHK				S	**Sg**	**15 17 13.9**	**-0.3**
JNG	**Nsakai**	**0.64**	**229**	⇑P	**Pg**	**15 17 10.1**	**-0.4**
JNG				S	**Sg**	**15 17 18.6**	**-0.1**
JIZZ	**Izumozaki**	**0.70**	**1**	⇑P	**Pb**	**15 17 12.6**	**-0.5**
JIZZ				S	**Sb**	**15 17 23.6**	**+0.5**
JAG	**Ashikaga**	**0.73**	**123**	⇓P	**Pg**	**15 17 11.7**	**-0.6**
JRY	**Ryogami san**	**0.83**	**168**	P	**Pg**	**15 17 13.3**	**-0.8**
JRY				S	**Sg**	**15 17 24.7**	**-0.1**
JFY	**Yanaizu**	**0.99**	**54**	⇑P	**Pg**	**15 17 16.5**	**-0.9**
JFY				S	**Sg**	**15 17 29.4**	**-0.9**
INU	**Inuyama**	**2.00**	**223**	*e*Pn	**Pb**	**15 17 34.0**	**-1.2**
I30JP	**ISUMI INFRASON**	**2.01**	**139**	Pn	**Pg**	**15 17 35.5**	**-1.2**
	baz=360,slow=163						
I30JP				*i*		15 27 40.0	
	baz=319,slow=314,SNR=1.4						
JHJ	**Hachijo jima 2**	**3.81**	**166**	Pn	**Pn**	**15 18 00.0**	**+2.4**
	53nm,0.3s,baz=76,slow=21,SNR=9.5						
JHJ2	**Mitsune**	**3.82**	**166**	*e*Pn	**Pn**	**15 17 59.6**	**+1.9**
ERM	**Erimo**	**6.23**	**32**	*e*Pn	**Pn**	**15 18 32.6**	**+1.8**
JNU	**Nakatsue**	**7.40**	**242**	Pn	**Pn**	**15 18 48.1**	**+1.1**
	0.2nm,0.3s,baz=61,slow=3.9,SNR=2.5						
JNU				LR	LR	15 21 49.4	
	comp=Z,406nm,19.0s,baz=50,slow=40						
ASAJ	**Asahikawa**	**7.87**	**21**	Pn	**Pn**	**15 18 55.2**	**+1.8**
	0.2nm,0.3s,baz=270,slow=19,SNR=3.1						
KSRS	**Korea Array**	**8.62**	**277**	Pn	**Pn**	**15 19 05.1**	**+1.4**
	0.9nm,0.3s,baz=92,slow=14,SNR=28						
KSRS				LR	LR	15 22 15.7	
	comp=Z,610nm,19.4s,baz=102,slow=37						
KS15	**Wonju Array Si**	**8.65**	**277**	*e*Pn	**Pn**	**15 19 05.2**	**+1.0**
USA0B	**Ussuriysk Arra**	**8.96**	**327**	*e*Pn	**Pn**	**15 19 10.2**	**+1.9**
USRK	**Ussuriysk Ar.**	**8.96**	**327**	Pn	**Pn**	**15 19 08.5**	**+0.2**
	0.2nm,0.3s,baz=138,slow=13,SNR=5.0						
USRK				LR	LR	15 22 21.5	
	comp=Z,272nm,18.9s,baz=137,slow=36						
KLR	**Kul'dur**	**13.39**	**340**	Pn	**Pn**	**15 20 10.1**	**+1.2**
	0.1nm,0.3s,baz=142,slow=14,SNR=3.6						
KLR				LR	LR	15 24 50.5	
	comp=Z,227nm,20.0s,baz=156,slow=36						
BJT	**Baijiatuan**	**17.93**	**287**	*e*Pn	**P**	**15 21 10.6**	**+1.6**
	14nm,1.1s						
PETK	**Petropavlovsk-**	**21.01**	**33**	P	**P**	**15 21 44.5**	**+2.0**
	4.1nm,0.8s,baz=243,slow=6.5,SNR=5.3						
PETK				LR	LR	15 30 01.4	
	comp=Z,174nm,18.2s,baz=232,slow=37						
PEA1	**Petropavlovsk-**	**21.01**	**33**	*e*P	**P**	**15 21 44.5**	**+1.9**
WHN	**Wuhan**	**21.17**	**260**	⇓P	**P**	**15 21 47.7**	**+3.2**
WHN				S	**S**	**15 25 40.4**	**0.0**
WHN				LR	LR		
	comp=N,940nm,3.8s						
WHN				LR	LR		
	comp=E,2μm,13.4s						
WHN				LR	LR		
	comp=Z,1μm,18.6s						
ENH	**Enshi**	**25.14**	**263**	*e*P	**P**	**15 22 23.7**	**-0.7**
	comp=Z,13nm,0.8s						
SONA0	**Songino Array**	**26.11**	**305**	*e*P	**P**	**15 22 31.7**	**-1.5**
SONM	**Songino Array**	**26.11**	**305**	P	**P**	**15 22 31.7**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=99,slow=9.3,SNR=2.9						
SONM				LR	LR	15 33 18.7	
	comp=Z,289nm,18.4s,baz=80,slow=38						
TIXI	**Tiksi**	**35.26**	**355**	P	**P**	**15 23 52.5**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=180,slow=1.2,SNR=1.9						
CM31	**Chiang Mai Arr**	**39.34**	**253**	*e*P	**P**	**15 24 27.4**	**-1.4**
	comp=Z,3.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**39.34**	**253**	P	**P**	**15 24 27.4**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=65,slow=14,SNR=3.7						
ZAA1	**Zalesovo Array**	**40.45**	**313**	*e*PcP	**PcP**	**15 26 40.2**	**-0.1**
ZALV	**Zalesovo Beam**	**40.45**	**313**	PcP	**PcP**	**15 26 40.2**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=56,slow=3.6,SNR=4.3						
MK32	**Makanchi Array**	**42.38**	**302**	*e*P	**P**	**15 24 53.2**	**-0.3**
MK32				*e*PcP	**PcP**	**15 26 46.4**	**-0.4**
MKAR	**Makanchi Array**	**42.38**	**302**	P	**P**	**15 24 53.2**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=74,slow=5.2,SNR=3.0						
MKAR				PcP	**PcP**	**15 26 46.4**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=76,slow=5.1,SNR=3.6						
MKAR				LR	LR	15 43 04.8	
	comp=Z,139nm,19.2s,baz=12,slow=37						
NRIK	**Noril'sk**	**42.55**	**336**	P	**P**	**15 24 53.4**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=84,slow=6.0,SNR=4.6						
BRDH	**Bariadhala**	**42.80**	**264**	LR	LR	15 45 43.4	
	comp=Z,134nm,18.6s,baz=128,slow=40						
KURBB	**Kurchatov Arra**	**44.41**	**308**	P	**P**	**15 25 08.9**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=84,slow=8.0,SNR=8.2						
BVAR	**Borovoye Array**	**49.09**	**312**	P	**P**	**15 25 46.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=132,slow=4.3,SNR=3.5						
BVAR				PcP	**PcP**	**15 27 09.9**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=57,slow=5.5,SNR=4.4						
KTH	**Kantishna Hill**	**49.14**	**34**	*e*P	**P**	**15 25 47.9**	**+1.2**
	comp=Z,8.2nm,1.2s						
ILAR	**Eielson Array**	**50.83**	**32**	P	**P**	**15 25 59.5**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=278,slow=6.5,SNR=15						
ILB	**Eielson Array**	**50.83**	**32**	*e*P	**P**	**15 25 59.8**	**+0.2**
	comp=Z,1.9nm,0.9s						
PRP	**Porcupine Dome**	**51.34**	**31**	*e*P	**P**	**15 26 04.4**	**+0.9**
	comp=Z,3.3nm,1.0s						
NIL	**Nilore**	**52.60**	**287**	*e*P	**P**	**15 26 10.7**	**-2.6**
	comp=Z,7.1nm,0.8s						
ARU	**Arti**	**55.06**	**318**	P	**P**	**15 26 30.1**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=72,slow=2.4,SNR=4.5						
INK	**Inuvik**	**55.56**	**27**	P	**P**	**15 26 34.4**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=269,slow=5.6						
WB2	**Warramunga Arr**	**56.61**	**185**	*e*P	**P**	**15 26 41.2**	**-1.1**
	comp=Z,9.8nm,0.9s						
WR1	**Warramunga Arr**	**56.61**	**185**	*e*P	**P**	**15 26 41.6**	**-0.7**
WRA	**Warramunga Arr**	**56.61**	**185**	P	**P**	**15 26 41.6**	**-0.7**
	comp=Z,6.8nm,0.9s,baz=345,slow=7.3,SNR=8.6						
AS31	**Alice Springs**	**60.34**	**185**	*e*P	**P**	**15 27 07.5**	**-0.8**
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**60.34**	**185**	P	**P**	**15 27 07.5**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=7.7,slow=5.7,SNR=11						
YKA	**Yellowknife Ar**	**65.07**	**29**	P	**P**	**15 27 40.4**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=282,slow=4.9,SNR=3.6						
YKB5	**Yellowknife Ar**	**65.07**	**29**	*e*P	**P**	**15 27 40.4**	**+1.0**
FIA0	**FINESS Array S**	**67.97**	**331**	*e*P	**P**	**15 27 58.1**	**+0.2**
FINES	**FINESS Array B**	**67.97**	**331**	P	**P**	**15 27 58.1**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=89,slow=8.4,SNR=9.5						
STKA	**Stephens Creek**	**68.40**	**177**	P	**P**	**15 28 02.9**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=346,slow=17,SNR=2.3						
STKA	**Stephens Creek**	**68.40**	**177**	*e*P	**P**	**15 27 59.2**	**-1.7**
AKASG	**Malin Array Be**	**73.11**	**321**	P	**P**	**15 28 28.2**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=49,slow=6.5,SNR=7.8						
AKASG				LR	LR	16 03 09.8	
	comp=Z,125nm,18.9s,baz=30,slow=38						
NB2	**NORSAR Subarra**	**73.52**	**336**	P	**P**	**15 28 31.3**	**-0.5**
	comp=Z,4.1nm,1.0s,baz=41,slow=6.5						
NB200	**NORSAR Array S**	**73.52**	**336**	*e*P	**P**	**15 28 31.2**	**-0.6**
NOA	**NORSAR Array B**	**73.52**	**336**	P	**P**	**15 28 31.2**	**-0.6**
	comp=Z,1.6nm,0.9s,baz=41,slow=5.9,SNR=6.3						
NV01	**Mina Array Sit**	**76.84**	**52**	*e*P	**P**	**15 28 52.6**	**+1.0**
NVAR	**Mina Array Bea**	**76.84**	**52**	P	**P**	**15 28 52.6**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=295,slow=4.9,SNR=6.5						
BUR08	**Bucovina Ar. S**	**77.09**	**320**	*e*P	**P**	**15 28 53.7**	**+0.9**
	comp=Z,1.8nm,0.9s						
BR101	**Keskin Array S**	**77.34**	**310**	*e*P	**P**	**15 28 54.8**	**+0.4**
BRTR	**Keskin Array B**	**77.34**	**310**	P	**P**	**15 28 54.8**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=359,slow=7.0,SNR=3.5						
BRTR				LR	LR	16 07 14.3	
	comp=Z,39nm,18.3s,baz=39,slow=39						
PDAR	**Pinedale Array**	**79.35**	**44**	P	**P**	**15 29 06.0**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=279,slow=3.9,SNR=3.7						
CLL	**Collm**	**80.17**	**329**	*e*P	**P**	**15 29 09.0**	**-0.4**
GERES	**GERESS Array B**	**81.71**	**327**	P	**P**	**15 29 17.2**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=35,slow=4.9,SNR=6.7						
LTX	**Lajitas**	**91.96**	**51**	*e*P	**P**	**15 30 08.8**	**+0.4**
TXAR	**Lajitas Array**	**91.96**	**51**	P	**P**	**15 30 08.8**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=302,slow=2.8,SNR=5.3						

IDC ***08*** *15:17:56.4±3.1, 10°.56N×126°.95E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.5/51, mbtmp3.8/5, Error ellipse: s-maj=283.9km s-min=25.7km az=68.0*

ISCJB ***08*** *15:17:57.3±0.6, 10°.7N±0°.1×127°.2E±0°.2, h24km, mb4.2/11, Error ellipse: s-maj=35.3km s-min=10.5km az=162.8*

NEIC ***08*** *15:18:01.2±1.4, 10°.66N×127°.28E, h45km±8km, mb4.4/8, Error ellipse: s-maj=28.3km s-min=6.8km az=57.0*

ISC 08 15:17:59.3±0.8, 10°.7N±0°.1×127°.3E±0°.3, h24km, n15, σ1§47/14, mb4.0/11, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**9.84**	**179**	*e*Pn	**Pn**	**15 20 20.8**	**+1.4**
MAT	**Matsushiro**	**27.59**	**19**	P	P	15 23 34.8	-10
AS31	**Alice Springs**	**34.74**	**169**	*e*P	**P**	**15 24 47.1**	**-0.8**
	1.0nm,1.1s						
ASAR	**Alice Springs**	**34.74**	**169**	P	**P**	**15 24 48.0**	**+0.2**
	0.5nm,0.6s,baz=346,slow=6.7,SNR=4.2						
CTAO	**Charters Tower**	**35.83**	**149**	*e*P	**P**	**15 24 56.5**	**-0.7**
	8.7nm,1.0s						
BBOO	**Buckleboo**	**44.05**	**169**	*e*P	**P**	**15 26 07.2**	**+1.9**
	3.7nm,0.6s						
PET	**Petropavlovsk**	**49.19**	**25**	*e*P	**P**	**15 26 46.3**	**+1.0**
	24nm,1.1s						
MK32	**Makanchi Array**	**52.31**	**322**	*e*P	**P**	**15 27 08.5**	**-0.5**
MKAR	**Makanchi Array**	**52.31**	**322**	P	**P**	**15 27 08.5**	**-0.5**
	1.2nm,0.8s,baz=122,slow=7.8,SNR=6.6						
KURK	**Kurchatov**	**56.30**	**325**	*e*P	**P**	**15 27 37.5**	**-0.5**
	2.5nm,0.9s						
KURBB	**Kurchatov Arra**	**56.31**	**325**	P	**P**	**15 27 38.5**	**+0.5**
	0.9nm,0.6s,baz=126,slow=6.8,SNR=13						
BVAR	**Borovoye Array**	**61.90**	**325**	P	**P**	**15 28 17.8**	**+1.1**
	0.5nm,0.6s,baz=108,slow=9.4,SNR=3.8						
FIA0	**FINESS Array S**	**86.00**	**332**	*e*P	**P**	**15 30 37.8**	**+0.2**
FINES	**FINESS Array B**	**86.00**	**332**	P	**P**	**15 30 37.8**	**+0.2**
	0.5nm,0.5s,baz=70,slow=6.3,SNR=5.9						
VNDA	**Vanda**	**90.21**	**173**	*e*P	**P**	**15 30 53.5**	**-3.7**
	6.3nm,0.9s						

IDC 08 15:18:37.5±2.5, 6°.69S×128°.71E, h0km, mb3.5/2, mb1 4.1/4, mb1mx3.6/43, mbtmp3.9/4, ML3.8/2, MS3.6/1, Ms1 3.6/1, ms1mx2.6/27, Error ellipse: s-maj=304.8km s-min=29.1km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.27**	**158**	Pn	Pn	15 22 01.2	+0.2
	0.2nm,0.3s,baz=334,slow=13,SNR=8.2						
WRA				Sn	Sn	15 24 28.1	-12
	0.4nm,0.3s,baz=340,slow=24,SNR=4.0						
ASAR	**Alice Springs**	**17.61**	**164**	P	Pn	15 22 44.5	-0.1
	1.4nm,0.3s,baz=346,slow=10,SNR=196						
PALK	**Pallekele**	**49.85**	**285**	LR	LR	15 49 52.7	
	comp=Z,55nm,18.1s,baz=304,slow=38						
MKAR	**Makanchi Array**	**67.27**	**327**	P	P	15 29 34.8	+0.8
	0.2nm,0.4s,baz=117,slow=7.9,SNR=3.9						
KURBB	**Kurchatov Arra**	**71.58**	**329**	P	P	15 29 59.8	-0.8
	0.2nm,0.5s,baz=126,slow=4.7,SNR=2.9						

NIED ***08*** *15:20:00, 36°.80N×138°.70E, h5km, Mw3.8 Best double couple: M0:5.77000×10^14 NP1:ϕs185.00000°, δ66.00000°, λ14.00000°. NP2:ϕs90.00000°, δ77.00000°, λ155.00000°.*

JMA 08 15:20:25.1, 36°.82N×138°.71E, h5km±3km, M3.5, 4C-2D Broadband fault plane solution: P waves. NP1: ϕs184.00000°, δ78.00000°, λ22.00000°. **NP2:**ϕs89.00000°, δ68.00000°, λ167.00000°. **Principal axes:** T Plg24.0000°, Azm48.0000°; N Plg65.0000°, Azm210.0000°; P Plg7.0000°, Azm315.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGK	**Kuni**	**0.26**	**192**	⇑P	Pg	15 20 30.5	+0.3
JGK				S	Sg	15 20 34.4	+0.7
JKT	**Katashina**	**0.44**	**97**	P	Pg	15 20 33.5	0.0
JKT				S	Sg	15 20 39.4	+0.2
MAT	**Matsushiro**	**0.49**	**236**	P	Pg	15 20 34.2	-0.3
MAT				S	Sg	15 20 40.4	-0.5
MAT	**Matsushiro**	**0.49**	**236**	P	Pg	15 20 34.2	-0.3
MAT				S	Sg	15 20 40.4	-0.5
JHK	**Hiroka**	**0.49**	**30**	⇑P	Pg	15 20 34.4	-0.2
JHK				S	Sg	15 20 41.1	+0.1
JNG	**Nsakai**	**0.64**	**230**	⇑P	Pg	15 20 37.0	-0.4
JIZZ	**Izumozaki**	**0.71**	**360**	P	Pb	15 20 39.8	-0.2
JIZZ				S	Sb	15 20 50.6	+0.6
JAG	**Ashikaga**	**0.72**	**123**	⇓P	Pg	15 20 38.8	0.0
JAG				S	Sg	15 20 48.2	+0.1
JRY	**Ryogami san**	**0.82**	**169**	⇓P	Pg	15 20 40.2	-0.6
JRY				S	Sg	15 20 51.5	+0.1
JFY	**Yanaizu**	**0.99**	**53**	⇑P	Pg	15 20 43.6	-0.5
JFY				S	Sg	15 20 56.2	-0.7

JMA 08 15:23:34.9, 36°.82N×138°.70E, h5km±2km, M1.4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGK	**Kuni**	**0.26**	**191**	P	Pg	15 23 40.5	+0.5
JGK				S	Sg	15 23 44.2	+0.7
JKT	**Katashina**	**0.44**	**97**	S	Sg	15 23 49.5	+0.2
MAJO	**Matsushiro**	**0.48**	**235**	*e*P	Pg	15 23 44.3	+0.1
	7.7nm,0.8s						
MAT	**Matsushiro**	**0.48**	**235**	P	Pg	15 23 44.2	0.0
MAT				S	Sg	15 23 50.4	-0.1
MAT	**Matsushiro**	**0.48**	**235**	S	Pg	15 23 44.2	0.0
MJB9	**Matsu-Tunnel**	**0.48**	**236**	*e*P	Pg	15 23 44.3	+0.1
	7.7nm,0.8s						
JHK	**Hiroka**	**0.50**	**31**	P	Pg	15 23 44.5	0.0
JHK				S	Sg	15 23 51.0	0.0
JNG	**Nsakai**	**0.64**	**230**	P	Pg	15 23 47.0	-0.1
JIZZ	**Izumozaki**	**0.71**	**1**	S	Sb	15 24 00.8	+1.0
JAG	**Ashikaga**	**0.72**	**123**	P	Pg	15 23 48.8	0.0
JAG				S	Sg	15 23 58.4	+0.2
JRY	**Ryogami san**	**0.82**	**168**	P	Pg	15 23 50.6	0.0
JRY				S	Sg	15 24 01.5	+0.3

SOME ***08*** *15:27:54.9, 37°.85N×71°.70E, h80km*

IDC ***08*** *15:27:57.9±8.7, 36°.47N×71°.26E, h182km±64km, mb3.3/2, mb1 3.3/6, mb1mx2.8/60, mbtmp3.7/6, MS3.8/1, Ms1 3.8/1, ms1mx2.4/29, Error ellipse: s-maj=145.3km s-min=51.9km az=91.0*

ISCJB ***08*** *15:27:59.1±0.8, 36°.66N±0°.04×71°.1E±0°.1, h200km, mb3.3/2, Error ellipse: s-maj=13.6km s-min=4.2km az=163.5*

NNC ***08*** *15:28:00.6±10.0, 37°.17N×70°.53E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=82.5km s-min=63.5km az=161.0*

ISC 08 15:27:58.8±1.1, 36°.64N±0°.07×71°.1E±0°.1, h200km, n32, σ1§87/40, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**5.56**	**352**	*e*P	**Pn**	**15 29 21.5**	**+1.1**
	32nm,0.2s						
IUG				*e*S	**Sn**	**15 30 22.9**	**-2.1**
	32nm,0.3s						
AML	**Almayashu**	**5.84**	**19**	P	**Pn**	**15 29 25.1**	**+0.7**
	SNR=65						
DHRM	**DHARAMSHALA**	**6.14**	**134**	*e*P	**Pn**	**15 29 28.9**	**+0.7**
DHRM				*e*S	**Sn**	**15 30 36.6**	**-2.2**
DHRM				IAML		15 30 38.4	
	comp=E,95nm,1.4s						
DHRM				IAML		15 30 38.7	
	comp=N,83nm,0.6s						
UCH	**Uchtor**	**6.18**	**24**	P	**Pn**	**15 29 29.8**	**+1.1**
	SNR=24						
DZA	**Taraz**	**6.25**	**2**	*e*P	**Pn**	**15 29 30.1**	**+0.9**
	comp=N,131nm,0.1s						
DZA				*e*S	**Sn**	**15 30 37.8**	**-3.1**
	comp=N,89nm,0.3s						
MRKS	**Merke**	**6.32**	**14**	*e*P	**Pn**	**15 29 30.9**	**+0.8**
	comp=N,40nm,0.3s						
MRKS				*e*S	**Sn**	**15 30 39.7**	**-2.9**
	comp=N,19nm,0.5s						
EKS2	**Erkin-Say**	**6.36**	**18**	P	**Pn**	**15 29 32.1**	**+1.3**
	SNR=11						
KK31	**Karatay Array**	**6.47**	**356**	⇓Pn	**Pn**	**15 29 32.6**	**+0.5**
	comp=N,3.1nm,0.2s,baz=179,slow=12,SNR=101						
KK31				⇓Sn	**Sn**	**15 30 40.7**	**-5.3**
	comp=N,15nm,0.8s,baz=188,slow=23,SNR=10						
AAK	**Ala-Archa**	**6.54**	**23**	P	**Pn**	**15 29 34.0**	**+0.9**
	comp=N,2.9nm,0.3s,baz=188,slow=4.0,SNR=11						
AAK				S	**Sn**	**15 30 47.9**	**-0.1**
	comp=N,1.3nm,0.3s,baz=310,slow=23,SNR=16						
AAK	**Ala-Archa**	**6.54**	**23**	P	**Pn**	**15 29 34.4**	**+1.2**
	SNR=6.5						
AAK	**Ala-Archa**	**6.54**	**23**	⇑Pn	**Pn**	**15 29 34.1**	**+1.0**
	comp=N,3.4nm,0.3s						
AAK				⇑Sn	**Sn**	**15 30 47.0**	**-1.0**
	comp=N,6.3nm,0.5s						
KBK	**Karagaybulak**	**6.71**	**25**	P	**Pn**	**15 29 37.4**	**+2.1**
	SNR=5.4						
USP	**Ospenovka**	**7.12**	**21**	P	**Pn**	**15 29 41.5**	**+1.0**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.17**	**28**	P	**Pn**	**15 29 42.7**	**+1.3**
	SNR=14						
TKM2	**Tokmak 2**	**7.17**	**28**	⇑Pn	**Pn**	**15 29 42.3**	**+1.0**
	comp=N,10nm,0.7s						
TKM2				⇑Sn	**Sn**	**15 31 02.6**	**-0.2**
	comp=N,5.2nm,0.9s						
SMLA	**Simla**	**7.47**	**136**	*e*P	**Pn**	**15 29 45.2**	**0.0**
SMLA				*e*S	**Sn**	**15 31 05.0**	**-4.7**
SMLA				IAML		15 31 07.7	
	comp=E,16nm,0.3s						
MKAR	**Makanchi Array**	**13.14**	**36**	P	**P**	**15 31 00.1**	**-0.9**
	comp=E,0.2nm,0.3s,baz=211,slow=13,SNR=7.7						
PYUN	**Piuthan**	**13.17**	**127**	*e*P	**Pn**	**15 30 58.4**	**-0.3**
	comp=E,4.1nm,0.4s						
DANN	**Dangsing**	**13.51**	**124**	*e*P	**P**	**15 31 05.3**	**-0.2**
KOLN	**Koldanda**	**13.79**	**126**	*e*P	**P**	**15 31 06.8**	**-1.8**
DMN	**Daman**	**14.89**	**123**	*e*P	**P**	**15 31 22.5**	**+1.7**
	comp=E,5.5nm,0.4s						
KKN	**Kakani**	**14.89**	**122**	*e*P	**P**	**15 31 22.8**	**+2.0**
KURBB	**Kurchatov Arra**	**14.97**	**19**	P	**P**	**15 31 22.2**	**+1.1**
	comp=E,0.0nm,0.3s,baz=210,slow=10,SNR=5.3						
AB31	**Akbulak array**	**14.99**	**331**	⇑Pn	**P**	**15 31 23.3**	**+1.9**
	comp=E,0.4nm,0.4s,baz=151,slow=12,SNR=20						
PKIN	**Phulchoki**	**15.11**	**123**	*e*P	**P**	**15 31 25.0**	**+1.8**
	comp=E,4.9nm,0.4s						
PKI	**Pulchoki**	**15.12**	**123**	*e*P	**P**	**15 31 24.8**	**+1.4**
	comp=E,8.6nm,0.6s						
JIRN	**Jiri**	**15.60**	**121**	*e*P	**Pn**	**15 31 31.9**	**+3.2**
	comp=E,7.6nm,0.3s						
RAMN	**Ramite**	**16.33**	**122**	*e*P	**Pn**	**15 31 38.5**	**+1.1**
ZALV	**Zalesovo Beam**	**19.76**	**25**	P	**P**	**15 32 14.7**	**+1.3**
	comp=E,0.4nm,0.3s,baz=221,slow=12,SNR=7.4						
USRK	**Ussuriysk Ar.**	**46.04**	**61**	LR	LR	15 57 58.4	
	comp=E,107nm,20.0s,baz=157,slow=39						
WRA	**Warramunga Arr**	**82.01**	**122**	P	**P**	**15 39 56.4**	**-0.3**
	comp=E,0.8nm,0.9s,baz=307,slow=4.8,SNR=4.9						
ASAR	**Alice Springs**	**84.28**	**125**	P	**P**	**15 40 08.3**	**+0.1**
	comp=E,0.5nm,0.7s,baz=315,slow=4.6,SNR=8.1						

ISCJB ***08*** *15:31:43.0±0.9, 30°.03N±0°.07×114°.18W±0°.04, h10km, Error ellipse: s-maj=10.2km s-min=3.7km az=16.4*

ECX ***08*** *15:31:44.2±0.5, 30°.12N×114°.13W, h8km, MD3.4, ML3.6*

NEIC ***08*** *15:31:46.0±2.8, 29°.89N×114°.28W, h34km±8km, MD4.1(MEX), ML3.6(ECX), Error ellipse:

comp=N,15nm,0.4s
TOTH AML AML 15 37 44.3
comp=E,20nm,0.5s

BJI **08** *15:38:54.3±0.0, 10˚.23N×126˚.92E, h19km, mb4.9/69, mB5.1/46, Ms4.5/45, Ms7 4.2/42*
IDC **08** *15:38:55.9±0.4, 10˚.60N×126˚.70E, h0km, mb4.6/30, mb1 4.7/31, mb1mx4.6/45, mbtmp4.6/31, ML4.2/1, MS3.6/22, Ms1 3.7/22, ms1mx3.5/36, Error ellipse: s-maj=18.5km s-min=10.0km az=86.0*
ISCJB **08** *15:38:56.9±1.0, 10˚.65N±0˚.02×126˚.92E±0˚.03, h15km±7km, mb4.9/133, MS3.9/33, Error ellipse: s-maj=4.4km s-min=3.3km az=175.5*
MAN **08** *15:38:58.1, 10˚.76N×126˚.96E, h36km, mb5.6, ML4.6, MS5.0*
NEIC **08** *15:38:59.6±2.1, 10˚.65N×126˚.79E, h22km±4km, mb4.9/65, Error ellipse: s-maj=15.9km s-min=9.8km az=71.0*
MOS **08** *15:38:59.2±1.1, 10˚.59N×126˚.80E, h32km, mb5.3/49, Error ellipse: s-maj=10.1km s-min=4.8km az=110.0*
GCMT **08** *15:39:01.6±0.4, 10˚.76N±0˚.06×126˚.93E±0˚.02, h13km±1km, MW4.8/76, Moment Tensor Solution. s9,c10; s76,c98; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.07±.22; Mθθ0.19±.10; Mφφ1.88±.15; Mrθ0.37±.43; Mrφ-0.12±.06; Mθf-0.56±.33; Best double couple: M0=2.08600×10^16 NP1:φs348.00000°, δ54.00000°, λ-99.00000°. NP2: φs183.00000°, δ37.00000°, λ-78.00000°. Principal axes: T 1.9740, Plg8.0000°, Azm85.0000°; N 0.2250, Plg7.0000°, Azm353.0000°; P -2.1990, Plg79.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KLM **08** *15:39:05.0, 10˚.46N×126˚.96E, h64km, mb5.2*
DJA **08** *15:39:10.7±0.5, 10˚.N±3˚×12˚.7E±˚, h82km±5km, M4.8/34, mb4.7/34, mB5.2/18, MLv5.5/1, Mw(mB)4.6/18, Mwp6.2/1*

ISC 08 15:39:01.4±0.7, 10˚.66N±0˚.03×126˚.80E±0˚.04, h33km±3km, n338, σ19°40/359, mb5.0/136, MS3.9/33, 47C-24D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.56**	**236**	⇑*iP*	**Pb**	**15 39 33.9**	**+4.2**
SCPH				*i* S	**Sb**	**15 39 52.0**	**+3.0**
BESP	**Borongan**	**1.63**	**305**	*e*P	**Pn**	**15 39 25.7**	**-2.2**
BESP				*e*S	**Sn**	**15 39 49.4**	**+1.7**
PLP	**Palo**	**1.86**	**286**	⇓*e*P	**Pn**	**15 39 29.2**	**-1.7**
PLP				*i* S	**Sn**	**15 39 52.2**	**-1.1**
MSLP	**Maasin**	**1.98**	**255**	*e*P	**Pn**	**15 39 32.4**	**-0.2**
MSLP				*e*S	**Sb**	**15 39 58.9**	**-2.2**
BUTP	**Butuan**	**2.04**	**215**	*e*P	**Pn**	**15 39 32.4**	**-1.1**
BUTP				*e*S	**Sn**	**15 39 58.4**	**+0.6**
OCLP	**Ormoc**	**2.19**	**281**	*e*P	**Pn**	**15 39 35.9**	**+0.4**
OCLP				*e*S	**Sn**	**15 40 02.4**	**+0.9**
CNP	**Cataman**	**2.79**	**312**	*e*P	**Pn**	**15 39 41.7**	**-2.1**
CNP				*e*S	**Sn**	**15 40 14.7**	**-1.5**
LLP	**Lapu-Lapu**	**2.81**	**263**	⇑*e*P	**Pn**	**15 39 44.4**	**+0.4**
LLP				*e*S	**Sn**	**15 40 16.9**	**+0.1**
CGP	**Cagayan de Oro**	**3.02**	**224**	⇓*e*P	**Pn**	**15 39 46.2**	**-0.7**
CGP				*e*S	**Sb**	**15 40 28.3**	**-2.6**
BUKP	**Musuan**	**3.25**	**212**	*e*P	**Pn**	**15 39 50.9**	**+0.7**
BUKP				*e*S	**Sb**	**15 40 33.6**	**-4.0**
MMPH	**Masbate**	**3.54**	**299**	*e*P	**Pn**	**15 39 55.6**	**+1.5**
MATI	**Mati**	**3.73**	**188**	*e*P	**Pn**	**15 39 53.0**	**-3.6**
SNPH	**Sibulan**	**3.75**	**250**	⇓*e*P	**Pn**	**15 39 58.3**	**+1.3**
DAV	**Davao City (W)**	**3.76**	**199**	Pn	**Pn**	**15 39 57.4**	**+0.2**
	50nm,0.3s,baz=40,slow=9.1,SNR=3.5						
DAV				Sn	**Sn**	**15 40 42.4**	**+2.0**
	36nm,0.3s,baz=355,slow=22,SNR=4.7						
DAV				LR	LR	15 41 35.7	
	comp=Z,1μm,20.3s,baz=41,slow=43						
DAV	**Davao City (W)**	**3.76**	**199**	*e*Pn	**Pn**	**15 39 58.5**	**+1.4**
PVCP	**Virac**	**3.90**	**319**	*e*P	**Pn**	**15 39 56.9**	**-2.2**
PVCP				*e*S	**Sn**	**15 40 46.1**	**+2.4**
DCPH	**Dipolog City**	**3.98**	**239**	⇑*e*P	**Pn**	**15 40 03.7**	**+3.6**
DCPH				*e*S	**Sn**	**15 40 50.0**	**+4.4**
GUIM	**Jordan**	**4.14**	**270**	*e*P	**Pn**	**15 40 02.8**	**+0.5**
CTBH	**Cotabato--PC H**	**4.25**	**217**	⇓*i*P	**Pn**	**15 40 06.0**	**+2.2**
PAGZ	**Pagadian**	**4.38**	**231**	*e*P	**Pn**	**15 40 06.0**	**+0.4**
DDMP	**Don Marcelino,**	**4.65**	**193**	*e*P	**Pn**	**15 40 09.6**	**+0.2**
DDMP				*e*S	**Sn**	**15 41 02.5**	**+0.2**
JAP	**San Jose, Anti**	**4.77**	**272**	⇑*e*P	**Pb**	**15 40 21.5**	**-2.9**
SJMP	**San Jose**	**5.85**	**288**	*e*P	**Pn**	**15 40 23.5**	**-2.3**
TNTI	**Ternate**	**9.84**	**177**	*e*Pn	**Pn**	**15 41 19.7**	**-0.9**
TNTI	**Ternate**	**9.84**	**177**	P	**Pn**	**15 41 19.4**	**-1.2**
	135nm,1.0s,1μm						
MRSI	**Marisa**	**11.21**	**206**	P	**Pn**	**15 41 40.6**	**+1.2**
	15nm,1.2s,253nm						
KKM	**Kota Kinabalu**	**11.43**	**247**	*e*Pn	**Pn**	**15 41 40.6**	**-1.9**
KKM	**Kota Kinabalu**	**11.43**	**247**	P	**Pn**	**15 41 47.0**	**+4.5**
LUWI	**Luwuk**	**12.29**	**199**	*e*Pn	**Pn**	**15 41 53.6**	**-0.7**
LUWI	**Luwuk**	**12.29**	**199**	P	**Pn**	**15 41 55.8**	**+1.5**
MPSI	**Mapaga**	**12.34**	**214**	P	**Pn**	**15 41 56.5**	**+1.7**
APSI	**Ampana**	**12.58**	**204**	P	**Pn**	**15 42 00.5**	**+2.3**
TPUB	**Ta-pu**	**13.88**	**336**	*e*Pn	**Pn**	**15 42 15.5**	**-0.5**
FAKI	**Fak Fak**	**14.54**	**158**	*e*Pn	**Pn**	**15 42 22.9**	**-2.0**
FAKI	**Fak Fak**	**14.54**	**158**	P	**Pn**	**15 42 23.9**	**-1.0**
	57nm,1.2s						
YHNB	**Yeheng**	**14.86**	**340**	*e*Pn	**Pn**	**15 42 31.6**	**+2.3**
BAKI	**Biak**	**14.98**	**141**	P	**Pn**	**15 42 30.5**	**-0.3**
TTSI	**Tana Toraja**	**15.28**	**207**	P	**Pn**	**15 42 36.1**	**+1.2**
	48nm,1.4s,557nm						
BNDI	**Bandanaira**	**15.39**	**168**	P	**Pn**	**15 42 33.5**	**-2.8**
BKB	**Balikpapan**	**15.40**	**220**	P	**Pn**	**15 42 35.3**	**-1.1**
SPSI	**Sidrap Palu**	**16.12**	**206**	P	**Pn**	**15 42 45.1**	**-0.6**
	35nm,1.3s,713nm						
JOW	**Kunigami**	**16.15**	**5**	Pn	**P**	**15 42 48.2**	**-0.7**
	0.4nm,0.3s,baz=156,slow=11,SNR=6.4						
JOW	**Kunigami**	**16.15**	**5**	*e*Pn	**Pn**	**15 42 46.2**	**+0.3**
	52nm,0.9s						
BNSI	**Bone**	**16.38**	**204**	P	**Pn**	**15 42 48.2**	**-0.7**
	46nm,1.2s,1μm						
SBUM	**Sibu**	**16.61**	**242**	*e*Pn	**Pn**	**15 42 49.1**	**-2.9**
	11nm,1.1s						
SBUM	**Sibu**	**16.61**	**242**	P	**P**	**15 42 54.0**	**-0.1**
KAPI	**Kappang**	**17.08**	**205**	Pn	**Pn**	**15 42 56.8**	**-1.0**
	0.8nm,0.3s,baz=334,slow=6.8,SNR=4.9						
KAPI				LR	LR	15 49 46.5	
	comp=Z,248nm,21.2s,baz=24,slow=38						
KAPI	**Kappang**	**17.08**	**205**	*e*Pn	**Pn**	**15 42 56.7**	**-1.0**
	29nm,1.1s						
BKSI	**Bulukumba**	**17.21**	**203**	P	**Pn**	**15 42 58.2**	**-1.2**
	13nm,1.2s						
GUMO	**Guam**	**17.90**	**79**	LR	LR	15 48 24.6	
	comp=Z,356nm,21.2s,baz=266,slow=32						
DLV	**T Lat**	**18.00**	**276**	*e*Pn	**Pn**	**15 43 07.6**	**-1.8**
QIZ	**Qiongzhong**	**18.37**	**299**	P	**Pn**	**15 43 14.2**	**+0.5**
QIZ				S	**S**	**15 46 40.4**	**-1.5**
QIZ				pmax	pmax		
	comp=Z,210nm,9.4s						
QIZ				LR	LR		
	comp=N,220nm,13.2s						
QIZ				LR	LR		
	comp=E,330nm,15.7s						
QIZ				LR	LR		
	comp=Z,440nm,28.9s						
GENI	**Genyem**	**18.72**	**134**	P	**Pn**	**15 43 21.5**	**+3.6**
	88nm,2.0s,2μm						
KSM	**Kuching**	**18.75**	**242**	*e*P	**Pn**	**15 43 18.9**	**+0.5**
	47nm,1.0s						
KSM	**Kuching**	**18.75**	**242**	P	**Pn**	**15 43 21.0**	**+2.6**
JAY	**Jayapura**	**19.05**	**133**	LR	LR	15 50 04.4	
	comp=Z,236nm,19.2s,baz=346,slow=35						
JAY	**Jayapura**	**19.05**	**133**	P	**Pn**	**15 43 24.1**	**+2.1**
MMRI	**Maumere**	**19.70**	**193**	*e*P	**Pn**	**15 43 28.9**	**-0.8**
	67nm,0.9s						
MMRI	**Maumere**	**19.70**	**193**	P	**Pn**	**15 43 28.9**	**-0.8**
	104nm,1.2s,1μm						
EDFI	**Ende, Flores**	**19.94**	**195**	P	**P**	**15 43 30.9**	**+0.1**
	26nm,1.3s						
SOEI	**Soe**	**20.43**	**187**	P	Pn	15 43 38.5	0.0
BATI	**Baumata**	**20.96**	**189**	P	**P**	**15 43 41.2**	**-0.6**
	64nm,0.6s,baz=6.4,slow=2.3,SNR=10.0						
BATI	**Baumata**	**20.96**	**189**	*e*P	**P**	**15 43 41.2**	**-0.6**
BATI				*e*P	**P**	**15 43 41.2**	**-0.6**
BATI	**Baumata**	**20.96**	**189**	P	**P**	**15 43 41.5**	**-0.3**
	66nm,1.2s						
KMMI	**Kalianget**	**21.74**	**217**	P	**P**	**15 43 52.3**	**+2.1**
NJ2	**Nanjing**	**22.52**	**342**	*e*P	**P**	**15 44 01.4**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
JNU	**Nakatsue**	**22.67**	**9**	P	**P**	**15 44 01.3**	**+1.2**
	37nm,1.2s,baz=187,slow=4.5,SNR=4.3						
JNU				LR	LR	15 53 59.2	
	comp=Z,108nm,18.1s,baz=168,slow=40						
JNU	**Nakatsue**	**22.67**	**9**	*e*P	**P**	**15 43 60.0**	**-0.1**
	48nm,1.1s						
JAGI	**Jajag, Banyuwa**	**22.79**	**214**	P	**P**	**15 44 00.6**	**-0.9**
	91nm,1.2s						
WHN	**Wuhan**	**22.93**	**331**	⇓P	**P**	**15 44 02.6**	**-0.1**
WHN				S	**S**	**15 48 03.9**	**-6.7**
WHN				pmax	pmax		
	comp=Z,34nm,1.3s						
WHN				LR	LR		
	comp=N,660nm,8.6s						
WHN				LR	LR		
	comp=E,560nm,11.2s						
WHN				LR	LR		
	comp=Z,650nm,12.5s						
SKNT	**Sakolnakorn**	**23.02**	**288**	P	**P**	**15 44 04.3**	**+0.5**
	12nm,1.0s						
TPI	**Tanjungpandan**	**23.25**	**236**	P	**P**	**15 44 05.4**	**-0.8**
	43nm,1.3s,2μm						
NGJI	**Ngawi**	**23.53**	**221**	P	**P**	**15 44 08.8**	**-0.1**
MTN	**Manton Dam**	**23.74**	**169**	*e*P	**P**	**15 44 10.0**	**-0.8**
	71nm,1.0s						
SMRI	**Semarang**	**23.97**	**223**	P	**P**	**15 44 14.7**	**+1.6**
	119nm,1.6s						
KHON	**Khomkaen**	**23.98**	**286**	P	**P**	**15 44 14.8**	**+1.7**
	23μm,0.4s						
PPBI	**Pangkal Pinang**	**24.19**	**239**	P	**P**	**15 44 14.6**	**-0.5**
	74nm,1.5s,2μm						
SLVN	**Son La**	**24.40**	**299**	*e*P	**P**	**15 44 15.5**	**-1.5**
	1.6nm,0.8s						
MYKOM	**Kota Tinggi**	**24.43**	**250**	*e*P	**P**	**15 44 17.5**	**+0.1**
	33nm,1.1s						
MYKOM	**Kota Tinggi**	**24.43**	**250**	P	**P**	**15 44 19.0**	**+1.7**
GYA	**Guiyang**	**24.67**	**312**	P	**P**	**15 44 19.6**	**+0.1**
GYA				pP	pP	15 44 25.8	-0.9
GYA				PP	**PnPn**	**15 44 57.6**	**+5.7**
GYA				S	**S**	**15 48 41.6**	**+2.4**
GYA				sS	sS	15 48 50.9	+0.1
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,150nm,13.4s						
GYA				LR	LR		
	comp=E,320nm,12.4s						
GYA				LR	LR		
	comp=Z,330nm,13.1s						
CHAI	**Chaiyaphum**	**24.70**	**285**	P	**P**	**15 44 20.3**	**+0.6**
	22μm,1.4s,292μm						
DSRI	**Dabo**	**24.71**	**245**	P	**P**	**15 44 16.4**	**-3.5**
ENH	**Enshi**	**25.31**	**323**	*e*P	**P**	**15 44 25.7**	**+0.6**
	61nm,1.0s						
JHJ	**Hachijo jima 2**	**25.34**	**26**	LR	LR	15 54 26.1	
	comp=Z,151nm,18.6s,baz=350,slow=37						
TJN	**Taejon**	**25.61**	**1**	⇑*e*P	**P**	**15 44 29.1**	**+1.3**
PBKT	**Sadao Pong**	**25.77**	**286**	P	**P**	**15 44 31.3**	**+1.9**
	3.8nm,2.0s						
LEM	**Lembang**	**25.82**	**229**	LR	LR	15 56 13.8	
	comp=Z,243nm,18.9s,baz=33,slow=40						
JMBI	**JAMBI**	**26.08**	**243**	P	**P**	**15 44 33.1**	**+0.9**
	129nm,1.1s						
IPM	**Ipoh**	**26.26**	**258**	*e*P	**P**	**15 44 33.2**	**-0.8**
	18nm,0.9s						
INU	**Inuyama**	**26.28**	**19**	*e*P	**P**	**15 44 33.1**	**-0.8**
	35nm,1.1s						
NANT	**Nan**	**26.48**	**291**	P	P	15 44 45.0	+9.1
PHET	**Kaeng Krachan**	**26.69**	**278**	P	**P**	**15 44 39.7**	**+1.9**
	30μm,0.8s,517μm						
KSRS	**Korea Array**	**26.70**	**2**	P	**P**	**15 44 38.0**	**+0.4**
	3.7nm,1.0s,baz=176,slow=10,SNR=17						
KSRS				LR	LR	15 56 52.7	
	comp=Z,135nm,18.2s,baz=175,slow=40						
KMI	**Kunming**	**26.97**	**305**	P	**P**	**15 44 42.1**	**+1.6**
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
MDSI	**Maura Dua**	**27.09**	**237**	P	**P**	**15 44 43.3**	**+2.0**
	29nm,1.2s						
CGJI	**Cibinong**	**27.13**	**232**	P	**P**	**15 44 44.1**	**+2.4**
	39nm,1.3s						
SDSI	**Sungai Dareh**	**27.74**	**247**	P	**P**	**15 44 46.4**	**-0.8**
MAJO	**Matsushiro**	**27.76**	**20**	*e*P	**P**	**15 44 45.2**	**-2.0**
	12nm,1.1s						
MAJO	**Matsushiro**	**27.76**	**20**	⇑*e*P	**P**	**15 44 47.2**	**0.0**
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MJAR	**Matsushiro Arr**	**27.76**	**20**	P	**P**	**15 44 45.6**	**-1.6**
	comp=Z,4.2nm,1.2s,baz=204,slow=9.5,SNR=7.1						
MJAR				LR	LR	15 54 22.4	
	comp=Z,133nm,20.7s,baz=205,slow=33						
CM31	**Chiang Mai Arr**	**28.03**	**289**	*e*P	**P**	**15 44 46.8**	**-3.0**
	comp=Z,3.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.03**	**289**	P	**P**	**15 44 47.8**	**-2.0**
	comp=Z,1.8nm,0.8s,baz=102,slow=7.5,SNR=13						
CMAR				PcP	**PcP**	**15 48 03.9**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=64,slow=0.9,SNR=4.9						
CMAR				LR	LR	15 56 36.0	
	comp=Z,127nm,18.4s,baz=128,slow=38						
XAN	**Xi'an**	**28.45**	**328**	P	**P**	**15 44 53.3**	**-0.1**
XAN				pmax	pmax		
	comp=Z,29nm,1.4s						
XAN				pmax	pmax		
	comp=Z,180nm,3.2s						
XAN				LR	LR		
	comp=Z,160nm,19.5s						
XAN				LR	LR		
	comp=Z,320nm,16.2s						
XAN				LR	LR		
	comp=Z,250nm,11.8s						
DL2	**Dalian**	**28.51**	**352**	P	**P**	**15 44 54.8**	**+1.0**
DL2				sP	**pwP**	**15 45 10.6**	**+0.1**
DL2				*e*S	**S**	**15 49 41.6**	**+2.2**
DL2				pmax	pmax		
	comp=Z,19nm,1.0s						
DL2				LR	LR		
	comp=Z,310nm,15.8s						
DL2				LR	LR		
	comp=Z,180nm,15.3s						
DL2				LR	LR		
	comp=Z,210nm,17.0s						
FITZ	**Fitzroy Crossi**	**28.59**	**182**	P	**P**	**15 44 53.5**	**-1.2**
	comp=Z,5.2nm,0.9s,baz=355,slow=11,SNR=6.2						
FITZ				LR	LR	15 57 17.5	
	comp=Z,44nm,18.9s,baz=22,slow=39						
FITZ	**Fitzroy Crossi**	**28.59**	**182**	*e*P	**P**	**15 44 53.3**	**-1.4**
	comp=Z,10.0nm,1.1s						
PDSI	**Padang**	**28.61**	**248**	P	**P**	**15 44 53.3**	**-1.7**
PSI	**Prapat**	**28.74**	**256**	P	**P**	**15 44 54.6**	**-1.7**
	comp=Z,3.4nm,0.4s,baz=238,slow=6.7,SNR=5.1						
PSI				LR	LR	15 57 59.8	
	comp=Z,232nm,18.5s,baz=123,slow=40						
PSI	**Prapat**	**28.74**	**256**	*e*P	**P**	**15 44 54.6**	**-1.7**
	comp=Z,13nm,1.1s						
PSI	**Prapat**	**28.74**	**256**	*e*P	**P**	**15 44 54.6**	**-1.7**
PSI				pmax	pmax		
	comp=Z,13nm,1.1s						
CD2	**Chengdu**	**29.38**	**317**	P	**P**	**15 45 01.9**	**+0.2**
CD2				S	**S**	**15 49 56.2**	**+2.7**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				LR	LR		
	comp=Z,1μm,15.2s						
CD2				LR	LR		
	comp=Z,2μm,17.6s						
SNY	**Shenyang**	**31.18**	**355**	⇑P	**P**	**15 45 18.8**	**+1.4**
SNY				pmax	pmax		
	comp=Z,21nm,0.9s						
WRAB	**Tennant Creek**	**31.29**	**166**	⇓*e*P	**P**	**15 45 17.4**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**31.30**	**166**	P	**P**	**15 45 16.4**	**-2.3**
	comp=Z,8.4nm,1.2s,baz=358,slow=8.4,SNR=13						
WB2	**Warramunga Arr**	**31.30**	**166**	*e*P	**P**	**15 45 16.5**	**-2.3**
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	**32.75**	**192**	*e*P	**P**	**15 45 30.4**	**-1.0**
	comp=Z,12nm,1.0s						
LZH	**Lanzhou**	**32.76**	**324**	*e*P	**P**	**15 45 32.6**	**+1.0**
LZH				pP	pP	15 45 38.3	-0.5
LZH				sP	sP	15 45 42.1	+0.4
LZH				PP	**PnPn**	**15 46 38.8**	**-1.7**
LZH				SS	SS	15 52 46.0	-22
LZH				pmax	pmax		
	comp=Z,50nm,1.2s						
LZH				pmax	pmax		
	comp=Z,180nm,4.3s						
LZH				LR	LR		
	comp=Z,550nm,12.1s						
LZH				LR	LR		
	comp=Z,580nm,11.4s						
LZH				LR	LR		
	comp=Z,680nm,13.5s						
HHC	**Hu-ho-hao-te**	**32.95**	**338**	*e*P	**P**	**15 45 32.5**	**-0.6**
HHC				S	**S**	**15 50 46.6**	**-2.5**
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
HHC				LR	LR		
	comp=Z,110nm,11.9s						
HHC				LR	LR		
	comp=Z,540nm,11.1s						
HHC				LR	LR		
	comp=Z,370nm,11.9s						
CN2	**Changchun**	**33.04**	**358**	*e*P	**P**	**15 45 34.2**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BTO	**Baotou**	**33.32**	**336**	*e*P	**P**	**15 45 36.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**33.72**	**7**	P	**P**	**15 45 39.4**	**-0.3**
	comp=Z,9.9nm,1.0s,baz=184,slow=7.6,SNR=18						
MDJ	**Mudanjiang**	**33.92**	**4**	P	**P**	**15 45 43.1**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,28nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,120nm,5.1s						
ASAR	**Alice Springs**	**34.81**	**169**	P	**P**	**15 45 47.7**	**-1.7**
	comp=Z,5.0nm,0.9s,baz=351,slow=6.7,SNR=53						
ASAR				PP	**PnPn**	**15 47 06.8**	**+0.4**
	comp=Z,4.1nm,1.0s,baz=352,slow=11,SNR=4.8						
ASAR				PcP	**PcP**	**15 48 22.2**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=341,slow=2.7,SNR=8.6						
TEY	**Ternei**	**35.28**	**12**	⇑*i*P	P	15 46 04.2	+11
TEY				pmax	pmax		
	comp=N,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
ASAJ	**Asahikawa**	**36.03**	**19**	P	**P**	**15 46 00.4**	**+0.8**
	comp=Z,6.0nm,1.1s,baz=128,slow=17,SNR=3.6						
SHL	**Shillong**	**36.21**	**299**	*e*P	**P**	**15 45 59.0**	**-2.6**
	comp=Z,19nm,0.9s						
SHL	**Shillong**	**36.21**	**299**	*e*P	**P**	**15 45 59.0**	**-2.6**
SHL				pmax	pmax		
	comp=Z,19nm,0.9s						
GTA	**Gaotai**	**37.37**	**325**	⇓P	**P**	**15 46 12.1**	**+0.9**
GTA				pP	pP	15 46 19.2	+0.7
GTA				sP	sP	15 46 22.6	+1.3
GTA				PcP	**PcP**	**15 48 29.7**	**-0.2**
GTA				pmax	pmax		
	comp=Z,43nm,1.4s						
GTA				pmax	pmax		
	comp=Z,240nm,5.0s						
GTA				LR	LR		
	comp=Z,220nm,17.2s						
GTA				LR	LR		
	comp=Z,280nm,17.2s						
GTA				LR	LR		
	comp=Z,160nm,18.6s						
YSS	**Yuzh-Sakhalins**	**38.62**	**18**	*e*P	**P**	**15 46 22.0**	**+0.5**
	comp=Z,31nm,1.1s						
YSS	**Yuzh-Sakhalins**	**38.62**	**18**	*e*P	**P**	**15 46 22.1**	**+0.6**
YSS				*e*		15 46 30.3	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLR	**Kul'dur**	**38.67**	**5**	P	**P**	**15 46 21.9**	**0.0**
	comp=Z,9.0nm,1.0s,baz=195,slow=6.1,SNR=16						
KLR	**Kul'dur**	**38.67**	**5**	*d i*P	**P**	**15 46 22.3**	**+0.4**
KLR				pmax	pmax		
	comp=Z,14nm,1.2s						
HIA	**Hailar**	**38.94**	**353**	*e*P	**P**	**15 46 24.9**	**+0.7**
	comp=Z,13nm,1.1s						
HIA	**Hailar**	**38.94**	**353**	*e*P	**P**	**15 46 24.9**	**+0.7**
HIA				pmax	pmax		
	comp=Z,13nm,1.1s						
ULN	**Ulaanbaatar**	**40.64**	**340**	*e*P	**P**	**15 46 36.7**	**-1.9**
	comp=Z,7.8nm,0.9s						
ULN	**Ulaanbaatar**	**40.64**	**340**	*d i*P	**P**	**15 46 39.3**	**+0.8**
ULN				pmax	pmax		
	comp=Z,26nm,1.7s						
ULN	**Ulaanbaatar**	**40.64**	**340**	P	**P**	**15 46 39.6**	**+1.1**
	SNR=10.0						
GRNR	**Gornyy**	**40.77**	**9**	*e*P	**P**	**15 46 39.1**	**-0.3**
SONM	**Songino Array**	**40.84**	**339**	P	**P**	**15 46 40.1**	**0.0**
	comp=Z,8.7nm,1.1s,baz=158,slow=7.8,SNR=26						
ZEA	**Zeya**	**42.97**	**0**	*e*P	**P**	**15 46 56.4**	**-0.8**
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
ZEA				MLR	MLR		
	comp=Z,200nm,18.0s						
ZAK	**Zakamensk**	**44.10**	**338**	*e*P	**P**	**15 47 05.0**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BBOO	**Buckleboo**	**44.12**	**169**	*e*P	**P**	**15 47 06.7**	**0.0**
	comp=Z,63nm,1.1s						
STKA	**Stephens Creek**	**44.60**	**162**	P	**P**	**15 47 09.7**	**-0.9**
	comp=Z,7.8nm,1.0s,baz=351,slow=6.9,SNR=6.9						
STKA	**Stephens Creek**	**44.60**	**162**	*e*P	**P**	**15 47 08.2**	**-2.4**
	comp=Z,2.9nm,1.1s						
STKA	**Stephens Creek**	**44.60**	**162**	*e*P	**P**	**15 47 08.2**	**-2.4**
STKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TLY	**Talaya**	**45.05**	**340**	*e*P	**P**	**15 47 14.8**	**+0.8**
	comp=Z,9.1nm,1.1s						
TLY	**Talaya**	**45.05**	**340**	*e*P	**P**	**15 47 13.4**	**-0.6**
TLY				pmax	pmax		
	comp=Z,36nm,1.3s						
TLY	**Talaya**	**45.05**	**340**	P	**P**	**15 47 15.7**	**+1.6**
	SNR=9.4						
IRK	**Irkutsk**	**45.32**	**341**	*e*P	**P**	**15 47 16.9**	**+0.8**
IRK				pmax	pmax		
	comp=Z,29nm,2.1s						
MOY	**Mondy**	**45.98**	**338**	*e*P	**P**	**15 47 22.3**	**+0.8**
MOY				pmax	pmax		
	comp=Z,41nm,1.9s						
WMQ	**Urumqi**	**47.24**	**322**	P	**P**	**15 47 32.9**	**+1.4**
WMQ				pP	pP	15 47 37.1	-1.8
WMQ				sP	sP	15 47 43.9	+2.2
WM

KSH pP pP 15 48 24.7 -0.6
KSH PP **PP** **15 50 20.7 +2.2**
KSH S **S** **15 55 50.6 +2.6**
KSH SS **SS** **15 59 29.7 +1.5**
KSH pmax pmax
comp=Z,62nm,1.1s
KSH pmax pmax
comp=Z,440nm,5.1s
KSH LR LR
comp=Z,150nm,9.0s
KSH LR LR
comp=Z,200nm,6.5s
KSH LR LR
comp=Z,380nm,17.0s
NIL Nilore 53.95 304 *e*P **P** **15 48 21.9 -0.4**
comp=Z,38nm,1.1s
NIL Nilore 53.95 304 *e*P **P** **15 48 21.9 -0.4**
NIL pmax pmax
comp=Z,38nm,1.1s
ULHL Ulahol 54.07 315 P **P** **15 48 24.3 +1.1**
SNR=25
ZALV Zalesovo Beam 54.54 331 P **P** **15 48 25.9 -0.3**
comp=Z,10nm,1.0s,baz=112,slow=6.6,SNR=18
ZALV LR LR 16 13 57.2
comp=Z,36nm,19.6s,baz=70,slow=38
KZA Kyzart 54.71 314 P **P** **15 48 28.8 +0.7**
SNR=51
TKM2 Tokmak 2 54.75 315 P **P** **15 48 28.7 +0.6**
SNR=15
KBK Karagaybulak 55.11 315 P **P** **15 48 31.6 +0.9**
SNR=12
UCH Uchtor 55.28 314 P **P** **15 48 33.2 +1.0**
SNR=64
SEY Seymchan 55.32 14*ce*P **P** **15 48 33.7 +2.1**
CHMS Chumysh 55.36 315 P **P** **15 48 33.0 +0.6**
SNR=15
AAK Ala-Archa 55.42 315 *e*P **P** **15 48 34.1 +1.1**
comp=Z,10nm,1.1s
AAK Ala-Archa 55.42 315*ce*P **P** **15 48 34.0 +1.1**
AAK pmax pmax
comp=Z,26nm,1.7s
AAK Ala-Archa 55.42 315 P **P** **15 48 34.4 +1.5**
SNR=16
USP Ospenovka 55.63 316 P **P** **15 48 34.6 +0.4**
SNR=17
NVS Novosibirsk 55.81 331 *e*P **P** **15 48 34.5 -0.8**
NVS pmax pmax
comp=N,10.0nm,1.2s
NVS pmax pmax
comp=Z,20nm,1.2s
NVS pmax pmax
comp=E,11nm,1.1s
AML Almayashu 55.82 314 P **P** **15 48 37.2 +1.1**
SNR=18
EKS2 Erkin-Say 55.93 315 P **P** **15 48 37.7 +1.1**
SNR=26
KURK Kurchatov 56.05 325 *e*P **P** **15 48 37.5 +0.5**
comp=E,66nm,1.1s
KURK Kurchatov 56.05 325 *e*P **P** **15 48 37.5 +0.5**
KURK pmax pmax
comp=Z,66nm,1.1s
KURK Kurchatov 56.05 325 P **P** **15 48 37.5 +0.5**
SNR=39
KK31 Karatay Array 58.35 314 *e*P **P** **15 48 53.8 +0.3**
comp=Z,28nm,1.0s
KK31 Karatay Array 58.35 314 *e*P **P** **15 48 53.8 +0.3**
KK31 pmax pmax
comp=Z,28nm,1.0s
TIXI Tiksi 60.96 1 *e*P **P** **15 49 10.3 -0.6**
comp=Z,14nm,1.0s
TIXI Tiksi 60.96 1*ce*P **P** **15 49 10.8 -0.1**
TIXI pmax pmax
comp=Z,24nm,1.7s
BRVK Borovoye 61.72 325 *e*P **P** **15 49 16.7 +0.3**
comp=Z,34nm,1.1s
BRVK Borovoye 61.72 325 *e*P **P** **15 49 16.7 +0.3**
BRVK pmax pmax
comp=Z,34nm,1.1s
BRVK Borovoye 61.72 325 P **P** **15 49 17.0 +0.6**
SNR=21
BILL Bilibino 62.89 16 *e*P **P** **15 49 24.3 +0.3**
comp=Z,16nm,1.1s
BILL Bilibino 62.89 16*c i*P **P** **15 49 24.5 +0.5**
BILL pmax pmax
comp=Z,26nm,1.7s
NRIK Noril'sk 63.77 346 P **P** **15 49 29.3 -0.5**
comp=Z,14nm,1.1s,baz=133,slow=6.9,SNR=23
NRIK LR LR 16 19 50.4
comp=Z,47nm,18.1s,baz=154,slow=38
NIKH Nikolski High 66.19 37 *e*P **P** **15 49 46.4 +0.6**
comp=Z,17nm,1.0s
GEYT Alibeck 66.73 307 P **P** **15 49 49.0 -0.6**
comp=Z,1.6nm,0.9s,baz=226,slow=3.9,SNR=3.6
GEYT LR LR 16 21 54.4
comp=Z,53nm,19.6s,baz=100,slow=39
GYA0B ALIBECK ARRAY 66.73 307 *e*P **P** **15 49 49.7 +0.1**
comp=Z,4.9nm,0.8s
AB31 Akbulak array 66.92 319 *i*P **P** **15 49 49.9 -0.7**
AB31 pmax pmax
comp=Z,25nm,1.2s
SVE Sverdlovsk 68.17 327⇓*i*P **P** **15 49 58.8 +0.5**
SVE pmax pmax
comp=Z,27nm,1.3s
AKTO Aktyubinsk 68.36 320 LR LR 16 23 41.9
comp=Z,44nm,18.1s,baz=119,slow=39
AKTO Aktyubinsk 68.36 320 P **P** **15 49 59.7 +0.1**
AKTO pmax pmax
comp=Z,40nm,1.4s
ARU Arti 69.19 326 *e*P **P** **15 50 03.8 -0.9**
comp=Z,12nm,1.0s
ARU Arti 69.19 326*d i*P **P** **15 50 04.1 -0.6**
ARU S **S** **15 59 07.7 -0.6**
ARU pmax pmax
comp=Z,28nm,1.4s
RDOG Red Dog Mine 72.85 22 *e*P **P** **15 50 27.1 +0.4**
comp=Z,12nm,1.1s
AKT Akhty 74.85 310 *e*P **P** **15 50 39.4 +0.3**
AKT *e* 15 50 53.0
AKT pmax pmax
comp=Z,23nm,1.2s
PRGR Permogore 76.50 331 *e*P **P** **15 50 47.0 -0.9**
PRGR pmax pmax
comp=Z,16nm,1.1s
GNI Garni 77.17 309⇓*e*P **P** **15 50 53.9 +1.6**
GNI pmax pmax
comp=Z,110nm,1.7s
COLD Coldfoot 77.53 23 *e*P **P** **15 50 53.4 -0.3**
comp=Z,3.5nm,1.1s
ZEI Tsey 77.65 312 *e*P **P** **15 50 53.7 -1.4**
ZEI pmax pmax
comp=Z,25nm,1.2s
CASY Casey 77.66 187 *e*P **P** **15 50 52.1 -2.1**
comp=Z,14nm,1.0s
PMR Palmer 77.88 29 *e*P **P** **15 50 53.9 -1.7**
comp=Z,10nm,1.0s
PMR Palmer 77.88 29 *e*P **P** **15 50 53.9 -1.7**
PMR pmax pmax
comp=Z,10.0nm,1.0s
AKH Akhalkalaki 78.04 310⇓*i*P **P** **15 50 58.4 +1.2**
AKH Akhalkalaki 78.04 310 P **P** **15 50 58.3 +1.1**
GOF Gofitskoye 78.15 314⇑*e*P **P** **15 50 57.5 0.0**
KBZ Khabaz 78.33 313 P **P** **15 50 58.1 -0.4**
comp=Z,14nm,1.2s,baz=93,slow=3.0,SNR=16
COLA College 78.45 26⇑*e*P **P** **15 50 58.6 -0.1**
COLA pmax pmax
comp=Z,10.0nm,1.6s
KIV Kislovodsk 78.47 313 *e*P **P** **15 51 00.1 +0.6**
comp=Z,8.6nm,0.8s
KIV Kislovodsk 78.47 313 *e*P **P** **15 50 59.8 +0.4**
KIV pmax pmax
comp=Z,55nm,1.1s
KIV Kislovodsk 78.47 313 P **P** **15 51 00.5 +1.1**
SNR=6.4
KIV P **P** **15 51 00.5 +1.1**
SNR=6.4
NEY Neytrino 78.49 312⇑*e*P **P** **15 51 01.5 +1.8**
NEY pmax pmax
comp=Z,3.0nm,1.2s
VRH Novokhopyorsk 78.70 320 *e*P **P** **15 50 59.7 -0.7**
VRH pmax pmax
comp=Z,50nm,1.1s
ILAR Eielson Array 78.87 26 P **P** **15 51 00.1 -1.0**
comp=Z,1.3nm,1.0s,baz=267,slow=4.2,SNR=10.0
ILAR LR LR 16 25 49.5
comp=Z,51nm,20.1s,baz=200,slow=36
BCA Borcka 79.44 310⇑*i*P **P** **15 51 04.7 0.0**
KLMR Klimovskoe 79.45 330 *e*P **P** **15 51 02.1 -2.2**
KLMR pmax pmax
comp=Z,35nm,1.1s
TMCR Tamitsa 79.95 334 *e*P **P** **15 51 06.2 -0.7**
VORD Divnogorie 80.25 320 *e*P **P** **15 51 06.4 -2.4**
VORD pmax pmax
comp=Z,10.0nm,0.5s
VSR Storozhevoye 80.31 320 *e*P **P** **15 51 08.2 -0.9**
VSR pmax pmax
comp=Z,20nm,0.9s
LPSR Galich'ya Gora 80.34 322 *e*P **P** **15 51 08.8 -0.5**
LPSR pmax pmax
comp=Z,40nm,1.2s
MOS Moscow 80.82 325 *e*P **P** **15 51 10.3 -1.5**
MOS *e* 15 51 21.3
MOS pmax pmax
comp=Z,67nm,1.2s
LVZ Lovozero 81.02 337⇓*e*P **P** **15 51 13.3 +0.6**
LVZ pmax pmax
comp=Z,32nm,1.7s
OBN Obninsk 81.48 324*d i*P **P** **15 51 14.9 -0.4**
OBN *e* 15 51 25.5
OBN *e* 15 54 18.8
OBN pmax pmax
comp=Z,63nm,1.7s
OBN MLR MLR
comp=Z,57nm,18.0s
ANN Anapa 82.14 314 *e*P **P** **15 51 18.6 -0.4**
ANN pmax pmax
comp=Z,58nm,1.3s
MSF Maaselka 83.51 336 P **P** **15 51 26.8 +1.1**
MSF pmax pmax
comp=Z,38nm,1.2s
ARCES ARCESS Array B 84.01 340 P **P** **15 51 27.7 -0.6**
comp=Z,16nm,0.9s,baz=64,slow=5.5,SNR=20
SIM Simferopol' 84.45 315*de*P **P** **15 51 30.6 -0.3**
SIM pmax pmax
comp=Z,21nm,1.2s
SUF Sumiainen 85.45 333 P **P** **15 51 36.9 +1.4**
SUF pmax pmax
comp=Z,21nm,1.2s
BR131 Keskin Array S 85.69 309 P **P** **15 51 36.1 -1.4**
SNR=7.0
BRTR Keskin Array B 85.69 309 P **P** **15 51 37.0 -0.5**
comp=Z,3.9nm,1.0s,baz=118,slow=4.5,SNR=19
BRTR LR LR 16 35 47.7
comp=Z,13nm,18.1s,baz=90,slow=40
BRTR Keskin Array B 85.69 309 P **P** **15 51 37.0 -0.5**
FIA1 FINESS Array S 85.80 332 *e*P **P** **15 51 36.6 -0.7**
comp=Z,36nm,1.1s
FINES FINESS Array B 85.80 332 P **P** **15 51 37.2 -0.1**
comp=Z,14nm,0.9s,baz=68,slow=4.8,SNR=41
VSU Vasula 86.22 329*ce*P **P** **15 51 39.6 +0.2**
VSU pmax pmax
comp=Z,105nm,1.1s
ANTO Ankara 86.30 310⇑*i*P **P** **15 51 40.6 +0.2**
ANTO Ankara 86.30 310⇑⇑P **P** **15 51 40.6 +0.2**
ANTO Ankara 86.30 310 P **P** **15 51 40.8 +0.4**
SNR=8.4
AKASG Malin Array Be 86.59 321 P **P** **15 51 40.7 -0.8**
comp=Z,14nm,1.1s,baz=61,slow=5.0,SNR=47
KIEV Kiev 86.61 321⇑*i*P **P** **15 51 41.1 -0.4**
KIEV Kiev 86.61 321*de*P **P** **15 51 40.6 -0.9**
KIEV pmax pmax
comp=Z,21nm,1.1s
KDZE Karadeniz Ereo 87.04 311⇑*i*P **P** **15 51 46.4 +2.5**
PPT2 Papeete2 87.19 108 *e*LR LR 16 19 20.6
comp=Z,86nm,23.5s
TLCR 88.09 316⇑*i*P **P** **15 51 48.9 +0.1**
TLCR 88.09 316⇑⇑P **P** **15 51 48.9 +0.1**
TBI Tubuai 88.50 114 *e*LR LR 16 20 06.9
comp=Z,146nm,23.5s
TIRR Tirgusor 88.53 315⇑*i*P **P** **15 51 50.9 0.0**
TIRR Tirgusor 88.53 315⇑⇑P **P** **15 51 50.9 0.0**
CFR Carcaliu 88.56 316⇑*i*P **P** **15 51 51.1 +0.1**
CFR Carcaliu 88.56 316⇑⇑P **P** **15 51 51.1 +0.1**
ICOR Ion Corvin 89.04 315⇑*i*P **P** **15 51 53.9 +0.6**
TESR Tescani 89.24 317⇑*i*P **P** **15 51 54.4 +0.2**
VRI Vrincioaia 89.35 317⇑*i*P **P** **15 51 55.3 +0.5**
VRI Vrincioaia 89.35 317⇑⇑P **P** **15 51 55.3 +0.5**
PLOR Plostina 89.41 317⇑*i*P **P** **15 51 54.8 -0.3**
PLOR Plostina 89.41 317⇑⇑P **P** **15 51 54.8 -0.3**
BIZ Bicaz 89.50 318⇑*i*P **P** **15 51 55.8 +0.4**
KMBO Kilima Mbogo 89.76 269 LR LR 16 33 00.9
comp=Z,69nm,18.0s,baz=96,slow=36
BURAR Bucovina Array 89.90 318⇓*i*P **P** **15 51 57.8 +0.4**
BURAR Bucovina Array 89.90 318⇓⇓P **P** **15 51 57.8 +0.4**
BUR08 Bucovina Ar. S 89.90 319 *e*P **P** **15 51 57.9 +0.4**
comp=Z,7.5nm,0.8s
MLR Muntele Rosu 89.98 316⇑*i*P **P** **15 51 58.2 +0.3**
MLR Muntele Rosu 89.98 316⇑⇑P **P** **15 51 58.2 +0.3**
LVV L'vov 90.04 321 *e*P **P** **15 51 58.4 +0.5**
MAW Mawson 90.24 200 P **P** **15 51 57.2 -1.0**
comp=Z,11nm,1.1s,baz=50,slow=5.3,SNR=9.4
VNDA Vanda 90.25 173 P **P** **15 51 57.9 -0.3**
comp=Z,2.7nm,0.9s,baz=345,slow=2.6,SNR=6.1
VNDA LR LR 16 37 12.5
comp=Z,22nm,18.0s,baz=336,slow=39
VNDA Vanda 90.25 173 *e*P **P** **15 51 58.4 +0.2**
comp=Z,6.6nm,1.1s
VNDA Vanda 90.25 173 *e*P **P** **15 51 58.4 +0.2**
VNDA pmax pmax
comp=Z,7.0nm,1.1s
ARR Arges 90.90 316⇑*i*P **P** **15 52 02.5 +0.4**
KOLS Kolonicke sedl 91.40 320 *e*P **P** **15 52 05.1 +0.8**
KOLS Kolonicke sedl 91.40 320 *e*P **P** **15 52 05.1 +0.8**
VLAD Vladila 91.44 315⇑*i*P **P** **15 52 04.6 +0.1**
LOT Lotru 91.46 317⇑*i*P P 15 51 56.4 -8.4
UZH Uzhgorod 91.48 320⇑*i*P **P** **15 52 05.0 +0.4**
UZH *i* 15 52 14.1
DRGR 91.77 318⇑*i*P **P** **15 52 06.6 +0.5**
DRGR 91.77 318⇑⇑P **P** **15 52 06.6 +0.5**
SIRR Siria 92.62 318⇑*i*P **P** **15 52 09.1 -0.9**
NB2 NORSAR Subarra 92.64 334 P **P** **15 52 08.5 -1.3**
comp=Z,13nm,1.4s,baz=63,slow=5.3
NOA NORSAR Array B 92.64 334 P **P** **15 52 08.8 -1.0**
comp=Z,3.6nm,1.0s,baz=66,slow=4.6,SNR=6.7
NOA LR LR 16 37 32.2
comp=Z,18nm,18.9s,baz=75,slow=38
VTS Vitosha 92.65 314⇓*i*P **P** **15 52 09.8 -0.6**
VTS Vitosha 92.65 314⇓⇓P **P** **15 52 09.8 -0.6**
MDVR Moldovita 93.05 316⇓*i*P **P** **15 52 12.6 +0.6**
YKA Yellowknife Ar 93.19 24 P **P** **15 52 12.6 +0.4**
comp=Z,1.2nm,0.8s,baz=298,slow=5.1,SNR=7.7
VYHS Vyhne 93.70 321 *e*P **P** **15 52 15.3 +0.4**
VYHS Vyhne 93.70 321 *e*P **P** **15 52 15.3 +0.4**
MORC Moravsky Berou 94.03 322 *e*P **P** **15 52 16.7 +0.3**
JAVC Velka Javorina 94.29 321 *e*P **P** **15 52 19.2 +1.5**
DPC Dobruska-Polom 94.54 323 *e*P **P** **15 52 19.7 +0.9**
DPC Dobruska-Polom 94.54 323 *e*P **P** **15 52 19.7 +0.9**
VRAC Vranov 94.78 322⇓*i*P **P** **15 52 20.4 +0.6**
VRAC Vranov 94.78 322⇓⇓P **P** **15 52 20.4 +0.6**
VRAC Vranov 94.78 322 *e*P **P** **15 52 20.7 +0.9**
KRUC Moravsky 94.99 322 *e*P **P** **15 52 21.5 +0.7**
BRG Berggiesshubel 95.73 324 *e*P **P** **15 52 24.3 +0.2**
comp=Z,9.7nm,1.4s
BRG *i* 15 52 35.5
comp=Z,6.7nm,1.2s
BRG Berggiesshubel 95.73 324 *e*P **P** **15 52 24.3 +0.2**
BRG *i* 15 52 35.5
BRG pmax pmax
comp=Z,6.0nm,1.4s
CONA Conrad Observa 95.75 321 *e*PcP **P** **15 52 25.1 +0.7**
comp=Z,9.6nm,1.3s,SNR=6.1
CLL Collm 96.08 325⇑*i*P **P** **15 52 25.4 -0.3**
comp=Z,9.0nm,1.2s
CLL *i* pP **sP** **15 52 36.6 +0.2**
comp=Z,9.0nm,1.3s
CLL *e*PP **PP** **15 56 19.0 +0.8**
CLL Collm 96.08 325⇑*i*P **P** **15 52 25.4 -0.3**
CLL *i* *PP **sP** **15 52 36.6 +0.2**
CLL pmax pmax
comp=Z,9.0nm,1.2s
ARSA Arzberg 96.23 320 *e*PcP **P** **15 52 26.7 +0.2**
comp=Z,11nm,1.6s,SNR=5.4
KHC Kasperske Hory 96.66 323 *e*P **P** **15 52 28.0 -0.5**
KHC *e* 15 52 39.3
KHC Kasperske Hory 96.66 323 *e*P **P** **15 52 28.0 -0.5**
KHC *ex* x 15 52 39.3
GERES GERESS Array B 96.71 322 P **P** **15 52 27.4 -1.3**
comp=Z,1.1nm,0.9s,baz=57,slow=4.9,SNR=12
SOKA Soboth 96.76 320 *e*PcP **P** **15 52 29.2 +0.1**
comp=Z,9.0nm,1.2s,SNR=5.3
MOA Molln 96.77 321 *e*PcP **P** **15 52 29.8 +0.8**
comp=Z,16nm,1.3s,SNR=9.3
BOJS Bojanci 97.08 319 *i*P Pdif 15 52 32.6 +2.1
OBKA Obir 97.14 320 *i*PcP Pdif 15 52 31.0 +0.2
comp=Z,7.9nm,1.1s
VISS Visnje 97.23 319 *i*P Pdif 15 52 32.1 +1.0
KBA Koelnbreinsper 97.66 321 *e*PcP **P** **15 52 33.1 -0.1**
comp=Z,9.0nm,1.1s
MYKA Terra Mystica 97.66 320 *i*PcP **P** **15 52 32.4 -0.6**
comp=Z,6.2nm,1.0s
JAVS Javornik 97.69 319 *i*P **P** **15 52 33.3 0.0**
ABTA Abfaltersbach 98.32 321 *e*PcP **P** **15 52 35.5 -0.6**
comp=Z,9.5nm,1.2s,SNR=5.2
WTTA Wattenberg 98.64 321 *i*Pdiff **P** **15 52 37.6 0.0**
comp=Z,11nm,1.2s
WATA Walderalm 98.64 322 *i*Pdiff **P** **15 52 37.1 -0.5**
comp=Z,2.3nm,0.6s
SQTA Sankt Quirin 98.92 322 *e*Pdiff Pdif 15 52 38.8 +0.1
comp=Z,12nm,1.4s
RETA Reutte 99.07 322 *e*Pdiff **Pdif** **15 52 40.4 +1.0**
comp=Z,3.4nm,1.2s
FETA Feichten 99.30 321 *e*Pdiff **Pdif** **15 52 40.6 +0.1**
comp=Z,8.0nm,1.4s
DAVA Damuels 99.69 322 *i*Pdiff **Pdif** **15 52 42.7 +0.5**
comp=Z,7.3nm,1.1s
LTX Lajitas 117.18 49 *e*PKPdf **PKPdf** **15 57 43.9 -0.2**
LTX Lajitas 117.18 49 *e*PKIKP **PKPdf** **15 57 43.9 -0.2**
TXAR Lajitas Array 117.18 49 PKP **PKPdf** **15 57 43.9 -0.2**
comp=Z,0.2nm,0.5s,baz=155,slow=4.9,SNR=3.4
TXAR PP **PP** **15 58 59.7 +5.7**
comp=Z,0.5nm,0.9s,baz=292,slow=6.6,SNR=4.2
TORD Torodi Ar. Bea 120.61 292 PKP **PKPdf** **15 57 50.4 -0.5**
comp=Z,1.3nm,0.9s,baz=7.1,slow=3.6,SNR=5.1
TOA1 Torodi Ar. Sit 120.61 292 *e*PKPdf **PKPdf** **15 57 50.4 -0.5**
PLCA Paso Flores 146.35 156 PKPbc **PKPbc** **15 58 39.3 0.0**
comp=Z,6.0nm,0.9s,baz=202,slow=1.1,SNR=7.8
PLCA Paso Flores 146.35 156 *e*PKPdf **PKPab** **15 58 40.3 +0.2**
PLCA Paso Flores 146.35 156 *e*PKP2 **PKPab** **15 58 40.3 +0.2**
TRQA Tornquist 151.60 165 *e*PKPbc **PKiKP** **15 58 53.4 +0.2**
TRQA Tornquist 151.60 165 *e*PKIKP **PKiKP** **15 58 53.4 +0.2**
LPAZ La Paz 164.44 113 PKP **PKPdf** **15 59 03.2 -0.3**
comp=Z,0.6nm,0.3s,baz=291,slow=1.2,SNR=4.7
LPAZ PKPab **PKPab** **15 59 59.0 +0.9**
comp=Z,0.9nm,0.7s,baz=170,slow=1.9,SNR=3.7

IDC 08 15:41:34.1±3.1, 34°.10S×178°.77W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.8/32, mbtmp3.9/3, ML3.6/1, Error ellipse: s-maj=73.9km s-min=36.1km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.32**	**218**		Pn	Pn	15 42 54.6	-0.3
	2.1nm,0.3s,baz=266,slow=4.9,SNR=20							
URZ					Sn	Sn	15 43 58.2	+1.3
	2.2nm,0.3s,baz=100,slow=23,SNR=12							
ASAR	**Alice Springs**	**42.40**	**271**		P	P	15 49 31.1	+0.6
	1.0nm,0.7s,baz=113,slow=7.4,SNR=7.4							
WRA	**Warramunga Arr**	**43.72**	**276**		P	P	15 49 40.5	-0.8
	1.7nm,0.8s,baz=118,slow=8.2,SNR=4.5							
FINES	**FINESS Array B**	**148.34**	**337**	PKPbc		PKPbc	16 01 20.9	-0.6
	1.8nm,0.9s,baz=38,slow=3.4,SNR=6.5							

MAN 08 16:12:45.7, 9°.42N×122°.43E, h23km, mb4.6, ML3.5, MS3.4, 1C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.80**	**95**⇓	*i*P		Pb	16 13 00.2	-0.7
SNPH				*i* s		Sb	16 13 10.8	-0.6
GUIM	**Jordan**	**1.21**	**7**	*e*P		Pn	16 13 07.6	+0.3
GUIM				*e*S		Sb	16 13 24.0	+0.8
TBP	**Tagbilaran**	**1.44**	**79**	*e*P		Pn	16 13 09.4	-1.0
LLP	**Lapu-Lapu**	**1.76**	**59**⇓	*i*P		Pn	16 13 14.9	+0.1
LLP				*i* S		Sn	16 13 36.9	+0.4
PAGZ	**Pagadian**	**1.82**	**149**	*e*P		Pn	16 13 16.4	+0.7
PAGZ				*e*S		Sn	16 13 38.8	+0.8
CUYO	**Cuyo Island**	**1.99**	**316**	*e*P		Pn	16 13 18.8	+0.7
CUYO				*e*S		Sn	16 13 42.3	+0.1
MSLP	**Maasin**	**2.50**	**73**	*e*P		Pn	16 13 25.8	+0.9
CTBH	**Cotabato--PC H**	**2.83**	**140**⇑	*i*P		Pn	16 13 31.2	+1.7
BUKP	**Musuan**	**3.02**	**120**	*e*P		Pn	16 13 32.7	+0.5
ENPP	**El Nido**	**3.45**	**301**	*e*P		Pn	16 13 38.7	+0.7

IDC 08 16:18:00.1±30.0, 5°.80N×126°.84E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/37, mbtmp3.8/3, Error ellipse: s-maj=507.4km s-min=111.5km az=156.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.77**	**183**	P		P	16 23 15.6	+1.0
	2.0nm,0.9s,baz=350,slow=12,SNR=2.2							
WRA	**Warramunga Arr**	**26.62**	**164**	P		P	16 23 39.9	-0.7
	15nm,0.3s,baz=341,slow=9.8,SNR=7.8							
ASAR	**Alice Springs**	**30.09**	**167**	P		P	16 24 11.6	+0.1
	0.5nm,0.4s,baz=353,slow=7.4,SNR=10.0							
STKA	**Stephens Creek**	**40.02**	**160**	P		P	16 25 36.6	-0.4
	0.7nm,0.4s,baz=351,slow=13,SNR=6.4							

*IDC **08** 16:19:44.5±3.5, 56°.37S×141°.35W, h0km, mb4.0/3, mb1 4.0/3, mb1mx3.7/38, mbtmp4.0/3, MS3.6/8, Ms1 3.6/8, ms1mx3.4/22, Error ellipse: s-maj=99.8km s-min=41.8km az=53.0*

ISC 08 16:19:42.9±3.1, 56°.2S±0°.5×140°.4W±0°.5, h10km, n24, σ1°.76/7, mb4.1/3, MS3.6/10, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**33.24**	**9**	*e*T		T	17 01 55.2	
	5.2nm,0.3s							
TBI	**Tubuai**	**33.45**	**345**	*e*LR		LR	16 35 04.5	
	comp=Z,255nm,27.8s							
TBI	**Tubuai**	**33.45**	**345**	*e*T		T	17 01 37.8	
	55nm,0.3s							
QSPA	**South Pole Qui**	**34.00**	**180**	P		**P**	**16 26 27.8**	**+1.2**
	2.6nm,1.1s,baz=53,slow=3.0,SNR=3.1							
QSPA				LR		LR	16 37 02.9	
	comp=Z,120nm,21.6s,baz=69,slow=31							
RPN	**Rapa Nui**	**36.57**	**50**	LR		LR	16 39 05.6	
	comp=Z,57nm,18.0s,baz=308,slow=31							
MEH	**Mehetia**	**38.66**	**348**	*e*T		T	17 08 13.1	
	33nm,0.3s							
TVO	**Taravao**	**38.90**	**346**	*e*T		T	17 08 28.0	
	1.3nm,0.3s							
PAE	**Paea**	**39.06**	**346**	*e*T		T	17 08 39.5	
	2.2nm,0.3s							
PPT2	**Papeete2**	**39.13**	**346**	*e*LR		LR	16 37 40.5	
	comp=Z,261nm,28.5s							
PPT2	**Papeete2**	**39.13**	**346**	*e*T		T	17 08 45.0	
	4.0nm,0.3s							
TIAR	**Tiarei**	**39.13**	**346**	*e*T		T	17 08 44.9	
	2.3nm,0.3s							
PPT	**Papeete**	**39.15**	**346**	LR		LR	16 39 09.1	
	comp=Z,104nm,19.5s,baz=158,slow=30							
VAH	**Vaihoa**	**41.22**	**349**	*e*T		T	17 11 25.8	
	41nm,0.3s							
PMOR	**Pomariorio Ree**	**41.48**	**349**	*e*T		T	17 11 44.9	
	2.5nm,0.3s							
VNA3	**Neumayer Olymp**	**48.22**	**161**	P		**P**	**16 28 23.4**	**+0.3**
VNA2	**Neumayer--Watz**	**48.90**	**161**	P		**P**	**16 28 26.4**	**-1.9**
VNA1	**Neumayer--Stat**	**48.98**	**161**	P		**P**	**16 28 27.4**	**-1.4**
DZM	**Mont Dzumac**	**51.63**	**289**	LR		LR	16 47 41.6	
	comp=Z,56nm,18.4s,baz=188,slow=33							
MAW	**Mawson**	**55.35**	**191**	LR		LR	16 49 43.7	
	comp=Z,50nm,21.5s,baz=206,slow=33							
STKA	**Stephens Creek**	**57.70**	**260**	P		**P**	**16 29 34.0**	**+0.5**
	2.1nm,0.9s,baz=122,slow=19,SNR=3.5							
STKA				LR		LR	16 50 44.1	
	comp=Z,51nm,18.4s,baz=194,slow=32							
ASAR	**Alice Springs**	**68.34**	**260**	P		**P**	**16 30 42.9**	**-1.4**
	0.9nm,0.8s,baz=142,slow=6.9,SNR=7.7							
JAY	**Jayapura**	**81.75**	**278**	LR		LR	17 05 27.7	
	comp=Z,26nm,18.3s,baz=58,slow=34							
BOSA	**Boshof**	**94.68**	**167**	LR		LR	17 13 16.1	
	comp=Z,31nm,19.3s,baz=204,slow=34							
MKAR	**Makanchi Array**	**152.24**	**268**	PKPbc		**PKiKP**	**16 39 39.8**	**+1.7**
	1.0nm,0.8s,baz=114,slow=3.5,SNR=6.5							

DJA 08 16:23:40.0±0.8, 11°.S±8°.×11°.7E±°, h62km±37km, M4.1/12, mb4.1/8, mB4.5/1, MLv4.1/12, Mw(mB)3.7/1, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**2.57**	**13**	P	Pn	16 24 19.1	-0.2
PLAI				S	Sn	16 24 47.4	-2.0
WBSI	**Waikabubak, Su**	**2.74**	**52**	P	Pn	16 24 20.6	-1.1
WBSI				S	Sn	16 24 54.1	+0.4
DNP	**Denpasar**	**3.30**	**323**	P	Pn	16 24 30.3	+1.0
SRBI	**Singaraja**	**3.79**	**329**	P	Pn	16 24 36.5	+0.5
JAGI	**Jajag, Banyuwa**	**4.15**	**313**	P	Pn	16 24 38.6	-2.3
EDFI	**Ende, Flores**	**5.12**	**60**	P	Pn	16 24 53.6	-0.7
	13nm,1.3s						
KMMI	**Kalianget**	**5.33**	**323**	P	Pn	16 24 57.4	+0.3
	14nm,0.7s,465nm						
BSSI	**Bau Bau, Buton**	**6.11**	**32**	P	Pn	16 25 08.8	+1.0
	34nm,1.3s						
PWJI	**Pagerwojo**	**6.26**	**301**	P	Pn	16 25 08.8	-1.0
BKSI	**Bulukumba**	**6.65**	**26**	P	Pn	16 25 16.3	+1.1
UGM	**Wanagama**	**7.42**	**297**	P	Pn	16 25 25.0	-0.7
BNSI	**Bone**	**7.48**	**23**	P	Pn	16 25 27.2	+0.7
SPSI	**Sidrap Palu**	**7.77**	**19**	P	Pn	16 25 30.1	-0.3
CGJI	**Cibinong**	**12.30**	**292**	P	Pn	16 26 28.7	-3.7

*ISCJB **08** 16:31:12.9±0.6,20.°42S±0.°03×69.°09W±0.°06,h134km±6km, mb3.1/1,Error ellipse: s-maj=8.8km s-min=4.1km az=176.1*
*SJA **08** 16:31:13.4±0.9,20.°43S×68.°99W,h116km±5km,ML3.1, MW3.0*
*GUC **08** 16:31:13.8±0.6,20.°39S×68.°95W,h121km±3km,ML3.4*
*IDC **08** 16:31:14.7±1.7,20.°53S×68.°60W,h132km±19km,mb3.1/1, mb1 3.1/5,mb1mx3.0/30,mbtmp3.4/5,Error ellipse: s-maj=46.7km s-min=17.1km az=101.0*

ISC 08 16:31:13.0±1.0,20.°41S±0.°03×68.°96W±0.°05,h124km±8km, n35,σ1§66/62,5C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.32**	**326**	*i* P	**Pn**	**16 31 31.0**	**0.0**
PB08				*i* S	**Sn**	**16 31 44.1**	**-0.3**
PB08	**IPOC Station P**	**0.32**	**326⇑**	*e*P	**Pn**	**16 31 30.9**	**0.0**
PB08				*i* S	**Sn**	**16 31 44.1**	**-0.3**
PB08				IAML		16 31 44.5	
	comp=E,5μm,0.2s						
PB01	**IPOC Station P**	**0.80**	**218⇓**	*e*P	**Pn**	**16 31 34.0**	**+0.3**
PB01				*e*S	**Sn**	**16 31 49.3**	**0.0**
PB01				IAML		16 31 50.7	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**0.92**	**314**	*i* P	**Pn**	**16 31 34.9**	**+0.1**
PB11				*i* S	**Sn**	**16 31 51.1**	**-0.1**
PB11	**IPOC Station P**	**0.92**	**314⇑**	*e*P	**Pn**	**16 31 34.9**	**+0.1**
PB11				*e*S	**Sn**	**16 31 51.1**	**-0.1**
PB11				IAML		16 31 53.0	
	comp=N,2μm,0.2s						
PB02	**IPOC Station P**	**1.26**	**224**	*i* P	**Pn**	**16 31 38.9**	**+0.8**
PB02				*i* S	**Sn**	**16 31 57.6**	**+0.4**
PB02	**IPOC Station P**	**1.26**	**224**	*e*P	**Pn**	**16 31 38.8**	**+0.7**
PB02				*e*S	**Sn**	**16 31 57.4**	**+0.2**
PB02				IAML		16 32 00.2	
	comp=E,2μm,0.2s						
PSGC	**Pisagua**	**1.36**	**306⇑**	*e*P	**Pn**	**16 31 39.2**	**0.0**
PSGC				*e*S	**Sn**	**16 31 58.9**	**-0.2**
PSGC				IAML		16 32 00.6	
	comp=N,454nm,0.3s						
PB09	**IPOC Station P**	**1.41**	**191**	*i* P	**Pn**	**16 31 40.8**	**+1.0**
PB09				*i* S	**Sn**	**16 32 02.0**	**+1.8**
PB09	**IPOC Station P**	**1.41**	**191**	*e*P	**Pn**	**16 31 40.8**	**+1.0**
PB09				*e*S	**Sn**	**16 32 01.3**	**+1.1**
PB09				IAML		16 32 05.4	
	comp=E,304nm,0.5s						
MNMCX	**Minye Minye**	**1.41**	**335**	*i* P	**Pn**	**16 31 40.7**	**+0.8**
MNMCX				*i* S	**Sn**	**16 32 01.4**	**+1.0**
PB07	**IPOC Station P**	**1.57**	**213**	*i* P	**Pn**	**16 31 42.2**	**+0.5**
PB07				*i* S	**Sn**	**16 32 02.7**	**-0.8**
PB07	**IPOC Station P**	**1.57**	**213**	*e*P	**Pn**	**16 31 42.2**	**+0.5**
PB07				*e*S	**Sn**	**16 32 03.7**	**+0.2**
PB07				IAML		16 32 05.7	
	comp=E,454nm,0.3s						
PB03	**IPOC Station P**	**1.79**	**204**	*i* P	**Pn**	**16 31 44.8**	**+0.6**
PB03				*i* S	**Sn**	**16 32 08.1**	**-0.1**
PB03	**IPOC Station P**	**1.79**	**204**	*e*P	**Pn**	**16 31 44.9**	**+0.6**
PB03				*i* S	**Sn**	**16 32 08.2**	**+0.1**
PB03				IAML		16 32 10.4	
	comp=E,297nm,0.5s						
PB16	**IPOC Station P**	**2.13**	**346**	*i* P	**Pn**	**16 31 50.0**	**+1.2**
PB16				*i* S	**Sn**	**16 32 17.9**	**+1.8**
PB16	**IPOC Station P**	**2.13**	**346⇑**	*e*P	**Pn**	**16 31 50.0**	**+1.2**
PB16				*i* S	**Sn**	**16 32 17.6**	**+1.4**
LVC	**Limon Verde**	**2.19**	**179**	P	**Pn**	**16 31 50.9**	**+1.5**
	comp=E,3.4nm,0.3s,baz=16,slow=4.9,SNR=32						
LVC				S	**Sn**	**16 32 17.6**	**+0.4**
	comp=E,5.5nm,0.3s,baz=345,slow=10,SNR=5.3						
LVC	**Limon Verde**	**2.19**	**179**	*i* P	**Pn**	**16 31 50.8**	**+1.5**
LVC				*i* S	**Sn**	**16 32 19.7**	**+2.5**
PB12	**IPOC Station P**	**2.21**	**324**	*i* P	**Pn**	**16 31 48.9**	**-0.4**
PB12				*i* S	**Sn**	**16 32 16.2**	**-0.9**
PB12	**IPOC Station P**	**2.21**	**324⇑**	*i*P	**Pn**	**16 31 48.9**	**-0.4**
PB12				IAML		16 32 21.8	
	comp=E,186nm,0.3s						
PB04	**IPOC Station P**	**2.21**	**210**	*i* P	**Pn**	**16 31 50.2**	**+0.8**
PB04				*i* S	**Sn**	**16 32 17.3**	**-0.1**
PB04	**IPOC Station P**	**2.21**	**210**	*e*P	**Pn**	**16 31 50.5**	**+1.0**
PB04				*i* S	**Sn**	**16 32 18.7**	**+1.3**
PB04				IAML		16 32 19.6	
	comp=N,239nm,0.1s						
PB06	**IPOC Station P**	**2.35**	**194**	*i* P	**Pn**	**16 31 52.2**	**+1.0**
PB06				*i* S	**Sn**	**16 32 21.0**	**+0.4**
PB06	**IPOC Station P**	**2.35**	**194**	*e*P	**Pn**	**16 31 52.3**	**+1.1**
PB06				IAML		16 32 26.7	
	comp=E,138nm,0.2s						
PB05	**IPOC Station P**	**2.69**	**205**	*i* P	**Pn**	**16 31 55.8**	**+0.3**
PB05	**IPOC Station P**	**2.69**	**205⇓**	*i*P	**Pn**	**16 31 56.2**	**+0.6**
PB05				IAML		16 32 36.4	
	comp=E,86nm,0.3s						
PB10	**IPOC Station P**	**3.42**	**205**	*i* P	**Pn**	**16 32 04.6**	**-0.4**
PB10				*i* S	**Sn**	**16 32 43.7**	**-1.5**
YJA	**Yavi**	**3.66**	**119**	*i* P	**Pn**	**16 32 10.6**	**+2.1**
YJA				*i* S	**Sn**	**16 32 56.2**	**+4.8**
LPAZ	**La Paz**	**4.17**	**11**	P	**Pn**	**16 32 18.6**	**+3.1**
	comp=E,0.8nm,0.3s,baz=206,slow=12,SNR=10						
HJA	**Humahuaca**	**4.32**	**131**	*i* P	**Pn**	**16 32 19.3**	**+2.1**
HJA				IAML		16 32 19.9	
	comp=Z,28nm,0.4s						
HJA				*i* S	**Sn**	**16 32 58.9**	**-8.1**
AZAP	**Zapla**	**5.23**	**137**	*i* P	**Pn**	**16 32 29.5**	**+0.1**
AZAP				IAML		16 32 34.8	
	comp=Z,5.7nm,0.4s						
AZAP				*i* S	**Sn**	**16 33 27.3**	**-1.5**
SIV	**San Ignacio**	**8.69**	**61**	P	**Pn**	**16 33 13.5**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=259,slow=13,SNR=9.5						
CPUP	**Villa Florida**	**12.19**	**121**	P	**Pn**	**16 34 00.7**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=315,slow=13,SNR=3.0						
TORD	**Torodi Ar. Bea**	**77.03**	**71**	P	**P**	**16 42 52.1**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=256,slow=5.8,SNR=3.5						

*ISCJB **08** 16:31:13.7±1.0,48.°70N±0.°07×156.°2E±0.°1,h35km, mb3.5/4,Error ellipse: s-maj=15.4km s-min=8.4km az=28.8*
*KRSC **08** 16:31:13.1±1.6,48.°84N×156.°63E,h20km±32km,ML3.8*
*IDC **08** 16:31:21.2±1.5,50.°13N×153.°48E,h0km,mb3.5/4, mb1 3.6/6,mb1mx3.3/38,mbtmp3.4/6,ML2.3/2,MS2.5/2, Ms1 2.5/2,ms1mx2.2/36,Error ellipse: s-maj=48.2km s-min=23.7km az=109.0*

ISC 08 16:31:16.1±1.4,48.°8N±0.°1×156.°2E±0.°1,h35km,n23, σ1§79/23,mb3.5/4,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.88**	**358**	*e*P	**Pn**	**16 31 45.1**	**-0.5**
SKR				*e*S	**Sn**	**16 32 09.2**	**+1.1**
ALID	**Alaid**	**2.11**	**348**	*e*P	**Pn**	**16 31 49.7**	**+0.7**
ALID				*e*S	**Sn**	**16 32 15.5**	**+1.5**
PAU	**Pauzhetka**	**2.69**	**8**	*e*P	**Pn**	**16 31 57.4**	**+0.6**
KDTR	**Khodutka, Kamc**	**3.23**	**21**	*e*P	**Pn**	**16 32 03.9**	**-0.3**
KDTR				*e*S	**Sn**	**16 32 41.2**	**-0.2**
MTVR	**Mutnovka**	**3.88**	**18**	*e*P	**Pn**	**16 32 14.5**	**+1.2**
PETK	**Petropavlovsk-**	**4.40**	**12**	Pn	**Pn**	**16 32 22.1**	**+1.8**
	0.6nm,0.3s,baz=170,slow=11,SNR=11						
PETK				LR	LR	16 34 18.9	
	comp=Z,52nm,20.8s,baz=142,slow=45						
DALK	**Dalny**	**4.52**	**20**	*e*P	**Pn**	**16 32 22.5**	**+0.6**
UGLR	**Uglovaya**	**4.70**	**19**	*e*P	**Pn**	**16 32 25.5**	**+1.0**
AVH	**Avacha**	**4.73**	**19**	*e*P	**Pn**	**16 32 26.9**	**+1.9**
KOK	**Koryaka**	**4.74**	**18**	*e*P	**Pn**	**16 32 27.2**	**+2.2**
SMAR	**Somma**	**4.75**	**19**	*e*P	**Pn**	**16 32 26.8**	**+1.5**
KRER	**Koryakskii**	**4.77**	**18**	*e*P	**Pn**	**16 32 27.7**	**+2.1**
SDLR	**Sedlovina**	**4.78**	**20**	*e*P	**Pn**	**16 32 26.2**	**+0.6**
KRX	**Arik**	**4.80**	**18**	*e*P	**Pn**	**16 32 27.9**	**+1.9**
SPN	**Mys Shipunski**	**4.92**	**28**	*e*P	**Pn**	**16 32 27.9**	**+0.5**
GNL	**Ganaly**	**5.01**	**12**	*e*P	**Pn**	**16 32 29.7**	**+0.9**
ASAJ	**Asahikawa**	**10.51**	**249**	Pn	**Pn**	**16 33 43.8**	**-0.3**
	2.4nm,0.3s,baz=74,slow=14,SNR=31						
KLR	**Kul'dur**	**16.05**	**281**	LR	LR	16 40 48.8	
	comp=Z,28nm,20.5s,baz=78,slow=40						
MJAR	**Matsshiro Arr**	**18.00**	**234**	P	**P**	**16 35 26.9**	**+3.3**
	0.0nm,0.3s,baz=16,slow=13,SNR=4.7						
TIXI	**Tiksi**	**26.15**	**341**	P	**P**	**16 36 41.9**	**-4.6**
	0.4nm,0.4s,baz=128,slow=4.3,SNR=4.0						
CMAR	**Chiang Mai Arr**	**54.88**	**258**	P	**P**	**16 40 42.1**	**-1.0**
	0.4nm,0.7s,baz=51,slow=7.1,SNR=4.6						
FINES	**FINESS Array B**	**63.05**	**336**	P	P	16 41 35.3	-3.9
	0.7nm,0.7s,baz=61,slow=12,SNR=3.8						
ASAR	**Alice Springs**	**74.86**	**201**	P	P	16 43 07.7	+15
	0.3nm,0.5s,baz=12,slow=5.8,SNR=8.7						

*ATH **08** 16:33:17.6,38.°17N×20.°24E,h7km±3km,ML3.0/9,Error ellipse: s-maj=3.6km s-min=1.2km az=66.0*
*THE **08** 16:33:17.5,38.°16N×20.°22E,h0km±1km,ML3.0/12,Error ellipse: s-maj=2.6km s-min=1.1km az=240.0*
*IDC **08** 16:33:18.4±11.0,38.°49N×20.°68E,h0km,mb3.1/3, mb1 3.3/4,mb1mx3.2/36,mbtmp3.2/4,ML3.7/1,Error ellipse: s-maj=210.1km s-min=33.2km az=34.0*

ISC 08 16:33:18.0±1.3,38.°19N±0.°04×20.°24E±0.°05,h15km±7km, n60,σ1§10/81,mb3.1/3,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.27**	**92**	P	**Pg**	**16 33 23.4**	**-0.5**
VLS				S	**Sg**	**16 33 27.0**	**-0.9**
VLS	**Valsamata**	**0.27**	**92**	P	**Pg**	**16 33 23.4**	**-0.5**
VLS				S	**Sg**	**16 33 27.0**	**-0.9**
VLS				AML	AML	16 33 27.1	
	comp=N,20920μm,0.2s						
VLS				AML	AML	16 33 27.1	
	comp=E,31951μm,0.1s						
FSK	**Fiskardo**	**0.37**	**43**	P	**Pg**	**16 33 25.2**	**-0.3**
FSK				S	**Sg**	**16 33 30.6**	**-0.1**
FSK	**Fiskardo**	**0.37**	**43**	P	**Pg**	**16 33 25.2**	**-0.3**
FSK				S	**Sg**	**16 33 30.5**	**-0.2**
KFL	**Anninata**	**0.44**	**100**	P	**Pg**	**16 33 26.3**	**-0.5**
KFL				S	**Sg**	**16 33 32.5**	**-0.2**
KFL	**Anninata**	**0.44**	**100**	P	**Pg**	**16 33 26.3**	**-0.5**
KFL				S	**Sg**	**16 33 32.5**	**-0.2**
KFL				AML	AML	16 33 32.8	
	comp=E,16493μm,0.4s						
KFL				AML	AML	16 33 35.0	
	comp=N,8382μm,0.4s						
EVGI	**Lefkada island**	**0.54**	**37**	P	**Pg**	**16 33 28.4**	**-0.3**
EVGI				S	**Sb**	**16 33 36.3**	**-0.5**
EVGI	**Lefkada island**	**0.54**	**37**	P	**Pg**	**16 33 28.4**	**-0.3**
EVGI				S	**Sb**	**16 33 36.1**	**-0.6**
MGNA	**Meganis**	**0.64**	**43**	P	**Pg**	**16 33 30.5**	**+0.1**
LKD2	**Lefkada island**	**0.68**	**28**	P	**Pg**	**16 33 30.9**	**-0.4**
LKD2	**Lefkada island**	**0.68**	**28**	P	**Pg**	**16 33 30.8**	**-0.6**
TSLK	**Tsoukalades, L**	**0.71**	**27**	P	**Pg**	**16 33 31.5**	**-0.4**
TSLK				S	**Sn**	**16 33 43.8**	**-0.4**
TSLK	**Tsoukalades, L**	**0.71**	**27**	P	**Pg**	**16 33 31.6**	**-0.3**
PDO	**Prodromos**	**0.85**	**61**	P	**Pg**	**16 33 33.6**	**-0.8**
PDO				AML	AML	16 33 51.1	
	comp=N,2190μm,0.4s						
PDO				AML	AML	16 33 52.9	
	comp=E,2392μm,0.5s						
RLS	**Riolos of Patr**	**0.97**	**97**	P	**Pb**	**16 33 35.9**	**-0.6**
RLS				S	**Sn**	**16 33 51.4**	**+0.8**
RLS	**Riolos of Patr**	**0.97**	**97**	P	**Pb**	**16 33 35.7**	**-0.9**
RLS				AML	AML	16 33 54.0	
	comp=N,789μm,0.5s						
RLS				AML	AML	16 34 00.8	
	comp=E,546μm,0.7s						
PVO	**Paravola**	**1.10**	**67**	P	**Pb**	**16 33 38.5**	**-0.1**
PVO	**Paravola**	**1.10**	**67**	P	**Pb**	**16 33 38.4**	**-0.2**
PVO				AML	AML	16 33 60.0	
	comp=N,2067μm,0.5s						
PVO				AML	AML	16 34 01.1	
	comp=E,1539μm,0.3s						
DRO	**Drossia**	**1.18**	**101**	P	**Pn**	**16 33 39.8**	**-0.2**
DRO				S	**Sg**	**16 33 58.6**	**+2.4**
DRO	**Drossia**	**1.18**	**101**	P	**Pn**	**16 33 39.7**	**-0.3**
DRO				AML	AML	16 34 02.6	
	comp=E,1672μm,0.8s						
DRO				AML	AML	16 34 09.1	
	comp=N,1375μm,0.5s						
UPR	**University Cam**	**1.22**	**85**	P	**Pg**	**16 33 41.6**	**+0.1**
EFP	**Efpalio**	**1.33**	**79**	P	**Pn**	**16 33 42.0**	**0.0**
EFP				S	**Sg**	**16 34 02.5**	**+1.6**
EFP	**Efpalio**	**1.33**	**79**	P	**Pn**	**16 33 42.1**	**0.0**
IGT	**Igoumenitsa**	**1.34**	**3**	P	**Pb**	**16 33 43.4**	**+0.5**
IGT				S	**Sg**	**16 34 04.1**	**+2.7**
LAKA	**Lakka**	**1.37**	**87**	P	**Pb**	**16 33 43.5**	**+0.2**
LAKA	**Lakka**	**1.37**	**87**	P	**Pb**	**16 33 43.7**	**+0.4**
ANX	**Ano Chora**	**1.38**	**72**	P	**Pn**	**16 33 43.3**	**+0.5**
ANX				S	**Sg**	**16 34 03.9**	**+1.4**
ANX	**Ano Chora**	**1.38**	**72**	P	**Pn**	**16 33 43.2**	**+0.5**
ANX				AML	AML	16 34 08.0	
	comp=E,1578μm,0.6s						
ANX				AML	AML	16 34 08.4	
	comp=N,1944μm,0.6s						
EVR	**Evrytania**	**1.43**	**59**	P	**Pb**	**16 33 45.1**	**+0.7**
EVR				AML	AML	16 34 06.9	
	comp=E,187μm,0.5s						
EVR				AML	AML	16 34 09.2	
	comp=N,406μm,0.6s						
SERG	**Sergoula**	**1.45**	**80**	P	**Pn**	**16 33 43.8**	**+0.2**
SERG				S	**Sg**	**16 34 06.2**	**+1.6**
SERG	**Sergoula**	**1.45**	**80**	P	**Pn**	**16 33 44.0**	**+0.4**
SERG				AML	AML	16 34 10.2	
	comp=E,640μm,0.8s						
SERG				AML	AML	16 34 11.7	
	comp=N,499μm,0.4s						
TRIZ	**Trizonia**	**1.45**	**82**	P	**Pn**	**16 33 43.9**	**+0.2**
TRIZ	**Trizonia**	**1.45**	**82**	P	**Pn**	**16 33 43.9**	**+0.2**
MES3	**Kyparissia**	**1.47**	**129**	P	**Pn**	**16 33 45.3**	**+1.4**
KALE	**Kalithea**	**1.51**	**82**	P	**Pn**	**16 33 44.5**	**0.0**
KALE				S	**Sg**	**16 34 07.5**	**+0.9**
KALE	**Kalithea**	**1.51**	**82**	P	**Pn**	**16 33 44.7**	**+0.2**
KLV	**Kalavryta, Ach**	**1.51**	**95**	P	**Pn**	**16 33 45.3**	**+0.8**
KLV	**Kalavryta, Ach**	**1.51**	**95**	P	**Pn**	**16 33 45.1**	**+0.6**
KEK	**Kerkira**	**1.56**	**347**	P	**Pb**	**16 33 47.2**	**+0.7**
GUR	**Goura**	**1.68**	**98**	P	**Pn**	**16 33 48.3**	**+1.4**
GUR				S	**Sg**	**16 34 11.7**	**-0.3**
GUR	**Goura**	**1.68**	**98**	P	**Pn**	**16 33 48.2**	**+1.4**
TRIP	**Tripoli**	**1.74**	**112**	P	**Pb**	**16 33 50.7**	**+1.1**
PYL	**PYLOS**	**1.76**	**137**	P	**Pb**	**16 33 50.4**	**+0.5**
DSF	**Desfina**	**1.81**	**82**	P	**Pb**	**16 33 51.9**	**+1.0**
AGG	**Agios Georgios**	**1.84**	**62**	P	**Pb**	**16 33 52.0**	**+0.8**
THL	**Klokotos Trika**	**1.95**	**45**	P	**Pb**	**16 33 53.3**	**+0.1**
PROD	**Prodromos**	**2.10**	**87**	P	**Pb**	**16 33 55.7**	**0.0**
DID	**Didima**	**2.47**	**105**	P	**Pn**	**16 33 59.7**	**+2.1**
KRUS	**Krusevo**	**3.27**	**13**	*i* Pn	**Pn**	**16 34 09.5**	**+0.8**
STON	**Ston**	**5.06**	**338**	*i* Pn	**Pn**	**16 34 34.0**	**+0.7**
STON				Sn	**Sn**	**16 35 29.5**	**-1.9**
UDBI	**Udbina**	**7.17**	**333**	*i* Pn	**Pn**	**16 35 04.6**	**+2.3**
NVLJ	**Novalja**	**7.54**	**329**	*e*Pn	**Pn**	**16 35 08.6**	**+1.3**
BOJS	**Bojanci**	**8.20**	**335**	*i* Pn	**Pn**	**16 35 18.4**	**+2.1**
BOJS				*i* Sn	**Sn**	**16 36 47.1**	**-1.7**
CRES	**Cresnjev**	**8.42**	**337**	*i* Pn	**Pn**	**16 35 20.4**	**+1.0**
JAVS	**Javornik**	**8.96**	**331**	*i* Pn	**Pn**	**16 35 28.5**	**+1.6**
JAVS				*i* Sn	**Sn**	**16 37 03.8**	**-3.8**
PERS	**Pernice**	**9.25**	**337**	*i* Pn	**Pn**	**16 35 31.3**	**+0.5**
PERS				*i* Sn	**Sn**	**16 37 11.6**	**-3.0**
GERES	**GERESS Array B**	**11.66**	**338**	Pn	**Pn**	**16 36 05.0**	**+1.2**
	comp=N,0.2nm,0.3s,baz=157,slow=14,SNR=4.0						
FINES	**FINESS Array B**	**23.56**	**7**	P	**P**	**16 38 27.4**	**-0.1**
	comp=N,0.9nm,0.7s,baz=194,slow=11,SNR=6.4						
NOA	**NORSAR Array B**	**23.57**	**349**	P	**P**	**16 38 28.2**	**+0.5**
	comp=N,0.2nm,0.6s,baz=151,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**45.48**	**58**	P	**P**	**16 41 35.4**	**-1.1**
	comp=N,0.1nm,0.4s,baz=272,slow=6.7,SNR=3.4						

MAN 08 16:37:14.8,10.°18N×123.°23E,h26km,mb3.6,ML2.3, MS1.7,1D,Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.73**	**80**	*e*P	Pb	16 37 28.3	-0.8
LLP				*e*S	Sb	16 37 37.8	-0.9
GUIM	**Jordan**	**0.77**	**305**	*e*P	Pb	16 37 29.8	+0.2
GUIM				*e*S	Sn	16 37 41.4	+0.6
SNPH	**Sibulan**	**0.84**	**180⇓**	*i*P	Pn	16 37 31.0	0.0
SNPH				*i* S	Sn	16 37 42.6	+0.1
MSLP	**Maasin**	**1.60**	**92**	*e*P	Pn	16 37 42.3	+0.8
MSLP				*e*S	Sn	16 38 02.1	+0.7

RSNC 08 16:52:20.4±1.0,6.°82N×73.°15W,h141km±4km,ML3.2, Mw3.5,5C-4D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**188⇓**	*i*P	Pn	16 52 39.6	-0.3
BARC				*e*S	Sn	16 52 54.1	-0.6
BARC				*i*		16 52 55.8	
	comp=Z,707nm,0.2s						
GIRC	**Giron, Santand**	**0.26**	**350⇑**	*i*P	Pn	16 52 39.4	-0.5
GIRC				*e*S	Sn	16 52 54.1	-0.6
GIRC				*i*		16 52 55.9	
	comp=Z,215nm,0.1s						
BRRC	**Barranca, Sant**	**0.63**	**297⇑**	*i*P	Pn	16 52 41.4	0.0
BRRC				*e*S	Sn	16 52 57.1	-0.3
BRRC				*i*		16 53 01.9	
	comp=Z,455nm,0.1s						
RUSC	**La Rusia**	**0.92**	**176**	*e*P	Pn	16 52 43.6	-0.7
RUSC				*e*S	Sn	16 53 01.6	-0.7
RUSC				*i*		16 53 03.4	
	comp=Z,116nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.33**	**258**	*e*P	Pn	16 52 46.3	-1.2
PTBC				*e*S	Sn	16 53 07.2	-0.8
PTBC				*i*		16 53 12.5	
	comp=Z,298nm,0.2s						
TAMC	**Tame, Arauca**	**1.40**	**106⇓**	*i*P	Pn	16 52 48.0	-0.2
TAMC				*e*S	Sn	16 53 09.3	-0.1
TAMC				*i*		16 53 10.0	
	comp=Z,150nm,0.3s						
OCAC	**Ocana**	**1.42**	**353⇑**	*i*P	Pn	16 52 47.7	-0.9
OCAC				*e*S	Sn	16 53 09.6	-0.6
OCAC				*i*		16 53 14.6	
	comp=Z,267nm,0.3s						
YOPC	**Yopal, Colombi**	**1.63**	**154⇓**	*i*P	Pn	16 52 50.5	-0.3
YOPC				*e*S	Sn	16 53 14.4	+0.4
YOPC				*i*		16 53 15.0	
	comp=Z,193nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.82**	**292**	*e*P	Pn	16 52 52.4	-0.5
ZARC				*e*S	Sn	16 53 18.1	+0.3
ZARC				*i*		16 53 20.0	
	comp=Z,352nm,0.1s						
NORC	**Norcasia**	**2.12**	**234⇓**	*i*P	Pn	16 52 56.2	-0.3
NORC				*e*S	Sn	16 53 24.5	+0.4
NORC				*i*		16 53 28.3	
	comp=Z,156nm,0.1s						
SMLC	**San Martn de**	**2.17**	**335**	*e*P	Pn	16 52 55.6	-1.4
SMLC				*e*S	Sn	16 53 26.9	+1.6
SMLC				*i*		16 53 34.1	
	comp=Z,325nm,0.1s						
CHIC	**Chingaza**	**2.25**	**195**	*e*P	Pn	16 52 58.0	-0.4
CHIC				*e*S	Sn	16 53 26.6	-1.0
CHIC				*i*		16 53 34.6	
	comp=Z,52nm,0.5s						
ROSC	**El Rosal**	**2.29**	**211**	*e*P	Pn	16 52 58.2	-0.6
ROSC				*e*S	Sn	16 53 30.4	+2.1
HELC	**Santa Helena**	**2.45**	**255**	*e*P	Pn	16 53 00.1	-0.7
HELC				*e*S	Sn	16 53 31.9	+0.1
HELC				*i*		16 53 38.2	
	comp=Z,89nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.71**	**234**	*e*P	Pn	16 53 04.3	+0.1
GUY2C				*e*S	Sn	16 53 37.6	-0.4
GUY2C				*i*		16 53 48.1	
	comp=Z,58nm,0.6s						
VILC	**Villavicencio,**	**2.74**	**191**	*e*P	Pn	16 53 03.4	-1.0
VILC				*e*S	Sn	16 53 37.2	-0.9
VILC				*i*		16 53 42.8	
	comp=Z,102nm,0.2s						
RREF	**El Recreo**	**2.90**	**229**	*e*P	Pn	16 53 09.1	+2.3
RREF				*e*S	Sn	16 53 44.4	+1.9
RREF				*i*		16 53 53.9	
	comp=Z,58nm,0.4s						
DBBC	**Dabeiba**	**3.04**	**274⇑**	*i*P	Pn	16 53 07.7	-0.4
DBBC				*e*S	Sn	16 53 42.4	-2.5
DBBC				*i*		16 53 46.1	
	comp=Z,73nm,0.6s						
CODC	**Agustn Codazz**	**3.11**	**355⇑**	*i*P	Pn	16 53 06.9	-2.0
CODC				*e*S	Sn	16 53 45.5	-0.8
CODC				*i*		16 53 51.3	
	comp=Z,21nm,0.8s						
ARGC	**

STG3 Santiaguito 3, 1.53 317 eP Pn 17 44 29.4 -0.8

MOS **08** *17:45:24.1±0.9, 5°.97N×126°.89E, h41km, mb5.1/39, Error ellipse: s-maj=10.9km s-min=5.7km az=113.9*
MAN **08** *17:45:25.8, 5°.64N×126°.96E, h64km, mb5.4, ML4.4, MS4.6*
ISCJB **08** *17:45:28.5±0.4, 5°.87N±0°.02×126°.95E±0°.03, h87km±3km, mb4.8/140, Error ellipse: s-maj=5.6km s-min=3.0km az=166.9*
DJA **08** *17:45:28.9±1.5, 6°N±6°×12°7E±°, h24km±18km, M4.8/12, mb4.9/12, mB5.2/7, MLv5.0/7, Mw(mB)4.5/7*
NEIC **08** *17:45:28.1±2.1, 5°.91N×126°.96E, h68km±6km, mb4.8/114, Error ellipse: s-maj=12.6km s-min=10.3km az=49.0*
BJI **08** *17:45:28.0±0.0, 5°.68N×126°.53E, h65km, mb4.7/41, mB4.9/25, Ms4.3/3, Ms7 4.0/2*
IDC **08** *17:45:30.4±1.4, 5°.89N×126°.95E, h85km±11km, mb4.0/20, mb1 4.1/22, mb1mx4.0/34, mbtmp4.4/22, MS3.3/12, Ms1 3.3/12, ms1mx3.1/27, Error ellipse: s-maj=18.8km s-min=8.9km az=70.0*
KLM **08** *17:45:34.0, 5°.68N×126°.58E, h31km, mb4.7*
ISC 08 17:45:29.5±0.7, 5°.86N±0°.03×126°.95E±0°.05, h79km±6km, n278, σ1s37/292, mb4.8/140**, 12C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.25**	**281**	*e*P	**Pn**	**17 45 49.6**	**-2.0**
DDMP				*e*S	**Sn**	**17 46 05.7**	**-2.7**
MATI	**Mati**	**1.28**	**328**	*e*P	**Pn**	**17 45 50.4**	**-1.6**
MATI				*e*S	**Sn**	**17 46 10.9**	**+1.9**
DAV	**Davao City (W)**	**1.82**	**312**	P	**Pn**	**17 45 59.1**	**+0.1**
	214nm,0.3s,baz=103,slow=2.0,SNR=56						
DAV				S	**Sn**	**17 46 22.9**	**+1.5**
	338nm,0.3s,baz=278,slow=21,SNR=22						
DAV				LR	LR	17 46 53.7	
	comp=Z,576nm,20.1s,baz=105,slow=46						
DAV	**Davao City (W)**	**1.82**	**312**	*e*Pn	**Pn**	**17 45 58.7**	**-0.3**
DAV				*e*		17 45 58.8	
DMPH	**Davao City--Mi**	**1.88**	**310⇑**	*e*P	**Pn**	**17 45 59.5**	**-0.3**
DMPH				*e*S	**Sn**	**17 46 24.6**	**+1.7**
SKMP	**Bagumbayan, Su**	**2.48**	**285**	*e*P	**Pn**	**17 46 06.4**	**-1.5**
SKMP				*e*S	**Sn**	**17 46 36.5**	**-0.8**
BUKP	**Musuan**	**2.75**	**317**	*e*P	**Pn**	**17 46 11.3**	**-0.2**
BUKP				*e*S	**Sn**	**17 46 45.2**	**+1.5**
CTBH	**Cotabato--PC H**	**3.01**	**297‖**	*e*P	**Pn**	**17 46 13.5**	**-1.5**
BUTP	**Butuan**	**3.36**	**337**	*e*P	**Pn**	**17 46 23.0**	**+3.2**
BUTP				*e*S	**Sn**	**17 47 04.8**	**+6.2**
CGP	**Cagayan de Oro**	**3.42**	**319⇑**	*i P*	**Pn**	**17 46 21.7**	**+1.2**
CGP				*i* S	**Sn**	**17 47 06.2**	**+6.3**
PAGZ	**Pagadian**	**4.06**	**299**	*e*P	**Pn**	**17 46 29.3**	**+0.1**
SCPH	**Surigao**	**4.16**	**340**	*e*P	Pn	17 46 42.5	+12
DCPH	**Dipolog City**	**4.48**	**307⇑**	*e*P	Pn	17 46 42.0	+6.9
MSLP	**Maasin**	**4.73**	**334**	*e*P	**Pn**	**17 46 36.8**	**-1.6**
MSLP				*e*S	**Sn**	**17 47 37.2**	**+5.3**
SNPH	**Sibulan**	**5.05**	**313‖**	*e*P	**Pn**	**17 46 45.1**	**+2.2**
TNTI	**Ternate**	**5.07**	**175**	*e*Pn	**Pn**	**17 46 43.4**	**+0.3**
TNTI				*e*Sn	**Sn**	**17 47 37.0**	**-3.3**
TNTI	**Ternate**	**5.07**	**175**	P	**Pn**	**17 46 45.0**	**+1.9**
	277nm,0.7s,3μm1.0nm						
TNTI				S	**Sn**	**17 47 41.8**	**+1.4**
	277nm,0.7s,3μm1.0nm						
LLP	**Lapu-Lapu**	**5.32**	**327**	*e*P	**Pn**	**17 46 46.3**	**-0.2**
LLP				*e*S	**Sn**	**17 47 46.4**	**-0.2**
PLP	**Palo**	**5.62**	**340⇑**	*e*P	**Pn**	**17 46 51.2**	**+0.6**
OCLP	**Ormoc**	**5.66**	**336**	*e*P	**Pn**	**17 46 52.1**	**+1.1**
BESP	**Borongan**	**5.90**	**345**	*e*P	**Pn**	**17 46 58.3**	**+3.9**
CNP	**Catarman**	**6.99**	**341**	*e*P	**Pn**	**17 47 10.6**	**+1.3**
MRSI	**Marisa**	**7.32**	**223**	P	**Pn**	**17 47 14.3**	**+0.5**
SWI	**Sorong**	**7.94**	**147**	P	**Pn**	**17 47 23.8**	**+1.5**
LUWI	**Luwuk**	**8.02**	**211**	*e*Pn	**Pn**	**17 47 24.6**	**+1.2**
LUWI				*e*Sn	**Sn**	**17 48 53.0**	**+0.4**
LUWI	**Luwuk**	**8.02**	**211**	P	**Pn**	**17 47 26.3**	**+2.9**
	205nm,0.9s,2μm						
APSI	**Ampana**	**8.56**	**218**	P	**Pn**	**17 47 34.8**	**+4.1**
MPSI	**Mapaga**	**8.92**	**232**	P	**Pn**	**17 47 34.0**	**-1.7**
TGY	**Tagaytay City**	**10.11**	**325**	LR	LR	17 52 26.0	
	comp=Z,158nm,20.2s,baz=189,slow=41						
FAKI	**Fak Fak**	**10.20**	**149**	*e*Pn	**Pn**	**17 47 53.8**	**+0.6**
KKM	**Kota Kinabalu**	**10.68**	**272**	*e*Pn	**Pn**	**17 48 00.8**	**+1.0**
KKM	**Kota Kinabalu**	**10.68**	**272**	P	**Pn**	**17 48 03.0**	**+3.2**
SRPI	**Serui, Papua**	**12.04**	**129**	P	**P**	**17 48 24.9**	**-3.1**
SPSI	**Sidrap Palu**	**12.11**	**216**	P	**Pn**	**17 48 20.9**	**+1.8**
KAPI	**Kappang**	**12.97**	**214**	P	**Pn**	**17 48 30.8**	**0.0**
	5.5nm,0.3s,baz=4.8,slow=4.7,SNR=3.5						
KAPI	**Kappang**	**12.97**	**214**	*e*Pn	**Pn**	**17 48 29.9**	**-0.9**
KAPI	**Kappang**	**12.97**	**214**	*e*P	**Pn**	**17 48 29.9**	**-0.9**
SAUI	**Saumlaki**	**14.42**	**162**	*e*Pn	**Pn**	**17 48 50.3**	**+0.5**
SBUM	**Sibu**	**15.07**	**258**	*e*Pn	**P**	**17 49 01.8**	**+0.1**
	42nm,0.8s						
SBUM	**Sibu**	**15.07**	**258**	P	**P**	**17 49 01.0**	**-0.7**
MMRI	**Maumere**	**15.14**	**198**	*e*Pn	**Pn**	**17 49 00.5**	**+1.4**
	69nm,1.2s						
EDFI	**Ende, Flores**	**15.43**	**200**	P	**Pn**	**17 49 04.4**	**+1.5**
SOEI	**Soe**	**15.74**	**190**	*e*Pn	**Pn**	**17 49 06.7**	**-0.1**
	60nm,1.0s						
BATI	**Baumata**	**16.29**	**192**	P	**P**	**17 49 15.9**	**+0.7**
	5.8nm,0.3s,baz=103,slow=2.6,SNR=8.1						
BATI	**Baumata**	**16.29**	**192**	*e*Pn	**P**	**17 49 15.9**	**+0.7**
BATI				*e*Pn	**P**	**17 49 15.9**	**+0.7**
KSM	**Kuching**	**17.16**	**256**	*e*Pn	**P**	**17 49 25.4**	**+0.5**
	36nm,1.0s						
KSM	**Kuching**	**17.16**	**256**	P	**P**	**17 49 26.0**	**+1.1**
PLAI	**Plampang**	**17.22**	**212**	P	**P**	**17 49 28.6**	**+3.1**
TWG	**Pinlang**	**17.79**	**342**	*e*P	**P**	**17 49 29.9**	**-1.9**
	248nm,1.9s						
YULB	**Yu-li**	**18.26**	**343**	*e*P	**P**	**17 49 35.4**	**-1.5**
	14nm,1.2s						
TPUB	**Ta-pu**	**18.38**	**341**	*e*P	**P**	**17 49 36.7**	**-1.6**
	46nm,1.5s						
SSLB	**Suanglung**	**18.74**	**343**	*e*P	**P**	**17 49 40.6**	**-1.6**
	47nm,1.8s						
MTN	**Manton Dam**	**19.04**	**167**	*e*P	**P**	**17 49 46.4**	**+0.9**
	66nm,1.4s						
JAGI	**Jajag, Banyuwa**	**19.11**	**222**	*e*P	**P**	**17 49 46.7**	**+0.4**
	80nm,1.6s						
DLV	**T Lat**	**19.21**	**290**	*e*P	**Pn**	**17 49 48.3**	**-0.9**
	51nm,0.8s						
YHNB	**Yeheng**	**19.45**	**345**	*e*P	**P**	**17 49 48.5**	**-1.6**
	195nm,2.0s						
UGM	**Wanagama**	**21.34**	**230**	*e*P	**P**	**17 50 09.5**	**-1.0**
	545nm,1.5s						
LEM	**Lembang**	**23.04**	**237**	P	**P**	**17 50 27.2**	**-1.4**
	15nm,0.7s,baz=89,slow=10.0,SNR=4.9						
CISI	**Cisompet, Garu**	**23.28**	**235**	*e*P	**P**	**17 50 29.2**	**-1.5**
	208nm,1.7s						
MYKOM	**Kota Tinggi**	**23.39**	**261**	*e*P	**P**	**17 50 29.9**	**-1.8**
	13nm,1.0s						
MYKOM	**Kota Tinggi**	**23.39**	**261**	P	**P**	**17 50 33.0**	**+1.3**
FITZ	**Fitzroy Crossi**	**23.84**	**183**	P	**P**	**17 50 36.7**	**+1.1**
	4.0nm,0.7s,baz=1.1,slow=6.2,SNR=10						
FITZ	**Fitzroy Crossi**	**23.84**	**183**	*e*P	**P**	**17 50 35.2**	**-0.3**
	11nm,1.0s						
PANO	**Nakornpanom**	**24.56**	**299**	P	**P**	**17 50 45.9**	**+3.7**
	0.2nm,1.1s						
SKNT	**Sakolnakorn**	**25.04**	**298**	P	**P**	**17 50 47.8**	**+1.2**
	12nm,0.7s						
COEN	**Coen**	**25.43**	**141**	*e*P	**P**	**17 50 50.3**	**+0.2**
	62nm,1.7s						
KHON	**Khomkaen**	**25.83**	**296**	P	**P**	**17 50 54.8**	**+1.1**
	25μm,0.6s						
IPM	**Ipoh**	**25.85**	**268**	*e*P	**P**	**17 50 53.2**	**-0.8**
	15nm,1.0s						
KULM	**Kulim**	**26.18**	**270**	*e*P	**P**	**17 50 56.0**	**-0.9**
	17nm,1.2s						
CHAI	**Chaiyaphum**	**26.43**	**294**	P	**P**	**17 51 00.7**	**+1.5**
	13μm,0.8s						
WRAB	**Tennant Creek**	**26.64**	**164**	*e*P	**P**	**17 51 01.8**	**+0.8**
	20nm,1.1s						
WRAB	**Tennant Creek**	**26.64**	**164**	*e*P	**P**	**17 51 01.8**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,20nm,1.1s						
WRA	**Warramunga Arr**	**26.65**	**164**	P	**P**	**17 51 02.5**	**+1.4**
	comp=Z,32nm,0.3s,baz=337,slow=12,SNR=2.1						
WB2	**Warramunga Arr**	**26.65**	**164**	*e*P	**P**	**17 51 01.7**	**+0.6**
	comp=Z,16nm,0.9s						
WC3	**Warramunga Arr**	**26.67**	**164**	*e*P	**P**	**17 51 01.6**	**+0.3**
	comp=Z,25nm,1.2s						
XMIS	**Christmas Isla**	**26.71**	**233**	*e*P	**P**	**17 51 01.3**	**-0.4**
	comp=Z,254nm,1.8s						
NJ2	**Nanjing**	**27.14**	**345**	*e*P	**P**	**17 51 06.9**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JNU	**Nakatsue**	**27.37**	**7**	*e*P	**P**	**17 51 05.9**	**-1.6**
	comp=Z,93nm,1.7s						
PBKT	**Sadao Pong**	**27.58**	**295**	P	**P**	**17 51 11.2**	**+1.8**
	comp=Z,3.7nm,0.8s						
PSAD1	**Pilbara Seismi**	**28.03**	**194**	*e*P	**P**	**17 51 13.5**	**+0.1**
	comp=Z,21nm,1.4s						
PSAC1	**Pilbara Seismi**	**28.11**	**194**	*e*P	**P**	**17 51 13.1**	**-1.0**
	comp=Z,38nm,1.4s						
PSAC2	**Pilbara Seismi**	**28.11**	**194**	*e*P	**P**	**17 51 13.0**	**-1.1**
	comp=Z,48nm,1.6s						
PSAB2	**Pilbara Seismi**	**28.12**	**194**	*e*P	**P**	**17 51 13.7**	**-0.4**
	comp=Z,85nm,1.9s						
PSAA2	**Pilbara Seismi**	**28.13**	**194**	*e*P	**P**	**17 51 13.4**	**-0.8**
	comp=Z,48nm,1.6s						
PSA00	**Pilbara Seismi**	**28.14**	**194**	*e*P	**P**	**17 51 14.6**	**+0.3**
	comp=Z,47nm,1.5s						
PSAB1	**Pilbara Seismi**	**28.14**	**194**	*e*P	**P**	**17 51 13.8**	**-0.6**
	comp=Z,19nm,1.1s						
PSAA3	**Pilbara Seismi**	**28.14**	**194**	*e*P	**P**	**17 51 13.2**	**-1.1**
	comp=Z,60nm,1.8s						
PSAA1	**Pilbara Seismi**	**28.14**	**194**	*e*P	**P**	**17 51 12.7**	**-1.6**
	comp=Z,26nm,1.2s						
PSAB3	**Pilbara Seismi**	**28.15**	**194**	*e*P	**P**	**17 51 12.8**	**-1.7**
	comp=Z,23nm,1.1s						
PSAC3	**Pilbara Seismi**	**28.19**	**194**	*e*P	**P**	**17 51 13.0**	**-1.8**
	comp=Z,26nm,1.0s						
PSAD3	**Pilbara Seismi**	**28.22**	**194**	*e*P	**P**	**17 51 13.7**	**-1.4**
	comp=Z,34nm,1.4s						
NANT	**Nan**	**28.63**	**299**	P	**P**	**17 51 21.1**	**+2.3**
	comp=Z,8μm,0.6s						
GSI	**Gunungsitoli**	**29.66**	**262**	*e*P	**P**	**17 51 26.2**	**-1.7**
	comp=Z,48nm,1.4s						
CM31	**Chiang Mai Arr**	**30.05**	**297**	*e*P	**P**	**17 51 30.9**	**-0.5**
	comp=Z,13nm,1.6s						
CMAR	**Chiang Mai Arr**	**30.05**	**297**	P	**P**	**17 51 31.3**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=114,slow=7.6,SNR=14						
CMAR				ScP	**ScP**	**17 58 08.2**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=125,slow=1.5,SNR=6.8						
CMAR				LR	LR	18 03 50.2	
	comp=Z,36nm,19.3s,baz=174,slow=37						
KMI	**Kunming**	**30.08**	**312**	P	**P**	**17 51 33.7**	**+1.8**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASAR	**Alice Springs**	**30.12**	**167**	P	**P**	**17 51 33.3**	**+1.3**
	comp=Z,1.2nm,0.5s,baz=344,slow=7.2,SNR=23						
ASAR				PcP	**PcP**	**17 54 32.4**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=345,slow=2.5,SNR=7.4						
ASAR				ScP	**ScP**	**17 58 07.5**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=338,slow=3.2,SNR=5.2						
ASAR				LR	LR	18 05 55.9	
	comp=Z,48nm,19.5s,baz=352,slow=41						
CMMT	**Chiang Mai**	**30.17**	**298**	P	**P**	**17 51 35.8**	**+3.3**
	comp=Z,2.7nm,0.7s						
CHTO	**Chiang Mai**	**30.17**	**298**	*e*P	**P**	**17 51 31.8**	**-0.7**
	comp=Z,3.0nm,0.6s						
CHTO	**Chiang Mai**	**30.17**	**298**	*e*P	**P**	**17 51 31.8**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INU	**Inuyama**	**30.78**	**16**	*e*P	**P**	**17 51 36.0**	**-1.6**
	comp=Z,9.4nm,1.1s						
PATS	**Pohnpei**	**31.18**	**86**	*e*P	**P**	**17 51 38.8**	**-2.7**
	comp=Z,140nm,1.2s						
KSRS	**Korea Array**	**31.46**	**1**	LR	LR	18 03 59.2	
	comp=Z,33nm,21.7s,baz=180,slow=35						
MAJO	**Matsushiro**	**32.24**	**17**	*e*P	**P**	**17 51 49.1**	**-1.3**
MAJO	**Matsushiro**	**32.24**	**17**	*e*P	**P**	**17 51 49.2**	**-1.3**
MJAR	**Matsushiro Arr**	**32.24**	**17**	P	**P**	**17 51 49.1**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=189,slow=9.1,SNR=5.8						
MJAR				LR	LR	18 03 44.9	
	comp=Z,38nm,21.4s,baz=210,slow=34						
XAN	**Xi'an**	**32.64**	**332**	P	**P**	**17 51 54.1**	**0.0**
XAN				pmax	pmax		
	comp=Z,12nm,1.1s						
XAN				pmax	pmax		
	comp=Z,100nm,3.9s						
XAN	**Xi'an**	**32.64**	**332**	*e*P	**P**	**17 51 53.7**	**-0.4**
	comp=Z,11nm,0.9s						
XAN	**Xi'an**	**32.64**	**332**	*e*P	**P**	**17 51 53.7**	**-0.4**
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
CD2	**Chengdu**	**33.09**	**322**	*e*P	**P**	**17 51 59.0**	**+1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	**Baijiatuan**	**35.37**	**346**	*e*P	**P**	**17 52 17.6**	**+0.1**
	comp=Z,20nm,1.2s						
BJT	**Baijiatuan**	**35.37**	**346**	*e*P	**P**	**17 52 17.6**	**+0.1**
BJT				pmax	pmax		
	comp=Z,20nm,1.2s						
MORW	**Morawa**	**36.28**	**196**	*e*P	**P**	**17 52 26.0**	**+0.6**
	comp=Z,61nm,1.9s						
FORT	**Forrest**	**36.44**	**178**	*e*P	**P**	**17 52 27.6**	**+0.8**
	comp=Z,22nm,0.9s						
LZH	**Lanzhou**	**36.81**	**328**	*e*P	**P**	**17 52 31.9**	**+1.8**
LZH				pP	pP	17 52 47.2	-0.7
LZH				sP	pwP	17 52 54.0	+1.6
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
MDJ	**Mudanjiang**	**38.67**	**3**	P	P	17 52 56.6	+11
MDJ	**Mudanjiang**	**38.67**	**3**	*e*P	**P**	**17 52 44.6**	**-0.9**
	comp=Z,14nm,1.2s						
SHL	**Shillong**	**38.83**	**304**	*e*P	**P**	**17 52 46.7**	**-0.7**
	comp=Z,9.6nm,0.6s						
SHL	**Shillong**	**38.83**	**304**	*e*P	**P**	**17 52 46.7**	**-0.7**
SHL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
EIDS	**Eidsvold**	**38.91**	**144**	*e*P	**P**	**17 52 48.3**	**+0.6**
	comp=Z,27nm,1.4s						
BBOO	**Buckleboo**	**39.42**	**168**	*e*P	**P**	**17 52 52.9**	**+1.1**
	comp=Z,91nm,1.9s						
NWAO	**Narrogin (SRO)**	**39.66**	**193**	*e*P	**P**	**17 52 55.3**	**+1.5**
	comp=Z,90nm,1.5s						
NWAO	**Narrogin (SRO)**	**39.66**	**193**	*e*P	**P**	**17 52 55.3**	**+1.5**
NWAO				pmax	pmax		
	comp=Z,90nm,1.5s						
STKA	**Stephens Creek**	**40.04**	**160**	P	**P**	**17 52 57.6**	**+0.6**
	comp=Z,3.4nm,0.5s,baz=338,slow=9.2,SNR=12						
STKA				LR	LR	18 14 27.8	
	comp=Z,96nm,18.8s,baz=4.7,slow=43						
STKA	**Stephens Creek**	**40.04**	**160**	*e*P	**P**	**17 52 58.0**	**+1.0**
	comp=Z,2.3nm,1.0s						
STKA	**Stephens Creek**	**40.04**	**160**	*e*P	**P**	**17 52 58.0**	**+1.0**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ASAJ	**Asahikawa**	**40.51**	**17**	P	**P**	**17 53 01.9**	**+1.2**
	comp=Z,3.9nm,0.6s,baz=187,slow=9.0,SNR=11						
GTA	**Gaotai**	**41.41**	**328**	P	**P**	**17 53 08.5**	**+0.1**
GTA				pP	pP	17 53 27.1	+0.7
GTA				sP	pwP	17 53 34.9	+3.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,66nm,4.9s						
GTA				LR	LR		
	comp=Z,300nm,17.9s						
ARMA	**Armidale**	**43.13**	**148**	*e*P	**P**	**17 53 23.7**	**+1.2**
	comp=Z,41nm,1.5s						
KLR	**Kul'dur**	**43.41**	**5⇑**	*e*P	**P**	**17 53 25.1**	**+0.8**
RAMN	**Ramite**	**43.74**	**303**	*e*P	**P**	**17 53 27.7**	**+0.1**
	comp=Z,12nm,0.7s						
JIRN	**Jiri**	**44.34**	**304**	*e*P	**P**	**17 53 32.6**	**0.0**
	comp=Z,17nm,0.6s						
GUN	**Gumba**	**44.69**	**304**	*e*P	**P**	**17 53 35.4**	**+0.1**
	comp=Z,21nm,0.8s						
PKI	**Pulchoki**	**44.95**	**304**	*e*P	**P**	**17 53 36.8**	**-0.6**
PKIN	**Phulchoki**	**44.97**	**304**	*e*P	**P**	**17 53 36.8**	**-0.6**
KKN	**Kakani**	**45.14**	**304**	*e*P	**P**	**17 53 38.5**	**-0.2**
ULN	**Ulaanbaatar**	**45.18**	**341**	*e*P	**P**	**17 53 38.1**	**-0.5**
	comp=Z,6.3nm,0.9s						
ULN	**Ulaanbaatar**	**45.18**	**341**	*c e*P	**P**	**17 53 38.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,15nm,1.7s						
DMN	**Daman**	**45.22**	**303**	*e*P	**P**	**17 53 38.8**	**-0.6**
SONM	**Songino Array**	**45.37**	**341**	P	**P**	**17 53 40.3**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=156,slow=7.7,SNR=8.9						
CAN	**Canberra**	**45.92**	**155**	*e*P	**P**	**17 53 45.8**	**+1.3**
	comp=Z,48nm,1.9s						
CAN	**Canberra**	**45.92**	**155**	*e*P	**P**	**17 53 45.8**	**+1.3**
CAN				pmax	pmax		
	comp=Z,48nm,1.9s						
PALK	**Pallekele**	**45.95**	**274**	*e*P	**P**	**17 53 44.0**	**-1.1**
	comp=Z,87nm,1.5s						
PALK	**Pallekele**	**45.95**	**274**	*e*P	**P**	**17 53 44.0**	**-1.1**
PALK				pmax	pmax		
	comp=Z,87nm,1.5s						
KOLN	**Koldanda**	**46.52**	**303**	*e*P	**P**	**17 53 49.6**	**0.0**
TOO	**Toolangi**	**46.54**	**160**	*e*P	**P**	**17 53 51.4**	**+2.1**
	comp=Z,78nm,1.9s						
TOO	**Toolangi**	**46.54**	**160**	*e*P	**P**	**17 53 51.4**	**+2.1**
TOO				pmax	pmax		
	comp=Z,78nm,1.9s						
DANN	**Dangsing**	**46.59**	**304**	*e*P	**P**	**17 53 49.6**	**-0.7**
	comp=Z,29nm,0.6s						
PYUN	**Piuthan**	**47.14**	**303**	*e*P	**P**	**17 53 54.5**	**0.0**
	comp=Z,22nm,0.7s						
MARNC	**Mare, Loyalty**	**48.58**	**125**	*e*P	**P**	**17 54 04.9**	**-0.5**
	comp=Z,446nm,1.6s						
TLY	**Talaya**	**49.59**	**341**	*e*P	**P**	**17 54 12.2**	**-0.5**
	comp=Z,4.8nm,1.0s						
TLY	**Talaya**	**49.59**	**341⇑**	*e*P	**P**	**17 54 12.7**	**0.0**
TLY				*i* AP	**pP**	**17 54 30.1**	**-1.2**
WMQ	**Urumqi**	**51.13**	**324**	*e*P	**P**	**17 54 25.2**	**+0.7**
WMQ				sP	sP	17 54 52.8	+1.2
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.7s						
WMQ				LR	LR		
	comp=Z,630nm,29.9s						
WMQ				LR	LR		
	comp=Z,1μm,31.5s						
WMQ				LR	LR		
	comp=Z,270nm,32.1s						
WMQ	**Urumqi**	**51.13**	**324**	*e*P	**P**	**17 54 23.9**	**-0.6**
	comp=Z,26nm,0.7s						
WMQ	**Urumqi**	**51.13**	**324**	*e*P	**P**	**17 54 23.9**	**-0.6**
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
PETK	**Petropavlovsk-**	**53.39**	**23**	LR	LR	18 20 17.2	
	comp=Z,17nm,19.1s,baz=227,slow=39						
DGZ	**Jazzator, Alta**	**54.87**	**330**	*c e*P	**P**	**17 54 52.3**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
PDGK	**Podgornoye**	**55.93**	**320**	P	**P**	**17 55 00.0**	**+0.3**
PDGK				pmax	pmax		
	comp=Z,13nm,0.9s						
MK31	**Makanchi Array**	**55.95**	**324**	*e*P	**P**	**17 54 60.0**	**+0.3**
	comp=Z,8.8nm,0.9s						
MK32	**Makanchi Array**	**55.95**	**324**	*e*ScP	**ScP**	**17 59 50.6**	**+1.0**
MKAR	**Makanchi Array**	**55.95**	**324**	P	**P**	**17 54 60.0**	**+0.3**
	comp=Z,5.1nm,0.5s,baz=125,slow=8.0,SNR=52						
MKAR				ScP	**ScP**	**17 59 50.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=126,slow=4.4,SNR=3.6						
MKAR				LR	LR	18 20 39.4	
	comp=Z,21nm,18.3s,baz=58,slow=38						
MKAR	**Makanchi Array**	**55.95**	**324**	P	**P**	**17 55 00.0**	**+0.3**
YAK	**Yakutsk**	**56.09**	**2**	*e*P	**P**	**17 54 58.8**	**-1.5**
	comp=Z,9.7nm,0.9s						
YAK	**Yakutsk**	**56.09**	**2**	*e*P	**P**	**17 54 58.8**	**-1.5**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAKZ	**Makanchi**	**56.14**	**324**	*e*P	**P**	**17 55 00.9**	**-0.1**
	comp=Z,15nm,1.0s						
MAKZ	**Makanchi**	**56.14**	**324**	*e*P	**P**	**17 55 00.9**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.0s						
MA2	**Magadan**	**56.60**	**14**	*e*P	**P**	**17 55 04.1**	**+0.1**
	comp=Z,19nm,1.4s						
MA2	**Magadan**	**56.60**	**14**	*e*P	**P**	**17 55 04.1**	**+0.1**
MA2				pmax	pmax		
	comp=Z,19nm,1.4s						
KSH	**Kashi**	**56.72**	**314**	*e*P	**P**	**17 55 09.4**	**+4.1**
NIL	**Nilore**	**56.82**	**307**	*e*P	**P**	**17 55 05.5**	**-0.6**
	comp=Z,9.6nm,0.6s						
NIL	**Nilore**	**56.82**	**307**	*e*P	**P**	**17 55 05.5**	**-0.6**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NRN	**Naryn**	**57.44**	**316**	*e*P	**P**	**17 55 09.8**	**-0.9**
	comp=Z,2.6nm,0.7s						
NRN	**Naryn**	**57.44**	**316**	*e*P	**P**	**17 55 09.8**	**-0.9**
NRN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KZA	**Kyzart**	**58.22**	**317**	P	**P**	**17 55 17.5**	**+1.3**
	SNR=5.0						
UCH	**Uchtor**	**58.78**	**316**	P	**P**	**17 55 21.1**	**+0.9**
	SNR=9.1						
ZAA0	**Zalesovo Array**	**58.81**	**332**	*e*P	**P**	**17 55 18.3**	**-1.2**
	comp=Z,16nm,1.8s						
ZALV	**Zalesovo Beam**	**58.81**	**332**	P	**P**	**17 55 18.6**	**-0.9**
	comp=Z,1.7nm,0.4s,baz=145,slow=5.7,SNR=10						
ZALV				LR	LR	18 21 17.5	
	comp=Z,31nm,20.6s,baz=68,slow=36						
AAK	**Ala-Archa**	**58.95**	**317**	*e*P	**P**	**17 55 20.2**	**

ARU					pmax	pmax			
	comp=Z,6.0nm,0.7s								
ANM	**Nome**	**75.25**	**24**	*e*P		**P**		**17 57 04.0**	**+0.5**
	comp=Z,20nm,1.2s								
ANM	**Nome**	**75.25**	**24**	*e*P		**P**		**17 57 04.0**	**+0.5**
ANM					pmax	pmax			
	comp=Z,20nm,1.2s								
KHLU	**Kahalu`u**	**75.98**	**71**	*e*P		**P**		**17 57 11.7**	**+2.9**
	comp=Z,138nm,1.3s								
SII	**Sitkinak Islan**	**79.00**	**34**	*e*P		**P**		**17 57 23.3**	**-1.5**
	comp=Z,146nm,1.4s								
OHAK	**Old Harbor**	**79.56**	**33**	*e*P		**P**		**17 57 26.7**	**-1.0**
	comp=Z,62nm,1.7s								
KDAK	**Kodiak Island**	**79.99**	**32**	*e*P		**P**		**17 57 28.6**	**-1.4**
	comp=Z,34nm,1.5s								
KDAK	**Kodiak Island**	**79.99**	**32**	*e*P		**P**		**17 57 28.6**	**-1.4**
KDAK					pmax	pmax			
	comp=Z,34nm,1.5s								
TBLG	**Delisi**	**80.32**	**311**	*e*P		**P**		**17 57 32.8**	**+0.5**
	comp=Z,14nm,0.9s								
TBLG	**Delisi**	**80.32**	**311**	*e*P		**P**		**17 57 32.8**	**+0.5**
TBLG					pmax	pmax			
	comp=Z,14nm,0.9s								
CAST	**Castle Rocks**	**80.75**	**27**	*e*P		**P**		**17 57 35.0**	**+0.9**
	comp=Z,3.5nm,0.8s								
PRGR	**Permogore**	**80.75**	**331**	*e*P		**P**		**17 57 33.2**	**-0.8**
PRGR					pmax	pmax			
	comp=Z,29nm,0.4s								
ZEI	**Tsey**	**80.95**	**312**	*e*P		**P**		**17 57 35.5**	**-0.3**
ZEI					pmax	pmax			
	comp=Z,5.0nm,0.4s								
BRLK	**Bradley Lake**	**81.02**	**31**	*e*P		**P**		**17 57 34.2**	**-1.4**
	comp=Z,67nm,2.0s								
SUA	**Susitna One**	**81.21**	**29**	*e*P		**P**		**17 57 37.3**	**+0.6**
	comp=Z,5.2nm,0.9s								
AKH	**Akhalkalaki**	**81.25**	**311**	*e*P		**P**		**17 57 38.4**	**+1.0**
	comp=Z,8.9nm,0.8s								
AKH	**Akhalkalaki**	**81.25**	**311**	*e*P		**P**		**17 57 38.4**	**+1.0**
AKH					pmax	pmax			
	comp=Z,9.0nm,0.8s								
BPAW	**Bear Paw Mtn.**	**81.29**	**26**	*e*P		**P**		**17 57 36.3**	**-0.6**
	comp=Z,6.3nm,1.2s								
MLY	**Manley**	**81.47**	**25**	*e*P		**P**		**17 57 37.7**	**-0.3**
	comp=Z,3.7nm,1.0s								
TRF	**Thorofare Moun**	**81.55**	**27**	*e*P		**P**		**17 57 38.0**	**-0.6**
	comp=Z,1.7nm,1.1s								
KBZ	**Khabaz**	**81.69**	**313**	P		**P**		**17 57 39.6**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=170,slow=7.7,SNR=4.7								
SEW	**Seward**	**81.76**	**30**	*e*P		**P**		**17 57 39.0**	**-0.4**
	comp=Z,16nm,1.2s								
KIV	**Kislovodsk**	**81.84**	**313**	*e*P		**P**		**17 57 41.2**	**+0.8**
KIV					pmax	pmax			
	comp=Z,26nm,1.0s								
COLD	**Coldfoot**	**81.86**	**23**	*e*P		**P**		**17 57 39.6**	**-0.2**
	comp=Z,1.9nm,0.6s								
RND	**Reindeer**	**82.20**	**27**	*e*P		**P**		**17 57 40.8**	**-1.0**
	comp=Z,7.6nm,1.3s								
RND	**Reindeer**	**82.20**	**27**	*e*P		**P**		**17 57 40.8**	**-1.0**
RND					pmax	pmax			
	comp=Z,8.0nm,1.3s								
TOLK	**Toolik Lake Re**	**82.20**	**22**	*e*P		**P**		**17 57 42.8**	**+1.1**
	comp=Z,21nm,1.9s								
VRH	**Novokhopyorsk**	**82.48**	**321**	*e*P		**P**		**17 57 42.8**	**-0.6**
VRH					pmax	pmax			
	comp=Z,10.0nm,0.7s								
CCB	**Clear Creek Bu**	**82.70**	**26**	*e*P		**P**		**17 57 44.0**	**-0.3**
	comp=Z,4.3nm,1.2s								
ILAR	**Eielson Array**	**83.10**	**26**	P		**P**		**17 57 45.5**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=250,slow=5.5,SNR=11								
ILB	**Eielson Array**	**83.10**	**26**	*e*P		**P**		**17 57 45.2**	**-1.2**
	comp=Z,13nm,1.8s								
DIV	**Divide**	**83.59**	**29**	*e*P		**P**		**17 57 49.8**	**+0.7**
	comp=Z,14nm,0.7s								
KLMR	**Klimovskoe**	**83.67**	**331**	*e*P		**P**		**17 57 47.6**	**-1.7**
KLMR					pmax	pmax			
	comp=Z,15nm,0.9s								
RIDG	**Independent Ri**	**84.00**	**27**	*e*P		**P**		**17 57 51.9**	**+0.8**
	comp=Z,7.7nm,1.1s								
VSR	**Storozhevoye**	**84.09**	**321**	*e*P		**P**		**17 57 50.9**	**-0.8**
VSR					pmax	pmax			
	comp=Z,10.0nm,1.3s								
LPSR	**Galich'ya Gora**	**84.19**	**322**	*e*P		**P**		**17 57 51.8**	**-0.3**
LPSR					pmax	pmax			
	comp=Z,9.0nm,0.6s								
TMCR	**Tamitsa**	**84.30**	**334**	*e*P		**P**		**17 57 54.2**	**+1.8**
TMCR					pmax	pmax			
	comp=Z,17nm,0.8s								
OBN	**Obninsk**	**85.46**	**325**	*d i*P		**P**		**17 57 58.6**	**+0.2**
OBN				*e*				18 01 12.7	
OBN				*e*S		S		18 08 32.5	+9.2
OBN					pmax	pmax			
	comp=Z,36nm,1.7s								
OBN					MLR	MLR			
	comp=Z,24nm,17.0s								
VNDA	**Vanda**	**85.50**	**173**	P		**P**		**17 57 57.9**	**-0.2**
	comp=Z,2.7nm,0.9s,baz=308,slow=6.3,SNR=7.1								
VNDA	**Vanda**	**85.50**	**173**	*e*P		**P**		**17 57 59.2**	**+1.0**
	comp=Z,3.0nm,0.7s								
VNDA	**Vanda**	**85.50**	**173**	*e*P		**P**		**17 57 59.2**	**+1.0**
VNDA					pmax	pmax			
	comp=Z,3.0nm,0.7s								
ANN	**Anapa**	**85.57**	**314**	*e*P		**P**		**17 57 58.8**	**-0.5**
ANN					pmax	pmax			
	comp=Z,38nm,0.9s								
MAW	**Mawson**	**85.81**	**200**	P		**P**		**17 57 59.5**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=26,slow=12,SNR=3.7								
INK	**Inuvik**	**88.12**	**22**	*e*P		**P**		**17 58 11.9**	**+0.8**
	comp=Z,13nm,1.9s								
INK	**Inuvik**	**88.12**	**22**	*e*P		**P**		**17 58 11.9**	**+0.8**
INK					pmax	pmax			
	comp=Z,13nm,1.9s								
ARCES	**ARCESS Array B**	**88.54**	**340**	P		**P**		**17 58 13.7**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=91,slow=7.1,SNR=6.5								
BR131	**Keskin Array S**	**88.84**	**310**	*e*P		**P**		**17 58 14.9**	**-0.5**
	comp=Z,2.7nm,0.8s								
BR131	**Keskin Array S**	**88.84**	**310**	*e*P		**P**		**17 58 14.9**	**-0.5**
BR131					pmax	pmax			
	comp=Z,3.0nm,0.8s								
BRTR	**Keskin Array B**	**88.84**	**310**	P		**P**		**17 58 14.7**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=115,slow=4.1,SNR=13								
FINES	**FINESS Array B**	**90.07**	**332**	P		**P**		**17 58 21.5**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=67,slow=4.7,SNR=14								
AKASG	**Malin Array Be**	**90.39**	**321**	P		**P**		**17 58 21.8**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=73,slow=4.5,SNR=4.8								
AKASG	**Malin Array Be**	**90.39**	**321**	*ce*P		**P**		**17 58 23.5**	**+1.4**
BUR08	**Bucovina Ar. S**	**93.57**	**318**	*e*P		**P**		**17 58 36.5**	**-0.6**
	comp=Z,3.8nm,1.1s								
NB2	**NORSAR Subarra**	**96.99**	**334**	P		**P**		**17 58 52.9**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=67,slow=4.6								
NB2	**NORSAR Subarra**	**96.99**	**334**	P		**P**		**17 58 52.9**	**+0.6**
	baz=67,slow=4.6								
NOA	**NORSAR Array B**	**96.99**	**334**	P		**P**		**17 58 52.8**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=66,slow=4.5,SNR=8.0								
NOA					LR	LR		18 45 58.7	
	comp=Z,17nm,21.8s,baz=335,slow=37								
BRG	**Berggiesshubel**	**99.67**	**324**	*e*P		**Pdif**		**17 59 06.3**	**+1.8**
	comp=Z,3.0nm,1.1s								
BRG	**Berggiesshubel**	**99.67**	**324**	*e*P		**Pdif**		**17 59 06.3**	**+1.8**
BRG					pmax	pmax			
	comp=Z,26nm,1.1s								
CLL	**Collm**	**100.05**	**324**	*e*P		**Pdif**		**17 59 07.0**	**+0.8**
GERES	**GERESS Array B**	**100.56**	**322**	P		**Pdif**		**17 59 08.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=38,slow=5.2,SNR=3.9								
TXAR	**Lajitas Array**	**120.12**	**51**	PKP		**PKiKP**		**18 04 12.6**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=90,slow=1.3,SNR=3.4								
TORD	**Torodi Ar. Bea**	**122.44**	**290**	PKP		**PKPdf**		**18 04 15.7**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=25,slow=2.7,SNR=9.6								
TRQA	**Tornquist**	**146.94**	**167**	*e*PKPbc		**PKPab**		**18 05 04.7**	**-0.2**
TRQA	**Tornquist**	**146.94**	**167**	*e*PKP2		**PKPab**		**18 05 04.7**	**-0.2**
CFA	**Coronel Fontan**	**150.70**	**153**	PKPbc		**PKPbc**		**18 05 13.2**	**-0.2**
	comp=Z,3.8nm,0.5s,baz=253,slow=2.3,SNR=11								
LCO	**Las Campanas**	**151.56**	**146**	PKIKP		**PKiKP**		**18 05 17.7**	**+1.6**

MAN 08 17:50:37.1, 9.18N×127.02E, h35km, mb4.5, ML3.3, MS3.1, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.40**	**262**	*e*P	Pn	17 50 57.6	-2.5
BUTP				*e*S	Sn	17 51 14.3	-3.0
SCPH	**Surigao**	**1.63**	**292**	||*i*P	Pn	17 51 10.5	+7.2
SCPH				*i* S	Sn	17 51 27.6	+4.5
BUKP	**Musuan**	**2.33**	**237**	*e*P	Pn	17 51 13.7	+0.8
BUKP				*e*S	Sn	17 51 41.5	+1.1
MSLP	**Maasin**	**2.33**	**294**	*e*P	Pn	17 51 14.0	+1.0
MATI	**Mati**	**2.34**	**199**	*e*P	Pn	17 51 13.4	+0.3
CGP	**Cagayan de Oro**	**2.41**	**253**	⇑*i*P	Pn	17 51 12.7	-1.4
CGP				*i* S	Sn	17 51 41.5	-0.9
BESP	**Borongan**	**2.87**	**327**	*e*P	Pn	17 51 21.6	+1.2
OCLP	**Ormoc**	**3.02**	**308**	*e*P	Pn	17 51 24.3	+1.8
LLP	**Lupa-Lapu**	**3.22**	**291**	*e*P	Pn	17 51 26.2	+1.0
LLP				*e*S	Pn	17 51 27.0	+1.8
DDMP	**Don Marcelino,**	**3.31**	**203**	*e*P	Pn	17 51 28.9	+2.3
DDMP				*e*S	Sn	17 52 06.4	+1.7
CNP	**Catarman**	**4.04**	**325**	*e*P	Pn	17 51 37.6	+1.1

NEIC ***08*** *18:12:05.9±2.0, 24.36S×176.09W, h10km, mb4.9/28, Error ellipse: s-maj=28.1km s-min=18.8km az=113.0*
IDC ***08*** *18:12:05.3±1.0, 24.56S×176.09W, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.2/23, mbtmp4.1/12, ML3.6/1, MS3.6/7, Ms1 3.6/7, ms1mx3.2/28, Error ellipse: s-maj=34.9km s-min=22.0km az=138.0*
ISCJB ***08*** *18:12:08.1±0.5, 24.65S±0.06×176.19W±0.09, h30km, mb4.5/28, MS3.5/7, Error ellipse: s-maj=12.5km s-min=9.1km az=11.6*

ISC 08 18:12:09.6±0.6, 24.74S±0.07×176.1W±0.1, h30km, n56, σ2§44/48, mb4.8/28, MS3.5/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**8.05**	**47**	*e*Pn	Pn	18 13 51.9	-13
NIUE				*e*Sn	Sn	18 15 08.9	-26
URZ	**Urewera**	**14.65**	**202**	Pn	**Pn**	**18 15 37.5**	**+2.7**
	0.3nm,0.3s,baz=149,slow=18,SNR=2.2						
URZ				Sn	**Sn**	**18 18 08.3**	**-7.9**
	0.3nm,0.3s,baz=160,slow=18,SNR=5.1						
URZ	**Urewera**	**14.65**	**202**	*e*Pn	**Pn**	**18 15 33.8**	**-0.9**
	52nm,1.4s						
RAR	**Rarotonga**	**15.46**	**80**	LR	LR	18 21 13.8	
	comp=Z,69nm,18.3s,baz=288,slow=36						
BKZ	**Black Stump Fm**	**15.68**	**202**	*e*Pn	**Pn**	**18 15 47.4**	**-1.0**
	35nm,1.4s						
HIZ	**Hauiti**	**15.72**	**207**	*e*Pn	**P**	**18 15 51.6**	**-0.9**
	154nm,1.3s						
DZM	**Mont Dzumac**	**16.23**	**276**	LR	LR	18 20 55.4	
	comp=Z,190nm,20.7s,baz=39,slow=33						
DZM	**Mont Dzumac**	**16.23**	**276**	*e*LR	LR	18 19 37.0	
	comp=Z,258nm,23.4s						
DZM	**Mont Dzumac**	**16.23**	**276**	*e*Pn	**Pn**	**18 15 55.7**	**+0.2**
	81nm,2.0s						
BFZ	**Birch Farm**	**17.13**	**200**	*e*Pn	**Pn**	**18 16 03.6**	**-3.2**
	46nm,1.1s						
SNZO	**South Karori**	**18.21**	**203**	*e*P	**P**	**18 16 14.9**	**-5.1**
	60nm,1.1s						
THZ	**Tophouse**	**19.27**	**206**	*e*P	**P**	**18 16 26.3**	**-5.5**
	151nm,1.5s						
KHZ	**Kahutara**	**19.59**	**203**	*e*P	**P**	**18 16 30.5**	**-4.8**
	67nm,1.5s						
OXZ	**Oxford**	**20.94**	**205**	*e*P	**P**	**18 16 48.2**	**-1.6**
	36nm,1.6s						
MQZ	**McQueen's Vall**	**21.04**	**203**	*e*P	**P**	**18 16 51.4**	**+0.5**
	53nm,1.3s						
KNTN	**Kanton**	**22.25**	**12**	*e*P	**P**	**18 16 58.0**	**-6.1**
	57nm,1.0s						
TBI	**Tubuai**	**24.37**	**92**	*e*LR	LR	18 23 04.8	
	comp=Z,114nm,29.0s						
WHZ	**Wether Hill Ro**	**24.70**	**207**	*e*P	**P**	**18 17 28.4**	**+0.5**
	93nm,1.7s						
PPT2	**Papeete2**	**25.73**	**79**	*e*LR	LR	18 23 51.4	
	comp=Z,140nm,26.0s						
PPT	**Papeete**	**25.73**	**79**	LR	LR	18 26 00.4	
	comp=Z,54nm,18.8s,baz=196,slow=32						
HNR	**Honiara**	**27.41**	**300**	LR	LR	18 27 02.3	
	comp=Z,120nm,20.8s,baz=132,slow=33						
CAN	**Canberra**	**31.84**	**242**	*e*P	**P**	**18 18 33.2**	**+1.3**
	61nm,2.0s						
CTAO	**Charters Tower**	**35.02**	**270**	*e*P	**P**	**18 19 00.8**	**+1.1**
	79nm,1.9s						
STKA	**Stephens Creek**	**37.72**	**249**	P	**P**	**18 19 24.0**	**+1.3**
	1.9nm,0.9s,baz=100,slow=13,SNR=4.7						
STKA				LR	LR	18 34 02.3	
	comp=Z,172nm,18.4s,baz=33,slow=35						
STKA	**Stephens Creek**	**37.72**	**249**	*e*P	**P**	**18 19 24.1**	**+1.5**
	4.1nm,1.8s						
BBOO	**Buckleboo**	**42.39**	**248**	*e*P	**P**	**18 20 01.6**	**+0.2**
	77nm,2.0s						
AS31	**Alice Springs**	**45.39**	**260**	*e*P	**P**	**18 20 25.7**	**0.0**
	1.6nm,1.3s						
ASAR	**Alice Springs**	**45.39**	**260**	P	**P**	**18 20 25.6**	**-0.1**
	1.0nm,0.4s,baz=91,slow=6.8,SNR=55						
ASAR				LR	LR	18 38 51.0	
	comp=Z,112nm,18.6s,baz=97,slow=35						
WC3	**Warramunga Arr**	**45.84**	**266**	*e*P	**P**	**18 20 28.4**	**-0.9**
	41nm,1.9s						
WB2	**Warramunga Arr**	**45.87**	**266**	*e*P	**P**	**18 20 28.5**	**-0.9**
	13nm,1.4s						
WR1	**Warramunga Arr**	**45.88**	**266**	*e*P	**P**	**18 20 28.7**	**-0.9**
WRA	**Warramunga Arr**	**45.88**	**266**	P	**P**	**18 20 28.7**	**-0.9**
	1.6nm,0.5s,baz=93,slow=9.3,SNR=19						
FORT	**Forrest**	**49.34**	**250**	*e*P	**P**	**18 20 55.4**	**-0.9**
	21nm,1.0s						
SBA	**Scott Base**	**53.79**	**184**	*e*P	**P**	**18 21 33.4**	**+4.6**
	16nm,1.8s						
FITZ	**Fitzroy Crossi**	**54.29**	**265**	LR	LR	18 44 40.5	
	comp=Z,99nm,18.4s,baz=111,slow=36						
FITZ	**Fitzroy Crossi**	**54.29**	**265**	*e*P	**P**	**18 21 33.3**	**0.0**
	19nm,1.5s						
MORW	**Morawa**	**59.91**	**250**	*e*P	**P**	**18 22 14.1**	**+1.0**
	26nm,1.6s						
CASY	**Casey**	**60.92**	**206**	*e*P	**P**	**18 22 21.0**	**+1.7**
	15nm,1.7s						
QSPA	**South Pole Qui**	**65.35**	**180**	*e*P	**P**	**18 22 51.2**	**+2.3**
	8.9nm,1.1s						
MJAR	**Matsushiro Arr**	**74.64**	**323**	P	**P**	**18 23 44.5**	**-1.5**
	1.1nm,0.8s,baz=164,slow=5.5,SNR=5.4						
MAJO	**Matsushiro**	**74.64**	**323**	*e*P	**P**	**18 23 44.5**	**-1.6**
ADK	**Adak**	**76.29**	**360**	*e*P	**P**	**18 23 54.9**	**-0.1**
	9.2nm,0.9s						
ATKA	**Atka Island**	**76.63**	**1**	*e*P	**P**	**18 23 55.0**	**-2.0**
	16nm,1.0s						
MAW	**Mawson**	**78.18**	**200**	P	**P**	**18 24 07.7**	**+2.0**
	2.2nm,0.7s,baz=215,slow=5.0,SNR=4.6						
PETK	**Petropavlovsk-**	**80.80**	**344**	P	**P**	**18 24 20.3**	**+0.4**
	4.6nm,0.8s,baz=128,slow=7.8,SNR=5.5						
KSRS	**Korea Array**	**81.19**	**318**	P	**P**	**18 24 23.3**	**+0.9**
	0.4nm,0.7s,baz=132,slow=6.5,SNR=5.0						
NVAR	**Mina Array Bea**	**82.95**	**42**	P	**P**	**18 24 32.2**	**+0.3**
	0.5nm,0.7s,baz=214,slow=10,SNR=3.8						
USRK	**Ussuriysk Ar.**	**83.43**	**325**	P	**P**	**18 24 35.0**	**+1.1**
	3.7nm,0.8s,baz=255,slow=15,SNR=6.7						
VNA3	**Neumayer Olymp**	**83.81**	**176**	P	**P**	**18 24 35.9**	**+0.3**
VNA2	**Neumayer--Watz**	**84.27**	**176**	P	**P**	**18 24 38.5**	**+0.5**
	baz=185,slow=3.1						
VNA1	**Neumayer--Stat**	**84.49**	**176**	P	**P**	**18 24 40.1**	**+1.1**
TXAR	**Lajitas Array**	**87.91**	**56**	P	**P**	**18 24 55.2**	**-1.5**
	0.4nm,0.8s,baz=228,slow=4.9,SNR=4.3						
CMAR	**Chiang Mai Arr**	**93.14**	**289**	P	**P**	**18 25 23.4**	**+2.1**
	1.1nm,0.8s,baz=131,slow=3.1,SNR=8.5						
AKASG	**Malin Array Be**	**147.54**	**330**	PKPbc	**PKPbc**	**18 31 49.5**	**-1.1**
	1.4nm,0.6s,baz=45,slow=4.0,SNR=7.5						
BRTR	**Keskin Array B**	**150.89**	**308**	PKPbc	**PKPbc**	**18 31 58.5**	**-1.0**
	1.3nm,0.8s,baz=142,slow=2.1,SNR=7.9						
CLL	**Collm**	**152.56**	**348**	*i* PKPbc	**PKiKP**	**18 32 03.7**	**+0.7**

KRSC 08 18:26:28.1±1.3, 49.20N×156.41E, h45km±21km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.50**	**353**	*e*P	Pn	18 26 53.9	+1.4
SKR				*e*S	Sn	18 27 11.5	+0.7
PAU	**Pauzhetka**	**2.29**	**6**	*e*S	Sn	18 27 33.9	+3.7
KDTR	**Khodutka, Kamc**	**2.82**	**22**	*e*P	Pn	18 27 14.6	+4.0
KDTR				*e*S	Sn	18 27 47.7	+4.3
MTVR	**Mutnovka**	**3.48**	**18**	*e*S	Sn	18 28 04.8	+5.1
RUS	**Russkaya**	**3.50**	**22**	*e*S	Sn	18 28 03.7	+3.6
DALK	**Dalny**	**4.11**	**20**	*e*P	Pn	18 27 32.6	+4.3
SPN	**Mys Shipunski**	**4.52**	**29**	*e*P	Pn	18 27 37.9	+4.0

ISCJB ***08*** *18:40:05.0±0.4, 11.67S±0.04×117.30E±0.03, h34km, mb4.2/3, Error ellipse: s-maj=5.9km s-min=4.7km az=19.0*
NEIC ***08*** *18:40:07.0±3.0, 11.56S×117.33E, h36km±17km, mb4.3/6, Error ellipse: s-maj=25.1km s-min=14.7km az=205.0*
DJA ***08*** *18:40:07.6±0.4, 12.5S±6.7×11.7E±.7, h71km±45km, M4.5/13, mb4.4/7, mB4.7/2, MLv4.5/13, Mw(mB)3.9/2*
IDC ***08*** *18:40:10.1±1.4, 11.74S×117.83E, h0km, mb3.9/2, mb1 4.2/5, mb1mx3.7/37, mbtmp4.1/5, ML4.0/3, Error ellipse: s-maj=32.7km s-min=23.3km az=48.0*

ISC 08 18:40:07.0±0.7, 11.64S±0.06×117.33E±0.05, h34km, n38, σ2§65/47, mb4.5/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**2.83**	**46**	P	**Pn**	**18 40 50.6**	**+0.7**
WBSI				S	**Sn**	**18 41 23.6**	**+0.6**
BASI	**Baing, Sumba**	**3.49**	**67**	P	**Pn**	**18 40 58.9**	**0.0**
BASI				S	**Sn**	**18 41 38.8**	**-0.2**
DNP	**Denpasar**	**3.60**	**324**	P	**Pn**	**18 41 01.0**	**+0.5**
SRBI	**Singaraja**	**4.10**	**329**	P	**Pn**	**18 41 09.4**	**+2.1**
JAGI	**Jajag, Banyuwa**	**4.44**	**315**	*e*Pn	**Pn**	**18 41 11.7**	**-0.3**
JAGI				*e*Sn	**Sn**	**18 42 00.9**	**-1.5**
JAGI	**Jajag, Banyuwa**	**4.44**	**315**	P	**Pn**	**18 41 11.3**	**-0.7**
JAGI				S	**Sn**	**18 41 59.9**	**-2.6**
EDFI	**Ende, Flores**	**5.16**	**57**	P	**Pn**	**18 41 22.2**	**+0.2**
KMMI	**Kalianget**	**5.64**	**324**	P	**Pn**	**18 41 30.6**	**+2.2**
	35nm,0.5s,471nm						
MMRI	**Maumere**	**5.68**	**59**	*e*Pn	**Pn**	**18 41 27.6**	**-1.4**
MMRI	**Maumere**	**5.68**	**59**	P	**Pn**	**18 41 29.4**	**+0.4**
BATI	**Baumata**	**6.38**	**78**	Pn	**Pn**	**18 41 39.4**	**+0.7**
	3.2nm,0.3s,baz=159,slow=1.3,SNR=5.8						
BATI				Sn	**Sn**	**18 42 48.9**	**-1.5**
	6.1nm,0.3s,baz=324,slow=19,SNR=5.0						
BATI	**Baumata**	**6.38**	**78**	*e*Pn	**Pn**	**18 41 39.4**	**+0.7**
BATI				*e*Pn	**Pn**	**18 41 39.4**	**+0.7**
BATI	**Baumata**	**6.38**	**78**	P	**Pn**	**18 41 37.8**	**-0.9**
PWJI	**Pagerwojo**	**6.52**	**303**	P	**Pn**	**18 41 39.9**	**-0.7**
	58nm,0.6s						
GRJI	**Gresik**	**6.70**	**314**	P	**Pn**	**18 41 43.8**	**+0.7**
BKSI	**Bulukumba**	**6.85**	**24**	P	**Pn**	**18 41 47.4**	**+2.2**
SOEI	**Soe**	**7.07**	**75**	*e*Pn	**Pn**	**18 41 45.6**	**-2.7**
SOEI	**Soe**	**7.07**	**75**	P	**Pn**	**18 41 45.0**	**-3.3**
UGM	**Wanagama**	**7.66**	**298**	*e*Pn	**Pn**	**18 41 56.1**	**-0.2**
UGM				*e*Sn	**Sn**	**18 43 15.8**	**-6.2**
UGM	**Wanagama**	**7.66**	**298**	P	**Pn**	**18 41 55.9**	**-0.4**
BNSI	**Bone**	**7.70**	**21**	P	**Pn**	**18 41 57.7**	**+1.0**
PSA00	**Pilbara Seismi**	**10.17**	**167**	*e*Pn	**Pn**	**18 42 29.8**	**-0.9**
PSA00				*e*Sn	Sn	18 44 11.0	-13
CISI	**Cisompet, Garu**	**10.22**	**293**	*e*Pn	**Pn**	**18 42 32.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**10.29**	**130**	Pn	**Pn**	**18 42 32.1**	**-0.2**
	1.4nm,0.3s,baz=303,slow=11,SNR=51						
FITZ				Sn	**Sn**	**18 44 20.0**	**-6.4**
	1.3nm,0.3s,baz=195,slow=20,SNR=4.9						
FITZ	**Fitzroy Crossi**	**10.29**	**130**	*e*Pn	**Pn**	**18 42 31.6**	**-0.7**
FITZ				*e*Sn	**Sn**	**18 44 18.9**	**-7.5**
GIRL	**Giralia**	**11.34**	**195**	*e*Pn	**Pn**	**18 42 46.8**	**+0.1**
MNAI	**Manna**	**15.96**	**296**	*e*Pn	**Pn**	**18 43 47.2**	**-1.9**
	175nm,1.1s						
MORW	**Morawa**	**17.39**	**184**	*e*Pn	**Pn**	**18 44 07.4**	**+0.3**
	19nm,1.4s						
MORW				*e*Sn	Sn	18 47 03.5	-16
WR1	**Warramunga Arr**	**18.32**	**119**	*e*P	**Pn**	**18 44 19.3**	**+0.7**
WRA	**Warramunga Arr**	**18.32**	**119**	P	**Pn**	**18 44 19.3**	**+0.7**
	68nm,0.3s,baz=293,slow=14,SNR=2.2						
WRA				S	Sn	18 47 30.7	-12
	50nm,0.3s,baz=324,slow=38,SNR=1.8						
WB2	**Warramunga Arr**	**18.33**	**119**	*e*P	**Pn**	**18 44 20.1**	**+1.3**
	9.4nm,1.1s						
AS31	**Alice Springs**	**19.79**	**129**	*e*P	**Pn**	**18 44 35.9**	**-0.4**
	1.4nm,0.6s						
ASAR	**Alice Springs**	**19.79**	**129**	P	**Pn**	**18 44 39.0**	**+2.7**
	0.5nm,0.3s,baz=313,slow=12,SNR=29						
NWAO	**Narrogin (SRO)**	**21.19**	**180**	P	**P**	**18 44 56.0**	**+6.3**
	4.3nm,0.4s,baz=11,slow=12,SNR=11						
NWAO	**Narrogin (SRO)**	**21.19**	**180**	*e*P	**

DRME	Dracevica, Mon	1.27	320	ePn	Pn	19 03 51.5	-0.6
SRN	Sarande	1.34	189	P	Pg	19 03 54.8	+0.1
SRN				S	Sg	19 04 14.8	+2.6
SRN	Sarande	1.34	189	i PN	Pg	19 03 55.2	+0.5
SRN				i SN	Sg	19 04 17.1	+4.9
PVY	Plav	1.40	350	⇑iPg	Pn	19 03 54.2	+0.1
PVY				eSg	Sg	19 04 15.4	+1.2
PDG	Podgorica	1.44	328	ePn	Pn	19 03 55.0	+0.6
PDG				eSg	Sg	19 04 19.0	+3.8
PDG	Podgorica	1.44	328	⇓iP	Pn	19 03 54.6	+0.2
PDG	Podgorica	1.44	328	S	Sg	19 04 17.0	+1.8
PDG	Podgorica	1.44	328	i Pg	Pn	19 03 54.7	+0.3
PDG	Podgorica	1.44	328	ePn	Pn	19 03 54.6	+0.2
TTG	Podgorica	1.44	328	⇓iPg	Pn	19 03 54.9	+0.6
TTG				eSg	Sg	19 04 17.4	+2.2
KZN	Kozani	1.45	128	P	Pn	19 03 55.1	+0.4
KZN				S	Sg	19 04 15.4	-0.3
BUM	Brajici-Budva	1.50	317	⇑iPg	Pb	19 03 56.5	0.0
BUM				eSg	Sg	19 04 19.5	+2.2
KPRO	Kipourio	1.50	146	P	Pb	19 03 56.4	-0.1
STIP	Stip	1.52	71	⇓iPn	Pg	19 03 58.5	+0.5
STIP				i Sn	Sg	19 04 22.7	+4.9
STIP				eLg	Lg	19 04 26.2	
	comp=N,100nm,0.6s						
KEK	Kerkira	1.54	194	P	Pb	19 03 57.3	+0.2
JAN	Janina	1.61	164	P	Pg	19 03 59.2	-0.7
KTI	Kastanea	1.62	120	P	Pn	19 03 57.7	+0.7
CEME	Cevo	1.68	323	⇑iPn	Pb	19 03 59.4	-0.1
CEME				eSn	Sg	19 04 23.7	+0.9
IGT	Igoumenitsa	1.68	178	P	Pb	19 03 59.8	+0.4
IGT				S	Sg	19 04 23.4	+0.6
BEY	Berane	1.68	350	i Pg	Pb	19 03 59.8	+0.1
IVA	Berane	1.68	350	⇓iPn	Pn	19 03 59.2	+1.3
IVA				eSn	Sg	19 04 22.6	-0.5
KOME	Kolasin	1.73	341	⇑iPn	Pb	19 04 00.0	-0.5
KOME				eSn	Sg	19 04 24.1	-0.6
VAY	Valandovo	1.73	86	P	Pn	19 03 58.8	+0.3
VAY	Valandovo	1.73	86	⇑iPn	Pn	19 03 58.8	+0.3
VAY				i Sn	Sb	19 04 22.4	+0.4
VAY				eLg	Lg	19 04 28.6	
	comp=N,185nm,0.7s						
HCY	Herceg Novi	1.82	313	⇑iPn	Pb	19 04 01.7	-0.1
HCY				eSn	Sg	19 04 27.3	0.0
HCY	Herceg Novi	1.82	313	ePn	Pn	19 04 00.9	+1.3
NKME	Niksic	1.84	328	⇑iPn	Pb	19 04 01.7	-0.6
NKME				eSn	Sg	19 04 27.4	-0.7
NKY	Niksic	1.86	330	⇑iPn	Pn	19 04 01.9	+1.5
NKY				eSn	Sb	19 04 27.6	+1.7
BARS	Barje	1.97	35	ePn	Pn	19 04 02.9	+1.1
KNT	Kendrikon	1.98	91	P	Pn	19 04 02.2	+0.3
KNT	Kendrikon	1.98	91	i Pn	Pn	19 04 02.2	+0.3
LIT	Litokhoron	2.02	123	P	Pn	19 04 02.9	+0.5
SJES	Sjenica	2.06	354	ePn	Pn	19 04 04.7	+1.6
SJES				eSn	Sb	19 04 32.8	+1.2
TREB	Trebinje	2.08	317	ePn	Pn	19 04 04.7	+1.5
TREB				eSn	Sb	19 04 34.0	+2.0
TREB	Trebinje	2.08	317	ePn	Pn	19 04 05.0	+1.8
BOSS	Bosilegrad	2.09	51	ePn	Pn	19 04 04.2	+0.8
BOSS				eSn	Sn	19 04 30.5	+1.3
SELS	Selova	2.10	17	ePn	Pn	19 04 04.4	+0.8
SELS				eSn	Sb	19 04 33.2	+0.5
THL	Klokotos Trika	2.11	140	P	Pn	19 04 04.5	+0.8
BRY	Bratogost	2.13	323	⇑iPn	Pb	19 04 06.3	-0.9
BRY				eSn	Sb	19 04 34.9	+1.4
CGL1	Ceglie Messapi	2.19	256	ePn	Pb	19 04 09.2	+1.0
PLE	Pljevlja	2.22	343	⇓iPn	Pn	19 04 06.7	+1.4
PLE				eSn	Sb	19 04 35.8	-0.3
HORT	Hortiatis	2.23	105	P	Pn	19 04 05.0	-0.3
UPM	Unac-Piva	2.24	333	⇑iPn	Pn	19 04 07.4	+1.8
UPM				eSn	Sb	19 04 37.5	+0.8
UPM	Unac-Piva	2.24	333	ePn	Pb	19 04 08.6	-0.5
FASA	Fasano	2.24	261	ePn	Pn	19 04 05.6	+0.1
SOH	Sokhos	2.36	98	P	Pn	19 04 07.7	+0.5
IVAS	Ivanjica	2.37	358	ePn	Pn	19 04 08.0	+0.8
TAR1	Taranto	2.37	254	ePn	Pn	19 04 06.7	-0.5
MASS	Massafra	2.44	257	ePn	Pn	19 04 07.8	-0.4
SRS	Serrai	2.51	91	P	Pn	19 04 09.4	+0.3
STON	Ston	2.54	312	ePn	Pn	19 04 10.8	+1.3
STON				eSn	Sb	19 04 44.9	-0.2
STON	Ston	2.54	312	ePn	Pn	19 04 11.3	+1.8
STON				Sn	Sg	19 04 52.4	+2.0
STON	Ston	2.54	312	ePn	Pn	19 04 10.6	+1.1
PLG	Polygyros	2.55	108	P	Pn	19 04 10.2	+0.5
BAI	Bari	2.56	269	ePn	Pn	19 04 10.2	+0.3
BAI				Sn	Sn	19 04 40.7	-0.1
EVGI	Lefkada island	2.60	173	P	Pn	19 04 11.6	+1.2
VTS	Vitosha	2.62	57	ePn	Pn	19 04 09.8	-1.0
VTS				eSn	Sn	19 04 43.2	+0.8
VTS	Vitosha	2.62	57	P	Pn	19 04 11.7	+0.9
VTS	Vitosha	2.62	57	⇑iP	Pn	19 04 11.8	+0.9
BOVS	Bovan	2.65	23	ePn	Pn	19 04 12.1	+1.1
BOVS				eSn	Sn	19 04 45.5	+2.7
AGG	Agios Georgios	2.69	144	P	Pn	19 04 12.5	+0.8
GRUS	Gruza	2.70	7	ePn	Pn	19 04 13.4	+1.7
GRUS				eSn	Sb	19 04 48.6	-1.1
ZAPS	Zavoj	2.71	40	ePn	Pn	19 04 13.1	+1.2
ZAPS				eSn	Sn	19 04 47.3	+2.9
NVR	Nevrokopi	2.71	86	P	Pn	19 04 12.6	+0.7
BBLS	Lazići	2.73	347	ePn	Pn	19 04 13.0	+0.7
BBLS	Lazići	2.73	347	ePn	Pb	19 04 16.2	-1.3
SG1	Sgolgore (BA)	2.75	263	ePn	Pn	19 04 12.8	+0.4
SG1				Sn	Sb	19 04 48.7	-2.4
MATE	Matera	2.76	259	⇑iP	Pn	19 04 12.7	+0.1
DIVS	Divibare	2.89	356	ePn	Pn	19 04 17.3	+2.8
DIVS				eSn	Sb	19 04 54.5	-1.0
DIVS	Divibare	2.89	356	ePn	Pn	19 04 16.4	+1.9
XOR	Xorichti	2.89	129	P	Pn	19 04 14.6	+0.1
ZAGS	Zajecar	2.98	28	ePn	Pn	19 04 16.9	+1.3
TRUS	Trudelj	3.01	2	ePn	Pn	19 04 18.3	+2.2
HAPS	Han Pijesak,BI	3.04	342	ePn	Pn	19 04 19.0	+2.5
HAPS				eSn	Sn	19 04 56.7	+4.1
HAPS	Han Pijesak,BI	3.04	342	ePn	Pn	19 04 18.3	+1.8
SVIS	Svilajnac	3.13	12	ePn	Pn	19 04 18.9	+1.2
KUBS	Kucevo	3.36	17	ePn	Pn	19 04 21.0	+0.1
TIP	Timpagrande	3.37	234	⇓iP	Pn	19 04 21.3	+0.2
MDVR	Moldovita	3.72	16	⇓iP	Pn	19 04 26.2	+0.3
FRGS	Fruska Gora	3.96	355	ePn	Pn	19 04 29.9	+0.8
FRGS	Fruska Gora	3.96	355	ePn	Pn	19 04 32.1	+3.0
MGRS	Mrkonjic Grad	3.97	325	ePn	Pn	19 04 32.7	+3.4
HERR	Herculane	3.99	22	⇓iP	Pn	19 04 29.1	-0.4
BLY	Banja Luka	4.20	328	ePn	Pn	19 04 34.0	+1.6
BLY	Banja Luka	4.20	328	⇑iP	Pn	19 04 31.3	-1.1
BLY	Banja Luka	4.20	328	ePn	Pn	19 04 37.5	+5.1
BZS	Buzias	4.51	12	ePn	Pn	19 04 37.1	+0.4
BZS	Buzias	4.51	12	⇓iP	Pn	19 04 36.8	+0.1
UDBI	Udbina	4.69	317	ePn	Pn	19 04 41.1	+2.0
LOT	Lotru	4.94	30	⇑iP	Pn	19 04 42.7	0.0
SIRR	Siria	5.15	11	⇑iP	Pn	19 04 45.6	+0.1
NVLJ	Novalja	5.19	312	ePn	Pn	19 04 46.7	+0.7
AQU	L'Aquila	5.26	285	ePn	Pn	19 04 47.9	+0.9
VOIR		5.47	38	⇑iP	Pn	19 04 50.5	+0.5
OZLJ	Ozalj	5.62	323	ePn	Pn	19 04 53.6	+1.7
BOJS	Bojanci	5.64	321	i Pn	Pn	19 04 53.6	+1.5
BOJS				eSn	Sn	19 05 59.8	+3.1
CRES	Cresnjev	5.79	324	ePn	Pn	19 04 55.2	+1.0
DRGR		5.85	17	⇓iP	Pn	19 04 55.7	+0.6
MLR	Muntele Rosu	5.95	42	⇑iP	Pn	19 04 57.5	+1.0
VISS	Visnje	6.06	321	i Pn	Pn	19 05 00.9	+3.0
VISS				i Sn	Sn	19 06 09.2	+2.3
CEY	Cerknica	6.21	319	ePn	Pn	19 05 01.0	+1.0
CSKK	Cskako	6.32	347	EPn	Sn	19 06 15.1	+1.7
JAVS	Javornik	6.50	318	i Pn	Pn	19 05 05.5	+1.5
JAVS				i Sn	Sn	19 06 19.3	+1.4
PLOR	Plostina	6.55	43	⇑iP	Pn	19 05 04.9	+0.1
PERS	Pernice	6.58	327	i Pn	Pn	19 05 07.1	+2.0
VRI	Vrincioaia	6.61	43	⇑iP	Pn	19 05 06.2	+0.8
TLB	Topalu	6.63	57	⇓iP	Pn	19 05 07.4	+1.7
SOKA	Soboth	6.65	327	i Pn	Pn	19 05 07.7	+1.6
	comp=N,1.2nm,0.2s						
PSZ	Piszkesteto	6.71	358	⇑iP	Pn	19 05 06.5	-0.4
PSZ	Piszkesteto	6.71	358	EPn	Pn	19 05 10.0	+3.1
PSZ				Sn	Sn	19 06 24.1	+0.9
OBKA	Obir	6.72	324	ePn	Pn	19 05 08.8	+1.7
	comp=N,1.3nm,0.2s						
TIRR	Tirgusor	6.81	59	⇑iP	Pn	19 05 09.2	+1.1
ARSA	Arzberg	6.94	332	i Pn	Pn	19 05 12.4	+2.4
	comp=N,0.8nm,0.3s						
CFR	Carcaliu	6.98	53	⇑iP	Pn	19 05 10.3	-0.2
VYHS	Vyhne	7.35	353	ePN	Pn	19 05 21.7	+6.0
VYHS				eSN	Sn	19 06 41.5	+2.6
KOLS	Kolonicke sedl	7.85	10	ePN	Pn	19 05 29.0	+6.5
ABTA	Abfaltersbach	7.87	317	ePn	Pn	19 05 24.7	+1.9
	comp=N,1.6nm,0.3s						
ABTA				eSn	Sn	19 06 54.3	+2.6
	comp=N,3.0nm,0.5s						
MOA	Molln	7.90	329	ePn	Pn	19 05 25.4	+2.2
	comp=N,0.6nm,0.2s						
MOA				i Sn	Sn	19 06 55.4	+3.0
	comp=N,1.5nm,0.4s						
PGF	Pioggiola	8.52	283	ePn	Pn	19 05 29.6	-2.2
WTTA	Wattenberg	8.66	317	i Pn	Pn	19 05 36.6	+2.8
	comp=N,1.2nm,0.2s						
WTTA				eSn	Sn	19 07 12.8	+1.5
	comp=N,0.8nm,0.2s						
SQTA	Sankt Quirin	8.86	316	ePn	Pn	19 05 39.0	+2.6
	comp=N,1.1nm,0.2s						
MOTA	Moosalm	8.99	316	i Pn	Pn	19 05 41.2	+3.0
	comp=N,0.8nm,0.2s						
SBF	Sospel	9.84	290	ePn	Pn	19 05 47.7	-2.1
SBF				eSn	Sn	19 07 32.6	-7.5
	comp=N,1.2nm,0.3s						
FRF	La Foret Royal	10.35	288	ePn	Pn	19 05 54.9	-1.9
FRF				eSn	Sn	19 07 44.2	-8.3
	comp=N,0.4nm,0.2s						
LPG	La Plagne	10.74	298	ePn	Pn	19 06 00.7	-1.6
LPG				eSn	Sn	19 07 53.2	-9.1
	comp=N,1.2nm,0.4s						
LPL	La Plagne	10.76	298	ePn	Pn	19 06 00.7	-1.8
LPL				eSn	Sn	19 07 53.6	-9.1
	comp=N,2.2nm,0.4s						
ORIF	Oris-en-Rattie	11.16	294	ePn	Pn	19 06 05.9	-2.1
ORIF				eSn	Sn	19 08 03.3	-9.2
	comp=N,1.5nm,0.4s						
SMRF	Simiane la Rot	11.18	289	ePn	Pn	19 06 05.5	-2.7
SMRF				eSn	Sn	19 08 04.8	-8.2
	comp=N,0.4nm,0.3s						
CABF	La Chapelle	11.56	303	ePn	Pn	19 06 11.8	-1.6
HINF	Hinteralfeld	11.63	309	ePn	Pn	19 06 12.0	-2.3
HINF				eSn	Sn	19 08 15.0	-8.8
	comp=N,1.6nm,0.4s						
HAU	Haudompre	12.02	309	ePn	Pn	19 06 17.5	-2.1
HAU				eSn	Sn	19 08 23.8	-9.5
	comp=N,1.9nm,0.3s						
LOR	Lormes	13.23	303	ePn	Pn	19 06 34.3	-1.8
LOR				eSn	Sn	19 08 53.7	-9.1
	comp=N,1.3nm,0.4s						
NB2	NORSAR Subarra	20.61	347	P	P	19 08 06.9	-0.5
	comp=Z,0.7nm,0.7s,baz=162,slow=11						

IDC 08 19:16:04.5±4.2, 16°.73S×174°.75W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/26, mbtmp3.7/3, MS3.4/10, Ms1 3.4/10, ms1mx3.1/30, Error ellipse: s-maj=296.6km s-min=31.1km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	18.51	250	LR	LR	19 26 11.3	
	comp=Z,165nm,21.6s,baz=40,slow=33						
PPT	Papeete	24.07	96	LR	LR	19 28 57.3	
	comp=Z,15nm,20.2s,baz=352,slow=32						
STKA	Stephens Creek	42.25	241	LR	LR	19 39 55.4	
	comp=Z,60nm,18.1s,baz=35,slow=34						
JAY	Jayapura	45.99	283	LR	LR	19 42 18.5	
	comp=Z,36nm,19.3s,baz=330,slow=34						
ASAR	Alice Springs	48.47	253	P	P	19 24 49.4	+0.1
	1.2nm,0.9s,baz=88,slow=8.2,SNR=9.7						
ASAR				LR	LR	19 44 40.1	
	comp=Z,60nm,18.2s,baz=101,slow=35						
MJAR	Matsushiro Arr	69.13	321	LR	LR	19 50 34.6	
	comp=Z,15nm,21.4s,baz=200,slow=30						
PETK	Petropavlovsk-	73.51	343	LR	LR	19 51 45.2	
	comp=Z,29nm,21.7s,baz=110,slow=29						
NVAR	Mina Array Bea	76.18	42	P	P	19 27 56.6	+1.6
	0.5nm,0.8s,baz=219,slow=7.0,SNR=2.9						
KSRS	Korea Array	76.21	316	LR	LR	19 57 37.1	
	comp=Z,8.4nm,20.1s,baz=120,slow=33						
USRK	Ussuriysk Ar.	77.67	324	LR	LR	19 54 03.9	
	comp=Z,44nm,21.5s,baz=125,slow=29						
TXAR	Lajitas Array	82.43	56	LR	LR	19 59 08.6	
	comp=Z,40nm,18.1s,baz=0.0,slow=31						
PDAR	Pinedale Array	84.12	42	P	P	19 28 36.1	-1.7
	0.1nm,0.3s,baz=224,slow=2.5,SNR=2.5						
BRTR	Keskin Array B	146.33	319	PKPbc	PKPdf	19 35 46.6	0.0
	1.1nm,1.0s,baz=46,slow=4.2,SNR=5.1						

*IDC **08** 19:25:02.7±14.0, 22°.78S×179°.46W, h410km±140km, mb3.5/4, mb1 3.5/5, mb1mx3.1/24, mbtmp4.2/5, Error ellipse: s-maj=97.7km s-min=31.8km az=30.0*
*ISCJB **08** 19:25:12.4±3.3, 23°.4S±0°.3×179°.9W±0°.5, h500km, mb4.2/5, Error ellipse: s-maj=66.5km s-min=24.0km az=153.4*

ISC 08 19:25:12.0±1.6, 23°.3S±0°.2×179°.7W±0°.3, h500km, n9, σ1§42/9, mb4.0/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	15.13	190	P	P	19 28 22.4	-1.0
	1.0nm,0.3s,baz=269,slow=4.2,SNR=6.1						
RPZ	Rata Peaks	21.72	198	P	P	19 29 27.6	+1.6
	10nm,0.6s,baz=7.1,slow=8.1,SNR=3.6						
STKA	Stephens Creek	35.18	247	P	P	19 31 23.6	+0.1
	1.0nm,0.4s,baz=98,slow=11,SNR=7.2						
ASAR	Alice Springs	42.39	260	P	P	19 32 21.8	-0.4
	2.0nm,0.4s,baz=96,slow=7.4,SNR=87						
WRA	Warramunga Arr	42.71	265	P	P	19 32 24.0	-0.7
	135nm,0.3s,baz=91,slow=9.7,SNR=2.1						
CMAR	Chiang Mai Arr	89.57	290	P	P	19 37 16.8	+0.6
	0.5nm,0.8s,baz=109,slow=4.9,SNR=4.0						
FINES	FINESS Array B	137.98	342	PKP	PKPdf	19 43 38.6	-0.2
	0.7nm,0.8s,baz=354,slow=1.4,SNR=4.5						
AKASG	Malin Array Be	144.63	328	PKP	PKPdf	19 43 49.0	-2.0
	0.3nm,0.3s,baz=38,slow=4.2,SNR=5.6						
BRTR	Keskin Array B	147.43	308	PKPbc	PKPdf	19 43 58.3	+1.9
	0.3nm,0.4s,baz=160,slow=2.9,SNR=3.9						

IDC 08 19:28:46.0±6.0, 1°.24N×98°.90E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.2/35, mbtmp3.5/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/34, Error ellipse: s-maj=305.5km s-min=23.1km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	32.59	127	LR	LR	19 47 20.2	
	comp=Z,49nm,20.2s,baz=107,slow=34						
NWAO	Narrogin (SRO)	38.14	155	LR	LR	19 52 22.0	
	comp=Z,56nm,18.7s,baz=128,slow=37						
WRA	Warramunga Arr	40.63	123	P	P	19 36 27.8	-0.3
	138nm,0.3s,baz=299,slow=9.5,SNR=1.2						
ASAR	Alice Springs	42.08	128	P	P	19 36 40.2	+0.1
	0.2nm,0.9s,baz=296,slow=7.8,SNR=3.6						
MKAR	Makanchi Array	47.63	345	P	P	19 37 23.9	0.0
	0.3nm,0.4s,baz=161,slow=8.7,SNR=4.7						
ZALV	Zalesovo Beam	53.80	350	P	P	19 38 10.1	-0.2
	0.7nm,0.5s,baz=145,slow=5.3,SNR=3.0						

*GCG **08** 19:43:01.2±0.3, 13°.31N×90°.91W, h18km±10km, MD3.5*
*ISCJB **08** 19:43:02.9±1.6, 13°.39N±0°.09×90°.83W±0°.07, h26km±16km, Error ellipse: s-maj=16.7km s-min=9.2km az=28.6*
*SNET **08** 19:43:04.6±1.1, 13°.47N×90°.70W, h18km±4km, ML3.5*
*UCR **08** 19:43:04.6±1.4, 13°.51N×90°.76W, h27km±5km, MD3.2, ML3.4*

ISC 08 19:43:03.9±2.4, 13°.5N±0°.1×90°.82W±0°.08, h25km±17km, n44, σ0§51/52, 5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.78	28	eP	Pb	19 43 19.0	-0.1
IXG	Ixpaco	0.78	28	eP	Pb	19 43 19.0	-0.1
IXG	Ixpaco	0.78	28	eP	Pb	19 43 19.4	+0.3
PCG	Pacaya	0.94	12	⇓iP	Pb	19 43 21.8	+0.1
PCG	Pacaya	0.94	12	⇓iP	Pb	19 43 21.8	+0.1
PCG	Pacaya	0.94	12	⇓iP	Pb	19 43 21.8	+0.1
FUG	Fuego 3	0.97	359	eP	Pn	19 43 22.1	-0.1
FUG	Fuego 3	0.97	359	⇓iP	Pn	19 43 22.0	-0.2
FUG	Fuego 3	0.97	359	⇓iP	Pn	19 43 22.0	-0.1
FUG				eP	Pn	19 43 22.1	-0.1
NBG	Las Nubes	1.20	22	eP	Pb	19 43 26.2	+0.1
NBG	Las Nubes	1.20	22	eP	Pb	19 43 26.2	+0.1
NBG	Las Nubes	1.20	22	eP	Pb	19 43 26.4	+0.2
RTR	El Retiro	1.21	70	eP	Pn	19 43 24.9	-0.6
RTR	El Retiro	1.21	70	eP	Pn	19 43 24.9	-0.6
SBLS	San Blas	1.22	72	eP	Pn	19 43 24.8	-0.8
SBLS	San Blas	1.22	72	eP	Pn	19 43 24.8	-0.8
SNJE	San Jose	1.24	71	eP	Pn	19 43 25.2	-0.7
SNJE	San Jose	1.24	71	eP	Pn	19 43 25.2	-0.7
UNIC	Santa Ana	1.33	67	eP	Pn	19 43 26.4	-0.5
UNIC				eS	Sn	19 43 43.0	-0.8
UNIC	Santa Ana	1.33	67	eP	Pn	19 43 26.4	-0.5
UNIC				eS	Sn	19 43 43.0	-0.8
STG3	Santiaguito 3,	1.43	329	eP	Pn	19 43 28.2	-0.4
STG3	Santiaguito 3,	1.43	329	eP	Pn	19 43 28.1	-0.4
PMON	Piamonte	1.48	81	eP	Pn	19 43 28.6	-0.5
PMON				eS	Sn	19 43 47.7	0.0
PMON				IAML		19 43 49.5	
PMON	Piamonte	1.48	81	eP	Pn	19 43 28.6	-0.5
PMON				eS	Sn	19 43 47.7	0.0
PMON				IAML		19 43 49.5	
UEES	San Salvador	1.55	80	IAML		19 43 51.1	
	comp=Z,481nm,0.4s						
UEES	San Salvador	1.55	80	IAML		19 43 51.1	
	comp=Z,481nm,0.4s						
SNET	Serv Nac Est T	1.56	82	eS	Sn	19 43 49.4	-0.2
SNET				IAML		19 43 50.4	
	comp=Z,413nm,0.3s						
SNET	Serv Nac Est T	1.56	82	eS	Sn	19 43 49.4	-0.2
SNET				IAML		19 43 50.4	
	comp=Z,413nm,0.3s						
LOMA	San Marcos	1.61	83	eP	Pn	19 43 30.8	0.0
LOMA				IAML		19 43 31.6	
	comp=Z,500nm,0.2s						
LOMA	San Marcos	1.61	83	eP	Pn	19 43 30.8	0.0
LOMA				IAML		19 43 31.6	
	comp=Z,500nm,0.2s						
LFU	La Fuente	1.68	80	eP	Pn	19 43 31.9	+0.1
LFU	La Fuente	1.68	80	eP	Pn	19 43 31.9	+0.1
MTO3	Montecristo	1.69	57	eP	Pn	19 43 31.6	-0.4
MTO3				eS	Sn	19 43 54.1	+1.1
MTO3	Montecristo	1.69	57	eP	Pn	19 43 31.6	-0.4
MTO3				eS	Sn	19 43 54.1	+1.1
LFRS	El Faro	1.71	85	eP	Pn	19 43 32.2	-0.1
LFRS				eS	Sn	19 43 53.5	0.0
LBRS	Las Brisas	1.74	81	eP	Pn	19 43 32.5	-0.3
PAVA	Las Pavas	1.84	82	eP	Pn	19 43 34.2	+0.1
PAVA	Las Pavas	1.84	82	eP	Pn	19 43 34.2	+0.1
SNVI	San Vicente	1.93	86	eS	Sn	19 44 00.1	+1.3
SNVI	San Vicente	1.93	86	eS	Sn	19 44 00.1	+1.3
PACA	Pacayal	2.42	90	eP	Pn	19 43 42.1	0.0
PACA	Pacayal	2.42	90	eP	Pn	19 43 42.1	0.0
CNCH	Conchagua	2.91	94	eP	Pn	19 43 48.5	-0.3
CNCH				eS	Sn	19 44 23.1	+0.1
CNCH				IAML		19 44 28.9	
	comp=Z,715nm,0.5s						
CNCH	Conchagua	2.91	94	eP	Pn	19 43 48.5	-0.3
CNCH				eS	Sn	19 44 23.1	+0.1
CNCH				IAML		19 44 28.9	
	comp=Z,715nm,0.5s						

IDC 08 19:50:24.6±1.1, 15°.21S×173°.26W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/33, mbtmp3.8/5, Error ellipse: s-maj=62.9km s-min=26.6km az=135.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	24.49	199	P	P	19 55 45.5	0.0
	9.8nm,0.7s,baz=350,slow=12,SNR=2.1						
ASAR	Alice Springs	50.30	252	P	P	19 59 23.2	-0.1
	0.6nm,0.7s,baz=88,slow=8.4,SNR=8.5						
NVAR	Mina Array Bea	74.10	42	P	P	20 02 02.6	-0.5
	0.5nm,0.8s,baz=224,slow=7.6,SNR=2.9						
TXAR	Lajitas Array	80.39	56	P	P	20 02 38.8	+0.3
	0.6nm,0.9s,baz=231,slow=4.2,SNR=5.3						
ILAR	Eielson Array	82.23	11	P	P	20 02 47.5	+0.2
	0.3nm,0.8s,baz=213,slow=6.3,SNR=3.1						

IDC 08 20:02:01.4±2.8, 11°.36N×43°.65W, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/31, mbtmp3.8/4, MS3.3/7, Ms1 3.3/7, ms1mx3.0/32, Error ellipse: s-maj=142.3km s-min=26.9km az=10.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05S1	Guadeloupe/Mar	17.03	282	T	T	20 23 08.8	
	SNR=11						
ROSC	El Rosal	31.03	260	LR	LR	20 22 25.3	
	comp=Z,48nm,18.5s,baz=188,slow=39						
H10N3	ASCENSION HYDR	34.71	122	T	T	20 46 15.3	
	baz=304,slow=75,SNR=26						
H10N2

CHGB	**Renai**	**0.28**	**40**	⇑P	**Pb**	**20 06 25.1**	**-1.0**
	baz=47						
CHGB				S	**Sg**	**20 06 29.3**	**-0.1**
	baz=47						
YUS	**Yu-Shan**	**0.35**	**184**	P	**Pb**	**20 06 26.6**	**-1.0**
	baz=173						
YUS				S	**Sb**	**20 06 31.9**	**-1.2**
	baz=173						
CHN5	**Tsauling**	**0.37**	**228**	⇓*i*P	**Pb**	**20 06 27.0**	**-0.5**
	baz=227						
CHN5				*i* S	**Sb**	**20 06 33.1**	**0.0**
	baz=227						
WHF	**Hehuan Shan**	**0.40**	**41**	⇑*i*P	**Pb**	**20 06 27.6**	**-0.7**
	baz=50						
WHF				S	**Sg**	**20 06 32.9**	**-0.1**
	baz=50						
TCU	**Taichung**	**0.41**	**318**	⇓P	**Pb**	**20 06 28.1**	**-0.1**
	baz=305						
TCU				*e*S	**Sb**	**20 06 34.9**	**+0.7**
	baz=305						
WGK	**Gukeng**	**0.41**	**247**	⇓*i*P	**Pb**	**20 06 28.0**	**-0.2**
	baz=246						
WGK				S	**Sb**	**20 06 34.5**	**+0.2**
	baz=246						
ESL	**Shilin**	**0.42**	**94**	⇓*i*P	**Pb**	**20 06 27.9**	**-0.4**
	baz=94						
ESL				*i* S	**Sb**	**20 06 34.0**	**-0.5**
	baz=94						
WDLH	**Douliu**	**0.43**	**249**	P	**Pb**	**20 06 28.4**	**-0.2**
	baz=248						
WDLH				*e*S	**Sb**	**20 06 35.7**	**+0.9**
	baz=248						
WHP	**Taichung City**	**0.43**	**356**	P	**Pg**	**20 06 27.5**	**-0.3**
	baz=1.0						
WHP				*e*S	**Sb**	**20 06 34.8**	**-0.2**
	baz=1.0						
TDCB	**Techi**	**0.44**	**22**	⇑P	**Pg**	**20 06 27.4**	**-0.6**
	baz=29						
TDCB				*e*S	**Sg**	**20 06 32.5**	**-1.5**
	baz=29						
WCHH	**Zhanghua**	**0.45**	**301**	⇓P	**Pb**	**20 06 28.8**	**-0.1**
	baz=302						
WCHH				S	**Sb**	**20 06 35.3**	**0.0**
	baz=302						
EGFH	**Guangfu**	**0.45**	**113**	⇓P	**Pb**	**20 06 28.4**	**-0.5**
	baz=112						
EGFH				S	**Sb**	**20 06 35.0**	**-0.4**
	baz=112						
EHY	**Hungye**	**0.46**	**137**	⇓*i*P	**Pb**	**20 06 28.8**	**-0.3**
	baz=129						
EHY				S	**Sb**	**20 06 35.3**	**-0.5**
	baz=129						
TWQ1	**Liyutan**	**0.53**	**340**	P	**Pb**	**20 06 30.6**	**+0.3**
	baz=328						
TWQ1				S	**Sb**	**20 06 38.9**	**+1.1**
	baz=328						
YULB	**Yu-li**	**0.54**	**147**	⇓P	**Pb**	**20 06 29.9**	**-0.5**
	baz=146						
YULB				*e*S	**Sg**	**20 06 36.6**	**-0.4**
	baz=146						
HGSD	**Ruisui**	**0.54**	**130**	⇓P	**Pb**	**20 06 30.5**	**+0.1**
	baz=127						
HGSD				S	**Sb**	**20 06 38.6**	**+0.6**
	baz=127						
CHN2	**Minshiung**	**0.56**	**236**	⇓*i*P	**Pb**	**20 06 30.6**	**0.0**
	baz=236						
CHN2				*i* S	**Sb**	**20 06 39.1**	**+0.7**
	baz=236						
RLNB	**Erlin**	**0.57**	**275**	P	**Pb**	**20 06 30.5**	**-0.4**
	baz=275						
RLNB				S	**Sb**	**20 06 39.1**	**+0.3**
	baz=275						
TWF1	**Yuli**	**0.57**	**149**	⇓*i*P	**Pb**	**20 06 30.7**	**-0.2**
	baz=147						
TWF1				S	**Sb**	**20 06 38.3**	**-0.6**
	baz=147						
ENLB	**Shoufeng**	**0.58**	**84**	⇓P	**Pb**	**20 06 30.3**	**-0.7**
	baz=84						
ENLB				S	**Sb**	**20 06 38.9**	**-0.1**
	baz=84						
ETLH	**Xiulin Townshi**	**0.59**	**52**	⇓P	**Pb**	**20 06 30.5**	**-0.8**
	baz=50						
ETLH				S	**Sb**	**20 06 38.6**	**-0.9**
	baz=50						
WDJ	**Dajia District**	**0.59**	**329**	P	**Pb**	**20 06 31.6**	**+0.4**
	baz=330						
WDJ				S	**Sb**	**20 06 40.8**	**+1.4**
	baz=330						
HWA	**Hwalien**	**0.59**	**77**	⇓P	**Pb**	**20 06 31.3**	**+0.1**
	baz=78						
HWA				S	**Sb**	**20 06 40.4**	**+1.0**
	baz=78						
NSY	**Sanyi**	**0.60**	**341**	⇓*i*P	**Pb**	**20 06 32.1**	**+0.6**
	baz=342						
NSY				*e*S	**Sb**	**20 06 41.4**	**+1.6**
	baz=342						
CHY	**Chiayi**	**0.61**	**236**	P	**Pb**	**20 06 31.5**	**-0.1**
	baz=235						
CHY				S	**Sb**	**20 06 41.1**	**+1.0**
	baz=235						
TWD	**Chiawan**	**0.61**	**67**	⇓*i*P	**Pb**	**20 06 31.1**	**-0.6**
	baz=68						
TWD				*e*S	**Sb**	**20 06 39.3**	**-0.8**
	baz=68						
TPUB	**Ta-pu**	**0.63**	**210**	⇑P	**Pb**	**20 06 31.6**	**-0.4**
	baz=209						
TPUB				S	**Sb**	**20 06 40.7**	**+0.1**
	baz=209						
WTCT	**Ta-ch'eng**	**0.64**	**272**	⇓*i*P	**Pb**	**20 06 31.4**	**-0.7**
	baz=272						
WTCT				*i* S	**Sb**	**20 06 41.1**	**+0.3**
	baz=272						
PTSB	**Yuanli**	**0.65**	**338**	P	**Pb**	**20 06 32.7**	**+0.4**
	baz=339						
PTSB				S	**Sb**	**20 06 42.3**	**+1.2**
	baz=339						
NACB	**Ninganchiao**	**0.65**	**60**	⇓P	**Pb**	**20 06 31.6**	**-0.7**
	baz=60						
NACB				*e*S	**Sg**	**20 06 40.2**	**-0.5**
	baz=60						
ELDTW	**Lidau**	**0.65**	**177**	*e*P	**Pg**	**20 06 31.4**	**-0.6**
	baz=175						
WTP	**Ta-pu**	**0.68**	**209**	P	**Pb**	**20 06 32.5**	**-0.4**
	baz=208						
WTP				S	**Sb**	**20 06 42.0**	**-0.2**
	baz=208						
NNSB	**Datong**	**0.69**	**33**	⇑P	**Pg**	**20 06 31.8**	**-0.9**
	baz=43						
WMLT	**Mailiao**	**0.69**	**267**	*e*P	**Pg**	**20 06 32.3**	**-0.4**
	baz=267						
NNS	**Nan Shan**	**0.69**	**31**	P	**Pg**	**20 06 32.1**	**-0.6**
	baz=42						
STYT	**Tauyuan**	**0.71**	**197**	⇑*i*P	**Pb**	**20 06 33.1**	**-0.2**
	baz=195						
STYT				*e*S	**Sb**	**20 06 43.2**	**+0.3**
	baz=195						
NMLH	**Miaoli**	**0.71**	**346**	*e*P	**Pn**	**20 06 34.1**	**-0.6**
	baz=347						
NMLH				S	**Sb**	**20 06 44.3**	**+1.4**
	baz=347						
WLGB	**Puzi**	**0.72**	**240**	P	**Pb**	**20 06 33.0**	**-0.4**
	baz=239						
WLGB				S	**Sb**	**20 06 44.0**	**+0.8**
	baz=239						
WSF	**Szhu**	**0.72**	**254**	P	**Pg**	**20 06 32.7**	**-0.5**
	baz=253						
WSF				S	**Sb**	**20 06 43.1**	**-0.1**
	baz=253						
TWK	**Hsinying**	**0.73**	**218**	⇑*i*P	**Pb**	**20 06 33.3**	**-0.3**
	baz=216						
TWK				S	**Sb**	**20 06 43.7**	**+0.2**
	baz=216						
SNST	**Tainan City**	**0.76**	**215**	*e*P	**Pb**	**20 06 33.8**	**-0.4**
	baz=214						
SNST				*e*S	**Sb**	**20 06 44.6**	**+0.2**
	baz=214						
CHN1	**Nanshi**	**0.78**	**212**	⇑P	**Pb**	**20 06 33.9**	**-0.5**
	baz=223						
CHN1				S	**Sb**	**20 06 45.3**	**+0.5**
	baz=223						
NSTT	**Nanjuang**	**0.78**	**2**	*e*P	**Pb**	**20 06 34.4**	**-0.2**
	baz=348						
LIOB	**Emei**	**0.80**	**3**	*e*P	**Pb**	**20 06 34.8**	**0.0**
	baz=349						
LIOB				*e*S	**Sb**	**20 06 46.4**	**+0.9**
	baz=349						
CHKT	**Chengkung**	**0.82**	**154**	*e*P	**Pn**	**20 06 36.0**	**-0.3**
	baz=152						
SGST	**Jiashian**	**0.84**	**206**	*e*P	**Pb**	**20 06 35.5**	**0.0**
	baz=215						
SGST				*e*S	**Sb**	**20 06 47.6**	**+0.9**
	baz=215						
CHN8	**Yiju**	**0.86**	**235**	*e*P	**Pb**	**20 06 35.4**	**-0.5**
	baz=234						
CHN8				*e*S	**Sb**	**20 06 48.2**	**+1.0**
	baz=234						
NSK	**Sanguang**	**0.90**	**23**	*e*P	**Pg**	**20 06 35.8**	**-0.8**
	baz=33						
YHNB	**Yeheng**	**0.90**	**24**	⇓P	**Pg**	**20 06 35.8**	**-0.8**
	baz=26						
NDT	**Datong Townshi**	**0.90**	**33**	*e*P	**Pg**	**20 06 35.4**	**-1.2**
	baz=33						
NDT				*e*S	**Sb**	**20 06 49.2**	**+0.8**
	baz=33						
SLGT	**Liugui**	**0.90**	**200**	*e*P	**Pb**	**20 06 36.7**	**+0.2**
	baz=199						
ENA	**Nanau**	**0.91**	**50**	P	**Pb**	**20 06 36.4**	**-0.3**
	baz=52						
NANB	**Nanao**	**0.91**	**50**	⇓P	**Pg**	**20 06 36.2**	**-0.6**
	baz=51						
NANB				*e*S	**Sg**	**20 06 47.8**	**-1.1**
	baz=51						
SBCB	**Hsinchu**	**0.94**	**1**	*e*P	**Pn**	**20 06 38.8**	**+0.9**
	baz=343						
CHN3	**Shinhua**	**0.95**	**216**	*e*P	**Pn**	**20 06 39.3**	**+1.3**
	baz=227						
HSN	**Hsinchu**	**0.95**	**360**	*e*P	**Pb**	**20 06 37.5**	**0.0**
	baz=345						
ENTT	**Nioudou**	**0.96**	**34**	*e*P	**Pg**	**20 06 36.8**	**-0.9**
	baz=30						
SCLT	**Jiali**	**0.98**	**227**	*e*P	**Pb**	**20 06 38.0**	**+0.1**
	baz=226						
SCLT				*e*S	**Sn**	**20 06 52.5**	**+0.5**
	baz=226						
TWG	**Pinlang**	**1.02**	**175**	⇑*i*P	**Pn**	**20 06 39.0**	**-0.1**
	baz=161						
TWGBT	**Beinan**	**1.03**	**175**	⇑P	**Pb**	**20 06 38.9**	**+0.2**
	baz=165						
TWGBT				S	**Sn**	**20 06 53.5**	**+0.2**
	baz=165						
NWLT	**Wulai**	**1.04**	**27**	*e*P	**Pg**	**20 06 38.1**	**-1.3**
	baz=29						
TAI1	**Yung-k'ang**	**1.06**	**221**	*e*P	**Pn**	**20 06 39.4**	**0.0**
	baz=220						
TWE	**Neicheng**	**1.08**	**36**	*e*P	**Pg**	**20 06 39.2**	**-0.7**
	baz=37						
TWE				*e*S	**Sb**	**20 06 54.3**	**+0.8**
	baz=37						
TTN	**Taitung**	**1.10**	**172**	*e*P	**Pn**	**20 06 40.8**	**+0.7**
	baz=170						
TWC	**Suao**	**1.10**	**46**	⇓*i*P	**Pb**	**20 06 39.7**	**-0.2**
	baz=47						
TWC				*e*S	**Sb**	**20 06 54.5**	**+0.3**
	baz=47						
NCUH	**Zhongli**	**1.13**	**10**	*e*P	**Pn**	**20 06 41.9**	**+1.2**
	baz=12						
NCU	**National Centr**	**1.14**	**10**	*e*P	**Pg**	**20 06 40.2**	**-0.9**
	baz=12						
SSD	**Sandimen**	**1.14**	**196**	P	**Pn**	**20 06 40.9**	**+0.3**
	baz=184						
SSD				*e*S	**Sn**	**20 06 56.9**	**+0.8**
	baz=184						
ILA	**Ilan**	**1.16**	**37**	*e*P	**Pg**	**20 06 40.0**	**-1.4**
	baz=46						
TATO	**Taipei**	**1.22**	**22**	*e*P	**Pn**	**20 06 42.1**	**+0.3**
	baz=25						
NHDH	**Xindian Distri**	**1.22**	**24**	*e*P	**Pn**	**20 06 42.6**	**+0.8**
	baz=25						
NHDH				*e*S	**Sn**	**20 06 59.8**	**+1.7**
	baz=25						
SNJT	**Kaohsiung City**	**1.24**	**209**	*e*P	**Pb**	**20 06 41.9**	**-0.4**
	baz=208						
ECL	**Taimali**	**1.24**	**181**	*e*P	**Pg**	**20 06 42.5**	**-0.6**
	baz=179						
ECL				*e*S	**Sn**	**20 07 00.5**	**+1.9**
	baz=179						
TWA	**Mucha**	**1.26**	**26**	*e*P	**Pn**	**20 06 42.4**	**0.0**
	baz=10.0						
EOS1	**EOS1**	**1.26**	**56**	*e*P	**Pg**	**20 06 43.5**	**0.0**
	baz=57						
MASBT	**Mashibuluo**	**1.27**	**195**	⇑P	**Pg**	**20 06 42.8**	**-0.8**
	baz=193						
MASBT				S	**Sn**	**20 07 00.8**	**+1.6**
	baz=193						
NTC	**Toucheng**	**1.27**	**38**	*e*P	**Pg**	**20 06 43.2**	**-0.4**
	baz=31						
TWS1	**Kuangyinshan**	**1.31**	**18**	*e*P	**Pn**	**20 06 43.3**	**+0.2**
	baz=4.0						
PHUB	**P'eng-hu**	**1.33**	**256**	⇓*e*P	**Pn**	**20 06 41.9**	**-1.4**
	baz=255						
PNG	**Penghu**	**1.33**	**258**	*e*P	**Pn**	**20 06 42.2**	**-1.1**
	baz=258						
WDGT	**Dungji**	**1.34**	**245**	*e*P	**Pn**	**20 06 42.4**	**-1.0**
	baz=244						
TIPB	**Shuangxi**	**1.36**	**34**	P	**Pg**	**20 06 44.5**	**-0.9**
	baz=18						
TIPB				*e*S	**Sg**	**20 07 02.8**	**-0.4**
	baz=18						
NTST	**Danshui**	**1.38**	**18**	*e*P	**Pg**	**20 06 45.6**	**-0.2**
	baz=4.0						
YM04	**YM04**	**1.40**	**21**	P	**Pn**	**20 06 44.1**	**-0.1**
	baz=4.0						
YM01	**YM01**	**1.40**	**23**	*e*P	**Pn**	**20 06 44.3**	**-0.1**
	baz=25						
SSPT	**Xinbi**	**1.41**	**196**	*e*P	**Pb**	**20 06 45.0**	**-0.1**
	baz=195						
YM10	**YM10**	**1.41**	**22**	*e*P	**Pn**	**20 06 44.1**	**-0.3**
	baz=24						
YM05	**YM05**	**1.42**	**22**	*e*P	**Pn**	**20 06 44.5**	**-0.1**
	baz=24						
YM11	**YM11**	**1.42**	**22**	*e*P	**Pn**	**20 06 44.9**	**+0.2**
	baz=25						
NWF	**Wu-fen Shan**	**1.42**	**31**	*e*P	**Pg**	**20 06 46.6**	**0.0**
	baz=14						
WFSB	**Wu-fen Shan**	**1.42**	**31**	*e*P	**Pg**	**20 06 46.4**	**-0.2**
	baz=17						
YM03	**YM03**	**1.42**	**21**	*e*P	**Pg**	**20 06 46.3**	**-0.3**
	baz=4.0						
YM07	**YM07**	**1.45**	**24**	*e*P	**Pn**	**20 06 45.0**	**0.0**
	baz=26						
YM08	**YM08**	**1.45**	**23**	*e*P	**Pg**	**20 06 46.1**	**-1.0**
	baz=25						
EAST	**Anshuo**	**1.46**	**185**	⇑*i*P	**Pb**	**20 06 46.0**	**-0.2**
	baz=174						
EAST				*e*S	**Sg**	**20 07 06.2**	**0.0**
	baz=174						
TWB1	**Santiao Chiao**	**1.48**	**38**	*e*P	**Pg**	**20 06 46.7**	**-1.0**
	baz=49						
TWB1				*e*S	**Sg**	**20 07 07.5**	**+0.5**
	baz=49						
TAW	**Tawu**	**1.48**	**183**	*e*P	**Pb**	**20 06 46.2**	**-0.2**
	baz=201						
SCZT	**Fangliau**	**1.50**	**193**	⇑*e*P	**Pn**	**20 06 46.1**	**+0.5**
	baz=191						
SCZT				*e*S	**Sn**	**20 07 05.7**	**+0.7**
	baz=191						
TWY	**Chenhua**	**1.53**	**22**	*e*P	**Pn**	**20 06 46.0**	**-0.1**
	baz=7.0						
VCHM	**Qimei**	**1.56**	**246**	*e*P	**Pn**	**20 06 46.0**	**-0.4**
	baz=236						
VCHM				*e*S	**Sn**	**20 07 05.6**	**-0.7**
	baz=236						
WLCH	**Liuqiu**	**1.59**	**200**	*e*P	**Pb**	**20 06 48.0**	**-0.3**
	baz=201						
TWP	**Hsiaoliuchiu**	**1.59**	**201**	*e*P	**Pn**	**20 06 46.2**	**-0.7**
	baz=201						
JYNG	**Yonagunijimaku**	**1.90**	**71**	P	**Pb**	**20 06 52.4**	**-1.1**
JYNG				S	**Sb**	**20 07 16.6**	**-0.5**
TWK1	**Hengchun**	**1.90**	**185**	*e*P	**Pn**	**20 06 50.6**	**-0.5**
	baz=201						
TWKBT	**Hengchun**	**1.90**	**185**	*e*P	**Pn**	**20 06 51.1**	**-0.1**
	baz=201						
YOJ	**Yonaguni jima**	**1.96**	**71**	*e*P	**Pn**	**20 06 52.8**	**+0.9**
	baz=70						
YOJ	**Yonaguni jima**	**1.96**	**71**	P	**Pn**	**20 06 52.6**	**+0.7**
YOJ				*e*S	**Sb**	**20 07 18.4**	**-0.4**
PTTC	**Pingtan**	**1.98**	**327**	*e*P	**Pn**	**20 06 50.7**	**-1.5**
	baz=327						
PCYT	**Pengchaiyu**	**2.04**	**29**	*e*P	**Pn**	**20 06 53.4**	**+0.4**
	baz=18						
PTMZ	**Houxiangcun**	**2.07**	**305**	*e*P	**Pn**	**20 06 52.8**	**-0.6**
	baz=318						
KNM	**Kinmen**	**2.39**	**284**	*e*P	**Pn**	**20 06 58.5**	**+0.7**
	baz=283						
KNMB	**Chin-men Tao**	**2.44**	**285**	*e*P	**Pn**	**20 06 57.2**	**-1.4**
	baz=285						
MATB	**Ma-tsu**	**2.48**	**338**	*e*P	**Pn**	**20 06 57.5**	**-1.6**
	baz=338						
IRIF	**Iriomote-Funau**	**2.56**	**78**	P	**Pn**	**20 07 01.1**	**+0.9**
IRIF				*e*S	**Sn**	**20 07 33.0**	**+1.8**
HATJ	**Hateruma jima**	**2.60**	**85**	P	**Pn**	**20 07 01.8**	**+1.1**
HATJ				*e*S	**Sn**	**20 07 33.2**	**+1.2**
JKRS	**Kuro-shima**	**2.80**	**81**	P	**Pn**	**20 07 03.9**	**+0.4**
JKRS				*e*S	**Sn**	**20 07 39.3**	**+2.2**
MHZQ	**Yeshan**	**2.86**	**322**	*e*P	**Pn**	**20 07 02.9**	**-1.4**
	baz=322						
LYJJ	**Jianjiangzhen**	**2.91**	**338**	*e*P	**Pn**	**20 07 03.7**	**-1.4**
	baz=338						
AXDP	**Jialang**	**2.94**	**292**	*e*P	**Pn**	**20 07 03.9**	**-1.5**
	baz=291						
JIJ	**Ishigaki jima**	**2.94**	**79**	P	**Pn**	**20 07 05.8**	**+0.4**
JIJ				*e*S	**Sn**	**20 07 40.8**	**+0.3**
ZPLA	**Ao Xicun**	**2.95**	**272**	*e*P	**Pn**	**20 07 04.5**	**-1.1**
	baz=272						
JISG	**Ishigakijimahi**	**3.13**	**76**	P	**Pn**	**20 07 08.5**	**+0.4**
JISG				S	**Sn**	**20 07 45.1**	**-0.2**
XPSS	**Dashiqiu**	**3.15**	**347**	*e*P	**Pn**	**20 07 06.9**	**-1.4**
	baz=347						
JTJ	**Tarama**	**3.49**	**76**	P	**Pn**	**20 07 14.0**	**+1.0**
JTJ				*e*S	**Sn**	**20 07 56.6**	**+2.5**

*ISCJB **08** 20:06:20.9±0.5, 6°.82N±0°.03×73°.10W±0°.03, h149km±4km, mb3.3/2, Error ellipse: s-maj=5.4km s-min=3.4km az=36.9*
*RSNC **08** 20:06:22.5±1.3, 6°.79N×73°.11W, h142km±4km, ML3.3, Mw3.6*
*IDC **08** 20:06:22.6±5.9, 6°.54N×72°.98W, h184km±43km, mb3.0/2, mb1 3.3/3, mb1mx3.0/27, mbtmp3.5/3, Error ellipse: s-maj=89.4km s-min=23.2km az=62.0*
ISC 08 20:06:20.8±0.9, 6°.81N±0°.03×73°.10W±0°.04, h153km±6km, n37, σ1 13/63, 5C-7D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time (h m s)	Res ISC
BARC	**Barichara**	**0.23**	**202**	⇑*i*P		**Pn**	**20 06 41.8**	**0.0**
BARC				*i*			20 06 41.9	
	comp=Z,276nm,0.4s							
BARC				*e*S		**Sn**	**20 06 56.5**	**-1.3**
GIRC	**Giron, Santand**	**0.28**	**340**	*i* P		**Pn**	**20 06 41.9**	**+0.1**
GIRC				*e*S		**Sn**	**20 06 56.1**	**-1.7**
PAMC	**Pamplona, Colo**	**0.66**	**37**	⇑*i*P		**Pn**	**20 06 44.7**	**+0.8**
PAMC				*e*S		**Sn**	**20 07 01.3**	**-0.1**
PAMC				*i*			20 07 02.6	
	comp=N,563nm,0.2s							
BRRC	**Barranca, Sant**	**0.68**	**296**	⇓*i*P		**Pn**	**20 06 43.8**	**+0.3**
BRRC				*e*S		**Sn**	**20 07 00.5**	**-0.2**
BRRC				*i*			20 07 04.8	
	comp=N,516nm,0.1s							
RUSC	**La Rusia**	**0.91**	**179**	⇓*i*P		**Pn**	**20 06 45.9**	**+0.2**
RUSC				*e*S		**Sn**	**20 07 04.0**	**-0.7**
RUSC				*i*			20 07 06.2	
	comp=E,213nm,0.2s							
GRMC	**Gramalote, San**	**0.95**	**18**	*i* P		**Pn**	**20 06 48.2**	**+2.7**
GRMC				*e*S		**Sn**	**20 07 06.9**	**+2.3**
CCUC3	**Cucuta, Santo**	**1.21**	**29**	*e*P		**Pn**	**20 06 49.2**	**+1.5**
CCUC3				*e*S		**Sn**	**20 07 08.9**	**+0.6**
CAPV	**Capacho**	**1.30**	**36**	⇑*i*P		**Pn**	**20 06 49.9**	**+1.1**
CAPV				*e*S		**Sn**	**20 07 10.7**	**+0.4**
TAMC	**Tame, Arauca**	**1.35**	**106**	⇓*i*P		**Pn**	**20 06 50.2**	**+1.2**
TAMC				*i*			20 06 50.3	
	comp=Z,190nm,0.2s							
TAMC				*e*S		**Sn**	**20 07 10.4**	**-0.3**
PTBC	**PUERTO BERRIO,**	**1.38**	**259**	⇓*i*P		**Pn**	**20 06 48.4**	**-0.9**
PTBC				*e*S		**Sn**	**20 07 10.4**	**-0.7**
PTBC				*i*			20 07 12.7	
	comp=E,412nm,0.2s							
OCAC	**Ocana**	**1.44**	**351**	*e*P		**Pn**	**20 06 50.2**	**+0.1**
OCAC				*e*S		**Sn**	**20 07 11.8**	**-0.7**
OCAC				*i*			20 07 12.7	
	comp=E,773nm,0.2s							
YOPC	**Yopal, Colombi**	**1.59**	**155**	⇓*i*P		**Pn**	**20 06 52.6**	**+0.9**
YOPC				*i*			20 06 53.3	
	comp=Z,98nm,0.2s							
YOPC				*e*S		**Sn**	**20 07 14.5**	**-1.0**
ZARC	**Zaragoza, Cauc**	**1.88**	**291**	*e*P		**Pn**	**20 06 54.9**	**+0.3**
ZARC				*e*S		**Sn**	**20 07 20.4**	**-0.2**
ZARC				*i*			20 07 25.4	
	comp=N,339nm,0.3s							
AGZ	**La Independenc**	**1.97**	**161**	⇓*i*P		**Pn**	**20 06 56.1**	**+0.4**
AGZ				*e*S		**Sn**	**20 07 20.9**	**-1.8**
NORC	**Norcasia**	**2.15**	**235**	*e*P		**Pn**	**20 06 57.8**	**-0.1**
NORC				*e*S		**Sn**	**20 07 25.8**	**-0.7**
NORC				*i*			20 07 30.9	
	comp=E,278nm,0.4s							
SMLC	**San Martn de**	**2.20**	**334**	*e*P		**Pn**	**20 06 58.2**	**-0.2**
SMLC				*i*			20 07 30.3	
	comp=E,258nm,0.1s							
CHIC	**Chingaza**	**2.26**	**196**	*e*P		**Pn**	**20 07 00.1**	**+0.5**
CHIC				*e*S		**Sn**	**20 07 29.1**	**-0.3**
CHIC				*i*			20 07 32.4	
	comp=E,113nm,0.3s							
CROSA	**EL ROSAL, CUND**	**2.30**	**212**	*e*P		**Pn**	**20 07 01.7**	**+1.7**
CROSA				*e*S		**Sn**	**20 07 29.6**	**-0.6**
ROSC	**El Rosal**	**2.31**	**212**	P		**Pn**	**20 07 02.3**	**+2.2**
	comp=E,12nm,0.3s,baz=286,slow=5.0,SNR=8.4							
ROSC				S		**Sn**	**20 07 32.9**	**+2.6**
	comp=E,23nm,0.3s,baz=347,slow=21,SNR=15							
ROSC	**El Rosal**	**2.31**	**212**	*e*P		**Pn**	**20 07 01.9**	**+1.9**
ROSC				*e*S		**Sn**	**20 07 30.2**	**-0.1**
HELC	**Santa Helena**	**2.50**	**256**	*e*P		**Pn**	**20 07 02.5**	**+0.2**
HELC				*e*S		**Sn**	**20 07 34.3**	**0.0**
HELC				*i*			20 07 41.5	
	comp=N,75nm,0.5s							
SOCV	**Socops**	**2.66**	**56**	*e*P		**Pn**	**20 07 04.3**	**+0.3**
SOCV				*e*S		**Sn**	**20 07 36.4**	**-1.0**
VILC	**Villavicencio,**	**2.75**	**193**	*e*P		**Pn**	**20 07 05.9**	**+0.6**
VILC				*e*S		**Sn**	**20 07 39.5**	**-0.1**
VILC				*i*			20 07 42.9	
	comp=E,208nm,0.6s							
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P		**Pn**	**20 07 06.7**	**+1.1**
GUY2C				*e*S		**Sn**	**20 07 40.8**	**+0.6**
GUY2C				*i*			20 07 49.2	
	comp=N,95nm,0.6s							
RREF	**El Recreo**	**2.94**	**230**	*e*P		**Pn**	**20 07 08.6**	**+0.6**
RREF				*e*S		**Sn**	**20 07 45.1**	**+0.6**
RREF				*i*			20 07 50.4	
	comp=Z,59nm,0.2s							
DBBC	**Dabeiba**	**3.10**	**274**	*e*P		**Pn**	**20 07 10.0**	**+0.4**
CODC	**Agustn Codazz**	**3.12**	**354**	⇑*i*P		**Pn**	**20 07 10.0**	**+0.2**
CODC				*i*			20 07 57.5	
	comp=N,23nm,0.3s							
SDV	**Santo Domingo**	**3.19**	**50**	*e*P		**Pn**	**20 07 11.5**	**+0.6**
SDV				*e*S		**Sn**	**20 07 48.9**	**-0.8**
PRAC	**Prado**	**3.56**	**210**	*e*P		**Pn**	**20 07 15.8**	**+0.4**
PRAC				*e*S		**Sn**	**20 07 58.4**	**+0.5**
PRAC				*i*			20 08 04.8	
	comp=E,79nm,0.3s							
ELOV	**Elorza**	**3.59**	**87**	*e*P		**Pn**	**20 07 16.1**	**+0.3**
VIRV	**

ASAR Alice Springs 37.08 62 P P 20 15 56.9 0.0
1.9nm,1.0s,baz=219,slow=7.3,SNR=7.8
ASAR LR LR 20 29 15.3
comp=Z,97nm,18.1s,baz=234,slow=33
VNDA Vanda 38.13 162 LR LR 20 30 15.4
comp=Z,110nm,20.5s,baz=282,slow=34
QSPA South Pole Qui 42.32 180 P P 20 16 40.3 0.0
2.0nm,0.8s,baz=279,slow=2.6,SNR=5.4
CMAR Chiang Mai Arr 65.97 1 P P 20 19 33.0 0.0
1.8nm,1.0s,baz=196,slow=5.4,SNR=8.5
WSAR Wadi Sarin 79.24 323 LR LR 20 48 28.1
comp=Z,33nm,18.3s,baz=150,slow=30
NVAR Mina Array Bea 151.86 96 PKPbc PKPbc 20 28 41.2 -0.4
1.2nm,0.9s,baz=209,slow=5.4,SNR=5.5

MEX 08 20:30:23.2±0.4, 14°.51N×92°.76W, h66km±14km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.62**	**51**	*e*P	Pn	20 30 35.5	-1.5
THIG				*e*S	Sn	20 30 45.4	-1.7
PCIG		**1.27**	**340**	*e*P	Pn	20 30 43.8	-1.1
PCIG				*e*S	Sn	20 30 59.0	-2.2

*SOME **08** 20:31:18.1, 43°.30N×87°.07E, h10km*
*NNC **08** 20:31:21.4±2.5, 43°.10N×88°.47E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=18.8km s-min=16.4km az=84.0*
ISC 08 20:31:25.8±4.1, 43°.2N±0°.1×88°.4E±0°.2, h10km, n10, σ3§14/20, 8C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**4.96**	**331**	*e*P	**Pn**	**20 32 42.0**	**+1.7**
	1.5nm,0.2s						
ZSN				*e*S	**Sn**	**20 33 44.0**	**+6.3**
	5.6nm,0.4s						
MK31	**Makanchi Array**	**5.66**	**312**	⇑Pn	**Pn**	**20 32 49.4**	**-0.6**
	1.0nm,0.4s,baz=130,slow=14,SNR=34						
MK31				⇑Sn	**Sn**	**20 33 56.9**	**+1.8**
	4.9nm,0.7s,baz=55,slow=35,SNR=4.0						
MK31				⇓Lg	Lg	20 34 23.1	
	7.2nm,0.5s,baz=130,slow=31,SNR=4.5						
MAKZ	**Makanchi**	**5.84**	**311**	⇓Pn	**Pn**	**20 32 49.0**	**-3.5**
	3.5nm,0.5s						
MAKZ				⇓Sn	**Sn**	**20 34 00.5**	**+0.9**
	2.8nm,0.5s						
MAKZ				⇑Lg	Lg	20 34 28.5	
	9.2nm,0.7s						
KTMS	**Ketmen**	**5.91**	**275**	*e*P	**Pn**	**20 32 51.6**	**-1.8**
	3.0nm,0.1s						
KTMS				*e*S	**Sn**	**20 34 01.3**	**+0.1**
	4.9nm,0.3s						
DJR	**Jarkent**	**6.37**	**283**	*e*P	**Pn**	**20 32 57.2**	**-2.5**
	3.7nm,0.2s						
DJR				*e*S	**Sn**	**20 34 09.8**	**-2.7**
PDGK	**Podgornoye**	**6.54**	**274**	⇓Pn	**Pn**	**20 32 59.6**	**-2.4**
	2.4nm,0.5s						
PDGK				⇑Sn	**Sn**	**20 34 15.5**	**-1.2**
	5.8nm,0.6s						
PDGK				⇑Lg	Lg	20 34 49.9	
	7.3nm,0.6s						
KAPS	**Kapalarasan**	**6.85**	**291**	*e*P	**Pn**	**20 33 06.7**	**+0.3**
	0.7nm,0.2s						
KAPS				*e*S	**Sn**	**20 34 27.2**	**+2.7**
	3.1nm,0.2s						
SATY	**Saty**	**7.34**	**273**	*e*P	**Pn**	**20 33 16.1**	**+2.9**
	2.8nm,0.2s						
SATY				*e*S	**Sn**	**20 34 43.4**	**+6.9**
	6.9nm,0.2s						
KURBB	**Kurchatov Arra**	**10.06**	**321**	⇓Pn	**Pn**	**20 33 48.7**	**-1.6**
	2.4nm,1.1s						
KURBB				⇓Sn	**Sn**	**20 35 41.0**	**-2.2**
	3.0nm,0.6s						
KURBB				⇑Lg	Lg	20 36 43.9	
	12nm,0.8s						
KURK	**Kurchatov**	**10.09**	**322**	⇑Pn	**Pn**	**20 33 46.9**	**-3.7**
	1.2nm,0.6s						
KURK				⇓Sn	**Sn**	**20 35 42.8**	**-0.9**
	0.9nm,0.5s						
KURK				⇑Lg	Lg	20 36 44.7	
	9.3nm,0.8s						

*BJI **08** 20:33:24.5±0.0, 10°.51N×126°.95E, h14km, mb5.0/76, mB5.1/65, Ms4.9/82, Ms7 4.7/73*
*ISCJB **08** 20:33:25.5±0.7, 10°.69N±0°.02×126°.90E±0°.02, h8km±4km, mb5.1/237, MS4.5/67, Error ellipse: s-maj=3.4km s-min=2.8km az=172.9*
*IDC **08** 20:33:26.1±0.3, 10°.67N×126°.84E, h0km, mb4.9/48, mb1 4.9/52, mb1mx4.9/59, mbtmp4.9/52, ML4.3/4, MS4.3/34, Ms1 4.3/34, ms1mx4.3/40, Error ellipse: s-maj=13.1km s-min=7.8km az=82.0*
*MOS **08** 20:33:28.3±0.9, 10°.74N×126°.77E, h24km, mb5.4/80, MS4.5/13, Error ellipse: s-maj=8.5km s-min=4.5km az=114.1*
*MAN **08** 20:33:28.4, 10°.73N×126°.85E, h43km, mb5.6, ML4.6, MS4.6*
*NEIC **08** 20:33:28.3±1.2, 10°.71N×126°.88E, h16km±3km, mb5.2/154, Error ellipse: s-maj=13.2km s-min=10.5km az=82.0*
*GCMT **08** 20:33:30.3±0.1, 10°.64N±0°.01×126°.96E±0°.01, h12km, MW5.2/119, Moment Tensor Solution. s63,c84; s119,c205; Duration: 1§0 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.77±.01; $M_{\theta\theta}$=0.26±.01; $M_{\phi\phi}$=0.50±.01; $M_{r\theta}$=-0.18±.04; $M_{\theta\phi}$=-0.30±.01; $M_{\phi r}$=0.11±.03; Best double couple: M_0=0.76200×10^{17} NP1:ϕ_s=133.00000°, δ=47.00000°, λ=-108.00000°. NP2:ϕ_s=339.00000°, δ=46.00000°, λ=-71.00000°. Principal axes: T 0.7060, Plg0.0000°, Azm236.0000°; N 0.1120, Plg13.0000°, Azm146.0000°; P -0.8180, Plg77.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **08** 20:33:36.0, 10°.56N×126°.98E, h84km, mb5.2*
*DJA **08** 20:33:53.7±2.7, 9°N±23°×12°7E±°, h45km±24km, M5.1/13, mb5.2/13, mB5.5/12, MLv5.4/3, Mw(mB)5.0/12, Mwp5.2/2*
ISC 08 20:33:31.1±0.7, 10°.67N±0°.03×126°.90E±0°.04, h34km±2km, n655, σ1§57/721, mb5.1/249, MS4.5/70, 51C-22D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.65**	**238**	⇓*i*P	Pn	20 34 04.0	+6.4
SCPH				*i* S	**Sn**	**20 34 23.5**	**+5.8**
BESP	**Borongan**	**1.71**	**303**	*e*P	**Pn**	**20 33 55.1**	**-3.4**
BESP				*e*S	**Sn**	**20 34 19.8**	**+0.7**
PLP	**Palo**	**1.95**	**285**	⇑*e*P	**Pn**	**20 33 58.8**	**-3.0**
PLP				*i* S	**Sn**	**20 34 22.9**	**-2.3**
MSLP	**Maasin**	**2.08**	**255**	*e*P	**Pn**	**20 34 01.0**	**-2.5**
MSLP				*e*S	**Sn**	**20 34 24.1**	**-4.2**
BUTP	**Butuan**	**2.11**	**217**	*e*P	**Pn**	**20 34 02.1**	**-2.0**
BUTP				*e*S	**Sn**	**20 34 25.9**	**-3.2**
OCLP	**Ormoc**	**2.28**	**280**	*e*P	**Pn**	**20 34 05.7**	**-0.7**
CNP	**Cataman**	**2.85**	**310**	*e*P	**Pn**	**20 34 10.7**	**-3.6**
CNP				*e*S	**Sn**	**20 34 46.7**	**-0.8**
LLP	**Lapu-Lapu**	**2.91**	**263**	⇑*e*P	**Pn**	**20 34 13.6**	**-1.4**
LLP				*e*S	**Sn**	**20 34 45.5**	**-3.3**
CGP	**Cagayan de Oro**	**3.10**	**225**	⇑*i*P	**Pn**	**20 34 17.4**	**-0.1**
CGP				*i* S	**Sn**	**20 34 50.8**	**-2.6**
BUKP	**Musuan**	**3.31**	**213**	*e*P	**Pn**	**20 34 19.7**	**-1.0**
BUKP				*e*S	**Sn**	**20 35 03.8**	**+4.8**
MMPH	**Masbate**	**3.62**	**298**	*e*P	**Pn**	**20 34 26.3**	**+1.5**
MATI	**Mati**	**3.75**	**190**	*e*P	**Pn**	**20 34 23.8**	**-2.9**
DAV	**Davao City (W)**	**3.81**	**200**	Pn	**Pn**	**20 34 27.9**	**+0.4**
	27nm,0.3s,baz=214,slow=11,SNR=2.2						
DAV	**Davao City (W)**	**3.81**	**200**	*e*Pn	**Pn**	**20 34 27.4**	**0.0**
DMPH	**Davao City--Mi**	**3.82**	**201**	⇑*e*P	**Pn**	**20 34 29.9**	**+2.3**
SNPH	**Sibulan**	**3.84**	**250**	*e*P	**Pn**	**20 34 28.3**	**+0.4**
PVCP	**Virac**	**3.96**	**318**	*e*P	**Pn**	**20 34 26.1**	**-3.4**
DCPH	**Dipolog City**	**4.07**	**240**	⇑*e*P	**Pn**	**20 34 33.9**	**+3.0**
DCPH				*e*S	**Sn**	**20 35 21.4**	**+4.0**
GUIM	**Jordan**	**4.24**	**270**	*e*P	**Pn**	**20 34 31.9**	**-1.4**
CTBH	**Cotabato--PC H**	**4.32**	**218**	⇑*i*P	**Pn**	**20 34 34.2**	**-0.2**
PAGZ	**Pagadian**	**4.46**	**231**	*e*P	**Pn**	**20 34 35.5**	**-0.9**
DDMP	**Don Marcelino,**	**4.69**	**195**	*e*P	**Pn**	**20 34 39.0**	**-0.5**
SKMP	**Bagumbayan, Su**	**4.74**	**210**	*e*P	**Pn**	**20 34 39.4**	**-0.8**
JAP	**San Jose, Anti**	**4.87**	**271**	⇑*e*P	**Pn**	**20 34 42.6**	**+0.6**
AUQP	**San Andres**	**4.90**	**303**	*e*P	**Pn**	**20 34 41.4**	**-1.1**
OTRP	**Odiongan**	**5.07**	**290**	*e*P	**Pn**	**20 34 42.9**	**-1.8**
BOAC	**Boac**	**5.67**	**300**	*e*P	**Pn**	**20 34 52.5**	**-0.5**
CUYO	**Cuyo Island**	**5.78**	**272**	*e*P	**Pn**	**20 34 52.3**	**-2.2**
SJMP	**San Jose**	**5.94**	**288**	*e*P	**Pn**	**20 34 56.1**	**-0.5**
TGY	**Tagaytay City**	**6.75**	**301**	Pn	**Pn**	**20 35 07.7**	**-0.3**
	12nm,0.3s,baz=312,slow=2.6,SNR=3.9						
TGY				LR	LR	20 38 24.7	
	comp=Z,3μm,18.4s,baz=126,slow=45						
BALP	**Baler**	**7.23**	**315**	*e*P	**Pn**	**20 35 15.0**	**+0.5**
ENPP	**El Nido**	**7.36**	**275**	*e*P	**Pn**	**20 35 13.8**	**-2.4**
SMPP	**San Manuel, Pa**	**8.14**	**313**	*e*P	**Pn**	**20 35 24.9**	**-2.0**
APYP	**Conner**	**9.01**	**323**	*e*P	**Pn**	**20 35 37.4**	**-1.5**
BATP	**Bataraza**	**9.16**	**259**	*e*P	**Pn**	**20 35 41.1**	**+0.2**
TNTI	**Ternate**	**9.85**	**177**	*e*Pn	**Pn**	**20 35 49.8**	**-0.5**
TNTI				*e*Sn	**Sn**	**20 37 37.7**	**-2.0**
TNTI	**Ternate**	**9.85**	**177**	P	**Pn**	**20 35 48.8**	**-1.5**
	392nm,1.0s,4μm						
MRSI	**Marisa**	**11.26**	**206**	P	**Pn**	**20 36 12.5**	**+2.7**
	30nm,1.0s,414nm2μm						
KKM	**Kota Kinabalu**	**11.53**	**247**	*e*Pn	**Pn**	**20 36 12.7**	**-0.8**
KKM	**Kota Kinabalu**	**11.53**	**247**	P	**Pn**	**20 36 16.0**	**+2.5**
SWI	**Sorong**	**12.25**	**159**	P	**P**	**20 36 31.9**	**-3.3**
LUWI	**Luwuk**	**12.34**	**200**	*e*Pn	**Pn**	**20 36 24.4**	**-0.1**
LUWI				*e*Sn	**Sn**	**20 38 44.8**	**+3.9**
LUWI	**Luwuk**	**12.34**	**200**	P	**Pn**	**20 36 27.9**	**+3.4**
	122nm,0.9s,3μm						
MPSI	**Mapaga**	**12.40**	**215**	P	**P**	**20 36 38.3**	**+1.4**
APSI	**Ampana**	**12.64**	**205**	P	**P**	**20 36 38.5**	**-1.0**
TWG	**Pinlang**	**13.30**	**336**	*e*Pn	**Pn**	**20 36 34.6**	**-3.1**
TWG				*e*Sn	**Sn**	**20 39 00.2**	**-4.3**
YULB	**Yu-li**	**13.73**	**338**	*e*Pn	**Pn**	**20 36 41.5**	**-2.0**
TPUB	**Ta-pu**	**13.91**	**335**	*e*Pn	**Pn**	**20 36 43.5**	**-2.5**
YOJ	**Yonaguni jima**	**14.21**	**345**	*e*Pn	**Pn**	**20 36 48.2**	**-1.8**
YOJ	**Yonaguni jima**	**14.21**	**345**	*e*P	**Pn**	**20 36 48.2**	**-1.8**
SSLB	**Suanglung**	**14.22**	**337**	*e*Pn	**Pn**	**20 36 47.8**	**-2.4**
SGKI	**Sangatta, Kali**	**14.47**	**220**	P	**P**	**20 37 04.6**	**+4.7**
	225nm,1.0s						
FAKI	**Fak Fak**	**14.51**	**158**	*e*Pn	**Pn**	**20 36 54.3**	**+0.1**
FAKI	**Fak Fak**	**14.51**	**158**	P	**Pn**	**20 36 53.8**	**-0.4**
YHNB	**Yeheng**	**14.88**	**340**	*e*Pn	**Pn**	**20 36 57.1**	**-2.1**
TATO	**Taipei**	**15.13**	**341**	P	**Pn**	**20 37 01.3**	**-1.1**
TTSI	**Tana Toraja**	**15.34**	**208**	P	**Pn**	**20 37 06.8**	**+1.6**
	200nm,1.0s,3μm						
BKB	**Balikpapan**	**15.48**	**221**	P	**P**	**20 37 14.7**	**+3.6**
	337nm,0.9s,4μm						
SRPI	**Serui, Papua**	**15.54**	**143**	P	P	20 37 24.5	+13
JOW	**Kunigami**	**16.13**	**4**	Pn	**P**	**20 37 19.2**	**+0.9**
	0.7nm,0.3s,baz=148,slow=12,SNR=9.4						
JOW	**Kunigami**	**16.13**	**4**	*e*Pn	**Pn**	**20 37 13.3**	**-2.0**
	49nm,1.1s						
SPSI	**Sidrap Palu**	**16.18**	**206**	P	**Pn**	**20 37 17.4**	**+1.4**
QZH	**Quanzhou**	**16.24**	**332**	⇑*i*P	**Pn**	**20 37 15.6**	**-1.1**
QZH				S	**Sn**	**20 40 15.8**	**-0.1**
QZH				pmax	pmax		
	comp=Z,410nm,4.5s						
QZH				LR	LR		
	comp=N,1μm,11.1s						
QZH				LR	LR		
	comp=E,1μm,14.7s						
QZH				LR	LR		
	comp=Z,2μm,14.2s						
BNSI	**Bone**	**16.43**	**205**	P	**P**	**20 37 21.3**	**-0.4**
	163nm,2.3s,5μm						
SBUM	**Sibu**	**16.70**	**242**	*e*Pn	**Pn**	**20 37 22.5**	**-0.2**
	22nm,0.9s						
SBUM	**Sibu**	**16.70**	**242**	P	**Pn**	**20 37 23.0**	**+0.3**
HKPS	**Hong Kong Po S**	**16.80**	**315**	*e*Pn	**Pn**	**20 37 22.5**	**-1.4**
	37nm,1.0s						
KAPI	**Kappang**	**17.13**	**205**	P	**Pn**	**20 37 28.7**	**+0.6**
	2.5nm,0.3s,baz=348,slow=1.2,SNR=13						
KAPI				LR	LR	20 45 18.3	
	comp=Z,1μm,19.2s,baz=11,slow=42						
KAPI	**Kappang**	**17.13**	**205**	*e*Pn	**Pn**	**20 37 27.3**	**-0.7**
	58nm,1.0s						
KAPI	**Kappang**	**17.13**	**205**	*e*P	**Pn**	**20 37 27.3**	**-0.7**
KAPI				pmax	pmax		
	comp=Z,58nm,1.0s						
KAPI	**Kappang**	**17.13**	**205**	P	**Pn**	**20 37 28.8**	**+0.7**
BKSI	**Bulukumba**	**17.26**	**203**	P	P	20 37 42.4	+12
GUMO	**Guam**	**17.80**	**79**	LR	LR	20 44 04.2	
	comp=Z,2μm,19.0s,baz=250,slow=36						
GUMO	**Guam**	**17.80**	**79**	*e*Pn	**Pn**	**20 37 34.0**	**-2.4**
	comp=Z,238nm,1.4s						
GUMO	**Guam**	**17.80**	**79**	*e*P	**Pn**	**20 37 34.0**	**-2.4**
GUMO				pmax	pmax		
	comp=Z,238nm,1.4s						
DLV	**T Lat**	**18.10**	**276**	*e*Pn	**Pn**	**20 37 39.0**	**-1.3**
	comp=Z,71nm,1.3s						
QIZ	**Qiongzhong**	**18.45**	**299**	P	**P**	**20 37 43.8**	**-0.2**
QIZ				S	**Sn**	**20 41 10.8**	**+1.2**
QIZ				pmax	pmax		
	comp=Z,530nm,9.2s						
QIZ				LR	LR		
	comp=Z,820nm,14.7s						
QIZ				LR	LR		
	comp=Z,940nm,15.7s						
QIZ				LR	LR		
	comp=Z,1μm,15.7s						
GENI	**Genyem**	**18.65**	**134**	P	**Pn**	**20 37 51.4**	**+4.6**
	comp=Z,146nm,1.2s,comp=Z,3μm						
KSM	**Kuching**	**18.84**	**242**	*e*P	**P**	**20 37 47.2**	**-1.2**
	comp=Z,85nm,0.9s						
KSM	**Kuching**	**18.84**	**242**	P	**Pn**	**20 37 52.0**	**+2.9**
JAY	**Jayapura**	**18.98**	**133**	P	**Pn**	**20 37 51.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=313,slow=7.1,SNR=4.9						
JAY				LR	LR	20 45 15.2	
	comp=Z,2μm,18.4s,baz=329,slow=37						
MMRI	**Maumere**	**19.73**	**194**	*e*P	**P**	**20 37 57.1**	**-1.0**
	comp=Z,143nm,0.8s						
SOEI	**Soe**	**20.46**	**187**	*e*P	**P**	**20 38 05.5**	**-0.6**
	comp=Z,246nm,1.1s						
BATI	**Baunata**	**20.99**	**189**	P	**P**	**20 38 11.7**	**0.0**
	comp=Z,209nm,0.5s,baz=90,slow=1.7,SNR=28						
BATI				LR	LR	20 47 05.3	
	comp=Z,526nm,21.7s,baz=332,slow=39						
BATI	**Baumata**	**20.99**	**189**	*e*P	**P**	**20 38 11.7**	**0.0**
BATI				*e*P	**P**	**20 38 11.7**	**0.0**
NJ2	**Nanjing**	**22.54**	**342**	*e*P	**P**	**20 38 29.4**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,33nm,0.8s						
PANO	**Nakornpanom**	**22.56**	**289**	P	**P**	**20 38 30.2**	**+1.6**
	comp=Z,0.3nm,1.0s						
JNU	**Nakatsue**	**22.64**	**9**	P	**P**	**20 38 29.1**	**-0.2**
	comp=Z,24nm,0.8s,baz=197,slow=8.6,SNR=8.2						
JNU				LR	LR	20 48 20.1	
	comp=Z,704nm,18.4s,baz=168,slow=40						
JNU	**Nakatsue**	**22.64**	**9**	*e*P	**P**	**20 38 28.5**	**-0.8**
	comp=Z,34nm,0.9s						
JAGI	**Jajag, Banyuwa**	**22.86**	**214**	*e*P	**P**	**20 38 31.5**	**-0.3**
	comp=Z,129nm,1.1s						
WHN	**Wuhan**	**22.96**	**331**	⇓P	**P**	**20 38 31.2**	**-1.5**
WHN				S	**S**	**20 42 37.1**	**-3.6**
WHN				pmax	pmax		
	comp=Z,210nm,1.4s						
WHN				pmax	pmax		
	comp=Z,1μm,4.4s						
WHN				LR	LR		
	comp=Z,1μm,19.5s						
WHN				LR	LR		
	comp=Z,3μm,16.6s						
WHN				LR	LR		
	comp=Z,3μm,13.9s						
SKNT	**Sakolnakorn**	**23.11**	**288**	P	**P**	**20 38 34.5**	**+0.2**
	comp=Z,27nm,1.1s						
MTN	**Manton Dam**	**23.74**	**170**	*e*P	**P**	**20 38 40.0**	**-0.3**
	comp=Z,68nm,0.8s						
SMRI	**Semarang**	**24.05**	**224**	*e*P	**P**	**20 38 44.3**	**+0.9**
	comp=Z,176nm,1.1s						
KHON	**Khomkaen**	**24.07**	**286**	P	**P**	**20 38 43.2**	**-0.3**
	comp=Z,64μm,1.0s						
SLVN	**Son La**	**24.48**	**298**	*e*P	**P**	**20 38 45.2**	**-2.1**
	comp=Z,28nm,1.3s						
MYKOM	**Kota Tinggi**	**24.53**	**250**	*e*P	**P**	**20 38 46.8**	**-1.0**
	comp=Z,64nm,1.1s						
UGM	**Wanagama**	**24.63**	**222**	*e*P	**P**	**20 38 48.6**	**-0.1**
	comp=Z,281nm,1.1s						
GYA	**Guiyang**	**24.73**	**312**	⇑*i*P	**P**	**20 38 48.8**	**-0.9**
GYA				PP	**PnPn**	**20 39 26.6**	**+4.2**
GYA				S	**S**	**20 43 07.3**	**-2.5**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,210nm,6.5s						
GYA				LR	LR		
	comp=Z,620nm,14.3s						
GYA				LR	LR		
	comp=Z,1μm,16.2s						
GYA				LR	LR		
	comp=Z,2μm,16.5s						
CHAI	**Chaiyaphum**	**24.79**	**285**	P	**P**	**20 38 49.3**	**-0.8**
	comp=Z,50μm,0.9s						
JHJ	**Hachijo jima 2**	**25.29**	**26**	LR	LR	20 48 59.1	
	comp=Z,1μm,19.4s,baz=257,slow=37						
ENH	**Enshi**	**25.36**	**323**	*e*P	**P**	**20 38 54.6**	**-0.6**
	comp=Z,109nm,0.9s						
TJN	**Taejon**	**25.60**	**1**	⇓*e*P	**P**	**20 38 57.2**	**0.0**
PBKT	**Sadao Pong**	**25.86**	**286**	P	**P**	**20 38 59.2**	**-0.6**
	comp=Z,14nm,1.0s,comp=Z,321nm						
LEM	**Lembang**	**25.90**	**229**	P	**P**	**20 39 01.4**	**+1.0**
	comp=Z,102nm,0.9s,baz=22,slow=4.7,SNR=16						
LEM				LR	LR	20 51 42.3	
	comp=Z,1μm,18.4s,baz=56,slow=42						
INU	**Inuyama**	**26.23**	**19**	*e*P	**P**	**20 39 02.2**	**-0.8**
	comp=Z,28nm,0.9s						
CISI	**Cisompet, Garu**	**26.24**	**227**	*e*P	**P**	**20 39 03.1**	**-0.3**
	comp=Z,81nm,0.9s						
IPM	**Ipoh**	**26.36**	**258**	*e*P	**P**	**20 39 03.8**	**-0.6**
	comp=Z,25nm,0.7s						
IPM	**Ipoh**	**26.36**	**258**	P	**P**	**20 39 05.0**	**+0.5**
KULM	**Kulim**	**26.53**	**260**	*e*P	**P**	**20 39 06.1**	**+0.1**
	comp=Z,28nm,1.0s						
NANT	**Nan**	**26.57**	**291**	P	**P**	**20 39 04.1**	**-2.2**
	comp=Z,21μm,0.8s,comp=Z,247μm						
KS15	**Wonju Array Si**	**26.67**	**2**	*e*P	**P**	**20 39 06.3**	**-0.6**
	comp=Z,54nm,1.5s						
KSRS	**Korea Array**	**26.68**	**2**	P	**P**	**20 39 07.3**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=177,slow=9.3,SNR=22						
KSRS				PcP	**PcP**	**20 42 30.8**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=202,slow=2.4,SNR=7.2						
KSRS				LR	LR	20 51 14.6	
	comp=Z,1μm,18.5s,baz=161,slow=40						
PHET	**Kaeng Krachan**	**26.78**	**277**	P	**P**	**20 39 07.6**	**-0.6**
	comp=Z,64μm,0.6s,comp=Z,809μm						
TIA	**Tai'an**	**26.93**	**342**	P	**P**	**20 39 08.8**	**-0.5**
TIA				S	**S**	**20 43 53.6**	**+9.5**
TIA				pmax	pmax		
	comp=Z,14nm,0.7s						
TIA				LR	LR		
	comp=Z,700nm,14.7s						
TIA				LR	LR		
	comp=Z,540nm,13.7s						
TIA				LR	LR		
	comp=Z,760nm,20.6s						
TRTT	**Trang**	**27.00**	**266**	P	**P**	**20 39 12.0**	**+1.8**
	comp=Z,32nm,1.0s,comp=Z,1μm						
KMI	**Kunming**	**27.05**	**305**	P	**P**	**20 39 09.6**	**-1.1**
KMI				S	**S**	**20 43 47.0**	**+0.3**
KMI				sS	pS	20 43 55.2	+0.7
KMI				pmax	pmax		
	comp=Z,22nm,0.7s						
KMI				pmax	pmax		
	comp=Z,160nm,4.0s						
KMI				LR	LR		
	comp=Z,750nm,16.3s						
KMI				LR	LR		
	comp=Z,1μm,15.4s						
KMI				LR	LR		
	comp=Z,950nm,17.6s						
KMI	**Kunming**	**27.05**	**305**	*e*P	**P**	**20 39 10.0**	**-0.7**
	comp=Z,64nm,1.4s						
KMI	**Kunming**	**27.05**	**305**	*e*P	**P**	**20 39 10.0**	**-0.7**
KMI				pmax	pmax		
	comp=Z,64nm,1.4s						
SRDT	**SRDT**	**27.36**	**281**	P	**P**	**20 39 17.8**	**+4.4**
	comp=Z,10nm,1.2s						
PAYA	**Payao**	**27.47**	**292**	P	**P**	**20 39 13.4**	**-1.0**
	comp=Z,36μm,0.7s,comp=Z,360μm						
LAMP	**Lampang**	**27.49**	**290**	P	**P**	**20 39 19.9**	**+5.4**
BKNI	**Bangkinang**	**27.68**	**250**	*e*P	**P**	**20 39 16.0**	**-0.3**
	comp=Z,118nm,1.4s						
MJAR	**Matsushiro Arr**	**27.71**	**20**	P	**P**	**20 39 14.9**	**-1.5**
	comp=Z,6.4nm,0.8s,baz=197,slow=9.6,SNR=24						
MJAR				LR	LR	20 50 28.4	
	comp=Z,1μm,18.5s,baz=190,slow=37						
MAJO	**Matsushiro**	**27.71**	**20**	*e*P	**P**	**20 39 14.3**	**-2.0**
	comp=Z,14nm,1.0s						
MAJO	**Matsushiro**	**27.71**	**20**	*e*P	**P**	**20 39 14.4**	**-2.0**
MAJO				pmax	pmax		
	comp=Z,13nm,1.0s						
MAT	**Matsushiro**	**27.71**	**20**	P	**P**	**20 39 14.7**	**-1.7**
MAT				S	**S**	**20 43 58.0**	**+1.4**
MJB9	**Matsu-Tunnel**	**27.72**	**20**	*e*P	**P**	**20 39 14.2**	**-2.2**
	comp=Z,14nm,1.0s						
CM31	**Chiang Mai Arr**	**28.11**	**289**	*e*P	**P**	**20 39 18.9**	**-1.3**
	comp=Z,17nm,1.3s						
CM31	**Chiang Mai Arr**	**28.11**	**289**	P	**P**	**20 39 19.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**28.11**	**289**	P	**P**	**20 39 18.1**	**-2.0**
	comp=Z,3.9nm,0.7s,baz=101,slow=7.5,SNR=33						
CMAR				PcP	**PcP**	**20 42 35.7**	**+1.7**
	comp=Z,1.8nm,0.6s,baz=117,slow=1.2,SNR=11						
CMAR				LR	LR	20 51 08.6	
	comp=Z,326nm,18.1s,baz=108,slow=38						
CMMT	**Chiang Mai**	**28.19**	**290**	P	**P**	**20 39 20.2**	**-0.6**
	comp=Z,3.3nm,0.9s						
CHTO	**Chiang Mai**	**28.19**	**290**	*e*P	**P**	**20 39 19.0**	**-1.8**
	comp=Z,4.4nm,0.8s						
CHTO	**Chiang Mai**	**28.19**	**290**	*e*P	**P**	**20 39 19.0**	**-1.8**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**28.19**	**290**	P	**P**	**20 39 18.4**	**-2.4**
PMG	**Port Moresby**	**28.36**	**134**	LR	LR	20 51 47.7	
	comp=Z,295nm,18.9s,baz=330,slow=39						
XAN	**Xi'an**	**28.49**	**328**	P	**P**	**20 39 22.7**	**-0.7**
XAN				PP	**PnPn**	**20 40 13.2**	**-0.5**

	comp=Z,7μm,16.7s					
TIY	**Taiyuan**	**29.90**	**337**	*e*P	**P**	**20 39 38.5 +2.6**
TIY				S	**S**	**20 44 32.6 +1.5**
TIY				pmax	pmax	
	comp=Z,17nm,0.5s					
TIY				pmax	pmax	
	comp=Z,180nm,4.5s					
TIY				LR	LR	
	comp=Z,1μm,17.7s					
TIY				LR	LR	
	comp=Z,390nm,10.7s					
TIY				LR	LR	
	comp=Z,710nm,12.6s					
LHMI	**Lhok Sumawe**	**30.14**	**262**	*e*P	**P**	**20 39 38.3 +0.1**
	comp=Z,234nm,1.1s					
GSI	**Gunungsitoli**	**30.58**	**254**	*e*P	**P**	**20 39 41.4 -0.7**
	comp=Z,29nm,0.9s					
BJT	**Baijiatuau**	**30.74**	**344**	*e*P	**P**	**20 39 42.9 -0.2**
	comp=Z,10nm,0.9s					
BJT	**Baijiatuau**	**30.74**	**344**	*e*P	**P**	**20 39 42.9 -0.2**
BJT				pmax	pmax	
	comp=Z,10.0nm,0.9s					
SNY	**Shenyang**	**31.17**	**355**	⇑P	**P**	**20 39 47.6 +0.7**
SNY				S	**S**	**20 44 57.8 +7.1**
SNY				pmax	pmax	
	comp=Z,27nm,0.8s					
SNY				pmax	pmax	
	comp=Z,340nm,3.7s					
SNY				LR	LR	
	comp=Z,950nm,18.6s					
SNY				LR	LR	
	comp=Z,880nm,14.5s					
SNY				LR	LR	
	comp=Z,970nm,21.6s					
WRAB	**Tennant Creek**	**31.28**	**166**⇓	*e*P	**P**	**20 39 47.0 -1.1**
WRAB				pmax	pmax	
	comp=Z,13nm,1.4s					
WR1	**Warramunga Arr**	**31.29**	**166**	*e*P	**P**	**20 39 46.4 -1.8**
WR1				*e*PcP	**PcP**	**20 42 43.5 +1.3**
WRA	**Warramunga Arr**	**31.29**	**166**	P	**P**	**20 39 46.4 -1.8**
	comp=Z,2.8nm,0.4s,baz=338,slow=11,SNR=25					
WRA				PcP	**PcP**	**20 42 43.5 +1.3**
	comp=Z,4.3nm,0.5s,baz=300,slow=3.0,SNR=12					
WB2	**Warramunga Arr**	**31.29**	**166**	*e*P	**P**	**20 39 46.7 -1.5**
	comp=Z,18nm,1.1s					
MBWA	**Marble Bar**	**32.41**	**193**	P	**P**	**20 39 57.6 -0.4**
MBWA				P	**P**	**20 39 57.6 -0.4**
PSA00	**Pilbara Seismi**	**32.78**	**192**	*e*P	**P**	**20 40 00.1 -1.1**
	comp=Z,25nm,0.9s					
LZH	**Lanzhou**	**32.81**	**324**	*e*P	**P**	**20 40 02.2 +0.6**
LZH				pP	pP	20 40 08.1 -1.1
LZH				sP	sP	20 40 12.6 -0.2
LZH				PP	**PP**	**20 41 13.8 -2.4**
LZH				S	**S**	**20 45 16.0 -0.8**
LZH				sS	sS	20 45 31.3 +2.5
LZH				pmax	pmax	
	comp=Z,40nm,1.2s					
LZH				pmax	pmax	
	comp=Z,380nm,4.9s					
LZH				LR	LR	
	comp=Z,1μm,14.6s					
LZH				LR	LR	
	comp=Z,1μm,15.7s					
LZH				LR	LR	
	comp=Z,2μm,16.8s					
PSAD3	**Pilbara Seismi**	**32.87**	**192**	*e*P	**P**	**20 40 01.2 -0.8**
	comp=Z,24nm,0.9s					
HHC	**Hu-ho-hao-te**	**32.97**	**338**	*e*P	**P**	**20 40 01.2 -1.7**
HHC				S	**S**	**20 45 18.0 -1.0**
HHC				pmax	pmax	
	comp=Z,15nm,0.9s					
HHC				pmax	pmax	
	comp=Z,210nm,5.7s					
HHC				LR	LR	
	comp=Z,810nm,15.4s					
HHC				LR	LR	
	comp=Z,990nm,13.8s					
HHC				LR	LR	
	comp=Z,980nm,15.3s					
CN2	**Changchun**	**33.03**	**358**	*e*P	**P**	**20 40 05.2 +2.0**
CN2				*e*S	**S**	**20 45 22.1 +2.4**
CN2				pmax	pmax	
	comp=Z,10.0nm,0.7s					
CN2				LR	LR	
	comp=Z,470nm,13.0s					
CN2				LR	LR	
	comp=Z,340nm,13.0s					
CN2				LR	LR	
	comp=Z,680nm,14.0s					
BTO	**Baotou**	**33.34**	**336**	*e*P	**P**	**20 40 07.4 +1.3**
PBA	**Port Blair**	**33.51**	**275**	*e*P	P	20 40 06.4 -1.4
	comp=Z,137nm,1.3s					
USA0B	**Ussuriysk Arra**	**33.70**	**7**	*e*P	**P**	**20 40 08.4 -0.6**
	comp=Z,22nm,0.8s					
USRK	**Ussuriysk Ar.**	**33.70**	**7**	P	**P**	**20 40 09.4 +0.5**
	comp=Z,16nm,0.7s,baz=178,slow=6.7,SNR=25					
USRK				LR	LR	20 52 16.9
	comp=Z,646nm,21.7s,baz=173,slow=34					
MDJ	**Mudanjiang**	**33.90**	**3**	P	**P**	**20 40 11.8 +1.0**
MDJ				PP	**PnPn**	**20 41 26.2 +2.0**
MDJ				S	**S**	**20 45 40.4 +7.3**
MDJ				pmax	pmax	
	comp=Z,310nm,3.5s					
MDJ				LR	LR	
	comp=Z,610nm,14.9s					
MDJ				LR	LR	
	comp=Z,400nm,9.8s					
MDJ				LR	LR	
	comp=Z,880nm,14.8s					
MDJ	**Mudanjiang**	**33.90**	**3**	*e*P	**P**	**20 40 10.9 +0.1**
	comp=Z,78nm,1.5s					
AS31	**Alice Springs**	**34.81**	**169**	*e*P	**P**	**20 40 17.3 -1.6**
	comp=Z,3.3nm,0.5s					
ASAR	**Alice Springs**	**34.81**	**169**	P	**P**	**20 40 18.0 -0.9**
	comp=Z,4.7nm,0.5s,baz=354,slow=6.5,SNR=122					
ASAR				PcP	**PcP**	**20 42 52.1 +0.3**
	comp=Z,5.8nm,0.5s,baz=346,slow=2.7,SNR=21					
ASAR				LR	LR	20 58 19.0
	comp=Z,117nm,18.9s,baz=2.0,slow=43					
TEY	**Ternei**	**35.24**	**12**⇓	*i*P	**P**	**20 40 24.6 +2.2**
TEY				pmax	pmax	
	comp=N,30nm,0.7s					
TEY				pmax	pmax	
	comp=Z,50nm,0.7s					
TEY				pmax	pmax	
	comp=E,10.0nm,0.6s					
GIRL	**Giralia**	**35.36**	**200**	*e*P	**P**	**20 40 22.4 -1.2**
	comp=E,180nm,1.2s					
ASAJ	**Asahikawa**	**35.98**	**19**	P	**P**	**20 40 28.7 -0.1**
	comp=E,7.6nm,0.6s,baz=244,slow=12,SNR=5.7					
CTA	**Charters Tower**	**36.02**	**148**	P	**P**	**20 40 29.1 -0.2**
	comp=E,9.5nm,0.9s,baz=322,slow=10.0,SNR=5.3					
CTAO	**Charters Tower**	**36.02**	**148**	*e*P	**P**	**20 40 29.5 +0.2**
	comp=E,37nm,1.3s					
SHL	**Shillong**	**36.29**	**299**	*e*P	**P**	**20 40 29.2 -2.7**
	comp=E,51nm,0.9s					
SHL	**Shillong**	**36.29**	**299**	*e*P	**P**	**20 40 29.2 -2.7**
SHL				pmax	pmax	
	comp=Z,51nm,0.9s					
SHL	**Shillong**	**36.29**	**299**	*e*P	**P**	**20 40 28.0 -3.9**
GTA	**Gaotai**	**37.41**	**325**	P	**P**	**20 40 41.5 +0.3**
GTA				pP	pP	20 40 45.0 -3.8
GTA				sP	sP	20 40 47.5 -4.9
GTA				PP	**PnPn**	**20 42 09.1 +1.3**
GTA				S	**S**	**20 46 28.0 +0.6**
GTA				sS	pS	20 46 36.6 +0.6
GTA				SS	**SnSn**	**20 49 02.2 -3.8**
GTA				pmax	pmax	
	comp=Z,19nm,1.3s					
GTA				pmax	pmax	
	comp=Z,300nm,3.9s					
GTA				LR	LR	
	comp=Z,440nm,14.8s					
GTA				LR	LR	
	comp=Z,550nm,16.2s					
GTA				LR	LR	
	comp=Z,590nm,13.4s					
LSA	**Lhasa**	**38.30**	**305**	P	**P**	**20 40 48.1 -1.1**
LSA				pmax	pmax	
	comp=Z,43nm,0.8s					
LSA	**Lhasa**	**38.30**	**305**	*e*P	**P**	**20 40 48.3 -0.9**
	comp=Z,74nm,1.6s					
LSA	**Lhasa**	**38.30**	**305**	*i*P	**P**	**20 40 49.0 -0.3**
	SNR=18					
LSA	**Lhasa**	**38.30**	**305**	*e*P	**P**	**20 40 48.3 -0.9**
LSA				pmax	pmax	
	comp=Z,74nm,1.6s					
YSS	**Yuzh-Sakhalins**	**38.58**	**17**	*e*P	**P**	**20 40 50.3 -0.4**
	comp=Z,33nm,1.1s					
YSS	**Yuzh-Sakhalins**	**38.58**	**17**⇑	*i*P	**P**	**20 40 51.4 +0.7**
YSS				*e*PPP	PPP	20 42 59.0
YSS				*e*S	**S**	**20 46 43.4 -1.1**
YSS				*e*SSS	SSS	20 49 54.4
YSS				pmax	pmax	
	comp=Z,20nm,1.4s					
YSS				pmax	pmax	
	comp=E,10.0nm,1.0s					
YSS				pmax	pmax	
	comp=Z,200nm,3.7s					
YSS				smax	smax	
	comp=N,200nm,7.4s					
YSS				smax	smax	
	comp=E,300nm,7.2s					
YSS				MLR	MLR	
	comp=E,200nm,15.0s					
YSS				MLR	MLR	
	comp=Z,500nm,15.0s					
YSS				MLR	MLR	
	comp=N,300nm,16.0s					
KLR	**Kul'dur**	**38.65**	**5**	P	**P**	**20 40 51.6 +0.3**
	comp=N,20nm,0.7s,baz=202,slow=5.9,SNR=50					
KLR				LR	LR	20 55 24.2
	comp=N,380nm,21.0s,baz=190,slow=34					
KLR	**Kul'dur**	**38.65**	**5**	*d*eP	**P**	**20 40 51.0 -0.3**
KLR				pmax	pmax	
	comp=Z,23nm,0.9s					
KUR	**Kuril'sk**	**38.85**	**24**	*e*P	**P**	**20 40 53.9 +0.9**
KUR				*e*		20 42 25.8
KUR				*e*S	**S**	**20 46 50.5 +1.8**
KUR				pmax	pmax	
	comp=Z,61nm,1.2s					
HIA	**Hailar**	**38.94**	**353**	*e*P	**P**	**20 40 53.1 -0.6**
	comp=Z,18nm,1.1s					
HIA	**Hailar**	**38.94**	**353**	*d*eP	**P**	**20 40 53.1 -0.6**
HIA				pmax	pmax	
	comp=Z,81nm,1.3s					
GRNR	**Gornyy**	**40.74**	**9**	*e*P	**P**	**20 41 08.8 +0.1**
GRNR				pmax	pmax	
	comp=Z,26nm,1.0s					
SONA0	**Songino Array**	**40.87**	**339**	*e*P	**P**	**20 41 10.2 +0.3**
SONA0				*e*PcP	**PcP**	**20 43 10.3 0.0**
SONM	**Songino Array**	**40.87**	**339**	P	**P**	**20 41 10.2 +0.3**
	comp=Z,4.6nm,0.7s,baz=158,slow=8.8,SNR=22					
SONM				PcP	**PcP**	**20 43 10.3 0.0**
	comp=Z,2.0nm,0.6s,baz=158,slow=2.9,SNR=5.5					
SONM				LR	LR	21 00 11.5
	comp=Z,350nm,20.1s,baz=140,slow=39					
MORW	**Morawa**	**40.87**	**195**	*e*P	**P**	**20 41 09.6 -0.4**
	comp=Z,22nm,1.0s					
FORT	**Forrest**	**41.23**	**178**	*e*P	**P**	**20 41 12.6 -0.3**
	comp=Z,54nm,1.1s					
RAMN	**Ramite**	**41.23**	**299**	*e*P	**P**	**20 41 13.0 -0.4**
	comp=Z,33nm,0.6s					
JIRN	**Jiri**	**41.77**	**300**	*e*P	**P**	**20 41 16.2 -1.7**
	comp=Z,72nm,0.7s					
GUN	**Gumba**	**42.10**	**300**	*e*P	**P**	**20 41 18.9 -1.7**
	comp=Z,89nm,1.0s					
TYV	**Tymovskoe**	**42.11**	**15**	*e*P	**P**	**20 41 22.6 +2.7**
TYV				*e*S	S	20 47 47.0 +10
TYV				pmax	pmax	
	comp=Z,300nm,4.9s					
TYV				pmax	pmax	
	comp=Z,15nm,1.5s					
TYV				smax	smax	
	comp=E,500nm,6.0s					
PKI	**Pulchoki**	**42.41**	**299**	*e*P	**P**	**20 41 21.8 -1.4**
PKIN	**Phulchoki**	**42.43**	**299**	*e*P	**P**	**20 41 21.8 -1.4**
	comp=E,23nm,0.9s					
KKN	**Kakani**	**42.58**	**300**	*e*P	**P**	**20 41 23.1 -1.3**
DMN	**Daman**	**42.68**	**299**	*e*P	**P**	**20 41 24.0 -1.3**
	comp=E,47nm,1.1s					
EIDS	**Eidsvold**	**42.88**	**147**	*e*P	**P**	**20 41 26.0 -0.5**
	comp=E,18nm,1.1s					
ZEA	**Zeya**	**42.95**	**0**	*e*P	**P**	**20 41 25.2 -1.5**
ZEA				pmax	pmax	
	comp=Z,46nm,1.4s					
ZEA				MLR	MLR	
	comp=Z,1μm,18.0s					
ZEA				MLR	MLR	
	comp=E,500nm,15.0s					
ZEA				MLR	MLR	
	comp=N,900nm,19.0s					
GKN	**Gorkha**	**43.19**	**300**	*e*P	**P**	**20 41 27.3 -1.9**
KOLN	**Koldanda**	**44.02**	**299**	*e*P	**P**	**20 41 34.0 -2.0**
	comp=N,70nm,1.2s					
DANN	**Dangsing**	**44.02**	**300**	*e*P	**P**	**20 41 33.9 -2.2**
	comp=N,47nm,0.7s					
BBOO	**Buckleboo**	**44.11**	**169**	*e*P	**P**	**20 41 36.0 -0.3**
	comp=N,50nm,0.7s					
ZAK	**Zakamensk**	**44.12**	**338**	*e*P	**P**	**20 41 35.3 -1.0**
ZAK				pmax	pmax	
	comp=Z,7.0nm,1.4s					
NWAO	**Narrogin (SRO)**	**44.32**	**192**	P	**P**	**20 41 36.4 -1.6**
	comp=Z,13nm,0.8s,baz=16,slow=10,SNR=4.5					
NWAO	**Narrogin (SRO)**	**44.32**	**192**	*e*P	**P**	**20 41 37.8 -0.2**
	comp=Z,36nm,0.9s					
NWAO	**Narrogin (SRO)**	**44.32**	**192**	*e*P	**P**	**20 41 37.8 -0.2**
NWAO				pmax	pmax	
	comp=Z,36nm,0.9s					
STKA	**Stephens Creek**	**44.59**	**162**	P	**P**	**20 41 40.0 -0.1**
	comp=Z,8.5nm,0.4s,baz=336,slow=8.1,SNR=64					
STKA				PcP	**PcP**	**20 43 23.1 +0.4**
	comp=Z,6.0nm,0.5s,baz=328,slow=2.2,SNR=3.9					
STKA				LR	LR	21 03 53.6
	comp=Z,159nm,20.0s,baz=6.7,slow=41					
STKA	**Stephens Creek**	**44.59**	**162**	*e*P	**P**	**20 41 40.0 -0.1**
	comp=Z,3.7nm,0.9s					
STKA	**Stephens Creek**	**44.59**	**162**	*e*P	**P**	**20 41 40.0 -0.1**
STKA				pmax	pmax	
	comp=Z,4.0nm,0.9s					
PYUN	**Piuthan**	**44.62**	**299**	*e*P	**P**	**20 41 38.6 -2.2**
	comp=Z,125nm,1.1s					
TLY	**Talaya**	**45.07**	**340**	*e*P	**P**	**20 41 43.5 -0.3**
	comp=Z,14nm,1.0s					
TLY	**Talaya**	**45.07**	**340**	*e*P	**P**	**20 41 42.9 -0.9**
TLY				*e*NS		20 51 27.7
TLY				pmax	pmax	
	comp=Z,50nm,1.5s					
TLY				MLR	MLR	
	comp=Z,907nm,18.0s					
TLY	**Talaya**	**45.07**	**340**	P	**P**	**20 41 43.7 -0.1**
	SNR=7.2					
IRK	**Irkutsk**	**45.34**	**341**	*e*P	**P**	**20 41 45.8 -0.1**
IRK				pmax	pmax	
	comp=Z,94nm,3.2s					
PALK	**Pallekele**	**45.73**	**270**	LR	LR	21 00 09.3
	comp=Z,316nm,21.9s,baz=114,slow=35					
MOY	**Mondy**	**46.01**	**338**	*e*P	**P**	**20 41 51.3 0.0**
MOY				pmax	pmax	
	comp=Z,40nm,2.0s					
SKR	**Severo-Kuril's**	**46.55**	**25**	*e*P	**P**	**20 41 55.8 +0.4**
SKR				*e*S	**S**	**20 48 43.3 +1.6**
SKR				pmax	pmax	
	comp=Z,200nm,4.2s					
SKR				pmax	pmax	
	comp=Z,400nm,3.5s					
SKR				pmax	pmax	
	comp=Z,76nm,1.0s					
SKR				MLR	MLR	
	comp=Z,700nm,17.0s					
SKR				MLR	MLR	
	comp=Z,800nm,15.0s					
ARMA	**Armidale**	**47.27**	**151**	*e*P	**P**	**20 42 00.9 -0.5**
	comp=Z,33nm,1.4s					
WMQ	**Urumqi**	**47.29**	**321**	P	**P**	**20 42 02.8 +1.3**
WMQ				pP	pP	20 42 06.2 -3.1
WMQ				sP	sP	20 42 13.9 +0.9
WMQ				pmax	pmax	
	comp=Z,70nm,1.3s					
WMQ				pmax	pmax	
	comp=Z,270nm,3.8s					
WMQ				LR	LR	
	comp=Z,3μm,28.3s					
WMQ				LR	LR	
	comp=Z,4μm,26.3s					
WMQ				LR	LR	
	comp=Z,1μm,23.5s					
WMQ	**Urumqi**	**47.29**	**321**	*e*P	**P**	**20 42 01.2 -0.3**
	comp=Z,61nm,1.1s					
WMQ	**Urumqi**	**47.29**	**321**	*e*P	**P**	**20 42 01.2 -0.3**
WMQ				pmax	pmax	
	comp=Z,61nm,1.1s					
BOD	**Bodaibo**	**48.08**	**351**	*e*P	**P**	**20 42 06.3 -0.9**
BOD				pmax	pmax	
	comp=Z,21nm,1.5s					
PEA0B	**Petropavlovsk-**	**49.02**	**24**	*e*P	**P**	**20 42 14.7 +0.2**
	comp=Z,28nm,0.7s					
PEA0B				*e*PcP	**PcP**	**20 43 39.1 +1.0**
PETK	**Petropavlovsk-**	**49.02**	**24**	P	**P**	**20 42 15.6 +1.1**
	comp=Z,20nm,0.7s,baz=201,slow=2.9,SNR=40					
PETK				PcP	**PcP**	**20 43 38.3 +0.2**
	comp=Z,3.6nm,0.6s,baz=176,slow=2.2,SNR=4.2					
PETK				LR	LR	21 01 42.4
	comp=Z,537nm,20.8s,baz=218,slow=35					
PET	**Petropavlovsk**	**49.35**	**25**	*d i*P	**P**	**20 42 17.3 +0.3**
PET				*e**PP	**sP**	**20 42 29.4 +1.9**
PET				*e*S	**S**	**20 49 25.6 +4.3**
PET				pmax	pmax	
	comp=Z,300nm,4.4s					
PET				pmax	pmax	
	comp=Z,100nm,5.6s					
PET				pmax	pmax	
	comp=Z,34nm,1.1s					
PET				MLR	MLR	
	comp=Z,400nm,18.0s					
PET				MLR	MLR	
	comp=Z,400nm,19.0s					
CAN	**Canberra**	**50.29**	**156**	*e*P	**P**	**20 42 24.5 0.0**
	comp=Z,41nm,1.5s					
CAN	**Canberra**	**50.29**	**156**	*e*P	**P**	**20 42 24.5 0.0**
CAN				pmax	pmax	
	comp=Z,41nm,1.5s					
DZM	**Mont Dzumac**	**50.63**	**130**	*e*P	**P**	**20 42 26.0 -1.3**
	comp=Z,27nm,0.8s					
DZM				*e*S	**S**	**20 49 38.8 -1.4**
	comp=Z,113nm,32.4s					
DZM				*e*LR	LR	20 56 59.4
	comp=Z,495nm,25.8s					
DZM	**Mont Dzumac**	**50.63**	**130**	*e*P	**P**	**20 42 27.2 -0.1**
	comp=Z,13nm,0.9s					
DGZ	**Jazzator, Alta**	**50.76**	**328**	*d i*P	**P**	**20 42 28.0 0.0**
DGZ				pmax	pmax	
	comp=Z,7.0nm,1.1s					
TOO	**Toolangi**	**51.06**	**161**	*e*P	**P**	**20 42 30.9 +0.7**
	comp=Z,41nm,1.4s					
TOO	**Toolangi**	**51.06**	**161**	*e*P	**P**	**20 42 30.9 +0.7**
TOO				pmax	pmax	
	comp=Z,41nm,1.4s					
YAK	**Yakutsk**	**51.31**	**2**	*e*P	**P**	**20 42 31.5 -0.2**
	comp=Z,33nm,0.8s					
YAK	**Yakutsk**	**51.31**	**2**	*e*P	**P**	**20 42 31.5 -0.2**
MA2	**Magadan**	**51.99**	**15**	P	**P**	**20 42 36.9 0.0**
	comp=Z,7.6nm,0.5s,baz=188,slow=9.4,SNR=6.1					
MA2	**Magadan**	**51.99**	**15**	*e*P	**P**	**20 42 36.6 -0.2**
	comp=Z,13nm,0.8s					
MA2	**Magadan**	**51.99**	**15**⇑	*e*P	**P**	**20 42 37.7 +0.9**
MA2				pmax	pmax	
	comp=Z,29nm,1.7s					
MK31	**Makanchi Array**	**52.09**	**322**	*e*P	**P**	**20 42 38.5 +0.6**
	comp=Z,33nm,0.8s					
MK31	**Makanchi Array**	**52.09**	**322**	*e*P	**P**	**20 42 38.5 +0.6**
MK31				pmax	pmax	
	comp=Z,33nm,0.8s					
MK32	**Makanchi Array**	**52.09**	**322**	*e*P	**P**	**20 42 38.2 +0.3**
MKAR	**Makanchi Array**	**52.09**	**322**	P	**P**	**20 42 38.2 +0.4**
	comp=Z,27nm,0.6s,baz=115,slow=6.6,SNR=142					
MKAR				LR	LR	21 05 48.4
	comp=Z,178nm,20.3s,baz=110,slow=37					
MAKZ	**Makanchi**	**52.28**	**322**	*e*P	**P**	**20 42 39.5 +0.2**
	comp=Z,98nm,1.4s					
MAKZ	**Makanchi**	**52.28**	**322**	*e*P	**P**	**20 42 39.5 +0.2**
MAKZ				pmax	pmax	
	comp=Z,98nm,1.4s					
KSH	**Kashi**	**53.43**	**312**	P	**P**	**20 42 50.1 +2.1**
KSH				pP	sP	20 43 01.0 +1.4
KSH				PP	**PP**	**20 44 52.8 +4.2**
KSH				S	**S**	**20 50 17.2 -1.2**
KSH				SS	**SS**	**20 53 57.9 -0.9**
KSH				pmax	pmax	
	comp=Z,110nm,1.2s					
KSH				pmax	pmax	
	comp=Z,410nm,4.4s					
KSH				LR	LR	
	comp=Z,640nm,12.1s					
KSH				LR	LR	
	comp=Z,1μm,17.2s					
KSH				LR	LR	
	comp=Z,1μm,17.5s					
NIL	**Nilore**	**54.02**	**304**	*e*P	**P**	**20 42 51.5 -0.9**
	comp=Z,56nm,1.0s					
NIL	**Nilore**	**54.02**	**304**	*e*P	**P**	**20 42 51.5 -0.9**
NIL				pmax	pmax	
	comp=Z,56nm,1.0s					
NRN	**Naryn**	**54.03**	**314**	*e*P	**P**	**20 42 52.5 -0.1**
	comp=Z,42nm,1.1s					
NRN	**Naryn**	**54.03**	**314**	*e*P	**P**	**20 42 52.5 -0.1**
NRN				pmax	pmax	
	comp=Z,42nm,1.1s					
BOOM	**Boomskoye usch**	**54.43**	**315**	*e*P	**P**	**20 42 55.2 -0.2**
	comp=Z,31nm,1.3s					
BOOM	**Boomskoye usch**	**54.43**	**315**	*e*P	**P**	**20 42 55.2 -0.2**
BOOM				pmax	pmax	
	comp=Z,31nm,1.3s					
ZAA0	**Zalesovo Array**	**54.58**	**331**	*e*P	**P**	**20 42 55.1 -0.9**
	comp=Z,9.3nm,0.8s					
ZALV	**Zalesovo Beam**	**54.58**	**331**	P	**P**	**20 42 55.4 -0.5**
	comp=Z,7.4nm,0.5s,baz=125,slow=7.4,SNR=26					
ZALV				LR	LR	21 08 36.9
	comp=Z,223nm,19.3s,baz=70,slow=39					
SEY	**Seymchan**	**55.28**	**14**	P	**P**	**20 43 02.5 +1.6**
	comp=Z,8.5nm,0.5s,baz=210,slow=4.9,SNR=23					
SEY	**Seymchan**	**55.28**	**14**⇓	*e*P	**P**	**20 43 02.2 +1.3**
FRU1	**Bishkek**	**55.45**	**315**	*e*P	**P**	**20 43 02.1 -0.5**
	comp=Z,39nm,1.2s					
FRU1	**Bishkek**	**55.45**	**315**	*e*P	**P**	**20 43 02.1 -0.5**
FRU1				pmax	pmax	
	comp=Z,39nm,1.2s					
AAK	**Ala-Archa**	**55.48**	**315**	P	**P**	**20 43 03.8 +0.9**
	comp=Z,6.1nm,0.8s,baz=98,slow=3.1,SNR=17					
AAK	**Ala-Archa**	**55.48**	**315**	*e*P	**P**	**20 43 02.9 -0.1**
	comp=Z,25nm,1.3s					
AAK	**Ala-Archa**	**55.48**	**315**	*i*P	**P**	**20 43 06.2 +3.2**
	SNR=6.4					
AAK	**Ala-Archa**	**55.48**	**315**	*e*P	**P**	**20 43 02.9 -0.1**
AAK				pmax	pmax	
	comp=Z,25nm,1.3s					
NVS	**Novosibirsk**	**55.85**	**331**	*e*P	**P**	**20 43 04.8 -0.3**
NVS				pmax	pmax	
	comp=N,14nm,1.2s					
NVS				pmax	pmax	
	comp=Z,26nm,1.2s					
NVS				pmax	pmax	
	comp=E,16nm,1.1s					
KURK	**Kurchatov**	**56.09**	**325**	*e*P	**P**	**20 43 06.3 -0.6**
	comp=E,39nm,0.6s					
KURK	**Kurchatov**	**56.09**	**325**	*d i*P	**P**	**20 43 06.4 -0.6**
KURK				pmax	pmax	
	comp=Z,49nm,1.1s					
KURK	**Kurchatov**	**56.09**	**325**	P	**P**	**20 43 07.2 +0.2**
	SNR=30					
KURK				P	**P**	**20 43 07.2 +0.2**
	SNR=30					
KURBB	**Kurchatov Arra**	**56.10**	**325**	P	**P**	**20 43 06.8 -0.2**
	comp=Z,28nm,0.5s,baz=126,slow=6.9,SNR=193					
ARSB	**Arslanbob**	**56.15**	**313**	*e*P	**P**	**20 43 07.8 0.0**
	comp=Z,69nm,1.4s					
TAU	**Tasmania Unive**	**56.50**	**162**	*e*P	**P**	**20 43 10.3 +0.5**
	comp=Z,89nm,1.4s					
TAU	**Tasmania Unive**	**56.50**	**162**	*e*P	**P**	**20 43 10.3 +0.5**
TAU				pmax	pmax	
	comp=Z,89nm,1.4s					
BTK	**Batken**	**57.39**	**311**	*e*P	**P**	**20 43 16.4 -0.1**
	comp=Z,40nm,1.2s					
BTK	**Batken**	**57.39**	**311**	*e*P	**P**	**20 43 16.4 -0.1**
BTK				pmax	pmax	
	comp=Z,40nm,1.2s					
GAR	**Garm**	**57.51**	**310**	*e*P	**P**	**20 43 16.8 -0.6**
	comp=Z,308nm,1.6s					
GAR	**Garm**	**57.51**	**310**	*e*P	**P**	**20 43 16.8 -0.6**
GAR				pmax	pmax	
	comp=Z,308nm,1.6s					
KBL	**Kabul**	**57.62**	**304**	*e*P	**P**	**20 43 17.6 -0.7**
	comp=Z,16nm,0.6s					
KBL	**Kabul**	**57.62**	**304**	*e*P	**P**	**20 43 17.7 -0.7**
KBL				pmax	pmax	
	comp=Z,16nm,0.6s					
KKAR	**Karatay Array**	**58.41**	**314**	*e*P	**P**	**20 43 23.0 -0.5**
	comp=Z,52nm,1.3s					
KKAR	**Karatay Array**	**58.41**	**314**	*e*P	**P**	**20 43 23.0 -0.5**
KKAR				pmax	pmax	

comp=Z,52nm,1.3s
TIXI Tiksi 60.95 1 P P 20 43 40.3 0.0
baz=192,slow=3.7
TIXI Tiksi 60.95 1 eP P 20 43 39.8 -0.5
comp=Z,27nm,0.9s
TIXI Tiksi 60.95 1 deP P 20 43 39.4 -1.0
TIXI pmax pmax
comp=Z,28nm,0.8s
BVAR Borovoye Array 61.69 325 P P 20 43 45.7 -0.1
comp=Z,19nm,0.6s,baz=123,slow=6.6,SNR=86
BRVK Borovoye 61.76 325 eP P 20 43 46.0 -0.3
comp=Z,26nm,0.8s
BRVK Borovoye 61.76 325 eP P 20 43 46.0 -0.3
BRVK pmax pmax
comp=Z,26nm,0.8s
BRVK Borovoye 61.76 325 P P 20 43 46.2 -0.1
SNR=17
BRVK P P 20 43 46.2 -0.1
SNR=17
ATKA Atka Island 62.78 36 eP P 20 43 52.4 -0.6
comp=Z,31nm,1.0s
BILL Bilibino 62.85 16 eP P 20 43 53.3 0.0
comp=Z,29nm,1.3s
BILL Bilibino 62.85 16 d iP P 20 43 53.1 -0.2
BILL pmax pmax
comp=Z,17nm,1.5s
NRIK Noril'sk 63.78 345 P P 20 43 59.1 -0.3
comp=Z,21nm,1.1s,baz=134,slow=7.0,SNR=13
NRIK LR LR 21 15 05.1
comp=Z,464nm,18.0s,baz=159,slow=39
NIKH Nikolski High 66.12 37 eP P 20 44 14.6 -0.3
comp=Z,20nm,0.8s
GEYT Alibeck 66.80 307 P P 20 44 19.5 -0.1
comp=Z,4.4nm,0.7s,baz=125,slow=3.8,SNR=12
GEYT LR LR 21 18 08.3
comp=Z,139nm,19.2s,baz=105,slow=40
GYA0B ALIBECK ARRAY 66.80 307 eP P 20 44 19.5 -0.2
comp=Z,26nm,1.6s
ABKAR Akbulak array 66.98 319 eP P 20 44 19.9 -0.6
comp=Z,42nm,1.3s
BKZ Black Stump Fm 67.69 140 eP P 20 44 25.5 +0.3
comp=Z,29nm,0.8s
UNV Unalaska Valle 67.70 36 eP P 20 44 24.1 -0.8
comp=Z,12nm,0.8s
UOSS Minazif 68.15 293 eP P 20 44 27.3 -1.1
comp=Z,27nm,1.4s
UOSS Minazif 68.15 293 P P 20 44 27.1 -1.3
SVE Sverdlovsk 68.21 327⇑ eP P 20 44 27.5 -0.6
SVE pmax pmax
comp=Z,44nm,1.2s
HATD Hatta, Dubai 68.22 292 P P 20 44 26.7 -2.2
ASHO Ashiyiah 68.29 292 P P 20 44 28.3 -1.0
AKTO Aktyubinsk 68.42 320 P P 20 44 28.9 -0.6
comp=Z,9.3nm,0.7s,baz=92,slow=5.8,SNR=27
ARU Arti 69.24 326 P P 20 44 33.8 -0.7
comp=Z,9.8nm,0.5s,baz=110,slow=4.3,SNR=54
ARU Arti 69.24 326 eP P 20 44 33.5 -1.0
comp=Z,29nm,0.5s
ARU Arti 69.24 326 d iP P 20 44 33.3 -1.2
ARU 20 44 55.4
ARU 20 47 06.4
ARU PPP PPP 20 48 44.0
ARU S **S** **20 53 40.5 +2.2**
ARU 20 54 28.9
ARU SS **SS** **20 58 00.1 -4.9**
ARU pmax pmax
comp=Z,18nm,0.5s
ARU MLR MLR
comp=Z,231nm,16.0s
KIRV Kirov 74.44 328 P P 20 45 05.0 -0.7
comp=Z,46nm,0.6s,baz=103,slow=1.9,SNR=21
SVW2 Sparrevohn 74.69 29 eP P 20 45 07.9 +0.7
comp=Z,40nm,1.6s
AKT Akhty 74.92 310 eP P 20 45 08.8 -0.2
AKT e 20 45 22.8
AKT pmax pmax
comp=Z,23nm,0.9s
MAK Makhachkala 75.07 312 eP P 20 45 04.5 -5.1
MAK e 20 47 51.9
MAK ePPP PPP 20 49 38.4
MAK eS **S** **20 54 42.7 -2.9**
MAK eSS **SS** **20 59 27.4 -7.4**
MAK eSSS SSS 21 02 50.6
MAK pmax pmax
comp=Z,95nm,1.8s
KDAK Kodiak Island 75.99 33 eP P 20 45 14.8 +0.2
comp=Z,16nm,0.8s
KDAK Kodiak Island 75.99 33 eP P 20 45 14.8 +0.2
KDAK pmax pmax
comp=Z,16nm,0.8s
GROC Groznyy 76.31 312 eP P 20 45 14.9 -1.9
GROC e 20 45 26.0
GROC eS **S** **20 54 56.7 -2.7**
GROC pmax pmax
comp=Z,38nm,0.8s
CAST Castle Rocks 76.50 27 eP P 20 45 17.7 +0.1
comp=Z,14nm,1.1s
PRGR Permogore 76.53 331 eP P 20 45 15.1 -2.5
PRGR e 20 45 27.3
PRGR pmax pmax
comp=Z,21nm,0.6s
BRLK Bradley Lake 76.94 31 eP P 20 45 19.8 -0.3
comp=Z,37nm,1.3s
BPAW Bear Paw Mtn. 77.03 27 eP P 20 45 20.8 +0.4
comp=Z,29nm,1.2s
SUA Susitna One 77.05 29 eP P 20 45 20.5 -0.3
comp=Z,13nm,0.8s
TBLG Delisi 77.15 310 eP P 20 45 21.6 -0.1
comp=Z,45nm,1.3s
TBLG Delisi 77.15 310 eP P 20 45 21.6 -0.1
TBLG pmax pmax
comp=Z,45nm,1.3s
GNI Garni 77.24 309 P P 20 45 24.4 +2.1
comp=Z,14nm,1.1s,baz=230,slow=22,SNR=6.6
GNI Garni 77.24 309 deP P 20 45 23.9 +1.6
GNI pmax pmax
comp=Z,65nm,1.4s
TRF Thorofare Moun 77.31 27 eP P 20 45 22.2 -0.1
comp=Z,4.4nm,1.1s
COLD Coldfoot 77.48 23 eP P 20 45 23.1 +0.2
comp=Z,13nm,1.6s
CASY Casey 77.68 187 eP P 20 45 23.8 -0.1
comp=Z,22nm,0.8s
ZEI Tsey 77.72 312 eP P 20 45 23.5 -1.5
ZEI pmax pmax
comp=Z,25nm,0.8s
TOLK Toolik Lake Re 77.77 22 P P 20 45 25.0 +0.4
baz=268
PMR Palmer 77.82 29 eP P 20 45 24.8 -0.1
comp=Z,17nm,1.1s
PMR Palmer 77.82 29 eP P 20 45 24.8 -0.1
PMR pmax pmax
comp=Z,17nm,1.1s
NCK Nalchik 77.90 312⇑ eP P 20 45 25.4 -0.4
NCK pmax pmax
comp=Z,20nm,1.1s
RND Reindeer 77.96 27 eP P 20 45 24.9 -0.8
comp=Z,22nm,1.3s
RND Reindeer 77.96 27 eP P 20 45 24.9 -0.8
RND pmax pmax
comp=Z,22nm,1.3s
AKH Akhalkalaki 78.11 310 eP P 20 45 27.6 +0.4
comp=Z,39nm,1.0s
AKH Akhalkalaki 78.11 310⇑ iP P 20 45 27.3 +0.2
AKH Akhalkalaki 78.11 310 eP P 20 45 27.6 +0.4
AKH pmax pmax
comp=Z,39nm,1.0s
KNK Knik Glacier 78.14 29 eP P 20 45 26.7 -0.1
comp=Z,20nm,1.1s
GOF Gofitskoye 78.21 314⇑ eP P 20 45 30.3 +2.9
GOF pmax pmax
comp=Z,23nm,1.1s
VMUR Van-Muradiye 78.21 308 i P P 20 45 35.0 +7.2
VMUR IAML_P
comp=Z,47nm,0.2s
HAKT HAKKARI 78.22 306 i P P 20 45 29.6 +1.7
HAKT IAML_P
comp=Z,37nm,0.2s
WRH Wood River Hil 78.30 26 eP P 20 45 27.3 -0.2
comp=Z,26nm,1.4s
KBZ Khabaz 78.39 313 P P 20 45 29.1 +0.7
comp=Z,21nm,1.1s,baz=78,slow=1.4,SNR=20
KBZ LR LR 21 25 21.1
comp=Z,316nm,18.0s,baz=72,slow=40
COLA College 78.40 26⇑ eP P 20 45 28.1 +0.1
COLA pmax pmax
comp=Z,6.0nm,0.9s
CCB Clear Creek Bu 78.42 26 eP P 20 45 27.8 -0.4
comp=Z,18nm,1.4s
KVAR Kislovodsk Arr 78.53 313 P P 20 45 31.1 +1.8
comp=Z,7.1nm,0.6s,baz=90,slow=20,SNR=13
KIV Kislovodsk 78.53 313 eP P 20 45 29.4 +0.1
comp=Z,41nm,1.1s
KIV Kislovodsk 78.53 313 ⇓ iP P 20 45 29.5 +0.1
KIV Kislovodsk 78.53 313 i P P 20 45 30.0 +0.6
SNR=13
KIV Kislovodsk 78.53 313 eP P 20 45 29.2 -0.1
KIV pmax pmax
comp=Z,109nm,1.1s
KIV Kislovodsk 78.53 313 P P 20 45 29.8 +0.4
SNR=12
KIV P P 20 45 29.8 +0.4
SNR=12
NEY Neytrino 78.55 312⇑ eP P 20 45 30.5 +0.9
NEY pmax pmax
comp=Z,2.0nm,0.9s
POKR Poker Plat Res 78.57 25 P P 20 45 30.0 +1.0
baz=271
DHY Denali Highway 78.63 28 eP P 20 45 29.9 +0.3
comp=Z,28nm,1.6s
EPOS Posof 78.67 310 i P P 20 45 31.1 +0.9
SCM Sheep Creek Mo 78.68 29 eP P 20 45 29.8 +0.1
comp=Z,30nm,1.2s
SCM Sheep Creek Mo 78.68 29 eP P 20 45 29.8 +0.1
SCM pmax pmax
comp=Z,30nm,1.2s
VRH Novokhopyorsk 78.76 320 eP P 20 45 29.1 -1.2
VRH pmax pmax
comp=Z,20nm,0.6s
TUTA Tutak 78.77 308 i P P 20 45 31.2 +0.3
TUTA IAML_P
comp=Z,582nm,0.6s
HDA Harding Lake 78.79 26 P P 20 45 29.3 -1.0
baz=271
ILAR Eielson Array 78.81 26 P P 20 45 30.5 +0.2
comp=Z,2.6nm,0.7s,baz=241,slow=4.6,SNR=23
ILAR PKKPbc **PKKPbc** 21 04 24.2 -2.4
comp=Z,0.3nm,0.5s,baz=131,slow=2.4,SNR=5.2
ILAR LR LR 21 17 30.6
comp=Z,137nm,21.7s,baz=274,slow=34
ILB Eielson Array 78.81 26 eP P 20 45 30.0 -0.3
comp=Z,4.4nm,0.8s
GLI Glacier Island 78.82 30 eP P 20 45 30.6 +0.1
comp=Z,16nm,1.0s
EATA Eleskirt 78.98 309 i P P 20 45 33.1 +0.9
EATA IAML_P
comp=Z,173nm,0.3s
DAGI Agillar 79.32 310 i P P 20 45 34.6 +0.9
DAGI IAML_P
comp=Z,185nm,0.3s
PRP Porcupine Dome 79.37 25 eP P 20 45 33.1 -0.4
comp=Z,3.0nm,0.8s
FYU Fort Yukon 79.44 24 eP P 20 45 34.9 +1.2
comp=Z,18nm,1.0s
DIV Divide 79.45 30 eP P 20 45 34.4 +0.5
comp=Z,35nm,1.5s
DBAD Bademkaya 79.49 310 i P P 20 45 35.5 +0.8
DBAD IAML_P
comp=Z,554nm,0.6s
KLMR Klimovskoe 79.49 330 eP P 20 45 32.7 -1.4
KLMR e 20 48 34.7
KLMR pmax pmax
comp=Z,57nm,1.4s
BCA Borcka 79.51 310⇑ iP P 20 45 33.4 -1.2
SRTM Siirt_Merkez 79.59 307 i P P 20 45 33.8 -1.5
SRTM IAML_P
comp=Z,130nm,0.5s
RIDG Independent Ri 79.74 27 eP P 20 45 35.3 -0.2
comp=Z,17nm,0.9s
TMCR Tamitsa 79.99 334 eP P 20 45 35.8 -0.9
TMCR pmax pmax
comp=Z,27nm,1.1s
DOT Dot Lake 80.10 27 eP P 20 45 37.4 0.0
comp=Z,16nm,1.4s
BNGL BINGOL 80.10 308 i P P 20 45 39.8 +1.7
VSR Storozhevoye 80.36 320 eP P 20 45 37.3 -1.7
VSR pmax pmax
comp=Z,40nm,1.8s
LPSR Galich'ya Gora 80.39 322 eP P 20 45 36.8 -2.3
LPSR pmax pmax
comp=Z,10.0nm,0.8s
KOPT Kop Dagi 80.49 309 i P P 20 45 42.0 +1.7
KOPT IAML_P
comp=Z,203nm,0.5s
BAYB BAYBURT 80.65 309 i P P 20 45 41.2 +0.1
BAYB IAML_P
comp=Z,289nm,0.6s
SOC Sochi 80.71 313 eP P 20 45 39.8 -1.2
SOC e*PP **PcP** **20 45 45.7 -2.0**
SOC ePPP PPP 20 50 29.3
SOC eS **S** **20 55 39.4 -7.1**
SOC pmax pmax
comp=Z,9.0nm,0.4s
MOS Moscow 80.87 325 eP P 20 45 40.0 -1.6
MOS e 20 45 50.5
MOS pmax pmax
comp=Z,43nm,0.7s
LVZ Lovozero 81.04 337⇑ eP P 20 45 42.1 -0.3
LVZ pmax pmax
comp=Z,7.0nm,1.1s
EGAK Eagle 81.26 26 eP P 20 45 44.0 +0.5
comp=Z,5.8nm,0.9s
KELT Kelkit 81.42 309 i P P 20 45 45.4 +0.2
KELT IAML_P
comp=Z,169nm,0.6s
OBN Obninsk 81.53 324 P P 20 45 45.1 0.0
comp=Z,5.2nm,0.6s,baz=16,slow=5.4,SNR=8.5
OBN Obninsk 81.53 324 eP P 20 45 44.7 -0.4
comp=Z,23nm,0.7s
OBN Obninsk 81.53 324 d iP P 20 45 43.6 -1.5
OBN e 20 45 53.0
OBN e 20 48 48.0
OBN eSS SS 21 01 12.4 +1.1
OBN pmax pmax
comp=Z,61nm,1.7s
OBN MLR MLR
comp=Z,241nm,17.0s
ANN Anapa 82.20 314 eP P 20 45 48.0 -0.9
ANN e 20 45 56.2
ANN eS **S** **20 56 02.0 +0.1**
ANN pmax pmax
comp=Z,72nm,1.0s
SUSE Susehri 82.22 309 i P P 20 45 50.5 +1.1
SUSE IAML_P
comp=Z,20nm,0.3s
HEKM Malatya_Hekimh 82.58 308 i P P 20 45 52.9 +1.6
HEKM IAML_P
comp=Z,4.0nm,0.3s
AKCD Akcadag 82.69 308 i P P 20 45 53.4 +1.6
AKCD IAML_P
comp=Z,27nm,0.4s
EPYK Eagle Plains 82.86 24 eP P 20 45 52.1 +0.2
comp=Z,25nm,1.3s
EPYK Eagle Plains 82.86 24 P P 20 45 52.5 +0.6
baz=280
INK Inuvik 83.69 22 P P 20 45 56.3 +0.1
comp=Z,2.3nm,0.6s,baz=281,slow=1.9,SNR=11
INK Inuvik 83.69 22 eP P 20 45 56.2 +0.1
comp=Z,20nm,1.5s
INK Inuvik 83.69 22 eP P 20 45 56.2 +0.1
INK pmax pmax
comp=Z,20nm,1.5s
SPA0 Spitsbergen Ar 83.75 349 eP P 20 45 55.7 -0.6
comp=Z,61nm,1.4s
SPA0 Spitsbergen Ar 83.75 349 eP P 20 45 56.4 +0.1
CUSAR Sarkisla-SIVAS 83.82 309 i P P 20 45 58.6 +0.9
KAMA Osmaniye 83.83 307 i P P 20 45 50.8 -6.9
KAMA IAML_P
comp=Z,270nm,0.1s
HAVZ Havza 83.97 311 i P P 20 45 58.2 0.0
HAVZ IAML_P
comp=Z,600nm,0.5s
ANDN Andirin 84.02 307 i P P 20 46 00.1 +1.5
ANDN IAML_P
comp=Z,294nm,0.6s
ARCES ARCESS Array B 84.03 340 P P 20 45 57.9 0.0
comp=Z,16nm,0.7s,baz=76,slow=6.4,SNR=28
ARCES LR LR 21 29 18.4
comp=Z,185nm,18.9s,baz=110,slow=40
ARE0 ARCESS Array S 84.03 340 eP P 20 45 57.8 -0.1
comp=Z,1.7nm,1.1s
ARE0 ARCESS Array S 84.03 340 eP P 20 45 57.7 -0.2
SAIM ADANA 84.17 307 i P P 20 46 01.6 +2.3
SAIM IAML_P
comp=Z,406nm,0.5s
ASF Jabal al Asfar 84.41 302 P P 20 46 01.7 +1.0
comp=Z,4.0nm,0.8s,baz=26,slow=2.7,SNR=7.5
ASF Jabal al Asfar 84.41 302 P P 20 46 02.3 +1.6
SIM Simferopol' 84.51 315 eP P 20 46 00.2 -0.6
SIM eS **S** **20 56 24.0 -1.3**
SIM pmax pmax
comp=Z,23nm,1.2s
SIRC Yozgat 84.67 309 i P P 20 46 02.1 +0.2
SIRC IAML_P
comp=Z,160nm,0.5s
YAHY KAYSERI_Yahyal 84.71 308 i P P 20 46 02.5 +0.3
YAHY IAML_P
comp=Z,8.6nm,0.3s
AKO Adana 84.75 307 i P P 20 46 02.6 +0.4
AKO IAML_P
comp=Z,443nm,0.7s
WHY Whitehorse 84.78 29 eP P 20 46 02.6 +0.6
comp=Z,24nm,1.0s
SKAG Skagway 84.82 31 eP P 20 46 03.2 +1.2
comp=Z,26nm,1.0s
BZK Bozkurt 85.10 312⇑ iP P 20 46 01.3 -2.5
CDAG Cicekdag 85.22 309 i P P 20 46 02.1 -2.5
CDAG IAML_P
comp=Z,15nm,0.1s
BESE Bessie Mountai 85.25 31 eP P 20 46 04.8 +0.5
comp=Z,40nm,1.4s
ILGA Ilgaz 85.47 311 eP P 20 46 06.1 +0.1
comp=Z,45nm,1.4s
ILGA Ilgaz 85.47 311 i P P 20 46 05.3 -0.7
ILGA IAML_P
comp=Z,298nm,0.5s
DELI KIRIKKALE 85.50 310 i P P 20 46 05.9 -0.1
DELI IAML_P
comp=Z,481nm,0.6s
MMAI Mount Meron Ar 85.52 303 P P 20 46 07.1 +0.9
comp=Z,12nm,0.8s,baz=82,slow=6.0,SNR=20
KIRS Kırehir-Merke 85.65 309 i P P 20 46 06.3 -0.4
KIRS IAML_P
comp=Z,610nm,0.6s
LISJ El Lisan 85.75 301 P P 20 46 09.7 +2.5
BR131 Keskin Array S 85.76 309 eP P 20 46 06.2 -1.2
comp=Z,9.4nm,0.8s
BR131 Keskin Array S 85.76 309 P P 20 46 06.9 -0.5
SNR=7.7
BRTR Keskin Array B 85.76 309 P P 20 46 06.7 -0.7
comp=Z,7.3nm,0.6s,baz=123,slow=5.1,SNR=51
BRTR LR LR 21 30 46.4
comp=Z,34nm,18.6s,baz=86,slow=40
BRTR Keskin Array B 85.76 309 eP P 20 46 06.5 -0.9
BRTR pmax pmax
comp=Z,7.0nm,0.6s
FIA1 FINESS Array S 85.83 332 eP P 20 46 06.2 -0.8
comp=Z,35nm,1.1s
FINES FINESS Array B 85.83 332 P P 20 46 06.4 -0.6
comp=Z,11nm,0.5s,baz=68,slow=5.0,SNR=117
AKSY AKSARAY - Alti 85.86 308 i P P 20 46 07.5 -0.3
AKSY IAML_P
comp=Z,188nm,0.6s
AMAZ Amatzia 86.18 301 P P 20 46 11.7 +2.2
VSU Vasula 86.25 329 deP P 20 46 08.2 -1.0
VSU pmax pmax
comp=Z,141nm,1.0s
VSU Vasula 86.25 329 eP P 20 46 10.4 +1.3
VSU IAmb IAmb 20 46 11.4
comp=Z,121nm,0.9s
ANTO Ankara 86.37 310 eP P 20 46 09.7 -0.6
comp=Z,15nm,0.6s
ANTO Ankara 86.37 310 eP P 20 46 09.7 -0.6
ANTO pmax pmax
comp=Z,15nm,0.6s
ANTO Ankara 86.37 310 P P 20 46 09.9 -0.4
SNR=6.5
ANTO P P 20 46 09.9 -0.4
SNR=6.5
BR231 Keskin MP Arra 86.39 310 eP P 20 46 10.4 0.0
comp=Z,15nm,0.6s
AKASG Malin Array Be 86.65 321 P P 20 46 10.5 -0.8
comp=Z,5.7nm,0.6s,baz=61,slow=5.3,SNR=24
AKBB Malin Array Si 86.65 321 eP P 20 46 10.6 -0.7
comp=Z,38nm,1.3s
AKBB Malin Array Si 86.65 321 eP P 20 46 10.6 -0.7
AKBB pmax pmax
comp=Z,38nm,1.3s
KIEV Kiev 86.66 321 i P P 20 46 11.2 -0.1
SNR=7.0
KIEV Kiev 86.66 321⇑ eP P 20 46 10.5 -0.8
KIEV pmax pmax
comp=Z,19nm,1.1s
IDID Didziasalis 87.03 326 eP P 20 46 14.2 +1.2
IDID IAmb IAmb 20 46 15.9
comp=Z,4.3nm,0.8s
PPT Papeete 87.10 108 LR LR 21 21 01.1
comp=Z,309nm,18.3s,baz=303,slow=33
PPT2 Papeete2 87.11 108 eS SKSac 20 56 43.4 +3.7
comp=Z,130nm,24.0s
PPT2 Papeete2 87.11 108 eLR LR 21 13 46.8
comp=Z,548nm,35.2s,baz=288
IZAR Zarasai 87.19 326 eP P 20 46 15.1 +1.2
IZAR IAmb IAmb 20 46 16.5
comp=Z,8.2nm,0.7s
ISAL Salakas 87.30 326 eP P 20 46 15.8 +1.5
ISAL IAmb IAmb 20 46 17.2
comp=Z,5.7nm,0.9s
IIGN Ignalina 87.31 326 eP P 20 46 15.8 +1.3
IIGN IAmb IAmb 20 46 17.3
comp=Z,7.2nm,0.9s
MILM Milestii Mici 87.76 317⇑ iP P 20 46 15.8 -0.9
STEI Steigen 88.10 339 eP P 20 46 16.7 -1.2
TLCR 88.15 316⇑ iP P 20 46 17.8 -0.9
TLCR 88.15 316 P P 20 46 17.7 -0.9
TBI Tubuai 88.42 114 eS S 20 57 00.0 -4.0
comp=Z,240nm,28.0s
TBI Tubuai 88.42 114 eLR LR 21 14 32.1
comp=Z,460nm,24.2s,baz=299
PABE Paberze 88.50 326 eP P 20 46 18.8 -1.2
PABE IAmb IAmb 20 46 21.7
comp=Z,26nm,0.8s
TIRR Tirgusor 88.59 315 eP P 20 46 20.0 -0.8
comp=Z,39nm,1.1s
TIRR Tirgusor 88.59 315⇑ iP P 20 46 19.8 -1.0
TIRR Tirgusor 88.59 315 eP P 20 46 20.0 -0.8
TIRR pmax pmax
comp=Z,39nm,1.1s
CFR Carcaliu 88.62 316 ⇓ iP P 20 46 19.9 -1.0
MANR Mangalia 88.62 314⇑ iP P 20 46 20.4 -0.5
SLIT Slitere, Latvi 88.76 329 eP P 20 46 21.4 +0.2
SLIT IAmb IAmb 20 46 22.4
comp=Z,113nm,0.6s
TLB Topalu 88.82 315 ⇓ iP P 20 46 21.2 -0.6
TUDR 88.84 316⇑ iP P 20 46 21.5 -0.4
ODBI Odobesti 89.21 316⇑ iP P 20 46 24.0 +0.3
TESR Tescani 89.30 317⇑ iP P 20 46 23.8 -0.3
PRAR RASCA 89.36 318⇑ iP P 20 46 23.6 -0.8
SUW Suwalki 89.37 325 eP P 20 46 23.1 -1.1
SUW Suwalki 89.37 325 eP P 20 46 23.1 -1.1
comp=Z,99nm,1.3s
SUW Suwalki 89.37 325 eP P 20 46 23.1 -1.1
VRI Vrincioaia 89.41 317⇑ iP P 20 46 24.6 0.0
VRI Vrincioaia 89.41 317 P P 20 46 24.6 0.0
PBUR Paburg 89.45 327 eP P 20 46 24.3 -0.2
PBUR IAmb IAmb 20 46 26.2
comp=Z,28nm,0.8s
PLOR Plostina 89.47 317⇑ iP P 20 46 24.0 -0.9
PLOR Plostina 89.47 317 P P 20 46 24.0 -0.9
BIZ Bicaz 89.55 318⇑ iP P 20 46 25.0 -0.3
KMBO Kilima Mbogo 89.86 269 P P 20 46 28.9 +1.2
comp=Z,2.3nm,0.8s,baz=23,slow=7.9,SNR=5.0
KMBO LR LR 21 27 57.5
comp=Z,487nm,18.0s,baz=78,slow=36
KMBO Kilima Mbogo 89.86 269 eP P 20 46 27.4 -0.3
comp=Z,9.8nm,1.3s
PHSR Pinarhisar 89.90 312⇑ iP P 20 46 26.4 -0.6
BURAR Bucovina Array 89.95 319⇑ iP P 20 46 27.4 +0.1
BURAR Bucovina Array 89.95 319 P P 20 46 27.3 0.0
BUR08 Bucovina Ar. S 89.96 319 eP P 20 46 27.2 -0.1
comp=Z,11nm,0.6s
OZUR 89.98 317⇑ iP P 20 46 36.1 +8.8
MLR Muntele Rosu 90.04 316 eP P 20 46 27.1 -0.6
comp=Z,22nm,1.3s
MLR Muntele Rosu 90.04 316⇑ iP P 20 46 26.6 -1.1
MLR Muntele Rosu 90.04 316 eP P 20 46 27.1 -0.6
MLR pmax pmax

comp=Z,22nm,1.3s
LVV L'vov 90.09 321 *e*P **P 20 46 27.7 0.0**
LVV MLR MLR
comp=N,200nm,18.0s
LVV MLR MLR
comp=E,100nm,18.0s
LVV MLR MLR
comp=Z,100nm,18.0s
VNDA Vanda 90.25 173 P **P 20 46 28.6 +0.9**
comp=Z,3.3nm,0.6s,baz=312,slow=6.8,SNR=16
VNDA PKKPbc **PKKPdf 21 03 57.8 +1.1**
comp=Z,1.0nm,0.4s,baz=14,slow=2.5,SNR=8.6
VNDA LR LR 21 29 53.3
comp=Z,144nm,18.9s,baz=344,slow=38
VNDA Vanda 90.25 173 *e*P **P 20 46 28.0 +0.3**
comp=Z,14nm,1.3s
VNDA Vanda 90.25 173 *e*P **P 20 46 28.0 +0.3**
VNDA pmax pmax
comp=Z,14nm,1.3s
MAW Mawson 90.28 200 P **P 20 46 28.2 +0.1**
comp=Z,8.7nm,1.0s,baz=45,slow=7.2,SNR=10
MAW LR LR 21 26 54.7
comp=Z,69nm,19.1s,baz=52,slow=36
MAW Mawson 90.28 200 *e*P **P 20 46 28.3 +0.3**
comp=Z,3.7nm,1.0s
MAW Mawson 90.28 200 *e*P **P 20 46 28.3 +0.3**
MAW pmax pmax
comp=Z,4.0nm,1.0s
VOIR 90.66 316⇑*i*P **P 20 46 30.4 -0.2**
ARCR ARCALIA 90.67 318⇑*i*P **P 20 46 29.6 -0.8**
HUMR Humele 90.95 316⇑*i*P **P 20 46 30.6 -1.2**
KWP Kalwaria Pacla 90.97 321 *e*P **P 20 46 32.0 +0.2**
KWP Kalwaria Pacla 90.97 321 *e*P **P 20 46 31.4 -0.4**
comp=Z,391nm,1.1s
KWP Kalwaria Pacla 90.97 321 *e*P **P 20 46 31.4 -0.4**
RES Resolute Bay 91.00 10 *e*P **P 20 46 31.7 +0.3**
comp=Z,15nm,0.8s
RES Resolute Bay 91.00 10 *e*P **P 20 46 31.7 +0.3**
RES pmax pmax
comp=Z,15nm,0.8s
SBA Scott Base 91.14 172 *e*P **P 20 46 32.5 +0.6**
comp=Z,22nm,1.6s
SBA Scott Base 91.14 172 *e*P **P 20 46 32.5 +0.6**
SBA pmax pmax
comp=Z,22nm,1.6s
CJR Cluj-Napoca 91.27 318⇑*i*P **P 20 46 33.2 -0.1**
KOLS Kolonicke sedl 91.45 320 *e*P **P 20 46 35.3 +1.2**
KOLS Kolonicke sedl 91.45 320 *e*P **P 20 46 35.3 +1.2**
TRPA Tarpa 91.53 320⇑*i*P **P 20 46 33.9 -0.5**
TRPA Tarpa 91.53 320⇓EP **P 20 46 33.1 -1.3**
UZH Uzhgorod 91.53 320 *e*P **P 20 46 34.0 -0.4**
UZH *i* 20 46 37.7
UZH *i* 20 46 45.1
DRGR 91.83 318⇑*i*P **P 20 46 35.0 -0.9**
TBLU Trondheim 92.03 336 *e*P **P 20 46 35.5 -0.9**
NC405 NORSAR Array S 92.42 334 *e*P **P 20 46 37.0 -1.3**
comp=Z,72nm,1.5s
NIE Niedzica 92.53 321 *e*P **P 20 46 39.4 +0.3**
NIE Niedzica 92.53 321 *e*P **P 20 46 39.4 +0.3**
OJC Ojcow 92.56 322 *e*P **P 20 46 39.0 -0.2**
OJC Ojcow 92.56 322 *e*P **P 20 46 39.2 0.0**
comp=Z,26nm,1.4s
OJC Ojcow 92.56 322 *e*P **P 20 46 39.2 0.0**
OJC pmax pmax
comp=Z,26nm,1.4s
NB2 NORSAR Subarra 92.67 334 P **P 20 46 37.4 -2.1**
comp=Z,3.8nm,0.7s,baz=63,slow=4.4
NB2 NORSAR Subarra 92.67 334 P **P 20 46 37.4 -2.1**
baz=63,slow=4.4
NB200 NORSAR Array S 92.67 334 *e*P **P 20 46 38.3 -1.2**
NOA NORSAR Array B 92.67 334 P **P 20 46 38.3 -1.2**
comp=Z,3.6nm,0.6s,baz=65,slow=4.5,SNR=24
NOA LR LR 21 33 29.4
comp=Z,139nm,18.4s,baz=45,slow=39
SIRR Siria 92.68 318⇑*i*P **P 20 46 39.7 -0.1**
VTS Vitosha 92.71 314 *e*P **P 20 46 39.4 -0.8**
comp=Z,18nm,1.4s
VTS Vitosha 92.71 314⇑*i*P **P 20 46 38.8 -1.4**
VTS Vitosha 92.71 314 *e*P **P 20 46 39.4 -0.8**
VTS pmax pmax
comp=Z,18nm,1.4s
NC204 NORSAR Array S 92.76 334 *e*P **P 20 46 39.0 -0.9**
comp=Z,21nm,1.1s
NAO01 NORSAR Array S 92.91 334 *e*P **P 20 46 39.4 -1.1**
BZS Buzias 92.91 317⇑*i*P **P 20 46 40.3 -0.6**
DOMB Dombas 93.10 335 *e*P **P 20 46 41.6 +0.2**
YKW3 Yellowknife Ar 93.10 24 *e*P **P 20 46 41.4 +0.1**
comp=Z,4.4nm,0.8s
MDVR Moldovita 93.11 317⇑*i*P **P 20 46 40.7 -1.2**
LANS Liptovska Anna 93.13 321 *e*P **P 20 46 43.5 +1.6**
LANS Liptovska Anna 93.13 321 *e*P **P 20 46 43.5 +1.6**
YKA Yellowknife Ar 93.14 24 P **P 20 46 41.8 +0.3**
comp=Z,3.9nm,0.8s,baz=301,slow=4.7,SNR=19
YKA LR LR 21 27 02.9
comp=Z,14nm,21.9s,baz=294,slow=34
YKB5 Yellowknife Ar 93.14 24 *e*P **P 20 46 41.9 +0.3**
OSL Oslo 93.40 333 *e*P **P 20 46 42.5 -0.3**
MOL Molde 93.44 336 *e*P **P 20 46 42.6 -0.3**
VAY Valandovo 93.57 313 *i*P **P 20 46 42.7 -1.3**
OKC Ostrava-Krasne 93.69 322 *e*P **P 20 46 41.0 -3.4**
OKC *e* 20 46 52.5
OKC MLR MLR
comp=Z,200nm,16.9s
OKC Ostrava-Krasne 93.69 322 *e*P **P 20 46 41.0 -3.4**
OKC *ex* x 20 46 52.5
OKC AMS AMS 21 35 20.0
comp=Z,200nm,16.9s
STIP Stip 93.73 313 *i*P **P 20 46 42.4 -2.3**
VYHS Vyhne 93.75 321 *e*P **P 20 46 44.8 +0.1**
VYHS Vyhne 93.75 321 *e*P **P 20 46 44.8 +0.1**
AKN Aaknes 93.87 336 *e*P **P 20 46 44.5 -0.4**
MORC Moravsky Berou 94.08 322 *e*P **P 20 46 45.7 -0.5**
SKO Skopje 94.18 314 *i*P **P 20 46 49.2 +2.4**
SRO Srobarova 94.32 320 *e*P **P 20 46 48.6 +1.3**
SRO Srobarova 94.32 320 *e*P **P 20 46 48.6 +1.3**
JAVC Velka Javorina 94.34 321 *e*P **P 20 46 48.6 +1.1**
KSP Ksiaz 94.42 323 *e*P **P 20 46 47.9 +0.2**
KSP Ksiaz 94.42 323 *e*P **P 20 46 47.9 +0.2**
CSKK Cskako 94.51 320 EP P 20 46 55.0 +6.8
BIA Bitola 94.56 313 *i*P **P 20 46 49.9 +1.2**
DPC Dobruska-Polom 94.59 323 *e*P **P 20 46 48.3 -0.3**
DPC *e* 20 46 59.9
DPC *e* 20 58 03.4
DPC MLR MLR
comp=Z,200nm,15.9s
DPC Dobruska-Polom 94.59 323 *e*P **P 20 46 48.3 -0.3**
DPC *ex* x 20 46 59.9
DPC *eS* **S 20 58 03.4 +4.3**
DPC AMS AMS 21 32 50.0
comp=Z,200nm,15.9s
CHVC Chvalec 94.66 323 *e*P **P 20 46 50.1 +1.3**
CHVC AMS AMS 21 33 00.0
comp=Z,300nm,19.4s
UPC Upice 94.72 323 *e*S **S 20 58 06.6 +6.5**
UPC AMS AMS 21 33 00.0
comp=Z,300nm,15.3s
VRAC Vranov 94.83 322⇑*i*P **P 20 46 49.3 -0.3**
VRAC Vranov 94.83 322 *e*P **P 20 46 49.8 +0.2**
TIH Tihany 94.91 319 EP **P 20 46 50.0 0.0**
KRUC Moravsky 95.04 322 *e*P **P 20 46 50.8 +0.2**
RUE Ruedersdorf 95.19 326 *e*P **P 20 46 50.1 -1.1**
RUE IAmb IAmb 20 46 54.4
comp=Z,18nm,0.9s
SOP Sopron 95.47 320 EP **P 20 46 52.0 -0.5**
TREC Trest 95.50 322 AMS AMS 21 36 20.0
comp=Z,200nm,18.6s
BLS5 Blasjo 95.54 334 *e*P **P 20 46 52.1 -0.6**
PVCC Panska Ves 95.55 324 AMS AMS 21 37 20.0
comp=Z,300nm,14.8s
PDG Podgorica 95.56 315⇑*i*P **P 20 46 51.3 -1.8**
GOPC GO Pecny, Ondr 95.67 323 *e*S **S 20 58 16.0 +7.5**
GOPC AMS AMS 21 33 40.0
comp=Z,200nm,16.2s
BRG Berggiesshubel 95.77 324 *e*P **P 20 46 53.6 -0.3**
comp=Z,11nm,1.2s
BRG *e* 20 47 04.0
comp=Z,6.7nm,1.1s
BRG PP PKiKP 20 51 14.0 -19
BRG S **S 20 58 10.0 +0.8**
comp=N,83nm,15.0s
comp=E,114nm,17.6s
comp=Z,211nm,18.5s
BRG Berggiesshubel 95.77 324 *e*P **P 20 46 53.6 -0.3**
BRG *e* 20 47 04.0
BRG S **S 20 58 10.0 +0.8**
BRG pmax pmax
comp=Z,3.0nm,1.2s
BRG MLR MLR
comp=N,7μm,15.0s
BRG MLR MLR
comp=E,83nm,17.6s
BRG MLR MLR
comp=Z,114nm,18.5s
BEHE Becsehely 95.78 319 EP **P 20 46 56.0 +2.0**
PRU Pruhonice 95.79 323 *e*P **P 20 46 53.5 -0.5**
PRU *e* 20 58 09.4
PRU MLR MLR
comp=Z,200nm,15.2s
PRU Pruhonice 95.79 323 *e*P **P 20 46 53.5 -0.5**
PRU *e*S **S 20 58 09.4 0.0**
PRU AMS AMS 21 36 00.0
comp=Z,200nm,15.2s
CONA Conrad Observa 95.81 321 *e*PcP **P 20 46 54.3 +0.1**
comp=Z,11nm,1.4s,SNR=8.9
CLL Collm 96.13 325 *e*P **P 20 46 55.1 -0.4**
comp=Z,9.8nm,1.1s
CLL Collm 96.13 325 *i*P **P 20 46 54.9 -0.6**
comp=Z,12nm,1.2s
CLL *i* P(2) 20 46 57.1
CLL *i* pP **pP 20 47 05.2 +1.0**
comp=Z,9.0nm,1.2s
CLL *i* 20 47 13.8
CLL *e*PP **PP 20 50 47.0 -1.1**
comp=Z,14nm,1.8s
CLL *e*S **S 20 58 11.0 -1.3**
CLL *e*SS SS 21 05 00.0 +17
CLL LmH 21 29 00.0
comp=N,100nm,19.9s
CLL LmH 21 29 00.0
comp=E,100nm,20.9s
CLL L L 21 36 00.0
comp=Z,200nm,19.4s
CLL Collm 96.13 325 *i*P **P 20 46 54.9 -0.6**
CLL *e*S **S 20 58 08.0 -4.3**
CLL pmax pmax
comp=Z,12nm,1.2s
ARSA Arzberg 96.28 320 *e*PcP **P 20 46 56.2 -0.1**
comp=Z,6.9nm,1.2s
KHC Kasperske Hory 96.71 323 *e*P **P 20 46 58.0 -0.2**
KHC *e* 20 47 09.7
KHC *e* 20 58 20.3
KHC MLR MLR
comp=Z,200nm,18.0s
KHC Kasperske Hory 96.71 323 *e*P **P 20 46 58.0 -0.2**
KHC *ex* x 20 47 09.7
KHC *eS* **S 20 58 20.3 +2.8**
KHC AMS AMS 21 41 30.0
comp=Z,200nm,18.0s
GEC2 GERESS Array S 96.76 322 *e*P **P 20 46 58.6 +0.1**
comp=Z,8.6nm,1.4s
GEC2 GERESS Array S 96.76 322 *e*P **P 20 46 58.6 +0.1**
GEC2 pmax pmax
comp=Z,9.0nm,1.4s
GERES GERESS Array B 96.76 322 P **P 20 46 58.4 -0.1**
comp=Z,1.4nm,0.8s,baz=52,slow=5.2,SNR=11
GERES LR LR 21 34 51.8
comp=Z,85nm,19.1s,baz=76,slow=38
PERS Pernice 96.78 320 *i*P **P 20 46 58.5 -0.1**
SOKA Soboth 96.81 320 *i*PcP **P 20 46 58.5 -0.3**
comp=Z,6.3nm,0.6s,SNR=8.3
MOA Molln 96.82 321 *e*PcP **P 20 46 58.8 +0.1**
comp=Z,15nm,1.2s,SNR=14
NKC Novy Kostel 96.91 324 AMS AMS 21 34 30.0
comp=Z,300nm,15.1s
BOJS Bojanci 97.14 319 *i*P **P 20 46 59.9 -0.3**
OBKA Obir 97.19 320 *i*PcP **P 20 47 00.1 -0.4**
comp=Z,7.7nm,1.1s
VISS Visnje 97.28 319 *e*P **P 20 47 00.7 -0.2**
B08A Colville Reser 97.30 38 *e*P Pdif 20 47 02.0 +1.0
comp=Z,3.6nm,0.8s
KBA Koelnbreinsper 97.71 321 *e*PcP **P 20 47 02.1 -0.8**
comp=Z,3.9nm,0.6s
MYKA Terra Mystica 97.71 320 *i*PcP **P 20 47 02.0 -0.9**
comp=Z,3.5nm,0.7s
JAVS Javornik 97.74 319 *i*P **P 20 47 02.6 -0.5**
ABTA Abfaltersbach 98.37 321 *e*PcP **P 20 47 04.6 -1.2**
comp=Z,6.4nm,0.8s,SNR=6.2
NEW Newport 98.67 37 *e*P Pdif 20 47 07.3 +0.2
comp=Z,3.3nm,1.0s
NEW Newport 98.67 37 *e*P Pdif 20 47 07.3 +0.2
NEW pmax pmax
comp=Z,3.0nm,1.0s
WTTA Wattenberg 98.69 321 *i* Pdiff **P 20 47 06.8 -0.6**
comp=Z,12nm,1.3s
WATA Walderalm 98.69 322 *e*Pdiff **P 20 47 06.8 -0.6**
comp=Z,3.5nm,0.9s
SYO Syowa Base 98.92 201⇓*e*X **P 20 47 03.8 -3.7**
SQTA Sankt Quirin 98.97 322 *i* Pdiff **P 20 47 08.1 -0.4**
comp=Z,5.4nm,0.9s
MOTA Moosalm 98.97 322 *i* Pdiff **P 20 47 07.7 -0.9**
comp=Z,4.0nm,1.0s
RETA Reutte 99.12 322 *e*Pdiff **Pdif 20 47 08.5 -0.7**
comp=Z,3.3nm,1.2s
WLF Walferdange 100.76 325⇑Pdif **Pdif 20 47 17.3 +1.0**
comp=Z,12nm,1.2s
NVAR Mina Array Bea 102.12 47 P **Pdif 20 47 24.7 +1.8**
comp=Z,0.4nm,0.6s,baz=290,slow=5.6,SNR=3.1
EKA Eskdalemuir Ar 102.15 333 P **Pdif 20 47 22.2 -0.1**
LTX Lajitas 117.10 49 *e*PKPdf **PKiKP 20 52 14.0 +0.5**
LTX Lajitas 117.10 49 *e*PKIKP **PKiKP 20 52 14.0 +0.5**
TXAR Lajitas Array 117.10 49 PKP **PKiKP 20 52 14.0 +0.6**
comp=Z,0.6nm,0.6s,baz=338,slow=0.3,SNR=8.1
TXAR PP **PP 20 53 21.5 -1.5**
comp=Z,0.8nm,0.9s,baz=269,slow=4.5,SNR=4.8
JCT Junction City 119.28 46 *e*PKPdf **PKiKP 20 52 18.0 +0.4**
JCT Junction City 119.28 46 *e*PKIKP **PKiKP 20 52 18.0 +0.4**
TORD Torodi Ar. Bea 120.69 292 PKP **PKPdf 20 52 19.7 -0.9**
comp=Z,2.4nm,0.8s,baz=134,slow=3.1,SNR=15
TORD PKKPbc **PKKPab 21 02 26.4 -0.7**
comp=Z,0.6nm,0.6s,baz=241,slow=2.3,SNR=6.6
TOA1 Torodi Ar. Sit 120.69 292 *e*PKPdf **PKPdf 20 52 19.7 -0.9**
WVT Waverly 123.09 33 *e*PKPdf **PKPdf 20 52 24.6 -0.1**
WVT Waverly 123.09 33 *e*PKIKP **PKPdf 20 52 24.6 -0.1**
KIC Kosan Boka 128.97 287 *e*P **PKiKP 20 52 37.2 0.0**
comp=Z,145nm,1.9s
DBIC Dimbokro 128.98 288 PKP **PKPdf 20 52 36.5 0.0**
comp=Z,4.3nm,0.6s,baz=93,slow=3.1,SNR=8.5
DBIC Dimbokro 128.98 288 *e*PKPdf **PKPdf 20 52 36.8 +0.3**
DBIC Dimbokro 128.98 288 *e*PKIKP **PKPdf 20 52 36.8 +0.3**
TIC Toumodi 129.14 288 *e*P **PKiKP 20 52 39.6 +2.1**
LIC Lamto 129.28 287 *e*P **PKiKP 20 52 38.2 +0.4**
comp=Z,120nm,2.0s
SDDR Presa de Saban 145.51 31 *e*PKPdf **PKPdf 20 53 06.2 -0.6**
PLCA Paso Flores 146.32 156 PKPbc **PKPab 20 53 09.7 +0.2**
comp=Z,19nm,0.8s,baz=242,slow=4.4,SNR=32
PLCA Paso Flores 146.32 156 *e*PKPdf **PKPdf 20 53 07.7 +0.1**
PLCA Paso Flores 146.32 156 *e*PKP2 **PKPdf 20 53 07.7 +0.1**
OBIP Obispado Ponce 148.51 25 *e*PKPbc **PKPbc 20 53 15.9 +0.6**
VIRV Villa del Rosa 151.52 43 *e*P **PKPbc 20 53 22.7 -0.1**
SMLC San Martn de 151.54 48 *e*P **PKPbc 20 53 21.6 -1.2**
TRQA Tornquist 151.59 165 *e*PKPbc **PKPbc 20 53 22.6 +0.3**
ZARC Zaragoza, Cauc 151.81 51 *e*P **PKPbc 20 53 23.0 -0.5**
HELC Santa Helena 152.09 54 *e*P **PKPbc 20 53 24.2 -0.4**
ROC1 El Roble 152.35 146 *e*PKPbc **PKiKP 20 53 25.6 +0.9**
OTAV Otavalo 152.56 68 *e*PKPdf **PKPdf 20 53 18.1 -0.7**
OTAV Otavalo 152.56 68 *e*PKIKP **PKPdf 20 53 18.1 -0.7**
YOTC Yotoco, Valle 152.66 59 *e*P **PKPbc 20 53 25.0 -0.5**
PTBC PUERTO BERRIO 152.72 52 *e*P **PKPbc 20 53 25.0 -0.5**
GUY2C Guyana, Caldas 152.78 56 *e*P **PKPbc 20 53 25.9 -0.4**
BBAC Balboa, Cauca 152.86 64 *e*P **PKPdf 20 53 16.5 -2.4**
BRRC Barranca, Sant 152.93 50 *e*P **PKPbc 20 53 25.8 -0.2**
NORC Norcasia 152.98 54 *e*P **PKPbc 20 53 25.0 -1.1**
POPC Popayan, Colom 153.12 62 *e*P **PKPbc 20 53 25.9 -0.8**
GIRC Giron, Santand 153.33 49 *e*P **PKiKP 20 53 27.6 +0.4**
SDV Santo Domingo 153.89 43 *e*PKPdf **PKPdf 20 53 21.2 +0.9**
SDV Santo Domingo 153.89 43 *e*P **PKPbc 20 53 28.3 0.0**
BETC Betania 154.11 60 *e*P **PKiKP 20 53 31.1 +2.4**
SOCV Socops 154.18 44 *e*P **PKPbc 20 53 28.8 +0.1**
RUSC La Rusia 154.18 51 *e*P **PKPbc 20 53 29.3 0.0**
CHIC Chingaza 154.45 55 *e*P **PKPbc 20 53 29.3 -0.5**
CPUP Villa Florida 163.92 166 PKP **PKPdf 20 53 32.3 +0.8**
comp=Z,2.5nm,0.9s,baz=202,slow=2.5,SNR=5.0
CPUP PKPab **PKPab 20 54 24.9 +0.9**
comp=Z,2.5nm,0.8s,baz=191,slow=5.5,SNR=3.8
LPAZ La Paz 164.36 113 PKP **PKPdf 20 53 32.8 -0.2**
comp=Z,1.4nm,0.5s,baz=333,slow=8.8,SNR=10.0
LPAZ PKPab **PKPab 20 54 29.4 +2.1**
comp=Z,3.8nm,0.9s,baz=268,slow=2.5,SNR=7.0
LPAZ La Paz 164.36 113 *e*PKPdf **PKPdf 20 53 33.1 +0.2**
LPAZ La Paz 164.36 113 *e*PKIKP **PKPdf 20 53 33.2 +0.2**

BJI ***08*** *20:39:21.5±0.0, 10°.33N×127°.05E, h14km, mb4.7/24, mB5.1/14, Ms4.9/7, Ms7 4.6/7*
IDC ***08*** *20:39:23.4±0.4, 10°.63N×126°.86E, h0km, mb4.5/36, mb1 4.5/38, mb1mx4.4/58, mbtmp4.5/38, ML4.3/2, Error ellipse: s-maj=17.6km s-min=9.4km az=84.0*
ISCJB ***08*** *20:39:26.0±1.4, 10°.62N±0°.02×126°.87E±0°.03, h29km±10km, mb4.7/109, MS4.6/2, Error ellipse: s-maj=5.0km s-min=3.9km az=170.1*
NEIC ***08*** *20:39:28.8±1.1, 10°.64N×126°.86E, h35km, mb4.8/90, Error ellipse: s-maj=19.0km s-min=13.3km az=76.0*
MAN ***08*** *20:39:32.8, 10°.47N×126°.40E, h24km, mb5.2, ML4.2, MS4.4*
ISC 08 20:39:27.2±2.0, 10°.67N±0°.04×126°.90E±0°.05, h24km±14km, n168, σ1$23/183, mb4.7/109, 4C-4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.65**	**238**	⇓*i*P	Pb	20 40 01.4	+4.6
SCPH				*i* S	**Sb**	**20 40 21.0**	**+3.8**
BESP	**Borongan**	**1.71**	**303**	*e*P	**Pn**	**20 39 53.5**	**-1.9**
BESP				*e*S	**Sn**	**20 40 17.2**	**+0.7**
PLP	**Palo**	**1.95**	**285**	⇑*e*P	**Pn**	**20 39 56.4**	**-2.4**
PLP				*e*S	**Sn**	**20 40 19.1**	**-3.4**
MSLP	**Maasin**	**2.08**	**255**	*e*P	**Pn**	**20 39 59.5**	**-1.1**
MSLP				*e*S	**Sn**	**20 40 19.0**	**-6.6**
BUTP	**Butuan**	**2.11**	**217**	*e*P	**Pn**	**20 40 00.3**	**-0.7**
BUTP				*e*S	**Sn**	**20 40 22.2**	**-4.2**
OCLP	**Ormoc**	**2.28**	**280**	*e*P	**Pn**	**20 40 03.0**	**-0.4**
CNP	**Catarman**	**2.85**	**310**	*e*P	Pn	20 40 08.7	-2.5
CNP				*e*S	**Sn**	**20 40 42.4**	**-2.4**
LLP	**Lapu-Lapu**	**2.91**	**263**	⇓*i*P	**Pn**	**20 40 11.8**	**-0.2**
LLP				*e*S	**Sn**	**20 40 45.1**	**-1.1**
CGP	**Cagayan de Oro**	**3.10**	**225**	⇑*i*P	**Pn**	**20 40 13.9**	**-0.6**
CGP				*i* S	**Sn**	**20 40 49.4**	**-1.4**
BUKP	**Musuan**	**3.31**	**213**	*e*P	**Pn**	**20 40 18.6**	**+1.0**
BUKP				*e*S	**Sn**	**20 40 58.5**	**+2.2**
SNPH	**Sibulan**	**3.84**	**250**	*e*P	**Pn**	**20 40 25.5**	**+0.6**
DCPH	**Dipolog City**	**4.07**	**240**	⇑*e*P	**Pn**	**20 40 31.2**	**+3.3**
DCPH				*e*S	**Sn**	**20 41 12.4**	**-2.4**
JAP	**San Jose, Anti**	**4.87**	**271**	⇑*e*P	**Pn**	**20 40 37.6**	**-1.3**
TNTI	**Ternate**	**9.85**	**177**	*e*Pn	**Pn**	**20 41 46.6**	**-0.7**
LUWI	**Luwuk**	**12.34**	**200**	*e*Pn	**Pn**	**20 42 24.2**	**+2.7**
TPUB	**Ta-pu**	**13.91**	**335**	*e*Pn	**Pn**	**20 42 44.8**	**+1.9**
YOJ	**Yonaguni jima**	**14.21**	**345**	*e*Pn	**Pn**	**20 42 47.6**	**+0.7**
SSLB	**Suanglung**	**14.22**	**337**	*e*Pn	**P**	**20 42 51.1**	**-3.2**
FAKI	**Fak Fak**	**14.51**	**158**	*e*Pn	**Pn**	**20 42 50.2**	**-1.1**
SBUM	**Sibu**	**16.70**	**242**	*e*Pn	**P**	**20 43 21.0**	**-1.0**
	10nm,1.0s						
KAPI	**Kappang**	**17.13**	**205**	P	**Pn**	**20 43 25.0**	**-0.1**
	0.5nm,0.3s,baz=67,slow=8.5,SNR=4.0						
KAPI	**Kappang**	**17.13**	**205**	*e*Pn	**Pn**	**20 43 25.5**	**+0.4**
	18nm,0.9s						
GUMO	**Guam**	**17.81**	**79**	P	**P**	**20 43 34.5**	**+0.3**
	2.0nm,0.3s,baz=18,slow=20,SNR=1.9						
QIZ	**Qiongzhong**	**18.45**	**299**	*e*P	**P**	**20 43 40.7**	**-0.5**
	20nm,1.1s						
KSM	**Kuching**	**18.84**	**242**	*e*P	**Pn**	**20 43 47.2**	**+1.0**
	26nm,0.9s						
MMRI	**Maumere**	**19.73**	**194**	*e*P	**Pn**	**20 43 56.9**	**+0.1**
	91nm,1.1s						
SOEI	**Soe**	**20.46**	**187**	*e*P	Pn	20 44 05.1	-0.5
	68nm,0.9s						
BATI	**Baumata**	**20.99**	**189**	P	**P**	**20 44 09.2**	**+0.2**
	56nm,0.6s,baz=246,slow=2.5,SNR=9.2						
BATI	**Baumata**	**20.99**	**189**	*e*P	**P**	**20 44 09.2**	**+0.2**
BATI				*e*P	**P**	**20 44 09.2**	**+0.2**
JNU	**Nakatsue**	**22.64**	**9**	P	**P**	**20 44 26.5**	**-0.1**
	16nm,1.1s,baz=180,slow=12,SNR=2.5						
JNU	**Nakatsue**	**22.64**	**9**	*e*P	**P**	**20 44 26.8**	**+0.2**
	29nm,1.2s						
JAGI	**Jajag, Banyuwa**	**22.86**	**214**	*e*P	**P**	**20 44 30.6**	**+1.6**
	32nm,0.7s						
WHN	**Wuhan**	**22.96**	**331**	⇓P	**P**	**20 44 31.2**	**+1.3**
WHN				pmax	pmax		
	comp=Z,210nm,1.4s						
MTN	**Manton Dam**	**23.74**	**170**	*e*P	**P**	**20 44 36.8**	**-0.9**
	48nm,0.9s						
SLVN	**Son La**	**24.48**	**298**	*e*P	**P**	**20 44 43.2**	**-1.5**
	3.4nm,0.9s						
MYKOM	**Kota Tinggi**	**24.53**	**250**	*e*P	**P**	**20 44 45.1**	**0.0**
	17nm,1.0s						
CHAI	**Chaiyaphum**	**24.79**	**285**	P	**P**	**20 44 51.0**	**+3.5**
	18μm,0.9s						
ENH	**Enshi**	**25.36**	**323**	*e*P	**P**	**20 44 53.1**	**+0.6**
	31nm,1.0s						
LEM	**Lembang**	**25.90**	**229**	P	**P**	**20 44 58.5**	**+0.8**
	17nm,0.6s,baz=340,slow=13,SNR=5.3						
INU	**Inuyama**	**26.23**	**19**	*e*P	**P**	**20 45 00.4**	**+0.1**
	26nm,1.5s						
IPM	**Ipoh**	**26.36**	**258**	*e*P	**P**	**20 45 01.2**	**-0.5**
	9.9nm,0.9s						
KULM	**Kulim**	**26.53**	**260**	*e*P	**P**	**20 45 03.7**	**+0.5**
	17nm,1.1s						
KSRS	**Korea Array**	**26.68**	**2**	P	**P**	**20 45 05.0**	**+0.7**
	2.4nm,0.8s,baz=177,slow=10,SNR=8.4						
MAJO	**Matsushiro**	**27.71**	**20**	*e*P	**P**	**20 45 12.7**	**-1.1**
MJAR	**Matsushiro Arr**	**27.71**	**20**	P	**P**	**20 45 12.7**	**-1.1**
	3.9nm,1.1s,baz=197,slow=9.3,SNR=7.3						
CM31	**Chiang Mai Arr**	**28.11**	**289**	*e*P	**P**	**20 45 16.5**	**-1.0**
	4.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**28.11**	**289**	P	**P**	**20 45 15.8**	**-1.7**
	0.9nm,0.7s,baz=99,slow=7.7,SNR=6.8						
XAN	**Xi'an**	**28.49**	**328**	P	**P**	**20 45 21.2**	**+0.5**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
XAN				LR	LR		
	comp=N,540nm,16.3s						
XAN				LR	LR		
	comp=E,400nm,14.1s						
XAN				LR	LR		
	comp=Z,470nm,14.1s						
XAN	**Xi'an**	**28.49**	**328**	*e*P	**P**	**20 45 21.2**	**+0.5**
	22nm,1.4s						
FITZ	**Fitzroy Crossi**	**28.61**	**182**	P	**P**	**20 45 20.2**	**-1.6**
	4.3nm,0.8s,baz=55,slow=17,SNR=3.7						
FITZ	**Fitzroy Crossi**	**28.61**	**182**	*e*P	**P**	**20 45 20.5**	**-1.3**
	17nm,1.4s						
COEN	**Coen**	**29.32**	**146**	*e*P	**P**	**20 45 27.6**	**-0.6**
	17nm,1.1s						
WR1	**Warramunga Arr**	**31.29**	**166**	*e*P	**P**	**20 45 43.5**	**-2.0**
WR1				*e*PcP	**PcP**	**20 48 39.6**	**0.0**
WRA	**Warramunga Arr**	**31.29**	**166**	P	**P**	**20 45 43.5**	**-2.0**
	0.8nm,0.5s,baz=291,slow=21,SNR=5.5						
WRA				PcP	**PcP**	**20 48 39.6**	**0.0**
	0.7nm,0.5s,baz=282,slow=4.3,SNR=5.5						
WB2	**Warramunga Arr**	**31.29**	**166**	*e*P	**P**	**20 45 43.9**	**-1.7**
	12nm,1.3s						
WB2				*e*PcP	**PcP**	**20 48 39.6**	**0.0**
WC3	**Warramunga Arr**	**31.31**	**166**	*e*P	**P**	**20 45 45.2**	**-0.5**
	23nm,1.4s						
WC3				*e*PcP	**PcP**	**20 48 39.7**	**0.0**
PSAD1	**Pilbara Seismi**	**32.67**	**192**	*e*P	**P**	**20 45 55.9**	**-1.7**
	12nm,0.9s						
LZH	**Lanzhou**	**32.81**	**324**	*e*P	**P**	**20 46 01.0**	**+2.0**
LZH				pP	sP	20 46 06.8	+0.3
LZH				sP	pwP	20 46 10.5	-3.2
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
USA0B	**Ussuriysk Arra**	**33.70**	**7**	*e*P	**P**	**20 46 06.5**	**+0.1**
	8.9nm,0.9s						
USRK	**Ussuriysk Ar.**	**33.70**	**7**	P	**P**	**20 46 06.1**	**-0.2**
	5.7nm,0.8s,baz=212,slow=9.0,SNR=8.8						
MDJ	**Mudanjiang**	**33.90**	**3**	*e*P	**P**	**20 46 08.7**	**+0.5**
	13nm,1.1s						
AS31	**Alice Springs**	**34.81**	**169**	*e*P	**P**	**20 46 15.0**	**-1.3**
	1.6nm,0.6s						
ASAR	**Alice Springs**	**34.81**	**169**	P	**P**	**20 46 14.7**	**-1.6**
	1.6nm,0.5s,baz=349,slow=6.5,SNR=16						
ASAR				PcP	**PcP**	**20 48 49.4**	**-0.1**
	1.6nm,0.5s,baz=342,slow=2.7,SNR=12						
SHL	**Shillong**	**36.29**	**299**	*e*P	**P**	**20 46 28.9**	**-0.4**
	15nm,0.9s						
GTA	**Gaotai**	**37.41**	**325**	⇓P	**P**	**20 46 40.2**	**+1.7**
GTA				pP	sP	20 46 47.7	+1.6
GTA				sP	pwP	20 46 50.5	-2.9
GTA				pmax	pmax		
	comp=Z,16nm,1.2s						
LSA	**Lhasa**	**38.

4.3nm,0.7s,baz=210,slow=5.6,SNR=16
HIA Hailar 38.93 353 *e*P **P 20 46 50.9 -0.2**
13nm,1.5s
ULN Ulaanbaatar 40.66 339 *e*P **P 20 47 05.8 +0.1**
4.3nm,1.0s
SONA0 Songino Array 40.87 339 *e*P **P 20 47 08.2 +0.9**
SONM Songino Array 40.87 339 P **P 20 47 08.2 +0.9**
1.4nm,0.7s,baz=158,slow=9.7,SNR=7.8
MORW Morawa 40.87 195 *e*P **P 20 47 07.2 -0.2**
24nm,1.4s
FORT Forrest 41.23 178 *e*P **P 20 47 09.5 -0.7**
28nm,1.0s
EIDS Eidsvold 42.88 147 *e*P **P 20 47 23.1 -0.8**
29nm,1.4s
BBOO Buckleboo 44.11 169 *e*P **P 20 47 33.3 -0.4**
34nm,0.8s
NWAO Narrogin (SRO) 44.32 192 P **P 20 47 35.0 -0.4**
13nm,0.9s,baz=23,slow=11,SNR=5.7
NWAO Narrogin (SRO) 44.32 192 *e*P **P 20 47 34.6 -0.8**
28nm,1.2s
STKA Stephens Creek 44.59 162 P **P 20 47 37.0 -0.5**
6.9nm,0.9s,baz=336,slow=8.0,SNR=13
STKA PcP **PcP 20 49 20.2 -0.1**
2.2nm,0.8s,baz=355,slow=12,SNR=2.9
STKA Stephens Creek 44.59 162 *e*P **P 20 47 37.0 -0.5**
3.3nm,1.1s
ARMA Armidale 47.27 151 *e*P **P 20 47 58.2 -0.7**
30nm,1.4s
WMQ Urumqi 47.29 321 *e*P **P 20 47 59.1 +0.3**
8.1nm,0.8s
PEA0B Petropavlovsk- 49.02 24 *e*P **P 20 48 12.5 +0.5**
33nm,1.3s
PETK Petropavlovsk- 49.02 24 P **P 20 48 13.4 +1.4**
5.4nm,0.7s,baz=196,slow=3.2,SNR=12
PEA1 Petropavlovsk- 49.02 24 *e*P **P 20 48 13.4 +1.4**
CAN Canberra 50.29 156 *e*P **P 20 48 21.9 -0.1**
17nm,1.1s
TOO Toolangi 51.06 161 *e*P **P 20 48 27.7 +0.1**
26nm,1.4s
YAK Yakutsk 51.31 2 *e*P **P 20 48 29.3 +0.2**
12nm,0.8s
MK31 Makanchi Array 52.09 322 *e*P **P 20 48 35.9 +0.6**
9.9nm,1.0s
MK32 Makanchi Array 52.09 322 *e*P **P 20 48 36.6 +1.3**
MKAR Makanchi Array 52.09 322 P **P 20 48 36.6 +1.3**
5.0nm,0.6s,baz=112,slow=7.6,SNR=15
MAKZ Makanchi 52.28 322 *e*P **P 20 48 36.5 -0.2**
17nm,1.1s
KSH Kashi 53.43 312 P **P 20 48 48.4 +3.0**
KSH S **S 20 56 18.9 +2.3**
KSH pmax pmax
comp=Z,24nm,1.2s
KSH pmax pmax
comp=Z,110nm,3.6s
KSH LR LR
comp=N,640nm,15.1s
KSH LR LR
comp=E,690nm,13.2s
KSH LR LR
comp=Z,1μm,15.9s
NIL Nilore 54.02 304 *e*P **P 20 48 48.8 -1.0**
18nm,0.9s
NRN Naryn 54.02 314 *e*P **P 20 48 49.7 -0.4**
8.3nm,0.7s
ZAA0 Zalesovo Array 54.58 331 *e*P **P 20 48 53.5 +0.1**
3.6nm,0.6s
ZALV Zalesovo Beam 54.58 331 P **P 20 48 53.2 -0.2**
2.6nm,0.8s,baz=153,slow=4.9,SNR=4.1
KURK Kurchatov 56.09 325 *e*P **P 20 49 04.4 0.0**
19nm,0.9s
KURBB Kurchatov Arra 56.10 325 P **P 20 49 04.8 +0.3**
5.0nm,0.6s,baz=125,slow=6.8,SNR=20
GAR Garm 57.51 310 *e*P **P 20 49 14.8 -0.1**
22nm,0.7s
KK31 Karatay Array 58.41 314 *e*P **P 20 49 21.1 +0.1**
8.5nm,0.9s
TIXI Tiksi 60.94 1 *e*P **P 20 49 38.1 +0.3**
8.0nm,1.1s
BVAR Borovoye Array 61.69 325 P **P 20 49 44.1 +0.8**
1.8nm,0.5s,baz=126,slow=6.3,SNR=7.7
BRVK Borovoye 61.76 325 *e*P **P 20 49 44.1 +0.4**
7.7nm,0.9s
BILL Bilibino 62.85 16 *e*P **P 20 49 51.2 +0.4**
5.0nm,1.0s
NRIK Noril'sk 63.78 345 P **P 20 49 55.4 -1.5**
5.5nm,1.0s,baz=132,slow=7.9,SNR=7.2
BKZ Black Stump Fm 67.69 140 *e*P **P 20 50 22.7 0.0**
34nm,1.4s
ARU Arti 69.23 326 P **P 20 50 31.6 -0.3**
1.8nm,0.4s,baz=95,slow=5.8,SNR=9.1
ARU Arti 69.23 326 *e*P **P 20 50 31.5 -0.5**
5.7nm,0.5s
KIRV Kirov 74.44 328 P **P 20 51 02.5 -0.6**
6.2nm,0.5s,baz=91,slow=2.7,SNR=5.4
KDAK Kodiak Island 75.99 33 *e*P **P 20 51 12.7 +0.6**
21nm,1.4s
CAST Castle Rocks 76.50 27 *e*P **P 20 51 15.8 +0.8**
8.8nm,1.3s
BPAW Bear Paw Mtn. 77.03 27 *e*P **P 20 51 18.6 +0.6**
18nm,1.3s
SUA Susitna One 77.05 29 *e*P **P 20 51 18.8 +0.5**
6.4nm,1.1s
TBLG Delisi 77.15 310 *e*P **P 20 51 19.3 +0.2**
6.2nm,0.8s
CASY Casey 77.69 187 *e*P **P 20 51 21.1 -0.2**
9.6nm,0.7s
PMR Palmer 77.82 29 *e*P **P 20 51 22.1 -0.2**
6.3nm,1.0s
MCK McKinley 77.92 27 *e*P **P 20 51 23.1 +0.1**
10.0nm,1.0s
RND Reindeer 77.96 27 *e*P **P 20 51 23.4 +0.2**
8.3nm,1.3s
AKH Akhalkalaki 78.10 310 *e*P **P 20 51 24.4 -0.2**
18nm,1.2s
WRH Wood River Hil 78.30 26 *e*P **P 20 51 25.2 +0.3**
11nm,1.4s
KBZ Khabaz 78.39 313 P **P 20 51 26.6 +0.7**
1.6nm,0.7s,baz=57,slow=8.9,SNR=5.1
CCB Clear Creek Bu 78.42 26 *e*P **P 20 51 25.4 -0.2**
6.3nm,1.3s
KIV Kislovodsk 78.53 313 *e*P **P 20 51 26.0 -0.8**
6.7nm,0.7s
SCM Sheep Creek Mo 78.68 29 *e*P **P 20 51 27.8 +0.5**
22nm,1.2s
ILAR Eielson Array 78.81 26 P **P 20 51 27.9 0.0**
0.7nm,0.7s,baz=247,slow=4.9,SNR=7.8
ILB Eielson Array 78.81 26 *e*P **P 20 51 27.8 0.0**
4.0nm,1.4s
RIDG Independent Ri 79.74 27 *e*P **P 20 51 33.3 +0.3**
8.6nm,1.0s
DOT Dot Lake 80.10 27 *e*P **P 20 51 35.4 +0.5**
5.3nm,1.2s
SCRK Sand Creek 80.11 27 *e*P **P 20 51 35.6 +0.5**
EGAK Eagle 81.26 26 *e*P **P 20 51 41.7 +0.6**
7.4nm,1.4s
OBN Obninsk 81.53 324 P **P 20 51 42.8 +0.2**
2.5nm,0.4s,baz=152,slow=11,SNR=4.6
OBN Obninsk 81.53 324 *e*P **P 20 51 42.7 +0.1**
16nm,1.1s
CTGM Chitina Glacie 81.62 30 *e*P **P 20 51 44.0 +0.7**
15nm,1.0s
HYT Haines Junctio 83.49 29 *e*P **P 20 51 53.5 +0.6**
12nm,1.4s
INK Inuvik 83.69 22 P **P 20 51 54.3 +0.7**
1.1nm,0.7s,baz=196,slow=2.0,SNR=5.3
INK Inuvik 83.69 22 *e*P **P 20 51 53.9 +0.3**
6.7nm,1.4s
ARCES ARCESS Array B 84.03 340 P **P 20 51 55.6 +0.2**
8.1nm,0.4s,baz=79,slow=6.3,SNR=7.0
WHY Whitehorse 84.78 29 *e*P **P 20 52 00.4 +0.9**
7.7nm,0.9s
MMAI Mount Meron Ar 85.51 303 P **P 20 52 04.6 +0.8**
18nm,1.3s,baz=67,slow=11,SNR=8.6
BR131 Keskin Array S 85.75 309 *e*P **P 20 52 03.9 -1.0**
3.1nm,0.8s
BRTR Keskin Array B 85.75 309 P **P 20 52 04.3 -0.6**
1.1nm,0.6s,baz=128,slow=4.7,SNR=6.6
FIA1 FINESS Array S 85.83 332 *e*P **P 20 52 04.3 -0.2**
15nm,1.1s
FINES FINESS Array B 85.83 332 P **P 20 52 04.6 0.0**
3.3nm,0.4s,baz=85,slow=4.6,SNR=26
AKASG Malin Array Be 86.64 321 P **P 20 52 08.8 0.0**
0.9nm,0.5s,baz=62,slow=5.4,SNR=14
AKBB Malin Array Si 86.64 321 *e*P **P 20 52 08.6 -0.2**
13nm,1.2s
BUR08 Bucovina Ar. S 89.96 319 *e*P **P 20 52 24.8 +0.1**
6.9nm,1.2s
VNDA Vanda 90.25 173 P **P 20 52 25.4 +0.2**
4.6nm,1.1s,baz=315,slow=7.8,SNR=4.2
VNDA Vanda 90.25 173 *e*P **P 20 52 25.3 0.0**
4.9nm,1.0s
MAW Mawson 90.29 200 P **P 20 52 25.2 -0.3**
2.7nm,0.8s,baz=77,slow=5.1,SNR=5.2
MAW Mawson 90.29 200 *e*P **P 20 52 25.4 -0.2**
3.1nm,1.4s
KWP Kalwaria Pacla 90.97 321 *e*P **P 20 52 28.8 -0.5**
115nm,1.1s
RES Resolute Bay 91.00 10 *e*P **P 20 52 28.8 -0.1**
5.5nm,0.8s
NB2 NORSAR Subarra 92.67 334 P **P 20 52 35.4 -1.6**
comp=Z,0.6nm,0.6s,baz=69,slow=4.8
NB200 NORSAR Array S 92.67 334 *e*P **P 20 52 35.8 -1.3**
NOA NORSAR Array B 92.67 334 P **P 20 52 35.8 -1.3**
comp=Z,1.0nm,0.7s,baz=65,slow=4.5,SNR=3.7
VTS Vitosha 92.71 314 *e*P **P 20 52 36.8 -0.9**
comp=Z,5.8nm,1.3s
YKA Yellowknife Ar 93.14 24 P **P 20 52 39.5 +0.4**
comp=Z,1.1nm,0.8s,baz=297,slow=4.7,SNR=7.0
YKB5 Yellowknife Ar 93.14 24 *e*P **P 20 52 39.5 +0.4**
CLL Collm 96.12 325 *i* P **P 20 52 53.3 +0.3**
GEC2 GERESS Array S 96.76 322 *e*P **P 20 52 55.7 -0.3**
comp=Z,2.4nm,1.1s
GERES GERESS Array B 96.76 322 P **P 20 52 55.9 -0.1**
comp=Z,0.8nm,1.0s,baz=53,slow=6.5,SNR=4.3
LTX Lajitas 117.10 49 *e*PKPdf **PKiKP 20 58 11.7 +0.6**
TXAR Lajitas Array 117.10 49 PKP **PKiKP 20 58 11.7 +0.6**
comp=Z,0.2nm,0.6s,baz=326,slow=1.8,SNR=3.8
TORD Torodi Ar. Bea 120.69 292 PKP **PKPdf 20 58 17.5 -0.6**
comp=Z,0.6nm,0.8s,baz=148,slow=3.8,SNR=5.7
TOA1 Torodi Ar. Sit 120.69 292 *e*PKPdf **PKPdf 20 58 17.5 -0.6**
PLCA Paso Flores 146.32 156 PKPbc **PKPab 20 59 06.9 -0.2**
comp=Z,4.4nm,0.7s,baz=256,slow=3.0,SNR=14
PLCA Paso Flores 146.32 156 *e*PKPdf **PKPbc 20 59 05.8 -0.5**
LPAZ La Paz 164.36 113 PKPab **PKPab 21 00 25.7 +0.8**
comp=Z,1.4nm,0.9s,baz=233,slow=2.2,SNR=3.6

SOME ***08*** *20:43:19.7,38.°00N×71.°83E,h5km*
IDC ***08*** *20:43:21.2±3.0,36.°64N×71.°57E,h92km±25km,mb3.8/17, mb1 4.0/23,mb1mx3.7/56,mbtmp4.2/23,MS4.1/2, Ms1 4.0/2,ms1mx2.8/38,Error ellipse: s-maj=20.0km s-min=14.6km az=4.0*
ISCJB ***08*** *20:43:23.5±0.2,36.°87N±0.°02×71.°55E±0.°04,h122km, mb4.0/36,Error ellipse: s-maj=4.1km s-min=2.7km az=3.7*
NNC ***08*** *20:43:23.8±3.4,37.°31N×71.°08E,h0km,mb4.9,mpv4.8, Error ellipse: s-maj=31.8km s-min=16.4km az=157.0*
NEIC ***08*** *20:43:24.9±2.0,36.°85N×71.°61E,h122km±9km,mb4.0/27, Error ellipse: s-maj=17.2km s-min=13.7km az=162.0*
ISC 08 20:43:24.9±0.4,**36.°91N**±0.°04×**71.°43E**±0.°04,**h122**km,**n112,** σ2**s13**/137,**mb4.1**/36,**12C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
GAR	**Garm**	**2.27**	**338**	*e*Pn	**Pn**	**20 44 02.6**		**+0.7**
GAR				*e*Sn	**Sn**	**20 44 30.4**		**+0.1**
KBL	**Kabul**	**3.05**	**220**	*e*Pn	**Pn**	**20 44 13.3**		**+1.1**
KBL				*e*Sn	**Sn**	**20 44 51.9**		**+3.3**
CEP	**Cherat**	**3.10**	**173**	⇑P	**Pn**	**20 44 13.1**		**+0.3**
CEP				S	**Sn**	**20 44 50.0**		**+0.4**
BTK	**Batken**	**3.18**	**352**	*e*Pn	**Pn**	**20 44 15.8**		**+2.1**
BTK				*e*Sn	**Sn**	**20 44 53.0**		**+1.5**
NIL	**Nilore**	**3.58**	**155**	*e*Pn	**Pn**	**20 44 19.4**		**+0.5**
NIL				*e*Sn	**Sn**	**20 45 00.7**		**+0.1**
THW	**Thamme Wali**	**4.11**	**176**	P	**Pn**	**20 44 25.8**		**-0.2**
ARSB	**Arslanbob**	**4.58**	**15**	*e*Pn	**Pn**	**20 44 32.4**		**+0.1**
ARSB				*e*Sn	**Sn**	**20 45 23.6**		**-1.0**
IUG	**Iuzhnay**	**5.34**	**349**	*e*P	**Pn**	**20 44 43.4**		**+0.9**
IUG				*e*S	**Sn**	**20 45 41.5**		**-1.6**
AML	**Almayashu**	**5.50**	**18**	P	**Pn**	**20 44 45.6**		**+0.6**
SNR=751								
CHM	**Chimkent**	**5.59**	**346**	*e*P	**Pn**	**20 44 46.7**		**+0.9**
CHM				*e*S	**Sn**	**20 45 46.8**		**-1.9**
NRN	**Naryn**	**5.75**	**37**	*e*Pn	**Pn**	**20 44 47.1**		**-1.1**
NRN				*e*Sn	**Sn**	**20 45 52.5**		**-0.6**
UCH	**Uchtor**	**5.83**	**23**	P	**Pn**	**20 44 50.0**		**+0.6**
SNR=124								
KZA	**Kyzart**	**5.95**	**29**	P	**Pn**	**20 44 51.2**		**+0.2**
SNR=33								
DZA	**Taraz**	**5.98**	**359**	⇓*i*P	**Pn**	**20 44 52.4**		**+1.3**
DZA				⇑*i*S	**Sn**	**20 45 57.2**		**-1.1**
MRKS	**Merke**	**5.99**	**13**	⇑*i*P	**Pn**	**20 44 52.0**		**+0.7**
MRKS				⇓*i*S	**Sn**	**20 45 56.6**		**-2.1**
EKS2	**Erkin-Say**	**6.03**	**17**	P	**Pn**	**20 44 52.7**		**+1.0**
SNR=31								
AAK	**Ala-Archa**	**6.19**	**21**	P	**Pn**	**20 44 55.0**		**+1.0**
AAK				S	**Sn**	**20 46 02.8**		**-0.8**
AAK	**Ala-Archa**	**6.19**	**21**	P	**Pn**	**20 44 55.0**		**+1.0**
SNR=50								
AAK	**Ala-Archa**	**6.19**	**21**	*e*Pn	**Pn**	**20 44 54.8**		**+0.8**
AAK				*e*Sn	**Sn**	**20 46 03.6**		**0.0**
AAK	**Ala-Archa**	**6.19**	**21**	⇓P	**Pn**	**20 44 54.8**		**+0.8**
AAK				⇑S	**Sn**	**20 46 01.0**		**-2.6**
KK31	**Karatay Array**	**6.23**	**354**	*e*Pn	**Pn**	**20 44 55.0**		**+0.6**
KK31				*e*Sn	**Sn**	**20 46 01.5**		**-2.8**
KK31	**Karatay Array**	**6.23**	**354**	⇑P	**Pn**	**20 44 53.8**		**-0.6**
19nm,0.3s,baz=173,slow=12,SNR=415								
KK31				⇑S	**Sn**	**20 46 00.8**		**-3.5**
34nm,0.4s,baz=170,slow=22,SNR=7.8								
KBK	**Karagaybulak**	**6.35**	**24**	P	**Pn**	**20 44 57.1**		**+0.9**
SNR=15								
FRU1	**Bishkek**	**6.39**	**22**	*e*Pn	**Pn**	**20 44 57.8**		**+1.2**
FRU1				*e*Sn	**Sn**	**20 46 10.1**		**+1.9**
ULHL	**Ulahol**	**6.50**	**33**	P	**Pn**	**20 44 58.1**		**-0.1**
SNR=8.3								
BOOM	**Boomskoye usch**	**6.57**	**31**	*e*Pn	**Pn**	**20 44 59.3**		**+0.1**
BOOM				*e*Sn	**Sn**	**20 46 12.8**		**-0.1**
CHMS	**Chumysh**	**6.60**	**22**	P	**Pn**	**20 44 59.8**		**+0.4**
SNR=43								
USP	**Ospenovka**	**6.78**	**19**	P	**Pn**	**20 45 01.9**		**+0.1**
SNR=38								
TKM2	**Tokmak 2**	**6.81**	**27**	P	**Pn**	**20 45 03.0**		**+0.6**
SNR=8.8								
TKM2	**Tokmak 2**	**6.81**	**27**	⇑P	**Pn**	**20 45 02.8**		**+0.4**
60nm,0.6s								
TKM2				⇓S	**Sn**	**20 46 17.3**		**-1.3**
18nm,0.9s								
KST	**Kastek**	**7.05**	**28**	*e*P	**Pn**	**20 45 09.9**		**+4.4**
14nm,0.4s								
KST				*e*S	**Sn**	**20 46 20.0**		**+1.7**
23nm,0.7s								
PDGK	**Podgornoye**	**8.90**	**41**	⇑P	**Pn**	**20 45 30.9**		**+0.3**
20nm,0.9s								
PDGK				⇑S	**Sn**	**20 47 15.5**		**+6.3**
26nm,1.3s								
GEYT	**Alibeck**	**10.64**	**280**	P	**Pn**	**20 45 51.9**		**-2.0**
2.4nm,0.3s,baz=110,slow=10,SNR=31								
GEYT				S	**Sn**	**20 47 46.2**		**-4.9**
3.7nm,0.3s,baz=98,slow=20,SNR=11								
GYA0B	**ALIBECK ARRAY**	**10.64**	**280**	*e*Pn	**Pn**	**20 45 51.8**		**-2.0**
GYA0B	**ALIBECK ARRAY**	**10.64**	**280**	⇑P	**Pn**	**20 45 52.1**		**-1.8**
GYA0B				⇑S	**Sn**	**20 47 47.4**		**-3.7**
MAKZ	**Makanchi**	**12.63**	**35**	*e*Pn	**Pn**	**20 46 18.7**		**-1.4**
MK31	**Makanchi Array**	**12.76**	**36**	*e*Pn	**Pn**	**20 46 20.9**		**-0.9**
MK32	**Makanchi Array**	**12.76**	**36**	*e*Pn	**Pn**	**20 46 20.6**		**-1.2**
MKAR	**Makanchi Array**	**12.76**	**36**	P	**Pn**	**20 46 20.6**		**-1.2**
0.3nm,0.3s,baz=220,slow=14,SNR=6.1								
PYUN	**Piuthan**	**13.12**	**129**	*e*P	**Pn**	**20 46 22.3**		**-4.5**
16nm,0.4s								
DANN	**Dangsing**	**13.44**	**126**	*e*P	**Pn**	**20 46 27.3**		**-3.7**
16nm,0.3s								
KOLN	**Koldanda**	**13.73**	**128**	*e*P	**Pn**	**20 46 30.5**		**-4.2**
11nm,0.4s								
KURBB	**Kurchatov Arra**	**14.63**	**18**	P	**Pn**	**20 46 43.3**		**-2.5**
0.1nm,0.3s,baz=213,slow=12,SNR=4.6								
KURK	**Kurchatov**	**14.74**	**18**	*e*Pn	**P**	**20 46 49.0**		**-0.9**
KKN	**Kakani**	**14.81**	**124**	*e*P	**Pn**	**20 46 44.3**		**-4.1**
DMN	**Daman**	**14.81**	**125**	*e*P	**Pn**	**20 46 44.7**		**-3.8**
11nm,0.4s								
AB31	**Akbulak array**	**14.90**	**330**	⇓P	**Pn**	**20 46 48.8**		**-0.4**
1.9nm,0.4s,baz=136,slow=12,SNR=70								
AB31				⇑S	**Sn**	**20 49 28.6**		**-5.3**
4.2nm,0.6s,baz=151,slow=23,SNR=9.6								
ABKAR	**Akbulak array**	**14.90**	**330**	*e*Pn	**Pn**	**20 46 49.0**		**-0.2**
4.0nm,0.9s								
PKIN	**Phulchoki**	**15.03**	**124**	*e*P	**Pn**	**20 46 46.5**		**-4.7**
PKI	**Pulchoki**	**15.04**	**124**	*e*P	**Pn**	**20 46 46.7**		**-4.7**
11nm,0.4s								
GUN	**Gumba**	**15.13**	**122**	*e*P	**Pn**	**20 46 49.4**		**-3.2**
13nm,0.3s								
JIRN	**Jiri**	**15.51**	**122**	*e*P	**Pn**	**20 46 52.3**		**-5.0**
22nm,0.3s								
BVAR	**Borovoye Array**	**16.14**	**358**	P	**Pn**	**20 47 04.1**		**-0.3**
0.7nm,0.3s,baz=165,slow=11,SNR=7.2								
BRVK	**Borovoye**	**16.17**	**358**	*e*Pn	**Pn**	**20 47 03.7**		**-1.2**
7.1nm,1.1s								
RAMN	**Ramite**	**16.24**	**123**	*e*P	**Pn**	**20 47 02.1**		**-4.2**
AKTO	**Aktyubinsk**	**16.61**	**329**	P	**Pn**	**20 47 11.6**		**+1.3**
2.5nm,0.3s,baz=147,slow=8.9,SNR=26								
AKTO				S	**Sn**	**20 50 07.3**		**-7.5**
0.3nm,0.3s,baz=113,slow=23,SNR=5.7								
AKTO	**Aktyubinsk**	**16.61**	**329**	⇓P	**Pn**	**20 47 10.8**		**+0.5**
23nm,1.1s								
AKTO				⇓S	**Sn**	**20 50 10.3**		**-4.6**
3.9nm,0.6s								
ZAA0	**Zalesovo Array**	**19.40**	**24**	*e*P	**P**	**20 47 41.1**		**-0.1**
6.0nm,0.8s								
ZALV	**Zalesovo Beam**	**19.40**	**24**	P	**P**	**20 47 41.6**		**+0.4**
1.8nm,0.3s,baz=209,slow=9.9,SNR=24								
ZALV				S	**S**	**20 51 12.1**		**-1.8**
baz=214,slow=20,SNR=2.4								
GNI	**Garni**	**21.10**	**287**	P	**P**	**20 48 04.6**		**+4.9**
15nm,1.1s,baz=80,slow=19,SNR=4.1								
ARU	**Arti**	**21.36**	**340**	P	**P**	**20 48 04.0**		**+1.8**
1.0nm,0.4s,baz=169,slow=14,SNR=4.3								
ARU	**Arti**	**21.36**	**340**	*e*P	**P**	**20 48 03.7**		**+1.5**
4.3nm,0.6s								
MDRS	**Chennai**	**25.02**	**159**	*ex*	**P**	**20 48 39.7**		**+2.1**
MDRS				*ex*	x	20 52 25.7		
MDRS				*ex*	x	20 56 17.7		
MDRS				*ex*	x	20 59 05.7		
KIRV	**Kirov**	**26.03**	**333**	P	**P**	**20 48 48.2**		**+2.0**
9.1nm,0.5s,baz=110,slow=4.3,SNR=5.3								
BR131	**Keskin Array S**	**29.64**	**287**	*e*P	**P**	**20 49 18.5**		**-0.4**
3.0nm,0.6s								
BRTR	**Keskin Array B**	**29.64**	**287**	P	**P**	**20 49 18.1**		**-0.8**
1.7nm,0.6s,baz=68,slow=14,SNR=22								
AKASG	**Malin Array Be**	**32.96**	**308**	P	**P**	**20 49 49.5**		**+1.9**
2.2nm,0.5s,baz=80,slow=6.7,SNR=10								
AKBB	**Malin Array Si**	**32.96**	**308**	*e*P	**P**	**20 49 48.5**		**+0.8**
3.3nm,0.5s								
MLR	**Muntele Rosu**	**34.88**	**299**	*e*P	**P**	**20 50 06.8**		**+2.3**
3.9nm,0.8s								
BUR08	**Bucovina Ar. S**	**35.37**	**302**	*e*P	**P**	**20 50 10.8**		**+2.2**
1.4nm,0.8s								
FIA1	**FINESS Array S**	**37.34**	**326**	*e*P	**P**	**20 50 26.3**		**+1.2**
4.1nm,0.9s								
FINES	**FINESS Array B**	**37.34**	**326**	P	**P**	**20 50 27.3**		**+2.2**
2.2nm,0.4s,baz=119,slow=11,SNR=29								
AGG	**Agios Georgios**	**38.39**	**289**	*e*P	**P**	**20 50 35.6**		**+1.3**
4.9nm,1.2s								
ARCES	**ARCESS Array B**	**40.90**	**337**	P	**P**	**20 50 56.7**		**+2.1**
5.7nm,0.3s,baz=117,slow=8.5,SNR=9.1								
GEC2	**GERESS Array S**	**42.98**	**305**	*e*P	**P**	**20 51 12.3**		**+0.4**
1.1nm,0.8s								
GERES	**GERESS Array B**	**42.98**	**305**	P	**P**	**20 51 13.4**		**+1.5**
0.3nm,0.5s,baz=75,slow=7.4,SNR=3.6								
CLL	**Collm**	**43.20**	**309**	*e*P	**P**	**20 51 16.0**		**+2.5**
NC303	**NORSAR Array S**	**44.20**	**323**	*e*P	**P**	**20 51 23.1**		**+1.8**
7.0nm,0.8s								
NB2	**NORSAR Subarra**	**44.26**	**323**	P	**P**	**20 51 23.4**		**+1.5**
comp=Z,1.2nm,0.5s,baz=93,slow=7.9								
NB200	**NORSAR Array S**	**44.26**	**323**	*e*P	**P**	**20 51 23.4**		**+1.5**
NOA	**NORSAR Array B**	**44.26**	**323**	P	**P**	**20 51 23.4**		**+1.5**
comp=Z,1.4nm,0.5s,baz=96,slow=7.7,SNR=13								
TIXI	**Tiksi**	**45.27**	**22**	*e*P	**P**	**20 51 30.2**		**+0.6**
comp=Z,2.4nm,0.8s								
SENIN	**Lac Senin/Sane**	**47.66**	**303**	*e*P	**P**	**20 51 50.4**		**+1.5**
comp=Z,3.0nm,0.8s								
KEST	**Kesra**	**49.23**	**288**	P	**P**	**20 52 03.8**		**+2.8**
comp=Z,2.1nm,0.7s,baz=32,slow=1.4,SNR=6.1								
KEST	**Kesra**	**49.23**	**288**	*e*P	**P**	**20 52 02.3**		**+1.3**
comp=Z,3.3nm,0.9s								
JHJ	**Hachijo jima 2**	**55.02**	**72**	LR	LR	21 19 45.6		
comp=Z,170nm,18.8s,baz=6.5,slow=40								
ESDC	**Sonseca Array**	**57.57**	**298**	P	**P**	**20 53 03.7**		**+1.8**
comp=Z,1.3nm,0.5s,baz=55,slow=7.6,SNR=15								
ESLA	**Sonseca Array**	**57.57**	**298**	*e*P	**P**	**20 53 03.1**		**+1.3**
comp=Z,3.3nm,1.1s								
TOA1	**Torodi Ar. Sit**	**66.07**	**269**	*e*P	**P**	**20 53 58.8**		**-0.2**
TOA0	**Torodi Ar. Sit**	**66.07**	**269**	*e*P	**P**	**20 53 58.5**		**-0.5**
comp=Z,3.3nm,0.9s								
TORD	**Torodi Ar. Bea**	**66.07**	**269**	P	**P**	**20 53 58.7**		**-0.2**
comp=Z,1.2nm,0.6s,baz=48,slow=4.8,SNR=7.9								
TOLK	**Toolik Lake Re**	**70.44**	**15**	*e*P	**P**	**20 54 26.2**		**+0.7**
comp=Z,1.2nm,0.7s								
INK	**Inuvik**	**73.45**	**9**	P	**P**	**20 54 44.0**		**+0.6**
comp=Z,0.7nm,0.3s,baz=146,slow=23,SNR=5.6								
BPAW	**Bear Paw Mtn.**	**73.90**	**18**	*e*P	**P**	**20 54 46.4**		**+0.3**
comp=Z,3.3nm,1.1s								
CAST	**Castle Rocks**	**74.19**	**19**	*e*P	**P**	**20 54 48.1**		**+0.3**
comp=Z,2.9nm,0.9s								
WRH	**Wood River Hil**	**74.28**	**17**	*e*P	**P**	**20 54 48.4**		**+0.1**
comp=Z,1.4nm,0.9s								
ILAR	**Eielson Array**	**74.30**	**16**	P	**P**	**20 54 48.7**		**+0.4**
comp=Z,0.7nm,0.9s,baz=322,slow=5.7,SNR=5.7								
ILB	**Eielson Array**	**74.30**	**16**	*e*P	**P**	**20 54 47.7**		**-0.6**
comp=Z,0.9nm,0.9s								
DBIC	**Dimbokro**	**75.06**	**267**	P	**P**	**20 54 53.4**		**-0.2**
comp=Z,2.0nm,0.5s,baz=190,slow=14,SNR=3.7								
DBIC	**Dimbokro**	**75.06**	**267**	*e*P	**P**	**20 54 53.4**		**-0.2**
comp=Z,6.0nm,1.1s								
LBTB	**Lobatse**	**75.21**	**222**	*e*P	**P**	**20 54 54.3**		**+0.1**
DHY	**Denali Highway**	**75.64**	**17**	*e*P	**P**	**20 54 56.0**		**-0.3**
comp=Z,2.9nm,1.2s								
BOSA	**Boshof**	**78.28**	**220**	LR	LR	21 30 40.9		
comp=Z,99nm,21.5s,baz=62,slow=36								
YKA	**Yellowknife Ar**	**80.82**	**3**	P	**P**	**20 55 25.6**		**+1.0**
comp=Z,0.7nm,0.5s,baz=346,slow=5.3,SNR=6.4								
YKB5	**Yellowknife Ar**	**80.82**	**3**	*e*P	**P**	**20 55 25.6**		**+1.0**
WRA	**Warramunga Arr**	**81.92**	**122**	P	**P**	**20 55 29.8**		**-1.2**
comp=Z,1.0nm,0.6s,baz=59,slow=12,SNR=14								
WR1	**Warramunga Arr**	**81.92**	**122**	*e*P	**P**	**20 55 29.8**		**-1.2**
WB2	**Warramunga Arr**	**81.92**	**122**	*e*P	**P**	**20 55 29.6**		**-1.5**
comp=Z,3.2nm,1.0s								
WC3	**Warramunga Arr**	**81.95**	**122**	*e*P	**P**	**20 55 29.4**		**-1.8**
comp=Z,3.0nm,1.0s								
AS31	**Alice Springs**	**84.21**	**125**	*e*P	**P

JKE	**Kume jima 2**	**2.81 264**	P	Pn	21 08 06.3	+0.3
JKE			*e*S	Sn	21 08 39.5	+0.8

*ISCJB **08** 21:20:06.8±1.2, 39°.12N±0°.05×142°.1E±0°.1, h50km±9km, mb3.5/2, Error ellipse: s-maj=19.3km s-min=6.4km az=19.5*
*JMA **08** 21:20:07.6±0.1, 39°.11N×142°.12E, h45km±1km, M3.3*
JMA Felt I J1.
*IDC **08** 21:20:10.8±1.9, 39°.67N×140°.73E, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.2/56, mbtmp3.3/4, ML2.5/2, Error ellipse: s-maj=51.8km s-min=25.4km az=126.0*
ISC 08 21:20:07.7±1.6, 39°.11N±0°.06×142°.1E±0°.1, h43km±12km, n21, σ0°71/21, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.34**	**265**	P	**Pn**	**21 20 16.9**	**+0.3**
OFUJ				S	**Sn**	**21 20 23.3**	**+0.4**
MIYJ	**Miyakonagasawa**	**0.52**	**335**	P	**Pn**	**21 20 18.7**	**-0.1**
MIYJ				S	**Sn**	**21 20 26.3**	**-0.4**
JKMT	**Kesennumamotoy**	**0.57**	**239**	P	**Pn**	**21 20 19.4**	**-0.1**
JKMT				S	**Sn**	**21 20 27.6**	**-0.3**
JMK	**Ichinoseki**	**0.70**	**257**	P	**Pn**	**21 20 21.1**	**-0.1**
JMK				*e*S	**Sn**	**21 20 31.0**	**0.0**
JOM	**Ohasama**	**0.72**	**300**	P	**Pn**	**21 20 21.7**	**+0.1**
JOM				*e*S	**Sn**	**21 20 31.9**	**+0.3**
JTH	**Tanohata**	**0.85**	**348**	P	**Pn**	**21 20 23.1**	**-0.1**
JIO	**Ouri**	**0.88**	**222**	P	**Pn**	**21 20 23.3**	**-0.3**
JIO				S	**Sn**	**21 20 34.2**	**-1.0**
JRG	**Rokugo**	**1.18**	**285**	P	**Pn**	**21 20 28.0**	**+0.3**
JANG	**Nango**	**1.34**	**340**	P	**Pn**	**21 20 30.0**	**0.0**
JOU	**Okura**	**1.35**	**237**	P	**Pn**	**21 20 30.1**	**+0.1**
JYK	**Kaneyama**	**1.37**	**263**	P	**Pn**	**21 20 30.6**	**+0.3**
MJAR	**Matsushiro Arr**	**4.01**	**231**	Pn	**Pn**	**21 21 08.7**	**+2.1**
	0.1nm,0.3s,baz=35,slow=12,SNR=24						
ASAJ	**Asahikawa**	**5.02**	**4**	Pn	**Pn**	**21 21 21.6**	**+1.2**
	0.3nm,0.3s,baz=204,slow=15,SNR=4.4						
ASAJ				Sn	**Sn**	**21 22 16.8**	**-0.3**
	0.2nm,0.3s,baz=212,slow=15,SNR=2.5						
H11N2	**WAKE ISLAND Hy 28.82**	**125**		T	T	21 56 23.5	
	baz=318,slow=75,SNR=112						
H11N1	**WAKE ISLAND Hy 28.83**	**125**		T	T	21 56 25.9	
	baz=318,slow=75,SNR=131						
H11N3	**WAKE ISLAND Hy 28.84**	**125**		T	T	21 56 24.9	
	baz=318,slow=75,SNR=124						
H11S1	**WAKE ISLAND Hy 29.60**	**127**		T	T	21 57 22.3	
	baz=319,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy 29.60**	**127**		T	T	21 57 20.6	
	baz=319,slow=76,SNR=35						
H11S2	**WAKE ISLAND Hy 29.62**	**127**		T	T	21 57 21.0	
	baz=319,slow=76,SNR=22						
MKAR	**Makanchi Array**	**43.51**	**300**	P	**P**	**21 28 06.1**	**-0.7**
	0.7nm,0.7s,baz=84,slow=9.4,SNR=4.1						
YKA	**Yellowknife Ar**	**61.75**	**31**	P	P	21 30 31.4	+10
	0.3nm,0.6s,baz=302,slow=6.5,SNR=3.1						

*JMA **08** 21:29:24.9±0.6, 20°.94N×122°.23E, h0km*
*ISCJB **08** 21:29:26.0±0.7, 20°.72N±0°.07×122°.3E±0°.1, h33km, mb3.5/8, Error ellipse: s-maj=16.2km s-min=6.0km az=30.7*
*IDC **08** 21:29:34.6±8.2, 20°.66N×122°.13E, h99km±82km, mb3.3/8, mb1 3.3/9, mb1mx3.1/61, mbtmp3.6/9, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/26, Error ellipse: s-maj=38.0km s-min=15.6km az=65.0*
ISC 08 21:29:28.2±1.1, 20°.7N±0°.1×122°.3E±0°.1, h35km, n22, σ1°15/18, mb3.6/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**3.81**	**10**	P	**Pn**	**21 30 25.5**	**+1.1**
IRIF	**Iriomote-Funau**	**3.87**	**20**	P	**Pn**	**21 30 24.9**	**-0.3**
IRIF				*e*S	**Sn**	**21 31 08.7**	**-0.7**
JKRS	**Kuro-shima**	**3.88**	**24**	S	**Sn**	**21 31 09.7**	**+0.1**
JIJ	**Ishigaki jima**	**4.04**	**25**	P	**Pn**	**21 30 27.4**	**-0.2**
JIJ				*e*S	**Sn**	**21 31 12.9**	**-0.8**
JISG	**Ishigakijimahi**	**4.31**	**26**	P	**Pn**	**21 30 31.5**	**+0.3**
JISG				*e*S	**Sn**	**21 31 18.7**	**-1.6**
JTJ	**Tarama**	**4.53**	**29**	*e*S	**Sn**	**21 31 25.3**	**-0.3**
KSRS	**Korea Array**	**17.41**	**15**	P	**P**	**21 33 32.2**	**+2.9**
	0.1nm,0.3s,baz=196,slow=11,SNR=4.8						
JHJ	**Hachijo jima 2**	**19.89**	**48**	LR	LR	21 41 26.4	
	comp=Z,36nm,18.6s,baz=340,slow=36						
CMAR	**Chiang Mai Arr**	**22.08**	**268**	P	**P**	**21 34 20.6**	**+0.1**
	1.2nm,1.0s,baz=62,slow=7.3,SNR=7.7						
MKAR	**Makanchi Array**	**41.56**	**318**	P	**P**	**21 37 12.6**	**+0.1**
	0.9nm,0.8s,baz=105,slow=6.9,SNR=4.9						
H11N1	**WAKE ISLAND Hy 41.79**	**83**		T	T	22 22 08.2	
	baz=278,slow=75,SNR=38						
H11N2	**WAKE ISLAND Hy 41.80**	**83**		T	T	22 22 15.4	
	baz=278,slow=75,SNR=74						
H11N3	**WAKE ISLAND Hy 41.81**	**83**		T	T	22 22 17.2	
	baz=278,slow=75,SNR=60						
H11S3	**WAKE ISLAND Hy 41.81**	**85**		T	T	22 22 13.7	
	baz=281,slow=74,SNR=203						
H11S1	**WAKE ISLAND Hy 41.82**	**85**		T	T	22 22 14.5	
	baz=281,slow=74,SNR=184						
H11S2	**WAKE ISLAND Hy 41.83**	**85**		T	T	22 22 11.9	
	baz=281,slow=74,SNR=180						
WRA	**Warramunga Arr**	**42.08**	**163**	P	**P**	**21 37 16.2**	**-0.7**
	1.1nm,1.0s,baz=346,slow=12,SNR=4.2						
ZALV	**Zalesovo Beam**	**43.72**	**329**	P	**P**	**21 37 28.2**	**-1.6**
	0.2nm,0.3s,baz=104,slow=6.1,SNR=2.8						
KURBB	**Kurchatov Arra**	**45.44**	**322**	P	**P**	**21 37 43.0**	**-0.6**
	1.4nm,0.8s,baz=118,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**45.53**	**165**	P	**P**	**21 37 45.2**	**+0.6**
	0.4nm,0.8s,baz=347,slow=12,SNR=3.3						
BVAR	**Borovoye Array**	**51.02**	**322**	P	**P**	**21 38 26.8**	**+0.2**
	0.9nm,0.7s,baz=110,slow=8.5,SNR=6.6						
ARU	**Arti**	**58.50**	**324**	P	**P**	**21 39 19.3**	**-1.4**
	0.4nm,0.4s,baz=32,slow=20,SNR=3.5						

*SJA **08** 21:40:31.4±1.1, 30°.91S×72°.10W, h36km±8km, ML3.2, MW3.5*
*GUC **08** 21:40:34.9±0.7, 30°.95S×71°.43W, h58km±8km, ML2.9*
ISC 08 21:40:30.8±1.7, 31°.02S±0°.03×71°.64W±0°.06, h1km±13km, n23, σ1°12/43, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**1.11**	**41**	*e*P	**Pn**	**21 40 54.1**	**+0.4**
GO04				*e*S	**Sb**	**21 41 08.4**	**+0.5**
GO04	**Tololo Observa**	**1.11**	**41**	⇓*e*P	**Pn**	**21 40 53.9**	**+0.2**
GO04				*i* S	**Sb**	**21 41 08.3**	**+0.3**
GO04				IAML		21 41 10.8	
	comp=E,2μm,0.2s						
LSCH	**La Serena**	**1.15**	**17**	*e*P	**Pn**	**21 40 54.8**	**+0.7**
LSCH				*i* S	**Sg**	**21 41 09.3**	**+1.4**
LSCH				IAML		21 41 15.4	
	comp=E,153nm,0.3s						
ROCH	**El Roble**	**2.02**	**165**	*e*P	**Pb**	**21 41 08.8**	**+0.3**
ROCH				*e*S	**Sg**	**21 41 35.5**	**-0.4**
ROCH				IAML		21 41 40.2	
	comp=N,175nm,0.3s						
ROC1	**El Roble**	**2.02**	**165**	*e*P	**Pb**	**21 41 08.8**	**+0.2**
ROC1				*e*S	**Sg**	**21 41 36.0**	**0.0**
RTLS	**Leoncito**	**2.15**	**112**	*e*P	**Pg**	**21 41 12.8**	**+0.8**
RTLS				*e*S	**Sg**	**21 41 41.3**	**+1.5**
RTLS				IAML		21 41 45.0	
	comp=Z,123nm,0.4s						
LCO	**Las Campanas**	**2.16**	**22**	*e*P	**Pn**	**21 41 09.3**	**+1.1**
LCO				*i* S	**Sn**	**21 41 36.3**	**+0.6**
LCO	**Las Campanas**	**2.16**	**22**	⇑*e*P	**Pn**	**21 41 09.0**	**+0.9**
LCO				*e*S	**Sn**	**21 41 35.1**	**-0.6**
LCO				IAML		21 41 39.7	
	comp=E,107nm,0.4s						
AUSP	**Uspallata**	**2.27**	**123**	*e*P	**Pg**	**21 41 14.6**	**+0.3**
AUSP				*e*S	**Sg**	**21 41 44.8**	**+1.2**
PEL	**Peldehue**	**2.27**	**159**	*e*P	**Pb**	**21 41 12.1**	**-0.6**
PEL				*e*S	**Sg**	**21 41 43.2**	**-0.6**
FCH	**Farellones**	**2.57**	**154**	*e*P	**Pb**	**21 41 16.9**	**-1.1**
FCH				IAML		21 41 59.5	
	comp=E,42nm,0.2s						
ZON	**Zonda**	**2.59**	**103**	*e*P	**Pg**	**21 41 19.5**	**-1.0**
ZON				*e*S	**Sg**	**21 41 53.0**	**-0.9**
ZON				IAML		21 42 05.2	
	comp=Z,51nm,0.6s						
AMOG	**MOGNA**	**2.70**	**89**	*e*P	**Pb**	**21 41 20.9**	**+0.9**
AMOG				*e*S	**Sg**	**21 41 59.3**	**+1.7**
RTLL	**Cerro Villicun**	**2.73**	**97**	*e*P	**Pb**	**21 41 20.6**	**+0.2**
RTLL				*e*S	**Sb**	**21 41 54.1**	**-0.4**
RTLL				IAML		21 42 13.7	
	comp=Z,46nm,0.6s						
RTCV	**Cerro Valdivia**	**2.78**	**108**	*e*P	**Pg**	**21 41 23.4**	**-0.7**
RTCV				*e*S	**Sg**	**21 41 59.4**	**-0.7**
ASAL	**Salagasta**	**2.85**	**124**	*e*P	**Pb**	**21 41 23.2**	**+0.5**
ARCO	**CERRO ARCO**	**2.93**	**129**	*e*P	**Pb**	**21 41 25.1**	**+1.1**
ARCO				*e*S	**Sg**	**21 42 04.1**	**-1.0**
ARCO				IAML		21 42 12.6	
	comp=Z,35nm,0.5s						
CFA	**Coronel Fontan**	**2.97**	**102**	*e*P	**Pb**	**21 41 24.2**	**-0.3**
CFA				*e*S	**Sb**	**21 42 01.6**	**+0.2**
AGUA	**GUANDACOL**	**3.12**	**62**	*e*P	**Pb**	**21 41 26.7**	**-0.5**
AGUA				*e*S	**Sb**	**21 42 04.5**	**-1.2**
GO03	**Copiap**	**3.62**	**20**	*e*P	**Pn**	**21 41 28.6**	**+0.5**
GO03				*e*S	**Sb**	**21 42 19.1**	**-1.1**
VCA	**Vinchina**	**3.75**	**54**	*e*P	**Pb**	**21 41 35.3**	**-2.6**
VCA				*e*S	**Sb**	**21 42 22.3**	**-1.5**
VCA				IAML		21 42 35.2	
	comp=Z,58nm,0.5s						
ACAN	**Cantantal**	**4.00**	**109**	*e*P	**Pb**	**21 41 39.6**	**-2.5**
ACAN				*e*S	**Sb**	**21 42 29.1**	**-1.8**
CYA	**Choya**	**5.68**	**65**	*i* P	**Pn**	**21 41 59.0**	**+2.5**
CYA				IAML		21 43 13.2	
	comp=Z,7.8nm,0.8s						

*SOME **08** 22:27:28.7, 39°.63N×74°.28E, h15km*
*KRNET **08** 22:27:32.0±0.1, 39°.56N×74°.84E, mb3.6*
*ISCJB **08** 22:27:32.5±1.0, 39°.42N±0°.05×74°.88E±0°.06, h10km, Error ellipse: s-maj=8.7km s-min=5.1km az=145.7*
*NNC **08** 22:27:34.0±2.3, 39°.71N×74°.67E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=17.1km s-min=10.3km az=166.0*
ISC 08 22:27:34.3±1.6, 39°.51N±0°.07×74°.77E±0°.04, h10km, n47, σ1°72/74, 35C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**2.14**	**26**	⇑*e*P	**Pn**	**22 28 09.9**	**-0.5**
	baz=24						
NRN				⇑*i*S	**Sn**	**22 28 37.9**	**+0.7**
	baz=24						
ARSB	**Arslanbob**	**2.27**	**324**	⇑*e*P	**Pn**	**22 28 12.4**	**+0.3**
	baz=22						
ARSB				⇑*i*S	**Sb**	**22 28 42.8**	**-0.9**
	baz=22						
DRK	**Karamyk**	**2.30**	**270**	⇓*i*P	**Pb**	**22 28 14.2**	**-1.9**
	baz=69						
DRK				⇓*i*S	**Sb**	**22 28 45.5**	**+0.9**
	baz=69						
ARLS	**Aral**	**2.38**	**352**	⇑*i*P	**Pn**	**22 28 13.4**	**-0.1**
	baz=51						
ARLS				⇑*i*S	**Sb**	**22 28 44.9**	**-1.9**
	baz=51						
KZA	**Kyzart**	**2.59**	**8**	P	**Pn**	**22 28 16.1**	**-0.7**
	SNR=17						
KZA	**Kyzart**	**2.59**	**8**	⇑*i*P	**Pn**	**22 28 16.2**	**-0.5**
	baz=7.0						
KZA				⇑*i*S	**Sn**	**22 28 50.0**	**+1.5**
	baz=7.0						
UCH	**Uchtor**	**2.73**	**356**	P	**Pn**	**22 28 18.6**	**0.0**
	SNR=19						
UCH	**Uchtor**	**2.73**	**356**	⇑*e*P	**Pn**	**22 28 18.2**	**-0.4**
	baz=55						
UCH				⇑*i*S	**Sn**	**22 28 53.8**	**+2.0**
	baz=55						
AML	**Almayashu**	**2.75**	**343**	P	**Pn**	**22 28 18.7**	**-0.1**
	SNR=11						
AML	**Almayashu**	**2.75**	**343**	⇓*i*P	**Pn**	**22 28 19.0**	**+0.2**
	baz=42						
AML				⇓*i*S	**Sn**	**22 28 54.4**	**+2.1**
	baz=42						
ULHL	**Ulahol**	**2.96**	**22**	P	**Pb**	**22 28 27.1**	**-0.2**
	SNR=9.4						
ULHL	**Ulahol**	**2.96**	**22**	⇑*i*P	**Pn**	**22 28 20.8**	**-0.7**
	baz=21						
ULHL				⇑*i*S	**Sn**	**22 28 57.3**	**+0.1**
	baz=21						
BTK	**Batken**	**3.09**	**282**	⇑*i*P	**Pn**	**22 28 25.0**	**+1.7**
	baz=80						
BTK				⇑*i*S	**Sn**	**22 29 03.3**	**+2.9**
	baz=80						
BOOM	**Boomskoye usch**	**3.11**	**16**	⇑*i*P	**Pn**	**22 28 23.7**	**+0.1**
	baz=16						
BOOM				⇑*i*S	**Sn**	**22 29 01.3**	**+0.4**
	baz=16						
ARK	**Arkit**	**3.13**	**318**	⇑*i*P	**Pn**	**22 28 23.9**	**+0.1**
	baz=16						
ARK				⇑*i*S	**Sn**	**22 29 03.2**	**+1.9**
	baz=16						
AAK	**Ala-Archa**	**3.13**	**356**	P	**Pn**	**22 28 24.1**	**+0.1**
	SNR=15						
AAK	**Ala-Archa**	**3.13**	**356**	⇓Pn	**Pn**	**22 28 23.8**	**-0.1**
	28nm,0.6s						
AAK				⇑Lg	Lg	22 29 07.5	
	20nm,0.5s						
AAK	**Ala-Archa**	**3.13**	**356**	⇑*e*P	**Pn**	**22 28 24.0**	**+0.1**
	baz=55						
AAK				⇑*i*S	**Sn**	**22 29 03.3**	**+1.8**
	baz=55						
KBK	**Karagaybulak**	**3.15**	**2**	P	**Pn**	**22 28 24.1**	**-0.1**
	SNR=14						
KBK	**Karagaybulak**	**3.15**	**2**	⇑*i*P	**Pn**	**22 28 24.3**	**+0.1**
	baz=1.0						
KBK				⇑*i*S	**Sn**	**22 29 03.3**	**+1.4**
	baz=1.0						
EKS2	**Erkin-Say**	**3.24**	**347**	P	**Pn**	**22 28 25.8**	**+0.4**
	SNR=12						
MRKS	**Merke**	**3.44**	**341**	Pg	**Pn**	**22 28 28.4**	**+0.3**
	27nm,0.3s						
MRKS				Lg	Lg	22 29 11.4	
	15nm,0.9s						
MRKS	**Merke**	**3.44**	**341**	⇑*i*P	**Pn**	**22 28 28.4**	**+0.3**
	27nm,0.3s						
MRKS				⇑*i*S	**Sn**	**22 29 11.4**	**+2.5**
	15nm,0.9s						
TKM2	**Tokmak 2**	**3.47**	**10**	P	**Pn**	**22 28 28.4**	**-0.2**
	SNR=21						
TKM2	**Tokmak 2**	**3.47**	**10**	⇓Pn	**Pn**	**22 28 28.0**	**-0.5**
	11nm,0.3s						
TKM2				⇑Sn	**Sn**	**22 29 09.3**	**-0.5**
	19nm,0.8s						
TKM2				⇑Lg	Lg	22 29 19.6	
	25nm,0.7s						
CHMS	**Chumysh**	**3.49**	**360**	P	**Pn**	**22 28 29.0**	**+0.3**
	SNR=7.8						
KST	**Kastek**	**3.65**	**14**	⇑*i*P	**Pn**	**22 28 31.1**	**+0.2**
	16nm,0.5s						
KST				⇑*i*S	**Sn**	**22 29 16.3**	**+2.2**
	22nm,0.8s						
USP	**Ospenovka**	**3.76**	**357**	P	**Pn**	**22 28 33.3**	**+0.8**
	SNR=6.5						
TNSS	**Tian-Shan**	**3.89**	**24**	Pg	**Pb**	**22 28 42.1**	**-1.1**
	10nm,0.4s						
TNSS				Lg	Lg	22 29 34.8	
	14nm,0.9s						
TNSS	**Tian-Shan**	**3.89**	**24**	⇑*i*P	**Pb**	**22 28 42.1**	**-1.1**
	10nm,0.4s						
TNSS				*e*S	**Sg**	**22 29 34.8**	**-4.5**
	14nm,0.9s						
KNDC	**Almaty**	**4.06**	**23**	⇑Pg	**Pb**	**22 28 44.1**	**-1.8**
	18nm,0.6s						
KNDC				⇑Lg	Lg	22 29 38.7	
	62nm,0.8s						
KOTS	**Kotyrbulak**	**4.12**	**25**	Pg	**Pb**	**22 28 45.2**	**-1.8**
	4.0nm,0.6s						
KOTS				Lg	Lg	22 29 40.0	
	21nm,0.6s						
KOTS	**Kotyrbulak**	**4.12**	**25**	*e*P	**Pb**	**22 28 45.2**	**-1.8**
	4.0nm,0.6s						
KOTS				*e*S	**Sb**	**22 29 40.0**	**+3.1**
	21nm,0.6s						
KTBS	**Karatobe**	**4.44**	**18**	Pg	**Pb**	**22 28 51.1**	**-1.3**
	2.8nm,0.5s						
KTBS				Lg	Lg	22 29 50.1	
	28nm,0.5s						
KTBS	**Karatobe**	**4.44**	**18**	*e*P	**Pb**	**22 28 51.1**	**-1.3**
	2.8nm,0.5s						
KTBS				*e*S	**Sb**	**22 29 50.1**	**+4.1**
	28nm,0.5s						
IUG	**Iuzhnay**	**4.46**	**308**	Pg	**Pn**	**22 28 42.2**	**+0.2**
	6.2nm,0.4s						
IUG				Lg	Lg	22 29 34.5	
	49nm,0.7s						
IUG	**Iuzhnay**	**4.46**	**308**	*e*P	**Pn**	**22 28 42.2**	**+0.2**
	6.2nm,0.4s						
IUG				*e*S	**Sn**	**22 29 34.5**	**+0.5**
	49nm,0.7s						
SATY	**Saty**	**4.48**	**36**	Pg	**Pb**	**22 28 53.5**	**+0.3**
	9.8nm,0.5s						
SATY				Lg	Lg	22 29 55.3	
	24nm,0.8s						
SATY	**Saty**	**4.48**	**36**	*e*P	**Pb**	**22 28 53.5**	**+0.3**
	9.8nm,0.5s						
SATY				*e*S	**Sg**	**22 29 55.3**	**-3.0**
	24nm,0.8s						
KUU	**Kurty**	**4.54**	**14**	Pg	**Pb**	**22 28 52.2**	**-1.8**
	4.3nm,0.3s						
KUU				Lg	Lg	22 29 52.7	
	16nm,0.6s						
KUU	**Kurty**	**4.54**	**14**	*e*P	**Pb**	**22 28 52.2**	**-1.8**
	4.3nm,0.3s						
KUU				⇑*i*S	**Sb**	**22 29 52.7**	**+3.9**
	16nm,0.6s						
CHKK	**Chushkaly**	**4.65**	**20**	Pg	**Pb**	**22 28 54.8**	**-1.2**
	6.1nm,0.7s						
CHKK				Lg	Lg	22 29 56.2	
	14nm,0.7s						
CHKK	**Chushkaly**	**4.65**	**20**	*e*P	**Pb**	**22 28 54.8**	**-1.2**
	6.1nm,0.7s						
CHKK				*e*S	**Sb**	**22 29 56.2**	**+4.1**
	14nm,0.7s						
KK31	**Karatay Array**	**4.82**	**320**	⇓Pn	**Pn**	**22 28 45.4**	**-1.5**
	0.6nm,0.3s,baz=133,slow=14,SNR=9.6						
KK31				⇓Pg	**Pb**	**22 28 58.5**	**-0.3**
	2.0nm,0.5s,baz=134,slow=14,SNR=7.1						
KK31				⇑Sn	**Sn**	**22 29 40.4**	**-2.3**
	2.2nm,0.3s,baz=154,slow=20,SNR=4.0						
KK31				⇓Lg	Lg	22 30 00.8	
	8.3nm,0.6s,baz=137,slow=27,SNR=4.2						
KPKS	**Kokpek**	**4.93**	**35**	*e*P	**Pb**	**22 28 58.0**	**-2.8**
	6.1nm,0.4s						
KPKS				*e*S	**Sb**	**22 30 01.9**	**+1.8**
	14nm,0.6s						
PDGK	**Podgornoye**	**5.21**	**41**	⇓Pg	**Pb**	**22 29 05.7**	**0.0**
	5.6nm,0.9s						
PDGK				⇑Lg	Lg	22 30 16.1	
	12nm,0.8s						
BTLS	**Baital**	**5.56**	**355**	*e*P	**Pb**	**22 29 10.3**	**-1.1**
	1.6nm,0.4s						
BTLS				*e*S	**Sb**	**22 30 22.7**	**+4.6**
	6.6nm,0.8s						

*SOME **08** 22:33:37.2, 39°.57N×74°.28E, h10km*
*KRNET **08** 22:33:40.1±0.1, 39°.54N×74°.92E, mb3.0*
*NNC **08** 22:33:44.1±4.4, 39°.77N×74°.70E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=31.9km s-min=20.2km az=161.0*
ISC 08 22:33:41.2±1.9, 39°.42N±0°.09×74°.85E±0°.06, h10km, n34, σ1°58/55, 18C-13D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**2.20**	**23**	⇑*i*P	**Pn**	**22 34 18.3**	**+0.2**
	baz=23						
NRN				⇑*i*S	**Sb**	**22 34 45.8**	**-2.9**
	baz=23						
DRK	**Karamyk**	**2.37**	**273**	⇑*i*P	**Pb**	**22 34 23.3**	**-0.8**
	baz=70						
DRK				⇑*i*S	**Sb**	**22 34 54.8**	**+1.3**
	baz=70						
ARSB	**Arslanbob**	**2.38**	**324**	⇑*i*P	**Pn**	**22 34 21.6**	**+1.1**
	baz=21						
ARSB				⇑*i*S	**Sb**	**22 34 52.3**	**-1.5**
	baz=21						
ARLS	**Aral**	**2.48**	**351**	⇑*i*P	**Pn**	**22 34 22.3**	**+0.5**
	baz=49						
ARLS				⇑*i*S	**Sn**	**22 34 53.2**	**+1.0**
	baz=49						
UCH	**Uchtor**	**2.82**	**355**	P	**Pn**	**22 34 27.0**	**+0.3**
	SNR=7.2						
UCH	**Uchtor**	**2.82**	**355**	⇑*e*P	**Pn**	**22 34 27.1**	**+0.3**
	baz=54						
UCH				⇑*i*S	**Sn**	**22 35 01.7**	**+0.6**
	baz=54						
AML	**Almayashu**	**2.85**	**342**	P	**Pb**	**22 34 30.4**	**-2.0**
	SNR=6.9						
AML	**Almayashu**	**2.85**	**342**	⇑*e*P	**Pn**	**22 34 28.0**	**+0.8**
	baz=41						
AML				⇑*i*S	**Sn**	**22 35 02.8**	**+1.0**
	baz=41						
BTK	**Batken**	**3.18**	**283**	⇓*i*P	**Pn**	**22 34 33.8**	**+2.5**
	baz=81						
BTK				⇓*i*S	**Sb**	**22 35 13.4**	**-3.2**
	baz=81						
BOOM	**Boomskoye usch**	**3.18**	**15**	⇑*i*P	**Pn**	**22 34 32.0**	**+0.5**
	baz=14						
BOOM				⇑*i*S	**Sn**	**22 35 09.8**	**+0.3**
	baz=14						
AAK	**Ala-Archa**	**3.23**	**355**	P	**Pn**	**22 34 33.8**	**+1.6**
	SNR=9.2						
AAK	**Ala-Archa**	**3.23**	**355**	⇑Pn	**Pn**	**22 34 32.4**	**+0.2**
	6.7nm,0.6s						
AAK				⇑Lg	Lg	22 35 16.0	
	7.7nm,0.7s						
AAK	**Ala-Archa**	**3.23**	**355**	⇓*i*P	**Pn**	**22 34 32.7**	**+0.6**
	baz=54						
AAK				⇓*i*S	**Sn**	**22 35 11.4**	**+0.6**
	baz=54						
KBK	**Karagaybulak**	**3.24**	**1**	P	**Pn**	**22 34 33.2**	**+0.9**
	SNR=6.0						
KBK	**Karagaybulak**	**3.24**	**1**	⇓*i*P	**Pn**	**22 34 32.9**	**+0.6**
	baz=0.0						
KBK				⇓*i*S	**Sn**	**22 35 11.7**	**+0.7**
	baz=0.0						
ARK	**Arkit**	**3.24**	**318**	⇓*i*P	**Pn**	**22 34 33.2**	**+0.9**
	baz=16						
ARK				⇓*i*S	**Sn**	**22 35 12.6**	**+1.6**
	baz=16						
MRKS	**Merke**	**3.55**	**340**	Pg	**Pn**	**22 34 36.8**	**+0.3**
	7.3nm,0.6s						
MRKS				Lg	Lg	22 35 20.5	
	4.3nm,0.9s						
MRKS	**Merke**	**3.55**	**340**	*e*P	**Pn**	**22 34 37.4**	**+1.0**
	7.3nm,0.5s						
MRKS				*e*S	**Sn**	**22 35 20.5**	**+2.0**
	5.6nm,0.4s						
TKM2	**Tokmak 2**	**3.55**	**9**	P	**Pn**	**22 34 37.6**	**+1.1**
	SNR=6.6						
TKM2	**Tokmak 2**	**3.55**	**9**	⇑Pn	**Pn**	**22 34 37.2**	**+0.7**
	3.8nm,0.3s						
TKM2				⇓Sn	**Sn**	**22 35 19.3**	**+0.6**
	4.2nm,0.6s						
TKM2		

IUG eS Sn 22 35 42.9 -0.7
12nm,0.6s
KUU Kurty 4.61 13 Pg Pb 22 35 00.6 -1.6
2.7nm,0.3s
KUU Lg Lg 22 36 00.7
4.6nm,0.4s
KUU Kurty 4.61 13 eP Pb 22 35 00.6 -1.6
2.7nm,0.3s
KUU ⇓iS Sb 22 36 00.7 +2.9
4.6nm,0.4s
KK31 Karatay Array 4.93 320 ⇑Pg Pb 22 35 07.2 -0.4
0.4nm,0.3s,baz=131,slow=16
KK31 ⇓Sn Sn 22 35 49.9 -2.5
2.0nm,0.6s
KK31 ⇓Lg Lg 22 36 10.1
2.3nm,0.6s,baz=128,slow=26

*IDC **08** 22:39:19.1±2.1, 10°.59N×126°.78E, h90km±6km, mb3.6/6, mb1 3.6/6, mb1mx3.2/54, mbtmp3.9/6, Error ellipse: s-maj=168.1km s-min=18.3km az=68.0*
*MAN **08** 22:39:28.1, 9°.64N×125°.35E, h33km, mb3.8, ML2.5, MS2.0*
ISC 08 22:39:20.5±0.9, 10°.6N±0°.1×126°.3E±0°.1, h100km, n11, σ2s04/14, mb4.0/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.47**	**295**	eP	Pn	22 39 40.2	-6.2
PLP				eS	**Sn**	**22 40 02.5**	**-3.4**
MSLP	**Maasin**	**1.51**	**254**	eP	**Pn**	**22 39 44.8**	**-2.0**
MSLP				eS	**Sn**	**22 40 10.6**	**+3.7**
BUKP	**Musuan**	**2.93**	**205**	eP	Pn	22 39 56.8	-8.7
ASAR	**Alice Springs**	**34.80**	**168**	P	**P**	**22 46 00.1**	**-1.7**
	0.5nm,0.8s,baz=354,slow=6.7,SNR=3.9						
ASAR				pP	**pP**	**22 46 23.5**	**+0.3**
	0.4nm,0.5s,baz=351,slow=6.8,SNR=2.9						
STKA	**Stephens Creek**	**44.64**	**161**	pP	pP	22 47 45.4	+0.6
	1.3nm,0.4s,baz=327,slow=8.0,SNR=2.7						
MKAR	**Makanchi Array**	**51.85**	**323**	P	**P**	**22 48 20.3**	**+1.8**
	1.1nm,0.7s,baz=111,slow=6.6,SNR=5.3						
MKAR				pP	**pP**	**22 48 43.0**	**+1.7**
	1.3nm,0.7s,baz=111,slow=7.7,SNR=5.0						
ZALV	**Zalesovo Beam**	**54.41**	**331**	pP	pP	22 49 00.1	-0.7
	0.6nm,0.4s,baz=51,slow=4.4,SNR=2.8						
KURBB	**Kurchatov Arra**	**55.88**	**325**	P	**P**	**22 48 49.1**	**+1.3**
	2.7nm,0.2s,baz=121,slow=6.9,SNR=2.5						
KURBB				pP	**pP**	**22 49 10.6**	**-0.6**
	1.6nm,0.5s,baz=124,slow=6.9,SNR=2.6						
BVAR	**Borovoye Array**	**61.47**	**325**	P	**P**	**22 49 27.9**	**+1.4**
	0.5nm,0.7s,baz=131,slow=8.3,SNR=3.4						
BRTR	**Keskin Array B**	**85.41**	**309**	P	**P**	**22 51 47.9**	**+0.6**
	0.4nm,0.7s,baz=27,slow=3.0,SNR=3.5						
BRTR				pP	**pP**	**22 52 11.4**	**-1.7**
	0.6nm,0.7s,baz=94,slow=3.0,SNR=5.7						
FINES	**FINES Array B**	**85.68**	**332**	P	**P**	**22 51 48.4**	**+0.4**
	0.9nm,0.9s,baz=84,slow=5.9,SNR=6.6						
FINES				pP	**pP**	**22 52 11.6**	**-0.5**
	0.7nm,0.3s,baz=71,slow=4.0,SNR=3.5						

*ISCJB **08** 22:39:54.2±0.7, 51°.40N±0°.03×16°.10E±0°.04, h0km, Error ellipse: s-maj=4.9km s-min=3.0km az=22.9*
*PRU **08** 22:39:55.4±0.0, 51°.46N×16°.11E, h0km*
*VIE **08** 22:39:56.8±0.8, 51°.31N×16°.13E, h0km, mb1.9/4, ml2.6/4, Error ellipse: s-maj=7.0km s-min=5.4km az=94.0, Suspected Mining induced.*
ISC 08 22:39:54.8±1.3, 51°.46N±0°.06×16°.08E±0°.03, h0km, n22, σ0s74/46, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**167**	ePg	**Pg**	**22 40 07.1**	**+0.1**
KSP				eSg	**Sg**	**22 40 16.0**	**+0.8**
CHVC	**Chvalec**	**0.88**	**181**	ePG	**Pg**	**22 40 12.0**	**+0.4**
CHVC				eSG	**Sb**	**22 40 23.9**	**-1.3**
UPC	**Upice**	**0.96**	**182**	ePG	**Pg**	**22 40 13.3**	**+0.1**
UPC				eSG	**Sb**	**22 40 26.3**	**-1.2**
	comp=Z,62nm,0.4s						
DPC	**Dobruska-Polom**	**1.13**	**172**	ePG	**Pg**	**22 40 16.1**	**-0.3**
DPC				eSG	**Sg**	**22 40 30.8**	**-0.2**
	comp=Z,28nm,0.3s						
PVCC	**Panska Ves**	**1.33**	**226**	ePG	**Pg**	**22 40 20.6**	**+0.2**
PVCC				eSG	**Sn**	**22 40 39.2**	**0.0**
	comp=Z,72nm,0.2s						
BRG	**Berggiesshubel**	**1.47**	**247**	PG	**Pn**	**22 40 23.0**	**+0.5**
BRG				SG	**Sn**	**22 40 43.2**	**+0.7**
	39nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.75**	**208**	ePG	**Pg**	**22 40 28.7**	**+0.3**
GOPC				eSG	**Sg**	**22 40 51.2**	**+0.1**
	comp=Z,14nm,0.8s						
PRU	**Pruhonice**	**1.77**	**214**	ePG	**Pb**	**22 40 28.4**	**+0.3**
PRU				eSG	**Sg**	**22 40 52.2**	**+0.6**
	comp=Z,20nm,0.3s						
CLL	**Collm**	**1.93**	**267**	i Pn	**Pn**	**22 40 28.6**	**-0.3**
CLL				i Pg	**Pb**	**22 40 30.1**	**-0.8**
CLL				i		22 40 35.7	
CLL				i Sg	**Sg**	**22 40 58.0**	**+1.2**
	comp=Z,14nm,0.5s						
MORC	**Moravsky Berou**	**1.93**	**150**	ePN	**Pn**	**22 40 28.2**	**-0.7**
MORC				eSG	**Sb**	**22 40 54.5**	**-1.0**
OKC	**Ostrava-Krasne**	**2.10**	**140**	ePG	**Pb**	**22 40 34.0**	**+0.3**
OKC				eSG	**Sb**	**22 41 00.0**	**-0.2**
VRAC	**Vranov**	**2.18**	**171**	ePN	**Pn**	**22 40 32.4**	**0.0**
VRAC				eSG	**Sg**	**22 41 04.2**	**-0.7**
TREC	**Trest**	**2.20**	**190**	eSG	**Sg**	**22 41 05.0**	**-0.6**
	comp=Z,15nm,0.2s						
KRUC	**Moravsky**	**2.41**	**175**	ePN	**Pn**	**22 40 36.1**	**+0.6**
KRUC				eSG	**Sg**	**22 41 11.4**	**-0.9**
NKC	**Novy Kostel**	**2.61**	**243**	ePN	**Pn**	**22 40 37.7**	**-0.5**
NKC				ePG	**Pg**	**22 40 44.4**	**-0.4**
NKC				eSG	**Sg**	**22 41 18.7**	**+0.1**
	comp=Z,17nm,0.4s						
JAVC	**Velka Javorina**	**2.80**	**158**	ePN	**Pn**	**22 40 42.5**	**+1.6**
KHC	**Kasperske Hory**	**2.83**	**215**	ePN	**Pn**	**22 40 41.4**	**+0.1**
KHC				ePG	**Pb**	**22 40 47.2**	**+0.9**
KHC				eSN	**Sn**	**22 41 16.1**	**0.0**
KHC				eSG	**Sg**	**22 41 25.0**	**-0.7**
	comp=Z,6.6nm,0.5s						
LANS	**Liptovska Anna**	**3.18**	**135**	ePG	**Pg**	**22 40 56.1**	**+0.4**
LANS				eSG	**Sg**	**22 41 35.2**	**-1.6**
MODS	**Modra-Piesok**	**3.19**	**165**	eSG	**Sg**	**22 41 36.3**	**-0.9**
VYHS	**Vyhne**	**3.47**	**148**	ePN	**Pn**	**22 40 51.7**	**+1.7**
VYHS				ePG	**Pg**	**22 41 01.0**	**-0.2**
VYHS				eSG	**Sg**	**22 41 46.6**	**+0.5**
CONA	**Conrad Observa**	**3.54**	**182**	ePn	**Pn**	**22 40 51.5**	**+0.4**
	comp=Z,0.7nm,0.3s						
CONA				Sg	**Sg**	**22 41 48.5**	**-0.1**
	comp=Z,5.0nm,0.3s						
MOA	**Molln**	**3.80**	**199**	i Pn	**Pn**	**22 40 54.9**	**+0.3**
	comp=Z,0.2nm,0.1s						
MOA				eSg	**Sg**	**22 41 57.9**	**+1.0**
	comp=Z,3.6nm,0.3s						

*IDC **08** 22:46:12.2±1.6, 39°.21N×74°.98E, h0km, mb3.6/8, mb1 3.7/13, mb1mx3.5/62, mbtmp3.6/13, ML3.3/5, MS2.7/2, Ms1 2.7/2, ms1mx2.3/35, Error ellipse: s-maj=28.6km s-min=18.5km az=132.0*
*SOME **08** 22:46:15.7, 39°.78N×74°.27E, h10km*
*KRNET **08** 22:46:15.8±0.1, 39°.45N×74°.87E, mb3.8*
*NNC **08** 22:46:20.8±2.3, 39°.74N×74°.88E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=17.7km s-min=11.1km az=164.0*
ISC 08 22:46:12.3±1.5, 39°.16N±0°.05×74°.83E±0°.03, h0km±10km, n74, σ1s88/114, mb3.7/7, 32C-20D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**2.37**	**279**	⇑iP	**Pb**	**22 46 57.9**	**+1.8**
	baz=72						
DRK				⇑iS	**Sg**	**22 47 28.5**	**-0.1**
	baz=72						
NRN	**Naryn**	**2.44**	**21**	⇓iP	**Pn**	**22 46 54.6**	**+0.8**
	baz=23						
NRN				⇓iS	**Sn**	**22 47 23.4**	**-1.1**
	baz=23						
ARSB	**Arslanbob**	**2.59**	**327**	⇑iP	**Pn**	**22 46 57.9**	**+2.3**
	baz=23						
ARSB				⇑iS	**Sn**	**22 47 28.7**	**+0.9**
	baz=23						
ARLS	**Aral**	**2.73**	**352**	⇑iP	**Pn**	**22 46 58.4**	**+0.9**
	baz=51						
ARLS				⇑iS	**Sn**	**22 47 30.5**	**-0.8**
	baz=51						
KZA	**Kyzart**	**2.94**	**6**	P	**Pn**	**22 47 01.7**	**+1.1**
	SNR=35						
KZA	**Kyzart**	**2.94**	**6**	⇑iP	**Pn**	**22 47 01.7**	**+1.1**
	baz=6.0						
KZA				⇑iS	**Sn**	**22 47 35.6**	**-1.2**
	baz=6.0						
UCH	**Uchtor**	**3.08**	**356**	P	**Pn**	**22 47 04.1**	**+1.4**
	SNR=58						
UCH	**Uchtor**	**3.08**	**356**	⇑iP	**Pn**	**22 47 04.0**	**+1.4**
	baz=55						
UCH				⇑iS	**Sn**	**22 47 38.8**	**-1.5**
	baz=55						
AML	**Almayashu**	**3.10**	**344**	P	**Pn**	**22 47 04.1**	**+1.4**
	SNR=92						
AML	**Almayashu**	**3.10**	**344**	⇑iP	**Pn**	**22 47 04.2**	**+1.4**
	baz=42						
AML				⇑iS	**Sn**	**22 47 39.8**	**-0.9**
	baz=42						
BTK	**Batken**	**3.23**	**287**	⇓iP	**Pb**	**22 47 09.3**	**-1.2**
	baz=82						
BTK				⇓iS	**Sb**	**22 47 47.8**	**-2.6**
	baz=82						
ULHL	**Ulahol**	**3.27**	**19**	P	**Pn**	**22 47 06.5**	**+1.5**
	SNR=16						
ULHL	**Ulahol**	**3.27**	**19**	⇑iP	**Pn**	**22 47 06.3**	**+1.3**
	baz=20						
ULHL				⇑iS	**Sn**	**22 47 43.5**	**-1.2**
	baz=20						
ARK	**Arkit**	**3.43**	**321**	⇑iP	**Pn**	**22 47 09.4**	**+2.3**
	baz=18						
ARK				⇑iS	**Sn**	**22 47 48.5**	**0.0**
	baz=18						
BOOM	**Boomskoye usch**	**3.44**	**14**	⇑iP	**Pn**	**22 47 08.8**	**+1.5**
	baz=15						
BOOM				⇑iS	**Sn**	**22 47 47.4**	**-1.4**
	baz=15						
AAK	**Ala-Archa**	**3.49**	**356**	Pn	**Pn**	**22 47 09.9**	**+2.0**
	9.0nm,0.3s,baz=164,slow=9.7,SNR=60						
AAK				Sn	**Sn**	**22 47 53.2**	**+3.2**
	8.6nm,0.3s,baz=244,slow=20,SNR=8.2						
AAK				LR	LR	22 48 31.5	
	comp=Z,63nm,20.4s,baz=146,slow=40						
AAK	**Ala-Archa**	**3.49**	**356**	P	**Pn**	**22 47 09.9**	**+2.0**
	SNR=41						
AAK	**Ala-Archa**	**3.49**	**356**	⇑Pn	**Pn**	**22 47 09.7**	**+1.7**
	69nm,0.6s						
AAK				⇓Lg	Lg	22 47 53.3	
	110nm,0.9s						
AAK	**Ala-Archa**	**3.49**	**356**	⇓iP	**Pn**	**22 47 09.4**	**+1.4**
	baz=55						
AAK				⇓iS	**Sn**	**22 47 48.6**	**-1.4**
	baz=55						
KBK	**Karagaybulak**	**3.50**	**1**	P	**Pn**	**22 47 10.0**	**+1.9**
	SNR=37						
KBK	**Karagaybulak**	**3.50**	**1**	⇑iP	**Pn**	**22 47 09.4**	**+1.3**
	baz=1.0						
KBK				⇑iS	**Sn**	**22 47 48.5**	**-1.8**
	baz=1.0						
EKS2	**Erkin-Say**	**3.59**	**348**	P	**Pn**	**22 47 11.6**	**+2.2**
	SNR=8.0						
EKS2	**Erkin-Say**	**3.59**	**348**	⇑eP	**Pn**	**22 47 11.2**	**+1.8**
	baz=46						
EKS2				⇑iS	**Sn**	**22 47 51.4**	**-1.1**
	baz=46						
FRU1	**Bishkek**	**3.65**	**358**	⇑iP	**Pn**	**22 47 11.6**	**+1.4**
	baz=57						
FRU1				⇑iS	**Sn**	**22 47 52.1**	**-1.9**
	baz=57						
MRKS	**Merke**	**3.79**	**342**	eP	**Pn**	**22 47 13.5**	**+1.5**
	58nm,0.3s						
MRKS				eS	**Sn**	**22 47 54.8**	**-2.5**
	27nm,0.5s						
TKM2	**Tokmak 2**	**3.81**	**9**	P	**Pn**	**22 47 14.2**	**+1.8**
	SNR=64						
TKM2	**Tokmak 2**	**3.81**	**9**	⇓Pn	**Pn**	**22 47 13.9**	**+1.5**
	38nm,0.4s						
TKM2				⇓Sn	**Sn**	**22 47 54.7**	**-3.2**
	52nm,0.8s						
TKM2				⇑Lg	Lg	22 48 04.3	
	68nm,0.6s						
TKM2	**Tokmak 2**	**3.81**	**9**	⇓iP	**Pn**	**22 47 14.0**	**+1.6**
	baz=9.0						
TKM2				⇓iS	**Sn**	**22 47 56.3**	**-1.6**
	baz=9.0						
CHMS	**Chumysh**	**3.84**	**359**	P	**Pn**	**22 47 14.5**	**+1.8**
	SNR=22						
CHMS	**Chumysh**	**3.84**	**359**	⇓eP	**Pn**	**22 47 14.2**	**+1.5**
	baz=59						
CHMS				⇓iS	**Sn**	**22 47 56.6**	**-1.9**
	baz=59						
KST	**Kastek**	**3.98**	**12**	eP	**Pn**	**22 47 16.6**	**+2.0**
	41nm,0.3s						
KST				eS	**Sn**	**22 48 00.9**	**-1.1**
	64nm,0.6s						
IZV	**Izvestkoviy**	**4.10**	**19**	Pg	**Pb**	**22 47 22.4**	**-3.1**
IZV				Lg	Lg	22 48 11.5	
IZV	**Izvestkoviy**	**4.10**	**19**	eP	**Pb**	**22 47 23.4**	**-2.1**
	21nm,0.6s						
IZV				eS	**Sb**	**22 48 11.5**	**-4.2**
	74nm,0.8s						
USP	**Ospenovka**	**4.12**	**357**	P	**Pn**	**22 47 18.6**	**+2.1**
	SNR=21						
USP	**Ospenovka**	**4.12**	**357**	⇓iP	**Pn**	**22 47 17.9**	**+1.4**
	baz=56						
USP				⇓iS	**Sn**	**22 48 03.5**	**-1.8**
	baz=56						
DGS	**Degeres**	**4.14**	**10**	eP	**Pn**	**22 47 19.1**	**+2.2**
	36nm,0.7s						
DGS				eS	**Sn**	**22 48 03.8**	**-2.3**
	44nm,0.5s						
TNSS	**Tian-Shan**	**4.19**	**22**	Pg	**Pb**	**22 47 27.2**	**0.0**
	25nm,0.5s						
TNSS				Lg	Lg	22 48 18.4	
	41nm,0.7s						
TNSS	**Tian-Shan**	**4.19**	**22**	eP	**Pb**	**22 47 27.2**	**0.0**
	25nm,0.5s						
TNSS				eS	**Sb**	**22 48 18.4**	**-0.1**
	41nm,0.7s						
KNDC	**Almaty**	**4.37**	**21**	⇓Pg	**Pb**	**22 47 31.2**	**+1.2**
	23nm,0.5s						
KNDC				⇓Lg	Lg	22 48 24.4	
	186nm,0.8s						
KOTS	**Kotyrbulak**	**4.42**	**22**	Pg	**Pb**	**22 47 30.0**	**-1.0**
	6.6nm,0.4s						
KOTS				Lg	Lg	22 48 23.0	
	249nm,0.8s						
KOTS	**Kotyrbulak**	**4.42**	**22**	eP	**Pb**	**22 47 30.0**	**-1.0**
	6.6nm,0.4s						
KOTS				eS	**Sb**	**22 48 23.0**	**-1.9**
	249nm,0.8s						
IUG	**Iuzhnay**	**4.72**	**311**	eP	**Pn**	**22 47 28.2**	**+3.4**
	16nm,0.2s						
IUG				eS	**Sn**	**22 48 20.6**	**+0.4**
	118nm,0.7s						
SATY	**Saty**	**4.74**	**34**	Pg	**Pb**	**22 47 37.0**	**+0.6**
	12nm,0.6s						
SATY				Lg	Lg	22 48 35.4	
	47nm,0.6s						
SATY	**Saty**	**4.74**	**34**	eP	**Pb**	**22 47 37.0**	**+0.6**
	12nm,0.6s						
SATY				eS	**Sb**	**22 48 35.4**	**+1.3**
	47nm,0.6s						
KTBS	**Karatobe**	**4.76**	**16**	Pg	**Pb**	**22 47 36.9**	**+0.3**
	6.9nm,0.5s						
KTBS				Lg	Lg	22 48 34.9	
	62nm,0.6s						
KTBS	**Karatobe**	**4.76**	**16**	eP	**Pb**	**22 47 36.9**	**+0.3**
	6.9nm,0.5s						
KTBS				eS	**Sb**	**22 48 34.9**	**+0.4**
	62nm,0.6s						
KUU	**Kurty**	**4.87**	**13**	Pg	**Pb**	**22 47 38.5**	**+0.1**
	14nm,0.5s						
KUU				Lg	Lg	22 48 37.7	
	92nm,1.1s						
KUU	**Kurty**	**4.87**	**13**	eP	**Pb**	**22 47 38.5**	**+0.1**
	14nm,0.5s						
KUU				eS	**Sb**	**22 48 37.7**	**+0.2**
	92nm,1.1s						
CHM	**Chimkent**	**5.07**	**310**	eP	**Pn**	**22 47 33.3**	**+3.6**
	56nm,0.2s						
CHM				eS	**Sn**	**22 48 30.1**	**+1.2**
	184nm,0.3s						
UZB	**Uzynbulak**	**5.09**	**37**	Pg	**Pb**	**22 47 45.1**	**+2.8**
	3.7nm,0.5s						
UZB				Lg	Lg	22 48 49.2	
	19nm,1.2s						
UZB	**Uzynbulak**	**5.09**	**37**	eP	**Pb**	**22 47 45.1**	**+2.8**
	3.7nm,0.5s						
UZB				eS	**Sb**	**22 48 49.1**	**+5.1**
	19nm,1.2s						
KK31	**Karatay Array**	**5.12**	**322**	⇓Pn	**Pn**	**22 47 31.4**	**+1.2**
	2.0nm,0.3s,baz=127,slow=12,SNR=49						
KK31				⇑Pg	**Pb**	**22 47 46.0**	**+3.4**
	2.6nm,0.3s,baz=125,slow=14,SNR=6.5						
KK31				⇑Sn	**Sn**	**22 48 28.2**	**-1.7**
	5.3nm,0.3s,baz=148,slow=24,SNR=3.9						
KK31				⇓Lg	Lg	22 48 48.3	
	16nm,0.5s,baz=125,slow=28,SNR=4.1						
KPKS	**Kokpek**	**5.19**	**33**	eP	**Pb**	**22 47 44.6**	**+0.6**
	14nm,1.1s						
KPKS				eS	**Sb**	**22 48 48.0**	**+1.1**
	70nm,0.5s						
PDGK	**Podgornoye**	**5.45**	**39**	⇓Pn	**Pn**	**22 47 36.8**	**+1.9**
	2.5nm,0.7s						
PDGK				⇑Pg	**Pb**	**22 47 51.1**	**+2.7**
	13nm,0.9s						
PDGK				⇑Lg	Lg	22 49 01.6	
	33nm,0.8s						
PDGK	**Podgornoye**	**5.45**	**39**	⇑iP	**Pn**	**22 47 37.4**	**+2.5**
	baz=40						
PDGK				⇑iS	**Sn**	**22 48 36.3**	**-2.1**
	baz=40						
MNBS	**Baschi**	**5.60**	**27**	Pg	**Pb**	**22 47 53.3**	**+2.3**
	3.6nm,0.6s						
MNBS				Lg	Lg	22 49 03.1	
	18nm,0.4s						
MNBS	**Baschi**	**5.60**	**27**	eP	**Pb**	**22 47 53.3**	**+2.3**
	3.6nm,0.6s						
MNBS				eS	**Sb**	**22 49 03.1**	**+4.4**
	18nm,0.4s						
CEP	**Cherat**	**5.82**	**205**	P	**Pb**	**22 47 52.4**	**-2.3**
CEP				S	**Sb**	**22 49 01.0**	**-4.0**
BTLS	**Baital**	**5.91**	**355**	eP	**Pb**	**22 47 54.4**	**-1.8**
	2.4nm,0.4s						
BTLS				eS	**Sb**	**22 49 06.2**	**-1.2**
	16nm,0.6s						
KTMS	**Ketmen**	**5.97**	**42**	eP	**Pg**	**22 48 05.4**	**-1.3**
	2.4nm,0.2s						
KTMS				eS	**Sg**	**22 49 24.9**	**+0.9**
	16nm,0.6s						
MKAR	**Makanchi Array**	**9.38**	**33**	Pn	**Pn**	**22 48 29.3**	**+0.5**
	0.1nm,0.3s,baz=213,slow=10,SNR=3.5						
GEYT	**Alibeck**	**13.14**	**270**	Pn	**Pn**	**22 49 21.0**	**+0.8**
	0.3nm,0.3s,baz=98,slow=11,SNR=5.1						
ZALV	**Zalesovo Beam**	**16.29**	**21**	Pn	**Pn**	**22 50 02.2**	**0.0**
	0.1nm,0.3s,baz=230,slow=11,SNR=2.7						
AKTO	**Aktyubinsk**	**16.38**	**319**	Pn	**Pn**	**22 50 01.2**	**-2.2**
	0.3nm,0.3s,baz=109,slow=18,SNR=5.9						
ARU	**Arti**	**20.36**	**333**	P	**P**	**22 50 51.3**	**+1.2**
	0.6nm,0.7s,baz=165,slow=7.6,SNR=3.6						
WSAR	**Wadi Sarin**	**21.01**	**226**	LR	LR	23 00 49.0	
	comp=Z,40nm,19.7s,baz=225,slow=42						
BRTR	**Keskin Array B**	**31.62**	**284**	P	**P**	**22 52 39.0**	**+2.0**
	0.8nm,0.7s,baz=91,slow=7.7,SNR=7.0						
FINES	**FINESS Array B**	**37.08**	**323**	P	**P**	**22 53 23.5**	**-0.3**
	1.4nm,0.8s,baz=113,slow=9.8,SNR=8.8						
GERES	**GERESS Array B**	**43.94**	**304**	P	**P**	**22 54 21.4**	**+0.5**
	0.5nm,0.5s,baz=70,slow=7.7,SNR=6.5						
NB2	**NORSAR Subarra**	**44.15**	**321**	P	**P**	**22 54 22.0**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=90,slow=7.9						
NOA	**NORSAR Array B**	**44.15**	**321**	P	**P**	**22 54 21.9**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=90,slow=7.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**68.78**	**270**	P	**P**	**22 57 19.4**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=61,slow=5.3,SNR=4.5						
ILAR	**Eielson Array**	**71.37**	**18**	P	**P**	**22 57 33.8**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=335,slow=7.5,SNR=2.9						
YKA	**Yellowknife Ar**	**78.41**	**4**	P	**P**	**22 58 11.9**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=346,slow=5.4,SNR=3.2						

*KRNET **08** 22:48:11.4±0.1, 39°.46N×74°.91E, mb3.9*
*NNC **08** 22:48:14.2±3.8, 39°.74N×74°.62E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=28.7km s-min=18.1km az=167.0*
ISC 08 22:48:13.0±1.9, 39°.58N±0°.09×74°.81E±0°.06, h10km, n18, σ2s02/35, 22C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**2.06**	**26**	⇑iP	**Pn**	**22 48 48.5**	**+0.5**
	baz=22						
NRN				⇑iS	**Sb**	**22 49 15.5**	**-1.0**
	baz=22						
ARSB	**Arslanbob**	**2.23**	**322**	⇑iP	**Pb**	**22 48 51.9**	**-1.6**
	baz=22						
ARSB				⇑iS	**Sb**	**22 49 21.7**	**+0.5**
	baz=22						
ARLS	**Aral**	**2.31**	**351**	⇓iP	**Pn**	**22 48 52.4**	**+1.2**
	baz=50						
ARLS				⇓iS	**Sb**	**22 49 23.6**	**+0.2**
	baz=50						
DRK	**Karamyk**	**2.33**	**268**	⇑iP	**Pn**	**22 48 52.0**	**+0.3**
	baz=72						
DRK				⇑iS	**Sb**	**22 49 22.6**	**-1.6**
	baz=72						
KZA	**Kyzart**	**2.52**	**7**	⇑iP	**Pb**	**22 48 56.4**	**-2.1**
	baz=6.0						
KZA				⇑iS	**Sb**	**22 49 28.7**	**-1.0**
	baz=6.0						
UCH	**Uchtor**	**2.65**	**355**	⇑iP	**Pb**	**22 48 58.4**	**-2.5**
	baz=54						
UCH				⇑iS	**Sb**	**22 49 32.9**	**-0.8**
	baz=54						
AML	**Almayashu**	**2.69**	**342**	⇓eP	**Pb**	**22 48 58.8**	**-2.6**
	baz=41						
AML				⇓iS	**Sb**	**22 49 33.7**	**-0.8**
	baz=41						
ULHL	**Ulahol**	**2.87**	**22**	⇑eP	**Pn**	**22 49 00.4**	**+1.3**
	baz=20						
ULHL				⇑iS	**Sn**	**22 49 36.4**	**+2.6**
	baz=20						
BOOM	**Boomskoye usch**	**3.03**	**16**	⇓iP	**Pn**	**22 49 02.8**	**+1.6**
	baz=14						
BOOM				⇓iS	**Sn**	**22 49 40.3**	**+2.7**
	baz=14						
AAK	**Ala-Archa**	**3.06**	**356**	⇑Pn	**Pn**	**22 49 01.7**	**+0.1**
	40nm,0.6s						
AAK				⇑Lg	Lg	22 49 43.2	
	107nm,1.4s						
AAK	**Ala-Archa**	**3.06**	**356**	⇓iP	**Pn**	**22 49 04.0**	**+2.4**
	baz=54						
AAK				⇓iS	**Sb**	**22 49 42.2**	**-3.0**
	baz=54						
KBK	**Karagaybulak**	**3.07**	**2**	⇓iP	**Pn**	**22 49 04.0**	**+2.2**
	baz=0.0						
KBK				⇓iS	**Sb**	**22 49 42.2**	**-3.3**
	baz=0.0						
ARK	**Arkit**	**3.10**	**317**	⇑iP	**Pn**	**22 49 03.5**	**+1.5**
	baz=17						
ARK				⇑iS	**Sn**	**22 49 41.8**	**+2.6**
	baz=17						
BTK	**Batken**	**3.11**	**280**	⇓iP	**Pn**	**22 49 03.5**	**+1.3**
	baz=82						
BTK				⇓iS	**Sn**	**22 49 41.5**	**+2.0**
	baz=82						
EKS2	**Erkin-Say**	**3.17**	**346**	⇑eP	**Pn**

MJAR	Matsushiro Arr	32.37	70	LR	LR	23 10 25.0	
	comp=Z,29nm,18.4s,baz=245,slow=36						
FINES	FINESS Array B	55.42	326	P	P	23 00 36.4	+0.4
	1.0nm,0.7s,baz=99,slow=7.2,SNR=4.1						

NSSC ***08*** *22:51:07.8±0.3, 33°.82N×35°.67E, h14km±2km, ML1.4*
GRAL ***08*** *22:51:09.8±0.3, 33°.79N×35°.80E, h0km±20km, MD2.7*
ISC 08 22:51:08.9±1.2, 33°.79N±0°.04×35°.83E±0°.05, h3km±17km, n10, σ0s72/18, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.19	309	eP	Pg	22 51 12.8	+0.2
BHL				eS	Sg	22 51 14.9	-0.1
DQRL	Deir Qamar	0.23	249	eP	Pg	22 51 13.5	+0.1
DQRL				eS	Sg	22 51 16.3	-0.2
RCY	Rachaya	0.29	179	eP	Pg	22 51 15.0	+0.4
RCY				eS	Sg	22 51 19.0	+0.6
BRBR	Barbar	0.39	165	eP	Pg	22 51 17.1	+0.6
BRBR				eS	Sb	22 51 24.1	-1.0
BRBR				AML	AML	22 51 25.3	
	comp=E,47nm,0.6s						
BRBR				AML	AML	22 51 27.1	
	comp=N,47nm,0.6s						
BRBR	Barbar	0.39	165	eP	Pg	22 51 17.1	+0.6
BRBR				eS	Sg	22 51 20.4	-1.2
SHBL	Chebaa	0.44	189	eP	Pg	22 51 17.7	+0.2
QASN	Qassioun	0.45	124	eP	Pb	22 51 19.3	-0.3
QASN				eS	Sb	22 51 27.5	+0.8
QASN				AML	AML	22 51 31.2	
	comp=N,57nm,0.4s						
QASN				AML	AML	22 51 32.1	
	comp=E,21nm,0.3s						
HWQ	Hawqa	0.50	11	eP	Pg	22 51 18.8	+0.2
TOTH	TOTAH	0.66	130	eP	Pb	22 51 23.1	+0.1
TOTH				eS	Sb	22 51 33.2	+0.6
TOTH				AML	AML	22 51 39.1	
	comp=E,9.1nm,0.5s						
TOTH				AML	AML	22 51 54.6	
	comp=N,7.7nm,0.7s						
TOTH	TOTAH	0.66	130	eP	Pb	22 51 23.2	+0.1
TOTH				eS	Sg	22 51 28.6	-1.5

ISCJB ***08*** *22:55:31.7±0.6, 2°.53N±0°.07×128°.46E±0°.08, h250km, mb3.8/9, Error ellipse: s-maj=10.7km s-min=9.4km az=17.0*
IDC ***08*** *22:55:33.4±3.4, 2°.46N×128°.43E, h252km±36km, mb3.6/9, mb1 3.8/11, mb1mx3.4/44, mbtmp4.3/11, Error ellipse: s-maj=28.7km s-min=11.3km az=73.0*
DJA ***08*** *22:55:33.9±0.8, 3°N±10°×12°8E±°, h212km±8km, M4.5/8, mb4.6/8, mB4.8/6, MLv4.7/8, Mw(mB)4.0/6*
ISC 08 22:55:33.1±0.7, 2°.48N±0°.09×128°.5E±0°.1, h250km, n21, σ0s96/23, mb3.7/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.02	213	P	Pn	22 56 13.5	-2.3
LUWI	Luwuk	6.68	238	P	Pn	22 57 09.0	-0.8
	179nm,0.5s,3μm1.1nm						
MRSI	Marisa	6.81	253	P	Pn	22 57 10.6	-0.9
	48nm,0.7s,639nm0.2nm						
APSI	Ampana	7.60	244	P	Pn	22 57 20.2	-1.2
	84nm,0.7s,2μm0.4nm						
MPSI	Mapaga	8.82	256	P	Pn	22 57 36.8	-0.1
	11nm,1.0s,554nm						
TTSI	Tana Toraja	10.23	238	P	Pn	22 57 54.3	-0.4
	73nm,0.5s,968nm						
BNSI	Bone	10.79	231	P	P	22 58 07.4	+1.1
SPSI	Sidrap Palu	10.79	234	P	Pn	22 58 01.9	+0.2
BKSI	Bulukumba	11.38	227	P	Pn	22 58 10.2	+1.1
JAY	Jayapura	13.21	112	P	P	22 58 34.0	+0.7
	0.9nm,0.3s,baz=270,slow=5.1,SNR=3.8						
BATI	Baumata	13.48	201	P	P	22 58 35.8	-0.4
	8.5nm,0.3s,baz=150,slow=10.0,SNR=6.9						
FITZ	Fitzroy Crossi	20.64	188	P	P	22 59 53.2	-0.8
	3.9nm,0.5s,baz=15,slow=8.5,SNR=19						
WRA	Warramunga Arr	23.02	166	P	P	23 00 15.9	-0.7
	6.4nm,0.3s,baz=353,slow=13,SNR=13						
ASAR	Alice Springs	26.53	169	P	P	23 00 48.2	0.0
	6.6nm,0.5s,baz=354,slow=7.8,SNR=127						
ASAR				PcP	PcP	23 04 06.3	+0.3
	0.8nm,0.4s,baz=351,slow=2.2,SNR=7.1						
CMAR	Chiang Mai Arr	32.99	301	P	P	23 01 46.4	+1.3
	0.6nm,0.3s,baz=119,slow=7.3,SNR=5.1						
KSRS	Korea Array	34.81	359	P	P	23 02 00.2	-0.1
	0.8nm,0.5s,baz=176,slow=11,SNR=5.4						
STKA	Stephens Creek	36.38	161	P	P	23 02 14.1	+0.3
	6.4nm,0.4s,baz=341,slow=7.9,SNR=43						
SONM	Songino Array	49.03	340	P	P	23 03 55.0	0.0
	0.4nm,0.6s,baz=142,slow=7.3,SNR=3.0						
MKAR	Makanchi Array	59.56	325	P	P	23 05 10.8	+0.2
	0.5nm,0.4s,baz=118,slow=8.0,SNR=8.5						
MKAR				PcP	PcP	23 05 56.5	+1.3
	0.3nm,0.4s,baz=147,slow=2.9,SNR=2.9						
BVAR	Borovoye Array	69.30	327	P	P	23 06 12.3	-1.2
	0.8nm,0.9s,baz=93,slow=3.3,SNR=5.0						
ARCES	ARCESS Array B	92.21	340	P	P	23 08 13.2	-1.0
	1.7nm,1.0s,baz=94,slow=3.6,SNR=3.6						

SOME ***08*** *23:20:39.3, 43°.02N×87°.20E, h25km*
NNC ***08*** *23:20:43.6±4.1, 43°.18N×87°.03E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=29.3km s-min=19.7km az=119.0*
ISC 08 23:20:35.4±3.1, 43°.0N±0°.1×87°.9E±0°.1, h10km, n10, σ2s37/17, 4C-8D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	Zaisan	4.95	335	Pg	Pg	23 22 10.1	-0.1
	2.5nm,0.9s						
ZSN				Lg	Lg	23 23 14.6	
	7.5nm,0.7s						
ZSN	Zaisan	4.95	335	⇑iP	Pg	23 22 10.1	-0.1
	2.5nm,0.9s						
ZSN				⇑iS	Sg	23 23 14.6	+0.3
	7.5nm,0.7s						
MK31	Makanchi Array	5.51	316	⇓Pn	Pn	23 21 58.5	+1.0
	0.4nm,0.3s,baz=146,slow=16,SNR=30						
MK31				⇓Pg	Pb	23 22 11.4	-0.3
	1.4nm,0.6s						
MK31				⇓Sn	Sn	23 22 57.1	-3.9
	5.1nm,0.6s						
MK31				⇓Lg	Lg	23 23 20.5	
	4.4nm,0.6s,baz=141,slow=27,SNR=3.7						
KTMS	Ketmen	5.54	277	Pg	Pb	23 22 11.4	-1.0
	2.3nm,0.4s						
KTMS				Lg	Lg	23 23 17.0	
	9.5nm,0.7s						
KTMS	Ketmen	5.54	277	eP	Pb	23 22 11.4	-1.0
	2.3nm,0.4s						
KTMS				eS	Sb	23 23 17.0	-2.0
	9.5nm,0.7s						
MAKZ	Makanchi	5.69	314	⇓Pn	Pn	23 22 00.3	+0.4
	7.8nm,0.9s						
MAKZ				⇓Sn	Sn	23 23 01.5	-3.7
	6.1nm,1.1s						
MAKZ				⇑Lg	Lg	23 23 25.6	
	6.9nm,0.8s						
PDGK	Podgornoye	6.17	276	Pg	Pb	23 22 24.1	+1.2
	0.6nm,0.2s						
PDGK				Lg	Lg	23 23 38.5	
	2.8nm,0.7s						
PDGK	Podgornoye	6.17	276	⇑Pn	Pn	23 22 07.2	+0.5
	1.8nm,0.8s						
PDGK				⇓Sn	Sn	23 23 15.4	-1.9
	5.2nm,0.7s						
PDGK				⇓Lg	Lg	23 23 38.1	
	7.0nm,0.6s						
KAPS	Kapalarasan	6.57	293	Pg	Pb	23 22 32.1	+2.4
	2.2nm,0.6s						
KAPS				Lg	Lg	23 23 53.3	
	4.8nm,0.7s						
KAPS	Kapalarasan	6.57	293	eP	Pb	23 22 32.1	+2.4
	2.2nm,0.6s						
KAPS				eS	Sb	23 23 53.3	+5.0
	4.8nm,0.7s						

KRNET ***08*** *23:51:57.9±0.1, 39°.52N×74°.87E, mb3.5*
SOME ***08*** *23:52:02.9, 39°.78N×74°.65E, h20km*
NNC ***08*** *23:52:02.7±1.7, 39°.76N×74°.69E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=13.4km s-min=7.3km az=161.0*

ISC 08 23:52:01.9±1.3, 39°.77N±0°.06×74°.74E±0°.03, h10km, n45, σ1s75/73, 36C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.92	30	⇑iP	Pb	23 52 36.4	-0.9
	baz=23						
NRN				⇑iS	Sg	23 53 04.2	+0.4
	baz=23						
ARSB	Arslanbob	2.05	320	⇑iP	Pb	23 52 39.5	+0.1
	baz=22						
ARSB				⇑iS	Sg	23 53 10.0	+2.0
	baz=22						
ARLS	Aral	2.12	352	⇑eP	Pb	23 52 40.6	+0.1
	baz=50						
ARLS				⇑iS	Sg	23 53 11.4	+1.4
	baz=50						
DRK	Karamyk	2.29	264	⇑iP	Pn	23 52 40.6	+0.6
	baz=70						
DRK				⇑iS	Sb	23 53 11.4	-0.5
	baz=70						
KZA	Kyzart	2.34	9	P	Pn	23 52 42.1	+1.2
	SNR=26						
KZA	Kyzart	2.34	9	⇑iP	Pb	23 52 43.4	-1.1
	baz=6.0						
KZA				⇑iS	Sg	23 53 16.4	-0.9
	baz=6.0						
UCH	Uchtor	2.47	356	P	Pb	23 52 44.6	-2.0
	SNR=8.6						
UCH	Uchtor	2.47	356	⇑iP	Pb	23 52 45.3	-1.3
	baz=54						
UCH				⇑iS	Sg	23 53 20.0	-1.2
	baz=54						
AML	Almayashu	2.49	342	P	Pb	23 52 47.8	+0.8
	SNR=12						
AML	Almayashu	2.49	342	⇑iP	Pb	23 52 45.8	-1.2
	baz=41						
AML				⇑iS	Sg	23 53 21.2	-0.9
	baz=41						
ULHL	Ulahol	2.73	24	P	Pb	23 52 50.5	-0.4
	SNR=13						
ULHL	Ulahol	2.73	24	⇑iP	Pn	23 52 47.9	+1.9
	baz=20						
ULHL				⇑iS	Sb	23 53 24.5	0.0
	baz=20						
BOOM	Boomskoye usch	2.87	18	⇑iP	Pn	23 52 50.0	+2.1
	baz=15						
BOOM				⇑iS	Sb	23 53 28.3	-0.3
	baz=15						
AAK	Ala-Archa	2.88	356	P	Pb	23 52 51.6	-1.8
	SNR=9.4						
AAK	Ala-Archa	2.88	356	⇑Pn	Pn	23 52 50.0	+2.0
	13nm,0.6s						
AAK				⇑Lg	Lg	23 53 35.2	
	27nm,1.1s						
AAK	Ala-Archa	2.88	356	⇑iP	Pb	23 52 50.9	-2.5
	baz=55						
AAK				⇑iS	Sb	23 53 29.4	+0.7
	baz=55						
KBK	Karagaybulak	2.89	3	P	Pg	23 52 55.6	-1.8
	SNR=13						
KBK	Karagaybulak	2.89	3	⇓iP	Pb	23 52 51.0	-2.7
	baz=1.0						
KBK				⇓iS	Sb	23 53 29.7	+0.5
	baz=1.0						
ARK	Arkit	2.93	315	⇑iP	Pb	23 52 51.1	-3.2
	baz=17						
ARK				⇑iS	Sb	23 53 29.9	-0.3
	baz=17						
EKS2	Erkin-Say	2.98	346	P	Pb	23 52 56.5	+1.2
	SNR=11						
EKS2	Erkin-Say	2.98	346	⇑iP	Pb	23 52 52.6	-2.6
	baz=46						
EKS2				⇑iS	Sb	23 53 32.2	+0.4
	baz=46						
BTK	Batken	3.03	277	⇑eP	Pn	23 52 51.5	+1.5
	baz=81						
BTK				⇑iS	Sb	23 53 30.5	-2.6
	baz=81						
MRKS	Merke	3.19	340	eP	Pb	23 52 59.5	+0.8
	13nm,0.6s						
MRKS				eS	Sb	23 53 38.3	+0.7
	12nm,0.6s						
TKM2	Tokmak 2	3.22	11	P	Pn	23 52 54.4	+1.7
	SNR=12						
TKM2	Tokmak 2	3.22	11	⇑Pn	Pn	23 52 54.4	+1.7
	7.2nm,0.4s						
TKM2				⇓Sn	Sb	23 53 36.1	-2.5
	18nm,0.7s						
TKM2				⇓Lg	Lg	23 53 45.6	
	13nm,0.6s						
CHMS	Chumysh	3.23	0	⇑eP	Pn	23 52 55.4	+2.7
	baz=59						
CHMS				⇑iS	Sb	23 53 37.9	-0.9
	baz=59						
KST	Kastek	3.40	15	Pg	Pg	23 53 06.8	-0.3
	11nm,0.5s						
KST				Lg	Lg	23 53 50.6	
	19nm,0.5s						
KST	Kastek	3.40	15	eP	Pg	23 53 06.8	-0.3
	11nm,0.5s						
KST				eS	Sg	23 53 50.6	-0.6
	19nm,0.5s						
IZV	Izvestkoviy	3.56	23	Pg	Pg	23 53 09.1	-1.1
	9.7nm,0.7s						
IZV				Lg	Lg	23 53 55.2	
	13nm,0.6s						
IZV	Izvestkoviy	3.56	23	eP	Pg	23 53 09.1	-1.1
	9.7nm,0.7s						
IZV				eS	Sg	23 53 55.2	-1.1
	13nm,0.6s						
DGS	Degeres	3.56	12	eP	Pb	23 53 05.4	+0.3
	14nm,0.6s						
DGS				eS	Sb	23 53 47.9	-0.5
	15nm,0.5s						
KNDC	Almaty	3.83	25	⇓Pg	Pg	23 53 12.7	-2.6
	15nm,0.7s						
KNDC				⇑Lg	Lg	23 54 05.2	
	40nm,0.8s						
KOTS	Kotyrbulak	3.90	26	Pg	Pg	23 53 15.5	-1.1
	3.7nm,0.6s						
KOTS				Lg	Lg	23 54 05.5	
	17nm,0.6s						
KOTS	Kotyrbulak	3.90	26	eP	Pg	23 53 15.5	-1.1
	3.7nm,0.6s						
KOTS				eS	Sg	23 54 05.5	-1.6
	17nm,0.6s						
KTBS	Karatobe	4.20	20	Pg	Pg	23 53 19.3	-3.1
	4.5nm,0.7s						
KTBS				Lg	Lg	23 54 11.9	
	18nm,0.7s						
KTBS	Karatobe	4.20	20	eP	Pg	23 53 19.3	-3.1
	4.5nm,0.7s						
KTBS				eS	Sb	23 54 11.9	+5.1
	18nm,0.7s						
IUG	luzhnay	4.29	305	Pg	Pg	23 53 23.4	-0.7
	22nm,0.6s						
IUG				Lg	Lg	23 54 19.9	
	52nm,0.6s						
IUG	luzhnay	4.29	305	eP	Pg	23 53 23.4	-0.7
	22nm,0.6s						
IUG				eS	Sg	23 54 19.9	+0.3
	52nm,0.6s						
SATY	Saty	4.29	39	Pg	Pg	23 53 22.2	-2.0
	6.7nm,0.7s						
SATY				Lg	Lg	23 54 17.2	
	17nm,0.6s						
SATY	Saty	4.29	39	eP	Pg	23 53 22.2	-2.0
	6.7nm,0.7s						
SATY				eS	Sg	23 54 17.2	-2.6
	17nm,0.6s						
KUU	Kurty	4.29	16	Pg	Pg	23 53 22.4	-1.8
	4.7nm,0.6s						
KUU				Lg	Lg	23 54 17.5	
	16nm,0.8s						
KUU	Kurty	4.29	16	eP	Pg	23 53 22.4	-1.8
	4.7nm,0.6s						
KUU				eS	Sg	23 54 17.4	-2.3
	16nm,0.8s						
KK31	Karatay Array	4.61	318	Pn	Pn	23 53 12.2	+0.5
	0.7nm,0.4s,baz=128,slow=12,SNR=28						
KK31				⇑Pg	Pb	23 53 23.9	+1.1
	4.6nm,0.7s,baz=136,slow=16,SNR=8.5						
KK31				⇑Sn	Sn	23 54 07.8	+2.6
	10nm,0.7s						
KK31				⇓Lg	Lg	23 54 26.8	
	4.3nm,0.5s,baz=136,slow=28						
PDGK	Podgornoye	5.04	43	⇑Pg	Pb	23 53 33.4	+3.1
	2.4nm,0.7s						
PDGK				⇑Lg	Lg	23 54 41.4	
	20nm,1.4s						
BTLS	Baital	5.30	355	eP	Pg	23 53 41.6	-1.7
	1.9nm,0.5s						
BTLS				eS	Sg	23 54 50.8	-1.2
	5.5nm,0.7s						

NEIC ***08*** *23:58:21.0±0.0, 10°.30N×86°.46W, h39km, mb4.7/139, MW4.9(UCR), After UCR.*
ISCJB ***08*** *23:58:22.6±0.3, 10°.64N×0°.04×86°.03W±0°.03, h10km, mb4.5/96, Error ellipse: s-maj=5.4km s-min=3.8km az=23.8*
UCR ***08*** *23:58:22.5±1.6, 10°.24N×86°.29W, h5km, MD4.1, ML4.5, mb4.7(NEIC)*
IDC ***08*** *23:58:23.1±0.6, 10°.99N×85°.75W, h0km, mb4.3/15, mb1 4.5/17, mb1mx4.2/33, mbtmp4.3/17, ML3.1/2, MS3.8/6, Ms1 3.8/6, ms1mx3.4/28, Error ellipse: s-maj=25.1km s-min=11.0km az=52.0*
BJI ***08*** *23:58:27.5±0.0, 10°.60N×86°.10W, h35km*
ISC 08 23:58:23.5±0.5, 10°.50N±0°.06×86°.18W±0°.05, h10km, n478, σ1s38/484, mb4.6/96, 5C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.66	77	iP	Pn	23 58 39.7	+0.8
NY14				iS	Sn	23 58 51.7	+2.4
GBS3	Finca Las Img	0.77	69	⇑iP	Pn	23 58 41.0	+0.5
LAPC	Finca la Perla	0.78	70	iP	Pb	23 58 41.2	+1.9
BUEV	Buena Vista	0.82	69	eP	Pb	23 58 41.7	+1.8
GB1A	Borinquen Arri	0.83	68	⇑eP	Pb	23 58 41.9	+1.7
GB1A				iP	Pn	23 58 42.1	+0.7
GPS1	Guardaparques	0.86	72	iP	Pn	23 58 42.5	+0.7
BUAI	Buenos Aires	0.92	66	iP	Pn	23 58 43.8	+1.2
LIM1	Limonal	0.94	78	iP	Pb	23 58 43.3	+1.4
COLC	Colonia	0.98	80	iP	Pb	23 58 43.9	+1.3
MESS	Mesas	1.00	76	⇑eP	Pg	23 58 43.8	+0.9
MESS				iP	Pb	23 58 44.4	+1.3
HORNC	Hornillas	1.01	78	iP	Pb	23 58 44.5	+1.3
PTEN	Parque Tenorio	1.20	80	iP	Pb	23 58 47.4	+1.0
JTS	Las Juntas de	1.23	100	Pn	Pn	23 58 46.2	-0.7
	123nm,0.3s,baz=335,slow=7.1,SNR=448						
JTS				Lg	Lg	23 59 03.4	
	514nm,0.3s,baz=307,slow=20,SNR=12						
JTS	Las Juntas de	1.23	100	ePn	Pn	23 58 46.5	-0.3
ARE1	Arenal 1	1.44	91	⇑eP	Pn	23 58 50.8	+1.0
MASN	Masaya	1.48	1	eP	Pb	23 58 52.3	+1.2
MGAN	Managua	1.64	358	eP	Pb	23 58 54.6	+0.8
SRA1	San Ramn	1.73	104	eP	Pn	23 58 53.1	-0.6
ACON	Acoyapa	1.76	34	ePn	Pn	23 58 56.2	+2.0
ACON	Acoyapa	1.76	34	eP	Pn	23 58 56.1	+2.0
ACON				IAML		23 59 31.9	
	comp=E,1μm,0.9s						
CNGN	Cerro Negro	2.05	346	eP	Pn	23 58 58.9	+0.7
HDC	Heredia	2.10	104	ePn	Pn	23 59 00.3	+1.5
HDC	Heredia	2.10	104	eP	Pn	23 58 58.9	0.0
BRAN	Las Pilas	2.21	356	eP	Pn	23 58 57.4	-2.9
CRIN	San Cristobal	2.34	339	eP	Pb	23 59 05.1	+2.9
MATN	Matagalpa	2.43	6	eP	Pn	23 59 05.6	+2.2
CVTR	Volcan Turrial	2.43	101	eP	Pn	23 59 04.5	+0.7
ESPN	Las Esperanzas	2.50	47	eP	Pn	23 59 06.3	+2.0
ESTN	Estel	2.59	356	ePn	Pn	23 59 07.4	+1.7
ESTN	Estel	2.59	356	eP	Pn	23 59 08.0	+2.4
CSGN	Cosiguina Volc	2.81	331	⇑eP	Pn	23 59 11.3	+2.7
DRK0	Durika	3.15	113	eP	Pn	23 59 13.6	+0.2
CNCH	Conchagua	3.20	330	eP	Pn	23 59 16.3	+2.3
BCIP	Isla Barro Col	6.39	101	ePn	Pn	23 59 59.0	+1.1
CCIG	Comitan	8.16	315	ePn	Pn	00 00 25.6	+3.4
FSCY	Frank Sound, G	10.00	28	ePn	Pn	00 00 48.8	+1.4
CMIG	Matias Romero	10.69	309	Pn	Pn	00 00 58.9	+2.1
	comp=E,0.5nm,0.3s,baz=109,slow=8.9,SNR=9.1						
ROSC	El Rosal	13.03	115	LR	LR	00 06 28.5	
	comp=E,201nm,19.6s,baz=232,slow=38						
TLIG	Tlapa	13.91	302	ePn	Pn	00 01 44.5	+3.5
SDV	Santo Domingo	15.41	95	Pn	Pn	00 01 59.2	-2.3
	comp=E,0.2nm,0.3s,baz=314,slow=16,SNR=2.5						
BANI	BANI	17.21	61	ePn	Pn	00 02 24.1	-0.2
757A	Oxford	18.75	11	P	P	00 02 44.2	+1.5
	baz=192,SNR=6.1						
758A	Lake Helen	18.95	14	P	P	00 02 45.8	+0.9
	baz=195						
LNIG	Linares	19.08	320	eP	P	00 02 47.9	+1.5
	comp=E,24nm,0.9s						
655A	Horseshoe Beac	19.11	8	P	P	00 02 48.0	+1.4
	baz=188						
657A	Interlachen	19.41	11	P	P	00 02 51.8	+1.9
	baz=192						
556A	Lake Butler	19.72	10	P	P	00 02 55.0	+1.7
	baz=190						
555A	McAlpin	19.75	8	eP	P	00 02 54.9	+1.2
555A	McAlpin	19.75	8	P	P	00 02 55.0	+1.4
	baz=189						
557A	Orange Park	19.86	11	P	P	00 02 56.1	+1.3
	baz=192						
454A	Quitman	20.25	6	P	P	00 03 01.3	+2.1
	baz=187						
452A	Marianna	20.27	2	P	Pn	00 03 01.6	+0.4
	baz=182						
455A	Stateville	20.35	8	P	P	00 03 02.2	+2.0
	baz=188						
AOPR	Arecibo Observ	20.36	65	eP	P	00 02 59.9	-0.5
	comp=E,36nm,0.8s						
OBIP	Obispado Ponce	20.39	66	eP	P	00 02 59.3	-1.4
	comp=E,24nm,0.9s						
BRAL	Brewton	20.58	358	eP	P	00 03 04.2	+1.5
	comp=E,65nm,1.0s						
BRAL	Brewton	20.58	358	P	P	00 03 05.0	+2.3
	baz=177						
349A	Repton	20.77	358	P	P	00 03 06.5	+1.8
	baz=177						
SJG	San Juan	20.82	66	P	P	00 03 02.1	-3.3
	comp=E,7.9nm,0.7s,baz=212,slow=19,SNR=2.2						
353A	Camilla	20.82	5	P	P	00 03 06.9	+1.6
	baz=185						
TIGA	Tifton	20.97	6	eP	P	00 03 08.7	+1.7
	comp=E,62nm,0.9s						
TIGA	Tifton	20.97	6	P	P	00 03 08.5	+1.6
	baz=187						
HKT	Hockley	21.34	336	eP	P	00 03 12.3	+1.5
	comp=E,98nm,1.7s						
250A	Grady	21.37	360	eP	P	00 03 11.5	+0.3
	comp=E,23nm,0.8s						
250A	Grady	21.37	360	P	P	00 03 12.8	+1.6
	baz=179						
249A	Camden	21.39	358	P	P	00 03 13.2	+1.8
	baz=177						
252A	Lumpkin	21.43	3	P	P	00 03 13.0	+1.1
	baz=183,SNR=5.5						
251A	Midway	21.50	2	P	P	00 03 14.1	+1.5
	baz=182,SNR=5.8						
254A	Abbeville	21.51	7	P	P	00 03 14.0	+1.4
	baz=187						
253A	Americus	21.54	5	eP	P	00 03 15.2	+2.2
	comp=E,48nm,1.0s						
253A	Americus	21.54	5	P	P	00 03 14.1	+1.1
	baz=185						
255A	Hazlehurst	21.60	9	eP	P	00 03 14.2	+0.6
	comp=E,55nm,1.3s						
255A	Hazlehurst	21.60	9	P	P	00 03 14.8	+1.2
	baz=189						
833A	Chaparral WMA,	21.64	327	P	P	00 03 16.7	+2.6
	baz=142,SNR=5.3						
256A	Glennville	21.74	10	P	P	00 03 16.6	+1.4
	baz=191						
151A	Opelika	21.93	2	P	P	00 03 18.5	+1.2
	baz=182,SNR=13						
149A	Jones	22.00	359	P	P	00 03 19.5	+1.5
	baz=178,SNR=13						
150A	Eclectic	22.00	0	P	P	00 03 19.5	+1.5
	baz=180,SNR=32						
148A	Greensboro	22.08	357	P	P	00 03 20.0	+1.2
	baz=176						
152A	Waverly Hall	22.10	3	P	P	00 03 20.3	+1.2
	baz=183,SNR=18						
153A	F

LRAL	Lakeview Retre baz=177,SNR=13	22.44	358	P	P	00 03 24.0	+1.3
156A	Sylvania baz=192	22.47	10	P	P	00 03 24.1	+1.1
NATX	Nacogdoches comp=E,38nm,0.8s	22.57	341	eP	P	00 03 25.0	+0.9
NATX	Nacogdoches baz=157	22.57	341	P	P	00 03 24.5	+0.5
157A	Early Branch baz=193	22.58	11	P	P	00 03 25.2	+1.0
Z49A	Columbiana baz=179,SNR=15	22.59	359	P	P	00 03 25.5	+1.2
Z52A	Williamson baz=184,SNR=9.0	22.64	4	P	P	00 03 26.2	+1.4
Z50A	Ashland baz=180,SNR=13	22.65	1	P	P	00 03 25.7	+0.7
Z51A	Franklin baz=182	22.73	2	P	P	00 03 27.6	+1.9
435B	Jarrell baz=150	22.80	334	P	P	00 03 27.5	+1.0
Z53A	Monticello baz=186,SNR=8.0	22.80	6	P	P	00 03 27.5	+1.0
Z54A	Sparta baz=188	22.84	7	P	P	00 03 28.1	+1.2
GOGA	Godfrey comp=E,98nm,2.0s	22.94	6	eP	P	00 03 28.4	+0.4
GOGA	Godfrey baz=186,SNR=7.0	22.94	6	P	P	00 03 28.6	+0.7
Z57A	Bowman baz=193	23.24	12	P	P	00 03 31.6	+0.5
Y49A	Blount Mountai comp=E,27nm,0.8s	23.25	360	eP	P	00 03 31.6	+0.4
Y49A	Blount Mountai baz=179,SNR=16	23.25	360	P	P	00 03 31.7	+0.5
Y50A	Piedmont baz=181,SNR=14	23.29	1	P	P	00 03 32.0	+0.5
Y51A	Rockmart baz=182,SNR=18	23.31	2	P	P	00 03 32.3	+0.5
Y48A	Jasper baz=177,SNR=8.0	23.32	358	P	P	00 03 32.6	+0.7
Y52A	Lilburn baz=185,SNR=8.7	23.34	4	P	P	00 03 32.7	+0.7
Y53A	Monroe baz=186,SNR=14	23.37	5	P	P	00 03 32.9	+0.6
Z41A	Richland Creek comp=E,40nm,1.0s	23.45	346	eP	P	00 03 32.9	-0.3
Z41A	Richland Creek baz=163,SNR=5.1	23.45	346	P	P	00 03 33.0	-0.2
Z58A	St. Stephen baz=195	23.47	13	P	P	00 03 34.0	+0.7
Y54A	Tignall baz=188,SNR=12	23.47	7	P	P	00 03 34.1	+0.7
JCT	Junction City comp=E,11nm,0.8s	23.57	329	eP	P	00 03 34.7	+0.2
JCT	Junction City baz=144	23.57	329	P	P	00 03 34.5	0.0
Y55A	Saluda baz=190,SNR=9.3	23.66	9	P	P	00 03 34.0	-1.3
WHTX	Lake Whitney, comp=E,26nm,0.9s	23.79	336	eP	P	00 03 37.1	+0.6
X48A	Hartselle comp=E,12nm,0.8s	23.85	358	eP	P	00 03 36.4	-0.7
X48A	Hartselle baz=178,SNR=8.1	23.85	358	P	P	00 03 36.7	-0.4
X50B	Fort Payne baz=181,SNR=6.0	23.86	1	P	P	00 03 37.0	-0.1
CCAR	Cane Creek comp=E,53nm,1.2s	23.86	348	eP	P	00 03 36.1	-1.1
X49A	Woodville baz=179,SNR=12	23.90	360	P	P	00 03 37.6	0.0
WLAR	White Oak Lake comp=E,33nm,0.9s	23.94	346	eP	P	00 03 38.3	+0.4
X47A	Russelville baz=176,SNR=37	23.95	357	P	P	00 03 37.7	-0.4
X51A	Calhoun comp=E,25nm,0.8s	23.98	3	eP	P	00 03 37.8	-0.5
X51A	Calhoun baz=183,SNR=7.6	23.98	3	P	P	00 03 38.3	-0.1
X53A	Estanollee baz=186	24.04	6	P	P	00 03 38.9	+0.1
X46A	Booneville baz=174,SNR=9.2	24.05	355	P	P	00 03 37.9	-1.0
OXF	Oxford comp=E,80nm,1.0s	24.08	353	eP	P	00 03 38.3	-0.9
OXF	Oxford baz=172,SNR=8.1	24.08	353	P	P	00 03 38.3	-0.9
X52A	Dahlonega baz=185,SNR=6.5	24.08	5	P	P	00 03 39.3	0.0
JSC	Jenkinsville comp=E,22nm,0.7s	24.10	10	eP	P	00 03 39.1	-0.3
X54A	Belton baz=189	24.19	8	P	P	00 03 39.9	-0.3
X55A	Gracelyn & Ava baz=190,SNR=10	24.22	9	P	P	00 03 40.8	+0.2
X56A	White Oak baz=192	24.34	10	P	P	00 03 42.0	+0.3
W49A	Belvidere baz=179,SNR=19	24.51	360	P	P	00 03 42.9	-0.3
W48A	Pulaski baz=178,SNR=30	24.54	359	P	P	00 03 43.3	-0.1
PAULI	Pauline comp=E,28nm,0.9s	24.54	9	eP	P	00 03 43.5	+0.1
W52A	Murphy baz=185,SNR=6.4	24.57	4	P	P	00 03 44.3	+0.5
W51A	Cleveland baz=183,SNR=10	24.58	3	P	P	00 03 44.2	+0.4
BIRD	Birdtown, Kers comp=E,43nm,1.5s	24.60	11	eP	P	00 03 43.8	-0.2
W50A	Signal Mountai comp=E,19nm,0.8s	24.60	2	eP	P	00 03 43.1	-0.9
W50A	Signal Mountai baz=182,SNR=8.5	24.60	2	P	P	00 03 43.8	-0.2
W46A	Michie baz=174	24.60	356	P	P	00 03 44.0	0.0
SWET	Sewanee comp=E,49nm,1.2s	24.61	0	eP	P	00 03 43.5	-0.6
X40A	Basin Creek Fa baz=164	24.64	347	P	P	00 03 44.3	-0.1
W47A	Westpoint baz=176,SNR=10	24.67	357	P	P	00 03 45.7	+1.0
W53A	Cullowhee baz=187,SNR=6.4	24.71	6	P	P	00 03 45.4	+0.3
W54A	Cherokee Point baz=189,SNR=11	24.74	8	P	P	00 03 45.8	+0.5
UALR	University of comp=E,25nm,0.8s	24.81	348	eP	P	00 03 45.1	-0.8
TXAR	Lajitas Array comp=E,4.9nm,0.7s,baz=139,slow=9.1,SNR=67	24.86	321	P	P	00 03 47.9	+1.3
TXAR	PcP comp=E,2.1nm,0.8s,baz=142,slow=5.2,SNR=11				PcP	00 07 24.2	+1.6
MIAR	Mount Ida baz=162,SNR=18	24.87	345	P	P	00 03 45.7	-0.7
CPCT	Cooper Cave comp=E,31nm,1.3s	24.88	3	eP	P	00 03 46.0	-0.6
KMSC	Kings Mountain comp=E,20nm,0.8s	24.93	9	eP	P	00 03 47.0	+0.1
KMSC	Kings Mountain baz=191,SNR=7.7	24.93	9	P	P	00 03 45.8	-1.1
W56A	Indian Trail baz=193	25.05	11	P	P	00 03 48.3	+0.2
V50A	Pikevile baz=182,SNR=6.1	25.08	2	P	P	00 03 48.4	+0.1
V48A	Smith Brothers baz=178,SNR=5.9	25.13	359	P	P	00 03 48.2	-0.6
V49A	McMinnville baz=180,SNR=16	25.15	1	P	P	00 03 48.5	-0.5
W41B	Gary Mavity, V baz=166,SNR=13	25.18	348	P	P	00 03 48.5	-0.7
V53A	Saluda baz=187,SNR=5.5	25.24	6	P	P	00 03 50.3	+0.4
V47A	Nunnelly baz=176,SNR=12	25.24	357	P	P	00 03 49.1	-0.7
V51A	Loudon baz=184,SNR=9.8	25.24	3	P	P	00 03 50.0	+0.2
V46A	Holladay baz=175,SNR=6.0	25.25	356	P	P	00 03 48.2	-1.6
ABTX	Abilene, Hawle comp=E,23nm,0.8s	25.27	333	eP	P	00 03 50.8	+0.7
ABTX	Abilene, Hawle baz=147,SNR=11	25.27	333	P	P	00 03 51.0	+0.8
V52A	Sevierville baz=186	25.34	5	P	P	00 03 50.7	0.0
X37A	Clayton comp=E,9.3nm,0.8s	25.41	342	eP	P	00 03 50.8	-0.5
V54A	Nebo baz=189	25.46	8	P	P	00 03 50.9	-0.8
CLTN	Cedars of Leba comp=E,11nm,1.0s	25.48	360	eP	P	00 03 51.1	-0.8
W39A	Magazine comp=E,19nm,1.0s	25.54	345	eP	P	00 03 51.5	-1.0
W39A	Magazine baz=162,SNR=9.9	25.54	345	P	P	00 03 52.1	-0.3
WVT	Waverly comp=E,9.4nm,0.9s	25.56	357	eP	P	00 03 50.6	-2.0
WVT	Waverly baz=176	25.56	357	P	P	00 03 52.1	-0.6
V56A	Mocksville baz=192	25.72	11	P	P	00 03 54.3	+0.1
U46A	Springville baz=175	25.81	356	P	P	00 03 54.9	0.0
U50A	Jamestown baz=183,SNR=11	25.83	2	P	P	00 03 55.1	-0.1
U51A	La Follette baz=184	25.84	4	P	P	00 03 54.9	-0.3
U47A	Clarksville baz=177,SNR=5.5	25.84	358	P	P	00 03 54.0	-1.3
U48A	Cassie Pea, Po baz=179	25.90	359	P	P	00 03 55.4	-0.3
U49A	Red Boiling Sp baz=180,SNR=8.8	25.90	1	P	P	00 03 55.5	-0.2
U52A	Thorn Hill baz=186	25.90	5	P	P	00 03 55.4	-0.5
V57A	Coltrane Farms baz=194	25.93	12	P	P	00 03 56.2	+0.1
U53A	Fall Branch baz=188,SNR=8.2	25.96	7	P	P	00 03 56.4	+0.1
V58A	Windy Hill, Pi baz=196	25.99	13	P	P	00 03 56.5	0.0
TZTN	Tazewell baz=186	26.04	5	P	P	00 03 57.3	+0.3
V59A	Middlesex baz=198	26.17	15	P	P	00 03 58.1	0.0
U54A	Nelsons Funny comp=E,19nm,0.8s	26.20	8	eP	P	00 03 58.0	-0.6
U54A	Nelsons Funny baz=189	26.20	8	P	P	00 03 58.6	0.0
U56A	King baz=193	26.26	11	P	P	00 03 59.4	+0.4
U55A	TA2, Sparta baz=191	26.30	9	P	P	00 03 59.9	+0.4
T47A	Sharon Grove baz=178,SNR=6.0	26.39	358	P	P	00 03 59.3	-0.8
T51A	Gray baz=184	26.43	4	P	P	00 04 00.4	-0.2
T50A	Nancy baz=183	26.43	2	P	P	00 04 00.2	-0.4
U40A	Yellville baz=165,SNR=9.5	26.44	348	P	P	00 03 59.8	-0.9
T46A	Princeton baz=176,SNR=9.9	26.47	357	P	P	00 04 00.2	-0.7
T49A	Edmonton baz=181,SNR=7.7	26.50	1	P	P	00 04 00.8	-0.3
U57A	Blanch baz=195	26.55	12	P	P	00 04 01.6	0.0
T52A	Hallie comp=E,27nm,1.3s	26.65	6	eP	P	00 04 02.3	-0.2
T52A	Hallie baz=187	26.65	6	P	P	00 04 02.7	+0.1
U58A	Oxford baz=196	26.69	14	P	P	00 04 02.8	-0.1
WMOK	Wichita Mounta baz=151,SNR=26	26.73	336	P	P	00 04 04.6	+1.2
TUL1	Leonard comp=E,19nm,0.9s	26.76	342	eP	P	00 04 02.0	-1.6
TUL1	Leonard baz=158,SNR=6.3	26.76	342	P	P	00 04 02.4	-1.1
T54A	Tazewell baz=190	26.77	8	P	P	00 04 03.6	-0.1
T55A	Pulaski baz=191	26.95	10	P	P	00 04 05.6	+0.3
S48A	Wiedeman Farm, baz=180	27.04	0	P	P	00 04 05.7	-0.3
S46A	Don Dixon Farm baz=176	27.10	357	P	P	00 04 05.0	-1.6
S50A	Richmond baz=183	27.11	3	P	P	00 04 06.8	+0.1
T57A	Hurt baz=195	27.11	12	P	P	00 04 06.7	0.0
S51A	Beattyville baz=185,SNR=6.0	27.12	5	P	P	00 04 05.6	-1.2
S49A	Springfield baz=182	27.18	2	P	P	00 04 06.7	-0.6
S52A	Salyersville baz=186	27.20	5	P	P	00 04 07.4	-0.2
S44A	Carbondale baz=173	27.22	355	P	P	00 04 07.0	-0.7
S53A	Williamson baz=188	27.31	7	P	P	00 04 08.3	-0.3
WCI	Wyandotte Cave comp=E,29nm,0.9s	27.61	360	eP	P	00 04 10.4	-0.8
WCI	Wyandotte Cave baz=179	27.61	360	P	P	00 04 10.3	-0.8
S55A	Lewisburg baz=192	27.63	10	P	P	00 04 10.6	-0.8
R47A	Wooly Knot Far baz=179,SNR=5.6	27.68	359	P	P	00 04 10.8	-1.0
R49A	Shelbyville baz=182	27.69	2	P	P	00 04 11.3	-0.6
R50A	Paris baz=184	27.71	3	P	P	00 04 11.6	-0.5
R45A	Skylar, Fairfi baz=175	27.74	356	P	P	00 04 11.8	-0.5
R51A	Hillsboro baz=185,SNR=8.6	27.78	4	P	P	00 04 11.8	-0.8
R48A	Northridge Ran baz=180	27.78	1	P	P	00 04 11.8	-0.9
CCM	Cathedral Cave comp=E,18nm,1.0s	27.81	351	eP	P	00 04 11.6	-1.3
CCM	Cathedral Cave baz=169	27.81	351	P	P	00 04 12.0	-1.0
MSTX	Muleshoe baz=143,SNR=7.8	27.87	329	P	P	00 04 13.0	-0.7
R52A	Catlettsburg baz=187	27.90	6	P	P	00 04 13.4	-0.3
R54A	Victor baz=190	27.95	9	P	P	00 04 13.8	-0.5
S58A	Poland Farm, P baz=197	27.97	14	P	P	00 04 14.1	-0.2
R53A	Hurricane baz=188	27.97	7	P	P	00 04 13.9	-0.4
Q48A	North Vernon baz=181	28.31	1	P	P	00 04 16.8	-0.6
Q47A	Bedord North L baz=179,SNR=8.3	28.32	360	P	P	00 04 16.4	-1.1
Q45A	Warren Harvey, baz=176,SNR=5.9	28.33	357	P	P	00 04 16.7	-0.9
PTGA	Pitinga comp=E,7.0nm,0.8s,baz=310,slow=7.6,SNR=12	28.36	112	P	P	00 04 18.4	+0.2
PTGA	Pitinga comp=E,19nm,1.3s	28.36	112	eP	P	00 04 18.8	+0.6
Q49A	Aurora baz=182	28.41	2	P	P	00 04 16.8	-1.5
R57A	Stanardsville baz=196	28.52	13	P	P	00 04 19.1	-0.2
Q51A	Peebles baz=186,SNR=12	28.52	5	P	P	00 04 19.0	-0.3
Q53A	Leroy baz=189	28.55	8	P	P	00 04 19.1	-0.4
Q52A	Bidwell baz=188,SNR=8.2	28.56	6	P	P	00 04 19.2	-0.4
Q54A	Coxs Mills comp=E,17nm,0.9s	28.76	9	eP	P	00 04 21.5	+0.1
Q54A	Coxs Mills baz=191	28.76	9	P	P	00 04 21.1	-0.3
P48A	Milroy baz=181,SNR=5.0	28.85	1	P	P	00 04 21.0	-1.2
P47A	Martinsville baz=180	28.87	360	P	P	00 04 20.8	-1.5
Q55A	Buckhannon baz=192	28.89	10	P	P	00 04 22.6	-0.1
P45A	Graceland, Par baz=176	28.94	358	P	P	00 04 22.2	-0.8
P49A	Miami Univ. Ec baz=183	28.94	2	P	P	00 04 21.7	-1.4
P51A	Williamsport baz=186	29.00	5	P	P	00 04 22.8	-0.7
P50A	Jamestown baz=184	29.07	4	P	P	00 04 23.5	-0.6
Q56A	Snyder Ridge, baz=194	29.10	11	P	P	00 04 24.9	+0.5
P53A	Whipple baz=189,SNR=8.6	29.18	8	P	P	00 04 24.9	-0.2
P52A	Corning baz=188,SNR=12	29.24	6	P	P	00 04 25.1	-0.5
P55A	Reedsville baz=192	29.44	10	P	P	00 04 27.1	-0.4
O49A	Covington baz=183	29.61	3	P	P	00 04 28.2	-0.8
O50A	Cable baz=185,SNR=8.3	29.61	4	P	P	00 04 27.8	-1.2
O47A	Sheridan baz=180	29.61	0	P	P	00 04 27.3	-1.6
P56A	Dayton Farm, R baz=194	29.62	12	P	P	00 04 29.5	+0.5
O48A	Farmland baz=182,SNR=5.1	29.65	2	P	P	00 04 28.0	-1.3
O45A	Potomac baz=177	29.66	358	P	P	00 04 27.9	-1.5
O51A	Pataskala baz=187	29.70	6	P	P	00 04 28.9	-0.9
ACSO	Alum Creek Sta baz=186,SNR=6.4	29.75	5	P	P	00 04 29.2	-0.9
O52A	Adamsville baz=188,SNR=7.1	29.75	7	P	P	00 04 29.6	-0.5
P57A	Homestead Farm baz=196	29.77	13	P	P	00 04 29.8	-0.5
SFIN	Lafayette baz=178,SNR=5.6	29.77	359	P	P	00 04 29.0	-1.4
O53A	New Philadelph baz=189,SNR=8.5	29.95	8	P	P	00 04 30.8	-1.2
O54A	Avella baz=191	30.01	9	P	P	00 04 31.3	-1.2
HDIL	Hopedale baz=174	30.06	355	P	P	00 04 31.5	-1.4
N44A	Piper City baz=176	30.22	357	P	P	00 04 32.4	-1.9
N45A	Kentland baz=177	30.25	358	P	P	00 04 32.8	-1.8
N48A	Decatur baz=182	30.25	2	P	P	00 04 32.8	-1.9
N50A	Nevada baz=186	30.27	5	P	P	00 04 33.4	-1.4
N46A	Monticello baz=179	30.28	359	P	P	00 04 33.2	-1.6
LENM	Lemitar	30.28	324	eP	P	00 04 37.0	+1.8
N49A	Columbus Grove comp=E,26nm,0.8s	30.35	3	eP	P	00 04 33.9	-1.6
N49A	Columbus Grove baz=184,SNR=8.7	30.35	3	P	P	00 04 34.2	-1.3
N43A	Stutzman Famil baz=174	30.43	356	P	P	00 04 35.3	-0.9
N52A	McGinn's Farm, baz=188	30.45	7	P	P	00 04 35.6	-0.8
LAZ	Ladron	30.54	324	eP	P	00 04 36.8	-0.7
O57A	Amberson baz=196	30.55	13	P	P	00 04 37.4	+0.1
N53A	Lisbon comp=E,14nm,0.9s	30.55	8	eP	P	00 04 36.1	-1.2
N53A	Lisbon baz=190	30.55	8	P	P	00 04 35.7	-1.6
ANMO	Albuquerque comp=E,3.7nm,0.8s	30.56	326	eP	P	00 04 39.2	+1.6
ANMO	Albuquerque baz=138	30.56	326	P	P	00 04 38.9	+1.2
TASM	ASL Pad, Albuq baz=138	30.56	326	P	P	00 04 38.9	+1.2
TASM	ASL Pad, Albuq baz=138	30.56	326	P	P	00 04 38.4	+0.7
SSPA	Standing Stone comp=E,27nm,1.4s	30.90	12	eP	P	00 04 40.2	-0.1
SSPA	Standing Stone baz=196	30.90	12	P	P	00 04 40.5	+0.1
M49A	Liberty Center baz=184	30.91	3	P	P	00 04 39.3	-1.1
O59A	Robesonia baz=199	30.98	15	P	P	00 04 39.9	-1.2
M41A	Milan baz=171	30.99	354	P	P	00 04 39.5	-1.6
N57A	Milroy baz=196	31.09	13	P	P	00 04 40.4	-1.6
N56A	West Decatur baz=195,SNR=5.8	31.09	12	P	P	00 04 41.8	-0.2
M53A	WI Miller and baz=190,SNR=7.2	31.20	8	P	P	00 04 41.4	-1.6
O60A	Telford baz=200	31.20	16	P	P	00 04 41.2	-1.7
T25A	Trinidad baz=143	31.20	331	P	P	00 04 44.0	+0.7
M52A	Chesterland baz=189	31.21	7	P	P	00 04 42.4	-0.7
L48A	N Adams baz=183	31.36	3	P	P	00 04 43.0	-1.4
L42A	Oliver, Polo comp=E,34nm,0.9s	31.53	355	eP	P	00 04 44.2	-1.7
L42A	Oliver, Polo baz=173,SNR=11	31.53	355	P	P	00 04 44.3	-1.6
M55A	Ridgway baz=194	31.53	11	P	P	00 04 45.2	-0.8
L43A	Garden Prairie baz=175	31.64	356	P	P	00 04 45.2	-1.7
M56A	Emporium baz=195	31.66	11	P	P	00 04 45.6	-1.5
N59A	State Game Lan baz=199	31.66	15	P	P	00 04 47.0	-0.1
L40A	Anamosa comp=E,18nm,1.0s	31.75	353	eP	P	00 04 46.2	-1.6
L40A	Anamosa baz=170	31.75	353	P	P	00 04 45.8	-2.0
L53A	Girard baz=191	31.76	8	P	P	00 04 46.7	-1.3
SCIA	State Center baz=166	31.89	350	P	P	00 04 47.3	-1.7
ERPA	Erie baz=191	31.96	9	P	P	00 04 48.2	-1.5
LPAZ	La Paz comp=E,1.3nm,0.9s,baz=335,slow=4.5,SNR=5.7	32.06	146	P	P	00 04 53.1	+1.7
LPAZ	LR comp=E,239nm,18.3s,baz=344,slow=37				LR	00 18 27.2	
LPAZ	La Paz	32.06	146	eP	P	00 04 48.1	-3.4
K47A	Vermontville baz=182	32.06	2	P	P	00 04 48.6	-2.0
SDCO	Great Sand Dun comp=E,4.6nm,0.8s	32.21	331	eP	P	00 04 52.4	+0.1
SDCO	Great Sand Dun baz=142	32.21	331	P	P	00 04 52.2	-0.1
K48A	Perry baz=184	32.23	3	P	P	00 04 50.9	-1.1
K42A	Prairie Point, baz=174	32.27	356	P	P	00 04 50.7	-1.7
L55A	Hinsdale baz=194	32.28	11	P	P	00 04 49.7	-2.8
JFWS	Jewell Farm baz=172	32.48	354	P	P	00 04 52.9	-1.3
J48A	Bridge Port baz=184	32.74	3	P	P	00 04 54.7	-1.8
J42A	Columbus baz=174	32.79	356	P	P	00 04 54.9	-2.0
BINY	Binghamton baz=198	32.82	14	P	P	00 04 55.8	-1.4
K55A	Perry baz=194	32.88	11	P	P	00 04 56.5	-1.2
X16A	Lo Mia Camp, P comp=E,6.1nm,1.1s	33.16	320	eP	P	00 05 02.7	+2.2
MVCO	Mesa Verde baz=137	33.34	327	P	P	00 05 00.9	-1.3
I42A	Draeger Farm, baz=175	33.35	356	P	P	00 05 00.5	-1.4
ACTO	Acton baz=191	33.41	8	P	P	00 05 00.9	-1.5
I51A	Listowel baz=189	33.48	7	P	P	00 05 01.7	-1.2
I41A	Arkdale baz=173	33.59	355	P	P	00 05 03.0	-0.9
BASO	Ashfield baz=188	33.62	6	P	P	00 05 03.2	-1.0
MNMC	Minye Minye comp=E,11nm,1.0s	33.68	151	eP	P	00 05 05.5	+0.2
BWLO	Walkerton baz=189	33.78	7	P	P	00 05 04.2	-1.3
I52A	Shelburne baz=190	33.85	8	P	P	00 05 04.4	-1.7
DRWO	Darlington Wes baz=193	33.87	10	P	P	00 05 04.4	-2.0
H43A	Windswept, Lux comp=E,21nm,1.2s	33.87	358	eP	P	00 05 04.8	-1.6
H43A	Windswept, Lux baz=177	33.87	358	P	P	00 05 04.4	-2.0
WLVO	Wesleyville baz=193	33.98	10	P	P	00 05 05.3	-2.0
SMCO	Snowmass comp=E,3.7nm,1.0s	34.05	330	eP	P	00 05 09.2	+0.7
H48A	Harrisville baz=185	34.17	4	P	P	00 05 07.2	-1.7
PV13	Radium Mtn., P	34.21	327	eP	P	00 05 11.4	+1.6

comp=E,4.7nm,0.9s
BMRO Meriville Lake 34.24 6 P P 00 05 07.7 -1.9
baz=188
PECO Prince Edward 34.25 12 P P 00 05 08.2 -1.4
baz=196
PV03 Paradox Valley 34.30 327 *e*P P 00 05 11.4 +1.0
comp=E,5.0nm,0.8s
PV05 Paradox Valley 34.30 327 *e*P P 00 05 11.2 +0.7
comp=E,5.4nm,0.7s
PV12 Saucer Basin, 34.32 328 *e*P P 00 05 12.3 +1.7
comp=E,9.7nm,0.8s
PV18 Skein Mesa, Pa 34.32 327 *e*P P 00 05 11.9 +1.2
comp=E,6.9nm,0.7s
ECSD EROS Data Cent 34.33 347 *e*P P 00 05 07.3 -3.0
comp=E,5.8nm,1.0s
ECSD EROS Data Cent 34.33 347 P P 00 05 08.2 -2.1
baz=161
I55A Frankford 34.39 11 P P 00 05 09.6 -1.2
baz=195
G45A Suttons Bay 34.42 1 P P 00 05 09.8 -1.4
baz=181
PV04 Paradox Valley 34.43 328 *e*P P 00 05 13.1 +1.6
comp=E,8.9nm,1.0s
H52A Wyevale 34.45 8 P P 00 05 09.6 -1.7
baz=191
G47A Hillman 34.61 3 P P 00 05 10.5 -2.2
baz=184
G43A Wallace 34.66 358 P P 00 05 11.6 -1.5
baz=177
SADO Sadowa 34.68 9 P P 00 05 09.3 -4.1
comp=E,7.1nm,0.8s,baz=242,slow=3.8,SNR=9.4
G40A Rib Lake 34.82 355 P P 00 05 12.9 -1.6
baz=173
TOBO Tobermory, Bru 34.83 6 P P 00 05 12.8 -1.9
baz=188
G39A Holcombe 34.93 354 P P 00 05 13.5 -2.0
baz=171,SNR=11
H56A Elgin 35.03 12 P P 00 05 14.9 -1.5
baz=197
SPMN Marine on St. 35.06 352 P P 00 05 14.0 -2.7
baz=168,SNR=5.5
G53A Haliburton 35.11 9 P P 00 05 15.3 -1.8
baz=193
W13A Hualapai Mount 35.15 319 *e*P P 00 05 20.2 +2.3
F41A Three Lakes 35.20 356 P P 00 05 15.9 -2.0
baz=175
F43A Flat Rock, Esc 35.22 359 P P 00 05 16.0 -2.0
baz=178
PLVO Plevna 35.30 11 P P 00 05 16.9 -1.8
baz=195
BUKO Buck Lake 35.30 8 P P 00 05 15.5 -3.2
baz=191
F48A Evansville 35.34 4 P P 00 05 17.1 -1.9
baz=186
F44A Big Bay de Noc 35.35 360 P P 00 05 16.5 -2.6
baz=179,SNR=8.5
LONY Lake Ozonia 35.44 14 P P 00 05 18.2 -1.7
baz=200
F40A Park Falls 35.45 355 P P 00 05 17.2 -2.9
baz=173
F39A Loretta 35.52 354 P P 00 05 18.0 -2.7
baz=172,SNR=6.2
F37A Hinrichs Farm, 35.53 352 P P 00 05 18.6 -2.0
baz=169
G55A Calabogie 35.57 12 P P 00 05 19.3 -1.7
baz=196
MONP2 Monument Peak 35.64 313 P P 00 05 19.4 -2.6
baz=122
F52A Sundridge 35.66 8 P P 00 05 19.1 -2.7
baz=191
F38A Pierce - Schro 35.67 353 P P 00 05 19.2 -2.6
baz=170,SNR=6.9
E43A Lone Tree Farm 35.76 359 P P 00 05 20.2 -2.5
baz=178,SNR=8.4
SRU San Rafael Swe 35.82 327 *e*P P 00 05 23.8 +0.3
comp=E,5.7nm,0.8s
E42A Champion 35.84 358 P P 00 05 20.8 -2.5
baz=177
E47A Iron Bridge 35.92 3 P P 00 05 21.9 -2.1
baz=185
E44A Grand Marais A 36.00 0 P P 00 05 23.3 -1.4
baz=180
MTPU Mount Pierson 36.00 324 *e*P P 00 05 26.7 +1.4
comp=E,14nm,1.8s
ALGO Algonquin Park 36.01 10 P P 00 05 22.7 -2.1
baz=193,SNR=5.2
ORIO Orleans, Innes 36.01 13 P P 00 05 22.6 -2.2
baz=198
E48A Lockeyer 36.02 5 P P 00 05 23.2 -1.7
baz=186
PFO Pinyon Flats O 36.05 314 P P 00 05 25.4 0.0
baz=122
GMRC Granite Mounta 36.14 317 P P 00 05 26.4 +0.1
baz=125
RWWY Rawlins 36.15 333 *e*P P 00 05 26.6 +0.2
comp=E,7.1nm,0.9s
P17A Butcher Ranch, 36.20 327 *e*P P 00 05 27.6 +0.9
comp=E,6.4nm,0.9s
F55A Otter Lake 36.20 12 P P 00 05 25.2 -1.3
baz=196
E52A Mattawa 36.23 9 P P 00 05 25.1 -1.6
baz=192
E38A The Farm, Brul 36.27 354 P P 00 05 25.1 -2.0
baz=171
D46A Sault St. Mari 36.31 2 P P 00 05 25.7 -1.6
baz=183
E51A G1948 Merrick 36.36 8 P P 00 05 25.9 -1.9
baz=191
CCUT Cedar City 36.37 322 *e*P P 00 05 28.7 +0.4
comp=E,3.7nm,1.2s
E53A Dumoine, Ponti 36.48 10 P P 00 05 27.2 -1.7
baz=194
D47A Chapleau 36.53 4 P P 00 05 27.5 -1.7
baz=185
E54A Lac Daplat, Po 36.62 10 P P 00 05 28.4 -1.6
baz=195
D49A Beulah Townshi 36.88 5 P P 00 05 30.0 -2.2
baz=188
D52A ZEK Kipawa Sen 36.95 9 P P 00 05 31.7 -1.1
baz=192
LVC Limon Verde 37.01 153 P P 00 05 36.0 +2.1
comp=E,2.6nm,0.8s,baz=270,slow=2.7,SNR=3.9
D53A Lac Vacive, Po 37.16 10 P P 00 05 33.6 -1.0
baz=194
PSUT Pine Spring 37.30 323 *e*P P 00 05 37.1 +0.9
comp=E,3.3nm,1.0s
C40A Isle Royale Na 37.38 357 P P 00 05 34.7 -1.7
baz=175
D54A Lac Fusel, La 37.41 11 P P 00 05 35.0 -1.7
baz=195
EYMN Ely 37.59 354 P P 00 05 36.1 -2.1
baz=171
TPNV Topopah Spring 37.79 319 *e*P P 00 05 41.5 +1.1
comp=E,13nm,1.1s
TPNV Topopah Spring 37.79 319 P P 00 05 42.5 +2.2
baz=126,SNR=12
EDW2 Edwards Air Fo 37.80 315 P P 00 05 40.2 -0.1
baz=122
DUG Dugway, Tooele 37.83 326 *e*P P 00 05 40.8 +0.2
comp=E,4.0nm,1.0s
DUG Dugway, Tooele 37.83 326 P P 00 05 41.2 +0.6
baz=134
LRMC Laurel Mtn Rad 37.91 316 P P 00 05 42.3 +1.0
baz=123
FURC Furnace Creek, 37.91 318 P P 00 05 41.4 +0.3
baz=125,SNR=5.7
PD31 Pinedale Array 38.07 332 *e*P P 00 05 42.9 +0.3
comp=E,4.1nm,1.1s
PDAR Pinedale Array 38.07 332 P P 00 05 42.0 -0.7
comp=E,1.5nm,0.7s,baz=126,slow=10,SNR=11
PDAR PcP **PcP 00 07 57.6 -0.2**
comp=E,0.9nm,0.7s,baz=145,slow=5.7,SNR=5.1
PDAR LR LR 00 23 49.2
comp=E,94nm,18.1s,baz=132,slow=40
MPMC Manual Prospec 38.09 317 P P 00 05 43.5 +0.5
baz=124
BGU Big Grassy Mou 38.46 327 *e*P P 00 05 46.0 +0.1
comp=E,4.9nm,1.0s
LATQ La Tuque 38.47 15 P P 00 05 44.5 -1.1
baz=201
AGMN Agassiz Nation 38.54 350 P P 00 05 44.5 -1.7
baz=164
GRAC Grapevine Rang 38.55 318 P P 00 05 49.1 +2.5
baz=125,SNR=8.7
ISA Isabella, Lake 38.55 316 P P 00 05 49.1 +2.5
baz=122
CWC Cottonwood Cre 38.70 317 P P 00 05 49.8 +1.8
baz=124

MDND Maddock 38.91 346 *e*P P 00 05 48.1 -1.2
comp=E,29nm,0.8s
VES Vestal, Richgr 39.06 316 P P 00 05 52.7 +1.9
baz=122
PKM Mcpherson Peak 39.08 314 P P 00 05 52.1 +0.8
baz=120
TPAW Teton Pass 39.28 331 *e*P P 00 05 53.2 +0.4
comp=E,6.0nm,1.0s
MOOW Moose Ponds 39.38 332 *e*P P 00 05 53.9 +0.3
comp=E,3.2nm,1.0s
FXWY Fox Creek 39.42 331 *e*P P 00 05 54.6 +0.6
MATQ Matagami 39.78 9 P P 00 05 54.4 -2.1
baz=193
RLMT Red Lodge 39.79 334 P P 00 05 57.0 -0.1
baz=143
NV11 Mina Array Sit 39.89 320 *e*P P 00 05 59.3 +1.4
comp=E,1.2nm,1.0s
OMMB Old Mammoth Mi 39.97 318 *e*P P 00 06 00.6 +1.8
comp=E,21nm,1.6s
NVAR Mina Array Bea 39.98 319 P P 00 06 00.4 +1.6
comp=E,7.8nm,0.8s,baz=136,slow=7.4,SNR=43
NVAR PcP **PcP 00 08 05.7 +1.7**
comp=E,3.3nm,0.8s,baz=138,slow=4.5,SNR=9.2
MDPB Devils Postpil 40.03 318 *e*pP P 00 06 02.1 +2.9
KVN Kaiserville 40.22 320 *e*P P 00 06 02.7 +2.1
comp=E,11nm,1.0s
YHH Holmes Hill 40.22 333 *e*P P 00 06 02.4 +1.6
comp=E,4.1nm,1.0s
RYN Ryn 40.24 320 *e*P P 00 06 02.8 +2.0
comp=E,9.4nm,1.0s
ULM Lac du Bonnet 40.43 350 P P 00 05 58.5 -3.5
comp=E,5.2nm,0.9s,baz=164,slow=8.7,SNR=4.3
ULM PcP **PcP 00 08 05.0 +0.1**
comp=E,4.1nm,0.7s,baz=131,slow=4.4,SNR=3.3
ULM LR LR 00 22 56.7
comp=E,80nm,18.1s,baz=42,slow=37
GCMT Greycliff 40.49 335 *e*P P 00 06 02.8 0.0
WAKR Walker 40.75 319 *e*P P 00 06 06.8 +1.7
comp=E,13nm,1.1s
YERR Yerington 40.90 320 *e*P P 00 06 07.5 +1.2
comp=E,14nm,1.2s
HLID Hailey 41.04 328 P P 00 06 07.3 -0.1
baz=135
BOZ Bozeman (W) 41.20 333 P P 00 06 08.8 +0.2
baz=140
PAHR Pah Rah Range 41.41 320 *e*P P 00 06 11.7 +1.3
comp=E,6.3nm,1.1s
DLMT Dillon 41.46 332 *e*P P 00 06 11.9 +1.1
comp=E,7.5nm,1.3s
BEKR Beckworth 42.11 320 *e*P P 00 06 17.9 +1.6
comp=E,11nm,1.0s
ORV Oroville 42.67 319 *e*P P 00 06 22.8 +2.2
comp=E,14nm,1.3s
MSO Missoula 43.18 332 *e*P P 00 06 25.1 +0.4
comp=E,5.0nm,1.0s
MSO Missoula 43.18 332 P P 00 06 24.6 -0.2
baz=138
O03E Paynes Creek 43.27 319 P P 00 06 26.4 +0.9
baz=123
M04C Macdoel 44.12 321 P P 00 06 33.7 +1.3
baz=124
I07A Izee 44.13 325 *e*P P 00 06 32.6 +0.2
comp=E,15nm,1.6s
L04D Klamath Falls 44.66 321 P P 00 06 37.7 +1.0
baz=124
J04D Umpqua Nationa 45.12 323 P P 00 06 42.1 +1.7
baz=125
I04A Tendick Farm, 45.62 323 P P 00 06 44.8 +0.6
baz=126
BDFB Brasilia 45.86 124 P P 00 06 46.7 +0.1
comp=E,4.0nm,0.6s,baz=277,slow=6.6,SNR=6.7
BDFB Brasilia 45.86 124 *e*P P 00 06 45.5 -1.0
comp=E,10nm,1.0s
BDFB *e*P P **00 06 46.7 +0.1**
G05D Wamic, OR 45.86 325 P P 00 06 47.5 +1.4
baz=128
J01E Myrtle Point 46.18 322 P P 00 06 49.8 +1.2
baz=123
F05D White Salmon 46.34 326 P P 00 06 51.4 +1.6
baz=128
SCHQ Schefferville 46.80 15 P P 00 06 50.6 -2.6
comp=E,7.5nm,0.7s,baz=203,slow=7.0,SNR=3.7
SCHQ LR LR 00 26 54.4
comp=E,120nm,18.9s,baz=200,slow=37
G03D McMinnville, O 46.95 324 P P 00 06 56.2 +1.7
baz=126
D03D Eldon 48.24 327 P P 00 07 05.2 +0.7
baz=128
PLCA Paso Flores 52.98 165 P P 00 07 44.4 +3.9
comp=E,6.9nm,1.0s,baz=352,slow=9.0,SNR=9.7
PLCA Paso Flores 52.98 165 *e*pP P 00 07 42.3 +1.8
YKA Yellowknife Ar 55.81 345 P P 00 07 58.5 -2.1
comp=E,2.2nm,0.9s,baz=137,slow=7.4,SNR=15
YKA PcP **PcP 00 08 59.5 -0.1**
comp=E,0.7nm,0.7s,baz=147,slow=4.2,SNR=4.4
USHA Ushuaia 66.78 169 LR LR 00 33 45.8
comp=E,3μm,21.4s,baz=113,slow=32
ILAR Eielson Array 68.29 336 P P 00 09 23.6 -1.0
comp=E,2.0nm,0.9s,baz=113,slow=4.4,SNR=18
ILAR LR LR 00 46 08.5
comp=E,104nm,18.9s,baz=142,slow=42
RND Reindeer 68.60 335 *e*P P 00 09 26.3 -0.3
comp=E,15nm,1.0s
BWN Browne 69.12 335 *e*P P 00 09 28.4 -1.3
comp=E,27nm,0.8s
TRF Thorofare Moun 69.22 334 *e*P P 00 09 29.4 -1.1
comp=E,6.8nm,0.9s
BPAW Bear Paw Mtn. 69.72 335 *e*P P 00 09 32.4 -1.1
comp=E,7.3nm,1.0s
TOLK Toolik Lake Re 70.74 340 P P 00 09 38.9 -0.8
baz=111
ESDC Sonseca Array 77.42 52 P P 00 10 15.8 -3.4
comp=E,1.6nm,0.8s,baz=285,slow=5.3,SNR=11
SONM Songino Array 120.86 350 PKP PKPdf 00 17 15.8 -0.7
comp=E,0.6nm,0.8s,baz=318,slow=1.9,SNR=3.7
GEYT Alibeck 121.38 33 PKP PKPdf 00 17 17.5 -0.2
comp=E,1.3nm,0.6s,baz=270,slow=1.5,SNR=5.3
KSRS Korea Array 122.57 328 PKP PKPdf 00 17 20.6 +0.7
comp=E,2.6nm,0.7s,baz=31,slow=0.9,SNR=13
WMQ Urumqi 125.65 5 *e*PKP PKPdf 00 17 25.8 +0.1
HHC Hu-ho-hao-te 126.34 343 *e*PKP PKPdf 00 17 22.0 -5.2
ASAR Alice Springs 139.65 246 PKP PKPdf 00 17 52.2 -0.3
comp=E,0.5nm,0.6s,baz=90,slow=1.3,SNR=4.1
CMAR Chiang Mai Arr 150.78 350 PKP PKPdf 00 18 11.0 -0.6
comp=E,1.5nm,0.4s,baz=326,slow=3.0,SNR=6.9
CMAR PKPbc **sPKPdf 00 18 16.6 +0.4**
comp=E,4.3nm,0.7s,baz=334,slow=3.1,SNR=19

MEX 09 00:02:09.8±0.5, 15°.20N×92°.88W, h106km±9km, MD3.8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.60**	**327**	***e*P**	Pn	00 02 25.8	-1.2
PCIG				*e*S	Sn	00 02 37.9	-1.9
THIG		**0.66**	**116**	***i*P**	Pn	00 02 26.2	-1.2
THIG				*i*S	Sn	00 02 39.6	-1.1
CCIG	**Comitan**	**1.29**	**34**	***e*P**	Pn	00 02 33.9	-0.2

MAN 09 00:18:14.5, 5°.76N×124°.13E, h7km, mb3.6, ML2.3, MS1.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.86**	**28**	***e*P**	Pg	00 18 30.4	-0.6
SKMP				*e*S	Sg	00 18 39.1	-3.1
CTBH	**Cotabato--PC H**	**1.46**	**4**	***i*P**	Pn	00 18 41.0	-0.2
CTBH				*i*S	Sn	00 18 57.1	-3.4
PAGZ	**Pagadian**	**2.20**	**340**	***e*P**	Pn	00 18 51.9	+0.3
PAGZ				*e*S	Sn	00 19 20.2	+1.1

*ISCJB **09** 00:21:28.1±2.7, 58°.75S±0°.03×25°.35W±0°.07, h1km±17km, mb5.4/54, MS4.9/31, Error ellipse: s-maj=6.8km s-min=4.7km az=149.9*
*MOS **09** 00:21:33.4±1.0, 58°.78S×25°.40W, h32km, mb5.6/28, MS4.9/6, Error ellipse: s-maj=19.4km s-min=10.3km az=101.2*
*NEIC **09** 00:21:34.6±1.4, 58°.72S×25°.36W, h33km±3km, mb5.3/60, MW5.2, Error ellipse: s-maj=16.5km s-min=13.6km az=50.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^{16}Nm; M_{rr}7.38; $M_{\theta\theta}$-1.21; $M_{\phi\phi}$-6.17; $M_{r\theta}$-2.99; $M_{\theta\phi}$4.22; $M_{\phi r}$2.55; Best double couple: $M_0$9.00000×10^{16} NP1:ϕ_s161.00000°, δ34.00000°, λ108.00000°. NP2: ϕ_s320.00000°, δ58.00000°, λ79.00000°. Principal axes: T 8.4300, Plg74.0000°, Azm200.0000°; N 0.9800, Plg10.0000°, Azm326.0000°; P -9.4000, Plg13.0000°, Azm59.0000°;*
*IDC **09** 00:21:34.6±1.4, 58°.72S×25°.31W, h33km±9km, mb5.1/23, mb1 5.1/25, mb1mx5.1/28, mbtmp5.3/25, ML5.4/2, MS4.5/10, Ms1 4.5/10, ms1mx4.3/24 Error ellipse: s-maj=12.7km s-min=10.8km az=42.0*
*GCMT **09** 00:21:37.6±0.2, 59°.03S±0°.02×24°.77W±0°.02, h35km, MW5.3/97, Moment Tensor Solution. s89,c149; s97,c151; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.89±.03; $M_{\theta\theta}$0.30±.02; $M_{\phi\phi}$-1.19±.02; $M_{r\theta}$-0.35±.03; $M_{\theta\phi}$0.08±.02; $M_{\phi r}$0.21±.03; Best double couple: $M_0$1.14300×10^{17} NP1:ϕ_s335.00000°, δ56.00000°, λ61.00000°. NP2:ϕ_s200.00000°, δ44.00000°, λ125.00000°. Principal axes: T 1.0650, Plg65.0000°, Azm190.0000°; N 0.1530, Plg24.0000°, Azm353.0000°; P -1.2200, Plg6.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 00:21:35.3±0.9, 58°.79S±0°.05×25°.36W±0°.05, h40km±7km, n775, σ0s99/798, mb5.4/50, MS4.9/32, 35C-14D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.62**	**301**	***e*Pn**	**Pn**	**00 23 27.4**	**+3.8**
VNA1	**Neumayer--Stat**	**13.88**	**156**	P	**Pn**	**00 24 47.4**	**-1.7**
VNA1				S	Sn	00 27 09.9	-12
VNA3	**Neumayer Olymp**	**14.08**	**159**	P	**Pn**	**00 24 49.8**	**-2.0**
VNA3				S	Sn	00 27 11.1	-15
VNA2	**Neumayer--Watz**	**14.28**	**156**	P	**Pn**	**00 24 52.3**	**-2.2**
baz=315,slow=15
VNA2 S Sn 00 27 19.0 -12
baz=320,slow=23
SNAA Sanae 15.84 154 P Pn 00 25 13.7 -1.4
SNAA S Sn 00 27 55.6 -14
SNAA Sanae 15.84 154 Pn Pn 00 25 13.3 -1.8
12nm,0.3s,baz=318,slow=15,SNR=79
SNAA Sn Sn 00 27 55.3 -14
3.6nm,0.3s,baz=321,slow=20,SNR=6.0
SNAA LR LR 00 30 06.4
comp=Z,3μm,20.2s,baz=313,slow=32
SNAA PcP **PcP 00 30 12.6 +1.1**
1.4nm,0.3s,baz=290,slow=2.1,SNR=6.0
SNAA Sanae 15.84 154 *e*Pn Pn 00 25 13.4 -1.6
103nm,0.7s
SNAA *e*PcP **PcP 00 30 12.6 +1.1**
SNAA Sanae 15.84 154 *e*P Pn 00 25 13.4 -1.6
SNAA pmax pmax
comp=Z,103nm,0.7s
PMSA Palmer Station 19.00 235 P Pn 00 25 54.0 0.0
comp=Z,14nm,0.3s,baz=73,slow=5.8,SNR=20
PMSA S **Sn 00 29 21.6 -3.9**
comp=Z,0.9nm,0.3s,baz=43,slow=7.7,SNR=2.0
PMSA LR LR 00 32 24.5
comp=Z,2μm,18.1s,baz=65,slow=34
PMSA Palmer Station 19.00 235 *e*P P 00 25 53.1 +0.1
comp=Z,556nm,1.5s
PMSA Palmer Station 19.00 235 *e*P P 00 25 50.9 -2.2
EFI East Falkland 19.80 277 *e*P Pn 00 26 04.3 +0.6
comp=Z,145nm,0.8s
EFI East Falkland 19.80 277 *e*P Pn 00 26 04.3 +0.6
EFI pmax pmax
comp=Z,145nm,0.8s
USHA Ushuaia 23.59 261 P P 00 26 41.9 -0.1
comp=Z,151nm,0.8s,baz=213,slow=7.1,SNR=55
USHA PcP **PcP 00 30 27.2 +1.5**
comp=Z,20nm,0.6s,baz=103,slow=3.1,SNR=8.5
GO10 Punta Arenas 25.76 263 *e*P P 00 27 01.6 -0.3
comp=Z,190nm,0.9s
GO09 Cerro Castillo 27.45 265 *e*P P 00 27 16.1 -0.9
comp=Z,139nm,1.4s
SYO Syowa Base 28.86 137 *e*P P 00 27 26.5 -2.9
SYO Syowa Base 28.86 137 *e*pP pP 00 27 35.4 -4.2
SYO Syowa Base 28.86 137 *e*sP sP 00 27 39.2 -4.9
SYO Syowa Base 28.86 137 *e*PP PP 00 28 33.2 -1.6
SYO Syowa Base 28.86 137 *e*PcP PcP 00 30 37.0 -0.6
TRQA Tornquist 31.35 295 *e*P P 00 27 51.9 +0.2
comp=Z,37nm,0.6s
TRQA Tornquist 31.35 295 *e*P P 00 27 51.9 +0.2
TRQA pmax pmax
comp=Z,37nm,0.6s
QSPA South Pole Qui 31.46 180 *e*P P 00 27 53.7 +1.1
comp=Z,113nm,0.6s
PLCA Paso Flores 33.51 282 P P 00 28 10.8 0.0
comp=Z,40nm,0.7s,baz=169,slow=8.0,SNR=120
PLCA PcP **PcP 00 30 51.0 +0.3**
comp=Z,6.0nm,0.6s,baz=80,slow=3.5,SNR=3.7
PLCA LR LR 00 41 48.1
comp=Z,1μm,18.7s,baz=148,slow=36
PLCA Paso Flores 33.51 282 *e*P P 00 28 10.7 0.0
comp=Z,77nm,1.0s
PLCA *e*PcP **PcP 00 30 51.0 +0.3**
PLCA Paso Flores 33.51 282 *e*P P 00 28 10.7 0.0
PLCA *e* 00 30 51.0
PLCA pmax pmax
comp=Z,77nm,1.0s
PLCA Paso Flores 33.51 282 *e*P P 00 28 10.7 0.0
CNLB Canela 34.27 318 *e*P P 00 28 15.9 -1.4
ITAB Concordia 36.62 318 *e*P P 00 28 37.4 -0.1
MAW Mawson 37.38 141 P P 00 28 43.3 -0.2
comp=Z,26nm,0.7s,baz=239,slow=11,SNR=30
MAW PcP **PcP 00 31 02.5 +1.0**
comp=Z,15nm,0.8s,baz=209,slow=3.3,SNR=7.5
MAW Mawson 37.38 141 *e*P P 00 28 36.4 -7.1
comp=Z,7.5nm,0.9s
MAW *e*PcP **PcP 00 31 02.5 +1.0**
TCA Tanti 38.10 299 *i*P P 00 28 48.8 -1.3
ESAR Angra dos Reis 38.24 331 *e*P P 00 28 51.8 +0.6
PARB Paraibuna 38.25 329 *e*P P 00 28 52.4 +1.0
SPB Sao Paulo 38.51 326 *e*P P 00 28 54.6 +1.1
ACAN Cantantal 38.52 295 *e*P P 00 28 53.0 -0.6
GO05 Huala 38.60 287 *e*P P 00 28 51.8 -2.5
comp=Z,124nm,1.1s
GO05 Huala 38.60 287 *i*P P 00 28 54.2 0.0
AAGR Agrelo 38.63 292 *e*P P 00 28 55.4 +0.8
CAM01 Campos-RJ 38.74 335 *e*P P 00 28 57.0 +1.6
ARCO CERRO ARCO 38.88 292 *i*P P 00 28 58.1 +1.3
PTGB Pitanga 38.91 319 *e*P P 00 28 56.3 -0.7
ASAL Salagasta 39.04 293 *e*P P 00 28 57.5 -0.5
CPUP Villa Florida 39.37 311 P P 00 28 59.3 -1.3
comp=Z,8.8nm,0.5s,baz=154,slow=6.8,SNR=29
CPUP PcP **PcP 00 31 08.6 +0.3**
comp=Z,3.8nm,0.6s,baz=177,slow=3.6,SNR=4.6
CPUP ScP **ScP 00 34 54.9 +1.6**
comp=Z,3.2nm,0.9s,baz=162,slow=3.2,SNR=3.5
CPUP LR LR 00 46 05.1
comp=Z,606nm,19.4s,baz=157,slow=37
CPUP Villa Florida 39.37 311 *e*P P 00 28 59.4 -1.3
FRTB Fartura 39.38 324 *e*P P 00 29 02.4 +1.6
PEL Peldehue 39.49 290 *e*P P 00 29 01.6 -0.1
comp=Z,252nm,0.6s
PEL Peldehue 39.49 290 *i*P P 00 29 02.0 +0.3
PEL Peldehue 39.49 290 *e*P P 00 29 01.6 -0.1
PEL pmax pmax
comp=Z,252nm,0.6s
RTCV Cerro Valdivia 39.50 294 *i*P P 00 29 01.8 0.0
CFA Coronel Fontan 39.57 294 P P 00 29 01.2 -1.2
comp=Z,53nm,0.6s,baz=150,slow=8.5,SNR=113
CFA PcP **PcP 00 31 08.9 -0.1**
comp=Z,26nm,0.5s,baz=163,slow=3.3,SNR=9.1
CFA LR LR 00 44 31.5
comp=Z,2μm,21.1s,baz=134,slow=35
CFA Coronel Fontan 39.57 294 *i*P P 00 29 01.1 -1.3
AUSP Uspallata 39.61 292 *e*P P 00 29 04.0 +1.0
RCLB Rio Claro- Sao 39.65 327 *e*P P 00 29 03.9 +0.8
ALF01 Guarapari-ES 39.71 337 *e*P P 00 29 05.4 +1.9
ROC1 El Roble 39.79 290 *i*P P 00 29 04.6 +0.2
ZON Zonda 39.83 294 *i*P P 00 29 04.4 -0.1
RTLL Cerro Villicun 39.91 294 *e*P P 00 29 04.5 -0.7
RTLS Leoncito 39.91 293 *e*P P 00 29 06.0 +0.4
AMOG MOGNA 40.24 295 *e*P P 00 29 08.0 0.0
BSCB Bom Sucesso 40.26 331 *e*P P 00 29 09.4 +1.2
RIB01 Linhares ES 40.91 338 *e*P P 00 29 14.7 +1.2
CYA Choya 41.10 300 *i*P P 00 29 12.7 -2.4
BB19B Bebedouro 41.22 326 *e*P P 00 29 16.1 +0.1
AGUA GUANDACOL 41.46 296 *e*P P 00 29 18.6 +0.6
BSFB Barra de Sao F 41.47 338 *e*P P 00 29 19.3 +1.2
SJMB Sao Joao De Ma 41.67 337 *e*P P 00 29 20.4 +0.8
VCA Vinchina 41.96 297 *e*P P 00 29 22.2 0.0

GO04	Tololo Observa	41.98	293	eP		P	00 29 22.5 0.0
	comp=Z,329nm,1.8s						
GO04	Tololo Observa	41.98	293	eP		P	00 29 22.2 -0.2
AHML	Horco Molle	42.32	301	i P		P	00 29 22.7 -2.3
LCO	Las Campanas	42.90	294	eP		P	00 29 29.4 -0.6
	comp=Z,117nm,1.2s						
LCO	Las Campanas	42.90	294	i P		P	00 29 29.8 -0.1
LCO	Las Campanas	42.90	294	eP		P	00 29 29.4 -0.6
LCO				pmax	pmax		
	comp=Z,117nm,1.2s						
LCO	Las Campanas	42.90	294	eP		P	00 29 29.9 -0.1
ITRB	Iturama	43.04	324	eP		P	00 29 31.2 +0.2
PMNB	Patos De Minas	43.05	330	eP		P	00 29 31.7 +0.7
SBA	Scott Base	43.41	184	eP		P	00 29 35.3 +2.1
	comp=Z,60nm,0.8s						
SBA	Scott Base	43.41	184	eP		P	00 29 35.3 +2.1
SBA				pmax	pmax		
	comp=Z,60nm,0.8s						
GO03	Copiap	43.87	295	eP		P	00 29 37.1 -0.5
	comp=Z,51nm,0.8s						
GO03	Copiap	43.87	295	eP		P	00 29 36.4 -1.2
VNDA	Vanda	43.88	182	P		P	00 29 38.6 +1.6
	comp=Z,80nm,0.7s,baz=186,slow=7.1,SNR=371						
VNDA				PcP		PcP	00 31 23.9 +1.5
	comp=Z,17nm,0.8s,baz=276,slow=4.3,SNR=3.6						
VNDA				LR		LR	00 46 58.5
VNDA				PKPPKP		P'P'df	01 01 27.4 -4.1
	comp=Z,1.2nm,0.3s,baz=22,slow=3.4,SNR=11						
VNDA	Vanda	43.88	182	eP		P	00 29 38.6 +1.6
	comp=Z,87nm,0.8s						
AQDB	Aquidauana	44.09	317	eP		P	00 29 37.6 -1.7
MCI6	Montes Claros	44.09	334	eP		P	00 29 39.8 +0.4
MCI9	Montes Claros	44.19	334	eP		P	00 29 40.9 +0.7
MCI8	Montes Claros	44.23	334	eP		P	00 29 41.2 +0.6
AZAP	Zapla	44.43	304	eP		P	00 29 40.6 -1.7
HJA	Humahuaca	45.47	304	i P		P	00 29 49.6 -1.2
BOSA	Boshof	45.79	71	i P		P	00 29 51.9 -1.0
BOSA	Boshof	45.79	71	P		P	00 29 52.5 -0.4
	comp=Z,7.2nm,0.7s,baz=208,slow=7.1,SNR=15						
BOSA				PcP		PcP	00 31 30.8 +0.9
	comp=Z,11nm,0.8s,baz=219,slow=3.2,SNR=4.0						
BOSA	Boshof	45.79	71	i P		P	00 29 51.9 -1.0
BDFB	Brasilia	46.23	329	P		P	00 29 57.1 +0.7
	comp=Z,19nm,0.5s,baz=161,slow=7.6,SNR=33						
BDFB				PcP		PcP	00 31 32.5 +0.9
	comp=Z,30nm,0.6s,baz=111,slow=2.1,SNR=11						
BDFB				LR		LR	00 49 06.8
	comp=Z,517nm,18.8s,baz=159,slow=36						
BDFB	Brasilia	46.23	329	eP		P	00 29 56.7 +0.2
	comp=Z,36nm,0.6s						
BDFB				eP		P	00 29 57.1 +0.7
BDFB				ePcP		PcP	00 31 32.5 +0.9
BDFB	Brasilia	46.23	329	eP		P	00 29 56.7 +0.2
BDFB				e			00 31 32.5
BDFB				pmax	pmax		
	comp=Z,36nm,0.6s						
YJA	Yavi	46.42	304	i P		P	00 29 57.3 -1.0
PB14	IPOC Station P	46.48	297	i P		P	00 29 57.1 -1.5
PB15	IPOC Station P	47.27	299	eP		P	00 30 04.0 -0.6
LVC	Limon Verde	47.54	300	eP		P	00 30 06.9 0.0
	comp=Z,22nm,0.8s						
LVC	Limon Verde	47.54	300	i P		P	00 30 06.4 -0.5
LVC	Limon Verde	47.54	300	eP		P	00 30 06.9 0.0
LVC				pmax	pmax		
	comp=Z,22nm,0.8s						
LVC	Limon Verde	47.54	300	eP		P	00 30 07.1 +0.2
PB05	IPOC Station P	47.91	299	eP		P	00 30 08.6 -0.9
PB03	IPOC Station P	48.40	300⇑	eP		P	00 30 12.6 -0.8
PB07	IPOC Station P	48.74	300	i P		P	00 30 15.4 -0.6
LBTB	Lobatse	48.96	69	P		P	00 30 17.4 -0.2
	comp=Z,8.4nm,0.8s,baz=206,slow=8.0,SNR=9.0						
LBTB				PcP		PcP	00 31 41.9 +0.7
	comp=Z,11nm,0.8s,baz=256,slow=4.9,SNR=4.1						
LBTB	Lobatse	48.96	69	eP		P	00 30 17.4 -0.2
	comp=Z,109nm,2.0s						
LBTB				ePcP		PcP	00 31 41.9 +0.7
PB01	IPOC Station P	49.16	301	i P		P	00 30 18.4 -0.7
PB08	IPOC Station P	49.80	302	i P		P	00 30 24.2 -0.2
SIV	San Ignacio	50.17	313	ScP		ScP	00 35 37.9 +0.1
	comp=Z,2.0nm,0.7s,baz=143,slow=5.1,SNR=4.3						
TSUM	Tsumeb	50.26	57	LR		LR	00 47 06.9
	comp=Z,885nm,21.8s,baz=190,slow=30						
TSUM	Tsumeb	50.26	57	eP		P	00 30 26.2 -1.3
	comp=Z,16nm,0.9s						
PB11	IPOC Station P	50.36	301	eP		P	00 30 27.1 -1.2
	comp=Z,24nm,0.7s						
PB11	IPOC Station P	50.36	301	i P		P	00 30 27.5 -0.8
H10S2	ASCENSION HYDR	50.39	14	T		T	01 24 56.3
	baz=188,slow=75,SNR=546						
H10S3	ASCENSION HYDR	50.39	14	T		T	01 25 01.2
	baz=188,slow=75,SNR=377						
H10S1	ASCENSION HYDR	50.40	14	T		T	01 24 57.6
	baz=188,slow=75,SNR=392						
MNMCX	Minye Minye	50.88	302	i P		P	00 30 32.0 -0.4
CASY	Casey	50.99	159	eP		P	00 30 32.7 +0.3
	comp=Z,27nm,1.0s						
H10N1	ASCENSION HYDR	51.50	14	T		T	01 26 23.3
	baz=187,slow=75,SNR=37						
H10N3	ASCENSION HYDR	51.51	14	T		T	01 26 22.1
	baz=187,slow=75,SNR=288						
H10N2	ASCENSION HYDR	51.52	14	T		T	01 26 21.8
	baz=187,slow=75,SNR=325						
LPAZ	La Paz	52.76	305	P		P	00 30 46.2 -0.6
	comp=Z,18nm,0.6s,baz=143,slow=4.9,SNR=92						
LPAZ				PcP		PcP	00 31 56.3 +0.3
	comp=Z,6.4nm,0.5s,baz=5.7,slow=2.6,SNR=10						
LPAZ				LR		LR	00 55 43.5
	comp=Z,280nm,19.3s,baz=156,slow=39						
LPAZ	La Paz	52.76	305	eP		P	00 30 46.1 -0.7
	comp=Z,22nm,0.6s						
LPAZ				ePcP		PcP	00 31 56.3 +0.3
LPAZ	La Paz	52.76	305	i P		P	00 30 46.3 -0.5
LPAZ	La Paz	52.76	305	eP		P	00 30 46.1 -0.7
LPAZ				e			00 31 56.3
LPAZ				pmax	pmax		
	comp=Z,22nm,0.6s						
LPAZ	La Paz	52.76	305	eP		P	00 30 46.8 0.0
CLDB	Colider	53.05	321	eP		P	00 30 47.4 -0.9
RCBR	Riachuelo	53.45	347	eP		P	00 30 52.3 +1.1
NBPA	Parau_RN	53.68	345	eP		P	00 30 53.4 +0.6
MATP	Matopo	54.25	69	i P		P	00 30 57.1 0.0
MATP	Matopo	54.25	69	i P		P	00 30 57.1 0.0
BLWY	Bulawayo	54.55	69	i P		P	00 30 58.9 -0.5
BLWY	Bulawayo	54.55	69	i P		P	00 30 58.9 -0.5
NBMO	Morrinhos-CE	56.50	342	eP		P	00 31 14.2 +1.0
LSZ	Lusaka	58.52	66	i P		P	00 31 24.3 -3.3
LSZ	Lusaka	58.52	66	eP		P	00 31 27.2 -0.4
	comp=Z,22nm,1.3s						
LSZ	Lusaka	58.52	66	eP		P	00 31 27.2 -0.4
LSZ				pmax	pmax		
	comp=Z,22nm,1.3s						
LSZ	Lusaka	58.52	66	i P		P	00 31 24.3 -3.3
NNA	Nana	60.43	298	i P		P	00 31 40.8 +0.2
PTGA	Pitinga	63.93	321	eP		P	00 32 02.4 -1.6
	comp=Z,6.9nm,0.6s						
PTGA	Pitinga	63.93	321	eP		P	00 32 04.4 +0.4
LIC	Lamto	66.83	22	eP		P	00 32 23.2 +0.5
	comp=Z,227nm,1.2s						
KIC	Kosan Boka	67.01	22	eP		P	00 32 24.4 +0.5
	comp=Z,67nm,0.9s						
TIC	Toumodi	67.24	22	eP		P	00 32 25.3 0.0
DBIC	Dimbokro	67.29	22	P		P	00 32 24.7 -0.9
	comp=Z,28nm,0.8s,baz=173,slow=6.9,SNR=29						
DBIC	Dimbokro	67.29	22	eP		P	00 32 26.4 +0.8
	comp=Z,39nm,0.8s						
DBIC	Dimbokro	67.29	22	eP		P	00 32 26.4 +0.8
DBIC				pmax	pmax		
	comp=Z,39nm,0.8s						
OTAV	Otavalo	71.99	303	eP		P	00 32 54.8 -0.4
OTAV	Otavalo	71.99	303	eP		P	00 32 55.8 +0.7
MBAR	Mbarara	72.58	60⇑	eP		P	00 33 01.5 +3.1
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BBAC	Balboa, Cauca	73.06	305	eP		P	00 33 00.1 -1.2
POPC	Popayan, Colom	73.28	305	eP		P	00 33 00.8 -1.8
ROSC	El Rosal	74.38	309	P		P	00 33 08.6 -0.6
	comp=Z,6.0nm,0.2s,baz=160,slow=18,SNR=5.5						
ROSC				LR		LR	01 07 12.1
	comp=Z,156nm,21.9s,baz=150,slow=37						
YOTC	Yotoco, Valle	74.44	306	eP		P	00 33 04.0 -5.2
YOTC				eP		P	00 33 04.7 -4.5
TOA0	Torodi Ar. Sit	75.00	27	eP		P	00 33 13.1 +0.9
	comp=Z,80nm,0.8s						
TORD	Torodi Ar. Bea	75.00	27	P		P	00 33 11.2 -1.0
	comp=Z,67nm,0.8s,baz=176,slow=7.1,SNR=270						
KMBO	Kilima Mbogo	75.16	67	P		P	00 33 13.5 -0.1
	comp=Z,0.7nm,0.3s,baz=206,slow=11,SNR=2.0						
GUY2C	Guyana, Caldas	75.16	308	eP		P	00 33 12.0 -1.8
NORC	Norcasia	75.26	308	eP		P	00 33 11.4 -2.5
PTBC	PUERTO BERRIO,	75.98	309	eP		P	00 33 15.3 -2.6
SDV	Santo Domingo	76.64	314	eP		P	00 33 21.1 -0.8
	comp=Z,20nm,0.8s						
SDV	Santo Domingo	76.64	314	eP		P	00 33 21.4 -0.4
RPZ	Rata Peaks	76.96	192	P		P	00 33 23.8 +0.5
	comp=Z,48nm,0.9s,baz=169,slow=2.6,SNR=10						
RPZ	Rata Peaks	76.96	192	eP		P	00 33 23.7 +0.5
	comp=Z,90nm,1.1s						
LTZ	Lake Taylor	77.74	193	eP		P	00 33 28.5 +0.9
	comp=Z,53nm,0.8s						
SMLC	San Martn de	77.88	311	eP		P	00 33 26.0 -2.6
KHZ	Kahutara	77.94	194	P		P	00 33 29.2 +0.5
TAU	Tasmania Unive	78.48	175	eP		P	00 33 31.7 +0.1
	comp=Z,98nm,0.8s						
TAU	Tasmania Unive	78.48	175	eP		P	00 33 31.7 +0.1
TAU				pmax	pmax		
	comp=Z,98nm,0.8s						
PLWZ	Palliser	78.55	196	P		P	00 33 32.8 +0.7
BSWZ	Blackbirch Sta	78.59	195	P		P	00 33 33.5 +1.2
THZ	Tophouse	78.67	194	eP		P	00 33 33.4 +0.6
	comp=Z,91nm,0.7s						
THZ	Tophouse	78.67	194	P		P	00 33 34.5 +1.6
PAWZ	Paruwai Farm	78.71	196	P		P	00 33 33.9 +0.9
BHW	Baring Head	78.76	195	P		P	00 33 34.2 +1.0
TUWZ	Tuamarina	78.86	195	P		P	00 33 34.7 +0.9
SNZO	South Karori	78.88	195	eP		P	00 33 34.9 +1.1
	comp=Z,171nm,1.0s						
TMWZ	Te Maipa	78.91	196	P		P	00 33 35.6 +1.5
MTW	Mount Morrison	78.92	196	P		P	00 33 35.0 +0.9
CAW	Cannon Point	79.03	196	P		P	00 33 35.7 +1.0
NNZ	Nelson	79.15	194	P		P	00 33 36.1 +0.8
HOWZ	Holdsworth Sta	79.17	196	P		P	00 33 36.4 +0.9
BFZ	Birch Farm	79.28	197	P		P	00 33 37.3 +1.2
PRWZ	Pori Road	79.44	196	P		P	00 33 37.9 +1.0
POWZ	Post Office Ro	79.63	196	P		P	00 33 39.2 +1.2
QRZ	Quartz Range	79.64	194	P		P	00 33 36.9 -1.2
DVHZ	Dannevirke	79.66	197	P		P	00 33 39.3 +1.0
KRHZ	Kereru	80.27	197	P		P	00 33 42.8 +1.3
KHEZ	Kahui Hut	80.95	195	P		P	00 33 45.3 +0.1
NBEZ	Newall Road No	81.00	195	P		P	00 33 45.0 -0.4
URZ	Urewera	81.51	198	P		P	00 33 48.9 +0.8
	comp=Z,25nm,0.6s,baz=210,slow=5.4,SNR=12						
MTP	Monte Pirata	83.41	322	eP		P	00 33 57.0 -1.1
	comp=Z,17nm,0.9s						
NWAO	Narrogin (SRO)	83.46	149	P		P	00 33 57.7 -0.6
	comp=Z,13nm,0.8s,baz=203,slow=4.1,SNR=4.8						
TAM	Tamanrasset	85.20	28	P		P	00 34 07.9 +0.7
TAM				pmax	pmax		
	comp=Z,12nm,1.0s						
TBI	Tubuai	86.09	230	eS		S	00 44 44.4 +1.4
	comp=Z,180nm,27.0s						
CSGN	Cosiguina Volc	87.34	300	eP		P	00 34 18.8 +0.9
	comp=Z,62nm,0.8s						
H08N3	Diego Garcia H	87.91	99	T		T	02 12 08.7
	baz=208,slow=74						
H08N1	Diego Garcia H	87.93	99	T		T	02 12 10.3
	baz=208,slow=74						
H08N2	Diego Garcia H	87.93	99	T		T	02 12 10.3
	baz=208						
FORT	Forrest	88.06	157	eP		P	00 34 21.7 +0.5
	comp=Z,98nm,0.8s						
STKA	Stephens Creek	89.03	169	P		P	00 34 25.9 +0.2
	comp=Z,36nm,0.8s,baz=171,slow=8.1,SNR=45						
STKA	Stephens Creek	89.03	169	eP		P	00 34 25.6 -0.1
	comp=Z,8.7nm,0.8s						
STKA	Stephens Creek	89.03	169	eP		P	00 34 25.6 -0.1
STKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PPT2	Papeete2	91.31	232	eS		S	00 45 33.1 +0.7
	comp=Z,260nm,29.5s						
PPT2	Papeete2	91.31	232	eLR		LR	01 03 57.0
	comp=Z,521nm,22.8s						
TAOE	Nuku Hiva Isla	94.89	244	eLR		LR	01 05 36.0
	comp=Z,941nm,25.9s						
ASAR	Alice Springs	96.08	161	P		P	00 34 57.6 -0.8
	comp=Z,16nm,0.8s,baz=183,slow=4.1,SNR=172						
ASAR				PP		PP	00 38 51.9 +1.5
	comp=Z,2.8nm,1.0s,baz=183,slow=7.8,SNR=5.5						
ASAR				PKiKP		PKiKP	00 39 36.2 -0.6
	comp=Z,1.1nm,0.6s,baz=193,slow=1.4,SNR=13						
ASAR				PKKPbc		PKKPbc	00 51 43.7 +1.0
	comp=Z,2.1nm,0.5s,baz=16,slow=2.1,SNR=22						
ASAR				PKPPKP		P'P'df	00 59 56.7 -6.5
	comp=Z,0.5nm,0.7s,baz=5.7,slow=0.9,SNR=4.2						
KEST	Kesra	98.51	28	P		P	00 35 08.7 -0.2
	comp=Z,3.3nm,0.9s,baz=174,slow=3.0,SNR=3.0						
KEST	Kesra	98.51	28	eP		P	00 35 08.8 -0.2
	comp=Z,6.1nm,1.0s						
DZM	Mont Dzumac	98.86	191	P		Pdif	00 35 11.6 +0.6
	comp=Z,7.4nm,0.9s,baz=192,slow=3.9,SNR=3.0						
DZM	Mont Dzumac	98.86	191	eLR		LR	01 07 18.3
	comp=Z,608nm,22.4s						
ESDC	Sonseca Array	99.71	17	P		Pdif	00 35 14.8 +0.7
	comp=Z,0.6nm,0.7s,baz=194,slow=5.3,SNR=4.4						
ESDC				PKKPbc		PKKPbc	00 51 35.0 +0.9
	comp=Z,0.3nm,0.5s,baz=2.4,slow=3.7,SNR=6.0						
FITZ	Fitzroy Crossi	99.77	152	P		Pdif	00 35 14.6 -0.5
	comp=Z,3.6nm,0.9s,baz=188,slow=3.3,SNR=4.1						
WRA	Warramunga Arr	99.79	161	P		Pdif	00 35 14.7 -0.4
	comp=Z,2.9nm,0.8s						
WRA				PKiKP		PKiKP	00 39 43.0 -0.4
	comp=Z,1.2nm,0.6s,baz=191,slow=3.0,SNR=6.7						
WRAB	Tennant Creek	99.80	161⇓	eP		Pdif	00 35 14.4 -0.8
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
Z54A	Sparta	103.36	313	P		Pdif	00 35 31.9 +1.5
	baz=153						
W58A	Raeford	103.63	317	P		Pdif	00 35 33.2 +1.6
	baz=154						
GOGA	Godfrey	103.75	313	P		Pdif	00 35 33.9 +1.7
	baz=153						
Z52A	Williamson	103.92	312	P		Pdif	00 35 34.3 +1.3
	baz=153						
W57A	Gilead	104.02	316	P		Pdif	00 35 35.0 +1.7
	baz=154						
LRAL	Lakeview Retre	104.80	310	P		PKiKP	00 39 53.2 +1.3
	baz=152						
Y51A	Rockmart	104.80	312	P		PKiKP	00 39 53.3 +1.4
	baz=152						
X51A	Calhoun	105.31	313	P		PKiKP	00 39 54.5 +1.7
	baz=152						
T56A	Rocky Mt	105.72	317	P		PKiKP	00 39 54.8 +1.3
	baz=154						
V52A	Sevierville	105.96	314	P		PKiKP	00 39 55.7 +1.7
	baz=153						
S57A	Dark Hollow, R	106.00	318	P		PKiKP	00 39 55.4 +1.5
	baz=154						
W50A	Signal Mountai	106.04	312	P		PKiKP	00 39 55.6 +1.4
	baz=152						
Q60A	Greensboro	106.07	321	P		PKiKP	00 39 55.5 +1.5
	baz=155						
U52A	Thorn Hill	106.36	315	P		PKiKP	00 39 56.5 +1.8
	baz=153						
PAL	Palisades	107.28	324	P		PKiKP	00 39 57.8 +1.6
	baz=156						
T49A	Edmonton	107.80	313	P		PKiKP	00 39 57.1 -0.3
	baz=152						
WVT	Waverly	107.83	311	P		PKiKP	00 39 57.2 -0.2
	baz=151						
Q53A	Leroy	107.88	317	P		PKiKP	00 39 57.7 +0.3
	baz=153						
U47A	Clarksville	107.89	312	P		PKiKP	00 39 57.7 +0.2
	baz=151						
JCT	Junction City	108.07	299	P		PKiKP	00 39 58.4 +0.3
	baz=148						
Q52A	Bidwell	108.23	317	P		PKiKP	00 39 58.1 +0.1
	baz=153						
T47A	Sharon Grove	108.30	312	P		PKiKP	00 39 58.1 -0.2
	baz=151						
S49A	Springfield	108.31	314	P		PKiKP	00 39 58.4 +0.1
	baz=152						
O55A	Ligonier	108.31	319	P		PKiKP	00 39 58.9 +0.6
	baz=154						
P53A	Whipple	108.39	317	P		PKiKP	00 39 59.2 +0.9
	baz=153						
N56A	West Decatur	108.61	320	P		PKiKP	00 39 59.3 +0.5
	baz=154						
T46A	Princeton	108.65	311	P		PKiKP	00 39 59.3 +0.4
	baz=151						
O54A	Avella	108.66	319	P		PKiKP	00 39 59.5 +0.7
	baz=153						
Q50A	Georgetown	108.75	315	P		PKiKP	00 39 59.0 -0.1
	baz=152						
VTS	Vitosha	108.77	36⇑	iP		PKiKP	00 39 58.6 -0.6
P52A	Corning	108.78	317	P		PKiKP	00 39 59.1 0.0
	baz=153						
W41B	Gary Mavity, V	108.79	307	P		PKiKP	00 39 59.2 0.0
	baz=150						
MIAR	Mount Ida	108.80	306	P		PKiKP	00 39 59.4 +0.1
	baz=149						
TXAR	Lajitas Array	108.90	295	PKiKP		PKiKP	00 40 00.2 +0.4
	comp=Z,1.7nm,0.6s,baz=144,slow=3.5,SNR=25						
TXAR				PKKPbc		PKKPbc	00 51 06.1 +0.2
	comp=Z,0.5nm,0.7s,baz=238,slow=2.4,SNR=4.6						
TXAR				PKKP		PKKPdf	00 51 21.4 +0.3
	comp=Z,0.7nm,0.9s,baz=286,slow=4.7,SNR=4.4						
O53A	New Philadelph	109.01	318	P		PKiKP	00 40 00.0 +0.6
	baz=153						
R48A	Northridge Ran	109.06	314	P		PKiKP	00 40 00.2 +0.6
	baz=151						
WCI	Wyandotte Cave	109.08	313	P		PKiKP	00 39 60.0 +0.3
	baz=151						
M56A	Emporium	109.08	321	P		PKiKP	00 40 00.2 +0.6
	baz=154						
O52A	Adamsville	109.11	317	P		PKiKP	00 39 60.0 +0.3
	baz=153						
N54A	Moraine State	109.22	319	P		PKiKP	00 40 00.2 +0.3
	baz=153						
R47A	Wooly Knot Far	109.22	313	P		PKiKP	00 40 00.1 +0.1
	baz=151						
M55A	Ridgway	109.26	320	P		PKiKP	00 40 00.1 +0.1
	baz=154						
P50A	Jamestown	109.36	316	P		PKiKP	00 39 59.7 -0.5
	baz=152						
W39A	Magazine	109.45	306	P		PKiKP	00 40 00.7 +0.2
	baz=149						
FETA	Feichten	109.55	25	ePKiKP		PKiKP	00 40 02.5 +2.0
	comp=Z,3.3nm,1.2s						
BRTR	Keskin Array B	109.67	45	PKiKP		PKiKP	00 40 00.6 -0.4
	comp=Z,0.5nm,0.7s,baz=188,slow=0.9,SNR=4.2						
BRTR				PP		PP	00 40 33.8 +0.4
	comp=Z,0.5nm,0.7s,baz=196,slow=7.8,SNR=3.0						
BRTR				PKKPbc		PKKPbc	00 51 03.8 +0.1
	comp=Z,2.1nm,0.7s,baz=109,slow=1.6,SNR=11						
BRTR				PKKP		PKKPab	00 51 16.4 +2.8
	comp=Z,2.5nm,0.8s,baz=55,slow=1.9,SNR=8.1						
ABTA	Abfaltersbach	109.70	27	ePKiKP		PKiKP	00 40 00.1 -0.6
	comp=Z,0.1nm,0.3s						
Q47A	Bedord North L	109.74	314	P		PKiKP	00 40 00.5 -0.4
	baz=151						
S44A	Carbondale	109.75	311	P		PKiKP	00 40 00.8 -0.1
	baz=150						
L55A	Hinsdale	109.79	321	P		PKiKP	00 40 01.3 +0.3
	baz=154						
ABTX	Abilene, Hawle	109.81	300	P		PKiKP	00 40 01.4 +0.1
	baz=148						
SQTA	Sankt Quirin	109.85	26	ePKiKP		PKiKP	00 40 01.1 +0.1
	comp=Z,3.7nm,0.6s						
MYKA	Terra Mystica	109.86	27	ePKiKP		PKiKP	00 40 01.0 0.0
	comp=Z,1.1nm,0.3s						
R45A	Skylar, Fairfi	109.89	312	P		PKiKP	00 40 01.2 0.0
	baz=150						
MOTA	Moosalm	109.94	25	ePKiKP		PKiKP	00 40 00.7 -0.5
	comp=Z,1.1nm,0.5s						
OBKA	Obir	109.97	28	ePKiKP		PKiKP	00 39 59.8 -1.4
	comp=Z,2.4nm,0.6s						
WTTA	Wattenberg	109.99	26	i PKiKP		PKiKP	00 40 01.6 +0.3
WTTA				ePKiKP		PKiKP	00 40 02.7 +1.4
	comp=Z,3.4nm,0.5s						
U40A	Yellville	110.06	307	P		PKiKP	00 40 01.2 -0.5
	baz=149						
L54A	Sinclairville	110.13	320	P		PKiKP	00 40 01.5 -0.1
	baz=153						
K55A	Perry	110.16	321	P		PKiKP	00 40 01.9 +0.3
	baz=154						
L53A	Girard	110.19	319	P		PKiKP	00 40 01.8 +0.2
	baz=153						
SOKA	Soboth	110.24	28	ePKiKP		PKiKP	00 40 02.0 +0.3
	comp=Z,0.4nm,0.3s						
O48A	Farmland	110.42	315	P		PKiKP	00 40 01.8 -0.4
	baz=151						
HERR	Herculane	110.58	34⇓	iP		PKiKP	00 40 01.7 -0.6
P46A	Rosedale	110.63	313	P		PKiKP	00 40 02.2 -0.4
	baz=151						
N49A	Columbus Grove	110.65	316	P		PKiKP	00 40 02.2 -0.3
	baz=152						
CCM	Cathedral Cave	110.86	310	P		PKiKP	00 40 02.6 -0.5
	baz=150						
ARSA	Arzberg	110.90	29	ePKiKP		PKiKP	00 40 03.0 +0.1
	comp=Z,0.8nm,0.5s						
TUL1	Leonard	110.91	305	P		PKiKP	00 40 03.0 -0.2
	baz=148						
BZS	Buzias	111.02	33⇑	iP		PKiKP	00 40 02.9 -0.2
BZS	Buzias	111.02	33	⇑PKIKP		PKiKP	00 40 02.9 -0.2
TYNO	Tyneside	111.08	320	P		PKiKP	00 40 03.6 +0.3
	baz=153						
MOA	Molln	111.15	27	ePKiKP		PKiKP	00 40 03.6 +0.3
	comp=Z,1.2nm,0.7s						
L50A	Kingsville	111.15	318	P		PKiKP	00 40 03.5 +0.1
	baz=152						
WMOK	Wichita Mounta	111.21	302	P		PKiKP	00 40 03.5 -0.3
	baz=148						
SFIN	Lafayette	111.25	314	P		PKiKP	00 40 03.2 -0.5
	baz=151						
I55A	Frankford	111.37	322	P		PKiKP	00 40 04.1 +0.3
	baz=154						
O45A	Potomac	111.38	313	P		PKiKP	00 40 03.7 -0

BWLO	Walkerton	112.41	320	P		PKiKP	00 40 06.4 +0.6
	baz=152						
J49A	Marlette	112.43	318	P		PKiKP	00 40 05.7 -0.1
	baz=152						
H52A	Wyevale	112.46	321	P		PKiKP	00 40 06.2 +0.3
	baz=153						
G53A	Haliburton	112.48	322	P		PKiKP	00 40 06.1 +0.2
	baz=153						
K47A	Vermontville	112.48	316	P		PKiKP	00 40 05.6 -0.4
	baz=151						
M44A	Midewin, Midew	112.48	314	P		PKiKP	00 40 06.0 0.0
	baz=150						
BASO	Ashfield	112.50	319	P		PKiKP	00 40 06.1 +0.2
	baz=152						
PEMO	Pembroke	112.54	323	P		PKiKP	00 40 06.0 0.0
	baz=154						
CFR	Carcaliu	112.61	38⇑	*i*P		PKiKP	00 40 05.5 -0.6
CFR	Carcaliu	112.61	38	⇑PKIKP		PKiKP	00 40 05.5 -0.6
AMTX	Amarillo	112.63	300	P		PKiKP	00 40 06.3 -0.3
	baz=147						
PLOR	Plostina	112.74	37⇑	*i*P		PKiKP	00 40 05.3 -1.1
PLOR	Plostina	112.74	37	⇑PKIKP		PKiKP	00 40 05.3 -1.1
LATQ	La Tuque	112.76	327	P		PKiKP	00 40 06.3 0.0
	baz=156						
K46A	Dorr	112.78	316	P		PKiKP	00 40 06.5 0.0
	baz=151						
VRI	Vrincioaia	112.78	37⇓	*i*P		PKiKP	00 40 05.0 -1.5
VRI	Vrincioaia	112.78	37	⇓PKIKP		PKiKP	00 40 05.0 -1.5
TREC	Trest	112.79	28	*e*PKIKP		PKiKP	00 40 06.8 +0.4
TREC				MLR		MLR	
	comp=Z,400nm,17.1s						
TREC	Trest	112.79	28	*e*PKPdf		PKiKP	00 40 06.8 +0.4
TREC				AMS		AMS	01 39 00.0
	comp=Z,400nm,17.1s						
KRUC	Moravsky	112.80	28	*e*PKIKP		PKiKP	00 40 06.1 -0.3
I49A	Point Hope	112.83	319	P		PKiKP	00 40 06.4 -0.2
	baz=152						
BMRO	Meriville Lake	112.86	320	P		PKiKP	00 40 06.7 +0.1
	baz=152						
M43A	Waltham Townsh	112.87	313	P		PKiKP	00 40 06.5 -0.2
	baz=150						
VYHS	Vyhne	112.90	30	*e*PKIKP		PKiKP	00 40 06.7 +0.1
VYHS	Vyhne	112.90	30	*e*PKP		PKiKP	00 40 06.7 +0.1
JAVC	Velka Javorina	112.93	29	*e*PKIKP		PKiKP	00 40 07.4 +0.7
NKC	Novy Kostel	112.96	25	AMS		AMS	01 36 30.0
	comp=Z,500nm,18.2s						
BUKO	Buck Lake	113.01	322	P		PKiKP	00 40 07.2 +0.3
	baz=153						
ALGO	Algonquin Park	113.04	323	P		PKiKP	00 40 07.3 +0.3
	baz=153						
VRAC	Vranov	113.08	28	*e*PKIKP		PKiKP	00 40 07.1 +0.2
E54A	Lac Daplat, Po	113.20	324	P		PKiKP	00 40 07.2 0.0
	baz=154						
GOPC	GO Pecny, Ondr	113.20	27	AMS		AMS	01 37 20.0
	comp=Z,300nm,19.3s						
PRU	Pruhonice	113.21	27	AMS		AMS	01 38 20.0
	comp=Z,300nm,20.1s						
E53A	Dumoine, Ponti	113.30	323	P		PKiKP	00 40 07.8 +0.3
	baz=153						
F52A	Sundridge	113.30	322	P		PKiKP	00 40 07.8 +0.3
	baz=153						
TESR	Tescani	113.33	36⇑	*i*P		PKiKP	00 40 06.1 -1.4
I48A	Sherman Twp	113.35	318	P		PKiKP	00 40 07.5 -0.1
	baz=151						
N40A	Mertquake, Sal	113.42	311	P		PKiKP	00 40 08.0 +0.2
	baz=149						
M41A	Milan	113.43	312	P		PKiKP	00 40 08.1 +0.2
	baz=149						
L43A	Garden Prairie	113.44	314	P		PKiKP	00 40 07.7 -0.1
	baz=150						
121A	Cookes Peak, D	113.51	294	P		PKiKP	00 40 08.9 +0.4
	baz=146						
TOBO	Tobermory, Bru	113.52	320	P		PKiKP	00 40 07.7 -0.1
	baz=152						
E52A	Mattawa	113.53	323	P		PKiKP	00 40 07.6 -0.2
	baz=153						
BIZ	Bicaz	113.55	36⇑	*i*P		PKiKP	00 40 07.3 -0.6
TRPA	Tarpa	113.57	33⇑	*i*P		PKiKP	00 40 07.9 +0.1
L42A	Oliver, Polo	113.63	313	P		PKiKP	00 40 08.0 -0.2
	baz=149						
H48A	Harrisville	113.67	319	P		PKiKP	00 40 07.9 -0.3
	baz=151						
D54A	Lac Fusel, La	113.68	324	P		PKiKP	00 40 07.9 -0.2
	baz=154						
PVCC	Panska Ves	113.72	27	*e*PKIKP		PKiKP	00 40 08.4 +0.3
PVCC				MLR		MLR	
	comp=Z,300nm,18.5s						
PVCC	Panska Ves	113.72	27	*e*PKPdf		PKiKP	00 40 08.4 +0.3
PVCC				AMS		AMS	01 37 30.0
	comp=Z,300nm,18.5s						
K43A	Burlington	113.73	314	P		PKiKP	00 40 08.3 0.0
	baz=150						
MORC	Moravsky Berou	113.75	29⇓	*i*P		PKiKP	00 40 08.1 -0.1
MORC	Moravsky Berou	113.75	29	⇓PKIKP		PKiKP	00 40 08.1 -0.1
I46A	Reed City	113.75	317	P		PKiKP	00 40 08.2 -0.1
	baz=150						
BURAR	Bucovina Array	113.88	35⇑	*i*P		PKiKP	00 40 08.8 +0.2
BURAR	Bucovina Array	113.88	35	⇑PKIKP		PKiKP	00 40 08.8 +0.2
D53A	Lac Vacive, Po	113.94	324	P		PKiKP	00 40 08.9 +0.3
	baz=153						
OKC	Ostrava-Krasne	113.95	29	AMS		AMS	01 39 50.0
	comp=Z,200nm,19.1s						
DPC	Dobruska-Polom	113.97	28	*e*PKIKP		PKiKP	00 40 08.9 +0.3
DPC				MLR		MLR	
	comp=Z,200nm,18.5s						
DPC	Dobruska-Polom	113.97	28	*ex*		PKiKP	00 40 08.9 +0.3
DPC				AMS		AMS	01 38 00.0
	comp=Z,200nm,18.5s						
E51A	G1948 Merrick	114.01	322	P		PKPdf	00 40 08.6 -0.2
	baz=152						
UPC	Upice	114.05	28	AMS		AMS	01 34 30.0
	comp=Z,300nm,23.0s						
D52A	ZEK Kipawa Sen	114.07	323	P		PKiKP	00 40 08.9 0.0
	baz=153						
CLL	Collm	114.09	25	*e*Pdif		Pdif	00 36 19.0 +1.3
CLL				*i* PKiKP		PKPdf	00 40 07.6 -1.1
CLL				*e*PP		PP	00 41 00.0 -4.8
CLL				*e*PS		PS	00 50 44.0 +2.7
CLL				*e*PKKPab		PKKPbc	00 50 50.0 +0.9
CLL				*e*SS		SS	00 56 48.0 -4.1
CLL				*e*SSS		SSS	01 01 18.0
CLL				LmV			01 24 00.0
	comp=Z,200nm,22.0s						
CHVC	Chvalec	114.13	28	AMS		AMS	01 34 30.0
	comp=Z,200nm,14.8s						
OSTC	Ostas	114.14	28	*e*PKPdf		PKiKP	00 40 09.2 +0.3
OSTC				AMS		AMS	01 25 00.0
	comp=Z,200nm,19.4s						
F49A	Sandfield	114.17	320	P		PKPdf	00 40 08.9 -0.1
	baz=152						
K42A	Prairie Point,	114.17	314	P		PKPdf	00 40 09.0 -0.2
	baz=149						
H46A	Fife Lake	114.18	317	P		PKiKP	00 40 09.4 +0.2
	baz=150						
GLMI	Grayling	114.22	318	P		PKiKP	00 40 09.5 +0.3
	baz=151						
KOLS	Kolonicke sedl	114.23	32	*e*PKIKP		PKiKP	00 40 18.5 +9.4
KOLS	Kolonicke sedl	114.23	32	*e*PKP		PKiKP	00 40 18.5 +9.4
G47A	Hillman	114.26	319	P		PKiKP	00 40 09.6 +0.4
	baz=151						
L40A	Anamosa	114.28	312	P		PKiKP	00 40 09.5 0.0
	baz=149						
E50A	Wahnapitae	114.32	321	P		PKiKP	00 40 09.4 +0.1
	baz=152						
J43A	Natural Harves	114.34	314	P		PKiKP	00 40 09.6 +0.1
	baz=149						
MILM	Milestii Mici	114.37	38⇑	*i*P		PKPdf	00 40 08.8 -0.6
SIM	Simferopol'	114.41	42	*i* PKIKP		PKiKP	00 40 09.9 +0.3
SIM				pmax		pmax	
	comp=Z,6.0nm,0.8s						
SIM				MLR		MLR	
	comp=N,120nm,19.4s						
F48A	Evansville	114.42	320	P		PKPdf	00 40 09.3 -0.2
	baz=151						
J42A	Columbus	114.55	314	P		PKPdf	00 40 09.8 -0.1
	baz=149						
JFWS	Jewell Farm	114.63	313	P		PKiKP	00 40 10.3 +0.2
	baz=149						
TUC	Tucson	114.77	292	P		PKiKP	00 40 11.1 +0.2
	baz=145						
G45A	Suttons Bay	114.78	317	P		PKiKP	00 40 10.5 +0.2
	baz=150						
E48A	Lockeyer	114.84	320	P		PKPdf	00 40 10.3 0.0
	baz=151						
ANMO	Albuquerque	114.87	297⇓	*i* PKIKP		PKiKP	00 40 11.5 +0.4
ANMO				pmax		pmax	
	comp=Z,3.0nm,1.3s						
ANMO	Albuquerque	114.87	297	P		PKiKP	00 40 11.1 0.0
	baz=146						
TASM	ASL Pad, Albuq	114.87	297	P		PKiKP	00 40 11.3 +0.2
	baz=146						
TASM	ASL Pad, Albuq	114.87	297	P		PKiKP	00 40 11.1 0.0
	baz=146						
SCIA	State Center	114.93	310	P		PKPdf	00 40 10.6 -0.1
	baz=148						
I42A	Draeger Farm,	114.97	314	P		PKiKP	00 40 10.8 +0.1
	baz=149						
H43A	Windswept, Lux	115.04	316	P		PKPdf	00 40 10.6 -0.2
	baz=149,SNR=5.4						
CBKS	Cedar Bluff	115.04	304	P		PKPdf	00 40 10.6 -0.4
	baz=146						
F46A	Macinaw City C	115.10	318	P		PKPdf	00 40 10.8 -0.1
	baz=150						
E47A	Iron Bridge	115.19	320	P		PKPdf	00 40 10.8 -0.2
	baz=151						
D49A	Beulah Townshi	115.27	321	P		PKPdf	00 40 11.1 -0.1
	baz=152						
F45A	CMU Biological	115.28	318	P		PKPdf	00 40 11.1 -0.1
	baz=150						
D48A	Paudash Townsh	115.33	321	P		PKPdf	00 40 10.9 -0.3
	baz=151						
H42A	Shiocton	115.36	315	P		PKPdf	00 40 11.3 -0.1
	baz=149						
E46A	Sault Ste Mari	115.46	319	*e*PKPdf		PKPdf	00 40 11.4 -0.1
E46A	Sault Ste Mari	115.46	319	P		PKiKP	00 40 11.5 0.0
	baz=150						
I41A	Arkdale	115.47	314	P		PKPdf	00 40 11.5 -0.1
	baz=149						
LSQQ	Lebel-sur-Quev	115.48	325	P		PKiKP	00 40 11.5 0.0
	baz=153						
CHGQ	Chibougamau	115.50	327	P		PKPdf	00 40 11.4 -0.1
	baz=154						
D47A	Chapleau	115.65	320	P		PKiKP	00 40 12.1 +0.2
	baz=151						
G43A	Wallace	115.69	316	P		PKiKP	00 40 12.1 0.0
	baz=149						
T25A	Trinidad	115.73	299	P		PKiKP	00 40 13.1 +0.4
	baz=146						
E45A	Wooded Hills,	115.75	318	P		PKiKP	00 40 12.5 +0.4
	baz=150						
D46A	Sault St. Mari	115.82	319	P		PKiKP	00 40 12.7 +0.4
	baz=150						
F44A	Big Bay de Noc	115.85	317	P		PKPdf	00 40 12.2 -0.1
	baz=150						
F43A	Flat Rock, Esc	116.00	317	P		PKPdf	00 40 12.4 -0.1
	baz=149,SNR=7.4						
E44A	Grand Marais A	116.23	318	P		PKPdf	00 40 12.9 -0.1
	baz=150						
F42A	Maple Grove Fa	116.28	316	P		PKPdf	00 40 12.6 -0.5
	baz=149						
MATQ	Matagami	116.31	325	P		PKiKP	00 40 13.2 +0.2
	baz=153						
E43A	Lone Tree Farm	116.40	317	P		PKPdf	00 40 13.2 -0.2
	baz=149						
KSCO	Kaye Shedlock'	116.47	302	P		PKPdf	00 40 13.2 -0.8
	baz=146						
BGNE	Belgrade	116.53	307	P		PKPdf	00 40 13.2 -0.7
	baz=146						
W18A	Petrified Fore	116.55	294	P		PKPdf	00 40 14.0 -0.3
	baz=145						
F41A	Three Lakes	116.62	315	P		PKPdf	00 40 13.2 -0.6
	baz=148,SNR=7.5						
G40A	Rib Lake	116.62	314	P		PKPdf	00 40 13.6 -0.3
	baz=148,SNR=10.0						
KBZ	Khabaz	116.63	49	PKP		PKPdf	00 40 13.4 -0.5
	comp=Z,2.2nm,0.7s,baz=235,slow=2.8,SNR=6.4						
AKT	Akhty	116.71	54	*i* PKIKP		PKiKP	00 40 15.0 +0.7
AKT				*e*			00 41 26.3
AKT				pmax		pmax	
	comp=Z,6.0nm,0.8s						
SDCO	Great Sand Dun	116.72	299	*e*PKPdf		PKiKP	00 40 14.7 0.0
SDCO	Great Sand Dun	116.72	299	P		PKiKP	00 40 14.7 0.0
	baz=145						
KIV	Kislovodsk	116.74	49	*i* PKIKP		PKPdf	00 40 14.0 -0.2
KIV				*e*			00 50 57.9
KIV				pmax		pmax	
	comp=Z,16nm,1.1s						
KIV				MLR		MLR	
	comp=Z,527nm,21.0s						
E42A	Champion	116.78	317	P		PKPdf	00 40 13.7 -0.5
	baz=149						
X16A	Lo Mia Camp, P	116.80	292	*e*PKPdf		PKiKP	00 40 15.3 +0.5
COWI	Conover	116.94	316	*e*PKPdf		PKPdf	00 40 14.0 -0.4
G39A	Holcombe	117.00	314	P		PKPdf	00 40 14.2 -0.3
	baz=148,SNR=12						
F40A	Park Falls	117.14	315	P		PKPdf	00 40 14.2 -0.6
	baz=148,SNR=6.6						
Y14A	Wickenburg	117.17	291	*e*PKPdf		PKiKP	00 40 15.4 0.0
S22A	4UR Ranch, Cre	117.33	298	P		PKiKP	00 40 16.3 +0.4
	baz=145						
GLA	Glamis	117.34	289	P		PKiKP	00 40 16.1 +0.4
	baz=144						
F39A	Loretta	117.44	314	P		PKPdf	00 40 15.0 -0.4
	baz=148,SNR=7.6						
D41A	Chassel	117.55	317	P		PKPdf	00 40 15.1 -0.4
	baz=148						
SPMN	Marine on St.	117.57	313	P		PKPdf	00 40 15.1 -0.5
	baz=147,SNR=5.4						
IKP	In-Ko-Pah, Jac	117.65	288	P		PKiKP	00 40 16.8 +0.5
	baz=144						
WUAZ	Wupatki	117.66	293	P		PKiKP	00 40 16.6 +0.2
	baz=144						
MVCO	Mesa Verde	117.67	296	P		PKiKP	00 40 16.8 +0.3
	baz=144						
SWSC	Sam W. Stewart	117.74	288	P		PKiKP	00 40 16.9 +0.5
	baz=144						
Y12C	Blythe	117.76	290	*e*PKPdf		PKiKP	00 40 17.1 +0.7
Y12C	Blythe	117.76	290	P		PKiKP	00 40 16.9 +0.5
	baz=144						
OGNE	Ogallala	117.80	304	P		PKPdf	00 40 16.2 -0.2
	baz=145						
ECSD	EROS Data Cent	117.82	309	P		PKPdf	00 40 15.9 -0.3
	baz=146						
KIEV	Kiev	117.83	36⇓	*i*P		PKPdf	00 40 15.1 -0.8
KIEV	Kiev	117.83	36⇓	*i*PKIKP		PKPdf	00 40 15.6 -0.3
F38A	Pierce - Schro	117.83	314	P		PKPdf	00 40 16.1 -0.1
	baz=147,SNR=7.7						
AKASG	Malin Array Be	117.84	36	PKP		PKPdf	00 40 15.4 -0.5
	comp=Z,4.7nm,0.6s,baz=234,slow=1.4,SNR=19						
MAK	Makhachkala	117.84	53	*e*P		Pdif	00 36 36.4 +1.8
MAK				*e*			00 41 28.7
MAK				*e*			00 47 06.4
MAK				*e*PS		PS	00 51 16.8 +1.2
MAK				*e*SS		SS	00 57 43.4 +2.0
MAK				*e*SSS		SSS	01 02 08.1
JAY	Jayapura	117.89	164	PKP		PKiKP	00 40 17.8 +0.4
	comp=Z,16nm,1.1s,baz=359,slow=23,SNR=3.3						
F37A	Hinrichs Farm,	117.92	313	P		PKPdf	00 40 16.0 -0.3
	baz=147						
BAR	Barrett	117.96	287	*e*PKPdf		PKiKP	00 40 17.5 +0.6
MONP2	Monument Peak	118.00	288	P		PKiKP	00 40 17.9 +0.6
	baz=144						
PDMCI	Parker Dam,Lak	118.02	290	P		PKiKP	00 40 17.1 +0.2
	baz=144						
SCHQ	Schefferville	118.07	334	PKP		PKPdf	00 40 16.2 -0.1
	comp=Z,8.7nm,0.4s,baz=222,slow=5.7,SNR=8.9						
BC3	Big Chuckawall	118.14	289	P		PKiKP	00 40 17.6 +0.2
	baz=144						
109C	Camp Elliot, M	118.34	287	P		PKiKP	00 40 17.8 +0.2
	baz=144						
IRM	Iron Mountain	118.39	290	P		PKiKP	00 40 18.2 +0.5
	baz=144						
GEYT	Alibeck	118.41	63	PKP		PKPdf	00 40 17.6 0.0
	comp=Z,1.3nm,0.5s,baz=242,slow=2.9,SNR=5.2						
ISCO	Idaho Springs	118.45	300	*e*PKPdf		PKPdf	00 40 17.6 -0.4
ISCO	Idaho Springs	118.45	300	*e*PKIKP		PKPdf	00 40 17.6 -0.4
ISCO	Idaho Springs	118.45	300	P		PKPdf	00 40 17.9 -0.1
	baz=144						
PV01	Paradox Valley	118.45	297	*e*PKPdf		PKiKP	00 40 18.0 0.0
C40A	Isle Royale Na	118.48	317	*e*PKPdf		PKPdf	00 40 16.4 -0.9
C40A	Isle Royale Na	118.48	317	P		PKPdf	00 40 16.8 -0.6
	baz=148						
PFO	Pinyon Flats O	118.60	288	PKP		PKiKP	00 40 18.7 +0.4
	comp=Z,3.9nm,0.6s,baz=172,slow=2.6,SNR=6.4						
PFO	Pinyon Flats O	118.60	288	*e*PKPdf		PKiKP	00 40 18.9 +0.6
PFO	Pinyon Flats O	118.60	288	*e*PKIKP		PKiKP	00 40 18.9 +0.6
PFO	Pinyon Flats O	118.60	288	P		PKiKP	00 40 18.7 +0.4
	baz=144						
NEE2	Needles Airpor	118.62	290	P		PKiKP	00 40 18.3 +0.2
	baz=144						
BELC	Belle Mtn. Jos	118.68	289	P		PKiKP	00 40 19.1 +0.6
	baz=144						
MURC	Murrieta	118.95	288	P		PKiKP	00 40 19.2 +0.3
	baz=144						
SCI2	San Clemente I	119.13	286	P		PKiKP	00 40 19.7 +0.5
	baz=144						
GMRC	Granite Mounta	119.15	290	P		PKiKP	00 40 20.0 +0.7
	baz=143						
BBRC	Big Bear Solar	119.35	288	P		PKiKP	00 40 20.0 +0.2
	baz=143						
EYMN	Ely	119.36	315	P		PKPdf	00 40 18.4 -0.7
	baz=147						
SUSD	Miller	119.36	308	P		PKPdf	00 40 18.9 -0.2
	baz=145,SNR=5.0						
CIS	Catalina Islan	119.40	286	P		PKiKP	00 40 20.2 +0.6
	baz=143						
N23A	Red Feather La	119.48	301	P		PKiKP	00 40 20.0 +0.1
	baz=144						
HEC	Hector,Ludlow	119.51	289	P		PKPdf	00 40 19.7 -0.2
	baz=143						
BFSC	Mount Baldy Ra	119.70	288	P		PKPdf	00 40 20.2 -0.1
	baz=143,SNR=7.4						
TUQ	Turquoise Moun	119.80	290	P		PKiKP	00 40 21.0 +0.4
	baz=143						
SNCC	San Nicolas Is	119.84	286	P		PKiKP	00 40 20.8 +0.3
	baz=143						
RRX	Edison Barstow	119.88	289	P		PKiKP	00 40 21.2 +0.7
	baz=143						
PASC	Pasadena Art C	119.90	287	*e*PKPdf		PKiKP	00 40 21.2 +0.6
O20A	White River Ci	119.91	299	P		PKiKP	00 40 20.7 0.0
	baz=143						
DECC	Green Verdugo	120.04	287	P		PKiKP	00 40 21.2 +0.3
	baz=143						
GSC	Goldstone, Bar	120.12	289	P		PKiKP	00 40 21.6 +0.5
	baz=143,SNR=17						
SHOC	Shoshone, Teco	120.34	290	P		PKiKP	00 40 21.7 +0.3
	baz=143,SNR=5.6						
EDW2	Edwards Air Fo	120.38	288	P		PKiKP	00 40 22.2 +0.6
	baz=143,SNR=31						
SCZ2	Santa Cruz Isl	120.49	286	P		PKiKP	00 40 22.3 +0.5
	baz=143						
OSI	Osito Audit: C	120.53	287	P		PKiKP	00 40 22.3 +0.5
	baz=143						
PBUR	Paburg	120.54	29	*e*P		PKPdf	00 40 20.6 -0.3
PBUR				IAmb		IAmb	00 40 21.9
	comp=Z,34nm,0.7s						
PABE	Paberze	120.60	30	*e*P		PKPdf	00 40 20.4 -0.7
PABE				IAmb		IAmb	00 40 21.9
	comp=Z,21nm,1.1s						
LRMC	Laurel Mtn Rad	120.70	288	P		PKiKP	00 40 22.9 +0.6
	baz=143,SNR=13						
ARVC	Arvin	120.98	287	P		PKiKP	00 40 23.3 +0.6
	baz=143						
IIGN	Ignalina	121.06	31	*e*P		PKiKP	00 40 22.1 0.0
IIGN				IAmb		IAmb	00 40 23.1
	comp=Z,5.9nm,0.8s						
MPMC	Manual Prospec	121.06	289	P		PKiKP	00 40 23.7 +0.6
	baz=143,SNR=22						
FURC	Furnace Creek,	121.08	290	P		PKiKP	00 40 23.6 +0.9
	baz=143,SNR=16						
K22A	Casper	121.15	302	P		PKPdf	00 40 22.4 -0.4
	baz=143,SNR=28						
TPNV	Topopah Spring	121.16	291	P		PKiKP	00 40 23.9 +0.7
	baz=143,SNR=59						
IDID	Didziasalis	121.17	32	*e*P		PKiKP	00 40 22.6 +0.3
IDID				IAmb		IAmb	00 40 23.2
	comp=Z,2.9nm,0.8s						
ISA	Isabella, Lake	121.23	288	P		PKiKP	00 40 24.0 +0.7
	baz=143,SNR=12						
RSSD	Black Hills	121.24	304	*e*PKPdf		PKPdf	00 40 22.6 -0.4
RSSD	Black Hills	121.24	304	*e*PKIKP		PKPdf	00 40 22.6 -0.4
RSSD	Black Hills	121.24	304	P		PKPdf	00 40 22.7 -0.4
	baz=143						
DAC	Darwin (Calif)	121.28	289	*e*PKPdf		PKiKP	00 40 26.1 +2.6
PKM	Mcpherson Peak	121.29	286	P		PKiKP	00 40 24.5 +1.0
	baz=143,SNR=9.4						
VORD	Divnogorie	121.36	42	*e*PKIKP		PKPdf	00 40 21.3 -1.4
VORD				pmax		pmax	
	comp=Z,10.0nm,0.6s						
IZAR	Zarasai	121.42	31	*e*P		PKPdf	00 40 22.6 0.0
IZAR				IAmb		IAmb	00 40 23.8
	comp=Z,7.3nm,0.7s						
VSR	Storozhevoye	121.52	42	*e*PKIKP		PKPdf	00 40 21.6 -1.4
VSR				pmax		pmax	
	comp=Z,10.0nm,1.1s						
CWC	Cottonwood Cre	121.65	289	P		PKiKP	00 40 24.8 +0.7
	baz=142						
SMMC	Simmler	121.71	287	P		PKiKP	00 40 25.3 +1.1
	baz=142,SNR=6.4						
OSL	Oslo	121.72	20	*e*P		PKPdf	00 40 22.8 -0.3
GRAC	Grapevine Rang	121.74	290	P		PKiKP	00 40 24.9 +0.7
	baz=142,SNR=8.1						
R11A	Troy Canyon, C	121.94	292	P		PKiKP	00 40 25.3 +0.6
	baz=142,SNR=28						
DUG	Dugway, Tooele	122.08	295	P		PKiKP	00 40 25.2 +0.3
	baz=142,SNR=52						
HYA	Hoyanger	122.11	17	*e*PKPdf		PKiKP	00 40 24.3 +0.3
PAGB	Antelope Grade	122.17	287	*e*PKPdf		PKiKP	00 40 25.8 +0.7
TIN	Tinemaha, Big	122.21	289	P		PKiKP	00 40 25.7 +0.5
	baz=142,SNR=5.6						
MDND	Maddock	122.39	310	P		PKPdf	00 40 24.3 -0.6
	baz=144						
NIL	Nilore	122.41	78	*e*PKPdf		PKPdf	00 40 25.3 -0.1
NIL	Nilore	122.41	78	*e*PKIKP		PKPdf	00 40 25.3 -0.1
VRH	Novokhopyorsk	122.41	43	*e*PKIKP		PKPdf	00 40 23.9 -0.8
VRH				pmax		pmax	
	comp=Z,20nm,0.7s						
NAO01	NORSAR Array S	122.59	20	*e*PKPdf		PKPdf	00 40 24.5 -0.3
NAO01	NORSAR Array S	122.59	20	*e*PKPdf		PKiKP	00 40 24.9 -0.1
LPSR	Galich'ya Gora	122.60	41	*e*PKIKP		PKPdf	00 40 24.6 -0.4
LPSR				pmax		pmax	
	comp=Z,10.0nm,0.9s						
BW06	Boulder Array	122.60	300	*e*PKPdf		PKPdf	00 40 25.4 -0.4
BW06	Boulder Array	122.60	300	P		PKPdf	00 40 25.2 -0.5
	baz=142,SNR=8.6						
PDAR	Pinedale Array	122.60	300	PKP		PKPdf	00 40 25.2 -0.5
	comp=Z,9.0nm,0.5s,baz=133,slow=5.1,SNR=106						
SPUT	South Promonto	122.78	297	*e*PKPdf		PKiKP	00 40 26.8 +0.5
NB2	NORSAR Subarra	122.83	20	PKPdf		PKPdf	00 40 24.9 -0.4
	comp=Z,12nm,1

WAKR	Walker	123.94	289	*e*PKPdf	PKiKP	00 40 29.7	+1.1
KKN	Kakani	123.96	92	*e*P	PKPdf	00 40 28.0	-0.8
	comp=Z,28nm,0.6s						
RAMN	Ramite	123.97	93	*e*P	PKPdf	00 40 28.7	-0.2
	comp=Z,68nm,0.6s						
IMW	Indian Meadow	124.11	299	*e*PKPdf	PKiKP	00 40 29.3	+0.4
LAO	LASA Array	124.21	305	P	PKiKP	00 40 28.7	0.0
	baz=142						
YERR	Yerington	124.22	290	*e*PKPdf	PKiKP	00 40 30.3	+1.1
SKNT	Sakolnakorn	124.31	116	P	PKPdf	00 40 29.5	0.0
RLMT	Red Lodge	124.32	302	P	PKiKP	00 40 29.2	0.0
	baz=141						
JIRN	Jiri	124.33	93	*e*P	PKPdf	00 40 29.2	-0.5
	comp=Z,123nm,0.7s						
H17A	Grant Village	124.34	300	P	PKiKP	00 40 30.2	+0.8
	baz=141						
GUN	Gumba	124.37	92	*e*P	PKPdf	00 40 29.3	-0.5
	comp=Z,57nm,0.8s						
PAYA	Payao	124.40	111	P	PKPdf	00 40 29.7	+0.1
PNTR	Pine Nut	124.47	290	*e*PKPdf	PKiKP	00 40 30.9	+1.2
PANO	Nakornpanom	124.75	117	P	PKiKP	00 40 30.8	+0.2
DGMT	Dagmar	124.75	307	P	PKiKP	00 40 29.7	-0.1
	baz=142						
HLID	Hailey	125.45	297	P	PKiKP	00 40 32.0	+0.5
	baz=140						
BOZ	Bozeman (W)	125.74	300	P	PKiKP	00 40 32.4	+0.4
	baz=140						
NSS	Namsos	126.21	19	*e*PKPdf	PKPdf	00 40 30.9	-0.7
FINES	FINESS Array B	126.35	28	PKP	PKPdf	00 40 31.7	-0.2
	comp=Z,18nm,0.5s,baz=151,slow=2.0,SNR=185						
FINES				PKKPbc	PKKPbc	00 50 04.2	+0.4
	comp=Z,3.0nm,1.1s,baz=64,slow=4.4,SNR=4.9						
O03E	Paynes Creek	126.48	289	P	PKiKP	00 40 33.4	-0.1
	baz=140,SNR=21						
EGMT	Eagleton	126.77	303	P	PKiKP	00 40 33.8	0.0
	baz=140						
SFJD	Kangerlussuaq	126.86	348	*e*PKPdf	PKiKP	00 40 33.1	-0.2
SFJD	Kangerlussuaq	126.86	348	*i* PKiKP	PKiKP	00 40 33.0	-0.2
SFJD				pmax	pmax		
	comp=Z,14nm,0.7s						
SFJD	Kangerlussuaq	126.86	348	*i* P	PKiKP	00 40 33.0	-0.2
	comp=Z,14nm,0.7s						
O02D	Mt. Diablo Mer	126.88	288	P	PKiKP	00 40 35.0	+0.7
	baz=140						
N02D	Trinity Center	127.45	289	P	PKiKP	00 40 35.7	+0.3
	baz=139,SNR=5.4						
M04C	Macdoel	127.64	290	P	PKiKP	00 40 36.1	+0.3
	baz=139,SNR=18						
MSO	Missoula	127.72	300	P	PKiKP	00 40 36.0	+0.2
	baz=139						
M02C	Callahan	127.84	289	P	PKiKP	00 40 36.3	+0.1
	baz=139,SNR=5.3						
YBH	Yreka Blue Hor	128.02	290	PKP	PKPdf	00 40 36.2	+0.3
	comp=Z,7.2nm,0.8s,baz=114,slow=5.7						
ABKAR	Akbulak array	128.10	56	*e*PKPdf	PKPdf	00 40 35.5	-0.2
MOR8	Moi Rana	128.13	19	*e*PKPdf	PKiKP	00 40 35.9	0.0
L04D	Klamath Falls	128.19	290	P	PKiKP	00 40 36.9	0.0
	baz=139,SNR=6.6						
KONS	Konsvik	128.21	19	*e*PKPdf	PKiKP	00 40 36.1	+0.1
K04D	Chiloquin, OR	128.23	291	P	PKiKP	00 40 37.2	+0.2
	baz=139						
KSH	Kashi	128.33	75	PKP	PKiKP	00 40 37.4	+0.1
KSH				PP	PP	00 42 44.4	+2.2
KSH				SS	SS	00 59 52.3	-2.5
KSH				AMB	AMB		
	comp=Z,160nm,5.7s						
KSH				LR	LR		
	comp=Z,130nm,6.8s						
KSH				LR	LR		
	comp=Z,270nm,8.3s						
KSH				LR	LR		
	comp=Z,420nm,20.5s						
J05D	Fort Rock, OR	128.47	292	P	PKiKP	00 40 37.9	+0.4
	baz=139,SNR=15						
F10A	Beach Ranch, E	128.58	297	*e*PKPdf	PKPdf	00 40 36.9	0.0
FFC	Flin Flon	128.72	314	*e*PKPdf	PKPdf	00 40 36.8	+0.1
FFC	Flin Flon	128.72	314	*i* PKiKP	PKiKP	00 40 37.1	-0.3
L02E	Cave Junction	128.78	289	P	PKiKP	00 40 38.3	+0.3
	baz=139						
J04D	Umpqua Nationa	128.86	291	P	PKiKP	00 40 38.5	+0.1
	baz=138,SNR=9.2						
ILULI	Ilulissat	129.05	348	*i* PKiKP	PKPdf	00 40 36.8	-0.1
ILULI	Ilulissat	129.05	348	*i* P	PKPdf	00 40 36.8	-0.1
FCC	Fort Churchill	129.06	321	*e*PKPdf	PKPdf	00 40 37.4	+0.2
FCC	Fort Churchill	129.06	321	*e*PKiKP	PKPdf	00 40 37.4	+0.2
AML	Almayashu	129.16	71	P	PKPdf	00 40 38.5	-0.1
	SNR=14						
K02D	Willamette Mer	129.22	290	P	PKiKP	00 40 39.1	+0.2
	baz=138,SNR=8.8						
I05D	Terrebonne, OR	129.31	293	P	PKiKP	00 40 39.2	+0.2
	baz=138,SNR=10						
I04A	Tendick Farm,	129.42	292	P	PKPdf	00 40 38.6	+0.1
	baz=138						
KLMR	Klimovskoe	129.51	35	*e*PKiKP	PKPdf	00 40 35.3	-2.7
KLMR				pmax	pmax		
	comp=Z,53nm,1.1s						
EKS2	Erkin-Say	129.60	71	P	PKPdf	00 40 39.1	+0.1
	SNR=11						
UCH	Uchtor	129.64	72	P	PKiKP	00 40 40.0	-0.2
	SNR=12						
J01E	Myrtle Point	129.69	290	P	PKiKP	00 40 39.3	-0.4
	baz=138						
I03D	Drain, OR	129.81	291	P	PKiKP	00 40 40.3	+0.4
	baz=138						
STEI	Steigen	129.86	19	*e*PKPdf	PKPdf	00 40 38.7	+0.2
AAK	Ala-Archa	129.94	71	P	PKiKP	00 40 40.1	-0.4
	SNR=11						
AAK	Ala-Archa	129.94	71	*e*PKPdf	PKiKP	00 40 40.0	-0.4
AAK	Ala-Archa	129.94	71	*ce*PKiKP	PKPdf	00 40 39.5	-0.2
AAK				pmax	pmax		
	comp=Z,13nm,0.7s						
G05D	Wamic, OR	129.97	294	P	PKiKP	00 40 40.4	+0.2
	baz=138						
H04D	Lebanon	130.12	292	P	PKiKP	00 40 40.8	+0.2
	baz=138						
KBK	Karagaybulak	130.17	72	P	PKPdf	00 40 40.5	+0.3
	SNR=8.9						
NEW	Newport	130.23	299	PKP	PKPdf	00 40 40.3	+0.4
	comp=Z,6.8nm,0.6s,baz=144,slow=2.6,SNR=8.5						
NEW				SKPbc	SKPbc	00 44 01.4	+2.0
	comp=Z,3.6nm,0.8s,baz=164,slow=6.3,SNR=3.9						
NEW	Newport	130.23	299	P	PKiKP	00 40 40.8	+0.1
	baz=137						
USP	Ospenovka	130.41	71	P	PKPdf	00 40 40.4	0.0
	SNR=10						
F05D	White Salmon	130.51	294	P	PKiKP	00 40 41.3	0.0
	baz=137						
BOOM	Boomskoye usch	130.54	73	*e*PKPdf	PKiKP	00 40 41.3	-0.4
BOOM	Boomskoye usch	130.54	73	*e*PKiKP	PKiKP	00 40 41.3	-0.4
G03D	McMinnville, O	130.88	292	P	PKiKP	00 40 42.0	-0.1
	baz=137						
F04D	Rainier, OR	131.39	293	P	PKiKP	00 40 43.1	0.0
	baz=136						
SUMG	Summit	131.39	355	*e*PKPdf	PKPdf	00 40 42.2	+0.4
SUMG	Summit	131.39	355⇑	*i* PKiKP	PKiKP	00 40 42.4	-0.4
SUMG				pmax	pmax		
	comp=Z,32nm,0.8s						
SUMG	Summit	131.39	355⇑	*i* P	PKiKP	00 40 42.4	-0.4
	comp=Z,32nm,0.8s						
E04D	Cinebar	131.52	294	P	PKiKP	00 40 43.2	-0.1
	baz=136						
TMCR	Tamitsa	131.70	32	*e*PKiKP	PKPdf	00 40 41.5	-0.5
TMCR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PRGR	Permogore	131.99	37	*e*PKiKP	PKPdf	00 40 40.2	-2.5
PRGR				pmax	pmax		
	comp=Z,14nm,0.6s						
TRO	Tromso	132.00	19	*e*PKPdf	PKPdf	00 40 41.8	-0.7
D04E	Lakebay	132.07	294	P	PKiKP	00 40 44.4	+0.1
	baz=136						
KTK1	Kautokeino	132.24	21	*e*PKPdf	PKPdf	00 40 42.9	-0.1
D03D	Eldon	132.47	294	P	PKiKP	00 40 45.2	0.0
	baz=136,SNR=9.1						
B05A	Bryant	132.53	296	P	PKiKP	00 40 44.9	-0.3
	baz=135,SNR=16						
NLWA	Neilton Lookou	132.74	294	*e*PKPdf	PKiKP	00 40 45.6	-0.2
ARU	Arti	132.78	49	*e*PKPdf	PKPdf	00 40 44.3	0.0
ARU	Arti	132.78	49	*i* PKiKP	PKPdf	00 40 44.1	-0.3
ARU				MLR	MLR		
	comp=Z,264nm,22.0s						
ARCES	ARCESS Array B	133.12	22	PKhKP	PKPpre	00 40 26.8	
	comp=Z,1.9nm,0.8s,baz=204,slow=2.7,SNR=5.0						
ARCES				PKP	PKPdf	00 40 44.9	+0.2
	comp=Z,26nm,0.7s,baz=218,slow=2.2,SNR=47						
ARCES				SKPbc	SKPbc	00 44 08.5	-0.4
	comp=Z,7.9nm,1.0s,baz=184,slow=5.2,SNR=5.0						
ARE0	ARCESS Array S	133.12	22	*e*PKPdf	PKPdf	00 40 44.2	-0.4
A04D	Lummi Island	133.14	296	P	PKiKP	00 40 46.1	-0.4
	baz=135						
GYA	Guiyang	133.70	113	*e*PKP	PKiKP	00 40 54.4	+5.9
GYA				AMB	AMB		
	comp=Z,130nm,7.8s						
HAMF	Hammerfest	133.71	20	*e*PKPdf	PKPdf	00 40 45.9	+0.2
LVZ	Lovozero	133.76	27	*e*PKPdf	PKPdf	00 40 45.3	-0.6
LVZ	Lovozero	133.76	27⇑	*e*PKiKP	PKPdf	00 40 45.7	-0.2
LVZ				pmax	pmax		
	comp=Z,20nm,0.7s						
SVE	Sverdlovsk	133.88	50	*e*PKiKP	PKPdf	00 40 46.7	+0.3
SVE				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LLLB	Lillooet	134.08	298	*e*PKPdf	PKPdf	00 40 46.7	-0.4
BRVK	Borovoye	135.36	59	*e*PKPdf	PKPdf	00 40 49.0	-0.3
BRVK	Borovoye	135.36	59	*ce*PKiKP	PKPdf	00 40 48.9	-0.4
DAG	Danmarks Havn	135.37	2⇑	*i*PKiKP	PKPdf	00 40 48.3	-0.4
DAG				pmax	pmax		
	comp=Z,12nm,0.7s						
DAG	Danmarks Havn	135.37	2⇑	*i P*	PKPdf	00 40 48.3	-0.4
	comp=Z,18nm,0.7s						
CD2	Chengdu	135.95	106	PKP	PKPdf	00 40 52.0	+0.8
MKAR	Makanchi Array	136.78	73	PKhKP	PKPpre	00 40 42.1	
	comp=Z,1.9nm,0.7s,baz=224,slow=2.6,SNR=13						
MKAR				PKP	PKiKP	00 40 53.1	-0.9
	comp=Z,2.2nm,0.5s,baz=222,slow=3.1,SNR=8.2						
MKAR				SKPbc	SKPbc	00 44 21.3	0.0
	comp=Z,2.8nm,1.0s,baz=198,slow=3.6,SNR=4.9						
MKAR				PKKP	PKKPdf	00 50 28.4	+0.3
	comp=Z,1.1nm,0.6s,baz=14,slow=0.7,SNR=7.7						
WMQ	Urumqi	137.45	80	*e*PKP	PKiKP	00 40 54.8	-0.7
WMQ				LR	LR		
	comp=Z,750nm,23.5s						
KURK	Kurchatov	137.64	66	*e*PKPdf	PKPdf	00 40 52.5	-1.1
KURK	Kurchatov	137.64	66⇑	*e*PKiKP	PKPdf	00 40 53.1	-0.5
BBB	Bella Bella	138.03	296	PKP	PKPdf	00 40 55.0	+0.7
	comp=Z,19nm,0.7s,baz=60,slow=3.8,SNR=7.7						
ENH	Enshi	138.24	113	*e*PKPdf	PKPdf	00 40 55.0	-0.5
YKA	Yellowknife Ar	138.84	315	PKhKP	PKPpre	00 40 44.0	
	comp=Z,1.6nm,0.5s,baz=121,slow=3.7,SNR=18						
YKA				PKP	PKPdf	00 40 56.0	+0.6
	comp=Z,66nm,0.6s,baz=130,slow=2.0,SNR=194						
YKA				SKPbc	SKPbc	00 44 26.2	-0.5
	comp=Z,3.8nm,0.8s,baz=122,slow=1.9,SNR=6.3						
YKA	Yellowknife Ar	138.84	315	PKiKP	PKPdf	00 40 56.0	+0.6
YKW3	Yellowknife Ar	138.89	315	*e*PKPdf	PKPdf	00 40 56.0	+0.5
SPITS	Spitsbergen Ar	139.04	12	PKhKP	PKPpre	00 40 47.0	
	comp=Z,4.9nm,0.6s,baz=158,slow=5.4,SNR=9.8						
KBS	Kingsbay	139.24	10	*de*PKiKP	PKiKP	00 40 57.6	-0.5
LZH	Lanzhou	140.11	102	*e*PKP	PKiKP	00 41 01.2	-0.1
LZH				sPKP		00 41 15.7	
LZH				LR	LR		
	comp=Z,230nm,18.2s						
LZH				LR	LR		
	comp=Z,230nm,18.0s						
LZH				LR	LR		
	comp=Z,280nm,20.1s						
GTA	Gaotai	140.56	95	PKP	PKPdf	00 40 57.2	-2.3
GTA				sPKP		00 41 14.4	
GTA				LR	LR		
	comp=Z,330nm,22.0s						
GTA				LR	LR		
	comp=Z,390nm,21.3s						
GTA				LR	LR		
	comp=Z,360nm,19.6s						
DIB	Dawson Inlet,	140.73	295	*e*PKPdf	PKPdf	00 40 59.8	+0.7
RES	Resolute Bay	140.77	337	PKhKP	PKPpre	00 40 51.5	
	comp=Z,8.6nm,0.6s,baz=138,slow=6.2,SNR=47						
RES				PKP	PKPdf	00 40 57.0	-1.6
	comp=Z,17nm,0.7s,baz=169,slow=4.3,SNR=31						
RES	Resolute Bay	140.77	337	*e*PKPpre	PKPpre	00 40 51.1	
RES				*e*PKPdf	PKiKP	00 41 00.2	-1.0
RES	Resolute Bay	140.77	337	PKiKP	PKPdf	00 40 57.0	-1.6
XAN	Xi'an	141.04	109	PKP	PKPdf	00 41 00.2	-0.3
XAN				LR	LR		
	comp=Z,240nm,18.1s						
XAN				LR	LR		
	comp=Z,260nm,19.6s						
XAN				LR	LR		
	comp=Z,270nm,18.6s						
NVS	Novosibirsk	142.41	64⇓	*i*PKiKP	PKPdf	00 40 58.6	-3.5
NVS				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.5s						
ZAA0	Zalesovo Array	142.63	66	*e*PKPpre	PKPpre	00 40 57.6	
ZALV	Zalesovo Beam	142.63	66	PKhKP	PKPpre	00 40 57.6	
	comp=E,5.8nm,0.4s,baz=231,slow=4.0,SNR=27						
ZALV				PKP	PKPdf	00 41 03.6	+1.0
	comp=E,7.2nm,0.4s,baz=231,slow=4.1,SNR=19						
ZALV				SKPbc	SKPbc	00 44 35.4	-1.5
	comp=E,2.6nm,0.9s,baz=259,slow=1.5,SNR=4.6						
DLBC	Dease Lake	142.69	303	PKiKP	PKPpre	00 40 58.9	
	comp=E,5.8nm,0.6s,baz=147,slow=1.6,SNR=11						
DLBC				PKP	PKPdf	00 41 03.6	+1.0
	comp=E,9.8nm,0.6s,baz=149,slow=5.5,SNR=9.2						
DLBC				SKPbc	SKPbc	00 44 35.9	-1.1
	comp=E,5.2nm,0.8s,baz=146,slow=7.3,SNR=3.9						
NJ2	Nanjing	144.06	122	*e*PKP	PKiKP	00 41 07.6	-1.7
TIY	Taiyuan	145.69	109	*e*PKPbc	PKPdf	00 41 08.6	0.0
TIY				pPKP	pPKPab	00 41 22.6	+1.1
TIY				PP	PP	00 44 36.1	+5.7
TIY				SKKS		00 51 19.2	
TIY				AMB	AMB		
	comp=E,200nm,3.9s						
TIY				LR	LR		
	comp=E,350nm,16.3s						
TIY				LR	LR		
	comp=E,100nm,10.5s						
TIY				LR	LR		
	comp=E,240nm,14.3s						
BTO	Baotou	146.69	103	*e*PKPbc	PKPdf	00 41 09.6	-0.6
TIA	Tai'an	146.74	116	PKPbc	PKPbc	00 41 12.2	+0.1
HYT	Haines Junctio	147.18	303	*e*PKPdf	PKPdf	00 41 09.7	-0.7
HHC	Hu-ho-hao-te	147.65	104	*e*PKPbc	PKPbc	00 41 14.4	-0.2
INK	Inuvik	148.52	317	PKP	PKPdf	00 41 10.2	-2.0
	comp=E,6.8nm,0.9s,baz=89,slow=1.9,SNR=33						
INK				PKPbc	PKPbc	00 41 16.0	+0.2
	baz=86,slow=2.8						
INK	Inuvik	148.52	317	*e*PKPbc	PKPbc	00 41 15.6	-0.3
EPYK	Eagle Plains	149.06	313	*e*PKPbc	PKPbc	00 41 17.7	+0.3
EPYK	Eagle Plains	149.06	313	P	PKPbc	00 41 17.6	+0.2
	baz=109						
BJT	Baijiatuau	149.31	111	*e*PKPbc	PKPbc	00 41 18.9	+0.1
BJT	Baijiatuau	149.31	111	*e*PKP2	PKPbc	00 41 18.9	+0.1
BJI	Beijing	149.33	111	PKPbc	PKPbc	00 41 18.7	-0.1
MOY	Mondy	149.34	80	*e*PKHKP	PKPdf	00 41 13.9	-0.3
MOY				pmax	pmax		
	comp=Z,99nm,1.9s						
BALM	Baldy	149.40	302	*e*PKPbc	PKiKP	00 41 19.1	-0.5
BALM	Baldy	149.40	302	*e*PKP2	PKiKP	00 41 19.1	-0.5
ZAK	Zakamensk	149.77	83	*e*PKHKP	PKPbc	00 41 19.2	-0.5
ZAK				pmax	pmax		
	comp=Z,57nm,1.1s						
JNU	Nakatsue	149.80	138	*e*PKPbc	PKPbc	00 41 20.3	0.0
SONM	Songino Array	149.83	90	PKP	PKPdf	00 41 14.8	-0.4
	comp=Z,5.0nm,1.1s,baz=212,slow=3.2,SNR=14						
SONM				PKPbc	PKPbc	00 41 20.1	+0.1
	comp=Z,44nm,0.9s,baz=208,slow=4.0,SNR=119						
HMT	Hamilton	149.97	300	*e*PKPbc	PKPbc	00 41 20.0	+0.2
EGAK	Eagle	150.28	309	*e*PKPbc	PKPbc	00 41 20.3	0.0
NRIK	Noril'sk	150.47	42	PKP	PKPdf	00 41 13.8	-1.4
	comp=Z,1.3nm,0.4s,baz=190,slow=3.1,SNR=4.7						
NRIK				PKPbc	PKPbc	00 41 20.8	+0.2
	comp=Z,26nm,0.8s,baz=157,slow=0.1,SNR=42						
TLY	Talaya	150.71	81	*e*PKPbc	PKiKP	00 41 22.2	-0.2
TLY	Talaya	150.71	81	*e*PKIKP	PKPdf	00 41 15.5	-0.7
TLY				pmax	pmax		
	comp=Z,241nm,1.8s						
MENT	Mentasta	150.73	305	*e*PKPbc	PKiKP	00 41 21.9	-0.2
EYAK	Cordova Ski Ar	150.73	299	*e*PKPbc	PKiKP	00 41 22.6	+0.5
DIV	Divide	150.97	300	*e*PKPbc	PKiKP	00 41 23.3	+0.5
DL2	Dalian	151.01	119	PKPbc	PKPbc	00 41 22.6	-0.3
DL2				PP	PP	00 45 07.9	+6.7
DL2				AMB	AMB		
	comp=Z,210nm,8.9s						
DL2				LR	LR		
	comp=Z,280nm,15.0s						
DL2				LR	LR		
	comp=Z,160nm,16.8s						
DL2				LR	LR		
	comp=Z,240nm,16.2s						
DOT	Dot Lake	151.11	306	*e*PKPbc	PKiKP	00 41 23.0	+0.1
SCRK	Sand Creek	151.19	307	*e*PKPbc	PKPbc	00 41 22.8	+0.1
IRK	Irkutsk	151.34	81	*e*PKIKP	PKPbc	00 41 22.8	-0.4
IRK				pmax	pmax		
	comp=Z,89nm,2.3s						
RIDG	Independent Ri	151.47	306	*e*PKPbc	PKiKP	00 41 24.2	+0.5
SCM	Sheep Creek Mo	151.92	301	*e*PKPbc	PKiKP	00 41 24.8	+0.1
DHY	Denali Highway	152.35	304	*e*PKPbc	PKiKP	00 41 26.0	+0.3
FYU	Fort Yukon	152.40	312	*e*PKPbc	PKiKP	00 41 26.2	+0.8
KS15	Wonju Array Si	152.49	129	*e*PKPbc	PKPbc	00 41 26.3	0.0
KSRS	Korea Array	152.52	129	PKP	PKPdf	00 41 18.4	-1.0
	comp=Z,1.1nm,0.5s,baz=208,slow=1.9,SNR=8.8						
KSRS				PKPbc	PKiKP	00 41 26.6	0.0
	comp=Z,8.6nm,0.7s,baz=243,slow=2.4,SNR=27						
HDA	Harding Lake	152.55	307	P	PKiKP	00 41 25.8	0.0
	baz=106						
ILAR	Eielson Array	152.62	307	PKPbc	PKPbc	00 41 25.7	-0.1
	comp=Z,131nm,0.8s,baz=136,slow=5.7,SNR=412						
PMR	Palmer	152.65	300	*e*PKPbc	PKiKP	00 41 26.1	+0.1
RC01	Rabbit Creek A	152.75	299	*e*PKPbc	PKiKP	00 41 26.7	+0.4
KDAK	Kodiak Island	152.82	291	*e*PKPbc	PKiKP	00 41 26.7	+0.1
CNPM	China Poot	152.88	295	*e*PKPbc	PKiKP	00 41 27.0	+0.4
OHAK	Old Harbor	152.93	289	*e*PKPbc	PKiKP	00 41 27.1	+0.3
POKR	Poker Flat Res	152.94	308	P	PKPbc	00 41 26.3	-0.2
	baz=104						
CCB	Clear Creek Bu	152.97	307	*e*PKPbc	PKPbc	00 41 26.1	-0.4
COLA	College	153.05	307	*e*PKPbc	PKPbc	00 41 26.5	-0.2
TCOL	CIGO, UAF Yank	153.05	307	P	PKPbc	00 41 26.6	-0.1
	baz=104						
RND	Reindeer	153.08	304	*e*PKPbc	PKiKP	00 41 27.3	+0.3
MCK	McKinley	153.21	305	*e*PKPbc	PKiKP	00 41 27.8	+0.6
SUA	Susitna One	153.33	299	*e*PKPbc	PKiKP	00 41 27.7	0.0
BWN	Browne	153.55	305	*e*PKPbc	PKPbc	00 41 27.6	-0.2
TOLK	Toolik Lake Re	154.37	316	P	PKiKP	00 41 31.0	+1.5
	baz=95						
COLD	Coldfoot	154.44	312	*e*PKPbc	PKiKP	00 41 30.5	+0.8
CAST	Castle Rocks	154.49	303	*e*PKPbc	PKPbc	00 41 29.5	-0.4
MAJO	Matsushiro	155.28	147	*e*PKPdf	PKPdf	00 41 24.2	+0.8
MAJO				*e*PKPbc	PKPbc	00 41 32.2	
MAJO				*e*PKPab	sPKPbc	00 41 48.5	-0.5
MAJO	Matsushiro	155.28	147	*e*PKIKP	PKPdf	00 41 24.2	+0.8
MAJO				*e*		00 41 32.2	
MAJO				*e*		00 41 48.5	
MAT	Matsushiro	155.28	147	PKP	PKPdf	00 41 22.3	-1.1
MJAR	Matsushiro Arr	155.28	147	PKP	PKPdf	00 41 24.2	+0.8
	comp=Z,1.8nm,0.9s,baz=198,slow=2.6,SNR=7.3						
MJAR				PKPbc	PKPbc	00 41 32.3	
	comp=Z,4.2nm,0.8s,baz=176,slow=2.7,SNR=13						
MJAR				PKPab	PKPab	00 41 48.6	0.0
	comp=Z,11nm,0.7s,baz=184,slow=4.9,SNR=20						
MJB9	Matsu-Tunnel	155.28	147	*e*PKPbc	PKPbc	00 41 32.6	
MJB9				*e*PKPab	PKPab	00 41 48.9	+0.2
HIA	Hailar	157.64	100	*e*PKPab	PKPab	00 41 58.9	+0.3
HIA	Hailar	157.64	100	*e*PKP2	PKPab	00 41 58.9	+0.3
UNV	Unalaska Valle	158.12	274	*e*PKPab	PKPab	00 41 59.9	-0.6
BOD	Bodaibo	158.85	75	*e*PKIKP	PKPdf	00 41 25.4	-1.8
BOD				pmax	pmax		
	comp=Z,12nm,1.0s						
NIKH	Nikolski High	158.91	270	*e*PKPab	PKPab	00 42 02.6	-1.4
USRK	Ussuriysk Ar.	159.85	126	PKPab	PKPab	00 42 08.0	-0.2
	comp=Z,4.9nm,0.8s,baz=223,slow=4.5,SNR=6.9						
TIXI	Tiksi	163.39	29	PKPab	PKPab	00 42 23.6	+0.6
	comp=Z,4.7nm,0.7s,baz=330,slow=1.2,SNR=7.2						
ZEA	Zeya	164.03	97	*e*PKIKP	PKPdf	00 41 31.8	-0.9
ZEA				pmax	pmax		
	comp=Z,42nm,2.0s						
BILL	Bilibino	169.38	336	*e*PKIKP	PKPdf	00 41 32.2	-4.2
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PETK	Petropavlovsk-	174.06	198	PKP	PKPdf	00 41 38.2	-0.9
	comp=Z,12nm,0.8s,baz=138,slow=4.8,SNR=12						
PETK				PKPab	PKPab	00 43 10.7	+0.1
	comp=Z,22nm,0.8s,baz=121,slow=5.5,SNR=15						
PEA1	Petropavlovsk-	174.06	198	*e*PKPab	PKPab	00 43 10.7	+0.1
SEY	Seymchan	175.69	14	PKP	PKPdf	00 41 37.3	-1.9
	comp=Z,9.4nm,1.1s,baz=173,slow=2.3,SNR=8.4						
SEY				PKPab	PKPab	00 43 18.7	+1.0
	comp=Z,1.9nm,0.7s,baz=48,slow=3.6,SNR=3.6						

**SVSA 09 00:31:41.0±1.0, 38.10°N×26.45°W, h0km±4km, MD3.5, ML2.0, Error ellipse: s-maj=5.

s-min=11.0km az=69.0
BJI ***09*** *00:36:27.0±0.0, 42°.70S×41°.70E, h5km, mb5.1/19, mB5.4/13, Ms5.1/10, Ms7 4.9/11*
NEIC ***09*** *00:36:27.3±2.4, 42°.69S×41°.67E, h10km±1km, mb5.1/40, Error ellipse: s-maj=16.6km s-min=10.3km az=82.0*
GCMT ***09*** *00:36:31.3±0.2, 42°.68S±0°.01×41°.80E±0°.01, h12km, MW5.2/104, Moment Tensor Solution. s52, c72; s104, c184; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=2.38±.16; Mθθ3.14±.15; Mφφ-0.76±.15; Mrθ1.10±.40; Mθφ6.80±.11; Mφr1.95±.40; Best double couple: M0=7.38300×10^16^ NP1:φs=189.00000°, δ87.00000°, λ-162.00000°. NP2:φs=98.00000°, δ72.00000°, λ-3.00000°. Principal axes: T 8.6470, Plg11.0000°, Azm322.0000°; N -2.5310, Plg72.0000°, Azm198.0000°; P -6.1180, Plg15.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 00:36:27.8±0.3, 42°.75S±0°.06×41°.49E±0°.07, h10km, n364, σ1§39/338, mb5.0/83, MS4.8/33, 37C-14D, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**8.26**	**120**	*e*Pn	**Pn**	**00 38 28.3**	**+0.7**
BOSA	**Boshof**	**19.26**	**312**	*i* P	**P**	**00 40 52.8**	**+0.2**
BOSA	**Boshof**	**19.26**	**312**	P	**P**	**00 40 52.5**	**0.0**
	1.3nm,0.3s,baz=147,slow=12,SNR=24						
BOSA				S	Sn	00 44 12.5	-17
	0.5nm,0.3s,baz=51,slow=21,SNR=4.0						
BOSA				LR	LR	00 47 13.0	
	comp=Z,3μm,19.1s,baz=158,slow=34						
BOSA	**Boshof**	**19.26**	**312**	*e*P	**Pn**	**00 40 54.2**	**+0.7**
	62nm,1.3s						
BOSA	**Boshof**	**19.26**	**312**	*i* P	**P**	**00 40 52.8**	**+0.2**
LBTB	**Lobatse**	**22.00**	**318**	P	**P**	**00 41 21.4**	**-0.8**
	30nm,1.0s,baz=152,slow=12,SNR=16						
LBTB				S	**S**	**00 45 21.2**	**-3.9**
	3.6nm,0.7s,baz=75,slow=16,SNR=3.1						
LBTB				LR	LR	00 48 45.2	
	comp=Z,3μm,19.3s,baz=181,slow=34						
LBTB	**Lobatse**	**22.00**	**318**	*e*P	**P**	**00 41 21.5**	**-0.8**
LBTB				*ep*P	**P**	**00 41 21.6**	**-0.7**
LBTB	**Lobatse**	**22.00**	**318**	*e*P	**P**	**00 41 21.5**	**-0.7**
LBTB				*e**PP	**P**	**00 41 21.6**	**-0.7**
ABPO	**Ambohimpanom**	**24.15**	**13**	*e*P	**P**	**00 41 43.5**	**-0.7**
	99nm,1.4s						
ABPO	**Ambohimpanom**	**24.15**	**13**	*e*P	**P**	**00 41 43.5**	**-0.7**
ABPO				pmax	pmax		
	comp=Z,99nm,1.4s						
OPO	**Ambohidratompo**	**24.58**	**13**	P	**P**	**00 41 48.1**	**0.0**
	comp=Z,8.9nm,1.0s,baz=186,slow=9.7,SNR=6.7						
OPO				LR	LR	00 50 01.6	
	comp=Z,2μm,18.1s,baz=2.0,slow=33						
MATP	**Matopo**	**24.80**	**330**	*i* P	**P**	**00 41 48.1**	**-1.9**
MATP	**Matopo**	**24.80**	**330**	P	**P**	**00 41 48.5**	**-1.5**
	comp=Z,23nm,0.9s,baz=162,slow=9.3,SNR=22						
MATP	**Matopo**	**24.80**	**330**	*i* P	**P**	**00 41 48.1**	**-1.9**
BLWY	**Bulawayo**	**25.02**	**330**	*i* P	**P**	**00 41 50.8**	**-1.2**
BLWY	**Bulawayo**	**25.02**	**330**	*i* P	**P**	**00 41 50.8**	**-1.2**
SYO	**Syowa Base**	**26.34**	**182**	⇑*i*pP	pP	00 42 06.4	+0.7
SYO	**Syowa Base**	**26.34**	**182**	⇑*i*pP	pP	00 42 09.4	+3.7
MAW	**Mawson**	**27.43**	**162**	P	**P**	**00 42 13.9**	**+0.6**
	comp=Z,16nm,1.3s,baz=336,slow=8.5,SNR=8.6						
MAW				LR	LR	00 50 18.9	
	comp=Z,1μm,21.7s,baz=328,slow=30						
MAW	**Mawson**	**27.43**	**162**	*e*P	**P**	**00 42 12.4**	**-0.9**
	comp=Z,26nm,1.9s						
MAW	**Mawson**	**27.43**	**162**	*e*P	**P**	**00 42 12.4**	**-0.9**
MAW				pmax	pmax		
	comp=Z,26nm,1.9s						
LSZ	**Lusaka**	**29.67**	**333**	*i* P	**P**	**00 42 33.1**	**-0.7**
LSZ	**Lusaka**	**29.67**	**333**	P	**P**	**00 42 32.5**	**-1.3**
	comp=Z,5.6nm,0.8s,baz=152,slow=9.1,SNR=12						
LSZ	**Lusaka**	**29.67**	**333**	*e*P	**P**	**00 42 32.8**	**-1.0**
	comp=Z,26nm,1.1s						
LSZ	**Lusaka**	**29.67**	**333**	*e*P	**P**	**00 42 32.8**	**-1.0**
LSZ				pmax	pmax		
	comp=Z,26nm,1.1s						
LSZ	**Lusaka**	**29.67**	**333**	*i* P	**P**	**00 42 33.1**	**-0.7**
TSUM	**Tsumeb**	**30.96**	**312**	P	**P**	**00 42 45.0**	**-0.3**
	comp=Z,6.6nm,0.9s,baz=137,slow=9.5,SNR=5.6						
TSUM	**Tsumeb**	**30.96**	**312**	*e*P	**P**	**00 42 44.2**	**-1.0**
	comp=Z,40nm,1.6s						
SNAA	**Sanae**	**36.07**	**202**	P	**P**	**00 43 31.0**	**+1.9**
SNAA	**Sanae**	**36.07**	**202**	P	**P**	**00 43 31.2**	**+2.1**
	comp=Z,10nm,0.9s,baz=54,slow=7.5,SNR=9.4						
SNAA	**Sanae**	**36.07**	**202**	*e*P	**P**	**00 43 30.2**	**+1.1**
	comp=Z,69nm,1.7s						
SNAA	**Sanae**	**36.07**	**202**	⇓*i*P	**P**	**00 43 30.2**	**+1.1**
VNA2	**Neumayer--Watz**	**37.06**	**204**	P	**P**	**00 43 39.8**	**+2.3**
	baz=64,slow=9.5						
VNA3	**Neumayer Olymp**	**37.87**	**204**	P	**P**	**00 43 46.0**	**+1.6**
KMBO	**Kilima Mbogo**	**41.61**	**354**	P	**P**	**00 44 16.8**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=165,slow=5.2,SNR=4.8						
KMBO				LR	LR	00 59 43.3	
	comp=Z,1μm,20.2s,baz=162,slow=34						
KMBO	**Kilima Mbogo**	**41.61**	**354**	*e*P	**P**	**00 44 16.8**	**+0.5**
	comp=Z,19nm,1.6s						
MBAR	**Mbarara**	**43.06**	**344**	P	**P**	**00 44 28.4**	**+0.4**
	comp=Z,2.1nm,0.2s,baz=150,slow=11,SNR=4.5						
MBAR	**Mbarara**	**43.06**	**344**	⇓*e*P	**P**	**00 44 27.8**	**-0.2**
MBAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
QSPA	**South Pole Qui**	**47.46**	**180**	P	**P**	**00 45 04.2**	**+1.8**
	comp=Z,30nm,1.0s,baz=250,slow=3.7,SNR=4.6						
QSPA	**South Pole Qui**	**47.46**	**180**	*e*P	**P**	**00 45 03.4**	**+0.9**
	comp=Z,86nm,1.1s						
VNDA	**Vanda**	**54.61**	**167**	P	**P**	**00 45 57.6**	**+1.8**
	comp=Z,1.5nm,0.5s,baz=247,slow=9.0,SNR=8.3						
VNDA				LR	LR	01 07 41.4	
	comp=Z,481nm,18.6s,baz=224,slow=34						
VNDA	**Vanda**	**54.61**	**167**	*e*P	**P**	**00 45 56.2**	**+0.4**
VNDA				*ep*P	**P**	**00 45 56.5**	**+0.8**
VNDA	**Vanda**	**54.61**	**167**	*e*P	**P**	**00 45 56.2**	**+0.4**
VNDA				*e**PP	**P**	**00 45 56.6**	**+0.8**
H01W2	**Cape Leeuwin H**	**55.54**	**108**	T	T	01 45 45.2	
	baz=238						
H01W3	**Cape Leeuwin H**	**55.55**	**108**	T	T	01 45 48.2	
	baz=238,slow=75						
H01W1	**Cape Leeuwin H**	**55.56**	**108**	T	T	01 45 48.8	
	baz=238						
PALK	**Pallekele**	**61.24**	**46**	LR	LR	01 06 23.1	
	comp=Z,631nm,20.8s,baz=294,slow=29						
KIC	**Kosan Boka**	**64.41**	**307**	*e*PKP1	**P**	**00 47 04.4**	**+0.2**
	comp=Z,99nm,1.3s						
LIC	**Lamto**	**64.47**	**307**	*e*PKP1	**P**	**00 47 04.6**	**0.0**
	comp=Z,58nm,1.0s						
DBIC	**Dimbokro**	**64.72**	**307**	P	**P**	**00 47 07.0**	**+0.8**
	comp=Z,19nm,0.9s,baz=122,slow=8.7,SNR=9.5						
DBIC				LR	LR	01 12 14.8	
	comp=Z,785nm,19.8s,baz=130,slow=33						
DBIC	**Dimbokro**	**64.72**	**307**	*e*P	**P**	**00 47 06.2**	**0.0**
	comp=Z,33nm,1.0s						
DBIC	**Dimbokro**	**64.72**	**307**	*e*P	**P**	**00 47 06.2**	**0.0**
DBIC				pmax	pmax		
	comp=Z,33nm,1.0s						
TIC	**Toumodi**	**64.80**	**307**	*e*PKP1	**P**	**00 47 05.4**	**-1.4**
TOA0	**Torodi Ar. Sit**	**66.52**	**317**	*e*P	**P**	**00 47 18.2**	**+0.4**
	comp=Z,28nm,1.0s						
TORD	**Torodi Ar. Bea**	**66.52**	**317**	P	**P**	**00 47 17.4**	**-0.4**
	comp=Z,23nm,1.1s,baz=157,slow=4.7,SNR=25						
TORD				LR	LR	01 14 19.1	
	comp=Z,636nm,22.0s,baz=325,slow=34						
TOA1	**Torodi Ar. Sit**	**66.53**	**317**	*e*P	**P**	**00 47 17.4**	**-0.5**
PDSI	**Padang**	**67.02**	**69**	P	**P**	**00 47 22.0**	**+0.8**
	comp=Z,20nm,1.0s						
LHSI	**Lahat**	**67.08**	**73**	P	**P**	**00 47 16.7**	**-4.8**
MDSI	**Maura Dua**	**67.08**	**74**	P	**P**	**00 47 21.5**	**0.0**
	comp=Z,8.9nm,1.8s						
LEM	**Lembang**	**67.92**	**78**	P	**P**	**00 47 27.7**	**+0.7**
PSI	**Prapat**	**68.70**	**65**	LR	LR	01 10 25.8	
	comp=Z,183nm,18.4s,baz=207,slow=30						
PSI	**Prapat**	**68.70**	**65**	*e*P	**P**	**00 47 29.5**	**-2.4**
	comp=Z,13nm,1.3s						
PSI	**Prapat**	**68.70**	**65**	*e*P	**P**	**00 47 29.5**	**-2.4**
PSI				pmax	pmax		
	comp=Z,13nm,1.3s						
TAM	**Tamanrasset**	**73.16**	**326**	*e*P	**P**	**00 47 58.9**	**+0.2**
	comp=Z,13nm,1.3s						
TAM	**Tamanrasset**	**73.16**	**326**	*e*P	**P**	**00 47 58.9**	**+0.2**
TAM				pmax	pmax		
	comp=Z,13nm,1.3s						
STKA	**Stephens Creek**	**75.79**	**120**	P	**P**	**00 48 12.5**	**-1.4**
	comp=Z,10.0nm,0.8s,baz=257,slow=4.8,SNR=10						
STKA				LR	LR	01 14 26.0	
	comp=Z,854nm,20.2s,baz=211,slow=30						
STKA	**Stephens Creek**	**75.79**	**120**	*e*P	**P**	**00 48 12.1**	**-1.9**
	comp=Z,2.6nm,1.4s						
STKA	**Stephens Creek**	**75.79**	**120**	*e*P	**P**	**00 48 12.1**	**-1.9**
STKA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ASAR	**Alice Springs**	**76.02**	**109**	P	**P**	**00 48 13.4**	**-2.0**
	comp=Z,17nm,1.1s,baz=222,slow=6.3,SNR=17						
AS31	**Alice Springs**	**76.03**	**109**	*e*P	**P**	**00 48 13.4**	**-2.0**
	comp=Z,5.5nm,1.2s						
PLCA	**Paso Flores**	**76.73**	**226**	P	**P**	**00 48 18.8**	**-0.4**
	comp=Z,3.8nm,1.0s,baz=162,slow=4.7,SNR=5.5						
PLCA				LR	LR	01 15 46.0	
	comp=Z,454nm,21.6s,baz=153,slow=31						
PLCA	**Paso Flores**	**76.73**	**226**	*e*P	**P**	**00 48 19.4**	**+0.1**
	comp=Z,7.7nm,0.9s						
PLCA	**Paso Flores**	**76.73**	**226**	*e*P	**P**	**00 48 19.4**	**+0.1**
PLCA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CPUP	**Villa Florida**	**78.64**	**245**	P	**P**	**00 48 30.0**	**0.0**
	comp=Z,4.8nm,1.0s,baz=108,slow=6.2,SNR=6.6						
CPUP				LR	LR	01 16 23.9	
	comp=Z,191nm,21.2s,baz=142,slow=30						
CPUP	**Villa Florida**	**78.64**	**245**	P	**P**	**00 48 30.0**	**0.0**
WRA	**Warramunga Arr**	**78.76**	**107**	P	**P**	**00 48 29.4**	**-1.4**
	comp=Z,15nm,0.9s						
WB2	**Warramunga Arr**	**78.77**	**107**	*e*P	**P**	**00 48 29.3**	**-1.5**
	comp=Z,46nm,1.3s						
WRAB	**Tennant Creek**	**78.78**	**107**	*e*P	**P**	**00 48 29.1**	**-1.7**
WRAB	**Tennant Creek**	**78.78**	**107**	⇑*e*P	**P**	**00 48 29.2**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,14nm,0.9s						
BDFB	**Brasilia**	**79.20**	**259**	P	**P**	**00 48 34.3**	**+0.9**
	comp=Z,8.7nm,1.1s,baz=67,slow=5.0,SNR=6.6						
BDFB	**Brasilia**	**79.20**	**259**	*e*P	**P**	**00 48 33.4**	**0.0**
	comp=Z,15nm,1.2s						
BDFB	**Brasilia**	**79.20**	**259**	*e*P	**P**	**00 48 33.4**	**0.0**
BDFB				pmax	pmax		
	comp=Z,15nm,1.2s						
CMAR	**Chiang Mai Arr**	**80.60**	**54**	P	**P**	**00 48 40.4**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=235,slow=6.1,SNR=10						
CMAR				LR	LR	01 19 59.6	
	comp=Z,259nm,18.1s,baz=205,slow=32						
GEYT	**Alibeck**	**81.71**	**13**	P	**P**	**00 48 47.6**	**+1.5**
	comp=Z,2.0nm,1.0s,baz=196,slow=4.3,SNR=4.0						
BRTR	**Keskin Array B**	**82.40**	**354**	P	**P**	**00 48 49.1**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=170,slow=8.7,SNR=7.6						
BRTR				LR	LR	01 22 21.6	
	comp=Z,130nm,21.9s,baz=204,slow=34						
BRTR	**Keskin Array B**	**82.40**	**354**	*i* P	**P**	**00 48 51.0**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GNI	**Garni**	**82.57**	**3**	⇓*e*P	**P**	**00 48 52.1**	**+1.4**
GNI				pmax	pmax		
	comp=Z,50nm,1.4s						
RPZ	**Rata Peaks**	**82.79**	**146**	LR	LR	01 19 10.2	
	comp=Z,379nm,18.1s,baz=208,slow=31						
BALB	**Balikesir**	**82.93**	**349**	*e*P	**P**	**00 48 52.1**	**-0.3**
	comp=Z,81nm,1.0s						
AGG	**Agios Georgios**	**83.23**	**345**	*e*P	**P**	**00 48 53.0**	**-1.0**
	comp=Z,9.4nm,0.8s						
AGG	**Agios Georgios**	**83.23**	**345**	*e*P	**P**	**00 48 53.0**	**-1.0**
AGG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KTUT	**Trabzon**	**83.37**	**359**	⇑*i*P	P	00 49 00.9	+6.3
KEST	**Kesra**	**83.44**	**334**	P	**P**	**00 48 56.2**	**+1.0**
	comp=Z,10nm,1.1s,baz=226,slow=6.3,SNR=5.7						
KEST				LR	LR	01 26 20.6	
	comp=Z,744nm,22.0s,baz=141,slow=36						
KEST	**Kesra**	**83.44**	**334**	*e*P	**P**	**00 48 54.2**	**-1.1**
	comp=Z,12nm,1.5s						
VAE	**Valguarnera**	**83.57**	**339**	LR	LR	01 25 56.0	
	comp=Z,634nm,21.6s,baz=178,slow=36						
AKH	**Akhalkalaki**	**83.80**	**2**	⇓*i*P	**P**	**00 48 55.7**	**-1.3**
AKT	**Akhty**	**84.03**	**5**	*e*P	P	00 49 05.5	+7.3
AKT				*e*		00 49 08.3	
AKT				*e*		00 52 15.6	
AKT				pmax	pmax		
	comp=Z,32nm,1.3s						
TBLG	**Delisi**	**84.15**	**2**	*e*P	**P**	**00 48 58.6**	**0.0**
	comp=Z,23nm,1.0s						
TBLG	**Delisi**	**84.15**	**2**	*e*P	**P**	**00 48 58.6**	**0.0**
TBLG				pmax	pmax		
	comp=Z,23nm,1.0s						
DIKM	**Dikmen**	**84.20**	**355**	⇑*i*P	**P**	**00 49 01.1**	**+2.2**
TIP	**Timpagrande**	**84.58**	**341**	*e*P	**P**	**00 49 00.6**	**-0.4**
	comp=Z,20nm,1.2s						
TIP	**Timpagrande**	**84.58**	**341**	⇓*i*P	**P**	**00 49 01.2**	**+0.3**
PHSR	**Pinarhisar**	**84.94**	**350**	⇑*i*P	**P**	**00 49 01.8**	**-0.8**
FNA	**Florina**	**85.12**	**345**	*e*P	**P**	**00 49 02.6**	**-1.0**
	comp=Z,16nm,1.2s						
FNA	**Florina**	**85.12**	**345**	*e*P	**P**	**00 49 02.6**	**-1.0**
FNA				pmax	pmax		
	comp=Z,16nm,1.2s						
ZEI	**Tsey**	**85.18**	**2**	*e*P	P	00 49 10.3	+6.3
ZEI				pmax	pmax		
	comp=Z,13nm,1.3s						
VAY	**Valandovo**	**85.41**	**346**	*i* P	**P**	**00 49 04.0**	**-1.0**
GAR	**Garm**	**85.47**	**22**	*e*P	**P**	**00 49 05.3**	**-0.2**
	comp=Z,32nm,1.2s						
GAR	**Garm**	**85.47**	**22**	*e*P	**P**	**00 49 05.3**	**-0.2**
GAR				pmax	pmax		
	comp=Z,33nm,1.2s						
MAK	**Makhachkala**	**85.50**	**4**	*e*P	**P**	**00 49 02.9**	**-2.4**
MAK				*e*		00 52 20.8	
MAK				*e*S	S	00 59 24.5	-12
MAK				pmax	pmax		
	comp=Z,74nm,1.7s						
NEY	**Neytrino**	**85.62**	**1**	⇑*e*P	**P**	**00 49 08.4**	**+2.2**
GROC	**Groznyy**	**85.66**	**3**	*e*P	**P**	**00 49 06.0**	**-0.1**
GROC				*e*		00 52 26.1	
GROC				pmax	pmax		
	comp=Z,21nm,1.1s						
KRUS	**Krusevo**	**85.71**	**345**	*i* P	**P**	**00 49 06.5**	**0.0**
STIP	**Stip**	**85.84**	**346**	*i* P	**P**	**00 49 06.9**	**-0.2**
NCK	**Nalchik**	**85.88**	**2**	⇑*e*P	**P**	**00 49 09.3**	**+2.0**
NCK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SOC	**Sochi**	**85.96**	**359**	*e*P	**P**	**00 49 04.0**	**-3.6**
SOC				MLR	MLR		
	comp=Z,163nm,19.0s						
MATE	**Matera**	**85.99**	**341**	⇓*i*P	**P**	**00 49 07.8**	**0.0**
KBZ	**Khabaz**	**86.10**	**1**	P	**P**	**00 49 09.5**	**+1.2**
	comp=Z,1.2nm,0.6s,baz=236,slow=10,SNR=6.3						
SKO	**Skopje**	**86.25**	**345**	*i* P	**P**	**00 49 09.3**	**+0.1**
MDT	**Midelt**	**86.25**	**323**	LR	LR	01 27 46.5	
	comp=Z,1μm,20.9s,baz=164,slow=36						
KIV	**Kislovodsk**	**86.33**	**1**	*e*P	**P**	**00 49 09.0**	**-0.6**
	comp=Z,19nm,1.2s						
KIV	**Kislovodsk**	**86.33**	**1**	⇑*i*P	**P**	**00 49 10.9**	**+1.3**
KIV	**Kislovodsk**	**86.33**	**1**	*e*P	**P**	**00 49 08.9**	**-0.6**
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
VTS	**Vitosha**	**86.56**	**347**	*e*P	**P**	**00 49 10.2**	**-0.6**
	comp=Z,5.2nm,0.9s						
VTS	**Vitosha**	**86.56**	**347**	⇑*i*P	**P**	**00 49 10.1**	**-0.6**
VTS	**Vitosha**	**86.56**	**347**	*e*P	**P**	**00 49 10.2**	**-0.6**
VTS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TTG	**Podgorica**	**87.13**	**344**	*e*P	**P**	**00 49 12.7**	**-0.7**
	comp=Z,12nm,1.1s						
TTG	**Podgorica**	**87.13**	**344**	*e*P	**P**	**00 49 12.7**	**-0.7**
TTG				pmax	pmax		
	comp=Z,12nm,1.1s						
ANN	**Anapa**	**87.24**	**357**	*e*P	**P**	**00 49 13.5**	**-0.3**
ANN				*e*		00 59 42.7	
ANN				pmax	pmax		
	comp=Z,19nm,1.0s						
ANN				MLR	MLR		
	comp=Z,223nm,25.0s						
GOF	**Gofitskoye**	**87.43**	**1**	⇑*e*P	P	00 49 23.0	+8.2
GOF				pmax	pmax		
	comp=Z,35nm,1.1s						
SIM	**Simferopol'**	**87.56**	**355**	*e*P	**P**	**00 49 17.9**	**+2.5**
SIM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TIRR	**Tirgusor**	**87.61**	**351**	*e*P	**P**	**00 49 14.2**	**-1.4**
	comp=Z,47nm,1.4s						
TIRR	**Tirgusor**	**87.61**	**351**	⇑*i*P	**P**	**00 49 14.9**	**-0.7**
TIRR	**Tirgusor**	**87.61**	**351**	*e*P	**P**	**00 49 14.2**	**-1.4**
TIRR				pmax	pmax		
	comp=Z,47nm,1.4s						
KSH	**Kashi**	**87.65**	**26**	P	**P**	**00 49 14.9**	**-1.3**
KSH				PP	**PP**	**00 52 40.2**	**-1.8**
KSH				S	**SKSac**	**00 59 48.3**	**+4.4**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,290nm,4.5s						
KSH				LR	LR		
	comp=Z,220nm,9.8s						
KSH				LR	LR		
	comp=Z,160nm,7.5s						
KSH				LR	LR		
	comp=Z,520nm,18.5s						
TLB	**Topalu**	**87.78**	**350**	⇑*i*P	**P**	**00 49 15.0**	**-1.4**
TLB	**Topalu**	**87.78**	**350**	⇑P	**P**	**00 49 15.0**	**-1.4**
KMI	**Kunming**	**87.96**	**53**	P	**P**	**00 49 20.2**	**+2.1**
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI				LR	LR		
	comp=Z,250nm,17.5s						
KMI				LR	LR		
	comp=Z,160nm,18.8s						
KMI				LR	LR		
	comp=Z,330nm,23.8s						
SIV	**San Ignacio**	**88.22**	**250**	P	**P**	**00 49 19.8**	**+0.4**
	baz=131,slow=7.8						
PGOR	**Pogoanele**	**88.23**	**350**	⇓*i*P	**P**	**00 49 20.1**	**+1.5**
CFR	**Carcaliu**	**88.35**	**351**	⇑*i*P	**P**	**00 49 18.6**	**-0.5**
CFR	**Carcaliu**	**88.35**	**351**	⇑P	**P**	**00 49 18.6**	**-0.5**
HERR	**Herculane**	**88.89**	**347**	⇓*i*P	**P**	**00 49 20.1**	**-1.6**
MDVR	**Moldovita**	**88.92**	**346**	⇓*i*P	**P**	**00 49 22.3**	**+0.4**
MLR	**Muntele Rosu**	**88.94**	**349**	⇑*i*P	**P**	**00 49 21.7**	**-0.4**
MLR	**Muntele Rosu**	**88.94**	**349**	⇑P	**P**	**00 49 21.7**	**-0.4**
ARR	**Arges**	**89.01**	**348**	⇑*i*P	**P**	**00 49 21.9**	**-0.5**
VOIR		**89.02**	**349**	⇑*i*P	**P**	**00 49 21.9**	**-0.5**
VOIR		**89.02**	**349**	⇑P	**P**	**00 49 21.9**	**-0.5**
PLOR	**Plostina**	**89.20**	**350**	⇓*i*P	**P**	**00 49 23.1**	**-0.1**
PLOR	**Plostina**	**89.20**	**350**	⇓P	**P**	**00 49 23.1**	**-0.1**
VRI	**Vrincioaia**	**89.21**	**350**	⇑*i*P	**P**	**00 49 22.8**	**-0.4**
VRI	**Vrincioaia**	**89.21**	**350**	⇑P	**P**	**00 49 22.8**	**-0.4**
LOT	**Lotru**	**89.22**	**348**	⇑*i*P	**P**	**00 49 23.4**	**0.0**
BZS	**Buzias**	**89.75**	**346**	⇑*i*P	**P**	**00 49 25.4**	**-0.3**
BZS	**Buzias**	**89.75**	**346**	⇑P	**P**	**00 49 25.4**	**-0.3**
MILM	**Milestii Mici**	**89.99**	**351**	⇑*i*P	**P**	**00 49 25.6**	**-1.2**
KIS	**Kishinev**	**90.07**	**351**	*e*P	**P**	**00 49 25.0**	**-2.2**
KIS	**Kishinev**	**90.07**	**351**	*e*P	**P**	**00 49 25.0**	**-2.2**
KIS				*e*		00 49 30.0	
BIZ	**Bicaz**	**90.34**	**350**	⇑*i*P	**P**	**00 49 28.4**	**-0.1**
SIRR	**Siria**	**90.37**	**346**	⇑*i*P	**P**	**00 49 25.6**	**-3.0**
DRGR		**90.70**	**347**	⇑*i*P	**P**	**00 49 29.6**	**-0.7**
DRGR		**90.70**	**347**	⇑P	**P**	**00 49 29.6**	**-0.7**
BURAR	**Bucovina Array**	**91.12**	**349**	⇑*i*P	**P**	**00 49 33.1**	**+0.9**
BURAR	**Bucovina Array**	**91.12**	**349**	⇑P	**P**	**00 49 33.1**	**+0.9**
BUR08	**Bucovina Ar. S**	**91.16**	**349**	*e*P	**P**	**00 49 32.1**	**-0.3**
	comp=Z,37nm,1.8s						
GYA	**Guiyang**	**91.29**	**54**	*e*P	**P**	**00 49 35.3**	**+1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PB11	**IPOC Station P**	**91.32**	**241**	*e*P	**P**	**00 49 34.0**	**-0.1**
	comp=Z,24nm,1.0s						
ESDC	**Sonseca Array**	**91.79**	**327**	P	**P**	**00 49 35.2**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=151,slow=4.3,SNR=10						
ESDC				LR	LR	01 32 25.7	
	comp=Z,516nm,18.7s,baz=175,slow=37						
ESLA	**Sonseca Array**	**91.79**	**327**	*e*P	**P**	**00 49 34.5**	**-1.0**
	comp=Z,14nm,1.3s						
OBKA	**Obir**	**92.04**	**342**	*e*P	**P**	**00 49 37.0**	**+0.5**
	comp=Z,3.4nm,0.9s						
SOKA	**Soboth**	**92.09**	**342**	*e*P	**P**	**00 49 37.1**	**+0.4**
	comp=Z,1.8nm,0.8s						
MYKA	**Terra Mystica**	**92.36**	**341**	*e*P	**P**	**00 49 39.0**	**+1.0**
	comp=Z,2.7nm,0.9s						
ARSA	**Arzberg**	**92.52**	**343**	P	**P**	**00 49 39.5**	**+0.9**
	comp=Z,1.6nm,0.8s						
ABTA	**Abfaltersbach**	**92.75**	**341**	*e*P	**P**	**00 49 40.7**	**+1.0**
	comp=Z,3.6nm,0.9s						
BNI	**Bardonecchia**	**92.77**	**336**	*e*P	**P**	**00 49 40.2**	**+0.2**
	comp=Z,9.2nm,1.1s						
LPAZ	**La Paz**	**92.81**	**245**	LR	LR	01 27 12.3	
	comp=Z,306nm,19.2s,baz=112,slow=33						
LPAZ	**La Paz**	**92.81**	**245**	*e*P	**P**	**00 49 38.5**	**-3.1**
LPAZ				*e*PcP	**P**	**00 49 38.8**	**-2.8**
LPAZ	**La Paz**	**92.81**	**245**	*e*P	**P**	**00 49 38.5**	**-3.1**
LPAZ				*e*		00 49 38.8	
KOLS	**Kolonicke sedl**	**92.85**	**347**	*es*P	sP

OBN				*e*S	**SKSac**	**01 00 36.3**	**-1.9**
OBN				*e*SS	**SS**	**01 08 15.9**	**+9.3**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DZM	**Mont Dzumac**	**97.98**	**130**	*e*LR	LR	01 21 50.6	
	comp=Z,499nm,28.1s						
XAN	**Xi'an**	**98.17**	**51**	P	Pdif	00 50 06.5	+1.7
XAN				pP	pwP	00 50 12.9	+2.8
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				LR	LR		
	comp=Z,150nm,23.9s						
XAN				LR	LR		
	comp=Z,220nm,21.7s						
XAN				LR	LR		
	comp=Z,280nm,20.6s						
BRVK	**Borovoye**	**98.60**	**17⇑**	*e*P	Pdif	00 50 08.2	+2.0
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WHN	**Wuhan**	**98.90**	**57**	⇓P	Pdif	00 50 14.4	+6.3
NJ2	**Nanjing**	**102.73**	**58**	*e*P	**Pdif**	**00 50 26.0**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
TBI	**Tubuai**	**113.46**	**169**	*e*LR	LR	01 29 08.7	
	comp=Z,393nm,36.5s						
MAJO	**Matsushiro**	**118.06**	**65**	*e*Pdif	**Pdif**	**00 51 33.1**	**0.0**
MAJO	**Matsushiro**	**118.06**	**65**	*e*P	**Pdif**	**00 51 33.1**	**0.0**
MJB9	**Matsu-Tunnel**	**118.06**	**65**	*e*Pdif	**Pdif**	**00 51 33.1**	**0.0**
PPT2	**Papeete2**	**119.10**	**168**	*e*LR	LR	01 31 43.0	
	comp=Z,312nm,21.2s						
TIXI	**Tiksi**	**129.11**	**24**	*d i*PKIKP	**PKiKP**	**00 55 37.6**	**+2.3**
BILL	**Bilibino**	**141.69**	**30⇓**	*e*PKIKP	**PKPdf**	**00 55 58.8**	**+0.6**
BILL				pmax	pmax		
	comp=Z,10.0nm,2.2s						
RES	**Resolute Bay**	**142.54**	**342**	PKP	**PKPdf**	**00 56 00.0**	**+0.6**
	comp=Z,1.8nm,1.0s,baz=45,slow=1.4,SNR=3.7						
RES	**Resolute Bay**	**142.54**	**342**	*e*PKPdf	**PKPdf**	**00 56 00.5**	**+1.1**
LNIG	**Linares**	**143.39**	**254**	*e*PKPpre	PKPab	00 55 57.8	-0.8
W41B	**Gary Mavity, V**	**143.62**	**274**	P	PKPab	00 55 59.2	0.0
	baz=116						
N43A	**Stutzman Famil**	**143.62**	**284**	P	PKPbc	00 55 59.6	-0.3
	baz=110						
E43A	**Lone Tree Farm**	**143.65**	**294**	*e*PKPpre	PKPbc	00 55 59.1	-0.7
WHAR	**Wooly Hollow**	**143.70**	**274**	*e*PKPpre	PKPbc	00 55 58.0	-2.2
H43A	**Windswept, Lux**	**143.70**	**291**	*e*PKPpre	PKPbc	00 55 58.9	-1.1
HKT	**Hockley**	**143.70**	**264**	*e*PKPdf	PKPbc	00 56 00.5	+0.1
HKT	**Hockley**	**143.70**	**264**	*e*PKIKP	PKPbc	00 56 00.5	+0.1
G43A	**Wallace**	**143.85**	**292**	*e*PKPdf	**PKPdf**	**00 56 01.9**	**-0.7**
G43A	**Wallace**	**143.85**	**292**	P	PKPbc	00 56 00.2	-0.2
	baz=104						
CCM	**Cathedral Cave**	**144.07**	**279**	*e*PKPdf	**PKPab**	**00 56 01.0**	**+0.2**
CCM	**Cathedral Cave**	**144.07**	**279**	P	**PKPab**	**00 56 00.9**	**0.0**
	baz=113						
ZAIG	**Zacatecas**	**144.16**	**248**	*e*PKPdf	PKPbc	00 56 02.2	-0.2
H42A	**Shiocton**	**144.24**	**290**	P	PKPbc	00 56 01.5	-0.2
	baz=105						
F42A	**Maple Grove Fa**	**144.28**	**293**	P	**PKPab**	**00 56 01.1**	**-0.3**
	baz=104						
E42A	**Champion**	**144.28**	**294**	P	**PKPab**	**00 56 00.6**	**-0.8**
	baz=103						
MIAR	**Mount Ida**	**144.31**	**272**	*e*PKPdf	**PKPab**	**00 56 00.6**	**-1.3**
MIAR	**Mount Ida**	**144.31**	**272**	*e*PKIKP	**PKPab**	**00 56 00.6**	**-1.3**
MIAR	**Mount Ida**	**144.31**	**272**	P	**PKPab**	**00 56 01.3**	**-0.6**
	baz=117						
L42A	**Oliver, Polo**	**144.31**	**286**	*e*PKPdf	**PKPab**	**00 56 01.0**	**-0.6**
L42A	**Oliver, Polo**	**144.31**	**286**	P	**PKPab**	**00 56 01.4**	**-0.2**
	baz=108,SNR=9.5						
J42A	**Columbus**	**144.32**	**288**	P	**PKPab**	**00 56 01.3**	**-0.3**
	baz=106,SNR=11						
K42A	**Prairie Point,**	**144.32**	**287**	P	**PKPab**	**00 56 01.3**	**-0.4**
	baz=107,SNR=6.6						
I42A	**Draeger Farm,**	**144.34**	**289**	*e*PKPdf	**PKPab**	**00 56 00.7**	**-0.9**
I42A	**Draeger Farm,**	**144.34**	**289**	P	**PKPab**	**00 56 01.5**	**-0.1**
	baz=106,SNR=12						
U40A	**Yellville**	**144.57**	**275**	P	**PKPab**	**00 56 01.8**	**-1.0**
	baz=115						
M41A	**Milan**	**144.74**	**284**	P	**PKPab**	**00 56 02.4**	**-0.8**
	baz=108						
W39A	**Magazine**	**144.76**	**273**	*e*PKPdf	**PKPab**	**00 56 02.8**	**-0.7**
W39A	**Magazine**	**144.76**	**273**	P	**PKPab**	**00 56 02.8**	**-0.7**
	baz=116						
D41A	**Chassel**	**144.85**	**295**	*e*PKPdf	**PKPab**	**00 56 02.8**	**-0.6**
D41A	**Chassel**	**144.85**	**295**	P	**PKPab**	**00 56 02.9**	**-0.6**
	baz=102						
G41A	**Antigo**	**144.86**	**291**	P	**PKPab**	**00 56 02.4**	**-1.1**
	baz=104						
F41A	**Three Lakes**	**144.93**	**292**	P	**PKPab**	**00 56 02.9**	**-0.9**
	baz=103						
JFWS	**Jewell Farm**	**145.00**	**287**	*e*PKPbc	**PKPbc**	**00 56 03.5**	**-0.7**
JFWS	**Jewell Farm**	**145.00**	**287**	*e*PKIKP	**PKPbc**	**00 56 03.5**	**-0.7**
JFWS	**Jewell Farm**	**145.00**	**287**	P	**PKPbc**	**00 56 03.5**	**-0.7**
	baz=106,SNR=7.9						
COWI	**Conover**	**145.03**	**293**	*e*PKPbc	**PKPbc**	**00 56 03.4**	**-0.8**
I41A	**Arkdale**	**145.05**	**289**	*e*PKPbc	**PKPbc**	**00 56 03.9**	**-0.4**
I41A	**Arkdale**	**145.05**	**289**	P	**PKPbc**	**00 56 03.8**	**-0.4**
	baz=105						
N40A	**Mertquake, Sal**	**145.33**	**283**	P	**PKPbc**	**00 56 04.7**	**-0.5**
	baz=109						
HHAR	**Hobbs**	**145.34**	**275**	*e*PKPdf	**PKPbc**	**00 56 04.7**	**-0.7**
833A	**Chaparral WMA,**	**145.39**	**258**	P	**PKPbc**	**00 56 05.6**	**-0.2**
	baz=125						
C40A	**Isle Royale Na**	**145.40**	**296**	*e*PKPdf	**PKPbc**	**00 56 03.6**	**-1.7**
C40A	**Isle Royale Na**	**145.40**	**296**	P	**PKPab**	**00 56 05.6**	**+0.2**
	baz=100						
435B	**Jarrell**	**145.43**	**263**	*e*PKPdf	**PKPbc**	**00 56 05.8**	**-0.1**
435B	**Jarrell**	**145.43**	**263**	P	**PKPbc**	**00 56 05.7**	**-0.1**
	baz=122						
L40A	**Anamosa**	**145.44**	**285**	*e*PKPdf	**PKPab**	**00 56 05.7**	**-0.1**
L40A	**Anamosa**	**145.44**	**285**	P	**PKPdf**	**00 56 05.3**	**-0.2**
	baz=107						
G40A	**Rib Lake**	**145.57**	**291**	P	**PKPdf**	**00 56 05.2**	**-0.5**
	baz=103						
X37A	**Clayton**	**145.66**	**271**	*e*PKPdf	**PKPdf**	**00 56 05.8**	**-0.3**
F40A	**Park Falls**	**145.66**	**292**	P	**PKPdf**	**00 56 05.5**	**-0.3**
	baz=102,SNR=15						
WHTX	**Lake Whitney,**	**145.95**	**265**	*e*PKPdf	**PKPdf**	**00 56 06.9**	**+0.1**
WHTX	**Lake Whitney,**	**145.95**	**265**	P	**PKPdf**	**00 56 07.1**	**+0.3**
	baz=120						
F39A	**Loretta**	**146.21**	**292**	P	**PKPdf**	**00 56 06.7**	**0.0**
	baz=102,SNR=12						
G39A	**Holcombe**	**146.24**	**291**	P	**PKPdf**	**00 56 07.1**	**+0.3**
	baz=103						
TUL1	**Leonard**	**146.54**	**273**	P	**PKPbc**	**00 56 08.4**	**-0.7**
	baz=115						
E38A	**The Farm, Brul**	**146.78**	**293**	P	**PKPbc**	**00 56 08.7**	**-0.8**
	baz=101						
F38A	**Pierce - Schro**	**146.87**	**292**	P	**PKPbc**	**00 56 09.4**	**-0.3**
	baz=101,SNR=12						
JCT	**Junction City**	**146.89**	**261**	*e*PKPdf	**PKPbc**	**00 56 09.5**	**-0.8**
JCT	**Junction City**	**146.89**	**261**	*e*PKP2	**PKPbc**	**00 56 09.5**	**-0.8**
JCT	**Junction City**	**146.89**	**261**	P	**PKPdf**	**00 56 09.1**	**+0.6**
	baz=123						
EYMN	**Ely**	**146.96**	**296**	*e*PKPdf	**PKPdf**	**00 56 08.5**	**+0.5**
EYMN	**Ely**	**146.96**	**296**	P	**PKPbc**	**00 56 09.3**	**-0.6**
	baz=99,SNR=11						
F37A	**Hinrichs Farm,**	**147.34**	**291**	P	**PKPbc**	**00 56 10.7**	**-0.4**
	baz=101						
SPMN	**Marine on St.**	**147.36**	**290**	P	**PKPbc**	**00 56 10.7**	**-0.5**
	baz=102						
ABTX	**Abilene, Hawle**	**147.87**	**265**	*e*PKPdf	**PKPdf**	**00 56 10.8**	**+0.8**
ABTX	**Abilene, Hawle**	**147.87**	**265**	P	**PKPbc**	**00 56 12.0**	**-1.0**
	baz=120						
WMOK	**Wichita Mounta**	**148.23**	**269**	*e*PKPdf	**PKPdf**	**00 56 11.4**	**+0.9**
WMOK	**Wichita Mounta**	**148.23**	**269**	*e*PKIKP	**PKPdf**	**00 56 11.4**	**+0.9**
WMOK	**Wichita Mounta**	**148.23**	**269**	P	**PKPbc**	**00 56 13.0**	**-0.9**
	baz=117						
FCC	**Fort Churchill**	**148.36**	**316**	*e*pPKPdf	**PKPbc**	**00 56 12.0**	**-1.3**
FCC	**Fort Churchill**	**148.36**	**316**	*e*PKP2	**PKPbc**	**00 56 12.0**	**-1.3**
HPIG		**149.01**	**250**	*e*PKPdf	**PKPbc**	**00 56 15.3**	**-1.1**
TXAR	**Lajitas Array**	**149.04**	**256**	PKPbc	**PKPbc**	**00 56 16.4**	**+0.2**
	comp=Z,14nm,1.1s,baz=134,slow=3.9,SNR=28						
ECSD	**EROS Data Cent**	**149.70**	**286**	*e*PKPdf	**PKPdf**	**00 56 13.8**	**+1.2**
ECSD	**EROS Data Cent**	**149.70**	**286**	P	**PKPbc**	**00 56 15.6**	**-1.7**
	baz=103						
AGMN	**Agassiz Nation**	**149.91**	**296**	*e*pPKPdf	**PKPbc**	**00 56 15.5**	**-2.1**
AGMN	**Agassiz Nation**	**149.91**	**296**	P	**PKPbc**	**00 56 16.6**	**-1.0**
	baz=95						
ULM	**Lac du Bonnet**	**150.05**	**299**	PKPbc	**PKPbc**	**00 56 17.4**	**-0.4**
	comp=Z,19nm,0.8s,baz=88,slow=2.2,SNR=11						
ULM	**Lac du Bonnet**	**150.05**	**299**	*e*PKPbc	**PKPbc**	**00 56 16.7**	**-1.2**
ULM	**Lac du Bonnet**	**150.05**	**299**	*e*PKIKP	**PKPbc**	**00 56 16.7**	**-1.2**
AMTX	**Amarillo**	**150.43**	**267**	*e*PKPbc	**PKPbc**	**00 56 18.5**	**-1.0**
AMTX	**Amarillo**	**150.43**	**267**	P	**PKPdf**	**00 56 16.6**	**+2.5**
	baz=116						
CBKS	**Cedar Bluff**	**150.56**	**276**	P	**PKPbc**	**00 56 18.0**	**-1.5**
	baz=110						
MSTX	**Muleshoe**	**150.82**	**265**	*e*PKPbc	**PKPbc**	**00 56 19.8**	**-0.6**
MSTX	**Muleshoe**	**150.82**	**265**	P	**PKPbc**	**00 56 19.8**	**-0.6**
	baz=118						
MNTX	**Cornudas Mount**	**151.58**	**258**	P	**PKPbc**	**00 56 21.2**	**-1.0**
	baz=122						
MDND	**Maddock**	**152.37**	**294**	*e*PKPdf	**PKPbc**	**00 56 20.7**	**-2.7**
MDND	**Maddock**	**152.37**	**294**	P	**PKPbc**	**00 56 22.3**	**-1.0**
	baz=94						
KSCO	**Kaye Shedlock'**	**152.75**	**274**	P	**PKPbc**	**00 56 23.5**	**-1.2**
	baz=109						
OGNE	**Ogallala**	**152.90**	**279**	P	**PKPbc**	**00 56 24.6**	**-0.3**
	baz=106						
T25A	**Trinidad**	**153.38**	**269**	*e*PKPbc	**PKPbc**	**00 56 26.1**	**-0.1**
T25A	**Trinidad**	**153.38**	**269**	P	**PKPbc**	**00 56 25.4**	**-0.8**
	baz=113						
TOLK	**Toolik Lake Re**	**153.40**	**9**	*e*PKPbc	**PKiKP**	**00 56 25.3**	**+0.1**
TOLK	**Toolik Lake Re**	**153.40**	**9**	P	**PKPbc**	**00 56 24.5**	**-0.5**
	baz=341						
FFC	**Flin Flon**	**153.41**	**310**	*e*PKPbc	**PKiKP**	**00 56 27.5**	**+2.0**
ANMO	**Albuquerque**	**153.97**	**263**	*ep*PKPdf	**PKPbc**	**00 56 24.3**	**-3.2**
ANMO	**Albuquerque**	**153.97**	**263⇑**	*e*PKIKP	**PKPdf**	**00 56 22.4**	**+2.9**
ANMO	**Albuquerque**	**153.97**	**263**	P	**PKPbc**	**00 56 27.0**	**-0.5**
	baz=117						
TASM	**ASL Pad, Albuq**	**153.97**	**263**	P	**PKPbc**	**00 56 27.0**	**-0.5**
	baz=117						
TASM	**ASL Pad, Albuq**	**153.97**	**263**	P	**PKPbc**	**00 56 27.4**	**-0.2**
	baz=117						
LAZ	**Ladron**	**154.21**	**262**	*e*PKPdf	**PKPdf**	**00 56 20.5**	**+0.6**
INK	**Inuvik**	**154.25**	**356**	PKPab	**PKPab**	**00 56 40.1**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=44,slow=4.6,SNR=5.8						
INK	**Inuvik**	**154.25**	**356**	*e*PKPbc	**PKPbc**	**00 56 24.6**	**-2.2**
INK	**Inuvik**	**154.25**	**356**	*e*PKIKP	**PKPbc**	**00 56 24.6**	**-2.2**
SDCO	**Great Sand Dun**	**154.42**	**270**	*e*PKPab	**PKPab**	**00 56 44.2**	**+1.3**
SDCO	**Great Sand Dun**	**154.42**	**270**	P	**PKPbc**	**00 56 28.5**	**-0.1**
	baz=112						
Q24A	**Divide**	**154.58**	**273**	P	**PKPbc**	**00 56 28.4**	**-0.5**
	baz=109						
RSSD	**Black Hills**	**155.03**	**285**	*e*PKPbc	PKPbc	00 56 30.4	
RSSD	**Black Hills**	**155.03**	**285**	*e*PKIKP	PKPbc	00 56 30.4	
RSSD	**Black Hills**	**155.03**	**285**	P	PKPbc	00 56 29.8	
	baz=99						
YKA	**Yellowknife Ar**	**155.74**	**333**	PKP	**PKPdf**	**00 56 19.7**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=41,slow=1.4,SNR=3.8						
YKA				PKPab	**PKPab**	**00 56 46.9**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=46,slow=3.5,SNR=8.9						
YKB5	**Yellowknife Ar**	**155.74**	**333**	*e*PKPdf	**PKPdf**	**00 56 19.7**	**-1.1**
N23A	**Red Feather La**	**155.74**	**277**	P	**PKPab**	**00 56 49.0**	**+0.6**
	baz=105						
TUC	**Tucson**	**155.77**	**254**	P	**PKPab**	**00 56 48.5**	**-0.1**
	baz=124						
SMCO	**Snowmass**	**156.00**	**272**	*e*PKPdif	PKPbc	00 56 31.6	
EPYK	**Eagle Plains**	**156.31**	**358**	P	**PKPab**	**00 56 50.4**	**+0.7**
	baz=3.0						
PV02	**Paradox Valley**	**156.97**	**269**	*e*PKPab	**PKPab**	**00 56 55.1**	**+1.4**
214A	**Organ Pipe Nat**	**156.99**	**251**	P	**PKPab**	**00 56 54.0**	**+0.3**
	baz=125						
PV13	**Radium Mtn., P**	**157.01**	**269**	*e*PKPab	**PKPab**	**00 56 55.3**	**+1.4**
PV12	**Saucer Basin,**	**157.05**	**269**	*e*PKPab	**PKPab**	**00 56 55.2**	**+1.1**
PV03	**Paradox Valley**	**157.06**	**269**	*e*PKPab	**PKPab**	**00 56 55.6**	**+1.4**
PV18	**Skein Mesa, Pa**	**157.11**	**269**	*ep*PKPdf	PKPbc	00 56 28.8	
PV18				*e*PKPab	**PKPab**	**00 56 55.8**	**+1.4**
PV16	**Nyswonger Mesa**	**157.13**	**269**	*e*PKPdf	**PKPdf**	**00 56 28.2**	**+4.5**
PV16				*e*PKPab	**PKPab**	**00 56 55.9**	**+1.5**
PV04	**Paradox Valley**	**157.16**	**269**	*e*PKPdf	**PKPdf**	**00 56 27.9**	**+4.2**
PV04				*e*PKPab	**PKPab**	**00 56 55.7**	**+1.2**
ILAR	**Eielson Array**	**157.43**	**9**	PKP	**PKPdf**	**00 56 22.0**	**-1.0**
	comp=Z,0.4nm,0.9s,baz=247,slow=1.9,SNR=2.8						
ILAR				PKPab	**PKPab**	**00 56 53.9**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=347,slow=3.7,SNR=3.4						
ILAR	**Eielson Array**	**157.43**	**9**	PKIKP	**PKPdf**	**00 56 22.0**	**-1.0**
HDA	**Harding Lake**	**157.77**	**10**	P	**PKPab**	**00 56 56.9**	**+0.9**
	baz=343						
WUAZ	**Wupatki**	**157.81**	**260**	*e*PKPab	**PKPab**	**00 56 59.4**	**+2.0**
WUAZ	**Wupatki**	**157.81**	**260**	P	**PKPab**	**00 56 59.1**	**+1.7**
	baz=117						
PDAR	**Pinedale Array**	**158.78**	**280**	PKP	**PKPdf**	**00 56 25.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=224,slow=4.1,SNR=4.8						
EGMT	**Eagleton**	**159.19**	**295**	P	**PKPab**	**00 57 02.5**	**-0.4**
	baz=86						
MTPU	**Mount Pierson**	**159.44**	**266**	*e*PKPab	**PKPab**	**00 57 05.2**	**+0.6**
BELC	**Belle Mtn. Jos**	**160.35**	**251**	P	**PKPab**	**00 57 09.2**	**+0.8**
	baz=123						
MURC	**Murrieta**	**160.96**	**248**	P	**PKPab**	**00 57 12.5**	**+1.6**
	baz=125						
SHPR	**Sheep Range**	**160.99**	**259**	*e*PKPab	**PKPab**	**00 57 11.8**	**+0.6**
R11A	**Troy Canyon, C**	**162.05**	**264**	*e*PKPdf	**PKPdf**	**00 56 33.1**	**+3.8**
BLG	**Laguna Peak, P**	**162.52**	**247**	P	**PKPab**	**00 57 18.8**	**+1.1**
	baz=125						
BCPM	**Bancas Point**	**162.76**	**2**	*e*PKPab	**PKPab**	**00 57 17.9**	**+0.1**
BMN	**Battle Mountai**	**163.91**	**269**	*e*PKPab	**PKPab**	**00 57 24.7**	**+0.8**
BMN	**Battle Mountai**	**163.91**	**269**	*e*PKP2	**PKPab**	**00 57 24.7**	**+0.8**
NEW	**Newport**	**164.05**	**298**	PKPab	**PKPab**	**00 57 25.0**	**+0.9**
	comp=Z,1.8nm,0.9s,baz=81,slow=3.6,SNR=3.3						
NVAR	**Mina Array Bea**	**164.06**	**261**	PKP	**PKPdf**	**00 56 32.5**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=124,slow=2.7,SNR=4.0						
NVAR				PKPab	**PKPab**	**00 57 25.8**	**+1.0**
	comp=Z,2.3nm,0.8s,baz=120,slow=5.5,SNR=8.5						
PNTR	**Pine Nut**	**165.25**	**262**	*e*PKPdf	PKPdf	00 56 49.4	+17
PNTR				*e*PKPab	**PKPab**	**00 57 31.6**	**+1.7**
O02D	**Mt. Diablo Mer**	**167.93**	**263**	P	**PKPab**	**00 57 38.9**	**-2.7**
	baz=107						
YBH	**Yreka Blue Hor**	**168.24**	**270**	PKP	**PKPdf**	**00 56 33.4**	**-0.9**
	comp=Z,3.4nm,0.4s,baz=126,slow=7.6,SNR=4.0						
I03D	**Drain, OR**	**168.89**	**280**	P	**PKPab**	**00 57 42.6**	**-2.9**
	baz=90						

ISCJB ***09*** *00:37:10.2±0.3, 22°.80S±0°.03×68°.89W±0°.04, h126km±4km, mb4.0/5, Error ellipse: s-maj=6.2km s-min=4.9km az=157.6*

SJA ***09*** *00:37:10.0±0.8, 22°.82S×68°.86W, h121km±5km, ML3.1, MW3.4*

IDC ***09*** *00:37:10.4±0.6, 22°.78S×68°.59W, h105km±8km, mb3.9/6, mb1 3.8/9, mb1mx3.6/39, mbtmp4.1/9, Error ellipse: s-maj=25.4km s-min=19.2km az=103.0*

GUC ***09*** *00:37:11.3±0.7, 22°.82S×68°.88W, h120km±4km, ML3.9*

ISC 09 00:37:10.9±0.7, 22°.78S±0°.04×68°.86W±0°.04, h121km±6km, n46, σ1°54/74, mb4.1/5, 9C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.18**	**345**	P	**Pn**	**00 37 27.2**	**-0.9**
	653nm,0.3s,baz=150,slow=4.3,SNR=6928						
LVC				S	**Sn**	**00 37 39.5**	**-1.3**
	2μm,0.3s,baz=345,slow=13,SNR=220						
LVC	**Limon Verde**	**0.18**	**345**	*i* P	**Pn**	**00 37 27.3**	**-0.7**
LVC				*i* S	**Sn**	**00 37 39.4**	**-1.5**
PB06	**IPOC Station P**	**0.66**	**277**	*i* P	**Pn**	**00 37 30.1**	**-0.1**
PB06				*i* S	**Sn**	**00 37 44.9**	**+0.2**
PB06	**IPOC Station P**	**0.66**	**277⇑**	*i* P	**Pn**	**00 37 30.0**	**-0.1**
PB06				*i* S	**Sn**	**00 37 44.6**	**-0.1**
PB06				IAML		00 37 45.8	
	comp=E,5μm,0.1s						
PB15	**IPOC Station P**	**0.70**	**233**	*i* P	**Pn**	**00 37 30.3**	**-0.3**
PB15				*i* S	**Sn**	**00 37 45.3**	**-0.2**
PB15	**IPOC Station P**	**0.70**	**233⇑**	*i* P	**Pn**	**00 37 30.2**	**-0.3**
PB15				*i* S	**Sn**	**00 37 44.8**	**-0.6**
PB09	**IPOC Station P**	**1.04**	**340**	*i* P	**Pn**	**00 37 34.5**	**+0.8**
PB09				*i* S	**Sn**	**00 37 51.8**	**+1.1**
PB09	**IPOC Station P**	**1.04**	**340⇑**	*e*P	**Pn**	**00 37 34.4**	**+0.8**
PB09				*e*S	**Sn**	**00 37 51.5**	**+0.8**
PB09				IAML		00 37 53.5	
	comp=N,3μm,0.5s						
PB03	**IPOC Station P**	**1.10**	**311**	*i* P	**Pn**	**00 37 34.6**	**+0.4**
PB03				*i* S	**Sn**	**00 37 52.0**	**+0.2**
PB03	**IPOC Station P**	**1.10**	**311⇑**	*i* P	**Pn**	**00 37 34.6**	**+0.4**
PB03				*i* S	**Sn**	**00 37 52.0**	**+0.2**
PB03				IAML		00 37 53.0	
	comp=N,4μm,0.2s						
PB05	**IPOC Station P**	**1.24**	**267**	*i* P	**Pn**	**00 37 35.6**	**0.0**
PB05				*i* S	**Sn**	**00 37 54.3**	**+0.1**
PB05	**IPOC Station P**	**1.24**	**267⇑**	*e*P	**Pn**	**00 37 35.5**	**0.0**
PB05				*e*S	**Sn**	**00 37 53.9**	**-0.4**
PB05				IAML		00 37 56.5	
	comp=E,932nm,0.1s						
PB04	**IPOC Station P**	**1.27**	**290**	*i* P	**Pn**	**00 37 36.3**	**+0.4**
PB04				*i* S	**Sn**	**00 37 56.4**	**+1.4**
PB04	**IPOC Station P**	**1.27**	**290⇑**	*i* P	**Pn**	**00 37 36.3**	**+0.4**
PB04				*e*S	**Sn**	**00 37 55.4**	**+0.4**
PB04				IAML		00 37 57.2	
	comp=N,2μm,0.1s						
PB07	**IPOC Station P**	**1.42**	**318**	*i* P	**Pn**	**00 37 38.3**	**+0.7**
PB07				*i* S	**Sn**	**00 37 58.1**	**+0.2**
PB07	**IPOC Station P**	**1.42**	**318⇑**	*i* P	**Pn**	**00 37 38.3**	**+0.7**
PB07				*i* S	**Sn**	**00 37 58.2**	**+0.4**
PB10	**IPOC Station P**	**1.72**	**245**	*i* P	**Pn**	**00 37 40.6**	**-0.4**
PB10				*i* S	**Sn**	**00 38 03.6**	**-0.2**
PB10	**IPOC Station P**	**1.72**	**245⇑**	*e*P	**Pn**	**00 37 40.6**	**-0.4**
PB10				*e*S	**Sn**	**00 38 03.2**	**-0.7**
PB10				IAML		00 38 05.7	
	comp=N,741nm,0.4s						
PB02	**IPOC Station P**	**1.74**	**326**	*i* P	**Pn**	**00 37 42.0**	**+0.6**
PB02				*e*S	**Sn**	**00 38 04.8**	**+0.2**
PB02	**IPOC Station P**	**1.74**	**326⇑**	*e*P	**Pn**	**00 37 41.9**	**+0.6**
PB02				*i* S	**Sn**	**00 38 05.0**	**+0.4**
PB02				IAML		00 38 11.5	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**1.83**	**341**	*i* P	**Pn**	**00 37 42.9**	**+0.5**
PB01				*e*S	**Sn**	**00 38 07.3**	**+1.0**
PB01	**IPOC Station P**	**1.83**	**341**	*e*P	**Pn**	**00 37 42.7**	**+0.3**
PB01				*e*S	**Sn**	**00 38 06.9**	**+0.5**
PB01				IAML		00 38 08.2	
	comp=N,2μm,0.3s						
PB14	**IPOC Station P**	**2.32**	**217**	*i* P	**Pn**	**00 37 47.6**	**-1.0**
PB14				*i* S	**Sn**	**00 38 13.4**	**-4.1**
PB14	**IPOC Station P**	**2.32**	**217**	*e*P	**Pn**	**00 37 47.6**	**-1.0**
PB14				*i* S	**Sn**	**00 38 15.7**	**-1.9**
PB14				IAML		00 38 17.8	
	comp=N,972nm,0.4s						
PB08	**IPOC Station P**	**2.64**	**354**	*i* P	**Pn**	**00 37 53.7**	**+0.8**
PB08				*e*S	**Sn**	**00 38 21.7**	**-3.5**
PB11	**IPOC Station P**	**3.10**	**346**	*i* P	**Pn**	**00 37 58.4**	**-0.2**
PB11				*i* S	**Sn**	**00 38 27.7**	**-7.7**
YJA	**Yavi**	**3.15**	**80**	*i* P	**Pn**	**00 38 01.0**	**+1.4**
YJA				IAML		00 38 04.5	
	comp=Z,8.3nm,0.5s						
YJA				*i* S	**Sn**	**00 38 38.1**	**+0.9**
PSGCX	**Pisagua**	**3.38**	**339**	*i* P	**Pn**	**00 38 00.8**	**-1.6**
PSGCX				*i* S	Sn	00 38 33.1	-8.9
SLA	**San Lorenzo**	**3.63**	**123**	*i* P	**Pn**	**00 38 07.3**	**+1.7**
SLA				IAML		00 38 08.0	
	comp=Z,32nm,0.4s						
SLA				*e*S	**Sn**	**00 38 50.8**	**+2.8**
MNMCX	**Minye Minye**	**3.70**	**349**	*i* P	**Pn**	**00 38 06.8**	**+0.1**
MNMCX				*e*S	Sn	00 38 38.5	-11
AZAP	**Zapla**	**3.77**	**113**	*i* P	**Pn**	**00 38 07.4**	**-0.2**
FSA	**Cafayete**	**4.23**	**142**	*i* P	**Pn**	**00 38 13.6**	**0.0**
PB12	**IPOC Station P**	**4.37**	**341**	*e*P	**Pn**	**00 38 13.9**	**-1.6**
PB16	**IPOC Station P**	**4.47**	**352**	*e*P	**Pn**	**00 38 18.0**	**+0.8**
PB16				*e*S	Sn	00 38 49.2	-19
AHML	**Horco Molle**	**5.11**	**142**	*i* P	**Pn**	**00 38 25.1**	**-0.3**
**

PSGC				*e*S	**Sb**	**01 22 57.7**	**+1.0**
PSGCX	**Pisagua**	**0.47**	**184**	*e*P	**Pb**	**01 22 50.0**	**-0.1**
PSGCX				*i* S	**Sb**	**01 22 57.5**	**+0.9**
PB12	**IPOC Station P**	**0.56**	**336**	*e*P	**Pb**	**01 22 51.2**	**-0.5**
PB12				*i* S	**Sb**	**01 22 59.5**	**+0.2**
PB12	**IPOC Station P**	**0.56**	**336**	⇓*i*P	**Pb**	**01 22 51.2**	**-0.5**
PB12				*e*S	**Sb**	**01 22 59.6**	**+0.2**
PB11	**IPOC Station P**	**0.75**	**147**	*e*P	**Pb**	**01 22 54.0**	**-0.8**
PB11				*i* S	**Sb**	**01 23 04.7**	**+0.1**
PB11	**IPOC Station P**	**0.75**	**147**	⇓*i*P	**Pb**	**01 22 54.0**	**-0.8**
PB11				*e*S	**Sb**	**01 23 04.8**	**+0.1**
PB11				IAML		01 23 05.3	
	comp=E,14μm,0.2s						
PB16	**IPOC Station P**	**0.96**	**35**	*i* P	**Pb**	**01 22 57.5**	**-1.2**
PB16				*e*S	**Sb**	**01 23 09.6**	**-1.6**
PB16	**IPOC Station P**	**0.96**	**35**	⇑*i*P	**Pb**	**01 22 57.5**	**-1.2**
PB16				*i* S	**Sb**	**01 23 10.6**	**-0.6**
PB16				IAML		01 23 11.4	
	comp=E,6μm,0.5s						
GO01	**Chusmiza**	**1.00**	**123**	*e*P	**Pb**	**01 22 58.5**	**-0.8**
GO01				*e*S	**Sb**	**01 23 12.7**	**+0.5**
GO01				IAML		01 23 12.8	
	comp=N,12μm,0.1s						
PB08	**IPOC Station P**	**1.34**	**139**	*e*P	**Pn**	**01 23 03.1**	**-0.7**
PB08				*e*S	**Sn**	**01 23 20.2**	**-0.7**
PB08	**IPOC Station P**	**1.34**	**139**	⇓*i*P	**Pn**	**01 23 03.0**	**-0.7**
PB08				*i* S	**Sn**	**01 23 20.6**	**-0.3**
PB01	**IPOC Station P**	**1.98**	**164**	*e*P	**Pn**	**01 23 11.3**	**-1.1**
PB01				*e*S	**Sn**	**01 23 38.3**	**+1.8**
PB01	**IPOC Station P**	**1.98**	**164**	⇓*i*P	**Pn**	**01 23 11.1**	**-1.3**
PB01				*i* S	**Sn**	**01 23 36.3**	**-0.3**
PB02	**IPOC Station P**	**2.19**	**175**	*e*P	**Pn**	**01 23 14.6**	**-0.6**
PB07	**IPOC Station P**	**2.59**	**176**	*e*P	**Pn**	**01 23 20.7**	**-0.1**
PB07				*e*S	**Sn**	**01 23 51.8**	**+0.2**
PB09	**IPOC Station P**	**2.77**	**164**	*e*P	**Pn**	**01 23 23.6**	**+0.4**
PB09				*e*S	**Sn**	**01 23 56.7**	**+0.7**
PB09	**IPOC Station P**	**2.77**	**164**	*e*P	**Pn**	**01 23 23.2**	**-0.1**
PB03	**IPOC Station P**	**2.92**	**174**	*e*P	**Pn**	**01 23 25.2**	**-0.2**
PB03				*e*S	**Sn**	**01 24 01.3**	**+1.6**
PB03	**IPOC Station P**	**2.92**	**174**	⇓*i*P	**Pn**	**01 23 25.2**	**-0.2**
PB04	**IPOC Station P**	**3.19**	**181**	*e*P	**Pn**	**01 23 28.7**	**-0.3**
LPAZ	**La Paz**	**3.39**	**34**	*e*P	**Pn**	**01 23 35.0**	**+2.8**
LVC	**Limon Verde**	**3.63**	**163**	*e*P	**Pn**	**01 23 36.4**	**+1.1**
LVC				*e*S	**Sn**	**01 24 20.9**	**+3.3**
PB05	**IPOC Station P**	**3.71**	**182**	*e*P	**Pn**	**01 23 35.1**	**-0.9**
PB10	**IPOC Station P**	**4.38**	**186**	*e*P	**Pn**	**01 23 43.6**	**-1.7**
PB14	**IPOC Station P**	**5.48**	**183**	*e*P	**Pn**	**01 23 58.5**	**-2.1**

KRSC 09 01:24:27.5±1.8, 49°.08N×156°.98E, h6km±29km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.70**	**341**	P	Pn	01 24 56.7	-0.9
SKR				*e*S	Sn	01 25 19.2	-0.4
ALID	**Alaid**	**2.01**	**333**	*e*P	Pn	01 25 01.6	-0.5
PAU	**Pauzhetka**	**2.39**	**357**	*e*P	Pn	01 25 08.7	+1.6
PAU				*e*S	Sb	01 25 39.7	-0.9
KDTR	**Khodutka, Kamc**	**2.82**	**14**	*e*P	Pb	01 25 15.9	-2.3
KDTR				*e*S	Sb	01 25 51.6	-1.3
ASAK	**Asacha**	**3.36**	**10**	*e*P	Pb	01 25 24.1	-3.3
MTVR	**Mutnovka**	**3.49**	**12**	*e*P	Pn	01 25 25.7	+3.3
MTVR				*e*S	Sb	01 26 09.3	-3.1
RUS	**Russkaya**	**3.49**	**16**	*e*P	Pn	01 25 24.7	+2.4
RUS				*e*S	Sn	01 26 07.8	+3.9
KRMR	**Karymshinskiy**	**3.82**	**11**	S	Sn	01 26 16.6	+4.6
DALK	**Dalny**	**4.11**	**15**	*e*P	Pn	01 25 34.0	+3.3
DALK				*e*S	Sn	01 26 23.7	+4.7
UGLR	**Uglovaya**	**4.29**	**15**	*i* P	Pn	01 25 37.9	+4.5
AVH	**Avacha**	**4.33**	**14**	*i* P	Pn	01 25 38.6	+4.7
SMAR	**Somma**	**4.34**	**15**	P	Pn	01 25 38.1	+4.0
KOK	**Koryaka**	**4.34**	**13**	*i* P	Pn	01 25 38.8	+4.8
SDLR	**Sedlovina**	**4.37**	**15**	*i* P	Pn	01 25 37.8	+3.4
KRER	**Koryakskii**	**4.37**	**14**	*e*P	Pn	01 25 38.9	+4.4
KRX	**Arik**	**4.41**	**13**	*e*P	Pn	01 25 39.7	+4.7
SPN	**Mys Shipunski**	**4.46**	**24**	*e*P	Pn	01 25 39.0	+3.5
SPN				*e*S	Sn	01 26 31.4	+3.8
GNL	**Ganaly**	**4.66**	**7**	*e*P	Pn	01 25 43.5	+5.1

KRSC 09 01:45:48.1±1.6, 49°.06N×156°.98E, h6km±37km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.71**	**341**	*e*P	Pn	01 46 18.1	-0.3
SKR				*e*S	Sn	01 46 40.6	0.0
ALID	**Alaid**	**2.03**	**334**	*e*P	Pn	01 46 23.9	+1.0
PAU	**Pauzhetka**	**2.41**	**358**	*e*P	Pb	01 46 30.2	-1.6
PAU				*e*S	Sb	01 47 01.2	-0.5
KDTR	**Khodutka, Kamc**	**2.84**	**14**	*e*P	Pn	01 46 36.1	+2.2
KDTR				*e*S	Sb	01 47 12.5	-1.6
ASAK	**Asacha**	**3.38**	**10**	*e*P	Pb	01 46 45.7	-2.6
MTVR	**Mutnovka**	**3.51**	**12**	*e*P	Pn	01 46 46.6	+3.4
RUS	**Russkaya**	**3.51**	**16**	*e*P	Pn	01 46 46.8	+3.7
RUS				*e*S	Sb	01 47 29.8	-3.7
UGLR	**Uglovaya**	**4.31**	**15**	*e*P	Pn	01 46 57.9	+3.7
AVH	**Avacha**	**4.35**	**14**	*e*P	Pn	01 46 58.7	+3.9
SMAR	**Somma**	**4.36**	**15**	*e*P	Pn	01 46 58.8	+3.8
KOK	**Koryaka**	**4.36**	**13**	*e*P	Pn	01 46 59.5	+4.6
SDLR	**Sedlovina**	**4.39**	**15**	*e*P	Pn	01 46 58.5	+3.2
KRX	**Arik**	**4.43**	**13**	*e*P	Pn	01 47 00.0	+4.1
SPN	**Mys Shipunski**	**4.47**	**24**	*e*P	Pn	01 47 00.0	+3.7
SPN				*e*S	Sn	01 47 53.4	+4.8
GNL	**Ganaly**	**4.68**	**7**	*e*P	Pn	01 47 04.3	+5.0
KBTR	**Krutoberegovo**	**7.99**	**24**	*e*P	Pn	01 47 49.6	+5.0

*SJA **09** 01:50:57.9±0.9, 21°.16S×69°.02W, h121km±6km, ML2.2, MW2.5*
*ISCJB **09** 01:50:58.9±0.8, 21°.18S±0°.03×69°.04W±0°.09, h120km±8km, Error ellipse: s-maj=13.5km s-min=4.2km az=3.5*
*GUC **09** 01:50:58.7±0.5, 21°.17S×68°.96W, h118km±2km, ML3.5*

ISC 09 01:50:59.7±1.5, 21°.17S±0°.03×69°.03W±0°.07, h112km±10km, n28, σ0°.56/51, 9C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.44**	**286**	*i* P	**Pn**	**01 51 16.2**	**-0.4**
PB01				*i* S	**Sn**	**01 51 29.2**	**-0.1**
PB01	**IPOC Station P**	**0.44**	**286**	⇑*i*P	**Pn**	**01 51 16.1**	**-0.4**
PB01				*e*S	**Sn**	**01 51 29.1**	**-0.1**
PB01				IAML		01 51 30.3	
	comp=E,3μm,0.1s						
PB09	**IPOC Station P**	**0.65**	**197**	*i* P	**Pn**	**01 51 17.8**	**-0.4**
PB09	**IPOC Station P**	**0.65**	**197**	⇑*i*P	**Pn**	**01 51 17.7**	**-0.5**
PB09				*e*S	**Sn**	**01 51 32.2**	**+0.2**
PB02	**IPOC Station P**	**0.82**	**259**	*i* P	**Pn**	**01 51 19.7**	**+0.2**
PB02				*i* S	**Sn**	**01 51 35.6**	**+1.3**
PB02	**IPOC Station P**	**0.82**	**259**	⇑*i*P	**Pn**	**01 51 19.6**	**+0.2**
PB02				*e*S	**Sn**	**01 51 35.2**	**+0.9**
PB02				IAML		01 51 36.4	
	comp=E,2μm,0.1s						
PB07	**IPOC Station P**	**0.97**	**235**	*i* P	**Pn**	**01 51 21.0**	**0.0**
PB07	**IPOC Station P**	**0.97**	**235**	⇑*i*P	**Pn**	**01 51 20.9**	**0.0**
PB07				*e*S	**Sn**	**01 51 37.6**	**+0.6**
PB08	**IPOC Station P**	**1.03**	**354**	*i* P	**Pn**	**01 51 21.4**	**-0.5**
PB08				*i* S	**Sn**	**01 51 38.8**	**+0.3**
PB08	**IPOC Station P**	**1.03**	**354**	⇓*i*P	**Pn**	**01 51 21.3**	**-0.5**
PB08				*e*S	**Sn**	**01 51 38.7**	**+0.2**
PB03	**IPOC Station P**	**1.10**	**217**	*i* P	**Pn**	**01 51 22.2**	**-0.2**
PB03				*i* S	**Sn**	**01 51 39.6**	**+0.1**
PB03	**IPOC Station P**	**1.10**	**217**	⇑*i*P	**Pn**	**01 51 22.1**	**-0.2**
PB03				*e*S	**Sn**	**01 51 39.5**	**+0.1**
PB03				IAML		01 51 40.5	
	comp=E,935nm,0.1s						
GO01	**Chusmiza**	**1.50**	**354**	⇓*i*P	**Pn**	**01 51 26.5**	**-0.7**
GO01				*i* S	**Sn**	**01 51 48.4**	**+0.4**
PB11	**IPOC Station P**	**1.52**	**337**	*i* P	**Pn**	**01 51 26.5**	**-0.6**
PB11				*i* S	**Sn**	**01 51 48.2**	**+0.4**
PB11	**IPOC Station P**	**1.52**	**337**	⇓*i*P	**Pn**	**01 51 26.4**	**-0.6**
PB11				*e*S	**Sn**	**01 51 47.9**	**+0.1**
PB11				IAML		01 51 48.8	
	comp=E,863nm,0.1s						
PB04	**IPOC Station P**	**1.56**	**222**	*i* P	**Pn**	**01 51 27.4**	**-0.2**
PB04				*i* S	**Sn**	**01 51 48.9**	**+0.3**
PB04	**IPOC Station P**	**1.56**	**222**	⇑*i*P	**Pn**	**01 51 27.3**	**-0.2**
PB04				*e*S	**Sn**	**01 51 49.0**	**+0.4**
PB04				IAML		01 51 50.0	
	comp=N,409nm,0.1s						
PB06	**IPOC Station P**	**1.61**	**198**	*i* P	**Pn**	**01 51 27.9**	**-0.2**
PB06				*i* S	**Sn**	**01 51 50.2**	**+0.4**
PB06	**IPOC Station P**	**1.61**	**198**	⇑*i*P	**Pn**	**01 51 27.9**	**-0.2**
PB06				*e*S	**Sn**	**01 51 49.8**	**+0.1**
PB06				IAML		01 51 50.9	
	comp=N,512nm,0.1s						
PSGCX	**Pisagua**	**1.87**	**327**	*i* P	**Pn**	**01 51 30.3**	**-1.0**
PSGCX				*i* S	**Sn**	**01 51 54.7**	**-0.7**
PB05	**IPOC Station P**	**2.00**	**213**	*i* P	**Pn**	**01 51 32.6**	**-0.3**
PB05				*i* S	**Sn**	**01 51 56.7**	**-1.5**
PB05	**IPOC Station P**	**2.00**	**213**	*e*P	**Pn**	**01 51 32.4**	**-0.5**
PB15	**IPOC Station P**	**2.07**	**191**	*i* P	**Pn**	**01 51 33.9**	**0.0**
PB15				*i* S	**Sn**	**01 52 00.5**	**+0.5**
PB15	**IPOC Station P**	**2.07**	**191**	⇑*i*P	**Pn**	**01 51 33.7**	**-0.2**
PB15				*e*S	**Sn**	**01 52 00.4**	**+0.4**
MNMCX	**Minye Minye**	**2.10**	**345**	*i* P	**Pn**	**01 51 34.0**	**-0.3**
MNMCX				*i* S	**Sn**	**01 52 02.2**	**+1.4**
PB16	**IPOC Station P**	**2.86**	**351**	*i* P	**Pn**	**01 51 44.5**	**0.0**
PB16	**IPOC Station P**	**2.86**	**351**	⇑*i*P	**Pn**	**01 51 44.4**	**-0.1**
PB16				*i* S	**Sn**	**01 52 20.0**	**+1.2**
HJA	**Humahuaca**	**3.92**	**122**	*i* P	**Pn**	**01 51 58.3**	**-0.1**
HJA				IAML		01 52 05.9	
	comp=Z,2.8nm,0.6s						

MEX 09 01:56:29.5±0.9, 17°.84N×103°.08W, h10km±15km, MD3.9, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.51**	**330**	*e*P	Pg	01 56 38.2	-1.3
MMIG				*e*S	Sg	01 56 45.5	-0.8
ZIIG	**Zihuatanejo**	**1.55**	**98**	*e*P	Pn	01 56 53.7	-3.4
ZIIG				*e*S	Sn	01 57 12.7	-4.6
EZ5V		**1.70**	**343**	*e*P	Pn	01 56 56.3	-3.2
URUA	**Uruapan**	**1.83**	**31**	*i* P	Pn	01 56 56.8	-4.4
URUA				*i* S	Sn	01 57 18.6	-6.0
CJM	**Chamela**	**2.49**	**312**	*e*P	Pn	01 57 07.7	-2.4
CJM				*i* S	Sn	01 57 36.0	-4.5

*DSN **09** 02:06:07.5±2.9, 26°.70N×57°.99E, h10km, ML3.4/7, Error ellipse: s-maj=41.8km s-min=13.1km az=3.0*
*OMAN **09** 02:06:07.3±3.5, 26°.50N×57°.98E, h0km, Error ellipse: s-maj=31.2km s-min=17.6km az=19.0*
*ISCJB **09** 02:06:08.3±0.6, 26°.59N±0°.03×57°.93E±0°.06, h10km, Error ellipse: s-maj=8.0km s-min=4.2km az=10.8*
*TEH **09** 02:06:09.3, 26°.72N×57°.74E, h8km, ML3.5*

ISC 09 02:06:09.9±1.0, 26°.65N±0°.04×57°.73E±0°.06, h10km, n45, σ1°.81/50, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**1.01**	**178**	*e*Pg	**Pn**	**02 06 30.9**	**+0.8**
NIAN	**Nian**	**1.21**	**319**	*e*Pg	**Pg**	**02 06 33.2**	**+0.1**
KHNJ	**Kahnooj**	**1.29**	**359**	*e*Pg	**Pn**	**02 06 32.1**	**-2.0**
BANOM	**Banah**	**1.47**	**241**	*e*P	**Pn**	**02 06 36.7**	**+0.1**
	SNR=254						
BANOM	**Banah**	**1.47**	**241**	P	**Pn**	**02 06 36.7**	**+0.1**
	SNR=254						
BANOM				S	**Sg**	**02 06 59.8**	**+2.5**
SHME	**Shamm**	**1.54**	**248**	*e*P	**Pb**	**02 06 38.4**	**-0.2**
	SNR=17						
SHME				S	**Sg**	**02 07 01.8**	**+2.2**
SHME	**Shamm**	**1.54**	**248**	*e*Pn	**Pb**	**02 06 38.6**	**0.0**
GENO	**Geno**	**1.58**	**299**	*e*Pn	**Pg**	**02 06 39.9**	**-0.3**
GENO				IAMB	IAmb	02 07 13.3	
	comp=N,0.0nm,0.4s						
MDH	**Madha**	**1.86**	**224**	P	**Pn**	**02 06 40.4**	**-1.5**
MSFE	**Esma-Masafi**	**1.91**	**228**	*e*P	**Pn**	**02 06 41.3**	**-1.2**
	SNR=7.9						
MSFE	**Esma-Masafi**	**1.91**	**228**	*e*Pn	**Pn**	**02 06 41.4**	**-1.2**
UOSS	**Minazif**	**2.18**	**219**	*e*P	**Pn**	**02 06 44.5**	**-1.7**
	SNR=13						
UOSS	**Minazif**	**2.18**	**219**	P	**Pn**	**02 06 44.6**	**-1.7**
UOSS	**Minazif**	**2.18**	**219**	*e*Pn	**Pn**	**02 06 44.4**	**-1.9**
HATD	**Hatta, Dubai**	**2.32**	**219**	P	**Pn**	**02 06 48.5**	**+0.4**
HATD	**Hatta, Dubai**	**2.32**	**219**	P	**Pn**	**02 06 47.2**	**-1.0**
HATD	**Hatta, Dubai**	**2.32**	**219**	*e*Pn	**Pn**	**02 06 47.3**	**-0.8**
ASHO	**Ashiyiah**	**2.47**	**218**	*e*P	**Pn**	**02 06 50.7**	**+0.4**
	SNR=11						
ASHO	**Ashiyiah**	**2.47**	**218**	P	**Pn**	**02 06 51.2**	**+0.9**
ASHO				S	**Sb**	**02 07 26.2**	**+1.3**
ASHO	**Ashiyiah**	**2.47**	**218**	*e*Pn	**Pn**	**02 06 49.5**	**-0.8**
NAZ	**Nazwa, Dubai**	**2.49**	**229**	P	**Pn**	**02 06 51.5**	**+0.9**
NAZ	**Nazwa, Dubai**	**2.49**	**229**	P	**Pb**	**02 06 53.6**	**-1.2**
NAZ				S	**Sb**	**02 07 28.5**	**+3.1**
NAZ	**Nazwa, Dubai**	**2.49**	**229**	*e*Pn	**Pb**	**02 06 53.1**	**-1.7**
CHBR	**Chabahar**	**2.69**	**112**	*e*Pn	**Pn**	**02 06 55.3**	**+2.1**
FAQ	**Al Faqa, Dubai**	**2.70**	**226**	P	**Pn**	**02 06 54.7**	**+1.2**
FAQ	**Al Faqa, Dubai**	**2.70**	**226**	*e*Pn	**Pn**	**02 06 55.3**	**+1.9**
SOHO	**SOHO**	**2.73**	**204**	P	**Pn**	**02 06 51.5**	**-2.3**
	SNR=18						
ASUD	**Al Ashush, Dub**	**2.96**	**228**	*i* P	**Pn**	**02 06 58.5**	**+1.6**
	SNR=8.0						
HOQ	**Hoqain**	**3.08**	**187**	*e*Pn	**Pn**	**02 06 57.8**	**-0.8**
NGRK	**Negar Kerman**	**3.11**	**344**	*e*Pn	**Pn**	**02 07 01.1**	**+1.7**
NGRK				IAMB	IAmb	02 08 02.7	
	comp=Z,0.0nm,0.8s						
BIDO	**Bidbid**	**3.13**	**173**	P	**Pn**	**02 06 57.5**	**-1.9**
BIDO				S	**Sn**	**02 07 33.5**	**-3.4**
CHMN	**Cheshme madani**	**3.21**	**357**	*e*Pn	**Pb**	**02 07 04.4**	**-2.8**
CHMN				IAMB	IAmb	02 08 04.0	
	comp=Z,0.0nm,0.5s						
KRBR	**Kerman**	**3.43**	**346**	*e*Pn	**Pn**	**02 07 04.3**	**+0.6**
TVBK	**TV Kerman**	**3.43**	**346**	*e*Pn	**Pb**	**02 07 07.2**	**-3.9**
KHGB	**Koh Gabri**	**3.87**	**344**	*e*Pn	**Pn**	**02 07 12.6**	**+2.8**
KHGB				IAMB	IAmb	02 08 20.3	
	comp=Z,0.0nm,0.6s						
ZHSF	**Zahedan**	**3.99**	**42**	*e*Pn	**Pn**	**02 07 14.4**	**+3.0**
GHIR	**Ghir-Karzin**	**4.52**	**292**	*e*Pn	**Pn**	**02 07 16.0**	**-2.5**
ISRV	**Sarvestan**	**4.91**	**305**	*e*Pn	**Pn**	**02 07 25.4**	**+1.4**
BSRN	**Basiran**	**5.44**	**13**	*e*Pn	**Pn**	**02 07 33.3**	**+2.1**
IMEH	**Mehriz**	**5.46**	**331**	*e*Pn	**Pn**	**02 07 34.2**	**+2.7**
IKOO	**Kooshah**	**5.86**	**11**	*e*Pn	**Pn**	**02 07 38.1**	**+1.0**
IKAZ	**Kazeroun**	**6.06**	**302**	*e*Pn	**Pn**	**02 07 39.5**	**-0.4**
ITEG	**Tejag**	**6.29**	**8**	*e*Pn	**Pn**	**02 07 45.0**	**+2.1**
IRAM	**Ramesheh**	**6.95**	**319**	*e*Pn	**Pn**	**02 07 52.6**	**+0.6**
IPIR	**Pirpir**	**8.46**	**317**	*e*Pn	**Pn**	**02 08 14.6**	**+1.8**

IDC 09 02:06:35.3±7.1, 5°.26S×151°.27E, h156km±69km, mb3.4/4, mb1 3.6/5, mb1mx3.2/42, mbtmp3.9/5, Error ellipse: s-maj=99.6km s-min=25.0km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.80**	**225**	S	Sn	02 09 04.5	-0.7
	2.2nm,0.3s,baz=222,slow=18,SNR=4.6						
CTA	**Charters Tower**	**15.53**	**198**	P	Pn	02 10 05.6	-0.4
	0.1nm,0.3s,baz=27,slow=11,SNR=2.7						
WRA	**Warramunga Arr**	**22.01**	**227**	P	P	02 11 16.7	-0.6
	2.0nm,0.5s,baz=53,slow=9.7,SNR=23						
ASAR	**Alice Springs**	**24.80**	**221**	P	P	02 11 43.7	+0.7
	1.2nm,0.6s,baz=57,slow=8.8,SNR=15						
PETK	**Petropavlovsk-**	**58.40**	**5**	P	P	02 16 14.6	+0.3
	1.9nm,0.7s,baz=170,slow=7.9,SNR=3.8						
ILAR	**Eielson Array**	**83.16**	**22**	P	P	02 18 43.2	-0.4
	0.3nm,0.6s,baz=260,slow=3.6,SNR=3.8						
KEST	**Kesra**	**133.69**	**316**	PKP	PKiKP	02 25 35.9	+0.5
	1.2nm,0.7s,baz=72,slow=3.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**148.99**	**287**	PKPbc	PKPbc	02 26 04.3	-1.6
	0.4nm,0.5s,baz=62,slow=3.8,SNR=2.8						

*ISCJB **09** 02:14:16.9±0.3, 36°.65N±0°.02×77°.13E±0°.04, h95km±4km, mb4.3/40, Error ellipse: s-maj=5.0km s-min=3.5km az=165.4*
*NEIC **09** 02:14:18.6±1.8, 36°.74N×77°.14E, h95km±6km, mb4.2/18, Error ellipse: s-maj=12.3km s-min=10.6km az=113.0*
*MOS **09** 02:14:18.5±1.1, 36°.73N×77°.00E, h101km, mb4.7/13, Error ellipse: s-maj=8.5km s-min=4.7km az=104.8*
*BJI **09** 02:14:19.5±0.0, 36°.89N×77°.25E, h100km, mb4.2/14, mB4.5/11*
*IDC **09** 02:14:20.1±0.7, 36°.76N×77°.02E, h101km±6km, mb3.9/20, mb1 4.0/26, mb1mx3.8/58, mbtmp4.2/26, Error ellipse: s-maj=12.5km s-min=11.2km az=47.0*
*NNC **09** 02:14:23.9±3.4, 37°.02N×76°.99E, h136km±35km, mb3.9, mpv4.6, Error ellipse: s-maj=30.5km s-min=21.1km az=178.0*

ISC 09 02:14:18.3±0.4, 36°.69N±0°.04×77°.07E±0°.04, h91km±4km, h90km: pP-P, n166, σ1°.92/192, mb4.5/40, 23C-10D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.95**	**343**	P	**Pn**	**02 15 02.3**	**-1.0**
KSH				S	**Sn**	**02 15 31.1**	**-6.8**
KSH				smax	smax		
	comp=N,3μm,0.4s						
KSH				smax	smax		
	comp=E,3μm,0.3s						
CHCP	**Chirah Chowk**	**4.34**	**227**	⇓P	**Pn**	**02 15 24.3**	**+2.3**
NIL	**Nilore**	**4.36**	**227**	*e*Pn	**Pn**	**02 15 23.8**	**+1.6**
NIL	**Nilore**	**4.36**	**227**	*e*P	**Pn**	**02 15 23.8**	**+1.6**
DHRM	**DHARAMSHALA**	**4.47**	**188**	*e*P	**Pn**	**02 15 26.5**	**+2.5**
DHRM				*e*S	**Sn**	**02 16 15.0**	**0.0**
DHRM				IAML		02 16 21.8	
	comp=N,958nm,0.3s						
DHRM				IAML		02 16 22.0	
	comp=E,1μm,0.2s						
CEP	**Cherat**	**5.10**	**237**	⇓P	**Pn**	**02 15 33.0**	**+0.6**
CEP				S	**Sn**	**02 16 27.0**	**-3.0**
SMLA	**Simla**	**5.55**	**179**	*e*P	**Pn**	**02 15 39.1**	**+0.8**
SMLA				*e*S	**Sn**	**02 16 36.6**	**-4.2**
KZA	**Kyzart**	**5.56**	**346**	P	**Pn**	**02 15 41.3**	**+2.4**
	SNR=48						
ULHL	**Ulahol**	**5.59**	**354**	P	**Pn**	**02 15 41.5**	**+2.5**
	SNR=12						
ARSB	**Arslanbob**	**5.62**	**327**	*e*Pn	**Pn**	**02 15 40.5**	**+1.1**
GAR	**Garm**	**5.82**	**295**	*e*Pn	**Pn**	**02 15 42.2**	**+0.1**
GAR	**Garm**	**5.82**	**295**	*e*P	**Pn**	**02 15 42.2**	**+0.1**
THW	**Thamme Wali**	**5.86**	**230**	P	**Pn**	**02 15 42.8**	**+0.2**
BOOM	**Boomskoye usch**	**5.86**	**352**	*e*Pn	**Pn**	**02 15 44.6**	**+1.9**
BOOM	**Boomskoye usch**	**5.86**	**352**	P	**Pn**	**02 15 44.6**	**+1.9**
UCH	**Uchtor**	**5.87**	**341**	P	**Pn**	**02 15 45.3**	**+2.2**
	SNR=92						
BTK	**Batken**	**5.95**	**306**	*e*Pn	**Pn**	**02 15 44.3**	**+0.4**
BTK	**Batken**	**5.95**	**306**	*e*P	**Pn**	**02 15 44.3**	**+0.4**
AML	**Almayashu**	**6.03**	**335**	P	**Pn**	**02 15 48.0**	**+2.8**
	SNR=30						
KBK	**Karagaybulak**	**6.18**	**345**	P	**Pn**	**02 15 49.1**	**+2.1**
	SNR=48						
AAK	**Ala-Archa**	**6.26**	**342**	P	**Pn**	**02 15 50.0**	**+1.8**
	comp=E,9.3nm,0.3s,baz=139,slow=7.9,SNR=44						
AAK				S	**Sn**	**02 17 00.2**	**+1.9**
	comp=E,8.1nm,0.3s,baz=29,slow=19,SNR=6.9						
AAK	**Ala-Archa**	**6.26**	**342**	P	**Pn**	**02 15 50.8**	**+2.6**
	SNR=32						
AAK	**Ala-Archa**	**6.26**	**342**	P	**Pn**	**02 15 50.7**	**+2.5**
	comp=E,22nm,0.6s						
AAK				S	**Sn**	**02 16 56.6**	**-1.8**
	comp=E,35nm,0.6s						
AAK	**Ala-Archa**	**6.26**	**342**	P	**Pn**	**02 15 50.7**	**+2.5**
AAK				S	**Sn**	**02 16 56.5**	**-1.8**
AAK				pmax	pmax		
	comp=Z,23nm,0.6s						
AAK				smax	smax		
	comp=N,35nm,0.6s						
TKM2	**Tokmak 2**	**6.33**	**350**	P	**Pn**	**02 15 51.3**	**+2.3**
	SNR=35						
TKM2	**Tokmak 2**	**6.33**	**350**	⇑P	**Pn**	**02 15 51.4**	**+2.3**
	comp=N,14nm,0.4s						
TKM2	**Tokmak 2**	**6.33**	**350**	*i* P	**Pn**	**02 15 51.4**	**+2.3**
TKM2				S	**Sn**	**02 17 00.0**	**+0.1**
DDI	**Dehra Dun**	**6.40**	**172**	*e*P	**Pn**	**02 15 52.2**	**+2.1**
DDI				*e*S	**Sn**	**02 16 57.2**	**-4.5**
JOSI	**Joshimath**	**6.46**	**161**	*e*P	**Pn**	**02 15 51.9**	**+0.9**
JOSI				*e*S	**Sn**	**02 16 58.6**	**-4.7**
EKS2	**Erkin-Say**	**6.48**	**338**	P	**Pn**	**02 15 55.0**	**+3.9**
	SNR=12						
AAA	**Alma-Ata**	**6.51**	**359**	*e*P	Pn	02 16 03.1	+12
AAA				pmax	pmax		
	comp=Z,33nm,0.4s						
KNDC	**Almaty**	**6.52**	**359**	⇓P	**

DGZ **Jazzator, Alta** 15.02 27*c iP* Pn 02 17 45.8 +0.2
GEYT **Alibeck** 15.14 280 P Pn 02 17 44.5 -2.5
comp=N,0.6nm,0.3s,baz=100,slow=9.6,SNR=7.2
GEYT S Sn 02 20 22.3 -12
comp=N,1.4nm,0.3s,baz=352,slow=32,SNR=8.4
GYA0B **ALIBECK ARRAY** 15.14 280 ⇓P Pn 02 17 44.7 -2.3
BVAR **Borovoye Array** 16.99 346 P P 02 18 11.6 +1.1
comp=N,1.6nm,0.3s,baz=153,slow=13,SNR=15
BRVK **Borovoye** 17.05 346 *e*Pn Pn 02 18 08.1 -2.6
comp=N,13nm,0.7s
BRVK **Borovoye** 17.05 346 ⇓P P 02 18 11.6 +0.5
comp=N,6.7nm,0.9s
BRVK **Borovoye** 17.05 346 *ce*P Pn 02 18 10.7 0.0
AB31 **Akbulak array** 17.69 321 P Pn 02 18 18.5 -0.1
comp=N,4.0nm,0.3s,baz=127,slow=11,SNR=250
AB31 **Akbulak array** 17.69 321 *e*P Pn 02 18 18.4 -0.1
AB31 pmax pmax
comp=Z,4.0nm,0.4s
ABKAR **Akbulak array** 17.69 321 *e*P P 02 18 16.5 -1.7
comp=Z,15nm,0.9s
ZAA0 **Zalesovo Array** 18.08 15 *e*P P 02 18 19.3 -3.1
comp=Z,8.7nm,0.8s
ZALV **Zalesovo Beam** 18.08 15 P Pn 02 18 23.0 -0.2
comp=Z,0.9nm,0.3s,baz=208,slow=12,SNR=9.2
ZALV **Zalesovo Beam** 18.08 15 *e*P Pn 02 18 23.0 -0.3
ZAA1 **Zalesovo Array** 18.08 15 *e*P Pn 02 18 25.2 +1.3
GTA **Gaotai** 18.11 74 *e*P Pn 02 18 40.6 -0.8
GTA pP pP
GTA sP sP 02 18 55.0 +1.8
GTA pmax pmax
comp=Z,3.0nm,0.9s
KOHI **KOHIMA** 18.19 122 *e*P P 02 18 24.4 +0.3
NVS **Novosibirsk** 18.64 11 *e*P P 02 18 26.2 -2.4
NVS pmax pmax
comp=N,8.0nm,0.9s
NVS pmax pmax
comp=Z,12nm,0.9s
AKTO **Aktyubinsk** 19.40 321 P P 02 18 37.5 +0.6
comp=Z,2.3nm,0.3s,baz=115,slow=11,SNR=48
AKTO **Aktyubinsk** 19.40 321 ⇓P P 02 18 36.6 -0.3
WSAR **Wadi Sarin** 20.80 235 P P 02 18 53.8 +1.5
comp=Z,17nm,0.7s,baz=80,slow=6.1,SNR=13
LZH **Lanzhou** 21.54 84 *e*P P 02 19 02.2 +1.9
LZH pP pP 02 19 21.9 +2.7
LZH PP **sP** 02 19 31.5 +0.2
LZH sP sP 02 19 35.1 +3.8
LZH pmax pmax
comp=Z,7.0nm,1.5s
LZH pmax pmax
comp=Z,110nm,4.3s
SVE **Sverdlovsk** 22.96 337 *e*P P 02 19 15.8 +1.1
SVE pmax pmax
comp=Z,12nm,0.6s
ZAK **Zakamensk** 23.27 46 *e*P P 02 19 18.6 +0.7
ZAK pmax pmax
comp=Z,3.0nm,0.9s
ARU **Arti** 23.35 334 P P 02 19 18.9 +0.4
comp=Z,4.3nm,0.4s,baz=128,slow=4.4,SNR=23
ARU **Arti** 23.35 334 *e*P P 02 19 17.6 -0.8
comp=Z,16nm,0.5s
ARU **Arti** 23.35 334 *c iP* P 02 19 18.8 +0.4
ARU 02 19 41.4
ARU S **S** 02 23 26.3 +2.3
ARU SS Sn 02 24 12.3 +22
ARU pmax pmax
comp=Z,9.0nm,0.5s
SONA0 **Songino Array** 24.25 53 *e*P P 02 19 28.8 +2.0
SONM **Songino Array** 24.25 53 P P 02 19 28.8 +2.0
comp=Z,7.0nm,0.9s,baz=252,slow=9.6,SNR=25
ULN **Ulaanbaatar** 24.68 54 *e*P P 02 19 29.9 -0.9
comp=Z,5.7nm,1.1s
ULN **Ulaanbaatar** 24.68 54 *e*P P 02 19 29.9 -0.9
ULN pmax pmax
comp=Z,6.0nm,1.1s
KMI **Kunming** 24.78 110 P P 02 19 32.7 +0.8
KMI pmax pmax
comp=Z,7.0nm,0.6s
CM31 **Chiang Mai Arr** 26.46 127 *e*P P 02 19 50.3 +3.4
comp=Z,5.7nm,0.6s
CMAR **Chiang Mai Arr** 26.46 127 P P 02 19 50.3 +3.4
comp=Z,4.1nm,0.8s,baz=309,slow=11,SNR=19
HHC **Hu-ho-hao-te** 27.11 71 *e*P P 02 19 52.0 -0.7
HHC pmax pmax
comp=Z,29nm,1.0s
HHC pmax pmax
comp=Z,61nm,5.2s
KIRV **Kirov** 28.39 329 P P 02 20 04.1 +0.3
comp=Z,7.6nm,0.5s,baz=104,slow=23,SNR=5.0
VRH **Novokhopyorsk** 28.97 311 *e*P P 02 20 08.8 -0.1
VRH pmax pmax
comp=Z,10.0nm,0.5s
VORD **Divnogorie** 30.39 310 *e*P P 02 20 21.4 -0.1
VORD pmax pmax
comp=Z,6.0nm,0.4s
VSR **Storozhevoye** 30.52 310 *e*P P 02 20 22.2 -0.5
VSR pmax pmax
comp=Z,10.0nm,0.5s
LPSR **Galich'ya Gora** 31.02 313 *e*P P 02 20 27.3 +0.3
LPSR pmax pmax
comp=Z,20nm,0.8s
WHN **Wuhan** 31.50 90 P P 02 20 36.0 +4.4
PRGR **Permogore** 31.77 332 *e*P P 02 20 33.1 -0.4
PRGR pmax pmax
comp=Z,7.0nm,0.6s
OBN **Obninsk** 33.06 317 *ce*P P 02 20 45.0 +0.1
OBN *e* 02 21 58.5
OBN pmax pmax
comp=Z,6.0nm,0.5s
KLMR **Klimovskoe** 33.83 328 *e*P P 02 20 47.5 -4.0
KLMR pmax pmax
comp=Z,9.0nm,1.3s
BR101 **Keskin Array S** 34.02 289 *e*P P 02 20 54.6 +1.0
BRTR **Keskin Array B** 34.02 289 P P 02 20 54.6 +1.0
comp=Z,0.8nm,0.7s,baz=108,slow=8.5,SNR=7.1
AKASG **Malin Array Be** 36.66 308 P P 02 21 15.8 -0.1
comp=Z,3.2nm,0.5s,baz=76,slow=8.1,SNR=14
AKBB **Malin Array Si** 36.66 308 *e*P P 02 21 15.8 -0.1
comp=Z,5.5nm,0.4s
AKBB **Malin Array Si** 36.66 308 *e*P P 02 21 15.8 -0.1
AKBB pmax pmax
comp=Z,6.0nm,0.4s
KIEV **Kiev** 36.67 308 *ce*P P 02 21 15.7 -0.3
KIEV pmax pmax
comp=Z,2.0nm,0.8s
VRI **Vrincioaia** 38.37 300⇑ *iP* P 02 21 32.7 +2.3
VRI **Vrincioaia** 38.37 300 ⇑P P 02 21 32.7 +2.3
PLOR **Plostina** 38.42 300⇑ *iP* P 02 21 32.7 +1.8
PLOR **Plostina** 38.42 300 ⇑P P 02 21 32.7 +1.8
MLR **Muntele Rosu** 38.95 299⇑ *iP* P 02 21 37.4 +2.0
MLR **Muntele Rosu** 38.95 299 ⇑P P 02 21 37.4 +2.0
LVZ **Lovozero** 39.18 336 *e*P P 02 21 36.8 -0.1
comp=Z,14nm,0.8s
LVZ **Lovozero** 39.18 336 *ce*P P 02 21 37.4 +0.5
LVZ pmax pmax
comp=Z,14nm,0.8s
ARR **Arges** 39.88 299⇑ *iP* P 02 21 44.3 +1.2
FIA1 **FINESS Array S** 40.11 325 *e*P P 02 21 44.5 -0.1
comp=Z,6.3nm,0.7s
FIA0 **FINESS Array S** 40.11 325 *e*P P 02 21 45.0 +0.4
FIA0 **FINESS Array S** 40.11 325 *e*P P 02 21 45.0 +0.4
FINES **FINESS Array B** 40.11 325 P P 02 21 45.0 +0.4
comp=Z,7.9nm,0.6s,baz=112,slow=9.3,SNR=105
TRPA **Tarpa** 41.05 304⇑ *iP* P 02 21 54.4 +1.8
KLR **Kul'dur** 41.07 54 P P 02 21 53.8 +1.0
comp=Z,1.2nm,0.6s,baz=236,slow=5.7,SNR=6.6
BZS **Buzias** 41.95 300⇑ *iP* P 02 22 01.4 +1.4
BZS **Buzias** 41.95 300 ⇑P P 02 22 01.4 +1.4
MDVR **Moldovita** 42.01 299⇑ *iP* P 02 22 01.2 +0.6
ARCES **ARCESS Array B** 42.89 336 P P 02 22 07.9 +0.6
comp=Z,9.0nm,0.4s,baz=107,slow=9.1,SNR=55
MATE **Matera** 46.49 294⇑ *iP* P 02 22 35.7 -0.6
GEC2 **GERESS Array S** 46.79 306 *e*P P 02 22 39.5 +0.9
comp=Z,1.8nm,0.9s
GEC2 **GERESS Array S** 46.79 306 *e*P P 02 22 39.5 +0.9
GEC2 pmax pmax
comp=Z,2.0nm,0.9s
GERES **GERESS Array B** 46.79 306 P P 02 22 39.5 +0.9
comp=Z,0.7nm,0.7s,baz=70,slow=7.7,SNR=8.5
CLL **Collm** 46.86 309 *e*P P 02 22 39.0 0.0
NC405 **NORSAR Array S** 46.94 323 *e*P P 02 22 39.3 -0.2
comp=Z,87nm,1.8s
NB2 **NORSAR Subarra** 47.18 323 P P 02 22 40.8 -0.6
comp=Z,9.6nm,1.1s,baz=90,slow=7.9
NB200 **NORSAR Array S** 47.18 323 *e*P P 02 22 41.3 -0.1
NOA **NORSAR Array B** 47.18 323 P P 02 22 41.3 -0.1
comp=Z,3.8nm,0.7s,baz=91,slow=7.6,SNR=24
NAO01 **NORSAR Array S** 47.34 322 *e*P P 02 22 42.1 -0.5
comp=Z,109nm,1.9s
KMBO **Kilima Mbogo** 52.72 234 P P 02 23 25.4 +1.2
comp=Z,0.7nm,0.5s,baz=59,slow=12,SNR=2.6
KMBO **Kilima Mbogo** 52.72 234 *e*P P 02 23 25.4 +1.2
comp=Z,10nm,1.6s
EKA **Eskdalemuir Ar** 55.52 317 P P 02 23 42.8 -0.9
EKA pmax pmax
comp=Z,3.0nm,0.6s
ESDC **Sonseca Array** 61.64 300 P P 02 24 26.4 -0.2
comp=Z,0.4nm,0.6s,baz=52,slow=7.2,SNR=6.2
SUMG **Summit** 62.42 342 *e*P P 02 24 31.7 0.0
comp=Z,7.4nm,1.0s
SUMG **Summit** 62.42 342 *i* P P 02 24 32.5 +0.9
SUMG pmax pmax
comp=Z,18nm,1.0s
SUMG **Summit** 62.42 342 *i* P P 02 24 32.5 +0.9
comp=Z,18nm,1.0s
TOA1 **Torodi Ar. Sit** 70.60 272 *e*P P 02 25 23.6 -0.5
TOA1 *ep*P **pP** 02 25 50.5 +1.6
TORD **Torodi Ar. Bea** 70.60 272 P P 02 25 23.6 -0.5
comp=Z,0.8nm,0.4s,baz=39,slow=6.0,SNR=29
TORD pP **pP** 02 25 50.5 +1.6
comp=Z,0.4nm,0.5s,baz=59,slow=5.1,SNR=2.0
INK **Inuvik** 72.84 11 P P 02 25 36.1 -0.5
comp=Z,0.9nm,0.4s,baz=354,slow=4.7,SNR=9.8
INK **Inuvik** 72.84 11 *e*P P 02 25 36.1 -0.5
comp=Z,3.0nm,1.1s
ILAR **Eielson Array** 73.17 18 P P 02 25 38.2 -0.5
comp=Z,0.6nm,0.4s,baz=322,slow=4.8,SNR=11
ILAR pP **pP** 02 26 03.5 +0.3
comp=Z,0.9nm,0.8s,baz=313,slow=6.0,SNR=7.3
ILB **Eielson Array** 73.17 18 *e*P P 02 25 38.2 -0.5
ILB *ep*P **pP** 02 26 03.5 +0.3
DBIC **Dimbokro** 79.58 271 P P 02 26 14.9 -0.9
comp=Z,3.0nm,0.8s,baz=246,slow=9.2,SNR=2.8
DBIC **Dimbokro** 79.58 271 *e*P P 02 26 14.9 -0.9
comp=Z,62nm,1.8s
AS31 **Alice Springs** 80.46 129 *e*P P 02 26 20.0 -0.3
AS31 *ep*P **pP** 02 26 48.1 +2.6
ASAR **Alice Springs** 80.46 129 P P 02 26 20.0 -0.3
comp=Z,0.4nm,0.7s,baz=320,slow=5.3,SNR=6.0
ASAR pP **pP** 02 26 48.1 +2.6
comp=Z,0.5nm,0.7s,baz=316,slow=5.2,SNR=2.4
YKA **Yellowknife Ar** 80.71 5 P P 02 26 20.7 -0.3
comp=Z,1.9nm,0.7s,baz=345,slow=5.5,SNR=15
YKA pP **pP** 02 26 46.8 +1.0
comp=Z,0.5nm,0.5s,baz=346,slow=5.6,SNR=3.4
YKB5 **Yellowknife Ar** 80.71 5 *e*P P 02 26 20.7 -0.3
YKB5 *ep*P **pP** 02 26 46.8 +1.0

*IDC **09** 02:17:05.4±1.0, 12°.42N×141°.50E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.7/49, mbtmp4.0/10, ML3.9/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/45, Error ellipse: s-maj=32.9km s-min=22.3km az=90.0*
*ISCJB **09** 02:17:08.5±0.6, 12°.41N±0°.08×141°.5E±0°.1, h33km, mb4.0/10, MS2.9/1, Error ellipse: s-maj=16.6km s-min=11.7km az=178.6*
*NEIC **09** 02:17:12.7±0.9, 12°.38N×141°.66E, h60km±9km, mb4.2/3, Error ellipse: s-maj=32.7km s-min=16.2km az=112.0*
ISC 09 02:17:10.1±0.7, 12°.4N±0°.1×141°.60E±0°.09, h33km, n18, σ0s95/18, mb4.2/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	3.39	70	Pn	Pn	02 18 02.6	+1.8
	8.3nm,0.3s,baz=191,slow=19,SNR=4.7						
GUMO				Sn	Sb	02 18 48.8	-1.7
	baz=253,slow=19,SNR=1.5						
GUMO	**Guam**	3.39	70	*e*Pn	Pn	02 18 02.2	+1.4
JAY	**Jayapura**	14.86	183	Pn	Pn	02 20 38.1	0.0
	0.8nm,0.3s,baz=6.6,slow=12,SNR=4.0						
JAY				LR	LR	02 25 50.1	
	comp=Z,65nm,21.7s,baz=356,slow=35						
MJAR	**Matsushiro Arr**	24.22	353	LR	LR	02 29 19.1	
	comp=Z,46nm,21.8s,baz=30,slow=30						
AS31	**Alice Springs**	36.64	192	*e*P	P	02 24 13.7	0.0
	1.9nm,1.3s						
ASAR	**Alice Springs**	36.64	192	P	P	02 24 13.7	-0.1
	0.4nm,0.7s,baz=18,slow=12,SNR=4.1						
KLR	**Kul'dur**	37.60	349	P	P	02 24 22.4	+0.8
	0.5nm,0.4s,baz=81,slow=13,SNR=2.0						
MK32	**Makanchi Array**	60.15	317	*e*P	P	02 27 15.1	+0.5
MKAR	**Makanchi Array**	60.15	317	P	P	02 27 15.1	+0.5
	1.4nm,0.9s,baz=90,slow=11,SNR=4.0						
ZALV	**Zalesovo Beam**	60.75	325	P	P	02 27 18.9	+0.3
	0.7nm,0.4s,baz=93,slow=5.8,SNR=3.3						
ZAA1	**Zalesovo Array**	60.75	325	*e*P	P	02 27 18.9	+0.3
KURK	**Kurchatov**	63.45	321	*e*P	P	02 27 36.5	-0.2
	3.7nm,0.7s						
NRIK	**Noril'sk**	66.22	342	P	P	02 27 54.5	+0.1
	1.5nm,0.4s,baz=126,slow=7.3,SNR=3.7						
BVAR	**Borovoye Array**	68.88	322	P	P	02 28 11.5	-0.1
	1.8nm,0.5s,baz=105,slow=8.3,SNR=9.7						
ILAR	**Eielson Array**	70.99	25	P	P	02 28 23.9	-0.4
	0.7nm,0.7s,baz=262,slow=5.4,SNR=6.8						
ILB	**Eielson Array**	70.99	25	*e*P	P	02 28 23.9	-0.4
	13nm,2.0s						
FIA0	**FINESS Array S**	90.85	334	*e*P	P	02 30 08.7	-1.4
FINES	**FINESS Array B**	90.85	334	P	P	02 30 08.7	-1.4
	0.8nm,0.7s,baz=70,slow=6.3,SNR=4.6						

*IDC **09** 02:39:27.0±1.2, 15°.57S×168°.08E, h0km, mb4.2/6, mb1 4.3/7, mb1mx3.9/35, mbtmp4.1/7, ML3.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/28, Error ellipse: s-maj=49.7km s-min=26.6km az=130.0*
*ISCJB **09** 02:39:30.2±0.8, 15°.76S±0°.09×168°.1E±0°.2, h33km, mb4.2/6, MS3.3/1, Error ellipse: s-maj=35.0km s-min=10.0km az=13.7*
ISC 09 02:39:32.0±0.9, 15°.7S±0°.1×168°.1E±0°.3, h35km, n8, σ0s56/8, mb4.2/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	6.53	194	Pn	Pn	02 41 06.0	+0.3
	2.2nm,0.3s,baz=68,slow=9.6,SNR=61						
DZM				Sn	Sn	02 42 18.7	-0.4
	0.5nm,0.3s,baz=139,slow=22,SNR=2.2						
ASAR	**Alice Springs**	33.10	251	P	P	02 46 05.0	+0.1
	1.2nm,0.7s,baz=82,slow=8.8,SNR=11						
PPT	**Papeete**	40.53	99	LR	LR	03 00 59.5	
	comp=Z,45nm,19.1s,baz=242,slow=32						
SONM	**Songino Array**	83.75	323	P	P	02 51 57.5	-0.1
	1.7nm,0.8s,baz=140,slow=5.8,SNR=7.2						
ILAR	**Eielson Array**	87.20	18	P	P	02 52 13.8	-0.5
	1.5nm,0.8s,baz=233,slow=6.0,SNR=15						
NVAR	**Mina Array Bea**	87.29	49	P	P	02 52 16.3	+0.7
	0.2nm,0.6s,baz=246,slow=6.5,SNR=2.7						
TIXI	**Tiksi**	91.07	348	P	P	02 52 32.8	+0.5
	1.2nm,0.3s,baz=117,slow=9.0,SNR=2.5						
YKA	**Yellowknife Ar**	98.03	27	P	P	02 53 03.7	-0.7
	1.2nm,0.8s,baz=257,slow=4.6,SNR=9.6						

*ISCJB **09** 02:45:25.7±0.5, 31°.64S±0°.04×178°.1W±0°.1, h35km, mb4.7/9, MS3.5/1, Error ellipse: s-maj=13.8km s-min=3.6km az=20.6*
*NEIC **09** 02:45:28.5±0.8, 31°.39S×178°.16W, h36km±7km, mb4.5/6, Error ellipse: s-maj=23.5km s-min=10.3km az=122.0*
*IDC **09** 02:45:31.2±3.7, 31°.67S×178°.08W, h62km±34km, mb4.5/4, mb1 4.4/6, mb1mx3.9/25, mbtmp4.7/6, ML3.8/2, MS3.6/2, Ms1 3.6/2, ms1mx2.9/29, Error ellipse: s-maj=34.6km s-min=18.3km az=158.0*
ISC 09 02:45:27.9±0.6, 31°.56S±0°.06×178°.0W±0°.1, h35km, n59, σ1s63/79, mb4.8/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	2.29	2	P	Pn	02 46 01.4	-1.8
GLKZ				S	Sn	02 46 25.2	-5.0
RAO	**Raoul Island**	2.30	2	*e*Pn	Pn	02 46 01.9	-1.5
RIZ	**Raoul Island**	2.31	1	P	Pn	02 46 01.7	-1.8
RIZ				S	Sn	02 46 27.4	-3.2
MXZ	**Matakaoa Point**	6.72	206	P	Pn	02 47 03.5	-0.4
MXZ				S	Sn	02 48 19.9	+0.7
HAZ	**Te Kaha**	7.09	208	P	Pn	02 47 09.9	+0.8
HAZ				S	Sn	02 48 29.7	+1.3
PUZ	**Puketiti**	7.19	204	P	Pn	02 47 09.2	-1.2
PUZ				S	Sn	02 48 29.5	-1.3
RUGZ	**Raukumara Rang**	7.31	208	P	Pn	02 47 11.7	-0.5
RUGZ				S	Sn	02 48 34.5	+0.4
TWGZ	**Tauwhareparae**	7.38	206	P	Pn	02 47 11.9	-1.2
TWGZ				S	Sn	02 48 35.7	0.0
CNGZ	**Carnagh Statio**	7.57	203	P	Pn	02 47 14.4	-1.4
MWZ	**Matawai**	7.69	207	P	Pn	02 47 15.8	-1.6
MWZ				S	Sn	02 48 41.8	-1.4
URZ	**Urewera**	7.79	210	P	Pn	02 47 20.1	+1.4
	2.3nm,0.3s,baz=278,slow=4.3,SNR=13						
URZ				S	Sn	02 48 45.3	-0.5
	6.0nm,0.3s,baz=316,slow=23,SNR=8.9						
URZ	**Urewera**	7.79	210	*e*Pn	Pn	02 47 19.8	+1.0
URZ				*e*Sn	Sn	02 48 45.7	-0.1
URZ	**Urewera**	7.79	210	P	Pn	02 47 17.0	-1.7
URZ				S	Sn	02 48 43.8	-1.9
OUZ	**Omahuta**	7.92	240	*e*Pn	Pn	02 47 24.1	+3.6
OUZ	**Omahuta**	7.92	240	P	Pn	02 47 25.4	+4.9
MUGZ	**Murupara**	8.12	210	P	Pn	02 47 21.2	-2.0
MUGZ				S	Sn	02 48 51.5	-2.4
SNGZ	**Shannon Statio**	8.15	207	P	Pn	02 47 22.7	-1.0
SNGZ				S	Sn	02 48 52.9	-1.7
RAHZ	**Arahi**	8.37	207	P	Pn	02 47 25.9	-0.8
RAHZ				S	Sn	02 48 57.8	-2.0
MTHZ	**Maungataniwha**	8.41	209	P	Pn	02 47 27.7	+0.5
MTHZ				S	Sn	02 48 58.8	-2.1
NMHZ	**Naumai**	8.63	208	P	Pn	02 47 29.7	-0.6
NMHZ				S	Sn	02 49 04.6	-1.9
ARHZ	**Aropaoanui**	8.70	207	P	Pn	02 47 29.5	-1.7
ARHZ				S	Sn	02 49 06.2	-1.9
BKZ	**Black Stump Fm**	8.82	209	*e*Pn	Pn	02 47 34.6	+1.7
BKZ	**Black Stump Fm**	8.82	209	P	Pn	02 47 31.7	-1.2
BKZ				S	Sn	02 49 07.1	-4.0
MCHZ	**McNeill Hill**	8.97	207	P	Pn	02 47 34.2	-0.8
MCHZ				S	Sn	02 49 11.7	-3.0
KAHZ	**Kahuranaki**	9.21	205	P	Pn	02 47 36.5	-1.8
KAHZ				S	Sn	02 49 16.6	-4.0
BHHZ	**Black Hill Sta**	9.27	210	P	Pn	02 47 39.1	0.0
KRHZ	**Kereru**	9.27	208	P	Pn	02 47 37.5	-1.6
RPZ	**Rata Peaks**	14.89	212	P	Pn	02 48 53.4	-2.4
	0.8nm,0.3s,baz=208,slow=12,SNR=2.4						
RPZ				S	Sn	02 51 24.3	-15
	0.9nm,0.3s,baz=14,slow=13,SNR=2.1						
DZM	**Mont Dzumac**	16.79	300	LR	LR	02 53 56.1	
	comp=Z,178nm,19.7s,baz=274,slow=30						
RAR	**Rarotonga**	19.28	62	P	Pn	02 49 52.6	+1.8
	1.9nm,0.3s,baz=324,slow=18,SNR=2.1						
PPT	**Papeete**	29.26	68	P	P	02 51 28.2	+1.4
	12nm,0.5s,baz=252,slow=19,SNR=2.7						
CTA	**Charters Tower**	34.01	281	P	P	02 52 09.7	+1.2
	8.1nm,0.6s,baz=102,slow=11,SNR=9.9						
STKA	**Stephens Creek**	34.24	259	P	P	02 52 10.7	+0.3
	2.2nm,0.4s,baz=100,slow=12,SNR=12						
STKA	**Stephens Creek**	34.24	259	*e*P	P	02 52 10.7	+0.3
	3.7nm,1.5s						
AS31	**Alice Springs**	43.06	268	*e*P	P	02 53 24.2	-0.4
	5.4nm,0.4s						
AS31				*e*PcP	PcP	02 55 13.8	-0.5
ASAR	**Alice Springs**	43.06	268	P	P	02 53 24.2	-0.4
	11nm,0.5s,baz=106,slow=7.4,SNR=258						
ASAR				PcP	PcP	02 55 13.8	-0.4
	0.3nm,0.5s,baz=126,slow=4.7,SNR=3.0						
ASAR				LR	LR	03 09 32.7	
	comp=Z,62nm,18.3s,baz=78,slow=34						
WB2	**Warramunga Arr**	44.15	273	*e*P	P	02 53 32.3	-1.0
	20nm,0.7s						
WRAB	**Tennant Creek**	44.15	273	*e*P	P	02 53 32.9	-0.5
	15nm,0.8s						
CASY	**Casey**	54.12	208	*e*P	P	02 54 49.6	+0.7
	4.4nm,0.8s						
QSPA	**South Pole Qui**	58.55	180	*e*P	P	02 55 23.2	+2.5
	7.8nm,0.7s						
MK32	**Makanchi Array**	118.52	310	*e*PKPdf	PKPdf	03 04 10.8	-0.8
MKAR	**Makanchi Array**	118.52	310	PKP	PKPdf	03 04 10.8	-0.8
	0.3nm,0.4s,baz=226,slow=0.5,SNR=6.1						
KURBB	**Kurchatov Arra**	121.89	313	PKP	PKPdf	03 04 17.0	-0.9
	1.6nm,0.7s,baz=105,slow=1.8,SNR=19						
BVAR	**Borovoye Array**	127.23	315	PKP	PKPdf	03 04 28.2	+0.1
	1.0nm,0.4s,baz=64,slow=3.4,SNR=8.4						
ARCES	**ARCESS Array B**	139.72	347	PKhKP	PKPpre	03 04 42.9	
	1.6nm,0.8s,baz=354,slow=1.2,SNR=4.1						
ARCES				PKP	PKPdf	03 04 50.3	-0.8
	1.0nm,0.7s,baz=62,slow=2.1,SNR=3.5						
FIA1	**FINESS Array S**	146.23	339	*e*PKPdf	PKPdf	03 05 03.2	+0.5
FIA0	**FINESS Array S**	146.23	339	*e*PKPdf	PKPdf	03 05 03.1	+0.4
FINES	**FINESS Array B**	146.23	339	PKPbc	PKPdf	03 05 03.1	+0.4
	7.6nm,0.7s,baz=46,slow=3.0,SNR=61						
NB2	**NORSAR Subarra**	149.90	351	PKP	PKPbc	03 05 13.3	-0.4
	comp=Z,1.6nm,0.6s,baz=14,slow=4.1						
NB200	**NORSAR Array S**	149.90	351	*e*PKPbc	PKPbc	03 05 13.7	0.0
NOA	**NORSAR Array B**	149.90	351	PKPbc	PKPbc	03 05 13.7	0.0
	comp=Z,1.5nm,0.6s,baz=13,slow=4.1,SNR=7.7						
AKASG	**Malin Array Be**	152.22	321	PKPbc	PKPbc	03 05 18.9	-0.4
	comp=Z,2.0nm,0.5s,baz=50,slow=2.7,SNR=9.3						
AKBB	**Malin Array Si**	152.22	321	*e*PKPbc	PKPbc	03 05 19.2	-0.2
BR101	**Keskin Array S**	153.14	296	*e*PKPbc	PKPbc	03 05 21.4	-0.6
BRTR	**Keskin Array B**	153.14	296	PKPbc	PKPbc	03 05 21.4	-0.6
	comp=Z,0.8nm,0.5s,baz=139,slow=4.2,SNR=6.4						
GEC2	**GERESS Array S**	160.60	336	*e*PKPab	PKPab	03 06 06.9	+1.5
GERES	**GERESS Array B**	160.60	336	PKPab	PKPab	03 06 07.1	+1.7
	comp=Z,0.1nm,0.3s,baz=20,slow=3.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	161.67	179	PKPab	PKPab	03 06 12.1	+1.5
	comp=Z,0.2nm,0.4s,baz=176,slow=2.7,SNR=4.2						
TOA1	**Torodi Ar. Sit**	161.68	179	*e*PKPab	PKPab	03 06 12.2	+1.5

WEL 09 03:02:12.7±1.7, 35°S±32°×17°9E±2°4, h277km±38km, M3.9/15, MLv3.9/15, Error ellipse: s-maj=0.0km s-min=0.0km az=153.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWGZ	**Tauwhareparae**	3.42	195	P	Pn	03 03 11.9	+0.6
TWGZ				S	S	03 03 59.8	+1.6
MWZ	**Matawai**	3.68	199	P	Pn	03 03 13.8	-0.3
MWZ				S	S	03 04 03.5	+0.3
TKGZ	**Te Karaka**	3.71	195	P	Pn	03 03 14.6	+0.3
URZ	**Urewera**	3.74	204	P	Pn	03 03 13.8	-1.0
URZ				S	S	03 04 03.5	-0.9
RIGZ	**Rimuhau**	3.98	195	P	Pn	03 03 17.3	-0.2
RIGZ				S	S	03 04 09.7	+0.5
MUGZ	**Murupara**	4.06	207	P	Pn	03 03 17.8	-0.5
MUGZ				S	S	03 04 11.2	+0.4
RTZ	**Ruatahuna**	4.11	204	P	Pn	03 03 19.1	+0.1
SNGZ	**Shannon Statio**	4.15	199	P	Pn	03 03 19.0	-0.5
KNZ	**Kokohu**	4.30	195	P	Pn	03 03 20.9	-0.2
MTHZ	**Maungataniwha**	4.37	204	P	Pn	03 03 22.0	+0.1
NMHZ	**Naumai**	4.60	203	P	Pn	03 03 24.5	-0.1
ARHZ	**Aropaoanui**	4.70	200	P	Pn	03 03 25.5	-0.2
HIZ	**Hauiti**	4.98	222	P	Pn	03 03 30.9	+1.8
KWHZ	**Kaweka Forest**	5.02	204	P	Pn	03 03 29.6	0.0
NGZ	**Ngauruhoe**	5.13	212	P	Pn	03 03 31.2	+0.2
BHHZ	**Black Hill Sta**	5.21	207	P	Pn	03 03 31.4	-0.5
FWVZ	**Far West T-bar**	5.21	212	P	Pn	03 03 31.9	-0.1
KAHZ	**Kahuranaki**	5.23	199	P	Pn	03 03 33.0	+1.0
KRHZ	**Kereru**	5.24	204	P	Pn	03 03 31.9	-0.2
MOVZ	**Moawhango**	5.26	209	P	Pn	03 03

GO01	**Chusmiza**	**0.23**	**116**⇓	*e*P	**Pn**	**03 08 35.4**	**-0.3**
GO01				*e*S	**Sn**	**03 08 47.3**	**+0.2**
GO01				IAML		03 08 47.9	
	comp=N,8μm,0.2s						
PB11	**IPOC Station P**	**0.30**	**230**⇑	*i*P	**Pn**	**03 08 35.4**	**-0.1**
PB11				*e*S	**Sn**	**03 08 47.1**	**+0.2**
PB11				IAML		03 08 47.6	
	comp=E,5μm,0.4s						
MNMC	**Minye Minye**	**0.47**	**338**⇓	*i*P	**Pn**	**03 08 36.9**	**+0.2**
MNMC				*e*S	**Sn**	**03 08 49.1**	**+0.3**
PB08	**IPOC Station P**	**0.62**	**157**⇓	*i*P	**Pn**	**03 08 38.0**	**+0.1**
PB08				*e*S	**Sn**	**03 08 51.3**	**+0.3**
PSGC	**Pisagua**	**0.67**	**268**⇑	*i*P	**Pn**	**03 08 37.8**	**-0.1**
PSGC				*e*S	**Sn**	**03 08 51.3**	**+0.1**
PB16	**IPOC Station P**	**1.23**	**356**⇓	*i*P	**Pn**	**03 08 44.6**	**+0.4**
PB16				*e*S	**Sn**	**03 09 02.9**	**+0.8**
PB12	**IPOC Station P**	**1.29**	**317**⇑	*i*P	**Pn**	**03 08 44.0**	**-0.3**
PB01	**IPOC Station P**	**1.47**	**183**⇓	*i*P	**Pn**	**03 08 46.6**	**+0.2**
PB01				*i*S	**Sn**	**03 09 06.5**	**+0.2**
PB02	**IPOC Station P**	**1.80**	**195**⇑	*i*P	**Pn**	**03 08 50.5**	**-0.1**
PB02				*i*S	**Sn**	**03 09 13.4**	**-0.2**
PB07	**IPOC Station P**	**2.19**	**192**	*e*P	**Pn**	**03 08 56.0**	**+0.3**
PB07				IAML		03 09 30.1	
	comp=N,130nm,0.2s						
PB03	**IPOC Station P**	**2.49**	**187**	*e*P	**Pn**	**03 09 00.1**	**+0.6**
PB03				IAML		03 09 36.3	
	comp=E,64nm,0.2s						
LPAZ	**La Paz**	**3.48**	**21**	P	**Pn**	**03 09 15.2**	**+2.0**
	comp=E,0.4nm,0.3s,baz=190,slow=6.0,SNR=16						
LPAZ				S	**Sn**	**03 09 52.0**	**-2.0**
	comp=E,0.3nm,0.3s,baz=220,slow=6.0,SNR=3.6						
BDFB	**Brasilia**	**20.76**	**83**	P	**P**	**03 12 53.0**	**-0.2**
	comp=E,1.0nm,0.5s,baz=229,slow=9.3,SNR=2.5						
TORD	**Torodi Ar. Bea**	**77.16**	**71**	P	**P**	**03 20 00.8**	**-2.3**
	comp=E,0.3nm,0.4s,baz=247,slow=5.1,SNR=12						
VNDA	**Vanda**	**78.66**	**190**	P	**P**	**03 20 12.2**	**+1.9**
	comp=E,3.1nm,0.5s,baz=139,slow=5.5,SNR=26						

*ISCJB **09** 03:09:05.7±0.3, 45°.32N±0°.01×20°.96E±0°.02, h6km±2km, Error ellipse: s-maj=2.5km s-min=1.9km az=25.1*
*BUC **09** 03:09:05.8±1.0, 45°.29N×20°.98E, h9km±3km, MD3.2/3, Error ellipse: s-maj=9.6km s-min=4.7km az=85.0*
*BEO **09** 03:09:06.8±0.3, 45°.31N×21°.10E, h11km±2km, ML2.8/13*
*PDG **09** 03:09:06.6±0.4, 45°.28N×21°.03E, h14km, ML2.9/10, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*
ISC 09 03:09:06.5±0.8, 45°.29N±0°.02×21°.00E±0°.02, h12km±6km, n93, σ1.9 23/148, 33C-20D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANR	**Banloc**	**0.13**	**46**⇓	*i*P	**Pg**	**03 09 09.8**	**0.0**
BANR				*i*S	**Sg**	**03 09 12.6**	**+0.5**
BANR	**Banloc**	**0.13**	**46**⇓	*i*P	**Pg**	**03 09 09.8**	**0.0**
BANR				*i*S	**Sg**	**03 09 12.6**	**+0.5**
BZS	**Buzias**	**0.54**	**53**	*e*Pg	**Pg**	**03 09 16.6**	**-0.5**
BZS				*e*Sg	**Sg**	**03 09 23.9**	**-0.4**
BZS	**Buzias**	**0.54**	**53**⇓	*i*P	**Pg**	**03 09 17.0**	**-0.1**
BZS				*i*S	**Sg**	**03 09 24.4**	**+0.1**
BZS	**Buzias**	**0.54**	**53**⇓	*i*P	**Pg**	**03 09 17.0**	**-0.1**
BEO	**Beograd**	**0.61**	**218**	*e*Pg	**Pb**	**03 09 17.9**	**-1.2**
BEO				*e*Sg	**Sn**	**03 09 29.1**	**-1.7**
MDVR	**Moldovita**	**0.72**	**135**⇑	*i*P	**Pb**	**03 09 20.3**	**-0.7**
MDVR				*i*S	**Sb**	**03 09 30.4**	**-0.4**
MDVR	**Moldovita**	**0.72**	**135**⇑	*i*P	**Pb**	**03 09 20.3**	**-0.7**
FRGS	**Fruska Gora**	**0.85**	**261**	*e*Pg	**Pn**	**03 09 24.1**	**-0.3**
FRGS				*e*Sg	**Sn**	**03 09 36.4**	**-0.4**
KUBS	**Kucevo**	**1.00**	**151**	*e*Pg	**Pg**	**03 09 24.5**	**-1.3**
KUBS				*e*Sg	**Sg**	**03 09 38.4**	**-0.5**
SVIS	**Svilajnac**	**1.04**	**171**	*e*Pg	**Pg**	**03 09 25.3**	**-1.2**
SVIS				*e*Sg	**Sb**	**03 09 40.3**	**+0.3**
SIRR	**Siria**	**1.08**	**25**⇑	*i*P	**Pn**	**03 09 27.2**	**-0.3**
SIRR				*i*S	**Sb**	**03 09 41.3**	**+0.1**
SIRR	**Siria**	**1.08**	**25**⇑	*i*P	**Pn**	**03 09 27.2**	**-0.3**
HERR	**Herculane**	**1.08**	**112**⇓	*i*P	**Pn**	**03 09 27.3**	**-0.2**
HERR				*i*S	**Sb**	**03 09 41.5**	**+0.2**
HERR	**Herculane**	**1.08**	**112**⇓	*i*P	**Pn**	**03 09 27.3**	**-0.2**
TRUS	**Trudelj**	**1.15**	**202**	*e*Pg	**Pn**	**03 09 28.4**	**0.0**
TRUS				*e*Sg	**Sn**	**03 09 45.3**	**+1.2**
DIVS	**Divibare**	**1.39**	**211**	*e*Pg	**Pb**	**03 09 31.9**	**-0.7**
DIVS				*e*Sg	**Sg**	**03 09 53.0**	**+1.6**
GRUS	**Gruza**	**1.42**	**188**	*e*Pg	**Pb**	**03 09 32.0**	**-0.9**
GRUS				*e*Sg	**Sg**	**03 09 54.0**	**+1.9**
DEV	**Deva**	**1.46**	**65**⇑	*i*P	**Pn**	**03 09 33.0**	**+0.3**
DEV				*i*S	**Sn**	**03 09 52.2**	**+0.4**
DEV	**Deva**	**1.46**	**65**⇑	*i*P	**Pn**	**03 09 33.0**	**+0.3**
PUNG	**Punghina**	**1.71**	**126**⇑	*i*P	**Pb**	**03 09 37.8**	**0.0**
PUNG				*i*S	**Sg**	**03 10 00.6**	**-0.8**
PUNG	**Punghina**	**1.71**	**126**⇑	*i*P	**Pb**	**03 09 37.8**	**0.0**
ZAGS	**Zajecar**	**1.72**	**149**	*e*Pn	**Pn**	**03 09 36.6**	**+0.3**
BOVS	**Bovan**	**1.73**	**163**	*e*Pn	**Pn**	**03 09 36.1**	**-0.3**
BOVS				*e*Sn	**Sb**	**03 09 59.3**	**-0.7**
IVAS	**Ivanjica**	**1.82**	**200**	*e*Pn	**Pn**	**03 09 37.3**	**-0.4**
IVAS				*e*Sn	**Sb**	**03 10 02.7**	**+0.1**
BBLS	**Lazići**	**1.83**	**219**	*e*Pn	**Pb**	**03 09 38.3**	**-1.6**
BBLS				*e*Sg	**Sg**	**03 10 07.2**	**+2.0**
HAPS	**Han Pijesak,BI**	**1.90**	**231**	*e*Pn	**Pb**	**03 09 40.4**	**-0.7**
HAPS				*e*Sg	**Sg**	**03 10 09.8**	**+2.4**
DRGR		**1.92**	**38**	*e*Pn	**Pn**	**03 09 38.7**	**-0.3**
DRGR				*e*Sg	**Sb**	**03 10 06.5**	**+1.2**
DRGR		**1.92**	**38**⇓	*i*P	**Pn**	**03 09 38.8**	**-0.3**
DRGR				*i*S	**Sn**	**03 10 03.4**	**+0.3**
DRGR		**1.92**	**38**⇓	*i*P	**Pn**	**03 09 38.8**	**-0.3**
LOT	**Lotru**	**1.96**	**84**⇑	*i*P	**Pb**	**03 09 41.4**	**-0.8**
LOT				*i*S	**Sb**	**03 10 07.6**	**+1.0**
LOT	**Lotru**	**1.96**	**84**⇑	*i*P	**Pb**	**03 09 41.4**	**-0.8**
SELS	**Selova**	**2.07**	**178**	*e*Pn	**Pn**	**03 09 41.6**	**+0.4**
SELS				*e*Sn	**Sb**	**03 10 08.9**	**-0.9**
SJES	**Sjenica**	**2.16**	**200**	*e*Pn	**Pn**	**03 09 42.8**	**+0.3**
PLE	**Pljevlja**	**2.28**	**211**⇓	*i*Pn	**Pn**	**03 09 44.7**	**+0.6**
PLE				*e*Sn	**Sb**	**03 10 14.9**	**-0.9**
CJR	**Cluj-Napoca**	**2.30**	**51**⇑	*i*P	**Pn**	**03 09 44.5**	**+0.2**
CJR				*i*S	**Sb**	**03 10 15.5**	**-0.9**
CJR	**Cluj-Napoca**	**2.30**	**51**⇑	*i*P	**Pn**	**03 09 44.5**	**+0.2**
ZAPS	**Zavoj**	**2.33**	**149**	*e*Pn	**Pn**	**03 09 45.5**	**+0.7**
ZAPS				*e*Sg	**Sg**	**03 10 20.4**	**-1.1**
MDB	**Medias**	**2.52**	**69**⇑	*i*P	**Pn**	**03 09 49.2**	**+2.0**
MDB	**Medias**	**2.52**	**69**⇑	*i*P	**Pn**	**03 09 49.2**	**+2.0**
BARS	**Barje**	**2.54**	**166**	*e*Pn	**Pn**	**03 09 47.1**	**-0.5**
BARS				*e*Sg	**Pb**	**03 09 50.2**	**-1.9**
BARS				*e*Sg	**Sg**	**03 10 28.3**	**+0.1**
IVA	**Berane**	**2.55**	**199**⇓	*i*Pn	**Pn**	**03 09 49.0**	**+1.2**
IVA				*e*Sn	**Sb**	**03 10 21.4**	**-2.1**
ARR	**Arges**	**2.56**	**87**⇑	*i*P	**Pb**	**03 09 50.2**	**-2.3**
ARR	**Arges**	**2.56**	**87**⇑	*i*P	**Pb**	**03 09 50.2**	**-2.3**
UPM	**Unac-Piva**	**2.58**	**217**⇓	*i*Pn	**Pn**	**03 09 49.3**	**+1.1**
UPM				*e*Sn	**Sb**	**03 10 21.8**	**-2.6**
KOME	**Kolasin**	**2.67**	**204**⇓	*i*Pn	**Pn**	**03 09 50.1**	**+0.7**
KOME				*e*Sn	**Sb**	**03 10 23.8**	**-3.1**
TIH	**Tihany**	**2.69**	**308**	EPn	**Pn**	**03 09 50.0**	**+0.3**
TIH				Sn	**Sn**	**03 10 24.0**	**+1.8**
PSZ	**Piszkesteto**	**2.74**	**344**⇑	*i*P	**Pn**	**03 09 50.3**	**0.0**
PSZ	**Piszkesteto**	**2.74**	**344**⇑	*i*P	**Pn**	**03 09 50.3**	**0.0**
PSZ	**Piszkesteto**	**2.74**	**344**	EPn	**Pn**	**03 09 51.0**	**+0.7**
PSZ				Sn	**Sn**	**03 10 25.1**	**+1.7**
PVY	**Plav**	**2.80**	**196**⇑	*i*Pn	**Pn**	**03 09 52.3**	**+1.0**
PVY				*e*Sn	**Sn**	**03 10 27.2**	**+2.2**
CSKK	**Cskako**	**2.81**	**318**	EPn	**Pn**	**03 09 51.0**	**-0.2**
CSKK				Sn	**Sn**	**03 10 26.0**	**+0.9**
VOIR		**2.86**	**86**⇑	*i*P	**Pn**	**03 09 54.2**	**+2.2**
VOIR		**2.86**	**86**⇑	*i*P	**Pn**	**03 09 54.2**	**+2.2**
NKY	**Niksic**	**2.87**	**211**⇑	*i*Pn	**Pn**	**03 09 53.8**	**+1.6**
NKY				*e*Sn	**Sn**	**03 10 29.1**	**+2.4**
NKME	**Niksic**	**2.92**	**211**⇓	*i*Pn	**Pn**	**03 09 54.3**	**+1.4**
NKME				*e*Sn	**Sn**	**03 10 29.8**	**+1.8**
BMR	**Baia Mare**	**2.94**	**35**⇑	*i*P	**Pn**	**03 09 54.9**	**+1.8**
BMR	**Baia Mare**	**2.94**	**35**⇑	*i*P	**Pn**	**03 09 54.9**	**+1.8**
BOSS	**Bosilegrad**	**2.99**	**159**	*e*Pn	**Pn**	**03 09 53.3**	**-0.5**
BOSS				*e*Sn	**Sn**	**03 10 30.4**	**+0.8**
TRPA	**Tarpa**	**3.03**	**20**	EPn	**Pn**	**03 09 54.0**	**-0.2**
TRPA				Sn	**Sn**	**03 10 32.0**	**+1.5**
VTS	**Vitosha**	**3.12**	**148**	*e*Pn	**Pn**	**03 09 56.3**	**+0.6**
VTS				*e*Sg	**Sg**	**03 10 46.4**	**-0.4**
VTS	**Vitosha**	**3.12**	**148**⇓	*i*P	**Pn**	**03 09 56.5**	**+0.8**
VTS	**Vitosha**	**3.12**	**148**⇓	*i*P	**Pn**	**03 09 56.5**	**+0.8**
TTG	**Podgorica**	**3.13**	**204**⇑	*i*Pn	**Pn**	**03 09 56.9**	**+1.3**
TTG				*e*Sn	**Sn**	**03 10 34.6**	**+1.7**
CEME	**Cevo**	**3.13**	**209**⇓	*i*Pn	**Pn**	**03 09 57.1**	**+1.4**
CEME				*e*Sn	**Sn**	**03 10 35.3**	**+2.2**
BEHE	**Becsehely**	**3.18**	**293**	EPn	**Pn**	**03 09 55.1**	**-1.2**
BEHE				Sn	**Sn**	**03 10 35.1**	**+0.9**
BUM	**Brajici-Budva**	**3.36**	**208**⇑	*i*Pn	**Pn**	**03 10 00.3**	**+1.4**
BUM				*e*Sn	**Sn**	**03 10 40.4**	**+1.7**
DRME	**Dracevica, Mon**	**3.37**	**204**⇑	*i*Pn	**Pn**	**03 10 00.4**	**+1.4**
DRME				*e*Sn	**Sn**	**03 10 40.8**	**+1.9**
HCY	**Herceg Novi**	**3.37**	**213**⇑	*i*Pn	**Pn**	**03 10 00.8**	**+1.8**
HCY				*e*Sn	**Sn**	**03 10 41.4**	**+2.4**
STON	**Ston**	**3.39**	**226**	*e*Pn	**Pn**	**03 10 00.4**	**+1.1**
STON				Sn	**Sn**	**03 10 41.2**	**+1.8**
MLR	**Muntele Rosu**	**3.49**	**85**⇓	*i*P	**Pn**	**03 10 01.6**	**+0.9**
MLR	**Muntele Rosu**	**3.49**	**85**⇓	*i*P	**Pn**	**03 10 01.6**	**+0.9**
VYHS	**Vyhne**	**3.53**	**336**	*e*PN	**Pn**	**03 10 01.7**	**+0.5**
VYHS				*e*SN	**Sn**	**03 10 40.8**	**-2.1**
ULC	**Ulcinj**	**3.56**	**202**⇑	*i*Pn	**Pn**	**03 10 02.9**	**+1.2**
ULC				*e*Sn	**Sn**	**03 10 45.1**	**+1.4**
STIP	**Stip**	**3.70**	**166**	*i* P	**Pn**	**03 10 03.2**	**-0.2**
BURAR	**Bucovina Array**	**3.73**	**50**⇑	*i*P	**Pn**	**03 10 05.8**	**+1.8**
BURAR	**Bucovina Array**	**3.73**	**50**⇑	*i*P	**Pn**	**03 10 05.8**	**+1.8**
KOLS	**Kolonicke sedl**	**3.75**	**13**	*e*PN	**Pn**	**03 10 05.0**	**+0.9**
KOLS				*e*PG	**Pg**	**03 10 18.5**	**+0.3**
UDBI	**Udbina**	**3.80**	**260**	Sn	**Sn**	**03 10 49.8**	**+0.3**
MODS	**Modra-Piesok**	**4.00**	**322**	*e*SN	**Sn**	**03 10 54.7**	**+0.1**
VRI	**Vrincioaia**	**4.06**	**80**⇑	*i*P	**Pn**	**03 10 10.0**	**+1.5**
VRI	**Vrincioaia**	**4.06**	**80**⇑	*i*P	**Pn**	**03 10 10.0**	**+1.5**
JAVC	**Velka Javorina**	**4.23**	**329**	*e*PN	**Pn**	**03 10 11.2**	**+0.3**
ARSA	**Arzberg**	**4.27**	**299**	*e*Pn	**Pn**	**03 10 13.6**	**+2.2**
	0.7nm,0.4s						
ARSA				Sn	**Sn**	**03 10 59.9**	**-1.3**
	1.0nm,0.3s						
SOKA	**Soboth**	**4.38**	**291**	*e*Pn	**Pn**	**03 10 15.4**	**+2.4**
	0.4nm,0.4s						
SOKA				*e*Sn	**Sn**	**03 11 03.3**	**-0.7**
	0.8nm,0.3s						
NVLJ	**Novalja**	**4.41**	**263**	Sn	**Sn**	**03 11 05.4**	**+0.8**
CONA	**Conrad Observa**	**4.42**	**309**	*e*Pn	**Pn**	**03 10 15.5**	**+2.1**
CONA				*e*Sn	**Sn**	**03 11 03.9**	**-0.9**
	1.6nm,0.5s						
KRUC	**Moravsky**	**4.91**	**322**	*e*PN	**Pn**	**03 10 19.9**	**-0.2**
VRAC	**Vranov**	**5.01**	**325**⇓	*i*P	**Pn**	**03 10 21.5**	**0.0**
VRAC	**Vranov**	**5.01**	**325**⇓	*i*P	**Pn**	**03 10 21.5**	**0.0**
VRAC	**Vranov**	**5.01**	**325**	*e*PN	**Pn**	**03 10 21.5**	**0.0**
MORC	**Moravsky Berou**	**5.06**	**334**	*e*PN	**Pn**	**03 10 22.7**	**+0.5**
MORC				*e*SG	**Sn**	**03 11 19.2**	**-1.4**
MOA	**Molln**	**5.30**	**301**	*e*Sn	**Sn**	**03 11 27.5**	**+0.9**
	0.9nm,0.3s						

*IDC **09** 03:12:41.6±0.6, 10°.56N×126°.61E, h0km, mb4.1/16, mb1 4.1/16, mb1mx3.9/58, mbtmp4.1/16, MS2.9/3, Ms1 2.9/3, ms1mx2.5/39, Error ellipse: s-maj=34.9km s-min=14.1km az=69.0*
*MAN **09** 03:12:43.8, 10°.91N×126°.88E, h31km, mb4.8, ML3.7, MS3.6*
*ISCJB **09** 03:12:44.0±2.2, 10°.86N±0°.04×126°.75E±0°.05, h18km±15km, mb4.4/29, MS2.6/1, Error ellipse: s-maj=8.2km s-min=6.6km az=10.7*
*NEIC **09** 03:12:46.5±1.1, 10°.51N×126°.75E, h35km, mb4.4/17, Error ellipse: s-maj=31.5km s-min=19.8km az=253.0*
ISC 09 03:12:44.7±2.7, 10°.82N±0°.04×126°.76E±0°.07, h17km±16km, n61, σ1.9 38/69, mb4.4/29, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.51**	**301**	*e*P	**Pn**	**03 13 09.6**	**-1.4**
SCPH	**Surigao**	**1.62**	**231**	*e*P	Pg	03 13 19.6	+3.7
SCPH				*e*S	**Sg**	**03 13 38.8**	**+1.8**
PLP	**Palo**	**1.78**	**281**	*e*P	**Pn**	**03 13 14.3**	**-0.4**
PLP				*e*S	**Sn**	**03 13 35.8**	**-1.1**
MSLP	**Maasin**	**1.99**	**250**	*e*P	**Pn**	**03 13 17.8**	**+0.3**
MSLP				*e*S	**Sb**	**03 13 43.9**	**-1.1**
BUTP	**Butuan**	**2.15**	**212**	*e*P	**Pn**	**03 13 19.2**	**-0.6**
BUTP				*e*S	**Sn**	**03 13 44.6**	**-1.5**
CNP	**Cataman**	**2.66**	**310**	*e*P	**Pn**	**03 13 26.2**	**-0.5**
CNP				*e*S	**Sn**	**03 13 56.8**	**-1.7**
LLP	**Lapu-Lapu**	**2.79**	**260**	*e*P	**Pb**	**03 13 32.0**	**-2.1**
LLP				*e*S	**Sn**	**03 14 04.0**	**+2.1**
BUKP	**Musuan**	**3.37**	**210**	*e*P	**Pn**	**03 13 37.9**	**+1.4**
BUKP				*e*S	**Sn**	**03 14 18.1**	**+2.0**
PVCP	**Virac**	**3.76**	**318**	*e*P	**Pn**	**03 13 40.9**	**-1.0**
PVCP				*e*S	**Sn**	**03 14 25.7**	**0.0**
SBUM	**Sibu**	**16.65**	**241**	*e*P	**P**	**03 16 42.9**	**+3.1**
	2.9nm,0.9s						
KAPI	**Kappang**	**17.21**	**204**	LR	LR	03 23 19.4	
	comp=Z,51nm,18.3s,baz=64,slow=38						
GUMO	**Guam**	**17.91**	**79**	LR	LR	03 23 22.1	
	comp=Z,33nm,19.9s,baz=97,slow=35						
ENH	**Enshi**	**25.16**	**323**	*e*P	**P**	**03 18 10.8**	**+1.6**
	12nm,1.0s						
CMAR	**Chiang Mai Arr**	**27.94**	**289**	LR	LR	03 29 21.2	
	comp=Z,16nm,19.1s,baz=215,slow=36						
WR1	**Warramunga Arr**	**31.46**	**166**	*e*P	**P**	**03 19 02.4**	**-3.2**
WR1				*e*PcP	**PcP**	**03 21 58.5**	**-0.2**
WRA	**Warramunga Arr**	**31.46**	**166**	P	**P**	**03 19 02.4**	**-3.2**
	132nm,0.3s,baz=352,slow=11,SNR=1.9						
WRA				PcP	**PcP**	**03 21 58.5**	**-0.2**
	130nm,0.3s,baz=4.3,slow=3.3,SNR=1.2						
AS31	**Alice Springs**	**34.98**	**169**	*e*P	**P**	**03 19 34.2**	**-2.0**
	0.9nm,0.8s						
AS31				*e*PcP	**PcP**	**03 22 07.8**	**-0.7**
ASAR	**Alice Springs**	**34.98**	**169**	P	**P**	**03 19 34.2**	**-2.0**
	0.9nm,0.7s,baz=350,slow=7.0,SNR=12						
ASAR				PcP	**PcP**	**03 22 07.8**	**-0.7**
	0.6nm,0.6s,baz=342,slow=3.1,SNR=9.0						
STKA	**Stephens Creek**	**44.77**	**162**	P	**P**	**03 20 54.8**	**-2.6**
	2.0nm,0.7s,baz=357,slow=8.9,SNR=5.0						
STKA	**Stephens Creek**	**44.77**	**162**	*e*P	**P**	**03 20 54.8**	**-2.6**
	11nm,2.0s						
PETK	**Petropavlovsk-**	**48.94**	**24**	P	**P**	**03 21 32.6**	**+2.7**
	2.7nm,0.8s,baz=204,slow=6.3,SNR=3.1						
PEA1	**Petropavlovsk-**	**48.95**	**24**	*e*P	**P**	**03 21 32.5**	**+2.6**
MK31	**Makanchi Array**	**51.89**	**322**	*e*P	**P**	**03 21 53.8**	**+1.5**
	4.3nm,0.9s						
MK32	**Makanchi Array**	**51.89**	**322**	*e*P	**P**	**03 21 53.5**	**+1.2**
MKAR	**Makanchi Array**	**51.89**	**322**	P	**P**	**03 21 53.5**	**+1.2**
	3.9nm,0.8s,baz=119,slow=8.1,SNR=28						
NRN	**Naryn**	**53.83**	**314**	*e*P	**P**	**03 22 08.3**	**+1.1**
	2.7nm,0.6s						
ZALV	**Zalesovo Beam**	**54.38**	**331**	P	**P**	**03 22 11.2**	**+0.7**
	1.5nm,0.7s,baz=120,slow=8.9,SNR=4.3						
ZAA1	**Zalesovo Array**	**54.38**	**331**	*e*P	**P**	**03 22 11.2**	**+0.6**
KURK	**Kurchatov**	**55.89**	**325**	*e*P	**P**	**03 22 22.3**	**+0.8**
	7.9nm,1.1s						
KURBB	**Kurchatov Arra**	**55.90**	**325**	P	**P**	**03 22 22.5**	**+0.9**
	3.3nm,0.5s,baz=124,slow=6.9,SNR=57						
GAR	**Garm**	**57.31**	**310**	*e*P	**P**	**03 22 32.5**	**+0.5**
	12nm,0.7s						
KK31	**Karatay Array**	**58.22**	**314**	*e*P	**P**	**03 22 38.5**	**+0.3**
	3.3nm,0.9s						
KKAR	**Karatay Array**	**58.22**	**314**	*e*P	**P**	**03 22 38.6**	**+0.5**
	3.3nm,0.9s						
BVAR	**Borovoye Array**	**61.49**	**325**	P	**P**	**03 23 01.4**	**+0.9**
	1.1nm,0.6s,baz=131,slow=8.2,SNR=9.6						
BRVK	**Borovoye**	**61.56**	**325**	*e*P	**P**	**03 23 01.6**	**+0.6**
	2.1nm,0.8s						
ABKAR	**Akbulak array**	**66.78**	**319**	*e*P	**P**	**03 23 35.4**	**+0.2**
	2.5nm,0.8s						
AKTO	**Aktyubinsk**	**68.22**	**320**	P	**P**	**03 23 44.9**	**+0.6**
	1.4nm,0.7s,baz=84,slow=8.7,SNR=5.8						
ARU	**Arti**	**69.04**	**326**	P	**P**	**03 23 49.3**	**0.0**
	0.9nm,0.5s,baz=176,slow=11,SNR=4.6						
ARU	**Arti**	**69.04**	**326**	*e*P	**P**	**03 23 49.3**	**0.0**
	2.6nm,0.6s						
INK	**Inuvik**	**83.60**	**22**	P	**P**	**03 25 12.6**	**+0.9**
	0.6nm,0.9s,baz=204,slow=1.3,SNR=2.8						
INK	**Inuvik**	**83.60**	**22**	*e*P	**P**	**03 25 12.6**	**+0.9**
	5.5nm,1.5s						
ARCES	**ARCESS Array B**	**83.85**	**340**	P	**P**	**03 25 13.7**	**+0.7**
	1.5nm,0.6s,baz=81,slow=7.7,SNR=6.4						
BR101	**Keskin Array S**	**85.56**	**309**	*e*P	**P**	**03 25 22.1**	**-0.4**
BR131	**Keskin Array S**	**85.56**	**309**	*e*P	**P**	**03 25 22.1**	**-0.4**
	1.4nm,0.8s						
BRTR	**Keskin Array B**	**85.56**	**309**	P	**P**	**03 25 22.1**	**-0.4**
	1.0nm,0.7s,baz=123,slow=3.4,SNR=8.7						
FIA0	**FINESS Array S**	**85.64**	**332**	*e*P	**P**	**03 25 22.5**	**+0.3**
FINES	**FINESS Array B**	**85.64**	**332**	P	**P**	**03 25 22.5**	**+0.3**
	1.2nm,0.4s,baz=74,slow=4.7,SNR=28						
AKASG	**Malin Array Be**	**86.45**	**321**	P	**P**	**03 25 26.5**	**+0.1**
	0.3nm,0.4s,baz=67,slow=3.5,SNR=5.5						
AKBB	**Malin Array Si**	**86.45**	**321**	*e*P	**P**	**03 25 26.5**	**+0.1**
BUR08	**Bucovina Ar. S**	**89.76**	**319**	*e*P	**P**	**03 25 42.8**	**+0.4**
	9.9nm,1.9s						
RES	**Resolute Bay**	**90.88**	**10**	P	**P**	**03 25 47.6**	**+0.6**
	1.6nm,1.0s,baz=304,slow=3.6,SNR=4.7						
RES	**Resolute Bay**	**90.88**	**10**	*e*P	**P**	**03 25 47.6**	**+0.6**
	19nm,2.0s						
NB200	**NORSAR Array S**	**92.48**	**334**	*e*P	**P**	**03 25 53.6**	**-1.1**
NOA	**NORSAR Array B**	**92.48**	**334**	P	**P**	**03 25 53.6**	**-1.1**
	0.6nm,0.8s,baz=60,slow=5.0,SNR=3.7						
YKA	**Yellowknife Ar**	**93.06**	**24**	P	**P**	**03 25 58.7**	**+1.4**
	0.2nm,0.3s,baz=307,slow=6.1,SNR=2.7						
YKB5	**Yellowknife Ar**	**93.06**	**24**	*e*P	**P**	**03 25 58.7**	**+1.4**
LTX	**Lajitas**	**117.11**	**49**	*e*PKPdf	**PKPdf**	**03 31 28.3**	**-1.4**
TXAR	**Lajitas Array**	**117.11**	**49**	PKP	**PKPdf**	**03 31 28.3**	**-1.4**
	0.1nm,0.4s,baz=1.4,slow=3.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**120.51**	**292**	PKP	**PKPdf**	**03 31 35.7**	**-0.7**
	0.3nm,0.8s,baz=82,slow=1.8,SNR=2.8						
TOA1	**Torodi Ar. Sit**	**120.51**	**292**	*e*PKPdf	**PKPdf**	**03 31 35.7**	**-0.7**
PLCA	**Paso Flores**	**146.51**	**156**	PKPbc	**PKPbc**	**03 32 25.8**	**+0.3**
	2.0nm,0.7s,baz=265,slow=6.4,SNR=4.7						

ATH 09 03:40:18.0, 38°.22N×22°.14E, h10km±1km, ML1.6/9, Error ellipse: s-maj=1.6km s-min=0.7km az=272.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG1	**Aigion**	**0.01**	**173**	P	Pg	03 40 19.7	-0.1
AIG1				S	Sg	03 40 21.0	+0.1
AIG3	**Aigion**	**0.04**	**320**	P	Pg	03 40 19.8	-0.1
AIG3				S	Sg	03 40 21.3	+0.1
AIG2	**Aigio**	**0.06**	**289**	P	Pg	03 40 19.6	-0.4
AIG2				S	Sg	03 40 20.8	-0.7
AIG4	**Aigion**	**0.06**	**301**	P	Pg	03 40 19.9	-0.2
AIG4				S	Sg	03 40 21.4	-0.1
LAKA	**Lakka**	**0.13**	**277**	P	Pg	03 40 21.7	+0.7
LAKA				S	Sg	03 40 23.7	+0.5
LAKA				AML	AML	03 40 23.8	
	comp=E,317μm,0.2s						
LAKA				AML	AML	03 40 23.9	
	comp=N,346μm,0.3s						
TRIZ	**Trizonia**	**0.15**	**340**	P	Pg	03 40 21.3	-0.1

*ISCJB **09** 04:31:47.8±0.3, 38°.76N±0°.01×27°.27E±0°.01, h13km±2km, mb3.4/3, MS2.3/1, Error ellipse: s-maj=1.9km s-min=1.8km az=40.3*
*ISK **09** 04:31:47.3, 38°.75N×27°.27E, h12km, ML3.7/48*
*ATH **09** 04:31:48.7, 38°.73N×27°.29E, h42km±5km, ML3.6/14, Error ellipse: s-maj=5.9km s-min=1.0km az=87.0*
*THE **09** 04:31:49.9, 38°.73N×27°.29E, h20km±2km, ML3.5/7, Error ellipse: s-maj=2.7km s-min=0.6km az=77.0*
ISC 09 04:31:48.1±0.9, 38°.74N±0°.02×27°.30E±0°.01, h12km±7km, n201, σ0°87/244, mb3.4/3, 14C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZEDA	**zmir-Bergama**	**0.28**	**323**	*i* P		**Pg**		**04 31 54.0**	**+0.1**
ZEDA				*i* S		**Sg**		**04 31 57.8**	**0.0**
BLCB	**Balcova**	**0.41**	**209**	PG		**Pg**		**04 31 55.9**	**-0.3**
BLCB				SG		**Sg**		**04 32 02.0**	**+0.4**
AKHS	**Akhisar**	**0.43**	**71**	*i* P		**Pb**		**04 31 57.5**	**0.0**
AKHS				*i* S		**Sb**		**04 32 04.5**	**+0.5**
AKHS				IAML_P					
	comp=Z,53μm,0.3s								
AKS	**Akhisar**	**0.43**	**71**	PG		**Pg**		**04 31 56.5**	**0.0**
FOCM	**Foa**	**0.44**	**266**	PG		**Pg**		**04 31 56.2**	**-0.6**
FOCM				SG		**Sg**		**04 32 02.0**	**-0.7**
GOMA	**Golmarmara-Man**	**0.49**	**94**	PG		**Pb**		**04 31 57.9**	**-0.7**
GOMA				SG		**Sb**		**04 32 06.1**	**+0.5**
URLA	**Izmir**	**0.67**	**235**	PG		**Pg**		**04 32 00.5**	**-0.6**
URLA	**Izmir**	**0.67**	**235**	*i* P		**Pg**		**04 32 00.9**	**-0.1**
URLA				*i* S		**Sb**		**04 32 11.1**	**+0.2**
URLA				IAML_P					
	comp=Z,41μm,0.3s								
STEP	**BALIKESIR_Sava**	**0.71**	**27**	*i* P		**Pb**		**04 32 02.6**	**+0.2**
STEP				*i* S		**Sb**		**04 32 12.8**	**+0.5**
STEP				IAML_P					
	comp=Z,62μm,0.1s								
AYVA	**Ayvalik**	**0.74**	**320**	*i* P		**Pb**		**04 32 03.0**	**+0.2**
AYVA				*i* S		**Sb**		**04 32 12.8**	**0.0**
AYVA				IAML_P					
	comp=Z,2μm,0.1s								
DGB	**zmir**	**0.76**	**205**	*i* P		**Pg**		**04 32 02.7**	**-0.1**
DGB				*i* S		**Sg**		**04 32 13.1**	**+0.3**
DGB				*i* S		**Sb**		**04 32 13.7**	**+0.2**
DGB				IAML_P					
	comp=Z,110μm,0.3s								
ZEY	**zmir**	**0.80**	**231**	*i* P		**Pg**		**04 32 03.3**	**-0.2**
ZEY				*i* S		**Sb**		**04 32 15.2**	**+0.6**
ZEY				IAML_P					
	comp=Z,42μm,0.3s								
AYDB	**Zeytinkoy-Aydi**	**0.92**	**149**	PG		**Pg**		**04 32 05.8**	**-0.1**
PRK	**Paraskevi**	**0.94**	**303**	P		**Pn**		**04 32 07.2**	**+0.1**
PRK				S		**Sn**		**04 32 20.6**	**+0.1**
PRK	**Paraskevi**	**0.94**	**303**	P		**Pn**		**04 32 07.1**	**0.0**
PRK				S		**Sn**		**04 32 20.2**	**-0.3**
PRK				AML		AML		04 32 23.0	
	comp=E,19229μm,0.5s								
PRK				AML		AML		04 32 24.7	
	comp=N,9474μm,0.5s								
BALB	**Balikesir**	**1.00**	**27**	PG		**Pg**		**04 32 06.9**	**-0.5**
CHOS	**Chios island**	**1.04**	**250**	PG		**Pg**		**04 32 07.9**	**-0.1**
CHOS	**Chios island**	**1.04**	**250**	P		**Pg**		**04 32 07.2**	**-0.8**
CHOS				S		**Sb**		**04 32 22.3**	**+0.8**
CHOS	**Chios island**	**1.04**	**250**	P		**Pg**		**04 32 07.9**	**-0.1**
CHOS				S		**Sg**		**04 32 21.5**	**0.0**
CHOS				AML		AML		04 32 24.9	
	comp=N,5446μm,0.3s								
CHOS				AML		AML		04 32 25.5	
	comp=E,12308μm,0.3s								
GCAM	**G?zelcaml?**	**1.04**	**183**	PG		**Pb**		**04 32 07.6**	**-0.4**
GCAM	**G?zelcaml?**	**1.04**	**183**	*i* P		**Pg**		**04 32 08.2**	**+0.1**
GCAM				*i* S		**Sn**		**04 32 22.6**	**-0.3**
KULA	**Kula-Manisa**	**1.09**	**102**	PN		**Pn**		**04 32 09.0**	**-0.3**
KULA	**Kula-Manisa**	**1.09**	**102**	P		**Pb**		**04 32 08.6**	**-0.3**
KULA				S		**Sn**		**04 32 23.7**	**-0.6**
SMG	**Samos**	**1.09**	**199**	P		**Pb**		**04 32 08.5**	**-0.4**
SMG				S		**Sb**		**04 32 23.3**	**+0.2**
SMG	**Samos**	**1.09**	**199**	P		**Pb**		**04 32 08.7**	**-0.2**
SMG				S		**Sb**		**04 32 23.0**	**-0.2**
SMG				AML		AML		04 32 28.3	
	comp=N,14026μm,0.4s								
SMG				AML		AML		04 32 29.6	
	comp=E,7954μm,0.6s								
GPNR	**Gulpinar-Canak**	**1.15**	**309**	PN		**Pb**		**04 32 09.8**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**1.16**	**330**	*i* P		**Pb**		**04 32 09.9**	**-0.1**
BAYC				*i* S		**Sn**		**04 32 26.0**	**+0.2**
BAYC				IAML_P					
	comp=Z,7μm,0.2s								
AYDN	**Tasoluk**	**1.17**	**157**	*i* P		**Pb**		**04 32 10.3**	**0.0**
AYDN				*i* S		**Sn**		**04 32 26.1**	**-0.2**
AYDN				IAML_P					
	comp=Z,7μm,0.2s								
SIGR	**SIGRI**	**1.22**	**293**	PN		**Pn**		**04 32 10.4**	**-0.5**
SIGR	**SIGRI**	**1.22**	**293**	P		**Pn**		**04 32 10.4**	**-0.5**
SIGR				S		**Sb**		**04 32 27.4**	**+0.7**
SIGR	**SIGRI**	**1.22**	**293**	P		**Pn**		**04 32 10.3**	**-0.5**
SIGR				S		**Sb**		**04 32 26.7**	**0.0**
SIGR				AML		AML		04 32 31.5	
	comp=N,2953μm,0.5s								
SIGR				AML		AML		04 32 34.1	
	comp=E,2992μm,0.6s								
DURS	**Dursunbey**	**1.25**	**47**	*i* P		**Pg**		**04 32 11.8**	**-0.4**
DURS				*i* S		**Sn**		**04 32 29.9**	**+1.5**
DURS				IAML_P					
	comp=Z,43μm,0.2s								
EZN	**Ezine**	**1.32**	**325**	PN		**Pn**		**04 32 12.6**	**+0.3**
EZN	**Ezine**	**1.32**	**325**	P		**Pb**		**04 32 12.7**	**0.0**
EZN				S		**Sb**		**04 32 28.9**	**-0.7**
EZN	**Ezine**	**1.32**	**325**	⇓*i* P		**Pn**		**04 32 12.5**	**+0.3**
GONE	**Gonen-Balikesi**	**1.34**	**13**	PN		**Pn**		**04 32 12.5**	**0.0**
USAK	**Uak-Merkez**	**1.35**	**91**	*i* P		**Pb**		**04 32 13.1**	**-0.2**
USAK				*i* S		**Sg**		**04 32 32.6**	**+1.2**
PSRA	**Psara**	**1.37**	**262**	P		**Pn**		**04 32 13.5**	**+0.5**
PSRA				S		**Sn**		**04 32 31.1**	**0.0**
PSRA				AML		AML		04 32 34.4	
	comp=E,9698μm,0.5s								
PSRA				AML		AML		04 32 36.9	
	comp=N,5577μm,0.3s								
BOZC	**Bozcaada**	**1.46**	**319**	PN		**Pn**		**04 32 14.2**	**-0.1**
BOZC	**Bozcaada**	**1.46**	**319**	*i* P		**Pb**		**04 32 15.0**	**-0.2**
BOZC				*i* S		**Sn**		**04 32 33.2**	**-0.1**
BOZC				IAML_P					
	comp=Z,4μm,0.2s								
MLSB	**Milas**	**1.49**	**165**	PN		**Pn**		**04 32 14.4**	**-0.3**
SHAP	**Saphane-Kutahy**	**1.53**	**79**	PN		**Pb**		**04 32 16.3**	**-0.1**
KNL	**Balıkesir**	**1.54**	**7**	*i* P		**Pn**		**04 32 15.6**	**+0.3**
KNL				*i* S		**Sb**		**04 32 35.8**	**-0.1**
KNL				IAML_P					
	comp=Z,13μm,0.2s								
KRBG	**Karabiga-Canak**	**1.65**	**0**	PN		**Pn**		**04 32 16.7**	**-0.1**
EDC	**Edincik**	**1.66**	**15**	PN		**Pn**		**04 32 16.6**	**-0.4**
GEDZ	**Gediz**	**1.68**	**79**	PN		**Pb**		**04 32 17.9**	**-1.0**
BODT	**Bodrum**	**1.68**	**180**	PN		**Pn**		**04 32 16.6**	**-0.7**
BODT	**Bodrum**	**1.68**	**180**	P		**Pn**		**04 32 17.0**	**-0.2**
BODT				S		**Sn**		**04 32 39.0**	**+0.3**
BDRM	**Kayabasi**	**1.68**	**176**	*i* P		**Pn**		**04 32 16.5**	**-0.7**
LPK	**Lapseki**	**1.68**	**346**	PN		**Pn**		**04 32 17.5**	**+0.2**
KCTX	**Karacabey (Bur**	**1.73**	**28**	PN		**Pn**		**04 32 17.4**	**-0.6**
GDZ	**Gediz**	**1.74**	**78**	*i* P		**Pb**		**04 32 19.1**	**-0.9**
GDZ				*i* S		**Sb**		**04 32 41.6**	**-0.3**
KHAL	**Karahalli**	**1.76**	**102**	*i* P		**Pb**		**04 32 19.4**	**-0.9**
KHAL				*i* S		**Sg**		**04 32 44.3**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.77**	**339**	PN		**Pn**		**04 32 18.8**	**+0.3**
YER	**Yerkesik**	**1.79**	**154**	PN		**Pn**		**04 32 18.9**	**+0.1**
YER	**Yerkesik**	**1.79**	**154**	P		**Pn**		**04 32 18.8**	**0.0**
YER				S		**Sn**		**04 32 40.3**	**-1.1**
ORLT	**Orhaneli**	**1.80**	**43**	PN		**Pn**		**04 32 19.3**	**+0.4**
GADA	**Gvkgeada**	**1.81**	**324**	PN		**Pn**		**04 32 19.6**	**+0.6**
GADA	**Gvkgeada**	**1.81**	**324**	P		**Pn**		**04 32 19.3**	**+0.3**
GADA				S		**Sn**		**04 32 41.9**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.94**	**357**	PN		**Pn**		**04 32 21.1**	**+0.1**
SART	**Tekirdag**	**1.95**	**357**	*i* P		**Pn**		**04 32 21.9**	**+0.9**
SART				*i* S		**Sn**		**04 32 45.3**	**-0.1**
ULDT	**Uludag**	**2.00**	**45**	*i* P		**Pn**		**04 32 22.3**	**+0.5**
LIA	**Limnos Island**	**2.00**	**306**	P		**Pn**		**04 32 21.8**	**+0.1**
LIA				S		**Sn**		**04 32 46.0**	**-0.7**
LIA	**Limnos Island**	**2.00**	**306**	P		**Pn**		**04 32 21.9**	**+0.2**
LIA				S		**Sn**		**04 32 46.1**	**-0.6**
LIA				AML		AML		04 32 47.9	
	comp=N,773μm,0.4s								
LIA				AML		AML		04 32 53.9	
	comp=E,974μm,0.6s								
ERIK	**Erikli-Kesan**	**2.02**	**343**	PN		**Pn**		**04 32 22.5**	**+0.6**
DAT	**Datca**	**2.02**	**174**	PN		**Pn**		**04 32 22.0**	**-0.1**
DAT	**Datca**	**2.02**	**174**	*i* P		**Pn**		**04 32 22.5**	**+0.4**
IGD	**Bursa**	**2.12**	**44**	*i* P		**Pn**		**04 32 23.5**	**+0.3**
IGD				*i* S		**Sn**		**04 32 49.7**	**+0.2**
KESN	**Edirne-Kesan**	**2.13**	**347**	*i* P		**Pn**		**04 32 24.9**	**+1.0**
TURN	**Turunc**	**2.13**	**151**	PN		**Pn**		**04 32 22.9**	**-0.6**
TURN	**Turunc**	**2.13**	**151**	*i* P		**Pn**		**04 32 23.2**	**-0.3**
ENEZ	**Enez**	**2.18**	**336**	PN		**Pn**		**04 32 24.8**	**+0.7**
APE	**Apeiranthos**	**2.18**	**220**	P		**Pn**		**04 32 23.0**	**-1.1**
APE				AML		AML		04 33 05.5	
	comp=N,441μm,0.3s								
APE				AML		AML		04 33 08.2	
	comp=E,486μm,0.6s								
ARMT	**Armutlu**	**2.19**	**33**	PN		**Pn**		**04 32 23.9**	**-0.3**
SMTH	**Samothraki Isl**	**2.20**	**322**	P		**Pn**		**04 32 24.8**	**+0.4**
SMTH				S		**Sn**		**04 32 51.1**	**-0.5**
SMTH	**Samothraki Isl**	**2.20**	**322**	P		**Pn**		**04 32 24.5**	**+0.1**
SMTH				AML		AML		04 33 03.8	
	comp=E,620μm,0.6s								
SMTH				AML		AML		04 33 05.3	
	comp=N,537μm,0.5s								
DALY	**Dalyan (Mula)**	**2.20**	**150**	PN		**Pn**		**04 32 24.8**	**+0.4**
DALY	**Dalyan (Mula)**	**2.20**	**150**	*i* P		**Pn**		**04 32 25.8**	**+1.4**
AMGA	**Amorgos Island**	**2.21**	**211**	P		**Pn**		**04 32 24.8**	**+0.2**
AMGA				AML		AML		04 33 02.3	
	comp=N,1444μm,0.4s								
AMGA				AML		AML		04 33 06.9	
	comp=E,1717μm,0.6s								
GEMT	**Gemlik**	**2.23**	**40**	PN		**Pn**		**04 32 24.9**	**0.0**
AFYO	**Afyonkarahisar**	**2.35**	**88**	*i* P		**Pb**		**04 32 29.0**	**-1.4**
ALN	**Alexandroupoli**	**2.36**	**336**	PN		**Pn**		**04 32 26.9**	**+0.3**
ALN	**Alexandroupoli**	**2.36**	**336**	P		**Pn**		**04 32 26.9**	**+0.3**
ALN				S		**Sn**		**04 32 56.2**	**+0.8**
ALN	**Alexandroupoli**	**2.36**	**336**	P		**Pn**		**04 32 26.8**	**+0.3**
ALN				S		**Sn**		**04 32 54.3**	**-1.1**
ALN				AML		AML		04 33 08.8	
	comp=E,1064μm,0.7s								
ALN				AML		AML		04 33 09.7	
	comp=N,1332μm,0.6s								
CRLT	**Corlu**	**2.41**	**8**	PN		**Pn**		**04 32 27.8**	**+0.5**
BRDR	**BURDUR-Merkez**	**2.42**	**115**	*i* P		**Pn**		**04 32 27.1**	**-0.4**
YLV	**Yalova**	**2.43**	**41**	PN		**Pn**		**04 32 27.6**	**-0.1**
YLV	**Yalova**	**2.43**	**41**	⇑*i* P		**Pn**		**04 32 27.5**	**-0.1**
YLV	**Yalova**	**2.43**	**41**	S		**Sn**		**04 32 57.3**	**+0.1**
BUY	**Buyukada**	**2.53**	**33**	PN		**Pn**		**04 32 28.4**	**-0.6**
BUY	**Buyukada**	**2.53**	**33**	*i* P		**Pn**		**04 32 28.5**	**-0.4**
ADVT	**Abdulvahap**	**2.53**	**47**	PN		**Pn**		**04 32 28.9**	**-0.1**
FETY	**Fethiye**	**2.54**	**145**	PN		**Pn**		**04 32 29.9**	**+0.8**
FETY	**Fethiye**	**2.54**	**145**	P		**Pn**		**04 32 29.3**	**+0.2**
FETY	**Fethiye**	**2.54**	**145**	*i* P		**Pn**		**04 32 30.7**	**+1.6**
SHUT	**Suhut-Afyon**	**2.56**	**93**	PN		**Pn**		**04 32 30.9**	**+1.5**
IOSP	**Ios island**	**2.57**	**219**	P		**Pn**		**04 32 28.2**	**-1.3**
IOSP	**Ios island**	**2.57**	**219**	P		**Pn**		**04 32 28.2**	**-1.3**
IOSP				AML		AML		04 33 13.2	
	comp=E,1237μm,0.5s								
IOSP				AML		AML		04 33 20.2	
	comp=N,968μm,0.6s								
AUKIR	**Kırka- Seyitga**	**2.58**	**77**	*i* P		**Pg**		**04 32 37.3**	**-0.1**
ARG	**Arkhangelos**	**2.61**	**165**	PN		**Pn**		**04 32 31.3**	**+1.3**
ARG	**Arkhangelos**	**2.61**	**165**	P		**Pn**		**04 32 31.0**	**+1.0**
ARG				AML		AML		04 33 15.1	
	comp=E,644μm,0.7s								
ARG				AML		AML		04 33 23.2	
	comp=N,933μm,0.9s								
EREA	**Eretria**	**2.66**	**264**	P		**Pn**		**04 32 29.6**	**-1.1**
CTKS	**Kestanelik-??a**	**2.66**	**20**	PN		**Pn**		**04 32 30.7**	**0.0**
ANAF	**Anafi Island**	**2.67**	**207**	P		**Pn**		**04 32 32.1**	**+1.2**
ANAF				AML		AML		04 33 18.2	
	comp=N,2330μm,0.6s								
ANAF				AML		AML		04 33 18.8	
	comp=E,2533μm,0.4s								
BGKT	**Bogazkoy**	**2.69**	**25**	PN		**Pn**		**04 32 31.5**	**+0.4**
ISK	**Istanbul-Kandi**	**2.69**	**30**	PN		**Pn**		**04 32 30.5**	**-0.6**
ISK	**Istanbul-Kandi**	**2.69**	**30**	P		**Pn**		**04 32 30.6**	**-0.6**
ISK				S		**Sn**		**04 33 03.5**	**-0.1**
BORA	**Eskisehir**	**2.70**	**64**	*i* P		**Pn**		**04 32 31.7**	**+0.3**
DION	**Dionisos Attik**	**2.72**	**257**	P		**Pn**		**04 32 31.5**	**-0.1**
DION	**Dionisos Attik**	**2.72**	**257**	P		**Pn**		**04 32 31.1**	**-0.6**
DION				AML		AML		04 33 26.5	
	comp=E,311μm,0.7s								
DION				AML		AML		04 33 29.7	
	comp=N,244μm,0.8s								
THAS	**Thassos island**	**2.72**	**314**	P		**Pn**		**04 32 31.6**	**0.0**
RDO	**Rodhopi**	**2.75**	**331**	P		**Pn**		**04 32 32.6**	**+0.6**
SANT	**Santorini**	**2.78**	**212**	⇓*i* P		**Pb**		**04 32 38.4**	**+0.7**
SANT	**Santorini**	**2.78**	**212**	S		**Sb**		**04 33 13.4**	**+1.6**
PTL	**Penteli**	**2.78**	**257**	P		**Pn**		**04 32 31.9**	**-0.5**
CTYL	**Yalikoy Yolu**	**2.83**	**15**	⇑*i* P		**Pn**		**04 32 33.0**	**-0.1**
CTYL	**Yalikoy Yolu**	**2.83**	**15**	S		**Sn**		**04 33 06.0**	**-1.1**
KLYT	**Kilyos**	**2.84**	**28**	PN		**Pn**		**04 32 33.1**	**-0.1**
KLYT	**Kilyos**	**2.84**	**28**	⇑*i* P		**Pn**		**04 32 33.2**	**0.0**
KLYT	**Kilyos**	**2.84**	**28**	S		**Sn**		**04 33 04.0**	**-3.4**
BAGO	**Egridir - ISPA**	**2.85**	**104**	*i* P		**Pn**		**04 32 33.7**	**+0.4**
BOLV	**Bolvadin**	**2.86**	**89**	*i* P		**Pn**		**04 32 35.3**	**+1.7**
ELL	**Elmali**	**2.87**	**133**	PN		**Pn**		**04 32 35.9**	**+2.1**
SRCK	**Saricakaya, Es**	**2.89**	**62**	*i* P		**Pn**		**04 32 34.1**	**+0.2**
PHSR	**Pinarhisar**	**2.89**	**3**	⇓*i* P		**Pn**		**04 32 33.6**	**-0.3**
PHSR	**Pinarhisar**	**2.89**	**3**	S		**Sn**		**04 33 07.3**	**-1.3**
VLY	**Voula,Athens**	**2.90**	**253**	P		**Pn**		**04 32 34.2**	**+0.2**
BCK	**Bucak**	**2.90**	**115**	PN		**Pn**		**04 32 35.3**	**+1.2**
GEYV	**SAKARYA_Geyve**	**2.90**	**52**	*i* P		**Pn**		**04 32 34.8**	**+0.8**
MRKA	**Markates**	**2.90**	**270**	P		**Pn**		**04 32 34.2**	**+0.2**
KORT	**Korkueli**	**2.98**	**125**	PN		**Pn**		**04 32 36.7**	**+1.5**
KORT	**Korkueli**	**2.98**	**125**	*i* P		**Pn**		**04 32 37.4**	**+2.2**
CIFT	**Cifteler, Eski**	**3.00**	**77**	*i* P		**Pg**		**04 32 44.6**	**-0.8**
GULT	**Gulveren**	**3.00**	**55**	PN		**Pn**		**04 32 36.1**	**+0.5**
SILT	**Sile**	**3.01**	**36**	⇑*i* P		**Pn**		**04 32 35.6**	**+0.1**
SILT	**Sile**	**3.01**	**36**	S		**Sn**		**04 33 10.8**	**-0.7**
OUR	**Ouranopolis**	**3.02**	**303**	P		**Pn**		**04 32 35.6**	**0.0**
KIRK	**Kırklareli**	**3.04**	**357**	*i* P		**Pn**		**04 32 35.6**	**-0.4**
AKAS	**Kas**	**3.11**	**143**	*i* P		**Pb**		**04 32 42.1**	**-1.3**
KAVA	**Kavala**	**3.11**	**317**	P		**Pn**		**04 32 37.2**	**+0.3**
KARP	**Karpathos**	**3.19**	**182**	P		**Pn**		**04 32 38.0**	**-0.1**
VIL2	**Platees**	**3.21**	**262**	P		**Pn**		**04 32 38.6**	**+0.4**
KAND	**Kocaeli-Kandir**	**3.24**	**43**	*i* P		**Pn**		**04 32 39.2**	**+0.5**
XOR	**Xorichti**	**3.26**	**282**	P		**Pn**		**04 32 39.0**	**0.0**
AUSIV	**SIVRIHISAR**	**3.37**	**77**	*i* P		**Pn**		**04 32 42.4**	**+1.7**
BTAS	**Tasketsi**	**3.39**	**56**	*i* P		**Pg**		**04 32 50.4**	**-2.6**
DID	**Didima**	**3.43**	**250**	P		**Pn**		**04 32 41.3**	**0.0**
AUMIH	**MIHALICIK**	**3.44**	**70**	*i* P		**Pg**		**04 32 53.2**	**-0.7**
SAHE	**Sakarya_HENDEK**	**3.46**	**51**	*i* P		**Pn**		**04 32 43.0**	**+1.2**
LTK	**Loutraki**	**3.48**	**259**	P		**Pn**		**04 32 42.5**	**+0.5**
NVR	**Nevrokopi**	**3.71**	**316**	P		**Pn**		**04 32 45.2**	**+0.1**
SRS	**Serrai**	**3.71**	**311**	P		**Pn**		**04 32 45.9**	**+0.7**
ZKR	**Zakros**	**3.72**	**194**	P		**Pn**		**04 32 45.9**	**+0.6**
NPS	**Neapolis**	**3.73**	**202**	P		**Pn**		**04 32 45.1**	**-0.3**
KDHN	**Kadinhani**	**3.78**	**92**	*i* P		**Pn**		**04 32 48.7**	**+2.4**
LAST	**Lasithi**	**3.86**	**203**	P		**Pn**		**04 32 47.1**	**-0.2**
KEPZ	**Antalya-Kepez**	**3.87**	**117**	*i* P		**Pn**		**04 32 49.7**	**+2.2**
KIBS	**BOLU**	**3.90**	**63**	*i* P		**Pg**		**04 33 03.4**	**+0.6**
IDI	**Anoyia**	**3.95**	**210**	Pn		**Pn**		**04 32 48.3**	**-0.2**
	comp=N,0.7nm,0.3s,baz=31,slow=14,SNR=7.2								
IDI				Sn		**Sn**		**04 33 32.5**	**-2.3**
	comp=N,2.0nm,0.3s,baz=315,slow=19,SNR=6.6								
IDI				Lg		Lg		04 33 51.0	
	comp=N,0.9nm,0.3s,baz=306,slow=19,SNR=2.5								
IDI				LR		LR		04 34 34.8	
	comp=N,123nm,18.0s,baz=66,slow=43								
GUR	**Goura**	**3.98**	**260**	P		**Pn**		**04 32 49.2**	**+0.2**
VLI	**Veliai**	**4.00**	**241**	P		**Pn**		**04 32 48.9**	**-0.3**
KALE	**Kalithea**	**4.06**	**267**	P		**Pn**		**04 32 51.1**	**+1.1**
KONT	**Konya--Tatoy**	**4.06**	**100**	*i* P		**Pn**		**04 32 52.2**	**+2.2**
KLV	**Kalavryta, Ach**	**4.10**	**262**	P		**Pn**		**04 32 51.2**	**+0.5**
KMER	**Konya-Meram**	**4.11**	**102**	*i* P		**Pn**		**04 32 53.6**	**+2.8**
KNT	**Kendrikon**	**4.16**	**307**	P		**Pn**		**04 32 52.5**	**+1.2**
ANX	**Ano Chora**	**4.21**	**270**	P		**Pn**		**04 32 52.8**	**+0.7**
KKUL	**Konya-Kulu**	**4.40**	**83**	*i* P		**Pg**		**04 33 11.9**	**-0.5**
ANTO	**Ankara**	**4.41**	**74**	⇑*i* P		**Pn**		**04 32 57.6**	**+2.7**
VAY	**Valandovo**	**4.45**	**307**	*i* Pn		**Pg**		**04 33 12.4**	**-0.8**
BBAL	**Bala**	**4.60**	**78**	*i* P		**Pg**		**04 33 17.5**	**+1.3**
STIP	**Stip**	**4.90**	**309**	*i* Pn		**Pn**		**04 33 01.3**	**-0.2**
VTS	**Vitosha**	**4.95**	**323**	⇑*i* P		**Pn**		**04 33 03.2**	**+0.8**
VTS	**Vitosha**	**4.95**	**323**	S		**Sn**		**04 33 57.8**	**-1.8**
BRTR	**Keskin Array B**	**5.02**	**77**	Pn		**Pn**		**04 33 04.3**	**+1.0**
	comp=N,1.6nm,0.3s,baz=256,slow=12,SNR=64								
BRTR				Pg		**Pg**		**04 33 24.4**	**+0.1**
	comp=N,1.0nm,0.3s,baz=253,slow=15,SNR=23								
BRTR				Sn		**Sn**		**04 34 00.6**	**-0.8**
	comp=N,1.9nm,0.3s,baz=252,slow=23,SNR=11								
BRTR				Lg		Lg		04 34 29.9	
	comp=N,0.4nm,0.3s,baz=259,slow=25,SNR=12								
ELDT	**Eldivan**	**5.04**	**68**	*i* P		**Pg**		**04 33 23.8**	**-0.8**
KIRS	**Kırehir-Merke**	**5.18**	**84**	*i* P		**Pn**		**04 33 08.5**	**+3.1**
DELI	**KIRIKKALE**	**5.28**	**74**	*i* P		**Pn**		**04 33 08.5**	**+1.6**
ILGA	**Ilgaz**	**5.45**	**63**	*i* P		**Pg**		**04 33 29.9**	**-2.5**
CDAG	**Cicekdag**	**5.57**	**79**	*i* P		**Pn**		**04 33 13.1**	**+2.2**
TIRR	**Tirgusor**	**5.77**	**8**	⇑*i* P		**Pn**		**04 33 14.0**	**+0.5**
TLB	**Topalu**	**5.87**	**5**	⇓*i* P		**Pn**		**04 33 14.2**	**-0.5**
CFR	**Carcaliu**	**6.46**	**5**	⇑*i* P		**Pn**		**04 33 22.9**	**0.0**
MLR	**Muntele Rosu**	**6.82**	**352**	Pn		**Pn**		**04 33 27.6**	**-0.4**
	comp=N,0.1nm,0.3s,baz=217,slow=11,SNR=8.3								
MLR				Sn		**Sn**		**04 34 45.8**	**+0.3**
	comp=N,0.2nm,0.3s,baz=284,slow=19,SNR=2.2								
MLR				Lg		Lg		04 35 26.4	
	comp=N,0.3nm,0.3s,baz=252,slow=12,SNR=3.2								
MLR	**Muntele Rosu**	**6.82**	**352**	⇑*i* P		**Pn**		**04 33 28.1**	**+0.1**
VOIR		**6.89**	**347**	⇑*i* P		**Pn**		**04 33 29.7**	**+0.7**
ARR	**Arges**	**6.91**	**344**	⇑*i* P		**Pn**		**04 33 29.7**	**+0.5**
VRI	**Vrincioaia**	**7.13**	**357**	⇑*i* P		**Pn**		**04 33 32.9**	**+0.7**
MDVR	**Moldovita**	**7.33**	**327**	⇑*i* P		**Pn**		**04 33 35.8**	**+0.8**
SEVA	**Sevastopol**	**7.50**	**38**	⇓*i* P		**Pn**		**04 33 38.0**	**+0.8**
TESR	**Tescani**	**7.78**	**357**	⇑*i* P		**Pn**		**04 33 41.5**	**+0.5**
BZS	**Buzias**	**8.06**	**330**	⇓*i* P		**Pn**		**04 33 45.0**	**+0.1**
BIZ	**Bicaz**	**8.24**	**354**	⇓*i* P		**Pn**		**04 33 48.0**	**+0.6**
DRGR		**8.72**	**339**	⇓*i* P		**Pn**		**04 33 54.3**	**+0.3**
BURAR	**Bucovina Array**	**9.00**	**351**	⇓*i* P		**Pn**		**04 33 59.0**	**+1.2**
VRAC	**Vranov**	**13.06**	**327**	LR		LR		04 40 45.9	
	comp=N,30nm,19.0s,baz=112,slow=41								
GNI	**Garni**	**13.56**	**79**	LR		LR		04 39 48.6	
	comp=N,23nm,21.9s,baz

TBG			eS	Sb	05 12 04.2	+0.1
TDBA	**Terre de Bas,**	**1.16 175**	eP	Pn	05 11 48.6	+0.8
SEUS	**St. Eustatius**	**1.28 292**	ePn	Pn	05 11 49.7	+0.3
SEUS			eSn	Sb	05 12 07.0	-0.7
SEUS	**St. Eustatius**	**1.28 292**	eP	Pn	05 11 50.5	+1.1
SEUS			eS	Sn	05 12 06.7	+1.3
MDPO	**Dominica; Chan**	**1.45 169**	eP	Pn	05 11 52.6	+0.8
MDPO			eS	Sn	05 12 11.3	+1.6
DWS	**Wesley**	**1.49 164**	eP	Pn	05 11 52.7	+0.3
DWS			eS	Sb	05 12 12.6	-1.0
BBL	**Barber's Block**	**1.50 170**	eP	Pn	05 11 53.3	+0.8
BBL			eS	Sb	05 12 12.9	-0.9
SMRT	**St. Maarten**	**1.64 309**	ePn	Pn	05 11 55.0	+0.6
SMRT	**St. Maarten**	**1.64 309** ⇑	P	Pn	05 11 54.8	+0.3
SMRT			eS	Sn	05 12 15.6	+1.2
MDN	**Morne-Daniel**	**1.71 169**	eP	Pn	05 11 56.1	+0.6
MDN			eS	Sn	05 12 18.1	+1.9
DLPL	**La Plaine**	**1.73 164**	eP	Pn	05 11 56.8	+1.1
DLPL			eS	Sn	05 12 17.7	+1.0
DBCT	**Belle View Cho**	**1.77 168**	eP	Pn	05 11 57.1	+0.8
DBCT			eS	Sn	05 12 19.1	+1.4
DPMT	**Pointe Michel**	**1.77 169**	eP	Pn	05 11 56.4	+0.2
DPMT			eS	Sn	05 12 19.2	+1.6
DSTT	**Stowe**	**1.80 167**	eS	Sn	05 12 19.6	+1.3
DSHT	**Scott's Head**	**1.82 169**	eP	Pn	05 11 57.6	+0.7
DSHT			eS	Sn	05 12 20.9	+2.1
PCM	**Pelee Case Pet**	**2.24 167**	eP	Pn	05 12 03.5	+0.8
CXM	**Morne La Croix**	**2.25 166**	eP	Pn	05 12 04.1	+1.1
BAMF	**Morne Balai**	**2.25 165**	eP	Pn	05 12 04.0	+1.0
GBMF	**Grand Be**	**2.27 166**	eP	Pn	05 12 04.1	+1.0
PML	**Morne Lenard**	**2.28 166**	eP	Pn	05 12 04.4	+1.1
FDF	**Fort de France**	**2.33 166**	ePn	Pn	05 12 04.5	+0.5
FDF	**Fort de France**	**2.33 166**	eP	Pn	05 12 04.8	+0.8
FDF			eS	Sn	05 12 32.1	+0.5
ILAM	**Ilet Lapin Mar**	**2.37 159**	eP	Pn	05 12 04.8	+0.4
ZAM	**Aeronautique**	**2.52 164**	eP	Pn	05 12 07.0	+0.6
LPMF	**Morne Lapointe**	**2.53 163**	eP	Pn	05 12 06.7	0.0
TRMF	**Trois Ilets**	**2.55 165**	eP	Pn	05 12 08.0	+1.1
BIM	**Bigot**	**2.56 165**	eP	Pn	05 12 08.3	+1.2
MVM	**Montagne Vaucl**	**2.57 161**	eP	Pn	05 12 07.8	+0.5
MPOM	**Morne Pois Mar**	**2.69 161**	eP	Pn	05 12 09.3	+0.5
H05S1	**Guadeloupe/Mar**	**2.71 161**	P	Pn	05 12 10.8	+1.6
	SNR=586					
H05S1			S	Sn	05 12 40.8	-0.1
CDVI	**St. Croix**	**2.98 285**	ePn	Pn	05 12 13.4	+0.5
SLBI	**Saint Lucia, B**	**3.06 166**	eP	Pn	05 12 15.2	+1.2
SLBI			eS	Sn	05 12 49.9	+0.5
SLW	**Petit Monier**	**3.07 165**	eP	Pn	05 12 15.2	+1.0
SLW			eS	Sn	05 12 50.4	+0.6
SLB	**Belfond**	**3.23 168**	eP	Pn	05 12 17.7	+1.2
SLB			eS	Sn	05 12 54.6	+0.8
SLPA	**Patience**	**3.23 166**	eP	Pn	05 12 17.6	+1.2
SLPA			eS	Sn	05 12 54.7	+0.9
SLDE	**Delcer**	**3.25 168**	eP	Pn	05 12 17.4	+0.7
SLDE			eS	Sn	05 12 55.6	+1.3
STVI	**Saint Thomas**	**3.34 294**	ePn	Pn	05 12 18.6	+0.7
STVI			eSn	Sn	05 13 00.0	+3.6
MCLT	**Moule a Chique**	**3.37 167**	eP	Pn	05 12 19.6	+1.4
MCLT			eS	Sn	05 12 58.4	+1.3
CUPR	**Culebra, Puert**	**3.62 291**	ePn	Pn	05 12 22.8	+1.2
SSV	**Crater Summit**	**3.70 172**	eP	Pn	05 12 24.5	+1.7
SVV	**Soufriere Volc**	**3.70 172**	eP	Pn	05 12 24.3	+1.4
SVB	**Belmont**	**3.75 173**	ePn	Pn	05 12 24.2	+0.8
SVB	**Belmont**	**3.75 173**	eP	Pn	05 12 24.7	+1.3
SVB			eS	Sn	05 13 06.5	+0.1
SVCV	**St. Vincent, C**	**3.76 171**	eP	Pn	05 12 24.9	+1.3
MTP	**Monte Pirata**	**3.79 287**	ePn	Pn	05 12 25.3	+1.3
HUMP	**Col San Antoni**	**4.08 287**	ePn	Pn	05 12 29.3	+1.4
CBYP	**Canovanas**	**4.12 288**	ePn	Pn	05 12 30.6	+2.0
SJG	**San Juan**	**4.35 285**	P	Pn	05 12 32.8	+1.2
	21nm,0.3s,baz=106,slow=15,SNR=43					
SJG			S	Sn	05 13 19.8	-1.4
	baz=253,slow=22,SNR=1.6					
SJG			LR	LR	05 14 33.4	
	comp=Z,129nm,18.4s,baz=86,slow=43					
SJG	**San Juan**	**4.35 285**	ePn	Pn	05 12 32.5	+0.9
BCHC	**Barbados, Cave**	**4.36 152**	eP	Pn	05 12 33.0	+1.2
BBGH	**Gun Hill**	**4.38 151**	eP	Pn	05 12 35.0	+2.9
BBGH	**Gun Hill**	**4.38 151**	eS	Sn	05 13 22.6	+0.5
BBSP	**Saint Philip**	**4.46 150**	eP	Pn	05 12 35.7	+2.4
ICMP	**Isla Caja de M**	**4.65 282**	ePn	Pn	05 12 36.6	+0.8
GRSS	**Sisters**	**4.69 178**	eP	Pn	05 12 38.5	+2.2
OBIP	**Obispado Ponce**	**4.76 283**	ePn	Pn	05 12 38.3	+1.0
GRHS	**Sauteurs**	**4.76 179**	eP	Pn	05 12 39.2	+1.8
EMPR	**Esperanza - Ma**	**4.79 288**	ePn	Pn	05 12 39.7	+1.9
GRGR	**Grenville**	**4.85 179**	ePn	Pn	05 12 39.4	+0.8
AOPR	**Arecibo Observ**	**4.96 286**	ePn	Pn	05 12 42.0	+1.9
CRPR	**Cabo Rojo, PR**	**5.22 282**	ePn	Pn	05 12 44.4	+0.7
MPR	**Mayaguez**	**5.29 284**	ePn	Pn	05 12 45.9	+1.3
AGP	**Aguadilla**	**5.33 286**	ePn	Pn	05 12 45.8	+0.5
TOSP	**Speyside**	**5.80 168**	eP	Pn	05 12 53.4	+1.8
SDD	**Santo Domingo**	**7.92 282**	ePn	Pn	05 13 21.3	+0.6
MDP	**Montagnes des**	**14.81 142**	P	Pn	05 14 53.5	-1.6
	0.2nm,0.3s,baz=360,slow=18,SNR=2.7					
MDP			S	Sn	05 17 19.0	-19
	0.1nm,0.3s,baz=54,slow=19,SNR=2.9					
MDP			LR	LR	05 20 41.2	
	comp=Z,28nm,20.0s,baz=144,slow=37					
PTGA	**Pitinga**	**17.71 174**	P	Pn	05 15 30.8	-1.3
	baz=320,slow=19,SNR=3.4					
PTGA	**Pitinga**	**17.71 174**	ePn	P	05 15 33.0	+0.2
ATAH	**Atahualpa**	**29.10 216**	LR	LR	05 30 54.5	
	comp=Z,24nm,20.7s,baz=24,slow=40					
SIV	**San Ignacio**	**32.80 179**	P	P	05 17 57.2	-1.1
	0.3nm,0.6s,baz=321,slow=13,SNR=3.0					
LTX	**Lajitas**	**40.25 295**	eP	P	05 19 00.1	-1.8
TXAR	**Lajitas Array**	**40.25 295**	P	P	05 19 00.1	-1.8
	0.1nm,0.3s,baz=125,slow=7.9,SNR=3.2					
PD31	**Pinedale Array**	**47.95 313**	eP	P	05 20 03.4	-0.3
	8.4nm,1.9s					
PDAR	**Pinedale Array**	**47.95 313**	P	P	05 20 02.7	-0.9
	0.3nm,0.5s,baz=129,slow=8.2,SNR=3.5					
H10N3	**ASCENSION HYDR**	**52.83 114**	T	T	06 17 28.0	
	baz=299,slow=75					
H10N2	**ASCENSION HYDR**	**52.83 114**	T	T	06 17 29.6	
	baz=299,slow=75					
H10N1	**ASCENSION HYDR**	**52.85 114**	T	T	06 17 29.6	
	baz=299,slow=75					
H10S3	**ASCENSION HYDR**	**53.21 115**	T	T	06 17 58.5	
	baz=299,slow=75,SNR=138					
H10S1	**ASCENSION HYDR**	**53.22 115**	T	T	06 17 58.8	
	baz=299,slow=75,SNR=202					
H10S2	**ASCENSION HYDR**	**53.23 115**	T	T	06 17 59.4	
	baz=299,slow=75,SNR=133					
DBIC	**Dimbokro**	**56.44 93**	P	P	05 21 07.7	+0.8
	1.4nm,0.5s,baz=282,slow=7.6,SNR=3.6					
DBIC	**Dimbokro**	**56.44 93**	eP	P	05 21 07.8	+1.0
	31nm,1.5s					
YKA	**Yellowknife Ar**	**58.29 334**	P	P	05 21 18.7	-0.4
	0.6nm,0.6s,baz=106,slow=7.3,SNR=6.2					
YKB5	**Yellowknife Ar**	**58.29 334**	eP	P	05 21 18.7	-0.4
TOA1	**Torodi Ar. Sit**	**61.14 84**	eP	P	05 21 39.6	0.0
TORD	**Torodi Ar. Bea**	**61.15 84**	P	P	05 21 39.6	0.0
	0.6nm,0.9s,baz=285,slow=8.0,SNR=3.4					
FIA0	**FINESS Array S**	**74.19 30**	eP	P	05 23 02.3	+1.2
FINES	**FINESS Array B**	**74.19 30**	P	P	05 23 02.3	+1.2
	1.2nm,0.8s,baz=261,slow=5.5,SNR=3.1					

IDC 09 06:29:51.2±11.0, 52°.23N×152°.35E, h537km±226km, mb2.7/5, mb1 2.9/5, mb1mx2.6/32, mbtmp3.6/5, Error ellipse: s-maj=191.9km s-min=26.3km az=164.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**32.74**	**44**	P	P	06 35 38.9	-0.4
	0.4nm,0.6s,baz=256,slow=6.3,SNR=6.4						
INK	**Inuvik**	**37.40**	**36**	P	P	06 36 17.7	-0.1
	0.5nm,0.3s,baz=290,slow=8.7,SNR=10						
MKAR	**Makanchi Array**	**44.19**	**292**	P	P	06 37 12.1	-0.1
	0.3nm,0.3s,baz=58,slow=6.3,SNR=5.5						
YKA	**Yellowknife Ar**	**46.91**	**39**	P	P	06 37 32.8	+0.1
	0.2nm,0.3s,baz=305,slow=7.0,SNR=3.6						
FINES	**FINESS Array B**	**58.89**	**333**	P	P	06 38 57.8	-0.1
	1.0nm,0.8s,baz=37,slow=8.2,SNR=3.4						

GCG 09 06:30:24.5±0.5, 14°.77N×91°.84W, h82km±5km, MD3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.27 102**	eP	Pn		06 30 37.3	+0.2
STG3			eS	Sn		06 30 47.8	+1.5
FUG	**Fuego 3**	**1.02 108**	eP	Pn		06 30 44.8	+0.7
FUG			eS	Sn		06 30 60.0	+1.2
PCG	**Pacaya**	**1.25 107**	eS	Sn		06 31 06.0	+2.1
IXG	**Ixpaco**	**1.48 113**	eS	Sn		06 31 10.7	+1.7

MAN 09 06:43:17.4, 11°.84N×125°.29E, h1km, mb3.8, ML2.6, MS2.1, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.28 148**	eP	Pg		06 43 22.9	+0.2
BESP			eS	Sb		06 43 31.2	+0.9
PLP	**Palo**	**0.73 204**	eP	Pg		06 43 32.1	+0.6
PLP			eS	Sn		06 43 46.4	-0.3
CNP	**Catarman**	**0.91 318**	eP	Pg		06 43 34.6	-0.2
CNP			eS	Sn		06 43 51.6	+0.5
MSLP	**Maasin**	**1.74 194**	eP	Pn		06 43 49.2	+0.4
MSLP			eS	Sg		06 44 20.0	+6.6

*JMA **09** 06:55:15.5±0.1, 23°.66N×121°.63E, h52km±2km, M3.0*
*TAP **09** 06:55:15.9, 23°.69N×121°.69E, h46km, ML3.5, C*
*ISCJB **09** 06:55:16.3±0.2, 23°.69N±0°.01×121°.69E±0°.02, h52km±3km,*
Error ellipse: s-maj=2.8km s-min=1.8km az=39.9

ISC 09 06:55:16.9±1.2, 23°.70N±0°.02×121°.67E±0°.02, h45km±6km, n108, σ0°81/181, 1C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.22 344**	i P	Pn		06 55 24.4	-0.4
	baz=338						
ENLB			eS	Sn		06 55 31.6	+1.2
	baz=338						
EGFH	**Guangfu**	**0.22 263**	i P	Pn		06 55 24.6	-0.3
	baz=265						
EGFH			eS	Sn		06 55 31.6	+1.1
	baz=265						
ESL	**Shilin**	**0.25 299**	P	Pn		06 55 24.6	-0.5
	baz=298						
ESL			eS	Sn		06 55 32.5	+1.6
	baz=298						
HWA	**Hwalien**	**0.29 348**	eP	Pn		06 55 25.6	+0.1
	baz=345						
HGSD	**Ruisui**	**0.30 228**	eP	Pn		06 55 26.0	+0.4
	baz=231						
HGSD			eS	Sn		06 55 33.9	+2.2
	baz=231						
EHY	**Hungye**	**0.37 239**	eP	Pn		06 55 25.3	-1.0
	baz=241						
TWD	**Chiawan**	**0.39 350**	P	Pn		06 55 26.3	-0.2
	baz=348						
TWD			eS	Sn		06 55 33.4	+0.1
	baz=348						
YULB	**Yu-li**	**0.46 229**	⇓P	Pn		06 55 26.5	-0.8
	baz=230						
YULB			eS	Sn		06 55 33.8	-0.9
	baz=230						
NACB	**Ninganchiao**	**0.48 352**	eP	Pn		06 55 27.0	-0.6
	baz=349						
NACB			eS	Sn		06 55 36.0	+0.8
	baz=349						
TWF1	**Yuli**	**0.48 225**	⇓P	Pn		06 55 26.9	-0.8
	baz=226						
TWF1			eS	Sn		06 55 34.5	-0.8
	baz=226						
VWDT	**VWDT**	**0.49 277**	⇓eP	Pn		06 55 27.7	+0.1
	baz=277						
VWDT			eS	Sn		06 55 35.8	+0.5
	baz=277						
OWD	**Renai**	**0.52 300**	i P	Pn		06 55 27.9	-0.3
	baz=299						
OWD			eS	Sn		06 55 35.9	-0.4
	baz=299						
ETLH	**Xiulin Townshi**	**0.54 341**	eP	Pn		06 55 27.6	-0.8
	baz=339						
CHGB	**Renai**	**0.58 309**	eP	Pn		06 55 29.1	0.0
	baz=307						
CHGB			eS	Sn		06 55 38.0	+0.2
	baz=307						
WHF	**Hehuan Shan**	**0.58 321**	⇑P	Pn		06 55 28.7	-0.6
	baz=319						
WHF			eS	Sn		06 55 38.0	-0.2
	baz=319						
CHKT	**Chengkung**	**0.66 205**	eP	Pn		06 55 29.1	-0.7
	baz=206						
CHKT			i S	Sn		06 55 39.6	+0.5
	baz=206						
SSLB	**Suanglung**	**0.66 278**	eP	Pn		06 55 29.5	-0.4
	baz=278						
SSLB			eS	Sn		06 55 40.3	+0.9
	baz=278						
YUS	**Yu-Shan**	**0.69 253**	P	Pn		06 55 30.5	-0.2
	baz=253						
YUS			eS	Sn		06 55 40.5	-0.2
	baz=253						
TWT	**Tachien**	**0.72 321**	eP	Pn		06 55 31.1	+0.2
	baz=318						
TWT			eS	Sn		06 55 41.1	+0.2
	baz=318						
TDCB	**Techi**	**0.73 320**	eP	Pn		06 55 31.0	+0.1
	baz=318						
TDCB			eS	Sn		06 55 41.0	-0.1
	baz=318						
SMLT	**Sun Moon Lake**	**0.73 285**	P	Pn		06 55 30.9	0.0
	baz=284						
SMLT			eS	Sn		06 55 41.3	+0.2
	baz=284						
NANB	**Nanao**	**0.73 6**	eP	Pn		06 55 30.4	-0.5
	baz=4.0						
NANB			eS	Sn		06 55 41.9	+0.8
	baz=4.0						
WHYT	**Xinyi Township**	**0.75 270**	i P	Pn		06 55 31.1	0.0
	baz=270						
WHYT			i S	Sn		06 55 42.3	+0.9
	baz=270						
DPDB	**Guoxing**	**0.76 297**	i P	Pn		06 55 31.4	+0.1
	baz=296						
DPDB			eS	Sn		06 55 42.2	+0.5
	baz=296						
NNSB	**Datong**	**0.78 340**	eP	Pn		06 55 31.2	-0.4
	baz=338						
NNSB			eS	Sn		06 55 41.5	-0.8
	baz=338						
ELDTW	**Lidau**	**0.78 230**	eP	Pn		06 55 30.6	-1.1
	baz=230						
ELDTW			eS	Sn		06 55 40.9	-1.4
	baz=230						
NNS	**Nan Shan**	**0.79 340**	i P	Pn		06 55 31.4	-0.4
	baz=339						
NNS			eS	Sn		06 55 42.0	-0.6
	baz=339						
ALS	**Alishan**	**0.81 257**	⇓P	Pn		06 55 32.3	+0.1
	baz=257						
ALS			i S	Sn		06 55 43.5	+0.2
	baz=257						
WJS	**Zhushan**	**0.87 279**	P	Pn		06 55 33.0	+0.3
	baz=278						
WJS			eS	Sn		06 55 45.9	+1.5
	baz=278						
WHP	**Taichung City**	**0.88 311**	eP	Pn		06 55 33.6	+0.7
	baz=310						
WHP			i S	Sn		06 55 45.4	+0.7
	baz=310						
CHN5	**Tsauling**	**0.91 264**	eP	Pn		06 55 33.7	+0.3
	baz=264						
CHN5			eS	Sn		06 55 46.6	+1.1
	baz=264						
NDT	**Datong Townshi**	**0.92 351**	P	Pn		06 55 33.0	-0.4
	baz=349						
NDT			eS	Sn		06 55 44.9	-0.5
	baz=349						
WNT	**Mingjian**	**0.92 282**	P	Pn		06 55 34.1	+0.7
	baz=281						
WNT			eS	Sn		06 55 46.7	+1.2
	baz=281						
TWC	**Suao**	**0.93 10**	eP	Pn		06 55 33.6	+0.1
	baz=9.0						
TWC			eS	Sn		06 55 46.5	+0.8
	baz=9.0						
ENTT	**Nioudou**	**0.95 354**	P	Pn		06 55 33.4	-0.4
	baz=353						
ENTT			eS	Sn		06 55 45.8	-0.4
	baz=353						
EOS1	**EOS1**	**0.95 26**	eP	Pn		06 55 34.3	+0.5
	baz=24						
EOS1			eS	Sn		06 55 47.7	+1.6
	baz=24						
STYT	**Tauyuan**	**0.99 238**	i P	Pn		06 55 34.5	0.0
	baz=238						
STYT			i S	Sn		06 55 47.8	+0.5
	baz=238						
YHNB	**Yeheng**	**1.01 345**	i P	Pn		06 55 34.6	0.0
	baz=343						
YHNB			eS	Sn		06 55 47.6	-0.2
	baz=343						
TCU	**Taichung**	**1.01 297**	eP	Pn		06 55 35.5	+0.8
	baz=296						
WGK	**Gukeng**	**1.01 270**	eP	Pn		06 55 35.5	+0.8
	baz=269						
NSK	**Sanguang**	**1.02 344**	P	Pn		06 55 34.8	0.0
	baz=343						
NSK			eS	Sn		06 55 47.7	-0.3
	baz=343						
TWE	**Neicheng**	**1.02 360**	eP	Pn		06 55 34.8	0.0
	baz=359						
TWE			eS	Sn		06 55 48.4	+0.4
	baz=359						
TWGBT	**Beinan**	**1.03 212**	eP	Pn		06 55 34.0	-0.9
	baz=213						
TWG	**Pinlang**	**1.03 212**	eP	Pn		06 55 34.0	-0.9
	baz=213						
TPUB	**Ta-pu**	**1.03 248**	eP	Pn		06 55 35.4	+0.4
	baz=248						
TPUB			eS	Sn		06 55 49.5	+1.2
	baz=248						
WDLH	**Douliu**	**1.04 270**	eP	Pn		06 55 35.9	+0.9
	baz=269						
TTN	**Taitung**	**1.05 207**	i P	Pn		06 55 35.0	-0.2
	baz=207						
WTP	**Ta-pu**	**1.07 245**	eP	Pn		06 55 35.8	+0.3
	baz=245						
WTP			eS	Sn		06 55 50.8	+1.7
	baz=245						
ILA	**Ilan**	**1.07 4**	eP	Pn		06 55 34.9	-0.5
	baz=3.0						
WCHH	**Zhanghua**	**1.09 291**	eP	Pn		06 55 36.4	+0.7
	baz=290						
NWLT	**Wulai**	**1.09 352**	eP	Pn		06 55 35.8	+0.1
	baz=350						
NSY	**Sanyi**	**1.10 311**	P	Pn		06 55 36.4	+0.6
	baz=310						
NSY			eS	Sn		06 55 50.9	+1.0
	baz=310						
NSTT	**Nanjuang**	**1.11 327**	eP	Pn		06 55 36.7	+0.6
	baz=326						
NSTT			eS	Sn		06 55 51.0	+0.8
	baz=326						
LIOB	**Emei**	**1.12 328**	eP	Pn		06 55 36.8	+0.7
	baz=327						
WDJ	**Dajia District**	**1.14 305**	i P	Pn		06 55 36.6	+0.2
	baz=304						
WDJ			eS	Sn		06 55 51.6	+0.6
	baz=304						
CHY	**Chiayi**	**1.16 260**	eP	Pn		06 55 36.9	+0.3
	baz=260						
CHY			eS	Sn		06 55 52.2	+0.9
	baz=260						
NMLH	**Miaoli**	**1.16 316**	i P	Pn		06 55 36.8	+0.1
	baz=315						
NMLH			i S	Sn		06 55 52.1	+0.7
	baz=315						
CHN1	**Nanshi**	**1.16 244**	eP	Pn		06 55 37.4	+0.6
	baz=244						
CHN1			eS	Sn		06 55 52.7	+1.2
	baz=244						
TWK	**Hsinying**	**1.17 249**	eP	Pn		06 55 37.6	+0.8
	baz=248						
TWK			eS	Sn		06 55 52.7	+1.1
	baz=248						
SGST	**Jiashian**	**1.17 239**	eP	Pn		06 55 37.6	+0.7
	baz=239						
SGST			eS	Sn		06 55 53.4	+1.8
	baz=239						
SLGT	**Liugui**	**1.17 234**	eP	Pn		06 55 37.6	+0.8
	baz=234						
SLGT			eS	Sn		06 55 53.3	+1.6
	baz=234						
SNST	**Tainan City**	**1.18 247**	eP	Pn		06 55 37.4	+0.5
	baz=246						
SNST			eS	Sn		06 55 52.8	+1.1
	baz=246						
WLTB	**Daxi**	**1.21 342**	eP	Pn		06 55 38.6	+1.2
	baz=340						
WLTB			eS	Sn		06 55 54.3	+1.6
	baz=340						
RLNB	**Erlin**	**1.22 280**	eP	Pn		06 55 38.0	+0.6
	baz=279						
RLNB			eS	Sn		06 55 54.5	+1.8
	baz=279						
NHDH	**Xindian Distri**	**1.27 354**	eP	Pn		06 55 38.6	+0.5
	baz=353						
NHDH			eS	Sn		06 55 54.0	-0.1
	baz=353						
TIPB	**Shuangxi**	**1.28 6**	eP	Pn		06 55 39.0	+0.7
	baz=5.0						
TIPB			eS	Sn		06 55 55.4	+1.0
	baz=5.0						
TWA	**Mucha**	**1.28 357**	eP	Pn		06 55 39.2	+0.8
	baz=355						
TWA			eS	Sn		06 55 54.9	+0.5
	baz=355						
WTCT	**Ta-ch'eng**	**1.28 278**	eP	Pn		06 55 38.3	-0.1
	baz=277						
WTCT			eS	Sn		06 55 56.2	+1.8
	baz=277						
TATO	**Taipei**	**1.29 353**	eS	Sn		06 55 55.2	+0.7
	baz=352						
TWB1	**Santiao Chiao**	**1.34 12**	eP	Pn		06 55 39.6	+0.5
	baz=11						
NCU	**National Centr**	**1.34 341**	eS	Sn		06 55 58.0	+2.2
	baz=340						
NWF	**Wu-fen Shan**	**1.37 4**	eP	Pn		06 55 40.2	+0.5
	baz=3.0						
NWF			eS	Sn		06 55 57.5	+0.8
	baz=3.0						
WFSB	**Wu-fen Shan**	**1.37 4**	eP	Pn		06 55 40.1	+0.5
	baz=3.0						
CHN8	**Yiju**	**1.38 256**	eP	Pn		06 55 39.4	-0.3
	baz=255						
CHN8			eS	Sn		06 55 57.4	+0.6
	baz=255						
JYNG	**Yonagunijimaku**	**1.39 57**	P	Pn		06 55 40.1	+0.3
JYNG			eS	Sn		06 55 57.5	+0.5
TWS1	**Kuangyinshan**	**1.42 351**	eS	Sn		06 55 58.9	+1.2
	baz=350						
MASBT	**Mashibuluo**	**1.44 222**	i P	Pn		06 55 40.5	-0.1
	baz=222						
YOJ	**Yonaguni jima**	**1.45 58**	eP	Pn		06 55 40.6	+0.1
	baz=57						
YOJ			eS	Sn		06 55 58.8	+0.5
	baz=57						
YOJ	**Yonaguni jima**	**1.45 58**	P	Pn		06 55 41.0	+0.4
YOJ			eS	Sn		06 55 58.8	+0.5
YM01	**YM01**	**1.45 356**	eP	Pn		06 55 41.2	+0.5
	baz=355						
YM01			eS	Sn		06 55 58.4	-0.1
	baz=355						
YM04	**YM04**	**1.46 355**	eP	Pn		06 55 41.5	+0.8
	baz=354						
YM05	**YM05**	**1.47 356**	eP	Pn		06 55 40.7	-0.3
	baz=355						
YM07	**YM07**	**1.48 358**	eP	Pn		06 55 41.1	0.0
	baz=357						
YM07			eS	Sn		06 55 59.2	+0.1
	baz=357						
YM08	**YM08**	**1.49 357**	eP	Pn		06 55 40.8	-0.4
	baz=356						
EAST	**Anshuo**	**1.51 210**	eP	Pn		06 55 40.9	-0.6
	baz=210						
EAST			i S	Sn		06 55 60.0	0.0
	baz=210						
SSPT	**

baz=203
PHUB P'eng-hu 1.93 265 *e*P Pn 06 55 46.5 -0.8
baz=264
PHUB *e*S Sn 06 56 09.4 -0.9
baz=264
PNG Penghu 1.94 267 *e*P Pn 06 55 46.8 -0.6
baz=266
HATJ Hateruma jima 1.99 79 P Pn 06 55 48.3 +0.3
HATJ *e*S Sn 06 56 12.0 +0.3
IRIF Iriomote-Funau 1.99 71 P Pn 06 55 48.4 +0.4
IRIF S Sn 06 56 12.5 +0.8
VCHM Qimei 2.11 257 *e*P Pn 06 55 49.2 -0.5
baz=257
JKRS Kuro-shima 2.21 75 P Pn 06 55 51.4 +0.4
JKRS *e*S Sn 06 56 17.9 +0.8
JIJ Ishigaki jima 2.36 73 P Pn 06 55 52.8 -0.3
JIJ *e*S Sn 06 56 20.0 -0.8
PTTC Pingtan 2.49 317 *e*P Pn 06 55 53.1 -1.8
baz=315
PTTC *e*S Sn 06 56 21.6 -2.6
baz=315
JISG Ishigakijimahi 2.57 69 P Pn 06 55 55.7 -0.3
JISG S Sn 06 56 24.9 -1.2
PTMZ Houxiangcun 2.68 300 *e*P Pn 06 55 56.4 -1.1
baz=299
MATB Ma-tsu 2.90 328 *e*P Pn 06 56 00.3 -0.3
baz=327
JTJ Tarama 2.93 71 P Pn 06 56 00.8 -0.1
JTJ S Sn 06 56 34.8 0.0
KNMB Chin-men Tao 3.09 285 *e*P Pn 06 56 01.6 -1.6
baz=284
LYJJ Jianjiangzhen 3.33 329 *e*P Pn 06 56 05.4 -1.1
baz=328
MHZQ Yeshan 3.39 316 *e*P Pn 06 56 06.0 -1.3
baz=314
JIRB Irabujima 3.39 70 P Pn 06 56 06.9 -0.4
JIRB *e*S Sn 06 56 46.8 +0.5
XPSS Dashiqiu 3.49 338 *e*P Pn 06 56 07.4 -1.3
baz=337
AXDP Jialang 3.58 290 *e*P Pn 06 56 08.5 -1.4
baz=289

MEX 09 06:58:01.5±0.9, 16°.77N×95°.05W, h103km±9km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.36**	**27**	*i* P	Pn	06 58 15.2	-1.5
CMIG				*i* S	Sn	06 58 26.5	-1.7
HUIG	**Huatulco**	**1.42**	**226**	*e*P	Pn	06 58 25.0	-2.0
HUIG				*i* S	Sn	06 58 45.0	-1.3
PCIG		**2.06**	**121**	*e*P	Pn	06 58 34.2	-0.7
PCIG				*e*S	Sn	06 58 59.0	-1.4

*ISCJB **09** 07:12:31.5±0.5, 35°.66N±0°.03×97°.25W±0°.02, h9km±3km, Error ellipse: s-maj=4.8km s-min=2.9km az=167.6*
*ANF **09** 07:12:31.9±0.6, 35°.60N×97°.24W, h5km, ML4.4/10, Error ellipse: s-maj=8.5km s-min=4.3km az=163.0*
*TUL **09** 07:12:32.4, 35°.62N×97°.26W, h7km, mbLg3.7*
*NEIC **09** 07:12:32.4±0.0, 35°.62N×97°.26W, h7km, MN3.7(TUL), After TUL.*
NEIC Felt [III] at Arcadia and Jones and [II] at Choctaw and Edmond. Also felt at Guthrie, Luther, Newalla, Norman, Oklahoma City and Spencer.
*IDC **09** 07:12:33.6±2.1, 35°.71N×97°.65W, h0km, mb1 3.6/3, mb1mx3.3/40, mbtmp3.3/3, ML3.3/3, Error ellipse: s-maj=32.0km s-min=13.3km az=103.0*
ISC 09 07:12:32.0±0.8, 35°.65N±0°.04×97°.27W±0°.03, h9km±6km, n55, σ1°39/71, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.07**	**82**	*e*Pg	**Pg**	**07 12 34.5**	**+0.4**
OK001	**Jones High Sch**	**0.09**	**188**	*e*Pg	**Pg**	**07 12 33.9**	**-0.4**
OK009	**Oakdale Elemen**	**0.14**	**242**	*e*Pg	**Pg**	**07 12 35.4**	**+0.4**
OK009				*e*Sg	**Sg**	**07 12 38.2**	**+1.1**
TUL1	**Leonard**	**1.23**	**77**	*e*Pg	**Pb**	**07 12 54.8**	**-0.6**
TUL1				*e*Sg	**Sg**	**07 13 11.6**	**-0.1**
TUL1	**Leonard**	**1.23**	**77**	P	**Pb**	**07 12 54.5**	**-0.9**
baz=256
TUL1 S **Sg** **07 13 11.4** **-0.3**
baz=256
WMOK Wichita Mounta 1.53 234 *e*Pn **Pn** **07 12 60.0** **+0.5**
WMOK *e*Sn **Sb** **07 13 20.3** **+0.2**
WMOK Wichita Mounta 1.53 234 P **Pn** **07 12 59.7** **+0.2**
baz=54
WMOK S **Sb** **07 13 20.2** **+0.2**
baz=54
U32A Winter Ranch, 1.58 298 *e*Pn **Pb** **07 13 01.9** **+0.6**
U32A *e*Sn **Sg** **07 13 23.4** **+0.6**
X37A Clayton 1.88 124 *e*Pn **Pb** **07 13 05.5** **+1.2**
X37A *e*Sn **Sb** **07 13 30.4** **+0.2**
HHAR Hobbs 2.78 76 *e*Pn **Pn** **07 13 17.8** **+1.1**
W39A Magazine 2.89 98 *e*Pn **Pn** **07 13 18.9** **+0.8**
W39A Magazine 2.89 98 P **Pn** **07 13 18.8** **+0.7**
baz=279
W39A S **Sn** **07 13 54.1** **+1.2**
baz=279
MIAR Mount Ida 3.23 109 *e*Pn **Pn** **07 13 24.0** **+1.3**
MIAR Mount Ida 3.23 109 P **Pn** **07 13 24.4** **+1.7**
baz=291
MIAR S **Sn** **07 14 01.5** **+0.2**
baz=291
ABTX Abilene, Hawle 3.60 214 *e*Pn **Pn** **07 13 28.6** **+0.7**
ABTX Abilene, Hawle 3.60 214 P **Pn** **07 13 28.1** **+0.2**
baz=33
ABTX S **Sn** **07 14 11.4** **+0.8**
baz=33
WHTX Lake Whitney, 3.65 182 *e*Pn **Pn** **07 13 29.0** **+0.4**
WHTX Lake Whitney, 3.65 182 Pb **Pb** **07 13 35.6** **-1.0**
baz=2.5
WHTX Sb **Sb** **07 14 23.3** **+2.3**
baz=2.5
U40A Yellville 3.65 78 P **Pn** **07 13 29.4** **+0.7**
baz=260
U40A Sb **Sb** **07 14 23.6** **+2.5**
baz=260
AMTX Amarillo 3.69 259 *e*Pn **Pn** **07 13 31.3** **+2.1**
AMTX Amarillo 3.69 259 P **Pn** **07 13 30.8** **+1.7**
baz=77
AMTX Sb **Sb** **07 14 25.0** **+2.9**
baz=77
CBKS Cedar Bluff 3.72 329 P **Pn** **07 13 31.1** **+1.4**
baz=148
CBKS Sb **Sg** **07 14 29.1** **-2.4**
baz=148
X40A Basin Creek Fa 3.82 106 *e*Pn **Pn** **07 13 31.8** **+0.8**
WLAR White Oak Lake 3.95 118 *e*Pn **Pn** **07 13 33.5** **+0.8**
W41B Gary Mavity, V 4.13 95 P **Pn** **07 13 36.1** **+0.9**
baz=278
W41B S **Sn** **07 14 24.8** **+1.2**
baz=278
Z41A Richland Creek 4.40 122 *e*Pn **Pn** **07 13 39.3** **+0.5**
NATX Nacogdoches 4.45 150 *e*Pn **Pn** **07 13 39.9** **+0.4**
MSTX Muleshoe 4.82 251 *e*Pn **Pn** **07 13 46.0** **+1.2**
CCAR Cane Creek 4.85 109 *e*Pn **Pn** **07 13 46.3** **+1.3**
435B Jarrell 4.86 183 *e*Pn **Pn** **07 13 46.5** **+1.2**
X43A Marvell 5.36 100 *e*Pn **Pn** **07 13 54.1** **+2.0**
HBAR Harrisburg 5.39 89 *e*Pn **Pn** **07 13 54.3** **+1.7**
CCM Cathedral Cave 5.40 62 *e*Pn **Pn** **07 13 54.5** **+1.8**
KSCO Kaye Shedlock' 5.43 310 *e*Pn **Pn** **07 13 55.9** **+2.7**
JCT Junction City 5.57 203 *e*Pn **Pn** **07 13 55.0** **0.0**
PBMO Poplar Bluff 5.65 76 *e*Pn **Pn** **07 13 58.5** **+2.4**
BGNE Belgrade 5.79 353 *e*Pn **Pn** **07 13 59.2** **+1.1**
CPRX Cap Rock 6.04 246 *e*Pn **Pn** **07 14 03.2** **+1.6**
OGNE Ogallala 6.48 326 *e*Pn **Pn** **07 14 09.0** **+1.5**
OXF Oxford 6.55 98 *e*Pn **Pn** **07 14 09.0** **+0.6**
SDCO Great Sand Dun 6.93 290 *e*Pn **Pn** **07 14 16.0** **+2.0**
SCIA State Center 7.01 26 *e*Pn **Pn** **07 14 15.9** **+1.1**
Q24A Divide 7.10 300 *e*Pn **Pn** **07 14 17.2** **+0.9**
PLAL Pickwick Lake 7.55 92 *e*Pn **Pn** **07 14 23.2** **+1.1**
WVT Waverly 7.68 84 *e*Pn **Pn** **07 14 24.1** **+0.1**
OLIL Olney 7.94 64 *e*Pn **Pn** **07 14 24.9** **-2.7**
S22A 4UR Ranch, Cre 7.96 288 *e*Pn **Pn** **07 14 29.2** **+1.1**
L40A Anamosa 7.96 35 *e*Pn **Pn** **07 14 28.3** **+0.5**
KVTX Kingsville 8.09 184 *e*Pn **Pn** **07 14 30.2** **+0.6**
TX31 Lajitas Ar. Si 8.29 222 *e*Pn **Pn** **07 14 32.2** **-0.3**
TXAR Lajitas Array 8.29 222 Pn **Pn** **07 14 31.8** **-0.6**
0.1nm,0.3s,baz=41,slow=10,SNR=9.4
TXAR Pg **Pb** **07 14 53.5** **-2.3**
0.4nm,0.3s,baz=41,slow=14,SNR=8.2
TXAR Lg Lg 07 16 45.0
1.2nm,0.3s,baz=60,slow=34,SNR=3.8
T47A Sharon Grove 8.32 78 *e*Pn **Pn** **07 14 34.2** **+1.5**
JFWS Jewell Farm 9.07 35 *e*Pn **Pn** **07 14 44.7** **+1.6**
PDAR Pinedale Array 11.88 310 Pn **Pn** **07 15 20.9** **-0.8**
0.2nm,0.3s,baz=128,slow=14,SNR=4.6
PDAR Lg Lg 07 18 37.3
0.2nm,0.3s,baz=120,slow=15,SNR=3.3
ULM Lac du Bonnet 14.63 4 Pn **Pn** **07 15 55.6** **-3.4**
0.2nm,0.3s,baz=180,slow=9.1,SNR=1.6
ULM Lg Lg 07 20 03.9
0.3nm,0.3s,baz=264,slow=16,SNR=2.1

*NIED **09** 07:43:00, 39°.60N×142°.10E, h59km, Mw3.6 Best double couple: M0:3.11000×10^14 NP1:φ0=207.00000°, δ12.00000°, λ131.00000°. NP2:φ0=345.00000°, δ81.00000°, λ82.00000°.*
*ISCJB **09** 07:43:47.3±0.7, 39°.64N±0°.03×142°.14E±0°.08, h47km±6km, mb3.7/3, MS3.8/1, Error ellipse: s-maj=10.0km s-min=4.9km az=9.4*
*JMA **09** 07:43:47.8, 39°.63N×142°.11E, h48km±1km, M3.8*
JMA Felt I J1.
*IDC **09** 07:43:50.4±3.1, 39°.69N×142°.14E, h58km±27km, mb3.4/3, mb1 3.6/6, mb1mx3.2/41, mbtmp3.7/6, ML3.3/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/24, Error ellipse: s-maj=40.2km s-min=16.6km az=119.0*
ISC 09 07:43:48.7±1.1, 39°.63N±0°.04×142°.11E±0°.08, h43km±8km, n25, σ1°12/30, mb3.8/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.23**	**258**	P	**Pn**	**07 43 56.1**	**-0.4**
MIYJ				S	**Sn**	**07 44 01.8**	**-0.2**
JTH	**Tanohata**	**0.37**	**328**	P	**Pn**	**07 43 57.3**	**-0.6**
JTH				S	**Sn**	**07 44 04.0**	**-0.4**
OFUJ	**Ofunato**	**0.65**	**212**	P	**Pn**	**07 44 00.5**	**-1.0**
OFUJ				S	**Sn**	**07 44 09.5**	**-1.1**
JOM	**Ohasama**	**0.65**	**257**	P	**Pn**	**07 44 01.0**	**-0.6**
JOM				S	**Sn**	**07 44 10.3**	**-0.5**
JKZ	**Kuzumaki**	**0.70**	**301**	P	**Pn**	**07 44 01.6**	**-0.7**
JKZ				S	**Sn**	**07 44 11.1**	**-0.9**
JANG	**Nango**	**0.88**	**329**	P	**Pn**	**07 44 03.5**	**-1.1**
JANG				S	**Sn**	**07 44 14.8**	**-1.4**
JMK	**Ichinoseki**	**0.97**	**226**	P	**Pn**	**07 44 04.9**	**-0.9**
JMK				S	**Sn**	**07 44 17.6**	**-0.8**
JRG	**Rokugo**	**1.17**	**259**	P	**Pn**	**07 44 07.7**	**-0.9**
JRG				*e*S	**Sn**	**07 44 22.6**	**-0.7**
JAH	**Hinai**	**1.27**	**297**	P	**Pn**	**07 44 09.4**	**-0.5**
JAH				S	**Sn**	**07 44 25.5**	**-0.3**
JIO	**Ouri**	**1.31**	**207**	P	**Pn**	**07 44 09.5**	**-1.1**
JIO				*e*S	**Sn**	**07 44 26.3**	**-0.6**
JTM	**Tenmabayashi**	**1.41**	**326**	P	**Pn**	**07 44 11.1**	**-0.8**
JTM				S	**Sn**	**07 44 28.3**	**-0.9**
MAT	**Matsushiro**	**4.36**	**226**	P	**Pn**	**07 44 54.3**	**+1.9**
MJAR	**Matsushiro Arr**	**4.36**	**226**	P	**Pn**	**07 44 54.8**	**+2.4**
0.4nm,0.3s,baz=32,slow=14,SNR=51
MJAR LR LR 07 46 55.2
comp=Z,54nm,19.1s,baz=45,slow=42
ASAJ Asahikawa 4.50 4 P **Pn** **07 44 54.1** **-0.2**
2.2nm,0.3s,baz=216,slow=11,SNR=12
ASAJ S **Sn** **07 45 46.5** **+1.1**
1.4nm,0.3s,baz=76,slow=4.2,SNR=2.9
KSRS Korea Array 11.32 263 P **Pn** **07 46 30.5** **+2.7**
0.2nm,0.3s,baz=65,slow=14,SNR=3.0
H11N2 WAKE ISLAND Hy 29.11 126 T T 08 20 18.5
baz=319,slow=75,SNR=88
H11N1 WAKE ISLAND Hy 29.12 126 T T 08 20 17.6
baz=319,slow=75,SNR=123
H11N3 WAKE ISLAND Hy 29.13 126 T T 08 20 13.9
baz=319,slow=75,SNR=113
H11S1 WAKE ISLAND Hy 29.91 128 T T 08 21 20.8
baz=320,slow=76,SNR=29
H11S3 WAKE ISLAND Hy 29.91 128 T T 08 21 21.3
baz=320,slow=76,SNR=33
H11S2 WAKE ISLAND Hy 29.92 128 T T 08 21 22.1
baz=320,slow=76,SNR=29
ZALV Zalesovo Beam 40.62 310 P **P** **07 51 24.1** **-0.1**
0.6nm,0.3s,baz=82,slow=7.9,SNR=2.5
ILAR Eielson Array 47.02 34 P **P** **07 52 14.7** **-0.7**
0.4nm,0.7s,baz=262,slow=6.4,SNR=5.7
INK Inuvik 51.84 28 P **P** **07 52 51.6** **-0.5**
0.6nm,0.4s,baz=281,slow=10,SNR=6.6
DLBC Dease Lake 56.26 39 LR LR 08 21 28.8
comp=Z,68nm,18.4s,baz=174,slow=40

NNC 09 08:01:24.4±2.9, 37°.23N×67°.22E, h0km, mb3.6, mpv3.3, 5C-2D, Error ellipse: s-maj=29.5km s-min=20.1km az=153.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array 6.38 22**			⇑Pn	Pn	08 03 00.8	+1.0
0.5nm,0.3s,baz=209,slow=16,SNR=18
KK31 ⇓Sn Sn 08 04 14.1 +0.8
0.8nm,0.3s,baz=218,slow=18,SNR=4.4
AAK Ala-Archa 7.77 44 ⇑Pn Pn 08 03 19.0 +0.1
1.0nm,0.4s
AAK ⇑Sn Sn 08 04 49.7 +2.0
3.5nm,0.6s
TKM2 Tokmak 2 8.57 46 ⇑Pn Pn 08 03 28.9 -1.1
0.8nm,0.5s
TKM2 ⇑Sn Sn 08 05 08.8 +1.4
2.3nm,0.6s
AB31 Akbulak array 13.13 339 ⇓P Pn 08 04 33.1 +1.1
0.4nm,0.6s,baz=154,slow=13,SNR=4.4
BVA0 Borovoye Array 15.95 7 P Pn 08 05 06.5 -3.5
baz=184,slow=13,SNR=8.5

*ISCJB **09** 08:23:18.8±2.7, 27°.5N±0°.4×62°.1E±0°.3, h10km, mb3.5/7, Error ellipse: s-maj=61.0km s-min=18.2km az=151.8*
*IDC **09** 08:23:20.1±2.3, 27°.70N×62°.03E, h0km, mb3.7/7, mb1 3.7/8, mb1mx3.5/53, mbtmp3.7/8, ML4.1/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/34, Error ellipse: s-maj=59.9km s-min=23.3km az=149.0*
ISC 09 08:23:21.6±2.4, 27°.7N±0°.4×62°.0E±0°.3, h10km, n10, σ0°93/9, mb3.4/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	**Alibeck 10.71 343**			LR	LR	08 31 00.9	
comp=Z,20nm,20.2s,baz=95,slow=43
AAK Ala-Archa 18.02 31 P **P** **08 27 33.8** **+1.0**
0.6nm,0.3s,baz=220,slow=11,SNR=5.4
MKAR Makanchi Array 24.84 34 P **P** **08 28 45.0** **+1.0**
0.4nm,0.6s,baz=218,slow=9.1,SNR=2.3
BVAR Borovoye Array 26.05 12 P **P** **08 28 54.3** **-0.6**
1.0nm,0.6s,baz=188,slow=9.7,SNR=7.4
KURBB Kurchatov Arra 26.11 24 P **P** **08 28 55.6** **+0.1**
0.4nm,0.5s,baz=219,slow=9.3,SNR=8.5
BRTR Keskin Array B 26.37 304 P **P** **08 28 59.5** **+1.3**
0.8nm,0.9s,baz=131,slow=7.9,SNR=4.6
FINES FINESS Array B 41.37 335 P **P** **08 31 07.0** **-0.6**
0.6nm,0.7s,baz=120,slow=8.2,SNR=4.5
TIXI Tiksi 56.70 20 P **P** **08 33 04.1** **-0.7**
1.3nm,0.3s,baz=321,slow=5.2,SNR=1.9
TORD Torodi Ar. Bea 57.86 268 P **P** **08 33 13.7** **-0.3**
0.7nm,0.6s,baz=67,slow=6.5,SNR=7.3
TXAR Lajitas Array 121.66 345 PKP **PKiKP** **08 42 16.7** **+0.3**
0.4nm,0.8s,baz=15,slow=4.7,SNR=4.7

*IDC **09** 08:25:39.4±0.8, 12°.12N×125°.59E, h0km, mb4.0/10, mb1 4.1/10, mb1mx3.8/42, mbtmp4.0/10, MS3.0/4, Ms1 3.0/4, ms1mx2.6/50, Error ellipse: s-maj=38.3km s-min=16.0km az=70.0*
*MAN **09** 08:25:42.1, 12°.21N×125°.76E, h15km, mb4.6, ML3.4, MS3.3*
ISC 09 08:25:40.2±1.9, 12°.18N±0°.04×125°.68E±0°.07, h7km±11km, n29, σ2°26/28, mb4.0/11, MS2.8/3, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan 0.62 203**			*e*P	**Pn**	**08 25 55.6**	**+0.2**
BESP *e*S **Sn** **08 26 07.9** **+2.3**
CNP Cataram 1.05 288 *e*P **Pn** **08 26 01.5** **+0.2**
CNP *e*S **Sn** **08 26 18.8** **+2.5**
PLP Palo 1.22 215 *e*P **Pn** **08 26 04.4** **+0.7**
PLP *e*S **Sn** **08 26 20.7** **+0.3**
OCLP Ormoc 1.54 223 *e*P **Pg** **08 26 09.6** **-0.1**
OCLP *e*S **Sg** **08 26 31.9** **+2.2**
PVCP Virac 2.05 314 *e*P **Pn** **08 26 13.4** **-1.8**
PVCP *e*S **Sg** **08 26 49.9** **+3.6**
MSLP Maasin 2.19 202 *e*P **Pb** **08 26 18.7** **-1.4**
MSLP *e*S **Sg** **08 26 53.5** **+3.0**
BUTP Butuan 3.19 181 *e*P **Pb** **08 26 34.0** **-3.2**
BUTP *e*S **Sg** **08 27 23.0** **+0.3**
GUIM Jordan 3.40 243 *e*P **Pb** **08 26 37.4** **-3.5**
GUIM *e*S **Sn** **08 27 10.3** **-4.1**
BUKP Musuan 4.32 188 *e*P **Pb** **08 26 52.6** **-3.8**
BUKP *e*S **Sn** **08 27 41.1** **+4.1**
GUMO Guam 18.76 84 LR LR 08 35 23.3
comp=Z,27nm,21.5s,baz=281,slow=31
BATI Baumata 22.33 185 P **P** **08 30 39.6** **+0.9**
23nm,0.6s,baz=323,slow=20,SNR=3.3
JHJ Hachijo jima 2 24.52 30 LR LR 08 39 56.8
comp=Z,30nm,21.1s,baz=99,slow=35
KSRS Korea Array 25.25 4 P P 08 31 16.6 +10
0.9nm,0.6s,baz=180,slow=11,SNR=5.5
CMAR Chiang Mai Arr 26.52 287 P **P** **08 31 18.7** **0.0**
1.7nm,0.8s,baz=95,slow=9.5,SNR=6.6
CMAR LR LR 08 42 29.0
comp=Z,23nm,18.5s,baz=190,slow=38
ASAR Alice Springs 36.52 167 P **P** **08 32 45.6** **-0.9**
0.4nm,0.5s,baz=345,slow=7.1,SNR=9.3
SONM Songino Array 39.04 339 P **P** **08 33 07.2** **-0.6**
0.3nm,0.3s,baz=145,slow=11,SNR=2.7
H11S3 WAKE ISLAND Hy 39.97 76 T T 09 16 04.0
baz=249
H11S1 WAKE ISLAND Hy 39.99 76 T T 09 16 07.4
baz=249
H11S2 WAKE ISLAND Hy 39.99 76 T T 09 16 06.6
baz=249
H11N1 WAKE ISLAND Hy 40.24 74 T T 09 16 24.8
baz=266,slow=75,SNR=10
H11N2 WAKE ISLAND Hy 40.25 74 T T 09 16 23.7
baz=266,slow=75,SNR=7.6
H11N3 WAKE ISLAND Hy 40.26 74 T T 09 16 23.7
baz=266,slow=75,SNR=12
STKA Stephens Creek 46.38 161 P **P** **08 34 06.8** **-0.5**
1.4nm,0.6s,baz=345,slow=12,SNR=2.6
MKAR Makanchi Array 50.17 322 P **P** **08 34 37.1** **+0.5**
1.3nm,0.7s,baz=114,slow=8.8,SNR=10
KURBB Kurchatov Arra 54.19 325 P **P** **08 35 06.8** **+0.4**
2.4nm,0.7s,baz=124,slow=7.2,SNR=22
BVAR Borovoye Array 59.78 325 P **P** **08 35 46.1** **+0.2**
1.5nm,0.9s,baz=119,slow=9.3,SNR=7.1
KIRV Kirov 72.54 328 LR LR 09 11 34.2
comp=Z,21nm,18.3s,baz=187,slow=38
ILAR Eielson Array 77.99 26 P **P** **08 37 41.1** **+2.0**
0.1nm,0.6s,baz=231,slow=5.2,SNR=3.2
FINES FINESS Array B 83.95 332 P **P** **08 38 10.4** **-0.5**
4.2nm,1.1s,baz=72,slow=6.2,SNR=6.6

*ISCJB **09** 08:31:50.8±0.5, 24°.92N±0°.03×122°.23E±0°.02, h113km±4km, Error ellipse: s-maj=4.9km s-min=2.9km az=167.7*
*JMA **09** 08:31:50.4±0.3, 24°.84N×122°.22E, h117km±4km, M2.2*
*TAP **09** 08:31:51.0, 24°.94N×122°.21E, h112km, ML3.3, B*
ISC 09 08:31:51.0±1.5, 24°.93N±0°.05×122°.22E±0°.03, h113km±8km, n72, σ0°53/120, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao 0.23 291**			*i* P	**Pn**	**08 32 06.8**	**0.0**
baz=288
TWB1 *e*S **Sn** **08 32 18.6** **-0.1**
baz=288
TIPB Shuangxi 0.36 277 *e*P **Pn** **08 32 07.2** **-0.2**
baz=275
TIPB *e*S **Sn** **08 32 19.3** **-0.5**
baz=275
EOS1 EOS1 0.39 192 *i* P **Pn** **08 32 07.6** **+0.1**
baz=191
EOS1 *e*S **Sn** **08 32 20.6** **+0.7**
baz=191
NWF Wu-fen Shan 0.42 290 *e*P **Pn** **08 32 07.9** **0.0**
baz=288
WFSB Wu-fen Shan 0.42 290 *e*P **Pn** **08 32 07.9** **+0.1**
baz=288
WFSB *e*S **Sn** **08 32 20.6** **+0.3**
baz=288
TWC Suao 0.46 227 *e*P **Pn** **08 32 08.6** **+0.6**
baz=224
TWC S **Sn** **08 32 19.9** **-0.8**
baz=224
TWE Neicheng 0.54 248 *e*P **Pn** **08 32 08.4** **0.0**
baz=245
YM07 YM07 0.60 294 *i* P **Pn** **08 32 09.0** **+0.1**
baz=293
YM07 *e*S **Sn** **08 32 22.3** **-0.1**
baz=293
YM01 YM01 0.63 290 *e*P **Pn** **08 32 09.1** **-0.1**
baz=289
YM01 *i* S **Sn** **08 32 22.5** **-0.3**
baz=289
NHDH Xindian Distri 0.63 273 *e*P **Pn** **08 32 08.3** **-0.8**
baz=272
YM05 YM05 0.64 292 *i* P **Pn** **08 32 09.2** **0.0**
baz=290
YM05 *e*S **Sn** **08 32 22.9** **-0.1**
baz=290
NANB Nanao 0.66 221 *i* P **Pn** **08 32 09.6** **+0.2**
baz=219
NANB *i* S **Sn** **08 32 23.2** **+0.1**
baz=219
YM04 YM04 0.66 290 *e*P **Pn** **08 32 09.2** **-0.2**
baz=289
ENTT Nioudou 0.66 244 *i* P **Pn** **08 32 09.4** **0.0**
baz=242
ENTT *e*S **Sn** **08 32 24.3** **+1.1**
baz=242
TWY Chenhua 0.66 302 *e*P **Pn** **08 32 09.2** **-0.1**
baz=301
ENA Nanau 0.66 221 *i* P **Pn** **08 32 09.6** **+0.2**
baz=219
ENA *e*S **Sn** **08 32 23.5** **+0.3**
baz=219
NWLT Wulai 0.67 257 *e*P **Pn** **08 32 09.0** **-0.5**
baz=255
NWLT *e*S **Sn** **08 32 23.7** **+0.3**
baz=255
PCYT Pengchaiyu 0.71 349 *i* P **Pn** **08 32 09.9** **+0.1**
baz=349
NDT Datong Townshi 0.72 243 P **Pn** **08 32 10.3** **+0.4**
baz=242
NDT *e*S **Sn** **08 32 24.6** **+0.5**
baz=242
YHNB Yeheng 0.81 252 *e*P **Pn** **08 32 10.6** **-0.1**
baz=250
YHNB *e*S **Sn** **08 32 25.2** **-0.3**
baz=250
JYNG Yonagunijimaku 0.81 126 P **Pn** **08 32 09.3** **-1.4**
JYNG *e*S **Sn** **08 32 25.5** **+0.1**
NSK Sanguang 0.82 252 P **Pn** **08 32 10.7** **-0.1**
baz=251
NSK *i* S **Sn** **08 32 25.4** **-0.3**
baz=251
YOJ Yonaguni jima 0.86 123 *e*P **Pn** **08 32 11.0** **-0.1**
baz=123
YOJ *e*S **Sn** **08 32 26.5** **+0.4**
baz=123
YOJ Yonaguni jima 0.86 123 P **Pn** **08 32 10.9** **-0.1**
YOJ *e*S **Sn** **08 32 26.8** **+0.7**
WLTB Daxi 0.88 265 *e*P **Pn** **08 32 11.6** **+0.3**
baz=264
WLTB *e*S **Sn** **08 32 27.7** **+1.1**
baz=264
NNSB Datong 0.91 237 *e*P **Pn** **08 32 12.1** **+0.3**
baz=236
NNSB *e*S **Sn** **08 32 27.3** **0.0**
baz=236
NNS Nan Shan 0.91 238 *e*P **Pn** **08 32 12.0** **+0.3**
baz=236
NNS *i* S **Sn** **08 32 27.0** **-0.3**
baz=236
NCUH Zhongli 0.94 273 *e*P **Pn** **08 32 12.1** **+0.2**
baz=271
NCUH *e*S **Sn** **08 32 27.8** **+0.2**
baz=271
NACB Ninganchiao 0.94 217 *e*P **Pn** **08 32 11.6** **-0.3**
baz=216
NACB *e*S **Sn** **08 32 27.0** **-0.7**
baz=216
ETLH Xiulin Townshi 0.98 223 *e*P **Pn** **08 32 12.3** **-0.1**
baz=222
ETLH *e*S **Sn** **08 32 27.8** **-0.7**

baz=222
TWD Chiawan 1.02 214 *e*P **Pn 08 32 12.5 -0.2**
baz=212
TWD *e*S **Sn 08 32 28.3 -0.7**
baz=212
LIOB Emei 1.13 256 *e*P **Pn 08 32 13.8 -0.1**
baz=255
LIOB *i* S **Sn 08 32 31.0 -0.1**
baz=255
SBCB Hsinchu 1.13 263 *e*S **Sn 08 32 30.7 -0.3**
baz=262
NSTT Nanjuang 1.15 255 *e*P **Pn 08 32 13.8 -0.2**
baz=254
NSTT *e*S **Sn 08 32 30.9 -0.5**
baz=254
TWT Tachien 1.17 235 *e*P **Pn 08 32 14.4 0.0**
baz=234
TWT *e*S **Sn 08 32 32.5 +0.5**
baz=234
ENLB Shoufeng 1.17 209 *i* S **Sn 08 32 31.9 +0.2**
baz=208
WHF Hehuan Shan 1.17 228 *e*P **Pn 08 32 14.8 +0.1**
baz=227
WHF *e*S **Sn 08 32 32.8 +0.2**
baz=227
TDCB Techi 1.18 235 *e*P **Pn 08 32 15.2 +0.6**
baz=234
TDCB *e*S **Sn 08 32 32.7 +0.5**
baz=234
CHGB Renai 1.29 228 *e*P **Pn 08 32 16.4 +0.6**
baz=227
CHGB *e*S **Sn 08 32 34.6 0.0**
baz=227
ESL Shilin 1.32 213 *e*P **Pn 08 32 16.5 +0.5**
baz=212
WHP Taichung City 1.33 241 *i* P **Pn 08 32 16.5 +0.4**
baz=240
WHP *i* S **Sn 08 32 35.1 -0.1**
baz=240
OWD Renai 1.36 225 *i* P **Pn 08 32 16.8 +0.3**
baz=223
OWD *e*S **Sn 08 32 35.5 -0.4**
baz=223
NSY Sanyi 1.42 249 *i* P **Pn 08 32 17.3 +0.2**
baz=248
DPDB Guoxing 1.48 233 *i* P **Pn 08 32 18.3 +0.4**
baz=232
DPDB *e*S **Sn 08 32 38.8 +0.6**
baz=232
IRIF Iriomote-Funau 1.50 113 P **Pn 08 32 17.9 -0.1**
IRIF *e*S **Sn 08 32 38.3 -0.1**
VWDT VWDT 1.53 220 *i* P **Pn 08 32 18.8 +0.4**
baz=219
VWDT *i* S **Sn 08 32 39.3 +0.2**
baz=219
WDJ Dajia District 1.55 248 *e*S **Sn 08 32 39.6 0.0**
baz=247
SMLT Sun Moon Lake 1.59 229 *i* P **Pn 08 32 19.6 +0.4**
baz=228
SMLT *e*S **Sn 08 32 41.4 +0.7**
baz=228
HGSD Ruisui 1.60 207 *e*P **Pn 08 32 19.0 -0.3**
baz=206
HGSD *e*S **Sn 08 32 40.6 -0.1**
baz=206
TYC Yuchr 1.61 231 *i* P **Pn 08 32 19.8 +0.5**
baz=229
TYC *e*S **Sn 08 32 41.1 +0.3**
baz=229
SSLB Suanglung 1.62 226 *i* P **Pn 08 32 20.0 +0.5**
baz=225
SSLB *e*S **Sn 08 32 41.7 +0.6**
baz=225
EHY Hungye 1.64 210 *e*P **Pn 08 32 19.8 0.0**
baz=209
HATJ Hateruma jima 1.69 121 *e*S **Sn 08 32 41.9 -0.6**
YULB Yu-li 1.75 209 *e*P **Pn 08 32 20.0 -1.1**
baz=208
WNT Mingjian 1.75 234 *i* P **Pn 08 32 21.5 +0.4**
baz=232
WNT *e*S **Sn 08 32 44.4 +0.6**
baz=232
WHYT Xinyi Township 1.75 226 *e*P **Pn 08 32 21.9 +0.8**
baz=225
WHYT *e*S **Sn 08 32 44.7 +0.7**
baz=225
WJS Zhushan 1.75 231 *i* S **Sn 08 32 43.9 -0.1**
baz=230
JKRS Kuro-shima 1.77 113 P **Pn 08 32 20.9 -0.4**
JKRS S **Sn 08 32 44.5 +0.2**
TWF1 Yuli 1.78 208 *e*P **Pn 08 32 21.3 -0.2**
baz=207
JIJ Ishigaki jima 1.84 107 P **Pn 08 32 21.9 -0.2**
JIJ *e*S **Sn 08 32 45.3 -0.5**
ALS Alishan 1.91 223 *e*P **Pn 08 32 24.0 +0.6**
baz=221
ALS *e*S **Sn 08 32 49.7 +1.7**
baz=221
JISG Ishigakijimahi 1.93 100 S **Sn 08 32 47.8 -0.1**
CHN5 Tsauling 1.93 227 *e*S **Sn 08 32 48.5 +0.4**
baz=226
WDLH Douliu 1.97 232 *e*S **Sn 08 32 48.5 -0.3**
baz=230
CHKT Chengkung 1.98 203 *e*P **Pn 08 32 23.0 -0.9**
baz=202
CHKT *e*S **Sn 08 32 47.0 -2.1**
baz=202
ELDTW Lidau 2.05 213 *i* S **Sn 08 32 50.6 -0.2**
baz=211
TPUB Ta-pu 2.18 222 *e*S **Sn 08 32 53.4 -0.1**
baz=221
JTJ Tarama 2.27 97 P **Pn 08 32 28.1 +0.5**
JTJ S **Sn 08 32 56.9 +1.2**
TWK Hsinying 2.29 224 *e*P **Pn 08 32 28.2 +0.3**
baz=223
TWK *e*S **Sn 08 32 56.2 0.0**
baz=223
CHN1 Nanshi 2.33 222 *e*S **Sn 08 32 56.8 -0.1**
baz=221
MATB Ma-tsu 2.39 301 *e*P **Pn 08 32 27.8 -1.3**
baz=300
JIRB Irabujima 2.68 92 S **Sn 08 33 06.4 +1.2**

MAN 09 08:50:44.4, 10°.27N×125°.07E, h27km, mb3.6, ML2.3, MS1.8, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.25**	**236**	*e*P	Pn	08 50 51.9	-0.4
MSLP				*e*S	Sb	08 51 00.2	+4.9
PLP	**Palo**	**0.89**	**355⇓**	*e*P	Pn	08 51 00.9	-0.3
PLP				*e*S	Sn	08 51 13.6	+0.4

MAN 09 08:55:54.1, 10°.04N×125°.21E, h30km, mb3.8, ML2.5, MS2.1, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.36**	**285**	*e*P	Pn	08 56 04.1	+0.8
MSLP				*e*S	Sn	08 56 10.8	+1.4
PLP	**Palo**	**1.14**	**348⇓**	*e*P	Pn	08 56 12.8	-1.3
PLP				*e*S	Sn	08 56 26.1	-2.6
OCLP	**Ormoc**	**1.17**	**329**	*e*P	Pn	08 56 13.8	-0.6
OCLP				*e*S	Sn	08 56 29.5	+0.2
BESP	**Borongan**	**1.56**	**8**	*e*P	Pn	08 56 20.2	+0.3
BESP				*e*S	Sn	08 56 38.1	-1.0
CNP	**Cataraman**	**2.51**	**348**	*e*P	Pn	08 56 35.3	+2.4
CNP				*e*S	Sn	08 57 04.6	+2.1

MAN 09 09:05:08.7, 9°.15N×126°.82E, h1km, mb4.7, ML3.6, MS3.5, Mindanao

*IDC **09** 09:05:50.1±0.9, 29°.08N×142°.49E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.6/55, mbtmp3.8/10, ML2.9/1, Error ellipse: s-maj=33.4km s-min=20.5km az=76.0*
*ISCJB **09** 09:05:52.3±0.5, 29°.13N±0°.07×142°.4E±0°.1, h27km, mb4.1/14, Error ellipse: s-maj=17.0km s-min=9.1km az=166.3*
*NEIC **09** 09:05:52.4±1.1, 29°.12N×142°.54E, h15km±6km, mb4.6/5, Error ellipse: s-maj=24.8km s-min=19.3km az=85.0*
ISC 09 09:05:54.2±0.8, 29°.2N±0°.1×142°.6E±0°.1, h27km, n25, σ0s96/25, mb4.1/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**8.22**	**334**	Pn	Pn	09 07 50.9	-0.9
	0.1nm,0.3s,baz=160,slow=10,SNR=12						
MAJO	**Matsushiro**	**8.22**	**334**	*e*Pn	Pn	09 07 52.0	+0.3
MJB9	**Matsu-Tunnel**	**8.23**	**334**	*e*Pn	Pn	09 07 52.0	+0.1
ERM	**Erimo**	**12.82**	**2**	*e*Pn	Pn	09 08 52.2	-2.4
SONA0	**Songino Array**	**33.51**	**314**	*e*P	P	09 12 32.5	+1.0
SONM	**Songino Array**	**33.51**	**314**	P	P	09 12 32.5	+1.0
	1.1nm,0.6s,baz=101,slow=7.5,SNR=2.6						
MTN	**Manton Dam**	**43.22**	**196**	*e*P	P	09 13 52.5	-0.7
	26nm,1.4s						
ZALV	**Zalesovo Beam**	**48.18**	**318**	P	P	09 14 32.6	+0.5
	1.2nm,0.6s,baz=88,slow=8.9,SNR=2.1						
ZAA1	**Zalesovo Array**	**48.18**	**318**	*e*P	P	09 14 32.6	+0.5
MK32	**Makanchi Array**	**49.46**	**308**	*e*P	P	09 14 41.1	-0.9
MKAR	**Makanchi Array**	**49.46**	**308**	P	P	09 14 41.1	-1.0
	0.6nm,0.6s,baz=89,slow=10,SNR=5.4						
WB2	**Warramunga Arr**	**49.48**	**190**	*e*P	P	09 14 42.0	-0.4
	9.1nm,1.3s						
WR1	**Warramunga Arr**	**49.48**	**190**	*e*P	P	09 14 41.6	-0.8
WRA	**Warramunga Arr**	**49.48**	**190**	P	P	09 14 41.6	-0.8
	2.1nm,0.7s,baz=3.7,slow=7.9,SNR=6.6						
ASAR	**Alice Springs**	**53.20**	**190**	P	P	09 15 08.9	-1.3
	0.3nm,0.5s,baz=2.6,slow=5.2,SNR=5.7						
ILB	**Eielson Array**	**55.71**	**29**	*e*P	P	09 15 28.0	0.0
	3.2nm,1.5s						
BVAR	**Borovoye Array**	**56.78**	**317**	P	P	09 15 35.7	-0.1
	1.4nm,0.6s,baz=90,slow=9.2,SNR=9.2						
KK31	**Karatay Array**	**58.19**	**305**	*e*P	P	09 15 45.7	-0.3
	2.6nm,0.5s						
ABKAR	**Akbulak array**	**63.92**	**314**	*e*P	P	09 16 24.6	-0.1
	2.0nm,0.6s						
YKA	**Yellowknife Ar**	**70.14**	**29**	P	P	09 17 04.4	+0.5
	0.5nm,0.6s,baz=296,slow=6.2,SNR=4.4						
YKB5	**Yellowknife Ar**	**70.14**	**29**	*e*P	P	09 17 04.4	+0.5
FIA0	**FINESS Array S**	**76.25**	**334**	*e*P	P	09 17 40.0	0.0
FINES	**FINESS Array B**	**76.25**	**334**	P	P	09 17 40.0	0.0
	0.9nm,0.9s,baz=64,slow=9.6,SNR=2.7						
NV01	**Mina Array Sit**	**78.94**	**52**	*e*P	P	09 17 57.5	+1.7
NVAR	**Mina Array Bea**	**78.94**	**52**	P	P	09 17 57.5	+1.7
	0.2nm,0.5s,baz=295,slow=6.5,SNR=3.9						

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*ANF **09** 09:06:49.8±2.5, 43°.94N×128°.74W, ML3.6/4, Error ellipse: s-maj=28.0km s-min=7.1km az=62.0*
*IDC **09** 09:06:49.3±2.8, 44°.14N×128°.94W, h0km, mb3.2/3, mb1 3.6/8, mb1mx3.4/56, mbtmp3.3/8, ML3.3/4, MS3.2/10, Ms1 3.2/10, ms1mx3.0/15, Error ellipse: s-maj=59.8km s-min=18.8km az=49.0*
*ISCJB **09** 09:06:52.0±0.7, 44°.18N±0°.05×128°.64W±0°.07, h15km, mb3.8/12, MS3.1/5, Error ellipse: s-maj=9.0km s-min=4.3km az=139.8*
*NEIC **09** 09:06:53.7±2.7, 44°.16N×128°.69W, h10km, mb3.9/22, Error ellipse: s-maj=25.5km s-min=18.0km az=229.0*
ISC 09 09:06:52.6±1.4, 44°.03N±0°.09×128°.8W±0°.1, h15km, n88, σ2s01/76, mb3.9/12, MS3.1/5, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.46**	**108**	*e*Pn	Pn	09 07 42.5	-3.4
I02D	**Swisshome**	**3.58**	**87**	P	Pn	09 07 45.7	-1.8
	baz=273						
J01E	**Myrtle Point**	**3.65**	**102**	P	Pn	09 07 46.1	-2.3
	baz=288						
J01E				S	Sn	09 08 30.3	-0.9
	baz=288						
I03D	**Drain, OR**	**3.96**	**93**	P	Pn	09 07 51.5	-1.3
	baz=279,SNR=47						
K02D	**Willamette Mer**	**3.98**	**108**	P	Pn	09 07 50.5	-2.6
	baz=294						
K02D				S	Sn	09 08 37.8	-1.7
	baz=294						
COR	**Corvallis**	**3.99**	**80**	*e*Pn	Pn	09 07 52.7	-0.5
G03D	**McMinnville, O**	**4.13**	**71**	P	Pn	09 07 53.8	-1.3
	baz=257,SNR=11						
L02E	**Cave Junction**	**4.25**	**114**	S	Sn	09 08 44.7	-1.3
	baz=300						
H04D	**Lebanon**	**4.39**	**81**	P	Pn	09 07 57.5	-1.2
	baz=267,SNR=16						
HUMO	**Hull Mountain**	**4.50**	**106**	*e*Pn	Pn	09 07 58.9	-1.3
HUMO				*e*Sn	Sn	09 08 52.5	+0.2
I04A	**Tendick Farm,**	**4.63**	**91**	P	Pn	09 08 00.2	-1.8
	baz=277,SNR=10						
H04A	**Detroit Lake**	**4.80**	**80**	*e*Pn	Pn	09 08 03.7	-0.5
NLWA	**Neilton Lookou**	**4.83**	**44**	*e*Pn	Pn	09 08 03.2	-1.5
J04D	**Umpqua Nationa**	**4.93**	**97**	P	Pn	09 08 04.4	-1.8
	baz=283,SNR=8.7						
YBH	**Yreka Blue Hor**	**5.03**	**115**	Pn	Pn	09 08 09.4	+1.8
	0.1nm,0.3s,baz=282,slow=8.3,SNR=4.2						
YBH				Sn	Sn	09 09 04.7	-0.8
	0.1nm,0.3s,baz=151,slow=19,SNR=2.5						
L04D	**Klamath Falls**	**5.09**	**109**	P	Pn	09 08 08.3	-0.1
	baz=295						
D04E	**Lakebay**	**5.28**	**51**	P	Pn	09 08 09.9	-1.0
	baz=236						
D03D	**Eldon**	**5.32**	**47**	P	Pn	09 08 09.6	-1.8
	baz=231						
G05D	**Wamic, OR**	**5.48**	**75**	P	Pn	09 08 13.0	-0.8
	baz=261						
F05D	**White Salmon**	**5.54**	**68**	P	Pn	09 08 13.6	-0.8
	baz=254						
J05D	**Fort Rock, OR**	**5.55**	**95**	P	Pn	09 08 13.7	-0.9
	baz=282						
LON	**Longmire**	**5.63**	**59**	*e*Pn	Pn	09 08 15.6	-0.2
PINE	**Pine Mountain**	**5.69**	**90**	*e*Pn	Pn	09 08 16.2	-0.5
D05A	**Enumclaw**	**5.74**	**54**	*e*Pn	Pn	09 08 17.5	+0.3
K05A	**Summer Lake**	**5.92**	**100**	*e*Pn	Pn	09 08 19.5	-0.3
B05A	**Bryant**	**6.30**	**45**	P	Pn	09 08 24.1	-0.8
	baz=230,SNR=18						
A04D	**Lummi Island**	**6.31**	**40**	P	Pn	09 08 23.7	-1.3
	baz=224						
LTY	**Liberty**	**6.56**	**58**	*e*Pn	Pn	09 08 28.6	+0.1
I07A	**Izee**	**6.71**	**86**	*e*Pn	Pn	09 08 31.5	+0.9
B06A	**Marblemount**	**6.78**	**46**	*e*Pn	Pn	09 08 30.8	-0.6
G08A	**Pilot Rock**	**7.14**	**76**	*e*Pn	Pn	09 08 36.7	+0.2
J08A	**Circle Bar Ran**	**7.52**	**92**	*e*Pn	Pn	09 08 44.9	+3.1
BEKR	**Beckworth**	**7.54**	**121**	*e*Pn	Pn	09 08 48.3	+6.2
D08A	**Wollman Farm,**	**7.58**	**63**	*e*Pn	Pn	09 08 42.4	+0.1
AFDM	**Forest Hills D**	**7.77**	**128**	*e*Pn	Pn	09 08 47.3	+2.2
LLLB	**Lilooet**	**8.09**	**33**	*e*Pn	Pn	09 08 48.3	-1.2
C09A	**Chrisman Ranch**	**8.26**	**59**	*e*Pn	Pn	09 08 50.6	-1.1
F10A	**Beach Ranch, E**	**8.44**	**73**	*e*Pn	Pn	09 08 58.7	+4.4
YERR	**Yerington**	**8.77**	**122**	*e*Pn	Pn	09 09 01.1	+2.2
NEW	**Newport**	**9.15**	**58**	LR	LR	09 12 29.6	
	comp=Z,161nm,19.3s,baz=264,slow=37						
NV01	**Mina Array Sit**	**9.69**	**122**	*e*Pn	Pn	09 09 13.3	+1.7
NVAR	**Mina Array Bea**	**9.69**	**122**	Pn	Pn	09 09 13.3	+1.7
	0.1nm,0.3s,baz=291,slow=12,SNR=5.8						
HLID	**Hailey**	**10.42**	**88**	*e*Pn	Pn	09 09 26.4	+4.9
ELK	**Elko**	**10.56**	**103**	Pn	Pn	09 09 26.2	+2.6
	baz=294,slow=10,SNR=4.8						
ELK				LR	LR	09 13 37.3	
	comp=Z,63nm,21.8s,baz=290,slow=38						
MSO	**Missoula**	**10.82**	**70**	*e*Pn	Pn	09 09 29.5	+2.5
MCMT	**McKenzie Canyo**	**11.45**	**80**	*e*Pn	Pn	09 09 39.7	+4.1
YMR	**Madison River**	**12.79**	**81**	*e*Pn	Pn	09 09 57.8	+3.8
IMW	**Indian Meadow**	**12.88**	**84**	*e*Pn	Pn	09 09 59.2	+3.9
YPP	**Pitchstone Pla**	**12.94**	**83**	*e*Pn	Pn	09 10 00.0	+4.0
FLWY	**Flagg Ranch**	**13.03**	**83**	*e*Pn	Pn	09 10 01.2	+3.9
H17A	**Grant Village**	**13.09**	**82**	*e*Pn	Pn	09 10 03.1	+5.0
KNB	**Kanab**	**14.02**	**114**	*e*Pn	Pn	09 10 14.1	+3.4
PDAR	**Pinedale Array**	**14.06**	**88**	Pn	Pn	09 10 14.8	+3.5
	0.1nm,0.3s,baz=270,slow=10,SNR=3.1						
PDAR				LR	LR	09 15 57.6	
	comp=Z,103nm,19.5s,baz=286,slow=39						
PFO	**Pinyon Flats O**	**14.15**	**133**	LR	LR	09 15 18.3	
	comp=Z,53nm,18.6s,baz=327,slow=36						
DLBC	**Dease Lake**	**14.45**	**357**	LR	LR	09 14 33.7	
	comp=Z,94nm,19.6s,baz=206,slow=32						
LAO	**LASA Array**	**16.09**	**73**	*e*Pn	P	09 10 41.0	-0.4
	10nm,1.1s						
PV01	**Paradox Valley**	**16.34**	**104**	*e*Pn	Pn	09 10 43.0	+1.4
	7.2nm,1.1s						
MVCO	**Mesa Verde**	**16.84**	**107**	*e*Pn	Pn	09 10 49.0	+1.1
	6.7nm,1.1s						
ANMO	**Albuquerque**	**19.44**	**110**	P	Pn	09 11 20.9	+1.1
	0.1nm,0.3s,baz=311,slow=12,SNR=6.5						
ANMO	**Albuquerque**	**19.44**	**110**	*e*P	Pn	09 11 23.7	+3.9
	1.9nm,0.8s						
LENM	**Lemitar**	**19.55**	**113**	*e*P	Pn	09 11 23.5	+2.4
T25A	**Trinidad**	**19.73**	**102**	*e*P	Pn	09 11 24.7	+1.4
	7.5nm,1.1s						
YKA	**Yellowknife Ar**	**20.27**	**19**	P	P	09 11 26.0	-1.2
	0.4nm,0.4s,baz=211,slow=11,SNR=5.7						
YKB5	**Yellowknife Ar**	**20.27**	**19**	*e*P	P	09 11 26.0	-1.2
FFC	**Flin Flon**	**20.36**	**49**	*e*P	P	09 11 27.8	-0.5
	71nm,0.8s						
DHY	**Denali Highway**	**21.88**	**337**	*e*P	P	09 11 45.4	+0.6
	4.9nm,1.1s						
EGAK	**Eagle**	**21.92**	**346**	*e*P	P	09 11 42.7	-2.3
	5.7nm,1.4s						
EPYK	**Eagle Plains**	**22.81**	**352**	*e*P	P	09 11 53.5	-1.0
	18nm,1.5s						
ULM	**Lac du Bonnet**	**23.12**	**63**	LR	LR	09 21 38.1	
	comp=Z,48nm,20.7s,baz=337,slow=38						
ILAR	**Eielson Array**	**23.13**	**340**	P	P	09 11 54.8	-2.9
	0.8nm,0.9s,baz=152,slow=8.7,SNR=10						
ECSD	**EROS Data Cent**	**23.14**	**79**	*e*P	P	09 11 57.6	-0.5
	5.9nm,1.0s						
WRH	**Wood River Hil**	**23.19**	**339**	*e*P	P	09 11 58.0	-0.4
	4.9nm,1.2s						
INK	**Inuvik**	**24.47**	**356**	LR	LR	09 20 55.5	
	comp=Z,66nm,19.5s,baz=1.0,slow=35						
LTX	**Lajitas**	**24.80**	**118**	*e*P	P	09 12 13.7	-0.4
TXAR	**Lajitas Array**	**24.80**	**118**	P	P	09 12 13.7	-0.4
	0.5nm,0.7s,baz=300,slow=7.2,SNR=6.1						
TXAR				LR	LR	09 23 18.7	
	comp=Z,30nm,18.1s,baz=0.0,slow=40						
WMOK	**Wichita Mounta**	**24.88**	**102**	*e*P	P	09 12 16.1	+1.4
	3.9nm,0.8s						
COLD	**Coldfoot**	**25.92**	**341**	*e*P	P	09 12 27.7	+4.0
	2.3nm,0.8s						
JCT	**Junction City**	**26.60**	**111**	*e*P	P	09 12 32.6	+2.3
	3.8nm,1.0s						
TOLK	**Toolik Lake Re**	**26.93**	**343**	*e*P	P	09 12 33.7	+0.8
	2.3nm,0.8s						
L46A	**Eue Claire**	**30.90**	**79**	*e*P	P	09 13 07.1	-1.3
	5.3nm,0.8s						
SCHQ	**Schefferville**	**40.45**	**52**	LR	LR	09 29 28.3	
	comp=Z,63nm,20.7s,baz=21,slow=34						
H11N3	**WAKE ISLAND Hy**	**58.18**	**267**	T	T	10 19 22.0	
	baz=49,slow=75,SNR=1627						
H11N2	**WAKE ISLAND Hy**	**58.19**	**267**	T	T	10 19 18.8	
	baz=49,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**58.20**	**267**	T	T	10 19 20.3	
	baz=49,slow=75,SNR=528						
H11S1	**WAKE ISLAND Hy**	**59.11**	**266**	T	T	10 20 34.6	
	baz=50,slow=75,SNR=115						
H11S2	**WAKE ISLAND Hy**	**59.12**	**266**	T	T	10 20 31.3	
	baz=50,slow=75,SNR=84						
H11S3	**WAKE ISLAND Hy**	**59.13**	**266**	T	T	10 20 35.9	
	baz=50,slow=75,SNR=90						
NOA	**NORSAR Array B**	**70.37**	**19**	LR	LR	09 50 36.4	
	comp=Z,16nm,18.1s,baz=330,slow=37						

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*ISCJB **09** 09:09:35.5±1.9, 14°.5N±0°.1×92°.69W±0°.10, h62km, Error ellipse: s-maj=22.6km s-min=7.2km az=32.0*
*MEX **09** 09:09:37.7±0.6, 14°.57N×92°.61W, h75km±17km, MD3.4*
*GCG **09** 09:09:37.4±0.4, 14°.41N×92°.52W, h28km±164km, MD3.5*
ISC 09 09:09:35.9±3.0, 14°.5N±0°.2×92°.7W±0°.1, h62km, n6, σ0s52/10, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.59**	**43**	*e*P	Pn	09 09 49.1	+0.1
THIG				*e*S	Sn	09 09 59.2	+0.6
STG3	**Santiaguito 3,**	**1.10**	**77**	*e*P	Pn	09 09 55.7	+0.1
STG3				*e*S	Sn	09 10 09.7	-0.4
PCIG		**1.33**	**337**	*i* P	Pn	09 09 58.8	+0.4
PCIG				*e*S	Sn	09 10 14.4	-0.9
FUG	**Fuego 3**	**1.78**	**91**	*e*P	Pn	09 10 04.5	-0.1
FUG				*e*S	Sn	09 10 26.0	-0.3
PCG	**Pacaya**	**2.01**	**92**	*e*P	Pn	09 10 08.3	+0.5
IXG	**Ixpaco**	**2.19**	**98**	*e*S	Sn	09 10 36.0	-0.3

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*ISCJB **09** 09:10:23.6±1.1, 32°.96N±0°.03×34°.77E±0°.06, h8km±5km, Error ellipse: s-maj=9.7km s-min=3.9km az=22.8*
*GRAL **09** 09:10:23.9±0.3, 32°.90N×34°.69E, h9km±6km, MD3.0*
*GII **09** 09:10:24.4±0.0, 32°.96N×34°.80E, h10km, MD1.5/4*
*NSSC **09** 09:10:25.0±0.5, 34°.07N×34°.95E, h23km±4km, ML1.9*
ISC 09 09:10:24.4±1.6, 32°.97N±0°.04×34°.80E±0°.08, h15km±8km, n18, σ0s73/32, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNTI	**Hanita**	**0.33**	**70**	Pg	Pg	09 10 31.2	-0.1
HNTI				Sg	Sg	09 10 36.7	+0.6
OFRI	**`Ofer**	**0.38**	**156**	Pg	Pg	09 10 32.3	+0.2
OFRI				Sg	Sg	09 10 37.4	0.0
MMA0B	**Mount Meron ar**	**0.51**	**84**	Pg	Pg	09 10 34.7	+0.2
MMA0B				Sg	Sb	09 10 42.6	+0.3
MMLI	**Mount Malkishu**	**0.74**	**135**	Pg	Pg	09 10 38.2	-0.7
MMLI				Sg	Sg	09 10 48.5	-0.2
SLTI	**Sal'it**	**0.75**	**164**	Pg	Pg	09 10 38.2	-0.9
SLTI				Sg	Sg	09 10 48.9	-0.1
KSDI	**Kefar Szold**	**0.76**	**73**	Pg	Pg	09 10 38.9	-0.2
KSDI				Sg	Sg	09 10 49.6	+0.5
GEM	**Giv'at Ha'Em**	**0.76**	**71**	Pg	Pg	09 10 39.2	-0.1
GEM				Sg	Sg	09 10 49.7	+0.3
NATI	**Neve Ativ**	**0.84**	**69**	Pg	Pg	09 10 40.4	-0.3
NATI				Sg	Sb	09 10 52.6	+0.9
KSHT	**Keshet**	**0.85**	**89**	Pg	Pg	09 10 40.9	0.0
HMDT	**Nahal Hemdat**	**0.94**	**139**	Pg	Pg	09 10 41.8	-0.8
HMDT				Sg	Sb	09 10 55.2	+0.6
DQRL	**Deir Qamar**	**0.98**	**41**	*e*P	Pg	09 10 43.1	-0.3
DQRL				*e*S	Sb	09 10 57.2	+1.3
RCY	**Rachaya**	**1.02**	**58**	*e*P	Pg	09 10 43.7	-0.4
RCY				*e*S	Sb	09 10 58.3	+1.3
BRBR	**Barbar**	**1.06**	**65**	*e*P	Pg	09 10 43.9	-1.1
BRBR				*e*S	Sg	09 10 58.2	-0.7
BRBR				AML	AML	09 11 01.3	
	comp=E,46nm,0.5s						
BRBR				AML	AML	09 11 01.4	
	comp=N,52nm,0.2s						
BHL	**Bhannes**	**1.18**	**37**	*e*P	Pb	09 10 46.1	-0.4
QASN	**Qassioun**	**1.36**	**65**	*e*P	Pn	09 10 47.3	-1.6
TOTH	**TOTAH**	**1.42**	**74**	*e*P	Pn	09 10 50.5	+0.7
TOTH				*e*S	Sn	09 11 07.3	-0.9
TOTH				AML	AML	09 11 11.8	
	comp=E,34nm,0.2s						
TOTH				AML	AML	09 11 12.2	
	comp=N,16nm,0.3s						
DSI	**Dead Sea**	**1.48**	**160**	Pn	Pn	09 10 50.2	-0.3
YTIR	**Yattir**	**1.62**	**170**	Pn	Pn	09 10 53.3	+0.8
YTIR				Sn	Sn	09 11 14.1	+0.9

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*TIR **09** 09:22:16.3, 41°.11N×20°.20E, h7km, Md3.1/4*
*PDG **09** 09:22:18.1±0.2, 41°.20N×20°.19E, h1km, ML2.5/11, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*
*SKO **09** 09:22:18.3, 41°.17N×20°.14E, h0km, M1.8, ML2.2*
ISC 09 09:22:17.0±1.4, 41°.05N±0°.06×20°.12E±0°.03, h4km±10km, n26, σ1s24/49, 6C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**327**	*e*Pg	Pg	09 22 23.5	-0.3
TIR	**Tirane**	**0.35**	**327**	*i* PG	Pg	09 22 23.7	-0.2
TIR				*i* SG	Sg	09 22 29.2	+0.7
OHR	**Ohrid**	**0.51**	**83**	*i* Pg	Pg	09 22 27.1	+0.2
OHR				*i* Sg	Sg	09 22 34.6	+1.1
OHR				*e*Lg	Lg	09 22 34.8	
	comp=N,123nm,0.3s						
OHR				*e*Lg	Lg	09 22 36.3	
	comp=E,121nm,0.4s						
PHP	**Peshkopia**	**0.68**	**21**	*i* PG	Pg	09 22 28.5	-1.5
PHP				*i* SG	Sg	09 22 37.8	-1.0
KRUS	**Krusevo**	**0.91**	**69

TTG	Podgorica	1.52	335	⇑ *i* Pg	Pn	09 22 44.2	-0.8
TTG				*e*Sg	Sg	09 23 06.7	+0.8
PVY	Plav	1.55	355	⇑ *i* Pg	Pn	09 22 43.8	-1.7
PVY				*e*Sg	Sn	09 23 06.5	+0.4
BUM	Brajici-Budva	1.55	324	⇑ *i* Pg	Pn	09 22 45.2	-0.3
BUM				*e*Sg	Sg	09 23 08.4	+1.5
STIP	Stip	1.68	67	*i* Pg	Pg	09 22 50.5	+1.3
STIP				*i* Sg	Sg	09 23 16.0	+5.0
CEME	Cevo	1.75	329	⇓ *i* Pn	Pn	09 22 48.4	+0.2
CEME				*e*Sn	Sg	09 23 13.7	+0.6
IVA	Berane	1.83	355	⇓ *i* Pn	Pn	09 22 49.5	+0.2
IVA				*e*Sn	Sb	09 23 15.0	+0.6
HCY	Herceg Novi	1.85	319	⇓ *i* Pn	Pb	09 22 51.4	-0.1
HCY				*e*Sn	Sg	09 23 16.8	+0.3
KOME	Kolasin	1.85	346	⇓ *i* Pn	Pn	09 22 49.8	+0.1
KOME				*e*Sn	Sb	09 23 16.3	+1.1
VAY	Valandovo	1.87	81	*i* Pg	Pb	09 22 51.2	-0.4
VAY				*e*Sg	Sb	09 23 15.7	+0.3
VAY				*e*Lg	Lg	09 23 19.5	
	comp=E,12nm,0.7s						
VAY				*e*Lg	Lg	09 23 20.3	
	comp=N,10.0nm,0.5s						
NKME	Niksic	1.92	333	⇓ *i* Pn	Pn	09 22 51.1	+0.5
NKME				*e*Sn	Sb	09 23 18.2	+1.1
NKY	Niksic	1.95	335	⇓ *i* Pn	Pn	09 22 51.6	+0.5
NKY				*e*Sn	Sb	09 23 18.3	+0.3
KNT	Kendrikon	2.10	86	*i* Pg	Pb	09 22 54.9	-0.8
UPM	Unac-Piva	2.33	338	⇑ *i* Pn	Pn	09 22 56.9	+0.5
UPM				*e*Sn	Sn	09 23 27.6	+2.0
VTS	Vitosha	2.80	55	*e*Pn	Pn	09 23 03.5	+0.7

MAN 09 09:35:10.7, 12°.12N×126°.07E, h42km, mb4.3, ML3.2, MS2.9, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.80	230	*e*P	Pn	09 35 26.3	+0.7
BESP				*e*S	Sn	09 35 38.0	+1.7
PLP	Palo	1.43	229	⇓ *e*P	Pn	09 35 35.5	+1.3
PLP				*e*S	Sn	09 35 52.4	+0.7
CNP	Catarman	1.43	286	*e*P	Pn	09 35 34.2	+0.1
CNP				*e*S	Sn	09 35 53.2	+1.5

MAN 09 10:01:51.4, 12°.13N×125°.83E, h68km, mb4.0, ML2.8, MS2.4, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.65	216	*e*P	Pn	10 02 07.3	+1.8
BESP				*e*S	Sn	10 02 19.1	+3.2
CNP	Catarman	1.20	289	*e*P	Pn	10 02 13.2	+0.9
CNP				*e*S	Sn	10 02 29.7	+1.7
PLP	Palo	1.26	221	⇓ *e*P	Pn	10 02 15.8	+2.6
PLP				*e*S	Sn	10 02 31.1	+1.6
OCLP	Ormoc	1.60	228	*e*P	Pn	10 02 17.5	-0.1

IDC 09 10:03:57.3±2.1, 6°.10S×128°.17E, h0km, mb3.6/1, mb1 4.0/3, mb1mx3.6/24, mbtmp3.8/3, ML3.7/2, Error ellipse: s-maj=125.5km s-min=31.3km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.01	157	Pn	Pn	10 07 30.9	+0.1
	0.3nm,0.3s,baz=336,slow=12,SNR=9.4						
WRA				Sn	Sn	10 10 08.3	-10
	0.6nm,0.3s,baz=338,slow=20,SNR=11						
ASAR	Alice Springs	18.31	163	P	Pn	10 08 12.7	-0.4
	0.5nm,0.3s,baz=343,slow=9.8,SNR=41						
ASAR				S	Sn	10 11 24.9	-13
	0.1nm,0.3s,baz=347,slow=17,SNR=5.4						
MKAR	Makanchi Array	66.49	327	P	P	10 14 49.0	+0.1
	0.3nm,0.4s,baz=123,slow=7.5,SNR=4.5						

*ISCJB **09** 10:14:14.9±0.6, 5°.73S±0°.08×154°.51E±0°.09, h200km, mb3.7/13, Error ellipse: s-maj=14.8km s-min=8.7km az=40.0*

*IDC **09** 10:14:15.0±2.1, 5°.71S×154°.51E, h185km±19km, mb3.6/13, mb1 3.8/16, mb1mx3.7/29, mbtmp4.2/16, Error ellipse: s-maj=18.1km s-min=11.0km az=114.0*

ISC 09 10:14:16.6±0.7, 5°.7S±0°.1×154°.5E±0°.1, h200km, n17, σ1 21/21, mb3.9/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.11	243	P	Pn	10 16 11.0	-0.2
	3.4nm,0.3s,baz=219,slow=20,SNR=16						
PMG				S	Sn	10 17 41.6	-1.0
	3.6nm,0.3s,baz=319,slow=20,SNR=6.9						
CTA	Charters Tower	16.34	208	P	Pn	10 17 55.3	+0.2
	1.0nm,0.3s,baz=30,slow=11,SNR=8.5						
DZM	Mont Dzumac	19.95	146	P	P	10 18 32.6	-1.0
	0.6nm,0.3s,baz=318,slow=11,SNR=6.2						
WRA	Warramunga Arr	24.13	232	P	P	10 19 15.0	+0.7
	4.2nm,0.5s,baz=58,slow=11,SNR=42						
WRA				PcP	PcP	10 22 51.8	+1.8
	1.1nm,0.8s,baz=48,slow=4.7,SNR=2.3						
ASAR	Alice Springs	26.64	226	P	P	10 19 36.9	-0.1
	1.2nm,0.4s,baz=57,slow=9.3,SNR=73						
ASAR				PcP	PcP	10 22 56.5	+0.8
	0.4nm,0.6s,baz=62,slow=3.1,SNR=4.2						
ASAR				S	S	10 23 59.2	+2.0
	1.1nm,1.1s,baz=56,slow=14,SNR=4.2						
STKA	Stephens Creek	28.66	203	P	P	10 19 53.9	-0.9
	1.3nm,0.7s,baz=42,slow=14,SNR=4.5						
MJAR	Matsushiro Arr	44.73	341	P	P	10 22 07.5	-2.5
	0.5nm,0.4s,baz=171,slow=6.6,SNR=4.5						
KSRS	Korea Array	49.59	332	P	P	10 22 47.0	-0.5
	2.4nm,0.7s,baz=146,slow=7.3,SNR=15						
PETK	Petropavlovsk-	58.69	2	P	P	10 23 53.3	+0.4
	1.8nm,0.8s,baz=165,slow=6.2,SNR=5.2						
CMAR	Chiang Mai Arr	59.77	295	P	P	10 24 02.4	+1.3
	1.7nm,0.5s,baz=106,slow=5.0,SNR=7.8						
SONM	Songino Array	68.00	327	P	P	10 24 55.1	+0.8
	1.5nm,0.6s,baz=149,slow=6.4,SNR=9.1						
MKAR	Makanchi Array	82.12	319	P	P	10 26 14.8	-0.1
	0.8nm,0.6s,baz=96,slow=5.9,SNR=8.7						
ILAR	Eielson Array	82.41	22	P	P	10 26 15.3	-0.6
	1.7nm,0.6s,baz=240,slow=5.2,SNR=21						
ZALV	Zalesovo Beam	82.85	326	P	P	10 26 17.8	-0.7
	1.2nm,0.4s,baz=119,slow=2.9,SNR=4.2						
NVAR	Mina Array Bea	91.36	52	P	P	10 27 01.6	+1.4
	0.5nm,0.8s,baz=237,slow=5.1,SNR=5.0						
YKA	Yellowknife Ar	95.48	28	P	P	10 27 18.6	+0.3
	0.2nm,0.5s,baz=264,slow=5.5,SNR=3.6						
TORD	Torodi Ar. Bea	152.17	287	PKPbc	PKPbc	10 33 47.7	-1.7
	0.4nm,0.3s,baz=36,slow=1.9,SNR=8.6						

*IDC **09** 11:05:44.7±3.1, 36°.02N×69°.40E, h80km±26km, mb3.6/15, mb1 3.7/19, mb1mx3.5/52, mbtmp3.9/19, Error ellipse: s-maj=23.3km s-min=16.4km az=175.0*

*BJI **09** 11:05:46.0±0.0, 36°.20N×69°.50E, h91km, mb4.5/12, mB4.7/9*

*MOS **09** 11:05:46.2±1.1, 36°.25N×69°.52E, h96km, mb4.1/10, Error ellipse: s-maj=9.7km s-min=5.4km az=82.0*

*ISCJB **09** 11:05:46.0±0.3, 36°.20N±0°.02×69°.63E±0°.04, h100km, mb3.9/23, Error ellipse: s-maj=4.6km s-min=3.3km az=165.2*

*NEIC **09** 11:05:47.4±3.0, 36°.24N×69°.52E, h90km±20km, mb4.2/12, Error ellipse: s-maj=22.9km s-min=16.3km az=139.0*

*NNC **09** 11:05:49.0±1.3, 36°.55N×69°.16E, h92km±16km, mb3.9, mpv4.2, Error ellipse: s-maj=13.0km s-min=6.3km az=159.0*

ISC 09 11:05:46.8±0.4, 36°.18N±0°.04×69°.43E±0°.04, h100km, n124, σ2 47/146, mb3.9/23, 10C-8D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	1.67	191	*e*Pn	Pn	11 06 16.0	+0.6
KBL				*e*Sn	Sn	11 06 38.4	+1.3
KBL	Kabul	1.67	191	*e*PN	Pn	11 06 16.0	+0.6
KBL				*e*		11 06 38.4	
GAR	Garm	2.90	14	*e*Pn	Pn	11 06 32.0	+0.8
GAR				*e*Sn	Sn	11 07 05.2	-0.3
GAR	Garm	2.90	14	*e*PN	Pn	11 06 32.1	+0.8
GAR				*e*		11 07 05.2	

BTK	Batken	4.02	15	*e*Pn	Pn	11 06 47.8	+1.5
BTK				*e*Sn	Sn	11 07 35.2	+2.7
BTK	Batken	4.02	15	PN	Pn	11 06 47.8	+1.5
NIL	Nilore	4.03	128	*e*Pn	Pn	11 06 46.7	+0.3
NIL				*e*Sn	Sn	11 07 32.8	+0.1
NIL	Nilore	4.03	128	*e*PN	Pn	11 06 46.7	+0.3
NIL				*e*		11 07 32.8	
KSH	Kashi	6.15	55	P	Pn	11 07 12.7	-2.6
KSH				S	Sn	11 08 14.1	-10
AML	Almayashu	6.80	28	P	Pn	11 07 23.8	-0.4
	SNR=14						
DHRM	DHARAMSHALA	6.91	123	*e*P	Pn	11 07 24.6	-1.1
DHRM				*e*S	Sn	11 08 37.9	-5.0
DHRM				IAML		11 08 41.5	
	comp=E,211nm,0.1s						
DHRM				IAML		11 08 42.2	
	comp=N,242nm,0.2s						
KK31	Karatay Array	6.96	7	*e*Pn	Pn	11 07 25.6	-0.5
KK31				*e*Sn	Sn	11 08 41.0	-2.7
KK31	Karatay Array	6.96	7	⇑ P	Pn	11 07 25.6	-0.5
	comp=N,15nm,0.6s,baz=196,slow=15,SNR=115						
KK31				⇑ S	Sn	11 08 38.4	-5.3
	comp=N,9.3nm,0.5s,baz=196,slow=25,SNR=6.1						
KK31	Karatay Array	6.96	7	*i* PN	Pn	11 07 25.5	-0.6
KK31				pmax	pmax		
	comp=Z,15nm,0.6s						
KKAR	Karatay Array	6.96	7	*e*Pn	Pn	11 07 25.7	-0.4
KKAR				*e*Sn	Sn	11 08 41.0	-2.7
KKAR	Karatay Array	6.96	7	*e*PN	Pn	11 07 25.7	-0.4
UCH	Uchtor	7.21	32	P	Pn	11 07 29.4	-0.5
	SNR=35						
EKS2	Erkin-Say	7.29	26	P	Pn	11 07 30.4	-0.3
	SNR=12						
NRN	Naryn	7.33	42	*e*Pn	Pn	11 07 29.8	-1.6
NRN	Naryn	7.33	42	*e*PN	Pn	11 07 29.8	-1.6
KZA	Kyzart	7.42	36	P	Pn	11 07 31.8	-1.0
	SNR=13						
AAK	Ala-Archa	7.54	30	P	Pn	11 07 33.5	-0.6
	comp=Z,3.1nm,0.3s,baz=194,slow=8.3,SNR=17						
AAK				S	Sn	11 08 54.7	-3.4
	comp=Z,3.4nm,0.3s,baz=300,slow=20,SNR=11						
AAK	Ala-Archa	7.54	30	P	Pn	11 07 33.9	-0.3
	SNR=9.5						
AAK	Ala-Archa	7.54	30	*e*Pn	Pn	11 07 33.8	-0.3
AAK				*e*Sn	Sn	11 08 55.7	-2.4
AAK	Ala-Archa	7.54	30	⇑ P	Pn	11 07 33.3	-0.8
	comp=Z,6.6nm,0.4s						
AAK				⇓ S	Sn	11 08 54.9	-3.2
	comp=Z,26nm,0.6s						
AAK	Ala-Archa	7.54	30	*e*PN	Pn	11 07 33.8	-0.3
CHMS	Chumysh	7.95	29	P	Pn	11 07 39.2	-0.3
	SNR=6.6						
BOOM	Boomskoye usch	8.07	37	*e*Pn	Pn	11 07 40.2	-1.1
BOOM				*e*Sn	Sn	11 09 09.4	-1.5
BOOM	Boomskoye usch	8.07	37	*e*PN	Pn	11 07 40.2	-1.1
USP	Ospenovka	8.08	27	P	Pn	11 07 40.3	-1.1
	SNR=9.7						
SMLA	Simla	8.19	126	*e*P	Pn	11 07 41.1	-1.6
SMLA				*e*S	Sn	11 09 06.5	-7.0
SMLA				IAML		11 09 11.6	
	comp=N,101nm,0.5s						
SMLA				IAML		11 09 12.4	
	comp=E,106nm,0.4s						
TKM2	Tokmak 2	8.24	33	P	Pn	11 07 42.9	-0.8
	SNR=14						
TKM2	Tokmak 2	8.24	33	⇑ P	Pn	11 07 42.5	-1.3
	comp=E,5.5nm,0.5s						
TKM2				⇓ S	Sn	11 09 13.9	-1.2
	comp=E,7.2nm,0.6s						
TKM2	Tokmak 2	8.24	33	PN	Pn	11 07 42.4	-1.3
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GEYT	Alibeck	9.21	284	P	Pn	11 07 55.2	-1.5
	comp=Z,1.8nm,0.3s,baz=130,slow=9.5,SNR=26						
GEYT				S	Sn	11 09 31.5	-7.0
	comp=Z,0.8nm,0.3s,baz=125,slow=14,SNR=3.4						
GYA0B	ALIBECK ARRAY	9.21	284	*e*Pn	Pn	11 07 55.1	-1.7
GYA0B	ALIBECK ARRAY	9.21	284	⇓ P	Pn	11 07 54.5	-2.2
GYA0B				⇑ S	Sn	11 09 33.9	-4.6
KHET	Khetri	9.72	144	*e*S	Sn	11 09 43.3	-7.8
NDI	New Delhi	9.96	136	*e*P	Pn	11 08 06.0	-0.9
NDI				*e*S	Sn	11 09 47.0	-10
JOSI	Joshimath	10.16	121	*e*P	Pn	11 08 08.5	-1.3
JOSI				*e*x	x	11 09 52.5	
JOSI				IAML		11 10 01.2	
	comp=E,76nm,0.8s						
SONA	Sohna	10.22	139	*e*P	Pn	11 08 10.7	+0.2
SONA				*e*S	Sn	11 09 52.5	-11
PDGK	Podgornoye	10.53	44	⇑ P	Pn	11 08 16.4	+1.8
	comp=E,1.9nm,0.6s						
PDGK	Podgornoye	10.53	44	P	Pn	11 08 13.1	-1.6
PDGK				S	Sn	11 10 04.4	-6.2
PDGK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PDGK				smax	smax		
	comp=N,10.0nm,0.9s						
PYUN	Piuthan	14.02	121	*e*P	Pn	11 08 57.0	-4.2
	comp=N,20nm,0.3s						
MAKZ	Makanchi	14.16	38	*e*Pn	P	11 09 07.9	+0.8
MK31	Makanchi Array	14.31	38	*e*Pn	Pn	11 09 04.7	+0.1
MK31				*e*P	P	11 09 10.5	+1.8
MK31	Makanchi Array	14.31	38	⇓ P	Pn	11 09 05.7	+1.2
	comp=N,12nm,0.8s,baz=210,slow=11,SNR=11						
MK31	Makanchi Array	14.31	38	*e*P	Pn	11 09 04.7	+0.1
MKAR	Makanchi Array	14.31	38	P	Pn	11 09 04.9	+0.4
	comp=N,1.1nm,0.3s,baz=220,slow=11,SNR=25						
DANN	Dangsing	14.41	119	*e*P	Pn	11 09 02.3	-4.0
	comp=N,17nm,0.3s						
BHPL	Bhopal	14.64	150	*e*x	Sn	11 11 40.9	-10
KOLN	Koldanda	14.65	121	*e*P	Pn	11 09 05.7	-3.6
	comp=N,8.8nm,0.3s						
AB31	Akbulak array	14.79	335	⇑ P	Pn	11 09 08.7	-2.0
	comp=N,1.1nm,0.5s,baz=152,slow=13,SNR=27						
AB31				⇓ S	Sn	11 11 46.2	-7.5
	comp=N,1.4nm,0.5s						
AB31	Akbulak array	14.79	335	P	Pn	11 09 08.7	-2.0
AB31				S	Sn	11 11 46.2	-7.5
ABKAR	Akbulak array	14.79	335	*e*Pn	Pn	11 09 09.0	-1.7
DMN	Daman	15.81	118	*e*P	Pn	11 09 20.4	-3.5
	comp=N,13nm,0.4s						
KKN	Kakani	15.82	117	*e*P	Pn	11 09 20.8	-3.3
	comp=N,14nm,0.4s						
KURBB	Kurchatov Arra	15.86	22	P	Pn	11 09 20.5	-3.5
	comp=N,0.1nm,0.3s,baz=211,slow=10,SNR=14						
KURBB	Kurchatov Arra	15.86	22	⇓ P	Pn	11 09 24.1	+0.1
	comp=N,17nm,0.8s						
WMQ	Urumqi	15.92	56	*e*P	P	11 09 27.7	+1.0
KURK	Kurchatov	15.96	22	*e*Pn	P	11 09 26.2	-0.8
	comp=N,12nm,0.9s						
KURK				*e*S	S	11 12 29.9	+0.6
KURK	Kurchatov	15.96	22	*e*P	P	11 09 26.2	-0.8
KURK				pmax	pmax		
	comp=Z,12nm,0.9s						
PKIN	Phulchoki	16.03	118	*e*P	Pn	11 09 23.8	-2.9
	comp=Z,12nm,0.3s						
PKI	Pulchoki	16.05	118	*e*P	Pn	11 09 23.6	-3.4
	comp=Z,9.8nm,0.3s						
GUN	Gumba	16.19	116	*e*P	Pn	11 09 26.3	-2.4
	comp=Z,22nm,0.4s						
AKTO	Aktyubinsk	16.46	333	P	Pn	11 09 30.3	-1.2
	comp=Z,0.5nm,0.3s,baz=130,slow=13,SNR=9.2						
AKTO	Aktyubinsk	16.46	333	P	Pn	11 09 29.0	-2.5
AKTO				S	Sn	11 12 27.5	-6.4
AKTO	Aktyubinsk	16.46	333	P	Pn	11 09 29.4	-2.1
AKTO				S	Sn	11 12 27.5	-6.4
JIRN	Jiri	16.56	116	*e*P	Pn	11 09 30.4	-2.9
	comp=Z,49nm,0.5s						
BVAR	Borovoye Array	16.85	2	P	Pn	11 09 34.5	-1.9
	comp=Z,2.1nm,0.3s,baz=170,slow=9.6,SNR=18						
BRVK	Borovoye	16.88	2	*e*Pn	Pn	11 09 35.7	-1.0
	comp=Z,4.5nm,0.7s						
BRVK	Borovoye	16.88	2	⇑ P	Pn	11 09 36.0	-0.7
	comp=Z,2.8nm,0.5s						
BRVK	Borovoye	16.88	2	*e*P	Pn	11 09 35.7	-1.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RAMN	Ramite	17.27	117	*e*P	Pn	11 09 38.5	-3.4
	comp=Z,17nm,0.4s						
DGZ	Jazzator, Alta	18.81	38	*d i* P	Pn	11 10 01.2	+1.1
DGZ				pmax	pmax		
	comp=Z,13nm,0.5s						
GNI	Garni	19.79	289	*e*P	Pn	11 10 13.6	+1.8
	comp=Z,13nm,0.8s						
GNI	Garni	19.79	289	*ce*P	Pn	11 10 13.4	+1.7
GNI				pmax	pmax		
	comp=Z,104nm,1.3s						
TBLG	Delisi	19.95	294	*e*P	Pn	11 10 13.5	0.0
	comp=Z,8.9nm,0.7s						
TBLG	Delisi	19.95	294	*e*P	Pn	11 10 13.5	0.0
TBLG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZAA0	Zalesovo Array	20.74	26	*e*P	P	11 10 19.6	+0.4
	comp=Z,18nm,0.6s						
ZAA0	Zalesovo Array	20.74	26	⇓ P	P	11 10 19.4	+0.2
	comp=Z,2.5nm,0.7s						
ZALV	Zalesovo Beam	20.74	26	P	P	11 10 19.5	+0.3
	comp=Z,21nm,0.5s,baz=222,slow=12,SNR=40						
AKH	Akhalkalaki	20.84	292	*e*P	Pn	11 10 24.1	+0.1
	comp=Z,8.9nm,0.6s						
AKH	Akhalkalaki	20.84	292	*e*P	Pn	11 10 24.1	+0.1
AKH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NVS	Novosibirsk	20.95	23	*e*P	P	11 10 22.4	+1.1
NVS				pmax	pmax		
	comp=N,20nm,1.0s						
NVS				pmax	pmax		
	comp=Z,31nm,1.0s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.9s						
ARU	Arti	21.55	343	P	P	11 10 30.1	+2.4
	comp=E,1.1nm,0.5s,baz=152,slow=5.2,SNR=5.6						
ARU	Arti	21.55	343	*e*P	P	11 10 30.2	+2.4
	comp=E,4.1nm,0.7s						
ARU	Arti	21.55	343	*c i*P	P	11 10 28.2	+0.4
ARU						11 11 00.9	
ARU				S	S	11 14 23.7	+3.0
ARU				SS	SnSn	11 14 59.0	+5.5
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	21.63	299	P	P	11 10 29.9	+1.1
	comp=Z,1.3nm,0.6s,baz=128,slow=8.4,SNR=4.3						
NEY	Neytrino	21.66	297	*i* P	P	11 10 33.8	+4.4
NEY				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KIV	Kislovodsk	21.82	299	*e*P	P	11 10 31.9	+1.0
KIV				pmax	pmax		
	comp=Z,12nm,0.9s						
SHL	Shillong	21.94	113	P	P	11 10 32.4	0.0
SHL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GTA	Gaotai	24.17	73	*e*P	P	11 10 55.4	+1.6
GTA				pP	pP	11 11 15.4	-1.2
GTA				sP	sP	11 11 27.9	-1.5
LZH	Lanzhou	27.71	80	*e*P	P	11 11 27.1	+1.3
LZH				pP	pP	11 11 47.0	-2.4
LZH				sP	sP	11 12 00.9	-0.7
LZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LZH				pmax	pmax		
	comp=Z,74nm,4.3s						
SONM	Songino Array	29.56	55	P	P	11 11 43.2	+1.1
	comp=Z,1.6nm,0.6s,baz=254,slow=10,SNR=7.9						
KMI	Kunming	30.57	102	P	P	11 11 53.6	+2.3
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC	Hu-ho-hao-te	33.06	69	*e*P	P	11 12 12.0	-0.9
HHC				pmax	pmax		
	comp=Z,59nm,5.0s						
MLR	Muntele Rosu	33.83	300	P	P	11 12 22.2	+2.7
MLR				pmax	pmax		
	comp=Z,3.0nm,1.6s						
NRIK	Noril'sk	34.67	11	P	P	11 12 28.1	+1.8
	comp=Z,2.6nm,0.5s,baz=190,slow=6.6,SNR=3.6						
FINES	FINESS Array B	37.05	327	P	P	11 12 47.4	+0.7
	comp=Z,0.4nm,0.6s,baz=98,slow=7.9,SNR=3.4						
FINES	FINESS Array B	37.05	327	*i* P	P	11 12 48.5	+1.9
WHN	Wuhan	37.68	85	P	P	11 12 54.5	+2.1
BRG	Berggiesshubel	41.83	308	P	P	11 13 27.3	+0.8
BRG				pmax	pmax		
	comp=Z,4.0nm,2.1s						
NC303	NORSAR Array S	43.82	324	*e*P	P	11 13 44.0	+1.6
	comp=Z,9.1nm,1.1s						
NOA	NORSAR Array B	43.87	323	P	P	11 13 43.4	+0.5
	comp=Z,0.3nm,0.5s,baz=99,slow=7.9,SNR=2.8						
KLR	Kul'dur	46.35	53	P	P	11 14 04.7	+2.0
	comp=Z,1.4nm,0.8s,baz=279,slow=11,SNR=4.4						
TIXI	Tiksi	46.54	22	P	P	11 14 04.5	+0.7
	comp=Z,2.1nm,0.3s,baz=270,slow=1.6,SNR=8.2						
TIXI	Tiksi	46.54	22	*e*P	P	11 14 04.6	+0.8
	comp=Z,3.3nm,0.8s						
TIXI	Tiksi	46.54	22	*e*P	P	11 14 04.6	+0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SBUM	Sibu	51.82	120	*e*P	P	11 14 47.5	+2.7
	comp=Z,2.1nm,1.1s						
TORD	Torodi Ar. Bea	64.44	268	P	P	11 16 12.4	-0.4
	comp=Z,0.3nm,0.5s,baz=53,slow=7.6,SNR=5.1						
TOLK	Toolik Lake Re	71.54	14	*e*P	P	11 16 57.6	+1.1
	comp=Z,3.3nm,0.5s						
INK	Inuvik	74.41	9	P	P	11 17 14.2	+0.8
	comp=Z,2.3nm,0.7s,baz=344,slow=8.1,SNR=11						
INK	Inuvik	74.41	9	*e*P	P	11 17 14.5	+1.2
	comp=Z,4.5nm,1.1s						
INK	Inuvik	74.41	9	*e*P	P	11 17 14.5	+1.2
INK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ILAR	Eielson Array	75.42	15	P	P	11 17 19.8	+0.5
	comp=Z,0.4nm,0.7s,baz=332,slow=5.6,SNR=4.2						
YKA	Yellowknife Ar	81.61	2	P	P	11 17 54.6	+1.4
	comp=Z,1.0nm,0.8s,baz=350,slow=4.7,SNR=7.5						
WRA	Warramunga Arr	82.91	121	P	P	11 18 01.2	+0.5
	comp=Z,1.2nm,0.9s,baz=320,slow=5.4,SNR=6.4						
ASAR	Alice Springs	85.12	124	P	P	11 18 10.8	-1.1
	comp=Z,0.2nm,0.5s,baz=309,slow=4.7,SNR=5.6						
BCIP	Isla Barro Col	126.41	321	*e*PKPdf	PKPdf	11 24 39.1	+0.6
BCIP	Isla Barro Col	126.41	321	*e*PKIKP	PKPdf	11 24 39.1	+0.6
PPT	Papeete	140.90	72	*e*PKPdf	PKiKP	11 25 08.8	+0.7
LVC	Limon Verde	141.55	279	*e*PKPdf	PKPdf	11 25

SEW	Seward	1.96	81	ePn	Pn	11 16 56.9	+0.3
SEW				eSn	Sn	11 17 21.7	-1.0
FIB	Fire Island	2.05	48	ePn	Pn	11 16 59.0	+1.3
SUA	Susitna One	2.06	37	ePn	Pn	11 16 58.5	+0.4
SUA				eSn	Sn	11 17 25.0	-0.2
KDAK	Kodiak Island	2.10	169	ePn	Pn	11 16 57.0	-1.3
KDAK				eSn	Sn	11 17 23.3	-2.3
RC01	Rabbit Creek A	2.17	53	ePn	Pn	11 16 59.2	0.0
RC01				eSn	Sn	11 17 25.6	-1.7
PTE	Portage	2.37	62	ePn	Pn	11 17 01.8	+0.2
OHAK	Old Harbor	2.62	180	ePn	Pn	11 17 03.4	-1.4
PMR	Palmer	2.71	48	ePn	Pn	11 17 05.2	-0.7
KNK	Knik Glacier	2.87	54	ePn	Pn	11 17 07.5	-0.5
KNK				eSn	Sn	11 17 40.8	-2.0
GHO	Glory Hole Cre	2.90	46	ePn	Pn	11 17 07.8	-0.6
GHO				eSn	Sn	11 17 41.9	-1.7
SML	Sawmill	3.14	49	ePn	Pn	11 17 10.8	-0.6
GLI	Glacier Island	3.26	69	ePn	Pn	11 17 13.7	+0.8
GLI				eSn	Sn	11 17 49.9	-1.9
SII	Sitkinak Islan	3.32	188	ePn	Pn	11 17 12.4	-1.4
SII				eSn	Sn	11 17 50.7	-2.6
TT01	Tatalina	3.34	338	ePn	Pn	11 17 13.6	-0.5
TT01				ePn	Pn	11 17 13.6	-0.5
CAST	Castle Rocks	3.64	9	ePn	Pn	11 17 18.5	+0.6
VMT	TAPS Tl Valdez	3.66	67	ePn	Pn	11 17 18.6	+0.5
EYAK	Cordova Ski Ar	3.84	76	ePn	Pn	11 17 20.8	+0.3
TRF	Thorofare Moun	3.90	20	ePn	Pn	11 17 21.4	-0.1
DIV	Divide	3.95	68	ePn	Pn	11 17 22.6	+0.6
DIV				eSn	Sn	11 18 05.8	-2.2
CHUM	Lake Minchumin	4.09	6	ePn	Pn	11 17 24.2	+0.5
SGAM	Sherman Glacie	4.10	77	ePn	Pn	11 17 24.4	+0.3
RND	Reindeer	4.17	29	ePn	Pn	11 17 24.5	-0.3
DHY	Denali Highway	4.32	39	ePn	Pn	11 17 26.6	-0.3
BPAW	Bear Paw Mtn.	4.42	13	ePn	Pn	11 17 27.4	-0.7
MCK	McKinley	4.43	26	ePn	Pn	11 17 28.4	+0.1
CHGN	Chignik	4.46	220	ePn	Pn	11 17 27.9	-0.8
HMT	Hamilton	4.56	80	ePn	Pn	11 17 30.9	+0.8
HMT				eSn	Sn	11 18 20.4	-2.0
NICHA	Nichawak Mount	4.70	81	ePn	Pn	11 17 32.7	+0.8
BWN	Browne	4.71	21	ePn	Pn	11 17 32.4	+0.4
BWN				ePn	Pn	11 17 32.6	+0.6
HARP	HAARP	4.72	53	ePn	Pn	11 17 32.9	+0.8
VNHG	Veniaminof 1	4.78	223	ePn	Pn	11 17 33.4	+0.4
PS10	TAPS Pump St10	5.09	42	ePn	Pn	11 17 37.9	+0.9
WRH	Wood River Hil	5.25	26	ePn	Pn	11 17 38.5	-0.8
MLY	Manley	5.35	12	ePn	Pn	11 17 41.1	+0.6
CCB	Clear Creek Bu	5.47	26	ePn	Pn	11 17 41.2	-0.8
RIDG	Independent Ri	5.61	42	ePn	Pn	11 17 44.3	+0.3
PS08	TAPS Pump Stn8	5.61	30	ePn	Pn	11 17 43.5	-0.5
COLA	College	5.66	24	ePn	Pn	11 17 44.1	-0.4
MDM	Murphy Dome	5.66	22	ePn	Pn	11 17 44.2	-0.4
ILAR	Eielson Array	5.79	28	P	Pn	11 17 45.9	-0.4
	5.1nm,0.3s,baz=216,slow=13,SNR=334						
ILAR				S	Sn	11 18 46.4	-5.2
	2.6nm,0.3s,baz=219,slow=21,SNR=9.1						
SDPT	Sand Point	5.92	224	ePn	Pn	11 17 47.0	-1.2
IM3	Indian Mountai	6.17	358	ePn	Pn	11 17 52.0	+0.5
BCA3	Beaver Creek A	6.40	55	ePn	Pn	11 17 54.9	+0.2
PNL	Peninsula	7.03	85	ePn	Pn	11 18 04.1	+1.0
EGAK	Eagle	7.52	44	ePn	Pn	11 18 08.9	-0.6
BM3	Burnt Mountain	8.53	23	ePn	Pn	11 18 21.8	-1.3
TOLK	Toolik Lake Re	8.99	9	ePn	Pn	11 18 29.5	+0.3
SKAG	Skagway	9.11	85	ePn	Pn	11 18 34.0	+3.2
UNV	Unalaska Valle	9.38	236	ePn	Pn	11 18 33.6	-0.9
JIS	Juneau Island	9.87	91	ePn	Pn	11 18 44.8	+3.8
EPYK	Eagle Plains	9.94	42	ePn	Pn	11 18 44.1	+2.2
DLBC	Dease Lake	12.02	87	P	P	11 19 15.3	-1.2
	0.8nm,0.3s,baz=289,slow=7.9,SNR=12						
INK	Inuvik	12.06	37	P	Pn	11 19 10.9	+1.1
	0.4nm,0.3s,baz=238,slow=15,SNR=10						
INK	Inuvik	12.06	37	ePn	Pn	11 19 10.6	+0.7
YKA	Yellowknife Ar	18.66	65	P	Pn	11 20 31.8	+0.3
	0.1nm,0.3s,baz=276,slow=11,SNR=6.2						
YKB5	Yellowknife Ar	18.66	65	eP	Pn	11 20 31.8	+0.3
KSRS	Korea Array	53.06	282	P	P	11 25 27.1	+1.9
	1.0nm,0.7s,baz=39,slow=7.1,SNR=4.2						
SONA0	Songino Array	54.76	306	eP	P	11 25 38.9	+1.3
SONM	Songino Array	54.76	306	P	P	11 25 38.9	+1.3
	0.7nm,0.5s,baz=26,slow=6.5,SNR=3.1						
ZAA1	Zalesovo Array	57.41	323	eP	P	11 25 56.2	0.0
ZALV	Zalesovo Beam	57.41	323	P	P	11 25 56.2	0.0
	1.2nm,0.5s,baz=25,slow=6.5,SNR=4.3						

JMA 09 11:20:03.2±0.2, 24°.87N×123°.94E, h2^{km}±3^{km}, M3.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	0.44	130	P	Pg	11 20 12.0	+0.4
JISG				eS	Sg	11 20 18.3	+1.0
JIJ	Ishigaki jima	0.54	160	P	Pg	11 20 13.6	+0.1
JIJ				eS	Sg	11 20 20.4	-0.1
IRIF	Iriomote-Funau	0.57	200	P	Pg	11 20 14.4	+0.3
IRIF				eS	Sb	11 20 23.0	-1.3
JKRS	Kuro-shima	0.63	174	P	Pg	11 20 15.8	+0.5
JKRS				eS	Sg	11 20 24.9	+1.4
JTJ	Tarama	0.73	108	P	Pg	11 20 17.8	+0.6
JTJ				S	Sb	11 20 28.4	-0.7
HATJ	Hateruma jima	0.82	189	P	Pg	11 20 19.2	+0.3
HATJ				S	Sg	11 20 30.5	+1.0
YOJ	Yonaguni jima	0.94	245	P	Pg	11 20 21.1	-0.1
YOJ				eS	Sg	11 20 33.9	+0.5
JYNG	Yonagunijimaku	1.00	245	P	Pg	11 20 22.0	-0.3
JYNG				eS	Sg	11 20 35.1	-0.1
JIRB	Irabujima	1.12	92	P	Pg	11 20 24.2	-0.5
JIRB				eS	Sg	11 20 39.6	+0.4
JIKM	Ikemajima	1.19	87	P	Pg	11 20 25.7	-0.3
JIKM				eS	Sg	11 20 41.5	+0.1

MEX 09 11:44:36.8±0.9, 17°.82N×103°.10W, h17^{km}±11^{km}, MD3.9, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.52	334	eP	Pg	11 44 45.0	-2.1
MMIG				eS	Sg	11 44 52.5	-1.7
ZIIG	Zihuatanejo	1.58	98	eP	Pn	11 45 00.7	-3.4
ZIIG				eS	Sn	11 45 19.0	-5.1
EZ5V		1.71	344	eP	Pn	11 45 03.2	-3.1
CJM	Chamela	2.48	313	eP	Pb	11 45 19.6	-1.4

NNC 09 11:50:20.0±6.3, 38°.29N×72°.35E, h0^{km}, mb3.5, mpv3.2, 1C-1D, Error ellipse: s-maj=49.1km s-min=39.7km az=168.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.64	20	P	Pn	11 51 31.9	+0.3
	1.5nm,0.6s						
AAK				S	Sn	11 52 26.9	+0.7
	7.2nm,0.5s						
KK31	Karatay Array	5.01	344	P	Pn	11 51 37.6	+1.2
	1.8nm,0.3s,baz=152,slow=11,SNR=37						
KK31				S	Sn	11 52 36.5	+1.4
	3.3nm,0.3s,baz=174,slow=22,SNR=17						
AB31	Akbulak array	14.14	325	⇓P	Pn	11 53 37.3	-4.1
	0.2nm,0.4s,baz=133,slow=13,SNR=10						
AB31				⇑S	Sn	11 56 06.0	-13
	0.6nm,0.6s						

ISCJB ***09*** *11:52:36.5±0.7, 51°.45N±0°.03×16°.10E±0°.03, h0^{km}, Error ellipse: s-maj=4.5km s-min=2.9km az=18.9*
IPEC ***09*** *11:52:37.6±0.3, 51°.51N×16°.25E, h0^{km}, ML2.2/3, Error ellipse: s-maj=3.2km s-min=1.7km az=66.0*
VIE ***09*** *11:52:40.0±1.5, 51°.35N×16°.07E, h0^{km}, mb2.0/3, ml2.5/5, Error ellipse: s-maj=11.4km s-min=9.2km az=26.0, Suspected Mining induced.*
ISC 09 11:52:36.7±1.2, 51°.56N±0°.05×16°.12E±0°.03, h0^{km}, n27, σ0^{s}97/54, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	171	ePg	Pg	11 52 50.7	+0.2
KSP				eSg	Sg	11 52 59.3	-0.6
CHVC	Chvalec	0.97	183	ePG	Pg	11 52 55.6	+0.3
CHVC				eSG	Sg	11 53 07.2	-0.6
	comp=Z,22nm,0.4s						
OSTC	Ostas	1.00	177	ePG	Pg	11 52 55.4	-0.5
OSTC				eSG	Sg	11 53 08.6	-0.3
	comp=Z,39nm,0.4s						
UPC	Upice	1.05	184	ePG	Pg	11 52 56.9	+0.1
UPC				eSG	Sg	11 53 09.8	-0.7
	comp=Z,75nm,0.4s						
DPC	Dobruska-Polom	1.21	174	ePG	Pg	11 52 59.5	-0.4
DPC				eSG	Sg	11 53 14.2	-1.4
	comp=Z,24nm,0.6s						
PVCC	Panska Ves	1.42	224	ePG	Pb	11 53 03.9	-0.2
PVCC				eSG	Sg	11 53 22.5	+0.2
	comp=Z,119nm,0.2s						
BRG	Berggiesshubel	1.53	244	PN	Pg	11 53 06.1	+0.1
BRG				PG	Pb	11 53 06.9	+0.9
BRG				SG	Sg	11 53 26.5	+0.6
	42nm,0.4s						
GOPC	GO Pecny, Ondr	1.85	208	ePG	Pn	11 53 10.2	+0.5
GOPC				eSG	Sb	11 53 34.6	-0.5
	comp=Z,11nm,0.1s						
PRU	Pruhonice	1.86	213	ePG	Pb	11 53 11.0	-0.6
PRU				eSG	Sb	11 53 35.4	0.0
	comp=Z,16nm,0.4s						
CLL	Collm	1.97	264	i Pn	Pn	11 53 10.1	-1.2
CLL				i Pg	Pb	11 53 13.1	-0.3
CLL				i		11 53 17.7	
CLL				i Sg	Sg	11 53 40.1	+0.2
	comp=Z,18nm,0.5s						
MORC	Moravsky Berou	2.00	153	ePN	Pn	11 53 11.4	-0.3
MORC				eSG	Sn	11 53 37.8	+0.3
MORC	Moravsky Berou	2.00	153	ePn	Pn	11 53 11.4	-0.3
	baz=335						
MORC				eSg	Sn	11 53 37.8	+0.3
	comp=Z,13nm,0.5s,baz=335						
OKC	Ostrava-Krasne	2.15	142	ePG	Pb	11 53 15.9	-0.6
OKC				eSG	Sg	11 53 44.8	-0.9
	comp=Z,15nm,0.7s						
VRAC	Vranov	2.27	172	ePN	Pn	11 53 15.8	+0.3
VRAC				eSG	Sb	11 53 47.2	0.0
VRAC	Vranov	2.27	172	ePn	Pn	11 53 15.7	+0.3
	baz=354						
VRAC				eSg	Sb	11 53 47.1	-0.1
	comp=Z,12nm,0.5s,baz=354						
TREC	Trest	2.30	190	eSG	Sb	11 53 48.6	+0.6
	comp=Z,10nm,0.4s						
KRUC	Moravsky	2.50	176	ePN	Pn	11 53 19.0	+0.3
KRUC				eSG	Sb	11 53 54.4	+0.6
KRUC	Moravsky	2.50	176	ePn	Pn	11 53 18.9	+0.3
	baz=358						
KRUC				eSg	Sb	11 53 54.4	+0.6
	comp=Z,12nm,0.7s,baz=358						
NKC	Novy Kostel	2.68	242	eSG	Sg	11 54 02.1	-0.6
	comp=Z,23nm,0.4s						
OJC	Ojcow	2.69	118	ePg	Pg	11 53 28.3	+0.2
OJC				eSg	Sg	11 54 03.4	+0.5
KHC	Kasperske Hory	2.92	215	ePN	Pn	11 53 24.6	+0.1
KHC				ePG	Pb	11 53 30.7	+1.0
KHC				eSN	Sn	11 53 59.1	-1.2
KHC				eSG	Sg	11 54 08.5	-2.1
	comp=Z,7.7nm,0.4s						
MODS	Modra-Piesok	3.27	166	eSG	Sg	11 54 19.7	-2.1
VYHS	Vyhne	3.53	149	ePN	Pn	11 53 33.7	+0.9
VYHS				eSG	Sg	11 54 29.7	-0.3
CONA	Conrad Observa	3.63	183	Pn	Pn	11 53 36.2	+1.9
	comp=Z,0.1nm,0.2s						
CONA				Sg	Sg	11 54 31.1	-2.4
	comp=Z,6.6nm,0.5s						
MOA	Molln	3.90	199	ePn	Pn	11 53 39.1	+1.3
	comp=Z,0.3nm,0.1s						
MOA				Sg	Sg	11 54 43.0	+1.1
	comp=Z,2.6nm,0.2s						
ARSA	Arzberg	4.33	185	Sg	Sg	11 54 59.2	+3.6
	comp=Z,3.3nm,0.5s						
KBA	Koelnbreinsper	4.83	203	Pg	Pg	11 54 08.7	-0.7
	comp=Z,0.5nm,0.2s						
KBA				Sg	Sg	11 55 11.9	-0.1
	comp=Z,3.0nm,0.5s						

IDC ***09*** *12:19:01.6±1.1, 2°.89S×130°.00E, h0^{km}, mb4.0/6, mb1 4.2/9, mb1mx3.9/35, mbtmp4.0/9, ML3.8/3, MS3.2/2, Ms1 3.2/2, ms1mx2.7/30, Error ellipse: s-maj=36.2km s-min=20.5km az=84.0*
ISCJB ***09*** *12:19:03.1±0.4, 2°.96S±0°.05×130°.00E±0°.09, h25^{km}, mb4.2/11, MS3.6/1, Error ellipse: s-maj=14.1km s-min=5.2km az=162.1*
NEIC ***09*** *12:19:07.7±2.3, 2°.88S×129°.96E, h45^{km}±8^{km}, mb4.0/11, Error ellipse: s-maj=14.8km s-min=9.3km az=174.0*
ISC 09 12:19:05.1±0.6, 2°.98S±0°.07×129°.93E±0°.08, h25^{km}, n30, σ1^{s}64/32, mb4.1/11, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.31	89	ePn	Pb	12 19 46.6	+0.5
TNTI	Ternate	4.53	325	ePn	Pn	12 20 12.4	+0.3
LUWI	Luwuk	7.41	285	ePn	Pn	12 20 49.2	-2.6
MTN	Manton Dam	9.87	173	ePn	Pn	12 21 29.2	+3.7
KAPI	Kappang	10.36	258	Pn	Pn	12 21 34.6	+2.4
	0.9nm,0.3s,baz=107,slow=3.3,SNR=4.6						
KAPI				LR	LR	12 25 14.4	
	comp=Z,72nm,20.5s,baz=72,slow=36						
FITZ	Fitzroy Crossi	15.60	195	Pn	Pn	12 22 43.7	+0.2
	0.3nm,0.3s,baz=20,slow=12,SNR=11						
FITZ	Fitzroy Crossi	15.60	195	ePn	Pn	12 22 44.4	+0.9
	4.1nm,0.8s						
COEN	Coen	17.03	131	eP	P	12 23 05.3	+1.9
	10.0nm,0.9s						
WRAB	Tennant Creek	17.39	166	ePn	Pn	12 23 05.3	-1.0
	13nm,1.5s						
WRA	Warramunga Arr	17.40	166	P	Pn	12 23 05.6	-0.8
	0.3nm,0.3s,baz=340,slow=12,SNR=15						
WRA				S	Sn	12 26 15.9	-3.5
	0.2nm,0.3s,baz=340,slow=23,SNR=3.7						
WR1	Warramunga Arr	17.40	166	ePn	Pn	12 23 05.6	-0.7
WR1				eSn	Sn	12 26 15.9	-3.5
WB2	Warramunga Arr	17.40	166	ePn	Pn	12 23 06.3	0.0
	17nm,1.5s						
AS31	Alice Springs	20.92	170	eP	P	12 23 47.7	+1.7
	4.3nm,0.6s						
ASAR	Alice Springs	20.92	170	P	P	12 23 47.5	+1.4
	8.8nm,0.6s,baz=347,slow=10,SNR=160						
ASAR				S	S	12 27 35.9	-2.3
	0.5nm,0.8s,baz=345,slow=15,SNR=5.9						
FORT	Forrest	27.71	183	eP	P	12 24 53.2	+1.7
	11nm,0.9s						
HNR	Honiara	30.50	103	eP	P	12 25 16.6	+0.1
	212nm,0.9s						
CMAR	Chiang Mai Arr	37.22	306	P	P	12 26 14.6	-0.2
	0.6nm,0.3s,baz=139,slow=7.9,SNR=6.9						
CHTO	Chiang Mai	37.40	307	eP	P	12 26 16.6	+0.2
	5.7nm,1.0s						
MJAR	Matsushiro Arr	40.07	10	P	P	12 26 37.9	-0.7
	0.6nm,0.7s,baz=188,slow=10.0,SNR=3.3						
MAJO	Matsushiro	40.07	10	eP	P	12 26 37.9	-0.7
MK32	Makanchi Array	64.86	326	eP	P	12 29 41.9	-0.3
MKAR	Makanchi Array	64.86	326	P	P	12 29 41.9	-0.3
	0.4nm,0.6s,baz=115,slow=7.3,SNR=5.1						
ZALV	Zalesovo Beam	67.98	333	P	P	12 30 01.7	-0.2
	0.6nm,0.5s,baz=112,slow=6.4,SNR=2.9						
ZAA1	Zalesovo Array	67.98	333	eP	P	12 30 01.7	-0.2
KURK	Kurchatov	69.09	328	eP	P	12 30 09.9	+1.0
	2.7nm,0.8s						
TIXI	Tiksi	74.50	360	P	P	12 30 41.7	+0.6
	1.2nm,0.3s,baz=188,slow=3.8,SNR=2.5						
MAW	Mawson	78.65	201	eP	P	12 31 03.8	-0.8
	1.0nm,0.9s						
ABKAR	Akbulak array	79.35	321	eP	P	12 31 09.2	+0.4
	1.7nm,0.9s						
KBZ	Khabaz	89.89	314	LR	LR	13 18 19.5	
	comp=Z,21nm,18.5s,baz=132,slow=40						
GTBY	Guantanamo Bay	150.31	54	ePKPbc	PKPbc	12 38 53.1	-2.0

NORS ***09*** *12:19:24.9±0.0, 40°.99N×45°.88E, h21^{km}, MPVA3.8*
TIF ***09*** *12:19:24.9, 41°.10N×45°.84E, h22^{km}±1^{km}*
DDA ***09*** *12:19:30.7, 40°.96N×45°.20E, h7^{km}±2^{km}, ML2.6*
ISC 09 12:19:24.0±1.4, 40°.98N±0°.05×45°.75E±0°.03, h8^{km}±12^{km}, n19, σ1^{s}08/36, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDFL	Dedoflistskaro	0.54	30	P	Pg	12 19 33.8	-0.8
DDFL				S	Sn	12 20 20.5	+33
BTNK	Botanikuri	1.01	315	P	Pb	12 19 44.0	+0.4
BTNK				S	Sb	12 19 57.6	+0.5
BTNK	Botanikuri	1.01	315	i P	Pb	12 19 44.2	+0.5
BTNK				i S	Sb	12 19 57.9	+0.8
SEAG	Tbilisi Sea	1.06	318	P	Pg	12 19 44.2	-0.2
SEAG				S	Sg	12 19 58.6	+0.4
TBLG	Delisi	1.07	315	P	Pb	12 19 45.1	+0.3
TBLG				S	Sg	12 19 59.5	+0.9
TBLG	Delisi	1.07	315	i P	Pb	12 19 45.2	+0.3
TBLG				i S	Sb	12 19 59.8	+0.8
KZRT	Kazreti	1.10	292	P	Pn	12 19 45.5	-0.2
KZRT				S	Sb	12 20 00.2	+0.4
AKT	Akhty	1.57	71	ePg	Pb	12 19 53.4	-0.1
AKT				eSg	Sb	12 20 13.8	+0.3
BGD	Bogdanovka	1.65	281	P	Pn	12 19 49.8	-3.7
BGD				S	Sg	12 20 18.3	+1.2
GNBR	Gunib	1.68	32	ePg	Pb	12 19 55.4	+0.2
GNBR				eSg	Sb	12 20 17.2	+0.7
IGDI	IGDIR	1.69	230	i P	Pg	12 19 57.9	+1.4
IGDI				IAML_P			
	comp=Z,139nm,0.2s						
XNZR	Khunzakh	1.72	24	ePg	Pb	12 19 56.2	+0.3
XNZR				eSg	Sb	12 20 18.5	+0.8
BTLR	Botlikh	1.72	12	ePg	Pb	12 19 56.1	+0.2
BTLR				eSg	Sb	12 20 18.4	+0.6
AKH	Akhalkalaki	1.76	285	P	Pg	12 19 57.7	0.0
AKH				S	Sg	12 20 20.8	+0.3
DVE	Vedeno	2.00	8	ePg	Pb	12 20 00.6	0.0
DVE				eSg	Sb	12 20 27.4	+1.8
LACR	Lac	2.14	330	ePg	Pb	12 20 02.9	-0.3
LACR				eSg	Sb	12 20 30.7	+0.8
ZEI	Tsey	2.28	323	ePn	Pb	12 20 04.8	-0.7
ZEI				eSn	Sb	12 20 35.3	+1.4
ONI	Oni	2.36	314	P	Pb	12 20 05.2	-1.6
ONI				S	Sn	12 20 33.9	+1.7
TKB	Tkibuli	2.48	305	P	Pb	12 20 07.2	-1.7
TKB				S	Sb	12 20 39.5	-0.1

MDD ***09*** *12:22:12.9±1.6, 36°.44N×9°.93W, h51^{km}±50^{km}, mb3.9/1, Error ellipse: s-maj=15.4km s-min=14.2km az=43.0, PRXIMO*
INMG ***09*** *12:22:13.6±1.3, 36°.49N×9°.80W, h15^{km}±5^{km}, ML1.8, Error ellipse: s-maj=6.6km s-min=5.5km az=60.0*
IGIL ***09*** *12:22:13.3, 36°.53N×9°.82W, h6^{km}, ML1.8*
ISC 09 12:22:11.0±3.1, 36°.5N±0°.1×9°.84W±0°.10, h14^{km}±10^{km}, n32, σ0^{s}94/59, 4C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.02	52	⇑eP	Pn	12 22 31.7	+0.8
PFVI				eS	Sn	12 22 45.4	+0.4
PFVI				A	A	12 22 46.5	
	13nm,0.6s						
PFVI	Vila Bisbo	1.02	52	⇑P	Pn	12 22 31.7	+0.8
	4.7nm,0.1s,SNR=18						
PFVI				S	Sb	12 22 44.5	+0.9
	25nm,0.2s,SNR=11						
MORF	Marmelete	1.23	50	eP	Pg	12 22 34.8	-0.1
MORF				eS	Sg	12 22 50.6	-0.3
MORF				AML	AML	12 22 52.5	
	comp=N,20nm,0.1s						
MORF	Marmelete	1.23	50	eP	Pg	12 22 34.8	-0.1
MORF				eS	Sg	12 22 50.8	-0.1
MORF				A	A	12 22 51.3	
	comp=N,12nm,0.1s						
MORF	Marmelete	1.23	50	P	Pg	12 22 34.8	-0.1
MORF				S	Sg	12 22 50.6	-0.3
	comp=N,20nm,0.1s						
PTEO	Sao Teotonio	1.36	41	eP	Pg	12 22 36.9	-0.3
PTEO				eS	Sn	12 22 54.2	+0.8
PTEO				A	A	12 22 54.7	
	comp=N,8.0nm,0.7s						
PTEO	Sao Teotonio	1.36	41	P	Pg	12 22 36.9	-0.3
PTEO				S	Sn	12 22 54.2	+0.8
	comp=N,4.0nm,0.7s						
PBDV	Barranco-do-Ve	1.69	64	ePn	Pn	12 22 41.0	+0.8
PBDV				eSn	Sn	12 23 01.1	-0.5
PBDV				A	A	12 23 01.9	
	comp=N,2.7nm,0.4s						
PBDV	Barranco-do-Ve	1.69	64	P	Pn	12 22 41.0	+0.8
PBDV				S	Sn	12 23 01.1	-0.5
	comp=N,2.7nm,0.4s						
PCVE	Castro Verde	1.82	52	ePn	Pn	12 22 43.0	+1.1
PCVE				eSn	Sn	12 23 05.5	+0.8
PCVE				A	A	12 23 07.3	
	comp=N,4.9nm,0.4s						
PCVE	Castro Verde	1.82	52	P	Pn	12 22 43.0	+1.1
PCVE				S	Sn	12 23 05.5	+0.8
	comp=N,4.9nm,0.4s						
MESJ	Messejana	1.85	44	eP	Pn	12 22 43.3	+1.0
MESJ				eS	Sn	12 23 05.4	-0.1
MESJ				AML	AML	12 23 07.0	
	comp=N,5.8nm,0.3s						
MESJ	Messejana	1.85	44	P	Pn	12 22 43.3	+1.0
MESJ				S	Sn	12 23 05.4	-0.1
	comp=N,5.8nm,0.3s						
PNCL	Nicolau / Gran	1.90	33	ePn	Pn	12 22 44.0	+0.9
PNCL				eSn	Sn	12 23 06.6	-0.2
PNCL				A	A	12 23 10.2	
	comp=N,3.6nm,0.1s						
PNCL	Nicolau / Gran	1.90	33	P	Pn	12 22 44.0	+0.9
PNCL				S	Sn	12 23 06.6	-0.2
	comp=N,3.6nm,0.1s						
PVAQ	Vaqueiros	1.91	62	⇑ePn	Pn	12 22 44.0	+0.8
PVAQ				eSn	Sn	12 23 06.3	-0.8
PVAQ				A	A	12 23 07.7	
	comp=N,5.3nm,0.3s						
PVAQ	Vaqueiros	1.91	62	P	Pn	12 22 44.0	+0.8
PVAQ				S	Sn	12 23 06.3	-0.8
	comp=N,5.3nm,0.3s						
EGRO	El Granado	2.14	61	⇑P	Pn	12 22 47.1	+0.8
	comp=N,0.3nm,0.0s,SNR=18						
EGRO				S	Sn	12 23 12.1	-0.5
	comp=N,2.5nm,0.1s,SNR=4.5						
PBEJ	Beja

*IDC **09** 12:23:20.2±1.1, 24.08S×66.85W, h193km±21km, mb3.1/1, mb1 3.1/6, mb1mx3.0/29, mbtmp3.6/6, Error ellipse: s-maj=28.8km s-min=14.9km az=89.0*

ISC 09 12:23:20.3±0.9, 23.99S±0.05×66.86W±0.04, h202km±8km, n25, σ1°77/44, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.43**	**121**	*i* P	**Pn**	**12 23 55.7**	**+1.9**
SLA				IAML		12 23 56.4	
	comp=Z,41nm,0.6s						
HJA	**Humahuaca**	**1.54**	**60**	*i* P	**Pn**	**12 23 56.2**	**+1.2**
HJA				IAML		12 23 58.8	
	comp=Z,76nm,0.3s						
HJA				*i* S	**S**	**12 24 19.1**	**-2.4**
AZAP	**Zapla**	**1.66**	**98**	*i* P	**Pn**	**12 23 57.2**	**+1.3**
AZAP				IAML		12 23 57.5	
	comp=Z,154nm,0.6s						
AZAP				*i* S	**S**	**12 24 17.7**	**-5.3**
YJA	**Yavi**	**2.19**	**35**	*i* P	**Pn**	**12 24 02.5**	**+1.0**
YJA				IAML		12 24 03.6	
	comp=Z,16nm,0.3s						
YJA				*i* S	**S**	**12 24 33.7**	**+0.8**
FSA	**Cafayete**	**2.26**	**159**	*i* P	**Pn**	**12 24 03.7**	**+1.8**
FSA				*i* S	**S**	**12 24 35.2**	**+1.4**
LVC	**Limon Verde**	**2.33**	**306**	P	**Pn**	**12 24 04.1**	**+1.2**
	comp=Z,14nm,0.3s,baz=116,slow=6.2,SNR=274						
LVC				S	**S**	**12 24 35.9**	**+0.5**
	comp=Z,14nm,0.3s,baz=270,slow=21,SNR=23						
LVC	**Limon Verde**	**2.33**	**306**	*i* P	**Pn**	**12 24 04.2**	**+1.2**
LVC				*i* S	**S**	**12 24 35.9**	**+0.5**
PB15	**IPOC Station P**	**2.52**	**287**	*i* P	**Pn**	**12 24 06.2**	**+1.4**
PB15				*i* S	**S**	**12 24 39.5**	**+0.7**
PB06	**IPOC Station P**	**2.80**	**297**	*i* P	**Pn**	**12 24 09.1**	**+1.1**
PB06				*i* S	**S**	**12 24 44.1**	**-0.3**
PB05	**IPOC Station P**	**3.27**	**290**	*i* P	**Pn**	**12 24 14.2**	**+0.7**
PB05				*i* S	**S**	**12 24 52.6**	**-1.7**
PB03	**IPOC Station P**	**3.29**	**305**	*i* P	**Pn**	**12 24 14.3**	**+0.6**
PB03				*i* S	**S**	**12 24 53.6**	**-1.2**
PB14	**IPOC Station P**	**3.29**	**258**	*i* P	**Pn**	**12 24 14.8**	**+0.9**
PB14				*i* S	**S**	**12 24 55.0**	**-0.2**
PB10	**IPOC Station P**	**3.42**	**277**	*i* P	**Pn**	**12 24 16.1**	**+1.0**
PB10				*i* S	**S**	**12 24 56.6**	**-0.7**
PB04	**IPOC Station P**	**3.45**	**298**	*i* P	**Pn**	**12 24 16.2**	**+0.6**
PB04				*i* S	**S**	**12 24 57.5**	**-0.7**
PB07	**IPOC Station P**	**3.59**	**308**	*i* P	**Pn**	**12 24 17.7**	**+0.3**
PB07				*i* S	**S**	**12 24 59.4**	**-1.9**
PB02	**IPOC Station P**	**3.86**	**313**	*i* P	**Pn**	**12 24 20.7**	**+0.1**
PB02				*i* S	**S**	**12 25 05.0**	**-2.4**
PB08	**IPOC Station P**	**4.38**	**331**	*i* P	**Pn**	**12 24 28.3**	**+0.9**
PB08				*i* S	**S**	**12 25 19.1**	**-0.4**
PB11	**IPOC Station P**	**4.95**	**328**	*i* P	**Pn**	**12 24 33.2**	**-1.2**
PB11				*i* S	**S**	**12 25 28.4**	**-3.7**
CFA	**Coronel Fontan**	**7.68**	**189**	P	**Pn**	**12 25 10.0**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=47,slow=17,SNR=19						
CFA				S	**S**	**12 26 31.4**	**-4.9**
	comp=Z,0.8nm,0.3s,baz=303,slow=23,SNR=11						
CFA	**Coronel Fontan**	**7.68**	**189**	*i* P	**Pn**	**12 25 10.5**	**+1.0**
CFA				*i* S	**S**	**12 26 33.4**	**-2.9**
LPAZ	**La Paz**	**7.76**	**351**	P	**Pn**	**12 25 11.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=202,slow=11,SNR=6.7						
SIV	**San Ignacio**	**9.64**	**35**	P	**Pn**	**12 25 36.7**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=221,slow=16,SNR=5.3						
BDFB	**Brasilia**	**19.56**	**68**	P	**P**	**12 27 33.9**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=237,slow=13,SNR=8.7						
TORD	**Torodi Ar. Bea**	**76.45**	**69**	P	**P**	**12 34 48.0**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=248,slow=5.6,SNR=4.8						
MKAR	**Makanchi Array**	**146.44**	**40**	PKPbc	**PKPab**	**12 42 39.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=323,slow=2.2,SNR=4.0						

*ISCJB **09** 13:03:14.9±1.4, 6.6S±0.3×154.5E±0.2, h48km, mb3.8/5, MS2.5/1, Error ellipse: s-maj=49.6km s-min=21.1km az=150.1*

*IDC **09** 13:03:21.6±5.9, 6.44S×154.13E, h94km±48km, mb3.6/5, mb1 3.9/6, mb1mx3.4/28, mbtmp4.0/6, MS2.7/3, Ms1 2.7/3, ms1mx2.6/23, Error ellipse: s-maj=61.5km s-min=34.0km az=132.0*

ISC 09 13:03:16.1±1.4, 6.6S±0.4×154.5E±0.3, h48km, n9, σ1°28/7, mb3.9/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.10**	**118**	LR	LR	13 07 03.5	
	comp=Z,54nm,18.1s,baz=357,slow=34						
PMG	**Port Moresby**	**7.82**	**248**	P	**Pn**	**13 05 08.6**	**+1.3**
	1.0nm,0.3s,baz=65,slow=14,SNR=4.4						
PMG				LR	LR	13 08 38.4	
	comp=Z,74nm,18.6s,baz=86,slow=42						
GUMO	**Guam**	**22.18**	**334**	LR	LR	13 17 24.2	
	comp=Z,20nm,19.1s,baz=84,slow=38						
WRA	**Warramunga Arr**	**23.68**	**234**	P	**P**	**13 08 22.8**	**-0.8**
	3.9nm,0.9s,baz=58,slow=9.6,SNR=12						
ASAR	**Alice Springs**	**26.12**	**227**	P	**P**	**13 08 44.9**	**-0.9**
	0.4nm,0.7s,baz=56,slow=8.1,SNR=7.4						
STKA	**Stephens Creek**	**27.94**	**204**	P	**P**	**13 09 02.6**	**+0.6**
	2.5nm,0.9s,baz=30,slow=7.6,SNR=3.5						
FITZ	**Fitzroy Crossi**	**30.40**	**245**	P	**P**	**13 09 22.6**	**-1.4**
	4.8nm,1.2s,baz=82,slow=7.1,SNR=2.2						
NVAR	**Mina Array Bea**	**91.82**	**52**	P	**P**	**13 16 20.2**	**+0.7**
	0.5nm,0.8s,baz=235,slow=4.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**152.45**	**286**	PKPbc	**PKPbc**	**13 23 07.3**	**-0.7**
	0.8nm,0.5s,baz=89,slow=2.0,SNR=7.3						

*IDC **09** 13:29:02.8±3.2, 5.52S×153.66E, h22km±19km, mb4.3/14, mb1 4.4/15, mb1mx4.2/34, mbtmp4.5/15, ML2.7/1, MS3.5/14, Ms1 3.5/14, ms1mx3.4/30, Error ellipse: s-maj=20.6km s-min=14.1km az=74.0*

*ISCJB **09** 13:29:03.8±0.3, 5.60S±0.04×153.67E±0.06, h43km, mb4.9/40, MS3.7/15, Error ellipse: s-maj=8.1km s-min=6.2km az=179.0*

*NEIC **09** 13:29:05.4±0.7, 5.55S×153.66E, h44km±6km, mb4.9/18, Error ellipse: s-maj=8.2km s-min=5.4km az=76.0*

*BJI **09** 13:29:06.2±0.0, 5.35S×153.73E, h59km, mb5.0/35, mB5.0/21, Ms4.5/6, Ms7 4.2/4*

ISC 09 13:29:05.7±0.5, 5.55S±0.06×153.64E±0.08, h43km, n75, σ1°24/74, mb4.8/40, MS3.7/15, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.99**	**312**	*e*P	**Pn**	**13 29 38.0**	**+1.1**
MANU	**Manus Island**	**7.16**	**299**	*e*Pn	**Pn**	**13 30 43.7**	**-4.2**
HNR	**Honiara**	**7.35**	**122**	LR	LR	13 33 39.4	
	comp=Z,618nm,20.7s,baz=274,slow=38						
PMG	**Port Moresby**	**7.48**	**239**	Pn	**Pn**	**13 30 52.9**	**+0.6**
	7.0nm,0.3s,baz=58,slow=9.6,SNR=21						
PMG				Sn	**Sn**	**13 32 16.5**	**+0.6**
	15nm,0.3s,baz=208,slow=22,SNR=6.0						
PMG				LR	LR	13 33 49.1	
	comp=Z,285nm,21.3s,baz=17,slow=38						
PMG	**Port Moresby**	**7.48**	**239**	*e*Pn	**Pn**	**13 30 52.6**	**+0.3**
PMG				Sn	**Sn**	**13 32 16.5**	**+0.6**
PATS	**Pohnpei**	**13.15**	**21**	*e*Pn	**Pn**	**13 32 09.8**	**-0.2**
JAY	**Jayapura**	**13.25**	**283**	LR	LR	13 36 56.7	
	comp=Z,287nm,20.7s,baz=30,slow=36						
CTA	**Charters Tower**	**16.14**	**206**	Pn	**P**	**13 32 51.6**	**-0.7**
	0.1nm,0.3s,baz=33,slow=18,SNR=3.1						
EIDS	**Eidsvold**	**19.86**	**187**	*e*P	**P**	**13 33 32.5**	**-0.7**
	64nm,1.8s						
DZM	**Mont Dzumac**	**20.58**	**144**	P	**P**	**13 33 41.1**	**0.0**
	41nm,0.7s,baz=310,slow=7.2,SNR=39						
DZM	**Mont Dzumac**	**20.58**	**144**	*e*P	**P**	**13 33 40.9**	**-0.3**
	46nm,0.7s						
ONTNC	**Ouen Toro**	**20.77**	**145**	*e*P	**P**	**13 33 43.0**	**-0.1**
	50nm,0.7s						
GUMO	**Guam**	**20.91**	**335**	LR	LR	13 41 35.0	
	comp=Z,36nm,20.8s,baz=177,slow=36						
MARNC	**Mare, Loyalty**	**21.10**	**140**	*e*P	**P**	**13 33 46.2**	**-0.5**
	137nm,0.7s						
WB2	**Warramunga Arr**	**23.59**	**231**	*e*P	**P**	**13 34 12.3**	**-0.5**
	19nm,1.4s						
WR1	**Warramunga Arr**	**23.60**	**231**	*e*P	**P**	**13 34 12.7**	**-0.2**
WR1				*e*PcP	**PcP**	**13 37 56.9**	**-0.2**
WR1				*e*ScP	**ScP**	**13 41 34.7**	**+2.6**
WRA	**Warramunga Arr**	**23.60**	**231**	P	**P**	**13 34 12.7**	**-0.2**
	3.5nm,0.8s,baz=59,slow=9.7,SNR=18						
WRA				PcP	**PcP**	**13 37 56.9**	**-0.2**
	1.3nm,0.6s,baz=60,slow=4.9,SNR=3.5						
WRA				ScP	**ScP**	**13 41 34.7**	**+2.6**
	2.0nm,1.1s,baz=68,slow=2.2,SNR=3.8						
AS31	**Alice Springs**	**26.18**	**225**	*e*P	**P**	**13 34 35.3**	**-1.1**
	1.6nm,0.9s						
ASAR	**Alice Springs**	**26.19**	**225**	P	**P**	**13 34 35.8**	**-0.7**
	4.6nm,0.9s,baz=58,slow=8.4,SNR=27						
ASAR				PcP	**PcP**	**13 38 02.8**	**-0.1**
	1.1nm,0.7s,baz=44,slow=2.6,SNR=7.2						
ASAR				ScP	**ScP**	**13 41 40.5**	**+1.1**
	0.4nm,0.7s,baz=50,slow=2.5,SNR=6.6						
ASAR				LR	LR	13 44 39.2	
	comp=Z,91nm,18.2s,baz=66,slow=36						
H11S3	**WAKE ISLAND Hy 27.13**	**28**		T	T	14 03 03.1	
	baz=207,slow=73,SNR=54						
H11S2	**WAKE ISLAND Hy 27.14**	**28**		T	T	14 03 05.0	
	baz=207,slow=53,SNR=53						
H11S1	**WAKE ISLAND Hy 27.15**	**28**		T	T	14 03 06.8	
	baz=207,slow=73,SNR=39						
STKA	**Stephens Creek**	**28.52**	**202**	ScP	**ScP**	**13 41 48.0**	**+1.8**
	3.6nm,1.0s,baz=120,slow=3.4,SNR=3.7						
BATI	**Baumata**	**30.04**	**259**	LR	LR	13 48 14.3	
	comp=Z,173nm,19.1s,baz=116,slow=38						
FITZ	**Fitzroy Crossi**	**30.05**	**243**	P	**P**	**13 35 10.0**	**-1.0**
	5.2nm,0.5s,baz=57,slow=7.8,SNR=34						
FITZ				LR	LR	13 47 27.3	
	comp=Z,105nm,19.7s,baz=64,slow=37						
FITZ	**Fitzroy Crossi**	**30.05**	**243**	*e*P	**P**	**13 35 09.1**	**-1.8**
	15nm,1.3s						
TGY	**Tagaytay City**	**37.87**	**301**	LR	LR	13 50 02.8	
	comp=Z,128nm,21.3s,baz=214,slow=33						
URZ	**Urewera**	**38.93**	**150**	P	**P**	**13 36 26.7**	**-0.7**
	4.2nm,0.4s,baz=355,slow=11,SNR=9.4						
RPZ	**Rata Peaks**	**40.99**	**161**	P	**P**	**13 36 44.2**	**-0.3**
	12nm,0.8s,baz=61,slow=3.0,SNR=3.7						
JNU	**Nakatsue**	**44.10**	**332**	P	**P**	**13 37 07.7**	**-2.2**
	11nm,0.8s,baz=272,slow=7.2,SNR=5.5						
JNU	**Nakatsue**	**44.10**	**332**	*e*P	**P**	**13 37 07.2**	**-2.7**
MJAR	**Matsushiro Arr**	**44.29**	**342**	LR	LR	13 54 06.6	
	comp=Z,33nm,21.9s,baz=180,slow=34						
KSRS	**Korea Array**	**49.04**	**333**	P	**P**	**13 37 48.0**	**-0.5**
	2.0nm,0.8s,baz=153,slow=8.0,SNR=8.5						
KSAR	**Wonju Array Be**	**49.05**	**333**	P	**P**	**13 37 48.0**	**-0.5**
NJ2	**Nanjing**	**49.95**	**321**	*e*P	**P**	**13 37 57.7**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	**Wuhan**	**51.97**	**316**	P	**P**	**13 38 11.8**	**+1.1**
USRK	**Ussuriysk Ar.**	**53.22**	**341**	LR	LR	13 57 27.3	
	comp=Z,34nm,21.6s,baz=217,slow=32						
ENH	**Enshi**	**55.27**	**313**	*e*P	**P**	**13 38 34.6**	**-0.4**
	24nm,1.1s						
CN2	**Changchun**	**55.32**	**335**	*e*P	**P**	**13 38 37.8**	**+2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	**Xi'an**	**57.73**	**316**	P	**P**	**13 38 52.1**	**-0.4**
XAN				pmax	pmax		
	comp=Z,14nm,0.7s						
XAN				pmax	pmax		
	comp=Z,54nm,3.1s						
XAN				LR	LR		
	comp=N,100nm,18.4s						
XAN				LR	LR		
	comp=E,120nm,21.7s						
XAN				LR	LR		
	comp=Z,120nm,17.9s						
XAN	**Xi'an**	**57.73**	**316**	*e*P	**P**	**13 38 51.7**	**-0.8**
	11nm,0.7s						
KMI	**Kunming**	**58.09**	**304**	P	**P**	**13 38 57.1**	**+1.7**
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
LAMP	**Lampang**	**58.35**	**296**	P	**P**	**13 38 58.7**	**+1.7**
	43μm,0.8s,360μm						
PAYA	**Payao**	**58.41**	**297**	P	**P**	**13 38 58.6**	**+1.2**
	44μm,0.8s,652μm						
CM31	**Chiang Mai Arr**	**58.95**	**295**	*e*P	**P**	**13 39 01.6**	**+0.4**
	14nm,0.7s						
CMAR	**Chiang Mai Arr**	**58.95**	**295**	P	**P**	**13 39 02.1**	**+1.0**
	10.0nm,0.8s,baz=109,slow=5.2,SNR=51						
CMAR				LR	LR	14 02 56.1	
	comp=Z,37nm,21.3s,baz=158,slow=34						
CMMT	**Chiang Mai**	**59.06**	**296**	P	**P**	**13 39 03.1**	**+1.2**
	6.0nm,1.2s						
CHTO	**Chiang Mai**	**59.06**	**296**	*e*P	**P**	**13 39 02.3**	**+0.4**
	12nm,1.1s						
CD2	**Chengdu**	**59.85**	**311**	*e*P	**P**	**13 39 08.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**60.14**	**324**	*e*P	**P**	**13 39 09.6**	**+0.5**
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,58nm,5.3s						
LZH	**Lanzhou**	**62.34**	**316**	*e*P	**P**	**13 39 25.9**	**+1.7**
LZH				pP	pwP	13 39 41.8	+0.6
LZH				sP	sP	13 39 48.5	+8.9
LZH				PP	**PP**	**13 41 43.2**	**+1.3**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,52nm,4.9s						
LZH				LR	LR		
	comp=N,340nm,15.2s						
LZH				LR	LR		
	comp=E,410nm,14.6s						
LZH				LR	LR		
	comp=Z,410nm,17.9s						
GTA	**Gaotai**	**66.77**	**317**	P	**P**	**13 39 54.4**	**+1.4**
GTA				pP	pwP	13 40 11.1	+1.0
GTA				sP	PcP	13 40 15.9	-5.8
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,51nm,5.3s						
GTA				LR	LR		
	comp=N,80nm,17.9s						
GTA				LR	LR		
	comp=E,95nm,19.6s						
SONA0	**Songino Array**	**67.40**	**328**	*e*P	**P**	**13 39 57.2**	**+0.3**
SONM	**Songino Array**	**67.40**	**328**	P	**P**	**13 39 57.2**	**+0.3**
	1.4nm,0.5s,baz=139,slow=4.8,SNR=8.6						
SONM				LR	LR	14 09 47.0	
	comp=Z,32nm,19.6s,baz=112,slow=36						
SHL	**Shillong**	**67.40**	**300**	*e*P	**P**	**13 39 56.9**	**-0.4**
	18nm,1.0s						
VNDA	**Vanda**	**72.06**	**178**	P	**P**	**13 40 25.4**	**+0.5**
	1.7nm,0.7s,baz=342,slow=4.8,SNR=11						
VNDA	**Vanda**	**72.06**	**178**	*e*P	**P**	**13 40 23.9**	**-1.0**
WMQ	**Urumqi**	**76.85**	**317**	*e*P	**P**	**13 40 53.1**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.1s						
WMQ				LR	LR		
	comp=N,2μm,39.0s						
WMQ				LR	LR		
	comp=E,1μm,39.2s						
WMQ				LR	LR		
	comp=Z,310nm,39.1s						
MK31	**Makanchi Array**	**81.43**	**319**	*e*P	**P**	**13 41 18.3**	**0.0**
	5.2nm,0.9s						
MK32	**Makanchi Array**	**81.43**	**319**	*e*P	**P**	**13 41 18.6**	**+0.3**
MKAR	**Makanchi Array**	**81.43**	**319**	P	**P**	**13 41 18.6**	**+0.3**
	4.4nm,0.7s,baz=103,slow=5.9,SNR=37						
MKAR				LR	LR	14 18 46.7	
	comp=Z,31nm,19.0s,baz=92,slow=37						
MAKZ	**Makanchi**	**81.64**	**319**	*e*P	**P**	**13 41 19.3**	**-0.1**
	7.8nm,0.9s						
ZALV	**Zalesovo Beam**	**82.23**	**326**	P	**P**	**13 41 21.9**	**-0.4**
	2.8nm,0.6s,baz=112,slow=5.0,SNR=8.2						
ZAA1	**Zalesovo Array**	**82.23**	**326**	*e*P	**P**	**13 41 21.9**	**-0.4**
ILAR	**Eielson Array**	**82.53**	**22**	P	**P**	**13 41 23.7**	**+0.1**
	0.3nm,0.6s,baz=251,slow=5.4,SNR=4.0						
ILAR				LR	LR	14 19 36.0	
	comp=Z,29nm,18.0s,baz=198,slow=37						
KSH	**Kashi**	**84.05**	**311**	P	**P**	**13 41 35.8**	**+3.6**
KSH				pmax	pmax		
	comp=Z,24nm,1.2s						
KSH				pmax	pmax		
	comp=Z,110nm,6.1s						
QSPA	**South Pole Qui**	**84.42**	**180**	*e*P	**P**	**13 41 33.2**	**-0.4**
	8.1nm,0.8s						
NRN	**Narvn**	**84.44**	**312**	*e*P	**P**	**13 41 33.9**	**-0.5**
	5.5nm,1.1s						
BOM	**Boomskoye usch**	**84.71**	**313**	*e*P	**P**	**13 41 35.8**	**+0.3**
	11nm,0.8s						
KURK	**Kurchatov**	**84.87**	**322**	*e*P	**P**	**13 41 35.3**	**-0.6**
	7.5nm,1.1s						
AAK	**Ala-Archa**	**85.78**	**313**	*e*P	**P**	**13 41 40.6**	**-0.3**
	6.5nm,0.8s						
TAM	**Tamanrasset**	**144.78**	**302**	*e*PKPdf	**PKPab**	**13 48 37.2**	**-0.8**
TOA0	**Torodi Ar. Sit**	**151.33**	**287**	*e*PKPbc	**PKPbc**	**13 48 54.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**151.33**	**287**	PKPbc	**PKPbc**	**13 48 55.3**	**-0.5**
	3.6nm,0.8s,baz=47,slow=3.2,SNR=19						
TOA1	**Torodi Ar. Sit**	**151.33**	**287**	*e*PKPbc	**PKPbc**	**13 48 55.3**	**-0.5**

SVSA 09 13:41:48.5±0.7, 37.44N×24.77W, h5km, MD3.7, ML2.7, 2C-2D, Error ellipse: s-maj=6.7km s-min=1.5km az=81.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	**0.46**	**317**	⇓*i*P	Pg	13 41 56.3	-1.1
BART				*e*S	Sg	13 42 02.5	-0.9
BART				A	A	13 42 04.9	
	196nm,0.2s						
PSMN	**Pico do Norte,**	**0.50**	**208**	⇑*i*P	Pg	13 41 57.2	-0.8
PSMN				*e*S	Sg	13 42 03.5	-1.0
PSMN				A	A	13 42 08.5	
	69nm,0.3s						
PSMA	**Santa Maria**	**0.53**	**213**	⇑*i*P	Pg	13 41 57.6	-1.1
PSMA				*e*S	Sg	13 42 04.3	-1.2
PSMA				A	A	13 42 11.9	
	61nm,0.2s						
GRON	**Grota Negra**	**0.69**	**299**	⇓*i*P	Pg	13 41 58.3	-3.4
GRON				*e*S	Sg	13 42 05.9	-4.7
GRON				A	A	13 42 08.2	
	176nm,0.2s						
PDA	**Ponta Delgada**	**0.77**	**294**	*e*P	Pg	13 42 00.9	-2.4
PDA				*e*S	Sg	13 42 10.6	-2.7
PDA				A	A	13 42 11.8	
	154nm,0.2s						
PSET	**Sete Cidades**	**0.84**	**297**	*e*P	Pn	13 42 13.3	+6.2
PSCM	**Serra do Cume**	**2.24**	**305**	*e*P	Pn	13 42 21.9	-4.3
PSCM				*e*S	Sn	13 42 46.4	-7.9
PSCM				A	A	13 42 48.6	
	24nm,0.3s						
ADH	**Angra Heroismo**	**2.29**	**303**	*e*P	Pn	13 42 22.2	-4.7
ADH				*e*S	Sn	13 42 47.5	-8.0
ADH				A	A	13 42 53.5	
	21nm,0.2s						

*DDA **09** 14:18:56.6, 39.14N×29.02E, h16km±1km, ML4.1*

*ISK **09** 14:18:56.8, 39.17N×29.03E, h9km, ML3.9/42*

*ISCJB **09** 14:18:57.0±0.3, 39.18N±0.02×29.00E±0.02, h10km±2km, mb3.3/3, MS3.1/1, Error ellipse: s-maj=2.6km s-min=2.3km az=31.2*

*IDC **09** 14:18:57.8±1.5, 39.20N×29.23E, h0km, mb3.5/3, mb1 3.7/7, mb1mx3.3/49, mbtmp3.6/7, ML3.4/4, MS3.1/1, Ms1 3.1/1, ms1mx2.2/38, Error ellipse: s-maj=25.3km s-min=17.5km az=27.0*

ISC 09 14:18:57.8±0.8, 39.15N±0.02×29.02E±0.02, h9km±5km, n132, σ0°97/159, mb3.4/3, 27C-15D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.06**	**212**	PG	**Pg**	**14 18 59.5**	**-0.3**
SMAA				SG	**Sg**	**14 19 01.8**	**+0.5**
SHAP	**Saphane-Kutahy**	**0.20**	**128**	PG	**Pg**	**14 19 01.7**	**-0.3**
SHAP				SG	**Sg**	**14 19 04.9**	**0.0**
GEDZ	**Gediz**	**0.32**	**109**	PG	**Pg**	**14 19 03.9**	**-0.3**
GEDZ				SG	**Sg**	**14 19 08.4**	**-0.1**
GDZ	**Gediz**	**0.36**	**99**	⇓*i*P	**Pg**	**14 19 05.0**	**-0.1**
GDZ				*i* S	**Sg**	**14 19 10.5**	**+0.6**
GDZ				IAML_P			
	comp=Z,104μm,0.1s						
USAK	**Uak-Merkez**	**0.43**	**180**	⇑*i*P	**Pg**	**14 19 06.3**	**+0.1**
USAK				*i* S	**Sg**	**14 19 12.2**	**+0.2**
DURS	**Dursunbey**	**0.62**	**317**	⇑*i*P	**Pg**	**14 19 09.6**	**-0.1**
DURS				*i* S	**Sb**	**14 19 18.8**	**-0.8**
DURS				IAML_P			
	comp=Z,45μm,0.2s						
KULA	**Kula-Manisa**	**0.69**	**204**	PG	**Pg**	**14 19 10.2**	**-0.9**
KULA	**Kula-Manisa**	**0.69**	**204**	P	**Pg**	**14 19 10.2**	**-0.9**
MANT	**Manisa**	**0.75**	**209**	⇑*i*P	**Pg**	**14 19 11.6**	**-0.7**
MANT				*i* S	**Sg**	**14 19 21.3**	**-0.7**
MANT				IAML_P			
	comp=Z,96μm,0.2s						
KHAL	**Karahalli**	**0.86**	**154**	⇑*i*P	**Pg**	**14 19 14.0**	**-0.4**
KHAL				*i* S	**Sg**	**14 19 24.2**	**-1.4**
KHAL				IAML_P			
	comp=Z,36μm,0.2s						
ORLT	**Orhaneli**	**0.90**	**354**	PG	**Pg**	**14 19 14.4**	**-0.7**
KHL	**Karahalli**	**0.91**	**154**	PG	**Pg**	**14 19 14.8**	**-0.5**
GOMA	**Golmarmara-Man**	**0.96**	**243**	PG	**Pg**	**14 19 15.9**	**-0.4**
AKHS	**Akhisar**	**0.98**	**254**	⇓*i*P	**Pg**	**14 19 16.0**	**-0.5**
AKHS				*i* S	**Sg**	**14 19 29.0**	**-0.2**
AKS	**Akhisar**	**0.98**	**254**	PG	**Pg**	**14 19 16.1**	**-0.4**
ULDT	**Uludag**	**1.00**	**5**	⇑*i*P	**Pg**	**14 19 16.8**	**-0.2**
ULDT				*i* S	**Sb**	**14 19 29.8**	**-0.9**
BALB	**Balikesir**	**1.01**	**299**	PG	**Pg**	**14 19 17.0**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.03**	**283**	⇓*i*P	**Pb**	**14 19 17.9**	**+0.1**
STEP				*i* S	**Sb**	**14 19 32.2**	**+0.7**
STEP				IAML_P			
	comp=Z,15μm,0.3s						
AFYO	**Afyonkarahisar**	**1.06**	**109**	*i* P	**Pg**	**14 19 17.2**	**-0.9**
AFYO				*i* S	**Sb**	**14 19 32.5**	**+0.2**
AFYO				IAML_P			
	comp=Z,45μm,0.3s						
IGD	**Bursa**	**1.12**	**7**	⇑*i*P	**Pb**	**14 19 18.0**	**-1.3**
IGD				*i* S	**Sn**	**14 19 36.7**	**+1.5**
AUKIR	**Kırka- Seyitga**	**1.18**	**83**	*i* P	**Pn**	**14 19 20.8**	**+0.3**
AUKIR				*i* S	**Sn**	**14 19 36.4**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.22**	**355**	PN	**Pn**	**14 19 20.

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PRK	Paraskevi	2.14	273	P		Pn	14 19 34.2	+0.7
KAND	Kocaeli-Kandir	2.14	24	*i* P		Pn	14 19 33.1	-0.5
KAND				*i* S		Sg	14 20 05.5	-1.1
EZN	Ezine	2.19	289	P		Pn	14 19 34.6	+0.3
EZN	Ezine	2.19	289	⇑*i*P		Pn	14 19 34.8	+0.5
EZN	Ezine	2.19	289	S		Sn	14 20 02.5	+1.0
SMG	Samos	2.24	231	P		Pn	14 19 35.8	+0.9
GELI	Tayfur-Gelibol	2.32	303	PN		Pn	14 19 35.9	-0.2
DALY	Dalyan (Mula)	2.34	187	PN		Pn	14 19 36.4	0.0
KORT	Korkueli	2.39	153	PN		Pn	14 19 37.4	+0.3
CTYL	Yalikoy Yolu	2.39	347	PN		Pn	14 19 36.3	-0.8
CTYL	Yalikoy Yolu	2.39	347	⇑*i*P		Pn	14 19 36.2	-0.8
CTYL	Yalikoy Yolu	2.39	347	S		Sn	14 20 04.9	-1.5
BOZC	Bozcaada	2.40	288	PN		Pn	14 19 37.2	+0.1
CHOS	Chios island	2.44	253	PN		Pn	14 19 37.7	-0.1
CHOS				SN		Sn	14 20 01.2	-6.5
CHOS	Chios island	2.44	253	P		Pn	14 19 37.0	-0.8
ERIK	Erikli-Kesan	2.45	309	PN		Pn	14 19 37.7	-0.2
SIGR	SIGRI	2.46	272	PN		Pn	14 19 38.5	+0.5
SIGR	SIGRI	2.46	272	P		Pn	14 19 37.8	-0.2
BODT	Bodrum	2.48	213	P		Pn	14 19 38.0	-0.3
FETY	Fethiye	2.51	179	PN		Pn	14 19 38.9	+0.2
FETY	Fethiye	2.51	179	P		Pn	14 19 38.8	+0.1
GADA	Gvkgeada	2.62	294	P		Pn	14 19 41.9	+1.7
PHSR	Pinarhisar	2.73	336	⇓*i*P		Pn	14 19 41.2	-0.5
PHSR	Pinarhisar	2.73	336	S		Sn	14 20 14.2	-0.6
KDZE	Karadeniz Ereo	2.85	40	⇑*i*P		Pn	14 19 43.5	+0.1
ALN	Alexandroupoli	2.87	308	P		Pn	14 19 43.2	-0.5
SMTH	Samothraki Isl	2.99	297	P		Pn	14 19 45.3	-0.1
LIA	Limnos Island	3.06	285	P		Pn	14 19 46.6	+0.4
EDRB	Edirne	3.21	328	P		Pn	14 19 48.0	-0.2
RDO	Rodhopi	3.33	308	P		Pn	14 19 50.0	0.0
BRTR	Keskin Array B	3.62	79	Pn		Pn	14 19 54.5	+0.4
	comp=Z,1.5nm,0.3s,baz=258,slow=13,SNR=44							
BRTR				Sn		Sn	14 20 37.1	0.0
	comp=Z,1.6nm,0.3s,baz=278,slow=17,SNR=4.6							
KAVA	Kavala	3.92	300	P		Pn	14 19 58.0	0.0
PAIG	Paliouri	4.20	282	P		Pn	14 20 03.8	+1.9
NVR	Nevrokopi	4.52	301	P		Pn	14 20 06.4	+0.1
SRS	Serrai	4.60	297	P		Pn	14 20 07.4	0.0
MANR	Mangalia	4.68	356	⇓*i*P		Pn	14 20 08.0	-0.4
MFTR	Murfatlar	5.04	355	⇓*i*P		Pn	14 20 13.4	-0.1
IDI	Anoyia	5.07	222	Pn		Pn	14 20 17.4	+3.5
	comp=Z,0.5nm,0.3s,baz=51,slow=13,SNR=4.3							
TIRR	Tirgusor	5.33	355	⇓*i*P		Pn	14 20 16.8	-0.6
TLB	Topalu	5.48	353	⇑*i*P		Pn	14 20 18.8	-0.7
VTS	Vitosha	5.59	310	P		Pn	14 20 22.5	+1.4
VTS	Vitosha	5.59	310	⇓*i*P		Pn	14 20 21.7	+0.6
HARR	Harsova	5.60	352	⇑*i*P		Pn	14 20 20.2	-0.9
STIP	Stip	5.80	298	*i* Pn		Pn	14 20 22.4	-1.6
TLCR		6.04	359	⇑*i*P		Pn	14 20 27.1	0.0
CFR	Carcaliu	6.06	354	⇓*i*P		Pn	14 20 26.5	-1.0
SEVA	Sevastopol	6.41	31	⇑*i*P		Pn	14 20 31.5	-0.7
MLR	Muntele Rosu	6.73	341	Pn		Pn	14 20 38.2	+1.4
	comp=Z,0.8nm,0.3s,baz=173,slow=10,SNR=9.3							
MLR	Muntele Rosu	6.73	341	⇑*i*P		Pn	14 20 36.8	-0.1
PLOR	Plostina	6.92	346	⇑*i*P		Pn	14 20 39.2	-0.2
VRI	Vrincioaia	6.92	347	⇑*i*P		Pn	14 20 39.1	-0.2
VOIR		6.94	336	⇑*i*P		Pn	14 20 39.6	0.0
ARR	Arges	7.01	334	⇑*i*P		Pn	14 20 40.8	+0.2
LOT	Lotru	7.40	330	⇑*i*P		Pn	14 20 45.3	-0.7
TESR	Tescani	7.56	347	⇑*i*P		Pn	14 20 47.7	-0.4
MILM	Milestii Mici	7.77	359	⇑*i*P		Pn	14 20 50.7	-0.2
MDVR	Moldovita	7.83	318	⇑*i*P		Pn	14 20 51.3	-0.5
MMAI	Mount Meron Ar	8.01	138	Pn		Pn	14 20 54.3	0.0
	comp=Z,0.4nm,0.3s,baz=327,slow=10,SNR=4.9							
BIZ	Bicaz	8.07	346	⇓*i*P		Pn	14 20 55.3	+0.2
BZS	Buzias	8.47	322	⇑*i*P		Pn	14 21 00.2	-0.3
BURAR	Bucovina Array	8.90	343	⇑*i*P		Pn	14 21 06.6	0.0
DRGR		8.93	331	⇓*i*P		Pn	14 21 06.6	-0.3
VYHS	Vyhne	11.88	325	*e*PN		Pn	14 21 45.8	-1.4
FINES	FINESS Array B	22.40	356	P		P	14 23 57.9	+1.8
	comp=Z,1.3nm,0.9s,baz=165,slow=11,SNR=2.4							
EKA	Eskdalemuir Ar	26.86	318	P		P	14 24 41.1	+2.7
	comp=Z,0.3nm,0.4s,baz=117,slow=12,SNR=3.7							
MKAR	Makanchi Array	39.07	61	P		P	14 26 24.7	-0.3
	comp=Z,0.5nm,0.6s,baz=268,slow=9.0,SNR=5.1							
SFJD	Kangerlussuaq	50.72	330	LR		LR	14 48 34.2	
	comp=Z,21nm,20.8s,baz=234,slow=35							

AUST **09** *14:21:56.3±0.0,25°.88S×132°.03E,h0km, Error ellipse: s-maj=0.1km s-min=0.1km az=253.0*

BJI **09** *14:22:09.4±0.0,26°.27S×132°.49E,h5km,mb5.5/77, mB5.5/55,Ms5.1/74,Ms7 4.8/69*

ISCJB **09** *14:22:12.8±0.1,26°.00S±0°.02×132°.01E±0°.03,h10km, mb5.6/177,MS5.4/641,Error ellipse: s-maj=3.6km s-min=2.7km az=138.2*

NEIC **09** *14:22:12.0±0.0,25°.87S×131°.98E,h11km Best double couple: NP1:φ=94.00000°,δ64.00000°,λ41.00000°. NP2:φ=343.00000°,δ54.00000°,λ147.00000°. Principal axes: T 0.9200, Plg46.0000°, Azm312.0000°; N 0.3000, Plg42.0000°, Azm120.0000°; P -1.2100, Plg6.0000°, Azm216.0000°;*

IDC **09** *14:22:13.0±0.3,25°.99S×131°.93E,h0km,mb5.3/27, mb1 5.4/32,mb1mx5.3/38,mbtmp5.3/32,ML5.6/5,MS5.1/28, Ms1 5.1/28,ms1mx5.0/34 Error ellipse: s-maj=14.0km s-min=10.2km az=67.0*

MOS **09** *14:22:14.3±1.0,25°.88S×131°.95E,h13km,mb5.7/46, MS5.1/51,Error ellipse: s-maj=10.6km s-min=5.8km az=98.6*

GCMT **09** *14:22:15.0±0.1,26°.00S±0°.01×132°.09E±0°.01,h12km, MW5.4/116,Moment Tensor Solution. s88,c153; s116,c258; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr1.05±.02; Mθθ-0.82±.02; Mφφ-0.22±.02; Mrθ0.02±.05; Mφ1.65±.02; Mφr0.28±.05; Best double couple: M0 1.77400×10^17 NP1:φs347.00000°,δ66.00000°, λ148.00000°. NP2:φs91.00000°,δ61.00000°,λ28.00000°. Principal axes: T 1.3370, Plg39.0000°, Azm308.0000°; N 0.8720, Plg51.0000°, Azm134.0000°; P -2.2110, Plg3.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC **09** *14:22:15.0±0.0,26°.11S×131°.99E,h0km,mb5.6/104, MS5.4/298,MW5.3,ML5.7(AUST),Depth from synthetics of broadband displacement seismograms. After AUST.*

NEIC Felt in the Ernabella-Kulgera area.

ISC 09 14:22:14.3±0.2,25°.99S±0°.03×132°.01E±0°.04,h10km, n1706,σ1s22/1436,mb5.6/187,MS5.5/644,36C-16D, Northern Territory

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	2.88	37	Pn		Pn	14 23 00.9	+0.6
	253nm,0.3s,baz=217,slow=12,SNR=1121							
ASAR				Sn		Sn	14 23 36.5	+1.5
	429nm,0.3s,baz=222,slow=25,SNR=8.0							
AS31	Alice Springs	2.88	37	*e*Pn		Pn	14 23 00.5	+0.2
AS31				*e*Sn		Sn	14 23 36.5	+1.4
WRKA	Warakurna	3.48	285	P		Pn	14 23 09.9	+1.3
	baz=3.4							
FORT	Forrest	5.91	215	*e*Pn		Pn	14 23 41.8	-0.1
FORT	Forrest	5.91	215	P		Pn	14 23 41.8	-0.1
	baz=5.9,SNR=241							
WC3	Warramunga Arr	6.38	20	*e*Pn		Pn	14 23 47.8	-0.7
WR1	Warramunga Arr	6.39	20	*e*Pn		Pn	14 23 48.4	-0.1
WR1				*e*Sn		Sn	14 24 58.6	-2.9
WRA	Warramunga Arr	6.39	20	Pn		Pn	14 23 48.4	-0.1
	102nm,0.3s,baz=197,slow=13,SNR=633							
WRA				Sn		Sn	14 24 58.6	-2.9
	202nm,0.3s,baz=198,slow=24,SNR=9.8							
WRA				Lg		Lg	14 25 28.5	
	288nm,0.3s,baz=198,slow=30,SNR=9.7							
WB2	Warramunga Arr	6.39	20	*e*Pn		Pn	14 23 47.4	-1.1
WB2	Warramunga Arr	6.39	20	P		Pn	14 23 47.7	-0.8
	baz=6.4							
WRAB	Tennant Creek	6.40	20	*e*Pn		Pn	14 23 47.7	-1.0
WRAB	Tennant Creek	6.40	20	*ce*P		Pn	14 23 48.5	-0.1
WRAB				pmax		pmax		
	comp=Z,183nm,0.6s							
BBOO	Buckleboo	7.66	154	*e*Pn		Pn	14 24 05.8	-0.1
BBOO	Buckleboo	7.66	154	P		Pn	14 24 06.2	+0.2
	baz=7.7,SNR=633							
QIS	Mount Isa	8.83	54	P		Pn	14 24 20.4	-1.6
	baz=8.9,SNR=656							
HTT	Hallett	9.55	143	P		Pn	14 24 31.5	-0.3
	baz=9.6,SNR=229							
FITZ	Fitzroy Crossi	9.82	322	Pn		Pn	14 24 34.7	-0.9
	comp=Z,64nm,0.3s,baz=148,slow=10,SNR=429							
FITZ				Sn		Sn	14 26 21.3	-4.7
	comp=Z,18nm,0.3s,baz=322,slow=12,SNR=3.8							
FITZ				Lg		Lg	14 27 20.0	
	comp=Z,45nm,0.3s,baz=53,slow=20,SNR=3.2							
FITZ				LR		LR	14 28 50.1	
	comp=Z,10μm,20.3s,baz=140,slow=41							
FITZ	Fitzroy Crossi	9.82	322	*e*Pn		Pn	14 24 34.1	-1.5
FITZ				*e*Sn		Sn	14 26 21.3	-4.7
FITZ				*e*Lg		Lg	14 27 20.0	
FITZ	Fitzroy Crossi	9.82	322	P		Pn	14 24 34.5	-1.1
	baz=9.8,SNR=334							
STKA	Stephens Creek	10.24	127	Pn		Pn	14 24 41.0	-0.3
	comp=Z,33nm,0.3s,baz=306,slow=13,SNR=194							
STKA				Sn		Sn	14 26 32.5	-3.8
	comp=Z,332nm,0.3s,baz=10,slow=20,SNR=23							
STKA				Lg		Lg	14 27 34.5	
	comp=Z,26nm,0.3s,baz=24,slow=19,SNR=2.6							
STKA				LR		LR	14 28 47.3	
	comp=Z,16μm,19.1s,baz=292,slow=38							
STKA	Stephens Creek	10.24	127	*e*Pn		Pn	14 24 40.6	-0.7
STKA				*e*Sn		Sn	14 26 32.5	-3.8
STKA				*e*Lg		Lg	14 27 34.5	
STKA	Stephens Creek	10.24	127	P		Pn	14 24 40.0	-1.3
	baz=10,SNR=304							
KMBL	Kambalda	10.38	237	P		Pn	14 24 42.5	-0.8
	baz=10,SNR=235							
KNRA	Kununurra	10.70	343	P		Pn	14 24 45.8	-1.8
	baz=11,SNR=601							
PSA00	Pilbara Seismi	11.97	289	*e*Pn		Pn	14 25 01.4	-3.7
MBWA	Marble Bar	12.24	291	P		Pn	14 25 06.0	-2.7
	SNR=53							
MTN	Manton Dam	13.10	356	*e*Pn		Pn	14 25 16.4	-4.1
MTN	Manton Dam	13.10	356	P		Pn	14 25 16.6	-3.9
	baz=13,SNR=100							
KDU	Kakadu	13.24	2	P		Pn	14 25 18.0	-4.3
	baz=13,SNR=159							
ARPS	Mount Arapiles	13.63	144	P		Pn	14 25 24.8	-2.9
	baz=14,SNR=135							
KLBR	Kellerberrin	13.69	243	P		Pn	14 25 24.6	-3.9
	baz=14,SNR=1000							
BLDU	Ballidu	14.24	248	P		Pn	14 25 31.3	-4.8
	baz=14,SNR=261							
CTA	Charters Tower	14.36	69	Pn		Pn	14 25 35.0	-2.8
	comp=Z,11nm,0.3s,baz=254,slow=14,SNR=67							
CTA				Sn		Sn	14 28 08.0	-9.2
	comp=Z,18nm,0.3s,baz=244,slow=19,SNR=3.8							
CTA				Lg		Lg	14 29 45.5	
	comp=Z,21nm,0.3s,baz=345,slow=19,SNR=4.9							
CTA				LR		LR	14 31 29.0	
	comp=Z,15μm,20.3s,baz=240,slow=38							
CTAO	Charters Tower	14.36	69	*e*Pn		Pn	14 25 34.5	-3.3
CTAO	Charters Tower	14.36	69	*e*P		Pn	14 25 34.5	-3.3
MORW	Morawa	14.50	254	*e*Pn		Pn	14 25 33.8	-5.8
MORW	Morawa	14.50	254	P		Pn	14 25 34.0	-5.6
	baz=14,SNR=266							
NWAO	Narrogin (SRO)	14.60	238	Pn		Pn	14 25 37.3	-3.7
	comp=Z,48nm,0.3s,baz=65,slow=10.0,SNR=106							
NWAO				Sn		Sn	14 28 11.1	-12
	comp=Z,96nm,0.3s,baz=154,slow=19,SNR=11							
NWAO				Lg		Lg	14 29 46.1	
	comp=Z,114nm,0.3s,baz=151,slow=18,SNR=7.4							
NWAO				LR		LR	14 31 19.5	
	comp=Z,41μm,19.0s,baz=68,slow=38							
NWAO	Narrogin (SRO)	14.60	238	P		Pn	14 25 36.7	-4.4
	baz=14,SNR=177							
NWAO	Narrogin (SRO)	14.60	238	P		Pn	14 25 37.4	-3.7
	SNR=7.7							
RMQ	Roma	15.04	96	P		Pn	14 25 44.2	-2.7
	baz=15,SNR=41							
MUN	Mundaring	15.06	243	P		Pn	14 25 42.3	-4.8
	baz=15,SNR=106							
COEN	Coen	15.90	43	*e*Pn		Pn	14 25 53.0	-5.3
	comp=Z,669nm,1.4s							
COEN	Coen	15.90	43	P		Pn	14 25 53.5	-4.8
	baz=16,SNR=99							
TOO	Toolangi	16.25	139	*e*Pn		Pn	14 26 00.2	-2.5
TOO	Toolangi	16.25	139	P		Pn	14 26 00.3	-2.5
	baz=16,SNR=55							
TOO	Toolangi	16.25	139	*e*P		Pn	14 26 00.2	-2.5
YNG	Young	16.40	124	P		Pn	14 26 03.1	-1.6
	baz=16,SNR=12							
GIRL	Giralia	16.54	278	*e*Pn		Pn	14 26 01.7	-4.8
	comp=Z,525nm,0.9s							
GIRL	Giralia	16.54	278	P		Pn	14 26 01.4	-5.0
	baz=16,SNR=14							
EIDS	Eidsvold	17.21	92	*e*Pn		Pn	14 26 11.9	-2.9
	comp=Z,494nm,1.3s							
CAN	Canberra	17.31	127	*e*Pn		Pn	14 26 14.0	-2.1
	comp=Z,814nm,1.7s							
CAN	Canberra	17.31	127	P		Pn	14 26 16.3	+0.2
CAN				pmax		pmax		
	comp=Z,231nm,1.6s							
CNB	Canberra Magne	17.57	126	P		Pn	14 26 18.8	-0.6
	baz=18,SNR=65							
BATI	Baumata	17.57	332	P		Pn	14 26 18.9	-0.6
	comp=Z,38nm,0.3s,baz=145,slow=3.4,SNR=43							
BATI				S		Sn	14 29 26.0	-9.3
	comp=Z,6.1nm,0.3s,baz=6.1,slow=19,SNR=5.4							
BATI	Baumata	17.57	332	*e*Pn		Pn	14 26 18.9	-0.6
BATI				*e*Sn		Sn	14 29 26.0	-9.3
BATI				*e*Sn		Sn	14 29 26.0	-9.3
BATI	Baumata	17.57	332	P		Pn	14 26 19.3	-0.2
SOEI	Soe	17.73	334	*e*Pn		Pn	14 26 17.6	-3.9
	comp=Z,953nm,1.4s							
SOEI	Soe	17.73	334	P		Pn	14 26 19.1	-2.4
	comp=Z,452nm,1.2s,comp=Z,6μm							
H01W1	Cape Leeuwin H	17.75	236	P		Pn	14 26 20.0	-1.4
	baz=73,slow=12,SNR=274							
H01W3	Cape Leeuwin H	17.76	236	P		Pn	14 26 20.1	-1.4
	baz=73,slow=12,SNR=233							
H01W2	Cape Leeuwin H	17.77	236	P		Pn	14 26 19.3	-2.3
	baz=73,slow=12,SNR=173							
ARMA	Armidale	17.85	109	*e*Pn		Pn	14 26 22.1	-0.8
	comp=Z,444nm,1.3s							
ARMA	Armidale	17.85	109	P		Pn	14 26 22.1	-0.8
	baz=18,SNR=78							
MGCD	Mangrove Creek	18.09	118	P		P	14 26 27.9	+1.8
	baz=18,SNR=16							
MMPI	Merauke	19.16	26	P		P	14 26 36.1	-1.8
MMRI	Maumere	19.60	330	*e*P		P	14 26 39.5	-3.2
	comp=Z,623nm,1.0s							
MMRI	Maumere	19.60	330	P		P	14 26 41.8	-0.9
	comp=Z,642nm,1.0s,comp=Z,8μm							
WSI	Waingapu	19.66	324	P		Pn	14 26 45.3	+0.4
	comp=Z,772nm,0.9s,comp=Z,229μm							
EDFI	Ende, Flores	19.75	328	P		P	14 26 44.4	-0.1
WBSI	Waikabubak, Su	20.18	321	P		P	14 26 49.4	+0.2
	comp=Z,469nm,1.0s,comp=Z,8μm							
MOO	Moorlands	20.61	147	P		Pn	14 26 57.7	+1.8
	baz=21,SNR=16							
TAU	Tasmania Unive	21.02	147	*e*P		P	14 26 59.5	+1.5
	comp=Z,516nm,1.1s							
TAU				LR		LR		
	comp=Z,1μm,18.0s							
TAU	Tasmania Unive	21.02	147	*e*P		P	14 26 59.6	+1.5
TAU				pmax		pmax		
	comp=Z,516nm,1.1s							
TAU				MLR		MLR		
	comp=Z,1μm,18.0s							
BNDI	Bandanaira	21.44	354	P		P	14 27 03.0	+0.3
PLAI	Plampang	21.77	319	P		P	14 27 06.7	+0.4
PMG	Port Moresby	21.87	44	P		P	14 27 08.3	+0.9
	comp=Z,158nm,1.0s,baz=240,slow=5.3,SNR=15							
PMG				LR		LR	14 35 56.2	
	comp=Z,27μm,18.4s,baz=225,slow=38							
PMG	Port Moresby	21.87	44	*e*P		P	14 27 07.2	-0.2
	comp=Z,1μm,1.5s							
PMG				LR		LR		
	comp=Z,30μm,18.0s							
PMG	Port Moresby	21.87	44	*ce*P		P	14 27 09.6	+2.2
PMG				pmax		pmax		
	comp=Z,4μm,1.7s							
BSSI	Bau Bau, Buton	22.59	329	P		P	14 27 15.5	+0.4
WAMI	Wamena	22.90	17	P		P	14 27 17.2	-1.1
FAKI	Fak Fak	22.94	1	*e*P		P	14 27 18.1	-0.7
	comp=Z,492nm,0.9s							
FAKI				LR		LR		
	comp=Z,4μm,22.0s							
FAKI	Fak Fak	22.94	1	P		P	14 27 18.9	+0.2
DNP	Denpasar	23.48	314	P		P	14 27 23.9	-0.3
BKSI	Bulukumba	23.48	329	P		P	14 27 23.4	-0.9
	comp=Z,107nm,0.6s,comp=Z,2μm							
KDI	Kendari	23.68	336	P		P	14 27 26.7	+0.5
SRBI	Singaraja	23.92	315	P		P	14 27 29.1	+0.5
	comp=Z,476nm,1.1s,comp=Z,7μm							
KAPI	Kappang	23.93	329	P		P	14 27 29.2	+0.6
	comp=Z,54nm,0.5s,baz=165,slow=7.7,SNR=32							
KAPI				LR		LR	14 36 36.0	
	comp=Z,3μm,20.8s,baz=144,slow=36							
KAPI	Kappang	23.93	329	*e*P		P	14 27 29.6	+1.1
	comp=Z,690nm,1.5s							
KAPI				LR		LR		
	comp=Z,2μm,19.0s							
KAPI	Kappang	23.93	329	*e*P		P	14 27 29.7	+1.1
KAPI				pmax		pmax		
	comp=Z,690nm,1.5s							
KAPI				MLR		MLR		
	comp=Z,2μm,19.0s							
KAPI	Kappang	23.93	329	P		P	14 27 31.1	+2.5
	SNR=22							
BNSI	Bone	24.31	330	P		P	14 27 32.0	-0.1
	comp=Z,167nm,1.0s,comp=Z,6μm							
LHI	Lord Howe Isla	24.32	109	*e*P		P	14 27 32.8	+0.6
	comp=Z,176nm,1.1s							
LHI				LR		LR		
	comp=Z,4μm,19.0s							
SRPI	Serui, Papua	24.32	10	P		P	14 27 31.7	-0.5
JAGI	Jajag, Banyuwa	24.32	313	*e*P		P	14 27 31.7	-0.6
	comp=Z,314nm,1.3s							
JAGI				LR		LR		
	comp=Z,3μm,20.0s							
JAGI	Jajag, Banyuwa	24.32	313	P		P	14 27 31.7	-0.6
	comp=Z,239nm,1.0s							
RKPI	Ransiki, Papua	24.42	5	P		P	14 27 33.5	+0.3
	comp=Z,320nm,0.8s							
GENI	Genyem	24.55	20	P		P	14 27 33.6	-0.7
JAY	Jayapura	24.79	21	P		P	14 27 37.0	+0.5
	comp=Z,237nm,1.0s,baz=229,slow=5.9,SNR=30							
JAY				LR		LR	14 37 40.0	
	comp=Z,14μm,20.1s,baz=180,slow=37							
JAY	Jayapura	24.79	21	P		P	14 27 36.5	-0.1
SPSI	Sidrap Palu	24.84	330	P		P	14 27 37.4	+0.4
	comp=Z,93nm,1.6s,comp=Z,2μm							
BAKI	Biak	24.96	10	P		P	14 27 38.5	+0.4
	comp=Z,635nm,1.4s,comp=Z,10μm							
SWI	Sorong	24.99	358	P		P	14 27 38.7	+0.4
	comp=Z,147nm,0.9s,comp=Z,2μm							
KMMI	Kalianget	25.50	314	P		P	14 27 44.0	+1.0
	comp=Z,104nm,1.0s							
TTSI	Tana Toraja	25.64	331	P		P	14 27 44.6	+0.4
PWJI	Pagerwojo	26.24	309	P		P	14 27 49.8	+0.1
	comp=Z,230nm,1.4s,comp=Z,3μm							
LUWI	Luwuk	26.35	339	*e*P		P	14 27 51.0	+0.3
	comp=Z,221nm,0.9s							
LUWI				LR		LR		
	comp=Z,2μm,22.0s							
LUWI	Luwuk	26.35	339	P		P	14 27 51.6	+1.0
	comp=Z,329nm,1.3s,comp=Z,7μm							
GRJI	Gresik	26.58	312	P		P	14 27 53.7	+0.9
	comp=Z,174nm,1.0s,comp=Z,2μm							
APSI	Ampana	26.86	337	P		P	14 27 55.5	+0.3
NGJI	Ngawi	26.95	310	P		P	14 27 57.6	+1.6
TNTI	Ternate	26.98	350	*e*P		P	14 27 55.7	-0.5
	comp=Z,59nm,0.9s							
TNTI				LR		LR		
	comp=Z,900nm,22.0s							
TNTI	Ternate	26.98	350	P		P	14 27 56.4	+0.1
	comp=Z,88nm,1.4s,comp=Z,1μm							
TNTI				pP		pP	14 27 59.8	+0.3
	comp=Z,88nm,1.4s,comp=Z,1μm							
UGM	Wanagama	27.22	308	PFAKE			14 28 10.0	+11
UGM				LR		LR		
	comp=Z,3μm,21.0s							
SMRI	Semarang	27.88	309	*e*P		P	14 28 02.9	-1.6
	comp=Z,375nm,1.3s							
SMRI				LR		LR		
	comp=Z,5μm,22.0s							
SMRI	Semarang	27.88	309	P		P	14 28 04.9	+0.4
MANU	Manus Island	28.02	34	PFAKE			14 28 20.0	+14
MANU				LR		LR		
	comp=Z,11μm,18.0s							
MRSI	Marisa	28.05	338	P		P	14 28 05.5	-0.4
MPSI	Mapaga	28.66	334	P		P	14 28 11.7	+0.3
RABL	Rabaul	29.03	45	PFAKE			14 28 30.0	+15
RABL				LR		LR		
	comp=Z,7μm,20.0s							
XMIS	Christmas Isla	29.31	297	PFAKE			14 28 30.0	+13
XMIS				LR		LR		
	comp=Z,2μm,21.0s							
CISI	Cisompet, Garu	29.44	304	*e*P		P	14 28 16.4	-1.9
	comp=Z,139nm,1.2s							
CISI				LR		LR		
	comp=Z,3μm,20.0s							
CISI	Cisompet, Garu	29.44	304	P		P	14 28 18.8	+0.4
LEM	Lembang	30.07	305	P		P	14 28 26.4	+2.3
LEM				pmax		pmax		
	comp=Z,104nm,1.7s							
HNR	Honiara	31.19	63	LR		LR	14 40 36.2	
	comp=Z,6μm,18.4s,baz=254,slow=35							
HNR	Honiara	31.19	63	PFAKE			14 28 50.0

RPZ	**Rata Peaks**	**36.20 129**	*e*P	**P**	**14 29 17.1 -0.1**
	comp=Z,76nm,1.0s				
RPZ			LR	LR	
	comp=Z,5μm,18.0s				
ODZ	**Otahua Downs**	**36.32 132**	*e*P	**P**	**14 29 17.6 -0.6**
	comp=Z,47nm,1.2s				
OXZ	**Oxford**	**36.79 128**	*e*P	**P**	**14 29 22.3 +0.1**
	comp=Z,74nm,0.7s				
LTZ	**Lake Taylor**	**36.82 127**	*e*P	**P**	**14 29 22.8 +0.3**
	comp=Z,106nm,1.0s				
LTZ			LR	LR	
	comp=Z,4μm,19.0s				
THZ	**Tophouse**	**37.05 126**	*e*P	**P**	**14 29 24.6 +0.1**
	comp=Z,88nm,0.8s				
CRLZ	**Canterbury Las**	**37.26 129**	*e*P	**P**	**14 29 26.2 +0.1**
	comp=Z,343nm,1.5s				
MQZ	**McQueen's Vall**	**37.32 129**	*e*P	**P**	**14 29 26.9 +0.3**
	comp=Z,163nm,1.4s				
MQZ			LR	LR	
	comp=Z,3μm,19.0s				
KHZ	**Kahutara**	**37.65 126**	*e*P	**P**	**14 29 29.9 +0.4**
	comp=Z,96nm,1.0s				
TPRI	**Tanjung Pinang**	**37.68 311**	P	**P**	**14 29 30.2 +0.2**
KRJI	**Kerinci**	**37.77 304**	P	**P**	**14 29 31.0 +0.1**
SNZO	**South Karori**	**38.29 124**	*e*P	**P**	**14 29 34.6 -0.3**
	comp=Z,89nm,0.8s				
SNZO			LR	LR	
	comp=Z,3μm,21.0s				
PPSI	**Pulau Pagai**	**38.44 302**	P	**P**	**14 29 38.4 +2.0**
	comp=Z,395nm,1.2s				
SDSI	**Sungai Dareh**	**38.57 305**	P	**P**	**14 29 36.6 -0.9**
MYKOM	**Kota Tinggi**	**38.77 311**	*e*P	**P**	**14 29 39.1 -0.1**
	comp=Z,211nm,1.6s				
MYKOM			LR	LR	
	comp=Z,2μm,21.0s				
MYKOM	**Kota Tinggi**	**38.77 311**	P	**P**	**14 29 41.0 +1.8**
PDSI	**Padang**	**39.30 304**	P	**P**	**14 29 42.5 -1.2**
	comp=Z,120nm,0.6s,comp=Z,1μm				
BFZ	**Birch Farm**	**39.34 123**	*e*P	**P**	**14 29 44.0 +0.3**
	comp=Z,82nm,1.0s				
BFZ			LR	LR	
	comp=Z,3μm,21.0s				
BKZ	**Black Stump Fm**	**39.35 121**	*e*P	**P**	**14 29 44.0 +0.1**
	comp=Z,112nm,1.7s				
BKZ			LR	LR	
	comp=Z,2μm,20.0s				
BKNI	**Bangkinang**	**39.71 306**	PFAKE		14 30 00.0 +13
BKNI			LR	LR	
	comp=Z,2μm,20.0s				
URZ	**Urewera**	**39.75 119**	P	**P**	**14 29 47.8 +0.6**
	comp=Z,28nm,0.6s,baz=252,slow=4.2,SNR=29				
URZ			LR	LR	14 45 13.8
	comp=Z,2μm,20.5s,baz=306,slow=35				
SISI	**Saibi**	**40.06 302**	P	**P**	**14 29 50.1 +0.1**
MXZ	**Matakaoa Point**	**40.65 118**	PFAKE		14 30 10.0 +15
MXZ			LR	LR	
	comp=Z,3μm,20.0s				
MNSI	**Mandailing Nat**	**41.09 305**	P	**P**	**14 29 57.5 -1.0**
	comp=Z,52nm,1.6s				
GUMO	**Guam**	**41.28 19**	LR	LR	14 48 32.4
	comp=Z,3μm,18.7s,baz=198,slow=38				
GUMO	**Guam**	**41.28 19**	PFAKE		14 30 10.0 +10
GUMO			LR	LR	
	comp=Z,3μm,19.0s				
PATS	**Pohnpei**	**41.44 42**	PFAKE		14 30 20.0 +19
PATS			LR	LR	
	comp=Z,4μm,20.0s				
CASY	**Casey**	**42.49 193**	*e*P	**P**	**14 30 09.1 -0.3**
	comp=Z,53nm,0.8s				
CASY			LR	LR	
	comp=Z,4μm,20.0s				
IPM	**Ipoh**	**42.65 311**	*e*P	**P**	**14 30 10.9 -0.4**
	comp=Z,190nm,1.7s				
IPM			LR	LR	
	comp=Z,2μm,22.0s				
IPM	**Ipoh**	**42.65 311**	P	**P**	**14 30 12.0 +0.7**
GSI	**Gunungsitoli**	**42.92 304**	*e*P	**P**	**14 30 13.2 -0.3**
	comp=Z,116nm,0.8s				
GSI	**Gunungsitoli**	**42.92 304**	P	**P**	**14 30 13.6 +0.1**
PSI	**Prapat**	**42.94 307**	P	**P**	**14 30 12.8 -0.9**
	comp=Z,18nm,0.8s,baz=165,slow=9.2,SNR=13				
PSI	**Prapat**	**42.94 307**	*e*P	**P**	**14 30 11.3 -2.4**
	comp=Z,40nm,1.2s				
PSI			LR	LR	
	comp=Z,3μm,22.0s				
PSI	**Prapat**	**42.94 307**	*e*P	**P**	**14 30 11.4 -2.4**
PSI			pmax	pmax	
	comp=Z,40nm,1.2s				
PSI			MLR	MLR	
	comp=Z,3μm,22.0s				
KULM	**Kulim**	**43.49 311**	*e*P	**P**	**14 30 18.0 -0.1**
	comp=Z,114nm,1.4s				
KULM			LR	LR	
	comp=Z,3μm,22.0s				
KULM	**Kulim**	**43.49 311**	P	**P**	**14 30 19.0 +0.9**
DLV	**T Lat**	**44.11 326**	*e*P	**P**	**14 30 22.8 -0.4**
	comp=Z,134nm,1.3s				
DLV			LR	LR	
	comp=Z,600nm,20.0s				
KCSI	**Kotacane, Aceh**	**44.27 306**	P	**P**	**14 30 23.7 -0.6**
	comp=Z,62nm,1.3s				
TPTI		**44.52 306**	P	**P**	**14 30 23.3 -3.0**
	comp=Z,63nm,1.1s				
SKLT	**Songkhla**	**44.90 313**	P	P	14 30 35.2 +5.9
MLSI	**Meulaboh, Aceh**	**45.77 306**	P	**P**	**14 30 34.9 -1.3**
	comp=Z,179nm,1.4s				
TRTT	**Trang**	**46.00 313**	P	**P**	**14 30 39.1 +1.0**
	comp=Z,189nm,1.2s,comp=Z,2μm				
PKDT	**Phuket**	**46.95 311**	P	**P**	**14 30 47.4 +1.8**
	comp=Z,187nm,1.1s				
TARA	**Tarawa**	**47.95 62**	PFAKE		14 31 10.0 +17
TARA			LR	LR	
	comp=Z,8μm,20.0s				
SRAK	**Srakaew**	**49.31 320**	P	**P**	**14 31 01.7 -2.0**
	comp=Z,737μm,1.1s				
QIZ	**Qiongzhong**	**49.66 332**	*e*P	**P**	**14 31 06.9 +0.6**
	comp=Z,112nm,1.4s				
QIZ			LR	LR	
	comp=Z,800nm,19.0s				
TWG	**Pinlang**	**49.66 347**	*e*P	**P**	**14 31 04.8 -1.5**
	comp=Z,144nm,1.3s				
TWG			LR	LR	
	comp=Z,3μm,22.0s				
PHET	**Kaeng Krachan**	**49.88 317**	P	**P**	**14 31 10.3 +2.2**
	comp=Z,101μm,1.1s				
YULB	**Yu-li**	**50.17 347**	*e*P	**P**	**14 31 09.1 -1.1**
	comp=Z,31nm,1.3s				
YULB			LR	LR	
	comp=Z,600nm,19.0s				
TPUB	**Ta-pu**	**50.22 346**	*e*P	**P**	**14 31 10.3 -0.3**
	comp=Z,98nm,1.0s				
TPUB			LR	LR	
	comp=Z,600nm,19.0s				
SSLB	**Suanglung**	**50.62 347**	*e*P	**P**	**14 31 13.2 -0.4**
	comp=Z,71nm,1.6s				
SSLB			LR	LR	
	comp=Z,700nm,18.0s				
SKNT	**Sakolnakorn**	**50.66 324**	P	**P**	**14 31 15.0 +1.0**
	comp=Z,71nm,1.9s				
CHAI	**Chaiyaphum**	**50.86 322**	P	**P**	**14 31 16.4 +0.9**
	comp=Z,110μm,1.1s				
NACB	**Ninganchiao**	**50.87 348**	*e*P	**P**	**14 31 15.2 -0.2**
	comp=Z,71nm,1.1s				
YOJ	**Yonaguni jima**	**50.90 349**	*e*P	**P**	**14 31 16.3 +0.7**
	comp=Z,523nm,1.7s				
YOJ	**Yonaguni jima**	**50.90 349**	*e*P	**P**	**14 31 16.3 +0.7**
YOJ			pmax	pmax	
	comp=Z,523nm,1.7s				
HKPS	**Hong Kong Po S**	**51.01 339**	*e*P	**P**	**14 31 17.0 +0.5**
	comp=Z,106nm,1.1s				
HKPS			LR	LR	
	comp=Z,700nm,18.0s				
YHNB	**Yeheng**	**51.40 348**	*e*P	**P**	**14 31 19.5 0.0**
	comp=Z,194nm,1.6s				
YHNB			LR	LR	
	comp=Z,700nm,19.0s				
KNMB	**Chin-men Tao**	**51.85 344**	PFAKE		14 31 40.0 +17
KNMB			LR	LR	
	comp=Z,800nm,22.0s				
PBKT	**Sadao Pong**	**51.97 321**	P	**P**	**14 31 24.9 +1.1**
	comp=Z,19nm,2.0s,comp=Z,335nm				
GZH	**Guangzhou**	**52.02 338**	P	P	14 31 29.0 +4.9
GZH			PP	**PP**	**14 33 27.4 +5.0**
GZH			S	**S**	**14 38 53.5 +5.8**
GZH			pmax	pmax	
	comp=Z,240nm,6.0s				
GZH			LR	LR	
	comp=Z,550nm,16.6s				
GZH			LR	LR	
	comp=Z,560nm,16.1s				
QZH	**Quanzhou**	**52.26 345**	*e*P	P	14 31 31.9 +6.1
QZH			S	**S**	**14 38 51.5 +0.5**
QZH			LR	LR	
	comp=Z,600nm,17.8s				
QZH			LR	LR	
	comp=Z,260nm,21.0s				
QZH			LR	LR	
	comp=Z,600nm,22.2s				
PBA	**Port Blair**	**53.47 310**	PFAKE		14 31 50.0 +15
PBA			LR	LR	
	comp=Z,3μm,20.0s				
VNDA	**Vanda**	**53.48 172**	P	**P**	**14 31 34.1 -0.1**
	comp=Z,7.9nm,0.4s,baz=322,slow=8.7,SNR=55				
VNDA			LR	LR	14 53 38.6
	comp=Z,1μm,18.4s,baz=333,slow=35				
VNDA	**Vanda**	**53.48 172**	*e*P	**P**	**14 31 33.8 -0.4**
	comp=Z,29nm,1.0s				
VNDA	**Vanda**	**53.48 172**	*e*P	**P**	**14 31 33.8 -0.4**
VNDA			pmax	pmax	
	comp=Z,29nm,1.0s				
SLVN	**Son La**	**54.37 327**	*e*P	**P**	**14 31 41.1 -0.4**
	comp=Z,61nm,1.5s				
SLVN			LR	LR	
	comp=Z,800nm,20.0s				
SBA	**Scott Base**	**54.37 171**	*e*P	**P**	**14 31 41.9 +1.2**
	comp=Z,32nm,1.0s				
SBA			LR	LR	
	comp=Z,1μm,20.0s				
SBA	**Scott Base**	**54.37 171**	*e*P	**P**	**14 31 41.9 +1.2**
SBA			pmax	pmax	
	comp=Z,32nm,1.0s				
SBA			MLR	MLR	
	comp=Z,1μm,20.0s				
CM31	**Chiang Mai Arr**	**54.63 321**	*e*P	**P**	**14 31 43.2 -0.2**
	comp=Z,61nm,1.3s				
CM31	**Chiang Mai Arr**	**54.63 321**	P	**P**	**14 31 45.2 +1.8**
	SNR=12				
CMAR	**Chiang Mai Arr**	**54.63 321**	P	**P**	**14 31 44.0 +0.6**
	comp=Z,16nm,0.9s,baz=151,slow=5.7,SNR=71				
CMAR			LR	LR	14 56 27.4
	comp=Z,531nm,21.9s,baz=134,slow=38				
CMAR	**Chiang Mai Arr**	**54.63 321**	P	**P**	**14 31 44.0 +0.6**
CHTO	**Chiang Mai**	**54.91 321**	*e*P	**P**	**14 31 45.3 -0.2**
	comp=Z,114nm,1.3s				
CHTO			LR	LR	
	comp=Z,1μm,21.0s				
CHTO	**Chiang Mai**	**54.91 321**	*e*P	**P**	**14 31 45.3 -0.2**
CHTO			pmax	pmax	
	comp=Z,114nm,1.3s				
CHTO			MLR	MLR	
	comp=Z,1μm,21.0s				
CHTO	**Chiang Mai**	**54.91 321**	P	**P**	**14 31 47.3 +1.9**
	SNR=26				
WAKE	**Wake Island**	**56.19 40**	PFAKE		14 32 10.0 +15
WAKE			LR	LR	
	comp=Z,2μm,20.0s				
GYA	**Guiyang**	**57.58 333**	⇑*i*P	**P**	**14 32 05.7 +1.2**
GYA			PP	**PP**	**14 34 15.8 +3.3**
GYA			S	**S**	**14 40 02.8 +0.1**
GYA			SS	**SS**	**14 43 57.2 +4.0**
GYA			pmax	pmax	
	comp=Z,60nm,1.0s				
GYA			pmax	pmax	
	comp=Z,180nm,4.8s				
GYA			LR	LR	
	comp=Z,550nm,18.4s				
GYA			LR	LR	
	comp=Z,840nm,22.1s				
GYA			LR	LR	
	comp=Z,840nm,20.8s				
SSE	**Sheshan**	**57.70 349**	PFAKE		14 32 20.0 +15
SSE			LR	LR	
	comp=Z,1μm,19.0s				
KMI	**Kunming**	**58.15 329**	P	**P**	**14 32 11.3 +2.7**
KMI			PP	**PP**	**14 34 21.1 +3.4**
KMI			S	**S**	**14 40 13.1 +2.8**
KMI			ScS	**ScS**	**14 41 59.8 +1.0**
KMI			SS	**SS**	**14 44 05.6 +3.3**
KMI			pmax	pmax	
	comp=Z,92nm,1.4s				
KMI			pmax	pmax	
	comp=Z,460nm,3.1s				
KMI			LR	LR	
	comp=Z,580nm,16.6s				
KMI			LR	LR	
	comp=Z,830nm,18.2s				
KMI			LR	LR	
	comp=Z,680nm,25.9s				
KMI	**Kunming**	**58.15 329**	PFAKE		14 32 20.0 +11
KMI			LR	LR	
	comp=Z,600nm,19.0s				
MAW	**Mawson**	**58.31 205**	P	**P**	**14 32 09.6 +0.6**
	comp=Z,31nm,1.1s,baz=78,slow=8.5,SNR=23				
MAW			LR	LR	14 54 22.2
	comp=Z,2μm,18.2s,baz=76,slow=33				
MAW	**Mawson**	**58.31 205**	*e*P	**P**	**14 32 09.1 +0.2**
	comp=Z,24nm,1.6s				
MAW			LR	LR	
	comp=Z,300nm,19.0s				
MAW	**Mawson**	**58.31 205**	*e*P	**P**	**14 32 09.1 +0.2**
MAW			pmax	pmax	
	comp=Z,24nm,1.6s				
MAW			MLR	MLR	
	comp=Z,300nm,19.0s				
WHN	**Wuhan**	**58.70 342**	⇓*i*P	**P**	**14 32 14.3 +2.3**
WHN			S	**S**	**14 40 19.8 +3.0**
WHN			pmax	pmax	
	comp=Z,240nm,1.2s				
WHN			pmax	pmax	
	comp=Z,890nm,4.1s				
WHN			LR	LR	
	comp=Z,1μm,15.2s				
WHN			LR	LR	
	comp=Z,1μm,17.8s				
WHN			LR	LR	
	comp=Z,1μm,16.1s				
JNU	**Nakatsue**	**58.79 359**	P	**P**	**14 32 12.6 -0.1**
	comp=Z,57nm,0.9s,baz=243,slow=2.1,SNR=21				
JNU	**Nakatsue**	**58.79 359**	*e*P	**P**	**14 32 12.3 -0.4**
	comp=Z,86nm,1.0s				
JNU			LR	LR	
	comp=Z,1μm,20.0s				
NJ2	**Nanjing**	**59.06 347**	*e*P	**P**	**14 32 16.6 +2.0**
NJ2			pmax	pmax	
	comp=Z,53nm,0.9s				
PALK	**Pallekele**	**59.77 296**	*e*P	**P**	**14 32 19.9 0.0**
	comp=Z,157nm,1.4s				
PALK			LR	LR	
	comp=Z,2μm,21.0s				
PALK	**Pallekele**	**59.77 296**	P	**P**	**14 32 21.7 +1.7**
PALK	**Pallekele**	**59.77 296**	*e*P	**P**	**14 32 20.0 0.0**
PALK			pmax	pmax	
	comp=Z,157nm,1.4s				
PALK			MLR	MLR	
	comp=Z,2μm,21.0s				
ENH	**Enshi**	**59.95 337**	*e*P	**P**	**14 32 20.7 -0.1**
	comp=Z,119nm,1.0s				
ENH			LR	LR	
	comp=Z,700nm,20.0s				
INU	**Inuyama**	**61.19 5**	*e*P	**P**	**14 32 29.4 +0.3**
	comp=Z,40nm,0.9s				
INU			LR	LR	
	comp=Z,2μm,21.0s				
SAIH	**SAIHA**	**61.25 318**	*e*P	**P**	**14 32 31.1 +1.1**
TJN	**Taejon**	**62.18 356**	*ce*P	**P**	**14 32 37.4 +1.6**
MJAR	**Matsushiro Arr**	**62.47 6**	P	**P**	**14 32 37.5 -0.2**
	comp=Z,34nm,0.8s,baz=192,slow=7.9,SNR=132				
MJAR			LR	LR	14 57 53.2
	comp=Z,735nm,21.1s,baz=170,slow=34				
MAJO	**Matsushiro**	**62.47 6**	*e*P	**P**	**14 32 37.1 -0.6**
	comp=Z,51nm,0.8s				
MAJO			LR	LR	
	comp=Z,900nm,21.0s				
MAJO	**Matsushiro**	**62.47 6**	*e*P	**P**	**14 32 37.1 -0.6**
MAJO			pmax	pmax	
	comp=Z,51nm,0.8s				
MAJO			MLR	MLR	
	comp=Z,900nm,21.0s				
MAT	**Matsushiro**	**62.47 6**	P	**P**	**14 32 37.3 -0.4**
MAT			S	**S**	**14 41 03.6 -1.3**
MJB9	**Matsu-Tunnel**	**62.47 6**	*e*P	**P**	**14 32 37.3 -0.4**
	comp=Z,51nm,0.8s				
MJB9			LR	LR	
	comp=Z,900nm,20.0s				
CD2	**Chengdu**	**62.70 333**	⇓P	**P**	**14 32 41.4 +2.0**
CD2			sP	sP	14 32 45.0 +0.9
CD2			S	**S**	**14 41 09.2 +1.1**
CD2			sS	sS	14 41 19.2 +5.5
CD2			SS	**SS**	**14 45 16.4 +3.1**
CD2			pmax	pmax	
	comp=Z,140nm,0.7s				
CD2			pmax	pmax	
	comp=Z,410nm,3.5s				
CD2			LR	LR	
	comp=Z,1μm,15.2s				
CD2			LR	LR	
	comp=Z,1μm,18.1s				
CD2			LR	LR	
	comp=Z,1μm,21.1s				
KOHI	**KOHIMA**	**63.09 322**	*e*P	**P**	**14 32 42.1 -0.2**
KS15	**Wonju Array Si**	**63.21 356**	*e*P	**P**	**14 32 42.8 +0.2**
	comp=Z,67nm,0.9s				
KSRS	**Korea Array**	**63.22 356**	P	**P**	**14 32 43.0 +0.4**
	comp=Z,49nm,0.8s,baz=176,slow=7.9,SNR=202				
KSRS			LR	LR	15 00 59.2
	comp=Z,576nm,20.7s,baz=168,slow=37				
KSRS			PKP2bc		15 01 41.4
	comp=Z,1.4nm,0.8s,baz=354,slow=3.0,SNR=5.2				
AGT	**Agartala**	**63.34 318**	*e*P	**P**	**14 32 45.1 +1.4**
AGT			IAmb	IAmb	14 32 46.7
	comp=Z,64nm,0.9s				
TIA	**Tai'an**	**63.44 347**	P	**P**	**14 32 44.9 +0.7**
TIA			pmax	pmax	
	comp=Z,47nm,1.1s				
TRD	**Trivandrum**	**63.52 295**	*e*P	**P**	**14 32 45.1 0.0**
XAN	**Xi'an**	**63.59 339**	P	**P**	**14 32 45.3 0.0**
XAN			pP	sP	14 32 50.1 +0.1
XAN			S	**S**	**14 41 16.3 -2.9**
XAN			ScS	**SKSac**	**14 42 34.5 -4.3**
XAN			SS	**SS**	**14 45 28.3 +1.1**
XAN			pmax	pmax	
	comp=Z,91nm,1.4s				
XAN			LR	LR	
	comp=Z,470nm,19.2s				
XAN			LR	LR	
	comp=Z,450nm,20.0s				
XAN			LR	LR	
	comp=Z,570nm,25.0s				
XAN	**Xi'an**	**63.59 339**	*e*P	**P**	**14 32 44.7 -0.6**
	comp=Z,106nm,1.1s				
XAN			LR	LR	
	comp=Z,600nm,21.0s				
XAN	**Xi'an**	**63.59 339**	*e*P	**P**	**14 32 44.7 -0.6**
XAN			pmax	pmax	
	comp=Z,106nm,1.1s				
XAN			MLR	MLR	
	comp=Z,600nm,21.0s				
JORH	**JORHAT**	**63.81 322**	*e*P	**P**	**14 32 47.3 +0.5**
QSPA	**South Pole Qui**	**64.09 180**	*e*P	**P**	**14 32 48.5 +0.1**
	comp=Z,83nm,1.3s				
QSPA			LR	LR	
	comp=Z,3μm,19.0s				
SHL	**Shillong**	**64.24 320**	*e*P	**P**	**14 32 49.6 -0.3**
	comp=Z,257nm,1.3s				
SHL			LR	LR	
	comp=Z,900nm,21.0s				
SHL	**Shillong**	**64.24 320**	*e*P	**P**	**14 32 49.6 -0.3**
SHL			pmax	pmax	
	comp=Z,257nm,1.3s				
SHL			MLR	MLR	
	comp=Z,900nm,21.0s				
SHL	**Shillong**	**64.24 320**	*e*P	**P**	**14 32 49.8 -0.1**
SHL			IAmb	IAmb	14 32 54.0
	comp=Z,22μm,6.8s				
BWNR	**Bhubaneshwar**	**64.25 311**	*ex*	P	14 32 43.1 -6.7
TEZP	**TEZPUR**	**64.52 321**	*e*P	**P**	**14 32 51.9 +0.4**
TEZP			IAmb	IAmb	14 32 54.0
	comp=Z,80nm,1.0s				
ZIRO	**ZIRO**	**64.65 323**	*e*P	**P**	**14 32 53.3 +0.8**
ZIRO			IAmb	IAmb	14 32 55.8
	comp=Z,98nm,1.4s				
GUWA	**GUWAHATI**	**64.83 320**	*e*P	**P**	**14 32 53.3 -0.2**
DL2	**Dalian**	**65.28 351**	*e*P	**P**	**14 32 54.6 -1.5**
DL2			S	**S**	**14 41 38.3 -1.4**
DL2			pmax	pmax	
	comp=Z,48nm,0.8s				
DL2			pmax	pmax	
	comp=Z,91nm,6.0s				
DL2			LR	LR	
	comp=Z,470nm,24.7s				
DL2			LR	LR	
	comp=Z,720nm,16.7s				
DL2			LR	LR	
	comp=Z,790nm,20.4s				
DHUB	**DHUBRI**	**65.69 319**	*e*P	**P**	**14 33 00.4 +1.2**
TAWA	**Tawang**	**65.80 321**	*e*P	**P**	**14 32 60.0 -0.3**
TAWA			IAmb	IAmb	14 33 02.6
	comp=Z,45nm,0.8s				
TIY	**Taiyuan**	**65.98 343**	*e*P	**P**	**14 33 02.2 +1.4**
TIY			S	**S**	**14 41 48.2 -0.3**
TIY			pmax	pmax	
	comp=Z,120nm,0.9s				
TIY			LR	LR	
	comp=Z,320nm,15.1s				
TIY			LR	LR	
	comp=Z,680nm,19.5s				
BOK	**Bokaro**	**66.63 314**	*e*P	**P**	**14 33 06.0 +0.7**
BOK			IAmb	IAmb	14 33 08.0
	comp=Z,30nm,1.2s				
SYO	**Syowa Base**	**66.87 203**	⇑*e*P	**P**	**14 33 04.4 -1.7**
SYO	**Syowa Base**	**66.87 203**	⇓*i*pP	**P**	**14 33 06.3 +0.2**
SYO	**Syowa Base**	**66.87 203**	⇑*e*PP	PP	14 35 33.2 +0.2
LZH	**Lanzhou**	**67.22 336**	⇓P	**P**	**14 33 10.6 +1.7**
LZH			pP	sP	14 33 13.4 -0.2
LZH			sP	pP	14 33 18.0 +5.6
LZH			S	**S**	**14 42 04.4 +0.6**
LZH			sS	sS	14 42 12.6 +3.1
LZH			pmax	pmax	
	comp=Z,120nm,1.4s				
LZH			pmax	pmax	
	comp=Z,170nm,4.9s				
LZH			LR	LR	
	comp=Z,770nm,17.5s				
LZH			LR	LR	
	comp=Z,700nm,17.5s				
LZH			LR	LR	
	comp=Z,740nm,17.9s				
BJT	**Baijiatuau**	**67.30 347**	PFAKE		14 33 20.0 +11
BJT			LR	LR	
	comp=Z,900nm,19.0s				
BJI	**Beijing**	**67.32 347**	P	**P**	**14 33 10.7 +1.5**
BJI			S	**S**	**14 42 05.3 +0.8**
BJI			pmax	pmax	
	comp=Z,24nm,1.1s				
BJI			LR	LR	
	comp=Z,160nm,15.9s				
BJI			LR	LR	
	comp=Z,170nm,24.2s				
BJI			LR	LR	
	comp=Z,170nm,38.2s				
GTK	**Tadong**	**67.49 319**	*e*P	**P**	**14 33 10.9 +0.1**
GTK			IAmb	IAmb	14 33 15.6
	comp=Z,2μm,3.0s				
HYB	**Hyderabad**	**67.54 304**	*i* P	**P**	**14 33 12.0 +0.8**
LSA	**Lhasa**	**67.82 322**	*e*P	**P**	**14 33 14.2 +1.0**
	comp=Z,128nm,1.1s				
LSA			LR	LR	
	comp=Z,400nm,22.0s				
LSA	**Lhasa**	**67.82 322**	P	**P**	**14 33 15.2 +1.9**
LSA	**Lhasa**	**67.82 322**	*e*P	**P**	**14 33 14.2 +1.0**
LSA			pmax	pmax	
	comp=Z,128nm,1.1s				
LSA			MLR	MLR	
	comp=Z,400nm,22.0s				
SNY	**Shenyang**	**67.92 353**	⇑P	**P**	**14 33 13.6 +0.6**
SNY			S	**S**	**14 42 05.4 -6.2**
SNY			pmax	pmax	
	comp=Z,48nm,1.1s				
SNY			pmax	pmax	
	comp=Z,190nm,3.9s				
SNY			LR	LR	
	comp=Z,770nm,15.7s				
SNY			LR	LR	
	comp=Z,500nm,17.1s				
SNY			LR	LR	
	comp=Z,1μm,19.9s				
RAMN	**Ramite**	**68.43 317**	*e*P	**P**	**14 33 17.7 +0.8**
	comp=Z,377nm,1.2s				
HHC	**Hu-ho-hao-te**	**69.15 344**	*e*P	**P**	**14 33 22.5 +1.6**
HHC			S	**S**	**14 42 28.9 +2.3**

HHC pmax pmax
comp=Z,61nm,1.2s
HHC pmax pmax
comp=Z,190nm,5.7s
HHC LR LR
comp=Z,550nm,19.6s
HHC LR LR
comp=Z,950nm,17.0s
HHC LR LR
comp=Z,1μm,17.9s
JIRN Jiri 69.20 317 *e*P **P 14 33 22.8 +1.0**
comp=Z,565nm,1.5s
BTO Baotou 69.33 342 *e*P **P 14 33 23.7 +1.7**
NGP Nagpur 69.53 307 *e*P **P 14 33 23.5 +0.1**
NGP IAmb IAmb 14 33 25.3
comp=Z,50nm,1.4s
GUN Gumba 69.57 317 *e*P **P 14 33 24.6 +0.6**
comp=Z,429nm,1.3s
PKI Pulchoki 69.61 317 *e*P **P 14 33 24.3 0.0**
PKIN Phulchoki 69.63 317 *e*P **P 14 33 24.2 -0.1**
comp=Z,36nm,0.5s
CN2 Changchun 69.70 355 ⇑P **P 14 33 25.7 +1.7**
CN2 *es*P sP 14 33 32.0 +3.2
CN2 *e*S **S 14 42 33.2 +0.5**
CN2 pmax pmax
comp=Z,70nm,1.1s
CN2 pmax pmax
comp=Z,400nm,6.0s
CN2 LR LR
comp=Z,500nm,19.0s
CN2 LR LR
comp=Z,500nm,19.0s
CN2 LR LR
comp=Z,600nm,21.0s
DMN Daman 69.83 316 *e*P **P 14 33 25.9 +0.4**
comp=Z,340nm,1.2s
USA0B Ussuriysk Arra 69.84 360 *e*P **P 14 33 24.7 -0.2**
comp=Z,82nm,1.3s
USA0B LR LR
comp=Z,2μm,20.0s
USRK Ussuriysk Ar. 69.84 360 P **P 14 33 25.4 +0.6**
comp=Z,18nm,0.7s,baz=185,slow=5.3,SNR=44
USRK PKP2bc 15 01 27.9
comp=Z,2.4nm,0.8s,baz=29,slow=3.3,SNR=2.7
USRK LR LR 15 02 43.0
comp=Z,1μm,21.4s,baz=157,slow=35
KKN Kakani 69.85 317 *e*P **P 14 33 25.7 +0.1**
GOA Goa 70.01 299 *e*P **P 14 33 28.0 +1.4**
GOA IAmb IAmb 14 33 29.7
comp=Z,145nm,1.2s
MDJ Mudanjiang 70.29 358 P **P 14 33 29.1 +1.5**
MDJ pP sP 14 33 33.9 +1.5
MDJ sP pP 14 33 36.1 +5.0
MDJ PP **PP 14 36 03.0 -0.7**
MDJ S **S 14 42 38.8 -0.8**
MDJ ScS **SKSac 14 43 28.0 -1.0**
MDJ pmax pmax
comp=Z,59nm,1.1s
MDJ pmax pmax
comp=Z,310nm,3.5s
MDJ LR LR
comp=Z,820nm,19.0s
MDJ LR LR
comp=Z,350nm,23.6s
MDJ LR LR
comp=Z,1μm,20.9s
MDJ Mudanjiang 70.29 358 *e*P **P 14 33 28.0 +0.4**
comp=Z,59nm,1.1s
MDJ LR LR
comp=Z,900nm,19.0s
TBI Tubuai 70.35 107 *e*LQ LQ 14 51 37.5
comp=Z,1μm,33.2s
TBI *e*LR LR 14 54 39.2
comp=Z,844nm,24.5s
ASAJ Asahikawa 70.43 8 P **P 14 33 29.4 +0.9**
comp=Z,23nm,0.8s,baz=240,slow=9.4,SNR=18
ASAJ PKP2bc 15 01 27.2
comp=Z,11nm,1.0s,baz=31,slow=4.9,SNR=5.5
ASAJ LR LR 15 05 23.9
comp=Z,539nm,19.5s,baz=184,slow=37
TEY Ternei 70.80 3‖ *e*P **P 14 33 31.2 +0.5**
TEY pmax pmax
comp=Z,30nm,1.3s
TEY pmax pmax
comp=N,10.0nm,1.3s
KOLN Koldanda 70.89 315 *e*P **P 14 33 32.0 +0.1**
comp=N,498nm,1.3s
DANN Dangsing 71.19 316 *e*P **P 14 33 33.9 0.0**
comp=N,172nm,0.8s
PYUN Piuthan 71.50 315 *e*P **P 14 33 35.1 -0.6**
GTA Gaotai 71.67 334 ⇑P **P 14 33 37.7 +1.4**
GTA pP sP 14 33 44.3 +3.2
GTA sP pP 14 33 46.8 +7.0
GTA S **S 14 42 57.9 +1.8**
GTA sS sS 14 43 07.0 +5.2
GTA pmax pmax
comp=N,83nm,1.2s
GTA pmax pmax
comp=N,470nm,4.3s
GTA LR LR
comp=N,390nm,17.9s
GTA LR LR
comp=N,410nm,18.2s
GTA LR LR
comp=N,610nm,20.3s
POO Poona 71.77 302 *e*P **P 14 33 36.6 -0.6**
POO IAmb IAmb 14 33 37.4
comp=Z,40nm,0.9s
BHPL Bhopal 72.01 308 *e*P **P 14 33 38.4 -0.2**
BHPL IAmb IAmb 14 33 40.1
comp=Z,20nm,0.8s
PAE Paea 72.31 101 *e*P **P 14 33 41.8 +1.2**
comp=Z,4.2nm,0.8s
KUR Kuril'sk 72.34 12 *e*P P 14 33 31.1 -8.9
PPT2 Papeete2 72.34 101 *e*P **P 14 33 42.3 +1.4**
comp=Z,47nm,1.3s
PPT2 Papeete2 72.34 101 *e*LQ LQ 14 52 32.1
comp=Z,2μm,25.5s
PPT2 *e*LR LR 14 55 35.6
comp=Z,900nm,23.8s
PPT Papeete 72.35 101 P **P 14 33 42.1 +1.2**
comp=Z,24nm,0.7s,baz=245,slow=6.1,SNR=4.5
PPT LR LR 15 02 43.6
comp=Z,489nm,19.7s,baz=255,slow=34
TVO Taravao 72.56 102 *e*P **P 14 33 43.6 +1.5**
comp=Z,9.3nm,1.0s
TIAR Tiarei 72.56 101 *e*P **P 14 33 43.8 +1.7**
comp=Z,30nm,1.0s
MIDW Midway 72.60 46 PFAKE 14 34 00.0 +18
MIDW LR LR
comp=Z,2μm,19.0s
YSS Yuzh-Sakhalins 73.24 8 PFAKE 14 34 00.0 +15
YSS LR LR
comp=Z,500nm,20.0s
YSS Yuzh-Sakhalins 73.24 8‖ *i*P **P 14 33 47.4 +2.1**
YSS *e**SP **PcP 14 33 56.1 -5.6**
YSS *e* 14 34 02.3
YSS *e* 14 36 24.3
YSS *e*S **S 14 43 14.8 +1.4**
YSS *e*PS 14 43 46.5
YSS *e*SS **SS 14 48 02.3 +6.5**
YSS pmax pmax
comp=Z,10.0nm,0.8s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS MLR MLR
comp=N,500nm,17.0s
YSS MLR MLR
comp=E,300nm,15.0s
PMOR Pomariorio Ree 74.83 99 *e*P **P 14 33 57.1 +1.7**
comp=E,111nm,1.2s
KLR Kul'dur 74.87 360 P **P 14 33 55.8 +0.9**
comp=E,14nm,0.9s,baz=213,slow=3.1,SNR=40
KLR LR LR 15 05 49.7
comp=E,1μm,20.7s,baz=176,slow=35
KLR Kul'dur 74.87 360*c i*P **P 14 33 56.0 +1.2**
KLR pmax pmax
comp=Z,23nm,1.0s
VAH Vaihoa 74.97 100 *e*P **P 14 33 57.7 +1.5**
comp=Z,85nm,1.2s
HIA Hailar 75.71 352 *e*P **P 14 34 00.6 +0.9**
comp=Z,60nm,1.3s
HIA LR LR
comp=Z,600nm,21.0s
HIA Hailar 75.71 352 *e*P **P 14 34 00.6 +0.9**
HIA pmax pmax
comp=Z,61nm,1.3s
HIA MLR MLR
comp=Z,600nm,21.0s
MSEY Mahe Island 75.86 272 PFAKE 14 34 20.0 +19
MSEY LR LR
comp=Z,2μm,20.0s
MSEY Mahe Island 75.86 272 P **P 14 34 02.2 +0.7**
DDI Dehra Dun 76.17 314 *e*P **P 14 34 03.1 +0.3**
GRNR Gornyy 76.51 3 *e*P **P 14 34 05.4 +1.2**
GRNR pmax pmax
comp=Z,36nm,1.0s
ULN Ulaanbaatar 76.86 343 PFAKE 14 34 20.0 +14
ULN LR LR
comp=Z,500nm,20.0s
SONA0 Songino Array 77.01 343 *e*P **P 14 34 08.1 +0.8**
SONM Songino Array 77.01 343 P **P 14 34 08.1 +0.8**
comp=Z,58nm,0.9s,baz=161,slow=5.8,SNR=208
SONM LR LR 15 09 37.3
comp=Z,623nm,21.4s,baz=150,slow=37
TYV Tymovskoe 77.09 7 *e*P **P 14 34 09.6 +2.2**
TYV *e*S **S 14 44 00.5 +4.5**
TYV pmax pmax
comp=Z,44nm,1.2s
TYV pmax pmax
comp=Z,300nm,4.4s
TYV smax smax
comp=N,400nm,8.7s
SMLA Simla 77.27 314 *e*P **P 14 34 09.5 +0.6**
ABPO Ambohimpanom 77.37 255 *e*P **P 14 34 10.5 +0.4**
comp=N,79nm,1.5s
ABPO LR LR
comp=Z,2μm,22.0s
ABPO Ambohimpanom 77.37 255 *e*P **P 14 34 10.5 +0.4**
ABPO pmax pmax
comp=Z,79nm,1.5s
ABPO MLR MLR
comp=Z,2μm,22.0s
SNAA Sanae 77.73 193 P **P 14 34 11.6 +0.6**
SNAA Sanae 77.73 193 *e*P **P 14 34 11.0 0.0**
comp=Z,47nm,1.1s
SNAA LR LR
comp=Z,3μm,19.0s
SNAA Sanae 77.73 193 *e*P **P 14 34 11.0 0.0**
SNAA pmax pmax
comp=Z,47nm,1.1s
SNAA MLR MLR
comp=Z,3μm,19.0s
DHRM DHARAMSHALA 78.56 314 *e*P **P 14 34 16.5 +0.1**
DHRM IAmb IAmb 14 34 18.3
comp=Z,48nm,1.0s
VNA2 Neumayer–Watz 79.23 193 P **P 14 34 20.3 +1.1**
baz=139,slow=4.5
SKR Severo-Kuril's 79.26 15 *e*P **P 14 34 18.5 -0.9**
SKR *e*S **S 14 44 24.1 +4.7**
SKR pmax pmax
comp=Z,300nm,3.8s
VNA3 Neumayer Olymp 79.40 192 P **P 14 34 20.8 +0.6**
ZEA Zeya 79.50 357 *e*P **P 14 34 22.2 +1.5**
ZEA *e*S **S 14 44 23.0 +1.2**
ZEA pmax pmax
comp=N,72nm,1.2s
ZEA pmax pmax
comp=Z,78nm,1.2s
ZEA pmax pmax
comp=Z,200nm,3.0s
ZEA smax smax
comp=E,600nm,7.0s
ZEA MLR MLR
comp=Z,600nm,17.0s
ZEA MLR MLR
comp=N,600nm,19.0s
VNA1 Neumayer–Stat 79.62 193 P **P 14 34 22.6 +1.2**
ZAK Zakamensk 80.18 342 *e*P **P 14 34 25.0 +0.4**
ZAK pmax pmax
comp=Z,45nm,1.4s
WMQ Urumqi 80.47 329 P **P 14 34 27.8 +1.5**
WMQ pP pP 14 34 30.6 +0.8
WMQ pmax pmax
comp=Z,240nm,1.3s
WMQ LR LR
comp=Z,1μm,20.7s
WMQ LR LR
comp=Z,1μm,21.1s
WMQ LR LR
comp=Z,910nm,27.5s
WMQ Urumqi 80.47 329 *e*P **P 14 34 26.0 -0.4**
comp=Z,186nm,1.1s
WMQ LR LR
comp=Z,400nm,22.0s
WMQ Urumqi 80.47 329 *e*P **P 14 34 26.0 -0.4**
WMQ pmax pmax
comp=Z,186nm,1.1s
WMQ MLR MLR
comp=Z,400nm,22.0s
TLY Talaya 81.25 343 *e*P **P 14 34 30.2 -0.1**
comp=Z,40nm,1.3s
TLY LR LR
comp=Z,700nm,21.0s
TLY Talaya 81.25 343 *e*P **P 14 34 30.7 +0.5**
TLY *e*S **S 14 44 42.2 +1.8**
TLY *e*SS **SS 14 49 50.0 -6.7**
TLY pmax pmax
comp=Z,109nm,1.6s
TLY MLR MLR
comp=Z,2μm,21.0s
TLY Talaya 81.25 343 P **P 14 34 32.1 +1.9**
SNR=24
NIL Nilore 81.43 314 *e*P **P 14 34 31.9 +0.3**
comp=Z,90nm,1.1s
NIL LR LR
comp=Z,300nm,21.0s
NIL Nilore 81.43 314 *e*P **P 14 34 31.9 +0.3**
NIL pmax pmax
comp=Z,90nm,1.1s
NIL MLR MLR
comp=Z,300nm,21.0s
IRK Irkutsk 81.59 343 *e*P **P 14 34 33.1 +1.1**
IRK pmax pmax
comp=Z,109nm,1.9s
PEA0B Petropavlovsk- 81.88 15 *e*P **P 14 34 33.6 +0.1**
comp=Z,66nm,1.1s
PEA0B LR LR
comp=Z,1μm,20.0s
PETK Petropavlovsk- 81.88 15 P **P 14 34 34.4 +0.9**
comp=Z,30nm,0.8s,baz=175,slow=4.7,SNR=26
PETK LR LR 15 10 32.0
comp=Z,953nm,20.6s,baz=201,slow=35
PEA1 Petropavlovsk- 81.88 15 *e*P **P 14 34 34.4 +0.9**
MOY Mondy 81.98 341 *e*P **P 14 34 35.7 +1.5**
MOY pmax pmax
comp=Z,221nm,1.8s
PET Petropavlovsk 82.03 16 *e*P **P 14 34 33.7 -0.5**
comp=Z,59nm,1.0s
PET LR LR
comp=Z,800nm,21.0s
PET Petropavlovsk 82.03 16 *e*P **P 14 34 32.2 -2.0**
PET *e*S **S 14 44 44.1 -4.2**
PET pmax pmax
comp=Z,100nm,4.4s
PET pmax pmax
comp=Z,69nm,1.0s
PET pmax pmax
comp=Z,300nm,4.1s
KSH Kashi 83.52 320 P **P 14 34 43.4 +0.8**
KSH PP **PP 14 38 00.0 +4.7**
KSH S **S 14 45 04.6 +0.1**
KSH SS **SS 14 50 33.9 +2.7**
KSH pmax pmax
comp=Z,66nm,1.1s
KSH pmax pmax
comp=Z,310nm,3.5s
KSH LR LR
comp=Z,460nm,12.4s
KSH LR LR
comp=Z,280nm,12.0s
KSH LR LR
comp=Z,2μm,22.7s
HPAH Hawaii Prepara 83.74 64 PFAKE 14 35 00.0 +16
HPAH LR LR
comp=Z,2μm,18.0s
WRMHI West Rim 83.75 65 PFAKE 14 35 00.0 +16
WRMHI LR LR
comp=Z,1μm,18.0s
KKO Keanakako`i 83.78 65 PFAKE 14 35 00.0 +16
KKO LR LR
comp=Z,2μm,20.0s
UWB Uwekahuna B 83.78 65 PFAKE 14 35 00.0 +16
UWB LR LR
comp=Z,2μm,22.0s
BYL Byron's Ledge 83.79 65 PFAKE 14 35 00.0 +16
BYL LR LR
comp=Z,2μm,20.0s
SBLHI Steaming Bluff 83.79 65 PFAKE 14 35 00.0 +16
SBLHI LR LR
comp=Z,2μm,19.0s
HATHI Halema'uma'u T 83.79 65 PFAKE 14 35 00.0 +16
HATHI LR LR
comp=Z,1μm,21.0s
JCUZ Jacuzzi 83.90 65 PFAKE 14 35 00.0 +15
JCUZ LR LR
comp=Z,2μm,19.0s
PDGK Podgornoye 84.16 324 P **P 14 34 45.7 0.0**
PDGK pmax pmax
comp=Z,111nm,1.4s
KBL Kabul 84.73 312 *e*P **P 14 34 49.4 +0.4**
comp=Z,52nm,1.3s
KBL LR LR
comp=Z,600nm,22.0s
NRN Naryn 84.77 321 *e*P **P 14 34 48.8 -0.3**
comp=Z,41nm,1.1s
NRN LR LR
comp=Z,500nm,22.0s
NRN Naryn 84.77 321 *e*P **P 14 34 48.8 -0.3**
NRN pmax pmax
comp=Z,41nm,1.1s
NRN MLR MLR
comp=Z,500nm,22.0s
BOD Bodaibo 84.84 350 *e*P **P 14 34 49.4 +0.8**
BOD pmax pmax
comp=Z,62nm,1.9s
DGZ Jazzator, Alta 85.13 333*c i*P **P 14 34 51.6 +1.1**
DGZ pmax pmax
comp=Z,17nm,0.9s
ULHL Ulahol 85.18 322 P **P 14 34 52.3 +1.3**
SNR=25
MK31 Makanchi Array 85.23 328 *e*P **P 14 34 50.6 -0.3**
comp=Z,61nm,1.1s
MK31 Makanchi Array 85.23 328 *e*P **P 14 34 50.6 -0.3**
MK31 pmax pmax
comp=Z,67nm,1.1s
MK32 Makanchi Array 85.23 328 *e*P **P 14 34 51.1 +0.2**
MK32 *e*PKKPbc **PKKPbc 14 52 57.6 -1.0**
MKAR Makanchi Array 85.23 328 P **P 14 34 51.1 +0.2**
comp=Z,16nm,0.5s,baz=144,slow=5.4,SNR=81
MKAR PKKPbc **PKKPbc 14 52 57.6 -1.0**
comp=Z,0.2nm,0.6s,baz=316,slow=4.0,SNR=4.4
MKAR LR LR 15 17 37.0
comp=Z,312nm,20.3s,baz=128,slow=39
MKAR Makanchi Array 85.23 328 *i* P **P 14 34 50.7 -0.2**
MKAR pmax pmax
comp=Z,16nm,0.5s
MAKZ Makanchi 85.39 328 *e*P **P 14 34 51.2 -0.5**
comp=Z,43nm,1.1s
MAKZ LR LR
comp=Z,300nm,20.0s
MAKZ Makanchi 85.39 328 *e*P **P 14 34 51.2 -0.5**
MAKZ pmax pmax
comp=Z,43nm,1.1s
MAKZ MLR MLR
comp=Z,300nm,20.0s
BOOM Boomskoye usch 85.51 322 *e*P **P 14 34 52.6 +0.1**
comp=Z,82nm,1.0s
BOOM LR LR
comp=Z,400nm,20.0s
BOOM Boomskoye usch 85.51 322 *e*P **P 14 34 52.7 +0.1**
BOOM pmax pmax
comp=Z,83nm,1.0s
BOOM MLR MLR
comp=Z,400nm,20.0s
KZA Kyzart 85.62 321 P **P 14 34 54.0 +0.6**
SNR=51
MHTO MHTO 85.64 296 P **P 14 34 55.0 +1.5**
SNR=5.9
TKM2 Tokmak 2 85.98 322 P **P 14 34 54.8 -0.2**
SNR=21
TKM2 Tokmak 2 85.98 322 P **P 14 34 54.5 -0.5**
TKM2 pmax pmax
comp=Z,38nm,1.2s
UCH Uchtor 86.13 321 P **P 14 34 56.2 +0.1**
SNR=55
KBK Karagaybulak 86.17 322 P **P 14 34 57.4 +1.5**
SNR=12
WSAR Wadi Sarin 86.22 298 P **P 14 34 56.9 +0.5**
comp=Z,6.5nm,0.7s,baz=146,slow=4.3,SNR=5.3
AAK Ala-Archa 86.41 321 P **P 14 34 57.6 +0.5**
SNR=37
AAK Ala-Archa 86.41 321 *e*P **P 14 34 57.1 0.0**
comp=Z,99nm,1.1s
AAK LR LR
comp=Z,500nm,20.0s
AAK Ala-Archa 86.41 321 *i* P **P 14 34 57.6 +0.5**
SNR=40
AAK Ala-Archa 86.41 321 *e*P **P 14 34 57.1 0.0**
AAK pmax pmax
comp=Z,99nm,1.1s
AAK MLR MLR
comp=Z,500nm,20.0s
AAK Ala-Archa 86.41 321 P **P 14 34 57.7 +0.7**
SNR=34
ARSB Arslanbob 86.43 320 *e*P **P 14 34 57.3 +0.1**
comp=Z,176nm,1.3s
FRU1 Bishkek 86.45 322 *e*P **P 14 34 57.9 +0.8**
comp=Z,81nm,1.1s
FRU1 LR LR
comp=Z,700nm,22.0s
FRU1 Bishkek 86.45 322 P **P 14 34 57.9 +0.8**
CHMS Chumysh 86.50 322 P **P 14 34 58.3 +1.0**
SNR=20
AML Almayashu 86.54 321 P **P 14 34 58.3 +0.4**
SNR=45
SMY Shemya 86.54 24 *e*P **P 14 34 58.6 +1.4**
comp=Z,77nm,1.0s
SMY LR LR
comp=Z,900nm,20.0s
GAR Garm 86.59 317 *e*P **P 14 34 57.9 -0.1**
comp=Z,108nm,1.3s
GAR LR LR
comp=Z,800nm,19.0s
MA2 Magadan 86.64 9 P **P 14 34 57.7 +0.2**
comp=Z,17nm,0.8s,baz=178,slow=6.6,SNR=13
MA2 Magadan 86.64 9 *e*P **P 14 34 57.7 +0.2**
comp=Z,25nm,0.9s
MA2 LR LR
comp=Z,900nm,21.0s
MA2 Magadan 86.64 9*c e*P **P 14 34 57.3 -0.2**
MA2 pmax pmax
comp=Z,50nm,1.7s
USP Ospenovka 86.81 322 P **P 14 34 59.0 +0.1**
SNR=58
EKS2 Erkin-Say 86.83 321 P **P 14 35 00.7 +1.7**
SNR=31
CHGR Chuyangaron 87.11 316 PFAKE 14 35 10.0 +10
CHGR LR LR
comp=Z,1μm,21.0s
YAK Yakutsk 87.73 359 *e*P **P 14 35 03.1 +0.4**
comp=Z,54nm,0.9s
YAK Yakutsk 87.73 359 *e*P **P 14 35 02.9 +0.2**
YAK *e*S **SKSac 14 45 28.7 -1.6**
YAK *e* 14 46 51.3
SOHO SOHO 88.33 298 P **P 14 35 08.0 +1.4**
SNR=9.2
KK31 Karatay Array 88.98 320 *e*P **P 14 35 08.8 -0.4**
comp=Z,38nm,1.4s
KK31 Karatay Array 88.98 320 *i* P **P 14 35 08.8 -0.4**
KK31 pmax pmax
comp=Z,21nm,1.2s
KKAR Karatay Array 88.98 320 *e*P **P 14 35 08.7 -0.4**
comp=Z,38nm,1.4s
KKAR Karatay Array 88.98 320 *e*P **P 14 35 08.7 -0.4**
KKAR pmax pmax
comp=Z,38nm,1.4s
ASHO Ashiyiah 88.98 298 *i* P **P 14 35 10.2 +0.6**
SNR=19
ASHO Ashiyiah 88.98 298 P **P 14 35 11.7 +2.0**
SNR=10
HATD Hatta, Dubai 88.99 298 *i* P **P 14 35 09.9 +0.2**
SNR=12
HATD Hatta, Dubai 88.99 298 P **P 14 35 11.1 +1.5**
SNR=6.6
UOSS Minazif 88.99 298 *e*P **P 14 35 09.1 -0.5**
comp=Z,83nm,1.4s
UOSS LR LR
comp=Z,600nm,21.0s

UOSS Minazif 88.99 298 *i* P **P 14 35 09.3 -0.3**
SNR=7.9

UOSS Minazif 88.99 298 P **P 14 35 10.6 +1.0**
SNR=5.6

MSFE Esma-Masafi 89.23 299 *i* P **P 14 35 11.3 +0.5**
SNR=12

FAQ Al Faqa, Dubai 89.38 298 P **P 14 35 11.7 +0.2**

ZAA0 Zalesovo Array 89.42 334 *e*P **P 14 35 10.4 -0.5**
comp=Z,66nm,1.3s
ZAA0 LR LR
comp=Z,300nm,20.0s

ZALV Zalesovo Beam 89.42 334 P **P 14 35 10.2 -0.7**
comp=Z,13nm,0.7s,baz=153,slow=1.7,SNR=56
ZALV PKKPbc **PKKPbc 14 52 47.0 -1.4**
comp=Z,0.6nm,0.4s,baz=300,slow=6.5,SNR=5.6
ZALV LR LR 15 18 19.8
comp=Z,216nm,20.7s,baz=76,slow=38

ZAA1 Zalesovo Array 89.43 334 *e*P **P 14 35 10.2 -0.7**
ZAA1 *e*PKKPdf **PKKPbc 14 52 47.0 -1.4**

NAZ Nazwa, Dubai 89.44 298 *i* P **P 14 35 12.3 +0.5**
SNR=7.0

NAZ Nazwa, Dubai 89.44 298 P **P 14 35 14.0 +2.2**
SNR=5.3

ASUD Al Ashush, Dub 89.53 298 P **P 14 35 13.1 +0.9**

ADK Adak 89.61 29 *e*P **P 14 35 12.8 +0.9**
comp=Z,237nm,1.6s
ADK LR LR
comp=Z,900nm,21.0s

KURK Kurchatov 89.72 329 *e*P **P 14 35 12.0 -0.4**
comp=Z,78nm,1.0s
KURK LR LR
comp=Z,300nm,20.0s

KURK Kurchatov 89.72 329 *e*P **P 14 35 12.0 -0.4**
KURK pmax pmax
comp=Z,78nm,1.0s
KURK MLR MLR
comp=Z,300nm,20.0s

KURK Kurchatov 89.72 329 P **P 14 35 13.0 +0.6**
SNR=27

GSTR Great Sitkin T 90.03 29 *e*P **P 14 35 14.6 +0.7**

SEY Seymchan 90.09 9 P **P 14 35 14.8 +1.0**
comp=Z,12nm,0.9s,baz=189,slow=4.8,SNR=15

SEY Seymchan 90.09 9 *ce*P **P 14 35 15.2 +1.4**

NVS Novosibirsk 90.71 334 ⇓*i*P **P 14 35 17.0 +0.1**
NVS *e* 14 45 43.0
NVS pmax pmax
comp=N,30nm,1.5s
NVS pmax pmax
comp=E,44nm,1.5s
NVS pmax pmax
comp=Z,65nm,1.5s

ATKA Atka Island 90.93 30 *e*P **P 14 35 18.4 +0.4**
comp=Z,40nm,0.8s
ATKA LR LR
comp=Z,1μm,19.0s

BOSA Boshof 91.17 237 P **P 14 35 20.9 +0.8**
comp=Z,30nm,1.1s,baz=126,slow=3.9,SNR=17
BOSA LR LR 15 10 26.1
comp=Z,3μm,19.4s,slow=32

BOSA Boshof 91.17 237 *e*P **P 14 35 21.2 +1.1**
comp=Z,52nm,1.1s

BOSA Boshof 91.17 237 *e*P **P 14 35 21.2 +1.1**
BOSA pmax pmax
comp=Z,52nm,1.1s

KMBO Kilima Mbogo 93.79 267 LR LR 15 12 16.7
comp=Z,1μm,20.7s,baz=98,slow=32

KMBO Kilima Mbogo 93.79 267 PFAKE 14 35 50.0 +17
KMBO LR LR
comp=Z,2μm,20.0s

KMBO Kilima Mbogo 93.79 267 P **P 14 35 32.8 +0.2**

GEYT Alibeck 93.97 310 P **P 14 35 32.7 +0.2**
comp=Z,4.7nm,0.9s,baz=18,slow=0.5,SNR=10
GEYT PP **PP 14 39 18.3 -0.6**
comp=Z,5.4nm,1.0s,baz=153,slow=10.0,SNR=4.6
GEYT LR LR 15 18 46.4
comp=Z,267nm,21.4s,baz=155,slow=36

GYA0B ALIBECK ARRAY 93.97 310 PFAKE 14 35 50.0 +17
GYA0B LR LR
comp=Z,800nm,22.0s

NAI Nairobi 94.13 267 PFAKE 14 35 50.0 +16
NAI LR LR
comp=Z,1μm,20.0s

DAMY Dhamar 94.17 284 *e*P **P 14 35 34.2 0.0**
comp=Z,44nm,1.2s
DAMY LR LR
comp=Z,700nm,21.0s

ATD Arta Tunnel 94.22 281 PFAKE 14 35 50.0 +16
ATD LR LR
comp=Z,900nm,18.0s

BRVK Borovoye 95.17 328 *e*P **P 14 35 37.2 -0.4**
comp=Z,10nm,1.1s
BRVK LR LR
comp=Z,400nm,22.0s

BRVK Borovoye 95.17 328 *e*P **P 14 35 37.2 -0.4**
BRVK pmax pmax
comp=Z,10.0nm,1.1s
BRVK MLR MLR
comp=Z,400nm,22.0s

BRVK Borovoye 95.17 328 P **P 14 35 38.4 +0.9**
SNR=8.0

LSZ Lusaka 95.36 250 *e*P **P 14 35 38.3 -1.3**
comp=Z,25nm,1.1s
LSZ LR LR
comp=Z,2μm,20.0s

LSZ Lusaka 95.36 250 *e*P **P 14 35 38.3 -1.3**
LSZ pmax pmax
comp=Z,25nm,1.1s
LSZ MLR MLR
comp=Z,2μm,20.0s

UNV Unalaska Valle 95.54 32 PFAKE 14 35 50.0 +11
UNV LR LR
comp=Z,2μm,22.0s

SPIA Saint Paul Isl 95.96 28 PFAKE 14 36 00.0 +19
SPIA LR LR
comp=Z,2μm,22.0s

AKUT Akutan 96.05 32 PFAKE 14 36 00.0 +18
AKUT LR LR
comp=Z,2μm,22.0s

FURI Furi 96.81 277 PFAKE 14 36 00.0 +14
FURI LR LR
comp=Z,1μm,20.0s

BILL Bilibino 97.12 12 PFAKE 14 36 00.0 +14
BILL LR LR
comp=Z,700nm,20.0s

BILL Bilibino 97.12 12 ⇑*e*P Pdif 14 35 46.9 +0.7
BILL *e* 14 39 41.5
BILL *e*S **SKSac 14 46 19.2 -3.5**
BILL pmax pmax
comp=Z,3.0nm,0.7s
BILL MLR MLR
comp=Z,653nm,20.0s

TIXI Tiksi 97.39 359 P **P 14 35 47.0 -0.3**
comp=Z,0.8nm,0.3s,baz=207,slow=1.8,SNR=4.8

TIXI Tiksi 97.39 359 PFAKE 14 36 00.0 +13
TIXI LR LR
comp=Z,1μm,20.0s

TIXI Tiksi 97.39 359 *ce*P Pdif 14 35 47.8 +0.5
TIXI pmax pmax
comp=Z,16nm,2.5s

FALS False Pass 97.59 32 PFAKE 14 36 00.0 +11
FALS LR LR
comp=Z,2μm,22.0s

AB31 Akbulak array 98.49 321 *i* P **P 14 35 49.3 -3.4**
AB31 pmax pmax
comp=Z,2.0nm,0.8s

SDPT Sand Point 99.27 32 PFAKE 14 36 10.0 +14
SDPT LR LR
comp=Z,2μm,22.0s

MBAR Mbarara 99.87 264 PFAKE 14 36 10.0 +10
MBAR LR LR
comp=Z,1μm,18.0s

AKTO Aktyubinsk 100.15 321 P **Pdif 14 36 00.1 0.0**
comp=Z,2.2nm,0.4s,baz=112,slow=4.7,SNR=13
AKTO PKKPbc **PKKPbc 14 52 18.9 -0.5**
comp=Z,0.7nm,0.7s,baz=298,slow=1.5,SNR=5.9

AKTO Aktyubinsk 100.15 321 P **Pdif 14 35 58.9 -1.2**
AKTO pmax pmax
comp=Z,11nm,1.4s

NRIK Noril'sk 100.33 345 P **Pdif 14 36 00.5 0.0**
comp=Z,7.1nm,1.1s,baz=144,slow=3.4,SNR=7.9

CHGN Chignik 100.76 32 PFAKE 14 36 20.0 +17
CHGN LR LR
comp=Z,2μm,19.0s

TSUM Tsumeb 102.08 242 PFAKE 14 36 20.0 +10
TSUM LR LR
comp=Z,3μm,21.0s

ANM Nome 102.37 23 PFAKE 14 36 20.0 +10
ANM LR LR
comp=Z,1μm,21.0s

ARU Arti 102.70 327 PKKPbc PKKPbc 14 52 10.9 -1.2
comp=Z,0.6nm,0.3s,baz=309,slow=2.7,SNR=3.5

ARU Arti 102.70 327 *e*PKKPbc PKKPbc 14 52 10.9 -1.2
ARU LR LR
comp=Z,400nm,21.0s

SII Sitkinak Islan 102.94 33 PFAKE 14 36 30.0 +18
SII LR LR
comp=Z,2μm,19.0s

OHAK Old Harbor 103.68 33 PFAKE 14 36 30.0 +14
OHAK LR LR
comp=Z,2μm,20.0s

KDAK Kodiak Island 104.27 32 PFAKE 14 36 30.0 +12
KDAK LR LR
comp=Z,2μm,22.0s

GNI Garni 104.30 308 PFAKE 14 36 30.0 +11
GNI LR LR
comp=Z,300nm,21.0s

SVW2 Sparrevohn 104.40 29 PFAKE 14 36 30.0 +11
SVW2 LR LR
comp=Z,1μm,21.0s

RDOG Red Dog Mine 105.15 21 PFAKE 14 40 50.0 +14
RDOG LR LR
comp=Z,400nm,20.0s

HOM Homer 105.52 31 PFAKE 14 40 50.0 +13
HOM LR LR
comp=Z,2μm,22.0s

AKH Akhalkalaki 105.64 309 PFAKE 14 40 50.0 +12
AKH LR LR
comp=Z,400nm,21.0s

CNPM China Poot 105.65 31 PFAKE 14 40 50.0 +13
CNPM LR LR
comp=Z,2μm,21.0s

KARS Kars 105.66 308 PFAKE 14 40 50.0 +12
KARS LR LR
comp=Z,1μm,21.0s

BRLK Bradley Lake 105.91 31 PFAKE 14 40 50.0 +12
BRLK LR LR
comp=Z,2μm,21.0s

SEW Seward 106.71 31 PFAKE 14 40 50.0 +11
SEW LR LR
comp=Z,3μm,22.0s

CAST Castle Rocks 106.89 27 PFAKE 14 40 50.0 +10
CAST LR LR
comp=Z,800nm,20.0s

RC01 Rabbit Creek A 106.97 30 PFAKE 14 40 50.0 +10
RC01 LR LR
comp=Z,2μm,22.0s

PMR Palmer 107.43 29 PFAKE 14 40 50.0 +9.5
PMR LR LR
comp=Z,2μm,22.0s

GHO Glory Hole Cre 107.59 29 PFAKE 14 41 00.0 +19
GHO LR LR
comp=Z,2μm,22.0s

BPAW Bear Paw Mtn. 107.61 27 PFAKE 14 41 00.0 +19
BPAW LR LR
comp=Z,400nm,18.0s

TRF Thorofare Moun 107.65 27 PFAKE 14 41 00.0 +19
TRF LR LR
comp=Z,300nm,20.0s

KNK Knik Glacier 107.66 30 PFAKE 14 41 00.0 +19
KNK LR LR
comp=Z,2μm,20.0s

SML Sawmill 107.86 29 PFAKE 14 41 00.0 +19
SML LR LR
comp=Z,1μm,22.0s

MLY Manley 108.08 26 PFAKE 14 41 00.0 +18
MLY LR LR
comp=Z,1μm,20.0s

GLI Glacier Island 108.08 31 PFAKE 14 41 00.0 +18
GLI LR LR
comp=Z,2μm,20.0s

RND Reindeer 108.23 28 PFAKE 14 41 00.0 +18
RND LR LR
comp=Z,800nm,20.0s

BWN Browne 108.26 27 PFAKE 14 41 00.0 +18
BWN LR LR
comp=Z,700nm,20.0s

MCK McKinley 108.31 27 PFAKE 14 41 00.0 +18
MCK LR LR
comp=Z,2μm,20.0s

SCM Sheep Creek Mo 108.32 30 PFAKE 14 41 00.0 +18
SCM LR LR
comp=Z,2μm,22.0s

EYAK Cordova Ski Ar 108.59 31 PFAKE 14 41 00.0 +17
EYAK LR LR
comp=Z,2μm,20.0s

DHY Denali Highway 108.74 28 PFAKE 14 41 00.0 +17
DHY LR LR
comp=Z,2μm,20.0s

DIV Divide 108.78 31 PFAKE 14 41 00.0 +17
DIV LR LR
comp=Z,2μm,22.0s

TRIS Tristan da Cun 108.86 210 PFAKE 14 41 00.0 +16
TRIS LR LR
comp=Z,7μm,20.0s

WRH Wood River Hil 108.93 27 PFAKE 14 41 00.0 +17
WRH LR LR
comp=Z,900nm,22.0s

CCB Clear Creek Bu 109.10 27 PFAKE 14 41 00.0 +16
CCB LR LR
comp=Z,900nm,21.0s

COLD Coldfoot 109.10 24 PFAKE 14 41 00.0 +16
COLD LR LR
comp=Z,600nm,18.0s

COLA College 109.16 26 PFAKE 14 41 00.0 +16
COLA LR LR
comp=Z,1μm,21.0s

HMT Hamilton 109.22 32 PFAKE 14 41 00.0 +16
HMT LR LR
comp=Z,2μm,20.0s

BMRM Bremner River 109.26 31 PFAKE 14 41 00.0 +16
BMRM LR LR
comp=Z,100nm,19.0s

HDA Harding Lake 109.37 27 PFAKE 14 41 00.0 +16
HDA LR LR
comp=Z,800nm,19.0s

HDA Harding Lake 109.37 27 P **PKiKP 14 40 45.8 +1.6**
baz=250

HARP HAARP 109.47 29 PFAKE 14 41 00.0 +16
HARP LR LR
comp=Z,2μm,21.0s

ILAR Eielson Array 109.52 27 Pdiff **Pdif 14 36 40.6 -0.8**
comp=Z,0.5nm,0.9s,baz=276,slow=5.3,SNR=3.0
ILAR PKiKP **PKiKP 14 40 44.8 +0.4**
comp=Z,0.6nm,0.7s,baz=262,slow=3.5,SNR=5.6
ILAR PKKPbc **PKKPbc 14 51 49.0 -2.2**
comp=Z,0.6nm,0.8s,baz=98,slow=1.3,SNR=5.3

ILB Eielson Array 109.52 27 *e*Pdif **Pdif 14 36 40.6 -0.8**
ILB *e*PKiKP **PKiKP 14 40 44.8 +0.4**
ILB *e*PKKPbc **PKKPbc 14 51 49.0 -2.2**

TOLK Toolik Lake Re 109.83 22 PFAKE 14 41 00.0 +15
TOLK LR LR
comp=Z,1μm,20.0s

TOLK Toolik Lake Re 109.83 22 P **PKiKP 14 40 46.4 +1.5**
baz=250

TGL Tana Glacier 110.02 31 PFAKE 14 41 00.0 +14
TGL LR LR
comp=Z,500nm,21.0s

RIDG Independent Ri 110.03 28 PFAKE 14 41 00.0 +15
RIDG LR LR
comp=Z,1μm,20.0s

MENT Mentasta 110.27 29 PFAKE 14 41 00.0 +14
MENT LR LR
comp=Z,2μm,20.0s

PRP Porcupine Dome 110.30 26 PFAKE 14 41 00.0 +14
PRP LR LR
comp=Z,1μm,20.0s

BALM Baldy 110.33 31 PFAKE 14 41 00.0 +14
BALM LR LR
comp=Z,1μm,20.0s

DOT Dot Lake 110.33 28 PFAKE 14 41 00.0 +14
DOT LR LR
comp=Z,1μm,20.0s

FYU Fort Yukon 110.73 25 PFAKE 14 41 00.0 +13
FYU LR LR
comp=Z,800nm,22.0s

CTGM Chitina Glacie 110.78 31 PFAKE 14 41 00.0 +13
CTGM LR LR
comp=Z,1μm,20.0s

PCA Pinnacle 111.06 32 PFAKE 14 41 00.0 +12
PCA LR LR
comp=Z,1μm,19.0s

BCPM Bancas Point 111.32 33 PFAKE 14 41 00.0 +12
BCPM LR LR
comp=Z,1μm,18.0s

EGAK Eagle 111.87 27 PFAKE 14 41 00.0 +11
EGAK LR LR
comp=Z,900nm,21.0s

BR101 Keskin Array S 112.24 304 *e*PKiKP **PKiKP 14 40 50.8 +0.2**

BRTR Keskin Array B 112.24 304 PKiKP **PKiKP 14 40 50.8 +0.2**
comp=Z,0.8nm,1.0s,baz=152,slow=4.6,SNR=4.2

SIT Sitka 112.82 36 PFAKE 14 41 10.0 +19
SIT LR LR
comp=Z,2μm,20.0s

ANTO Ankara 112.90 304 PFAKE 14 41 10.0 +18
ANTO LR LR
comp=Z,500nm,20.0s

SKAG Skagway 113.33 34 PFAKE 14 41 10.0 +18
SKAG LR LR
comp=Z,1μm,19.0s

BESE Bessie Mountai 113.39 35 PFAKE 14 41 10.0 +18
BESE LR LR
comp=Z,1μm,19.0s

JIS Juneau Island 113.57 35 PFAKE 14 41 10.0 +18
JIS LR LR
comp=Z,2μm,20.0s

CRAG Craig 113.69 38 PFAKE 14 41 10.0 +17
CRAG LR LR
comp=Z,2μm,18.0s

WHY Whitehorse 113.78 33 PFAKE 14 41 10.0 +17
WHY LR LR
comp=Z,2μm,20.0s

OBN Obninsk 113.93 321 PFAKE 14 41 10.0 +17
OBN LR LR
comp=Z,301nm,21.0s

OBN Obninsk 113.93 321 ⇓*i*PKIKP **PKiKP 14 40 54.6 +1.6**
OBN *e* 14 41 56.0
OBN *e*SS SS 14 57 35.9 -0.7
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN MLR MLR
comp=Z,373nm,24.0s

EPYK Eagle Plains 114.01 26 PFAKE 14 41 10.0 +17
EPYK LR LR
comp=Z,1μm,22.0s

EPYK Eagle Plains 114.01 26 P **PKiKP 14 40 53.9 +0.9**
baz=260

MDUB Mudurnu 114.24 305 PFAKE 14 41 10.0 +16
MDUB LR LR
comp=Z,1μm,18.0s

WRAK Wrangell Islan 114.30 37 PFAKE 14 41 10.0 +16
WRAK LR LR
comp=Z,2μm,20.0s

INK Inuvik 115.51 24 PKP **PKiKP 14 40 55.5 -0.1**
comp=Z,3.9nm,0.9s,baz=315,slow=1.7,SNR=8.7

INK Inuvik 115.51 24 *e*PKPdf **PKiKP 14 40 55.3 -0.3**
INK LR LR
comp=Z,1μm,20.0s

INK Inuvik 115.51 24 *e*PKIKP **PKiKP 14 40 55.3 -0.3**
INK MLR MLR
comp=Z,1μm,20.0s

YLV Yalova 115.61 304 ⇑*i*P **PKPdf 14 40 56.7 -0.1**

YLV Yalova 115.61 304 ⇑PKIKP **PKPdf 14 40 56.7 -0.1**

DLBC Dease Lake 115.86 35 *e*PKPdf **PKiKP 14 40 57.2 +0.4**
DLBC LR LR
comp=Z,2μm,20.0s

BALB Balikesir 116.52 303 PFAKE 14 41 10.0 +11
BALB LR LR
comp=Z,1μm,21.0s

LVZ Lovozero 116.55 335 PFAKE 14 41 10.0 +12
LVZ LR LR
comp=Z,500nm,21.0s

TIRR Tirgusor 117.11 309 PFAKE 14 41 10.0 +11
TIRR LR LR
comp=Z,900nm,21.0s

TLB Topalu 117.39 309 ⇓*i*P **PKiKP 14 41 01.0 +1.0**

TLB Topalu 117.39 309 ⇓PKIKP **PKiKP 14 41 01.0 +1.0**

CFR Carcaliu 117.43 309 ⇑*i*P **PKiKP 14 41 00.6 +0.5**

CFR Carcaliu 117.43 309 ⇑PKIKP **PKiKP 14 41 00.6 +0.5**

AKASG Malin Array Be 117.58 316 PKP **PKPdf 14 41 00.2 0.0**
comp=Z,1.6nm,0.6s,baz=70,slow=2.6,SNR=7.7
AKASG PP **PP 14 42 12.1 -0.8**
comp=Z,1.2nm,0.8s,baz=76,slow=5.6,SNR=7.2

AKBB Malin Array Si 117.58 316 *e*PKPdf **PKPdf 14 40 59.6 -0.6**
AKBB *e*PP **PP 14 42 12.1 -0.8**
AKBB LR LR
comp=Z,300nm,22.0s

AKBB Malin Array Si 117.58 316 *e*PKIKP **PKPdf 14 40 59.6 -0.6**
AKBB *e* 14 42 12.1
AKBB MLR MLR
comp=Z,300nm,22.0s

KIEV Kiev 117.59 316 *e*PKPdf **PKPdf 14 40 59.6 -0.6**
KIEV LR LR
comp=Z,300nm,22.0s

KIEV Kiev 117.59 316 ⇑*i*P **PKPdf 14 40 59.8 -0.3**

KIEV Kiev 117.59 316 PKPdf **PKPdf 14 40 59.9 -0.3**

KIEV Kiev 117.59 316 ⇑PKIKP **PKPdf 14 40 59.9 -0.3**

M02C Callahan 117.64 55 P **PKiKP 14 41 02.1 +1.3**
baz=259

SANT Santorini 117.66 299 PFAKE 14 41 20.0 +19
SANT LR LR
comp=Z,300nm,20.0s

EZN Ezine 117.73 303 ⇑*i*P **PKiKP 14 41 01.2 +0.4**

EZN Ezine 117.73 303 ⇑PKIKP **PKiKP 14 41 01.2 +0.4**

HUMO Hull Mountain 117.79 54 PFAKE 14 41 20.0 +19
HUMO LR LR
comp=Z,1μm,18.0s

NLWA Neilton Lookou 117.97 48 PFAKE 14 41 20.0 +19
NLWA LR LR
comp=Z,2μm,19.0s

G03D McMinnville, O 118.03 51 P **PKiKP 14 41 04.8 +3.5**
baz=260

ALN Alexandroupoli 118.15 304 PFAKE 14 41 20.0 +18
ALN LR LR
comp=Z,200nm,20.0s

H04D Lebanon 118.29 52 P **PKiKP 14 41 03.3 +1.5**
baz=260

ORV Oroville 118.29 57 PFAKE 14 41 20.0 +18
ORV LR LR
comp=Z,800nm,19.0s

I04A Tendick Farm, 118.40 52 P **PKPdf 14 41 02.2 +0.2**
baz=260

PGC Sidney 118.43 47 PFAKE 14 41 20.0 +18
PGC LR LR
comp=Z,2μm,20.0s

PAGB Antelope Grade 118.46 62 PFAKE 14 41 20.0 +18
PAGB LR LR
comp=Z,2μm,19.0s

D03D Eldon 118.51 48 P **PKiKP 14 41 03.5 +1.4**
baz=262

J04D Umpqua Nationa 118.52 53 P **PKiKP 14 41 03.3 +0.8**
baz=260

AFDM Forest Hills D 118.57 58 *e*PKPdf **PKPdf 14 41 02.1 -0.5**

PKM Mcpherson Peak 118.62 63 P **PKiKP 14 41 04.8 +1.8**
baz=257

H04A Detroit Lake 118.70 51 PFAKE 14 41 20.0 +17
H04A LR LR
comp=Z,1μm,21.0s

CMB Columbia Colle 118.84 59 PFAKE 14 41 20.0 +17
CMB LR LR
comp=Z,1μm,20.0s

MLR Muntele Rosu 119.01 309 *e*PKPdf **PKPdf 14 41 03.2 -0.1**
MLR LR LR
comp=Z,500nm,21.0s

MLR Muntele Rosu 119.01 309 ⇓*i*P **PKPdf 14 41 03.3 0.0**

MLR Muntele Rosu 119.01 309 *e*PKIKP **PKPdf 14 41 03.2 -0.1**
MLR MLR MLR
comp=Z,500nm,21.0s

BIZ Bicaz 119.10 311 ⇓*i*P **PKiKP 14 41 03.7 +0.4**

J05D Fort Rock, OR 119.16 53 P **PKiKP 14 41 04.6 +0.8**
baz=261

D05A Enumclaw 119.20 49 PFAKE 14 41 20.0 +17
D05A LR LR
comp=Z,2μm,21.0s

BEKR Beckworth 119.21 57 *e*PKPdf **PKPdf 14 41 03.9 0.0**
BEKR LR LR
comp=Z,1μm,21.0s

LON Longmire 119.27 49 PFAKE 14 41 20.0 +16
LON LR LR
comp=Z,2μm,22.0s

B05A Bryant 119.27 47 P **PKPdf 14 41 03.5 0.0**
baz=263

K05A Summer Lake 119.31 54 *e*PKPdf **PKiKP 14 41 04.9 +0.7**

KEV Kevo 119.31 337 PFAKE 14 41 20.0 +17
KEV LR LR
comp=Z,400nm,21.0s

VES Vestal, Richgr 119.41 62 P **PKiKP 14 41 04.8 +0.6**

baz=258
CIS Catalina Islan 119.41 65 P PKiKP 14 41 05.7 +1.3
baz=257
OSI Osito Audit: C 119.43 63 PFAKE 14 41 20.0 +16
OSI LR LR
comp=Z,2μm,19.0s
PINE Pine Mountain 119.45 53 PFAKE 14 41 20.0 +16
PINE LR LR
comp=Z,1μm,22.0s
IDID Didziasalis 119.54 321 eP PKPdf 14 41 03.3 -0.5
MOD Modoc Plateau 119.61 55 ePKPdf PKiKP 14 41 05.4 +0.7
MOD LR LR
comp=Z,700nm,19.0s
VCNR Virginia City 119.65 58 PFAKE 14 41 20.0 +15
VCNR LR LR
comp=Z,1μm,21.0s
PNTR Pine Nut 119.65 58 ePKPdf PKiKP 14 41 06.2 +1.2
WAKR Walker 119.66 59 PFAKE 14 41 20.0 +15
WAKR LR LR
comp=Z,2μm,20.0s
VSU Vasula 119.69 324 eP PKPdf 14 41 03.5 -0.4
VSU IAmb IAmb 14 41 06.2
comp=Z,30nm,0.9s
B06A Marblemount 119.70 47 PFAKE 14 41 20.0 +16
B06A LR LR
comp=Z,1μm,21.0s
PASC Pasadena Art C 119.77 64 ePKPdf PKiKP 14 41 06.0 +1.0
PASC LR LR
comp=Z,2μm,20.0s
MDPB Devils Postpil 119.77 60 PFAKE 14 41 20.0 +15
MDPB LR LR
comp=Z,1μm,19.0s
BURAR Bucovina Array 119.79 312 ⇓iP PKiKP 14 41 05.6 +0.8
BURAR Bucovina Array 119.79 312 ⇓PKiKP PKiKP 14 41 05.6 +0.8
BUR08 Bucovina Ar. S 119.80 312 ePKPdf PKiKP 14 41 06.0 +1.2
OMMB Old Mammoth Mi 119.83 60 PFAKE 14 41 20.0 +15
OMMB LR LR
comp=Z,1μm,18.0s
IIGN Ignalina 119.84 321 eP PKPdf 14 41 02.0 -2.4
IIGN IAmb IAmb 14 41 06.4
comp=Z,5.6nm,1.0s
ISA Isabella, Lake 119.85 62 ePKPdf PKPdf 14 41 03.8 -1.4
ISA LR LR
comp=Z,2μm,20.0s
ISA Isabella, Lake 119.85 62 ePKIKP PKPdf 14 41 03.8 -1.4
ISA MLR MLR
comp=Z,2μm,20.0s
ISA Isabella, Lake 119.85 62 P PKiKP 14 41 06.5 +1.3
baz=258
ARCES ARCESS Array B 119.86 337 PKP PKPdf 14 41 03.5 -0.6
comp=Z,5.5nm,0.8s,baz=132,slow=1.8,SNR=14
G06A Carlson Farm, 119.87 51 PFAKE 14 41 20.0 +15
G06A LR LR
comp=Z,1μm,21.0s
MWC Mount Wilson 119.88 64 PFAKE 14 41 20.0 +15
MWC LR LR
comp=Z,2μm,19.0s
YERR Yerington 119.90 58 ePKPdf PKPdf 14 41 05.5 +0.2
YERR LR LR
comp=Z,800nm,20.0s
ARR Arges 119.90 309 ⇑iP PKiKP 14 41 05.3 +0.3
ISAL Salakas 119.91 321 eP PKPdf 14 41 00.8 -3.7
ISAL IAmb IAmb 14 41 03.4
comp=Z,7.0nm,1.0s
PAHR Pah Rah Range 119.92 58 ePKPdf PKiKP 14 41 06.0 +0.7
PAHR LR LR
comp=Z,1μm,22.0s
FIA1 FINESS Array S 120.06 328 ePKPdf PKPdf 14 41 03.9 -0.7
FIA0 FINESS Array S 120.06 328 ePKPdf PKPdf 14 41 04.0 -0.6
FIA0 FINESS Array S 120.06 328 ePKIKP PKPdf 14 41 04.0 -0.6
FINES FINESS Array B 120.06 328 PKP PKPdf 14 41 04.0 -0.6
comp=Z,7.8nm,0.8s,baz=106,slow=4.2,SNR=23
FINES FINESS Array B 120.06 328 PKIKP PKPdf 14 41 04.0 -0.6
EDW2 Edwards Air Fo 120.08 63 P PKiKP 14 41 06.7 +1.0
baz=258
LTY Liberty 120.10 49 PFAKE 14 41 20.0 +15
LTY LR LR
comp=Z,2μm,22.0s
BFSC Mount Baldy Ra 120.21 64 P PKiKP 14 41 06.3 +0.3
baz=257
CWC Cottonwood Cre 120.32 61 P PKiKP 14 41 06.6 +0.3
baz=258
RYN Ryan 120.39 59 ePKPdf PKiKP 14 41 07.0 +0.7
RYN LR LR
comp=Z,1μm,20.0s
MURC Murrieta 120.45 65 P PKiKP 14 41 07.2 +0.8
baz=257
LRMC Laurel Mtn Rad 120.45 63 P PKiKP 14 41 08.1 +1.6
baz=258
I07A Izee 120.52 53 PFAKE 14 41 20.0 +14
I07A LR LR
comp=Z,1μm,21.0s
VTS Vitosha 120.52 306 ePKPdf PKPdf 14 41 06.4 +0.1
VTS LR LR
comp=Z,300nm,21.0s
VTS Vitosha 120.52 306 ⇑iP PKiKP 14 41 06.6 +0.2
VTS Vitosha 120.52 306 ePKIKP PKPdf 14 41 06.4 +0.1
VTS MLR MLR
comp=Z,300nm,21.0s
NV01 Mina Array Sit 120.52 59 ePKPdf PKiKP 14 41 07.3 +0.7
NV01 ePKPKPbc PKKPab 14 51 12.4 0.0
NVAR Mina Array Bea 120.52 59 PKP PKiKP 14 41 07.3 +0.7
comp=Z,5.8nm,0.8s,baz=219,slow=4.7,SNR=47
NVAR PKKPbc PKKPab 14 51 12.4 0.0
comp=Z,1.5nm,0.9s,baz=91,slow=4.2,SNR=10
ITM Ithomi 120.60 299 PFAKE 14 41 20.0 +13
ITM LR LR
comp=Z,300nm,21.0s
NV11 Mina Array Sit 120.64 59 ePKPdf PKiKP 14 41 07.3 +0.5
NV11 LR LR
comp=Z,100nm,20.0s
BAR Barrett 120.67 66 ePKPdf PKiKP 14 41 07.6 +0.7
BAR LR LR
comp=Z,1μm,19.0s
DAC Darwin (Calif) 120.68 62 PFAKE 14 41 20.0 +13
DAC LR LR
comp=Z,2μm,19.0s
MPMC Manual Prospec 120.72 62 P PKiKP 14 41 08.4 +1.3
baz=258
HAWA Hanford 120.78 50 ePKPdf PKiKP 14 41 07.5 +0.9
HAWA LR LR
comp=Z,2μm,22.0s
KVN Kaiserville 120.79 58 ePKPdf PKiKP 14 41 07.5 +0.3
KVN LR LR
comp=Z,1μm,20.0s
WVOR Wild Horse Val 120.92 55 ePKPdf PKiKP 14 41 07.4 +0.2
WVOR LR LR
comp=Z,800nm,20.0s
WVOR Wild Horse Val 120.92 55 ePKIKP PKiKP 14 41 07.4 +0.2
WVOR MLR MLR
comp=Z,800nm,20.0s
MONP2 Monument Peak 120.92 66 P PKiKP 14 41 08.1 +0.5
baz=257
GRAC Grapevine Rang 120.99 61 P PKiKP 14 41 08.5 +1.1
baz=259
PFO Pinyon Flats O 121.05 65 PKP PKiKP 14 41 08.6 +0.9
comp=Z,6.4nm,0.7s,baz=324,slow=1.7,SNR=15
PFO Pinyon Flats O 121.05 65 ePKPdf PKPdf 14 41 07.7 0.0
PFO LR LR
comp=Z,1μm,20.0s
PFO Pinyon Flats O 121.05 65 P PKiKP 14 41 08.4 +0.6
baz=258
G08A Pilot Rock 121.05 51 ePKPdf PKiKP 14 41 07.8 +0.4
G08A LR LR
comp=Z,1μm,22.0s
B08A Colville Reser 121.11 48 ePKPdf PKPdf 14 41 06.4 -0.7
B08A LR LR
comp=Z,2μm,21.0s
GSC Goldstone, Bar 121.11 63 ePKPdf PKPdf 14 41 07.6 0.0
GSC LR LR
comp=Z,2μm,22.0s
GSC Goldstone, Bar 121.11 63 P PKiKP 14 41 09.1 +1.4
baz=258
E08A Dider Farm, El 121.12 50 PFAKE 14 41 20.0 +13
E08A LR LR
comp=Z,2μm,21.0s
PABE Paberze 121.13 321 eP PKiKP 14 41 07.3 +0.3
PABE IAmb IAmb 14 41 08.5
comp=Z,22nm,0.9s
IKP In-Ko-Pah, Jac 121.13 66 P PKiKP 14 41 08.5 +0.7
baz=257
LCO Las Campanas 121.13 157 eP PKiKP 14 41 10.8 +2.5
J08A Circle Bar Ran 121.16 53 ePKPdf PKPdf 14 41 06.6 -0.9
J08A LR LR
comp=Z,800nm,20.0s

D08A Wollman Farm, 121.27 49 ePKPdf PKiKP 14 41 07.7 +0.2
D08A LR LR
comp=Z,1μm,22.0s
FURC Furnace Creek, 121.29 62 P PKiKP 14 41 09.5 +1.6
baz=259
DRGR 121.40 311 ⇑iP PKPdf 14 41 07.4 -0.4
DRGR 121.40 311 ⇑PKIKP PKPdf 14 41 07.4 -0.4
HEC Hector,Ludlow 121.40 64 P PKiKP 14 41 09.3 +0.9
baz=258
BELC Belle Mtn. Jos 121.51 65 P PKiKP 14 41 10.3 +1.7
baz=258
SUW Suwalki 121.55 319 PFAKE 14 41 20.0 +12
SUW LR LR
comp=Z,400nm,22.0s
FNA Florina 121.63 303 ePKPdf PKPdf 14 41 07.5 -0.9
FNA LR LR
comp=Z,300nm,22.0s
KWP Kalwaria Pacla 121.64 314 ePKPdf PKPdf 14 41 07.4 -0.6
KWP LR LR
comp=Z,3μm,18.0s
KWP Kalwaria Pacla 121.64 314 ePKIKP PKPdf 14 41 07.4 -0.6
KWP MLR MLR
comp=Z,3μm,18.0s
SHOC Shoshone, Teco 121.65 62 P PKiKP 14 41 10.4 +1.7
baz=259
BMN Battle Mountai 121.68 57 PFAKE 14 41 20.0 +11
BMN LR LR
comp=Z,800nm,20.0s
E09A Wood Farm, Sta 121.75 50 PFAKE 14 41 20.0 +11
E09A LR LR
comp=Z,2μm,21.0s
C09A Chrisman Ranch 121.77 48 ePKPdf PKPdf 14 41 08.5 +0.1
C09A LR LR
comp=Z,2μm,21.0s
UZH Uzhgorod 121.84 313 ePKIKP PKPdf 14 41 05.4 -3.0
TUQ Turquoise Moun 121.85 63 P PKiKP 14 41 10.5 +1.3
baz=259
TPNV Topopah Spring 121.86 61 ePKPdf PKiKP 14 41 09.4 +0.1
TPNV LR LR
comp=Z,1μm,22.0s
TPNV Topopah Spring 121.86 61 ePKIKP PKiKP 14 41 09.4 +0.1
TPNV MLR MLR
comp=Z,1μm,22.0s
TPNV Topopah Spring 121.86 61 P PKiKP 14 41 10.1 +0.9
baz=260
KOLS Kolonicke sedl 121.87 313 ePKIKP PKiKP 14 41 10.0 +1.3
KOLS Kolonicke sedl 121.87 313 ePKP PKiKP 14 41 10.0 +1.3
BC3 Big Chuckawall 121.88 65 P PKiKP 14 41 10.6 +1.3
baz=258
MDVR Moldovita 121.89 308 ⇑iP PKPdf 14 41 08.9 +0.1
GMRC Granite Mounta 121.94 64 P PKiKP 14 41 10.7 +1.3
baz=259
BZS Buzias 122.04 309 ⇓iP PKiKP 14 41 09.3 +0.2
BZS Buzias 122.04 309 ⇓PKIKP PKiKP 14 41 09.3 +0.2
SLIT Slitere, Latvi 122.05 323 eP PKPdf 14 41 08.0 -0.5
SLIT IAmb IAmb 14 41 11.0
comp=Z,198nm,1.2s
BMO Blue Mountains 122.17 52 ePKPdf PKPdf 14 41 09.5 +0.1
BMO LR LR
comp=Z,1μm,20.0s
BMO Blue Mountains 122.17 52 ePKIKP PKPdf 14 41 09.5 +0.1
BMO MLR MLR
comp=Z,1μm,20.0s
IRM Iron Mountain 122.23 65 P PKiKP 14 41 11.7 +1.8
baz=258
GLA Glamis 122.27 66 PFAKE 14 41 20.0 +10
GLA LR LR
comp=Z,1μm,18.0s
PBUR Paburg 122.28 321 eP PKPdf 14 41 07.0 -2.0
PBUR IAmb IAmb 14 41 10.9
comp=Z,38nm,1.1s
F10A Beach Ranch, E 122.33 51 PFAKE 14 41 20.0 +10
F10A LR LR
comp=Z,800nm,20.0s
LDFC Landfair 122.44 64 ePKPdf PKPdf 14 41 09.8 -0.4
LDFC LR LR
comp=Z,2μm,21.0s
NEW Newport 122.58 48 PKP PKiKP 14 41 10.7 +0.5
comp=Z,1.8nm,0.7s,baz=329,slow=1.4,SNR=3.8
NEW Newport 122.58 48 PFAKE 14 41 20.0 +10
NEW LR LR
comp=Z,2μm,22.0s
NEW Newport 122.58 48 P PKiKP 14 41 11.1 +0.9
baz=266
R11A Troy Canyon, C 122.62 60 ePKPdf PKiKP 14 41 11.1 +0.4
R11A LR LR
comp=Z,900nm,20.0s
R11A Troy Canyon, C 122.62 60 P PKiKP 14 41 11.6 +0.8
baz=261
SHPR Sheep Range 122.65 62 ePKPdf PKiKP 14 41 11.6 +0.7
SHPR LR LR
comp=Z,2μm,20.0s
Y12C Blythe 122.66 65 ePKPdf PKiKP 14 41 12.0 +1.3
Y12C LR LR
comp=Z,900nm,21.0s
Y12C Blythe 122.66 65 P PKiKP 14 41 12.1 +1.3
baz=258
TIR Tirane 122.83 304 PFAKE 14 41 20.0 +9.2
TIR LR LR
comp=Z,300nm,22.0s
PDMCI Parker Dam,Lak 123.08 65 P PKiKP 14 41 12.7 +1.2
baz=259
PLID Pearl Lake 123.11 52 ePKPdf PKiKP 14 41 12.0 +0.4
PLID LR LR
comp=Z,2μm,22.0s
SRIG Santa Rosalia 123.15 73 PFAKE 14 41 30.0 +18
SRIG LR LR
comp=Z,900nm,19.0s
ELK Elko 123.22 57 PKP PKiKP 14 41 12.9 +1.0
comp=Z,7.1nm,0.9s,baz=282,slow=3.2,SNR=23
ELK Elko 123.22 57 ePKPdf PKiKP 14 41 12.4 +0.5
ELK LR LR
comp=Z,1μm,21.0s
PSZ Piszkesteto 123.39 312 ePKPdf PKPdf 14 41 11.8 +0.2
PSZ LR LR
comp=Z,200nm,19.0s
PSZ Piszkesteto 123.39 312 ⇑iP PKPdf 14 41 11.8 +0.2
PSZ Piszkesteto 123.39 312 ⇑PKIKP PKPdf 14 41 11.8 +0.2
PDG Podgorica 123.41 305 ⇑iP PKPdf 14 41 11.6 -0.1
TTG Podgorica 123.41 305 ePKPdf PKPdf 14 41 11.5 -0.2
TTG LR LR
comp=Z,300nm,21.0s
TTG Podgorica 123.41 305 ePKIKP PKPdf 14 41 11.5 -0.2
TTG MLR MLR
comp=Z,300nm,21.0s
W13A Hualapai Mount 123.43 64 ePKPdf PKPdf 14 41 12.3 +0.1
W13A LR LR
comp=Z,2μm,22.0s
YKW3 Yellowknife Ar 123.48 31 ePKPdf PKPdf 14 41 11.2 +0.1
YKA Yellowknife Ar 123.49 31 PKP PKPdf 14 41 10.8 -0.3
comp=Z,8.0nm,0.8s,baz=284,slow=1.8,SNR=51
YKA PKKPbc PKKPbc 14 51 00.3 -1.0
comp=Z,0.6nm,0.7s,baz=108,slow=3.9,SNR=5.4
YKB5 Yellowknife Ar 123.49 31 ePKPdf PKPdf 14 41 10.8 -0.3
YKB5 ePKKPbc PKKPbc 14 51 00.3 -1.0
214A Organ Pipe Nat 123.71 68 P PKiKP 14 41 14.3 +1.4
baz=258
Y14A Wickenburg 123.93 65 ePKPdf PKiKP 14 41 14.0 +0.7
Y14A LR LR
comp=Z,900nm,22.0s
PSUT Pine Spring 123.99 60 ePKPdf PKPdf 14 41 13.3 +0.1
HLID Hailey 124.12 54 ePKPdf PKiKP 14 41 14.2 +0.7
HLID LR LR
comp=Z,900nm,21.0s
HLID Hailey 124.12 54 P PKiKP 14 41 13.8 +0.2
baz=265
VYHS Vyhne 124.12 312 ePKIKP PKiKP 14 41 13.9 +0.7
VYHS Vyhne 124.12 312 ePKP PKiKP 14 41 13.9 +0.7
CCUT Cedar City 124.23 61 ePKPdf PKiKP 14 41 15.0 +1.0
LCMT Little Creek M 124.25 62 ePKPdf PKiKP 14 41 14.9 +0.9
KNB Kanab 124.58 62 ePKPdf PKiKP 14 41 15.8 +1.2
OKC Ostrava-Krasne 124.60 314 ePKIKP PKiKP 14 41 14.9 +0.9
OKC MLR MLR
comp=Z,200nm,18.4s
OKC Ostrava-Krasne 124.60 314 ePKPDF PKiKP 14 41 14.9 +0.9
OKC AMS AMS 15 37 00.0
comp=Z,200nm,18.4s
MSO Missoula 124.66 50 ePKPdf PKPdf 14 41 14.3 +0.2
MSO LR LR
comp=Z,1μm,19.0s
MSO Missoula 124.66 50 P PKPdf 14 41 14.4 +0.2
baz=268
HSIG 124.66 72 PFAKE 14 41 30.0 +15
HSIG LR LR
comp=Z,800nm,21.0s

WALA Waterton Lakes 124.73 47 ePKPdf PKPdf 14 41 14.4 +0.2
BGU Big Grassy Mou 124.90 57 ePKPdf PKiKP 14 41 15.5 +0.3
JAVC Velka Javorina 124.90 313 ePKP PKiKP 14 41 16.3 +1.5
U15A North Rim 124.92 62 PFAKE 14 41 30.0 +15
U15A LR LR
comp=Z,2μm,21.0s
TIP Timpagrande 124.93 301 ePKPdf PKiKP 14 41 15.2 +0.1
TIP Timpagrande 124.93 301 ⇑iP PKiKP 14 41 15.4 +0.3
CNLB Canela 124.95 177 eP PKiKP 14 41 17.0 +1.4
DUG Dugway, Tooele 124.99 58 ePKPdf PKiKP 14 41 15.7 +0.3
DUG LR LR
comp=Z,700nm,21.0s
DUG Dugway, Tooele 124.99 58 P PKiKP 14 41 16.1 +0.8
baz=264
MORC Moravsky Berou 124.99 314 ePKPdf PKPdf 14 41 14.1 -0.4
MORC LR LR
comp=Z,300nm,22.0s
MORC Moravsky Berou 124.99 314 ⇑iP PKPdf 14 41 14.5 0.0
MORC Moravsky Berou 124.99 314 ePKIKP PKPdf 14 41 14.1 -0.4
MORC MLR MLR
comp=Z,300nm,22.0s
MORC Moravsky Berou 124.99 314 ePKP PKiKP 14 41 15.9 +1.0
PKCU Pink Cliffs 125.05 61 ePKPdf PKiKP 14 41 16.8 +1.1
BLY Banja Luka 125.10 308 ePKPdf PKiKP 14 41 15.3 +0.1
BLY LR LR
comp=Z,300nm,20.0s
BLY Banja Luka 125.10 308 ⇑iP PKiKP 14 41 15.7 +0.5
MATE Matera 125.13 303 ⇑iP PKiKP 14 41 15.6 +0.3
HVU Hansel Valley 125.17 56 ePKPdf PKiKP 14 41 15.8 +0.2
MTPU Mount Pierson 125.22 60 ePKPdf PKiKP 14 41 17.0 +0.9
MSU Marysvale 125.29 60 ePKPdf PKiKP 14 41 17.3 +1.2
X16A Lo Mia Camp, P 125.29 65 ePKPdf PKiKP 14 41 16.6 +0.4
X16A LR LR
comp=Z,1μm,22.0s
MCMT McKenzie Canyo 125.33 52 ePKPdf PKiKP 14 41 16.6 +0.6
TUC Tucson 125.47 68 PFAKE 14 41 30.0 +14
TUC LR LR
comp=Z,1μm,21.0s
TUC Tucson 125.47 68 P PKPdf 14 41 15.9 -0.2
baz=259
WUAZ Wupatki 125.52 64 ePKPdf PKPdf 14 41 16.3 +0.1
WUAZ LR LR
comp=Z,2μm,22.0s
WUAZ Wupatki 125.52 64 P PKiKP 14 41 17.7 +1.2
baz=261
DLMT Dillon 125.53 52 ePKPdf PKiKP 14 41 16.7 +0.4
DLMT LR LR
comp=Z,1μm,20.0s
VRAC Vranov 125.61 313 ePKP PKiKP 14 41 16.9 +0.8
LRM Limekiln Ridge 125.65 51 ePKPdf PKiKP 14 41 16.8 +0.2
RES Resolute Bay 125.70 14 ePKPdf PKPdf 14 41 14.8 -0.3
RES LR LR
comp=Z,500nm,20.0s
RES Resolute Bay 125.70 14 ePKIKP PKPdf 14 41 14.8 -0.3
RES MLR MLR
comp=Z,500nm,20.0s
KRUC Moravsky 125.74 313 ePKP PKiKP 14 41 17.1 +0.8
DPC Dobruska-Polom 125.77 315 ePKIKP PKiKP 14 41 17.5 +1.1
DPC MLR MLR
comp=Z,400nm,19.2s
DPC Dobruska-Polom 125.77 315 ePKPDF PKiKP 14 41 17.5 +1.1
DPC AMS AMS 15 51 50.0
comp=Z,400nm,19.2s
OSTC Ostas 125.83 315 ePKPDF PKiKP 14 41 17.4 +0.9
OSTC AMS AMS 15 53 40.0
comp=Z,300nm,15.7s
MPU Maple Canyon 125.87 58 ePKPdf PKPdf 14 41 17.0 +0.3
CHVC Chvalec 125.93 315 ePKPDF PKiKP 14 41 17.1 +0.4
CHVC AMS AMS 15 43 20.0
comp=Z,400nm,21.6s
UPC Upice 125.96 315 ePKIKP PKiKP 14 41 17.8 +1.1
UPC MLR MLR
comp=Z,400nm,18.8s
UPC Upice 125.96 315 ePKPDF PKiKP 14 41 17.8 +1.1
UPC AMS AMS 15 53 40.0
comp=Z,400nm,18.8s
HWUT Hardware Ranch 126.06 56 PFAKE 14 41 30.0 +13
HWUT LR LR
comp=Z,400nm,22.0s
JLU Jordanelle 126.07 57 ePKPdf PKiKP 14 41 17.6 0.0
CONA Conrad Observa 126.10 312 ePKPdf PKiKP 14 41 17.6 +0.4
comp=Z,7.0nm,1.3s,SNR=5.4
Q16A Castle Valley 126.12 60 ePKPdf PKiKP 14 41 17.8 +0.1
TMUT Trail Mountain 126.13 59 ePKPdf PKiKP 14 41 17.9 +0.1
TCUT Toone Canyon 126.14 57 ePKPdf PKiKP 14 41 18.0 +0.2
BOZ Bozeman (W) 126.22 51 ePKPdf PKiKP 14 41 17.9 +0.3
BOZ LR LR
comp=Z,600nm,20.0s
BOZ Bozeman (W) 126.22 51 ePKIKP PKiKP 14 41 17.9 +0.3
BOZ MLR MLR
comp=Z,600nm,20.0s
BOZ Bozeman (W) 126.22 51 P PKiKP 14 41 18.4 +0.8
baz=268
WDD Wied Dalam 126.27 297 PFAKE 14 41 30.0 +12
WDD LR LR
comp=Z,300nm,21.0s
ARSA Arzberg 126.33 311 ePKPdf PKiKP 14 41 18.1 +0.5
comp=Z,7.6nm,1.2s,SNR=6.0
TREC Trest 126.34 313 ePKIKP PKiKP 14 41 18.2 +0.7
TREC MLR MLR
comp=Z,400nm,16.6s
TREC Trest 126.34 313 ePKPDF PKiKP 14 41 18.2 +0.7
TREC AMS AMS 15 54 00.0
comp=Z,400nm,16.6s
QLMT Earthquake Lak 126.34 52 ePKPdf PKiKP 14 41 19.2 +1.2
AHID Auburn Hatcher 126.48 55 ePKPdf PKiKP 14 41 18.9 +0.6
AHID LR LR
comp=Z,700nm,21.0s
YHB Horse Butte 126.50 52 ePKPdf PKiKP 14 41 19.2 +0.9
P17A Butcher Ranch, 126.51 59 ePKPdf PKiKP 14 41 18.5 +0.1
X18A Snowflake 126.53 65 ePKPdf PKPdf 14 41 18.1 -0.1
X18A LR LR
comp=Z,1μm,22.0s
319A Douglas 126.56 69 PFAKE 14 41 30.0 +11
319A LR LR
comp=Z,900nm,19.0s
FXWY Fox Creek 126.58 54 ePKPdf PKiKP 14 41 19.2 +0.7
PERS Pernice 126.61 310 i PKPdf PKiKP 14 41 18.2 0.0
TPAW Teton Pass 126.63 54 ePKPdf PKiKP 14 41 19.3 +0.6
SRU San Rafael Swe 126.64 59 ePKPdf PKPdf 14 41 18.1 -0.1
SRU San Rafael Swe 126.64 59 ePKIKP PKPdf 14 41 18.1 -0.1
IMW Indian Meadow 126.66 53 ePKPdf PKiKP 14 41 19.1 +0.4
IMW LR LR
comp=Z,600nm,18.0s
SOKA Soboth 126.67 310 ePKPdf PKPdf 14 41 18.2 +0.3
comp=Z,14nm,1.1s,SNR=10
YHH Holmes Hill 126.75 52 ePKPdf PKiKP 14 41 19.7 +0.8
GOPC GO Pecny, Ondr 126.77 314 ePKIKP PKiKP 14 41 20.3 +1.9
GOPC MLR MLR
comp=Z,300nm,20.9s
GOPC GO Pecny, Ondr 126.77 314 ePKPDF PKiKP 14 41 20.3 +1.9
GOPC AMS AMS 15 45 20.0
comp=Z,300nm,20.9s
SNOW Snow King Moun 126.77 54 ePKPdf PKPdf 14 41 18.6 +0.2
SNOW LR LR
comp=Z,800nm,20.0s
W18A Petrified Fore 126.79 64 ePKPdf PKiKP 14 41 19.1 0.0
W18A LR LR
comp=Z,2μm,22.0s
W18A Petrified Fore 126.79 64 P PKiKP 14 41 19.9 +0.8
baz=262
MOOW Moose Ponds 126.79 54 ePKPdf PKiKP 14 41 19.8 +0.9
MOOW LR LR
comp=Z,700nm,20.0s
FLWY Flagg Ranch 126.84 53 ePKPdf PKPdf 14 41 18.7 +0.2
FLWY LR LR
comp=Z,600nm,19.0s
PVCC Panska Ves 126.88 315 AMS AMS 15 54 10.0
comp=Z,300nm,19.3s
LOHW Long Hollow 126.89 54 ePKPdf PKPdf 14 41 18.8 +0.2
LOHW LR LR
comp=Z,800nm,21.0s
PRU Pruhonice 126.93 314 ePKIKP PKiKP 14 41 19.2 +0.5
PRU MLR MLR
comp=Z,400nm,17.2s
PRU Pruhonice 126.93 314 ePKPDF PKiKP 14 41 19.2 +0.5
PRU AMS AMS 15 48 40.0
comp=Z,400nm,17.2s
H17A Grant Village 126.94 53 PFAKE 14 41 30.0 +11
H17A LR LR
comp=Z,1μm,21.0s
H17A Grant Village 126.94 53 P PKiKP 14 41 21.5 +2.3
baz=268
ITAB Concordia 126.94 175 eP PKiKP 14 41 22.3 +2.8

OBKA Obir 127.00 310 ePKPdf PKiKP 14 41 19.6 +0.5
comp=Z,5.8nm,1.0s
LJU Ljubljana 127.01 309 i PKPdf PKiKP 14 41 19.0 +0.1
LKWY Lake 127.06 53 PFAKE 14 41 30.0 +11
LKWY LR LR
comp=Z,1μm,21.0s
NC602 NORSAR Array S 127.14 328 ePKPdf PKPdf 14 41 18.2 0.0
MOA Molln 127.18 312 ePKPdf PKiKP 14 41 19.6 +0.4
comp=Z,4.5nm,1.1s
CPUP Villa Florida 127.21 169 PKP PKPdf 14 41 19.8 +0.2
comp=Z,12nm,1.1s,baz=210,slow=0.0,SNR=15
NB2 NORSAR Subarra127.22 328 PKP PKPdf 14 41 18.5 0.0
comp=Z,20nm,1.2s,baz=69,slow=3.8
NB200 NORSAR Array S 127.22 328 ePKPdf PKPdf 14 41 18.4 -0.1
NOA NORSAR Array B 127.22 328 PKP PKPdf 14 41 18.4 -0.1
comp=Z,7.3nm,1.1s,baz=259,slow=3.2,SNR=9.7
BRG Berggiesshubel 127.26 315 ePKP PKiKP 14 41 19.2 -0.1
comp=Z,56nm,2.1s
BRG ePP PP 14 43 19.0 +0.5
comp=Z,17nm,1.6s
BRG ePKPPKP P'P'df 14 59 41.3 +0.3
comp=Z,4.2nm,1.1s
BRG Berggiesshubel 127.26 315 ePKIKP PKiKP 14 41 19.2 -0.1
BRG e 14 43 19.0
BRG pmax pmax
comp=Z,5.0nm,2.1s
BRG pmax pmax
comp=Z,56nm,1.6s
RGN Rugen 127.29 320 PFAKE 14 41 30.0 +11
RGN LR LR
comp=Z,400nm,21.0s
GORS Gorjuse 127.38 310 i PKPdf PKPdf 14 41 19.2 -0.1
NAO01 NORSAR Array S 127.43 328 ePKPdf PKPdf 14 41 19.0 +0.2
NBO00 NORSAR Array S 127.43 328 ePKPdf PKPdf 14 41 19.2 +0.4
EGMT Eagleton 127.51 48 ePKPdf PKPdf 14 41 19.1 -0.3
EGMT LR LR
comp=Z,2μm,22.0s
EGMT Eagleton 127.51 48 P PKiKP 14 41 20.0 0.0
baz=272
CLTB Caltabellotta 127.52 299 PFAKE 14 41 30.0 +10
CLTB LR LR
comp=Z,300nm,20.0s
GEC2 GERESS Array S 127.52 313 ePKPdf PKPdf 14 41 19.7 +0.2
GEC2 LR LR
comp=Z,400nm,21.0s
GERES GERESS Array B 127.52 313 PKP PKPdf 14 41 19.4 -0.1
comp=Z,3.3nm,0.9s,baz=101,slow=0.7,SNR=21
KHC Kasperske Hory 127.59 313 ePKPdf PKPdf 14 41 19.6 0.0
KHC LR LR
comp=Z,100nm,21.0s
KHC Kasperske Hory 127.59 313 ePKIKP PKiKP 14 41 20.4 +0.3
KHC MLR MLR
comp=Z,400nm,16.0s
KHC Kasperske Hory 127.59 313 ePKPDF PKiKP 14 41 20.4 +0.3
KHC AMS AMS 15 53 30.0
comp=Z,400nm,16.0s
GCMT Greycliff 127.60 51 ePKPdf PKPdf 14 41 18.8 -1.0
LVC Limon Verde 127.61 155 eP PKiKP 14 41 23.2 +1.8
BW06 Boulder Array 127.62 55 ePKPdf PKPdf 14 41 20.2 +0.2
BW06 LR LR
comp=Z,900nm,20.0s
BW06 Boulder Array 127.62 55 P PKPdf 14 41 19.8 -0.3
baz=268
PD31 Pinedale Array 127.62 55 ePKPdf PKPdf 14 41 20.1 +0.1
PDAR Pinedale Array 127.62 55 PKP PKiKP 14 41 20.6 0.0
comp=Z,3.4nm,0.9s,baz=222,slow=2.0,SNR=24
MYKA Terra Mystica 127.62 310 ePKPdf PKiKP 14 41 20.6 +0.3
comp=Z,4.5nm,0.9s
AQU L'Aquila 127.73 305 PFAKE 14 41 30.0 +9.4
AQU LR LR
comp=Z,200nm,22.0s
PV14 Lion Creek, Pa 127.74 60 ePKPdf PKPdf 14 41 19.9 -0.5
PV23 Carpenter Ridg 127.75 60 ePKPdf PKPdf 14 41 20.5 0.0
PV23 LR LR
comp=Z,1μm,20.0s
PV19 Morning Glory 127.76 60 ePKPdf PKiKP 14 41 21.0 -0.1
PV19 LR LR
comp=Z,2μm,22.0s
PV17 East Wray Mesa 127.78 61 ePKPdf PKPdf 14 41 20.9 +0.4
PV20 West Nyswonger 127.78 60 PFAKE 14 41 30.0 +9.0
PV20 LR LR
comp=Z,2μm,22.0s
PV21 Cone Mtn., Par 127.79 60 ePKPdf PKiKP 14 41 21.0 -0.1
PV16 Nyswonger Mesa 127.81 60 ePKPdf PKiKP 14 41 21.3 +0.2
PV16 LR LR
comp=Z,2μm,22.0s
PV18 Skein Mesa, Pa 127.81 61 ePKPdf PKPdf 14 41 20.8 +0.3
CLL Collm 127.82 316 ePKPdf PKPdf 14 41 20.2 +0.4
CLL LR LR
comp=Z,400nm,20.0s
CLL Collm 127.82 316 i PKPdf PKiKP 14 41 20.4 0.0
comp=Z,12nm,1.3s
CLL ePP PP 14 43 25.0 +2.8
comp=Z,11nm,1.4s
CLL LmV 15 47 00.0
comp=Z,400nm,20.5s
CLL Collm 127.82 316 i PKIKP PKiKP 14 41 20.4 0.0
CLL pmax pmax
comp=Z,12nm,1.3s
CLL MLR MLR
comp=Z,400nm,20.5s
KBA Koelnbreinsper 127.82 311 ePKPdf PKPdf 14 41 19.7 -0.5
comp=Z,5.6nm,1.1s
PV04 Paradox Valley 127.83 60 ePKPdf PKiKP 14 41 21.3 +0.2
PV04 LR LR
comp=Z,2μm,22.0s
PV11 David Mesa, Pa 127.85 61 ePKPdf PKiKP 14 41 21.2 +0.1
PV03 Paradox Valley 127.86 61 ePKPdf PKPdf 14 41 20.8 +0.1
PV03 LR LR
comp=Z,2μm,21.0s
PV13 Radium Mtn., P 127.88 61 ePKPdf PKiKP 14 41 21.8 +0.5
PV13 LR LR
comp=Z,2μm,21.0s
RLMT Red Lodge 127.88 52 PFAKE 14 41 30.0 +9.0
RLMT LR LR
comp=Z,1μm,22.0s
RLMT Red Lodge 127.88 52 P PKiKP 14 41 22.2 +1.2
baz=270
PV12 Saucer Basin, 127.91 60 ePKPdf PKiKP 14 41 21.5 +0.2
PV22 Blue Mesa, Par 127.94 60 ePKPdf PKiKP 14 41 21.5 +0.2
PV02 Paradox Valley 127.95 61 ePKPdf PKiKP 14 41 22.1 +0.7
121A Cookes Peak, D 128.01 68 P PKiKP 14 41 22.2 +0.6
baz=261
MVCO Mesa Verde 128.04 62 ePKPdf PKiKP 14 41 22.0 +0.4
MVCO LR LR
comp=Z,2μm,20.0s
MVCO Mesa Verde 128.04 62 P PKiKP 14 41 22.7 +1.1
baz=264
PV07 Paradox Valley 128.04 60 ePKPdf PKiKP 14 41 21.8 +0.3
PV07 LR LR
comp=Z,1μm,20.0s
PV01 Paradox Valley 128.07 61 ePKPdf PKiKP 14 41 21.9 +0.3
PV01 LR LR
comp=Z,2μm,21.0s
NKC Novy Kostel 128.26 315 AMS AMS 15 49 10.0
comp=Z,500nm,20.2s
KONO Kongsberg 128.34 327 PFAKE 14 41 30.0 +8.8
KONO LR LR
comp=Z,500nm,22.0s
TULEG Thule 128.37 6 PFAKE 14 41 30.0 +9.2
TULEG LR LR
comp=Z,400nm,20.0s
ABTA Abfaltersbach 128.40 310 ePKPdf PKPdf 14 41 21.3 +0.1
comp=Z,14nm,1.1s,SNR=7.7
O20A White River Ci 128.48 58 ePKPdf PKiKP 14 41 23.3 +0.9
O20A LR LR
comp=Z,800nm,21.0s
O20A White River Ci 128.48 58 P PKiKP 14 41 23.3 +0.9
baz=266
HPIG 128.76 75 PFAKE 14 41 40.0 +17
HPIG LR LR
comp=Z,1μm,20.0s
LENM Lemitar 128.91 66 ePKPdf PKPdf 14 41 22.6 -0.2
Y22D IRIS PASSCAL I 128.95 66 PFAKE 14 41 40.0 +17
Y22D LR LR
comp=Z,800nm,18.0s
EPT El Paso 128.96 69 PFAKE 14 41 40.0 +17
EPT LR LR
comp=Z,800nm,19.0s
WTTA Wattenberg 128.98 311 ePKPdf PKiKP 14 41 23.8 +0.7
comp=Z,24nm,1.0s,SNR=12
TIJ01 Guaruva-PR 128.98 179 eP PKiKP 14 41 25.7 +1.9
WATA Walderalm 129.01 311 ePKPdf PKPdf 14 41 22.8 +0.3
comp=Z,15nm,1.1s,SNR=10
GRA1 Grafenberg Arr 129.09 314 PFAKE 14 41 40.0 +17
GRA1 LR LR
comp=Z,300nm,19.0s
GRFO Grafenberg 129.09 314 PFAKE 14 41 40.0 +17
GRFO LR LR
comp=Z,300nm,20.0s
BNM Barren Site 129.20 66 ePKPdf PKPdf 14 41 23.6 +0.3
SQTA Sankt Quirin 129.27 311 ePKPdf PKiKP 14 41 24.2 +0.6
comp=Z,21nm,1.5s,SNR=10
RWWY Rawlins 129.33 56 ePKPdf PKPdf 14 41 23.6 +0.3
RWWY LR LR
comp=Z,700nm,20.0s
MOTA Moosalm 129.34 311 i PKPdf PKiKP 14 41 24.5 +0.7
comp=Z,15nm,1.3s
SMCO Snowmass 129.40 60 ePKPdf PKiKP 14 41 25.0 +0.5
S22A 4UR Ranch, Cre 129.41 61 PFAKE 14 41 40.0 +16
S22A LR LR
comp=Z,2μm,20.0s
S22A 4UR Ranch, Cre 129.41 61 P PKiKP 14 41 26.2 +1.7
baz=265
ANMO Albuquerque 129.43 65 PKP PKiKP 14 41 24.8 +0.4
comp=Z,1.3nm,0.8s,baz=219,slow=3.7,SNR=6.2
ANMO SKPbc SKPbc 14 44 45.6 +0.1
comp=Z,3.7nm,0.9s,baz=258,slow=4.4,SNR=7.7
ANMO Albuquerque 129.43 65 ePKPdf PKPdf 14 41 22.9 -0.8
ANMO eSKPdf SKPbc 14 44 46.1 +0.5
ANMO LR LR
comp=Z,800nm,21.0s
PTGB Pitanga 129.44 175 eP PKiKP 14 41 27.3 +2.5
RETA Reutte 129.56 311 ePKPdf PKiKP 14 41 24.6 +0.5
comp=Z,3.3nm,0.6s
FETA Feichten 129.61 311 ePKPdf PKiKP 14 41 25.2 +0.9
comp=Z,6.0nm,1.1s
FETA eSKPbc SKPab 14 44 45.3 +0.3
comp=Z,16nm,1.3s
K22A Casper 129.85 55 ePKPdf PKPdf 14 41 24.2 0.0
K22A LR LR
comp=Z,500nm,20.0s
K22A Casper 129.85 55 P PKiKP 14 41 25.0 0.0
baz=270
MNTX Cornudas Mount 129.89 69 ePKPdf PKPdf 14 41 24.5 +0.1
MNTX LR LR
comp=Z,700nm,20.0s
MNTX Cornudas Mount 129.89 69 P PKiKP 14 41 25.8 +0.6
baz=261
PB11 IPOC Station P 129.89 153 ePKPdf PKPdf 14 41 24.8 -0.2
FUORN Ofenpass-Fuorn 129.95 310 PFAKE 14 41 40.0 +15
FUORN LR LR
comp=Z,500nm,21.0s
VLC Villacollemand 129.96 307 PFAKE 14 41 40.0 +15
VLC LR LR
comp=Z,200nm,19.0s
LAO LASA Array 129.96 50 ePKPdf PKiKP 14 41 25.0 +0.1
LAO LR LR
comp=Z,1μm,22.0s
LAO LASA Array 129.96 50 P PKiKP 14 41 25.2 +0.3
baz=273
GO01 Chusmiza 130.16 154 ePKPdf PKPdf 14 41 25.9 -0.1
DAVA Damuels 130.17 311 ePKPdf PKiKP 14 41 26.2 +0.7
comp=Z,12nm,1.0s,SNR=8.8
DAVA eSKPbc SKPbc 14 44 48.3 +0.6
comp=Z,26nm,1.2s
DAVOX Davos/Dischmat 130.21 310 SKPbc SKPab 14 44 47.7 0.0
comp=Z,4.3nm,0.5s,baz=79,slow=6.5,SNR=9.1
N23A Red Feather La 130.26 57 ePKPdf PKiKP 14 41 25.9 -0.1
N23A LR LR
comp=Z,700nm,20.0s
N23A Red Feather La 130.26 57 P PKiKP 14 41 25.8 -0.2
baz=268
KEST Kesra 130.43 296 SKPbc SKPab 14 44 49.0 +0.1
comp=Z,14nm,1.1s,baz=151,slow=4.2,SNR=6.3
KEST Kesra 130.43 296 eSKPbc SKPbc 14 44 49.8 +0.8
SDCO Great Sand Dun 130.46 61 ePKPdf PKiKP 14 41 26.4 -0.2
SDCO LR LR
comp=Z,1μm,20.0s
SDCO Great Sand Dun 130.46 61 P PKiKP 14 41 27.1 +0.5
baz=266
ISCO Idaho Springs 130.48 59 PFAKE 14 41 40.0 +13
ISCO LR LR
comp=Z,900nm,20.0s
ISCO Idaho Springs 130.48 59 P PKiKP 14 41 26.9 +0.3
baz=268
ZAIG Zacatecas 130.48 81 ePKPdf PKPdf 14 41 26.2 0.0
ZAIG LR LR
comp=Z,900nm,20.0s
STU Stuttgart 130.50 313 PFAKE 14 41 40.0 +14
STU LR LR
comp=Z,300nm,21.0s
TUE Stuetta 130.59 310 PFAKE 14 41 40.0 +14
TUE LR LR
comp=Z,400nm,20.0s
PHWY Pilot Hill 130.63 57 ePKPdf PKPdf 14 41 25.7 -0.3
PHWY LR LR
comp=Z,600nm,19.0s
SPB Sao Paulo 130.71 181 PFAKE 14 41 40.0 +13
SPB LR LR
comp=Z,1μm,20.0s
SPB Sao Paulo 130.71 181 eP PKiKP 14 41 28.0 +0.8
Q24A Divide 130.80 60 PFAKE 14 41 40.0 +13
Q24A LR LR
comp=Z,1μm,22.0s
PARB Paraibuna 130.91 183 eP PKiKP 14 41 29.4 +1.7
FRTB Fartura 130.94 178 eP PKiKP 14 41 29.2 +1.5
LTX Lajitas 130.96 73 ePKPdf PKPdf 14 41 27.3 +0.6
LTX eSKPbc SKPab 14 44 51.9 +0.5
TX31 Lajitas Ar. Si 130.96 73 ePKPdf PKiKP 14 41 27.7 +0.1
TXAR Lajitas Array 130.96 73 PKP PKPdf 14 41 27.3 +0.6
comp=Z,3.5nm,0.8s,baz=220,slow=2.2,SNR=30
TXAR SKPbc SKPab 14 44 51.9 +0.5
comp=Z,13nm,1.0s,baz=235,slow=4.4,SNR=33
BFO Black Forest 131.12 313 PFAKE 14 41 40.0 +13
BFO LR LR
comp=Z,200nm,20.0s
ESAR Angra dos Reis 131.16 184 eP PKiKP 14 41 29.1 +1.1
DGMT Dagmar 131.18 47 PFAKE 14 41 40.0 +13
DGMT LR LR
comp=Z,1μm,20.0s
T25A Trinidad 131.28 62 ePKPdf PKiKP 14 41 28.6 +0.4
T25A LR LR
comp=Z,2μm,19.0s
T25A Trinidad 131.28 62 P PKiKP 14 41 29.0 +0.9
baz=266
TAM Tamanrasset 131.43 278 PFAKE 14 41 40.0 +11
TAM LR LR
comp=Z,500nm,19.0s
FFC Flin Flon 131.45 39 ePKPdf PKiKP 14 41 27.7 +0.1
FFC LR LR
comp=Z,2μm,21.0s
FFC Flin Flon 131.45 39 i PKIKP PKiKP 14 41 29.2 +1.6
RSSD Black Hills 131.63 53 PFAKE 14 41 40.0 +11
RSSD LR LR
comp=Z,1μm,20.0s
TOC3 Torodi Ar. Sit 131.71 265 PFAKE 14 41 40.0 +11
TOC3 LR LR
comp=Z,800nm,20.0s
TOC2 Torodi Ar. Sit 131.72 265 PFAKE 14 41 40.0 +11
TOC2 LR LR
comp=Z,800nm,21.0s
TOC4 Torodi Ar. Sit 131.72 264 PFAKE 14 41 40.0 +11
TOC4 LR LR
comp=Z,700nm,20.0s
TOB3 Torodi Ar. Sit 131.73 265 PFAKE 14 41 40.0 +11
TOB3 LR LR
comp=Z,700nm,20.0s
TOB2 Torodi Ar. Sit 131.73 265 PFAKE 14 41 40.0 +11
TOB2 LR LR
comp=Z,800nm,20.0s
TOA3 Torodi Ar. Sit 131.74 265 PFAKE 14 41 40.0 +11
TOA3 LR LR
comp=Z,700nm,20.0s
TOA0 Torodi Ar. Sit 131.74 265 ePKPdf PKPdf 14 41 28.1 -0.2
TOA0 LR LR
comp=Z,800nm,21.0s
TORD Torodi Ar. Bea 131.74 265 PKP PKPdf 14 41 28.2 -0.2
comp=Z,12nm,0.8s,baz=87,slow=1.2,SNR=44
TORD SKPbc SKPbc 14 44 53.9 -0.3
comp=Z,15nm,0.9s,baz=55,slow=2.9,SNR=19
TOC1 Torodi Ar. Sit 131.74 265 PFAKE 14 41 40.0 +11
TOC1 LR LR
comp=Z,1μm,20.0s
TOA1 Torodi Ar. Sit 131.74 265 ePKPdf PKPdf 14 41 28.2 -0.2
TOA1 eSKPbc SKPbc 14 44 53.9 -0.3
TOA1 LR LR
comp=Z,800nm,21.0s
TOB4 Torodi Ar. Sit 131.75 265 PFAKE 14 41 40.0 +11
TOB4 LR LR
comp=Z,700nm,20.0s
TOC5 Torodi Ar. Sit 131.75 264 PFAKE 14 41 40.0 +11
TOC5 LR LR
comp=Z,800nm,20.0s
TOB5 Torodi Ar. Sit 131.75 265 PFAKE 14 41 40.0 +11
TOB5 LR LR
comp=Z,800nm,20.0s
TOC7 Torodi Ar. Sit 131.76 265 PFAKE 14 41 40.0 +11
TOC7 LR LR
comp=Z,700nm,20.0s
VAS01 Vassouras-RJ 131.82 186 eP PKiKP 14 41 29.6 +0.1
RCLB Rio Claro- Sao 131.88 181 eP PKiKP 14 41 29.6 -0.1
ECH Echery 131.91 312 PFAKE 14 41 40.0 +11
ECH LR LR
comp=Z,200nm,19.0s
SENIN Lac Senin/Sane 132.01 310 PFAKE 14 41 40.0 +11
SENIN LR LR
comp=Z,300nm,21.0s
CAM01 Campos-RJ 132.08 188 eP PKiKP 14 41 30.5 +0.5
MSTX Muleshoe 132.36 67 ePKPdf PKPdf 14 41 28.3 -0.9
MSTX LR LR
comp=Z,600nm,21.0s
MSTX Muleshoe 132.36 67 P PKPdf 14 41 28.4 -0.7
baz=264
WLF Walferdange 132.36 315 PFAKE 14 41 40.0 +10
WLF LR LR
comp=Z,2μm,19.0s
BNI Bardonecchia 132.56 308 PFAKE 14 41 40.0 +10
BNI LR LR
comp=Z,400nm,20.0s
KSCO Kaye Shedlock' 132.77 60 PFAKE 14 41 40.0 +9.0
KSCO LR LR
comp=Z,1μm,20.0s
NNA Nana 132.96 140 ePKPdf PKPdf 14 41 30.4 -0.5
NNA Nana 132.96 140 i PKIKP PKiKP 14 41 32.2 +0.2
SCO Scoresbysund 133.02 348 PFAKE 14 41 40.0 +10
SCO LR LR
comp=Z,300nm,20.0s
SUMG Summit 133.07 356 PFAKE 14 41 40.0 +9.1
SUMG LR LR
comp=Z,300nm,20.0s
BSCB Bom Sucesso 133.19 184 eP PKiKP 14 41 33.0 +0.6
AQDB Aquidauana 133.21 170 eP PKiKP 14 41 34.0 +1.7
OGNE Ogallala 133.22 57 PFAKE 14 41 40.0 +8.2
OGNE LR LR
comp=Z,1μm,21.0s
UCC Uccle 133.29 316 PFAKE 14 41 40.0 +8.6
UCC LR LR
comp=Z,500nm,21.0s
AMTX Amarillo 133.34 66 PFAKE 14 41 50.0 +18
AMTX LR LR
comp=Z,700nm,20.0s
LPAZ La Paz 133.64 153 PKhKP PKPpre 14 41 19.0
comp=Z,0.5nm,0.4s,baz=297,slow=4.5,SNR=4.0
LPAZ PKP PKPdf 14 41 33.5 +0.8
comp=Z,3.4nm,1.1s,baz=274,slow=2.7,SNR=7.0
LPAZ SKPbc SKPbc 14 45 01.6 +0.1
comp=Z,13nm,0.9s,baz=168,slow=2.1,SNR=15
LPAZ La Paz 133.64 153 ePKPpre PKPpre 14 41 19.0
LPAZ ePKPdf PKPdf 14 41 30.8 -1.9
LPAZ eSKPbc SKPbc 14 45 01.4 -0.2
LPAZ La Paz 133.64 153 ePKHKP PKPpre 14 41 19.0
LPAZ e 14 41 30.8
LPAZ La Paz 133.64 153 eP PKiKP 14 41 34.4 +0.4
LNIG Linares 133.75 80 PFAKE 14 41 50.0 +17
LNIG LR LR
comp=Z,1μm,20.0s
SSB Saint Sauveur 134.04 309 PFAKE 14 41 50.0 +17
SSB LR LR
comp=Z,200nm,20.0s
FCC Fort Churchill 134.20 32 PFAKE 14 41 50.0 +17
FCC LR LR
comp=Z,1μm,21.0s
MDND Maddock 134.31 48 PFAKE 14 41 50.0 +16
MDND LR LR
comp=Z,2μm,21.0s
JCT Junction City 134.45 72 PFAKE 14 41 50.0 +15
JCT LR LR
comp=Z,1μm,19.0s
JCT Junction City 134.45 72 P PKiKP 14 41 34.5 0.0
baz=262
833A Chaparral WMA, 134.48 75 PFAKE 14 41 50.0 +15
833A LR LR
comp=Z,800nm,20.0s
ITRB Iturama 134.53 177 eP PKiKP 14 41 35.9 +0.9
DBIC Dimbokro 134.65 253 PKP PKPdf 14 41 33.8 -0.1
comp=Z,8.3nm,0.9s,baz=76,slow=2.7,SNR=5.6
DBIC SKPbc SKPbc 14 45 03.9 -0.3
comp=Z,13nm,1.1s,baz=173,slow=1.8,SNR=5.5
ABTX Abilene, Hawle 134.83 69 PFAKE 14 41 50.0 +15
ABTX LR LR
comp=Z,800nm,18.0s
ABTX Abilene, Hawle 134.83 69 P PKPdf 14 41 33.9 +0.2
baz=264
BSFB Barra de Sao F 134.91 190 eP PKiKP 14 41 36.9 +1.2
CBKS Cedar Bluff 135.02 60 PFAKE 14 41 50.0 +15
CBKS LR LR
comp=Z,1μm,20.0s
SJMB Sao Joao De Ma 135.09 189 eP PKiKP 14 41 37.4 +1.2
CLF Chambon-Foret 135.18 313 PFAKE 14 41 50.0 +15
CLF LR LR
comp=Z,500nm,20.0s
U32A Winter Ranch, 135.59 64 PFAKE 14 41 50.0 +13
U32A LR LR
comp=Z,2μm,20.0s
CMIG Matias Romero 135.69 92 SKPbc SKPbc 14 45 07.4 +0.1
comp=Z,1.5nm,0.6s,baz=189,slow=3.7,SNR=7.4
WMOK Wichita Mounta 135.71 66 ePKPdf PKPdf 14 41 35.5 +0.1
WMOK LR LR
comp=Z,600nm,20.0s
WMOK Wichita Mounta 135.71 66 P PKPdf 14 41 36.0 +0.6
baz=267
ULM Lac du Bonnet 136.19 43 PKP PKPdf 14 41 35.6 0.0
comp=Z,5.3nm,0.4s,baz=137,slow=0.3,SNR=6.8
ULM Lac du Bonnet 136.19 43 ePKPdf PKPdf 14 41 35.3 -0.4
ULM LR LR
comp=Z,1μm,20.0s
ULM Lac du Bonnet 136.19 43 ePKIKP PKPdf 14 41 35.3 -0.4
ULM MLR MLR
comp=Z,1μm,20.0s
EKA Eskdalemuir Ar 136.25 324 SKPbc SKPbc 14 45 08.0 +0.2
comp=Z,1.6nm,0.7s,baz=62,slow=1.7,SNR=4.4
ESK Eskdalemuir 136.28 324 PFAKE 14 41 50.0 +13
ESK LR LR
comp=Z,400nm,21.0s
435B Jarrell 136.39 72 ePKPdf PKPdf 14 41 36.2 -0.5
435B LR LR
comp=Z,1μm,19.0s
435B Jarrell 136.39 72 P PKiKP 14 41 38.3 -0.1
baz=263
WHTX Lake Whitney, 136.62 70 PFAKE 14 41 50.0 +11
WHTX LR LR
comp=Z,700nm,18.0s
WHTX Lake Whitney, 136.62 70 P PKiKP 14 41 38.3 -0.5
baz=265
AGMN Agassiz Nation 136.68 46 PFAKE 14 41 50.0 +12
AGMN LR LR
comp=Z,1μm,20.0s
ILULI Ilulissat 136.71 2 PFAKE 14 41 50.0 +12
ILULI LR LR
comp=Z,300nm,20.0s
ECSD EROS Data Cent 137.01 53 PFAKE 14 41 50.0 +11
ECSD LR LR
comp=Z,800nm,19.0s
ECSD EROS Data Cent 137.01 53 P PKPdf 14 41 36.6 -0.9
baz=278
MCI6 Montes Claros 137.28 186 eP PKiKP 14 41 41.4 +0.7
MCI8 Montes Claros 137.43 186 eP PKiKP 14 41 40.8 -0.2
KSU1 Kansas State U 137.45 60 PFAKE 14 41 50.0 +10
KSU1 LR LR
comp=Z,1μm,22.0s
HKT Hockley 137.80 73 PFAKE 14 41 50.0 +8.8
HKT LR LR
comp=Z,1μm,18.0s
TUL1 Leonard 138.18 64 PFAKE 14 41 50.0 +8.1
TUL1 LR LR
comp=Z,900nm,19.0s
X37A Clayton 138.51 66 ePKPdf PKPdf 14 41 39.4 -1.0
X37A LR LR
comp=Z,700nm,22.0s
BDFB Brasilia 138.62 180 PKP PKPdf 14 41 41.1 -0.3
comp=Z,7.3nm,0.9s,baz=229,slow=0.3,SNR=6.1
BDFB Brasilia 138.62 180 ePKPdf PKPdf 14 41 41.1 -0.3
BDFB ePKPdf PKPdf 14 41 41.1 -0.3
BDFB LR LR
comp=Z,1μm,21.0s

DSB	**Dublin**	**138.82**	**323**	PFAKE		14 41 50.0	+7.4
DSB				LR	LR			
comp=Z,400nm,21.0s								
APG	**El Apazote**	**138.91**	**97**	SKPbc	**SKPbc**	**14 45 17.1**	**0.0**	
comp=Z,10nm,1.1s,baz=331,slow=3.7,SNR=7.2								
SFJD	**Kangerlussuaq**	**138.94**	**2**	PFAKE		14 41 50.0	+7.6
SFJD				LR	LR			
comp=Z,400nm,21.0s								
NATX	**Nacogdoches**	**138.97**	**71**	PFAKE		14 42 00.0	+16
NATX				LR	LR			
comp=Z,900nm,18.0s								
JANB	**Januaria**	**139.05**	**185**	*e*P	**PKiKP**	**14 41 44.4**	**0.0**	
SPMN	**Marine on St.**	**139.43**	**50**	PFAKE		14 42 00.0	+16
SPMN				LR	LR			
comp=Z,1μm,20.0s								
EYMN	**Ely**	**139.60**	**46**	PFAKE		14 42 00.0	+16
EYMN				LR	LR			
comp=Z,1μm,22.0s								
EYMN	**Ely**	**139.60**	**46**	P	**PKPdf**	**14 41 41.2**	**-0.8**
baz=287								
HHAR	**Hobbs**	**139.68**	**64**	PFAKE		14 42 00.0	+15
HHAR				LR	LR			
comp=Z,900nm,20.0s								
SCIA	**State Center**	**139.75**	**55**	PFAKE		14 42 00.0	+15
SCIA				LR	LR			
comp=Z,800nm,20.0s								
ANGG	**Ammassalik, Gr**	**139.82**	**353**	PFAKE		14 42 00.0	+16
ANGG				LR	LR			
comp=Z,400nm,20.0s								
W39A	**Magazine**	**139.82**	**65**	PFAKE		14 42 00.0	+15
W39A				LR	LR			
comp=Z,800nm,20.0s								
W39A	**Magazine**	**139.82**	**65**	P	**PKPdf**	**14 41 42.6**	**-0.3**
baz=270								
F38A	**Pierce - Schro**	**139.88**	**49**	P	**PKPdf**	**14 41 41.6**	**-1.1**
baz=284								
E38A	**The Farm, Brul**	**139.93**	**48**	PFAKE		14 42 00.0	+15
E38A				LR	LR			
comp=Z,2μm,21.0s								
MIAR	**Mount Ida**	**139.99**	**67**	*e*PKPdf	**PKPdf**	**14 41 43.3**	**+0.1**
MIAR				LR	LR			
comp=Z,1μm,22.0s								
MIAR	**Mount Ida**	**139.99**	**67**	P	**PKPdf**	**14 41 43.1**	**-0.1**
baz=270								
WLAR	**White Oak Lake**	**140.36**	**68**	PFAKE		14 42 00.0	+14
WLAR				LR	LR			
comp=Z,800nm,20.0s								
U40A	**Yellville**	**140.55**	**64**	P	**PKPdf**	**14 41 40.6**	**-3.6**
baz=272								
X40A	**Basin Creek Fa**	**140.60**	**67**	PFAKE		14 42 00.0	+13
X40A				LR	LR			
comp=Z,1μm,22.0s								
Z41A	**Richland Creek**	**140.61**	**69**	PFAKE		14 42 00.0	+13
Z41A				LR	LR			
comp=Z,800nm,19.0s								
ESDC	**Sonseca Array**	**140.95**	**302**	PKhKP	PKPpre	14 41 36.7		
comp=Z,1.4nm,0.6s,baz=51,slow=3.5,SNR=9.9								
ESDC				SKPbc	**SKPbc**	**14 45 20.8**	**-0.9**	
comp=Z,3.4nm,1.0s,baz=54,slow=2.5,SNR=4.7								
ESLA	**Sonseca Array**	**140.95**	**302**	PFAKE		14 42 00.0	+13
ESLA				LR	LR			
comp=Z,400nm,21.0s								
UALR	**University of**	**141.01**	**66**	*e*PKPdf	**PKPdf**	**14 41 45.4**	**+0.4**
UALR				LR	LR			
comp=Z,1μm,20.0s								
WHAR	**Wooly Hollow**	**141.04**	**65**	PFAKE		14 42 00.0	+12
WHAR				LR	LR			
comp=Z,500nm,19.0s								
OTAV	**Otavalo**	**141.04**	**126**	*e*PKPpre	**PKPdf**	**14 41 44.3**	**-2.0**
OTAV	**Otavalo**	**141.04**	**126**	*e*P	**PKiKP**	**14 41 48.7**	**-0.3**
W41B	**Gary Mavity, V**	**141.08**	**66**	*e*PKPpre	PKPpre	14 41 38.2	
W41B				*e*PKPdf	**PKPdf**	**14 41 44.9**	**-0.2**
W41B				LR	LR			
comp=Z,600nm,18.0s								
C40A	**Isle Royale Na**	**141.10**	**45**	*e*PKPpre	PKPpre	14 41 37.7		
C40A				*e*PKPdf	**PKPdf**	**14 41 43.9**	**-0.8**
C40A				LR	LR			
comp=Z,1μm,21.0s								
L40A	**Anamosa**	**141.19**	**54**	*e*PKPpre	PKPpre	14 41 37.7		
L40A				LR	LR			
comp=Z,900nm,20.0s								
G40A	**Rib Lake**	**141.20**	**49**	*e*PKPpre	PKPpre	14 41 38.1		
G40A				LR	LR			
comp=Z,800nm,20.0s								
PAB	**San Pablo**	**141.26**	**301**	PFAKE		14 42 00.0	+12
PAB				LR	LR			
comp=Z,300nm,21.0s								
TGUH	**Tegucigalpa,Un**	**141.38**	**100**	PFAKE		14 42 00.0	+11
TGUH				LR	LR			
comp=Z,500nm,18.0s								
COWI	**Conover**	**141.68**	**48**	*e*PKPpre	PKPpre	14 41 40.5		
COWI				LR	LR			
comp=Z,1μm,20.0s								
N41A	**Harden Midland**	**141.69**	**57**	PFAKE		14 42 00.0	+11
N41A				LR	LR			
comp=Z,700nm,20.0s								
CCM	**Cathedral Cave**	**141.72**	**61**	*e*PKPpre	PKPpre	14 41 40.1		
CCM				LR	LR			
comp=Z,1μm,20.0s								
JFWS	**Jewell Farm**	**141.72**	**53**	*e*PKPpre	PKPpre	14 41 40.0		
JFWS				LR	LR			
comp=Z,1μm,20.0s								
JFWS	**Jewell Farm**	**141.72**	**53**	*e*PKHKP	PKPpre	14 41 40.0		
JFWS				MLR	MLR			
comp=Z,1μm,20.0s								
JTS	**Las Juntas de**	**141.73**	**107**	PKhKP	PKPpre	14 41 40.3		
comp=Z,12nm,1.0s,baz=351,slow=3.1,SNR=5.2								
JTS	**Las Juntas de**	**141.73**	**107**	PFAKE		14 42 00.0	+10
JTS				LR	LR			
comp=Z,600nm,22.0s								
I41A	**Arkdale**	**141.73**	**51**	PFAKE		14 42 00.0	+11
I41A				LR	LR			
comp=Z,800nm,19.0s								
D41A	**Chassel**	**141.76**	**46**	*e*PKPpre	PKPpre	14 41 40.5		
D41A				LR	LR			
comp=Z,2μm,22.0s								
F41A	**Three Lakes**	**141.81**	**48**	*e*PKPpre	PKPpre	14 41 40.4		
F41A				LR	LR			
comp=Z,2μm,22.0s								
X43A	**Marvell**	**142.22**	**67**	PFAKE		14 42 00.0	+10
X43A				LR	LR			
comp=Z,900nm,22.0s								
L42A	**Oliver, Polo**	**142.33**	**54**	*e*PKPpre	PKPpre	14 41 41.2		
L42A				LR	LR			
comp=Z,1μm,20.0s								
HBAR	**Harrisburg**	**142.37**	**65**	PFAKE		14 42 00.0	+10
HBAR				LR	LR			
comp=Z,600nm,22.0s								
I42A	**Draeger Farm,**	**142.44**	**51**	*e*PKPpre	PKPpre	14 41 42.0		
I42A				LR	LR			
comp=Z,800nm,21.0s								
SLM	**Saint Louis**	**142.45**	**60**	PFAKE		14 42 00.0	+10
SLM				LR	LR			
comp=Z,1μm,20.0s								
PBMO	**Poplar Bluff**	**142.47**	**63**	*e*PKPpre	PKPpre	14 41 42.0		
PBMO				LR	LR			
comp=Z,1μm,20.0s								
H42A	**Shiocton**	**142.54**	**50**	PFAKE		14 42 00.0	+9.5
H42A				LR	LR			
comp=Z,1μm,21.0s								
H42A	**Shiocton**	**142.54**	**50**	P	**PKPdf**	**14 41 43.2**	**-4.2**
baz=286								
CLDB	**Colider**	**142.58**	**167**	*e*P	**PKPdf**	**14 41 49.2**	**+0.7**
P43A	**Skaggs, Pawnee**	**142.86**	**58**	P	**PKPdf**	**14 41 43.4**	**-4.8**
baz=279								
GNAR	**Gosnell**	**142.86**	**64**	PFAKE		14 42 00.0	+8.6
GNAR				LR	LR			
comp=Z,700nm,20.0s								
HDIL	**Hopedale**	**142.88**	**56**	PFAKE		14 42 00.0	+8.7
HDIL				LR	LR			
comp=Z,800nm,21.0s								
G43A	**Wallace**	**142.91**	**48**	*e*PKPpre	**PKPdf**	**14 41 43.2**	**-4.8**
G43A				LR	LR			
comp=Z,1μm,21.0s								
G43A	**Wallace**	**142.91**	**48**	P	**PKPdf**	**14 41 43.6**	**-4.4**
baz=288								
J43A	**Natural Harves**	**142.92**	**52**	P	**PKPdf**	**14 41 44.3**	**-3.8**
baz=284								
M43A	**Waltham Townsh**	**142.97**	**55**	P	**PKPdf**	**14 41 43.5**	**-4.7**
baz=281								
L43A	**Garden Prairie**	**142.97**	**54**	P	**PKPdf**	**14 41 44.4**	**-3.9**
baz=283								
MET	**Memphis--Engin**	**142.97**	**65**	PFAKE		14 42 00.0	+8.3
MET				LR	LR			
comp=Z,600nm,21.0s								
E43A	**Lone Tree Farm**	**143.00**	**46**	PFAKE		14 42 00.0	+8.6
E43A				LR	LR			
comp=Z,1μm,20.0s								
E43A	**Lone Tree Farm**	**143.00**	**46**	P	PKPbc	14 41 45.5	+0.5
baz=290								
MVO	**Moncorvo**	**143.03**	**305**	*e*PKPdf	**PKPdf**	**14 41 47.9**	**-0.6**
PARMO	**Parma**	**143.03**	**63**	PFAKE		14 42 00.0	+8.3
PARMO				LR	LR			
comp=Z,800nm,20.0s								
F43A	**Flat Rock, Esc**	**143.07**	**47**	P	PKPbc	14 41 45.7	+0.5
baz=289								
H43A	**Windswept, Lux**	**143.08**	**50**	*e*PKPpre	PKPab	14 41 44.8	+1.0
H43A				LR	LR			
comp=Z,1μm,21.0s								
H43A	**Windswept, Lux**	**143.08**	**50**	P	PKPbc	14 41 44.8	-0.4
baz=286								
PVMO	**Portageville**	**143.09**	**63**	PFAKE		14 42 00.0	+8.1
PVMO				LR	LR			
comp=Z,1μm,21.0s								
K43A	**Burlington**	**143.15**	**53**	*e*PKPpre	PKPbc	14 41 44.7	-0.8
K43A				LR	LR			
comp=Z,900nm,19.0s								
K43A	**Burlington**	**143.15**	**53**	P	PKPbc	14 41 45.6	+0.1
baz=284								
ESPN	**Las Esperanzas**	**143.19**	**105**	PFAKE		14 42 00.0	+7.3
ESPN				LR	LR			
comp=Z,500nm,22.0s								
S44A	**Carbondale**	**143.32**	**61**	P	PKPab	14 41 45.0	+0.1
baz=276								
SIUC	**Southern Illin**	**143.35**	**61**	*e*PKPpre	PKPbc	14 41 46.3	+0.1
SIUC				LR	LR			
comp=Z,1μm,20.0s								
HALT	**Halls**	**143.42**	**64**	PFAKE		14 42 00.0	+7.4
HALT				LR	LR			
comp=Z,700nm,20.0s								
GLAT	**Glass**	**143.43**	**64**	PFAKE		14 42 00.0	+7.4
GLAT				LR	LR			
comp=Z,1μm,20.0s								
OXF	**Oxford**	**143.43**	**66**	PFAKE		14 42 00.0	+7.4
OXF				LR	LR			
comp=Z,1μm,22.0s								
F44A	**Big Bay de Noc**	**143.52**	**47**	P	PKPbc	14 41 47.5	+1.1
baz=290								
POLO	**Lamas de Olo**	**143.55**	**305**	*e*PKPdf	**PKPdf**	**14 41 50.1**	**+0.6**
MTE	**Manteigas**	**143.55**	**303**	*e*PKPdf	PKPbc	14 41 47.7	+0.9
MTE	**Manteigas**	**143.55**	**303**	PFAKE		14 42 00.0	+7.2
MTE				LR	LR			
comp=Z,500nm,19.0s								
PCBR	**Castelo Branco**	**143.60**	**303**	*e*PKPdf	PKPbc	14 41 48.2	+1.4
PMRV	**Marv??o**	**143.60**	**302**	*e*PKPdf	PKPbc	14 41 47.9	+1.0
E44A	**Grand Marais A**	**143.62**	**46**	*e*PKPpre	PKPbc	14 41 48.1	+1.4
E44A				LR	LR			
comp=Z,1μm,22.0s								
E44A	**Grand Marais A**	**143.62**	**46**	P	PKPbc	14 41 47.7	+1.0
baz=291								
M44A	**Midewin, Midew**	**143.65**	**55**	*e*PKPpre	PKPbc	14 41 47.9	+1.0
M44A				LR	LR			
comp=Z,900nm,20.0s								
M44A	**Midewin, Midew**	**143.65**	**55**	P	PKPbc	14 41 47.3	+0.4
baz=282								
N44A	**Piper City**	**143.71**	**56**	P	PKPbc	14 41 47.9	+0.7
baz=281								
PVIS	**Viseu**	**143.75**	**304**	*e*PKPdf	PKPbc	14 41 48.3	+0.9
PGAV	**Gaveira, Arco**	**143.76**	**306**	*e*PKPdf	**PKPdf**	**14 41 49.6**	**-0.2**
UTMT	**University of**	**143.77**	**63**	*e*PKPpre	PKPbc	14 41 48.3	+0.9
T45A	**Paducah**	**143.88**	**62**	PFAKE		14 42 00.0	+6.5
T45A				LR	LR			
comp=Z,1μm,20.0s								
T45A	**Paducah**	**143.88**	**62**	P	PKPbc	14 41 48.6	+0.9
baz=276								
POPC	**Popayan, Colom**	**143.90**	**126**	*e*P	PKPab	14 41 48.1	0.0
FLOC	**Florencia**	**143.98**	**128**	*e*P	**PKPdf**	**14 41 50.1**	**-0.8**
R45A	**Skylar, Fairfi**	**144.01**	**60**	P	PKPbc	14 41 48.6	+0.5
baz=278								
Q45A	**Warren Harvey,**	**144.02**	**59**	P	PKPbc	14 41 48.4	+0.3
baz=279								
OLIL	**Olney**	**144.09**	**59**	*e*PKPdf	PKPbc	14 41 48.9	+0.5
OLIL				LR	LR			
comp=Z,1μm,21.0s								
X46A	**Booneville**	**144.11**	**66**	P	PKPbc	14 41 49.0	+0.5
baz=272								
O45A	**Potomac**	**144.12**	**57**	P	PKPbc	14 41 49.2	+0.8
baz=281								
PVAQ	**Vaqueiros**	**144.14**	**299**	*e*PKPdf	**PKPdf**	**14 41 50.0**	**-0.5**
PVAQ	**Vaqueiros**	**144.14**	**299**	*e*PKPdf	**PKPdf**	**14 41 49.9**	**-0.5**
PVAQ				LR	LR			
comp=Z,500nm,18.0s								
PBEJ	**Beja**	**144.18**	**300**	*e*PKPdf	**PKPdf**	**14 41 50.9**	**+0.4**
E45A	**Wooded Hills,**	**144.19**	**46**	P	**PKPdf**	**14 41 49.5**	**-0.7**
baz=292								
F45A	**CMU Biological**	**144.21**	**47**	P	PKPbc	14 41 48.9	+0.4
baz=290								
H45A	**Beulah**	**144.21**	**49**	P	PKPbc	14 41 48.9	+0.4
baz=288								
EVO	**Evora**	**144.22**	**300**	*e*PKPdf	PKPbc	14 41 49.8	+1.0
P45A	**Graceland, Par**	**144.24**	**58**	*e*PKPdf	**PKPab**	**14 41 48.7**	**+0.3**
P45A				LR	LR			
comp=Z,1μm,20.0s								
P45A	**Graceland, Par**	**144.24**	**58**	P	PKPbc	14 41 49.1	+0.3
baz=280								
COI	**Coimbra**	**144.24**	**303**	PFAKE		14 42 00.0	+5.9
COI				LR	LR			
comp=Z,400nm,21.0s								
W46A	**Michie**	**144.25**	**65**	P	**PKPab**	**14 41 48.8**	**+0.2**
baz=273								
I45A	**Fountain**	**144.26**	**50**	PFAKE		14 42 00.0	+5.9
I45A				LR	LR			
comp=Z,1μm,21.0s								
PMTG	**Montargil**	**144.30**	**301**	*e*PKPdf	PKPbc	14 41 50.0	+1.0
U46A	**Springville**	**144.32**	**63**	P	PKPbc	14 41 49.3	+0.2
baz=275								
PBDV	**Barranco-do-Ve**	**144.33**	**298**	*e*PKPdf	**PKPdf**	**14 41 50.8**	**-0.1**
J45A	**Montague**	**144.33**	**51**	PFAKE		14 42 00.0	+5.8
J45A				LR	LR			
comp=Z,500nm,20.0s								
G45A	**Suttons Bay**	**144.34**	**48**	*e*PKPdf	PKPbc	14 41 49.1	+0.2
G45A				LR	LR			
comp=Z,1μm,21.0s								
G45A	**Suttons Bay**	**144.34**	**48**	P	PKPbc	14 41 49.5	+0.6
baz=289								
PTOM	**Tomar**	**144.35**	**302**	*e*PKPdf	**PKPdf**	**14 41 50.5**	**-0.3**
PCVE	**Castro Verde**	**144.36**	**299**	*e*PKPdf	PKPbc	14 41 50.2	+0.9
V46A	**Holladay**	**144.41**	**64**	P	PKPbc	14 41 49.6	+0.1
baz=274								
T46A	**Princeton**	**144.47**	**62**	P	PKPbc	14 41 50.4	+0.8
baz=276								
MESJ	**Messejana**	**144.48**	**299**	*e*PKPdf	PKPbc	14 41 50.4	+0.8
MESJ				AMS	AMS	16 00 23.2	
comp=Z,318nm,23.2s								
MESJ	**Messejana**	**144.48**	**299**	*e*PKIKP	PKPbc	14 41 50.4	+0.8
PLAL	**Pickwick Lake**	**144.50**	**66**	*e*PKPdf	**PKPab**	**14 41 48.8**	**-0.7**
PLAL				LR	LR			
comp=Z,600nm,21.0s								
S46A	**Don Dixon Farm**	**144.54**	**61**	P	**PKPab**	**14 41 48.9**	**-0.6**
baz=277								
USIN	**University of**	**144.54**	**60**	*e*PKPdf	**PKPab**	**14 41 49.7**	**+0.1**
USIN				LR	LR			
comp=Z,1μm,22.0s								
SFIN	**Lafayette**	**144.56**	**56**	*e*PKPdf	**PKPab**	**14 41 49.5**	**-0.1**
SFIN				LR	LR			
comp=Z,800nm,19.0s								
SFIN	**Lafayette**	**144.56**	**56**	P	PKPbc	14 41 50.0	+0.3
baz=282								
Q46A	**CEJHS Indians,**	**144.62**	**59**	P	PKPbc	14 41 50.6	+0.6
baz=280								
WVT	**Waverly**	**144.62**	**64**	*e*PKPdf	**PKPab**	**14 41 49.3**	**-0.7**
WVT				LR	LR			
comp=Z,1μm,20.0s								
WVT	**Waverly**	**144.62**	**64**	*e*PKIKP	**PKPab**	**14 41 49.3**	**-0.7**
WVT				MLR	MLR			
comp=Z,1μm,20.0s								
WVT	**Waverly**	**144.62**	**64**	P	**PKPab**	**14 41 49.5**	**-0.4**
baz=275								
R46A	**Gibon Southern**	**144.62**	**60**	P	PKPbc	14 41 50.6	+0.5
baz=278								
P46A	**Rosedale**	**144.63**	**58**	P	PKPbc	14 41 50.7	+0.7
baz=280								
MARP	**Paez Belalcaza**	**144.63**	**126**	*e*P	**PKPdf**	**14 41 52.8**	**+0.4**
F46A	**Macinaw City C**	**144.67**	**46**	P	PKPbc	14 41 50.5	+0.5
baz=291								
PNCL	**Nicolau / Gran**	**144.68**	**300**	*e*PKPdf	**PKPdf**	**14 41 52.1**	**+0.7**
D46A	**Sault St. Mari**	**144.71**	**44**	P	PKPbc	14 41 50.6	+0.6
baz=294								
X47A	**Russelville**	**144.71**	**66**	P	**PKPab**	**14 41 50.5**	**+0.2**
baz=273								
N46A	**Monticello**	**144.72**	**55**	P	PKPbc	14 41 50.5	+0.2
baz=283								
E46A	**Sault Ste Mari**	**144.75**	**45**	*e*PKPdf	**PKPab**	**14 41 49.9**	**-0.2**
E46A				LR	LR			
comp=Z,1μm,22.0s								
E46A	**Sault Ste Mari**	**144.75**	**45**	P	PKPbc	14 41 50.6	+0.4
baz=292								
G46A	**Petoskey**	**144.77**	**47**	P	**PKPab**	**14 41 50.2**	**0.0**
baz=290								
L46A	**Eue Claire**	**144.78**	**53**	*e*PKPdf	PKPbc	14 41 50.6	+0.2
L46A				LR	LR			
comp=Z,1μm,18.0s								
L46A	**Eue Claire**	**144.78**	**53**	P	PKPbc	14 41 51.0	+0.5
baz=285								
IVI	**Ivigtut**	**144.79**	**0**	*e*PKPdf	**PKPab**	**14 41 49.8**	**+0.1**
IVI				LR	LR			
comp=Z,500nm,19.0s								
NRS	**Narsarsuaq**	**144.79**	**358**	*e*PKPdf	**PKPab**	**14 41 49.8**	**0.0**
NRS				LR	LR			
comp=Z,600nm,22.0s								
NRS	**Narsarsuaq**	**144.79**	**358**	*e*PKIKP	**PKPab**	**14 41 49.8**	**0.0**
NRS				MLR	MLR			
comp=Z,600nm,22.0s								
H46A	**Fife Lake**	**144.81**	**49**	P	**PKPab**	**14 41 50.5**	**+0.1**
baz=289								
I46A	**Reed City**	**144.83**	**50**	P	**PKPab**	**14 41 50.5**	**0.0**
baz=288								
J46A	**Howard City**	**144.87**	**51**	P	PKPbc	14 41 51.1	+0.4
baz=287								
W47A	**Westpoint**	**144.88**	**65**	P	**PKPab**	**14 41 50.3**	**-0.6**
baz=274								
M46A	**Old House Fiel**	**144.89**	**54**	*e*PKPdf	**PKPab**	**14 41 50.9**	**+0.1**
M46A				LR	LR			
comp=Z,900nm,20.0s								
M46A	**Old House Fiel**	**144.89**	**54**	P	**PKPdf**	**14 41 51.5**	**-0.1**
baz=284								
MORF	**Marmelete**	**144.89**	**299**	*e*PKPdf	**PKPab**	**14 41 51.1**	**+0.1**
MORF				AMS	AMS	15 53 57.5	
comp=N,409nm,19.3s								
MORF	**Marmelete**	**144.89**	**299**	*e*PKPdf	**PKPdf**	**14 41 52.2**	**+0.3**
MORF	**Marmelete**	**144.89**	**299**	*e*PKIKP	**PKPab**	**14 41 51.1**	**+0.1**
V47A	**Nunnelly**	**144.90**	**64**	P	**PKPab**	**14 41 50.2**	**-0.8**
baz=275								
BETC	**Betania**	**144.90**	**127**	*e*P	**PKPab**	**14 41 51.5**	**-0.2**
PTEO	**Sao Teotonio**	**144.91**	**299**	*e*PKPdf	**PKPdf**	**14 41 52.8**	**+1.0**
K46A	**Dorr**	**144.97**	**52**	P	**PKPab**	**14 41 51.1**	**+0.1**
baz=286								
148A	**Greensboro**	**145.01**	**70**	P	**PKPdf**	**14 41 52.3**	**+0.1**
baz=270								
U47A	**Clarksville**	**145.02**	**63**	P	**PKPbc**	**14 41 51.0**	**-0.4**
baz=276								
PFVI	**Vila Bisbo**	**145.05**	**298**	*e*PKPdf	**PKPdf**	**14 41 53.2**	**+1.1**
PFVI	**Vila Bisbo**	**145.05**	**298**	*e*PKPbc	**PKPdf**	**14 41 52.3**	**+0.3**
PFVI				LR	LR			
comp=Z,500nm,20.0s								
LIS	**Lisbon**	**145.07**	**301**	*e*PKPdf	**PKPbc**	**14 41 51.5**	**+0.1**
LIS				AMS	AMS	15 53 26.0	
comp=N,734nm,21.1s								
LIS	**Lisbon**	**145.07**	**301**	*e*PKIKP	**PKPbc**	**14 41 51.5**	**+0.1**
GLMI	**Grayling**	**145.10**	**48**	*e*PKPbc	**PKPdf**	**14 41 51.9**	**0.0**
GLMI				LR	LR			
comp=Z,1μm,21.0s								
GLMI	**Grayling**	**145.10**	**48**	P	**PKPdf**	**14 41 52.3**	**+0.3**
baz=290								
T47A	**Sharon Grove**	**145.11**	**62**	*e*PKPbc	**PKPbc**	**14 41 51.5**	**-0.2**
T47A				LR	LR			
comp=Z,800nm,19.0s								
T47A	**Sharon Grove**	**145.11**	**62**	P	**PKPbc**	**14 41 51.5**	**-0.2**
baz=277								
YOTC	**Yotoco, Valle**	**145.11**	**124**	*e*P	**PKPab**	**14 41 52.8**	**+0.3**
PMAFR	**Mafra**	**145.13**	**301**	*e*PKPdf	**PKPdf**	**14 41 53.3**	**+1.1**
NBLI	**Livramento-PB**	**145.16**	**199**	*e*P	**PKPdf**	**14 41 54.6**	**+1.5**
S47A	**Hartford**	**145.21**	**61**	P	**PKPbc**	**14 41 51.9**	**0.0**
baz=278								
D47A	**Chapleau**	**145.23**	**44**	P	**PKPdf**	**14 41 52.4**	**+0.4**
baz=295								
BLO	**Bloomington**	**145.23**	**58**	*e*PKPbc	**PKPbc**	**14 41 51.4**	**-0.6**
BLO				LR	LR			
comp=Z,2μm,21.0s								
BLO	**Bloomington**	**145.23**	**58**	*e*PKP2	**PKPbc**	**14 41 51.4**	**-0.6**
BLO				MLR	MLR			
comp=Z,2μm,21.0s								
O47A	**Sheridan**	**145.28**	**56**	P	**PKPbc**	**14 41 52.3**	**+0.2**
baz=282								
Y48A	**Jasper**	**145.31**	**67**	P	**PKPbc**	**14 41 52.1**	**-0.3**
baz=272								
349A	**Repton**	**145.32**	**72**	P	**PKPdf**	**14 41 53.4**	**+0.7**
baz=269								
Q47A	**Bedord North L**	**145.35**	**58**	P	**PKPbc**	**14 41 52.3**	**-0.1**
baz=280								
P47A	**Martinsville**	**145.36**	**58**	P	**PKPdf**	**14 41 52.7**	**+0.1**
baz=281								
E47A	**Iron Bridge**	**145.37**	**45**	P	**PKPab**	**14 41 52.8**	**+0.5**
baz=294								
R47A	**Wooly Knot Far**	**145.38**	**60**	P	**PKPbc**	**14 41 52.3**	**-0.2**
baz=279								
X48A	**Hartselle**	**145.38**	**66**	*e*PKPbc	**PKPbc**	**14 41 51.4**	**-1.2**
X48A				LR	LR			
comp=Z,800nm,20.0s								
X48A	**Hartselle**	**145.38**	**66**	P	**PKPbc**	**14 41 51.7**	**-1.0**
baz=273								
249A	**Camden**	**145.39**	**71**	P	**PKPab**	**14 41 53.1**	**+0.3**
baz=270								
W48A	**Pulaski**	**145.43**	**65**	P	**PKPbc**	**14 41 52.3**	**-0.5**
baz=274								
M47A	**Cromwell**	**145.43**	**54**	P	**PKPab**	**14 41 53.1**	**+0.3**
baz=284								
BRAL	**Brewton**	**145.44**	**72**	P	**PKPbc**	**14 41 52.6**	**-0.3**
baz=268								
I47A	**Gladwin**	**145.45**	**49**	*e*PKPdf	**PKPdf**	**14 41 52.5**	**0.0**
I47A				LR	LR			
comp=Z,2μm,22.0s								
I47A	**Gladwin**	**145.45**	**49**	P	**PKPab**	**14 41 52.9**	**+0.2**
baz=289								
H47A	**Mio**	**145.46**	**48**	P	**PKPab**	**14 41 53.3**	**+0.6**
baz=290								
V48A	**Smith Brothers**	**145.47**	**64**	*e*PKPdf	**PKPdf**	**14 41 52.0**	**-0.8**
V48A				LR	LR			
comp=Z,800nm,20.0s								
V48A	**

Y49A	Blount Mountai	145.94	67	ePKPdf	PKPdf	14 41 53.4	-0.3	
Y49A				LR	LR			
	comp=Z,700nm,21.0s							
Y49A	Blount Mountai	145.94	67	P	PKPbc	14 41 54.5	0.0	
	baz=273							
D48A	Paudash Townsh	145.97	43	P	PKPdf	14 41 53.7	+0.3	
	baz=296							
X49A	Woodville	145.97	66	P	PKPdf	14 41 54.0	+0.3	
	baz=274							
W49A	Belvidere	145.98	65	P	PKPdf	14 41 53.5	-0.3	
	baz=275							
N48A	Decatur	145.99	55	P	PKPbc	14 41 54.3	0.0	
	baz=284							
H48A	Harrisville	146.01	48	ePKPdf	PKPdf	14 41 53.7	+0.2	
H48A				LR	LR			
	comp=Z,1μm,20.0s							
H48A	Harrisville	146.01	48	P	PKPdf	14 41 53.8	+0.4	
	baz=291							
P48A	Milroy	146.01	57	P	PKPdf	14 41 54.1	+0.5	
	baz=282							
F48A	Evansville	146.04	45	P	PKPbc	14 41 54.1	-0.2	
	baz=294							
O48A	Farmland	146.04	56	P	PKPbc	14 41 54.3	-0.2	
	baz=283							
E48A	Lockeyer	146.05	44	P	PKPbc	14 41 54.2	-0.1	
	baz=295							
350A	Dozier	146.05	72	P	PKPbc	14 41 54.6	-0.2	
	baz=269							
M48A	Edgerton	146.06	54	ePKPdf	PKPab	14 41 55.0	-0.1	
M48A				LR	LR			
	comp=Z,1μm,21.0s							
M48A	Edgerton	146.06	54	P	PKPbc	14 41 54.8	+0.2	
	baz=285							
K48A	Perry	146.10	51	P	PKPbc	14 41 54.8	+0.1	
	baz=288							
250A	Grady	146.11	71	ePKPdf	PKPbc	14 41 55.3	+0.3	
250A				LR	LR			
	comp=Z,500nm,19.0s							
250A	Grady	146.11	71	P	PKPab	14 41 55.5	-0.1	
	baz=270							
L48A	N Adams	146.13	53	P	PKPbc	14 41 54.8	+0.1	
	baz=286							
J48A	Bridge Port	146.18	50	ePKPdf	PKPdf	14 41 54.4	+0.6	
J48A				LR	LR			
	comp=Z,1μm,20.0s							
J48A	Bridge Port	146.18	50	P	PKPbc	14 41 54.9	+0.1	
	baz=289							
D49A	Beulah Townshi	146.20	42	P	PKPdf	14 41 54.3	+0.5	
	baz=297							
V49A	McMinnville	146.21	64	P	PKPdf	14 41 54.1	0.0	
	baz=276							
U49A	Red Boiling Sp	146.22	63	P	PKPdf	14 41 54.3	+0.2	
	baz=277							
SWET	Sewanee	146.24	65	ePKPdf	PKPdf	14 41 54.7	+0.4	
SWET				LR	LR			
	comp=Z,700nm,20.0s							
RCBR	Riachuelo	146.27	202	PFAKE		14 42 10.0	+11	
RCBR				LR	LR			
	comp=Z,900nm,20.0s							
RCBR	Riachuelo	146.27	202	eP	PKPab	14 41 57.5	+0.9	
PRVC	Isla de Provid	146.27	105	eP	PKPab	14 41 57.5	+0.8	
150A	Eclectic	146.31	70	P	PKPbc	14 41 55.2	-0.3	
	baz=271							
T49A	Edmonton	146.34	62	ePKPdf	PKPbc	14 41 55.1	-0.4	
T49A				LR	LR			
	comp=Z,1μm,18.0s							
T49A	Edmonton	146.34	62	P	PKPbc	14 41 55.2	-0.4	
	baz=278							
Z50A	Ashland	146.38	68	ePKPdf	PKPdf	14 41 54.7	+0.3	
Z50A				LR	LR			
	comp=Z,800nm,21.0s							
Z50A	Ashland	146.38	68	P	PKPdf	14 41 55.0	+0.6	
	baz=272							
S49A	Springfield	146.43	60	P	PKPdf	14 41 55.0	+0.6	
	baz=279							
R49A	Shelbyville	146.43	59	P	PKPbc	14 41 55.7	-0.1	
	baz=280							
F49A	Sandfield	146.43	45	P	PKPdf	14 41 54.9	+0.8	
	baz=294							
Y50A	Piedmont	146.50	67	P	PKPbc	14 41 55.9	-0.1	
	baz=273							
Q49A	Aurora	146.50	58	P	PKPbc	14 41 55.9	0.0	
	baz=282							
P49A	Miami Univ. Ec	146.53	57	P	PKPbc	14 41 55.8	-0.2	
	baz=282							
X50B	Fort Payne	146.53	66	P	PKPdf	14 41 55.5	+0.8	
	baz=274							
L49A	Milan	146.56	52	P	PKPbc	14 41 56.5	+0.5	
	baz=287							
K49A	Clarkson	146.57	51	P	PKPbc	14 41 56.3	+0.3	
	baz=288							
AAM	Ann Arbor	146.58	52	ePKPdf	PKPdf	14 41 54.7	+0.2	
AAM				LR	LR			
	comp=Z,800nm,22.0s							
AAM	Ann Arbor	146.58	52	ePKIKP	PKPdf	14 41 54.7	+0.2	
AAM				MLR	MLR			
	comp=Z,800nm,22.0s							
AAM	Ann Arbor	146.58	52	P	PKPab	14 41 56.8	-0.3	
	baz=288							
N49A	Columbus Grove	146.59	54	ePKPdf	PKPbc	14 41 55.6	-0.6	
N49A				LR	LR			
	comp=Z,1μm,22.0s							
N49A	Columbus Grove	146.59	54	P	PKPbc	14 41 56.0	-0.1	
	baz=285							
M49A	Liberty Center	146.60	53	P	PKPbc	14 41 56.6	+0.5	
	baz=286							
J49A	Marlette	146.60	50	P	PKPbc	14 41 55.6	-0.5	
	baz=290							
I49A	Point Hope	146.62	49	ePKPdf	PKPbc	14 41 56.2	+0.1	
I49A				LR	LR			
	comp=Z,1μm,22.0s							
I49A	Point Hope	146.62	49	P	PKPbc	14 41 55.6	-0.5	
	baz=291							
GUY2C	Guyana, Caldas	146.66	124	eP	PKPab	14 41 58.8	0.0	
O49A	Covington	146.66	56	ePKPdf	PKPbc	14 41 55.8	-0.6	
O49A				LR	LR			
	comp=Z,1μm,22.0s							
O49A	Covington	146.66	56	P	PKPbc	14 41 56.1	-0.2	
	baz=284							
NBPA	Parau_RN	146.73	200	eP	PKPab	14 41 58.1	-0.3	
W50A	Signal Mountai	146.75	65	ePKPdf	PKPdf	14 41 56.0	+0.9	
W50A				LR	LR			
	comp=Z,700nm,20.0s							
W50A	Signal Mountai	146.75	65	P	PKPdf	14 41 56.0	+0.9	
	baz=276							
251A	Midway	146.84	71	P	PKPbc	14 41 56.8	-0.3	
	baz=271							
V50A	Pikeville	146.87	64	P	PKPdf	14 41 56.1	+0.9	
	baz=276							
T50A	Nancy	146.90	62	P	PKPdf	14 41 56.1	+0.9	
	baz=279							
151A	Opelika	146.90	70	P	PKPbc	14 41 56.6	-0.7	
	baz=271							
E50A	Wahnapitae	146.97	43	P	PKPbc	14 41 56.2	-0.8	
	baz=297							
U50A	Jamestown	146.98	63	P	PKPdf	14 41 56.2	+0.8	
	baz=278							
TOBO	Tobermory, Bru	146.99	46	P	PKPbc	14 41 56.5	-0.6	
	baz=294							
Z51A	Franklin	147.00	68	P	PKPbc	14 41 56.8	-0.8	
	baz=273							
452A	Marianna	147.03	73	P	PKPbc	14 41 57.7	0.0	
	baz=269							
MATQ	Matagami	147.03	36	P	PKPdf	14 41 56.1	+1.1	
	baz=305							
Y51A	Rockmart	147.06	67	P	PKPdf	14 41 56.7	+1.1	
	baz=274							
R50A	Paris	147.08	59	P	PKPdf	14 41 56.0	+0.5	
	baz=281							
S50A	Richmond	147.14	60	P	PKPdf	14 41 56.6	+1.0	
	baz=280							
DBBC	Dabeiba	147.15	120	eP	PKPbc	14 41 58.8	+0.2	
K50A	Casco	147.16	50	PFAKE		14 42 10.0	+10	
K50A				LR	LR			
	comp=Z,1μm,20.0s							
HELC	Santa Helena	147.16	122	eP	PKPdf	14 41 52.8	-4.0	
X51A	Calhoun	147.18	66	ePKPdf	PKPdf	14 41 55.6	-0.2	
X51A				LR	LR			
	comp=Z,700nm,20.0s							
X51A	Calhoun	147.18	66	P	PKPbc	14 41 57.5	-0.5	
	baz=275							
ROSC	El Rosal	147.18	125	PKPbc	PKPbc	14 41 59.4	+0.4	
	comp=Z,32nm,0.7s,baz=158,slow=3.5,SNR=10							
ROSC	El Rosal	147.18	125	ePKPdf	PKPdf	14 41 55.2	-1.7	
ROSC	El Rosal	147.18	125	eP	PKPab	14 42 00.1	-0.6	
W51A	Cleveland	147.20	65	P	PKPbc	14 41 57.8	-0.3	
	baz=276							
P50A	Jamestown	147.20	57	P	PKPbc	14 41 57.1	-0.8	
	baz=283							
O50A	Cable	147.21	56	P	PKPbc	14 41 57.4	-0.5	
	baz=284							
Q50A	Georgetown	147.24	58	P	PKPbc	14 41 57.6	-0.5	
	baz=282							
NORC	Norcasia	147.25	124	eP	PKPbc	14 41 58.1	-0.7	
352A	Blakely	147.26	72	ePKPdf	PKPbc	14 41 58.9	+0.6	
352A				LR	LR			
	comp=Z,700nm,22.0s							
352A	Blakely	147.26	72	P	PKPbc	14 41 58.7	+0.4	
	baz=270							
L50A	Kingsville	147.26	52	P	PKPbc	14 41 57.5	-0.5	
	baz=288							
M50A	Fremont	147.29	53	ePKPdf	PKPbc	14 41 58.5	+0.4	
M50A				LR	LR			
	comp=Z,1μm,20.0s							
M50A	Fremont	147.29	53	P	PKPbc	14 41 58.6	+0.5	
	baz=287							
CPCT	Cooper Cave	147.36	64	ePKPdf	PKPbc	14 41 57.9	-0.6	
CPCT				LR	LR			
	comp=Z,900nm,21.0s							
BASO	Ashfield	147.37	48	P	PKPbc	14 41 58.4	+0.2	
	baz=292							
N50A	Nevada	147.39	54	P	PKPbc	14 41 58.5	+0.1	
	baz=286							
152A	Waverly Hall	147.41	69	ePKPdf	PKPbc	14 41 58.5	-0.2	
152A				LR	LR			
	comp=Z,700nm,22.0s							
152A	Waverly Hall	147.41	69	P	PKPbc	14 41 58.8	+0.1	
	baz=272							
BRCO	Bruce Peninsul	147.43	47	P	PKPbc	14 41 59.1	+0.7	
	baz=293							
BMRO	Meriville Lake	147.44	47	P	PKPbc	14 41 58.8	+0.4	
	baz=294							
V51A	Loudon	147.46	64	ePKPdf	PKPbc	14 41 58.3	-0.4	
V51A				LR	LR			
	comp=Z,800nm,20.0s							
V51A	Loudon	147.46	64	P	PKPbc	14 41 58.6	-0.1	
	baz=277							
CHIC	Chingaza	147.47	126	eP	PKPdf	14 41 58.8	+1.4	
D51A	Lot 18 Range I	147.48	41	P	PKPbc	14 41 58.6	+0.2	
	baz=299							
T51A	Gray	147.62	61	P	PKPbc	14 41 58.1	-1.0	
	baz=279							
Z52A	Williamson	147.64	68	P	PKPbc	14 41 59.0	-0.3	
	baz=273							
U51A	La Follette	147.65	62	P	PKPbc	14 41 58.7	-0.6	
	baz=278							
R51A	Hillsboro	147.65	59	P	PKPbc	14 41 58.7	-0.5	
	baz=282							
ACSO	Alum Creek Sta	147.66	55	ePKPdf	PKPdf	14 41 56.1	-0.3	
ACSO				LR	LR			
	comp=Z,900nm,20.0s							
ACSO	Alum Creek Sta	147.66	55	P	PKPbc	14 41 59.1	0.0	
	baz=285							
E51A	G1948 Merrick	147.68	42	P	PKPbc	14 41 59.0	0.0	
	baz=298							
Q51A	Peebles	147.68	57	PFAKE		14 42 10.0	+8.5	
Q51A				LR	LR			
	comp=Z,1μm,20.0s							
Q51A	Peebles	147.68	57	P	PKPbc	14 41 59.2	0.0	
	baz=283							
BWLO	Walkerton	147.68	47	P	PKPbc	14 41 59.4	+0.3	
	baz=293							
F51A	Arnstein	147.70	44	P	PKPbc	14 41 59.2	+0.1	
	baz=297							
KLBO	Killbear Provi	147.77	45	P	PKPbc	14 41 59.3	0.0	
	baz=296							
S51A	Beattyville	147.77	60	ePKPdf	PKPdf	14 41 56.8	+0.1	
S51A				LR	LR			
	comp=Z,1μm,19.0s							
S51A	Beattyville	147.77	60	P	PKPbc	14 41 58.8	-0.8	
	baz=281							
453A	Whigham	147.78	73	ePKPdf	PKPbc	14 41 59.3	-0.3	
453A				LR	LR			
	comp=Z,700nm,19.0s							
453A	Whigham	147.78	73	P	PKPbc	14 41 59.4	-0.3	
	baz=269							
P51A	Williamsport	147.79	57	ePKPdf	PKPbc	14 41 59.9	+0.4	
P51A				LR	LR			
	comp=Z,1μm,22.0s							
P51A	Williamsport	147.79	57	P	PKPbc	14 41 59.5	0.0	
	baz=284							
LSQQ	Lebel-sur-Quev	147.79	37	P	PKPbc	14 41 59.0	-0.2	
	baz=305							
353A	Camilla	147.87	72	P	PKPbc	14 41 59.5	-0.5	
	baz=270							
I51A	Listowel	147.88	48	P	PKPbc	14 41 59.7	+0.1	
	baz=293							
W52A	Murphy	147.89	65	ePKPdf	PKPdf	14 41 57.1	+0.1	
W52A				LR	LR			
	comp=Z,700nm,20.0s							
W52A	Murphy	147.89	65	P	PKPbc	14 41 58.8	-1.2	
	baz=276							
Y52A	Lilburn	147.89	67	ePKPdf	PKPbc	14 41 58.7	-1.3	
Y52A				LR	LR			
	comp=Z,700nm,22.0s							
Y52A	Lilburn	147.89	67	P	PKPbc	14 41 59.1	-0.9	
	baz=274							
N51A	Ashland	147.91	54	ePKPdf	PKPdf	14 41 56.9	+0.1	
N51A				LR	LR			
	comp=Z,1μm,22.0s							
N51A	Ashland	147.91	54	P	PKPbc	14 41 59.7	-0.1	
	baz=287							
M51A	Elyria	147.93	53	P	PKPbc	14 41 59.8	-0.1	
	baz=288							
253A	Americus	147.93	71	ePKPdf	PKPdf	14 41 56.9	-0.2	
253A				LR	LR			
	comp=Z,700nm,19.0s							
253A	Americus	147.93	71	P	PKPbc	14 41 59.9	-0.2	
	baz=271							
K51A	Iona Station	147.95	50	P	PKPbc	14 41 59.8	0.0	
	baz=290							
O51A	Pataskala	147.96	55	P	PKPbc	14 42 00.1	+0.1	
	baz=285							
X52A	Dahlonega	147.97	66	P	PKPdf	14 41 58.7	+1.6	
	baz=276							
TZTN	Tazewell	148.00	62	ePKPdf	PKPdf	14 41 57.2	+0.1	
TZTN				LR	LR			
	comp=Z,1μm,20.0s							
TZTN	Tazewell	148.00	62	P	PKPbc	14 41 58.9	-1.3	
	baz=279							
SCHQ	Schefferville	148.02	21	PKPbc	PKPbc	14 42 00.1	+0.4	
	comp=Z,46nm,0.7s,baz=11,slow=2.2,SNR=23							
SCHQ	Schefferville	148.02	21	ePKPdf	PKPdf	14 41 57.0	+0.4	
SCHQ				LR	LR			
	comp=Z,900nm,20.0s							
V52A	Sevierville	148.06	63	ePKPdf	PKPdf	14 41 57.5	+0.3	
V52A				LR	LR			
	comp=Z,800nm,20.0s							
V52A	Sevierville	148.06	63	P	PKPdf	14 41 58.5	+1.3	
	baz=278							
D52A	ZEK Kipawa Sen	148.11	41	P	PKPbc	14 41 59.7	-0.4	
	baz=300							
F52A	Sundridge	148.13	44	P	PKPbc	14 41 59.9	-0.3	
	baz=298							
153A	Fort Valley	148.16	69	P	PKPbc	14 42 00.8	+0.1	
	baz=272							
U52A	Thorn Hill	148.16	62	P	PKPbc	14 42 00.5	-0.1	
	baz=279							
S52A	Salyersville	148.17	60	P	PKPbc	14 42 00.5	-0.1	
	baz=281							
PTBC	PUERTO BERRIO	148.20	123	eP	PKPdf	14 41 58.1	0.0	
BUKO	Buck Lake	148.24	44	P	PKPbc	14 42 00.2	-0.3	
	baz=297							
H52A	Wyevale	148.28	46	P	PKPbc	14 42 00.5	-0.1	
	baz=295							
Y53A	Monroe	148.29	67	P	PKPbc	14 42 00.8	-0.2	
	baz=274							
E52A	Mattawa	148.30	42	P	PKPbc	14 42 00.8	+0.1	
	baz=299							
554A	Perry	148.31	74	P	PKPbc	14 42 00.8	-0.3	
	baz=268							
I52A	Shelburne	148.34	47	P	PKPbc	14 42 00.8	0.0	
	baz=294							
Z53A	Monticello	148.34	68	P	PKPbc	14 42 00.7	-0.5	
	baz=274							
T52A	Hallie	148.35	61	ePKPdf	PKPdf	14 41 57.5	-0.1	
T52A				LR	LR			
	comp=Z,2μm,22.0s							
T52A	Hallie	148.35	61	P	PKPbc	14 42 00.8	-0.3	
	baz=280							
R52A	Catlettsburg	148.37	58	P	PKPbc	14 42 00.9	-0.2	
	baz=282							
454A	Quitman	148.37	73	P	PKPbc	14 42 01.6	+0.3	
	baz=269							
TIGA	Tifton	148.40	72	ePKPdf	PKPbc	14 42 00.5	-0.9	
TIGA	Tifton	148.40	72	P	PKPbc	14 42 01.3	0.0	
	baz=271							
GOGA	Godfrey	148.42	68	ePKPdf	PKPbc	14 42 01.1	-0.2	
GOGA				LR	LR			
	comp=Z,600nm,20.0s							
GOGA	Godfrey	148.42	68	ePKP2	PKPbc	14 42 01.1	-0.2	
GOGA				MLR	MLR			
	comp=Z,600nm,20.0s							
GOGA	Godfrey	148.42	68	P	PKPbc	14 42 01.2	-0.2	
	baz=274							
N52A	McGinn's Farm,	148.44	54	P	PKPbc	14 42 01.1	-0.1	
	baz=287							
P52A	Corning	148.44	56	P	PKPbc	14 42 01.2	0.0	
	baz=285							
M52A	Chesterland	148.45	52	ePKPdf	PKPbc	14 42 01.1	-0.2	
M52A				LR	LR			
	comp=Z,2μm,22.0s							
M52A	Chesterland	148.45	52	P	PKPbc	14 42 01.0	-0.2	
	baz=289							
J52A	Paris	148.46	49	P	PKPbc	14 42 01.2	0.0	
	baz=292							
X53A	Estanollee	148.46	66	P	PKPbc	14 42 01.4	0.0	
	baz=276							
K52A	Tillsonburg	148.47	50	P	PKPbc	14 42 01.3	+0.1	
	baz=291							
D53A	Lac Vacive, Po	148.47	40	ePKPdf	PKPbc	14 42 00.4	-0.7	
D53A				LR	LR			
	comp=Z,1μm,20.0s							
D53A	Lac Vacive, Po	148.47	40	P	PKPbc	14 42 00.8	-0.3	
	baz=301							
W53A	Cullowhee	148.50	65	P	PKPbc	14 42 01.8	+0.1	
	baz=277							
Q52A	Bidwell	148.51	57	P	PKPbc	14 42 01.6	+0.2	
	baz=284							
O52A	Adamsville	148.53	55	ePKPdf	PKPbc	14 42 01.4	-0.1	
O52A				LR	LR			
	comp=Z,900nm,20.0s							
O52A	Adamsville	148.53	55	P	PKPbc	14 42 01.5	0.0	
	baz=286							
ACTO	Acton	148.60	48	P	PKPbc	14 42 01.6	+0.1	
	baz=293							
CHGQ	Chibougamau	148.62	33	P	PKPbc	14 42 01.2	-0.1	
	baz=310							
254A	Abbeville	148.64	71	P	PKPbc	14 42 02.0	0.0	
	baz=272							
655A	Horseshoe Beac	148.67	75	P	PKPbc	14 42 02.5	+0.4	
	baz=268							
SADO	Sadowa	148.71	45	PKPbc	PKPbc	14 42 01.5	-0.2	
	comp=Z,46nm,0.8s,baz=236,slow=0.9,SNR=13							
SADO	Sadowa	148.71	45	ePKPdf	PKPdf	14 41 58.0	0.0	
SADO				ePKPbc	PKPbc	14 42 01.9	+0.1	
V53A	Saluda	148.72	64	ePKPdf	PKPdf	14 41 58.0	-0.3	
V53A				ePKPbc	PKPbc	14 42 02.2	+0.1	
V53A				LR	LR			
	comp=Z,800nm,20.0s							
V53A	Saluda	148.72	64	P	PKPbc	14 42 02.7	+0.5	
	baz=278							
T53A	Wise	148.72	61	P	PKPbc	14 42 02.7	+0.5	
	baz=280							
154A	Montrose	148.77	69	ePKPdf	PKPbc	14 42 02.1	-0.2	
154A				LR	LR			
	comp=Z,800nm,19.0s							
154A	Montrose	148.77	69	P	PKPbc	14 42 02.5	+0.2	
	baz=273							
RUSC	La Rusia	148.79	125	eP	PKPbc	14 42 04.1	+0.6	
U53A	Fall Branch	148.80	62	P	PKPbc	14 42 02.4	+0.1	
	baz=279							
I53A	Kortright Cn E	148.82	47	P	PKPbc	14 42 02.6	+0.6	
	baz=294							
ALGO	Algonquin Park	148.83	42	P	PKPbc	14 42 02.0	0.0	
	baz=299							
E53A	Dumoine, Ponti	148.85	42	P	PKPbc	14 42 02.5	+0.4	
	baz=300							
G53A	Haliburton	148.88	44	P	PKPbc	14 42 02.3	+0.1	
	baz=297							
455A	Stateville	148.89	73	P	PKPbc	14 42 02.8	+0.2	
	baz=270							
R53A	Hurricane	148.90	58	ePKPdf	PKPbc	14 42 02.3	-0.2	
R53A				LR	LR			
	comp=Z,2μm,21.0s							
R53A	Hurricane	148.90	58	P	PKPbc	14 42 02.2	-0.3	
	baz=283							
S53A	Williamson	148.91	60	P	PKPbc	14 42 02.6	+0.1	
	baz=282							
YOPC	Yopal, Colombi	148.91	127	eP	PKPbc	14 42 03.5	+0.1	
TYNO	Tyneside	148.93	49	P	PKPbc	14 42 02.5	+0.1	
	baz=293							
555A	McAlpin	148.93	74	epPKPdf	PKPbc	14 42 03.2	+0.4	
555A				LR	LR			
	comp=Z,600nm,19.0s							
555A	McAlpin	148.93	74	P	PKPbc	14 42 03.2	+0.4	
	baz=269							
O53A	New Philadelph	148.95	54	P	PKPbc	14 42 02.5	0.0	
	baz=287							
Z54A	Sparta	148.96	68	P	PKPbc	14 42 02.2	-0.5	
	baz=274							
M53A	Wt Miller and	148.97	52	P	PKPbc	14 42 02.2	-0.3	
	baz=289							
Y54A	Tignall	149.03	67	P	PKPbc	14 42 03.2	+0.3	
	baz=275							
355A	Pearson	149.03	72	P	PKPbc	14 42 02.9	-0.1	
	baz=271							
D54A	Lac Fusel, La	149.04	40	P	PKPbc	14 42 01.9	-0.7	
	baz=303							
P53A	Whipple	149.04	56	ePKPdf	PKPdf	14 41 58.5	-0.2	
P53A				ePKPbc	PKPbc	14 42 03.1	+0.4	
P53A				LR	LR			
	comp=Z,1μm,21.0s							
P53A	Whipple	149.04	56	P	PKPbc	14 42 02.7	-0.1	
	baz=286							
N53A	Lisbon	149.06	53	ePKPdf	PKPdf	14 41 58.9	+0.2	
N53A				ePKPbc	sPKPdf	14 42 03.4	-0.1	
N53A				LR	LR			
	comp=Z,1μm,20.0s							
N53A	Lisbon	149.06	53	P	PKPbc	14 42 02.8	0.0	
	baz=288							
L53A	Girard	149.08	51	P	PKPbc	14 42 02.7	-0.1	
	baz=291							
Q53A	Leroy	149.10	57	P	PKPbc	14 42 02.9	0.0	
	baz=284							
PKRO	Pickering	149.10	47	P	PKPbc	14 42 02.8	0.0	
	baz=295							
E54A	Lac Daplat, Po	149.11	41	P	PKPbc	14 42 02.5	-0.2	
	baz=301							
BRRC	Barranca, Sant	149.13	123	eP	PKPbc	14 42 02.8	-0.9	
BARC	Barichara	149.19	124	eP	PKPbc	14 42 04.1	-0.1	
ERPA	Erie	149.21	50	ePKPdf	PKPbc	14 42 02.7	-0.4	
ERPA				LR	LR			
	comp=Z,2μm,22.0s							
ERPA	Erie	149.21	50	P	PKPbc	14 42 02.7	-0.4	
	baz=291							
X54A	Belton	149.22	66	P	PKPbc	14 42 03.5	+0.2	
	baz=276							
ALLY	Alegheny Colle	149.27	51	ePKPdf	PKPbc	14 42 03.0	-0.3	
ALLY				LR	LR			
	comp=Z,2μm,22.0s							
656A	Willston	149.29	76	epPKPdf	PKPbc	14 42 04.1	+0.4	
656A				LR	LR			
	comp=Z,700nm,21.0s							
656A	Willston	149.29	76	P	PKPbc	14 42 04.0	+0.3	
	baz=268							
W54A	Cherokee Point	149.31	65	P	PKPbc	14 42 03.9	+0.3	
	baz=278							
155A	Kite	149.31	69	P	PKPbc	14 42 04.0	+0.3	
	baz=273							
255A	Hazlehurst	149.34	71	ePKPdf	PKPbc	14 42 03.5	-0.3	
255A				LR	LR			
	comp=Z,700nm,20.0s							
255A	Hazlehurst	149.34	71	P	PKPbc	14 42 04.0	+0.3	
	baz=272							
HODGE	Hodges	149.35	66	ePKPdf	PKPbc	14 42 03.8	+0.1	
HODGE				LR	LR			
	comp=Z,

V54A	Nebo	149.40	63	P	PKPbc	14 42 03.7	-0.1	
	baz=279							
556A	Lake Butler	149.42	75	P	PKPbc	14 42 04.1	+0.1	
	baz=269							
957A	Wimauma	149.45	79	PFAKE		14 42 10.0	+1.0	
957A				LR	LR			
	comp=Z,500nm,18.0s							
PEMO	Pembroke	149.46	42	P	PKPbc	14 42 03.8	+0.2	
	baz=300							
T54A	Tazewell	149.46	61	P	PKPbc	14 42 04.2	+0.2	
	baz=281							
GIRC	Giron, Santand	149.50	124	eP	PKPbc	14 42 04.8	0.0	
857A	Zephyrhills	149.50	78	P	PKPbc	14 42 04.5	+0.2	
	baz=266							
S54A	Dingess, Beckl	149.51	59	P	PKPbc	14 42 04.1	0.0	
	baz=283							
Z55A	Blythe	149.55	68	P	PKPbc	14 42 04.5	+0.3	
	baz=274							
WLVO	Wesleyville	149.56	46	P	PKPbc	14 42 04.1	+0.2	
	baz=296							
O54A	Avella	149.58	54	P	PKPbc	14 42 04.4	+0.3	
	baz=288							
Q54A	Coxs Mills	149.59	57	ePKPdf	PKPbc	14 42 03.5	-0.6	
Q54A				LR	LR			
	comp=Z,1μm,21.0s							
Q54A	Coxs Mills	149.59	57	P	PKPbc	14 42 04.0	-0.1	
	baz=285							
N54A	Moraine State	149.62	53	epPKPdf	PKPbc	14 42 04.4	+0.2	
N54A				LR	LR			
	comp=Z,1μm,19.0s							
N54A	Moraine State	149.62	53	P	PKPbc	14 42 04.4	+0.2	
	baz=289							
L54A	Sinclairville	149.63	50	P	PKPbc	14 42 04.1	-0.1	
	baz=292							
PAULI	Pauline	149.64	65	ePKPdf	PKPdf	14 42 00.6	+0.8	
PAULI				ePKPbc	sPKPdf	14 42 04.9	+0.3	
PAULI				LR	LR			
	comp=Z,700nm,20.0s							
356A	Blackshear	149.65	72	P	PKPbc	14 42 05.0	+0.5	
	baz=271							
M54A	Oil Creek Stat	149.66	51	ePKPdf	PKPdf	14 41 59.4	-0.3	
M54A				ePKPbc	PKPbc	14 42 04.3	+0.1	
M54A				LR	LR			
	comp=Z,2μm,22.0s							
M54A	Oil Creek Stat	149.66	51	P	PKPbc	14 42 04.0	-0.2	
	baz=291							
R54A	Victor	149.67	58	P	PKPbc	14 42 04.4	0.0	
	baz=284							
757A	Oxford	149.68	77	P	PKPbc	14 42 04.7	0.0	
	baz=267							
J54A	Appleton	149.68	48	ePKPdf	PKPbc	14 42 04.2	0.0	
J54A				LR	LR			
	comp=Z,1μm,22.0s							
J54A	Appleton	149.68	48	P	PKPbc	14 42 04.0	-0.2	
	baz=295							
P54A	Burton	149.68	55	P	PKPbc	14 42 04.5	+0.1	
	baz=287							
Y55A	Saluda	149.71	67	P	PKPbc	14 42 04.4	-0.2	
	baz=276							
456A	Hilliard	149.75	73	ePKPbc	PKiKP	14 42 05.5	-0.2	
456A				LR	LR			
	comp=Z,600nm,20.0s							
456A	Hilliard	149.75	73	P	PKiKP	14 42 05.8	+0.1	
	baz=270							
058A	Arcadia	149.78	80	P	PKiKP	14 42 05.9	0.0	
	baz=264							
DELO	Deloro Mine	149.79	45	ePKPdf	PKPbc	14 42 04.2	-0.2	
DELO				LR	LR			
	comp=Z,2μm,22.0s							
DELO	Deloro Mine	149.79	45	P	PKPbc	14 42 04.6	+0.1	
	baz=298							
256A	Glennville	149.83	71	P	PKPbc	14 42 05.3	+0.3	
	baz=272							
X55A	Gracelyn & Ava	149.84	66	P	PKPbc	14 42 05.5	+0.6	
	baz=277							
MEDO	Medina	149.85	48	ePKPdf	PKPbc	14 42 04.5	-0.1	
MEDO				LR	LR			
	comp=Z,1μm,21.0s							
MEDO	Medina	149.85	48	P	PKPbc	14 42 04.6	0.0	
	baz=295							
958A	Wauchula	149.87	79	P	PKPbc	14 42 05.4	+0.2	
	baz=265							
657A	Interlachen	149.88	75	P	PKPbc	14 42 05.3	+0.2	
	baz=268							
PLVO	Plevna	149.88	43	ePKPdf	PKPdf	14 41 59.5	-0.3	
PLVO				ePKPbc	PKPbc	14 42 04.9	+0.3	
PLVO	Plevna	149.88	43	P	PKPbc	14 42 04.9	+0.3	
	baz=299							
I55A	Frankford	149.89	45	P	PKPbc	14 42 04.8	+0.1	
	baz=297							
SMLC	San Martn de	149.91	120	eP	PKPbc	14 42 06.1	+0.5	
K54A	Basiliko Farm,	149.91	49	P	PKPbc	14 42 04.5	-0.3	
	baz=294							
F55A	Otter Lake	149.92	41	P	PKPbc	14 42 05.0	+0.3	
	baz=301							
V55A	Taylorsville	149.97	63	P	PKPbc	14 42 05.5	+0.3	
	baz=280							
U55A	TA2, Sparta	149.99	61	P	PKPbc	14 42 05.7	+0.4	
	baz=281							
KMSC	Kings Mountain	149.99	64	epPKPdf	PKPbc	14 42 05.3	0.0	
KMSC				LR	LR			
	comp=Z,700nm,20.0s							
KMSC	Kings Mountain	149.99	64	P	PKiKP	14 42 06.0	-0.2	
	baz=278							
G55A	Calabogie	149.99	43	P	PKPbc	14 42 05.0	+0.1	
	baz=300							
557A	Orange Park	150.01	74	P	PKiKP	14 42 06.2	-0.1	
	baz=269							
H55A	Tweed	150.05	44	P	PKPbc	14 42 05.0	-0.1	
	baz=298							
T55A	Pulaski	150.07	60	P	PKPbc	14 42 05.8	+0.4	
	baz=282							
156A	Sylvania	150.13	69	P	PKiKP	14 42 06.5	+0.1	
	baz=274							
MCWV	Mont Chateau	150.13	55	epPKPdf	PKPbc	14 42 05.6	+0.2	
MCWV				LR	LR			
	comp=Z,700nm,20.0s							
MCWV	Mont Chateau	150.13	55	P	PKPbc	14 42 05.9	+0.5	
	baz=287							
S55A	Lewisburg	150.14	59	P	PKPbc	14 42 05.9	+0.3	
	baz=284							
OCAC	Ocana	150.15	122	eP	PKiKP	14 42 07.5	+0.2	
Q55A	Buckhannon	150.15	56	P	PKiKP	14 42 06.3	-0.2	
	baz=286							
JSC	Jenkinsville	150.16	66	ePKPdf	PKPbc	14 42 05.3	-0.4	
JSC				LR	LR			
	comp=Z,1μm,20.0s							
JSC	Jenkinsville	150.16	66	ePKIKP	PKPbc	14 42 05.3	-0.4	
JSC				MLR	MLR			
	comp=Z,1μm,20.0s							
Z56A	Williston	150.18	68	ePKPbc	PKPbc	14 42 06.0	+0.3	
Z56A				LR	LR			
	comp=Z,700nm,20.0s							
Z56A	Williston	150.18	68	P	PKiKP	14 42 06.8	+0.3	
	baz=275							
Y56A	Pelion	150.18	67	P	PKiKP	14 42 06.7	+0.1	
	baz=276							
P55A	Reedsville	150.19	55	P	PKPbc	14 42 05.9	+0.3	
	baz=287							
DWPF	Disney Wildern	150.19	78	ePKPbc	PKPbc	14 42 06.4	+0.5	
DWPF				LR	LR			
	comp=Z,500nm,22.0s							
DWPF	Disney Wildern	150.19	78	P	PKPbc	14 42 06.4	+0.5	
	baz=266							
357A	Townsend	150.20	72	P	PKiKP	14 42 07.1	+0.4	
	baz=272							
J55A	Hilton	150.23	47	ePKPdf	PKPbc	14 42 05.0	-0.6	
J55A				LR	LR			
	comp=Z,900nm,20.0s							
J55A	Hilton	150.23	47	P	PKPbc	14 42 05.1	-0.4	
	baz=296							
L55A	Hinsdale	150.26	49	P	PKPbc	14 42 05.7	0.0	
	baz=293							
858A	St. Cloud	150.26	78	P	PKiKP	14 42 06.8	-0.1	
	baz=266							
K55A	Perry	150.29	48	P	PKPbc	14 42 05.6	-0.1	
	baz=294							
M55A	Ridgway	150.30	51	P	PKPbc	14 42 06.2	+0.4	
	baz=292							
X56A	White Oak	150.32	65	P	PKPbc	14 42 06.2	+0.2	
	baz=277							
BLA	Blacksburg	150.33	60	PFAKE		14 42 10.0	-2.4	
BLA				LR	LR			
	comp=Z,1μm,21.0s							
059A	Moore Haven	150.35	81	PFAKE		14 42 10.0	-2.7	
059A				LR	LR			
	comp=Z,500nm,20.0s							
059A	Moore Haven	150.35	81	P	PKiKP	14 42 07.3	+0.2	
	baz=264							
O55A	Ligonier	150.36	54	P	PKPbc	14 42 06.3	+0.3	
	baz=289							
N55A	Marion Center	150.39	52	epPKPdf	PKPbc	14 42 05.8	-0.3	
N55A				LR	LR			
	comp=Z,1μm,21.0s							
N55A	Marion Center	150.39	52	P	PKPbc	14 42 05.9	-0.2	
	baz=290							
MMNY	Mt. Morris Dam	150.39	48	epPKPdf	PKPbc	14 42 05.7	-0.2	
MMNY				LR	LR			
	comp=Z,900nm,21.0s							
658A	Bunnell	150.41	76	epPKPdf	PKPbc	14 42 06.3	0.0	
658A				LR	LR			
	comp=Z,700nm,20.0s							
658A	Bunnell	150.41	76	P	PKPbc	14 42 06.4	0.0	
	baz=268							
061Z	Ochoppi	150.44	83	P	PKiKP	14 42 07.7	+0.3	
	baz=262							
758A	Lake Helen	150.44	77	P	PKiKP	14 42 07.2	-0.1	
	baz=268							
PECO	Prince Edward	150.46	45	epPKPdf	PKPbc	14 42 05.9	-0.2	
PECO	Prince Edward	150.46	45	P	PKPbc	14 42 06.4	+0.3	
	baz=298							
157A	Early Branch	150.54	69	P	PKiKP	14 42 07.5	+0.2	
	baz=274							
U56A	King	150.54	62	P	PKiKP	14 42 07.2	0.0	
	baz=281							
V56A	Mocksville	150.55	63	ePKPbc	PKPbc	14 42 06.9	+0.4	
V56A				LR	LR			
	comp=Z,1μm,20.0s							
V56A	Mocksville	150.55	63	P	PKiKP	14 42 07.3	0.0	
	baz=280							
257A	Skidaway Islan	150.57	71	PFAKE		14 42 20.0	+6.6	
257A				LR	LR			
	comp=Z,900nm,20.0s							
W56A	Indian Trail	150.60	64	P	PKiKP	14 42 07.4	0.0	
	baz=279							
H56A	Elgin	150.61	44	P	PKPbc	14 42 06.9	+0.5	
	baz=300							
ORIO	Orleans, Innes	150.62	42	P	PKPbc	14 42 06.8	+0.4	
	baz=302							
959A	Okeechobee	150.64	80	P	PKiKP	14 42 08.0	+0.3	
	baz=265							
T56A	Rocky Mt	150.68	60	P	PKPbc	14 42 06.7	-0.2	
	baz=283							
M56A	Emporium	150.70	51	P	PKPbc	14 42 07.3	+0.5	
	baz=292							
Z57A	Bowman	150.73	68	P	PKPbc	14 42 07.3	+0.3	
	baz=276							
BIRD	Birdtown, Kers	150.77	65	ePKPbc	PKPbc	14 42 07.5	+0.4	
BIRD				LR	LR			
	comp=Z,700nm,21.0s							
Q56A	Snyder Ridge,	150.80	56	P	PKPbc	14 42 07.2	+0.1	
	baz=287							
N56A	West Decatur	150.83	52	P	PKPbc	14 42 07.5	+0.4	
	baz=291							
O56A	Blue Knob Stat	150.87	53	ePKPdf	PKPdf	14 42 01.4	-0.2	
O56A				ePKPbc	PKPbc	14 42 07.6	+0.3	
O56A				LR	LR			
	comp=Z,1μm,22.0s							
O56A	Blue Knob Stat	150.87	53	P	PKPbc	14 42 07.4	+0.1	
	baz=290							
S56A	Natural Bridge	150.89	59	P	PKPbc	14 42 07.4	0.0	
	baz=284							
Y57A	Sumter	150.91	66	epPKPdf	PKPbc	14 42 07.2	-0.2	
Y57A				LR	LR			
	comp=Z,1μm,20.0s							
Y57A	Sumter	150.91	66	P	PKPbc	14 42 07.5	+0.1	
	baz=277							
P56A	Dayton Farm, R	150.92	55	P	PKPbc	14 42 07.2	-0.1	
	baz=288							
PTGA	Pitinga	151.03	155	PFAKE		14 42 20.0	+4.3	
PTGA				LR	LR			
	comp=Z,600nm,21.0s							
PTGA	Pitinga	151.03	155	eP	PKPbc	14 42 05.8	-2.6	
LATQ	La Tuque	151.04	36	P	PKiKP	14 42 07.9	0.0	
	baz=309							
W57A	Gilead	151.07	64	epPKPdf	PKPbc	14 42 07.4	-0.4	
W57A				LR	LR			
	comp=Z,700nm,21.0s							
W57A	Gilead	151.07	64	P	PKPbc	14 42 08.1	+0.3	
	baz=279							
CODC	Agustn Codazz	151.09	119	eP	PKPbc	14 42 06.1	-2.3	
X57A	Johnson Farm,	151.10	65	P	PKiKP	14 42 08.4	-0.1	
	baz=278							
V57A	Coltrane Farms	151.12	62	P	PKiKP	14 42 08.5	0.0	
	baz=281							
SMRC	Santa Marta, M	151.18	116	eP	PKPbc	14 42 08.8	+0.1	
NHSC	New Hope	151.19	68	epPKPdf	PKPbc	14 42 07.7	-0.4	
NHSC				LR	LR			
	comp=Z,900nm,20.0s							
NHSC	New Hope	151.19	68	P	PKiKP	14 42 08.7	0.0	
	baz=276							
RGRS	Roger Stewart	151.20	69	ePKPbc	PKiKP	14 42 08.8	+0.1	
158A	Hollywood	151.21	69	P	PKPbc	14 42 08.2	0.0	
	baz=275							
SSPA	Standing Stone	151.22	52	ePKPdf	PKPdf	14 42 02.4	+0.3	
SSPA				ePKPbc	PKPbc	14 42 07.7	-0.3	
SSPA				LR	LR			
	comp=Z,1μm,21.0s							
SSPA	Standing Stone	151.22	52	P	PKPbc	14 42 08.1	+0.1	
	baz=291							
T57A	Hurt	151.29	60	ePKPbc	PKPbc	14 42 08.1	-0.2	
T57A				LR	LR			
	comp=Z,1μm,20.0s							
T57A	Hurt	151.29	60	P	PKPbc	14 42 08.7	+0.4	
	baz=283							
S57A	Dark Hollow, R	151.33	58	epPKPdf	PKPbc	14 42 08.0	-0.4	
S57A				LR	LR			
	comp=Z,1μm,20.0s							
S57A	Dark Hollow, R	151.33	58	P	PKPbc	14 42 08.2	-0.2	
	baz=285							
U57A	Blanch	151.35	61	P	PKPbc	14 42 08.8	+0.4	
	baz=282							
Q57A	Strasburg	151.38	55	P	PKPbc	14 42 08.3	-0.1	
	baz=288							
N57A	Milroy	151.42	52	P	PKPbc	14 42 08.4	-0.1	
	baz=292							
Z58A	St. Stephen	151.47	68	P	PKPbc	14 42 09.1	+0.3	
	baz=276							
R57A	Stanardsville	151.51	57	P	PKPbc	14 42 09.0	+0.2	
	baz=286							
Y58A	Scranton	151.52	66	ePKPbc	PKPbc	14 42 09.0	+0.2	
Y58A				LR	LR			
	comp=Z,900nm,21.0s							
Y58A	Scranton	151.52	66	P	PKiKP	14 42 09.3	0.0	
	baz=277							
P57A	Homestead Farm	151.53	54	P	PKPbc	14 42 08.8	+0.1	
	baz=289							
O57A	Amberson	151.56	53	P	PKPbc	14 42 09.1	+0.3	
	baz=291							
LONY	Lake Ozonia	151.62	42	ePKPbc	PKPbc	14 42 08.9	0.0	
LONY				LR	LR			
	comp=Z,1μm,22.0s							
LONY	Lake Ozonia	151.62	42	P	PKPbc	14 42 09.2	+0.4	
	baz=302							
V58A	Windy Hill, Pi	151.66	62	P	PKiKP	14 42 09.8	+0.3	
	baz=281							
X58A	Rowland	151.70	65	ePKPbc	PKPbc	14 42 09.2	-0.1	
X58A				LR	LR			
	comp=Z,900nm,21.0s							
X58A	Rowland	151.70	65	P	PKPbc	14 42 09.4	+0.2	
	baz=279							
W58A	Raeford	151.71	64	P	PKPbc	14 42 09.4	+0.1	
	baz=280							
T58A	Grand View Acr	151.86	60	P	PKPbc	14 42 09.7	+0.1	
	baz=284							
BINY	Binghamton	151.91	48	ePKPbc	PKPbc	14 42 09.5	0.0	
BINY				LR	LR			
	comp=Z,1μm,22.0s							
BINY	Binghamton	151.91	48	P	PKPbc	14 42 09.6	0.0	
	baz=296							
R58A	Rapidan	151.91	57	P	PKPbc	14 42 09.6	-0.1	
	baz=287							
U58A	Oxford	151.98	61	P	PKPbc	14 42 09.8	0.0	
	baz=283							
S58A	Poland Farm, P	152.06	58	ePKPbc	PKPbc	14 42 09.7	-0.3	
S58A				LR	LR			
	comp=Z,1μm,21.0s							
S58A	Poland Farm, P	152.06	58	P	PKPbc	14 42 10.2	+0.2	
	baz=286							
R58B	Mineral	152.10	57	ePKPbc	PKPbc	14 42 09.7	-0.3	
R58B				LR	LR			
	comp=Z,2μm,19.0s							
R58B	Mineral	152.10	57	P	PKPbc	14 42 10.1	0.0	
	baz=286							
FRNY	Flat Rock	152.10	41	epPKPdf	PKPbc	14 42 09.0	-0.8	
FRNY				LR	LR			
	comp=Z,1μm,20.0s							
NCB	Newcomb	152.18	43	ePKPbc	PKPbc	14 42 09.6	-0.6	
NCB				LR	LR			
	comp=Z,1μm,20.0s							
PAGS	Pennsylvania G	152.20	52	epPKPdf	PKPbc	14 42 09.2	-1.0	
PAGS				LR	LR			
	comp=Z,1μm,19.0s							
X59A	McDuffie Farm,	152.30	65	P	PKPbc	14 42 10.8	+0.2	
	baz=280							
W59A	Clinton	152.32	63	P	PKiKP	14 42 11.5	+0.5	
	baz=281							
KSPA	Keystone Colle	152.33	49	PFAKE		14 42 20.0	-0.5	
KSPA				LR	LR			
	comp=Z,1μm,21.0s							
V59A	Middlesex	152.36	62	P	PKiKP	14 42 11.4	+0.4	
	baz=282							
CBN	Corbin Frederi	152.41	57	ePKPbc	PKPbc	14 42 10.4	-0.3	
CBN				LR	LR			
	comp=Z,1μm,21.0s							
CBN	Corbin Frederi	152.41	57	P	PKPbc	14 42 10.9	+0.1	
	baz=287							
SDMD	Soldier's Deli	152.41	54	epPKPdf	PKPbc	14 42 10.0	-0.8	
SDMD				LR	LR			
	comp=Z,700nm,22.0s							
O59A	Robesonia	152.55	52	P	PKPbc	14 42 10.9	-0.1	
	baz=293							
MVL	Millersville	152.55	52	ePKPdf	PKPdf	14 42 04.7	+0.7	
MVL				ePKPbc	PKPbc	14 42 10.3	-0.7	
MVL				LR	LR			
	comp=Z,1μm,20.0s							
U59A	Littleton	152.58	61	ePKPbc	PKPbc	14 42 10.7	-0.5	
U59A				LR	LR			
	comp=Z,900nm,19.0s							
U59A	Littleton	152.58	61	P	PKPbc	14 42 11.4	+0.2	
	baz=284							
SDV	Santo Domingo	152.59	124	PKP	PKPdf	14 42 05.4	+0.3	
	comp=Z,6.2nm,0.9s,baz=290,slow=2.9,SNR=5.8							
SDV				PKPbc	PKPbc	14 42 12.0	-0.1	
	comp=Z,21nm,0.9s,baz=260,slow=0.7,SNR=14							
SDV	Santo Domingo	152.59	124	ePKPdf	PKPdf	14 42 04.1	-1.0	
SDV				ePKPbc	PKPbc	14 42 11.3	-0.8	
SDV				ePKPab	PKPab	14 42 20.7	-1.8	
SDV				LR	LR			
	comp=Z,900nm,19.0s							
SDV	Santo Domingo	152.59	124	eP	PKPdf	14 42 07.8	+2.7	
MOQ	Mont Orford	152.60	39	epPKPdf	PKPbc	14 42 09.9	-1.2	
MOQ				ePKPab	PKPab	14 42 21.6	+0.1	
N59A	State Game Lan	152.60	50	epPKPdf	PKPbc	14 42 10.2	-1.0	
N59A				LR	LR			
	comp=Z,2μm,21.0s							
N59A	State Game Lan	152.60	50	P	PKPbc	14 42 11.3	+0.2	
	baz=294							
R59A	King George, V	152.60	56	P	PKiKP	14 42 11.5	+0.1	
	baz=288							
T59A	Double "B" Far	152.62	59	ePKPbc	PKPbc	14 42 10.6	-0.7	
T59A				LR	LR			
	comp=Z,1μm,20.0s							
T59A	Double "B" Far	152.62	59	P	PKiKP	14 42 11.7	+0.2	
	baz=285							
P59A	Jarrettsville	152.63	53	P	PKPbc	14 42 11.2	0.0	
	baz=291							
Y60A	Bolivia	152.70	66	PFAKE		14 42 20.0	-2.3	
Y60A				LR	LR			
	comp=Z,800nm,22.0s							
CNNC	Cliffs of the	152.75	63	ePKPbc	PKiKP	14 42 12.0	+0.2	
CNNC				LR	LR			
	comp=Z,800nm,19.0s							
CNNC	Cliffs of the	152.75	63	P	PKiKP	14 42 12.3	+0.5	
	baz=281							
X60A	Albert Glenn T	152.80	64	P	PKPbc	14 42 11.8	+0.1	
	baz=280							
ACCN	Adirondack Com	152.83	44	PFAKE		14 42 20.0	-2.5	
ACCN				LR	LR			
	comp=Z,800nm,20.0s							
VT1	Waterbury	152.87	41	ePKPbc	PKPbc	14 42 11.4	-0.2	
VT1				LR	LR			
	comp=Z,2μm,21.0s							
W60A	Pink Hill	152.93	63	P	PKiKP	14 42 12.3	+0.1	
	baz=281							
LUPA	Lehigh Univers	153.00	50	PFAKE		14 42 20.0	-3.4	
LUPA				LR	LR			
	comp=Z,100nm,20.0s							
U60A	Pendleton	153.05	60	P	PKPbc	14 42 12.4	+0.1	
	baz=284							
O60A	Telford	153.10	51	P	PKiKP	14 42 12.8	+0.4	
	baz=294							
S60A	Water View	153.10	57	P	PKiKP	14 42 12.9	+0.5	
	baz=287							
P60A	Greenville	153.13	52	P	PKiKP	14 42 12.8	+0.4	
	baz=292							
V60A	Jim Taylor Roa	153.14	62	ePKPbc	PKPbc	14 42 12.1	-0.3	
V60A				LR	LR			
	comp=Z,1μm,20.0s							
V60A	Jim Taylor Roa	153.14	62	P	PKPbc	14 42 12.4	0.0	
	baz=283							
TRY	Troy	153.17	45	PFAKE		14 42 20.0	-3.9	
TRY				LR	LR			
	comp=Z,800nm,20.0s							
T60A	Surry	153.20	58	PFAKE		14 42 20.0	-4.3	
T60A				LR	LR			
	comp=Z,1μm,20.0s							
T60A	Surry	153.20	58	P	PKiKP	14 42 13.3	+0.6	
	baz=286							
PSUB	Penn St. - Bra	153.22	52	ePKPdf	PKPdf	14 42 04.9	-0.1	
PSUB				ePKPbc	PKPbc	14 42 12.7	+0.2	
PSUB				LR	LR			
	comp=Z,1μm,19.0s							
Q60A	Greensboro	153.28	54	P	PKiKP	14 42 13.7	+0.9	
	baz=291							
ODNJ	Ogdensburg	153.32	49	ePKPbc	PKPbc	14 42 12.8	+0.1	
ODNJ				ePKPab	PKPab	14 42 24.8	+0.1	
ODNJ				LR	LR			
	comp=Z,2μm,21.0s							
LBNH	Lisbon	153.41	41	ePKPbc	PKPbc	14 42 12.8	0.0	
LBNH				LR	LR			
	comp=Z,2μm,22.0s							
LBNH	Lisbon	153.41	41	ePKIKP	PKPbc	14 42 12.8	0.0	
LBNH				MLR	MLR			
	comp=Z,2μm,22.0s							
LBNH	Lisbon	153.41	41	P	PKiKP	14 42 14.1	+1.1	
	baz=305							
HNH	Hanover	153.50	42	ePKPbc	PKiKP	14 42 13.4	+0.3	
HNH				LR	LR			
	comp=Z,1μm,20.0s							
BRNJ	Basking Ridge	153.53	50	ePKPbc	PKPbc	14 42 13.2	+0.1	
BRNJ				LR	LR			
	comp=Z,2μm,22.0s							
U61A	Possum Corner	153.64	60	PFAKE		14 42 20.0	-6.2	
U61A				LR	LR			
	comp=Z,1μm,20.0s							
V61A	Roper	153.67	61	ePKPbc	PKiKP	14 42 14.0	+0.3	
V61A				LR	LR			
	comp=Z,1μm,19.0s							
V61A	Roper	153.67	61	P	PKiKP	14 42 14.4	+0.7	
	baz=284							
KSCT	Kent School, K	153.78	47	PFAKE		14 42 20.0	+6.3	
KSCT				LR	LR			
	comp=Z,900nm,21.0s							
M61A	Granite Spring	153.79	48	P	PKiKP	14 42 14.4	+0.7	
	baz=298							
PAL	Palisades	153.83	49	ePKPbc	PKPbc	14 42 13.8	0.0	
PAL				ePKPab	PKPab	14 42 27.4	+0.5	
PAL				LR	LR			
	comp=Z,1μm,22.0s							
PAL	Palisades	153.83	49	ePKIKP	PKPbc	14 42 13.8	0.0	
PAL				e		14 42 27.4		
PAL				MLR	MLR			
	comp=Z,1μm,22.0s							
PAL	Palisades	153.83	49	P	PKiKP	14 42 14.4	+0.6	
	baz=297							
S61A	Accomac	153.85	57	PFAKE		14 42 20.0	+6.0	
S61A				LR	LR			
	comp=Z,2μm,21.0s		

comp=Z,1μm,20.0s
QUA2 Belchertown 154.23 45 PFAKE 14 42 20.0 +5.3
QUA2 LR LR
comp=Z,1μm,21.0s
PKME Peaks-Kenny Pk 154.25 36 PFAKE 14 42 20.0 +5.4
PKME LR LR
comp=Z,2μm,20.0s
PKME Peaks-Kenny Pk 154.25 36 P **PKiKP 14 42 14.8 +0.2**
baz=311
BATG Bathurst New B 154.39 29 *e*PKPab **PKPab 14 42 30.9 +1.9**
WVL Waterville 154.51 38 PFAKE 14 42 20.0 +4.9
WVL LR LR
comp=Z,2μm,21.0s
HRV Adam Dziewonsk 154.61 44 PFAKE 14 42 20.0 +4.6
HRV LR LR
comp=Z,900nm,20.0s
WES Weston 154.82 44 *e*PKPab **PKPab 14 42 31.8 +0.8**
WES LR LR
comp=Z,900nm,20.0s
WES Weston 154.82 44 *e*PKP2 **PKPab 14 42 31.8 +0.8**
WES MLR MLR
comp=Z,900nm,20.0s
BRYW Bryant College 154.94 45 PFAKE 14 42 20.0 +3.8
BRYW LR LR
comp=Z,2μm,21.0s
EMMW East Machias 155.59 35 PFAKE 14 42 20.0 +12
EMMW LR LR
comp=Z,2μm,20.0s
DRLN Deer Lake 155.62 15 PFAKE 14 42 20.0 +12
DRLN LR LR
comp=Z,2μm,22.0s
GGN Saint George 155.62 34 PFAKE 14 42 20.0 +12
GGN LR LR
comp=Z,2μm,22.0s
SDDR Presa de Saban 157.39 103 *e*PKPab **PKPab 14 42 41.4 -1.4**
SDDR LR LR
comp=Z,700nm,21.0s
CMLA Cha da Macela 157.66 307 PFAKE 14 42 20.0 +8.9
CMLA LR LR
comp=Z,900nm,20.0s

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*NNC **09** 14:24:27.0±4.4, 37.°97N×72.°16E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=34.3km s-min=28.3km az=168.0*
ISC 09 14:24:26.2±4.7, 37.°6N±0.°3×72.°2E±0.°1, h130km, n12, σ0°72/15, 2C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=48	**4.63**	**14**	P	**Pn**	**14 25 35.4**	**+0.7**
UCH	**Uchtor** SNR=30	**4.91**	**20**	P	**Pn**	**14 25 39.0**	**+0.5**
KZA	**Kyzart** SNR=10	**5.01**	**27**	P	**Pn**	**14 25 39.5**	**-0.3**
EKS2	**Erkin-Say** SNR=14	**5.16**	**13**	P	**Pn**	**14 25 42.2**	**+0.7**
AAK	**Ala-Archa** SNR=13	**5.29**	**19**	P	**Pn**	**14 25 44.0**	**+0.8**
AAK	**Ala-Archa** 11nm,0.6s	**5.29**	**19**	⇑P	**Pn**	**14 25 43.7**	**+0.4**
AAK	10nm,0.7s			⇑S	**Sn**	**14 26 44.1**	**+0.8**
ULHL	**Ulahol** SNR=5.7	**5.54**	**33**	P	**Pn**	**14 25 46.3**	**-0.5**
KK31	**Karatay Array** 2.7nm,0.5s,baz=252,slow=16,SNR=12	**5.61**	**347**	P	**Pn**	**14 25 47.8**	**+0.3**
KK31	6.8nm,0.3s,baz=161,slow=20,SNR=16			S	**Sn**	**14 26 49.4**	**-1.4**
CHMS	**Chumysh** SNR=6.3	**5.69**	**19**	P	**Pn**	**14 25 49.3**	**+0.7**
TKM2	**Tokmak 2** SNR=11	**5.88**	**25**	P	**Pn**	**14 25 51.0**	**-0.2**
TKM2	**Tokmak 2** 6.7nm,0.6s	**5.88**	**25**	⇓P	**Pn**	**14 25 50.7**	**-0.5**
TKM2	1.9nm,0.7s			⇓S	**Sn**	**14 26 57.1**	**-0.4**
USP	**Ospenovka** SNR=6.7	**5.88**	**16**	P	**Pn**	**14 25 51.4**	**+0.3**

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*NORS **09** 14:31:38.6±0.0, 42.°39N×44.°97E, h8km, MPVA3.6*
*ISCJB **09** 14:31:40.3±0.5, 42.°48N±0.°05×45.°04E±0.°03, h13km±11km, Error ellipse: s-maj=9.0km s-min=4.1km az=179.9*
*TIF **09** 14:31:40.7, 42.°45N×44.°97E, h28km±1km*
ISC 09 14:31:39.9±1.1, 42.°43N±0.°03×45.°01E±0.°03, h15km±10km, n14, σ0°83/25, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUDG	**Gudauri**	**0.39**	**275**	P	**Pn**	**14 31 49.6**	**-1.7**
GUDG				S	**Sb**	**14 31 55.5**	**+0.9**
KMGR	**Komgaron**	**0.63**	**351**	*e*Pg	**Pg**	**14 31 52.7**	**0.0**
KMGR				*e*Sg	**Sb**	**14 32 02.2**	**+0.8**
LACR	**Lac**	**0.66**	**307**	*e*Pg	**Pg**	**14 31 52.2**	**-0.5**
LACR				*e*Sg	**Sg**	**14 32 00.7**	**-0.7**
SEAG	**Tbilisi Sea**	**0.68**	**193**	P	**Sn**	**14 32 05.2**	**-0.3**
TBLG	**Delisi**	**0.73**	**196**	P	**Pn**	**14 31 55.6**	**-0.1**
TBLG				S	**Sn**	**14 32 06.7**	**+0.1**
BTNK	**Botanikuri**	**0.76**	**192**	P	**Pn**	**14 31 56.1**	**0.0**
BTLR	**Botlikh**	**0.93**	**75**	*e*Pg	**Pb**	**14 31 56.6**	**-1.1**
BTLR				*e*Sg	**Sg**	**14 32 10.9**	**+0.8**
KORR	**Kora**	**0.95**	**314**	*e*Pg	**Pn**	**14 31 58.7**	**-0.1**
KORR				*e*Sg	**Sn**	**14 32 12.6**	**+0.5**
DVE	**Vedeno**	**0.98**	**57**	*e*Pg	**Pb**	**14 31 58.9**	**+0.3**
DVE				*e*Sg	**Sn**	**14 32 13.1**	**+0.2**
KZRT	**Kazreti**	**1.14**	**204**	P	**Pg**	**14 32 02.0**	**+0.2**
KZRT				S	**Sg**	**14 32 17.6**	**+0.9**
ONI	**Oni**	**1.16**	**278**	P	**Sg**	**14 32 19.5**	**+2.1**
LSNR	**Lesken**	**1.21**	**315**	*e*Pg	**Pg**	**14 32 03.0**	**-0.2**
LSNR				*e*Sg	**Sg**	**14 32 19.3**	**+0.3**
DDFL	**Dedoflistskaro**	**1.29**	**139**	P	**Pn**	**14 32 02.8**	**-0.6**
DDFL				S	**Sb**	**14 32 20.7**	**+0.5**
AKH	**Akhalkalaki**	**1.52**	**228**	P	**Pg**	**14 32 08.2**	**-1.0**
AKH				S	**Sg**	**14 32 28.9**	**0.0**

MEX 09 14:39:13.8±0.7, 14.°97N×93.°60W, h16km±207km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.82**	**27**	*e*P	Pb	14 39 26.3	-3.3
PCIG				*e*S	Sb	14 39 36.9	-3.5
THIG		**1.29**	**93**	*i* S	Sb	14 39 50.7	-3.4

RSNC 09 14:41:09.9±0.7, 4.°98N×74.°78W, h11km±5km, ML1.8, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NORC	**Norcasia**	**0.59**	**351**	*e*P	Pg	14 41 20.7	-0.8
NORC				*e*S	Sg	14 41 28.7	-0.6
NORC				*i*		14 41 31.0	
comp=Z,45nm,0.4s							
GUY2C	**Guyana, Caldas**	**0.63**	**293**	*e*P	Pg	14 41 22.3	0.0
GUY2C				*e*S	Sg	14 41 30.6	-0.2
GUY2C				*i*		14 41 32.4	
comp=Z,22nm,0.4s							
PRAC	**Prado**	**1.26**	**185**	*e*P	Pn	14 41 31.8	-1.7
PRAC				*e*S	Sb	14 41 48.6	-1.3
PRAC				*i*		14 41 51.0	
comp=Z,26nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.59**	**12**	*e*P	Pn	14 41 36.5	-1.5
PTBC				*e*S	Sn	14 41 57.5	-1.0
PTBC				*i*		14 42 04.0	
comp=Z,14nm,0.4s							

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*ISCJB **09** 14:46:54.0±0.3, 51.°40N±0.°02×16.°13E±0.°02, h0km, Error ellipse: s-maj=2.6km s-min=1.8km az=12.9*
*IPEC **09** 14:46:55.6±0.3, 51.°46N×16.°28E, h0km, ML2.6/3, Error ellipse: s-maj=3.1km s-min=1.7km az=66.0*
*IDC **09** 14:46:56.8±0.7, 51.°40N×16.°06E, h0km, mb1 3.2/7, mb1mx3.1/49, mbtmp3.1/7, ML3.0/7, Error ellipse: s-maj=12.3km s-min=6.3km az=106.0*
*BGR **09** 14:46:57.9±0.4, 51.°37N×16.°12E, h1km, ML3.2/16, Error ellipse: s-maj=4.4km s-min=2.2km az=13.0*
*VIE **09** 14:46:58.4±0.9, 51.°26N×16.°31E, h0km, mb2.4/12, ml3.0/14, Error ellipse: s-maj=7.2km s-min=5.6km az=62.0, Suspected Mining induced.*
*LDG **09** 14:46:58.3±0.2, 51.°25N×15.°96E, h1km, Ml3.2/6, Error ellipse: s-maj=5.5km s-min=2.9km az=23.0, Suspected Mining induced.*
ISC 09 14:46:54.8±0.6, 51.°49N±0.°03×16.°17E±0.°02, h0km, n84, σ1°57/154, 3C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**173**	*i* Pg	**Pg**	**14 47 07.8**	**+0.6**
KSP				*e*Sg	**Sg**	**14 47 15.6**	**+0.1**
KSP	**Ksiaz**	**0.65**	**173**	*e*Pg	**Pg**	**14 47 07.8**	**+0.6**
KSP				*e*Sg	**Sg**	**14 47 15.7**	**+0.1**
CHVC	**Chvalec**	**0.90**	**185**	*e*PG	**Pg**	**14 47 12.7**	**+0.7**
CHVC				*e*SG	**Sg**	**14 47 23.6**	**-0.1**
comp=Z,149nm,0.5s							
OSTC	**Ostas**	**0.93**	**178**	*e*PG	**Pg**	**14 47 13.3**	**+0.7**
OSTC				*e*SG	**Sg**	**14 47 24.6**	**0.0**
comp=Z,93nm,0.4s							
UPC	**Upice**	**0.98**	**186**	*e*PG	**Pg**	**14 47 13.9**	**+0.3**
UPC				*e*SG	**Sg**	**14 47 26.8**	**+0.4**
comp=Z,208nm,0.4s							
DPC	**Dobruska-Polom**	**1.14**	**175**	*e*Pg	**Pg**	**14 47 16.6**	**0.0**
DPC				*e*Sg	**Sg**	**14 47 31.8**	**+0.4**
DPC	**Dobruska-Polom**	**1.14**	**175**	*e*PG	**Pg**	**14 47 16.6**	**0.0**
DPC				*e*SG	**Sg**	**14 47 31.8**	**+0.4**
comp=Z,98nm,0.5s							
PVCC	**Panska Ves**	**1.40**	**227**	*e*PG	**Pn**	**14 47 21.9**	**+0.4**
PVCC				*e*SG	**Sg**	**14 47 40.3**	**+0.8**
comp=Z,319nm,0.4s							
BRG	**Berggiesshubel**	**1.53**	**247**	PN	**Pn**	**14 47 24.0**	**+0.6**
BRG				PG	**Pg**	**14 47 24.7**	**+0.6**
BRG				SG	**Sg**	**14 47 44.9**	**+1.0**
112nm,0.6s							
BRG	**Berggiesshubel**	**1.53**	**247**	*e*Pn	**Pn**	**14 47 23.1**	**-0.3**
BRG				*e*Sg	**Sn**	**14 47 44.7**	**+0.7**
GOPC	**GO Pecny, Ondr**	**1.80**	**210**	*e*PG	**Pb**	**14 47 28.5**	**-0.2**
GOPC				*e*SG	**Sn**	**14 47 51.8**	**+1.1**
comp=Z,67nm,0.4s							
PRU	**Pruhonice**	**1.82**	**215**	*e*PG	**Pb**	**14 47 29.0**	**0.0**
PRU				*e*SG	**Sb**	**14 47 53.1**	**+0.8**
comp=Z,110nm,0.4s							
FBE	**Freiberg**	**1.86**	**253**	*e*Pn	**Pb**	**14 47 30.1**	**+0.5**
FBE				*e*Sg	**Sg**	**14 47 55.4**	**+0.8**
RAC	**Raciborz**	**1.90**	**137**	*e*Pg	**Pg**	**14 47 31.5**	**+0.3**
RAC				*e*Sg	**Sg**	**14 47 55.9**	**+0.1**
MORC	**Moravsky Berou**	**1.92**	**152**	⇓*i*P	**Pn**	**14 47 28.4**	**-0.4**
MORC	**Moravsky Berou**	**1.92**	**152**	S	**Sn**	**14 47 53.0**	**-0.6**
MORC	**Moravsky Berou**	**1.92**	**152**	*e*PN	**Pn**	**14 47 28.7**	**-0.1**
MORC				*e*SG	**Sn**	**14 47 54.4**	**+0.8**
MORC	**Moravsky Berou**	**1.92**	**152**	*e*Pn	**Pn**	**14 47 28.6**	**-0.2**
baz=335							
MORC				*e*Sg	**Sn**	**14 47 54.3**	**+0.7**
46nm,0.3s,baz=335							
MORC	**Moravsky Berou**	**1.92**	**152**	*e*Pn	**Pn**	**14 47 28.7**	**-0.1**
CLL	**Collm**	**1.99**	**266**	*i* Pn	**Pn**	**14 47 29.4**	**-0.3**
CLL				*i* Pg	**Pb**	**14 47 32.8**	**+0.9**
CLL				*i*		14 47 34.0	
CLL				*i* Sg	**Sg**	**14 48 00.4**	**+1.6**
comp=Z,47nm,0.5s							
CLL	**Collm**	**1.99**	**266**	*e*Pn	**Pn**	**14 47 29.5**	**-0.2**
CLL				*e*Sg	**Sg**	**14 48 00.6**	**+1.8**
OKC	**Ostrava-Krasne**	**2.07**	**142**	*e*Pn	**Pb**	**14 47 32.9**	**-0.4**
OKC				*e*Sg	**Sb**	**14 47 59.8**	**+0.3**
OKC	**Ostrava-Krasne**	**2.07**	**142**	*e*PG	**Pg**	**14 47 34.1**	**-0.4**
OKC				*e*SG	**Sg**	**14 48 01.0**	**-0.3**
comp=Z,50nm,0.4s							
VRAC	**Vranov**	**2.20**	**173**	Pn	**Pn**	**14 47 33.3**	**+0.8**
comp=Z,3.3nm,0.3s,baz=348,slow=13,SNR=20							
VRAC				Lg	Lg	14 48 04.0	
comp=Z,12nm,0.3s,baz=246,slow=20,SNR=12							
VRAC	**Vranov**	**2.20**	**173**	⇓*i*P	**Pn**	**14 47 32.9**	**+0.4**
VRAC	**Vranov**	**2.20**	**173**	S	**Sn**	**14 48 00.8**	**+0.4**
VRAC	**Vranov**	**2.20**	**173**	*e*PN	**Pn**	**14 47 33.1**	**+0.6**
VRAC				*e*SG	**Sb**	**14 48 03.5**	**+0.4**
VRAC	**Vranov**	**2.20**	**173**	*e*Pn	**Pn**	**14 47 33.0**	**+0.4**
baz=355							
VRAC				*e*Sg	**Sb**	**14 48 03.5**	**+0.4**
comp=Z,29nm,0.3s,baz=355							
TREC	**Trest**	**2.24**	**192**	*e*PN	**Pn**	**14 47 33.5**	**+0.4**
TREC				*e*PG	**Pb**	**14 47 36.7**	**+0.6**
TREC				*e*SG	**Sb**	**14 48 05.6**	**+1.3**
comp=Z,44nm,0.3s							
KRUC	**Moravsky**	**2.43**	**177**	*e*PN	**Pn**	**14 47 36.5**	**+0.7**
KRUC				*e*PG	**Pb**	**14 47 39.6**	**+0.3**
KRUC				*e*SG	**Sb**	**14 48 11.0**	**+1.2**
KRUC	**Moravsky**	**2.43**	**177**	*e*Pn	**Pn**	**14 47 36.4**	**+0.7**
baz=358							
KRUC	**Moravsky**	**2.43**	**177**	*e*Pg	**Pb**	**14 47 39.6**	**+0.3**
baz=358							
KRUC				*e*Sg	**Sb**	**14 48 11.0**	**+1.2**
comp=Z,27nm,0.4s,baz=358							
TANN	**Tannenbergstha**	**2.58**	**247**	*e*Pn	**Pn**	**14 47 38.5**	**+0.6**
TANN				*e*Sg	**Sb**	**14 48 16.7**	**+2.5**
OJC	**Ojcow**	**2.62**	**117**	*e*Pn	**Pn**	**14 47 37.4**	**-0.9**
OJC				*e*Pg	**Pg**	**14 47 46.1**	**+1.1**
OJC				*e*Sg	**Sg**	**14 48 20.6**	**+1.6**
OJC	**Ojcow**	**2.62**	**117**	*e*Pn	**Pn**	**14 47 39.2**	**+0.8**
OJC				*e*Sg	**Sg**	**14 48 20.5**	**+1.5**
NKC	**Novy Kostel**	**2.67**	**243**	*e*PN	**Pn**	**14 47 39.7**	**+0.6**
NKC				*e*PG	**Pg**	**14 47 45.8**	**-0.2**
NKC				*e*SG	**Sg**	**14 48 20.6**	**0.0**
comp=Z,99nm,0.4s							
JAVC	**Velka Javorina**	**2.80**	**159**	*e*PN	**Pn**	**14 47 42.7**	**+1.8**
KHC	**Kasperske Hory**	**2.88**	**216**	*e*PN	**Pn**	**14 47 42.1**	**+0.1**
KHC				*e*PG	**Pb**	**14 47 48.5**	**+1.4**
KHC				*e*SN	**Sn**	**14 48 17.1**	**-0.3**
KHC				*e*SG	**Sb**	**14 48 26.1**	**+3.1**
comp=Z,44nm,0.6s							
MANZ	**Manzenberg**	**2.99**	**241**	*e*Pn	**Pn**	**14 47 44.1**	**+0.7**
MANZ				*e*Sg	**Sg**	**14 48 29.8**	**-0.9**
MOX	**Moxa**	**3.00**	**255**	*e*Pn	**Pn**	**14 47 45.1**	**+1.6**
MOX				*e*Sg	**Sg**	**14 48 31.1**	**+0.1**
ROTZ	**Rotzenmuhle**	**3.06**	**237**	*e*Pn	**Pn**	**14 47 45.1**	**+0.8**
ROTZ				*e*Sg	**Sb**	**14 48 31.1**	**+3.3**
GEC2	**GERESS Array S**	**3.08**	**212**	*e*Pn	**Pn**	**14 47 46.1**	**+1.3**
GEC2				*e*Sg	**Sb**	**14 48 31.4**	**+2.7**
GERES	**GERESS Array B**	**3.08**	**212**	Pn	**Pn**	**14 47 45.2**	**+0.4**
comp=Z,0.7nm,0.3s,baz=33,slow=13,SNR=13							
GERES				Pg	**Pb**	**14 47 51.5**	**+0.9**
comp=Z,4.9nm,0.3s,baz=34,slow=17,SNR=30							
GERES				Sn	**Sn**	**14 48 21.2**	**-1.2**
comp=Z,4.1nm,0.3s,baz=34,slow=25,SNR=5.5							
GERES				Lg	Lg	14 48 30.9	
comp=Z,12nm,0.3s,baz=31,slow=28,SNR=18							
LANS	**Liptovska Anna**	**3.15**	**137**	*e*SG	**Sg**	**14 48 37.1**	**+1.2**
WET	**Wettzell**	**3.15**	**223**	*e*Pn	**Pn**	**14 47 46.1**	**+0.3**
WET				*e*Sg	**Sg**	**14 48 34.6**	**-1.5**
MODS	**Modra-Piesok**	**3.20**	**167**	*e*PG	**Pg**	**14 47 54.8**	**-1.2**
MODS				*e*SG	**Sg**	**14 48 37.3**	**-0.1**
KOLL	**Kolacno**	**3.25**	**153**	*e*SG	**Sg**	**14 48 38.6**	**-0.4**
ZST	**Bratislava**	**3.35**	**169**	*e*PG	**Pg**	**14 47 57.8**	**-1.1**
ZST				*e*SG	**Sb**	**14 48 38.9**	**+2.7**
NIE	**Niedzica**	**3.35**	**127**	*e*P	**Pg**	**14 48 00.5**	**+1.5**
NIE				*e*S	**Sg**	**14 48 44.5**	**+2.1**
VYHS	**Vyhne**	**3.45**	**149**	*e*PN	**Pn**	**14 47 49.8**	**0.0**
VYHS				*e*PG	**Pg**	**14 48 00.9**	**0.0**
VYHS				*e*SG	**Sg**	**14 48 46.4**	**+0.8**
CONA	**Conrad Observa**	**3.57**	**183**	Pn	**Pn**	**14 47 52.4**	**+0.9**
comp=Z,1.0nm,0.3s							
CONA				Sg	**Sg**	**14 48 48.3**	**-1.0**
comp=Z,9.5nm,0.3s							
CLZ	**Clausthal**	**3.63**	**278**	*e*Pn	**Pn**	**14 47 53.6**	**+1.4**
CLZ				*e*Sg	**Sg**	**14 48 53.9**	**+2.6**
GRF	**Grafenberg Arr**	**3.63**	**242**	*e*Pn	**Pn**	**14 47 52.8**	**+0.6**
GRF				*e*Sg	**Sg**	**14 48 50.9**	**-0.5**
BSD	**Bornholm Skovb**	**3.71**	**349**	*i* P	**Pn**	**14 47 53.5**	**+0.2**
BSD				*i* S	**Sn**	**14 48 35.5**	**-2.2**
MOA	**Molln**	**3.84**	**200**	*e*Pn	**Pn**	**14 47 55.8**	**+0.7**
comp=Z,1.5nm,0.2s							
MOA				Pg	**Pg**	**14 48 07.6**	**-0.8**
comp=Z,1.8nm,0.3s							
MOA				Sg	**Sg**	**14 48 58.8**	**+0.6**
comp=Z,15nm,0.3s							
STHS	**Stebnicka Huta**	**3.84**	**121**	*e*PN	**Pn**	**14 47 56.8**	**+1.6**
STHS				*e*PG	**Pg**	**14 48 10.0**	**+1.6**
STHS				*e*SG	**Sg**	**14 49 00.2**	**+2.0**
ARSA	**Arzberg**	**4.26**	**186**	*e*Pn	**Pn**	**14 48 01.7**	**+0.8**
comp=Z,0.7nm,0.2s							
ARSA				Sg	**Sg**	**14 49 11.2**	**-0.4**
comp=Z,18nm,0.7s							
PSZ	**Piszkesteto**	**4.31**	**144**	⇑*i*P	**Pn**	**14 48 01.2**	**-0.4**
KOLS	**Kolonicke sedl**	**4.68**	**121**	*e*PN	**Pn**	**14 48 07.0**	**+0.4**
KOLS				*e*PG	**Pg**	**14 48 28.4**	**+4.1**
KBA	**Koelnbreinsper**	**4.78**	**204**	*e*Pn	**Pn**	**14 48 09.6**	**+1.3**
comp=Z,0.5nm,0.1s							
KBA				Sg	**Sg**	**14 49 29.4**	**+1.0**
comp=Z,19nm,0.6s							
SOKA Soboth		**4.87**	**189**	Pg	**Pg**	**14 48 26.8**	**-1.3**
comp=Z,1.3nm,0.5s							
SOKA				Sg	**Sg**	**14 49 32.2**	**+1.1**
comp=Z,2.1nm,0.3s							
OBKA Obir		**5.09**	**193**	Pg	**Pg**	**14 48 32.0**	**-0.4**
comp=Z,2.8nm,0.5s							
OBKA				Sg	**Sg**	**14 49 37.4**	**-1.0**
comp=Z,6.2nm,0.5s							
WATA Walderalm		**5.12**	**218**	*e*Pn	**Pn**	**14 48 13.9**	**+1.0**
comp=Z,0.9nm,0.2s							
MYKA Terra Mystica		**5.14**	**200**	Sg	**Sg**	**14 49 40.1**	**+0.4**
comp=Z,5.4nm,0.4s							
WTTA Wattenberg		**5.16**	**217**	*e*Sn	**Sn**	**14 49 12.4**	**-1.3**
comp=Z,1.4nm,0.3s							
WTTA				Sg	**Sg**	**14 49 43.5**	**+3.0**
comp=Z,5.8nm,0.4s							
MOTA Moosalm		**5.30**	**221**	*e*Pn	**Pn**	**14 48 16.8**	**+1.4**
comp=Z,0.6nm,0.4s							
ABTA Abfaltersbach		**5.32**	**208**	Pn	**Pn**	**14 48 17.5**	**+2.1**
comp=Z,3.0nm,0.7s							
SQTA Sankt Quirin		**5.36**	**219**	*e*Pn	**Pn**	**14 48 18.5**	**+2.4**
comp=Z,1.6nm,0.2s							
SQTA				*e*Sn	**Sn**	**14 49 18.9**	**+0.4**
comp=Z,1.5nm,0.2s							
SQTA				Sg	**Sg**	**14 49 48.4**	**+1.5**
comp=Z,6.2nm,0.3s							
DAVA Damuels		**5.88**	**227**	*e*Sn	**Sn**	**14 49 29.0**	**-2.4**
comp=Z,3.9nm,0.5s							
DAVOX Davos/Dischmat		**6.26**	**224**	Pn	**Pn**	**14 48 28.6**	**0.0**
comp=Z,0.2nm,0.3s,baz=356,slow=19,SNR=2.2							
DAVOX				Sn	**Sn**	**14 49 39.8**	**-1.0**
comp=Z,0.5nm,0.3s,baz=242,slow=18,SNR=3.4							
DAVOX				Lg	Lg	14 50 12.4	
comp=Z,0.8nm,0.3s,baz=280,slow=19,SNR=3.4							
DRGR		**6.36**	**135**	⇑*i*P	**Pn**	**14 48 29.5**	**-0.3**
CDF Champ du Feu		**6.51**	**245**	*e*Pn	**Pn**	**14 48 30.3**	**-1.6**
CDF				*e*Sg	**Sb**	**14 50 16.1**	**+8.8**
comp=Z,5.5nm,0.5s							
BZS Buzias		**6.89**	**146**	⇓*i*P	**Pn**	**14 48 37.0**	**0.0**
BURAR Bucovina Array		**7.04**	**120**	⇑*i*P	**Pn**	**14 48 39.3**	**+0.1**
HINF Hinteralfeld		**7.08**	**242**	*e*Pn	**Pn**	**14 48 37.9**	**-1.7**
HINF				*e*Sg	Sg	14 50 33.8	-8.1
comp=Z,5.2nm,0.4s							
HAU Haudompre		**7.25**	**245**	*e*Pn	**Pn**	**14 48 40.4**	**-1.6**
HAU				*e*Sg	Sb	14 50 38.8	+10
comp=Z,2.7nm,0.3s							
GIVF Givet		**7.33**	**264**	*e*Pn	**Pn**	**14 48 41.8**	**-1.2**
GIVF				*e*Sg	**Sg**	**14 50 42.2**	**-7.7**
comp=Z,1.6nm,0.2s							
PAGF Fort de Pagny		**7.34**	**251**	*e*Pn	**Pn**	**14 48 42.1**	**-1.1**
PAGF				*e*Sg	Sb	14 50 40.7	+10
comp=Z,13nm,0.7s							
AKASG Malin Array Be		**8.26**	**90**	Pn	**Pn**	**14 48 55.4**	**-0.3**
comp=Z,0.7nm,0.3s,baz=278,slow=12,SNR=4.5							
HFS Hagfors		**8.78**	**352**	Pn	**Pn**	**14 49 03.0**	**+0.1**
comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=7.5							
HFS				Sn	**Sn**	**14 50 40.3**	**-2.1**
comp=Z,0.1nm,0.3s,baz=171,slow=29,SNR=2.5							
LOR Lormes		**9.07**	**247**	*e*Sg	Sn	14 51 35.9	+46
comp=Z,0.6nm,0.3s							
FINES FINESS Array B		**11.37**	**25**	Pn	**Pn**	**14 49 37.1**	**-1.1**
comp=Z,0.2nm,0.3s,baz=208,slow=11,SNR=7.9							
FINES				Sn	**Sn**	**14 51 40.5**	**-5.4**
comp=Z,0.2nm,0.3s,baz=200,slow=20,SNR=4.9							
EKA Eskdalemuir Ar		**12.15**	**296**	Pn	**Pn**	**14 49 48.8**	**-0.2**
baz=103,slow=14,SNR=4.0							
ARCES ARCESS Array B		**18.64**	**10**	P	**P**	**14 51 11.2**	**-2.5**
comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=7.6							

MAN 09 14:54:44.1, 7.°21N×124.°91E, h30km, mb3.7, ML2.5, MS2.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.66**	**271**	⇑*i*P	Pb	14 54 56.9	-0.2
CTBH				*i* S	Sb	14 55 05.7	-0.3
BUKP	**Musuan**	**0.68**	**13**	*e*P	Pn	14 54 58.0	+0.2
BUKP				*e*S	Sn	14 55 08.1	+0.7
SKMP	**Bagumbayan, Su**	**0.78**	**208**	*e*P	Pb	14 54 59.3	+0.2
SKMP				*e*S	Sn	14 55 10.3	+0.6
CGP	**Cagayan de Oro**	**1.25**	**350**	⇑*e*P	Pb	14 55 10.0	+2.9
PAGZ	**Pagadian**	**1.64**	**293**	*e*P	Pn	14 55 11.4	+0.5
PAGZ				*e*S	Sn	14 55 31.6	+0.6

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*DDA **09** 15:15:08.5, 38.°81N×26.°78E, h27km, ML4.0*
*ATH **09** 15:15:08.3, 38.°76N×26.°86E, h30km±1km, ML3.7/7, Error ellipse: s-maj=3.0km s-min=1.2km az=268.0*
*IDC **09** 15:15:08.0±0.9, 38.°79N×26.°87E, h0km, mb3.6/9, mb1 3.6/14, mb1mx3.5/51, mbtmp3.5/14, ML3.5/5, Error ellipse: s-maj=14.9km s-min=13.9km az=142.0*
*ISCJB **09** 15:15:09.4±0.3, 38.°78N±0.°01×26.°75E±0.°02, h13km±2km, mb3.4/9, Error ellipse: s-maj=2.4km s-min=2.0km az=11.7*
*THE **09** 15:15:09.5, 38.°77N×26.°79E, h7km±1km, ML3.8/7, Error ellipse: s-maj=1.7km s-min=0.6km az=248.0*
*ISK **09** 15:15:09.1, 38.°78N×26.°76E, h17km, ML4.0/25*
ISC 09 15:15:09.9±0.8, 38.°81N±0.°01×26.°75E±0.°02, h11km±5km, n144, σ1°52/187, mb3.6/9, 20C-14D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM Foa		**0.09**	**187**	PG	**Pg**	**15 15 11.9**	**-0.6**
FOCM				SG	**Sg**	**15 15 13.8**	**-0.6**
CAND Candarli		**0.15**	**17**	PG	**Pg**	**15 15 13.8**	**+0.4**
KRBN Karaburun		**0.26**	**215**	PG	**Pg**	**15 15 15.4**	**+0.2**
KRBN				SG	**Sg**	**15 15 19.4**	**+0.6**
ZEDA zmir-Bergama		**0.30**	**58**	⇑*i*P	**Pg**	**15 15 15.9**	**-0.

STEP *i* S **Sg** **15 15 39.8 -0.7**
STEP IAML_P
comp=Z,95μm,0.4s
PSRA Psara 0.96 254 P **Pn** **15 15 29.2 -0.1**
PSRA S **Sn** **15 15 43.3 +0.4**
PSRA AML AML 15 15 44.7
comp=N,23403μm,0.4s
PSRA AML AML 15 15 45.0
comp=E,19849μm,0.6s
EZN Ezine 1.07 342 PN **Pb** **15 15 30.0 -0.3**
EZN Ezine 1.07 342 P **Pg** **15 15 29.5 -0.9**
EZN S **Sn** **15 15 45.0 -0.6**
EZN Ezine 1.07 342 ⇓*i*P **Pb** **15 15 30.0 -0.3**
EZN S **Sg** **15 15 40.2 -4.1**
SMG Samos 1.10 176 P **Pg** **15 15 29.4 -1.6**
SMG S **Sg** **15 15 44.5 -0.8**
SMG Samos 1.10 176 P **Pg** **15 15 29.6 -1.4**
SMG S **Sg** **15 15 43.3 -2.0**
SMG AML AML 15 15 47.9
comp=N,14473μm,0.4s
SMG AML AML 15 15 48.5
comp=E,9209μm,0.3s
BALY Balya 1.15 36 ⇑*i*P **Pb** **15 15 31.1 -0.7**
BALY *i* S **Sn** **15 15 47.9 +0.1**
BOZC Bozcaada 1.17 333 PN **Pn** **15 15 31.9 -0.2**
BOZC Bozcaada 1.17 333 ⇑*i*P **Pb** **15 15 31.5 -0.5**
BOZC *i* S **Sn** **15 15 48.6 +0.6**
GCAM G?zelcaml? 1.17 161 PN **Pb** **15 15 31.1 -1.0**
GCAM G?zelcaml? 1.17 161 *i* P **Pb** **15 15 31.5 -0.5**
GCAM *i* S **Sb** **15 15 46.7 -0.5**
BALB Balikesir 1.21 46 PN **Pb** **15 15 31.8 -1.0**
AYDB Zeytinkoy-Aydi 1.25 133 PN **Pn** **15 15 32.1 -1.2**
GONE Gonen-Balikesi 1.44 30 PN **Pn** **15 15 35.4 -0.4**
AYDN Tasoluk 1.45 142 *i* P **Pn** **15 15 35.9 -0.2**
AYDN IAML_P
comp=Z,9μm,0.1s
MANT Manisa 1.45 102 ⇓*i*P **Pn** **15 15 35.1 -1.2**
MANT *i* S **Sn** **15 15 55.2 -0.3**
MANT IAML_P
comp=Z,1μm,0.1s
KULA Kula-Manisa 1.53 100 PN **Pn** **15 15 36.2 -1.0**
KULA Kula-Manisa 1.53 100 P **Pn** **15 15 36.1 -1.1**
KULA S **Sn** **15 15 54.8 -2.2**
GADA Gvkgeada 1.53 335 PN **Pn** **15 15 36.9 -0.2**
GADA Gvkgeada 1.53 335 P **Pn** **15 15 36.9 -0.2**
GADA S **Sb** **15 15 57.4 -0.2**
DURS Dursunbey 1.56 59 ⇓*i*P **Pn** **15 15 36.8 -0.8**
DURS *i* S **Sn** **15 15 57.6 -0.2**
DURS IAML_P
comp=Z,6μm,0.1s
KNL Balıkesir 1.58 22 *i* P **Pn** **15 15 37.7 -0.1**
KNL *i* S **Sn** **15 15 58.3 +0.1**
KNL IAML_P
comp=Z,14μm,0.2s
GELI Tayfur-Gelibol 1.60 353 PN **Pn** **15 15 37.7 -0.4**
LIA Limnos Island 1.63 312 P **Pn** **15 15 38.4 -0.1**
LIA S **Sg** **15 16 01.1 -1.2**
LIA Limnos Island 1.63 312 P **Pn** **15 15 38.4 -0.1**
LIA AML AML 15 16 03.7
comp=N,3488μm,0.5s
LIA AML AML 15 16 05.0
comp=E,2926μm,0.4s
KRBG Karabiga-Canak 1.64 15 PN **Pn** **15 15 37.9 -0.7**
MLSB Milas 1.71 151 PN **Pn** **15 15 38.5 -1.2**
EDC Edincik 1.76 29 PN **Pn** **15 15 39.8 -0.5**
TNSA Tinos 1.78 225 P **Pn** **15 15 40.0 -0.5**
BODT Bodrum 1.80 165 PN **Pn** **15 15 39.8 -1.0**
ERIK Erikli-Kesan 1.87 355 PN **Pn** **15 15 42.1 +0.3**
RKY Sarkoy-Tekirda 1.91 10 PN **Pn** **15 15 42.1 -0.3**
SMTH Samothraki Isl 1.91 331 P **Pn** **15 15 41.9 -0.4**
SMTH Samothraki Isl 1.91 331 P **Pn** **15 15 41.9 -0.4**
SMTH AML AML 15 16 13.6
comp=N,1146μm,0.6s
SMTH AML AML 15 16 15.0
comp=E,1727μm,0.4s
SART Tekirdag 1.91 10 *i* P **Pn** **15 15 42.4 0.0**
SART *i* S **Sb** **15 16 07.9 -0.7**
KCTX Karacabey (Bur 1.92 40 PN **Pn** **15 15 41.3 -1.2**
ENEZ Enez 1.98 347 PN **Pn** **15 15 43.3 0.0**
APE Apeiranthos 1.98 209 P **Pn** **15 15 41.3 -2.1**
APE Apeiranthos 1.98 209 P **Pn** **15 15 41.3 -2.1**
KESN Edirne-Kesan 2.02 359 *i* P **Pn** **15 15 44.0 -0.1**
KESN *i* S **Sb** **15 16 11.5 -0.5**
YER Yerkesik 2.06 143 PN **Pn** **15 15 43.7 -0.8**
AMGA Amorgos Island 2.08 199 P **Pn** **15 15 42.6 -2.1**
AMGA Amorgos Island 2.08 199 P **Pn** **15 15 42.6 -2.1**
DENT Denizli 2.08 120 PN **Pn** **15 15 43.9 -0.9**
GDZ Gediz 2.15 82 *i* P **Pn** **15 15 45.0 -0.8**
GDZ *i* S **Sg** **15 16 19.7 +0.6**
ALN Alexandroupoli 2.16 346 P **Pn** **15 15 45.5 -0.2**
ALN S **Sn** **15 16 13.5 +1.1**
DAT Datca 2.18 162 PN **Pn** **15 15 45.2 -0.9**
EREA Eretria 2.24 261 P **Pn** **15 15 46.4 -0.5**
EREA S **Sn** **15 16 14.2 -0.3**
EREA Eretria 2.24 261 P **Pn** **15 15 46.1 -0.7**
EREA AML AML 15 16 26.2
comp=N,1012μm,0.6s
EREA AML AML 15 16 26.6
comp=E,644μm,0.6s
DION Dionisos Attik 2.33 253 P **Pn** **15 15 47.8 -0.3**
IOSP Ios island 2.38 209 P **Pn** **15 15 46.6 -2.2**
THAS Thassos island 2.38 320 P **Pn** **15 15 48.4 -0.4**
THAS Thassos island 2.38 320 P **Pn** **15 15 48.0 -0.8**
SERI Serifos 2.43 228 P **Pn** **15 15 47.9 -1.6**
SERI AML AML 15 16 29.4
comp=E,559μm,0.5s
SERI AML AML 15 16 36.2
comp=N,574μm,0.6s
MRKA Markates 2.47 269 P **Pn** **15 15 49.7 -0.4**
MRKA Markates 2.47 269 P **Pn** **15 15 49.6 -0.4**
DALY Dalyan (Mula) 2.50 142 PN **Pn** **15 15 49.1 -1.3**
RDO Rodhopi 2.51 339 P **Pn** **15 15 50.8 +0.2**
OUR Ouranopolis 2.62 306 P **Pn** **15 15 52.3 +0.2**
PAIG Paliouri 2.63 296 P **Pn** **15 15 51.9 -0.3**
SANT Santorini 2.64 203 ⇑*i*P **Pg** **15 16 01.2 +0.8**
SANT Santorini 2.64 203 S **Sg** **15 16 36.1 +1.5**
YLV Yalova 2.68 48 S **Sg** **15 16 38.1 +2.0**
MHLA Plaka, Milos I 2.76 223 P **Pn** **15 15 53.1 -0.9**
KAVA Kavala 2.78 323 P **Pn** **15 15 54.2 -0.1**
VIL2 Platees 2.79 259 P **Pn** **15 15 54.2 -0.2**
XOR Xorichti 2.82 283 P **Pn** **15 15 54.9 0.0**
PHSR Pinarhisar 2.88 12 ⇑*i*P **Pb** **15 15 59.3 -2.0**
PHSR Pinarhisar 2.88 12 S **Sn** **15 16 32.5 +2.1**
CTYL Yalikoy Yolu 2.92 23 ⇓*i*P **Pb** **15 16 02.0 +0.2**
CTYL Yalikoy Yolu 2.92 23 S **Sb** **15 16 37.5 0.0**
KLYT Kilyos 3.01 35 ⇑*i*P **Pb** **15 16 05.0 +1.5**
KLYT Kilyos 3.01 35 S **Sb** **15 16 42.5 +2.2**
DID Didima 3.06 246 P **Pn** **15 15 57.3 -0.8**
SILT Sile 3.23 43 ⇓*i*P **Pg** **15 16 09.1 -2.7**
SILT Sile 3.23 43 S **Sb** **15 16 49.0 +2.4**
VLI Veliai 3.67 237 P **Pn** **15 16 05.5 -1.0**
KLV Kalavryta, Ach 3.69 260 P **Pn** **15 16 06.8 0.0**
IDI Anoyia 3.81 203 Pn **Pn** **15 16 07.0 -1.5**
comp=N,0.7nm,0.3s,baz=33,slow=14,SNR=7.1
IDI Pg **Pb** **15 16 19.3 +2.2**
comp=N,1.0nm,0.3s,baz=1.9,slow=14,SNR=6.2
IDI Lg Lg 15 17 09.6
comp=N,1.1nm,0.3s,baz=293,slow=21,SNR=1.1
KYTH Kithira 3.88 230 P **Pn** **15 16 08.3 -1.2**
VAY Valandovo 4.07 309 *i* Pn **Pn** **15 16 07.3 -4.7**
STIP Stip 4.53 311 *i* Pn **Pn** **15 16 17.9 -0.4**
VTS Vitosha 4.65 326 ⇑*i*P **Pn** **15 16 19.1 -1.0**
VTS Vitosha 4.65 326 S **Sn** **15 17 07.7 -6.4**
KRUS Krusevo 4.93 303 *i* Pn **Pn** **15 16 25.6 +1.7**
ICOR Ion Corvin 5.37 8 ⇓*i*P **Pn** **15 16 32.9 +3.1**
ICOR Ion Corvin 5.37 8 S **Sg** **15 18 04.3 +2.3**
BRTR Keskin Array B 5.43 78 Pn **Pn** **15 16 30.9 +0.1**
comp=N,0.9nm,0.3s,baz=255,slow=14,SNR=19
BRTR Pg **Pg** **15 16 50.9 -2.9**
comp=N,0.6nm,0.3s,baz=262,slow=16,SNR=18
BRTR Lg Lg 15 17 57.1
baz=264,slow=29,SNR=1.8
TLB Topalu 5.86 9 ⇓*i*P **Pn** **15 16 40.4 +3.9**
CFR Carcaliu 6.45 9 ⇓*i*P **Pn** **15 16 48.0 +3.3**
CFR Carcaliu 6.45 9 S **Sg** **15 18 44.3 +7.5**
MLR Muntele Rosu 6.71 355 Pn **Pn** **15 16 49.4 +1.1**
comp=N,0.7nm,0.3s,baz=336,slow=12,SNR=6.9
MLR Sn **Sn** **15 18 02.8 -1.9**
comp=N,0.9nm,0.3s,baz=234,slow=23,SNR=1.7
MLR Lg Lg 15 18 47.5
comp=N,0.6nm,0.3s,baz=155,slow=8.6,SNR=4.9
MLR Muntele Rosu 6.71 355 ⇑*i*P **Pn** **15 16 49.2 +0.9**

ARR Arges 6.74 347 ⇓*i*P **Pn** **15 16 49.0 +0.2**
ARR Arges 6.74 347 S **Sn** **15 18 01.3 -4.2**
VOIR 6.74 350 ⇑*i*P **Pn** **15 16 50.1 +1.3**
VOIR 6.74 350 S **Sg** **15 18 44.5 -1.8**
HERR Herculane 6.88 333 ⇓*i*P **Pn** **15 16 50.3 -0.2**
LOT Lotru 7.00 343 ⇓*i*P **Pn** **15 16 53.1 +0.8**
PLOR Plostina 7.04 359 ⇓*i*P **Pn** **15 16 55.3 +2.5**
MDVR Moldovita 7.05 329 ⇑*i*P **Pn** **15 16 52.9 -0.1**
VRI Vrincioaia 7.05 360 ⇑*i*P **Pn** **15 16 55.5 +2.5**
TESR Tescani 7.70 360 ⇑*i*P **Pn** **15 17 03.4 +1.5**
BZS Buzias 7.79 332 ⇑*i*P **Pn** **15 17 03.0 -0.2**
BZS Buzias 7.79 332 S **Sg** **15 19 15.5 -4.4**
BIZ Bicaz 8.14 357 ⇓*i*P **Pn** **15 17 09.6 +1.7**
DRGR 8.51 341 ⇑*i*P **Pn** **15 17 13.8 +0.7**
MMAI Mount Meron Ar 9.09 127 Pn **Pn** **15 17 19.0 -2.1**
comp=N,1.9nm,0.3s,baz=307,slow=12,SNR=7.5
VYHS Vyhne 11.24 332 *e*PN **Pn** **15 17 54.2 +3.8**
GERES GERESS Array B 13.74 321 Pn **Pn** **15 18 25.6 +1.1**
comp=N,0.1nm,0.3s,baz=135,slow=11,SNR=2.1
FINES FINESS Array B 22.67 359 P **P** **15 20 11.3 +0.5**
comp=N,0.8nm,0.6s,baz=164,slow=7.5,SNR=5.2
HFS Hagfors 22.89 343 P **P** **15 20 13.0 -0.1**
comp=N,1.2nm,0.7s,baz=185,slow=33,SNR=2.7
ESDC Sonseca Array 23.75 282 P **P** **15 20 24.0 +1.9**
comp=N,0.3nm,0.5s,baz=79,slow=10,SNR=2.6
GEYT Alibeck 24.56 82 P **P** **15 20 29.1 -0.6**
comp=N,2.1nm,0.9s,baz=266,slow=8.9,SNR=5.0
AKTO Aktyubinsk 24.92 52 P **P** **15 20 32.0 -0.8**
comp=N,0.4nm,0.3s,baz=238,slow=12,SNR=3.9
EKA Eskdalemuir Ar 25.95 319 P **P** **15 20 42.4 +0.4**
comp=N,0.4nm,0.6s,baz=115,slow=12,SNR=4.3
MKAR Makanchi Array 40.78 60 P **P** **15 22 50.6 -0.3**
comp=N,1.0nm,0.8s,baz=270,slow=7.0,SNR=9.1
ZALV Zalesovo Beam 41.61 49 P **P** **15 22 56.9 -0.8**
comp=N,1.0nm,0.6s,baz=267,slow=8.9,SNR=4.9
WHN Wuhan 69.89 67 *e*P **P** **15 26 24.6 +3.7**
YKA Yellowknife Ar 74.37 342 P **P** **15 26 46.5 -0.7**
comp=N,0.5nm,0.7s,baz=32,slow=5.9,SNR=3.6

*IDC **09** 15:18:21.9±1.1, 35°.80N×141°.30E, h0km, mb3.6/4, mb1 3.7/7, mb1mx3.4/45, mbtmp3.6/7, ML3.9/2, MS2.7/1, Ms1 2.7/1, ms1mx2.5/37, Error ellipse: s-maj=26.4km s-min=19.4km az=81.0*
*ISCJB **09** 15:18:23.7±0.7, 35°.81N±0°.04×141°.35E±0°.07, h26km, mb3.9/6, Error ellipse: s-maj=8.0km s-min=6.4km az=177.2*
*JMA **09** 15:18:26.6±0.1, 35°.81N×141°.12E, h35km±1km, M3.4 Broadband fault plane solution: P waves. NP1: φs=107.00000°, δ73.00000°, λ-81.00000°. NP2: φs=259.00000°, δ19.00000°, λ-117.00000°. Principal axes: T Plg27.0000°, Azm190.0000°; N Plg8.0000°, Azm284.0000°; P Plg61.0000°, Azm30.0000°;*

ISC 09 15:18:25.6±0.9, 35.84N±0°.05×141°.26E±0°.08, h26km, n26, σ1§06/25, mb3.7/6, 3C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.35**	**248**	⇓P	**Pb**	**15 18 33.5**	**0.0**
CHOJ				*e*S	**Sb**	**15 18 38.3**	**-0.5**
JIHU	**Itakohorinouch**	**0.61**	**282**	P	**Pb**	**15 18 37.1**	**-0.6**
JHYU	**Hitachinakayam**	**0.74**	**313**	P	**Pb**	**15 18 39.9**	**0.0**
JYT	**Yasato**	**0.95**	**295**	⇑P	**Pn**	**15 18 41.8**	**-1.4**
JHO	**Hitachi**	**0.98**	**324**	⇑P	**Pn**	**15 18 43.0**	**-0.3**
JCN	**Nagara**	**0.96**	**244**	⇓P	**Pn**	**15 18 43.2**	**-0.1**
BSO4	**Boso 4**	**1.13**	**222**	P	**Pn**	**15 18 45.0**	**-0.7**
BSO3	**Boso 3**	**1.20**	**211**	⇑P	**Pn**	**15 18 45.7**	**-0.8**
BSO1	**Boso 1**	**1.20**	**191**	P	**Pn**	**15 18 46.0**	**-0.2**
JAG	**Ashikaga**	**1.57**	**292**	P	**Pn**	**15 18 50.9**	**-1.0**
MJAR	**Matsushiro Arr**	**2.56**	**287**	Pn	**Pn**	**15 19 05.8**	**+0.3**
	0.8nm,0.3s,baz=93,slow=8.4,SNR=71						
MJAR				Sn	**Sn**	**15 19 37.2**	**+1.4**
	0.7nm,0.3s,baz=88,slow=15,SNR=2.1						
MAT	**Matsushiro**	**2.57**	**287**	P	**Pn**	**15 19 04.8**	**-0.7**
MAT				S	**Pb**	**15 19 11.0**	**0.0**
JHJ	**Hachijo jima 2**	**2.97**	**205**	Pn	**Pn**	**15 19 10.2**	**-0.9**
	23nm,0.3s,baz=154,slow=23,SNR=15						
JHJ				Sn	**Sn**	**15 19 43.8**	**-2.1**
	54nm,0.3s,baz=62,slow=24,SNR=9.7						
JHJ				LR	LR	15 20 27.2	
	comp=Z,137nm,21.1s,baz=50,slow=42						
ASAJ	**Asahikawa**	**8.33**	**7**	Pn	**Pn**	**15 20 24.1**	**-0.6**
	1.8nm,0.3s,baz=213,slow=8.3,SNR=25						
ASAJ				Sn	**Sn**	**15 21 55.2**	**-2.7**
	0.3nm,0.3s,baz=144,slow=18,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**27.66**	**119**	T	T	15 53 14.3	
	baz=311,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**27.67**	**119**	T	T	15 53 12.3	
	baz=311,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**27.68**	**119**	T	T	15 53 15.8	
	baz=311,slow=75,SNR=35						
H11S1	**WAKE ISLAND Hy**	**28.34**	**121**	T	T	15 54 08.0	
	baz=312,slow=75,SNR=36						
H11S3	**WAKE ISLAND Hy**	**28.34**	**121**	T	T	15 54 08.1	
	baz=312,slow=75,SNR=27						
H11S2	**WAKE ISLAND Hy**	**28.35**	**121**	T	T	15 54 11.1	
	baz=312,slow=75,SNR=19						
SONM	**Songino Array**	**28.37**	**306**	P	**P**	**15 24 17.8**	**+0.1**
	0.3nm,0.4s,baz=111,slow=8.2,SNR=2.7						
MKAR	**Makanchi Array**	**44.66**	**303**	P	**P**	**15 26 36.4**	**+0.4**
	0.7nm,0.6s,baz=91,slow=9.8,SNR=9.5						
ILAR	**Eielson Array**	**50.57**	**32**	P	**P**	**15 27 22.2**	**+0.6**
	0.3nm,0.6s,baz=264,slow=6.0,SNR=5.8						
WRA	**Warramunga Arr**	**55.86**	**188**	P	**P**	**15 28 01.0**	**+0.1**
	13nm,0.4s,baz=357,slow=6.8,SNR=13						
ASAR	**Alice Springs**	**59.59**	**188**	P	**P**	**15 28 27.0**	**-0.1**
	0.5nm,0.9s,baz=3.5,slow=6.2,SNR=4.1						
BRG	**Berggiesshubel**	**82.02**	**329**	*i* P	**P**	**15 30 45.3**	**+2.1**
	3.0nm,0.8s						

MAN 09 15:34:19.1, 7°.30N×124°.79E, h2km, mb4.1, ML2.9, MS2.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.55**	**262**	⇓*i*P	Pb	15 34 31.3	-0.1
CTBH				*i* S	Sb	15 34 40.3	+0.6
BUKP	**Musuan**	**0.64**	**25**	*e*P	Pg	15 34 31.7	+0.3
BUKP				*e*S	Sb	15 34 42.2	-0.3
SKMP	**Bagumbayan, Su**	**0.81**	**198**	*e*P	Pg	15 34 34.0	-0.7
SKMP				*e*S	Sg	15 34 42.2	-3.0
CGP	**Cagayan de Oro**	**1.15**	**355**	⇑*e*P	Pg	15 34 41.2	-0.1
CGP				*e*S	Sg	15 34 56.2	-0.1
DDMP	**Don Marcelino,**	**1.50**	**142**	*e*P	Pn	15 34 46.9	-0.1
DDMP				*e*S	Sg	15 35 08.0	+0.7
PAGZ	**Pagadian**	**1.50**	**292**	*e*P	Pn	15 34 46.2	-0.9
PAGZ				*e*S	Sg	15 35 07.4	0.0

MEX 09 15:43:19.6±0.3, 17°.30N×101°.42W, h12km±38km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.31**	**352**	*i* P	Pg	15 43 25.6	-0.3
ZIIG				*i* S	Sg	15 43 30.1	-0.1
ARIG	**Puente Sto Nin**	**1.41**	**46**	*i* P	Pn	15 43 41.6	-3.6
ARIG				*e*S	Sn	15 43 58.5	-5.2
MMIG	**Aquila**	**2.08**	**299**	*e*P	Pn	15 43 50.9	-3.5
PLIG	**Platanillo**	**2.13**	**59**	*i* P	Pn	15 43 51.6	-3.4
PLIG				*e*S	Sn	15 44 17.2	-4.3

IGQ 09 15:46:21.7±0.6, 2°S±3°×7°8W±°, h12km, MLv4.0, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APUY	**Puyo**	**0.99**	**345**	P	Pg	15 46 39.8	-1.0
APUY				S	Sb	15 46 54.2	+0.3
BPAT	**Tungurahua Vol**	**1.15**	**322**	P	Pb	15 46 42.4	-1.5
BPAT				S	Sb	15 46 58.1	-0.8
PAT1	**Patacocha**	**1.15**	**322**	P	Pb	15 46 42.4	-1.4
PAT1				S	Sb	15 46 58.2	-0.7
ARRY	**Arrayan**	**1.16**	**321**	P	Pb	15 46 42.1	-1.8
BMAS	**Trigal station**	**1.18**	**321**	P	Pb	15 46 42.6	-1.7
BULB	**Ulba Tungurahu**	**1.19**	**325**	P	Pb	15 46 42.7	-1.8
BULB				S	Sb	15 46 59.0	-0.9
RETU	**Refugio**	**1.20**	**323**	P	Pb	15 46 42.8	-1.9
BRUN	**Tungurahua Vol**	**1.20**	**326**	P	Pb	15 46 43.2	-1.5
BRUN				S	Sb	15 46 59.9	-0.3
RUN5	**Runtun**	**1.21**	**325**	P	Pn	15 46 43.3	-1.5
BBIL	**Ulba Tungurahu**	**1.22**	**322**	P	Pn	15 46 43.5	-1.5
BBIL				S	Sb	15 47 00.5	-0.4
POND	**Pondoa**	**1.22**	**324**	P	Pn	15 46 43.3	-1.7
BIL2	**Estacion Bilba**	**1.23**	**321**	P	Pn	15 46 43.9	-1.1
ARDO	**Archidona, Ten**	**1.42**	**357**	P	Pn	15 46 45.8	-1.6
ARDO				S	Sn	15 47 04.9	-1.2
PISA	**Pisayambo**	**1.50**	**334**	P	Pn	15 46 48.2	-0.8
COHC	**Cochancay**	**1.52**	**268**	P	Pn	15 46 49.3	+0.5
COHC				S	Sg	15 47 10.1	-0.6
BMOR	**Cotopaxi Volca**	**1.83**	**337**	S	Sb	15 47 18.6	+0.1
MILO	**Milagro-Astudi**	**1.83**	**274**	P	Pb	15 46 54.7	-0.4
MILO				S	Sg	15 47 20.7	+0.1
BTAM	**Cotopaxi Volca**	**1.85**	**339**	P	Pn	15 46 53.7	-0.2
BTAM				S	Sb	15 47 19.6	+0.2
BREF	**Cotopaxi Volca**	**1.88**	**338**	P	Pn	15 46 54.3	+0.1
BREF				S	Sb	15 47 19.8	-0.2
BVC2	**Cotopaxi Volca**	**1.88**	**339**	P	Pn	15 46 54.3	+0.1
BVC2				S	Sb	15 47 20.3	+0.3
VC1	**Cotopaxi 1**	**1.89**	**339**	P	Pn	15 46 54.2	-0.1
BNAS	**Cotopaxi Volca**	**1.89**	**337**	P	Pn	15 46 54.9	+0.6
ANTS	**Antisana-Sarah**	**1.96**	**347**	P	Pn	15 46 55.9	+0.6
ANTS				S	Sb	15 47 21.3	-1.0
ANTG	**Antisana-Guama**	**1.97**	**345**	P	Pn	15 46 55.2	-0.3
PITA	**Cotopaxi Volc**	**1.98**	**339**	P	Pb	15 46 56.7	-1.2
ANTI	**Antisana**	**2.00**	**348**	P	Pn	15 46 55.9	-0.1
REVS	**Reventador Sur**	**2.30**	**3**	P	Pn	15 47 00.3	+0.6
CASC	**Dorado de Casc**	**2.57**	**9**	P	Pb	15 47 05.9	-1.9

*IDC **09** 15:50:30.0±1.3, 43°.38N×144°.11E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/41, mbtmp3.6/8, ML2.4/1, Error ellipse: s-maj=30.8km s-min=15.4km az=16.0*
*ISCJB **09** 15:50:31.7±0.4, 43°.33N±0°.04×143°.95E±0°.04, h18km±4km, mb3.5/7, Error ellipse: s-maj=6.8km s-min=4.4km az=164.5*
*JMA **09** 15:50:31.9, 43°.34N×143°.98E, h7km±1km, M3.3 Broadband fault plane solution: P waves. NP1: φs=35.00000°, δ57.00000°, λ80.00000°. NP2: φs=232.00000°, δ35.00000°, λ104.00000°. Principal axes: T Plg76.0000°, Azm276.0000°; N Plg8.0000°, Azm40.0000°; P Plg11.0000°, Azm132.0000°;*
JMA Felt I J1.
*SKHL **09** 15:50:32.3±0.8, 43°.05N×144°.00E, h41km±2km, mb4.3/5*
*MOS **09** 15:50:33.6±1.2, 43°.30N×143°.99E, h41km, mb4.0/1, Error ellipse: s-maj=18.3km s-min=11.5km az=135.1*

ISC 09 15:50:31.4±0.9, 43°.36N±0°.03×144°.03E±0°.03, h10km±7km, n36, σ1§13/43, mb3.5/7, 1C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.20**	**251**	⇓P	**Pg**	**15 50 35.3**	**-0.3**
JAR				*e*S	**Sg**	**15 50 38.1**	**-0.4**
JOB	**Onbets**	**0.48**	**198**	⇓P	**Pg**	**15 50 40.6**	**-0.1**
JOB				*e*S	**Sg**	**15 50 48.0**	**+1.0**
JNK	**Nakash**	**0.55**	**66**	⇓P	**Pb**	**15 50 43.0**	**0.0**
JAK	**Akkeshi**	**0.61**	**127**	⇓P	**Pg**	**15 50 43.4**	**+0.3**
JTKR	**Abashiri--Toko**	**0.61**	**352**	⇓P	**Pb**	**15 50 43.9**	**-0.3**
JMP	**Maruseppu**	**0.81**	**323**	⇓P	**Pg**	**15 50 47.1**	**+0.1**
JKHN	**Kushirohamanak**	**0.87**	**108**	P	**Pb**	**15 50 48.1**	**-0.4**
JKHN				S	**Sn**	**15 51 00.8**	**-1.5**
JCH	**Churui**	**0.89**	**214**	P	**Pb**	**15 50 47.4**	**-1.5**
GLVR	**Golovnino**	**1.15**	**70**	*e*PN	**Pn**	**15 50 53.0**	**-0.4**
GLVR				*i* S	**Sg**	**15 51 09.7**	**+1.5**
GLVR				pmax	pmax		
	comp=Z,165nm,0.3s						
GLVR				pmax	pmax		
	comp=N,103nm,0.4s						
GLVR				pmax	pmax		
	comp=E,67nm,0.2s						
GLVR				smax	smax		
	comp=N,5μm,0.3s						
GLVR				smax	smax		
	comp=E,7μm,0.2s						
GLVR	**Golovnino**	**1.15**	**70**	*e*P	**Pn**	**15 50 53.0**	**-0.4**
GLVR				AMB	AMB	15 50 55.0	
	comp=E,165nm,0.4s						
GLVR				*i* S	**Sg**	**15 51 09.0**	**+0.8**
GLVR				A	A	15 51 10.0	
	comp=E,499nm,0.3s						
GLVR				A	A	15 51 10.0	
	comp=E,710nm,0.3s						
JKA	**Kamikawa-asahi**	**1.28**	**306**	*e*P	**Pg**	**15 50 56.0**	**0.0**
ASAJ	**Asahikawa**	**1.28**	**306**	Pg	**Pg**	**15 50 56.0**	**0.0**
	comp=E,113nm,0.3s,baz=151,slow=13,SNR=1786						
ASAJ				Lg	Lg	15 51 12.9	
	comp=E,86nm,0.3s,baz=246,slow=33,SNR=25						
ASAJ	**Asahikawa**	**1.28**	**306**	PN	**Pg**	**15 50 56.0**	**0.0**
GRPR	**Tuman**	**1.41**	**63**	*e*PN	**Pb**	**15 50 57.4**	**-0.3**
GRPR				*e*S	**Sg**	**15 51 16.6**	**-0.1**
GRPR				pmax	pmax		
	comp=N,69nm,0.5s						
GRPR				pmax	pmax		
	comp=E,97nm,0.5s						
GRPR				pmax	pmax		
	comp=Z,225nm,0.5s						
GRPR				smax	smax		
	comp=N,336nm,0.3s						
GRPR				smax	smax		
	comp=E,511nm,0.4s						
GRPR	**Tuman**	**1.41**	**63**	*e*P	**Pb**	**15 50 57.7**	**0.0**
GRPR				AMB	AMB	15 51 02.0	
	comp=E,69nm,0.5s						
GRPR				AMB	AMB	15 51 02.0	
	comp=E,97nm,0.5s						
GRPR				AMB	AMB	15 51 02.0	
	comp=E,225nm,0.5s						
GRPR				*e*S	**Sg**	**15 51 16.0**	**-0.7**
GRPR				A	A	15 51 19.0	
	comp=E,336nm,0.4s						
GRPR				A	A	15 51 19.0	
	comp=E,511nm,0.4s						
LAGR	**Lagunnoye**	**1.45**	**61**	*e*PN	**Pb**	**15 50 58.5**	**+0.1**
LAGR				*e*S	**Sg**	**15 51 18.6**	**+0.7**
LAGR				pmax	pmax		
	comp=N,72nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,275nm,0.4s						
LAGR				pmax	pmax		
	comp=E,143nm,0.3s						
LAGR				smax	smax		
	comp=E,1μm,0.4s						
LAGR				smax	smax		
	comp=N,1μm,0.3s						
LAGR	**Lagunnoye**	**1.45**	**61**	*e*P	**Pb**	**15 50 58.0**	**-0.4**
LAGR				AMB	AMB	15 51 01.0	
	comp=N,143nm,0.4s						
LAGR				*e*S	**Sg**	**15 51 18.0**	**+0.1**
LAGR				A	A	15 51 19.0	
	comp=N,1μm,0.5s						
LAGR				A	A	15 51 19.0	
	comp=N,1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.49**	**62**	⇑*i*PN	**Pb**	**15 50 59.0**	**0.0**
YUK				*i* S	**Sg**	**15 51 19.2**	**0.0**
YUK				pmax	pmax		
	comp=Z,128nm,0.3s						
YUK				pmax	pmax		
	comp=N,141nm,0.4s						
YUK				pmax	pmax		
	comp=E,

KUR A A 15 52 15.0
comp=N,45nm,0.3s
KUR A A 15 52 15.0
comp=N,42nm,0.3s
MJAR Matsushiro Arr 8.15 215 Pn **Pn 15 52 31.5 +1.9**
comp=N,0.0nm,0.3s,baz=25,slow=13,SNR=6.1
SONM Songino Array 26.53 293 P **P 15 56 09.7 +0.6**
comp=N,0.6nm,0.7s,baz=96,slow=9.0,SNR=3.2
H11N2 WAKE ISLAND Hy 30.38 134 T T 16 27 52.4
baz=328,slow=75,SNR=29
H11N1 WAKE ISLAND Hy 30.39 134 T T 16 27 53.3
baz=328,slow=75,SNR=19
H11N3 WAKE ISLAND Hy 30.40 134 T T 16 27 55.0
baz=328,slow=75,SNR=21
H11S1 WAKE ISLAND Hy 31.30 135 T T 16 29 05.2
baz=328,slow=76,SNR=34
H11S3 WAKE ISLAND Hy 31.30 135 T T 16 29 04.3
baz=328,slow=76,SNR=25
H11S2 WAKE ISLAND Hy 31.31 135 T T 16 29 09.0
baz=328,slow=76,SNR=25
ZALV Zalesovo Beam 39.42 307 P **P 15 58 01.2 +0.1**
comp=N,0.7nm,0.4s,baz=68,slow=8.0,SNR=3.8
MKAR Makanchi Array 42.75 297 P **P 15 58 28.4 -0.3**
comp=N,0.7nm,0.7s,baz=80,slow=8.2,SNR=7.9
ILAR Eielson Array 43.13 36 P **P 15 58 32.0 +0.5**
comp=N,0.6nm,0.8s,baz=258,slow=4.4,SNR=9.2
ILAR Eielson Array 43.13 136 P **P 15 58 32.0 +0.5**
YKA Yellowknife Ar 57.37 33 P **P 16 00 19.3 0.0**
comp=N,0.2nm,0.4s,baz=300,slow=6.1,SNR=3.3
FINES FINESS Array B 64.17 332 P **P 16 01 05.1 -0.5**
comp=N,0.6nm,0.6s,baz=76,slow=5.9,SNR=3.4
TXAR Lajitas Array 84.73 54 P **P 16 03 05.8 0.0**
comp=N,0.1nm,0.6s,baz=316,slow=2.5,SNR=2.6

*IDC **09** 15:59:43.9±1.0, 5°.28S×133°.76E, h0km, mb3.7/4, mb1 4.1/9, mb1mx3.9/29, mbtmp4.0/9, ML4.1/4, MS3.2/2, Ms1 3.2/2, ms1mx2.7/33, Error ellipse: s-maj=40.2km s-min=19.3km az=66.0*
*ISCJB **09** 15:59:46.9±0.9, 5°.49S±0°.07×133°.65E±0°.08, h35km, mb3.5/4, Error ellipse: s-maj=11.7km s-min=9.9km az=153.6*
ISC 09 15:59:49.1±0.9, 5°.59S±0°.08×133°.71E±0°.09, h35km, n13, σ2§10/16, mb3.8/4, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**10.96**	**245**	Pn	**Pn**	**16 02 25.3**	**+1.8**
	1.7nm,0.3s,baz=86,slow=14,SNR=3.2						
BATI				Sn	**Sn**	**16 04 25.7**	**+0.7**
	5.4nm,0.3s,baz=126,slow=22,SNR=4.3						
PMG	**Port Moresby**	**13.86**	**107**	LR	LR	16 09 16.8	
	comp=Z,121nm,19.2s,baz=306,slow=41						
KAPI	**Kappang**	**13.91**	**272**	LR	LR	16 08 33.0	
	comp=Z,72nm,20.9s,baz=97,slow=38						
WRA	**Warramunga Arr**	**14.28**	**178**	Pn	**Pn**	**16 03 09.7**	**+0.7**
	0.0nm,0.3s,baz=350,slow=13,SNR=1.8						
WRA				Sn	**Sn**	**16 05 43.9**	**-2.4**
	8.3nm,0.3s,baz=358,slow=24,SNR=19						
FITZ	**Fitzroy Crossi**	**14.72**	**212**	Pn	**Pn**	**16 03 16.9**	**+1.9**
	0.8nm,0.3s,baz=36,slow=10,SNR=21						
FITZ				Sn	**Sn**	**16 05 53.2**	**-3.8**
	1.2nm,0.3s,baz=200,slow=18,SNR=8.2						
ASAR	**Alice Springs**	**17.98**	**179**	P	**P**	**16 03 58.1**	**+1.4**
	0.3nm,0.3s,baz=355,slow=11,SNR=43						
ASAR				S	**Sn**	**16 07 12.8**	**-3.2**
	0.2nm,0.3s,baz=358,slow=28,SNR=4.2						
CTA	**Charters Tower**	**18.88**	**141**	P	**Pn**	**16 04 08.0**	**+0.6**
	0.3nm,0.3s,baz=331,slow=13,SNR=3.9						
STKA	**Stephens Creek**	**27.18**	**165**	P	**P**	**16 05 32.1**	**+2.6**
	1.8nm,0.8s,baz=330,slow=11,SNR=5.1						
CMAR	**Chiang Mai Arr**	**41.78**	**306**	P	**P**	**16 07 34.6**	**-1.0**
	0.3nm,0.7s,baz=129,slow=7.1,SNR=2.8						
CMAR				PcP	**PcP**	**16 09 32.4**	**+0.9**
	0.7nm,0.9s,baz=141,slow=3.0,SNR=4.3						
MKAR	**Makanchi Array**	**69.13**	**325**	P	**P**	**16 10 50.2**	**-1.7**
	0.6nm,0.6s,baz=122,slow=8.1,SNR=6.3						
ZALV	**Zalesovo Beam**	**72.01**	**332**	P	**P**	**16 11 07.0**	**-2.3**
	0.3nm,0.3s,baz=119,slow=8.4,SNR=2.6						
CPUP	**Villa Florida**	**146.51**	**162**	PKPbc	**PKPab**	**16 19 28.4**	**0.0**
	5.0nm,1.1s,baz=206,slow=2.0,SNR=6.2						
LPAZ	**La Paz**	**149.35**	**136**	PKPbc	**PKiKP**	**16 19 37.0**	**-0.3**
	1.4nm,0.9s,baz=314,slow=3.5,SNR=3.8						

*NEIC **09** 16:42:11.6±1.1, 11°.15N×127°.66E, h10km, mb4.2/2, Error ellipse: s-maj=91.7km s-min=9.6km az=68.0*
*IDC **09** 16:42:13.7±4.2, 11°.21N×126°.84E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.5/40, mbtmp3.8/4, Error ellipse: s-maj=322.6km s-min=30.1km az=68.0*
*ISCJB **09** 16:42:18.1±1.2, 11°.22N±0°.04×126°.69E±0°.07, h41km±11km, mb3.9/6, Error ellipse: s-maj=12.1km s-min=6.6km az=170.3*
*MAN **09** 16:42:18.1, 11°.21N×126°.65E, h29km, mb4.7, ML3.6, MS3.6*
ISC 09 16:42:18.5±2.2, 11°.26N±0°.04×126°.66E±0°.09, h28km±14km, n23, σ1§32/31, mb3.8/6, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.24**	**286**	*e*P	**Pn**	**16 42 39.3**	**-0.8**
BESP				*e*S	**Sb**	**16 42 58.4**	**+1.4**
PLP	**Palo**	**1.65**	**267**	⇓*e*P	**Pn**	**16 42 45.5**	**-0.2**
PLP				*e*S	**Sn**	**16 43 04.7**	**-1.4**
SCPH	**Surigao**	**1.86**	**218**	⇓*i*P	Pb	16 42 56.1	+4.2
SCPH				*i* S	**Sb**	**16 43 16.2**	**+1.3**
OCLP	**Ormoc**	**2.02**	**264**	*e*P	**Pb**	**16 42 52.5**	**-2.1**
OCLP				*e*S	**Sn**	**16 43 13.2**	**-2.0**
MSLP	**Maasin**	**2.09**	**238**	*e*P	**Pn**	**16 42 51.8**	**0.0**
MSLP				*e*S	**Sn**	**16 43 17.7**	**+0.8**
CNP	**Cataman**	**2.32**	**303**	*e*P	**Pn**	**16 42 54.2**	**-0.7**
CNP				*e*S	**Sn**	**16 43 24.3**	**+1.9**
BUTP	**Butuan**	**2.49**	**204**	*e*P	**Pn**	**16 42 57.6**	**+0.3**
BUTP				*e*S	**Sn**	**16 43 25.8**	**-1.1**
LLP	**Lapu-Lapu**	**2.81**	**251**	*e*P	**Pb**	**16 43 07.3**	**-0.6**
LLP				*e*S	**Sn**	**16 43 35.3**	**+0.7**
PVCP	**Virac**	**3.37**	**314**	*e*P	**Pn**	**16 43 10.5**	**+1.1**
PVCP				*e*S	**Sn**	**16 43 47.1**	**-1.5**
BUKP	**Musuan**	**3.71**	**205**	*e*P	**Pn**	**16 43 14.5**	**+0.4**
BUKP				*e*S	**Sn**	**16 43 56.5**	**-0.4**
DCPH	**Dipolog City**	**4.20**	**231**	⇑*e*P	**Pn**	**16 43 24.5**	**+3.6**
PAGZ	**Pagadian**	**4.68**	**224**	*e*P	**Pn**	**16 43 27.0**	**-0.5**
NACB	**Ninganchiao**	**13.72**	**340**	*e*Pn	**Pn**	**16 45 32.5**	**+1.2**
FAKI	**Fak Fak**	**15.14**	**158**	*e*Pn	Pn	16 45 39.9	-11
ASAR	**Alice Springs**	**35.43**	**168**	P	**P**	**16 49 11.2**	**-1.3**
	0.3nm,0.3s,baz=347,slow=7.8,SNR=2.4						
MK31	**Makanchi Array**	**51.48**	**322**	*e*P	**P**	**16 51 22.7**	**+1.0**
	1.0nm,0.8s						
MK32	**Makanchi Array**	**51.48**	**322**	*e*P	**P**	**16 51 22.8**	**+1.2**
MKAR	**Makanchi Array**	**51.48**	**322**	P	**P**	**16 51 22.8**	**+1.2**
	1.5nm,0.7s,baz=116,slow=8.0,SNR=15						
ZALV	**Zalesovo Beam**	**53.95**	**331**	P	**P**	**16 51 39.5**	**-0.2**
	0.5nm,0.4s,baz=128,slow=9.5,SNR=3.6						
ZAA1	**Zalesovo Array**	**53.95**	**331**	*e*P	**P**	**16 51 39.5**	**-0.2**
KURK	**Kurchatov**	**55.48**	**325**	*e*P	**P**	**16 51 52.1**	**+1.2**
	4.4nm,0.8s						
BR101	**Keskin Array S**	**85.20**	**309**	*e*P	**P**	**16 54 52.5**	**-0.5**
BRTR	**Keskin Array B**	**85.20**	**309**	P	**P**	**16 54 52.5**	**-0.5**
	0.2nm,0.4s,baz=94,slow=4.6,SNR=2.6						

IDC 09 16:42:21.6±3.7, 20°.21S×175°.23W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.7/35, mbtmp4.1/4, Error ellipse: s-maj=162.4km s-min=46.4km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.10**	**263**	P	P	16 49 25.9	+0.3
	1.7nm,0.3s,baz=119,slow=10,SNR=3.6						
STKA	**Stephens Creek**	**40.25**	**244**	P	P	16 50 01.0	+0.6
	0.6nm,0.6s,baz=101,slow=10,SNR=3.6						
ASAR	**Alice Springs**	**47.11**	**256**	P	P	16 50 54.9	-1.0
	2.2nm,0.6s,baz=95,slow=7.7,SNR=21						
CMAR	**Chiang Mai Arr**	**92.48**	**289**	P	P	16 55 34.9	-0.2
	0.5nm,0.8s,baz=112,slow=3.8,SNR=4.7						
AKASG	**Malin Array Be**	**143.97**	**333**	PKP	PKPbc	17 01 57.7	+1.0
	0.2nm,0.3s,baz=32,slow=1.3,SNR=6.1						
BRTR	**Keskin Array B**	**148.53**	**314**	PKPbc	PKPbc	17 02 10.5	-0.3
	0.5nm,0.8s,baz=64,slow=3.4,SNR=3.6						

IDC 09 16:43:39.6±3.9, 6°.12S×130°.00E, h0km, mb3.6/1, mb1 3.7/2, mb1mx3.3/35, mbtmp3.6/2, ML4.4/2, Error ellipse: s-maj=344.0km s-min=31.4km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.38**	**163**	Pn	Pn	16 47 04.4	-0.2
	4.1nm,0.3s,baz=344,slow=13,SNR=5.8						
WRA				Sn	Sn	16 49 30.0	-15
	4.6nm,0.3s,baz=341,slow=22,SNR=4.7						
ASAR	**Alice Springs**	**17.85**	**168**	P	Pn	16 47 49.7	+0.1
	0.2nm,0.3s,baz=349,slow=12,SNR=12						
MKAR	**Makanchi Array**	**67.49**	**327**	P	P	16 54 37.6	0.0
	0.3nm,0.4s,baz=113,slow=8.1,SNR=5.7						

*ISCJB **09** 16:45:22.8±0.5, 44°.63N±0°.04×147°.76E±0°.07, h120km±3km, mb4.0/29, Error ellipse: s-maj=9.1km s-min=5.3km az=38.7*
*MOS **09** 16:45:22.9±1.2, 44°.74N×147°.69E, h120km, mb4.3/9, Error ellipse: s-maj=9.9km s-min=7.3km az=85.8*
*IDC **09** 16:45:23.9±0.8, 44°.84N×147°.61E, h110km±6km, mb3.7/18, mb1 3.9/23, mb1mx3.8/38, mbtmp4.0/23, Error ellipse: s-maj=16.5km s-min=11.9km az=151.0*
*SKHL **09** 16:45:24.0±0.1, 44°.63N×147°.77E, h119km±4km, mb4.2/6, msh5.2/5*
*JMA **09** 16:45:25.7±0.4, 44°.30N×147°.76E, h111km, M4.0*
ISC 09 16:45:23.2±0.6, 44°.61N±0°.05×147°.77E±0°.06, h115km±4km, n123, σ1§34/144, mb4.0/35, 9C-11D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.63**	**6**	*d i*PN	**Pn**	**16 45 41.4**	**0.0**
KUR				*i* S	**Sn**	**16 45 55.0**	**-0.1**
KUR				pmax	pmax		
	comp=N,491nm,0.1s						
KUR				pmax	pmax		
	comp=Z,1μm,0.1s						
KUR				smax	smax		
	comp=N,3μm,0.4s						
KUR	**Kuril'sk**	**0.63**	**6**	*i* P	**Pn**	**16 45 41.5**	**0.0**
KUR				AMB	AMB	16 45 42.0	
	comp=N,132nm,0.3s						
KUR				*i* S	**Sn**	**16 45 54.7**	**-0.5**
KUR				A	A	16 45 55.0	
	comp=N,341nm,0.4s						
KUR				A	A	16 45 55.0	
	comp=N,2μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.49**	**248**	*c i*PN	**Pn**	**16 45 51.3**	**+1.2**
YUK				*i* S	**Sn**	**16 46 11.2**	**+0.7**
YUK				pmax	pmax		
	comp=E,184nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=N,176nm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.2s						
YUK				smax	smax		
	comp=E,3μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.49**	**248**	AMB	AMB	16 45 51.0	
	comp=E,90nm,0.3s						
YUK				*i* P	**Pn**	**16 45 51.3**	**+1.2**
YUK				*i* S	**Sn**	**16 46 11.7**	**+1.2**
YUK				A	A	16 46 13.0	
	comp=E,157nm,0.5s						
YUK				A	A	16 46 13.0	
	comp=E,328nm,0.5s						
LAGR	**Lagunnoye**	**1.53**	**249**	*e*PN	**Pn**	**16 45 52.0**	**+1.4**
LAGR				*e*S	**Sn**	**16 46 12.4**	**+1.0**
LAGR				pmax	pmax		
	comp=N,88nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,360nm,0.1s						
LAGR				smax	smax		
	comp=N,4μm,0.5s						
LAGR				smax	smax		
	comp=E,3μm,0.5s						
LAGR	**Lagunnoye**	**1.53**	**249**	*e*P	**Pn**	**16 45 51.8**	**+1.2**
LAGR				AMB	AMB	16 45 55.0	
	comp=E,36nm,0.3s						
LAGR				*e*S	**Sn**	**16 46 12.9**	**+1.5**
LAGR				A	A	16 46 17.0	
	comp=E,418nm,0.5s						
LAGR				A	A	16 46 17.0	
	comp=E,339nm,0.5s						
GRPR	**Tuman**	**1.56**	**247**	*c i*PN	**Pn**	**16 45 52.4**	**+1.4**
GRPR				*e*S	**Sn**	**16 46 12.6**	**+0.4**
GRPR				pmax	pmax		
	comp=Z,303nm,0.2s						
GRPR				pmax	pmax		
	comp=N,115nm,0.1s						
GRPR				smax	smax		
	comp=N,2μm,0.3s						
GRPR				smax	smax		
	comp=E,3μm,0.3s						
GRPR	**Tuman**	**1.56**	**247**	*i* P	**Pn**	**16 45 52.0**	**+1.0**
GRPR				AMB	AMB	16 45 53.0	
	comp=E,30nm,0.2s						
GRPR				*e*S	**Sn**	**16 46 13.6**	**+1.4**
GRPR				A	A	16 46 16.0	
	comp=E,178nm,0.3s						
GRPR				A	A	16 46 16.0	
	comp=E,299nm,0.3s						
GLVR	**Golovnino**	**1.84**	**243**	⇓*i*PN	**Pn**	**16 45 55.6**	**+1.2**
GLVR				*e*S	**Sn**	**16 46 19.1**	**+1.0**
GLVR				pmax	pmax		
	comp=E,26nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,225nm,0.1s						
GLVR				smax	smax		
	comp=E,3μm,0.3s						
GLVR				smax	smax		
	comp=N,2μm,0.2s						
GLVR	**Golovnino**	**1.84**	**243**	*i* P	**Pn**	**16 45 55.7**	**+1.3**
GLVR				AMB	AMB	16 45 56.0	
	comp=N,26nm,0.3s						
GLVR				AMB	AMB	16 45 56.0	
	comp=N,22nm,0.3s						
GLVR				*e*S	**Sn**	**16 46 19.3**	**+1.2**
GLVR				A	A	16 46 19.9	
	comp=N,169nm,0.3s						
GLVR				A	A	16 46 19.9	
	comp=N,267nm,0.3s						
NEM2	**Nemuro 2**	**1.92**	**230**	P	**Pn**	**16 45 55.6**	**+0.2**
NEM2				*e*S	**Sn**	**16 46 18.3**	**-1.7**
JRA	**Rausu**	**2.02**	**251**	P	**Pn**	**16 45 58.2**	**+1.6**
JRA				*e*S	**Sn**	**16 46 23.5**	**+1.4**
JNK	**Nakash**	**2.43**	**246**	P	**Pn**	**16 46 03.2**	**+1.4**
JKHN	**Kushirohamanak**	**2.43**	**232**	P	**Pn**	**16 46 02.3**	**+0.5**
JKHN				*e*S	**Sn**	**16 46 29.6**	**-1.9**
JAK	**Akkeshi**	**2.75**	**235**	P	**Pn**	**16 46 06.3**	**+0.3**
JAK				*e*S	**Sn**	**16 46 37.5**	**-1.4**
JTKR	**Abashiri--Toko**	**2.85**	**258**	P	**Pn**	**16 46 09.0**	**+1.7**
JAR	**Ashorobuto**	**3.17**	**247**	P	**Pn**	**16 46 13.5**	**+1.9**
JKK2	**Kamakawa 2**	**3.69**	**260**	P	**Pn**	**16 46 20.5**	**+2.1**
JSE	**Soyaes**	**3.71**	**277**	P	**Pn**	**16 46 20.8**	**+2.1**
ASAJ	**Asahikawa**	**3.75**	**264**	P	**Pn**	**16 46 21.6**	**+2.4**
	comp=N,6.5nm,0.3s,baz=73,slow=21,SNR=89						
ASAJ				S	Sn	16 47 19.8	+17
	comp=N,2.2nm,0.3s,baz=17,slow=33,SNR=3.9						
JCH	**Churui**	**3.77**	**240**	P	**Pn**	**16 46 20.3**	**+0.7**
JCH				*e*S	**Sn**	**16 47 01.9**	**-1.3**
JFR	**Furan**	**4.01**	**251**	P	**Pn**	**16 46 24.9**	**+2.1**
YSS	**Yuzh-Sakhalins**	**4.22**	**305**	⇑*e*PN	**Pn**	**16 46 27.1**	**+1.6**
YSS				*e*S	**Sn**	**16 47 14.2**	**+0.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
YSS	**Yuzh-Sakhalins**	**4.22**	**305**	*e*P	**Pn**	**16 46 27.0**	**+1.6**
YSS				AMB	AMB	16 46 28.0	
	comp=Z,10.0nm,0.7s						
YSS				*e*S	**Sn**	**16 47 15.0**	**+1.2**
ERM	**Erimo**	**4.25**	**234**	*i* PN	**Pn**	**16 46 27.8**	**+1.9**
JNBK	**Urakawa-nobuka**	**4.33**	**239**	P	**Pn**	**16 46 27.1**	**0.0**
JNBK				*e*S	**Sn**	**16 47 14.3**	**-2.3**
JEW	**Eniwo**	**4.91**	**251**	P	**Pn**	**16 46 37.3**	**+2.5**
JKB	**Kayabe**	**5.62**	**243**	P	**Pn**	**16 46 44.6**	**+0.2**
JKB				*e*S	**Sn**	**16 47 44.9**	**-2.9**
JOT	**Ohata**	**5.89**	**239**	P	**Pn**	**16 46 47.4**	**-0.7**
JOT				*e*S	**Sn**	**16 47 49.1**	**-5.2**
PETK	**Petropavlovsk-**	**10.72**	**34**	P	**Pn**	**16 47 52.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=193,slow=12,SNR=3.9						
MJA0	**Matsu Arr-Jizo**	**10.83**	**225**	*e*PN	**Pn**	**16 47 53.6**	**-1.3**
MJAR	**Matsushiro Arr**	**10.85**	**225**	P	**Pn**	**16 47 54.1**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=26,slow=12,SNR=9.4						
USRK	**Ussuriysk Ar.**	**11.30**	**273**	P	**Pn**	**16 48 00.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=100,slow=15,SNR=5.2						
KLR	**Kul'dur**	**11.89**	**299**	*i* PN	**Pn**	**16 48 08.4**	**-0.4**
KLR	**Kul'dur**	**11.89**	**299**	*e*P	**Pn**	**16 48 08.4**	**-0.4**
EKMR	**Ekimchan**	**12.90**	**316**	*e*P	**Pn**	**16 48 22.0**	**-0.1**
MA2	**Magadan**	**15.10**	**6**	P	**Pn**	**16 48 50.0**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=203,slow=8.1,SNR=7.5						
MA2	**Magadan**	**15.10**	**6**	P	**Pn**	**16 48 50.0**	**-0.2**
MA2	**Magadan**	**15.10**	**6**	*e*P	**Pn**	**16 48 50.0**	**-0.2**
BMKR	**Bomnak**	**15.84**	**316**	*e*P	**Pn**	**16 48 58.0**	**-1.4**
CN2	**Changchun**	**16.03**	**275**	*e*P	**P**	**16 49 03.0**	**-0.1**
KSRS	**Korea Array**	**16.57**	**251**	P	**Pn**	**16 49 07.8**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=61,slow=11,SNR=4.8						
JNU	**Nakatsue**	**17.42**	**235**	P	**Pn**	**16 49 21.9**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=32,slow=19,SNR=5.5						
YAK	**Yakutsk**	**20.39**	**335**	*e*P	**P**	**16 49 48.1**	**-2.5**
BILL	**Bilibino**	**25.41**	**16**	*e*P	**P**	**16 50 39.1**	**-0.5**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL	**Bilibino**	**25.41**	**16**	*e*P	**P**	**16 50 39.1**	**-0.5**
SONM	**Songino Array**	**28.56**	**291**	P	**P**	**16 51 08.1**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=72,slow=9.3,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**29.48**	**141**	T	T	17 22 15.7	
	baz=333,slow=76,SNR=164						
H11N1	**WAKE ISLAND Hy**	**29.49**	**141**	T	T	17 22 23.5	
	baz=333,slow=76,SNR=178						
H11N3	**WAKE ISLAND Hy**	**29.49**	**141**	T	T	17 22 19.4	
	baz=333,slow=76,SNR=190						
WHN	**Wuhan**	**29.75**	**253**	*e*P	**P**	**16 51 16.8**	**-1.9**
H11S1	**WAKE ISLAND Hy**	**30.46**	**143**	T	T	17 23 39.5	
	baz=334,slow=76,SNR=172						
H11S3	**WAKE ISLAND Hy**	**30.47**	**143**	T	T	17 23 33.9	
	baz=334,slow=76,SNR=193						
H11S2	**WAKE ISLAND Hy**	**30.48**	**143**	T	T	17 23 34.0	
	baz=334,slow=76,SNR=123						
NRIK	**Noril'sk**	**38.72**	**330**	P	**P**	**16 52 33.5**	**-2.0**
	comp=Z,4.1nm,0.6s,baz=127,slow=8.0,SNR=3.7						
ILAR	**Eielson Array**	**40.53**	**37**	P	**P**	**16 52 50.8**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=257,slow=6.2,SNR=22						
ILAR				pP	**pP**	**16 53 16.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=268,slow=7.0,SNR=1.6						
ILAR	**Eielson Array**	**40.53**	**37**	*e*P	**P**	**16 52 51.7**	**+1.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**44.59**	**297**	P	**P**	**16 53 22.5**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=80,slow=7.7,SNR=6.5						
MKAR				PcP	**PcP**	**16 55 04.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=62,slow=3.4,SNR=3.0						
MKAR	**Makanchi Array**	**44.59**	**297**	*e*P	**P**	**16 53 24.7**	**+1.1**
MKAR	**Makanchi Array**	**44.59**	**297**	*e*P	**P**	**16 53 24.6**	**+1.0**
KURK	**Kurchatov**	**45.42**	**303**	*i* P	**P**	**16 53 28.9**	**-1.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**45.42**	**303**	*e*P	**P**	**16 53 28.9**	**-1.2**
INK	**Inuvik**	**45.43**	**31**	P	**P**	**16 53 29.9**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=287,slow=7.8,SNR=42						
CMAR	**Chiang Mai Arr**	**48.20**	**253**	P	**P**	**16 53 53.5**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=31,slow=7.6,SNR=3.1						
ARU	**Arti**	**54.03**	**317**	*c i*P	**P**	**16 54 33.7**	**-1.5**
ARU				S	**S**	**17 02 00.8**	**-1.3**
ARU				SS	**SKiKP**	**17 05 37.6**	**+2.7**
ARU				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	**Yellowknife Ar**	**54.84**	**34**	P	**P**	**16 54 41.7**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=303,slow=7.2,SNR=6.6						
ARCES	**ARCESS Array B**	**58.60**	**340**	P	**P**	**16 55 05.3**	**-2.1**
	comp=Z,1.7nm,0.9s,baz=45,slow=9.1,SNR=3.7						
FINES	**FINESS Array B**	**64.31**	**333**	P	**P**	**16 55 44.6**	**-1.3**
	comp=Z,4.4nm,0.5s,baz=40,slow=7.2,SNR=50						
GEYT	**Alibeck**	**64.42**	**299**	P	**P**	**16 55 47.6**	**+0.6**
	comp=Z,2.4nm,0.5s,baz=48,slow=2.2,SNR=7.0						
WRA	**Warramunga Arr**	**65.40**	**194**	P	**P**	**16 55 55.9**	**+2.5**
	comp=Z,6.8nm,0.3s,baz=132,slow=46,SNR=2.8						
NVAR	**Mina Array Bea**	**66.74**	**59**	P	**P**	**16 56 03.3**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=294,slow=6.8,SNR=5.5						
NVAR				pP	**PcP**	**16 56 30.7**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=283,slow=5.9,SNR=4.0						
NB2	**NORSAR Subarra**	**68.96**	**339**	P	**P**	**16 56 14.3**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.96**	**339**	P	**P**	**16 56 14.7**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=32,slow=6.8,SNR=18						
PDAR	**Pinedale Array**	**69.01**	**50**	P	**P**	**16 56 17.6**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=284,slow=1.8,SNR=6.5						
PDAR				pP	**pP**	**16 56 45.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=318,slow=2.4,SNR=2.2						
ASAR	**Alice Springs**	**69.12**	**194**	P	**P**	**16 56 18.6**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=13,slow=6.0,SNR=10						
KIV	**Kislovodsk**	**69.52**	**312**	*e*P	**P**	**16 56 19.8**	**+0.4**
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KIV	**Kislovodsk**	**69.52**	**312**	*e*P	**P**	**16 56 19.8**	**+0.4**
KBZ	**Khabaz**	**69.56**	**312**	P	**P**	**16 56 20.2**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=60,slow=5.9,SNR=11						
ZEI	**Tsey**	**69.66**	**310**	*e*P	**P**	**16 56 20.1**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZEI	**Tsey**	**69.66**	**310**	*e*P	**P**	**16 56 20.1**	**-0.2**
AKASG	**Malin Array Be**	**71.15**	**324**	P	**P**	**16 56 28.6**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=39,slow=6.2,SNR=5.7						

comp=Z,0.4nm,0.6s,baz=309,slow=4.5,SNR=4.0
BDFB Brasilia 148.18 30 PKPbc **PKPbc 17 04 56.3 +0.4**
comp=Z,2.4nm,0.7s,baz=298,slow=6.3,SNR=3.5

*NEIC **09** 16:53:57.4±1.4, 54°.38N×161°.39E, h86km±12km, mb4.2/10, Error ellipse: s-maj=30.7km s-min=4.0km az=144.0*
*KRSC **09** 16:54:05.0±0.7, 54°.00N×160°.28E, h116km±9km, ML4.4*
*ISCJB **09** 16:54:05.9±0.3, 54°.08N±0°.03×160°.02E±0°.07, h124km±2km, mb3.9/32, Error ellipse: s-maj=7.5km s-min=2.6km az=28.7*
*MOS **09** 16:54:06.1±0.9, 54°.11N×159°.94E, h126km, mb4.0/8, Error ellipse: s-maj=11.8km s-min=4.1km az=75.7*
*IDC **09** 16:54:07.0±0.6, 54°.30N×159°.64E, h110km±6km, mb3.4/17, mb1 3.6/19, mb1mx3.5/34, mbtmp3.8/19, Error ellipse: s-maj=17.0km s-min=8.4km az=139.0*

ISC 09 16:54:06.2±0.5, 54°.04N±0°.03×160°.13E±0°.04, h116km±4km, n138, σ1§28/187, mb3.9/32, 1C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.95**	**184**	*i* P	**Pn**	**16 54 27.5**	**+0.1**
SPN				*e*S	**Sn**	**16 54 42.7**	**-0.6**
SPN	**Mys Shipunski**	**0.95**	**184**	PN	**Pn**	**16 54 27.5**	**+0.1**
SPN				S	**Sn**	**16 54 42.7**	**-0.6**
NLC	**Nalytchevo**	**0.99**	**208**	*e*P	**Pn**	**16 54 28.3**	**+0.5**
NLC				*e*S	**Sn**	**16 54 44.1**	**+0.1**
NLC	**Nalytchevo**	**0.99**	**208**	PN	**Pn**	**16 54 28.3**	**+0.5**
NLC				S	**Sn**	**16 54 44.1**	**+0.1**
SDLR	**Sedlovina**	**1.07**	**225**	*i* P	**Pn**	**16 54 29.3**	**+0.6**
SDLR				*e*S	**Sn**	**16 54 46.4**	**+0.7**
SDLR	**Sedlovina**	**1.07**	**225**	PN	**Pn**	**16 54 29.3**	**+0.6**
SDLR				S	**Sn**	**16 54 46.4**	**+0.7**
MKZ	**Mys Kozlova**	**1.07**	**61**	*e*P	**Pn**	**16 54 28.9**	**+0.4**
MKZ				*e*S	**Sn**	**16 54 44.9**	**-0.6**
MKZ	**Mys Kozlova**	**1.07**	**61**	PN	**Pn**	**16 54 28.9**	**+0.4**
MKZ				S	**Sn**	**16 54 44.9**	**-0.6**
KZV	**Kizimen**	**1.08**	**5**	*e*P	**Pn**	**16 54 29.5**	**+0.7**
KZV				*e*S	**Sn**	**16 54 46.8**	**+0.8**
KZV	**Kizimen**	**1.08**	**5**	PN	**Pn**	**16 54 29.5**	**+0.7**
KZV				S	**Sn**	**16 54 46.8**	**+0.8**
KRER	**Koryakskii**	**1.10**	**229**	*e*P	**Pn**	**16 54 29.9**	**+0.7**
KRER				*e*S	**Sn**	**16 54 47.1**	**+0.6**
KRER	**Koryakskii**	**1.10**	**229**	PN	**Pn**	**16 54 29.9**	**+0.7**
KRER				S	**Sn**	**16 54 47.1**	**+0.6**
SMAR	**Somma**	**1.11**	**226**	*e*P	**Pn**	**16 54 29.8**	**+0.5**
SMAR	**Somma**	**1.11**	**226**	PN	**Pn**	**16 54 29.8**	**+0.5**
KRX	**Arik**	**1.11**	**233**	*e*P	**Pn**	**16 54 29.9**	**+0.7**
KRX				*e*S	**Sn**	**16 54 47.6**	**+1.0**
KRX	**Arik**	**1.11**	**233**	PN	**Pn**	**16 54 29.9**	**+0.7**
KRX				S	**Sn**	**16 54 47.6**	**+1.0**
AVH	**Avacha**	**1.14**	**227**	*e*P	**Pn**	**16 54 30.1**	**+0.7**
AVH				*e*S	**Sn**	**16 54 48.0**	**+1.1**
AVH	**Avacha**	**1.14**	**227**	PN	**Pn**	**16 54 30.1**	**+0.7**
AVH				S	**Sn**	**16 54 48.0**	**+1.1**
UGLR	**Uglovaya**	**1.14**	**223**	*e*P	**Pn**	**16 54 30.3**	**+0.8**
UGLR				*e*S	**Sn**	**16 54 47.5**	**+0.5**
UGLR	**Uglovaya**	**1.14**	**223**	PN	**Pn**	**16 54 30.3**	**+0.8**
UGLR				S	**Sn**	**16 54 47.5**	**+0.5**
KOK	**Koryaka**	**1.16**	**230**	*e*P	**Pn**	**16 54 30.5**	**+0.8**
KOK	**Koryaka**	**1.16**	**230**	PN	**Pn**	**16 54 30.5**	**+0.8**
TUMD	**Tumrok D**	**1.17**	**8**	*e*P	**Pn**	**16 54 30.2**	**+0.5**
TUMD				*e*S	**Sn**	**16 54 47.4**	**-0.1**
TUMR	**Tumrok**	**1.24**	**0**	*e*P	**Pn**	**16 54 31.6**	**+1.0**
TUMR	**Tumrok**	**1.24**	**0**	PN	**Pn**	**16 54 30.2**	**-0.4**
TUMR				S	**Sn**	**16 54 47.4**	**-1.6**
DALK	**Dalny**	**1.30**	**220**	*e*P	**Pn**	**16 54 31.7**	**+0.6**
DALK				*e*S	**Sn**	**16 54 50.5**	**+0.6**
DALK	**Dalny**	**1.30**	**220**	PN	**Pn**	**16 54 31.7**	**+0.6**
DALK				S	**Sn**	**16 54 50.5**	**+0.6**
GNL	**Ganaly**	**1.34**	**256**	*e*P	**Pn**	**16 54 32.1**	**+0.4**
GNL	**Ganaly**	**1.34**	**256**	PN	**Pn**	**16 54 32.1**	**+0.4**
PET	**Petropavlovsk**	**1.35**	**221**	*e*Pn	**Pn**	**16 54 32.1**	**+0.5**
PET				*e*Sn	**Sn**	**16 54 51.0**	**+0.1**
PET	**Petropavlovsk**	**1.35**	**221**	*i* P	**Pn**	**16 54 32.2**	**+0.5**
PET				*e*S	**Sn**	**16 54 51.2**	**+0.4**
PET	**Petropavlovsk**	**1.35**	**221**	⇑*i*PN	**Pn**	**16 54 32.1**	**+0.5**
PET				*e*S	**Sn**	**16 54 51.4**	**+0.6**
PET				pmax	pmax		
	comp=Z,500nm,0.3s						
PET				pmax	pmax		
	comp=Z,564nm,0.4s						
PET				smax	smax		
	comp=N,3μm,0.8s						
PET				smax	smax		
	comp=E,3μm,0.7s						
KRMR	**Karymshinskiy**	**1.71**	**225**	*i* P	**Pn**	**16 54 36.5**	**+0.7**
KRMR				*e*S	**Sn**	**16 54 58.3**	**0.0**
KRMR	**Karymshinskiy**	**1.71**	**225**	PN	**Pn**	**16 54 36.5**	**+0.7**
KRMR				S	**Sn**	**16 54 58.3**	**0.0**
PEA0B	**Petropavlovsk-**	**1.73**	**238**	*e*Pn	**Pn**	**16 54 36.5**	**+0.5**
PETK	**Petropavlovsk-**	**1.73**	**238**	P	**Pn**	**16 54 36.4**	**+0.3**
	comp=E,50nm,0.3s,baz=62,slow=15,SNR=822						
PETK				S	**Sn**	**16 54 57.9**	**-0.9**
	comp=E,20nm,0.3s,baz=20,slow=28,SNR=7.0						
RUS	**Russkaya**	**1.88**	**212**	*e*P	**Pn**	**16 54 38.5**	**+0.5**
RUS				*e*S	**Sn**	**16 55 01.7**	**-0.5**
RUS	**Russkaya**	**1.88**	**212**	PN	**Pn**	**16 54 38.5**	**+0.5**
RUS				S	**Sn**	**16 55 01.7**	**-0.5**
KPT	**Kopyto**	**1.93**	**2**	*e*P	**Pn**	**16 54 39.1**	**+0.5**
KPT	**Kopyto**	**1.93**	**2**	PN	**Pn**	**16 54 39.1**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**1.93**	**10**	*e*P	**Pn**	**16 54 40.3**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**1.93**	**10**	PN	**Pn**	**16 54 40.3**	**+1.6**
BZWR	**Bezymyannyi-We**	**1.94**	**6**	*e*P	**Pn**	**16 54 39.8**	**+1.0**
BZWR	**Bezymyannyi-We**	**1.94**	**6**	PN	**Pn**	**16 54 39.8**	**+1.0**
GRL	**Gorelyy**	**1.94**	**220**	*e*P	**Pn**	**16 54 39.1**	**+0.3**
GRL	**Gorelyy**	**1.94**	**220**	PN	**Pn**	**16 54 39.1**	**+0.3**
MTVR	**Mutnovka**	**1.95**	**218**	*e*P	**Pn**	**16 54 40.1**	**+1.1**
MTVR				*e*S	**Sn**	**16 55 04.9**	**+0.9**
MTVR	**Mutnovka**	**1.95**	**218**	PN	**Pn**	**16 54 40.1**	**+1.1**
MTVR				S	**Sn**	**16 55 04.9**	**+0.9**
KOZ	**Kozyrevsk**	**2.02**	**356**	*e*P	**Pn**	**16 54 40.2**	**+0.4**
KOZ	**Kozyrevsk**	**2.02**	**356**	PN	**Pn**	**16 54 40.2**	**+0.4**
ESO	**Esso**	**2.06**	**337**	*e*P	**Pn**	**16 54 40.4**	**+0.2**
ESO				*e*S	**Sn**	**16 55 06.7**	**+0.5**
ESO	**Esso**	**2.06**	**337**	PN	**Pn**	**16 54 40.4**	**+0.2**
ESO				S	**Sn**	**16 55 06.7**	**+0.5**
LGNR	**Loginova**	**2.07**	**9**	*e*P	**Pn**	**16 54 42.5**	**+1.9**
LGNR	**Loginova**	**2.07**	**9**	PN	**Pn**	**16 54 42.5**	**+1.9**
APC	**Apacha**	**2.10**	**239**	*e*P	**Pn**	**16 54 41.9**	**+1.2**
APC				*e*S	**Sn**	**16 55 09.1**	**+2.1**
APC	**Apacha**	**2.10**	**239**	PN	**Pn**	**16 54 41.9**	**+1.2**
APC				S	**Sn**	**16 55 09.1**	**+2.1**
CIRR	**Tsirk**	**2.11**	**9**	*e*P	**Pn**	**16 54 42.5**	**+1.6**
CIRR	**Tsirk**	**2.11**	**9**	PN	**Pn**	**16 54 42.5**	**+1.6**
ASAK	**Asacha**	**2.14**	**220**	*e*P	**Pn**	**16 54 42.6**	**+1.4**
ASAK	**Asacha**	**2.14**	**220**	PN	**Pn**	**16 54 42.6**	**+1.4**
KRSR	**Krestovskiy**	**2.19**	**6**	*e*P	**Pn**	**16 54 42.1**	**+0.1**
KRSR	**Krestovskiy**	**2.19**	**6**	PN	**Pn**	**16 54 42.1**	**+0.1**
SRDR	**Sredinnyy**	**2.29**	**354**	*e*P	**Pn**	**16 54 43.6**	**+0.4**
SRDR	**Sredinnyy**	**2.29**	**354**	PN	**Pn**	**16 54 43.6**	**+0.4**
KLY	**Klyuchi**	**2.29**	**7**	*e*P	**Pn**	**16 54 44.7**	**+1.6**
KLY				*e*S	**Sn**	**16 55 12.6**	**+1.1**
KLY	**Klyuchi**	**2.29**	**7**	PN	**Pn**	**16 54 44.7**	**+1.6**
KLY				S	**Sn**	**16 55 12.6**	**+1.1**
KDTR	**Khodutka, Kamc**	**2.56**	**210**	*e*P	**Pn**	**16 54 46.9**	**+0.3**
KDTR				*e*S	**Sn**	**16 55 16.0**	**-1.6**
KDTR	**Khodutka, Kamc**	**2.56**	**210**	PN	**Pn**	**16 54 46.9**	**+0.3**
KDTR				S	**Sn**	**16 55 16.0**	**-1.6**
BDR	**Baidarnaya**	**2.60**	**13**	*e*P	**Pn**	**16 54 49.0**	**+1.8**
BDR				*e*S	**Sn**	**16 55 20.0**	**+1.2**
BDR	**Baidarnaya**	**2.60**	**13**	PN	**Pn**	**16 54 49.0**	**+1.8**
BDR				S	**Sn**	**16 55 20.0**	**+1.2**
SMKR	**Semkarok**	**2.66**	**16**	*e*P	**Pn**	**16 54 48.4**	**+0.5**
SMKR	**Semkarok**	**2.66**	**16**	PN	**Pn**	**16 54 48.4**	**+0.5**
KBTR	**Krutoberegovo**	**2.66**	**34**	*e*P	**Pn**	**16 54 49.4**	**+1.5**
KBTR				*e*S	**Sn**	**16 55 20.6**	**+0.6**
KBTR	**Krutoberegovo**	**2.66**	**34**	PN	**Pn**	**16 54 49.4**	**+1.5**
KBTR				S	**Sn**	**16 55 20.6**	**+0.6**
KBG	**Krutoberegovo**	**2.67**	**33**	*e*P	**Pn**	**16 54 49.4**	**+1.5**
KBG				*e*S	**Sn**	**16 55 19.3**	**-0.7**
KBG	**Krutoberegovo**	**2.67**	**33**	PN	**Pn**	**16 54 49.4**	**+1.5**
KBG				S	**Sn**	**16 55 19.3**	**-0.7**
SRKR	**Sorokina**	**2.68**	**12**	*e*P	**Pn**	**16 54 49.7**	**+1.5**
SRKR	**Sorokina**	**2.68**	**12**	PN	**Pn**	**16 54 49.7**	**+1.5**
PAU	**Pauzhetka**	**3.27**	**219**	*e*P	**Pn**	**16 54 57.3**	**+1.4**
PAU	**Pauzhetka**	**3.27**	**219**	PN	**Pn**	**16 54 57.3**	**+1.4**
BKI	**Bering**	**3.59**	**69**	*e*P	**Pn**	**16 55 00.5**	**+0.4**
BKI				*e*S	**Sn**	**16 55 39.4**	**-2.4**
BKI	**Bering**	**3.59**	**69**	PN	**Pn**	**16 55 00.5**	**+0.4**
BKI				S	**Sn**	**16 55 39.4**	**-2.4**
SKR	**Severo-Kuril's**	**4.17**	**218**	*e*P	**Pn**	**16 55 08.9**	**+1.1**
SKR				*e*S	**Sn**	**16 55 55.2**	**-0.4**
SKR	**Severo-Kuril's**	**4.17**	**218**	PN	**Pn**	**16 55 08.9**	**+1.1**
SKR				S	**Sn**	**16 55 55.2**	**-0.4**
MA2	**Magadan**	**7.55**	**321**	P	**Pn**	**16 55 50.3**	**-3.2**
	comp=E,0.1nm,0.3s,baz=122,slow=12,SNR=2.6						
MA2	**Magadan**	**7.55**	**321**	*e*PN	**Pn**	**16 55 53.1**	**-0.4**
ASAJ	**Asahikawa**	**15.14**	**236**	P	**P**	**16 57 35.3**	**-0.9**
	comp=E,0.2nm,0.3s,baz=51,slow=15,SNR=3.6						
ERM	**Erimo**	**16.49**	**230**	*e*Pn	**P**	**16 57 54.7**	**+3.6**
	comp=E,130nm,1.4s						
ERM	**Erimo**	**16.49**	**230**	*i* P	**P**	**16 57 53.4**	**+2.3**
YAK	**Yakutsk**	**17.84**	**309**	*e*P	**P**	**16 58 04.8**	**-1.0**
	comp=E,26nm,0.6s						
YAK	**Yakutsk**	**17.84**	**309**	*e*P	**P**	**16 58 05.1**	**-0.7**
ANM	**Nome**	**20.23**	**45**	*e*P	P	16 58 16.7	-15
	comp=E,52nm,1.5s						
TIXI	**Tiksi**	**22.23**	**334**	P	**P**	**16 58 51.8**	**-1.1**
	comp=E,1.1nm,0.4s,baz=138,slow=9.5,SNR=7.9						
TIXI				pP	**pP**	**16 59 13.9**	**-0.9**
	comp=E,1.4nm,0.6s,baz=116,slow=9.2,SNR=3.3						
TIXI	**Tiksi**	**22.23**	**334**	*i* P	**P**	**16 58 51.3**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MJA0	**Matsu Arr-Jizo**	**23.15**	**230**	*e*P	**P**	**16 59 03.1**	**+0.8**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJB9	**Matsu-Tunnel**	**23.16**	**230**	*e*P	**P**	**16 59 03.1**	**+0.7**
	comp=Z,13nm,1.5s						
MAJO	**Matsushiro**	**23.17**	**230**	*e*P	**P**	**16 59 03.2**	**+0.8**
	comp=Z,13nm,1.5s						
MAJO	**Matsushiro**	**23.17**	**230**	*e*P	**P**	**16 59 03.2**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,13nm,1.5s						
MAT	**Matsushiro**	**23.17**	**230**	P	**P**	**16 59 03.1**	**+0.7**
MJAR	**Matsushiro Arr**	**23.17**	**230**	P	**P**	**16 59 03.2**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=17,slow=8.9,SNR=9.4						
BOD	**Bodaibo**	**25.72**	**297**	*e*P	**P**	**16 59 23.2**	**-2.1**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CAST	**Castle Rocks**	**25.91**	**50**	*e*P	P	16 59 11.1	-16
	comp=Z,4.1nm,0.9s						
TRF	**Thorofare Moun**	**26.71**	**50**	*e*P	P	16 59 21.4	-13
	comp=Z,1.6nm,0.4s						
KSRS	**Korea Array**	**27.61**	**246**	P	**P**	**16 59 42.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=37,slow=12,SNR=2.6						
ILAR	**Eielson Array**	**28.14**	**47**	P	**P**	**16 59 48.5**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=273,slow=7.6,SNR=14						
ILAR				pP	**pP**	**17 00 14.1**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=276,slow=7.4,SNR=2.7						
SONM	**Songino Array**	**33.71**	**282**	P	**P**	**17 00 33.9**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=69,slow=7.9,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**34.64**	**169**	T	T	17 37 26.0	
	baz=353,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**34.66**	**169**	T	T	17 37 35.9	
	baz=353,slow=76,SNR=40						
H11N1	**WAKE ISLAND Hy**	**34.66**	**169**	T	T	17 37 34.5	
	baz=353,slow=76,SNR=29						
HHC	**Hu-ho-hao-te**	**34.69**	**268**	*e*P	**P**	**17 00 42.7**	**-2.0**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
H11S1	**WAKE ISLAND Hy**	**35.83**	**169**	T	T	17 38 55.9	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**35.84**	**169**	T	T	17 38 52.9	
	baz=352						
H11S2	**WAKE ISLAND Hy**	**35.85**	**169**	T	T	17 38 54.5	
	baz=352						
LZH	**Lanzhou**	**42.38**	**269**	*e*P	**P**	**17 01 48.0**	**-1.0**
LZH				pP	pP	17 02 07.8	-7.7
LZH				sP	sP	17 02 16.3	-12
LZH				PP	**PP**	**17 03 31.4**	**+2.2**
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,94nm,4.9s						
YKA	**Yellowknife Ar**	**42.45**	**43**	P	**P**	**17 01 51.2**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=298,slow=7.6,SNR=3.5						
GTA	**Gaotai**	**42.53**	**275**	*e*P	**P**	**17 01 49.2**	**-1.0**
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
WMQ	**Urumqi**	**46.68**	**288**	*e*P	**P**	**17 02 22.0**	**-1.0**
WMQ				pP	pP	17 02 41.8	-8.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,82nm,5.7s						
WMQ				LR	LR		
	comp=N,2μm,32.3s						
WMQ				LR	LR		
	comp=E,2μm,28.7s						
WMQ				LR	LR		
	comp=Z,480nm,38.9s						
KURK	**Kurchatov**	**47.25**	**301**	*e*P	**P**	**17 02 25.0**	**-2.2**
	comp=Z,3.2nm,0.6s						
KURK	**Kurchatov**	**47.25**	**301**	*e*P	**P**	**17 02 25.0**	**-2.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK31	**Makanchi Array**	**47.77**	**295**	*e*P	**P**	**17 02 29.0**	**-2.3**
	comp=Z,0.9nm,0.7s						
MK31	**Makanchi Array**	**47.77**	**295**	*e*P	**P**	**17 02 29.0**	**-2.3**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**47.77**	**295**	P	**P**	**17 02 29.2**	**-2.1**
	comp=Z,1.0nm,0.6s,baz=54,slow=7.4,SNR=12						
KMI	**Kunming**	**51.02**	**259**	P	**P**	**17 02 57.0**	**+0.5**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARU	**Arti**	**52.71**	**317**	*d i* P	**P**	**17 03 06.6**	**-1.8**
ARU						17 04 15.3	
ARU				S	**S**	**17 10 32.7**	**+5.8**
ARU				SS	**SS**	**17 14 05.2**	**-0.9**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PDAR	**Pinedale Array**	**57.04**	**61**	P	**P**	**17 03 43.3**	**+3.2**
	comp=Z,0.8nm,0.5s,baz=327,slow=2.8,SNR=8.8						
CMAR	**Chiang Mai Arr**	**58.40**	**258**	P	**P**	**17 03 49.5**	**0.0**
	comp=Z,0.6nm,0.3s,baz=25,slow=7.2,SNR=4.5						
CMAR	**Chiang Mai Arr**	**58.40**	**258**	*i* P	**P**	**17 03 51.2**	**+1.7**
FINES	**FINESS Array B**	**59.26**	**336**	P	**P**	**17 03 54.0**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=37,slow=10,SNR=4.8						
FINES	**FINESS Array B**	**59.26**	**336**	*i* P	**P**	**17 03 53.0**	**-1.8**
NOA	**NORSAR Array B**	**62.63**	**344**	P	**P**	**17 04 15.2**	**-2.5**
	comp=Z,0.4nm,0.7s,baz=23,slow=6.8,SNR=2.8						
GEYT	**Alibeck**	**66.59**	**303**	P	**P**	**17 04 42.5**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=49,slow=2.7,SNR=2.9						
AKASG	**Malin Array Be**	**67.81**	**329**	P	**P**	**17 04 49.7**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=31,slow=6.8,SNR=4.2						
KBZ	**Khabaz**	**68.86**	**316**	P	**P**	**17 04 57.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=45,slow=4.3,SNR=3.4						
TXAR	**Lajitas Array**	**70.25**	**67**	P	**P**	**17 05 09.1**	**+2.4**
	comp=Z,0.6nm,0.4s,baz=292,slow=5.1,SNR=9.6						
TXAR				pP	**pP**	**17 05 35.0**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=285,slow=5.1,SNR=2.8						
CLL	**Collm**	**71.47**	**339**	*i* P	**P**	**17 05 12.5**	**-1.2**
CLL				pmax	pmax		
	comp=Z,10.0nm,1.5s						
BRTR	**Keskin Array B**	**75.90**	**320**	P	**P**	**17 05 39.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=9.2,slow=6.6,SNR=2.7						
WRA	**Warramunga Arr**	**76.95**	**205**	P	**P**	**17 05 46.9**	**+1.1**
	comp=Z,6.4nm,0.3s,baz=19,slow=5.5,SNR=0.8						
ASAR	**Alice Springs**	**80.63**	**204**	P	**P**	**17 06 07.8**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=16,slow=5.0,SNR=6.5						
ASAR				pP	**pP**	**17 06 34.8**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=16,slow=5.2,SNR=2.4						
ASAR				sP	**sP**	**17 06 47.7**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=13,slow=4.9,SNR=1.8						

KRSC 09 17:22:27.4±2.0, 50°.70N×156°.79E, h129km±16km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.43**	**268**	*i* P	Pn	17 22 47.1	+1.1
SKR				*e*S	Sn	17 23 00.8	+0.8
PAU	**Pauzhetka**	**0.77**	**1**	*e*P	Pn	17 22 48.8	+0.6
PAU				*e*S	Sn	17 23 03.9	-0.1
ALID	**Alaid**	**0.81**	**283**	*e*P	Pn	17 22 48.1	-0.6
KDTR	**Khodutka, Kamc**	**1.37**	**36**	*i* P	Pn	17 22 55.9	+1.9
KDTR				*e*S	Sn	17 23 16.0	+1.7
ASAK	**Asacha**	**1.82**	**22**	*e*P	Pn	17 23 00.9	+1.7
MTVR	**Mutnovka**	**1.98**	**25**	*e*P	Pn	17 23 02.9	+1.6
RUS	**Russkaya**	**2.04**	**31**	*e*P	Pn	17 23 03.8	+2.0
APC	**Apacha**	**2.24**	**6**	*e*P	Pn	17 23 04.1	-0.1
KRMR	**Karymshinskiy**	**2.29**	**21**	*e*P	Pn	17 23 06.2	+1.4
DALK	**Dalny**	**2.63**	**27**	*e*P	Pn	17 23 10.8	+1.6
DALK				*e*S	Sn	17 23 44.4	+3.1
UGLR	**Uglovaya**	**2.81**	**26**	*e*P	Pn	17 23 14.1	+2.5
KOK	**Koryaka**	**2.83**	**23**	*e*P	Pn	17 23 14.4	+2.5
AVH	**Avacha**	**2.84**	**24**	*e*P	Pn	17 23 14.4	+2.5
SMAR	**Somma**	**2.85**	**25**	*e*P	Pn	17 23 14.9	+2.7
KRER	**Koryakskii**	**2.87**	**24**	*e*P	Pn	17 23 14.6	+2.1
SDLR	**Sedlovina**	**2.89**	**26**	*e*P	Pn	17 23 15.0	+2.4
KRX	**Arik**	**2.90**	**23**	*e*P	Pn	17 23 15.0	+2.2
NLC	**Nalytchevo**	**2.94**	**32**	*e*P	Pn	17 23 14.0	+0.9
GNL	**Ganaly**	**3.08**	**13**	*e*P	Pn	17 23 16.1	+1.0
SPN	**Mys Shipunski**	**3.13**	**39**	*e*P	Pn	17 23 17.3	+1.8
MKZ	**Mys Kozlova**	**4.89**	**36**	*e*P	Pn	17 23 39.5	+0.6
MKZ				*e*S	Sn	17 24 33.9	-0.7
TUMD	**Tumrok D**	**5.01**	**24**	*e*P	Pn	17 23 43.8	+3.3
TUMR	**Tumrok**	**5.02**	**23**	*e*P	Pn	17 23 44.5	+3.8
KBTR	**Krutoberegovo**	**6.58**	**31**	*e*P	Pn	17 24 02.6	+1.0
BKI	**Bering**	**7.15**	**47**	*e*P	Pn	17 24 10.3	+1.1

*ISCJB **09** 18:02:20.8±0.7, 4°.24S±0°.05×133°.80E±0°.08, h10km, mb3.6/2, MS3.1/1, Error ellipse: s-maj=11.2km s-min=6.6km az=3.1*
*IDC **09** 18:02:22.6±2.9, 4°.34S×133°.53E, h0km, mb3.7/2, mb1 4.1/4, mb1mx3.6/27, mbtmp3.9/4, ML4.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/27, Error ellipse: s-maj=99.3km s-min=26.1km az=76.0*
*DJA **09** 18:02:25.2±0.5, 4°.5±3°×13°.4E±°, h15km±3km, M4.3/7, mb4.6/5, mB5.1/3, MLv4.2/7, Mw(mB)4.4/3*

ISC 09 18:02:22.6±0.9, 4°.15S±0°.06×133°.85E±0°.08, h10km, n14, σ1§74/15, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**0.51**	**344**	P	**Pg**	**18 02 33.3**	**+0.8**
KMPI				S	**Sg**	**18 02 38.6**	**-0.6**
FAKI	**Fak Fak**	**2.01**	**308**	P	**Pn**	**18 02 56.8**	**+0.2**
RKPI	**Ransiki, Papua**	**2.65**	**7**	P	**Pn**	**18 03 04.8**	**-0.6**
RKPI				S	**Sn**	**18 03 34.9**	**-2.6**
SRPI	**Serui, Papua**	**3.29**	**47**	P	**Pn**	**18 03 15.9**	**+1.6**
BAKI	**Biak**	**3.71**	**38**	P	**Pn**	**18 03 21.3**	**+1.3**
BNDI	**Bandanaira**	**3.95**	**265**	P	**Pn**	**18 03 25.6**	**+2.3**
APSI	**Ampana**	**12.60**	**284**	P	**Pn**	**18 05 23.5**	**+1.4**
MRSI	**Marisa**	**12.76**	**291**	P	**Pn**	**18 05 24.2**	**0.0**
WRA	**Warramunga Arr**	**15.70**	**178**	Pn	**Pn**	**18 06 01.5**	**-2.6**
	5.8nm,0.3s,baz=350,slow=13,SNR=3.0						
FITZ	**Fitzroy Crossi**	**16.02**	**209**	Pn	**Pn**	**18 06 05.3**	**-2.8**
	0.3nm,0.3s,baz=25,slow=8.0,SNR=20						
FITZ				Sn	Sn	18 08 53.0	-13
	0.1nm,0.3s,baz=193,slow=18,SNR=2.7						
ASAR	**Alice Springs**	**19.40**	**180**	P	**P**	**18 06 49.1**	**+0.2**
	0.3nm,0.3s,baz=4.5,slow=10,SNR=69						
HNR	**Honiara**	**26.43**	**103**	LR	LR	18 20 18.4	
	comp=Z,53nm,19.0s,baz=115,slow=40						
CMAR	**Chiang Mai Arr**	**41.08**	**304**	P	**P**	**18 10 07.4**	**+0.5**
	0.8nm,0.8s,baz=129,slow=7.1,SNR=6.3						
MKAR	**Makanchi Array**	**68.05**

LVC	Limon Verde	7.10	167	ePn	Pn	18 44 40.8	+2.2
PB05	IPOC Station P	7.16	177	i P	Pn	18 44 39.3	+0.1
PB15	IPOC Station P	7.58	172	i P	Pn	18 44 46.2	+1.5
PB15				i S	S	18 46 09.1	-1.8
PB10	IPOC Station P	7.81	179	ePn	Pn	18 44 48.6	+1.2
PB10	IPOC Station P	7.81	179	i P	Pn	18 44 48.6	+1.2
PB10				i S	S	18 46 14.2	-1.7
YJA	Yavi	8.09	144	i P	Pn	18 44 53.4	+1.9
YJA				i S	S	18 46 24.0	+0.7
HJA	Humahuaca	8.98	147	i P	Pn	18 45 04.6	+1.6
HJA				IAML		18 45 05.3	
	comp=Z,38nm,0.4s						
HJA				i S	S	18 46 42.3	-1.9
SIV	San Ignacio	9.22	93	P	Pn	18 45 04.2	-1.6
	comp=Z,0.6nm,0.3s,baz=287,slow=12,SNR=14						
SIV				S	S	18 46 48.9	-0.6
	comp=Z,0.2nm,0.3s,baz=232,slow=11,SNR=3.8						
GO02	Mina Guanaco	9.50	174	ePn	Pn	18 45 11.4	+1.8
AZAP	Zapla	10.00	149	i P	Pn	18 45 16.0	0.0
AZAP				IAML		18 45 19.7	
	comp=Z,7.3nm,0.2s						
AZAP				i S	S	18 47 06.7	-1.5
GO03	Copiap	11.88	178	ePn	Pn	18 45 38.4	-1.3
CPUP	Villa Florida	16.33	133	P	Pn	18 46 37.1	+2.6
	comp=Z,0.2nm,0.3s,baz=328,slow=7.4,SNR=4.7						
PTGA	Pitinga	18.20	36	P	P	18 46 53.2	-0.8
	comp=Z,3.6nm,0.3s,baz=214,slow=13,SNR=36						
PTGA	Pitinga	18.20	36	eP	P	18 46 53.0	-1.1
	comp=Z,13nm,0.6s						
ROSC	El Rosal	20.70	350	eP	P	18 47 21.4	+0.2
	comp=Z,3.2nm,0.8s						
SPB	Sao Paulo	23.22	113	eP	P	18 47 41.5	-3.6
	comp=Z,8.8nm,0.3s						
SDV	Santo Domingo	24.39	0	P	P	18 47 55.5	-0.5
	comp=Z,1.2nm,0.3s,baz=358,slow=21,SNR=3.7						
ESPN	Las Esperanzas	30.80	333	eP	P	18 48 52.9	0.0
	comp=Z,11nm,0.9s						
TXAR	Lajitas Array	54.94	324	P	P	18 52 06.7	+0.6
	comp=Z,0.4nm,1.0s,baz=154,slow=6.9,SNR=4.6						
PDAR	Pinedale Array	68.26	330	P	P	18 53 35.9	+1.0
	comp=Z,0.3nm,0.6s,baz=103,slow=7.5,SNR=3.3						
NVAR	Mina Array Bea	69.91	322	P	P	18 53 47.2	+2.0
	comp=Z,0.4nm,0.8s,baz=118,slow=7.3,SNR=3.1						
TORD	Torodi Ar. Bea	77.05	72	P	P	18 54 26.2	-0.8
	comp=Z,2.8nm,0.7s,baz=264,slow=5.2,SNR=16						
YKA	Yellowknife Ar	85.17	341	P	P	18 55 10.3	+1.6
	comp=Z,0.9nm,0.6s,baz=131,slow=4.8,SNR=5.3						
ZALV	Zalesovo Beam	137.26	21	PKP	PKiKP	19 01 58.5	+1.9
	comp=Z,1.8nm,0.7s,baz=310,slow=6.9,SNR=5.8						
MJAR	Matsushiro Arr	146.99	314	PKPbc	PKPab	19 02 16.1	-0.6
	comp=Z,0.5nm,0.5s,baz=35,slow=0.3,SNR=3.9						
SONM	Songino Array	147.83	4	PKPbc	PKPab	19 02 19.4	-0.5
	comp=Z,1.3nm,0.5s,baz=345,slow=2.4,SNR=6.6						

*IDC **09** 18:45:53.3±1.0, 2°.92S×130°.19E, h0km, mb3.8/7, mb1 4.1/9, mb1mx3.8/28, mbtmp3.9/9, ML4.5/3, MS3.3/5, Ms1 3.3/5, ms1mx2.8/39, Error ellipse: s-maj=36.9km s-min=17.1km az=75.0*
*ISCJB **09** 18:45:55.5±0.3, 3°.01S±0°.03×129°.79E±0°.04, h25km, mb4.1/15, MS3.1/2, Error ellipse: s-maj=5.1km s-min=4.7km az=7.5*
*DJA **09** 18:45:56.5±0.2, 3°.S±2°×13°.0E±°, h10km, M4.5/13, mb4.6/12, mB5.0/4, MLv4.5/13, Mw(mB)4.3/4*
*NEIC **09** 18:45:59.8±2.3, 3°.03S×129°.89E, h48km±9km, mb4.1/16, Error ellipse: s-maj=18.7km s-min=12.2km az=60.0*

ISC 09 18:45:57.4±0.5, 2°.99S±0°.05×129°.80E±0°.06, h25km, n48, σ1§34/48, mb4.0/15, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.52	176	P	Pb	18 46 25.1	+0.1
BNDI				S	Sn	18 46 41.5	-0.6
FAKI	Fak Fak	2.45	88	ePn	Pn	18 46 37.9	+2.0
FAKI	Fak Fak	2.45	88	P	Pn	18 46 37.8	+2.0
FAKI				S	Sn	18 47 04.6	-0.3
SWI	Sorong	2.57	35	P	Pn	18 46 38.5	+1.0
SWI				S	Sn	18 47 08.2	+0.3
TNTI	Ternate	4.46	327	ePn	Pn	18 47 04.7	+1.1
TNTI	Ternate	4.46	327	P	Pn	18 47 04.6	+1.1
RKPI	Ransiki, Papua	4.61	72	P	Pn	18 47 06.0	+0.4
SRPI	Serui, Papua	6.53	80	P	Pn	18 47 32.8	+0.8
BAKI	Biak	6.55	74	P	Pn	18 47 33.4	+1.1
LUWI	Luwuk	7.29	285	ePn	Pn	18 47 42.1	-0.2
LUWI	Luwuk	7.29	285	P	Pn	18 47 43.7	+1.3
APSI	Ampana	8.40	284	P	Pn	18 47 59.1	+1.4
	50nm,1.0s,613nm0.2nm						
MRSI	Marisa	8.58	294	P	Pn	18 48 01.3	+1.2
	11nm,0.7s,0.1nm						
BATI	Baumata	9.41	220	LR	LR	18 51 54.4	
	comp=Z,416nm,20.5s,baz=77,slow=37						
MTN	Manton Dam	9.88	172	ePn	Pn	18 48 19.5	+1.6
EDFI	Ende, Flores	9.89	234	P	Pn	18 48 20.0	+1.8
BKSI	Bulukumba	9.93	256	P	Pn	18 48 20.4	+1.8
KAPI	Kappang	10.22	258	Pn	Pn	18 48 28.2	+5.6
	1.0nm,0.3s,baz=86,slow=14,SNR=5.7						
KAPI				LR	LR	18 52 50.6	
	comp=Z,189nm,21.6s,baz=76,slow=39						
FITZ	Fitzroy Crossi	15.56	195	Pn	Pn	18 49 36.6	+1.3
	0.7nm,0.3s,baz=42,slow=9.3,SNR=13						
FITZ				LR	LR	18 56 54.1	
	comp=Z,37nm,20.7s,baz=8.5,slow=42						
FITZ	Fitzroy Crossi	15.56	195	ePn	Pn	18 49 36.6	+1.3
	7.2nm,1.1s						
WRAB	Tennant Creek	17.41	166	eP	P	18 49 59.8	-0.2
	4.7nm,0.9s						
WR1	Warramunga Arr	17.42	166	ePn	Pn	18 49 56.4	-2.5
WRA	Warramunga Arr	17.42	166	P	Pn	18 49 56.4	-2.5
	6.1nm,0.3s,baz=339,slow=12,SNR=3.1						
WB2	Warramunga Arr	17.42	166	eP	P	18 49 59.8	-0.2
	6.9nm,1.0s						
PSA00	Pilbara Seismi	20.85	207	eP	P	18 50 37.2	-0.4
	7.4nm,1.0s						
AS31	Alice Springs	20.93	169	eP	P	18 50 38.0	-0.5
	5.4nm,0.8s						
ASAR	Alice Springs	20.93	169	P	P	18 50 38.0	-0.4
	11nm,0.8s,baz=349,slow=11,SNR=84						
CISI	Cisompet, Garu	22.35	257	eP	P	18 50 51.0	-2.9
	24nm,1.1s						
LEM	Lembang	22.42	259	LR	LR	19 00 49.5	
	comp=Z,161nm,20.2s,baz=97,slow=39						
STKA	Stephens Creek	30.80	160	P	P	18 52 10.5	-0.8
	0.6nm,0.4s,baz=337,slow=15,SNR=3.8						
STKA	Stephens Creek	30.80	160	eP	P	18 52 10.5	-0.8
	0.4nm,0.9s						
JNU	Nakatsue	35.93	2	eP	P	18 52 53.7	-2.3
	3.6nm,1.0s						
CM31	Chiang Mai Arr	37.12	306	eP	P	18 53 07.3	+1.1
	2.4nm,0.9s						
CMAR	Chiang Mai Arr	37.12	306	P	P	18 53 07.3	+1.1
	1.7nm,1.1s,baz=127,slow=6.3,SNR=7.4						
CMAR				LR	LR	19 09 59.1	
	comp=Z,18nm,19.7s,baz=194,slow=39						
JHJ2	Mitsune	37.14	14	eP	P	18 53 06.6	+0.4
	49nm,0.8s						
CHTO	Chiang Mai	37.30	307	eP	P	18 53 07.6	-0.3
	5.0nm,1.0s						
MAJO	Matsushiro	40.10	11	eP	P	18 53 29.3	-1.9
MAJO				e		18 53 29.4	
MJAR	Matsushiro Arr	40.10	11	P	P	18 53 29.4	-1.7
	0.9nm,0.5s,baz=190,slow=9.3,SNR=6.6						
MJB9	Matsu-Tunnel	40.11	11	eP	P	18 53 29.3	-1.9
	2.3nm,0.6s						
SONA0	Songino Array	54.61	341	eP	P	18 55 25.3	+1.3
SONM	Songino Array	54.61	341	P	P	18 55 25.3	+1.3
	0.9nm,0.8s,baz=154,slow=6.0,SNR=4.5						
NIL	Nilore	64.50	310	eP	P	18 56 30.6	-1.8
	3.8nm,0.8s						
MK31	Makanchi Array	64.80	326	eP	P	18 56 34.8	+0.7
	1.2nm,0.9s						
MK32	Makanchi Array	64.80	326	eP	P	18 56 34.5	+0.4
MKAR	Makanchi Array	64.80	326	P	P	18 56 34.5	+0.4
	0.5nm,0.7s,baz=118,slow=9.7,SNR=6.2						
ZALV	Zalesovo Beam	67.93	333	P	P	18 56 54.3	+0.4
	0.6nm,0.5s,baz=142,slow=7.5,SNR=3.9						
ZAA1	Zalesovo Array	67.93	333	eP	P	18 56 54.3	+0.4
KURK	Kurchatov	69.03	328	eP	P	18 57 01.5	+0.6
	3.4nm,0.8s						

TAP 09 18:49:21.0, 24°.40N×121°.96E, h24km±1km, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	Nanao	0.19	277	eP	Pb	18 49 26.8	+0.3
	baz=277						
NANB				eS	Sb	18 49 31.0	+0.9
	baz=277						
ENA	Nanau	0.20	277	P	Pb	18 49 26.8	+0.3
	baz=276						
ENA				S	Sb	18 49 31.1	+0.8
	baz=276						
EOS1	EOS1	0.21	47	eP	Pb	18 49 27.4	+0.7
	baz=46						
EOS1				eS	Sb	18 49 33.4	+2.9
	baz=46						
TWC	Suao	0.23	334	eP	Pb	18 49 26.5	-0.4
	baz=335						
TWC				S	Sb	18 49 31.8	+0.9
	baz=335						
NACB	Ninganchiao	0.40	236	eP	Pb	18 49 29.6	0.0
	baz=235						
NACB				eS	Sb	18 49 36.7	+1.3
	baz=235						
ENTT	Nioudou	0.43	303	P	Pb	18 49 30.7	+0.7
	baz=303						
ENTT				S	Sb	18 49 37.2	+1.0
	baz=303						
NDT	Datong Townshi	0.45	296	eP	Pb	18 49 30.5	+0.1
	baz=296						
NDT				eS	Sb	18 49 37.8	+1.0
	baz=296						
ETLH	Xiulin Townshi	0.48	246	eP	Pb	18 49 31.1	+0.2
	baz=245						
ETLH				eS	Sn	18 49 39.2	-1.0
	baz=245						
NNSB	Datong	0.53	273	eP	Pb	18 49 31.6	-0.1
	baz=272						
NNSB				eS	Sb	18 49 40.1	+1.1
	baz=272						
NNS	Nan Shan	0.54	274	eS	Sb	18 49 40.4	+1.1
	baz=273						
NWLT	Wulai	0.56	312	eP	Pb	18 49 32.7	+0.5
	baz=311						
NWLT				eS	Sb	18 49 40.9	+1.1
	baz=311						
TIPB	Shuangxi	0.58	348	eP	Pn	18 49 33.2	-0.6
	baz=347						
TIPB				eS	Sn	18 49 42.0	-0.6
	baz=347						
YHNB	Yeheng	0.59	297	eP	Pb	18 49 33.4	+0.5
	baz=296						
YHNB				eS	Sb	18 49 41.8	+0.9
	baz=296						
TWB1	Santiao Chiao	0.60	3	eP	Pb	18 49 33.2	+0.2
	baz=3.0						
TWB1				eS	Sb	18 49 41.7	+0.7
	baz=3.0						
NSK	Sanguang	0.61	297	eS	Sb	18 49 42.3	+0.9
	baz=296						

JMA 09 18:49:58.2±0.1, 24°.21N×123°.77E, h13km±2km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.13	344	P	Pg	18 50 01.6	0.0
IRIF				S	Sg	18 50 04.4	+0.4
HATJ	Hateruma jima	0.16	168	P	Pg	18 50 01.9	0.0
HATJ				S	Sg	18 50 04.9	+0.4
JKRS	Kuro-shima	0.22	83	P	Pg	18 50 03.2	+0.2
JKRS				S	Sb	18 50 07.2	-0.8
JIJ	Ishigaki jima	0.37	66	P	Pg	18 50 05.5	-0.2
JIJ				S	Sg	18 50 10.8	0.0
JISG	Ishigakijimahi	0.62	53	P	Pg	18 50 10.4	+0.1
JISG				eS	Sb	18 50 19.2	-0.3
YOJ	Yonaguni jima	0.74	290	P	Pb	18 50 12.7	-0.2
YOJ				eS	Sb	18 50 23.3	+0.4
JYNG	Yonagunijimaku	0.79	288	P	Pb	18 50 13.8	0.0
JYNG				eS	Sb	18 50 25.0	+0.6
JTJ	Tarama	0.95	63	P	Pg	18 50 16.6	0.0
JTJ				S	Sb	18 50 29.4	+0.3

MEX 09 18:58:11.6±0.3, 14°.65N×93°.19W, h16km±76km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.05	358	eP	Pb	18 58 27.9	-3.5
PCIG				eS	Sb	18 58 40.5	-4.4

*ISCJB **09** 19:01:42.0±0.3, 43°.85N±0°.03×105°.19W±0°.04, h0km, mb4.1/4, Error ellipse: s-maj=4.6km s-min=3.9km az=173.0*
*ANF **09** 19:01:43.8±0.5, 43°.78N×105°.30W, ML3.8/11, Error ellipse: s-maj=7.5km s-min=4.7km az=137.0*
*NEIC **09** 19:01:43.9±0.3, 43°.81N×105°.25W, h0km, ML3.4, Error ellipse: s-maj=5.2km s-min=4.6km az=98.0, Suspected Mining explosion.*
NEIC 58 km [36 miles] SSE of Gillette.
*IDC **09** 19:01:44.4±0.8, 44°.14N×105°.73W, h0km, mb4.0/3, mb1 3.8/8, mb1mx3.6/46, mbtmp3.7/8, ML3.1/4, MS2.6/1, Ms1 2.6/1, ms1mx2.2/38, Error ellipse: s-maj=24.4km s-min=8.1km az=145.0*

ISC 09 19:01:43.5±0.7, 43°.89N±0°.04×105°.19W±0°.04, h0km, n59, σ1§53/67, mb4.1/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.86	74	ePg	Pn	19 02 02.7	-0.4
RSSD	Black Hills	0.86	74	P	Pn	19 02 02.6	-0.5
	baz=251						
RSSD				S	Sn	19 02 17.1	+0.6
	baz=251						
K22A	Casper	1.58	219	ePn	Pn	19 02 09.9	-2.9
K22A	Casper	1.58	219	P	Pn	19 02 10.2	-2.6
	baz=38						
K22A				S	Sg	19 02 32.1	-2.0
	baz=38						
PHWY	Pilot Hill	2.59	184	ePn	Pn	19 02 26.1	-0.8
RWWY	Rawlins	2.66	215	ePn	Pn	19 02 27.7	-0.1
LAO	LASA Array	2.89	346	ePn	Pn	19 02 32.1	+1.3
LAO	LASA Array	2.89	346	P	Pn	19 02 32.0	+1.1
	baz=166						
N23A	Red Feather La	3.04	191	ePn	Pn	19 02 32.8	-0.3
N23A	Red Feather La	3.04	191	P	Pn	19 02 32.6	-0.5
	baz=9.8						
N23A				S	Sn	19 03 08.8	-1.6
	baz=9.8						
RLMT	Red Lodge	3.17	294	ePn	Pn	19 02 35.2	+0.4
RLMT	Red Lodge	3.17	294	P	Pn	19 02 35.1	+0.4
	baz=113						
RLMT				S	Sn	19 03 14.2	+0.8
	baz=113						
BW06	Boulder Array	3.38	252	ePn	Pn	19 02 37.2	-0.5
BW06	Boulder Array	3.38	252	P	Pn	19 02 37.0	-0.7
	baz=70						
PD31	Pinedale Array	3.38	252	ePn	Pn	19 02 37.1	-0.6
PDAR	Pinedale Array	3.38	252	Pn	Pn	19 02 37.1	-0.6
	6.9nm,0.3s,baz=66,slow=17,SNR=52						
PDAR				Lg	Lg	19 03 21.3	
	13nm,0.3s,baz=71,slow=32,SNR=16						
GCMT	Greycliff	3.71	302	ePn	Pn	19 02 43.1	+1.0
OGNE	Ogallala	3.76	140	ePn	Pn	19 02 43.1	+0.4
OGNE	Ogallala	3.76	140	P	Pn	19 02 43.0	+0.3
	baz=321						
OGNE				S	Sn	19 03 27.5	-0.2
	baz=321						
H17A	Grant Village	3.91	279	P	Pn	19 02 45.9	+0.9
	baz=97						
LOHW	Long Hollow	3.93	268	ePn	Pn	19 02 45.5	+0.2
FLWY	Flagg Ranch	3.98	275	ePn	Pn	19 02 46.4	+0.4
ISCO	Idaho Springs	4.10	185	ePn	Pn	19 02 47.5	-0.2
ISCO	Idaho Springs	4.10	185	P	Pn	19 02 47.2	-0.5
	baz=3.8						
ISCO				Sb	Sb	19 03 47.3	+0.4
	baz=3.8						
REDW	Red Top Meadow	4.15	265	ePn	Pn	19 02 48.5	+0.3
O20A	White River Ci	4.39	212	ePn	Pn	19 02 51.1	-0.4
O20A	White River Ci	4.39	212	P	Pn	19 02 50.8	-0.7
	baz=30						
O20A				Sb	Sb	19 03 56.8	+1.7
	baz=30						
AHID	Auburn Hatcher	4.46	257	ePn	Pn	19 02 50.3	-2.2
DGMT	Dagmar	4.63	8	ePn	Pn	19 02 58.2	+3.5
DGMT	Dagmar	4.63	8	P	Pn	19 02 57.7	+3.0
	baz=189						
DGMT				Sb	Sg	19 04 08.8	-3.5
	baz=189						
BOZ	Bozeman (W)	4.89	293	ePn	Pn	19 02 58.4	-0.1
SMCO	Snowmass	4.89	196	ePn	Pn	19 02 59.3	+0.6
Q24A	Divide	4.92	180	ePn	Pn	19 02 58.2	-0.8
EGMT	Eagleton	5.22	324	ePn	Pn	19 03 03.9	+1.1
HWUT	Hardware Ranch	5.22	246	ePn	Pn	19 03 02.0	-0.9
KSCO	Kaye Shedlock'	5.24	158	ePn	Pn	19 03 02.6	-0.6
SPUT	South Promonto	5.95	247	ePn	Pn	19 03 12.4	-0.5
P17A	Butcher Ranch,	6.06	225	ePn	Pn	19 03 13.5	-1.0
ECSD	EROS Data Cent	6.21	88	ePn	Pn	19 03 16.8	+0.5
SRU	San Rafael Swe	6.23	222	ePn	Pn	19 03 15.0	-1.8
TMUT	Trail Mountain	6.43	227	ePn	Pn	19 03 19.0	-0.8
T25A	Trinidad	6.77	175	ePn	Pn	19 03 23.8	-0.4
ELK	Elko	8.08	251	Pn	Pn	19 03 41.9	-0.4
	0.4nm,0.3s,baz=61,slow=6.6,SNR=8.0						
ELK				Lg	Lg	19 05 55.1	
	0.1nm,0.3s,baz=191,slow=16,SNR=2.8						
ELK				LR	LR	19 07 06.4	
	comp=Z,48nm,20.2s,baz=185,slow=41						
ANMO	Albuquerque	8.99	187	Sn	Sn	19 05 43.5	+6.9
	0.2nm,0.3s,baz=232,slow=14,SNR=8.8						
ULM	Lac du Bonnet	8.99	42	Pn	Pn	19 03 54.8	+0.4
	1.5nm,0.3s,baz=234,slow=11,SNR=5.4						
ULM				Lg	Lg	19 06 27.5	
	1.0nm,0.3s,baz=122,slow=17,SNR=5.2						
LAZ	Ladron	9.60	190	ePn	Pn	19 04 03.0	0.0
LENM	Lemitar	9.81	189	ePn	Pn	19 04 02.0	-3.9
FFC	Flin Flon	11.04	10	ePn	Pn	19 04 22.8	+0.3
NV01	Mina Array Sit	11.29	246	ePn	Pn	19 04 26.9	+0.8
NVAR	Mina Array Bea	11.29	246	Pn	Pn	19 04 26.9	+0.8
	0.1nm,0.3s,baz=48,slow=13,SNR=7.3						
LTX	Lajitas	14.58	175	eP	P	19 05 17.0	-0.8
TXAR	Lajitas Array	14.58	175	Pn	P	19 05 17.0	-0.8
	0.0nm,0.3s,baz=356,slow=11,SNR=3.3						
ARCES	ARCESS Array B	61.25	18	P	P	19 11 59.8	-0.1
	1.1nm,0.6s,baz=343,slow=7.9,SNR=8.9						
FIA0	FINESS Array S	67.87	23	eP	P	19 12 42.9	-0.2
FINES	FINESS Array B	67.87	23	P	P	19 12 42.9	-0.2
	1.0nm,0.8s,baz=22,slow=2.1,SNR=4.2						
ZAA1	Zalesovo Array	82.16	354	eP	P	19 14 05.2	-0.6
ZALV	Zalesovo Beam	82.16	354	P	P	19 14 05.2	-0.6
	0.9nm,0.6s,baz=41,slow=2.9,SNR=4.0						
MK32	Makanchi Array	89.46	355	eP	P	19 14 42.4	+0.2
MKAR	Makanchi Array	89.46	355	P	P	19 14 42.4	+0.2
	0.6nm,0.7s,baz=8.2,slow=4.8,SNR=7.3						

*DDA **09** 19:05:21.3, 40°.74N×44°.25E, h7km±1km, ML2.5*

ISC 09 19:05:21.7±1.3, 40°.75N±0°.04×44°.24E±0°.05, h10km±14km, n9, σ0§56/16, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAK	Akyaka	0.48	263	i P	Pb	19 05 31.6	-0.8
EAK				i S	Sg	19 05 38.5	+0.9
KZRT	Kazreti	0.65	11	P	Pg	19 05 34.0	-0.4
KZRT				S	Sg	19 05 43.1	+0.1
BGD	Bogdanovka	0.71	317	P	Pg	19 05 35.7	+0.2
BGD				S	Sb	19 05 45.7	-0.4
DIGO	Kars	0.74	243	i P	Pg	19 05 35.9	-0.1
AKH	Akhalkalaki	0.87	320	P	Pg	19 05 38.1	-0.4
AKH				S	Sg	19 05 50.0	+0.2
IGDI	IGDIR	0.89	188	i P	Pb	19 05 38.8	-0.4
IGDI				i S	Sb	19 05 51.8	+0.7
IGDI				IAML_P			
	comp=Z,262nm,0.1s						
BTNK	Botanikuri	1.03	24	P	Pg	19 05 41.0	-0.4
BTNK				S	Sb	19 05 55.3	+0.1
BTNK	Botanikuri	1.03	24	i P	Pg	19 05 41.1	-0.4
BTNK				IAML_P			
	comp=Z,945nm,0.1s						
GUDG	Gudauri	1.73	6	P	Pb	19 05 54.0	+0.4
GUDG				S	Sb	19 06 16.2	+0.8

*IDC **09** 19:11:47.6±3.1, 10°.98N×127°.87E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.3/47, mbtmp3.6/4, Error ellipse: s-maj=267.0km s-min=27.3km az=69.0*
*MAN **09** 19:11:49.2, 10°.73N×127°.08E, h39km, mb4.7, ML3.6, MS3.5*
*ISCJB **09** 19:11:52.8±1.3, 10°.86N±0°.09×126°.92E±0°.08, h33km, mb3.7/4, Error ellipse: s-maj=13.7km s-min=9.8km az=146.9*

ISC 09 19:11:55.2±1.2, 10°.97N±0°.08×126°.8E±0°.1, h35km, n9, σ2§69/14, mb3.7/4, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	1.51	295	eP	Pn	19 12 18.7	-1.1
BESP				eS	Sn	19 12 41.3	+3.0
SCPH	Surigao	1.77	229	i P	Pn	19 12 27.8	+4.4
SCPH				i S	Sn	19 12 45.2	+0.4
PLP	Palo	1.83	276	i eP	Pn	19 12 21.8	-2.5
PLP				eS	Sn	19 12 43.9	-2.4
MSLP	Maasin	2.11	247	eP	Pn	19 12 25.9	-2.2
MSLP				eS	Sn	19 12 51.9	-1.2
OCLP	Ormoc	2.19	272	eP	Pn	19 12 28.4	-0.7
OCLP				eS	Sn	19 12 57.2	+2.2
ASAR	Alice Springs	35.11	169	P	P	19 18 41.4	-4.1
	0.2nm,0.6s,baz=351,slow=6.8,SNR=7.3						
MKAR	Makanchi Array	51.82	322	P	P	19 21 02.4	+2.6
	0.7nm,0.8s,baz=120,slow=8.7,SNR=7.2						
BVAR	Borovoye Array	61.41	325	P	P	19 22 09.6	+1.7
	0.5nm,0.7s,baz=126,slow=7.3,SNR=4.2						
FINES	FINESS Array B	85.55	332	P	P	19 24 29.3	-0.2
	1.2nm,0.9s,baz=90,slow=2.7,SNR=5.7						

*JMA **09** 19:14:50.3±0.2, 24°.96N×128°.04E, h76km, M3.2*
*IDC **09** 19:14:54.4±1.2, 25°.56N×127°.41E, h0km, mb3.4/2, mb1 3.5/2, mb1mx3.1/48, mbtmp3.4/2, MS2.5/1, Ms1 2.7/1, ms1mx2.1/28, Error ellipse: s-maj=33.7km s-min=14.0km az=113.0*

ISC 09 19:14:48.9±2.8, 25°.06N±0°.09×127°.92E±0°.08, h10km±12km, n26, σ1§49/39, mb3.5/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	1.09	353	P	Pn	19 15 12.2	+2.0
JJT3				S	Sn	19 15 28.3	+3.0
JNTH	Nagotoyohara	1.46	4	P	Pb	19 15 16.2	+0.1
JNTH				S	Sg	19 15 36.0	+0.2
JKE	Kume jima 2	1.63	321	P	Pg	19 15 20.0	-0.1
JKE				eS	Sg	19 15 41.6	+0.3
JAGN	Aguni-jima	1.64	338	P	Pg	19 15 20.3	-0.2
JAGN				S	Sg	19 15 41.6	-0.2
JOW	Kunigami

IRIF	**Iriomote-Funau**	**3.88 260**	P	**Pn**	**19 15 50.0 +1.4**		
CMAR	**Chiang Mai Arr**	**27.67 262**	LR	LR	19 31 46.8		
comp=Z,9.8nm,19.6s,baz=270,slow=37							
MKAR	**Makanchi Array**	**42.12 313**	P	**P**	**19 22 42.8 +1.5**		
0.4nm,0.5s,baz=95,slow=10.0,SNR=7.9							
WRA	**Warramunga Arr**	**45.16 171**	P	P	19 23 17.4 +11		
6.5nm,0.3s,baz=349,slow=9.3,SNR=0.8							
ASAR	**Alice Springs**	**48.78 173**	P	P	19 23 45.5 +11		
0.1nm,0.5s,baz=2.6,slow=15,SNR=4.4							

MAN 09 19:23:17.1, 14°.14N×120°.42E, h122km, mb3.9, ML2.6, MS2.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.44**	**202**	*e*P	Pn	19 23 35.6	+0.6
LUBP				*e*S	Sn	19 23 51.3	+2.9
PGP	**Puerto Galera**	**0.82**	**141**	⇑*i*P	Pn	19 23 39.3	+1.6
PGP				*i*S	Sn	19 23 55.9	+2.6
SJMP	**San Jose**	**1.81**	**158**	*e*P	Pn	19 23 49.2	+1.0
SJMP				*e*S	Sn	19 24 12.3	+0.2
BUSP	**Coron**	**2.14**	**186**	*e*P	Pn	19 23 53.4	+1.0
BUSP				*e*S	Sn	19 24 20.9	+1.5

NIED ***09*** *19:27:00.36°.70N×142°.30E, h14km, Mw3.5 Best double couple: M0=2.28000×10^14 NP1:φs=212.00000°, δ27.00000°, λ102.00000°. NP2:φs=18.00000°, δ64.00000°, λ84.00000°.*

JMA 09 19:27:12.2±0.3, 36°.72N×142°.26E, h11km±4km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.23**	**288**	P	Pn	19 27 34.9	-0.5
ONAJ				*e*S	Sb	19 27 50.8	-0.6
JFK	**Kawauchi**	**1.28**	**301**	P	Pn	19 27 35.6	-0.5
JHO	**Hitachi**	**1.36**	**266**	P	Pn	19 27 36.9	-0.3
JHYU	**Hitachinakayam**	**1.40**	**255**	P	Pn	19 27 37.9	+0.3
JHYU				*e*S	Sb	19 27 56.2	0.0
JFFD	**Fukushimafurud**	**1.41**	**286**	P	Pn	19 27 37.3	-0.5
JMM	**Marumori**	**1.64**	**315**	P	Pn	19 27 41.1	+0.2
JFT	**Otama**	**1.73**	**298**	P	Pb	19 27 43.2	-0.8
JIO	**Ouri**	**1.88**	**338**	P	Pn	19 27 44.7	+0.5
JIO				*e*S	Sn	19 28 08.3	+0.4
JOU	**Okura**	**2.08**	**323**	P	Pn	19 27 48.3	+1.3
JAG	**Ashikaga**	**2.28**	**263**	P	Pn	19 27 50.4	+0.6
BSO1	**Boso 1**	**2.31**	**207**	P	Pn	19 27 50.0	+0.3
BSO1				*e*S	Sn	19 28 18.6	+0.8
JMK	**Ichinoseki**	**2.38**	**340**	P	Pn	19 27 52.0	+0.9
JMK				S	Sn	19 28 21.2	+1.0
JNS	**Sasagawa**	**2.59**	**296**	P	Pn	19 27 56.0	+2.0
JYK	**Kaneyama**	**2.66**	**326**	P	Pn	19 27 56.1	+1.1
MAT	**Matsushiro**	**3.27**	**268**	P	Pn	19 28 05.8	+2.5
MAT				S	Sn	19 28 41.7	-0.5

IDC ***09*** *19:51:41.3±1.2, 44°.42N×84°.33E, h0km, mb3.5/1, mb1 3.3/4, mb1mx3.1/42, mbtmp3.2/4, ML2.6/3, MS2.8/4, Ms1 2.8/4, ms1mx2.4/40, Error ellipse: s-maj=42.1km s-min=12.0km az=57.0*
SOME ***09*** *19:51:41.7, 44°.13N×83°.92E, h5km*
BJI ***09*** *19:51:44.0±0.0, 44°.23N×83°.83E, h8km, ML3.3/8*
NNC ***09*** *19:51:45.4±1.2, 44°.27N×83°.62E, h3km±6km, mb3.9, mpv3.5, Error ellipse: s-maj=9.8km s-min=4.0km az=126.0*

ISC 09 19:51:42.0±0.8, 44°.17N±0°.04×83°.89E±0°.03, h10km, n45, σ2°.76/61, 14C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.66**	**255**	Pg	**Pb**	**19 52 30.3**	**+0.4**
3.9nm,0.3s							
KTMS				Lg	Lg	19 53 04.9	
172nm,0.5s							
KTMS	**Ketmen**	**2.66**	**255**	*e*P	**Pb**	**19 52 30.3**	**+0.4**
3.9nm,0.3s							
KTMS				*e*S	**Sb**	**19 53 04.9**	**+2.3**
172nm,0.5s							
WMQ	**Urumqi**	**2.77**	**96**	*e*Pn	**Pb**	**19 52 30.6**	**-1.0**
WMQ				Sg	**Sg**	**19 53 11.1**	**+0.3**
WMQ				smax	smax		
comp=N,240nm,0.5s							
WMQ				smax	smax		
comp=E,120nm,0.5s							
MK31	**Makanchi Array**	**2.86**	**337**	⇑Pn	**Pn**	**19 52 29.6**	**+1.9**
0.1nm,0.1s							
MK31				⇑Pg	**Pb**	**19 52 34.2**	**+1.1**
6.5nm,0.5s,baz=161,slow=11,SNR=204							
MK31				⇓Lg	Lg	19 53 09.9	
81nm,0.6s,baz=152,slow=27,SNR=13							
MKAR	**Makanchi Array**	**2.86**	**337**	Pn	**Pn**	**19 52 29.6**	**+1.9**
4.3nm,0.3s,baz=148,slow=14,SNR=91							
MKAR				Pg	**Pb**	**19 52 34.2**	**+1.1**
4.3nm,0.3s,baz=148,slow=18,SNR=149							
MKAR				Lg	Lg	19 53 09.8	
25nm,0.3s,baz=150,slow=28,SNR=27							
MKAR				LR	LR	19 53 23.7	
comp=Z,18nm,19.0s,baz=202,slow=37							
DJR	**Jarkent**	**2.95**	**275**	Pg	**Pb**	**19 52 36.0**	**+1.2**
33nm,0.5s							
DJR				Lg	Lg	19 53 14.2	
181nm,0.5s							
DJR	**Jarkent**	**2.95**	**275**	*e*P	**Pb**	**19 52 36.0**	**+1.2**
33nm,0.5s							
DJR				*e*S	**Sg**	**19 53 14.2**	**-2.6**
181nm,0.5s							
MAKZ	**Makanchi**	**2.96**	**334**	⇑Pn	**Pn**	**19 52 31.5**	**+2.4**
0.7nm,0.6s							
MAKZ				⇓Pg	**Pb**	**19 52 36.3**	**+1.4**
5.5nm,0.3s							
MAKZ				⇑Lg	Lg	19 53 13.2	
30nm,0.6s							
PDGK	**Podgornoye**	**3.30**	**257**	Pg	**Pb**	**19 52 40.4**	**-0.3**
4.4nm,0.5s							
PDGK				Lg	Lg	19 53 22.4	
60nm,0.5s							
PDGK	**Podgornoye**	**3.30**	**257**	⇑Pg	**Pb**	**19 52 42.8**	**+2.1**
7.5nm,0.4s							
PDGK				⇓Lg	Lg	19 53 22.1	
92nm,0.5s							
ZSN	**Zaisan**	**3.35**	**11**	Pg	**Pg**	**19 52 44.2**	**-2.0**
4.9nm,0.3s							
ZSN				Lg	Lg	19 53 28.7	
35nm,0.6s							
ZSN	**Zaisan**	**3.35**	**11**	*e*P	**Pg**	**19 52 44.2**	**-2.0**
4.9nm,0.3s							
ZSN				*e*S	**Sg**	**19 53 28.7**	**-0.9**
35nm,0.6s							
KAPS	**Kapalarasan**	**3.42**	**291**	Pg	**Pg**	**19 52 45.7**	**-1.8**
2.4nm,0.1s							
KAPS				Lg	Lg	19 53 31.1	
33nm,0.3s							
KAPS	**Kapalarasan**	**3.42**	**291**	*e*P	**Pg**	**19 52 45.7**	**-1.8**
2.4nm,0.1s							
KAPS				*e*S	**Sg**	**19 53 31.1**	**-0.7**
33nm,0.3s							
MNBS	**Baschi**	**3.96**	**271**	Pg	**Pb**	**19 52 52.6**	**+0.7**
5.2nm,0.2s							
MNBS				Lg	Lg	19 53 42.9	
96nm,0.4s							
MNBS	**Baschi**	**3.96**	**271**	*e*P	**Pb**	**19 52 52.6**	**+0.7**
5.2nm,0.2s							
MNBS				*e*S	**Sb**	**19 53 42.9**	**+3.1**
96nm,0.4s							
SATY	**Saty**	**4.13**	**256**	Pg	**Pg**	**19 52 58.5**	**-2.7**
15nm,0.3s							
SATY				Lg	Lg	19 53 53.0	
39nm,0.4s							
SATY	**Saty**	**4.13**	**256**	*e*P	**Pg**	**19 52 58.5**	**-2.7**
15nm,0.3s							
SATY				*e*S	**Sg**	**19 53 53.0**	**-1.7**
39nm,0.4s							
KURS	**Kuram**	**4.20**	**263**	Pg	**Pg**	**19 52 59.7**	**-2.6**
7.5nm,0.6s							
KURS				Lg	Lg	19 53 55.0	
26nm,1.4s							
KURS	**Kuram**	**4.20**	**263**	*e*P	**Pg**	**19 52 59.7**	**-2.6**
7.5nm,0.6s							
KURS				*e*S	**Sg**	**19 53 55.0**	**-1.7**
26nm,1.4s							
ARXS	**Arharly**	**4.36**	**273**	Pg	**Pb**	**19 53 02.0**	**+3.3**
16nm,0.4s							
ARXS				Lg	Lg	19 53 59.3	
90nm,0.5s							
ARXS	**Arharly**	**4.36**	**273**	*e*P	**Pb**	**19 53 02.0**	**+3.3**
16nm,0.4s							
ARXS				*e*S	**Sg**	**19 53 59.3**	**-2.7**
90nm,0.5s							
CHKK	**Chushkaly**	**4.99**	**269**	Pg	**Pb**	**19 53 12.3**	**+2.9**
7.0nm,0.5s							
CHKK				Lg	Lg	19 54 17.0	
52nm,0.4s							
CHKK	**Chushkaly**	**4.99**	**269**	*e*P	**Pb**	**19 53 12.3**	**+2.9**
7.0nm,0.5s							
CHKK				*e*S	**Sg**	**19 54 17.0**	**-5.2**
52nm,0.4s							
KOTS	**Kotyrbulak**	**5.00**	**262**	Pg	**Pb**	**19 53 12.4**	**+2.7**
5.6nm,0.6s							
KOTS				Lg	Lg	19 54 16.9	
114nm,1.0s							
KOTS	**Kotyrbulak**	**5.00**	**262**	*e*P	**Pb**	**19 53 12.4**	**+2.7**
5.6nm,0.6s							
KOTS				*e*S	**Sg**	**19 54 16.9**	**-5.7**
114nm,1.0s							
KNDC	**Almaty**	**5.11**	**262**	⇑Pg	**Pg**	**19 53 15.6**	**-4.2**
10nm,0.7s							
KNDC				⇑Lg	Lg	19 54 20.1	
43nm,0.7s							
KTBS	**Karatobe**	**5.23**	**267**	Pg	**Pb**	**19 53 17.5**	**+4.1**
3.2nm,0.7s							
KTBS				Lg	Lg	19 54 25.9	
35nm,0.6s							
KTBS	**Karatobe**	**5.23**	**267**	*e*P	**Pb**	**19 53 17.5**	**+4.1**
3.2nm,0.7s							
KTBS				*e*S	**Sg**	**19 54 25.9**	**-3.9**
35nm,0.6s							
IZV	**Izvestkoviy**	**5.41**	**260**	Pg	**Pb**	**19 53 20.9**	**+4.3**
6.8nm,0.5s							
IZV				Lg	Lg	19 54 31.8	
29nm,0.8s							
IZV	**Izvestkoviy**	**5.41**	**260**	*e*P	**Pb**	**19 53 20.9**	**+4.3**
6.8nm,0.5s							
IZV				*e*S	**Sg**	**19 54 31.8**	**-3.7**
29nm,0.8s							
KUU	**Kurty**	**5.45**	**270**	Pg	**Pg**	**19 53 22.9**	**-3.5**
2.6nm,0.3s							
KUU				Lg	Lg	19 54 35.0	
26nm,0.4s							
KUU	**Kurty**	**5.45**	**270**	*e*P	**Pg**	**19 53 22.9**	**-3.5**
2.6nm,0.3s							
KUU				*e*S	**Sg**	**19 54 35.0**	**-2.0**
26nm,0.4s							
TKM2	**Tokmak 2**	**6.16**	**261**	⇑Pn	**Pn**	**19 53 16.0**	**+2.8**
1.5nm,0.6s							
TKM2				⇑Pg	**Pg**	**19 53 35.4**	**-4.4**
3.6nm,0.6s							
TKM2				⇓Lg	Lg	19 54 53.3	
15nm,0.7s							
AAK	**Ala-Archa**	**7.01**	**261**	LR	LR	19 56 07.3	
comp=Z,17nm,18.0s,baz=166,slow=36							
AAK	**Ala-Archa**	**7.01**	**261**	⇓Pg	Pg	19 53 51.0	-5.2
1.9nm,0.5s							
AAK				⇑Lg	Lg	19 55 21.2	
13nm,0.8s							
KURBB	**Kurchatov Arra**	**7.41**	**333**	Pn	**Pn**	**19 53 30.1**	**0.0**
0.0nm,0.3s,baz=139,slow=13,SNR=3.5							
KURBB	**Kurchatov Arra**	**7.41**	**333**	⇑Pn	**Pn**	**19 53 31.9**	**+1.8**
1.5nm,0.8s							
KURBB				⇑Sn	**Sn**	**19 54 54.1**	**0.0**
5.0nm,0.7s							
KURBB				⇑Lg	Lg	19 55 33.3	
28nm,0.6s							
KK31	**Karatay Array**	**9.76**	**268**	⇑Lg	Lg	19 56 47.1	
2.8nm,0.7s							
ZALV	**Zalesovo Beam**	**9.81**	**3**	Pn	**Pn**	**19 53 59.5**	**-3.5**
0.2nm,0.3s,baz=174,slow=16,SNR=2.6							
ZALV				Sn	**Sn**	**19 55 48.1**	**-4.9**
0.7nm,0.3s,baz=181,slow=24,SNR=7.2							
ONI	**Oni**	**29.23**	**281**	P	**P**	**19 57 45.0**	**+1.0**
ONI				S	**P**	**19 57 46.8**	**+2.8**
WRA	**Warramunga Arr**	**78.72**	**132**	P	**P**	**20 03 45.5**	**+0.9**
10nm,0.3s,baz=316,slow=5.8,SNR=0.4							
ASAR	**Alice Springs**	**81.56**	**135**	P	**P**	**20 04 00.7**	**+0.8**
0.3nm,0.7s,baz=326,slow=4.7,SNR=5.0							
HNR	**Honiara**	**86.67**	**106**	LR	LR	20 43 00.8	
comp=Z,25nm,18.9s,baz=64,slow=36							
PDAR	**Pinedale Array**	**92.61**	**10**	LR	LR	20 50 18.2	
comp=Z,19nm,21.5s,baz=320,slow=38							

UCR 09 19:54:33.3±1.5, 11°.27N×86°.68W, h22km±7km, MD4.1, ML3.4, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGAN	**Managua**	**0.97**	**26**	*e*P	Pb	19 54 51.4	-0.1
MOMN	**Momotombo**	**1.14**	**7**	*e*P	Pn	19 54 53.4	-0.7
CNGN	**Cerro Negro**	**1.22**	**359**	*e*P	Pn	19 54 53.7	-1.4
NY14	**Universidad de**	**1.29**	**119**	*i*P	Pn	19 54 55.8	-0.2
TEL3	**Telica 3**	**1.30**	**353**	*e*P	Pn	19 54 56.0	-0.2
LAPC	**Finca la Perla**	**1.33**	**112**	*i*P	Pn	19 54 55.7	-0.8
TELN	**Telica**	**1.33**	**354**	*e*P	Pn	19 54 56.5	-0.2
GB1A	**Borinquen Arri**	**1.34**	**110**	*i*P	Pn	19 54 56.5	-0.2
GPS3	**Bodega del ICE**	**1.39**	**112**	*i*P	Pn	19 54 57.5	0.0
GPS1	**Guardaparques**	**1.40**	**111**	*i*P	Pn	19 54 57.1	-0.5
CRIN	**San Cristobal**	**1.47**	**346**	*e*P	Pn	19 54 58.8	+0.3
CRIN				IAML		19 55 26.6	
comp=N,890nm,0.5s							
COLC	**Colonia**	**1.57**	**112**	*i*P	Pn	19 55 00.3	+0.4
HORNC	**Hornillas**	**1.58**	**110**	*i*P	Pn	19 54 59.9	-0.2
ACON	**Acoyapa**	**1.63**	**65**	*e*P	Pn	19 54 59.8	-1.0
ACON				*e*S	Sn	19 55 22.0	+0.9
AMAS	**Alto Masis**	**1.78**	**111**	*i*P	Pn	19 55 03.0	+0.1
MATN	**Matagalpa**	**1.81**	**24**	*e*P	Pn	19 55 02.8	-0.5
MATN				*e*S	Sn	19 55 26.6	+1.0
MATN				IAML		19 55 30.2	
comp=Z,326nm,0.4s							
ESTN	**Estel**	**1.84**	**10**	*e*P	Pn	19 55 03.1	-0.7
CSGN	**Cosiguina Volc**	**1.90**	**333**	*e*P	Pn	19 55 05.5	+1.0
CSGN				*e*S	Sn	19 55 27.8	0.0
CNCH	**Conchagua**	**2.29**	**331**	*e*P	Pn	19 55 10.1	+0.2
TGUH	**Tegucigalpa,Un**	**2.83**	**348**	*e*P	Pn	19 55 18.2	+0.9

MAN 09 19:55:44.9, 7°.25N×124°.92E, h25km, mb3.7, ML2.5, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.64**	**13**	*e*P	Pn	19 55 58.6	+0.1
BUKP				*e*S	Sn	19 56 08.3	+0.4
CTBH	**Cotabato--PC H**	**0.67**	**268**	⇑*i*P	Pb	19 55 57.6	-0.4
CTBH				*i*S	Sb	19 56 05.7	-1.2
SKMP	**Bagumbayan, Su**	**0.81**	**207**	*e*P	Pb	19 56 00.3	-0.1
SKMP				*e*S	Sn	19 56 18.4	+6.3
PAGZ	**Pagadian**	**1.64**	**291**	*e*P	Pn	19 56 12.0	-0.1
PAGZ				*e*S	Sn	19 56 33.3	+0.9

RSNC 09 20:09:48.1±1.4, 6°.82N×73°.14W, h145km±4km, ML3.1, Mw3.5, 7C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**192**	⇑*i*P	Pn	20 10 07.7	-0.5
BARC				*e*S	Sn	20 10 22.4	-1.0
BARC				*i*		20 10 23.6	
comp=Z,176nm,0.3s							
GIRC	**Giron, Santand**	**0.26**	**347**	*i*P	Pn	20 10 07.7	-0.5
GIRC				*e*S	Sn	20 10 22.7	-0.7
BRRC	**Barranca, Sant**	**0.64**	**296**	⇓*i*P	Pn	20 10 09.4	-0.2
BRRC				*i*		20 10 09.7	
comp=Z,330nm,0.3s							
BRRC				*e*S	Sn	20 10 26.6	+0.5
PAMC	**Pamplona, Colo**	**0.67**	**40**	⇓*i*P	Pn	20 10 10.4	-0.1
PAMC				*i*		20 10 10.7	
comp=Z,216nm,0.2s							
PAMC				*e*S	Sn	20 10 27.6	+0.1
RUSC	**La Rusia**	**0.93**	**177**	*e*P	Pn	20 10 11.8	-0.6
RUSC				*e*S	Sn	20 10 30.4	-0.4
RUSC				*i*		20 10 31.6	
comp=E,180nm,0.5s							
GRMC	**Gramalote, San**	**0.95**	**20**	*e*P	Pn	20 10 14.1	+1.9
GRMC				*e*S	Sn	20 10 32.8	+2.3
GRMC				*i*		20 10 34.0	
comp=Z,145nm,0.5s							
CCUC3	**Cucuta, Santo**	**1.22**	**31**	*e*P	Pn	20 10 14.4	-0.1
CCUC3				*e*S	Sn	20 10 34.8	+0.2
CAPV	**Capacho**	**1.32**	**38**	⇑*i*P	Pn	20 10 15.6	-0.1
CAPV				*e*S	Sn	20 10 35.8	-0.9
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	*e*P	Pn	20 10 14.2	-1.5
PTBC				*e*S	Sn	20 10 35.4	-1.3
PTBC				*i*		20 10 41.0	
comp=E,253nm,0.6s							
TAMC	**Tame, Arauca**	**1.39**	**106**	*i*P	Pn	20 10 16.1	0.0
TAMC				*e*S	Sn	20 10 36.5	-1.0
TAMC				*i*		20 10 39.0	
comp=E,104nm,0.6s							
OCAC	**Ocana**	**1.42**	**353**	*e*P	Pn	20 10 15.6	-1.0
OCAC				*e*S	Sn	20 10 37.1	-1.3
OCAC				*i*		20 10 40.0	
comp=E,415nm,0.2s							
YOPC	**Yopal, Colombi**	**1.62**	**154**	*e*P	Pn	20 10 18.2	-0.6
YOPC				*e*S	Sn	20 10 41.3	-0.9
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P	Pn	20 10 20.2	-0.8
ZARC				*e*S	Sn	20 10 45.6	-0.7
ZARC				*i*		20 10 51.0	
comp=N,206nm,0.3s							
CTAU	**Tausa, Cundina**	**1.84**	**209**	*e*P	Pn	20 10 22.5	+0.8
CTAU				*e*S	Sn	20 10 47.3	-0.1
AGZ	**La Independenc**	**1.99**	**160**	*e*P	Pn	20 10 22.1	-0.7
AGZ				*e*S	Sn	20 10 46.6	-2.9
CTAB	**Cerro Tablazo,**	**2.09**	**211**	*e*P	Pn	20 10 25.1	+0.6
CTAB				*e*S	Sn	20 10 51.6	-0.7
NORC	**Norcasia**	**2.13**	**234**	*e*P	Pn	20 10 23.6	-1.0
NORC				*e*S	Sn	20 10 51.2	-1.3
NORC				*i*		20 10 58.2	
comp=N,190nm,0.2s							
SMLC	**San Martn de**	**2.17**	**335**	*e*P	Pn	20 10 23.9	-1.1
SMLC				*e*S	Sn	20 10 52.8	-0.7
SMLC				*i*		20 11 01.4	
comp=E,113nm,0.3s							
CHIC	**Chingaza**	**2.26**	**195**	⇑*i*P	Pn	20 10 26.1	-0.4
CHIC				*e*S	Sn	20 10 55.4	-0.5
CHIC				*i*		20 10 59.9	
comp=N,104nm,0.4s							
CROSA	**EL ROSAL, CUND**	**2.29**	**211**	*e*P	Pn	20 10 27.4	+0.6
CROSA				*e*S	Sn	20 10 56.0	-0.5
ROSC	**El Rosal**	**2.29**	**211**	⇑*i*P	Pn	20 10 28.1	+1.2
ROSC				*e*S	Sn	20 10 56.7	+0.1
HELC	**Santa Helena**	**2.46**	**255**	*e*P	Pn	20 10 28.4	-0.5
HELC				*e*S	Sn	20 11 00.6	+0.5
HELC				*i*		20 11 07.2	
comp=N,70nm,0.3s							
SOCV	**Socops**	**2.69**	**57**	⇑*i*P	Pn	20 10 30.0	-1.4
GUY2C	**Guyana, Caldas**	**2.73**	**235**	*e*P	Pn	20 10 32.0	-0.2
GUY2C				*e*S	Sn	20 11 06.4	+0.1
GUY2C				*i*		20 11 14.8	
comp=N,55nm,0.7s							
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	Pn	20 10 31.6	-0.7
VILC				*e*S	Sn	20 11 06.1	-0.2
VILC				*i*		20 11 13.8	
comp=E,149nm,0.5s							
RREF	**El Recreo**	**2.91**	**229**	*e*P	Pn	20 10 34.5	-0.3
RREF				*e*S	Sn	20 11 10.3	-0.4
RREF				*i*		20 11 23.9	
comp=Z,30nm,0.3s							
DBBC	**Dabeiba**	**3.06**	**274**	*e*P	Pn	20 10 35.0	-1.1
CODC	**Agustn Codazz**	**3.11**	**354**	*e*P	Pn	20 10 35.7	-1.0
CODC				*i*		20 11 19.7	
comp=N,22nm,0.3s							
SDV	**Santo Domingo**	**3.22**	**50**	⇑*i*P	Pn	20 10 37.2	-1.0
SDV				*e*S	Sn	20 11 14.2	-2.8
PRAC	**Prado**	**3.55**	**210**	*e*P	Pn	20 10 41.4	-1.0
PRAC				*e*S	Sn	20 11 23.5	-1.0
PRAC				*i*		20 11 30.1	
comp=N,34nm,0.6s							
ELOV	**Elorza**	**3.63**	**87**	⇑*i*P	Pn	20 10 42.0	-1.4
YOTC	**Yotoco, Valle**	**4.26**	**229**	*e*P	Pn	20 10 50.4	-1.4

MEX 09 20:10:27.9±0.3, 16°.09N×98°.22W, h6km±3km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.32**	**17**	*i*P	Pg	20 10 33.8	-0.4
PNIG				*i*S	Sg	20 10 38.5	+0.1
TLIG	**Tlapa**	**1.51**	**347**	*e*P	Pn	20 10 51.6	-3.9
TLIG				*i*S	Sn	20 11 10.7	-4.9

SJA ***09*** *20:14:51.9±1.0, 23°.65S×68°.21W, h138km±8km, ML3.3, MW3.4*
ISCJB ***09*** *20:14:52.2±0.4, 23°.62S±0°.03×68°.24W±0°.05, h143km±6km, mb3.7/4, Error ellipse: s-maj=8.0km s-min=5.1km az=2.1*
IDC ***09*** *20:14:52.4±1.3, 23°.62S×67°.89W, h112km±13km, mb3.7/4, mb1 3.7/8, mb1mx3.5/27, mbtmp4.1/8, Error ellipse: s-maj=20.0km s-min=18.5km az=64.0*
GUC ***09*** *20:14:53.4±0.6, 23°.61S×68°.28W, h141km±5km, ML3.8*
NEIC ***09*** *20:14:54.0±0.0, 23°.54S×68°.37W, h139km, mb4.0/2, ML3.7(GUC), After GUC.*

ISC 09 20:14:53.4±0.8, 23°.62S±0°.04×68°.27W±0°.04, h134km±7km, n58, σ1°.35/85, mb3.9/4, 7C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.16**	**329**	P	**Pn**	**20 15 19.0**	**+0.3**
81nm,0.3s,baz=120,slow=13,SNR=1432							
LVC				S	**Sn**	**20 15 37.4**	**-0.4**
428nm,0.3s,baz=297,slow=19,SNR=116							
LVC	**Limon Verde**	**1.16**	**329**	*i*P	**Pn**	**20 15 18.8**	**+0.1**
LVC				*i*S	**Sn**	**20 15 38.0**	**+0.1**
LVC	**Limon Verde**	**1.16**	**329**	⇑*i*P	**Pn**	**20 15 18.8**	**+0.1**
LVC				*i*S	**Sn**	**20 15 37.7**	**-0.2**
PB15	**IPOC Station P**	**1.18**	**290**	*i*P	**Pn**	**20 15 19.1**	**+0.5**
PB15				*i*S	**Sn**	**20 15 38.1**	**+0.3**
PB15	**IPOC Station P**	**1.18**	**290**	⇑*i*P	**Pn**	**20 15 19.1**	**+0.5**
PB15				*e*S	**Sn**	**20 15 38.1**	**+0.3**
PB06	**IPOC Station P**	**1.50**	**307**	*i*P	**Pn**	**20 15 22.5**	**+0.5**
PB06				*i*S	**Sn**	**20 15 45.2**	**+1.4**
PB06	**IPOC Station P**	**1.50**	**307**	⇑*e*P	**Pn**	**20 15 22.5**	**+0.5**
PB06				*e*S	**Sn**	**20 15 44.0**	**+0.2**
PB06				IAML		20 15 47.8	
comp=E,2μm,0.2s							
PB05	**IPOC Station P**	**1.93**	**293**	*i*P	**Pn**	**20 15 27.1**	**+0.2**
PB05				*i*S	**Sn**	**20 15 53.6**	**+1.0**
PB05	**IPOC Station P**	**1.93**	**293**	⇑*e*P	**Pn**	**20 15 27.1**	**+0.2**
PB05				*i*S	**Sn**	**20 15 52.8**	**+0.2**
PB05				IAML		20 16 04.0	
comp=N,397nm,0.3s							
GO02	**Mina Guanaco**	**1.95**	**218**	*e*Pn	**Pn**	**20 15 28.

HJA IAML 20 15 37.1
comp=Z,214nm,0.4s
PB02 IPOC Station P 2.74 326 *i* P **Pn 20 15 36.9 0.0**
PB02 *i* S **Sn 20 16 10.2 -0.2**
PB02 IPOC Station P 2.74 326⇓ *e*P **Pn 20 15 37.0 0.0**
PB01 IPOC Station P 2.80 336 *e*Pn **Pn 20 15 37.5 -0.2**
PB01 IPOC Station P 2.80 336 *e*P **Pn 20 15 37.6 -0.1**
PB01 *e*S **Sn 20 16 11.3 -0.5**
PB01 IAML 20 16 16.4
comp=N,324nm,0.3s
YJA Yavi 2.92 61 *i* P **Pn 20 15 39.2 -0.3**
YJA *i* S **Sn 20 16 21.5 +6.5**
AZAP Zapla 2.99 102 *i* P **Pn 20 15 39.3 -1.0**
AZAP IAML 20 15 40.0
comp=Z,37nm,0.4s
AZAP *i* S Sn 20 16 27.2 +11
PB08 IPOC Station P 3.56 346 *i* P **Pn 20 15 47.9 +0.1**
PB08 IPOC Station P 3.56 346 *e*P **Pn 20 15 48.0 +0.2**
GO01 Chusmiza 4.02 347 *e*Pn **Pn 20 15 53.6 -0.5**
PB11 IPOC Station P 4.05 341 *e*Pn **Pn 20 15 52.5 -1.6**
PB11 *e*Sn Sn 20 16 30.1 -11
GO03 Copiap 4.34 204 *e*Pn **Pn 20 15 56.2 -1.6**
PSGCX Pisagua 4.36 336 *i* P **Pn 20 15 56.0 -2.1**
MNMC Minye Minye 4.63 344 *e*Pn **Pn 20 15 59.9 -2.1**
PB12 IPOC Station P 5.34 339 *i* P **Pn 20 16 09.5 -1.7**
PB16 IPOC Station P 5.38 347 *i* P **Pn 20 16 11.7 -0.6**
LCO Las Campanas 5.80 202 *e*Pn **Pn 20 16 14.8 -2.7**
GO04 Tololo Observa 6.91 199 *e*Pn **Pn 20 16 28.8 -3.6**
LPAZ La Paz 7.29 1 P **Pn 20 16 38.0 0.0**
comp=Z,0.8nm,0.3s,baz=163,slow=1.0,SNR=39
LPAZ La Paz 7.29 1 *e*Pn **Pn 20 16 38.0 0.0**
CFA Coronel Fontan 7.96 180 P **Pn 20 16 43.8 -2.5**
comp=Z,2.4nm,0.3s,baz=9.2,slow=13,SNR=58
ROC1 El Roble 9.63 194 *e*Pn Pn 20 17 04.2 -4.8
SIV San Ignacio 10.17 43 P **Pn 20 17 11.7 -4.3**
comp=Z,5.6nm,0.3s,baz=255,slow=8.3,SNR=50
PLCA Paso Flores 17.17 186 P **Pn 20 18 47.1 +1.9**
comp=Z,0.1nm,0.3s,baz=323,slow=5.1,SNR=2.5
BDFB Brasilia 20.65 71 P **P 20 19 19.4 -3.3**
comp=Z,5.7nm,0.4s,baz=249,slow=12,SNR=13
BDFB Brasilia 20.65 71 *e*P **P 20 19 21.2 -1.5**
comp=Z,6.9nm,0.7s
PTGA Pitinga 24.14 21 *e*P **P 20 19 56.7 -0.3**
comp=Z,3.9nm,1.0s
TXAR Lajitas Array 62.70 325 P **P 20 25 06.5 +2.3**
comp=Z,0.3nm,0.6s,baz=147,slow=9.4,SNR=4.6
DBIC Dimbokro 68.79 72 P **P 20 25 43.9 +0.4**
comp=Z,1.4nm,0.5s,baz=214,slow=6.2,SNR=2.8
TORD Torodi Ar. Bea 77.52 70 P **P 20 26 33.7 -1.1**
comp=Z,1.3nm,0.5s,baz=264,slow=5.5,SNR=16
ASAR Alice Springs 128.30 206 PKP **PKiKP 20 33 46.4 +1.0**
comp=Z,0.5nm,0.8s,baz=128,slow=1.8,SNR=9.0
WRA Warramunga Arr 131.41 209 PKP **PKiKP 20 33 52.9 +1.2**
comp=Z,152nm,0.4s,baz=190,slow=2.6,SNR=2.0
MKAR Makanchi Array 146.96 38 PKPbc **PKPbc 20 34 20.4 +0.3**
comp=Z,0.6nm,0.7s,baz=316,slow=2.9,SNR=5.2

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*IDC **09** 20:17:35.3±0.9, 28°.91N×95°.69E, h0km, mb3.5/8, mb1 3.6/8, mb1mx3.4/42, mbtmp3.5/8, Error ellipse: s-maj=44.8km s-min=17.6km az=58.0*
*ISCJB **09** 20:17:39.1±0.8, 29°.01N±0°.08×95°.9E±0°.1, h40km, mb3.8/8, Error ellipse: s-maj=17.1km s-min=10.1km az=28.1*
ISC 09 20:17:41.3±1.0, 29°.0N±0°.1×95°.9E±0°.1, h40km, n11, σ1§39/11, mb3.8/8, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.95**	**227**	*e*P		Pn	20 18 48.0	-5.4
SHL				*e*S		**Sn**	**20 19 49.5**	**0.0**
SONM	**Songino Array**	**20.48**	**21**	P		**P**	**20 22 16.3**	**+0.6**
	0.5nm,0.6s,baz=216,slow=14,SNR=3.7							
MKAR	**Makanchi Array**	**20.70**	**333**	P		**P**	**20 22 17.9**	**-0.2**
	0.7nm,0.5s,baz=142,slow=12,SNR=9.5							
AAK	**Ala-Archa**	**21.98**	**314**	P		**P**	**20 22 35.2**	**+3.3**
	1.9nm,0.5s,baz=131,slow=9.0,SNR=5.0							
KURBB	**Kurchatov Arra**	**25.26**	**334**	P		**P**	**20 23 03.1**	**-0.4**
	0.3nm,0.4s,baz=146,slow=10,SNR=5.1							
ZALV	**Zalesovo Beam**	**26.21**	**345**	P		**P**	**20 23 12.5**	**+0.4**
	1.3nm,0.5s,baz=158,slow=11,SNR=6.3							
AKASG	**Malin Array Be**	**53.65**	**314**	P		**P**	**20 26 57.0**	**-1.6**
	0.7nm,0.4s,baz=76,slow=2.1,SNR=3.0							
FINES	**FINESS Array B**	**55.38**	**327**	P		**P**	**20 27 10.0**	**-1.0**
	0.9nm,0.8s,baz=104,slow=12,SNR=3.3							
WRA	**Warramunga Arr**	**61.18**	**138**	P		**P**	**20 27 52.4**	**+0.3**
	0.9nm,0.6s,baz=310,slow=8.3,SNR=6.0							
ASAR	**Alice Springs**	**63.87**	**141**	P		**P**	**20 28 10.2**	**+0.2**
	0.4nm,0.6s,baz=328,slow=6.5,SNR=8.3							
TORD	**Torodi Ar. Bea**	**87.34**	**283**	P		**P**	**20 30 24.7**	**+0.1**
	0.5nm,0.8s,baz=60,slow=5.2,SNR=3.2							

IDC 09 20:37:15.9±8.6, 5°.62S×150°.26E, h0km, mb3.2/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.3/3, Error ellipse: s-maj=189.8km s-min=42.1km az=94.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.03**	**226**	P		P	20 42 00.7	-0.8
	1.1nm,0.9s,baz=67,slow=7.6,SNR=4.3							
ASAR	**Alice Springs**	**23.87**	**220**	P		P	20 42 32.1	+0.8
	0.2nm,0.4s,baz=56,slow=9.6,SNR=6.0							
CMAR	**Chiang Mai Arr**	**55.95**	**297**	P		P	20 46 56.1	-0.3
	0.5nm,0.7s,baz=116,slow=4.9,SNR=4.8							

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*INMG **09** 20:50:47.9±1.4, 35°.50N×2°.14W, h18km±7km, ML2.2, Error ellipse: s-maj=7.2km s-min=5.9km az=157.0*
*MDD **09** 20:50:48.4±0.9, 35°.45N×2°.16W, h15km±9km, mbLg2.2/17, Error ellipse: s-maj=8.8km s-min=6.5km az=178.0, PRXIMO*
*CRAAG **09** 20:50:49.7, 35°.19N×1°.96W, Ml2.7*
ISC 09 20:50:47.2±1.1, 35°.39N±0°.06×2°.13W±0°.03, h30km±13km, n38, σ1§89/63, 1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OLHC	**Oulhaca**	**0.59**	**103**	P		**Pb**	**20 50 57.8**	**-1.4**
MELI	**Melilla**	**0.67**	**262**	P		**Pb**	**20 51 00.3**	**-0.1**
	18nm,0.1s,SNR=7.9							
MELI				S		**Sb**	**20 51 09.2**	**-0.2**
	270nm,0.3s,SNR=7.9							
MELI	**Melilla**	**0.67**	**262**⇓	*i*P		**Pn**	**20 51 01.5**	**+0.9**
MELI				*e*S		**Sb**	**20 51 08.7**	**-0.7**
EMEL	**Melilla**	**0.69**	**263**	P		**Pb**	**20 51 00.7**	**0.0**
	43nm,0.1s,SNR=7.9							
EMEL				S		**Sb**	**20 51 10.1**	**+0.2**
	440nm,0.2s,SNR=7.9							
EALB	**Alboran**	**0.92**	**307**	P		**Pb**	**20 51 03.2**	**-1.5**
	9.3nm,0.1s,SNR=5.8							
EALB				S		**Sn**	**20 51 16.9**	**+0.5**
	75nm,0.3s,SNR=5.8							
OTSS	**Djebel Tessala**	**1.09**	**95**	P		**Pb**	**20 51 09.6**	**+2.0**
OTSS	**Djebel Tessala**	**1.09**	**95**	P		**Pb**	**20 51 09.6**	**+2.0**
ENIJ	**Nijar**	**1.58**	**358**	P		**Pn**	**20 51 11.6**	**-1.6**
	2.0nm,0.2s,SNR=7.9							
ENIJ				S		**Sn**	**20 51 29.5**	**-3.2**
	20nm,0.3s,SNR=7.9							
EBER	**Berja**	**1.63**	**338**	P		**Pn**	**20 51 13.5**	**-0.5**
	2.4nm,0.3s,SNR=11							
EBER				S		**Sn**	**20 51 31.8**	**-2.3**
	17nm,0.3s,SNR=6.9							
ELGU	**Los Guajares,**	**1.91**	**321**	P		**Pn**	**20 51 16.9**	**-0.9**
	0.8nm,0.3s,SNR=7.9							
ELGU				S		**Sn**	**20 51 37.0**	**-3.9**
	3.7nm,0.2s,SNR=7.9							
EQUE	**Quentar**	**2.10**	**330**	P		**Pn**	**20 51 21.4**	**+0.9**
	1.8nm,0.4s,SNR=14							
EQUE				S		**Sn**	**20 51 45.4**	**-0.3**
	2.3nm,0.2s,SNR=4.9							
EMAL	**Malaga-Limoner**	**2.32**	**307**	*e*P		**Pb**	**20 51 31.6**	**+3.3**
EMAL				*e*S		**Sn**	**20 51 48.4**	**-2.3**
EGOR	**Sierra Gorda,**	**2.35**	**318**	P		**Pn**	**20 51 24.5**	**+0.6**
	0.2nm,0.2s,SNR=4.0							
EGOR				S		**Sn**	**20 51 52.3**	**+0.5**
	2.0nm,0.2s,SNR=4.0							
EMIJ	**Mijas**	**2.45**	**299**	P		**Pn**	**20 51 24.9**	**-0.2**
	0.6nm,0.3s,SNR=7.9							
EMIJ				S		**Sn**	**20 51 49.5**	**-4.6**
	7.4nm,0.4s,SNR=7.9							
EQES	**Quesada**	**2.53**	**343**	P		**Pn**	**20 51 28.7**	**+2.4**
	0.6nm,0.1s,SNR=14							
EQES				S		**Sn**	**20 51 57.9**	**+1.8**
	4.7nm,0.3s							

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EMUR	**La Murta**	**2.55**	**16**	P		**Pn**	**20 51 25.9**	**-0.7**
	0.9nm,0.2s,SNR=7.9							
EMUR				S		**Sn**	**20 51 52.2**	**-4.5**
	2.7nm,0.3s,SNR=4.0							
SESP	**Santiago Espad**	**2.75**	**353**	P		**Pn**	**20 51 31.2**	**+1.8**
	1.1nm,0.1s,SNR=7.9							
SESP				S		**Sn**	**20 52 02.5**	**+0.8**
	5.8nm,0.2s,SNR=7.9							
ETOB	**Tobarra**	**3.29**	**8**	P		**Pn**	**20 51 37.7**	**+1.0**
	2.1nm,0.4s,SNR=10							
ETOB				S		**Sn**	**20 52 13.9**	**-0.8**
	1.9nm,0.3s							
ESPR	**Espera**	**3.36**	**297**	P		**Pn**	**20 51 39.7**	**+2.1**
	0.5nm,0.2s,SNR=4.0							
ESPR				S		**Sn**	**20 52 18.7**	**+2.2**
	1.7nm,0.3s,SNR=4.0							
ECAB	**El Cabril**	**3.77**	**316**	P		**Pn**	**20 51 45.7**	**+2.4**
	0.3nm,0.3s,SNR=7.9							
ECAB				S		**Sn**	**20 52 31.2**	**+4.6**
	0.8nm,0.3s,SNR=4.0							
EMIN	**Mina Concepcio**	**4.36**	**304**	P		**Pn**	**20 51 51.5**	**+0.1**
	0.2nm,0.2s,SNR=7.9							
EMIN				S		**Sn**	**20 52 40.0**	**-1.3**
	1.0nm,0.3s,SNR=7.9							
PAB	**San Pablo**	**4.51**	**338**	P		**Pn**	**20 51 55.5**	**+2.0**
	0.3nm,0.3s,SNR=7.9							
PAB				S		**Sn**	**20 52 43.2**	**-1.8**
	0.3nm,0.3s,SNR=4.0							
EGRO	**El Granado**	**4.82**	**298**	P		**Pn**	**20 51 58.2**	**+0.6**
	1.5nm,0.3s,SNR=6.9							
EGRO				S		**Sn**	**20 52 49.8**	**-2.7**
	2.0nm,0.3s,SNR=7.9							
PVAQ	**Vaqueiros**	**4.94**	**296**	*e*Pn		**Pn**	**20 51 59.5**	**+0.2**
PVAQ				*e*Sn		**Sn**	**20 52 52.8**	**-2.6**
PVAQ				A		A	20 52 59.0	
	2.6nm,0.6s							
PVAQ	**Vaqueiros**	**4.94**	**296**	P		**Pn**	**20 51 59.5**	**+0.2**
PVAQ				S		**Sn**	**20 52 52.8**	**-2.6**
	2.6nm,0.6s							
PBDV	**Barranco-do-Ve**	**5.04**	**293**	*e*Pn		**Pn**	**20 52 01.1**	**+0.3**
PBDV				*e*Sn		**Sn**	**20 52 56.6**	**-1.4**
PBDV	**Barranco-do-Ve**	**5.04**	**293**	P		**Pn**	**20 52 01.1**	**+0.3**
PBDV				S		**Sn**	**20 52 56.6**	**-1.4**
EBAD	**Badajoz**	**5.16**	**312**	P		**Pn**	**20 52 03.1**	**+0.8**
	0.3nm,0.1s,SNR=5.3							
EBAD				S		**Sn**	**20 52 58.0**	**-2.8**
	1.0nm,0.2s,SNR=7.9							
PCVE	**Castro Verde**	**5.26**	**297**	*e*Pn		**Pn**	**20 52 04.3**	**+0.5**
PCVE	**Castro Verde**	**5.26**	**297**	P		**Pn**	**20 52 04.3**	**+0.5**
MORF	**Marmelete**	**5.61**	**292**	*e*Pn		**Pn**	**20 52 09.4**	**+0.9**
MORF	**Marmelete**	**5.61**	**292**	P		**Pn**	**20 52 09.4**	**+0.9**
PTEO	**Sao Teotonio**	**5.74**	**294**	*e*Pn		**Pn**	**20 52 11.2**	**+0.9**
PTEO	**Sao Teotonio**	**5.74**	**294**	P		**Pn**	**20 52 11.2**	**+0.9**
PNCL	**Nicolau / Gran**	**5.82**	**300**	*e*Pn		**Pn**	**20 52 12.5**	**+1.1**
PNCL	**Nicolau / Gran**	**5.82**	**300**	P		**Pn**	**20 52 12.5**	**+1.1**
PMRV	**Marv??o**	**5.82**	**315**	*e*Pn		**Pn**	**20 52 12.7**	**+1.3**
PMRV	**Marv??o**	**5.82**	**315**	P		**Pn**	**20 52 12.7**	**+1.3**

IDC 09 20:51:31.0±1.6, 52°.90S×21°.20E, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.5/25, mbtmp3.8/2, MS3.1/5, Ms1 3.1/5, ms1mx2.9/22, Error ellipse: s-maj=57.1km s-min=51.2km az=120.0, South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**21.59**	**200**	P		P	20 56 22.0	0.0
	3.5nm,0.8s,baz=42,slow=7.3,SNR=4.3							
SNAA				LR		LR	21 03 50.8	
	comp=Z,19nm,18.2s,baz=290,slow=34							
BOSA	**Boshof**	**24.45**	**9**	LR		LR	21 04 37.1	
	comp=Z,60nm,19.2s,baz=182,slow=32							
LBTB	**Lobatse**	**28.05**	**9**	LR		LR	21 06 21.4	
	comp=Z,55nm,19.7s,baz=150,slow=32							
H10S2	**ASCENSION HYDR**	**52.54**	**313**	T		T	21 57 28.5	
	baz=153,slow=75,SNR=4.5							
H10S3	**ASCENSION HYDR**	**52.55**	**313**	T		T	21 57 27.7	
	baz=153,slow=75,SNR=4.2							
H10S1	**ASCENSION HYDR**	**52.56**	**313**	T		T	21 57 29.1	
	baz=153,slow=75,SNR=3.8							
KMBO	**Kilima Mbogo**	**53.30**	**20**	LR		LR	21 22 48.4	
	comp=Z,27nm,18.7s,baz=222,slow=35							
TORD	**Torodi Ar. Bea**	**67.89**	**339**	LR		LR	21 26 41.8	
	comp=Z,15nm,20.2s,baz=305,slow=31							
ASAR	**Alice Springs**	**84.07**	**122**	P		P	21 04 03.6	0.0
	0.4nm,0.7s,baz=202,slow=4.8,SNR=5.0							
PDAR	**Pinedale Array**	**146.05**	**273**	PKPbc		PKPdf	21 11 10.8	-0.6
	0.7nm,0.7s,baz=114,slow=5.5,SNR=6.5							
NVAR	**Mina Array Bea**	**148.68**	**259**	PKPbc		PKPbc	21 11 19.9	+0.2
	0.8nm,0.7s,baz=108,slow=5.8,SNR=3.7							

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*IDC **09** 21:05:23.9±12.0, 10°.43N×85°.63W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.6/22, mbtmp3.5/4, MS3.2/2, Ms1 3.3/2, ms1mx2.7/18, Error ellipse: s-maj=316.6km s-min=128.8km az=17.0*
*ISCJB **09** 21:05:41.2±0.7, 11°.27N±0°.05×86°.70W±0°.06, h57km±10km, mb3.4/4, MS3.2/2, Error ellipse: s-maj=12.4km s-min=4.2km az=141.3*
*UCR **09** 21:05:41.0±2.5, 11°.27N×86°.71W, h26km±7km, MD4.1, ML4.1*
ISC 09 21:05:42.9±1.2, 11°.35N±0°.06×86°.63W±0°.07, h54km±16km, n35, σ1§49/43, mb3.4/4, 2C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MASN	**Masaya**	**0.79**	**36**	*e*P		**Pn**	**21 05 57.7**	**-0.3**
COPN	**Copaltepe**	**0.83**	**2**	*e*P		**Pn**	**21 05 57.4**	**-1.1**
MGAN	**Managua**	**0.88**	**25**	*e*P		**Pn**	**21 05 58.2**	**-0.9**
APYN	**Apoyeque**	**0.92**	**17**	*e*P		**Pn**	**21 05 59.4**	**-0.3**
MOMN	**Momotombo**	**1.06**	**5**	*e*P		**Pn**	**21 06 00.6**	**-0.9**
CNGN	**Cerro Negro**	**1.15**	**357**	*e*P		**Pn**	**21 06 00.8**	**-1.9**
CNGN				*e*S		**Sn**	**21 06 19.1**	**+1.6**
CNGN				IAML			21 06 26.8	
	comp=N,1μm,0.4s							
TEL3	**Telica 3**	**1.23**	**350**	*e*P		**Pn**	**21 06 03.2**	**-0.7**
TELN	**Telica**	**1.26**	**351**	*e*P		**Pn**	**21 06 03.8**	**-0.6**
NY14	**Universidad de**	**1.28**	**123**	*i*P		**Pn**	**21 06 02.9**	**-1.6**
NY14				*i*S		**Sn**	**21 06 19.5**	**-1.1**
BUEV	**Buena Vista**	**1.32**	**114**⇑	*e*P		**Pn**	**21 06 03.9**	**-1.2**
BUEV				*e*S		**Sn**	**21 06 21.3**	**-0.4**
GB1A	**Borinquen Arri**	**1.32**	**114**	*e*P		**Pn**	**21 06 03.6**	**-1.4**
GB1A				*i*P		**Pn**	**21 06 03.7**	**-1.4**
GB1A				*e*S		**Sn**	**21 06 21.3**	**-0.3**
BRAN	**Las Pilas**	**1.39**	**11**	*e*S		Sn	21 06 12.8	-11
BRAN				IAML			21 06 13.3	
	comp=N,21μm,0.3s							
CRIN	**San Cristobal**	**1.40**	**343**	*e*P		**Pn**	**21 06 05.9**	**-0.3**
CRIN				*e*S		**Sn**	**21 06 27.4**	**+3.7**
CRIN				IAML			21 06 30.2	
	comp=N,2μm,0.3s							
MESS	**Mesas**	**1.53**	**113**⇑	*e*P		**Pn**	**21 06 07.3**	**-0.6**
MESS				*e*S		**Sn**	**21 06 29.8**	**+2.9**
ACON	**Acoyapa**	**1.55**	**67**	*e*P		**Pn**	**21 06 07.1**	**-1.1**
ACON				⇓*e*P		**Pn**	**21 06 07.6**	**-0.6**
ACON				*e*S		**Sn**	**21 06 29.0**	**+1.7**
COLC	**Colonia**	**1.56**	**116**	*i*P		**Pn**	**21 06 07.1**	**-1.2**
CUI	**Cuipilapa**	**1.59**	**115**	*e*P		**Pn**	**21 06 08.0**	**-0.8**
MATN	**Matagalpa**	**1.71**	**24**	*e*P		**Pn**	**21 06 10.1**	**-0.4**
MATN				*e*S		**Sn**	**21 06 33.6**	**+2.3**
ACAL	**Aguas Claras**	**1.72**	**114**	*i*P		**Pn**	**21 06 09.8**	**-0.7**
ESTN	**Estel**	**1.76**	**8**	*e*P		**Pn**	**21 06 10.4**	**-0.7**
AMAS	**Alto Masis**	**1.77**	**114**	*i*P		**Pn**	**21 06 10.1**	**-1.1**
AMAS				*i*S		**Sn**	**21 06 35.1**	**+2.5**
CSGN	**Cosiguina Volc**	**1.86**	**331**	*e*P		**Pn**	**21 06 12.4**	**-0.1**
CSGN				*e*S		**Sn**	**21 06 35.0**	**+0.2**
ARE1	**Arenal 1**	**2.07**	**115**	*e*P		**Pn**	**21 06 16.0**	**+0.6**
CNCH	**Conchagua**	**2.25**	**329**	*e*P		**Pn**	**21 06 17.4**	**-0.5**
ESPN	**Las Esperanzas**	**2.43**	**70**	*e*P		**Pn**	**21 06 20.3**	**+0.2**
SRA1	**San Ramn**	**2.46**	**121**	*e*P		**Pn**	**21 06 23.3**	**+2.6**
VSM	**San Miguel**	**2.62**	**322**	*e*P		**Pn**	**21 06 24.4**	**+1.4**
HDC	**Heredia**	**2.81**	**118**	*e*P		**Pn**	**21 06 28.4**	**+2.9**
DRK0	**Durika**	**3.92**	**122**	*e*P		**Pn**	**21 06 41.7**	**+0.9**
TXAR	**Lajitas Array**	**23.93**	**321**	P		**P**	**21 10 52.1**	**-0.1**
	comp=N,2.8nm,0.7s,baz=135,slow=10,SNR=19							
PTGA	**Pitinga**	**29.09**	**113**	LR		LR	21 22 40.7	
	comp=N,43nm,18.1s,baz=310,slow=37							
LPAZ	**La Paz**	**33.00**	**146**	LR		LR	21 26 34.5	
	comp=N,49nm,19.1s,baz=333,slow=40							
PDAR	**Pinedale Array**	**37.12**	**332**	P		**P**	**21 12 47.1**	**-1.5**
	comp=N,0.4nm,0.6s,baz=121,slow=11,SNR=3.6							
NVAR	**Mina Array Bea**	**39.06**	**319**	P		**P**	**21 13 03.6**	**-1.4**
	comp=N,0.2nm,0.4s,baz=140,slow=4.7,SNR=2.1							

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**67.35**	**336**	P		P	21 16 28.4	-3.7
	comp=N,0.2nm,0.6s,baz=113,slow=5.0,SNR=4.1							

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*NIED **09** 21:09:00.21°.70N×121°.90E, h32km, Mw4.4 Best double couple: M0=4.08000×10^15 NP1:φs=336.00000°, δ59.00000°, λ153.00000°. NP2:φs=80.00000°, δ67.00000°, λ34.00000°.*
*ISCJB **09** 21:09:11.9±0.7, 21°.58N±0°.04×121°.10E±0°.03, h30km±3km, mb4.0/19, MS3.7/3, Error ellipse: s-maj=6.2km s-min=4.2km az=163.1*
*TAP **09** 21:09:11.4, 21°.58N×121°.17E, h24km±1km, ML4.0, D*
*JMA **09** 21:09:11.3±0.2, 21°.67N×120°.88E, h43km, M4.2*
*IDC **09** 21:09:14.3±3.9, 21°.58N×121°.04E, h33km±28km, mb3.7/17, mb1 3.9/18, mb1mx3.8/34, mbtmp3.9/18, ML3.4/1, MS3.7/4, Ms1 3.8/4, ms1mx3.2/31, Error ellipse: s-maj=20.0km s-min=15.8km az=77.0*
ISC 09 21:09:13.7±1.2, 21°.64N±0°.06×121°.06E±0°.04, h27km±7km, n89, σ1§12/115, mb4.0/19, MS3.6/3, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.29**	**330**	*i* P		**Pb**	**21 09 20.2**	**-0.6**
	baz=318							
TSEB				S		**Sb**	**21 09 26.9**	**+1.2**
	baz=318							
TWKBT	**Hengchun**	**0.37**	**322**	*i* P		**Pb**	**21 09 21.0**	**-1.0**
	baz=317							
TWKBT				*i* S		**Sb**	**21 09 27.9**	**+0.2**
	baz=317							
TWK1	**Hengchun**	**0.38**	**322**	P		**Pb**	**21 09 21.2**	**-0.9**
	baz=317							
TWK1				*e*S		**Sb**	**21 09 27.9**	**+0.1**
	baz=317							
HEN	**Hengchun**	**0.47**	**321**	P		**Pb**	**21 09 23.0**	**-0.5**
	baz=317							
HEN				*e*S		**Sb**	**21 09 30.4**	**+0.3**
	baz=317							
LAY	**Lan-yu**	**0.60**	**49**	*e*P		**Pb**	**21 09 24.2**	**-1.6**
	baz=38							
TAW	**Tawu**	**0.73**	**348**	*i* P		**Pb**	**21 09 26.3**	**-1.5**
	baz=342							
TAW				*e*S		**Sb**	**21 09 37.5**	**+0.1**
	baz=342							
EAST	**Anshuo**	**0.76**	**345**	*i* P		**Pb**	**21 09 26.9**	**-1.6**
	baz=340							
EAST				*e*S		**Sb**	**21 09 39.1**	**+0.6**
	baz=340							
SCZT	**Fangliau**	**0.83**	**331**⇑	*i*P		**Pb**	**21 09 28.9**	**-0.6**
	baz=327							
SCZT				S		**Sb**	**21 09 41.7**	**+1.3**
	baz=327							
WLCH	**Liuqiu**	**0.94**	**318**	*e*P		**Pb**	**21 09 31.8**	**+0.3**
	baz=316							
SSPT	**Xinbi**	**0.95**	**332**	*e*P		**Pb**	**21 09 31.2**	**-0.3**
	baz=328							
SSPT				S		**Sn**	**21 09 45.2**	**+1.3**
	baz=328							
TWP	**Hsiaoliuchiu**	**0.95**	**317**	*e*P		**Pb**	**21 09 31.9**	**+0.3**
	baz=315							
ECL	**Taimali**	**0.95**	**354**	*e*P		**Pb**	**21 09 28.7**	**-2.9**
	baz=349							
MASBT	**Mashibuluo**	**1.04**	**338**	P		**Pn**	**21 09 31.2**	**-1.2**
	baz=334							
MASBT				*e*S		**Sb**	**21 09 46.7**	**+0.3**
	baz=334							
SSD	**Sandimen**	**1.17**	**340**	P		**Pn**	**21 09 32.9**	**-1.3**
	baz=337							
TWGBT	**Beinan**	**1.17**	**1**	*e*P		**Pn**	**21 09 31.2**	**-3.0**
	baz=356							
TWG	**Pinlang**	**1.17**	**1**	*e*P		**Pn**	**21 09 31.5**	**-2.8**
	baz=356							
SNJT	**Kaohsiung City**	**1.29**	**329**	*e*P		**Pn**	**21 09 37.1**	**+1.1**
	baz=326							
SLGT	**Liugui**	**1.40**	**344**	*e*P		**Pn**	**21 09 37.3**	**-0.1**
	baz=341							
CHKT	**Chengkung**	**1.48**	**11**	*e*P		**Pn**	**21 09 36.3**	**-2.1**
	baz=7.0							
CHKT				*e*S		**Sn**	**21 09 56.1**	**-0.8**
	baz=7.0							
SGST	**Jiashian**	**1.50**	**343**	*e*P		**Pn**	**21 09 38.9**	**+0.2**
	baz=340							
STYT	**Tauyuan**	**1.54**	**350**	*e*P		**Pn**	**21 09 39.6**	**+0.3**
	baz=346							
ELDTW	**Lidau**	**1.54**	**359**	*e*P		**Pn**	**21 09 37.7**	**-1.8**
	baz=355							
CHN1	**Nanshi**	**1.61**	**342**	*e*P		**Pn**	**21 09 40.2**	**-0.1**
	baz=339							
CHN1				*e*S		**Sn**	**21 10 00.5**	**+0.2**
	baz=339							
WTP	**Ta-pu**	**1.65**	**346**	P		**Pn**	**21 09 40.8**	**-0.1**
	baz=343							
TPUB	**Ta-pu**	**1.69**	**347**	*e*P		**Pn**	**21 09 40.2**	**-1.3**
	baz=343							
**

JTJ	Tarama	4.49	48	P	Pn	21 10 20.6	+0.7
JTJ				eS	Sn	21 11 11.4	+0.2
JIRB	Irabujima	4.94	49	P	Pn	21 10 25.7	-0.3
JIRB				S	Sn	21 11 22.0	-0.3
JMJ2	Miyako jima3	4.99	51	eS	Sn	21 11 25.9	+2.2
JIKM	Ikemajima	5.05	49	eS	Sn	21 11 26.3	+1.3
JKE	Kume jima 2	7.01	47	P	Pn	21 10 55.3	+0.7
KSRS	Korea Array	16.84	19	Pn	Pn	21 13 07.3	-0.1
	0.1nm,0.3s,baz=182,slow=17,SNR=6.6						
KSRS				LR	LR	21 20 41.1	
	comp=Z,146nm,18.5s,baz=170,slow=41						
CMAR	Chiang Mai Arr	21.01	265	P	P	21 13 55.4	+0.1
	0.6nm,0.7s,baz=70,slow=8.8,SNR=4.8						
CMAR				LR	LR	21 23 38.6	
	comp=Z,148nm,19.4s,baz=86,slow=41						
MAT	Matsushiro	21.04	41	P	P	21 13 58.3	+2.8
MAT				eS	Sn	21 18 16.0	+21
MJAR	Matsushiro Arr	21.05	41	P	P	21 13 57.3	+1.8
	5.8nm,0.9s,baz=228,slow=9.3,SNR=23						
USRK	Ussuriysk Ar.	24.25	19	P	P	21 14 28.6	+0.3
	3.2nm,0.7s,baz=206,slow=11,SNR=7.6						
ASAJ	Asahikawa	28.64	33	P	P	21 15 10.2	+2.3
	4.9nm,0.7s,baz=203,slow=7.7,SNR=7.5						
SONM	Songino Array	28.67	339	P	P	21 15 09.0	+0.7
	2.2nm,0.8s,baz=154,slow=7.6,SNR=8.0						
SONM				PcP	PcP	21 18 19.6	+1.1
	0.3nm,0.4s,baz=132,slow=4.1,SNR=3.1						
SONM				LR	LR	21 28 02.8	
	comp=Z,142nm,18.9s,baz=146,slow=39						
KLR	Kul'dur	28.81	15	P	P	21 15 10.4	+1.0
	0.5nm,0.4s,baz=234,slow=3.7,SNR=4.8						
MKAR	Makanchi Array	40.11	318	P	P	21 16 48.0	+1.0
	0.8nm,0.6s,baz=115,slow=10,SNR=12						
MKAR				PcP	PcP	21 18 52.2	+1.0
	0.4nm,0.8s,baz=107,slow=4.8,SNR=2.8						
ZALV	Zalesovo Beam	42.33	329	P	P	21 17 04.9	-0.1
	3.5nm,0.8s,baz=110,slow=6.9,SNR=10						
ZALV				PcP	PcP	21 18 58.3	+0.1
	0.6nm,0.5s,baz=70,slow=1.7,SNR=2.6						
WRA	Warramunga Arr	43.32	162	P	P	21 17 11.8	-1.7
	119nm,0.3s,baz=352,slow=11,SNR=3.2						
WRA				PcP	PcP	21 19 02.0	-0.1
	128nm,0.3s,baz=338,slow=3.6,SNR=1.8						
ASAR	Alice Springs	46.74	164	P	P	21 17 40.1	-0.6
	0.9nm,0.9s,baz=345,slow=7.1,SNR=8.3						
ASAR				PcP	PcP	21 19 13.6	-0.3
	1.0nm,0.8s,baz=355,slow=3.5,SNR=7.2						
ASAR				ScP	ScP	21 23 04.7	-1.1
	0.2nm,0.6s,baz=342,slow=3.4,SNR=4.1						
NRIK	Noril'sk	51.82	346	P	P	21 18 17.8	-1.1
	6.6nm,0.7s,baz=131,slow=8.4,SNR=8.3						
ILAR	Eielson Array	71.52	27	P	P	21 20 30.7	-1.1
	0.3nm,0.7s,baz=305,slow=6.5,SNR=3.6						
ARCES	ARCESS Array B	71.84	338	P	P	21 20 33.8	+0.1
	3.2nm,1.1s,baz=36,slow=7.8,SNR=4.4						
FINES	FINESS Array B	73.57	330	P	P	21 20 43.7	-0.3
	1.9nm,0.7s,baz=84,slow=7.9,SNR=11						
BRTR	Keskin Array B	74.59	307	P	P	21 20 50.8	+0.2
	0.5nm,0.8s,baz=108,slow=4.7,SNR=4.0						
AKASG	Malin Array Be	74.69	319	P	P	21 20 50.4	-0.3
	0.4nm,0.4s,baz=63,slow=5.5,SNR=3.5						
NOA	NORSAR Array B	80.41	332	P	P	21 21 22.4	-0.2
	0.8nm,0.7s,baz=60,slow=5.0,SNR=3.1						
NOA				LR	LR	22 01 03.0	
	comp=Z,96nm,18.2s,baz=60,slow=39						
GERES	GERESS Array B	84.72	321	P	P	21 21 45.5	+0.1
	1.5nm,0.8s,baz=64,slow=6.1,SNR=9.7						
YKA	Yellowknife Ar	85.35	23	P	P	21 21 47.6	-0.5
	1.2nm,0.8s,baz=315,slow=4.2,SNR=5.6						
SDV	Santo Domingo	147.56	22	PKPbc	PKPdf	21 28 53.8	-0.1
	4.3nm,0.6s,baz=11,slow=3.2,SNR=5.4						

*IDC **09** 21:18:52.1±3.2,9°.70N×84°.59W,h74km±13km,mb3.2/5, mb1 3.6/6,mb1mx3.4/25,mbtmp3.6/6,MS2.7/1,Ms1 2.7/1, ms1mx2.3/13,Error ellipse: s-maj=74.7km s-min=25.5km az=24.0*

*ISCJB **09** 21:18:54.6±0.4,10°.16N±0°.05×84°.44W±0°.05,h86km±3km, mb3.3/5,Error ellipse: s-maj=11.7km s-min=4.3km az=44.1*

*UCR **09** 21:18:55.6±1.6,10°.18N×84°.40W,h73km±4km,MD4.0, ML3.5*

ISC 09 21:18:54.5±0.8,10°.12N±0°.06×84°.46W±0°.06,h82km±5km, n37,σ1°46/47,mb3.5/5,3C-3D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRA1	San Ramn	0.04	212	eP	Pn	21 19 06.2	-0.3
HDC	Heredia	0.36	109	i P	Pn	21 19 07.2	-0.4
HDC				i S	Sn	21 19 17.4	+0.1
FORC	Fortuna	0.40	329	i P	Pn	21 19 08.1	+0.3
FORC				i S	Sn	21 19 17.6	0.0
CASO	Castillo	0.41	319	i P	Pn	21 19 08.3	+0.4
CASO				i S	Sn	21 19 18.2	+0.4
ARE1	Arenal 1	0.42	323	⇓eP	Pn	21 19 08.3	+0.3
ARE1				eS	Sn	21 19 18.6	+0.6
SJS	Escuela Geolog	0.44	115	eP	Pn	21 19 08.8	+0.7
CEDE	Laguna Cedeo	0.44	326	i P	Pn	21 19 08.6	+0.4
JTS	Las Juntas de	0.52	289	P	Pn	21 19 09.0	+0.3
	baz=149,slow=18						
JTS				S	Sn	21 19 19.7	+0.5
	790nm,0.3s,baz=150,slow=20,SNR=137						
CVTR	Volcan Turrial	0.69	98	⇓eP	Pn	21 19 09.8	-1.0
AMAS	Alto Masis	0.72	313	i P	Pn	21 19 11.0	+0.3
ACAL	Aguas Claras	0.76	312	i P	Pn	21 19 11.8	+0.6
PTEN	Parque Tenorio	0.79	319	i P	Pn	21 19 11.9	+0.4
CUI	Cuipilapa	0.88	308	i P	Pn	21 19 13.1	+0.7
MESS	Mesas	0.95	310	eP	Pn	21 19 13.4	+0.2
MESS				i P	Pn	21 19 14.2	+0.9
EDDO	Dominical	1.04	146	eP	Pn	21 19 14.8	+0.6
GPS1	Guardaparques	1.09	307	i P	Pn	21 19 15.9	+1.0
BUEV	Buena Vista	1.15	306	⇑eP	Pn	21 19 16.0	+0.4
GB1A	Borinquen Arri	1.16	307	eP	Pn	21 19 16.7	+1.0
NY14	Universidad de	1.18	296	i P	Pn	21 19 17.0	+1.1
DRK0	Durika	1.47	125	⇑eP	Pn	21 19 20.3	+0.5
EDBA	Buenos Aires	1.50	129	⇓eP	Pn	21 19 19.8	-0.3
ACON	Acoyapa	1.96	339	eP	Pn	21 19 26.7	+0.6
ACON				eS	Sn	21 19 50.5	+0.4
ACON				IAML		21 19 51.7	
	comp=N,505nm,0.9s						
ESPN	Las Esperanzas	2.07	4	⇑i P	Pn	21 19 27.6	+0.2
ESPN				eS	Sn	21 19 51.9	-0.6
ESPN				IAML		21 19 53.5	
	comp=N,324nm,0.6s						
BRU2	Volcan	2.19	127	i P	Pn	21 19 30.5	+1.4
BRU2				i S	Sn	21 19 57.2	+1.7
DVD	David	2.59	130	i P	Pn	21 19 35.9	+1.4
DVD				i S	Sn	21 20 06.5	+1.4
MATN	Matagalpa	3.14	333	eP	Pn	21 19 42.7	+0.8
BCIP	Isla Barro Col	4.65	101	eP	Pn	21 20 04.8	+2.4
AZU	Azuero	4.74	119	i P	Pn	21 20 06.9	+3.4
APG	El Apazote	7.61	310	P	Pn	21 20 47.2	+4.2
	comp=N,0.7nm,0.3s,baz=121,slow=7.4,SNR=11						
CMIG	Matias Romero	12.27	305	P	Pn	21 21 44.5	-1.8
	comp=N,0.3nm,0.3s,baz=99,slow=13,SNR=4.2						
CMIG				LR	LR	21 25 57.2	
	comp=N,39nm,21.8s,baz=192,slow=34						
TXAR	Lajitas Array	26.23	319	P	P	21 24 23.4	+1.4
	comp=N,0.6nm,0.6s,baz=143,slow=9.1,SNR=9.2						
NVAR	Mina Array Bea	41.38	319	P	P	21 26 33.5	+0.5
	comp=N,0.3nm,0.4s,baz=134,slow=7.6,SNR=3.0						
ILAR	Eielson Array	69.33	336	P	P	21 29 53.3	+0.4
	comp=N,0.2nm,0.6s,baz=144,slow=6.7,SNR=3.3						
ESDC	Sonseca Array	76.32	52	P	P	21 30 35.9	+1.0
	comp=N,0.3nm,0.5s,baz=282,slow=5.7,SNR=4.0						
TORD	Torodi Ar. Bea	84.04	78	P	P	21 31 15.9	-0.9
	comp=N,0.3nm,0.5s,baz=296,slow=6.4,SNR=7.3						
ASAR	Alice Springs	141.04	245	PKP	PKPdf	21 38 12.5	-3.7
	comp=N,0.3nm,0.7s,baz=98,slow=3.1,SNR=4.2						
WRA	Warramunga Arr	141.37	251	PKP	PKPdf	21 38 12.7	-4.2
	comp=N,0.9nm,1.0s,baz=108,slow=2.7,SNR=2.8						

*ATH **09** 21:21:53.7,35°.61N×26°.13E,h39km±2km,ML2.8/5,Error ellipse: s-maj=2.2km s-min=1.0km az=156.0*

*THE **09** 21:21:55.5,35°.60N×26°.14E,h31km±2km,ML2.6/10,Error ellipse: s-maj=2.6km s-min=0.6km az=141.0*

ISC 09 21:21:54.8±1.2,35°.60N±0°.02×26°.11E±0°.03,h34km±2km, n44,σ0°79/62,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIA	Sitia Lasithi	0.40	183	P	Pn	21 22 04.1	-0.2
STIA				S	Sn	21 22 10.6	+0.1
ZKR	Zakros	0.50	170	P	Pb	21 22 05.5	+0.1
ZKR				S	Sn	21 22 12.8	-0.1
ZKR	Zakros	0.50	170	P	Pb	21 22 05.4	0.0
ZKR				S	Sn	21 22 12.9	0.0
ZKR				AML	AML	21 22 13.3	
	comp=E,2453μm,0.3s						
ZKR				AML	AML	21 22 13.4	
	comp=N,1292μm,0.2s						
NPS	Neapolis	0.53	230	P	Pb	21 22 06.2	+0.2
NPS				S	Sn	21 22 13.7	-0.1
NPS	Neapolis	0.53	230	P	Pb	21 22 06.1	+0.2
NPS				S	Sn	21 22 13.7	-0.1
NPS				AML	AML	21 22 13.9	
	comp=E,6214μm,0.2s						
NPS				AML	AML	21 22 14.1	
	comp=N,3678μm,0.4s						
LAST	Lasithi	0.68	230	P	Pb	21 22 08.4	0.0
LAST				S	Sn	21 22 17.6	0.0
LAST	Lasithi	0.68	230	P	Pb	21 22 08.3	-0.2
LAST				S	Sb	21 22 17.9	+0.2
LAST				AML	AML	21 22 19.1	
	comp=N,1516μm,0.5s						
LAST				AML	AML	21 22 19.9	
	comp=E,950μm,0.1s						
ANAF	Anafi Island	0.80	340	P	Pb	21 22 10.3	-0.1
ANAF				S	Sb	21 22 20.7	-0.3
ANAF	Anafi Island	0.80	340	P	Pn	21 22 09.8	+0.1
ANAF				S	Sb	21 22 20.7	-0.3
ANAF				AML	AML	21 22 21.6	
	comp=N,3132μm,0.4s						
ANAF				AML	AML	21 22 22.0	
	comp=E,2107μm,0.2s						
KARP	Karpathos	0.86	94	P	Pn	21 22 10.1	-0.3
KARP				S	Sn	21 22 21.1	-0.7
KARP	Karpathos	0.86	94	P	Pn	21 22 10.2	-0.3
KARP				S	Sb	21 22 22.0	-0.6
KARP				AML	AML	21 22 24.2	
	comp=N,565μm,0.2s						
KARP				AML	AML	21 22 24.8	
	comp=E,781μm,0.2s						
IACM	Heraklion	0.90	251	P	Pn	21 22 11.5	+0.4
IACM				S	Sb	21 22 23.7	-0.1
KSTL	Kastelli Herak	0.90	251	P	Pn	21 22 09.9	-1.2
KSTL				S	Sn	21 22 19.4	-3.5
SNT2	Vlychada, Sant	0.92	323	P	Pn	21 22 11.6	+0.3
SANT	Santorini	0.93	325	P	Pn	21 22 11.7	+0.1
THR6	Thira Island,	0.95	322	P	Pn	21 22 12.0	+0.3
THR6	Thira Island,	0.95	322	P	Pn	21 22 12.1	+0.4
SAP1	Santorini-Akro	0.95	322	P	Pn	21 22 12.3	+0.5
THR8	Santorini-Mono	0.95	327	P	Pn	21 22 12.1	+0.3
THR3	Thira Island,	0.99	324	P	Pn	21 22 12.6	+0.3
THR3	Thira Island,	0.99	324	P	Pn	21 22 12.7	+0.4
THR2	Thira island,	1.00	327	P	Pn	21 22 13.0	+0.5
THR2	Thira island,	1.00	327	P	Pb	21 22 13.2	-0.6
THR5	Thira Island,	1.02	323	P	Pn	21 22 13.3	+0.6
THR5	Thira Island,	1.02	323	P	Pb	21 22 13.4	-0.6
CMBO	Columbo, Santo	1.04	327	P	Pb	21 22 13.7	-0.6
IDI	Anoyia	1.05	253	P	Pn	21 22 13.5	+0.4
SIVA	Sivas	1.22	242	P	Pb	21 22 16.7	-0.6
AMGA	Amorgos Island	1.24	352	P	Pn	21 22 15.5	-0.2
AMGA				S	Sn	21 22 31.3	0.0
AMGA	Amorgos Island	1.24	352	P	Pn	21 22 15.5	-0.2
IOSP	Ios island	1.30	329	P	Pn	21 22 16.9	+0.3
IOSP				S	Sn	21 22 33.5	+0.7
IOSP	Ios island	1.30	329	P	Pn	21 22 16.7	+0.1
APE	Apeiranthos	1.54	342	P	Pn	21 22 20.0	+0.1
VAM	Vamos	1.57	263	P	Pn	21 22 39.6	+0.3
VAM				S	Sn	21 22 39.6	+0.1
VAM	Vamos	1.57	263	P	Pn	21 22 20.7	+0.4
VAM				S	Sn	21 22 40.8	+1.3
DAT	Datca	1.63	46	i P	Pn	21 22 21.3	0.0
ARG	Arkhangelos	1.74	69	P	Pn	21 22 23.5	+0.8
IMMV	Iera Moni Meta	1.75	266	P	Pn	21 22 23.4	+0.7
IMMV				S	Sn	21 22 45.1	+1.3
IMMV	Iera Moni Meta	1.75	266	P	Pn	21 22 23.5	+0.7
SMG	Samos	2.18	15	P	Pn	21 22 28.6	-0.1
TURN	Turunc	2.38	57	i P	Pn	21 22 30.9	-0.4
TURN				IAML_P			
	comp=Z,455nm,0.1s						
DALY	Dalyan (Mula)	2.38	59	i P	Pn	21 22 33.6	+2.1
DALY				IAML_P			
	comp=Z,277nm,0.2s						
FETY	Fethiye	2.62	66	i P	Pn	21 22 36.9	+2.2
VLI	Veliai	2.80	294	P	Pn	21 22 38.4	+1.2

TAP 09 21:31:60.0,23°.82N×121°.70E,h21km,ML1.9,1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.12	310	i P	Pb	21 32 04.5	-1.9
	baz=310						
ENLB				S	Sb	21 32 08.1	-2.8
	baz=310						
HWA	Hwalien	0.18	329	eP	Pb	21 32 05.7	-0.2
	baz=331						
HWA				eS	Sb	21 32 09.4	-0.7
	baz=331						
ESL	Shilin	0.25	268	⇓i P	Pb	21 32 06.3	+0.2
	baz=267						
ESL				i S	Sb	21 32 10.9	+0.5
	baz=267						
TWD	Chiawan	0.27	339	i P	Pb	21 32 07.0	+0.6
	baz=340						
TWD				eS	Sb	21 32 11.7	+0.9
	baz=340						
EGFH	Guangfu	0.30	239	P	Pb	21 32 07.0	+0.4
	baz=238						
EGFH				eS	Sb	21 32 12.6	+1.4
	baz=238						
NACB	Ninganchiao	0.36	344	i P	Pb	21 32 08.2	+0.6
	baz=343						
NACB				eS	Sb	21 32 14.0	+1.2
	baz=343						
HGSD	Ruisui	0.42	218	eP	Pn	21 32 10.2	-0.6
	baz=217						
ETLH	Xiulin Townshi	0.43	332	P	Pb	21 32 09.5	+0.7
	baz=331						
ETLH				eS	Sb	21 32 16.4	+1.4
	baz=331						
EHY	Hungye	0.47	228	eP	Pb	21 32 09.5	0.0
	baz=227						
WHF	Hehuan Shan	0.51	309	eP	Pb	21 32 11.2	+0.6
	baz=308						
CHGB	Renai	0.54	296	eP	Pb	21 32 11.7	+0.7
	baz=295						
NANB	Nanao	0.60	4	eP	Pb	21 32 12.4	+0.5
	baz=3.0						

JMA 09 21:32:42.2,24°.12N×123°.52E,h20km±1km,M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.27	104	P	Pb	21 32 48.2	-0.2
HATJ				S	Sb	21 32 52.2	-0.4
IRIF	Iriomote-Funau	0.29	42	P	Pb	21 32 48.6	-0.1
IRIF				S	Sb	21 32 52.7	-0.4
JKRS	Kuro-shima	0.46	75	P	Pb	21 32 51.5	-0.1
JKRS				S	Sb	21 32 58.0	-0.1
YOJ	Yonaguni jima	0.58	306	P	Pb	21 32 53.3	-0.3
JIJ	Ishigaki jima	0.62	67	P	Pb	21 32 53.9	-0.4
JIJ				S	Sb	21 33 02.4	-0.2
JISG	Ishigakijimahi	0.86	57	P	Pb	21 32 58.1	-0.3
JISG				eS	Sb	21 33 10.0	+0.5

ISC 09 21:35:57.6±2.5,51°.5N±0°.1×16°.20E±0°.09,h0km,n9, σ0°59/17,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	Chvalec	0.96	186	ePG	Pg	21 36 16.0	+0.1
CHVC				eSG	Sg	21 36 29.2	+0.8
	comp=Z,2.0nm,0.4s						
OSTC	Ostas	0.99	179	ePG	Pg	21 36 17.0	+0.5
OSTC				eSG	Sg	21 36 30.0	+0.7
	comp=Z,3.0nm,0.2s						
UPC	Upice	1.04	187	ePG	Pb	21 36 18.4	-0.1
UPC				eSG	Sg	21 36 30.6	-0.5
	comp=Z,3.9nm,0.4s						
DPC	Dobruska-Polom	1.20	176	ePG	Pg	21 36 20.0	-0.5
DPC				eSG	Sg	21 36 36.3	+0.3
	comp=Z,2.9nm,0.9s						
PVCC	Panska Ves	1.45	226	ePG	Pn	21 36 24.4	-0.6
PVCC				eSG	Sg	21 36 43.7	-0.3
	comp=Z,9.4nm,0.2s						
BRG	Berggiesshubel	1.57	246	PG	Pn	21 36 26.2	-0.5
BRG				SG	Sn	21 36 46.8	-0.9
	3.7nm,0.4s						
CLL	Collm	2.02	265	i (Pg)	Pn	21 36 32.7	-0.1
CLL				eSg	Sn	21 36 59.0	+0.3
NKC	Novy Kostel	2.71	243	eSG	Sg	21 37 25.5	+0.8
	comp=Z,2.4nm,0.5s						
KHC	Kasperske Hory	2.94	216	ePG	Pb	21 36 51.6	+0.7
KHC				eSG	Sg	21 37 31.8	-0.2

*ISCJB **09** 21:36:29.4±0.3,24°.37N±0°.02×122°.06E±0°.02,h19km±5km, Error ellipse: s-maj=3.5km s-min=2.5km az=147.6*

*TAP **09** 21:36:29.2,24°.39N×122°.00E,h21km,ML2.8,B*

*JMA **09** 21:36:29.0,24°.32N×122°.02E,h28km±2km,M2.1*

ISC 09 21:36:28.6±1.0,24°.36N±0°.02×122°.04E±0°.02,h15km±8km, n63,σ0°56/93,1C-5D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.20	23	⇑i P	Pb	21 36 34.8	+0.9
	baz=42						
EOS1				eS	Sb	21 36 39.2	+1.6
	baz=42						
NANB	Nanao	0.27	284	⇓i P	Pb	21 36 35.1	-0.1
	baz=286						
NANB				eS	Sb	21 36 39.6	0.0
	baz=286						
ENA	Nanau	0.28	283	⇓i P	Pb	21 36 35.1	-0.2
	baz=286						
ENA				eS	Sb	21 36 39.6	-0.2
	baz=286						
TWC	Suao	0.30	325	⇓i P	Pb	21 36 35.5	-0.1
	baz=335						
TWC				eS	Sb	21 36 39.5	-0.9
	baz=335						
NACB	Ninganchiao	0.45	245	P	Pg	21 36 37.6	0.0
	baz=236						
NACB				eS	Sb	21 36 44.8	+0.1
	baz=236						
TWE	Neicheng	0.49	316	P	Pb	21 36 38.9	-0.1
	baz=321						
TWE				eS	Sg	21 36 44.3	-0.7
	baz=321						
TWD	Chiawan	0.49	235	eP	Pb	21 36 38.9	0.0
	baz=231						
TWD				eS	Sb	21 36 47.0	+1.1
	baz=231						
ENTT	Nioudou	0.51	303	⇓i P	Pb	21 36 39.3	0.0
	baz=304						
ENTT				eS	Sb	21 36 46.3	-0.3
	baz=304						
NTC	Toucheng	0.53	339	eP	Pb	21 36 39.8	+0.3
	baz=343						
NTC				eS	Sb	21 36 47.3	+0.4
	baz=343						
ETLH	Xiulin Townshi	0.53	253	eP	Pg	21 36 39.3	+0.1
	baz=255						
NDT	Datong Townshi	0.54	297	⇓i P	Pb	21 36 39.7	+0.1
	baz=297						
NDT				eS	Sb	21 36 46.7	-0.5
	baz=297						
HWA	Hwalien	0.55	226	eP	Pn	21 36 42.1	+0.3
	baz=232						
NNSB	Datong	0.60	276	eP	Pb	21 36 40.8	-0.1
	baz=280						
NNSB				eS	Sg	21 36 48.8	+0.2
	baz=280						
ENLB	Shoufeng	0.61	221	eP	Pb	21 36 41.8	+0.9
	baz=216						
ENLB				eS	Sn	21 36 53.3	+1.2
	baz=216						
NNS	Nan Shan	0.61	277	eP	Pg	21 36 40.8	+0.1
	baz=281						
NNS				eS	Sg	21 36 48.8	-0.1
	baz=281						
TIPB	Shuangxi	0.64	342	P	Pb	21 36 41.6	+0.2
	baz=346						
TIPB				eS	Sb	21 36 49.6	-0.5
	baz=346						
NWLT	Wulai	0.64	310	eP	Pb	21 36 41.8	+0.4
	baz=306						
NWLT				eS	Sg	21 36 49.0	-0.6
	baz=306						
TWB1	Santiao Chiao	0.64	356	eP	Pb	21 36 41.2	-0.4
	baz=353						
YHNB	Yeheng	0.68	297	P	Pb	21 36 42.3	+0.2
	baz=300						
YHNB				eS	Sb	21 36 50.9	-0.5
	baz=300						
NSK	Sanguang	0.69	297	eP	Pb	21 36 42.7	+0.3
	baz=297						
NSK				eS	Sb	21 36 51.7	-0.2
	baz=297						
WHF	Hehuan Shan	0.74	253	eP	Pg	21 36 43.4	+0.2
	baz=257						
NWF	Wu-fen Shan	0.74	342	eP	Pn	21 36 43.9	-0.7
	baz=337						
NWF				eS	Sn	21 36 53.8	-1.9
	baz=337						
WFSB	Wu-fen Shan	0.74	342	eP	Pn	21 36 44.8	+0.3
	baz=337						
WFSB				eS	Sg	21 36 52.5	-0.4
	baz=337						
NHDH	Xindian Distri	0.76	322	eP	Pn	21 36 44.0	-0.7
	baz=313						
ESL	Shilin	0.78	226	eP	Pg	21 36 44.1	+0.4
	baz=222						
TATO	Taipei	0.79	321	eP	Pn	21 36 45.1	0.0
	baz=313						
TDCB	Techi	0.81	262	eP	Pn	21 36 45.1	-0.5
	baz=264						
TDCB				eS	Sn	21 36 56.6	-0.8
	baz=264						
JYNG	Yonagunijimaku	0.83	84	P	Pg	21 36 45.0	+0.3
JYNG				S	Sg	21 36 55.8	+0.1
CHGB	Renai	0.85	249	P	Pg	21 36 45.6	+0.5
	baz=246						
CHGB				eS	Sn	21 36 58.5	+0.1
	baz=246						
YM01	YM01	0.89	331	eP	Pn	21 36 46.5	-0.1
	baz=333						
EGFH	Guangfu	0.89	219	eP	Pn	21 36 46.4	-0.1
	baz=200						
YOJ	Yonaguni jima	0.89	83	eP	Pb	21 36 44.4	-1.3
	baz=79						
YOJ	Yonaguni jima	0.89	83	P	Pb	21 36 45.7	0.0
YOJ				eS	Sb	21 36 57.5	+0.1
YM07	YM07	0.89	335	eP	Pn	21 36 47.0	+0.4
	baz=336						
YM11	YM11	0.90	332	eP	Pn	21 36 47.3	+0.4
	baz=333						
YM05	YM05	0.91	332	eP	Pn	21 36 47.2	+0.4
	baz=333						
YM04	YM04	0.91	330	eP	Pn	21 36 47.2	+0.3
	baz=331						
TWS1	Kuangyinshan	0.93	323	eP	Pn	21 36 48.3	+1.2
	baz=324						
LIOB	Emei	0.97	287	eP	Pg	21 36 48.1	+0.7
	baz=287						
NSTT	Nanjuang	0.98

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      baz=226
WHYT  Xinyi Township      1.27 239 eP        Pb        21 36 52.8 +0.5
      baz=227
WJS   Zhushan             1.31 246 eP        Pg        21 36 54.3 +0.4
      baz=245
YUS   Yu-Shan             1.32 229 eP        Pb        21 36 53.6 +0.3
      baz=227
CHN5  Tsauling            1.46 239 eP        Pb        21 36 55.7 +0.2
      baz=237
CHN5                                eS       Sg        21 37 15.8  0.0
      baz=237
ELDTW Lidau               1.50 219 eP        Pn        21 36 55.1 +0.1
      baz=203
WDLH  Douliu              1.53 244 eP        Pg        21 36 58.1 +0.1
      baz=243
IRIF  Iriomote-Funau      1.54  91 P         Pn        21 36 54.9 -0.6
IRIF                                eS       Sn        21 37 15.1 -0.1
TPUB  Ta-pu               1.67 231 eP        Pb        21 36 59.1  0.0
      baz=215
STYT  Tauyuan             1.68 225 eP        Pb        21 36 58.4 -0.7
      baz=210
WTP   Ta-pu               1.71 230 eP        Pb        21 36 59.5 -0.3
      baz=213
JKRS  Kuro-shima          1.80  94 P         Pn        21 36 59.3 +0.3
JKRS                                S        Sn        21 37 21.9 +0.3
SLGT  Liugui              1.87 223 eP        Pb        21 37 02.2 -0.2
      baz=222
JIJ   Ishigaki jima       1.92  90 P         Pn        21 37 00.7  0.0
JIJ                                 S        Sn        21 37 24.0 -0.5
JISG  Ishigakijimahi      2.08  83 P         Pn        21 37 03.0 +0.1
JISG                                eS       Sn        21 37 28.7 +0.2
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IDC ***09*** *21:40:23.4±0.5, 8°.81S×157°.86E, h0km, mb4.5/20, mb1 4.6/25, mb1mx4.5/35, mbtmp4.5/25, ML3.9/4, MS4.0/20, Ms1 4.0/20, ms1mx3.9/26, Error ellipse: s-maj=16.8km s-min=14.0km az=112.0*

BJI ***09*** *21:40:25.5±0.0, 9°.10S×158°.10E, h23km, mb4.8/43, mB5.0/25, Ms4.8/17, Ms7 4.5/12*

MOS ***09*** *21:40:26.8±1.3, 8°.77S×157°.90E, h28km, mb5.1/28, Error ellipse: s-maj=10.2km s-min=9.3km az=73.3*

GCMT ***09*** *21:40:26.3±0.3, 8°.95S±0°.02×157°.89E±0°.03, h20km±1km, MW5.0/73, Moment Tensor Solution. s25,c28; s73,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.48±.20; Mθθ-1.08±.13; Mφφ-1.39±.14; Mrθ-0.74±.26; Mφφ1.64±.08; Mφr-2.16±.30; Best double couple: M0=3.49100×10^16 NP1:φs=168.00000°, δ64.00000°, λ121.00000°. NP2: φs=294.00000°, δ40.00000°, λ43.00000°. Principal axes: T 3.8320, Plg59.0000°, Azm122.0000°; N -0.6720, Plg28.0000°, Azm333.0000°; P -3.1500, Plg14.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISCJB ***09*** *21:40:26.0±0.2, 8°.88S±0°.04×157°.81E±0°.03, h23km, mb4.9/120, MS4.1/23 Error ellipse: s-maj=5.2km s-min=3.8km az=159.3*

NEIC ***09*** *21:40:28.3±3.1, 8°.87S×158°.00E, h30km±3km, mb5.0/93, Error ellipse: s-maj=13.3km s-min=10.9km az=205.0*

ISC 09 21:40:27.1±0.3, 8°.87S±0°.05×158°.02E±0°.04, h23km, n307, σ1§58/296, mb5.0/119, MS4.1/23, 9C,
Bougainville-Solomon Islands region

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Code  Station Name        Δ°  AZ°  Phase ID          Time      Res
                                   Op    ISC         h m  s    ISC
HNR   Honiara             1.99 106 iP        Pb        21 41 02.0 -0.6
HNR                                iS        Sb        21 41 27.0 +0.1
HNR   Honiara             1.99 106 Pn        Pn        21 40 59.6 +0.3
      68nm,0.3s,baz=260,slow=5.2,SNR=23
HNR                                LR        LR        21 41 30.0
      comp=Z,2μm,18.2s,baz=296,slow=31
HNR                                Sn        Sb        21 41 30.0 +3.1
      376nm,0.3s,baz=49,slow=7.6,SNR=5.8
HNR   Honiara             1.99 106 ePn       Pn        21 40 59.6 +0.3
HNR                                eSn       Sn        21 41 23.2 -0.3
HNR   Honiara             1.99 106 eP        Pn        21 40 59.6 +0.3
HNR                                e                   21 41 23.2
RABL  Rabaul              7.45 308 ePn       Pn        21 42 15.8 +1.4
RABL                               eSn       Sn        21 43 40.3 +2.0
PMG   Port Moresby        10.73 266 Pn       Pn        21 42 56.5 -3.0
      0.5nm,0.3s,baz=127,slow=10,SNR=2.1
PMG                                LR        LR        21 47 02.6
      comp=Z,2μm,18.3s,baz=82,slow=38
PMG   Port Moresby        10.73 266 iP       Pn        21 43 02.2 +2.7
COEN  Coen                15.40 249 ePn      Pn        21 44 05.0 +1.9
      62nm,0.9s
COEN  Coen                15.40 249 P        Pn        21 44 05.2 +2.1
      baz=15,SNR=12
DZM   Mont Dzumac         15.42 149 Pn       Pn        21 44 04.3 +0.8
      0.2nm,0.3s,baz=329,slow=5.9,SNR=4.3
DZM                                LR        LR        21 48 55.6
      comp=Z,986nm,18.1s,baz=328,slow=33
DZM   Mont Dzumac         15.42 149 eLR      LR        21 47 29.1
      comp=Z,653nm,23.8s
DZM   Mont Dzumac         15.42 149 ePn      Pn        21 44 04.3 +0.8
      57nm,1.4s
PATS  Pohnpei             15.61  1 ePn       Pn        21 44 03.4 -2.4
      279nm,1.4s
CTA   Charters Tower      15.92 224 Pn       Pn        21 44 07.7 -2.3
      0.8nm,0.3s,baz=45,slow=15,SNR=5.3
CTA                                LR        LR        21 49 31.4
      comp=Z,717nm,19.2s,baz=60,slow=34
CTAO  Charters Tower      15.92 224 ePn      Pn        21 44 08.1 -1.8
      29nm,0.8s
CTAO  Charters Tower      15.92 224 eP       Pn        21 44 08.1 -1.8
CTAO                               pmax      pmax
      comp=Z,29nm,0.8s
MMPI  Merauke             17.44 270 P        Pn        21 44 27.1 -1.9
EIDS  Eidsvold            17.68 201 ePn      Pn        21 44 25.3 -6.7
      comp=Z,38nm,1.0s
EIDS  Eidsvold            17.68 201 P        P         21 44 34.7 +1.9
      baz=18,SNR=3.2
JAY   Jayapura            18.34 289 P        P         21 44 36.5 -3.7
      comp=Z,0.2nm,0.3s,baz=108,slow=20,SNR=3.1
JAY                                LR        LR        21 52 13.7
      comp=Z,622nm,18.4s,baz=38,slow=39
JAY   Jayapura            18.34 289 P        P         21 44 40.0 -0.2
GENI  Genyem              18.81 288 P        P         21 44 45.2 -0.2
RMQ   Roma                19.59 205 P        Pn        21 44 55.4 +0.2
      baz=20,SNR=10
FUNA  Funafuti            20.94  91 eP       P         21 45 06.4 -2.1
      comp=Z,149nm,1.3s
QIS   Mount Isa           21.23 235 P        P         21 45 11.9 +0.2
      baz=21,SNR=14
ARMA  Armidale            22.25 195 eP       P         21 45 19.4 -3.2
      comp=Z,20nm,1.0s
ARMA  Armidale            22.25 195 P        P         21 45 26.6 +4.0
      baz=22,SNR=5.3
SRPI  Serui, Papua        22.76 287 P        P         21 45 27.8 -0.3
BAKI  Biak                23.10 288 P        P         21 45 31.6 -0.1
RKPI  Ransiki, Papua      24.82 286 P        P         21 45 47.8 -0.1
CMSA  Cobar Meteorol      25.30 205 P        P         21 45 52.0 -0.1
      baz=26,SNR=8.4
KDU   Kakadu              25.37 259 P        P         21 45 52.2 -0.7
      baz=25,SNR=12
WRAB  Tennant Creek       25.38 242 eP       P         21 45 51.2 -1.7
      comp=Z,39nm,0.8s
WRAB  Tennant Creek       25.38 242 ceP      P         21 45 51.9 -1.1
WRAB                               pmax      pmax
      comp=Z,50nm,1.3s
WB2   Warramunga Arr      25.39 242 eP       P         21 45 52.1 -0.9
      comp=Z,40nm,0.8s
WR1   Warramunga Arr      25.39 242 eP       P         21 45 52.0 -1.1
WRA   Warramunga Arr      25.40 242 P        P         21 45 52.0 -1.1
      comp=Z,79nm,0.3s,baz=60,slow=9.2,SNR=3.4
GUMO  Guam                25.85 330 LR       LR        21 55 31.9
      comp=Z,157nm,18.7s,baz=133,slow=35
FAKI  Fak Fak             26.29 281 P        P         21 46 00.8 -0.5
SAUI  Saumlaki            26.44 270 P        P         21 46 01.8 -0.8
MTN   Manton Dam          26.59 259 eP       P         21 46 04.3 -0.5
      comp=Z,44nm,1.3s
MTN   Manton Dam          26.69 259 P        P         21 46 04.5 -0.2
      baz=27
AS31  Alice Springs       27.35 235 eP       P         21 46 09.0 -1.8
      comp=Z,2.5nm,0.8s
AS31                               ePcP      PcP       21 49 30.2 +0.4
ASAR  Alice Springs       27.36 235 P        P         21 46 09.0 -1.8
      comp=Z,8.4nm,0.8s,baz=63,slow=9.1,SNR=68
ASAR                               PcP       PcP       21 49 30.2 +0.4
      comp=Z,1.1nm,0.9s,baz=76,slow=3.9,SNR=2.7
ASAR                               LR        LR        21 56 40.0
      comp=Z,493nm,18.9s,baz=59,slow=36
STKA  Stephens Creek      27.50 211 P        P         21 46 12.2 +0.2
      comp=Z,29nm,0.8s,baz=19,slow=11,SNR=50
STKA                               LR        LR        21 57 17.5
      comp=Z,509nm,19.0s,slow=37
STKA  Stephens Creek      27.50 211 eP       P         21 46 14.4 +2.5
      comp=Z,6.6nm,0.8s
STKA  Stephens Creek      27.50 211 P        P         21 46 13.6 +1.6
      baz=28,SNR=30
STKA  Stephens Creek      27.50 211 eP       P         21 46 14.5 +2.5
STKA                               pmax      pmax
      comp=Z,7.0nm,0.8s
BNDI  Bandanaira          28.24 277 P        P         21 46 18.3 -0.5
BNDI                               pP        sP        21 46 34.2 +6.1
KNRA  Kununurra           29.35 254 P        P         21 46 27.8 -0.8
      baz=29
BBOO  Buckleboo           31.30 217 eP       P         21 46 45.3 -0.4
      comp=Z,22nm,0.8s
BBOO  Buckleboo           31.30 217 P        P         21 46 45.2 -0.4
      baz=31,SNR=9.8
TNTI  Ternate             32.00 286 P        P         21 46 52.0 -0.1
WRKA  Warakurna           32.54 237 P        P         21 46 54.9 -1.9
      baz=33,SNR=18
FITZ  Fitzroy Crossi      32.74 250 eP       P         21 46 55.5 -3.0
      comp=Z,14nm,1.1s
FITZ  Fitzroy Crossi      32.74 250 P        P         21 46 57.1 -1.4
      baz=33,SNR=6.3
SOEI  Soe                 33.31 266 P        P         21 47 02.5 -1.1
BATI  Baumata             33.89 265 P        P         21 47 04.3 -4.3
MMRI  Maumere             35.35 268 eP       P         21 47 20.7 -0.6
      comp=Z,55nm,1.0s
MMRI  Maumere             35.35 268 P        P         21 47 19.3 -1.9
FORT  Forrest             35.42 228 eP       P         21 47 21.3 -0.3
      comp=Z,33nm,1.0s
KDI   Kendari             35.50 276 P        P         21 47 21.9 -0.6
BFZ   Birch Farm          35.58 156 eP       P         21 47 25.1 +2.2
      comp=Z,61nm,1.3s
EDFI  Ende, Flores        35.89 267 P        P         21 47 24.2 -1.8
KHZ   Kahutara            36.09 160 eP       P         21 47 26.9 -0.3
      comp=Z,39nm,1.3s
APSI  Ampana              37.06 280 P        P         21 47 35.4 -0.4
MRSI  Marisa              37.12 283 P        P         21 47 36.0 -0.3
WSI   Waingapu            37.22 266 P        P         21 47 36.2 -1.0
BSSI  Bau Bau, Buton      37.29 271 P        P         21 47 37.0 -0.8
BKSI  Bulukumba           37.75 273 P        P         21 47 41.0 -0.7
BNSI  Bone                37.90 274 P        P         21 47 42.3 -0.7
WBSI  Waikabubak, Su      38.12 266 P        P         21 47 43.8 -1.0
SPSI  Sidrap Palu         38.30 275 P        P         21 47 45.7 -0.6
TTSI  Tana Toraja         38.41 276 P        P         21 47 46.7 -0.5
PSA00 Pilbara Seismi      38.82 247 eP       P         21 47 49.5 -1.1
      comp=Z,28nm,1.0s
MPSI  Mapaga              39.05 282 P        P         21 47 50.6 -2.1
PLAI  Plampang            39.75 267 P        P         21 47 57.5 -1.0
KMBL  Kambalda            40.35 231 P        P         21 48 02.7 -0.6
      baz=40,SNR=6.2
SGKI  Sangatta, Kali      41.08 279 P        P         21 48 09.1 -0.4
BKB   Balikpapan          41.62 278 P        P         21 48 13.6 -0.3
JAGI  Jajag, Banyuwa      43.34 267 P        P         21 48 24.6 -3.4
MTKI  Muara Teweh, K      43.64 278 P        P         21 48 29.9 -0.5
KMMI  Kalianget           43.64 269 P        P         21 48 30.0 -0.4
MORW  Morawa              44.17 237 eP       P         21 48 33.3 -1.2
      comp=Z,22nm,1.1s
MORW  Morawa              44.17 237 P        P         21 48 33.8 -0.7
      baz=44,SNR=4.1
PWJI  Pagerwojo           45.70 267 P        P         21 48 43.5 -3.3
SMRI  Semarang            47.13 269 P        P         21 48 57.2 -0.9
INU   Inuyama             48.25 337 eP       P         21 49 05.9 -0.5
      comp=Z,21nm,1.2s
SSLB  Suanglung           48.63 313 eP       P         21 49 09.1 -0.4
      comp=Z,12nm,0.9s
KSM   Kuching             48.64 280 eP       P         21 49 13.0 +3.2
      comp=Z,35nm,1.2s
MJAR  Matsushiro Arr      48.86 339 P        P         21 49 09.3 -1.7
      comp=Z,1.9nm,1.0s,baz=170,slow=9.6,SNR=4.6
MJAR                               PcP       PcP       21 50 35.1 -0.4
      comp=Z,1.2nm,0.8s,baz=152,slow=5.5,SNR=2.2
MAJO  Matsushiro          48.86 339 eP       P         21 49 09.3 -1.8
MAJO                               ePcP      PcP       21 50 35.1 -0.4
MAJO  Matsushiro          48.86 339 eP       P         21 49 09.3 -1.8
MAJO                               e                   21 50 35.1
MAT   Matsushiro          48.86 339 P        P         21 49 10.1 -1.0
JNU   Nakatsue            49.11 330 eP       P         21 49 12.7 -0.4
      comp=Z,17nm,0.9s
JCJI  Jatiwangi           49.33 269 P        P         21 49 14.2 -0.8
CISI  Cisompet, Garu      49.67 268 P        P         21 49 16.9 -0.9
LEM   Lembang             49.94 269 P        P         21 49 19.0 -0.9
TPI   Tanjungpandan       50.43 274 P        P         21 49 22.9 -0.5
PPT   Papeete             51.61 105 LR       LR        22 06 47.2
      comp=Z,176nm,21.0s,baz=286,slow=31
PPT2  Papeete2            51.61 105 eS       S         21 56 46.0 -6.5
      comp=Z,102nm,28.2s
PPT2                               eLQ       LQ        22 02 11.4
      comp=Z,240nm,25.0s
PPT2                               eLR       LR        22 04 24.1
      comp=Z,370nm,22.8s,baz=265
TBI   Tubuai              52.20 113 eLQ      LQ        22 02 25.3
      comp=Z,658nm,30.5s
TBI                                eLR       LR        22 04 36.7
      comp=Z,245nm,23.8s
DLV   T Lat               53.40 292 eP       P         21 49 43.9 -1.9
      comp=Z,29nm,1.4s
MDSI  Maura Dua           53.61 271 P        P         21 49 46.6 -0.5
MHA   Mahukona            53.75  57 eP       P         21 49 48.6 +0.6
MHA   Mahukona            53.75  57 eP       P         21 49 48.6 +0.6
KSRS  Korea Array         54.01 330 P        P         21 49 48.1 -1.5
      comp=Z,0.8nm,0.4s,baz=149,slow=8.7,SNR=8.6
KSRS                               LR        LR        22 11 45.1
      comp=Z,83nm,19.1s,baz=144,slow=35
KS15  Wonju Array Si      54.02 330 eP       P         21 49 48.1 -1.6
      comp=Z,7.4nm,1.1s
NJ2   Nanjing             55.27 319 eP       P         21 50 01.1 +2.3
NJ2                                pmax      pmax
      comp=Z,8.0nm,0.5s
SDSI  Sungai Dareh        56.87 275 P        P         21 50 10.3 -0.3
YSS   Yuzh-Sakhalins      57.22 348 iP       P         21 50 14.1 +1.7
YSS                                pmax      pmax
      comp=Z,6.0nm,1.0s
WHN   Wuhan               57.37 315 P        P         21 50 20.5 +6.7
USRK  Ussuriysk Ar.       57.85 338 P        P         21 50 15.4 -1.5
      comp=Z,2.1nm,0.8s,baz=137,slow=3.9,SNR=7.1
MNSI  Mandailing Nat      58.99 276 P        P         21 50 21.9 -3.7
CN2   Changchun           60.18 333 eP       P         21 50 36.0 +2.9
CN2                                pmax      pmax
      comp=Z,10.0nm,0.5s
ENH   Enshi               60.71 312 eP       P         21 50 36.5 -0.6
      comp=Z,16nm,1.1s
GYA   Guiyang             60.97 307 P        P         21 50 43.5 +4.5
GYA                                pmax      pmax
      comp=Z,10.0nm,0.8s
PET   Petropavlovsk       61.66  0 eP        P         21 50 43.8 +0.8
PET                                pmax      pmax
      comp=Z,40nm,1.7s
PEA0B Petropavlovsk-      61.74 360 eP       P         21 50 44.9 +1.3
      comp=Z,35nm,1.1s
PETK  Petropavlovsk-      61.74 360 P        P         21 50 43.6 +0.1
      comp=Z,23nm,0.9s,baz=147,slow=6.9,SNR=18
PETK                               LR        LR        22 16 09.7
      comp=Z,95nm,19.7s,baz=176,slow=35
PEA1  Petropavlovsk-      61.74 360 eP       P         21 50 43.6  0.0
KLR   Kul'dur             62.28 341 LR       LR        22 16 06.3
      comp=Z,64nm,20.4s,baz=148,slow=34
KLR   Kul'dur             62.28 341 iP       P         21 50 47.5 +0.2
KLR                                pmax      pmax
      comp=Z,11nm,1.5s
UTTA  Uttaradit           62.60 295 P        P         21 50 56.6 +6.6
      comp=Z,14μm,1.0s
NANT  Nan                 62.84 296 P        P         21 50 57.9 +6.2
      comp=Z,17μm,0.8s,comp=Z,202μm
SMY   Shemya              62.88  11 eP       P         21 50 47.2 -4.0
      comp=Z,76nm,1.4s
XAN   Xi'an               63.13 315 P        P         21 50 58.9 +5.6
XAN                                pmax      pmax
      comp=Z,8.0nm,1.2s
XAN                                LR        LR
      comp=Z,130nm,22.8s
XAN                                LR        LR
      comp=Z,160nm,27.1s
XAN   Xi'an               63.13 315 eP       P         21 50 46.9 -6.5
      comp=Z,7.2nm,0.9s
XAN   Xi'an               63.13 315 eP       P         21 50 46.9 -6.4
XAN                                pmax      pmax
      comp=Z,7.0nm,0.9s
KMI   Kunming             63.54 304 P        P         21 50 59.2 +2.7
KMI                                pP        sP        21 51 06.0 -0.1
KMI                                sP        pP        21 51 08.5 +4.7
KMI                                pmax      pmax
      comp=Z,13nm,1.0s
KMI   Kunming             63.54 304 eP       P         21 50 55.9 -0.6
      comp=Z,32nm,1.4s
KMI   Kunming             63.54 304 eP       P         21 50 55.9 -0.6
KMI                                pmax      pmax
      comp=Z,32nm,1.4s
PAYA  Payao               63.77 297 P        P         21 51 06.5 +8.7
      comp=Z,16μm,0.7s
CM31  Chiang Mai Arr      64.29 295 eP       P         21 51 00.8 -0.4
      comp=Z,12nm,1.0s
CMAR  Chiang Mai Arr      64.29 295 P        P         21 51 00.8 -0.4
      comp=Z,0.8nm,0.3s,baz=102,slow=3.8,SNR=6.0
CMAR                               LR        LR        22 18 46.3
      comp=Z,47nm,19.6s,baz=92,slow=36
CMAR  Chiang Mai Arr      64.29 295 ceP      P         21 51 01.7 +0.5
CMAR                               pmax      pmax
      comp=Z,1.0nm,0.3s
ADK   Adak                64.31  17 eP       P         21 50 58.9 -1.7
      comp=Z,28nm,0.9s
ADK   Adak                64.31  17 eP       P         21 50 58.9 -1.7
ADK                                pmax      pmax
      comp=Z,28nm,0.9s
CMMT  Chiang Mai          64.40 296 P        P         21 51 08.2 +6.2
CD2   Chengdu             65.30 310 ⇑iP      P         21 51 11.2 +3.5
CD2                                pmax      pmax
      comp=Z,30nm,0.5s
HHC   Hu-ho-hao-te        65.38 323 eP       P         21 51 10.7 +2.7
HHC                                S         S         21 59 54.3 +3.2
HHC                                pmax      pmax
      comp=Z,24nm,0.9s
HHC                                pmax      pmax
      comp=Z,62nm,5.4s
HHC                                LR        LR
      comp=Z,210nm,16.2s
HHC                                LR        LR
      comp=Z,190nm,15.3s
HHC                                LR        LR
      comp=Z,700nm,15.3s
CASY  Casey               65.77 199 eP       P         21 51 08.9 -1.1
      comp=Z,18nm,1.2s
ZEA   Zeya                67.59 341 eP       P         21 51 21.8  0.0
ZEA                                pmax      pmax
      comp=Z,29nm,1.0s
LZH   Lanzhou             67.75 315 eP       P         21 51 28.6 +5.2
LZH                                pP        sP        21 51 34.4 +1.3
LZH                                sP        pP        21 51 39.1 +8.4
LZH                                pmax      pmax
      comp=Z,11nm,1.3s
LZH                                pmax      pmax
      comp=Z,91nm,4.9s
LZH                                LR        LR
      comp=Z,340nm,15.2s
LZH                                LR        LR
      comp=Z,410nm,14.6s
LZH                                LR        LR
      comp=Z,410nm,17.9s
MA2   Magadan             68.47 356 ceP      P         21 51 26.8 -0.4
MA2                                pmax      pmax
      comp=Z,41nm,2.5s
VNDA  Vanda               68.65 179 P        P         21 51 29.1 +0.9
      comp=Z,1.7nm,0.8s,baz=318,slow=4.8,SNR=4.1
VNDA                               LR        LR        22 18 19.8
      comp=Z,116nm,18.0s,baz=352,slow=33
SEY   Seymchan            71.72 357 P        P         21 51 46.8 -0.2
      comp=Z,8.1nm,1.0s,baz=175,slow=6.5,SNR=7.9
SEY   Seymchan            71.72 357 ceP      P         21 51 46.6 -0.4
GTA   Gaotai              72.15 316 P        P         21 51 50.2 -0.1
GTA                                pP        pP        21 51 59.0 +1.3
GTA                                sP        sP        21 52 03.9 +3.8
GTA                                pmax      pmax
      comp=Z,3.0nm,1.3s
GTA                                pmax      pmax
      comp=Z,85nm,5.8s
GTA                                LR        LR
      comp=Z,63nm,18.6s
GTA                                LR        LR
      comp=Z,77nm,17.9s
SONA0 Songino Array       72.53 326 eP       P         21 51 52.7 +0.3
SONM  Songino Array       72.53 326 P        P         21 51 52.7 +0.3
      comp=Z,2.7nm,0.9s,baz=137,slow=6.3,SNR=12
SHL   Shillong            72.82 300 eP       P         21 51 54.5 -0.2
      comp=Z,22nm,1.2s
SHL   Shillong            72.82 300 eP       P         21 51 54.5 -0.2
SHL                                pmax      pmax
      comp=Z,22nm,1.2s
YAK   Yakutsk             74.04 347 eP       P         21 52 01.1 +0.3
      comp=Z,25nm,0.8s
YAK   Yakutsk             74.04 347 eP       P         21 52 00.7 -0.1
YAK                                e*PP      pP        21 52 09.4 +1.3
YAK                                eS        S         22 02 28.0 +56
LSA   Lhasa               74.80 304 P        P         21 52 12.2 +5.7
LSA                                pmax      pmax
      comp=Z,10.0nm,0.4s
LSA   Lhasa               74.80 304 eP       P         21 52 07.2 +0.7
      comp=Z,31nm,0.7s
LSA   Lhasa               74.80 304 eP       P         21 52 07.2 +0.7
LSA                                pmax      pmax
      comp=Z,31nm,0.7s
BOD   Bodaibo             75.47 337 eP       P         21 52 08.8 -0.4
BOD                                pmax      pmax
      comp=Z,8.0nm,2.5s
ZAK   Zakamensk           75.67 327 eP       P         21 52 09.1 -1.5
ZAK                                pmax      pmax
      comp=Z,2.0nm,1.2s
BILL  Bilibino            76.95  3 eP        P         21 52 17.2 -0.2
      comp=Z,26nm,1.0s
BILL  Bilibino            76.95  3 ceP       P         21 52 17.0 -0.4
BILL                               i                   21 52 22.6
BILL                               pmax      pmax
      comp=Z,36nm,1.3s
BILL                               MLR       MLR
      comp=Z,134nm,22.0s
SVW2  Sparrevohn          78.63  21 eP       P         21 52 27.5 +0.6
      comp=Z,13nm,1.1s
RC01  Rabbit Creek A      80.79  23 eP       P         21 52 42.5 +3.9
      comp=Z,9.9nm,1.0s
QSPA  South Pole Qui      81.11 180 eP       P         21 52 40.9 +0.3
      comp=Z,7.9nm,1.0s
CAST  Castle Rocks        81.40  20 eP       P         21 52 41.9  0.0
      comp=Z,10nm,0.9s
GHO   Glory Hole Cre      81.52  23 eP       P         21 52 43.4 +0.8
      comp=Z,14nm,0.9s
SML   Sawmill             81.76  23 eP       P         21 52 44.7 +0.9
      comp=Z,30nm,1.3s
SML   Sawmill             81.76  23 eP       P         21 52 44.7 +0.9
SML                                pmax      pmax
      comp=Z,30nm,1.3s
TRF   Thorofare Moun      82.05  21 eP       P         21 52 45.7 +0.2
      comp=Z,2.6nm,0.9s
SCM   Sheep Creek Mo      82.16  23 eP       P         21 52 46.9 +0.9
      comp=Z,15nm,1.0s
SCM   Sheep Creek Mo      82.16  23 eP       P         21 52 46.9 +0.9
SCM                                pmax      pmax
      comp=Z,15nm,1.0s
BPAW  Bear Paw Mtn.       82.22  20 eP       P         21 52 45.9 -0.2
      comp=Z,5.5nm,1.1s
WMQ   Urumqi              82.23 317 eP       P         21 52 48.2 +1.4
WMQ                                LR        LR
      comp=Z,1μm,21.9s
WMQ                                LR        LR
      comp=Z,1μm,24.9s
WMQ                                LR        LR
      comp=Z,250nm,29.9s
RND   Reindeer            82.53  21 eP       P         21 52 48.0 +0.2
      comp=Z,20nm,1.2s
TIXI  Tiksi               82.65 351 P        P         21 52 46.7 -1.5
      comp=Z,2.8nm,0.9s,baz=121,slow=8.8,SNR=9.3
TIXI  Tiksi               82.65 351 eP       P         21 52 47.1 -1.0
      comp=Z,7.4nm,1.1s
TIXI  Tiksi               82.65 351 ceP      P         21 52 47.7 -0.5
TIXI                               pmax      pmax
      comp=Z,15nm,1.7s
MCK   McKinley            82.70  21 eP       P         21 52 48.9 +0.2
      comp=Z,35nm,1.0s
MCK   McKinley            82.70  21 eP       P         21 52 48.9 +0.2
MCK                                pmax      pmax
      comp=Z,35nm,1.0s
DHY   Denali Highway      82.87  22 eP       P         21 52 49.6 -0.1
      comp=Z,10nm,1.1s
CCB   Clear Creek Bu      83.65  21 eP       P         21 52 53.2 -0.3
      comp=Z,7.0nm,1.0s
COLA  College             83.77  20 iP       P         21 52 53.3 -0.8
COLA                               pmax      pmax
      comp=Z,21nm,1.0s
MAW   Mawson              83.82 203 P        P         21 52 53.6 -0.8
      comp=Z,5.5nm,1.0s,baz=79,slow=6.3,SNR=6.0
MAW                                LR        LR        22 27 38.3
      comp=Z,122nm,18.9s,baz=80,slow=34
```

MAW	Mawson	83.82	203	eP	P	21 52 55.0	+0.6
	comp=Z,4.1nm,1.4s						
MAW	Mawson	83.82	203	P	P	21 52 54.7	+0.3
	baz=84						
MAW	Mawson	83.82	203	eP	P	21 52 55.0	+0.6
MAW				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ILAR	Eielson Array	84.04	21	P	P	21 52 54.8	-0.8
	comp=Z,3.8nm,0.9s,baz=260,slow=4.9,SNR=37						
ILB	Eielson Array	84.04	21	eP	P	21 52 52.7	-2.8
	comp=Z,14nm,1.3s						
MENT	Mentasta	84.18	23	eP	P	21 52 57.6	+1.3
	comp=Z,6.3nm,0.9s						
RIDG	Independent Ri	84.19	22	eP	P	21 52 57.1	+0.7
	comp=Z,18nm,1.2s						
DOT	Dot Lake	84.43	22	eP	P	21 52 58.4	+0.8
	comp=Z,12nm,1.0s						
TOLK	Toolik Lake Re	85.51	17	eP	P	21 53 04.0	+1.1
	comp=Z,5.7nm,1.0s						
HYT	Haines Junctio	85.70	26	eP	P	21 53 05.8	+1.6
	comp=Z,26nm,1.5s						
EGAK	Eagle	86.11	22	eP	P	21 53 06.8	+0.9
	comp=Z,8.9nm,1.1s						
MK31	Makanchi Array	86.79	318	eP	P	21 53 09.4	-0.2
	comp=Z,3.4nm,1.2s						
MK31	Makanchi Array	86.79	318	eP	P	21 53 09.5	-0.2
MK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MK32	Makanchi Array	86.79	318	eP	P	21 53 08.5	-1.2
MKAR	Makanchi Array	86.79	318	P	P	21 53 08.5	-1.2
	comp=Z,1.3nm,0.8s,baz=106,slow=4.8,SNR=8.4						
WHY	Whitehorse	86.79	27	eP	P	21 53 10.7	+1.2
	comp=Z,5.5nm,1.0s						
ZALV	Zalesovo Beam	87.41	325	P	P	21 53 10.8	-1.6
	comp=Z,0.6nm,0.4s,baz=100,slow=5.0,SNR=4.3						
ZALV				LR	LR	22 31 36.9	
	comp=Z,37nm,20.2s,baz=68,slow=35						
ZAA1	Zalesovo Array	87.41	326	eP	P	21 53 10.8	-1.6
EPYK	Eagle Plains	88.49	21	eP	P	21 53 18.4	+0.9
	comp=Z,20nm,1.1s						
AFDM	Forest Hills D	88.60	50	eP	P	21 53 20.6	+2.0
	comp=Z,5.7nm,1.0s						
WAKR	Walker	89.68	51	eP	P	21 53 26.8	+2.9
	comp=Z,14nm,1.3s						
OMMB	Old Mammoth Mi	89.84	52	eP	P	21 53 26.9	+2.1
	comp=Z,7.7nm,1.2s						
YERR	Yerington	89.93	51	eP	P	21 53 18.5	-6.5
	comp=Z,7.5nm,1.2s						
MWC	Mount Wilson	89.95	55	eP	P	21 53 27.3	+2.1
	comp=Z,28nm,1.1s						
PAHR	Pah Rah Range	89.96	50	eP	P	21 53 27.3	+2.2
	comp=Z,12nm,1.3s						
BOOM	Boomskoye usch	90.14	313	eP	P	21 53 26.1	+0.2
	comp=Z,3.2nm,0.9s						
BOOM	Boomskoye usch	90.14	313	eP	P	21 53 26.1	+0.2
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	90.15	321	ceP	P	21 53 24.4	-1.1
KURK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
RYN	Ryan	90.41	51	eP	P	21 53 29.5	+2.3
	comp=Z,11nm,1.1s						
INK	Inuvik	90.42	20	P	P	21 53 26.7	+0.4
	comp=Z,2.1nm,1.0s,baz=298,slow=9.0,SNR=6.8						
INK	Inuvik	90.42	20	eP	P	21 53 27.0	+0.7
	comp=Z,5.7nm,1.3s						
INK	Inuvik	90.42	20	eP	P	21 53 27.0	+0.7
INK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NV01	Mina Array Sit	90.54	51	eP	P	21 53 29.6	+1.7
NVAR	Mina Array Bea	90.54	51	P	P	21 53 29.6	+1.7
	comp=Z,8.5nm,0.9s,baz=237,slow=6.8,SNR=17						
NVAR				LR	LR	22 27 56.0	
	comp=Z,82nm,19.8s,baz=226,slow=31						
NV11	Mina Array Sit	90.66	51	eP	P	21 53 30.5	+2.1
	comp=Z,1.2nm,1.0s						
DAC	Darwin (Calif)	90.70	54	eP	P	21 53 32.9	+4.2
	comp=Z,19nm,1.3s						
I07A	Izee	90.75	46	eP	P	21 53 30.2	+1.6
	comp=Z,6.0nm,1.1s						
KVN	Kaiserville	90.81	51	eP	P	21 53 31.2	+2.1
	comp=Z,13nm,1.0s						
KVN	Kaiserville	90.81	51	eP	P	21 53 31.2	+2.1
KVN				pmax	pmax		
	comp=Z,13nm,1.0s						
WVOR	Wild Horse Val	91.05	47	eP	P	21 53 32.0	+1.9
	comp=Z,7.2nm,1.1s						
GSC	Goldstone, Bar	91.16	55	eP	P	21 53 32.7	+2.0
	comp=Z,5.5nm,1.1s						
J08A	Circle Bar Ran	91.34	46	eP	P	21 53 32.6	+1.2
	comp=Z,8.1nm,1.0s						
NRIK	Noril'sk	91.49	340	LR	LR	22 34 03.8	
	comp=Z,44nm,21.9s,baz=122,slow=35						
SYO	Syowa Base	91.52	198⇑	esP	sP	21 53 40.0	-1.4
TPNV	Topopah Spring	91.88	53	eP	P	21 53 31.9	-2.2
	comp=Z,9.5nm,0.9s						
TPNV	Topopah Spring	91.88	53	eP	P	21 53 31.9	-2.2
TPNV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BMO	Blue Mountains	92.44	45	eP	P	21 53 37.6	+1.2
	comp=Z,3.6nm,1.1s						
BMO	Blue Mountains	92.44	45	eP	P	21 53 37.6	+1.2
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
R11A	Troy Canyon, C	92.63	52	eP	P	21 53 39.5	+2.0
	comp=Z,7.1nm,1.1s						
SHPR	Sheep Range	92.67	54	eP	P	21 53 40.5	+2.7
	comp=Z,13nm,1.3s						
F10A	Beach Ranch, E	92.69	44	eP	P	21 53 38.2	+0.7
	comp=Z,5.9nm,1.2s						
ELK	Elko	93.27	49	P	P	21 53 41.6	+1.1
	comp=Z,1.9nm,0.8s,baz=246,slow=2.9,SNR=7.6						
ELK	Elko	93.27	49	eP	P	21 53 42.6	+2.1
	comp=Z,2.7nm,0.9s						
ELK	Elko	93.27	49	eP	P	21 53 42.6	+2.1
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PSUT	Pine Spring	94.00	52	eP	P	21 53 46.8	+2.9
	comp=Z,8.2nm,1.3s						
HLID	Hailey	94.29	47	eP	P	21 53 47.0	+1.9
	comp=Z,8.2nm,1.4s						
BGU	Big Grassy Mou	94.95	50	eP	P	21 53 50.2	+2.0
	comp=Z,2.7nm,1.0s						
HVU	Hansel Valley	95.25	49	eP	P	21 53 52.0	+2.5
	comp=Z,9.6nm,1.3s						
HVU	Hansel Valley	95.25	49	eP	P	21 53 52.0	+2.5
HVU				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MSU	Marysvale	95.30	52	eP	P	21 53 53.4	+3.5
MSU	Marysvale	95.30	52	eP	P	21 53 53.4	+3.5
BRVK	Borovoye	95.66	323	i P	P	21 53 48.7	-2.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BOZ	Bozeman (W)	96.51	45	eP	P	21 53 56.8	+1.6
	comp=Z,2.7nm,0.8s						
BOZ	Bozeman (W)	96.51	45	eP	P	21 53 56.8	+1.6
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	96.59	28	P	P	21 53 55.0	+0.2
	comp=Z,1.3nm,0.8s,baz=262,slow=4.5,SNR=6.3						
YKA				LR	LR	22 32 27.6	
	comp=Z,13nm,19.7s,baz=248,slow=32						
YKB5	Yellowknife Ar	96.59	28	eP	P	21 53 55.0	+0.2
PD31	Pinedale Array	97.73	48	eP	P	21 54 00.5	-0.3
	comp=Z,2.1nm,1.1s						
PDAR	Pinedale Array	97.73	48	P	P	21 54 00.5	-0.3
	comp=Z,0.9nm,0.8s,baz=243,slow=3.0,SNR=8.0						
PDAR				LR	LR	22 33 53.6	
	comp=Z,58nm,19.2s,baz=288,slow=33						
LTX	Lajitas	101.51	62	ePdif	Pdif	21 54 18.1	+0.3
LTX	Lajitas	101.51	62	eP	Pdif	21 54 18.1	+0.3
TXAR	Lajitas Array	101.51	62	P	Pdif	21 54 18.1	+0.3
	comp=Z,0.3nm,0.9s,baz=250,slow=2.6,SNR=2.3						
AKASG	Malin Array Be	120.79	325	PKP	PKPdf	21 59 17.4	0.0
	comp=Z,0.5nm,0.5s,baz=79,slow=1.2,SNR=3.6						
AKBB	Malin Array Si	120.79	325	ePKPdf	PKPdf	21 59 17.4	0.0
AKBB	Malin Array Si	120.79	325	ePKIKP	PKPdf	21 59 17.4	0.0
BR101	Keskin Array S	121.86	311	ePKPdf	PKPdf	21 59 18.7	-1.3
BRTR	Keskin Array B	121.86	311	PKP	PKPdf	21 59 18.7	-1.3
	comp=Z,0.3nm,0.6s,baz=40,slow=4.7,SNR=3.0						
NB2	NORSAR Subarra	122.43	342	PKPdf	PKPdf	21 59 19.9	-0.5
	comp=Z,0.6nm,0.8s,baz=37,slow=1.8						
NB200	NORSAR Array S	122.43	342	ePKPdf	PKPdf	21 59 19.8	-0.6
NOA	NORSAR Array B	122.43	342	PKP	PKPdf	21 59 19.8	-0.6
	comp=Z,1.1nm,0.8s,baz=35,slow=1.9,SNR=4.6						
KWP	Kalwaria Pacla	124.97	326	ePKPdf	PKiKP	21 59 26.3	+0.4
KWP	Kalwaria Pacla	124.97	326	ePKIKP	PKiKP	21 59 26.3	+0.4
KOLS	Kolonicke sedl	125.59	326	ePKIKP	PKiKP	21 59 28.0	+0.9
KOLS	Kolonicke sedl	125.59	326	ePKP	PKiKP	21 59 28.0	+0.9
MORC	Moravsky Berou	127.65	329	ePKP	PKPdf	21 59 31.4	+0.7
DPC	Dobruska-Polom	127.91	330	ePKIKP	PKiKP	21 59 33.3	+1.5
DPC	Dobruska-Polom	127.91	330	ePKPDF	PKiKP	21 59 33.3	+1.5
LPAZ	La Paz	127.94	119	PKP	PKPdf	21 59 33.3	+0.4
	comp=Z,1.5nm,0.8s,baz=244,slow=5.0,SNR=6.2						
LPAZ	La Paz	127.94	119	ePKPdf	PKiKP	21 59 34.3	+0.8
LPAZ	La Paz	127.94	119	ePKIKP	PKiKP	21 59 34.3	+0.8
JAVC	Velka Javorina	128.14	328	ePKP	PKiKP	21 59 32.8	+0.5
KRUC	Moravsky	128.68	328	ePKP	PKPdf	21 59 33.3	+0.7
BRG	Berggiesshubel	128.72	332	eP	PKPdf	21 59 31.1	-1.5
	comp=Z,2.5nm,1.0s						
BRG	Berggiesshubel	128.72	332	ePKIKP	PKPdf	21 59 31.1	-1.5
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	Collm	128.87	332	i PKPdf	PKPdf	21 59 31.9	-1.0
	comp=Z,4.0nm,1.2s						
CLL				i		21 59 37.8	
CLL	Collm	128.87	332	i PKIKP	PKPdf	21 59 31.9	-1.0
CLL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KHC	Kasperske Hory	130.06	330	ePKIKP	PKPdf	21 59 36.0	+0.7
KHC				e		21 59 42.1	
KHC	Kasperske Hory	130.06	330	ePKPDF	PKPdf	21 59 36.0	+0.7
KHC				ex	x	21 59 42.1	
GEC2	GERESS Array S	130.19	330	ePKPdf	PKPdf	21 59 35.2	-0.4
GEC2	GERESS Array S	130.19	330	ePKIKP	PKPdf	21 59 35.2	-0.4
GERES	GERESS Array B	130.19	330	PKP	PKPdf	21 59 35.2	-0.4
	comp=Z,0.6nm,0.8s,baz=327,slow=2.2,SNR=5.8						
BDFB	Brasilia	144.53	133	PKP	PKPab	22 00 01.6	+0.3
	comp=Z,25nm,0.8s,baz=213,slow=1.8,SNR=35						
BDFB	Brasilia	144.53	133	ePKPdf	PKPbc	22 00 02.2	+0.7
BDFB	Brasilia	144.53	133	ePKIKP	PKPbc	22 00 02.2	+0.7
MVO	Moncorvo	145.22	340	ePKP	PKPbc	22 00 03.5	+0.5
POLO	Lamas de Olo	145.28	341	ePKP	PKPbc	22 00 03.4	+0.2
PVRL	Vila Real	145.34	341	i LQ	LQ	22 00 15.8	
ESDC	Sonseca Array	145.36	335	PKPbc	PKPbc	22 00 02.9	-0.6
	comp=Z,1.0nm,0.7s,baz=24,slow=4.4,SNR=5.9						
PVIS	Viseu	145.91	341	ePKP	PKPab	22 00 06.1	+0.5
MTE	Manteigas	146.07	340	ePKP	PKPbc	22 00 06.2	+0.5
PCBR	Castelo Branco	146.55	340	ePKP	PKPab	22 00 08.6	+0.6
PMRV	Marv??o	146.89	339	ePKP	PKPab	22 00 09.3	-0.1
PTOM	Tomar	147.07	341	ePKP	PKPab	22 00 10.1	+0.1
PMTG	Montargil	147.50	340	ePKP	PKPbc	22 00 10.1	+0.4
EVO	Evora	147.91	339	ePKP	PKPbc	22 00 11.9	+1.0
PBEJ	Beja	148.30	338	i LQ	LQ	22 00 20.4	
PNCL	Nicolau / Gran	148.46	339	ePKP	PKPbc	22 00 13.5	+1.2
PCVE	Castro Verde	148.72	338	ePKP	PKiKP	22 00 14.3	-0.2
PBDV	Barranco-do-Ve	149.02	338	i LQ	LQ	22 00 21.5	
PTEO	Sao Teotonio	149.04	339	ePKP	PKPbc	22 00 12.3	-1.5
TAM	Tamanrasset	150.21	301	ePKPbc	PKPbc	22 00 18.0	+0.6
TAM	Tamanrasset	150.21	301	ePKIKP	PKPbc	22 00 18.0	+0.6
TORD	Torodi Ar. Bea	156.38	282	PKP	PKPdf	22 00 20.3	-0.9
	comp=Z,0.7nm,1.0s,baz=53,slow=0.7,SNR=2.5						
TORD				PKPab	PKPab	22 00 50.9	+1.4
	comp=Z,1.7nm,1.1s,baz=77,slow=1.0,SNR=5.2						
TOA1	Torodi Ar. Sit	156.38	282	ePKPdf	PKPdf	22 00 20.3	-0.9
TOA1				ePKPab	PKPab	22 00 50.9	+1.4

*AZER **09** 21:40:41.9±0.4, 38°.99N×43°.07E, h10km, ml3.6/25, Error ellipse: s-maj=6.0km s-min=3.8km az=4.0*
*NSSP **09** 21:40:42.5, 38°.90N×43°.50E, h10km, Ms3.5*
*TEH **09** 21:40:44.8, 38°.91N×43°.55E, h8km, ML3.4*
*ISK **09** 21:40:44.3, 38°.91N×43°.56E, h5km, ML3.6/14*
*DDA **09** 21:40:45.1, 38°.90N×43°.55E, h10km±2km, ML3.5*
ISC 09 21:40:45.8±0.9, 38°.92N±0°.02×43°.51E±0°.02, h7km±6km, n107, σ1§58/142, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.08	37	i P	Pg	21 40 48.1	0.0
VMUR				i S	Sg	21 40 50.3	+0.7
VMUR	Van-Muradiye	0.08	37	ePg	Pg	21 40 47.5	-0.6
ERCV	ERCIS-VAN	0.16	307	PG	Pg	21 40 49.2	-0.1
ERCV				SG	Sg	21 40 53.2	+1.5
ERCV	ERCIS-VAN	0.16	307	ePg	Pg	21 40 50.0	+0.7
VANB	Van	0.34	196	PG	Pb	21 40 53.8	-0.4
VANB	Van	0.34	196	ePg	Pb	21 40 54.0	-0.2
CLDR	Caldiran	0.39	55	PG	Pg	21 40 52.7	-0.8
CLDR				SG	Sg	21 40 59.0	+0.4
CLDR	Caldiran	0.39	55	i P	Pg	21 40 53.4	-0.1
CLDR				IAML_P			
	comp=Z,68μm,0.2s						
CLDR	Caldiran	0.39	55	ePg	Pg	21 40 52.7	-0.8
TVAN	Van	0.40	191	i P	Pb	21 40 54.6	-0.8
TVAN				i S	Sb	21 41 02.0	+0.3
TVAN	Van	0.40	191	ePg	Pg	21 40 53.7	0.0
DYDN	Diyadin	0.64	13	i P	Pg	21 40 58.0	-0.2
DYDN				IAML_P			
	comp=Z,13μm,0.1s						
DYDN	Diyadin	0.64	13	ePg	Pg	21 40 57.5	-0.7
GEVA	Gevas	0.70	210	i P	Pg	21 40 59.0	-0.4
GEVA				i S	Sn	21 41 11.9	-1.6
GEVA				IAML_P			
	comp=Z,15μm,0.3s						
GEVA	Gevas	0.70	210	ePg	Pg	21 40 58.5	-0.9
AKDM	Akdamar-Van	0.72	215	PG	Pg	21 40 59.0	-0.7
AKDM				SG	Sb	21 41 11.2	+0.2
AKDM	Akdamar-Van	0.72	215	ePg	Pg	21 40 59.0	-0.7
TUTA	Tutak	0.72	312	i P	Pg	21 40 59.2	-0.5
TUTA	Tutak	0.72	312	ePg	Pg	21 40 59.1	-0.7
AGRB	Hanur-Agry	0.77	329	PG	Pg	21 41 00.2	-0.4
AGRB				SG	Sb	21 41 12.4	+0.1
AGRB	Hanur-Agry	0.77	329	ePg	Pg	21 41 00.2	-0.4
MLAZ	Malazgirt-MUS	0.78	287	PG	Pg	21 41 00.5	-0.3
MLAZ				SG	Sn	21 41 13.9	-1.4
MLAZ	Malazgirt-MUS	0.78	287	ePn	Pb	21 41 02.0	+0.2
BASK	Baskale_VAN	0.95	156	i P	Pg	21 41 03.2	-0.9
BASK				IAML_P			
	comp=Z,18μm,0.3s						
BASK	Baskale_VAN	0.95	156	ePn	Pg	21 41 03.1	-1.0
IGDI	IGDIR	1.04	25	i P	Pg	21 41 05.2	-0.7
IGDI				IAML_P			
	comp=Z,3μm,0.3s						
IGDI	IGDIR	1.04	25	ePn	Pg	21 41 05.0	-0.9
BLIS	Bitlis-Merkez	1.20	246	i P	Pb	21 41 08.0	-1.0
BLIS	Bitlis-Merkez	1.20	246	ePn	Pb	21 41 07.4	-1.6
TASB	TASBURUN-IGDIR	1.20	28	PN	Pb	21 41 07.7	-1.2
TASB	TASBURUN-IGDIR	1.20	28	ePn	Pg	21 41 09.3	+0.4
EATA	Eleskirt	1.23	320	i P	Pb	21 41 08.6	-0.9
EATA				i S	Sn	21 41 28.9	+2.3
EATA				IAML_P			
	comp=Z,5μm,0.4s						
EATA	Eleskirt	1.23	320	ePg	Pb	21 41 08.3	-1.2
HYR	Heyderabad	1.31	52	P	Pn	21 41 09.4	-1.2
	SNR=54						
HYR				S	Sg	21 41 31.4	+3.4
HAKT	HAKKARI	1.37	173	i P	Pn	21 41 10.6	-0.9
HAKT				IAML_P			
	comp=Z,3μm,0.3s						
HAKT	HAKKARI	1.37	173	ePg	Pn	21 41 10.3	-1.3
DIGO	Kars	1.50	356	i P	Pg	21 41 14.5	-0.1
DIGO				IAML_P			
	comp=Z,7μm,0.2s						
DIGO	Kars	1.50	356	ePn	Pg	21 41 14.2	-0.3
GNI	Garni	1.55	38	PN	Pb	21 41 14.3	-0.7
GNI	Garni	1.55	38	⇑i P	Pb	21 41 14.2	-0.7
GNI				⇑i S	Sg	21 41 36.1	+0.4
NAX	Nakhchivan	1.57	80	P	Pb	21 41 15.0	-0.2
	SNR=159						
NAX				S	Sg	21 41 39.4	+3.1
MUSM	Mu-Merkez	1.57	263	i P	Pn	21 41 14.2	0.0
MUSM				IAML_P			
	comp=Z,1μm,0.2s						
MUSM	Mu-Merkez	1.57	263	ePn	Pn	21 41 13.5	-0.7
VRTB	Varto-Mus	1.61	279	PN	Pg	21 41 16.5	-0.3
VRTB	Varto-Mus	1.61	279	i P	Pg	21 41 17.5	+0.7
VRTB				IAML_P			
	comp=Z,9μm,0.5s						
VRTB	Varto-Mus	1.61	279	ePn	Pg	21 41 17.0	+0.2
SBZ	Shahbuz	1.66	73	P	Pn	21 41 15.6	+0.1
	SNR=314						
SBZ				S	Sg	21 41 40.7	+1.5
SIRN	Sırnak	1.66	212	i P	Pb	21 41 17.0	+0.2
SIRN	Sırnak	1.66	212	ePn	Pb	21 41 17.0	+0.2
KOPR	Koprukoy-ERZUR	1.67	310	PN	Pb	21 41 16.9	0.0
HOMI	Horasan	1.67	313	i P	Pg	21 41 17.7	-0.2
HOMI				IAML_P			
	comp=Z,2μm,0.2s						
CUKT	Cukurca	1.67	177	PN	Pn	21 41 15.7	+0.1
CUKT	Cukurca	1.67	177	i P	Pb	21 41 16.1	-1.0
CUKT	Cukurca	1.67	177	ePn	Pb	21 41 16.0	-1.0
IMRD	Marand	1.73	96	ePg	Pn	21 41 16.6	+0.2
IMRD				IAMB	IAmb	21 41 50.3	
	comp=Z,8μm,0.5s						
KARS	Kars	1.73	349	PN	Pb	21 41 17.5	-0.6
KARS	Kars	1.73	349	ePn	Pb	21 41 18.0	-0.1
EAK	Akyaka	1.76	2	i P	Pg	21 41 20.6	+0.9
EAK				IAML_P			
	comp=Z,4μm,0.5s						
EAK	Akyaka	1.76	2	ePn	Pg	21 41 20.2	+0.5
ISHB	Shabestar	1.77	110	ePg	Pn	21 41 17.0	-0.1
ISHB				IAMB	IAmb	21 41 47.7	
	comp=Z,3μm,0.4s						
BNGL	BINGOL	1.84	272	i P	Pb	21 41 20.0	+0.1
BNGL	BINGOL	1.84	272	ePn	Pb	21 41 20.0	+0.1
SENK	Senkaya-Erzuru	1.86	332	PN	Pb	21 41 19.7	-0.6
SENK	Senkaya-Erzuru	1.86	332	ePn	Pg	21 41 21.4	-0.2
ORD	Ordubad	1.94	89	P	Pb	21 41 20.1	-1.4
	SNR=163						
ORD				S	Sg	21 41 48.9	+0.8
KARO	Karliova-Bingo	1.95	282	PN	Pb	21 41 20.4	-1.4
SVAN	Silvan-Diyarba	1.97	248	i P	Pb	21 41 21.6	-0.3
SVAN	Silvan-Diyarba	1.97	248	ePn	Pb	21 41 20.8	-1.2
AKDA	Akdag	2.04	306	i P	Pb	21 41 23.4	+0.2
BTMN	Batman	2.04	240	i P	Pb	21 41 22.9	-0.3
BTMN				i S	Sg	21 41 52.0	+0.8
ECAT	Cat-ERZURUM	2.08	290	i P	Pb	21 41 24.1	0.0
IAZR	Azarshahr	2.31	122	ePn	Pn	21 41 25.8	+1.3
IAZR				IAMB	IAmb	21 41 38.2	
	comp=Z,3μm,0.6s						
BGD	Bogdanovka	2.34	2	P	Pb	21 41 28.8	+0.3
KRIK	Erzurum-spir	2.44	306	i P	Pg	21 41 31.2	-1.4
AKH	Akhalkalaki	2.48	360	P	Pg	21 41 32.5	-1.0
AKH	Akhalkalaki	2.48	360	P	Pg	21 41 32.5	-1.0
KZRT	Kazreti	2.56	15	P	Pb	21 41 32.4	+0.4
QZX	Qazax, Azerbai	2.57	33	P	Pn	21 41 25.8	-2.0
	SNR=44						
QZX				S	Sn	21 41 59.7	+0.3
KOPT	Kop Dagi	2.57	296	i P	Pg	21 41 34.8	-0.4
MAHB	Mahabad	2.77	140	ePn	Pn	21 41 32.3	+1.6
GANJ	Ganja	2.77	51	P	Pn	21 41 29.7	-0.9
	SNR=20						
GANJ				S	Sb	21 42 06.7	-3.1
IHRS	Heris	2.83	101	ePn	Pn	21 41 32.4	+0.7
IHRS				IAMB	IAmb	21 41 43.2	
	comp=Z,1μm,0.6s						
BTNK	Botanikuri	2.93	19	P	Pb	21 41 36.1	-2.3
TBLG	Delisi	2.96	18	P	Pb	21 41 38.5	-0.4
BATM	Batumi	3.02	333	P	Pb	21 41 39.9	+0.1
BRDA	Brd	3.14	64	P	Pn	21 41 35.2	-0.4
	SNR=7.7						
BRDA				S	Sb	21 42 16.6	-3.7
MNGR	Mingechevir, A	3.32	55	P	Pn	21 41 37.3	-0.8
	SNR=5.5						
MNGR				S	Sn	21 42 20.4	+2.6
TKB	Tkibuli	3.45	354	P	Pg	21 41 49.5	-2.4
ZRD	Zardab	3.50	66	P	Pn	21 41 40.3	-0.3
ZRD				S	Sn	21 42 25.8	+3.6
ZKTA	Zakatala	3.61	40	P	Pn	21 41 40.7	-1.5
	SNR=11						
ZKTA				S	Sn	21 42 26.3	+1.3
SEKA	Sheki	3.64	50	P	Pn	21 41 42.3	-0.3
	SNR=20						
SEKA				S	Sn	21 42 29.3	+3.5
ONI	Oni	3.67	359	P	Pb	21 41 53.0	+2.1
LRK	Lerik	3.79	93	P	Pn	21 41 44.9	+0.2
	SNR=5.4						
LRK				S	Sb	21 42 34.0	-5.2
GLBA	Ciilabad	3.81	84	P	Pn	21 41 45.2	+0.2
	SNR=11						
GLBA				S	Sb	21 42 34.5	-5.3
KDMR	Kurdemir	3.89	67	P	Pn	21 41 45.6	-0.3
KDMR				S	Sn	21 42 35.6	+3.7
QBL	Gabala	3.89	57	P	Pn	21 41 45.3	-0.8
	SNR=16						
QBL				S	Sn	21 42 35.0	+2.9
SAAT	Saatly	3.92	75	P	Pn	21 41 45.9	-0.5
SAAT				S	Sn	21 42 35.8	+3.2
IML	Ismayilli	4.05	61	P	Pn	21 41 47.7	-0.6
	SNR=6.6						
IML				S	Sn	21 42 38.8	+2.8
ASTR	Astara	4.15	93	P	Pn	21 41 49.9	+0.4
	SNR=3.7						
ASTR				S	Sn	21 42 42.9	+4.7
XNQ	Khinaliq	4.21	56	P	Pn	21 41 49.6	-0.9
	SNR=9.0						
XNQ				S	Sn	21 42 42.3	+2.3
PQL	Pirkuli	4.33	63

DCPH	**Dipolog City**	**1.98**	**311**⇑	*e*P	Pg	22 10 44.6	+5.9
DCPH				*e*S	Sg	22 11 11.1	+6.7
IPIL	**Ipil**	**2.32**	**283**	*e*P	Pn	22 10 40.2	+0.2
IPIL				*e*S	Sn	22 11 10.8	+1.6
SNPH	**Sibulan**	**2.61**	**322**	*i* P	Pb	22 10 46.7	-1.6
MSLP	**Maasin**	**2.85**	**0**	*e*P	Pn	22 10 47.1	-0.1
MSLP				*e*S	Sb	22 11 26.1	-1.6
LLP	**Lapu-Lapu**	**3.16**	**344**	*e*P	Pn	22 10 52.9	+1.4
LLP				*e*S	Sn	22 11 31.1	+1.3
OCLP	**Ormoc**	**3.77**	**356**	*e*P	Pn	22 11 02.0	+2.0

MAN 09 22:12:17.0, 7°.24N×124°.78E, h24km, mb3.9, ML2.6, MS2.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.53**	**269**	⇓*i*P	Pn	22 12 29.0	0.0
CTBH				*i* S	Sn	22 12 37.8	+0.6
BUKP	**Musuan**	**0.70**	**24**	*e*P	Pb	22 12 29.8	-0.8
BUKP				*e*S	Sb	22 12 40.1	+0.2
SKMP	**Bagumbayan, Su**	**0.75**	**198**	*e*P	Pb	22 12 31.4	0.0
SKMP				*e*S	Sn	22 12 43.5	+0.9
CGP	**Cagayan de Oro**	**1.22**	**356**	*e*P	Pb	22 12 39.2	-0.1
CGP				*e*S	Sb	22 12 54.5	-0.1

*ISCJB **09** 22:22:53.1±1.8, 36°.26N±0°.04×142°.28E±0°.10, h13km±14km, mb3.5/2, Error ellipse: s-maj=13.1km s-min=7.5km az=3.0*
*IDC **09** 22:22:53.7±6.5, 36°.15N×142°.18E, h0km, mb3.7/2, mb1 3.5/3, mb1mx3.3/34, mbtmp3.5/3, ML2.3/1, Error ellipse: s-maj=132.0km s-min=56.7km az=166.0*
*JMA **09** 22:22:55.7±0.2, 36°.30N×142°.14E, h77km, M2.7*
ISC 09 22:22:52.4±2.3, 36°.21N±0°.06×142°.26E±0°.10, h2km±14km, n15, σ1§44/22, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.24**	**246**	P	**Pg**	**22 23 17.1**	**+1.0**
CHOJ				S	**Sn**	**22 23 32.9**	**-1.1**
JHYU	**Hitachinakayam**	**1.35**	**276**	P	**Pb**	**22 23 18.2**	**-0.3**
JHO	**Hitachi**	**1.42**	**287**	P	**Pn**	**22 23 18.5**	**-0.7**
JHO				S	**Sb**	**22 23 35.9**	**-2.2**
ONAJ	**Iwakimizuishiy**	**1.47**	**308**	P	**Pn**	**22 23 18.8**	**-1.2**
BSO1	**Boso 1**	**1.87**	**214**	P	**Pb**	**22 23 26.2**	**-0.7**
BSO1				S	**Sb**	**22 23 49.2**	**-1.3**
BSO3	**Boso 3**	**2.00**	**226**	P	**Pb**	**22 23 28.0**	**-1.3**
BSO3				*e*S	**Sb**	**22 23 52.0**	**-2.5**
JFT	**Otama**	**2.02**	**311**	P	**Pn**	**22 23 27.5**	**0.0**
JFT				*e*S	**Sn**	**22 23 51.4**	**-1.9**
JMM	**Marumori**	**2.03**	**325**	P	**Pn**	**22 23 26.2**	**-1.4**
JAG	**Ashikaga**	**2.27**	**276**	P	**Pn**	**22 23 30.8**	**-0.2**
JRY	**Ryogami san**	**2.72**	**267**	P	**Pn**	**22 23 37.4**	**+0.2**
JMK	**Ichinoseki**	**2.86**	**344**	P	**Pn**	**22 23 38.3**	**-0.7**
MJAR	**Matsushiro Arr**	**3.28**	**277**	Pn	**Pn**	**22 23 44.9**	**0.0**
	0.4nm,0.3s,baz=99,slow=7.1,SNR=15						
MJAR				Sn	**Sn**	**22 24 26.3**	**+1.8**
	0.1nm,0.3s,baz=95,slow=15,SNR=4.6						
MAT	**Matsushiro**	**3.28**	**277**	P	**Pn**	**22 23 46.2**	**+1.3**
MAT				S	**Sn**	**22 24 25.9**	**+1.4**
SONM	**Songino Array**	**28.81**	**305**	P	**P**	**22 28 52.6**	**+0.7**
	0.7nm,0.7s,baz=104,slow=9.4,SNR=3.4						
MKAR	**Makanchi Array**	**45.13**	**303**	P	**P**	**22 31 12.3**	**+2.0**
	0.5nm,0.6s,baz=92,slow=9.9,SNR=6.0						

*NNC **09** 23:29:43.0±0.3, 43°.02N×70°.15E, h0km, mb3.5, mpv2.9, Error ellipse: s-maj=3.7km s-min=1.2km az=144.0*
*KRNET **09** 23:29:43.5±0.1, 43°.03N×69°.99E, mb2.8*
*SOME **09** 23:29:43.1, 43°.03N×70°.13E, h0km*
ISC 09 23:29:39.2±2.2, 43°.21N±0°.07×70°.02E±0°.08, h11km±14km, n39, σ1§04/70, 31C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK08	**Karatay Array**	**0.36**	**108**	⇑P	**Pb**	**23 29 48.2**	**+0.6**
KK08				⇑S	**Sb**	**23 29 52.1**	**-1.1**
KK09	**Karatay Array**	**0.36**	**105**	⇑P	**Pb**	**23 29 48.4**	**+0.8**
KK09				⇑S	**Sb**	**23 29 52.6**	**-0.7**
KK03	**Karatay Array**	**0.37**	**107**	⇑P	**Pb**	**23 29 48.3**	**+0.5**
KK03				⇑S	**Sb**	**23 29 52.4**	**-1.2**
KK04	**Karatay Array**	**0.37**	**106**	⇑P	**Pb**	**23 29 48.4**	**+0.6**
KK04				⇑S	**Sb**	**23 29 52.6**	**-1.0**
KK01	**Karatay Array**	**0.37**	**107**	⇑P	**Pb**	**23 29 48.4**	**+0.6**
KK01				⇑S	**Sb**	**23 29 52.6**	**-1.1**
KK07	**Karatay Array**	**0.37**	**109**	⇑P	**Pb**	**23 29 48.2**	**+0.4**
KK07				⇑S	**Sb**	**23 29 52.3**	**-1.4**
KK02	**Karatay Array**	**0.38**	**107**	⇑P	**Pb**	**23 29 48.2**	**+0.4**
KK02				⇑S	**Sb**	**23 29 52.6**	**-1.2**
KK31	**Karatay Array**	**0.38**	**107**	⇑P	**Pb**	**23 29 48.5**	**+0.6**
	3.0nm,0.3s,baz=279,slow=6.0,SNR=174						
KK31				⇓S	**Sb**	**23 29 52.5**	**-1.3**
	12nm,0.3s,baz=314,slow=55,SNR=7.4						
KK05	**Karatay Array**	**0.38**	**105**	⇑P	**Pb**	**23 29 48.7**	**+0.7**
KK05				⇑S	**Sb**	**23 29 52.9**	**-0.9**
KK06	**Karatay Array**	**0.39**	**108**	⇑P	**Pb**	**23 29 48.5**	**+0.4**
KK06				⇑S	**Sg**	**23 29 52.4**	**+0.4**
IUG	**Iuzhnay**	**1.07**	**180**	P	**Pg**	**23 30 00.1**	**+0.4**
	2.4nm,0.3s						
IUG				S	**Sg**	**23 30 12.2**	**-1.3**
	46nm,0.4s						
IUG	**Iuzhnay**	**1.07**	**180**	*e*P	**Pg**	**23 30 00.1**	**+0.4**
	baz=78						
IUG				*e*S	**Sg**	**23 30 12.3**	**-1.3**
	baz=78						
IUG	**Iuzhnay**	**1.07**	**180**	*e*P	**Pg**	**23 30 00.1**	**+0.4**
	2.4nm,0.3s						
IUG				*e*S	**Sg**	**23 30 12.2**	**-1.3**
	46nm,0.4s						
ARK	**Arkit**	**2.02**	**134**	⇑*i*P	**Pg**	**23 30 19.4**	**+1.6**
	baz=29						
ARK				⇑*i*S	**Sg**	**23 30 45.2**	**+1.2**
	baz=29						
MRKS	**Merke**	**2.40**	**100**	Pg	**Pg**	**23 30 25.0**	**-0.1**
	3.9nm,0.2s						
MRKS				Lg	Lg	23 30 55.1	
	13nm,0.3s						
MRKS	**Merke**	**2.40**	**100**	*e*P	**Pg**	**23 30 25.0**	**-0.1**
	baz=96						
MRKS				*e*S	**Sg**	**23 30 55.1**	**-1.1**
	baz=96						
MRKS	**Merke**	**2.40**	**100**	*e*P	**Pg**	**23 30 25.0**	**-0.1**
	3.9nm,0.2s						
MRKS				*e*S	**Sg**	**23 30 55.1**	**-1.1**
	13nm,0.3s						
EKS2	**Erkin-Say**	**2.81**	**100**	⇓*i*P	**Pb**	**23 30 31.4**	**+1.9**
	baz=96						
EKS2				⇓*i*S	**Sb**	**23 31 06.0**	**+2.0**
	baz=96						
ARSB	**Arslanbob**	**2.90**	**130**	⇑*i*P	**Pb**	**23 30 31.8**	**+0.8**
	baz=26						
ARSB				⇑*i*S	**Sb**	**23 31 05.8**	**-0.7**
	baz=26						
AML	**Almayashu**	**2.92**	**111**	⇑*i*P	**Pb**	**23 30 33.0**	**+1.6**
	baz=7.0						
AML				⇑*i*S	**Sb**	**23 31 09.1**	**+1.8**
	baz=7.0						
USP	**Ospenovka**	**3.27**	**88**	⇓*i*P	**Pb**	**23 30 38.2**	**+0.9**
	baz=84						
USP				⇓*i*S	**Sb**	**23 31 17.1**	**-0.1**
	baz=84						
AAK	**Ala-Archa**	**3.33**	**98**	⇑Pg	**Pg**	**23 30 41.8**	**-1.2**
	1.4nm,0.4s						
AAK				⇑Lg	Lg	23 31 24.1	
	5.0nm,0.5s						
ARLS	**Aral**	**3.45**	**112**	⇑*e*P	**Pb**	**23 30 39.9**	**-0.6**
	baz=8.0						
ARLS				⇑*i*S	**Sb**	**23 31 20.9**	**-1.6**
	baz=8.0						
TKM2	**Tokmak 2**	**4.09**	**92**	⇑Pg	**Pg**	**23 30 56.1**	**-1.5**
	1.2nm,0.5s						
TKM2				⇑Lg	Lg	23 31 46.8	
	7.5nm,0.8s						
DGS	**Degeres**	**4.20**	**88**	Pg	**Pg**	**23 30 58.1**	**-1.5**
	4.0nm,0.6s						
DGS				Lg	Lg	23 31 51.9	
	8.5nm,0.4s						
DGS	**Degeres**	**4.20**	**88**	*e*P	**Pg**	**23 30 58.1**	**-1.5**
	baz=85						
DGS				*e*S	**Sg**	**23 31 51.8**	**-2.3**
	baz=85						
DGS	**Degeres**	**4.20**	**88**	*e*P	**Pg**	**23 30 58.1**	**-1.5**
	4.0nm,0.6s						
DGS				*e*S	**Sg**	**23 31 51.9**	**-2.3**
	8.5nm,0.4s						
KST	**Kastek**	**4.35**	**90**	Pg	**Pg**	**23 31 03.2**	**+0.7**
	2.2nm,0.3s						
KST				Lg	Lg	23 32 00.1	
	9.9nm,0.7s						
KST	**Kastek**	**4.35**	**90**	*e*P	**Pg**	**23 31 03.2**	**+0.7**
	baz=88						
KST				*e*S	**Sg**	**23 32 00.1**	**+1.2**
	baz=88						
KST	**Kastek**	**4.35**	**90**	*e*P	**Pg**	**23 31 03.2**	**+0.7**
	2.2nm,0.3s						
KST				*e*S	**Sg**	**23 32 00.1**	**+1.2**
	9.9nm,0.7s						
KUU	**Kurty**	**4.64**	**79**	Pg	**Pg**	**23 31 07.8**	**-0.2**
	1.0nm,0.3s						
KUU				Lg	Lg	23 32 08.5	
	4.8nm,0.5s						
KUU	**Kurty**	**4.64**	**79**	*e*P	**Pg**	**23 31 07.8**	**-0.2**
	baz=77						
KUU				*e*S	**Sg**	**23 32 08.5**	**+0.3**
	baz=77						
KUU	**Kurty**	**4.64**	**79**	*e*P	**Pg**	**23 31 07.8**	**-0.2**
	1.0nm,0.3s						
KUU				*e*S	**Sg**	**23 32 08.5**	**+0.3**
	4.8nm,0.5s						
KTBS	**Karatobe**	**4.87**	**82**	Pg	**Pg**	**23 31 12.2**	**-0.3**
	0.7nm,0.2s						
KTBS				Lg	Lg	23 32 15.6	
	7.0nm,0.4s						
KTBS	**Karatobe**	**4.87**	**82**	*e*P	**Pg**	**23 31 12.2**	**-0.3**
	baz=79						
KTBS				*e*S	**Sg**	**23 32 15.7**	**+0.1**
	baz=79						
KTBS	**Karatobe**	**4.87**	**82**	*e*P	**Pg**	**23 31 12.2**	**-0.3**
	0.7nm,0.2s						
KTBS				*e*S	**Sg**	**23 32 15.6**	**+0.1**
	7.0nm,0.4s						
CHKK	**Chushkaly**	**5.11**	**80**	Pg	**Pg**	**23 31 16.7**	**-0.2**
	0.4nm,0.2s						
CHKK				Lg	Lg	23 32 23.7	
	5.1nm,0.4s						
CHKK	**Chushkaly**	**5.11**	**80**	*e*P	**Pg**	**23 31 16.7**	**-0.2**
	baz=78						
CHKK				*e*S	**Sg**	**23 32 23.7**	**+0.7**
	baz=78						
CHKK	**Chushkaly**	**5.11**	**80**	*e*P	**Pg**	**23 31 16.7**	**-0.2**
	0.4nm,0.2s						
CHKK				*e*S	**Sg**	**23 32 23.6**	**+0.7**
	5.1nm,0.4s						

IDC 09 23:59:01.2±1.4, 31°.89N×104°.32E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.3/41, mbtmp3.5/5, ML3.7/1, Error ellipse: s-maj=77.0km s-min=22.9km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.23**	**201**	Pn	Pn	00 02 24.9	+0.8
	0.1nm,0.3s,baz=357,slow=17,SNR=2.8						
MKAR	**Makanchi Array**	**22.51**	**318**	P	P	00 04 01.1	-1.3
	0.8nm,0.6s,baz=136,slow=11,SNR=7.3						
KURBB	**Kurchatov Arra**	**26.73**	**322**	P	P	00 04 42.4	+0.2
	0.2nm,0.4s,baz=123,slow=9.8,SNR=5.4						
FINES	**FINESS Array B**	**57.02**	**326**	P	P	00 08 49.3	+0.8
	0.7nm,0.7s,baz=81,slow=8.7,SNR=4.9						
WRA	**Warramunga Arr**	**59.03**	**147**	P	P	00 09 02.7	-0.3
	0.8nm,0.8s,baz=331,slow=8.1,SNR=2.7						

IDC 10 00:09:26.3±11.0, 18°.17S×176°.50W, h0km, mb3.9/1, mb1 4.1/1, mb1mx3.5/28, mbtmp3.9/1, Error ellipse: s-maj=596.5km s-min=52.5km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.47**	**254**	P	P	00 17 55.5	-0.1
	0.8nm,0.4s,baz=89,slow=8.3,SNR=14						
BRTR	**Keskin Array B**	**146.24**	**316**	PKPbc	PKPdf	00 29 07.9	-0.3
	0.3nm,0.6s,baz=125,slow=2.7,SNR=2.9						
GERES	**GERESS Array B**	**148.30**	**347**	PKPbc	PKPbc	00 29 14.4	-0.2
	0.3nm,0.4s,baz=46,slow=2.8,SNR=4.3						

*IDC **10** 00:34:08.4±1.5, 39°.27S×177°.48E, h0km, mb4.5/3, mb1 4.5/5, mb1mx4.0/24, mbtmp4.4/5, ML4.0/2, MS3.5/1, Ms1 3.5/1, ms1mx2.9/18, Error ellipse: s-maj=40.8km s-min=17.6km az=88.0*
*ISCJB **10** 00:34:12.7±0.3, 39°.31S±0°.02×177°.53E±0°.04, h48km±3km, mb4.3/6, MS3.4/1, Error ellipse: s-maj=5.1km s-min=3.0km az=16.0*
*NEIC **10** 00:34:13.6±0.0, 39°.20S×177°.46E, h19km, mb4.3/4, ML4.5(WEL), After WEL.*
*WEL **10** 00:34:14.2±0.4, 39°.5±3°.×17°.7E±°, h22km±4km, M4.7/21, ML5.1/17, MLv4.7/21, Error ellipse: s-maj=0.0km s-min=0.0km az=163.0*
ISC 10 00:34:12.6±1.0, 39°.30S±0°.03×177°.46E±0°.03, h29km±7km, n160, σ1§44/175, mb4.2/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHHZ	**Waihua**	**0.28**	**322**	P	**Pb**	**00 34 19.6**	**-0.2**
WHHZ				S	**Sb**	**00 34 24.4**	**-0.1**
KNZ	**Kokohu**	**0.33**	**32**	P	**Pn**	**00 34 21.0**	**-0.4**
KNZ				S	**Sn**	**00 34 26.5**	**-0.6**
ARHZ	**Aropaoanui**	**0.36**	**276**	P	**Pn**	**00 34 22.3**	**+0.5**
ARHZ				S	**Sn**	**00 34 29.2**	**+1.2**
MHGZ	**Mahia Peninsul**	**0.38**	**67**	P	**Pn**	**00 34 23.5**	**+1.3**
MHGZ				S	**Sn**	**00 34 31.6**	**+3.1**
CKHZ	**Cape Kidnapper**	**0.46**	**219**	P	**Pn**	**00 34 26.1**	**+2.9**
CKHZ				S	**Sn**	**00 34 36.3**	**+5.8**
RAHZ	**Arahi**	**0.48**	**323**	P	**Pb**	**00 34 22.5**	**-0.2**
RAHZ				S	**Sb**	**00 34 29.6**	**0.0**
PRGZ	**Paritu Road**	**0.50**	**42**	P	**Pn**	**00 34 24.3**	**+0.4**
SNGZ	**Shannon Statio**	**0.53**	**350**	P	**Pb**	**00 34 23.2**	**-0.2**
SNGZ				S	**Sb**	**00 34 30.6**	**-0.2**
NMHZ	**Naumai**	**0.54**	**292**	P	**Pn**	**00 34 24.7**	**+0.3**
NMHZ				S	**Sn**	**00 34 33.3**	**+0.7**
MCHZ	**McNeill Hill**	**0.60**	**256**	P	**Pn**	**00 34 27.2**	**+2.0**
RIGZ	**Rimuhau**	**0.64**	**22**	P	**Pn**	**00 34 25.8**	**+0.1**
MTHZ	**Maungataniwha**	**0.65**	**313**	P	**Pb**	**00 34 25.3**	**-0.3**
MTHZ				S	**Sb**	**00 34 34.4**	**-0.1**
KAHZ	**Kahuranaki**	**0.67**	**222**	P	**Pn**	**00 34 28.9**	**+2.8**
BKZ	**Black Stump Fm**	**0.76**	**280**	*e*Pg	**Pn**	**00 34 28.2**	**+0.8**
BKZ	**Black Stump Fm**	**0.76**	**280**	P	**Pn**	**00 34 28.3**	**+0.8**
BKZ				S	**Sn**	**00 34 39.6**	**+1.7**
RTZ	**Ruatahuna**	**0.78**	**331**	P	**Pb**	**00 34 27.1**	**-0.6**
KWHZ	**Kaweka Forest**	**0.81**	**261**	P	**Pn**	**00 34 29.8**	**+1.7**
PXZ	**Pawanui**	**0.86**	**212**	P	**Pn**	**00 34 30.9**	**+2.2**
KRHZ	**Kereru**	**0.91**	**247**	P	**Pn**	**00 34 31.2**	**+1.8**
TKGZ	**Te Karaka**	**0.91**	**20**	P	**Pn**	**00 34 29.6**	**+0.2**
MRHZ	**Matea Rd**	**0.93**	**300**	P	**Pn**	**00 34 30.5**	**+0.7**
MWZ	**Matawai**	**0.97**	**3**	P	**Pb**	**00 34 29.9**	**-0.9**
MUGZ	**Murupara**	**0.98**	**327**	P	**Pb**	**00 34 30.4**	**-0.6**
CNGZ	**Carnagh Statio**	**1.00**	**36**	P	**Pn**	**00 34 31.2**	**+0.5**
URZ	**Urewera**	**1.07**	**345**	Pn	**Pn**	**00 34 30.9**	**-0.7**
	560nm,0.3s,baz=222,slow=6.9,SNR=1359						
URZ				Sn	**Sb**	**00 34 45.0**	**-1.2**
	1μm,0.3s,baz=74,slow=19,SNR=45						
URZ				LR	LR	00 34 47.3	
	comp=Z,420nm,20.6s,baz=22,slow=37						
WPHZ	**Waipukurau**	**1.09**	**225**	P	**Pb**	**00 34 34.3**	**+1.3**
BHHZ	**Black Hill Sta**	**1.09**	**260**	P	**Pb**	**00 34 33.7**	**+0.7**
HATZ	**Hinemaiaia**	**1.14**	**291**	P	**Pb**	**00 34 34.3**	**+0.6**
ALRZ	**Allen Road**	**1.14**	**310**	P	**Pb**	**00 34 33.5**	**-0.2**
PNHZ	**Pukenui**	**1.15**	**237**	P	**Pb**	**00 34 34.5**	**+0.6**
PRRZ	**Plateau Road**	**1.15**	**314**	P	**Pb**	**00 34 33.5**	**-0.4**
PRHZ	**Porangahau**	**1.15**	**213**	P	**Pb**	**00 34 34.7**	**+0.8**
TWGZ	**Tauwhareparae**	**1.20**	**20**	P	**Pn**	**00 34 33.6**	**+0.2**
RRRZ	**Republican Roa**	**1.21**	**322**	P	**Pn**	**00 34 34.2**	**+0.6**
WPRZ	**Whakapapatarin**	**1.27**	**307**	P	**Pb**	**00 34 35.7**	**-0.3**
RITZ	**Rihia Road**	**1.28**	**284**	P	**Pb**	**00 34 36.6**	**+0.5**
HRRZ	**Handcock Road**	**1.29**	**314**	P	**Pn**	**00 34 35.5**	**+0.8**
TARZ	**Mount Tarawera**	**1.30**	**325**	P	**Pn**	**00 34 35.4**	**+0.5**
EDRZ	**Edgecumbe**	**1.32**	**335**	P	**Pn**	**00 34 35.4**	**+0.3**
MOVZ	**Moawhango**	**1.32**	**265**	P	**Pb**	**00 34 37.4**	**+0.6**
WHTZ	**Whakaora**	**1.33**	**298**	P	**Pb**	**00 34 37.0**	**0.0**
RUGZ	**Raukumara Rang**	**1.34**	**8**	P	**Pn**	**00 34 35.3**	**-0.2**
HLRZ	**Highlands Stat**	**1.36**	**320**	P	**Pn**	**00 34 36.5**	**+0.9**
HSRZ	**Hossack Road**	**1.37**	**316**	P	**Pn**	**00 34 36.6**	**+0.9**
PUZ	**Puketiti**	**1.38**	**27**	P	**Pn**	**00 34 35.5**	**-0.4**
RATZ	**Rangitukua**	**1.38**	**288**	P	**Pb**	**00 34 37.6**	**-0.2**
TSZ	**Takapari Road**	**1.38**	**236**	P	**Pb**	**00 34 37.8**	**0.0**
ANWZ	**Angora Road**	**1.38**	**213**	P	**Pb**	**00 34 37.7**	**-0.1**
MKRZ	**Makatiti**	**1.39**	**326**	P	**Pb**	**00 34 37.8**	**-0.3**
TUVZ	**Tukino**	**1.40**	**271**	P	**Pb**	**00 34 38.9**	**+0.8**
KATZ	**Kakaramea**	**1.41**	**283**	P	**Pb**	**00 34 38.0**	**-0.3**
DVHZ	**Dannevirke**	**1.41**	**224**	P	**Pb**	**00 34 38.0**	**-0.3**
GRRZ	**Galatos Road**	**1.42**	**312**	P	**Pn**	**00 34 37.3**	**+0.9**
KRVZ	**Karewarewa**	**1.42**	**278**	P	**Pb**	**00 34 38.6**	**0.0**
NGZ	**Ngauruhoe**	**1.45**	**274**	P	**Pb**	**00 34 38.7**	**-0.2**
MARZ	**Manawahe**	**1.45**	**335**	P	**Pn**	**00 34 37.6**	**+0.8**
WHVZ	**Whangaehu Hut**	**1.45**	**270**	P	**Pb**	**00 34 39.4**	**+0.3**
WTVZ	**West Tongariro**	**1.46**	**277**	P	**Pb**	**00 34 39.2**	**0.0**
OMRZ	**Omania**	**1.46**	**324**	P	**Pn**	**00 34 37.3**	**+0.3**
WATZ	**Wairara**	**1.47**	**293**	P	**Pb**	**00 34 39.1**	**-0.2**
FWVZ	**Far West T-bar**	**1.48**	**271**	P	**Pb**	**00 34 39.2**	**-0.4**
TRVZ	**Turoa**	**1.48**	**269**	P	**Pb**	**00 34 39.4**	**-0.2**
WHRZ	**Whale Island**	**1.49**	**345**	P	**Pn**	**00 34 38.0**	**+0.6**
UTU	**Utuhina**	**1.49**	**318**	P	**Pn**	**00 34 38.6**	**+1.2**
KUTZ	**Kaahu Road**	**1.51**	**302**	P	**Pn**	**00 34 38.8**	**+1.1**
MTVZ	**Mangateitei**	**1.54**	**266**	P	**Pb**	**00 34 40.5**	**0.0**
LIRZ	**Lichensteins R**	**1.54**	**327**	P	**Pn**	**00 34 39.2**	**+1.0**
NGRZ	**Ngongotaha**	**1.55**	**320**	P	**Pn**	**00 34 39.7**	**+1.3**
HAZ	**Te Kaha**	**1.56**	**10**	P	**Pn**	**00 34 38.4**	**0.0**
TWVZ	**Taurewa**	**1.58**	**278**	P	**Pn**	**00 34 40.3**	**+1.5**
KARZ	**Kaharoa**	**1.59**	**323**	P	**Pn**	**00 34 38.9**	**+0.1**
OPRZ	**Ohinepanea**	**1.62**	**334**	P	**Pn**	**00 34 38.8**	**-0.3**
PKVZ	**Pokaka**	**1.64**	**270**	P	**Pb**	**00 34 41.8**	**-0.3**
BFZ	**Birch Farm**	**1.66**	**214**	*e*Pn	**Pn**	**00 34 40.9**	**+1.1**
BFZ	**Birch Farm**	**1.66**	**214**	P	**Pn**	**00 34 41.1**	**+1.3**
PRWZ	**Pori Road**	**1.69**	**222**	P	**Pn**	**00 34 42.1**	**+1.9**
POWZ	**Post Office Ro**	**1.69**	**229**	P	**Pn**	**00 34 42.3**	**+2.1**
WIZ	**White Island**	**1.78**	**353**	P	**Pn**	**00 34 41.3**	**-0.1**
TLZ	**Tolley Road**	**1.78**	**302**	P	**Pn**	**00 34 40.8**	**-0.6**
MXZ	**Matakaoa Point**	**1.86**	**21**	*e*Pn	**Pn**	**00 34 43.2**	**+0.8**
MXZ	**Matakaoa Point**	**1.86**	**21**	P	**Pn**	**00 34 43.5**	**+1.0**
CPWZ	**Castlepoint**	**1.87**	**210**	P	**Pb**	**00 34 45.3**	**-0.9**
KMRZ	**Kaimai**	**1.88**	**320**	P	**Pn**	**00 34 43.2**	**+0.5**
TIWZ	**Tintock**	**1.90**	**219**	P	**Pn**	**00 34 44.7**	**+1.5**
WAZ	**Wanganui**	**1.96**	**256**	P	**Pb**	**00 34 47.0**	**-0.7**
MRZ	**Mangatainoka R**	**1.98**	**226**	P	**Pn**	**00 34 45.2**	**+1.0**
VRZ	**Vera Road**	**2.10**	**274**	P	**Pb**	**00 34 48.5**	**-1.5**
TMWZ	**Te Maipa**	**2.17**	**213**	P	**Pn**	**00 34 47.5**	**+0.8**
HIZ	**Hauiti**	**2.17**	**290**	*e*Pn	**Pn**	**00 34 48.5**	**+1.7**
HIZ	**Hauiti**	**2.17**	**290**	P	**Pn**	**00 34 48.5**	**+1.7**
HOWZ	**Holdsworth Sta**	**2.18**	**222**	P	**Pn**	**00 34 47.8**	**+0.9**
OGWZ	**Otaki Gorge**	**2.32**	**228**	P	**Pn**	**00 34 50.1**	**+1.3**
MTW	**Mount Morrison**	**2.38**	**218**	P	**Pn**	**00 34 50.1**	**+0.4**
TRWZ	**Traveller**	**2.49**	**212**	P	**Pn**	**00 34 51.2**	**0.0**
KIW	**Kapiti Island**	**2.50**	**231**	P	**Pn**	**00 34 52.2**	**+0.9**
PREZ	**Palmer Road**	**2.56**	**268**	P	**Pb**	**00 34 55.6**	**-2.2**
CAW	**Cannon Point**	**2.57**	**225**	P	**Pn**	**00 34 53.0**	**+0.7**
PAWZ	**Paruwai Farm**	**2.59**	**216**	P	**Pn**	**00 34 53.0**	**+0.4**
KHEZ	**Kahui Hut**	**2.67**	**269**	P	**Pn**	**00 34 57.2**	**+3.5**
PKE	**Pukeiti**	**2.69**	**271**	P	**Pn**	**00 34 57.0**	**+3.0**
MSWZ	**Moikau Station**	**2.70**	**218**	P	**Pn**	**00 34 54.2**	**+0.1**
PLWZ	**Palliser**	**2.82**	**216**	P	**Pn**	**00 34 55.4**	**-0.3**
MKAZ	**Moumakai**	**2.84**	**320**	P	**Pn**	**00 34 58.3**	**+2.3**
BHW	**Baring Head**	**2.89**	**222**	P	**Pn**	**00 34 56.8**	**+0.3**
SNZO	**South Karori**	**2.91**	**225**	*e*Pn	**Pn**	**00 34 57.0**	**+0.2**
TCW	**Tory Channel**	**3.09**	**231**	P	**Pn**	**00 34 59.8**	**+0.4**
DUWZ	**D'Urville Isla**	**3.10**	**240**	P	**Pn**	**00 35 01.0**	**+1.4**
WIAZ	**Waiheke Island**	**3.10**	**323**	P	**Pn**	**00 35 01.1**	**+1.5**
MBAZ	**Motutapu North**	**3.23**	**321**	P	**Pn**	**00 35 03.0**	**+1.6**
TUWZ	**Tuamarina**	**3.42**	**230**	P	**Pn**	**00 35 03.9**	**-0.1**
CMWZ	**Cape Campbell**	**3.48**	**224**	P	**Pn**	**00 35 08.4**	**+3.7**
BSWZ	**Blackbirch Sta**	**3.64**	**227**	P	**Pn**	**00 35 06.9**	**0.0**
NNZ	**Nelson**	**3.66**	**237**	P	**Pn**	**00 35 08.4**	**+1.2**
QRZ	**Quartz Range**	**4.08**	**246**	P	**Pn**	**00 35 12.9**	**0.0**
WCZ	**Waipu Caves**	**4.17**	**323**	P	**Pn**	**00 35 15.8**	**+1.6**
**THZ

*UCR **10** 00:57:05.9±2.6, 8°.33N×82°.80W, h11km±7km, MD4.3, ML4.3, mb4.3(NEIC)*
*NEIC **10** 00:57:06.0±2.5, 8°.23N×82°.82W, h35km±3km, mb4.3/21, Error ellipse: s-maj=23.5km s-min=11.3km az=213.0*
NEIC Felt at Boquete, David and Puerto Armuelles, Panama.
*IDC **10** 00:57:06.3±2.3, 9°.29N×82°.42W, h0km, mb3.9/6, mb1 4.1/11, mb1mx3.8/39, mbtmp3.9/11, ML3.5/4, MS3.4/12, Ms1 3.4/12, ms1mx3.2/30, Error ellipse: s-maj=64.0km s-min=16.1km az=17.0*
ISC 10 00:57:05.9±1.2, 8°.33N±0°.07×82°.85W±0°.04, h29km±7km, n81, σ1=79/80, mb4.2/23, MS3.3/6, 6C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.40**	**75**	*i* P	**Pb**	**00 57 13.7**	**-1.1**
DVD				AMP		00 57 14.1	
	comp=Z,38μm,0.3s						
DVD				*i* S	**Sb**	**00 57 20.3**	**-0.5**
BRU2	**Volcan**	**0.48**	**18**	⇓*i*P	**Pb**	**00 57 15.5**	**-0.6**
BRU2				*e*S	**Sb**	**00 57 22.8**	**-0.4**
PTJ1	**Puerto Jimnez**	**0.49**	**294**	*e*P	**Pb**	**00 57 15.6**	**-0.6**
EDSV	**San Vito**	**0.50**	**346**	*e*P	**Pb**	**00 57 16.2**	**-0.2**
EDBA	**Buenos Aires**	**0.93**	**333**	⇑*i*P	**Pb**	**00 57 22.9**	**-0.5**
DRK0	**Durika**	**1.01**	**337**	*i* P	**Pn**	**00 57 23.8**	**-0.4**
DRK0				*i* S	**Sn**	**00 57 40.1**	**+2.7**
EDDO	**Dominical**	**1.36**	**312**	⇓*e*P	**Pn**	**00 57 29.1**	**+0.2**
CVTR	**Volcan Turrial**	**1.91**	**332**	⇑*e*P	**Pn**	**00 57 37.9**	**+1.1**
SJS	**Escuela Geolog**	**1.99**	**323**	*e*P	**Pb**	**00 57 41.9**	**+0.3**
HDC	**Heredia**	**2.08**	**323**	*e*Pn	**Pn**	**00 57 40.5**	**+1.6**
HDC				*e*Sn	**Sb**	**00 58 09.3**	**+0.8**
HDC	**Heredia**	**2.08**	**323**	⇓*e*P	**Pn**	**00 57 40.5**	**+1.6**
HDC				*i* S	**Sb**	**00 58 08.5**	**0.0**
SRA1	**San Ramn**	**2.38**	**317**	*e*P	**Pn**	**00 57 44.5**	**+1.5**
PNME	**Penonome**	**2.50**	**86**	*e*P	**Pn**	**00 57 44.2**	**-0.3**
AZU	**Azuero**	**2.60**	**102**	*e*P	**Pn**	**00 57 46.7**	**+0.7**
AZU	**Azuero**	**2.60**	**102**	*i* P	**Pn**	**00 57 46.7**	**+0.7**
AZU				*i* S	**Sn**	**00 58 18.8**	**+2.2**
FORC	**Fortuna**	**2.78**	**320**	*i* P	**Pn**	**00 57 51.2**	**+2.7**
CASO	**Castillo**	**2.80**	**318**	*i* P	**Pn**	**00 57 51.7**	**+3.0**
ARE1	**Arenal 1**	**2.81**	**319**	⇑*i*P	**Pn**	**00 57 51.8**	**+2.9**
JTS	**Las Juntas de**	**2.85**	**313**	Pn	**Pn**	**00 57 50.6**	**+1.2**
	comp=Z,28nm,0.3s,baz=335,slow=23,SNR=80						
JTS				Sn	**Sn**	**00 58 24.1**	**+1.3**
	comp=Z,100nm,0.3s,baz=84,slow=21,SNR=16						
JTS				Lg	Lg	00 58 32.1	
	comp=Z,66nm,0.3s,baz=18,slow=20,SNR=14						
JTS				LR	LR	00 59 11.9	
	comp=Z,963nm,19.1s,baz=190,slow=47						
JTS	**Las Juntas de**	**2.85**	**313**	*e*Pn	**Pn**	**00 57 50.9**	**+1.5**
JTS				*e*		00 57 51.0	
JTS				*e*		00 58 24.0	
JTS				*e*Sn	**Sn**	**00 58 24.4**	**+1.6**
ZANG	**Zanguenga, Cho**	**3.01**	**78**	*e*P	**Pn**	**00 57 52.0**	**+0.4**
BCIP	**Isla Barro Col**	**3.09**	**74**	*e*Pn	**Pn**	**00 57 53.1**	**+0.5**
BCIP				*e*Sn	**Sb**	**00 58 42.1**	**+4.8**
BCIP	**Isla Barro Col**	**3.09**	**74**	*e*P	**Pn**	**00 57 53.1**	**+0.5**
BCIP	**Isla Barro Col**	**3.09**	**74**	*i* P	**Pn**	**00 57 53.2**	**+0.5**
ACAL	**Aguas Claras**	**3.15**	**317**	*i* P	**Pn**	**00 57 56.4**	**+2.8**
FRIJ	**El Hiral**	**3.21**	**74**	*i* P	**Pn**	**00 57 55.6**	**+1.3**
CUI	**Cuipilapa**	**3.25**	**315**	*e*P	**Pn**	**00 57 57.6**	**+2.6**
MESS	**Mesas**	**3.33**	**316**	*e*P	**Pn**	**00 57 59.3**	**+3.2**
UPA	**Univ. de Panam**	**3.34**	**79**	*e*P	**Pn**	**00 57 58.2**	**+2.1**
UPA	**Univ. de Panam**	**3.34**	**79**	*e*P	**Pn**	**00 57 59.3**	**+3.2**
BUEV	**Buena Vista**	**3.52**	**314**	⇑*e*P	**Pn**	**00 58 01.9**	**+3.2**
GB1A	**Borinquen Arri**	**3.53**	**315**	*e*P	**Pn**	**00 58 01.8**	**+2.9**
ESPN	**Las Esperanzas**	**4.10**	**340**	*e*Pn	**Pn**	**00 58 07.6**	**+1.1**
ESPN				*e*Sn	**Sb**	**00 59 05.9**	**-0.5**
ESPN	**Las Esperanzas**	**4.10**	**340**	⇑*e*P	**Pn**	**00 58 07.8**	**+1.2**
ACON	**Acoyapa**	**4.28**	**328**	*e*Pn	**Pn**	**00 58 10.9**	**+1.8**
ACON	**Acoyapa**	**4.28**	**328**	⇑*i*P	**Pn**	**00 58 11.1**	**+2.0**
UPD2	**Meteti**	**4.78**	**87**	*e*P	**Pn**	**00 58 14.8**	**-1.2**
CNGN	**Cerro Negro**	**5.61**	**318**	*e*P	**Pn**	**00 58 30.1**	**+2.6**
ESTN	**Estel**	**5.87**	**324**	*e*Pn	**Pn**	**00 58 33.6**	**+2.6**
CSGN	**Cosiguina Volc**	**6.54**	**315**	*e*Pn	**Pn**	**00 58 44.1**	**+3.9**
TGUH	**Tegucigalpa,Un**	**7.16**	**323**	*e*Pn	Pn	00 58 53.3	+4.7
ROSC	**El Rosal**	**9.15**	**112**	Pn	**Pn**	**00 59 20.3**	**+3.9**
	comp=Z,1.5nm,0.3s,baz=270,slow=14,SNR=4.0						
ROSC	**El Rosal**	**9.15**	**112**	*e*Pn	**Pn**	**00 59 14.1**	**-2.3**
OTAV	**Otavalo**	**9.16**	**151**	*e*Pn	**Pn**	**00 59 17.4**	**+0.9**
APG	**El Apazote**	**9.98**	**312**	Pn	**Pn**	**00 59 27.4**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=116,slow=7.4,SNR=13						
APG				LR	LR	01 03 42.0	
	comp=Z,314nm,20.3s,baz=134,slow=41						
SDV	**Santo Domingo**	**12.09**	**86**	Pn	**Pn**	**00 59 55.2**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=231,slow=13,SNR=1.9						
SDV				LR	LR	01 05 23.0	
	comp=Z,303nm,20.6s,baz=258,slow=43						
CMIG	**Matias Romero**	**14.61**	**308**	Pn	**Pn**	**01 00 31.3**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=124,slow=12,SNR=3.4						
CMIG				LR	LR	01 06 34.4	
	comp=Z,194nm,18.3s,baz=128,slow=40						
ATAH	**Atahualpa**	**15.99**	**164**	LR	LR	01 06 25.7	
	comp=Z,151nm,19.3s,baz=1.1,slow=33						
SJG	**San Juan**	**18.92**	**57**	LR	LR	01 08 11.4	
	comp=Z,61nm,19.1s,baz=178,slow=37						
PTGA	**Pitinga**	**24.52**	**110**	LR	LR	01 12 32.0	
	comp=Z,83nm,19.1s,baz=292,slow=38						
LRAL	**Lakeview Retre**	**24.88**	**352**	*e*P	**P**	**01 02 26.4**	**+0.3**
	comp=Z,19nm,1.5s						
Z50A	**Ashland**	**24.96**	**354**	*e*P	**P**	**01 02 26.4**	**-0.5**
	comp=Z,8.9nm,1.2s						
Y52A	**Lilburn**	**25.43**	**358**	*e*P	**P**	**01 02 32.4**	**+1.2**
	comp=Z,9.7nm,1.1s						
WHAR	**Wooly Hollow**	**28.19**	**343**	*e*P	P	01 02 51.6	-4.3
	comp=Z,6.8nm,1.1s						
LPAZ	**La Paz**	**28.47**	**149**	LR	LR	01 16 11.8	
	comp=Z,68nm,18.2s,baz=309,slow=39						
TXAR	**Lajitas Array**	**28.62**	**320**	LR	LR	01 16 00.5	
	comp=Z,33nm,18.8s,baz=0.0,slow=40						
MDP	**Montagnes des**	**30.16**	**94**	LR	LR	01 15 54.0	
	comp=Z,189nm,18.7s,baz=250,slow=38						
CCM	**Cathedral Cave**	**30.55**	**347**	*e*P	**P**	**01 03 15.4**	**-1.5**
	comp=Z,3.5nm,0.8s						
PV13	**Radium Mtn., P**	**37.83**	**326**	*e*P	**P**	**01 04 20.9**	**+0.7**
	comp=Z,7.1nm,1.4s						
PV03	**Paradox Valley**	**37.91**	**326**	*e*P	**P**	**01 04 21.3**	**+0.4**
	comp=Z,2.0nm,1.0s						
PD31	**Pinedale Array**	**41.55**	**330**	*e*P	**P**	**01 04 51.8**	**+0.6**
	comp=Z,4.1nm,1.4s						
PDAR	**Pinedale Array**	**41.55**	**330**	P	**P**	**01 04 51.7**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=146,slow=11,SNR=5.1						
PDAR				LR	LR	01 24 37.4	
	comp=Z,36nm,18.1s,baz=129,slow=40						
R11A	**Troy Canyon, C**	**41.98**	**321**	*e*P	**P**	**01 04 54.9**	**+0.3**
	comp=Z,0.5nm,0.8s						
SPUT	**South Promonto**	**42.02**	**326**	*e*P	**P**	**01 04 53.6**	**-1.4**
	comp=Z,4.6nm,1.3s						
ISA	**Isabella, Lake**	**42.39**	**315**	*e*P	**P**	**01 04 58.6**	**+0.7**
	comp=Z,3.3nm,1.0s						
REDW	**Red Top Meadow**	**42.63**	**330**	*e*P	**P**	**01 05 01.1**	**+1.1**
	comp=Z,10nm,1.4s						
ULM	**Lac du Bonnet**	**43.17**	**348**	P	**P**	**01 05 01.9**	**-2.0**
	comp=Z,2.0nm,0.6s,baz=185,slow=6.9,SNR=3.1						
NV01	**Mina Array Sit**	**43.77**	**319**	*e*P	**P**	**01 05 11.1**	**+1.9**
NVAR	**Mina Array Bea**	**43.77**	**319**	P	**P**	**01 05 11.1**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=130,slow=6.0,SNR=5.6						
BMN	**Battle Mountai**	**44.24**	**322**	*e*P	**P**	**01 05 14.2**	**+1.3**
	comp=Z,3.0nm,0.8s						
BOZ	**Bozeman (W)**	**44.65**	**331**	*e*P	**P**	**01 05 16.5**	**+0.5**
	comp=Z,8.6nm,1.5s						
H04A	**Detroit Lake**	**49.70**	**324**	*e*P	**P**	**01 05 56.1**	**+0.8**
	comp=Z,9.9nm,0.9s						
YKA	**Yellowknife Ar**	**58.79**	**343**	P	**P**	**01 07 00.7**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=137,slow=7.2,SNR=4.3						
YKB5	**Yellowknife Ar**	**58.79**	**343**	*e*P	**P**	**01 07 00.7**	**-0.4**
RES	**Resolute Bay**	**66.67**	**357**	P	**P**	**01 07 52.0**	**-1.5**
	comp=Z,1.8nm,0.9s,baz=198,slow=7.6,SNR=7.2						
PCA	**Pinnacle**	**66.94**	**333**	*e*S	**S**	**01 16 46.3**	**-0.5**
SUMG	**Summit**	**69.49**	**13**	*e*P	P	01 08 06.8	-4.9
	comp=Z,8.7nm,1.3s						
ILAR	**Eielson Array**	**71.60**	**336**	P	**P**	**01 08 24.3**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=113,slow=4.5,SNR=8.1						
RND	**Reindeer**	**71.96**	**334**	*e*P	**P**	**01 08 22.9**	**-3.6**
	comp=Z,13nm,1.5s						
BWN	**Browne**	**72.46**	**335**	*e*P	P	01 08 20.1	-9.3
	comp=Z,43nm,0.9s						
NOA	**NORSAR Array B**	**84.74**	**29**	LR	LR	01 45 20.8	
	comp=Z,11nm,18.8s,baz=35,slow=35						

*NIED **10** 01:10:00.33°.30N×139°.50E, h5km, Mw4.3 Best double couple: M0=2.90000×10^15 NP1:φs=290.00000°, δ2.00000°, λ-113.00000°. NP2:φs=132.00000°, δ88.00000°, λ-89.00000°.*
*IDC **10** 01:10:54.5±0.5, 33°.18N×139°.69E, h0km, mb4.0/20, mb1 4.2/26, mb1mx4.1/43, mbtmp4.0/26, ML3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=16.1km s-min=5.3km az=41.0*
*ISCJB **10** 01:10:56.7±0.5, 33°.24N±0°.03×139°.48E±0°.04, h22km±3km, mb4.1/30, Error ellipse: s-maj=6.2km s-min=4.1km az=42.7*
*NEIC **10** 01:10:57.1±1.5, 33°.25N×139°.43E, h11km±4km, mb4.4/17, Error ellipse: s-maj=14.6km s-min=8.4km az=200.0*
NEIC Recorded [1 JMA] on Hachijo-jima.
*JMA **10** 01:10:57.1±0.1, 33°.27N×139°.47E, h15km±3km, M3.8*
JMA Felt I J1.
ISC 10 01:10:56.9±1.1, 33°.29N±0°.03×139°.48E±0°.04, h11km±7km, n84, σ1=49/90, mb4.1/30, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**0.31**	**124**	Pn	**Pg**	**01 11 03.7**	**+0.6**
	6μm,0.3s,baz=37,slow=2.7,SNR=38						
JHJ				Sn	**Sb**	**01 11 08.7**	**-0.6**
	5μm,0.3s,baz=0.0,slow=20,SNR=96						
JHJ2	**Mitsune**	**0.33**	**122**	*e*Pg	**Pb**	**01 11 04.3**	**-0.5**
JHJ2				*e*Sg	**Sg**	**01 11 08.1**	**0.0**
JHJ2	**Mitsune**	**0.33**	**122**	P	**Pg**	**01 11 03.9**	**+0.3**
JHJ2				*e*S	**Sb**	**01 11 09.0**	**-1.1**
JHCJ	**Hachijojimakas**	**0.34**	**129**	P	**Pg**	**01 11 04.0**	**+0.2**
JHCJ				*e*S	**Sg**	**01 11 08.9**	**+0.5**
JMKN	**Mikurajimanish**	**0.61**	**9**	P	**Pg**	**01 11 09.1**	**+0.4**
JMKN				S	**Sg**	**01 11 17.8**	**+1.1**
JAOM	**Aogashimamukai**	**0.86**	**164**	P	**Pg**	**01 11 13.1**	**-0.3**
JKO	**Kozu shima**	**0.94**	**342**	P	**Pg**	**01 11 14.8**	**-0.2**
JSKK	**Shikinejimakit**	**1.07**	**348**	P	**Pb**	**01 11 16.6**	**-0.7**
JIM2	**Oshima 3**	**1.43**	**358**	P	**Pn**	**01 11 22.2**	**-0.5**
JIZS	**Izushimoda**	**1.51**	**341**	P	**Pn**	**01 11 23.5**	**-0.3**
TK02	**Tokai 2**	**1.58**	**295**	P	**Pn**	**01 11 24.9**	**+0.3**
TK01	**Tokai 1**	**1.65**	**287**	P	**Pn**	**01 11 25.8**	**+0.4**
TK01				*e*S	**Sn**	**01 11 47.2**	**+0.8**
KTJ3	**Kamata3**	**1.68**	**348**	P	**Pn**	**01 11 26.2**	**+0.1**
TK04	**Tokai 4**	**1.73**	**310**	P	**Pn**	**01 11 27.1**	**+0.4**
BSO3	**Boso 3**	**1.73**	**29**	P	**Pn**	**01 11 26.3**	**-0.4**
BSO4	**Boso 4**	**1.84**	**23**	P	**Pn**	**01 11 28.3**	**0.0**
BSO1	**Boso 1**	**1.84**	**42**	P	**Pn**	**01 11 26.7**	**-1.2**
INU	**Inuyama**	**2.89**	**316**	*e*Pn	**Pn**	**01 11 43.4**	**+0.6**
INU				*e*Sn	**Sn**	**01 12 17.6**	**0.0**
MJAR	**Matsushiro Arr**	**3.41**	**343**	Pn	**Pn**	**01 11 50.3**	**+0.3**
	1.1nm,0.3s,baz=274,slow=8.1,SNR=25						
MJAR				Sn	**Sn**	**01 12 26.4**	**-4.0**
	0.4nm,0.3s,baz=166,slow=13,SNR=3.8						
MAJO	**Matsushiro**	**3.41**	**343**	*e*Pn	**Pn**	**01 11 53.6**	**+3.7**
MAJO				*e*Sn	**Sn**	**01 12 26.4**	**-4.0**
MAT	**Matsushiro**	**3.41**	**343**	P	**Pn**	**01 11 52.1**	**+2.1**
MAT				*e*S	**Sb**	**01 12 36.7**	**-2.0**
MJB9	**Matsu-Tunnel**	**3.41**	**342**	*e*Pn	**Pn**	**01 11 54.2**	**+4.2**
JNU	**Nakatsue**	**7.21**	**271**	Pn	**Pn**	**01 12 42.6**	**+0.4**
	2.1nm,0.3s,baz=115,slow=7.4,SNR=17						
JNU				Sn	**Sn**	**01 14 04.3**	**+0.2**
	0.2nm,0.3s,baz=179,slow=17,SNR=3.1						
JNU	**Nakatsue**	**7.21**	**271**	*e*Pn	**Pn**	**01 12 42.0**	**-0.2**
JNU				*e*Sn	**Sn**	**01 14 04.3**	**+0.2**
ERM	**Erimo**	**9.18**	**17**	*e*Pn	**Pn**	**01 13 10.6**	**+1.4**
KSRS	**Korea Array**	**10.31**	**297**	Pn	**Pn**	**01 13 25.0**	**+0.4**
	0.3nm,0.3s,baz=112,slow=14,SNR=3.7						
KSRS				LR	LR	01 17 08.1	
	comp=Z,126nm,19.6s,baz=148,slow=35						
KS15	**Wonju Array Si**	**10.33**	**297**	*e*Pn	**Pn**	**01 13 25.0**	**0.0**
ASAJ	**Asahikawa**	**11.08**	**12**	Pn	**Pn**	**01 13 33.4**	**-1.8**
	1.2nm,0.3s,baz=203,slow=7.7,SNR=3.8						
USRK	**Ussuriysk Ar.**	**12.36**	**334**	Pn	**Pn**	**01 13 52.3**	**-0.3**
	0.1nm,0.3s,baz=134,slow=12,SNR=2.1						
KLR	**Kul'dur**	**16.94**	**342**	Pn	**Pn**	**01 14 53.7**	**0.0**
	0.1nm,0.3s,baz=146,slow=11,SNR=4.3						
YULB	**Yu-li**	**18.77**	**243**	*e*P	**P**	**01 15 09.0**	**-7.1**
	9.8nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**27.91**	**112**	T	T	01 45 56.8	
	baz=305,slow=75,SNR=176						
H11N1	**WAKE ISLAND Hy**	**27.91**	**112**	T	T	01 45 55.4	
	baz=305,slow=75,SNR=178						
H11N3	**WAKE ISLAND Hy**	**27.92**	**112**	T	T	01 45 58.2	
	baz=305,slow=75,SNR=195						
H11S3	**WAKE ISLAND Hy**	**28.46**	**114**	T	T	01 46 38.4	
	baz=307,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy**	**28.46**	**114**	T	T	01 46 36.5	
	baz=307,slow=75,SNR=44						
H11S2	**WAKE ISLAND Hy**	**28.48**	**114**	T	T	01 46 37.6	
	baz=307,slow=75,SNR=32						
SONA0	**Songino Array**	**28.77**	**310**	*e*P	**P**	**01 16 54.3**	**-0.4**
SONM	**Songino Array**	**28.77**	**310**	P	**P**	**01 16 54.3**	**-0.4**
	1.1nm,0.7s,baz=116,slow=9.8,SNR=3.2						
TIXI	**Tiksi**	**38.84**	**355**	P	**P**	**01 18 21.0**	**-0.4**
	2.2nm,0.6s,baz=146,slow=7.5,SNR=4.3						
ZAA1	**Zalesovo Array**	**43.36**	**315**	*e*P	**P**	**01 18 59.4**	**+0.5**
ZALV	**Zalesovo Beam**	**43.36**	**315**	P	**P**	**01 18 59.4**	**+0.5**
	0.6nm,0.6s,baz=117,slow=8.8,SNR=2.9						
MK32	**Makanchi Array**	**44.86**	**305**	*e*P	**P**	**01 19 12.4**	**+1.2**
MKAR	**Makanchi Array**	**44.86**	**305**	P	**P**	**01 19 12.4**	**+1.2**
	0.4nm,0.6s,baz=85,slow=8.4,SNR=4.6						
KSH	**Kashi**	**50.56**	**296**	P	**P**	**01 19 59.9**	**+4.3**
MCK	**McKinley**	**52.63**	**32**	*e*P	**P**	**01 20 12.0**	**+1.4**
	4.4nm,0.8s						
RND	**Reindeer**	**52.67**	**32**	*e*P	**P**	**01 20 11.0**	**+0.1**
	4.6nm,0.9s						
CCB	**Clear Creek Bu**	**53.12**	**31**	*e*P	**P**	**01 20 16.4**	**+2.4**
	1.9nm,0.7s						
WR1	**Warramunga Arr**	**53.16**	**186**	*e*P	**P**	**01 20 13.1**	**-1.8**
WRA	**Warramunga Arr**	**53.16**	**186**	P	**P**	**01 20 13.1**	**-1.8**
	1.4nm,0.6s,baz=1.0,slow=7.0,SNR=7.8						
SCM	**Sheep Creek Mo**	**53.43**	**34**	*e*P	**P**	**01 20 16.1**	**-0.4**
	7.8nm,1.0s						
ILAR	**Eielson Array**	**53.51**	**31**	P	**P**	**01 20 17.2**	**+0.3**
	2.3nm,0.8s,baz=270,slow=5.7,SNR=27						
ILB	**Eielson Array**	**53.51**	**31**	*e*P	**P**	**01 20 16.0**	**-0.9**
	3.6nm,0.9s						
MENT	**Mentasta**	**55.02**	**33**	*e*P	**P**	**01 20 29.2**	**+1.2**
	3.7nm,0.8s						
AS31	**Alice Springs**	**56.89**	**186**	*e*P	**P**	**01 20 42.0**	**+0.3**
	1.0nm,0.4s						
ASAR	**Alice Springs**	**56.89**	**186**	P	**P**	**01 20 42.0**	**+0.3**
	0.9nm,0.6s,baz=16,slow=11,SNR=5.2						
EPYK	**Eagle Plains**	**57.56**	**28**	*e*P	**P**	**01 20 47.9**	**+1.7**
	11nm,0.7s						
HYT	**Haines Junctio**	**58.26**	**35**	*e*P	**P**	**01 20 53.6**	**+2.4**
	4.4nm,0.8s						
INK	**Inuvik**	**58.44**	**26**	P	**P**	**01 20 50.8**	**-1.3**
	2.8nm,0.8s,baz=262,slow=4.3,SNR=7.7						
INK	**Inuvik**	**58.44**	**26**	*e*P	**P**	**01 20 53.2**	**+1.0**
	4.0nm,0.9s						
DLBC	**Dease Lake**	**62.56**	**36**	P	**P**	**01 21 20.9**	**+0.3**
	1.4nm,0.6s,baz=27,slow=2.3,SNR=3.5						
DLBC	**Dease Lake**	**62.56**	**36**	*e*P	**P**	**01 21 20.9**	**+0.3**
	3.2nm,0.9s						
STKA	**Stephens Creek**	**64.85**	**178**	P	**P**	**01 21 35.8**	**0.0**
	2.0nm,0.7s,baz=122,slow=22,SNR=2.9						
STKA	**Stephens Creek**	**64.85**	**178**	*e*P	**P**	**01 21 35.8**	**0.0**
	0.3nm,0.8s						
RES	**Resolute Bay**	**66.61**	**14**	P	**P**	**01 21 47.0**	**+0.4**
	3.8nm,0.8s,baz=315,slow=7.2,SNR=10						
RES	**Resolute Bay**	**66.61**	**14**	*e*P	**P**	**01 21 47.0**	**+0.4**
	7.1nm,1.1s						
YKA	**Yellowknife Ar**	**67.84**	**29**	P	**P**	**01 21 54.9**	**+0.3**
	0.9nm,0.8s,baz=298,slow=6.4,SNR=4.0						
YKB5	**Yellowknife Ar**	**67.84**	**29**	*e*P	**P**	**01 21 54.9**	**+0.3**
FIA1	**FINESS Array S**	**71.38**	**332**	*e*P	**P**	**01 22 17.1**	**+0.6**
	9.0nm,1.1s						
FIA0	**FINESS Array S**	**71.38**	**332**	*e*P	**P**	**01 22 16.8**	**+0.2**
FINES	**FINESS Array B**	**71.38**	**332**	P	**P**	**01 22 16.8**	**+0.2**
	2.5nm,0.8s,baz=101,slow=6.0,SNR=9.5						
AKASG	**Malin Array Be**	**76.28**	**322**	P	**P**	**01 22 46.1**	**+0.6**
	0.3nm,0.4s,baz=53,slow=5.6,SNR=2.3						
AKBB	**Malin Array Si**	**76.28**	**322**	*e*P	**P**	**01 22 46.0**	**+0.6**
	1.3nm,0.8s						
NB2	**NORSAR Subarra**	**77.01**	**337**	P	**P**	**01 22 49.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**77.01**	**337**	P	**P**	**01 22 49.5**	**0.0**
	comp=Z,1.6nm,0.7s,baz=42,slow=5.7,SNR=10						
NV01	**Mina Array Sit**	**78.53**	**52**	*e*P	**P**	**01 22 59.1**	**+0.5**
NVAR	**Mina Array Bea**	**78.53**	**52**	P	**P**	**01 22 59.1**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=297,slow=6.0,SNR=5.1						
BR101	**Keskin Array S**	**80.13**	**311**	*e*P	**P**	**01 23 07.6**	**+0.4**
BRTR	**Keskin Array B**	**80.13**	**311**	P	**P**	**01 23 07.6**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=119,slow=8.4,SNR=4.1						
PD31	**Pinedale Array**	**81.44**	**44**	*e*P	**P**	**01 23 14.3**	**+0.1**
	comp=Z,0.9nm,0.9s						
PDAR	**Pinedale Array**	**81.44**	**44**	P	**P**	**01 23 14.3**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=321,slow=2.6,SNR=4.4						
GERES	**GERESS Array B**	**85.03**	**327**	P	**P**	**01 23 33.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=53,slow=3.8,SNR=3.6						
LTX	**Lajitas**	**93.68**	**51**	*e*P	**P**	**01 24 13.9**	**0.0**
TXAR	**Lajitas Array**	**93.68**	**51**	P	**P**	**01 24 13.9**	**0.0**
	comp=Z,1.2nm,0.8s,baz=306,slow=3.1,SNR=9.3						

IDC 10 01:15:42.3±0.8, 33°.14N×139°.77E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/30, mbtmp3.7/4, ML2.8/2, Error ellipse: s-maj=8.3km s-min=1.9km az=122.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**0.02**	**155**	Pn	Pg	01 15 50.4	+7.7
	544nm,0.3s,baz=303,slow=22,SNR=31						
JHJ				Sn	Sg	01 15 55.4	+13
	888nm,0.3s,baz=72,slow=20,SNR=34						
MJAR	**Matsushiro Arr**	**3.63**	**340**	Pn	Pn	01 16 38.6	-1.2
	0.1nm,0.3s,baz=162,slow=12,SNR=3.3						
JNU	**Nakatsue**	**7.46**	**272**	Pn	Pn	01 17 31.5	-0.9
	0.3nm,0.3s,baz=84,slow=9.2,SNR=3.9						
ILAR	**Eielson Array**	**53.51**	**31**	P	P	01 25 04.0	-0.2
	0.3nm,0.7s,baz=274,slow=6.2,SNR=4.3						
NOA	**NORSAR Array B**	**77.25**	**337**	P	P	01 27 38.1	+0.1
	0.6nm,0.8s,baz=42,slow=6.0,SNR=3.0						
TXAR	**Lajitas Array**	**93.58**	**51**	P	P	01 29 01.4	+0.7
	0.4nm,0.7s,baz=298,slow=1.9,SNR=3.4						

MAN 10 01:24:52.2, 12°.00N×126°.06E, h29km, mb4.1, ML2.9, MS2.5, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.73**	**237**	*e*P	Pb	01 25 06.2	-0.2
BESP				*e*S	Sn	01 25 17.9	+1.1
PLP	**Palo**	**1.35**	**232**	⇑*e*P	Pn	01 25 15.2	0.0
PLP				*e*S	Sn	01 25 32.9	+0.8
CNP	**Catarman**	**1.46**	**291**	*e*P	Pn	01 25 14.4	-2.2
CNP				*e*S	Sn	01 25 29.4	-5.4
OCLP	**Ormoc**	**1.71**	**237**	*e*P	Pb	01 25 22.0	-1.0
OCLP				*e*S	Sb	01 25 47.0	+2.9
MSLP	**Maasin**	**2.20**	**213**	*e*P	Pn	01 25 27.8	+1.0
MSLP				*e*S	Sn	01 25 53.9	+0.9
SCPH	**Surigao**	**2.27**	**194**	⇑*i*P	Sn	01 26 00.1	+5.2
SCPH				*i* S	Sb	01 26 07.5	+7.1
PVCP	**Virac**	**2.45**	**311**	*e*P	Pn	01 25 31.

BCK	**Bucak**	**3.74**	**49**	PN	**Pn**	**01 36 24.2**	**+1.3**
KHAL	**Karahalli**	**3.84**	**30**	*i* P	**Pn**	**01 36 24.6**	**+0.2**
KHAL				IAML_P			
	comp=Z,150nm,0.2s						
KEPZ	**Antalya-Kepez**	**4.13**	**62**	*i* P	**Pn**	**01 36 29.6**	**+1.3**

MEX 10 01:39:00.3±0.3, 18°.08N×101°.99W, h7km±7km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.69**	**133**	*i* P	Pg	01 39 12.4	-1.2
ZIIG				*i* S	Sg	01 39 21.7	-0.8
MMIG	**Aquila**	**1.30**	**279**	*i* P	Pn	01 39 21.2	-3.7
MMIG				*e*S	Sb	01 39 37.6	-4.6
ARIG	**Puente Sto Nin**	**1.57**	**83**	*e*P	Pn	01 39 25.1	-3.6
ARIG				*i* S	Sn	01 39 44.4	-5.0
MEIG	**Mezcala**	**2.26**	**94**	*e*P	Pn	01 39 33.2	-5.0
MEIG				*e*S	Sb	01 40 10.3	+0.6
PLIG	**Platanillo**	**2.38**	**82**	*e*P	Pn	01 39 39.0	-0.9
PLIG				*e*S	Sn	01 40 10.0	+0.5
TLIG	**Tlapa**	**3.30**	**98**	*e*S	Sn	01 40 32.1	-0.1

*SJA **10** 01:44:40.2±0.7, 21°.44S×68°.46W, h130km±14km, ML2.0, MW3.2*
*GUC **10** 01:44:41.7±0.6, 21°.47S×68°.53W, h136km±3km, ML3.1*
ISC 10 01:44:41.7±1.7, 21°.48S±0°.04×68°.53W±0°.06, h131km±15km, n24, σ0°.44/42, 9C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.74**	**244**	*i* P	**Pn**	**01 45 02.3**	**-0.4**
PB09	**IPOC Station P**	**0.74**	**244**	⇑*i* P	**Pn**	**01 45 02.8**	**+0.1**
PB09				*e*S	**Sn**	**01 45 18.9**	**+0.3**
PB09				IAML		01 45 21.4	
PB01	**IPOC Station P**	**0.99**	**296**	⇑*i* P	**Pn**	**01 45 04.5**	**-0.3**
PB01				*e*S	**Sn**	**01 45 21.8**	**-0.5**
PB01				IAML		01 45 23.3	
	comp=N,706nm,0.3s						
LVC	**Limon Verde**	**1.18**	**197**	⇓*i* P	**Pn**	**01 45 06.7**	**-0.3**
LVC				*i* S	**Sn**	**01 45 26.0**	**-0.1**
PB03	**IPOC Station P**	**1.27**	**243**	*i* P	**Pn**	**01 45 07.3**	**-0.4**
PB03				*i* S	**Sn**	**01 45 27.6**	**+0.3**
PB03	**IPOC Station P**	**1.27**	**243**	⇑*i* P	**Pn**	**01 45 07.6**	**-0.1**
PB03				*e*S	**Sn**	**01 45 27.2**	**-0.1**
PB03				IAML		01 45 29.1	
	comp=E,191nm,0.2s						
PB02	**IPOC Station P**	**1.28**	**277**	*i* P	**Pn**	**01 45 07.4**	**-0.3**
PB02				*i* S	**Sn**	**01 45 27.6**	**+0.2**
PB02	**IPOC Station P**	**1.28**	**277**	⇑*i* P	**Pn**	**01 45 07.7**	**0.0**
PB02				*e*S	**Sn**	**01 45 27.4**	**0.0**
PB02				IAML		01 45 29.3	
	comp=E,882nm,0.5s						
PB07	**IPOC Station P**	**1.29**	**259**	*i* P	**Pn**	**01 45 07.8**	**0.0**
PB07				*i* S	**Sn**	**01 45 28.2**	**+0.6**
PB07	**IPOC Station P**	**1.29**	**259**	⇑*i* P	**Pn**	**01 45 07.8**	**0.0**
PB07				*e*S	**Sn**	**01 45 27.7**	**+0.1**
PB07				IAML		01 45 28.8	
	comp=E,557nm,0.3s						
PB08	**IPOC Station P**	**1.45**	**336**	⇓*i* P	**Pn**	**01 45 10.2**	**+0.4**
PB08				*e*S	**Sn**	**01 45 31.8**	**+0.6**
PB08				IAML		01 45 34.9	
	comp=E,141nm,0.2s						
PB06	**IPOC Station P**	**1.56**	**218**	*i* P	**Pn**	**01 45 10.3**	**-0.5**
PB06	**IPOC Station P**	**1.56**	**218**	⇑*i* P	**Pn**	**01 45 10.8**	**0.0**
PB06				*e*S	**Sn**	**01 45 33.3**	**+0.4**
PB06				IAML		01 45 34.2	
	comp=E,158nm,0.3s						
PB04	**IPOC Station P**	**1.73**	**240**	*e*P	**Pn**	**01 45 12.5**	**-0.2**
PB04				*e*S	**Sn**	**01 45 36.5**	**0.0**
PB04				IAML		01 45 45.0	
	comp=N,129nm,0.1s						
GO01	**Chusmiza**	**1.90**	**341**	⇑*i* P	**Pn**	**01 45 15.4**	**+0.3**
GO01				*e*S	**Sn**	**01 45 41.1**	**+0.5**
PB15	**IPOC Station P**	**1.93**	**207**	*i* P	**Pn**	**01 45 15.6**	**+0.4**
PB15	**IPOC Station P**	**1.93**	**207**	⇑*i* P	**Pn**	**01 45 15.2**	**0.0**
PB15				*i* S	**Sn**	**01 45 41.6**	**+0.8**
PB11	**IPOC Station P**	**2.01**	**328**	*e*P	**Pn**	**01 45 15.7**	**-0.3**
PB11				*e*S	**Sn**	**01 45 42.2**	**-0.1**
PB11				IAML		01 45 43.8	
	comp=E,209nm,0.3s						
PB05	**IPOC Station P**	**2.07**	**228**	*e*P	**Pn**	**01 45 16.6**	**-0.1**
PB05				*e*S	**Sn**	**01 45 43.6**	**0.0**
PB05				IAML		01 45 50.1	
	comp=N,48nm,0.3s						
PSGC	**Pisagua**	**2.39**	**321**	⇑*i* P	**Pn**	**01 45 19.9**	**-0.9**
PSGC				*i* S	**Sn**	**01 45 49.5**	**-1.3**
MNMC	**Minye Minye**	**2.54**	**337**	*e*P	**Pn**	**01 45 23.0**	**+0.2**
MNMC				*i* S	**Sn**	**01 45 54.6**	**+0.3**
YJA	**Yavi**	**2.88**	**105**	*i* P	**Pn**	**01 45 26.5**	**-0.8**
YJA				IAML		01 45 33.4	
	comp=Z,2.1nm,0.5s						
PB16	**IPOC Station P**	**3.26**	**343**	*e*P	**Pn**	**01 45 33.0**	**+0.6**
HJA	**Humahuaca**	**3.36**	**121**	*i* P	**Pn**	**01 45 33.6**	**+0.1**
HJA				IAML		01 45 35.9	
	comp=Z,7.3nm,0.3s						

MEX 10 01:53:56.0±0.8, 17°.17N×99°.91W, h2km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.29**	**176**	*e*P	Pg	01 54 00.6	-1.1
ACP2				*e*S	Sg	01 54 06.0	+0.5
CAIG	**El Cayaco**	**0.36**	**251**	*e*P	Pg	01 54 02.4	-0.6
CAIG				*e*S	Sg	01 54 08.5	+0.8
MEIG	**Mezcala**	**0.80**	**20**	*e*P	Pg	01 54 10.1	-1.3
MEIG				*i* S	Sg	01 54 22.2	+0.4
ARIG	**Puente Sto Nin**	**1.18**	**339**	*e*P	Pg	01 54 15.7	-3.0
ARIG				*e*S	Sg	01 54 32.2	-1.8
PLIG	**Platanillo**	**1.28**	**18**	*e*P	Pg	01 54 17.8	-2.7
PLIG				*i* S	Sg	01 54 31.4	-5.7
TLIG	**Tlapa**	**1.34**	**73**	*e*P	Pg	01 54 16.3	-5.4
TLIG				*i* S	Sg	01 54 32.6	-6.5

*SOME **10** 02:16:44.5, 42°.03N×82°.00E, h10km*
*NNC **10** 02:16:45.0±3.6, 42°.14N×82°.11E, h0km, mb3.5, mpv3.1,*
Error ellipse: s-maj=32.1km s-min=22.0km az=10.0
ISC 10 02:16:44.2±2.4, 42°.06N±0°.10×81°.90E±0°.08, h10km, n20, σ1s75/34, 4C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.80**	**321**	Pg	**Pg**	**02 17 18.7**	**0.0**
	42nm,0.3s						
KTMS				Lg	Lg	02 17 44.1	
	70nm,0.3s						
KTMS	**Ketmen**	**1.80**	**321**	*e*P	**Pg**	**02 17 18.6**	**0.0**
	42nm,0.3s						
KTMS				*e*S	**Sg**	**02 17 42.8**	**+0.9**
	70nm,0.3s						
PDGK	**Podgornoye**	**2.19**	**306**	⇓Pn	**Pg**	**02 17 25.2**	**-0.9**
	3.8nm,0.4s						
PDGK				⇑Sn	**Sg**	**02 17 56.7**	**+2.4**
	66nm,0.7s						
UZB	**Uzynbulak**	**2.39**	**298**	Pg	**Pg**	**02 17 29.5**	**-0.4**
	4.9nm,0.2s						
UZB				Lg	Lg	02 18 01.9	
	31nm,0.4s						
UZB	**Uzynbulak**	**2.39**	**298**	*e*P	**Pg**	**02 17 29.5**	**-0.4**
	4.9nm,0.2s						
UZB				*e*S	**Sg**	**02 18 01.9**	**+1.0**
	31nm,0.4s						
DJR	**Jarkent**	**2.75**	**327**	*e*P	**Pg**	**02 17 35.8**	**-1.0**
	6.1nm,0.5s						
DJR				*e*S	**Sg**	**02 18 12.5**	**+0.1**
	11nm,0.4s						
KPKS	**Kokpek**	**2.75**	**302**	*e*P	**Pb**	**02 17 35.2**	**+1.7**
	10nm,0.2s						
KPKS				*e*S	**Sg**	**02 18 11.5**	**-1.2**
	66nm,0.5s						
KURS	**Kuram**	**3.10**	**299**	*e*P	**Pb**	**02 17 41.5**	**+2.1**
	2.3nm,0.5s						
KURS				*e*S	**Sg**	**02 18 22.3**	**-1.3**
	7.9nm,0.4s						
MNBS	**Baschi**	**3.26**	**309**	Pg	**Pb**	**02 17 44.5**	**+2.2**
	4.0nm,0.4s						
MNBS				Lg	Lg	02 18 28.2	
	15nm,0.4s						
MNBS	**Baschi**	**3.26**	**309**	*e*P	**Pb**	**02 17 44.5**	**+2.2**
	4.0nm,0.4s						
MNBS				*e*S	**Sg**	**02 18 28.1**	**-0.8**
	15nm,0.4s						
ARXS	**Arharly**	**3.68**	**307**	Pg	**Pg**	**02 17 52.6**	**-2.0**
	3.4nm,0.6s						
ARXS				Lg	Lg	02 18 41.6	
	15nm,0.5s						
ARXS	**Arharly**	**3.68**	**307**	*e*P	**Pg**	**02 17 52.6**	**-2.0**
	3.4nm,0.6s						
ARXS				*e*S	**Sg**	**02 18 41.6**	**-0.6**
	15nm,0.5s						
KAPS	**Kapalarasan**	**3.72**	**331**	*e*P	**Pg**	**02 17 52.6**	**-2.7**
	5.5nm,0.6s						
KAPS				*e*S	**Sg**	**02 18 41.3**	**-2.2**
	8.8nm,0.6s						
KOTS	**Kotyrbulak**	**3.72**	**290**	Pg	**Pb**	**02 17 52.9**	**+2.8**
	3.7nm,0.5s						
KOTS				Lg	Lg	02 18 41.9	
	24nm,0.5s						
KOTS	**Kotyrbulak**	**3.72**	**290**	*e*P	**Pb**	**02 17 52.9**	**+2.8**
	3.7nm,0.5s						
KOTS				*e*S	**Sg**	**02 18 41.9**	**-1.9**
	24nm,0.5s						
TNSS	**Tian-Shan**	**3.79**	**287**	*e*P	**Pg**	**02 17 54.8**	**-2.0**
	1.3nm,0.2s						
TNSS				*e*S	**Sg**	**02 18 45.1**	**-0.8**
	6.3nm,0.6s						
KTBS	**Karatobe**	**4.18**	**295**	Pg	**Pg**	**02 18 03.2**	**-0.9**
	1.5nm,0.4s						
KTBS				Lg	Lg	02 19 00.1	
	17nm,0.4s						
KTBS	**Karatobe**	**4.18**	**295**	*e*P	**Pg**	**02 18 01.3**	**-2.8**
	1.5nm,0.4s						
KTBS				*e*S	**Sg**	**02 18 56.4**	**-1.8**
	17nm,0.4s						
KST	**Kastek**	**4.50**	**285**	*e*P	**Pg**	**02 18 07.7**	**-2.6**
	1.7nm,0.4s						
KST				*e*S	**Sg**	**02 19 07.2**	**-1.3**
	5.7nm,0.5s						
MK31	**Makanchi Array**	**4.74**	**3**	⇑Pn	**Pn**	**02 17 56.0**	**+0.2**
	0.1nm,0.2s,baz=184,slow=12,SNR=11						
MK31				⇑Pg	**Pb**	**02 18 08.2**	**+0.8**
	1.0nm,0.5s,baz=178,slow=15,SNR=5.9						
MK31				⇑Lg	Lg	02 19 07.9	
	3.0nm,0.6s,baz=185,slow=28,SNR=2.6						

MAN 10 02:22:12.0, 16°.29N×120°.70E, h21km, mb4.2, ML3.0, MS2.6, Luzon

MAN 10 02:27:49.9, 10°.91N×124°.84E, h22km, mb4.1, ML2.9, MS2.5, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.27**	**301**	*e*P	Pn	02 27 58.0	-0.6
OCLP				*e*S	Sn	02 28 05.0	+1.0
PLP	**Palo**	**0.28**	**28**	⇓*e*P	Pn	02 27 57.8	-1.0
PLP				*e*S	Sn	02 28 04.1	-0.3
BESP	**Borongan**	**0.90**	**40**	*e*P	Pb	02 28 05.5	-1.3
BESP				*e*S	Sn	02 28 20.3	+0.7
CNP	**Catarman**	**1.60**	**354**	*e*P	Pb	02 28 19.6	+0.9

*ISCJB **10** 02:29:45.5±0.4, 35°.58S±0°.03×71°.30W±0°.06, h105km±2km, mb4.2/30, Error ellipse: s-maj=8.6km s-min=5.0km az=8.6*
*GUC **10** 02:29:46.1±0.5, 35°.56S×71°.58W, h114km±4km, ML4.1*
*NEIC **10** 02:29:46.0±0.0, 35°.56S×71°.58W, h114km, mb4.4/55, ML4.1(GUC), After GUC.*
NEIC Felt [III] at Cabrero, Colbun, Linares, Maule, Parral, Pelarco, Retiro, San Clemente, San Javier, Tome and Villa Alegre; [II] at Rio Claro and Talca.
*IDC **10** 02:29:47.1±2.2, 35°.59S×71°.18W, h100km±18km, mb3.8/8, mb1 3.9/12, mb1mx3.8/27, mbtmp4.1/12, MS3.0/4, Ms1 3.0/4, ms1mx2.8/25, Error ellipse: s-maj=25.0km s-min=12.7km az=94.0*
ISC 10 02:29:47.0±0.8, 35°.52S±0°.04×71°.46W±0°.08, h100km±7km, n355, σ1s16/360, mb4.3/30, 4C, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.64**	**323**	*e*Pn	**Pn**	**02 30 04.2**	**+0.3**
GO05	**Huala**	**0.64**	**323**	⇑*i* P	**Pn**	**02 30 04.2**	**+0.3**
GO05				*e*S	**Sn**	**02 30 17.6**	**+0.9**
GO05				IAML		02 30 21.4	
	comp=E,5μm,0.2s						
CCHI	**Chillan**	**1.19**	**205**	⇑*i* P	**Pn**	**02 30 08.6**	**-0.9**
CCHI				*e*S	**Sn**	**02 30 25.3**	**-1.2**
LMEL	**Las Melosas**	**1.97**	**32**	⇑*i* P	**Pn**	**02 30 19.9**	**+0.6**
LMEL				*e*S	**Sn**	**02 30 46.1**	**+2.2**
LMEL				IAML		02 30 49.1	
	comp=E,1μm,0.2s						
ANTU	**Antumapu**	**2.07**	**20**	*e*P	**Pn**	**02 30 21.2**	**+0.7**
ANTU				*e*S	**Sn**	**02 30 47.3**	**+1.3**
ANTU				IAML		02 30 49.6	
	comp=E,2μm,0.4s						
CLCH	**Cerro Calan**	**2.26**	**20**	*e*P	**Pn**	**02 30 23.2**	**+0.2**
CLCH				*e*S	**Sn**	**02 30 51.5**	**+0.9**
CLCH				IAML		02 30 53.0	
	comp=E,2μm,0.3s						
PEL	**Peldehue**	**2.46**	**15**	*e*Pn	**Pn**	**02 30 26.1**	**+0.5**
PEL				*e*Sn	Sn	02 30 48.3	-6.9
PEL	**Peldehue**	**2.46**	**15**	*e*P	**Pn**	**02 30 26.0**	**+0.4**
ROC1	**El Roble**	**2.57**	**8**	*e*Pn	**Pn**	**02 30 27.7**	**+0.5**
ROC1				*e*Sn	Sn	02 30 51.0	-7.1
ROCH	**El Roble**	**2.57**	**8**	*e*P	**Pn**	**02 30 27.6**	**+0.3**
CFA	**Coronel Fontan**	**4.75**	**35**	P	**Pn**	**02 30 54.8**	**-1.5**
	comp=E,5.6nm,0.3s,baz=210,slow=11,SNR=89						
CFA				S	**Sn**	**02 31 49.6**	**-0.6**
	comp=E,7.0nm,0.3s,baz=182,slow=17,SNR=5.9						
PLCA	**Paso Flores**	**5.25**	**172**	P	**Pn**	**02 31 00.8**	**-2.3**
	comp=E,3.7nm,0.3s,baz=3.7,slow=11,SNR=68						
PLCA				LR	LR	02 33 02.0	
	comp=E,130nm,20.5s,baz=26,slow=38						
PLCA	**Paso Flores**	**5.25**	**172**	*e*Pn	**Pn**	**02 31 01.0**	**-2.1**
PLCA				*e*Sn	**Sn**	**02 32 06.8**	**+4.4**
GO04	**Tololo Observa**	**5.37**	**6**	*e*Pn	**Pn**	**02 31 04.7**	**-0.2**
GO04				*e*Sn	**Sn**	**02 32 03.9**	**-1.6**
LCO	**Las Campanas**	**6.53**	**6**	*e*Pn	**Pn**	**02 31 20.1**	**-0.6**
LCO				*e*Sn	**Sn**	**02 32 28.8**	**-5.0**
TRQA	**Tornquist**	**8.02**	**111**	*e*Pn	Pn	02 31 37.9	-2.8
GO02	**Mina Guanaco**	**10.45**	**9**	*e*Pn	**Pn**	**02 32 15.5**	**+1.3**
LVC	**Limon Verde**	**13.06**	**10**	LR	LR	02 38 51.7	
	comp=E,55nm,18.9s,baz=196,slow=42						
CPUP	**Villa Florida**	**15.19**	**57**	LR	LR	02 38 57.8	
	comp=E,77nm,20.1s,baz=222,slow=37						
MNMC	**Minye Minye**	**16.41**	**6**	*e*Pn	**Pn**	**02 33 30.4**	**-1.3**
	comp=E,5.8nm,0.8s						
EFI	**East Falkland**	**18.79**	**153**	*e*P	**P**	**02 33 56.4**	**-1.8**
	comp=E,34nm,1.0s						
LPAZ	**La Paz**	**19.39**	**10**	P	**P**	**02 34 06.5**	**+0.8**
	comp=E,0.1nm,0.3s,baz=166,slow=9.2,SNR=5.6						
USHA	**Ushuaia**	**19.42**	**175**	P	**P**	**02 34 04.8**	**-0.3**
	comp=E,1.3nm,0.3s,baz=345,slow=7.9,SNR=12						
SIV	**San Ignacio**	**21.56**	**28**	P	**P**	**02 34 28.1**	**-0.3**
	comp=E,1.5nm,0.7s,baz=228,slow=9.1,SNR=10						
NNA	**Nana**	**23.93**	**347**	LR	LR	02 41 54.0	
	comp=E,60nm,21.7s,baz=182,slow=30						
BDFB	**Brasilia**	**28.84**	**53**	P	**P**	**02 35 34.4**	**-1.7**
	comp=E,1.0nm,0.4s,baz=236,slow=3.4,SNR=3.5						
VNA3	**Neumayer Olymp**	**47.77**	**157**	P	**P**	**02 38 14.3**	**+0.8**
VNA1	**Neumayer--Stat**	**48.09**	**156**	P	**P**	**02 38 16.4**	**+0.5**
VNA2	**Neumayer--Watz**	**48.43**	**157**	P	**P**	**02 38 19.4**	**+0.8**
	baz=288,slow=9.0						
SNAA	**Sanae**	**50.00**	**157**	P	**P**	**02 38 31.6**	**+0.9**
SNAA	**Sanae**	**50.00**	**157**	P	**P**	**02 38 30.5**	**-0.1**
	comp=E,4.7nm,0.7s,baz=287,slow=6.6,SNR=12						
SNAA	**Sanae**	**50.00**	**157**	*e*P	**P**	**02 38 28.8**	**-1.8**
	comp=E,8.0nm,1.0s						
059A	**Moore Haven**	**62.82**	**350**	P	**P**	**02 40 01.5**	**-0.4**
	baz=171						
058A	**Arcadia**	**63.01**	**350**	P	**P**	**02 40 02.5**	**-0.6**
	baz=171						
SYO	**Syowa Base**	**64.28**	**158**	⇑*e*P	**P**	**02 40 15.0**	**+4.0**
758A	**Lake Helen**	**64.80**	**351**	P	**P**	**02 40 13.5**	**-1.3**
	baz=171						
757A	**Oxford**	**64.90**	**350**	P	**P**	**02 40 15.4**	**-0.1**
	baz=171						
552A	**Lynn Haven**	**66.59**	**347**	P	**P**	**02 40 25.5**	**-0.8**
	baz=168						
356A	**Blackshear**	**67.25**	**350**	P	**P**	**02 40 29.2**	**-1.2**
	baz=171						
357A	**Townsend**	**67.26**	**351**	P	**P**	**02 40 30.0**	**-0.5**
	baz=171						
255A	**Hazlehurst**	**67.89**	**350**	P	**P**	**02 40 33.8**	**-0.7**
	baz=170						
251A	**Midway**	**68.52**	**347**	P	**P**	**02 40 39.2**	**+0.8**
	baz=168						
833A	**Chaparral WMA,**	**68.76**	**334**	P	**P**	**02 40 40.9**	**+0.9**
	baz=156						
151A	**Opelika**	**68.93**	**347**	P	**P**	**02 40 40.3**	**-0.7**
	baz=168						
152A	**Waverly Hall**	**68.97**	**348**	P	**P**	**02 40 40.8**	**-0.4**
	baz=169						
Z55A	**Blythe**	**69.11**	**350**	P	**P**	**02 40 42.3**	**+0.2**
	baz=171						
150A	**Eclectic**	**69.14**	**347**	P	**P**	**02 40 42.0**	**-0.3**
	baz=168						
149A	**Jones**	**69.27**	**346**	P	**P**	**02 40 42.8**	**-0.3**
	baz=167						
Z53A	**Monticello**	**69.38**	**349**	P	**P**	**02 40 43.3**	**-0.4**
	baz=170						
Z52A	**Williamson**	**69.42**	**348**	P	**P**	**02 40 43.5**	**-0.5**
	baz=169						
GOGA	**Godfrey**	**69.49**	**349**	P	**P**	**02 40 45.0**	**+0.6**
	baz=170						
147A	**Livingston**	**69.65**	**345**	P	**P**	**02 40 45.9**	**+0.6**
	baz=166						
Z51A	**Franklin**	**69.68**	**348**	P	**P**	**02 40 45.8**	**+0.2**
	baz=168						
LRAL	**Lakeview Retre**	**69.74**	**346**	P	**P**	**02 40 45.3**	**-0.6**
	baz=167						
Z50A	**Ashland**	**69.75**	**347**	*e*P	**P**	**02 40 45.1**	**-0.9**
	comp=E,5.5nm,0.8s						
Z50A	**Ashland**	**69.75**	**347**	P	**P**	**02 40 45.2**	**-0.9**
	baz=168						
Y55A	**Saluda**	**69.78**	**351**	P	**P**	**02 40 46.8**	**+0.6**
	baz=171						
Z49A	**Columbiana**	**69.80**	**347**	P	**P**	**02 40 45.8**	**-0.5**
	baz=167						
Y54A	**Tignall**	**69.82**	**350**	P	**P**	**02 40 45.8**	**-0.6**
	baz=170						
Y53A	**Monroe**	**69.94**	**349**	P	**P**	**02 40 47.1**	**-0.1**
	baz=170						
Y52A	**Lilburn**	**70.03**	**349**	P	**P**	**02 40 47.4**	**-0.3**
	baz=169						
X59A	**McDuffie Farm,**	**70.05**	**354**	P	**P**	**02 40 48.2**	**+0.4**
	baz=174						
Y51A	**Rockmart**	**70.23**	**348**	P	**P**	**02 40 48.8**	**-0.1**
	baz=168						
Y50A	**Piedmont**	**70.33**	**347**	P	**P**	**02 40 50.6**	**+1.0**
	baz=168						
Y49A	**Blount Mountai**	**70.42**	**347**	P	**P**	**02 40 51.3**	**+1.1**
	baz=167						
X54A	**Belton**	**70.45**	**350**	P	**P**	**02 40 49.9**	**-0.4**
	baz=171						
X53A	**Estanollee**	**70.54**	**350**	P	**P**	**02 40 50.5**	**-0.3**
	baz=170						
W58A	**Raeford**	**70.56**	**353**	P	**P**	**02 40 51.3**	**+0.4**
	baz=173						
Y48A	**Jasper**	**70.62**	**346**	P	**P**	**02 40 51.4**	**0.0**
	baz=167						
X52A	**Dahlonega**	**70.73**	**349**	P	**P**	**02 40 52.6**	**+0.6**
	baz=169						
W57A	**Gilead**	**70.76**	**353**	P	**P**	**02 40 52.1**	**0.0**
	baz=173						
W56A	**Indian Trail**	**70.81**	**352**	P	**P**	**02 40 53.2**	**+0.8**
	baz=172						
X51A	**Calhoun**	**70.84**	**348**	P	**P**	**02 40 52.9**	**+0.3**
	baz=169						
JCT	**Junction City**	**70.86**	**334**	P	**P**	**02 40 54.3**	**+1.4**
	baz=156,SNR=6.8						
X50B	**Fort Payne**	**70.88**	**348**	P	**P**	**02 40 53.1**	**+0.2**
	baz=168						
X48A	**Hartselle**	**71.12**	**346**	*e*P	**P**	**02 40 54.3**	**0.0**
	comp=E,10nm,1.0s						
X48A	**Hartselle**	**71.12**	**346**	P	**P**	**02 40 55.2**	**+0.9**
	baz=167,SNR=5.5						
V60A	**Jim Taylor Roa**	**71.13**	**355**	P	**P**	**02 40 54.1**	**-0.2**
	baz=175						
W53A	**Cullowhee**	**71.17**	**350**	P	**P**	**02 40 54.5**	**-0.2**
	baz=170						
W52A	**Murphy**	**71.21**	**349**	P	**P**	**02 40 55.8**	**+0.8**
	baz=169						
Z41A	**Richland Creek**	**71.28**	**341**	P	**P**	**02 40 55.6**	**+0.2**
	baz=162						
TXAR	**Lajitas Array**	**71.29**	**331**	P	**P**	**02 40 57.3**	**+1.6**
	comp=E,1.7nm,0.6s,baz=151,slow=8.1,SNR=18						
X47A	**Russelville**	**71.34**	**346**	P	**P**	**02 40 56.4**	**+0.7**
	baz=166,SNR=5.4						
W51A	**Cleveland**	**71.41**	**349**	P	**P**	**02 40 56.1**	**0.0**
	baz=169						
WHTX	**Lake Whitney,**	**71.46**	**337**	*e*P	**P**	**02 40 55.4**	**-1.1**
	comp=E,10nm,0.8s						
WHTX	**Lake Whitney,**	**71.46**	**337**	P	**P**	**02 40 56.7**	**+0.3**
	baz=158,SNR=5.4						
V56A	**Mocksville**	**71.47**	**352**	P	**P**	**02 40 57.2**	**+0.8**
	baz=172						
V57A	**Coltrane Farms**	**71.47**	**353**	P	**P**	**02 40 57.1**	**+0.7**
	baz=173						
W50A	**Signal Mountai**	**71.54**	**348**	*e*P	**P**	**02 40 55.7**	**-1.2**
	comp=E,9.4nm,0.8s						
W50A	**Signal Mountai**	**71.54**	**348**	P	**P**	**02 40 57.3**	**+0.4**
	baz=168						
V55A	**Taylorsville**	**71.59**	**352**	P	**P**	**02 40 57.2**	**0.0**
	baz=172						
V54A	**Nebo**	**71.61**	**351**	P	**P**	**02 40 56.8**	**-0.5**
	baz=171						
V53A	**Saluda**	**71.61**	**350**	P	**P**	**02 40 57.2**	**-0.2**
	baz=170						
W49A	**Belvidere**	**71.62**	**347**	P	**P**	**02 40 57.3**	**0.0**
	baz=168						
OXF	**Oxford**	**71.66**	**344**	P	**P**	**02 40 57.6**	**0.0**
	baz=165						
W48A	**Pulaski**	**71.77**	**347**	P	**P**	**02 40 58.0**	**-0.3**
	baz=167						
U58A	**Oxford**	**71.86**	**354**	P	**P**	**02 40 58.9**	**+0.2**
	baz=174						
V52A	**Sevierville**	**71.90**	**350**	P	**P**	**02 40 58.4**	**-0.6**
	baz=170						
V50A	**Pikeville**	**71.96**	**348**	P	**P**	**02 40 59.5**	**+0.1**
	baz=168						
U56A	**King**	**71.99**	**352**	P	**P**	**02 40 59.3**	**-0.2**
	baz=172						
W47A	**Westpoint**	**72.00**	**346**	P	**P**	**02 40 59.2**	**-0.4**
	baz=166						
V49A	**McMinnville**	**72.19**	**348**	P	**P**	**02 41 01.1**	**+0.4**
	baz=168,SNR=5.5						
U55A	**TA2, Sparta**	**72.21**	**352**	P	**P**

U48A	Cassie Pea, Po	73.03 347	P	P	02 41 05.0	-0.7
	baz=167					
T51A	Gray	73.05 350	P	P	02 41 06.2	+0.3
	baz=170					
T52A	Hallie	73.05 350	P	P	02 41 05.0	-0.8
	baz=170					
U47A	Clarksville	73.10 347	P	P	02 41 05.4	-0.7
	baz=167					
U46A	Springville	73.19 346	P	P	02 41 07.5	+0.9
	baz=166					
S56A	Natural Bridge	73.22 353	P	P	02 41 06.4	-0.4
	baz=173					
T50A	Nancy	73.24 349	P	P	02 41 06.4	-0.5
	baz=169					
S57A	Dark Hollow, R	73.25 354	P	P	02 41 05.8	-1.1
	baz=174					
R58B	Mineral	73.36 355	P	P	02 41 07.7	+0.2
	baz=175					
W39A	Magazine	73.38 341	P	P	02 41 08.7	+1.0
	baz=161,SNR=5.5					
S55A	Lewisburg	73.41 353	P	P	02 41 08.1	+0.2
	baz=172					
T49A	Edmonton	73.44 348	P	P	02 41 07.6	-0.5
	baz=168					
S54A	Dingess, Beckl	73.53 352	P	P	02 41 08.6	0.0
	baz=172					
T48A	Bowling Green	73.59 348	P	P	02 41 09.1	+0.2
	baz=168					
T47A	Sharon Grove	73.60 347	P	P	02 41 09.2	+0.2
	baz=167					
S52A	Salyersville	73.63 350	P	P	02 41 08.5	-0.7
	baz=170					
S51A	Beattyville	73.66 350	P	P	02 41 09.6	+0.2
	baz=170					
R58A	Rapidan	73.70 355	P	P	02 41 09.5	-0.1
	baz=175					
R57A	Stanardsville	73.74 354	P	P	02 41 10.6	+0.8
	baz=174					
T46A	Princeton	73.80 346	P	P	02 41 10.8	+0.7
	baz=166					
S50A	Richmond	73.82 349	P	P	02 41 10.7	+0.4
	baz=169					
R54A	Victor	73.87 352	P	P	02 41 10.8	+0.2
	baz=172					
S48A	Wiedeman Farm,	74.06 348	P	P	02 41 12.2	+0.5
	baz=168					
MNTX	Cornudas Mount	74.07 330	P	P	02 41 12.8	+0.9
	baz=152					
S47A	Hartford	74.14 347	P	P	02 41 12.5	+0.3
	baz=167					
R52A	Catlettsburg	74.22 351	P	P	02 41 13.0	+0.4
	baz=171					
U40A	Yellville	74.23 342	P	P	02 41 13.4	+0.7
	baz=162,SNR=5.5					
S46A	Don Dixon Farm	74.39 347	P	P	02 41 13.4	-0.2
	baz=166					
WMOK	Wichita Mounta	74.41 337	P	P	02 41 13.0	-0.8
	baz=157,SNR=5.4					
Q57A	Strasburg	74.47 354	P	P	02 41 14.3	+0.3
	baz=174					
Q55A	Buckhannon	74.58 353	P	P	02 41 15.1	+0.4
	baz=173					
TUL1	Leonard	74.60 340	P	P	02 41 14.5	-0.4
	baz=160					
Q54A	Coxs Mills	74.64 352	P	P	02 41 14.9	-0.1
	baz=172					
S44A	Carbondale	74.70 345	P	P	02 41 15.2	-0.2
	baz=165					
R47A	Wooly Knot Far	74.77 348	P	P	02 41 15.2	-0.6
	baz=168					
Q52A	Bidwell	74.79 351	P	P	02 41 16.3	+0.5
	baz=171					
P57A	Homestead Farm	74.88 355	P	P	02 41 17.3	+0.9
	baz=175					
P59A	Jarrettsville	74.90 356	P	P	02 41 17.5	+1.0
	baz=176					
Q51A	Peebles	74.99 350	P	P	02 41 17.4	+0.3
	baz=170					
MSTX	Muleshoe	75.08 333	P	P	02 41 18.8	+0.9
	baz=154					
Q49A	Aurora	75.19 349	P	P	02 41 18.5	+0.3
	baz=169					
P53A	Whipple	75.20 352	P	P	02 41 17.6	-0.6
	baz=172					
P54A	Burton	75.22 353	P	P	02 41 18.3	-0.1
	baz=172					
Q48A	North Vernon	75.25 349	P	P	02 41 18.7	+0.2
	baz=168					
P52A	Corning	75.43 352	P	P	02 41 19.8	+0.2
	baz=171					
CCM	Cathedral Cave	75.47 344	eP	P	02 41 19.2	-0.6
	comp=E,11nm,0.8s					
CCM	Cathedral Cave	75.47 344	P	P	02 41 20.6	+0.8
	baz=164					
AMTX	Amarillo	75.51 335	P	P	02 41 21.0	+0.8
	baz=155					
O60A	Telford	75.56 357	P	P	02 41 20.7	+0.5
	baz=177					
O57A	Amberson	75.58 355	P	P	02 41 21.1	+0.7
	baz=175					
P50A	Jamestown	75.62 350	P	P	02 41 20.3	-0.3
	baz=170					
Q45A	Warren Harvey,	75.64 347	P	P	02 41 20.6	-0.2
	baz=166					
P49A	Miami Univ. Ec	75.68 349	P	P	02 41 20.4	-0.6
	baz=169					
O55A	Ligonier	75.70 354	P	P	02 41 21.5	+0.4
	baz=174					
P48A	Milroy	75.72 349	P	P	02 41 21.3	+0.1
	baz=168					
O54A	Avella	75.78 353	P	P	02 41 20.6	-0.9
	baz=173					
121A	Cookes Peak, D	75.78 329	P	P	02 41 23.9	+1.9
	baz=150					
O52A	Adamsville	75.87 352	P	P	02 41 22.6	+0.5
	baz=171					
P47A	Martinsville	75.88 348	P	P	02 41 22.6	+0.5
	baz=168					
O53A	New Philadelph	75.94 352	P	P	02 41 21.4	-1.0
	baz=172					
O51A	Pataskala	76.00 351	P	P	02 41 23.2	+0.4
	baz=171					
ACSO	Alum Creek Sta	76.13 351	P	P	02 41 23.8	+0.3
	baz=170					
O50A	Cable	76.13 350	P	P	02 41 23.8	+0.3
	baz=170					
P46A	Rosedale	76.17 348	P	P	02 41 23.3	-0.4
	baz=167					
N59A	State Game Lan	76.17 357	P	P	02 41 24.8	+1.1
	baz=176					
N55A	Marion Center	76.25 354	P	P	02 41 24.8	+0.6
	baz=174					
O49A	Covington	76.27 350	P	P	02 41 24.2	-0.1
	baz=169					
N53A	Lisbon	76.45 353	P	P	02 41 25.7	+0.4
	baz=172					
O48A	Farmland	76.46 349	P	P	02 41 25.5	+0.1
	baz=169					
N54A	Moraine State	76.52 353	P	P	02 41 26.5	+0.8
	baz=173					
O47A	Sheridan	76.60 348	P	P	02 41 26.2	0.0
	baz=168					
P43A	Skaggs, Pawnee	76.63 346	P	P	02 41 27.1	+0.8
	baz=165					
N50A	Nevada	76.68 351	P	P	02 41 26.2	-0.4
	baz=170					
N51A	Ashland	76.73 352	P	P	02 41 26.6	-0.3
	baz=171					
O45A	Potomac	76.88 347	P	P	02 41 27.0	-0.7
	baz=167					
M56A	Emporium	76.88 355	P	P	02 41 28.0	+0.3
	baz=174					
SFIN	Lafayette	76.89 348	P	P	02 41 28.3	+0.5
	baz=167					
TUC	Tucson	76.90 327	P	P	02 41 29.8	+1.6
	baz=148					
M55A	Ridgway	76.91 354	P	P	02 41 28.0	+0.1
	baz=174					
O44A	Mansfield	76.92 347	P	P	02 41 27.8	-0.1
	baz=166					
N49A	Columbus Grove	76.97 350	P	P	02 41 28.3	+0.1
	baz=170					
N48A	Decatur	77.03 349	P	P	02 41 28.4	-0.2
	baz=169					
M54A	Oil Creek Stat	77.03 354	P	P	02 41 28.6	0.0
	baz=173					
M51A	Elyria	77.11 352	P	P	02 41 28.8	-0.2
	baz=171					
N47A	Urbana	77.15 349	P	P	02 41 29.3	0.0
	baz=168					
M52A	Chesterland	77.23 352	P	P	02 41 31.3	+1.6
	baz=172					
M50A	Fremont	77.29 351	P	P	02 41 30.9	+0.9
	baz=170					
ANMO	Albuquerque	77.34 331	eP	P	02 41 28.6	-2.2
	comp=E,4.9nm,1.1s					
ANMO	Albuquerque	77.34 331	P	P	02 41 31.7	+1.0
	baz=152					
TASM	ASL Pad, Albuq	77.34 331	P	P	02 41 32.0	+1.2
	baz=152					
TASM	ASL Pad, Albuq	77.34 331	P	P	02 41 32.3	+1.6
	baz=152					
BINY	Binghamton	77.46 357	P	P	02 41 30.7	-0.2
	baz=176					
HDIL	Hopedale	77.47 346	P	P	02 41 31.4	+0.4
	baz=165					
N44A	Piper City	77.48 347	P	P	02 41 30.9	-0.1
	baz=166					
M49A	Liberty Center	77.48 350	P	P	02 41 30.8	-0.3
	baz=170					
214A	Organ Pipe Nat	77.53 325	P	P	02 41 34.1	+2.5
	baz=147					
M48A	Edgerton	77.59 350	P	P	02 41 31.5	-0.2
	baz=169					
L55A	Hinsdale	77.60 355	P	P	02 41 32.1	+0.4
	baz=174					
L54A	Sinclairville	77.72 354	P	P	02 41 31.8	-0.6
	baz=174					
N41A	Harden Midland	77.93 345	P	P	02 41 34.1	+0.5
	baz=164					
M44A	Midewin, Midew	78.04 347	P	P	02 41 33.6	-0.6
	baz=166					
L47A	Sherwood	78.15 350	P	P	02 41 34.8	+0.1
	baz=169					
N40A	Mertquake, Sal	78.25 345	P	P	02 41 36.0	+0.6
	baz=164					
CBKS	Cedar Bluff	78.45 338	P	P	02 41 38.1	+1.5
	baz=157					
M41A	Milan	78.50 345	P	P	02 41 37.3	+0.6
	baz=164					
T25A	Trinidad	78.51 334	eP	P	02 41 35.7	-1.5
	comp=E,14nm,1.0s					
T25A	Trinidad	78.51 334	P	P	02 41 38.6	+1.5
	baz=153					
K50A	Casco	78.59 352	P	P	02 41 37.0	-0.2
	baz=171					
K47A	Vermontville	78.80 350	P	P	02 41 38.1	-0.3
	baz=169					
J52A	Paris	78.82 353	P	P	02 41 38.2	-0.2
	baz=173					
W18A	Petrified Fore	78.83 329	P	P	02 41 41.1	+2.2
	baz=149					
L43A	Garden Prairie	78.94 347	P	P	02 41 38.7	-0.4
	baz=166					
L42A	Oliver, Polo	78.94 346	P	P	02 41 39.5	+0.4
	baz=165					
BOSA	Boshof	78.95 117	P	P	02 41 38.6	-1.3
	comp=E,1.8nm,0.6s,baz=189,slow=3.6,SNR=5.2					
ACTO	Acton	79.15 354	P	P	02 41 40.5	+0.3
	baz=173					
PECO	Prince Edward	79.24 356	P	P	02 41 41.4	+0.7
	baz=176					
J48A	Bridge Port	79.25 351	P	P	02 41 40.5	-0.3
	baz=170					
L40A	Anamosa	79.31 345	P	P	02 41 40.5	-0.6
	baz=164					
WLVO	Wesleyville	79.33 355	P	P	02 41 41.1	0.0
	baz=174					
LBNH	Lisbon	79.39 360	P	P	02 41 42.2	+0.7
	baz=180					
PKRO	Pickering	79.42 354	P	P	02 41 41.7	+0.1
	baz=174					
I51A	Listowel	79.43 353	P	P	02 41 41.9	+0.1
	baz=172					
SDCO	Great Sand Dun	79.44 333	P	P	02 41 43.6	+1.2
	baz=152					
I55A	Frankford	79.57 355	P	P	02 41 42.9	+0.5
	baz=175					
K42A	Prairie Point,	79.62 347	P	P	02 41 42.6	-0.2
	baz=165					
IKP	In-Ko-Pah, Jac	79.69 323	P	P	02 41 46.0	+2.5
	baz=145					
LONY	Lake Ozonia	79.82 358	P	P	02 41 44.2	+0.4
	baz=178					
Y12C	Blythe	79.82 325	eP	P	02 41 41.8	-2.3
	comp=E,6.1nm,0.9s					
Y12C	Blythe	79.82 325	P	P	02 41 46.6	+2.5
	baz=146					
H56A	Elgin	79.86 357	P	P	02 41 44.6	+0.6
	baz=176					
DELO	Deloro Mine	79.86 356	P	P	02 41 44.8	+0.8
	baz=175					
H55A	Tweed	79.87 356	P	P	02 41 44.9	+0.9
	baz=175					
WUAZ	Wupatki	79.87 328	P	P	02 41 46.3	+1.7
	baz=148					
JFWS	Jewell Farm	79.93 346	P	P	02 41 45.1	+0.7
	baz=165					
S22A	4UR Ranch, Cre	79.94 332	P	P	02 41 46.7	+1.6
	baz=152					
MONP2	Monument Peak	80.04 323	P	P	02 41 47.9	+2.3
	baz=144					
J42A	Columbus	80.10 347	P	P	02 41 45.9	+0.5
	baz=166					
MVCO	Mesa Verde	80.12 331	eP	P	02 41 42.4	-3.6
	comp=E,5.2nm,1.0s					
MVCO	Mesa Verde	80.12 331	P	P	02 41 47.7	+1.8
	baz=150					
BC3	Big Chuckawall	80.19 324	P	P	02 41 48.9	+2.7
	baz=145					
PLVO	Plevna	80.35 356	P	P	02 41 47.3	+0.7
	baz=176					
BANO	Bancroft	80.38 355	P	P	02 41 47.4	+0.6
	baz=175					
IRM	Iron Mountain	80.45 324	P	P	02 41 49.0	+1.5
	baz=145					
G53A	Haliburton	80.53 355	P	P	02 41 48.2	+0.6
	baz=174					
G55A	Calabogie	80.54 356	P	P	02 41 48.2	+0.5
	baz=176					
I42A	Draeger Farm,	80.62 347	P	P	02 41 48.8	+0.6
	baz=166					
PFO	Pinyon Flats O	80.64 323	P	P	02 41 51.3	+2.6
	baz=144					
H46A	Fife Lake	80.66 350	P	P	02 41 48.4	0.0
	baz=169					
TOBO	Tobermory, Bru	80.89 353	P	P	02 41 49.7	+0.2
	baz=172					
KLBO	Killbear Provi	80.89 354	P	P	02 41 50.4	+0.8
	baz=173					
BUKO	Buck Lake	80.91 354	P	P	02 41 50.1	+0.4
	baz=174					
PEMO	Pembroke	81.00 356	P	P	02 41 49.7	-0.3
	baz=175					
PV13	Radium Mtn., P	81.07 331	eP	P	02 41 47.0	-4.0
	comp=E,5.5nm,1.0s					
SCI2	San Clemente I	81.17 321	P	P	02 41 52.2	+0.8
	baz=143					
GMRC	Granite Mounta	81.21 325	P	P	02 41 54.1	+2.4
	baz=145					
F52A	Sundridge	81.26 354	P	P	02 41 51.7	+0.3
	baz=174					
ISCO	Idaho Springs	81.30 334	P	P	02 41 53.2	+0.9
	baz=153					
ALGO	Algonquin Park	81.32 355	P	P	02 41 52.1	+0.3
	baz=175					
F51A	Arnstein	81.44 354	P	P	02 41 52.4	-0.1
	baz=173					
F49A	Sandfield	81.47 353	P	P	02 41 52.6	0.0
	baz=171					
HEC	Hector,Ludlow	81.57 324	P	P	02 41 55.3	+1.8
	baz=145					
F48A	Evansville	81.60 352	P	P	02 41 53.5	+0.2
	baz=171					
E53A	Dumoine, Ponti	81.72 356	P	P	02 41 54.9	+1.0
	baz=175					
BFSC	Mount Baldy Ra	81.73 323	P	P	02 41 56.7	+2.2
	baz=144					
E54A	Lac Daplat, Po	81.75 356	P	P	02 41 53.6	-0.5
	baz=175					
LCMT	Little Creek M	81.94 327	eP	P	02 41 51.7	-3.9
	comp=E,1.0nm,0.9s					
E50A	Wahnapitae	82.00 354	P	P	02 41 56.2	+0.8
	baz=172					
E51A	G1948 Merrick	82.00 354	P	P	02 41 56.1	+0.7
	baz=174					
ECSD	EROS Data Cent	82.14 342	P	P	02 41 56.6	+0.4
	baz=160					
GSC	Goldstone, Bar	82.17 324	P	P	02 41 56.0	-0.7
	baz=144					
G40A	Rib Lake	82.19 347	P	P	02 41 57.4	+1.0
	baz=165					
E48A	Lockeyer	82.20 353	P	P	02 41 56.4	0.0
	baz=171					
F44A	Big Bay de Noc	82.24 350	P	P	02 41 56.4	-0.2
	baz=168					
E47A	Iron Bridge	82.30 352	P	P	02 41 57.3	+0.4
	baz=170					
E46A	Sault Ste Mari	82.33 351	P	P	02 41 57.8	+0.6
	baz=170					
MTPU	Mount Pierson	82.35 329	eP	P	02 41 54.8	-3.1
	comp=E,2.6nm,0.8s					
D52A	ZEK Kipawa Sen	82.36 355	P	P	02 41 57.4	+0.2
	baz=174					
SHPR	Sheep Range	82.38 326	eP	P	02 41 55.9	-1.9
	comp=E,3.7nm,1.1s					
N23A	Red Feather La	82.39 334	eP	P	02 41 54.4	-3.5
	comp=E,5.0nm,1.1s					
N23A	Red Feather La	82.39 334	P	P	02 41 59.4	+1.5
	baz=152					
G39A	Holcombe	82.39 346	P	P	02 41 57.8	+0.3
	baz=164					
D53A	Lac Vacive, Po	82.42 356	P	P	02 41 58.2	+0.6
	baz=175					
D54A	Lac Fusel, La	82.43 356	P	P	02 41 58.3	+0.7
	baz=176					
E45A	Wooded Hills,	82.44 350	P	P	02 41 58.6	+1.0
	baz=169					
F41A	Three Lakes	82.44 348	P	P	02 41 57.6	-0.1
	baz=166					
O20A	White River Ci	82.56 332	P	P	02 41 59.2	+0.5
	baz=151					
D50A	G1974 Best Tow	82.66 354	P	P	02 41 59.1	+0.3
	baz=173					
SPMN	Marine on St.	82.66 345	P	P	02 41 58.7	-0.1
	baz=163					
Q16A	Castle Valley	82.67 330	eP	P	02 41 55.9	-3.4
	comp=E,4.9nm,0.9s					
E43A	Lone Tree Farm	82.72 349	P	P	02 41 59.8	+0.7
	baz=167					
MSU	Marysvale	82.74 329	eP	P	02 41 58.2	-1.5
F40A	Park Falls	82.80 347	P	P	02 42 00.2	+0.6
	baz=165					
D46A	Sault St. Mari	82.82 351	P	P	02 41 59.1	-0.5
	baz=170					
D48A	Paudash Townsh	82.85 353	P	P	02 42 00.1	+0.3
	baz=172					
D47A	Chapleau	82.87 352	P	P	02 42 00.2	+0.2
	baz=171					
D49A	Beulah Townshi	82.90 353	P	P	02 42 00.4	+0.3
	baz=172					
MPMC	Manual Prospec	83.11 324	P	P	02 42 03.4	+1.7
	baz=144					
F38A	Pierce - Schro	83.18 346	P	P	02 42 01.6	+0.1
	baz=164					
TPNV	Topopah Spring	83.25 325	P	P	02 42 04.3	+2.0
	baz=145					
ISA	Isabella, Lake	83.27 323	eP	P	02 42 00.9	-1.4
	comp=E,3.4nm,0.9s					
ISA	Isabella, Lake	83.27 323	P	P	02 42 04.6	+2.2
	baz=143					
PKM	Mcpherson Peak	83.32 322	P	P	02 42 04.0	+1.2
	baz=142					
PSUT	Pine Spring	83.48 328	eP	P	02 42 00.6	-2.9
	comp=E,5.4nm,1.0s					
D41A	Chassel	83.63 348	P	P	02 42 04.2	+0.4
	baz=166					
VES	Vestal, Richgr	83.71 323	P	P	02 42 06.2	+1.7
	baz=143					
E38A	The Farm, Brul	83.73 346	P	P	02 42 04.0	-0.4
	baz=164					
R11A	Troy Canyon, C	84.09 327	P	P	02 42 08.6	+2.0
	baz=145					
K22A	Casper	84.14 335	eP	P	02 42 02.7	-4.1
	comp=E,8.4nm,1.0s					
K22A	Casper	84.14 335	P	P	02 42 08.1	+1.3
	baz=152					
JLU	Jordanelle	84.21 331	eP	P	02 42 02.9	-4.4
	comp=E,3.2nm,0.8s					
TORD	Torodi Ar. Bea	84.29 70	P	P	02 42 06.4	-1.5
	comp=E,1.5nm,0.9s,baz=246,slow=4.7,SNR=4.9					
TOA1	Torodi Ar. Sit	84.29 70	eP	P	02 42 06.4	-1.5
LSQQ	Lebel-sur-Quev	84.35 356	P	P	02 42 07.6	+0.2
	baz=176					
DUG	Dugway, Tooele	84.42 329	eP	P	02 42 03.9	-4.3
	comp=E,1.5nm,0.8s					
DUG	Dugway, Tooele	84.42 329	P	P	02 42 09.3	+1.1
	baz=147					
RSSD	Black Hills	84.62 337	P	P	02 42 09.9	+0.7
	baz=154					
MATQ	Matagami	85.09 356	P	P	02 42 11.0	-0.1
	baz=175					
CHGQ	Chibougamau	85.10 358	P	P	02 42 11.0	-0.1
	baz=178					
BW06	Boulder Array	85.33 333	P	P	02 42 13.4	+0.6
	baz=150					
PDAR	Pinedale Array	85.33 333	P	P	02 42 13.0	+0.2
	comp=E,0.9nm,0.7s,baz=169,slow=5.1,SNR=8.7					
NVAR	Mina Array Bea	85.40 325	P	P	02 42 13.8	+0.5
	comp=E,1.5nm,0.8s,baz=152,slow=5.9,SNR=7.4					
KVN	Kaiserville	85.81 325	eP	P	02 42 11.6	-3.6
	comp=E,4.1nm,1.1s					
LAO	LASA Array	87.61 337	P	P	02 42 24.4	+0.8
	baz=152					
HLID	Hailey	87.89 330	P	P	02 42 26.4	+1.2
	baz=146					
BOZ	Bozeman (W)	88.53 333	P	P	02 42 27.8	-0.2
	baz=148					
TOLK	Toolik Lake Re	118.47 336	P	PKPdf	02 48 21.1	-0.7
	baz=115					
AAK	Ala-Archa	152.77 65	PKPbc	PKPbc	02 49 31.0	-1.1
	comp=E,2.7nm,0.5s,baz=222,slow=2.4,SNR=6.9					
MK32	Makanchi Array	157.36 52	ePKPab	PKPab	02 50 02.2	-0.5
MKAR	Makanchi Array	157.36 52	PKPab	PKPab	02 50 02.2	-0.5
	comp=E,0.3nm,0.5s,baz=251,slow=4.4,SNR=4.0					
SONA0	Songino Array	167.60 7	ePKPab	PKPab	02 50 48.4	+0.9
SONM	Songino Array	167.60 7	PKPab	PKPab	02 50 48.4	+0.9
	comp=E,0.3nm,0.4s,baz=347,slow=5.9,SNR=3.5					

TAP **10** *02:51:34.9,24.°06N×122.°68E,h37km,ML3.5,D*
JMA **10** *02:51:34.8±0.1,24.°05N×122.°62E,h23km±3km,M2.8*
ISCJB **10** *02:51:35.1±0.4,24.°03N±0.°02×122.°64E±0.°02,h30km±3km,*
Error ellipse: s-maj=3.8km s-min=2.4km az=163.6
ISC 10 02:51:34.8±1.1,24.°04N±0.°03×122.°64E±0.°02,h26km±12km,
n73,g0966/114,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.50	34	P		Pb	02 51 44.7	-0.3
JYNG				S		Sb	02 51 51.8	-0.1
YOJ	Yonaguni jima	0.54	38	P		Pb	02 51 45.5	-0.2
	baz=42							
YOJ				S		Sn	02 51 53.6	-1.4
	baz=42							
YOJ	Yonaguni jima	0.54	38	P		Pb	02 51 45.5	-0.2
YOJ				S		Sb	02 51 53.1	-0.1
EOS1	EOS1	0.69	318	P		Pb	02 51 48.5	+0.3
	baz=314							
EOS1				eS		Sn	02 51 59.0	+0.2
	baz=314							
NANB	Nanao	0.90	296	eP		Pn	02 51 51.6	-0.2
	baz=293							
NANB				eS		Sn	02 52 04.2	+0.2
	baz=293							
ENA	Nanau	0.91	296	P		Pn	02 51 51.7	-0.2
	baz=293							
ENA				eS		Sn	02 52 04.6	+0.4
	baz=293							
TWC	Suao	0.92	308	P		Pn	02 51 51.5	-0.5
	baz=306							
TWC				S		Sn	02 52 04.3	-0.1
	baz=306							
TWD	Chiawan	0.96	273	eP		Pn	02 51 52.4	-0.1
	baz=271							
TWD				eS		Sb	02 52 05.1	+0.1
	baz=271							
ENLB	Shoufeng	0.96	262	eP		Pn	02 51 52.0	-0.6
	baz=249							
ENLB				eS		Sb	02 52 05.8	+0.7
	baz=249							
NACB	Ninganchiao	0.97	278	eP		Pn	02 51 52.1	-0.5
	baz=263							

NACB				eS	Sn	02 52 06.0	+0.4
	baz=263							
IRIF	Iriomote-Funau	1.04	73	P	Pb	02 51 54.2	+0.1
IRIF				S	Sn	02 52 07.9	+0.7
HATJ	Hateruma jima	1.06	89	P	Pb	02 51 54.9	+0.4
HATJ				eS	Sb	02 52 08.6	+0.6
ETLH	Xiulin Townshi	1.07	279	eP	Pn	02 51 54.0	-0.2
	baz=277							
ILA	Ilan	1.09	312	eP	Pb	02 51 55.1	+0.1
	baz=309							
NTC	Toucheng	1.10	318	eP	Pn	02 51 54.3	-0.2
	baz=329							
NTC				eS	Sb	02 52 09.8	+0.7
	baz=329							
TWE	Neicheng	1.12	308	eP	Pn	02 51 55.1	+0.3
	baz=305							
ESL	Shilin	1.13	259	eP	Pn	02 51 54.9	0.0
	baz=249							
ESL				eS	Sn	02 52 09.1	-0.4
	baz=249							
TWB1	Santiao Chiao	1.14	329	eP	Pn	02 51 54.4	-0.6
	baz=335							
TWB1				eS	Sb	02 52 09.8	-0.3
	baz=335							
ENTT	Nioudou	1.15	302	eP	Pn	02 51 55.8	+0.6
	baz=299							
SLBB	Yuanshan	1.16	308	eP	Pb	02 51 56.3	0.0
	baz=305							
EGFH	Guangfu	1.17	252	eS	Sn	02 52 11.1	+0.5
	baz=251							
NDT	Datong Townshi	1.18	299	eP	Pb	02 51 56.3	-0.2
	baz=285							
NDT				eS	Sn	02 52 11.1	+0.4
	baz=285							
TIPB	Shuangxi	1.19	322	P	Pn	02 51 55.6	-0.2
	baz=332							
TIPB				S	Sb	02 52 11.5	-0.3
	baz=332							
NNSB	Datong	1.22	289	eP	Pn	02 51 56.4	+0.2
	baz=287							
NNSB				eS	Sn	02 52 11.8	-0.1
	baz=287							
NNS	Nan Shan	1.23	289	eP	Pn	02 51 56.7	+0.4
	baz=287							
NNS				eS	Sn	02 52 12.4	+0.3
	baz=287							
HGSD	Ruisui	1.24	244	eP	Pn	02 51 56.0	-0.4
	baz=243							
HGSD				eS	Sn	02 52 11.4	-0.9
	baz=243							
JKRS	Kuro-shima	1.26	81	P	Pb	02 51 58.0	+0.1
JKRS				eS	Sb	02 52 14.7	+0.9
WHF	Hehuan Shan	1.26	275	eP	Pn	02 51 57.1	0.0
	baz=273							
NWLT	Wulai	1.27	306	eP	Pn	02 51 57.5	+0.6
	baz=316							
NWF	Wu-fen Shan	1.29	323	eP	Pn	02 51 57.0	-0.2
	baz=321							
NWF				eS	Sn	02 52 14.0	+0.2
	baz=321							
WFSB	Wu-fen Shan	1.29	323	eP	Pn	02 51 57.0	-0.2
	baz=321							
WFSB				eS	Sn	02 52 13.7	0.0
	baz=321							
YHNB	Yeheng	1.32	299	eP	Pn	02 51 58.0	+0.4
	baz=284							
CHGB	Renai	1.34	271	eP	Pn	02 51 58.1	0.0
	baz=270							
CHGB				eS	Sn	02 52 15.7	+0.5
	baz=270							
OWD	Renai	1.34	267	eP	Pn	02 51 57.9	-0.1
	baz=265							
OWD				eS	Sn	02 52 14.0	-1.0
	baz=265							
TWA	Mucha	1.35	314	eP	Pb	02 51 58.9	-0.5
	baz=312							
TDCB	Techi	1.37	279	eP	Pn	02 51 59.0	+0.7
	baz=267							
YULB	Yu-li	1.39	243	eP	Pn	02 51 58.6	+0.1
	baz=232							
YULB				eS	Sn	02 52 15.6	-0.5
	baz=232							
VWDT	VWDT	1.40	259	eP	Pn	02 51 59.1	+0.5
	baz=257							
VWDT				eS	Sn	02 52 16.4	+0.1
	baz=257							
JIJ	Ishigaki jima	1.41	76	P	Pn	02 51 59.1	+0.4
JIJ				eS	Sb	02 52 16.9	-1.0
TWF1	Yuli	1.41	241	eP	Pn	02 51 58.9	+0.1
	baz=240							
TWF1				eS	Sn	02 52 16.7	+0.3
	baz=240							
YM07	YM07	1.47	321	eP	Pn	02 51 59.3	-0.3
	baz=319							
YM07				eS	Sn	02 52 18.1	+0.1
	baz=319							
YM01	YM01	1.48	319	eP	Pb	02 52 00.9	-0.7
	baz=316							
YM10	YM10	1.49	319	eP	Pn	02 51 59.5	-0.4
	baz=316							
YM05	YM05	1.49	319	eP	Pn	02 51 59.6	-0.4
	baz=316							
YM08	YM08	1.50	320	eP	Pn	02 51 59.6	-0.4
	baz=318							
CHKT	Chengkung	1.50	232	eS	Sn	02 52 16.6	-2.0
	baz=221							
YM04	YM04	1.50	318	eP	Pn	02 51 59.9	-0.1
	baz=315							
TWY	Chenhua	1.56	323	eP	Pn	02 52 01.5	+0.7
	baz=320							
SSLB	Suanglung	1.56	261	eP	Pn	02 52 01.8	+0.8
	baz=260							
DPDB	Guoxing	1.57	270	eP	Pn	02 52 01.8	+0.8
	baz=268							
SMLT	Sun Moon Lake	1.60	265	eP	Pn	02 52 02.2	+0.7
	baz=263							
SMLT				eS	Sn	02 52 21.5	+0.1
	baz=263							
LIOB	Emei	1.60	293	eP	Pn	02 52 02.7	+1.3
	baz=290							
NSTT	Nanjuang	1.61	292	eP	Pn	02 52 02.7	+1.2
	baz=291							
NSTT				eS	Sn	02 52 22.0	+0.5
	baz=291							
JISG	Ishigakijimahi	1.62	70	P	Pn	02 52 01.7	+0.1
JISG				S	Sb	02 52 22.4	-1.6
TYC	Yuchr	1.64	266	eP	Pn	02 52 02.6	+0.7
	baz=264							
YUS	Yu-Shan	1.64	251	eP	Pn	02 52 03.0	+0.7
	baz=249							
YUS				eS	Sn	02 52 22.7	-0.2
	baz=249							
PCYT	Pengchaiyu	1.67	342	eP	Pn	02 52 01.7	-0.7
	baz=340							
WHYT	Xinyi Township	1.67	259	eP	Pn	02 52 03.4	+1.0
	baz=247							
WHYT				eS	Sn	02 52 23.9	+0.8
	baz=247							
ELDTW	Lidau	1.71	241	eP	Pn	02 52 03.1	0.0
	baz=239							
ELDTW				eS	Sn	02 52 23.3	-0.8
	baz=239							
ALS	Alishan	1.76	253	eP	Pn	02 52 05.1	+1.2
	baz=251							
ALS				eS	Sn	02 52 25.3	-0.3
	baz=251							
CHN5	Tsauling	1.85	257	eP	Pn	02 52 06.3	+1.4
	baz=256							
TWGBT	Beinan	1.88	230	eP	Pn	02 52 05.5	+0.2
	baz=241							
TWGBT				eS	Sn	02 52 27.3	-0.8
	baz=241							
TWG	Pinlang	1.88	230	eP	Pn	02 52 05.5	+0.2
	baz=241							
TWG				eS	Sn	02 52 28.2	0.0
	baz=241							
JTJ	Tarama	1.97	72	P	Pn	02 52 07.5	+1.0
TPUB	Ta-pu	1.99	249	eP	Pn	02 52 08.2	+1.5
	baz=239							
WTP	Ta-pu	2.02	247	eP	Pn	02 52 09.0	+1.8
	baz=237							
MASBT	Mashibuluo	2.33	233	eP	Pb	02 52 14.5	-1.6
	baz=226							
EAST	Anshuo	2.33	225	eP	Pn	02 52 12.0	+0.5
	baz=225							
PHUB	P'eng-hu	2.86	260	eP	Pn	02 52 19.4	+0.7
	baz=273							
PHUB				eS	Sn	02 52 52.9	+0.6
	baz=273							
PNG	Penghu	2.87	261	eP	Pn	02 52 19.8	+1.0
	baz=274							
PNG				eS	Sn	02 52 53.1	+0.7
	baz=274							
PTMZ	Houxiangcun	3.36	288	eP	Pn	02 52 25.5	-0.1
	baz=286							
LYJJ	Jianjiangzhen	3.62	314	eP	Pn	02 52 28.9	-0.1
	baz=312							
XPSS	Dashiqiu	3.64	323	eP	Pn	02 52 30.2	+0.8
	baz=321							

*IDC **10** 02:52:18.2±2.8, 36.°40N×71.°37E, h159km±24km, mb3.4/15, mb1 3.5/22, mb1mx3.3/66, mbtmp3.9/22, Error ellipse: s-maj=19.4km s-min=12.9km az=3.0*
*ISCJB **10** 02:52:21.3±0.3, 36.°62N±0.°03×71.°42E±0.°05, h200km, mb3.6/17, Error ellipse: s-maj=6.6km s-min=3.3km az=154.3*
*NNC **10** 02:52:23.0±3.1, 36.°86N×71.°06E, h142km±47km, mb3.4, mpv4.1, Error ellipse: s-maj=30.6km s-min=14.5km az=159.0*

ISC 10 02:52:21.7±0.5, **36.°58N**±0.°05×**71.°30E**±0.°05, **h200**km, **n63**, σ2°**36**/75, **mb3.6**/17, **10C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.79	170	⇓P	Pn	02 53 09.4	+0.3
CEP				S	Sn	02 53 41.0	-5.1
CHCP	Chirah Chowk	3.33	151	P	Pn	02 53 16.1	+0.8
THW	Thamme Wali	3.79	174	P	Pn	02 53 21.5	+0.5
SARP	Sargodha	4.78	166	P	Pn	02 53 33.0	-0.4
AML	Almayashu	5.85	18	P	Pn	02 53 45.5	-1.7
	SNR=115						
DHRM	DHARAMSHALA	5.97	135	eP	Pn	02 53 49.2	+0.3
DHRM				eS	Sn	02 54 54.7	-3.1
DHRM				IAML		02 54 57.8	
	comp=E,394nm,0.4s						
DHRM				IAML		02 54 58.1	
	comp=N,342nm,0.5s						
UCH	Uchtor	6.16	23	P	Pn	02 53 49.8	-1.7
	SNR=20						
KZA	Kyzart	6.29	28	P	Pn	02 53 51.8	-1.1
	SNR=16						
EKS2	Erkin-Say	6.37	17	P	Pn	02 53 52.6	-1.1
	SNR=15						
AAK	Ala-Archa	6.53	21	P	Pn	02 53 54.5	-1.4
	comp=N,5.5nm,0.3s,baz=180,slow=6.2,SNR=18						
AAK				S	Sn	02 55 03.9	-6.7
	comp=N,4.0nm,0.3s,baz=127,slow=20,SNR=16						
AAK	Ala-Archa	6.53	21	P	Pn	02 53 55.4	-0.5
	SNR=12						
AAK	Ala-Archa	6.53	21	P	Pn	02 53 55.1	-0.8
	comp=N,5.7nm,0.4s						
AAK				⇑S	Sn	02 55 04.8	-5.9
	comp=N,32nm,0.6s						
KK31	Karatay Array	6.54	355	⇑P	Pn	02 53 54.6	-1.4
	comp=N,6.6nm,0.2s,baz=174,slow=12,SNR=199						
KK31				⇑S	Sn	02 55 03.7	-7.0
	comp=N,73nm,0.8s,baz=171,slow=21,SNR=30						
KBK	Karagaybulak	6.69	24	P	Pn	02 53 57.6	-0.4
	SNR=7.4						
TKM2	Tokmak 2	7.14	26	P	Pn	02 54 03.6	-0.3
	SNR=14						
TKM2	Tokmak 2	7.14	26	⇓P	Pn	02 54 03.2	-0.7
	comp=N,6.0nm,0.7s						
TKM2				⇓S	Sn	02 55 21.5	-3.6
	comp=N,17nm,0.8s						
SMLA	Simla	7.30	136	eP	Pn	02 54 05.6	-0.3
SMLA				eS	Sn	02 55 23.9	-4.7
SMLA				IAML		02 55 27.3	
	comp=E,111nm,0.1s						
SMLA				IAML		02 55 27.7	
	comp=N,140nm,0.3s						
DDI	Dehra Dun	8.41	136	eP	Pn	02 54 19.8	-0.5
DDI				eS	Sn	02 55 52.2	-2.7
JOSI	Joshimath	9.13	129	eP	Pn	02 54 30.5	+0.5
JOSI				eS	Sn	02 56 09.5	-3.0
JOSI				IAML		02 56 14.2	
	comp=N,90nm,0.4s						
JOSI				IAML		02 56 17.0	
	comp=E,74nm,0.2s						
PDGK	Podgornoye	9.21	40	⇑P	Pn	02 54 31.2	+0.4
	comp=E,1.1nm,0.5s						
GEYT	Alibeck	10.60	281	P	Pn	02 54 46.1	-2.5
	comp=E,0.7nm,0.3s,baz=110,slow=11,SNR=13						
GEYT				S	Sn	02 56 40.4	-6.6
	comp=E,0.7nm,0.3s,baz=113,slow=14,SNR=3.1						
GYA0B	ALIBECK ARRAY	10.60	281	⇓P	Pn	02 54 46.6	-2.1
GYA0B				⇑S	Sn	02 56 40.8	-6.2
PYUN	Piuthan	12.99	127	eP	Pn	02 55 17.4	-2.0
	comp=E,41nm,0.3s						
MK31	Makanchi Array	13.08	35	⇑P	P	02 55 24.4	+1.2
	comp=E,1.4nm,0.6s,baz=209,slow=11,SNR=9.4						
MKAR	Makanchi Array	13.08	35	P	Pn	02 55 19.2	-0.9
	comp=E,0.3nm,0.3s,baz=220,slow=12,SNR=2.6						
DANN	Dangsing	13.33	124	eP	Pn	02 55 23.0	-0.6
	comp=E,35nm,0.3s						
KOLN	Koldanda	13.61	127	eP	Pn	02 55 25.9	-1.2
	comp=E,22nm,0.3s						
GKN	Gorkha	14.14	123	eP	Pn	02 55 33.5	-0.1
	comp=E,60nm,0.2s						
BHPL	Bhopal	14.31	157	eP	P	02 55 36.2	-0.8
DMN	Daman	14.71	124	eP	P	02 55 40.7	-1.0
	comp=E,58nm,0.5s						
KKN	Kakani	14.71	123	eP	P	02 55 40.8	-0.9
	comp=E,46nm,0.4s						
PKIN	Phulchoki	14.93	123	eP	P	02 55 43.9	-0.2
	comp=E,61nm,0.5s						
PKI	Pulchoki	14.94	123	eP	P	02 55 44.0	-0.3
	comp=E,66nm,0.5s						
KURBB	Kurchatov Arra	14.97	18	P	Pn	02 55 42.5	-0.9
	comp=E,0.1nm,0.3s,baz=205,slow=10,SNR=9.4						
KURBB	Kurchatov Arra	14.97	18	⇓P	P	02 55 43.4	-0.7
	comp=E,2.7nm,0.8s						
GUN	Gumba	15.05	121	eP	P	02 55 45.1	-0.4
	comp=E,35nm,0.3s						
KURK	Kurchatov	15.08	18	⇑P	P	02 55 45.9	+0.7
	comp=E,2.0nm,0.8s						
AB31	Akbulak array	15.13	330	⇑P	Pn	02 55 44.9	-0.5
	comp=E,1.8nm,0.4s,baz=143,slow=11,SNR=102						
JIRN	Jiri	15.42	121	eP	P	02 55 49.8	+0.2
	comp=E,166nm,0.4s						
RAMN	Ramite	16.15	122	eP	Pn	02 55 58.0	-0.1
	comp=E,22nm,0.3s						
BVA0	Borovoye Array	16.46	358	⇑P	Pn	02 56 01.1	-0.2
	comp=E,1.4nm,0.4s,baz=159,slow=13,SNR=14						
BVAR	Borovoye Array	16.46	358	P	P	02 56 00.0	-0.4
	comp=E,0.4nm,0.3s,baz=159,slow=12,SNR=6.9						
AKTO	Aktyubinsk	16.84	330	P	Pn	02 56 05.8	0.0
	comp=E,2.5nm,0.3s,baz=139,slow=11,SNR=42						
AKTO				S	S	02 59 09.6	-0.3
	comp=E,0.3nm,0.3s,baz=98,slow=18,SNR=5.4						
AKTO	Aktyubinsk	16.84	330	⇑P	Pn	02 56 06.7	+0.9
	comp=E,6.7nm,0.5s						
ZALV	Zalesovo Beam	19.74	24	P	P	02 56 36.3	+0.3
	comp=E,1.5nm,0.3s,baz=219,slow=10,SNR=9.9						
SONM	Songino Array	28.09	55	P	P	02 57 56.3	+1.6
	comp=E,0.5nm,0.8s,baz=256,slow=12,SNR=3.2						
BRTR	Keskin Array B	29.64	288	P	P	02 58 10.8	+2.2
	comp=E,0.4nm,0.6s,baz=108,slow=8.4,SNR=4.6						
AKASG	Malin Array Be	33.09	309	P	P	02 58 40.9	+2.5
	comp=E,0.6nm,0.3s,baz=80,slow=7.6,SNR=2.8						
FINES	FINESS Array B	37.55	326	P	P	02 59 18.9	+2.6
	comp=E,0.4nm,0.4s,baz=125,slow=8.7,SNR=7.3						
ARCES	ARCESS Array B	41.17	337	P	P	02 59 48.8	+2.7
	comp=E,15nm,0.5s,baz=110,slow=9.7,SNR=6.8						
HFS	Hagfors	43.16	322	P	P	03 00 04.4	+2.2
	comp=E,1.8nm,0.4s,baz=99,slow=9.3,SNR=20						
NB2	NORSAR Subarra	44.47	323	P	P	03 00 14.8	+2.1
	comp=Z,0.6nm,0.4s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.47	323	P	P	03 00 14.5	+1.8
	comp=Z,0.1nm,0.3s,baz=100,slow=7.8,SNR=8.0						
EKA	Eskdalemuir Ar	52.40	316	P	P	03 01 15.0	+1.8
	comp=Z,0.1nm,0.3s,baz=76,slow=7.5,SNR=3.4						
ESDC	Sonseca Array	57.64	298	P	P	03 01 53.4	+2.4
	comp=Z,0.5nm,0.6s,baz=49,slow=6.6,SNR=6.9						
PETK	Petropavlovsk-	59.74	44	P	P	03 02 05.3	+0.1
	comp=Z,2.7nm,0.9s,baz=303,slow=8.0,SNR=2.5						
TORD	Torodi Ar. Bea	65.96	269	P	P	03 02 46.2	-0.6
	comp=Z,0.9nm,0.4s,baz=52,slow=5.8,SNR=16						
INK	Inuvik	73.79	9	P	P	03 03 35.7	+2.1
	comp=Z,0.8nm,0.6s,baz=325,slow=7.1,SNR=7.0						
ILAR	Eielson Array	74.64	16	P	P	03 03 39.1	+0.5
	comp=Z,0.3nm,0.8s,baz=328,slow=4.6,SNR=4.9						
FRB	Frobisher Bay	75.06	343	P	P	03 03 42.7	+1.8
	comp=Z,1.5nm,0.7s,baz=61,slow=7.5,SNR=3.0						
YKA	Yellowknife Ar	81.16	3	P	P	03 04 16.1	+1.7
	comp=Z,1.1nm,0.6s,baz=352,slow=5.6,SNR=8.0						
WRA	Warramunga Arr	81.83	122	P	P	03 04 20.0	+1.4
	comp=Z,134nm,0.3s,baz=310,slow=5.2,SNR=1.9						
ASAR	Alice Springs	84.10	125	P	P	03 04 31.1	+0.9
	comp=Z,0.8nm,0.6s,baz=311,slow=5.2,SNR=16						

MEX 10 03:10:19.5±0.8, **14.°58N**×**94.°70W**, **h16**km±999km, **MD3.8, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.80	311	eP	Pn	03 10 46.3	-3.5
HUIG				i S	Sn	03 11 06.8	-5.5
PCIG		1.82	52	eP	Pn	03 10 46.5	-3.5
PCIG				i S	Sn	03 11 07.3	-5.5
CMIG	Matias Romero	2.50	356	i P	Pn	03 10 57.5	-2.0
CMIG				i S	Sn	03 11 26.1	-3.6

*BER **10** 03:12:12.4±1.3, 60.°10N×0.°46E, h15km, ML1.7, ML2.0(BGS), Confirmed Earthquake*

BGS 10 03:12:13.3±1.4, **59.°93N**×**0.°20E**, **h8**km±313km, **ML2.0, 4D, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LRW	Lerwick	0.72	288	⇓iP	Pg	03 12 26.6	-0.5
LRW				eS	Sg	03 12 36.1	-0.4
LRW				IAML		03 12 38.3	
	comp=E,69nm,0.1s						
LRW				IAML		03 12 38.9	
	comp=N,52nm,0.1s						
LRW	Lerwick	0.72	288	⇓iP	Pg	03 12 26.6	-0.5
LRW				eS	Sg	03 12 36.1	-0.4
LRW				IAML		03 13 40.6	
	comp=N,22nm,0.1s						
LRW				IAML		03 13 40.8	
	comp=E,26nm,0.1s						
LRW	Lerwick	0.72	288	⇓iP	Pg	03 12 26.6	-0.5
LRW				eS	Sg	03 12 36.1	-0.4
LRW				IAML		03 12 38.3	
	comp=E,69nm,0.1s						
LRW				IAML		03 12 38.9	
	comp=N,52nm,0.1s						
LRW	Lerwick	0.72	288	⇓iP	Pg	03 12 26.6	-0.5
LRW				eS	Sg	03 12 36.1	-0.4
LRW				IAML		03 13 40.6	
	comp=N,22nm,0.1s						
LRW				IAML		03 13 40.8	
	comp=E,26nm,0.1s						
LRW	Lerwick	0.72	288	eP	Pg	03 12 26.8	-0.3
LRW				eS	Sg	03 12 37.0	+0.5
LRW				IAML		03 12 38.7	
	comp=Z,53nm,0.2s						
BIGH	Upper Bighouse	2.56	238	eP	Pn	03 12 54.3	-0.7
BIGH	Upper Bighouse	2.56	238	eP	Pn	03 12 54.3	-0.7
BIGH	Upper Bighouse	2.56	238	eP	Pn	03 12 54.3	-0.7
BIGH	Upper Bighouse	2.56	238	eP	Pn	03 12 54.3	-0.7
ASK	Askoy	2.56	75	eP	Pn	03 12 49.0	-6.0
ASK				eS	Sn	03 13 16.0	-10
ASK				IAML		03 13 16.9	
	comp=Z,4.5nm,0.1s						
BER	Bergen	2.61	78	eS	Sn	03 13 17.4	-10
KMY	Karmoy	2.67	103	eP	Pn	03 12 52.8	-3.8
KMY				eS	Sn	03 13 21.3	-7.7
KMY				IAML		03 13 22.7	
	comp=Z,8.3nm,0.2s						
MCD	Coleburn Disti	2.96	219	eP	Pn	03 13 00.8	+0.2
MCD	Coleburn Disti	2.96	219	eP	Pn	03 13 00.8	+0.2
MCD	Coleburn Disti	2.96	219	eP	Pn	03 13 00.8	+0.2
MCD	Coleburn Disti	2.96	219	eP	Pn	03 13 00.8	+0.2
STAV	Stavanger	2.98	107	eP	Pn	03 12 56.9	-4.0
STAV				eS	Sn	03 13 28.5	-8.3
HYA	Hoyanger	3.21	65	eP	Pn	03 12 57.9	-6.1
HYA				eS	Sn	03 13 31.4	-11
HYA				IAML		03 13 35.9	
	comp=Z,5.0nm,0.1s						
BLS5	Blasjo	3.22	96	eP	Pn	03 12 59.4	-4.7
BLS5				eS	Sn	03 13 33.2	-9.5
ODD1	Odda	3.24	87	eP	Pn	03 12 59.4	-5.1
ODD1				eS	Sn	03 13 33.7	-10
DRUM	Mains of Drumt	3.34	206	eP	Pn	03 13 04.6	-1.1
DRUM	Mains of Drumt	3.34	206	eP	Pn	03 13 04.6	-1.1
DRUM	Mains of Drumt	3.34	206	eP	Pn	03 13 04.6	-1.1
DRUM	Mains of Drumt	3.34	206	eP	Pn	03 13 04.6	-1.1
AKN	Aaknes	4.00	53	eP	Pn	03 13 09.0	-6.0
AKN				eS	Sn	03 13 49.5	-13
KPL	Plockton	4.01	232	eP	Pn	03 13 13.9	-1.1
KPL				eS	Sn	03 13 57.3	-4.8
INVG	Invergeldie, C	4.17	214	eP	Pn	03 13 15.8	-1.4
INVG	Invergeldie, C	4.17	214	eP	Pn	03 13 15.8	-1.4
INVG	Invergeldie, C	4.17	214	eP	Pn	03 13 15.8	-1.4
INVG	Invergeldie, C	4.17	214	eP	Pn	03 13 15.8	-1.4
EDI	Edinburgh	4.40	206	eP	Pn	03 13 19.9	-0.4
EDI				eS	Sn	03 14 09.0	-2.8
MOL	Molde	4.43	50	eP	Pn	03 13 14.6	-6.2
MOL				eS	Sn	03 13 59.5	-13
HOMB	Homborsund	4.60	108	eP	Pn	03 13 19.2	-3.8
HOMB				eS	Sn	03 14 06.5	-10
KONO	Kongsberg	4.76	89	eP	Pn	03 13 20.6	-4.7
KONO				eS	Sn	03 14 10.3	-10
DOMB	Dombas	4.81	60	eP	Pn	03 13 20.8	-5.2
DOMB				eS	Sn	03 14 09.7	-12
ESK	Eskdalemuir	4.97	203	eP	Pn	03 13 27.4	-0.8
NAO01	NORSAR Array S	5.38	76	eP	Pn	03 13 28.5	-5.3
NAO01				eS	Sn	03 14 24.0	-12
NC602	NORSAR Array S	5.70	77	eP	Pn	03 13 32.9	-5.2
NC602				eS	Sn	03 14 31.4	-12
MUD	Monsted U'grnd	5.89	122	eP	Pn	03 13 35.6	-5.2
MUD				eS	Sn	03 14 33.8	-15

MAN 10 03:25:27.7, **7.°22N**×**124.°92E**, **h28**km, **mb4.1, ML2.9, MS2.5, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.67	270	⇓iP	Pb	03 25 40.1	-0.6
CTBH				i S	Sb	03 25 49.2	-0.5
BUKP	Musuan	0.67	12	eP	Pb	03 25 40.7	-0.2
BUKP				eS	Sn	03 25 51.2	+0.3
SKMP	Bagumbayan, Su	0.79	208	eP	Pn	03 25 43.7	+0.8
SKMP				eS	Sn	03 25 53.9	+0.1
CGP	Cagayan de Oro	1.24	350	⇑eP	Pb	03 25 50.3	-0.2
CGP				eS	Sn	03 26 05.5	+0.4
PAGZ	Pagadian	1.64	292	eP	Pn	03 25 55.2	+0.5
PAGZ				eS	Sn	03 26 15.4	+0.5

*ISCJB **10** 03:39:56.2±0.8, 76.°09N±0.°03×24.°7E±0.°2, h10km, Error ellipse: s-maj=8.5km s-min=4.9km az=1.8*
*NAO **10** 03:39:59.7±2.1, 76.°05N×24.°16E, h17km±11km, ML2.7*
*BER **10** 03:40:01.2±2.9, 76.°07N×24.°79E, h18km±12km, ML2.2, ML2.7(NAO), Confirmed Earthquake*

ISC 10 03:39:58.3±1.0, **76.°06N**±0.°04×**24.°80E**±0.°06, **h10**km, **n15**, σ2°**33**/35, **Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO	Bjornoya	2.12	225	eP

SPA0	**Spitsbergen Ar**	**2.85 322**	Pn	**Pn**	**03 40 43.5**	**-0.3**
	baz=139,slow=18					
SPA0			Pg	**Pb**	**03 40 50.8**	**+1.6**
SPA0			Sn	**Sn**	**03 41 15.6**	**-2.5**
SPA0			*e*Sg	**Sb**	**03 41 24.4**	**+0.4**
SPA0			IAML		03 41 27.4	
	comp=Z,19nm,0.4s					
BRBA	**Barentsburg A**	**3.12 315**	Pn	**Pn**	**03 40 47.3**	**-0.1**
BRBA			Sn	**Sn**	**03 41 22.9**	**-1.6**
BRBA			Lg	Lg	03 41 31.6	
BRBA	**Barentsburg A**	**3.12 315**	Pn	**Pn**	**03 40 47.3**	**-0.1**
BRBA			Sn	**Sn**	**03 41 22.9**	**-1.6**
BRBA			Sg	**Sb**	**03 41 31.6**	**-0.1**
KBS	**Kingsbay**	**4.01 322**	Pn	**Pn**	**03 40 58.7**	**-1.0**
KBS			Sn	**Sn**	**03 41 44.1**	**-2.4**
KBS			Lg	Lg	03 41 59.0	
KBS	**Kingsbay**	**4.01 322**	*e*P	**Pn**	**03 40 59.2**	**-0.4**
KBS			*e*S	**Sn**	**03 41 44.1**	**-2.4**
KBS			*e*Sg	**Sb**	**03 42 01.1**	**+3.8**
KBS			IAML		03 42 06.3	
	comp=Z,29nm,0.4s					
ZFI2	**Zemlya Franca-**	**6.56 33**	*e*P	**Pn**	**03 41 36.4**	**+1.8**
ZFI2			*e*S	**Sn**	**03 42 46.8**	**-2.4**
	comp=Z,1.9nm,1.0s					
ARA0	**ARCESS Array S**	**6.56 178**	Pn	**Pn**	**03 41 34.5**	**-0.2**
ARA0			Sn	**Sn**	**03 42 45.0**	**-4.5**
	baz=2.8,slow=22					
ARA0	**ARCESS Array S**	**6.56 178**	Pn	**Pn**	**03 41 34.5**	**-0.2**
ARA0			Sn	**Sn**	**03 42 45.0**	**-4.5**
	baz=2.8,slow=22					
KIF	**Kilpisjarvi**	**7.19 192**	Pn	**Pn**	**03 41 44.4**	**+1.1**
KIF			Sn	**Sn**	**03 43 00.2**	**-4.6**
KIF	**Kilpisjarvi**	**7.19 192**	Pn	**Pn**	**03 41 44.4**	**+1.1**
KIF			Sn	**Sn**	**03 43 00.2**	**-4.6**

*ISCJB **10** 03:46:56.5±0.5, 37°.18N±0°.03×16°.06E±0°.03, h25km±5km, Error ellipse: s-maj=5.7km s-min=3.6km az=154.7*
*ROM **10** 03:46:58.2±0.2, 37°.244N±0°.010×15°.91E±0°.01, h24km±1km, ML2.8/42, Error ellipse: s-maj=1.3km s-min=0.6km az=309.0*
ISC 10 03:46:57.2±1.2, 37°23N±0°.04×16°.01E±0°.04, h30km±11km, n58, σ1°34/65, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SN1	**Capo Mulini Ma**	**0.58**	**303**	P	**Pn**	**03 47 10.1**	**+0.9**
SN1				AML	AML		
	comp=E,1435μm,0.1s						
SN1				AML	AML		
	comp=N,1735μm,0.4s						
SN1				AML	AML		
	comp=E,1435μm,0.1s						
SN1				AML	AML		
	comp=N,1735μm,0.4s						
SN1				AML	AML		
	comp=E,1435μm,0.1s						
SN1				AML	AML		
	comp=N,1735μm,0.4s						
SN1				AML	AML		
	comp=E,1435μm,0.1s						
SN1				AML	AML		
	comp=N,1735μm,0.4s						
AGST	**Augusta-Monte**	**0.63**	**273**	P	**Pb**	**03 47 09.7**	**0.0**
AGST				S	**Sb**	**03 47 17.1**	**-1.1**
AGST				AML	AML		
	comp=E,755μm,0.3s						
AGST				AML	AML		
	comp=N,790μm,0.5s						
AGST				AML	AML		
	comp=E,755μm,0.3s						
AGST				AML	AML		
	comp=N,790μm,0.5s						
AGST				AML	AML		
	comp=E,755μm,0.3s						
AGST				AML	AML		
	comp=N,790μm,0.5s						
AGST				AML	AML		
	comp=N,790μm,0.5s						
AGST				AML	AML		
	comp=E,755μm,0.3s						
HAGA	**Augusta**	**0.69**	**275**	P	**Pb**	**03 47 10.5**	**-0.2**
HAGA				S	**Sb**	**03 47 18.8**	**-1.1**
HAGA				AML	AML		
	comp=E,662μm,0.6s						
HAGA				AML	AML		
	comp=N,568μm,0.4s						
HAGA				AML	AML		
	comp=E,662μm,0.6s						
HAGA				AML	AML		
	comp=N,568μm,0.4s						
HAGA				AML	AML		
	comp=E,662μm,0.6s						
HAGA				AML	AML		
	comp=N,568μm,0.4s						
HAGA				AML	AML		
	comp=E,662μm,0.6s						
HAGA				AML	AML		
	comp=N,568μm,0.4s						
SSY	**Sortino**	**0.76**	**265**	P	**Pb**	**03 47 11.6**	**-0.3**
SSY				S	**Sb**	**03 47 20.9**	**-0.9**
SSY				AML	AML		
	comp=E,1035μm,0.4s						
SSY				AML	AML		
	comp=N,2070μm,0.6s						
SSY				AML	AML		
	comp=E,1035μm,0.4s						
SSY				AML	AML		
	comp=N,2070μm,0.6s						
SSY				AML	AML		
	comp=N,2070μm,0.6s						
SSY				AML	AML		
	comp=E,1035μm,0.4s						
HAVL	**Avola**	**0.76**	**250**	P	**Pb**	**03 47 12.0**	**+0.1**
HAVL				S	**Sb**	**03 47 21.5**	**-0.4**
HAVL				AML	AML		
	comp=E,3535μm,0.2s						
HAVL				AML	AML		
	comp=N,2855μm,0.2s						
HAVL				AML	AML		
	comp=E,3535μm,0.2s						
HAVL				AML	AML		
	comp=N,2855μm,0.2s						
HAVL				AML	AML		
	comp=E,3535μm,0.2s						
HAVL				AML	AML		
	comp=N,2855μm,0.2s						
HAVL				AML	AML		
	comp=E,3535μm,0.2s						
HAVL				AML	AML		
	comp=N,2855μm,0.2s						
HCRL	**Carlentini**	**0.79**	**274**	P	**Pb**	**03 47 12.1**	**-0.2**
HCRL				S	**Sb**	**03 47 21.8**	**-0.8**
HCRL				AML	AML		
	comp=E,1250μm,0.2s						
HCRL				AML	AML		
	comp=N,826μm,0.1s						
HCRL				AML	AML		
	comp=E,1250μm,0.2s						
HCRL				AML	AML		
	comp=N,826μm,0.1s						
HCRL				AML	AML		
	comp=E,1250μm,0.2s						
HCRL				AML	AML		
	comp=N,826μm,0.1s						
MTTG	**Motta San Giov**	**0.81**	**342**	P	**Pb**	**03 47 13.6**	**+0.8**
MTTG				AML	AML		
	comp=E,336μm,1.2s						
MTTG				AML	AML		
	comp=N,374μm,0.6s						
MTTG				AML	AML		
	comp=E,336μm,1.2s						
MTTG				AML	AML		
	comp=N,374μm,0.6s						
MTTG				AML	AML		
	comp=E,336μm,1.2s						
MTTG				AML	AML		
	comp=N,374μm,0.6s						
MTTG				AML	AML		
	comp=E,336μm,1.2s						
MTTG				AML	AML		
	comp=N,374μm,0.6s						
SOI	**Samo**	**0.84**	**2**	P	**Pb**	**03 47 14.2**	**+0.9**
SOI				S	**Sb**	**03 47 24.7**	**+0.4**
SOI				AML	AML		
	comp=E,617μm,1.0s						
SOI				AML	AML		
	comp=N,350μm,0.4s						
SOI				AML	AML		
	comp=E,617μm,1.0s						
SOI				AML	AML		
	comp=N,350μm,0.4s						
SOI				AML	AML		
	comp=E,617μm,1.0s						
SOI				AML	AML		
	comp=N,350μm,0.4s						
MEU	**Monte Lauro**	**0.88**	**262**	AML	AML		
	comp=N,1555μm,0.2s						
MEU				AML	AML		
	comp=E,746μm,0.3s						
MEU				AML	AML		
	comp=N,1555μm,0.2s						
MEU				AML	AML		
	comp=E,746μm,0.3s						
HPAC	**Pachino**	**0.90**	**234**	P	**Pb**	**03 47 15.1**	**+0.9**
HPAC				S	**Sn**	**03 47 26.7**	**+1.0**
HPAC				AML	AML		
	comp=E,1370μm,0.9s						
HPAC				AML	AML		
	comp=N,1695μm,0.3s						
HPAC				AML	AML		
	comp=E,1370μm,0.9s						
HPAC				AML	AML		
	comp=N,1695μm,0.3s						
HPAC				AML	AML		
	comp=N,1695μm,0.3s						
HPAC				AML	AML		
	comp=E,1370μm,0.9s						
GMB	**Gambarie**	**0.95**	**351**	P	**Pb**	**03 47 15.7**	**+0.6**
GMB				S	**Sn**	**03 47 28.0**	**+0.8**
GMB				AML	AML		
	comp=E,3710μm,0.6s						
GMB				AML	AML		
	comp=N,3155μm,0.2s						
GMB				AML	AML		
	comp=E,3705μm,0.6s						
GMB				AML	AML		
	comp=N,3150μm,0.2s						
GMB				AML	AML		
	comp=E,3710μm,0.6s						
GMB				AML	AML		
	comp=N,3155μm,0.2s						
GMB				AML	AML		
	comp=E,3705μm,0.6s						
GMB				AML	AML		
	comp=N,3150μm,0.2s						
AIO	**Antillo**	**0.96**	**320**	P	**Pn**	**03 47 15.5**	**+0.7**
AIO				AML	AML		
	comp=E,362μm,0.6s						
AIO				AML	AML		
	comp=N,440μm,0.3s						
AIO				AML	AML		
	comp=E,362μm,0.6s						
AIO				AML	AML		
	comp=N,440μm,0.3s						
AIO				AML	AML		
	comp=E,362μm,0.6s						
AIO				AML	AML		
	comp=N,440μm,0.3s						
ESML	**S. M. di Licod**	**0.98**	**294**	P	**Pn**	**03 47 15.4**	**+0.4**
ESML				S	**Sn**	**03 47 27.3**	**-0.6**
ESML				AML	AML		
	comp=E,504μm,0.5s						
ESML				AML	AML		
	comp=N,430μm,0.5s						
ESML				AML	AML		
	comp=E,504μm,0.5s						
ESML				AML	AML		
	comp=N,430μm,0.5s						
ESML				AML	AML		
	comp=N,430μm,0.5s						
ESML				AML	AML		
	comp=E,504μm,0.5s						
HMDC	**Modica**	**1.02**	**255**	P	**Pn**	**03 47 15.7**	**+0.2**
HMDC				S	**Sn**	**03 47 28.1**	**-0.8**
HMDC				AML	AML		
	comp=E,1540μm,0.7s						
HMDC				AML	AML		
	comp=N,1006μm,0.5s						
HMDC				AML	AML		
	comp=E,1540μm,0.7s						
HMDC				AML	AML		
	comp=N,1006μm,0.5s						
HMDC				AML	AML		
	comp=N,1006μm,0.5s						
HMDC				AML	AML		
	comp=E,1540μm,0.7s						
ATN	**Antennamare**	**1.02**	**335**	P	**Pn**	**03 47 16.8**	**+1.2**
ATN				AML	AML		
	comp=E,828μm,0.2s						
ATN				AML	AML		
	comp=N,852μm,0.9s						
ATN				AML	AML		
	comp=E,828μm,0.2s						
ATN				AML	AML		
	comp=N,852μm,0.9s						
ATN				AML	AML		
	comp=N,852μm,0.9s						
ATN				AML	AML		
	comp=E,828μm,0.2s						
ATN				AML	AML		
	comp=N,852μm,0.9s						
ATN				AML	AML		
	comp=E,828μm,0.2s						
HVZN	**Vizzini**	**1.04**	**268**	P	**Pn**	**03 47 16.0**	**+0.2**
HVZN				S	**Sn**	**03 47 28.3**	**-1.0**
HVZN				AML	AML		
	comp=E,3480μm,0.9s						
HVZN				AML	AML		
	comp=N,5810μm,0.8s						
HVZN				AML	AML		
	comp=E,3480μm,0.9s						
HVZN				AML	AML		
	comp=N,5810μm,0.8s						
HVZN				AML	AML		
	comp=E,3480μm,0.9s						
HVZN				AML	AML		
	comp=N,5810μm,0.8s						
MPNC	**Port Mandanici**	**1.05**	**330**	P	**Pn**	**03 47 16.9**	**+1.0**
MPNC				AML	AML		
	comp=E,672μm,0.3s						
MPNC				AML	AML		
	comp=N,586μm,1.4s						
MPNC				AML	AML		
	comp=E,673μm,0.3s						
MPNC				AML	AML		
	comp=N,586μm,1.4s						
MPNC				AML	AML		
	comp=N,586μm,1.4s						
MPNC				AML	AML		
	comp=E,672μm,0.3s						
NOV	**Novara**	**1.06**	**319**	P	**Pn**	**03 47 16.9**	**+0.8**
NOV				AML	AML		
	comp=E,322μm,0.5s						
NOV				AML	AML		
	comp=N,296μm,0.4s						
NOV				AML	AML		
	comp=E,322μm,0.5s						
NOV				AML	AML		
	comp=N,296μm,0.4s						
NOV				AML	AML		
	comp=E,322μm,0.5s						
NOV				AML	AML		
	comp=N,296μm,0.4s						
MSRU	**Castanea**	**1.11**	**339**	P	**Pb**	**03 47 18.1**	**+0.4**
MSRU				AML	AML		
	comp=E,714μm,1.4s						
MSRU				AML	AML		
	comp=N,608μm,0.9s						
MSRU				AML	AML		
	comp=E,714μm,1.4s						
MSRU				AML	AML		
	comp=N,608μm,0.9s						
MSRU				AML	AML		
	comp=N,608μm,0.9s						
MSRU				AML	AML		
	comp=E,714μm,1.4s						
MILZ	**Milazzo**	**1.21**	**329**	P	**Pn**	**03 47 19.5**	**+1.5**
MILZ				AML	AML		
	comp=E,556μm,0.3s						
MILZ				AML	AML		
	comp=N,717μm,0.3s						
MILZ				AML	AML		
	comp=E,556μm,0.3s						
MILZ				AML	AML		
	comp=N,717μm,0.3s						
MILZ				AML	AML		
	comp=N,717μm,0.3s						
MILZ				AML	AML		
	comp=E,556μm,0.3s						
MUCR	**Ucria**	**1.22**	**312**	P	**Pn**	**03 47 19.3**	**+1.1**
MUCR				AML	AML		
	comp=E,290μm,0.4s						
MUCR				AML	AML		
	comp=N,461μm,0.9s						
MUCR				AML	AML		
	comp=E,290μm,0.4s						
MUCR				AML	AML		
	comp=N,461μm,0.9s						
MUCR				AML	AML		
	comp=E,290μm,0.4s						
MUCR				AML	AML		
	comp=N,461μm,0.9s						
HBSP	**Bosco Santo Pi**	**1.22**	**266**	P	**Pn**	**03 47 18.7**	**+0.5**
HBSP				AML	AML		
	comp=E,1650μm,0.2s						
HBSP				AML	AML		
	comp=N,1780μm,0.3s						
HBSP				AML	AML		
	comp=E,1655μm,0.2s						
HBSP				AML	AML		
	comp=N,1780μm,0.3s						
HBSP				AML	AML		
	comp=N,1780μm,0.3s						
HBSP				AML	AML		
	comp=E,1650μm,0.2s						
GALF	**Gagliano Caste**	**1.25**	**293**	P	**Pn**	**03 47 20.1**	**+1.4**
GALF				AML	AML		
	comp=E,212μm,0.4s						
GALF				AML	AML		
	comp=N,224μm,0.3s						
GALF				AML	AML		
	comp=E,212μm,0.4s						
GALF				AML	AML		
	comp=N,224μm,0.3s						
GALF				AML	AML		
	comp=N,224μm,0.3s						
GALF				AML	AML		
	comp=E,212μm,0.4s						
PLAC	**Placanica**	**1.26**	**15**	P	**Pb**	**03 47 20.6**	**+0.2**
PLAC				AML	AML		
	comp=E,129μm,0.4s						
PLAC				AML	AML		
	comp=N,90μm,0.6s						
PLAC				AML	AML		
	comp=E,129μm,0.4s						
PLAC				AML	AML		
	comp=N,90μm,0.6s						
PLAC				AML	AML		
	comp=N,90μm,0.6s						
PLAC				AML	AML		
	comp=E,129μm,0.4s						
RAFF	**Raffo Rosso**	**1.32**	**270**	P	**Pn**	**03 47 20.7**	**+1.1**
RAFF				S	**Sn**	**03 47 37.7**	**+1.5**
RAFF				AML	AML		
	comp=E,734μm,0.3s						
RAFF				AML	AML		
	comp=N,595μm,0.4s						
RAFF				AML	AML		
	comp=E,733μm,0.3s						
RAFF				AML	AML		
	comp=N,595μm,0.4s						
RAFF				AML	AML		
	comp=E,734μm,0.3s						
RAFF				AML	AML		
	comp=N,595μm,0.4s						
MCPD	**Capo d'Orlando**	**1.35**	**312**	AML	AML		
	comp=N,210μm,1.6s						
MCPD				AML	AML		
	comp=E,208μm,0.3s						
MCPD				AML	AML		
	comp=E,208μm,0.3s						
MCPD				AML	AML		
	comp=N,210μm,1.6s						
MCPD				AML	AML		
	comp=E,208μm,0.3s						
MCPD				AML	AML		
	comp=N,210μm,1.6s						
JOPP	**Joppolo**	**1.38**	**356**	P	**Pb**	**03 47 22.2**	**-0.2**
JOPP				AML	AML		
	comp=E,161μm,0.3s						
JOPP				AML	AML		
	comp=N,170μm,0.3s						
JOPP				AML	AML		
	comp=E,161μm,0.3s						
JOPP				AML	AML		
	comp=N,170μm,0.3s						
JOPP				AML	AML		
	comp=N,170μm,0.3s						
JOPP				AML	AML		
	comp=E,161μm,0.3s						
MSFR	**San Fratello**	**1.39**	**306**	P	**Pn**	**03 47 22.1**	**+1.5**
MSFR				AML	AML		
	comp=E,89μm,0.8s						
MSFR				AML	AML		
	comp=N,114μm,0.5s						
MSFR				AML	AML		
	comp=E,89μm,0.8s						
MSFR				AML	AML		
	comp=N,114μm,0.5s						
MSFR				AML	AML		
	comp=N,114μm,0.5s						
MSFR				AML	AML		
	comp=E,89μm,0.8s						
VPL	**Vulcano Piano**	**1.41**	**325**	P	**Pn**	**03 47 22.2**	**+1.4**
VPL				S	**Sn**	**03 47 40.2**	**+1.8**
VPL				AML	AML		
	comp=E,2535μm,0.9s						
VPL				AML	AML		
	comp=N,2100μm,0.9s						
VPL				AML	AML		
	comp=E,2535μm,0.9s						
VPL				AML	AML		
	comp=N,2095μm,0.9s						
VPL				AML	AML		
	comp=E,2535μm,0.9s						
VPL				AML	AML		
	comp=N,2100μm,0.9s						
IACL	**Alicudi**	**1.85**	**315**	AML	AML		
	comp=E,140μm,0.3s						
IACL				AML	AML		
	comp=N,148μm,1.2s						
IACL				AML	AML		
	comp=E,140μm,0.3s						
IACL				AML	AML		
	comp=N,148μm,1.2s						
SERS	**Sersale**	**1.88**	**16**	P	**Pn**	**03 47 29.4**	**+1.9**
SERS				AML	AML		
	comp=E,30μm,0.4s						
SERS				AML	AML		
	comp=N,58μm,1.3s						
SERS				AML	AML		
	comp=E,30μm,0.4s						
SERS				AML	AML		
	comp=N,58μm,1.3s						
CAR1	**CAROLEI**	**2.03**	**4**	AML	AML		
	comp=N,106μm,0.4s						
CAR1				AML	AML		
	comp=E,144μm,0.3s						
CAR1				AML	AML		
	comp=E,144μm,0.3s						
CAR1				AML	AML		
	comp=N,106μm,0.4s						
TIP	**Timpagrande**	**2.03**	**17**	P	**Pn**	**03 47 31.2**	**+1.8**
TIP				AML	AML		
	comp=E,29μm,0.4s						
TIP				AML	AML		
	comp=N,32μm,1.2s						
TIP				AML	AML		
	comp=N,32μm,1.2s						
TIP				AML	AML		
	comp=E,29μm,0.4s						
CELI	**Celico**	**2.20**	**10**	P	**Pn**	**03 47 34.4**	**+2.5**
CELI				AML	AML		
	comp=E,70μm,1.3s						
CELI				AML	AML		
	comp=N,103μm,0.4s						

CELI				AML	AML		
	comp=N,103μm,0.4s						
CELI				AML	AML		
	comp=E,70μm,1.3s						
CET2	**Cetraro**	**2.30**	**359**	P	**Pn**	**03 47 34.8**	**+1.7**
CET2				AML	AML		
	comp=E,156μm,0.8s						
CET2				AML	AML		
	comp=N,150μm,1.2s						
CET2				AML	AML		
	comp=N,150μm,1.2s						
CET2				AML	AML		
	comp=E,156μm,0.8s						
PIPA	**Pietrapaola**	**2.34**	**15**	P	**Pn**	**03 47 35.6**	**+1.9**
PIPA				AML	AML		
	comp=E,122μm,0.2s						
PIPA				AML	AML		
	comp=N,67μm,1.0s						
PIPA				AML	AML		
	comp=E,122μm,0.2s						
PIPA				AML	AML		
	comp=N,67μm,1.0s						
MGR	**Morigerati**	**2.93**	**353**	AML	AML		
	comp=E,34μm,0.6s						
MGR				AML	AML		
	comp=N,33μm,0.9s						
MGR				AML	AML		
	comp=E,34μm,0.6s						
MGR				AML	AML		
	comp=N,33μm,0.9s						
TAR1	**Taranto**	**3.44**	**16**	*e*Pn	**Pn**	**03 47 48.8**	**+0.1**
MATE	**Matera**	**3.46**	**9**	AML	AML		
	comp=N,47μm,1.1s						
MATE				AML	AML		
	comp=E,49μm,0.2s						
MATE				AML	AML		
	comp=N,47μm,1.1s						
MATE				AML	AML		
	comp=E,49μm,0.2s						
MASS	**Massafra**	**3.51**	**14**	*e*Pn	**Pn**	**03 47 50.0**	**+0.3**
CGL1	**Ceglie Messapi**	**3.60**	**18**	*e*Pn	**Pn**	**03 47 51.8**	**+0.8**
CGL1				Sn	**Sn**	**03 48 29.7**	**-2.9**
SG1	**Sgolgore (BA)**	**3.64**	**8**	*e*Pn	**Pn**	**03 47 52.7**	**+1.1**
SG1				Sn	**Sn**	**03 48 31.2**	**-2.3**
NOCI	**Noci**	**3.65**	**13**	AML	AML		
	comp=N,140μm,1.5s						
NOCI				AML	AML		
	comp=E,102μm,0.7s						
NOCI				AML	AML		
	comp=N,140μm,1.5s						
NOCI				AML	AML		
	comp=E,102μm,0.7s						
AMUR	**Altamura**	**3.70**	**7**	AML	AML		
	comp=N,54μm,1.5s						
AMUR				AML	AML		
	comp=E,78μm,0.2s						
AMUR				AML	AML		
	comp=N,54μm,1.5s						
AMUR				AML	AML		
	comp=E,78μm,0.2s						
FASA	**Fasano**	**3.73**	**16**	*e*Pn	**Pn**	**03 47 53.4**	**+0.7**
VLS	**Valsamata**	**3.75**	**74**	P	**Pn**	**03 47 53.3**	**+0.3**
VLS	**Valsamata**	**3.75**	**74**	AML	AML		
	comp=E,50μm,1.6s						
VLS				AML	AML		
	comp=E,50μm,1.6s						
VLS				AML	AML		
	comp=N,52μm,0.3s						
VLS				AML	AML		
	comp=N,52μm,0.3s						
FSK	**Fiskardo**	**3.80**	**70**	P	**Pn**	**03 47 54.3**	**+0.6**
KFL	**Anninata**	**3.89**	**76**	P	**Pn**	**03 47 55.3**	**+0.4**
EVGI	**Lefkada island**	**3.92**	**68**	P	**Pn**	**03 47 56.3**	**+0.9**
BAI	**Bari**	**3.93**	**10**	*e*Pn	**Pn**	**03 47 56.6**	**+1.1**
LKD2	**Lefkada island**	**3.98**	**66**	P	**Pn**	**03 47 56.7**	**+0.4**
TSLK	**Tsoukalades, L**	**4.00**	**65**	P	**Pn**	**03 47 56.8**	**+0.4**
DRO	**Drossia**	**4.58**	**79**	P	**Pn**	**03 48 06.2**	**+1.7**
ANX	**Ano Chora**	**4.87**	**72**	P	**Pn**	**03 48 09.9**	**+1.5**
AGG	**Agios Georgios**	**5.29**	**68**	P	**Pn**	**03 48 16.2**	**+2.0**
DID	**Didima**	**5.76**	**85**	P	**Pn**	**03 48 21.5**	**+0.8**
STON	**Ston**	**5.78**	**12**	*e*Pn	**Pn**	**03 48 21.2**	**+0.3**
STON				Sn	**Sn**	**03 49 20.7**	**-5.4**

ROM 10 03:47:02.6±0.1, 41°.715N±0°.006×13°.763E±0°.007, h9km, ML1.2/1, Error ellipse: s-maj=0.8km s-min=0.3km az=219.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POFI	**Posta Fibreno**	**0.04**	**273**	P	Pg	03 47 04.9	+0.4
POFI				S	Sg	03 47 06.0	+0.1
POFI				AML	AML		
	comp=E,386μm,0.7s						
POFI				AML	AML		
	comp=N,200μm,0.1s						
POFI				AML	AML		
	comp=N,200μm,0.1s						
POFI				AML	AML		
	comp=E,386μm,0.7s						
POFI				END			
POFI				END			
VVLD	**Villa Vallelon**	**0.19**	**326**	P	Pg	03 47 07.2	+0.6
VVLD				S	Sg	03 47 10.4	+1.1
VVLD				END			
VVLD				END			
CERA	**Filignano**	**0.23**	**121**	P	Pg	03 47 07.8	+0.6
CERA				S	Sg	03 47 11.8	+1.4
RNI2	**Rionero Sannit**	**0.29**	**92**	P	Pb	03 47 09.6	-0.5
INTR	**Introdacqua**	**0.31**	**20**	P	Pg	03 47 09.5	+0.6
INTR				S	Sb	03 47 14.9	-0.9
INTR				AML	AML		
	comp=E,65950μm,1.4s						
INTR				AML	AML		
	comp=N,86650μm,1.4s						
INTR				AML	AML		
	comp=E,65950μm,1.4s						
INTR				AML	AML		
	comp=N,86650μm,1.4s						
MIDA	**Miranda**	**0.38**	**101**	P	Pg	03 47 10.5	+0.5
MIDA				S	Sb	03 47 16.8	-0.7
CERT	**Cerreto**	**0.63**	**292**	P	Pg	03 47 14.5	-0.3
CERT				S	Sb	03 47 24.2	-0.6

*ISCJB **10** 03:52:04.2±0.8, 76°.15N±0°.03×24°.1E±0°.2, h10km, Error ellipse: s-maj=8.1km s-min=4.5km az=166.9*
*NAO **10** 03:52:06.7±2.7, 76°.12N×24°.18E, h18km±15km, ML2.5*
*BER **10** 03:52:08.1±2.5, 76°.13N×24°.67E, h23km±14km, ML1.9, ML2.5(NAO), Confirmed Earthquake*

ISC 10 03:52:04.9±1.0, 76°.13N±0°.04×24°.72E±0°.07, h10km, n15, σ2°45/28, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO	**Bjornoya**	**2.15**	**224**	*e*Pg	**Pb**	**03 52 46.6**	**+2.7**
BJO				*e*Sg	**Sb**	**03 53 12.6**	**+2.0**
BJO1	**Bjornoya**	**2.19**	**225**	Pg	**Pb**	**03 52 46.8**	**+2.3**
BJO1				Lg	Lg	03 53 13.1	
HSP	**Hornsund**	**2.32**	**297**	Pn	**Pn**	**03 52 43.0**	**+0.1**
HSP				Lg	Lg	03 53 15.8	
HSPB	**Hornsund (broa**	**2.32**	**297**	*e*P	**Pn**	**03 52 43.5**	**+0.6**
HSPB				*e*Sg	**Sb**	**03 53 16.1**	**+0.8**
HSPB				IAML		03 53 20.1	
	comp=Z,6.6nm,0.3s						
SPA0	**Spitsbergen Ar**	**2.78**	**322**	Pn	**Pn**	**03 52 49.4**	**0.0**
	baz=140,slow=14						
SPA0				Sn	**Sn**	**03 53 20.6**	**-2.2**
	baz=126,slow=28						
SPA0				Lg	Lg	03 53 31.9	
	baz=127,slow=28						
SPA0	**Spitsbergen Ar**	**2.78**	**322**	Pn	**Pn**	**03 52 49.4**	**0.0**
	baz=140,slow=14						
SPA0				Sn	**Sn**	**03 53 20.6**	**-2.2**
	baz=126,slow=28						
SPA0				Sg	**Sb**	**03 53 31.9**	**+3.4**
	baz=127,slow=28						
BRBA	**Barentsburg A**	**3.05**	**315**	Sn	**Sn**	**03 53 26.8**	**-2.7**
BRBA				Lg	Lg	03 53 37.4	
BRBA	**Barentsburg A**	**3.05**	**315**	Sn	**Sn**	**03 53 26.8**	**-2.7**
BRBA				Sg	**Sb**	**03 53 37.4**	**+1.1**
KBS	**Kingsbay**	**3.94**	**322**	Pn	**Pn**	**03 53 04.6**	**-0.7**
KBS				Sn	**Sn**	**03 53 50.6**	**-0.8**
KBS				Lg	Lg	03 54 07.5	
KBS	**Kingsbay**	**3.94**	**322**	*e*P	**Pn**	**03 53 04.4**	**-0.8**
KBS				*e*S	**Sn**	**03 53 47.7**	**-3.7**
KBS				IAML		03 54 12.9	
	comp=Z,14nm,0.3s						
KEV	**Kevo**	**6.44**	**173**	Pn	**Pn**	**03 53 41.6**	**+2.0**
KEV				Sn	**Sn**	**03 54 49.4**	**-3.6**
KEV	**Kevo**	**6.44**	**173**	Pn	**Pn**	**03 53 41.6**	**+2.0**
KEV				Sn	**Sn**	**03 54 49.4**	**-3.6**
ZFI2	**Zemlya Franca-**	**6.51**	**34**	*e*P	**Pn**	**03 53 43.0**	**+2.5**
ZFI2				*e*S	**Sn**	**03 54 51.6**	**-3.0**
	comp=Z,2.4nm,1.0s						
ARA0	**ARCESS Array S**	**6.63**	**178**	Pn	**Pn**	**03 53 43.1**	**+0.9**
	baz=1.3,slow=9.3						
ARA0				Sn	**Sn**	**03 54 54.0**	**-3.8**
	baz=2.3,slow=22						
ARA0	**ARCESS Array S**	**6.63**	**178**	Pn	**Pn**	**03 53 43.1**	**+0.9**
	baz=1.3,slow=9.3						
ARA0				Sn	**Sn**	**03 54 54.0**	**-3.8**
	baz=2.3,slow=22						

HEL 10 03:52:57.8±0.2, 67°.81N×20°.18E, h0km, ML1.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.72**	**70**	*e*P	Pg	03 53 10.5	-1.1
LANU				*e*S	Sg	03 53 20.4	-0.6
KIF	**Kilpisjarvi**	**1.22**	**11**	*e*P	Pg	03 53 20.5	-0.7
KIF				*e*S	Sg	03 53 36.4	-0.7
KIF				MSG		03 53 36.5	
	comp=Z,2.6nm,0.2s						
HEF	**Hetta**	**1.44**	**64**	*e*PN	Pb	03 53 25.4	0.0
HEF				MSG		03 53 40.6	
	comp=Z,1.1nm,0.2s						
HEF				*e*SB	Sg	03 53 42.3	-1.6
ERTU	**Ertsjaerv**	**1.48**	**147**	*e*P	Pn	03 53 24.5	-1.2
TOF	**Tornio**	**2.38**	**135**	MSG		03 54 11.4	
	comp=Z,0.7nm,0.2s						
TOF				*e*SG	Sb	03 54 12.6	+1.2
RNF	**Rovaniemi**	**2.57**	**115**	*e*PG	Pb	03 53 43.5	-1.2

*ISCJB **10** 03:54:28.8±0.8, 6°.67S±0°.05×131°.44E±0°.09, h100km, mb3.6/2, Error ellipse: s-maj=12.8km s-min=6.6km az=2.9*
*DJA **10** 03:54:31.6±0.5, 7°.5±2°.×13°.1E±°, h98km±11km, MA4.6/6, mb4.6/3, mB5.0/4, MLv4.7/6, Mw(mB)4.4/4*
*IDC **10** 03:54:38.0±8.7, 7°.25S×131°.07E, h144km±89km, mb3.4/2, mb1 3.9/6, mb1mx3.4/40, mbtmp4.3/6, Error ellipse: s-maj=76.7km s-min=26.7km az=38.0*

ISC 10 03:54:31.1±0.9, 6°.60S±0°.05×131°.29E±0°.09, h100km, n12, σ3°13/16, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.37**	**179**	P	**Pn**	**03 54 57.3**	**+1.5**
SAUI				S	**Sn**	**03 55 15.7**	**+1.2**
BNDI	**Bandanaira**	**2.48**	**326**	P	**Pn**	**03 55 11.6**	**+1.6**
BNDI				S	**Sn**	**03 55 40.4**	**+0.6**
FAKI	**Fak Fak**	**3.78**	**15**	P	**Pn**	**03 55 28.0**	**+0.6**
FAKI				S	**Sn**	**03 56 09.5**	**-1.5**
SWI	**Sorong**	**5.70**	**360**	P	**Pn**	**03 55 54.0**	**+0.6**
	33nm,0.6s,2μm						
SWI				S	**Sn**	**03 56 52.2**	**-5.3**
	33nm,0.6s,2μm						
SOEI	**Soe**	**7.62**	**245**	P	**Pn**	**03 56 20.3**	**+0.7**
TNTI	**Ternate**	**8.30**	**332**	P	Pn	03 56 50.5	+22
BATI	**Baumata**	**8.35**	**244**	P	**Pn**	**03 56 31.1**	**+1.6**
	baz=90,slow=3.0						
BATI				S	**Sn**	**03 57 57.9**	**-4.2**
	11nm,0.3s,baz=276,slow=24,SNR=6.3						
FITZ	**Fitzroy Crossi**	**12.68**	**205**	P	**Pn**	**03 57 24.4**	**-3.5**
	2.4nm,0.3s,baz=28,slow=11,SNR=66						
FITZ				S	Sn	03 59 34.6	-13
	1.9nm,0.3s,baz=120,slow=23,SNR=8.0						
WRA	**Warramunga Arr**	**13.59**	**168**	P	**Pn**	**03 57 36.0**	**-3.8**
	2.6nm,0.3s,baz=349,slow=13,SNR=7.0						
WRA				S	Sn	03 59 58.3	-11
	4.0nm,0.3s,baz=346,slow=23,SNR=8.0						
ASAR	**Alice Springs**	**17.15**	**172**	P	**Pn**	**03 58 23.6**	**-1.1**
	0.4nm,0.3s,baz=350,slow=13,SNR=28						
ASAR				S	Sn	04 01 22.2	-13
	0.6nm,0.3s,baz=354,slow=25,SNR=6.7						
MKAR	**Makanchi Array**	**68.60**	**326**	P	**P**	**04 05 28.0**	**+4.6**
	0.5nm,0.4s,baz=133,slow=7.8,SNR=8.8						
KURBB	**Kurchatov Arra**	**72.85**	**328**	P	**P**	**04 05 53.4**	**+4.4**
	0.5nm,0.6s,baz=120,slow=5.1,SNR=5.1						

IDC 10 03:57:34.3±28.0, 18°.45S×178°.34W, h492km±339km, mb3.1/7, mb1 3.3/7, mb1mx3.0/46, mbtmp3.9/7, Error ellipse: s-maj=87.6km s-min=55.5km az=40.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.43**	**242**	P	P	04 04 13.3	+0.3
	0.7nm,0.5s,baz=85,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**44.60**	**260**	P	P	04 05 01.3	-1.0
	1.2nm,0.8s,baz=94,slow=7.6,SNR=5.7						
ASAR	**Alice Springs**	**44.71**	**255**	P	P	04 05 02.8	-0.3
	2.8nm,0.4s,baz=89,slow=9.0,SNR=16						
FITZ	**Fitzroy Crossi**	**53.01**	**261**	P	P	04 06 05.3	+0.5
	3.7nm,1.0s,baz=83,slow=8.1,SNR=2.9						
PETK	**Petropavlovsk-**	**74.22**	**345**	P	P	04 08 20.7	+0.7
	1.1nm,0.6s,baz=147,slow=8.2,SNR=2.9						
TXAR	**Lajitas Array**	**86.23**	**58**	P	P	04 09 23.9	+0.3
	0.3nm,0.7s,baz=227,slow=4.8,SNR=2.9						
ILAR	**Eielson Array**	**86.40**	**13**	P	P	04 09 21.9	-1.5
	0.2nm,0.4s,baz=223,slow=4.6,SNR=6.1						

RSNC 10 04:01:37.9±1.1, 2°.51N×75°.40W, h4km±3km, ML3.4, Mw3.6, 3C-5D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BETC	**Betania**	**0.18**	**345**	*i* Pg	Pg	04 01 43.0	+1.5
MARP	**Paez Belalcaza**	**0.65**	**301**	*i* P	Pg	04 01 49.5	-1.0
MARP				*e*S	Sg	04 01 59.1	+0.1
MARP				*i*		04 01 59.4	
	comp=Z,2μm,0.3s						
FLOC	**Florencia**	**0.95**	**196**	*i* P	Pg	04 01 54.2	-2.0
FLOC				*e*S	Sg	04 02 07.5	-1.0
FLOC				*i*		04 02 08.7	
	comp=Z,1μm,0.4s						
PCON	**Cinco Dias**	**1.02**	**260**	*e*P	Pg	04 01 56.2	-1.3
PCON				*e*S	Sg	04 02 10.5	-0.2
SOTA	**Rioblanco**	**1.27**	**253**	*i* P	Pg	04 02 00.3	-1.9
SOTA				*e*S	Sg	04 02 17.8	-0.9
SOTA				*i*		04 02 18.7	
	comp=Z,821nm,0.3s						
POPC	**Popayan, Colom**	**1.28**	**272**	*i* P	Pg	04 02 00.3	-2.2
POPC				*e*S	Sg	04 02 18.1	-1.0
POPC				*i*		04 02 19.1	
	comp=Z,288nm,0.3s						
PRAC	**Prado**	**1.30**	**23**	*i* P	Pg	04 01 59.9	-3.1
PRAC				*e*S	Sg	04 02 18.3	-1.5
PRAC				*i*		04 02 23.5	
	comp=Z,558nm,0.3s						
YOTC	**Yotoco, Valle**	**1.75**	**327**	*i* P	Pn	04 02 07.1	-2.0
YOTC				*e*S	Sn	04 02 30.3	-1.7
YOTC				*i*		04 02 31.3	
	comp=Z,177nm,0.4s						
CRUC	**La Cruz**	**1.81**	**239**	*e*P	Pn	04 02 09.1	-1.2
CRUC				*e*S	Sn	04 02 33.4	-0.5
CRUC				*i*		04 02 35.8	
	comp=Z,377nm,0.4s						
BBAC	**Balboa, Cauca**	**1.91**	**255**	*i* P	Pn	04 02 10.9	-0.5
BBAC				*i*		04 02 39.0	
	comp=Z,359nm,0.9s						
GCUF	**Volcan Galeras**	**2.33**	**237**	*e*P	Pn	04 02 18.8	+1.4
VILC	**Villavicencio,**	**2.33**	**47**	*e*P	Pn	04 02 16.6	-0.6
RREF	**El Recreo**	**2.38**	**1**	*e*P	Pn	04 02 18.4	0.0
RREF				*e*S	Sn	04 02 49.3	+1.0
PTLC	**Puerto Leguiza**	**2.39**	**166**	*e*P	Pb	04 02 21.0	-0.6
PLMC	**San Jos del P**	**2.54**	**340**	*e*P	Pn	04 02 20.9	+0.8
PLMC				*e*S	Sb	04 02 55.1	-0.8
ROSC	**El Rosal**	**2.56**	**25**	*e*P	Pn	04 02 22.3	+1.8
CHIC	**Chingaza**	**2.69**	**38**	*e*P	Pn	04 02 21.6	-0.7
GUVC	**San Jose del G**	**2.77**	**89**	*e*P	Pn	04 02 20.6	-2.4
HELC	**Santa Helena**	**3.66**	**358**	*e*P	Pn	04 02 39.0	+3.3
RUSC	**La Rusia**	**4.08**	**34**	*e*P	Pn	04 02 40.4	-1.2
PTBC	**PUERTO BERRIO,**	**4.12**	**13**	*e*P	Pn	04 02 38.1	-3.5

IDC 10 04:13:39.8±5.7, 4°.99S×133°.97E, h0km, mb3.5/1, mb1 4.0/3, mb1mx3.5/21, mbtmp3.7/3, ML3.7/2, Error ellipse: s-maj=320.5km s-min=31.0km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.87**	**179**	Pn	Pn	04 17 10.0	-1.5
	0.3nm,0.3s,baz=357,slow=14,SNR=17						
WRA				Sn	Sn	04 19 43.7	-13
	0.1nm,0.3s,baz=360,slow=24,SNR=3.4						
ASAR	**Alice Springs**	**18.57**	**180**	P	Pn	04 17 58.9	+0.3
	0.5nm,0.3s,baz=5.0,slow=10,SNR=22						
ASAR				S	Sn	04 21 16.3	-11
	0.1nm,0.3s,baz=0.0,slow=29,SNR=3.6						
MKAR	**Makanchi Array**	**68.80**	**325**	P	P	04 24 46.0	0.0
	0.2nm,0.3s,baz=132,slow=6.0,SNR=3.7						

*IDC **10** 04:27:00.1±2.1, 5°.35S×128°.26E, h0km, mb3.8/1, mb1 4.1/3, mb1mx3.6/23, mbtmp3.8/3, ML3.8/2, Error ellipse: s-maj=135.1km s-min=29.9km az=67.0*
*ISCJB **10** 04:27:17.3±0.7, 5°.52S±0°.06×129°.78E±0°.09, h150km, mb4.2/2, Error ellipse: s-maj=13.9km s-min=7.0km az=159.7*
*NEIC **10** 04:27:18.7±2.3, 5°.46S×129°.79E, h156km±32km, mb4.2/5, Error ellipse: s-maj=30.8km s-min=12.4km az=119.0*

ISC 10 04:27:18.2±0.9, 5°.59S±0°.08×129°.8E±0°.1, h150km, n14, σ2°31/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.81**	**148**	*e*Pn	**Pn**	**04 28 02.6**	**-0.5**
FAKI	**Fak Fak**	**3.60**	**43**	*e*Pn	**Pn**	**04 28 13.7**	**+0.5**
MTN	**Manton Dam**	**7.33**	**170**	*e*Pn	**Pn**	**04 29 04.4**	**+1.7**
MTN				*e*Sn	**Sn**	**04 30 28.7**	**+4.0**
LUWI	**Luwuk**	**8.35**	**302**	*e*Pn	**Pn**	**04 29 15.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**13.09**	**198**	*e*Pn	**Pn**	**04 30 20.4**	**+1.8**
WRAB	**Tennant Creek**	**14.93**	**163**	*e*Pn	**Pn**	**04 30 43.6**	**+1.8**
	8.2nm,1.1s						
WR1	**Warramunga Arr**	**14.94**	**163**	*e*Pn	**Pn**	**04 30 42.9**	**+1.0**
WR1				*e*Sn	**Sn**	**04 33 24.4**	**-3.5**
WRA	**Warramunga Arr**	**14.94**	**163**	Pn	**Pn**	**04 30 42.9**	**+1.0**
	0.2nm,0.3s,baz=337,slow=13,SNR=13						
WRA				Sn	**Sn**	**04 33 24.4**	**-3.5**
	0.6nm,0.3s,baz=337,slow=24,SNR=7.5						
WC3	**Warramunga Arr**	**14.96**	**163**	*e*Pn	**Pn**	**04 30 43.0**	**+0.8**
	17nm,1.4s						
COEN	**Coen**	**15.57**	**123**	*e*Pn	**Pn**	**04 30 50.7**	**+0.9**
	33nm,1.5s						
ASAR	**Alice Springs**	**18.41**	**168**	P	**P**	**04 31 23.4**	**+1.4**
	0.8nm,0.3s,baz=346,slow=9.7,SNR=51						
ASAR				S	**S**	**04 34 41.6**	**-2.9**
	0.1nm,0.3s,baz=353,slow=21,SNR=4.7						
SBUM	**Sibu**	**19.29**	**294**	*e*P	**P**	**04 31 31.6**	**-0.1**
	9.7nm,1.6s						
FORT	**Forrest**	**25.12**	**184**	*e*P	**P**	**04 32 25.9**	**-3.3**
	48nm,1.3s						
MKAR	**Makanchi Array**	**66.94**	**327**	P	P	04 37 48.0	-6.6
	0.3nm,0.3s,baz=127,slow=5.9,SNR=4.8						

*ISCJB **10** 04:28:43.0±0.7, 22°.07S±0°.03×68°.66W±0°.06, h125km±9km, Error ellipse: s-maj=9.6km s-min=5.4km az=173.4*
*SJA **10** 04:28:42.4±0.6, 22°.04S×68°.60W, h120km±4km, ML2.7, MW3.5*
*GUC **10** 04:28:43.2±0.7, 22°.06S×68°.60W, h122km±3km, ML3.3*

ISC 10 04:28:43.8±1.5, 22°.06S±0°.04×68°.64W±0°.05, h118km±11km, n25, σ0°40/43, 10C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.60**	**204**	*i* P	**Pn**	**04 29 02.1**	**-0.5**
LVC				*i* S	**Sn**	**04 29 17.1**	**+0.4**
LVC	**Limon Verde**	**0.60**	**204**	*e*P	**Pn**	**04 29 02.1**	**-0.5**
LVC				*e*S	**Sn**	**04 29 16.0**	**-0.8**
PB09	**IPOC Station P**	**0.61**	**295**	*i* P	**Pn**	**04 29 02.3**	**-0.2**
PB09				*i* S	**Sn**	**04 29 16.9**	**+0.3**
PB09	**IPOC Station P**	**0.61**	**295**	*i* P	**Pn**	**04 29 02.5**	**0.0**
PB09				*e*S	**Sn**	**04 29 16.5**	**0.0**
PB09				IAML		04 29 18.9	
	comp=E,948nm,0.6s						
PB03	**IPOC Station P**	**1.03**	**270**	*i* P	**Pn**	**04 29 06.0**	**-0.2**
PB03	**IPOC Station P**	**1.03**	**270**	⇑*i* P	**Pn**	**04 29 05.8**	**-0.3**
PB03				*e*S	**Sn**	**04 29 23.1**	**+0.2**
PB03				IAML		04 29 24.4	
	comp=E,686nm,0.1s						
PB06	**IPOC Station P**	**1.07**	**233**	*i* P	**Pn**	**04 29 06.6**	**0.0**
PB06				*i* S	**Sn**	**04 29 24.7**	**+0.9**
PB06	**IPOC Station P**	**1.07**	**233**	⇑*i* P	**Pn**	**04 29 06.5**	**0.0**
PB06				*e*S	**Sn**	**04 29 23.8**	**+0.1**
PB06				IAML		04 29 24.7	
	comp=N,866nm,0.6s						
PB07	**IPOC Station P**	**1.20**	**286**	*i* P	**Pn**	**04 29 07.8**	**-0.1**
PB07				*i* S	**Sn**	**04 29 27.4**	**+1.3**
PB07	**IPOC Station P**	**1.20**	**286**	⇑*i* P	**Pn**	**04 29 07.9**	**-0.1**
PB07				*e*S	**Sn**	**04 29 26.4**	**+0.2**
PB07				IAML		04 29 27.2	
	comp=N,607nm,0.1s						
PB01	**IPOC Station P**	**1.28**	**322**	*e*P	**Pn**	**04 29 08.6**	**-0.2**
PB01				*e*S	**Sn**	**04 29 27.6**	**0.0**
PB01				IAML		04 29 28.9	
	comp=E,603nm,0.3s						
PB15	**IPOC Station P**	**1.37**	**214**	*i* P	**Pn**	**04 29 09.9**	**0.0**
PB15	**IPOC Station P**	**1.37**	**214**	⇑*i* P	**Pn**	**04 29 10.0**	**+0.1**
PB15				*i* S	**Sn**	**04 29 30.0**	**+0.4**
PB02	**IPOC Station P**	**1.38**	**302**	*i* P	**Pn**	**04 29 09.7**	**-0.2**
PB02				*i* S	**Sn**	**04 29 29.7**	**+0.2**
PB02	**IPOC Station P**	**1.38**	**302**	*e*P	**Pn**	**04 29 09.8**	**-0.1**
PB02				*e*S	**Sn**	**04 29 29.6**	**0.0**
PB04	**IPOC Station P**	**1.42**	**259**	⇑*i* P	**Pn**	**04 29 10.1**	**-0.2**
PB04				*e*S	**Sn**	**04 29 30.9**	**+0.4**
PB04				IAML		04 29 35.4	
	comp=E,468nm,0.2s						
PB05	**IPOC Station P**	**1.64**	**241**	⇑*i* P	**Pn**	**04 29 12.7**	**-0.2**
PB05				*i* S	**Sn**	**04 29 34.8**	**-0.3**
PB05				IAML		04 29 38.3	
	comp=N,192nm,0.3s						
PB08	**IPOC Station P**	**1.97**	**346**	⇑*i* P	**Pn**	**04 29 17.7**	**+0.5**
PB08				*i* S	**Sn**	**04 29 43.2**	**+0.6**
PB08				IAML		04 29 44.6	
	comp=E,197nm,0.2s						
GO01	**Chusmiza**	**2.44**	**348**	⇑*i* P	**Pn**	**04 29 23.3**	**+0.1**
GO01				*e*S	**Sn**	**04 29 53.1**	**-0.2**
PB11	**IPOC Station P**	**2.48**	**337**	⇑*i* P	**Pn**	**04 29 22.7**	**-0.7**
PB11				*i* S	**Sn**	**04 29 53.5**	**-0.2**
YJA	**Yavi**	**2.90**	**93**	*i* P	**Pn**	**04 29 29.3**	**+0.1**
YJA				IAML		04 29 31.1	
	comp=Z,12nm,0.4s						
MNMC	**Minye Minye**	**3.05**	**343**	⇑*i* P	**Pn**	**04 29 30.4**	**-0.6**
HJA	**Humahuaca**	**3.20**	**112**	*i* P	**Pn**	**04 29 33.2**	**+0.1**
HJA				IAML		04 29 35.2	
	comp=Z,16nm,0.4s						
GO02	**Mina Guanaco**	**3

NIKH eSn S 04 45 13.9 -3.0
OKAK Okmok 1.52 82 ePn Pn 04 44 53.0 -0.9
OKWE Okmok W'ng Wal 1.59 86 ePn Pn 04 44 53.4 -1.0
OKTU Okmok Mt. Tuli 1.71 89 ePn Pn 04 44 54.8 -0.8
KOSE Korovin Southe 2.19 242 ePn Pn 04 45 00.4 0.0
KONE Korovin Northe 2.20 244 ePn Pn 04 45 00.4 0.0
KOFP Korovin Flat P 2.25 241 ePn Pn 04 45 00.8 -0.2
KOKL Mount Kliuchef 2.28 243 ePn Pn 04 45 01.2 -0.2
KOWE Korovin West 2.28 244 ePn Pn 04 45 01.3 -0.1
ATKA Atka Island 2.34 240 ePn Pn 04 45 01.3 -0.6
ATKA eSn S 04 45 34.4 0.0
MCIR Makushin Cirqu 2.44 75 ePn Pn 04 45 03.2 +0.1
MSW Makushin Switc 2.50 76 ePn Pn 04 45 03.0 -0.7
MSW eSn S 04 45 37.8 +0.1
MREP Makushin Rep't 2.50 79 ePn Pn 04 45 03.7 -0.1
UNV Unalaska Valle 2.65 79 ePn Pn 04 45 04.8 -0.5
UNV eSn S 04 45 37.6 -3.0
AKRB Akutan Reef Bi 2.96 74 ePn Pn 04 45 08.6 -0.2
AKRB eSn S 04 45 48.2 +1.3
AKUT Akutan 3.13 74 ePn Pn 04 45 10.7 -0.1
AKUT eSn S 04 45 49.9 -0.6
AKSA Akutan Strait 3.17 74 ePn Pn 04 45 10.8 -0.6
AKSA eSn S 04 45 52.0 +0.6
GSTR Great Sitkin T 3.40 249 ePn Pn 04 45 14.0 -0.1
GSMY Great Sitkin M 3.42 249 ePn Pn 04 45 14.0 -0.4
GSTD Great Sitkin T 3.47 249 ePn Pn 04 45 14.6 -0.4
GSTD eSn S 04 45 57.8 -0.1
ETKA Kagalaska Isla 3.70 248 ePn Pn 04 45 17.1 -0.6
ADAG Mount Adagdak 3.75 250 ePn Pn 04 45 18.5 +0.1
SPIA Saint Paul Isl 3.80 5 ePn Pn 04 45 19.3 +0.4
WESP Westdahl Peak 3.81 71 ePn Pn 04 45 19.3 +0.2
WESP eSn S 04 46 05.8 +0.4
WEBT Westdahl Beart 3.81 69 ePn Pn 04 45 19.4 +0.3
ADK Adak 3.84 249 ePn Pn 04 45 18.9 -0.6
ADK eSn S 04 46 03.5 -2.5
ADK Adak 3.84 249 eP Pn 04 45 18.9 -0.6
ADK e 04 46 03.5
KIRH Kanaga Island 4.07 251 ePn Pn 04 45 22.0 -0.2
KINC Kanaga Island 4.07 251 ePn Pn 04 45 22.0 -0.3
KICM Kanaga Island 4.12 251 ePn Pn 04 45 22.7 -0.1
KIWB Kanaga Island 4.12 250 ePn Pn 04 45 22.7 -0.2
KIWB eSn S 04 46 07.7 -4.5
KIKV Kanaga Island 4.12 251 ePn Pn 04 45 22.7 -0.2
KIMD Kanaga Island 4.20 250 ePn Pn 04 45 23.6 -0.4
TAPA Tanaga Point A 4.51 252 ePn Pn 04 45 27.6 -0.2
TAFP Tanaga Falls P 4.57 254 ePn Pn 04 45 28.5 -0.1
TASE Tanaga Southea 4.63 253 ePn Pn 04 45 29.4 +0.1
FALS False Pass 4.63 69 ePn Pn 04 45 29.1 -0.1
FALS eSn S 04 46 22.4 -1.4
TANO Tanaga North 4.64 254 ePn Pn 04 45 30.1 +0.6
GALAA Gareloi Lava P 5.08 254 ePn Pn 04 45 35.2 +0.3
DOL Dolgoi Island 5.57 68 ePn Pn 04 45 40.7 -0.5
PS4A Pavlof South-4 5.63 66 ePn Pn 04 45 42.1 +0.1
PVV Pavlof Volcano 5.67 66 ePn Pn 04 45 42.1 -0.4
SDPT Sand Point 6.39 68 ePn Pn 04 45 50.1 -1.6
CHGN Chignik 7.77 63 ePn Pn 04 46 07.3 -2.2
CHGN eSn S 04 47 30.7 -6.4
SII Sitkinak Islan 10.11 65 ePn Pn 04 46 38.0 -1.9
OHAK Old Harbor 10.73 62 ePn Pn 04 46 44.5 -3.3
KDAK Kodiak Island 11.24 60 ePn Pn 04 46 52.0 -2.3
KDAK Kodiak Island 11.24 60 eP Pn 04 46 52.0 -2.3
SVW2 Sparrevohn 11.30 41 ePn Pn 04 46 56.1 +1.0
ANM Nome 11.55 12 ePn Pn 04 46 59.9 +1.7
ANM Nome 11.55 12 eP Pn 04 46 59.9 +1.7
RSO Redoubt South 12.14 47 ePn Pn 04 47 05.7 -0.3
HOM Homer 12.31 52 ePn Pn 04 47 09.4 +1.6
CNPM China Poot 12.45 53 ePn Pn 04 47 08.2 -1.5
BRLK Bradley Lake 12.70 52 ePn Pn 04 47 11.9 -1.0
CAST Castle Rocks 14.00 37 ePn P 04 47 31.0 +0.3
PMR Palmer 14.23 46 ePn Pn 04 47 31.5 -0.2
PMR Palmer 14.23 46 eP Pn 04 47 31.5 -0.2
MID Middleton Isla 14.81 56 ePn Pn 04 47 37.1 -1.8
MID Middleton Isla 14.81 56 eP Pn 04 47 37.1 -1.8
SCM Sheep Creek Mo 15.11 47 ePn Pn 04 47 41.6 -1.0
129nm,0.8s
SCM Sheep Creek Mo 15.11 47 eP Pn 04 47 41.6 -1.0
SCM pmax pmax
comp=Z,129nm,0.8s
MCK McKinley 15.34 39 ePn P 04 47 45.4 -0.1
comp=Z,48nm,1.0s
MCK McKinley 15.34 39 eP P 04 47 45.4 -0.1
MCK pmax pmax
comp=Z,48nm,1.0s
MLY Manley 15.47 33 ePn P 04 47 48.9 +2.0
comp=Z,53nm,1.0s
CCB Clear Creek Bu 16.25 37 eP P 04 47 54.8 -0.7
comp=Z,21nm,0.6s
MDM Murphy Dome 16.28 36 eP Pn 04 47 56.7 +0.1
comp=Z,18nm,0.9s
TCOL CIGO, UAF Yank 16.36 36 P Pn 04 47 56.9 -0.6
baz=236
COLA College 16.36 36 d iP Pn 04 47 57.2 -0.3
HDA Harding Lake 16.44 39 P P 04 47 57.6 0.0
baz=239
POKR Poker Plat Res 16.65 36 P P 04 47 59.2 -0.6
baz=236
ILAR Eielson Array 16.65 37 P P 04 47 58.4 -1.5
comp=Z,13nm,0.3s,baz=237,slow=8.7,SNR=501
ILAR S S 04 50 59.1 -4.1
baz=245,slow=15,SNR=2.8
ILAR ScP ScP 04 55 50.9 -0.8
comp=Z,0.3nm,0.3s,baz=272,slow=3.3,SNR=17
MENT Mentasta 17.09 45 eP Pn 04 48 06.1 0.0
comp=Z,30nm,0.4s
SCRK Sand Creek 17.39 42 eP P 04 48 08.2 +0.1
comp=Z,56nm,0.6s
FYU Fort Yukon 18.21 34 eP Pn 04 48 18.6 -0.7
comp=Z,167nm,0.6s
BCPM Bancas Point 18.25 56 eP P 04 48 17.8 +0.5
comp=Z,45nm,0.7s
BILL Bilibino 18.26 332 ||eP Pn 04 48 18.8 -1.0
BILL pmax pmax
comp=Z,9.0nm,1.7s
TOLK Toolik Lake Re 18.27 25 P Pn 04 48 19.3 -0.7
baz=224,SNR=68
PETK Petropavlovsk- 18.72 282 P P 04 48 23.0 +0.5
comp=Z,0.4nm,0.3s,baz=85,slow=14,SNR=9.1
EGAK Eagle 18.84 41 eP P 04 48 24.6 +1.0
comp=Z,69nm,0.6s
SIT Sitka 20.46 65 eP P 04 48 41.7 +0.7
comp=Z,37nm,1.1s
SIT Sitka 20.46 65 eP P 04 48 41.7 +0.7
SIT pmax pmax
comp=Z,37nm,1.1s
WHY Whitehorse 20.68 55 eP P 04 48 42.6 -0.8
comp=Z,12nm,0.8s
EPYK Eagle Plains 21.15 39 eP P 04 48 47.8 -0.5
comp=Z,34nm,0.4s
EPYK Eagle Plains 21.15 39 P P 04 48 47.3 -0.9
baz=249,SNR=37
SEY Seymchan 21.29 311 P P 04 48 50.1 +0.3
comp=Z,9.3nm,0.7s,baz=106,slow=8.4,SNR=18
SEY PcP PcP 04 52 45.3 +0.3
comp=Z,1.1nm,0.2s,baz=171,slow=5.7,SNR=4.6
CRAG Craig 21.89 69 eP P 04 48 57.2 +1.5
comp=Z,14nm,0.7s
WRAK Wrangell Islan 22.16 67 eP P 04 49 00.7 +2.3
comp=Z,46nm,1.1s
DIB Dawson Inlet, 22.78 75 eP P 04 49 06.5 +2.5
comp=Z,8.8nm,0.9s
INK Inuvik 23.01 35 P P 04 49 06.5 +0.5
comp=Z,31nm,0.5s,baz=239,slow=6.6,SNR=133
INK Inuvik 23.01 35 eP P 04 49 06.5 +0.5
comp=Z,69nm,1.1s
MOBC Moresby Island 23.09 75 eP P 04 49 08.7 +1.9
comp=Z,23nm,0.9s
DLBC Dease Lake 23.17 61 P P 04 49 09.5 +1.9
comp=Z,13nm,0.5s,baz=275,slow=7.6,SNR=43
DLBC pP pP 04 49 49.7 +5.1
comp=Z,11nm,0.8s,baz=287,slow=9.5,SNR=3.7
YSS Yuzh-Sakhalins 29.94 277 eP P 04 50 05.4 -2.7
YSS pmax pmax
comp=Z,13nm,1.3s
YKA Yellowknife Ar 30.27 50 P P 04 50 10.5 -0.3
comp=Z,1.9nm,0.3s,baz=274,slow=7.3,SNR=25
YKA ScP ScP 04 56 27.8 -0.3
comp=Z,0.4nm,0.4s,baz=280,slow=3.1,SNR=4.8
D03D Eldon 30.51 81 P P 04 50 13.2 +0.1
baz=299
B05A Bryant 30.75 80 P P 04 50 15.9 +0.7
baz=298
TIXI Tiksi 31.37 328 i P P 04 50 21.3 +0.9
TIXI pmax pmax
comp=Z,1.0nm,0.3s

HAWA Hanford 33.19 81 eP P 04 50 38.4 +1.9
comp=Z,5.8nm,0.6s
NEW Newport 33.66 77 P P 04 50 42.1 +1.5
NEW pmax pmax
comp=Z,14nm,0.7s
NEW Newport 33.66 77 P P 04 50 41.8 +1.2
baz=299,SNR=10
WALA Waterton Lakes 35.13 73 eP P 04 50 54.4 +1.1
comp=Z,2.7nm,0.7s
RES Resolute Bay 35.84 26 P P 04 50 59.1 +0.2
RES pmax pmax
comp=Z,5.0nm,1.9s
MSO Missoula 36.25 77 P P 04 51 03.4 +0.7
baz=302
HLID Hailey 37.78 82 eP P 04 51 16.9 +1.1
comp=Z,1.8nm,0.7s
HLID Hailey 37.78 82 P P 04 51 16.5 +0.7
baz=305
USRK Ussuriysk Ar. 37.79 280 PcP PcP 04 53 27.9 +0.3
comp=Z,1.8nm,0.7s,baz=96,slow=1.4,SNR=4.3
MCMT McKenzie Canyo 37.98 79 eP P 04 51 19.1 +1.6
MCMT ePcP PcP 04 53 30.2 +1.6
EGMT Eagleton 38.03 73 P P 04 51 18.4 +0.7
baz=302,SNR=5.7
BOZ Bozeman (W) 38.26 77 P P 04 51 20.3 +0.5
baz=304,SNR=6.7
NVAR Mina Array Bea 38.60 91 P P 04 51 24.9 +2.1
comp=Z,1.3nm,0.6s,baz=300,slow=8.2,SNR=13
NVAR PcP PcP 04 53 31.9 +1.3
comp=Z,1.2nm,0.6s,baz=283,slow=2.6,SNR=8.8
MJAR Matsushiro Arr 38.84 265 PcP PcP 04 53 31.1 0.0
comp=Z,0.9nm,0.3s,baz=95,slow=3.9,SNR=4.2
ELK Elko 38.98 86 eP P 04 51 26.9 +1.0
comp=Z,1.0nm,0.8s
FFC Flin Flon 38.98 59 eP P 04 51 25.9 +0.5
comp=Z,3.8nm,0.6s
FFC Flin Flon 38.98 59 eP P 04 51 25.9 +0.5
FFC pmax pmax
comp=Z,4.0nm,0.6s
RLMT Red Lodge 39.91 76 P P 04 51 33.6 +0.1
baz=305
CWC Cottonwood Cre 40.05 93 P P 04 51 35.8 +1.1
baz=312
PKM Mcpherson Peak 40.07 96 P P 04 51 35.6 +0.7
baz=314
R11A Troy Canyon, C 40.28 89 P P 04 51 37.2 +0.6
baz=310
ISA Isabella, Lake 40.34 94 P P 04 51 38.0 +1.0
baz=313
FURC Furnace Creek, 40.76 92 P P 04 51 41.1 +0.9
baz=312
DUG Dugway, Tooele 40.77 85 P P 04 51 40.1 -0.4
baz=309
LAO LASA Array 40.77 72 P P 04 51 40.4 0.0
baz=304,SNR=5.7
TPNV Topopah Spring 40.80 91 P P 04 51 41.1 +0.2
baz=312
BW06 Boulder Array 41.12 79 eP P 04 51 44.8 +1.4
comp=Z,2.1nm,0.7s
BW06 Boulder Array 41.12 79 P P 04 51 44.2 +0.8
baz=307,SNR=5.6
PDAR Pinedale Array 41.12 79 P P 04 51 44.8 +1.3
comp=Z,1.9nm,0.5s,baz=302,slow=3.5,SNR=18
PDAR PcP PcP 04 53 38.1 -0.5
comp=Z,0.4nm,0.5s,baz=287,slow=1.5,SNR=3.1
PDAR ScP ScP 04 57 08.4 0.0
comp=Z,0.3nm,0.6s,baz=294,slow=2.2,SNR=3.8
LCMT Little Creek M 42.56 89 eP P 04 51 54.1 -0.9
comp=Z,1.9nm,0.8s
K22A Casper 42.97 77 P P 04 51 58.4 +0.2
baz=308
O20A White River Ci 43.52 81 P P 04 52 03.9 +1.1
baz=310,SNR=5.6
RSSD Black Hills 43.52 74 P P 04 52 02.8 0.0
baz=307
MDND Maddock 43.83 67 P P 04 52 05.7 +0.8
baz=305
PV03 Paradox Valley 44.37 84 eP P 04 52 10.9 +1.4
comp=Z,1.6nm,0.7s
KSRS Korea Array 44.38 275 P P 04 52 09.5 +0.2
comp=Z,1.0nm,0.5s,baz=61,slow=7.5,SNR=3.8
ULM Lac du Bonnet 44.48 62 P P 04 52 09.9 -0.1
comp=Z,2.6nm,0.3s,baz=307,slow=6.8,SNR=4.3
AGMN Agassiz Nation 45.62 65 P P 04 52 18.8 -0.2
baz=306
SDCO Great Sand Dun 46.70 82 eP P 04 52 29.1 +1.3
comp=Z,1.3nm,0.6s
ECSD EROS Data Cent 47.98 70 P P 04 52 37.2 -0.2
baz=309
TASM ASL Pad, Albuq 48.01 86 P P 04 52 39.4 +1.5
baz=313
EYMN Ely 48.17 62 P P 04 52 38.9 +0.2
baz=308
BGNE Belgrade 48.60 73 P P 04 52 42.9 +0.8
baz=310
F37A Hinrichs Farm, 48.94 65 P P 04 52 44.4 -0.2
baz=309,SNR=5.6
E38A The Farm, Brul 48.97 64 P P 04 52 44.8 0.0
baz=309
SPMN Marine on St. 49.16 66 P P 04 52 46.9 +0.7
baz=309
F38A Pierce - Schro 49.20 65 P P 04 52 46.5 0.0
baz=309,SNR=6.6
CBKS Cedar Bluff 49.38 77 P P 04 52 48.6 +0.6
baz=312
ULN Ulaanbaatar 49.62 299 ceP P 04 52 49.9 0.0
ULN pmax pmax
comp=Z,8.0nm,2.3s
F39A Loretta 49.74 64 P P 04 52 51.0 +0.4
baz=309
SONM Songino Array 49.98 299 P P 04 52 52.2 -0.4
comp=Z,0.4nm,0.5s,baz=52,slow=9.7,SNR=3.9
SONM pP pwP 04 53 41.5 +0.3
comp=Z,2.1nm,0.8s,baz=58,slow=7.9,SNR=8.8
SONM ScP ScP 04 57 42.2 -2.9
comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=3.6
G39A Holcombe 50.01 65 P P 04 52 52.5 -0.2
baz=310
F40A Park Falls 50.17 64 P P 04 52 53.7 -0.2
baz=310
G40A Rib Lake 50.55 64 P P 04 52 56.4 -0.3
baz=310
F41A Three Lakes 50.83 63 P P 04 52 58.7 -0.1
baz=310
MNTX Cornudas Mount 50.92 88 P P 04 53 00.5 +0.9
baz=316
SCIA State Center 51.07 70 P P 04 53 00.8 +0.2
baz=311
G41A Antigo 51.13 64 P P 04 53 01.1 0.0
baz=310
I41A Arkdale 51.51 65 P P 04 53 03.5 -0.4
baz=311
E43A Lone Tree Farm 51.54 62 eP P 04 53 04.3 +0.2
comp=Z,8.2nm,0.5s
E43A Lone Tree Farm 51.54 62 P P 04 53 03.8 -0.2
baz=310,SNR=6.0
HHC Hu-ho-hao-te 51.70 289 eP P 04 53 05.3 -0.1
HHC pmax pmax
comp=Z,18nm,1.1s
HHC pmax pmax
comp=Z,200nm,5.9s
F43A Flat Rock, Esc 51.80 62 P P 04 53 05.8 -0.2
baz=311
G43A Wallace 51.90 63 P P 04 53 06.7 -0.1
baz=311
H42A Shiocton 51.94 64 P P 04 53 07.3 +0.3
baz=311
JFWS Jewell Farm 52.06 67 P P 04 53 07.8 -0.1
baz=312
L40A Anamosa 52.08 68 P P 04 53 08.4 +0.3
baz=312
F44A Big Bay de Noc 52.10 62 P P 04 53 08.5 +0.4
baz=311
I42A Draeger Farm, 52.14 65 P P 04 53 08.7 +0.2
baz=311
H43A Windswept, Lux 52.38 64 P P 04 53 10.2 -0.1
baz=311
K42A Prairie Point, 52.64 66 P P 04 53 12.1 -0.1
baz=312
N40A Mertquake, Sal 52.67 70 P P 04 53 12.3 -0.1
baz=312
D46A Sault St. Mari 52.74 59 P P 04 53 12.6 -0.3
baz=311
M41A Milan 52.92 68 P P 04 53 13.7 -0.6
baz=312
E46A Sault Ste Mari 52.95 60 P P 04 53 14.5 +0.1
baz=312
L42A Oliver, Polo 52.98 67 P P 04 53 14.6 -0.1
baz=312

D47A Chapleau 53.11 59 P P 04 53 15.5 -0.1
baz=312
G46A Petoskey 53.36 61 P P 04 53 17.5 +0.1
baz=312
E47A Iron Bridge 53.42 59 P P 04 53 17.8 0.0
baz=312
NJ2 Nanjing 53.50 276 eP P 04 53 18.8 +0.2
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
TXAR Lajitas Array 53.65 88 P P 04 53 20.9 +1.0
comp=Z,2.6nm,0.8s,baz=301,slow=5.4,SNR=22
TXAR PcP PcP 04 54 24.2 +0.8
comp=Z,0.9nm,0.5s,baz=276,slow=1.2,SNR=6.4
ABTX Abilene, Hawle 53.69 83 P P 04 53 21.2 +1.2
baz=315
D48A Paudash Townsh 53.69 58 P P 04 53 19.5 -0.3
baz=312
M43A Waltham Townsh 53.76 67 P P 04 53 20.5 +0.2
baz=313
L44A Lake County Fo 53.83 66 P P 04 53 21.1 +0.3
baz=313
D49A Beulah Townshi 53.86 57 P P 04 53 20.6 -0.4
baz=312,SNR=6.3
E48A Lockeyer 53.98 59 P P 04 53 22.1 +0.3
baz=312
MATQ Matagami 54.01 53 P P 04 53 21.2 -0.9
baz=312
HDIL Hopedale 54.17 68 P P 04 53 23.3 0.0
baz=313
F48A Evansville 54.18 60 P P 04 53 22.8 -0.6
baz=312
H47A Mio 54.19 62 P P 04 53 23.6 +0.2
baz=312
J46A Howard City 54.27 64 P P 04 53 24.3 +0.3
baz=313
M44A Midewin, Midew 54.30 67 P P 04 53 24.3 0.0
baz=313
F49A Sandfield 54.52 59 P P 04 53 25.8 0.0
baz=313
K46A Dorr 54.64 64 P P 04 53 26.9 +0.2
baz=313
N44A Piper City 54.65 67 P P 04 53 26.7 0.0
baz=313
P43A Skaggs, Pawnee 54.67 69 P P 04 53 26.9 0.0
baz=314
D50A G1974 Best Tow 54.69 57 P P 04 53 26.8 -0.2
baz=313
E50A Wahnapitae 54.74 58 P P 04 53 27.1 -0.3
baz=313,SNR=5.2
J47A Sunmer 54.78 63 P P 04 53 28.1 +0.4
baz=313
CCM Cathedral Cave 54.79 72 P P 04 53 28.7 +0.9
baz=314
LSQQ Lebel-sur-Quev 54.80 53 P P 04 53 27.2 -0.5
baz=313
N45A Kentland 54.96 67 P P 04 53 28.7 -0.3
baz=313
K47A Vermontville 55.08 64 P P 04 53 29.5 -0.3
baz=313
JCT Junction City 55.13 85 P P 04 53 31.2 +0.8
baz=316
TOBO Tobermory, Bru 55.16 59 P P 04 53 29.7 -0.6
baz=313,SNR=6.1
O45A Potomac 55.25 68 P P 04 53 31.2 +0.1
baz=314
E51A G1948 Merrick 55.30 57 P P 04 53 30.8 -0.6
baz=313,SNR=6.3
CHGQ Chibougamau 55.45 51 P P 04 53 31.4 -1.0
baz=314
F51A Arnstein 55.50 58 P P 04 53 32.2 -0.5
baz=313
D52A ZEK Alpawa Sen 55.53 56 P P 04 53 32.5 -0.5
baz=314
KLBO Killbear Provi 55.74 59 P P 04 53 34.3 -0.2
baz=314
BMRO Meriville Lake 55.75 60 P P 04 53 34.4 -0.1
baz=314
D53A Lac Vacive, Po 55.81 56 P P 04 53 34.5 -0.5
baz=314
K49A Clarkson 55.82 63 P P 04 53 35.3 +0.2
baz=314
E52A Mattawa 55.89 57 P P 04 53 34.5 -1.0
baz=314
F52A Sundridge 55.89 58 P P 04 53 34.9 -0.7
baz=314,SNR=12
MIAR Mount Ida 55.90 77 P P 04 53 36.3 +0.5
baz=315
N47A Urbana 55.93 66 P P 04 53 36.0 0.0
baz=314
Q45A Warren Harvey, 55.95 69 P P 04 53 36.0 -0.1
baz=314
P46A Rosedale 55.98 68 P P 04 53 36.1 -0.1
baz=314
ZALV Zalesovo Beam 56.04 316 pP pP 04 54 26.2 +4.7
comp=Z,0.9nm,0.6s,baz=16,slow=7.5,SNR=2.3
BUKO Buck Lake 56.10 58 P P 04 53 36.8 -0.2
baz=314
O47A Sheridan 56.12 67 P P 04 53 36.6 -0.6
baz=314
L49A Milan 56.12 64 P P 04 53 36.5 -0.7
baz=314
S44A Carbondale 56.17 71 P P 04 53 37.7 +0.1
baz=315
D54A Lac Fusel, La 56.28 55 P P 04 53 37.9 -0.4
baz=314
I51A Listowel 56.40 60 P P 04 53 38.8 -0.4
baz=314
H52A Wyevale 56.40 59 P P 04 53 38.7 -0.5
baz=314,SNR=5.0
ALGO Algonquin Park 56.42 57 P P 04 53 38.4 -0.9
baz=314
M49A Liberty Center 56.45 64 P P 04 53 39.4 -0.2
baz=314
E54A Lac Daplat, Po 56.52 56 P P 04 53 39.2 -0.8
baz=314
P47A Martinsville 56.59 67 P P 04 53 40.2 -0.4
baz=314,SNR=5.9
G53A Haliburton 56.71 58 P P 04 53 40.7 -0.7
baz=314,SNR=11
N49A Columbus Grove 56.73 65 P P 04 53 40.9 -0.7
baz=314
WLAR White Oak Lake 56.78 77 eP P 04 53 44.5 +2.5
comp=Z,8.6nm,0.7s
Q47A Bedord North L 56.88 68 P P 04 53 42.3 -0.4
baz=315
P48A Milroy 57.07 67 P P 04 53 43.5 -0.5
baz=315
BANO Bancroft 57.14 57 P P 04 53 43.9 -0.4
baz=315
Q48A North Vernon 57.27 67 P P 04 53 45.4 0.0
baz=315
T46A Princeton 57.40 71 P P 04 53 46.1 -0.1
baz=315
WCI Wyandotte Cave 57.46 68 P P 04 53 46.8 +0.1
baz=315
LVZ Lovozero 57.53 349 P P 04 53 46.7 -0.1
LVZ pmax pmax
comp=Z,9.0nm,0.9s
PLVO Plevna 57.55 57 P P 04 53 46.9 -0.3
baz=315
DELO Deloro Mine 57.65 58 P P 04 53 48.0 +0.1
baz=315
WLVO Wesleyville 57.67 59 P P 04 53 48.0 0.0
baz=315
N51A Ashland 57.70 64 P P 04 53 48.1 -0.3
baz=315
U46A Springville 57.72 71 P P 04 53 48.1 -0.5
baz=315
M52A Chesterland 57.81 63 P P 04 53 48.1 -1.0
baz=315
I55A Frankford 57.83 58 P P 04 53 47.6 -1.5
baz=315
H55A Tweed 57.84 57 P P 04 53 49.1 -0.2
baz=315
P50A Jamestown 57.86 66 P P 04 53 48.8 -0.6
baz=315
T47A Sharon Grove 57.88 70 P P 04 53 48.9 -0.7
baz=315
DGZ Jazzator, Alta 57.97 311 i P P 04 53 49.8 -0.5
DGZ pmax pmax
comp=Z,1.0nm,0.5s
S48A Wiedeman Farm, 57.99 69 P P 04 53 50.6 +0.1
baz=315
R49A Shelbyville 58.03 68 P P 04 53 50.6 -0.1
baz=315
WVT Waverly 58.08 71 P P 04 53 51.4 +0.3
baz=316

O51A	Pataskala	58.12	64	P	P	04 53 50.9	-0.5
	baz=315						
N52A	McGinn's Farm,	58.15	63	P	P	04 53 51.0	-0.5
	baz=315						
V46A	Holladay	58.15	72	P	P	04 53 51.8	+0.2
	baz=316						
U47A	Clarksville	58.17	71	P	P	04 53 51.3	-0.4
	baz=316						
MEDO	Medina	58.18	59	P	P	04 53 51.1	-0.5
	baz=315						
T48A	Bowling Green	58.19	69	P	P	04 53 51.8	-0.1
	baz=316						
M53A	WI Miller and	58.24	62	P	P	04 53 51.6	-0.5
	baz=315						
H56A	Elgin	58.28	57	P	P	04 53 52.3	+0.1
	baz=316						
Q50A	Georgetown	58.30	66	P	P	04 53 52.6	+0.1
	baz=315						
S49A	Springfield	58.33	68	P	P	04 53 52.4	-0.3
	baz=316						
OXF	Oxford	58.34	74	P	P	04 53 53.0	+0.2
	baz=316						
L54A	Sinclairville	58.39	61	P	P	04 53 52.9	-0.2
	baz=315						
J55A	Hilton	58.43	59	P	P	04 53 53.2	-0.1
	baz=316						
K54A	Basiliko Farm,	58.45	60	P	P	04 53 53.5	0.0
	baz=315						
V47A	Nunnelly	58.47	71	P	P	04 53 54.2	+0.5
	baz=316						
W46A	Michie	58.48	72	P	P	04 53 53.5	-0.3
	baz=316						
R50A	Paris	58.51	67	P	P	04 53 54.2	+0.2
	baz=316						
Q51A	Peebles	58.52	66	P	P	04 53 54.1	0.0
	baz=316						
U48A	Cassie Pea, Po	58.54	70	P	P	04 53 54.6	+0.4
	baz=316,SNR=7.4						
O52A	Adamsville	58.56	64	P	P	04 53 54.1	-0.2
	baz=316						
N53A	Lisbon	58.60	63	P	P	04 53 54.3	-0.3
	baz=316						
T49A	Edmonton	58.68	69	P	P	04 53 55.7	+0.5
	baz=316						
K55A	Perry	58.69	59	P	P	04 53 54.9	-0.3
	baz=316						
M54A	Oil Creek Stat	58.73	61	P	P	04 53 55.2	-0.2
	baz=316						
X46A	Booneville	58.78	73	P	P	04 53 56.3	+0.4
	baz=316						
O53A	New Philadelph	58.80	63	P	P	04 53 55.8	-0.1
	baz=316						
W47A	Westpoint	58.84	72	P	P	04 53 56.2	-0.1
	baz=316						
L55A	Hinsdale	58.88	60	P	P	04 53 56.3	-0.3
	baz=316						
S50A	Richmond	58.90	68	P	P	04 53 56.8	+0.1
	baz=316						
R51A	Hillsboro	58.91	67	P	P	04 53 56.8	+0.1
	baz=316,SNR=9.1						
V48A	Smith Brothers	58.93	71	P	P	04 53 56.9	0.0
	baz=316						
N54A	Moraine State	58.94	62	P	P	04 53 56.9	-0.1
	baz=316						
U49A	Red Boiling Sp	58.96	70	P	P	04 53 57.2	+0.1
	baz=316						
LONY	Lake Ozonia	59.09	56	P	P	04 53 57.5	-0.5
	baz=316						
T50A	Nancy	59.13	68	P	P	04 53 58.1	-0.2
	baz=316						
Q52A	Bidwell	59.15	65	P	P	04 53 58.3	-0.1
	baz=316						
M55A	Ridgway	59.23	61	P	P	04 53 58.6	-0.3
	baz=316						
P53A	Whipple	59.25	64	P	P	04 53 59.0	-0.1
	baz=316						
O54A	Avella	59.30	63	P	P	04 53 58.9	-0.5
	baz=316						
W48A	Pulaski	59.30	71	P	P	04 53 59.0	-0.4
	baz=316						
LZH	Lanzhou	59.35	290	*e*P	P	04 53 58.8	-1.2
LZH				pP	pP	04 54 40.2	-5.4
LZH				sP	sP	04 55 04.0	-3.6
LZH				PP	PP	04 56 12.4	-0.8
LZH				pmax	pmax		
	comp=Z,10.0nm,1.6s						
LZH				pmax	pmax		
	comp=Z,91nm,4.9s						
S51A	Beattyville	59.37	67	P	P	04 53 59.8	-0.1
	baz=316						
R52A	Catlettsburg	59.39	66	P	P	04 54 00.0	0.0
	baz=316						
V49A	McMinnville	59.43	70	P	P	04 53 59.9	-0.5
	baz=316						
M56A	Emporium	59.52	61	P	P	04 54 01.0	+0.1
	baz=316						
U50A	Jamestown	59.56	69	P	P	04 54 01.6	+0.4
	baz=316						
N55A	Marion Center	59.60	62	P	P	04 54 01.4	-0.1
	baz=316						
Q53A	Leroy	59.63	65	P	P	04 54 01.9	+0.3
	baz=316						
P54A	Burton	59.66	64	P	P	04 54 02.2	+0.3
	baz=316						
T51A	Gray	59.66	68	P	P	04 54 02.3	+0.4
	baz=316						
W49A	Belvidere	59.69	71	P	P	04 54 02.4	+0.2
	baz=316						
X48A	Hartselle	59.73	72	P	P	04 54 02.3	-0.1
	baz=316						
R53A	Hurricane	59.78	66	P	P	04 54 02.5	-0.2
	baz=316						
Q54A	Coxs Mills	59.91	64	P	P	04 54 03.6	0.0
	baz=316						
V50A	Pikevile	59.95	70	P	P	04 54 03.5	-0.4
	baz=316						
MCWV	Mont Chateau	59.96	63	P	P	04 54 03.5	-0.3
	baz=316						
U51A	La Follette	60.05	68	P	P	04 54 04.3	-0.2
	baz=316						
Y48A	Jasper	60.05	73	P	P	04 54 04.1	-0.5
	baz=317						
P55A	Reedsville	60.08	63	P	P	04 54 03.7	-1.1
	baz=316						
T52A	Hallie	60.09	67	P	P	04 54 05.1	+0.2
	baz=316						
X49A	Woodville	60.10	71	P	P	04 54 05.2	+0.3
	baz=317						
BINY	Binghamton	60.14	59	P	P	04 54 04.9	-0.2
	baz=317						
S53A	Williamson	60.15	66	P	P	04 54 05.4	+0.2
	baz=316						
W50A	Signal Mountai	60.17	70	P	P	04 54 05.5	+0.1
	baz=317						
TZTN	Tazewell	60.19	68	P	P	04 54 04.7	-0.8
	baz=316						
O56A	Blue Knob Stat	60.19	62	P	P	04 54 05.7	+0.1
	baz=316						
V51A	Loudon	60.28	69	P	P	04 54 06.6	+0.5
	baz=317						
Q55A	Buckhannon	60.31	64	P	P	04 54 06.5	+0.2
	baz=316						
N57A	Milroy	60.38	61	P	P	04 54 06.9	+0.2
	baz=317						
U52A	Thorn Hill	60.40	68	P	P	04 54 07.6	+0.7
	baz=317						
R54A	Victor	60.41	65	P	P	04 54 07.2	+0.3
	baz=316						
T53A	Wise	60.43	67	P	P	04 54 07.2	0.0
	baz=317						
S54A	Dingess, Beckl	60.51	66	P	P	04 54 07.8	+0.1
	baz=317						
W51A	Cleveland	60.51	70	P	P	04 54 07.6	-0.1
	baz=317						
X50B	Fort Payne	60.52	71	P	P	04 54 07.7	-0.1
	baz=317						
Y49A	Blount Mountai	60.52	72	P	P	04 54 07.9	0.0
	baz=317						
P56A	Dayton Farm, R	60.60	63	P	P	04 54 08.3	0.0
	baz=317						
V52A	Sevierville	60.67	69	P	P	04 54 09.2	+0.4
	baz=317						
LBNH	Lisbon	60.67	55	P	P	04 54 07.9	-0.8
	baz=317						
LRAL	Lakeview Retre	60.79	73	P	P	04 54 10.0	+0.5
	baz=317						
U53A	Fall Branch	60.86	67	P	P	04 54 10.5	+0.4
	baz=317						
Y50A	Piedmont	60.88	72	P	P	04 54 10.5	+0.3
	baz=317						
X51A	Calhoun	60.89	70	P	P	04 54 10.6	+0.4
	baz=317						
T54A	Tazewell	60.90	66	P	P	04 54 10.5	+0.1
	baz=317						
Z49A	Columbiana	60.94	73	P	P	04 54 10.8	+0.2
	baz=317						
S55A	Lewisburg	60.97	65	P	P	04 54 11.0	+0.2
	baz=317						
KURK	Kurchatov	60.99	317	*e*P	P	04 54 10.5	-0.1
	comp=Z,2.3nm,0.9s						
KURK	Kurchatov	60.99	317	*e*P	P	04 54 10.5	-0.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
W52A	Murphy	61.03	69	P	P	04 54 11.5	+0.3
	baz=317						
U54A	Nelsons Funny	61.16	67	P	P	04 54 12.1	-0.1
	baz=317						
N59A	State Game Lan	61.18	59	P	P	04 54 12.0	-0.1
	baz=317						
PKME	Peaks-Kenny Pk	61.18	52	P	P	04 54 12.0	0.0
	baz=318						
149A	Jones	61.22	73	P	P	04 54 13.3	+0.8
	baz=317						
V53A	Saluda	61.23	68	P	P	04 54 13.3	+0.7
	baz=317						
Z50A	Ashland	61.24	72	P	P	04 54 13.3	+0.6
	baz=317						
Y51A	Rockmart	61.26	71	P	P	04 54 12.8	0.0
	baz=317						
T55A	Pulaski	61.29	66	P	P	04 54 13.5	+0.5
	baz=317						
W53A	Cullowhee	61.40	69	P	P	04 54 14.0	+0.2
	baz=317						
X52A	Dahlonega	61.41	70	P	P	04 54 14.4	+0.6
	baz=317						
O59A	Robesonia	61.41	60	P	P	04 54 14.2	+0.5
	baz=317						
249A	Camden	61.49	74	P	P	04 54 14.1	-0.2
	baz=317						
S56A	Natural Bridge	61.55	64	P	P	04 54 14.7	0.0
	baz=317						
U55A	TA2, Sparta	61.60	66	P	P	04 54 15.7	+0.6
	baz=317						
Z51A	Franklin	61.62	72	P	P	04 54 15.2	+0.1
	baz=317						
V54A	Nebo	61.63	68	P	P	04 54 15.9	+0.7
	baz=317						
T56A	Rocky Mt	61.77	65	P	P	04 54 16.3	+0.2
	baz=317						
P59A	Jarrettsville	61.80	61	P	P	04 54 16.3	+0.1
	baz=317						
M61A	Granite Spring	61.92	58	P	P	04 54 16.5	-0.6
	baz=318						
250A	Grady	61.98	73	P	P	04 54 18.2	+0.6
	baz=318						
V55A	Taylorsville	61.98	67	P	P	04 54 18.0	+0.5
	baz=317						
PAL	Palisades	62.07	58	P	P	04 54 18.0	-0.1
	baz=318						
U56A	King	62.08	66	P	P	04 54 19.0	+0.8
	baz=317						
151A	Opelika	62.12	72	P	P	04 54 18.5	0.0
	baz=318						
Y53A	Monroe	62.13	70	P	P	04 54 18.9	+0.4
	baz=318						
Z52A	Williamson	62.15	71	P	P	04 54 18.8	+0.2
	baz=318						
WMQ	Urumqi	62.17	307	*e*P	P	04 54 21.0	+2.2
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.9s						
WMQ				LR	LR		
	comp=Z,550nm,18.7s						
WMQ				LR	LR		
	comp=Z,490nm,18.7s						
WMQ				LR	LR		
	comp=Z,250nm,26.7s						
T57A	Hurt	62.21	65	P	P	04 54 19.3	+0.2
	baz=318						
X54A	Belton	62.30	69	P	P	04 54 20.0	+0.3
	baz=318						
BRVK	Borovoye	62.34	323	*i* P	P	04 54 19.5	-0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
251A	Midway	62.39	73	P	P	04 54 20.5	+0.2
	baz=318						
V56A	Mocksville	62.41	67	P	P	04 54 20.4	0.0
	baz=318						
O61A	Allentown	62.41	59	P	P	04 54 20.5	+0.2
	baz=318						
MKAR	Makanchi Array	62.43	312	P	P	04 54 19.6	-0.8
	comp=Z,0.6nm,0.6s,baz=53,slow=6.2,SNR=4.8						
MKAR				pP	pwP	04 55 10.0	-0.8
	comp=Z,2.1nm,0.9s,baz=49,slow=7.2,SNR=7.7						
GOGA	Godfrey	62.52	70	P	P	04 54 21.3	+0.2
GOGA				pmax	pmax		
	comp=Z,7.0nm,2.4s						
GOGA	Godfrey	62.52	70	P	P	04 54 21.4	+0.3
	baz=318						
Z53A	Monticello	62.56	71	P	P	04 54 21.3	-0.1
	baz=318,SNR=5.1						
Y54A	Tignall	62.62	69	P	P	04 54 22.0	+0.2
	baz=318,SNR=5.9						
T58A	Grand View Acr	62.64	64	P	P	04 54 22.0	+0.1
	baz=318						
JOF	Joensuu	62.72	349	P	P	04 54 21.7	-0.3
JOF				pmax	pmax		
	comp=Z,6.0nm,1.9s						
X55A	Gracelyn & Ava	62.77	68	P	P	04 54 23.5	+0.8
	baz=318						
252A	Lumpkin	62.84	72	P	P	04 54 23.5	+0.2
	baz=318						
153A	Fort Valley	62.88	71	P	P	04 54 23.7	+0.2
	baz=318						
351A	Pinckard	62.88	73	P	P	04 54 23.8	+0.3
	baz=318						
Z54A	Sparta	63.00	70	P	P	04 54 24.6	+0.3
	baz=318						
Y55A	Saluda	63.03	69	P	P	04 54 25.1	+0.6
	baz=318						
X56A	White Oak	63.08	68	P	P	04 54 25.6	+0.8
	baz=318						
253A	Americus	63.14	72	P	P	04 54 25.5	+0.2
	baz=318						
T59A	Double "B" Far	63.15	64	P	P	04 54 26.2	+1.0
	baz=318						
W57A	Gilead	63.17	67	P	P	04 54 25.9	+0.5
	baz=318						
CD2	Chengdu	63.19	286	*e*P	P	04 54 23.9	-1.7
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				LR	LR		
	comp=Z,380nm,13.1s						
CD2				LR	LR		
	comp=Z,280nm,12.8s						
CD2				LR	LR		
	comp=Z,400nm,14.7s						
X57A	Johnson Farm,	63.62	67	P	P	04 54 28.6	+0.2
	baz=318						
254A	Abbeville	63.70	71	P	P	04 54 29.3	+0.3
	baz=318						
Y57A	Sumter	63.79	68	P	P	04 54 29.8	+0.4
	baz=318						
256A	Glennville	64.47	70	P	P	04 54 34.3	+0.5
	baz=318						
NHSC	New Hope	64.59	68	P	P	04 54 34.9	+0.3
	baz=319						
Z58A	St. Stephen	64.62	68	P	P	04 54 35.0	+0.2
	baz=319						
FINES	FINESS Array B	64.71	351	P	P	04 54 34.4	-0.6
	comp=Z,1.6nm,0.7s,baz=5.3,slow=10,SNR=7.0						
W61A	Ground Anchor	64.79	65	P	P	04 54 35.8	-0.1
	baz=319						
NB2	NORSAR Subarra	65.89	359	P	P	04 54 42.6	-0.1
	comp=Z,0.8nm,0.5s,baz=1.3,slow=6.2						
NOA	NORSAR Array B	65.89	359	P	P	04 54 43.0	+0.3
	comp=Z,1.3nm,0.6s,baz=2.3,slow=6.4,SNR=8.8						
NOA	NORSAR Array B	65.89	359	P	P	04 54 43.0	+0.3
VSU	Vasula	67.58	350	*ce*P	P	04 54 52.1	-1.1
VSU				pmax	pmax		
	comp=Z,25nm,1.3s						
AAK	Ala-Archa	69.12	314	*ce*P	P	04 55 03.3	0.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KKAR	Karatay Array	70.40	317	P	P	04 55 10.5	-0.4
AKASG	Malin Array Be	74.90	347	P	P	04 55 36.1	-1.1
	comp=Z,1.4nm,0.5s,baz=14,slow=4.7,SNR=4.9						
KIEV	Kiev	74.91	347	P	P	04 55 36.4	-0.8
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	Chiang Mai Arr	75.50	281	P	P	04 55 41.0	-0.2
	comp=Z,1.3nm,0.7s,baz=30,slow=7.7,SNR=4.8						
CMAR	Chiang Mai Arr	75.50	281	P	P	04 55 41.0	-0.2
BCLA	Clavier	76.50	3	⇑P	P	04 55 47.2	+0.9
KHC	Kasperske Hory	77.77	357	P	P	04 55 54.3	+0.8
KHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	78.06	357	P	P	04 55 54.2	-0.9
	comp=Z,1.0nm,0.6s,baz=20,slow=4.3,SNR=6.9						
GERES				pP	pwP	04 56 46.6	+0.2
	comp=Z,0.2nm,0.3s,baz=343,slow=5.9,SNR=2.6						
VYHS	Vyhne	78.15	353	*e*P	P	04 55 54.9	-0.6
VYHS	Vyhne	78.15	353	*e*P	P	04 55 54.9	-0.6
BURAR	Bucovina Array	78.43	349	⇑*i*P	P	04 55 57.0	-0.1
BURAR	Bucovina Array	78.43	349	⇑P	P	04 55 57.1	-0.1
DRGR		79.51	351	⇑*i*P	P	04 56 02.7	-0.3
DRGR		79.51	351	⇑P	P	04 56 02.7	-0.3
SEVA	Sevastopol	80.20	342	⇑*i*P	P	04 56 07.4	+0.8
MLR	Muntele Rosu	80.44	348	⇓*i*P	P	04 56 03.0	-5.1
MLR	Muntele Rosu	80.44	348	⇓P	P	04 56 03.1	-5.0
CFR	Carcaliu	80.46	346	⇑*i*P	P	04 56 07.5	-0.5
CFR	Carcaliu	80.46	346	⇑P	P	04 56 07.5	-0.5
ARR	Arges	80.72	349	⇑*i*P	P	04 56 11.9	+2.4
TLB	Topalu	81.05	346	⇓*i*P	P	04 56 11.0	-0.1
TLB	Topalu	81.05	346	⇓P	P	04 56 11.0	-0.1
TIRR	Tirgusor	81.12	346	⇑*i*P	P	04 56 11.3	-0.2
TIRR	Tirgusor	81.12	346	⇑P	P	04 56 11.3	-0.2
BRTR	Keskin Array B	84.85	341	P	P	04 56 30.4	-0.5
	comp=Z,0.6nm,0.6s,baz=352,slow=2.2,SNR=5.1						
WRAB	Tennant Creek	86.92	230	*ce*P	P	04 56 42.0	+1.0
WRAB				pmax	pmax		
	comp=Z,11nm,1.7s						
WRA	Warramunga Arr	86.94	230	P	P	04 56 40.6	-0.5
	comp=Z,3.7nm,0.8s,baz=39,slow=5.5,SNR=28						
PSI	Prapat	87.88	272	P	P	04 56 45.9	0.0
PSI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ASAR	Alice Springs	90.36	229	P	P	04 56 57.4	+0.2
	comp=Z,6.1nm,0.5s,baz=24,slow=4.6,SNR=112						
TORD	Torodi Ar. Bea	113.42	8	PKiKP	PKiKP	05 02 31.2	-1.7
	comp=Z,0.2nm,0.5s,baz=340,slow=3.4,SNR=3.5						
TORD				PKKPbc	PKKPbc	05 13 16.6	+1.1
	comp=Z,0.7nm,0.6s,baz=170,slow=2.5,SNR=9.6						
CPUP	Villa Florida	124.62	88	PKP	PKPdf	05 02 54.0	0.0
	comp=Z,1.5nm,0.8s,baz=22,slow=4.9,SNR=3.4						
PLCA	Paso Flores	127.03	111	PKP	PKPdf	05 02 58.5	+0.1
	comp=Z,2.8nm,0.9s,baz=278,slow=7.0,SNR=4.6						
MAW	Mawson	151.09	220	PKPbc	PKiKP	05 03 46.9	-0.1
	comp=Z,3.1nm,0.5s,baz=125,slow=3.1,SNR=11						
BOSA	Boshof	152.53	328	PKPbc	PKPbc	05 03 50.2	-1.0
	comp=Z,2.2nm,0.5s,baz=350,slow=0.6,SNR=7.4						

NAO ***10*** *04:47:33.2±2.9, 76°.14N×23°.94E, h10km±16km, ML1.9*

BER 10 04:47:35.4±2.3, 76°.10N×24°.33E, h20km±11km, ML1.6, ML1.9(NAO), Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO	Bjornoya	2.07	222	*e*Pg	Pb	04 48 12.1	-0.1
BJO				*e*Sg	Sb	04 48 38.2	+0.8
BJO1	Bjornoya	2.10	223	Pg	Pb	04 48 12.1	-0.6
BJO1				Lg	Lg	04 48 38.4	
HSP	Hornsund	2.25	298	Pn	Pn	04 48 11.0	-0.3
HSP				Lg	Lg	04 48 41.6	
HSPB	Hornsund (broa	2.25	298	*e*Pg	Pb	04 48 13.4	-1.8
HSPB				*e*Sg	Sb	04 48 41.9	-0.6
HSPB				IAML		04 48 43.2	
	comp=Z,6.2nm,0.6s						
SPA0	Spitsbergen Ar	2.74	323	Pn	Pn	04 48 15.0	-3.2
	baz=143,slow=16						
SPA0				Sn	Sn	04 48 47.2	-3.4
	baz=145,slow=22						
SPA0				Lg	Lg	04 48 56.9	
	baz=134,slow=37						
SPA0	Spitsbergen Ar	2.74	323	*e*P	Pn	04 48 15.5	-2.6
SPA0				Sn	Sn	04 48 47.2	-3.4
	baz=145,slow=22						
SPA0				*e*Sg	Sb	04 48 56.8	0.0
BRBA	Barentsburg A	3.00	316	Pn	Pn	04 48 20.2	-1.5
BRBA				Sn	Sn	04 48 55.0	-2.1
BRBA				Lg	Lg	04 49 03.8	
BRBA	Barentsburg A	3.00	316	Pn	Pn	04 48 20.2	-1.5
BRBA				Sn	Sn	04 48 55.0	-2.1
BRBA				Sg	Sb	04 49 03.8	-0.4
KBS	Kingsbay	3.90	322	Pn	Pn	04 48 30.9	-3.2
KBS				Sn	Sn	04 49 15.6	-3.6
KBS				Lg	Lg	04 49 34.0	
KBS	Kingsbay	3.90	322	*e*P	Pn	04 48 32.0	-2.1
KBS				*e*S	Sn	04 49 14.6	-4.6
KBS				*e*Sg	Sb	04 49 32.3	+2.3
KBS				IAML		04 49 38.4	
	comp=Z,4.5nm,0.5s						
ZFI2	Zemlya Franca-	6.58	34	*e*P	Pn	04 49 09.8	-1.0
ZFI2				*e*S	Sn	04 50 16.6	-8.5
	comp=Z,1.3nm,1.0s						
ARA0	ARCESS Array S	6.61	176	Pn	Pn	04 49 10.4	-0.9
ARA0	ARCESS Array S	6.61	176	Pn	Pn	04 49 10.4	-0.9

HEL 10 04:48:55.9±0.2, 67°.87N×20°.31E, h0km, ML1.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	Lannavaara	0.66	74	*e*P	Pg	04 49 08.0	-0.5
LANU				*e*S	Sg	04 49 15.8	-1.2
KIF	Kilpisjarvi	1.15	9	*e*P	Pg	04 49 17.1	-0.9
KIF				*e*S	Sg	04 49 32.9	0.0
KIF				MSG		04 49 33.9	
	comp=Z,3.1nm,0.2s						
HEF	Hetta	1.37	65	*e*P	Pg	04 49 19.9	-2.1
HEF				MSG		04 49 36.0	
	comp=Z,0.9nm,0.2s						
HEF				*e*S	Sg	04 49 38.3	-1.4
ERTU	Ertsjaerv	1.51	150	*e*PG	Pn	04 49 23.2	-1.0
TOF	Tornio	2.39	137	MSG		04 50 06.3	
	comp=Z,1.2nm,0.2s						
TOF				*e*SB	Sb	04 50 08.5	-1.3
ARE0	ARCESS Array S	2.53	46	*e*PB	Pn	04 49 39.9	+1.7
RNF	Rovaniemi	2.56	117	*e*PB	Pn	04 49 39.8	+1.3

ANF ***10*** *04:50:11.4±0.7, 32°.25N×115°.31W, h12km±2km, ML3.1/14,*
Error ellipse: s-maj=4.5km s-min=2.3km az=6.0
PAS ***10*** *04:50:12.7±0.0, 32°.22N×115°.29W, h13km*
SCEDC ***10*** *04:50:12.7, 32°.22N×115°.29W, h13km*
ISCJB ***10*** *04:50:13.0±0.5, 32°.27N±0°.02×115°.30W±0°.02, h14km±3km,*
Error ellipse: s-maj=3.7km s-min=3.2km az=38.8
MEX ***10*** *04:50:14.4±0.3, 32°.40N×115°.14W, h27km±4km, MD3.8*
ECX ***10*** *04:50:14.2±0.6, 32°.25N×115°.32W, h5km, MD3.0, ML3.2*
NEIC ***10*** *04:50:14.2±0.0, 32°.25N×115°.32W, h5km, ML3.0(ECX),*
ML3.2(PAS), After ECX.

ISC 10 04:50:13.1±0.9, 32°.25N±0°.02×115°.32W±0°.03, h15km±6km, n55, σ1°.10/77, 5C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.17	6	*e*P	Pb	04 50 16.9	-1.1
CPBX				*e*S	Sg	04 50 20.2	0.0
CPBX				⇑*e*		04 50 21.7	
CPBX				IAML		04 50 21.7	
	comp=E,23μm,0.2s						
CPBX				IAML		04 50 25.2	
	comp=N,25μm,0.3s						
CPBX				⇓*e*		04 50 25.2	
MBIG	Mexicali	0.19	34	*e*Pg	Pg	04 50 17.8	+0.1
MBIG				*e*Sg	Sg	04 50 20.7	0.0
MBIG	Mexicali	0.19	34	*e*P	Pg	04 50 17.8	+0.1
MBIG				*e*S	Sg	04 50 20.7	0.0
MBIG	Mexicali	0.19	34	*e*P	Pg	04 50 17.8	+0.1
DREC	Desert Rsrch C	0.57	350	*e*P	Pg	04 50 24.6	+0.3
WESC	Westside Schoo	0.62	326	*e*P	Pb	04 50 25.2	-0.3
YUH	Yuha Desert	0.65	308	⇑*i*P	Pb	04 50 25.2	-0.8
RMX	La Rumorosa	0.73	299	*e*P	Pb	04 50 25.8	-1.7
RMX				*e*S	Sb	04 50 35.0	-2.4
RMX				⇑*e*		04 50 37.1	

RMX				IAML			04 50 37.1
	comp=N,941nm,0.6s						
IKP	**In-Ko-Pah, Jac**	**0.78**	**301**	P		**Pb**	**04 50 27.8 -0.5**
	baz=122,SNR=180						
IKP				S		**Sb**	**04 50 37.6 -1.1**
	baz=122						
IKP	**In-Ko-Pah, Jac**	**0.78**	**301**	*e*P		**Pb**	**04 50 27.7 -0.6**
SWSC	**Sam W. Stewart**	**0.80**	**330**	P		**Pb**	**04 50 27.6 -1.2**
	baz=150,SNR=49						
SWSC				S		**Sb**	**04 50 38.3 -1.1**
	baz=150						
SWSC	**Sam W. Stewart**	**0.80**	**330**	*e*P		**Pb**	**04 50 27.7 -1.1**
ECBX	**El Chinero**	**0.81**	**163**	*e*P		**Pg**	**04 50 28.8 0.0**
ECBX				*e*S		**Sg**	**04 50 40.0 +0.6**
CRR	**Carrizo Plain**	**0.84**	**320**	⇑*i*P		**Pb**	**04 50 28.5 -0.8**
GLA	**Glamis**	**0.91**	**27**	*e*Pg		**Pb**	**04 50 30.0 -0.6**
GLA				*e*Sg		**Sg**	**04 50 42.0 -0.5**
GLA	**Glamis**	**0.91**	**27**	P		**Pb**	**04 50 29.1 -1.4**
	baz=205,SNR=46						
GLA				S		**Sb**	**04 50 41.4 -1.0**
	baz=205						
ZAX	**El Zacaton**	**1.09**	**228**	*e*P		**Pn**	**04 50 33.5 -0.4**
MONP2	**Monument Peak**	**1.13**	**305**	P		**Pn**	**04 50 33.3 -1.2**
	baz=125,SNR=172						
MONP2				S		**Sb**	**04 50 48.7 -0.3**
	baz=125						
MONP2	**Monument Peak**	**1.13**	**305**	*e*P		**Pn**	**04 50 34.0 -0.5**
CBX	**Cerro Bola**	**1.14**	**274**	*e*Pg		**Pn**	**04 50 34.3 -0.3**
CBX				*e*Sg		**Sb**	**04 50 49.4 +0.3**
CBX	**Cerro Bola**	**1.14**	**274**	*e*P		**Pn**	**04 50 34.3 -0.3**
CBX				*e*S		**Sb**	**04 50 49.4 +0.3**
CBX	**Cerro Bola**	**1.14**	**274**	*e*P		**Pn**	**04 50 34.3 -0.3**
CBX				*e*S		**Sb**	**04 50 49.4 +0.3**
CBX				IAML			04 50 53.6
	comp=E,422nm,0.5s						
CBX				⇑*e*			04 50 53.6
TJIG	**Tijuana**	**1.16**	**280**	*e*P		**Pn**	**04 50 34.4 -0.3**
SPIG	**San Pedro Mart**	**1.20**	**186**	*e*Pg		**Pn**	**04 50 35.5 -0.2**
SPIG				*e*Sn		**Sg**	**04 50 52.2 +0.1**
SPIG	**San Pedro Mart**	**1.20**	**186**	*e*P		**Pn**	**04 50 35.5 -0.2**
SPIG				*e*S		**Sg**	**04 50 52.2 +0.1**
SPIG	**San Pedro Mart**	**1.20**	**186**	*e*P		**Pn**	**04 50 35.5 -0.2**
SPX	**San Pedro Mart**	**1.20**	**186**	*e*P		**Pn**	**04 50 35.5 -0.2**
SPX				*i*S		**Sn**	**04 50 51.8 -0.1**
SPX	**San Pedro Mart**	**1.20**	**186**	*e*P		**Pn**	**04 50 35.5 -0.2**
SPX				*e*S		**Sn**	**04 50 52.0 +0.2**
SPX				*e*			04 50 55.3
SPX				IAML			04 50 55.3
	comp=E,237nm,0.3s						
BAR	**Barrett**	**1.22**	**291**	*e*Pg		**Pn**	**04 50 35.2 -0.4**
BAR				*e*Sn		**Sb**	**04 50 51.6 +0.2**
BAR	**Barrett**	**1.22**	**291**	*e*P		**Pn**	**04 50 35.5 -0.1**
BC3	**Big Chuckawall**	**1.41**	**356**	P		**Pn**	**04 50 37.1 -1.2**
	baz=175,SNR=29						
113A	**Mohawk Valley,**	**1.42**	**68**	*e*Pn		**Pn**	**04 50 37.2 -1.0**
113A				*e*Sn		**Sn**	**04 50 54.8 -1.8**
EML	**El Monte Cty P**	**1.44**	**297**	*e*P		**Pn**	**04 50 38.5 0.0**
109C	**Camp Elliot, M**	**1.63**	**294**	P		**Pn**	**04 50 40.7 -0.6**
	baz=113,SNR=31						
109C				S		**Sn**	**04 51 02.0 0.0**
	baz=113						
CPE	**Camp Elliot**	**1.63**	**294**	*e*Pn		**Pn**	**04 50 41.0 -0.2**
CPE				*e*Sn		**Sn**	**04 51 02.3 +0.3**
Y12C	**Blythe**	**1.64**	**24**	*e*Pn		**Pb**	**04 50 42.6 -0.4**
PFO	**Pinyon Flats O**	**1.66**	**325**	*e*Pn		**Pn**	**04 50 40.4 -1.5**
PFO	**Pinyon Flats O**	**1.66**	**325**	P		**Pn**	**04 50 40.3 -1.5**
	baz=145						
PFO				S		**Sn**	**04 51 02.8 -0.2**
	baz=145						
MURC	**Murrieta**	**2.07**	**311**	Sb		**Sb**	**04 51 17.2 +1.2**
	baz=130						
214A	**Organ Pipe Nat**	**2.15**	**97**	P		**Pn**	**04 50 47.1 -1.3**
	baz=278						
Y14A	**Wickenburg**	**2.58**	**48**	*e*Pn		**Pn**	**04 50 54.8 +0.5**
BFSC	**Mount Baldy Ra**	**2.79**	**316**	Sb		**Sb**	**04 51 38.0 +1.3**
	baz=135						
LDFC	**Landfair**	**2.83**	**4**	*e*Pn		**Pn**	**04 50 59.6 +1.8**
CIS	**Catalina Islan**	**2.85**	**295**	Sb		**Sb**	**04 51 39.3 +1.1**
	baz=113						
FMP	**Fort Macarthur**	**2.89**	**301**	Sb		**Sb**	**04 51 42.3 +2.8**
	baz=120						
MWC	**Mount Wilson**	**3.02**	**311**	*e*Pn		**Pn**	**04 51 01.9 +1.3**
W13A	**Hualapai Mount**	**3.09**	**22**	*e*Pn		**Pn**	**04 51 01.5 +0.1**
DECC	**Green Verdugo**	**3.22**	**309**	Sb		**Sb**	**04 51 50.0 +1.0**
	baz=128						
EDW2	**Edwards Air Fo**	**3.44**	**320**	Sb		**Sb**	**04 51 58.6 +3.1**
	baz=139						
TUC	**Tucson**	**3.85**	**88**	*e*Pn		**Pn**	**04 51 15.1 +3.3**
X16A	**Lo Mia Camp, P**	**3.91**	**55**	*e*Pn		**Pn**	**04 51 13.5 +0.8**
SHPR	**Sheep Range**	**4.25**	**2**	*e*Pn		**Pn**	**04 51 20.0 +2.6**
U15A	**North Rim**	**4.87**	**30**	*e*Pn		**Pn**	**04 51 27.5 +1.5**
LCMT	**Little Creek M**	**5.05**	**19**	*e*Pn		**Pn**	**04 51 30.1 +1.6**
KNB	**Kanab**	**5.19**	**23**	*e*Pn		**Pn**	**04 51 30.0 -0.3**

ATH 10 04:53:58.4, 38.°16N×23.°19E, h10km±3km, ML1.5/4, Error ellipse: s-maj=3.1km s-min=1.0km az=96.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIL2	**Platees**	**0.08**	**52**	P	Pg	04 54 00.9	0.0
VIL2				S	Sg	04 54 03.0	+0.4
VIL2				AML	AML	04 54 03.4	
	comp=E,612μm,0.3s						
VIL2				AML	AML	04 54 03.7	
	comp=N,308μm,0.1s						
LTK	**Loutraki**	**0.22**	**232**	P	Pg	04 54 02.9	-0.1
LTK				S	Sg	04 54 06.3	+0.1
LOUT	**Loutraki**	**0.24**	**224**	P	Pg	04 54 03.7	+0.3
LOUT				S	Sg	04 54 06.8	+0.1
PROD	**Prodromos**	**0.25**	**293**	P	Pg	04 54 03.3	-0.1
PROD				S	Sg	04 54 07.5	+0.6
PROD				AML	AML	04 54 08.6	
	comp=E,433μm,0.4s						
PROD				AML	AML	04 54 08.7	
	comp=N,492μm,0.3s						
LKR	**Lokris**	**0.51**	**343**	P	Pg	04 54 07.7	-0.6
LKR				S	Sg	04 54 15.7	+0.6
LKR				AML	AML	04 54 16.5	
	comp=N,173μm,0.2s						
LKR				AML	AML	04 54 16.6	
	comp=E,178μm,0.3s						
ATAL	**Atalanti**	**0.55**	**346**	P	Pg	04 54 09.1	+0.1
EPID	**Epidavros**	**0.55**	**186**	P	Pg	04 54 09.4	+0.3
VLY	**Voula,Athens**	**0.57**	**123**	P	Pg	04 54 09.7	+0.2
DSF	**Desfina**	**0.58**	**296**	P	Pg	04 54 09.2	-0.5
DSF				S	Sg	04 54 17.7	+0.5
DSF				AML	AML	04 54 19.9	
	comp=E,106μm,0.2s						
DSF				AML	AML	04 54 20.2	
	comp=N,104μm,0.2s						
DID	**Didima**	**0.66**	**177**	P	Pg	04 54 10.6	-0.5
KLV	**Kalavryta, Ach**	**0.83**	**262**	P	Pg	04 54 14.3	0.0

IDC 10 05:01:51.2±3.2, 54.°54N×86.°52E, h0km, mb1 2.9/2, mb1mx2.8/34, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=24.9km s-min=15.4km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.16**	**240**	*i*		05 10 00.0	
	baz=60,slow=319,SNR=4.3						
ZALV	**Zalesovo Beam**	**1.16**	**240**	Pg	Pg	05 02 12.4	-1.1
	1.5nm,0.3s,baz=56,slow=17,SNR=7.4						
ZALV				Lg	Lg	05 02 29.3	
	2.0nm,0.3s,baz=57,slow=28,SNR=12						
KURBB	**Kurchatov Arra**	**6.25**	**234**	Pn	Pn	05 03 25.3	+0.7
	0.1nm,0.3s,baz=52,slow=14,SNR=6.3						
KURBB				Lg	Lg	05 05 09.4	
	0.0nm,0.3s,baz=53,slow=34,SNR=4.4						
MKAR	**Makanchi Array**	**8.21**	**201**	Pn	Pn	05 03 52.6	+1.1
	0.1nm,0.3s,baz=23,slow=13,SNR=4.9						
MKAR				Sn	Sn	05 05 24.3	-0.6
	0.1nm,0.3s,baz=21,slow=26,SNR=4.5						
MKAR				Lg	Lg	05 06 12.7	
	0.0nm,0.3s,baz=24,slow=32,SNR=3.7						

MAN 10 05:22:15.4, 7.°25N×124.°94E, h20km, mb4.2, ML3.0, MS2.6, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.59**	**107**	⇑*e*P	Pn	05 22 32.2	+3.5
DMPH				*e*S	Sn	05 22 40.7	+3.0
BUKP	**Musuan**	**0.63**	**11**	*e*P	Pb	05 22 28.5	+0.6
BUKP				*e*S	Sn	05 22 39.1	+0.2
CTBH	**Cotabato--PC H**	**0.69**	**267**	⇓*i*P	Pb	05 22 27.9	-0.9
CTBH				*i*S	Sb	05 22 37.0	-0.9
SKMP	**Bagumbayan, Su**	**0.83**	**208**	*e*P	Pb	05 22 30.9	-0.3
SKMP				*e*S	Sn	05 22 44.2	+0.6
CGP	**Cagayan de Oro**	**1.22**	**349**	⇓*e*P	Pb	05 22 37.8	0.0
CGP				*e*S	Sb	05 22 53.1	0.0
PAGZ	**Pagadian**	**1.65**	**291**	*e*P	Pn	05 22 43.7	+0.4
PAGZ				*e*S	Sb	05 23 04.8	-0.8

MAN 10 05:25:33.9, 9.°35N×125.°15E, h33km, mb4.3, ML3.1, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.83**	**340**	*e*P	Pb	05 25 50.1	+0.1
MSLP				*e*S	Sn	05 25 59.7	-0.8
CGP	**Cagayan de Oro**	**0.99**	**207**	⇑*e*P	Pb	05 25 58.0	+5.3
CGP				*e*S	Sb	05 26 12.1	+6.6
TBP	**Tagbilaran**	**1.31**	**285**	*e*P	Pb	05 25 57.6	-0.4
TBP				*i*S	Sn	05 26 11.7	-0.6
BUKP	**Musuan**	**1.46**	**183**	*e*P	Pb	05 26 06.1	+5.5
BUKP				*e*S	Sb	05 26 28.8	+10
LLP	**Lapu-Lapu**	**1.51**	**310**	*e*P	Pn	05 25 59.9	+1.2
LLP				*e*S	Sn	05 26 17.3	+0.1
PAGZ	**Pagadian**	**2.29**	**230**	*e*P	Pn	05 26 09.9	+0.4
PAGZ				*e*S	Sb	05 26 41.5	-1.2

DDA 10 05:31:26.8, 38.°25N×26.°57E, h7km±1km, ML2.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEY	**zmir**	**0.05**	**261**	*i*P	Pg	05 31 29.5	+1.1
ZEY				IAML_P			
	comp=Z,10μm,0.1s						
URLA	**Izmir**	**0.12**	**10**	*i*P	Pg	05 31 30.2	+0.9
URLA				*i*S	Sg	05 31 32.9	+1.8
URLA				IAML_P			
	comp=Z,4μm,0.1s						
DGB	**zmir**	**0.32**	**128**	*i*P	Pg	05 31 33.6	+0.7
DGB				*i*S	Sb	05 31 38.8	-1.3

ISK 10 05:32:17.2, 39.°72N×25.°58E, h12km, ML1.6/6, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.38**	**71**	PG	Pb	05 32 25.7	-0.2
BOZC				SG	Sb	05 32 31.2	-0.6
BOZC	**Bozcaada**	**0.38**	**71**	*i*P	Pb	05 32 26.0	+0.1
BOZC				*i*S	Sb	05 32 31.3	-0.5
GADA	**Gvkgeada**	**0.53**	**27**	PG	Pb	05 32 28.1	-0.4
GADA				SG	Sb	05 32 36.1	0.0
SIGR	**SIGRI**	**0.55**	**157**	PG	Pb	05 32 28.3	-0.3
SIGR				SG	Sb	05 32 36.4	0.0
EZN	**Ezine**	**0.58**	**79**	PG	Pg	05 32 28.9	+0.3
EZN				SG	Sb	05 32 37.6	+0.1
BAYC	**CANAKKALE_Bayr**	**0.74**	**88**	*i*P	Pb	05 32 32.4	+0.3
BAYC				*i*S	Sb	05 32 43.2	+1.0
ENEZ	**Enez**	**1.11**	**23**	PN	Pg	05 32 38.7	+0.1
ALN	**Alexandroupoli**	**1.23**	**17**	PN	Pb	05 32 40.5	+0.1
ALN				SN	Sg	05 32 57.6	+0.6

*ISCJB **10** 05:32:28.8±0.3, 42.°59S±0.°02×173.°06E±0.°03, h27km±3km, mb3.6/4, Error ellipse: s-maj=5.1km s-min=2.0km az=38.0*
*NEIC **10** 05:32:28.6±0.0, 42.°61S×173.°16E, h29km, mb4.3/3, ML4.0(WEL), After WEL.*
*WEL **10** 05:32:28.4±0.3, 43.°5S±2.°×17.°3E±.°, h5km, M4.0/16, ML4.2/12, MLv4.0/16, Error ellipse: s-maj=0.0km s-min=0.0km az=113.8*
*IDC **10** 05:32:36.7±10.0, 45.°62S×169.°64E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/22, mbtmp3.5/2, Error ellipse: s-maj=532.6km s-min=48.0km az=47.0*

ISC 10 05:32:27.4±1.1, 42.°62S±0.°02×173.°08E±0.°03, h8km±8km, n96, σ1°17/124, mb3.5/4, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVZ	**Greta Valley S**	**0.35**	**186**	P	Pb	05 32 37.2	+1.3
GVZ				S	Sb	05 32 43.7	+2.0
KHZ	**Kahutara**	**0.39**	**59**	*e*Pg	Pb	05 32 36.9	+0.4
KHZ	**Kahutara**	**0.39**	**59**	P	Pb	05 32 36.9	+0.4
KHZ				S	Sb	05 32 42.8	+0.1
LTZ	**Lake Taylor**	**0.62**	**254**	*e*Pg	Pg	05 32 40.1	+0.7
LTZ				*e*Sg	Sg	05 32 47.1	-0.4
LTZ	**Lake Taylor**	**0.62**	**254**	P	Pg	05 32 40.1	+0.7
AMCZ	**Amberley**	**0.64**	**209**	P	Pn	05 32 42.3	-0.5
AMCZ				S	Sn	05 32 52.1	-1.1
THZ	**Tophouse**	**0.86**	**351**	*e*Pn	Pg	05 32 43.7	-0.2
THZ				*e*Sg	Sg	05 32 54.2	-0.9
THZ	**Tophouse**	**0.86**	**351**	P	Pg	05 32 43.7	-0.2
THZ				S	Sg	05 32 54.0	-1.2
CRLZ	**Canterbury Las**	**1.02**	**199**	*e*Pn	Pg	05 32 47.7	+0.9
CRLZ				*e*Sn	Sn	05 33 02.1	-0.2
CRLZ	**Canterbury Las**	**1.02**	**199**	P	Pn	05 32 48.0	+0.1
CRLZ				S	Sn	05 33 02.6	+0.3
OXZ	**Oxford**	**1.04**	**227**	*e*Pn	Pb	05 32 47.7	+0.1
OXZ				*e*Sn	Sn	05 33 02.5	-0.6
OXZ	**Oxford**	**1.04**	**227**	P	Pb	05 32 47.8	+0.1
OXZ				S	Sn	05 33 03.2	+0.1
BSWZ	**Blackbirch Sta**	**1.08**	**33**	P	Pg	05 32 48.7	+0.6
BSWZ				S	Sn	05 33 05.6	+1.8
OKCZ	**Okains Bay**	**1.11**	**181**	P	Pn	05 32 49.5	+0.3
MQZ	**McQueen's Vall**	**1.13**	**196**	*e*Pn	Pb	05 32 48.8	-0.4
MQZ				*e*Sn	Sb	05 33 04.6	+0.5
MQZ	**McQueen's Vall**	**1.13**	**196**	P	Pb	05 32 48.8	-0.4
MQZ				S	Sb	05 33 04.5	+0.4
CMWZ	**Cape Campbell**	**1.21**	**45**	P	Pg	05 32 52.0	+1.5
INZ	**Inchbonnie**	**1.21**	**264**	P	Pn	05 32 50.4	-0.2
AKCZ	**Akaroa Harbour**	**1.26**	**186**	P	Pn	05 32 51.1	-0.2
DSZ	**Denniston Nort**	**1.29**	**312**	P	Pb	05 32 51.7	-0.2
DSZ				S	Sg	05 33 08.5	-0.3
TUWZ	**Tuamarina**	**1.35**	**29**	P	Pb	05 32 52.9	+0.1
TUWZ				S	Sg	05 33 12.1	+1.4
NNZ	**Nelson**	**1.42**	**9**	P	Pb	05 32 53.5	-0.5
TCW	**Tory Channel**	**1.66**	**33**	P	Pn	05 32 57.2	+0.5
SNZO	**South Karori**	**1.78**	**43**	*e*Pn	Pn	05 32 58.4	+0.1
SNZO				*e*Sn	Sb	05 33 23.1	+0.5
WVZ	**Waitaha Valley**	**1.79**	**254**	P	Pn	05 32 58.7	+0.3
BHW	**Baring Head**	**1.80**	**48**	P	Pn	05 32 58.7	0.0
QRZ	**Quartz Range**	**1.84**	**347**	P	Pn	05 32 59.7	+0.5
RPZ	**Rata Peaks**	**1.85**	**233**	*e*Pn	Pn	05 32 58.8	-0.6
RPZ				*e*Sn	Sn	05 33 22.9	0.0
RPZ	**Rata Peaks**	**1.85**	**233**	P	Pn	05 32 58.9	-0.5
DUWZ	**D'Urville Isla**	**1.92**	**19**	P	Pn	05 33 01.3	+0.9
PLWZ	**Palliser**	**1.93**	**58**	P	Pn	05 33 00.1	-0.3
MSWZ	**Moikau Station**	**2.01**	**54**	P	Pn	05 33 01.2	-0.3
CAW	**Cannon Point**	**2.11**	**45**	P	Pn	05 33 02.9	0.0
PAWZ	**Paruwai Farm**	**2.14**	**56**	P	Pn	05 33 02.7	-0.6
KIW	**Kapiti Island**	**2.22**	**39**	P	Pn	05 33 05.0	+0.5
TRWZ	**Traveller**	**2.29**	**59**	P	Pn	05 33 05.1	-0.3
MTW	**Mount Morrison**	**2.32**	**52**	P	Pn	05 33 05.2	-0.6
OGWZ	**Otaki Gorge**	**2.38**	**42**	P	Pn	05 33 06.6	-0.1
HOWZ	**Holdsworth Sta**	**2.50**	**47**	P	Pn	05 33 08.1	-0.2
FOZ	**Fox Glacier**	**2.56**	**248**	*e*Pn	Pn	05 33 09.9	+0.8
FOZ				*e*Sn	Sn	05 33 41.0	+0.6
FOZ	**Fox Glacier**	**2.56**	**248**	P	Pn	05 33 10.0	+0.8
TMWZ	**Te Maipa**	**2.58**	**55**	P	Pn	05 33 08.5	-0.9
MRZ	**Mangatainoka R**	**2.71**	**45**	P	Pn	05 33 10.5	-0.6
LBZ	**Lake Benmore**	**2.75**	**229**	*e*Pn	Pn	05 33 11.8	0.0
LBZ				*e*Sn	Sn	05 33 45.0	-0.3
LBZ	**Lake Benmore**	**2.75**	**229**	P	Pn	05 33 11.6	-0.2
ODZ	**Otahua Downs**	**3.00**	**215**	*e*Pn	Pn	05 33 14.7	-0.5
ODZ				*e*Sn	Sn	05 33 51.3	0.0
ODZ	**Otahua Downs**	**3.00**	**215**	P	Pn	05 33 14.5	-0.6
POWZ	**Post Office Ro**	**3.00**	**43**	P	Pb	05 33 18.4	-2.6
BFZ	**Birch Farm**	**3.06**	**52**	*e*Pn	Pn	05 33 14.5	-1.5
BFZ				*e*Sn	Sn	05 33 51.0	-1.7
BFZ	**Birch Farm**	**3.06**	**52**	P	Pn	05 33 15.0	-0.9
WAZ	**Wanganui**	**3.20**	**27**	P	Pn	05 33 19.8	+1.9
DVHZ	**Dannevirke**	**3.28**	**46**	P	Pn	05 33 17.8	-1.2
ANWZ	**Angora Road**	**3.33**	**51**	P	Pn	05 33 20.7	+0.9
TSZ	**Takapari Road**	**3.35**	**41**	P	Pn	05 33 22.1	+2.1
NBEZ	**Newall Road No**	**3.40**	**10**	P	Pn	05 33 23.1	+2.5
JCZ	**Jackson Bay**	**3.46**	**244**	P	Pn	05 33 21.5	0.0
PKE	**Pukeiti**	**3.49**	**12**	P	Pn	05 33 24.1	+2.2
PNHZ	**Pukenui**	**3.58**	**42**	P	Pn	05 33 23.2	0.0
WKZ	**Wanaka**	**3.68**	**232**	*e*Pn	Pn	05 33 23.5	-1.1
WKZ				*e*Sn	Sn	05 34 10.7	+2.5
MTVZ	**Mangateitei**	**3.70**	**30**	P	Pn	05 33 26.4	+1.6
VRZ	**Vera Road**	**3.71**	**21**	P	Pn	05 33 27.1	+2.1
HHSZ	**Highcliff Hill**	**3.72**	**208**	P	Pn	05 33 27.3	+2.2
PKVZ	**Pokaka**	**3.74**	**28**	P	Pn	05 33 26.8	+1.4
MOVZ	**Moawhango**	**3.79**	**33**	P	Pn	05 33 26.8	+0.7
WHVZ	**Whangaehu Hut**	**3.83**	**31**	P	Pn	05 33 27.5	+0.7
FWVZ	**Far West T-bar**	**3.84**	**30**	P	Pn	05 33 27.6	+0.7
BHHZ	**Black Hill Sta**	**3.85**	**37**	P	Pn	05 33 27.1	+0.2
KRHZ	**Kereru**	**3.87**	**41**	P	Pn	05 33 27.7	+0.5
TUVZ	**Tukino**	**3.87**	**31**	P	Pn	05 33 28.3	+1.0
NGZ	**Ngauruhoe**	**3.93**	**30**	P	Pn	05 33 29.0	+0.9
TWVZ	**Taurewa**	**3.97**	**28**	P	Pn	05 33 29.3	+0.8
WTVZ	**West Tongariro**	**3.98**	**29**	P	Pn	05 33 29.3	+0.6
KRVZ	**Karewarewa**	**4.02**	**30**	P	Pn	05 33 30.1	+0.8
KWHZ	**Kaweka Forest**	**4.07**	**40**	P	Pn	05 33 32.4	+2.5
TUZ	**Tuapeka**	**4.16**	**215**	P	Pn	05 33 33.9	+2.9
MSZ	**Milford Sound**	**4.27**	**239**	P	Pn	05 33 32.6	0.0
BKZ	**Black Stump Fm**	**4.31**	**38**	*e*Pn	Pn	05 33 32.1	-1.1
BKZ				*e*Sn	Sn	05 34 24.7	+1.1
BKZ	**Black Stump Fm**	**4.31**	**38**	P	Pn	05 33 33.5	+0.3
HIZ	**Hauiti**	**4.32**	**19**	*e*Pn	Pn	05 33 34.4	+1.1
HIZ				*e*Sn	Sn	05 34 25.0	+1.3
HIZ	**Hauiti**	**4.32**	**19**	P	Pn	05 33 34.6	+1.4
MLZ	**Mavora Lakes**	**4.51**	**231**	*e*Pn	Pn	05 33 34.5	-1.5
MLZ				*e*Sn	Sn	05 34 29.5	+0.8
TLZ	**Tolley Road**	**4.67**	**24**	P	Pn	05 33 40.4	+2.2
MTHZ	**Maungataniwha**	**4.72**	**38**	P	Pn	05 33 39.4	+0.5
SYZ	**Scrubby Hill**	**4.83**	**214**	P	Pn	05 33 40.4	+0.2
WHZ	**Wether Hill Ro**	**4.93**	**227**	*e*Pn	Pn	05 33 41.6	-0.2
DCZ	**Deep Cove**	**5.13**	**234**	*e*Pn	Pn	05 33 42.4	-2.0
DCZ				*e*Sn	Sn	05 34 42.1	-1.8
TOZ	**Tahuroa Road**	**5.22**	**22**	P	Pn	05 33 46.5	+0.9
MKAZ	**Moumakai**	**5.73**	**17**	P	Pn	05 33 53.4	+0.7
OUZ	**Omahuta**	**7.40**	**3**	*e*Pn	Pn	05 34 17.0	+1.4
OUZ				*e*Sn	Sn	05 35 37.8	-1.8
MCQ	**Macquarie Isla**	**15.09**	**213**	*e*Pn	Pn	05 35 56.5	-4.1
	37nm,0.9s						
MCQ				*e*Sn	Sn	05 38 48.0	+0.2
STKA	**Stephens Creek**	**27.12**	**283**	*e*P	P	05 38 10.7	0.0
	0.7nm,1.1s						
CTAO	**Charters Tower**	**31.85**	**306**	*e*P	P	05 38 52.2	-0.6
	7.9nm,1.1s						
ASAR	**Alice Springs**	**37.45**	**288**	P	P	05 39 40.6	-0.6
	0.4nm,0.9s,baz=132,slow=7.1,SNR=4.3						
WRA	**Warramunga Arr**	**39.61**	**293**	P	P	05 40 02.9	+3.5
	1.6nm,1.0s,baz=129,slow=8.7,SNR=3.2						
HYT	**Haines Junctio**	**110.66**	**23**	*e*Pdif	Pdif	05 46 58.9	-0.8
TORD	**Torodi Ar. Bea**	**149.70**	**197**	PKPbc	PKPbc	05 52 17.9	-0.1
	0.7nm,0.9s,baz=186,slow=1.8,SNR=5.1						

*NIED **10** 05:38:00, 45.°10N×150.°00E, h35km, Mw4.1 Best double couple: M0 1.69000×10^15 NP1:φs 189.00000°, δ7.00000°, λ32.00000°. NP2:φs 68.00000°, δ86.00000°, λ96.00000°.*
*SKHL **10** 05:38:51.1±0.5, 44.°93N×150.°21E, h44km±8km, mb4.6/6*
*JMA **10** 05:38:51.7±0.6, 45.°13N×150.°03E, h30km, M4.7*
*ISCJB **10** 05:38:51.1±0.4, 45.°01N±0.°05×149.°97E±0.°05, h35km, mb3.8/23, MS3.3/1, Error ellipse: s-maj=8.9km s-min=3.2km az=149.3*
*MOS **10** 05:38:54.1±1.0, 45.°09N×149.°74E, h65km, mb4.1/8, Error ellipse: s-maj=10.1km s-min=7.6km az=67.7*
*IDC **10** 05:38:56.0±2.6, 45.°05N×149.°83E, h66km±23km, mb3.5/15, mb1 3.8/20, mb1mx3.7/34, mbtmp3.8/20, MS3.0/3, Ms1 3.0/3, ms1mx2.6/28, Error ellipse: s-maj=19.1km s-min=13.4km az=144.0*

ISC 10 05:38:52.1±0.6, 44.°90N±0.°07×149.°99E±0.°06, h35km, n82, σ2°16/90, mb3.8/23, 8C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.54**	**283**	⇓*e*PN	Pn	05 39 16.9	-0.1
KUR				*e*S	Sn	05 39 35.3	-0.4
KUR	**Kuril'sk**	**1.54**	**283**	*i*P	Pn	05 39 16.0	-1.0
KUR				AMB	AMB	05 39 20.0	
	65nm,0.3s						
KUR				AMB	AMB	05 39 20.0	
	87nm,0.3s						
KUR

comp=Z,300nm,14.0s
YSS Yuzh-Sakhalins 5.45 295 *e*P **Pn 05 40 11.8 +1.2**
ERM Erimo 5.75 242 *d i*PN **Pn 05 40 18.2 +3.4**
JNB Noboribetsu 6.93 253 *e*S **Sn 05 41 48.5 -0.1**
SKR Severo-Kuril's 7.10 33 *e*PN **Pn 05 40 36.2 +2.8**
SKR pmax pmax
comp=Z,82nm,0.8s
SKR MLR MLR
comp=Z,100nm,13.0s
SKR MLR MLR
comp=Z,200nm,14.0s
SKR Severo-Kuril's 7.10 33 *e*P **Pn 05 40 33.5 +0.1**
SKR AMB AMB 05 40 40.0
comp=Z,82nm,0.8s
JKB Kayabe 7.18 248 P **Pn 05 40 35.7 +1.2**
JKB *e*S **Sn 05 41 51.7 -3.1**
JANG Nango 7.71 237 *e*S **Sn 05 42 01.6 -6.3**
JTM Tenmabayashi 7.74 241 *e*S **Sn 05 42 03.7 -4.7**
OFUJ Ofunato 8.49 230 *e*S **Sn 05 42 20.4 -6.7**
TEY Ternei 9.49 276⇑ *e*PN Pn 05 41 13.9 +7.8
TEY pmax pmax
comp=E,10.0nm,1.4s
TEY pmax pmax
comp=Z,10.0nm,1.4s
TEY Ternei 9.49 276 *e*P **Pn 05 41 10.0 +3.9**
TEY AMB AMB 05 41 14.7
comp=Z,10.0nm,1.0s
PETK Petropavlovsk- 9.64 29 P **Pn 05 41 10.2 +2.0**
comp=Z,1.0nm,0.3s,baz=208,slow=11,SNR=19
PETK LR LR 05 44 56.4
comp=Z,54nm,21.3s,baz=218,slow=38
MAJO Matsushiro 12.22 231⇑ *i*PN **Pn 05 41 47.1 +3.5**
USRK Ussuriysk Ar. 12.86 273 P **Pn 05 41 53.6 +1.4**
comp=Z,0.2nm,0.3s,baz=84,slow=12,SNR=2.2
VLA Vladivostok 13.15 269⇑ *i*PN **Pn 05 41 54.5 -1.7**
VLA pmax pmax
comp=Z,16nm,0.7s
KLR Kul'dur 13.16 296 LR LR 05 47 01.4
comp=Z,54nm,20.9s,baz=134,slow=37
EKMR Ekimchan 13.83 312 *e*P **Pn 05 42 05.0 -0.4**
BMKR Bomnak 16.75 313 *e*P **Pn 05 42 43.0 -0.7**
KROS Kirovskiy 17.61 311 *e*P **Pn 05 42 55.0 +0.5**
KROS AMB AMB 05 42 57.7
comp=Z,3.0nm,0.6s
SEY Seymchan 18.12 4 P **P 05 43 02.8 +2.1**
comp=Z,0.4nm,0.3s,baz=172,slow=13,SNR=5.0
KSRS Korea Array 18.17 254 P **Pn 05 43 02.4 +1.0**
comp=Z,0.3nm,0.3s,baz=68,slow=9.6,SNR=3.5
YAK Yakutsk 20.83 333 *i*P **P 05 43 28.0 -2.2**
YAK Yakutsk 20.83 333 *e*P **P 05 43 28.0 -2.2**
BILL Bilibino 24.71 15⇑ *e*P **P 05 44 09.1 -0.4**
BILL pmax pmax
comp=Z,2.0nm,1.2s
BILL Bilibino 24.71 15 *e*P **P 05 44 09.1 -0.4**
TIXI Tiksi 28.68 346⇓ *i*P **P 05 44 43.4 -1.8**
TIXI pmax pmax
comp=Z,1.0nm,0.9s
H11N2 WAKE ISLAND Hy 28.76 145 T T 06 15 36.9
baz=335,slow=76,SNR=401
H11N1 WAKE ISLAND Hy 28.78 145 T T 06 15 35.1
baz=335,slow=76,SNR=339
H11N3 WAKE ISLAND Hy 28.78 145 T T 06 15 37.2
baz=335,slow=76,SNR=410
H11S1 WAKE ISLAND Hy 29.79 147 T T 06 16 47.6
baz=336,slow=76,SNR=350
H11S3 WAKE ISLAND Hy 29.80 147 T T 06 16 52.1
baz=336,slow=76,SNR=309
H11S2 WAKE ISLAND Hy 29.81 147 T T 06 16 49.0
baz=336,slow=76,SNR=221
SONM Songino Array 29.93 291 P **P 05 44 56.3 -0.4**
comp=Z,0.3nm,0.4s,baz=84,slow=11,SNR=2.5
COLA College 38.93 37⇑ *i*P **P 05 46 15.7 +1.7**
COLA pmax pmax
comp=Z,5.0nm,1.0s
ILAR Eielson Array 39.35 37 P **P 05 46 17.4 -0.2**
comp=Z,1.2nm,0.8s,baz=258,slow=8.1,SNR=13
INK Inuvik 44.37 31 P **P 05 46 59.1 +0.6**
comp=Z,1.7nm,0.6s,baz=238,slow=6.8,SNR=3.0
MKAR Makanchi Array 45.85 298 P **P 05 47 10.5 -0.1**
comp=Z,0.3nm,0.5s,baz=71,slow=6.2,SNR=2.5
MKAR PcP **PcP 05 48 47.4 0.0**
comp=Z,0.3nm,0.5s,baz=76,slow=0.6,SNR=3.2
MKAR LR LR 06 07 18.6
comp=Z,35nm,19.4s,baz=92,slow=37
KURK Kurchatov 46.57 304⇑ *i*P **P 05 47 13.7 -2.4**
KURK pmax pmax
comp=Z,1.0nm,1.1s
KURK Kurchatov 46.57 304 *e*P **P 05 47 13.7 -2.4**
BRVK Borovoye 50.39 310⇑ *i*P **P 05 47 42.7 -2.8**
BRVK pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 53.70 35 P **P 05 48 10.0 +0.1**
comp=Z,1.3nm,0.8s,baz=299,slow=7.1,SNR=4.6
FINES FINESS Array B 64.75 334 P **P 05 49 24.1 -2.3**
comp=Z,0.6nm,0.5s,baz=46,slow=11,SNR=4.3
FINES FINESS Array B 64.75 334 *i*P **P 05 49 26.8 +0.4**
FINES pmax pmax
comp=Z,1.0nm,0.5s
NVAR Mina Array Bea 65.24 60 P **P 05 49 31.8 +1.5**
comp=Z,0.5nm,0.7s,baz=299,slow=6.0,SNR=5.9
OBN Obninsk 65.57 325⇓ *e*P **P 05 49 30.3 -1.5**
OBN pmax pmax
comp=Z,3.0nm,0.7s
OBN Obninsk 65.57 325 *e*P **P 05 49 31.4 -0.4**
WRA Warramunga Arr 66.09 196 P **P 05 49 36.2 +0.7**
comp=Z,1.2nm,0.7s,baz=2.9,slow=6.7,SNR=5.9
PDAR Pinedale Array 67.60 52 P **P 05 49 45.9 +0.5**
comp=Z,0.6nm,0.8s,baz=191,slow=1.5,SNR=4.8
NOA NORSAR Array B 69.24 340 P **P 05 49 53.9 -1.1**
comp=Z,0.4nm,0.6s,baz=31,slow=7.3,SNR=2.9
ASAR Alice Springs 69.80 196 P **P 05 50 00.3 +1.5**
comp=Z,0.8nm,0.6s,baz=12,slow=5.0,SNR=14
ASAR Alice Springs 69.80 196 *e*P **P 05 50 00.6 +1.8**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
KBZ Khabaz 70.54 313 P **P 05 50 03.8 +0.7**
comp=Z,3.9nm,0.8s,baz=64,slow=1.6,SNR=7.6
KIEV Kiev 71.84 325⇓ *i*P **P 05 50 10.5 -0.4**
KIEV pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 74.67 56⇑ *i*P **P 05 50 28.8 +0.6**
CLL Collm 77.20 334 *i*P **P 05 50 40.0 -2.0**
comp=Z,5.0nm,0.8s
CLL *i*pP **pP 05 50 52.3 +0.2**
CLL Collm 77.20 334 *i*P **P 05 50 40.0 -2.0**
CLL pmax pmax
comp=Z,5.0nm,0.8s
ESK Eskdalemuir 77.60 345 *i*P **P 05 50 43.5 -0.7**
BRTR Keskin Array B 78.19 315 P **P 05 50 47.5 -0.5**
comp=Z,0.4nm,0.6s,baz=22,slow=8.1,SNR=3.3
KHC Kasperske Hory 78.91 333 *e*P **P 05 50 51.0 -0.6**
KHC Kasperske Hory 78.91 333 *e*P **P 05 50 51.0 -0.6**
GERES GERESS Array B 79.11 332 P **P 05 50 51.9 -0.9**
comp=Z,0.9nm,0.5s,baz=30,slow=6.2,SNR=7.8
GERES GERESS Array B 79.11 332 *e*P **P 05 50 52.1 -0.7**
GERES pmax pmax
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 80.31 58 P **P 05 51 00.3 +0.6**
comp=Z,0.5nm,0.4s,baz=302,slow=4.2,SNR=17

MEX 10 05:57:25.7±0.4, 19°21N×104°11W, h2km, MD3.7, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZ5V		**0.55**	**61**	*i* P	Pg	05 57 35.8	-0.4
EZ5V				*e*S	Sg	05 57 44.1	+0.8
MMIG	**Aquila**	**1.17**	**142**	*e*P	Pg	05 57 45.5	-2.6
MMIG				*e*S	Sg	05 58 00.9	-2.4

*GCG **10** 06:07:56.9±0.6, 13°80N×92°49W, h21km±126km, MD3.9*
*MEX **10** 06:07:57.6±0.8, 14°09N×92°54W, h104km±34km, MD4.0*
ISC 10 06:07:44.2±5.5, 13°4N±0°3×93°0W±0°2, h34km±5km, n7, σ1§04/12, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.69**	**26**	*i* P	**Pb**	**06 08 15.3**	**+0.5**
THIG				*e*S	**Sn**	**06 08 30.2**	**-1.7**
STG3	**Santiaguito 3,**	**1.94**	**47**	*e*P	**Pb**	**06 08 19.9**	**+0.9**
PCIG		**2.33**	**355**	*e*P	**Pb**	**06 08 25.8**	**+0.3**
PCIG				*e*S	**Sn**	**06 08 47.4**	**-0.1**
FUG	**Fuego 3**	**2.37**	**63**	*e*P	**Pb**	**06 08 26.0**	**-0.4**
FUG				*e*S	**Sn**	**06 08 48.4**	**-0.5**
PCG	**Pacaya**	**2.56**	**66**	*e*S	**Sn**	**06 08 54.5**	**+1.0**
IXG	**Ixpaco**	**2.63**	**72**	*e*P	**Pb**	**06 08 30.2**	**-0.6**
IXG				*e*S	**Sn**	**06 08 56.2**	**+0.9**
CCIG	**Comitan**	**3.02**	**16**	*e*P	**Pb**	**06 08 36.5**	**-0.9**
CCIG				*e*S	**Sn**	**06 09 06.0**	**+1.1**

NNC 10 06:21:51.6±3.6, 54°06N×86°46E, h0km, mb3.6, mpv3.2, 4C-3D, Error ellipse: s-maj=33.0km s-min=27.0km az=86.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.85**	**238**	⇑Pn	Pn	06 23 19.3	-0.2
KURK	0.7nm,0.4s			⇑Lg	Lg	06 24 55.7	
KURBB	**Kurchatov Arra**	**5.95**	**238**	⇑Pn	Pn	06 23 20.8	-0.1
KURBB	5.6nm,0.7s			⇓Lg	Lg	06 25 02.1	
MK31	**Makanchi Array**	**7.74**	**202**	⇓Pn	Pn	06 23 45.8	+0.3
MK31	0.2nm,0.2s,baz=27,slow=14,SNR=22			⇑Sn	Sn	06 25 15.5	+1.6
MK31	0.4nm,0.5s			⇓Lg	Lg	06 25 55.5	
	3.2nm,0.9s,baz=28,slow=29,SNR=4.6						

*PGC **10** 06:23:14.8±0.4, 58°84N×137°65W, h1km, ML3.2/11, 116km Ese of Yakutat, Ak Southeastern Alaska*
*AEIC **10** 06:23:14.7±0.0, 58°87N×137°62W, h8km*
*NEIC **10** 06:23:14.8±0.0, 58°84N×137°65W, h1km, ML3.1(AEIC), ML3.2(OTT), After OTT.*
ISC 10 06:23:14.0±0.8, 58°81N±0°04×137°62W±0°02, h10km, n69, σ1§48/110, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.92**	**45**	*e*Pg	**Pg**	**06 23 31.5**	**0.0**
PLBC				*e*Sg	**Sg**	**06 23 43.0**	**-0.5**
PLBC	**Pleasant Camp**	**0.92**	**45**	P	**Pg**	**06 23 31.5**	**0.0**
PLBC				S	**Sg**	**06 23 43.0**	**-0.5**
PNL	**Peninsula**	**1.25**	**314**	*e*Pg	**Pn**	**06 23 36.5**	**-1.1**
PNL				*e*Sn	**Sn**	**06 23 54.4**	**-0.1**
PNL	**Peninsula**	**1.25**	**314**	P	**Pn**	**06 23 36.6**	**-1.0**
PNL				S	**Sb**	**06 23 53.5**	**-0.4**
YKU2	**Yakutat**	**1.27**	**304**	*e*Pg	**Pn**	**06 23 38.2**	**+0.5**
YKU2				*e*Sg	**Sg**	**06 23 54.6**	**-0.1**
SKAG	**Skagway**	**1.35**	**60**	*e*Pg	**Pn**	**06 23 38.9**	**+0.1**
SKAG				*e*Sg	**Sb**	**06 23 56.6**	**+0.1**
BESE	**Bessie Mountai**	**1.46**	**98**	Pn	**Pn**	**06 23 41.1**	**+0.6**
BESE				Sg	**Sn**	**06 24 00.4**	**+0.7**
BCPM	**Bancas Point**	**1.54**	**319**	*e*Pn	**Pn**	**06 23 40.8**	**-0.7**
BCPM				*e*Sn	**Sb**	**06 24 02.3**	**+0.2**
YUK7	**Dusty Glacier**	**1.74**	**352**	*e*Pn	**Pn**	**06 23 45.3**	**+0.8**
YUK7				*e*Sn	**Sn**	**06 24 06.7**	**-0.1**
YUK7	**Dusty Glacier**	**1.74**	**352**	Pn	**Pn**	**06 23 45.3**	**+0.8**
YUK7				Sg	**Sn**	**06 24 06.7**	**-0.1**
JIS	**Juneau Island**	**1.78**	**106**	*e*Pn	**Pn**	**06 23 46.0**	**+1.2**
JIS				*e*Sn	**Sn**	**06 24 09.7**	**+2.3**
HYT	**Haines Junctio**	**2.02**	**2**	Pn	**Pn**	**06 23 48.7**	**+0.5**
HYT				Sg	**Sb**	**06 24 16.1**	**+0.1**
SAMH	**Samovar Hills**	**2.08**	**311**	*e*Pn	**Pn**	**06 23 49.8**	**+0.8**
SAMH				*e*Sn	**Sb**	**06 24 19.2**	**+1.3**
SAMH	**Samovar Hills**	**2.08**	**311**	Pn	**Pn**	**06 23 49.8**	**+0.8**
SAMH				Sg	**Sb**	**06 24 19.2**	**+1.3**
YUK6	**Outpost Mounta**	**2.17**	**350**	*e*Pn	**Pn**	**06 23 50.9**	**+0.6**
YUK6				*e*Sn	**Sb**	**06 24 20.7**	**+0.3**
YUK6	**Outpost Mounta**	**2.17**	**350**	Pn	**Pn**	**06 23 50.9**	**+0.6**
YUK6				Sg	**Sb**	**06 24 20.7**	**+0.3**
CHX	**Chaix Hills**	**2.18**	**307**	*e*Pn	**Pn**	**06 23 51.8**	**+1.4**
WHY	**Whitehorse**	**2.31**	**36**	Pn	**Pn**	**06 23 53.0**	**+0.8**
WHY				Pg	**Pb**	**06 23 56.0**	**+0.2**
WHY				Sn	**Sb**	**06 24 23.6**	**-0.9**
WHY				Sg	**Sg**	**06 24 25.7**	**-2.5**
YUK5	**Granite Creek**	**2.33**	**357**	*e*Pn	**Pn**	**06 23 53.6**	**+1.1**
YUK5				*e*Sn	**Sb**	**06 24 23.3**	**-1.6**
YUK5	**Granite Creek**	**2.33**	**357**	Pn	**Pn**	**06 23 53.6**	**+1.1**
YUK5				Sn	**Sb**	**06 24 23.3**	**-1.6**
RKAV	**Rock Avalanche**	**2.41**	**310**	*e*Pn	**Pn**	**06 23 55.5**	**+1.9**
RKAV				*e*Sn	**Sb**	**06 24 28.7**	**+1.3**
RKAV	**Rock Avalanche**	**2.41**	**310**	Pn	**Pn**	**06 23 55.5**	**+1.9**
RKAV				Sg	**Sb**	**06 24 28.7**	**+1.3**
YUK4	**Talbot Arm**	**2.59**	**349**	*e*Pn	**Pn**	**06 23 58.6**	**+2.5**
YUK4	**Talbot Arm**	**2.59**	**349**	Pn	**Pn**	**06 23 58.6**	**+2.5**
MESA	**MESA**	**2.60**	**304**	*e*Pn	**Pn**	**06 23 55.7**	**-0.5**
MESA				*e*Sn	**Sb**	**06 24 33.6**	**+0.8**
MESA	**MESA**	**2.60**	**304**	Pn	**Pn**	**06 23 55.7**	**-0.5**
MESA				Sg	**Sb**	**06 24 33.6**	**+0.8**
CTGM	**Chitina Glacie**	**2.86**	**321**	*e*Pn	**Pn**	**06 23 59.9**	**+0.2**
CTGM				*e*Sn	**Sn**	**06 24 35.2**	**+1.0**
CTGM	**Chitina Glacie**	**2.86**	**321**	Pn	**Pn**	**06 24 00.4**	**+0.7**
CTGM				Sg	**Sb**	**06 24 39.1**	**-1.0**
SNH	**Sunshine Point**	**2.99**	**299**	*e*Pn	**Pn**	**06 24 01.5**	**0.0**
KIAG	**Kiagna River**	**3.19**	**314**	Pn	**Pn**	**06 24 04.4**	**+0.1**
KIAG				Sg	**Sb**	**06 24 47.8**	**-1.9**
BALM	**Baldy**	**3.26**	**315**	*e*Pn	**Pn**	**06 24 06.2**	**+1.0**
BALM				*e*Sn	**Sn**	**06 24 45.2**	**+1.2**
BALM	**Baldy**	**3.26**	**315**	Pn	**Pn**	**06 24 06.4**	**+1.2**
BALM				Sg	**Sb**	**06 24 50.7**	**-1.0**
YUK3	**Moose Creek**	**3.29**	**336**	*e*Pn	**Pn**	**06 24 06.3**	**+0.6**
YUK3				*e*Sg	**Sb**	**06 24 55.0**	**+2.4**
YUK3	**Moose Creek**	**3.29**	**336**	Pn	**Pn**	**06 24 06.3**	**+0.6**
YUK3				Sg	**Sb**	**06 24 55.0**	**+2.4**
YUK2	**White River**	**3.39**	**333**	*e*Pn	**Pn**	**06 24 07.4**	**+0.5**
YUK2				*e*Sg	**Sg**	**06 24 59.2**	**-3.4**
YUK2	**White River**	**3.39**	**333**	Pn	**Pn**	**06 24 07.4**	**+0.5**
YUK2				Sg	**Sg**	**06 24 59.2**	**-3.4**
NICHA	**Nichawak Mount**	**3.54**	**297**	*e*Pn	**Pn**	**06 24 10.5**	**+1.7**
HMT	**Hamilton**	**3.71**	**297**	*e*Pn	**Pn**	**06 24 12.6**	**+1.3**
HMT				*e*Sn	**Sn**	**06 24 56.4**	**+1.4**
WRAK	**Wrangell Islan**	**3.71**	**128**	*e*Pn	**Pn**	**06 24 13.3**	**+2.0**
WRAK				*e*Sg	**Sg**	**06 25 11.7**	**-1.4**
BVCY	**Beaver Creek**	**3.95**	**338**	*e*Pn	**Pn**	**06 24 16.4**	**+1.8**
BVCY	**Beaver Creek**	**3.95**	**338**	Pn	**Pn**	**06 24 16.4**	**+1.8**
DLBC	**Dease Lake**	**3.99**	**92**	Pn	**Pn**	**06 24 17.4**	**+2.3**
DLBC				Sg	**Sg**	**06 25 18.9**	**-3.0**
CRAG	**Craig**	**4.15**	**142**	*e*Pn	**Pn**	**06 24 19.1**	**+1.8**
CRAG				*e*Sn	**Sn**	**06 25 07.9**	**+2.1**
EYAK	**Cordova Ski Ar**	**4.47**	**296**	*e*Pn	**Pn**	**06 24 23.5**	**+1.8**
DIV	**Divide**	**4.71**	**303**	*e*Pn	**Pn**	**06 24 26.2**	**+1.2**
DIV				*e*Sn	**Sn**	**06 25 20.7**	**+1.1**
BCA3	**Beaver Creek A**	**4.72**	**336**	*e*Pn	**Pn**	**06 24 25.9**	**+0.7**
GLI	**Glacier Island**	**5.21**	**297**	*e*Pn	**Pn**	**06 24 33.0**	**+1.2**
GLI				*e*Sn	**Sn**	**06 25 32.0**	**+0.1**
SCM	**Sheep Creek Mo**	**5.69**	**306**	*e*Pn	**Pn**	**06 24 40.3**	**+1.8**
SCM				*e*Sn	**Sn**	**06 25 44.9**	**+1.0**
KNK	**Knik Glacier**	**6.01**	**300**	*e*Pn	**Pn**	**06 24 45.0**	**+2.1**
RIDG	**Independent Ri**	**6.04**	**328**	*e*Pn	**Pn**	**06 24 45.7**	**+2.3**
RUBB	**Prince Rupert**	**6.07**	**135**	Sg	**Sg**	**06 26 24.1**	**-4.4**
SML	**Sawmill**	**6.11**	**304**	*e*Pn	**Pn**	**06 24 45.7**	**+1.5**
SEW	**Seward**	**6.17**	**287**	*e*Pn	**Pn**	**06 24 46.1**	**+1.1**
EGAK	**Eagle**	**6.22**	**346**	*e*Pn	**Pn**	**06 24 47.3**	**+1.7**
DIB	**Dawson Inlet,**	**6.32**	**151**	*e*Pn	**Pn**	**06 24 49.2**	**+2.1**
GHO	**Glory Hole Cre**	**6.35**	**303**	*e*Pn	**Pn**	**06 24 49.6**	**+2.0**
PMR	**Palmer**	**6.38**	**301**	*e*Pn	**Pn**	**06 24 49.4**	**+1.5**
DHY	**Denali Highway**	**6.39**	**316**	*e*Pn	**Pn**	**06 24 50.1**	**+2.0**
RC01	**Rabbit Creek A**	**6.50**	**296**	*e*Pn	**Pn**	**06 24 50.5**	**+1.0**
CNPM	**China Poot**	**7.04**	**282**	*e*Pn	**Pn**	**06 24 57.8**	**+0.8**
RND	**Reindeer**	**7.12**	**315**	*e*Pn	**Pn**	**06 24 59.7**	**+1.5**
ILB	**Eielson Array**	**7.41**	**328**	*e*Pn	**Pn**	**06 25 03.0**	**+1.0**
CCB	**Clear Creek Bu**	**7.58**	**325**	*e*Pn	**Pn**	**06 25 06.5**	**+2.1**
EPYK	**Eagle Plains**	**7.60**	**3**	*e*Pn	**Pn**	**06 25 07.1**	**+2.4**
TRF	**Thorofare Moun**	**7.69**	**313**	*e*Pn	**Pn**	**06 25 07.2**	**+1.2**
BWN	**Browne**	**7.80**	**319**	*e*Pn	**Pn**	**06 25 07.4**	**0.0**
KDAK	**Kodiak Island**	**7.95**	**269**	*e*Pn	**Pn**	**06 25 07.3**	**-2.1**
BPAW	**Bear Paw Mtn.**	**8.30**	**315**	*e*Pn	**Pn**	**06 25 14.5**	**+0.2**
OHAK	**Old Harbor**	**8.47**	**266**	*e*Pn	**Pn**	**06 25 15.9**	**-0.6**

MEX 10 06:23:43.0±0.6, 16°34N×98°21W, h6km±4km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.10**	**53**	*i* P	Pg	06 23 44.5	-0.7
PNIG				*i* S	Sg	06 23 46.5	-0.2
TLIG	**Tlapa**	**1.27**	**344**	*e*P	Pn	06 24 04.2	-3.2
TLIG				*i* S	Sg	06 24 19.8	-4.0

*IDC **10** 06:26:28.9±2.0, 25°32S×179°48E, h493km±21km, mb3.8/18, mb1 4.0/19, mb1mx3.8/37, mbtmp4.6/19, Error ellipse: s-maj=15.6km s-min=13.9km az=75.0*
*ISCJB **10** 06:26:29.0±0.1, 25°50S±0°02×179°41E±0°03, h507km, mb4.4/71, Error ellipse: s-maj=4.3km s-min=3.0km az=22.4*
*NEIC **10** 06:26:29.8±1.3, 25°49S×179°45E, h511km±6km, mb4.6/67, Error ellipse: s-maj=17.5km s-min=15.0km az=57.0*
ISC 10 06:26:29.7±0.4, 25°60S±0°06×179°45E±0°07, h507km, n202, σ1§23/217, mb4.5/69, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.32**	**148**	P	**P**	**06 27 51.8**	**+0.7**
RAO	**Raoul Island**	**4.33**	**148**	*e*P	**P**	**06 27 52.5**	**+1.3**
RAO				*e*S	**S**	**06 28 59.1**	**+1.4**
GLKZ	**Green Lake**	**4.34**	**148**	P	**P**	**06 27 50.1**	**-1.0**
GLKZ				S	**S**	**06 28 56.0**	**-1.8**
OUZ	**Omahuta**	**10.84**	**206**	*e*P	**P**	**06 28 55.4**	**-0.4**
MARNC	**Mare, Loyalty**	**11.25**	**289**	*e*P	**P**	**06 28 59.7**	**-0.6**
PINNC	**Pines Island,**	**11.36**	**283**	*e*P	**P**	**06 28 59.8**	**-1.7**
MXZ	**Matakaoa Point**	**11.97**	**184**	*e*P	**P**	**06 29 09.7**	**+2.0**
DZM	**Mont Dzumac**	**12.41**	**284**	P	**P**	**06 29 14.3**	**+1.5**
DZM	**Mont Dzumac**	**12.41**	**284**	*e*P	**P**	**06 29 13.3**	**+0.5**
URZ	**Urewera**	**12.78**	**188**	P	**P**	**06 29 15.4**	**-0.8**
URZ	4.4nm,0.3s,baz=359,slow=1.6,SNR=27			S	**S**	**06 31 33.0**	**-0.6**
HIZ	**Hauiti**	**13.45**	**196**	*e*P	**P**	**06 29 25.9**	**+2.6**
BKZ	**Black Stump Fm**	**13.76**	**190**	*e*P	**P**	**06 29 26.8**	**+0.2**
KRHZ	**Kereru**	**14.25**	**190**	P	**P**	**06 29 30.8**	**-1.0**
KRHZ				S	**S**	**06 31 58.0**	**-3.9**
PNHZ	**Pukenui**	**14.54**	**190**	P	**P**	**06 29 30.9**	**-3.8**
PNHZ				S	**S**	**06 32 01.8**	**-5.6**
PXZ	**Pawanui**	**14.56**	**188**	P	**P**	**06 29 36.6**	**+1.7**
PXZ				S	**S**	**06 32 05.6**	**-2.1**
WPHZ	**Waipukurau**	**14.65**	**189**	S	**S**	**06 32 07.0**	**-2.5**
DVHZ	**Dannevirke**	**14.92**	**190**	P	**P**	**06 29 37.8**	**-1.0**
ANWZ	**Angora Road**	**15.03**	**189**	P	**P**	**06 29 40.3**	**+0.4**
BFZ	**Birch Farm**	**15.28**	**189**	*e*P	**P**	**06 29 41.7**	**-0.8**
MRZ	**Mangatainoka R**	**15.37**	**191**	P	**P**	**06 29 38.5**	**-4.9**
MRZ				S	**S**	**06 32 15.8**	**-7.4**
OGWZ	**Otaki Gorge**	**15.59**	**192**	P	**P**	**06 29 45.1**	**-0.6**
HOWZ	**Holdsworth Sta**	**15.61**	**191**	P	**P**	**06 29 46.4**	**+0.4**
DUWZ	**D'Urville Isla**	**15.85**	**196**	P	**P**	**06 29 49.8**	**+1.3**
DUWZ				S	**S**	**06 32 31.6**	**-0.7**
MTW	**Mount Morrison**	**15.87**	**191**	P	**P**	**06 29 50.1**	**+1.5**
TCW	**Tory Channel**	**16.16**	**194**	P	**P**	**06 29 50.4**	**-1.2**
SNZO	**South Karori**	**16.16**	**193**	*e*P	**P**	**06 29 51.1**	**-0.5**
PLWZ	**Palliser**	**16.31**	**191**	P	**P**	**06 29 53.2**	**0.0**
NNZ	**Nelson**	**16.38**	**196**	P	**P**	**06 29 53.8**	**0.0**
TUWZ	**Tuamarina**	**16.44**	**195**	P	**P**	**06 29 55.0**	**+0.5**
THZ	**Tophouse**	**17.01**	**197**	*e*P	**P**	**06 30 01.0**	**+0.7**
THZ	36nm,1.1s			*e*S	**S**	**06 32 53.9**	**+1.2**
THZ	**Tophouse**	**17.01**	**197**	P	**P**	**06 30 00.6**	**+0.2**
KHZ	**Kahutara**	**17.47**	**195**	*e*P	**P**	**06 30 04.5**	**-0.1**
KHZ	13nm,0.6s			*e*S	**S**	**06 33 01.4**	**+1.3**
LTZ	**Lake Taylor**	**18.13**	**197**	*e*P	**P**	**06 30 10.7**	**0.0**
OXZ	**Oxford**	**18.70**	**197**	*e*P	**P**	**06 30 16.7**	**+0.8**
OXZ	20nm,0.9s			*e*S	**S**	**06 33 20.0**	**-0.2**
MQZ	**McQueen's Vall**	**18.90**	**195**	*e*P	**P**	**06 30 18.7**	**+1.1**
RPZ	**Rata Peaks**	**19.33**	**199**	P	**P**	**06 30 23.5**	**+1.9**
RPZ	**Rata Peaks**	**19.33**	**199**	*e*P	**P**	**06 30 21.8**	**+0.1**
FOZ	**Fox Glacier**	**19.55**	**201**	*e*P	**P**	**06 30 23.9**	**+0.3**
LBZ	**Lake Benmore**	**20.20**	**200**	*e*P	**P**	**06 30 30.0**	**+0.5**
ODZ	**Otahua Downs**	**20.67**	**198**	*e*P	**P**	**06 30 33.9**	**+0.1**
WKZ	**Wanaka**	**20.96**	**201**	*e*P	**P**	**06 30 37.3**	**+0.8**
MLZ	**Mavora Lakes**	**21.74**	**202**	*e*P	**P**	**06 30 44.0**	**+0.6**
WHZ	**Wether Hill Ro**	**22.26**	**202**	*e*P	**P**	**06 30 49.3**	**+1.2**
ARMA	**Armidale**	**25.00**	**253**	*e*P	**P**	**06 31 14.9**	**+2.0**
ARMA	**Armidale**	**25.00**	**253**	P	**P**	**06 31 12.5**	**-0.4**
EIDS	**Eidsvold**	**25.59**	**264**	*e*P	**P**	**06 31 19.3**	**+1.2**
EIDS	**Eidsvold**	**25.59**	**264**	P	**P**	**06 31 17.5**	**-0.6**
MGCD	**Mangrove Creek**	**25.78**	**246**	P	**P**	**06 31 21.1**	**+1.4**
RMQ	**Roma**	**27.56**	**261**	P	**P**	**06 31 35.6**	**+0.2**
CAN	**Canberra**	**27.89**	**242**	*e*P	**P**	**06 31 40.1**	**+1.9**
MILA	**Mila**	**28.17**	**239**	P	**P**	**06 31 42.5**	**+1.8**
YNG	**Young**	**28.19**	**245**	P	**P**	**06 31 43.1**	**+2.3**
CMSA	**Cobar Meteorol**	**30.16**	**251**	P	**P**	**06 31 59.5**	**+1.6**
CTAO	**Charters Tower**	**31.03**	**273**	*e*P	**P**	**06 32 06.9**	**+1.2**
TOO	**Toolangi**	**31.13**	**239**	*e*P	**P**	**06 32 07.6**	**+1.3**
TOO	**Toolangi**	**31.13**	**239**	P	**P**	**06 32 08.3**	**+1.9**
STKA	**Stephens Creek**	**33.66**	**250**	P	**P**	**06 32 29.5**	**+1.6**
STKA	**Stephens Creek**	**33.66**	**250**	*e*P	**P**	**06 32 29.5**	**+1.6**
STKA	**Stephens Creek**	**33.66**	**250**	P	**P**	**06 32 28.7**	**+0.8**
PMG	**Port Moresby**	**34.62**	**292**	*e*P	**P**	**06 32 35.4**	**-0.8**
COEN	**Coen**	**35.93**	**282**	*e*P	**P**	**06 32 48.0**	**+0.9**
COEN	**Coen**	**35.93**	**282**	P	**P**	**06 32 47.3**	**+0.2**
HTT	**Hallett**	**35.95**	**248**	P	**P**	**06 32 48.4**	**+1.3**
QIS	**Mount Isa**	**36.90**	**269**	P	**P**	**06 32 55.3**	**+0.2**
BBOO	**Buckleboo**	**38.35**	**249**	*e*P	**P**	**06 33

MTN	Manton Dam	47.11	276	P	P	06 34 15.5	-0.3
	baz=47,SNR=5.1						
KNRA	Kununurra	48.21	272	P	P	06 34 24.5	+0.6
	baz=48,SNR=19						
FITZ	Fitzroy Crossi	50.23	267	P	P	06 34 39.4	+0.5
	13nm,0.5s,baz=104,slow=5.6,SNR=64						
FITZ	Fitzroy Crossi	50.23	267	eP	P	06 34 39.2	+0.4
FITZ	Fitzroy Crossi	50.23	267	P	P	06 34 39.4	+0.5
	baz=50,SNR=32						
VNDA	Vanda	52.66	185	P	P	06 34 58.3	+2.7
	0.7nm,0.6s,baz=25,slow=6.4,SNR=4.0						
VNDA	Vanda	52.66	185	eP	P	06 34 57.2	+1.6
PSAC2	Pilbara Seismi	54.34	261	eP	P	06 35 08.1	-0.3
	20nm,1.4s						
PSA00	Pilbara Seismi	54.39	261	eP	P	06 35 08.1	-0.7
	28nm,1.3s						
MORW	Morawa	55.84	251	eP	P	06 35 18.5	-0.4
	6.9nm,1.0s						
QSPA	South Pole Qui	64.50	180	eP	P	06 36 16.6	+0.8
	6.2nm,0.8s						
QSPA				ePcP	PcP	06 36 43.1	-1.8
MJAR	Matsushiro Arr	73.02	326	P	P	06 37 06.3	-1.3
	13nm,0.7s,baz=163,slow=5.8,SNR=30						
MAJO	Matsushiro	73.02	326	eP	P	06 37 06.7	-0.9
	18nm,0.9s						
MAT	Matsushiro	73.02	326	P	P	06 37 06.0	-1.6
MAT				eS	S	06 45 52.2	-1.4
MJB9	Matsu-Tunnel	73.02	326	eP	P	06 37 06.6	-1.0
	17nm,0.9s						
YOJ	Yonaguni jima	73.86	308	eP	P	06 37 12.0	-0.6
	80nm,1.2s						
YULB	Yu-li	74.45	306	eP	P	06 37 14.4	-1.6
	19nm,1.3s						
JNU	Nakatsue	74.47	319	P	P	06 37 14.8	-1.2
	14nm,0.9s,baz=117,slow=2.3,SNR=5.5						
JNU	Nakatsue	74.47	319	eP	P	06 37 14.9	-1.0
	33nm,1.3s						
KSRS	Korea Array	79.23	321	P	P	06 37 42.0	+0.1
	5.5nm,0.7s,baz=135,slow=5.6,SNR=29						
KS15	Wonju Array Si	79.24	321	eP	P	06 37 42.2	+0.3
	10nm,0.9s						
PETK	Petropavlovsk-	80.63	347	P	P	06 37 47.9	-0.9
	2.8nm,0.7s,baz=109,slow=8.0,SNR=3.7						
PEA1	Petropavlovsk-	80.63	347	eP	P	06 37 47.9	-0.9
NJ2	Nanjing	81.40	312	eP	P	06 37 55.5	+2.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	Ussuriysk Ar.	81.92	328	P	P	06 37 55.7	0.0
	comp=Z,2.7nm,0.6s,baz=147,slow=4.1,SNR=11						
VNA3	Neumayer Olymp	83.22	177	P	P	06 38 02.6	+0.6
VNA2	Neumayer--Watz	83.63	178	P	P	06 38 04.6	+0.6
	baz=184,slow=4.0						
VNA1	Neumayer--Stat	83.87	177	P	P	06 38 05.7	+0.6
ARVC	Arvin	84.00	47	P	P	06 38 06.2	-0.2
	baz=233						
MURC	Murrieta	84.18	49	P	P	06 38 07.2	-0.1
	baz=234						
BFSC	Mount Baldy Ra	84.25	48	P	P	06 38 07.8	+0.1
	baz=234						
VES	Vestal, Richgr	84.26	46	P	P	06 38 07.5	-0.1
	baz=233						
MONP2	Monument Peak	84.30	50	P	P	06 38 08.7	+0.5
	baz=235						
IKP	In-Ko-Pah, Jac	84.38	50	P	P	06 38 08.6	+0.2
	baz=235						
EDW2	Edwards Air Fo	84.40	47	P	P	06 38 08.5	+0.1
	baz=234						
ISA	Isabella, Lake	84.55	46	eP	P	06 38 08.9	-0.2
	comp=Z,8.1nm,0.9s						
ISA	Isabella, Lake	84.55	46	P	P	06 38 09.1	-0.1
	baz=233						
O02D	Mt. Diablo Mer	84.66	41	P	P	06 38 09.6	-0.1
	baz=230						
PFO	Pinyon Flats O	84.69	49	eP	P	06 38 09.2	-0.8
	comp=Z,4.7nm,1.0s						
PFO	Pinyon Flats O	84.69	49	P	P	06 38 09.7	-0.3
	baz=235						
SWSC	Sam W. Stewart	84.76	50	P	P	06 38 10.0	-0.1
	baz=235						
CMB	Columbia Colle	84.77	43	eP	P	06 38 09.6	-0.5
	comp=Z,4.4nm,1.0s						
BELC	Belle Mtn. Jos	85.23	49	P	P	06 38 12.8	+0.2
	baz=235						
CWC	Cottonwood Cre	85.27	46	P	P	06 38 12.3	-0.4
	baz=233						
BC3	Big Chuckawall	85.40	49	P	P	06 38 13.5	0.0
	baz=235						
MPMC	Manual Prospec	85.43	46	P	P	06 38 13.6	0.0
	baz=234						
GSC	Goldstone, Bar	85.44	47	eP	P	06 38 13.7	+0.2
	comp=Z,4.1nm,0.8s						
GSC	Goldstone, Bar	85.44	47	P	P	06 38 13.4	-0.1
	baz=234						
HEC	Hector,Ludlow	85.48	48	P	P	06 38 13.8	+0.1
	baz=235						
GLA	Glamis	85.49	50	P	P	06 38 13.2	-0.6
	baz=236						
KLR	Kul'dur	85.76	331	P	P	06 38 14.1	-0.5
	comp=Z,0.9nm,0.6s,baz=80,slow=2.6,SNR=3.8						
IRM	Iron Mountain	85.90	49	P	P	06 38 15.6	-0.1
	baz=235						
PNTR	Pine Nut	85.90	43	eP	P	06 38 14.1	-1.8
	comp=Z,4.3nm,0.9s						
GMRC	Granite Mounta	85.90	48	P	P	06 38 16.1	+0.2
	baz=235						
TUQ	Turquoise Moun	86.10	48	P	P	06 38 17.0	+0.2
	baz=235						
214A	Organ Pipe Nat	86.30	52	P	P	06 38 17.9	+0.3
	baz=237						
NV01	Mina Array Sit	86.31	44	eP	P	06 38 17.4	-0.4
NVAR	Mina Array Bea	86.31	44	P	P	06 38 17.4	-0.4
	comp=Z,2.6nm,0.8s,baz=222,slow=8.4,SNR=20						
PAHR	Pah Rah Range	86.41	43	eP	P	06 38 17.3	-0.9
	comp=Z,3.2nm,0.8s						
PDMCI	Parker Dam,Lak	86.67	49	P	P	06 38 19.5	+0.2
	baz=236						
TPNV	Topopah Spring	86.76	46	eP	P	06 38 19.8	-0.1
	comp=Z,6.5nm,1.0s						
TPNV	Topopah Spring	86.76	46	P	P	06 38 19.8	-0.1
	baz=235						
KVN	Kaiserville	86.81	44	eP	P	06 38 19.7	-0.4
	comp=Z,3.0nm,0.8s						
J04D	Umpqua Nationa	87.01	39	P	P	06 38 21.5	+0.5
	baz=230						
I04A	Tendick Farm,	87.20	38	P	P	06 38 22.1	+0.5
	baz=230						
MOD	Modoc Plateau	87.21	40	eP	P	06 38 21.3	-0.6
	comp=Z,5.2nm,1.1s						
PLCA	Paso Flores	87.44	134	P	P	06 38 24.1	+1.0
	comp=Z,3.0nm,1.1s,baz=306,slow=6.1,SNR=4.8						
PLCA	Paso Flores	87.44	134	eP	P	06 38 23.1	0.0
	comp=Z,12nm,1.5s						
J05D	Fort Rock, OR	87.54	39	P	P	06 38 24.1	+0.8
	baz=231						
TUC	Tucson	87.94	53	P	P	06 38 26.3	+0.9
	baz=238						
R11A	Troy Canyon, C	87.99	45	P	P	06 38 24.8	-0.9
	baz=235						
PINE	Pine Mountain	88.02	39	eP	P	06 38 25.0	-0.7
	comp=Z,16nm,1.0s						
F04D	Rainier, OR	88.35	36	P	P	06 38 27.5	+0.6
	baz=230						
319A	Douglas	88.54	54	eP	P	06 38 28.2	-0.1
	comp=Z,9.7nm,0.9s						
LCMT	Little Creek M	88.78	48	eP	P	06 38 29.9	+0.6
	comp=Z,2.9nm,0.9s						
CCUT	Cedar City	89.00	47	eP	P	06 38 29.7	-0.7
	comp=Z,4.1nm,1.1s						
I07A	Izee	89.02	39	eP	P	06 38 29.1	-1.1
	comp=Z,7.6nm,0.9s						
KNB	Kanab	89.06	48	eP	P	06 38 29.2	-1.5
	comp=Z,3.4nm,0.9s						
J08A	Circle Bar Ran	89.17	40	eP	P	06 38 30.9	0.0
	comp=Z,8.5nm,1.2s						
WUAZ	Wupatki	89.23	50	P	P	06 38 31.9	+0.4
	baz=238						
XAN	Xi'an	89.40	308	P	P	06 38 32.8	+0.7
XAN				pP	pP	06 40 18.0	-5.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ELK	Elko	89.58	44	eP	P	06 38 32.9	-0.2
	comp=Z,1.8nm,0.8s						
CMAR	Chiang Mai Arr	89.65	291	P	P	06 38 35.0	+1.4
	comp=Z,1.3nm,0.6s,baz=134,slow=3.2,SNR=5.9						
X18A	Snowflake	89.70	51	eP	P	06 38 33.2	-0.5
	comp=Z,3.6nm,0.8s						
MTPU	Mount Pierson	90.05	47	eP	P	06 38 34.6	-0.8
	comp=Z,5.8nm,0.9s						
MSU	Marysvale	90.31	47	eP	P	06 38 36.1	-0.4
DUG	Dugway, Tooele	90.81	45	P	P	06 38 38.7	+0.1
	baz=237						
TMUT	Trail Mountain	91.36	47	eP	P	06 38 40.6	-0.8
	comp=Z,8.0nm,0.8s						
MPU	Maple Canyon	91.47	46	eP	P	06 38 41.2	-0.6
	comp=Z,3.0nm,0.8s						
MNTX	Cornudas Mount	91.58	56	P	P	06 38 41.9	-0.3
	baz=241						
CD2	Chengdu	91.59	304	eP	P	06 38 41.9	-0.5
HLID	Hailey	91.69	42	P	P	06 38 43.5	+0.8
	baz=236						
HVU	Hansel Valley	91.70	44	eP	P	06 38 42.4	-0.4
	comp=Z,9.5nm,1.5s						
LTX	Lajitas	91.75	58	eP	P	06 38 42.9	-0.2
TX31	Lajitas Ar. Si	91.75	58	eP	P	06 38 42.6	-0.6
	comp=Z,3.2nm,0.9s						
TXAR	Lajitas Array	91.75	58	P	P	06 38 42.9	-0.2
	comp=Z,2.1nm,0.8s,baz=215,slow=6.1,SNR=21						
TCUT	Toone Canyon	92.21	45	eP	P	06 38 44.8	-0.4
	comp=Z,5.4nm,0.7s						
ANMO	Albuquerque	92.39	52	P	P	06 38 45.9	-0.2
	baz=240						
S22A	4UR Ranch, Cre	93.51	50	P	P	06 38 51.0	-0.3
	baz=240						
LZH	Lanzhou	94.02	308	eP	P	06 38 53.7	+0.2
LZH				pP	pP	06 40 42.8	-2.4
LZH				sP	sP	06 41 29.4	-6.5
LZH				PP	PP	06 43 01.0	+12
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
PD31	Pinedale Array	94.25	44	eP	P	06 38 53.4	-1.1
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	94.25	44	P	P	06 38 54.5	0.0
	comp=Z,0.3nm,0.6s,baz=176,slow=2.7,SNR=2.9						
SDCO	Great Sand Dun	94.43	50	P	P	06 38 54.9	-0.6
	baz=241						
ISCO	Idaho Springs	95.34	48	P	P	06 38 59.7	+0.1
	baz=241						
N23A	Red Feather La	95.65	47	P	P	06 39 00.9	0.0
	baz=241						
SONA0	Songino Array	98.06	319	ePdif	Pdif	06 39 11.2	-0.1
SONM	Songino Array	98.06	319	P	Pdif	06 39 11.2	-0.1
	comp=Z,0.9nm,1.0s,baz=129,slow=3.9,SNR=2.5						
MK32	Makanchi Array	112.92	312	eSKPdf	SKPdf	06 46 55.7	0.0
MKAR	Makanchi Array	112.92	312	SKP	SKPdf	06 46 55.7	0.0
	comp=Z,0.5nm,0.8s,baz=55,slow=1.2,SNR=3.6						
GEYT	Alibeck	129.37	299	SKPbc	SKPbc	06 47 16.5	+1.9
	comp=Z,2.6nm,0.8s,baz=38,slow=2.6,SNR=3.7						
ARCES	ARCESS Array B	133.43	348	SKPbc	SKPbc	06 47 28.2	+0.3
	comp=Z,3.7nm,0.6s,baz=40,slow=3.4,SNR=20						
FIA0	FINESS Array S	139.88	340	ePKPpre	PKPpre	06 44 50.6	
FIA0				eSKPbc	SKPbc	06 47 47.5	+0.4
FINES	FINESS Array B	139.88	340	PKhKP	PKPpre	06 44 50.7	
	comp=Z,0.3nm,0.4s,baz=17,slow=1.5,SNR=2.8						
FINES				SKPbc	SKPbc	06 47 47.5	+0.4
	comp=Z,6.4nm,0.7s,baz=67,slow=3.6,SNR=24						
NB2	NORSAR Subarra	143.67	350	PKP	PKPab	06 45 03.2	-1.5
	comp=Z,0.7nm,0.6s,baz=16,slow=3.2						
NB200	NORSAR Array S	143.67	350	ePKPdf	PKPab	06 45 03.6	-1.1
NOA	NORSAR Array B	143.67	350	PKhKP	PKPab	06 45 03.6	-1.1
	comp=Z,1.4nm,0.8s,baz=20,slow=3.8,SNR=5.1						
AKASG	Malin Array Be	146.10	326	PKPbc	PKPdf	06 45 11.2	+0.8
	comp=Z,0.3nm,0.3s,baz=41,slow=4.4,SNR=4.1						
AKASG				SKPbc	SKiKP	06 48 03.2	+0.5
	comp=Z,0.2nm,0.3s,baz=62,slow=2.2,SNR=4.2						
BR101	Keskin Array S	148.16	305	ePKPbc	PKPbc	06 45 18.1	-0.4
BR131	Keskin Array S	148.16	305	ePKPdf	PKPdf	06 45 13.8	-0.6
BR131				ePKPbc	PKPbc	06 45 17.6	-0.8
BR131				ePKPab	PKPab	06 45 22.9	-0.4
BRTR	Keskin Array B	148.16	305	PKPbc	PKPbc	06 45 18.1	-0.4
	comp=Z,3.0nm,0.8s,baz=117,slow=9.8,SNR=3.7						
VYHS	Vyhne	152.55	331	ePKP	PKPab	06 45 40.6	-0.5
TORD	Torodi Ar. Bea	167.44	190	PKPab	PKPab	06 46 47.1	+0.4
	comp=Z,1.0nm,0.8s,baz=184,slow=5.6,SNR=4.5						
TOA1	Torodi Ar. Sit	167.44	190	ePKPab	PKPab	06 46 47.1	+0.4

IDC 10 06:27:38.0±2.0, 51°.68N×82°.12E, h0km, mb1 2.7/2, mb1mx2.7/48, mbtmp2.7/2, ML2.1/2, Error ellipse: s-maj=20.3km s-min=16.1km az=178.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.50	246	Pg	Pb	06 28 23.1	-0.5
	0.1nm,0.3s,baz=67,slow=19,SNR=5.0						
KURBB				Lg	Lg	06 28 55.3	
	0.1nm,0.3s,baz=67,slow=34,SNR=7.6						
I46RU	ZALESOVO INFRA	2.80	35	i		06 42 00.0	
	baz=214,slow=246,SNR=15						
ZALV	Zalesovo Beam	2.80	35	Pn	Pn	06 28 22.8	-1.3
	0.4nm,0.3s,baz=220,slow=16,SNR=6.1						
ZALV				Sn	Sn	06 28 56.0	-2.6
	0.3nm,0.3s,baz=219,slow=24,SNR=6.9						
MKAR	Makanchi Array	4.89	179	Pn	Pn	06 28 54.1	+1.4
	0.3nm,0.3s,baz=3.7,slow=11,SNR=9.5						
MKAR				Lg	Lg	06 30 10.7	
	0.1nm,0.3s,baz=358,slow=31,SNR=4.2						

SJA 10 06:28:23.9±0.6, 31°.36S×68°.59W, h106km±3km, ML2.6, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.10	73	iP	Pn	06 28 39.2	+0.4
RTLL				iS	Sn	06 28 51.0	+1.1
SJA	San Juan	0.17	172	iP	Pn	06 28 39.3	+0.4
AMOG	MOGNA	0.43	11	iP	Pn	06 28 40.9	+0.9
AMOG				iS	Sn	06 28 52.6	+0.5
RTCV	Cerro Valdivia	0.50	175	iP	Pn	06 28 40.8	+0.3
RTCV				iS	Sn	06 28 53.8	+0.9
RTLS	Leoncito	0.75	234	iP	Pn	06 28 43.7	+1.0
RTLS				IAML		06 28 44.3	
	comp=Z,148nm,0.3s						
RTLS				iS	Sn	06 28 58.9	+2.0
AUSP	Uspallata	1.10	218	iP	Pn	06 28 47.3	+1.1
AUSP				iS	Sn	06 29 04.6	+1.6
ASAL	Salagasta	1.25	190	iP	Pn	06 28 48.6	+1.0
ASAL				iS	Sn	06 29 07.1	+1.5
ACAN	Cantantal	1.50	128	iP	Pn	06 28 51.8	+1.3
ACAN				iS	Sn	06 29 11.7	+0.9
ARCO	CERRO ARCO	1.51	191	iP	Pn	06 28 51.7	+0.9
ARCO				iS	Sn	06 29 12.3	+1.1
ARCO				IAML		06 29 13.4	
	comp=Z,54nm,0.2s						
AAGR	Agrelo	1.73	187	iP	Pn	06 28 54.6	+1.1

TRN ***10*** *06:28:45.6, 18°.88N×65°.13W, h64km*
ISCJB ***10*** *06:28:46.8±0.4, 18°.85N±0°.03×65°.07W±0°.02, h33km±6km, mb3.8/55, MS2.7/4, Error ellipse: s-maj=5.6km s-min=2.4km az=7.3*
IDC ***10*** *06:28:46.2±4.0, 18°.95N×64°.95W, h41km±36km, mb3.5/11, mb1 3.8/13, mb1mx3.6/38, mbtmp3.8/13, ML3.1/2, MS2.9/6, Ms1 2.9/6, ms1mx2.7/25, Error ellipse: s-maj=31.9km s-min=16.5km az=58.0*
NEIC ***10*** *06:28:47.5±0.0, 18°.98N×65°.13W, h12km, mb3.9/85, ML3.7(RSPR), After RSPR.*
RSPR ***10*** *06:28:47.5, 18°.98N×65°.13W, h12km±2km*
ISC 10 06:28:47.8±0.7, 18°.88N±0°.05×65°.09W±0°.02, h38km±2km, n268, σ2°.9/16/268, mb3.7/55, MS2.9/4, 14C-21D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.59	198	↓eP	Pn	06 28 59.5	-0.4
CUPR	Culebra, Puert	0.59	198	eS	Sn	06 29 09.3	+1.0
CUPR	Culebra, Puert	0.59	198	ePg	Pn	06 28 59.5	-0.4
CUPR				eSg	Sn	06 29 09.3	+1.0
MTP	Monte Pirata	0.89	210	↓eP	Pn	06 29 03.6	-0.3
MTP	Monte Pirata	0.89	210	ePg	Pn	06 29 03.6	-0.3
MTP				eSg	Sn	06 29 16.9	+1.4
MTP	Monte Pirata	0.89	210	↓eP	Pn	06 29 03.6	-0.3
MTP				eS	Sn	06 29 16.6	+1.0
CBYP	Canovanas	0.94	231	↑eP	Pn	06 29 04.2	-0.4
CBYP				eS	Sn	06 29 16.8	-0.2
CBYP	Canovanas	0.94	231	eS	Sn	06 29 17.3	+0.4
CBYP	Canovanas	0.94	231	↑eP	Pn	06 29 03.8	-0.9
CBYP	Canovanas	0.94	231	ePg	Pn	06 29 03.6	-1.1
CBYP				eSg	Sn	06 29 18.3	+1.3
CBYP	Canovanas	0.94	231	↑eP	Pn	06 29 03.8	-0.9
CBYP				eS	Sn	06 29 16.8	-0.2
HUMP	Col San Antoni	1.03	225	↓eP	Pn	06 29 05.2	-0.5
HUMP				eS	Sn	06 29 19.3	+0.4
HUMP	Col San Antoni	1.03	225	↓eP	Pn	06 29 05.2	-0.5
HUMP	Col San Antoni	1.03	225	ePg	Pn	06 29 05.2	-0.5
HUMP				eSg	Sn	06 29 19.2	+0.4
HUMP	Col San Antoni	1.03	225	↓eP	Pn	06 29 05.2	-0.5
HUMP				eS	Sn	06 29 19.3	+0.4
CDVI	St. Croix	1.16	165	↑eP	Pn	06 29 08.1	+0.7
CDVI				eS	Sn	06 29 24.4	+2.3
CDVI	St. Croix	1.16	165	↑eP	Pn	06 29 08.0	+0.5
CDVI	St. Croix	1.16	165	ePn	Pn	06 29 08.2	+0.7
CDVI				eSn	Sn	06 29 25.2	+3.1
CDVI	St. Croix	1.16	165	↑eP	Pn	06 29 08.0	+0.5
CDVI				eS	Sn	06 29 23.7	+1.6
PDPR	Patillas Dam,	1.23	226	eS	Sn	06 29 23.9	+0.1
PDPR	Patillas Dam,	1.23	226	↑eP	Pn	06 29 08.1	-0.4
SJG	San Juan	1.26	233	↓eP	Pn	06 29 08.2	-0.8
SJG	San Juan	1.26	233	P	Pn	06 29 08.2	-0.8
	72nm,0.3s,baz=73,slow=17,SNR=117						
SJG				S	Sn	06 29 22.8	-1.9
	281nm,0.3s,baz=315,slow=17,SNR=22						
SJG				LR	LR	06 29 45.3	
	comp=Z,445nm,19.3s,baz=46,slow=42						
SJG	San Juan	1.26	233	ePn	Pn	06 29 08.2	-0.8
SJG				eSn	Sn	06 29 25.1	+0.4
SJG	San Juan	1.26	233	↓eP	Pn	06 29 08.2	-0.8
SJG				eS	Sn	06 29 24.6	-0.1
IGPR	InterUniversit	1.32	227	↑eP	Pn	06 29 09.6	-0.2
IGPR				eS	Sn	06 29 26.8	+0.5
IGPR	InterUniversit	1.32	227	↓eP	Pn	06 29 09.4	-0.4
EMPR	Esperanza - Ma	1.42	254	↑eP	Pn	06 29 10.4	-0.7
EMPR	Esperanza - Ma	1.42	254	eS	Sn	06 29 27.9	-0.8
EMPR	Esperanza - Ma	1.42	254	ePn	Pn	06 29 09.4	-1.7
EMPR				eSg	Sn	06 29 23.8	-4.8
CELP	Cerrillos	1.62	241	↓eP	Pn	06 29 13.5	-0.4
CELP				eS	Sn	06 29 33.7	+0.1
CELP	Cerrillos	1.62	241	ePn	Pn	06 29 13.5	-0.4
CELP				eSn	Sn	06 29 33.7	+0.1
CELP	Cerrillos	1.62	241	↓eP	Pn	06 29 13.5	-0.4
CELP				eS	Sn	06 29 33.7	+0.1
OBIP	Obispado Ponce	1.66	240	↓eP	Pn	06 29 14.1	-0.3
OBIP	Obispado Ponce	1.66	240	ePn	Pn	06 29 14.1	-0.3
OBIP	Obispado Ponce	1.66	240	↓eP	Pn	06 29 14.1	-0.3
OBIP				eS	Sn	06 29 34.9	+0.3
AOPR	Arecibo Observ	1.67	252	↓eP	Pn	06 29 13.7	-0.8
AOPR				eS	Sn	06 29 33.7	-1.0
AOPR	Arecibo Observ	1.67	252	↓eP	Pn	06 29 13.8	-0.8
AOPR	Arecibo Observ	1.67	252	eS	Sn	06 29 34.6	0.0
AOPR	Arecibo Observ	1.67	252	ePn	Pn	06 29 13.7	-0.8
AOPR				eSn	Sn	06 29 35.1	+0.4
AOPR	Arecibo Observ	1.67	252	↓eP	Pn	06 29 13.7	-0.8
AOPR				eS	Sn	06 29 33.7	-1.0
ICMP	Isla Caja de M	1.68	234	↑eP	Pn	06 29 14.1	-0.7
ICMP	Isla Caja de M	1.68	234	eS	Sn	06 29 35.6	+0.5
ICMP	Isla Caja de M	1.68	234	ePn	Pn	06 29 14.0	-0.7
GBPR	Guanica, Bosqu	1.92	243	↑eP	Pn	06 29 17.8	-0.2
GBPR	Guanica, Bosqu	1.92	243	ePn	Pn	06 29 17.8	-0.2
GBPR				eSn	Sn	06 29 40.7	-0.2
GBPR	Guanica, Bosqu	1.92	243	↑eP	Pn	06 29 17.8	-0.2
GBPR				eS	Sn	06 29 40.7	-0.2
AGPR	Aguadilla, PR	1.96	258	↓eP	Pn	06 29 17.2	-1.3
AGPR	Aguadilla, PR	1.96	258	↓eP	Pn	06 29 17.2	-1.3
AGPR				eS	Sn	06 29 40.9	-1.0
AGP	Aguadilla	2.00	257	ePn	Pn	06 29 17.5	-1.6
LSP	Las Mesas	2.02	250	↑eP	Pn	06 29 18.9	-0.5
LSP	Las Mesas	2.02	250	ePn	Pn	06 29 18.9	-0.5
LSP				eSn	Sn	06 29 42.4	-1.0
LSP	Las Mesas	2.02	250	↑eP	Pn	06 29 18.9	-0.5
LSP				eS	Sn	06 29 42.4	-1.0
MPR	Mayaguez	2.06	252	ePn	Pn	06 29 18.9	-0.9
MLPR	Magueyes Islan	2.06	244	↓eP	Pn	06 29 19.5	-0.4
MLPR	Magueyes Islan	2.06	244	eS	Sn	06 29 44.7	+0.2
SMRT	St. Maarten	2.08	113	ePn	Pn	06 29 18.7	-1.5
SMRT	St. Maarten	2.08	113	eP	Pn	06 29 19.0	-1.2
SMRT				eS	Sn	06 29 44.4	-0.5
CRPR	Cabo Rojo, PR	2.11	246	↓eP	Pn	06 29 20.1	-0.4
CRPR	Cabo Rojo, PR	2.11	246	ePn	Pn	06 29 20.3	-0.2
CRPR	Cabo Rojo, PR	2.11	246	↓eP	Pn	06 29 20.1	-0.4
CRPR				eS	Sn	06 29 45.1	-0.3
SEUS	St. Eustatius	2.43	124	ePn	Pn	06 29 24.5	-0.5
SEUS	St. Eustatius	2.43	124	eP	Pn	06 29 26.5	+1.5
SEUS				eS	Sn	06 29 55.7	+2.3
SKDB	Saint Kitts 2	2.62	124	eP	Pn	06 29 27.2	-0.3
SKDB				eS	Sn	06 30 00.1	+2.0
BSK	Brimstone Hill	2.62	125	eP	Pn	06 29 28.5	+0.9
BSK	Brimstone Hill	2.62	125	e	Sn	06 30 01.7	+3.4
SKI	Saint Kitts	2.71	124	ePn	Pn	06 29 28.4	-0.4
SKI	Saint Kitts	2.71	124	eP	Pn	06 29 28.2	-0.7
SKI				eS	Sn	06 30 02.1	+1.7
SKOC	St. Kitts, UWI	2.74	125	eP	Pn	06 29 29.6	+0.4
SKOC				eS	Sn	06 30 02.6	+1.6
NVRH	Round Hill, Ne	2.90	125	eP	Pn	06 29 32.7	+1.1
NVBH

557A	Orange Park	18.75 309	P	Pn	06 33 04.6 +0.4
	baz=122				
457A	Yulee	18.96 311	P	Pn	06 33 07.9 +1.2
	baz=124				
656A	Willston	19.02 307	eP	P	06 33 06.3 -0.2
	6.6nm,0.6s				
Z59A	Georgetown, SC	19.13 321	P	Pn	06 33 13.6 +4.9
	baz=135				
556A	Lake Butler	19.24 308	P	Pn	06 33 16.9 +6.8
	baz=121				
158A	Hollywood	19.34 318	P	Pn	06 33 17.5 +6.2
	baz=132				
456A	Hilliard	19.35 311	eP	Pn	06 33 11.5 +0.1
	28nm,0.4s				
456A	Hilliard	19.35 311	P	Pn	06 33 14.6 +3.2
	baz=124				
W61A	Ground Anchor	19.36 329	P	Pn	06 33 17.0 +5.5
	baz=144				
357A	Townsend	19.37 313	P	Pn	06 33 16.3 +4.7
	baz=126				
X60A	Albert Glenn T	19.39 326	P	Pn	06 33 16.3 +4.5
	baz=140				
257A	Skidaway Islan	19.39 315	eP	Pn	06 33 16.0 +4.1
	111nm,0.9s				
257A	Skidaway Islan	19.39 315	P	Pn	06 33 17.6 +5.7
	baz=128				
CSU	Charleston Sou	19.43 319	eP	Pn	06 33 16.7 +4.3
RGRS	Roger Stewart	19.46 319	eP	Pn	06 33 14.4 +1.7
	505nm,0.3s				
Z58A	St. Stephen	19.52 320	P	Pn	06 33 18.6 +5.3
	baz=134				
NHSC	New Hope	19.58 319	eP	Pn	06 33 16.9 +2.8
NHSC	New Hope	19.58 319	P	Pn	06 33 19.5 +5.3
	baz=133				
W60A	Pink Hill	19.62 328	P	Pn	06 33 20.1 +5.5
	baz=142				
655A	Horseshoe Beac	19.64 306	P	Pn	06 33 21.6 +6.7
	baz=118				
ESPN	Las Esperanzas	19.66 253	eP	Pn	06 33 16.8 +1.6
	11nm,0.9s				
V61A	Roper	19.67 331	eP	Pn	06 33 18.3 +3.2
	47nm,0.9s				
V61A	Roper	19.67 331	P	Pn	06 33 22.1 +6.9
	baz=146				
555A	McAlpin	19.72 308	eP	P	06 33 14.6 +0.5
	13nm,1.0s				
555A	McAlpin	19.72 308	P	Pn	06 33 20.6 +4.7
	baz=120				
356A	Blackshear	19.76 312	P	Pn	06 33 20.1 +3.8
	baz=125				
157A	Early Branch	19.82 317	P	Pn	06 33 22.7 +5.7
	baz=130				
Y58A	Scranton	19.83 322	eP	Pn	06 33 16.6 -0.4
	12nm,1.0s				
Y58A	Scranton	19.83 322	P	Pn	06 33 22.5 +5.4
	baz=135				
CNNC	Cliffs of the	19.86 328	eP	Pn	06 33 17.2 -0.1
	8.6nm,0.9s				
CNNC	Cliffs of the	19.86 328	P	Pn	06 33 23.7 +6.3
	baz=142				
V60A	Jim Taylor Roa	19.97 330	eP	Pn	06 33 19.7 +1.0
	5.9nm,0.7s				
V60A	Jim Taylor Roa	19.97 330	P	Pn	06 33 24.7 +6.0
	baz=144				
256A	Glennville	19.98 314	P	Pn	06 33 24.4 +5.6
	baz=127				
Z57A	Bowman	20.04 319	P	Pn	06 33 25.3 +5.8
	baz=132				
U61A	Possum Corner	20.06 332	eP	P	06 33 18.0 +0.2
	16nm,0.9s				
U61A	Possum Corner	20.06 332	P	Pn	06 33 25.4 +5.6
	baz=147				
455A	Stateville	20.09 309	P	Pn	06 33 25.4 +5.3
	baz=122				
X58A	Rowland	20.11 324	eP	Pn	06 33 20.6 +0.2
	4.7nm,0.8s				
X58A	Rowland	20.11 324	P	Pn	06 33 25.5 +5.1
	baz=137				
PTGA	Pitinga	20.12 165	P	P	06 33 18.2 -0.4
	1.6nm,0.5s,baz=329,slow=20,SNR=3.6				
156A	Sylvania	20.13 316	P	Pn	06 33 26.2 +5.6
	baz=129				
554A	Perry	20.24 307	P	Pn	06 33 28.7 +6.7
	baz=119				
355A	Pearson	20.28 311	P	Pn	06 33 27.6 +5.2
	baz=124				
Y57A	Sumter	20.34 321	eP	Pn	06 33 22.2 -0.8
	6.0nm,0.8s				
Y57A	Sumter	20.34 321	P	Pn	06 33 28.1 +5.1
	baz=134,SNR=7.7				
255A	Hazlehurst	20.35 313	eP	P	06 33 19.2 -1.7
	4.1nm,0.9s				
255A	Hazlehurst	20.35 313	P	Pn	06 33 28.3 +5.1
	baz=126				
W58A	Raeford	20.40 325	P	Pn	06 33 29.4 +5.7
	baz=138				
V59A	Middlesex	20.45 328	P	Pn	06 33 30.5 +6.2
	baz=142,SNR=8.9				
Z56A	Williston	20.47 318	eP	P	06 33 22.8 +0.5
	6.9nm,0.8s				
Z56A	Williston	20.47 318	P	Pn	06 33 29.5 +4.8
	baz=131,SNR=7.2				
X57A	Johnson Farm,	20.48 322	P	Pn	06 33 30.5 +5.9
	baz=136,SNR=11				
U60A	Pendleton	20.50 331	P	Pn	06 33 31.1 +6.3
	baz=146,SNR=10				
U59A	Littleton	20.70 330	eP	P	06 33 25.4 +0.7
	3.3nm,1.0s				
U59A	Littleton	20.70 330	P	Pn	06 33 34.4 +7.2
	baz=144,SNR=19				
Y56A	Pelion	20.74 319	P	Pn	06 33 34.5 +6.8
	baz=132,SNR=7.6				
155A	Kite	20.75 315	P	Pn	06 33 34.3 +6.5
	baz=127,SNR=9.4				
BIRD	Birdtown, Kers	20.82 322	eP	P	06 33 27.1 +1.1
	3.0nm,0.6s				
TIGA	Tifton	20.86 310	eP	P	06 33 26.9 +0.4
	10nm,1.0s				
TIGA	Tifton	20.86 310	P	Pn	06 33 36.0 +6.8
	baz=122				
T60A	Surry	20.87 333	eP	P	06 33 27.2 +0.7
	35nm,0.8s				
S61A	Accomac	20.90 336	eP	Pn	06 33 29.4 -0.1
	49nm,0.9s				
S61A	Accomac	20.90 336	P	Pn	06 33 36.5 +7.0
	baz=151				
Z55A	Blythe	20.90 316	P	Pn	06 33 36.2 +6.5
	baz=129,SNR=7.3				
W57A	Gilead	20.91 324	eP	P	06 33 25.9 -1.1
	4.8nm,0.9s				
W57A	Gilead	20.91 324	P	Pn	06 33 37.2 +7.5
	baz=137				
254A	Abbeville	20.93 312	P	Pn	06 33 36.5 +6.6
	baz=124				
JTS	Las Juntas de	21.02 249	LR	LR	06 40 20.9
	comp=Z,13nm,20.4s,baz=162,slow=33				
JSC	Jenkinsville	21.04 320	eP	P	06 33 30.0 +1.5
	3.0nm,0.9s				
X56A	White Oak	21.05 321	P	P	06 33 37.8 +9.3
	baz=134,SNR=5.8				
T59A	Double "B" Far	21.09 331	eP	P	06 33 30.3 +1.4
	2.5nm,0.8s				
T59A	Double "B" Far	21.09 331	P	P	06 33 39.0 +10
	baz=145,SNR=8.5				
U58A	Oxford	21.10 329	P	P	06 33 38.8 +10
	baz=142				
Y55A	Saluda	21.18 318	P	P	06 33 40.3 +10
	baz=131,SNR=15				
154A	Montrose	21.18 314	eP	P	06 33 30.3 +0.4
	12nm,0.8s				
154A	Montrose	21.18 314	P	P	06 33 39.8 +10
	baz=126				
W56A	Indian Trail	21.23 323	P	P	06 33 41.2 +11
	baz=136				
V57A	Coltrane Farms	21.34 326	P	P	06 33 42.3 +11
	baz=139				
Z54A	Sparta	21.38 315	P	P	06 33 42.6 +11
	baz=128				
X55A	Gracelyn & Ava	21.40 320	P	P	06 33 42.1 +10
	baz=132,SNR=11				
U57A	Blanch	21.52 327	P	P	06 33 45.1 +12
	baz=141				
T58A	Grand View Acr	21.53 329	P	P	06 33 44.0 +10
	baz=143				
253A	Americus	21.59 311	eP	P	06 33 35.2 +0.9
253A	Americus	21.59 311	P	P	06 33 45.0 +11
	baz=123				
HODGE	Hodges	21.62 318	eP	P	06 33 36.4 +1.7
	0.6nm,0.5s				
S59A	Mechanicsville	21.63 333	P	P	06 33 45.3 +11
	baz=147				
Y54A	Tignall	21.66 317	P	P	06 33 46.3 +11
	baz=129				
V56A	Mocksville	21.67 324	eP	P	06 33 36.6 +1.4
	2.4nm,0.8s				
V56A	Mocksville	21.67 324	P	P	06 33 46.6 +11
	baz=137				
KMSC	Kings Mountain	21.68 322	eP	P	06 33 36.8 +1.6
	2.6nm,0.9s				
KMSC	Kings Mountain	21.68 322	P	P	06 33 46.7 +11
	baz=134				
PAULI	Pauline	21.74 320	eP	P	06 33 37.8 +1.9
	1.8nm,0.5s				
TGUH	Tegucigalpa,Un	21.80 261	eP	P	06 33 38.2 +1.3
	7.6nm,0.7s				
S58A	Poland Farm, P	21.84 331	eP	P	06 33 39.8 +2.9
	3.0nm,0.8s				
352A	Blakely	21.86 309	eP	P	06 33 39.8 +2.6
	5.7nm,0.7s				
GOGA	Godfrey	21.90 315	eP	P	06 33 39.5 +1.9
T57A	Hurt	21.92 328	eP	P	06 33 39.5 +1.7
	1.2nm,0.9s				
CBN	Corbin Frederi	22.04 333	eP	P	06 33 40.9 +1.9
	6.7nm,0.8s				
CSGN	Cosiguina Volc	22.38 258	eP	P	06 33 45.3 +2.2
	21nm,0.8s				
Y52A	Lilburn	22.57 315	eP	P	06 33 46.7 +1.8
	3.2nm,0.9s				
BLA	Blacksburg	22.68 327	eP	P	06 33 47.7 +1.7
	5.5nm,0.9s				
PSUB	Penn St. - Bra	22.80 339	eP	P	06 33 49.0 +1.8
	2.5nm,0.9s				
SDMD	Soldier's Deli	22.85 336	eP	P	06 33 49.6 +1.8
	1.4nm,0.8s				
V53A	Saluda	22.92 320	eP	P	06 33 49.8 +1.2
	0.5nm,0.6s				
U54A	Nelsons Funny	22.93 323	eP	P	06 33 50.2 +1.5
	2.5nm,0.7s				
MVL	Millersville	23.18 338	eP	P	06 33 52.6 +1.6
	2.4nm,0.9s				
BRNJ	Basking Ridge	23.21 341	eP	P	06 33 52.9 +1.6
W52A	Murphy	23.23 318	eP	P	06 33 53.2 +1.5
	2.0nm,0.8s				
MYIG	Mrida	23.27 279	eP	P	06 33 53.4 +1.3
	58nm,0.9s				
PAL	Palisades	23.32 343	eP	P	06 33 54.3 +1.9
	4.9nm,0.9s				
LUPA	Lehigh Univers	23.38 340	eP	P	06 33 54.2 +1.2
	0.2nm,0.5s				
Z50A	Ashland	23.50 312	eP	P	06 33 56.3 +1.9
	1.6nm,0.7s				
V52A	Sevierville	23.51 320	eP	P	06 33 55.6 +1.2
	2.1nm,0.9s				
X51A	Calhoun	23.51 316	eP	P	06 33 56.0 +1.6
	1.4nm,0.9s				
ODNJ	Ogdensburg	23.59 342	eP	P	06 33 56.8 +1.7
	1.2nm,0.6s				
BRYW	Bryant College	23.62 348	eP	P	06 33 56.8 +1.5
CPCT	Cooper Cave	23.83 318	eP	P	06 33 59.2 +1.8
	2.5nm,1.0s				
KSCT	Kent School, K	23.88 344	eP	P	06 34 00.1 +2.4
	5.2nm,1.0s				
TZTN	Tazewell	23.95 321	eP	P	06 33 59.0 +0.5
	1.9nm,0.8s				
V51A	Loudon	23.95 319	eP	P	06 33 58.9 +0.4
T52A	Hallie	24.00 323	eP	P	06 33 59.7 +0.7
	2.2nm,0.9s				
WES	Weston	24.03 349	eP	P	06 34 00.6 +1.5
	1.9nm,0.8s				
LRAL	Lakeview Retre	24.16 310	eP	P	06 34 02.4 +2.0
	1.3nm,0.6s				
Y49A	Blount Mountai	24.17 312	eP	P	06 34 02.0 +1.5
	0.9nm,0.4s				
APG	El Apazote	24.57 265	P	P	06 34 04.6 0.0
	2.8nm,0.6s,baz=76,slow=19,SNR=6.4				
APG			LR	LR	06 43 58.1
	comp=Z,35nm,19.4s,baz=54,slow=37				
V48A	Smith Brothers	25.50 316	eP	P	06 34 14.1 +1.4
O52A	Adamsville	25.61 329	eP	P	06 34 14.3 +0.7
	2.1nm,0.7s				
HAL	Halifax	25.72 2	eP	P	06 34 15.4 +1.0
CCIG	Comitan	25.91 269	eP	P	06 34 17.1 +0.4
	5.5nm,0.9s				
LBNH	Lisbon	25.93 349	eP	P	06 34 17.8 +1.4
PLAL	Pickwick Lake	25.93 313	eP	P	06 34 17.6 +1.1
	4.4nm,0.9s				
MMNY	Mt. Morris Dam	26.14 338	eP	P	06 34 20.0 +1.7
	2.6nm,0.7s				
ERPA	Erie	26.41 335	eP	P	06 34 22.3 +1.5
	9.6nm,0.8s				
O49A	Covington	26.93 326	eP	P	06 34 27.7 +2.1
UTMT	University of	27.21 315	eP	P	06 34 29.8 +1.8
	12nm,0.7s				
N41A	Harden Midland	31.00 320	eP	P	06 35 03.6 +1.9
	3.8nm,0.6s				
LPAZ	La Paz	35.07 185	P	P	06 35 36.6 -1.4
	0.6nm,0.7s,baz=350,slow=11,SNR=3.2				
LPAZ	La Paz	35.07 185	eP	P	06 35 42.1 +4.0
LTX	Lajitas	36.58 294	eP	P	06 35 49.3 -1.1
TXAR	Lajitas Array	36.58 294	P	P	06 35 49.3 -1.1
	0.6nm,0.8s,baz=108,slow=12,SNR=7.9				
MSTX	Muleshoe	36.72 302	eP	P	06 35 53.1 +1.5
	1.9nm,0.6s				
SDCO	Great Sand Dun	39.87 307	eP	P	06 36 17.3 -0.9
	1.2nm,0.8s				
DGMT	Dagmar	43.20 322	eP	P	06 36 47.3 +2.2
	8.3nm,0.8s				
PD31	Pinedale Array	44.34 312	eP	P	06 36 53.8 -0.8
	0.5nm,0.8s				
PDAR	Pinedale Array	44.34 312	P	P	06 36 53.2 -1.4
	0.4nm,0.4s,baz=116,slow=10,SNR=5.9				
CPUP	Vila Florida	45.56 170	P	P	06 37 02.2 -1.8
	0.8nm,0.6s,baz=342,slow=6.4,SNR=3.0				
CPUP			LR	LR	06 58 26.6
	comp=Z,14nm,20.8s,baz=357,slow=39				
NV01	Mina Array Sit	49.88 305	eP	P	06 37 37.8 -0.1
NVAR	Mina Array Bea	49.88 305	P	P	06 37 37.8 -0.1
	0.5nm,0.9s,baz=82,slow=6.5,SNR=3.6				
CFA	Coronel Fontan	50.28 183	P	P	06 37 38.1 -2.5
	1.6nm,0.5s,baz=339,slow=5.0,SNR=3.9				
YKA	Yellowknife Ar	55.23 335	P	P	06 38 14.2 -2.5
	0.3nm,0.4s,baz=110,slow=7.3,SNR=5.5				
TORD	Torodi Ar. Bea	64.13 84	P	P	06 39 16.4 -2.4
	0.4nm,0.7s,baz=293,slow=8.5,SNR=2.5				
NOA	NORSAR Array B	67.04 31	LR	LR	07 04 59.3
	comp=Z,7.2nm,21.2s,baz=25,slow=32				
ILAR	Eielson Array	69.61 333	P	P	06 39 50.1 -2.7
	0.3nm,0.6s,baz=93,slow=5.6,SNR=4.5				
ILB	Eielson Array	69.61 333	eP	P	06 39 55.8 +3.0
	1.1nm,0.8s				
ASAR	Alice Springs	161.67 252	PKPab	PKPab	06 49 28.3 -2.4
	0.3nm,0.8s,baz=104,slow=3.9,SNR=3.6				

UCR 10 06:30:53.1±2.3, 10°.07N×85°.69W, h20km±7km, MD3.6, 5C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.59	15	i P	Pb	06 31 05.2	+0.3
LAPC	Finca la Perla	0.74	20	i P	Pb	06 31 06.9	-0.4
LIM1	Limonal	0.76	35	i P	Pb	06 31 07.2	-0.4
COLC	Colonia	0.76	39	⇑iP	Pb	06 31 07.2	-0.5
BUEV	Buena Vista	0.77	21	⇑eP	Pb	06 31 07.5	-0.4
CUI	Cuipilapa	0.78	42	i P	Pb	06 31 07.6	-0.4
GB1A	Borinquen Arri	0.80	21	⇑eP	Pb	06 31 07.9	-0.4
HORNC	Hornillas	0.81	38	⇑iP	Pb	06 31 08.0	-0.6
MESS	Mesas	0.82	36	⇑eP	Pb	06 31 08.3	-0.5
MESS				i P	Pb	06 31 08.3	-0.5
ACAL	Aguas Claras	0.85	49	i P	Pb	06 31 08.8	-0.5
AMAS	Alto Masis	0.87	52	i P	Pb	06 31 08.9	-0.7
AMAS				i S	Sb	06 31 21.2	+0.2
ARE1	Arenal 1	1.03	68	eP	Pb	06 31 11.7	-0.6
SRA1	San Ramn	1.19	89	eP	Pn	06 31 13.7	-1.1
HDC	Heredia	1.56	92	eP	Pn	06 31 19.6	-0.2
	baz=296,slow=3.0						
HDC				eS	Sb	06 31 40.6	0.0
CVTR	Volcan Turrial	1.90	91	eP	Pn	06 31 25.2	+0.4
ACON	Acoyapa	1.95	15	eP	Pn	06 31 24.4	-0.7
ESPN	Las Esperanzas	2.51	33	eP	Pn	06 31 32.3	-0.5
BCIP	Isla Barro Col	5.84	98	eP	Pn	06 32 15.2	-3.4
	baz=286,slow=9.3						

ISCJB 10 06:35:10.4±1.2, 19°.00N±0°.06×65°.10W±0°.04, h28km±6km, Error ellipse: s-maj=9.9km s-min=5.5km az=4.8
NEIC 10 06:35:11.8±0.0, 18°.97N×65°.07W, h11km, MD3.4(RSPR), After RSPR.
RSPR 10 06:35:11.8, 18°.97N×65°.07W, h11km±6km, MD3.4/13

ISC 10 06:35:09.9±2.2, 18°.99N±0°.09×65°.12W±0°.04, h17km±9km, n46, σ0°66/71, 27C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.69	193	eP	Pg	06 35 24.2	+0.6
CUPR	Culebra, Puert	0.69	193	eS	Sg	06 35 33.9	+1.1
CUPR	Culebra, Puert	0.69	193	ePg	Pg	06 35 24.1	+0.6
CUPR				eSg	Sg	06 35 33.9	+1.1
MTP	Monte Pirata	0.98	205	⇑eP	Pg	06 35 28.5	-0.4
MTP	Monte Pirata	0.98	205	ePg	Pg	06 35 28.4	-0.4
MTP				eSg	Sg	06 35 42.0	+0.3
MTP	Monte Pirata	0.98	205	⇑eP	Pg	06 35 28.5	-0.4
MTP				eS	Sg	06 35 41.6	-0.2
CBYP	Canovanas	1.00	224	⇑eP	Pg	06 35 28.7	-0.6
CBYP				eS	Sg	06 35 42.1	-0.3
CBYP	Canovanas	1.00	224	⇑eP	Pg	06 35 28.7	-0.6
CBYP	Canovanas	1.00	224	ePg	Pg	06 35 28.7	-0.6
CBYP				eSg	Sg	06 35 41.9	-0.6
CBYP	Canovanas	1.00	224	⇑eP	Pg	06 35 28.7	-0.6
CBYP				eS	Sg	06 35 41.9	-0.6
HUMP	Col San Antoni	1.09	220	⇑eP	Pb	06 35 30.1	-0.2
HUMP				eS	Sb	06 35 44.7	+0.4
HUMP	Col San Antoni	1.09	220	⇑eP	Pb	06 35 30.1	-0.2
HUMP	Col San Antoni	1.09	220	⇑eP	Pb	06 35 30.1	-0.2
HUMP				eS	Sb	06 35 44.5	+0.3
CDVI	St. Croix	1.28	165	ePn	Pn	06 35 32.7	-0.3
CDVI				eSn	Sb	06 35 50.0	+0.4
PDPR	Patillas Dam,	1.29	222	⇑eP	Pn	06 35 32.9	-0.3
PDPR	Patillas Dam,	1.29	222	eS	Sb	06 35 49.5	-0.5
SJG	San Juan	1.31	228	⇑eP	Pn	06 35 33.1	-0.4
SJG	San Juan	1.31	228	eS	Sb	06 35 50.1	-0.5
SJG	San Juan	1.31	228	ePn	Pn	06 35 33.1	-0.4
SJG				eSn	Sb	06 35 50.6	0.0
SJG	San Juan	1.31	228	⇑eP	Pn	06 35 33.1	-0.4
SJG				eS	Sb	06 35 50.1	-0.5
IGPR	InterUniversit	1.38	223	⇑eP	Pn	06 35 34.3	-0.1
IGPR				eS	Sn	06 35 52.1	-0.2
IGPR	InterUniversit	1.38	223	⇑eP	Pn	06 35 34.3	-0.1
IGPR	InterUniversit	1.38	223	eS	Sn	06 35 51.8	-0.5
EMPR	Esperanza - Ma	1.43	249	⇑eP	Pn	06 35 35.5	+0.4
EMPR	Esperanza - Ma	1.43	249	eS	Sn	06 35 53.8	+0.3
EMPR	Esperanza - Ma	1.43	249	ePn	Pn	06 35 35.5	+0.4
EMPR				eSn	Sn	06 35 53.8	+0.3
CELP	Cerrillos	1.66	237	⇑iP	Pn	06 35 38.5	+0.3
CELP				eS	Sn	06 35 58.9	-0.2
CELP	Cerrillos	1.66	237	ePn	Pn	06 35 38.5	+0.3
CELP				eSn	Sn	06 35 58.9	-0.2
CELP	Cerrillos	1.66	237	⇑iP	Pn	06 35 38.5	+0.3
CELP				eS	Sn	06 35 58.9	-0.2
AOPR	Arecibo Observ	1.68	248	⇑eP	Pn	06 35 38.6	+0.1
AOPR	Arecibo Observ	1.68	248	⇑eP	Pn	06 35 38.6	+0.1
AOPR				eS	Sn	06 35 59.8	+0.2
OBIP	Obispado Ponce	1.69	237	⇑eP	Pn	06 35 39.0	+0.3
OBIP	Obispado Ponce	1.69	237	⇑eP	Pn	06 35 39.0	+0.3
OBIP				eS	Sn	06 35 59.8	-0.3
ICMP	Isla Caja de M	1.73	231	ePn	Pn	06 35 40.4	+1.2
AGPR	Aguadilla, PR	1.96	255	⇑eP	Pn	06 35 42.4	0.0
AGPR	Aguadilla, PR	1.96	255	⇑eP	Pn	06 35 42.4	0.0
AGPR				eS	Sn	06 36 06.4	-0.1
LSP	Las Mesas	2.03	247	⇑eP	Pn	06 35 43.9	+0.5
LSP	Las Mesas	2.03	247	ePn	Pn	06 35 43.9	+0.5
LSP				eSn	Sn	06 36 08.8	+0.3
LSP	Las Mesas	2.03	247	⇑eP	Pn	06 35 43.9	+0.5
LSP				eS	Sn	06 36 08.8	+0.3
MPR	Mayaguez	2.06	248	ePn	Pn	06 35 44.4	+0.6
MPR				eSn	Sn	06 36 12.8	+3.7
MLPR	Magueyes Islan	2.09	241	⇑eP	Pn	06 35 44.8	+0.6
MLPR	Magueyes Islan	2.09	241	eS	Sn	06 36 10.0	+0.2
CRPR	Cabo Rojo, PR	2.13	243	⇑eP	Pn	06 35 45.3	+0.6
CRPR	Cabo Rojo, PR	2.13	243	ePn	Pn	06 35 45.4	+0.8
CRPR				eSn	Sn	06 36 09.6	-1.1
CRPR	Cabo Rojo, PR	2.13	243	⇑eP	Pn	06 35 45.3	+0.6
CRPR				eS	Sn	06 36 11.2	+0.5
SKI	Saint Kitts	2.80	126	ePn	Pn	06 35 53.5	-0.5
SKI				eSn	Sn	06 36 27.5	+0.1

ISK 10 07:01:13.9, 37°.55N×35°.70E, h5km, ML2.0/3
DDA 10 07:01:14.8, 37°.55N×35°.68E, h7km±3km, ML2.8
ISCJB 10 07:01:15.1±0.5, 37°.52N±0°.03×35°.69E±0°.03, h6km±7km, Error ellipse: s-maj=5.5km s-min=4.2km az=157.0

ISC 10 07:01:14.7±1.0, 37°.56N±0°.05×35°.71E±0°.03, h8km±11km, n9, σ0°33/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	Kozan	0.12	129	PG	Pg	07 01 17.1	-0.3
KOZT				SG	Sg	07 01 19.3	0.0
AKO	Adana	0.23	245	i P	Pg	07 01 19.5	+0.2
AKO				i S	Sg	07 01 22.8	+0.4
ANDN	Andirin	0.51	87	i P	Pg	07 01 24.7	+0.1
ANDN				i S	Sb	07 01 33.8	+0.2
ANDN				IAML_P			
	comp=Z,4μm,0.2s						
SAIM	ADANA	0.51	35	i P	Pb	07 01 25.8	-0.3
SAIM				i S	Sb	07 01 33.7	-0.1
CEYT	Ceyhan	0.55	176	PG	Pg	07 01 24.9	-0.4
CEYT				SG	Sg	07 01 32.9	+0.5
KARA	Karaisali	0.60	240	PG	Pg	07 01 25.7	-0.5
KARA				SG	Sg	07 01 34.4	+0.3
YAHY	KAYSERI_Yahyal	0.60	333	i P	Pb	07 01 27.6	0.0
YAHY				i S	Sb	07 01 36.3	0.0
YAHY				IAML_P			
	comp=Z,995nm,0.1s						
GULE	Gulek	0.79	250	i P	Pg	07 01 29.9	0.0
GULE				i S	Sb	07 01 41.4	-0.4
GULE				IAML_P			
	comp=Z,714nm,0.2s						
KAMA	Osmaniye	0.85	116	i P	Pb	07 01 32.0	+0.2
KAMA				IAML_P			
	comp=Z,794nm,0.1s						

IDC 10 07:15:23.4±1.9, 10°.69S×165°.59E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/25, mbtmp4.1/4, MS3.3/2, Ms1 3.3/2, ms1mx2.9/34, Error ellipse: s-maj=90.5km s-min=27.9km az=137.0
ISCJB 10 07:15:26.8±0.9, 10°.87S±0°.09×165°.6E±0°.1, h30km, mb4.3/11, MS3.1/1, Error ellipse: s-maj=18.2km s-min=10.2km az=145.3
NEIC 10 07:15:29.5±2.9, 10°.93S×165°.70E, h35km, mb4.3/10, Error ellipse: s-maj=28.1km s-min=20.1km az=87.0

ISC 10 07:15:29.2±1.0, 10°.85S±0°.1×165°.5E±0°.1, h30km, n23, σ1°68/22, mb4.3/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.65	284	ePn	Pn	07 16 55.2	+4.0
HNR				eSn	Sn	07 17 50.6	-4.5
MARNC	Mare, Loyalty	10.86	167	ePn	Pn	07 18 02.9	+0.2
DZM	Mont Dzumac	11.21	176	ePn	Pn	07 18 07.0	-0.6
OUENC	Ouen Island, N	11.59	174	ePn	Pn	07 18 13.5	+0.8
PINNC	Pines Island,	11.86	171	ePn	Pn	07 18 17.8	+1.4
PMG	Port Moresby	18.12	273	LR	LR	07 25 52.8	
	comp=Z,124nm,19.3s,baz=150,slow=35						
CTAO	Charters Tower	20.70	241	eP	Pn	07 20 09.3	-0.3
	16nm,1.1s						
BKZ	Black Stump Fm	29.87	163	eP	P	07 21 32.8	-1.4
	26nm,1.5s						
STKA	Stephens Creek	30.44	223	P	P	07 21 39.2	0.0
	0.9nm,0.4s,baz=61,slow=8.9,SNR=4.1		

2.9nm,0.8s,baz=64,slow=10,SNR=38
ASAR PcP **PcP** 07 24 43.1 -1.6
0.3nm,0.9s,baz=72,slow=3.0,SNR=3.8
RAR Rarotonga 34.85 112 LR LR 07 34 19.2
comp=Z,35nm,18.8s,baz=280,slow=33
FITZ Fitzroy Crossi 39.21 255 P **P** 07 22 55.6 +0.5
5.1nm,0.9s,baz=98,slow=6.8
FITZ Fitzroy Crossi 39.21 255 *e*P **P** 07 22 55.5 +0.5
8.5nm,1.3s
MAJO Matsushiro 53.68 333 *e*P **P** 07 24 49.2 +0.9
9.1nm,1.3s
ILAR Eielson Array 83.39 19 P **P** 07 27 51.6 -1.6
0.7nm,0.7s,baz=241,slow=5.1,SNR=8.1
ILB Eielson Array 83.39 19 *e*P **P** 07 27 52.9 -0.3
1.0nm,0.8s

*SJA **10** 07:22:38.9±0.6,24.°50S×67.°20W,h215km±6km,ML2.5, MW3.3*
*ISCJB **10** 07:22:40.5±0.4,24.°39S±0.°02×67.°34W±0.°03,h191km±5km, mb3.0/2,Error ellipse: s-maj=4.3km s-min=4.0km az=151.7*
*NEIC **10** 07:22:41.7±2.9,24.°35S×67.°52W,h196km±43km,mb4.1/2, Error ellipse: s-maj=66.2km s-min=18.3km az=95.0*
*IDC **10** 07:22:41.0±1.0,24.°36S×67.°10W,h165km±11km,mb3.0/2, mb1 3.3/9,mb1mx3.2/27,mbtmp3.7/9,Error ellipse: s-maj=17.5km s-min=11.9km az=74.0*
*GUC **10** 07:22:43.5±0.6,24.°29S×67.°63W,h214km±8km,ML4.2*
ISC 10 07:22:40.8±0.7,**24.°36S**±0.°04×**67.°32W**±0.°04,**h192**km±8km, **n48**,σ1§**90**/76,**6C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.69**	**103**	*i* P	**Pn**	**07 23 15.4**	**-0.3**
SLA				*i* S	**S**	**07 23 41.6**	**-1.2**
SLA				IAML		07 23 42.4	
	comp=Z,93nm,0.7s						
AZAP	**Zapla**	**2.06**	**87**	*i* P	**Pn**	**07 23 19.3**	**-0.3**
AZAP				*i* S	**S**	**07 23 49.2**	**-0.4**
AZAP				IAML		07 23 49.5	
	comp=Z,45nm,0.6s						
HJA	**Humahuaca**	**2.09**	**57**	*i* P	**Pn**	**07 23 20.3**	**+0.2**
HJA				IAML		07 23 24.4	
	comp=Z,17nm,0.4s						
HJA				*i* S	**S**	**07 23 51.9**	**+1.4**
FSA	**Cafayete**	**2.12**	**145**	*i* P	**Pn**	**07 23 18.8**	**-1.4**
FSA				IAML		07 23 30.6	
	comp=Z,3.5nm,0.3s						
GO02	**Mina Guanaco**	**2.21**	**248**	*e*Pn	**Pn**	**07 23 22.5**	**+1.2**
GO02				*e*Sn	**S**	**07 23 53.4**	**+0.7**
GO02	**Mina Guanaco**	**2.21**	**248**	⇑*i*P	**Pn**	**07 23 23.0**	**+1.7**
GO02				*i* S	**S**	**07 23 53.9**	**+1.2**
LVC	**Limon Verde**	**2.27**	**320**	P	**Pn**	**07 23 23.4**	**+1.4**
	comp=Z,16nm,0.3s,baz=133,slow=8.1,SNR=97						
LVC				S	**S**	**07 23 54.3**	**+0.2**
	comp=Z,81nm,0.3s,baz=300,slow=22,SNR=74						
LVC	**Limon Verde**	**2.27**	**320**	*e*Pn	**Pn**	**07 23 23.3**	**+1.3**
LVC				*e*Sn	**S**	**07 23 53.2**	**-0.8**
LVC	**Limon Verde**	**2.27**	**320**	*e*S	**S**	**07 23 54.2**	**+0.2**
PB15	**IPOC Station P**	**2.28**	**300**	*i* P	**Pn**	**07 23 23.9**	**+1.9**
PB15				*i* S	**S**	**07 23 57.1**	**+3.2**
PB15	**IPOC Station P**	**2.28**	**300**	⇑*i*P	**Pn**	**07 23 23.6**	**+1.6**
PB15				*i* S	**S**	**07 23 53.8**	**0.0**
PB15				IAML		07 23 58.5	
	comp=E,3μm,0.4s						
PB06	**IPOC Station P**	**2.64**	**308**	*e*P	**Pn**	**07 23 27.4**	**+1.4**
PB06				*e*S	**S**	**07 24 00.3**	**-0.8**
PB06				IAML		07 24 06.1	
	comp=N,636nm,0.4s						
YJA	**Yavi**	**2.73**	**38**	*i* P	**Pn**	**07 23 28.4**	**+1.1**
YJA				IAML		07 24 03.5	
	comp=Z,6.5nm,0.5s						
YJA				*i* S	**S**	**07 24 05.3**	**+1.7**
PB14	**IPOC Station P**	**2.82**	**264**	⇑*i*P	**Pn**	**07 23 29.5**	**+1.3**
PB14				*e*S	**S**	**07 24 04.2**	**-0.9**
PB14				IAML		07 24 06.5	
	comp=E,208nm,0.5s						
AHML	**Horco Molle**	**3.01**	**144**	*i* P	**Pn**	**07 23 27.8**	**-2.3**
AHML				IAML		07 23 31.3	
	comp=Z,3.9nm,0.5s						
PB05	**IPOC Station P**	**3.04**	**299**	⇑*i*P	**Pn**	**07 23 31.8**	**+1.2**
PB05				*e*S	**S**	**07 24 07.7**	**-1.7**
PB05				IAML		07 24 11.7	
	comp=N,329nm,0.4s						
PB10	**IPOC Station P**	**3.08**	**285**	*e*Pn	**Pn**	**07 23 31.9**	**+1.0**
PB10				*e*Sn	**S**	**07 24 07.7**	**-2.4**
PB10	**IPOC Station P**	**3.08**	**285**	*i* S	**S**	**07 24 08.4**	**-1.6**
PB09	**IPOC Station P**	**3.10**	**325**	*e*P	**Pn**	**07 23 33.5**	**+2.0**
PB03	**IPOC Station P**	**3.21**	**315**	⇑*e*P	**Pn**	**07 23 34.0**	**+1.3**
PB03				*e*S	**S**	**07 24 11.8**	**-1.4**
PB03				IAML		07 24 12.8	
	comp=N,376nm,0.4s						
PB04	**IPOC Station P**	**3.29**	**307**	*e*Pn	**Pn**	**07 23 34.9**	**+1.2**
PB04				*e*Sn	**S**	**07 24 13.3**	**-1.7**
PB07	**IPOC Station P**	**3.53**	**317**	⇑*i*P	**Pn**	**07 23 37.9**	**+1.2**
PB07				*i* S	**S**	**07 24 18.5**	**-1.8**
PB02	**IPOC Station P**	**3.85**	**321**	*e*P	**Pn**	**07 23 41.2**	**+0.7**
PB01	**IPOC Station P**	**3.86**	**328**	*e*Pn	**Pn**	**07 23 41.2**	**+0.6**
PB01				*e*Sn	**S**	**07 24 26.1**	**-1.4**
PB01	**IPOC Station P**	**3.86**	**328**	*e*P	**Pn**	**07 23 41.7**	**+1.0**
PB01				*i* S	**S**	**07 24 25.9**	**-1.6**
PB01				IAML		07 24 27.3	
	comp=E,141nm,0.2s						
GO03	**Copiap**	**4.16**	**219**	*e*Pn	**Pn**	**07 23 44.6**	**+0.4**
GO03				*e*Sn	**S**	**07 24 33.2**	**-0.9**
PB08	**IPOC Station P**	**4.53**	**338**	*e*P	**Pn**	**07 23 50.5**	**+1.1**
PB08				*i* S	**S**	**07 24 42.6**	**-0.6**
GO01	**Chusmiza**	**4.98**	**339**	*e*Pn	**Pn**	**07 23 55.6**	**+0.3**
GO01				*e*Sn	**S**	**07 24 49.1**	**-4.7**
PB11	**IPOC Station P**	**5.06**	**334**	*e*Pn	**Pn**	**07 23 55.5**	**-0.5**
PB11				*e*Sn	**S**	**07 24 51.4**	**-3.8**
LCO	**Las Campanas**	**5.53**	**212**	*e*Pn	**Pn**	**07 24 01.9**	**-0.2**
LCO				*e*Sn	**S**	**07 25 04.1**	**-2.1**
MNMC	**Minye Minye**	**5.62**	**337**	*e*Pn	**Pn**	**07 24 03.6**	**+0.3**
MNMC				*e*Sn	**S**	**07 25 06.0**	**-2.3**
GO04	**Tololo Observa**	**6.57**	**207**	*e*Pn	**Pn**	**07 24 14.7**	**-0.8**
GO04				*e*Sn	**S**	**07 25 28.2**	**-2.2**
CFA	**Coronel Fontan**	**7.26**	**186**	P	**Pn**	**07 24 26.2**	**+1.8**
	comp=E,0.8nm,0.3s,baz=317,slow=8.2,SNR=17						
CFA				S	**S**	**07 25 42.6**	**-4.0**
	comp=E,0.7nm,0.3s,baz=126,slow=17,SNR=5.6						
LPAZ	**La Paz**	**8.07**	**354**	P	**Pn**	**07 24 36.9**	**+1.3**
	comp=E,0.8nm,0.3s,baz=155,slow=9.2,SNR=38						
LPAZ				S	**S**	**07 26 01.6**	**-5.0**
	comp=E,0.0nm,0.3s,baz=251,slow=11,SNR=2.9						
LPAZ	**La Paz**	**8.07**	**354**	*e*Pn	**Pn**	**07 24 37.3**	**+1.7**
LPAZ				*e*Sn	**S**	**07 26 04.1**	**-2.6**
CPUP	**Villa Florida**	**9.25**	**104**	P	**Pn**	**07 24 49.9**	**-0.5**
	comp=E,0.0nm,0.3s,baz=312,slow=11,SNR=3.4						
SIV	**San Ignacio**	**10.18**	**36**	P	**Pn**	**07 25 00.7**	**-1.9**
	comp=E,0.7nm,0.3s,baz=234,slow=11,SNR=21						
TRQA	**Tornquist**	**14.39**	**163**	*e*Pn	**P**	**07 25 56.4**	**-1.0**
PLCA	**Paso Flores**	**16.55**	**189**	P	**Pn**	**07 26 25.6**	**+3.5**
	comp=E,0.1nm,0.3s,baz=29,slow=19,SNR=3.6						
PLCA	**Paso Flores**	**16.55**	**189**	*e*P	**Pn**	**07 26 21.9**	**-0.2**
	comp=E,11nm,1.5s						
BDFB	**Brasilia**	**20.09**	**68**	P	**P**	**07 27 00.6**	**+0.6**
	comp=E,0.5nm,0.3s,baz=243,slow=8.3,SNR=7.4						
BDFB	**Brasilia**	**20.09**	**68**	*e*P	**P**	**07 27 00.8**	**+0.9**
	comp=E,8.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.97**	**69**	P	**P**	**07 34 14.2**	**+1.5**
	comp=E,0.4nm,0.5s,baz=266,slow=6.0,SNR=4.4						
NVAR	**Mina Array Bea**	**78.64**	**322**	P	P	07 34 26.4	+4.7
	comp=E,0.1nm,0.5s,baz=134,slow=3.9,SNR=2.1						
MODS	**Modra-Piesok**	**104.38**	**43**	*e*PDIF	**Pdif**	**07 36 28.2**	**+4.8**
ASAR	**Alice Springs**	**128.01**	**205**	PKP	**PKiKP**	**07 41 25.8**	**+0.6**
	comp=E,0.5nm,0.8s,baz=186,slow=4.1,SNR=3.0						
MKAR	**Makanchi Array**	**146.99**	**40**	PKPbc	**PKiKP**	**07 42 04.6**	**+1.6**
	comp=E,0.6nm,0.7s,baz=304,slow=3.0,SNR=3.7						
LZH	**Lanzhou**	**166.05**	**31**	*e*PKP	**PKPdf**	**07 42 18.9**	**-4.3**
LZH				pPKP	pPKPdf	07 43 14.3	-0.4
LZH				sPKP		07 43 39.4	

*IDC **10** 07:24:54.2±1.4,2.°86S×130.°00E,h0km,mb3.9/5, mb1 4.1/6,mb1mx3.7/40,mbtmp4.0/6,ML4.7/2,MS3.3/9, Ms1 3.3/9,ms1mx3.0/38,Error ellipse: s-maj=76.8km s-min=20.4km az=70.0*
*ISCJB **10** 07:24:57.9±0.4,2.°99S±0.°05×129.°67E±0.°05,h35km, mb4.0/7,MS3.1/5,Error ellipse: s-maj=7.3km s-min=6.7km az=6.9*

*DJA **10** 07:24:59.0±0.3,3.°S±3.°×13.°0E±.°,h107km±8km,M4.3/8, mb4.5/6,mB4.7/2,MLv4.2/8,Mw(mB)3.9/2*
*NEIC **10** 07:24:59.5±2.2,3.°02S×129.°89E,h35km±2km,mb4.3/6, Error ellipse: s-maj=19.3km s-min=14.8km az=156.0*
ISC 10 07:24:59.6±0.7,**2.°98S**±0.°05×**129.°72E**±0.°07,**h35**km,**n35**, σ2§**90**/32,**mb4.0/7,MS3.0/5,Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.54**	**173**	P	**Pn**	**07 25 26.8**	**+2.2**
BNDI				S	**Sn**	**07 25 49.3**	**+5.9**
FAKI	**Fak Fak**	**2.53**	**89**	*e*Pn	**Pn**	**07 25 36.5**	**-1.7**
FAKI	**Fak Fak**	**2.53**	**89**	P	**Pn**	**07 25 39.5**	**+1.3**
SWI	**Sorong**	**2.61**	**36**	P	**Pn**	**07 25 38.9**	**-0.4**
SWI				S	**Sn**	**07 26 12.3**	**+2.5**
SANI	**Sanana**	**3.84**	**284**	P	**Pn**	**07 25 54.3**	**-1.9**
TNTI	**Ternate**	**4.41**	**328**	P	**Pn**	**07 26 01.0**	**-3.1**
RKPI	**Ransiki, Papua**	**4.69**	**72**	P	**Pn**	**07 26 08.3**	**+0.4**
BAKI	**Biak**	**6.63**	**75**	P	**Pn**	**07 26 34.0**	**-0.6**
	53nm,0.8s						
APSI	**Ampana**	**8.32**	**284**	P	**Pn**	**07 26 55.6**	**-2.3**
	48nm,0.8s,556nm						
MRSI	**Marisa**	**8.50**	**294**	P	Pn	07 26 57.6	-2.7
	28nm,0.7s						
BATI	**Baumata**	**9.36**	**220**	LR	LR	07 30 56.5	
	comp=Z,392nm,20.4s,baz=85,slow=38						
KAPI	**Kappang**	**10.14**	**258**	LR	LR	07 31 57.1	
	comp=Z,168nm,22.0s,baz=70,slow=40						
FITZ	**Fitzroy Crossi**	**15.55**	**195**	Pn	**Pn**	**07 28 37.9**	**+1.6**
	0.3nm,0.3s,baz=18,slow=13,SNR=6.4						
FITZ				LR	LR	07 34 52.7	
	comp=Z,75nm,18.7s,baz=28,slow=38						
FITZ	**Fitzroy Crossi**	**15.55**	**195**	*e*Pn	**Pn**	**07 28 38.0**	**+1.7**
WR1	**Warramunga Arr**	**17.45**	**165**	*e*Pn	**P**	**07 29 00.0**	**-1.3**
WR1				*e*Sn	**Sn**	**07 32 06.8**	**-7.0**
WRA	**Warramunga Arr**	**17.45**	**165**	P	**P**	**07 29 00.0**	**-1.4**
	8.9nm,0.3s,baz=345,slow=13,SNR=2.0						
WRA				S	**Sn**	**07 32 06.8**	**-7.0**
	7.2nm,0.3s,baz=333,slow=23,SNR=2.3						
WB2	**Warramunga Arr**	**17.45**	**165**	*e*Pn	**Pn**	**07 28 59.3**	**-1.1**
	16nm,1.3s						
TGY	**Tagaytay City**	**19.08**	**333**	LR	LR	07 38 28.4	
	comp=Z,90nm,19.1s,baz=272,slow=43						
KSM	**Kuching**	**19.90**	**283**	*e*P	**P**	**07 29 30.8**	**+2.4**
	15nm,1.1s						
AS31	**Alice Springs**	**20.96**	**169**	*e*P	**P**	**07 29 35.0**	**-4.7**
	5.7nm,0.5s						
AS31				*e*S	**S**	**07 33 31.1**	**-0.4**
ASAR	**Alice Springs**	**20.96**	**169**	P	Pn	07 29 40.4	-2.1
	9.1nm,0.8s,baz=348,slow=11,SNR=34						
ASAR				S	**S**	**07 33 27.8**	**-3.8**
	0.6nm,0.5s,baz=352,slow=25,SNR=4.2						
GUMO	**Guam**	**22.29**	**42**	LR	LR	07 39 02.5	
	comp=Z,27nm,19.3s,baz=68,slow=38						
LEM	**Lembang**	**22.34**	**259**	LR	LR	07 39 57.7	
	comp=Z,140nm,20.3s,baz=78,slow=40						
STKA	**Stephens Creek**	**30.84**	**160**	LR	LR	07 46 38.1	
	comp=Z,82nm,19.0s,baz=2.2,slow=42						
CMAR	**Chiang Mai Arr**	**37.04**	**306**	P	**P**	**07 32 08.5**	**+2.0**
	0.8nm,0.4s,baz=139,slow=8.8,SNR=4.8						
CMAR				LR	LR	07 50 22.7	
	comp=Z,20nm,19.1s,baz=290,slow=41						
MJAR	**Matsushiro Arr**	**40.11**	**11**	LR	LR	07 48 49.8	
	comp=Z,24nm,19.7s,baz=50,slow=36						
MK31	**Makanchi Array**	**64.75**	**326**	*e*P	**P**	**07 35 35.3**	**+0.7**
	3.7nm,1.3s						
MK32	**Makanchi Array**	**64.75**	**326**	*e*P	**P**	**07 35 34.8**	**+0.2**
MKAR	**Makanchi Array**	**64.75**	**326**	P	**P**	**07 35 34.8**	**+0.2**
	0.4nm,0.5s,baz=122,slow=6.9,SNR=7.3						
KSH	**Kashi**	**64.91**	**316**	*e*P	**P**	**07 35 40.0**	**+4.2**
KURBB	**Kurchatov Arra**	**68.97**	**328**	P	**P**	**07 36 01.1**	**-0.1**
	0.8nm,0.5s,baz=127,slow=5.5,SNR=12						
KURK	**Kurchatov**	**68.97**	**328**	*e*P	**P**	**07 36 01.7**	**+0.4**
	3.3nm,0.7s						
BVAR	**Borovoye Array**	**74.54**	**327**	P	**P**	**07 36 35.4**	**+0.6**
	0.8nm,0.8s,baz=118,slow=5.3,SNR=5.6						
ABKAR	**Akbulak array**	**79.21**	**321**	*e*P	**P**	**07 37 01.4**	**+0.3**
	7.2nm,1.8s						
CPUP	**Villa Florida**	**150.07**	**167**	PKPbc	**PKPbc**	**07 44 46.4**	**-1.0**
	1.1nm,0.6s,baz=177,slow=17,SNR=3.9						

*ISCJB **10** 07:30:37.9±0.5,20.°82S±0.°07×177.°63W±0.°10,h365km, mb3.8/14,Error ellipse: s-maj=13.0km s-min=9.3km az=25.8*
*IDC **10** 07:30:46.0±3.4,21.°02S×177.°72W,h444km±36km, mb3.4/13,mb1 3.6/15,mb1mx3.5/30,mbtmp4.2/15,Error ellipse: s-maj=18.5km s-min=14.8km az=96.0*
ISC 10 07:30:38.5±0.6,**21.°0S**±0.°1×**177.°5W**±0.°1,**h365**km,**n36**, σ1§**27**/37,**mb3.9**/14,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.97**	**263**	P	**Pn**	**07 33 55.7**	**+1.0**
	0.7nm,0.3s,baz=91,slow=16,SNR=8.7						
URZ	**Urewera**	**17.84**	**194**	P	**Pn**	**07 34 24.3**	**-3.0**
	2.3nm,0.3s,baz=331,slow=7.0,SNR=3.4						
URZ				S	**S**	**07 37 28.6**	**-0.2**
	0.6nm,0.3s,baz=61,slow=19,SNR=4.6						
ARMA	**Armidale**	**29.28**	**245**	P	**P**	**07 36 10.9**	**+2.3**
	baz=33,SNR=7.3						
MGCD	**Mangrove Creek**	**30.36**	**240**	P	**P**	**07 36 20.6**	**+2.6**
	baz=34,SNR=8.1						
CNB	**Canberra Magne**	**32.34**	**237**	P	**P**	**07 36 37.3**	**+2.0**
	baz=36,SNR=25						
CTA	**Charters Tower**	**33.90**	**265**	P	**P**	**07 36 49.0**	**+0.3**
	2.5nm,0.5s,baz=86,slow=10,SNR=4.0						
CMSA	**Cobar Meteorol**	**34.49**	**245**	P	**P**	**07 36 54.6**	**+1.0**
	baz=38,SNR=9.1						
TOO	**Toolangi**	**35.99**	**234**	P	**P**	**07 37 07.5**	**+1.3**
	baz=40,SNR=6.8						
TOO				P	P	07 37 07.6	+1.4
	baz=40,SNR=7.1						
STKA	**Stephens Creek**	**38.00**	**245**	P	**P**	**07 37 23.1**	**+0.1**
	5.1nm,0.5s,baz=81,slow=11,SNR=15						
STKA	**Stephens Creek**	**38.00**	**245**	P	**P**	**07 37 24.0**	**+1.0**
	baz=42,SNR=6.7						
HTT	**Hallett**	**40.41**	**243**	P	**P**	**07 37 43.2**	**+0.4**
	baz=44,SNR=7.1						
BBOO	**Buckleboo**	**42.75**	**244**	P	**P**	**07 38 01.4**	**-0.1**
	baz=47,SNR=20						
ASAR	**Alice Springs**	**44.86**	**257**	P	**P**	**07 38 17.9**	**-0.3**
	7.0nm,0.6s,baz=98,slow=7.9,SNR=116						
ASAR				PcP	**PcP**	**07 39 50.6**	**-2.3**
	0.9nm,0.6s,baz=108,slow=3.8,SNR=5.6						
WRA	**Warramunga Arr**	**44.99**	**262**	P	**P**	**07 38 18.4**	**-1.0**
	36nm,0.3s,baz=91,slow=8.5,SNR=2.3						
KDU	**Kakadu**	**48.42**	**271**	P	**P**	**07 38 45.1**	**-0.5**
	baz=53,SNR=3.6						
FORT	**Forrest**	**49.53**	**247**	P	**P**	**07 38 53.0**	**-0.8**
	baz=54,SNR=12						
WRKA	**Warakurna**	**49.78**	**254**	P	**P**	**07 38 55.2**	**-0.6**
	baz=54,SNR=25						
FITZ	**Fitzroy Crossi**	**53.42**	**263**	P	**P**	**07 39 22.2**	**-0.3**
	baz=58,SNR=6.9						
VNDA	**Vanda**	**57.48**	**185**	P	**P**	**07 39 50.6**	**+0.5**
	1.8nm,0.7s,baz=17,slow=5.7,SNR=7.7						
GIRL	**Giralia**	**62.87**	**255**	P	**P**	**07 40 27.5**	**+0.3**
	baz=67,SNR=3.5						
MJAR	**Matsushiro Arr**	**70.86**	**323**	P	**P**	**07 41 15.8**	**-1.0**
	1.2nm,0.3s,baz=163,slow=7.2,SNR=5.0						
PETK	**Petropavlovsk-**	**76.84**	**345**	P	**P**	**07 41 49.8**	**-0.9**
	3.8nm,0.8s,baz=126,slow=7.5,SNR=5.0						
KSRS	**Korea Array**	**77.54**	**318**	P	**P**	**07 41 55.1**	**+0.2**
	0.9nm,0.6s,baz=146,slow=9.1,SNR=4.1						
USRK	**Ussuriysk Ar.**	**79.61**	**326**	P	**P**	**07 42 06.5**	**+0.6**
	2.0nm,0.7s,baz=173,slow=6.0,SNR=5.6						
NVAR	**Mina Array Bea**	**81.06**	**43**	P	**P**	**07 42 15.6**	**+1.6**
	0.3nm,0.7s,baz=228,slow=11,SNR=3.7						
TXAR	**Lajitas Array**	**86.93**	**57**	P	**P**	**07 42 45.3**	**+1.9**
	0.2nm,0.6s,baz=229,slow=5.4,SNR=2.7						
VNA3	**Neumayer Olymp**	**87.64**	**176**	P	**P**	**07 42 46.5**	**+0.6**
VNA2	**Neumayer--Watz**	**88.09**	**177**	P	**P**	**07 42 48.9**	**+0.8**
	baz=186,slow=3.6						
VNA1	**Neumayer--Stat**	**88.31**	**176**	P	**P**	**07 42 49.8**	**+0.8**
ILAR	**Eielson Array**	**88.67**	**13**	P	**P**	**07 42 49.0**	**-1.7**
	0.4nm,0.6s,baz=214,slow=5.1,SNR=7.2						
PDAR	**Pinedale Array**	**88.99**	**43**	P	**P**	**07 42 53.8**	**+0.8**
	0.4nm,0.6s,baz=160,slow=4.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	**90.70**	**289**	P	**P**	**07 43 01.4**	**+0.2**
	1.2nm,0.4s,baz=112,slow=3.3,SNR=5.8						
FINES	**FINESS Array B**	**136.35**	**344**	PKP	**PKPdf**	**07 49 15.0**	**-1.6**
	0.6nm,0.7s,baz=321,slow=3.6,SNR=2.3						
AKASG	**Malin Array Be**	**143.65**	**331**	PKP	PKPab	07 49 26.0	-2.0
	2.3nm,0.6s,baz=44,slow=4.4,SNR=12						
BRTR	**Keskin Array B**	**147.49**	**312**	PKPbc	**PKPdf**	**07 49 37.6**	**+0.3**
	0.7nm,0.6s,baz=129,slow=3.2,SNR=4.6						
GERES	**GERESS Array B**	**150.78**	**345**	PKPbc	**PKPbc**	**07 49 46.7**	**-1.4**
	0.5nm,0.3s,baz=17,slow=1.8,SNR=6.9						

WEL 10 07:31:15.0,38.°S±1.°×**17.°8E**±.°,**h40**km±2km,**M3.9**/17, **ML4.2**/13,**MLv3.9**/17,**Error ellipse: s-maj=0.0km s-min=0.0km az=65.9,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKGZ	**Te Karaka**	**0.05**	**86**	P	Pn	07 31 21.6	+0.2
TKGZ				S	Sn	07 31 26.8	+0.9
MWZ	**Matawai**	**0.23**	**299**	P	Pn	07 31 22.6	-0.1
MWZ				S	Sn	07 31 28.2	0.0
TWGZ	**Tauwhareparae**	**0.31**	**31**	P	Pn	07 31 24.0	+0.6
TWGZ				S	Sn	07 31 31.3	+1.9
CNGZ	**Carnagh Statio**	**0.34**	**97**	P	Pn	07 31 24.5	+0.8
SNGZ	**Shannon Statio**	**0.48**	**225**	P	Pn	07 31 26.1	+0.5
SNGZ				S	Sn	07 31 34.9	+2.0
RUGZ	**Raukumara Rang**	**0.48**	**350**	P	Pn	07 31 25.5	-0.1
RUGZ				S	Sn	07 31 33.6	+0.5
PRGZ	**Paritu Road**	**0.49**	**170**	P	Pn	07 31 25.9	+0.3
PUZ	**Puketiti**	**0.53**	**46**	P	Pn	07 31 26.3	+0.2
PUZ				S	Sn	07 31 35.3	+1.3
KNZ	**Kokohu**	**0.58**	**188**	P	Pn	07 31 26.9	0.0
KNZ				S	Sn	07 31 36.7	+1.4
RTZ	**Ruatahuna**	**0.65**	**254**	P	Pn	07 31 28.5	+0.7
HAZ	**Te Kaha**	**0.69**	**0**	P	Pn	07 31 28.5	+0.3
MHGZ	**Mahia Peninsul**	**0.71**	**172**	P	Pn	07 31 28.9	+0.2
MHGZ				S	Sn	07 31 39.7	+1.2
RAHZ	**Arahi**	**0.72**	**229**	P	Pn	07 31 29.3	+0.5
WHHZ	**Waihua**	**0.76**	**214**	P	Pn	07 31 29.7	+0.4
MUGZ	**Murupara**	**0.79**	**267**	P	Pn	07 31 30.7	+0.9
MTHZ	**Maungataniwha**	**0.84**	**241**	P	Pn	07 31 31.1	+0.7
WHRZ	**Whale Island**	**0.86**	**312**	P	Pn	07 31 31.9	+1.2
EDRZ	**Edgecumbe**	**0.89**	**292**	P	Pn	07 31 31.9	+0.8
MXZ	**Matakaoa Point**	**0.97**	**25**	P	Pn	07 31 32.7	+0.5
MARZ	**Manawahe**	**0.98**	**297**	P	Pn	07 31 32.9	+0.5
RRRZ	**Republican Roa**	**1.00**	**276**	P	Pn	07 31 33.3	+1.0
NMHZ	**Naumai**	**1.00**	**229**	P	Pn	07 31 33.4	+0.7
ARHZ	**Aropaoanui**	**1.02**	**217**	P	Pn	07 31 33.4	+0.5
WIZ	**White Island**	**1.03**	**333**	P	Pn	07 31 33.1	+0.2
PRRZ	**Plateau Road**	**1.09**	**267**	P	Pn	07 31 34.7	+0.9
ALRZ	**Allen Road**	**1.13**	**264**	P	Pn	07 31 35.4	+1.0
MRHZ	**Matea Rd**	**1.14**	**250**	P	Pn	07 31 35.5	+1.0
OPRZ	**Ohinepanea**	**1.14**	**301**	P	Pn	07 31 34.5	0.0
OMRZ	**Omania**	**1.16**	**286**	P	Pn	07 31 35.4	+0.6
HRRZ	**Handcock Road**	**1.18**	**272**	P	Pn	07 31 35.9	+0.9
LIRZ	**Lichensteins R**	**1.18**	**291**	P	Pn	07 31 35.5	+0.4
BKZ	**Black Stump Fm**	**1.24**	**234**	P	Pn	07 31 36.5	+0.7
WPRZ	**Whakapapatarin**	**1.27**	**266**	P	Pn	07 31 37.4	+1.1
KARZ	**Kaharoa**	**1.28**	**289**	P	Pn	07 31 36.8	+0.4
MCHZ	**McNeill Hill**	**1.31**	**220**	P	Pn	07 31 37.2	+0.4
CKHZ	**Cape Kidnapper**	**1.33**	**204**	P	Pn	07 31 36.6	-0.5
HATZ	**Hinemaiaia**	**1.40**	**251**	P	Pn	07 31 38.7	+0.7
TGRZ	**Tauranga**	**1.40**	**300**	P	Pn	07 31 37.8	-0.1
KWHZ	**Kaweka Forest**	**1.44**	**227**	P	Pn	07 31 38.8	+0.1
KAHZ	**Kahuranaki**	**1.52**	**207**	P	Pn	07 31 39.2	-0.6
KUTZ	**Kaahu Road**	**1.54**	**268**	P	Pn	07 31 40.9	+1.0
KMRZ	**Kaimai**	**1.57**	**292**	P	Pn	07 31 40.4	0.0
RITZ	**Rihia Road**	**1.59**	**250**	P	Pn	07 31 41.7	+1.0
KRHZ	**Kereru**	**1.62**	**222**	P	Pn	07 31 40.6	-0.5
WATZ	**Wairara**	**1.63**	**260**	P	Pn	07 31 42.1	+0.9
RATZ	**Rangitukua**	**1.63**	**254**	P	Pn	07 31 42.1	+0.9
BHHZ	**Black Hill Sta**	**1.70**	**231**	P	Pn	07 31 42.4	+0.2

BKNI			S	Sn	07 33 56.4	-0.2
PDSI	**Padang**	**1.55 154**	P	Pn	07 33 38.7	+0.4
PDSI			S	Sn	07 34 02.0	+0.3
SISI	**Saibi**	**1.93 201**	P	Pn	07 33 41.9	-0.5
SISI			S	Sn	07 34 09.5	+0.5
SDSI	**Sungai Dareh**	**2.17 130**	P	Pn	07 33 46.0	+0.8
SDSI			S	Sn	07 34 14.2	+0.1
KCSI	**Kotacane, Aceh**	**3.62 326**	P	Pn	07 34 04.1	+0.9
KCSI			S	Sn	07 34 44.5	-1.8
TPTI		**3.78 317**	P	Pn	07 34 05.5	+0.2
TPTI			S	Sn	07 34 49.2	-0.9
SNSI	**Sinabang, Aceh**	**3.94 299**	P	Pn	07 34 09.3	+1.9
SNSI			S	Sn	07 34 52.0	-1.7
H08S2	**Diego Garcia H**	**28.38 253**	T	T	08 06 33.1	
	baz=72,slow=75,SNR=9.0					
H08S3	**Diego Garcia H**	**28.38 253**	T	T	08 06 33.9	
	baz=72,slow=75,SNR=8.7					
H08S1	**Diego Carcia H**	**28.40 253**	T	T	08 06 31.5	
	baz=72,slow=75,SNR=8.6					
WRA	**Warramunga Arr**	**39.48 123**	P	**P**	**07 40 22.5**	**-1.0**
	38nm,0.3s,baz=291,slow=9.4,SNR=2.6					
ASAR	**Alice Springs**	**40.93 128**	P	**P**	**07 40 32.9**	**-2.5**
	0.2nm,0.4s,baz=287,slow=6.6,SNR=3.8					
MKAR	**Makanchi Array**	**48.59 344**	P	**P**	**07 41 37.1**	**+1.5**
	0.7nm,0.3s,baz=156,slow=8.5,SNR=18					
KURBB	**Kurchatov Arra**	**53.12 343**	P	**P**	**07 42 10.4**	**+1.1**
	0.7nm,0.7s,baz=163,slow=6.3,SNR=4.6					
ZALV	**Zalesovo Beam**	**54.70 349**	P	**P**	**07 42 22.0**	**+1.3**
	1.8nm,0.5s,baz=179,slow=5.7,SNR=5.1					
BVAR	**Borovoye Array**	**57.79 339**	P	**P**	**07 42 43.5**	**+0.8**
	0.9nm,0.5s,baz=146,slow=11,SNR=6.7					

SJA 10 07:51:55.4±0.5, 21°.60S×68°.42W, h148km±5km, ML1.8, MW4.2, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.79**	**256**	*i* P	Pn	07 52 18.8	+0.2
PB09				*i* S	Sn	07 52 36.4	+0.3
PB03	**IPOC Station P**	**1.32**	**250**	*i* P	Pn	07 52 23.7	+0.6
PB03				*i* S	Sn	07 52 45.0	+0.8
PB07	**IPOC Station P**	**1.37**	**265**	*i* P	Pn	07 52 24.4	+0.7
PB07				*i* S	Sn	07 52 46.1	+0.9
PB02	**IPOC Station P**	**1.41**	**281**	*i* P	Pn	07 52 24.6	+0.6
PB02				*i* S	Sn	07 52 46.2	+0.5
PB06	**IPOC Station P**	**1.53**	**244**	*i* P	Pn	07 52 25.8	+0.5
PB04	**IPOC Station P**	**1.76**	**245**	*i* P	Pn	07 52 28.6	+0.7
PB15	**IPOC Station P**	**1.87**	**211**	*i* P	Pn	07 52 30.0	+0.8
PB15				*i* S	Sn	07 52 55.4	+0.3
HJA	**Humahuaca**	**3.21**	**120**	*i* P	Pn	07 52 47.5	+1.8
HJA				IAML		07 53 46.1	
	comp=Z,1.9nm,0.3s						

NNC 10 08:02:20.5±4.6, 53°.82N×88°.09E, h0km, mb3.5, mpv3.2, 7C-1D, Error ellipse: s-maj=34.0km s-min=32.0km az=170.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.59**	**246**	⇑Pn	Pn	08 03 58.0	-0.5
	1.1nm,0.7s						
KURK				⇑Sn	Sn	08 05 17.0	+2.6
	1.1nm,0.6s						
KURK				⇑Lg	Lg	08 05 50.7	
	2.6nm,0.7s						
KURBB	**Kurchatov Arra**	**6.69**	**245**	Pn	Pn	08 03 59.3	-0.6
	0.8nm,0.3s						
KURBB				⇑Sn	Sn	08 05 17.3	+0.6
	5.0nm,0.6s						
KURBB				⇓Lg	Lg	08 05 50.7	
	5.1nm,0.6s						
MK31	**Makanchi Array**	**7.95**	**210**	⇑Pn	Pn	08 04 19.0	+1.7
	0.7nm,0.7s,baz=26,slow=13,SNR=4.4						
MK31				⇑Sn	Sn	08 05 50.0	+2.1
	0.5nm,0.6s						
MK31				⇑Lg	Lg	08 06 24.9	
	1.8nm,0.7s						

ISCJB ***10*** *08:05:50.9±0.8, 56°.46N±0°.02×167°.71W±0°.03, h8km±5km, mb4.8/171, MS3.9/36, Error ellipse: s-maj=3.1km s-min=2.5km az=11.8*
IDC ***10*** *08:05:51.5±0.6, 56°.42N×167°.80W, h0km, mb4.4/30, mb1 4.6/31, mb1mx4.4/45, mbtmp4.4/31, ML4.6/1, MS3.7/28, Ms1 3.7/28, ms1mx3.6/40, Error ellipse: s-maj=18.5km s-min=10.1km az=11.0*
NEIC ***10*** *08:05:52.9±0.0, 56°.39N×167°.72W, h15km, mb4.8/230, ML4.8(AEIC), After AEIC.*
AEIC ***10*** *08:05:52.9, 56°.39N×167°.72W, h15km, ML4.8, MB4.8(NEIC)*
GCMT ***10*** *08:05:52.9±0.3, 56°.45N±0°.03×167°.74W±0°.07, h16km±1km, MW4.8/69, Moment Tensor Solution. s13,c16; s69,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.86±.14; $M_{\theta\theta}$1.54±.10; $M_{\phi\phi}$0.31±.08; $M_{r\theta}$-0.30±.30; $M_{\theta\phi}$-0.46±.06; $M_{\phi r}$-0.34±.39; Best double couple: $M_0$1.82700×10^{16} NP1:ϕ_s299.00000°, δ43.00000°, λ-74.00000°. Principal axes: T 1.7020, Plg3.0000°, Azm198.0000°; N 0.2500, Plg11.0000°, Azm107.0000°; P -1.9530, Plg78.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***10*** *08:05:53.3±1.1, 56°.36N×167°.79W, h25km, mb5.1/44, MS4.2/5 Error ellipse: s-maj=11.6km s-min=5.5km az=97.7*
BJI ***10*** *08:05:55.4±0.0, 56°.77N×168°.40W, h16km, mb4.9/35, mB5.0/28, Ms4.8/17, Ms7 4.5/7*

ISC 10 08:05:54.4±0.7, 56°.43N±0°.04×167°.78W±0°.03, h20km±3km, n598, σ1$24/609, mb4.9/176, MS3.9/37, 27C-10D, Pribilof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**1.55**	**300**	*e*Pn	Pn	08 06 19.6	-1.2
SPIA				*e*Sn	Sb	08 06 41.1	-0.5
AKRB	**Akutan Reef Bi**	**2.50**	**156**	*e*Pn	Pn	08 06 32.8	-1.1
AKRB				*e*Sn	Sn	08 07 04.0	+0.2
WEBT	**Westdahl Beart**	**2.52**	**136**	*e*Pn	Pn	08 06 33.5	-0.6
MCIR	**Makushin Cirqu**	**2.53**	**168**	*e*Pn	Pn	08 06 33.4	-1.0
ZRO	**Akutan Zero**	**2.56**	**156**	*e*Pn	Pn	08 06 33.6	-1.1
AKUT	**Akutan**	**2.57**	**153**	*e*Pn	Pn	08 06 33.2	-1.6
AKUT				*e*Sn	Sb	08 07 11.9	+1.1
MSW	**Makushin Switc**	**2.58**	**167**	*e*Pn	Pn	08 06 34.4	-0.6
MSW				*e*Sn	Sn	08 07 05.0	-0.8
AKSA	**Akutan Strait**	**2.59**	**152**	*e*Pn	Pn	08 06 34.1	-0.9
WESP	**Westdahl Peak**	**2.60**	**137**	*e*Pn	Pn	08 06 34.4	-1.0
UNV	**Unalaska Valle**	**2.69**	**164**	*e*Pn	Pn	08 06 34.8	-1.6
UNV				*e*Sn	Sn	08 07 06.2	-2.2
OKAK	**Okmok**	**2.87**	**187**	*e*Pn	Pn	08 06 41.1	+2.1
FALS	**False Pass**	**2.93**	**121**	*e*Pn	Pn	08 06 38.8	-0.9
OKTU	**Okmok Mt. Tuli**	**3.05**	**183**	*e*Pn	Pn	08 06 40.1	-1.4
DRIA	**Deer Island**	**3.45**	**113**	*e*Pn	Pn	08 06 45.9	-1.0
DOL	**Dolgoi Island**	**3.58**	**109**	*e*Pn	Pn	08 06 47.9	-0.8
SDPT	**Sand Point**	**4.25**	**102**	*e*Pn	Pn	08 06 56.8	-1.1
VNWF	**Veniaminof 8**	**4.59**	**90**	*e*Pn	Pn	08 07 02.7	+0.1
VNHG	**Veniaminof 1**	**4.80**	**89**	*e*Pn	Pn	08 07 05.6	+0.1
CHGN	**Chignik**	**5.21**	**87**	*e*Pn	Pn	08 07 10.8	-0.2
CHGN				*e*Sn	Sn	08 08 08.2	-2.3
AZAC	**Aniakchak**	**5.29**	**81**	*e*Pn	Pn	08 07 12.6	+0.4
KOFP	**Korovin Flat P**	**5.56**	**224**	*e*Pn	Pn	08 07 16.5	+0.5
KOKL	**Mount Kliuchef**	**5.57**	**225**	*e*Pn	Pn	08 07 16.4	+0.3
ATKA	**Atka Island**	**5.66**	**224**	*e*Pn	Pn	08 07 17.1	-0.1
GSTR	**Great Sitkin T**	**6.51**	**232**	*e*Pn	Pn	08 07 28.2	-0.8
GSTR				*e*Sn	Sn	08 08 38.8	-3.8
GSMY	**Great Sitkin M**	**6.54**	**231**	*e*Pn	Pn	08 07 29.2	-0.2
KELA	**Mount Kelaz**	**6.80**	**68**	*e*Pn	Pn	08 07 33.3	+0.3
ETKA	**Kagalaska Isla**	**6.83**	**232**	*e*Pn	Pn	08 07 34.7	+1.5
ADAG	**Mount Adagdak**	**6.83**	**233**	*e*Pn	Pn	08 07 32.6	-0.7
ADK	**Adak**	**6.93**	**233**	*e*Pn	Pn	08 07 33.0	-1.7
ADK	**Adak**	**6.93**	**233**	P	Pn	08 07 33.0	-1.7
KABU	**Katmai Buttres**	**7.01**	**70**	*e*Pn	Pn	08 07 36.5	+0.6
KAHC	**Katmai Hardscr**	**7.23**	**67**	*e*Pn	Pn	08 07 39.0	+0.1
KIMD	**Kanaga Island**	**7.26**	**234**	*e*Pn	Pn	08 07 40.7	+1.5
KARR	**Katmai Rainbow**	**7.35**	**68**	*e*Pn	Pn	08 07 41.0	+0.5
KAHG	**Katmai Hook Gl**	**7.43**	**68**	*e*Pn	Pn	08 07 42.3	+0.7
SII	**Sitkinak Islan**	**7.53**	**83**	*e*Pn	Pn	08 07 39.3	-3.6
SVW2	**Sparrevohn**	**7.88**	**49**	*e*Pn	Pn	08 07 47.6	-0.1
OHAK	**Old Harbor**	**7.99**	**78**	*e*Pn	Pn	08 07 49.9	+0.8
ANM	**Nome**	**8.25**	**7**	*e*Pn	Pn	08 07 52.8	0.0
KDAK	**Kodiak Island**	**8.38**	**74**	*e*Pn	Pn	08 07 55.9	+1.3
KDAK	**Kodiak Island**	**8.38**	**74**	*i* P	Pn	08 07 55.9	+1.3
TT01	**Tatalina**	**8.80**	**38**	*e*Pn	Pn	08 08 00.3	0.0
TT01				*e*Pn	Pn	08 08 00.3	0.0
RDWB	**Redoubt West**	**8.82**	**56**	*e*Pn	Pn	08 08 01.4	+0.7
RSO	**Redoubt South**	**8.85**	**57**	*e*Pn	Pn	08 08 00.8	-0.3
RDJH	**Redoubt Jeurge**	**8.87**	**56**	*e*Pn	Pn	08 08 02.0	+0.6
SPWE	**Spurr West**	**9.25**	**52**	*e*Pn	Pn	08 08 08.0	+1.4
CNPM	**China Poot**	**9.32**	**64**	*e*Pn	Pn	08 08 08.6	+1.2
SPU	**Mount Spurr**	**9.44**	**53**	*e*Pn	Pn	08 08 08.5	-0.6
BRLK	**Bradley Lake**	**9.54**	**63**	*e*Pn	Pn	08 08 09.3	-1.2
SUA	**Susitna One**	**10.13**	**53**	*e*Pn	Pn	08 08 17.4	-1.2
SEW	**Seward**	**10.32**	**62**	*e*Pn	Pn	08 08 20.1	-1.0
RC01	**Rabbit Creek A**	**10.46**	**56**	*e*Pn	Pn	08 08 22.2	-0.7
CAST	**Castle Rocks**	**10.52**	**42**	*e*Pn	Pn	08 08 22.8	-1.0
PMR	**Palmer**	**10.90**	**54**	*e*Pn	Pn	08 08 29.7	+0.8
KTH	**Kantishna Hill**	**11.03**	**43**	*e*Pn	Pn	08 08 30.6	-0.2
GHO	**Glory Hole Cre**	**11.05**	**53**	*e*Pn	Pn	08 08 29.3	-1.8
KNK	**Knik Glacier**	**11.14**	**55**	*e*Pn	Pn	08 08 33.8	+1.4
TRF	**Thorofare Moun**	**11.21**	**44**	*e*Pn	Pn	08 08 33.7	+0.2
BPAW	**Bear Paw Mtn.**	**11.31**	**40**	*e*Pn	Pn	08 08 33.8	-0.9
SML	**Sawmill**	**11.33**	**54**	*e*Pn	Pn	08 08 34.0	-0.9
RND	**Reindeer**	**11.76**	**46**	*e*Pn	Pn	08 08 40.5	-0.3
SCM	**Sheep Creek Mo**	**11.79**	**54**	*e*Pn	Pn	08 08 41.8	+0.6
MCK	**McKinley**	**11.88**	**44**	*e*Pn	Pn	08 08 43.1	+0.6
RDOG	**Red Dog Mine**	**11.88**	**9**	*e*Pn	Pn	08 08 41.5	-1.0
BWN	**Browne**	**11.90**	**42**	*e*Pn	Pn	08 08 41.3	-1.5
MLY	**Manley**	**11.95**	**37**	*e*Pn	Pn	08 08 43.5	0.0
DHY	**Denali Highway**	**12.21**	**49**	*e*Pn	Pn	08 08 48.6	+1.5
EYAK	**Cordova Ski Ar**	**12.22**	**61**	*e*Pn	Pn	08 08 44.6	-2.4
DIV	**Divide**	**12.32**	**58**	*e*Pn	Pn	08 08 48.5	0.0
WRH	**Wood River Hil**	**12.57**	**42**	*e*Pn	Pn	08 08 49.4	-2.5
TCOL	**CIGO, UAF Yank**	**12.87**	**41**	P	Pn	08 08 57.0	+1.1
	baz=238						
COLA	**College**	**12.87**	**41**	*e*Pn	Pn	08 08 56.2	+0.3
COLA	**College**	**12.87**	**41**	*c i* P	Pn	08 08 58.2	+2.3
HMT	**Hamilton**	**12.91**	**63**	*e*Pn	Pn	08 08 56.7	+0.1
HDA	**Harding Lake**	**12.97**	**43**	P	Pn	08 08 58.3	+1.0
	baz=241						
POKR	**Poker Plat Res**	**13.15**	**40**	P	Pn	08 09 01.5	+1.7
	baz=238,SNR=11						
ILAR	**Eielson Array**	**13.17**	**42**	Pn	Pn	08 09 02.0	+2.0
	0.2nm,0.3s,baz=243,slow=13,SNR=63						
ILAR				LR	LR	08 14 20.5	
	comp=Z,479nm,19.8s,baz=247,slow=39						
ILB	**Eielson Array**	**13.17**	**42**	*e*Pn	Pn	08 09 00.3	+0.2
COLD	**Coldfoot**	**13.58**	**30**	*e*Pn	Pn	08 09 05.2	-0.3
TOLK	**Toolik Lake Re**	**14.76**	**27**	*e*Pn	Pn	08 09 22.7	+1.0
TOLK	**Toolik Lake Re**	**14.76**	**27**	P	Pn	08 09 23.4	+1.7
	baz=223						
BILL	**Biilibino**	**16.60**	**325**	*e*Pn	Pn	08 09 45.5	-0.1
	14nm,1.3s						
BILL	**Biilibino**	**16.60**	**325**	*ce*P	P	08 09 47.5	-0.5
BILL				*e*S	Sn	08 12 50.3	+1.2
BILL				pmax	pmax		
	comp=Z,68nm,2.5s						
SKAG	**Skagway**	**17.39**	**66**	*e*Pn	Pn	08 09 54.0	-1.5
	comp=Z,16nm,0.9s						
WHY	**Whitehorse**	**17.56**	**62**	*e*Pn	Pn	08 09 57.6	-0.2
	comp=Z,41nm,1.4s						
EPYK	**Eagle Plains**	**17.68**	**43**	*e*Pn	Pn	08 09 58.1	-1.0
	comp=Z,60nm,0.8s						
EPYK	**Eagle Plains**	**17.68**	**43**	P	P	08 10 00.2	+0.3
	baz=250,SNR=69						
BESE	**Bessie Mountai**	**17.72**	**69**	*e*Pn	Pn	08 09 57.0	-2.7
	comp=Z,44nm,1.0s						
SIT	**Sitka**	**17.72**	**74**	*e*Pn	Pn	08 09 58.0	-1.6
	comp=Z,52nm,1.1s						
JIS	**Juneau Island**	**18.01**	**70**	*e*Pn	Pn	08 10 01.8	-1.3
	comp=Z,59nm,1.2s						
CRAG	**Craig**	**19.31**	**78**	*e*P	P	08 10 15.3	-2.5
	comp=Z,69nm,1.3s						
WRAK	**Wrangell Islan**	**19.47**	**75**	*e*P	P	08 10 18.3	-1.3
	comp=Z,152nm,1.3s						
INK	**Inuvik**	**19.51**	**39**	P	P	08 10 20.6	+0.7
	comp=Z,1.6nm,0.3s,baz=232,slow=7.3,SNR=21						
INK	**Inuvik**	**19.51**	**39**	*e*P	P	08 10 20.4	+0.5
	comp=Z,21nm,0.9s						
PET	**Petropavlovsk**	**19.57**	**274**	*e*P	P	08 10 17.8	-2.8
PET				*e*S	S	08 13 51.2	-9.3
PET				pmax	pmax		
	comp=Z,100nm,7.3s						
PET				pmax	pmax		
	comp=Z,100nm,7.0s						
PET				MLR	MLR		
	comp=Z,100nm,10.0s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PEA1	**Petropavlovsk-**	**20.06**	**275**	*e*P	P	08 10 25.2	-0.9
PEA0B	**Petropavlovsk-**	**20.06**	**275**	*e*P	P	08 10 25.6	-0.5
	comp=Z,42nm,1.4s						
PETK	**Petropavlovsk-**	**20.06**	**275**	P	P	08 10 25.2	-0.9
	comp=Z,2.5nm,0.7s,baz=80,slow=9.2,SNR=3.5						
PETK				LR	LR	08 19 34.7	
	comp=Z,83nm,18.4s,baz=86,slow=41						
DLBC	**Dease Lake**	**20.25**	**69**	P	Pn	08 10 29.6	-0.5
	comp=Z,14nm,0.8s,baz=287,slow=11,SNR=17						
DLBC				LR	LR	08 18 33.1	
	comp=Z,349nm,19.5s,baz=288,slow=38						
DLBC	**Dease Lake**	**20.25**	**69**	*e*P	P	08 10 26.7	-1.4
	comp=Z,68nm,1.3s						
DIB	**Dawson Inlet,**	**20.45**	**84**	*e*P	P	08 10 29.7	-0.6
	comp=Z,59nm,1.1s						
SEY	**Seymchan**	**20.85**	**305**	P	P	08 10 35.5	+0.9
	comp=Z,20nm,1.2s,baz=70,slow=10,SNR=11						
MA2	**Magadan**	**21.93**	**296**	P	P	08 10 46.2	0.0
	comp=Z,6.1nm,0.7s,baz=79,slow=16,SNR=4.2						
MA2				LR	LR	08 19 09.9	
	comp=Z,65nm,18.6s,baz=116,slow=36						
MA2	**Magadan**	**21.93**	**296**	*e*P	P	08 10 44.7	-1.5
	comp=Z,62nm,1.4s						
MA2	**Magadan**	**21.93**	**296**	*i* P	P	08 10 47.6	+1.4
MA2				pmax	pmax		
	comp=Z,24nm,1.2s						
BBB	**Bella Bella**	**23.29**	**84**	LR	LR	08 19 15.9	
	comp=Z,255nm,18.8s,baz=322,slow=34						
BBB	**Bella Bella**	**23.29**	**84**	*e*P	P	08 11 01.9	+1.4
	comp=Z,64nm,1.3s						
YKA	**Yellowknife Ar**	**27.00**	**55**	P	P	08 11 35.3	+0.9
	comp=Z,6.7nm,0.9s,baz=276,slow=9.9,SNR=35						
YKA				PcP	PcP	08 14 54.8	-0.5
	comp=Z,1.4nm,0.7s,baz=280,slow=2.8,SNR=7.2						
YKA				LR	LR	08 22 47.3	
	comp=Z,36nm,21.1s,baz=278,slow=38						
YKB5	**Yellowknife Ar**	**27.00**	**55**	*e*P	P	08 11 35.4	+0.9
YKB5				*e*PcP	PcP	08 14 54.8	-0.5
LLLB	**Lillooet**	**27.48**	**83**	*e*P	P	08 11 37.8	-1.1
	comp=Z,19nm,1.4s						
A04D	**Lummi Island**	**28.01**	**87**	P	P	08 11 43.5	-0.2
	baz=303						
D03D	**Eldon**	**28.46**	**89**	P	P	08 11 47.3	-0.4
	baz=305						
B05A	**Bryant**	**28.60**	**87**	P	P	08 11 49.6	+0.7
	baz=304						
D04E	**Lakebay**	**28.84**	**89**	P	P	08 11 51.4	+0.4
	baz=306						
E04D	**Cinebar**	**29.32**	**90**	P	P	08 11 55.5	+0.1
	baz=306						
F04D	**Rainier, OR**	**29.36**	**91**	P	P	08 11 56.3	+0.6
	baz=307						
TYV	**Tymovskoe**	**29.36**	**280**	*e*P	P	08 11 59.1	+3.5
TYV				pmax	pmax		
	comp=Z,6.0nm,1.5s						
G03D	**McMinnville, O**	**29.75**	**93**	P	P	08 11 59.2	0.0
	baz=308						
TIXI	**Tiksi**	**29.82**	**325**	*i* P	P	08 11 59.4	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LTY	**Liberty**	**29.97**	**88**	*e*P	P	08 12 00.8	-0.4
	comp=Z,17nm,1.4s						
B08A	**Colville Reser**	**30.08**	**85**	*e*P	P	08 12 03.4	+1.3
	comp=Z,20nm,1.2s						
H04D	**Lebanon**	**30.48**	**94**	P	P	08 12 05.1	-0.5
	baz=309						
H04A	**Detroit Lake**	**30.68**	**93**	*e*P	P	08 12 08.9	+1.4
	comp=Z,24nm,1.0s						
J01E	**Myrtle Point**	**30.69**	**97**	P	P	08 12 07.6	+0.1
	baz=311						
D08A	**Wollman Farm,**	**31.05**	**87**	*e*P	P	08 12 11.7	+1.1
	comp=Z,18nm,1.1s						
HAWA	**Hanford**	**31.11**	**88**	*e*P	P	08 12 12.2	+1.0
	comp=Z,30nm,1.3s						
I04A	**Tendick Farm,**	**31.12**	**94**	P	P	08 12 10.9	-0.4
	baz=310						
K02D	**Willamette Mer**	**31.15**	**97**	P	P	08 12 11.5	-0.1
	baz=312						
F07A	**Phinny Hill Vi**	**31.19**	**89**	*e*P	P	08 12 10.7	-1.1
	comp=Z,14nm,0.8s						
E08A	**Dider Farm, El**	**31.31**	**88**	*e*P	P	08 12 14.4	+1.5
	comp=Z,19nm,1.2s						
YAK	**Yakutsk**	**31.35**	**306**	*e*P	P	08 12 13.6	+0.5
	comp=Z,18nm,0.8s						
YAK	**Yakutsk**	**31.35**	**306**	*e*P	P	08 12 12.7	-0.3
YAK				*e**PP	sP	08 12 21.3	-0.2
YAK				*e*		08 13 16.0	
YAK				*e*PPP	PPP	08 13 28.3	
YAK				*e*		08 15 06.0	
YAK				*e*S	S	08 17 17.7	-1.1
YAK				*e*SS	SnSn	08 19 04.1	+1.8
YAK				*e*		08 22 42.3	
NEW	**Newport**	**31.36**	**83**	*e*P	P	08 12 13.6	+0.2
	comp=Z,12nm,1.0s						
NEW	**Newport**	**31.36**	**83**	P	P	08 12 13.9	+0.5
	baz=304						
I05D	**Terrebonne, OR**	**31.37**	**93**	P	P	08 12 13.5	0.0
	baz=309						
YSS	**Yuzh-Sakhalins**	**31.45**	**274**	*i* P	P	08 12 15.0	+0.9
YSS				pmax	pmax		
	comp=Z,12nm,1.5s						
L02E	**Cave Junction**	**31.54**	**98**	P	P	08 12 15.0	0.0
	baz=312						
J04D	**Umpqua Nationa**	**31.65**	**95**	P	P	08 12 15.8	-0.4
	baz=311						
E09A	**Wood Farm, Sta**	**31.80**	**87**	*e*P	P	08 12 18.7	+1.4
	comp=Z,26nm,1.1s						
PINE	**Pine Mountain**	**31.94**	**93**	*e*P	P	08 12 15.8	-2.9
	comp=Z,20nm,1.3s						
G08A	**Pilot Rock**	**32.09**	**89**	*e*P	P	08 12 18.3	-1.6
	comp=Z,26nm,1.5s						
J05D	**Fort Rock, OR**	**32.10**	**94**	P	P	08 12 21.3	+1.2
	baz=311,SNR=11						
L04D	**Klamath Falls**	**32.22**	**97**	P	P	08 12 20.1	-1.0
	baz=312						
YBH	**Yreka Blue Hor**	**32.32**	**98**	P	P	08 12 22.1	+0.2
	comp=Z,3.6nm,1.0s,baz=348,slow=20,SNR=2.9						
RES	**Resolute Bay**	**32.32**	**28**	*e*P	P	08 12 22.0	+0.5
	comp=Z,8.3nm,1.2s						
RES	**Resolute Bay**	**32.32**	**28**	P	P	08 12 22.3	+0.8
RES				pmax	pmax		
	comp=Z,8.0nm,1.2s						
M02C	**Callahan**	**32.47**	**98**	P	P	08 12 23.5	+0.2
	baz=313						
I07A	**Izee**	**32.55**	**91**	*e*P	P	08 12 25.0	+1.0
	comp=Z,14nm,1.0s						
F10A	**Beach Ranch, E**	**32.64**	**87**	*e*P	P	08 12 26.1	+1.4
	comp=Z,18nm,1.2s						
K05A	**Summer Lake**	**32.66**	**95**	*e*P	P	08 12 26.9	+1.9
	comp=Z,28nm,1.0s						
WALA	**Waterton Lakes**	**32.67**	**80**	*e*P	P	08 12 25.6	+0.6
	comp=Z,23nm,1.5s						
M04C	**Macdoel**	**32.76**	**97**	P	P	08 12 25.8	-0.1
	baz=312						
N02D	**Trinity Center**	**32.84**	**99**	P	P	08 12 26.3	-0.1
	baz=314						
BMO	**Blue Mountains**	**33.28**	**89**	*e*P	P	08 12 31.5	+1.2
	comp=Z,6.4nm,1.2s						
O02D	**Mt. Diablo Mer**	**33.35**	**100**	P	P	08 12 30.6	-0.3
	baz=314						
MOD	**Modoc Plateau**	**33.53**	**95**	*e*P	P	08 12 34.0	+1.4
	comp=Z,20nm,1.2s						
J08A	**Circle Bar Ran**	**33.59**	**92**	*e*P	P	08 12 34.4	+1.4
	comp=Z,14nm,1.1s						
O03E	**Paynes Creek**	**33.80**	**99**	P	P	08 12 34.3	-0.6
	baz=314						
MSO	**Missoula**	**33.94**	**83**	*e*P	P	08 12 37.1	+1.0
	comp=Z,14nm,1.2s						
MSO	**Missoula**	**33.94**	**83**	P	P	08 12 35.9	-0.1
	baz=307						
WVOR	**Wild Horse Val**	**34.10**	**93**	*e*P	P	08 12 38.6	+1.0
	comp=Z,13nm,1.0s						
ORV	**Oroville**	**34.49**	**99**	*e*P	P	08 12 41.5	+0.7
	comp=Z,14nm,1.3s						
ORV	**Oroville**	**34.49**	**99**	P	P	08 12 41.3	+0.6
ORV				pmax	pmax		
	comp=Z,14nm,1.3s						
BEKR	**Beckworth**	**34.90**	**98**	*e*P	P	08 12 45.4	+0.9
	comp=Z,5.6nm,1.1s						
HRY	**Holter Researc**	**35.17**	**82**	*e*P	P	08 12 47.5	+0.7
AFDM	**Forest Hills D**	**35.21**	**100**	*e*P	P	08 12 48.7	+1.7
	comp=Z,16nm,1.4s						
LRM	**Limekiln Ridge**	**35.37**	**83**	*e*P	P	08 12 41.4	-7.2
EGMT	**Eagleton**	**35.53**	**78**	*e*P	P

DUG	Dugway, Tooele	38.85	91	P		P	08 13 18.2	+0.2
	baz=314,SNR=10							
BW06	Boulder Array	38.92	85	P		P	08 13 19.0	+0.3
	baz=311,SNR=6.5							
PDAR	Pinedale Array	38.92	85	P		P	08 13 18.9	+0.1
	comp=Z,1.8nm,0.5s,baz=318,slow=2.9,SNR=15							
ISA	Isabella, Lake	38.96	101	P		P	08 13 19.4	+0.4
	baz=318,SNR=7.0							
MPMC	Manual Prospec	39.20	100	P		P	08 13 22.0	+0.9
	baz=318,SNR=14							
TPNV	Topopah Spring	39.24	97	P		P	08 13 22.5	+1.2
	baz=317,SNR=10							
FURC	Furnace Creek,	39.25	99	P		P	08 13 22.0	+0.8
	baz=317,SNR=12							
LRMC	Laurel Mtn Rad	39.53	100	P		P	08 13 24.3	+0.5
	baz=318							
EDW2	Edwards Air Fo	39.80	101	P		P	08 13 26.7	+0.8
	baz=319							
SHOC	Shoshone, Teco	39.99	99	P		P	08 13 27.8	+0.4
	baz=318,SNR=10							
GSC	Goldstone, Bar	40.14	100	P		P	08 13 29.6	+0.9
	baz=318,SNR=17							
SHPR	Sheep Range	40.16	97	*e*P		P	08 13 29.2	+0.1
	comp=Z,4.9nm,1.0s							
BOD	Bodaibo	40.26	306	*e*P		P	08 13 28.8	-0.6
BOD				pmax		pmax		
	comp=Z,21nm,1.3s							
MSU	Marysvale	40.37	92	*e*P		P	08 13 29.6	-1.3
CCUT	Cedar City	40.40	94	*e*P		P	08 13 31.6	+0.5
	comp=Z,13nm,1.4s							
BFSC	Mount Baldy Ra	40.47	102	P		P	08 13 32.0	+0.5
	baz=319							
P17A	Butcher Ranch,	40.50	90	*e*P		P	08 13 31.7	-0.1
	comp=Z,13nm,1.3s							
FMP	Fort Macarthur	40.52	103	P		P	08 13 32.1	+0.3
	baz=320							
TUQ	Turquoise Moun	40.52	99	P		P	08 13 32.8	+0.8
	baz=318,SNR=7.4							
K22A	Casper	40.67	83	P		P	08 13 32.9	-0.3
	baz=312,SNR=6.0							
CIS	Catalina Islan	40.69	103	P		P	08 13 33.4	+0.2
	baz=320							
HEC	Hector,Ludlow	40.75	100	P		P	08 13 34.3	+0.5
	baz=318,SNR=17							
MJAR	Matsushiro Arr	40.90	264	LR		LR	08 28 59.1	
	comp=Z,33nm,21.4s,baz=350,slow=34							
MAJO	Matsushiro	40.90	264	*i* P		P	08 13 36.9	+1.9
MAJO				pmax		pmax		
	comp=Z,6.0nm,1.1s							
RSSD	Black Hills	41.07	79	*e*P		P	08 13 35.3	-1.3
	comp=Z,13nm,1.1s							
RSSD	Black Hills	41.07	79	P		P	08 13 35.8	-0.7
	baz=311							
GMRC	Granite Mounta	41.15	99	P		P	08 13 36.9	-0.2
	baz=318,SNR=18							
MURC	Murrieta	41.20	102	P		P	08 13 37.3	-0.2
	baz=319							
LDFC	Landfair	41.23	98	*e*P		P	08 13 36.5	-1.3
	comp=Z,28nm,1.2s							
O20A	White River Ci	41.43	87	*e*P		P	08 13 39.6	+0.1
	comp=Z,33nm,1.1s							
O20A	White River Ci	41.43	87	P		P	08 13 39.5	0.0
	baz=314,SNR=19							
BELC	Belle Mtn. Jos	41.55	100	P		P	08 13 40.8	+0.3
	baz=319,SNR=8.9							
ULM	Lac du Bonnet	41.56	67	LR		LR	08 31 24.6	
	comp=Z,238nm,18.4s,baz=319,slow=37							
PFO	Pinyon Flats O	41.59	101	P		P	08 13 40.8	0.0
	comp=Z,7.3nm,1.1s,baz=312,slow=4.6,SNR=6.6							
PFO	Pinyon Flats O	41.59	101	*e*P		P	08 13 39.7	-1.1
	comp=Z,9.4nm,1.0s							
PFO	Pinyon Flats O	41.59	101	P		P	08 13 41.2	+0.4
	baz=319,SNR=11							
109C	Camp Elliot, M	41.79	102	P		P	08 13 42.5	+0.2
	baz=320							
IRM	Iron Mountain	41.90	99	P		P	08 13 44.3	+1.0
	baz=319,SNR=21							
BC3	Big Chuckawall	42.11	100	P		P	08 13 45.1	+0.1
	baz=319							
MONP2	Monument Peak	42.16	102	P		P	08 13 45.7	+0.2
	baz=320							
N23A	Red Feather La	42.18	84	P		P	08 13 44.6	-1.1
	baz=313,SNR=5.4							
PDMCI	Parker Dam,Lak	42.34	98	P		P	08 13 47.0	+0.3
	baz=318							
PV11	David Mesa, Pa	42.36	90	*e*P		P	08 13 47.4	+0.3
	comp=Z,29nm,1.2s							
SWSC	Sam W. Stewart	42.46	101	P		P	08 13 48.1	+0.4
	baz=320							
IKP	In-Ko-Pah, Jac	42.51	102	P		P	08 13 48.7	+0.4
	baz=320							
Y12C	Blythe	42.55	99	P		P	08 13 48.9	+0.5
	baz=319							
AGMN	Agassiz Nation	42.77	69	P		P	08 13 50.5	+0.4
	baz=309							
SMCO	Snowmass	42.80	87	*e*P		P	08 13 50.2	-0.7
	comp=Z,5.9nm,1.3s							
GLA	Glamis	42.91	100	P		P	08 13 51.5	+0.1
	baz=319							
WUAZ	Wupatki	42.97	95	P		P	08 13 51.9	-0.2
	baz=317							
ISCO	Idaho Springs	43.12	85	P		P	08 13 53.5	+0.1
	baz=314							
NRIK	Noril'sk	43.33	330	P		P	08 13 53.8	-0.5
NRIK				LR		LR	08 33 32.3	
	comp=Z,3.0nm,0.8s,baz=68,slow=6.2,SNR=10							
MVCO	Mesa Verde	43.34	90	*e*P		P	08 13 54.7	-0.4
	comp=Z,12nm,1.0s							
MVCO	Mesa Verde	43.34	90	P		P	08 13 55.1	-0.1
	baz=316,SNR=9.2							
S22A	4UR Ranch, Cre	43.89	88	P		P	08 14 00.1	+0.5
	baz=316,SNR=9.6							
SDCO	Great Sand Dun	44.62	87	P		P	08 14 05.7	+0.2
	baz=316,SNR=15							
214A	Organ Pipe Nat	44.84	99	P		P	08 14 07.7	+0.7
	baz=320,SNR=7.0							
KBS	Kingsbay	44.90	0	*ce*P		P	08 14 07.8	+1.0
KBS				pmax		pmax		
	comp=Z,134nm,1.7s							
FRB	Frobisher Bay	45.16	38	P		P	08 14 08.4	-0.7
	comp=Z,8.8nm,0.9s,baz=314,slow=6.5,SNR=8.1							
KSCO	Kaye Shedlock'	45.32	84	P		P	08 14 11.1	+0.3
	baz=315							
ECSD	EROS Data Cent	45.35	75	P		P	08 14 10.5	-0.4
	baz=312							
SPITS	Spitsbergen Ar	45.63	359	P		P	08 14 11.3	-1.3
	comp=Z,9.6nm,0.9s,baz=47,slow=5.0,SNR=6.8							
DAG	Danmarks Havn	45.63	10	*i* P		P	08 14 12.2	-0.4
DAG				pmax		pmax		
	comp=Z,8.0nm,0.7s							
DAG	Danmarks Havn	45.63	10	*i* P		P	08 14 12.2	-0.4
	comp=Z,12nm,0.7s							
T25A	Trinidad	45.66	87	P		P	08 14 13.7	0.0
	baz=316							
TUC	Tucson	45.69	97	*e*P		P	08 14 14.8	+1.0
	comp=Z,23nm,1.4s							
TUC	Tucson	45.69	97	P		P	08 14 14.2	+0.4
	baz=320							
KSRS	Korea Array	45.95	274	P		P	08 14 16.2	+0.6
	comp=Z,2.3nm,0.9s,baz=48,slow=8.6,SNR=8.1							
KSRS				LR		LR	08 36 25.6	
	comp=Z,20nm,18.0s,baz=70,slow=40							
KS15	Wonju Array Si	45.98	274	*e*P		P	08 14 14.7	-1.2
	comp=Z,22nm,1.5s							
BGNE	Belgrade	46.10	78	*e*P		P	08 14 16.4	-0.5
	comp=Z,41nm,1.4s							
BGNE	Belgrade	46.10	78	P		P	08 14 16.4	-0.5
	baz=314							
TASM	ASL Pad, Albuq	46.12	91	P		P	08 14 17.2	0.0
	baz=318,SNR=8.5							
TASM	ASL Pad, Albuq	46.12	91	P		P	08 14 17.3	0.0
	baz=318,SNR=8.8							
ANMO	Albuquerque	46.12	91	P		P	08 14 16.8	-0.4
	comp=Z,2.7nm,0.9s,baz=328,slow=9.1,SNR=9.2							
ANMO	Albuquerque	46.12	91	*e*P		P	08 14 16.7	-0.5
	comp=Z,8.8nm,1.1s							
ANMO	Albuquerque	46.12	91	*ce*P		P	08 14 17.3	+0.1
ANMO				pmax		pmax		
	comp=Z,13nm,1.7s							
ANMO	Albuquerque	46.12	91	P		P	08 14 17.3	+0.1
	baz=318							
F37A	Hinrichs Farm,	46.12	70	P		P	08 14 16.5	-0.4
	baz=312							
F38A	Pierce - Schro	46.36	69	P		P	08 14 18.5	-0.3
	baz=312,SNR=6.2							
BNM	Barren Site	46.61	92	*e*P		P	08 14 19.6	-1.6
SUMG	Summit	46.62	19	*e*P		P	08 14 22.2	+1.3
	comp=Z,37nm,1.1s							
SUMG	Summit	46.62	19	*i* P		P	08 14 21.6	+0.6
SUMG				pmax		pmax		
	comp=Z,110nm,1.2s							
SUMG	Summit	46.62	19	*i* P		P	08 14 21.6	+0.6
	comp=Z,112nm,1.2s							
CBKS	Cedar Bluff	47.05	82	*e*P		P	08 14 21.6	-2.7
	comp=Z,15nm,1.2s							
CBKS	Cedar Bluff	47.05	82	P		P	08 14 23.7	-0.7
	baz=315							
G39A	Holcombe	47.18	69	P		P	08 14 23.9	-1.2
	baz=313							
121A	Cookes Peak, D	47.18	94	P		P	08 14 26.4	+0.9
	baz=319,SNR=8.0							
F40A	Park Falls	47.29	68	P		P	08 14 25.3	-0.8
	baz=312							
G40A	Rib Lake	47.69	69	P		P	08 14 28.9	-0.4
	baz=313							
F41A	Three Lakes	47.94	68	P		P	08 14 30.6	-0.5
	baz=313							
E43A	Lone Tree Farm	48.58	66	P		P	08 14 35.3	-0.7
	baz=313							
TLY	Talaya	48.76	304	*e*P		P	08 14 38.9	+1.5
TLY				pmax		pmax		
	comp=Z,46nm,1.4s							
TLY				MLR		MLR		
	comp=Z,267nm,13.0s							
TLY	Talaya	48.76	304	P		P	08 14 39.4	+2.1
	SNR=8.2							
AMTX	Amarillo	48.82	87	*e*P		P	08 14 36.0	-2.2
	comp=Z,22nm,1.4s							
AMTX	Amarillo	48.82	87	P		P	08 14 37.6	-0.5
	baz=318							
MSTX	Muleshoe	48.89	89	*e*P		P	08 14 37.3	-1.4
	comp=Z,17nm,1.2s							
MSTX	Muleshoe	48.89	89	P		P	08 14 37.9	-0.8
	baz=318							
MNTX	Corudas Mount	49.14	93	*e*P		P	08 14 39.8	-0.8
	comp=Z,26nm,1.2s							
MNTX	Cornudas Mount	49.14	93	P		P	08 14 41.1	+0.6
	baz=320,SNR=26							
JFWS	Jewell Farm	49.29	71	P		P	08 14 40.4	-1.1
	baz=314							
J42A	Columbus	49.60	70	P		P	08 14 43.4	-0.5
	baz=314							
ULN	Ulaanbaatar	49.74	298	*e*P		P	08 14 43.9	-1.2
	comp=Z,15nm,1.2s							
ULN	Ulaanbaatar	49.74	298	*ce*P		P	08 14 45.2	+0.1
ULN				pmax		pmax		
	comp=Z,21nm,1.7s							
ULN	Ulaanbaatar	49.74	298	P		P	08 14 46.5	+1.4
	SNR=7.0							
ZAK	Zakamensk	49.81	303	*e*P		P	08 14 46.3	+0.8
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.5s							
D47A	Chapleau	50.06	63	P		P	08 14 46.5	-0.8
	baz=314							
SONA0	Songino Array	50.09	299	*e*P		P	08 14 49.0	+1.3
SONA0				*e*PcP		PcP	08 16 07.9	+0.8
SONM	Songino Array	50.09	299	P		P	08 14 49.0	+1.3
	comp=Z,5.7nm,0.9s,baz=44,slow=7.8,SNR=21							
SONM				PcP		PcP	08 16 07.9	+0.8
	comp=Z,0.8nm,0.3s,baz=32,slow=3.6,SNR=6.0							
SONM				LR		LR	08 37 41.9	
	comp=Z,138nm,18.0s,baz=58,slow=38							
N41A	Harden Midland	50.52	74	*e*P		P	08 14 49.4	-1.5
	comp=Z,13nm,1.1s							
N41A	Harden Midland	50.52	74	P		P	08 14 48.9	-2.0
	baz=316							
WMOK	Wichita Mounta	50.53	85	P		P	08 14 50.0	-1.1
	baz=318,SNR=7.4							
D48A	Paudash Townsh	50.61	62	P		P	08 14 51.4	-0.1
	baz=314							
D49A	Beulah Townshi	50.76	61	P		P	08 14 52.5	-0.1
	baz=314							
MATQ	Matagami	50.80	57	P		P	08 14 52.5	-0.4
	baz=314,SNR=8.2							
E48A	Lockeyer	50.92	63	P		P	08 14 53.4	-0.4
	baz=314							
SCO	Scoresbysund	51.05	14	*i* P		P	08 14 55.7	+1.2
SCO				pmax		pmax		
	comp=Z,33nm,1.1s							
SCO	Scoresbysund	51.05	14	*i* P		P	08 14 55.7	+1.2
	comp=Z,33nm,1.1s							
TUL1	Leonard	51.32	81	*e*P		P	08 14 54.8	-2.1
	comp=Z,5.3nm,0.9s							
HDIL	Hopedale	51.46	73	*e*P		P	08 14 56.4	-1.6
	comp=Z,8.0nm,0.8s							
HDIL	Hopedale	51.46	73	P		P	08 14 57.4	-0.5
	baz=316							
F49A	Sandfield	51.49	63	P		P	08 14 57.8	-0.3
	baz=315							
LSQQ	Lebel-sur-Quev	51.60	57	P		P	08 14 58.5	-0.4
	baz=315							
ABTX	Abilene, Hawle	51.63	87	*e*P		P	08 14 57.9	-1.5
	comp=Z,24nm,1.1s							
ABTX	Abilene, Hawle	51.63	87	P		P	08 14 58.6	-0.8
	baz=319,SNR=6.3							
SCHQ	Schefferville	51.89	46	LR		LR	08 36 54.6	
	comp=Z,104nm,20.9s,baz=343,slow=36							
TX31	Lajitas Ar. Si	51.90	93	*e*P		P	08 15 00.6	-0.9
	comp=Z,23nm,1.1s							
LTX	Lajitas	51.90	93	*e*P		P	08 15 01.4	-0.1
TXAR	Lajitas Array	51.90	93	P		P	08 15 01.4	0.0
	comp=Z,9.0nm,0.9s,baz=299,slow=5.2,SNR=77							
TXAR				LR		LR	08 35 24.0	
	comp=Z,105nm,19.7s,baz=0.0,slow=34							
N44A	Piper City	51.90	72	P		P	08 15 00.2	-1.0
	baz=316							
P43A	Skaggs, Pawnee	52.00	74	P		P	08 15 01.5	-0.5
	baz=316							
VLDQ	Val d'Or	52.05	58	*e*P		P	08 15 00.3	-1.9
	comp=Z,16nm,1.0s							
HHAR	Hobbs	52.06	80	*e*P		P	08 15 00.1	-2.4
	comp=Z,7.4nm,1.2s							
CHGQ	Chibougamau	52.19	55	P		P	08 15 02.6	-0.7
	baz=315,SNR=8.9							
E51A	G1948 Merrick	52.19	61	P		P	08 15 02.9	-0.5
	baz=315							
D52A	ZEK Kipawa Sen	52.40	60	P		P	08 15 04.2	-0.7
	baz=316							
HHC	Hu-ho-hao-te	52.40	289	*e*P		P	08 15 05.4	+0.3
HHC				pmax		pmax		
	comp=Z,32nm,1.1s							
HHC				pmax		pmax		
	comp=Z,130nm,5.8s							
F51A	Arnstein	52.42	62	P		P	08 15 04.3	-0.7
	baz=316							
X37A	Clayton	52.52	82	*e*P		P	08 15 04.0	-2.0
	comp=Z,11nm,1.1s							
ANGG	Ammassalik, Gr	52.57	24	*e*P		P	08 15 05.6	-0.2
	comp=Z,22nm,0.9s							
U40A	Yellville	52.60	79	P		P	08 15 05.8	-0.7
	baz=318							
D53A	Lac Vacive, Po	52.66	59	P		P	08 15 06.6	-0.3
	baz=316,SNR=5.5							
KLBO	Killbear Provi	52.68	62	P		P	08 15 06.7	-0.2
	baz=316							
BMRO	Meriville Lake	52.73	64	P		P	08 15 07.0	-0.3
	baz=316							
SFIN	Lafayette	52.75	71	*e*P		P	08 15 06.0	-1.6
	comp=Z,13nm,1.3s							
SFIN	Lafayette	52.75	71	P		P	08 15 06.9	-0.7
	baz=316							
E52A	Mattawa	52.77	61	P		P	08 15 07.1	-0.6
	baz=316							
F52A	Sundridge	52.80	61	P		P	08 15 07.2	-0.7
	baz=316							
W39A	Magazine	52.95	81	P		P	08 15 08.4	-0.6
	baz=318							
BUKO	Buck Lake	53.02	62	P		P	08 15 09.0	-0.5
	baz=316,SNR=5.7							
D54A	Lac Fusel, La	53.11	59	P		P	08 15 09.7	-0.5
	baz=316,SNR=5.8							
JCT	Junction City	53.16	89	*e*P		P	08 15 09.9	-0.9
	comp=Z,27nm,1.1s							
JCT	Junction City	53.16	89	P		P	08 15 10.0	-0.8
	baz=320,SNR=14							
E53A	Dumoine, Ponti	53.19	60	P		P	08 15 10.4	-0.3
	baz=316							
Q45A	Warren Harvey,	53.27	73	P		P	08 15 10.1	-1.3
	baz=317							
WHTX	Lake Whitney,	53.32	86	P		P	08 15 11.9	0.0
	baz=319							
O47A	Sheridan	53.34	71	P		P	08 15 11.8	-0.1
	baz=317							
H52A	Wyevale	53.35	63	P		P	08 15 11.4	-0.5
	baz=316							
E54A	Lac Daplat, Po	53.38	60	P		P	08 15 11.6	-0.4
	baz=316,SNR=7.8							
MIAR	Mount Ida	53.54	81	*e*P		P	08 15 11.8	-1.7
	comp=Z,18nm,1.5s							
MIAR	Mount Ida	53.54	81	P		P	08 15 12.2	-1.3
	baz=318							
G53A	Haliburton	53.63	62	P		P	08 15 13.7	-0.3
	baz=316,SNR=6.5							
SADO	Sadowa	53.63	62	P		P	08 15 13.9	0.0
	comp=Z,2.5nm,0.5s,baz=283,slow=3.9,SNR=3.2							
SADO	Sadowa	53.63	62	*e*P		P	08 15 13.9	0.0
	comp=Z,12nm,1.2s							
R45A	Skylar, Fairfi	53.64	74	P		P	08 15 13.6	-0.5
	baz=317							
KEV	Kevo	53.67	354	*e*P		P	08 15 14.1	+0.3
	comp=Z,30nm,1.2s							
W41B	Gary Mavity, V	53.80	79	P		P	08 15 14.8	-0.5
	baz=318							
PEMO	Pembroke	53.89	60	P		P	08 15 15.0	-0.9
	baz=317							
ARCES	ARCESS Array B	53.97	354	P		P	08 15 16.5	+0.4
	comp=Z,8.1nm,0.9s,baz=15,slow=10.0,SNR=10							
ARCES				LR		LR	08 39 22.5	
	comp=Z,122nm,19.4s,baz=26,slow=37							
BANO	Bancroft	54.04	61	P		P	08 15 16.6	-0.4
	baz=317							
PLIO	Pelee Island,	54.07	67	P		P	08 15 16.6	-0.6
	baz=317							
Q47A	Bedord North L	54.16	72	P		P	08 15 17.1	-0.8
	baz=317							
435B	Jarrell	54.16	87	P		P	08 15 17.4	-0.6
	baz=320							
F55A	Otter Lake	54.21	60	P		P	08 15 16.7	-1.5
	baz=317							
P48A	Milroy	54.30	71	P		P	08 15 17.4	-1.5
	baz=317							
PLVO	Plevna	54.44	61	P		P	08 15 19.5	-0.4
	baz=317							
G55A	Calabogie	54.46	60	P		P	08 15 19.3	-0.7
	baz=317							
N50A	Nevada	54.52	68	P		P	08 15 20.3	-0.3
	baz=317							
DELO	Deloro Mine	54.56	61	P		P	08 15 20.4	-0.3
	baz=317							
WLVO	Wesleyville	54.61	62	P		P	08 15 21.2	+0.1
	baz=317							
H55A	Tweed	54.75	61	P		P	08 15 21.7	-0.3
	baz=317,SNR=5.4							
I55A	Frankford	54.75	62	P		P	08 15 22.0	-0.1
	baz=317							
LATQ	La Tuque	54.75	56	P		P	08 15 21.4	-0.7
	baz=317							
LVZ	Lovozero	54.88	350	*e*P		P	08 15 23.2	+0.5
	comp=Z,35nm,1.1s							
LVZ	Lovozero	54.88	350	*ce*P		P	08 15 23.5	+0.7
LVZ				pmax		pmax		
	comp=Z,48nm,1.7s							
ORIO	Orleans, Innes	54.89	59	P		P	08 15 22.3	-0.8
	baz=317							
Z41A	Richland Creek	54.93	81	P		P	08 15 23.4	-0.1
	baz=319							
NJ2	Nanjing	54.96	276	*e*P		P	08 15 23.0	-0.8
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
NVS	Novosibirsk	54.99	318	*e*P		P	08 15 24.1	+0.4
NVS				pmax		pmax		
	comp=Z,20nm,1.7s							
NVS				pmax		pmax		
	comp=E,12nm,1.3s							
833A	Chaparral WMA,	55.05	91	P		P	08 15 24.5	0.0
	baz=321							
ZAA1	Zalesovo Array	55.08	317	*e*P		P	08 15 24.4	+0.1
ZAA1				*e*PcP		PcP	08 16 25.8	+0.2
ZALV	Zalesovo Beam	55.08	317	P		P	08 15 24.4	0.0
	comp=E,0.9nm,0.3s,baz=32,slow=5.8,SNR=2.4							
ZALV				PcP		PcP	08 16 25.8	+0.2
	comp=E,2.8nm,0.5s,baz=90,slow=1.4,SNR=3.2							
ZALV				LR		LR	08 40 26.2	
	comp=E,88nm,18.7s,baz=68,slow=38							
MEDO	Medina	55.14	63	P		P	08 15 24.1	-0.9
	baz=317							
H56A	Elgin	55.16	60	P		P	08 15 24.9	-0.2
	baz=318,SNR=5.4							
PECO	Prince Edward	55.29	61	P		P	08 15 25.1	-0.9
	baz=318							
APA	Apatity	55.32	350⇑	*i* P		P	08 15 24.5	-1.4
APA				*i*			08 16 21.0	
APA				pmax		pmax		
	comp=Z,6.0nm,0.8s							
J55A	Hilton	55.38	63	P		P	08 15 26.2	-0.4
	baz=318							
K54A	Basiliko Farm,	55.43	64	P		P	08 15 26.7	-0.4
	baz=318							
WVT	Waverly	55.49	75	P		P	08 15 26.9	-0.6
	baz=318							
V46A	Holladay	55.58	76	P		P	08 15 27.2	-1.0
	baz=319							
Q51A	Peebles	55.71	70	P		P	08 15 27.7	-1.4
	baz=318							
R50A	Paris	55.75	71	P		P	08 15 28.0	-1.4
	baz=318							
M54A	Oil Creek Stat	55.76	65	P		P	08 15 28.3	-1.1
	baz=318							
HKT	Hockley	55.77	86	*i* P		P	08 15 29.2	-0.4
HKT				pmax		pmax		
	comp=Z,7.0nm,1.3s							
OXF	Oxford	55.84	78	P		P	08 15 28.2	-1.9
	baz=319							
V47A	Nunnelly	55.88	75	P		P	08 15 29.3	-1.1
	baz=319							
U48A	Cassie Pea, Po	55.89	74	P		P	08 15 29.0	-1.4
	baz=318							
O53A	New Philadelph	55.90	67	P		P	08 15 29.4	-1.1
	baz=318							
GUMO	Guam	55.94	240	LR		LR	08 36 11.4	
	comp=Z,42nm,19.2s,baz=74,slow=32							
LONY	Lake Ozonia	55.95	59	P		P	08 15 29.2	-1.5
	baz=318							
T49A	Edmonton	55.98	73	P		P	08 15 30.5	-0.7
	baz=318							
N54A	Moraine State	56.00	66	P		P	08 15 30.0	-1.2
	baz=318							
R51A	Hillsboro	56.12	71	P		P	08 15 30.9	-1.1
	baz=318							
M55A	Ridgway	56.24	65	P		P	08 15 32.1	-0.8
	baz=318							
X46A	Booneville	56.26	77	P		P	08 15 31.7	-1.4
	baz=319							
T50A	Nancy	56.42	72	P		P	08 15 34.2	0.0
	baz=319							
M56A	Emporium	56.52	64	P		P	08 15 34.4	-0.5
	baz=318							
N55A	Marion Center	56.64	65	P		P	08 15 35.4	-0.4
	baz=318							
N56A	West Decatur	56.89	65	P		P	08 15 36.4	-1.2
	baz=318							
T51A	Gray	56.93	72	P		P	08 15 36.2	-1.7
	baz=319							
Q54A	Coxs Mills	57.04	68	P		P	08 15 37.7	-0.9
	baz=319							
BINY	Binghamton	57.08	62	P		P	08 15 38.1	-0.7
	baz=319,SNR=5.8							
V50A	Pikev

Q57A	Strasburg	58.24	66	P	P	08 15 46.2	-0.9
	baz=319						
O59A	Robesonia	58.40	64	P	P	08 15 47.1	-1.0
	baz=319						
WHN	Wuhan	58.59	279	P	P	08 15 50.6	+1.0
149A	Jones	58.72	77	P	P	08 15 49.5	-0.9
	baz=320						
X52A	Dahlonega	58.74	74	P	P	08 15 49.7	-1.0
	baz=320						
O60A	Telford	58.78	63	P	P	08 15 50.5	-0.3
	baz=320						
U55A	TA2, Sparta	58.80	70	P	P	08 15 50.8	-0.3
	baz=320						
P59A	Jarrettsville	58.81	65	P	P	08 15 50.2	-0.7
	baz=320						
XAN	Xi'an	58.86	286	P	P	08 15 51.8	+0.3
XAN				pP	pP	08 15 56.4	-1.4
XAN				pmax	pmax		
	comp=Z,13nm,1.5s						
XAN				LR	LR		
	comp=Z,110nm,18.4s						
XAN				LR	LR		
	comp=Z,130nm,19.5s						
PAL	Palisades	59.00	62	P	P	08 15 51.8	-0.4
	baz=320						
U56A	King	59.27	70	P	P	08 15 54.2	0.0
	baz=320						
T57A	Hurt	59.36	68	P	P	08 15 54.5	-0.4
	baz=320						
PRGR	Permogore	59.40	342	*eP*	P	08 15 52.7	-2.0
PRGR				pmax	pmax		
	comp=Z,23nm,1.0s						
GTA	Gaotai	59.49	296	*eP*	P	08 15 56.6	+0.7
GTA				pP	pP	08 16 01.0	-1.2
GTA				sP	sP	08 16 03.6	-1.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,52nm,5.6s						
GTA				LR	LR		
	comp=Z,140nm,16.5s						
GTA				LR	LR		
	comp=Z,160nm,15.9s						
V56A	Mocksville	59.62	70	P	P	08 15 56.1	-0.6
	baz=320						
U57A	Blanch	59.75	69	P	P	08 15 56.7	-0.8
	baz=320						
KURK	Kurchatov	59.97	318	*eP*	P	08 15 59.3	+0.4
	comp=Z,56nm,1.5s						
KURK	Kurchatov	59.97	318	*ceP*	P	08 15 59.6	+0.8
KURK				pmax	pmax		
	comp=Z,44nm,1.7s						
KURK	Kurchatov	59.97	318	P	P	08 16 00.2	+1.4
	SNR=12						
LZH	Lanzhou	59.98	291	*eP*	P	08 16 00.7	+1.4
LZH				pP	sP	08 16 13.0	+5.0
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
LZH				pmax	pmax		
	comp=Z,160nm,5.4s						
LZH				LR	LR		
	comp=Z,440nm,16.2s						
LZH				LR	LR		
	comp=Z,560nm,17.3s						
X56A	White Oak	60.35	72	P	P	08 16 01.1	-0.6
	baz=320						
SVE	Sverdlovsk	60.54	332	*eP*	P	08 16 04.2	+1.6
SVE				pmax	pmax		
	comp=Z,47nm,1.2s						
BRVK	Borovoye	60.95	324	*eP*	P	08 16 06.2	+0.7
	comp=Z,40nm,1.1s						
BRVK	Borovoye	60.95	324	*c iP*	P	08 16 05.8	+0.3
BRVK				pmax	pmax		
	comp=Z,19nm,1.0s						
BRVK	Borovoye	60.95	324	P	P	08 16 06.9	+1.4
	SNR=22						
KLMR	Klimovskoe	61.10	345	*eP*	P	08 16 05.4	-0.9
KLMR				pmax	pmax		
	comp=Z,28nm,1.3s						
ARU	Arti	61.43	333	*eP*	P	08 16 09.2	+0.5
	comp=Z,21nm,0.8s						
ARU	Arti	61.43	333	*d iP*	P	08 16 09.2	+0.5
ARU				S	S	08 24 28.9	+0.7
ARU				SS	SS	08 28 24.1	-3.9
ARU				pmax	pmax		
	comp=Z,39nm,1.6s						
MK31	Makanchi Array	61.70	313	*eP*	P	08 16 08.8	-1.9
	comp=Z,10nm,1.3s						
MK32	Makanchi Array	61.70	313	*eP*	P	08 16 10.8	0.0
MKAR	Makanchi Array	61.70	313	P	P	08 16 10.8	0.0
	comp=Z,2.9nm,0.8s,baz=66,slow=3.0,SNR=11						
MKAR				LR	LR	08 45 22.8	
	comp=Z,80nm,18.2s,baz=23,slow=38						
MKAR	Makanchi Array	61.70	313	*i P*	P	08 16 12.8	+2.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	Urumqi	61.78	307	*eP*	P	08 16 13.2	+1.8
WMQ				pP	sP	08 16 24.1	+4.0
WMQ				pmax	pmax		
	comp=Z,29nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.8s						
WMQ				LR	LR		
	comp=Z,620nm,21.3s						
FIA1	FINESS Array S	61.97	353	*eP*	P	08 16 13.0	+0.8
	comp=Z,38nm,1.4s						
FIA0	FINESS Array S	61.97	353	*eP*	P	08 16 12.4	+0.2
FINES	FINESS Array B	61.97	353	P	P	08 16 12.5	+0.2
	comp=Z,7.4nm,0.9s,baz=20,slow=6.1,SNR=17						
FINES				LR	LR	08 44 32.4	
	comp=Z,102nm,20.1s,baz=20,slow=38						
NC204	NORSAR Array S	62.63	1	*eP*	P	08 16 17.3	+0.6
	comp=Z,39nm,1.4s						
NB201	NORSAR Array S	62.86	1	*eP*	P	08 16 18.0	-0.3
	comp=Z,33nm,1.1s						
NB2	NORSAR Subarra	62.87	1	P	P	08 16 18.4	0.0
	comp=Z,27nm,1.4s,baz=356,slow=6.5						
NB2	NORSAR Subarra	62.87	1	P	P	08 16 18.4	0.0
	baz=356,slow=6.5						
NB200	NORSAR Array S	62.87	1	*eP*	P	08 16 17.4	-1.0
NOA	NORSAR Array B	62.87	1	P	P	08 16 17.4	-1.0
	comp=Z,5.7nm,1.0s,baz=357,slow=6.5,SNR=10						
NOA				LR	LR	08 46 07.0	
	comp=Z,30nm,18.4s,baz=0.0,slow=38						
CD2	Chengdu	64.04	287	*eP*	P	08 16 30.3	+3.8
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
TLIG	Tlapa	64.06	97	*eP*	P	08 16 26.9	0.0
	comp=Z,23nm,1.0s						
KONO	Kongsberg	64.25	1	*ceP*	P	08 16 28.3	+0.9
KONO				pmax	pmax		
	comp=Z,29nm,1.7s						
VSU	Vasula	64.87	352	*ceP*	P	08 16 32.5	+1.1
VSU				pmax	pmax		
	comp=Z,122nm,1.7s						
VSU	Vasula	64.87	352	*eP*	P	08 16 31.9	+0.5
VSU				IAmb	IAmb	08 16 33.4	
	comp=Z,51nm,1.0s						
SLIT	Slitere, Latvi	66.01	354	*eP*	P	08 16 37.1	-1.7
SLIT				IAmb	IAmb	08 16 43.9	
	comp=Z,117nm,0.6s						
CMIG	Matias Romero	66.47	94	LR	LR	08 44 31.9	
	comp=Z,41nm,19.3s,baz=321,slow=35						
060Z	West Palm Beac	66.92	77	P	P	08 16 44.6	-0.5
	baz=323						
OBN	Obninsk	67.06	345	LR	LR	08 48 32.1	
	comp=Z,24nm,20.5s,baz=348,slow=38						
OBN	Obninsk	67.06	345	*ceP*	P	08 16 46.1	+0.5
OBN				*e*		08 19 13.1	
OBN				pmax	pmax		
	comp=Z,28nm,1.7s						
OBN				MLR	MLR		
	comp=Z,102nm,21.0s						
ABKAR	Akbulak array	67.47	328	*eP*	P	08 16 48.6	+0.3
PBUR	Paburg	67.63	354	*eP*	P	08 16 50.2	+1.1
PBUR				IAmb	IAmb	08 16 54.2	
	comp=Z,50nm,0.4s						
ISAL	Salakas	67.79	352	*eP*	P	08 16 51.0	+0.9
ISAL				IAmb	IAmb	08 16 53.0	
	comp=Z,8.6nm,1.2s						
EKA	Eskdalemuir Ar	67.90	9	P	P	08 16 51.6	+0.7
	comp=Z,6.3nm,0.6s,baz=356,slow=4.9,SNR=17						
IIGN	Ignalina	68.00	351	*eP*	P	08 16 52.3	+0.8
IIGN				IAmb	IAmb	08 16 58.0	
	comp=Z,14nm,1.2s						
PABE	Paberze	68.02	353	*eP*	P	08 16 50.9	-0.7
PABE				IAmb	IAmb	08 16 57.9	
	comp=Z,50nm,1.1s						
AAK	Ala-Archa	68.26	315	*eP*	P	08 16 55.3	+1.7
	comp=Z,32nm,1.2s						
AAK	Ala-Archa	68.26	315	*ceP*	P	08 16 54.6	+1.0
AAK				pmax	pmax		
	comp=Z,43nm,1.7s						
AAK	Ala-Archa	68.26	315	P	P	08 16 55.3	+1.7
	SNR=11						
NRN	Naryn	68.68	314	*eP*	P	08 16 58.2	+1.7
	comp=Z,22nm,1.3s						
NRN	Naryn	68.68	314	P	P	08 16 58.2	+1.7
NRN				pmax	pmax		
	comp=Z,22nm,1.3s						
LPSR	Galich'ya Gora	69.13	343	*eP*	P	08 16 57.6	-1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KKAR	Karatay Array	69.38	318	*eP*	P	08 17 00.7	+0.3
	comp=Z,16nm,0.8s						
VRH	Novokhopyorsk	70.00	341	*eP*	P	08 17 02.7	-1.3
VRH				pmax	pmax		
	comp=Z,20nm,1.5s						
KSH	Kashi	70.31	313	P	P	08 17 10.8	+4.5
KSH				pP	sP	08 17 14.3	-0.8
KSH				sP	pP	08 17 17.0	+4.3
KSH				S	S	08 26 22.0	+4.7
KSH				ScS	ScS	08 27 08.3	+0.4
KSH				pmax	pmax		
	comp=Z,58nm,1.4s						
KSH				pmax	pmax		
	comp=Z,140nm,3.9s						
KSH				LR	LR		
	comp=Z,290nm,8.5s						
KSH				LR	LR		
	comp=Z,210nm,18.0s						
VSR	Storozhevoye	70.43	342	*eP*	P	08 17 06.5	-0.2
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VORD	Divnogorie	70.65	342	*eP*	P	08 17 07.3	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LSA	Lhasa	71.52	296	*eP*	P	08 17 13.4	-0.8
	comp=Z,17nm,0.6s						
AKASG	Malin Array Be	72.31	349	P	P	08 17 17.9	-0.1
	comp=Z,7.9nm,0.6s,baz=15,slow=6.3,SNR=15						
AKASG				LR	LR	08 55 47.7	
	comp=Z,35nm,18.3s,baz=330,slow=41						
KIEV	Kiev	72.32	349	*eP*	P	08 17 17.9	-0.2
	comp=Z,24nm,1.2s						
KIEV	Kiev	72.32	349	*i P*	P	08 17 17.4	-0.7
KIEV				pmax	pmax		
	comp=Z,11nm,1.1s						
CLL	Collm	72.63	359	*eP*	P	08 17 19.0	-0.9
CLL				*i* pP	pP	08 17 23.8	-2.5
CLL	Collm	72.63	359	*eP*	P	08 17 19.0	-0.9
BRG	Berggiesshubel	73.06	359	*eP*	P	08 17 22.6	+0.2
	comp=Z,7.3nm,1.1s						
BRG	Berggiesshubel	73.06	359	*eP*	P	08 17 22.6	+0.2
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DPC	Dobruska-Polom	73.53	357	*eP*	P	08 17 26.6	+1.2
DPC				*e*		08 17 30.6	
DPC	Dobruska-Polom	73.53	357	*eP*	P	08 17 26.6	+1.2
DPC				*epP*	pP	08 17 30.6	-1.2
MORC	Moravsky Berou	74.07	356	*eP*	P	08 17 29.4	+0.9
VRAC	Vranov	74.57	357	*eP*	P	08 17 32.5	+1.1
LANS	Liptovska Anna	74.62	355	*eP*	P	08 17 33.7	+2.0
LANS	Liptovska Anna	74.62	355	*eP*	P	08 17 33.7	+2.0
KOLS	Kolonicke sedl	74.67	353	*eP*	P	08 17 33.3	+1.3
KOLS				pmax	pmax		
	comp=Z,14nm,1.4s						
KOLS	Kolonicke sedl	74.67	353	*eP*	P	08 17 33.3	+1.3
KHC	Kasperske Hory	74.80	359	*eP*	P	08 17 34.0	+1.2
KHC	Kasperske Hory	74.80	359	*eP*	P	08 17 34.0	+1.2
KRUC	Moravsky	74.82	357	*eP*	P	08 17 33.8	+1.0
JAVC	Velka Javorina	74.98	356	*eP*	P	08 17 36.1	+2.3
GEC2	GERESS Array S	75.09	359	*eP*	P	08 17 34.0	-0.5
GERES	GERESS Array B	75.09	359	P	P	08 17 34.0	-0.5
	comp=Z,0.4nm,0.2s,baz=353,slow=4.2,SNR=6.9						
GERES				LR	LR	08 53 16.5	
	comp=Z,41nm,18.3s,baz=24,slow=38						
GERES	GERESS Array B	75.09	359	P	P	08 17 34.0	-0.5
PPT	Papeete	75.28	162	LR	LR	08 43 59.7	
	comp=Z,113nm,19.3s,baz=312,slow=30						
VYHS	Vyhne	75.30	355	*eP*	P	08 17 36.4	+0.8
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VYHS	Vyhne	75.30	355	*eP*	P	08 17 36.4	+0.8
PPT2	Papeete2	75.31	162	*e*LR	LR	08 40 54.5	
	comp=Z,152nm,22.8s						
TRPA	Tarpa	75.45	353	⇑*iP*	P	08 17 38.1	+1.6
MODS	Modra-Piesok	75.48	357	*eP*	P	08 17 37.4	+0.7
MODS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MODS	Modra-Piesok	75.48	357	*eP*	P	08 17 37.4	+0.7
GOF	Gofitskoye	75.62	338	⇑*iP*	P	08 17 38.4	+0.9
GOF				pmax	pmax		
	comp=Z,57nm,0.8s						
ZST	Bratislava	75.67	357	*eP*	P	08 17 37.6	-0.1
ZST	Bratislava	75.67	357	*eP*	P	08 17 37.6	-0.1
BURAR	Bucovina Array	75.76	351	⇑*iP*	P	08 17 39.2	+0.8
BURAR	Bucovina Array	75.76	351	⇑⇑P	P	08 17 39.2	+0.8
BIZ	Bicaz	76.35	350	⇑*iP*	P	08 17 42.8	+1.2
NIL	Nilore	76.46	311	*eP*	P	08 17 42.7	+0.2
	comp=Z,44nm,1.2s						
NIL	Nilore	76.46	311	P	P	08 17 44.0	+1.5
NIL				pmax	pmax		
	comp=Z,44nm,1.2s						
CM31	Chiang Mai Arr	76.62	283	*eP*	P	08 17 42.8	-0.8
	comp=Z,15nm,1.3s						
CMAR	Chiang Mai Arr	76.62	283	P	P	08 17 42.8	-0.8
	comp=Z,1.4nm,0.5s,baz=15,slow=6.1,SNR=11						
CMAR	Chiang Mai Arr	76.62	283	*i P*	P	08 17 44.2	+0.7
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KIV	Kislovodsk	76.75	338	*eP*	P	08 17 44.6	+0.6
KIV				pmax	pmax		
	comp=Z,50nm,1.1s						
KIV				MLR	MLR		
	comp=Z,186nm,18.0s						
DRGR		76.78	353	⇑*iP*	P	08 17 45.0	+0.9
DRGR		76.78	353	⇑⇑P	P	08 17 45.0	+0.9
KBZ	Khabaz	76.92	338	P	P	08 17 46.5	+1.6
	comp=Z,11nm,0.8s,baz=331,slow=4.0,SNR=13						
KBZ				LR	LR	08 55 22.9	
	comp=Z,75nm,18.9s,baz=14,slow=39						
ANN	Anapa	76.94	342	*eP*	P	08 17 42.2	-2.7
ANN				*e**PP	PcP	08 17 57.4	+1.5
ANN				*eS*	S	08 27 24.1	-7.5
ANN				pmax	pmax		
	comp=Z,20nm,1.1s						
OZUR		77.21	350	⇓*iP*	P	08 17 47.3	+0.7
VRI	Vrincioaia	77.35	350	⇓*iP*	P	08 17 49.2	+1.9
VRI	Vrincioaia	77.35	350	⇓P	P	08 17 49.2	+1.9
KBL	Kabul	77.39	315	*eP*	P	08 17 48.0	0.0
NEY	Neytrino	77.42	338	*i P*	P	08 17 49.8	+1.9
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZEI	Tsey	77.60	337	*eP*	P	08 17 47.7	-1.3
ZEI				pmax	pmax		
	comp=Z,17nm,1.1s						
MLR	Muntele Rosu	77.80	350	⇑*iP*	P	08 17 50.8	+0.8
MLR	Muntele Rosu	77.80	350	⇑⇑P	P	08 17 50.9	+0.9
CFR	Carcaliu	77.88	349	⇑*iP*	P	08 17 54.0	+3.8
CFR	Carcaliu	77.88	349	⇑P	P	08 17 54.0	+3.8
AKT	Akhty	77.95	333	*eP*	P	08 17 52.2	+1.4
AKT				*e*		08 18 00.9	
AKT				pmax	pmax		
	comp=Z,38nm,1.1s						
BZS	Buzias	78.02	353	⇓*iP*	P	08 17 51.2	+0.2
BZS	Buzias	78.02	353	⇓P	P	08 17 51.2	+0.2
ARR	Arges	78.04	351	⇑*iP*	P	08 17 52.7	+1.5
GEYT	Alibeck	78.28	325	P	P	08 17 54.1	+1.5
	comp=Z,12nm,0.8s,baz=296,slow=4.8,SNR=17						
TIRR	Tirgusor	78.56	348	⇓*iP*	P	08 17 55.0	+1.0
TIRR	Tirgusor	78.56	348	⇓P	P	08 17 55.0	+1.0
MDVR	Moldovita	78.84	353	⇓*iP*	P	08 17 55.1	-0.5
GNI	Garni	79.92	335	*i P*	P	08 18 00.8	-1.0
GNI				pmax	pmax		
	comp=Z,25nm,1.0s						
DIKM	Dikmen	80.37	343	⇑*iP*	P	08 18 06.0	+2.1
DZM	Mont Dzumac	81.17	204	*e*LR	LR	08 43 32.4	
	comp=Z,160nm,22.0s						
MTE	Manteigas	82.10	15	*eP*	P	08 18 14.7	+1.5
BR101	Keskin Array S	82.51	343	*eP*	P	08 18 16.8	+1.3
BR131	Keskin Array S	82.51	343	*eP*	P	08 18 12.7	-2.8
	comp=Z,8.0nm,1.0s						
BR131	Keskin Array S	82.51	343	P	P	08 18 18.0	+2.5
	SNR=5.4						
BRTR	Keskin Array B	82.51	343	P	P	08 18 16.8	+1.3
	comp=Z,3.6nm,0.8s,baz=35,slow=3.0,SNR=16						
BRTR				LR	LR	08 58 02.7	
	comp=Z,38nm,21.8s,baz=322,slow=38						
PTOM	Tomar	82.73	16	*eP*	P	08 18 18.5	+2.1
PMRV	Marv??o	83.07	15	*eP*	P	08 18 23.6	+5.4
PMTG	Montargil	83.30	16	*eP*	P	08 18 24.5	+5.1
EVO	Evora	83.86	16	*eP*	P	08 18 23.2	+0.9
ROSC	El Rosal	87.92	84	LR	LR	09 04 31.1	
	comp=Z,23nm,18.5s,baz=26,slow=40						
WRAB	Tennant Creek	90.22	233	*ceP*	P	08 18 51.7	-1.5
WRAB				pmax	pmax		
	comp=Z,16nm,1.3s						
WB2	Warramunga Arr	90.23	233	*eP*	P	08 18 52.0	-1.2
	comp=Z,16nm,1.3s						
WR1	Warramunga Arr	90.23	233	*eP*	P	08 18 53.2	-0.1
WRA	Warramunga Arr	90.23	233	P	P	08 18 53.2	-0.1
	comp=Z,136nm,0.3s,baz=32,slow=7.9,SNR=1.4						
AS31	Alice Springs	93.69	231	*eP*	P	08 19 08.8	-0.4
	comp=Z,1.5nm,1.1s						
ASAR	Alice Springs	93.69	231	P	P	08 19 09.0	-0.3
	comp=Z,0.9nm,0.7s,baz=18,slow=3.8,SNR=6.8						
STKA	Stephens Creek	97.88	222	LR	LR	08 58 56.5	
	comp=Z,106nm,21.1s,baz=26,slow=32						
QSPA	South Pole Qui	146.20	180	*e*PKPdf	PKPdf	08 25 29.0	-1.6
BOSA	Boshof	150.69	336	PKPbc	PKiKP	08 25 45.2	-0.2
	comp=Z,3.1nm,0.5s,baz=49,slow=2.5,SNR=9.2						
VNA3	Neumayer Olymp	162.46	156	PKPab	PKPab	08 26 40.1	-0.9
VNA2	Neumayer--Watz	163.20	158	PKPab	PKPab	08 26 47.0	+2.8
	baz=224,slow=2.2						
VNA1	Neumayer--Stat	163.21	156	PKPab	PKPab	08 26 47.6	+3.3
SNAA	Sanae	163.43	163	PKPab	PKPab	08 26 44.8	-0.5

NEIC 10 08:11:59.0±0.0, 56°.79N×167°.18W, h40km, ML3.5(AEIC), After AEIC., Pribilof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	1.72	284	*e*Pn	Pn	08 12 27.0	+0.6
SPIA				*e*Sn	Sn	08 12 48.3	+1.1
WESP	Westdahl Peak	2.69	148	*e*Pn	Pn	08 12 40.3	+0.6
AKRB	Akutan Reef Bi	2.74	166	*e*Pn	Pn	08 12 41.4	+1.0
AKRB				*e*Sn	Sn	08 13 14.6	+2.4
AKUT	Akutan	2.78	163	*e*Pn	Pn	08 12 39.8	-1.1
AKUT				*e*Sn	Sn	08 13 12.6	-0.6
AKSA	Akutan Strait	2.79	162	*e*Pn	Pn	08 12 42.0	+1.0
AKSA				*e*Sn	Sn	08 13 17.2	+3.8
MCIR	Makushin Cirqu	2.85	177	*e*Pn	Pn	08 12 43.2	+1.3
FALS	False Pass	2.87	131	*e*Pn	Pn	08 12 43.6	+1.5
FALS				*e*Sn	Sn	08 13 15.4	0.0
MSW	Makushin Switc	2.89	175	*e*Pn	Pn	08 12 43.5	+1.1
MSW				*e*Sn	Sn	08 13 18.3	+2.4
UNV	Unalaska Valle	2.98	172	*e*Pn	Pn	08 12 47.1	+3.6
UNV				*e*Sn	Sn	08 13 19.0	+1.0
ATKA	Atka Island	6.15	225	*e*Pn	Pn	08 13 28.6	+1.4
ANM	Nome	7.85	6	*e*Pn	Pn	08 13 48.1	-2.3
KDAK	Kodiak Island	7.97	77	*e*Pn	Pn	08 13 53.5	+1.4

*BJI **10** 08:26:00.1±0.0, 10°.29S×165°.16E, h8km, mb4.9/20, mB5.0/17, Ms4.7/6, Ms7 4.5/5*
*ISCJB **10** 08:26:01.5±0.2, 10°.62S±0°.03×165°.26E±0°.05, h31km, mb4.5/53, MS4.0/13, Error ellipse: s-maj=6.5km s-min=4.6km az=166.0*
*NEIC **10** 08:26:03.7±1.9, 10°.59S×165°.28E, h35km, mb4.5/40, Error ellipse: s-maj=18.8km s-min=16.4km az=62.0*
*IDC **10** 08:26:04.4±2.9, 10°.66S×165°.29E, h48km±26km, mb4.0/14, mb1 4.2/16, mb1mx3.9/45, mbtmp4.3/16, ML5.1/2, MS3.9/13, Ms1 3.9/13, ms1mx3.6/26, Error ellipse: s-maj=22.4km s-min=14.7km az=55.0*

ISC 10 08:26:03.2±0.4, 10°.61S±0°.05×165°.29E±0°.06, h31km, n93, σ19 38/89, mb4.5/53, MS4.0/14, 1C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.39	282	*e*P	Pn	08 27 23.0	+1.5
HNR				*e*S	Sn	08 28 20.0	-2.6
HNR	Honiara	5.39	282	P	Pn	08 27 24.0	+2.5
	151nm,0.3s,baz=144,slow=9.3,SNR=24						
HNR				S	Sn	08 28 23.8	+1.3
	81nm,0.3s,baz=195,slow=20,SNR=9.2						
HNR				LR	LR	08 29 33.2	
	comp=Z,2μm,19.6s,baz=118,slow=39						
HNR	Honiara	5.39	282	*e*Pn	Pn	08 27 23.5	+1.9
HNR				*e*Sn	Sn	08 28 23.0	+0.4
MARNC	Mare, Loyalty	11.12	167	*e*Pn	Pn	08 28 41.9	+1.7
DZM	Mont Dzumac	11.45	175	P	Pn	08 28 44.8	+0.1
	5.3nm,0.3s,baz=306,slow=5.5,SNR=56						
DZM				S	Sn	08 30 48.9	-2.7
	1.2nm,0.3s,baz=323,slow=20,SNR=3.5						
DZM				LR	LR	08 32 24.1	
	comp=Z,639nm,21.1s,baz=18,slow=33						
DZM	Mont Dzumac	11.45	175	*e*Pn	Pn	08 28 46.3	+1.6
	19nm,0.3s						
DZM				*e*Sn	Sn	08 30 48.0	-3.6
	5.5nm,0.3s						
DZM				*e*LR	LR	08 31 24.0	
	comp=Z,784nm,23.4s						
DZM	Mont Dzumac	11.45	175	*e*Pn	Pn	08 28 45.7	+1.0
DZM				*e*Sn	Sn	08 30 52.3	+0.6
PINNC	Pines Island,	12.11	170	*e*Pn	Pn	08 28 53.9	+0.3
PINNC				*e*Sn	Sn	08 31 11.7	+4.0
TARA	Tarawa	14.11	33	*e*Pn	Pn	08 29 21.6	+0.5
RABL	Rabaul	14.49	295	*e*Pn	Pn	08 29 26.1	-0.2
PMG	Port Moresby	17.89	272	LR	LR	08 36 43.2	
	comp=Z,581nm,19.7s,baz=112,slow=36						
EIDS	Eidsvold	19.92	221	*e*P	Pn	08 30 34.2	-0.1
	9.4nm,0.9s						
CTA	Charters Tower	20.61	241	P	P	08 30 41.0	+0.9
	3.7nm,0.7s,baz=65,slow=13,SNR=3.2						
CTAO	Charters Tower	20.61	241	*e*P	P	08 30 40.1	0.0
	15nm,1.1s						
COEN	Coen	21.86	259	*e*P	P	08 30 52.2	-1.4
	14nm,1.1s						
ARMA	Armidale	23.45	211	*e*P	P	08 31 10.4	+0.2
	5.6nm,0.8s						
RAO	Raoul Island	24.29	142	*e*P	P	08 31 16.5	-1.5
	324nm,0.9s						
OUZ	Omahuta	25.64	164	*e*P	P	08 31 29.8	-0.2
JAY	Jayapura	25.69	287	P	P	08 31 29.0	-1.9
	13nm,0.9s,baz=142,slow=19,SNR=3.3						
JAY				LR	LR	08 42 52.1	
	comp=Z,307nm,18.9s,baz=43,slow=39						
H11S2	WAKE ISLAND Hy	28.95	3	T	T	09 02 31.2	
	baz=184,slow=76,S

AS31	**Alice Springs**	32.59	242	*e*P	P	08 32 29.9	-2.3
	1.1nm,1.0s						
ASAR	**Alice Springs**	32.59	242	P	P	08 32 30.1	-2.1
	0.9nm,0.6s,baz=63,slow=10,SNR=22						
ASAR				PcP	PcP	08 35 16.9	-1.4
	1.2nm,1.1s,baz=77,slow=2.4,SNR=5.1						
ASAR				LR	LR	08 45 13.7	
	comp=Z,162nm,18.5s,baz=68,slow=35						
LTZ	**Lake Taylor**	32.62	170	*e*P	P	08 32 33.1	+0.9
	5.8nm,0.8s						
OXZ	**Oxford**	33.11	171	*e*P	P	08 32 39.1	+2.7
	11nm,1.1s						
SARN	**Sarigan**	33.30	324	*e*P	P	08 32 39.3	+0.9
	38nm,1.1s						
RPZ	**Rata Peaks**	33.35	172	*e*P	P	08 32 39.2	+0.6
MQZ	**McQueen's Vall**	33.58	170	*e*P	P	08 32 39.9	-0.6
BBOO	**Buckleboo**	34.80	226	*e*P	P	08 32 51.7	+0.4
	8.8nm,1.0s						
FITZ	**Fitzroy Crossi**	39.06	254	*e*P	P	08 33 27.1	-0.6
	1.4nm,0.9s						
PPT2	**Papeete2**	44.24	104	*e*LR	LR	08 46 37.1	
	comp=Z,219nm,22.8s						
PSAD2	**Pilbara Seismi**	44.75	250	*e*P	P	08 34 12.0	-2.2
PSAB2	**Pilbara Seismi**	44.84	250	*e*P	P	08 34 13.0	-1.9
	3.2nm,0.9s						
PSAD3	**Pilbara Seismi**	44.92	250	*e*P	P	08 34 17.8	+2.3
	6.5nm,1.0s						
NJ2	**Nanjing**	61.40	316	*e*P	P	08 36 18.9	+2.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PETK	**Petropavlovsk-**	63.80	355	LR	LR	08 58 50.1	
	comp=Z,58nm,21.3s,baz=174,slow=31						
KLR	**Kul'dur**	66.49	337	P	P	08 36 49.2	-0.5
	2.8nm,0.9s,baz=128,slow=2.7,SNR=6.4						
XAN	**Xi'an**	69.50	312	P	P	08 37 09.0	-0.1
XAN				pP	pP	08 37 19.1	+1.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC	**Hu-ho-hao-te**	71.21	320	*e*P	P	08 37 20.9	+1.4
HHC				pmax	pmax		
	comp=Z,33nm,1.2s						
HHC				pmax	pmax		
	comp=Z,100nm,5.6s						
CMAR	**Chiang Mai Arr**	71.53	294	P	P	08 37 21.9	+0.2
	1.6nm,0.4s,baz=122,slow=4.5,SNR=7.3						
CMAR				LR	LR	09 06 19.1	
	comp=Z,19nm,21.4s,baz=65,slow=34						
CD2	**Chengdu**	71.99	307	*e*P	P	08 37 25.2	+0.9
LZH	**Lanzhou**	74.14	312	*e*P	P	08 37 39.1	+2.0
LZH				pP	pP	08 37 44.9	-0.8
LZH				sP	sP	08 37 46.9	-1.9
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,90nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,16.7s						
LZH				LR	LR		
	comp=E,240nm,16.2s						
LZH				LR	LR		
	comp=Z,360nm,17.3s						
OHAK	**Old Harbor**	75.67	22	*e*P	P	08 37 44.5	-0.7
	16nm,1.1s						
ULN	**Ulaanbaatar**	77.69	324	*e*P	P	08 37 57.6	+0.5
	8.2nm,1.0s						
SVW2	**Sparrevohn**	77.85	18	*e*P	P	08 37 57.0	-0.4
	4.4nm,1.0s						
SONA0	**Songino Array**	78.06	324	*e*P	P	08 37 58.8	-0.3
SONM	**Songino Array**	78.06	324	P	P	08 37 58.8	-0.3
	1.8nm,0.7s,baz=139,slow=6.6,SNR=13						
CNPM	**China Poot**	78.10	21	*e*P	P	08 37 59.4	+0.5
	5.8nm,0.8s						
GTA	**Gaotai**	78.44	314	⇓P	P	08 38 02.4	+1.0
GTA				pP	PcP	08 38 10.6	+0.1
GTA				sP	pwP	08 38 15.1	+0.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,24nm,5.9s						
GTA				LR	LR		
	comp=N,50nm,15.6s						
GTA				LR	LR		
	comp=E,87nm,16.5s						
GTA				LR	LR		
	comp=Z,56nm,15.2s						
BILL	**Bilibino**	78.45	0	*e*P	P	08 38 01.0	+0.3
	10nm,1.1s						
QSPA	**South Pole Qui**	79.39	180	*e*P	P	08 38 07.0	+0.8
	18nm,1.0s						
SHL	**Shillong**	79.92	298	*e*P	P	08 38 09.7	-0.2
	9.7nm,1.0s						
PMR	**Palmer**	80.31	20	*e*P	P	08 38 10.0	-0.9
	3.8nm,1.0s						
KNK	**Knik Glacier**	80.42	21	*e*P	P	08 38 11.5	0.0
	12nm,1.2s						
CAST	**Castle Rocks**	80.68	18	*e*P	P	08 38 12.4	-0.5
	4.9nm,1.0s						
TLY	**Talaya**	81.52	326	*e*P	P	08 38 17.7	+0.1
	4.1nm,1.0s						
RDOG	**Red Dog Mine**	81.69	12	*e*P	P	08 38 19.0	+0.9
	5.0nm,1.0s						
BALM	**Baldy**	82.40	23	*e*P	P	08 38 22.3	+0.2
	3.8nm,0.8s						
HDA	**Harding Lake**	82.98	19	*e*P	P	08 38 24.2	-0.8
	5.6nm,1.0s						
MENT	**Mentasta**	83.09	21	*e*P	P	08 38 25.9	+0.3
	2.3nm,1.0s						
ILAR	**Eielson Array**	83.25	19	P	P	08 38 25.2	-1.1
	1.7nm,0.8s,baz=238,slow=5.4,SNR=17						
ILAR				LR	LR	09 10 27.7	
	comp=Z,67nm,20.2s,baz=260,slow=32						
ILB	**Eielson Array**	83.25	19	*e*P	P	08 38 25.2	-1.1
	3.3nm,1.1s						
EGAK	**Eagle**	85.13	20	*e*P	P	08 38 35.8	-0.1
	3.3nm,1.0s						
TIXI	**Tiksi**	85.58	349	P	P	08 38 36.7	-1.3
	1.3nm,0.3s,baz=121,slow=7.7,SNR=6.2						
TIXI	**Tiksi**	85.58	349	*e*P	P	08 38 37.4	-0.6
	2.9nm,1.1s						
NV01	**Mina Array Sit**	86.09	50	*e*P	P	08 38 41.3	-0.3
NVAR	**Mina Array Bea**	86.09	50	P	P	08 38 41.3	-0.3
	0.5nm,0.9s,baz=215,slow=4.9,SNR=3.7						
NVAR				LR	LR	09 11 29.4	
	comp=Z,89nm,18.9s,baz=236,slow=32						
WMQ	**Urumqi**	88.47	315	*e*P	P	08 38 54.6	+1.8
WMQ				pmax	pmax		
	comp=Z,19nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.3s						
WMQ				LR	LR		
	comp=E,810nm,27.9s						
WMQ				LR	LR		
	comp=Z,310nm,33.1s						
SYO	**Syowa Base**	92.06	197⇑	*e*pP	pP	08 39 14.8	-3.5
MK32	**Makanchi Array**	92.90	317	*e*P	P	08 39 12.1	-1.2
MKAR	**Makanchi Array**	92.90	317	P	P	08 39 12.1	-1.2
	1.5nm,0.7s,baz=94,slow=5.4,SNR=10						
ZALV	**Zalesovo Beam**	92.95	324	P	P	08 39 12.4	-0.8
	0.8nm,0.3s,baz=106,slow=5.3,SNR=4.0						
ZAA1	**Zalesovo Array**	92.95	324	*e*P	P	08 39 12.4	-0.8
PD31	**Pinedale Array**	93.59	47	*e*P	P	08 39 16.1	-0.7
PDAR	**Pinedale Array**	93.59	47	P	P	08 39 16.2	-0.7
	0.1nm,0.3s,baz=198,slow=5.6,SNR=4.1						
PDAR				LR	LR	09 14 38.3	
	comp=Z,45nm,21.2s,baz=286,slow=31						
NRIK	**Noril'sk**	95.56	340	LR	LR	09 19 35.2	
	comp=Z,34nm,21.8s,baz=102,slow=34						
TXAR	**Lajitas Array**	96.02	61	LR	LR	09 16 16.4	
	comp=Z,58nm,19.6s,baz=0.0,slow=31						
LPAZ	**La Paz**	120.78	116	PKP	PKPdf	08 44 53.4	-0.7
	0.7nm,0.8s,baz=180,slow=2.0,SNR=3.5						

*ISCJB **10** 08:44:55.2±0.5, 34°.30N±0°.04×26°.82E±0°.03, h95km±12km, Error ellipse: s-maj=7.6km s-min=4.6km az=166.9*
*ATH **10** 08:44:55.8, 34°.21N×26°.72E, h36km±4km, ML2.9/3, Error ellipse: s-maj=6.8km s-min=3.1km az=146.0*
*THE **10** 08:44:57.7, 34°.21N×26°.77E, h40km±9km, ML2.9/9, Error ellipse: s-maj=9.2km s-min=1.0km az=9.0*
*HLW **10** 08:44:59.8, 33°.88N×26°.96E, h31km±15km, Md4.3, Ml4.0*
*DDA **10** 08:45:29.4, 36°.73N×28°.92E, h7km±3km, ML2.0*
ISC 10 08:44:55.7±1.3,**34°.26N**±0°.05×**26°.82E**±0°.04,**h89**km±16km, **n33**,σ1ˢ**29**/52,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	0.98	330	P	**Pn**	08 45 14.5	-0.6
ZKR				S	**Sn**	08 45 28.1	-1.6
ZKR	**Zakros**	0.98	330	P	**Pn**	08 45 14.7	-0.4
ZKR				AML	AML	08 45 36.1	
	comp=N,768μm,0.6s						
ZKR				AML	AML	08 45 37.4	
	comp=E,1263μm,0.5s						
STIA	**Sitia Lasithi**	1.11	328	P	**Pn**	08 45 16.8	+0.2
STIA				S	**Sn**	08 45 31.3	-1.0
KARP	**Karpathos**	1.31	12	P	**Pn**	08 45 19.8	+0.7
KARP				S	**Sn**	08 45 37.0	+0.3
KARP	**Karpathos**	1.31	12	P	**Pn**	08 45 20.5	+1.4
KARP				S	**Sn**	08 45 38.3	+1.5
NPS	**Neapolis**	1.41	316	P	**Pn**	08 45 20.3	+0.1
NPS				S	**Sn**	08 45 38.8	+0.1
NPS	**Neapolis**	1.41	316	P	**Pn**	08 45 21.1	+0.9
NPS				S	**Sn**	08 45 38.7	0.0
NPS				AML	AML	08 45 40.1	
	comp=E,747μm,0.5s						
NPS				AML	AML	08 45 52.2	
	comp=N,714μm,0.6s						
LAST	**Lasithi**	1.42	310	P	**Pn**	08 45 20.5	0.0
LAST				S	**Sn**	08 45 38.2	-1.0
LAST	**Lasithi**	1.42	310	P	**Pn**	08 45 21.1	+0.6
LAST				S	**Sn**	08 45 39.0	-0.1
LAST				AML	AML	08 45 43.2	
	comp=E,592μm,0.7s						
LAST				AML	AML	08 45 47.6	
	comp=N,724μm,0.7s						
SIVA	**Sivas**	1.82	295	P	**Pn**	08 45 25.9	+0.4
IDI	**Anoyia**	1.89	303	P	**Pn**	08 45 26.2	-0.2
IDI				S	**Sn**	08 45 49.2	-0.6
PRNS	**Prines Rethymn**	2.20	301	P	**Pn**	08 45 32.4	+1.9
PRNS				S	**Sn**	08 45 58.2	+1.2
GVD	**Gavdhos**	2.32	285	P	**Pn**	08 45 33.0	+0.9
GVD				S	**Sn**	08 45 59.5	-0.5
GVD	**Gavdhos**	2.32	285	P	**Pn**	08 45 33.1	+1.0
VAM	**Vamos**	2.44	299	P	**Pn**	08 45 34.6	+1.0
VAM				S	**Sn**	08 46 02.9	+0.2
VAM	**Vamos**	2.44	299	P	**Pn**	08 45 34.8	+1.2
DAT	**Datca**	2.54	14	*e*P	**Pn**	08 45 34.2	-0.9
DAT				*i* S	**Sn**	08 46 03.1	-2.2
IMMV	**Iera Moni Meta**	2.62	298	P	**Pn**	08 45 37.3	+1.2
IMMV				S	**Sn**	08 46 06.8	-0.3
IMMV	**Iera Moni Meta**	2.62	298	P	**Pn**	08 45 37.6	+1.5
DALY	**Dalyan (Mula)**	2.96	30	*e*P	**Pn**	08 45 38.6	-2.0
DALY				*i* S	**Sn**	08 46 15.5	+0.4
TURN	**Turunc**	2.98	29	*i* P	**Pn**	08 45 40.9	0.0
TURN				*i* S	Sn	08 46 09.5	-6.3
TURN				IAML_P			
	comp=Z,202nm,0.1s						
FETY	**Fethiye**	3.00	37	*e*P	Pn	08 45 34.3	-7.0
FETY				*i* S	**Sn**	08 46 16.1	-0.3
AKAS	**Kas**	3.01	48	*i* P	**Pn**	08 45 43.6	+2.1
AKAS				*i* S	**Sn**	08 46 17.0	+0.2
AKAS				IAML_P			
	comp=Z,944nm,0.2s						
SLUM	**Salum**	3.08	206	P	**Pn**	08 45 42.7	+0.5
	baz=213						
SLUM				S	**Sn**	08 46 14.4	-3.6
	baz=213						
ANKY	**Antikythira Is**	3.30	300	P	**Pn**	08 45 46.5	+1.3
ANKY				S	**Sn**	08 46 22.5	-0.9
ANKY	**Antikythira Is**	3.30	300	P	**Pn**	08 45 45.9	+0.7
AYDN	**Tasoluk**	3.50	14	*e*P	Pn	08 45 53.8	+5.8
AYDN				*i* S	**Sn**	08 46 25.0	-3.3
AYDN				IAML_P			
	comp=Z,165nm,0.2s						
KYTH	**Kithira**	3.67	304	P	**Pn**	08 45 51.7	+1.4
KYTH				S	**Sn**	08 46 30.5	-2.1
KYTH	**Kithira**	3.67	304	P	**Pn**	08 45 51.8	+1.4
SWA2		5.14	193	P	**Pn**	08 46 11.1	+0.9
	baz=196						
HHAG	**Hagoal**	6.21	132	P	**Pn**	08 46 26.2	+1.4
	baz=130						
HHAG				AMP		08 47 00.0	
	baz=130						
GLL	**Jalalah**	6.25	137	P	**Pn**	08 46 25.7	+0.2
	baz=135						
SUZ	**Suez**	6.75	129	P	**Pn**	08 46 33.1	+1.0
	baz=127						

*DDA **10** 08:57:36.2, 39°.21N×26°.08E, h7km±3km, ML2.5*
*ISK **10** 08:57:36.8, 39°.24N×26°.20E, h9km, ML1.9/8*
*ISCJB **10** 08:57:37.1±0.6, 39°.22N±0°.03×26°.16E±0°.05, h11km±5km, Error ellipse: s-maj=7.1km s-min=4.2km az=161.5*
ISC 10 08:57:37.4±1.0,**39°.24N**±0°.03×**26°.18E**±0°.05,**h12**km±9km, **n13**,σ0ˢ**37**/20,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	0.22	350	PG	**Pg**	08 57 42.1	-0.1
GPNR				SG	**Sg**	08 57 45.6	+0.2
SIGR	**SIGRI**	0.26	265	PG	**Pg**	08 57 42.6	-0.1
AYVA	**Ayvalik**	0.40	79	*i* P	**Pb**	08 57 46.7	+0.2
AYVA				*i* S	**Sg**	08 57 51.0	+0.3
AYVA				IAML_P			
	comp=Z,391nm,0.1s						
BAYC	**CANAKKALE_Bayr**	0.58	29	*i* P	**Pb**	08 57 49.9	+0.4
BAYC				*i* S	**Sb**	08 57 58.0	+0.3
BAYC				IAML_P			
	comp=Z,503nm,0.2s						
EZN	**Ezine**	0.60	10	PG	**Pg**	08 57 48.8	-0.3
BOZC	**Bozcaada**	0.61	351	PG	**Pg**	08 57 49.1	-0.3
BOZC				SG	**Sb**	08 57 58.2	-0.5
BOZC	**Bozcaada**	0.61	351	*i* P	**Pg**	08 57 49.0	-0.3
BOZC				*i* S	**Sb**	08 57 58.3	-0.4
BOZC				IAML_P			
	comp=Z,679nm,0.1s						
ZEDA	**zmir-Bergama**	0.74	111	*i* P	**Pb**	08 57 52.1	-0.2
ZEDA				*i* S	**Sg**	08 58 01.3	-0.3
ZEDA				IAML_P			
	comp=Z,965nm,0.2s						
CHOS	**Chios island**	0.85	187	PG	**Pg**	08 57 53.9	0.0
URLA	**Izmir**	0.93	160	PG	**Pg**	08 57 54.8	-0.6
URLA				SG	**Sb**	08 58 08.5	+0.6
GELI	**Tayfur-Gelibol**	1.18	11	PN	**Pb**	08 57 59.7	-0.1
ENEZ	**Enez**	1.50	359	PN	**Pn**	08 58 04.3	+0.2
ALN	**Alexandroupoli**	1.66	356	PN	**Pn**	08 58 06.5	+0.1

*SJA **10** 08:59:38.0±0.7, 19°.90S×68°.97W, h135km±4km, ML2.7, MW3.7*
*IDC **10** 08:59:38.6±8.5, 20°.07S×68°.50W, h133km±60km, mb3.0/2, mb1 3.2/3, mb1mx3.0/22, mbtmp3.4/3, Error ellipse: s-maj=78.3km s-min=37.3km az=22.0*
*ISCJB **10** 08:59:39.8±0.6, 19°.87S±0°.03×69°.03W±0°.08, h130km±5km, mb3.1/2, Error ellipse: s-maj=11.8km s-min=5.2km az=175.6*
*GUC **10** 08:59:40.1±0.7, 19°.82S×68°.90W, h120km±3km, ML3.3*
ISC 10 08:59:39.4±1.0,**19°.86S**±0°.04×**68°.96W**±0°.07,**h124**km±7km, **n23**,σ1ˢ**22**/37,**9C**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	0.29	310	*i* P	**Pn**	08 59 57.2	-0.3
GO01				*e*S	**Sn**	09 00 10.5	-0.5
GO01				IAML		09 00 11.6	
	comp=E,1μm,0.3s						
PB08	**IPOC Station P**	0.34	212	*i* P	**Pn**	08 59 57.7	+0.1
PB08				*i* S	**Sn**	09 00 12.3	+1.1
PB08	**IPOC Station P**	0.34	212⇑	*i* P	**Pn**	08 59 57.6	0.0
PB08				*e*S	**Sn**	09 00 11.1	-0.1
PB08				IAML		09 00 12.1	
	comp=N,2μm,0.3s						
PB11	**IPOC Station P**	0.66	278	*i* P	**Pn**	08 59 59.3	+0.1
PB11	**IPOC Station P**	0.66	278⇑	*i* P	**Pn**	08 59 59.2	+0.1
PB11				*e*S	**Sn**	09 00 14.5	+0.5
PB11				IAML		09 00 15.2	
	comp=N,575nm,0.4s						
MNMC	**Minye Minye**	0.94	320⇑	*i* P	**Pn**	09 00 01.9	+0.3
MNMC				*e*S	**Sn**	09 00 18.6	+0.3
MNMC				IAML		09 00 20.1	
	comp=N,1μm,0.2s						
MNMCX	**Minye Minye**	0.94	320	*i* P	**Pn**	09 00 02.0	+0.4
MNMCX				*i* S	**Sn**	09 00 19.4	+1.1
PSGC	**Pisagua**	1.12	283⇑	*i* P	**Pn**	09 00 03.5	+0.3
PSGC				*e*S	**Sn**	09 00 21.6	+0.5
PSGC				IAML		09 00 22.1	
	comp=N,404nm,0.3s						
PSGCX	**Pisagua**	1.12	283	*i* P	**Pn**	09 00 03.5	+0.3
PSGCX				*i* S	**Sn**	09 00 22.0	+0.8
PB01	**IPOC Station P**	1.28	203⇑	*i* P	**Pn**	09 00 05.5	+0.7
PB01				*e*S	**Sn**	09 00 25.0	+0.9
PB01				IAML		09 00 26.0	
	comp=N,653nm,0.4s						
PB16	**IPOC Station P**	1.60	341	*i* P	**Pn**	09 00 09.7	+0.7
PB16				*i* S	**Sn**	09 00 33.1	+1.8
PB16	**IPOC Station P**	1.60	341	*e*P	**Pn**	09 00 09.8	+0.9
PB16				IAML		09 00 34.1	
	comp=N,457nm,0.5s						
PB02	**IPOC Station P**	1.70	211	*i* P	**Pn**	09 00 09.3	-0.3
PB02	**IPOC Station P**	1.70	211⇑	*i* P	**Pn**	09 00 10.6	+1.0
PB02				*i* S	**Sn**	09 00 33.7	+1.0
PB12	**IPOC Station P**	1.79	313	*i* P	**Pn**	09 00 10.4	-0.2
PB12	**IPOC Station P**	1.79	313⇑	*i* P	**Pn**	09 00 10.5	-0.2
PB12				*i* S	**Sn**	09 00 34.1	-0.3
PB09	**IPOC Station P**	1.95	188⇑	*i* P	**Pn**	09 00 13.8	+1.1
PB09				*i* S	**Sn**	09 00 39.7	+1.6
PB07	**IPOC Station P**	2.05	205	*e*P	**Pn**	09 00 15.0	+1.1
PB07				IAML		09 00 43.5	
	comp=E,165nm,0.4s						
PB15	**IPOC Station P**	3.37	188	*e*P	**Pn**	09 00 33.0	+2.0
LPAZ	**La Paz**	3.63	13	P	**Pn**	09 00 36.0	+1.2
	comp=E,2.0nm,0.3s,baz=185,slow=8.2,SNR=94						
LPAZ				S	**Sn**	09 01 21.0	+3.4
	comp=E,0.1nm,0.3s,baz=248,slow=16,SNR=3.5						
HJA	**Humahuaca**	4.70	136	*i* P	**Pn**	09 00 48.5	-0.3
HJA				IAML		09 00 52.9	
	comp=Z,5.9nm,0.5s						
TXAR	**Lajitas Array**	59.26	325	P	**P**	09 09 29.2	+1.1
	comp=Z,0.2nm,0.8s,baz=159,slow=7.7,SNR=2.5						
TORD	**Torodi Ar. Bea**	76.86	71	P	**P**	09 11 14.6	-3.7
	comp=Z,0.3nm,0.5s,baz=249,slow=5.6,SNR=5.5						

IDC 10 09:02:16.6±3.0,**53°.54N**×**87°.67E**,**h0**km,**mb1 3.1**/2, **mb1mx3.0**/36,**mbtmp3.1**/2,**ML2.9**/2,**Error ellipse: s-maj=28.2km s-min=15.7km az=55.0**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.74	285	*i*		09 13 33.3	
	baz=103,slow=336,SNR=2.7						
ZALV	**Zalesovo Beam**	1.74	285	Pg	Pn	09 02 47.7	-0.5
	3.7nm,0.3s,baz=102,slow=13,SNR=12						
ZALV				Lg	Lg	09 03 12.0	
	3.5nm,0.3s,baz=101,slow=24,SNR=7.5						
KURBB	**Kurchatov Arra**	6.35	246	Pn	Pn	09 03 52.3	+1.0
	0.1nm,0.3s,baz=61,slow=14,SNR=4.6						
KURBB				Lg	Lg	09 05 38.4	
	0.0nm,0.3s,baz=64,slow=33,SNR=7.8						
MKAR	**Makanchi Array**	7.58	209	Pn	Pn	09 04 09.5	+1.1
	0.3nm,0.3s,baz=28,slow=13,SNR=9.4						
MKAR				Lg	Lg	09 06 16.6	
	0.1nm,0.3s,baz=24,slow=30,SNR=3.1						

*IDC **10** 09:12:18.1±0.8, 15°.50S×173°.16W, h0km, mb4.0/9, mb1 4.3/9, mb1mx4.0/27, mbtmp4.0/9, Error ellipse: s-maj=41.4km s-min=18.4km az=136.0*
*ISCJB **10** 09:12:21.1±0.5, 15°.51S±0°.09×173°.28W±0°.09, h29km, mb4.0/14, Error ellipse: s-maj=15.0km s-min=11.3km az=140.2*
*NEIC **10** 09:12:26.1±0.9, 15°.68S×173°.20W, h58km±8km, mb4.1/6, Error ellipse: s-maj=26.2km s-min=20.0km az=120.0*
ISC 10 09:12:22.8±0.7,**15°.5S**±0°.1×**173°.3W**±0°.1,**h29**km,**n22**, σ0ˢ**71**/22,**mb4.1**/14,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	4.76	139	*e*Pn	**Pn**	09 13 32.9	+0.3
URZ	**Urewera**	24.20	199	P	**P**	09 17 37.3	+0.5
	11nm,0.6s,baz=355,slow=19,SNR=14						
STKA	**Stephens Creek**	44.10	240	P	**P**	09 20 28.8	+0.2
	1.5nm,0.5s,baz=71,slow=9.5,SNR=4.9						
STKA	**Stephens Creek**	44.10	240	*e*P	**P**	09 20 28.7	0.0
	0.8nm,0.9s						
WR1	**Warramunga Arr**	49.95	257	*e*P	**P**	09 21 14.6	0.0
WRA	**Warramunga Arr**	49.95	257	P	**P**	09 21 14.6	0.0
	1.0nm,0.9s,baz=89,slow=6.1,SNR=3.4						
AS31	**Alice Springs**	50.21	252	*e*P	**P**	09 21 16.1	-0.3
	1.1nm,0.8s						
ASAR	**Alice Springs**	50.21	252	P	**P**	09 21 16.1	-0.3
	2.5nm,0.6s,baz=86,slow=8.1,SNR=37						
PETK	**Petropavlovsk-**	72.78	342	P	**P**	09 23 49.3	+1.1
	3.4nm,0.8s,baz=119,slow=12,SNR=3.9						
PEA1	**Petropavlovsk-**	72.79	342	*e*P	**P**	09 23 49.3	+1.0
NV01	**Mina Array Sit**	74.32	42	*e*P	**P**	09 23 58.0	+0.1
NVAR	**Mina Array Bea**	74.32	42	P	**P**	09 23 58.0	+0.1
	1.4nm,0.9s,baz=225,slow=11,SNR=10						
PINE	**Pine Mountain**	75.91	36	*e*P	**P**	09 24 08.1	+1.1
	5.7nm,1.1s						
X16A	**Lo Mia Camp, P**	76.89	48	*e*P	**P**	09 24 13.3	+0.6
	2.7nm,0.9s						
U15A	**North Rim**	77.28	46	*e*P	**P**	09 24 15.0	0.0
	3.3nm,1.1s						
LTX	**Lajitas**	80.56	56	*e*P	**P**	09 24 32.5	-0.4
TXAR	**Lajitas Array**	80.56	56	P	**P**	09 24 32.5	-0.4
	0.6nm,0.8s,baz=214,slow=4.2,SNR=7.8						
PDAR	**Pinedale Array**	82.26	42	P	**P**	09 24 39.8	-2.0
	0.7nm,1.0s,baz=204,slow=3.3,SNR=4.0						
ILAR	**Eielson Array**	82.53	11	P	**P**	09 24 41.6	-0.7
	0.5nm,0.5s,baz=226,slow=6.4,SNR=11						
MAW	**Mawson**	87.73	199	*e*P	**P**	09 25 07.9	-0.7
	1.1nm,0.8s						
BR101	**Keskin Array S**	146.33	321	*e*PKPdf	**PKPbc**	09 32 01.4	+0.1
BRTR	**Keskin Array B**	146.33	321	PKPbc	**PKPbc**	09 32 01.4	+0.1
	0.4nm,0.5s,baz=82,slow=3.1,SNR=2.8						

MAN 10 09:13:14.9,15°.10N×120°.24E,h120km,**mb4.2,ML3.1, MS2.8,1D,Luzon**

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

LOMA eS Sn 09 21 41.4 +0.8
LOMA IAML 09 21 44.2
comp=Z,364nm,0.2s
MTO3 Montecristo 1.38 46 eP Pn 09 21 27.4 -0.7
MTO3 eS Sn 09 21 45.9 +0.5
STG3 Santiaguito 3, 1.71 318 eP Pn 09 21 32.3 -0.2

MEX 10 09:28:03.8±0.5, 17°.94N×103°.06W, h2km, MD3.7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.44	322	eP	Pg	09 28 11.7	-0.6
MMIG				eS	Sg	09 28 18.7	+0.7
ZIIG	Zihuatanejo	1.56	102	eP	Pn	09 28 28.7	-3.8
ZIIG				i S	Sn	09 28 48.4	-4.9
EZ5V		1.62	342	eP	Pn	09 28 30.4	-3.2
EZ5V				i S	Sn	09 28 50.5	-4.7
ARIG	Puente Sto Nin	2.60	82	i P	Pn	09 28 44.7	-2.3
ARIG				eS	Sn	09 29 15.5	-3.7

ISCJB ***10*** *09:50:48.9±0.9, 20°.4S±0°.2×178°.0W±0°.2, h534km, mb3.7/4, Error ellipse: s-maj=23.8km s-min=21.7km az=27.5*
IDC ***10*** *09:50:50.1±6.8, 20°.53S×177°.90W, h543km±84km, mb3.2/4, mb1 3.5/6, mb1mx3.1/28, mbtmp4.1/6, Error ellipse: s-maj=42.8km s-min=30.8km az=20.0*
ISC 10 09:50:49.6±1.1, 20°.5S±0°.2×177°.9W±0°.2, h534km, n9, σ1°11/9, mb3.8/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.69	261	P	P	09 53 57.5	+1.2
0.4nm,0.3s,baz=129,slow=18,SNR=3.6							
URZ	Urewera	18.25	193	P	P	09 54 28.8	-1.5
0.5nm,0.3s,baz=331,slow=18,SNR=4.7							
ASAR	Alice Springs	44.62	257	P	P	09 58 14.9	+0.1
3.4nm,0.7s,baz=89,slow=8.2,SNR=58							
WRA	Warramunga Arr	44.71	262	P	P	09 58 15.1	-0.4
1.7nm,0.3s,baz=90,slow=7.8,SNR=49							
MJAR	Matsushiro Arr	70.25	324	P	P	10 01 07.8	-1.4
1.1nm,0.5s,baz=151,slow=6.0,SNR=4.3							
TXAR	Lajitas Array	86.95	57	P	P	10 02 39.3	+0.8
0.2nm,0.5s,baz=218,slow=7.8,SNR=4.8							
VNA3	Neumayer Olymp	88.16	176	P	P	10 02 43.4	+0.1
VNA2	Neumayer--Watz	88.60	177	P	P	10 02 45.9	+0.6
baz=186,slow=4.9							
VNA1	Neumayer--Stat	88.83	177	P	P	10 02 47.1	+0.8

MEX 10 10:24:49.0±0.4, 15°.22N×96°.60W, h9km±3km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PANG	Puerto Angel	0.46	15	eP	Pg	10 24 57.4	-0.5
PANG				i S	Sg	10 25 04.4	+0.4
HUIG	Huatulco	0.72	41	i P	Pg	10 25 01.2	-1.6
HUIG				i S	Sg	10 25 11.1	-1.2
CMIG	Matias Romero	2.48	41	eP	Pn	10 25 26.6	-3.0
CMIG				i S	Sn	10 25 56.3	-3.8

KRNET ***10*** *11:39:56.4±0.1, 39°.10N×70°.43E, mb3.3*
NNC ***10*** *11:39:56.9±3.9, 38°.97N×70°.25E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=38.8km s-min=20.0km az=165.0*
ISC 10 11:39:57.0±3.0, 38°.9N±0°.2×70°.36E±0°.07, h17km, n16, σ2°33/29, 18C-10D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	1.17	18	⇓eP	Pb	11 40 15.6	-3.2
baz=17							
TAS	Tashkent	2.52	341	⇑iP	Pn	11 40 39.1	+1.9
baz=39							
TAS				⇑iS	Sn	11 41 10.1	+2.6
baz=39							
ARK	Arkit	3.10	23	⇑iP	Pn	11 40 46.7	+1.4
baz=23							
ARK				⇑iS	Sn	11 41 22.9	+0.8
baz=23							
ARSB	Arslanbob	3.12	39	⇓eP	Pn	11 40 46.9	+1.4
baz=40							
ARSB				⇓iS	Sn	11 41 23.7	+1.3
baz=40							
AML	Almayashu	4.08	38	⇑eP	Pn	11 41 00.5	+1.6
baz=38							
AML				⇑iS	Sn	11 41 47.5	+1.1
baz=38							
KK31	Karatay Array	4.16	2	Pn	Pn	11 41 03.8	+4.1
0.5nm,0.2s,baz=177,slow=12,SNR=14							
KK31				⇑Pg	Pg	11 41 14.5	-2.1
1.7nm,0.4s,baz=178,slow=13,SNR=4.1							
KK31				⇑Lg	Lg	11 42 04.5	
8.1nm,0.6s,baz=181,slow=29,SNR=5.5							
ARLS	Aral	4.20	45	⇓iP	Pn	11 41 02.5	+2.1
baz=46							
ARLS				⇓iS	Sn	11 41 50.2	+1.0
baz=46							
EKS2	Erkin-Say	4.53	34	⇓eP	Pn	11 41 06.9	+2.0
baz=34							
EKS2				⇓iS	Sn	11 41 57.7	+0.4
baz=34							
UCH	Uchtor	4.56	43	⇑iP	Pn	11 41 07.2	+1.6
baz=43							
UCH				⇑iS	Sn	11 41 59.1	+0.7
baz=43							
AAK	Ala-Archa	4.84	39	⇑Pn	Pn	11 41 10.9	+1.7
3.0nm,0.3s							
AAK				⇑Sn	Sn	11 42 10.3	+5.3
5.0nm,0.5s							
KZA	Kyzart	4.87	48	⇓iP	Pn	11 41 11.9	+2.1
baz=49							
KZA				⇓iS	Sn	11 42 06.6	+0.6
baz=49							
KBK	Karagaybulak	5.09	42	⇑eP	Pn	11 41 14.3	+1.7
baz=42							
KBK				⇑iS	Sn	11 42 11.1	0.0
baz=42							
TKM2	Tokmak 2	5.62	43	⇑Pn	Pn	11 41 21.7	+1.9
3.1nm,0.4s							
TKM2				⇑Sn	Sn	11 42 29.3	+5.2
2.5nm,0.5s							
TKM2	Tokmak 2	5.62	43	⇑eP	Pn	11 41 21.6	+1.7
baz=44							
TKM2				⇑iS	Sn	11 42 24.0	-0.1
baz=44							
AB31	Akbulak array	12.72	327	P	Pn	11 42 58.0	+1.0
0.6nm,0.6s,baz=137,slow=14,SNR=9.7							
AKTO	Aktyubinsk	14.43	327	⇓P	Pn	11 43 18.3	-2.1
1.7nm,0.8s							

MOS ***10*** *11:52:04.7±1.0, 5°.29N×125°.93E, h43km, mb5.0/39, Error ellipse: s-maj=13.3km s-min=5.4km az=101.6*
BJI ***10*** *11:52:08.4±0.0, 5°.19N×126°.14E, h83km, mb4.8/43, mB5.0/30, Ms4.3/11, Ms7 4.0/11*
MAN ***10*** *11:52:09.0, 5°.17N×126°.17E, h63km, mb5.2, ML4.2, MS4.4*
ISCJB ***10*** *11:52:10.6±0.3, 5°.31N±0°.02×126°.17E±0°.03, h98km±3km, mb4.7/118, Error ellipse: s-maj=5.7km s-min=3.0km az=173.6*
DJA ***10*** *11:52:11.8±0.5, 5°N±4°×12°6E±°, h42km±6km, M4.8/16, mb4.8/16, mB5.2/9, MLv5.0/12, Mw(mB)4.6/9*
NEIC ***10*** *11:52:11.3±1.4, 5°.33N×126°.17E, h88km±6km, mb4.8/81, Error ellipse: s-maj=10.2km s-min=5.3km az=160.0*
IDC ***10*** *11:52:11.0±1.0, 5°.32N×126°.14E, h87km±8km, mb4.2/20, mb1 4.3/23, mb1mx4.2/41, mbtmp4.5/23, MS3.2/17, Ms1 3.2/17, ms1mx3.1/30, Error ellipse: s-maj=21.5km s-min=7.9km az=78.0*
ISC 10 11:52:11.5±0.6, 5°.32N±0°.03×126°.21E±0°.05, h89km±5km, n241, σ1°60/263, mb4.8/118, 15C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.92	327	eP	Pn	11 52 28.8	-1.5
GSPH	General Santos	1.47	301	⇑iP	Pn	11 52 35.7	-1.2
MATI	Mati	1.61	2	eP	Pn	11 52 38.2	-0.5
MATI				eS	Sn	11 52 59.2	-0.1
SGSI	Sangihe	1.76	203	P	Pn	11 52 39.7	-0.9
DAV	Davao City (W)	1.85	340	P	Pn	11 52 41.9	+0.1
186nm,0.3s,baz=164,slow=1.4,SNR=16							
DAV				S	Sn	11 53 04.1	-0.5
288nm,0.3s,baz=44,slow=20,SNR=7.7							
DAV	Davao City (W)	1.85	340	ePn	Pn	11 52 41.0	-0.7
DAV				eSn	Sn	11 52 59.8	-4.9
DMPH	Davao City--Mi	1.88	338	⇑eP	Pn	11 52 41.9	-0.3
DMPH				eS	Sn	11 53 07.1	+1.5
SKMP	Bagumbayan, Su	2.04	306	eP	Pn	11 52 43.4	-0.9
SKMP				eS	Sn	11 53 10.0	+0.8
CTBH	Cotabato--PC H	2.72	314	⇑iP	Pn	11 52 52.4	-0.9
BUKP	Musuan	2.79	336	eP	Pn	11 52 54.4	+0.1
BUKP				eS	Sn	11 53 26.3	-0.8
CGP	Cagayan de Oro	3.46	334	eP	Pn	11 53 05.6	+2.3
BUTP	Butuan	3.67	351	eP	Pn	11 53 07.7	+1.6
BUTP				eS	Sn	11 53 51.1	+2.7
PAGZ	Pagadian	3.77	312	eP	Pn	11 53 06.6	-0.8
PAGZ				eS	Sn	11 53 51.1	+0.3
DCPH	Dipolog City	4.31	319	⇑eP	Pn	11 53 25.2	+10
IPIL	Ipil	4.37	304	eP	Pn	11 53 15.6	0.0
IPIL				eS	Sn	11 54 03.9	-1.5
TNTI	Ternate	4.67	166	ePn	Pn	11 53 19.0	-0.7
TNTI				eSn	Sn	11 54 10.6	-2.0
TNTI	Ternate	4.67	166	P	Pn	11 53 18.9	-0.7
MSLP	Maasin	4.96	344	eP	Pn	11 53 24.8	+1.1
MSLP				eS	Sn	11 54 22.3	+2.4
KMSI	Cibinong	5.21	205	P	Pn	11 53 29.7	+2.6
LLP	Lapu-Lapu	5.44	336	eP	Pn	11 53 31.1	+1.0
LLP				eS	Sn	11 54 45.6	+14
OCLP	Ormoc	5.91	345	eP	Pn	11 53 37.7	+1.1
PLP	Palo	5.93	348	⇓eP	Pn	11 53 37.2	+0.3
BESP	Borongan	6.29	353	eP	Pn	11 53 44.5	+2.8
BESP				eS	Sn	11 54 42.7	-9.4
MRSI	Marisa	6.43	222	P	Pn	11 53 44.0	+0.3
LUWI	Luwuk	7.20	209	ePn	Pn	11 53 54.5	+0.3
LUWI				eSn	Sn	11 55 17.5	+3.2
LUWI	Luwuk	7.20	209	P	Pn	11 53 52.6	-1.5
SANI	Sanana	7.33	182	P	Pn	11 53 53.8	-2.1
APSI	Ampana	7.69	216	P	Pn	11 54 03.3	+2.5
SIJI	Sorong	7.96	140	P	Pn	11 54 03.5	-1.0
4.6nm,0.3s,baz=333,slow=7.5,SNR=16							
SIJI				S	Sn	11 55 29.5	-3.5
1.6nm,0.3s,baz=170,slow=18,SNR=3.8							
SIJI				LR	LR	11 56 20.7	
comp=Z,71nm,21.6s,baz=2.5,slow=31							
MPSI	Mapaga	8.02	232	P	Pn	11 54 05.6	+0.3
TGY	Tagaytay City	10.15	330	LR	LR	11 59 10.5	
comp=Z,119nm,20.7s,baz=149,slow=41							
FAKI	Fak Fak	10.17	143	ePn	Pn	11 54 34.5	-0.2
FAKI	Fak Fak	10.17	143	P	Pn	11 54 34.9	+0.2
TTSI	Tana Toraja	10.48	218	P	Pn	11 54 42.0	+3.1
SPSI	Sidrap Palu	11.25	215	P	Pn	11 54 57.4	+8.0
BNSI	Bone	11.42	212	P	Pn	11 54 57.0	+5.3
KAPI	Kappang	12.13	212	P	Pn	11 55 00.6	-0.7
0.9nm,0.3s,baz=44,slow=8.8,SNR=6.8							
KAPI	Kappang	12.13	212	ePn	Pn	11 55 00.2	-1.0
SBUM	Sibu	14.25	259	ePn	Pn	11 55 30.0	+0.8
EDFI	Ende, Flores	14.69	198	P	P	11 55 42.6	+3.8
SOEI	Soe	15.10	187	ePn	Pn	11 55 40.7	+0.4
28nm,0.9s							
BATI	Baumata	15.63	189	P	Pn	11 55 47.2	+0.3
1.2nm,0.3s,baz=355,slow=12,SNR=2.3							
BATI	Baumata	15.63	189	ePn	Pn	11 55 47.2	+0.3
BATI				ePn	Pn	11 55 47.2	+0.3
BATI	Baumata	15.63	189	P	P	11 55 52.5	+3.2
KSM	Kuching	16.33	257	ePn	Pn	11 55 56.0	+0.4
19nm,0.9s							
PLAI	Plampang	16.38	211	P	P	11 55 57.7	+0.2
72nm,1.1s							
JAY	Jayapura	16.44	118	LR	LR	12 01 26.1	
comp=Z,79nm,20.4s,baz=12,slow=34							
TWG	Pinlang	18.09	345	eP	P	11 56 15.5	-0.8
59nm,0.6s							
GMJI	Gumukmas	18.56	223	P	Pn	11 56 28.2	+5.4
TPUB	Ta-pu	18.67	344	eP	P	11 56 22.0	-0.6
24nm,0.8s							
SSLB	Suanglung	19.05	345	eP	P	11 56 26.5	-0.3
14nm,0.8s							
GUMO	Guam	20.14	65	LR	LR	12 04 12.7	
comp=Z,43nm,19.2s,baz=189,slow=36							
QIZ	Qiongzhong	20.98	312	eP	P	11 56 47.5	-0.3
93nm,1.5s							
JOW	Kunigami	21.48	5	eP	P	11 56 53.2	+0.1
33nm,1.0s							
MYKOM	Kota Tinggi	22.59	262	eP	P	11 57 05.1	+0.2
37nm,1.0s							
FITZ	Fitzroy Crossi	23.28	181	P	P	11 57 10.6	-1.0
9.1nm,0.8s,baz=357,slow=7.2,SNR=48							
MDSI	Maura Dua	24.07	247	P	P	11 57 21.6	+2.8
LHSI	Lahat	24.42	249	P	P	11 57 25.9	+3.9
65nm,1.1s							
SKNT	Sakolnakorn	24.66	300	P	P	11 57 29.6	+5.4
20nm,1.5s							
KHON	Khomkaen	25.41	297	P	P	11 57 37.3	+6.2
39μm,0.8s							
PMG	Port Moresby	25.49	125	⇑iP	P	11 57 37.4	+5.6
COEN	Coen	25.50	139	eP	P	11 57 31.8	-0.1
18nm,1.0s							
SDSI	Sungai Dareh	25.52	257	P	P	11 57 34.7	+2.6
BKNI	Bangkinang	25.62	260	eP	P	11 57 32.9	-0.1
62nm,0.6s							
CHAI	Chaiyaphum	25.99	296	P	P	11 57 39.9	+3.5
19μm,1.0s							
WRAB	Tennant Creek	26.34	163	eP	P	11 57 39.8	+0.4
8.2nm,0.8s							
WRAB	Tennant Creek	26.34	163	eP	P	11 57 39.8	+0.4
WRAB				pmax	pmax		
comp=Z,8.0nm,0.8s							
WR1	Warramunga Arr	26.35	163	eP	P	11 57 39.2	-0.3
WRA	Warramunga Arr	26.35	163	P	P	11 57 39.2	-0.3
comp=Z,2.8nm,0.5s,baz=357,slow=11,SNR=76							
WB2	Warramunga Arr	26.35	163	eP	P	11 57 39.7	+0.2
comp=Z,6.9nm,0.7s							
PDSI	Padang	26.45	257	P	P	11 57 45.8	+5.2
comp=Z,64nm,1.1s							
PBKT	Sadao Pong	27.14	296	P	P	11 57 50.3	+3.6
PSA00	Pilbara Seismi	27.45	193	eP	P	11 57 48.5	-0.8
comp=Z,18nm,0.8s							
WHN	Wuhan	27.46	337	eP	P	11 57 51.7	+2.4
NJ2	Nanjing	27.47	346	eP	P	11 57 49.9	+0.5
NJ2				pmax	pmax		
comp=Z,11nm,0.9s							
JNU	Nakatsue	28.00	8	P	P	11 57 53.9	-0.2
comp=Z,19nm,0.9s,baz=196,slow=5.2,SNR=7.1							
JNU	Nakatsue	28.00	8	eP	P	11 57 54.0	-0.2
comp=Z,24nm,0.9s							
GYA	Guiyang	28.11	320	eP	P	11 58 08.0	+13
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s							
ENH	Enshi	29.40	330	eP	P	11 58 05.6	-1.1
comp=Z,25nm,1.4s							
CM31	Chiang Mai Arr	29.64	298	eP	P	11 58 08.5	-0.4
comp=Z,15nm,1.5s							
CMAR	Chiang Mai Arr	29.64	298	P	P	11 58 08.8	-0.1
comp=Z,1.1nm,0.7s,baz=109,slow=6.8,SNR=7.9							
CMAR				ScP	ScP	12 04 47.0	+1.2
comp=Z,6.6nm,0.9s,baz=128,slow=1.4,SNR=23							
CMAR				LR	LR	12 10 19.9	
comp=Z,34nm,18.9s,baz=98,slow=37							
AS31	Alice Springs	29.77	166	eP	P	11 58 09.6	-0.4
comp=Z,5.2nm,1.6s							
ASAR	Alice Springs	29.77	166	P	P	11 58 09.3	-0.7
comp=Z,2.9nm,0.6s,baz=346,slow=7.3,SNR=63							
ASAR				PcP	PcP	12 01 12.0	+0.1
comp=Z,2.4nm,0.7s,baz=344,slow=2.4,SNR=11							
ASAR				ScP	ScP	12 04 46.4	+0.2
comp=Z,1.3nm,0.8s,baz=356,slow=3.6,SNR=7.5							
KMI	Kunming	29.91	314	P	P	11 58 12.4	+1.0
KMI				pmax	pmax		
comp=Z,8.0nm,0.5s							
KMI				pmax	pmax		
comp=Z,45nm,4.7s							
TJN	Taejon	30.93	2	⇓iP	P	11 58 20.9	+0.9
INU	Inuyama	31.50	17	eP	P	11 58 24.1	-0.9
comp=Z,8.9nm,0.6s							
KS15	Wonju Array Si	32.01	3	eP	P	11 58 29.5	+0.1
comp=Z,14nm,1.1s							
KSRS	Korea Array	32.02	3	P	P	11 58 30.5	+0.9
comp=Z,2.4nm,0.6s,baz=178,slow=10,SNR=16							
XAN	Xi'an	32.77	333	P	P	11 58 34.7	-1.5
XAN				pP	pP	11 58 55.8	0.0
XAN				pmax	pmax		
comp=Z,11nm,1.4s							
XAN				pmax	pmax		
comp=Z,59nm,3.5s							
XAN	Xi'an	32.77	333	eP	P	11 58 34.8	-1.5
comp=Z,12nm,0.8s							
XAN	Xi'an	32.77	333	eP	P	11 58 34.8	-1.5
XAN				pmax	pmax		
comp=Z,12nm,0.8s							
MAJO	Matsushiro	32.96	18	eP	P	11 58 36.6	-1.3
MAJO	Matsushiro	32.96	18	⇑iP	P	11 58 38.7	+0.8
MAJO				pmax	pmax		
comp=Z,6.0nm,0.9s							
MAT	Matsushiro	32.96	18	P	P	11 58 36.2	-1.7
MAT				S	S	12 03 51.4	+1.7
MJAR	Matsushiro Arr	32.96	18	P	P	11 58 36.7	-1.2
comp=Z,4.1nm,0.8s,baz=201,slow=9.7,SNR=11							
MJAR				LR	LR	12 10 21.8	
comp=Z,36nm,21.6s,baz=185,slow=33							
CD2	Chengdu	33.06	323	eP	P	11 58 46.7	+7.8
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s							
MORW	Morawa	35.56	195	eP	P	11 58 59.5	-1.0
comp=Z,15nm,1.0s							
BJT	Baijiatuau	35.71	347	eP	P	11 59 00.9	-0.6
comp=Z,21nm,0.6s							
BJT	Baijiatuau	35.71	347	eP	P	11 59 01.0	-0.6
BJT				pmax	pmax		
comp=Z,21nm,0.6s							
BJI	Beijing	35.73	347	P	P	11 59 01.6	-0.1
BJI				pmax	pmax		
comp=Z,14nm,0.5s							
FORT	Forrest	35.94	177	eP	P	11 59 02.6	-1.0
comp=Z,38nm,0.8s							
LZH	Lanzhou	36.88	329	eP	P	11 59 11.9	+0.1
LZH				pP	pwP	11 59 33.7	-2.0
LZH				sP	sP	11 59 42.8	+1.5
LZH				PP	PnPn	12 00 39.9	+1.3
LZH				pmax	pmax		
comp=Z,35nm,1.5s							
LZH				pmax	pmax		
comp=Z,86nm,5.4s							
LZH				LR	LR		
comp=Z,260nm,14.2s							
LZH				LR	LR		
comp=Z,250nm,14.6s							
LZH				LR	LR		
comp=Z,350nm,14.6s							
MSHR	Mys Shultsa	37.36	6	⇓iP	P	11 59 17.5	+2.0
HHC	Hu-ho-hao-te	37.73	342	eP	P	11 59 18.4	-0.5
HHC				pmax	pmax		
comp=Z,22nm,1.1s							
HHC				pmax	pmax		
comp=Z,95nm,5.6s							
VLA	Vladivostok	37.98	7	⇑iP	P	11 59 22.8	+2.1
VLA				pmax	pmax		
comp=Z,26nm,1.1s							
SHL	Shillong	38.53	305	eP	P	11 59 24.9	-0.9
comp=Z,15nm,0.8s							
SHL	Shillong	38.53	305	eP	P	11 59 24.9	-0.9
SHL				pmax	pmax		
comp=Z,15nm,0.8s							
SHL	Shillong	38.53	305	eP	P	11 59 25.0	-0.9
EIDS	Eidsvold	38.92	143	eP	P	11 59 28.6	-0.2
comp=Z,14nm,0.9s							
NWAO	Narrogin (SRO)	38.98	192	eP	P	11 59 28.6	-0.7
comp=Z,41nm,1.4s							
NWAO	Narrogin (SRO)	38.98	192	eP	P	11 59 28.6	-0.7
NWAO				pmax	pmax		
comp=Z,41nm,1.4s							
USA0B	Ussuriysk Arra	39.05	7	eP	P	11 59 30.6	+0.9
comp=Z,17nm,0.8s							
USA0B	Ussuriysk Arra	39.05	7	eP	P	11 59 30.6	+0.9
USA0B				pmax	pmax		
comp=Z,17nm,0.8s							
USRK	Ussuriysk Ar.	39.05	7	P	P	11 59 30.3	+0.6
comp=Z,13nm,0.8s,baz=194,slow=7.7,SNR=29							
USRK				LR	LR	12 13 51.5	
comp=Z,30nm,21.0s,baz=193,slow=33							
BBOO	Buckleboo	39.06	167	eP	P	11 59 29.5	-0.4
comp=Z,22nm,1.3s							
MDJ	Mudanjiang	39.25	4	P	P	11 59 32.6	+1.2
MDJ				pmax	pmax		
comp=Z,52nm,1.1s							
MDJ	Mudanjiang	39.25	4	eP	P	11 59 32.2	+0.9
comp=Z,37nm,0.9s							
STKA	Stephens Creek	39.79	159	P	P	11 59 35.8	-0.3
comp=Z,6.8nm,0.8s,baz=330,slow=8.7,SNR=11							
STKA				PcP	PcP	12 01 40.6	-0.1
comp=Z,4.4nm,1.1s,baz=352,slow=7.0,SNR=3.3							
STKA				LR	LR	12 17 09.0	
comp=Z,62nm,18.8s,baz=25,slow=38							
STKA	Stephens Creek	39.79	159	eP	P	11 59 35.8	-0.3
comp=Z,2.1nm,0.9s							
STKA	Stephens Creek	39.79	159	eP	P	11 59 35.8	-0.3
STKA				pmax	pmax		
comp=Z,2.0nm,0.9s							
TEY	Ternei	40.59	11	⇑eP	P	11 59 43.4	+1.0
TEY				pmax	pmax		
comp=Z,10.0nm,1.6s							
GTA	Gaotai	41.48	329	eP	P	11 59 49.4	-0.6
GTA				pmax	pmax		
comp=Z,5.0nm,1.3s							
GTA				pmax	pmax		
comp=Z,78nm,4.9s							
GTA				LR	LR		
comp=Z,69nm,15.9s							
GTA				LR	LR		
comp=Z,70nm,14.6s							
GTA				LR	LR		
comp=Z,76nm,16.5s							
ARMA	Armidale	43.07	147	eP	P	12 00 03.2	+0.2
comp=Z,11nm,1.0s							
RAMN	Ramite	43.42	304	eP	P	12 00 06.1	0.0
comp=Z,16nm,0.6s							
YSS	Yuzh-Sakhalins	43.86	16	⇓eP	P	12 00 10.9	+1.9
YSS				pmax	pmax		
comp=Z,10.0nm,0.6s							
KLR	Kul'dur	44.01	5	⇑iP	P	12 00 10.7	+0.6
KLR				pmax	pmax		
comp=Z,23nm,1.4s							
JIRN	Jiri	44.03	305	eP	P	12 00 10.7	-0.5
comp=Z,26nm,0.7s							
HIA	Hailar	44.13	354	eP	P	12 00 11.4	+0.2
comp=Z,29nm,1.3s							
HIA	Hailar	44.13	354	eP	P	12 00 11.4	+0.2
HIA				pmax	pmax		
comp=Z,29nm,1.3s							
GUN	Gumba	44.38	305	eP	P	12 00 13.2	-0.7
comp=Z,33nm,0.7s							
ULN	Ulaanbaatar	45.45	342	eP	P	12 00 21.4	-0.4
comp=Z,5.4nm,0.6s							
ULN	Ulaanbaatar	45.45	342	⇑iP	P	12 00 22.1	+0.2
ULN				pmax	pmax		
comp=Z,5.0nm,1.1s							
SONA0	Songino Array	45.63	341	eP	P	12 00 22.2	-1.0
SONA0				ePcP	PcP	12 02 00.2	+0.1
SONM	Songino Array	45.63	341	P	P	12 00 22.2	-1.0
comp=Z,1.1nm,0.5s,baz=159,slow=9.9,SNR=8.6							
SONM				PcP	PcP	12 02 00.2	+0.1
comp=Z,2.4nm,0.8s,baz=166,slow=4.0,SNR=5.5							
SONM				LR	LR	12 19 59.7	
comp=Z,34nm,20.9s,baz=108,slow=37							
CAN	Canberra	45.76	154	eP	P	12 00 24.8	+0.5
comp=Z,75nm,1.6s							
CAN	Canberra	45.76	154	eP	P	12 00 24.8	+0.5
CAN				pmax	pmax		
comp=Z,75nm,1.6s							
KOLN	Koldanda	46.21	304	eP	P	12 00 27.7	-0.5
comp=Z,28nm,0.7s							
DANN	Dangsing	46.28	305	eP	P	12 00 28.1	-0.8
com

comp=Z,21nm,0.7s
WMQ pmax pmax
comp=Z,97nm,3.7s
WMQ LR LR
comp=Z,830nm,35.9s
WMQ LR LR
comp=Z,520nm,30.5s
WMQ LR LR
comp=Z,100nm,25.3s
BOD Bodaibo 53.23 352 *eP* **P 12 01 20.6 0.0**
BOD pmax pmax
comp=Z,11nm,1.2s
PETK Petropavlovsk- 54.17 23 P **P 12 01 28.0 +0.3**
comp=Z,3.6nm,0.9s,baz=244,slow=1.3,SNR=6.9
PETK LR LR 12 22 11.4
comp=Z,13nm,21.7s,baz=209,slow=33
PETK Petropavlovsk- 54.17 23 *eP* **P 12 01 28.0 +0.3**
PEA1 Petropavlovsk- 54.17 23 *eP* **P 12 01 28.0 +0.3**
DGZ Jazzator, Alta 54.96 330 ⇑*iP* **P 12 01 32.6 -1.1**
DGZ pmax pmax
comp=Z,2.0nm,0.6s
PDGK Podgornoye 55.87 320 P **P 12 01 39.5 -0.7**
PDGK pmax pmax
comp=Z,10.0nm,1.2s
MK31 Makanchi Array 55.96 325 *eP* **P 12 01 39.2 -1.5**
comp=Z,7.7nm,1.0s
MK31 Makanchi Array 55.96 325 *eP* **P 12 01 39.2 -1.5**
MK31 pmax pmax
comp=Z,8.0nm,1.0s
MK32 Makanchi Array 55.96 325 *eP* **P 12 01 39.5 -1.2**
MKAR Makanchi Array 55.96 325 P **P 12 01 39.5 -1.2**
comp=Z,3.1nm,0.4s,baz=114,slow=7.6,SNR=33
MKAR ScP **ScP 12 06 28.8 -0.7**
comp=Z,2.7nm,0.7s,baz=112,slow=4.7,SNR=9.9
MKAR LR LR 12 26 50.7
comp=Z,21nm,19.1s,baz=92,slow=37
MAKZ Makanchi 56.15 325 *eP* **P 12 01 40.8 -1.3**
comp=Z,12nm,1.1s
MAKZ Makanchi 56.15 325 *eP* **P 12 01 40.8 -1.3**
MAKZ pmax pmax
comp=Z,12nm,1.1s
KSH Kashi 56.56 315 P **P 12 01 49.9 +4.6**
KSH S **S 12 09 25.5 -5.0**
KSH pmax pmax
comp=Z,8.0nm,0.6s
KSH pmax pmax
comp=Z,260nm,6.9s
KSH LR LR
comp=Z,470nm,15.4s
KSH LR LR
comp=Z,440nm,15.4s
KSH LR LR
comp=Z,230nm,21.0s
YAK Yakutsk 56.64 2 *eP* **P 12 01 45.4 +0.3**
comp=Z,48nm,0.7s
YAK Yakutsk 56.64 2 *eP* **P 12 01 45.5 +0.3**
YAK *e**PP **pP 12 02 01.0 -5.6**
YAK *e* 12 02 40.1
YAK *e* 12 03 51.4
YAK *e*PPP PPP 12 05 08.0
YAK *e*S **S 12 09 33.8 +3.4**
YAK *e**SS **pS 12 09 59.4 +4.6**
YAK *e* 12 11 29.0
YAK *e*SS **SS 12 13 23.1 +3.7**
MA2 Magadan 57.30 15 *eP* **P 12 01 50.3 +0.4**
comp=Z,19nm,1.6s
MA2 Magadan 57.30 15 *eP* **P 12 01 50.3 +0.4**
MA2 pmax pmax
comp=Z,19nm,1.6s
NRN Naryn 57.32 317 *eP* **P 12 01 50.1 -0.7**
comp=Z,7.5nm,1.4s
NRN Naryn 57.32 317 *eP* **P 12 01 50.1 -0.7**
NRN pmax pmax
comp=Z,8.0nm,1.4s
AAK Ala-Archa 58.84 317 *eP* **P 12 02 00.7 -0.5**
comp=Z,4.4nm,1.1s
AAK Ala-Archa 58.84 317 *eP* **P 12 02 00.7 -0.5**
AAK pmax pmax
comp=Z,4.0nm,1.1s
ZAA0 Zalesovo Array 58.94 333 *eP* **P 12 02 01.6 +0.2**
comp=Z,6.6nm,0.9s
ZALV Zalesovo Beam 58.94 333 P **P 12 01 59.4 -2.1**
comp=Z,2.1nm,0.5s,baz=144,slow=7.1,SNR=6.6
ZALV LR LR 12 30 09.5
comp=Z,26nm,18.9s,baz=70,slow=39
KURK Kurchatov 60.13 327 *eP* **P 12 02 08.6 -1.1**
comp=Z,9.8nm,0.8s
KURK Kurchatov 60.13 327 *eP* **P 12 02 08.6 -1.1**
KURK pmax pmax
comp=Z,10.0nm,0.8s
NVS Novosibirsk 60.23 333 *eP* **P 12 02 08.2 -2.1**
NVS pmax pmax
comp=Z,18nm,1.9s
GAR Garm 60.48 312 *eP* **P 12 02 11.4 -1.1**
comp=Z,13nm,0.9s
GAR Garm 60.48 312 *eP* **P 12 02 11.4 -1.1**
GAR pmax pmax
comp=Z,13nm,0.9s
SEY Seymchan 60.61 13 ⇓*iP* **P 12 02 15.1 +2.4**
KKAR Karatay Array 61.73 317 *eP* **P 12 02 19.5 -1.2**
comp=Z,4.4nm,1.0s
KKAR Karatay Array 61.73 317 *eP* **P 12 02 19.5 -1.2**
KKAR pmax pmax
comp=Z,4.0nm,1.0s
BRVK Borovoye 65.78 327 *eP* **P 12 02 46.2 -0.9**
comp=Z,11nm,1.2s
BRVK Borovoye 65.78 327 *eP* **P 12 02 46.2 -0.9**
BRVK pmax pmax
comp=Z,11nm,1.2s
TIXI Tiksi 66.27 1 *eP* **P 12 02 49.8 -0.1**
comp=Z,11nm,1.2s
TIXI Tiksi 66.27 1 ⇑*iP* **P 12 02 50.4 +0.5**
TIXI pmax pmax
comp=Z,6.0nm,1.0s
BILL Bilibino 68.16 15 *eP* **P 12 03 02.5 +0.6**
comp=Z,11nm,1.2s
BILL Bilibino 68.16 15 ⇑*iP* **P 12 03 02.7 +0.8**
BILL pmax pmax
comp=Z,6.0nm,1.0s
NRIK Noril'sk 68.77 346 P **P 12 03 04.7 -1.0**
comp=Z,5.0nm,0.6s,baz=122,slow=7.4,SNR=6.9
NRIK LR LR 12 35 11.9
comp=Z,26nm,19.8s,baz=174,slow=38
GEYT Alibeck 69.50 308 LR LR 12 37 04.4
comp=Z,16nm,18.7s,baz=15,slow=39
ABKAR Akbulak array 70.60 321 *eP* **P 12 03 16.2 -1.1**
comp=Z,2.1nm,0.8s
UNV Unalaska Valle 72.42 35 *eP* **P 12 03 27.9 -0.2**
comp=Z,12nm,0.8s
ARU Arti 73.32 328 *eP* **P 12 03 31.5 -1.9**
comp=Z,6.8nm,0.6s
ARU Arti 73.32 328 *dP* **P 12 03 31.6 -1.9**
ARU *PP **PcP 12 03 51.1 +1.7**
ARU S **S 12 12 53.0 -2.1**
ARU pmax pmax
comp=Z,6.0nm,0.7s
FALS False Pass 74.42 34 *eP* **P 12 03 39.2 -0.6**
comp=Z,15nm,0.6s
RDOG Red Dog Mine 78.00 21 *eP* **P 12 04 00.5 +0.6**
comp=Z,26nm,1.4s
KDAK Kodiak Island 80.83 32 *eP* **P 12 04 16.1 +0.6**
comp=Z,42nm,1.5s
KDAK Kodiak Island 80.83 32 *eP* **P 12 04 16.1 +0.6**
KDAK pmax pmax
comp=Z,42nm,1.5s
CAST Castle Rocks 81.55 27 *eP* **P 12 04 20.1 +0.9**
comp=Z,14nm,0.7s
KIV Kislovodsk 81.67 314 *eP* **P 12 04 18.8 -1.6**
KIV pmax pmax
comp=Z,13nm,1.0s
BPAW Bear Paw Mtn. 82.09 26 *eP* **P 12 04 22.5 +0.4**
comp=Z,20nm,1.0s
MLY Manley 82.27 25 *eP* **P 12 04 23.9 +0.8**
comp=Z,12nm,0.8s
TRF Thorofare Moun 82.36 27 *eP* **P 12 04 23.8 +0.1**
comp=Z,3.6nm,1.0s
RC01 Rabbit Creek A 82.49 29 *eP* **P 12 04 24.3 +0.1**
comp=Z,7.3nm,0.6s
COLD Coldfoot 82.64 23 *eP* **P 12 04 26.1 +1.2**
comp=Z,5.0nm,1.2s
TOLK Toolik Lake Re 82.96 22 *eP* **P 12 04 27.4 +0.9**
comp=Z,15nm,1.1s
MCK McKinley 82.98 27 *eP* **P 12 04 26.9 +0.2**
comp=Z,19nm,1.0s
RND Reindeer 83.00 27 *eP* **P 12 04 26.4 -0.5**
comp=Z,9.2nm,0.8s
RND Reindeer 83.00 27 *eP* **P 12 04 26.4 -0.5**
RND pmax pmax
comp=Z,9.0nm,0.8s
KNK Knik Glacier 83.12 29 *eP* **P 12 04 27.9 +0.4**
comp=Z,30nm,1.3s
SML Sawmill 83.19 28 *eP* **P 12 04 28.2 +0.4**
comp=Z,22nm,1.1s
SML Sawmill 83.19 28 *eP* **P 12 04 28.2 +0.4**
SML pmax pmax
comp=Z,22nm,1.1s
WRH Wood River Hil 83.37 26 *eP* **P 12 04 28.6 -0.1**
comp=Z,12nm,1.0s
COLA College 83.49 25 ⇑*iP* **P 12 04 30.2 +1.0**
COLA pmax pmax
comp=Z,4.0nm,0.9s
CCB Clear Creek Bu 83.50 26 *eP* **P 12 04 29.3 0.0**
comp=Z,17nm,1.3s
DHY Denali Highway 83.66 27 *eP* **P 12 04 30.8 +0.4**
comp=Z,3.7nm,0.7s
SCM Sheep Creek Mo 83.67 28 *eP* **P 12 04 30.6 +0.3**
comp=Z,30nm,1.3s
SCM Sheep Creek Mo 83.67 28 *eP* **P 12 04 30.6 +0.3**
SCM pmax pmax
comp=Z,30nm,1.3s
ILAR Eielson Array 83.90 25 P **P 12 04 30.9 -0.5**
comp=Z,2.2nm,0.5s,baz=246,slow=5.0,SNR=31
ILAR LR LR 12 47 12.2
comp=Z,10nm,19.0s,baz=197,slow=39
ILB Eielson Array 83.90 25 *eP* **P 12 04 30.6 -0.7**
comp=Z,7.1nm,1.1s
VSR Storozhevoye 84.03 321 *eP* **P 12 04 30.4 -1.9**
VSR pmax pmax
comp=Z,5.0nm,0.6s
LPSR Galich'ya Gora 84.16 322 *eP* **P 12 04 31.0 -1.9**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
DIV Divide 84.42 29 *eP* **P 12 04 34.8 +0.6**
comp=Z,16nm,0.8s
RIDG Independent Ri 84.80 27 *eP* **P 12 04 36.1 +0.1**
comp=Z,17nm,1.2s
MAW Mawson 85.06 200 P **P 12 04 37.3 +0.2**
comp=Z,3.7nm,0.8s,baz=55,slow=6.5,SNR=3.7
VNDA Vanda 85.06 173 P **P 12 04 37.0 +0.2**
comp=Z,3.1nm,0.6s,baz=317,slow=6.8,SNR=19
VNDA Vanda 85.06 173 *eP* **P 12 04 37.1 +0.2**
comp=Z,9.9nm,1.2s
VNDA Vanda 85.06 173 *eP* **P 12 04 37.1 +0.2**
VNDA pmax pmax
comp=Z,10.0nm,1.2s
OBN Obninsk 85.47 325 ⇑*iP* **P 12 04 38.8 -0.6**
OBN *eS* **S 12 15 02.0 -1.5**
OBN pmax pmax
comp=Z,19nm,0.3s
OBN MLR MLR
comp=Z,25nm,16.0s
EGAK Eagle 86.35 25 *eP* **P 12 04 43.7 +0.1**
comp=Z,5.3nm,1.1s
ARCES ARCESS Array B 88.78 340 P **P 12 04 53.9 -1.3**
comp=Z,9.2nm,0.4s,baz=88,slow=6.4,SNR=13
ARE0 ARCESS Array S 88.79 340 *eP* **P 12 04 54.1 -1.0**
comp=Z,0.8nm,1.5s
SPA0 Spitsbergen Ar 88.83 349 *eP* **P 12 04 55.1 -0.2**
comp=Z,35nm,1.3s
INK Inuvik 88.88 21 *eP* **P 12 04 55.4 -0.2**
comp=Z,3.7nm,1.0s
INK Inuvik 88.88 21 *eP* **P 12 04 55.4 -0.2**
INK pmax pmax
comp=Z,4.0nm,1.0s
FIA0 FINESS Array S 90.19 332 *eP* **P 12 05 00.3 -1.6**
FIA0 FINESS Array S 90.19 332 *eP* **P 12 05 00.3 -1.6**
FINES FINESS Array B 90.19 332 P **P 12 05 00.3 -1.6**
comp=Z,1.1nm,0.5s,baz=52,slow=5.2,SNR=9.0
FINES LR LR 12 48 32.2
comp=Z,23nm,19.5s,baz=52,slow=38
SYO Syowa Base 93.72 201 ⇓*eP* **P 12 05 15.8 -2.1**
NB200 NORSAR Array S 97.14 334 *eP* **P 12 05 31.8 -2.1**
NOA NORSAR Array B 97.14 334 P **P 12 05 31.8 -2.1**
comp=Z,0.7nm,0.7s,baz=66,slow=4.5,SNR=3.6
NOA LR LR 12 52 00.8
comp=Z,16nm,21.4s,baz=60,slow=37
LTX Lajitas 121.02 51 *e*PKPdf **PKiKP 12 10 55.5 +0.7**
LTX Lajitas 121.02 51 *e*PKIKP **PKiKP 12 10 55.5 +0.7**
TXAR Lajitas Array 121.02 51 PKP **PKiKP 12 10 55.5 +0.7**
comp=Z,0.2nm,0.6s,baz=56,slow=0.5,SNR=3.7
TORD Torodi Ar. Bea 121.92 289 PKP **PKPdf 12 10 56.1 -0.6**
comp=Z,1.3nm,0.6s,baz=33,slow=3.4,SNR=7.2
TOA1 Torodi Ar. Sit 121.93 289 *e*PKPdf **PKPdf 12 10 56.1 -0.6**

WEL 10 12:02:47.6, 41°S±1°×17°4E±°, h80km±2km, M3.5/24, ML3.8/18, MLv3.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=104.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.29**	**261**	P	Pn	12 03 00.2	+0.4
DUWZ				S	Sn	12 03 09.5	+0.6
TCW	**Tory Channel**	**0.45**	**183**	P	Pn	12 03 01.9	+0.9
TCW				S	Sn	12 03 11.8	+1.0
KIW	**Kapiti Island**	**0.47**	**103**	P	Pn	12 03 01.8	+0.7
KIW				S	Sn	12 03 11.4	+0.3
OGWZ	**Otaki Gorge**	**0.66**	**95**	P	Pn	12 03 03.5	+0.7
OGWZ				S	Sn	12 03 14.9	+0.8
CAW	**Cannon Point**	**0.67**	**121**	P	Pn	12 03 03.6	+0.6
CAW				S	Sn	12 03 14.9	+0.6
TUWZ	**Tuamarina**	**0.72**	**202**	P	Pn	12 03 04.1	+0.6
BHW	**Baring Head**	**0.78**	**147**	P	Pn	12 03 04.6	+0.5
NNZ	**Nelson**	**0.84**	**236**	P	Pn	12 03 04.7	-0.1
HOWZ	**Holdsworth Sta**	**0.93**	**99**	P	Pn	12 03 06.0	+0.2
OHWZ	**Ohakea**	**0.95**	**55**	P	Pn	12 03 06.7	+0.7
MSWZ	**Moikau Station**	**0.97**	**133**	P	Pn	12 03 06.8	+0.5
MRZ	**Mangatainoka R**	**0.97**	**85**	P	Pn	12 03 06.3	0.0
MTW	**Mount Morrison**	**0.99**	**114**	P	Pn	12 03 06.8	+0.3
CMWZ	**Cape Campbell**	**0.99**	**184**	P	Pn	12 03 07.7	+1.2
BSWZ	**Blackbirch Sta**	**1.01**	**199**	P	Pn	12 03 07.3	+0.5
PAWZ	**Paruwai Farm**	**1.05**	**127**	P	Pn	12 03 07.7	+0.4
PLWZ	**Palliser**	**1.08**	**139**	P	Pn	12 03 08.0	+0.3
WAZ	**Wanganui**	**1.13**	**28**	P	Pn	12 03 08.9	+0.7
POWZ	**Post Office Ro**	**1.17**	**72**	P	Pn	12 03 08.5	-0.2
TIWZ	**Tintock**	**1.20**	**91**	P	Pn	12 03 09.1	0.0
TRWZ	**Traveller**	**1.23**	**122**	P	Pn	12 03 09.7	+0.3
TMWZ	**Te Maipa**	**1.25**	**107**	P	Pn	12 03 09.9	+0.2
PRWZ	**Pori Road**	**1.28**	**81**	P	Pn	12 03 10.3	+0.1
LREZ	**Lake Rotokare**	**1.30**	**3**	P	Pn	12 03 10.9	+0.6
QRZ	**Quartz Range**	**1.35**	**267**	P	Pn	12 03 10.2	-0.7
NMEZ	**Namu Road**	**1.38**	**346**	P	Pn	12 03 11.6	+0.2
PREZ	**Palmer Road**	**1.42**	**355**	P	Pn	12 03 12.6	+0.7
TSZ	**Takapari Road**	**1.44**	**62**	P	Pn	12 03 11.8	-0.4
THZ	**Tophouse**	**1.46**	**226**	P	Pn	12 03 12.5	+0.1
BFZ	**Birch Farm**	**1.48**	**88**	P	Pn	12 03 12.5	-0.1
KHEZ	**Kahui Hut**	**1.48**	**351**	P	Pn	12 03 12.9	+0.2
DVHZ	**Dannevirke**	**1.49**	**73**	P	Pn	12 03 12.1	-0.7
NBEZ	**Newall Road No**	**1.52**	**347**	P	Pn	12 03 13.5	+0.3
DREZ	**Durham Road**	**1.57**	**357**	P	Pn	12 03 14.2	+0.4
PKE	**Pukeiti**	**1.58**	**351**	P	Pn	12 03 14.2	+0.2
MTVZ	**Mangateitei**	**1.64**	**33**	P	Pn	12 03 15.1	+0.3
VRZ	**Vera Road**	**1.67**	**12**	P	Pn	12 03 15.3	+0.2
PKVZ	**Pokaka**	**1.67**	**29**	P	Pn	12 03 15.0	-0.2
PNHZ	**Pukenui**	**1.68**	**60**	P	Pn	12 03 14.4	-0.8
ANWZ	**Angora Road**	**1.68**	**80**	P	Pn	12 03 14.9	-0.3
TRVZ	**Turoa**	**1.74**	**34**	P	Pn	12 03 16.6	+0.3
MOVZ	**Moawhango**	**1.75**	**40**	P	Pn	12 03 15.7	-0.5
KHZ	**Kahutara**	**1.75**	**199**	P	Pn	12 03 16.3	+0.1
WPHZ	**Waipukurau**	**1.77**	**68**	P	Pn	12 03 16.1	-0.4
WHVZ	**Whangaehu Hut**	**1.77**	**34**	P	Pn	12 03 17.0	+0.3
FWVZ	**Far West T-bar**	**1.78**	**33**	P	Pn	12 03 16.9	+0.1
TUVZ	**Tukino**	**1.81**	**35**	P	Pn	12 03 17.2	0.0
PRHZ	**Porangahau**	**1.84**	**75**	P	Pn	12 03 17.0	-0.4
BHHZ	**Black Hill Sta**	**1.85**	**47**	P	Pn	12 03 17.1	-0.5
NGZ	**Ngauruhoe**	**1.87**	**33**	P	Pn	12 03 18.0	+0.1
TWVZ	**Taurewa**	**1.90**	**28**	P	Pn	12 03 18.0	-0.3
WTVZ	**West Tongariro**	**1.91**	**31**	P	Pn	12 03 18.2	-0.2
KRHZ	**Kereru**	**1.93**	**56**	P	Pn	12 03 18.0	-0.7
KRVZ	**Karewarewa**	**1.95**	**32**	P	Pn	12 03 19.2	+0.2
KATZ	**Kakaramea**	**2.08**	**31**	P	Pn	12 03 21.0	+0.4
KWHZ	**Kaweka Forest**	**2.10**	**51**	P	Pn	12 03 20.4	-0.5
DSZ	**Denniston Nort**	**2.13**	**242**	P	Pn	12 03 20.4	-0.8
KAHZ	**Kahuranaki**	**2.19**	**65**	P	Pn	12 03 21.7	-0.4
RATZ	**Rangitukua**	**2.20**	**31**	P	Pn	12 03 22.1	-0.2
HIZ	**Hauiti**	**2.28**	**11**	P	Pn	12 03 23.1	-0.2
BKZ	**Black Stump Fm**	**2.31**	**47**	P	Pn	12 03 22.9	-0.9
GVZ	**Greta Valley S**	**2.40**	**203**	P	Pn	12 03 24.2	-0.7
LTZ	**Lake Taylor**	**2.53**	**216**	P	Pn	12 03 25.6	-1.0
NMHZ	**Naumai**	**2.54**	**50**	P	Pn	12 03 25.8	-1.0
TLZ	**Tolley Road**	**2.60**	**22**	P	Pn	12 03 27.7	0.0
AMCZ	**Amberley**	**2.71**	**206**	P	Pn	12 03 28.1	-0.9
RAHZ	**Arahi**	**2.82**	**50**	P	Pn	12 03 30.7	+0.2
INZ	**Inchbonnie**	**2.91**	**227**	P	Pn	12 03 30.6	-1.0
MUGZ	**Murupara**	**2.97**	**41**	P	Pn	12 03 33.4	+0.9
OXZ	**Oxford**	**3.07**	**213**	P	Pn	12 03 31.7	-2.2
CRLZ	**Canterbury Las**	**3.08**	**203**	P	Pn	12 03 32.9	-1.1
OKCZ	**Okains Bay**	**3.10**	**197**	P	Pn	12 03 33.2	-1.2
TOZ	**Tahuroa Road**	**3.16**	**17**	P	Pn	12 03 34.6	-0.5
MQZ	**McQueen's Vall**	**3.19**	**202**	P	Pn	12 03 33.1	-2.3
MHGZ	**Mahia Peninsul**	**3.20**	**61**	P	Pn	12 03 34.1	-1.5
AKCZ	**Akaroa Harbour**	**3.28**	**198**	P	Pn	12 03 35.2	-1.5
WVZ	**Waitaha Valley**	**3.53**	**228**	P	Pn	12 03 39.9	-0.2
TKGZ	**Te Karaka**	**3.58**	**51**	P	Pn	12 03 39.5	-1.4
KBAZ	**Karaka Road Bo**	**3.69**	**7**	P	Pn	12 03 42.6	+0.4
AWAZ	**Awhitu Peninsu**	**3.70**	**4**	P	Pn	12 03 42.3	-0.1
MKAZ	**Moumakai**	**3.71**	**11**	P	Pn	12 03 42.2	-0.3
RPZ	**Rata Peaks**	**3.82**	**218**	P	Pn	12 03 43.5	-0.6
ETAZ	**East Tamaki Re**	**3.83**	**7**	P	Pn	12 03 44.1	-0.1
TWGZ	**Tauwhareparae**	**3.84**	**49**	P	Pn	12 03 42.4	-2.0
RVAZ	**Riverhead Bore**	**3.99**	**3**	P	Pn	12 03 46.1	-0.2
MBAZ	**Motutapu North**	**4.01**	**7**	P	Pn	12 03 46.9	+0.2
WIAZ	**Waiheke Island**	**4.01**	**10**	P	Pn	12 03 46.7	0.0
HAZ	**Te Kaha**	**4.03**	**43**	P	Pn	12 03 45.3	-1.6
ABAZ	**Army Bay**	**4.17**	**6**	P	Pn	12 03 48.8	0.0
FOZ	**Fox Glacier**	**4.34**	**229**	P	Pn	12 03 49.3	-1.8
LBZ	**Lake Benmore**	**4.73**	**219**	P	Pn	12 03 56.1	-0.4
WCZ	**Waipu Caves**	**4.81**	**0**	P	Pn	12 03 57.4	-0.2
ODZ	**Otahua Downs**	**5.06**	**211**	P	Pn	12 03 58.7	-2.2
JCZ	**Jackson Bay**	**5.26**	**229**	P	Pn	12 04 01.8	-2.0

SJA 10 12:10:59.0±0.5, 31°59S×69°55W, h116km±4km, ML3.2, MW3.9, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.30**	**133**	*i* P	Pn	12 11 16.8	+0.9
RTLS				*i* S	Sn	12 11 30.1	+1.6
RTLS				IAML		12 11 30.2	
	comp=Z,504nm,0.2s						
AUSP	**Uspallata**	**0.64**	**168**	*i* P	Pn	12 11 19.0	+1.1
RTCV	**Cerro Valdivia**	**0.90**	**108**	*i* P	Pn	12 11 20.5	+0.7
RTCV				*i* S	Sn	12 11 36.3	+0.8
AMOG	**MOGNA**	**1.12**	**54**	*i* P	Pn	12 11 23.1	+1.1
ASAL	**Salagasta**	**1.17**	**149**	*i* P	Pn	12 11 23.2	+0.7
ASAL				*i* S	Sn	12 11 41.7	+1.4

MAN 10 12:18:28.5, 13°75N×120°62E, h100km, mb3.5, ML2.2, MS1.7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.36**	**267**	*eP*	Pn	12 18 44.9	+1.4
LUBP				*eS*	Sn	12 18 57.5	+2.9
PGP	**Puerto Galera**	**0.41**	**128**	⇑*iP*	Pn	12 18 45.2	+1.4
PGP				*i* S	Sn	12 18 58.0	+2.9
SJMP	**San Jose**	**1.37**	**159**	*eP*	Pn	12 18 54.5	+1.2
SJMP				*eS*	Sn	12 19 12.8	+0.8
BUSP	**Coron**	**1.79**	**193**	*eP*	Pn	12 18 58.9	+0.4

DJA 10 12:36:43.8±0.8, 10°S±5°×11°9E±°, h10km±5km, M4.0/7, mb4.4/1, mB4.5/1, MLv3.8/7, Mw(mB)3.6/1, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.96**	**42**	P	Pg	12 37 01.5	-0.8
WBSI				S	Sb	12 37 15.8	+0.4
WSI	**Waingapu**	**1.68**	**66**	P	Pn	12 37 12.7	-0.6
WSI				S	Sb	12 37 36.1	0.0
PLAI	**Plampang**	**1.79**	**328**	P	Pn	12 37 14.5	-0.4
PLAI				S	Sn	12 37 38.1	+0.4
EDFI	**Ende, Flores**	**3.32**	**61**	P	Pn	12 37 34.2	-1.8
BSSI	**Bau Bau, Buton**	**4.53**	**23**	P	Pn	12 37 54.1	+1.5
BSSI				S	Sn	12 38 46.0	+0.6
BKSI	**Bulukumba**	**5.19**	**15**	P	Pn	12 38 02.7	+1.1
BKSI				S	Sn	12 39 00.1	-1.4

MEX 10 12:48:13.1±0.5, 16°31N×98°22W, h23km±6km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.12**	**47**	*i* P	Pb	12 48 16.4	-1.2
PNIG				*i* S	Sb	12 48 19.5	-1.2
TLIG	**Tlapa**	**1.29**	**345**	*eP*	Pn	12 48 32.7	-3.1
TLIG				*eS*	Sn	12 48 47.6	-4.9

*IDC **10** 12:52:33.5±1.7, 8°47S×124°50E, h0km, mb3.8/2, mb1 3.7/4, mb1mx3.5/26, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=169.9km s-min=31.0km az=59.0*
*ISCJB **10** 12:52:42.5±1.0, 9°1S±0°1×123°85E±0°09, h100km, mb3.7/2, Error ellipse: s-maj=19.8km s-min=8.3km az=34.7.*
*DJA **10** 12:52:47.4±1.3, 9°S±6°×12°4E±°, h32km±25km, M3.1/5, MLv3.1/5*
ISC 10 12:52:44.2±1.2, 9°2S±0°2×123°8E±0°1, h100km, n7, σ1°15/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.76**	**137**	P	**Pn**	**12 53 03.3**	**+1.0**
SOEI				S	**Sn**	**12 53 13.9**	**-2.0**
BATI	**Baumata**	**1.01**	**185**	P	**Pn**	**12 53 05.5**	**+0.7**
EDFI	**Ende, Flores**	**2.08**	**282**	P	**Pn**	**12 53 18.5**	**+0.6**
EDFI				S	**Sn**	**12 53 42.8**	**-0.9**
WRA	**Warramunga Arr**	**14.80**	**137**	Pn	Pn	12 56 04.7	-3.8
	0.1nm,0.3s,baz=316,slow=13,SNR=15						
WRA				Sn	Sn	12 58 39.0	-13
	0.3nm,0.3s,baz=319,slow=24,SNR=6.6						
ASAR	**Alice Springs**	**17.36**	**147**	Pn	**P**	**12 56 40.5**	**+0.3**
	0.1nm,0.3s,baz=320,slow=12,SNR=9.9						
ASAR				Sn	Sn	12 59 42.5	-11
	0.1nm,0.3s,baz=319,slow=23,SNR=5.1						
MKAR	**Makanchi Array**	**66.86**	**330**	P	**P**	**13 03 25.4**	**-0.1**
	0.4nm,0.5s,baz=130,slow=8.3,SNR=5.5						
ZALV	**Zalesovo Beam**	**70.98**	**337**	P	**P**	**13 03 50.7**	**-0.1**
	0.5nm,0.3s,baz=142,slow=7.3,SNR=2.7						

MEX 10 13:15:15.2±0.7, 16°38N×98°42W, h2km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.28**	**88**	*eP*	Pg	13 15 20.0	-0.6
PNIG				*i* S	Sg	13 15 24.7	+0.4
TLIG	**Tlapa**	**1.18**	**353**	*eP*	Pg	13 15 34.9	-3.0
TLIG				*i* S	Sg	13 15 51.0	-2.2

*ISCJB **10** 13:19:07.5±0.7, 50°60N±0°07×5°70E±0°08, h14km, Error ellipse: s-maj=10.1km s-min=6.6km az=153.2*
ISC 10 13:19:08.1±1.3, 50°61N±0°05×5°69E±0°05, h14km, n8, σ1°07/9, Belgium

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCH	**La Chartreuse**	**0.07**	**301**	P	**Pg**	**13 19 09.9**	**-0.9**
BSTI	**Sart Tilman**	**0.08**	**255**	P	**Pg**	**13 19 09.0**	**-2.0**
BEBN	**Eben Emael**	**0.19**	**358**	P	**Pg**	**13 19 12.4**	**-0.1**
MEM	**Membach**	**0.20**	**89**	P	**Pg**	**13 19 11.8**	**-0.8**
HGN	**Heimansgroeve**	**0.22**	**44**	*eP*g	**Pg**	**13 19 12.5**	**-0.5**
HGN				*eS*g	**Sg**	**13 19 16.1**	**-0.2**
HGN				*eR*g	Rg	13 19 19.5	
BCLA	**Clavier**	**0.31**	**233**	P	**Pg**	**13 19 14.5**	**+0.1**
BHOU	**Houvegnez**	**0.32**	**141**	P	**Pg**	**13 19 14.5**	**-0.2**
BSKQ	**Steenkerk**	**1.02**	**273**	P	**Pb**	**13 19 28.5**	**+1.0**

*MDD **10** 13:29:44.3±3.4, 32°24N×7°56W, h0km, mb3.6/2, Error ellipse: s-maj=54.6km s-min=30.2km az=91.0, PRXIMO*
INMG 10 13:29:45.4±1.1, 32°33N×7°81W, h0km, ML2.2, Error ellipse: s-maj=4.7km s-min=3.4km az=119.0, Morocco

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

PBDV	**Barranco-do-Ve**	**4.90**	**359**	*e*Pn	Pn	13 30 59.3	-1.1
PBDV				*e*Sn	Sn	13 31 55.3	-2.5
PBDV	**Barranco-do-Ve**	**4.90**	**359**	Pn	Pn	13 30 59.3	-1.1
PBDV				Sn	Sn	13 31 55.3	-2.5
MORF	**Marmelete**	**5.01**	**352**	*e*Pn	Pn	13 31 00.9	-1.0
MORF				*e*Sn	Sn	13 31 57.7	-2.9
MORF				A	A	13 32 05.1	
	1.6nm,0.3s						
MORF	**Marmelete**	**5.01**	**352**	Pn	Pn	13 31 00.9	-1.0
MORF				Sn	Sn	13 31 57.7	-2.9
	1.6nm,0.3s						
PVAQ	**Vaqueiros**	**5.06**	**1**	*e*Pn	Pn	13 31 01.3	-1.2
PVAQ				*e*Sn	Sn	13 31 58.2	-3.5
PVAQ				A	A	13 31 59.7	
	2.9nm,0.5s						
PVAQ	**Vaqueiros**	**5.06**	**1**	Pn	Pn	13 31 01.3	-1.2
PVAQ				Sn	Sn	13 31 58.2	-3.5
	2.9nm,0.5s						
PTEO	**Sao Teotonio**	**5.26**	**352**	*e*Pn	Pn	13 31 04.4	-0.8
PTEO	**Sao Teotonio**	**5.26**	**352**	Pn	Pn	13 31 04.4	-0.8
PCVE	**Castro Verde**	**5.29**	**358**	*e*Pn	Pn	13 31 05.0	-0.7
PCVE	**Castro Verde**	**5.29**	**358**	Pn	Pn	13 31 05.0	-0.7
EMIN	**Mina Concepcio**	**5.50**	**9**	Pn	Pn	13 31 07.3	-1.3
	0.6nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	13 32 07.8	-4.8
	0.2nm,0.3s,SNR=7.9						
PNCL	**Nicolau / Gran**	**5.80**	**354**	*e*Pn	Pn	13 31 12.0	-0.6
PNCL				*e*Sn	Sn	13 32 16.6	-3.2
PNCL				A	A	13 32 21.3	
	1.9nm,0.4s						
PNCL	**Nicolau / Gran**	**5.80**	**354**	Pn	Pn	13 31 12.0	-0.6
PNCL				Sn	Sn	13 32 16.6	-3.2
	1.9nm,0.4s						
ECAB	**El Cabril**	**6.06**	**18**	Pn	Pn	13 31 15.0	-1.3
	0.4nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	13 32 19.0	-7.3
	0.8nm,0.6s,SNR=7.9						
EVO	**Evora**	**6.19**	**359**	*e*Pn	Pn	13 31 17.0	-1.0
EVO				*e*Sn	Sn	13 32 26.0	-3.5
EVO				A	A	13 32 27.6	
	2.7nm,0.5s						
EVO	**Evora**	**6.19**	**359**	Pn	Pn	13 31 17.0	-1.0
EVO				Sn	Sn	13 32 26.0	-3.5
	2.7nm,0.5s						

*NNC **10** 13:50:08.6±3.4, 36°.70N×70°.99E, h110km±108km, mb3.2, mpv3.8, Error ellipse: s-maj=32.9km s-min=25.4km az=136.0*

ISC 10 13:50:07.5±3.6, 36°.6N±0°.2×71°.0E±0°.1, h100km, n12, σ0°61/15, 3C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.89**	**20**	P	**Pn**	**13 51 32.9**	**+0.3**
	SNR=65						
UCH	**Uchtor**	**6.23**	**25**	P	**Pn**	**13 51 37.2**	**-0.1**
	SNR=9.5						
KZA	**Kyzart**	**6.38**	**30**	P	**Pn**	**13 51 38.9**	**-0.3**
	SNR=8.4						
EKS2	**Erkin-Say**	**6.41**	**19**	P	**Pn**	**13 51 40.7**	**+1.3**
	SNR=16						
KK31	**Karatay Array**	**6.49**	**357**	⇑P	**Pn**	**13 51 41.0**	**+0.6**
	1.4nm,0.2s,baz=172,slow=11,SNR=79						
KK31				⇓S	**Sn**	**13 52 52.0**	**-1.0**
	3.8nm,0.3s,baz=193,slow=24,SNR=9.0						
AAK	**Ala-Archa**	**6.59**	**23**	P	**Pn**	**13 51 42.5**	**+0.5**
	SNR=8.1						
AAK	**Ala-Archa**	**6.59**	**23**	⇑P	**Pn**	**13 51 42.1**	**+0.2**
	4.2nm,0.3s						
AAK				⇓S	**Sn**	**13 52 55.7**	**0.0**
	4.8nm,0.5s						
CHMS	**Chumysh**	**7.00**	**23**	P	**Pn**	**13 51 47.7**	**+0.3**
	SNR=8.7						
USP	**Ospenovka**	**7.17**	**21**	P	**Pn**	**13 51 50.0**	**+0.4**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.23**	**28**	P	**Pn**	**13 51 50.6**	**0.0**
	SNR=9.0						
TKM2	**Tokmak 2**	**7.23**	**28**	⇑P	**Pn**	**13 51 49.9**	**-0.7**
	3.1nm,0.5s						
TKM2				⇓S	**Sn**	**13 53 11.6**	**+0.4**
	4.7nm,0.8s						
AB31	**Akbulak array**	**14.98**	**331**	⇓P	**Pn**	**13 53 33.5**	**-0.2**
	0.3nm,0.3s,baz=166,slow=12,SNR=4.1						

*ISK **10** 13:53:39.2, 40°.02N×33°.09E, h6km, ML1.9/5*
*ISCJB **10** 13:53:40.8±0.6, 39°.92N±0°.04×33°.08E±0°.03, h5km±5km, Error ellipse: s-maj=5.9km s-min=4.0km az=1.9*
*DDA **10** 13:53:40.6, 39°.90N×33°.11E, h7km±3km, ML2.6*

ISC 10 13:53:40.5±1.2, 39°.93N±0°.04×33°.11E±0°.03, h3km±10km, n14, σ0°72/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.25**	**256**	PG	**Pg**	**13 53 45.1**	**-0.3**
ANTO				SG	**Sg**	**13 53 49.2**	**+0.5**
LOD	**Lodumlu**	**0.27**	**262**	PG	**Pg**	**13 53 45.3**	**-0.4**
LOD				SG	**Sg**	**13 53 49.7**	**+0.4**
BBAL	**Bala**	**0.39**	**179**	*i* P	**Pg**	**13 53 48.4**	**+0.5**
BBAL				*i* S	**Sg**	**13 53 54.0**	**+1.0**
BBAL				IAML_P			
	comp=Z,3μm,0.2s						
ELDT	**Eldivan**	**0.61**	**23**	*i* P	**Pb**	**13 53 53.6**	**-0.4**
ELDT				IAML_P			
	comp=Z,2μm,0.2s						
DELI	**KIRIKKALE**	**0.62**	**83**	*i* P	**Pb**	**13 53 53.8**	**-0.4**
DELI				*i* S	**Sb**	**13 54 03.2**	**-0.1**
DELI				IAML_P			
	comp=Z,1μm,0.2s						
KKUL	**Konya-Kulu**	**0.77**	**191**	*i* P	**Pg**	**13 53 54.8**	**-0.5**
KKUL				*i* S	**Sb**	**13 54 06.8**	**-0.7**
KKUL				IAML_P			
	comp=Z,369nm,0.2s						
KIRS	**Kırehir-Merke**	**1.01**	**142**	*i* P	**Pg**	**13 53 59.6**	**-0.3**
KIRS				*i* S	**Sb**	**13 54 14.3**	**-0.1**
KIRS				IAML_P			
	comp=Z,471nm,0.2s						
CDAG	**Cicekdag**	**1.02**	**107**	*i* P	**Pg**	**13 54 00.2**	**+0.2**
CDAG				*i* S	**Sn**	**13 54 16.5**	**-0.1**
CDAG				IAML_P			
	comp=Z,756nm,0.2s						
KIBS	**BOLU**	**1.08**	**297**	*i* P	**Pb**	**13 54 01.9**	**0.0**
KIBS				*i* S	**Sn**	**13 54 20.4**	**+2.2**
KIBS				IAML_P			
	comp=Z,576nm,0.2s						
YAYX	**Yaylak**	**1.13**	**151**	PN	**Pg**	**13 54 02.2**	**+0.1**
YAYX				SN	**Sn**	**13 54 20.2**	**+0.9**
AUMIH	**MIHALICIK**	**1.25**	**268**	*i* P	**Pn**	**13 54 05.2**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.32**	**249**	PN	**Pg**	**13 54 04.9**	**-0.8**
SVRH				SN	**Sn**	**13 54 23.8**	**-0.2**
KIZT	**Kizilcal**	**1.42**	**223**	PN	**Pn**	**13 54 06.8**	**-0.5**
YOZ	**Yozgat**	**1.73**	**99**	PN	**Pn**	**13 54 10.9**	**-0.6**

*NEIC **10** 14:12:03.1±2.5, 1°.43N×126°.15E, h21km±19km, mb4.4/8, Error ellipse: s-maj=9.7km s-min=5.9km az=61.0*
*DJA **10** 14:12:03.2±0.6, 2°.N±7°×12°.6E±°, h10km, M4.8/5, MLv4.8/5*
*ISCJB **10** 14:12:04.4±0.3, 1°.45N±0°.04×126°.27E±0°.07, h47km, mb4.1/20, Error ellipse: s-maj=10.2km s-min=5.5km az=163.1*
*IDC **10** 14:12:07.5±3.7, 1°.44N×126°.28E, h56km±35km, mb3.8/15, mb1 3.9/17, mb1mx3.8/35, mbtmp4.1/17, ML4.0/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/35, Error ellipse: s-maj=27.4km s-min=11.8km az=75.0*

ISC 10 14:12:06.4±0.5, 1°.45N±0°.06×126°.38E±0°.09, h47km, n47, σ1°18/44, mb4.1/20, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**124**	*e*Pn	**Pn**	**14 12 26.1**	**-0.5**
TNTI	**Ternate**	**1.19**	**124**	P	**Pn**	**14 12 26.4**	**-0.2**
SGSI	**Sangihe**	**2.38**	**339**	P	**Pn**	**14 12 41.0**	**-1.9**
KMSI	**Cibinong**	**2.55**	**250**	P	**Pn**	**14 12 45.6**	**+0.3**
LUWI	**Luwuk**	**4.38**	**236**	*e*Pn	**Pn**	**14 13 06.5**	**-3.8**
SIJI	**Sorong**	**5.40**	**115**	LR	LR	14 15 36.9	
	comp=Z,159nm,21.5s,baz=161,slow=38						
CTBH	**Cotabato--PC H**	**6.12**	**340**	⇑*i*P	**Pn**	**14 13 33.8**	**-0.5**
FAKI	**Fak Fak**	**7.30**	**127**	*e*Pn	**Pn**	**14 13 52.1**	**+1.7**
KAPI	**Kappang**	**9.22**	**226**	P	**Pn**	**14 14 18.7**	**+1.8**
	1.5nm,0.3s,baz=48,slow=13,SNR=3.6						
MMRI	**Maumere**	**10.84**	**202**	*e*Pn	Pn	14 14 29.3	-10
KKM	**Kota Kinabalu**	**11.12**	**294**	*e*Pn	Pn	14 14 36.6	-6.4

BATI	**Baumata**	**11.89**	**193**	LR	LR	14 19 31.7	
	comp=Z,82nm,20.6s,baz=154,slow=38						
MTN	**Manton Dam**	**14.96**	**162**	*e*Pn	**Pn**	**14 15 35.1**	**+0.2**
	7.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.44**	**182**	P	**P**	**14 16 29.1**	**+0.1**
	0.3nm,0.3s,baz=25,slow=8.0,SNR=9.9						
FITZ	**Fitzroy Crossi**	**19.44**	**182**	*e*P	**P**	**14 16 28.2**	**-0.9**
WRAB	**Tennant Creek**	**22.64**	**160**	*e*P	**P**	**14 17 03.1**	**-0.6**
	9.5nm,0.7s						
WR1	**Warramunga Arr**	**22.65**	**160**	*e*P	**P**	**14 17 03.4**	**-0.3**
WRA	**Warramunga Arr**	**22.65**	**160**	P	**P**	**14 17 03.4**	**-0.3**
	10nm,0.6s,baz=337,slow=12,SNR=52						
WB2	**Warramunga Arr**	**22.65**	**160**	*e*P	**P**	**14 17 03.2**	**-0.5**
	12nm,0.8s						
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**14 17 35.8**	**+0.6**
	1.5nm,0.5s,baz=348,slow=7.3,SNR=41						
ASAR				PcP	**PcP**	**14 21 03.4**	**+0.7**
	0.7nm,0.5s,baz=347,slow=2.4,SNR=6.9						
CMAR	**Chiang Mai Arr**	**31.78**	**304**	P	**P**	**14 18 25.3**	**-1.2**
	0.2nm,0.3s,baz=108,slow=6.0,SNR=4.1						
KS15	**Wonju Array Si**	**35.84**	**2**	*e*P	**P**	**14 19 02.0**	**+0.4**
KSAR	**Wonju Array Be**	**35.84**	**2**	P	**P**	**14 19 02.0**	**+0.4**
KSRS	**Korea Array**	**35.86**	**2**	P	**P**	**14 19 02.0**	**+0.3**
	1.0nm,0.7s,baz=181,slow=9.4,SNR=4.6						
STKA	**Stephens Creek**	**36.15**	**158**	P	**P**	**14 19 04.8**	**+0.5**
	2.8nm,0.7s,baz=340,slow=9.0,SNR=9.2						
STKA	**Stephens Creek**	**36.15**	**158**	*e*P	**P**	**14 19 04.3**	**0.0**
	6.6nm,2.0s						
MJAR	**Matsushiro Arr**	**36.59**	**16**	P	**P**	**14 19 07.7**	**-0.4**
	1.0nm,0.7s,baz=187,slow=10,SNR=3.1						
MAJO	**Matsushiro**	**36.59**	**16**	*e*P	**P**	**14 19 07.7**	**-0.4**
USRK	**Ussuriysk Ar.**	**42.86**	**6**	P	**P**	**14 19 59.7**	**-0.3**
	1.6nm,0.6s,baz=204,slow=9.3,SNR=6.5						
SONA0	**Songino Array**	**49.34**	**342**	*e*P	**P**	**14 20 52.1**	**+1.0**
SONM	**Songino Array**	**49.34**	**342**	P	**P**	**14 20 52.1**	**+1.0**
	0.6nm,0.4s,baz=130,slow=6.4,SNR=3.2						
PETK	**Petropavlovsk-**	**57.66**	**22**	P	**P**	**14 21 53.1**	**+1.3**
	1.9nm,0.8s,baz=184,slow=4.3,SNR=8.2						
PEA1	**Petropavlovsk-**	**57.66**	**22**	*e*P	**P**	**14 21 53.1**	**+1.3**
MK32	**Makanchi Array**	**59.23**	**326**	*e*P	**P**	**14 22 02.3**	**-0.6**
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**14 22 02.3**	**-0.6**
	1.8nm,0.6s,baz=120,slow=8.2,SNR=15						
KSH	**Kashi**	**59.42**	**316**	*e*P	**P**	**14 22 07.6**	**+3.1**
ZALV	**Zalesovo Beam**	**62.46**	**334**	P	**P**	**14 22 25.6**	**+1.0**
	0.5nm,0.4s,baz=108,slow=4.7,SNR=2.8						
ZAA1	**Zalesovo Array**	**62.46**	**334**	*e*P	**P**	**14 22 25.6**	**+1.0**
KURK	**Kurchatov**	**63.47**	**328**	*e*P	**P**	**14 22 30.1**	**-1.4**
	4.3nm,0.7s						
TIXI	**Tiksi**	**70.11**	**1**	*e*P	**P**	**14 23 12.9**	**-0.5**
	3.4nm,1.1s						
NRIK	**Noril'sk**	**72.55**	**347**	P	**P**	**14 23 28.4**	**+0.3**
	5.0nm,0.7s,baz=138,slow=9.3,SNR=8.0						
ABKAR	**Akbulak array**	**73.69**	**321**	*e*P	**P**	**14 23 33.5**	**-1.8**
	1.2nm,0.8s						
AKTO	**Aktyubinsk**	**75.22**	**322**	P	**P**	**14 23 43.9**	**-0.3**
	0.9nm,0.4s,baz=134,slow=12,SNR=4.6						
ARU	**Arti**	**76.67**	**328**	P	**P**	**14 23 51.1**	**-1.1**
	0.7nm,0.3s,baz=89,slow=2.6,SNR=5.7						
ARU	**Arti**	**76.67**	**328**	*e*P	**P**	**14 23 50.6**	**-1.6**
	4.3nm,0.8s						
VNDA	**Vanda**	**81.22**	**173**	P	**P**	**14 24 16.2**	**-0.6**
	0.6nm,0.6s,baz=315,slow=5.7,SNR=2.2						
CFA	**Coronel Fontan**	**146.98**	**157**	PKPbc	**PKPbc**	**14 31 44.9**	**+0.3**
	1.5nm,0.5s,baz=219,slow=5.9,SNR=4.7						

*IDC **10** 14:21:10.6±0.5, 5°.55S×81°.69W, h0km, mb4.6/21, mb1 4.7/26, mb1mx4.7/31, mbtmp4.6/26, ML4.2/5, MS4.2/21, Ms1 4.2/21, ms1mx4.1/22, Error ellipse: s-maj=20.1km s-min=9.8km az=56.0*
*GCMT **10** 14:21:11.8±0.2, 5°.85S±0°.01×81°.90W±0°.01, h18km±1km, MW5.0/83, Moment Tensor Solution. s39,c44; s83,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.75±.13; $M_{\theta\theta}$-3.25±.10; $M_{\phi\phi}$5.01±.14; $M_{r\theta}$-0.76±.27; $M_{\theta\phi}$0.16±.10; $M_{\phi r}$0.53±.29; Best double couple: $M_0$4.31700×10^{16} NP1:ϕ_s139.00000°, δ77.00000°, λ-160.00000°. NP2: ϕ_s44.00000°, δ71.00000°, λ-14.00000°. Principal axes: T 5.0530, Plg4.0000°, Azm271.0000°; N -1.4620, Plg66.0000°, Azm171.0000°; P -3.5810, Plg23.0000°, Azm3.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*VAO **10** 14:21:14.5±0.6, 5°.64S×81°.46W, h10km, mb5.0*
*NEIC **10** 14:21:16.8±0.1, 5°.56S×81°.63W, mb4.9/184, Error ellipse: s-maj=4.7km s-min=2.1km az=57.0*
*ISCJB **10** 14:21:16.9±1.0, 5°.46S±0°.03×81°.56W±0°.04, h60km±8km, mb4.8/184, MS4.3/24, Error ellipse: s-maj=7.4km s-min=3.2km az=147.4*
*BJI **10** 14:21:18.0±0.0, 5°.60S×81°.60W, h34km, mB5.1/2, Ms5.2/4, Ms7 4.9/4*

ISC 10 14:21:16.3±0.6, 5°.60S±0°.05×81°.61W±0°.06, h40km±4km, h41km: pP-P, n564, σ0°99/566, mb4.9/184, MS4.3/24, 1C-1D, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.54**	**116**	Pn	**Pn**	**14 22 10.7**	**+1.6**
	32nm,0.3s,baz=337,slow=6.5,SNR=110						
ATAH				Sn	**Sn**	**14 22 51.8**	**+1.9**
	58nm,0.3s,baz=17,slow=20,SNR=6.7						
OTAV	**Otavalo**	**6.60**	**29**	*e*Pn	**Pn**	**14 22 49.7**	**-1.5**
OTAV	**Otavalo**	**6.60**	**29**	*e*P	**Pn**	**14 22 50.0**	**-1.2**
OTAV	**Otavalo**	**6.60**	**29**	*e*P	**Pn**	**14 22 50.2**	**-1.0**
NNA	**Nana**	**7.90**	**144**	Pn	**Pn**	**14 23 08.9**	**+0.2**
	12nm,0.3s,baz=311,slow=11,SNR=25						
NNA				Sn	**Sn**	**14 24 30.5**	**-6.5**
	13nm,0.3s,baz=246,slow=19,SNR=4.7						
NNA				LR	LR	14 25 59.7	
	comp=Z,587nm,21.6s,baz=332,slow=36						
NNA	**Nana**	**7.90**	**144**	*e*Pn	**Pn**	**14 23 07.2**	**-1.5**
NNA				Sn	**Sn**	**14 24 30.5**	**-6.5**
BBAC	**Balboa, Cauca**	**8.73**	**30**	*e*P	**Pn**	**14 23 21.2**	**+0.9**
PTLC	**Puerto Leguiza**	**8.89**	**50**	*e*P	**Pn**	**14 23 18.2**	**-4.1**
POPC	**Popayan, Colom**	**9.47**	**31**	*e*P	**Pn**	**14 23 33.3**	**+2.9**
PAYG	**Puerto Ayora**	**9.95**	**299**	*e*Pn	**Pn**	**14 23 34.0**	**-2.8**
ROSC	**El Rosal**	**12.67**	**35**	LR	LR	14 29 53.6	
	comp=Z,1μm,19.3s,baz=218,slow=41						
DBBC	**Dabeiba**	**13.64**	**23**	*e*P	**Pn**	**14 24 29.9**	**+2.5**
BCIP	**Isla Barro Col**	**14.77**	**7**	*e*Pn	**Pn**	**14 24 44.2**	**+1.6**
JTS	**Las Juntas de**	**16.13**	**348**	Pn	**Pn**	**14 25 00.2**	**-0.1**
	0.6nm,0.3s,baz=216,slow=3.3,SNR=5.5						
JTS				LR	LR	14 29 47.3	
	comp=Z,697nm,20.1s,baz=235,slow=32						
JTS	**Las Juntas de**	**16.13**	**348**	*e*Pn	**P**	**14 25 02.8**	**-0.2**
	70nm,1.5s						
LPAZ	**La Paz**	**16.95**	**130**	P	**P**	**14 25 12.2**	**-0.5**
	0.5nm,0.3s,baz=324,slow=13,SNR=46						
LPAZ				LR	LR	14 32 54.1	
	comp=Z,331nm,20.7s,baz=313,slow=41						
LPAZ	**La Paz**	**16.95**	**130**	*e*Pn	**P**	**14 25 12.4**	**-0.4**
	47nm,0.9s						
ACON	**Acoyapa**	**17.81**	**349**	*e*Pn	**P**	**14 25 21.9**	**+0.4**
	32nm,1.0s						
MNMC	**Minye Minye**	**17.83**	**140**	*e*Pn	**Pn**	**14 25 21.7**	**0.0**
	23nm,0.8s						
ESPN	**Las Esperanzas**	**17.88**	**351**	*e*Pn	**Pn**	**14 25 20.5**	**-1.6**
	20nm,0.7s						
SDV	**Santo Domingo**	**18.07**	**37**	P	**Pn**	**14 25 25.3**	**+0.6**
	2.6nm,0.3s,baz=206,slow=11,SNR=14						
SDV	**Santo Domingo**	**18.07**	**37**	*e*P	**Pn**	**14 25 26.1**	**+1.5**
	258nm,1.8s						
SDV	**Santo Domingo**	**18.07**	**37**	*e*P	**Pn**	**14 25 26.7**	**+2.0**
PB11	**IPOC Station P**	**18.26**	**142**	*e*P	**Pn**	**14 25 27.8**	**+0.9**
	32nm,0.7s						
GO01	**Chusmiza**	**18.48**	**140**	*e*P	**Pn**	**14 25 30.7**	**+0.9**
	64nm,1.4s						
PB01	**IPOC Station P**	**19.34**	**144**	*e*P	**Pn**	**14 25 40.9**	**+1.1**
	12nm,0.9s						
CSGN	**Cosiguina Volc**	**19.38**	**342**	*e*P	**Pn**	**14 25 40.0**	**-0.3**
	160nm,1.5s						
TGUH	**Tegucigalpa,Un**	**20.32**	**344**	*e*P	**P**	**14 25 50.0**	**+0.7**
	47nm,0.8s						
PB10	**IPOC Station P**	**20.75**	**150**	*e*P	**P**	**14 25 55.0**	**+1.3**
	25nm,0.8s						
LVC	**Limon Verde**	**20.89**	**145**	P	Pn	14 25 57.4	-0.9
	15nm,0.9s,baz=304,slow=7.8,SNR=8.9						
LVC	**Limon Verde**	**20.89**	**145**	*e*P	**P**	**14 25 57.0**	**+1.4**
	31nm,1.0s						
PTGA	**Pitinga**	**22.13**	**78**	P	**P**	**14 26 08.6**	**-0.1**
	119nm,0.9s,baz=258,slow=12,SNR=141						
PTGA	**Pitinga**	**22.13**	**78**	*e*P	**P**	**14 26 08.5**	**-0.2**
	147nm,0.9s						
PTGA	**Pitinga**	**22.13**	**78**	*e*P	**P**	**14 26 08.6**	**-0.1**

APG	**El Apazote**	**22.27**	**337**	P	**P**	**14 26 10.6**	**+0.2**
	11nm,0.9s,baz=90,slow=23,SNR=5.6						
GO02	**Mina Guanaco**	**22.61**	**151**	*e*P	**P**	**14 26 15.8**	**+1.8**
	40nm,1.1s						
SIV	**San Ignacio**	**22.63**	**119**	P	**P**	**14 26 14.2**	**+0.1**
	15nm,0.9s,baz=302,slow=10,SNR=54						
CLDB	**Colider**	**26.06**	**103**	*e*P	**P**	**14 26 46.7**	**+0.4**
CMIG	**Matias Romero**	**26.09**	**330**	P	**P**	**14 26 46.4**	**+0.1**
	4.5nm,0.8s,baz=127,slow=11,SNR=9.7						
SJG	**San Juan**	**28.07**	**33**	P	**P**	**14 27 05.5**	**+1.4**
	11nm,0.3s,baz=233,slow=2.5,SNR=6.1						
SJG	**San Juan**	**28.07**	**33**	*e*P	**P**	**14 27 05.5**	**+1.4**
	53nm,1.0s						
CBYP	**Canovanas**	**28.36**	**33**	*e*P	**P**	**14 27 08.3**	**+1.5**
	289nm,1.8s						
CFA	**Coronel Fontan**	**28.75**	**156**	P	**P**	**14 27 11.2**	**+1.0**
	2.9nm,0.8s,baz=336,slow=6.1,SNR=4.5						
AQDB	**Aquidauana**	**29.18**	**123**	*e*P	**P**	**14 27 15.5**	**+1.4**
CPUP	**Villa Florida**	**31.02**	**134**	P	**P**	**14 27 31.2**	**+0.9**
	6.3nm,0.9s,baz=325,slow=9.4,SNR=14						
CPUP				LR	LR	14 41 39.1	
	comp=Z,839nm,19.4s,baz=322,slow=40						
CPUP	**Villa Florida**	**31.02**	**134**	*e*P	**P**	**14 27 31.5**	**+1.2**
	8.6nm,1.0s						
CPUP	**Villa Florida**	**31.02**	**134**	*e*P	**P**	**14 27 31.1**	**+0.8**
ITRB	**Iturama**	**33.47**	**118**	*e*P	**P**	**14 27 52.5**	**+0.6**
SMTB	**Santa Maria do**	**33.89**	**98**	*e*P	**P**	**14 27 56.1**	**+0.5**
PTGB	**Pitanga**	**34.13**	**127**	*e*P	**P**	**14 27 58.3**	**+0.7**
BDFB	**Brasilia**	**34.44**	**110**	P	**P**	**14 28 01.0**	**+0.5**
	13nm,0.7s,baz=275,slow=9.5,SNR=19						
BDFB				LR	LR	14 43 15.8	
	comp=Z,2μm,18.9s,baz=286,slow=38						
BDFB	**Brasilia**	**34.44**	**110**	*e*P	**P**	**14 28 00.8**	**+0.3**
	18nm,0.8s						
ITAB	**Concordia**	**35.35**	**131**	*e*P	**P**	**14 28 08.8**	**+0.7**
FRTB	**Fartura**	**35.55**	**123**	*e*P	**P**	**14 28 11.2**	**+1.3**
BB19B	**Bebedouro**	**35.55**	**119**	*e*P	**P**	**14 28 10.0**	**0.0**
PLCA	**Paso Flores**	**36.36**	**166**	P	**P**	**14 28 17.6**	**+1.0**
	14nm,0.9s,baz=2.4,slow=10,SNR=26						
PLCA				LR	LR	14 40 34.9	
	comp=Z,222nm,18.1s,baz=31,slow=32						
PLCA	**Paso Flores**	**36.36**	**166**	*e*P	**P**	**14 28 17.6**	**+1.0**
	18nm,0.9s						
PLCA	**Paso Flores**	**36.36**	**166**	*e*P	**P**	**14 28 17.6**	**+1.0**
452A	**Marianna**	**36.40**	**355**	P	**P**	**14 28 17.2**	**+0.2**
	baz=174						
PMNB	**Patos De Minas**	**36.62**	**114**	*e*P	**P**	**14 28 20.2**	**+1.0**
TIJ01	**Guaruva-PR**	**36.86**	**126**	*e*P	**P**	**14 28 22.3**	**+1.1**
RCLB	**Rio Claro- Sao**	**36.91**	**120**	*e*P	**P**	**14 28 22.8**	**+1.2**
254A	**Abbeville**	**37.37**	**358**	P	**P**	**14 28 24.9**	**-0.2**
	baz=177						
SPB	**Sao Paulo**	**37.44**	**122**	*e*P	**P**	**14 28 26.1**	**+0.1**
	32nm,0.8s						
SPB	**Sao Paulo**	**37.44**	**122**	*e*P	**P**	**14 28 26.8**	**+0.9**
JANB	**Januaria**	**37.82**	**107**	*e*P	**P**	**14 28 31.3**	**+2.0**
833A	**Chaparral WMA,**	**37.84**	**334**	P	**P**	**14 28 29.6**	**+0.4**
	baz=150						
HKT	**Hockley**	**37.89**	**340**	*e*P	**P**	**14 28 29.7**	**+0.1**
	14nm,1.0s						
151A	**Opelika**	**38.08**	**355**	P	**P**	**14 28 31.7**	**+0.5**
	baz=174						
152A	**Waverly Hall**	**38.17**	**356**	P	**P**	**14 28 31.5**	**-0.5**
	baz=175						
150A	**Eclectic**	**38.23**	**354**	P	**P**	**14 28 32.3**	**-0.1**
	baz=173						
149A	**Jones**	**38.30**	**353**	P	**P**	**14 28 32.7**	**-0.4**
	baz=172						
MCI8	**Montes Claros**	**38.50**	**110**	*e*P	**P**	**14 28 35.9**	**+0.8**
MCI9	**Montes Claros**	**38.53**	**110**	*e*P	**P**	**14 28 36.6**	**+1.3**
MCI6	**Montes Claros**	**38.55**	**110**	*e*P	**P**	**14 28 37.2**	**+1.6**
Z52A	**Williamson**	**38.67**	**356**	P	**P**	**14 28 35.5**	**-0.6**
	baz=176						
Z59A	**Georgetown, SC**	**38.69**	**3**	P	**P**	**14 28 35.8**	**-0.5**
	baz=184						
LRAL	**Lakeview Retre**	**38.76**	**353**	*e*P	**P**	**14 28 36.3**	**-0.6**
	8.9nm,0.6s						
LRAL	**Lakeview Retre**	**38.76**	**353**	P	**P**	**14 28 36.3**	**-0.6**
	baz=172,SNR=5.3						
BSCB	**Bom Sucesso**	**38.84

V58A	Windy Hill, Pi	41.24	3	P	P	14 28 56.2	-1.3
	baz=184						
X40A	Basin Creek Fa	41.26	346	P	P	14 28 56.9	-0.7
	baz=163						
V51A	Loudon	41.26	357	P	P	14 28 57.1	-0.6
	baz=176						
V52A	Sevierville	41.26	358	eP	P	14 28 56.5	-1.1
	20nm,1.2s						
V52A	Sevierville	41.26	358	P	P	14 28 56.8	-0.8
	baz=177						
V59A	Middlesex	41.27	4	P	P	14 28 56.5	-1.1
	baz=185						
DUB01	Friburgo-RJ	41.30	117	eP	P	14 29 00.4	+2.1
V57A	Coltrane Farms	41.30	2	P	P	14 28 57.7	-0.2
	baz=183						
V49A	McMinnville	41.34	355	P	P	14 28 57.0	-1.3
	baz=174						
V60A	Jim Taylor Roa	41.35	5	eP	P	14 28 57.9	-0.3
	17nm,0.6s						
V60A	Jim Taylor Roa	41.35	5	P	P	14 28 57.9	-0.3
	baz=187						
V48A	Smith Brothers	41.41	354	P	P	14 28 57.4	-1.5
	baz=172						
SJMB	Sao Joao De Ma	41.49	112	eP	P	14 29 00.7	+0.9
MIAR	Mount Ida	41.50	345	eP	P	14 28 59.0	-0.6
	9.8nm,1.0s						
MIAR	Mount Ida	41.50	345	P	P	14 28 58.5	-1.1
	baz=162						
V47A	Nunnelly	41.58	353	P	P	14 28 59.3	-0.9
	baz=171						
V46A	Holladay	41.63	352	P	P	14 28 59.5	-1.1
	baz=170						
ABTX	Abilene, Hawle	41.70	337	eP	P	14 29 01.3	0.0
	24nm,0.6s						
ABTX	Abilene, Hawle	41.70	337	P	P	14 29 01.3	0.0
	baz=152,SNR=6.8						
U56A	King	41.74	1	P	P	14 29 00.6	-0.9
	baz=182						
U53A	Fall Branch	41.75	359	P	P	14 29 00.4	-1.3
	baz=179						
W41B	Gary Mavity, V	41.78	347	eP	P	14 29 01.6	-0.2
	37nm,1.9s						
W41B	Gary Mavity, V	41.78	347	P	P	14 29 00.4	-1.4
	baz=164						
U52A	Thorn Hill	41.80	358	P	P	14 29 00.7	-1.4
	baz=177						
U51A	La Follette	41.82	357	P	P	14 29 01.0	-1.2
	baz=176						
BSFB	Barra de Sao F	41.83	112	eP	P	14 29 03.3	+0.7
U57A	Blanch	41.86	3	P	P	14 29 01.1	-1.5
	baz=183						
U58A	Oxford	41.87	4	P	P	14 29 02.0	-0.6
	baz=185						
U55A	TA2, Sparta	41.88	1	P	P	14 29 01.9	-0.9
	baz=181						
U59A	Littleton	41.88	5	P	P	14 29 01.2	-1.5
	baz=186						
WHAR	Wooly Hollow	41.90	347	eP	P	14 29 02.9	0.0
	9.0nm,0.9s						
U50A	Jamestown	41.90	356	P	P	14 29 02.2	-0.7
	baz=175						
WVT	Waverly	41.92	352	eP	P	14 29 01.4	-1.6
	4.9nm,0.6s						
WVT	Waverly	41.92	352	P	P	14 29 01.9	-1.1
	baz=171						
X37A	Clayton	42.03	343	eP	P	14 29 04.2	+0.2
	21nm,1.0s						
U49A	Red Boiling Sp	42.07	355	P	P	14 29 02.7	-1.6
	baz=174						
W39A	Magazine	42.17	345	eP	P	14 29 05.4	+0.4
	13nm,0.8s						
W39A	Magazine	42.17	345	P	P	14 29 03.2	-1.9
	baz=162,SNR=6.1						
RIB01	Linhares ES	42.35	113	eP	P	14 29 07.0	+0.2
ALF01	Guarapari-ES	42.37	115	eP	P	14 29 07.6	+0.7
T53A	Wise	42.37	359	P	P	14 29 05.4	-1.3
	baz=179						
T51A	Gray	42.40	357	P	P	14 29 06.0	-0.9
	baz=177						
T58A	Grand View Acr	42.42	4	P	P	14 29 05.8	-1.3
	baz=185						
T56A	Rocky Mt	42.43	2	P	P	14 29 06.1	-1.1
	baz=182						
T57A	Hurt	42.43	3	eP	P	14 29 06.3	-0.8
T57A				epP	pwP	14 29 21.1	-0.9
T57A	Hurt	42.43	3	P	P	14 29 06.0	-1.1
	baz=184						
T54A	Tazewell	42.44	0	P	P	14 29 06.7	-0.7
	baz=180						
T55A	Pulaski	42.50	1	P	P	14 29 06.7	-1.1
	baz=181						
T50A	Nancy	42.51	356	P	P	14 29 07.1	-0.7
	baz=175						
T59A	Double "B" Far	42.52	5	P	P	14 29 07.4	-0.5
	baz=186						
T49A	Edmonton	42.64	355	P	P	14 29 07.7	-1.1
	baz=174						
T47A	Sharon Grove	42.68	353	P	P	14 29 08.5	-0.7
	baz=172						
T48A	Bowling Green	42.72	354	P	P	14 29 09.2	-0.3
	baz=173						
PBMO	Poplar Bluff	42.96	350	eP	P	14 29 10.7	-0.7
	26nm,1.4s						
U40A	Yellville	43.05	347	P	P	14 29 12.3	+0.1
	baz=164,SNR=9.1						
S51A	Beattyville	43.05	358	P	P	14 29 11.8	-0.4
	baz=177						
S50A	Richmond	43.13	357	P	P	14 29 11.4	-1.5
	baz=176						
S55A	Lewisburg	43.16	1	P	P	14 29 12.4	-0.7
	baz=182						
S54A	Dingess, Beckl	43.18	0	P	P	14 29 12.3	-1.0
	baz=180						
S57A	Dark Hollow, R	43.21	3	P	P	14 29 12.1	-1.4
	baz=184						
S48A	Wiedeman Farm,	43.23	355	P	P	14 29 12.6	-1.0
	baz=174						
HHAR	Hobbs	43.24	345	eP	P	14 29 13.8	+0.1
	24nm,1.3s						
S47A	Hartford	43.25	354	P	P	14 29 12.8	-1.0
	baz=172						
WMOK	Wichita Mounta	43.27	339	eP	P	14 29 13.8	-0.3
	21nm,1.4s						
WMOK	Wichita Mounta	43.27	339	P	P	14 29 13.4	-0.6
	baz=155,SNR=12						
S49A	Springfield	43.30	356	P	P	14 29 13.0	-1.1
	baz=175						
TUL1	Leonard	43.39	343	eP	P	14 29 14.4	-0.6
	16nm,0.6s						
TUL1	Leonard	43.39	343	P	P	14 29 14.5	-0.4
	baz=159						
S46A	Don Dixon Farm	43.44	353	P	P	14 29 13.5	-1.8
	baz=171						
MNTX	Cornudas Mount	43.47	330	eP	P	14 29 15.4	-0.4
	13nm,1.1s						
MNTX	Cornudas Mount	43.47	330	P	P	14 29 15.3	-0.4
	baz=144,SNR=17						
R58B	Mineral	43.48	4	eP	P	14 29 15.1	-0.5
	12nm,1.0s						
R58B	Mineral	43.48	4	P	P	14 29 14.9	-0.7
	baz=185						
R54A	Victor	43.56	1	P	P	14 29 15.6	-0.7
	baz=181						
S44A	Carbondale	43.66	351	P	P	14 29 16.1	-1.0
	baz=169,SNR=5.3						
SIUC	Southern Illin	43.67	351	eP	P	14 29 16.6	-0.6
	19nm,0.8s						
R49A	Shelbyville	43.79	356	P	P	14 29 17.3	-0.9
	baz=175						
R58A	Rapidan	43.80	4	P	P	14 29 17.3	-0.9
	baz=185						
R45A	Skylar, Fairfi	44.11	352	P	P	14 29 20.1	-0.5
	baz=170						
MSTX	Muleshoe	44.16	334	eP	P	14 29 21.4	+0.1
	18nm,0.8s						
MSTX	Muleshoe	44.16	334	P	P	14 29 21.2	-0.1
	baz=149,SNR=7.0						
Q53A	Leroy	44.23	0	P	P	14 29 20.7	-1.0
	baz=180						
CCM	Cathedral Cave	44.35	349	eP	P	14 29 22.6	0.0
	33nm,0.6s						
CCM	Cathedral Cave	44.35	349	P	P	14 29 22.0	-0.6
	baz=166						
Q54A	Coxs Mills	44.36	1	P	P	14 29 21.8	-0.9
	baz=181						
Q55A	Buckhannon	44.39	2	P	P	14 29 21.6	-1.4
	baz=182						
Q51A	Peebles	44.43	358	P	P	14 29 21.7	-1.6
	baz=178						
AMTX	Amarillo	44.49	336	P	P	14 29 22.4	-1.6
	baz=151						
U32A	Winter Ranch,	44.83	340	eP	P	14 29 26.6	+0.1
	28nm,0.6s						
P56A	Dayton Farm, R	44.95	3	P	P	14 29 27.1	-0.3
	baz=184						
P48A	Milroy	44.97	356	P	P	14 29 27.3	-0.3
	baz=175						
P50A	Jamestown	45.03	358	P	P	14 29 28.0	0.0
	baz=177						
319A	Douglas	45.28	326	eP	P	14 29 30.2	0.0
	33nm,1.1s						
121A	Cookes Peak, D	45.36	328	P	P	14 29 30.7	-0.3
	baz=142,SNR=7.8						
RCBR	Riachuelo	45.47	93	eP	P	14 29 33.6	+1.6
O51A	Pataskala	45.53	359	P	P	14 29 31.2	-0.8
	baz=179						
P43A	Skaggs, Pawnee	45.60	351	P	P	14 29 31.9	-0.6
	baz=169						
ACSO	Alum Creek Sta	45.62	359	P	P	14 29 32.1	-0.7
	baz=178						
O47A	Sheridan	45.80	355	P	P	14 29 32.8	-1.3
	baz=174						
BNM	Barren Site	46.07	331	eP	P	14 29 36.8	+0.1
N50A	Nevada	46.16	358	P	P	14 29 35.8	-1.2
	baz=178						
N52A	McGinn's Farm,	46.18	360	P	P	14 29 35.8	-1.3
	baz=180						
N55A	Marion Center	46.22	3	P	P	14 29 36.2	-1.2
	baz=184						
LENM	Lemitar	46.25	331	eP	P	14 29 38.3	+0.3
N51A	Ashland	46.30	359	P	P	14 29 36.7	-1.3
	baz=179						
HDIL	Hopedale	46.47	352	P	P	14 29 38.3	-1.1
	baz=170						
N45A	Kentland	46.54	354	P	P	14 29 38.7	-1.2
	baz=172						
KSU1	Kansas State U	46.59	344	P	P	14 29 40.0	-0.4
	baz=159						
N59A	State Game Lan	46.60	6	P	P	14 29 39.9	-0.5
	baz=188						
ANMO	Albuquerque	46.63	332	eP	P	14 29 40.8	-0.2
	14nm,0.9s						
ANMO	Albuquerque	46.63	332	P	P	14 29 41.7	+0.7
	baz=145						
TASM	ASL Pad, Albuq	46.64	332	P	P	14 29 41.2	+0.2
	baz=145,SNR=13						
TASM	ASL Pad, Albuq	46.64	332	P	P	14 29 41.1	+0.1
	baz=145,SNR=12						
M51A	Elyria	46.71	359	P	P	14 29 40.3	-0.9
	baz=179						
M50A	Fremont	46.79	359	P	P	14 29 41.3	-0.6
	baz=178						
M53A	Wt Miller and	46.82	1	P	P	14 29 42.7	+0.6
	baz=181						
TUC	Tucson	46.82	326	eP	P	14 29 41.4	-1.0
	8.1nm,0.8s						
TUC	Tucson	46.82	326	P	P	14 29 42.5	+0.1
	baz=138						
N41A	Harden Midland	46.86	350	eP	P	14 29 41.8	-0.6
	12nm,0.6s						
N41A	Harden Midland	46.86	350	P	P	14 29 41.9	-0.6
	baz=167						
M52A	Chesterland	46.91	0	P	P	14 29 41.7	-1.1
	baz=180						
M54A	Oil Creek Stat	46.91	2	P	P	14 29 41.9	-0.9
	baz=183						
M56A	Emporium	46.96	4	P	P	14 29 42.3	-0.9
	baz=185						
N40A	Mertquake, Sal	47.16	350	P	P	14 29 43.5	-1.2
	baz=166						
CBKS	Cedar Bluff	47.28	341	P	P	14 29 45.6	-0.2
	baz=155						
L48A	N Adams	47.38	357	P	P	14 29 45.2	-1.3
	baz=176						
M41A	Milan	47.46	351	P	P	14 29 46.8	-0.3
	baz=168						
L47A	Sherwood	47.46	356	P	P	14 29 46.1	-1.0
	baz=175						
T25A	Trinidad	47.55	335	eP	P	14 29 48.8	+0.6
	10nm,0.8s						
T25A	Trinidad	47.55	335	P	P	14 29 48.0	-0.1
	baz=149,SNR=11						
L55A	Hinsdale	47.64	3	P	P	14 29 47.6	-0.9
	baz=184						
L54A	Sinclairville	47.65	2	P	P	14 29 47.9	-0.7
	baz=183						
214A	Organ Pipe Nat	47.73	323	P	P	14 29 49.6	+0.1
	baz=136						
BINY	Binghamton	47.84	6	P	P	14 29 49.5	-0.6
	baz=188						
L42A	Oliver, Polo	47.94	352	eP	P	14 29 49.5	-1.3
	19nm,1.0s						
L42A	Oliver, Polo	47.94	352	P	P	14 29 49.8	-1.0
	baz=169						
L43A	Garden Prairie	48.00	353	P	P	14 29 50.2	-1.1
	baz=170						
X18A	Snowflake	48.05	328	eP	P	14 29 52.0	-0.1
	7.8nm,0.8s						
K54A	Basilko Farm,	48.05	3	P	P	14 29 50.4	-1.3
	baz=184						
K47A	Vermontville	48.14	357	P	P	14 29 51.3	-1.1
	baz=176						
K55A	Perry	48.21	3	P	P	14 29 51.7	-1.1
	baz=185						
K48A	Perry	48.23	358	P	P	14 29 52.2	-0.9
	baz=177						
L40A	Anamosa	48.24	350	eP	P	14 29 52.1	-1.0
	28nm,1.2s						
L40A	Anamosa	48.24	350	P	P	14 29 52.5	-0.6
	baz=167						
SCIA	State Center	48.45	348	eP	P	14 29 54.2	-0.6
	29nm,0.8s						
SCIA	State Center	48.45	348	P	P	14 29 54.7	-0.1
	baz=165						
K43A	Burlington	48.46	353	P	P	14 29 54.5	-0.3
	baz=171						
SDCO	Great Sand Dun	48.53	335	eP	P	14 29 55.8	0.0
	13nm,1.1s						
SDCO	Great Sand Dun	48.53	335	P	P	14 29 55.4	-0.4
	baz=148,SNR=19						
K42A	Prairie Point,	48.66	352	P	P	14 29 56.6	+0.3
	baz=170						
X16A	Lo Mia Camp, P	48.76	327	eP	P	14 29 57.6	+0.1
	8.0nm,0.9s						
JFWS	Jewell Farm	48.92	352	P	P	14 29 57.7	-0.6
	baz=169						
S22A	4UR Ranch, Cre	49.11	333	eP	P	14 29 59.6	-0.5
	17nm,1.5s						
S22A	4UR Ranch, Cre	49.11	333	P	P	14 29 59.7	-0.5
	baz=146,SNR=9.6						
Y14A	Wickenburg	49.28	325	eP	P	14 30 01.6	+0.3
	12nm,0.8s						
I49A	Point Hope	49.32	359	P	P	14 30 00.5	-0.8
	baz=178						
Q24A	Divide	49.41	336	P	P	14 30 02.1	-0.5
	baz=148						
MVCO	Mesa Verde	49.44	332	eP	P	14 30 01.9	-0.8
	9.6nm,0.9s						
MVCO	Mesa Verde	49.44	332	P	P	14 30 01.9	-0.8
	baz=144,SNR=7.8						
I47A	Gladwin	49.46	357	P	P	14 30 01.9	-0.5
	baz=176						
PECO	Prince Edward	49.48	4	P	P	14 30 01.5	-1.1
	baz=186						
BWLO	Walkerton	49.49	0	P	P	14 30 02.3	-0.4
	baz=181						
WUAZ	Wupatki	49.55	328	eP	P	14 30 03.8	+0.2
	18nm,0.9s						
WUAZ	Wupatki	49.55	328	P	P	14 30 04.0	+0.5
	baz=140,SNR=13						
I48A	Sherman Twp	49.59	358	P	P	14 30 03.6	+0.2
	baz=177						
GLA	Glamis	49.71	323	P	P	14 30 05.2	+0.6
	baz=134						
BMRO	Meriville Lake	49.97	0	P	P	14 30 06.8	+0.5
	baz=180						
DELO	Deloro Mine	50.02	4	P	P	14 30 05.1	-1.5
	baz=185						
Y12C	Blythe	50.02	324	eP	P	14 30 06.6	-0.3
	12nm,0.9s						
Y12C	Blythe	50.02	324	P	P	14 30 07.1	+0.2
	baz=135						
H55A	Tweed	50.08	4	P	P	14 30 06.4	-0.8
	baz=186						
H43A	Windswept, Lux	50.15	354	eP	P	14 30 06.7	-0.9
	21nm,1.0s						
H43A	Windswept, Lux	50.15	354	P	P	14 30 07.2	-0.5
	baz=172						
PDMCI	Parker Dam,Lak	50.19	325	P	P	14 30 08.1	-0.1
	baz=136						
H56A	Elgin	50.19	5	P	P	14 30 07.2	-0.8
	baz=187						
PV01	Paradox Valley	50.21	332	eP	P	14 30 08.8	+0.2
	24nm,1.5s						
IKP	In-Ko-Pah, Jac	50.22	322	P	P	14 30 08.8	+0.2
	baz=133						
SWSC	Sam W. Stewart	50.23	322	P	P	14 30 06.8	-1.7
	baz=133						
USHA	Ushuaia	50.23	170	P	P	14 30 08.8	+0.7
	8.5nm,0.8s,baz=309,slow=6.5,SNR=3.3						
ISCO	Idaho Springs	50.31	336	eP	P	14 30 10.1	+0.7
	7.7nm,0.9s						
ISCO	Idaho Springs	50.31	336	P	P	14 30 08.7	-0.7
	baz=148,SNR=7.1						
PV13	Radium Mtn., P	50.35	332	eP	P	14 30 09.7	+0.1
	33nm,1.4s						
PV02	Paradox Valley	50.35	332	eP	P	14 30 09.8	+0.2
	24nm,1.2s						
SMCO	Snowmass	50.36	334	eP	P	14 30 10.1	+0.2
	5.5nm,1.0s						
PV05	Paradox Valley	50.41	332	eP	P	14 30 10.3	+0.1
	20nm,1.4s						
PV03	Paradox Valley	50.44	332	eP	P	14 30 10.2	0.0
	20nm,1.2s						
PV18	Skein Mesa, Pa	50.46	332	eP	P	14 30 10.3	-0.2
	14nm,1.0s						
PV12	Saucer Basin,	50.47	332	eP	P	14 30 10.5	0.0
	17nm,0.8s						
PV11	David Mesa, Pa	50.49	332	eP	P	14 30 10.5	-0.1
	55nm,1.6s						
PV07	Paradox Valley	50.49	332	eP	P	14 30 10.3	-0.4
	15nm,1.1s						
BC3	Big Chuckawall	50.51	323	P	P	14 30 11.1	+0.4
	baz=134						
PV17	East Wray Mesa	50.51	332	eP	P	14 30 10.6	-0.2
	20nm,1.2s						
PV16	Nyswonger Mesa	50.52	332	eP	P	14 30 10.7	-0.2
	21nm,1.3s						
PV20	West Nyswonger	50.56	332	eP	P	14 30 10.7	-0.5
	14nm,1.3s						
MONP2	Monument Peak	50.57	322	P	P	14 30 11.6	+0.2
	baz=133						
PLVO	Plevna	50.57	4	P	P	14 30 10.1	-0.8
	baz=186						
PV04	Paradox Valley	50.58	332	eP	P	14 30 11.1	-0.1
	18nm,1.4s						
PV14	Lion Creek, Pa	50.62	332	eP	P	14 30 11.6	-0.1
	19nm,1.3s						
W13A	Hualapai Mount	50.62	325	eP	P	14 30 11.5	-0.2
	12nm,0.8s						
PV22	Blue Mesa, Par	50.64	332	eP	P	14 30 11.8	0.0
	17nm,1.5s						
IRM	Iron Mountain	50.67	324	P	P	14 30 11.9	0.0
	baz=135						
U15A	North Rim	50.73	328	eP	P	14 30 12.5	-0.1
	10.0nm,1.3s						
PV09	Paradox Valley	50.77	332	eP	P	14 30 12.6	-0.2
G55A	Calabogie	50.81	4	P	P	14 30 11.0	-1.7
	baz=186						
G43A	Wallace	50.92	354	eP	P	14 30 12.5	-1.0
	23nm,1.3s						
G43A	Wallace	50.92	354	P	P	14 30 12.5	-1.0
	baz=172						
ECSD	EROS Data Cent	50.94	346	eP	P	14 30 12.4	-1.3
	13nm,0.6s						
ECSD	EROS Data Cent	50.94	346	P	P	14 30 12.7	-1.0
	baz=161,SNR=13						
BELC	Belle Mtn. Jos	51.07	323	P	P	14 30 15.2	+0.2
	baz=134						
WVL	Waterville	51.08	11	eP	P	14 30 14.9	+0.2
	9.0nm,0.8s						
PFO	Pinyon Flats O	51.08	322	eP	P	14 30 15.2	+0.1
	30nm,1.9s						
PFO	Pinyon Flats O	51.08	322	P	P	14 30 15.8	+0.7
	baz=133						
G40A	Rib Lake	51.22	352	P	P	14 30 16.0	+0.3
	baz=169						
N23A	Red Feather La	51.37	336	P	P	14 30 17.0	-0.3
	baz=148						
G39A	Holcombe	51.38	351	P	P	14 30 16.3	-0.6
	baz=168						
GMRC	Granite Mounta	51.41	324	P	P	14 30 17.8	+0.2
	baz=135,SNR=5.3						
ALGO	Algonquin Park	51.42	3	P	P	14 30 16.3	-1.0
	baz=184						
F43A	Flat Rock, Esc	51.44	355	P	P	14 30 16.5	-0.8
	baz=173						
KNB	Kanab	51.45	328	eP	P	14 30 18.2	+0.4
	8.5nm,1.0s						
PKCU	Pink Cliffs	51.51	329	eP	P	14 30 19.2	+0.8
	18nm,0.9s						
SPMN	Marine on St.	51.58	350	eP	P	14 30 17.4	-1.0
	9.9nm,0.7s						
LCMT	Little Creek M	51.67	328	eP	P	14 30 19.8	+0.4
	8.3nm,1.1s						
E52A	Mattawa	51.72	3	P	P	14 30 20.7	+1.2
	baz=184						
PKME	Peaks-Kenny Pk	51.82	11	eP	P	14 30 21.1	+0.8
	12nm,0.9s						
PKME	Peaks-Kenny Pk	51.82	11	P	P	14 30 21.3	+1.1
	baz=196						
HEC	Hector,Ludlow	51.84	323	P	P	14 30 21.4	+0.7
	baz=134,SNR=7.1						
E47A	Iron Bridge	51.85	359	P	P	14 30 19.1	-1.3
	baz=178						
F40A	Park Falls	51.85	352	P	P	14 30 19.8	-0.7
	baz=169						
E48A	Lockeyer	51.85	360	P	P	14 30 18.6	-1.9
	baz=179						
MTPU	Mount Pierson	51.90	329	eP	P	14 30 21.6	+0.3
	3.7nm,0.7s						
SRU	San Rafael Swe	51.91	331	eP	P	14 30 21.3	+0.1
	38nm,1.8s						
SRU				epP	pP	14 30 34.0	+2.3
E51A	G1948 Merrick	51.94	2	P	P	14 30 19.9	-1.2
	baz=183						
E54A	Lac Daplat, Po	51.95	4	P	P	14 30 19.5	-1.7
	baz=186						
F39A	Loretta	51.95	352	P	P	14 30 20.1	-1.1
	baz=168						
SCI2	San Clemente I	51.97	320	P	P	14 30 20.2	-1.4
	baz=131						
E43A	Lone Tree Farm	51.97	355	eP	P	14 30 20.2	-1.1
	12nm,1.0s						
E43A	Lone Tree Farm	51.97	355	P	P	14 30 20.0	-1.3
	baz=173						
SZCU	Shurtz Canyon	52.02	328	eP	P	14 30 22.3	+0.1
	9.9nm,0.9s						
TUQ	Turquoise Moun	52.02	324	P	P	14 30 22.4	+0.3
	baz=135,SNR=9.0						
Q16A	Castle Valley	52.07	331	eP	P	14 30 22.4	-0.1
	7.4nm,0.7s						
CCUT	Cedar City	52.14	328	eP	P	14 30 23.8	+0.7
	12nm,1.0s						
F38A	Pierce - Schro	52.14	351	P	P	14 30 22.4	-0.2
	baz=167,SNR=9.0						
SUSD	Miller	52.20	344	P	P	14 30 22.7	-0.4
	baz=158						
BFSC	Mount Baldy Ra	52.24	322	P	P	14 30 23.9	+0.2
	baz=132						
MSU	Marysvale	52.25	330	eP	P	14 30 23.8	-0.1
P17A	Butcher Ranch,	52.30	332	eP	P	14 30 24.0	-0.1
	20nm,1.2s						
D46A	Sault St. Mari	52.31	358	P	P	14 30 23.6	-0.2
	baz=177						
SHPR	Sheep Range	52.35	326	eP	P	14 30 24.2	-0.3
	16nm,1.2s						
TMUT	Trail Mountain	52.38	331	eP	P	14 30 24.6	-0.3
	4.2nm,0.7s						
D52A	ZEK Kipawa Sen	52.42	3	P	P	14 30 23.8	-0.9
	baz=184						
D47A	Chapleau	52.44	359	P	P	14 30 22.5	-2.4
	baz=178,SNR=5.2						
GSC	Goldstone, Bar	52.45	324	eP	P	14 30 25.1	-0.1
	11nm,1.1s						
GSC	Goldstone, Bar	52.45	324	P	P	14 30 24.6	-0.6
	baz=134,SNR=6.1						
RWWY	Rawlins	52.55	336	eP	P	14 30 25.6	-0.5
	20nm,1.3s						
D53A	Lac Vacive, Po	52.56	3	P	P	14 30 24.4	-1.3
	baz=185						
D49A	Beulah Townshi	52.64	0	P	P	14 30 25.1	-1.2
	baz=180						
D54A	Lac Fusel, La	52.70	4	P	P	14 30 25.9	-0.9

baz=186
E38A The Farm, Brul 52.72 351 *e*P P 14 30 26.4 -0.5
13nm,0.9s
E38A The Farm, Brul 52.72 351 P P 14 30 26.3 -0.6
baz=168
D41A Chassel 52.79 354 *e*P P 14 30 27.3 -0.1
15nm,0.7s
D41A Chassel 52.79 354 P P 14 30 27.6 +0.2
baz=171
EDW2 Edwards Air Fo 52.88 322 P P 14 30 28.4 +0.1
baz=132,SNR=6.9
BLG Laguna Peak, P 53.03 321 P P 14 30 29.9 +0.4
baz=131
K22A Casper 53.09 337 *e*P P 14 30 29.3 -0.7
12nm,0.9s
K22A Casper 53.09 337 P P 14 30 29.7 -0.3
baz=148
PSUT Pine Spring 53.13 328 *e*P P 14 30 30.3 0.0
9.9nm,0.9s
TPNV Topopah Spring 53.28 325 *e*P P 14 30 31.7 +0.3
10.0nm,1.1s
TPNV Topopah Spring 53.28 325 P P 14 30 32.1 +0.7
baz=135,SNR=7.8
FURC Furnace Creek, 53.29 325 P P 14 30 31.7 +0.4
baz=134,SNR=5.1
NLU North Lily Min 53.32 331 *e*P P 14 30 32.3 +0.6
5.2nm,1.0s
MPMC Manual Prospec 53.37 324 P P 14 30 32.1 -0.1
baz=134,SNR=8.3
RSSD Black Hills 53.46 340 *e*P P 14 30 33.0 +0.3
5.3nm,0.8s
RSSD Black Hills 53.46 340 P P 14 30 32.1 -0.6
baz=152
JLU Jordanelle 53.52 332 *e*P P 14 30 33.3 +0.1
13nm,1.1s
DAC Darwin (Calif) 53.58 324 *e*P P 14 30 33.8 +0.1
4.7nm,0.8s
ISA Isabella, Lake 53.69 323 *e*P P 14 30 34.6 +0.2
22nm,1.8s
ISA Isabella, Lake 53.69 323 P P 14 30 34.0 -0.4
baz=132
C40A Isle Royale Na 53.70 354 P P 14 30 33.1 -0.9
baz=171
DUG Dugway, Tooele 53.86 331 *e*P P 14 30 36.3 +0.7
12nm,0.8s
DUG Dugway, Tooele 53.86 331 P P 14 30 35.3 -0.3
baz=140,SNR=7.4
R11A Troy Canyon, C 53.91 327 *e*P P 14 30 36.3 +0.2
10nm,1.1s
R11A Troy Canyon, C 53.91 327 P P 14 30 36.5 +0.4
baz=137,SNR=19
TCUT Toone Canyon 53.91 332 *e*P P 14 30 36.7 +0.6
81nm,1.7s
CWC Cottonwood Cre 53.98 324 P P 14 30 36.4 -0.1
baz=133
PKM Mcpherson Peak 54.01 321 P P 14 30 36.2 -0.6
baz=131
EYMN Ely 54.02 352 *e*P P 14 30 35.8 -0.7
12nm,0.8s
EYMN Ely 54.02 352 P P 14 30 35.5 -1.0
baz=168,SNR=7.3
HWUT Hardware Ranch 54.37 333 *e*P P 14 30 39.3 0.0
15nm,0.9s
BATG Bathurst New B 54.41 13 *e*P P 14 30 39.6 +0.3
15nm,0.9s
BW06 Boulder Array 54.42 335 *e*P P 14 30 39.2 -0.6
6.0nm,0.9s
BW06 Boulder Array 54.42 335 P P 14 30 38.8 -1.0
baz=145,SNR=9.4
PD31 Pinedale Array 54.42 335 *e*P P 14 30 39.1 -0.6
5.2nm,0.9s
PDAR Pinedale Array 54.42 335 P P 14 30 39.4 -0.3
4.2nm,0.8s,baz=130,slow=7.4,SNR=32
PDAR PcP PcP 14 31 42.5 -0.5
0.9nm,0.7s,baz=139,slow=4.7,SNR=1.9
PDAR LR LR 14 53 29.7
comp=Z,124nm,18.5s,baz=150,slow=36
BGU Big Grassy Mou 54.53 331 *e*P P 14 30 41.0 +0.5
7.2nm,0.9s
SPUT South Promonto 54.55 332 *e*P P 14 30 41.1 +0.5
23nm,1.3s
LSQQ Lebel-sur-Quev 54.58 4 P P 14 30 39.6 -0.9
baz=186
HVU Hansel Valley 55.07 332 *e*P P 14 30 44.3 -0.1
12nm,1.2s
AGMN Agassiz Nation 55.11 348 *e*P P 14 30 43.9 -0.4
34nm,0.7s
AGMN Agassiz Nation 55.11 348 P P 14 30 43.8 -0.6
baz=163,SNR=31
NV11 Mina Array Sit 55.39 325 *e*P P 14 30 47.1 +0.3
0.8nm,1.0s
REDW Red Top Meadow 55.46 334 *e*P P 14 30 47.5 +0.3
26nm,1.4s
NV01 Mina Array Sit 55.48 325 *e*PcP PcP 14 31 47.8 +0.6
NVAR Mina Array Bea 55.48 325 P P 14 30 48.0 +0.5
5.8nm,0.7s,baz=127,slow=7.3,SNR=52
NVAR PcP PcP 14 31 47.8 +0.6
1.1nm,0.6s,baz=111,slow=4.0,SNR=2.6
NVAR LR LR 14 50 46.8
comp=Z,134nm,21.9s,baz=111,slow=32
ELK Elko 55.49 329 *e*P P 14 30 47.1 -0.4
12nm,1.1s
MDND Maddock 55.53 345 *e*P P 14 30 47.1 -0.3
51nm,0.8s
MDND Maddock 55.53 345 P P 14 30 46.2 -1.2
baz=158,SNR=7.3
LOHW Long Hollow 55.55 335 *e*P P 14 30 47.4 -0.5
6.1nm,1.1s
TPAW Teton Pass 55.60 334 *e*P P 14 30 48.1 -0.2
11nm,0.9s
MOOW Moose Ponds 55.72 335 *e*P P 14 30 49.3 +0.2
13nm,1.6s
FXWY Fox Creek 55.75 334 *e*P P 14 30 48.8 -0.6
3.9nm,0.8s
KVN Kaiserville 55.79 326 *e*P P 14 30 49.5 -0.2
6.5nm,0.9s
IMW Indian Meadow 55.92 335 *e*P P 14 30 50.1 -0.5
4.7nm,0.8s
YPP Pitchstone Pla 56.17 335 *e*P P 14 30 52.6 +0.2
12nm,1.4s
WAKR Walker 56.17 325 *e*P P 14 30 53.0 +0.6
6.7nm,0.8s
RLMT Red Lodge 56.24 337 P P 14 30 52.1 -0.7
baz=146
BMN Battle Mountai 56.29 328 *e*P P 14 30 52.8 -0.3
8.0nm,1.0s
YERR Yerington 56.39 325 *e*P P 14 30 53.9 0.0
17nm,1.3s
YMR Madison River 56.56 335 *e*P P 14 30 54.7 -0.4
10.0nm,0.9s
YHH Holmes Hill 56.61 335 *e*P P 14 30 55.6 +0.1
5.3nm,1.0s
PNTR Pine Nut 56.66 325 *e*P P 14 30 56.4 +0.5
13nm,1.2s
YHB Horse Butte 56.72 335 *e*P P 14 30 55.5 -0.7
10nm,0.8s
QLMT Earthquake Lak 56.89 335 *e*P P 14 30 57.3 -0.1
GCMT Greycliff 56.96 337 *e*P P 14 30 57.8 0.0
PAHR Pah Rah Range 56.96 326 *e*P P 14 30 58.1 +0.2
6.6nm,0.9s
ULM Lac du Bonnet 56.98 349 P P 14 30 56.8 -0.9
17nm,0.7s,baz=163,slow=6.9,SNR=18
ULM Lac du Bonnet 56.98 349 *e*P P 14 30 56.6 -1.0
18nm,0.8s
HLID Hailey 57.21 332 *e*P P 14 30 59.9 +0.2
14nm,0.9s
HLID Hailey 57.21 332 P P 14 30 59.7 0.0
baz=140,SNR=27
DGMT Dagmar 57.37 342 *e*P P 14 31 01.0 +0.5
16nm,0.7s
DGMT Dagmar 57.37 342 P P 14 31 00.0 -0.5
baz=153
MCMT McKenzie Canyo 57.49 334 *e*P P 14 31 01.8 +0.1
BOZ Bozeman (W) 57.59 335 *e*P P 14 31 02.2 -0.1
14nm,1.1s
BOZ Bozeman (W) 57.59 335 P P 14 31 02.1 -0.1
baz=144,SNR=12
BEKR Beckworth 57.62 325 *e*P P 14 31 02.6 0.0
7.6nm,0.6s
DLMT Dillon 57.81 335 *e*P P 14 31 04.1 +0.3
8.2nm,0.9s
ORV Oroville 58.07 324 *e*P P 14 31 06.0 +0.4
18nm,1.1s
TAOE Nuku Hiva Isla 58.12 263 *e*LR LR 14 47 54.7
comp=Z,388nm,25.3s
WVOR Wild Horse Val 58.46 328 *e*P P 14 31 08.0 -0.4
15nm,1.1s
HRY Holter Researc 58.57 336 *e*P P 14 31 09.2 +0.1

O03E Paynes Creek 58.73 325 P P 14 31 09.9 -0.4
baz=131
EGMT Eagleton 58.85 338 *e*P P 14 31 10.9 0.0
12nm,0.8s
EGMT Eagleton 58.85 338 P P 14 31 10.6 -0.4
baz=147,SNR=9.5
MOD Modoc Plateau 58.98 327 *e*P P 14 31 12.0 0.0
16nm,0.7s
J08A Circle Bar Ran 59.04 329 *e*P P 14 31 12.0 -0.4
7.0nm,0.8s
MSO Missoula 59.54 335 *e*P P 14 31 15.9 +0.2
22nm,1.1s
MSO Missoula 59.54 335 P P 14 31 15.8 +0.1
baz=142,SNR=9.7
BMO Blue Mountains 59.55 331 *e*P P 14 31 15.2 -0.6
BMO *ep*P pP 14 31 28.1 +1.8
M04C Macdoel 59.74 326 P P 14 31 17.1 -0.2
baz=132,SNR=5.6
K05A Summer Lake 59.86 327 *e*P P 14 31 18.4 +0.2
32nm,0.8s
I07A Izee 60.08 329 *e*P P 14 31 20.1 +0.6
25nm,1.6s
YBH Yreka Blue Hor 60.20 325 *e*P P 14 31 19.7 -0.7
17nm,1.0s
L04D Klamath Falls 60.29 326 P P 14 31 20.7 -0.3
baz=132
F10A Beach Ranch, E 60.35 332 *e*P P 14 31 21.3 0.0
14nm,0.9s
J05D Fort Rock, OR 60.42 328 P P 14 31 21.7 -0.3
baz=133
PINE Pine Mountain 60.62 328 *e*P P 14 31 23.5 +0.2
14nm,0.9s
G08A Pilot Rock 60.67 331 *e*P P 14 31 23.6 +0.1
22nm,1.0s
J04D Umpqua Nationa 60.87 327 P P 14 31 24.7 -0.3
baz=132
E09A Wood Farm, Sta 61.17 332 *e*P P 14 31 27.2 +0.5
19nm,1.3s
WALA Waterton Lakes 61.29 336 *e*P P 14 31 27.5 -0.2
20nm,0.8s
K02D Willamette Mer 61.36 326 P P 14 31 28.7 +0.4
baz=131
I04A Tendick Farm, 61.40 327 P P 14 31 28.3 -0.1
baz=132
SCHQ Schefferville 61.46 10 P P 14 31 27.6 -1.0
4.9nm,0.6s,baz=245,slow=10,SNR=3.5
SCHQ LR LR 15 00 04.4
comp=Z,65nm,18.2s,baz=216,slow=38
I03D Drain, OR 61.84 327 P P 14 31 31.6 +0.3
baz=131
NEW Newport 62.02 334 P P 14 31 32.9 +0.4
baz=139
LTY Liberty 62.91 331 *e*P P 14 31 38.8 +0.2
6.8nm,0.7s
B08A Colville Reser 63.08 333 *e*P P 14 31 39.6 +0.1
5.1nm,0.7s
LON Longmire 63.11 330 *e*P P 14 31 39.6 -0.2
5.5nm,0.8s
E04D Cinebar 63.35 330 P P 14 31 41.7 +0.3
baz=133
D03D Eldon 64.28 330 P P 14 31 47.5 0.0
baz=133
B05A Bryant 64.30 331 P P 14 31 47.0 -0.5
baz=134
A04D Lummi Island 64.91 331 P P 14 31 52.0 +0.5
baz=134
LLLB Lillooet 65.85 333 *e*P P 14 31 57.6 -0.1
25nm,1.4s
PPT Papeete 67.34 253 LR LR 14 54 10.2
comp=Z,183nm,19.1s,baz=99,slow=29
PPT2 Papeete2 67.34 253 *e*S S 14 41 06.3 +5.2
121nm,28.8s
PPT2 Papeete2 67.34 253 *e*LR LR 14 52 20.3
comp=Z,474nm,26.2s,baz=89
TBI Tubuai 67.48 247 *e*S S 14 41 07.0 +4.7
381nm,33.0s
TBI Tubuai 67.48 247 *e*LR LR 14 52 13.7
comp=Z,319nm,28.0s
YKA Yellowknife Ar 72.44 345 P P 14 32 37.2 -1.0
2.1nm,0.5s,baz=145,slow=6.0,SNR=9.9
YKA LR LR 15 05 53.5
comp=Z,5.8nm,18.1s,baz=146,slow=37
DLBC Dease Lake 74.63 336 *e*P P 14 32 51.8 +0.6
17nm,1.1s
BESE Bessie Mountai 76.74 334 *e*P P 14 33 02.8 -0.5
15nm,1.2s
RAR Rarotonga 76.98 250 LR LR 14 57 58.5
comp=Z,147nm,22.0s,baz=82,slow=29
DBIC Dimbokro 77.56 82 P P 14 33 09.3 +0.5
3.7nm,0.8s,baz=252,slow=6.3,SNR=4.2
DBIC LR LR 15 06 37.3
comp=Z,499nm,19.0s,baz=234,slow=35
DBIC Dimbokro 77.56 82 *e*P P 14 33 09.3 +0.5
47nm,1.5s
VNA3 Neumayer Olymp 78.96 162 P P 14 33 16.3 +0.9
VNA1 Neumayer--Stat 79.25 161 P P 14 33 18.5 +1.5
VNA2 Neumayer--Watz 79.60 161 P P 14 33 19.6 +0.7
baz=298,slow=6.2
SNAA Sanae 81.18 162 P P 14 33 28.2 +0.7
SNAA Sanae 81.18 162 *e*P P 14 33 27.7 +0.2
9.7nm,0.9s
HMT Hamilton 81.76 333 *e*P P 14 33 30.9 +0.3
21nm,1.2s
EPYK Eagle Plains 81.91 340 *e*P P 14 33 31.3 0.0
15nm,1.3s
EPYK Eagle Plains 81.91 340 P P 14 33 31.3 0.0
baz=124
INK Inuvik 82.05 343 *e*P P 14 33 31.7 -0.2
15nm,1.4s
EGAK Eagle 82.61 338 *e*P P 14 33 34.8 -0.1
24nm,1.1s
SUMG Summit 82.74 12 *e*P P 14 33 35.4 -0.6
18nm,1.1s
SUMG Summit 82.74 12 *i*P P 14 33 35.9 -0.1
46nm,1.1s
PAB San Pablo 83.78 49 *e*P P 14 33 41.0 -0.7
14nm,1.3s
PMR Palmer 84.44 334 *e*P P 14 33 43.5 -0.9
6.7nm,0.9s
QSPA South Pole Qui 84.49 180 *e*P P 14 33 45.6 +0.8
22nm,1.1s
RC01 Rabbit Creek A 84.52 333 *e*P P 14 33 44.9 +0.1
25nm,1.4s
HDA Harding Lake 84.66 337 P P 14 33 44.8 -0.7
baz=115
TOA0 Torodi Ar. Sit 84.77 76 *e*P P 14 33 47.0 0.0
20nm,1.4s
TORD Torodi Ar. Bea 84.77 76 P P 14 33 47.2 +0.2
6.0nm,0.9s,baz=290,slow=4.5,SNR=24
TORD LR LR 15 11 38.8
comp=Z,447nm,18.7s,baz=290,slow=36
ILAR Eielson Array 84.79 337 P P 14 33 45.2 -0.9
0.9nm,0.8s,baz=132,slow=3.6,SNR=7.9
ILAR LR LR 15 12 46.9
comp=Z,91nm,19.9s,baz=130,slow=37
BPAW Bear Paw Mtn. 86.17 336 *e*P P 14 33 52.4 -0.6
9.3nm,1.1s
CAST Castle Rocks 86.39 335 *e*P P 14 33 53.2 -0.9
11nm,1.1s
COLD Coldfoot 87.01 339 *e*P P 14 33 57.6 +0.5
COLD *ep*P pP 14 34 10.2 +1.7
TOLK Toolik Lake Re 87.33 340 *e*P P 14 33 58.2 -0.4
TOLK *ep*P pP 14 34 11.1 +1.1
TOLK Toolik Lake Re 87.33 340 P P 14 33 58.4 -0.2
baz=113
DAG Danmarks Havn 89.43 12 *i*P P 14 34 08.2 -0.2
VNDA Vanda 90.12 191 P P 14 34 12.1 +0.4
0.7nm,0.7s,baz=98,slow=3.7,SNR=4.6
VNDA LR LR 15 07 12.6
comp=Z,65nm,19.6s,baz=117,slow=31
KEST Kesra 94.00 55 LR LR 15 14 54.1
comp=Z,162nm,21.5s,baz=247,slow=34
SYO Syowa Base 95.47 162‖ *e*X P 14 34 32.0 -4.5
NOA NORSAR Array B 96.23 29 LR LR 15 16 53.9
comp=Z,52nm,19.3s,baz=260,slow=35
GERES GERESS Array B 97.68 42 LR LR 15 16 31.3
comp=Z,68nm,20.5s,baz=277,slow=34
RPZ Rata Peaks 98.53 224 LR LR 15 10 17.7
comp=Z,133nm,20.3s,baz=94,slow=30
VYHS Vyhne 101.09 42 *e*PDIF Pdif 14 35 02.8 +0.6
DZM Mont Dzumac 107.99 245 *e*LR LR 15 11 18.9
comp=Z,133nm,30.9s
ABKAR Akbulak array 125.73 30 *e*PKPdf PKiKP 14 40 14.4 +0.4
ZAA0 Zalesovo Array 130.55 11 *e*PKPdf PKPdf 14 40 22.4 -0.3
ZALV Zalesovo Beam 130.55 11 PKP PKiKP 14 40 22.6 -0.9
2.1nm,0.5s,baz=336,slow=3.3,SNR=9.8
KURK Kurchatov 132.09 17 *e*PKPdf PKPdf 14 40 25.6 0.0
KURK *ep*PKPdf pPKPdf 14 40 38.3 +1.1

AS31 Alice Springs 134.76 229 *e*PKPdf PKPdf 14 40 31.6 -0.1
ASAR Alice Springs 134.76 229 PKP PKPdf 14 40 31.6 -0.1
1.5nm,0.5s,baz=109,slow=1.9,SNR=29
WRA Warramunga Arr 136.48 233 PKP PKPdf 14 40 34.1 -0.8
2.1nm,0.4s
MKAR Makanchi Array 136.67 16 PKP PKPdf 14 40 34.2 -0.2
0.7nm,0.6s,baz=343,slow=1.8,SNR=5.0
SONA0 Songino Array 137.36 352 *e*PKPdf PKPdf 14 40 35.6 -0.2
SONM Songino Array 137.36 352 PKP PKPdf 14 40 35.6 -0.2
1.5nm,0.7s,baz=353,slow=1.3,SNR=5.9
KSRS Korea Array 138.41 324 PKP PKPdf 14 40 37.4 -0.4
1.0nm,0.8s,baz=322,slow=1.4,SNR=7.1
KSAR Wonju Array Be 138.44 324 PKP PKPdf 14 40 37.4 -0.5
KSH Kashi 140.63 28 *e*PKP PKPdf 14 40 40.8 -1.3
WMQ Urumqi 140.78 12 *e*P PKPdf 14 40 41.5 -0.7
WMQ pmax pmax
comp=Z,170nm,3.9s
HHC Hu-ho-hao-te 142.97 343 *e*PKP PKPdf 14 40 47.0 +0.8
FITZ Fitzroy Crossi 144.26 228 PKP PKPbc 14 40 47.6 +0.5
comp=Z,14nm,0.8s,baz=180,slow=2.2,SNR=18
PSA00 Pilbara Seismi 145.77 217 *e*PKPdf PKPab 14 40 51.8 -0.5
GTA Gaotai 146.32 358 ⇑PKPbc PKPbc 14 40 52.7 -0.5
GTA PKPab PKiKP 14 40 56.7 +0.3
GTA pPKP pPKPdf 14 41 05.4 +1.7
GTA sPKP 14 41 12.0
GTA LR LR
comp=Z,95nm,18.1s
GTA LR LR
comp=Z,68nm,17.5s
GTA LR LR
comp=Z,110nm,18.7s
NJ2 Nanjing 147.46 327 *e*PKPbc PKPdf 14 40 53.0 -1.0
LZH Lanzhou 149.25 351 *e*PKPbc PKPdf 14 40 57.6 +0.5
LZH pPKP PKPab 14 41 07.0 +1.2
LZH sPKP 14 41 10.6
LZH LR LR
comp=Z,150nm,18.5s
LZH LR LR
comp=Z,170nm,18.3s
LZH LR LR
comp=Z,230nm,20.1s
XAN Xi'an 150.06 342 PKPbc PKPbc 14 41 02.8 -0.4
XAN pPKP PKiKP 14 41 06.1 +2.0
XAN PKPab pPKPbc 14 41 14.6 -0.2
XAN Xi'an 150.06 342 *e*PKPbc PKPbc 14 41 02.4 -0.8
CD2 Chengdu 154.32 349 PKPbc PKPbc 14 41 09.1 -3.9
CMAR Chiang Mai Arr 167.21 358 PKP PKPdf 14 41 19.2 +0.3
comp=Z,1.1nm,0.9s,baz=289,slow=1.7,SNR=6.3
CMAR PKPab PKPab 14 42 22.0 -1.1
comp=Z,0.8nm,0.8s,baz=350,slow=4.6,SNR=3.3

TAP 10 14:24:17.4, 24°.46N×121°.95E, h9km, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.18**	**329**	*e*P	Pg	14 24 21.2	0.0
TWC	baz=331			*e*S	Sg	14 24 23.7	-0.1
EOS1	**EOS1**	**0.19**	**60**	P	Pg	14 24 21.4	0.0
EOS1	baz=60			*e*S	Sg	14 24 24.3	+0.3
NANB	**Nanao**	**0.19**	**261**	*e*P	Pg	14 24 21.4	+0.1
NANB	baz=260			*e*S	Sg	14 24 24.3	+0.3
ENA	**Nanau**	**0.19**	**261**	*e*P	Pg	14 24 21.4	0.0
ENA	baz=260			*e*S	Sg	14 24 24.3	+0.1
ENTT	**Nioudou**	**0.40**	**298**	*e*P	Pg	14 24 25.1	-0.2
ENTT	baz=297			*e*S	Sg	14 24 30.6	+0.2
NDT	**Datong Townshi**	**0.42**	**290**	*e*S	Sg	14 24 31.8	+0.4
NACB	**Ninganchiao**	**0.43**	**229**	*e*P	Pg	14 24 25.5	-0.3
NACB	baz=229			*e*S	Sg	14 24 31.9	+0.3
YHNB	**Yeheng**	**0.56**	**292**	*e*S	Sg	14 24 36.3	+0.4
	baz=291						

*ISCJB **10** 14:25:04.9±2.5, 10°.43N±0°.05×127°.05E±0°.06, h25km±20km, mb3.9/4, Error ellipse: s-maj=10.4km s-min=8.0km az=150.0*
*MAN **10** 14:25:04.5, 10°.41N×127°.09E, h88km, mb4.4, ML3.3, MS3.1*
*IDC **10** 14:25:04.6±1.9, 9°.93N×126°.13E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/38, mbtmp3.8/4, Error ellipse: s-maj=206.5km s-min=24.0km az=67.0*

ISC 10 14:25:04.1±3.0, 10°.44N±0°.05×127°.02E±0°.09, h8km±17km, n13, σ1°.70/22, mb3.9/4, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.65**	**247**	*e*P	Pg	14 25 40.9	+5.3
SCPH				*e*S	**Sg**	**14 25 59.6**	**+2.6**
BESP	**Borongan**	**1.94**	**307**	*e*P	**Pn**	**14 25 36.7**	**-0.6**
BESP				*e*S	**Sn**	**14 26 01.9**	**0.0**
BUTP	**Butuan**	**2.01**	**224**	*e*P	**Pn**	**14 25 38.3**	**-0.1**
BUTP				*e*S	**Sn**	**14 26 01.7**	**-2.0**
PLP	**Palo**	**2.13**	**290⇑**	*e*P	**Pn**	**14 25 39.9**	**-0.1**
PLP				*e*S	**Sn**	**14 26 03.8**	**-3.0**
MSLP	**Maasin**	**2.15**	**262**	*e*P	**Pn**	**14 25 38.9**	**-1.4**
MSLP				*e*S	**Sn**	**14 26 07.0**	**-0.2**
OCLP	**Ormoc**	**2.45**	**285**	*e*P	**Pb**	**14 25 47.0**	**-1.4**
OCLP				*e*S	**Sn**	**14 26 16.3**	**+1.7**
LLP	**Lapu-Lapu**	**3.01**	**268**	*e*P	**Pn**	**14 25 52.7**	**+0.6**
LLP				*e*S	**Sn**	**14 26 27.7**	**-0.7**
CNP	**Catarman**	**3.10**	**312**	*e*P	**Pn**	**14 25 53.6**	**+0.3**
CNP				*e*S	**Sn**	**14 26 29.6**	**-0.9**
BUKP	**Musuan**	**3.20**	**217**	*e*P	**Pb**	**14 25 58.7**	**-2.5**
BUKP				*e*S	**Sn**	**14 26 36.3**	**+3.2**
WRA	**Warramunga Arr**	**31.04**	**167**	P	**P**	**14 31 22.3**	**-0.3**
	3.1nm,1.3s,baz=341,slow=10.0,SNR=3.2						
ASAR	**Alice Springs**	**34.56**	**169**	P	**P**	**14 31 52.2**	**-1.2**
	0.6nm,0.7s,baz=353,slow=7.0,SNR=9.4						
ASAR				PcP	**PcP**	**14 34 29.3**	**+1.0**
	1.0nm,1.0s,baz=342,slow=2.0,SNR=6.7						
MKAR	**Makanchi Array**	**52.34**	**322**	P	**P**	**14 34 18.6**	**+1.9**
	0.9nm,0.6s,baz=126,slow=8.7,SNR=4.8						
FINES	**FINESS Array B**	**86.09**	**332**	P	**P**	**14 37 45.8**	**+0.3**
	1.3nm,0.9s,baz=83,slow=6.0,SNR=4.2						

JMA 10 14:25:07.1±0.1, 25°.04N×123°.62E, h53km, M1.2, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.71**	**172**	P	Pn	14 25 21.1	0.0
IRIF				*e*S	Sn	14 25 31.6	+0.4
JISG	**Ishigakijimahi**	**0.77**	**126**	P	Pn	14 25 22.0	+0.1
JISG				*e*S	Sn	14 25 33.2	+0.5
JIJ	**Ishigaki jima**	**0.82**	**145**	P	Pn	14 25 23.0	+0.4
JIJ				S	Sn	14 25 34.0	+0.1
JYNG	**Yonagunijimaku**	**0.85**	**226**	P	Pn	14 25 23.1	+0.2
JYNG				*e*S	Sn	14 25 34.6	+0.1
JKRS	**Kuro-shima**	**0.87**	**156**	*e*S	Sn	14 25 34.6	-0.4

*ISK **10** 14:37:14.6, 38°.26N×38°.14E, h9km, ML1.7/4*
*DDA **10** 14:37:15.1, 38°.31N×38°.22E, h7km±5km, ML2.7*

ISC 10 14:37:14.6±1.4, 38°.29N±0°.04×38°.23E±0°.04, h5km±12km, n9, σ0°.57/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	**0.62**	**340**	*i*P	**Pg**	**14 37 26.8**	**+0.1**
HEKM				*i*S	**Sb**	**14 37 37.3**	**-0.1**
HEKM				IAML_P			
	comp=Z,1μm,0.1s						
ELZG	**Elazig**	**0.63**	**71**	*i*P	**Pg**	**14 37 26.0**	**-0.7**
ELZG				*i*S	**Sb**	**14 37 37.4**	**-0.1**
ELZG				IAML_P			
	comp=Z,584nm,0.1s						
DARE	**Darende-Malaty**	**0.65**	**296**	PG	**Pg**	**14 37 26.7**	**-0.4**
DARE				SG	**Sg**	**14 37 35.5**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.85**	**84**	PG	**Pb**	**14 37 32.6**	**+0.5**
SVRC				SG	**Sn**	**14 37 46.0**	**-0.5**

URFA	Urfa	0.97	151	PG	Pg	14 37 33.8	+0.6
KEMA	Kemaliye	1.00	12	*i* P	Pg	14 37 33.9	+0.1
KEMA				*i* S	Sb	14 37 48.9	+0.8
GZT	Gaziantep	1.07	210	*i* P	Pn	14 37 36.6	+0.1
GZT				*i* S	Sn	14 37 51.8	-0.1
CUKAN	kangal_SIVAS	1.19	330	*i* P	Pg	14 37 37.6	+0.2
CUKAN				*i* S	Sn	14 37 55.3	+0.6
KMRS	Kahramanmaras	1.31	234	PN	Pn	14 37 38.6	-1.1

*IDC **10** 14:37:31.3±4.3,21°.29S×178°.17W,h388km±43km,mb3.5/8, mb1 3.6/10,mb1mx3.4/25,mbtmp4.2/10,Error ellipse: s-maj=23.2km s-min=20.7km az=52.0*
*ISCJB **10** 14:37:32.7±0.9,21°.4S±0°.1×178°.3W±0°.2,h412km,mb3.8/8, Error ellipse: s-maj=20.7km s-min=17.2km az=136.5*
ISC 10 14:37:33.2±0.9,21°.3S±0°.1×178°.2W±0°.2,h412km,n14, σ1§14/17,mb3.8/8,Fijian region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.34	264	P	P	14 40 38.8	+0.6
	0.5nm,0.3s,baz=53,slow=15,SNR=4.7						
URZ	Urewera	17.39	193	P	P	14 41 09.0	-1.7
	1.1nm,0.3s,baz=274,slow=4.9,SNR=13						
URZ				S	S	14 44 12.2	+1.6
	1.5nm,0.3s,baz=269,slow=21,SNR=8.8						
RPZ	Rata Peaks	24.09	199	P	P	14 42 13.8	0.0
	3.6nm,0.4s,baz=336,slow=3.8,SNR=6.7						
STKA	Stephens Creek	37.31	245	P	P	14 44 08.2	-0.2
	4.6nm,0.7s,baz=87,slow=12,SNR=9.2						
JAY	Jayapura	44.16	289	P	P	14 45 03.2	-0.5
	6.6nm,0.6s,baz=137,slow=4.8,SNR=6.0						
ASAR	Alice Springs	44.20	258	P	P	14 45 03.6	-0.3
	2.3nm,0.6s,baz=91,slow=8.2,SNR=44						
ASAR				PcP	PcP	14 46 40.4	0.0
	0.6nm,0.6s,baz=110,slow=3.8,SNR=5.5						
WRA	Warramunga Arr	44.35	263	P	P	14 45 04.3	-0.8
	1.3nm,0.4s,baz=95,slow=8.1,SNR=21						
WRA				PcP	PcP	14 46 41.8	+0.9
	0.6nm,0.6s,baz=85,slow=5.1,SNR=2.6						
NVAR	Mina Array Bea	81.70	43	P	P	14 49 08.9	+1.5
	0.4nm,0.7s,baz=236,slow=7.5,SNR=3.6						
PDAR	Pinedale Array	89.64	43	P	P	14 49 46.0	+0.1
	0.4nm,0.6s,baz=244,slow=5.8,SNR=3.7						
CMAR	Chiang Mai Arr	90.24	290	P	P	14 49 50.9	+2.0
	1.3nm,0.8s,baz=128,slow=3.1,SNR=6.5						
ARCES	ARCESS Array B	129.67	349	PKP	PKiKP	14 55 53.3	-1.1
	6.3nm,0.3s,baz=0.0,slow=2.4,SNR=7.1						
AKASG	Malin Array Be	143.63	330	PKP	PKPdf	14 56 18.1	-1.6
	1.7nm,0.4s,baz=41,slow=4.6,SNR=8.8						
BRTR	Keskin Array B	147.26	311	PKPbc	PKPbc	14 56 29.3	-0.1
	1.6nm,0.6s,baz=143,slow=3.7,SNR=7.9						
GERES	GERESS Array B	150.92	344	PKPbc	PKiKP	14 56 37.7	-0.8
	0.4nm,0.3s,baz=56,slow=2.4,SNR=4.1						

*ISCJB **10** 14:49:19.0±0.6, 18°.48S±0°.07×168°.7E±0°.1,h100km, mb3.9/8,Error ellipse: s-maj=14.5km s-min=8.6km az=23.3*
*IDC **10** 14:49:19.4±6.2, 18°.42S×168°.69E,h89km±62km,mb3.6/6, mb1 3.9/7,mb1mx3.6/26,mbtmp4.0/7,ML4.5/1,MS2.8/3, Ms1 2.8/3,ms1mx2.6/22,Error ellipse: s-maj=64.5km s-min=27.5km az=158.0*
*NEIC **10** 14:49:21.2±2.5, 18°.56S×168°.81E,h111km±25km,mb4.3/2, Error ellipse: s-maj=32.8km s-min=11.9km az=175.0*
ISC 10 14:49:20.1±0.8,18°.59S±0°.09×168°.9E±0°.1,h100km,n20, σ1§50/21,mb3.8/8,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.98	195	*e*Pn	Pn	14 50 06.6	+0.9
MARNC				*e*Sn	Sn	14 50 36.6	-4.1
DZM	Mont Dzumac	4.14	213	P	Pn	14 50 22.6	+1.3
	26nm,0.3s,baz=67,slow=9.9,SNR=357						
DZM				LR	LR	14 51 08.3	
	comp=Z,62nm,21.0s,baz=31,slow=26						
DZM				S	Sn	14 51 09.0	+0.2
	114nm,0.3s,baz=149,slow=21,SNR=21						
DZM	Mont Dzumac	4.14	213	*e*Pn	Pn	14 50 21.9	+0.6
DZM				S	Sn	14 51 09.0	+0.2
PINNC	Pines Island,	4.22	198	*e*Pn	Pn	14 50 25.3	+3.1
OUENC	Ouen Island, N	4.25	206	*e*Pn	Pn	14 50 24.4	+1.6
RAO	Raoul Island	16.08	134	*e*Pn	Pn	14 53 00.0	-0.3
	280nm,0.9s						
STKA	Stephens Creek	27.89	236	P	P	14 55 02.2	+1.5
	1.9nm,0.8s,baz=68,slow=5.4,SNR=2.8						
WR1	Warramunga Arr	32.58	262	*e*P	P	14 55 40.8	-1.4
WRA	Warramunga Arr	32.58	262	P	P	14 55 40.8	-1.4
	0.5nm,0.3s,baz=88,slow=7.4,SNR=9.6						
AS31	Alice Springs	32.94	255	*e*P	P	14 55 44.6	-0.8
	1.8nm,0.9s						
ASAR	Alice Springs	32.94	255	P	P	14 55 44.8	-0.6
	2.6nm,0.6s,baz=78,slow=8.5,SNR=64						
GUMO	Guam	39.77	322	LR	LR	15 12 42.5	
	comp=Z,14nm,21.1s,baz=122,slow=36						
SIJI	Sorong	40.86	291	LR	LR	15 13 07.0	
	comp=Z,26nm,19.0s,baz=58,slow=35						
FITZ	Fitzroy Crossi	40.95	264	*e*P	P	14 56 53.2	0.0
	9.3nm,0.7s						
SONA0	Songino Array	86.48	323	*e*P	P	15 01 51.4	-0.4
SONM	Songino Array	86.48	323	P	P	15 01 51.4	-0.4
	1.0nm,0.7s,baz=123,slow=5.3,SNR=5.2						
NV01	Mina Array Sit	88.64	49	*e*P	P	15 02 03.1	+0.6
NVAR	Mina Array Bea	88.64	49	P	P	15 02 03.1	+0.6
	0.3nm,0.7s,baz=232,slow=4.4,SNR=2.2						
ILAR	Eielson Array	89.72	17	P	P	15 02 06.2	-0.4
	0.2nm,0.5s,baz=244,slow=5.0,SNR=5.6						
ARCES	ARCESS Array B	124.35	345	PKP	PKPdf	15 08 06.7	0.0
	8.4nm,0.3s,baz=58,slow=2.2,SNR=6.3						

IDC 10 15:04:39.8±4.2,11°.34S×167°.08E,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.6/30,mbtmp3.8/4,Error ellipse: s-maj=201.7km s-min=28.5km az=141.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.62	251	P	P	15 11 14.1	+0.5
	1.2nm,1.0s,baz=78,slow=8.5,SNR=3.5						
ASAR	Alice Springs	33.84	244	P	P	15 11 23.0	-1.2
	0.4nm,0.7s,baz=72,slow=9.8,SNR=6.8						
FITZ	Fitzroy Crossi	40.57	255	P	P	15 12 21.8	+0.3
	3.1nm,1.1s,baz=52,slow=12,SNR=2.8						
ILAR	Eielson Array	83.38	18	P	P	15 17 08.7	+0.1
	0.8nm,0.6s,baz=218,slow=5.8,SNR=17						

*ISCJB **10** 15:19:07.7±1.3,3°.3N±0°.1×126°.77E±0°.10,h35km,mb3.5/3, Error ellipse: s-maj=18.8km s-min=9.7km az=39.4*
*IDC **10** 15:19:07.2±1.9,2°.27N×124°.64E,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.4/26,mbtmp3.6/3,Error ellipse: s-maj=214.9km s-min=24.5km az=64.0*
*DJA **10** 15:19:13.4±0.9,3°N±5°×12°6E±°,h62km±16km,M3.9/7, mb4.0/4,mB4.6/1,MLv3.9/7,Mw(mB)3.8/1*
ISC 10 15:19:10.4±1.5,3°.24N±0°.09×126°.6E±0°.1,h35km,n10, σ3§03/12,mb3.7/3,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.20	292	P	Pn	15 19 31.1	+0.5
SGSI				S	Sn	15 19 44.9	-0.7
TNTI	Ternate	2.56	164	S	Sn	15 20 23.3	+4.0
KMSI	Cibinong	3.75	225	P	Pn	15 20 08.3	+2.5
SANI	Sanana	5.29	187	P	Pn	15 20 26.5	-0.5
SANI				S	Sn	15 21 20.5	-6.4
MRSI	Marisa	5.44	240	P	Pn	15 20 30.3	+1.3
APSI	Ampana	6.47	231	P	Pn	15 20 47.2	+4.0
MPSI	Mapaga	7.33	247	P	Pn	15 20 55.1	+0.1
WRA	Warramunga Arr	24.25	162	P	P	15 24 23.5	-0.8
	1.3nm,0.5s,baz=335,slow=10,SNR=33						
ASAR	Alice Springs	27.66	166	P	P	15 24 54.6	-0.5
	0.2nm,0.5s,baz=346,slow=12,SNR=13						
MKAR	Makanchi Array	57.91	325	P	P	15 28 58.8	-0.2
	0.3nm,0.4s,baz=123,slow=8.4,SNR=7.9						

UCR 10 15:36:02.5±2.0,10°.31N×86°.29W,h10km±15km,MD3.9, ML3.8,3C,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.82	65	*i* P	Pb	15 36 18.6	-0.2
NY14				*i* S	Sb	15 36 30.4	+0.5
BUEV	Buena Vista	1.00	61⇑	*e*P	Pg	15 36 20.5	-1.2
BUEV				*e*S	Sg	15 36 34.2	-0.4
GB1A	Borinquen Arri	1.01	60	*i* P	Pg	15 36 20.9	-1.1
GB1A				*e*S	Sb	15 36 35.6	-0.1
GPS1	Guardaparques	1.03	63	*i* P	Pg	15 36 21.2	-1.2
LIM1	Limonal	1.09	69	*i* P	Pg	15 36 22.0	-1.5
BUAI	Buenos Aires	1.10	59⇑	*i* P	Pg	15 36 21.6	-2.0
MESS	Mesas	1.16	68⇑	*i* P	Pb	15 36 23.2	-1.6
MESS				*e*S	Sb	15 36 39.3	-0.6
ACAL	Aguas Claras	1.28	75	*i* P	Pn	15 36 24.8	-1.7
AMAS	Alto Masis	1.31	77	*i* P	Pn	15 36 25.4	-1.6
ARE1	Arenal 1	1.55	84	*e*P	Pn	15 36 29.5	-0.8
ARE1				*e*S	Sg	15 36 58.1	+5.5
COPN	Copaltepe	1.89	351	*e*P	Pn	15 36 33.9	-1.0
ACON	Acoyapa	1.98	33	*e*P	Pn	15 36 34.8	-1.4
ACON				*e*S	Sb	15 37 02.4	-1.1
MOMN	Momotombo	2.10	353	*e*P	Pn	15 36 36.8	-1.1
CNGN	Cerro Negro	2.22	350	*e*P	Pn	15 36 39.0	-0.4
CSGN	Cosiguina Volc	2.93	335	IAML		15 37 27.6	
	comp=N,431nm,0.6s						

*NSSP **10** 15:36:24.7,38°.53N×43°.75E,h10km,Ms4.1*
*ISK **10** 15:36:25.9,38°.51N×43°.84E,h2km,ML4.3/19*
*DDA **10** 15:36:25.5,38°.53N×43°.86E,h5km±3km,ML3.8*
*TEH **10** 15:36:26.5,38°.57N×43°.81E,h10km,ML4.1*
*IDC **10** 15:36:27.9±0.7,38°.56N×43°.90E,h0km,mb3.8/16, mb1 3.8/25,mb1mx3.7/43,mbtmp3.7/25,ML3.7/6,MS3.3/20, Ms1 3.3/20,ms1mx3.2/53,Error ellipse: s-maj=11.0km s-min=8.7km az=139.0*
*AZER **10** 15:36:27.0±0.6,38°.50N×43°.62E,h10km,ml4.1/31, ms3.1/1,Error ellipse: s-maj=7.5km s-min=5.0km az=167.0*
*MOS **10** 15:36:27.6±1.3,38°.41N×43°.83E,h11km,mb4.2/18,Error ellipse: s-maj=6.6km s-min=3.5km az=90.7*
*NEIC **10** 15:36:29.3±2.7,38°.50N×43°.90E,h10km,mb4.1/18, MD4.3(ISK),Error ellipse: s-maj=20.2km s-min=12.1km az=167.0*
ISC 10 15:36:27.8±0.9,38°.53N±0°.02×43°.80E±0°.02,h1km±6km, n312,σ1§43/385,mb4.2/30,MS3.2/14,12C-6D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	0.31	269	*i* P	Pg	15 36 33.3	-0.5
TVAN				*i* S	Sb	15 36 41.7	-0.3
TVAN	Van	0.31	269	*e*Pg	Pg	15 36 33.1	-0.7
VANB	Van	0.33	281	PG	Pg	15 36 33.3	-0.9
VANB	Van	0.33	281	*e*Pg	Pg	15 36 33.2	-0.9
VMUR	Van-Muradiye	0.49	338	*i* P	Pg	15 36 36.6	-0.7
VMUR				*i* S	Sb	15 36 46.9	-0.3
VMUR	Van-Muradiye	0.49	338	*e*Pg	Pg	15 36 35.8	-1.5
BASK	Baskale_VAN	0.51	162	*i* P	Pg	15 36 37.2	-0.3
ERCV	ERCIS-VAN	0.61	323	PG	Pg	15 36 39.3	-0.2
ERCV	ERCIS-VAN	0.61	323	*e*Pg	Pg	15 36 38.9	-0.6
CLDR	Caldiran	0.62	8	PG	Pg	15 36 38.2	-1.5
CLDR				SG	Sg	15 36 48.7	+1.0
CLDR	Caldiran	0.62	8	*i* P	Pg	15 36 38.5	-1.2
CLDR				*i* S	Sg	15 36 47.3	-0.4
CLDR	Caldiran	0.62	8	*e*Pg	Pg	15 36 37.8	-1.9
AKDM	Akdamar-Van	0.68	253	PG	Pg	15 36 39.9	-0.9
AKDM	Akdamar-Van	0.68	253	*e*Pg	Pg	15 36 39.7	-1.1
ADCV	BITLIS_Adilcev	0.89	288	*i* P	Pg	15 36 44.7	-0.2
ADCV				*i* S	Sn	15 36 58.2	-3.0
ADCV				IAML_P			
	comp=Z,4μm,0.2s						
ADCV	BITLIS_Adilcev	0.89	288	*e*Pg	Pg	15 36 43.8	-1.1
HAKT	HAKKARI	0.98	184	*i* P	Pg	15 36 45.1	-1.5
HAKT				*i* S	Sb	15 36 59.7	-1.4
DYDN	Diyadin	1.01	355	*i* P	Pg	15 36 45.5	-1.8
DYDN				*i* S	Sg	15 37 01.3	+0.8
DYDN				IAML_P			
	comp=Z,29μm,0.5s						
DYDN	Diyadin	1.01	355	*e*Pg	Pg	15 36 45.2	-2.1
MLAZ	Malazgirt-MUS	1.15	302	PN	Pb	15 36 49.6	-1.0
MLAZ	Malazgirt-MUS	1.15	302	*e*Pg	Pb	15 36 48.7	-1.9
TUTA	Tutak	1.16	319	*i* P	Pb	15 36 48.2	-2.6
TUTA				*i* S	Sn	15 37 06.8	-1.3
TUTA	Tutak	1.16	319	*e*Pg	Pb	15 36 48.1	-2.8
AGRB	Hanur-Agry	1.22	329	PN	Pb	15 36 50.3	-1.5
AGRB	Hanur-Agry	1.22	329	*e*Pg	Pb	15 36 49.3	-2.5
CUKT	Cukurca	1.29	187	PN	Pn	15 36 50.9	-2.2
CUKT	Cukurca	1.29	187	*i* P	Pn	15 36 51.0	-2.2
CUKT				*i* S	Sn	15 37 11.7	+0.6
CUKT	Cukurca	1.29	187	*e*Pg	Pn	15 36 50.9	-2.2
BLIS	Bitlis-Merkez	1.33	265	*i* P	Pn	15 36 51.3	-2.4
BLIS				*i* S	Sn	15 37 11.2	-0.9
IGDI	IGDIR	1.35	9	*i* P	Pn	15 36 52.2	-1.7
IGDI				*i* S	Sb	15 37 07.8	-4.0
HYR	Heyderabad	1.44	34	*e*Pg	Pn	15 36 53.2	-1.9
HYR	Heyderabad	1.44	34	P	Pn	15 36 53.2	-1.9
HYR				S	Sg	15 37 15.4	+1.3
HYR	Heyderabad	1.44	34	Pn	Pn	15 36 53.2	-1.9
HYR				Sn	Sg	15 37 15.4	+1.3
ISHB	Shabestar	1.45	99	*e*Pn	Pn	15 36 52.1	-3.3
ISHB				IAMB	IAmb	15 36 56.7	
	comp=Z,19μm,0.3s						
NAX	Nakhchivan	1.47	64	P	Pn	15 36 54.0	-1.5
NAX	Nakhchivan	1.47	64	*e*Pg	Pn	15 36 54.0	-1.5
NAX	Nakhchivan	1.47	64	P	Pn	15 36 54.0	-1.5
NAX				S	Sg	15 37 16.2	+1.2
NAX	Nakhchivan	1.47	64	Pn	Pn	15 36 54.0	-1.5
NAX				Sn	Sg	15 37 16.2	+1.2
TASB	TASBURUN-IGDIR	1.49	13	PN	Pn	15 36 54.9	-0.9
TASB	TASBURUN-IGDIR	1.49	13	*e*Pn	Pn	15 36 54.5	-1.3
IMRD	Marand	1.50	82	*e*Pn	Pn	15 36 53.2	-2.8
IMRD				IAMB	IAmb	15 36 57.3	
	comp=Z,64μm,0.4s						
SIRN	Sırnak	1.51	227	*i* P	Pg	15 36 56.9	+0.1
SIRN				*i* S	Sg	15 37 19.4	+3.1
SIRN	Sırnak	1.51	227	*e*Pn	Pg	15 36 56.4	-0.4
VNNZ	Vanand	1.57	1⇑	*i* P	Pn	15 36 56.2	-0.7
VNNZ			⇑	*i* S	Sg	15 37 18.3	+0.1
SBZ	Shahbuz	1.61	57	*e*Pn	Pn	15 36 56.6	-0.9
SBZ	Shahbuz	1.61	57	P	Pn	15 36 56.7	-0.9
	SNR=162						
SBZ				S	Sg	15 37 21.1	+1.4
SBZ	Shahbuz	1.61	57	Pn	Pn	15 36 56.7	-0.9
	SNR=162						
SBZ				Sn	Sg	15 37 21.1	+1.4
EATA	Eleskirt	1.67	323	*i* P	Pb	15 36 58.7	-0.9
EATA				*i* S	Sg	15 37 23.8	+2.1
EATA				IAML_P			
	comp=Z,8μm,0.4s						
EATA	Eleskirt	1.67	323	*e*Pn	Pn	15 36 56.6	-2.0
ORD	Ordubad	1.76	76	*e*Pn	Pn	15 36 59.2	-0.3
ORD	Ordubad	1.76	76	P	Pn	15 36 59.2	-0.3
	SNR=246						
ORD				S	Sg	15 37 24.5	+0.1
ORD	Ordubad	1.76	76	Pn	Pn	15 36 59.2	-0.3
	SNR=246						
ORD				Sn	Sg	15 37 24.5	+0.1
ARUZ	Aruch	1.76	7⇑	*i* P	Pb	15 36 60.0	-1.1
ARUZ			⇑	*i* S	Sb	15 37 23.8	+0.1
GNI	Garni	1.77	24	PN	Pn	15 36 58.9	-0.9
GNI	Garni	1.77	24	Pg	Pn	15 36 59.9	+0.1
	comp=Z,61nm,0.3s,baz=230,slow=2.4,SNR=86						
GNI				Lg	Lg	15 37 24.0	
	comp=Z,65nm,0.3s,baz=334,slow=19,SNR=6.4						
GNI	Garni	1.77	24	*e*Pn	Pn	15 36 59.8	0.0
GNI	Garni	1.77	24	⇓*i* P	Pn	15 36 59.9	+0.1
GNI			⇑	*i* S	Sb	15 37 24.2	+0.2
GNI	Garni	1.77	24	*e*Pn	Pn	15 36 59.8	0.0
MUSM	Mu-Merkez	1.80	277	*i* P	Pn	15 36 59.2	-1.0
MUSM				*i* S	Sb	15 37 23.5	-1.4
MUSM				IAML_P			
	comp=Z,5μm,0.3s						
MUSM	Mu-Merkez	1.80	277	*e*Pn	Pn	15 36 58.5	-1.7
ITBZ	Tabriz	1.87	98	*e*Pn	Pn	15 37 00.6	-0.5
ITBZ				IAMB	IAmb	15 37 10.1	
	comp=N,6μm,0.4s						
DIGO	Kars	1.91	350	*i* P	Pb	15 37 03.2	-0.4
KAPZ	Kaputan	1.92	21⇑	*i* P	Pb	15 37 02.5	-1.2
KAPZ			⇑	*i* S	Sb	15 37 28.0	-0.2
IAZR	Azarshahr	1.92	116	*e*Pn	Pn	15 37 01.4	-0.5
IAZR				IAMB	IAmb	15 37 10.5	
	comp=Z,18μm,0.5s						
VRTB	Varto-Mus	1.94	290	PN	Pn	15 37 01.7	-0.3
VRTB	Varto-Mus	1.94	290	*i* P	Pb	15 37 03.6	-0.4
VRTB	Varto-Mus	1.94	290	*e*Pn	Pn	15 37 01.8	-0.3
SVAN	Silvan-Diyarba	2.08	260	PN	Pn	15 37 03.9	0.0
SVAN	Silvan-Diyarba	2.08	260	*e*Pn	Pn	15 37 03.9	0.0
BTMN	Batman	2.10	253	*i* P	Pn	15 37 04.2	+0.1
BTMN				*i* S	Sg	15 37 35.5	+0.3
BTMN				IAML_P			
	comp=Z,3μm,0.5s						
KOPR	Koprukoy-ERZUR	2.10	315	PN	Pn	15 37 03.9	-0.4
HOMI	Horasan	2.11	316	*i* P	Pb	15 37 06.7	-0.3
HOMI				IAML_P			
	comp=Z,7μm,0.4s						
EAK	Akyaka	2.16	356	*i* P	Pb	15 37 07.3	-0.4
KARS	Kars	2.17	345	PN	Pn	15 37 04.6	-0.6
KARS	Kars	2.17	345	*e*Pn	Pb	15 37 06.1	-1.8
KARS	Kars	2.17	345	*e*P	Pb	15 37 06.1	-1.8
KARS	Kars	2.17	345	*e*Pn	Pn	15 37 05.1	-0.1
SENK	Senkaya-Erzuru	2.32	331	PN	Pn	15 37 07.1	-0.2
SENK	Senkaya-Erzuru	2.32	331	*e*Pn	Pn	15 37 07.3	0.0
MAHB	Mahabad	2.32	139	*e*Pn	Pn	15 37 08.3	+1.0
ECAT	Cat-ERZURUM	2.45	297	*i* P	Pb	15 37 11.6	-1.1
BNGB	Bingl	2.48	282	PN	Pn	15 37 09.3	-0.2
BGOL	Bingol	2.49	282	*e*P	Pb	15 37 12.8	-0.6
STEZ	Stepenevan	2.51	10	*e*P	Pn	15 37 08.0	-1.9
STEZ				*e*S	Sn	15 37 42.0	+0.9
IHRS	Heris	2.55	94	*e*Pn	Pn	15 37 10.4	-0.2
IHRS				IAMB	IAmb	15 37 20.1	
	comp=Z,7μm,0.5s						
BINT	Bingol	2.62	279	*e*Pn	Pn	15 37 09.8	-1.5
GDB	GEDABAY	2.66	34	*e*Pn	Pn	15 37 11.4	-0.5
GDB	GEDABAY	2.66	34	P	Pn	15 37 11.5	-0.5
	SNR=65						
GDB				S	Sn	15 37 46.0	+1.2
GDB	GEDABAY	2.66	34	Pn	Pn	15 37 11.5	-0.5
	SNR=65						
GDB				Sn	Sn	15 37 46.0	+1.2
HANI	Diyarbakir_Han	2.67	269	*i* P	Pn	15 37 13.1	+1.0
MARD	Mardin	2.68	244	*i* P	Pn	15 37 12.8	+0.6
YEDI	Yedisu-Bingol	2.69	291	PN	Pn	15 37 12.4	-0.1
YEDI	Yedisu-Bingol	2.69	291	*e*Pn	Pn	15 37 12.7	+0.2
BGD	Bogdanovka	2.73	357	P	Pb	15 37 17.3	-0.4
BGD	Bogdanovka	2.73	357	*e*P	Pb	15 37 17.8	+0.2
QZX	Qazax, Azerbai	2.80	25	*e*Pn	Pn	15 37 12.0	-1.7
QZX	Qazax, Azerbai	2.80	25	P	Pn	15 37 11.8	-1.9
	SNR=58						
QZX				S	Sn	15 37 48.2	+0.1
QZX	Qazax, Azerbai	2.80	25	Pn	Pn	15 37 11.8	-1.9
	SNR=58						
QZX				Sn	Sn	15 37 48.2	+0.1
MAZI	Mazidag	2.86	249	PN	Pn	15 37 14.4	-0.3
MAZI	Mazidag	2.86	249	*e*Pn	Pn	15 37 14.3	-0.4
KRIK	Erzurum-spir	2.87	310	*i* P	Pb	15 37 20.3	+0.4
GANJ	Ganja	2.87	42	P	Pn	15 37 14.9	+0.2
GANJ	Ganja	2.87	42	*e*Pn	Pn	15 37 14.9	+0.2
GANJ	Ganja	2.87	42	P	Pn	15 37 15.0	+0.2
	SNR=36						
GANJ				P	Pn	15 37 15.0	+0.2
	SNR=103						
GANJ				S	Sn	15 37 51.7	+1.8
GANJ	Ganja	2.87	42	Pn	Pn	15 37 15.0	+0.2
	SNR=36						
GANJ				Pn	Pn	15 37 15.0	+0.2
	SNR=103						
GANJ				Sn	Sn	15 37 51.7	+1.8
AKH	Akhalkalaki	2.88	355	PN	Pn	15 37 15.0	-0.1
AKH	Akhalkalaki	2.88	355	P	Pb	15 37 19.7	-0.6
AKH				S	Sg	15 38 04.2	+3.7
AKH	Akhalkalaki	2.88	355	*e*Pn	Pn	15 37 16.4	+1.3
AKH	Akhalkalaki	2.88	355	*e*P	Pb	15 37 19.6	-0.6
KZRT	Kazreti	2.89	9	P	Pb	15 37 19.1	-1.1
KZRT				S	Sg	15 37 58.6	-2.0
KZRT	Kazreti	2.89	9	*e*P	Pb	15 37 19.1	-1.1
KZRT				*e*S	Sg	15 37 58.6	-2.0
DAGI	Agillar	2.93	331	*i* P	Pb	15 37 20.7	-0.2
DYBB	Diyarbakir	2.94	260	PN	Pn	15 37 16.1	+0.3
KOPT	Kop Dagi	2.96	301	*i* P	Pb	15 37 22.2	+0.6
DBAD	Bademkaya	2.97	327	*i* P	Pb	15 37 22.1	+0.6
ISRB	Sarab	3.13	102	*e*Pn	Pn	15 37 18.7	+0.3
BRDA	Brd	3.13	55	*e*Pn	Pn	15 37 18.0	-0.3
BRDA	Brd	3.13	55	P	Pn	15 37 18.0	-0.3
	SNR=25						
BRDA				S	Sn	15 37 58.1	+1.7
BRDA	Brd	3.13	55	Pn	Pn	15 37 18.0	-0.3
	SNR=25						
BRDA				Sn	Sn	15 37 58.1	+1.7
TBLG	Delisi	3.27	12	PN	Pn	15 37 20.2	-0.1
TBLG	Delisi	3.27	12	P	Pb	15 37 25.7	-1.0
TBLG				S	Sg	15 38 12.9	-0.1
TBLG	Delisi	3.27	12	*e*Pn	Pn	15 37 22.9	+2.6
TBLG	Delisi	3.27	12	*e*P	Pb	15 37 25.7	-1.0
ERZN	Erzincan	3.35	290	PN	Pn	15 37 21.6	+0.2
BCA	Borcka	3.36	331	P

GUDG	Gudauri	3.96	7	P	Pb	15 37 38.0	-0.6
GUDG	Gudauri	3.96	7	eP	Pb	15 37 37.9	-0.6
ONI	Oni	4.06	356	P	Pb	15 37 36.9	-3.3
ONI	Oni	4.06	356	eP	Pb	15 37 36.9	-3.3
IML	Ismayilli	4.06	55	P	Pn	15 37 31.2	0.0
IML				S	Sn	15 38 21.3	+1.9
IML	Ismayilli	4.06	55	Pn	Pn	15 37 31.2	0.0
IML				Sn	Sn	15 38 21.3	+1.9
AKT	Akhty	4.21	44	eP	Pn	15 37 34.7	+1.4
AKT				eS	Sn	15 38 22.0	-1.2
AKT				pmax	pmax		
	comp=Z,22nm,0.5s						
AKT				smax	smax		
	comp=N,28nm,0.6s						
AKT				smax	smax		
	comp=E,37nm,0.5s						
AKT				smax	smax		
	comp=E,30nm,0.5s						
ZEI	Tsey	4.25	1	eP	Pb	15 37 39.1	-4.4
ZEI				pmax	pmax		
	comp=Z,68nm,0.9s						
XNQ	Khinaliq	4.25	50	P	Pn	15 37 34.6	+0.6
XNQ				S	Sn	15 38 25.3	+1.0
XNQ	Khinaliq	4.25	50	Pn	Pn	15 37 34.6	+0.6
XNQ				Sn	Sn	15 38 25.3	+1.0
ALIB	Äli-Bayra	4.28	69	P	Pn	15 37 34.4	+0.3
ALIB				S	Sn	15 38 26.6	+1.9
ALIB	Äli-Bayra	4.28	69	Pn	Pn	15 37 34.4	+0.3
ALIB				Sn	Sn	15 38 26.6	+1.9
PQL	Pirkuli	4.33	57	P	Pn	15 37 35.6	+0.7
	SNR=3.4						
PQL				S	Sn	15 38 27.5	+1.4
PQL	Pirkuli	4.33	57	Pn	Pn	15 37 35.6	+0.7
	SNR=3.4						
PQL				Sn	Sn	15 38 27.5	+1.4
GBS	Qobustan	4.45	62	P	Pn	15 37 36.3	-0.2
	SNR=14						
GBS				S	Sn	15 38 30.5	+1.6
GBS	Qobustan	4.45	62	Pn	Pn	15 37 36.3	-0.2
	SNR=14						
GBS				Sn	Sn	15 38 30.5	+1.6
BTLR	Botlikh	4.52	23	i P	Pn	15 37 40.1	+2.7
QSAR	Qusar	4.54	48	P	Pn	15 37 37.0	-0.7
	SNR=11						
QSAR				S	Sn	15 38 32.4	+1.3
QSAR	Qusar	4.54	48	Pn	Pn	15 37 37.0	-0.7
	SNR=11						
QSAR				Sn	Sn	15 38 32.4	+1.3
GNBR	Gunib	4.54	31	i P	Pn	15 37 41.9	+4.1
QUBA	Quba, Azerbaij	4.58	51	P	Pn	15 37 37.6	-0.6
	SNR=7.0						
QUBA				S	Sn	15 38 33.6	+1.6
QUBA	Quba, Azerbaij	4.58	51	Pn	Pn	15 37 37.6	-0.6
	SNR=7.0						
QUBA				Sn	Sn	15 38 33.6	+1.6
ATGJ	Altiaghaj	4.59	58	P	Pn	15 37 37.3	-1.1
	SNR=5.1						
ATGJ				S	Sn	15 38 34.8	+2.3
ATGJ	Altiaghaj	4.59	58	Pn	Pn	15 37 37.3	-1.1
	SNR=5.1						
ATGJ				Sn	Sn	15 38 34.8	+2.3
SIZA	Siyzn	4.67	55	P	Pn	15 37 38.8	-0.8
	SNR=4.2						
SIZA				S	Sn	15 38 36.1	+1.6
SIZA	Siyzn	4.67	55	Pn	Pn	15 37 38.8	-0.8
	SNR=4.2						
SIZA				Sn	Sn	15 38 36.1	+1.6
DVE	Vedeno	4.76	21	i P	Pn	15 37 43.9	+3.2
NEY	Neytrino	4.78	350	i P	Pn	15 37 44.3	+3.1
GROC	Groznyy	4.90	17	eP	Pn	15 37 42.8	+0.1
GROC				e		15 38 38.0	
GROC				smax	smax		
	comp=E,341nm,1.3s						
GROC				smax	smax		
	comp=E,134nm,1.3s						
GROC				smax	smax		
	comp=N,297nm,1.2s						
GOBA	Gobu	4.95	66	P	Pn	15 37 43.1	-0.3
GOBA				P	Pn	15 37 43.1	-0.3
GOBA				S	Sn	15 38 43.1	+1.8
GOBA				S	Sn	15 38 43.1	+1.8
GOBA	Gobu	4.95	66	Pn	Pn	15 37 43.1	-0.3
GOBA				Sn	Sn	15 38 43.1	+1.8
NCK	Nalchik	4.96	358	i P	Pn	15 37 46.1	+2.6
DOMR	Dombai	5.03	342	i P	Pn	15 37 45.8	+1.2
NDR	Nardaran	5.20	65	P	Pn	15 37 47.2	+0.5
NDR				S	Sn	15 38 49.6	+2.4
NDR	Nardaran	5.20	65	Pn	Pn	15 37 47.2	+0.5
NDR				Sn	Sn	15 38 49.6	+2.4
KBZ	Khabaz	5.24	353	Pn	Pn	15 37 48.9	+1.7
	comp=N,0.1nm,0.3s,baz=126,slow=12,SNR=2.4						
MAK	Makhachkala	5.24	31	eP	Pn	15 37 48.6	+1.3
MAK				eS	Sn	15 38 48.0	-0.3
MAK				pmax	pmax		
	comp=Z,168nm,1.2s						
MAK				MLR	MLR		
	comp=Z,137nm,11.0s						
GALA	Gala	5.26	67	P	Pn	15 37 47.8	+0.2
GALA				S	Sn	15 38 50.9	+2.1
GALA	Gala	5.26	67	Pn	Pn	15 37 47.8	+0.2
GALA				Sn	Sn	15 38 50.9	+2.1
SHA1	Shidzhatmaz	5.27	351	i P	Pn	15 37 50.3	+2.4
KVAR	Kislovodsk Arr	5.48	352	Pg	Pb	15 38 06.9	+2.5
	baz=258,slow=19,SNR=4.3						
KVAR				LR	LR	15 40 34.9	
	comp=Z,175nm,20.9s,baz=53,slow=45						
KIV	Kislovodsk	5.48	352	ePn	Pn	15 37 53.9	+3.2
KIV	Kislovodsk	5.48	352	eP	Pn	15 37 53.1	+2.4
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
KIV				MLR	MLR		
	comp=Z,96nm,7.0s						
PYA1	Pyatigorsk	5.55	355	i P	Pn	15 37 52.9	+1.3
SOC	Sochi	5.92	330	eP	Pn	15 37 58.3	+1.8
SOC				e		15 39 05.3	
SOC				MLR	MLR		
	comp=Z,234nm,10.0s						
IKFM	Kafar-mosalman	5.97	146	ePn	Pn	15 37 58.2	+0.8
ANN	Anapa	7.87	325	eP	Pn	15 38 24.3	+1.0
ANN				eS	Sn	15 39 54.1	+1.1
ANN				pmax	pmax		
	comp=Z,12nm,1.1s						
ANN				MLR	MLR		
	comp=Z,252nm,13.0s						
BR101	Keskin Array S	7.99	282	ePn	Pn	15 38 29.0	+3.8
BRTR	Keskin Array B	7.99	282	Pn	Pn	15 38 29.0	+3.8
	comp=Z,0.0nm,0.3s,baz=90,slow=10,SNR=3.9						
BRTR				LR	LR	15 41 49.9	
	comp=Z,207nm,19.3s,baz=96,slow=40						
BRTR	Keskin Array B	7.99	282	P	Pn	15 38 29.0	+3.8
ASF	Jabal al Asfar	8.49	224	Pg	Pg	15 39 08.1	-2.4
	comp=Z,0.4nm,0.3s,baz=106,slow=7.9,SNR=3.8						
ASF				Lg	Lg	15 41 03.6	
	comp=Z,0.2nm,0.3s,baz=16,slow=20,SNR=4.6						
MMAI	Mount Meron Ar	8.77	234	Pn	Pn	15 38 37.8	+2.0
	baz=60,slow=14,SNR=2.3						
MMAI				LR	LR	15 42 16.5	
	comp=Z,553nm,18.0s,baz=50,slow=39						
GEYT	Alibeck	11.28	89	Pn	Pn	15 39 09.0	-1.2
	comp=Z,0.3nm,0.3s,baz=290,slow=17,SNR=3.9						
GEYT				LR	LR	15 44 52.0	
	comp=Z,179nm,20.2s,baz=290,slow=45						
EIL	Elat	11.48	222	Lg	Lg	15 42 45.6	
	comp=Z,0.1nm,0.3s,baz=271,slow=9.8,SNR=4.9						
EIL				LR	LR	15 44 20.5	
	comp=Z,409nm,18.5s,baz=310,slow=41						
VORD	Divnogorie	12.84	347	eP	Pn	15 39 32.4	+1.1
VORD				pmax	pmax		
	comp=Z,20nm,1.3s						
VSR	Storozhevoye	13.10	347	eP	Pn	15 39 36.3	+1.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MLR	Muntele Rosu	14.97	303	Pn	Pn	15 40 02.2	+1.6
	comp=Z,0.2nm,0.3s,baz=154,slow=13,SNR=3.1						
MLR	Muntele Rosu	14.97	303	‖ i P	P	15 40 11.1	+4.8
IDI	Anoyia	15.47	264	Pn	P	15 40 09.6	-2.3
	comp=Z,0.1nm,0.3s,baz=255,slow=18,SNR=2.5						
IDI				LR	LR	15 47 36.9	
	comp=Z,43nm,21.8s,baz=75,slow=43						
VOIR		15.54	302	‖ i P	P	15 40 14.9	+2.3
VOIR		15.54	302	‖ P	P	15 40 14.9	+2.3
AKTO	Aktyubinsk	15.60	36	Pn	Pn	15 40 07.8	-1.1
	comp=Z,0.1nm,0.3s,baz=224,slow=15,SNR=6.1						
AKTO				LR	LR	15 47 45.5	
	comp=Z,83nm,18.1s,baz=222,slow=44						
ABKAR	Akbulak array	15.78	42	ePn	Pn	15 40 09.0	-2.2
	comp=Z,4.1nm,1.0s						
ARR	Arges	15.79	302	⇑ i P	P	15 40 18.9	+3.5
AKASG	Malin Array Be	15.96	324	Pn	P	15 40 14.6	-2.5
	comp=Z,0.3nm,0.3s,baz=135,slow=12,SNR=7.4						
AKBB	Malin Array Si	15.96	324	ePn	Pn	15 40 13.7	+0.3
	comp=Z,4.3nm,1.0s						
AKBB	Malin Array Si	15.96	324	eP	Pn	15 40 13.7	+0.3
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIEV	Kiev	15.96	324	ePn	Pn	15 40 13.7	+0.3
	comp=Z,3.8nm,1.0s						
KIEV	Kiev	15.96	324	eP	Pn	15 40 13.7	+0.3
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VTS	Vitosha	16.14	291	ePn	P	15 40 18.4	-1.0
	comp=Z,6.7nm,1.1s						
VTS	Vitosha	16.14	291	eP	P	15 40 18.4	-1.0
VTS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BURAR	Bucovina Array	16.30	310	‖ i P	P	15 40 23.4	+2.3
BUR08	Bucovina Ar. S	16.32	310	ePn	P	15 40 20.0	-1.3
	comp=Z,4.9nm,1.0s						
OBN	Obninsk	17.29	346	cePn	Pn	15 40 29.8	-0.5
OBN				pmax	pmax		
	comp=Z,13nm,1.3s						
OBN				MLR	MLR		
	comp=Z,88nm,15.0s						
MDVR	Moldovita	17.62	298	‖ i P	P	15 40 35.1	-0.6
KWP	Kalwaria Pacla	18.71	313	eP	Pn	15 40 50.2	+2.3
	comp=Z,142nm,1.3s						
KWP	Kalwaria Pacla	18.71	313	eP	Pn	15 40 50.3	+2.3
KWP				pmax	pmax		
	comp=Z,142nm,1.3s						
WSAR	Wadi Sarin	19.82	136	P	Pn	15 41 00.1	-1.3
	comp=Z,0.1nm,0.3s,baz=254,slow=9.5,SNR=2.2						
KIRV	Kirov	20.39	8	P	Pn	15 41 06.6	-1.3
	comp=Z,6.0nm,0.6s,baz=24,slow=19,SNR=4.2						
ARU	Arti	20.42	24	P	P	15 41 06.3	+0.1
	comp=Z,1.8nm,0.7s,baz=219,slow=7.0,SNR=7.5						
ARU				LR	LR	15 51 46.6	
	comp=Z,73nm,19.1s,baz=208,slow=45						
ARU	Arti	20.42	24	eP	P	15 41 05.9	-0.3
	comp=Z,39nm,1.9s						
ARU	Arti	20.42	24	c i P	Pn	15 41 08.8	+0.6
ARU						15 41 24.1	
ARU				S	Sn	15 44 58.4	-0.1
ARU	Arti			SS	SnSn	15 45 13.9	+0.9
ARU				pmax	pmax		
	comp=Z,17nm,1.8s						
VYHS	Vyhne	20.58	307	eP	Pn	15 41 09.3	-0.9
VYHS	Vyhne	20.58	307	eP	Pn	15 41 09.3	-0.9
KBL	Kabul	20.65	93	P	Pn	15 41 10.3	-1.0
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GAR	Garm	20.66	80	eP	Pn	15 41 11.6	+0.2
	comp=Z,29nm,1.3s						
KK31	Karatay Array	20.68	69	eP	Pn	15 41 10.4	-1.1
	comp=Z,6.1nm,0.9s						
KK31	Karatay Array	20.68	69	eP	Pn	15 41 10.4	-1.1
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KKAR	Karatay Array	20.68	69	eP	Pn	15 41 10.2	-1.3
	comp=Z,6.1nm,0.9s						
KKAR	Karatay Array	20.68	69	eP	Pn	15 41 10.2	-1.3
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BTK	Batken	20.94	77	eP	Pn	15 41 13.4	-1.2
	comp=Z,19nm,1.4s						
BTK	Batken	20.94	77	eP	Pn	15 41 13.4	-1.2
BTK				pmax	pmax		
	comp=Z,19nm,1.4s						
SVE	Sverdlovsk	21.42	26	eP	P	15 41 23.4	+6.4
SVE				pmax	pmax		
	comp=Z,35nm,2.0s						
VRAC	Vranov	22.25	308	P	P	15 41 27.5	+1.5
	comp=Z,5.8nm,1.0s,baz=104,slow=9.6,SNR=6.2						
VRAC				LR	LR	15 53 02.1	
	comp=Z,37nm,18.4s,baz=134,slow=45						
KLMR	Klimovskoe	22.51	355	eP	P	15 41 30.5	+1.9
KLMR				pmax	pmax		
	comp=Z,26nm,1.0s						
DPC	Dobruska-Polom	22.76	310	eP	P	15 41 35.1	+3.6
DPC	Dobruska-Polom	22.76	310	eP	P	15 41 35.1	+3.6
VSU	Vasula	22.80	337	cePn	P	15 41 30.9	-0.8
VSU				pmax	pmax		
	comp=Z,30nm,0.8s						
UPC	Upice	23.00	310	eP	P	15 41 34.9	+0.9
UPC	Upice	23.00	310	eP	P	15 41 34.9	+0.9
PRGR	Permogore	23.16	2	eP	P	15 41 32.7	-2.7
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRVK	Borovoye	23.31	43	eP	P	15 41 37.0	-0.1
	comp=Z,7.6nm,1.2s						
BRVK	Borovoye	23.31	43	eP	P	15 41 37.0	-0.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BVAR	Borovoye Array	23.35	43	P	P	15 41 38.6	+1.1
	comp=Z,0.5nm,0.5s,baz=239,slow=13,SNR=4.0						
AAK	Ala-Archa	23.60	70	P	P	15 41 40.6	+0.3
	comp=Z,1.2nm,0.4s,baz=264,slow=9.8,SNR=3.1						
AAK				LR	LR	15 51 42.3	
	comp=Z,71nm,18.4s,baz=260,slow=39						
AAK	Ala-Archa	23.60	70	i P	P	15 41 42.0	+1.7
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GEC2	GERESS Array S	23.94	305	eP	P	15 41 43.3	-0.1
	comp=Z,13nm,1.8s						
GEC2	GERESS Array S	23.94	305	eP	P	15 41 43.3	-0.1
GEC2				pmax	pmax		
	comp=Z,13nm,1.8s						
GERES	GERESS Array B	23.94	305	P	P	15 41 43.3	-0.1
	comp=Z,0.6nm,0.6s,baz=114,slow=9.8,SNR=7.6						
GERES				LR	LR	15 53 29.7	
	comp=Z,70nm,18.7s,baz=143,slow=43						
KHC	Kasperske Hory	24.09	306	eP	P	15 41 45.4	+0.6
	comp=Z,5.0nm,1.5s						
KHC	Kasperske Hory	24.09	306	eP	P	15 41 45.4	+0.6
KHC				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KHC	Kasperske Hory	24.09	306	eP	P	15 41 45.3	+0.6
CLL	Collm	25.07	311	eP	P	15 41 54.3	+0.7
	comp=Z,7.6nm,1.1s						
CLL	Collm	25.07	311	i P	P	15 41 54.2	+0.6
	comp=Z,6.0nm,0.9s						
CLL				i pP	pP	15 41 56.1	+1.5
CLL				L	L	15 55 00.0	
	comp=Z,100nm,18.1s						
CLL	Collm	25.07	311	eP	P	15 41 54.3	+0.7
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NKC	Novy Kostel	25.09	308	eP	P	15 41 55.1	+1.3
NKC	Novy Kostel	25.09	308	eP	P	15 41 55.1	+1.3
FIA0	FINESS Array S	25.44	340	eP	P	15 41 57.7	+0.9
FIA0	FINESS Array S	25.44	340	eP	P	15 41 57.7	+0.9
FINES	FINESS Array B	25.44	340	P	P	15 41 57.7	+0.9
	comp=Z,3.2nm,1.0s,baz=142,slow=14,SNR=3.5						
FINES				LR	LR	15 53 08.2	
	comp=Z,74nm,18.7s,baz=140,slow=39						
JOF	Joensuu	25.57	347	P	P	15 41 57.2	-0.8
JOF				pmax	pmax		
	comp=Z,13nm,0.8s						
DAVOX	Davos/Dischmat	26.11	299	P	P	15 42 04.4	+1.0
	comp=Z,2.4nm,0.4s,baz=323,slow=13,SNR=3.5						
DAVOX				LR	LR	15 53 28.8	
	comp=Z,21nm,21.6s,baz=94,slow=39						
KURBB	Kurchatov Arra	27.27	52	P	P	15 42 12.9	-0.6
	comp=Z,1.1nm,0.8s,baz=261,slow=9.2,SNR=8.6						
KURK	Kurchatov	27.35	52	eP	P	15 42 13.7	-0.5
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	27.35	52	i P	P	15 42 14.7	+0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,2.1s						
BNI	Bardonecchia	28.25	295	P	P	15 42 21.3	-1.2
BNI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
HFS	Hagfors	28.76	329	P	P	15 42 25.9	-0.7
	comp=Z,2.9nm,0.8s,baz=134,slow=6.2,SNR=5.1						
HFS				LR	LR	15 55 40.3	
	comp=Z,35nm,22.0s,baz=120,slow=40						
MK32	Makanchi Array	29.24	61	eP	P	15 42 30.6	-0.6
MKAR	Makanchi Array	29.24	61	P	P	15 42 30.6	-0.6
	comp=Z,0.4nm,0.6s,baz=258,slow=7.2,SNR=2.9						
MKAR				LR	LR	15 56 20.7	
	comp=Z,72nm,19.3s,baz=258,slow=41						
NOA	NORSAR Array B	30.28	329	LR	LR	15 56 15.2	
	comp=Z,51nm,19.8s,baz=130,slow=39						
ZALV	Zalesovo Beam	31.77	47	P	P	15 42 52.2	-1.2
	comp=Z,0.3nm,0.3s,baz=310,slow=11,SNR=2.3						
ZALV				LR	LR	15 56 33.2	
	comp=Z,54nm,19.6s,baz=248,slow=38						
ZAA1	Zalesovo Array	31.77	47	eP	P	15 42 52.2	-1.2
DGZ	Jazzator, Alta	32.81	56	i P	P	15 43 03.7	+0.9
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TOA1	Torodi Ar. Sit	45.01	247	eP	P	15 44 44.7	-0.3
TORD	Torodi Ar. Bea	45.01	247	P	P	15 44 44.7	-0.4
	comp=Z,1.1nm,1.1s,baz=62,slow=6.8,SNR=2.8						
ULN	Ulaanbaatar	45.86	57	eP	P	15 44 51.2	-0.5
ULN				pmax	pmax		
	comp=Z,15nm,4.5s						
BOD	Bodaibo	48.22	42	eP	P	15 45 09.7	-0.1
BOD				pmax	pmax		
	comp=Z,4.0nm,2.0s						
CM31	Chiang Mai Arr	51.63	97	eP	P	15 45 35.5	-0.7
	comp=Z,21nm,1.8s						
CMAR	Chiang Mai Arr	51.63	97	P	P	15 45 35.5	-0.7
	comp=Z,0.8nm,0.8s,baz=300,slow=9.1,SNR=4.4						
TIXI	Tiksi	52.42	23	cePn	P	15 45 40.9	-0.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,2.5s						
SFJD	Kangerlussuaq	56.86	332	LR	LR	16 11 00.8	
	comp=Z,25nm,19.2s,baz=47,slow=36						
RES	Resolute Bay	63.80	349	LR	LR	16 14 46.0	
	comp=Z,188nm,21.4s,baz=242,slow=36						
KS15	Wonju Array Si	63.90	62	eP	P	15 47 01.3	-1.0
	comp=Z,52nm,1.8s						
KSRS	Korea Array	63.92	62	P	P	15 47 01.3	-1.1
	comp=Z,1.5nm,0.9s,baz=283,slow=6.5,SNR=5.7						
BILL	Bilibino	65.39	20	i P	P	15 47 14.1	+2.6
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BOSA	Boshof	69.01	197	P	P	15 47 36.2	+1.2
	comp=Z,2.5nm,0.8s,baz=35,slow=5.8,SNR=5.3						
PDAR	Pinedale Array	95.54	341	LR	LR	16 33 34.5	
	comp=Z,33nm,18.1s,baz=42,slow=36						

*GRAL **10** 15:36:46.9±0.3, 33°.99N×36°.20E, h32km±5km, MD2.8*
*NSSC **10** 15:36:46.1±0.8, 34°.06N×36°.16E, h7km±17km, ML1.6*

ISC 10 15:36:45.4±2.5, 34°.07N±0°.08×36°.18E±0°.09, h15km±16km, n7, σ0°.49/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWQ	Hawqa	0.28	317	eP	Pn	15 36 54.9	-0.2
HWQ				eS	Sn	15 37 00.8	-0.4
BHL	Bhannes	0.47	249	eP	Pb	15 36 56.2	+0.8
QASN	Qassioun	0.54	171	eP	Pb	15 36 56.7	0.0
QASN				eS	Sb	15 37 04.3	0.0
QASN				AML	AML	15 37 07.7	
	comp=E,55nm,0.7s						
QASN				AML	AML	15 37 07.9	
	comp=N,118nm,0.2s						
DQRL	Deir Qamar	0.62	234	eP	Pb	15 36 58.3	+0.3
RCY	Rachaya	0.64	207	eP	Pg	15 36 58.0	0.0
RCY				eS	Sg	15 37 06.2	-0.4
BRBR	Barbar	0.69	196	eP	Pb	15 36 59.5	+0.4
BRBR				eS	Sb	15 37 08.1	-0.4
BRBR				AML	AML	15 37 12.5	
	comp=E,26nm,0.3s						
BRBR				AML	AML	15 37 14.7	
	comp=N,30nm,0.4s						
TOTH	TOTAH	0.74	164	eP	Pb	15 37 00.6	+0.6
TOTH				eS	Sb	15 37 10.3	+0.4
TOTH				AML	AML	15 37 14.7	
	comp=E,29nm,0.5s						
TOTH				AML	AML	15 37 17.0	
	comp=N,17nm,0.4s						

ISK 10 15:39:08.5, 40°.87N×28°.78E, h11km, ML1.9/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUY	Buyukada	0.25	93	PG	Pg	15 39 14.1	+0.4
BUY				SG	Sg	15 39 17.9	+0.7
ISK	Istanbul-Kandi	0.29	46	PG	Pg	15 39 14.9	+0.5
KAVV	Kandilli-Istan	0.29	46	PG	Pg	15 39 14.9	+0.5
ARMT	Armutlu	0.30	169	PG	Pg	15 39 15.1	+0.5
ARMT				SG	Sb	15 39 19.9	-1.1
BGKT	Bogazkoy	0.32	358	PG	Pg	15 39 15.3	+0.4
CTKS	Kestanelik-??a	0.43	331	PG	Pg	15 39 17.2	+0.3
KLYT	Kilyos	0.43	27	PG	Pg	15 39 17.5	+0.4
KLYT				SG	Sb	15 39 24.1	-0.6
HRT	Hereke	0.67	93	PG	Pb	15 39 22.0	-0.3
SILT	Sile	0.71	66	PG	Pb	15 39 22.6	-0.3
EDC	Edincik	0.87	234	PG	Pb	15 39 25.6	0.0
KRBG	Karabiga-Canak	1.23	248	PN	Pg	15 39 31.9	-0.1
RKY	Sarkoy-Tekirda	1.23	262	PN	Pg	15 39 32.3	+0.1

*NSSP **10** 15:39:17.8, 38°.53N×43°.77E, h10km, Ms3.6*
*ISK **10** 15:39:18.9, 38°.53N×43°.85E, h1km, ML3.7/16*
*DDA **10** 15:39:18.8, 38°.56N×43°.79E, h5km±1km, ML3.5*
*AZER **10** 15:39:19.7±1.5, 38°.29N×43°.77E, h10km, ml3.3/7, Error ellipse: s-maj=15.2km s-min=9.9km az=44.0*

ISC 10 15:39:20.3±0.9, 38°.56N±0°.02×43°.78E±0°.02, h16km±8km, n58, σ1°.38/84, 7C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	0.29	264	i P	Pb	15 39 26.9	-0.5
TVAN				i S	Sg	15 39 31.0	-0.1
VANB	Van	0.31	277	PG	Pg	15 39 26.2	-0.7
VANB				SG	Sb	15 39 32.8	+0.3
VMUR	Van-Muradiye	0.46	339	i P	Pg	15 39 29.2	-0.4
VMUR				i S	Sn	15 39 39.1	-1.4
VMUR				IAML_P			
	comp=Z,9μm,0.2s						
BASK	Baskale_VAN	0.54	161	i P	Pg	15 39 30.3	-0.7
BASK				i S	Sg	15 39 38.1	-0.2
BASK				IAML_P			
	comp=Z,17μm,0.1s						
ERCV	ERCIS-VAN	0.57	323	PG	Pb	15 39 32.3	+0.1
ERCV				SG	Sn	15 39 42.2	-1.2
CLDR	Caldiran	0.59	10	PG	Pg	15 39 31.2	-0.9
CLDR				SG	Sb	15 39 41.0	+0.2
CLDR	Caldiran	0.59	10	i P	Pg	15 39 31.2	-0.9
CLDR				i S	Sb	15 39 41.4	+0.7
CLDR				IAML_P			
	comp=Z,32μm,0.3s						
AKDM	Akdamar-Van	0.67	250	PG	Pb	15 39 33.6	-0.2
AKDM				SG	Sn	15 39 44.6	-1.1
ADCV	BITLIS_Adilcev	0.86	287	i P	Pn	15 39 37.4

SBZ	Shahbuz	1.61	58	P		Pb	15 39 50.1	+0.2
	SNR=12							
SBZ				S		Sg	15 40 12.8	+0.4
EATA	Eleskirt	1.64	323	*i* P		Pg	15 39 51.4	-0.5
EATA				IAML_P				
	comp=Z,4μm,0.5s							
ARUZ	Aruch	1.74	8	⇑*i* P		Pg	15 39 52.7	-1.0
ARUZ				⇑*i* S		Sg	15 40 16.9	+0.6
GNI	Garni	1.75	25	PN		Pb	15 39 51.7	-0.6
GNI	Garni	1.75	25	⇓*i* P		Pb	15 39 52.7	+0.4
GNI				⇑*i* S		Sg	15 40 17.3	+0.4
ORD	Ordubad	1.77	77	P		Pb	15 39 52.1	-0.4
ORD	SNR=51							
ORD				S		Sg	15 40 17.2	-0.2
MUSM	Mu-Merkez	1.78	276	*i* P		Pb	15 39 51.9	-0.8
DIGO	Kars	1.88	350	*e*P		Pg	15 39 56.2	-0.3
KAPZ	Kaputan	1.90	22	⇑*i* P		Pb	15 39 55.4	+0.7
KAPZ				⇑*i* S		Sg	15 40 21.5	0.0
VRTB	Varto-Mus	1.91	289	PN		Pb	15 39 54.7	-0.2
KOPR	Koprukoy-ERZUR	2.07	314	PN		Pb	15 39 57.1	-0.6
SVAN	Silvan-Diyarba	2.07	259	PN		Pb	15 39 56.7	-0.9
SVAN	Silvan-Diyarba	2.07	259	*e*P		Pg	15 39 59.4	-0.6
SVAN				IAML_P				
	comp=Z,2μm,0.5s							
HOMI	Horasan	2.08	316	*i* P		Pb	15 39 58.6	+0.8
BTMN	Batman	2.09	252	*e*P		Pb	15 39 58.1	+0.2
EAK	Akyaka	2.13	356	*i* P		Pg	15 40 01.9	+0.8
KARS	Kars	2.13	346	PN		Pb	15 39 57.5	-1.3
KARO	Karliova-Bingo	2.26	290	PN		Pb	15 39 59.7	-1.2
SENK	Senkaya-Erzuru	2.28	332	PN		Pb	15 40 00.2	-1.1
BNGB	Bingl	2.46	281	PN		Pb	15 40 02.5	-1.8
STEZ	Stepenevan	2.48	11	*e*P		Pb	15 40 04.0	-0.7
STEZ				*e*S		Sg	15 40 39.0	-1.2
GDB	GEDABAY	2.64	35	P		Pb	15 40 05.3	-2.1
GDB				S		Sg	15 40 43.6	-1.7
YEDI	Yedisu-Bingol	2.67	290	PN		Pb	15 40 05.5	-2.4
QZX	Qazax, Azerbai	2.78	26	P		Pb	15 40 08.2	-1.5
QZX	SNR=8.2							
QZX				S		Sb	15 40 44.1	+0.6
MAZI	Mazidag	2.85	248	PN		Pb	15 40 07.8	-3.2
AKH	Akhalkalaki	2.85	356	PN		Pn	15 40 07.8	+2.3
AKH	Akhalkalaki	2.85	356	⇓*i* P		Pg	15 40 13.1	-2.0
GANJ	Ganja	2.86	43	P		Pb	15 40 08.0	-3.1
GANJ	SNR=5.4							
DAGI	Agillar	2.90	331	*i* P		Pg	15 40 14.0	-1.9
DBAD	Bademkaya	2.93	327	*i* P		Pg	15 40 14.9	-1.6
KOPT	Kop Dagi	2.93	301	*e*P		Pg	15 40 16.1	-0.4
BCA	Borcka	3.32	331	PN		Pn	15 40 14.8	+3.1
BCA	Borcka	3.32	331	⇓*i* P		Pg	15 40 21.3	-2.7
BAYT	Aydıntepe-Bayb	3.36	304	PN		Pn	15 40 15.3	+2.9
BATM	Batumi	3.44	333	⇓*i* P		Pg	15 40 23.5	-2.7

IDC 10 15:47:10.0±1.8, 46°.79N×151°.65E, h0km, mb3.5/2, mb1 3.5/3, mb1mx3.2/41, mbtmp3.4/3, ML1.6/1, Error ellipse: s-maj=84.2km s-min=32.6km az=102.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.43	29	Pn	Pn	15 48 59.6	0.0
	0.0nm,0.3s,baz=196,slow=12,SNR=2.1						
H11N2	WAKE ISLAND Hy 29.74	150		T	T	16 24 35.2	
	baz=340,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy 29.75	150		T	T	16 24 36.3	
	baz=340,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy 29.75	150		T	T	16 24 40.3	
	baz=340,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy 30.81	151		T	T	16 26 03.2	
	baz=341,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy 30.82	151		T	T	16 25 53.2	
	baz=341,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy 30.82	151		T	T	16 26 00.9	
	baz=341,slow=76,SNR=32						
FINES	FINESS Array B	63.57	334	P	P	15 57 41.8	0.0
	0.5nm,0.5s,baz=31,slow=7.8,SNR=4.5						
ASAR	Alice Springs	71.94	197	P	P	15 58 35.0	0.0
	0.2nm,0.8s,baz=13,slow=6.2,SNR=4.5						

UCR 10 15:47:49.7±1.8, 10°.30N×86°.32W, h9km±13km, MD3.7, ML2.6, 2C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.84	66	*i* P		Pg	15 48 06.2	+0.2
LAPC	Finca la Perla	0.99	62	*i* P		Pg	15 48 07.7	-1.0
BUEV	Buena Vista	1.02	61	*i* P		Pg	15 48 08.2	-1.2
GB1A	Borinquen Arri	1.04	60	*i* P		Pg	15 48 08.5	-1.2
GPS3	Bodega del ICE	1.04	64	*i* P		Pg	15 48 08.7	-1.1
CUI	Cuipilapa	1.19	72	⇑*e*P		Pb	15 48 10.8	-1.6
CUI				*e*S		Sb	15 48 27.9	0.0
MESS	Mesas	1.19	68	⇑*i* P		Pb	15 48 10.7	-1.8
MESS				*e*S		Sb	15 48 27.6	-0.4
ACAL	Aguas Claras	1.30	75	*i* P		Pn	15 48 12.8	-1.4
ACAL				*i* S		Sb	15 48 31.3	0.0
PTEN	Parque Tenorio	1.37	72	*i* P		Pn	15 48 13.8	-1.2
ARE1	Arenal 1	1.58	84	*e*P		Pn	15 48 17.0	-0.9
ACON	Acoyapa	2.00	34	*e*P		Pn	15 48 22.4	-1.3
ACON				*e*S		Sn	15 48 49.7	+0.9
ACON				IAML			15 48 56.9	
	comp=N,45nm,0.5s							
MOMN	Momotombo	2.11	354	*e*P		Pn	15 48 24.2	-0.9
CNGN	Cerro Negro	2.22	350	*e*P		Pn	15 48 26.1	-0.6
MATN	Matagalpa	2.64	8	*e*P		Pn	15 48 31.7	-0.9
CSGN	Cosiguina Volc	2.92	336	*e*P		Pn	15 48 31.4	-5.1

*ISCJB **10** 16:13:21.9±0.5, 38°.33N±0°.03×31°.83E±0°.04, h8km±7km, Error ellipse: s-maj=5.7km s-min=5.1km az=8.8*
*DDA **10** 16:13:21.1, 38°.34N×31°.83E, h7km±3km, ML2.5*
*ISK **10** 16:13:21.1, 38°.31N×31°.80E, h7km, ML2.0/7*
ISC 10 16:13:21.6±1.0, 38°.33N±0°.03×31°.84E±0°.03, h14km±9km, n13, σ0°40/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOGA	KONYA_Doganhis	0.26	211	*i* P		Pg	16 13 27.6	+0.3
DOGA				*i* S		Sg	16 13 30.9	-0.3
DOGA				IAML_P				
	comp=Z,2μm,0.2s							
KDHN	Kadinhani	0.29	49	*i* P		Pg	16 13 27.7	0.0
KDHN				*i* S		Sg	16 13 31.8	-0.1
KDHN				IAML_P				
	comp=Z,4μm,0.2s							
LADK	Ladik-KONYA	0.43	108	PG		Pg	16 13 30.3	0.0
LADK				SG		Sb	16 13 37.2	-0.4
KIZT	Kizilcal	0.55	3	PG		Pb	16 13 32.7	-0.4
KIZT				SG		Sb	16 13 41.1	+0.2
KONT	Konya--Tatoy	0.56	133	PG		Pg	16 13 32.6	-0.1
KONT				SG		Sb	16 13 40.8	-0.4
KONT	Konya--Tatoy	0.56	133	*i* P		Pb	16 13 33.1	-0.2
KONT				IAML_P				
	comp=Z,1μm,0.1s							
KMER	Konya-Meram	0.70	143	*i* P		Pb	16 13 36.4	+0.7
KMER				IAML_P				
	comp=Z,218nm,0.2s							
BOLV	Bolvadin	0.80	299	*i* P		Pb	16 13 37.8	+0.4
BOLV				*i* S		Sb	16 13 47.5	-0.6
BOLV				IAML_P				
	comp=Z,2μm,0.3s							
CHBY	Cihanbeyli	0.86	73	PG		Pb	16 13 38.9	+0.5
BAGO	Egridir - ISPA	0.90	248	*i* P		Pn	16 13 39.7	-0.3
SVRH	Sivrihisar-ESK	1.14	348	PN		Pn	16 13 43.6	+0.3
CIFT	Cifteler, Eski	1.19	330	PN		Pn	16 13 44.3	+0.3
YAYX	Yaylak	1.66	68	PN		Pb	16 13 52.2	+0.2

*ISCJB **10** 16:14:41.7±1.6, 65°.9N±0°.3×174°.4W±0°.2, h10km, mb3.7/6, MS3.3/1, Error ellipse: s-maj=43.2km s-min=13.2km az=5.1*
*IDC **10** 16:14:44.9±1.9, 66°.09N×175°.28W, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.6/50, mbtmp3.7/9, ML3.6/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/41, Error ellipse: s-maj=52.0km s-min=20.6km az=1.0*
ISC 10 16:14:44.1±1.8, 65°.9N±0°.3×174°.46W±0°.09, h10km, n10, σ0°66/10, mb3.8/6, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	Eielson Array	11.53	83	Pn	Pn	16 17 28.6	+0.1
	0.2nm,0.3s,baz=289,slow=14,SNR=12						
ILAR				Sn	Sn	16 19 36.6	-0.4
	0.1nm,0.3s,baz=116,slow=32,SNR=2.6						
ILAR				Lg	Lg	16 20 50.4	
	0.1nm,0.3s,baz=285,slow=25,SNR=3.2						
SEY	Seymchan	14.52	274	Pn	Pn	16 18 03.6	-5.6
	0.1nm,0.3s,baz=107,slow=19,SNR=2.8						
INK	Inuvik	15.88	63	Pn	P	16 18 31.1	+0.1
	0.3nm,0.3s,baz=315,slow=10,SNR=12						
TIXI	Tiksi	20.54	311	P	P	16 19 21.5	-0.6
	1.1nm,0.3s,baz=264,slow=1.3,SNR=5.7						
ZALV	Zalesovo Beam	46.33	307	P	P	16 23 09.5	0.0
	0.5nm,0.5s,baz=37,slow=7.9,SNR=2.5						
FINES	FINESS Array B	52.03	348	P	P	16 23 52.4	-0.6
	0.3nm,0.5s,baz=342,slow=8.7,SNR=3.6						
FINES				LR	LR	16 48 11.3	
	comp=Z,28nm,18.2s,baz=66,slow=39						
NOA	NORSAR Array B	53.27	357	P	P	16 24 03.3	+1.0
	1.0nm,0.8s,baz=2.7,slow=7.3,SNR=3.3						
MKAR	Makanchi Array	53.27	303	P	P	16 24 03.4	+1.0
	0.4nm,0.7s,baz=55,slow=7.0,SNR=2.6						
AKASG	Malin Array Be	62.29	343	P	P	16 25 05.5	-0.2
	0.8nm,0.5s,baz=16,slow=6.7,SNR=3.5						
CMAR	Chiang Mai Arr	71.93	275	P	P	16 26 07.1	-0.3
	0.8nm,0.8s,baz=5.9,slow=5.5,SNR=5.8						

*IDC **10** 16:22:39.8±1.4, 1°.72N×127°.05E, h0km, mb4.1/4, mb1 4.1/6, mb1mx3.6/52, mbtmp3.9/6, ML3.3/2, Error ellipse: s-maj=59.2km s-min=21.3km az=63.0*
*ISCJB **10** 16:22:48.5±0.9, 2°.0N±0°.1×127°.8E±0°.2, h100km, mb3.9/5, Error ellipse: s-maj=27.9km s-min=13.8km az=151.8*
*NEIC **10** 16:22:51.9±1.6, 1°.73N×127°.40E, h109km±11km, mb4.1/3, Error ellipse: s-maj=58.4km s-min=11.0km az=67.0*
ISC 10 16:22:50.5±1.3, 1°.9N±0°.2×127°.7E±0°.1, h100km, n12, σ0°92/12, mb3.9/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.13	198	*e*Pn	Pn	16 23 12.5	+0.2
SIJI	Sorong	4.45	127	Pn	Pn	16 23 55.4	-0.5
	0.4nm,0.3s,baz=232,slow=19,SNR=2.1						
FITZ	Fitzroy Crossi	19.93	186	P	P	16 27 12.6	-1.9
	0.2nm,0.3s,baz=8.5,slow=9.2,SNR=5.8						
FITZ	Fitzroy Crossi	19.93	186	*e*P	P	16 27 13.6	-0.8
	17nm,1.5s						
WR1	Warramunga Arr	22.61	164	*e*P	P	16 27 43.3	+0.3
WRA	Warramunga Arr	22.61	164	P	P	16 27 43.3	+0.3
	3.6nm,0.3s,baz=338,slow=12,SNR=133						
AS31	Alice Springs	26.07	167	*e*P	P	16 28 15.0	+0.2
	1.8nm,1.2s						
ASAR	Alice Springs	26.07	167	P	P	16 28 15.1	+0.3
	0.7nm,0.3s,baz=344,slow=7.8,SNR=52						
STKA	Stephens Creek	36.03	160	P	P	16 29 43.5	+1.3
	2.6nm,0.3s,baz=345,slow=8.2,SNR=17						
STKA	Stephens Creek	36.03	160	*e*P	P	16 29 43.2	+1.0
	11nm,2.0s						
MK32	Makanchi Array	59.66	325	*e*P	P	16 32 44.1	-0.2
MKAR	Makanchi Array	59.66	325	P	P	16 32 44.1	-0.2
	0.5nm,0.5s,baz=120,slow=7.9,SNR=9.8						

MAN 10 16:26:29.6, 13°.53N×120°.96E, h16km, mb3.9, ML2.7, MS2.2, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.03	201	⇑*e*P		Pg	16 26 32.2	-0.3
PGP				*i* S		Sg	16 26 34.3	-0.2
LUBP	Lubang	0.73	286	*e*P		Pb	16 26 44.0	+0.1
LUBP				*e*S		Sn	16 26 56.3	+0.3
SJMP	San Jose	1.07	172	*e*P		Pb	16 26 48.4	-1.4
SJMP				*e*S		Sn	16 27 05.3	+0.7

*ISCJB **10** 16:30:46.8±0.3, 59°.91N±0°.03×22°.42E±0°.04, h0km, Error ellipse: s-maj=4.6km s-min=2.9km az=1.4*
*UPP **10** 16:30:49.6±1.1, 59°.85N×22°.19E, h0km, ML2.5, Suspected explosion*
*HEL **10** 16:30:49.4±0.1, 59°.82N×22°.29E, h0km, ML2.1, ML2.5(UPP), Explosion*
*IDC **10** 16:30:49.9±1.7, 59°.86N×22°.39E, h0km, mb1 2.6/3, mb1mx2.5/47, mbtmp2.6/3, ML2.2/4, Error ellipse: s-maj=22.4km s-min=6.5km az=157.0*
*NAO **10** 16:30:49.2±1.1, 59°.85N×22°.28E, ML2.3*
*BER **10** 16:30:50.7±4.1, 59°.81N×22°.29E, h0km, ML2.3(NAO), Suspected explosion*
ISC 10 16:30:48.1±0.7, 59°.93N±0°.04×22°.39E±0°.02, h0km, n55, σ1°66/82, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	Metsahovi	1.05	73	*e*P		Pb	16 31 09.4	+0.4
RAF	Rauma	1.14	345	*e*P		Pn	16 31 11.6	+0.3
RAF				*e*S		Sn	16 31 27.7	+0.2
AAL	Aland	1.23	283	P		Pg	16 31 10.9	-0.6
AAL				S		Sg	16 31 27.1	-0.3
AAL	Aland	1.23	283	*e*P		Pg	16 31 10.9	-0.6
AAL				*e*S		Sg	16 31 25.9	-1.5
MTSE	Matsula	1.42	148	*e*P		Pn	16 31 13.7	-1.4
MTSE				*e*S		Sg	16 31 31.3	-2.3
PVF	Pernaja	1.84	69	*e*P		Pg	16 31 23.6	+0.2
PVF				*e*S		Sg	16 31 48.5	+1.3
PVF				MSG			16 31 52.1	
	comp=Z,16nm,0.1s							
ARBE	Arbavere	1.89	104	*e*PN		Pb	16 31 23.2	-0.1
ARBE				*e*SG		Sb	16 31 48.4	+0.9
NRTU	Norrtaelje	1.91	264	P		Pn	16 31 21.9	0.0
NRTU				S		Sn	16 31 46.6	0.0
NRTU	Norrtaelje	1.91	264	*e*P		Pn	16 31 21.9	0.0
NRTU				*e*S		Sn	16 31 46.6	0.0
GRAU	Graesoe	1.97	284	P		Pn	16 31 22.8	+0.2
GRAU				S		Sn	16 31 48.9	+1.0
GRAU	Graesoe	1.97	284	*e*P		Pn	16 31 22.8	+0.2
GRAU				*e*S		Sn	16 31 48.9	+1.0
FORU	Forsmark	2.15	284	P		Pn	16 31 26.3	+1.2
FORU	Forsmark	2.15	284	*e*P		Pn	16 31 26.3	+1.2
SLIT	Slitere, Latvi	2.31	181	*e*PB		Pn	16 31 27.4	+0.2
SLIT				*e*SG		Sn	16 31 57.4	+1.1
FIA0	FINESS Array S	2.37	48	Pn		Pb	16 31 32.2	+0.7
	baz=227,slow=14							
FIA0				Lg		Lg	16 32 04.7	
	baz=237,slow=28							
FIA0	FINESS Array S	2.37	48	Pn		Pb	16 31 32.2	+0.7
	baz=227,slow=14							
FIA0				Sg		Sg	16 32 04.7	+0.6
	baz=237,slow=28							
FIA0	FINESS Array S	2.37	48	*e*PB		Pb	16 31 31.9	+0.4
FIA0				MSG			16 32 06.6	
	comp=Z,10.0nm,0.2s							
FINES	FINESS Array B	2.37	48	Pn		Pb	16 31 32.2	+0.7
	comp=Z,1.2nm,0.3s,baz=232,slow=15,SNR=116							
FINES				Lg		Lg	16 32 04.8	
	comp=Z,4.4nm,0.3s,baz=234,slow=24,SNR=47							
NYNU	Nynaeshamn	2.42	249	P		Pn	16 31 29.0	+0.2
NYNU	Nynaeshamn	2.42	249	*e*P		Pn	16 31 29.0	+0.2
FIBU	Brunna	2.54	272	P		Pn	16 31 31.3	+0.9
OSTU	Oestervaala	2.65	279	P		Pn	16 31 32.6	+0.7
OSTU	Oestervaala	2.65	279	*e*P		Pn	16 31 32.6	+0.7
VJF	Virojoki	2.65	74	*e*SG		Sg	16 32 12.4	-0.7
VJF				MSG			16 32 15.1	
	comp=Z,7.3nm,0.1s							
BACU	Backbrunna	2.66	271	P		Pn	16 31 32.9	+0.8
BACU	Backbrunna	2.66	271	*e*P		Pn	16 31 32.9	+0.8
VSU	Vasula	2.68	121	Pn		Pn	16 31 34.2	+1.9
VSU				Lg		Lg	16 32 11.1	
VSU	Vasula	2.68	121	Pn		Pn	16 31 34.2	+1.9
VSU				Sg		Sb	16 32 11.1	+1.0
VSU	Vasula	2.68	121	*e*SG		Sb	16 32 10.8	+0.7
IGGU	Iggoen	2.69	293	P		Pn	16 31 33.7	+1.2
IGGU	Iggoen	2.69	293	*e*P		Pn	16 31 33.7	+1.2
VAF	Ylistaro	3.13	2	*e*P		Pb	16 31 42.7	-1.8
VAF				MSG			16 32 36.4	
	comp=Z,3.4nm,0.1s							
HFS	Hagfors	4.37	276	Pn		Pn	16 31 56.1	+0.6
	baz=90,slow=14							
HFS				Lg		Lg	16 33 00.8	
	baz=90,slow=37							
HFS	Hagfors	4.37	276	Pn		Pn	16 31 56.0	+0.4
	comp=Z,0.2nm,0.3s,baz=90,slow=11,SNR=13							
HFS				Pg		Pb	16 32 05.7	+0.1
	comp=Z,0.3nm,0.3s,baz=96,slow=15,SNR=7.9							
HFS				Sn		Sn	16 32 47.5	+0.5
	comp=Z,0.3nm,0.3s,baz=89,slow=25,SNR=5.3							
HFS				Lg		Lg	16 33 00.6	
	comp=Z,1.1nm,0.3s,baz=94,slow=31,SNR=11							
HFS	Hagfors	4.37	276	Pn		Pn	16 31 56.1	+0.6
	baz=90,slow=14							
HFS				Sg		Sb	16 33 00.8	+2.1
	baz=90,slow=37							
NC602	NORSAR Array S	5.45	283	*e*P		Pn	16 32 11.0	+0.6
NRA0	NORESS Array S	5.45	283	Pn		Pn	16 32 10.8	+0.4
	baz=92,slow=12							
NRA0				Sn		Sn	16 33 10.4	-3.3
	baz=100,slow=22							
NRA0				Lg		Lg	16 33 36.2	
	baz=96,slow=28							
NRA0	NORESS Array S	5.45	283	Pn		Pn	16 32 10.8	+0.4
	baz=92,slow=12							
NRA0				Sn		Sn	16 33 10.4	-3.3
	baz=100,slow=22							
NRA0				Sg		Sb	16 33 36.2	+6.4
	baz=96,slow=28							
NC303	NORSAR Array S	5.59	288	*e*P		Pn	16 32 12.6	+0.3
NB201	NORSAR Array S	5.60	286	*e*P		Pn	16 32 13.1	+0.6
NB2	NORSAR Subarra	5.63	286	Pn		Pn	16 32 13.8	+0.8
	baz=95,slow=14							
NB2				Sn		Sn	16 33 16.9	-1.5
NB2	NORSAR Subarra	5.63	286	Pn		Pn	16 32 13.8	+0.8
	baz=95,slow=14							
NB2				Sn		Sn	16 33 16.9	-1.5
NOA	NORSAR Array B	5.63	286	Pn		Pn	16 32 12.9	-0.1
	comp=Z,0.0nm,0.3s,baz=101,slow=13,SNR=4.7							
NOA				Sn		Sn	16 33 16.6	-1.8
	comp=Z,0.0nm,0.3s,baz=35,slow=8.7,SNR=2.3							
NOA				Lg		Lg	16 33 40.1	
	comp=Z,0.0nm,0.3s,baz=103,slow=16,SNR=4.0							
NAO01	NORSAR Array S	5.78	284	*e*P		Pn	16 32 15.6	+0.6
NAO01				*e*S		Sn	16 33 19.8	-2.0
STRU	Stroemstad	5.78	266	*e*P		Pn	16 32 14.2	-0.7
NBO00	NORSAR Array S	5.85	286	*e*P		Pn	16 32 16.1	+0.3
NBO00				*e*S		Sn	16 33 20.6	-2.9
NC204	NORSAR Array S	5.88	288	*e*P		Pn	16 32 16.3	-0.1
MOR8	Moi Rana	7.23	333	*e*P		Pn	16 32 39.1	+4.4
HEF	Hetta	8.53	3	*e*P		Pn	16 32 54.2	+1.6
KIF	Kilpisjarvi	9.14	356	*e*P		Pn	16 33 02.4	+1.4
ARA0	ARCESS Array S	9.74	7	Pn		Pn	16 33 09.8	+0.6
	baz=190,slow=16							
ARA0				Sn		Sn	16 34 54.8	-4.3
	baz=183,slow=18							
ARA0	ARCESS Array S	9.74	7	Pn		Pn	16 33 09.8	+0.6
	baz=190,slow=16							
ARA0				Sn		Sn	16 34 54.8	-4.3
	baz=183,slow=18							
ARCES	ARCESS Array B	9.74	7	Pn		Pn	16 33 09.8	+0.7
	comp=Z,0.2nm,0.3s,baz=192,slow=14,SNR=10							
ARCES				Sn		Sn	16 34 54.4	-4.7
	comp=Z,0.0nm,0.3s,baz=186,slow=17,SNR=2.5							
ARE0	ARCESS Array S	9.74	7	*e*P		Pn	16 33 10.5	+1.3
KEV	Kevo	10.06	9	*e*P		Pn	16 33 14.5	+1.0

*DDA **10** 16:36:03.8, 39°.00N×27°.91E, h14km±1km, ML3.4*
*THE **10** 16:36:03.8, 39°.06N×28°.06E, h1km±1km, ML3.2/7, Error ellipse: s-maj=2.0km s-min=0.7km az=47.0*
*ISK **10** 16:36:03.8, 39°.01N×27°.86E, h7km, ML3.5/30*
*ISCJB **10** 16:36:04.1±0.3, 39°.02N±0°.01×27°.94E±0°.02, h3km±3km, Error ellipse: s-maj=2.7km s-min=2.5km az=20.2*
ISC 10 16:36:04.2±0.9, 39°.02N±0°.02×27°.92E±0°.02, h9km±7km, n65, σ0°78/88, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.16	211	*i* P		Pg	16 36 08.1	+0.4
AKHS				*i* S		Sg	16 36 11.0	+1.0
AKHS				IAML_P				
	comp=Z,180μm,0.2s							
AKS	Akhisar	0.16	211	PG		Pg	16 36 07.4	-0.2
AKS				SG		Sg	16 36 09.7	-0.3
GOMA	Golmarmara-Man	0.31	180	PG		Pg	16 36 10.4	+0.1
GOMA				SG		Sg	16 36 15.2	+0.7
STEP	BALIKESIR_Sava	0.39	336	*i* P		Pb	16 36 12.8	-0.6
STEP				*i* S		Sb	16 36 18.4	-1.2
STEP				IAML_P				
	comp=Z,32μm,0.2s							
BALB	Balikesir	0.62	357	PG		Pb	16 36 16.7	-0.6
BALB				SG		Sb	16 36 25.2	-1.0
ZEDA	zmir-Bergama	0.66	266	*i* P		Pb	16 36 17.9	-0.1
ZEDA				*i* S		Sb	16 36 27.4	+0.2
ZEDA				IAML_P				
	comp=Z,11μm,0.2s							
DURS	Dursunbey	0.72	36	*i* P		Pb	16 36 18.9	-0.2
DURS				*i* S		Sb	16 36 28.4	-0.8
DURS				IAML_P				
	comp=Z,3μm,0.1s							
KULA	Kula-Manisa	0.77	131	PG		Pg	16 36 18.8	-0.2
KULA	Kula-Manisa	0.77	131	P		Pg	16 36 18.7	-0.2
KULA				S		Sg	16 36 28.4	-0.6
SMAA	Simav-Kutahya	0.83	84	PG		Pb	16 36 21.1	+0.2
USAK	Uak-Merkez	0.91	109	*i* P		Pg	16 36 21.6	-0.1
USAK				*i* S		Sb	16 36 34.7	+0.2
USAK				IAML_P				
	comp=Z,7μm,0.3s							
BLCB	Balcova	0.93	228	PG		Pg	16 36 21.5	-0.7
FOCM	Foa	0.98	252	PG		Pg	16 36 22.1	-0.9
AYVA	Ayvalik	1.00	287	*i* P		Pn	16 36 24.7	+0.3
AYVA				*i* S		Sn	16 36 37.8	-0.9
SHAP	Saphane-Kutahy	1.01	89	PG		Pn	16 36 24.7	-0.1
GONE	Gonen-Balikesi	1.04	350	PG		Pb	16 36 24.3	-0.2
AYD

BODT	**Bodrum**	**2.01 194**	PN	**Pn**	**16 36 38.7**	**+0.3**
BODT	**Bodrum**	**2.01 194**	P	**Pn**	**16 36 37.8**	**-0.6**
BUY	**Buyukada**	**2.05 26**	PN	**Pb**	**16 36 40.8**	**-0.8**
SHUT	**Suhut-Afyon**	**2.11 102**	PN	**Pb**	**16 36 41.2**	**-1.5**
TURN	**Turunc**	**2.21 166**	PN	**Pb**	**16 36 42.8**	**-1.5**
ISK	**Istanbul-Kandi**	**2.22 23**	P	**Pn**	**16 36 40.1**	**-1.2**
DALY	**Dalyan (Mula)**	**2.27 165**	PN	**Pn**	**16 36 43.2**	**+1.3**
LIA	**Limnos Island**	**2.29 293**	P	**Pn**	**16 36 42.4**	**+0.1**
LIA			S	**Sb**	**16 37 13.4**	**-0.9**
DAT	**Datca**	**2.30 187**	PN	**Pn**	**16 36 43.2**	**+0.7**
SMTH	**Samothraki Isl**	**2.34 309**	P	**Pn**	**16 36 43.2**	**+0.2**
SMTH			S	**Sb**	**16 37 14.4**	**-1.4**
ALN	**Alexandroupoli**	**2.37 323**	P	**Pn**	**16 36 43.5**	**+0.3**
ALN			S	**Sn**	**16 37 13.7**	**+1.3**
EDRB	**Edirne**	**2.96 343**	P	**Pn**	**16 36 51.4**	**-0.1**

*ISCJB **10** 16:37:35.9±0.6, 28°.2S±0°.1×69°.1E±0°.1, h10km, mb4.0/11, Error ellipse: s-maj=18.9km s-min=15.1km az=13.9*
*IDC **10** 16:37:36.0±0.7, 28°.16S×69°.04E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.7/35, mbtmp3.9/9, Error ellipse: s-maj=25.0km s-min=20.2km az=179.0*
*NEIC **10** 16:37:37.6±0.4, 28°.14S×69°.03E, h10km, mb4.5/4, Error ellipse: s-maj=14.0km s-min=11.3km az=195.0*
ISC 10 16:37:37.4±0.8, **28°.2S**±0°.2×**69°.1E**±0°.2, **h10**km, **n20,** σ**0**s**73**/20, **mb4.1**/11, **South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**38.85**	**264**	P	**P**	**16 45 03.8**	**+0.8**
	1.3nm,0.7s,baz=35,slow=19,SNR=2.6						
LBTB	**Lobatse**	**38.85**	**264**	*e*P	**P**	**16 45 04.0**	**+0.9**
	42nm,1.8s						
SUR	**Sutherland**	**41.61**	**252**	P	**P**	**16 45 25.5**	**-0.5**
	1.9nm,0.7s,baz=32,slow=19,SNR=3.4						
SUR	**Sutherland**	**41.61**	**252**	*e*P	**P**	**16 45 25.8**	**-0.1**
	81nm,1.8s						
CMAR	**Chiang Mai Arr**	**54.64**	**35**	P	**P**	**16 47 05.6**	**-1.0**
	0.5nm,0.9s,baz=238,slow=5.2,SNR=4.1						
ASAR	**Alice Springs**	**57.88**	**102**	P	**P**	**16 47 30.9**	**+1.1**
	0.9nm,0.7s,baz=251,slow=6.4,SNR=17						
AS31	**Alice Springs**	**57.88**	**102**	*e*P	**P**	**16 47 31.0**	**+1.1**
	3.2nm,1.5s						
WRA	**Warramunga Arr**	**59.55**	**98**	P	**P**	**16 47 42.3**	**+0.8**
	1.0nm,0.6s,baz=244,slow=9.2,SNR=7.6						
WR1	**Warramunga Arr**	**59.56**	**98**	*e*P	**P**	**16 47 42.3**	**+0.8**
VNDA	**Vanda**	**63.30**	**166**	P	**P**	**16 48 05.5**	**-0.5**
	0.8nm,0.8s,baz=282,slow=7.1,SNR=6.2						
VNDA	**Vanda**	**63.30**	**166**	*e*P	**P**	**16 48 05.6**	**-0.4**
BRTR	**Keskin Array B**	**75.19**	**332**	P	**P**	**16 49 20.4**	**+0.2**
	0.3nm,0.6s,baz=164,slow=5.7,SNR=4.1						
BR101	**Keskin Array S**	**75.19**	**332**	*e*P	**P**	**16 49 20.4**	**+0.2**
MK32	**Makanchi Array**	**75.58**	**9**	*e*P	**P**	**16 49 22.5**	**+0.3**
MKAR	**Makanchi Array**	**75.58**	**9**	P	**P**	**16 49 22.5**	**+0.3**
	0.6nm,0.6s,baz=192,slow=6.3,SNR=5.4						
ABKAR	**Akbulak array**	**77.52**	**354**	*e*P	**P**	**16 49 33.2**	**+0.2**
	3.3nm,1.4s						
ZALV	**Zalesovo Beam**	**82.92**	**9**	P	**P**	**16 50 02.0**	**0.0**
	1.8nm,0.7s,baz=189,slow=4.5,SNR=6.7						
ZAA1	**Zalesovo Array**	**82.93**	**9**	*e*P	**P**	**16 50 02.0**	**-0.1**
YKA	**Yellowknife Ar**	**145.61**	**3**	PKPbc	**PKPdf**	**16 57 14.2**	**-1.0**
	0.7nm,0.5s,baz=334,slow=3.0,SNR=4.8						
YKB5	**Yellowknife Ar**	**145.61**	**3**	*e*PKPdf	**PKPdf**	**16 57 14.2**	**-1.1**

*ISCJB **10** 16:51:40.0±0.4, 23°.37N±0°.01×122°.08E±0°.02, h19km±2km, Error ellipse: s-maj=2.9km s-min=1.9km az=41.8*
*JMA **10** 16:51:40.8±0.1, 23°.38N×122°.01E, h44km, M2.5*
*TAP **10** 16:51:41.6, 23°.38N×122°.04E, h35km, ML2.9, D*
ISC 10 16:51:40.2±1.1, **23°.38N**±0°.02×**122°.06E**±0°.02, **h20**km±6km, **n91,** σ**0**s**70**/170, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.60**	**281**	*e*P	**Pb**	**16 51 52.3**	**+0.3**
	baz=281						
HGSD				*e*S	**Sb**	**16 51 60.0**	**-0.1**
	baz=281						
EGFH	**Guangfu**	**0.65**	**297**	*e*P	**Pb**	**16 51 53.3**	**+0.4**
	baz=305						
EGFH				*e*S	**Sb**	**16 52 02.2**	**+0.6**
	baz=305						
ENLB	**Shoufeng**	**0.67**	**321**	*e*P	**Pb**	**16 51 53.4**	**+0.1**
	baz=332						
ENLB				*e*S	**Sb**	**16 52 02.1**	**-0.1**
	baz=332						
EHY	**Hungye**	**0.69**	**281**	P	**Pb**	**16 51 54.0**	**+0.4**
	baz=280						
EHY				S	**Sb**	**16 52 03.6**	**+0.9**
	baz=280						
CHKT	**Chengkung**	**0.70**	**247**	P	**Pb**	**16 51 53.5**	**-0.1**
	baz=239						
CHKT				S	**Sb**	**16 52 02.2**	**-0.6**
	baz=239						
YULB	**Yu-li**	**0.70**	**271**	*e*P	**Pb**	**16 51 54.0**	**+0.3**
	baz=266						
YULB				*e*S	**Sb**	**16 52 04.1**	**+1.0**
	baz=266						
TWF1	**Yuli**	**0.70**	**268**	*i* P	**Pb**	**16 51 54.2**	**+0.4**
	baz=263						
TWF1				S	**Sn**	**16 52 04.2**	**-1.0**
	baz=263						
ESL	**Shilin**	**0.72**	**307**	*i* P	**Pb**	**16 51 54.1**	**0.0**
	baz=308						
ESL				*i* S	**Sb**	**16 52 03.2**	**-0.4**
	baz=308						
HWA	**Hwalien**	**0.73**	**325**	P	**Pb**	**16 51 54.8**	**+0.6**
	baz=334						
HWA				S	**Sn**	**16 52 05.4**	**-0.5**
	baz=334						
TWD	**Chiawan**	**0.82**	**329**	P	**Pb**	**16 51 55.9**	**+0.1**
	baz=330						
TWD				S	**Sb**	**16 52 06.3**	**-0.1**
	baz=330						
NACB	**Ninganchiao**	**0.90**	**332**	*e*P	**Pb**	**16 51 56.9**	**-0.3**
	baz=332						
NACB				*e*S	**Sb**	**16 52 08.1**	**-0.6**
	baz=332						
VWDT	**VWDT**	**0.93**	**294**	*e*P	**Pn**	**16 51 57.9**	**-0.1**
	baz=294						
VWDT				*e*S	**Sb**	**16 52 09.5**	**+0.1**
	baz=294						
ELDTW	**Lidau**	**0.98**	**259**	*i* P	**Pb**	**16 51 57.8**	**-0.7**
	baz=248						
ELDTW				*i* S	**Sb**	**16 52 09.8**	**-1.3**
	baz=248						
ETLH	**Xiulin Townshi**	**0.98**	**327**	*e*P	**Pb**	**16 51 58.5**	**0.0**
	baz=327						
ETLH				*e*S	**Sb**	**16 52 10.5**	**-0.7**
	baz=327						
OWD	**Renai**	**1.00**	**305**	*e*P	**Pb**	**16 51 58.7**	**-0.1**
	baz=305						
OWD				*e*S	**Sb**	**16 52 10.8**	**-0.8**
	baz=305						
YUS	**Yu-Shan**	**1.03**	**277**	*i* P	**Pb**	**16 51 59.6**	**+0.1**
	baz=276						
YUS				*i* S	**Sb**	**16 52 12.4**	**-0.4**
	baz=276						
TTN	**Taitung**	**1.05**	**234**	*e*P	**Pb**	**16 51 59.9**	**+0.3**
	baz=232						
TTN				S	**Sb**	**16 52 11.9**	**-0.9**
	baz=232						
WHF	**Hehuan Shan**	**1.06**	**316**	*i* P	**Pb**	**16 51 59.7**	**-0.4**
	baz=316						
WHF				*i* S	**Sb**	**16 52 12.7**	**-0.9**
	baz=316						
CHGB	**Renai**	**1.06**	**310**	*e*P	**Pn**	**16 51 59.9**	**-0.2**
	baz=310						
CHGB				*e*S	**Sb**	**16 52 12.9**	**-0.6**
	baz=310						
TWGBT	**Beinan**	**1.06**	**239**	*e*P	**Pn**	**16 51 59.3**	**-0.6**
	baz=230						
TWGBT				*e*S	**Sb**	**16 52 12.2**	**-1.1**
	baz=230						
TWG	**Pinlang**	**1.07**	**239**	P	**Pn**	**16 51 59.4**	**-0.6**
	baz=230						
TWG				*i* S	**Sb**	**16 52 12.2**	**-1.2**
	baz=230						
NANB	**Nanao**	**1.08**	**345**	*e*P	**Pn**	**16 52 00.2**	**0.0**
	baz=345						
NANB				*e*S	**Sb**	**16 52 13.6**	**-0.4**
	baz=345						
ENA	**Nanau**	**1.09**	**344**	P	**Pb**	**16 52 00.3**	**0.0**
	baz=345						
ENA				S	**Sb**	**16 52 13.8**	**-0.3**
	baz=345						
SSLB	**Suanglung**	**1.10**	**292**	*e*P	**Pn**	**16 52 00.2**	**-0.2**
	baz=292						
SSLB				*e*S	**Sb**	**16 52 13.5**	**-0.8**
	baz=292						
WHYT	**Xinyi Township**	**1.16**	**286**	P	**Pb**	**16 52 01.8**	**+0.3**
	baz=280						
WHYT				*e*S	**Sb**	**16 52 15.3**	**-0.7**
	baz=280						
ALS	**Alishan**	**1.16**	**277**	*i* P	**Pb**	**16 52 02.0**	**+0.3**
	baz=276						
ALS				*i* S	**Sb**	**16 52 16.7**	**+0.2**
	baz=276						
EOS1	**EOS1**	**1.17**	**3**	*e*P	**Pn**	**16 52 01.3**	**0.0**
	baz=3.0						
EOS1				*e*S	**Sn**	**16 52 16.7**	**+0.1**
	baz=3.0						
SMLT	**Sun Moon Lake**	**1.18**	**296**	P	**Pn**	**16 52 01.8**	**+0.2**
	baz=300						
SMLT				*e*S	**Sn**	**16 52 17.2**	**+0.1**
	baz=300						
TWT	**Tachien**	**1.19**	**317**	P	**Pb**	**16 52 02.3**	**+0.1**
	baz=316						
TWT				S	**Sb**	**16 52 16.7**	**-0.5**
	baz=316						
TDCB	**Techi**	**1.20**	**317**	*e*P	**Pb**	**16 52 02.3**	**-0.1**
	baz=316						
TDCB				*e*S	**Sb**	**16 52 16.4**	**-1.1**
	baz=316						
NNSB	**Datong**	**1.22**	**329**	*e*P	**Pn**	**16 52 02.0**	**-0.2**
	baz=319						
NNSB				*e*S	**Sn**	**16 52 16.7**	**-1.4**
	baz=319						
STYT	**Tauyuan**	**1.22**	**260**	*i* P	**Pn**	**16 52 02.4**	**+0.3**
	baz=253						
STYT				*i* S	**Sn**	**16 52 17.0**	**-1.1**
	baz=253						
TYC	**Yuchr**	**1.22**	**296**	P	**Pb**	**16 52 02.6**	**0.0**
	baz=295						
TYC				*e*S	**Sn**	**16 52 17.8**	**-0.3**
	baz=295						
DPDB	**Guoxing**	**1.23**	**302**	P	**Pb**	**16 52 02.9**	**+0.1**
	baz=309						
DPDB				*e*S	**Sn**	**16 52 17.5**	**-0.9**
	baz=309						
NNS	**Nan Shan**	**1.23**	**329**	P	**Pn**	**16 52 02.6**	**+0.2**
	baz=329						
NNS				S	**Sn**	**16 52 17.0**	**-1.5**
	baz=329						
TWC	**Suao**	**1.24**	**351**	*e*P	**Pb**	**16 52 03.2**	**+0.3**
	baz=351						
TWC				S	**Sn**	**16 52 18.1**	**-0.4**
	baz=351						
ECL	**Taimali**	**1.28**	**233**	P	**Pn**	**16 52 02.1**	**-0.8**
	baz=242						
ECL				S	**Sn**	**16 52 16.8**	**-2.7**
	baz=242						
CHN5	**Tsauling**	**1.29**	**280**	*i* P	**Pb**	**16 52 04.4**	**+0.6**
	baz=279						
CHN5				*e*S	**Sn**	**16 52 19.3**	**-0.5**
	baz=279						
WJS	**Zhushan**	**1.30**	**290**	*e*P	**Pb**	**16 52 04.8**	**+0.8**
	baz=289						
WJS				*e*S	**Sb**	**16 52 21.3**	**+1.1**
	baz=289						
TPUB	**Ta-pu**	**1.32**	**267**	*e*P	**Pb**	**16 52 04.6**	**+0.3**
	baz=272						
TPUB				*e*S	**Sb**	**16 52 21.6**	**+0.8**
	baz=272						
NDT	**Datong Townshi**	**1.32**	**338**	*e*P	**Pb**	**16 52 04.1**	**-0.2**
	baz=338						
NDT				*e*S	**Sn**	**16 52 20.4**	**-0.1**
	baz=338						
ENTT	**Nioudou**	**1.34**	**340**	P	**Pb**	**16 52 04.5**	**0.0**
	baz=340						
ENTT				*e*S	**Sn**	**16 52 20.6**	**-0.3**
	baz=340						
WTP	**Ta-pu**	**1.34**	**265**	P	**Pb**	**16 52 04.8**	**+0.2**
	baz=257						
WTP				S	**Sb**	**16 52 22.3**	**+1.0**
	baz=257						
JYNG	**Yonagunijimaku**	**1.34**	**37**	P	**Pn**	**16 52 04.0**	**+0.3**
JYNG				S	**Sn**	**16 52 20.5**	**-0.5**
CHN4	**Tsaushan**	**1.35**	**269**	P	**Pb**	**16 52 05.2**	**+0.4**
	baz=268						
CHN4				*e*S	**Sb**	**16 52 22.7**	**+1.1**
	baz=268						
SLGT	**Liugui**	**1.36**	**254**	*e*P	**Pb**	**16 52 04.7**	**-0.2**
	baz=253						
SLGT				*e*S	**Sb**	**16 52 21.9**	**0.0**
	baz=253						
WNT	**Mingjian**	**1.36**	**292**	P	**Pb**	**16 52 05.8**	**+0.9**
	baz=292						
WHP	**Taichung City**	**1.36**	**312**	*e*P	**Pb**	**16 52 05.2**	**+0.2**
	baz=312						
YOJ	**Yonaguni jima**	**1.39**	**39**	P	**Pb**	**16 52 05.8**	**+0.4**
YOJ				S	**Sn**	**16 52 22.2**	**+0.1**
TWE	**Neicheng**	**1.39**	**345**	*e*P	**Pn**	**16 52 03.9**	**-0.5**
	baz=339						
TWE				S	**Sn**	**16 52 22.1**	**0.0**
	baz=339						
SGST	**Jiashian**	**1.39**	**258**	P	**Pb**	**16 52 05.9**	**+0.4**
	baz=251						
SGST				S	**Sb**	**16 52 23.2**	**+0.4**
	baz=251						
WGK	**Gukeng**	**1.41**	**283**	P	**Pb**	**16 52 06.1**	**+0.3**
	baz=283						
CHN1	**Nanshi**	**1.42**	**263**	P	**Pb**	**16 52 06.4**	**+0.4**
	baz=256						
CHN1				S	**Sb**	**16 52 24.9**	**+1.1**
	baz=256						
WDLH	**Douliu**	**1.43**	**283**	*e*P	**Pb**	**16 52 06.1**	**0.0**
	baz=283						
YHNB	**Yeheng**	**1.43**	**334**	*e*P	**Pn**	**16 52 05.7**	**+0.6**
	baz=334						
YHNB				*e*S	**Sn**	**16 52 22.4**	**-1.0**
	baz=334						
NSK	**Sanguang**	**1.45**	**334**	P	**Pn**	**16 52 05.7**	**+0.4**
	baz=334						
NSK				S	**Sn**	**16 52 22.0**	**-1.6**
	baz=334						
SNST	**Tainan City**	**1.45**	**264**	*e*P	**Pb**	**16 52 06.9**	**+0.5**
	baz=263						
SNST				*e*S	**Sb**	**16 52 25.6**	**+1.2**
	baz=263						
TWK	**Hsinying**	**1.45**	**266**	P	**Pb**	**16 52 06.8**	**+0.2**
	baz=265						
TWK				S	**Sb**	**16 52 25.8**	**+1.2**
	baz=265						
SSD	**Sandimen**	**1.46**	**245**	P	**Pn**	**16 52 05.5**	**+0.1**
	baz=240						
SSD				S	**Sn**	**16 52 23.4**	**-0.5**
	baz=240						
TCU	**Taichung**	**1.48**	**301**	*e*P	**Pb**	**16 52 07.5**	**+0.5**
	baz=301						
TCU				*e*S	**Sb**	**16 52 25.9**	**+0.5**
	baz=301						
NWLT	**Wulai**	**1.49**	**340**	*e*P	**Pn**	**16 52 05.9**	**+0.2**
	baz=329						
NWLT				*e*S	**Sn**	**16 52 24.1**	**-0.5**
	baz=329						
EAST	**Anshuo**	**1.49**	**229**	P	**Pn**	**16 52 05.3**	**-0.6**
	baz=235						
EAST				S	**Sn**	**16 52 22.6**	**-2.2**
	baz=235						
MASBT	**Mashibuluo**	**1.52**	**240**	*e*P	**Pn**	**16 52 06.1**	**-0.1**
	baz=234						
MASBT				*e*S	**Sn**	**16 52 25.5**	**+0.1**
	baz=234						
TWQ1	**Liyutan**	**1.53**	**310**	P	**Pb**	**16 52 08.5**	**+0.8**
	baz=317						
TWQ1				*e*S	**Sb**	**16 52 27.6**	**+0.9**
	baz=317						
WCHH	**Zhanghua**	**1.55**	**297**	*e*P	**Pb**	**16 52 08.2**	**+0.1**
	baz=296						
WCHH				*e*S	**Sb**	**16 52 27.3**	**0.0**
	baz=296						
NSTT	**Nanjuang**	**1.58**	**322**	P	**Pb**	**16 52 09.1**	**+0.4**
	baz=322						
NSTT				S	**Sb**	**16 52 27.6**	**-0.7**
	baz=322						
LIOB	**Emei**	**1.59**	**323**	P	**Pb**	**16 52 08.9**	**+0.1**
	baz=322						
LIOB				S	**Sb**	**16 52 27.8**	**-0.6**
	baz=322						
TIPB	**Shuangxi**	**1.60**	**352**	*e*P	**Pb**	**16 52 08.7**	**-0.4**
	baz=5.0						
TIPB				*e*S	**Sn**	**16 52 28.0**	**+0.5**
	baz=5.0						
TWM1	**Shoushan**	**1.61**	**250**	*e*P	**Pb**	**16 52 10.2**	**+1.0**
	baz=249						
TWM1				*e*S	**Sb**	**16 52 31.1**	**+2.1**
	baz=249						
WDJ	**Dajia District**	**1.62**	**307**	*e*P	**Pb**	**16 52 09.1**	**-0.3**
	baz=319						
WDJ				*e*S	**Sb**	**16 52 29.9**	**+0.4**
	baz=319						
RLNB	**Erlin**	**1.64**	**289**	*e*P	**Pb**	**16 52 09.5**	**-0.3**
	baz=287						
RLNB				*e*S	**Sn**	**16 52 28.9**	**+0.5**
	baz=287						
TATO	**Taipei**	**1.68**	**342**	*e*S	**Sn**	**16 52 29.2**	**0.0**
	baz=332						
HATJ	**Hateruma jima**	**1.73**	**67**	P	**Pn**	**16 52 09.6**	**+0.5**
HATJ				S	**Sn**	**16 52 30.2**	**-0.5**
IRIF	**Iriomote-Funau**	**1.80**	**58**	P	**Pn**	**16 52 11.0**	**+1.0**
IRIF				S	**Sn**	**16 52 32.4**	**+0.1**
TWS1	**Kuangyinshan**	**1.81**	**341**	*e*P	**Pn**	**16 52 11.2**	**+1.0**
	baz=342						
YM01	**YM01**	**1.82**	**346**	*e*P	**Pn**	**16 52 10.8**	**+0.4**
	baz=332						
YM10	**YM10**	**1.83**	**346**	*e*P	**Pb**	**16 52 11.9**	**-1.1**
	baz=332						
YM10				*e*S	**Sn**	**16 52 33.6**	**+0.4**
	baz=332						
HEN	**Hengchun**	**1.83**	**222**	*e*S	**Sn**	**16 52 32.2**	**-0.9**
	baz=221						
YM04	**YM04**	**1.83**	**345**	*e*S	**Sn**	**16 52 34.0**	**+0.8**
	baz=332						
YM07	**YM07**	**1.84**	**347**	*e*S	**Sn**	**16 52 33.8**	**+0.5**
	baz=333						
TWKBT	**Hengchun**	**1.84**	**219**	*e*P	**Pn**	**16 52 11.4**	**+0.8**
	baz=226						
TWKBT				*e*S	**Sn**	**16 52 32.4**	**-0.8**
	baz=226						
YM05	**YM05**	**1.84**	**346**	*e*S	**Sn**	**16 52 33.8**	**+0.5**
	baz=332						
TWK1	**Hengchun**	**1.84**	**219**	*e*P	**Pn**	**16 52 12.1**	**+1.6**
	baz=226						
TWK1				*e*S	**Sn**	**16 52 33.6**	**+0.3**
	baz=226						
YM08	**YM08**	**1.85**	**347**	*e*S	**Sn**	**16 52 33.3**	**-0.4**
	baz=332						
JKRS	**Kuro-shima**	**1.98**	**64**	P	**Pn**	**16 52 13.5**	**+1.0**
JKRS				S	**Sn**	**16 52 36.8**	**+0.1**
JIJ	**Ishigaki jima**	**2.14**	**62**	P	**Pn**	**16 52 15.3**	**+0.5**
JIJ				S	**Sn**	**16 52 39.6**	**-1.2**
WDGT	**Dungji**	**2.21**	**267**	P	**Pn**	**16 52 16.5**	**+0.8**
	baz=266						
WDGT				S	**Sn**	**16 52 41.9**	**-0.5**
	baz=266						
PHUB	**P'eng-hu**	**2.29**	**274**	*e*P	**Pn**	**16 52 17.4**	**+0.7**
	baz=273						
PHUB				*e*S	**Sn**	**16 52 43.9**	**-0.5**
	baz=273						
PNG	**Penghu**	**2.31**	**275**	P	**Pn**	**16 52 17.9**	**+0.8**
	baz=274						
PNG				S	**Sn**	**16 52 44.4**	**-0.5**
	baz=274						
JISG	**Ishigakijimahi**	**2.38**	**59**	P	**Pn**	**16 52 18.0**	**-0.1**
JISG				S	**Sn**	**16 52 45.2**	**-1.5**
VCHM	**Qimei**	**2.43**	**267**	*e*P	**Pn**	**16 52 19.7**	**+1.0**
	baz=265						
VCHM				*e*S	**Sn**	**16 52 47.5**	**-0.2**
	baz=265						

IDC 10 16:58:12.8±16.0, **20°.39S**×**177°.08E**, **h617**km±205km, **mb3.1**/3, **mb1 3.4**/3, **mb1mx2.8**/19, **mbtmp4.1**/3, **Error ellipse: s-maj=259.2km s-min=73.1km az=155.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.04**	**263**	P	P	17 04 58.7	+1.9
	2.9nm,0.5s,baz=95,slow=7.8,SNR=2.7						
ASAR	**Alice Springs**	**40.05**	**257**	P	P	17 04 55.9	-0.9
	1.0nm,0.3s,baz=89,slow=8.1,SNR=54						
ASAR				S	S	17 10 33.4	+13
	0.1nm,0.5s,baz=92,slow=17,SNR=4.1						
NVAR	**Mina Array Bea**	**84.17**	**46**	P	P	17 09 40.9	+0.1
	0.5nm,0.6s,baz=223,slow=8.6,SNR=4.1						
NOA	**NORSAR Array B**	**138.18**	**350**	PKP	PKPdf	17 16 26.9	-1.5
	0.3nm,0.5s,baz=21,slow=3.8,SNR=3.8						
HFS	**Hagfors**	**138.56**	**348**	PKP	PKPdf	17 16 28.9	-0.2
	1.4nm,0.6s,baz=72,slow=4.7,SNR=6.8						

*ISCJB **10** 17:09:51.7±0.4, 23°.09S±0°.03×66°.72W±0°.03, h221km±5km, mb3.8/1, Error ellipse: s-maj=5.6km s-min=3.9km az=137.9*
*SJA **10** 17:09:51.6±0.6, 23°.10S×66°.65W, h223km±3km, ML3.0, MW3.3*
*IDC **10** 17:09:52.2±0.9, 23°.07S×66°.59W, h204km±14km, mb3.4/1, mb1 3.4/8, mb1mx3.2/39, mbtmp3.9/8, Error ellipse: s-maj=18.3km s-min=16.2km az=104.0*
*GUC **10** 17:09:54.3±0.4, 23°.01S×67°.03W, h248km±6km, ML4.5*
ISC 10 17:09:52.0±0.8, **23°.12S**±0°.05×**66°.71W**±0°.04, **h218**km±8km, **n50,** σ**1**s**42**/75, **13C-4D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.20**	**94**	*e*P	**Pn**	**17 10 26.1**	**+0.6**
HJA				IAML		17 10 26.6	
	comp=Z,206nm,0.5s						
YJA	**Yavi**	**1.45**	**50**	*e*P	**Pn**	**17 10 28.0**	**+0.5**
YJA				IAML		17 10 28.6	
	comp=Z,64nm,0.4s						
YJA				*e*S	**S**	**17 10 54.3**	**-0.5**
AZAP	**Zapla**	**1.86**	**126**	*e*P	**Pn**	**17 10 31.0**	**+0.2**
AZAP				IAML		17 10 33.4	
	comp=Z,36nm,0.6s						
AZAP				*e*S	**S**	**17 11 00.6**	**-0.4**
SLA	**San Lorenzo**	**1.94**	**146**	*e*P	**Pn**	**17 10 32.0**	**+0.6**
SLA				IAML		17 10 35.1	
	comp=Z,36nm,0.8s						
SLA				⇓*e*S	**S**	**17 11 01.9**	**-0.3**
LVC	**Limon Verde**	**2.09**	**284**	P	**Pn**	**17 10 34.6**	**+1.3**
	comp=Z,11nm,0.3s,baz=92,slow=7.8,SNR=73						
LVC				S	**S**	**17 11 05.5**	**+0.4**
	comp=Z,29nm,0.3s,baz=274,slow=19,SNR=40						
LVC	**Limon Verde**	**2.09**	**284**	*e*P	**Pn**	**17 10 34.1**	**+0.9**
LVC				*e*S	**S**	**17 11 05.6**	**+0.4**
LVC				IAML		17 11 09.2	
	comp=Z,54nm,0.4s						
LVC	**Limon Verde**	**2.09**	**284**	⇓*i*P	**Pn**	**17 10 34.6**	**+1.3**
LVC				*i* S	**S**	**17 11 05.5**	**+0.4**
PB15	**IPOC Station P**	**2.54**	**267**	⇑*i*P	**Pn**	**17 10 39.2**	**+1.4**
PB15				*i* S	**S**	**17 11 13.7**	**+0.4**
PB06	**IPOC Station P**	**2.67**	**278**	*e*P	**Pn**	**17 10 40.2**	**+1.0**
PB06	**IPOC Station P**	**2.67**	**278**	⇑*i*P	**Pn**	**17 10 40.1**	**+1.0**
PB06				*e*S	**S**	**17 11 15.0**	**-0.7**
PB06				IAML		17 11 16.5	
	comp=N,609nm,0.4s						
PB09	**IPOC Station P**	**2.69**	**299**	*e*P	**Pn**	**17 10 40.5**	**+1.2**
PB09				*e*S	**S**	**17 11 16.0**	**-0.1**
PB09	**IPOC Station P**	**2.69**	**299**	⇑*i*P	**Pn**	**17 10 40.9**	**+1.5**
PB09				*e*S	**S**	**17 11 15.1**	**-1.0**
PB03	**IPOC Station P**	**3.01**	**290**	*e*P	**Pn**	**17 10 43.8**	**+0.9**
PB03	**IPOC Station P**	**3.01**	**290**	⇑*i*P	**Pn**	**17 10 43.6**	**+0.7**
PB03				*e*S	**S**	**17 11 21.3**	**-1.2**
PB03				IAML		17 11 23.8	
	comp=E,622nm,0.2s						
FSA	**Cafayete**	**3.05**

PB01				IAML		17 11 29.7	
	comp=E,528nm,0.2s						
GO02	**Mina Guanaco**	**3.33**	**232**	⇓*i*P	**Pn**	**17 10 47.8**	**+1.1**
GO02				*e*S	**S**	**17 11 29.9**	**+0.5**
GO02				IAML		17 11 32.2	
	comp=E,440nm,0.2s						
PB02	**IPOC Station P**	**3.46**	**301**	*e*P	**Pn**	**17 10 48.8**	**+0.8**
PB02	**IPOC Station P**	**3.46**	**301**	⇑*i*P	**Pn**	**17 10 48.4**	**+0.4**
PB02				*e*S	**S**	**17 11 29.9**	**-1.9**
PB02				IAML		17 11 32.6	
	comp=E,534nm,0.3s						
PB10	**IPOC Station P**	**3.56**	**263**	*e*P	**Pn**	**17 10 50.1**	**+1.0**
PB10	**IPOC Station P**	**3.56**	**263**	⇓*i*P	**Pn**	**17 10 50.0**	**+1.0**
PB10				*i*S	**S**	**17 11 32.1**	**-1.7**
PB14	**IPOC Station P**	**3.70**	**245**	*e*P	**Pn**	**17 10 51.8**	**+0.7**
PB08	**IPOC Station P**	**3.74**	**322**	*e*P	**Pn**	**17 10 52.9**	**+1.2**
PB08	**IPOC Station P**	**3.74**	**322**	⇑*i*P	**Pn**	**17 10 53.1**	**+1.4**
PB08				*e*S	**S**	**17 11 38.2**	**-0.2**
AHML	**Horco Molle**	**3.86**	**161**	*e*P	**Pn**	**17 10 53.1**	**+0.4**
GO01	**Chusmiza**	**4.14**	**326**	⇑*i*P	**Pn**	**17 10 57.6**	**+0.8**
GO01				*i*S	**S**	**17 11 46.5**	**-1.0**
PB11	**IPOC Station P**	**4.33**	**320**	*e*P	**Pn**	**17 10 59.0**	**+0.3**
PB11	**IPOC Station P**	**4.33**	**320**	*e*P	**Pn**	**17 10 58.2**	**-0.4**
PB11				*e*S	**S**	**17 11 48.5**	**-2.5**
PSGCX	**Pisagua**	**4.74**	**317**	*e*P	**Pn**	**17 11 02.5**	**-1.2**
MNMC	**Minye Minye**	**4.80**	**325**	⇑*i*P	**Pn**	**17 11 04.8**	**+0.1**
MNMC				*i*S	**S**	**17 11 59.5**	**-2.4**
CYA	**Choya**	**5.36**	**171**	*e*P	**Pn**	**17 11 11.9**	**+0.5**
PB16	**IPOC Station P**	**5.43**	**331**	*e*P	**Pn**	**17 11 13.5**	**+0.6**
PB16	**IPOC Station P**	**5.43**	**331**	⇑*i*P	**Pn**	**17 11 13.4**	**+0.4**
PB16				*e*S	**S**	**17 12 14.8**	**-2.0**
GO03	**Copiap**	**5.48**	**215**	*e*P	**Pn**	**17 11 12.5**	**-0.4**
PB12	**IPOC Station P**	**5.62**	**322**	*e*P	**Pn**	**17 11 15.0**	**+0.2**
VCA	**Vinchina**	**5.75**	**193**	*e*P	**Pn**	**17 11 17.4**	**+0.9**
LPAZ	**La Paz**	**6.93**	**349**	P	**Pn**	**17 11 32.9**	**+0.8**
	comp=E,1.7nm,0.3s,baz=120,slow=3.2,SNR=35						
LPAZ				S	**S**	**17 12 49.1**	**-2.6**
	comp=E,0.3nm,0.3s,baz=259,slow=16,SNR=4.0						
CFA	**Coronel Fontan**	**8.56**	**189**	P	**Pn**	**17 11 51.5**	**-0.9**
	comp=E,1.0nm,0.3s,baz=300,slow=10,SNR=54						
CFA				S	**S**	**17 13 21.8**	**-7.3**
	comp=E,1.7nm,0.3s,baz=274,slow=20,SNR=8.7						
SIV	**San Ignacio**	**8.86**	**38**	P	**Pn**	**17 11 54.5**	**-1.9**
	comp=E,2.5nm,0.3s,baz=226,slow=11,SNR=52						
CPUP	**Villa Florida**	**9.10**	**112**	P	**Pn**	**17 11 59.1**	**-0.3**
	comp=E,0.1nm,0.3s,baz=284,slow=10,SNR=3.8						
PLCA	**Paso Flores**	**17.86**	**190**	P	**P**	**17 13 47.1**	**+2.1**
	comp=E,0.2nm,0.3s,baz=48,slow=15,SNR=2.8						
BDFB	**Brasília**	**19.13**	**70**	P	**P**	**17 13 59.5**	**+0.5**
	comp=E,0.5nm,0.3s,baz=251,slow=7.5,SNR=5.6						
PTGA	**Pitinga**	**23.20**	**17**	P	**P**	**17 14 39.0**	**-0.7**
	comp=E,0.9nm,0.3s,baz=288,slow=19,SNR=3.8						
MKAR	**Makanchi Array**	**145.68**	**39**	PKPbc	**PKPbc**	**17 29 06.3**	**+1.4**
	comp=E,0.8nm,0.6s,baz=326,slow=2.9,SNR=11						

MEX 10 17:10:43.8±0.4, 17°.35N×100°.66W, h51km±9km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.48**	**128**	*e*P	Pn	17 10 53.3	-1.6
CAIG				*e*S	Sn	17 11 01.0	-1.8
ZIIG	**Zihuatanejo**	**0.81**	**289**	*e*P	Pn	17 10 57.4	-1.6
ZIIG				*e*S	Sn	17 11 08.4	-1.8
ACP2	**Acapulco**	**0.88**	**122**	*i*P	Pn	17 10 58.5	-1.5
ACP2				*i*S	Sn	17 11 09.9	-1.8
ARIG	**Puente Sto Nin**	**0.97**	**18**	*e*P	Pn	17 10 59.5	-1.8
ARIG				*i*S	Sn	17 11 12.2	-1.8
MEIG	**Mezcala**	**1.15**	**60**	*e*P	Pn	17 11 03.4	-0.3
MEIG				*e*S	Sn	17 11 17.1	-1.2
PLIG	**Platanillo**	**1.52**	**47**	*e*P	Pn	17 11 07.7	-0.9
PLIG				*i*S	Sn	17 11 25.3	-2.0

*IDC **10** 17:15:40.7±1.0, 36°.63N×23°.29E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.4/46, mbtmp3.6/9, ML3.5/2, Error ellipse: s-maj=24.2km s-min=11.8km az=52.0*
*ISK **10** 17:15:43.2, 36°.64N×23°.18E, h12km, ML3.3/14*
*ATH **10** 17:15:44.2, 36°.61N×23°.17E, h30km, ML3.2/29, Error ellipse: s-maj=1.3km s-min=0.8km az=226.0*
*ISCJB **10** 17:15:45.2±0.3, 36°.59N±0°.02×23°.16E±0°.03, h28km±3km, mb3.4/7, Error ellipse: s-maj=3.7km s-min=2.8km az=149.4*
*THE **10** 17:15:45.4, 36°.60N×23°.15E, h15km, ML3.3/13, Error ellipse: s-maj=0.9km s-min=0.3km az=227.0*

ISC 10 17:15:44.8±0.8, 36°.61N±0°.02×23°.16E±0°.02, h23km±6km, n101, σ0°90/128, mb3.4/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNVA	**Monemvasia**	**0.12**	**309**	P	**Pb**	**17 15 49.6**	**+0.2**
VLI	**Veliai**	**0.21**	**301**	P	**Pb**	**17 15 50.2**	**-0.1**
VLI				S	**Sb**	**17 15 53.4**	**-0.7**
VLI	**Veliai**	**0.21**	**301**	P	**Pb**	**17 15 50.3**	**0.0**
VLI				S	**Sb**	**17 15 54.4**	**+0.4**
VLI				AML	AML	17 15 56.3	
	comp=E,12099μm,0.3s						
VLI				AML	AML	17 15 56.8	
	comp=N,13457μm,0.5s						
KYTH	**Kithira**	**0.35**	**194**	P	**Pb**	**17 15 52.6**	**0.0**
KYTH				S	**Sb**	**17 15 57.6**	**-0.2**
KYTH	**Kithira**	**0.35**	**194**	P	**Pb**	**17 15 52.7**	**+0.2**
KYTH				S	**Sb**	**17 15 57.7**	**-0.2**
KYTH				AML	AML	17 15 57.9	
	comp=E,13399μm,0.5s						
KYTH				AML	AML	17 15 58.0	
	comp=N,14177μm,0.4s						
KTHR	**Kythira**	**0.37**	**199**	P	**Pb**	**17 15 53.1**	**+0.3**
KTHR				S	**Sb**	**17 15 59.3**	**+1.1**
ANKY	**Antikythira Is**	**0.75**	**171**	P	**Pb**	**17 15 59.6**	**+0.4**
ANKY				S	**Sn**	**17 16 10.3**	**-0.4**
ANKY	**Antikythira Is**	**0.75**	**171**	P	**Pb**	**17 15 59.7**	**+0.5**
ANKY				S	**Sb**	**17 16 09.3**	**+0.3**
ANKY				AML	AML	17 16 10.6	
	comp=N,5026μm,0.3s						
ANKY				AML	AML	17 16 10.7	
	comp=E,8375μm,0.5s						
KRND	**KRANIDI**	**0.77**	**360**	P	**Pb**	**17 16 00.0**	**+0.4**
KRND				S	**Sn**	**17 16 12.0**	**+0.8**
KRND	**KRANIDI**	**0.77**	**360**	P	**Pn**	**17 16 00.2**	**-0.1**
DID	**Didima**	**0.90**	**4**	P	**Pb**	**17 16 01.8**	**+0.1**
DID				S	**Sn**	**17 16 15.3**	**+0.9**
DID	**Didima**	**0.90**	**4**	P	**Pn**	**17 16 02.1**	**0.0**
DID				S	**Sn**	**17 16 14.7**	**+0.3**
DID				AML	AML	17 16 16.2	
	comp=N,5793μm,0.5s						
DID				AML	AML	17 16 16.6	
	comp=E,5523μm,0.3s						
VLX	**Vlachokerasia**	**0.98**	**321**	P	**Pn**	**17 16 03.5**	**+0.2**
VLX				S	**Sn**	**17 16 17.7**	**+1.1**
VLX	**Vlachokerasia**	**0.98**	**321**	P	**Pn**	**17 16 03.7**	**+0.4**
VLX				S	**Sn**	**17 16 16.6**	**0.0**
VLX				AML	AML	17 16 18.5	
	comp=E,5088μm,0.5s						
VLX				AML	AML	17 16 19.2	
	comp=N,5157μm,0.4s						
EPID	**Epidavros**	**1.00**	**358**	P	**Pb**	**17 16 04.4**	**+0.8**
EPID				S	**Sn**	**17 16 18.3**	**+1.3**
MHLO	**Agia Marina, M**	**1.00**	**85**	P	**Pb**	**17 16 04.2**	**+0.7**
MHLO				S	**Sn**	**17 16 18.9**	**+1.9**
MHLO	**Agia Marina, M**	**1.00**	**85**	P	**Pb**	**17 16 03.7**	**+0.2**
ITM	**Ithomi**	**1.14**	**300**	PN	**Pn**	**17 16 05.6**	**+0.2**
ITM				SN	**Sn**	**17 16 21.8**	**+1.5**
ITM	**Ithomi**	**1.14**	**300**	P	**Pb**	**17 16 06.0**	**+0.2**
ITM				S	**Sn**	**17 16 22.4**	**+2.1**
ITM	**Ithomi**	**1.14**	**300**	P	**Pb**	**17 16 06.0**	**+0.2**
ITM				S	**Sn**	**17 16 22.1**	**+1.8**
ITM				AML	AML	17 16 25.4	
	comp=N,2069μm,0.3s						
ITM				AML	AML	17 16 32.0	
	comp=E,1145μm,0.7s						
PYL	**PYLOS**	**1.17**	**284**	P	**Pn**	**17 16 06.2**	**+0.4**
PYL				S	**Sb**	**17 16 22.4**	**+1.3**
PYL	**PYLOS**	**1.17**	**284**	P	**Pb**	**17 16 06.4**	**0.0**
MES2	**Methoni**	**1.18**	**281**	P	**Pb**	**17 16 06.6**	**0.0**
MES2				S	**Sb**	**17 16 23.0**	**+1.5**
MES2				AML	AML	17 16 25.4	
	comp=N,2867μm,0.3s						
MES2				AML	AML	17 16 26.7	
	comp=E,2706μm,0.5s						
SERI	**Serifos**	**1.20**	**62**	P	**Pb**	**17 16 06.6**	**-0.2**
SERI				S	**Sb**	**17 16 23.0**	**+1.1**
SERI	**Serifos**	**1.20**	**62**	P	**Pb**	**17 16 06.6**	**-0.2**
IMMV	**Iera Moni Meta**	**1.33**	**150**	PN	**Pn**	**17 16 08.2**	**+0.2**
IMMV				SN	**Sb**	**17 16 26.8**	**+1.2**
IMMV	**Iera Moni Meta**	**1.33**	**150**	P	**Pn**	**17 16 08.0**	**0.0**
IMMV				S	**Sb**	**17 16 26.8**	**+1.2**
IMMV	**Iera Moni Meta**	**1.33**	**150**	P	**Pn**	**17 16 08.2**	**+0.2**
IMMV				AML	AML	17 16 35.7	
	comp=N,2276μm,0.5s						
IMMV				AML	AML	17 16 39.7	
	comp=E,1982μm,0.5s						
VLY	**Voula,Athens**	**1.34**	**22**	P	**Pn**	**17 16 08.2**	**+0.1**
VLY				S	**Sb**	**17 16 26.4**	**+0.4**
VLY	**Voula,Athens**	**1.34**	**22**	P	**Pn**	**17 16 08.3**	**+0.1**
VLY				AML	AML	17 16 32.7	
	comp=E,2432μm,0.7s						
VLY				AML	AML	17 16 34.6	
	comp=N,3406μm,0.7s						
MES3	**Kyparissia**	**1.35**	**299**	P	**Pb**	**17 16 09.6**	**+0.2**
LOUT	**Loutraki**	**1.38**	**354**	P	**Pb**	**17 16 09.6**	**-0.4**
LOUT	**Loutraki**	**1.38**	**354**	P	**Pn**	**17 16 09.4**	**+0.6**
LOUT				S	**Sb**	**17 16 28.5**	**+1.2**
LOUT				AML	AML	17 16 38.3	
	comp=E,317μm,0.4s						
LOUT				AML	AML	17 16 41.3	
	comp=N,267μm,0.6s						
ATHU	**Athens Univers**	**1.44**	**20**	P	**Pn**	**17 16 09.9**	**+0.3**
ATHU				AML	AML	17 16 36.2	
	comp=N,641μm,0.4s						
ATHU				AML	AML	17 16 36.2	
	comp=E,500μm,0.5s						
VAM	**Vamos**	**1.47**	**145**	P	**Pn**	**17 16 10.1**	**+0.2**
VAM	**Vamos**	**1.47**	**145**	P	**Pn**	**17 16 10.2**	**+0.2**
VAM				AML	AML	17 16 40.5	
	comp=E,2831μm,0.6s						
VAM				AML	AML	17 16 42.4	
	comp=N,2264μm,0.6s						
GUR	**Goura**	**1.48**	**334**	P	**Pn**	**17 16 10.6**	**+0.5**
GUR				S	**Sb**	**17 16 29.6**	**-0.4**
GUR	**Goura**	**1.48**	**334**	P	**Pn**	**17 16 10.4**	**+0.3**
GUR				AML	AML	17 16 34.3	
	comp=N,4071μm,0.5s						
GUR				AML	AML	17 16 35.2	
	comp=E,3864μm,0.4s						
AMT	**Artemida-Makis**	**1.48**	**309**	P	**Pb**	**17 16 11.5**	**-0.2**
AMT				AML	AML	17 16 33.5	
	comp=N,2631μm,0.7s						
AMT				AML	AML	17 16 39.6	
	comp=E,2473μm,0.7s						
PTL	**Penteli**	**1.54**	**21**	P	**Pn**	**17 16 11.6**	**+0.6**
PTL				AML	AML	17 16 39.3	
	comp=E,962μm,0.6s						
PTL				AML	AML	17 16 39.7	
	comp=N,1314μm,0.4s						
VILL	**Villia**	**1.56**	**5**	P	**Pn**	**17 16 11.3**	**+0.1**
DION	**Dionisos Attik**	**1.59**	**23**	P	**Pn**	**17 16 12.2**	**+0.6**
DION	**Dionisos Attik**	**1.59**	**23**	P	**Pn**	**17 16 12.3**	**+0.6**
DION				S	**Sb**	**17 16 32.4**	**-0.8**
DION				AML	AML	17 16 43.5	
	comp=N,1145μm,0.8s						
DION				AML	AML	17 16 48.3	
	comp=E,1079μm,0.5s						
VIL2	**Platees**	**1.60**	**3**	P	**Pn**	**17 16 11.5**	**-0.2**
VIL2				AML	AML	17 16 39.0	
	comp=N,1386μm,0.8s						
VIL2				AML	AML	17 16 40.4	
	comp=E,2372μm,0.7s						
KLV	**Kalavryta, Ach**	**1.64**	**331**	P	**Pn**	**17 16 12.8**	**+0.4**
KLV	**Kalavryta, Ach**	**1.64**	**331**	P	**Pn**	**17 16 12.7**	**+0.3**
KLV				AML	AML	17 16 38.1	
	comp=N,722μm,0.7s						
KLV				AML	AML	17 16 39.4	
	comp=E,845μm,0.8s						
PROD	**Prodromos**	**1.66**	**353**	P	**Pn**	**17 16 13.0**	**+0.5**
PROD				AML	AML	17 16 43.3	
	comp=E,775μm,0.3s						
PROD				AML	AML	17 16 44.3	
	comp=N,964μm,0.4s						
IOSP	**Ios island**	**1.72**	**86**	P	**Pn**	**17 16 14.2**	**+0.9**
IOSP	**Ios island**	**1.72**	**86**	P	**Pn**	**17 16 14.4**	**+1.1**
THR5	**Thira Island,**	**1.78**	**96**	P	**Pn**	**17 16 15.2**	**+1.1**
THR3	**Thira Island,**	**1.82**	**96**	P	**Pn**	**17 16 15.7**	**+1.0**
ALIK	**Aliki, Aigiali**	**1.85**	**334**	P	**Pn**	**17 16 16.5**	**+1.4**
DSF	**Desfina**	**1.87**	**345**	P	**Pn**	**17 16 16.5**	**+1.0**
DSF	**Desfina**	**1.87**	**345**	P	**Pn**	**17 16 16.5**	**+1.0**
SANT	**Santorini**	**1.87**	**97**	PN	**Pn**	**17 16 15.8**	**+0.3**
LAKA	**Lakka**	**1.88**	**330**	P	**Pn**	**17 16 17.1**	**+1.5**
LAKA				AML	AML	17 16 47.5	
	comp=N,554μm,0.7s						
LAKA				AML	AML	17 16 53.4	
	comp=E,339μm,0.8s						
EREA	**Eretria**	**1.91**	**19**	P	**Pn**	**17 16 16.8**	**+0.8**
EREA	**Eretria**	**1.91**	**19**	P	**Pn**	**17 16 16.9**	**+0.9**
EREA				S	**Sn**	**17 16 40.4**	**+1.0**
EREA				AML	AML	17 16 40.9	
	comp=E,755μm,0.5s						
EREA				AML	AML	17 16 53.0	
	comp=N,558μm,0.4s						
GVD	**Gavdhos**	**1.92**	**157**	PN	**Pn**	**17 16 16.9**	**+0.7**
IDI	**Anoyia**	**1.93**	**133**	Pg	**Pn**	**17 16 15.7**	**-0.6**
	comp=N,4.1nm,0.3s,baz=316,slow=17,SNR=48						
IDI				Lg	Lg	17 16 38.4	
	comp=N,13nm,0.3s,baz=335,slow=19,SNR=7.7						
KALE	**Kalithea**	**1.95**	**336**	P	**Pn**	**17 16 17.2**	**+0.6**
KALE				AML	AML	17 16 49.3	
	comp=E,638μm,0.6s						
KALE				AML	AML	17 16 51.4	
	comp=N,681μm,0.4s						
TRIZ	**Trizonia**	**1.95**	**334**	P	**Pn**	**17 16 17.3**	**+0.7**
APE	**Apeiranthos**	**1.96**	**76**	PN	**Pn**	**17 16 17.1**	**+0.4**
APE	**Apeiranthos**	**1.96**	**76**	P	**Pn**	**17 16 17.6**	**+0.9**
APE	**Apeiranthos**	**1.96**	**76**	P	**Pn**	**17 16 17.7**	**+0.9**
SERG	**Sergoula**	**2.00**	**334**	P	**Pn**	**17 16 18.5**	**+1.2**
SERG				AML	AML	17 16 50.4	
	comp=N,548μm,0.5s						
SERG				AML	AML	17 17 02.6	
	comp=E,469μm,0.5s						
LKR	**Lokris**	**2.04**	**357**	P	**Pn**	**17 16 18.4**	**+0.6**
LKR				AML	AML	17 16 43.5	
	comp=N,625μm,0.7s						
LKR				AML	AML	17 16 59.6	
	comp=E,464μm,0.5s						
EFP	**Efpalio**	**2.07**	**332**	P	**Pn**	**17 16 19.8**	**+1.6**
EFP				AML	AML	17 16 58.0	
	comp=N,486μm,0.9s						
EFP				AML	AML	17 17 00.1	
	comp=E,451μm,0.7s						
ATAL	**Atalanti**	**2.08**	**357**	P	**Pn**	**17 16 18.9**	**+0.5**
ATAL				AML	AML	17 17 00.2	
	comp=N,306μm,0.5s						
ATAL				AML	AML	17 17 05.0	
	comp=E,356μm,0.6s						
MRKA	**Markates**	**2.12**	**9**	P	**Pn**	**17 16 19.7**	**+0.8**
MRKA				AML	AML	17 16 53.7	
	comp=N,432μm,0.8s						
MRKA				AML	AML	17 16 59.1	
	comp=E,496μm,0.5s						
ANAF	**Anafi Island**	**2.12**	**96**	P	**Pn**	**17 16 20.2**	**+1.3**
ANX	**Ano Chora**	**2.21**	**334**	P	**Pn**	**17 16 20.8**	**+0.6**
ANX				AML	AML	17 17 00.8	
	comp=N,907μm,0.6s						
ANX				AML	AML	17 17 04.7	
	comp=E,642μm,0.5s						
LAST	**Lasithi**	**2.38**	**127**	P	**Pn**	**17 16 23.2**	**+0.7**
AGG	**Agios Georgios**	**2.50**	**345**	PN	**Pn**	**17 16 24.4**	**+0.3**
AGG	**Agios Georgios**	**2.50**	**345**	P	**Pn**	**17 16 25.2**	**+1.1**
AGG	**Agios Georgios**	**2.50**	**345**	P	**Pn**	**17 16 25.1**	**+1.0**
AGG				AML	AML	17 17 10.7	
	comp=E,186μm,0.6s						
AGG				AML	AML	17 17 24.8	
	comp=N,154μm,0.7s						
ZKR	**Zakros**	**2.90**	**120**	PN	**Pn**	**17 16 30.4**	**+0.8**
CHOS	**Chios island**	**2.91**	**52**	PN	**Pn**	**17 16 30.1**	**+0.3**
CHOS	**Chios island**	**2.91**	**52**	P	**Pn**	**17 16 30.4**	**+0.6**
URLA	**Izmir**	**3.25**	**56**	PN	**Pn**	**17 16 34.9**	**+0.5**
SIGR	**SIGRI**	**3.36**	**39**	PN	**Pn**	**17 16 36.6**	**+0.7**
KARP	**Karpathos**	**3.41**	**107**	PN	**Pn**	**17 16 37.6**	**+0.9**
OUR	**Ouranopolis**	**3.77**	**10**	PN	**Pn**	**17 16 42.2**	**+0.6**
BOZC	**Bozcaada**	**3.95**	**34**	PN	**Pn**	**17 16 44.9**	**+0.9**
HORT	**Hortiatis**	**3.98**	**359**	PN	**Pn**	**17 16 45.5**	**+0.9**
ARG	**Arkhangelos**	**4.03**	**94**	PN	**Pn**	**17 16 46.7**	**+1.6**
FNA	**Florina**	**4.39**	**342**	PN	**Pn**	**17 16 51.1**	**+0.9**
KNT	**Kendrikon**	**4.55**	**358**	PN	**Pn**	**17 16 53.5**	**+1.2**
GELI	**Tayfur-Gelibol**	**4.59**	**34**	PN	**Pn**	**17 16 53.9**	**+1.1**
FETY	**Fethiye**	**4.77**	**88**	PN	**Pn**	**17 16 56.9**	**+1.6**
ALN	**Alexandroupoli**	**4.84**	**27**	PN	**Pn**	**17 16 57.6**	**+1.4**
AKAS	**Kas**	**5.21**	**92**	PN	**Pn**	**17 17 03.2**	**+1.7**
MMAI	**Mount Meron Ar**	**10.69**	**106**	Pn	**Pn**	**17 18 15.5**	**-1.1**
	comp=N,0.5nm,0.3s,baz=311,slow=13,SNR=2.2						
EIL	**Elat**	**12.06**	**122**	Pn	**Pn**	**17 18 32.5**	**-2.8**
	comp=N,0.2nm,0.3s,baz=338,slow=19,SNR=2.4						
HFS	**Hagfors**	**24.32**	**348**	P	**P**	**17 20 58.8**	**-1.7**
	comp=N,1.2nm,0.4s,baz=158,slow=12,SNR=8.6						
FINES	**FINESS Array B**	**24.92**	**3**	P	**P**	**17 21 03.9**	**-2.0**
	comp=N,0.5nm,0.5s,baz=184,slow=16,SNR=4.0						
NOA	**NORSAR Array B**	**25.60**	**347**	P	**P**	**17 21 11.6**	**-0.6**
	comp=N,0.2nm,0.3s,baz=157,slow=10,SNR=4.9						
EKA	**Eskdalemuir Ar.**	**25.92**	**325**	P	**P**	**17 21 15.4**	**+0.4**
	comp=N,0.2nm,0.4s,baz=124,slow=8.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**30.27**	**225**	P	**P**	**17 21 54.3**	**0.0**
	comp=N,0.2nm,0.4s,baz=26,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**44.35**	**58**	P	**P**	**17 23 52.2**	**-1.0**
	comp=N,0.3nm,0.3s,baz=269,slow=8.5,SNR=9.1						
ZALV	**Zalesovo Beam**	**45.19**	**47**	P	**P**	**17 23 58.2**	**-1.5**
	comp=N,1.1nm,0.5s,baz=265,slow=7.2,SNR=5.7						

MEX 10 17:23:38.7±0.4, 16°.69N×99°.71W, h8km±3km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.25**	**316**	*e*P	Pg	17 23 43.5	-0.2
ACP2				*e*S	Sg	17 23 47.4	+0.3
CAIG	**El Cayaco**	**0.64**	**303**	*e*P	Pg	17 23 50.0	-1.1
CAIG				*e*S	Sg	17 23 58.7	-0.8
MEIG	**Mezcala**	**1.23**	**4**	*e*P	Pb	17 23 58.4	-3.8
MEIG				*e*S	Sb	17 24 13.0	-5.3
PLIG	**Platanillo**	**1.70**	**7**	*e*P	Pn	17 24 06.5	-2.2
PLIG				*i*S	Sn	17 24 26.2	-4.5

MEX 10 17:40:29.2±0.5, 15°.77N×97°.08W, h29km±22km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.94**	**90**	*e*P	Pn	17 40 44.0	-2.4
HUIG				*e*S	Sn	17 40 55.2	-3.8
PNIG	**Pinotepa**	**1.18**	**302**	*e*P	Pn	17 40 47.8	-2.0
PNIG				*e*S	Sn	17 41 01.1	-3.9
CMIG	**Matias Romero**	**2.49**	**58**	*i*P	Pn	17 41 06.1	-1.7
CMIG				*e*S	Sn	17 41 35.0	-2.2

*NSSP **10** 17:46:08.2, 38°.50N×43°.70E, h8km, Ms3.5*
*ISK **10** 17:46:09.6, 38°.52N×43°.85E, h5km, ML3.6/14*
*TEH **10** 17:46:10.3, 38°.53N×43°.81E, h10km, ML3.6*
*DDA **10** 17:46:10.5, 38°.54N×43°.82E, h7km±3km, ML3.4*
*AZER **10** 17:46:11.4±1.0, 38°.49N×43°.68E, h10km, ml3.4/10, Error ellipse: s-maj=8.0km s-min=6.5km az=96.0*

ISC 10 17:46:11.5±1.1, 38°.53N±0°.02×43°.82E±0°.02, h6km±9km, n91, σ1°20/119, 4C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.33**	**270**	*i*P	**Pg**	**17 46 17.1**	**-0.9**
TVAN				*i*S	**Sb**	**17 46 23.4**	**-2.1**
TVAN				IAML_P			
	comp=Z,57μm,0.4s						
TVAN	**Van**	**0.33**	**270**	*e*Pg	**Pg**	**17 46 17.0**	**-0.9**
VANB	**Van**	**0.34**	**281**	PG	**Pg**	**17 46 16.9**	**-1.4**
VANB				SG	**Sg**	**17 46 23.5**	**+0.6**
VANB	**Van**	**0.34**	**281**	*e*Pg	**Pg**	**17 46 17.1**	**-1.2**
BASK	**Baskale_VAN**	**0.49**	**163**	*i*P	**Pg**	**17 46 20.9**	**-0.1**
BASK				*i*S	**Sb**	**17 46 29.8**	**-0.5**
BASK	**Baskale_VAN**	**0.49**	**163**	*e*Pg	**Pg**	**17 46 20.4**	**-0.7**
VMUR	**Van-Muradiye**	**0.50**	**337**	*i*P	**Pg**	**17 46 20.7**	**-0.5**
VMUR				*i*S	**Sb**	**17 46 30.8**	**+0.3**
VMUR	**Van-Muradiye**	**0.50**	**337**	*e*Pg	**Pg**	**17 46 20.3**	**-0.9**
CLDR	**Caldiran**	**0.62**	**7**	PG	**Pg**	**17 46 22.3**	**-1.2**
CLDR				SG	**Sg**	**17 46 32.3**	**+0.7**
CLDR	**Caldiran**	**0.62**	**7**	*i*P	**Pg**	**17 46 22.6**	**-0.9**
CLDR				*i*S	**Sb**	**17 46 32.7**	**-1.3**
CLDR				IAML_P			
	comp=Z,19μm,0.4s						
CLDR	**Caldiran**	**0.62**	**7**	*e*Pg	**Pg**	**17 46 21.7**	**-1.8**
GEVA	**Gevas**	**0.64**	**251**	*i*P	**Pg**	**17 46 23.1**	**-0.6**
GEVA				*i*S	**Sb**	**17 46 34.8**	**+0.5**
GEVA				IAML_P			
	comp=Z,2μm,0.1s						
GEVA	**Gevas**	**0.64**	**251**	*e*Pg	**Pg**	**17 46 22.5**	**-1.3**
AKDM	**Akdamar-Van**	**0.69**	**254**	PG	**Pg**	**17 46 24.1**	**-0.7**
AKDM				SG	**Sb**	**17 46 35.2**	**-0.7**
AKDM	**Akdamar-Van**	**0.69**	**254**	*e*Pg	**Pg**	**17 46 23.4**	**-1.4**
ADCV	**BITLIS_Adilcev**	**0.90**	**288**	*i*P	**Pb**	**17 46 29.0**	**-0.8**
ADCV				IAML_P			
	comp=Z,1μm,0.1s						
ADCV	**BITLIS_Adilcev**	**0.90**	**288**	*e*Pg	**Pg**	**17 46 27.9**	**-1.0**
**

GNI	**Garni**	**1.77**	**23**	PN	**Pn**	**17 46 42.8**	**-0.1**
GNI	**Garni**	**1.77**	**23⇑**	*i*P	**Pb**	**17 46 43.9**	**-0.6**
GNI			⇑	*i*S	**Sg**	**17 47 08.6**	**+0.2**
ITBZ	**Tabriz**	**1.85**	**98**	*e*Pn	**Pn**	**17 46 44.6**	**+0.6**
ITBZ				IAMB	IAmb	17 47 18.9	
	comp=E,2μm,0.5s						
IAZR	**Azarshahr**	**1.90**	**116**	*e*Pn	**Pn**	**17 46 45.3**	**+0.6**
IAZR				IAMB	IAmb	17 46 49.1	
	comp=Z,5μm,0.6s						
DIGO	**Kars**	**1.92**	**350**	*i* P	**Pb**	**17 46 47.1**	**+0.1**
DIGO	**Kars**	**1.92**	**350**	*e*Pn	**Pb**	**17 46 46.5**	**-0.5**
SVAN	**Silvan-Diyarba**	**2.10**	**260**	PN	**Pn**	**17 46 47.7**	**+0.5**
SVAN	**Silvan-Diyarba**	**2.10**	**260**	*i* P	**Pb**	**17 46 49.8**	**-0.1**
SVAN				IAML_P			
	comp=Z,1μm,0.5s						
SVAN	**Silvan-Diyarba**	**2.10**	**260**	*e*Pn	**Pn**	**17 46 47.3**	**+0.1**
BTMN	**Batman**	**2.11**	**253**	*i* P	**Pb**	**17 46 49.4**	**-0.7**
BTMN				IAML_P			
	comp=Z,1μm,0.5s						
KOPR	**Koprukoy-ERZUR**	**2.12**	**314**	PN	**Pn**	**17 46 47.8**	**+0.2**
BNGL	**BINGOL**	**2.13**	**282**	*i* P	**Pb**	**17 46 49.5**	**-1.2**
KARS	**Kars**	**2.17**	**345**	PN	**Pn**	**17 46 48.4**	**0.0**
KARS	**Kars**	**2.17**	**345**	*e*Pn	**Pn**	**17 46 48.5**	**0.0**
MAHB	**Mahabad**	**2.31**	**139**	*e*Pn	**Pb**	**17 46 52.6**	**-1.0**
SENK	**Senkaya-Erzuru**	**2.33**	**331**	PN	**Pn**	**17 46 50.9**	**+0.4**
SENK	**Senkaya-Erzuru**	**2.33**	**331**	*e*Pn	**Pn**	**17 46 51.0**	**+0.4**
BNGB	**Bingl**	**2.50**	**282**	PN	**Pn**	**17 46 53.3**	**+0.5**
STEZ	**Stepenevan**	**2.51**	**10**	*e*P	**Pn**	**17 46 54.0**	**+1.0**
STEZ				*e*S	**Sb**	**17 47 29.0**	**+0.7**
IHRS	**Heris**	**2.54**	**94**	*e*Pn	**Pn**	**17 46 55.1**	**+1.6**
IHRS				IAMB	IAmb	17 47 04.5	
	comp=N,2μm,0.4s						
BINT	**Bingol**	**2.63**	**279**	*e*Pn	**Pn**	**17 46 53.8**	**-0.8**
GDB	**GEDABAY**	**2.65**	**34**	*e*Pn	**Pn**	**17 46 55.3**	**+0.3**
GDB	**GEDABAY**	**2.65**	**34**	P	**Pn**	**17 46 55.3**	**+0.3**
	SNR=11						
GDB				S	**Sb**	**17 47 30.7**	**-1.7**
GANJ	**Ganja**	**2.87**	**42**	*e*Pn	**Pn**	**17 46 58.7**	**+0.9**
GANJ	**Ganja**	**2.87**	**42**	P	**Pn**	**17 46 58.7**	**+0.9**
	SNR=13						
GANJ				S	**Sb**	**17 47 36.2**	**-2.2**
MAZI	**Mazidag**	**2.87**	**249**	*e*Pn	**Pn**	**17 46 59.1**	**+1.2**
AKH	**Akhalkalaki**	**2.89**	**355**	PN	**Pn**	**17 46 58.7**	**+0.4**
DYBB	**Diyarbakir**	**2.96**	**260**	PN	**Pn**	**17 46 59.9**	**+0.9**
ISRB	**Sarab**	**3.11**	**102**	IAMB	IAmb	17 47 15.9	
	comp=Z,1μm,0.6s						
ISRB				*e*Pn	**Pn**	**17 47 02.1**	**+0.8**
BCA	**Borcka**	**3.37**	**331**	PN	**Pn**	**17 47 05.8**	**+1.1**
BAYT	**Aydıntepe-Bayb**	**3.40**	**304**	PN	**Pn**	**17 47 06.4**	**+1.1**
LRK	**Lerik**	**3.54**	**87**	*e*Pn	**Pn**	**17 47 08.5**	**+1.3**
LRK	**Lerik**	**3.54**	**87**	P	**Pn**	**17 47 08.5**	**+1.3**
	SNR=14						
LRK				S	**Sn**	**17 47 51.8**	**+2.3**
SVRC	**Sivrice-ELAZID**	**3.55**	**269**	PN	**Pn**	**17 47 08.5**	**+1.2**
GLBA	**Clilabad**	**3.64**	**77**	*e*Pn	**Pn**	**17 47 09.0**	**+0.7**
GLBA	**Clilabad**	**3.64**	**77**	P	**Pn**	**17 47 09.1**	**+0.7**
	SNR=5.7						
ZKTA	**Zakatala**	**3.78**	**34**	P	**Pn**	**17 47 11.3**	**+1.0**
ASTR	**Astara**	**3.90**	**88**	*e*Pn	**Pn**	**17 47 12.8**	**+0.9**
ASTR	**Astara**	**3.90**	**88**	P	**Pn**	**17 47 12.8**	**+0.9**
	SNR=7.6						

MEX 10 17:56:41.2±0.6, 18°.78N×103°.36W, h2km, MD3.6, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
EZ5V		**0.74**	**342**	*e*P	Pg		17 56 54.9	-0.5
EZ5V				*e*S	Sg		17 57 05.6	+0.7
CJM	**Chamela**	**1.75**	**295**	*e*P	Pn		17 57 11.1	-1.5
CJM				*i* S	Sn		17 57 34.5	-0.9

*ISK **10** 18:02:56.6, 38°.47N×43°.97E, h19km, ML1.9/4*
*DDA **10** 18:02:58.2, 38°.64N×43°.93E, h7km±1km, ML2.5*
ISC 10 18:02:56.1±3.4, 38°.62N±0°.04×44°.1E±0°.1, h3km±20km, n7, σ0°.92/12, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TVAN	**Van**	**0.52**	**260**	*i* P	**Pb**		**18 03 07.6**	**-0.3**
TVAN				*i* S	**Sg**		**18 03 13.4**	**+0.5**
TVAN				IAML_P				
	comp=Z,2μm,0.2s							
VANB	**Van**	**0.53**	**267**	PG	**Pg**		**18 03 06.2**	**0.0**
VANB				SG	**Sg**		**18 03 12.9**	**-0.1**
CLDR	**Caldiran**	**0.53**	**348**	PG	**Pn**		**18 03 10.3**	**-0.5**
CLDR				SG	**Sn**		**18 03 20.4**	**0.0**
BASK	**Baskale_VAN**	**0.57**	**184**	*e*P	**Pn**		**18 03 10.9**	**-0.3**
BASK				*i* S	**Sn**		**18 03 19.9**	**-1.3**
BASK				IAML_P				
	comp=Z,1μm,0.1s							
AKDM	**Akdamar-Van**	**0.90**	**251**	PG	**Pg**		**18 03 12.4**	**-0.9**
HAKT	**HAKKARI**	**1.10**	**195**	*i* P	**Pn**		**18 03 19.7**	**+1.2**
HAKT				*i* S	**Sn**		**18 03 35.6**	**+1.3**
HAKT				IAML_P				
	comp=Z,308nm,0.2s							
AGRB	**Hanur-Agry**	**1.26**	**319**	PN	**Pg**		**18 03 20.9**	**+0.6**

*ISK **10** 18:16:58.7, 38°.51N×43°.89E, h8km, ML2.4/5*
*DDA **10** 18:16:59.8, 38°.53N×43°.89E, h7km±3km, ML2.6*
ISC 10 18:16:60.0±1.3, 38°.53N±0°.03×43°.88E±0°.05, h11km±12km, n12, σ1°.03/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.39**	**280**	PG	**Pg**		**18 17 06.5**	**-1.3**
VANB				SG	**Sg**		**18 17 12.6**	**-0.4**
BASK	**Baskale_VAN**	**0.49**	**169**	*i* P	**Pb**		**18 17 10.5**	**-0.1**
BASK				*i* S	**Sb**		**18 17 17.8**	**0.0**
VMUR	**Van-Muradiye**	**0.52**	**332**	*i* P	**Pb**		**18 17 11.0**	**-0.2**
VMUR				IAML_P				
	comp=Z,423nm,0.1s							
CLDR	**Caldiran**	**0.61**	**3**	PG	**Pg**		**18 17 11.4**	**-0.5**
CLDR				SG	**Sb**		**18 17 20.7**	**-0.8**
CLDR	**Caldiran**	**0.61**	**3**	*i* P	**Pg**		**18 17 11.9**	**-0.1**
CLDR				*i* S	**Sb**		**18 17 21.6**	**+0.1**
CLDR				IAML_P				
	comp=Z,2μm,0.2s							
GEVA	**Gevas**	**0.68**	**252**	*i* P	**Pg**		**18 17 12.9**	**-0.4**
GEVA				*i* S	**Sb**		**18 17 23.6**	**+0.2**
GEVA				IAML_P				
	comp=Z,2μm,0.1s							
AKDM	**Akdamar-Van**	**0.74**	**254**	PG	**Pg**		**18 17 13.5**	**-0.8**
AKDM				SG	**Sb**		**18 17 24.2**	**-0.8**
HAKT	**HAKKARI**	**0.98**	**188**	*i* P	**Pn**		**18 17 19.2**	**-0.7**
HAKT				*i* S	**Sb**		**18 17 32.6**	**+0.5**
HAKT				IAML_P				
	comp=Z,2μm,0.2s							
AGRB	**Hanur-Agry**	**1.25**	**327**	PN	**Pn**		**18 17 23.4**	**-0.2**
SRTM	**Siirt_Merkez**	**1.63**	**251**	*i* P	**Pg**		**18 17 31.4**	**0.0**
SRTM				*i* S	**Sg**		**18 17 55.4**	**+2.9**
SRTM				IAML_P				
	comp=Z,757nm,0.4s							
EATA	**Eleskirt**	**1.71**	**321**	*i* P	**Pb**		**18 17 31.4**	**-0.2**
EATA				*i* S	**Sg**		**18 17 57.3**	**+2.2**
EATA				IAML_P				
	comp=Z,119nm,0.2s							
GNI	**Garni**	**1.75**	**22**	PN	**Pn**		**18 17 30.4**	**+0.1**

*ISCJB **10** 18:47:57.8±0.8, 6°.50S±0°.06×130°.12E±0°.09, h146km, mb3.6/2, Error ellipse: s-maj=12.0km s-min=8.7km az=2.8*
*IDC **10** 18:47:59.1±2.1, 6°.45S×130°.05E, h138km±23km, mb3.5/2, mb1 3.6/6, mb1mx3.3/31, mbtmp4.1/6, Error ellipse: s-maj=26.8km s-min=18.3km az=106.0*
ISC 10 18:47:57.4±0.9, 6°.53S±0°.06×130°.3E±0°.1, h146km, n7, σ3°.31/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.71**	**10**	P	**Pn**		**18 49 21.1**	**+0.9**
	3.8nm,0.3s,baz=164,slow=23,SNR=54							
SIJI				S	**Sn**		**18 50 19.8**	**-5.1**
	13nm,0.3s,baz=269,slow=22,SNR=16							
BATI	**Baumata**	**7.49**	**240**	P	**Pn**		**18 49 45.3**	**+1.1**
	4.4nm,0.3s,baz=111,slow=4.2,SNR=9.7							
BATI				S	**Sn**		**18 51 06.2**	**-1.7**
	8.5nm,0.3s,baz=170,slow=18,SNR=9.4							
FITZ	**Fitzroy Crossi**	**12.36**	**201**	P	**Pn**		**18 50 49.1**	**+0.6**
	0.3nm,0.3s,baz=28,slow=13,SNR=16							
FITZ				S	**Sn**		**18 53 00.6**	**-4.5**
	1.2nm,0.3s,baz=216,slow=17,SNR=7.6							
WRA	**Warramunga Arr**	**13.91**	**164**	P	**Pn**		**18 51 10.3**	**+1.9**
	1.2nm,0.3s,baz=341,slow=13,SNR=2.2							
WRA				S	Sn		18 53 36.5	-6.0
	4.9nm,0.3s,baz=334,slow=21,SNR=3.9							
ASAR	**Alice Springs**	**17.39**	**169**	P	**Pn**		**18 51 55.4**	**+4.1**
	0.7nm,0.3s,baz=346,slow=10,SNR=81							
ASAR				S	**S**		**18 55 00.6**	**-3.6**
	0.5nm,0.3s,baz=356,slow=27,SNR=6.5							
CMAR	**Chiang Mai Arr**	**39.64**	**309**	P	**P**		**18 55 15.5**	**+0.3**
	0.6nm,0.8s,baz=132,slow=6.9,SNR=6.4							
MKAR	**Makanchi Array**	**67.98**	**327**	P	**P**		**18 58 42.2**	**+1.5**
	1.7nm,0.5s,baz=115,slow=8.1,SNR=26							

*SNET **10** 18:56:35.9±0.6, 12°.20N×88°.52W, h1km±7km, ML3.6*
*IDC **10** 18:56:35.9±1.6, 12°.88N×87°.76W, h0km, mb4.1/7, mb1 4.2/9, mb1mx3.9/38, mbtmp4.0/9, ML3.3/3, MS3.1/4, Ms1 3.1/4, ms1mx2.7/24, Error ellipse: s-maj=48.2km s-min=22.6km az=37.0*
*UCR **10** 18:56:35.4±2.0, 12°.04N×88°.48W, h20km±25km, ML3.6, mb4.3(NEIC)*
*ISCJB **10** 18:56:36.4±0.8, 12°.01N±0°.05×88°.45W±0°.04, h42km±6km, mb4.3/31, MS3.3/3, Error ellipse: s-maj=10.6km s-min=4.5km az=33.9*
*NEIC **10** 18:56:40.8±1.6, 12°.22N×88°.18W, h64km±7km, mb4.3/33, Error ellipse: s-maj=22.7km s-min=14.6km az=69.0*
ISC 10 18:56:39.4±1.4, 12°.13N±0°.08×88°.37W±0°.05, h54km±12km, n89, σ1°.61/102, mb4.3/31, MS3.2/3, 7C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**1.15**	**43**	*e*Pn	**Pn**		**18 56 58.6**	**-0.7**
CSGN	**Cosiguina Volc**	**1.15**	**43**	*e*P	**Pn**		**18 56 58.6**	**-0.7**
CSGN				*e*S	**Sn**		**18 57 19.2**	**+5.0**
CSGN	**Cosiguina Volc**	**1.15**	**43⇑**	*e*P	**Pn**		**18 56 58.7**	**-0.7**
CNCH	**Conchagua**	**1.25**	**25**	*e*P	**Pn**		**18 56 59.4**	**-1.4**
CNCH				*e*S	**Sn**		**18 57 18.2**	**+1.5**
CNCH	**Conchagua**	**1.25**	**25⇑**	*e*P	**Pn**		**18 56 59.1**	**-1.7**
CNCH				*e*S	**Sn**		**18 57 18.2**	**+1.5**
LCND	**La Caada**	**1.26**	**22**	*e*P	**Pn**		**18 56 59.1**	**-1.6**
LCND	**La Caada**	**1.26**	**22**	*e*P	**Pn**		**18 56 59.1**	**-1.6**
LCY	**Lacayo**	**1.28**	**3**	*e*P	**Pn**		**18 56 59.4**	**-1.8**
LCY	**Lacayo**	**1.28**	**3**	*e*P	**Pn**		**18 56 59.4**	**-1.8**
PACA	**Pacayal**	**1.33**	**2**	*e*P	**Pn**		**18 57 00.1**	**-1.7**
PACA				*e*S	**Sn**		**18 57 18.9**	**+0.4**
PACA	**Pacayal**	**1.33**	**2⇑**	*e*P	**Pn**		**18 57 00.1**	**-1.7**
PACA				*e*S	**Sn**		**18 57 18.9**	**+0.4**
TECA	**Tecapa**	**1.36**	**355**	*e*P	**Pn**		**18 57 00.3**	**-1.9**
TECA				*e*S	**Sn**		**18 57 19.0**	**-0.3**
TECA	**Tecapa**	**1.36**	**355**	*e*P	**Pn**		**18 57 00.3**	**-1.9**
TECA				*e*S	**Sn**		**18 57 19.0**	**-0.3**
LFRS	**El Faro**	**1.63**	**336⇑**	*e*P	**Pn**		**18 57 03.5**	**-2.3**
CAHU	**Cacacuatique**	**1.64**	**5**	*e*P	**Pn**		**18 57 05.1**	**-0.9**
CAHU				*e*P	**Pn**		**18 57 05.2**	**-0.9**
CAHU	**Cacacuatique**	**1.64**	**5**	*e*P	**Pn**		**18 57 05.1**	**-0.9**
PAVA	**Las Pavas**	**1.66**	**341**	*e*P	**Pn**		**18 57 04.6**	**-1.7**
PAVA				*e*S	**Sn**		**18 57 26.9**	**+0.2**
PAVA				IAML			18 57 38.3	
	comp=Z,822nm,0.4s							
PAVA	**Las Pavas**	**1.66**	**341**	*e*P	**Pn**		**18 57 04.6**	**-1.7**
PAVA				*e*S	**Sn**		**18 57 26.9**	**+0.2**
PAVA				IAML			18 57 38.3	
	comp=Z,822nm,0.4s							
CNGN	**Cerro Negro**	**1.68**	**77**	*e*P	**Pn**		**18 57 05.5**	**-0.9**
CNGN				*e*S	**Sn**		**18 57 27.7**	**+0.9**
LOMA	**San Marcos**	**1.70**	**333**	*e*P	**Pn**		**18 57 04.7**	**-2.0**
LOMA	**San Marcos**	**1.70**	**333**	*e*P	**Pn**		**18 57 04.7**	**-2.0**
LBRS	**Las Brisas**	**1.72**	**338**	*e*P	**Pn**		**18 57 05.4**	**-1.7**
COPN	**Copaltepe**	**1.74**	**88**	*e*P	**Pn**		**18 57 05.0**	**-2.2**
COPN				*e*S	**Sn**		**18 57 29.6**	**+1.2**
MOMN	**Momotombo**	**1.81**	**81**	*e*P	**Pn**		**18 57 05.9**	**-2.3**
BOQS	**Boqueron**	**1.82**	**331**	*e*P	**Pn**		**18 57 06.8**	**-1.8**
VICT	**Victoria**	**1.83**	**352**	*e*P	**Pn**		**18 57 07.8**	**-0.9**
VICT	**Victoria**	**1.83**	**352**	*e*P	**Pn**		**18 57 07.8**	**-0.9**
APYN	**Apoyeque**	**1.98**	**87**	*e*P	**Pn**		**18 57 09.1**	**-1.4**
MGAN	**Managua**	**2.08**	**89**	*e*P	**Pn**		**18 57 11.2**	**-0.6**
SBLS	**San Blas**	**2.09**	**324**	*e*P	**Pn**		**18 57 10.5**	**-1.7**
SBLS	**San Blas**	**2.09**	**324**	*e*P	**Pn**		**18 57 10.5**	**-1.7**
RTR	**El Retiro**	**2.15**	**325**	*e*P	**Pn**		**18 57 11.6**	**-1.4**
RTR	**El Retiro**	**2.15**	**325**	*e*P	**Pn**		**18 57 11.6**	**-1.4**
ESTN	**Estel**	**2.18**	**64**	*e*Pn	**Pn**		**18 57 11.9**	**-1.5**
ESTN	**Estel**	**2.18**	**64**	*e*P	**Pn**		**18 57 12.0**	**-1.3**
TGUH	**Tegucigalpa,Un**	**2.19**	**29**	*e*Pn	**Pn**		**18 57 12.9**	**-0.5**
MTO3	**Montecristo**	**2.45**	**337⇑**	*e*P	**Pn**		**18 57 16.1**	**-1.0**
MTO3	**Montecristo**	**2.45**	**337⇑**	*e*P	**Pn**		**18 57 16.1**	**-1.0**
MATN	**Matagalpa**	**2.52**	**71**	*e*P	**Pn**		**18 57 17.6**	**-0.4**
ACON	**Acoyapa**	**3.13**	**93**	*e*Pn	**Pn**		**18 57 24.9**	**-1.4**
ACON	**Acoyapa**	**3.13**	**93**	*e*P	**Pn**		**18 57 24.8**	**-1.6**
APG	**El Apazote**	**3.50**	**325**	Pn	**Pn**		**18 57 30.7**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=143,slow=7.2,SNR=9.0							
JTS	**Las Juntas de**	**3.82**	**118**	Pn	**Pn**		**18 57 36.5**	**+0.7**
	comp=Z,3.6nm,0.3s,baz=164,slow=23,SNR=15							
JTS				Sn	**Sn**		**18 58 18.1**	**-1.4**
	comp=Z,1.7nm,0.3s,baz=15,slow=20,SNR=2.9							
JTS				LR	LR		18 59 18.4	
	comp=Z,140nm,21.9s,baz=8.5,slow=43							
JTS	**Las Juntas de**	**3.82**	**118**	*e*Pn	**Pn**		**18 57 35.6**	**-0.2**
ESPN	**Las Esperanzas**	**3.98**	**89**	*e*Pn	**Pn**		**18 57 37.2**	**-0.7**
CMIG	**Matias Romero**	**8.00**	**309**	Pn	**Pn**		**18 58 32.9**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=131,slow=9.5,SNR=11							
CMIG				Sn	**Sn**		**19 00 08.5**	**+6.3**
	comp=Z,0.1nm,0.3s,baz=69,slow=17,SNR=2.3							
LNIG	**Linares**	**16.47**	**322**	*e*Pn	**Pn**		**19 00 26.9**	**-0.1**
	comp=Z,14nm,0.9s							
833A	**Chaparral WMA,**	**19.12**	**329**	*e*P	**P**		**19 00 58.2**	**+0.2**
	comp=Z,34nm,0.9s							
152A	**Waverly Hall**	**20.71**	**9**	*e*P	**P**		**19 01 16.6**	**+1.3**
	comp=Z,8.1nm,0.7s							
LRAL	**Lakeview Retre**	**20.84**	**3**	*e*P	**P**		**19 01 17.7**	**+1.0**
	comp=Z,9.3nm,1.2s							
JCT	**Junction City**	**21.11**	**332**	*e*P	**P**		**19 01 20.1**	**+0.4**
	comp=Z,7.6nm,0.7s							
LTX	**Lajitas**	**22.26**	**323**	*e*P	**P**		**19 01 33.4**	**+1.3**
TXAR	**Lajitas Array**	**22.26**	**323**	P	**P**		**19 01 33.4**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=144,slow=11,SNR=28							
TX31	**Lajitas Ar. Si**	**22.26**	**323**	*e*P	**P**		**19 01 33.1**	**+1.0**
	comp=Z,3.3nm,0.7s							
MIAR	**Mount Ida**	**22.81**	**349**	*e*P	**P**		**19 01 38.1**	**+0.4**
	comp=Z,11nm,0.9s							
W41B	**Gary Mavity, V**	**23.21**	**352**	*e*P	**P**		**19 01 42.0**	**+0.3**
	comp=Z,8.2nm,0.8s							
X37A	**Clayton**	**23.24**	**345**	*e*P	**P**		**19 01 43.0**	**+0.9**
	comp=Z,26nm,1.4s							
WHAR	**Wooly Hollow**	**23.33**	**352**	*e*P	**P**		**19 01 43.3**	**+0.4**
	comp=Z,11nm,0.9s							
W39A	**Magazine**	**23.48**	**349**	*e*P	**P**		**19 01 45.0**	**+0.6**
	comp=Z,15nm,1.1s							
WMOK	**Wichita Mounta**	**24.41**	**339**	*e*P	**P**		**19 01 52.6**	**-0.3**
	comp=Z,7.3nm,1.2s							
U54A	**Nelsons Funny**	**24.99**	**13**	*e*P	**P**		**19 01 59.3**	**+1.1**
	comp=Z,17nm,1.0s							
MNTX	**Cornudas Mount**	**25.00**	**324**	*e*P	**P**		**19 01 58.5**	**+0.2**
	comp=Z,2.3nm,0.9s							
MSTX	**Muleshoe**	**25.40**	**331**	*e*P	**P**		**19 02 02.5**	**+0.5**
	comp=Z,11nm,0.8s							
AMTX	**Amarillo**	**25.67**	**334**	*e*P	**P**		**19 02 05.6**	**+1.1**
	comp=Z,28nm,1.3s							
CCM	**Cathedral Cave**	**25.94**	**355**	*e*P	**P**		**19 02 06.6**	**-0.1**
	comp=Z,5.4nm,0.9s							
CBKS	**Cedar Bluff**	**28.43**	**341**	*e*P	**P**		**19 02 28.5**	**-0.6**
	comp=Z,35nm,0.7s							
T25A	**Trinidad**	**28.76**	**333**	*e*P	**P**		**19 02 33.7**	**+1.4**
	comp=Z,4.1nm,0.8s							
BBSR	**BB Station**	**29.64**	**43**	*e*P	**P**		**19 02 37.2**	**-2.6**
	comp=Z,41nm,1.4s							
SDCO	**Great Sand Dun**	**29.75**	**332**	*e*P	**P**		**19 02 42.6**	**+1.4**
	comp=Z,2.6nm,1.0s							
L40A	**Anamosa**	**29.92**	**356**	*e*P	**P**		**19 02 42.6**	**+0.4**
	comp=Z,7.2nm,0.8s							
S22A	**4UR Ranch, Cre**	**30.38**	**330**	*e*P	**P**		**19 02 47.5**	**+0.8**
	comp=Z,2.3nm,0.8s							
PV13	**Radium Mtn., P**	**31.70**	**328**	*e*P	**P**		**19 02 59.4**	**+1.2**
	comp=Z,8.3nm,1.0s							
PV14	**Lion Creek, Pa**	**31.96**	**328**	*e*P	**P**		**19 03 03.6**	**+3.0**
	comp=Z,30nm,1.0s							
SPMN	**Marine on St.**	**33.19**	**354**	*e*P	**P**		**19 03 09.4**	**-1.6**
	comp=Z,15nm,0.6s							
AGMN	**Agassiz Nation**	**36.59**	**352**	*e*P	**P**		**19 03 39.3**	**-0.9**
	comp=Z,12nm,1.0s							
NV01	**Mina Array Sit**	**37.35**	**320**	*e*P	**P**		**19 03 49.7**	**+2.6**
NV01				*e*PcP	**PcP**		**19 06 08.6**	**+3.2**
NVAR	**Mina Array Bea**	**37.35**	**320**	P	**P**		**19 03 49.7**	**+2.6**
	comp=Z,0.6nm,0.8s,baz=138,slow=8.5,SNR=2.8							
NVAR				PcP	**PcP**		**19 06 08.6**	**+3.2**
	comp=Z,0.4nm,0.4s,baz=140,slow=3.5,SNR=5.7							
ULM	**Lac du Bonnet**	**38.50**	**352**	P	**P**		**19 03 54.9**	**-1.4**
	comp=Z,7.7nm,0.6s,baz=150,slow=8.4,SNR=7.1							
ULM				LR	LR		19 21 04.1	
	comp=Z,35nm,18.6s,baz=127,slow=39							
BOZ	**Bozeman (W)**	**38.78**	**334**	*e*P	**P**		**19 03 59.3**	**+0.4**
	comp=Z,2.4nm,1.0s							
PAHR	**Pah Rah Range**	**38.79**	**321**	*e*sP	sP		19 04 21.6	+2.7
FRB	**Frobisher Bay**	**53.40**	**11**	P	**P**		**19 05 51.5**	**-1.8**
	comp=Z,7.3nm,0.8s,baz=214,slow=8.4,SNR=5.3							
YKA	**Yellowknife Ar**	**53.68**	**345**	P	**P**		**19 05 54.6**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=131,slow=7.5,SNR=5.0							
YKB5	**Yellowknife Ar**	**53.68**	**345**	*e*P	**P**		**19 05 54.6**	**-0.9**
RES	**Resolute Bay**	**62.64**	**358**	P	**P**		**19 06 55.8**	**-2.0**
	comp=Z,1.7nm,0.7s,baz=188,slow=9.0,SNR=4.4							
ILAR	**Eielson Array**	**65.95**	**336**	P	**P**		**19 07 19.6**	**-0.1**
	comp=Z,1.0nm,1.1s,baz=132,slow=5.3,SNR=6.0							
NOA	**NORSAR Array B**	**84.08**	**29**	LR	LR		19 47 17.7	
	comp=Z,5.7nm,18.1s,baz=340,slow=37							
NRIK	**Noril'sk**	**98.68**	**1**	LR	LR		19 58 03.6	
	comp=Z,19nm,18.6s,baz=124,slow=38							
ASAR	**Alice Springs**	**138.32**	**248**	PKhKP	**PKPdf**		**19 15 59.8**	**+0.2**
	comp=Z,0.4nm,1.0s,baz=83,slow=2.1,SNR=2.7							
CMAR	**Chiang Mai Arr**	**148.76**	**347**	PKPbc	**PKiKP**		**19 16 23.8**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=344,slow=3.2,SNR=6.2							

*NSSP **10** 18:56:46.6, 41°.10N×47°.35E, h10km, Ms3.3*
*AZER **10** 18:56:46.8±0.1, 41°.11N×47°.44E, h8km, ml3.2/29, Error ellipse: s-maj=1.0km s-min=0.7km az=356.0*
*NORS **10** 18:56:49.1±0.0, 41°.13N×47°.56E, h8km, MPVA4.0*
*DRS **10** 18:56:49.7±0.0, 41°.16N×47°.34E, h12km, ML3.2/4*
ISC 10 18:56:48.0±1.1, 41°.01N±0°.01×47°.42E±0°.01, h3km±9km, n102, σ1°.44/190, 5C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SEKA	**Sheki**	**0.26**	**320**	PG	**Pg**		**18 56 52.7**	**-0.3**
SEKA	**Sheki**	**0.26**	**320**	P	**Pg**		**18 56 52.8**	**-0.3**
	SNR=2375							
SEKA				S	**Sg**		**18 56 56.4**	**0.0**
QBL	**Gabala**	**0.32**	**101**	P	**Pg**		**18 56 55.0**	**+0.7**
	SNR=160							
QBL				S	**Sb**		**18 57 01.4**	**-0.7**
MNGR	**Mingechevir, A**	**0.35**	**227**	PG	**Pb**		**18 56 57.5**	**+0.7**
MNGR	**Mingechevir, A**	**0.35**	**227**	P	**Pb**		**18 56 57.6**	**+0.7**
	SNR=33							
MNGR				S	**Sb**		**18 57 03.9**	**+1.2**
AKT	**Akhty**	**0.53**	**27⇑**	*i*PG	**Pg**		**18 56 57.7**	**-0.4**
AKT				*e*S	**Sg**		**18 57 04.6**	**-0.4**
AKT	**Akhty**	**0.53**	**27**	*i* Pg	**Pg**		**18 56 57.6**	**-0.5**
	1μm,0.2s							
AKT			⇑	*e*Sg	**Sg**		**18 57 04.6**	**-0.4**
	5μm,0.3s							
XNQ	**Khinaliq**	**0.57**	**73**	P	**Pg**		**18 56 58.8**	**-0.2**
	SNR=310							
XNQ				S	**Sb**		**18 57 07.9**	**-1.4**
IML	**Ismayilli**	**0.62**	**110**	P	**Pb**		**18 57 00.9**	**-0.6**
	SNR=34		

UNCR	Uncukul	1.77	345	*e*Pg	Pb	18 57 21.0	-0.1
UNCR				*e*Sg	Sg	18 57 47.5	+2.8
KRNR	Karanay	1.86	348	*e*PN	Pb	18 57 22.0	-0.6
KRNR				*e*S	Sg	18 57 48.5	+0.9
KRNR				pmax	pmax		
	comp=Z,41nm,0.2s						
KRNR	Karanay	1.86	348	*e*Pg	Pb	18 57 22.0	-0.6
KRNR				*e*Sg	Sg	18 57 48.5	+0.9
BTLR	Botlikh	1.88	332	*e*PN	Pb	18 57 22.6	-0.4
BTLR				*e*S	Sg	18 57 50.1	+1.7
BTLR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BTLR	Botlikh	1.88	332	*e*Pg	Pg	18 57 23.3	-0.7
	comp=Z,4.0nm,0.6s						
BTLR				⇓*e*Sg	Sg	18 57 50.2	+1.8
	comp=Z,87nm,0.7s						
GLBA	Clilabad	1.92	157	Pn	Pb	18 57 22.1	-1.5
	SNR=12						
GLBA				Sn	Sg	18 57 50.7	+1.1
MAK	Makhachkala	1.95	2	*e*PN	Pg	18 57 25.8	+0.4
MAK				*e*		18 57 29.2	
MAK				*e*		18 57 30.8	
MAK				*e*		18 57 56.2	
MAK				pmax	pmax		
	comp=Z,82nm,0.3s						
MAK				smax	smax		
	comp=E,422nm,0.6s						
MAK				smax	smax		
	comp=E,435nm,0.6s						
MAK	Makhachkala	1.95	2	*e*Pg	Pg	18 57 25.3	-0.1
MAK				*e*Sg	Sg	18 57 50.1	-0.5
NDR	Nardaran	2.00	102	Pn	Pb	18 57 23.5	-1.4
NDR				Sn	Sn	18 57 47.0	-1.1
DBC	Dubki	2.06	348	*e*PN	Pg	18 57 26.8	-0.6
DBC				*e*S	Sg	18 57 55.4	+1.3
DBC	Dubki	2.06	348	*e*Pg	Pg	18 57 26.5	-0.9
DBC				*e*Sg	Sg	18 57 54.3	+0.2
BTNK	Botanikuri	2.08	290	P	Pn	18 57 24.1	+0.2
BTNK				S	Sb	18 57 52.4	-0.4
BTNK	Botanikuri	2.08	290	*e*PN	Pn	18 57 24.1	+0.2
BTNK				*e*S	Sb	18 57 52.4	-0.4
DLMR	Dylym	2.14	344	*e*PN	Pg	18 57 29.0	0.0
DLMR				*e*S	Sg	18 58 01.0	+4.2
DLMR				pmax	pmax		
	comp=Z,46nm,0.3s						
DLMR	Dylym	2.14	344	*e*Pg	Pg	18 57 29.0	0.0
DLMR				*e*Sg	Sg	18 58 01.0	+4.2
TBLG	Delisi	2.14	291	P	Pn	18 57 25.1	+0.4
TBLG				S	Sb	18 57 53.8	-0.6
TBLG	Delisi	2.14	291	*e*PN	Pn	18 57 25.0	+0.4
TBLG				*e*S	Sb	18 57 53.8	-0.6
TBLG	Delisi	2.14	291	*e*Pg	Pn	18 57 25.1	+0.4
TBLG				*e*Sg	Sb	18 57 53.8	-0.6
SBZ	Shahbuz	2.15	222	Pn	Pb	18 57 26.8	-0.9
	SNR=4.8						
SBZ				Sn	Sg	18 57 56.9	-0.2
GALA	Gala	2.17	105	Pn	Pb	18 57 26.0	-1.8
DVE	Vedeno	2.17	334	*e*PN	Pb	18 57 27.6	-0.4
DVE				*e*S	Sg	18 57 59.3	+1.5
DVE	Vedeno	2.17	334	*e*Pg	Pb	18 57 27.5	-0.4
DVE				*e*Sg	Sg	18 57 59.3	+1.5
GNI	Garni	2.21	248	⇑*i*P	Pb	18 57 27.6	-1.2
GNI				⇑*i*S	Sg	18 57 58.5	-0.6
GNI	Garni	2.21	248	*e*Pn	Pb	18 57 27.9	-0.9
STEZ	Stepenevan	2.28	271	*e*P	Pn	18 57 26.0	-0.8
STEZ				*e*S	Sb	18 57 57.0	-1.7
KZRT	Kazreti	2.31	280	P	Pn	18 57 27.0	0.0
KZRT				S	Sb	18 57 57.9	-1.4
KZRT	Kazreti	2.31	280	*e*PN	Pn	18 57 27.0	0.0
KZRT				*e*S	Sb	18 57 57.9	-1.4
ORD	Ordubad	2.35	208	Pg	Pb	18 57 29.7	-1.3
	SNR=15						
ORD				Sn	Sg	18 58 01.6	-1.9
NAX	Nakhchivan	2.35	219	PN	Pb	18 57 30.2	-0.9
NAX	Nakhchivan	2.35	219	Pn	Pb	18 57 30.2	-0.9
	SNR=4.4						
NAX				Sg	Sg	18 58 03.9	+0.4
LRK	Lerik	2.47	163	Pn	Pn	18 57 29.7	+0.4
	SNR=10						
LRK				Sn	Sb	18 58 02.8	-1.2
GROC	Groznyy	2.50	332	*e*PN	Pn	18 57 26.1	-3.5
GROC				*e*		18 58 06.0	
GROC				pmax	pmax		
	comp=Z,28nm,0.3s						
LKRN	Lenkeran, Azer	2.52	155	PN	Pn	18 57 30.0	+0.2
LKRN	Lenkeran, Azer	2.52	155	Pn	Pn	18 57 30.1	+0.2
LKRN				Sn	Sb	18 58 04.5	-0.8
ARUZ	Aruch	2.63	255	*i* P	Pn	18 57 32.9	+1.3
ARUZ				*i* S	Sb	18 58 08.7	+0.1
GUDG	Gudauri	2.64	304	P	Pb	18 57 33.1	-2.9
GUDG				S	Sb	18 58 08.3	-0.6
GUDG	Gudauri	2.64	304	*e*PN	Pb	18 57 33.1	-2.9
GUDG				*e*S	Sb	18 58 08.3	-0.6
ASTR	Astara	2.67	156	Pn	Pb	18 57 33.9	-2.5
	SNR=4.6						
ASTR				Sn	Sb	18 58 08.2	-1.3
VNNZ	Vanand	2.88	253	*i* P	Pn	18 57 36.2	+1.3
VNNZ				*i* S	Sb	18 58 14.6	-1.3
BGD	Bogdanovka	2.90	276	P	Pb	18 57 38.6	-1.8
BGD	Bogdanovka	2.90	276	*e*PN	Pb	18 57 38.6	-1.8
LACR	Lac	2.95	309	*e*PN	Pb	18 57 39.3	-2.0
LACR				*e*S	Sb	18 58 18.6	+0.7
LACR	Lac	2.95	309	*e*Pn	Pn	18 57 37.6	+1.7
LACR				*e*Sn	Sb	18 58 16.5	-1.3
AKH	Akhalkalaki	2.99	279	P	Pb	18 57 40.1	-1.9
AKH				S	Sb	18 58 18.1	-0.8
AKH	Akhalkalaki	2.99	279	*e*PN	Pb	18 57 40.0	-1.9
AKH				*e*S	Sb	18 58 18.1	-0.8
AKH	Akhalkalaki	2.99	279	*e*Pn	Pb	18 57 40.1	-1.9
AKH				*e*Sn	Sb	18 58 18.1	-0.8
ZEI	Tsey	3.17	305	*e*PN	Pb	18 57 41.2	+2.2
ZEI				*e*S	Sb	18 58 23.6	-0.6
KORR	Kora	3.25	311	*e*PN	Pb	18 57 45.9	-0.3
KORR				*e*S	Sb	18 58 27.9	+1.7
KORR	Kora	3.25	311	*e*Pn	Pb	18 57 46.0	-0.3
KORR				*e*Sn	Sb	18 58 28.0	+1.7
ONI	Oni	3.36	299	P	Pn	18 57 43.3	+1.8
ONI				S	Sb	18 58 32.0	+2.4
ONI	Oni	3.36	299	*e*PN	Pn	18 57 43.2	+1.8
ONI				*e*S	Sb	18 58 31.9	+2.4
ONI	Oni	3.36	299	*e*Pn	Pn	18 57 43.3	+1.8
LSNR	Lesken	3.50	312	*e*Pn	Pb	18 57 49.1	-1.6
LSNR				*e*Sn	Sb	18 58 28.4	-5.3
TKB	Tkibuli	3.57	293	P	Pn	18 57 45.8	+1.4
TKB				S	Sb	18 58 35.5	-0.2
TKB	Tkibuli	3.57	293	*e*PN	Pn	18 57 45.8	+1.4
TKB				*e*S	Sb	18 58 35.5	-0.2
NEY	Neytrino	4.15	304	*e*PN	Pn	18 57 53.8	+1.4
NEY				*e*S	Sn	18 58 44.5	+3.0
NEY	Neytrino	4.15	304	*e*Pn	Pn	18 57 53.8	+1.4
NEY				*e*Pn	Sn	18 58 44.5	+3.0

MEX 10 19:02:54.0±0.7, 16°.07N×98°.63W, h16km±999km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.58	56	*i* P	Pg	19 03 03.2	-2.3
PNIG				*i* S	Sg	19 03 11.5	-1.7
TLIG	Tlapa	1.49	2	*i* P	Pn	19 03 17.2	-3.1
TLIG				*i* S	Sn	19 03 33.8	-5.7

*NEIC **10** 19:40:50.7±1.9, 40°.34N×127°.15W, h10km, ML3.3, Error ellipse: s-maj=27.6km s-min=20.9km az=297.0*
*ANF **10** 19:40:51.5±1.2, 40°.44N×127°.06W, h10km, ML3.6/10, Error ellipse: s-maj=12.3km s-min=7.4km az=64.0*
ISC 10 19:40:50.2±3.1, 40°.36N±0°.09×127°.3W±0°.2, h16km, n53, σ1s15/57, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRM	Mail Ridge	2.72	92	*e*Pn	Pn	19 41 33.1	-0.2
KHMM	Horse Mountain	2.74	78	*e*Pn	Pn	19 41 32.4	-1.2
KCPM	Cahto Peak	2.90	102	*e*Pn	Pn	19 41 35.3	-0.5
L02E	Cave Junction	3.29	56	P	Pn	19 41 40.7	-0.3
	baz=237,SNR=6.9						
O02D	Mt. Diablo Mer	3.43	92	P	Pn	19 41 42.9	-0.1
	baz=274,SNR=27						
O02D				S	Sn	19 42 21.8	-1.5
	baz=274						
M02C	Callahan	3.50	71	P	Pn	19 41 43.6	-0.4
	baz=253						
M02C				S	Sn	19 42 23.8	-1.2
	baz=253						
HOPS	Hopland Field	3.51	112	*e*Pn	Pn	19 41 43.8	-0.3
N02D	Trinity Center	3.52	78	P	Pn	19 41 43.7	-0.6
	baz=261						
N02D				S	Sn	19 42 24.9	-0.7
	baz=261						
K02D	Willamette Mer	3.57	48	P	Pn	19 41 44.3	-0.6
	baz=229,SNR=125						
WDC	Whiskeytown Da	3.61	85	*e*Pn	Pn	19 41 45.4	0.0
YBH	Yreka Blue Hor	3.71	67	*e*Pn	Pn	19 41 47.1	+0.3
J01E	Myrtle Point	3.75	41	P	Pn	19 41 46.4	-0.9
	baz=221,SNR=13						
GDXM	Geysers	3.78	113	*e*Pn	Pn	19 41 47.1	-0.8
HUMO	Hull Mountain	3.94	54	*e*Pn	Pn	19 41 49.6	-0.4
MCCM	Marconi Confer	4.06	122	*e*Pn	Pn	19 41 51.0	-0.6
L04D	Klamath Falls	4.17	62	P	Pn	19 41 54.6	+1.4
	baz=244,SNR=38						
O03E	Paynes Creek	4.17	89	P	Pn	19 41 53.0	-0.2
	baz=272,SNR=25						
O03E				S	Sn	19 42 41.3	-0.4
	baz=272						
M04C	Macdoel	4.34	69	P	Pn	19 41 56.3	+0.8
	baz=252,SNR=12						
ORV	Oroville	4.50	98	*e*Pn	Pn	19 41 57.1	-0.6
I02D	Swisshome	4.52	33	P	Pn	19 41 58.2	+0.3
	baz=214,SNR=44						
J04D	Umpqua Nationa	4.81	52	P	Pn	19 42 02.2	+0.2
	baz=234,SNR=10						
I04A	Tendick Farm,	4.98	45	P	Pn	19 42 04.8	+0.5
	baz=227,SNR=8.2						
AFDM	Forest Hills D	5.05	104	*e*Pn	Pn	19 42 06.3	+1.0
BEKR	Beckworth	5.32	93	*e*Pn	Pn	19 42 09.9	+0.9
K05A	Summer Lake	5.33	62	*e*Pn	Pn	19 42 09.8	+0.6
J05D	Fort Rock, OR	5.37	55	P	Pn	19 42 10.0	+0.3
	baz=238,SNR=23						
MOD	Modoc Plateau	5.48	71	*e*Pn	Pn	19 42 11.3	+0.1
H04A	Detroit Lake	5.72	39	*e*Pn	Pn	19 42 15.2	+0.7
SAO	San Andreas Ge	5.80	126	*e*Pn	Pn	19 42 14.1	-1.5
PINE	Pine Mountain	5.82	52	*e*Pn	Pn	19 42 16.7	+0.7
CMB	Columbia Colle	5.82	111	*e*Pn	Pn	19 42 17.5	+1.6
PAHR	Pah Rah Range	6.08	94	*e*Pn	Pn	19 42 19.0	-0.5
WAKR	Walker	6.33	105	*e*Pn	Pn	19 42 25.9	+2.8
WVOR	Wild Horse Val	6.81	69	*e*Pn	Pn	19 42 29.3	-0.2
I07A	Izee	6.85	55	*e*Pn	Pn	19 42 31.1	+1.1
MDPB	Devils Postpil	6.93	111	*e*Pn	Pn	19 42 34.4	+3.1
RYN	Ryan	6.98	102	*e*Pn	Pn	19 42 34.1	+2.3
OMMB	Old Mammoth Mi	7.00	110	*e*Pn	Pn	19 42 35.3	+3.1
KVN	Kaiserville	7.18	98	*e*Pn	Pn	19 42 35.7	+1.0
PAGB	Antelope Grade	7.21	128	*e*Pn	Pn	19 42 34.5	-0.4
J08A	Circle Bar Ran	7.21	63	*e*Pn	Pn	19 42 35.6	+0.6
NV11	Mina Array Sit	7.31	102	*e*Pn	Pn	19 42 37.1	+0.7
LON	Longmire	7.51	30	*e*Pn	Pn	19 42 41.0	+1.9
PKM	Mcpherson Peak	8.04	130	P	Pn	19 42 46.1	-0.4
	baz=315,SNR=8.3						
ISA	Isabella, Lake	8.37	121	*e*Pn	Pn	19 42 52.2	+1.4
ISA	Isabella, Lake	8.37	121	P	Pn	19 42 51.9	+1.0
	baz=307,SNR=7.9						
LTY	Liberty	8.38	32	*e*Pn	Pn	19 42 50.8	-0.1
BMO	Blue Mountains	8.60	55	*e*Pn	Pn	19 42 55.7	+1.6
GSC	Goldstone, Bar	9.69	118	*e*Pn	Pn	19 43 10.2	+1.2
B08A	Colville Reser	9.80	33	*e*Pn	Pn	19 43 12.2	+1.8
HEC	Hector,Ludlow	10.27	119	P	Pn	19 43 17.8	+0.8
	baz=306,SNR=7.1						
MCMT	McKenzie Canyo	11.52	62	*e*Pn	Pn	19 43 33.8	-0.4
PV17	East Wray Mesa	14.32	92	*e*Pn	Pn	19 44 12.9	+0.5

*NIED **10** 20:09:00, 36°.80N×138°.70E, h5km, Mw3.8 Best double couple: M0=5.38000×10^14 NP1:φs=345.00000°, δ77.00000°, λ0.00000°. NP2:φs=255.00000°, δ90.00000°, λ167.00000°.*
JMA 10 20:09:54.5, 36°.83N×138°.69E, h6km±2km, M3.6, 4C-2D Broadband fault plane solution: P waves. NP1: φs=85.00000°, δ78.00000°, λ-152.00000°. **NP2:** φs=349.00000°, δ63.00000°, λ-14.00000°. **Principal axes:** T Plg10.0000°, Azm215.0000°; N Plg60.0000°, Azm107.0000°; P Plg28.0000°, Azm310.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGK	Kuni	0.27	189	⇑P	Pg	20 10 00.1	+0.3
JKT	Katashina	0.45	98	⇓P	Pg	20 10 03.3	0.0
JKT				S	Sg	20 10 09.5	+0.3
MAT	Matsushiro	0.48	234	P	Pg	20 10 03.6	-0.2
MAT				S	Sg	20 10 09.8	-0.3
MAT	Matsushiro	0.48	234	P	Pg	20 10 03.5	-0.3
MAT				*e*S	Sg	20 10 09.8	-0.3
JHK	Hiroka	0.49	32	⇑P	Pg	20 10 04.0	0.0
JHK				S	Sg	20 10 10.8	+0.3
JNG	Nsakai	0.64	229	⇑P	Pg	20 10 06.4	-0.3
JNG				S	Sg	20 10 14.7	-0.3
JAG	Ashikaga	0.73	123	⇓P	Pg	20 10 08.6	0.0
JRY	Ryogami san	0.83	168	⇑P	Pg	20 10 09.9	-0.5
JRY				S	Sg	20 10 20.8	-0.4

MEX 10 20:24:33.0±0.3, 25°.18N×100°.58W, h20km, MD3.8, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	Linares	1.05	105	*e*P	Pb	20 24 49.2	-3.2
	baz=286,slow=14						
LNIG				*i* S	Sb	20 25 01.9	-3.8

MEX 10 20:31:49.4±0.9, 16°.34N×98°.17W, h14km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.07	41	*i* P	Pg	20 31 51.0	-1.2
PNIG				*i* S	Sg	20 31 53.7	-0.4
TLIG	Tlapa	1.27	343	*e*P	Pn	20 32 09.1	-3.8
TLIG				*e*S	Sb	20 32 25.0	-4.5

*ISCJB **10** 20:35:46.4±1.9, 4°.3S±0°.6×152°.0E±0°.7, h100km, Error ellipse: s-maj=133.9km s-min=13.9km az=39.0*
*IDC **10** 20:35:47.1±5.1, 4°.87S×152°.54E, h104km±41km, mb3.6/3, mb1 3.8/4, mb1mx3.2/40, mbtmp4.0/4, MS3.2/1, Ms1 3.2/1, ms1mx2.3/28, Error ellipse: s-maj=96.9km s-min=27.6km az=131.0*
ISC 10 20:35:47.5±2.3, 4°.4S±0°.7×152°.1E±0°.8, h100km, n7, σ0s56/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.98	225	P	Pn	20 37 27.0	-0.2
	2.1nm,0.3s,baz=32,slow=19,SNR=3.7						
PMG				S	Sn	20 38 45.7	+0.6
	1.4nm,0.3s,baz=236,slow=18,SNR=2.8						
WRA	Warramunga Arr	23.20	227	P	P	20 40 45.1	-0.7
	59nm,0.3s,baz=57,slow=10,SNR=1.0						
ASAR	Alice Springs	25.98	221	P	P	20 41 11.1	+0.1
	0.5nm,0.5s,baz=56,slow=8.6,SNR=10						
FITZ	Fitzroy Crossi	29.25	240	P	P	20 41 40.2	0.0
	1.5nm,0.3s,baz=59,slow=6.7,SNR=18						
KLR	Kul'dur	56.30	344	LR	LR	21 09 46.5	
	comp=Z,17nm,18.1s,baz=192,slow=36						
ILAR	Eielson Array	82.07	22	P	P	20 47 57.0	+0.4
	0.7nm,0.7s,baz=249,slow=4.9,SNR=7.7						
TORD	Torodi Ar. Bea	149.55	288	PKPbc	PKPbc	20 55 26.1	-0.3
	0.5nm,0.3s,baz=74,slow=2.4,SNR=20						

UCR 10 20:41:47.0±2.3, 10°.20N×86°.41W, h14km±30km, MD3.9, ML3.1, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.97	62	*i* P	Pb	20 42 05.3	-0.3
NY14				*i* S	Sb	20 42 17.4	-0.9
LAPC	Finca la Perla	1.11	59	*i* P	Pb	20 42 06.7	-1.4
GPS1	Guardaparques	1.19	61	*i* P	Pn	20 42 08.1	-1.2
LIM1	Limonal	1.24	66	*i* P	Pn	20 42 08.9	-1.1
CUI	Cuipilapa	1.31	69	*i* P	Pn	20 42 10.2	-0.7
MESS	Mesas	1.31	66	*i* P	Pn	20 42 10.0	-1.0
ACAL	Aguas Claras	1.42	72	*i* P	Pn	20 42 12.0	-0.5
JTS	Las Juntas de	1.44	86	*e*P	Pn	20 42 12.2	-0.4
COPN	Copaltepe	1.98	355	*e*P	Pn	20 42 18.8	-1.3
COPN				*e*S	Sb	20 42 47.7	+0.4
APYN	Apoyeque	2.02	2	*e*P	Pn	20 42 19.7	-1.1
MOMN	Momotombo	2.20	357	*e*P	Pn	20 42 21.9	-1.3
MATN	Matagalpa	2.76	10	*e*P	Pn	20 42 29.2	-1.7
MATN				IAML		20 42 55.2	
	comp=N,99nm,0.7s						
ESPN	Las Esperanzas	2.87	46	*e*P	Pn	20 42 31.7	-0.6

MAN 10 20:51:57.8, 6°.18N×124°.75E, h15km, mb3.8, ML2.5, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.22	116	⇑*i*P	Pb	20 52 07.1	+3.4

*IDC **10** 21:05:06.9±2.0, 34°.52N×139°.51E, h128km±6km, mb3.3/3, mb1 3.3/4, mb1mx3.0/32, mbtmp3.6/4, Error ellipse: s-maj=83.4km s-min=6.3km az=71.0*
*JMA **10** 21:05:06.0±0.2, 34°.63N×139°.89E, h124km±2km, M3.1*
ISC 10 21:05:05.8±0.9, 34°.63N±0°.05×139°.90E±0°.07, h130km±6km, n23, σ0s84/32, mb3.5/3, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIM2	Oshima 3	0.40	284	P	Pn	21 05 23.8	-0.6
JIM2				S	Sn	21 05 37.6	-0.9
TATJ	Tateyama 2	0.41	359	P	Pn	21 05 24.8	+0.4
TATJ				S	Sn	21 05 39.9	+1.4
JTHY	Toshimahigashi	0.52	259	P	Pn	21 05 24.9	-0.1
BSO3	Boso 3	0.53	70	P	Pn	21 05 25.2	+0.5
BSO3				X		21 05 41.0	
JMKN	Mikurajimanish	0.78	200	P	Pn	21 05 26.4	-0.4
JMKN				*i* S	Sn	21 05 41.9	-0.8
JIZS	Izushimoda	0.85	277	P	Pn	21 05 27.3	-0.1
JIZS				S	Sn	21 05 43.3	-0.4
BSO1	Boso 1	0.89	88	P	Pn	21 05 27.5	+0.5
JOD2	Odawara 2	0.92	314	P	Pn	21 05 27.7	-0.3
JOD2				S	Sn	21 05 44.3	-0.6
JFNN	Fujinakano	1.15	300	P	Pn	21 05 30.4	+0.2
JFNN				*e*S	Sn	21 05 48.6	-0.1
JYN	Shimob	1.41	308	P	Pn	21 05 33.1	+0.1
JYN				S	Sn	21 05 56.0	+2.2
JHJ	Hachijo jima 2	1.50	184	P	Pn	21 05 33.9	-0.1
	34nm,0.3s,baz=161,slow=23,SNR=20						
JHJ				S	Sn	21 05 54.7	-0.8
	104nm,0.3s,baz=301,slow=22,SNR=19						
JRY	Ryogami san	1.61	330	P	Pn	21 05 35.3	+0.1
JRY				S	Sn	21 05 57.3	-0.4
JAG	Ashikaga	1.83	349	P	Pn	21 05 37.1	-0.7
JAG				S	Sn	21 06 00.5	-1.6
TK02	Tokai 2	1.90	250	P	Pn	21 05 39.1	+0.8
TK02				X		21 06 05.7	
MJAR	Matsushiro Arr	2.36	325	P	Pn	21 05 43.9	-0.3
	1.0nm,0.3s,baz=163,slow=12,SNR=37						
MJAR				S	Sn	21 06 12.3	-1.5
	1.0nm,0.3s,baz=182,slow=24,SNR=12						
MAT	Matsushiro	2.36	325	P	Pn	21 05 44.0	-0.2
MAT				S	Sn	21 06 13.2	-0.6
H11N2	WAKE ISLAND Hy 28.11	115		T	T	21 40 51.5	
	baz=308,slow=75,SNR=9.9						
H11N1	WAKE ISLAND Hy 28.12	115		T	T	21 40 52.2	
	baz=308,slow=75,SNR=6.2						
H11N3	WAKE ISLAND Hy 28.13	115		T	T	21 40 53.9	
	baz=308,slow=75,SNR=3.1						
SONM	Songino Array	28.21	308	P	P	21 10 47.3	+1.1
	0.7nm,0.7s,baz=108,slow=9.2,SNR=5.2						
MKAR	Makanchi Array	44.40	304	P	P	21 13 03.7	+0.3
	0.5nm,0.5s,baz=85,slow=9.7,SNR=7.8						
WRA	Warramunga Arr	54.52	186	P	P	21 14 19.3	-1.0
	125nm,0.3s,baz=1.2,slow=6.9,SNR=1.4						
ASAR	Alice Springs	58.25	186	P	P	21 14 46.4	-0.2
	0.2nm,0.5s,baz=20,slow=9.4,SNR=4.8						

*IGIL **10** 21:55:44.9, 36°.53N×11°.58W, h31km, ML2.2*
*INMG **10** 21:55:45.8±1.1, 36°.53N×11°.54W, h31km, ML2.3, Error ellipse: s-maj=5.6km s-min=3.3km az=92.0*
*MDD **10** 21:55:45.1±1.5, 36°.72N×11°.32W, h0km, mb4.1/3, Error ellipse: s-maj=13.0km s-min=10.4km az=69.0, PRXIMO*
ISC 10 21:55:43.7±3.5, 36°.7N±0°.1×11°.6W±0°.2, h35km, n60, σ1s52/98, 2C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.24	77	⇑*i*Pn	Pn	21 56 19.2	+0.9
PFVI				*e*Sn	Sn	21 56 43.5	-1.2
PFVI				A	A	21 56 46.7	
	10nm,0.4s						
PFVI	Vila Bisbo	2.24	77	⇑P	Pn	21 56 19.1	+0.9
	6.5nm,0.1s,SNR=18						
PFVI				S	Sn	21 56 43.4	-1.2
	22nm,0.1s,SNR=7.9						
MORF	Marmelete	2.41	73	*e*P	Pn	21 56 21.8	+1.0
MORF				*e*S	Sn	21 56 48.7	-0.4
MORF				AML	AML	21 56 52.9	
	comp=N,20nm,0.4s						
MORF	Marmelete	2.41	73	*e*Pn	Pn	21 56 21.8	+1.0
MORF				*e*Sn	Sn	21 56 48.8	-0.4
MORF				A	A	21 56 56.1	
	comp=N,11nm,0.2s						
MORF	Marmelete	2.41	73	P	Pn	21 56 21.8	+1.0
MORF				S	Sn	21 56 48.7	-0.4
	comp=N,20nm,0.4s						
PTEO	Sao Teotonio	2.43	68	*e*Pn	Pn	21 56 22.1	+1.2
PTEO				*e*Sn	Sn	21 56 49.4	0.0
PTEO				A	A	21 56 52.8	
	comp=N,9.3nm,0.3s						
PTEO	Sao Teotonio	2.43	68	P	Pn	21 56 22.1	+1.2
PTEO				S	Sn	21 56 49.4	0.0
	comp=N,4.7nm,0.3s						
PNCL	Nicolau / Gran	2.82	58	*e*Pn	Pn	21 56 28.0	+1.8
PNCL				*e*Sn	Sn	21 56 59.7	+0.8
PNCL				A	A	21 57 02.5	
	comp=N,6.5nm,0.7s						
PNCL	Nicolau / Gran	2.82	58	P	Pn	21 56 28.0	+1.8
PNCL				S	Sn	21 56 59.7	+0.8
	comp=N,6.5nm,0.7s						
MESJ	Messejana	2.91	65	*e*P	Pn	21 56 28.9	+1.4
MESJ				*e*S	Sn	21 57 00.9	-0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGRO				S	Sn	21 57 12.1	-0.5
	comp=N,4.6nm,0.2s,SNR=6.0						
EVO	**Evora**	**3.38**	**55**	*e*Pn	Pn	21 56 35.5	+1.5
EVO				*e*Sn	Sn	21 57 13.2	+0.3
EVO				A	A	21 57 16.2	
	comp=N,8.2nm,0.1s						
EVO	**Evora**	**3.38**	**55**	P	Pn	21 56 35.5	+1.5
EVO				S	Sn	21 57 13.0	+0.1
EVO	**Evora**	**3.38**	**55**	*e*P	Pn	21 56 39.0	+5.0
EVO				*e*S	Sn	21 57 13.0	+0.1
PMTG	**Montargil**	**3.57**	**46**	*e*Pn	Pn	21 56 38.0	+1.4
PMTG				*e*Sn	Sn	21 57 16.9	-0.7
PMTG				A	A	21 57 22.7	
	comp=N,2.5nm,0.1s						
PMTG	**Montargil**	**3.57**	**46**	P	Pn	21 56 38.0	+1.4
PMTG				S	Sn	21 57 16.9	-0.7
	comp=N,2.5nm,0.1s						
PTOM	**Tomar**	**3.86**	**39**	*e*Sn	Sn	21 57 25.0	+0.3
PTOM				A	A	21 57 28.6	
	comp=N,6.9nm,0.2s						
PTOM	**Tomar**	**3.86**	**39**	S	Sn	21 57 25.0	+0.3
	comp=N,3.5nm,0.2s						
EMIN	**Mina Concepcio**	**4.05**	**73**	P	Pn	21 56 44.4	+1.2
	comp=N,0.7nm,0.1s,SNR=12						
EMIN				S	Sn	21 57 27.7	-1.7
	comp=N,2.0nm,0.2s,SNR=8.3						
EBAD	**Badajoz**	**4.17**	**58**	P	Pn	21 56 46.5	+1.7
	comp=N,0.7nm,0.1s,SNR=6.7						
EBAD				S	Sn	21 57 31.6	-0.7
	comp=N,6.0nm,0.2s,SNR=7.8						
PMRV	**Marv??o**	**4.30**	**49**	*e*Pn	Pn	21 56 47.9	+1.3
PMRV				*e*Sn	Sn	21 57 34.6	-0.9
PMRV				A	A	21 57 36.2	
	comp=N,1.8nm,0.2s						
PMRV	**Marv??o**	**4.30**	**49**	P	Pn	21 56 47.9	+1.3
PMRV				S	Sn	21 57 34.6	-0.9
	comp=N,1.8nm,0.2s						
PCBR	**Castelo Branco**	**4.52**	**44**	*e*Sn	Sn	21 57 40.3	-0.7
PCBR				A	A	21 57 42.8	
	comp=N,2.3nm,0.2s						
PCBR	**Castelo Branco**	**4.52**	**44**	S	Sn	21 57 40.3	-0.7
	comp=N,1.2nm,0.2s						
ESPR	**Espera**	**4.58**	**86**	P	Pn	21 56 51.3	+0.8
	comp=N,2.7nm,0.1s,SNR=10.0						
ESPR				S	Sn	21 57 40.1	-2.4
	comp=N,8.3nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**4.89**	**39**	*e*Sn	Sn	21 57 49.9	-0.2
MTE				A	A	21 57 53.1	
	comp=N,2.8nm,0.1s						
MTE	**Manteigas**	**4.89**	**39**	S	Sn	21 57 49.9	-0.2
	comp=N,1.4nm,0.1s						
PVIS	**Viseu**	**4.97**	**34**	*e*Pn	Pn	21 56 57.1	+1.3
PVIS				*e*Sn	Sn	21 57 51.0	-1.1
PVIS				A	A	21 57 56.3	
	comp=N,4.7nm,0.1s						
PVIS	**Viseu**	**4.97**	**34**	P	Pn	21 56 57.1	+1.3
PVIS				S	Sn	21 57 51.0	-1.1
	comp=N,2.3nm,0.1s						
ECAB	**El Cabril**	**5.09**	**72**	P	Pn	21 56 58.4	+0.9
	comp=N,1.0nm,0.2s,SNR=16						
ECAB				S	Sn	21 57 52.5	-2.6
	comp=N,2.0nm,0.3s						
EPLA	**Plasencia**	**5.49**	**50**	P	Pn	21 57 04.5	+1.6
	comp=N,0.3nm,0.1s,SNR=7.9						
EPLA				S	Sn	21 58 03.9	-1.0
	comp=N,2.1nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.55**	**31**	*e*Sn	Sn	21 58 04.8	-1.7
POLO				A	A	21 58 07.5	
	comp=N,1.4nm,0.3s						
POLO	**Lamas de Olo**	**5.55**	**31**	S	Sn	21 58 04.8	-1.7
	comp=N,1.4nm,0.3s						
MVO	**Moncorvo**	**5.72**	**37**	*e*Pn	Pn	21 57 08.2	+2.0
MVO				*e*Sn	Sn	21 58 08.6	-2.1
MVO				A	A	21 58 11.5	
	comp=N,2.4nm,0.1s						
MVO	**Moncorvo**	**5.72**	**37**	P	Pn	21 57 07.1	+0.9
	comp=N,0.6nm,0.1s,SNR=7.9						
MVO				S	Sn	21 58 07.9	-2.8
	comp=N,2.3nm,0.1s,SNR=7.9						
PCAB	**Cabril**	**5.75**	**27**	*e*Sn	Sn	21 58 10.7	-0.5
PCAB	**Cabril**	**5.75**	**27**	S	Sn	21 58 10.7	-0.5
ELOB	**Lobios**	**5.87**	**26**	P	Pn	21 57 09.1	+0.8
	comp=N,0.3nm,0.1s,SNR=4.0						
ELOB				S	Sn	21 58 11.8	-2.6
	comp=N,2.5nm,0.2s,SNR=6.0						
PGAV	**Gavieira, Arco**	**5.89**	**25**	*e*Sn	Sn	21 58 13.3	-1.5
PGAV				A	A	21 58 15.3	
	comp=N,2.2nm,0.1s						
PGAV	**Gavieira, Arco**	**5.89**	**25**	S	Sn	21 58 13.3	-1.5
	comp=N,2.2nm,0.1s						
EZAM	**Zamans**	**5.92**	**21**	S	Sn	21 58 13.0	-2.4
	comp=N,2.4nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**6.36**	**34**	*e*Sn	Sn	21 58 24.5	-1.8
PBRG				A	A	21 58 26.7	
	comp=N,2.0nm,0.3s						
PBRG	**Braganca**	**6.36**	**34**	S	Sn	21 58 24.5	-1.8
	comp=N,1.0nm,0.3s						
PAB	**San Pablo**	**6.37**	**61**	P	Pn	21 57 16.7	+1.5
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	21 58 22.6	-4.2
	comp=N,0.3nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.47**	**34**	S	Sn	21 58 26.5	-2.6
	comp=N,4.3nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**6.70**	**61**	P	Pn	21 57 20.9	+1.3
	comp=N,0.9nm,0.2s,baz=246,slow=13,SNR=4.0						
EAGO	**Agolada(Pontev**	**6.70**	**22**	S	Sn	21 58 30.0	-4.6
	comp=N,1.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**6.87**	**78**	P	Pn	21 57 24.4	+2.4
	comp=N,0.1nm,0.2s,SNR=4.0						
EQES				S	Sn	21 58 35.3	-3.6
	comp=N,1.0nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.47**	**26**	S	Sn	21 58 50.6	-3.2
	comp=N,1.0nm,0.2s,SNR=7.9						

NIED ***10*** *22:06:00,37.°40N×141.°50E,h14km,Mw4.1 Best double couple: M0 1.38000×10^15 NP1:φ0 148.00000°,δ45.00000°, λ-57.00000°. NP2:φ0 285.00000°,δ54.00000°, λ-119.00000°.*

IDC ***10*** *22:06:05.2±0.5,37.°41N×141.°48E,h0km,mb4.1/25, mb1 4.2/32,mb1mx4.1/64,mbtmp4.1/32,ML3.8/5,MS3.0/10, Ms1 3.0/10,ms1mx2.8/52,Error ellipse: s-maj=14.2km s-min=11.2km az=102.0*

ISCJB ***10*** *22:06:06.7±0.7,37.°39N±0.°03×141.°57E±0.°04,h23km±4km, mb4.2/32,MS3.0/4,Error ellipse: s-maj=6.0km s-min=3.8km az=34.8*

NEIC ***10*** *22:06:08.8±1.7,37.°37N×141.°56E,h24km±3km,mb4.3/13, Error ellipse: s-maj=16.0km s-min=10.9km az=109.0*

NEIC Recorded [2 JMA] in Fukushima.

JMA ***10*** *22:06:09.0±0.1,37.°39N×141.°43E,h32km±1km,M4.2*

JMA Felt II J1.

ISC 10 22:06:06.6±1.4,37.°38N±0.°03×141.°58E±0.°05,h11km±8km, n81,σ1°15/91,mb4.1/32,MS3.0/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.56**	**269**	P	Pg	22 06 18.4	+0.9
JFK				S	Sg	22 06 24.7	-0.3
ONAJ	**Iwakimizuishiy**	**0.68**	**246**	P	Pg	22 06 20.3	+0.5
ONAJ				S	Sg	22 06 28.1	-0.6
JMM	**Marumori**	**0.79**	**308**	P	Pg	22 06 22.0	+0.1
JMM				S	Sg	22 06 31.1	-1.2
JFFD	**Fukushimafurud**	**0.86**	**251**	P	Pb	22 06 23.0	-0.6
JFFD				S	Sb	22 06 32.9	-2.2
JFT	**Otama**	**1.00**	**279**	P	Pb	22 06 25.7	-0.2
JFT				S	Sb	22 06 37.3	-1.8
JIO	**Ouri**	**1.09**	**351**	P	Pb	22 06 27.0	-0.5
JIO				S	Sb	22 06 39.9	-1.8
JHO	**Hitachi**	**1.11**	**227**	P	Pb	22 06 26.5	-1.3
JOU	**Okura**	**1.22**	**324**	P	Pn	22 06 29.5	-0.2
JOU				S	Sb	22 06 44.4	-1.2
JYS	**Shiratake**	**1.47**	**306**	P	Pn	22 06 33.1	+0.1
JYS				*e*S	Sn	22 06 51.3	-0.9
JFY	**Yanaizu**	**1.49**	**272**	P	Pn	22 06 33.1	-0.3
JFY				*e*S	Sn	22 06 51.7	-1.1
MJAR	**Matsushiro Arr**	**2.82**	**254**	Pn	Pn	22 06 52.1	+0.5
	13nm,0.3s,baz=79,slow=16,SNR=258						
MJAR				LR	LR	22 07 23.1	
	comp=Z,73nm,20.7s,baz=60,slow=28						
MJAR				Sn	Sn	22 07 25.4	-0.3
	6.1nm,0.3s,baz=94,slow=16,SNR=5.8						
MAJO	**Matsushiro**	**2.83**	**254**	*e*Pn	Pn	22 06 52.8	+1.1
MAJO				*e*Sn	Sn	22 07 25.4	-0.3
MAT	**Matsushiro**	**2.83**	**254**	P	Pn	22 06 52.7	+1.0
MAT				S	Sn	22 07 27.2	+1.5
MJB9	**Matsu-Tunnel**	**2.83**	**254**	*e*Pn	Pn	22 06 52.8	+1.1
MJB9				*e*Sn	Sn	22 07 23.8	-1.9
INU	**Inuyama**	**4.20**	**243**	*e*Pn	Pn	22 07 12.2	+1.6
JHJ2	**Mitsune**	**4.49**	**199**	*e*Pn	Pn	22 07 15.5	+0.9
JHJ2				*e*Sn	Sn	22 08 03.6	-3.3
JHJ	**Hachijo jima 2**	**4.49**	**200**	Pn	Pn	22 07 15.5	+0.9
	63nm,0.3s,baz=285,slow=22,SNR=28						
JHJ				Sn	Sn	22 08 04.3	-2.6
	155nm,0.3s,baz=69,slow=23,SNR=9.1						
JHJ				LR	LR	22 08 54.8	
	comp=Z,159nm,19.6s,baz=30,slow=38						
ERM	**Erimo**	**4.79**	**14**	*e*Pn	Pn	22 07 19.0	+0.3
ERM				*e*Sn	Sn	22 08 09.2	-5.0
ASAJ	**Asahikawa**	**6.78**	**6**	Pn	Pn	22 07 46.1	+0.1
	6.9nm,0.3s,baz=216,slow=9.2,SNR=26						
ASAJ				Sn	Sn	22 09 03.5	+0.4
	0.9nm,0.3s,baz=281,slow=28,SNR=1.4						
ASAJ				LR	LR	22 10 45.2	
	comp=Z,109nm,20.1s,baz=314,slow=42						
YSS	**Yuzh-Sakhalins**	**9.61**	**5**	*e*Pn	Pn	22 08 24.9	+0.1
JNU	**Nakatsue**	**9.72**	**247**	Pn	Pn	22 08 25.4	-1.0
	0.1nm,0.3s,baz=32,slow=9.5,SNR=1.7						
JNU	**Nakatsue**	**9.72**	**247**	*e*Pn	Pn	22 08 27.5	+1.0
USRK	**Ussuriysk Ar.**	**9.96**	**316**	Pn	Pn	22 08 29.4	-0.2
	baz=124,slow=14,SNR=2.2						
KSRS	**Korea Array**	**10.86**	**275**	Pn	Pn	22 08 42.2	+0.3
	0.3nm,0.3s,baz=90,slow=14,SNR=3.0						
KSRS				LR	LR	22 12 47.6	
	comp=Z,103nm,18.2s,baz=115,slow=37						
KS15	**Wonju Array Si**	**10.89**	**274**	*e*Pn	Pn	22 08 42.2	-0.2
KLR	**Kul'dur**	**13.82**	**332**	Pn	Pn	22 09 25.4	+3.0
	0.1nm,0.3s,baz=138,slow=12,SNR=2.9						
KLR				LR	LR	22 14 32.3	
	comp=Z,74nm,19.1s,baz=154,slow=37						
PETK	**Petropavlovsk-**	**19.33**	**30**	P	P	22 10 31.8	+0.1
	0.1nm,0.3s,baz=206,slow=9.9,SNR=5.2						
PETK				LR	LR	22 18 48.9	
	comp=Z,19nm,18.4s,baz=219,slow=40						
PEA1	**Petropavlovsk-**	**19.33**	**30**	*e*P	P	22 10 31.8	+0.1
MA2	**Magadan**	**22.99**	**12**	P	P	22 11 11.8	+0.8
	4.2nm,0.3s,baz=164,slow=16,SNR=3.5						
MA2				LR	LR	22 20 09.6	
	comp=Z,30nm,18.5s,baz=328,slow=37						
SONA0	**Songino Array**	**27.70**	**303**	*e*P	P	22 11 53.4	-1.5
SONM	**Songino Array**	**27.70**	**303**	P	P	22 11 53.4	-1.5
	1.2nm,0.7s,baz=97,slow=8.5,SNR=5.7						
SONM				LR	LR	22 22 57.8	
	comp=Z,20nm,20.1s,baz=116,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.21**	**122**	T	T	22 41 40.2	
	baz=314,slow=75,SNR=988						
H11N1	**WAKE ISLAND Hy**	**28.22**	**122**	T	T	22 41 40.8	
	baz=314,slow=75,SNR=1017						
H11N3	**WAKE ISLAND Hy**	**28.23**	**122**	T	T	22 41 41.5	
	baz=314,slow=75,SNR=1199						
H11S1	**WAKE ISLAND Hy**	**28.94**	**124**	T	T	22 42 28.0	
	baz=316,slow=76,SNR=653						
H11S3	**WAKE ISLAND Hy**	**28.94**	**124**	T	T	22 42 26.6	
	baz=316,slow=76,SNR=444						
H11S2	**WAKE ISLAND Hy**	**28.95**	**124**	T	T	22 42 33.0	
	baz=316,slow=76,SNR=400						
SIJI	**Sorong**	**39.23**	**196**	P	P	22 13 34.5	-0.6
	2.2nm,0.5s,baz=18,slow=9.6,SNR=2.1						
ZALV	**Zalesovo Beam**	**41.78**	**312**	P	P	22 13 55.3	-0.5
	1.6nm,0.5s,baz=77,slow=6.7,SNR=7.7						
NRIK	**Noril'sk**	**43.01**	**335**	LR	LR	22 32 41.0	
	comp=Z,31nm,18.5s,baz=46,slow=37						
MK31	**Makanchi Array**	**44.05**	**302**	*e*P	P	22 14 14.2	-0.2
	2.7nm,0.8s						
MKAR	**Makanchi Array**	**44.05**	**302**	P	P	22 14 14.1	-0.2
	1.7nm,0.7s,baz=88,slow=9.9,SNR=14						
KURK	**Kurchatov**	**45.83**	**308**	*e*P	P	22 14 28.0	-0.4
	8.8nm,0.7s						
KURBB	**Kurchatov Arra**	**45.90**	**308**	P	P	22 14 28.4	-0.5
	1.2nm,0.4s,baz=81,slow=8.1,SNR=4.4						
ILAR	**Eielson Array**	**49.14**	**33**	P	P	22 14 54.4	+0.5
	1.4nm,0.7s,baz=269,slow=6.5,SNR=15						
ILB	**Eielson Array**	**49.14**	**33**	*e*P	P	22 14 55.5	+1.6
	2.9nm,0.8s						
EPYK	**Eagle Plains**	**53.16**	**30**	*e*P	P	22 15 26.6	+2.4
	6.5nm,0.7s						
ARU	**Arti**	**56.19**	**318**	P	P	22 15 45.8	-0.4
	1.2nm,0.4s,baz=88,slow=6.5						
ARU	**Arti**	**56.19**	**318**	*e*P	P	22 15 45.9	-0.4
	6.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**57.18**	**198**	P	P	22 15 54.3	+0.7
	1.6nm,0.8s,baz=30,slow=8.1,SNR=2.3						
WR1	**Warramunga Arr**	**57.42**	**188**	*e*P	P	22 15 55.4	+0.1
WRA	**Warramunga Arr**	**57.42**	**188**	P	P	22 15 55.4	+0.1
	26nm,0.3s,baz=355,slow=8.4,SNR=1.7						
ABKAR	**Akbulak array**	**57.82**	**310**	*e*P	P	22 15 57.5	-0.4
	2.7nm,0.6s						
KIRV	**Kirov**	**60.05**	**323**	P	P	22 16 12.4	-0.8
	10nm,0.6s,baz=261,slow=1.3,SNR=5.0						
AS31	**Alice Springs**	**61.14**	**188**	*e*P	P	22 16 21.8	+0.7
	1.0nm,0.8s						
ASAR	**Alice Springs**	**61.15**	**188**	P	P	22 16 21.8	+0.7
	2.1nm,0.8s,baz=4.4,slow=5.5,SNR=15						
YKA	**Yellowknife Ar**	**63.45**	**30**	P	P	22 16 36.4	+0.4
	0.5nm,0.6s,baz=292,slow=5.6,SNR=2.3						
YKB5	**Yellowknife Ar**	**63.45**	**30**	*e*P	P	22 16 36.4	+0.4
GEYT	**Alibeck**	**63.78**	**299**	P	P	22 16 38.5	-0.3
	0.5nm,0.6s,baz=52,slow=2.4,SNR=7.5						
FIA0	**FINESS Array S**	**68.57**	**332**	*e*P	P	22 17 09.0	0.0
FINES	**FINESS Array B**	**68.57**	**332**	P	P	22 17 09.0	0.0
	3.8nm,0.8s,baz=31,slow=9.2,SNR=13						
STKA	**Stephens Creek**	**68.89**	**180**	P	P	22 17 12.1	+0.8
	2.0nm,0.8s,baz=7.7,slow=21,SNR=2.9						
STKA	**Stephens Creek**	**68.89**	**180**	*e*P	P	22 17 12.1	+0.8
	1.0nm,1.1s						
KBZ	**Khabaz**	**70.78**	**311**	P	P	22 17 22.8	-0.1
	1.9nm,0.7s,baz=325,slow=4.1,SNR=5.0						
HFS	**Hagfors**	**73.83**	**336**	P	P	22 17 40.9	+0.1
	0.7nm,0.5s,baz=86,slow=7.6,SNR=5.6						
NB2	**NORSAR Subarra**	**73.92**	**337**	P	P	22 17 41.1	-0.3
	comp=Z,1.6nm,0.7s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**73.92**	**337**	P	P	22 17 41.4	0.0
	comp=Z,1.2nm,0.7s,baz=39,slow=5.9,SNR=7.8						
NOA				LR	LR	22 53 32.8	
	comp=Z,21nm,19.4s,baz=45,slow=39						
AKASG	**Malin Array Be**	**74.11**	**322**	P	P	22 17 42.2	-0.4
	comp=Z,2.2nm,0.5s,baz=46,slow=6.1,SNR=16						
AKBB	**Malin Array Si**	**74.11**	**322**	*e*P	P	22 17 42.2	-0.4
	comp=Z,3.4nm,0.7s						
NVAR	**Mina Array Bea**	**74.68**	**53**	P	P	22 17 48.3	+1.8
	comp=Z,0.7nm,0.7s,baz=301,slow=6.2,SNR=3.8						
PD31	**Pinedale Array**	**77.33**	**46**	*e*P	P	22 18 01.9	+0.4
	comp=Z,1.2nm,0.9s						
PDAR	**Pinedale Array**	**77.33**	**46**	P	P	22 18 01.9	+0.4
	comp=Z,0.5nm,0.5s,baz=313,slow=0.6,SNR=5.2						
BR101	**Keskin Array S**	**78.72**	**312**	*e*P	P	22 18 09.5	+0.3
BRTR	**Keskin Array B**	**78.72**	**312**	P	P	22 18 09.5	+0.3
	comp=Z,0.3nm,0.7s,baz=76,slow=6.1,SNR=3.0						
GERES	**GERESS Array B**	**82.49**	**329**	P	P	22 18 29.0	-0.2
	comp=Z,0.5nm,0.5s,baz=60,slow=6.3,SNR=4.8						
EKA	**Eskdalemuir Ar**	**82.85**	**341**	P	P	22 18 31.4	+0.6
	comp=Z,0.2nm,0.5s,baz=29,slow=5.0,SNR=2.5						
LTX	**Lajitas**	**89.81**	**52**	*e*P	P	22 19 07.3	+1.6
TXAR	**Lajitas Array**	**89.81**	**52**	P	P	22 19 07.3	+1.6
	comp=Z,0.9nm,0.5s,baz=298,slow=3.1,SNR=9.0						
LPAZ	**La Paz**	**146.41**	**59**	PKPbc	**PKPdf**	**22 25 47.6**	**0.0**
	comp=Z,1.8nm,0.6s,baz=51,slow=1.5,SNR=10						
LPAZ	**La Paz**	**146.41**	**59**	*e*PKPdf	**PKiKP**	**22 25 51.6**	**-0.3**
SIV	**San Ignacio**	**150.76**	**49**	PKPbc	**PKPbc**	**22 25 59.0**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=352,slow=1.8,SNR=6.8						

MEX 10 22:08:43.6±0.9,15.°01N×93.°63W,h32km±100km,MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.79**	**30**	*i* P	Pn	22 08 56.5	-2.0
PCIG				*i* S	Sn	22 09 06.3	-3.0
CCIG	**Comitan**	**1.91**	**48**	*e*P	Pn	22 09 11.9	-2.3
CCIG				*i* S	Sn	22 09 34.6	-2.6

ISCJB ***10*** *22:11:48.5±0.3,25.°49N±0.°06×124.°84E±0.°05, h122km±4km,mb4.0/18,Error ellipse: s-maj=10.8km s-min=4.5km az=147.8*

IDC ***10*** *22:11:49.5±2.6,25.°50N×124.°80E,h116km±25km, mb3.6/16,mb1 3.6/18,mb1mx3.4/70,mbtmp3.9/18,Error ellipse: s-maj=21.7km s-min=11.9km az=72.0*

JMA ***10*** *22:11:50.0±0.1,25.°59N×124.°76E,h102km,M3.7*

ISC 10 22:11:49.6±0.7,25.°50N±0.°08×124.°84E±0.°06,h118km±8km, n35,σ0°62/51,mb3.8/18,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.68**	**147**	P	Pn	22 12 08.8	+0.2
JIKM				S	Sn	22 12 22.8	-0.1
JIRB	**Irabujima**	**0.73**	**156**	P	Pn	22 12 09.0	0.0
JIRB				S	Sn	22 12 22.6	-1.0
JTJ	**Tarama**	**0.86**	**189**	P	Pn	22 12 10.2	0.0
JTJ				S	Sn	22 12 25.2	-0.5
JMJ2	**Miyako jima3**	**0.87**	**150**	P	Pn	22 12 10.7	+0.5
JMJ2				S	Sn	22 12 25.9	+0.1
JOGS	**Gusukube**	**0.90**	**145**	P	Pn	22 12 11.0	+0.5
JOGS				S	Sn	22 12 26.5	+0.3
JISG	**Ishigakijimahi**	**1.03**	**208**	P	Pn	22 12 11.7	0.0
JISG				S	Sn	22 12 27.7	-0.8
JIJ	**Ishigaki jima**	**1.30**	**209**	P	Pn	22 12 14.3	-0.3
JIJ				S	Sn	22 12 31.9	-1.6
JKRS	**Kuro-shima**	**1.47**	**211**	P	Pn	22 12 16.4	-0.1
JKRS				*e*S	Sn	22 12 36.7	-0.3
IRIF	**Iriomote-Funau**	**1.54**	**221**	P	Pn	22 12 17.1	-0.2
IRIF				S	Sn	22 12 37.6	-0.8
HATJ	**Hateruma jima**	**1.72**	**214**	P	Pn	22 12 19.5	0.0
HATJ				*e*S	Sn	22 12 41.9	-0.4
JKE	**Kume jima 2**	**1.93**	**64**	P	Pn	22 12 22.1	0.0
JKE				S	Sn	22 12 47.5	+0.6
YOJ	**Yonaguni jima**	**1.96**	**239**	P	Pn	22 12 23.0	+0.6
YOJ				S	Sn	22 12 47.1	-0.4
JYNG	**Yonagunijimaku**	**2.01**	**239**	P	Pn	22 12 23.6	+0.5
JYNG				*e*S	Sn	22 12 48.4	-0.3
JAGN	**Aguni-jima**	**2.42**	**63**	P	Pn	22 12 28.3	+0.1
JAGN				*e*S	Sn	22 12 57.0	-0.8
JOW	**Kunigami**	**3.36**	**66**	P	Pn	22 12 40.0	-0.5
	0.4nm,0.3s,baz=115,slow=14,SNR=13						
JOW				S	Sn	22 13 17.7	-2.2
	0.9nm,0.3s,baz=94,slow=18,SNR=6.9						
KSRS	**Korea Array**	**12.20**	**12**	P	Pn	22 14 40.1	+0.8
	0.2nm,0.3s,baz=186,slow=12,SNR=13						
MJAR	**Matsushiro Arr**	**15.87**	**43**	P	P	22 15 28.0	+0.3
	0.1nm,0.3s,baz=235,slow=10,SNR=5.3						
SONM	**Songino Array**	**26.62**	**332**	P	P	22 17 17.3	+0.2
	0.8nm,0.5s,baz=149,slow=8.7,SNR=5.8						
PETK	**Petropavlovsk-**	**36.94**	**33**	P	P	22 18 47.2	+0.2
	1.1nm,0.6s,baz=190,slow=2.6,SNR=2.9						
MKAR	**Makanchi Array**	**39.78**	**313**	P	P	22 19 10.8	-0.2
	1.4nm,0.4s,baz=100,slow=10,SNR=40						
ZALV	**Zalesovo Beam**	**41.03**	**325**	P	P	22 19 21.2	+0.2
	1.1nm,0.4s,baz=120,slow=7.9,SNR=5.6						
KURBB	**Kurchatov Arra**	**43.31**	**318**	P	P	22 19 39.3	-0.2
	0.4nm,0.3s,baz=106,slow=7.8,SNR=3.4						
FITZ	**Fitzroy Crossi**	**43.34**	**179**	P	P	22 19 39.1	-1.0
	3.2nm,0.6s,baz=360,slow=7.9,SNR=10						
WRA	**Warramunga Arr**	**46.10**	**168**	P	P	22 20 02.3	+0.3
	25nm,0.3s,baz=346,slow=9.6,SNR=2.3						
BVAR	**Borovoye Array**	**48.81**	**319**	P	P	22 20 22.8	+0.2
	0.2nm,0.3s,baz=104,slow=7.9,SNR=3.3						
BVAR				PcP	PcP	22 21 46.0	+0.4
	0.7nm,0.5s,baz=106,slow=3.2,SNR=5.5						
ASAR	**Alice Springs**	**49.66**	**169**	P	P	22 20 30.4	+1.0
	0.8nm,0.6s,baz=355,slow=7.4,SNR=15						
ARU	**Arti**	**56.09**	**322**	P	P	22 21 16.0	-0.3
	0.6nm,0.4s,baz=182,slow=9.1,SNR=4.3						
GEYT	**Alibeck**	**57.01**	**300**	P	P	22 21 23.2	0.0
	0.8nm,0.5s,baz=90,slow=7.2,SNR=2.9						
SPITS	**Spitsbergen Ar**	**68.91**	**348**	P	P	22 22 40.5	-0.7
	6.1nm,1.0s,baz=54,slow=7.3,SNR=3.5						
ARCES	**ARCESS Array B**	**69.56**	**338**	P	P	22 22 44.9	-0.4
	6.3nm,0.3s,baz=75,slow=6.9,SNR=3.4						
FINES	**FINESS Array B**	**71.98**	**330**	P	P	22 23 00.5	+0.4
	1.3nm,0.9s,baz=54,slow=9.7,SNR=5.9						
RES	**Resolute Bay**	**76.81**	**10**	P	P	22 23 28.1	+0.3
	1.6nm,1.0s,baz=350,slow=6.1,SNR=2.6						
MLR	**Muntele Rosu**	**78.11**	**315**	P	P	22 23 35.8	+0.1
	0.5nm,0.4s,baz=346,slow=5.5,SNR=3.1						
NOA	**NORSAR Array B**	**78.59**	**333**	P	P	22

H04A	Detroit Lake	3.48	15	ePn	Pn	22 17 48.1	-1.5
VCNR	Virginia City	3.53	124	ePn	Pn	22 17 47.4	-3.1
PNTR	Pine Nut	3.69	126	ePn	Pn	22 17 51.8	-0.8
WVOR	Wild Horse Val	3.75	71	ePn	Pn	22 17 53.1	-0.3
G03D	McMinnville, O	3.89	2	Pb	Pb	22 18 06.4	+1.0
baz=181							
I07A	Izee	4.00	45	ePn	Pn	22 17 54.4	-2.5
CMB	Columbia Colle	4.04	143	ePn	Pn	22 17 58.5	+1.2
WAKR	Walker	4.17	131	ePn	Pn	22 18 00.3	+1.1
G06A	Carlson Farm,	4.41	27	ePn	Pn	22 18 02.1	-0.4
KVN	Kaiserville	4.67	117	ePn	Pn	22 18 07.9	+1.7
NV11	Mina Array Sit	4.98	124	ePn	Pn	22 18 11.6	+1.3
G08A	Pilot Rock	5.14	38	ePn	Pn	22 18 14.9	+2.5
F10A	Beach Ranch, E	6.47	42	ePn	Pn	22 18 32.7	+2.0

IDC 10 22:17:46.2±13.0, 1°.14N×101°.22W, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.6/44, mbtmp3.7/3, MS3.9/4, Ms1 3.9/4, ms1mx3.1/27, Error ellipse: s-maj=451.5km s-min=196.2km az=110.0, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	28.13	355	LR	LR	22 33 45.3	
comp=Z,77nm,19.2s,baz=0.0,slow=34							
LVC	Limon Verde	39.36	129	LR	LR	22 38 00.6	
comp=Z,426nm,20.6s,baz=186,slow=31							
PDAR	Pinedale Array	42.11	351	P	P	22 25 40.1	-0.3
0.4nm,0.7s,baz=160,slow=11,SNR=4.1							
CFA	Coronel Fontan	45.15	139	LR	LR	22 41 39.1	
comp=Z,33nm,19.3s,baz=158,slow=32							
YKA	Yellowknife Ar	62.02	353	P	P	22 28 08.2	+0.1
1.4nm,0.9s,baz=161,slow=5.9,SNR=3.1							
ILAR	Eielson Array	71.50	341	P	P	22 29 08.4	-0.1
0.6nm,0.7s,baz=151,slow=4.1,SNR=6.7							
RPZ	Rata Peaks	89.13	226	LR	LR	23 01 59.2	
comp=Z,252nm,21.1s,baz=332,slow=30							

IDC 10 22:18:20.8±0.6, 1°.67S×138°.74E, h0km, mb4.0/12, mb1 4.1/15, mb1mx4.0/40, mbtmp4.0/15, ML4.5/5, MS3.3/5, Ms1 3.3/5, ms1mx2.8/36, Error ellipse: s-maj=20.9km s-min=13.3km az=64.0
DJA 10 22:18:23.5±0.5, 1°.5±5°×13°.9E±°, h55km±9km, M4.8/7, mb4.8/3, MLv4.8/7
ISCJB 10 22:18:24.1±0.3, 1°.74S±0°.05×138°.65E±0°.03, h33km, mb4.0/17, MS3.4/3, Error ellipse: s-maj=7.0km s-min=4.0km az=14.8
NEIC 10 22:18:25.9±1.3, 1°.76S×138°.68E, h32km±6km, mb4.3/12, Error ellipse: s-maj=16.1km s-min=10.6km az=54.0
ISC 10 22:18:26.1±0.5, 1°.75S±0°.07×138°.65E±0°.04, h35km, n55, σ1°.09/53, mb4.1/17, MS3.5/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	1.73	119	P	Pn	22 18 54.6	+0.9
GENI				S	Sn	22 19 17.4	+2.8
JAY	Jayapura	2.19	110	Pn	Pn	22 18 59.3	-0.7
24nm,0.3s,baz=252,slow=8.4,SNR=60							
JAY				Sn	Sn	22 19 24.6	-1.3
20nm,0.3s,baz=278,slow=13,SNR=6.7							
JAY	Jayapura	2.19	110	P	Pn	22 18 58.8	-1.2
JAY				S	Sn	22 19 23.8	-2.1
SRPI	Serui, Papua	2.41	267	P	Pn	22 19 03.7	+0.6
SRPI				S	Sn	22 19 31.4	-0.1
BAKI	Biak	2.60	282	P	Pn	22 19 03.8	-1.9
FAKI	Fak Fak	6.50	260	ePn	Pn	22 19 59.4	+0.1
FAKI				eSn	Sn	22 21 11.7	-0.7
FAKI	Fak Fak	6.50	260	P	Pn	22 20 01.4	+2.0
SIJI	Sorong	7.44	277	Pn	Pn	22 20 12.7	+0.5
1.0nm,0.3s,baz=138,slow=7.6,SNR=2.7							
SIJI				Sn	Sn	22 21 36.4	+1.0
0.5nm,0.3s,baz=246,slow=23,SNR=1.2							
PMG	Port Moresby	11.38	132	LR	LR	22 26 38.7	
comp=Z,182nm,18.3s,baz=36,slow=44							
MTN	Manton Dam	13.30	214	ePn	Pn	22 21 31.9	-0.7
MTN				eSn	Sn	22 23 55.4	-4.0
SOEI	Soe	16.36	240	ePn	Pn	22 22 14.3	+0.9
47nm,1.0s							
BATI	Baumata	17.10	240	P	Pn	22 22 22.8	+0.2
5.2nm,0.3s,baz=314,slow=5.7,SNR=10							
BATI	Baumata	17.10	240	ePn	Pn	22 22 22.8	+0.2
BATI				ePn	Pn	22 22 22.8	+0.2
WRAB	Tennant Creek	18.56	193	eP	P	22 22 40.4	+0.3
27nm,0.8s							
WB2	Warramunga Arr	18.57	193	eP	P	22 22 40.2	0.0
24nm,0.8s							
WR1	Warramunga Arr	18.57	193	eP	P	22 22 40.3	+0.1
WRA	Warramunga Arr	18.57	193	P	P	22 22 40.3	+0.1
9.9nm,0.3s,baz=11,slow=11,SNR=3.3							
KAPI	Kappang	19.14	260	LR	LR	22 30 34.8	
comp=Z,29nm,21.8s,baz=76,slow=38							
CTA	Charters Tower	19.68	158	P	P	22 22 52.9	+0.5
0.3nm,0.3s,baz=342,slow=13,SNR=4.0							
FITZ	Fitzroy Crossi	20.67	217	P	P	22 23 03.5	+0.5
2.1nm,0.5s,baz=47,slow=9.9,SNR=11							
FITZ				LR	LR	22 31 17.1	
comp=Z,74nm,18.9s,baz=36,slow=37							
FITZ	Fitzroy Crossi	20.67	217	eP	Pn	22 23 06.8	+1.2
AS31	Alice Springs	22.27	192	eP	P	22 23 21.2	+0.9
9.2nm,0.8s							
ASAR	Alice Springs	22.27	192	P	P	22 23 20.9	+0.6
28nm,0.8s,baz=24,slow=10,SNR=189							
EIDS	Eidsvold	26.37	154	eP	P	22 23 59.8	+0.7
18nm,1.0s							
PSA00	Pilbara Seismi	26.90	222	eP	P	22 24 04.8	+0.7
5.0nm,0.8s							
STKA	Stephens Creek	30.10	175	P	P	22 24 32.8	+0.4
2.3nm,0.5s,baz=341,slow=12,SNR=7.7							
STKA	Stephens Creek	30.10	175	eP	P	22 24 32.8	+0.4
0.3nm,0.9s							
H11S3	WAKE ISLAND Hy	34.14	53	T	T	23 01 01.0	
baz=236,slow=75,SNR=55							
H11S2	WAKE ISLAND Hy	34.15	53	T	T	23 01 02.8	
baz=236,slow=75,SNR=49							
H11S1	WAKE ISLAND Hy	34.16	53	T	T	23 00 59.8	
baz=236,slow=75,SNR=48							
H11N1	WAKE ISLAND Hy	34.97	51	T	T	23 02 06.0	
baz=233,slow=75							
H11N2	WAKE ISLAND Hy	34.99	51	T	T	23 02 09.0	
baz=233,slow=75							
H11N3	WAKE ISLAND Hy	34.99	51	T	T	23 02 07.0	
baz=233,slow=75							
CM31	Chiang Mai Arr	43.92	299	eP	P	22 26 29.6	-0.3
4.2nm,1.0s							
CMAR	Chiang Mai Arr	43.92	299	P	P	22 26 29.5	-0.3
0.9nm,0.6s,baz=117,slow=6.3,SNR=6.9							
SONA0	Songino Array	56.83	335	eP	P	22 28 07.8	+0.5
SONM	Songino Array	56.83	335	P	P	22 28 07.8	+0.5
0.3nm,0.5s,baz=130,slow=6.4,SNR=2.5							
SONM				LR	LR	22 53 08.4	
comp=Z,36nm,19.2s,baz=90,slow=37							
MK32	Makanchi Array	69.00	322	eP	P	22 29 28.5	+0.4
MKAR	Makanchi Array	69.00	322	P	P	22 29 28.5	+0.4
0.9nm,0.6s,baz=110,slow=6.6,SNR=8.7							
ZALV	Zalesovo Beam	71.08	330	P	P	22 29 39.9	-0.7
1.0nm,0.5s,baz=109,slow=5.5,SNR=4.9							
ZAA1	Zalesovo Array	71.08	330	eP	P	22 29 39.9	-0.7
VNDA	Vanda	76.74	175	P	P	22 30 13.7	+0.3
0.4nm,0.6s,baz=333,slow=11,SNR=3.5							
BVAR	Borovoye Array	78.50	325	P	P	22 30 24.0	+0.3
2.4nm,0.7s,baz=103,slow=6.4,SNR=14							
BRVK	Borovoye	78.57	325	eP	P	22 30 24.8	+0.8
3.9nm,0.8s							
NRIK	Noril'sk	78.79	344	P	P	22 30 24.9	0.0
1.4nm,0.4s,baz=107,slow=7.1,SNR=3.9							
GEYT	Alibeck	83.60	308	P	P	22 30 51.3	+0.1
0.3nm,0.3s,baz=193,slow=12,SNR=4.4							
ABKAR	Akbulak array	83.95	320	eP	P	22 30 51.0	-1.7
1.3nm,0.9s							
ILAR	Eielson Array	84.99	24	P	P	22 30 56.8	-0.8
0.4nm,0.7s,baz=264,slow=5.2,SNR=4.1							
KIRV	Kirov	91.08	328	LR	LR	23 13 27.9	
comp=Z,15nm,18.4s,baz=165,slow=36							
TORD	Torodi Ar. Bea	135.93	287	PKP	PKPdf	22 37 45.0	+0.6
0.4nm,0.8s,baz=37,slow=2.4,SNR=2.8							
TOA1	Torodi Ar. Sit	135.93	287	ePKPdf	PKPdf	22 37 45.0	+0.6
LPAZ	La Paz	148.05	125	PKPbc	PKPbc	22 38 08.1	-1.7
2.8nm,0.9s,baz=319,slow=1.5,SNR=8.9							
LPAZ	La Paz	148.05	125	ePKPdf	PKPdf	22 38 07.9	+1.2
CPUP	Villa Florida	148.10	152	PKPbc	PKPbc	22 38 09.4	+0.5
4.7nm,1.0s,baz=215,slow=7.2,SNR=9.0							
CPUP	Villa Florida	148.10	152	ePKPbc	PKPbc	22 38 09.6	+0.6

ISCJB 10 22:21:25.9±0.6, 17°.76N±0°.06×101°.49W±0°.03, h61km±7km, mb3.5/2, Error ellipse: s-maj=10.0km s-min=4.8km az=7.4
MEX 10 22:21:27.7±0.7, 17°.80N×101°.44W, h50km±8km, MD4.2
NEIC 10 22:21:28.4±0.0, 17°.75N×101°.47W, h53km, MD4.2(MEX), After MEX.
IDC 10 22:21:29.5±5.1, 17°.06N×101°.10W, h0km, mb3.6/2, mb1 4.0/4, mb1mx3.6/47, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=117.7km s-min=36.4km az=26.0
ISC 10 22:21:26.9±1.0, 17°.76N±0°.05×101°.48W±0°.03, h51km±8km, n36, σ1°.22/48, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.15	176	ePn	Pn	22 21 35.3	+0.2
ZIIG				eSn	Sn	22 21 41.3	+0.5
ZIIG	Zihuatanejo	0.15	176	eP	Pn	22 21 35.3	+0.2
ZIIG				eS	Sn	22 21 41.3	+0.5
ARIG	Puente Sto Nin	1.19	64	iP	Pn	22 21 46.6	-0.6
CAIG	El Cayaco	1.35	121	ePn	Pn	22 21 49.3	-0.1
CAIG	El Cayaco	1.35	121	eP	Pn	22 21 49.3	-0.1
MMIG	Aquila	1.85	287	ePn	Pn	22 21 57.0	+0.8
MMIG				eSn	Sn	22 22 18.2	-0.3
MMIG	Aquila	1.85	287	iP	Pn	22 21 57.0	+0.8
MMIG				eS	Sn	22 22 18.2	-0.3
PLIG	Platanillo	1.98	71	ePn	Pn	22 21 58.0	-0.1
PLIG				eSn	Sn	22 22 21.6	-0.2
PLIG	Platanillo	1.98	71	eP	Pn	22 21 58.0	-0.1
PLIG				iS	Sn	22 22 21.6	-0.2
MAVM	Malinalco, Edo	2.23	57	eP	Pn	22 22 04.1	+2.6
ATVM	ATLACOMULCO	2.52	38	eP	Pn	22 22 06.5	+0.9
YAIG	Yautepec	2.54	64	ePn	Pn	22 22 05.6	-0.2
YAIG				eSn	Sn	22 22 35.0	-0.5
YAIG	Yautepec	2.54	64	eP	Pn	22 22 05.6	-0.2
YAIG				eS	Sn	22 22 35.0	-0.5
TLIG	Tlapa	2.78	94	ePn	Pn	22 22 10.1	+1.0
TLIG	Tlapa	2.78	94	eP	Pn	22 22 10.1	+1.0
TLIG				iS	Sn	22 22 41.3	-0.2
AMVM	AMECAMECA	2.90	61	eP	Pn	22 22 09.7	-1.1
IGIG	Irapuato, Guan	2.98	3	iP	Pn	22 22 12.4	+0.5
PPM	Popocatepetl	3.00	64	ePn	Pn	22 22 13.1	+0.6
PPM				eSn	Sn	22 22 47.6	+0.2
PPM	Popocatepetl	3.00	64	iP	Pn	22 22 13.1	+0.6
PPM				eS	Sn	22 22 47.6	+0.2
VTVM	Tizayuca	3.25	52	iP	Pn	22 22 15.2	-0.4
DEIG	Demacu	3.42	42	ePn	Pn	22 22 27.5	+9.5
DEIG				eSn	Sn	22 22 59.5	+2.1
DEIG	Demacu	3.42	42	eP	Pn	22 22 27.5	+9.5
DEIG				iS	Sn	22 22 59.5	+2.1
PNIG	Pinotepa	3.48	113	ePn	Pn	22 22 18.9	+0.3
PNIG				eSn	Sn	22 23 00.8	+2.2
PNIG	Pinotepa	3.48	113	eP	Pn	22 22 18.9	+0.3
PNIG				iS	Sn	22 23 00.8	+2.2
CJM	Chamela	3.80	298	ePn	Pn	22 22 25.0	+2.1
CJM				eSn	Sn	22 23 04.4	-1.9
CJM	Chamela	3.80	298	eP	Pn	22 22 25.0	+2.1
CJM				iS	Sn	22 23 04.4	-1.9
ANIG	Ahuacatlan	4.36	319	ePn	Pn	22 22 31.4	+0.8
ANIG	Ahuacatlan	4.36	319	iP	Pn	22 22 31.4	+0.8
ZAIG	Zacatecas	5.09	349	ePn	Pn	22 22 37.1	-3.7
CMIG	Matias Romero	6.33	95	Pn	Pn	22 22 59.1	+1.4
1.2nm,0.3s,baz=263,slow=13,SNR=7.5							
CMIG				Sn	Sn	22 24 05.5	-3.1
1.0nm,0.3s,baz=105,slow=11,SNR=2.4							
CMIG				Lg	Lg	22 24 32.1	
0.9nm,0.3s,baz=308,slow=7.0,SNR=4.9							
LNIG	Linares	7.34	14	ePn	Pn	22 23 11.9	+0.4
TXAR	Lajitas Array	11.69	351	Pn	Pn	22 24 29.8	+19
0.1nm,0.3s,baz=169,slow=14,SNR=6.9							
LDFC	Landfair	21.09	328	eP	P	22 26 05.8	-1.4
Y58A	Scranton	25.29	46	eP	P	22 26 48.1	-0.5
NVAR	Mina Array Bea	25.30	328	P	P	22 27 06.0	+17
1.1nm,0.7s,baz=149,slow=11,SNR=3.1							
ILAR	Eielson Array	55.90	338	P	P	22 31 13.7	+14
0.4nm,0.9s,baz=138,slow=6.1,SNR=2.9							

IDC 10 22:22:37.0±2.6, 20°.30S×173°.72W, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/41, mbtmp4.1/6, Error ellipse: s-maj=79.1km s-min=29.1km az=129.0
ISC 10 22:22:40.7±2.9, 20°.3S±0°.4×173°.8W±0°.5, h21km, n9, σ0°.39/10, mb4.1/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.45	263	P	P	22 29 53.2	+0.4
1.9nm,0.3s,baz=69,slow=8.6,SNR=4.2							
STKA	Stephens Creek	41.45	245	P	P	22 30 26.1	0.0
1.5nm,0.6s,baz=67,slow=7.7,SNR=3.3							
ASAR	Alice Springs	48.41	256	P	P	22 31 21.6	-0.1
0.5nm,0.4s,baz=102,slow=7.8,SNR=6.2							
ASAR				PcP	PcP	22 32 48.2	+0.2
0.6nm,0.7s,baz=84,slow=4.7,SNR=3.2							
WRA	Warramunga Arr	48.54	261	P	P	22 31 22.0	-0.7
15nm,0.4s,baz=96,slow=7.7,SNR=1.7							
MJAR	Matsushiro Arr	72.45	321	P	P	22 34 05.7	0.0
1.1nm,0.6s,baz=166,slow=8.3,SNR=4.0							
PETK	Petropavlovsk-	77.16	343	P	P	22 34 32.4	-0.1
1.2nm,0.6s,baz=123,slow=5.3,SNR=3.2							
KSRS	Korea Array	79.40	316	P	P	22 34 45.7	+0.4
0.9nm,0.6s,baz=138,slow=9.8,SNR=4.2							
AKASG	Malin Array Be	144.63	335	PKP	PKPab	22 42 13.8	-0.4
0.3nm,0.4s,baz=44,slow=3.5,SNR=5.1							
BRTR	Keskin Array B	149.54	316	PKPbc	PKPbc	22 42 29.1	+0.2
0.3nm,0.7s,baz=48,slow=3.6,SNR=4.4							

ANF 10 22:24:30.1±1.6, 35°.48N×97°.03W, h1km±14km, ML4.1/7, Error ellipse: s-maj=20.1km s-min=6.9km az=162.0
TUL 10 22:24:31.0, 35°.47N×97°.01W, h7km, ML3.3
NEIC 10 22:24:31.0±0.0, 35°.47N×97°.01W, h7km, ML3.3(TUL), After TUL.
NEIC Felt [IV] at McLoud. Also felt at Oklahoma City and Shawnee.
ISC 10 22:24:30.7±1.3, 35°.46N±0°.04×96°.97W±0°.03, h3km±11km, n33, σ1°.81/50, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.27	317	ePg	Pg	22 24 36.4	+0.6
OK001	Jones High Sch	0.28	291	ePg	Pg	22 24 36.5	+0.4
OK009	Oakdale Elemen	0.39	288	ePg	Pg	22 24 38.5	+0.3
TUL1	Leonard	1.06	65	ePg	Pg	22 24 51.1	+0.2
TUL1				eSg	Sg	22 25 04.5	-0.2
TUL1	Leonard	1.06	65	P	Pg	22 24 51.0	+0.1
baz=246							
TUL1				S	Sb	22 25 06.2	+0.3
baz=246							
X37A	Clayton	1.57	123	ePn	Pb	22 25 00.6	+0.2
WMOK	Wichita Mounta	1.65	245	ePn	Pn	22 25 00.4	-0.2
WMOK				eSn	Sn	22 25 20.3	-2.0
WMOK	Wichita Mounta	1.65	245	P	Pn	22 25 00.1	-0.5
baz=63							
WMOK				S	Sn	22 25 22.1	-0.2
baz=63							
U32A	Winter Ranch,	1.89	300	ePn	Pn	22 25 04.3	+0.4
HHAR	Hobbs	2.59	71	ePn	Pn	22 25 14.7	+1.2
W39A	Magazine	2.62	95	ePn	Pn	22 25 15.1	+1.2
W39A	Magazine	2.62	95	P	Pn	22 25 14.0	+0.2
baz=277							
W39A				S	Sn	22 25 47.9	+1.8
baz=277							
MIAR	Mount Ida	2.93	107	ePn	Pn	22 25 20.1	+1.9
MIAR				eSn	Sn	22 25 49.4	-4.5
MIAR	Mount Ida	2.93	107	P	Pn	22 25 19.6	+1.4
baz=289							
MIAR				S	Sn	22 25 56.2	+2.4
baz=289							
U40A	Yellville	3.46	74	P	Pn	22 25 25.4	-0.1
baz=256							
WHTX	Lake Whitney,	3.48	187	ePn	Pn	22 25 25.5	-0.2
WHTX				ePg	Pb	22 25 33.7	+0.7
WHTX	Lake Whitney,	3.48	187	Pb	Pb	22 25 33.2	+0.2
baz=6.0							
WHTX				S	Sn	22 26 08.1	+0.5
baz=6.0							
X40A	Basin Creek Fa	3.53	105	ePn	Pn	22 25 29.1	+2.7
X40A				ePg	Pg	22 25 36.4	-1.9
ABTX	Abilene, Hawle	3.60	219	ePn	Pn	22 25 27.4	0.0
ABTX	Abilene, Hawle	3.60	219	P	Pn	22 25 27.1	-0.2
baz=37							
WLAR	White Oak Lake	3.64	118	ePn	Pn	22 25 29.8	+1.8
WLAR				eSn	Sn	22 26 07.9	-3.5
W41B	Gary Mavity, V	3.87	93	ePn	Pn	22 25 32.6	+1.5
W41B				ePg	Pb	22 25 41.6	+2.0
AMTX	Amarillo	3.90	263	ePn	Pn	22 25 32.6	+1.0
AMTX				ePg	Pb	22 25 42.1	+1.9
CBKS	Cedar Bluff	4.01	327	ePn	Pn	22 25 32.9	-0.2
CBKS				ePg	Pb	22 25 43.6	+1.6
Z41A	Richland Creek	4.09	121	ePn	Pn	22 25 36.9	+2.8
CCM	Cathedral Cave	5.28	59	ePn	Pn	22 25 51.1	+0.8
CCM				ePg	Pg	22 26 08.8	-2.9
SCIA	State Center	7.07	23	ePn	Pn	22 26 16.6	+1.5
SCIA				ePg	Pg	22 26 41.4	-4.8
SCIA				eSn	Sn	22 27 35.3	-0.6
SDCO	Great Sand Dun	7.23	291	ePn	Pn	22 26 18.1	+0.6
SDCO				ePg	Pg	22 26 45.5	-3.8
ANMO	Albuquerque	7.78	269	ePn	Pn	22 26 20.8	-4.3
MNTX	Cornudas Mount	7.96	244	ePn	Pn	22 26 26.5	-0.8
ISCO	Idaho Springs	8.11	305	ePn	Pn	22 26 30.6	+1.0
ISCO				ePg	Pb	22 26 58.7	+6.7
TX31	Lajitas Ar. Si	8.33	225	ePn	Pn	22 26 33.8	+1.3
K22A	Casper	10.33	317	ePn	Pn	22 26 56.5	-3.3

IDC 10 22:28:59.5±0.6, 20°.28S×173°.64W, h0km, mb4.6/16, mb1 4.7/17, mb1mx4.5/36, mbtmp4.5/17, ML4.2/1, MS3.9/11, Ms1 3.9/11, ms1mx3.7/27, Error ellipse: s-maj=20.1km s-min=16.5km az=136.0
BJI 10 22:28:59.8±0.0, 20°.16S×173°.73W, h6km, mb5.1/19, mB5.4/14, Ms4.7/3, Ms7 4.6/3
ISCJB 10 22:29:02.2±0.3, 20°.14S±0°.05×173°.71W±0°.06, h25km, mb4.8/45, MS3.9/12, Error ellipse: s-maj=9.0km s-min=6.6km az=38.2
NEIC 10 22:29:10.9±2.1, 20°.11S×173°.84W, h86km±1km, mb4.6/51, Error ellipse: s-maj=21.7km s-min=17.7km az=126.0
ISC 10 22:29:03.3±0.4, 20°.19S±0°.09×173°.60W±0°.08, h25km, n142, σ1°.04/137, mb4.8/45, MS3.9/12, 20C-13D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.63	73	ePn	Pn	22 29 50.6	-7.4
NIUE				eSn	Sn	22 30 27.1	-13
RAR	Rarotonga	12.98	97	Pn	Pn	22 31 59.1	-7.0
3.6nm,0.3s,baz=267,slow=8.4,SNR=6.3							
RAR				Sn	Sn	22 34 07.6	-22
1.6nm,0.3s,baz=94,slow=21,SNR=1.4							
RAR				LR	LR	22 36 51.4	
comp=Z,584nm,18.7s,baz=286,slow=36							
RAR	Rarotonga	12.98	97	ePn	Pn	22 31 59.0	-7.2
RAR				eSn	Sn	22 34 08.7	-21
MARNC	Mare, Loyalty	17.23	263	ePn	P	22 33 04.1	+0.4
214nm,1.1s							
DZM	Mont Dzumac	18.71	261	P	P	22 33 19.8	-0.4
0.7nm,0.3s,baz=258,slow=22,SNR=5.7							
DZM				LR	LR	22 39 07.9	
comp=Z,366nm,21.0s,baz=94,slow=33							
DZM	Mont Dzumac	18.71	261	eP	Pn	22 33 21.0	+0.2
93nm,1.6s							
DZM				eLR	LR	22 37 44.5	
comp=Z,580nm,24.9s							
DZM	Mont Dzumac	18.71	261	eP	Pn	22 33 20.8	+0.1
41nm,1.1s							
URZ	Urewera	19.72	202	P	Pn	22 33 32.9	+0.3
0.5nm,0.3s,baz=178,slow=2.0,SNR=4.4							
BKZ	Black Stump Fm	20.75	202	eP	Pn	22 33 45.3	+0.5
18nm,1.2s							
HIZ	Hauiti	20.81	206	eP	Pn	22 33 45.9	+0.4
34nm,0.8s							
BFZ	Birch Farm	22.19	201	eP	P	22 33 59.8	+2.1
52nm,1.1s							
TBI	Tubuai	22.62	102	eLR	LR	22 39 01.8	
comp=Z,474nm,29.8s,baz=264							
PPT2	Papeete2	22.87	88	eS	S	22 38 09.5	-4.0
127nm,23.5s							
PPT2				eLQ	LQ	22 38 20.7	
368nm,24.8s							
PPT2				eLR	LR	22 39 20.2	
comp=Z,611nm,27.0s,baz=255							
PPT	Papeete	22.87	87	LR	LR	22 41 15.9	
comp=Z,391nm,18.4s,baz=252,slow=32							
THZ	Tophouse	24.36	205	eP	P	22 34 18.9	-0.5
21nm,1.0s							
KHZ	Kahutara	24.67	203	eP	P	22 34 23.9	+1.7
30nm,1.2s							
LTZ	Lake Taylor	25.47	205	eP	P	22 34 32.5	+3.0
11nm,0.7s							
OXZ	Oxford	26.02	204	eP	P	22 34 33.0	-1.4
32nm,0.9s							
RPZ	Rata Peaks	26.74	205	P	P	22 34 40.3	-0.5
7.8nm,0.8s,baz=4.1,slow=14,SNR=4.3							
RPZ	Rata Peaks	26.74	205	eP	P	22 34 40.9	+0.1
14nm,0.9s							
HNR	Honiara	27.68	289	LR	LR	22 43 57.6	
comp=Z,84nm,18.1s,baz=142,slow=32							
TAOE	Nuku Hiva Isla	34.21	76	eLR	LR	22 44 15.4	
comp=Z,374nm,28.8s							
CAN	Canberra	36.13	237	eP	P	22 36 02.6	-1.0
11nm,0.7s							
CTA	Charters Tower	37.63	263	P	P	22 36 16.0	-0.5
4.2nm,0.4s,baz=94,slow=9.7,SNR=9.8							
PMG	Port Moresby	39.33	280	P	P	22 36 30.0	-0.8
24nm,0.9s,baz=90,slow=6.8,SNR=4.0							
STKA	Stephens Creek	41.65	244	P	P	22 36 48.7	-1.1
4.7nm,0.6s,baz=90,slow=11,SNR=12							
STKA				LR	LR	22 52 11.7	
comp=Z,117nm,19.0s,baz=34,slow=34							
ASAR	Alice

PV13	Radium Mtn., P	84.01	46	eP		P	22 41 32.8	+0.8
	17nm,1.0s							
ANMO	Albuquerque	84.02	50	eP		P	22 41 33.0	+0.8
	6.8nm,1.1s							
MCK	McKinley	85.84	11	eP		P	22 41 41.0	+0.6
	7.8nm,0.9s							
PDAR	Pinedale Array	85.95	42	P		P	22 41 41.9	+0.3
	1.8nm,0.9s,baz=226,slow=3.9,SNR=8.8							
CCB	Clear Creek Bu	86.88	11	eP		P	22 41 45.6	+0.2
	4.1nm,0.9s							
ILAR	Eielson Array	87.16	11	P		P	22 41 46.8	0.0
	0.7nm,0.7s,baz=225,slow=5.5,SNR=7.9							
SYO	Syowa Base	87.89	191	⇓ePP		PP	22 45 15.0	-0.9
VNA3	Neumayer Olymp	88.12	175	P		P	22 41 51.1	-0.5
SNAA	Sanae	88.15	177	P		P	22 41 51.9	+0.1
SNAA	Sanae	88.15	177	eP		P	22 41 52.1	+0.4
	5.0nm,1.1s							
VNA2	Neumayer--Watz	88.61	176	P		P	22 41 54.6	+0.7
VNA1	Neumayer--Stat	88.82	175	P		P	22 41 55.6	+0.9
RSSD	Black Hills	90.10	42	eP		P	22 42 01.6	+0.2
	4.7nm,1.0s							
XAN	Xi'an	91.27	306	P		P	22 42 08.7	+1.8
XAN				pmax	pmax			
	comp=Z,8.0nm,1.7s							
XAN				pmax	pmax			
	comp=Z,120nm,5.9s							
XAN	Xi'an	91.27	306	eP		P	22 42 07.8	+0.9
	9.9nm,1.1s							
CFA	Coronel Fontan	91.91	125	P		P	22 42 09.5	-0.5
	3.5nm,0.9s,baz=247,slow=9.0,SNR=4.9							
KMI	Kunming	92.92	296	P		P	22 42 14.9	-0.1
KMI				pmax	pmax			
	comp=Z,19nm,0.5s							
KMI				pmax	pmax			
	comp=Z,85nm,4.1s							
INK	Inuvik	92.94	14	LR		LR	23 17 37.3	
	comp=Z,390nm,19.1s,baz=330,slow=31							
CMAR	Chiang Mai Arr	93.93	288	P		P	22 42 20.4	+0.9
	3.0nm,1.0s,baz=125,slow=2.6,SNR=13							
CMAR				LR		LR	23 23 27.7	
	comp=Z,15nm,19.8s,baz=195,slow=35							
CD2	Chengdu	94.13	301	eP		P	22 42 19.5	-0.7
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
LZH	Lanzhou	95.90	306	eP		P	22 42 28.0	-0.3
LZH				pP		PcP	22 42 31.0	+2.5
LZH				sP		pP	22 42 33.3	-1.5
LZH				PP		PP	22 46 21.8	+0.9
LZH				pmax	pmax			
	comp=Z,18nm,1.3s							
LZH				pmax	pmax			
	comp=Z,70nm,4.9s							
LPAZ	La Paz	98.33	111	LR		LR	23 20 20.3	
	comp=Z,64nm,18.2s,baz=237,slow=31							
MKAR	Makanchi Array	114.00	313	PKP		PKiKP	22 47 40.0	-0.2
	0.7nm,0.6s,baz=53,slow=3.3,SNR=7.4							
KSH	Kashi	118.11	305	ePKP		PKiKP	22 47 49.0	+0.5
AKASG	Malin Array Be	144.62	335	PKP		PKPbc	22 48 36.4	+0.1
	1.6nm,0.6s,baz=40,slow=4.5,SNR=28							
KIEV	Kiev	144.64	335	ePKPdf		PKPab	22 48 35.9	-0.4
GKP	Gorka Klasztor	145.94	348	eP		PKPab	22 48 41.2	+0.2
BEL	Belsk	146.48	344	eP		PKiKP	22 48 54.8	+10
KIS	Kishinev	147.62	331	eP		PKPbc	22 48 45.0	-0.5
MILM	Milestii Mici	147.68	331	⇑iP		PKPbc	22 48 45.9	+0.2
KWP	Kalwaria Pacla	147.88	340	eP		PKPbc	22 48 46.4	+0.2
KWP	Kalwaria Pacla	147.88	340	ePKPbc		PKPbc	22 48 46.6	+0.5
CLL	Collm	148.52	352	i PKPbc		PKPbc	22 48 47.5	-0.3
	comp=Z,15nm,1.3s							
CLL				i PKPab		PKiKP	22 48 50.1	+0.8
	comp=Z,7.0nm,0.7s							
KOLS	Kolonicke sedl	148.62	340	ePKP		PKiKP	22 48 50.3	+0.7
BURAR	Bucovina Array	148.68	335	⇑iP		PKiKP	22 48 50.3	+0.4
OSTC	Ostas	148.72	348	⇑ePKP		PKiKP	22 48 49.7	-0.1
OSTC				ex		x	22 49 04.9	
NIE	Niedzica	148.80	342	eP		PKiKP	22 48 49.9	-0.1
BRG	Berggiesshubel	148.81	351	eP		PKiKP	22 48 49.4	-0.5
	comp=Z,9.5nm,1.1s							
BIZ	Bicaz	148.86	333	⇓iP		PKiKP	22 48 50.2	0.0
DPC	Dobruska-Polom	148.90	348	⇑ePKP		PKiKP	22 48 50.2	0.0
DPC				ep	PKP	sPKPab	22 49 06.3	+4.5
TLCR		148.95	328	⇑iP		PKiKP	22 48 50.2	-0.2
TESR	Tescani	148.96	332	⇑iP		PKiKP	22 48 50.1	-0.3
PVCC	Panska Ves	149.05	350	⇑ePKP		PKiKP	22 48 50.9	+0.5
MORC	Moravsky Berou	149.18	346	⇑iP		PKiKP	22 48 50.4	-0.4
MORC	Moravsky Berou	149.18	346	ePKP		PKiKP	22 48 50.8	0.0
TRPA	Tarpa	149.23	339	⇑iP		PKiKP	22 48 50.4	-0.5
TRPA	Tarpa	149.23	339	⇑EP		PKPbc	22 48 50.0	+0.3
LANS	Liptovska Anna	149.27	343	ePKP		PKPbc	22 48 49.8	-0.9
CFR	Carcaliu	149.28	329	⇓iP		PKiKP	22 48 51.0	-0.1
VRI	Vrincioaia	149.42	332	⇓iP		PKPbc	22 48 49.4	-0.9
PLOR	Plostina	149.47	332	⇓iP		PKiKP	22 48 51.0	-0.5
PRU	Pruhonice	149.57	350	⇑ePKP		PKiKP	22 48 51.2	-0.3
BR131	Keskin Array S	149.60	316	ePKPbc		PKPbc	22 48 49.5	-1.6
BRTR	Keskin Array B	149.60	316	PKPbc		PKPbc	22 48 51.1	0.0
	comp=Z,3.1nm,0.9s,baz=138,slow=4.3,SNR=19							
GOPC	GO Pecny, Ondr	149.60	349	⇑ePKP		PKiKP	22 48 52.2	+0.6
MEM	Membach	149.65	1	⇓PKP		PKiKP	22 48 51.6	-0.1
TIRR	Tirgusor	149.67	328	⇑iP		PKiKP	22 48 51.8	-0.1
TLB	Topalu	149.76	328	⇓iP		PKiKP	22 48 52.4	+0.3
BCLA	Clavier	149.83	1	⇓PKP		PKPab	22 48 56.8	+0.3
VRAC	Vranov	149.83	347	ePKP		PKiKP	22 48 52.0	-0.1
JAVC	Velka Javorina	150.00	345	ePKP		PKiKP	22 48 53.7	+1.1
VYHS	Vyhne	150.04	343	ePKP		PKiKP	22 48 52.7	+0.1
MLR	Muntele Rosu	150.06	332	ePKPdf		PKPdf	22 48 45.8	-1.2
MLR	Muntele Rosu	150.06	332	⇓iP		PKPbc	22 48 50.3	-1.7
KRUC	Moravsky	150.10	347	ePKP		PKiKP	22 48 52.6	-0.1
DOU	Dourbes	150.13	2	⇓PKP		PKiKP	22 48 52.3	-0.4
PSZ	Piszkesteto	150.26	342	EP		PKiKP	22 48 53.1	-0.1
DRGR		150.31	337	⇓iP		PKiKP	22 48 53.5	+0.2
MODS	Modra-Piesok	150.55	345	ePKP		PKPbc	22 48 53.2	+0.3
KHC	Kasperske Hory	150.56	350	ePKPdf		PKPdf	22 48 45.7	-1.9
KHC				ePKPbc		PKPbc	22 48 52.4	-0.5
KHC	Kasperske Hory	150.56	350	⇑ePKP		PKiKP	22 48 53.6	-0.1
KHC				ePKPAB		pPKPbc	22 49 00.8	+0.9
KHC				ep	PKP	sPKPab	22 49 12.8	+4.2
WLF	Walferdange	150.59	0	⇓PKP		PKiKP	22 48 54.2	+0.5
ARR	Arges	150.73	333	⇑iP		PKiKP	22 48 55.2	+1.0
MDUB	Mudurnu	150.74	319	ePKPbc		PKPbc	22 48 53.8	+0.1
GERES	GERESS Array B	150.82	350	PKPbc		PKiKP	22 48 54.7	+0.4
	comp=Z,2.2nm,1.0s,baz=56,slow=3.4,SNR=13							
SIRR	Siria	151.14	338	⇓iP		PKPbc	22 48 54.1	-0.3
CONA	Conrad Observa	151.29	347	ePKiKP		PKiKP	22 48 56.1	+0.8
	comp=Z,11nm,1.7s							
SOP	Sopron	151.37	346	EP		PKiKP	22 48 55.1	-0.2
BZS	Buzias	151.71	337	⇑iP		PKiKP	22 48 56.3	+0.2
TIH	Tihany	151.76	343	EP		PKPbc	22 48 55.0	-0.7
MORH	Mrgy, Hungar	152.17	342	⇑EP		PKiKP	22 48 57.0	0.0
LEF	Lefka	152.34	308	⇑iP		PKPab	22 49 06.2	-1.3
MDVR	Moldovita	152.39	336	⇑iP		PKiKP	22 48 58.1	+0.5
WATA	Walderalm	152.60	352	i PKiKP		PKiKP	22 48 58.0	0.0
	comp=Z,2.3nm,0.8s							
MOTA	Moosalm	152.65	353	ePKiKP		PKPbc	22 48 58.0	+0.1
	comp=Z,5.8nm,1.0s							
WTTA	Wattenberg	152.66	352	ePKiKP		PKPbc	22 48 58.1	+0.1
	comp=Z,4.0nm,0.8s							
SQTA	Sankt Quirin	152.76	353	ePKiKP		PKiKP	22 48 59.5	+1.1
	comp=Z,5.7nm,1.2s							
DAVA	Damuels	152.83	355	i PKiKP		PKiKP	22 48 59.8	+1.2
	comp=Z,4.7nm,0.6s							
FETA	Feichten	153.01	353	ePKiKP		PKPbc	22 48 58.8	0.0
	comp=Z,7.6nm,1.3s							
ABTA	Abfaltersbach	153.05	351	ePKPbc		PKPbc	22 48 57.2	-1.5
	comp=Z,5.6nm,1.1s							
EZN	Ezine	154.02	323	⇑iP		PKPab	22 49 15.3	+0.9
TORD	Torodi Ar. Bea	171.67	147	PKPab		PKPab	22 50 32.6	+0.6
	comp=Z,1.0nm,1.1s,baz=192,slow=4.0,SNR=3.0							

*ISK **10** 22:32:21.7, 38°.33N×38°.81E, h8km, ML1.9/4*
*ISCJB **10** 22:32:22.5±0.7, 38°.29N±0°.04×38°.81E±0°.06, h11km, Error ellipse: s-maj=6.9km s-min=5.1km az=6.0*
*DDA **10** 22:32:22.2, 38°.31N×38°.80E, h7km±3km, ML2.7*
ISC 10 22:32:22.5±1.0, 38°.33N±0°.05×38°.80E±0°.05, h11km, n6, σ0°.64/10, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.22	40	i P	Pb	22 32 28.4	-0.2
ELZG				i S	Sg	22 32 31.9	+1.4
ELZG				IAML_P			
	comp=Z,11μm,0.2s						
SVRC	Sivrice-ELAZID	0.40	82	PG	Pg	22 32 29.9	-0.5
SVRC				SG	Sg	22 32 35.8	0.0
URFA	Urfa	0.88	179	PG	Pg	22 32 39.4	-0.1
URFA				SG	Sb	22 32 51.9	+0.2
KEMA	Kemaliye	0.97	346	eP	Pb	22 32 41.7	+0.3
KEMA				i S	Sn	22 32 55.5	-0.5
DARE	Darende-Malaty	1.06	284	PG	Pg	22 32 42.5	-0.5
MAZI	Mazidag	1.56	123	PN	Pn	22 32 50.4	+0.1

*ISCJB **10** 22:36:18.7±0.6, 1°.34N±0°.07×101°.44W±0°.07, h10km, mb4.4/55, MS3.8/19, Error ellipse: s-maj=12.8km s-min=6.4km az=44.2*
*IDC **10** 22:36:18.2±0.7, 1°.42N×101°.42W, h0km, mb4.3/13, mb1 4.4/16, mb1mx4.3/35, mbtmp4.2/16, ML3.7/3, MS3.8/20, Ms1 3.8/20, ms1mx3.7/27, Error ellipse: s-maj=25.7km s-min=13.6km az=50.0*
*NEIC **10** 22:36:20.1±2.3, 1°.25N×101°.41W, h10km±2km, mb4.5/129, Error ellipse: s-maj=22.5km s-min=14.9km az=58.0*
*GCMT **10** 22:36:21.1±0.4, 1°.30N±0°.03×101°.30W±0°.04, h19km±1km, MW4.8/67, Moment Tensor Solution. s27,c29; s67,c87; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.44±.15; Mθθ 1.72±.10; Mφφ 0.72±.09; Mrθ-0.05±.21; Mφφ 0.83±.06; Mφr 0.33±.22; Best double couple: M0 2.33600×10^16 NP1:φs=234.00000°, δ47.00000°, λ-99.00000°. NP2: φs=67.00000°, δ44.00000°, λ-81.00000°. Principal axes: T 2.1930, Plg1.0000°, Azm330.0000°; N 0.2900, Plg6.0000°, Azm240.0000°; P -2.4780, Plg83.0000°, Azm73.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 10 22:36:19.6±0.6, 1°.31N±0°.09×101°.5W±0°.1, h10km, n113, σ1.552/107, mb4.5/55, MS3.9/19, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	16.40	10	ePn	P	22 40 12.4	-0.7
	5.5nm,0.8s						
CMIG	Matias Romero	16.97	22	Pn	Pn	22 40 15.6	-1.7
	0.1nm,0.3s,baz=205,slow=11,SNR=1.8						
CMIG				LR	LR	22 45 13.1	
	comp=Z,528nm,19.9s,baz=189,slow=32						
APG	El Apazote	17.41	38	P	Pn	22 40 20.6	-2.5
	0.2nm,0.3s,baz=220,slow=17,SNR=1.8						
APG				LR	LR	22 45 25.6	
	comp=Z,372nm,21.2s,baz=233,slow=32						
CCIG	Comitan	17.49	31	ePn	Pn	22 40 24.3	+0.3
	12nm,1.1s						
JTS	Las Juntas de	18.68	61	P	P	22 40 36.0	-2.2
	0.5nm,0.3s,baz=37,slow=20,SNR=1.8						
JTS				LR	LR	22 45 50.6	
	comp=Z,163nm,20.4s,baz=342,slow=31						
JTS	Las Juntas de	18.68	61	eP	P	22 40 36.0	-2.2
	16nm,1.1s						
TGUH	Tegucigalpa,Un	18.90	47	eP	Pn	22 40 42.8	+1.6
	24nm,0.8s						
ZAIG	Zacatecas	21.36	357	eP	P	22 41 11.6	+3.9
	5.3nm,1.1s						
TEIG	Tepich	22.80	34	eP	P	22 41 23.0	+0.3
	17nm,1.0s						
OTAV	Otavalo	23.03	92	eP	P	22 41 27.3	+1.5
	9.8nm,1.1s						
OTAV	Otavalo	23.03	92	eP	P	22 41 28.9	+3.1
LNIG	Linares	23.53	5	eP	P	22 41 29.8	-0.4
	7.4nm,1.0s						
GCUF	Volcan Galeras	24.11	90	eP	P	22 41 36.2	-0.3
BBAC	Balboa, Cauca	24.21	88	eP	P	22 41 36.8	-0.2
LPIG	La Paz	24.23	340	P	P	22 41 36.6	-0.2
	15nm,0.3s,baz=166,slow=4.2,SNR=2.9						
SOTA	Rioblanco	24.85	88	eP	P	22 41 44.2	+0.9
PCON	Cinco Dias	25.07	87	eP	P	22 41 50.8	+5.6
YOTO	Yotoco, Valle	25.23	83	eP	P	22 41 50.1	+4.0
MARP	Paez Belalcaza	25.53	86	eP	P	22 41 50.1	+1.0
FLOC	Florencia	25.80	89	eP	P	22 41 50.8	-0.5
HPIG		25.80	351	eP	P	22 41 53.5	+2.2
	6.4nm,1.1s						
GUY2C	Guyana, Caldas	26.34	81	eP	P	22 41 58.1	+1.5
PRAC	Prado	26.65	84	eP	P	22 41 55.5	-3.6
PTLC	Puerto Leguiza	26.68	92	eP	P	22 41 58.8	-0.5
833A	Chaparral WMA,	26.94	4	eP	P	22 42 03.7	+2.4
	7.0nm,0.8s						
ROSC	El Rosal	27.32	82	P	P	22 42 06.3	+0.8
	1.7nm,0.4s,baz=270,slow=16,SNR=2.6						
ROSC				LR	LR	22 51 09.9	
	comp=Z,104nm,20.6s,baz=232,slow=33						
NNA	Nana	27.79	119	LR	LR	22 50 28.9	
	comp=Z,457nm,19.5s,baz=296,slow=31						
TX31	Lajitas Ar. Si	27.95	356	eP	P	22 42 11.9	+1.4
	4.4nm,1.1s						
TXAR	Lajitas Array	27.95	356	P	P	22 42 09.9	-0.6
	2.4nm,0.9s,baz=173,slow=11,SNR=7.5						
TXAR				PcP	PcP	22 45 25.9	0.0
	0.5nm,0.8s,baz=180,slow=4.1,SNR=3.9						
RUSC	La Rusia	28.68	80	eP	P	22 42 18.1	+0.4
HKT	Hockley	28.98	10	eP	P	22 42 21.1	+1.6
	2.0nm,1.0s						
JCT	Junction City	29.06	3	eP	P	22 42 21.0	+0.7
	15nm,1.1s						
RPN	Rapa Nui	29.27	194	LR	LR	22 51 17.8	
	comp=Z,186nm,19.8s,baz=336,slow=31						
MNTX	Cornudas Mount	30.45	353	eP	P	22 42 32.7	+0.1
	3.6nm,1.1s						
MSTX	Muleshoe	32.52	358	eP	P	22 42 53.4	+2.4
	7.2nm,0.9s						
BNM	Barren Site	33.03	352	eP	P	22 42 57.0	+1.4
LAZ	Ladron	33.35	351	eP	P	22 42 59.2	+0.9
113A	Mohawk Valley,	33.37	341	eP	P	22 43 00.9	+2.7
	5.4nm,1.1s						
X37A	Clayton	33.60	9	eP	P	22 43 00.1	-0.1
	17nm,1.1s						
ANMO	Albuquerque	33.79	353	eP	P	22 43 02.0	-0.1
	2.9nm,1.1s						
MIAR	Mount Ida	33.88	12	eP	P	22 43 02.8	+0.2
	29nm,1.1s						
X18A	Snowflake	33.99	347	eP	P	22 43 05.0	+1.1
	3.2nm,0.7s						
W41B	Gary Mavity, V	34.77	13	eP	P	22 43 11.1	+0.8
	15nm,1.1s						
WHAR	Wooly Hollow	34.87	13	eP	P	22 43 11.4	+0.1
	14nm,1.1s						
T25A	Trinidad	35.76	356	eP	P	22 43 20.9	+1.7
	3.6nm,1.0s						
MVCO	Mesa Verde	36.31	350	eP	P	22 43 25.1	+1.2
	7.0nm,1.1s						
WVT	Waverly	36.88	19	eP	P	22 43 28.4	-0.1
	17nm,1.1s						
LPAZ	La Paz	37.26	119	P	P	22 43 33.1	+0.4
	1.6nm,0.8s,baz=306,slow=8.5,SNR=5.8						
LPAZ				PcP	PcP	22 45 52.5	+0.1
	1.1nm,0.9s,baz=297,slow=6.3,SNR=3.6						
LPAZ	La Paz	37.26	119	eP	P	22 43 34.1	+1.4
	5.2nm,1.1s						
LPAZ				ePcP	PcP	22 45 52.5	+0.1
CPCT	Cooper Cave	37.45	23	eP	P	22 43 33.5	+0.2
	9.2nm,1.1s						
PV22	Blue Mesa, Par	37.65	351	eP	P	22 43 36.7	+1.4
	10nm,1.2s						
CCM	Cathedral Cave	37.76	13	eP	P	22 43 35.7	-0.2
	7.0nm,0.8s						
CCM				ePP	PP	22 45 01.1	-1.2
DAC	Darwin (Calif)	37.87	339	eP	P	22 43 41.4	+4.2
	2.3nm,1.0s						
T47A	Sharon Grove	37.90	19	eP	P	22 43 38.4	+1.3
	25nm,1.1s						
TAOE	Nuku Hiva Isla	39.85	255	eLR	LR	22 54 44.9	
	comp=Z,252nm,26.8s						
NVAR	Mina Array Bea	40.05	339	P	P	22 43 54.8	-0.5
	0.7nm,0.7s,baz=157,slow=9.5,SNR=2.6						
NVAR				PcP	PcP	22 46 00.1	-0.2
	0.6nm,0.7s,baz=169,slow=5.5,SNR=3.8						
NVAR				LR	LR	22 57 20.8	
	comp=Z,171nm,19.3s,baz=186,slow=32						
RKT	Rikitea	40.66	231	eT	T	23 27 06.7	
	4.2nm,0.4s						
PTGA	Pitinga	41.54	93	P	P	22 44 07.2	-0.6
	1.4nm,0.3s,baz=276,slow=11,SNR=11						
PTGA	Pitinga	41.54	93	eP	P	22 44 08.2	+0.4
	12nm,1.1s						
O49A	Covington	41.71	20	eP	P	22 44 08.2	-0.6
	19nm,1.0s						
PDAR	Pinedale Array	41.91	351	P	P	22 44 10.6	0.0
	3.9nm,0.9s,baz=157,slow=8.0,SNR=13						
PDAR				PcP	PcP	22 46 05.4	-0.9
	0.5nm,0.7s,baz=134,slow=5.2,SNR=2.7						
PDAR				LR	LR	22 59 54.1	
	comp=Z,183nm,21.8s,baz=193,slow=34						
ECSD	EROS Data Cent	42.46	5	eP	P	22 44 16.0	+1.1
	9.7nm,1.1s						
RSSD	Black Hills	42.69	357	eP	P	22 44 18.2	+1.2
	11nm,1.1s						
SSPA	Standing Stone	44.60	26	eP	P	22 44 33.3	+1.1
	17nm,1.1s						
G08A	Pilot Rock	46.44	343	eP	P	22 44 49.6	+2.8
	1.9nm,1.1s						
ULM	Lac du Bonnet	48.99	5	P	P	22 45 05.0	-1.4
	7.7nm,1.0s,baz=196,slow=8.5,SNR=5.7						
ULM				LR	LR	23 05 22.3	
	comp=Z,86nm,18.5s,baz=204,slow=36						
D53A	Lac Vacive, Po	50.07	21	eP	P	22 45 15.4	+0.8
	5.3nm,1.1s						
PLCA	Paso Flores	50.42	150	P	P	22 45 18.9	+1.4
	2.8nm,1.0s,baz=316,slow=7.8,SNR=3.5						
PLCA				LR	LR	23 01 44.5	
	comp=Z,334nm,19.4s,baz=336,slow=30						
PLCA	Paso Flores	50.42	150	eP	P	22 45 18.9	+1.4
	1.6nm,1.0s						
CPUP	Villa Florida	50.66	126	P	P	22 45 19.8	+0.4
	2.7nm,0.9s,baz=280,slow=4.4,SNR=4.8						
CPUP				LR	LR	23 05 18.0	
	comp=Z,106nm,19.5s,baz=310,slow=34						
CPUP	Villa Florida	50.66	126	eP	P	22 45 19.7	+0.2
	1.4nm,1.1s						
PPT	Papeete	50.96	246	LR	LR	23 01 06.8	
	comp=Z,84nm,19.2s,baz=12,slow=29						
PPT2	Papeete2	50.96	246	eLR	LR	23 00 01.4	
	comp=Z,143nm,27.0s						
FFC	Flin Flon	53.25	360	eP	P	22 45 38.9	+0.6
	3.3nm,1.1s						
BDFB	Brasilia	55.42	110	P	P	22 45 54.6	-0.3
	1.0nm,0.3s,baz=270,slow=6.1,SNR=3.0						
BDFB				LR	LR	23 08 02.9	
	comp=Z,340nm,20.3s,baz=40,slow=34						
SCHQ	Schefferville	60.37	22	LR	LR	23 12 18.7	
	comp=Z,41nm,19.3s,baz=308,slow=36						
DLBC	Dease Lake	61.24	343	eP	P	22 46 35.4	+0.5
	11nm,1.1s						
YKA	Yellowknife Ar	61.83	353	P	P	22 46 38.0	-0.6
	6.6nm,0.9s,baz=162,slow=6.4,SNR=16						
YKA				LR	LR	23 13 46.0	
	comp=Z,14nm,18.1s,baz=181,slow=36						
YKW3	Yellowknife Ar	61.90	353	eP	P	22 46 38.6	-0.4
	16nm,1.1s						
KNK	Knik Glacier	69.65	338	eP	P	22 47 30.0	+0.8
	20nm,1.2s						
INK	Inuvik	70.36	348	eP	P	22 47 33.7	+0.4
	13nm,1.1s						
ILAR	Eielson Array	71.27	341	P	P	22 47 38.3	-0.7
	4.5nm,1.0s,baz=151,slow=4.5,SNR=27						
ILAR				LR	LR	23 16 36.3	
	comp=Z,62nm,18.9s,baz=126,slow=34						
MCK	McKinley	71.28	340	eP	P	22 47 40.7	+1.6
	6.6nm,0.9s						
RES	Resolute Bay	73.39	2	eP	P	22 47 50.8	-0.6
	13nm,1.1s						
TOLK	Toolik Lake Re	74.60	344	eP	P	22 47 59.7	+1.0
	2.5nm,1.1s						
SUMG	Summit	80.89	16	eP	P	22 48 34.3	+0.2
	7.1nm,1.1s						
SUMG	Summit	80.89	16	i P	P	22 48 33.8	-0.4
	41nm,1.1s						
BILL	Bilibino	89.65	338	eP	P	22 49 18.1	+0.6
	4.1nm,1.1s						
H11S2	WAKE ISLAND Hy	91.33	288	T	T	00 30 39.3	
	baz=88,slow=74,SNR=20						
H11S1	WAKE ISLAND Hy	91.34	288	T	T	00 30 39.5	
	baz=88,slow=74,SNR=12						
H11S3	WAKE ISLAND Hy	91.35	288	T	T	00 30 42.0	
	baz=88,slow=74,SNR=11						
VNDA	Vanda	92.72	192	LR	LR	23 22 22.4	
	comp=Z,65nm,20.1s,baz=91,slow=30						
PETK	Petropavlovsk-	95.47	323	LR	LR	23 26 59.1	
	comp=Z,37nm,18.4s,baz=121,slow=32						
DBIC	Dimbokro	96.41	83	LR	LR	23 29 56.0	
	comp=Z,47nm,19.2s,baz=222,slow=33						
NOA	NORSAR Array B	99.66	27	LR	LR	23 34 54.7	
	comp=Z,11nm,18.5s,baz=305,slow=35						
VYHS	Vyhne	108.58	37	ePDIF	Pdif	22 50 45.6	+2.2
KOLS	Kolonicke sedl	110.43	36	ePDIF	Pdif	22 50 53.0	+1.3
AS31	Alice Springs	122.01	243	ePKPdf	PKPdf	22 55 14.8	-0.6
ASAR	Alice Springs	122.01	243	PKP	PKPdf	22 55 14.8	-0.6
	0.7nm,0.8s,baz=131,slow=2.6,SNR=4.4						
BR101	Keskin Array S	122.12	40	ePKPdf	PKPdf	22 55 14.8	-0.5
BRTR	Keskin Array B	122.12	40	PKP	PKPdf	22 55 14.8	-0.5
	0.2nm,0.6s,baz=339,slow=2.5,SNR=4.1						
SSLB	Suanglung	131.84	304	ePKPpre	PKPpre	22 55 18.8	
MK32	Makanchi Array	131.99	357	ePKPdf	PKPdf	22 55 32.8	-1.0
MKAR	Makanchi Array	131.99	357	PKP	PKPdf	22 55 32.8	-1.0
	0.5nm,0.9s,baz=12,slow=2.1,

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
	comp=N,35μm,0.6s						
CESI				AML	AML		
	comp=E,30μm,0.2s						
CESI				AML	AML		
	comp=N,35μm,0.6s						
CESI				AML	AML		
	comp=N,35μm,0.6s						
CESI				AML	AML		
	comp=E,30μm,0.2s						
MGAB	**Montegabbione**	**0.36**	**296**	P	Pg	23 10 54.2	+0.6
MGAB				S	Sb	23 11 00.3	-0.7
MGAB				AML	AML		
	comp=E,141μm,0.2s						
MGAB				AML	AML		
	comp=N,122μm,0.4s						
MGAB				AML	AML		
	comp=E,141μm,0.2s						
MGAB				AML	AML		
	comp=N,122μm,0.4s						
LNSS	**Leonessa**	**0.39**	**113**	P	Pg	23 10 54.6	+0.5
LNSS				S	Sb	23 11 00.7	-0.9
LNSS				AML	AML		
	comp=E,95μm,0.3s						
LNSS				AML	AML		
	comp=N,103μm,0.9s						
LNSS				AML	AML		
	comp=E,95μm,0.3s						
LNSS				AML	AML		
	comp=N,103μm,0.9s						
LNSS				AML	AML		
	comp=E,95μm,0.3s						
LNSS				AML	AML		
	comp=N,103μm,0.9s						
NRCA	**Norcia**	**0.42**	**79**	P	Pg	23 10 55.2	+0.5
NRCA				S	Sb	23 11 01.8	-0.7
NRCA				AML	AML		
	comp=E,161μm,0.1s						
NRCA				AML	AML		
	comp=N,194μm,0.1s						
NRCA				AML	AML		
	comp=N,194μm,0.1s						
NRCA				AML	AML		
	comp=E,161μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.43**	**8**	P	Pg	23 10 55.4	+0.4
ATCC				S	Sb	23 11 02.2	-0.8
ATCC				AML	AML		
	comp=E,85μm,0.7s						
ATCC				AML	AML		
	comp=N,71μm,0.6s						
ATCC				AML	AML		
	comp=E,85μm,0.7s						
ATCC				AML	AML		
	comp=N,71μm,0.6s						
ATCC				AML	AML		
	comp=N,71μm,0.6s						
ATCC				AML	AML		
	comp=E,85μm,0.7s						
ATTE	**AVT- Monte Tez**	**0.47**	**341**	P	Pg	23 10 56.1	+0.5
ATTE				AML	AML		
	comp=E,54μm,1.1s						
ATTE				AML	AML		
	comp=N,61μm,1.1s						
ATTE				AML	AML		
	comp=E,54μm,1.1s						
ATTE				AML	AML		
	comp=N,61μm,1.1s						
ATTE				AML	AML		
	comp=N,61μm,1.1s						
ATTE				AML	AML		
	comp=E,54μm,1.1s						
FDMO	**Fiordimonte**	**0.48**	**54**	P	Pg	23 10 56.2	+0.4
FDMO				S	Sb	23 11 03.6	-0.7
FDMO				AML	AML		
	comp=E,56μm,0.2s						
FDMO				AML	AML		
	comp=N,56μm,0.2s						
FDMO				AML	AML		
	comp=N,56μm,0.2s						
FDMO				AML	AML		
	comp=E,56μm,0.2s						
SACS	**San Casciano d**	**0.49**	**281**	P	Pb	23 10 56.6	-0.6
SNTG	**Esanatoglia**	**0.57**	**29**	P	Pg	23 10 57.9	+0.3
SNTG				AML	AML		
	comp=E,18μm,1.3s						
SNTG				AML	AML		
	comp=N,22μm,1.5s						
SNTG				AML	AML		
	comp=E,18μm,1.3s						
SNTG				AML	AML		
	comp=N,22μm,1.5s						
SNTG				AML	AML		
	comp=E,18μm,1.3s						
SNTG				AML	AML		
	comp=N,22μm,1.5s						
SMA1	**SAN MARTINO**	**0.58**	**102**	P	Pg	23 10 58.1	+0.3
FIAM	**Fiamignano**	**0.64**	**139**	P	Pg	23 10 58.6	-0.2
ATVO	**AVT- Monte Val**	**0.64**	**350**	AML	AML		
	comp=E,39μm,1.6s						
ATVO				AML	AML		
	comp=E,39μm,1.6s						
ATVO				AML	AML		
	comp=N,28μm,0.5s						
ATVO				AML	AML		
	comp=N,28μm,0.5s						
CAFI	**Castiglion Fio**	**0.72**	**323**	P	Pg	23 11 00.5	+0.1
CAFI				AML	AML		
	comp=E,27μm,0.9s						
CAFI				AML	AML		
	comp=N,32μm,0.5s						
CAFI				AML	AML		
	comp=N,32μm,0.5s						
CAFI				AML	AML		
	comp=E,27μm,0.9s						
GIUL	**Giuliano Di Ro**	**1.30**	**156**	AML	AML		
	comp=E,23μm,0.9s						
GIUL				AML	AML		
	comp=N,31μm,1.2s						
GIUL				AML	AML		
	comp=E,23μm,0.9s						
GIUL				AML	AML		
	comp=N,31μm,1.2s						
SARO	**Sassorosso**	**2.12**	**313**	AML	AML		
	comp=N,380μm,0.6s						
SARO				AML	AML		
	comp=E,168μm,0.3s						
SARO				AML	AML		
	comp=N,380μm,0.6s						
SARO				AML	AML		
	comp=E,168μm,0.3s						
ERBM	**Eremo**	**2.28**	**318**	AML	AML		
	comp=E,81μm,1.6s						
ERBM				AML	AML		
	comp=N,90μm,1.6s						
ERBM				AML	AML		
	comp=E,81μm,1.6s						
ERBM				AML	AML		
	comp=N,90μm,1.6s						

*GEN **10** 23:11:22.2, 44°.14N×10°.69E, h17km±2km, Ml1.5*
ROM 10 23:11:22.2±0.1, 44°.117N±0°.005×10°.656E±0°.005, h16km±1km, ML1.8/5, Error ellipse: s-maj=0.5km s-min=0.4km az=354.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
BDI	**Bagni Di Lucca**	**0.07**	**218**	P	Pg	23 11 25.7	+0.2
BDI				S	Sg	23 11 28.1	+0.5
BDI	**Bagni Di Lucca**	**0.07**	**218**	AML	AML		
	comp=E,1260μm,0.4s						
BDI				AML	AML		
	comp=E,1260μm,0.4s						
BDI				AML	AML		
	comp=N,1625μm,0.9s						
BDI				AML	AML		
	comp=E,1470μm,0.3s						
BDI				AML	AML		
	comp=N,1590μm,0.9s						
BDI				AML	AML		
	comp=E,1470μm,0.3s						
BDI				AML	AML		
	comp=N,1625μm,0.9s						
BDI				AML	AML		
	comp=N,1590μm,0.9s						
POPM	**Popiglio**	**0.10**	**135**	P	Pb	23 11 26.0	+0.2
POPM				S	Sb	23 11 28.6	+0.4
POPM	**Popiglio**	**0.10**	**135**	P	Pb	23 11 26.0	+0.1
POPM				S	Sb	23 11 28.7	+0.5
POPM				AML	AML		
	comp=E,1705μm,0.3s						
POPM				AML	AML		
	comp=N,1655μm,0.9s						
POPM				AML	AML		
	comp=E,1705μm,0.3s						
POPM				AML	AML		
	comp=N,1655μm,0.9s						
POPM				AML	AML		
	comp=N,1655μm,0.9s						
POPM				AML	AML		
	comp=E,1705μm,0.3s						
CARD	**Cardoso**	**0.15**	**234**	P	Pb	23 11 26.7	-0.1
CARD				S	Sb	23 11 29.7	0.0
CARD	**Cardoso**	**0.15**	**234**	P	Pb	23 11 26.7	-0.1
CARD				S	Sb	23 11 29.8	+0.1
CARD	**Cardoso**	**0.15**	**234**	AML	AML		
	comp=N,903μm,0.7s						
CARD				AML	AML		
	comp=E,739μm,0.6s						
CARD				AML	AML		
	comp=N,903μm,0.7s						
CARD				AML	AML		
	comp=E,739μm,0.6s						
SARO	**Sassorosso**	**0.20**	**290**	P	Pg	23 11 27.1	0.0
SARO				S	Sb	23 11 30.7	-0.4
SARO	**Sassorosso**	**0.20**	**290**	P	Pg	23 11 27.1	0.0
SARO				S	Sb	23 11 30.7	-0.4
VLC	**Villacollemand**	**0.20**	**282**	P	Pg	23 11 27.2	+0.2
VLC				S	Sb	23 11 30.9	-0.2
VLC	**Villacollemand**	**0.20**	**282**	AML	AML		
	comp=N,194μm,0.7s						
VLC				AML	AML		
	comp=E,152μm,1.4s						
VLC				AML	AML		
	comp=N,194μm,0.7s						
VLC				AML	AML		
	comp=E,139μm,0.8s						
VLC				AML	AML		
	comp=E,139μm,0.8s						
VLC				AML	AML		
	comp=N,194μm,0.7s						
VLC				AML	AML		
	comp=N,194μm,0.7s						
VLC				AML	AML		
	comp=E,152μm,1.4s						
MAIM	**Mastiano**	**0.23**	**210**	P	Pb	23 11 27.9	-0.2
MAIM				S	Sb	23 11 31.9	-0.1
MAIM	**Mastiano**	**0.23**	**210**	P	Pb	23 11 27.9	-0.2
MAIM				S	Sb	23 11 31.9	-0.1
MAIM				AML	AML		
	comp=E,99μm,0.1s						
MAIM				AML	AML		
	comp=N,150μm,0.4s						
MAIM				AML	AML		
	comp=E,99μm,0.1s						
MAIM				AML	AML		
	comp=N,150μm,0.4s						
MAIM				AML	AML		
	comp=E,99μm,0.1s						
MAIM				AML	AML		
	comp=N,150μm,0.4s						
MTCR	**Monte La Croce**	**0.26**	**110**	P	Pg	23 11 28.2	+0.1
MTCR				S	Sg	23 11 32.3	+0.2
ZCCA	**Zocca**	**0.33**	**44**	P	Pb	23 11 30.0	+0.2
ZCCA				AML	AML		
	comp=E,95μm,0.5s						
ZCCA				AML	AML		
	comp=N,113μm,0.6s						
ZCCA				AML	AML		
	comp=E,95μm,0.5s						
ZCCA				AML	AML		
	comp=N,113μm,0.6s						
ZCCA				AML	AML		
	comp=N,113μm,0.6s						
ZCCA				AML	AML		
	comp=E,95μm,0.5s						
PTF	**Prato**	**0.34**	**118**	P	Pg	23 11 29.4	+0.1
PTF				S	Sb	23 11 34.8	-0.2
FNVD	**Fontana Vidola**	**0.34**	**81**	P	Pg	23 11 29.5	+0.1
FNVD				S	Sg	23 11 34.3	0.0
FNVD				AML	AML		
	comp=E,252μm,0.8s						
FNVD				AML	AML		
	comp=N,256μm,0.6s						
FNVD				AML	AML		
	comp=E,252μm,0.8s						
FNVD				AML	AML		
	comp=N,256μm,0.6s						
ERBM	**Eremo**	**0.35**	**330**	P	Pg	23 11 29.6	0.0
SEI	**Scarperia**	**0.51**	**97**	P	Pg	23 11 32.5	+0.1
SEI				S	Sb	23 11 40.2	+0.3
SEI				AML	AML		
	comp=E,142μm,0.6s						
SEI				AML	AML		
	comp=N,293μm,0.4s						
SEI				AML	AML		
	comp=E,142μm,0.6s						
SEI				AML	AML		
	comp=N,293μm,0.4s						
SEI				AML	AML		
	comp=N,293μm,0.4s						
SEI				AML	AML		
	comp=E,142μm,0.6s						

*CRAAG **10** 23:14:56.7, 36°.39N×2°.47E, Ml3.0*
*MDD **10** 23:14:58.5±0.6, 36°.47N×2°.46E, h0km, mb3.8/3, Error ellipse: s-maj=7.9km s-min=5.3km az=11.0, PRXIMO*
*ISCJB **10** 23:14:59.4±0.8, 36°.62N±0°.05×2°.36E±0°.06, h18km, Error ellipse: s-maj=7.1km s-min=5.8km az=138.8*
ISC 10 23:14:57.9±1.0, 36°.45N±0°.05×2°.51E±0°.06, h18km, n17, σ1§47/26, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
EMHD	**Djebel Mahoud**	**0.44**	**124**	P	**Pg**	**23 15 06.8**	**-0.1**
EMHD	**Djebel Mahoud**	**0.44**	**124**	P	**Pg**	**23 15 06.8**	**-0.1**
ABA	**Alger-Bouzarea**	**0.55**	**50**	P	**Pg**	**23 15 09.6**	**+0.6**
ABA	**Alger-Bouzarea**	**0.55**	**50**	P	**Pg**	**23 15 09.6**	**+0.6**
ECHA	**Ech Chlef**	**0.97**	**252**	P	**Pb**	**23 15 16.8**	**+0.7**
ECHF	**Ech Chlef**	**0.99**	**253**	P	**Pb**	**23 15 16.8**	**+0.4**
OKGL	**Djebel Kef Gue**	**1.56**	**255**	P	**Pn**	**23 15 24.9**	**+0.1**
	11nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.73**	**341**	P	**Pn**	**23 15 42.0**	**+1.1**
	1.6nm,0.1s,SNR=8.0						
EIBI				S	**Sn**	**23 16 11.3**	**-2.2**
	3.3nm,0.2s,SNR=8.0						
EBEN2	**Beniarda presa**	**3.09**	**317**	P	**Pn**	**23 15 46.9**	**+1.1**
	0.8nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**23 16 19.6**	**-2.7**
	0.4nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**3.30**	**296**	S	**Sn**	**23 16 27.0**	**-0.5**
	0.1nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.32**	**4**	P	**Pn**	**23 15 49.4**	**+0.4**
	0.7nm,0.2s,SNR=6.8						
ETOS				S	**Sn**	**23 16 26.2**	**-1.9**
	0.4nm,0.3s,SNR=4.9						
ETOB	**Tobarra**	**3.90**	**305**	P	**Pn**	**23 15 58.4**	**+1.4**
	0.8nm,0.1s,SNR=8.0						
ETOB				S	**Sn**	**23 16 40.6**	**-1.7**
	0.2nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.17**	**320**	P	**Pn**	**23 16 01.5**	**+0.8**
	0.2nm,0.2s,SNR=7.9						
ECHE				S	**Sn**	**23 16 47.3**	**-1.6**
	0.1nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**4.36**	**294**	P	**Pn**	**23 16 04.9**	**+1.5**
	2.3nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**23 16 52.0**	**-1.8**
	1.2nm,0.2s,SNR=7.9						
EBER	**Berja**	**4.36**	**278**	P	**Pn**	**23 16 03.4**	**0.0**
	1.0nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**23 16 51.6**	**-2.2**
	0.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.56**	**330**	P	**Pn**	**23 16 07.1**	**+1.0**
	0.9nm,0.2s,SNR=9.7						
EMOS				S	**Sn**	**23 16 56.1**	**-2.5**
	0.3nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.66**	**289**	P	**Pn**	**23 16 09.4**	**+2.0**
	0.6nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**23 17 01.3**	**+0.2**
	0.5nm,0.2s,SNR=8.5						

*IDC **10** 23:15:32.1±1.0, 48°.35N×155°.79E, h0km, mb3.5/5, mb1 3.8/8, mb1mx3.6/41, mbtmp3.6/8, ML3.5/3, Error ellipse: s-maj=32.3km s-min=20.2km az=140.0*
*MOS **10** 23:15:34.9±0.7, 48°.46N×155°.73E, h37km, mb4.2/1, Error ellipse: s-maj=21.5km s-min=4.5km az=76.4*
*SKHL **10** 23:15:35.4±0.5, 48°.48N×155°.75E, h38km±1km, mb4.2/3*
*KRSC **10** 23:15:37.3±1.5, 48°.80N×156°.43E, h17km±25km, ML4.6*
*ISCJB **10** 23:15:38.0±0.8, 48°.73N±0°.06×155°.8E±0°.1, h36km, mb3.5/5, Error ellipse: s-maj=13.8km s-min=6.3km az=29.4*
ISC 10 23:15:37.3±0.9, 48°.59N±0°.08×155°.72E±0°.09, h36km, n73, σ1§69/82, mb3.4/5, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
SKR	**Severo-Kuril's**	**2.11**	**7**	*e*P	**Pn**	**23 16 08.9**	**-1.1**
SKR				*e*S	**Sn**	**23 16 33.4**	**-1.6**
SKR	**Severo-Kuril's**	**2.11**	**7**	PN	**Pn**	**23 16 08.9**	**-1.1**
SKR				S	**Sn**	**23 16 33.4**	**-1.6**
SKR	**Severo-Kuril's**	**2.11**	**7**	*e*P	**Pn**	**23 16 08.0**	**-2.0**
SKR				AMB	AMB	23 16 12.0	
	51nm,0.6s						
SKR				*e*S	**Sn**	**23 16 32.0**	**-3.0**
SKR				A	A	23 16 38.0	
	934nm,0.7s						
SKR				A	A	23 16 38.0	
	724nm,0.7s						
ALID	**Alaid**	**2.28**	**357**	*e*P	**Pn**	**23 16 13.1**	**+0.5**
ALID	**Alaid**	**2.28**	**357**	PN	**Pn**	**23 16 13.1**	**+0.5**
PAU	**Pauzhetka**	**2.96**	**13**	*e*P	**Pn**	**23 16 21.6**	**-0.2**
PAU				*e*S	**Sn**	**23 16 55.6**	**-0.4**
PAU	**Pauzhetka**	**2.96**	**13**	PN	**Pn**	**23 16 21.6**	**-0.2**
PAU	**Pauzhetka**	**2.96**	**13**	*e*P	**Pn**	**23 16 21.2**	**-0.6**
PAU				AMB	AMB	23 16 24.6	
	15nm,0.4s						
PAU				*e*S	**Sn**	**23 16 55.8**	**-0.2**
PAU				A	A	23 16 59.5	
	390nm,0.3s						
PAU				A	A	23 16 59.5	
	250nm,0.3s						
KDTR	**Khodutka, Kamc**	**3.56**	**24**	*e*P	**Pn**	**23 16 30.2**	**+0.3**
KDTR				*e*S	**Sn**	**23 17 09.0**	**-1.7**
KDTR	**Khodutka, Kamc**	**3.56**	**24**	PN	**Pn**	**23 16 30.2**	**+0.3**
ASAK	**Asacha**	**4.04**	**19**	*e*P	**Pn**	**23 16 38.0**	**+1.3**
ASAK	**Asacha**	**4.04**	**19**	PN	**Pn**	**23 16 38.0**	**+1.3**
MTVR	**Mutnovka**	**4.20**	**21**	*e*P	**Pn**	**23 16 40.1**	**+1.2**
MTVR				*e*S	**Sn**	**23 17 26.1**	**-0.6**
MTVR	**Mutnovka**	**4.20**	**21**	PN	**Pn**	**23 16 40.1**	**+1.2**
RUS	**Russkaya**	**4.24**	**24**	*e*P	**Pn**	**23 16 39.8**	**+0.5**
RUS				*e*S	**Sn**	**23 17 27.1**	**-0.3**
RUS	**Russkaya**	**4.24**	**24**	PN	**Pn**	**23 16 39.8**	**+0.5**
RUS	**Russkaya**	**4.24**	**24**	*e*P	**Pn**	**23 16 39.8**	**+0.5**
APC	**Apacha**	**4.43**	**11**	*e*P	**Pn**	**23 16 43.9**	**+1.9**
APC	**Apacha**	**4.43**	**11**	PN	**Pn**	**23 16 43.9**	**+1.9**
KRMR	**Karymshinskiy**	**4.51**	**19**	*e*P	**Pn**	**23 16 43.3**	**+0.3**
KRMR				*e*S	**Sn**	**23 17 32.0**	**-2.2**
KRMR	**Karymshinskiy**	**4.51**	**19**	PN	**Pn**	**23 16 43.3**	**+0.3**
PETK	**Petropavlovsk-**	**4.69**	**15**	Pn	**Pn**	**23 16 47.1**	**+1.6**
	5.5nm,0.3s,baz=178,slow=12,SNR=38						
PETK				Sn	**Sn**	**23 17 44.9**	**+6.2**
	0.3nm,0.3s,baz=356,slow=39,SNR=1.0						
PET	**Petropavlovsk**	**4.81**	**22**	PN	**Pn**	**23 16 48.9**	**+1.8**
PET	**Petropavlovsk**	**4.81**	**22**	*e*P	**Pn**	**23 16 48.0**	**+0.9**
PET				AMB	AMB	23 16 54.0	
	66nm,0.7s						
PET				*e*S	**Sn**	**23 17 42.6**	**+1.1**
PET				A	A	23 17 47.9	
	101nm,0.7s						
PET				A	A	23 17 47.9	
	135nm,0.7s						
DALK	**Dalny**	**4.84**	**22**	*e*P	**Pn**	**23 16 48.9**	**+1.3**
DALK				*e*S	**Sn**	**23 17 41.5**	**-0.8**
DALK	**Dalny**	**4.84**	**22**	PN	**Pn**	**23 16 48.9**	**+1.3**
UGLR	**Uglovaya**	**5.02**	**22**	*e*P	**Pn**	**23 16 51.6**	**+1.4**
UGLR	**Uglovaya**	**5.02**	**22**	PN	**Pn**	**23 16 51.6**	**+1.4**
AVH	**Avacha**	**5.05**	**21**	*e*P	**Pn**	**23 16 52.0**	**+1.4**
AVH				*e*S	**Sn**	**23 17 46.1**	**-1.5**
AVH	**Avacha**	**5.05**	**21**	PN	**Pn**	**23 16 52.0**	**+1.4**
AVH	**Avacha**	**5.05**	**21**	*e*P	**Pn**	**23 16 52.0**	**+1.4**
KOK	**Koryaka**	**5.05**	**20**	*e*P	**Pn**	**23 16 52.5**	**+1.9**
KOK	**Koryaka**	**5.05**	**20**	PN	**Pn**	**23 16 52.5**	**+1.9**
KOK	**Koryaka**	**5.05**	**20**	*e*P	**Pn**	**23 16 52.5**	**+1.9**
SMAR	**Somma**	**5.07**	**21**	*e*P	**Pn**	**23 16 52.4**	**+1.5**
SMAR	**Somma**	**5.07**	**21**	PN	**Pn**	**23 16 52.4**	**+1.5**
KRER	**Koryakskii**	**5.09**	**21**	*e*P	**Pn**	**23 16 52.4**	**+1.2**
KRER	**Koryakskii**	**5.09**	**21**	PN	**Pn**	**23 16 52.4**	**+1.2**
KRX	**Arik**	**5.12**	**20**	*e*P	**Pn**	**23 16 52.8**	**+1.3**
KRX	**Arik**	**5.12**	**20**	PN	**Pn**	**23 16 52.8**	**+1.3**
NLC	**Nalytchevo**	**5.13**	**25**	*e*P	**Pn**	**23 16 52.4**	**+0.9**
NLC				*e*S	**Sn**	**23 17 47.0**	**-2.3**
NLC	**Nalytchevo**	**5.13**	**25**	PN	**Pn**	**23 16 52.4**	**+0.9**
NLC	**Nalytchevo**	**5.13**	**25**	*e*P	**Pn**	**23 16 52.4**	**+0.9**
SPN	**Mys Shipunski**	**5.27**	**29**	*e*P	**Pn**	**23 16 54.3**	**+0.9**
SPN				*e*S	**Sn**	**23 17 51.1**	**-1.8**
SPN	**Mys Shipunski**	**5.27**	**29**	PN	**Pn**	**23 16 54.3**	**+0.9**
SPN	**Mys Shipunski**	**5.27**	**29**	*e*P	**Pn**	**23 16 54.3**	**+0.9**
GNL	**Ganaly**	**5.30**	**14**	*e*P	**Pn**	**23 16 55.5**	**+1.5**
GNL	**Ganaly**	**5.30**	**14**	PN	**Pn**	**23 16 55.5**	**+1.5**
MKZ	**Mys Kozlova**	**7.05**	**30**	S	**Sn**	**23 18 33.9**	**-2.6**
KZV	**Kizimen**	**7.12**	**22**	*e*P	**Pn**	**23 17 21.3**	**+2.4**
KZV	**Kizimen**	**7.12**	**22**	PN	**Pn**	**23 17 21.3**	**+2.4**
TUMR	**Tumrok**	**7.24**	**21**	*e*P	**Pn**	**23 17 24.3**	**+3.8**
TUMR	**Tumrok**	**7.24**	**21**	PN	**Pn**	**23 17 24.3**	**+3.8**
KBTR	**Krutoberegovo**	**8.77**	**27**	*e*P	**Pn**	**23 17 42.7**	**+1.3**
KBTR	**Krutoberegovo**	**8.77**	**27**	PN	**Pn**	**23 17 42.7**	**+1.3**
BKI	**Bering**	**9.16**	**40**	*e*P	**Pn**	**23 17 47.1**	**+0.4**
BKI	**Bering**	**9.16**	**40**	PN	**Pn**	**23 17 47.1**	**+0.4**
ASAJ	**Asahikawa**	**10.12**	**249**	Pn	**Pn**	**23 17 58.3**	**-1.6**
	0.8nm,0.3s,baz=76,slow=16,SNR=6.0						
KLR	**Kul'dur**	**15.76**	**281**	Pn	**Pn**	**23 19 17.4**	**+1.0**
	0.1nm,0.3s,baz=73,slow=19,SNR=5.0						
BILL	**Bilibino**	**20.22**	**11**	*e*P	**P**	**23 20 04.7**	**-4.1**
H11N2	**WAKE ISLAND Hy**	**30.17**	**159**	T	T	23 53 50.0	
	baz=345,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.19**	**159**	T	T	23 53 34.3	
	baz=345,slow=74						
H11N3	**WAKE ISLAND Hy**	**30.19**	**159**	T	T	23 54 00.4	
	baz=345						
H11S1	**WAKE ISLAND Hy**	**31.30**	**160**	T	T	23 55 00.6	
	baz=345,slow=76,SNR=662						
H11S3	**WAKE ISLAND Hy**	**31.31**	**160**	T	T	23 55 07.2	
	baz=345,slow=76,SNR=646						
H11S2	**WAKE ISLAND Hy**	**31.32**	**160**	T	T	23 55 02.0	
	baz=345,slow=76,SNR=390						
ILAR	**Eielson Array**	**34.01**	**40**	P	**P**	**23 22 18.1**	**+0.9**
	0.2nm,0.6s,baz=243,slow=7.0,SNR=3.6						
MKAR	**Makanchi Array**	**47.67**	**297**	P	**P**	**23 24 11.0**	**+1.1**
	0.4nm,0.9s,baz=62,slow=6.7,SNR=2.6						
MKAR	**Makanchi Array**	**47.67**	**297**	P	**P**	**23 24 11.0**	**+1.1**
MKAR	**Makanchi Array**	**47.67**	**297**	*e*P	**P**	**23 24 11.0**	**+1.1**
PDAR	**Pinedale Array**	**62.24**	**56**	P	**P**	**23 25 57.2**	**+1.6**
	0.7nm,0.9s,baz=329,slow=3.2,SNR=4.3						
ASAR	**Alice Springs**	**74.53**	**201**	P	**P**	**23 27 11.1**	**-1.0**
	0.4nm,0.8s,baz=18,slow=6.2,SNR=3.1						
TXAR	**Lajitas Array**	**75.06**	**63**	P	**P**	**23 27 16.1**	**+0.7**
	0.5nm,0.6s,baz=281,slow=5.1,SNR=3.8						

MEX 10 23:15:53.4±0.3, 15°.49N×93°.63W, h71km±73km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
PCIG		**0.45**	**62**	*e*P	Pn	23 16 04.4	-1.4
PCIG				*e*S	Sn	23 16 13.2	-1.7

IDC 10 23:19:44.5±1.6, 10°.59S×165°.65E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/33, mbtmp4.0/5, ML4.1/1, MS3.1/4, Ms1 3.0/4, ms1mx2.7/31, Error ellipse: s-maj=52.4km s-min=28.8km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
HNR	**Honiara**	**5.73**	**281**	LR	LR	23 22 52.6	
	comp=Z,70nm,20.2s,baz=120,slow=33						
DZM	**Mont Dzumac**	**11.44**	**176**	Pn	Pn	23 22 28.1	-1.2
	1.3nm,0.3s,baz=24,slow=20,SNR=10.0						
DZM				Sn	Sn	23 24 27.1	-11
	0.2nm,0.3s,baz=259,slow=22,SNR=1.5						
STKA	**Stephens Creek**	**30.70**	**223**	LR	LR	23 37 09.4	
	comp=Z,39nm,18.7s,baz=23,slow=34						
WRA	**Warramunga Arr**	**31.55**	**249**	P	P	23 26 09.7	+0.8

2.3nm,0.8s,baz=78,slow=8.6,SNR=11
ASAR Alice Springs 32.91 243 P P 23 26 20.5 -0.3
0.6nm,0.6s,baz=63,slow=10,SNR=7.2
ASAR LR LR 23 39 32.7
comp=Z,36nm,18.6s,baz=86,slow=36
PPT Papeete 43.90 104 LR LR 23 40 43.8
comp=Z,32nm,22.0s,baz=220,slow=29
ILAR Eielson Array 83.12 19 P P 23 32 12.5 +0.6
0.4nm,0.7s,baz=233,slow=5.5,SNR=3.0
ZALV Zalesovo Beam 93.13 324 P P 23 32 59.3 -1.1
0.5nm,0.4s,baz=90,slow=8.8,SNR=2.6

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*ISCJB **10** 23:27:57.6±0.7, 23°.82S±0°.08×179°.9E±0°.1, h526km, mb4.0/12, Error ellipse: s-maj=15.7km s-min=10.5km az=176.8*
*IDC **10** 23:27:58.3±1.8, 23°.77S×179°.88E, h519km±16km, mb3.6/12, mb1 3.7/14, mb1mx3.5/24, mbtmp4.5/14, Error ellipse: s-maj=23.7km s-min=15.4km az=150.0*
ISC 10 23:27:57.8±0.6, 23°.89S±0°.09×180°.0E±0°.1, h526km, n55, σ1§34/65, mb4.0/12, 6C-9D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.60**	**276**	**P**	**P**	**23 30 42.3**	**-0.5**
	0.7nm,0.3s,baz=104,slow=20,SNR=5.0						
URZ	**Urewera**	**14.54**	**189**	**P**	**P**	**23 31 02.6**	**0.0**
	4.7nm,0.3s,baz=39,slow=2.4,SNR=20						
URZ				S	**S**	**23 33 32.9**	**-2.2**
	0.8nm,0.3s,baz=237,slow=23,SNR=7.5						
CTA	**Charters Tower**	**31.46**	**270**	**P**	**P**	**23 33 37.6**	**+1.2**
	4.6nm,0.4s,baz=100,slow=11,SNR=12						
PMG	**Port Moresby**	**34.47**	**289**	**P**	**P**	**23 34 01.3**	**-0.6**
	19nm,0.6s,baz=119,slow=7.5,SNR=4.7						
STKA	**Stephens Creek**	**34.71**	**248**	**P**	**P**	**23 34 05.0**	**+1.2**
	1.5nm,0.5s,baz=106,slow=10.0,SNR=3.0						
ASAR	**Alice Springs**	**42.02**	**261**	**P**	**P**	**23 35 03.8**	**+0.5**
	4.4nm,0.8s,baz=94,slow=8.2,SNR=29						
ASAR				pP	**pP**	**23 36 37.8**	**+1.2**
	0.8nm,0.9s,baz=88,slow=7.7,SNR=2.8						
ASAR				ScP	**ScP**	**23 39 49.5**	**+3.0**
	1.2nm,0.8s,baz=94,slow=3.8,SNR=6.4						
ASAR				S	**S**	**23 40 42.6**	**-1.7**
	0.5nm,0.8s,baz=100,slow=14,SNR=4.1						
WRA	**Warramunga Arr**	**42.39**	**266**	**P**	**P**	**23 35 06.2**	**0.0**
	3.3nm,0.4s,baz=100,slow=8.9,SNR=35						
WRA				S	**S**	**23 40 46.0**	**-3.6**
	2.3nm,1.1s,baz=118,slow=13,SNR=3.3						
MJAR	**Matsushiro Arr**	**71.88**	**326**	**P**	**P**	**23 38 27.4**	**-0.2**
	4.6nm,0.8s,baz=165,slow=6.1,SNR=10						
KSRS	**Korea Array**	**78.23**	**320**	**P**	**P**	**23 39 03.9**	**+1.0**
	2.5nm,0.7s,baz=136,slow=6.0,SNR=9.7						
PETK	**Petropavlovsk-**	**79.08**	**347**	**P**	**P**	**23 39 07.6**	**+0.4**
	5.5nm,0.7s,baz=119,slow=7.0,SNR=12						
USRK	**Ussuriysk Ar.**	**80.74**	**327**	**P**	**P**	**23 39 16.1**	**0.0**
	4.4nm,0.8s,baz=90,slow=4.2,SNR=8.9						
PLCA	**Paso Flores**	**88.29**	**134**	**P**	**P**	**23 39 54.5**	**+1.1**
	1.3nm,0.8s,baz=167,slow=6.8,SNR=2.9						
CMAR	**Chiang Mai Arr**	**89.51**	**290**	**P**	**P**	**23 40 01.2**	**+1.8**
	1.6nm,0.8s,baz=139,slow=3.2,SNR=9.7						
ILAR	**Eielson Array**	**92.02**	**14**	**P**	**P**	**23 40 09.2**	**-0.7**
	0.3nm,0.7s,baz=220,slow=5.4,SNR=3.4						
ILAR				PP	**PP**	**23 43 56.3**	**-2.9**
	0.4nm,0.9s,baz=224,slow=6.7,SNR=4.3						
MKAR	**Makanchi Array**	**112.13**	**313**	PKiKP	**PKiKP**	**23 45 32.8**	**-0.6**
	0.2nm,0.5s,baz=78,slow=2.8,SNR=3.6						
ARCES	**ARCESS Array B**	**131.87**	**348**	PKP	**PKPdf**	**23 46 10.2**	**-0.3**
	1.5nm,0.7s,baz=28,slow=2.9,SNR=6.6						
FINES	**FINESS Array B**	**138.43**	**341**	PKhKP	PKPpre	23 46 14.6	
	1.0nm,0.7s,baz=29,slow=4.4,SNR=5.3						
FINES				PKP	**PKPdf**	**23 46 23.8**	**+1.0**
	0.6nm,0.4s,baz=78,slow=4.3,SNR=8.2						
NB2	**NORSAR Subarra**	**142.07**	**351**	PKP	**PKPdf**	**23 46 24.6**	**-4.9**
	comp=Z,0.9nm,0.7s,baz=15,slow=3.1						
NOA	**NORSAR Array B**	**142.07**	**351**	PKhKP	**PKPdf**	**23 46 25.6**	**-3.9**
	comp=Z,1.2nm,0.7s,baz=16,slow=4.6,SNR=7.6						
AKASG	**Malin Array Be**	**144.95**	**327**	PKP	**PKPdf**	**23 46 34.9**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=42,slow=4.4,SNR=18						
AKASG				SKP		23 49 21.1	
	comp=Z,2.1nm,0.8s,baz=32,slow=1.8,SNR=3.4						
KIEV	**Kiev**	**144.96**	**327**	⇓*i*P	**PKPdf**	**23 46 34.9**	**+0.1**
BRTR	**Keskin Array B**	**147.56**	**307**	PKPbc	**PKPbc**	**23 46 43.1**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=156,slow=4.8,SNR=11						
BRTR				PKPab	**PKPab**	**23 46 47.5**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=94,slow=4.4,SNR=17						
BURAR	**Bucovina Array**	**148.95**	**326**	⇓*i*P	**PKiKP**	**23 46 48.0**	**+0.7**
TLB	**Topalu**	**149.19**	**319**	⇓*i*P	**PKiKP**	**23 46 47.5**	**-0.2**
LEF	**Lefka**	**149.38**	**299**	⇓*i*P	**PKPbc**	**23 46 47.8**	**+0.1**
TRPA	**Tarpa**	**149.91**	**329**	⇓*i*P	**PKPbc**	**23 46 47.9**	**-0.6**
OSTC	**Ostas**	**150.54**	**339**	*e*PKP	**PKiKP**	**23 46 51.0**	**+0.6**
CTYL	**Yalikoy Yolu**	**150.60**	**313**	⇑*i*P	**PKPab**	**23 46 57.6**	**-1.9**
DPC	**Dobruska-Polom**	**150.68**	**338**	*e*PKP	**PKiKP**	**23 46 51.0**	**+0.3**
DPC				*ex*	x	23 47 00.7	
ARR	**Arges**	**150.70**	**323**	⇑*i*P	**PKiKP**	**23 46 51.9**	**+0.9**
MORC	**Moravsky Berou**	**150.73**	**336**	⇑*i*P	**PKPbc**	**23 46 50.5**	**+0.1**
MORC	**Moravsky Berou**	**150.73**	**336**	*e*PKP	**PKiKP**	**23 46 51.1**	**+0.2**
MORC				*e*		23 47 00.5	
DRGR		**150.77**	**327**	⇓*i*P	**PKiKP**	**23 46 51.0**	**-0.1**
CLL	**Collm**	**150.84**	**343**	*i* PKPdf	**PKPdf**	**23 46 47.0**	**+2.7**
CLL				⇓*i*PKPbc	**PKiKP**	**23 46 50.9**	**0.0**
	comp=Z,10.0nm,0.9s						
CLL				*i* PKPab	**PKPab**	**23 47 00.1**	**0.0**
	comp=Z,4.0nm,0.7s						
BRG	**Berggiesshubel**	**150.97**	**342**	*i* PKP	**PKiKP**	**23 46 51.3**	**+0.1**
	comp=Z,5.8nm,0.5s						
BRG				*e*		23 47 01.2	
	comp=Z,3.8nm,1.0s						
PVCC	**Panska Ves**	**151.09**	**341**	*e*PKP	**PKiKP**	**23 46 52.1**	**+0.6**
PVCC				*ex*	x	23 47 02.2	
VRAC	**Vranov**	**151.47**	**337**	⇑*i*P	**PKPab**	**23 47 03.8**	**+0.9**
VRAC	**Vranov**	**151.47**	**337**	*e*PKP	**PKiKP**	**23 46 52.6**	**+0.3**
VRAC				*e*		23 47 03.8	
SIRR	**Siria**	**151.65**	**327**	⇓*i*P	**PKiKP**	**23 46 53.0**	**+0.2**
KRUC	**Moravsky**	**151.74**	**337**	*e*PKP	**PKiKP**	**23 46 53.1**	**+0.2**
KRUC				*e*		23 47 04.8	
BZS	**Buzias**	**152.13**	**326**	⇑*i*P	**PKPbc**	**23 46 53.6**	**0.0**
KHC	**Kasperske Hory**	**152.62**	**340**	*e*PKP	**PKiKP**	**23 46 55.0**	**+0.2**
KHC				*ex*	x	23 47 08.5	
MDVR	**Moldovita**	**152.65**	**325**	⇓*i*P	**PKPbc**	**23 46 54.9**	**0.0**
GERES	**GERESS Array B**	**152.84**	**340**	PKPbc	**PKPbc**	**23 46 55.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=29,slow=3.0,SNR=4.7						
GERES				PKPab	**PKPab**	**23 47 08.9**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=73,slow=4.5,SNR=3.9						
CONA	**Conrad Observa**	**152.89**	**336**	*e*PKPab	**PKPab**	**23 47 10.3**	**+1.2**
	comp=Z,4.2nm,0.7s						
VTS	**Vitosha**	**153.18**	**320**	⇑*i*P	**PKPab**	**23 47 12.2**	**+1.6**
SOKA	**Soboth**	**154.24**	**336**	*e*PKPab	**PKPab**	**23 47 15.2**	**+0.3**
	comp=Z,4.2nm,1.1s						
MYKA	**Terra Mystica**	**154.79**	**338**	*i* PKPab	**PKPab**	**23 47 16.9**	**-0.3**
	comp=Z,2.5nm,0.5s						
WATA	**Walderalm**	**154.83**	**341**	*i* PKPab	**PKPab**	**23 47 18.0**	**+0.5**
	comp=Z,1.1nm,0.4s						
WTTA	**Wattenberg**	**154.88**	**341**	*i* PKPab	**PKPab**	**23 47 18.5**	**+0.8**
	comp=Z,3.2nm,0.6s						
RETA	**Reutte**	**154.93**	**343**	*e*PKPab	**PKPab**	**23 47 18.4**	**+0.7**
	comp=Z,2.9nm,0.9s						
MOTA	**Moosalm**	**154.96**	**342**	*e*PKPab	**PKPab**	**23 47 18.2**	**+0.2**
	comp=Z,4.9nm,1.2s						
ABTA	**Abfaltersbach**	**155.07**	**339**	*e*PKPab	**PKPab**	**23 47 18.1**	**-0.3**
	comp=Z,2.2nm,0.7s						
DAVA	**Damuels**	**155.34**	**344**	*i* PKPab	**PKPab**	**23 47 20.3**	**+0.6**
	comp=Z,1.9nm,0.4s						
ESDC	**Sonseca Array**	**163.91**	**11**	PKPab	**PKPab**	**23 47 56.7**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=344,slow=4.1,SNR=4.9						

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*IDC **10** 23:37:20.7±2.1, 31°.58S×178°.55W, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.8/22, mbtmp4.1/3, ML3.7/1, Error ellipse: s-maj=61.0km s-min=38.5km az=133.0*
ISC 10 23:37:22.0±1.4, 32°.0S±0°.2×177°.8W±0°.3, h35km, n9, σ2§23/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.49**	**212**	**Pn**	**Pn**	**23 39 11.6**	**+2.8**
	1.2nm,0.3s,baz=273,slow=6.7,SNR=14						
URZ				Sn	**Sn**	**23 40 31.1**	**-1.3**
	2.9nm,0.3s,baz=93,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**43.19**	**269**	P	**P**	**23 45 18.8**	**-1.0**
	1.4nm,0.6s,baz=104,slow=7.8,SNR=17						
WRA	**Warramunga Arr**	**44.32**	**274**	P	**P**	**23 45 27.4**	**-1.5**
	2.4nm,0.6s,baz=114,slow=8.4,SNR=19						
VNA3	**Neumayer Olymp**	**76.70**	**176**	P	**P**	**23 49 06.7**	**-2.4**
VNA2	**Neumayer--Watz**	**77.14**	**177**	P	P	23 49 04.9	-6.6
VNA1	**Neumayer--Stat**	**77.37**	**176**	P	P	23 49 06.7	-6.1
FINES	**FINESS Array B**	**146.69**	**339**	PKPbc	**PKPab**	**23 57 01.3**	**+0.8**
	1.0nm,0.5s,baz=45,slow=4.1,SNR=8.9						
NB2	**NORSAR Subarra**	**150.35**	**351**	PKP	**PKiKP**	**23 57 11.3**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.35**	**351**	PKPbc	**PKiKP**	**23 57 11.5**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=12,slow=4.1,SNR=3.7						

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*ISCJB **11** 00:09:06.2±0.5, 14°.96S±0°.07×167°.4E±0°.1, h100km, mb4.1/16, Error ellipse: s-maj=16.9km s-min=9.3km az=165.4*
*IDC **11** 00:09:10.9±3.8, 14°.93S×167°.39E, h128km±34km, mb3.8/11, mb1 4.0/12, mb1mx3.7/39, mbtmp4.2/12, MS2.8/1, Ms1 2.8/1, ms1mx2.6/19, Error ellipse: s-maj=27.5km s-min=20.7km az=89.0*
*NEIC **11** 00:09:11.2±1.9, 14°.97S×167°.44E, h131km±9km, mb4.1/9, Error ellipse: s-maj=28.1km s-min=18.0km az=85.0*
ISC 11 00:09:07.6±0.8, 14°.80S±0°.08×167°.5E±0°.2, h100km, n31, σ1§23/32, mb4.1/16, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**6.66**	**176**	*e*Pn	**Pn**	**00 10 42.2**	**-0.6**
MARNC				*e*Sn	Sn	00 11 48.3	-8.9
DZM	**Mont Dzumac**	**7.30**	**188**	P	**Pn**	**00 10 53.0**	**+1.4**
	9.7nm,0.3s,baz=350,slow=12,SNR=29						
DZM				S	**Sn**	**00 12 14.6**	**+1.6**
	1.2nm,0.3s,baz=299,slow=23,SNR=3.2						
DZM				LR	LR	00 12 40.3	
	comp=Z,74nm,19.9s,baz=40,slow=29						
DZM	**Mont Dzumac**	**7.30**	**188**	*e*Pn	**Pn**	**00 10 53.1**	**+1.4**
DZM				*e*Sn	Sn	00 12 02.8	-10
PINNC	**Pines Island,**	**7.77**	**180**	*e*Pn	**Pn**	**00 11 00.2**	**+2.3**
URZ	**Urewera**	**24.86**	**162**	*e*P	**P**	**00 14 19.9**	**-0.9**
	21nm,1.1s						
BKZ	**Black Stump Fm**	**25.52**	**164**	*e*P	**P**	**00 14 25.4**	**-1.5**
	14nm,1.2s						
THZ	**Tophouse**	**27.27**	**171**	*e*P	**P**	**00 14 40.8**	**-1.8**
STKA	**Stephens Creek**	**29.12**	**230**	P	**P**	**00 14 59.2**	**+0.1**
	5.1nm,0.8s,baz=55,slow=7.7,SNR=6.0						
STKA	**Stephens Creek**	**29.12**	**230**	*e*P	**P**	**00 14 58.7**	**-0.5**
	1.4nm,0.9s						
LBZ	**Lake Benmore**	**29.57**	**176**	*e*P	**P**	**00 15 02.7**	**-0.2**
WR1	**Warramunga Arr**	**32.03**	**256**	*e*P	**P**	**00 15 22.9**	**-2.0**
WRA	**Warramunga Arr**	**32.03**	**256**	P	**P**	**00 15 22.9**	**-2.0**
	1.1nm,0.7s,baz=82,slow=8.6,SNR=6.6						
AS31	**Alice Springs**	**32.87**	**249**	*e*P	**P**	**00 15 30.7**	**-1.5**
	1.5nm,0.9s						
ASAR	**Alice Springs**	**32.87**	**249**	P	**P**	**00 15 30.7**	**-1.5**
	4.1nm,0.9s,baz=78,slow=9.0,SNR=22						
VNDA	**Vanda**	**62.79**	**181**	P	**P**	**00 19 21.2**	**-0.7**
	0.9nm,0.4s,baz=349,slow=7.3,SNR=13						
VNDA	**Vanda**	**62.79**	**181**	*e*P	**P**	**00 19 21.1**	**-0.9**
	2.2nm,1.0s						
SBA	**Scott Base**	**63.06**	**180**	*e*P	**P**	**00 19 23.5**	**-0.3**
	9.0nm,0.9s						
PETK	**Petropavlovsk-**	**68.16**	**354**	P	**P**	**00 19 58.4**	**+1.6**
	3.0nm,0.8s,baz=142,slow=7.5,SNR=4.0						
PEA1	**Petropavlovsk-**	**68.16**	**354**	*e*P	**P**	**00 19 58.4**	**+1.6**
CM31	**Chiang Mai Arr**	**75.19**	**294**	*e*P	**P**	**00 20 40.9**	**+1.1**
	4.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.19**	**294**	P	**P**	**00 20 40.9**	**+1.1**
	1.1nm,0.7s,baz=135,slow=5.1,SNR=5.6						
MAW	**Mawson**	**81.90**	**202**	P	**P**	**00 21 15.1**	**-0.6**
	3.4nm,1.0s,baz=108,slow=3.2,SNR=3.0						
MAW	**Mawson**	**81.90**	**202**	*e*P	**P**	**00 21 15.1**	**-0.6**
	1.0nm,0.9s						
SONA0	**Songino Array**	**82.69**	**324**	*e*P	**P**	**00 21 20.9**	**+0.7**
SONM	**Songino Array**	**82.69**	**324**	P	**P**	**00 21 20.9**	**+0.7**
	0.7nm,0.7s,baz=148,slow=7.9,SNR=5.6						
ILAR	**Eielson Array**	**86.52**	**18**	P	**P**	**00 21 38.4**	**-0.6**
	0.6nm,0.9s,baz=225,slow=6.3,SNR=5.7						
ILB	**Eielson Array**	**86.52**	**18**	*e*P	**P**	**00 21 38.4**	**-0.6**
	1.9nm,1.0s						
MK32	**Makanchi Array**	**97.42**	**316**	*e*P	**P**	**00 22 30.5**	**+0.5**
MKAR	**Makanchi Array**	**97.42**	**316**	P	**P**	**00 22 30.5**	**+0.5**
	0.7nm,0.7s,baz=101,slow=6.3,SNR=6.9						
ZALV	**Zalesovo Beam**	**97.59**	**324**	P	**P**	**00 22 29.9**	**-0.6**
	0.3nm,0.4s,baz=116,slow=6.6,SNR=2.4						
ZAA1	**Zalesovo Array**	**97.59**	**324**	*e*P	**P**	**00 22 29.9**	**-0.6**

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*DSN **11** 00:09:41.0±3.5, 26°.59N×58°.15E, h10km, ML3.5/9, Error ellipse: s-maj=48.8km s-min=15.3km az=8.0*
*IDC **11** 00:09:41.5±15.0, 26°.81N×57°.97E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/37, mbtmp3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/20, Error ellipse: s-maj=305.9km s-min=67.0km az=96.0*
*ISCJB **11** 00:09:43.6±0.7, 26°.59N±0°.03×57°.77E±0°.09, h10km, mb3.2/3, Error ellipse: s-maj=11.2km s-min=4.5km az=8.8*
*TEH **11** 00:09:45.4, 26°.79N×57°.75E, h10km, ML3.6*
ISC 11 00:09:43.1±0.9, 26°.57N±0°.05×57°.94E±0°.06, h10km, n43, σ1§59/41, mb3.4/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.94**	**189**	*e*Pg	Pn	00 10 07.9	+5.6
KHNJ	**Kahnooj**	**1.39**	**351**	*e*Pg	**Pn**	**00 10 07.2**	**-1.4**
NIAN	**Nian**	**1.40**	**315**	IAMB	IAmb	00 10 33.3	
	comp=N,0.0nm,0.4s						
NIAN				*e*Pg	**Pn**	**00 10 08.7**	**0.0**
BANOM	**Banah**	**1.61**	**247**	*e*P	**Pn**	**00 10 11.3**	**-0.2**
	SNR=58						
SHME	**Shamm**	**1.69**	**253**	*e*P	**Pn**	**00 10 13.6**	**+0.8**
	SNR=25						
SHME				S	**Sn**	**00 10 37.9**	**+3.4**
SHME	**Shamm**	**1.69**	**253**	*e*Pn	**Pn**	**00 10 13.6**	**+0.8**
GENO	**Geno**	**1.78**	**298**	*e*Pg	**Pn**	**00 10 14.8**	**+0.7**
GENO				IAMB	IAmb	00 10 41.3	
	comp=N,0.0nm,0.6s						
BNDS	**Bandar-Abbas**	**1.78**	**298**	*e*Pg	Pn	00 10 06.0	-8.1
MDH	**Madha**	**1.94**	**230**	P	**Pn**	**00 10 15.1**	**-1.1**
MSFE	**Esma-Masafi**	**2.00**	**233**	*e*P	**Pn**	**00 10 16.6**	**-0.4**
	SNR=8.5						
MSFE	**Esma-Masafi**	**2.00**	**233**	*e*Pn	**Pn**	**00 10 16.5**	**-0.6**
UOSS	**Minazif**	**2.25**	**224**	*e*P	**Pn**	**00 10 19.4**	**-0.9**
	SNR=9.9						
UOSS	**Minazif**	**2.25**	**224**	*e*Pn	**Pn**	**00 10 19.5**	**-0.9**
HATD	**Hatta, Dubai**	**2.38**	**224**	*e*P	**Pn**	**00 10 21.8**	**-0.4**
	SNR=9.9						
CHBR	**Chabahar**	**2.48**	**112**	*e*Pn	**Pg**	**00 10 32.0**	**+1.3**
ASHO	**Ashiyiah**	**2.53**	**223**	*e*P	**Pn**	**00 10 24.2**	**-0.1**
	SNR=16						
NAZ	**Nazwa, Dubai**	**2.59**	**233**	*e*P	**Pn**	**00 10 25.4**	**+0.4**
	SNR=9.2						
NAZ	**Nazwa, Dubai**	**2.59**	**233**	*e*Pn	**Pn**	**00 10 28.0**	**+3.0**
FAQ	**Al Faqa, Dubai**	**2.79**	**230**	P	**Pn**	**00 10 30.2**	**+2.4**
FAQ	**Al Faqa, Dubai**	**2.79**	**230**	*e*Pn	**Pn**	**00 10 27.7**	**-0.1**
HOQ	**Hoqain**	**3.03**	**191**	*e*Pn	**Pn**	**00 10 31.3**	**+0.2**
BIDO	**Bidbid**	**3.04**	**177**	*e*Pn	**Pn**	**00 10 32.2**	**+0.9**
ASUD	**Al Ashush, Dub**	**3.05**	**231**	*i* P	**Pn**	**00 10 32.1**	**+0.7**
	SNR=8.8						
ALNE	**Al Ain**	**3.19**	**219**	*e*Pn	**Pn**	**00 10 35.1**	**+1.7**
NGRK	**Negar Kerman**	**3.25**	**341**	*e*Pn	**Pn**	**00 10 36.0**	**+1.5**
NGRK				IAMB	IAmb	00 10 42.5	
	comp=Z,0.0nm,0.3s						
CHMN	**Cheshme madani**	**3.30**	**354**	IAMB	IAmb	00 08 00.3	
	comp=Z,0.0nm,1.0s						
CHMN				*e*Pn	**Pn**	**00 10 36.6**	**+1.4**
KRBR	**Kerman**	**3.56**	**343**	*e*Pn	**Pn**	**00 10 38.0**	**-0.7**
TVBK	**TV Kerman**	**3.56**	**343**	*e*Pn	**Pn**	**00 10 41.1**	**+2.3**
TVBK				IAMB	IAmb	00 10 50.8	
	comp=Z,0.0nm,0.3s						
ZHSF	**Zahedan**	**3.93**	**39**	*e*Pn	**Pb**	**00 10 50.2**	**-2.5**
KHGB	**Koh Gabri**	**4.01**	**342**	*e*Pn	**Pn**	**00 10 47.0**	**+2.2**
KHGB				IAMB	IAmb	00 10 58.6	
	comp=Z,0.0nm,0.5s						
IPAR	**Pars**	**5.41**	**308**	*e*Pn	**Pn**	**00 11 06.1**	**+2.0**
IBAF	**Bafgh**	**5.42**	**338**	IAMB	IAmb	00 11 26.8	
	comp=Z,147nm,0.4s						
IBAF				*e*Pn	**Pn**	**00 11 06.3**	**+2.2**
IMEH	**Mehriz**	**5.62**	**330**	*e*Pn	**Pn**	**00 11 09.0**	**+2.0**
IKOO	**Kooshah**	**5.91**	**9**	*e*Pn	**Pn**	**00 11 12.6**	**+1.6**
IKAZ	**Kazeroun**	**6.26**	**302**	*e*Pn	**Pn**	**00 11 14.1**	**-1.8**
ITEG	**Tejag**	**6.35**	**6**	*e*Pn	**Pn**	**00 11 20.0**	**+3.1**
ISAD	**Sadrabad**	**6.50**	**326**	*e*Pn	**Pn**	**00 11 20.4**	**+1.4**
IRAM	**Ramesheh**	**7.13**	**318**	*e*Pn	**Pn**	**00 11 28.2**	**+0.5**
IPIR	**Pirpir**	**8.64**	**316**	*e*Pn	**Pn**	**00 11 47.7**	**-0.9**
GEYT	**Alibeck**	**11.33**	**1**	LR	LR	00 16 52.2	
	comp=Z,34nm,20.2s,baz=35,slow=39						
BRTR	**Keskin Array B**	**24.12**	**309**	P	**Pn**	**00 14 58.6**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=130,slow=11,SNR=6.7						
GERES	**GERESS Array B**	**40.73**	**315**	P	**P**	**00 17 22.2**	**-1.9**
	comp=Z,0.5nm,0.9s,baz=100,slow=9.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**54.17**	**267**	P	**P**	**00 19 09.3**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=66,slow=7.0,SNR=8.2						

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*ISK **11** 00:11:48.5, 38°.47N×43°.94E, h7km, ML2.3/6*
*DDA **11** 00:11:49.9, 38°.54N×43°.82E, h7km±1km, ML2.5*
*ISCJB **11** 00:11:50.0±0.8, 38°.52N±0°.03×43°.89E±0°.05, h9km±6km, Error ellipse: s-maj=7.0km s-min=5.3km az=30.0*
ISC 11 00:11:49.5±1.3, 38°.52N±0°.03×43°.87E±0°.04, h13km±12km, n16, σ0§50/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.36**	**272**	*i* P	**Pb**	**00 11 57.7**	**-0.3**
TVAN				*i* S	**Sb**	**00 12 03.4**	**-0.3**
TVAN				IAML_P			
	comp=Z,1μm,0.1s						
VANB	**Van**	**0.39**	**282**	PG	**Pg**	**00 11 56.8**	**-0.5**
BASK	**Baskale_VAN**	**0.47**	**167**	*i* P	**Pb**	**00 12 00.1**	**+0.3**
BASK				IAML_P			
	comp=Z,3μm,0.2s						
CLDR	**Caldiran**	**0.63**	**3**	PG	**Pg**	**00 12 01.8**	**-0.1**
CLDR				SG	**Sb**	**00 12 11.9**	**+0.6**
CLDR	**Caldiran**	**0.63**	**3**	*i* P	**Pb**	**00 12 02.4**	**-0.2**
CLDR				*i* S	**Sb**	**00 12 11.1**	**-0.2**
CLDR				IAML_P			
	comp=Z,2μm,0.1s						
ERCV	**ERCIS-VAN**	**0.65**	**321**	PG	**Pg**	**00 12 02.7**	**+0.4**
GEVA	**Gevas**	**0.67**	**253**	*e*P	**Pb**	**00 12 03.0**	**-0.1**
GEVA				*i* S	**Sn**	**00 12 14.7**	**-0.6**
GEVA				IAML_P			
	comp=Z,702nm,0.1s						
AKDM	**Akdamar-Van**	**0.72**	**255**	PG	**Pb**	**00 12 03.8**	**-0.3**
AKDM				SG	**Sb**	**00 12 15.2**	**+1.2**
ADCV	**BITLIS_Adilcev**	**0.94**	**288**	*i* P	**Pg**	**00 12 07.9**	**+0.1**
ADCV				*i* S	**Sg**	**00 12 20.4**	**+0.2**
ADCV				IAML_P			
	comp=Z,155nm,0.1s						
HAKT	**HAKKARI**	**0.96**	**188**	*i* P	**Pn**	**00 12 09.6**	**+0.6**
HAKT				IAML_P			
	comp=Z,720nm,0.2s						
AGRB	**Hanur-Agry**	**1.26**	**327**	PN	**Pg**	**00 12 13.8**	**0.0**
CUKT	**Cukurca**	**1.28**	**189**	PN	**Pn**	**00 12 12.6**	**-0.7**
CUKT	**Cukurca**	**1.28**	**189**	*i* P	**Pg**	**00 12 13.9**	**-0.3**
CUKT				IAML_P			
	comp=Z,181nm,0.2s						
TASB	**TASBURUN-IGDIR**	**1.49**	**11**	PN	**Pb**	**00 12 17.6**	**+0.4**
SRTM	**Siirt_Merkez**	**1.62**	**252**	*i* P	**Pg**	**00 12 21.1**	**+0.4**
SRTM				IAML_P			
	comp=Z,480nm,0.4s						
GNI	**Garni**	**1.77**	**22**	PN	**Pb**	**00 12 21.4**	**-0.5**

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*ISCJB **11** 00:45:32.6±0.2, 21°.33S±0°.02×68°.48W±0°.03, h131km±2km, mb4.2/28, Error ellipse: s-maj=4.7km s-min=3.2km az=151.8*
*IDC **11** 00:45:32.4±0.9, 21°.18S×68°.26W, h100km±9km, mb4.0/13, mb1 4.0/17, mb1mx3.9/30, mbtmp4.3/17, MS2.9/2, Ms1 2.9/2, ms1mx2.6/19, Error ellipse: s-maj=14.7km s-min=10.6km az=119.0*
*NEIC **11** 00:45:33.0±0.0, 21°.32S×68°.64W, h133km, mb4.4/28, ML4.1(GUC), After GUC.*
*VAO **11** 00:45:

ROC1	El Roble	11.74	190	*e*Pn	Pn	00 48 14.5	-3.1
ROC1				*e*Sn	Sn	00 50 12.6	-14
AQDB	Aquidauana	12.02	88	*e*P	Pn	00 48 18.1	-3.2
PTGB	Pitanga	15.51	105	*e*P	Pn	00 49 05.8	-0.2
ITAB	Concordia	16.03	114	*e*P	Pn	00 49 12.0	-0.3
CLDB	Colider	16.09	51	*e*P	Pn	00 49 12.8	-0.4
ITRB	Iturama	17.10	88	*e*P	P	00 49 24.2	-1.0
TRQA	Tornquist	17.53	163	*e*P	P	00 49 30.6	+0.7
comp=E,2.7nm,0.9s							
TRQA	Tornquist	17.53	163	*e*P	Pn	00 49 31.4	+0.9
FRTB	Fartura	17.65	100	*e*P	P	00 49 31.2	0.0
OGAUY	Aigu	17.72	140	*e*P	Pn	00 49 33.3	+0.4
CNLB	Canela	17.80	120	*e*P	P	00 49 32.7	-0.1
TUJ01	Guaruva-PR	18.34	106	*e*P	P	00 49 38.9	-0.1
BB19B	Bebedouro	18.65	93	*e*P	P	00 49 41.5	-0.7
PLCA	Paso Flores	19.34	185	P	Pn	00 49 51.9	-0.1
comp=E,0.1nm,0.3s,baz=83,slow=21,SNR=2.8							
PLCA	Paso Flores	19.34	185	*e*P	Pn	00 49 51.9	-0.1
comp=E,2.4nm,1.0s							
PLCA	Paso Flores	19.34	185	*e*P	Pn	00 49 52.3	+0.3
RCLB	Rio Claro- Sao	19.51	97	*e*P	P	00 49 50.7	-0.9
SPB	Sao Paulo	19.61	100	*e*P	P	00 49 51.8	-0.9
BDFB	Brasilia	20.27	77	P	P	00 49 58.1	-1.8
comp=E,0.8nm,0.3s,baz=264,slow=14,SNR=8.5							
BDFB	Brasilia	20.27	77	*e*P	P	00 49 58.1	-1.8
BDFB				*e*P	P	00 49 59.1	-0.9
BSCB	Bom Sucesso	22.15	93	*e*P	P	00 50 18.6	-1.2
PTGA	Pitinga	22.18	23	P	P	00 50 16.4	-3.7
comp=E,2.3nm,0.3s,baz=208,slow=15,SNR=10							
PTGA	Pitinga	22.18	23	*e*P	P	00 50 17.4	-2.8
comp=E,3.2nm,0.5s							
PTGA	Pitinga	22.18	23	*e*P	P	00 50 17.5	-2.6
VAS01	Vassouras-RJ	23.30	97	*e*P	P	00 50 30.4	-0.5
OTAV	Otavalo	23.59	334	*e*P	P	00 50 36.6	+2.4
SMTB	Santa Maria do	23.71	61	*e*P	P	00 50 32.9	-1.8
MCI8	Montes Claros	23.72	83	*e*P	P	00 50 34.7	-0.2
MCI9	Montes Claros	23.74	83	*e*P	P	00 50 34.5	-0.5
JANB	Januaria	23.83	79	*e*P	P	00 50 33.9	-2.0
FLOC	Florencia	23.89	342	*e*P	P	00 50 36.3	0.0
DUB01	Friburgo-RJ	24.29	96	*e*P	P	00 50 39.2	-0.8
SOTA	Rioblanco	24.70	340	*e*P	P	00 50 47.6	+3.4
BBAC	Balboa, Cauca	24.80	339	*e*P	P	00 50 45.6	+0.8
CAM01	Campos-RJ	24.98	96	*e*P	P	00 50 46.1	-0.1
POPC	Popayan, Colom	25.10	340	*e*P	P	00 50 48.2	+0.7
PRAC	Prado	25.73	345	*e*P	P	00 50 53.6	+0.6
SJMB	Sao Joao De Ma	25.81	89	*e*P	P	00 50 53.1	-0.7
ALF01	Guarapari-ES	25.95	93	*e*P	P	00 50 55.5	+0.5
BSFB	Barra de Sao F	26.11	89	*e*P	P	00 50 55.4	-1.0
CHIC	Chingaza	26.37	348	*e*P	P	00 50 58.9	-0.3
RIB01	Linhares ES	26.44	91	*e*P	P	00 50 58.7	-0.7
ROSC	El Rosal	26.69	347	LR	LR	01 02 24.4	
comp=E,53nm,21.4s,baz=38,slow=38							
RUSC	La Rusia	27.49	350	*e*P	P	00 51 08.9	-0.5
NORC	Norcasia	27.51	346	*e*P	P	00 51 08.2	-0.8
PTBC	PUERTO BERRIO,	28.37	348	*e*P	P	00 51 13.5	-3.1
SDV	Santo Domingo	30.17	356	P	P	00 51 31.3	-1.5
comp=E,1.2nm,0.3s,baz=215,slow=16,SNR=2.1							
SDV	Santo Domingo	30.17	356	*e*P	P	00 51 35.3	+2.6
SMLC	San Martn de	30.51	349	*e*P	P	00 51 32.2	-3.3
NBMO	Morrinhos-CE	33.02	61	*e*P	P	00 51 57.8	+0.2
RCBR	Riachuelo	35.17	69	*e*P	P	00 52 15.8	-0.4
SJG	San Juan	39.34	4	P	P	00 52 48.4	-2.8
comp=E,14nm,0.7s,baz=144,slow=4.2,SNR=5.9							
AOPR	Arecibo Observ	39.55	3	*e*P	P	00 52 49.9	-3.0
comp=E,32nm,1.1s							
PMSA	Palmer Station	43.45	177	*e*P	P	00 53 26.7	+2.4
656A	Willston	52.25	345	P	P	00 54 32.7	+0.3
baz=164							
657A	Interlachen	52.30	345	P	P	00 54 32.9	+0.2
baz=164							
557A	Orange Park	52.68	346	P	P	00 54 35.5	-0.1
baz=165							
454A	Quitman	53.81	344	P	P	00 54 44.5	+0.6
baz=163							
353A	Camilla	54.57	344	P	P	00 54 49.4	+0.1
baz=162							
NHSC	New Hope	55.34	348	P	P	00 54 55.1	+0.3
baz=167							
Z57A	Bowman	55.62	348	P	P	00 54 57.1	+0.2
baz=166							
152A	Waverly Hall	55.95	344	P	P	00 54 59.1	-0.1
baz=162							
249A	Camden	55.99	341	P	P	00 54 59.3	-0.2
baz=159							
Y58A	Scranton	56.02	349	P	P	00 54 59.8	+0.1
baz=168							
Z54A	Sparta	56.03	346	P	P	00 54 59.3	-0.5
baz=164							
Z53A	Monticello	56.24	345	P	P	00 55 01.3	0.0
baz=163							
GOGA	Godfrey	56.34	345	P	P	00 55 01.3	-0.7
baz=163							
Z52A	Williamson	56.37	344	P	P	00 55 01.7	-0.5
baz=162							
Y55A	Saluda	56.48	347	P	P	00 55 03.1	+0.1
baz=165							
Y54A	Tignall	56.59	346	P	P	00 55 03.4	-0.4
baz=164							
Y53A	Monroe	56.80	345	P	P	00 55 04.8	-0.5
baz=163							
Z50A	Ashland	56.83	343	P	P	00 55 05.0	-0.5
baz=161							
X56A	White Oak	56.85	348	P	P	00 55 05.3	-0.3
baz=166							
Y52A	Lilburn	56.92	345	P	P	00 55 05.4	-0.7
baz=163							
LRAL	Lakeview Retre	56.94	341	P	P	00 55 05.6	-0.6
baz=160							
X55A	Gracelyn & Ava	56.95	347	P	P	00 55 06.3	0.0
baz=166							
W58A	Raeford	57.03	350	P	P	00 55 06.8	0.0
baz=168							
X54A	Belton	57.18	346	P	P	00 55 07.5	-0.5
baz=165							
Y51A	Rockmart	57.21	344	P	P	00 55 07.4	-0.7
baz=162							
W57A	Gilead	57.29	349	P	P	00 55 08.6	-0.1
baz=167							
Y50A	Piedmont	57.38	343	P	P	00 55 09.3	-0.1
baz=161							
W56A	Indian Trail	57.38	348	P	P	00 55 09.1	-0.2
baz=167							
KMSC	Kings Mountain	57.53	348	P	P	00 55 10.2	-0.2
baz=166							
Y49A	Blount Mountai	57.54	342	P	P	00 55 09.7	-0.7
baz=160							
X52A	Dahlonega	57.58	345	P	P	00 55 10.4	-0.4
baz=163							
V59A	Middlesex	57.60	351	P	P	00 55 10.4	-0.4
baz=169							
W54A	Cherokee Point	57.66	347	P	P	00 55 11.5	+0.2
baz=165							
V58A	Windy Hill, Pi	57.76	350	P	P	00 55 11.6	-0.3
baz=168							
X51A	Calhoun	57.79	344	P	P	00 55 12.1	-0.1
baz=162							
X50B	Fort Payne	57.90	343	P	P	00 55 12.4	-0.6
baz=161							
W53A	Cullowhee	57.95	346	P	P	00 55 13.4	-0.1
baz=164							
V57A	Coltrane Farms	57.97	349	P	P	00 55 13.2	-0.2
baz=168							
V56A	Mocksville	58.02	349	P	P	00 55 13.8	+0.1
baz=167							
U59A	Littleton	58.11	351	P	P	00 55 14.2	-0.1
baz=170							
V55A	Taylorsville	58.20	348	P	P	00 55 15.3	+0.3
baz=166							
U58A	Oxford	58.26	350	P	P	00 55 15.2	-0.3
baz=169							
V54A	Nebo	58.27	347	P	P	00 55 15.7	+0.1
baz=165							
X48A	Hartselle	58.27	342	P	P	00 55 15.1	-0.5
baz=160							
W51A	Cleveland	58.33	344	P	P	00 55 15.6	-0.3
baz=162							
V53A	Saluda	58.35	346	P	P	00 55 16.0	-0.1
baz=164							
U57A	Blanch	58.42	350	P	P	00 55 16.2	-0.4
baz=168							
W50A	Signal Mountai	58.51	344	P	P	00 55 16.7	-0.5
baz=162							
U56A	King	58.52	349	P	P	00 55 17.2	-0.1
baz=167							
X47A	Russelville	58.57	341	P	P	00 55 16.8	-0.9
baz=159							
W49A	Belvidere	58.68	343	P	P	00 55 18.0	-0.4
baz=161							
T59A	Double "B" Far	58.68	352	P	P	00 55 18.0	-0.4
baz=170							
V52A	Sevierville	58.70	346	P	P	00 55 18.0	-0.5
baz=164							
U55A	TA2, Sparta	58.80	348	P	P	00 55 19.3	0.0
baz=166							
T58A	Grand View Acr	58.80	351	P	P	00 55 19.2	+0.1
baz=169							
V51A	Loudon	58.84	345	P	P	00 55 18.9	-0.5
baz=163							
W48A	Pulaski	58.88	342	P	P	00 55 19.3	-0.6
baz=160							
V50A	Pikevile	58.90	344	P	P	00 55 19.4	-0.5
baz=162,SNR=7.8							
T57A	Hurt	58.96	350	P	P	00 55 20.2	-0.1
baz=168							
U54A	Nelsons Funny	58.97	348	P	P	00 55 20.4	0.0
baz=166							
U53A	Fall Branch	58.97	347	P	P	00 55 20.0	-0.5
baz=165							
PLAL	Pickwick Lake	59.07	341	*e*P	P	00 55 19.1	-2.0
comp=E,5.3nm,1.0s							
T56A	Rocky Mt	59.12	349	P	P	00 55 21.1	-0.4
baz=168							
U52A	Thorn Hill	59.17	346	P	P	00 55 21.2	-0.6
baz=164							
V49A	McMinnville	59.20	344	P	P	00 55 21.2	-0.7
baz=161,SNR=5.6							
U51A	La Follette	59.31	345	P	P	00 55 21.8	-0.9
baz=163							
T55A	Pulaski	59.34	349	P	P	00 55 23.4	+0.4
baz=167,SNR=6.4							
TZTN	Tazewell	59.36	346	P	P	00 55 22.7	-0.4
baz=164							
V48A	Smith Brothers	59.42	343	*e*P	P	00 55 22.2	-1.2
comp=E,7.4nm,0.8s							
V48A	Smith Brothers	59.42	343	P	P	00 55 22.8	-0.6
baz=160,SNR=5.2							
T54A	Tazewell	59.44	348	P	P	00 55 23.4	-0.3
baz=166							
U50A	Jamestown	59.54	345	P	P	00 55 23.7	-0.6
baz=162							
T53A	Wise	59.56	347	P	P	00 55 24.2	-0.3
baz=165							
CLTN	Cedars of Leba	59.62	343	*e*P	P	00 55 23.9	-0.9
comp=E,5.0nm,0.8s							
S57A	Dark Hollow, R	59.66	350	P	P	00 55 24.4	-0.7
baz=169							
V47A	Nunnelly	59.70	342	P	P	00 55 24.3	-1.1
baz=160							
V46A	Holladay	59.84	342	P	P	00 55 25.1	-1.2
baz=159							
T51A	Gray	59.85	346	P	P	00 55 26.1	-0.4
baz=164							
U49A	Red Boiling Sp	59.87	344	P	P	00 55 26.0	-0.6
baz=162							
WHTX	Lake Whitney,	59.89	332	P	P	00 55 26.9	+0.2
baz=149							
S55A	Lewisburg	59.93	349	P	P	00 55 27.4	+0.4
baz=167,SNR=9.8							
R58A	Rapidan	60.05	351	P	P	00 55 27.5	-0.2
baz=170							
U48A	Cassie Pea, Po	60.07	343	P	P	00 55 27.3	-0.6
baz=161							
WVT	Waverly	60.07	342	*e*P	P	00 55 26.5	-1.3
comp=E,9.2nm,0.9s							
WVT	Waverly	60.07	342	P	P	00 55 26.9	-1.0
baz=159							
S54A	Dingess, Beckl	60.10	348	P	P	00 55 28.2	0.0
baz=166							
T50A	Nancy	60.12	345	P	P	00 55 27.6	-0.6
baz=163							
R57A	Stanardsville	60.12	351	P	P	00 55 28.6	+0.3
baz=169							
U47A	Clarksville	60.20	343	P	P	00 55 28.1	-0.7
baz=160,SNR=6.0							
T49A	Edmonton	60.37	344	P	P	00 55 29.3	-0.6
baz=162,SNR=7.8							
R54A	Victor	60.42	349	P	P	00 55 30.4	+0.1
baz=167,SNR=5.9							
S51A	Beattyville	60.42	346	P	P	00 55 29.6	-0.6
baz=164							
MIAR	Mount Ida	60.53	336	P	P	00 55 31.1	+0.1
baz=153,SNR=5.1							
T48A	Bowling Green	60.59	344	P	P	00 55 30.7	-0.8
baz=161							
W41B	Gary Mavity, V	60.60	338	P	P	00 55 31.0	-0.6
baz=155							
VNA2	Neumayer--Watz	60.62	161	P	P	00 55 31.7	+0.4
baz=286,slow=6.6							
S50A	Richmond	60.64	346	P	P	00 55 31.3	-0.5
baz=163,SNR=5.6							
T47A	Sharon Grove	60.67	343	P	P	00 55 31.3	-0.7
baz=160,SNR=7.7							
R53A	Hurricane	60.74	348	P	P	00 55 32.5	0.0
baz=166							
TXAR	Lajitas Array	60.76	325	P	P	00 55 33.2	+0.3
comp=E,0.6nm,0.8s,baz=160,slow=8.4,SNR=2.4							
Q57A	Strasburg	60.83	351	P	P	00 55 33.6	+0.6
baz=170							
T46A	Princeton	60.94	342	P	P	00 55 33.2	-0.6
baz=160,SNR=6.7							
S49A	Springfield	60.95	345	P	P	00 55 33.1	-0.7
baz=162							
Q56A	Snyder Ridge,	60.95	351	P	P	00 55 34.5	+0.7
baz=169							
S48A	Wiedeman Farm,	61.02	344	P	P	00 55 33.1	-1.2
baz=161							
Q55A	Buckhannon	61.05	350	P	P	00 55 35.5	+0.9
baz=168,SNR=6.4							
R51A	Hillsboro	61.05	346	P	P	00 55 34.0	-0.5
baz=164							
Q54A	Coxs Mills	61.17	349	*e*P	P	00 55 34.8	-0.5
comp=E,11nm,0.6s							
Q54A	Coxs Mills	61.17	349	P	P	00 55 35.3	0.0
baz=167,SNR=5.4							
Q53A	Leroy	61.17	348	P	P	00 55 35.2	-0.2
baz=166,SNR=7.1							
S47A	Hartford	61.18	343	P	P	00 55 34.4	-1.0
baz=161							
W39A	Magazine	61.18	336	*e*P	P	00 55 35.6	+0.1
comp=E,8.7nm,0.8s							
W39A	Magazine	61.18	336	P	P	00 55 36.0	+0.5
baz=153							
P57A	Homestead Farm	61.22	352	P	P	00 55 36.1	+0.5
baz=170							
P56A	Dayton Farm, R	61.35	351	P	P	00 55 37.1	+0.6
baz=169							
R49A	Shelbyville	61.40	345	P	P	00 55 35.9	-1.0
baz=162							
ABTX	Abilene, Hawle	61.41	330	P	P	00 55 37.3	+0.2
baz=147							
Q52A	Bidwell	61.41	348	P	P	00 55 36.6	-0.4
baz=166							
S46A	Don Dixon Farm	61.49	343	P	P	00 55 36.2	-1.2
baz=160							
P55A	Reedsville	61.51	350	P	P	00 55 37.3	-0.3
baz=168							
WCI	Wyandotte Cave	61.62	344	P	P	00 55 37.5	-0.9
baz=161							
Q50A	Georgetown	61.66	346	P	P	00 55 37.9	-0.7
baz=164							
MCWV	Mont Chateau	61.66	350	P	P	00 55 38.8	+0.3
baz=168							
R48A	Northridge Ran	61.68	345	P	P	00 55 38.0	-0.7
baz=162							
Q51A	Peebles	61.70	347	P	P	00 55 38.2	-0.7
baz=164							
P54A	Burton	61.71	350	P	P	00 55 39.3	+0.4
baz=168,SNR=7.2							
P53A	Whipple	61.76	349	*e*P	P	00 55 36.8	-2.4
comp=E,21nm,0.8s							
P53A	Whipple	61.76	349	P	P	00 55 38.9	-0.4
baz=166,SNR=7.1							
U40A	Yellville	61.88	338	P	P	00 55 39.5	-0.7
baz=154							
S44A	Carbondale	61.94	341	P	P	00 55 39.9	-0.6
baz=158							
Q49A	Aurora	62.02	346	P	P	00 55 40.3	-0.7
baz=163							
P52A	Corning	62.04	348	P	P	00 55 40.7	-0.5
baz=166							
O56A	Blue Knob Stat	62.06	351	P	P	00 55 41.8	+0.4
baz=170							
O55A	Ligonier	62.11	351	P	P	00 55 42.1	+0.4
baz=169							
Q48A	North Vernon	62.15	345	P	P	00 55 40.9	-0.9
baz=162							
R45A	Skylar, Fairfi	62.21	343	P	P	00 55 41.4	-1.0
baz=159,SNR=6.1							
SNAA	Sanae	62.25	161	P	P	00 55 43.8	+1.5
SNAA	Sanae	62.25	161	P	P	00 55 44.0	+1.7
comp=E,2.0nm,0.7s,baz=258,slow=8.6,SNR=16							
SNAA	Sanae	62.25	161	*e*P	P	00 55 44.0	+1.7
comp=E,2.6nm,0.8s							
O54A	Avella	62.26	350	P	P	00 55 42.4	-0.2
baz=168							
Q47A	Bedord North L	62.32	344	P	P	00 55 42.1	-0.9
baz=161							
SSPA	Standing Stone	62.33	352	P	P	00 55 43.0	-0.1
baz=170							
P50A	Jamestown	62.35	347	P	P	00 55 42.7	-0.5
baz=164							
N57A	Milroy	62.41	352	P	P	00 55 43.6	0.0
baz=171							
O52A	Adamsville	62.45	349	P	P	00 55 43.6	-0.3
baz=166							
O53A	New Philadelph	62.47	349	P	P	00 55 43.8	-0.2
baz=167							
P49A	Miami Univ. Ec	62.48	346	P	P	00 55 43.1	-1.0
baz=163							
P48A	Milroy	62.58	345	P	P	00 55 43.5	-1.3
baz=162							
TUL1	Leonard	62.58	335	P	P	00 55 44.9	+0.1
baz=151							
O51A	Pataskala	62.62	348	P	P	00 55 44.5	-0.5
baz=165							
N55A	Marion Center	62.63	351	P	P	00 55 45.6	+0.5
baz=169,SNR=6.3							
N56A	West Decatur	62.66	352	P	P	00 55 45.6	+0.3
baz=170							
Q45A	Warren Harvey,	62.74	343	P	P	00 55 44.8	-1.0
baz=160							
ACSO	Alum Creek Sta	62.78	348	P	P	00 55 45.6	-0.5
baz=165							
WMOK	Wichita Mounta	62.80	332	P	P	00 55 46.0	-0.4
baz=148							
P47A	Martinsville	62.80	345	P	P	00 55 45.3	-0.9
baz=162							
O50A	Cable	62.83	347	P	P	00 55 45.8	-0.6
baz=164							
CCM	Cathedral Cave	62.88	340	*e*P	P	00 55 44.6	-2.2
comp=E,9.6nm,0.8s							
CCM	Cathedral Cave	62.88	340	P	P	00 55 46.4	-0.4
baz=156							
N53A	Lisbon	62.94	350	P	P	00 55 47.0	-0.2
baz=167							
N54A	Moraine State	62.95	350	P	P	00 55 47.6	+0.4
baz=168							
O49A	Covington	63.02	346	P	P	00 55 47.0	-0.7
baz=164							
N52A	McGinn's Farm,	63.10	349	P	P	00 55 47.8	-0.4
baz=166							
M56A	Emporium	63.21	352	P	P	00 55 48.7	-0.2
baz=170							
P45A	Graceland, Par	63.22	343	*e*P	P	00 55 47.2	-1.8
comp=E,14nm,0.8s							
P45A	Graceland, Par	63.22	343	P	P	00 55 47.7	-1.3
baz=160							
M55A	Ridgway	63.27	351	P	P	00 55 49.5	+0.2
baz=170							
O48A	Farmland	63.27	346	P	P	00 55 48.5	-0.9
baz=163							
N51A	Ashland	63.33	348	P	P	00 55 49.0	-0.7
baz=166							
M54A	Oil Creek Stat	63.44	351	P	P	00 55 50.4	0.0
baz=168							
O47A	Sheridan	63.49	345	P	P	00 55 49.7	-1.0
baz=162							
MNTX	Cornudas Mount	63.52	325	P	P	00 55 50.9	-0.3
baz=142							
M53A	WI Miller and	63.53	350	P	P	00 55 50.9	-0.1
baz=168							
BINY	Binghamton	63.66	354	P	P	00 55 52.2	+0.3
baz=172							
M51A	Elyria	63.69	349	P	P	00 55 51.6	-0.5
baz=166							
N49A	Columbus Grove	63.69	347	P	P	00 55 51.4	-0.6
baz=164,SNR=5.1							
N48A	Decatur	63.82	346	P	P	00 55 52.0	-0.9
baz=163							
P43A	Skaggs, Pawnee	63.82	342	P	P	00 55 51.8	-1.1
baz=158							
SFIN	Lafayette	63.85	344	P	P	00 55 51.8	-1.4
baz=161							
O45A	Potomac	63.89	344	P	P	00 55 52.0	-1.4
baz=160							
L55A	Hinsdale	63.93	352	P	P	00 55 52.7	-0.9
baz=170							
N47A	Urbana	63.99	346	P	P	00 55 53.1	-0.9
baz=162							
ERPA	Erie	64.08	351	P	P	00 55 54.5	-0.1
baz=168							
PLIO	Pelee Island,	64.18	348	P	P	00 55 54.6	-0.6
baz=166							
M49A	Liberty Center	64.18	347	P	P	00 55 54.6	-0.7
baz=164							
N46A	Monticello	64.25	345	P	P	00 55 54.5	-1.2
baz=161							
L48A	N Adams	64.73	347	P	P	00 55 58.0	-0.8
baz=164							
N43A	Stutzman Famil	64.93	343	P	P	00 55 59.3	-0.9
baz=159							
K50A	Casco	65.17	349	P	P	00 56 00.7	-0.9
baz=166							
J52A	Paris	65.26	350	P	P	00 56 02.0	-0.2
baz=168							
M43A	Waltham Townsh	65.33	343	P	P	00 56 01.7	-1.1
baz=159							
K48A	Perry	65.49	347	P	P	00 56 02.9	-0.8
baz=164							
K47A	Vermontville	65.54	347	P	P	00 56 03.0	-1.0
baz=163							
M41A	Milan	65.72	342	P	P	00 56 04.0	-1.2
baz=158							
K46A	Dorr	65.73	346	P	P	00 56 03.8	-1.4
baz=162							
J49A	Marlette	65.83	348	P	P	00 56 04.8	-1.1
baz=165							
I55A	Frankford	65.84	353	P	P	00 56 05.7	-0.2
baz=171							
I51A	Listowel	65.89	350	P	P	00 56 05.9	-0.4
baz=167							
J48A	Bridge Port	65.90	348	P	P	00 56 04.9	-1.4
baz=165							
LONY	Lake Ozonia	65.94	355	P	P	00 56 06.5	-0.1
baz=174							
L43A	Garden Prairie	65.97	344	P	P	00 56 06.2	-0.6
baz=160							
J47A	Sunmer	66.05	347	P	P	00 56 06.4	-0.9
baz=164							
BASO	Ashfield	66.20	350	P	P	00 56 07.9	-0.4
baz=167							
BWLO	Walkerton	66.22	350	P	P	00 56 08.0	-0.3
baz=167							
K43A	Burlington	66.36	344	P	P	00 56 08.5	-0.7
baz=160							
H52A	Wyevale	66.54	351	P	P	00 56 10.0	-0.4
baz=169							
L40A	Anamosa	66.55	342	P	P	00 56 10.8	+0.3
baz=157							
ANMO	Albuquerque	66.61	327	P	P	00 56 12.4	+1.1
baz=142							
TASM	ASL Pad, Albuq	66.62	327	P	P	00 56 12.4	+1.1
baz=142							
TASM	ASL Pad, Albuq	66.62	327	P	P	00 56 12.4	+1.1
baz=142							
K42A	Prairie Point,	66.69	343	P	P	00 56 10.9	-0.4
baz=159							
BMRO	Meriville Lake	66.70	350	P	P	00 56 10.8	-0.6
baz=167							
I47A	Gladwin	66.73	348	P	P	00 56 10.7	-0.9
baz=164							
I48A	Sherman Twp	66.74	348	P	P	00 56 11.0	-0.6
baz=165							
G53A	Haliburton	66.84	352	P	P	00 56 11.0	-1.3
baz=170							
I46A	Reed City	66.85	347	P	P	00 56 11.2	-1.2
baz=163							
J43A	Natural Harves	67.01	344	P	P	00 56 12.8	-0.6
baz=160							
JFWS	Jewell Farm	67.06	343	P	P	00 56 13.3	-0.5
baz=158							
J42A	Columbus

	baz=159						
H47A	Mio	67.23	348	P	P	00 56 13.7	-1.1
	baz=164						
BUKO	Buck Lake	67.26	352	P	P	00 56 14.7	-0.2
	baz=169						
KLBO	Killbear Provi	67.29	351	P	P	00 56 14.9	-0.1
	baz=168						
TOBO	Tobermory, Bru	67.36	350	P	P	00 56 14.8	-0.7
	baz=167						
H46A	Fife Lake	67.37	347	P	P	00 56 14.7	-0.9
	baz=163						
F52A	Sundridge	67.59	352	P	P	00 56 16.6	-0.4
	baz=169						
I42A	Draeger Farm,	67.61	344	P	P	00 56 16.7	-0.5
	baz=160						
F51A	Arnstein	67.81	351	P	P	00 56 17.8	-0.6
	baz=169						
H43A	Windswept, Lux	67.88	345	P	P	00 56 18.4	-0.4
	baz=161						
214A	Organ Pipe Nat	67.92	320	P	P	00 56 21.3	+1.9
	baz=136						
G45A	Suttons Bay	67.95	347	P	P	00 56 18.3	-0.9
	baz=163						
E54A	Lac Daplat, Po	67.97	354	P	P	00 56 19.0	-0.4
	baz=171						
G46A	Petoskey	68.05	348	P	P	00 56 19.3	-0.6
	baz=164						
H42A	Shiocton	68.10	345	P	P	00 56 19.6	-0.6
	baz=160						
F48A	Evansville	68.13	349	P	P	00 56 19.9	-0.4
	baz=166						
BGNE	Belgrade	68.27	336	P	P	00 56 21.5	+0.1
	baz=150						
E51A	G1948 Merrick	68.34	352	P	P	00 56 21.7	0.0
	baz=169						
SDCO	Great Sand Dun	68.35	329	eP	P	00 56 22.5	+0.2
	comp=E,2.7nm,0.8s						
SDCO	Great Sand Dun	68.35	329	P	P	00 56 23.5	+1.2
	baz=143						
DBIC	Dimbokro	68.37	73	P	P	00 56 22.6	0.0
	comp=E,2.9nm,0.5s,baz=223,slow=8.2,SNR=7.6						
DBIC	Dimbokro	68.37	73	eP	P	00 56 22.6	0.0
	comp=E,4.5nm,0.7s						
E50A	Wahnapitae	68.41	351	P	P	00 56 21.7	-0.4
	baz=168						
G43A	Wallace	68.60	346	P	P	00 56 22.6	-0.7
	baz=161						
D54A	Lac Fusel, La	68.63	354	P	P	00 56 23.1	-0.4
	baz=172						
D52A	ZEK Kipawa Sen	68.64	353	P	P	00 56 23.7	+0.2
	baz=170						
D53A	Lac Vacive, Po	68.66	353	P	P	00 56 23.6	0.0
	baz=171						
E48A	Lockeyer	68.69	350	P	P	00 56 23.6	-0.2
	baz=166						
E47A	Iron Bridge	68.85	349	P	P	00 56 24.6	-0.2
	baz=165						
X16A	Lo Mia Camp, P	68.90	323	eP	P	00 56 22.3	-3.3
	comp=E,2.9nm,1.0s						
E46A	Sault Ste Mari	68.95	348	P	P	00 56 24.7	-0.8
	baz=164						
F43A	Flat Rock, Esc	69.03	346	P	P	00 56 25.1	-0.9
	baz=162						
G40A	Rib Lake	69.23	344	P	P	00 56 26.8	-0.5
	baz=159						
D49A	Beulah Townshi	69.33	351	P	P	00 56 27.5	-0.2
	baz=167						
D47A	Chapleau	69.40	349	P	P	00 56 27.6	-0.7
	baz=166						
MVCO	Mesa Verde	69.41	327	P	P	00 56 30.2	+1.4
	baz=140						
G39A	Holcombe	69.50	343	P	P	00 56 28.5	-0.4
	baz=158						
E43A	Lone Tree Farm	69.50	346	P	P	00 56 28.3	-0.6
	baz=162						
VLDQ	Val d'Or	69.66	354	eP	P	00 56 29.1	-0.7
	comp=E,5.2nm,0.9s						
ECSD	EROS Data Cent	69.76	339	P	P	00 56 30.3	-0.2
	baz=152						
F40A	Park Falls	69.81	344	P	P	00 56 30.7	-0.2
	baz=159						
SPMN	Marine on St.	69.90	342	P	P	00 56 31.6	+0.2
	baz=156						
F39A	Loretta	70.02	344	P	P	00 56 31.7	-0.4
	baz=158						
ISCO	Idaho Springs	70.04	330	P	P	00 56 33.7	+0.9
	baz=143						
F38A	Pierce - Schro	70.32	343	P	P	00 56 33.5	-0.4
	baz=157						
D41A	Chassel	70.50	346	P	P	00 56 34.9	-0.1
	baz=160						
LSQQ	Lebel-sur-Quev	70.55	354	P	P	00 56 35.1	0.0
	baz=172						
BC3	Big Chuckawall	70.69	320	P	P	00 56 38.7	+2.1
	baz=134						
MONP2	Monument Peak	70.76	319	P	P	00 56 39.1	+2.0
	baz=133						
E38A	The Farm, Brul	70.83	343	P	P	00 56 36.6	-0.3
	baz=157						
N23A	Red Feather La	71.07	331	P	P	00 56 40.0	+1.1
	baz=143						
CHGQ	Chibougamau	71.19	356	P	P	00 56 39.1	+0.1
	baz=174						
MATQ	Matagami	71.31	354	P	P	00 56 39.4	-0.4
	baz=171						
C40A	Isle Royale Na	71.44	346	P	P	00 56 40.4	-0.3
	baz=160						
O20A	White River Ci	71.54	329	P	P	00 56 42.2	+0.5
	baz=141						
GMRC	Granite Mounta	71.59	321	P	P	00 56 44.4	+2.3
	baz=134						
EYMN	Ely	72.05	344	P	P	00 56 43.7	-0.6
	baz=158						
BFSC	Mount Baldy Ra	72.43	319	P	P	00 56 49.0	+1.9
	baz=132						
GSC	Goldstone, Bar	72.63	320	P	P	00 56 49.9	+1.7
	baz=133						
RSSD	Black Hills	72.87	334	P	P	00 56 50.5	+1.0
	baz=146						
EDW2	Edwards Air Fo	73.06	319	P	P	00 56 52.1	+1.5
	baz=132						
TPNV	Topopah Spring	73.44	322	P	P	00 56 55.3	+2.3
	baz=134						
FURC	Furnace Creek,	73.46	321	P	P	00 56 55.3	+2.5
	baz=134						
MPMC	Manual Prospec	73.55	320	P	P	00 56 55.0	+1.3
	baz=133						
AGMN	Agassiz Nation	73.58	341	P	P	00 56 53.9	+0.6
	baz=154						
DUG	Dugway, Tooele	73.88	326	P	P	00 56 57.2	+1.8
	baz=138						
ISA	Isabella, Lake	73.88	320	P	P	00 56 57.8	+2.4
	baz=132						
R11A	Troy Canyon, C	74.04	323	P	P	00 56 58.8	+2.4
	baz=135						
CWC	Cottonwood Cre	74.16	320	P	P	00 56 59.3	+2.1
	baz=133						
PKM	Mcpherson Peak	74.19	318	P	P	00 56 59.2	+1.8
	baz=131						
PDAR	Pinedale Array	74.21	330	P	P	00 56 58.8	+1.4
	comp=E,0.5nm,0.5s,baz=135,slow=7.4,SNR=5.6						
VES	Vestal, Richgr	74.37	319	P	P	00 56 59.3	+1.1
	baz=132						
ULM	Lac du Bonnet	75.33	342	P	P	00 57 03.2	-0.2
	comp=E,3.7nm,0.6s,baz=164,slow=7.3,SNR=3.8						
NVAR	Mina Array Bea	75.64	322	P	P	00 57 07.6	+1.9
	comp=E,1.6nm,0.8s,baz=153,slow=6.8,SNR=8.4						
RLMT	Red Lodge	75.90	332	P	P	00 57 08.8	+1.7
	baz=141						
TOA1	Torodi Ar. Sit	76.99	70	eP	P	00 57 11.2	-2.3
TORD	Torodi Ar. Bea	76.99	70	P	P	00 57 11.2	-2.3
	comp=E,0.7nm,0.4s,baz=263,slow=3.4,SNR=96						
HLID	Hailey	77.15	328	P	P	00 57 16.2	+2.1
	baz=137						
BOZ	Bozeman (W)	77.33	331	P	P	00 57 16.3	+1.3
	baz=139						
EGMT	Eagleton	78.37	333	eP	P	00 57 17.8	-2.9
	comp=E,7.8nm,0.8s						
EGMT	Eagleton	78.37	333	P	P	00 57 21.1	+0.5
	baz=141						
O03E	Paynes Creek	78.90	321	P	P	00 57 24.3	+0.6
	baz=131						
MSO	Missoula	79.32	330	P	P	00 57 26.6	+0.8
	baz=138						
M04C	Macdoel	79.89	322	P	P	00 57 30.6	+1.5
	baz=131						
I02D	Swisshome	82.51	323	P	P	00 57 44.4	+1.7
	baz=130						
BOSA	Boshof	83.18	118	P	P	00 57 47.2	+0.4
	comp=E,3.7nm,0.9s,baz=253,slow=1.4,SNR=5.0						
MAW	Mawson	84.32	163	P	P	00 57 53.5	+1.9
	comp=E,1.4nm,0.5s,baz=247,slow=7.7,SNR=6.2						
MAW	Mawson	84.32	163	eP	P	00 57 53.5	+1.9
	comp=E,0.4nm,0.7s						
ESDC	Sonseca Array	85.52	44	P	P	00 57 58.2	0.0
	comp=E,0.3nm,0.5s,baz=241,slow=5.6,SNR=5.7						
YKA	Yellowknife Ar	91.22	340	P	P	00 58 24.9	+0.4
	comp=E,5.7nm,0.5s,baz=134,slow=4.5,SNR=42						
ASAR	Alice Springs	130.16	207	PKP	PKiKP	01 04 31.4	+0.5
	comp=E,0.7nm,0.6s,baz=134,slow=1.3,SNR=7.5						
AS31	Alice Springs	130.16	207	ePKPdf	PKiKP	01 04 31.4	+0.5
PEA1	Petropavlovsk-	132.70	324	ePKPdf	PKiKP	01 04 35.6	+0.6
PETK	Petropavlovsk-	132.70	324	PKP	PKiKP	01 04 35.6	+0.6
	comp=E,1.1nm,0.6s,baz=77,slow=3.2,SNR=4.6						
WR1	Warramunga Arr	133.22	210	ePKPdf	PKiKP	01 04 37.7	+0.5
WRA	Warramunga Arr	133.22	210	PKP	PKiKP	01 04 37.7	+0.5
	comp=E,1.5nm,0.7s,baz=208,slow=2.5,SNR=10.0						
ZALV	Zalesovo Beam	141.72	25	PKhKP	PKPdf	01 04 49.0	-1.5
	comp=E,1.4nm,0.6s,baz=294,slow=3.8,SNR=5.3						
KSH	Kashi	144.76	51	PKP	PKPdf	01 04 56.6	+0.1
KSH				PP	PP	01 08 18.3	+3.4
KSH				SKS	SKSdf	01 11 53.9	-0.8
MKAR	Makanchi Array	145.35	36	PKPbc	PKiKP	01 04 58.1	-3.1
	comp=E,5.9nm,0.7s,baz=326,slow=3.6,SNR=50						
WMQ	Urumqi	150.18	36	ePKPbc	PKPdf	01 05 04.5	-0.8
USRK	Ussuriysk Ar.	151.62	328	PKPbc	PKiKP	01 05 14.1	0.0
	comp=E,2.2nm,0.7s,baz=8.5,slow=2.9,SNR=6.3						
MJAR	Matsushiro Arr	152.29	309	PKPbc	PKiKP	01 05 15.4	-0.4
	comp=E,0.8nm,0.3s,baz=109,slow=2.9,SNR=4.1						
MAJO	Matsushiro	152.29	309	ePKPbc	PKiKP	01 05 15.4	-0.4
SONA0	Songino Array	153.32	8	ePKPdf	PKPdf	01 05 11.6	+1.6
SONA0				ePKPbc	PKiKP	01 05 19.0	+1.3
SONA0				ePKPab	PKPab	01 05 30.6	+0.7
SONM	Songino Array	153.32	8	PKP	PKPdf	01 05 11.5	+1.6
	comp=E,0.5nm,0.7s,baz=311,slow=1.9,SNR=3.1						
SONM				PKPbc	PKiKP	01 05 19.0	+1.3
	comp=E,0.4nm,0.6s,baz=43,slow=1.6,SNR=3.5						
SONM				PKPab	PKPab	01 05 30.5	+0.7
	comp=E,0.7nm,0.8s,baz=339,slow=3.7,SNR=3.0						
KSRS	Korea Array	158.58	322	PKP	PKPdf	01 05 18.7	+1.8
	comp=E,0.8nm,0.5s,baz=34,slow=4.3,SNR=4.3						
KS15	Wonju Array Si	158.61	322	ePKPdf	PKPdf	01 05 18.7	+1.7
HHC	Hu-ho-hao-te	160.62	360	ePKP	PKPdf	01 05 19.7	+0.3
HHC				LR	LR		
	comp=E,210nm,18.8s						
HHC				LR	LR		
	comp=E,140nm,18.1s						
HHC				LR	LR		
	comp=E,320nm,17.7s						
LZH	Lanzhou	163.93	23	ePKP	PKPdf	01 05 24.4	+1.5
NJ2	Nanjing	167.52	330	ePKP	PKPdf	01 05 26.2	+0.5
CD2	Chengdu	168.28	35	PKP	PKPdf	01 05 40.2	+14

UCR 11 01:07:02.8±0.9, 11°.66N×85°.78W, h14km±4km, MD3.8, ML2.9, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACON	Acoyapa	0.66	63	eP	Pg	01 07 15.0	-0.8
ACON				eS	Sg	01 07 24.7	+0.1
APYN	Apoyeque	0.80	315	eP	Pg	01 07 17.5	-0.9
BUAI	Buenos Aires	0.89	151	i P	Pb	01 07 19.0	-1.1
BUAI				i S	Sg	01 07 31.9	0.0
GB1A	Borinquen Arri	0.92	156	i P	Pb	01 07 19.8	-0.8
GBS3	Finca Las Img	0.93	160	i P	Pb	01 07 19.6	-1.2
BUEV	Buena Vista	0.93	157	i P	Pb	01 07 19.5	-1.3
LAPC	Finca la Perla	0.95	159	i P	Pb	01 07 19.6	-1.5
GPS2	Hotel Rincn d	0.99	155	i P	Pb	01 07 21.3	-0.5
NY14	Universidad de	1.03	167	i P	Pb	01 07 21.5	-1.0
MOMN	Momotombo	1.05	315	eP	Pb	01 07 21.0	-1.8
PTEN	Parque Tenorio	1.22	140	i P	Pn	01 07 24.7	-0.8
MATN	Matagalpa	1.27	353	eP	Pn	01 07 25.1	-1.1
MATN				eS	Sb	01 07 42.5	-0.3
MATN				IAML		01 07 44.6	
	comp=N,344nm,0.2s						
ESPN	Las Esperanzas	1.54	70	eP	Pn	01 07 29.5	-0.3
ESPN				IAML		01 07 52.2	
	comp=N,96nm,0.5s						
ESTN	Estel	1.54	338	eS	Sb	01 07 50.8	+0.1
JTS	Las Juntas de	1.58	149	eP	Pn	01 07 29.9	-0.5
JTS				eS	Sn	01 07 50.8	0.0

KRSC 11 01:29:57.5±1.8, 51°.92N×160°.67E, h56km±22km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.25	342	eP	Pn	01 30 19.7	+1.0
SPN				eS	Sn	01 30 34.9	+0.4
RUS	Russkaya	1.43	292	eP	Pn	01 30 23.0	+1.9
RUS				eS	Sn	01 30 40.4	+1.6
NLC	Nalytchevo	1.50	328	eP	Pn	01 30 24.3	+2.3
NLC				eS	Sn	01 30 43.0	+2.5
KDTR	Khodutka, Kamc	1.61	267	eP	Pn	01 30 25.5	+1.9
KDTR				eS	Sn	01 30 44.3	+1.0
DALK	Dalny	1.62	314	eP	Pn	01 30 25.6	+1.9
DALK				eS	Sn	01 30 44.7	+1.2
MTVR	Mutnovka	1.63	291	eP	Pn	01 30 26.1	+2.1
MTVR				eS	Sn	01 30 46.0	+2.0
PET	Petropavlovsk	1.66	313	eP	Pn	01 30 26.1	+1.9
PET				eS	Sn	01 30 46.3	+1.8
UGLR	Uglovaya	1.72	320	eP	Pn	01 30 27.7	+2.5
SDLR	Sedlovina	1.75	322	eP	Pn	01 30 28.0	+2.4
SMAR	Somma	1.77	321	eP	Pn	01 30 28.1	+2.2
ASAK	Asacha	1.77	286	eP	Pn	01 30 29.2	+3.4
AVH	Avacha	1.79	320	eP	Pn	01 30 29.0	+2.8
AVH				eS	Sn	01 30 50.8	+2.9
KRMR	Karymshinskiy	1.81	301	eP	Pn	01 30 28.4	+2.2
KRMR				eS	Sn	01 30 50.3	+2.3
KRER	Koryakskii	1.82	321	eP	Pn	01 30 28.8	+2.2
KOK	Koryaka	1.86	319	eP	Pn	01 30 29.4	+2.4
KRX	Arik	1.90	320	eP	Pn	01 30 30.8	+3.1
APC	Apacha	2.38	297	eP	Pn	01 30 37.2	+3.2
GNL	Ganaly	2.43	318	eP	Pn	01 30 38.6	+3.7
KZV	Kizimen	3.21	356	eP	Pn	01 30 48.5	+2.9
ALID	Alaid	3.37	254	eP	Pn	01 30 50.4	+2.6
TUMR	Tumrok	3.39	355	eP	Pn	01 30 51.7	+3.7
KBG	Krutoberegovo	4.51	15	eP	Pn	01 31 10.5	+7.3
BKI	Bering	4.56	42	eP	Pn	01 31 06.4	+2.5
BKI				eS	Sn	01 31 55.3	-0.3

*IDC **11** 01:36:57.9±6.5, 27°.98N×12°.59W, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.5/31, mbtmp3.8/5, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/33, Error ellipse: s-maj=136.6km s-min=28.9km az=100.0*
*IGIL **11** 01:36:57.1, 28°.53N×13°.20W, h10km, ML3.2*
*INMG **11** 01:36:58.0±2.8, 28°.47N×13°.04W, h10km, MD4.1, ML3.5, Error ellipse: s-maj=10.7km s-min=6.0km az=137.0*
*MDD **11** 01:36:58.4±0.4, 28°.53N×13°.20W, h20km, mbLg3.7/13, Error ellipse: s-maj=4.5km s-min=1.7km az=120.0, PRXIMO TT-model: canary*
MDD EMS: II INTENSIDAD MAXIMA.

ISC 11 01:36:53.3±0.8, 28°.57N±0°.05×13°.27W±0°.06, h10km, n45, σ2°.15/58, 1C-3D, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFUE	Fuerteventura	0.59	278	⇓P	Pn	01 37 09.3	+1.5
	SNR=18						
CFUE				S	Sn	01 37 18.2	+0.6
	5μm,0.3s,SNR=7.9						
EFAM	Famara	0.61	338	⇑P	Pn	01 37 09.3	+1.3
	358nm,0.2s,SNR=18						
EFAM				S	Sn	01 37 18.4	+0.6
	3μm,0.3s,SNR=7.9						
CFTV	Fuerteventura	0.73	258	⇓P	Pn	01 37 10.7	+0.9
	187nm,0.3s,SNR=18						
EOSO	Osorio	2.08	257	⇓P	Pn	01 37 29.5	+1.3
	49nm,0.5s,SNR=18						
EOSO				S	Sn	01 37 53.6	-0.6
	217nm,0.5s,SNR=9.4						
EBAJ	Bajamar	2.71	270	P	Pn	01 37 39.5	+2.6
	13nm,0.2s,SNR=90						
EBAJ				S	Sn	01 38 08.3	-1.4
	35nm,0.2s,SNR=6.6						
CRAJ	Montana Rajada	2.95	265	P	Pn	01 37 42.5	+2.0
	69nm,2.0s,SNR=7.1						
CRAJ				S	Sn	01 38 15.5	-0.7
	294nm,0.3s,SNR=6.5						
CCAN	Las Canadas	2.96	264	P	Pn	01 37 42.5	+1.8
	2.0nm,0.3s,SNR=59						
CCAN				S	Sn	01 38 15.6	-0.8
	14nm,0.3s,SNR=5.0						
EGOM	La Gomera	3.50	264	P	Pn	01 37 50.2	+2.5
	43nm,0.1s,SNR=98						
EGOM				S	Sn	01 38 26.9	-2.3
	183nm,0.3s,SNR=7.1						
TBT	Taburiente	4.09	273	P	Pn	01 37 58.4	+2.6
	32nm,0.2s,SNR=7.9						
TBT				S	Sn	01 38 41.6	-2.2
	100nm,0.3s,SNR=7.9						
CTIG	El Hierro	4.18	260	P	Pn	01 37 59.3	+2.1
	7.2nm,0.2s,SNR=7.9						
CTIG				S	Sn	01 38 43.5	-2.6
	114nm,0.5s,SNR=7.9						
CHIE	El Hierro	4.23	260	P	Pn	01 37 59.9	+2.1
	0.9nm,0.2s,SNR=7.9						
CHIE				S	Sn	01 38 45.5	-1.8
	3.8nm,0.2s,SNR=7.9						
CRST	La Restinga, E	4.27	259	P	Pn	01 38 00.6	+2.3
	8.0nm,0.1s,SNR=7.9						
CCUM	Cumbre, El Hie	4.29	260	P	Pn	01 38 01.0	+2.3
	9.4nm,0.2s,SNR=7.9						
CCUM				S	Sn	01 38 44.4	-4.3
	38nm,0.2s,SNR=7.9						
CTAN	El Hierro	4.30	260	S	Sn	01 38 45.0	-4.2
	64nm,0.3s,SNR=7.9						
FUL	Funchal	5.13	323	eP	Pn	01 38 13.0	+2.8
FUL				eS	Sn	01 39 08.1	-1.4
FUL				A	A	01 39 18.1	
	46nm,0.3s						
PMPS	Porto Santo	5.20	330	eP	Pn	01 38 12.0	+0.9
PMPS				eS	Sn	01 39 07.8	-3.3
PMPS				A	A	01 39 16.0	
	30nm,0.3s						
PMAR	Madeira	5.20	324	eP	Pn	01 38 13.1	+1.7
PMAR				eS	Sn	01 39 08.3	-3.2
PMAR				A	A	01 39 15.9	
	128nm,0.3s						
PMPST	Porto Santo, M	5.21	330	eP	Pn	01 38 12.2	+0.8
PMPST				eS	Sn	01 39 08.0	-3.6
PMPST				A	A	01 39 14.9	
	66nm,0.3s						
PMOZ	Porto Moniz, M	5.43	322	eP	Pn	01 38 17.2	+2.8
PMOZ				eS	Sn	01 39 14.5	-2.5
PMOZ				A	A	01 39 22.6	
	138nm,0.4s						
PMOZ	Porto Moniz, M	5.43	322	P	Pn	01 38 17.1	+2.7
	19nm,0.3s,SNR=7.9						
PMOZ				S	Sn	01 39 14.9	-2.1
	264nm,0.4s,SNR=7.9						
IFR	Ifrane	8.55	53	eP	Pn	01 38 54.3	-3.1
IFR				eS	Sn	01 40 22.5	-11
PFVI	Vila Bisbo	9.32	22	eP	Pn	01 39 07.4	-0.3
PFVI				eS	Sn	01 40 43.6	-9.0
PFVI				A	A	01 40 53.7	
	7.0nm,0.4s						
MORF	Marmelete	9.54	23	eP	Pn	01 39 10.2	-0.5
MORF				eS	Sn	01 40 47.5	-11
MORF				AML	AML	01 40 51.7	
	comp=N,13nm,0.1s						
MORF	Marmelete	9.54	23	eP	Pn	01 39 09.2	-1.6
MORF				eS	Sn	01 40 49.3	-8.7
MORF				A	A	01 40 52.8	
	comp=N,7.8nm,0.1s						
PTEO	Sao Teotonio	9.73	22	eP	Pn	01 39 13.3	0.0
PTEO				eS	Sn	01 40 53.5	-9.2
PTEO				A	A	01 40 57.5	
	comp=N,8.5nm,0.6s						
PBDV	Barranco-do-Ve	9.74	26	eP	Pn	01 39 12.1	-1.4
PBDV				eS	Sn	01 40 54.5	-8.5
PBDV				A	A	01 41 02.8	
	comp=N,4.6nm,0.5s						
PVAQ	Vaqueiros	9.97	26	eP	Pn	01 39 17.0	+0.4
PVAQ				eS	Sn	01 40 57.5	-11
PVAQ				A	A	01 41 04.1	
	comp=N,5.9nm,0.4s						
PCVE	Castro Verde	10.04	24	eP	Pn	01 39 16.1	-1.6
PCVE				eS	Sn	01 41 00.2	-10
PCVE				A	A	01 41 05.7	
	comp=N,6.0nm,0.6s						
MESJ	Messejana	10.17	23	eP	Pn	01 39 18.5	-0.8
MESJ				eS	Sn	01 41 01.9	-12
MESJ				AML	AML	01 41 05.4	
	comp=E,9.1nm,0.6s						
PNCL	Nicolau / Gran	10.31	21	eP	Pn	01 39 21.8	+0.5
PNCL				eS	Sn	01 41 07.3	-10
PNCL				A	A	01 41 13.7	
	comp=E,4.5nm,0.4s						
PBEJ	Beja	10.46	24	eS	Sn	01 41 10.7	-10
PBEJ				A	A	01 41 15.1	
	comp=E,5.4nm,0.4s						
EVO	Evora	10.86	22	eP	Pn	01 39 29.5	+0.7
EVO				eS	Sn	01 41 20.0	-10
EVO				A	A	01 41 23.5	
	comp=E,6.4nm,0.4s						
PMAFR	Mafra	10.88	17	eP	Pn	01 39 29.6	+0.5
PMAFR				eS	Sn	01 41 22.4	-8.4
PMAFR				A	A	01 41 28.1	
	comp=E,13nm,0.7s						
PMTG	Montargil	11.28	20	eP	Pn	01 39 34.6	0.0
PMTG				eS	Sn	01 41 29.6	-11
PMTG				A	A	01 41 33.6	
	comp=E,5.2nm,0.5s						
PMRV	Marv??o	11.88	23	eP	Pn	01 39 41.5	-1.2
PMRV				eS	Sn	01 41 44.4	-11
PMRV				A	A	01 41 48.6	
	comp=E,5.1nm,0.7s						
PCBR	Castelo Branco	12.22	22	eS	Sn	01 41 53.9	-10
PCBR				A	A	01 41 57.2	
	comp=E,2.3nm,0.3s						
ESDC	Sonseca Array	13.48	32	Pn	Pn	01 40 03.4	-1.4
	comp=E,0.2nm,0.3s,baz=223,slow=13,SNR=3.2						
ESDC				Sn	Sn	01 42 20.5	-14
	comp=E,0.6nm,0.3s,baz=212,slow=22,SNR=6.4						
KEST	Kesra	20.41	64	P	Pn	01 41 33.8	+1.1
	comp=E,8.4nm,1.0s,baz=220,slow=16,SNR=5.3						
KEST				LR	LR	01 49 32.0	
	comp=E,49nm,20.2s,baz=258,slow=37						
TORD	Torodi Ar. Bea	20.72	135	P	P	01 41 30.2	-3.8
	comp=E,0.4nm,0.3s,baz=321,slow=12,SNR=31						
TORD				S	S	01 45 06.9	-19
	comp=E,0.1nm,0.3s,baz=323,slow=24,SNR=3.3						
TORD				Lg	Lg	01 47 39.6	
	baz=318,slow=28,SNR=3.2						
TIC	Toumodi	23.16	159	ePKIKP	P	01 42 04.1	+4.0
DBIC	Dimbokro	23.19	158	P	P	01 41 58.9	-1.4
	comp=E,4.4nm,0.8s,baz=331,slow=12,SNR=10						
KIC	Kosan Boka	23.51	158	ePKIKP	P	01 42 04.0	+0.4
	comp=E,21nm,0.7s						
LIC	Lamto	23.55	159	ePKIKP	P	01 42 04.3	+0.3
	comp=E,51nm,0.6s						
BRTR	Keskin Array B	39.98	61	P	P	01 44 34.3	+6.0
	comp=E,0.3nm,0.7s,baz=274,slow=13

H10N1	**ASCENSION HYDR**	**35.23**	**123**	T	T	02 59 24.9	
	baz=304,slow=75,SNR=26						
H10S3	**ASCENSION HYDR**	**35.70**	**124**	T	T	03 00 02.6	
	baz=305,slow=75,SNR=14						
H10S1	**ASCENSION HYDR**	**35.71**	**124**	T	T	03 00 03.5	
	baz=305,slow=75,SNR=14						
H10S2	**ASCENSION HYDR**	**35.72**	**124**	T	T	03 00 03.8	
	baz=305,slow=75,SNR=10						
LPAZ	**La Paz**	**36.97**	**221**	LR	LR	02 37 46.2	
	comp=Z,38nm,18.7s,baz=46,slow=37						
DBIC	**Dimbokro**	**38.81**	**94**	LR	LR	02 35 11.4	
	comp=Z,30nm,19.7s,baz=344,slow=31						
TORD	**Torodi Ar. Bea**	**44.42**	**83**	P	P	02 23 25.8	-0.1
	1.0nm,0.8s,baz=278,slow=7.7,SNR=5.3						
TORD				LR	LR	02 39 33.3	
	comp=Z,37nm,21.7s,baz=300,slow=33						
TXAR	**Lajitas Array**	**57.98**	**297**	P	P	02 25 07.7	-0.1
	0.2nm,0.7s,baz=121,slow=8.5,SNR=4.2						
PLCA	**Paso Flores**	**57.99**	**204**	LR	LR	02 51 49.8	
	comp=Z,38nm,18.1s,baz=155,slow=38						
NOA	**NORSAR Array B**	**63.06**	**27**	LR	LR	02 48 06.3	
	comp=Z,6.0nm,20.6s,baz=50,slow=31						
PDAR	**Pinedale Array**	**64.14**	**312**	LR	LR	02 53 47.8	
	comp=Z,12nm,18.0s,baz=254,slow=36						
ILAR	**Eielson Array**	**84.72**	**335**	P	P	02 27 48.7	+0.1
	0.3nm,0.9s,baz=60,slow=5.3,SNR=4.0						

BJI ***11*** *02:30:27.9±0.0,2°.50S×100°.44E,h30km,mb5.1/55, mB4.9/38,Ms4.4/27,Ms7 4.1/27*
MOS ***11*** *02:30:34.8±0.9,1°.63S×100°.37E,h33km,mb5.4/61,Error ellipse: s-maj=9.4km s-min=4.6km az=114.3*
NEIC ***11*** *02:30:36.4±1.8,1°.78S×100°.28E,h35km±2km,mb5.0/93, Error ellipse: s-maj=11.2km s-min=1.5km az=75.0*
NEIC Felt [IV] at Painan, [III] at Padang and [II] at Bukittinggi, Padangpanjang and Pariaman.
ISCJB ***11*** *02:30:38.0±0.4,1°.70S±0°.02×100°.30E±0°.02,h63km±3km, mb5.1/161,Error ellipse: s-maj=4.9km s-min=3.2km az=43.3*
DJA ***11*** *02:30:39.6±0.2,2°.5±2°.×10°0E±°,h53km±3km,M4.8/30, mb5.2/30,mB5.2/17,MLv5.2/24,Mw(mB)4.5/19*
IDC ***11*** *02:30:39.1±0.9,1°.68S×100°.33E,h56km±6km,mb4.7/26, mb1 4.8/28,mb1mx4.7/36,mbtmp4.9/28,MS3.6/26, Ms1 3.6/26,ms1mx3.6/32,Error ellipse: s-maj=16.5km s-min=10.1km az=49.0*
KLM ***11*** *02:30:46.0,1°.32S×100°.34E,h81km,mb5.0*
ISC 11 02:30:38.6±0.5,**1°.78S**±0°.04×**100°.24E**±0°.03,**h55**km±4km, **h55**km:**pP-P**,**n830**,σ1#**25**/839,**mb5.2**/170,**MS3.8**/35, **38C-13D**,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase Id Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.89**	**15**	P	**Pn**	**02 30 53.6**	**-1.4**
PPSI	**Pulau Pagai**	**1.01**	**193**	P	**Pn**	**02 30 57.4**	**+0.9**
SISI	**Saibi**	**1.23**	**291**	P	**Pn**	**02 30 59.2**	**-0.3**
SISI				S	**Sn**	**02 31 15.7**	**+0.5**
KRJI	**Kerinci**	**1.26**	**104**	P	**Pn**	**02 31 01.6**	**+1.6**
KRJI				S	**Sn**	**02 31 18.4**	**+2.3**
SDSI	**Sungai Dareh**	**1.46**	**55**	P	**Pn**	**02 31 02.4**	**-0.2**
BKNI	**Bangkinang**	**2.24**	**21**	*e*Pn	**Pn**	**02 31 11.5**	**-1.8**
BKNI				*e*Sn	**Sn**	**02 31 37.6**	**-2.1**
BKNI	**Bangkinang**	**2.24**	**21**	P	**Pn**	**02 31 14.3**	**+1.1**
RGRI	**Rengat**	**2.53**	**56**	P	**Pn**	**02 31 18.4**	**+1.2**
PBSI	**Pulau Batu**	**2.60**	**311**	P	**Pn**	**02 31 18.1**	**-0.1**
MNSI	**Mandailing Nat**	**2.64**	**346**	P	**Pn**	**02 31 19.3**	**+0.6**
JMBI	**JAMBI**	**3.41**	**88**	P	**Pn**	**02 31 30.8**	**+1.6**
MNAI	**Manna**	**3.73**	**133**	*e*Pn	**Pn**	**02 31 35.0**	**+1.2**
MNAI				*e*Sn	**Sn**	**02 32 14.1**	**-2.5**
MNAI	**Manna**	**3.73**	**133**	P	**Pn**	**02 31 35.2**	**+1.4**
LHSI	**Lahat**	**3.86**	**122**	P	**Pn**	**02 31 37.1**	**+1.6**
DSRI	**Dabo**	**4.53**	**74**	P	**Pn**	**02 31 44.7**	**+0.1**
PSI	**Prapat**	**4.73**	**344**	P	**Pn**	**02 31 45.9**	**-1.7**
	22nm,0.3s,baz=155,slow=11,SNR=8.7						
PSI				LR	LR	02 33 53.4	
	comp=Z,2μm,20.8s,baz=160,slow=42						
PSI	**Prapat**	**4.73**	**344**	*e*Pn	**Pn**	**02 31 45.2**	**-2.4**
PSI	**Prapat**	**4.73**	**344**	*e*P	**Pn**	**02 31 45.2**	**-2.4**
MDSI	**Maura Dua**	**4.77**	**124**	P	**Pn**	**02 31 50.1**	**+2.2**
LWLI	**Liwa**	**4.99**	**130**	P	**Pn**	**02 31 53.2**	**+2.1**
TPRI	**Tanjung Pinang**	**5.05**	**58**	P	**Pn**	**02 31 52.8**	**+0.9**
MYKOM	**Kota Tinggi**	**5.06**	**46**	*e*Pn	**Pn**	**02 31 52.7**	**+0.8**
MYKOM				*e*Sn	**Sn**	**02 32 46.1**	**-3.0**
MYKOM	**Kota Tinggi**	**5.06**	**46**	P	**Pn**	**02 31 53.0**	**+1.1**
TSI	**Tuntungan**	**5.50**	**342**	P	**Pn**	**02 32 01.8**	**+3.8**
KASI	**Kota Agung**	**5.65**	**131**	P	**Pn**	**02 32 01.6**	**+1.6**
SNSI	**Sinabang, Aceh**	**5.71**	**317**	P	**Pn**	**02 32 01.5**	**+0.7**
TPTI		**5.86**	**329**	P	**Pn**	**02 32 03.7**	**+0.8**
IPM	**Ipoh**	**6.26**	**7**	*e*Pn	**Pn**	**02 32 09.2**	**+0.7**
IPM	**Ipoh**	**6.26**	**7**	P	**Pn**	**02 32 11.0**	**+2.5**
KULM	**Kulim**	**7.03**	**3**	*e*Pn	**Pn**	**02 32 18.0**	**-0.9**
KULM	**Kulim**	**7.03**	**3**	P	**Pn**	**02 32 20.0**	**+1.0**
MLSI	**Meulaboh, Aceh**	**7.12**	**327**	P	Pn	02 32 33.0	+13
CGJI	**Cibinong**	**7.26**	**132**	P	**Pn**	**02 32 21.9**	**-0.2**
SKLT	**Songkhla**	**8.89**	**2**	P	**Pn**	**02 32 45.9**	**+1.4**
	29nm,0.7s,425nm0.1nm						
LEM	**Lembang**	**8.90**	**125**	LR	LR	02 36 39.9	
	comp=Z,296nm,20.9s,baz=257,slow=41						
CISI	**Cisompet, Garu**	**9.48**	**127**	*e*Pn	**Pn**	**02 32 49.5**	**-3.1**
CISI	**Cisompet, Garu**	**9.48**	**127**	P	Pn	02 32 57.7	+5.1
	153nm,0.6s,46μm						
XMIS	**Christmas Isla**	**10.18**	**148**	*e*Pn	Pn	02 32 57.2	-5.0
UGM	**Wanagama**	**11.92**	**121**	*e*Pn	**Pn**	**02 33 24.6**	**-1.3**
UGM				*e*Sn	**Sn**	**02 35 34.5**	**-3.0**
UGM	**Wanagama**	**11.92**	**121**	P	**Pn**	**02 33 25.6**	**-0.3**
SBUM	**Sibu**	**12.69**	**71**	*e*Pn	**Pn**	**02 33 39.5**	**+3.0**
SBUM	**Sibu**	**12.69**	**71**	P	Pn	02 33 42.0	+5.5
CHBT	**CHBT**	**14.58**	**8**	P	P	02 34 13.3	+6.2
PHET	**Kaeng Krachan**	**14.60**	**358**	P	**P**	**02 34 08.8**	**+1.5**
PBA	**Port Blair**	**15.28**	**331**	*e*P	Pn	02 34 09.5	-1.5
JAGI	**Jajag, Banyuwa**	**15.37**	**116**	*e*Pn	**Pn**	**02 34 08.1**	**-4.0**
	53nm,0.8s						
CHAI	**Chaiyaphum**	**17.65**	**6**	P	**P**	**02 34 46.2**	**+5.1**
	40μm,0.7s						
KKM	**Kota Kinabalu**	**17.75**	**64**	*e*P	**Pn**	**02 34 42.3**	**+0.3**
	37nm,0.9s						
KKM	**Kota Kinabalu**	**17.75**	**64**	P	**P**	**02 34 45.0**	**+2.7**
PBKT	**Sadao Pong**	**18.24**	**2**	P	**P**	**02 34 46.9**	**-0.7**
	7.8nm,0.8s,741nm						
PANO	**Nakornpanom**	**19.29**	**13**	P	**Pn**	**02 35 04.0**	**+3.4**
	1.1nm,1.1s,50nm						
UTTA	**Uttaradit**	**19.40**	**1**	P	**P**	**02 35 01.3**	**+1.0**
	41μm,0.8s						
TTSI	**Tana Toraja**	**19.60**	**94**	P	**Pn**	**02 35 06.2**	**+1.9**
	61nm,0.9s						
KAPI	**Kappang**	**19.74**	**100**	P	**P**	**02 35 05.0**	**+0.9**
	4.7nm,0.3s,baz=328,slow=4.0,SNR=10						
KAPI				LR	LR	02 43 06.7	
	comp=Z,187nm,20.1s,baz=277,slow=38						
KAPI	**Kappang**	**19.74**	**100**	*e*P	**P**	**02 35 02.7**	**-1.4**
	33nm,0.7s						
KAPI	**Kappang**	**19.74**	**100**	*e*P	**P**	**02 35 02.7**	**-1.4**
KAPI				pmax	pmax		
	comp=Z,33nm,0.7s						
MPSI	**Mapaga**	**19.77**	**84**	P	**P**	**02 35 06.4**	**+2.0**
	comp=Z,25nm,0.6s,comp=Z,323nm						
BNSI	**Bone**	**20.01**	**98**	P	**P**	**02 35 08.7**	**+1.7**
	comp=Z,155nm,0.9s,comp=Z,1μm						
CMAR	**Chiang Mai Arr**	**20.15**	**356**	P	**P**	**02 35 05.5**	**-2.9**
	comp=Z,36nm,0.7s,baz=185,slow=10,SNR=68						
CMAR				PcP	**PcP**	**02 39 22.8**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=211,slow=3.2,SNR=6.7						
CMAR				LR	LR	02 43 27.3	
	comp=Z,260nm,20.0s,baz=180,slow=38						
BKSI	**Bulukumba**	**20.15**	**101**	P	**P**	**02 35 10.2**	**+1.7**
	comp=Z,58nm,0.8s,comp=Z,468nm						
LAMP	**Lampang**	**20.18**	**358**	P	**P**	**02 35 08.7**	**-0.1**
	comp=Z,86μm,0.7s,comp=Z,742μm						
CMMT	**Chiang Mai**	**20.50**	**357**	P	**P**	**02 35 11.9**	**-0.3**
	comp=Z,10nm,0.7s						
CHTO	**Chiang Mai**	**20.50**	**356**	*e*P	**P**	**02 35 11.6**	**-0.7**
	comp=Z,13nm,0.7s						
CHTO	**Chiang Mai**	**20.50**	**356**	*e*P	**P**	**02 35 11.6**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,13nm,0.7s						
PAYA	**Payao**	**21.01**	**359**	P	**P**	**02 35 20.2**	**+2.5**
	comp=Z,36μm,0.9s						
APSI	**Ampana**	**21.42**	**88**	P	P	02 35 30.2	+8.0
PALK	**Pallekele**	**21.47**	**295**	P	**P**	**02 35 24.3**	**+1.5**
	comp=Z,5.2nm,0.6s,baz=116,slow=18,SNR=3.0						
PALK				LR	LR	02 42 59.6	
	comp=Z,144nm,19.2s,baz=114,slow=34						
PALK	**Pallekele**	**21.47**	**295**	*e*P	**P**	**02 35 24.3**	**+1.5**
	comp=Z,34nm,1.2s						
MRSI	**Marisa**	**21.82**	**84**	P	**P**	**02 35 27.4**	**+1.0**
	comp=Z,50nm,1.0s,comp=Z,566nm						
LUWI	**Luwuk**	**22.54**	**88**	P	**P**	**02 35 36.7**	**+2.5**
	comp=Z,94nm,1.2s,comp=Z,4μm						
SLVN	**Son La**	**23.25**	**9**	*e*P	**P**	**02 35 40.4**	**-1.0**
	comp=Z,13nm,0.8s						
SOEI	**Soe**	**25.17**	**109**	*e*P	**P**	**02 35 56.1**	**-3.1**
	comp=Z,82nm,1.5s						
BRDH	**Bariadhala**	**25.71**	**341**	P	**P**	**02 36 04.6**	**+0.8**
	comp=Z,92nm,0.4s,baz=177,slow=5.8,SNR=8.8						
BRDH				LR	LR	02 48 25.4	
	comp=Z,283nm,19.0s,baz=140,slow=42						
TGY	**Tagaytay City**	**25.88**	**52**	LR	LR	02 46 58.5	
	comp=Z,150nm,19.2s,baz=78,slow=38						
BWNR	**Bhubaneshwar**	**26.10**	**328**	*ex*	P	02 36 01.3	-6.2
DAV	**Davao City (W)**	**26.77**	**71**	LR	LR	02 48 17.5	
	comp=Z,94nm,20.8s,baz=134,slow=40						
KMI	**Kunming**	**26.85**	**5**	P	**P**	**02 36 17.5**	**+3.1**
KMI				pP	pP	02 36 25.9	-2.1
KMI				sP	sP	02 36 31.5	-3.0
KMI				pmax	pmax		
	comp=Z,20nm,0.6s						
KMI				pmax	pmax		
	comp=Z,71nm,4.0s						
KMI				LR	LR		
	comp=Z,280nm,15.2s						
KMI				LR	LR		
	comp=Z,200nm,11.0s						
KMI				LR	LR		
	comp=Z,310nm,17.1s						
AGT	**Agartala**	**26.96**	**342**	*e*P	**P**	**02 36 14.3**	**-0.9**
SILR	**SILCHAR**	**27.37**	**345**	*e*P	**P**	**02 36 15.7**	**-3.1**
KOHI	**KOHIMA**	**27.97**	**348**	*e*P	**P**	**02 36 23.0**	**-1.3**
H08S2	**Diego Garcia H**	**28.25**	**257**	T	T	03 05 09.0	
	baz=80,slow=75,SNR=193						
H08S3	**Diego Garcia H**	**28.25**	**257**	T	T	03 05 10.1	
	baz=80,slow=75,SNR=216						
H08S1	**Diego Garcia H**	**28.26**	**257**	T	T	03 05 10.6	
	baz=80,slow=75,SNR=161						
SHL	**Shillong**	**28.36**	**344**	*e*P	**P**	**02 36 26.9**	**-0.9**
SHL				IAmb	IAmb	02 36 29.3	
	comp=Z,14nm,0.8s						
MOKO	**MOKOCHONG**	**28.48**	**349**	*e*P	**P**	**02 36 27.8**	**-1.0**
MOKO				IAmb	IAmb	02 36 28.1	
	comp=Z,36nm,0.4s						
GYA	**Guiyang**	**28.75**	**12**	⇑*i*P	**P**	**02 36 29.9**	**-1.3**
GYA				pP	pP	02 36 38.3	-6.6
GYA				sP	sP	02 36 43.0	-8.3
GYA				PP	**PnPn**	**02 37 21.6**	**-2.8**
GYA				S	**S**	**02 41 16.2**	**-0.8**
GYA				sS	sS	02 41 34.8	-4.8
GYA				pmax	pmax		
	comp=Z,20nm,0.6s						
GYA				pmax	pmax		
	comp=Z,110nm,5.4s						
GYA				LR	LR		
	comp=Z,190nm,17.6s						
GYA				LR	LR		
	comp=Z,140nm,11.2s						
GYA				LR	LR		
	comp=Z,270nm,17.3s						
MNCY	**Minicoy**	**28.90**	**291**	*e*P	**P**	**02 36 32.4**	**-0.2**
BOK	**Bokaro**	**29.00**	**332**	*e*P	**P**	**02 36 33.0**	**-0.4**
BOK				IAmb	IAmb	02 36 35.5	
	comp=Z,30nm,0.5s						
GUWA	**GUWAHATI**	**29.01**	**344**	*e*P	**P**	**02 36 31.7**	**-1.7**
GUWA				IAmb	IAmb	02 36 32.9	
	comp=Z,24nm,0.4s						
TEZP	**TEZPUR**	**29.13**	**346**	*e*P	**P**	**02 36 32.9**	**-1.6**
H08N1	**Diego Garcia H**	**29.49**	**260**	T	T	03 07 15.5	
	baz=138,slow=75,SNR=7.0						
H08N2	**Diego Garcia H**	**29.50**	**260**	T	T	03 07 14.2	
	baz=138,slow=75,SNR=3.9						
H08N3	**Diego Garcia H**	**29.52**	**260**	T	T	03 07 16.1	
	baz=138,slow=75,SNR=11						
FITZ	**Fitzroy Crossi**	**29.74**	**125**	P	**P**	**02 36 39.5**	**-0.6**
	comp=Z,7.5nm,0.6s,baz=334,slow=9.0,SNR=22						
FITZ				LR	LR	02 48 37.9	
	comp=Z,119nm,20.5s,baz=303,slow=36						
ZIRO	**ZIRO**	**29.78**	**349**	*e*P	**P**	**02 36 38.7**	**-1.7**
TAWA	**Tawang**	**30.29**	**345**	*e*P	**P**	**02 36 43.8**	**-1.4**
GOA	**Goa**	**31.25**	**304**	*e*P	**P**	**02 36 54.0**	**+0.7**
GOA				IAmb	IAmb	02 36 57.0	
	comp=Z,46nm,1.1s						
RAMN	**Ramite**	**31.44**	**336**	*e*P	**P**	**02 36 55.9**	**+0.7**
	comp=Z,37nm,0.4s						
TPUB	**Ta-pu**	**31.87**	**37**	*e*P	**P**	**02 36 59.3**	**+0.6**
	comp=Z,56nm,0.9s						
FAKI	**Fak Fak**	**32.00**	**93**	*e*P	**P**	**02 36 58.9**	**-1.2**
	comp=Z,21nm,0.7s						
FAKI	**Fak Fak**	**32.00**	**93**	P	**P**	**02 36 59.6**	**-0.5**
	comp=Z,30nm,0.7s,comp=Z,636nm						
JIRN	**Jiri**	**32.24**	**336**	*e*P	**P**	**02 37 02.9**	**+0.6**
	comp=Z,95nm,0.4s						
YULB	**Yu-li**	**32.34**	**38**	*e*P	**P**	**02 37 03.5**	**+0.6**
	comp=Z,19nm,0.8s						
SSLB	**Suanglung**	**32.43**	**37**	*e*P	**P**	**02 37 03.6**	**-0.1**
	comp=Z,15nm,0.7s						
PKI	**Pulchoki**	**32.48**	**335**	*e*P	**P**	**02 37 04.5**	**+0.1**
	comp=Z,13nm,0.4s						
LSA	**Lhasa**	**32.48**	**345**	*e*P	**P**	**02 37 05.2**	**+0.6**
	comp=Z,74nm,1.1s						
LSA	**Lhasa**	**32.48**	**345**	*e*P	**P**	**02 37 05.2**	**+0.6**
LSA				pmax	pmax		
	comp=Z,74nm,1.1s						
PKIN	**Phulchoki**	**32.49**	**335**	*e*P	**P**	**02 37 04.5**	**0.0**
	comp=Z,16nm,0.4s						
MTN	**Manton Dam**	**32.51**	**111**	*e*P	P	02 37 01.2	-3.3
	comp=Z,30nm,1.4s						
GUN	**Gumba**	**32.59**	**336**	*e*P	**P**	**02 37 06.0**	**+0.6**
	comp=Z,147nm,0.4s						
DMN	**Daman**	**32.65**	**335**	*e*P	**P**	**02 37 06.0**	**+0.2**
	comp=Z,21nm,0.6s						
CD2	**Chengdu**	**32.68**	**6**	*e*P	**P**	**02 37 06.9**	**+1.1**
CD2				S	**S**	**02 42 23.0**	**+4.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				LR	LR		
	comp=Z,590nm,17.7s						
CD2				LR	LR		
	comp=Z,350nm,18.6s						
CD2				LR	LR		
	comp=Z,730nm,17.7s						
KKN	**Kakani**	**32.73**	**335**	*e*P	**P**	**02 37 06.7**	**+0.2**
	comp=Z,37nm,0.4s						
POO	**Poona**	**32.88**	**309**	*e*P	**P**	**02 37 07.1**	**-0.6**
POO				IAmb	IAmb	02 37 08.8	
	comp=Z,17nm,0.5s						
ENH	**Enshi**	**33.07**	**15**	*e*P	**P**	**02 37 07.5**	**-1.7**
	comp=Z,47nm,0.6s						
BHPL	**Bhopal**	**33.35**	**320**	*e*P	**P**	**02 37 12.5**	**+0.8**
BHPL				IAmb	IAmb	02 37 16.1	
	comp=Z,13nm,1.4s						
KOLN	**Koldanda**	**33.45**	**333**	*e*P	**P**	**02 37 13.3**	**+0.5**
	comp=Z,70nm,0.7s						
KDU	**Kakadu**	**33.72**	**110**	P	**P**	**02 37 11.9**	**-3.1**
	baz=34,SNR=3.8						
DANN	**Dangsing**	**33.88**	**333**	*e*P	**P**	**02 37 16.8**	**+0.2**
	comp=Z,130nm,0.4s						
PYUN	**Piuthan**	**34.02**	**332**	*e*P	**P**	**02 37 18.0**	**+0.3**
	comp=Z,33nm,0.6s						
WHN	**Wuhan**	**34.84**	**22**	P	**P**	**02 37 24.2**	**-0.3**
WHN				S	**S**	**02 42 54.1**	**+2.4**
WHN				pmax	pmax		
	comp=Z,42nm,0.8s						
WHN				LR	LR		
	comp=Z,1μm,19.0s						
WHN				LR	LR		
	comp=Z,630nm,15.3s						
WHN				LR	LR		
	comp=Z,900nm,19.0s						
PALU	**Palau**	**35.34**	**75**	P	P	02 37 21.9	-7.2
	baz=35,SNR=4.2						
H01W3	**Cape Leeuwin H**	**35.39**	**160**	T	T	03 15 39.9	
	baz=335,slow=76,SNR=18						
H01W2	**Cape Leeuwin H**	**35.41**	**160**	T	T	03 15 39.3	
	baz=335,slow=76,SNR=43						
H01W1	**Cape Leeuwin H**	**35.41**	**160**	T	T	03 15 39.4	
	baz=335,slow=76,SNR=15						
WRKA	**Warakurna**	**35.60**	**133**	P	**P**	**02 37 32.4**	**+1.2**
	baz=36,SNR=15						
XAN	**Xi'an**	**36.55**	**12**	P	**P**	**02 37 37.1**	**-2.1**
XAN				S	**S**	**02 43 26.7**	**+8.8**
XAN				pmax	pmax		
	comp=Z,140nm,0.6s						
XAN				LR	LR		
	comp=Z,190nm,15.7s						
XAN				LR	LR		
	comp=Z,190nm,7.6s						
XAN				LR	LR		
	comp=Z,310nm,16.3s						
WRA	**Warramunga Arr**	**37.90**	**121**	P	**P**	**02 37 49.4**	**-1.5**
	comp=Z,13nm,0.3s,baz=293,slow=11,SNR=2.2						
WR1	**Warramunga Arr**	**37.90**	**121**	*e*P	**P**	**02 37 49.4**	**-1.5**
WRAB	**Tennant Creek**	**37.91**	**121**	*e*P	**P**	**02 37 49.7**	**-1.2**
	comp=Z,13nm,0.6s						
WRAB	**Tennant Creek**	**37.91**	**121**	⇓*i*P	**P**	**02 37 49.7**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s						
WB2	**Warramunga Arr**	**37.91**	**121**	*e*P	**P**	**02 37 49.8**	**-1.2**
	comp=Z,12nm,0.7s						
NJ2	**Nanjing**	**37.99**	**26**	*e*P	**P**	**02 37 52.2**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
FORT	**Forrest**	**39.06**	**140**	*e*P	**P**	**02 38 01.0**	**+0.6**
	comp=Z,74nm,1.2s						
AS31	**Alice Springs**	**39.19**	**126**	*e*P	**P**	**02 38 01.2**	**-0.5**
	comp=Z,6.0nm,0.6s						
AS31				*e*PcP	**PcP**	**02 40 11.0**	**+0.8**
ASAR	**Alice Springs**	**39.19**	**126**	P	**P**	**02 38 01.5**	**-0.2**
	comp=Z,18nm,0.7s,baz=303,slow=8.0,SNR=107						
ASAR				PcP	**PcP**	**02 40 11.0**	**+0.8**
	comp=Z,5.3nm,0.7s,baz=305,slow=2.5,SNR=12						
ASAR				S	**S**	**02 43 54.4**	**-3.9**
	comp=Z,1.1nm,0.8s,baz=298,slow=16,SNR=4.2						
SMLA	**Simla**	**39.40**	**328**	*e*P	**P**	**02 38 02.1**	**-1.1**
SMLA				IAmb	IAmb	02 38 04.1	
	comp=Z,9.6nm,0.8s						
DHRM	**DHARAMSHALA**	**40.73**	**328**	*e*P	**P**	**02 38 14.5**	**0.0**
TIA	**Tai'an**	**40.94**	**21**	P	**P**	**02 38 14.6**	**-1.3**
TIA				pmax	pmax		
	comp=Z,45nm,1.9s						
TIA				LR	LR		
	comp=Z,240nm,17.1s						
TIA				LR	LR		
	comp=Z,160nm,10.7s						
TIA				LR	LR		
	comp=Z,350nm,15.7s						
GTA	**Gaotai**	**40.99**	**360**	⇑P	**P**	**02 38 15.2**	**-1.2**
GTA				pP	pP	02 38 23.9	-6.4
GTA				sP	sP	02 38 27.4	-9.2
GTA				PcP	**PcP**	**02 40 16.2**	**+0.5**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,77nm,5.7s						
GTA				LR	LR		
	comp=Z,140nm,19.4s						
GTA				LR	LR		
	comp=Z,120nm,17.5s						
GTA				LR	LR		
	comp=Z,140nm,19.7s						
QIS	**Mount Isa**	**42.70**	**119**	P	**P**	**02 38 29.6**	**-1.0**
	baz=43,SNR=9.3						
NIL	**Nilore**	**43.45**	**327**	*e*P	**P**	**02 38 35.9**	**-0.5**
	comp=Z,56nm,0.6s						
NIL	**Nilore**	**43.45**	**327**	*e*P	**P**	**02 38 35.9**	**-0.5**
NIL				pmax	pmax		
	comp=Z,56nm,0.6s						
HHC	**Hu-ho-hao-te**	**43.66**	**12**	*e*P	**P**	**02 38 41.2**	**+3.1**
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
BJT	**Baijiatuau**	**44.08**	**18**	*e*P	**P**	**02 38 41.6**	**+0.3**
	comp=Z,16nm,0.8s						
BJT	**Baijiatuau**	**44.08**	**18**	*e*P	**P**	**02 38 41.6**	**+0.3**
BJT				pmax	pmax		
	comp=Z,16nm,0.8s						
BJI	**Beijing**	**44.10**	**18**	P	**P**	**02 38 41.5**	**+0.1**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JNU	**Nakatsue**	**45.18**	**37**	*e*P	**P**	**02 38 49.5**	**-0.8**
BBOO	**Buckleboo**	**45.64**	**136**	*e*P	**P**	**02 38 53.7**	**-0.2**
	comp=Z,214nm,1.8s						
BBOO	**Buckleboo**	**45.64**	**136**	P	**P**	**02 38 54.6**	**+0.7**
	baz=46,SNR=13						
KS15	**Wonju Array Si**	**46.68**	**31**	*e*P	**P**	**02 39 01.9**	**-0.1**
KS15				*e*PcP	**PcP**	**02 40 35.5**	**+0.6**
KSRS	**Korea Array**	**46.71**	**31**	P	**P**	**02 39 01.8**	**-0.4**
	comp=Z,9.7nm,0.6s,baz=224,slow=8.2,SNR=35						
KSRS				PcP	**PcP**	**02 40 35.5**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=242,slow=3.0,SNR=4.9						
KSRS				LR	LR	02 59 52.2	
	comp=Z,103nm,18.2s,baz=159,slow=38						
KSH	**Kashi**	**46.74**	**334**	P	**P**	**02 39 03.9**	**+1.4**
KSH				PcP	**PcP**	**02 40 35.1**	**-0.2**
KSH				S	**S**	**02 45 46.7**	**-1.9**
KSH				pmax	pmax		
	comp=Z,29nm,0.7s						
KSH				pmax	pmax		
	comp=Z,240nm,4.9s						
KSH				LR	LR		
	comp=Z,150nm,7.1s						
KSH				LR	LR		
	comp=Z,190nm,11.1s						
KSH				LR	LR		
	comp=Z,170nm,15.9s						
WMQ	**Urumqi**	**46.77**	**348**	P	**P**	**02 39 03.7**	**+1.1**
WMQ				pP	pP	02 39 14.3	-2.5
WMQ				pmax	pmax		
	comp=Z,120nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.7s						
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KBK	**Karagaybulak**	49.77	336	P		P	02 39 27.2 +1.3
	SNR=20						
ULN	**Ulaanbaatar**	49.80	6	*e*P		P	02 39 25.6 -0.3
	comp=Z,26nm,0.8s						
ULN	**Ulaanbaatar**	49.80	6	*d i*P		P	02 39 26.0 0.0
ULN				pmax		pmax	
	comp=Z,25nm,0.9s						
AML	**Almayashu**	49.87	334	P		P	02 39 27.8 +0.8
	SNR=30						
AAK	**Ala-Archa**	49.94	335	P		P	02 39 28.2 +1.0
	SNR=12						
AAK	**Ala-Archa**	49.94	335	*e*P		P	02 39 28.5 +1.3
	comp=Z,15nm,0.6s						
AAK	**Ala-Archa**	49.94	335	*e*P		P	02 39 28.5 +1.3
AAK				pmax		pmax	
	comp=Z,15nm,0.6s						
CHMS	**Chumysh**	50.13	336	P		P	02 39 29.1 +0.6
	SNR=9.6						
UOSS	**Minazif**	50.25	305	*e*P		P	02 39 29.3 -0.4
	comp=Z,13nm,1.2s						
EKS2	**Erkin-Say**	50.26	335	P		P	02 39 30.6 +1.0
	SNR=44						
USP	**Ospenovka**	50.46	336	P		P	02 39 31.4 +0.5
	SNR=51						
CN2	**Changchun**	50.69	23	*e*P		P	02 39 31.1 -1.5
CN2				*es*P		pP	02 39 44.9 -2.2
CN2				*e*PP		PP	02 41 28.1 -1.0
CN2				*e*S		S	02 46 43.3 -0.5
CN2				*e*SS		SS	02 50 15.5 -3.5
CN2				pmax		pmax	
	comp=Z,30nm,0.9s						
CN2				pmax		pmax	
	comp=Z,200nm,3.0s						
CN2				LR		LR	
	comp=Z,120nm,11.0s						
CN2				LR		LR	
	comp=Z,130nm,11.0s						
CN2				LR		LR	
	comp=Z,150nm,12.0s						
MK31	**Makanchi Array**	50.88	344	*e*P		P	02 39 34.1 +0.1
	comp=Z,44nm,0.7s						
MK31	**Makanchi Array**	50.88	344	*e*P		P	02 39 34.1 +0.1
MK31				pmax		pmax	
	comp=Z,44nm,0.7s						
MK32	**Makanchi Array**	50.88	344	*e*P		P	02 39 34.2 +0.2
MK32				*es*P		pP	02 39 49.6 +1.5
MKAR	**Makanchi Array**	50.88	344	P		P	02 39 34.2 +0.2
	comp=Z,52nm,0.4s,baz=151,slow=8.1,SNR=568						
MKAR				pP		pP	02 39 49.6 +1.5
	comp=Z,6.9nm,0.4s,baz=155,slow=9.0,SNR=3.7						
MKAR				LR		LR	03 05 16.3
	comp=Z,48nm,18.5s,baz=120,slow=41						
MAKZ	**Makanchi**	50.98	344	*e*P		P	02 39 34.6 -0.2
	comp=Z,32nm,0.8s						
MAKZ	**Makanchi**	50.98	344	*e*P		P	02 39 34.6 -0.2
MAKZ				pmax		pmax	
	comp=Z,32nm,0.8s						
MAJO	**Matsushiro**	51.95	39	*e*P		P	02 39 41.8 -0.5
	comp=Z,7.3nm,0.6s						
MAJO	**Matsushiro**	51.95	39	*e*P		P	02 39 41.8 -0.5
MAJO				pmax		pmax	
	comp=Z,7.0nm,0.6s						
MAT	**Matsushiro**	51.95	39	P		P	02 39 41.4 -0.8
MAT				S		S	02 47 04.2 +2.6
MJB9	**Matsu-Tunnel**	51.95	39	*e*P		P	02 39 42.1 -0.2
MJAR	**Matsushiro Arr**	51.95	39	P		P	02 39 41.5 -0.8
	comp=Z,3.6nm,0.5s,baz=208,slow=7.7,SNR=12						
MJAR				LR		LR	03 03 16.1
	comp=Z,56nm,19.5s,baz=240,slow=38						
ZAK	**Zakamensk**	52.02	2	*e*P		P	02 39 41.4 -1.2
ZAK				pmax		pmax	
	comp=Z,3.0nm,1.0s						
KK31	**Karatay Array**	52.07	333	*e*P		P	02 39 42.8 -0.2
KK31	**Karatay Array**	52.07	333	*e*P		P	02 39 42.8 -0.2
KKAR	**Karatay Array**	52.07	333	*e*P		P	02 39 42.8 -0.2
	comp=Z,8.0nm,0.9s						
KKAR	**Karatay Array**	52.07	333	*e*P		P	02 39 42.8 -0.2
KKAR				pmax		pmax	
	comp=Z,8.0nm,0.9s						
CMSA	**Cobar Meteorol**	52.07	130	P		P	02 39 43.9 +0.7
	baz=52,SNR=33						
DGZ	**Jazzator, Alta**	52.45	350	*d i*P		P	02 39 46.4 +0.5
DGZ				pmax		pmax	
	comp=Z,28nm,0.7s						
RMQ	**Roma**	52.63	122	P		P	02 39 47.7 +0.3
	baz=53,SNR=5.0						
MDJ	**Mudanjiang**	53.09	26	*e*P		P	02 39 47.5 -2.9
	comp=Z,8.0nm,0.6s						
MOY	**Mondy**	53.25	1	*e*P		P	02 39 51.3 -0.4
TLY	**Talaya**	53.34	3	*e*P		P	02 39 53.0 +0.8
TLY				pmax		pmax	
	comp=Z,15nm,0.7s						
TLY				MLR		MLR	
	comp=Z,313nm,16.0s						
USA0B	**Ussuriysk Arra**	53.85	28	*e*P		P	02 39 56.0 -0.1
	comp=Z,27nm,0.7s						
USRK	**Ussuriysk Ar.**	53.85	28	P		P	02 39 56.0 0.0
	comp=Z,22nm,0.5s,baz=228,slow=4.3,SNR=75						
USRK				LR		LR	03 05 01.6
	comp=Z,94nm,18.7s,baz=175,slow=38						
EIDS	**Eidsvold**	54.26	120	*e*P		P	02 39 58.7 -0.8
	comp=Z,8.9nm,0.8s						
YNG	**Young**	55.30	131	P		P	02 40 07.1 +0.2
	baz=55,SNR=6.5						
GEYT	**Alibeck**	55.43	320	P		P	02 40 07.6 -0.1
	comp=Z,12nm,0.7s,baz=154,slow=8.2,SNR=25						
GYA0B	**ALIBECK ARRAY**	55.43	320	*e*P		P	02 40 07.9 +0.2
	comp=Z,16nm,0.9s						
KURK	**Kurchatov**	55.46	343	*e*P		P	02 40 07.6 0.0
	comp=Z,54nm,0.8s						
KURK	**Kurchatov**	55.46	343	*c i*P		P	02 40 07.5 -0.1
KURK				pmax		pmax	
	comp=Z,55nm,0.9s						
CAN	**Canberra**	56.18	132	*e*P		P	02 40 14.6 +1.4
	comp=Z,21nm,1.2s						
CAN	**Canberra**	56.18	132	*e*P		P	02 40 14.6 +1.4
CAN				pmax		pmax	
	comp=Z,21nm,1.2s						
ARMA	**Armidale**	56.34	126	*e*P		P	02 40 16.3 +1.9
	comp=Z,15nm,0.8s						
ARMA	**Armidale**	56.34	126	P		P	02 40 14.2 -0.2
	baz=56,SNR=7.2						
ZAA0	**Zalesovo Array**	56.99	349	*e*P		P	02 40 17.7 -0.8
	comp=Z,58nm,0.7s						
ZALV	**Zalesovo Beam**	56.99	349	P		P	02 40 18.0 -0.5
	comp=Z,46nm,0.5s,baz=176,slow=5.8,SNR=195						
ZALV				LR		LR	03 05 35.4
	comp=Z,60nm,21.9s,baz=75,slow=37						
ZALV	**Zalesovo Beam**	56.99	349	P		P	02 40 18.0 -0.5
ZAA1	**Zalesovo Array**	57.00	349	*e*P		P	02 40 18.0 -0.5
KLR	**Kul'dur**	57.63	24	*c i*P		P	02 40 22.5 -0.6
KLR				pmax		pmax	
	comp=Z,13nm,1.0s						
NVS	**Novosibirsk**	58.15	349	⇓*i*P		P	02 40 25.9 -0.6
NVS				pmax		pmax	
	comp=Z,12nm,0.4s						
NVS				pmax		pmax	
	comp=N,9.0nm,0.5s						
NVS				pmax		pmax	
	comp=E,9.0nm,0.5s						
ERM	**Erimo**	58.34	37	*e*P		P	02 40 27.5 -0.6
	comp=E,17nm,1.1s						
ERM	**Erimo**	58.34	37	*e*P		P	02 40 27.5 -0.6
ERM				pmax		pmax	
	comp=Z,17nm,1.1s						
TAU	**Tasmania Unive**	58.60	141	*e*P		P	02 40 30.7 +0.7
	comp=Z,186nm,1.8s						
TAU	**Tasmania Unive**	58.60	141	*e*P		P	02 40 30.7 +0.7
TAU				pmax		pmax	
	comp=Z,187nm,1.8s						
ZEA	**Zeya**	59.72	18	*e*P		P	02 40 37.0 -0.5
ZEA				pmax		pmax	
	comp=N,24nm,1.0s						
ZEA				pmax		pmax	
	comp=Z,32nm,1.0s						
BRVK	**Borovoye**	60.12	340	*e*P		P	02 40 39.5 -0.8
	comp=Z,15nm,0.6s						
BRVK	**Borovoye**	60.12	340	*c i*P		P	02 40 39.4 -0.9
BRVK				pmax		pmax	
	comp=Z,9.0nm,0.8s						
BOD	**Bodaibo**	60.43	8	*e*P		P	02 40 41.5 -0.7
BOD				pmax		pmax	
	comp=Z,15nm,1.2s						
YSS	**Yuzh-Sakhalins**	61.17	32	*e*P		P	02 40 48.0 +0.6
	comp=Z,40nm,0.8s						
YSS	**Yuzh-Sakhalins**	61.17	32	*e*P		P	02 40 48.1 +0.6
YSS				*e*			02 40 55.0
YSS				*e*			02 41 06.4
YSS				pmax		pmax	
	comp=Z,50nm,0.7s						
AB31	**Akbulak array**	61.56	331	P		P	02 40 49.5 -0.6
AB31				pmax		pmax	
	comp=Z,33nm,0.7s						
ABKAR	**Akbulak array**	61.56	331	*e*P		P	02 40 49.7 -0.4
	comp=Z,42nm,0.7s						
KMBO	**Kilima Mbogo**	62.97	270	LR		LR	03 03 06.8
	comp=Z,50nm,21.0s,baz=98,slow=31						
KMBO	**Kilima Mbogo**	62.97	270	*e*P		P	02 40 58.6 -1.9
	comp=Z,7.4nm,1.4s						
KMBO	**Kilima Mbogo**	62.97	270	*e*P		P	02 40 58.6 -1.9
KMBO				pmax		pmax	
	comp=Z,7.0nm,1.4s						
AKT	**Akhty**	64.10	318	⇑*i*P		P	02 41 07.5 +0.2
AKT				*e*			02 41 42.1
AKT				pmax		pmax	
	comp=Z,25nm,1.3s						
GNI	**Garni**	65.53	316	*c e*P		P	02 41 16.0 -0.7
GNI				pmax		pmax	
	comp=Z,102nm,1.7s						
GROC	**Groznyy**	66.17	319	*e*P		P	02 41 19.3 -1.3
GROC				*e*			02 41 48.6
GROC				*e*S		S	02 50 03.2 -2.1
GROC				pmax		pmax	
	comp=Z,33nm,0.8s						
TBLG	**Delisi**	66.21	318	*e*P		P	02 41 21.4 +0.5
TBLG	**Delisi**	66.21	318	*e*P		P	02 41 21.4 +0.5
SVE	**Sverdlovsk**	66.57	338	⇓*e*P		P	02 41 22.5 -0.3
SVE				pmax		pmax	
	comp=Z,43nm,0.9s						
KARS	**Kars**	66.88	316	*e*P		P	02 41 26.4 +1.1
	comp=Z,66nm,0.7s						
AKH	**Akhalkalaki**	66.92	317	*e*P		P	02 41 25.8 +0.1
	comp=Z,8.2nm,0.8s						
ARU	**Arti**	67.10	336	*e*P		P	02 41 25.0 -1.2
	comp=Z,25nm,1.0s						
ARU	**Arti**	67.10	336	*c i*P		P	02 41 25.4 -0.8
ARU							02 43 50.1
ARU				S		S	02 50 20.6 +4.5
ARU				SS		SS	02 54 37.2 +1.1
ARU				pmax		pmax	
	comp=Z,32nm,1.2s						
ZEI	**Tsey**	67.23	318	*e*P		P	02 41 26.3 -1.3
ZEI				pmax		pmax	
	comp=Z,25nm,0.6s						
YAK	**Yakutsk**	67.47	15	*e*P		P	02 41 27.5 -0.8
	comp=Z,59nm,0.6s						
YAK	**Yakutsk**	67.47	15	*e*P		P	02 41 27.0 -1.4
NCK	**Nalchik**	67.74	319	*i*P		P	02 41 30.3 -0.3
NCK				pmax		pmax	
	comp=Z,20nm,0.8s						
NEY	**Neytrino**	68.21	318	*i*P		P	02 41 34.5 +0.8
NEY				pmax		pmax	
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	68.30	319	P		P	02 41 34.3 +0.4
	comp=Z,24nm,0.7s,baz=115,slow=5.4,SNR=67						
KIV	**Kislovodsk**	68.53	319	*e*P		P	02 41 34.7 -0.9
	comp=Z,20nm,0.9s						
KIV	**Kislovodsk**	68.53	319	⇑*i*P		P	02 41 36.5 +0.9
KIV	**Kislovodsk**	68.53	319	*e*P		P	02 41 35.6 0.0
KIV				pmax		pmax	
	comp=Z,64nm,1.0s						
GOF	**Gofitskoye**	68.77	320	⇑*e*P		P	02 41 36.2 -0.8
SOC	**Sochi**	70.35	318	*e*P		P	02 41 46.0 -0.7
SOC				*e*			02 44 23.2
SOC				*e*S		S	02 50 57.4 +2.3
SOC				*e*SS		SS	02 55 23.1 -3.7
SOC				pmax		pmax	
	comp=Z,37nm,0.7s						
MAW	**Mawson**	70.56	194	LR		LR	03 05 41.4
	comp=Z,86nm,19.8s,baz=38,slow=30						
NRIK	**Noril'sk**	71.50	355	P		P	02 41 52.2 -1.0
	comp=Z,14nm,0.5s,baz=142,slow=5.8,SNR=18						
NRIK				LR		LR	03 16 40.2
	comp=Z,66nm,18.2s,baz=199,slow=39						
VRH	**Novokhopyorsk**	72.27	326	*e*P		P	02 41 57.1 -1.0
VRH				pmax		pmax	
	comp=Z,70nm,0.6s						
PETK	**Petropavlovsk-**	72.57	32	P		P	02 41 59.5 -0.4
	comp=Z,6.0nm,0.6s,baz=204,slow=4.2,SNR=16						
PETK				LR		LR	03 12 48.5
	comp=Z,18nm,21.6s,baz=223,slow=35						
PEA1	**Petropavlovsk-**	72.57	32	*e*P		P	02 41 59.5 -0.4
LEF	**Lefka**	72.67	308	⇓*i*P		P	02 42 00.9 +0.1
MA2	**Magadan**	72.73	24	*e*P		P	02 42 01.0 +0.2
	comp=Z,19nm,0.8s						
MA2	**Magadan**	72.73	24	*c e*P		P	02 42 00.8 +0.1
MA2				pmax		pmax	
	comp=Z,16nm,0.7s						
PET	**Petropavlovsk**	73.04	33	*i*P		P	02 42 02.0 -0.7
PET				pmax		pmax	
	comp=Z,17nm,0.9s						
BR101	**Keskin Array S**	73.35	312	*e*P		P	02 42 04.2 -0.8
BR131	**Keskin Array S**	73.35	312	*e*P		P	02 42 04.4 -0.6
	comp=Z,8.2nm,0.8s						
BRTR	**Keskin Array B**	73.35	312	P		P	02 42 04.2 -0.8
	comp=Z,5.8nm,0.6s,baz=134,slow=7.2,SNR=54						
BRTR				LR		LR	03 17 29.0
	comp=Z,10nm,18.1s,baz=88,slow=38						
VORD	**Divnogorie**	73.56	325	*e*P		P	02 42 04.3 -1.4
VORD				pmax		pmax	
	comp=Z,20nm,0.4s						
ILGA	**Ilgaz**	73.68	314	*e*P		P	02 42 07.4 +0.4
	comp=Z,12nm,1.0s						
VSR	**Storozhevoye**	73.73	325	*c i*P		P	02 42 05.8 -1.0
VSR				pmax		pmax	
	comp=Z,39nm,0.9s						
ANTO	**Ankara**	74.01	312	⇑*i*P		P	02 42 08.6 -0.2
LPSR	**Galich'ya Gora**	74.44	326	*e*P		P	02 42 10.0 -0.9
LPSR				pmax		pmax	
	comp=Z,20nm,0.7s						
LBZ	**Lake Benmore**	74.50	136	*e*P		P	02 42 10.2 -1.3
	comp=Z,88nm,1.8s						
SIM	**Simferopol'**	74.60	318	*e*P		P	02 42 12.9 +0.9
SIM							02 42 24.0
SIM				pmax		pmax	
	comp=Z,14nm,0.6s						
SEY	**Seymchan**	75.33	22	*c e*P		P	02 42 15.4 -0.4
LBTB	**Lobatse**	75.34	245	*e*P		P	02 42 15.1 -1.7
	comp=Z,41nm,2.0s						
LBTB	**Lobatse**	75.34	245	*e*P		P	02 42 15.1 -1.7
LBTB				pmax		pmax	
	comp=Z,41nm,2.0s						
MDUB	**Mudurnu**	75.35	313	*e*P		P	02 42 16.6 +0.1
	comp=Z,68nm,0.8s						
PRGR	**Permogore**	75.56	336	⇑*i*P		P	02 42 16.8 -0.3
PRGR				pmax		pmax	
	comp=Z,58nm,0.6s						
TIXI	**Tiksi**	75.60	9	*e*P		P	02 42 16.0 -1.2
	comp=Z,60nm,0.5s						
TIXI	**Tiksi**	75.60	9	*c i*P		P	02 42 16.0 -1.2
TIXI				pmax		pmax	
	comp=Z,30nm,1.0s						
THZ	**Tophouse**	75.92	133	*e*P		P	02 42 18.9 -0.9
	comp=Z,61nm,1.6s						
BOSA	**Boshof**	75.97	241	P		P	02 42 22.3 +1.9
	comp=Z,2.6nm,0.8s,baz=76,slow=6.1,SNR=5.4						
BOSA				LR		LR	03 10 41.1
	comp=Z,64nm,18.6s,baz=72,slow=32						
BOSA	**Boshof**	75.97	241	*e*P		P	02 42 21.8 +1.4
	comp=Z,67nm,1.9s						
MOS	**Moscow**	76.43	329	*e*P		P	02 42 21.1 -1.1
MOS				pmax		pmax	
	comp=Z,62nm,0.6s						
YLV	**Yalova**	76.72	312	⇓*i*P		P	02 42 24.0 -0.3
OBN	**Obninsk**	76.73	328	*e*P		P	02 42 23.5 -0.4
	comp=Z,34nm,0.6s						
OBN	**Obninsk**	76.73	328	⇑*i*P		P	02 42 23.9 0.0
OBN	**Obninsk**	76.73	328	*c i*P		P	02 42 23.7 -0.2
OBN				*i*			02 42 40.0
OBN				*i*			02 45 17.9
OBN				pmax		pmax	
	comp=Z,28nm,0.9s						
OBN				MLR		MLR	
	comp=Z,27nm,17.0s						
KARP	**Karpathos**	77.32	307	*e*P		P	02 42 28.3 +0.6
	comp=Z,58nm,0.8s						
KLMR	**Klimovskoe**	77.73	334	*e*P		P	02 42 27.8 -1.6
KLMR				pmax		pmax	
	comp=Z,15nm,0.7s						
KLMR	**Klimovskoe**	77.73	334	*e*P		P	02 42 27.9 -1.5
KLMR				AMP			02 42 30.0
	comp=Z,15nm,0.7s						
SYO	**Syowa Base**	78.15	199	⇓*e*P		P	02 42 23.2 -8.4
SYO	**Syowa Base**	78.15	199	⇓*e*PcP		PcP	02 42 39.2 -1.8
BKZ	**Black Stump Fm**	78.23	130	*e*P		P	02 42 33.3 +0.5
	comp=Z,32nm,0.5s						
BFZ	**Birch Farm**	78.24	131	*e*P		P	02 42 32.5 -0.2
	comp=Z,122nm,1.3s						
TIRR	**Tirgusor**	78.36	316	*e*P		P	02 42 33.2 -0.1
	comp=Z,28nm,0.7s						
TIRR	**Tirgusor**	78.36	316	⇓*i*P		P	02 42 33.2 -0.1
TIRR	**Tirgusor**	78.36	316	*e*P		P	02 42 33.2 -0.1
TIRR				pmax		pmax	
	comp=Z,28nm,0.7s						
TLB	**Topalu**	78.65	316	⇑*i*P		P	02 42 34.9 +0.1
MILM	**Milestii Mici**	78.71	319	⇑*i*P		P	02 42 34.8 -0.3
CFR	**Carcaliu**	78.73	317	⇑*i*P		P	02 42 35.2 0.0
ALN	**Alexandroupoli**	79.26	312	*e*P		P	02 42 35.9 -2.4
	comp=Z,22nm,1.3s						
ALN	**Alexandroupoli**	79.26	312	*e*P		P	02 42 35.9 -2.4
ALN				pmax		pmax	
	comp=Z,22nm,1.3s						
AKASG	**Malin Array Be**	79.45	322	P		P	02 42 38.7 -0.5
	comp=Z,1.9nm,0.4s,baz=84,slow=4.6,SNR=12						
AKASG				LR		LR	03 22 16.6
	comp=Z,21nm,20.6s,baz=55,slow=39						
AKBB	**Malin Array Si**	79.45	322	*e*P		P	02 42 38.4 -0.7
	comp=Z,5.0nm,0.8s						
AKBB	**Malin Array Si**	79.45	322	*e*P		P	02 42 38.4 -0.7
AKBB				pmax		pmax	
	comp=Z,5.0nm,0.8s						
KIEV	**Kiev**	79.46	322	⇑*i*P		P	02 42 38.7 -0.5
KIEV	**Kiev**	79.46	322	*i*P		P	02 42 37.3 -1.9
KIEV				pmax		pmax	
	comp=Z,4.0nm,0.8s						
VRI	**Vrincioaia**	79.85	317	⇑*i*P		P	02 42 42.2 +0.8
PLOR	**Plostina**	79.90	317	⇑*i*P		P	02 42 43.1 +1.4
SULR		79.91	316	⇑*i*P		P	02 42 42.6 +0.9
TESR	**Tescani**	80.05	318	⇓*i*P		P	02 42 42.8 +0.3
MLR	**Muntele Rosu**	80.30	317	*e*P		P	02 42 44.6 +0.6
	comp=Z,12nm,0.8s						
MLR	**Muntele Rosu**	80.30	317	⇑*i*P		P	02 42 44.8 +0.8
MLR	**Muntele Rosu**	80.30	317	*e*P		P	02 42 44.6 +0.6
MLR				pmax		pmax	
	comp=Z,12nm,0.8s						
BIZ	**Bicaz**	80.51	318	⇑*i*P		P	02 42 45.6 +0.6
PRAR	**RASCA**	80.53	319	⇑*i*P		P	02 42 46.0 +1.0
ARR	**Arges**	81.18	316	⇑*i*P		P	02 42 48.7 +0.1
BURAR	**Bucovina Array**	81.25	319	⇑*i*P		P	02 42 50.1 +1.1
BUR08	**Bucovina Ar. S**	81.27	319	*e*P		P	02 42 50.3 +1.2
	comp=Z,12nm,0.9s						
VTS	**Vitosha**	81.65	313	*e*P		P	02 42 51.4 +0.1
	comp=Z,7.8nm,0.7s						
VTS	**Vitosha**	81.65	313	⇑*i*P		P	02 42 51.4 +0.1
VTS	**Vitosha**	81.65	313	*e*P		P	02 42 51.4 +0.1
VTS				pmax		pmax	
	comp=Z,8.0nm,0.7s						
LOT	**Lotru**	81.79	316	⇓*i*P		P	02 42 52.6 +0.7
VNDA	**Vanda**	82.33	169	P		P	02 42 55.5 +1.5
	comp=Z,1.3nm,0.6s,baz=304,slow=5.4,SNR=14						
VNDA				LR		LR	03 13 11.0
	comp=Z,25nm,21.9s,baz=336,slow=31						
VNDA	**Vanda**	82.33	169	*e*P		P	02 42 55.9 +1.9
	comp=Z,8.9nm,1.4s						
VNDA	**Vanda**	82.33	169	*e*P		P	02 42 55.9 +1.9
VNDA				pmax		pmax	
	comp=Z,9.0nm,1.4s						
DRGR		82.76	317	⇓*i*P		P	02 42 57.4 +0.5
BILL	**Bilibino**	82.87	20	*i*P		P	02 42 54.7 -2.2
BILL				*i*			02 43 02.9
BILL				pmax		pmax	
	comp=Z,1.0nm,0.8s						
BILL				MLR		MLR	
	comp=Z,83nm,21.0s						
VSU	**Vasula**	82.94	329	*c e*P		P	02 42 56.9 -0.5
VSU				pmax		pmax	
	comp=Z,39nm,0.6s						
TRPA	**Tarpa**	83.12	319	⇑*i*P		P	02 42 59.4 +0.8
TRPA	**Tarpa**	83.12	319	⇑EP		P	02 42 58.1 -0.5
KWP	**Kalwaria Pacla**	83.28	320	*e*P		P	02 43 00.2 +0.7
KWP	**Kalwaria Pacla**	83.28	320	*e*P		P	02 43 00.1 +0.6
	comp=Z,185nm,1.5s						
KWP	**Kalwaria Pacla**	83.28	320	*e*P		P	02 43 00.2 +0.7
BZS	**Buzias**	83.31	316	⇑*i*P		P	02 43 00.0 +0.3
SBA	**Scott Base**	83.43	169	*e*P		P	02 43 01.4 +1.7
	comp=Z,5.2nm,0.9s						
SBA	**Scott Base**	83.43	169	*e*P		P	02 43 01.4 +1.7
SBA				pmax		pmax	
	comp=Z,5.0nm,0.9s						
KOLS	**Kolonicke sedl**	83.44	320	*e*P		P	02 43 01.4 +1.1
KOLS				pmax		pmax	
	comp=Z,15nm,0.9s						
KOLS	**Kolonicke sedl**	83.44	320	*e*P		P	02 43 01.4 +1.1
SUW	**Suwalki**	83.84	325	*e*P		P	02 43 02.2 0.0
SUW	**Suwalki**	83.84	325	*e*P		P	02 43 01.9 -0.3
	comp=Z,62nm,0.9s						
SUW	**Suwalki**	83.84	325	*e*P		P	02 43 02.2 0.0
FIA1	**FINESS Array S**	84.03	332	*e*P		P	02 43 03.3 +0.4
	comp=Z,16nm,0.6s						
FIA0	**FINESS Array S**	84.03	332	*e*P		P	02 43 03.2 +0.3
FIA0	**FINESS Array S**	84.03	332	*e*P		P	02 43 03.3 +0.3
FINES	**FINESS Array B**	84.03	332	P		P	02 43 03.2 +0.3
	comp=Z,13nm,0.5s,baz=108,slow=5.5,SNR=186						
FINES				LR		LR	03 24 59.1
	comp=Z,26nm,18.6s,baz=88,slow=39						
PDG	**Podgorica**	84.53	313	⇑*i*P		P	02 43 05.4 -0.6
TTG	**Podgorica**	84.53	313	*e*P		P	02 43 06.1 +0.1
	comp=Z,14nm,0.7s						
TTG	**Podgorica**	84.53	313	*e*P		P	02 43 06.1 +0.1
TTG				pmax		pmax	
	comp=Z,14nm,0.7s						
NIE	**Niedzica**	84.80	320	*e*P		P	02 43 08.2 +1.0
NIE	**Niedzica**	84.80	320	*e*P		P	02 43 08.2 +1.0
PSZ	**Piszkesteto**	84.84	318	⇑EP		P	02 43 07.0 -0.5
OJC	**Ojcow**	85.24	321	*e*P		P	02 43 10.4 +1.1
OJC	**Ojcow**	85.24	321	*e*P		P	02 43 10.4 +1.1
MORH	**Mrgy, Hungar**	85.45	316	⇑EP		P	02 43 10.0 -0.5
VYHS	**Vyhne**	85.62	319	*e*P		P	02 43 11.7 +0.4
VYHS				pmax		pmax	
	comp=Z,3.0nm,1.4s						
VYHS	**Vyhne**	85.62	319	*e*P		P	02 43 11.7 +0.4
KLNR	**Kaliningrad**	85.66	325	*i*P		P	02 43 11.3 0.0
KLNR				pmax		pmax	
	comp=Z,46nm,0.8s

comp=Z,6.4nm,0.9s
BRG Berggiesshubel 89.02 321 *e*P **P 02 43 28.4 +0.8**
BRG pmax pmax
comp=Z,6.0nm,0.9s
GEC2 GERESS Array S 89.04 319 *e*P **P 02 43 28.9 +1.0**
comp=Z,17nm,1.6s
GEC2 GERESS Array S 89.04 319 *e*P **P 02 43 28.9 +1.0**
GEC2 pmax pmax
comp=Z,17nm,1.6s
GERES GERESS Array B 89.04 319 P **P 02 43 28.6 +0.7**
comp=Z,2.0nm,0.7s,baz=84,slow=4.2,SNR=17
KHC Kasperske Hory 89.14 319 *e*P **P 02 43 29.1 +0.8**
KHC Kasperske Hory 89.14 319 *e*P **P 02 43 29.1 +0.8**
CLL Collm 89.64 321 *i* P **P 02 43 30.9 +0.4**
comp=Z,4.0nm,1.0s
CLL *i* (sP) **pP 02 43 47.5 +1.7**
comp=Z,4.0nm,0.9s
CLL Collm 89.64 321 *i* P **P 02 43 30.9 +0.4**
CLL pmax pmax
comp=Z,4.0nm,1.0s
STEI Steigen 89.75 338 *e*P **P 02 43 30.9 +0.3**
MOR8 Moi Rana 89.91 336 *e*P **P 02 43 31.4 -0.1**
WTTA Wattenberg 90.34 317 *e*P **P 02 43 34.1 -0.1**
comp=Z,5.2nm,0.7s,SNR=4.2
WATA Walderalm 90.38 317 *i* P **P 02 43 33.6 -0.7**
SPA0 Spitsbergen Ar 90.47 348 *e*P **P 02 43 33.0 -0.9**
STOK Stokkvaagen 90.49 336 *e*P **P 02 43 34.7 +0.6**
SQTA Sankt Quirin 90.63 317 *e*P **P 02 43 35.6 +0.2**
comp=Z,4.9nm,0.6s,SNR=4.3
MOTA Moosalm 90.70 317 *e*P **P 02 43 35.7 -0.1**
comp=Z,5.5nm,0.7s
NC405 NORSAR Array S 90.83 331 *e*P **P 02 43 36.6 +0.7**
comp=Z,50nm,1.8s
NSS Namsos 90.84 334 *e*P **P 02 43 36.1 +0.3**
RETA Reutte 90.94 317 *e*PcP **P 02 43 37.1 +0.4**
comp=Z,6.4nm,0.8s
NC303 NORSAR Array S 91.00 331 *e*P **P 02 43 36.9 +0.3**
comp=Z,45nm,1.6s
NB2 NORSAR Subarra 91.07 331 P **P 02 43 36.5 -0.5**
comp=Z,1.5nm,0.6s,baz=95,slow=4.6
NB2 NORSAR Subarra 91.07 331 P **P 02 43 36.5 -0.5**
baz=95,slow=4.6
NB200 NORSAR Array S 91.07 331 *e*P **P 02 43 36.9 -0.1**
NOA NORSAR Array B 91.07 331 P **P 02 43 36.9 -0.1**
comp=Z,2.2nm,0.7s,baz=92,slow=4.7,SNR=18
NOA LR LR 03 28 35.5
comp=Z,28nm,18.5s,baz=105,slow=38
FUORN Ofenpass-Fuorn 91.26 316 *e*P **P 02 43 39.6 +1.0**
comp=Z,8.7nm,0.8s
NBO00 NORSAR Array S 91.28 331 *e*P **P 02 43 37.0 -1.0**
NC204 NORSAR Array S 91.29 331 *e*P **P 02 43 38.5 +0.4**
comp=Z,58nm,1.9s
KEST Kesra 91.75 306 P **P 02 43 42.8 +2.0**
comp=Z,7.0nm,0.8s,baz=309,slow=4.0,SNR=7.2
KEST Kesra 91.75 306 *e*P **P 02 43 42.8 +2.0**
comp=Z,13nm,0.9s
KONO Kongsberg 91.84 329 *e*P **P 02 43 40.4 -0.2**
SKAR Skarslia 92.49 331 *e*P **P 02 43 44.4 +0.8**
MOL Molde 92.81 332 *e*P **P 02 43 46.3 +1.4**
AKN Aaknes 93.08 332 *e*P **P 02 43 46.9 +0.7**
TORD Torodi Ar. Bea 98.72 283 P **P 02 44 13.2 +0.2**
comp=Z,1.1nm,1.0s,baz=90,slow=4.4,SNR=4.3
TOA1 Torodi Ar. Sit 98.72 283 *e*P **P 02 44 13.2 +0.2**
TOLK Toolik Lake Re 98.92 20 *e*P **P 02 44 12.8 +0.1**
comp=Z,2.6nm,0.6s
TOLK Toolik Lake Re 98.92 20 P **P 02 44 12.9 +0.1**
baz=288
BPAW Bear Paw Mtn. 99.73 25 *e*Pdif **Pdif 02 44 16.4 0.0**
comp=Z,19nm,2.0s
TCOL CIGO, UAF Yank 100.78 24 P **Pdif 02 44 21.2 +0.2**
baz=289
ILAR Eielson Array 101.21 24 P **Pdif 02 44 22.2 -0.8**
comp=Z,0.3nm,0.6s,baz=288,slow=3.6,SNR=4.7
ILAR PP PP 02 48 22.5 -10
comp=Z,0.4nm,0.8s,baz=313,slow=6.4,SNR=4.4
ILAR PKKPbc **PKKPbc 03 00 33.4 -2.2**
comp=Z,0.4nm,0.6s,baz=115,slow=1.2,SNR=5.7
ILB Eielson Array 101.21 24 *e*Pdif **Pdif 02 44 22.2 -0.8**
ILB *e*PP PP 02 48 22.5 -10
SCO Scoresbysund 102.00 343 *i* P **PKiKP 02 48 49.3 +0.7**
DOT Dot Lake 102.77 24 *e*Pdif **Pdif 02 44 29.2 -0.8**
E04D Cinebar 121.89 34 P **PKPdf 02 49 27.2 +0.2**
baz=307
G03D McMinnville, O 122.30 35 P **PKPdf 02 49 27.2 -0.5**
baz=306
I02D Swisshome 122.59 36 P **PKPdf 02 49 28.0 -0.3**
baz=304
J01E Myrtle Point 123.06 37 P **PKPdf 02 49 28.8 -0.5**
baz=304
I03D Drain, OR 123.11 37 P **PKPdf 02 49 29.1 -0.2**
baz=305
G05D Wamic, OR 123.38 34 P **PKPdf 02 49 29.6 -0.3**
baz=306
K02D Willamette Mer 123.49 38 P **PKPdf 02 49 30.3 0.0**
baz=304
I04A Tendick Farm, 123.61 36 P **PKPdf 02 49 30.2 -0.2**
baz=306
NEW Newport 123.62 29 P **PKPdf 02 49 30.4 +0.1**
baz=313
J04D Umpqua Nationa 124.12 36 P **PKPdf 02 49 31.0 -0.6**
baz=306
FFC Flin Flon 124.18 15 *e*PKPdf **PKPdf 02 49 30.7 -0.4**
FFC Flin Flon 124.18 15 *i* PKIKP **PKPdf 02 49 31.0 -0.1**
L04D Klamath Falls 124.59 38 P **PKPdf 02 49 32.2 -0.3**
baz=305
J05D Fort Rock, OR 124.61 36 P **PKPdf 02 49 32.2 -0.2**
baz=306
M04C Macdoel 125.12 38 P **PKPdf 02 49 32.9 -0.6**
baz=305
F10A Beach Ranch, E 125.12 31 *e*PKPdf **PKPdf 02 49 33.5 +0.2**
O02D Mt. Diablo Mer 125.42 40 P **PKPdf 02 49 33.8 -0.2**
baz=303
O03E Paynes Creek 125.99 39 P **PKPdf 02 49 34.7 -0.4**
baz=304
J08A Circle Bar Ran 126.15 34 *e*PKPdf **PKPdf 02 49 36.3 +0.9**
MSO Missoula 126.17 29 *e*PKPdf **PKPdf 02 49 35.1 -0.1**
MSO Missoula 126.17 29 P **PKPdf 02 49 35.0 -0.3**
baz=316
PLID Pearl Lake 126.36 31 *e*PKPdf **PKPdf 02 49 36.4 +0.5**
WVOR Wild Horse Val 126.64 35 *e*PKPpre PKPpre 02 49 25.1
EGMT Eagleton 127.15 25 P **PKPdf 02 49 37.3 +0.2**
baz=321
BOZ Bozeman (W) 128.16 28 *e*PKPdf **PKPdf 02 49 39.9 +0.7**
BOZ Bozeman (W) 128.16 28 *e*PKIKP **PKPdf 02 49 39.9 +0.7**
BOZ Bozeman (W) 128.16 28 P **PKPdf 02 49 39.6 +0.4**
baz=318
HLID Hailey 128.23 32 P **PKPdf 02 49 39.9 +0.5**
baz=314
NV01 Mina Array Sit 129.28 39 *e*PKPdf **PKPdf 02 49 43.1 +1.5**
NVAR Mina Array Bea 129.28 39 PKP **PKPdf 02 49 43.1 +1.5**
comp=Z,0.8nm,0.5s,baz=252,slow=1.8,SNR=3.0
LAO LASA Array 129.67 23 *e*PKPdf **PKiKP 02 49 43.8 +1.1**
LAO LASA Array 129.67 23 P **PKPdf 02 49 42.8 +0.9**
baz=325
R11A Troy Canyon, C 131.01 38 *e*PKPdf **PKiKP 02 49 46.8 +1.0**
R11A Troy Canyon, C 131.01 38 P **PKPdf 02 49 45.9 +1.1**
baz=309,SNR=6.4
MPMC Manual Prospec 131.20 41 P **PKPdf 02 49 46.5 +1.2**
baz=306
PD31 Pinedale Array 131.27 29 *e*PKPdf **PKPdf 02 49 44.3 -1.0**
PDAR Pinedale Array 131.27 29 PKP **PKPdf 02 49 44.3 -1.0**
comp=Z,0.5nm,0.5s,baz=17,slow=0.9,SNR=8.1
PDAR SKPbc **SKPbc 02 53 04.8 -1.0**
comp=Z,0.3nm,0.6s,baz=79,slow=3.2,SNR=3.5
CHGQ Chibougamau 131.82 355 P **PKPdf 02 49 45.8 -0.1**
baz=7.2
BFSC Mount Baldy Ra 132.12 43 P **PKPdf 02 49 47.1 +0.1**
baz=304
MATQ Matagami 132.16 358 P **PKPdf 02 49 46.3 -0.1**
baz=2.8
RSSD Black Hills 132.66 24 *e*PKPdf **PKPdf 02 49 47.5 -0.3**
RSSD Black Hills 132.66 24 *e*PKIKP **PKPdf 02 49 47.5 -0.3**
RSSD Black Hills 132.66 24 P **PKPdf 02 49 47.7 -0.2**
baz=326
K22A Casper 132.78 27 *e*PKPdf **PKPdf 02 49 48.0 -0.1**
K22A Casper 132.78 27 P **PKPdf 02 49 48.0 -0.1**
baz=322
LSQQ Lebel-sur-Quev 132.84 358 P **PKPdf 02 49 48.0 +0.2**
baz=3.7
EYMN Ely 132.90 11 P **PKPdf 02 49 48.3 +0.3**
baz=344
GMRC Granite Mounta 133.15 41 P **PKPdf 02 49 50.4 +1.4**
baz=307
C40A Isle Royale Na 133.33 9 P **PKPdf 02 49 48.5 -0.2**
baz=347
IRM Iron Mountain 133.87 42 P **PKPdf 02 49 49.7 -0.5**
baz=307
O20A White River Ci 133.90 30 *e*PKPdf **PKPdf 02 49 51.8 +1.5**
O20A White River Ci 133.90 30 P **PKPdf 02 49 51.1 +0.8**
baz=319
BC3 Big Chuckawall 133.96 43 P **PKPdf 02 49 50.2 -0.2**
baz=306
IKP In-Ko-Pah, Jac 134.08 44 P **PKPdf 02 49 50.3 -0.4**
baz=304
LATQ La Tuque 134.17 353 P **PKPdf 02 49 50.4 +0.1**
baz=9.7
E38A The Farm, Brul 134.18 11 P **PKPdf 02 49 50.3 -0.1**
baz=343
D41A Chassel 134.25 8 P **PKPdf 02 49 50.4 -0.1**
baz=348
N23A Red Feather La 134.43 28 P **PKPdf 02 49 52.8 +1.5**
baz=322
D54A Lac Fusel, La 134.72 357 P **PKPdf 02 49 50.9 -0.4**
baz=4.3
F38A Pierce - Schro 134.73 12 P **PKPdf 02 49 50.8 -0.6**
baz=343
D47A Chapleau 134.81 3 P **PKPdf 02 49 51.7 +0.1**
baz=355
D53A Lac Vacive, Po 134.84 358 P **PKPdf 02 49 51.1 -0.4**
baz=2.8
D51A Lot 18 Range I 134.87 360 P **PKPdf 02 49 51.2 -0.4**
baz=0.5
PV17 East Wray Mesa 134.89 33 *e*PKPdf **PKPdf 02 49 50.7 -1.5**
D46A Sault St. Mari 134.91 4 P **PKPdf 02 49 51.3 -0.4**
baz=354
PV07 Paradox Valley 134.94 32 *e*PKPdf **PKiKP 02 49 54.5 +0.7**
F39A Loretta 134.96 11 P **PKPdf 02 49 51.9 0.0**
baz=344
D52A ZEK Kipawa Sen 134.97 359 P **PKPdf 02 49 51.7 -0.1**
baz=1.8
F40A Park Falls 135.11 10 P **PKPdf 02 49 52.2 0.0**
baz=345
E43A Lone Tree Farm 135.13 7 *e*PKPdf **PKPdf 02 49 52.4 +0.3**
E43A Lone Tree Farm 135.13 7 P **PKPdf 02 49 52.0 -0.1**
baz=350
E45A Wooded Hills, 135.35 5 P **PKPdf 02 49 52.6 +0.1**
baz=352
E47A Iron Bridge 135.40 3 P **PKPdf 02 49 52.0 -0.6**
baz=355
E46A Sault Ste Mari 135.41 4 P **PKPdf 02 49 52.5 -0.1**
baz=354
E48A Lockeyer 135.43 2 P **PKPdf 02 49 52.7 0.0**
baz=356
G39A Holcombe 135.52 11 P **PKPdf 02 49 52.8 -0.1**
baz=344
E50A Wahnapitae 135.53 1 P **PKPdf 02 49 52.4 -0.4**
baz=359
E53A Dumoine, Ponti 135.54 358 P **PKPdf 02 49 52.1 -0.8**
baz=2.9
F44A Big Bay de Noc 135.60 7 P **PKPdf 02 49 53.7 +0.7**
baz=350
ECSD EROS Data Cent 135.61 17 P **PKPdf 02 49 53.0 -0.2**
baz=336
E52A Mattawa 135.66 359 P **PKPdf 02 49 53.0 -0.1**
baz=1.5
G40A Rib Lake 135.72 11 *e*PKPdf **PKPdf 02 49 54.7 +1.4**
G40A Rib Lake 135.72 11 P **PKPdf 02 49 54.2 +0.9**
baz=345
F45A CMU Biological 135.98 6 P **PKPdf 02 49 53.9 +0.2**
baz=352
F51A Arnstein 136.03 0 P **PKPdf 02 49 54.4 +0.6**
baz=360
F48A Evansville 136.06 3 P **PKPdf 02 49 53.4 -0.5**
baz=356
G43A Wallace 136.14 8 P **PKPdf 02 49 54.1 0.0**
baz=348
F49A Sandfield 136.15 2 P **PKPdf 02 49 54.1 0.0**
baz=357
F52A Sundridge 136.16 360 P **PKPdf 02 49 53.4 -0.7**
baz=0.6
PEMO Pembroke 136.22 357 P **PKPdf 02 49 54.4 +0.2**
baz=3.6
G46A Petoskey 136.41 5 P **PKPdf 02 49 55.5 +1.0**
baz=353
S22A 4UR Ranch, Cre 136.41 32 P **PKPdf 02 49 55.9 +0.7**
baz=319
KLBO Killbear Provi 136.60 0 P **PKPdf 02 49 55.8 +0.9**
baz=359
G55A Calabogie 136.62 357 P **PKPdf 02 49 55.9 +1.0**
baz=4.3
G47A Hillman 136.63 4 P **PKPdf 02 49 55.3 +0.3**
baz=354
214A Organ Pipe Nat 136.75 43 P **PKPdf 02 49 55.7 +0.1**
baz=307
PLVO Plevna 136.85 357 P **PKPdf 02 49 56.0 +0.6**
baz=3.9
H43A Windswept, Lux 136.90 8 P **PKPdf 02 49 56.7 +1.2**
baz=348
BANO Bancroft 136.91 358 P **PKPdf 02 49 55.8 +0.3**
baz=2.6
LONY Lake Ozonia 137.09 355 P **PKPdf 02 49 57.0 +1.1**
baz=7.5
SDCO Great Sand Dun 137.10 30 P **PKPdf 02 49 55.8 -0.7**
baz=320
LBNH Lisbon 137.15 352 P **PKPdf 02 49 57.2 +1.3**
baz=12
I42A Draeger Farm, 137.28 10 P **PKPdf 02 49 56.7 +0.5**
baz=346
DELO Deloro Mine 137.40 358 P **PKPdf 02 49 56.5 +0.1**
baz=3.1
J42A Columbus 137.80 10 P **PKPdf 02 49 58.5 +1.3**
baz=346
BWLO Walkerton 137.82 1 P **PKPdf 02 49 58.1 +0.9**
baz=358
TUC Tucson 137.88 41 P **PKPdf 02 49 58.1 +0.3**
baz=310
BASO Ashfield 137.91 2 P **PKPdf 02 49 58.6 +1.3**
baz=357
JFWS Jewell Farm 137.98 12 P **PKPdf 02 49 58.1 +0.6**
baz=344
T25A Trinidad 138.11 30 P **PKPdf 02 49 58.3 +0.1**
baz=321
TASM ASL Pad, Albuq 138.69 34 P **PKPdf 02 49 59.5 +0.2**
baz=317
TASM ASL Pad, Albuq 138.69 34 P **PKPdf 02 49 59.7 +0.4**
baz=317
ANMO Albuquerque 138.69 34 *e*PKPpre PKPpre 02 49 52.3
ANMO Albuquerque 138.69 34 *e*PKHKP PKPpre 02 49 52.3
ANMO Albuquerque 138.69 34 P **PKPdf 02 50 00.4 +1.1**
baz=317
CBKS Cedar Bluff 138.86 24 P **PKPdf 02 49 58.6 -0.7**
baz=329
TYNO Tyneside 138.86 0 P **PKPdf 02 50 00.0 +0.9**
baz=360
K46A Dorr 138.91 7 P **PKPdf 02 49 59.3 +0.1**
baz=351
L43A Garden Prairie 138.97 10 P **PKPdf 02 50 00.5 +1.1**
baz=346
L42A Oliver, Polo 138.97 11 P **PKPdf 02 50 00.4 +1.0**
baz=345
K47A Vermontville 139.02 6 P **PKPdf 02 50 00.9 +1.4**
baz=352
K49A Clarkson 139.04 4 P **PKPdf 02 50 00.0 +0.5**
baz=354
BINY Binghamton 139.61 356 P **PKPdf 02 50 01.4 +0.8**
baz=5.7
L47A Sherwood 139.68 6 P **PKPdf 02 50 01.8 +1.2**
baz=352
L49A Milan 139.69 5 P **PKPdf 02 50 01.7 +1.0**
baz=354
L54A Sinclairville 139.72 359 P **PKPdf 02 50 02.2 +1.5**
baz=0.6
L55A Hinsdale 139.75 358 P **PKPdf 02 50 02.3 +1.4**
baz=2.0
L48A N Adams 139.79 5 P **PKPdf 02 50 01.9 +1.0**
baz=353
L53A Girard 140.00 1 P **PKPdf 02 50 02.4 +1.1**
baz=359
PLIO Pelee Island, 140.12 3 P **PKPdf 02 50 02.6 +1.2**
baz=356
M50A Fremont 140.44 4 P **PKPdf 02 50 03.3 +1.3**
baz=355
M56A Emporium 140.45 358 P **PKPdf 02 50 04.0 +1.9**
baz=2.4
M54A Oil Creek Stat 140.45 360 P **PKPdf 02 50 03.8 +1.7**
baz=0.1
M55A Ridgway 140.48 359 P **PKPdf 02 50 03.3 +1.1**
baz=1.5
N46A Monticello 140.55 8 P **PKPdf 02 50 03.9 +1.6**
baz=349
PAL Palisades 140.59 353 P **PKPdf 02 50 03.3 +1.0**
baz=9.1
N47A Urbana 140.71 7 P **PKPdf 02 50 03.7 +1.1**
baz=351
N48A Decatur 140.81 6 P **PKPdf 02 50 04.2 +1.5**
baz=352
N56A West Decatur 141.01 358 P **PKPdf 02 50 04.5 +1.4**
baz=2.2
N50A Nevada 141.06 4 P **PKPdf 02 50 05.0 +1.8**
baz=355
N53A Lisbon 141.14 1 P **PKPdf 02 50 04.8 +1.4**
baz=358
O47A Sheridan 141.28 8 P **PKPdf 02 50 04.9 +1.3**
baz=350
SSPA Standing Stone 141.28 358 P **PKPdf 02 50 05.5 +1.9**
baz=2.9
O48A Farmland 141.38 7 P **PKPdf 02 50 05.2 +1.4**
baz=351
MSTX Muleshoe 141.42 31 P **PKPdf 02 50 05.1 +0.9**
baz=321
O61A Allentown 141.57 354 P **PKPdf 02 50 05.9 +1.8**
baz=8.3
ACSO Alum Creek Sta 141.61 4 P **PKPdf 02 50 05.5 +1.2**
baz=355
O50A Cable 141.65 5 P **PKPdf 02 50 05.7 +1.4**
baz=354
MNTX Cornudas Mount 141.66 36 P **PKPdf 02 50 05.7 +1.1**
baz=316
O56A Blue Knob Stat 141.67 359 P **PKPdf 02 50 06.4 +2.0**
baz=1.9
O51A Pataskala 141.72 4 P **PKPdf 02 50 06.1 +1.7**
baz=355
P45A Graceland, Par 141.73 10 P **PKPdf 02 50 07.0 +2.6**
baz=347
O54A Avella 141.77 1 P **PKPdf 02 50 05.9 +1.4**
baz=359
P60A Greenville 141.96 355 P **PKPdf 02 50 07.1 +2.3**
baz=6.6
P47A Martinsville 142.00 8 P **PKPdf 02 50 06.5 +1.6**
baz=349
P48A Milroy 142.14 7 P **PKPdf 02 50 06.6 +1.4**
baz=351
P50A Jamestown 142.17 5 P **PKPdf 02 50 06.6 +1.4**
baz=353
Q45A Warren Harvey, 142.27 11 P **PKPdf 02 50 06.6 +1.2**
baz=346
P51A Williamsport 142.35 4 P **PKPdf 02 50 06.8 +1.2**
baz=355
CCM Cathedral Cave 142.39 15 P **PKPdf 02 50 07.2 +1.5**
baz=341
P53A Whipple 142.44 2 P **PKPdf 02 50 07.2 +1.5**
baz=357
P55A Reedsville 142.45 0 P **PKPdf 02 50 07.4 +1.6**
baz=360
WMOK Wichita Mounta 142.72 26 *e*PKPpre **PKPdf 02 50 01.6 -4.7**
WMOK Wichita Mounta 142.72 26 *e*PKIKP **PKPdf 02 50 01.7 -4.7**
Q57A Strasburg 142.90 358 P **PKPdf 02 50 08.6 +2.0**
baz=2.2
Q50A Georgetown 142.91 5 P **PKPdf 02 50 08.8 +2.3**
baz=353
TUL1 Leonard 142.93 22 *e*PKPpre **PKPdf 02 50 02.3 -4.4**
Q55A Buckhannon 142.96 0 P **PKPdf 02 50 09.1 +2.4**
baz=359
Q53A Leroy 143.06 2 P **PKPdf 02 50 09.2 +2.4**
baz=357
R47A Wooly Knot Far 143.13 9 P **PKPdf 02 50 09.2 +2.2**
baz=349
HHAR Hobbs 143.24 19 *e*PKPpre PKPab 02 50 03.1 +0.1
R60A Leonardtown, M 143.57 356 P **PKPdf 02 50 10.6 +2.9**
baz=5.3
R58A Rapidan 143.62 358 P **PKiKP 02 50 10.8 -0.4**
baz=2.9
R57A Stanardsville 143.64 358 P **PKPdf 02 50 10.7 +2.8**
baz=2.0
PBMO Poplar Bluff 143.80 15 *e*PKPpre PKPab 02 50 04.2 -0.9
ABTX Abilene, Hawle 144.07 29 *e*PKPdf **PKPab 02 50 06.7 +0.4**
ABTX Abilene, Hawle 144.07 29 P **PKPdf 02 50 11.5 +2.7**
baz=325
S51A Beattyville 144.14 5 P **PKPdf 02 50 11.5 +2.8**
baz=353
BDFB Brasilia 144.16 240 PKP PKPbc 02 50 09.0 +1.4
comp=Z,2.8nm,0.5s,baz=108,slow=3.3,SNR=7.9
S57A Dark Hollow, R 144.18 359 *e*PKPdf **PKPab 02 50 06.8 +0.2**
S57A Dark Hollow, R 144.18 359 P **PKPdf 02 50 11.8 +3.0**
baz=1.3
W39A Magazine 144.28 20 *e*PKPdf **PKPab 02 50 06.7 -0.3**
W39A Magazine 144.28 20 P **PKPdf 02 50 11.8 +2.7**
baz=336
S58A Poland Farm, P 144.30 358 *e*PKPdf **PKPdf 02 50 09.5 +0.5**
LTX Lajitas 144.38 37 *e*PKPdf **PKPab 02 50 08.3 +0.6**
LTX Lajitas 144.38 37 *e*PKIKP **PKPab 02 50 08.3 +0.6**
TX31 Lajitas Ar. Si 144.38 37 *e*PKPdf **PKPab 02 50 07.6 -0.1**
TXAR Lajitas Array 144.38 37 PKP **PKPab 02 50 08.3 +0.6**
comp=Z,11nm,0.5s,baz=201,slow=1.3,SNR=174
TXAR pPKP **pPKPdf 02 50 24.8 -0.9**
comp=Z,4.8nm,0.6s,baz=253,slow=0.9,SNR=5.6
TXAR SKPbc **SKPbc 02 53 44.5 +0.2**
comp=Z,0.6nm,0.7s,baz=15,slow=1.0,SNR=5.3
CPUP Villa Florida 144.64 216 PKP PKPbc 02 50 10.1 +1.3
comp=Z,12nm,0.7s,baz=126,slow=1.7,SNR=46
CPUP pPKP pPKPdf 02 50 23.9 -1.9
comp=Z,5.0nm,0.7s,baz=153,slow=3.2,SNR=6.1
WHAR Wooly Hollow 144.68 18 *e*PKPdf **PKPab 02 50 07.8 -0.7**
T52A Hallie 144.72 4 *e*PKPdf **PKPab 02 50 08.4 -0.2**
T52A Hallie 144.72 4 P **PKPab 02 50 07.9 -0.7**
baz=354,SNR=6.6
U46A Springville 144.72 12 P **PKPab 02 50 08.1 -0.5**
baz=345
T51A Gray 144.77 6 P **PKPab 02 50 07.8 -1.0**
baz=353,SNR=16
W41B Gary Mavity, V 144.80 18 P **PKPab 02 50 07.9 -1.0**
baz=338,SNR=8.5
U47A Clarksville 144.81 11 P **PKPab 02 50 08.2 -0.7**
baz=347,SNR=12
T55A Pulaski 144.82 1 P **PKPab 02 50 08.1 -0.9**
baz=358,SNR=7.4
T54A Tazewell 144.85 3 P **PKPab 02 50 08.2 -0.9**
baz=357,SNR=7.9
T53A Wise 144.87 4 P **PKPab 02 50 08.6 -0.7**
baz=355,SNR=9.5
U48A Cassie Pea, Po 144.87 10 P **PKPab 02 50 08.3 -0.8**
baz=348,SNR=25
T59A Double "B" Far 144.92 357 *e*PKPbc **PKPab 02 50 09.1 -0.2**
T59A Double "B" Far 144.92 357 P **PKPab 02 50 08.6 -0.7**
baz=3.8
T56A Rocky Mt 144.92 0 P **PKPab 02 50 08.4 -1.0**
baz=360,SNR=7.9
MIAR Mount Ida 144.94 20 *e*PKPbc **PKPab 02 50 09.3 -0.2**
MIAR Mount Ida 144.94 20 P **PKPab 02 50 09.3 -0.2**
baz=336,SNR=62
T57A Hurt 144.95 359 *e*PKPbc **PKPab 02 50 09.0 -0.4**
T57A Hurt 144.95 359 P **PKPab 02 50 08.6 -0.8**
baz=0.8,SNR=6.2
T58A Grand View Acr 144.99 358 P **PKPab 02 50 08.8 -0.7**
baz=2.1,SNR=7.9
U49A Red Boiling Sp 144.99 8 P **PKPbc 02 50 08.5 -1.1**
baz=349,SNR=18
WVT Waverly 145.01 11 *e*PKPbc **PKPbc 02 50 09.1 -0.5**
WVT Waverly 145.01 11 *e*PKIKP **PKPbc 02 50 09.1 -0.5**
WVT Waverly 145.01 11 P **PKPbc 02 50 08.9 -0.7**
baz=346
UALR University of 145.14 18 *e*PKPbc **PKPbc 02 50 09.6 -0.5**
U50A Jamestown 145.21 7 P **PKPbc 02 50 09.5 -0.9**
baz=351,SNR=55
TZTN Tazewell 145.23 5 *e*PKPbc **PKPbc 02 50 09.7 -0.7**
TZTN Tazewell 145.23 5 P **PKPbc 02 50 09.6 -0.7**
baz=353,SNR=19
X40A Basin Creek Fa 145.25 19 *e*PKPbc **PKPbc 02 50 09.9 -0.5**
X40A Basin Creek Fa 145.25 19 P **PKPbc 02 50 10.0 -0.5**
baz=337,SNR=16
V46A Holladay 145.27 12 P **PKPbc 02 50 09.6 -0.9**
baz=345,SNR=28
CLTN Cedars of Leba 145.32 9 *e*PKPbc **PKPbc 02 50 09.9 -0.7**
U51A La Follette 145.34 6 P **PKPbc 02 50 09.5 -1.2**
baz=352,SNR=7.0
V47A Nunnelly 145.36 11 P **PKPbc 02 50 09.9 -0.9**
baz=346,SNR=18
U54A Nelsons Funny 145.38 3 *e*PKPbc **PKPbc 02 50 10.0 -0.9**
U54A Nelsons Funny 145.38 3 P **PKPbc 02 50 09.8 -1.1**
baz=356
U60A Pendleton 145.39 356 P **PKPbc 02 50 10.2 -0.6**
baz=4.5,SNR=6.3
U52A Thorn Hill 145.39 5 P **PKPbc 02 50 10.1 -0.8**
baz=354
U55A TA2, Sparta 145.43 2 P **PKPbc 02 50 10.2 -0.9**
baz=358,SNR=13
U61A Possum Corner 145.48 355 P **PKPdf 02 50 10.0 -1.1**
baz=5.8
U53A Fall Branch 145.49 4 P **PKPdf 02 50 10.2 -1.0**
baz=355,SNR=5.6
U57A Blanch 145.51 359 P **PKPdf 02 50 10.7 -0.5**

baz=0.7,SNR=15
U58A Oxford 145.54 358 P **PKPdf 02 50 10.9 -0.3**
baz=2.1,SNR=11
U59A Littleton 145.55 357 *e*PKPdf **PKPdf 02 50 11.3 +0.1**
U59A Littleton 145.55 357 P **PKPdf 02 50 10.7 -0.5**
baz=3.4
V48A Smith Brothers 145.58 10 *e*PKPdf **PKPdf 02 50 10.4 -0.9**
V48A Smith Brothers 145.58 10 P **PKPdf 02 50 10.5 -0.9**
baz=347,SNR=21
U56A King 145.60 1 P **PKPdf 02 50 10.7 -0.7**
baz=359,SNR=6.4
WHTX Lake Whitney, 145.63 27 P **PKPdf 02 50 11.1 -0.4**
baz=328
V49A McMinnville 145.70 9 P **PKPdf 02 50 10.6 -0.9**
baz=349,SNR=18
JCT Junction City 145.71 32 *e*PKPdf **PKPdf 02 50 12.4 +0.7**
JCT Junction City 145.71 32 *e*PKP2 **PKPdf 02 50 12.4 +0.7**
JCT Junction City 145.71 32 P **PKPdf 02 50 12.3 +0.5**
baz=323
X43A Marvell 145.81 16 P **PKPdf 02 50 12.0 +0.3**
baz=340
V51A Loudon 145.88 7 *e*PKPdf **PKPdf 02 50 11.8 0.0**
V51A Loudon 145.88 7 P **PKPdf 02 50 11.5 -0.3**
baz=352
WLAR White Oak Lake 145.88 20 *e*PKPdf **PKPdf 02 50 12.6 +0.8**
W47A Westpoint 145.91 11 P **PKPdf 02 50 11.8 -0.1**
baz=346,SNR=23
V50A Pikeville 145.91 8 P **PKPdf 02 50 11.5 -0.4**
baz=350,SNR=18
V52A Sevierville 145.92 6 *e*PKPdf **PKPdf 02 50 11.7 -0.2**
V52A Sevierville 145.92 6 P **PKPdf 02 50 11.7 -0.2**
baz=353,SNR=11
V61A Roper 146.03 355 P **PKPdf 02 50 12.6 +0.6**
baz=5.6
V57A Coltrane Farms 146.06 0 P **PKPdf 02 50 12.1 0.0**
baz=360,SNR=7.1
PLAL Pickwick Lake 146.07 12 *e*PKPdf **PKPdf 02 50 11.2 -0.9**
V55A Taylorsville 146.07 2 P **PKPdf 02 50 12.2 +0.1**
baz=357
V60A Jim Taylor Roa 146.10 356 P **PKPdf 02 50 12.3 +0.1**
baz=4.4
CCAR Cane Creek 146.11 18 *e*PKPdf **PKPdf 02 50 13.5 +1.2**
V54A Nebo 146.11 3 P **PKPdf 02 50 12.1 -0.2**
baz=356
V56A Mocksville 146.13 1 *e*PKPdf **PKPdf 02 50 12.8 +0.6**
V56A Mocksville 146.13 1 P **PKPdf 02 50 12.4 +0.2**
baz=359
W48A Pulaski 146.14 11 P **PKPdf 02 50 12.2 -0.1**
baz=347,SNR=25
V58A Windy Hill, Pi 146.15 359 P **PKPdf 02 50 12.7 +0.5**
baz=1.1
V59A Middlesex 146.15 358 P **PKPdf 02 50 12.8 +0.6**
baz=2.6
V53A Saluda 146.16 4 *e*PKPdf **PKPdf 02 50 12.7 +0.3**
V53A Saluda 146.16 4 P **PKPdf 02 50 12.5 +0.1**
baz=354,SNR=11
CPCT Cooper Cave 146.21 7 *e*PKPdf **PKPdf 02 50 12.8 +0.4**
OXF Oxford 146.21 14 *e*PKPdf **PKPdf 02 50 12.9 +0.5**
OXF Oxford 146.21 14 *e*PKP2 **PKPdf 02 50 12.9 +0.5**
OXF Oxford 146.21 14 P **PKPdf 02 50 12.6 +0.2**
baz=342
SWET Sewanee 146.24 9 *e*PKPdf **PKPdf 02 50 12.6 +0.1**
W49A Belvidere 146.28 10 P **PKPdf 02 50 12.6 +0.1**
baz=348,SNR=30
W50A Signal Mountai 146.35 8 *e*PKPdf **PKPdf 02 50 12.5 -0.2**
W50A Signal Mountai 146.35 8 P **PKPdf 02 50 12.7 0.0**
baz=350,SNR=6.8
X46A Booneville 146.37 13 P **PKPdf 02 50 12.8 +0.1**
baz=344,SNR=6.0
Z41A Richland Creek 146.38 20 P **PKPdf 02 50 13.7 +1.0**
baz=336
W51A Cleveland 146.46 7 P **PKPdf 02 50 13.4 +0.5**
baz=351,SNR=6.1
X47A Russelville 146.56 12 P **PKPdf 02 50 13.1 +0.1**
baz=345,SNR=21
435B Jarrell 146.57 29 *e*PKPbc **PKPdf 02 50 14.9 +1.8**
435B Jarrell 146.57 29 P **PKPdf 02 50 14.3 +1.1**
baz=326
W52A Murphy 146.63 6 *e*PKPdf **PKPdf 02 50 14.3 +1.1**
W52A Murphy 146.63 6 P **PKPdf 02 50 13.8 +0.7**
baz=352,SNR=6.8
W53A Cullowhee 146.63 5 P **PKPdf 02 50 14.1 +0.8**
baz=354,SNR=10.0
CNNC Cliffs of the 146.66 357 P **PKPdf 02 50 14.4 +1.3**
baz=3.3
W59A Clinton 146.76 358 P **PKPdf 02 50 14.2 +0.9**
baz=2.3
KMSC Kings Mountain 146.77 2 *e*PKPdf **PKPdf 02 50 14.4 +1.0**
KMSC Kings Mountain 146.77 2 P **PKPdf 02 50 14.1 +0.7**
baz=357,SNR=13
W54A Cherokee Point 146.78 4 P **PKPdf 02 50 14.2 +0.8**
baz=356,SNR=6.3
X48A Hartselle 146.79 11 *e*PKPdf **PKPdf 02 50 14.0 +0.6**
X48A Hartselle 146.79 11 P **PKPdf 02 50 13.9 +0.6**
baz=347,SNR=20
W57A Gilead 146.79 0 *e*PKPdf **PKPdf 02 50 14.7 +1.3**
W57A Gilead 146.79 0 P **PKPdf 02 50 14.5 +1.2**
baz=360,SNR=5.1
W56A Indian Trail 146.80 1 P **PKPdf 02 50 14.4 +1.0**
baz=358
X49A Woodville 146.86 10 P **PKPdf 02 50 14.5 +1.0**
baz=348,SNR=15
W58A Raeford 146.92 359 P **PKPdf 02 50 15.0 +1.4**
baz=0.9,SNR=5.1
X50B Fort Payne 147.02 9 P **PKPdf 02 50 14.7 +0.9**
baz=349
NATX Nacogdoches 147.03 24 P **PKPdf 02 50 15.5 +1.7**
baz=332
X51A Calhoun 147.03 8 *e*PKPdf **PKPdf 02 50 15.3 +1.5**
X51A Calhoun 147.03 8 P **PKPdf 02 50 15.3 +1.5**
baz=351,SNR=5.7
PAULI Pauline 147.07 3 *e*PKPdf **PKPdf 02 50 14.8 +0.9**
X52A Dahlonega 147.11 6 P **PKPdf 02 50 15.6 +1.6**
baz=352,SNR=9.8
X53A Estanollee 147.27 5 P **PKPdf 02 50 16.1 +1.9**
baz=353,SNR=14
Y48A Jasper 147.29 11 P **PKPdf 02 50 15.3 +1.1**
baz=346,SNR=7.6
BIRD Birdtown, Kers 147.29 1 *e*PKPbc **PKPdf 02 50 16.4 +2.1**
X54A Belton 147.31 4 P **PKPdf 02 50 15.8 +1.6**
baz=355,SNR=11
X60A Albert Glenn T 147.32 357 P **PKPdf 02 50 16.7 +2.4**
baz=3.2,SNR=6.6
X59A McDuffie Farm, 147.35 358 P **PKPdf 02 50 16.5 +2.2**
baz=2.1
X58A Rowland 147.39 359 P **PKPdf 02 50 16.3 +2.0**
baz=0.7
X55A Gracelyn & Ava 147.43 3 P **PKPdf 02 50 16.2 +1.8**
baz=356,SNR=9.5
X56A White Oak 147.43 2 P **PKPdf 02 50 16.2 +1.8**
baz=358,SNR=6.7
X57A Johnson Farm, 147.48 1 P **PKPdf 02 50 16.4 +1.9**
baz=359,SNR=5.0
Y49A Blount Mountai 147.48 10 *e*PKPdf **PKPdf 02 50 16.4 +1.8**
Y49A Blount Mountai 147.48 10 P **PKPdf 02 50 16.4 +1.8**
baz=348,SNR=18
Y50A Piedmont 147.57 9 P **PKPdf 02 50 16.5 +1.7**
baz=349,SNR=6.1
HODGE Hodges 147.63 4 *e*PKPbc **PKPdf 02 50 16.9 +2.2**
JSC Jenkinsville 147.63 2 *e*PKPbc **PKPdf 02 50 17.2 +2.4**
JSC Jenkinsville 147.63 2 *e*PKP2 **PKPdf 02 50 17.2 +2.4**
Y51A Rockmart 147.66 8 P **PKPdf 02 50 16.9 +2.0**
baz=350,SNR=5.9
Y52A Lilburn 147.83 7 *e*PKPbc **PKPbc 02 50 18.0 0.0**
Y52A Lilburn 147.83 7 P **PKPbc 02 50 17.9 -0.2**
baz=352,SNR=9.0
Y53A Monroe 147.89 6 P **PKPdf 02 50 17.9 +2.6**
baz=353,SNR=10.0
Y57A Sumter 147.92 1 P **PKPdf 02 50 17.8 +2.5**
baz=359,SNR=8.0
Y55A Saluda 147.94 3 P **PKPdf 02 50 17.8 +2.5**
baz=356,SNR=5.1
Y54A Tignall 147.96 5 P **PKPdf 02 50 17.9 +2.6**
baz=354,SNR=7.2
Y58A Scranton 148.04 360 P **PKPdf 02 50 18.0 +2.6**
baz=0.1
HKT Hockley 148.09 27 *e*PKPbc **PKPbc 02 50 19.7 +0.9**
Z49A Columbiana 148.11 11 P **PKPdf 02 50 18.0 +2.4**
baz=347,SNR=8.8
Y56A Pelion 148.12 2 P **PKPdf 02 50 18.0 +2.4**
baz=357
Z50A Ashland 148.16 10 *e*PKPbc **PKPdf 02 50 18.1 +2.4**
Z50A Ashland 148.16 10 P **PKPdf 02 50 18.1 +2.4**
baz=348,SNR=9.6
LRAL Lakeview Retre 148.17 12 *e*PKPbc **PKPdf 02 50 18.1 +2.4**
LRAL Lakeview Retre 148.17 12 P **PKPdf 02 50 18.1 +2.4**
baz=346,SNR=6.9
Z51A Franklin 148.22 9 P **PKPdf 02 50 18.4 +2.6**
baz=350
147A Livingston 148.24 14 *e*PKPbc **PKPbc 02 50 19.1 -0.1**
147A Livingston 148.24 14 P **PKPdf 02 50 18.7 +2.8**
baz=344,SNR=5.1
GOGA Godfrey 148.34 6 *e*PKPbc **PKPbc 02 50 19.2 -0.2**
GOGA Godfrey 148.34 6 *e*PKP2 **PKPbc 02 50 19.2 -0.2**
GOGA Godfrey 148.34 6 P **PKPbc 02 50 19.0 -0.4**
baz=353,SNR=8.7
148A Greensboro 148.43 13 P **PKPdf 02 50 19.0 +2.9**
baz=345
Z52A Williamson 148.45 7 P **PKPbc 02 50 19.5 -0.2**
baz=351,SNR=14
Z53A Monticello 148.46 6 P **PKPdf 02 50 19.2 +3.0**
baz=353,SNR=8.1
Z54A Sparta 148.57 5 P **PKPbc 02 50 19.7 -0.3**
baz=354,SNR=9.2
Z58A St. Stephen 148.61 0 P **PKPbc 02 50 19.9 -0.2**
baz=360
Z57A Bowman 148.63 2 P **PKPbc 02 50 19.9 -0.3**
baz=358,SNR=5.4
149A Jones 148.64 11 P **PKPdf 02 50 19.6 +3.1**
baz=346,SNR=6.0
Z55A Blythe 148.64 4 P **PKPbc 02 50 20.1 -0.1**
baz=355
150A Eclectic 148.77 10 P **PKPbc 02 50 20.0 -0.6**
baz=348,SNR=5.9
152A Waverly Hall 148.92 8 *e*PKPdf **PKPdf 02 50 17.6 +0.6**
152A Waverly Hall 148.92 8 P **PKPbc 02 50 20.5 -0.4**
baz=350,SNR=7.9
151A Opelika 148.97 9 P **PKPbc 02 50 20.5 -0.6**
baz=349,SNR=8.7
154A Montrose 149.16 6 P **PKPbc 02 50 21.3 -0.2**
baz=353
249A Camden 149.17 12 P **PKPbc 02 50 21.5 -0.1**
baz=346,SNR=8.7
155A Kite 149.21 4 P **PKPbc 02 50 21.6 0.0**
baz=355
156A Sylvania 149.24 3 P **PKPbc 02 50 21.9 +0.2**
baz=356
250A Grady 149.34 11 *e*PKPbc **PKPbc 02 50 22.3 +0.3**
250A Grady 149.34 11 P **PKPbc 02 50 21.8 -0.2**
baz=347
251A Midway 149.38 9 P **PKPbc 02 50 22.1 0.0**
baz=349,SNR=21
ZAIG Zacatecas 149.57 45 *e*PKPbc **PKPbc 02 50 24.4 +1.1**
252A Lumpkin 149.58 8 P **PKPbc 02 50 22.5 -0.1**
baz=350,SNR=11
253A Americus 149.60 7 *e*PKPbc **PKPbc 02 50 22.9 +0.2**
253A Americus 149.60 7 P **PKPbc 02 50 22.6 -0.1**
baz=351
349A Repton 149.76 13 P **PKPbc 02 50 23.3 +0.2**
baz=345
254A Abbeville 149.81 6 P **PKPbc 02 50 23.0 -0.2**
baz=353
350A Dozier 149.87 11 P **PKPbc 02 50 23.5 +0.1**
baz=347
256A Glennville 149.89 4 P **PKPbc 02 50 23.2 -0.1**
baz=356
255A Hazlehurst 149.90 5 P **PKPbc 02 50 23.3 -0.1**
baz=354
BRAL Brewton 149.96 13 P **PKPbc 02 50 23.6 +0.1**
baz=345
352A Blakely 150.06 9 *e*PKPbc **PKPbc 02 50 24.2 +0.5**
352A Blakely 150.06 9 P **PKPbc 02 50 23.6 -0.2**
baz=350
351A Pinckard 150.15 10 P **PKPbc 02 50 23.4 -0.6**
baz=348
LNIG Linares 150.16 38 *e*PKPbc **PKPbc 02 50 23.8 -0.5**
TIGA Tifton 150.28 7 *e*PKPbc **PKPbc 02 50 24.7 +0.4**
TIGA Tifton 150.28 7 P **PKPbc 02 50 24.3 0.0**
baz=352
353A Camilla 150.29 8 P **PKPbc 02 50 24.5 +0.2**
baz=351
449A Pace 150.32 13 P **PKPbc 02 50 24.9 +0.4**
baz=345
355A Pearson 150.45 5 P **PKPbc 02 50 24.8 +0.1**
baz=354
356A Blackshear 150.53 4 P **PKPbc 02 50 25.1 +0.2**
baz=355
453A Whigham 150.76 8 *e*PKPbc **PKPbc 02 50 26.0 +0.5**
453A Whigham 150.76 8 P **PKPbc 02 50 25.9 +0.4**
baz=351
454A Quitman 150.99 7 P **PKPbc 02 50 26.0 -0.1**
baz=352
455A Stateville 151.03 6 P **PKPbc 02 50 26.3 +0.2**
baz=353
456A Hilliard 151.13 4 P **PKPbc 02 50 26.0 -0.3**
baz=355
457A Yulee 151.26 3 P **PKPbc 02 50 27.0 +0.3**
baz=356
552A Lynn Haven 151.31 10 P **PKPbc 02 50 26.9 +0.2**
baz=348
GO02 Mina Guanaco 151.46 200 *e*PKPbc **PKiKP 02 50 29.3 +1.1**
554A Perry 151.60 7 P **PKPbc 02 50 27.4 -0.1**
baz=352
555A McAlpin 151.65 6 *e*PKPbc **PKPbc 02 50 28.2 +0.7**
555A McAlpin 151.65 6 P **PKPbc 02 50 27.9 +0.4**
baz=353
556A Lake Butler 151.82 5 P **PKPbc 02 50 28.0 +0.1**
baz=354
557A Orange Park 151.85 4 P **PKPbc 02 50 28.3 +0.3**
baz=356
655A Horseshoe Beac 152.22 7 P **PKPbc 02 50 29.1 +0.2**
baz=352
857A Zephyrhills 153.55 5 P **PKPbc 02 50 31.4 -0.5**
baz=354
059A Moore Haven 154.92 3 P **PKPbc 02 50 33.6 -1.2**
baz=357
LPAZ La Paz 158.69 212 PKP **PKPdf 02 50 33.1 +1.2**
comp=Z,1.2nm,0.8s,baz=90,slow=4.0,SNR=5.4

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*ISN **11** 02:33:01.6±1.5, 34°.89N×44°.56E, h15km±999km, ML3.5*
*ISCJB **11** 02:33:07.5±0.7, 34°.80N±0°.05×44°.34E±0°.08, h33km, Error ellipse: s-maj=9.9km s-min=6.2km az=153.7*
*TEH **11** 02:33:07.1, 34°.78N×44°.52E, h10km, ML3.1*
ISC 11 02:33:08.3±1.4,**34°.78N**±0°.05×**44°.29E**±0°.08,**h35**km,**n11,**
σ1§**32**/13,**Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHD	**Baghdad**	**1.51**	**177**	*e*Pg	**Pn**	**02 33 32.0**	**-0.9**
BHD	baz=5.0			AML	AML	02 33 35.4	
BHD	comp=Z,4μm,0.3s			*e*Sg	**Sn**	**02 33 52.0**	**+0.7**
IDHR	**Dehrash**	**1.73**	**92**	*e*Pn	**Pn**	**02 33 34.4**	**-1.7**
MSL	**Mosul**	**1.88**	**330**	*e*Pg	**Pn**	**02 33 37.0**	**-1.0**
MSL	comp=Z,184nm,0.4s			AML	AML	02 33 39.5	
MSL				*e*Sg	**Sn**	**02 34 01.4**	**+1.0**
IGHG	**Ghaleghazi**	**1.94**	**103**	*e*Pn	**Pn**	**02 33 39.6**	**+0.6**
IGHG	comp=Z,2μm,0.6s			IAMB	IAmb	02 34 15.7	
IVIS	**Veis**	**2.13**	**96**	*e*Pn	**Pn**	**02 33 41.2**	**-0.3**
IVIS	comp=Z,1μm,0.4s			IAMB	IAmb	02 34 11.6	
ILIN	**Lien**	**2.20**	**86**	*e*Pn	**Pn**	**02 33 42.1**	**-0.6**
ILIN	comp=Z,2μm,0.8s			IAMB	IAmb	02 34 11.9	
MAHB	**Mahabad**	**2.29**	**30**	*e*Pn	**Pn**	**02 33 41.2**	**-2.6**
KCHF	**Cheshme Sefid,**	**2.33**	**102**	*e*Pn	**Pn**	**02 33 44.1**	**-0.2**
IKOM	**Komasi**	**2.73**	**102**	*e*Pn	**Pn**	**02 33 49.5**	**-0.3**
IKFM	**Kafar-mosalman**	**3.21**	**112**	*e*Pn	**Pn**	**02 33 56.4**	**+0.2**
ISHB	**Shabestar**	**3.65**	**17**	*e*Pn	**Pn**	**02 34 04.5**	**+1.9**
ISHB	comp=Z,214nm,0.4s			IAMB	IAmb	02 35 00.3	

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*NEIC **11** 02:36:34.7±0.0, 16°.17N×94°.43W, h96km, MD4.0(MEX), After MEX.*
MEX 11 02:36:34.7±0.3,**16°.17N**×**94°.43W**,**h96**km±6km,**MD4.0,**
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.02**	**335**	*e*Pn	Pn	02 36 53.7	-1.3
CMIG				*e*Sn	Sn	02 37 08.8	-1.6
CMIG	**Matias Romero**	**1.02**	**335**	*e*P	Pn	02 36 53.7	-1.3
CMIG				*i* S	Sn	02 37 08.8	-1.6
PCIG		**1.25**	**111**	*e*Pn	Pn	02 36 56.4	-1.3
PCIG				*e*Sn	Sn	02 37 13.4	-1.7
PCIG		**1.25**	**111**	*e*P	Pn	02 36 56.4	-1.3
PCIG				*i* S	Sn	02 37 13.4	-1.7
HUIG	**Huatulco**	**1.67**	**256**	*e*Pn	Pn	02 37 01.5	-1.3
HUIG				*e*Sn	Sn	02 37 23.3	-0.9
HUIG	**Huatulco**	**1.67**	**256**	*i* P	Pn	02 37 01.5	-1.3
HUIG				*e*S	Sn	02 37 23.3	-0.9
CCIG	**Comitan**	**2.20**	**87**	*e*Pn	Pn	02 37 07.6	-2.3
CCIG				*e*Sn	Sn	02 37 30.4	-6.5
TLIG	**Tlapa**	**4.20**	**290**	*e*Pn	Pn	02 37 37.7	+1.0
TLIG				*e*Sn	Sn	02 38 21.9	-2.8
TEIG	**Tepich**	**7.10**	**54**	*e*Pn	Pn	02 38 11.7	-4.3
TEIG				*e*Sn	Sn	02 39 32.1	-3.1

ISK 11 02:40:57.6,36°.51N×29°.44E,h7km,**ML1.7/8,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.31**	**153**	PG	Pg	02 41 03.9	+0.2
AKAS				SG	Sg	02 41 09.0	+1.3
FETY	**Fethiye**	**0.31**	**294**	PG	Pg	02 41 03.4	-0.3
ELL	**Elmali**	**0.45**	**58**	PG	Pg	02 41 06.7	+0.3
DALY	**Dalyan (Mula)**	**0.70**	**296**	PG	Pg	02 41 11.5	+0.4
DALY				SG	Sb	02 41 22.1	+0.1
TURN	**Turunc**	**0.76**	**299**	PG	Pn	02 41 16.9	+2.1
KORT	**Korkueli**	**0.88**	**56**	PG	Pb	02 41 15.2	-0.2
YER	**Yerkesik**	**1.12**	**304**	PN	Pb	02 41 19.4	+0.1
DAT	**Datca**	**1.51**	**279**	PN	Pb	02 41 25.9	-0.1

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*IDC **11** 02:55:34.2±1.5, 8°.96S×80°.28W, h0km, mb3.8/8, mb1 4.1/10, mb1mx3.8/35, mbtmp3.9/10, ML4.0/2, MS3.5/12, Ms1 3.5/12, ms1mx3.2/34, Error ellipse: s-maj=38.0km s-min=17.2km az=44.0*
*ISCJB **11** 02:55:38.8±0.6, 8°.73S±0°.06×79°.94W±0°.09, h33km, mb4.3/11, MS3.5/6, Error ellipse: s-maj=14.0km s-min=5.9km az=153.2*
*NEIC **11** 02:55:40.5±2.0, 8°.79S×79°.97W, h29km±8km, mb4.5/9, Error ellipse: s-maj=24.6km s-min=5.1km az=68.0*
ISC 11 02:55:40.6±0.7,**8°.84S**±0°.06×**80°.04W**±0°.10,**h35**km,**n40,**
σ1§**49**/30,**mb4.2**/11,**MS3.5**/6,**Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.35**	**44**	Pn	**Pn**	**02 56 20.0**	**+2.9**
	103nm,0.3s,baz=138,slow=15,SNR=1.8						
NNA	**Nana**	**4.44**	**135**	Pn	**Pn**	**02 56 44.8**	**-0.7**
	3.3nm,0.3s,baz=357,slow=8.5,SNR=7.0						
NNA				Sn	**Sn**	**02 57 38.3**	**+2.4**
	26nm,0.3s,baz=229,slow=16,SNR=5.0						
NNA				Lg	Lg	02 57 57.5	
	17nm,0.3s,baz=142,slow=23,SNR=7.0						
NNA				LR	LR	02 58 35.6	
	comp=Z,399nm,21.4s,baz=288,slow=40						
NNA	**Nana**	**4.44**	**135**	*e*Pn	**Pn**	**02 56 45.5**	**0.0**
NNA				*e*Sn	**Sn**	**02 57 35.5**	**-0.5**
OTAV	**Otavalo**	**9.15**	**10**	*e*Pn	**Pn**	**02 57 49.8**	**-0.9**
OTAV				*e*Sn	**Sn**	**02 59 31.6**	**-1.1**
PAYG	**Puerto Ayora**	**13.03**	**308**	*e*Pn	**Pn**	**02 58 45.0**	**+1.6**
LPAZ	**La Paz**	**13.78**	**124**	Pn	**P**	**02 59 02.0**	**-0.2**
	0.2nm,0.3s,baz=296,slow=4.3,SNR=11						
LPAZ				LR	LR	03 04 50.0	
	comp=Z,266nm,19.1s,baz=340,slow=40						
LPAZ	**La Paz**	**13.78**	**124**	*e*Pn	**Pn**	**02 58 53.4**	**-0.6**
ROSC	**El Rosal**	**14.74**	**23**	LR	LR	03 04 49.5	
	comp=Z,161nm,20.1s,baz=343,slow=37						
PB11	**IPOC Station P**	**14.79**	**138**	*e*Pn	**Pn**	**02 59 07.5**	**0.0**
GO01	**Chusmiza**	**15.04**	**137**	*e*Pn	**P**	**02 59 19.0**	**+3.0**
LVC	**Limon Verde**	**17.37**	**143**	LR	LR	03 06 02.9	
	comp=Z,96nm,19.5s,baz=306,slow=36						
GO02	**Mina Guanaco**	**19.04**	**150**	*e*P	**Pn**	**03 00 04.3**	**+3.2**
SIV	**San Ignacio**	**19.83**	**113**	P	**P**	**03 00 08.7**	**+0.2**
	2.7nm,0.9s,baz=293,slow=9.2,SNR=12						
SIV				LR	LR	03 08 21.0	
	comp=Z,194nm,18.8s,baz=304,slow=38						
SDV	**Santo Domingo**	**19.95**	**28**	P	**P**	**03 00 09.8**	**-0.2**
	2.9nm,0.6s,baz=180,slow=20,SNR=3.6						
SDV				LR	LR	03 08 27.9	
	comp=Z,139nm,20.2s,baz=236,slow=38						
PTGA	**Pitinga**	**21.55**	**69**	P	**P**	**03 00 26.7**	**-0.4**
	7.0nm,0.7s,baz=224,slow=13,SNR=8.8						
PTGA				LR	LR	03 09 41.7	
	comp=Z,362nm,18.9s,baz=274,slow=39						
PTGA	**Pitinga**	**21.55**	**69**	*e*P	**P**	**03 00 26.9**	**-0.2**
	8.0nm,0.8s						
CPUP	**Villa Florida**	**27.69**	**132**	LR	LR	03 14 33.6	
	comp=Z,106nm,19.7s,baz=315,slow=41						
CPUP	**Villa Florida**	**27.69**	**132**	*e*P	**P**	**03 01 24.2**	**-1.4**
	16nm,1.7s						
SJG	**San Juan**	**30.09**	**27**	LR	LR	03 16 58.2	
	comp=Z,39nm,19.0s,baz=195,slow=42						
MDP	**Montagnes des**	**30.62**	**64**	LR	LR	03 15 36.3	
	comp=Z,63nm,21.8s,baz=234,slow=39						
GRTK	**Grand Turk**	**31.40**	**16**	*e*P	**P**	**03 01 56.4**	**-2.1**
	548nm,1.8s						
BDFB	**Brasilia**	**31.99**	**105**	LR	LR	03 15 29.3	
	comp=Z,136nm,18.8s,baz=82,slow=37						
CCM	**Cathedral Cave**	**47.81**	**348**	*e*P	**P**	**03 04 15.2**	**+0.6**
	3.0nm,0.6s						
PV17	**East Wray Mesa**	**54.08**	**332**	*e*P	P	03 05 07.0	+4.9
	7.4nm,0.6s						
PD31	**Pinedale Array**	**57.99**	**335**	*e*P	**P**	**03 05 30.1**	**0.0**
PDAR	**Pinedale Array**	**57.99**	**335**	P	**P**	**03 05 30.1**	**0.0**
	0.1nm,0.3s,baz=138,slow=3.1,SNR=3.4						
YKA	**Yellowknife Ar**	**75.96**	**344**	P	**P**	**03 07 21.3**	**-2.2**
	0.6nm,0.7s,baz=130,slow=5.2,SNR=3.6						
YKB5	**Yellowknife Ar**	**75.96**	**344**	*e*P	**P**	**03 07 21.3**	**-2.2**
TOA1	**Torodi Ar. Sit**	**84.03**	**76**	*e*P	**P**	**03 08 08.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**84.03**	**76**	P	**P**	**03 08 08.7**	**+0.4**
	1.8nm,0.8s,baz=272,slow=5.0,SNR=9.5						
TORD				LR	LR	03 44 25.0	
	comp=Z,29nm,18.4s,baz=300,slow=35						
ESDC	**Sonseca Array**	**85.04**	**49**	P	**P**	**03 08 14.3**	**+1.5**
	0.7nm,0.8s,baz=274,slow=5.4,SNR=5.2						
EGAK	**Eagle**	**86.18**	**338**	*e*P	**P**	**03 08 18.2**	**+0.3**
	2.6nm,0.8s						
ILAR	**Eielson Array**	**88.36**	**337**	P	**P**	**03 08 27.8**	**-0.7**
	0.8nm,0.8s,baz=148,slow=3.5,SNR=8.2						
ILB	**Eielson Array**	**88.36**	**337**	*e*P	**P**	**03 08 27.8**	**-0.7**
H11N3	**WAKE ISLAND Hyl**	**14.57**	**288**	T	T	05 18 50.6	
	baz=92,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hyl**	**14.58**	**288**	T	T	05 18 52.2	
	baz=92,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hyl**	**14.58**	**288**	T	T	05 18 51.8	
	baz=92,slow=74,SNR=11						
H11S2	**WAKE ISLAND Hyl**	**14.74**	**286**	T	T	05 19 04.0	
	baz=95,slow=74,SNR=4.9						
H11S1	**WAKE ISLAND Hyl**	**14.74**	**286**	T	T	05 19 06.1	
	baz=95						
H11S3	**WAKE ISLAND Hyl**	**14.75**	**286**	T	T	05 19 03.4	
	baz=95,slow=74,SNR=3.8						

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*DJA **11** 03:05:42.9±2.0, 6°.N±6°×12°.7E±°, h21km±22km, M4.5/9, mb4.4/7, mB4.7/2, MLv4.5/9, Mw(mB)3.9/2*
*ISCJB **11** 03:05:43.2±0.7, 5°.75N±0°.04×127°.09E±0°.07, h71km±7km, mb4.2/18, Error ellipse: s-maj=11.5km s-min=4.8km az=160.8*
*MAN **11** 03:05:43.5, 5°.77N×126°.97E, h16km, mb4.6, ML3.4, MS3.3*
*IDC **11** 03:05:44.9±2.4, 5°.93N×127°.32E, h71km±21km, mb3.8/9, mb1 3.9/11, mb1mx3.6/37, mbtmp4.1/11, MS3.2/12, Ms1 3.2/12, ms1mx2.9/43, Error ellipse: s-maj=38.2km s-min=10.9km az=60.0*
*NEIC **11** 03:05:45.7±1.6, 5°.88N×127°.21E, h78km±5km, mb4.3/13, Error ellipse: s-maj=30.2km s-min=11.7km az=57.0*
ISC 11 03:05:44.8±1.1,**5°.74N**±0°.05×**127°.06E**±0°.09,**h70**km±11km,
n57,σ1§**55**/56,**mb4.2**/18,**1C-1D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.39**	**285**	*e*P	**Pn**	**03 06 05.7**	**-2.7**
DDMP				*e*S	**Sn**	**03 06 24.7**	**-1.3**
MATI	**Mati**	**1.44**	**326**	*e*P	**Pn**	**03 06 06.3**	**-2.7**
MATI				*e*S	**Sn**	**03 06 26.0**	**-1.1**
DAV	**Davao City (W)**	**1.98**	**312**	P	**Pn**	**03 06 16.7**	**+0.6**
	239nm,0.3s,baz=252,slow=3.2,SNR=8.9						
DAV				S	**Sn**	**03 06 43.1**	**+3.1**
	136nm,0.3s,baz=255,slow=23,SNR=23						
DAV				LR	LR	03 07 34.5	
	comp=Z,920nm,18.2s,baz=158,slow=53						
DAV	**Davao City (W)**	**1.98**	**312**	*e*Pn	**Pn**	**03 06 16.3**	**+0.1**
DAV				*e*Sn	**Sn**	**03 06 42.5**	**+2.5**
DMPH	**Davao City--Mi**	**2.04**	**311**	*e*P	**Pn**	**03 06 17.2**	**+0.2**
DMPH				*e*S	**Sn**	**03 06 46.8**	**+5.3**
SGSI	**Sangihe**	**2.55**	**217**	P	**Pn**	**03 06 23.2**	**-0.7**

SGSI				S	Sn	03 06 53.9	0.0
SKMP	Bagumbayan, Su	2.62	287	eP	Pn	03 06 23.6	-1.3
SKMP				eS	Sn	03 06 55.8	+0.2
BUKP	Musuan	2.91	317	eP	Pn	03 06 29.0	+0.2
BUKP				eS	Sn	03 07 03.0	+0.4
BUTP	Butuan	3.51	336	eP	Pn	03 06 37.3	+0.3
BUTP				eS	Sn	03 07 19.3	+2.0
CGP	Cagayan de Oro	3.57	319	‖eP	Pn	03 06 39.5	+1.6
CGP				eS	Sn	03 07 21.8	+2.9
TNTI	Ternate	4.95	176	ePn	Pn	03 06 57.8	+1.1
TNTI	Ternate	4.95	176	P	Pn	03 06 55.6	-1.1
MRSI	Marisa 29nm,0.5s,0.1nm	7.31	225	P	Pn	03 07 28.9	-0.1
SIJI	Sorong 2.2nm,0.3s,baz=354,slow=18,SNR=4.7	7.80	147	P	Pn	03 07 34.2	-1.4
SANI	Sanana	7.81	188	P	Pn	03 07 32.8	-3.1
FAKI	Fak Fak	10.04	149	ePn	Pn	03 08 07.5	+1.1
TGY	Tagaytay City comp=Z,198nm,19.4s,baz=197,slow=42	10.26	324	LR	LR	03 12 52.5	
KAPI	Kappang comp=Z,76nm,21.4s,baz=62,slow=38	12.94	214	LR	LR	03 14 09.3	
TPUB	Ta-pu 10nm,0.9s	18.52	341	eP	P	03 09 54.0	-1.9
MTN	Manton Dam 29nm,1.4s	18.90	168	eP	P	03 10 00.8	+0.9
LEM	Lembang comp=Z,52nm,20.8s,baz=66,slow=37	23.07	237	LR	LR	03 20 05.1	
FITZ	Fitzroy Crossi 2.2nm,0.8s,baz=59,slow=10,SNR=5.1	23.73	183	P	P	03 10 52.2	+1.4
FITZ	Fitzroy Crossi 9.2nm,1.1s	23.73	183	eP	P	03 10 52.2	+1.4
WRAB	Tennant Creek 8.8nm,0.8s	26.50	164	eP	P	03 11 19.0	+3.1
WR1	Warramunga Arr	26.51	165	eP	P	03 11 17.0	+1.0
WRA	Warramunga Arr 5.1nm,0.7s,baz=344,slow=12,SNR=5.7	26.51	165	P	P	03 11 17.0	+1.0
WB2	Warramunga Arr 23nm,1.4s	26.51	164	eP	P	03 11 15.9	-0.1
JHJ	Hachijo jima 2 comp=Z,29nm,19.7s,baz=242,slow=39	29.70	22	LR	LR	03 25 05.5	
AS31	Alice Springs 1.6nm,1.1s	29.98	167	eP	P	03 11 48.3	+1.3
ASAR	Alice Springs 0.7nm,0.5s,baz=358,slow=9.9,SNR=6.9	29.98	167	P	P	03 11 48.3	+1.3
CMAR	Chiang Mai Arr comp=Z,19nm,18.7s,baz=108,slow=38	30.20	297	LR	LR	03 25 08.7	
KSRS	Korea Array comp=Z,45nm,21.6s,baz=152,slow=37	31.57	1	LR	LR	03 24 53.9	
MJAR	Matsushiro Arr comp=Z,15nm,21.8s,baz=230,slow=34	32.31	17	LR	LR	03 23 45.8	
BBOO	Buckleboo 90nm,1.5s	39.28	168	eP	P	03 13 08.0	+1.0
STKA	Stephens Creek 3.0nm,0.5s,baz=333,slow=9.4,SNR=6.6	39.90	161	P	P	03 13 13.7	+1.7
STKA	Stephens Creek 1.9nm,1.1s	39.90	161	eP	P	03 13 13.7	+1.7
ARMA	Armidale 3.7nm,1.0s	42.98	148	eP	P	03 13 35.5	-2.0
PALK	Pallekele comp=Z,22nm,18.5s,baz=294,slow=36	46.07	275	LR	LR	03 33 51.8	
MK31	Makanchi Array	56.11	324	eP	P	03 15 17.5	+0.4
MK32	Makanchi Array	56.11	324	eP	P	03 15 17.1	0.0
MKAR	Makanchi Array 1.6nm,0.3s,baz=114,slow=7.5,SNR=20	56.11	324	P	P	03 15 17.1	0.0
MKAR	comp=Z,33nm,19.2s,baz=89,slow=38			LR	LR	03 41 06.4	
MAKZ	Makanchi 2.1nm,0.6s	56.30	324	eP	P	03 15 18.8	+0.4
ZALV	Zalesovo Beam 0.8nm,0.4s,baz=128,slow=9.3,SNR=3.4	58.96	332	P	P	03 15 36.3	-0.6
ZAA1	Zalesovo Array	58.96	332	eP	P	03 15 36.3	-0.6
KURK	Kurchatov 7.4nm,0.5s	60.24	327	eP	P	03 15 45.9	+0.1
HIZ	Hauiti 62nm,1.1s	62.44	139	eP	P	03 15 59.8	-0.9
KBZ	Khabaz comp=Z,20nm,18.3s,baz=66,slow=40	81.84	313	LR	LR	04 00 30.7	
ILAR	Eielson Array 0.6nm,0.5s,baz=247,slow=5.5,SNR=19	83.16	26	P	P	03 18 02.1	-0.9
ILB	Eielson Array	83.16	26	eP	P	03 18 02.1	-0.9
ARCES	ARCESS Array B 2.3nm,0.8s,baz=74,slow=6.4,SNR=5.7	88.69	340	P	P	03 18 28.8	-1.4
BR101	Keskin Array S	89.00	310	eP	P	03 18 32.0	-0.5
BRTR	Keskin Array B 0.4nm,0.7s,baz=107,slow=7.7,SNR=3.9	89.00	310	P	P	03 18 32.0	-0.5
FIA0	FINESS Array S	90.22	332	eP	P	03 18 37.0	-0.5
FINES	FINESS Array B 1.1nm,0.7s,baz=150,slow=4.2,SNR=4.7	90.22	332	P	P	03 18 37.0	-0.5
NOA	NORSAR Array B comp=Z,20nm,21.8s,baz=5.0,slow=38	97.14	334	LR	LR	04 06 27.3	
TORD	Torodi Ar. Bea 0.6nm,0.5s,baz=59,slow=1.5,SNR=18	122.58	289	PKP	PKPdf	03 24 32.9	-0.6
TOA1	Torodi Ar. Sit	122.58	289	ePKPdf	PKPdf	03 24 32.9	-0.6

IDC ***11*** *03:08:31.1±4.0, 3°.62S×104°.50W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/30, mbtmp3.9/5, MS3.5/13, Ms1 3.5/13, ms1mx3.4/22, Error ellipse: s-maj=130.1km s-min=50.9km az=121.0*

ISCJB ***11*** *03:08:37.7±1.1, 2°.8S±0°.1×104°.9W±0°.1, h10km, mb4.5/56, MS3.5/13, Error ellipse: s-maj=22.0km s-min=17.8km az=37.2*

NEIC ***11*** *03:08:39.7±1.8, 2°.84S×104°.83W, h10km, mb4.5/56, Error ellipse: s-maj=42.9km s-min=24.5km az=91.0*

ISC 11 03:08:39.4±1.2, 2°.8S±0°.2×104°.9W±0°.3, h10km, n74, σ1§22/64, mb4.6/56, MS3.6/13, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa 29nm,1.8s	21.18	17	eP	P	03 13 24.6	-0.7
CMIG	Matias Romero 3.0nm,0.9s,baz=207,slow=4.9,SNR=1.6	22.10	26	P	P	03 13 34.8	-0.3
CMIG	comp=Z,343nm,19.6s,baz=198,slow=31			LR	LR	03 20 11.9	
APG	El Apazote comp=Z,232nm,20.8s,baz=234,slow=31	22.74	38	LR	LR	03 20 34.2	
CCIG	Comitan 57nm,1.7s	22.77	33	eP	P	03 13 42.9	+0.5
JTS	Las Juntas de comp=Z,140nm,20.9s,baz=340,slow=31	23.73	56	LR	LR	03 20 48.9	
LVIG	Laguna Verde 35nm,1.2s	23.89	20	eP	P	03 13 52.5	-0.9
ZAIG	Zacatecas 33nm,1.9s	25.53	5	eP	P	03 14 09.2	+0.6
LPIG	La Paz comp=Z,202nm,20.3s,baz=198,slow=29	27.27	349	LR	LR	03 22 10.1	
NNA	Nana comp=Z,33nm,20.9s,baz=283,slow=29	29.22	110	LR	LR	03 22 08.4	
HPIG		29.59	359	eP	P	03 14 43.1	-1.9
833A	Chaparral WMA, 36nm,1.8s	31.41	9	eP	P	03 15 01.8	+1.0
ROSC	El Rosal comp=Z,62nm,21.9s,baz=106,slow=32	31.46	76	LR	LR	03 25 16.8	
LTX	Lajitas	31.99	2	eP	P	03 15 05.7	-0.3
TX31	Lajitas Ar. Si 3.3nm,1.3s	31.99	2	eP	P	03 15 07.8	+1.8
TXAR	Lajitas Array 1.0nm,1.0s,baz=179,slow=8.0,SNR=7.3	31.99	2	P	P	03 15 05.7	-0.3
TXAR	comp=Z,91nm,20.5s,baz=0.0,slow=32			LR	LR	03 25 41.9	
JCT	Junction City 22nm,1.5s	33.46	8	eP	P	03 15 20.9	+2.1
MNTX	Cornudas Mount 6.9nm,1.2s	34.33	359	eP	P	03 15 25.9	-0.4
WHTX	Lake Whitney, 13nm,1.1s	35.33	11	eP	P	03 15 34.8	-0.2
TUC	Tucson 11nm,1.9s	35.38	351	eP	P	03 15 36.0	+0.6
ABTX	Abilene, Hawle 22nm,1.3s	35.59	8	eP	P	03 15 36.2	-1.0
NATX	Nacogdoches 36nm,1.4s	35.73	15	eP	P	03 15 38.4	0.0
MSTX	Muleshoe 17nm,1.8s	36.64	3	eP	P	03 15 47.0	+0.7
Y22D	IRIS PASSCAL I 54nm,1.6s	36.74	357	eP	P	03 15 48.1	+0.9
BNM	Barren Site	36.81	358	eP	P	03 15 44.0	-3.8
LENM	Lemitar	36.84	357	eP	P	03 15 48.8	+0.7
LAZ	Ladron	37.08	357	eP	P	03 15 50.0	-0.2
CPE	Camp Elliot 4.5nm,0.9s	37.35	343	eP	P	03 15 51.2	-1.0
VBMS	Vicksburg 15nm,0.8s	37.41	20	eP	P	03 15 50.6	-2.1
ANMO	Albuquerque 3.2nm,1.3s	37.59	358	eP	P	03 15 52.9	-1.5
AMTX	Amarillo 14nm,1.4s	37.62	4	eP	P	03 15 52.8	-1.8
Z41A	Richland Creek 15nm,0.9s	37.65	17	eP	P	03 15 54.8	+0.1
WMOK	Wichita Mounta 5.3nm,1.5s	37.79	8	eP	P	03 15 57.2	+1.3
WLAR	White Oak Lake 32nm,1.5s	37.97	16	eP	P	03 15 57.8	+0.4
LPAZ	La Paz comp=Z,23nm,21.4s,baz=306,slow=34	38.53	113	LR	LR	03 29 42.9	
W41B	Gary Mavity, V 16nm,1.4s	39.60	16	eP	P	03 16 13.1	+2.0
WHAR	Wooly Hollow 21nm,1.4s	39.70	16	eP	P	03 16 11.2	-0.7
MVCO	Mesa Verde 7.0nm,1.1s	39.97	355	eP	P	03 16 15.2	+0.8
SDCO	Great Sand Dun 9.2nm,1.6s	40.36	359	eP	P	03 16 19.1	+1.3
S22A	4UR Ranch, Cre 12nm,1.6s	40.40	358	eP	P	03 16 19.2	+1.2
PLAL	Pickwick Lake 6.6nm,0.6s	40.77	21	eP	P	03 16 20.8	0.0
PBMO	Poplar Bluff 14nm,1.1s	41.63	18	eP	P	03 16 28.0	+0.2
SRU	San Rafael Swe 4.4nm,1.0s	42.05	353	eP	P	03 16 32.5	+1.0
R11A	Troy Canyon, C 2.6nm,1.1s	42.14	347	eP	P	03 16 33.2	+0.9
P17A	Butcher Ranch, 11nm,1.4s	42.43	353	eP	P	03 16 35.6	+1.0
CCM	Cathedral Cave 9.3nm,1.4s	42.58	16	eP	P	03 16 37.8	+2.2
O20A	White River Ci 12nm,1.2s	42.85	356	eP	P	03 16 38.3	+0.2
NVAR	Mina Array Bea comp=Z,83nm,21.0s,baz=210,slow=30	42.88	344	LR	LR	03 30 18.6	
DUG	Dugway, Tooele 6.2nm,1.2s	43.42	351	eP	P	03 16 43.7	+1.2
PHWY	Pilot Hill 17nm,1.6s	43.91	359	eP	P	03 16 47.5	+0.8
BW06	Boulder Array 6.3nm,1.4s	45.57	355	eP	P	03 17 00.1	+0.2
PDAR	Pinedale Array 0.6nm,0.6s,baz=165,slow=6.2,SNR=8.3	45.57	355	P	P	03 16 58.9	-1.0
PDAR	comp=Z,66nm,18.1s,baz=168,slow=32			LR	LR	03 33 35.5	
FXWY	Fox Creek 4.3nm,1.2s	46.57	354	eP	P	03 17 08.0	+0.3
ECSD	EROS Data Cent 7.2nm,1.4s	46.93	8	eP	P	03 17 11.2	+1.0
HLID	Hailey 3.3nm,1.1s	46.96	351	eP	P	03 17 11.4	+0.8
H17A	Grant Village 6.8nm,1.3s	47.28	354	eP	P	03 17 10.5	-2.8
P53A	Whipple 19nm,1.2s	47.31	25	eP	P	03 17 14.3	+1.0
J08A	Circle Bar Ran 7.2nm,1.3s	47.57	347	eP	P	03 17 16.4	+1.0
YMR	Madison River 10nm,1.2s	47.59	354	eP	P	03 17 17.6	+2.0
YHH	Holmes Hill 6.8nm,1.2s	47.69	354	eP	P	03 17 18.1	+1.6
MCMT	McKenzie Canyo	47.97	352	eP	P	03 17 12.6	-5.9
I07A	Izee 8.0nm,1.1s	48.50	346	eP	P	03 17 23.4	+0.9
G08A	Pilot Rock 14nm,1.8s	49.51	347	eP	P	03 17 30.9	+0.6
COWI	Conover 10nm,1.4s	50.66	14	eP	P	03 17 37.9	-1.0
ULM	Lac du Bonnet comp=Z,160nm,19.6s,baz=251,slow=34	53.42	7	LR	LR	03 39 21.6	
YKA	Yellowknife Ar 1.7nm,0.8s,baz=161,slow=6.3,SNR=7.1	65.55	355	P	P	03 19 21.7	-1.2
YKA	comp=Z,6.6nm,19.2s,baz=234,slow=33			LR	LR	03 45 29.6	
YKB5	Yellowknife Ar	65.55	355	eP	P	03 19 21.7	-1.2
MENT	Mentasta 5.6nm,0.7s	71.80	342	eP	P	03 20 01.2	-0.7
RIDG	Independent Ri 6.6nm,1.0s	72.73	343	eP	P	03 20 07.6	+0.1
RND	Reindeer 6.7nm,1.1s	73.75	341	eP	P	03 20 13.3	-0.3
ILAR	Eielson Array 1.6nm,0.8s,baz=155,slow=4.7,SNR=18	74.10	343	P	P	03 20 14.5	-1.0
ILB	Eielson Array 4.1nm,1.0s	74.10	343	eP	P	03 20 14.6	-1.0
QSPA	South Pole Qui 17nm,1.2s	87.23	180	eP	P	03 21 25.6	-0.3
PETK	Petropavlovsk- comp=Z,31nm,20.7s,baz=175,slow=30	96.71	323	LR	LR	03 56 46.1	
CMAR	Chiang Mai Arr 1.3nm,0.9s,baz=355,slow=0.9,SNR=3.5	151.97	305	PKPbc	PKPdf	03 28 30.5	+1.1

SJA 11 03:35:40.9±0.7, 31°.13S×69°.02W, h118km±4km, ML2.9, MW3.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMOG	MOGNA	0.49	67	iP	Pn	03 35 59.7	+1.1
AMOG				iS	Sn	03 36 12.7	+0.8
ZON	Zonda	0.51	145	iP	Pn	03 35 59.1	+0.4
ZON				iS	Sn	03 36 12.4	+0.3
RTLL	Cerro Villicun	0.51	113	iP	Pn	03 35 59.0	+0.3
SJA	San Juan	0.56	135	iP	Pn	03 35 59.8	+0.8
SJA				iS	Sn	03 36 13.5	+0.8
SJA	comp=Z,373nm,0.2s			IAML		03 36 13.6	
RTLS	Leoncito	0.71	199	iP	Pn	03 36 01.3	+0.9
RTLS	comp=Z,123nm,0.3s			IAML		03 36 17.6	
CFA	Coronel Fontan	0.82	125	iP	Pn	03 36 01.4	+0.3
RTCV	Cerro Valdivia	0.84	151	iP	Pn	03 36 01.6	+0.4
RTCV				iS	Sn	03 36 17.9	+1.3
AUSP	Uspallata	1.13	196	iP	Pn	03 36 05.5	+1.1
ASAL	Salagasta	1.46	174	iP	Pn	03 36 09.1	+1.2
ASAL				iS	Sn	03 36 29.4	+1.0
ACAN	Cantantal	1.93	127	iP	Pn	03 36 14.3	+0.8

ISCJB ***11*** *03:45:51.1±0.7, 32°.32N±0°.05×141°.90E±0°.06, h10km, mb3.6/6, Error ellipse: s-maj=8.5km s-min=6.0km az=146.0*

IDC ***11*** *03:45:51.5±1.1, 32°.24N×141°.80E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/35, mbtmp3.5/7, ML2.7/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/45, Error ellipse: s-maj=28.9km s-min=19.5km az=55.0*

JMA ***11*** *03:45:52.6±0.2, 32°.26N×141°.94E, h81km, M3.4*

ISC 11 03:45:52.8±1.0, 32°.31N±0°.08×141°.77E±0°.08, h10km, n22, σ1§06/28, mb3.7/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.70	276	P	Pb	03 46 23.3	-0.9
JHCJ	Hachijojimakas	1.83	295	P	Pb	03 46 24.4	-2.0
JHCJ				S	Sb	03 46 48.4	-0.9
JHJ2	Mitsune	1.83	296	P	Pb	03 46 24.9	-1.5
JHJ2				eS	Sb	03 46 49.5	+0.2
JHJ	Hachijo jima 2 52nm,0.3s,baz=60,slow=20,SNR=33	1.86	296	Pn	Pb	03 46 24.9	-1.9
JHJ	42nm,0.3s,baz=66,slow=20,SNR=4.6			Sn	Sb	03 46 49.9	-0.3
JMKN	Mikurajimanish	2.42	311	S	Sn	03 47 03.2	+1.2
BSO1	Boso 1	2.43	344	P	Pn	03 46 32.2	+0.1
BSO1				eS	Sn	03 47 02.4	+0.8
BSO2	Boso 2	2.58	341	S	Sn	03 47 06.5	+0.9
BSO3	Boso 3	2.70	337	P	Pn	03 46 36.3	+0.3
BSO4	Boso 4	2.93	336	P	Pn	03 46 39.9	+0.6
BSO4				S	Sn	03 47 15.1	+0.6
JOD2	Odawara 2	3.70	324	P	Pn	03 46 50.7	+0.7
JOD2				S	Sn	03 47 34.5	+0.9
JHU	Hanno	4.09	330	S	Sn	03 47 43.6	+0.2
JRY	Ryogami san	4.39	328	eS	Sn	03 47 52.3	+1.4
JHO	Hitachi	4.40	347	P	Pn	03 46 58.8	-0.9
JAG	Ashikaga	4.53	336	P	Pn	03 47 02.2	+0.7
MJAR	Matsushiro Arr 0.3nm,0.3s,baz=156,slow=10,SNR=12	5.14	326	Pn	Pn	03 47 10.9	+0.9
MJAR				LR	LR	03 49 35.9	
ASAJ	comp=Z,70nm,18.4s,baz=160,slow=43 Asahikawa 0.6nm,0.3s,baz=247,slow=7.7,SNR=4.9	11.81	3	Pn	Pn	03 48 38.8	-2.4
SONM	Songino Array 0.5nm,0.5s,baz=98,slow=10,SNR=3.3	30.88	311	P	P	03 52 10.4	+1.0
MKAR	Makanchi Array 0.3nm,0.4s,baz=85,slow=9.6,SNR=4.1	47.00	306	P	P	03 54 24.6	+0.4
WRA	Warramunga Arr 1.8nm,0.9s,baz=359,slow=9.3,SNR=9.1	52.44	189	P	P	03 55 05.2	-0.6
ILAR	Eielson Array 0.4nm,0.7s,baz=266,slow=7.3,SNR=5.1	53.37	30	P	P	03 55 12.5	+0.4
ASAR	Alice Springs 0.2nm,0.5s,baz=6.2,slow=15,SNR=4.1	56.17	189	P	P	03 55 33.0	+0.1
TXAR	Lajitas Array 0.2nm,0.6s,baz=270,slow=5.0,SNR=3.6	92.76	53	P	P	03 59 06.2	+0.3

ISK ***11*** *03:46:22.9, 40°.39N×42°.25E, h8km, ML2.2/6*

DDA ***11*** *03:46:23.2, 40°.37N×42°.27E, h7km±1km, ML2.7*

ISC 11 03:46:22.9±1.3, 40°.35N±0°.03×42°.26E±0°.04, h12km±12km, n12, σ0§63/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENK	Senkaya-Erzuru	0.22	17	PG	Pg	03 46 27.9	+0.2
HOMI	Horasan	0.41	222	iP	Pb	03 46 32.4	+0.1
HOMI				iS	Sb	03 46 38.2	-0.4
HOMI				IAML_P			
	comp=Z,2μm,0.1s						
KOPR	Koprukoy-ERZUR	0.48	221	PG	Pb	03 46 33.0	-0.3
KOPR				SG	Sb	03 46 40.8	+0.4
EATA	Eleskirt	0.52	160	iP	Pb	03 46 34.5	+0.4
EATA				iS	Sb	03 46 42.9	+1.2
EATA				IAML_P			
	comp=Z,3μm,0.3s						
KARS	Kars	0.68	66	PG	Pb	03 46 36.5	-0.3
DAGI	Agillar	0.77	340	iP	Pb	03 46 38.9	+0.6
DAGI				iS	Sb	03 46 49.9	+1.0
DAGI				IAML_P			
	comp=Z,2μm,0.2s						
DBAD	Bademkaya	0.80	327	iP	Pb	03 46 38.9	+0.1
DBAD				iS	Sb	03 46 50.1	+0.6
DIGO	Kars	0.85	85	iP	Pb	03 46 39.3	-0.4
DIGO				iS	Sn	03 46 52.9	-0.6
DIGO				IAML_P			
	comp=Z,3μm,0.1s						
AGRB	Hanur-Agry	0.95	144	PG	Pn	03 46 42.5	+0.2
BCA	Borcka	1.20	336	PN	Pg	03 46 45.1	-0.8
BATM	Batumi	1.32	341	PN	Pg	03 46 47.5	-0.8
BAYT	Aydıntepe-Bayb	1.62	272	PN	Pb	03 46 52.9	0.0

MAN 11 03:52:53.4, 7°.49N×125°.08E, h19km, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	1.03	338	‖eP	Pb	03 53 12.0	-0.6
CGP				eS	Sg	03 53 27.1	+0.1

IDC 11 03:53:43.3±11.0, 17°.26S×178°.92W, h488km±134km, mb3.0/4, mb1 3.4/4, mb1mx3.0/28, mbtmp3.9/4, Error ellipse: s-maj=121.3km s-min=44.2km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 1.2nm,0.9s,baz=88,slow=9.3,SNR=6.2	44.28	259	P	P	04 01 08.7	-0.4
ASAR	Alice Springs 3.1nm,0.4s,baz=90,slow=8.1,SNR=46	44.50	254	P	P	04 01 10.8	0.0
ILAR	Eielson Array 0.3nm,0.9s,baz=212,slow=3.2,SNR=4.3	85.37	13	P	P	04 05 28.0	+0.1
TXAR	Lajitas Array 0.2nm,0.7s,baz=222,slow=5.0,SNR=5.9	86.06	58	P	P	04 05 32.1	-0.1
BRTR	Keskin Array B 0.4nm,0.5s,baz=77,slow=2.3,SNR=4.0	143.99	315	PKP	PKPab	04 12 22.6	+0.2
GERES	GERESS Array B 0.2nm,0.4s,baz=20,slow=3.2,SNR=4.4	146.87	345	PKPbc	PKPbc	04 12 29.6	-0.8

ISCJB ***11*** *04:07:16.9±0.5, 51°.48N±0°.02×16°.13E±0°.03, h0km, Error ellipse: s-maj=3.5km s-min=2.5km az=12.9*

PRU ***11*** *04:07:19.7±0.0, 51°.47N×16°.10E, h0km*

IDC ***11*** *04:07:19.7±0.9, 51°.48N×15°.94E, h0km, mb1 3.3/5, mb1mx3.1/40, mbtmp3.2/5, ML2.9/6, Error ellipse: s-maj=19.0km s-min=8.2km az=104.0*

VIE ***11*** *04:07:21.7±0.8, 51°.28N×16°.03E, h0km, mb2.3/5, ml2.7/5, Error ellipse: s-maj=7.2km s-min=5.6km az=73.0, Suspected Mining induced.*

ISC 11 04:07:17.3±0.7, 51°.56N±0°.03×16°.10E±0°.02, h0km, n36, σ1§12/74, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.73	170	iPg	Pg	04 07 31.7	+0.5
KSP				eSg	Sg	04 07 39.7	-0.9
CHVC	Chvalec	0.97	182	ePG	Pg	04 07 36.5	+0.6
CHVC				eSG	Sg	04 07 48.4	-0.1
	comp=Z,36nm,0.3s						
OSTC	Ostas	1.01	176	ePG	Pg	04 07 37.1	+0.5
OSTC				eSG	Sg	04 07 49.3	-0.3
	comp=Z,38nm,0.7s						
UPC	Upice	1.05	183	ePG	Pg	04 07 37.8	+0.3
UPC				eSG	Sg	04 07 50.0	-1.1
	comp=Z,92nm,0.4s						
DPC	Dobruska-Polom	1.22	173	ePG	Pg	04 07 40.3	-0.3
DPC				eSG	Sg	04 07 55.2	-1.2
	comp=Z,41nm,0.8s						
PVCC	Panska Ves	1.41	224	ePG	Pb	04 07 45.3	+0.8
PVCC				eSG	Sn	04 08 04.1	+0.6
	comp=Z,108nm,0.3s						
BRG	Berggiesshubel	1.52	244	PN	Pn	04 07 46.4	+0.7
BRG				PG	Pg	04 07 47.4	+1.0
BRG				SG	Sn	04 08 07.2	+1.0
	51nm,0.3s						
GOPC	GO Pecny, Ondr	1.85	207	ePG	Pn	04 07 51.6	+1.4
GOPC				eSG	Sb	04 08 15.9	+0.4
	comp=Z,14nm,0.4s						
PRU	Pruhonice	1.86	213	ePN	Pn	04 07 50.4	+0.1
PRU				ePG	Pb	04 07 52.5	+0.4
PRU				eSG	Sb	04 08 16.5	+0.7
	comp=Z,16nm,0.4s						
CLL	Collm comp=Z,5.0nm,0.4s	1.95	264	iPn	Pn	04 07 52.3	+0.6
CLL				iPg	Pb	04 07 54.8	+1.1
CLL				i		04 07 57.6	
CLL				iSg	Sg	04 08 22.0	+2.0
	comp=Z,18nm,0.5s						
MORC	Moravsky Berou	2.01	152	ePN	Pn	04 07 52.2	-0.3
MORC				eSG	Sn	04 08 19.1	+0.8
OKC	Ostrava-Krasne	2.16	142	ePG	Pb	04 07 57.5	+0.3
OKC				eSG	Sb	04 08 24.6	0.0
	comp=Z,26nm,0.6s						
CHZP	Chorzow	2.23	124	ePg	Pg	04 08 01.1	+1.1
CHZP				eSg	Sg	04 08 29.9	+1.1
VRAC	Vranov	2.28	172	Pn	Pn	04 07 57.5	+1.4
	comp=Z,2.8nm,0.3s,baz=346,slow=19,SNR=9.7						
VRAC				Lg	Lg	04 08 29.6	
	comp=Z,3.5nm,0.3s,baz=252,slow=20,SNR=6.6						
VRAC	Vranov	2.28	172	ePN	Pn	04 07 57.0	+0.9
VRAC				eSG	Sb	04 08 27.0	-0.9
TREC	Trest	2.30	190	ePN	Pn	04 07 57.1	+0.6
TREC				ePG	Pb	04 08 00.4	+0.8
TREC				eSG	Sb	04 08 29.6	+1.0
	comp=Z,16nm,0.3s						
KRUC	Moravsky	2.51	176	ePG	Pb	04 08 03.0	-0.2
KRUC				eSG	Sb	04 08 34.0	-0.6
NKC	Novy Kostel	2.67	242	ePN	Pn	04 08 02.7	+1.2
NKC				ePG	Pg	04 08 08.6	+0.3
NKC				eSG	Sg	04 08 44.2	+1.4
	comp=Z,34nm,0.4s						
OJC	Ojcow	2.70	118	ePn	Pn	04 08 02.4	+0.5
OJC				ePg	Pg	04 08 10.9	+1.9
OJC				eSg	Sg	04 08 45.5	+1.5
JAVC	Velka Javorina	2.89	159	ePN	P

MODS			*e*SG	**Sg**	**04 09 02.4 -0.2**
NIE	**Niedzica**	**3.44 127**	*e*P	**Pg**	**04 08 22.9 -0.2**
NIE			*e*S	**Sg**	**04 09 06.6 -0.9**
VYHS	**Vyhne**	**3.54 149**	*e*PN	**Pn**	**04 08 13.6 +0.1**
VYHS			*e*PG	**Pg**	**04 08 24.9 -0.2**
VYHS			*e*SG	**Sg**	**04 09 09.3 -1.7**
BSD	**Bornholm Skovb**	**3.63 349**	*i* P	**Pn**	**04 08 16.1 +1.4**
BSD			*i* S	**Sn**	**04 08 55.4 -2.8**
CONA	**Conrad Observa**	**3.64 182**	*i* Pn	**Pn**	**04 08 15.4 +0.5**
	comp=Z,1.0nm,0.2s				
CONA			*e*Sg	**Sg**	**04 09 12.4 -1.7**
	comp=Z,11nm,0.5s				
MOA	**Molln**	**3.90 198**	*i* Pn	**Pn**	**04 08 18.8 +0.4**
	comp=Z,1.3nm,0.2s				
MOA			*e*Sg	**Sg**	**04 09 21.0 -1.5**
	comp=Z,5.6nm,0.3s				
ARSA	**Arzberg**	**4.33 185**	*e*Pn	**Pn**	**04 08 23.5 -0.8**
	comp=Z,1.3nm,0.2s				
ARSA			Sg	**Sg**	**04 09 35.5 -0.7**
	comp=Z,11nm,0.7s				
KOLS	**Kolonicke sedl**	**4.75 121**	*e*PN	**Pn**	**04 08 30.9 +0.7**
KOLS			*e*PG	**Pg**	**04 08 49.3 +0.9**
DAVOX	**Davos/Dischmat**	**6.28 223**	Pn	**Pn**	**04 08 52.0 +0.6**
	comp=Z,0.3nm,0.3s,baz=54,slow=8.7,SNR=2.5				
DAVOX			Lg	Lg	04 10 35.1
	comp=Z,0.1nm,0.3s,baz=261,slow=19,SNR=2.0				
HFS	**Hagfors**	**8.70 352**	Pn	**Pn**	**04 09 24.9 +0.6**
	comp=Z,0.2nm,0.3s,baz=156,slow=14,SNR=4.6				
FINES	**FINESS Array B**	**11.32 25**	Pn	**Pn**	**04 10 00.1 0.0**
	comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=4.2				
EKA	**Eskdalemuir Ar**	**12.08 296**	Pn	**Pn**	**04 10 07.8 -2.6**
	baz=102,slow=13,SNR=2.7				
ARCES	**ARCESS Array B**	**18.57 10**	Pn	**P**	**04 11 33.4 -2.1**
	comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=6.2				

MAN 11 04:16:35.7, 9°.74N×125°.32E, h25km, mb3.9, ML2.6, MS2.2, Mindanao

*SJA **11** 04:19:20.3±0.7, 23°.94S×66°.88W, h222km±13km, ML2.9, MW3.1*
*ISCJB **11** 04:19:21.2±0.4, 23°.93S±0°.03×66°.83W±0°.04, h217km±5km, mb3.0/2, Error ellipse: s-maj=6.6km s-min=3.8km az=136.8*
*IDC **11** 04:19:22.3±2.0, 23°.83S×66°.62W, h204km±19km, mb2.9/2, mb1 3.2/6, mb1mx3.1/24, mbtmp3.6/6, Error ellipse: s-maj=23.3km s-min=17.0km az=67.0*
*GUC **11** 04:19:23.5±0.4, 23°.79S×67°.10W, h249km±6km, ML4.6*
ISC 11 04:19:22.2±0.8, 23°.89S±0°.04×66°.81W±0°.05, h209km±7km, n31, σ1°19/53, 5C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.45**	**63**	*i* P	**Pn**	**04 19 57.4**	**+0.7**
SLA	**San Lorenzo**	**1.45**	**125**	*i* P	**Pn**	**04 19 57.0**	**+0.6**
SLA				*i* S	**Sn**	**04 20 22.9**	**-0.2**
SLA				IAML		04 20 24.0	
	comp=E,102nm,0.5s						
AZAP	**Zapla**	**1.63**	**102**	*i* P	**Pn**	**04 19 58.2**	**+0.1**
YJA	**Yavi**	**2.08**	**35**	*i* P	**Pn**	**04 20 03.4**	**+0.7**
YJA				*i* S	**Sn**	**04 20 35.7**	**+1.6**
YJA				IAML		04 20 36.2	
	comp=E,39nm,0.5s						
LVC	**Limon Verde**	**2.31**	**303**	⇓*i* P	**Pn**	**04 20 06.4**	**+1.4**
LVC				*i* S	**Sn**	**04 20 39.1**	**+0.7**
FSA	**Cafayete**	**2.34**	**161**	*i* P	**Pn**	**04 20 04.4**	**-0.7**
FSA				*i* S	**Sn**	**04 20 37.1**	**-1.6**
FSA				IAML		04 20 37.4	
	comp=Z,50nm,0.6s						
PB15	**IPOC Station P**	**2.54**	**285**	*e*P	**Pn**	**04 20 08.5**	**+1.3**
PB15				*e*S	**Sn**	**04 20 42.6**	**+0.2**
PB06	**IPOC Station P**	**2.80**	**294**	*e*P	**Pn**	**04 20 11.3**	**+1.1**
PB06				*e*S	**Sn**	**04 20 47.3**	**-0.3**
PB06				IAML		04 20 49.3	
	comp=N,1μm,0.2s						
GO02	**Mina Guanaco**	**2.84**	**243**	⇓*i* P	**Pn**	**04 20 11.4**	**+0.7**
GO02				*i* S	**Sn**	**04 20 48.8**	**+0.1**
PB09	**IPOC Station P**	**3.06**	**312**	*e*P	**Pn**	**04 20 14.4**	**+1.2**
PB09				*e*S	**Sn**	**04 20 52.3**	**-0.8**
AHML	**Horco Molle**	**3.18**	**156**	*i* P	**Pn**	**04 20 13.2**	**-1.3**
AHML				*i* S	**Sn**	**04 20 53.2**	**-2.3**
AHML				IAML		04 20 57.1	
	comp=Z,11nm,0.5s						
PB03	**IPOC Station P**	**3.27**	**303**	*e*P	**Pn**	**04 20 16.4**	**+0.7**
PB03				*e*S	**Sn**	**04 20 56.6**	**-1.0**
PB05	**IPOC Station P**	**3.29**	**288**	*e*P	**Pn**	**04 20 16.3**	**+0.5**
PB05				*e*S	**Sn**	**04 20 56.2**	**-1.5**
PB04	**IPOC Station P**	**3.44**	**296**	*e*P	**Pn**	**04 20 18.2**	**+0.5**
PB04				*e*S	**Sn**	**04 20 60.0**	**-1.2**
PB04				IAML		04 21 03.0	
	comp=N,653nm,0.1s						
PB10	**IPOC Station P**	**3.46**	**275**	⇑*i* P	**Pn**	**04 20 18.2**	**+0.5**
PB10				*i* S	**Sn**	**04 20 59.7**	**-1.5**
PB10				IAML		04 21 03.4	
	comp=N,510nm,0.3s						
PB07	**IPOC Station P**	**3.56**	**306**	*e*P	**Pn**	**04 20 19.7**	**+0.5**
PB07				*e*S	**Sn**	**04 21 02.5**	**-1.4**
PB07				IAML		04 21 03.6	
	comp=N,358nm,0.3s						
PB01	**IPOC Station P**	**3.76**	**318**	⇑*i* P	**Pn**	**04 20 21.9**	**+0.4**
PB01				*i* S	**Sn**	**04 21 06.9**	**-1.2**
PB02	**IPOC Station P**	**3.83**	**311**	*e*P	**Pn**	**04 20 22.5**	**+0.1**
PB02				*e*	**Sn**	**04 21 07.7**	**-1.9**
PB02				*e*S	**Sn**	**04 21 07.7**	**-1.9**
PB02				IAML		04 21 11.8	
	comp=E,295nm,0.4s						
PB08	**IPOC Station P**	**4.32**	**329**	*e*P	**Pn**	**04 20 29.7**	**+1.0**
PB08				*e*S	**Sn**	**04 21 20.9**	**0.0**
PB08				IAML		04 21 24.0	
	comp=N,169nm,0.5s						
CYA	**Choya**	**4.63**	**169**	*i* P	**Pn**	**04 20 30.9**	**-1.2**
GO01	**Chusmiza**	**4.75**	**332**	⇑*i* P	**Pn**	**04 20 34.5**	**+0.4**
GO01				*i* S	**Sn**	**04 21 29.5**	**-1.3**
PB11	**IPOC Station P**	**4.88**	**327**	⇑*i* P	**Pn**	**04 20 34.9**	**-0.7**
PB11				*e*S	**Sn**	**04 21 31.1**	**-2.4**
MNMC	**Minye Minye**	**5.40**	**331**	⇑*i* P	**Pn**	**04 20 42.0**	**-0.1**
MNMC				*e*S	**Sn**	**04 21 43.0**	**-2.4**
LPAZ	**La Paz**	**7.66**	**350**	P	**Pn**	**04 21 12.1**	**+0.4**
	comp=N,1.4nm,0.3s,baz=152,slow=7.0,SNR=56						
LPAZ				S	**Sn**	**04 22 37.8**	**-1.1**
	comp=N,0.4nm,0.3s,baz=342,slow=16,SNR=4.2						
CPUP	**Villa Florida**	**8.93**	**108**	P	**Pn**	**04 21 25.5**	**-2.0**
	comp=N,0.2nm,0.3s,baz=292,slow=12,SNR=9.9						
PLCA	**Paso Flores**	**17.09**	**190**	P	**P**	**04 23 08.8**	**+1.2**
	comp=N,0.1nm,0.3s,baz=41,slow=9.3,SNR=3.3						
BDFB	**Brasilia**	**19.48**	**69**	P	**P**	**04 23 32.8**	**-0.9**
	comp=N,0.3nm,0.3s,baz=259,slow=8.4,SNR=3.6						
TXAR	**Lajitas Array**	**63.69**	**324**	P	**P**	**04 29 32.6**	**+1.0**
	comp=N,0.1nm,0.4s,baz=113,slow=7.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**76.36**	**69**	P	**P**	**04 30 47.8**	**-1.0**
	comp=N,0.2nm,0.4s,baz=248,slow=4.9,SNR=6.6						
WRA	**Warramunga Arr**	**131.81**	**207**	PKP	**PKPdf**	**04 38 12.1**	**+0.9**
	comp=N,0.9nm,0.8s,baz=167,slow=1.9,SNR=4.0						
MKAR	**Makanchi Array**	**146.32**	**40**	PKPbc	**PKPdf**	**04 38 37.9**	**+1.2**
	comp=N,0.9nm,0.6s,baz=302,slow=2.3,SNR=11						

MEX 11 04:31:52.7±0.4, 15°.76N×95°.31W, h70km±22km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.77**	**271**	*e*P	Pn	04 32 06.5	-1.9
HUIG				*i* S	Sn	04 32 18.6	-1.5
CMIG	**Matias Romero**	**1.39**	**17**	*i* P	Pn	04 32 14.9	-1.4
CMIG				*i* S	Sn	04 32 32.0	-1.9
PCIG		**2.01**	**91**	*i* P	Pn	04 32 23.2	-1.3

DJA 11 05:03:07.5±0.5, 8°S±3°×12°0E±°, h161km±5km, M3.6/13, MLv3.6/13, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.31**	**190**	P	Pn	05 03 36.4	+0.2
WBSI				S	Sn	05 03 58.4	+0.1
WSI	**Waingapu**	**1.48**	**154**	P	Pn	05 03 37.6	-0.1
WSI				S	Sn	05 04 01.2	+0.2
PLAI	**Plampang**	**1.90**	**255**	P	Pn	05 03 42.4	+0.3
PLAI				S	Sn	05 04 09.0	+0.2
EDFI	**Ende, Flores**	**2.08**	**101**	P	Pn	05 03 43.9	-0.4
BASI	**Baing, Sumba**	**2.09**	**153**	P	Pn	05 03 44.3	0.0
BSSI	**Bau Bau, Buton**	**2.34**	**21**	P	Pn	05 03 47.0	-0.3
MMRI	**Maumere**	**2.60**	**97**	P	Pn	05 03 50.8	+0.5
BKSI	**Bulukumba**	**3.04**	**9**	P	Pn	05 03 56.0	+0.2
SPSI	**Sidrap Palu**	**4.35**	**2**	P	Pn	05 04 12.7	+0.1
BATI	**Baumata**	**4.39**	**115**	P	Pn	05 04 13.2	0.0
SOEI	**Soe**	**4.79**	**107**	P	Pn	05 04 18.3	-0.2

*IDC **11** 05:09:57.5±1.4, 8°.16S×117°.63E, h0km, mb3.7/4, mb1 3.9/7, mb1mx3.7/35, mbtmp3.8/7, ML3.7/3, MS3.2/4, Ms1 3.3/4, ms1mx2.8/29, Error ellipse: s-maj=54.5km s-min=18.7km az=60.0*
*ISCJB **11** 05:09:60.0±0.5, 8°.03S±0°.04×117°.87E±0°.05, h10km, mb3.8/4, MS3.3/3, Error ellipse: s-maj=7.8km s-min=5.7km az=26.7*
*DJA **11** 05:10:02.2±0.6, 8°S±4°×11°8E±°, h15km±5km, M4.1/11, MLv4.1/11*
ISC 11 05:10:00.3±0.7, 8°.10S±0°.04×117°.89E±0°.05, h10km, n22, σ2°12/21, mb3.8/4, MS3.2/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.73**	**189**	P	**Pg**	**05 10 16.6**	**+2.1**
PLAI				S	**Sb**	**05 10 27.4**	**+2.1**
WBSI	**Waikabubak, Su**	**2.13**	**136**	P	**Pn**	**05 10 37.9**	**+1.9**
SRBI	**Singaraja**	**2.65**	**270**	P	**Pn**	**05 10 44.5**	**+1.4**
WSI	**Waingapu**	**2.85**	**123**	P	**Pn**	**05 10 47.6**	**+1.8**
BSSI	**Bau Bau, Buton**	**3.23**	**53**	P	**Pn**	**05 10 52.6**	**+1.5**
BKSI	**Bulukumba**	**3.54**	**39**	P	**Pn**	**05 10 56.6**	**+1.3**
KAPI	**Kappang**	**3.58**	**31**	Pn	**Pn**	**05 10 57.2**	**+1.3**
	10nm,0.3s,baz=209,slow=5.2,SNR=43						
KAPI				Sn	**Sn**	**05 11 38.5**	**+0.3**
	16nm,0.3s,baz=243,slow=23,SNR=15						
JAGI	**Jajag, Banyuwa**	**3.72**	**264**	P	**Pn**	**05 10 58.1**	**+0.3**
EDFI	**Ende, Flores**	**3.82**	**100**	P	**Pn**	**05 11 00.9**	**+1.7**
BNSI	**Bone**	**4.28**	**31**	P	**Pg**	**05 11 22.6**	**+0.2**
GMJI	**Gumukmas**	**4.40**	**267**	P	**Pn**	**05 11 08.1**	**+0.9**
SPSI	**Sidrap Palu**	**4.51**	**25**	P	Pg	05 11 33.2	+6.5
TTSI	**Tana Toraja**	**5.37**	**21**	P	**Pg**	**05 11 45.9**	**+2.6**
LEM	**Lembang**	**10.26**	**276**	LR	LR	05 16 47.2	
	comp=Z,97nm,20.7s,baz=178,slow=41						
FITZ	**Fitzroy Crossi**	**12.48**	**144**	Pn	**Pn**	**05 12 58.1**	**0.0**
	0.1nm,0.3s,baz=328,slow=9.5,SNR=3.2						
FITZ				Sn	**Sn**	**05 15 10.8**	**-6.5**
	0.2nm,0.3s,baz=163,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**19.81**	**128**	P	**P**	**05 14 31.2**	**+0.1**
	0.4nm,0.3s,baz=299,slow=12,SNR=20						
ASAR	**Alice Springs**	**21.80**	**137**	P	**P**	**05 14 53.5**	**+0.8**
	3.3nm,0.7s,baz=320,slow=12,SNR=23						
CMAR	**Chiang Mai Arr**	**32.34**	**325**	LR	LR	05 30 21.0	
	comp=Z,24nm,19.0s,baz=65,slow=38						
STKA	**Stephens Creek**	**32.34**	**140**	P	**P**	**05 16 29.1**	**-0.8**
	1.2nm,0.4s,baz=300,slow=8.1,SNR=4.2						
ASAJ	**Asahikawa**	**56.58**	**21**	LR	LR	05 46 44.2	
	comp=Z,18nm,18.6s,baz=176,slow=39						
SONM	**Songino Array**	**56.61**	**351**	P	**P**	**05 19 42.9**	**-0.6**
	0.4nm,0.6s,baz=163,slow=10,SNR=2.9						
SONM				LR	LR	05 45 10.7	
	comp=Z,64nm,18.2s,baz=119,slow=37						
MKAR	**Makanchi Array**	**63.16**	**333**	P	**P**	**05 20 26.6**	**-1.8**
	0.2nm,0.5s,baz=134,slow=8.3,SNR=2.4						

*NORS **11** 05:41:42.8±0.0, 42°.76N×46°.24E, h4km, MPVA3.7*
DRS 11 05:41:43.7±0.0, 42°.80N×46°.12E, h10km, ML2.2/2, 1C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.15**	**1**	*e*Pg	Pb	05 41 49.3	+0.6
DVE				*e*Sg	Sg	05 41 52.6	+2.9
BTLR	**Botlikh**	**0.16**	**152**	*e*Pg	Pb	05 41 48.1	-0.6
	339nm,0.1s						
BTLR				⇓*e*Sg	Sg	05 41 50.6	+0.9
	3μm,0.3s						
DLMR	**Dylym**	**0.46**	**54**	*e*Pg	Pb	05 41 53.5	-0.3
	46nm,0.3s						
DLMR				*e*Sg	Sb	05 42 00.0	-0.7
	213nm,0.0s						
GROC	**Groznyy**	**0.47**	**329**	*e*Pg	Pn	05 41 56.3	-0.1
GROC				*e*Sg	Sb	05 42 03.6	+2.7
UNCR	**Uncukul**	**0.50**	**100**	*e*Pg	Pg	05 41 53.3	-0.2
	68nm,0.3s						
UNCR				*e*Sg	Sg	05 42 00.0	-0.1
	256nm,0.3s						
XNZR	**Khunzakh**	**0.50**	**121**	*e*Pg	Pb	05 41 54.4	-0.2
XNZR				*e*Sg	Sg	05 42 01.1	+0.9
DBC	**Dubki**	**0.56**	**67**	*e*Pg	Pg	05 41 55.0	+0.3
DBC				*e*Sg	Sg	05 42 02.6	+0.5
KRNR	**Karanay**	**0.58**	**87**	*e*Pg	Pb	05 41 56.0	+0.1
	36nm,0.2s						
KRNR				*e*Sg	Sg	05 42 02.5	-0.1
ARKR	**Arakani**	**0.67**	**107**	*e*Pg	Pb	05 41 57.7	+0.2
	58nm,0.0s						
ARKR				*e*Sg	Sg	05 42 06.0	+0.4
	73nm,0.2s						
BUJR	**Buynaksk**	**0.72**	**88**	*i* Pg	Pn	05 41 59.6	-0.3
BUJR				*e*Sg	Sb	05 42 09.1	+0.8
GNBR	**Gunib**	**0.75**	**123**	*e*Pg	Pb	05 41 59.3	+0.5
	60nm,0.4s						
GNBR				⇑*e*Sg	Sb	05 42 08.9	-0.2
	136nm,0.3s						
KMGR	**Komgaron**	**0.96**	**286**	*e*Pg	Pn	05 42 06.3	+3.1
KMGR				*e*Sg	Sn	05 42 20.9	+4.0
KMKR	**Kumukh**	**0.99**	**133**	*e*Pg	Pn	05 42 04.0	+0.3
	47nm,0.2s						
KMKR				*e*Sg	Sn	05 42 17.0	-0.8
	119nm,0.3s						
MAK	**Makhachkala**	**1.03**	**81**	*e*Pg	Pb	05 42 03.8	+0.2
MAK				*e*Sg	Sg	05 42 16.8	0.0
LACR	**Lac**	**1.34**	**272**	*e*Pg	Pg	05 42 13.1	+3.5
LACR				*e*Sg	Sg	05 42 32.2	+5.2
ZEI	**Tsey**	**1.64**	**270**	*e*Pg	Pg	05 42 17.7	+2.6
ZEI				*e*Sg	Sg	05 42 41.2	+4.9
AKT	**Akhty**	**1.78**	**137**	*e*Pg	Pb	05 42 17.0	+0.5
AKT				*e*Sg	Sb	05 42 39.9	+1.0
NEY	**Neytrino**	**2.53**	**281**	*e*Pn	Pg	05 42 31.6	-0.7
NEY				*e*Sn	Sg	05 43 05.0	-0.1
SHA1	**Shidzhatmaz**	**2.70**	**291**	*e*Pn	Pb	05 42 31.7	-0.5
SHA1				*e*Sn	Sb	05 43 07.0	+1.6

*NORS **11** 06:00:56.0±0.0, 43°.01N×45°.72E, h4km, MPVA3.5*
DRS 11 06:01:00.4±0.0, 43°.20N×46°.26E, h12km, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.26**	**202**	*e*Pg	Pg	06 01 05.0	-0.9
DVE				*e*Sg	Sb	06 01 11.6	0.0
GROC	**Groznyy**	**0.34**	**270**	*e*Pg	Pg	06 01 02.5	-4.7
GROC				*e*Sg	Sg	06 01 05.5	-6.4
DBC	**Dubki**	**0.46**	**113**	*e*Pg	Pg	06 01 09.8	+0.4
DBC				*e*Sg	Sb	06 01 20.2	+3.1
BTLR	**Botlikh**	**0.54**	**183**	*e*Pg	Pg	06 01 09.4	-1.5
BTLR				*e*Sg	Sb	06 01 19.7	+0.2
KRNR	**Karanay**	**0.61**	**128**	*e*Pg	Pg	06 01 12.0	-0.2
KRNR				*e*Sg	Sb	06 01 21.0	-0.5
UNCR	**Uncukul**	**0.63**	**141**	*e*Pg	Pg	06 01 12.0	-0.6
UNCR				*e*Sg	Sn	06 01 25.0	0.0
XNZR	**Khunzakh**	**0.74**	**153**	*e*Pg	Pg	06 01 13.4	-1.3
XNZR				*e*Sg	Sn	06 01 26.7	-1.2
KMGR	**Komgaron**	**1.03**	**262**	*e*Pg	Pb	06 01 12.1	-8.0
KMGR				*e*Sg	Sb	06 01 24.1	-10
TRKR	**Terskaya**	**1.23**	**296**	*e*Pg	Pn	06 01 14.1	-9.2
TRKR				*e*Sg	Sb	06 01 27.8	-11
KMKR	**Kumukh**	**1.24**	**150**	*e*Pg	Pg	06 01 24.7	+0.5
KMKR				*e*Sg	Sn	06 01 44.0	+3.7
LACR	**Lac**	**1.49**	**256**	*e*Pg	Pn	06 01 17.8	-9.2
LACR				*e*Sg	Sn	06 01 35.9	-11
STDR	**Stavd-Durt**	**1.61**	**277**	*e*Pg	Pn	06 01 20.0	-8.6
STDR				*e*Sg	Sn	06 01 38.5	-11
ZEI	**Tsey**	**1.78**	**257**	*e*Pg	Pn	06 01 23.4	-7.7
ZEI				*e*Sg	Sn	06 01 44.7	-8.9
KBTC	**Kuba-Taba**	**2.16**	**287**	*e*Pg	Pn	06 01 27.0	-9.2
KBTC				*e*Sg	Sn	06 01 52.3	-11
NEY	**Neytrino**	**2.58**	**272**	*e*Pn	Pn	06 01 33.3	-8.9
NEY				*e*Sn	Sn	06 02 03.5	-10
SHA1	**Shidzhatmaz**	**2.68**	**283**	*e*Pn	Pn	06 01 34.5	-9.0
SHA1				*e*Sn	Sn	06 02 05.0	-11

IDC 11 06:20:48.2±6.5, 49°.96S×109°.09E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.7/18, mbtmp3.6/3, MS3.4/3, Ms1 3.3/3, ms1mx3.0/16, Error ellipse: s-maj=231.3km s-min=28.7km az=104.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.50**	**16**	T	T	06 39 42.1	
	baz=199,slow=73,SNR=23						
H01W1	**Cape Leeuwin H**	**15.52**	**16**	T	T	06 39 38.7	
	baz=199,slow=73,SNR=50						
H01W3	**Cape Leeuwin H**	**15.52**	**16**	T	T	06 39 39.1	
	baz=199,slow=73,SNR=43						
NWAO	**Narrogin (SRO)**	**18.06**	**23**	LR	LR	06 29 57.3	
	comp=Z,96nm,19.8s,baz=129,slow=30						
MAW	**Mawson**	**28.78**	**215**	LR	LR	06 36 18.6	
	comp=Z,37nm,21.1s,baz=43,slow=32						
ASAR	**Alice Springs**	**32.62**	**46**	P	P	06 27 21.8	+0.2
	0.8nm,0.8s,baz=210,slow=8.3,SNR=4.1						
VNDA	**Vanda**	**33.88**	**162**	P	P	06 27 31.9	-0.1
	0.2nm,0.3s,baz=311,slow=9.3,SNR=8.9						
WRA	**Warramunga Arr**	**36.06**	**43**	P	P	06 27 51.1	-0.3
	1.0nm,0.7s,baz=208,slow=10.0,SNR=3.9						
BRDH	**Bariadhala**	**73.96**	**343**	LR	LR	07 01 41.5	
	comp=Z,45nm,18.1s,baz=123,slow=33						
TXAR	**Lajitas Array**	**147.81**	**117**	PKPbc	PKPbc	06 40 34.2	-0.7
	0.4nm,0.8s,baz=197,slow=2.8,SNR=5.1						

WEL 11 07:30:58.0±1.2, 34°S±10°×17°9E±°, h148km±34km, M4.1/14, MLv4.1/14, Error ellipse: s-maj=0.0km s-min=0.0km az=43.1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZ	**Great Barrier**	**3.49**	**233**	P	Pn	07 31 51.0	-0.6
KUZ	**Kuaotunu**	**3.64**	**225**	P	Pn	07 31 52.4	-1.0
KUZ				S	Sn	07 32 35.2	-1.3
HAZ	**Te Kaha**	**3.66**	**194**	P	Pn	07 31 52.4	-1.2
RUGZ	**Raukumara Rang**	**3.88**	**195**	P	Pn	07 31 56.3	-0.4
PUZ	**Puketiti**	**3.89**	**188**	P	Pn	07 31 55.4	-1.3
PUZ				S	Sn	07 32 43.9	+1.5
TWGZ	**Tauwhareparae**	**4.03**	**191**	P	Pn	07 31 58.1	-0.5
OPRZ	**Ohinepanea**	**4.10**	**207**	P	Pn	07 32 03.5	+4.0
WCZ	**Waipu Caves**	**4.13**	**244**	P	Pn	07 31 59.9	0.0
WCZ				S	Sn	07 32 48.7	+0.7
MWZ	**Matawai**	**4.27**	**195**	P	Pn	07 32 01.5	-0.1
URZ	**Urewera**	**4.30**	**199**	P	Pn	07 32 01.2	-0.9
URZ				S	Sn	07 32 52.1	+0.2
CNGZ	**Carnagh Statio**	**4.30**	**188**	P	Pn	07 32 00.7	-1.4
TKGZ	**Te Karaka**	**4.31**	**191**	P	Pn	07 32 01.6	-0.6
TKGZ				S	Sn	07 32 52.8	+0.6
KARZ	**Kaharoa**	**4.38**	**209**	P	Pn	07 32 06.2	+3.1
OUZ	**Omahuta**	**4.50**	**256**	P	Pn	07 32 04.4	-0.3
OUZ				S	Sn	07 32 57.1	+0.3
MUGZ	**Murupara**	**4.60**	**202**	P	Pn	07 32 08.1	+2.1
RTZ	**Ruatahuna**	**4.67**	**199**	P	Pn	07 32 07.4	+0.4
SNGZ	**Shannon Statio**	**4.74**	**195**	P	Pn	07 32 07.5	-0.4
RAHZ	**Arahi**	**4.92**	**197**	P	Pn	07 32 10.5	+0.2
MTHZ	**Maungataniwha**	**4.93**	**199**	P	Pn	07 32 11.5	+1.1
TLZ	**Tolley Road**	**4.94**	**213**	P	Pn	07 32 11.6	+1.1
BKZ	**Black Stump Fm**	**5.32**	**201**	P	Pn	07 32 15.4	-0.2
HIZ	**Hauiti**	**5.41**	**216**	P	Pn	07 32 18.8	+2.1
BFZ	**Birch Farm**	**6.80**	**197**	P	Pn	07 32 33.1	-2.3
BFZ				S	Sn	07 33 52.1	+0.5
MRZ	**Mangatainoka R**	**6.97**	**201**	P	Pn	07 32 34.9	-2.6

IDC 11 07:52:12.8±3.7, 19°.94S×174°.81W, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.7/37, mbtmp3.7/3, Error ellipse: s-maj=356.1km s-min=32.0km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**47.56**	**256**	P	P	08 00 50.3	-0.2
	0.9nm,0.5s,baz=86,slow=8.1,SNR=15						
TXAR	**Lajitas Array**	**84.25**	**56**	P	P	08 04 45.9	-0.8
	0.3nm,0.8s,baz=212,slow=4.4,SNR=4.2						
PDAR	**Pinedale Array**	**86.52**	**42**	P	P	08 04 58.7	+0.7
	0.3nm,0.5s,baz=219,slow=4.2,SNR=3.0						

*IDC **11** 08:00:04.9±1.1, 51°.12N×168°.22W, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.5/52, mbtmp3.6/7, ML2.9/1, Error ellipse: s-maj=40.5km s-min=21.2km az=170.0*
*ISCJB **11** 08:00:07.7±0.6, 51°.06N±0°.05×168°.17W±0°.07, h33km, mb3.7/7, Error ellipse: s-maj=8.1km s-min=5.7km az=146.8*
*NEIC **11** 08:00:10.0±0.0, 51°.14N×168°.11W, h32km, mb3.6/12, ML3.0(AEIC), After AEIC.*
ISC 11 08:00:09.6±0.9, 51°.10N±0°.09×168°.19W±0°.06, h35km, n41, σ1°49/49, mb3.8/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.92**	**348**	*e*Pn	**Pn**	**08 00 39.3**	**-0.5**
NIKH				*e*S

0.4nm,0.6s,baz=29,slow=4.1,SNR=5.4

*IDC **11** 08:03:24.6±2.5,4.°16N×95.°58E,h0km,mb3.6/2,mb1 3.9/4, mb1mx3.5/42,mbtmp3.8/4,ML4.1/2,MS3.2/4,Ms1 3.3/4, ms1mx2.8/44,Error ellipse: s-maj=89.9km s-min=23.9km az=57.0*

*ISCJB **11** 08:03:28.5±1.0,4.°45N±0.°05×96.°10E±0.°07,h10km, MS3.5/1,Error ellipse: s-maj=10.2km s-min=6.2km az=165.7*

*DJA **11** 08:03:30.6±0.4,4.°N±3.°×9.°6E±.°,h10km,M4.2/7,MLv4.2/7*

ISC 11 08:03:30.0±0.9,4.°48N±0.°05×96.°23E±0.°07,h10km,n19, σ1♀58/18,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.28**	**141**	P	**Pg**	**08 03 35.8**	**+0.2**
MLSI				S	**Sg**	**08 03 40.4**	**+1.0**
LHMI	**Lhok Sumawe**	**1.03**	**44**	P	**Pg**	**08 03 49.0**	**-0.9**
LHMI				S	**Sn**	**08 04 05.1**	**0.0**
BSI	**Banda Aceh**	**1.37**	**317**	S	**Sb**	**08 04 15.1**	**+1.7**
TPTI		**1.54**	**142**	P	**Pn**	**08 03 56.9**	**-0.7**
TPTI				S	**Sb**	**08 04 17.8**	**-0.5**
KCSI	**Kotacane, Aceh**	**1.81**	**122**	P	**Pn**	**08 04 01.5**	**+0.2**
KCSI				S	**Sb**	**08 04 25.4**	**-0.7**
SNSI	**Sinabang, Aceh**	**2.06**	**177**	P	**Pn**	**08 04 05.1**	**+0.3**
TSI	**Tuntungan**	**2.53**	**113**	P	**Pn**	**08 04 11.7**	**+0.6**
PSI	**Prapat**	**3.17**	**122**	Pn	**Pn**	**08 04 22.2**	**+2.1**
	5.2nm,0.3s,baz=314,slow=16,SNR=11						
PSI				Sn	**Sn**	**08 05 00.6**	**+2.5**
	13nm,0.3s,baz=303,slow=17,SNR=6.9						
MNSI	**Mandailing Nat**	**4.96**	**137**	P	**Pn**	**08 04 44.7**	**0.0**
CMAR	**Chiang Mai Arr**	**14.14**	**11**	Pn	**Pn**	**08 06 53.4**	**+2.8**
	0.7nm,0.3s,baz=202,slow=18,SNR=3.3						
CMAR				LR	LR	08 12 12.2	
	comp=Z,40nm,18.0s,baz=176,slow=36						
PALK	**Pallekele**	**15.69**	**281**	LR	LR	08 12 46.7	
	comp=Z,83nm,19.9s,baz=117,slow=37						
BRDH	**Bariadhala**	**18.62**	**347**	LR	LR	08 15 29.7	
	comp=Z,84nm,18.4s,baz=145,slow=39						
H08S2	**Diego Garcia H**	**26.57**	**243**	T	T	08 36 31.0	
	baz=61,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**26.57**	**243**	T	T	08 36 18.1	
	baz=61,slow=76,SNR=7.6						
H08S1	**Diego Carcia H**	**26.59**	**243**	T	T	08 36 28.9	
	baz=61,slow=76,SNR=8.2						
MKAR	**Makanchi Array**	**43.84**	**346**	P	**P**	**08 11 33.5**	**-2.9**
	0.2nm,0.3s,baz=161,slow=9.9,SNR=4.6						
WRA	**Warramunga Arr**	**44.63**	**124**	P	**P**	**08 11 41.9**	**-1.3**
	132nm,0.3s,baz=304,slow=9.5,SNR=1.6						
ASAR	**Alice Springs**	**46.17**	**129**	P	**P**	**08 11 53.8**	**-1.5**
	1.2nm,0.8s,baz=304,slow=7.4,SNR=9.7						
VNDA	**Vanda**	**89.21**	**169**	LR	LR	08 51 02.5	
	comp=Z,21nm,19.8s,baz=301,slow=32						

*NEIC **11** 08:07:49.8±0.0,16.°26N×97.°47W,h30km,MD4.0(MEX), After MEX.*

MEX 11 08:07:49.8±0.8,16.°26N×97.°47W,h30km±11km,MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.40**	**110**	*e*Pn	Pn	08 08 11.1	-2.2
HUIG				*e*Sn	Sn	08 08 27.0	-3.7
HUIG	**Huatulco**	**1.40**	**110**	*e*P	Pn	08 08 11.1	-2.2
HUIG				*e*S	Sn	08 08 27.0	-3.7
TLIG	**Tlapa**	**1.67**	**321**	*e*Pn	Pn	08 08 15.9	-1.3
TLIG				*e*Sn	Sn	08 08 37.0	-0.7
CMIG	**Matias Romero**	**2.61**	**71**	*e*Pn	Pn	08 08 27.8	-2.2
CMIG				*e*Sn	Sn	08 08 58.2	-2.5
CMIG	**Matias Romero**	**2.61**	**71**	*e*P	Pn	08 08 27.8	-2.2
CMIG				*i* S	Sn	08 08 58.2	-2.5
CAIG	**El Cayaco**	**2.80**	**287**	*e*Pn	Pn	08 08 31.1	-1.5
CAIG				*e*Sn	Sn	08 09 02.1	-3.2
CAIG	**El Cayaco**	**2.80**	**287**	*e*P	Pn	08 08 31.1	-1.5
CAIG				*i* S	Sn	08 09 02.1	-3.2
LVIG	**Laguna Verde**	**3.59**	**16**	*e*Pn	Pn	08 08 42.0	-1.4
LVIG				*e*Sn	Sn	08 09 27.3	+2.5
LVIG	**Laguna Verde**	**3.59**	**16**	*i* P	Pn	08 08 42.1	-1.3
LVIG				*e*S	Sn	08 09 27.3	+2.5
CCIG	**Comitan**	**5.12**	**89**	*e*Pn	Pn	08 09 03.3	-1.4
TEIG	**Tepich**	**9.58**	**64**	*e*Pn	Pn	08 10 04.1	-1.7

*ISCJB **11** 08:10:50.8±0.6,39.°48N±0.°03×142.°11E±0.°08,h50km±5km, mb4.2/6,Error ellipse: s-maj=10.6km s-min=4.8km az=12.0.*

*JMA **11** 08:10:51.6,39.°49N×142.°06E,h46km±1km,M3.9*

JMA Felt II J1.

*IDC **11** 08:10:53.4±2.9,39.°46N×141.°90E,h62km±29km,mb3.5/6, mb1 3.7/8,mb1mx3.4/36,mbtmp3.8/8,ML3.4/2,MS2.8/2, Ms1 2.8/2,ms1mx2.4/38,Error ellipse: s-maj=36.2km s-min=15.2km az=110.0*

ISC 11 08:10:51.5±1.0,39.°48N±0.°03×142.°08E±0.°08,h42km±8km, n28,σ1♀54/36,mb3.9/6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.22**	**296**	P	**Pn**	**08 10 59.6**	**+0.4**
MIYJ				S	**Sn**	**08 11 05.1**	**+0.6**
JTH	**Tanohata**	**0.49**	**340**	P	**Pn**	**08 11 02.3**	**+0.1**
JTH				S	**Sn**	**08 11 09.7**	**0.0**
OFUJ	**Ofunato**	**0.51**	**219**	P	**Pn**	**08 11 02.7**	**+0.3**
OFUJ				S	**Sn**	**08 11 10.6**	**+0.5**
JOM	**Ohasama**	**0.61**	**270**	P	**Pn**	**08 11 04.0**	**+0.2**
JOM				S	**Sn**	**08 11 12.8**	**+0.3**
JKZ	**Kuzumaki**	**0.77**	**311**	P	**Pn**	**08 11 06.2**	**+0.2**
JKZ				S	**Sn**	**08 11 16.3**	**-0.1**
JKMT	**Kesennumamotoy**	**0.82**	**215**	P	**Pn**	**08 11 06.7**	**+0.2**
JKMT				S	**Sn**	**08 11 17.3**	**-0.2**
JMK	**Ichinoseki**	**0.85**	**232**	P	**Pn**	**08 11 07.1**	**+0.1**
JMK				S	**Sn**	**08 11 18.1**	**-0.2**
JANG	**Nango**	**0.99**	**334**	P	**Pn**	**08 11 08.8**	**-0.2**
JANG				S	**Sn**	**08 11 21.1**	**-0.7**
JRG	**Rokugo**	**1.12**	**266**	P	**Pn**	**08 11 10.9**	**+0.2**
JRG				*e*S	**Sn**	**08 11 25.6**	**+0.6**
JIO	**Ouri**	**1.17**	**209**	P	**Pn**	**08 11 11.4**	**0.0**
JIO				S	**Sn**	**08 11 25.8**	**-0.3**
JAH	**Hinai**	**1.32**	**303**	P	**Pn**	**08 11 14.3**	**+0.9**
JAH				*e*S	**Sn**	**08 11 30.7**	**+0.9**
MJAR	**Matsushiro Arr**	**4.24**	**227**	P	**Pn**	**08 11 55.4**	**+1.9**
	0.4nm,0.3s,baz=34,slow=11,SNR=44						
MJAR				LR	LR	08 13 53.2	
	comp=Z,85nm,19.2s,baz=55,slow=44						
MAT	**Matsushiro**	**4.24**	**227**	P	**Pn**	**08 11 57.0**	**+3.5**
MAT				*e*S	**Sn**	**08 12 44.7**	**+3.0**
ASAJ	**Asahikawa**	**4.65**	**5**	P	**Pn**	**08 11 59.8**	**+0.6**
	3.0nm,0.3s,baz=218,slow=8.1,SNR=12						
ASAJ				S	**Sn**	**08 12 48.1**	**-3.7**
	1.7nm,0.3s,baz=256,slow=17,SNR=1.8						
JHJ	**Hachijo jima 2**	**6.61**	**197**	P	**Pn**	**08 12 23.3**	**-2.8**
	9.2nm,0.3s,baz=18,slow=20,SNR=3.5						
JHJ				S	**Sn**	**08 13 36.0**	**-4.3**
	6.9nm,0.3s,baz=73,slow=20,SNR=2.5						
JHJ				LR	LR	08 14 59.5	
	comp=Z,86nm,18.3s,baz=241,slow=38						
MA2	**Magadan**	**20.86**	**12**	P	**P**	**08 15 29.8**	**+0.2**
	3.7nm,0.5s,baz=218,slow=7.0,SNR=5.2						
SEY	**Seymchan**	**24.29**	**11**	P	**P**	**08 16 05.5**	**+0.9**
	2.0nm,0.7s,baz=194,slow=9.3,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**29.04**	**125**	T	T	08 47 20.5	
	baz=318,slow=76,SNR=243						
H11N1	**WAKE ISLAND Hy**	**29.05**	**126**	T	T	08 47 21.0	
	baz=318,slow=76,SNR=257						
H11N3	**WAKE ISLAND Hy**	**29.06**	**125**	T	T	08 47 22.5	
	baz=318,slow=76,SNR=280						
H11S1	**WAKE ISLAND Hy**	**29.84**	**127**	T	T	08 48 23.3	
	baz=320,slow=76,SNR=75						
H11S3	**WAKE ISLAND Hy**	**29.84**	**127**	T	T	08 48 22.0	
	baz=320,slow=76,SNR=106						
H11S2	**WAKE ISLAND Hy**	**29.85**	**127**	T	T	08 48 20.4	
	baz=320,slow=76,SNR=52						
MKAR	**Makanchi Array**	**43.31**	**300**	P	**P**	**08 18 47.8**	**-1.4**
	0.3nm,0.5s,baz=82,slow=10,SNR=3.1						
ILAR	**Eielson Array**	**47.16**	**34**	P	**P**	**08 19 20.2**	**+0.8**
	0.6nm,0.6s,baz=267,slow=6.4,SNR=11						
INK	**Inuvik**	**51.98**	**28**	P	**P**	**08 19 57.1**	**+1.1**
	1.6nm,0.8s,baz=304,slow=3.6,SNR=3.7						
WRA	**Warramunga Arr**	**59.55**	**188**	P	**P**	**08 20 49.4**	**-1.4**
	134nm,0.3s,baz=8.5,slow=6.7,SNR=1.3						
ASAR	**Alice Springs**	**63.28**	**188**	P	**P**	**08 21 15.2**	**-0.7**
	1.1nm,0.8s,baz=5.1,slow=6.4,SNR=9.8						

*ISCJB **11** 08:19:16.2±0.9,40.°07N±0.°04×142.°2E±0.°1,h52km±6km, mb3.4/2,Error ellipse: s-maj=13.1km s-min=6.9km az=176.1*

*JMA **11** 08:19:16.9±0.1,40.°07N×142.°21E,h44km±1km,M3.7*

JMA Felt I J1.

*IDC **11** 08:19:17.9±3.6,40.°50N×141.°07E,h0km,mb3.5/2, mb1 3.5/4,mb1mx3.4/35,mbtmp3.5/4,ML3.0/2,Error ellipse: s-maj=69.1km s-min=32.5km az=111.0*

ISC 11 08:19:15.6±1.4,40.°11N±0.°04×142.°31E±0.°09,h45km±11km, n15,σ1♀45/25,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.38**	**244**	P	**Pn**	**08 19 25.6**	**+0.5**
JTH				S	**Sn**	**08 19 31.6**	**-0.2**
JKEN	**Kujiedanarisaw**	**0.47**	**282**	P	**Pn**	**08 19 26.5**	**+0.4**
JKEN				S	**Sn**	**08 19 33.2**	**-0.4**
MIYJ	**Miyakonagasawa**	**0.65**	**215**	P	**Pn**	**08 19 28.6**	**+0.1**
MIYJ				S	**Sn**	**08 19 36.7**	**-1.0**
JANG	**Nango**	**0.66**	**294**	P	**Pn**	**08 19 29.2**	**+0.6**
JANG				S	**Sn**	**08 19 37.8**	**-0.2**
JKZ	**Kuzumaki**	**0.76**	**261**	P	**Pn**	**08 19 30.5**	**+0.5**
JKZ				S	**Sn**	**08 19 40.0**	**-0.4**
JOM	**Ohasama**	**1.01**	**231**	P	**Pn**	**08 19 33.8**	**+0.5**
JOM				S	**Sn**	**08 19 45.6**	**-0.7**
OFUJ	**Ofunato**	**1.14**	**206**	P	**Pn**	**08 19 35.6**	**+0.5**
OFUJ				S	**Sn**	**08 19 48.8**	**-0.7**
JTM	**Tenmabayashi**	**1.16**	**306**	P	**Pn**	**08 19 36.5**	**+1.1**
JAH	**Hinai**	**1.28**	**274**	P	**Pn**	**08 19 37.9**	**+0.9**
JAH				S	**Sn**	**08 19 52.8**	**-0.3**
JMK	**Ichinoseki**	**1.43**	**216**	P	**Pn**	**08 19 39.5**	**+0.5**
JMK				S	**Sn**	**08 19 56.0**	**-0.6**
JRG	**Rokugo**	**1.47**	**242**	P	**Pn**	**08 19 40.5**	**+0.9**
ASAJ	**Asahikawa**	**4.01**	**3**	Pn	**Pn**	**08 20 17.8**	**+3.3**
	1.6nm,0.3s,baz=247,slow=14,SNR=5.6						
ASAJ				Sn	**Sn**	**08 20 56.0**	**-4.2**
	8.7nm,0.3s,baz=275,slow=12,SNR=4.7						
MJAR	**Matsushiro Arr**	**4.80**	**223**	Pn	**Pn**	**08 20 28.2**	**+2.9**
	0.1nm,0.3s,baz=30,slow=13,SNR=16						
SONM	**Songino Array**	**26.79**	**299**	P	**P**	**08 24 51.1**	**-0.3**
	0.5nm,0.4s,baz=109,slow=8.3,SNR=2.8						
MKAR	**Makanchi Array**	**43.15**	**300**	P	**P**	**08 27 10.8**	**-0.8**
	0.4nm,0.5s,baz=90,slow=9.3,SNR=5.1						

*ISCJB **11** 08:19:37.0±1.5,41.°34N±0.°04×144.°82E±0.°05, h21km±1km,mb4.0/17,MS3.3/2,Error ellipse: s-maj=6.9km s-min=5.9km az=13.1*

*IDC **11** 08:19:36.0±1.3,41.°46N×144.°84E,h0km,mb3.9/11, mb1 4.1/14,mb1mx3.9/35,mbtmp3.9/14,ML3.1/3,MS3.0/5, Ms1 3.0/5,ms1mx2.6/48,Error ellipse: s-maj=36.7km s-min=18.3km az=163.0*

*JMA **11** 08:19:39.7±0.2,41.°46N×144.°87E,h45km±1km,M4.2*

*NEIC **11** 08:19:40.0±1.0,41.°33N×144.°82E,h30km±7km,mb4.2/8, Error ellipse: s-maj=20.6km s-min=14.8km az=186.0*

ISC 11 08:19:37.3±3.9,41.°42N±0.°06×144.°85E±0.°06,h10km±25km, n50,σ0♀80/54,mb4.1/17,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.40**	**296**	*e*Pn	**Pn**	**08 20 03.3**	**+0.5**
ERM				*e*Sn	**Sn**	**08 20 21.0**	**-0.3**
JEM	**Erimo**	**1.40**	**296**	P	**Pn**	**08 20 03.4**	**+0.6**
JEM				*e*S	**Sn**	**08 20 20.8**	**-0.5**
JTHR	**Tokachihiroo**	**1.45**	**307**	P	**Pn**	**08 20 03.8**	**+0.3**
JTHR				*e*S	**Sn**	**08 20 21.2**	**-1.3**
JAK	**Akkeshi**	**1.58**	**356**	P	**Pn**	**08 20 05.0**	**-0.3**
JAK				*e*S	**Sn**	**08 20 24.1**	**-1.6**
JCH	**Churui**	**1.63**	**318**	P	**Pn**	**08 20 06.2**	**+0.2**
JCH				*e*S	**Sn**	**08 20 25.4**	**-1.5**
JOB	**Onbets**	**1.66**	**333**	P	**Pn**	**08 20 07.0**	**+0.6**
JOB				*e*S	**Sn**	**08 20 27.4**	**-0.4**
JKHN	**Kushirohamanak**	**1.67**	**8**	P	**Pn**	**08 20 06.5**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.79**	**299**	P	**Pn**	**08 20 09.3**	**+1.2**
YSS	**Yuzh-Sakhalins**	**5.73**	**345**	*e*Pn	**Pn**	**08 21 04.0**	**+1.7**
MAJO	**Matsushiro**	**7.11**	**229**	*e*Pn	**Pn**	**08 21 21.2**	**-0.1**
MJAR	**Matsushiro Arr**	**7.11**	**229**	Pn	**Pn**	**08 21 21.0**	**-0.3**
	0.2nm,0.3s,baz=25,slow=14,SNR=5.3						
MJAR				Sn	**Sn**	**08 22 40.0**	**-2.1**
	0.1nm,0.3s,baz=76,slow=35,SNR=2.6						
INU	**Inuyama**	**8.63**	**222**	*e*Pn	**Pn**	**08 21 42.9**	**+0.7**
JHJ2	**Mitsune**	**9.21**	**207**	*e*Pn	**Pn**	**08 21 49.6**	**-0.6**
MDJ	**Mudanjiang**	**11.62**	**291**	*e*Pn	**Pn**	**08 22 22.8**	**-0.2**
KLR	**Kul'dur**	**12.07**	**315**	LR	LR	08 26 52.9	
	comp=Z,28nm,19.9s,baz=173,slow=36						
KSRS	**Korea Array**	**13.67**	**259**	Pn	**Pn**	**08 22 51.1**	**0.0**
	0.4nm,0.3s,baz=69,slow=14,SNR=4.6						
KSRS				LR	LR	08 28 06.2	
	comp=Z,61nm,19.1s,baz=95,slow=37						
KS15	**Wonju Array Si**	**13.70**	**259**	*e*Pn	**Pn**	**08 22 51.1**	**-0.5**
PETK	**Petropavlovsk-**	**14.56**	**32**	Pn	**Pn**	**08 23 01.7**	**-1.4**
	0.2nm,0.3s,baz=171,slow=13,SNR=3.6						
PETK				LR	LR	08 28 23.1	
	comp=Z,55nm,20.4s,baz=219,slow=36						
PEA1	**Petropavlovsk-**	**14.56**	**32**	*e*Pn	**Pn**	**08 23 01.8**	**-1.5**
SEY	**Seymchan**	**22.00**	**9**	P	**P**	**08 24 30.9**	**-0.4**
	2.3nm,0.6s,baz=189,slow=9.4,SNR=6.8						
SONA0	**Songino Array**	**27.89**	**296**	*e*P	**P**	**08 25 27.9**	**+0.6**
SONM	**Songino Array**	**27.89**	**296**	P	**P**	**08 25 27.9**	**+0.6**
	1.9nm,0.8s,baz=90,slow=7.8,SNR=7.3						
NRIK	**Noril'sk**	**40.50**	**333**	LR	LR	08 46 08.7	
	comp=Z,49nm,18.5s,baz=330,slow=39						
ZALV	**Zalesovo Beam**	**41.09**	**309**	LR	LR	08 45 44.8	
	comp=Z,31nm,19.1s,baz=65,slow=38						
MK32	**Makanchi Array**	**44.19**	**299**	*e*P	**P**	**08 27 46.2**	**-0.1**
MKAR	**Makanchi Array**	**44.19**	**299**	P	**P**	**08 27 46.2**	**-0.1**
	0.4nm,0.7s,baz=80,slow=8.9,SNR=2.3						
ILAR	**Eielson Array**	**44.37**	**35**	P	**P**	**08 27 47.8**	**+0.4**
	0.5nm,0.6s,baz=275,slow=8.0,SNR=8.9						
ILB	**Eielson Array**	**44.37**	**35**	*e*P	**P**	**08 27 47.8**	**+0.4**
CRQM	**Cirque**	**46.51**	**40**	*e*P	**P**	**08 28 06.9**	**+2.2**
EGAK	**Eagle**	**46.81**	**34**	*e*P	**P**	**08 28 07.4**	**+0.7**
	2.1nm,1.1s						
HYT	**Haines Junctio**	**49.20**	**39**	*e*P	**P**	**08 28 26.7**	**+1.3**
	9.3nm,0.9s						
INK	**Inuvik**	**49.26**	**29**	P	**P**	**08 28 25.4**	**-0.2**
	0.8nm,0.3s,baz=266,slow=5.5,SNR=6.8						
INK	**Inuvik**	**49.26**	**29**	*e*P	**P**	**08 28 26.1**	**+0.5**
	1.9nm,0.6s						
YKA	**Yellowknife Ar**	**58.68**	**32**	P	**P**	**08 29 34.4**	**0.0**
	0.7nm,0.8s,baz=300,slow=5.4,SNR=3.3						
YKB5	**Yellowknife Ar**	**58.68**	**32**	*e*P	**P**	**08 29 34.4**	**0.0**
FIA0	**FINESS Array S**	**66.17**	**333**	*e*P	**P**	**08 30 24.6**	**+0.1**
FINES	**FINESS Array B**	**66.17**	**333**	P	**P**	**08 30 24.6**	**+0.1**
	3.5nm,0.5s,baz=43,slow=6.8,SNR=18						
BOZ	**Bozeman (W)**	**69.76**	**47**	*e*P	**P**	**08 30 48.0**	**+0.3**
	1.8nm,0.7s						
NV01	**Mina Array Sit**	**70.27**	**56**	*e*P	**P**	**08 30 51.5**	**+0.6**
NVAR	**Mina Array Bea**	**70.27**	**56**	P	**P**	**08 30 51.5**	**+0.5**
	0.5nm,0.6s,baz=284,slow=7.2,SNR=4.9						
NB2	**NORSAR Subarra**	**71.14**	**338**	P	**P**	**08 30 55.4**	**-0.3**
	comp=Z,2.3nm,1.0s,baz=34,slow=6.5						
NB200	**NORSAR Array S**	**71.14**	**338**	*e*P	**P**	**08 30 55.8**	**+0.1**
NOA	**NORSAR Array B**	**71.14**	**338**	P	**P**	**08 30 55.8**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=36,slow=6.0,SNR=4.7						
BW06	**Boulder Array**	**72.72**	**48**	*e*P	**P**	**08 31 05.9**	**+0.2**
	comp=Z,0.7nm,0.6s						
PD31	**Pinedale Array**	**72.72**	**48**	*e*P	**P**	**08 31 05.9**	**+0.2**
PDAR	**Pinedale Array**	**72.72**	**48**	P	**P**	**08 31 05.9**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=270,slow=1.7,SNR=9.1						
SRU	**San Rafael Swe**	**74.55**	**51**	*e*P	**P**	**08 31 16.9**	**+0.5**
	comp=Z,2.3nm,0.9s						
ECSD	**EROS Data Cent**	**78.83**	**40**	*e*P	**P**	**08 31 40.2**	**-0.2**
	comp=Z,3.3nm,1.0s						
LTX	**Lajitas**	**85.37**	**55**	*e*P	**P**	**08 32 15.3**	**+0.3**
TXAR	**Lajitas Array**	**85.37**	**55**	P	**P**	**08 32 15.3**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=296,slow=3.6,SNR=22						

*NNC **11** 08:35:55.9±1.3,54.°17N×87.°08E,h0km,mb3.3,mpv3.1, Error ellipse: s-maj=10.8km s-min=6.0km az=20.0, Suspected Mining explosion.*

*IDC **11** 08:35:57.8±2.5,54.°16N×87.°06E,h0km,mb1 3.2/3, mb1mx3.0/41,mbtmp3.2/3,ML2.8/3,Error ellipse: s-maj=22.2km s-min=14.2km az=70.0*

ISC 11 08:35:56.6±3.5,54.°2N±0.°2×87.°1E±0.°1,h0km,n10, σ1♀20/16,8C-6D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.34**	**262**	*i*		08 44 30.0	
	baz=78,slow=336,SNR=4.2						
ZAA0	**Zalesovo Array**	**1.34**	**262**	⇓P	**Pg**	**08 36 20.8**	**-1.5**
	0.9nm,0.7s						
ZAA0				⇑S	**Sg**	**08 36 39.6**	**-0.1**
	1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**1.34**	**262**	Pg	**Pg**	**08 36 21.4**	**-0.9**
	1.7nm,0.3s,baz=77,slow=15,SNR=13						
ZALV				Lg	Lg	08 36 40.8	
	2.3nm,0.3s,baz=80,slow=28,SNR=8.3						
KURK	**Kurchatov**	**6.21**	**240**	⇓Pn	**Pn**	**08 37 29.0**	**-0.5**
	2.9nm,0.8s						
KURK				⇓Sn	**Sn**	**08 38 42.2**	**+1.0**
	0.9nm,0.7s						
KURK				⇓Lg	Lg	08 39 13.4	
	2.0nm,0.6s						
KURBB	**Kurchatov Arra**	**6.32**	**239**	Pn	**Pn**	**08 37 32.7**	**+1.8**
	0.1nm,0.3s,baz=56,slow=14,SNR=11						
KURBB				Sn	**Sn**	**08 38 43.7**	**0.0**
	0.0nm,0.3s,baz=38,slow=19,SNR=2.6						
KURBB				Lg	Lg	08 39 16.3	
	0.0nm,0.3s,baz=58,slow=33,SNR=3.3						
KURBB	**Kurchatov Arra**	**6.32**	**239**	⇑Pn	**Pn**	**08 37 32.2**	**+1.2**
	4.1nm,0.9s						
KURBB				⇑Sn	**Sn**	**08 38 44.7**	**+1.0**
	2.8nm,0.5s						
KURBB				⇑Lg	Lg	08 39 15.3	
	2.9nm,0.7s						
MK31	**Makanchi Array**	**7.98**	**204**	⇑Pn	**Pn**	**08 37 52.5**	**-1.4**
	0.4nm,0.5s,baz=29,slow=14,SNR=6.2						
MK31				⇓Sn	**Sn**	**08 39 23.9**	**-0.9**
	0.7nm,0.7s,baz=30,slow=26,SNR=4.3						
MK31				⇑Lg	Lg	08 40 13.8	
	2.6nm,0.8s,baz=29,slow=27,SNR=3.5						
MKAR	**Makanchi Array**	**7.98**	**204**	Pn	**Pn**	**08 37 55.9**	**+2.0**
	0.2nm,0.3s,baz=26,slow=13,SNR=7.0						
MKAR				Sn	**Sn**	**08 39 25.1**	**+0.3**
	0.2nm,0.3s,baz=22,slow=27,SNR=6.5						
MKAR				Lg	Lg	08 40 13.3	
	0.1nm,0.3s,baz=33,slow=30,SNR=2.4						
MAKZ	**Makanchi**	**8.05**	**206**	⇓Pn	**Pn**	**08 37 54.9**	**+0.2**
	2.2nm,0.6s						
MAKZ				⇑Sn	**Sn**	**08 39 27.0**	**+0.6**
	0.9nm,0.6s						
MAKZ				⇑Lg	Lg	08 40 13.3	
	2.3nm,0.9s						
BVAR	**Borovoye Array**	**9.98**	**270**	Pn	**Pn**	**08 38 22.4**	**+1.2**
	0.1nm,0.3s,baz=71,slow=14,SNR=3.1						

*DRS **11** 08:48:56.0±0.0,43.°09N×47.°24E,h12km,ML2.8/4*

*NORS **11** 08:48:56.2±0.0,42.°98N×47.°14E,h8km,MPVA3.6*

ISC 11 08:48:55.7±1.2,43.°14N±0.°05×47.°23E±0.°03,h15km±8km, n20,σ1♀90/36,4C-5D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.32**	**248**	*i* Pg	**Pg**	**08 49 02.3**	**0.0**
DBC				*e*Sg	**Sg**	**08 49 06.8**	**-0.1**
BUJR	**Buynaksk**	**0.33**	**196**	*i* Pg	**Pg**	**08 49 02.2**	**-0.4**
BUJR				*e*Sg	**Sg**	**08 49 06.9**	**-0.3**
KRNR	**Karanay**	**0.40**	**217**	*i* Pg	**Pg**	**08 49 03.0**	**-0.7**
	78nm,0.2s						
KRNR				*e*Sg	**Sg**	**08 49 07.5**	**-1.7**
	322nm,0.3s						
DLMR	**Dylym**	**0.45**	**261**	*e*Pg	**Pb**	**08 49 05.5**	**+0.3**
	80nm,0.2s						
DLMR				*e*Sg	**Sb**	**08 49 12.5**	**+0.8**
	347nm,0.3s						
UNCR	**Uncukul**	**0.54**	**217**	*e*Pg	**Pg**	**08 49 05.3**	**-1.0**
	107nm,0.2s						
UNCR				*e*Sg	**Sg**	**08 49 10.0**	**-3.4**
	628nm,0.6s						
ARKR	**Arakani**	**0.57**	**198**	*e*Pg	**Pg**	**08 49 06.2**	**-0.7**
	70nm,0.2s						
ARKR				*e*Sg	**Sg**	**08 49 13.5**	**-0.9**
	202nm,0.3s						
XNZR	**Khunzakh**	**0.71**	**213**	*e*Pg	**Pg**	**08 49 08.8**	**-0.8**
XNZR				*e*Sg	**Sg**	**08 49 18.0**	**-1.1**
SGKR	**Sergokala**	**0.75**	**155**	*e*Pg	**Pg**	**08 49 10.0**	**-0.3**
SGKR				*e*Sg	**Sn**	**08 49 22.0**	**-0.8**
	354nm,0.3s						
GNBR	**Gunib**	**0.78**	**195**	*e*Pg	**Pg**	**08 49 10.4**	**-0.5**
	88nm,0.9s						
GNBR			

ARCES	**ARCESS Array B**	**5.05 340**	Pn		**Pn**	**09 02 35.9**	**0.0**
	1.1nm,0.3s,baz=156,slow=14,SNR=24						
ARCES			Sn		**Sn**	**09 03 35.5**	**+0.7**
	0.6nm,0.3s,baz=155,slow=26,SNR=5.2						
ARCES			Lg		Lg	09 03 57.1	
	1.2nm,0.3s,baz=158,slow=29,SNR=8.8						
HFS	**Hagfors**	**9.10 246**	Pn		**Pn**	**09 03 30.5**	**-0.8**
	0.2nm,0.3s,baz=58,slow=14,SNR=3.1						
NOA	**NORSAR Array B**	**9.57 255**	Pn		**Pn**	**09 03 37.8**	**0.0**
	0.0nm,0.3s,baz=61,slow=12,SNR=2.3						

*ISK **11** 09:09:45.8, 40°.24N×34°.98E, h8km, ML1.9/2*
*ISCJB **11** 09:09:48.0±0.7, 40°.13N±0°.06×34°.90E±0°.06, h8km±9km, Error ellipse: s-maj=11.0km s-min=6.8km az=28.6*
*DDA **11** 09:09:47.2, 40°.12N×34°.87E, h7km±2km, ML2.5*
ISC 11 09:09:47.9±1.1, 40°.15N±0°.06×34°.89E±0°.04, h12km±11km, n8, σ1§06/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COAL	**Corum-Alaca**	**0.13**	**34**	*i* P	**Pg**	**09 09 51.4**	**0.0**
COAL				*i* S	**Sg**	**09 09 53.8**	**+0.1**
COAL				IAML_P			
	comp=Z,2μm,0.2s						
CORM	**Corum**	**0.20**	**280**	PG	**Pg**	**09 09 51.7**	**-0.7**
CORM				SG	**Sg**	**09 09 56.2**	**+0.7**
YOZ	**Yozgat**	**0.60**	**147**	PG	**Pg**	**09 09 58.9**	**-0.8**
YOZ				SG	**Sg**	**09 10 08.4**	**+0.7**
CDAG	**Cicekdag**	**0.66**	**218**	*i* P	**Pg**	**09 10 00.1**	**-0.6**
DELI	**KIRIKKALE**	**0.76**	**259**	*i* P	**Pb**	**09 10 02.4**	**-0.7**
DELI				IAML_P			
	comp=Z,542nm,0.1s						
SIRC	**Yozgat**	**0.83**	**166**	*i* P	**Pb**	**09 10 03.8**	**-0.6**
KIRS	**Kırehir-Merke**	**1.26**	**217**	*i* P	**Pn**	**09 10 10.7**	**-0.7**
KIRS				IAML_P			
	comp=Z,352nm,0.2s						
YAYX	**Yaylak**	**1.47**	**215**	PN	**Pn**	**09 10 14.9**	**+0.6**
YAYX				SN	**Sb**	**09 10 36.0**	**+2.2**

WEL 11 09:15:28.4±1.4, 35°.S±23°.×17°.9E±3°.0, h189km±46km, M3.8/4, ML3.7/1, MLv3.8/4, Error ellipse: s-maj=0.0km s-min=0.0km az=116.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**3.15**	**197**	P	Pn	09 16 20.4	+1.2
HAZ				S	Sn	09 17 00.6	+1.6
PUZ	**Puketiti**	**3.36**	**190**	P	Pn	09 16 21.4	-0.4
PUZ				S	Sn	09 17 02.3	-1.5
RUGZ	**Raukumara Rang**	**3.37**	**198**	P	Pn	09 16 22.1	+0.1
RUGZ				S	Sn	09 17 04.3	+0.1
WHRZ	**Whale Island**	**3.49**	**207**	P	Pn	09 16 21.7	-1.7
TWGZ	**Tauwhareparae**	**3.51**	**193**	P	Pn	09 16 23.7	0.0
TWGZ				S	Sn	09 17 07.6	+0.5
MWZ	**Matawai**	**3.76**	**198**	P	Pn	09 16 26.6	-0.1
MWZ				S	Sn	09 17 12.9	+0.3
TKGZ	**Te Karaka**	**3.79**	**194**	P	Pn	09 16 26.4	-0.7
TKGZ				S	Sn	09 17 14.5	+1.3
URZ	**Urewera**	**3.81**	**203**	P	Pn	09 16 27.5	+0.2
URZ				S	Sn	09 17 13.8	+0.2
RIGZ	**Rimuhau**	**4.06**	**194**	P	Pn	09 16 31.3	+0.7
RIGZ				S	Sn	09 17 19.1	-0.4
MUGZ	**Murupara**	**4.12**	**205**	P	Pn	09 16 30.9	-0.3
RTZ	**Ruatahuna**	**4.17**	**202**	P	Pn	09 16 30.7	-1.3
SNGZ	**Shannon Statio**	**4.23**	**198**	P	Pn	09 16 34.3	+1.7
SNGZ				S	Sn	09 17 23.2	0.0
BKZ	**Black Stump Fm**	**4.83**	**204**	P	Pn	09 16 40.8	+0.5

*ISCJB **11** 09:23:30.6±0.4, 13°.66N±0°.04×120°.64E±0°.06, h109km±4km, mb3.8/8, Error ellipse: s-maj=9.7km s-min=6.3km az=157.9*
*IDC **11** 09:23:30.8±0.7, 13°.66N×120°.93E, h106km±7km, mb3.5/8, mb1 3.6/8, mb1mx3.3/58, mbtmp3.8/8, MS3.4/4, Ms1 3.4/4, ms1mx2.8/28, Error ellipse: s-maj=32.9km s-min=14.6km az=64.0*
*MAN **11** 09:23:31.2, 13°.69N×120°.59E, h91km, mb4.3, ML3.2, MS2.9*
ISC 11 09:23:31.4±0.8, 13°.67N±0°.04×120°.66E±0°.06, h104km±6km, n22, σ1§41/28, mb3.9/8, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.33**	**121**	*i* P	**Pn**	**09 23 46.3**	**-0.4**
PGP				*i* S	**Sn**	**09 23 57.0**	**-1.1**
LUBP	**Lubang**	**0.41**	**279**	*e*P	**Pn**	**09 23 46.8**	**-0.3**
LUBP				*e*S	**Sn**	**09 23 57.7**	**-1.1**
TGY	**Tagaytay City**	**0.51**	**32**	P	**Pn**	**09 23 48.2**	**+0.4**
	711nm,0.3s,baz=230,slow=2.9,SNR=58						
TGY				S	**Sn**	**09 24 00.5**	**+0.5**
	1μm,0.3s,baz=197,slow=19,SNR=26						
TGY	**Tagaytay City**	**0.51**	**32**	⇓*e*P	**Pn**	**09 23 48.0**	**+0.2**
TGY				*e*S	**Sn**	**09 24 02.8**	**+2.7**
BOAC	**Boac**	**1.17**	**100**	*e*P	**Pn**	**09 23 54.6**	**+0.6**
BOAC				*e*S	**Sn**	**09 24 10.6**	**-0.4**
SJMP	**San Jose**	**1.28**	**160**	*e*P	**Pn**	**09 23 56.0**	**+0.7**
SJMP				*e*S	**Sn**	**09 24 13.6**	**+0.2**
POLP	**Polilio Island**	**1.62**	**49**	*e*P	**Pn**	**09 24 00.7**	**+1.3**
POLP				*e*S	**Sn**	**09 24 16.4**	**-4.3**
BUSP	**Coron**	**1.72**	**195**	*e*P	**Pn**	**09 24 00.4**	**-0.2**
BUSP				*e*S	**Sn**	**09 24 22.1**	**-0.7**
OTRP	**Odiongan**	**1.85**	**134**	*e*P	**Pn**	**09 24 02.6**	**+0.3**
OTRP				*e*S	**Sn**	**09 24 27.0**	**+1.0**
SCZP	**Santa Cruz**	**2.22**	**341**	*e*P	**Pn**	**09 24 06.7**	**-0.3**
SCZP				*e*S	**Sn**	**09 24 33.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**21.40**	**286**	P	**P**	**09 28 12.9**	**+1.9**
	1.8nm,0.7s,baz=100,slow=8.5,SNR=11						
JNU	**Nakatsue**	**21.49**	**24**	LR	LR	09 35 12.5	
	comp=Z,108nm,21.5s,baz=315,slow=33						
PSI	**Prapat**	**24.04**	**245**	P	**P**	**09 28 38.5**	**+1.3**
	10nm,0.8s,baz=117,slow=6.8,SNR=3.8						
KSRS	**Korea Array**	**24.56**	**14**	LR	LR	09 38 25.9	
	comp=Z,53nm,18.5s,baz=157,slow=37						
WRA	**Warramunga Arr**	**36.01**	**158**	P	**P**	**09 30 20.7**	**-2.0**
	0.6nm,0.4s,baz=343,slow=11,SNR=19						
SONM	**Songino Array**	**36.08**	**344**	P	**P**	**09 30 23.2**	**+0.1**
	0.5nm,0.3s,baz=157,slow=7.7,SNR=2.6						
ASAR	**Alice Springs**	**39.30**	**161**	P	**P**	**09 30 48.8**	**-1.7**
	0.3nm,0.3s,baz=337,slow=7.3,SNR=13						
MKAR	**Makanchi Array**	**46.03**	**324**	P	**P**	**09 31 43.7**	**-0.9**
	0.2nm,0.4s,baz=128,slow=9.5,SNR=3.7						
KURBB	**Kurchatov Arra**	**50.19**	**326**	P	**P**	**09 32 17.0**	**+0.5**
	1.0nm,0.5s,baz=128,slow=7.6,SNR=5.0						
BVAR	**Borovoye Array**	**55.78**	**326**	P	**P**	**09 32 58.3**	**+0.8**
	0.6nm,0.5s,baz=115,slow=9.7,SNR=3.2						
TIXI	**Tiksi**	**58.16**	**3**	LR	LR	09 58 49.6	
	comp=Z,24nm,21.8s,baz=198,slow=36						
GEYT	**Alibeck**	**60.12**	**306**	LR	LR	10 00 51.1	
	comp=Z,53nm,20.1s,baz=130,slow=37						

*NNC **11** 09:26:13.4±2.3, 53°.52N×87°.84E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=18.4km s-min=9.2km az=63.0, Suspected Mining explosion.*
*IDC **11** 09:26:15.4±2.5, 53°.48N×87°.70E, h0km, mb1 3.4/3, mb1mx3.1/60, mbtmp3.4/3, ML3.2/3, Error ellipse: s-maj=22.2km s-min=13.2km az=65.0*
KRAR 11 09:26:09.8±0.1, 53°.51N×87°.63E, M2.4, 10C-4D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**286**	*i*		09 37 23.1	
	baz=99,slow=332,SNR=4.1						
ZAA0	**Zalesovo Array**	**1.73**	**286**	⇓Pn	Pg	09 26 45.6	+2.8
	1.6nm,0.5s						
ZAA0				⇑Sn	Sg	09 27 11.3	+6.0
	3.7nm,0.4s						
ZALV	**Zalesovo Beam**	**1.73**	**286**	Pg	Pg	09 26 46.1	+3.3
	7.9nm,0.3s,baz=102,slow=15,SNR=40						
ZALV				Lg	Lg	09 27 11.5	
	11nm,0.3s,baz=103,slow=25,SNR=16						
KURK	**Kurchatov**	**6.21**	**247**	⇑Pn	Pn	09 27 49.3	+6.6
	15nm,1.4s						
KURK				⇑Sn	Sn	09 29 02.4	+8.0
	1.9nm,0.8s						
KURK				⇑Lg	Lg	09 29 31.7	
	8.8nm,0.9s						
KURBB	**Kurchatov Arra**	**6.31**	**246**	Pn	Pn	09 27 50.6	+6.5
	0.3nm,0.3s,baz=59,slow=13,SNR=7.8						
KURBB				Sn	Sn	09 29 02.1	+5.3
	0.1nm,0.3s,baz=52,slow=20,SNR=2.2						
KURBB				Lg	Lg	09 29 35.6	
	0.1nm,0.3s,baz=63,slow=32,SNR=7.6						
KURBB	**Kurchatov Arra**	**6.31**	**246**	⇓Pn	Pn	09 27 49.6	+5.6
	3.7nm,0.5s						
KURBB				⇑Sn	Sn	09 29 06.5	+10
	3.7nm,0.5s						
KURBB				⇑Lg	Lg	09 29 33.9	
	9.2nm,0.6s						
MK31	**Makanchi Array**	**7.55**	**209**	⇑Pn	Pn	09 28 07.7	+6.7
	0.9nm,0.5s,baz=28,slow=12,SNR=34						
MK31				⇑Sn	Sn	09 29 33.4	+6.2
	1.9nm,0.8s,baz=19,slow=22,SNR=5.5						
MK31				⇑Lg	Lg	09 30 13.2	
	1.8nm,0.6s,baz=38,slow=31,SNR=3.5						
MKAR	**Makanchi Array**	**7.55**	**209**	Pn	Pn	09 28 07.8	+6.8
	0.9nm,0.3s,baz=30,slow=13,SNR=39						
MKAR				Sn	Sn	09 29 31.8	+4.6
	0.3nm,0.3s,baz=32,slow=28,SNR=7.4						
MKAR				Lg	Lg	09 30 13.8	
	0.2nm,0.3s,baz=35,slow=28,SNR=7.7						
MAKZ	**Makanchi**	**7.63**	**211**	⇓Pn	Pn	09 28 07.3	+5.2
	2.7nm,0.6s						
MAKZ				⇓Sn	Sn	09 29 33.6	+4.4
	3.9nm,0.9s						
MAKZ				⇑Lg	Lg	09 30 15.3	
	3.1nm,0.8s						
BVAR	**Borovoye Array**	**10.34**	**274**	Pn	Pn	09 28 45.4	+6.1
	0.2nm,0.3s,baz=84,slow=15,SNR=3.1						

*KRAR **11** 09:35:40.7±0.1, 54°.09N×87°.24E, M1.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*IDC **11** 09:36:20.4±3.1, 53°.52N×87°.66E, h0km, mb1 3.2/2, mb1mx3.0/43, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=28.2km s-min=16.6km az=51.0*
NNC 11 09:36:20.7±3.1, 53°.38N×87°.71E, h3km±27km, mb3.3, mpv3.0, 6C-4D, Error ellipse: s-maj=29.2km s-min=16.1km az=86.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**290**	*i*		09 47 40.9	
	baz=101,slow=338,SNR=1.3						
ZAA0	**Zalesovo Array**	**1.81**	**290**	⇑Pn	Pn	09 36 52.1	-0.7
	0.7nm,0.6s						
ZAA0				⇓Sn	Sb	09 37 17.4	-0.1
	4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**1.81**	**290**	Pg	Pn	09 36 51.5	-1.3
	2.1nm,0.3s,baz=104,slow=14,SNR=5.8						
ZALV				Lg	Lg	09 37 15.7	
	2.4nm,0.3s,baz=104,slow=24,SNR=4.4						
KURK	**Kurchatov**	**6.21**	**248**	⇑Pn	Pn	09 37 53.6	+0.5
	1.5nm,0.6s						
KURK				⇑Sn	Sn	09 39 04.7	+0.2
	4.0nm,0.8s						
KURK				⇑Lg	Lg	09 39 39.0	
	4.6nm,0.9s						
KURBB	**Kurchatov Arra**	**6.30**	**248**	Pn	Pn	09 37 56.4	+2.0
	0.1nm,0.3s,baz=62,slow=14,SNR=6.1						
KURBB				Sn	Sn	09 39 06.3	-0.6
	0.0nm,0.3s,baz=58,slow=35,SNR=6.3						
KURBB	**Kurchatov Arra**	**6.30**	**248**	⇓Pn	Pn	09 37 56.0	+1.5
	1.4nm,0.3s						
KURBB				⇑Sn	Sn	09 39 06.7	-0.2
	8.7nm,1.1s						
KURBB				⇓Lg	Lg	09 39 38.9	
	7.7nm,0.8s						
MK31	**Makanchi Array**	**7.45**	**210**	⇓Pn	Pn	09 38 11.6	+1.4
	1.4nm,0.9s,baz=33,slow=11,SNR=9.4						
MK31				⇑Lg	Lg	09 40 20.9	
	8.7nm,1.2s,baz=29,slow=24,SNR=3.9						
MKAR	**Makanchi Array**	**7.45**	**210**	Pn	Pn	09 38 12.6	+2.3
	0.2nm,0.3s,baz=25,slow=13,SNR=7.8						

*ISCJB **11** 09:37:04.9±0.2, 21°.75S±0°.02×68°.17W±0°.02, h119km±2km, mb5.2/184, Error ellipse: s-maj=4.1km s-min=2.8km az=140.4*
*BJI **11** 09:37:04.9±0.0, 21°.68S×68°.13W, h101km, mB5.2/13*
*VAO **11** 09:37:06.8±0.3, 21°.88S×68°.06W, h110km, mb5.7*
*MOS **11** 09:37:06.3±1.3, 21°.60S×68°.11W, h116km, mb5.2/20, Error ellipse: s-maj=12.4km s-min=7.0km az=111.3*
*NEIC **11** 09:37:07.0±0.0, 21°.89S×68°.50W, h133km, mb5.1/377, ML5.2(GUC), After GUC.*
NEIC Felt [IV] at Calama and Sierra Gorda; [III] at Oficina Maria Elena, Pica, Pozo Almonte and Tocopilla; [II] at Alto Hospicio, Camina, Huara, Iquique and San Pedro de Atacama.
*GUC **11** 09:37:07.6±0.7, 21°.87S×68°.43W, h136km±4km, ML5.2*
*IDC **11** 09:37:07.6±0.4, 21°.78S×68°.15W, h122km±2km, mb4.8/26, mb1 4.9/31, mb1mx4.8/39, mbtmp5.2/31, MS4.1/14, Ms1 4.0/14, ms1mx3.9/23, Error ellipse: s-maj=10.5km s-min=7.6km az=76.0*
*GCMT **11** 09:37:13.0±0.2, 22°.01S±0°.01×68°.42W±0°.01, h139km±1km, MW5.4/108, Moment Tensor Solution. s81,c114; s108,c195; Duration: 1§2 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.63±.02; $M_{\theta\theta}$=0.28±.03; $M_{\phi\phi}$=0.90±.03; $M_{r\theta}$=0.55±.01; $M_{\theta\phi}$=0.48±.02; $M_{\phi r}$=-0.82±.02; Best double couple: M_0=1.35800×10^{17} NP1:ϕ_s=344.00000°, δ=73.00000°, λ=-125.00000°. NP2:ϕ_s=232.00000°, δ=38.00000°, λ=-28.00000°. Principal axes: T 1.2990, Plg20.0000°, Azm100.0000°; N 0.1180, Plg33.0000°, Azm356.0000°; P -1.4180, Plg49.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 11 09:37:06.0±0.3, 21°.85S±0°.03×68°.19W±0°.04, h116km±2km, h116km:pP-P, n1054, σ1§37/1177, mb5.2/184, 19C-7D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.98**	**273**	*e*P	**Pn**	**09 37 29.2**	**+1.5**
PB09				*e*S	**Sn**	**09 37 45.0**	**+1.0**
PB09				IAML		09 37 48.6	
	comp=N,37μm,0.4s						
LVC	**Limon Verde**	**1.01**	**221**	P	**Pn**	**09 37 29.8**	**+1.6**
	comp=N,3μm,0.3s,baz=15,slow=7.5						
LVC				S	**Sn**	**09 37 45.5**	**+0.6**
	comp=N,3μm,0.3s,baz=287,slow=19,SNR=39						
LVC				LR	LR	09 38 06.9	
	comp=N,5μm,19.9s,baz=5.5,slow=54						
LVC	**Limon Verde**	**1.01**	**221**	*e*Pn	**Pn**	**09 37 29.6**	**+1.4**
LVC				*e*Sn	**Sn**	**09 37 46.8**	**+1.9**
LVC	**Limon Verde**	**1.01**	**221**	*e*P	**Pn**	**09 37 29.6**	**+1.4**
LVC				*e*		09 37 46.8	
LVC	**Limon Verde**	**1.01**	**221**	⇑*i*P	**Pn**	**09 37 29.6**	**+1.4**
LVC				*i* S	**Sn**	**09 37 46.8**	**+1.9**
LVC	**Limon Verde**	**1.01**	**221**	*e*P	**Pn**	**09 37 29.7**	**+1.6**
PB01	**IPOC Station P**	**1.45**	**303**	*e*Pn	**Pn**	**09 37 33.5**	**+0.8**
PB01				*e*Sn	**Sn**	**09 37 52.4**	**-0.7**
PB01	**IPOC Station P**	**1.45**	**303**	⇑*i*P	**Pn**	**09 37 33.6**	**+0.8**
PB01				*i* S	**Sn**	**09 37 53.5**	**+0.4**
PB01				IAML		09 37 55.7	
	comp=N,43μm,0.3s						
PB03	**IPOC Station P**	**1.46**	**262**	*e*P	**Pn**	**09 37 33.3**	**+0.3**
PB03				*e*S	**Sn**	**09 37 52.5**	**-0.9**
PB03				IAML		09 37 54.1	
	comp=E,40μm,0.4s						
PB06	**IPOC Station P**	**1.54**	**236**	⇑*i*P	**Pn**	**09 37 34.5**	**+0.7**
PB06				*e*S	**Sn**	**09 37 54.8**	**-0.1**
PB06				IAML		09 37 56.7	
	comp=E,45μm,0.4s						
PB07	**IPOC Station P**	**1.58**	**274**	*e*P	**Pn**	**09 37 34.8**	**+0.4**
PB07				*e*S	**Sn**	**09 37 55.0**	**-0.9**
PB07				IAML		09 37 57.0	
	comp=N,42μm,0.4s						
PB02	**IPOC Station P**	**1.67**	**288**	*e*P	**Pn**	**09 37 35.7**	**+0.3**
PB02				*e*S	**Sn**	**09 37 57.0**	**-0.7**
PB15	**IPOC Station P**	**1.79**	**221**	*e*P	**Pn**	**09 37 37.5**	**+0.6**
PB15				*e*S	**Sn**	**09 38 01.3**	**+0.8**
PB04	**IPOC Station P**	**1.88**	**255**	*e*Pn	**Pn**	**09 37 37.8**	**-0.2**
PB04				*e*Sn	**Sn**	**09 38 01.2**	**-1.1**
PB04	**IPOC Station P**	**1.88**	**255**	*e*P	**Pn**	**09 37 37.4**	**-0.6**
PB04				*i* S	**Sn**	**09 38 00.7**	**-1.6**
PB04				IAML		09 38 02.1	
	comp=N,31μm,0.3s						
PB08	**IPOC Station P**	**1.93**	**332**	⇑*i*P	**Pn**	**09 37 41.1**	**+2.3**
PB08				*i* S	**Sn**	**09 38 05.9**	**+2.2**
PB05	**IPOC Station P**	**2.11**	**242**	*e*P	**Pn**	**09 37 40.6**	**-0.2**
PB05				*i* S	**Sn**	**09 38 05.8**	**-1.6**
PB05				IAML		09 38 07.3	
	comp=N,23μm,0.7s						
GO01	**Chusmiza**	**2.37**	**336**	*e*Pn	**Pn**	**09 37 46.3**	**+1.8**
GO01	**Chusmiza**	**2.37**	**336**	⇑*i*P	**Pn**	**09 37 46.2**	**+1.7**
GO01				*i* S	**Sn**	**09 38 15.2**	**+1.4**
PB11	**IPOC Station P**	**2.49**	**326**	*e*Pn	**Pn**	**09 37 46.4**	**+0.6**
PB11				*e*Sn	**Sn**	**09 38 16.6**	**+0.4**
PB11	**IPOC Station P**	**2.49**	**326**	⇑*i*P	**Pn**	**09 37 46.4**	**+0.6**
PB11				*i* S	**Sn**	**09 38 16.4**	**+0.1**
PB10	**IPOC Station P**	**2.74**	**232**	*e*Pn	**Pn**	**09 37 47.7**	**-1.1**
PB10				*e*Sn	**Sn**	**09 38 17.9**	**-3.7**
PB10	**IPOC Station P**	**2.74**	**232**	⇑*i*P	**Pn**	**09 37 47.6**	**-1.1**
PB10				*i* S	**Sn**	**09 38 18.4**	**-3.3**
PSGC	**Pisagua**	**2.88**	**321**	⇑*i*P	**Pn**	**09 37 50.0**	**-0.8**
PSGC				*i* S	**Sn**	**09 38 23.5**	**-1.8**
MNMC	**Minye Minye**	**3.01**	**334**	*e*Pn	**Pn**	**09 37 53.6**	**+0.9**
MNMC				*e*Sn	**Sn**	**09 38 26.0**	**-2.6**
MNMC	**Minye Minye**	**3.01**	**334**	⇑*i*P	**Pn**	**09 37 53.6**	**+0.9**
MNMC				*i* S	**Sn**	**09 38 29.7**	**+1.2**
PB14	**IPOC Station P**	**3.43**	**216**	*e*P	**Pn**	**09 37 58.2**	**0.0**
GO02	**Mina Guanaco**	**3.54**	**201**	*e*Pn	**Pn**	**09 37 59.3**	**-0.3**
GO02	**Mina Guanaco**	**3.54**	**201**	⇓*i*P	**Pn**	**09 37 59.8**	**+0.2**
GO02				*i* S	**Sn**	**09 38 40.6**	**-0.4**
LPAZ	**La Paz**	**5.54**	**1**	P	**Pn**	**09 38 28.9**	**+2.1**
	comp=N,45nm,0.3s,baz=169,slow=6.1,SNR=624						
LPAZ				S	**Sn**	**09 39 22.7**	**-6.9**
	comp=N,8.3nm,0.3s,baz=181,slow=14,SNR=3.6						
LPAZ	**La Paz**	**5.54**	**1**	*e*Pn	**Pn**	**09 38 29.4**	**+2.6**
LPAZ				*e*Sn	**Sn**	**09 39 23.6**	**-6.0**
LPAZ	**La Paz**	**5.54**	**1**	*e*P	**Pn**	**09 38 29.4**	**+2.6**
LPAZ				*e*		09 39 23.6	
LPAZ	**La Paz**	**5.54**	**1**	*e*P	**Pn**	**09 38 29.0**	**+2.1**
GO03	**Copiap**	**6.01**	**198**	*e*Pn	**Pn**	**09 38 30.2**	**-2.4**
LCO	**Las Campanas**	**7.48**	**197**	*e*Pn	**Pn**	**09 38 48.8**	**-3.9**
LCO				*e*Sn	**Sn**	**09 40 08.7**	**-7.4**
LCO	**Las Campanas**	**7.48**	**197**	*e*P	**Pn**	**09 38 48.8**	**-3.9**
GO04	**Tololo Observa**	**8.61**	**195**	*e*Pn	**Pn**	**09 39 03.4**	**-4.6**
SIV	**San Ignacio**	**8.91**	**50**	P	**Pn**	**09 39 11.1**	**-0.8**
	comp=N,136nm,0.3s,baz=250,slow=11,SNR=1972						
SIV				S	**Sn**	**09 40 44.9**	**-5.7**
	comp=N,4.8nm,0.3s,baz=286,slow=18,SNR=3.4						
CFA	**Coronel Fontan**	**9.71**	**180**	P	**Pn**	**09 39 19.9**	**-2.8**
	comp=N,61nm,0.3s,baz=1.0,slow=12,SNR=157						
CFA				S	Sn	09 40 59.8	-10
	comp=N,13nm,0.3s,baz=239,slow=19,SNR=7.8						
CPUP	**Villa Florida**	**10.88**	**116**	P	**Pn**	**09 39 38.4**	**0.0**
	comp=N,2.4nm,0.3s,baz=298,slow=12,SNR=72						
CPUP				LR	LR	09 43 45.4	
	comp=N,714nm,19.0s,baz=315,slow=37						
CPUP	**Villa Florida**	**10.88**	**116**	*e*P	**Pn**	**09 39 38.0**	**-0.4**
ROC1	**El Roble**	**11.36**	**192**	*e*Pn	Pn	09 39 39.2	-5.9
PEL	**Peldehue**	**11.46**	**191**	*e*Pn	Pn	09 39 40.7	-5.5
PEL	**Peldehue**	**11.46**	**191**	*e*P	Pn	09 39 40.7	-5.5
AQDB	**Aquidauana**	**11.73**	**86**	*e*P	**Pn**	**09 39 49.2**	**-0.7**
NNA	**Nana**	**12.83**	**318**	P	**Pn**	**09 40 02.2**	**-2.2**
	comp=N,1.8nm,0.3s,baz=174,slow=13,SNR=12						
NNA				S	Sn	09 42 16.2	-10
	comp=N,3.2nm,0.3s,baz=150,slow=14,SNR=2.7						
NNA				LR	LR	09 45 30.7	
	comp=N,1μm,18.3s,baz=157,slow=39						
NNA	**Nana**	**12.83**	**318**	*e*Pn	**Pn**	**09 40 03.7**	**-0.7**
NNA				*e*Sn	**Sn**	**09 42 21.5**	**-4.3**
NNA	**Nana**	**12.83**	**318**	*c*eP	**Pn**	**09 40 04.3**	**-0.1**
GO05	**Huala**	**13.51**	**193**	*e*Pn	Pn	09 40 05.7	-7.3
C2SB	**Chapadao do Su**	**14.72**	**81**	*e*P	**Pn**	**09 40 28.3**	**-0.3**
PTGB	**Pitanga**	**15.09**	**104**	*e*P	**Pn**	**09 40 34.4**	**+1.1**
ITAB	**Concordia**	**15.56**	**113**	*e*P	**Pn**	**09 40 39.2**	**+0.1**
CLDB	**Colider**	**16.13**	**49**	*e*P	**Pn**	**09 40 46.4**	**+0.1**
ITRB	**Iturama**	**16.81**	**86**	*e*P	**P**	**09 40 55.7**	**+0.9**
TRQA	**Tornquist**	**17.01**	**163**	*e*P	**P**	**09 40 55.7**	**-1.2**
	comp=N,115nm,0.6s						
TRQA				*e*S	**Sn**	**09 44 02.7**	**-3.6**
TRQA	**Tornquist**	**17.01**	**163**	*e*P	**P**	**09 40 55.7**	**-1.2**
TRQA				*e*S	**Sn**	**09 44 02.7**	**-3.6**
TRQA				pmax	pmax		
	comp=Z,115nm,0.6s						
OGAUY	**Aigu**	**17.18**	**139**	*e*P	**P**	**09 40 58.7**	**0.0**
CNLB	**Canela**	**17.30**	**119**	*e*P	**P**	**09 41 00.2**	**0.0**
ATAH	**Atahualpa**	**17.64**	**325**	P	**Pn**	**09 41 06.2**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=172,slow=9.9,SNR=11						
BB19B	**Bebedouro**	**18.32**	**91**	*e*P	**Pn**	**09 41 12.9**	**+0.1**
PLCA	**Paso Flores**	**18.93**	**186**	P	**P**	**09 41 18.3**	**+0.4**
	comp=Z,4.2nm,0.3s,baz=33,slow=13,SNR=86						
PLCA				S	**S**	**09 44 47.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=142,slow=19,SNR=1.6						
PLCA				PcP	**PcP**	**09 45 40.1**	**+1.0**
	comp=Z,0.4nm,0

HELC **Santa Helena** 28.78 345 *eP* P 09 42 53.5 0.0
PTBC **PUERTO BERRIO,** 28.88 347 *eP* P 09 42 52.2 -1.8
SDV **Santo Domingo** 30.64 355 *eP* P 09 43 11.6 +1.9
EFI **East Falkland** 30.79 168 *eP* P 09 43 10.3 -0.2
comp=Z,269nm,1.4s
EFI **East Falkland** 30.79 168 *eP* P 09 43 10.3 -0.2
EFI pmax pmax
comp=Z,269nm,1.4s
MDP **Montagnes des** 30.82 31 P P 09 43 10.8 -0.4
comp=Z,54nm,0.7s,baz=205,slow=9.2,SNR=52
MDP LR LR 09 56 02.1
comp=Z,470nm,19.7s,baz=200,slow=37
GO10 **Punta Arenas** 31.33 183 *eP* P 09 43 14.2 -1.1
BCIP **Isla Barro Col** 32.88 338 *eP* P 09 43 28.3 -0.8
comp=Z,36nm,1.0s
BCIP **Isla Barro Col** 32.88 338 *eP* P 09 43 28.3 -0.8
BCIP pmax pmax
comp=Z,36nm,1.0s
USHA **Ushuaia** 32.93 180 P P 09 43 30.0 +0.8
comp=Z,31nm,0.7s,baz=350,slow=7.9,SNR=21
NBMO **Morrinhos-CE** 32.97 60 *eP* P 09 43 29.5 -0.5
NBLI **Livramento-PB** 33.39 69 *eP* P 09 43 34.1 +0.3
NBPA **Parau_RN** 34.05 67 *eP* P 09 43 38.7 -0.7
GRGR **Grenville** 34.38 11 *eP* P 09 43 41.0 -1.1
comp=Z,134nm,0.8s
RCBR **Riachuelo** 35.05 68 P P 09 43 46.6 -1.5
comp=Z,154nm,0.8s,baz=333,slow=0.5,SNR=20
RCBR **Riachuelo** 35.05 68 *eP* P 09 43 48.1 0.0
comp=Z,159nm,0.8s
RCBR **Riachuelo** 35.05 68 *eP* P 09 43 48.1 0.0
RCBR pmax pmax
comp=Z,159nm,0.8s
RCBR **Riachuelo** 35.05 68 *eP* P 09 43 48.4 +0.3
SVB **Belmont** 35.56 12 *eP* P 09 43 50.9 -1.5
comp=Z,161nm,1.2s
JTS **Las Juntas de** 35.93 331 P P 09 43 54.2 -1.3
comp=Z,8.4nm,0.9s,baz=317,slow=18,SNR=5.0
JTS **Las Juntas de** 35.93 331 *eP* P 09 43 54.0 -1.5
comp=Z,18nm,1.0s
FDF **Fort de France** 37.01 11 *eP* P 09 44 03.1 -1.6
FDF **Fort de France** 37.01 11 *eP* P 09 44 03.1 -1.6
ESPN **Las Esperanzas** 37.35 333 *eP* P 09 44 06.6 -0.9
comp=Z,14nm,0.8s
ACON **Acoyapa** 37.52 332 *eP* P 09 44 07.4 -1.5
comp=Z,22nm,1.2s
ESTN **Estel** 39.05 331 *eP* P 09 44 22.2 +0.3
comp=Z,17nm,1.0s
ICMP **Isla Caja de M** 39.53 2 *eP* P 09 44 27.7 +2.0
comp=Z,44nm,1.0s
CRPR **Cabo Rojo, PR** 39.63 2 *eP* P 09 44 29.3 +2.8
comp=Z,68nm,1.2s
OBIP **Obispado Ponce** 39.68 2 *eP* P 09 44 27.0 +0.1
comp=Z,172nm,1.5s
SJG **San Juan** 39.77 3 P P 09 44 26.1 -1.5
comp=Z,25nm,0.2s,baz=115,slow=9.1,SNR=7.0
SJG pP pP 09 44 55.3 +0.2
comp=Z,47nm,0.4s,baz=199,slow=5.2,SNR=4.8
SJG **San Juan** 39.77 3 *eP* P 09 44 25.1 -2.5
comp=Z,32nm,0.8s
ANWB **Willy Bob** 39.78 10 *eP* P 09 44 26.6 -1.1
comp=Z,102nm,0.7s
MTP **Monte Pirata** 39.79 4 *eP* P 09 44 25.9 -1.9
comp=Z,16nm,0.9s
HUMP **Col San Antoni** 39.81 3 *eP* P 09 44 27.4 -0.7
comp=Z,63nm,1.4s
MPR **Mayaguez** 39.83 2 *eP* P 09 44 27.4 -0.8
comp=Z,36nm,0.9s
CBYP **Canovanas** 39.94 3 *eP* P 09 44 28.3 -0.9
comp=Z,26nm,1.1s
SMRT **St. Maarten** 39.97 8 *eP* P 09 44 26.8 -2.6
comp=Z,78nm,1.3s
AOPR **Arecibo Observ** 39.98 2 *eP* P 09 44 27.2 -2.3
comp=Z,74nm,1.4s
HOPE **Hope Point** 40.25 152 *eP* P 09 44 32.4 +1.1
comp=Z,164nm,1.1s
TGUH **Tegucigalpa,Un** 40.30 331 *eP* P 09 44 30.7 -1.5
comp=Z,27nm,1.0s
APG **El Apazote** 42.65 327 P P 09 44 52.1 +0.5
comp=Z,26nm,1.0s,baz=189,slow=3.3,SNR=13
PMSA **Palmer Station** 42.99 177 P P 09 44 54.8 +1.3
comp=Z,35nm,0.9s,baz=30,slow=5.6,SNR=6.8
PMSA **Palmer Station** 42.99 177 *eP* P 09 44 55.3 +1.9
comp=Z,60nm,0.8s
PMSA **Palmer Station** 42.99 177 *eP* P 09 44 54.0 +0.6
CCIG **Comitan** 44.58 326 *eP* P 09 45 07.5 +0.6
comp=Z,30nm,1.2s
CCIG *epP* pP 09 45 28.7 -6.2
CCIG *esP* sP 09 45 37.4 -11
TEIG **Tepich** 46.20 333 *eP* P 09 45 19.5 0.0
comp=Z,30nm,0.9s
CMIG **Matias Romero** 46.71 324 P P 09 45 23.8 +0.3
comp=Z,12nm,0.9s,baz=135,slow=5.6,SNR=14
061Z **Ochoppi** 49.01 345 *eP* P 09 45 42.4 +1.3
comp=Z,214nm,1.2s
061Z *epP* pP 09 46 00.4 -9.2
061Z *esP* sP 09 46 12.3 -11
061Z **Ochoppi** 49.01 345 P P 09 45 42.0 +0.9
baz=165
TLIG **Tlapa** 49.19 320 *eP* P 09 45 43.3 +0.5
comp=Z,19nm,0.9s
TLIG *epP* pP 09 46 04.5 -6.6
TLIG *esP* sP 09 46 14.1 -10
060Z **West Palm Beac** 49.45 345 P P 09 45 45.4 +0.9
baz=165
059Z **Ave Maria** 49.60 344 P P 09 45 46.2 +0.6
baz=164
LVIG **Laguna Verde** 49.69 324 *eP* P 09 45 45.4 -1.0
comp=Z,48nm,1.5s
060A **Indiantown** 50.01 346 P P 09 45 49.4 +0.7
baz=166
059A **Moore Haven** 50.13 345 *eP* P 09 45 50.4 +0.8
comp=Z,111nm,0.8s
059A *epP* pP 09 46 10.8 -7.4
059A *esP* sP 09 46 21.0 -11
059A **Moore Haven** 50.13 345 P P 09 45 50.4 +0.8
baz=165,SNR=5.2
TRIS **Tristan da Cun** 50.28 121 *eP* P 09 45 52.4 +1.6
comp=Z,200nm,1.0s
058A **Arcadia** 50.38 344 P P 09 45 52.0 +0.6
baz=164,SNR=5.4
959A **Okeechobee** 50.60 345 P P 09 45 53.9 +0.8
baz=165
958A **Wauchula** 50.87 344 P P 09 45 55.7 +0.6
baz=164
957A **Wimauma** 51.07 344 *eP* P 09 45 57.0 +0.3
comp=Z,80nm,0.8s
957A **Wimauma** 51.07 344 P P 09 45 57.4 +0.7
baz=164
DWPF **Disney Wildern** 51.29 345 *eP* P 09 45 59.2 +1.0
comp=Z,59nm,0.8s
DWPF **Disney Wildern** 51.29 345 P P 09 45 58.4 +0.1
baz=165
858A **St. Cloud** 51.37 345 P P 09 45 59.0 +0.1
baz=165
857A **Zephyrhills** 51.64 344 P P 09 46 01.2 +0.4
baz=164
758A **Lake Helen** 52.05 346 P P 09 46 04.4 +0.5
baz=165
757A **Oxford** 52.24 345 P P 09 46 05.9 +0.5
baz=164,SNR=5.7
658A **Bunnell** 52.51 346 P P 09 46 07.7 +0.4
baz=165
656A **Willston** 52.77 344 *eP* P 09 46 09.1 -0.1
comp=Z,104nm,1.5s
656A *epP* pP 09 46 30.1 -7.8
656A *esP* sP 09 46 40.9 -10
656A **Willston** 52.77 344 P P 09 46 09.7 +0.5
baz=164,SNR=6.6
657A **Interlachen** 52.81 345 P P 09 46 09.7 +0.2
baz=164
655A **Horseshoe Beac** 53.09 344 P P 09 46 12.0 +0.5
baz=163,SNR=5.2
557A **Orange Park** 53.19 345 P P 09 46 12.6 +0.4
baz=165
556A **Lake Butler** 53.34 345 P P 09 46 13.8 +0.4
baz=164,SNR=5.4
ASCN **Ascension** 53.57 84 *eP* P 09 46 16.0 +0.5
comp=Z,272nm,0.9s
555A **McAlpin** 53.59 344 *eP* P 09 46 16.0 +0.7
comp=Z,30nm,0.8s
555A *epP* pP 09 46 36.2 -7.9
555A *esP* sP 09 46 46.9 -10
555A **McAlpin** 53.59 344 P P 09 46 15.8 +0.6
baz=163
554A **Perry** 53.75 343 P P 09 46 16.8 +0.4
baz=162
456A **Hilliard** 53.94 345 *eP* P 09 46 17.9 +0.1
comp=Z,175nm,1.4s
456A **Hilliard** 53.94 345 P P 09 46 18.4 +0.6
baz=164
BBSR **BB Station** 54.02 4 *eP* P 09 46 18.3 0.0
comp=Z,30nm,0.6s
455A **Stateville** 54.20 344 P P 09 46 19.9 +0.2
baz=163
552A **Lynn Haven** 54.24 342 P P 09 46 20.1 +0.1
baz=161
454A **Quitman** 54.33 344 P P 09 46 20.9 +0.4
baz=163,SNR=6.1
357A **Townsend** 54.49 346 P P 09 46 21.9 +0.2
baz=165
356A **Blackshear** 54.54 345 P P 09 46 22.6 +0.5
baz=164
453A **Whigham** 54.65 343 *eP* P 09 46 23.1 +0.2
comp=Z,45nm,0.9s
453A **Whigham** 54.65 343 P P 09 46 23.3 +0.4
baz=162,SNR=8.0
355A **Pearson** 54.73 345 P P 09 46 23.6 +0.1
baz=164
452A **Marianna** 54.88 342 P P 09 46 24.6 +0.1
baz=161
257A **Skidaway Islan** 54.92 347 P P 09 46 25.4 +0.6
baz=166
TIGA **Tifton** 55.01 344 *eP* P 09 46 25.8 +0.4
comp=Z,22nm,0.8s
TIGA **Tifton** 55.01 344 P P 09 46 25.3 -0.2
baz=163
353A **Camilla** 55.09 343 P P 09 46 26.1 0.0
baz=162,SNR=9.3
256A **Glennville** 55.11 346 P P 09 46 26.6 +0.4
baz=165
255A **Hazlehurst** 55.20 345 *eP* P 09 46 24.8 -2.0
comp=Z,51nm,1.4s
255A **Hazlehurst** 55.20 345 P P 09 46 27.1 +0.3
baz=164
450A **Crestview** 55.26 341 P P 09 46 27.0 -0.2
baz=160
352A **Blakely** 55.40 343 *eP* P 09 46 28.2 -0.1
comp=Z,47nm,0.9s
352A **Blakely** 55.40 343 P P 09 46 28.2 -0.1
baz=162,SNR=8.9
254A **Abbeville** 55.41 344 P P 09 46 28.4 0.0
baz=163
158A **Hollywood** 55.48 348 P P 09 46 29.3 +0.5
baz=167
LNIG **Linares** 55.52 325 *eP* P 09 46 29.3 0.0
comp=Z,12nm,0.9s
ZAIG **Zacatecas** 55.58 321 *eP* P 09 46 31.9 +1.8
comp=Z,19nm,0.8s
RGRS **Roger Stewart** 55.65 348 *eP* P 09 46 30.6 +0.6
comp=Z,620nm,0.5s
156A **Sylvania** 55.67 346 P P 09 46 30.3 +0.1
baz=165
253A **Americus** 55.74 344 *eP* P 09 46 31.0 +0.3
comp=Z,84nm,1.3s
253A **Americus** 55.74 344 P P 09 46 30.4 -0.3
baz=162
BRAL **Brewton** 55.74 340 *eP* P 09 46 30.9 +0.2
comp=Z,64nm,1.0s
BRAL **Brewton** 55.74 340 P P 09 46 30.8 +0.1
baz=159
350A **Dozier** 55.76 341 P P 09 46 30.6 -0.2
baz=160
NHSC **New Hope** 55.84 348 *eP* P 09 46 32.8 +1.4
comp=Z,81nm,1.0s
NHSC **New Hope** 55.84 348 P P 09 46 31.7 +0.3
baz=167
252A **Lumpkin** 55.84 343 P P 09 46 31.1 -0.3
baz=162,SNR=5.2
155A **Kite** 55.86 345 P P 09 46 31.8 +0.2
baz=164
349A **Repton** 55.95 340 P P 09 46 32.3 +0.1
baz=159,SNR=5.1
Z58A **St. Stephen** 55.99 348 P P 09 46 32.7 +0.2
baz=167
154A **Montrose** 56.01 345 *eP* P 09 46 33.0 +0.5
comp=Z,56nm,1.0s
154A **Montrose** 56.01 345 P P 09 46 32.2 -0.4
baz=164
251A **Midway** 56.12 342 P P 09 46 32.9 -0.5
baz=161,SNR=11
Z57A **Bowman** 56.13 347 P P 09 46 33.6 +0.2
baz=166
250A **Grady** 56.26 342 *eP* P 09 46 33.4 -1.0
comp=Z,26nm,0.8s
250A **Grady** 56.26 342 P P 09 46 33.8 -0.6
baz=160
Z56A **Williston** 56.29 347 *eP* P 09 46 33.3 -1.3
comp=Z,35nm,1.0s
Z56A **Williston** 56.29 347 P P 09 46 34.8 +0.2
baz=166
Z55A **Blythe** 56.36 346 P P 09 46 35.4 +0.3
baz=165
152A **Waverly Hall** 56.47 343 *eP* P 09 46 35.5 -0.4
comp=Z,10nm,0.9s
152A **Waverly Hall** 56.47 343 P P 09 46 35.4 -0.4
baz=162
151A **Opelika** 56.50 343 P P 09 46 35.6 -0.6
baz=161,SNR=5.7
249A **Camden** 56.51 341 P P 09 46 36.0 -0.2
baz=159,SNR=7.5
Z54A **Sparta** 56.54 345 P P 09 46 35.9 -0.4
baz=164
Z53A **Monticello** 56.76 345 P P 09 46 37.3 -0.6
baz=163
Y57A **Sumter** 56.76 348 *eP* P 09 46 37.3 -0.6
comp=Z,40nm,1.1s
Y57A **Sumter** 56.76 348 P P 09 46 38.1 +0.2
baz=167
150A **Eclectic** 56.77 342 P P 09 46 37.7 -0.3
baz=161,SNR=13
GOGA **Godfrey** 56.85 345 *eP* P 09 46 38.2 -0.3
comp=Z,6.1nm,0.8s
GOGA **Godfrey** 56.85 345 *eP* P 09 46 38.3 -0.3
GOGA pmax pmax
comp=Z,6.0nm,0.8s
GOGA **Godfrey** 56.85 345 P P 09 46 38.3 -0.3
baz=163
Z52A **Williamson** 56.88 344 P P 09 46 38.5 -0.3
baz=162
X60A **Albert Glenn T** 56.88 350 P P 09 46 38.8 0.0
baz=170
X59A **McDuffie Farm,** 56.98 350 P P 09 46 39.3 -0.1
baz=169
Y55A **Saluda** 56.99 346 P P 09 46 39.5 0.0
baz=165
149A **Jones** 56.99 341 P P 09 46 39.0 -0.6
baz=160
SACV **Santiago Islan** 57.01 54 *eP* P 09 46 39.1 -0.9
comp=Z,97nm,0.9s
X58A **Rowland** 57.09 349 *eP* P 09 46 40.4 +0.2
comp=Z,23nm,1.1s
X58A **Rowland** 57.09 349 P P 09 46 40.4 +0.2
baz=168
Y54A **Tignall** 57.10 346 P P 09 46 40.3 -0.1
baz=164,SNR=5.8
X57A **Johnson Farm,** 57.14 348 P P 09 46 40.8 +0.2
baz=167
JSC **Jenkinsville** 57.19 347 *eP* P 09 46 39.3 -1.7
comp=Z,12nm,0.7s
JSC **Jenkinsville** 57.19 347 *eP* P 09 46 39.3 -1.7
JSC pmax pmax
comp=Z,13nm,0.7s
Z51A **Franklin** 57.20 343 P P 09 46 40.6 -0.5
baz=162
148A **Greensboro** 57.27 341 P P 09 46 41.0 -0.6
baz=159
Y53A **Monroe** 57.31 345 P P 09 46 41.5 -0.2
baz=163
W60A **Pink Hill** 57.31 351 P P 09 46 42.2 +0.4
baz=170
W61A **Ground Anchor** 57.33 351 P P 09 46 42.2 +0.3
baz=171
X56A **White Oak** 57.35 347 P P 09 46 42.5 +0.4
baz=166,SNR=7.6
Z50A **Ashland** 57.35 342 *eP* P 09 46 41.8 -0.4
comp=Z,29nm,0.9s
Z50A **Ashland** 57.35 342 P P 09 46 41.7 -0.4
baz=161,SNR=19
HODGE **Hodges** 57.36 346 *eP* P 09 46 41.8 -0.3
comp=Z,9.0nm,0.9s
BIRD **Birdtown, Kers** 57.38 348 *eP* P 09 46 43.3 +1.0
comp=Z,33nm,0.9s
BIRD *epP* pP 09 47 03.0 -8.4
BIRD *esP* sP 09 47 15.5 -9.1
Y52A **Lilburn** 57.43 344 *eP* P 09 46 41.8 -0.9
comp=Z,11nm,0.9s
Y52A **Lilburn** 57.43 344 P P 09 46 42.4 -0.3
baz=163
X55A **Gracelyn & Ava** 57.45 347 P P 09 46 43.1 +0.3
baz=166,SNR=7.3
LRAL **Lakeview Retre** 57.46 341 *eP* P 09 46 42.2 -0.7
comp=Z,15nm,1.1s
LRAL **Lakeview Retre** 57.46 341 P P 09 46 42.2 -0.7
baz=160,SNR=7.6
Z49A **Columbiana** 57.47 342 P P 09 46 42.4 -0.6
baz=160,SNR=9.0
147A **Livingston** 57.52 340 P P 09 46 42.5 -0.8
baz=158
CNNC **Cliffs of the** 57.52 351 P P 09 46 43.3 +0.1
baz=170
W58A **Raeford** 57.52 349 P P 09 46 43.7 +0.4
baz=168
W59A **Clinton** 57.54 350 P P 09 46 43.4 +0.1
baz=169
X54A **Belton** 57.69 346 P P 09 46 44.7 +0.3
baz=165,SNR=6.4
Y51A **Rockmart** 57.73 343 P P 09 46 44.3 -0.4
baz=162,SNR=11
W57A **Gilead** 57.79 349 *eP* P 09 46 45.5 +0.4
comp=Z,17nm,0.8s
W57A **Gilead** 57.79 349 P P 09 46 45.4 +0.3
baz=167
PAULI **Pauline** 57.83 347 *eP* P 09 46 43.7 -1.7
comp=Z,31nm,1.2s
VBMS **Vicksburg** 57.86 338 *eP* P 09 46 45.5 -0.2
comp=Z,13nm,0.8s
VBMS **Vicksburg** 57.86 338 P P 09 46 45.5 -0.2
baz=156
X53A **Estanollee** 57.86 345 P P 09 46 45.4 -0.3
baz=164
V61A **Roper** 57.88 352 P P 09 46 46.3 +0.6
baz=171
W56A **Indian Trail** 57.88 348 P P 09 46 46.0 +0.3
baz=167,SNR=7.1
Y50A **Piedmont** 57.90 343 P P 09 46 45.4 -0.6
baz=161,SNR=7.6
V60A **Jim Taylor Roa** 57.95 351 P P 09 46 46.6 +0.4
baz=170
HKT **Hockley** 57.97 332 *eP* P 09 46 46.6 +0.2
comp=Z,13nm,1.1s
HKT *epP* pP 09 47 07.0 -8.6
HKT *esP* sP 09 47 18.6 -10
HKT **Hockley** 57.97 332 *eP* P 09 46 46.6 +0.2
HKT *e*SP pP 09 47 18.6 +3.0
HKT pmax pmax
comp=Z,13nm,1.1s
KMSC **Kings Mountain** 58.04 347 *eP* P 09 46 47.7 +0.8
comp=Z,32nm,1.1s
KMSC **Kings Mountain** 58.04 347 P P 09 46 47.3 +0.4
baz=166,SNR=7.8
Y49A **Blount Mountai** 58.06 342 *eP* P 09 46 46.7 -0.3
comp=Z,19nm,1.1s
Y49A **Blount Mountai** 58.06 342 P P 09 46 46.2 -0.8
baz=160,SNR=5.6
V59A **Middlesex** 58.09 350 P P 09 46 47.6 +0.4
baz=169
X52A **Dahlonega** 58.10 345 P P 09 46 47.1 -0.3
baz=163,SNR=5.3
W54A **Cherokee Point** 58.16 346 P P 09 46 48.4 +0.6
baz=165,SNR=10
V58A **Windy Hill, Pi** 58.26 350 P P 09 46 48.0 -0.4
baz=168
833A **Chaparral WMA,** 58.27 328 *eP* P 09 46 48.6 -0.1
comp=Z,35nm,0.7s
833A **Chaparral WMA,** 58.27 328 P P 09 46 49.1 +0.5
baz=146,SNR=8.2
X51A **Calhoun** 58.30 344 *eP* P 09 46 48.7 -0.1
comp=Z,35nm,0.9s
X51A **Calhoun** 58.30 344 P P 09 46 48.4 -0.3
baz=162,SNR=7.8
Y48A **Jasper** 58.33 341 P P 09 46 48.0 -0.9
baz=160
U61A **Possum Corner** 58.39 352 P P 09 46 49.4 +0.1
baz=171
X50B **Fort Payne** 58.41 343 P P 09 46 49.0 -0.6
baz=161,SNR=7.1
W53A **Cullowhee** 58.46 346 P P 09 46 50.1 +0.1
baz=164,SNR=11
V57A **Coltrane Farms** 58.47 349 P P 09 46 50.1 +0.2
baz=168
V56A **Mocksville** 58.52 348 *eP* P 09 46 51.0 +0.8
comp=Z,44nm,0.9s
V56A **Mocksville** 58.52 348 P P 09 46 51.0 +0.8
baz=167,SNR=14
W52A **Murphy** 58.57 345 *eP* P 09 46 50.8 +0.2
comp=Z,33nm,1.3s
W52A **Murphy** 58.57 345 P P 09 46 50.7 +0.1
baz=163,SNR=5.8
U59A **Littleton** 58.60 351 P P 09 46 51.0 +0.3
baz=170
U60A **Pendleton** 58.63 352 P P 09 46 51.1 +0.2
baz=171
X49A **Woodville** 58.65 342 P P 09 46 50.6 -0.5
baz=161
V55A **Taylorsville** 58.70 348 P P 09 46 52.3 +0.8
baz=166,SNR=8.8
U58A **Oxford** 58.75 350 P P 09 46 52.2 +0.4
baz=169
V54A **Nebo** 58.78 347 P P 09 46 52.5 +0.4
baz=165,SNR=15
X48A **Hartselle** 58.80 342 *eP* P 09 46 51.9 -0.3
comp=Z,39nm,1.0s
X48A **Hartselle** 58.80 342 P P 09 46 51.8 -0.4
baz=160,SNR=19
W51A **Cleveland** 58.84 344 P P 09 46 52.5 0.0
baz=162,SNR=11
V53A **Saluda** 58.86 346 *eP* P 09 46 53.0 +0.3
comp=Z,16nm,0.8s
V53A **Saluda** 58.86 346 P P 09 46 52.7 0.0
baz=164,SNR=8.9
U57A **Blanch** 58.92 350 P P 09 46 53.4 +0.5
baz=168
W50A **Signal Mountai** 59.02 344 *eP* P 09 46 52.6 -1.2
comp=Z,29nm,0.9s
W50A **Signal Mountai** 59.02 344 P P 09 46 53.5 -0.2
baz=162,SNR=16
U56A **King** 59.02 349 P P 09 46 54.3 +0.6
baz=167,SNR=6.2
NATX **Nacogdoches** 59.03 334 *eP* P 09 46 54.8 +1.0
comp=Z,44nm,0.9s
NATX *epP* pP 09 47 14.5 -8.7
NATX *esP* sP 09 47 26.9 -10
NATX **Nacogdoches** 59.03 334 P P 09 46 54.7 +0.8
baz=152
SHEL **Horse Pasture** 59.03 96 *eP* P 09 46 53.5 -0.9
comp=Z,180nm,0.8s
SHEL **Horse Pasture** 59.03 96 *i*P P 09 46 56.7 +2.4
CPCT **Cooper Cave** 59.06 344 *eP* P 09 46 53.6 -0.3
comp=Z,27nm,1.1s
CPCT *epP* pP 09 47 14.3 -9.0
CPCT *esP* sP 09 47 24.6 -12
X47A **Russelville** 59.10 341 P P 09 46 53.4 -0.8
baz=159,SNR=17
T59A **Double "B" Far** 59.17 351 *eP* P 09 46 53.7 -1.0
comp=Z,16nm,0.9s
T59A *epP* pP 09 47 14.9 -9.1
T59A **Double "B" Far** 59.17 351 P P 09 46 54.9 +0.2
baz=170
SWET **Sewanee** 59.20 343 *eP* P 09 46 54.4 -0.6
comp=Z,34nm,0.9s
W49A **Belvidere** 59.20 343 P P 09 46 54.5 -0.5
baz=161,SNR=9.0
V52A **Sevierville** 59.21 345 *eP* P 09 46 54.8 -0.2
comp=Z,36nm,0.9s
V52A **Sevierville** 59.21 345 P P 09 46 54.8 -0.2
baz=164,SNR=14
T58A **Grand View Acr** 59.29 350 P P 09 46 55.9 +0.4
baz=169
U55A **TA2, Sparta** 59.30 348 P P 09 46 56.2 +0.6
baz=166,SNR=11
V51A **Loudon** 59.35 345 *eP* P 09 46 56.0 0.0
comp=Z,16nm,0.8s
V51A **Loudon** 59.35 345 P P 09 46 55.6 -0.3
baz=163,SNR=7.0
X46A **Booneville** 59.35 340 P P 09 46 55.0 -1.0
baz=158
W48A **Pulaski** 59.41 342 P P 09 46 55.9 -0.4
baz=160,SNR=14
V50A **Pikevile** 59.41 344 P P 09 46 56.3 -0.1
baz=162,SNR=22
T57A **Hurt** 59.46 350 *eP* P 09 46 57.4 +0.7
comp=Z,17nm,1.1s
T57A *epP* pP 09 47 17.3 -8.7

T57A	Hurt baz=168	59.46 350	P	P	09 46 57.1 +0.5
435B	Jarrell comp=Z,14nm,0.8s	59.46 331	eP	P	09 46 57.2 +0.4
435B			epP	pP	09 47 28.6 +2.4
435B	Jarrell baz=148	59.46 331	P	P	09 46 57.0 +0.1
U54A	Nelsons Funny comp=Z,55nm,0.8s	59.47 347	eP	P	09 46 57.3 +0.5
U54A	Nelsons Funny baz=166,SNR=16	59.47 347	P	P	09 46 57.2 +0.3
U53A	Fall Branch baz=165,SNR=11	59.48 347	P	P	09 46 56.7 -0.2
VNA3	Neumayer Olymp	59.53 161	P	P	09 46 58.1 +1.3
OXF	Oxford comp=Z,54nm,1.1s	59.58 340	eP	P	09 46 56.9 -0.6
OXF	Oxford	59.58 340	eP	P	09 46 56.9 -0.6
OXF			pmax	pmax	
	comp=Z,54nm,1.1s				
OXF	Oxford baz=158,SNR=6.3	59.58 340	P	P	09 46 56.3 -1.2
PLAL	Pickwick Lake comp=Z,29nm,1.1s	59.59 341	eP	P	09 46 56.7 -0.9
T56A	Rocky Mt baz=168,SNR=6.8	59.62 349	P	P	09 46 58.8 +1.0
Z41A	Richland Creek comp=Z,23nm,1.0s	59.62 336	eP	P	09 46 58.3 +0.5
Z41A			epP	pP	09 47 18.5 -8.8
Z41A	Richland Creek baz=154	59.62 336	P	P	09 46 58.3 +0.5
S61A	Accomac baz=172	59.63 353	P	P	09 46 59.3 +1.5
W47A	Westpoint baz=160	59.70 342	P	P	09 46 57.8 -0.6
V49A	McMinnville baz=161,SNR=22	59.71 343	P	P	09 46 57.9 -0.5
VNA1	Neumayer--Stat	59.73 160	P	P	09 46 59.7 +1.6
U51A	La Follette baz=163,SNR=7.0	59.82 345	P	P	09 46 58.8 -0.4
W46A	Michie baz=159	59.83 341	P	P	09 46 58.0 -1.2
CCAR	Cane Creek comp=Z,25nm,0.7s	59.84 337	eP	P	09 46 59.6 +0.3
T55A	Pulaski baz=167,SNR=19	59.84 348	P	P	09 47 00.2 +0.8
TZTN	Tazewell comp=Z,16nm,0.9s	59.87 346	eP	P	09 46 59.1 -0.4
TZTN			epP	pP	09 47 18.5 -11
TZTN	Tazewell baz=164	59.87 346	P	P	09 46 59.2 -0.3
BLA	Blacksburg comp=Z,54nm,1.5s	59.87 349	eP	P	09 47 00.3 +0.8
BLA	Blacksburg	59.87 349	eP	P	09 47 00.3 +0.8
BLA			pmax	pmax	
	comp=Z,53nm,1.5s				
V48A	Smith Brothers comp=Z,73nm,1.4s	59.94 343	eP	P	09 46 59.6 -0.4
V48A	Smith Brothers baz=160,SNR=17	59.94 343	P	P	09 46 59.7 -0.4
T54A	Tazewell baz=166,SNR=8.4	59.94 348	P	P	09 47 00.4 +0.3
U50A	Jamestown baz=162,SNR=13	60.05 345	P	P	09 47 00.3 -0.5
T53A	Wise baz=165,SNR=12	60.06 347	P	P	09 47 00.9 0.0
X43A	Marvell comp=Z,57nm,0.9s	60.07 338	eP	P	09 47 00.8 0.0
X43A	Marvell baz=156	60.07 338	P	P	09 47 00.9 0.0
VNA2	Neumayer--Watz baz=294,slow=8.6	60.10 161	P	P	09 47 02.0 +1.3
WLAR	White Oak Lake comp=Z,76nm,0.9s	60.12 336	eP	P	09 47 02.2 +0.9
WLAR			epP	pP	09 47 21.1 -10
CLTN	Cedars of Leba comp=Z,17nm,0.9s	60.13 343	eP	P	09 47 01.0 -0.3
S57A	Dark Hollow, R comp=Z,19nm,1.1s	60.16 350	eP	P	09 47 02.4 +1.0
S57A	Dark Hollow, R baz=169	60.16 350	P	P	09 47 01.8 +0.3
S56A	Natural Bridge baz=168	60.17 350	P	P	09 47 02.1 +0.6
R58B	Mineral comp=Z,17nm,1.1s	60.19 351	eP	P	09 47 00.7 -0.9
R58B	Mineral baz=170	60.19 351	P	P	09 47 02.0 +0.4
V47A	Nunnelly baz=160,SNR=7.9	60.22 342	P	P	09 47 00.9 -1.0
R61A	Willards baz=173	60.24 354	P	P	09 47 01.9 -0.1
JCT	Junction City comp=Z,24nm,0.8s	60.25 329	eP	P	09 47 02.4 +0.1
JCT	Junction City	60.25 329	eP	P	09 47 02.4 +0.1
JCT			pmax	pmax	
	comp=Z,24nm,0.8s				
JCT	Junction City baz=146,SNR=21	60.25 329	P	P	09 47 02.3 0.0
T52A	Hallie comp=Z,16nm,0.9s	60.28 346	eP	P	09 47 02.4 +0.1
T52A	Hallie baz=164	60.28 346	P	P	09 47 01.9 -0.5
R59A	King George, V baz=171	60.32 352	P	P	09 47 02.9 +0.4
CBN	Corbin Frederi baz=171	60.36 352	P	P	09 47 02.8 0.0
T51A	Gray baz=164,SNR=7.7	60.36 346	P	P	09 47 02.5 -0.3
V46A	Holladay baz=159,SNR=7.1	60.37 341	P	P	09 47 01.6 -1.3
U49A	Red Boiling Sp baz=162,SNR=9.9	60.38 344	P	P	09 47 02.4 -0.6
S55A	Lewisburg baz=167,SNR=18	60.43 349	P	P	09 47 04.2 +0.8
WHTX	Lake Whitney, comp=Z,18nm,0.8s	60.43 331	eP	P	09 47 04.0 +0.6
WHTX	Lake Whitney, baz=149,SNR=6.5	60.43 331	P	P	09 47 03.5 +0.1
R58A	Rapidan baz=170	60.54 351	P	P	09 47 04.3 +0.3
HPIG		60.56 321	eP	P	09 47 04.6 -0.1
	comp=Z,26nm,1.2s				
U48A	Cassie Pea, Po baz=161,SNR=7.9	60.58 343	P	P	09 47 04.0 -0.4
WVT	Waverly comp=Z,40nm,1.0s	60.59 342	eP	P	09 47 03.6 -0.8
WVT	Waverly	60.59 342	eP	P	09 47 03.6 -0.8
WVT			pmax	pmax	
	comp=Z,40nm,1.0s				
WVT	Waverly baz=159	60.59 342	P	P	09 47 03.6 -0.8
S54A	Dingess, Beckl baz=166,SNR=7.6	60.61 348	P	P	09 47 04.8 +0.2
R57A	Stanardsville baz=169	60.61 351	P	P	09 47 05.2 +0.7
T50A	Nancy baz=163,SNR=17	60.63 345	P	P	09 47 04.1 -0.6
S53A	Williamson baz=166,SNR=5.8	60.65 347	P	P	09 47 04.7 -0.2
U47A	Clarksville baz=160,SNR=20	60.73 342	P	P	09 47 04.7 -0.6
X40A	Basin Creek Fa baz=154	60.73 337	P	P	09 47 04.7 -0.7
UALR	University of comp=Z,23nm,1.0s	60.81 337	eP	P	09 47 06.2 +0.2
S52A	Salyersville baz=164	60.85 347	P	P	09 47 05.2 -0.9
T49A	Edmonton comp=Z,32nm,0.9s	60.88 344	eP	P	09 47 05.1 -1.3
T49A	Edmonton baz=162,SNR=20	60.88 344	P	P	09 47 05.9 -0.5
U46A	Springville baz=159,SNR=9.5	60.90 342	P	P	09 47 05.8 -0.8
R54A	Victor baz=167,SNR=14	60.91 348	P	P	09 47 07.1 +0.4
Q59A	Harwood baz=171	60.92 352	P	P	09 47 06.3 -0.2
S51A	Beattyville comp=Z,11nm,0.8s	60.93 346	eP	P	09 47 06.5 -0.2
S51A	Beattyville baz=164,SNR=5.6	60.93 346	P	P	09 47 06.4 -0.3
Q60A	Greensboro baz=172	60.96 353	P	P	09 47 07.0 +0.2
MIAR	Mount Ida comp=Z,29nm,1.1s	61.06 336	eP	P	09 47 06.8 -0.8
MIAR	Mount Ida	61.06 336	eP	P	09 47 06.9 -0.8
MIAR			pmax	pmax	
	comp=Z,29nm,1.1s				
MIAR	Mount Ida baz=153,SNR=14	61.06 336	P	P	09 47 07.5 -0.1
UTMT	University of comp=Z,58nm,0.9s	61.09 341	eP	P	09 47 06.5 -1.3
GNAR	Gosnell comp=Z,65nm,1.2s	61.10 340	eP	P	09 47 07.3 -0.6
T48A	Bowling Green baz=161,SNR=6.1	61.11 343	P	P	09 47 07.3 -0.6
W41B	Gary Mavity, V baz=155,SNR=11	61.14 338	P	P	09 47 07.8 -0.3
S50A	Richmond baz=163,SNR=10	61.15 345	P	P	09 47 07.7 -0.5
T47A	Sharon Grove baz=160,SNR=22	61.19 343	P	P	09 47 07.8 -0.6
R53A	Hurricane baz=166	61.24 348	P	P	09 47 08.6 -0.2
WHAR	Wooly Hollow comp=Z,14nm,0.9s	61.26 338	eP	P	09 47 07.3 -1.7
LTX	Lajitas	61.30 325	eP	P	09 47 09.7 +0.2
LTX			epP	pP	09 47 39.8 +0.8
LTX	Lajitas	61.30 325	eP	P	09 47 09.7 +0.2
LTX			e*PP	pP	09 47 39.8 +0.8
TXAR	Lajitas Array comp=Z,2.4nm,0.6s,baz=151,slow=8.4,SNR=29	61.30 325	P	P	09 47 09.7 +0.2
TXAR			pP	pP	09 47 39.8 +0.8
	comp=Z,8.1nm,0.9s,baz=134,slow=8.9,SNR=11				
TXAR			PKP2bc		10 16 32.6
	comp=Z,0.9nm,1.0s,baz=256,slow=3.6,SNR=4.2				
TX31	Lajitas Ar. Si comp=Z,5.0nm,0.8s	61.30 325	eP	P	09 47 09.5 -0.1
Q57A	Strasburg baz=170,SNR=5.8	61.32 351	P	P	09 47 10.3 +1.0
LPIG	La Paz comp=Z,13nm,0.3s,baz=142,slow=1.5,SNR=5.9	61.35 316	P	P	09 47 09.4 -0.4
R52A	Catlettsburg baz=165	61.39 347	P	P	09 47 09.3 -0.5
Q56A	Snyder Ridge, baz=169,SNR=6.3	61.44 350	P	P	09 47 11.3 +1.1
T46A	Princeton baz=160,SNR=21	61.46 342	P	P	09 47 09.7 -0.6
S49A	Springfield baz=162,SNR=6.4	61.46 345	P	P	09 47 09.5 -0.8
S48A	Wiedeman Farm, baz=162,SNR=12	61.54 344	P	P	09 47 09.5 -1.3
Q55A	Buckhannon baz=168,SNR=7.6	61.55 349	P	P	09 47 12.0 +1.1
R51A	Hillsboro baz=164,SNR=7.6	61.56 346	P	P	09 47 10.6 -0.3
T45A	Paducah baz=159	61.65 341	P	P	09 47 11.0 -0.6
Q54A	Coxs Mills baz=167,SNR=6.4	61.67 349	P	P	09 47 11.8 +0.2
Q53A	Leroy baz=166,SNR=8.8	61.67 348	P	P	09 47 11.9 +0.2
S47A	Hartford baz=161,SNR=15	61.69 343	P	P	09 47 10.9 -1.0
P57A	Homestead Farm baz=170	61.70 351	P	P	09 47 12.6 +0.8
R50A	Paris baz=163	61.71 346	P	P	09 47 11.4 -0.5
W39A	Magazine baz=153,SNR=16	61.72 336	P	P	09 47 12.5 +0.4
SNAA	Sanae	61.73 161	P	P	09 47 12.9 +1.1
SNAA	Sanae	61.73 161	P	P	09 47 12.9 +1.1
	comp=Z,59nm,0.6s,baz=282,slow=7.3,SNR=559				
SNAA			pP	pP	09 47 46.4 +4.8
	comp=Z,13nm,0.8s,baz=292,slow=6.8,SNR=1.3				
SNAA	Sanae comp=Z,89nm,0.9s	61.73 161	eP	P	09 47 11.8 0.0
SNAA	Sanae	61.73 161	d/P	P	09 47 12.8 +1.0
FCAR	Ozark Folk Cen comp=Z,17nm,1.0s	61.74 338	eP	P	09 47 11.3 -0.9
P56A	Dayton Farm, R baz=169	61.84 351	P	P	09 47 13.7 +0.9
R49A	Shelbyville comp=Z,10nm,0.8s	61.92 345	eP	P	09 47 12.1 -1.2
R49A	Shelbyville baz=162	61.92 345	P	P	09 47 12.6 -0.7
Q52A	Bidwell baz=166	61.92 348	P	P	09 47 12.8 -0.6
ABTX	Abilene, Hawle comp=Z,37nm,1.3s	61.95 330	eP	P	09 47 12.5 -1.2
ABTX	Abilene, Hawle baz=147,SNR=6.1	61.95 330	P	P	09 47 13.7 0.0
PBMO	Poplar Bluff comp=Z,29nm,1.1s	61.98 340	eP	P	09 47 11.7 -2.1
P55A	Reedsville baz=168,SNR=6.5	62.00 350	P	P	09 47 14.7 +0.8
S46A	Don Dixon Farm baz=160,SNR=5.4	62.01 343	P	P	09 47 12.8 -1.1
WCI	Wyandotte Cave comp=Z,20nm,0.7s	62.14 344	eP	P	09 47 13.9 -0.9
WCI	Wyandotte Cave	62.14 344	eP	P	09 47 13.9 -0.9
WCI			pmax	pmax	
	comp=Z,20nm,0.7s				
WCI	Wyandotte Cave baz=161	62.14 344	P	P	09 47 14.0 -0.8
MCWV	Mont Chateau baz=168,SNR=6.6	62.15 350	P	P	09 47 15.6 +0.7
Q50A	Georgetown baz=164	62.16 346	P	P	09 47 14.3 -0.6
R48A	Northridge Ran baz=162	62.19 344	P	P	09 47 14.3 -0.9
Q51A	Peebles baz=164	62.20 347	P	P	09 47 14.6 -0.6
P54A	Burton baz=168,SNR=11	62.20 349	P	P	09 47 15.7 +0.5
O60A	Telford baz=173	62.21 354	P	P	09 47 15.8 +0.6
P53A	Whipple baz=166,SNR=9.8	62.26 348	P	P	09 47 15.7 +0.1
R47A	Wooly Knot Far baz=161,SNR=6.6	62.26 344	P	P	09 47 14.6 -1.0
O57A	Amberson baz=170	62.37 352	P	P	09 47 17.1 +0.8
U40A	Yellville baz=154,SNR=12	62.41 338	P	P	09 47 16.2 -0.5
R46A	Gibon Southern baz=160	62.44 343	P	P	09 47 15.7 -1.1
S44A	Carbondale baz=158,SNR=8.1	62.46 341	P	P	09 47 16.3 -0.6
Q49A	Aurora baz=163	62.53 345	P	P	09 47 16.7 -0.7
P52A	Corning baz=166	62.54 348	P	P	09 47 17.3 -0.1
O56A	Blue Knob Stat baz=170	62.55 351	P	P	09 47 17.6 0.0
P51A	Williamsport baz=165	62.58 347	P	P	09 47 17.2 -0.5
O55A	Ligonier baz=169,SNR=6.1	62.60 350	P	P	09 47 18.5 +0.6
Q48A	North Vernon baz=162,SNR=5.8	62.66 345	P	P	09 47 17.5 -0.7
R45A	Skylar, Fairfi baz=159,SNR=10.0	62.73 342	P	P	09 47 17.8 -0.9
O54A	Avella baz=168	62.75 350	P	P	09 47 18.7 -0.2
SSPA	Standing Stone baz=170	62.82 352	P	P	09 47 19.3 0.0
Q47A	Bedord North L baz=161	62.84 344	P	P	09 47 18.6 -0.9
N59A	State Game Lan baz=172	62.84 354	P	P	09 47 20.3 +0.8
P50A	Jamestown baz=164	62.86 346	P	P	09 47 19.1 -0.4
N57A	Milroy baz=171	62.89 352	P	P	09 47 20.2 +0.4
O52A	Adamsville baz=166	62.95 348	P	P	09 47 20.1 -0.1
O53A	New Philadelph baz=167	62.96 349	P	P	09 47 20.4 +0.1
P49A	Miami Univ. Ec baz=163	62.99 346	P	P	09 47 19.5 -1.0
P48A	Milroy baz=162	63.09 345	P	P	09 47 19.9 -1.2
TUL1	Leonard baz=152	63.11 335	P	P	09 47 21.2 -0.1
N55A	Marion Center baz=169,SNR=9.9	63.12 351	P	P	09 47 21.9 +0.7
O51A	Pataskala baz=165,SNR=5.3	63.13 348	P	P	09 47 21.0 -0.4
N56A	West Decatur baz=170	63.15 351	P	P	09 47 21.7 +0.2
Q45A	Warren Harvey, baz=160,SNR=9.5	63.26 343	P	P	09 47 21.0 -1.2
ACSO	Alum Creek Sta comp=Z,24nm,0.9s	63.28 347	eP	P	09 47 21.2 -1.1
ACSO			epP	pP	09 47 54.7 +2.7
ACSO	Alum Creek Sta baz=165,SNR=5.0	63.28 347	P	P	09 47 22.0 -0.3
P47A	Martinsville baz=162,SNR=5.9	63.32 344	P	P	09 47 21.5 -1.1
O50A	Cable baz=164	63.34 347	P	P	09 47 21.8 -1.0
WMOK	Wichita Mounta baz=148	63.34 332	P	P	09 47 22.3 -0.6
CCM	Cathedral Cave comp=Z,27nm,1.0s	63.41 340	eP	P	09 47 22.5 -0.7
CCM	Cathedral Cave	63.41 340	eP	P	09 47 22.5 -0.7
CCM			pmax	pmax	
	comp=Z,27nm,1.0s				
CCM	Cathedral Cave baz=156	63.41 340	P	P	09 47 22.8 -0.5
N53A	Lisbon baz=167	63.44 349	P	P	09 47 23.6 +0.2
N54A	Moraine State baz=168,SNR=6.4	63.45 350	P	P	09 47 24.0 +0.6
O49A	Covington baz=164	63.53 346	P	P	09 47 23.4 -0.6
N52A	McGinn's Farm, baz=166	63.60 349	P	P	09 47 24.2 -0.2
M56A	Emporium baz=170	63.69 352	P	P	09 47 25.5 +0.4
P45A	Graceland, Par baz=160,SNR=7.1	63.74 343	P	P	09 47 24.1 -1.3
M55A	Ridgway baz=169	63.76 351	P	P	09 47 25.8 +0.3
O48A	Farmland baz=163	63.78 346	P	P	09 47 24.9 -0.8
N51A	Ashland baz=166	63.83 348	P	P	09 47 25.4 -0.6
N50A	Nevada baz=165	63.84 347	P	P	09 47 25.4 -0.6
M54A	Oil Creek Stat baz=168,SNR=6.8	63.93 350	P	P	09 47 26.7 +0.1
O47A	Sheridan baz=162,SNR=5.7	64.00 345	P	P	09 47 25.9 -1.2
M53A	WI Miller and baz=168	64.03 350	P	P	09 47 27.4 +0.2
MNTX	Cornudas Mount baz=142,SNR=32	64.07 325	P	P	09 47 27.3 -0.4
HRV	Adam Dziewonsk baz=177	64.11 357	P	P	09 47 28.2 +0.5
BINY	Binghamton baz=172	64.14 354	P	P	09 47 28.6 +0.7
M51A	Elyria baz=166	64.19 348	P	P	09 47 28.0 -0.3
N49A	Columbus Grove baz=164,SNR=6.2	64.20 347	P	P	09 47 27.6 -0.7
M52A	Chesterland baz=167	64.24 349	P	P	09 47 28.7 0.0
N48A	Decatur baz=163,SNR=5.1	64.33 346	P	P	09 47 28.2 -0.9
P43A	Skaggs, Pawnee baz=158,SNR=5.5	64.34 342	P	P	09 47 28.3 -1.0
SFIN	Lafayette baz=161	64.37 344	P	P	09 47 27.9 -1.6
O45A	Potomac baz=160,SNR=6.8	64.41 344	P	P	09 47 28.3 -1.4
L55A	Hinsdale baz=170	64.41 352	P	P	09 47 30.3 +0.5
M50A	Fremont baz=165	64.43 348	P	P	09 47 29.4 -0.4
L53A	Girard baz=168	64.46 350	P	P	09 47 30.2 +0.2
N47A	Urbana baz=162	64.50 345	P	P	09 47 29.4 -0.9
MSTX	Muleshoe baz=145,SNR=20	64.54 329	P	P	09 47 30.7 -0.3
ERPA	Erie baz=168	64.58 350	P	P	09 47 31.0 +0.2
L54A	Sinclairville baz=169,SNR=5.4	64.59 351	P	P	09 47 31.4 +0.5
PLIO	Pelee Island, baz=166	64.68 348	P	P	09 47 31.0 -0.4
M49A	Liberty Center baz=164	64.69 347	P	P	09 47 30.9 -0.6
N46A	Monticello baz=161,SNR=5.2	64.77 345	P	P	09 47 30.8 -1.2
AMTX	Amarillo baz=146	64.77 330	P	P	09 47 31.8 -0.6
K54A	Basiliko Farm, baz=170	64.87 351	P	P	09 47 31.4 -1.3
N45A	Kentland baz=161	64.92 344	P	P	09 47 31.0 -2.0
M47A	Cromwell baz=162	64.94 346	P	P	09 47 32.0 -1.2
L50A	Kingsville baz=165	65.00 348	P	P	09 47 32.5 -1.0
N44A	Piper City baz=160,SNR=5.2	65.03 343	P	P	09 47 32.4 -1.4
HDIL	Hopedale baz=159	65.12 342	P	P	09 47 33.2 -1.2
L48A	N Adams baz=164	65.23 347	P	P	09 47 34.2 -0.9
L49A	Milan baz=164	65.25 347	P	P	09 47 34.8 -0.4
K52A	Tillsonburg baz=168	65.34 350	P	P	09 47 35.5 -0.2
MEDO	Medina baz=170	65.38 352	P	P	09 47 35.9 -0.1
J55A	Hilton baz=170	65.40 352	P	P	09 47 36.2 +0.2
K51A	Iona Station baz=167	65.42 349	P	P	09 47 35.7 -0.5
L47A	Sherwood baz=163	65.43 346	P	P	09 47 35.3 -1.0
N43A	Stutzman Famil baz=159,SNR=6.4	65.45 343	P	P	09 47 35.5 -1.0
J54A	Appleton baz=170	65.51 352	P	P	09 47 36.8 0.0
TYNO	Tyneside baz=168	65.51 351	P	P	09 47 36.9 +0.1
STCO	Saint Catharin baz=169	65.52 351	P	P	09 47 37.1 +0.2
K50A	Casco baz=166	65.67 348	P	P	09 47 37.0 -0.9
L46A	Eue Claire baz=162	65.72 345	P	P	09 47 36.8 -1.3
N41A	Harden Midland baz=157	65.72 341	P	P	09 47 37.0 -1.2
J52A	Paris baz=168,SNR=6.0	65.75 350	P	P	09 47 38.2 -0.1
K49A	Clarkson baz=165	65.84 348	P	P	09 47 38.1 -0.9
M43A	Waltham Townsh baz=159	65.85 343	P	P	09 47 38.1 -0.9
PECO	Prince Edward baz=171	65.96 353	P	P	09 47 39.9 +0.3
K48A	Perry baz=164,SNR=7.4	65.99 347	P	P	09 47 39.1 -0.8
121A	Cookes Peak, D baz=140,SNR=28	66.01 324	P	P	09 47 42.0 +1.5
ACTO	Acton baz=168	66.05 351	P	P	09 47 40.1 -0.1
K47A	Vermontville baz=163	66.05 347	P	P	09 47 39.4 -0.9
N40A	Mertquake, Sal baz=157	66.10 341	P	P	09 47 39.8 -0.8
WLVO	Wesleyville baz=170	66.12 352	P	P	09 47 40.3 -0.3
I53A	Kortright Cn E baz=169	66.19 351	P	P	09 47 40.5 -0.6
KSU1	Kansas State U baz=152	66.22 336	P	P	09 47 41.1 -0.4
K46A	Dorr baz=162	66.24 346	P	P	09 47 40.2 -1.3
M41A	Milan baz=158	66.24 342	P	P	09 47 40.1 -1.4
PKRO	Pickering baz=169	66.25 351	P	P	09 47 41.8 +0.3
L44A	Lake County Fo baz=160	66.27 344	P	P	09 47 40.9 -0.8
I55A	Frankford baz=171	66.32 353	P	P	09 47 42.2 +0.2
J49A	Marlette baz=165	66.33 348	P	P	09 47 41.1 -0.9
I51A	Listowel baz=167,SNR=5.3	66.39 350	P	P	09 47 42.1 -0.3
J48A	Bridge Port baz=165	66.40 348	P	P	09 47 41.7 -0.8
LONY	Lake Ozonia baz=174	66.41 355	P	P	09 47 42.8 +0.2
L43A	Garden Prairie baz=160	66.49 343	P	P	09 47 42.4 -0.7
H56A	Elgin baz=172	66.53 354	P	P	09 47 43.7 +0.5

J47A	Sunmer	66.55	347	P	P	09 47 42.6	-0.8
	baz=164						
L42A	Oliver, Polo	66.57	343	P	P	09 47 42.7	-1.0
	baz=159						
H55A	Tweed	66.59	353	P	P	09 47 43.6	0.0
	baz=171						
DELO	Deloro Mine	66.61	353	P	P	09 47 43.6	-0.2
	baz=171						
BASO	Ashfield	66.70	349	P	P	09 47 44.2	-0.2
	baz=167						
BWLO	Walkerton	66.71	350	P	P	09 47 44.3	-0.2
	baz=167						
Y22D	IRIS PASSCAL I	66.72	326	P	P	09 47 46.2	+1.2
	baz=141						
PKME	Peaks-Kenny Pk	66.80	359	P	P	09 47 45.1	+0.1
	baz=179						
I49A	Point Hope	66.83	349	P	P	09 47 44.3	-0.9
	baz=166						
K43A	Burlington	66.87	344	P	P	09 47 44.8	-0.7
	baz=160,SNR=11						
BRCO	Bruce Peninsul	66.89	350	P	P	09 47 45.4	-0.1
	baz=167						
H52A	Wyevale	67.03	351	P	P	09 47 45.8	-0.7
	baz=169						
L40A	Anamosa	67.07	342	P	P	09 47 45.7	-1.0
	baz=157,SNR=7.1						
J45A	Montague	67.09	346	P	P	09 47 45.8	-1.1
	baz=162						
BANO	Bancroft	67.14	353	P	P	09 47 47.1	-0.1
	baz=170						
ANMO	Albuquerque	67.16	326	eP	P	09 47 47.9	+0.2
	comp=Z,15nm,0.9s						
ANMO	Albuquerque	67.16	326	deP	P	09 47 48.3	+0.5
ANMO				pmax	pmax		
	comp=Z,38nm,1.9s						
ANMO	Albuquerque	67.16	326	P	P	09 47 48.8	+1.0
	baz=142						
TASM	ASL Pad, Albuq	67.16	326	P	P	09 47 48.7	+0.9
	baz=142,SNR=25						
TASM	ASL Pad, Albuq	67.16	326	P	P	09 47 48.8	+0.9
	baz=142,SNR=24						
BMRO	Meriville Lake	67.19	350	P	P	09 47 46.3	-1.2
	baz=167						
CBKS	Cedar Bluff	67.20	334	P	P	09 47 47.9	+0.2
	baz=149						
K42A	Prairie Point,	67.20	343	P	P	09 47 47.1	-0.5
	baz=159,SNR=12						
G55A	Calabogie	67.23	353	P	P	09 47 48.0	+0.3
	baz=172						
I47A	Gladwin	67.24	347	P	P	09 47 46.9	-0.9
	baz=164						
I48A	Sherman Twp	67.24	348	P	P	09 47 47.3	-0.5
	baz=165						
ORIO	Orleans, Innes	67.31	354	P	P	09 47 48.5	+0.3
	baz=173						
G53A	Haliburton	67.33	352	P	P	09 47 48.4	0.0
	baz=170						
I46A	Reed City	67.36	347	P	P	09 47 47.3	-1.3
	baz=163						
LMN	Caledonia Moun	67.45	3	eP	P	09 47 48.1	-1.0
	comp=Z,23nm,0.8s						
J43A	Natural Harves	67.53	344	P	P	09 47 49.2	-0.5
	baz=160,SNR=8.9						
TUC	Tucson	67.53	322	eP	P	09 47 50.5	+0.5
	comp=Z,49nm,1.2s						
TUC	Tucson	67.53	322	eP	P	09 47 50.5	+0.5
TUC				pmax	pmax		
	comp=Z,49nm,1.2s						
TUC	Tucson	67.53	322	P	P	09 47 51.2	+1.2
	baz=138						
SCIA	State Center	67.54	340	eP	P	09 47 48.2	-1.5
	comp=Z,24nm,1.1s						
SCIA	State Center	67.54	340	P	P	09 47 48.9	-0.8
	baz=155						
JFWS	Jewell Farm	67.58	343	P	P	09 47 49.4	-0.6
	baz=158,SNR=7.3						
I45A	Fountain	67.62	346	P	P	09 47 49.5	-0.8
	baz=162						
J42A	Columbus	67.65	344	P	P	09 47 50.1	-0.3
	baz=159						
H48A	Harrisville	67.66	348	P	P	09 47 49.7	-0.7
	baz=165						
PEMO	Pembroke	67.71	353	P	P	09 47 50.7	0.0
	baz=171						
H47A	Mio	67.73	348	P	P	09 47 50.4	-0.5
	baz=164						
BUKO	Buck Lake	67.75	351	P	P	09 47 50.9	-0.1
	baz=169						
F55A	Otter Lake	67.77	354	P	P	09 47 51.4	+0.3
	baz=172						
KLBO	Killbear Provi	67.78	351	P	P	09 47 51.1	-0.1
	baz=168,SNR=6.3						
LIC	Lamto	67.84	73	eP	P	09 47 52.5	+0.2
	comp=Z,194nm,0.7s						
TOBO	Tobermory, Bru	67.85	350	P	P	09 47 51.3	-0.3
	baz=167						
H46A	Fife Lake	67.88	347	P	P	09 47 50.8	-1.0
	baz=163						
T25A	Trinidad	67.89	329	P	P	09 47 53.2	+0.9
	baz=144,SNR=7.6						
GLMI	Grayling	68.03	347	P	P	09 47 51.4	-1.3
	baz=164						
TIC	Toumodi	68.04	73	eP	P	09 47 54.0	+0.5
ALGO	Algonquin Park	68.08	353	P	P	09 47 52.8	-0.2
	baz=170						
F52A	Sundridge	68.08	352	P	P	09 47 53.2	+0.1
	baz=169						
I42A	Draeger Farm,	68.13	344	P	P	09 47 53.0	-0.4
	baz=160,SNR=9.0						
H45A	Beulah	68.14	346	P	P	09 47 52.6	-0.8
	baz=162						
KIC	Kosan Boka	68.16	73	eP	P	09 47 54.8	+0.5
	comp=Z,439nm,0.9s						
DBIC	Dimbokro	68.19	73	P	P	09 47 54.8	+0.3
	comp=Z,184nm,0.9s,baz=214,slow=6.5,SNR=80						
DBIC				S	S	09 56 43.3	-2.6
	comp=Z,18nm,1.1s,baz=78,slow=18,SNR=5.6						
DBIC				LR	LR	10 18 06.1	
	comp=Z,128nm,19.1s,baz=252,slow=36						
DBIC	Dimbokro	68.19	73	eP	P	09 47 55.1	+0.6
	comp=Z,251nm,0.9s						
DBIC	Dimbokro	68.19	73	eP	P	09 47 55.1	+0.6
DBIC				pmax	pmax		
	comp=Z,251nm,0.9s						
G47A	Hillman	68.22	348	P	P	09 47 53.5	-0.4
	baz=165						
F51A	Arnstein	68.29	351	P	P	09 47 53.4	-0.9
	baz=169						
QSPA	South Pole Qui	68.34	180	eP	P	09 47 56.2	+1.5
	comp=Z,254nm,1.2s						
H43A	Windswept, Lux	68.39	345	P	P	09 47 54.4	-0.6
	baz=161,SNR=8.7						
E53A	Dumoine, Ponti	68.45	353	P	P	09 47 55.6	+0.2
	baz=171						
E54A	Lac Daplat, Po	68.45	353	P	P	09 47 55.6	+0.2
	baz=171,SNR=8.0						
G45A	Suttons Bay	68.45	347	P	P	09 47 55.1	-0.3
	baz=163						
214A	Organ Pipe Nat	68.46	320	P	P	09 47 57.6	+1.8
	baz=136,SNR=52						
F49A	Sandfield	68.46	350	P	P	09 47 56.5	+1.1
	baz=166						
E52A	Mattawa	68.48	352	P	P	09 47 55.3	-0.1
	baz=170						
I41A	Arkdale	68.54	343	P	P	09 47 55.3	-0.6
	baz=159						
G46A	Petoskey	68.55	347	P	P	09 47 55.3	-0.7
	baz=164						
KSCO	Kaye Shedlock'	68.60	332	eP	P	09 47 57.4	+0.7
	comp=Z,18nm,0.8s						
KSCO	Kaye Shedlock'	68.60	332	P	P	09 47 57.4	+0.7
	baz=146,SNR=7.0						
H42A	Shiocton	68.61	345	P	P	09 47 55.9	-0.5
	baz=160,SNR=6.1						
F48A	Evansville	68.62	349	P	P	09 47 56.0	-0.4
	baz=166						
BGNE	Belgrade	68.80	336	P	P	09 47 57.8	+0.1
	baz=151,SNR=7.2						
E51A	G1948 Merrick	68.83	352	P	P	09 47 58.0	+0.3
	baz=169						
BATG	Bathurst New B	68.83	2	eP	P	09 47 58.6	+0.9
	comp=Z,42nm,1.0s						
SDCO	Great Sand Dun	68.89	329	eP	P	09 47 59.6	+0.9
	comp=Z,57nm,1.4s						
SDCO	Great Sand Dun	68.89	329	P	P	09 47 59.6	+0.9
	baz=143,SNR=49						
E50A	Wahnapitae	68.90	351	P	P	09 47 57.9	-0.2
	baz=168						
F46A	Macinaw City C	68.97	348	P	P	09 47 57.9	-0.7
	baz=164						
W18A	Petrified Fore	69.02	324	P	P	09 48 00.8	+1.4
	baz=139,SNR=27						
F45A	CMU Biological	69.04	347	P	P	09 47 58.5	-0.5
	baz=163						
LATQ	La Tuque	69.04	357	P	P	09 47 59.7	+0.8
	baz=176						
D54A	Lac Fusel, La	69.11	354	P	P	09 47 59.1	-0.3
	baz=172,SNR=7.7						
G43A	Wallace	69.11	345	P	P	09 47 58.8	-0.7
	baz=161						
D52A	ZEK Kipawa Sen	69.13	353	P	P	09 47 59.9	+0.3
	baz=170,SNR=5.9						
D53A	Lac Vacive, Po	69.14	353	P	P	09 48 00.0	+0.4
	baz=171,SNR=12						
E48A	Lockeyer	69.18	350	P	P	09 47 59.9	0.0
	baz=166,SNR=7.4						
E47A	Iron Bridge	69.34	349	P	P	09 48 00.6	-0.3
	baz=165						
D51A	Lot 18 Range I	69.36	352	P	P	09 48 01.2	+0.2
	baz=169						
G41A	Antigo	69.43	344	P	P	09 48 01.0	-0.4
	baz=160						
E46A	Sault Ste Mari	69.45	348	P	P	09 48 00.9	-0.6
	baz=164						
F44A	Big Bay de Noc	69.50	347	P	P	09 48 01.3	-0.5
	baz=162						
F43A	Flat Rock, Esc	69.53	346	P	P	09 48 01.4	-0.7
	baz=162,SNR=9.5						
S22A	4UR Ranch, Cre	69.54	328	P	P	09 48 03.7	+1.1
	baz=142,SNR=12						
E45A	Wooded Hills,	69.61	348	P	P	09 48 02.2	-0.3
	baz=164						
Q24A	Divide	69.70	330	P	P	09 48 04.6	+0.9
	baz=144,SNR=9.6						
G40A	Rib Lake	69.75	344	P	P	09 48 03.0	-0.4
	baz=159,SNR=7.3						
D49A	Beulah Townshi	69.82	350	P	P	09 48 03.9	+0.1
	baz=167,SNR=9.7						
D47A	Chapleau	69.90	349	P	P	09 48 03.8	-0.4
	baz=166,SNR=5.5						
D46A	Sault St. Mari	69.90	348	P	P	09 48 03.7	-0.6
	baz=165						
OGNE	Ogallala	69.95	333	P	P	09 48 03.4	-1.4
	baz=147						
MVCO	Mesa Verde	69.96	327	eP	P	09 48 06.1	+0.9
	comp=Z,58nm,1.3s						
MVCO	Mesa Verde	69.96	327	P	P	09 48 06.4	+1.2
	baz=141,SNR=31						
E43A	Lone Tree Farm	70.01	346	eP	P	09 48 04.3	-0.7
	comp=Z,8.6nm,0.8s						
E43A	Lone Tree Farm	70.01	346	P	P	09 48 04.5	-0.5
	baz=162,SNR=5.9						
G39A	Holcombe	70.02	343	P	P	09 48 04.5	-0.5
	baz=158,SNR=6.7						
WUAZ	Wupatki	70.21	324	eP	P	09 48 08.3	+1.6
	comp=Z,71nm,1.0s						
WUAZ	Wupatki	70.21	324	P	P	09 48 08.5	+1.8
	baz=138,SNR=51						
ECSD	EROS Data Cent	70.29	338	P	P	09 48 06.4	-0.4
	baz=152,SNR=9.7						
F40A	Park Falls	70.33	344	P	P	09 48 06.8	-0.1
	baz=159,SNR=26						
SPMN	Marine on St.	70.42	342	P	P	09 48 07.0	-0.6
	baz=156						
GLA	Glamis	70.44	320	eP	P	09 48 09.4	+1.4
	comp=Z,34nm,0.9s						
GLA	Glamis	70.44	320	eP	P	09 48 09.4	+1.4
GLA				pmax	pmax		
	comp=Z,34nm,0.9s						
GLA	Glamis	70.44	320	P	P	09 48 09.5	+1.6
	baz=135,SNR=14						
F39A	Loretta	70.54	343	P	P	09 48 07.8	-0.4
	baz=158,SNR=8.0						
ISCO	Idaho Springs	70.58	330	P	P	09 48 10.0	+0.9
	baz=144,SNR=15						
Y12C	Blythe	70.75	320	P	P	09 48 11.5	+1.8
	baz=135,SNR=18						
F37A	Hinrichs Farm,	70.83	342	P	P	09 48 09.7	-0.2
	baz=156,SNR=5.6						
F38A	Pierce - Schro	70.83	343	P	P	09 48 09.6	-0.4
	baz=157,SNR=6.6						
PDMCI	Parker Dam,Lak	70.91	321	P	P	09 48 12.1	+1.4
	baz=135,SNR=13						
PV03	Paradox Valley	70.94	327	eP	P	09 48 12.1	+1.0
	comp=Z,13nm,1.1s						
IKP	In-Ko-Pah, Jac	70.94	319	P	P	09 48 12.9	+1.8
	baz=134,SNR=21						
SWSC	Sam W. Stewart	70.95	319	P	P	09 48 12.7	+1.7
	baz=134,SNR=6.3						
PV07	Paradox Valley	70.97	327	eP	P	09 48 12.3	+1.0
	comp=Z,14nm,1.0s						
PV17	East Wray Mesa	71.01	327	eP	P	09 48 12.3	+0.8
	comp=Z,28nm,1.3s						
D41A	Chassel	71.02	345	eP	P	09 48 11.1	0.0
	comp=Z,22nm,0.8s						
D41A	Chassel	71.02	345	P	P	09 48 11.3	+0.2
	baz=160,SNR=11						
LSQQ	Lebel-sur-Quev	71.02	354	P	P	09 48 11.3	+0.3
	baz=172						
BC3	Big Chuckawall	71.23	320	P	P	09 48 14.4	+1.6
	baz=134,SNR=44						
MONP2	Monument Peak	71.30	319	P	P	09 48 15.1	+1.7
	baz=133,SNR=22						
BAR	Barrett	71.31	318	eP	P	09 48 14.8	+1.6
	comp=Z,47nm,0.9s						
E38A	The Farm, Brul	71.34	343	P	P	09 48 13.0	0.0
	baz=158						
U15A	North Rim	71.38	324	eP	P	09 48 15.8	+1.9
	comp=Z,63nm,1.1s						
IRM	Iron Mountain	71.40	320	P	P	09 48 15.4	+1.7
	baz=135,SNR=35						
NEE2	Needles Airpor	71.52	321	P	P	09 48 16.1	+1.7
	baz=135						
N23A	Red Feather La	71.61	331	P	P	09 48 16.2	+1.1
	baz=144,SNR=15						
CHGQ	Chibougamau	71.65	356	P	P	09 48 14.9	+0.1
	baz=174						
109C	Camp Elliot, M	71.72	318	P	P	09 48 16.8	+1.2
	baz=133						
SUSD	Miller	71.73	337	P	P	09 48 15.3	-0.1
	baz=150						
MATQ	Matagami	71.78	354	P	P	09 48 15.3	-0.3
	baz=171						
BELC	Belle Mtn. Jos	71.80	320	P	P	09 48 17.9	+1.6
	baz=134,SNR=23						
PFO	Pinyon Flats O	71.81	319	eP	P	09 48 17.7	+1.4
	comp=Z,36nm,1.1s						
PFO	Pinyon Flats O	71.81	319	eP	P	09 48 17.7	+1.4
PFO				pmax	pmax		
	comp=Z,35nm,1.1s						
PFO	Pinyon Flats O	71.81	319	P	P	09 48 18.1	+1.8
	baz=134,SNR=23						
C40A	Isle Royale Na	71.96	345	eP	P	09 48 15.5	-1.2
	comp=Z,10nm,0.8s						
C40A	Isle Royale Na	71.96	345	P	P	09 48 16.5	-0.2
	baz=160,SNR=6.0						
LDFC	Landfair	72.02	321	eP	P	09 48 19.7	+2.2
	comp=Z,85nm,1.1s						
O20A	White River Ci	72.09	329	P	P	09 48 19.2	+1.2
	baz=142,SNR=38						
GMRC	Granite Mounta	72.14	320	P	P	09 48 20.1	+1.8
	baz=134,SNR=70						
MURC	Murrieta	72.25	319	P	P	09 48 20.5	+1.6
	baz=133,SNR=11						
BBRC	Big Bear Solar	72.54	319	P	P	09 48 22.8	+2.0
	baz=133,SNR=10						
EYMN	Ely	72.56	344	P	P	09 48 19.7	-0.6
	baz=158,SNR=9.9						
HEC	Hector,Ludlow	72.57	320	P	P	09 48 22.7	+1.9
	baz=134,SNR=46						
SCI2	San Clemente I	72.68	317	P	P	09 48 22.7	+1.4
	baz=132,SNR=5.1						
TUQ	Turquoise Moun	72.75	321	P	P	09 48 23.4	+1.5
	baz=134						
CIS	Catalina Islan	72.88	318	P	P	09 48 24.0	+1.4
	baz=132,SNR=5.5						
BFSC	Mount Baldy Ra	72.97	319	P	P	09 48 24.6	+1.4
	baz=133,SNR=31						
PMOZ	Porto Moniz, M	72.98	43	eS	S	09 57 44.4	+3.4
FMP	Fort Macarthur	73.01	318	P	P	09 48 24.6	+1.3
	baz=132						
GSC	Goldstone, Bar	73.17	320	P	P	09 48 26.1	+1.8
	baz=134,SNR=26						
SHOC	Shoshone, Teco	73.27	321	P	P	09 48 26.0	+1.2
	baz=134,SNR=14						
K22A	Casper	73.28	331	P	P	09 48 25.9	+1.0
	baz=143,SNR=9.6						
DECC	Green Verdugo	73.39	318	P	P	09 48 27.2	+1.6
	baz=132						
RSSD	Black Hills	73.41	334	eP	P	09 48 26.4	+0.7
	comp=Z,16nm,1.1s						
RSSD	Black Hills	73.41	334	eP	P	09 48 26.4	+0.7
RSSD				pmax	pmax		
	comp=Z,16nm,1.1s						
RSSD	Black Hills	73.41	334	P	P	09 48 26.3	+0.7
	baz=146						
EDW2	Edwards Air Fo	73.61	319	P	P	09 48 28.1	+1.2
	baz=133,SNR=22						
BLG	Laguna Peak, P	73.75	318	P	P	09 48 29.0	+1.4
	baz=132						
LRMC	Laurel Mtn Rad	73.82	320	P	P	09 48 29.7	+1.6
	baz=133,SNR=23						
OSI	Osito Audit: C	73.87	318	P	P	09 48 29.6	+1.2
	baz=132						
TPNV	Topopah Spring	73.98	322	P	P	09 48 31.2	+2.1
	baz=134,SNR=45						
FURC	Furnace Creek,	74.01	321	P	P	09 48 30.9	+1.9
	baz=134,SNR=50						
SCZ2	Santa Cruz Isl	74.03	317	P	P	09 48 30.6	+1.3
	baz=131,SNR=5.9						
MPMC	Manual Prospec	74.10	320	P	P	09 48 31.2	+1.3
	baz=133,SNR=27						
AGMN	Agassiz Nation	74.10	341	P	P	09 48 29.0	-0.3
	baz=154,SNR=5.8						
ARVC	Arvin	74.28	319	P	P	09 48 32.0	+1.4
	baz=132						
SBC	Santa Barbara	74.37	318	P	P	09 48 32.2	+0.9
	baz=131						
ISA	Isabella, Lake	74.42	319	P	P	09 48 33.3	+1.7
	baz=132,SNR=40						
DUG	Dugway, Tooele	74.42	326	P	P	09 48 33.2	+1.6
	baz=138,SNR=25						
R11A	Troy Canyon, C	74.59	323	P	P	09 48 34.4	+1.8
	baz=135,SNR=45						
GRAC	Grapevine Rang	74.66	321	P	P	09 48 34.7	+1.8
	baz=134,SNR=11						
CWC	Cottonwood Cre	74.71	320	P	P	09 48 34.7	+1.4
	baz=133						
PKM	Mcpherson Peak	74.73	318	P	P	09 48 35.2	+1.7
	baz=131,SNR=32						
BW06	Boulder Array	74.75	330	P	P	09 48 34.1	+0.5
	baz=141,SNR=11						
PDAR	Pinedale Array	74.75	330	P	P	09 48 34.0	+0.5
	comp=Z,3.5nm,0.9s,baz=151,slow=6.6,SNR=28						
PDAR				pP	pP	09 49 05.2	+1.1
	comp=Z,2.7nm,0.8s,baz=126,slow=8.5,SNR=2.9						
PDAR				LR	LR	10 24 54.3	
	comp=Z,41nm,20.0s,baz=151,slow=38						
MDND	Maddock	74.90	339	P	P	09 48 34.6	+0.6
	baz=150,SNR=13						
VES	Vestal, Richgr	74.91	319	P	P	09 48 35.6	+1.4
	baz=132,SNR=15						
SMMC	Simmler	75.12	318	P	P	09 48 37.5	+1.9
	baz=131,SNR=20						
TIN	Tinemaha, Big	75.21	321	P	P	09 48 37.8	+1.7
	baz=133,SNR=5.6						
HVU	Hansel Valley	75.57	327	eP	P	09 48 38.9	+0.8
	comp=Z,26nm,1.0s						
HVU	Hansel Valley	75.57	327	eP	P	09 48 38.9	+0.8
HVU				pmax	pmax		
	comp=Z,27nm,1.0s						
SBA	Scott Base	75.60	190	eP	P	09 48 40.0	+2.4
	comp=Z,86nm,1.3s						
SBA	Scott Base	75.60	190	eP	P	09 48 40.1	+2.4
SBA				pmax	pmax		
	comp=Z,86nm,1.3s						
SNOW	Snow King Moun	75.85	329	eP	P	09 48 40.7	+0.9
	comp=Z,28nm,0.9s						
ULM	Lac du Bonnet	75.86	342	P	P	09 48 39.0	-0.3
	comp=Z,7.1nm,0.6s,baz=150,slow=4.8,SNR=7.6						
ULM				pP	pP	09 49 10.6	+0.8
	comp=Z,5.0nm,0.5s,baz=151,slow=5.6,SNR=2.2						
PPT2	Papeete2	75.89	257	eS	S	09 58 14.2	+0.2
	comp=Z,311nm,28.5s						
PPT2				eLQ	LQ	10 09 03.8	
	comp=Z,528nm,28.2s						
PPT2				eLR	LR	10 12 04.0	
	comp=Z,420nm,37.2s						
LOHW	Long Hollow	75.89	330	eP	P	09 48 40.5	+0.5
	comp=Z,29nm,1.2s						
SYO	Syowa Base	75.94	159	⇑iP	P	09 48 39.2	-0.5
SYO	Syowa Base	75.94	159	‖iPcP	PcP	09 48 49.2	-2.4
SYO	Syowa Base	75.94	159	‖epP	pP	09 49 05.2	-5.0
MLAC	Mammoth, Mammo	75.95	321	P	P	09 48 42.0	+1.5
	baz=133,SNR=8.1						
NV01	Mina Array Sit	76.18	322	eP	P	09 48 43.2	+1.4
NV01				epP	pP	09 49 13.4	+0.8
NVAR	Mina Array Bea	76.18	322	P	P	09 48 43.2	+1.4
	comp=Z,10nm,0.8s,baz=153,slow=6.8,SNR=79						
NVAR				pP	pP	09 49 13.4	+0.8
	comp=Z,5.3nm,0.8s,baz=149,slow=7.5,SNR=4.4						
IMW	Indian Meadow	76.26	330	eP	P	09 48 43.3	+1.1
	comp=Z,38nm,1.0s						
FLWY	Flagg Ranch	76.29	330	eP	P	09 48 43.8	+1.5
	comp=Z,61nm,1.0s						
SCHQ	Schefferville	76.38	1	P	P	09 48 42.5	+0.3
	comp=Z,6.1nm,0.8s,baz=181,slow=4.0,SNR=5.4						
SCHQ				pP	pP	09 49 13.8	+0.9
	comp=Z,16nm,1.1s,baz=182,slow=4.7,SNR=3.3						
SCHQ				LR	LR	10 24 02.3	
	comp=Z,48nm,21.1s,baz=40,slow=37						
LAO	LASA Array	76.39	334	P	P	09 48 43.5	+0.9
	baz=144,SNR=12						
RLMT	Red Lodge	76.44	331	P	P	09 48 44.3	+1.2
	baz=142,SNR=14						
H17A	Grant Village	76.47	330	P	P	09 48 45.4	+2.0
	baz=140,SNR=11						
VNDA	Vanda	76.62	190	P	P	09 48 45.4	+1.9
	comp=Z,20nm,0.9s,baz=133,slow=4.9,SNR=94						
VNDA				LR	LR	10 20 52.3	
	comp=Z,35nm,21.1s,baz=142,slow=34						
TOA1	Torodi Ar. Sit	76.84	70	eP	P	09 48 45.4	-0.3
TOA1				eS	S	09 58 22.1	-2.3
TORD	Torodi Ar. Bea	76.84	70	P	P	09 48 45.4	-0.3
	comp=Z,117nm,0.7s,baz=267,slow=3.8,SNR=211						
TORD				S	S	09 58 22.1	-2.3
	comp=Z,5.2nm,1.0s,baz=258,slow=11,SNR=13						
TORD				LR	LR	10 21 45.0	
	comp=Z,185nm,20.2s,baz=290,slow=35						
DGMT	Dagmar	77.06	336	P	P	09 48 47.3	+1.0
	baz=146,SNR=7.3						
GCMT	Greycliff	77.14	332	eP	P	09 48 48.0	+1.1
HLID	Hailey	77.70	328	eP	P	09 48 51.7	+1.6
	comp=Z,45nm,0.9s						
HLID	Hailey	77.70	328	P	P	09 48 51.9	+1.8
	baz=137,SNR=69						
SUR	Sutherland	77.82	120	eP	P	09 48 53.8	+2.6
	comp=Z,43nm,1.1s						
BOZ	Bozeman (W)	77.87	330	P	P	09 48 52.1	+1.1
	baz=140,SNR=19						
EGMT	Eagleton	78.91	333	P	P	09 48 57.0	+0.4
	baz=141						
TSUM	Tsumeb	79.30	106	eP	P	09 49 01.2	+1.7
	comp=Z,55nm,0.9s						
O03E	Paynes Creek	79.45	321	P	P	09 48 59.8	+0.1
	baz=131,SNR=16						
PLID	Pearl Lake	79.59	328	eP	P	09 49 01.7	+1.2
	comp=Z,47nm,0.9s						
MOD	Modoc Plateau	79.65	323	eP	P	09 49 02.0	+1.2
	comp=Z,45nm,1.1s						
MSO	Missoula	79.86	330	P	P	09 49 03.1	+1.3
	baz=138,SNR=8.5						
O02D	Mt. Diablo Mer	79.95	321	P	P	09 49 02.9	+0.6
	baz=130,SNR=7.2						
N02D	Trinity Center	80.41	321	P	P	09 49 05.0	+0.1
	baz=130,SNR=5.9						
M04C	Macdoel	80.44	322	P	P	09 49 06.1	+1.0
	baz=131,SNR=18						
M02C	Callahan	80.77	322	P	P	09 49 07.

MORF *i* LQ LQ 09 49 45.0
PTEO Sao Teotonio 81.34 44 *e*P **P 09 49 12.5 +2.8**
PTEO *i* LQ LQ 09 49 45.3
MDT Midelt 81.46 50 P **P 09 49 12.2 +1.5**
comp=Z,4.7nm,0.7s,baz=228,slow=4.3,SNR=11
MDT pP **pP 09 49 43.0 +1.1**
comp=Z,30nm,1.1s,baz=254,slow=6.8,SNR=11
J04D Umpqua Nationa 81.54 323 P **P 09 49 11.9 +1.0**
baz=131,SNR=8.3
FFC Flin Flon 81.58 341 *e*P **P 09 49 10.9 +0.3**
comp=Z,18nm,1.1s
FFC Flin Flon 81.58 341 *e*P **P 09 49 10.9 +0.3**
FFC pmax pmax
comp=Z,18nm,1.1s
PBDV Barranco-do-Ve 81.68 44 *e*P **P 09 49 12.2 +0.6**
PBDV *e*pP **pP 09 49 37.8 -5.0**
PBDV *i* LQ LQ 09 49 47.3
PBDV *e*S **SKSac 09 59 18.0 -2.8**
L02E Cave Junction 81.68 322 P **P 09 49 12.5 +1.0**
baz=130
PNCL Nicolau / Gran 81.80 43 *e*P **P 09 49 13.9 +1.8**
PNCL Nicolau / Gran 81.80 43 *e*PcP **PcP 09 49 18.3 +0.8**
PNCL *e*pP **pP 09 49 39.0 -4.3**
PNCL *i* LQ LQ 09 49 47.4
PNCL *e*S **SKSac 09 59 18.5 -3.0**
PMAFR Mafra 81.82 42 *i* LQ LQ 09 49 46.9
PMAFR *e*S **SKSac 09 59 21.9 +0.3**
PCVE Castro Verde 81.83 44 *e*P **P 09 49 14.1 +1.8**
PCVE Castro Verde 81.83 44 *e*PcP **PcP 09 49 18.0 +0.3**
PCVE *i* LQ LQ 09 49 47.0
I05D Terrebonne, OR 81.83 325 P **P 09 49 13.9 +1.6**
baz=132,SNR=22
MESJ Messejana 81.84 44 *e*P **P 09 49 12.9 +0.6**
MESJ AMb AMB 09 49 17.1
comp=Z,16nm,1.5s
MESJ *e*S **SKSac 09 59 18.4 -3.4**
PVAQ Vaqueiros 81.91 44 *e*P **P 09 49 14.6 +1.9**
comp=Z,29nm,1.6s
PVAQ Vaqueiros 81.91 44 *e*PcP **PcP 09 49 18.2 +0.2**
PVAQ Vaqueiros 81.91 44 *e*S **SKSac 09 59 25.9 +3.6**
PVAQ Vaqueiros 81.91 44 *e*P **P 09 49 13.6 +0.8**
comp=Z,12nm,1.0s
G06A Carlson Farm, 82.06 326 *e*P **P 09 49 15.0 +1.6**
comp=Z,26nm,1.2s
K02D Willamette Mer 82.06 322 P **P 09 49 14.9 +1.4**
baz=130,SNR=8.1
I04A Tendick Farm, 82.06 324 P **P 09 49 13.8 +0.4**
baz=131,SNR=8.2
PBEJ Beja 82.17 44 *e*P **P 09 49 16.8 +2.7**
PBEJ *i* LQ LQ 09 49 51.3
NEW Newport 82.39 329 *e*P **P 09 49 14.7 -0.4**
comp=Z,14nm,1.2s
NEW Newport 82.39 329 *e*P **P 09 49 14.7 -0.4**
NEW pmax pmax
comp=Z,14nm,1.2s
NEW Newport 82.39 329 P **P 09 49 15.2 +0.1**
baz=135,SNR=9.2
G05D Wamic, OR 82.42 325 P **P 09 49 17.0 +1.7**
baz=132,SNR=6.0
J01E Myrtle Point 82.51 322 P **P 09 49 15.1 -0.7**
baz=130
I03D Drain, OR 82.52 323 P **P 09 49 16.6 +0.8**
baz=130
PMTG Montargil 82.55 43 *e*P **P 09 49 17.6 +1.6**
PMTG Montargil 82.55 43 *e*PcP **PcP 09 49 21.4 +0.6**
PMTG *i* LQ LQ 09 49 51.5
PMTG *e*S **SKSac 09 59 28.3 +1.8**
BOSA Boshof 82.69 118 P **P 09 49 18.6 +1.2**
comp=Z,5.1nm,0.3s,baz=260,slow=4.5,SNR=18
H04D Lebanon 82.71 324 P **P 09 49 17.3 +0.5**
baz=131
PTOM Tomar 82.75 42 *e*P **P 09 49 18.6 +1.5**
PTOM *i* LQ LQ 09 49 52.0
F05D White Salmon 82.92 326 P **P 09 49 19.1 +1.3**
baz=132
I02D Swisshome 83.06 323 P **P 09 49 19.9 +1.4**
baz=130
PMRV Marv??o 83.28 43 *e*P **P 09 49 20.1 +0.2**
PMRV Marv??o 83.28 43 *e*PcP **PcP 09 49 24.5 +0.4**
PMRV *i* LQ LQ 09 49 54.5
G03D McMinnville, O 83.44 324 P **P 09 49 22.9 +2.4**
baz=130
PCBR Castelo Branco 83.47 43 *e*P **P 09 49 21.5 +0.7**
PCBR *i* LQ LQ 09 49 55.8
MTE Manteigas 83.75 42 *e*P **P 09 49 23.6 +1.3**
MTE *i* LQ LQ 09 49 57.5
MTE *e*S **SKKSac 09 59 42.6 +3.0**
MAW Mawson 83.80 163 P **P 09 49 23.5 +1.4**
comp=Z,50nm,0.9s,baz=218,slow=6.4,SNR=53
MAW LR LR 10 27 56.8
comp=Z,80nm,19.2s,baz=222,slow=36
E04D Cinebar 83.94 326 P **P 09 49 23.8 +0.8**
baz=131
POLO Lamas de Olo 84.16 41 *e*P **P 09 49 25.4 +1.0**
POLO Lamas de Olo 84.16 41 *e*PcP **PcP 09 49 28.5 +0.5**
POLO Lamas de Olo 84.16 41 *e*S **S 09 59 40.7 +0.8**
PCAB Cabril 84.22 41 *e*P **P 09 49 25.9 +1.3**
PCAB *e*pP **pP 09 49 51.9 -4.0**
PGAV Gavieira, Arco 84.22 40 *e*P **P 09 49 21.2 -3.5**
PGAV Gavieira, Arco 84.22 40 *e*S **SKKSac 09 59 44.8 +1.7**
D04E Lakebay 84.45 326 P **P 09 49 25.0 -0.5**
baz=131
MVO Moncorvo 84.51 42 *e*P **P 09 49 27.3 +1.2**
MVO *i* LQ LQ 09 50 01.6
MVO *e*S **SKKSac 09 59 47.6 +2.3**
B05A Bryant 84.82 327 P **P 09 49 27.4 +0.1**
baz=131,SNR=9.0
D03D Eldon 84.85 326 P **P 09 49 28.4 +0.9**
baz=131
PBRG Braganca 85.06 41 *e*P **P 09 49 29.9 +1.1**
PBRG *i* LQ LQ 09 50 03.8
PAB San Pablo 85.30 44 *e*P **P 09 49 31.3 +1.2**
comp=Z,20nm,1.0s
PAB San Pablo 85.30 44 *e*P **P 09 49 31.3 +1.2**
PAB pmax pmax
comp=Z,20nm,1.0s
A04D Lummi Island 85.42 327 P **P 09 49 31.1 +0.8**
baz=131
ESDC Sonseca Array 85.62 44 P **P 09 49 32.6 +0.9**
comp=Z,8.9nm,0.9s,baz=237,slow=5.5,SNR=21
ESDC pP **pP 09 50 04.3 +1.2**
comp=Z,23nm,1.0s,baz=237,slow=5.1,SNR=9.4
ESDC LR LR 10 25 37.4
comp=Z,40nm,19.7s,baz=245,slow=34
YKA Yellowknife Ar 91.74 340 P **P 09 50 00.5 +0.5**
comp=Z,29nm,0.7s,baz=133,slow=4.5,SNR=166
YKA pP **pP 09 50 33.4 +2.0**
comp=Z,14nm,0.8s,baz=137,slow=4.7,SNR=4.4
YKA LR LR 10 35 33.1
comp=Z,6.5nm,18.7s,baz=130,slow=38
YKB5 Yellowknife Ar 91.74 340 *e*P **P 09 50 00.5 +0.5**
YKB5 *e*pP **pP 09 50 33.4 +2.0**
CASY Casey 92.14 179 *e*P **P 09 50 03.8 +1.7**
comp=Z,103nm,1.0s
KEST Kesra 92.98 53 LR LR 10 34 46.5
comp=Z,141nm,18.2s,baz=292,slow=37
DLBC Dease Lake 94.83 332 *e*P **P 09 50 14.5 0.0**
comp=Z,12nm,1.0s
THZ Tophouse 95.19 221 *e*P **P 09 50 13.0 -3.7**
comp=Z,33nm,0.9s
SUMG Summit 96.31 9 *e*P **P 09 50 21.6 +0.3**
comp=Z,13nm,1.3s
SUMG Summit 96.31 9 *i* P **P 09 50 24.0 +2.7**
SUMG pmax pmax
comp=Z,26nm,1.2s
SUMG Summit 96.31 9 *i* P **P 09 50 24.0 +2.7**
comp=Z,26nm,1.2s
CLL Collm 101.47 39 *i* PP **PP 09 54 52.7 -3.1**
comp=Z,19nm,1.7s
CLL *e*SKSac SKSac 10 01 24.0 +11
CLL *e*SP **SP 10 03 42.0 -5.0**
CLL *e*(SS) 10 09 18.0
CLL L L 10 36 00.0
comp=Z,100nm,19.7s
INK Inuvik 101.50 340 P **Pdif 09 50 44.3 +0.2**
comp=Z,1.5nm,0.8s,baz=106,slow=6.7,SNR=5.1
INK pP pP 09 51 16.1 +0.3
comp=Z,6.7nm,1.2s,baz=145,slow=5.8,SNR=4.3
INK Inuvik 101.50 340 *e*Pdif **Pdif 09 50 43.7 -0.4**
EPYK Eagle Plains 101.63 337 P **Pdif 09 50 45.5 +0.7**
baz=118
MODS Modra-Piesok 103.11 43 *e*P **Pdif 09 50 51.1 -0.7**
MODS Modra-Piesok 103.11 43 *e*PDIF **Pdif 09 50 51.1 -0.7**
NB200 NORSAR Array S 103.90 30 *e*PP **PP 09 55 13.0 -0.8**
NOA NORSAR Array B 103.90 30 PP **PP 09 55 13.0 -0.8**
comp=Z,3.3nm,1.1s,baz=242,slow=7.5,SNR=3.5
HFS Hagfors 104.76 31 PP **PP 09 55 19.1 -1.1**
comp=Z,10nm,0.9s,baz=242,slow=3.1,SNR=11
ILAR Eielson Array 104.85 334 PP **PP 09 55 20.0 -0.8**
comp=Z,0.9nm,0.9s,baz=121,slow=4.3,SNR=3.8
ILB Eielson Array 104.85 334 *e*PP **PP 09 55 20.0 -0.8**
TOLK Toolik Lake Re 107.06 338 P **PKiK 09 55 18.0 +0.3**
baz=106
FIA0 FINESS Array S 110.96 31 *e*PKKPbc PKKPbc 10 06 23.8 -1.1
FINES FINESS Array B 110.96 31 PKKPbc PKKPbc 10 06 23.8 -1.1
comp=Z,3.0nm,1.0s,baz=12,slow=2.7,SNR=3.6
AKASG Malin Array Be 111.21 43 PKiKP **PKiKP 09 55 25.7 -0.2**
comp=Z,0.3nm,0.3s,baz=257,slow=2.6,SNR=4.9
AKASG PP **PP 09 56 04.4 -3.0**
comp=Z,4.8nm,0.9s,baz=259,slow=7.4,SNR=5.7
AKASG PKKPbc **PKKPbc 10 06 23.4 -0.3**
comp=Z,0.2nm,0.3s,baz=68,slow=3.5,SNR=4.6
AKASG PKKPab **PKKPab 10 06 31.9 +1.0**
comp=Z,0.2nm,0.3s,baz=61,slow=4.5,SNR=5.9
AKASG Malin Array Be 111.21 43 *i* PKIKP **PKiKP 09 55 25.1 -0.8**
AKBB Malin Array Si 111.21 43 *e*PKiKP **PKiKP 09 55 25.7 -0.2**
AKBB *e*PKKPbc **PKKPbc 10 06 23.4 -0.3**
AKBB *e*PKKPab **PKKPab 10 06 31.9 +1.0**
ARCES ARCESS Array B 111.56 22 PKKPbc PKKPbc 10 06 21.6 -1.5
comp=Z,4.2nm,0.9s,baz=72,slow=4.0,SNR=6.2
ARCES PKKPab **PKKPab 10 06 29.7 +1.0**
comp=Z,5.0nm,1.0s,baz=90,slow=4.9,SNR=5.6
BR101 Keskin Array S 112.49 55 *e*PKiKP **PKiKP 09 55 29.6 +0.8**
BR101 *e*PP **PP 09 56 14.9 -2.2**
BR101 *e*PKKPab **PKKPab 10 06 27.4 +1.5**
BRTR Keskin Array B 112.49 55 PKiKP **PKiKP 09 55 29.6 +0.8**
comp=Z,1.8nm,0.9s,baz=239,slow=0.8,SNR=8.5
BRTR PP **PP 09 56 14.9 -2.2**
comp=Z,7.2nm,1.0s,baz=242,slow=6.1,SNR=12
BRTR PKKPab **PKKPab 10 06 27.4 +1.5**
comp=Z,0.2nm,0.3s,baz=72,slow=4.0,SNR=4.5
OBN Obninsk 116.03 38 *i* PKIKP **PKiKP 09 55 35.1 +0.2**
OBN pmax pmax
comp=Z,11nm,1.0s
LPSR Galich'ya Gora 117.39 41 *e*PKIKP **PKiKP 09 55 37.8 +0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 117.52 43 *e*PKIKP **PKPdf 09 55 37.3 -0.7**
VSR pmax pmax
comp=Z,10.0nm,1.3s
STKA Stephens Creek 119.44 209 PKP **PKiKP 09 55 42.9 +0.4**
comp=Z,6.8nm,0.8s,baz=126,slow=5.8,SNR=7.9
STKA Stephens Creek 119.44 209 *e*PKPdf **PKiKP 09 55 42.6 +0.1**
KIV Kislovodsk 119.67 51 *i* PKIKP **PKPdf 09 55 42.4 -0.1**
KIV pmax pmax
comp=Z,28nm,1.0s
KBZ Khabaz 119.82 51 PKP **PKiKP 09 55 43.8 +1.1**
comp=Z,7.7nm,0.9s,baz=91,slow=0.7,SNR=15
KBZ pPKP **pPKPdf 09 56 16.7 +1.1**
comp=Z,3.9nm,0.8s,baz=158,slow=2.4,SNR=2.1
AKH Akhalkalaki 120.14 54 P **Pdif 09 52 09.8 +1.9**
AKH Akhalkalaki 120.14 54 *e*Pdif **Pdif 09 52 08.6 +0.7**
AKH Akhalkalaki 120.14 54 *e*P **Pdif 09 52 08.6 +0.7**
BGD Bogdanovka 120.21 54 P **Pdif 09 52 06.9 -1.3**
BGD S **Pdif 09 52 08.4 +0.2**
ZEI Tsey 120.51 52 *i* PKIKP **PKPdf 09 55 41.9 -2.4**
ZEI pmax pmax
comp=Z,5.0nm,0.7s
BILL Bilibino 123.09 339 *e*PKPdf **PKiKP 09 55 49.1 +0.6**
BILL Bilibino 123.09 339*c* *i*PKIKP **PKiKP 09 55 49.6 +1.2**
BILL pmax pmax
comp=Z,11nm,1.7s
CTAO Charters Tower 126.42 221 *e*PKPdf **PKPdf 09 55 55.8 -0.3**
CTAO Charters Tower 126.42 221 *e*PKIKP **PKPdf 09 55 55.8 -0.3**
ARU Arti 128.06 34 PKP **PKPdf 09 55 58.2 +0.2**
comp=Z,3.1nm,0.5s,baz=285,slow=2.1,SNR=13
ARU Arti 128.06 34 *e*PKPdf **PKiKP 09 55 58.8 +0.1**
ARU Arti 128.06 34 *i* PKIKP **PKiKP 09 55 59.0 +0.3**
ARU 09 57 58.8
ARU 10 03 00.8
TIXI Tiksi 129.22 353 PKP **PKPdf 09 55 59.9 +0.1**
comp=Z,7.8nm,0.9s,baz=22,slow=2.7,SNR=16
TIXI SKPbc SKPbc 09 59 10.8 0.0
comp=Z,5.3nm,0.9s,baz=36,slow=3.7,SNR=9.9
TIXI Tiksi 129.22 353*c* *i*PKIKP **PKPdf 09 56 00.0 +0.1**
TIXI pmax pmax
comp=Z,14nm,1.3s
AKTO Aktyubinsk 129.45 42 SKPbc SKPbc 09 59 12.4 +0.2
comp=Z,4.9nm,0.9s,baz=279,slow=2.8,SNR=6.8
AS31 Alice Springs 129.91 207 *e*PKPdf **PKPdf 09 56 02.7 -0.1**
ASAR Alice Springs 129.91 207 PKP **PKPdf 09 56 03.0 +0.3**
comp=Z,31nm,0.8s,baz=148,slow=2.3,SNR=126
NRIK Noril'sk 130.29 11 PKP **PKPdf 09 56 02.0 +0.1**
comp=Z,2.4nm,0.4s,baz=66,slow=1.9,SNR=5.2
NRIK SKPbc **SKPbc 09 59 14.9 +0.3**
comp=Z,2.9nm,0.5s,baz=40,slow=2.4,SNR=4.6
SEY Seymchan 130.69 337 PKP **PKPdf 09 56 03.2 +0.4**
comp=Z,19nm,0.8s,baz=90,slow=2.6,SNR=36
SEY SKPbc **SKPab 09 59 16.4 +0.1**
comp=Z,5.0nm,1.0s,baz=68,slow=2.2,SNR=4.2
SEY Seymchan 130.69 337*c* *i*PKIKP **PKiKP 09 56 04.5 +0.8**
GEYT Alibeck 131.41 58 PKP **PKiKP 09 56 05.7 -0.3**
comp=Z,3.4nm,0.7s,baz=256,slow=6.0,SNR=6.0
GEYT SKPbc **SKPab 09 59 20.1 -0.3**
comp=Z,6.2nm,0.9s,baz=265,slow=5.5,SNR=8.3
WB2 Warramunga Arr 132.98 210 *e*PKPdf **PKPdf 09 56 08.7 +0.1**
WR1 Warramunga Arr 132.98 210 *e*PKPdf **PKiKP 09 56 09.5 -0.3**
WR1 *e*SKPbc **SKPbc 09 59 26.1 +0.2**
WRA Warramunga Arr 132.98 210 PKP **PKiKP 09 56 09.5 -0.3**
comp=Z,27nm,0.8s,baz=183,slow=1.7,SNR=66
WRA SKPbc **SKPbc 09 59 26.1 +0.2**
comp=Z,10nm,1.0s,baz=179,slow=3.8,SNR=9.5
WRAB Tennant Creek 132.99 210 *e*PKPdf **PKPdf 09 56 08.6 0.0**
WRAB Tennant Creek 132.99 210*c* *i*PKIKP **PKiKP 09 56 09.6 -0.2**
WRAB pmax pmax
comp=Z,65nm,1.7s
PEA1 Petropavlovsk- 133.24 324 *e*PKPpre PKPpre 09 55 56.7
PEA1 *e*PKPdf **PKiKP 09 56 08.9 -0.3**
PETK Petropavlovsk- 133.24 324 PKhKP PKPpre 09 55 56.7
comp=Z,5.0nm,0.9s,baz=92,slow=5.0,SNR=6.5
PETK PKP **PKiKP 09 56 08.9 -0.3**
comp=Z,18nm,1.1s,baz=84,slow=6.1,SNR=13
MA2 Magadan 133.33 334 SKPbc **SKPbc 09 59 25.5 -0.1**
comp=Z,1.9nm,0.5s,baz=101,slow=4.2,SNR=5.1
MA2 Magadan 133.33 334 *e*PKPdf **PKPdf 09 56 07.5 -0.5**
MA2 *e*SKPbc **SKPbc 09 59 25.5 -0.1**
MA2 Magadan 133.33 334*c* *i*PKIKP **PKiKP 09 56 09.6 +0.4**
MA2 pmax pmax
comp=Z,22nm,1.7s
BRVK Borovoye 135.63 35 *e*PKPdf **PKPdf 09 56 12.0 -0.4**
BRVK Borovoye 135.63 35 *e*PKIKP **PKPdf 09 56 12.0 -0.4**
BVAR Borovoye Array 135.70 35 PKP **PKiKP 09 56 14.2 0.0**
comp=Z,5.2nm,0.8s,baz=284,slow=2.4,SNR=21
BVAR SKPbc **SKPbc 09 59 34.0 +0.5**
comp=Z,3.2nm,0.8s,baz=279,slow=3.9,SNR=7.3
PSA00 Pilbara Seismi 136.13 191 *e*PKPdf **PKPdf 09 56 15.0 +0.6**
YAK Yakutsk 138.01 348 *e*PKIKP **PKPdf 09 56 16.6 +0.1**
CHGR Chuyangaron 139.92 55 *e*PKPdf **PKPdf 09 56 20.1 -0.8**
MTN Manton Dam 140.65 211 *e*PKPdf **PKPdf 09 56 20.8 -2.1**
GAR Garm 140.73 55 *e*PKPdf **PKPdf 09 56 20.8 -1.7**
GAR Garm 140.73 55 *e*PKIKP **PKPdf 09 56 20.8 -1.7**
KURK Kurchatov 141.25 34 *e*PKPdf **PKiKP 09 56 24.5 -1.0**
KURK Kurchatov 141.25 34*c* *i*PKIKP **PKiKP 09 56 24.6 -1.0**
KURK pmax pmax
comp=Z,8.0nm,1.0s
ZAA1 Zalesovo Array 141.98 26 *e*PKPpre PKPpre 09 56 21.1
ZAA1 *e*PKPdf **PKPdf 09 56 25.5 +1.5**
ZAA1 *e*SKPbc **SKiKP 09 59 51.9 -0.6**
ZALV Zalesovo Beam 141.98 26 PKKPKP PKPpre 09 56 21.1
comp=Z,15nm,0.7s,baz=336,slow=3.2,SNR=7.1
ZALV PKP **PKPdf 09 56 25.5 +1.5**
comp=Z,16nm,0.6s,baz=294,slow=2.0,SNR=24
ZALV SKPbc **SKiKP 09 59 51.9 -0.6**
comp=Z,5.7nm,0.7s,baz=283,slow=2.7,SNR=6.2
AAK Ala-Archa 142.65 48 PKP **PKPdf 09 56 25.0 -0.8**
comp=Z,5.1nm,0.7s,baz=186,slow=2.6,SNR=8.9
AAK SKPbc **SKiKP 09 59 54.4 -0.2**
comp=Z,1.6nm,0.3s,baz=146,slow=3.7,SNR=4.4
AAK Ala-Archa 142.65 48 *e*PKPdf **PKPdf 09 56 24.0 -1.9**
AAK Ala-Archa 142.65 48*c* *i*PKIKP **PKPdf 09 56 24.9 -0.9**
AAK pmax pmax
comp=Z,9.0nm,1.0s
GENI Genyem 143.14 232 PKP **PKPdf 09 56 26.2 -1.1**
BOD Bodaibo 144.04 358 *e*PKIKP PKPbc 09 56 25.6 -0.2
BOD pmax pmax
comp=Z,40nm,1.2s
NIL Nilore 144.10 62 *e*PKPdf PKPbc 09 56 27.2 +0.4
NIL Nilore 144.10 62 *e*PKIKP PKPbc 09 56 27.3 +0.5
NRN Naryn 144.14 49 *e*PKPdf **PKPdf 09 56 28.0 -0.7**
YSS Yuzh-Sakhalins 144.63 323 *e*PKPdf **PKPdf 09 56 29.0 +0.1**
YSS Yuzh-Sakhalins 144.63 323 *e*PKIKP PKPbc 09 56 28.2 +0.3
YSS *e* 09 56 57.8
YSS pmax pmax
comp=Z,200nm,2.1s
YSS pmax pmax
comp=Z,80nm,0.9s
KSH Kashi 144.80 52 PKP **PKPdf 09 56 30.1 +0.5**
KSH pPKP pPKPdf 09 56 57.7 -4.9
KSH PP **PP 09 59 54.8 +6.7**
KSH SKS **SKSdf 10 03 27.4 -1.1**
KSH AMB AMB
comp=Z,380nm,5.5s
KSH LR LR
comp=Z,1μm,13.2s
KSH LR LR
comp=Z,610nm,12.9s
KSH LR LR
comp=Z,220nm,17.3s
MAKZ Makanchi 145.34 37 *e*PKPdf **PKPab 09 56 31.4 +0.9**
MAKZ Makanchi 145.34 37 *e*PKIKP **PKPab 09 56 31.4 +0.9**
MK32 Makanchi Array 145.52 37 *e*PKPdf **PKPab 09 56 31.7 +0.5**
MK32 *e*pPKPdf **pPKPdf 09 57 03.8 +0.2**
MKAR Makanchi Array 145.52 37 PKPbc **PKPab 09 56 31.7 +0.5**
comp=Z,17nm,0.7s,baz=310,slow=4.6,SNR=86
MKAR pPKPbc **pPKPdf 09 57 03.8 +0.2**
comp=Z,42nm,1.0s,baz=304,slow=2.8,SNR=4.8
ZEA Zeya 146.06 344 *e*PKP2 **PKPbc 09 56 31.9 -0.3**
ZEA pmax pmax
comp=Z,110nm,1.4s
BATI Baumata 146.08 201 PKP **PKPab 09 56 34.6 +0.4**
ASAJ Asahikawa 146.26 318 PKPbc **PKPab 09 56 33.7 -0.4**
comp=Z,58nm,0.8s,baz=262,slow=5.2,SNR=70
SOEI Soe 146.29 203 *e*PKPdf **PKPab 09 56 35.2 +0.1**
SOEI Soe 146.29 203 PKP **PKPab 09 56 35.5 +0.4**
ERM Erimo 146.93 315 *e*PKPbc **PKPbc 09 56 35.4 +0.3**
ERM Erimo 146.93 315*c* *i*PKIKP **PKPbc 09 56 34.3 -0.8**
ERM pmax pmax
comp=Z,144nm,1.0s
BAKI Biak 147.02 229 PKP **PKPab 09 56 37.8 -0.1**
GUMO Guam 147.51 261 PKPbc **PKPbc 09 56 37.2 -0.3**
comp=Z,470nm,1.1s,baz=180,slow=6.8,SNR=10
GUMO Guam 147.51 261 *e*PKPbc **PKPbc 09 56 36.4 -1.0**
MMRI Maumere 148.02 200 *e*PKPbc **PKPdf 09 56 36.5 +0.8**
FAKI Fak Fak 148.28 222 *e*PKPbc **PKPdf 09 56 37.8 +1.7**
FAKI Fak Fak 148.28 222 PKP **PKPdf 09 56 37.7 +1.6**
FAKI PKP **PKPbc 09 56 39.3 -0.3**
HYB Hyderabad 148.41 92 *i* PKP **PKPdf 09 56 38.0 +1.8**
KLR Kul'dur 148.43 335 PKP **PKPdf 09 56 36.0 +0.7**
comp=Z,21nm,0.9s,baz=38,slow=2.6,SNR=22
KLR PKPbc **PKPbc 09 56 39.5 +0.6**
comp=Z,21nm,0.9s,baz=27,slow=3.5,SNR=42
KLR pPKPbc **pPKPbc 09 57 11.8 +0.3**
comp=Z,15nm,1.1s,baz=68,slow=3.6,SNR=2.5
PLAI Plampang 148.95 191 PKP **PKPbc 09 56 41.3 0.0**
PLAI PKP **PKiKP 09 56 42.0 -0.6**
MOY Mondy 149.08 13 *e*PKIKP **PKPbc 09 56 38.8 -1.8**
MOY pmax pmax
comp=Z,76nm,1.8s
TEY Ternei 149.20 325 *e*PKIKP **PKPdf 09 56 37.7 +1.1**
TEY *e* 09 56 41.7
TEY pmax pmax
comp=Z,10.0nm,1.4s
TEY pmax pmax
comp=E,10.0nm,0.9s
TEY pmax pmax
comp=Z,30nm,1.6s
TLY Talaya 149.56 10 *e*PKPbc **PKPdf 09 56 39.3 +2.2**
TLY Talaya 149.56 10 *e*PKP2 **PKiKP 09 56 42.9 +0.2**
TLY pmax pmax
comp=Z,57nm,1.3s
JAGI Jajag, Banyuwa 149.78 185 *e*PKPbc **PKPdf 09 56 40.2 +1.7**
JAGI Jajag, Banyuwa 149.78 185 PKP **PKPbc 09 56 42.7 -0.6**
JAGI PKP **PKiKP 09 56 42.9 -1.4**
JAGI PKP **PKPab 09 56 43.8 -5.0**
AAI Ambon 149.97 214 PKP **PKPdf 09 56 40.5 +1.7**
AAI PKP **PKPbc 09 56 43.2 -0.6**
GMJI Gumukmas 150.02 183 PKP **PKPbc 09 56 41.6 -2.3**
GMJI PKP **PKiKP 09 56 43.1 -1.6**
WMQ Urumqi 150.35 37 *e*PKPbc **PKPdf 09 56 38.7 +0.1**
WMQ LR LR
comp=Z,270nm,29.9s
WMQ LR LR
comp=Z,300nm,24.5s
WMQ LR LR
comp=Z,170nm,26.3s
UGM Wanagama 150.39 177 *e*PKPbc **PKPbc 09 56 44.5 -0.3**
UGM Wanagama 150.39 177 PKP **PKPbc 09 56 43.7 -1.1**
UGM PKP **PKiKP 09 56 44.1 -1.5**
CISI Cisompet, Garu 150.51 172 *e*PKPdf **PKPdf 09 56 40.5 +0.8**
CISI *e*PKPbc **PKiKP 09 56 46.0 +0.1**
CISI Cisompet, Garu 150.51 172 PKP **PKPbc 09 56 43.9 -1.3**
CISI PKP **PKiKP 09 56 45.1 -0.8**
CISI PKP **PKiKP 09 56 46.0 +0.1**
ZAK Zakamensk 150.75 11 *e*PKIKP **PKPdf 09 56 40.5 +1.5**
ZAK pmax pmax
comp=Z,14nm,1.2s
SMRI Semarang 151.25 177 *e*PKPbc **PKPdf 09 56 42.8 +2.0**
SMRI *e*PKPab **PKiKP 09 56 48.3 +1.0**
BKSI Bulukumba 151.79 198 PKP **PKPbc 09 56 46.0 -2.0**
BKSI PKP **PKiKP 09 56 48.0 -0.4**
BKSI PKP **PKPdf 09 56 49.1 +7.5**
USRK Ussuriysk Ar. 152.16 328 PKP **PKPdf 09 56 41.8 +0.6**
comp=Z,4.3nm,0.8s,baz=247,slow=2.9,SNR=13
USRK PKPbc **PKiKP 09 56 48.9 +0.6**
comp=Z,33nm,0.9s,baz=302,slow=1.8,SNR=41
USRK pPKPbc **pPKPbc 09 57 21.0 +0.2**
comp=Z,9.1nm,1.0s,baz=64,slow=4.4,SNR=1.9
MJAR Matsushiro Ar 152.81 308 PKPbc **PKPbc 09 56 49.9 +0.1**
comp=Z,20nm,0.9s,baz=97,slow=1.5,SNR=40
MAJO Matsushiro 152.81 308 *e*PKPdf **PKPdf 09 56 39.6 -2.9**
MAJO *e*PKPbc **PKPbc 09 56 49.7 0.0**
MAJO *e*PKPab **PKPab 09 57 01.3 +0.2**
PYUN Piuthan 153.18 71 *e*P **PKPdf 09 56 44.2 +0.7**
SONA0 Songino Array 153.71 8 *e*PKPdf **PKPdf 09 56 44.0 +0.5**
SONA0 *e*PKPab **PKPab 09 57 06.2 +1.6**
SONM Songino Array 153.71 8 PKP **PKPdf 09 56 44.0 +0.5**
comp=Z,7.9nm,0.9s,baz=339,slow=0.2,SNR=22
SONM PKPab **PKPab 09 57 06.2 +1.6**
comp=Z,6.7nm,0.8s,baz=325,slow=3.4,SNR=7.5
KOLN Koldanda 153.76 71 *e*P **PKPdf 09 56 44.7 +0.3**
ULN Ulaanbaatar 153.77 7 *e*PKPdf **PKPdf 09 56 38.9 -4.8**
ULN *e*PKPbc **PKPbc 09 56 51.2 -0.4**
ULN *e*PKPab **PKPab 09 57 06.5 +1.6**
ULN Ulaanbaatar 153.77 7 *e*PKIKP **PKPdf 09 56 38.9 -4.8**
ULN *e* 09 57 06.5
DANN Dangsing 153.82 70 *e*P **PKPdf 09 56 45.6 +1.1**
TNTI Ternate 154.14 218 *e*PKPbc **PKPbc 09 56 49.7 -3.6**
TNTI *e*PKPab **PKPab 09 57 08.1 +1.0**
CN2 Changchun 155.36 336 *e*PKP **PKPdf 09 56 49.5 +3.7**
PKI Pulchoki 155.38 71 *e*P **PKPdf 09 56 47.0 +0.2**
GUN Gumba 155.74 70 *e*P **PKPdf 09 56 47.6 +0.3**
comp=Z,42nm,0.8s
RAMN Ramite 156.50 72 *e*P **PKPdf 09 56 48.9 +0.7**
MPSI Mapaga 157.21 201 PKP **PKPdf 09 56 53.9 +4.8**
MPSI PKP PKPab 09 57 03.9 -16
PSI Prapat 157.29 145 *e*PKPdf **PKPdf 09 56 45.8 -3.6**
PSI *e*PKPab **pPKPdf 09 57 21.9 -0.5**
PSI Prapat 157.29 145 *e*PKIKP **PKPdf 09 56 45.8 -3.6**
PSI *e* 09 57 21.9
KSRS Korea Array 159.13 322 PKP **PKPdf 09 56 51.7 +1.0**
comp=Z,10.0nm,0.9s,baz=54,slow=0.9,SNR=48
KSRS PKPab **PKPab 09 57 26.7 -1.4**
comp=Z,7.4nm,1.0s,baz=38,slow=3.4,SNR=12
KSRS pPKPab **pPKPab 09 58 03.4 +3.6**
comp=Z,2.0nm,0.6s,baz=63,slow=5.1,SNR=2.6
KS15 Wonju Array Si 159.16 322 *e*PKPab **PKPab 09 57 26.7 -1.5**
KS15 epPKPab **pPKPab 09 58 03.4 +3.4**
KSM Kuching 159.69 176 *e*PKPab **PKPab 09 57 32.0 +1.0**
GTA Gaotai 159.72 28 ||PKP **PKPdf 09 56 52.9 +1.4**
GTA pPKP pPKPdf 09 57 21.8 -2.9
GTA sPKP 09 57 32.8
GTA PKPab **sPKPdf 09 57 35.7 -1.5**
GTA LR LR
comp=Z,67nm,18.1s
GTA LR LR
comp=Z,65nm,19.0s
GTA LR LR
comp=Z,43nm,19.0s
SBUM Sibu 160.71 181 *e*PKPab **PKPab 09 57 36.8 +1.4**
HHC Hu-ho-hao-te 161.06 1 *e*PKP **PKPdf 09 56 53.3 +0.4**
BTO Baotou 161.24 4 *e*PKP **PKPdf 09 56 53.8 +0.7**
SURA Surathani 162.79 135 PKP **PKPdf 09 56 51.8 -3.5**
LZH Lanzhou 164.21 24 *e*PKP **PKPdf 09 56 56.5 +0.2**

LZH			pPKP	pPKPdf	09 57 22.0	-7.5
LZH			sPKP		09 57 33.8	
LZH			LR	LR		
	comp=Z,150nm,18.5s					
LZH			LR	LR		
	comp=Z,170nm,18.3s					
LZH			LR	LR		
	comp=Z,230nm,20.1s					
TIA	**Tai'an**	**164.96 343**	PKP	**PKPdf**	**09 56 58.0**	**+1.3**
CM31	**Chiang Mai Arr**	**167.45 103**	*e*PKPdf	**PKPdf**	**09 57 00.1**	**+0.9**
CM31			*e*PKPab	**PKPab**	**09 58 06.2**	**+1.0**
CM31			*e*PP	**PP**	**10 01 57.9**	**+3.7**
CMAR	**Chiang Mai Arr**	**167.45 103**	PKP	**PKPdf**	**09 57 00.1**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=259,slow=2.0,SNR=19					
CMAR			PKPab	**PKPab**	**09 58 06.2**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=255,slow=6.4,SNR=2.8					
CMAR			PP	**PP**	**10 01 57.8**	**+3.7**
	comp=Z,1.4nm,0.5s,baz=262,slow=6.3,SNR=5.7					
CHTO	**Chiang Mai**	**167.56 102**	*e*PKPdf	**PKPdf**	**09 56 59.9**	**+0.7**
CHTO			*e*PKPab	**PKPab**	**09 58 05.4**	**-0.4**
CHTO	**Chiang Mai**	**167.56 102**	*e*PKIKP	**PKPdf**	**09 56 59.9**	**+0.7**
CHTO			*e*		09 58 05.4	
CMMT	**Chiang Mai**	**167.56 102**	PKP	**PKPdf**	**09 57 00.5**	**+1.3**
XAN	**Xi'an**	**167.60 11**	*e*PKPdf	**PKPdf**	**09 56 59.4**	**+0.5**
XAN			*e*PKPab	**PKPab**	**09 58 01.6**	**-3.7**
XAN	**Xi'an**	**167.60 11**	*e*PKIKP	**PKPdf**	**09 56 59.4**	**+0.5**
XAN			*e*		09 58 01.6	
NJ2	**Nanjing**	**168.06 330**	*e*PKP	**PKPdf**	**09 56 59.2**	**0.0**
LAMP	**Lampang**	**168.09 104**	PKP	**PKPdf**	**09 57 02.9**	**+3.3**
CD2	**Chengdu**	**168.45 37**	PKP	**PKPdf**	**09 56 59.0**	**-0.6**
PBKT	**Sadao Pong**	**168.49 115**	PKP	**PKPdf**	**09 57 01.6**	**+1.7**
WHN	**Wuhan**	**171.05 346**	PKP	**PKPdf**	**09 57 02.2**	**+1.2**
KMI	**Kunming**	**171.06 67**	PKP	**PKPdf**	**09 57 00.8**	**-0.7**
SSLB	**Suanglung**	**171.35 285**	*e*PKPdf	**PKPdf**	**09 56 59.9**	**-1.5**
SSLB			*e*PKPab	**PKPab**	**09 58 19.5**	**-3.0**
GYA	**Guiyang**	**173.44 45**	PKP	**PKPdf**	**09 57 02.4**	**0.0**
GYA			pPKP	pPKPdf	09 57 30.0	-5.5
GYA			sPKP		09 57 39.2	
GYA			PKPab	**PKPab**	**09 58 32.4**	**+0.8**
GYA			PKS	**PKSdf**	**10 00 32.6**	**-2.2**
GYA			AMB	AMB		
	comp=Z,120nm,8.3s					

SOME ***11*** *09:57:45.1,40°.87N×71°.77E,h20km*
KRNET ***11*** *09:57:46.0±0.1,40°.96N×71°.75E,h18km,mb2.6*
NNC ***11*** *09:57:50.0±3.1,41°.10N×71°.79E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=27.5km s-min=11.1km az=7.0

ISC 11 09:57:45.1±1.2,40°.93N±0°.04×71°.81E±0°.03,h13km±14km, n20,σ1§49/35,20C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.88**	**8**	⇑*i*P	**Pb**	**09 58 02.1**	**-0.2**
	baz=12						
ARK				⇑*i*S	**Sg**	**09 58 13.7**	**0.0**
	baz=12						
ARSB	**Arslanbob**	**0.97**	**65**	⇑*i*P	**Pg**	**09 58 05.2**	**+1.3**
	baz=68						
ARSB				⇑*i*S	**Sg**	**09 58 18.3**	**+1.7**
	baz=68						
BTK	**Batken**	**1.15**	**221**	⇑*i*P	**Pb**	**09 58 07.4**	**+0.5**
	baz=19						
BTK				⇑*i*S	**Sg**	**09 58 23.4**	**+1.1**
	baz=19						
IUG	**Iuzhnay**	**1.81**	**313**	P	**Pb**	**09 58 18.4**	**+0.2**
	37nm,0.2s						
IUG				S	**Sg**	**09 58 42.2**	**-1.1**
	148nm,0.3s						
IUG	**Iuzhnay**	**1.81**	**313**	*e*P	**Pb**	**09 58 18.4**	**+0.2**
	37nm,0.2s						
IUG				*e*S	**Sg**	**09 58 42.2**	**-1.1**
	148nm,0.3s						
AML	**Almayashu**	**1.86**	**49**	⇑*i*P	**Pb**	**09 58 20.1**	**+0.9**
	baz=51						
AML				⇑*i*S	**Sg**	**09 58 45.3**	**+0.3**
	baz=51						
MRKS	**Merke**	**2.10**	**30**	Pg	**Pg**	**09 58 24.9**	**-0.6**
	21nm,0.3s						
MRKS				Lg	Lg	09 58 53.1	
	34nm,0.4s						
MRKS	**Merke**	**2.10**	**30**	*e*P	**Pg**	**09 58 24.9**	**-0.6**
	21nm,0.3s						
MRKS				*e*S	**Sg**	**09 58 53.1**	**+0.3**
	34nm,0.4s						
ARLS	**Aral**	**2.11**	**63**	⇓*i*P	**Pb**	**09 58 24.7**	**+1.4**
	baz=64						
ARLS				⇓*i*S	**Sg**	**09 58 52.5**	**-0.5**
	baz=64						
EKS2	**Erkin-Say**	**2.27**	**40**	⇑*i*P	**Pb**	**09 58 26.4**	**+0.3**
	baz=41						
EKS2				⇑*i*S	**Sb**	**09 58 55.3**	**+1.1**
	baz=41						
KK31	**Karatay Array**	**2.38**	**336**	⇑Pn	**Pb**	**09 58 28.1**	**+0.2**
	2.1nm,0.4s,baz=148,slow=16,SNR=14						
KK31				⇑Sn	**Sb**	**09 58 58.5**	**+1.3**
	18nm,0.5s,baz=148,slow=29,SNR=17						
UCH	**Uchtor**	**2.41**	**56**	⇑*i*P	**Pb**	**09 58 29.0**	**+0.4**
	baz=58						
UCH				⇑*i*S	**Sb**	**09 59 00.2**	**+1.8**
	baz=58						
AAK	**Ala-Archa**	**2.64**	**49**	⇑Pn	**Pb**	**09 58 32.9**	**+0.6**
	3.6nm,0.7s						
AAK				⇑Lg	Lg	09 59 09.5	
	10nm,0.8s						
KZA	**Kyzart**	**2.83**	**65**	⇑*i*P	**Pb**	**09 58 35.1**	**-0.6**
	baz=66						
KZA				⇑*i*S	**Sb**	**09 59 10.5**	**+0.1**
	baz=66						
NRN	**Naryn**	**3.20**	**80**	⇑*i*P	**Pb**	**09 58 39.7**	**-2.4**
	baz=80						
NRN				⇑*i*S	**Sb**	**09 59 18.8**	**-2.3**
	baz=80						
TKM2	**Tokmak 2**	**3.46**	**54**	⇓Pn	**Pb**	**09 58 48.1**	**+1.8**
	1.7nm,0.5s						
TKM2				⇓Lg	Lg	09 59 34.4	
	2.0nm,0.3s						
DGS	**Degeres**	**3.75**	**51**	Pg	**Pb**	**09 58 54.5**	**+3.3**
	2.9nm,0.4s						
DGS				Lg	Lg	09 59 43.6	
	8.4nm,0.5s						
DGS	**Degeres**	**3.75**	**51**	*e*P	**Pb**	**09 58 54.5**	**+3.3**
	2.9nm,0.4s						
DGS				*e*S	**Sg**	**09 59 43.6**	**-1.9**
	8.4nm,0.5s						
KST	**Kastek**	**3.75**	**54**	Pg	**Pg**	**09 58 54.9**	**-2.0**
	3.2nm,0.3s						
KST				Lg	Lg	09 59 44.3	
	4.3nm,0.8s						
KST	**Kastek**	**3.75**	**54**	*e*P	**Pg**	**09 58 54.9**	**-2.0**
	3.2nm,0.3s						
KST				*e*S	**Sg**	**09 59 44.3**	**-1.2**
	4.3nm,0.8s						

MAN 11 10:06:20.2,6°.06N×125°.65E,h90km,mb3.9,ML2.7,MS2.2, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.70**	**272**	⇑*i*P	Pn	10 06 35.2	-1.6
DMPH	**Davao City--Mi**	**1.02**	**352**	⇑*e*P	Pn	10 06 40.5	+0.3
DMPH				*e*S	Sn	10 06 57.3	+2.1

NNC ***11*** *10:34:51.6±4.7,53°.59N×88°.14E,h0km,mb3.9,mpv3.6,*
Error ellipse: s-maj=40.1km s-min=18.4km az=56.0,
Suspected Mining explosion.

ASRS 11 10:34:50.9,53°.59N×87°.96E,M3.4,5C-7D,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.90**	**282**	⇑Pn	Pb	10 35 26.4	0.0
	3.7nm,0.7s						
ZAA0				⇑Sn	Sg	10 35 53.1	+1.2
	6.7nm,0.7s						
KURK	**Kurchatov**	**6.43**	**247**	⇑Pn	Pn	10 36 29.2	+2.4
	4.3nm,0.6s						
KURK				⇑Lg	Lg	10 38 19.0	
	9.8nm,0.8s						
KURBB	**Kurchatov Arra**	**6.52**	**247**	⇓Pn	Pn	10 36 30.9	+2.8
	11nm,0.7s						
KURBB				⇓Lg	Lg	10 38 21.3	
	13nm,0.7s						
MK31	**Makanchi Array**	**7.71**	**210**	⇓Pn	Pn	10 36 48.1	+3.7
	2.5nm,0.7s,baz=26,slow=12,SNR=26						
MK31				⇑Sn	Sn	10 38 13.9	+1.5
	1.9nm,0.8s,baz=36,slow=23						
MK31				⇓Lg	Lg	10 38 59.8	
	9.6nm,0.9s,baz=34,slow=32,SNR=7.1						
MAKZ	**Makanchi**	**7.79**	**212**	⇓Pn	Pn	10 36 49.5	+3.9
	2.6nm,0.7s						
MAKZ				⇓Sn	Sn	10 38 17.2	+2.8
	2.0nm,0.8s						
MAKZ				⇓Lg	Lg	10 39 01.4	
	3.6nm,0.9s						

MAN 11 10:34:51.6,11°.39N×124°.62E,h2km,mb4.2,ML3.0,MS2.6, 1C,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.33**	**182**	*e*P	Pg	10 34 58.8	+0.9
PLP	**Palo**	**0.42**	**122**	⇑*e*P	Pn	10 35 09.4	+4.8
BESP	**Borongan**	**0.83**	**75**	*e*P	Pg	10 35 07.2	-0.3
BESP				*e*S	Sn	10 35 23.9	+0.8
CNP	**Catarman**	**1.12**	**2**	*e*P	Pg	10 35 12.7	-0.3
CNP				*e*S	Sn	10 35 30.6	+0.3
MSLP	**Maasin**	**1.27**	**169**	*e*P	Pn	10 35 16.6	+0.4
MSLP				*e*S	Sn	10 35 34.0	+0.2

DJA 11 10:44:11.1±0.9,10°S±6°×10°9E±°,h10km,M4.1/7, MLv4.1/7,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**2.45**	**24**	P	Pn	10 44 52.0	+0.8
YOGI				S	Sn	10 45 22.1	+0.8
UGM	**Wanagama**	**2.47**	**30**	P	Pn	10 44 50.8	-0.7
UGM				S	Sn	10 45 22.4	+0.6
CISI	**Cisompet, Garu**	**2.89**	**330**	P	Pn	10 44 57.0	-0.2
CISI				S	Sn	10 45 32.4	+0.3
PWJI	**Pagerwojo**	**3.22**	**51**	P	Pn	10 44 59.7	-2.0
PWJI				S	Sn	10 45 37.5	-2.7
NGJI	**Ngawi**	**3.44**	**39**	P	Pn	10 45 07.1	+2.3

KRSC ***11*** *10:56:34.8±1.8,53°.90N×153°.34E,h660km±25km,ML5.3*
BJI ***11*** *10:56:36.0±0.0,54°.12N×152°.92E,h631km,mb4.8/48, mB4.6/32*
ISCJB ***11*** *10:56:36.9±0.1,54°.17N±0°.02×152°.94E±0°.02, h636km±1km,mb4.7/592,Error ellipse: s-maj=3.0km s-min=1.6km az=165.8*
MOS ***11*** *10:56:36.6±0.8,54°.18N×152°.96E,h630km,mb4.9/91, Error ellipse: s-maj=5.9km s-min=3.9km az=94.3*
IDC ***11*** *10:56:38.4±0.4,54°.18N×152°.88E,h636km±4km,mb4.2/38, mb1 4.4/43,mb1mx4.3/50,mbtmp5.3/43,Error ellipse: s-maj=6.0km s-min=4.9km az=151.0*
NEIC ***11*** *10:56:38.4±1.9,54°.12N×152°.96E,h640km±4km, mb4.8/534,Error ellipse: s-maj=11.6km s-min=10.2km az=153.0*

ISC 11 10:56:37.6±0.3,54°.08N±0°.03×152°.99E±0°.03,h634km±3km, h632km:pP-P,n1810,σ1§13/2082,mb4.8/599,39C-109D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**2.74**	**113**	*e*P	**P**	**10 57 57.4**	**-0.8**
APC				*e*S	**S**	**10 59 02.2**	**-1.8**
APC	**Apacha**	**2.74**	**113**	P	**P**	**10 57 57.4**	**-0.8**
APC				S	**S**	**10 59 02.2**	**-1.8**
GNL	**Ganaly**	**2.95**	**96**	*i* P	**P**	**10 57 58.8**	**-0.6**
GNL				*e*S	**S**	**10 59 04.8**	**-1.5**
GNL	**Ganaly**	**2.95**	**96**	P	**P**	**10 57 58.8**	**-0.6**
GNL				S	**S**	**10 59 04.8**	**-1.5**
PEA1	**Petropavlovsk-**	**2.97**	**107**	*e*P	**P**	**10 57 58.7**	**-0.6**
PEA0B	**Petropavlovsk-**	**2.97**	**107**	*e*P	**P**	**10 57 58.5**	**-0.9**
PEA0B	**Petropavlovsk-**	**2.97**	**107**	P	**P**	**10 57 58.5**	**-0.9**
PETK	**Petropavlovsk-**	**2.97**	**107**	P	**P**	**10 57 58.7**	**-0.7**
	133nm,0.3s,baz=327,slow=3.6,SNR=2390						
PETK				ScP	**ScP**	**11 06 28.1**	**+0.2**
	0.2nm,0.3s,baz=338,slow=1.1,SNR=4.2						
KRMR	**Karymshinskiy**	**3.32**	**110**	*e*S	**S**	**10 59 07.0**	**-2.6**
ASAK	**Asacha**	**3.41**	**118**	*i* P	**P**	**10 58 01.0**	**-0.9**
ASAK				*e*S	**S**	**10 59 09.3**	**-1.5**
ASAK	**Asacha**	**3.41**	**118**	P	**P**	**10 58 01.0**	**-0.9**
ASAK				S	**S**	**10 59 09.3**	**-1.5**
KRX	**Arik**	**3.44**	**100**	*i* P	**P**	**10 58 01.4**	**-0.7**
KRX	**Arik**	**3.44**	**100**	P	**P**	**10 58 01.4**	**-0.7**
KOK	**Koryaka**	**3.45**	**101**	*e*P	**P**	**10 58 01.5**	**-0.6**
KOK	**Koryaka**	**3.45**	**101**	P	**P**	**10 58 01.5**	**-0.6**
PAU	**Pauzhetka**	**3.50**	**137**	*e*P	**P**	**10 58 01.3**	**-1.1**
PAU				*e*S	**S**	**10 59 09.2**	**-2.4**
PAU	**Pauzhetka**	**3.50**	**137**	P	**P**	**10 58 01.3**	**-1.1**
PAU				S	**S**	**10 59 09.2**	**-2.4**
MTVR	**Mutnovka**	**3.50**	**115**	*e*P	**P**	**10 58 01.6**	**-1.0**
MTVR				*e*S	**S**	**10 59 09.1**	**-2.9**
MTVR	**Mutnovka**	**3.50**	**115**	P	**P**	**10 58 01.6**	**-1.0**
MTVR				S	**S**	**10 59 09.1**	**-2.9**
KRER	**Koryakskii**	**3.51**	**101**	*e*P	**P**	**10 58 01.6**	**-1.0**
KRER	**Koryakskii**	**3.51**	**101**	P	**P**	**10 58 01.6**	**-1.0**
AVH	**Avacha**	**3.51**	**101**	*i* P	**P**	**10 58 01.7**	**-0.8**
AVH	**Avacha**	**3.51**	**101**	P	**P**	**10 58 01.7**	**-0.8**
PET	**Petropavlovsk**	**3.54**	**105**	*e*P	**P**	**10 58 01.2**	**-1.4**
PET				*e*S	**S**	**10 59 10.5**	**-1.5**
PET	**Petropavlovsk**	**3.54**	**105**	*i* P	**P**	**10 58 01.3**	**-1.2**
PET				*e*S	**S**	**10 59 08.2**	**-3.8**
PET	**Petropavlovsk**	**3.54**	**105κ**	*i*P	**P**	**10 58 01.2**	**-1.4**
PET				*e*S	**S**	**10 59 08.1**	**-3.9**
PET				pmax	pmax		
	comp=Z,700nm,0.5s						
PET				pmax	pmax		
	comp=Z,792nm,0.5s						
PET				smax	smax		
	comp=E,880nm,0.9s						
PET				smax	smax		
	comp=N,784nm,1.5s						
PET				smax	smax		
	comp=N,1μm,1.6s						
PET				smax	smax		
	comp=E,2μm,1.8s						
SMAR	**Somma**	**3.55**	**101**	*i* P	**P**	**10 58 02.0**	**-0.9**
SMAR	**Somma**	**3.55**	**101**	P	**P**	**10 58 02.0**	**-0.9**
UGLR	**Uglovaya**	**3.58**	**102**	*i* P	**P**	**10 58 02.1**	**-0.9**
UGLR				*e*S	**S**	**10 59 10.8**	**-1.9**
UGLR	**Uglovaya**	**3.58**	**102**	P	**P**	**10 58 02.1**	**-0.9**
UGLR				S	**S**	**10 59 10.8**	**-1.9**
DALK	**Dalny**	**3.59**	**105**	*e*P	**P**	**10 58 01.3**	**-1.6**
DALK				*e*S	**S**	**10 59 08.3**	**-4.3**
DALK	**Dalny**	**3.59**	**105**	P	**P**	**10 58 01.3**	**-1.6**
DALK				S	**S**	**10 59 08.3**	**-4.3**
SDLR	**Sedlovina**	**3.59**	**101**	*i* P	**P**	**10 58 01.9**	**-1.2**
SDLR	**Sedlovina**	**3.59**	**101**	P	**P**	**10 58 01.9**	**-1.2**
RUS	**Russkaya**	**3.70**	**114**	*i* P	**P**	**10 58 01.6**	**-2.0**
RUS				*e*S	**S**	**10 59 08.6**	**-5.3**
RUS	**Russkaya**	**3.70**	**114**	P	**P**	**10 58 01.6**	**-2.0**
RUS				S	**S**	**10 59 08.6**	**-5.3**
ESO	**Esso**	**3.77**	**58**	*e*P	**P**	**10 58 03.8**	**-0.1**
ESO				*e*S	**S**	**10 59 13.3**	**-1.4**
ESO	**Esso**	**3.77**	**58**	P	**P**	**10 58 03.8**	**-0.1**
ESO				S	**S**	**10 59 13.3**	**-1.4**
KDTR	**Khodutka, Kamc**	**3.83**	**124**	*e*P	**P**	**10 58 01.5**	**-2.9**
KDTR				*e*S	**S**	**10 59 08.6**	**-6.7**
KDTR	**Khodutka, Kamc**	**3.83**	**124**	P	**P**	**10 58 01.5**	**-2.9**
KDTR				S	**S**	**10 59 08.6**	**-6.7**
NLC	**Nalytchevo**	**3.89**	**101**	*e*P	**P**	**10 58 03.2**	**-1.5**
NLC				*e*S	**S**	**10 59 11.6**	**-4.4**
NLC	**Nalytchevo**	**3.89**	**101**	P	**P**	**10 58 03.2**	**-1.5**
NLC				S	**S**	**10 59 11.6**	**-4.4**
SKR	**Severo-Kuril's**	**3.91**	**149**	*e*P	**P**	**10 58 03.3**	**-1.6**
SKR				*e*S	**S**	**10 59 12.1**	**-4.1**
SKR	**Severo-Kuril's**	**3.91**	**149**	*e*P	**P**	**10 58 03.3**	**-1.6**
SKR				*e*S	**S**	**10 59 12.1**	**-4.1**
SKR				pmax	pmax		
	comp=Z,1μm,0.4s						
SKR				pmax	pmax		
	comp=Z,200nm,8.0s						
SKR				smax	smax		
	comp=E,368nm,0.7s						
SKR				smax	smax		
	comp=N,677nm,0.7s						
SKR				MLR	MLR		
	comp=Z,100nm,15.0s						
SKR				MLR	MLR		
	comp=Z,300nm,15.0s						
SPN	**Mys Shipunski**	**4.30**	**100**	*i* P	**P**	**10 58 05.1**	**-2.4**
SPN				*e*S	**S**	**10 59 13.8**	**-7.3**
SPN	**Mys Shipunski**	**4.30**	**100**	P	**P**	**10 58 05.1**	**-2.4**
SPN				S	**S**	**10 59 13.8**	**-7.3**
TUMR	**Tumrok**	**4.32**	**71**	*i* P	**P**	**10 58 07.3**	**-0.4**
TUMR				*e*S	**S**	**10 59 19.7**	**-1.8**
TUMR	**Tumrok**	**4.32**	**71**	P	**P**	**10 58 07.3**	**-0.4**
TUMR				S	**S**	**10 59 19.7**	**-1.8**
KZV	**Kizimen**	**4.37**	**73**	*e*P	**P**	**10 58 07.4**	**-0.7**
KZV	**Kizimen**	**4.37**	**73**	P	**P**	**10 58 07.4**	**-0.7**
KOZ	**Kozyrevsk**	**4.42**	**61**	*e*P	**P**	**10 58 08.0**	**-0.2**
KOZ				*e*S	**S**	**10 59 22.5**	**-0.1**
KOZ	**Kozyrevsk**	**4.42**	**61**	P	**P**	**10 58 08.0**	**-0.2**
KOZ				S	**S**	**10 59 22.5**	**-0.1**
TUMD	**Tumrok D**	**4.45**	**72**	*e*P	**P**	**10 58 06.8**	**-1.7**
SRDR	**Sredinnyy**	**4.46**	**57**	*e*P	**P**	**10 58 08.3**	**-0.2**
SRDR				*e*S	**S**	**10 59 22.7**	**-0.4**
SRDR	**Sredinnyy**	**4.46**	**57**	P	**P**	**10 58 08.3**	**-0.2**
SRDR				S	**S**	**10 59 22.7**	**-0.4**
KPT	**Kopyto**	**4.57**	**63**	*e*P	**P**	**10 58 08.3**	**-1.1**
KPT				*e*S	**S**	**10 59 23.5**	**-1.1**
KPT	**Kopyto**	**4.57**	**63**	P	**P**	**10 58 08.3**	**-1.1**
KPT				S	**S**	**10 59 23.5**	**-1.1**
BZMR	**Bezymyannaya**	**4.70**	**64**	*e*P	**P**	**10 58 09.1**	**-1.3**
BZMR				*e*S	**S**	**10 59 25.5**	**-0.9**
BZMR	**Bezymyannaya**	**4.70**	**64**	P	**P**	**10 58 09.1**	**-1.3**
BZMR				S	**S**	**10 59 25.5**	**-0.9**
BZWR	**Bezymyannyi-We**	**4.71**	**63**	*e*P	**P**	**10 58 09.3**	**-1.2**
BZWR				*e*S	**S**	**10 59 25.4**	**-1.3**
BZWR	**Bezymyannyi-We**	**4.71**	**63**	P	**P**	**10 58 09.3**	**-1.2**
BZWR				S	**S**	**10 59 25.4**	**-1.3**
BZGR	**Bezymyannyi-Gr**	**4.81**	**64**	*e*P	**P**	**10 58 10.7**	**-0.4**
BZGR				*e*S	**S**	**10 59 27.3**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**4.81**	**64**	P	**P**	**10 58 10.7**	**-0.4**
BZGR				S	**S**	**10 59 27.3**	**-0.5**
KRSR	**Krestovskiy**	**4.84**	**61**	*e*P	**P**	**10 58 10.3**	**-1.1**
KRSR				*e*S	**S**	**10 59 25.9**	**-2.4**
KRSR	**Krestovskiy**	**4.84**	**61**	P	**P**	**10 58 10.3**	**-1.1**
KRSR				S	**S**	**10 59 25.9**	**-2.4**
LGNR	**Loginova**	**4.86**	**63**	*i* P	**P**	**10 58 11.4**	**-0.3**
LGNR				*e*S	**S**	**10 59 28.2**	**-0.6**
LGNR	**Loginova**	**4.86**	**63**	P	**P**	**10 58 11.4**	**-0.3**
LGNR				S	**S**	**10 59 28.2**	**-0.6**
CIRR	**Tsirk**	**4.90**	**62**	*e*P	**P**	**10 58 11.9**	**+0.1**
CIRR				*e*S	**S**	**10 59 28.4**	**-0.7**
CIRR	**Tsirk**	**4.90**	**62**	P	**P**	**10 58 11.9**	**+0.1**
CIRR				S	**S**	**10 59 28.4**	**-0.7**
KLY	**Klyuchi**	**4.92**	**60**	*e*P	**P**	**10 58 11.4**	**-0.4**
KLY				*e*S	**S**	**10 59 28.3**	**-0.8**
KLY	**Klyuchi**	**4.92**	**60**	P	**P**	**10 58 11.4**	**-0.4**
KLY				S	**S**	**10 59 28.3**	**-0.8**
MKZ	**Mys Kozlova**	**5.14**	**81**	*e*P	**P**	**10 58 10.2**	**-3.3**
MKZ				*e*S	**S**	**10 59 24.5**	**-7.6**
MKZ	**Mys Kozlova**	**5.14**	**81**	P	**P**	**10 58 10.2**	**-3.3**
MKZ				S	**S**	**10 59 24.5**	**-7.6**
BDR	**Baidarnaya**	**5.31**	**59**	*e*P	**P**	**10 58 14.0**	**-0.9**
BDR				*e*S	**S**	**10 59 32.4**	**-2.3**
BDR	**Baidarnaya**	**5.31**	**59**	P	**P**	**10 58 14.0**	**-0.9**
BDR				S	**S**	**10 59 32.4**	**-2.3**
SRKR	**Sorokina**	**5.33**	**58**	*e*P	**P**	**10 58 14.3**	**-0.7**
SRKR	**Sorokina**	**5.33**	**58**	P	**P**	**10 58 14.3**	**-0.7**
SMKR	**Semkarok**	**5.45**	**59**	*e*P	**P**	**10 58 14.8**	**-1.2**
SMKR				*e*S	**S**	**10 59 35.6**	**-1.1**
SMKR	**Semkarok**	**5.45**	**59**	P	**P**	**10 58 14.8**	**-1.2**
SMKR				S	**S**	**10 59 35.6**	**-1.1**
MA2	**Magadan**	**5.64**	**348**	P	**P**	**10 58 16.8**	**-0.5**
	comp=Z,21nm,0.3s,baz=154,slow=7.9,SNR=227						
MA2				S	**S**	**10 59 38.5**	**-0.8**
	baz=49,slow=19,SNR=23						
MA2	**Magadan**	**5.64**	**348**	*e*P	**P**	**10 58 17.1**	**-0.2**
MA2				*e*		10 59 38.0	
MA2				*e*S	**S**	**10 59 38.5**	**-0.8**
MA2	**Magadan**	**5.64**	**348**	P	**P**	**10 58 17.1**	**-0.2**
MA2				S	**S**	**10 59 37.8**	**-1.5**
KBG	**Krutoberegovo**	**5.98**	**65**	*e*P	**P**	**10 58 17.1**	**-3.0**
KBG				*e*S	**S**	**10 59 37.9**	**-6.3**
KBG	**Krutoberegovo**	**5.98**	**65**	P	**P**	**10 58 17.1**	**-3.0**
KBG				S	**S**	**10 59 37.9**	**-6.3**
OKH	**Okha**	**5.98**	**269**	*c i*P	**P**	**10 58 21.8**	**+1.5**
OKH				*i* S	**S**	**10 59 43.7**	**-0.7**
OKH				pmax	pmax		
	comp=Z,200nm,8.1s						
OKH				smax	smax		
	comp=N,700nm,6.6s						
OKH				smax	smax		
	comp=E,900nm,9.8s						
KBTR	**Krutoberegovo**	**6.02**	**65**	*e*P	**P**	**10 58 17.7**	**-2.8**
KBTR				*e*S	**S**	**10 59 38.1**	**-6.9**
KBTR	**Krutoberegovo**	**6.02**	**65**	P	**P**	**10 58 17.7**	**-2.8**
KBTR				S	**S**	**10 59 38.1**	**-6.9**
TYV	**Tymovskoe**	**7.09**	**247**	*e*P	**P**	**10 58 31.0**	**+1.2**
TYV				*e*S	**S**	**11 00 01.0**	**-0.8**
TYV				pmax	pmax		
	comp=Z,600nm,2.4s						
TYV				pmax	pmax		
	comp=Z,288nm,1.0s						
TYV				smax	smax		
	comp=N,1μm,4.2s						
TYV				smax	smax		
	comp=N,97nm,1.4s						
NKL	**Nikolayevsk**	**7.39**	**268**	*e*P	**P**	**10 58 33.0**	**+0.6**
NKL				*e*		11 00 07.0	
NKL				pmax	pmax		
	comp=E,190nm,0.6s						
NKL				pmax	pmax		
	comp=Z,340nm,0.6s						
OSSR	**Ossora**	**7.58**	**43**	*e*P	**P**	**10 58 33.9**	**-0.1**
OSSR				*e*S	**S**	**11 00 08.1**	**-1.5**
OSSR	**Ossora**	**7.58**	**43**	P	**P**	**10 58 33.9**	**-0.1**
OSSR				S	**S**	**11 00 08.1**	**-1.5**
BKI	**Bering**	**7.62**	**76**	*e*P	**P**	**10 58 35.2**	**+0.8**
BKI				*e*S	**S**	**11 00 10.3**	**0.0**
BKI	**Bering**	**7.62**	**76**	P	**P**	**10 58 35.2**	**+0.8**

comp=E,210nm,0.4s
GRNR pmax pmax
comp=Z,340nm,0.4s
GRNR pmax pmax
comp=Z,84nm,1.0s
ASAJ Asahikawa 12.06 218 P **P 10 59 15.9 -1.0**
comp=Z,0.9nm,0.3s,baz=17,slow=5.9,SNR=13
ASAJ S **S 11 01 28.1 +0.8**
comp=Z,0.1nm,0.3s,baz=120,slow=20,SNR=4.6
ASAJ PcP **PcP 11 04 03.2 +0.4**
comp=Z,0.8nm,0.3s,baz=307,slow=5.1,SNR=4.8
ASAJ ScP **ScP 11 06 37.6 +0.8**
comp=Z,0.3nm,0.3s,baz=248,slow=6.3,SNR=6.4
SMY Shemya 12.66 88 *e*P **P 10 59 22.5 +0.2**
SMY *e*S **S 11 01 35.4 -1.9**
SMY Shemya 12.66 88 *e*P **P 10 59 22.5 +0.2**
SMY *e*S **S 11 01 35.4 -1.9**
ERM Erimo 13.73 212 *e*P **P 10 59 31.2 -1.5**
ERM *e*S **S 11 01 51.7 -4.0**
ERM Erimo 13.73 212 *e*P **P 10 59 31.2 -1.5**
ERM *e*S **S 11 01 51.7 -4.0**
TEY Ternei 13.94 236 ⇓*i*P **P 10 59 35.5 +0.9**
TEY pmax pmax
comp=N,90nm,0.8s
TEY pmax pmax
comp=Z,180nm,0.7s
TEY pmax pmax
comp=E,90nm,0.7s
KLR Kul'dur 14.03 258 P **P 10 59 35.9 +0.5**
comp=E,25nm,0.3s,baz=61,slow=9.2,SNR=382
KLR S **S 11 02 02.2 +1.6**
baz=190,slow=19,SNR=4.2
KLR PcP **PcP 11 04 05.8 +0.6**
comp=E,1.0nm,0.3s,baz=305,slow=2.5,SNR=5.6
KLR ScP **ScP 11 06 40.0 +0.1**
comp=E,0.5nm,0.3s,baz=15,slow=3.5,SNR=10
YAK Yakutsk 14.61 312 *e*P **P 10 59 40.0 -0.5**
YAK *e*S **S 11 02 08.4 -1.2**
YAK Yakutsk 14.61 312*c i*P **P 10 59 40.0 -0.5**
YAK *e*S **S 11 02 08.3 -1.2**
ZEA Zeya 15.15 279 *e*P **P 10 59 45.1 -0.5**
ZEA *e*S **S 11 02 18.0 -0.6**
ZEA pmax pmax
comp=E,300nm,2.0s
ZEA pmax pmax
comp=Z,400nm,2.0s
ZEA pmax pmax
comp=E,120nm,1.0s
ZEA pmax pmax
comp=Z,310nm,1.0s
ZEA smax smax
comp=E,1μm,7.0s
ZEA smax smax
comp=N,400nm,5.0s
BILL Bilibino 15.35 19 *e*P **P 10 59 47.1 0.0**
comp=N,35nm,1.1s
BILL *e*S **S 11 02 22.9 +1.5**
BILL Bilibino 15.35 19*d i*P **P 10 59 47.1 0.0**
BILL *i* 11 02 22.3
BILL pmax pmax
comp=Z,30nm,1.0s
USA0B Ussuriysk Arra 16.87 243 *e*P **P 11 00 01.3 -0.1**
comp=Z,40nm,0.8s
USA0B Ussuriysk Arra 16.87 243 P **P 11 00 01.3 -0.1**
USA0B pmax pmax
comp=Z,40nm,0.8s
USRK Ussuriysk Ar. 16.87 243 P **P 11 00 01.5 +0.2**
comp=Z,2.8nm,0.3s,baz=53,slow=8.2,SNR=71
USRK S **S 11 02 48.1 +1.3**
baz=62,slow=25,SNR=2.1
MDJ Mudanjiang 17.87 248 P **P 11 00 10.4 -0.1**
MDJ sP sP 11 02 36.8 -6.0
MDJ S S **11 03 02.9 -0.2**
MDJ ScP **ScP 11 06 46.0 -1.5**
MDJ ScS **ScS 11 10 27.8 -0.7**
MDJ pmax pmax
comp=Z,52nm,0.9s
MDJ Mudanjiang 17.87 248 *e*P **P 11 00 10.4 -0.1**
comp=Z,44nm,0.8s
KIWB Kanaga Island 18.06 85 *e*P **P 11 00 11.8 -0.3**
ADK Adak 18.32 85 *e*P **P 11 00 14.4 0.0**
comp=Z,38nm,1.0s
ADK Adak 18.32 85 *e*P **P 11 00 14.4 0.0**
ADK pmax pmax
comp=Z,38nm,1.0s
MSHR Mys Shultsa 18.44 240*d i*P **P 11 00 16.7 +1.1**
ATKA Atka Island 19.68 82 *e*P **P 11 00 25.5 -1.1**
comp=Z,74nm,0.6s
MJB9 Matsu-Tunnel 20.32 216 *e*P **P 11 00 34.2 +1.5**
comp=Z,8.7nm,0.8s
MJB9 *e*PcP **PcP 11 04 16.0 0.0**
MAJO Matsushiro 20.32 216 *e*P **P 11 00 34.2 +1.6**
comp=Z,8.2nm,0.8s
MAJO *e*S **S 11 03 42.8 +0.7**
MAT Matsushiro 20.32 216 P **P 11 00 34.0 +1.3**
MAT S **S 11 03 39.8 -2.2**
MJAR Matsushiro Arr 20.32 216 P **P 11 00 34.0 +1.3**
comp=Z,4.2nm,0.5s,baz=9.6,slow=9.3,SNR=16
MJAR S **S 11 03 42.8 +0.7**
comp=Z,3.5nm,1.0s,baz=5.6,slow=14,SNR=4.8
MJAR PcP **PcP 11 04 16.3 +0.3**
comp=Z,7.3nm,0.6s,baz=95,slow=1.1,SNR=14
MJAR ScP **ScP 11 06 53.5 +0.2**
comp=Z,5.4nm,0.6s,baz=34,slow=0.9,SNR=14
TIXI Tiksi 20.49 338 P **P 11 00 34.2 +0.4**
comp=Z,77nm,0.5s,baz=130,slow=9.1,SNR=193
TIXI S **S 11 03 42.9 -0.9**
comp=Z,11nm,0.8s,baz=270,slow=20,SNR=18
TIXI PcP **PcP 11 04 15.2 -0.4**
comp=Z,7.0nm,0.3s,baz=127,slow=4.6,SNR=4.1
TIXI ScP **ScP 11 06 53.2 +0.2**
comp=Z,1.9nm,0.3s,baz=81,slow=4.8,SNR=3.3
TIXI Tiksi 20.49 338 *e*P **P 11 00 34.1 +0.4**
comp=Z,85nm,0.6s
CN2 Changchun 20.68 251 *e*P **P 11 00 31.9 -3.9**
CN2 *e*sP sP 11 03 11.0 -3.0
CN2 *e*S **S 11 03 42.6 -5.0**
CN2 pmax pmax
comp=Z,20nm,0.7s
SPIA Saint Paul Isl 20.82 67 *e*P **P 11 00 36.9 +0.2**
comp=Z,412nm,1.5s
HIA Hailar 21.05 270 *e*P **P 11 00 39.1 +0.1**
comp=Z,31nm,0.6s
HIA Hailar 21.05 270 *e*P **P 11 00 39.2 +0.1**
HIA pmax pmax
comp=Z,31nm,0.6s
INU Inuyama 21.81 217 *e*P **P 11 00 46.8 +0.9**
comp=Z,18nm,1.3s
BOD Bodaibo 21.93 296 *e*P **P 11 00 46.5 -0.2**
BOD pmax pmax
comp=Z,24nm,1.1s
NIKH Nikolski High 22.53 77 *e*P **P 11 00 51.2 -0.8**
comp=Z,86nm,0.9s
JHJ2 Mitsune 22.96 209 *e*P **P 11 00 58.0 +1.9**
comp=Z,232nm,0.9s
UNV Unalaska Valle 23.60 74 *e*P **P 11 01 00.6 -0.9**
comp=Z,89nm,1.3s
UNV *e*PcP **PcP 11 04 22.1 -0.2**
AKUT Akutan 23.93 73 *e*P **P 11 01 04.0 -0.5**
comp=Z,144nm,0.5s
AKUT *e*PcP **PcP 11 04 22.8 -0.3**
AKUT *e*S **S 11 04 38.1 -0.2**
KSRS Korea Array 23.94 236 P **P 11 01 06.2 +1.5**
comp=Z,15nm,0.6s,baz=31,slow=9.2,SNR=70
KSRS PcP **PcP 11 04 24.1 +0.7**
comp=Z,12nm,0.8s,baz=18,slow=2.1,SNR=28
KSRS ScP **ScP 11 07 03.0 +0.3**
comp=Z,4.3nm,1.0s,baz=28,slow=2.0,SNR=11
KS15 Wonju Array Si 23.96 236 *e*P **P 11 01 06.2 +1.2**
comp=Z,13nm,0.8s
KS15 *e*PcP **PcP 11 04 23.9 +0.4**
RDOG Red Dog Mine 24.80 39 *e*P **P 11 01 12.6 +0.6**
comp=Z,12nm,0.9s
FALS False Pass 25.04 70 *e*P **P 11 01 14.6 +0.4**
comp=Z,50nm,0.7s
JNU Nakatsue 26.17 226 P **P 11 01 25.0 +0.5**
comp=Z,13nm,1.2s,baz=145,slow=2.2,SNR=6.0
JNU Nakatsue 26.17 226 *e*P **P 11 01 25.1 +0.7**
comp=Z,11nm,1.0s
SDPT Sand Point 26.52 68 *e*P **P 11 01 25.3 -1.8**
comp=Z,38nm,0.7s
SDPT *e*S **S 11 05 16.9 -1.9**
CHGN Chignik 27.37 65 *e*P **P 11 01 33.7 -0.8**
comp=Z,22nm,0.6s
SVW2 Sparrevohn 27.78 55 *e*P **P 11 01 38.5 +0.4**
comp=Z,20nm,1.0s

CAST Castle Rocks 29.08 49 *e*P **P 11 01 50.8 +1.5**
comp=Z,7.5nm,0.8s
ULN Ulaanbaatar 29.16 277 *e*P **P 11 01 51.3 +1.0**
comp=Z,12nm,0.7s
ULN Ulaanbaatar 29.16 277*c e*P **P 11 01 51.0 +0.7**
ULN pmax pmax
comp=Z,12nm,0.7s
RSO Redoubt South 29.26 55 *e*P **P 11 01 52.4 +1.4**
TLY Talaya 29.39 286 *e*P **P 11 01 53.7 +1.5**
comp=Z,19nm,0.9s
TLY *e*PcP **PcP 11 04 36.8 +0.3**
TLY Talaya 29.39 286 *e*P **P 11 01 53.6 +1.5**
TLY pmax pmax
comp=Z,63nm,1.1s
BPAW Bear Paw Mtn. 29.48 48 *e*P **P 11 01 53.8 +1.2**
comp=Z,7.7nm,1.3s
MLY Manley 29.49 46 *e*P **P 11 01 54.0 +1.3**
comp=Z,3.9nm,0.6s
SII Sitkinak Islan 29.54 63 *e*P **P 11 01 53.4 +0.1**
comp=Z,7.1nm,1.0s
SONA0 Songino Array 29.56 277 *e*P **P 11 01 54.4 +0.7**
SONA0 *e*PcP **PcP 11 04 37.2 +0.1**
SONA0 *e*S **S 11 06 06.9 +0.7**
SONM Songino Array 29.56 277 P **P 11 01 54.4 +0.7**
comp=Z,15nm,0.8s,baz=63,slow=7.9,SNR=38
SONM PcP **PcP 11 04 37.2 +0.1**
comp=Z,8.1nm,0.6s,baz=82,slow=1.6,SNR=8.7
SONM S **S 11 06 06.9 +0.7**
comp=Z,0.7nm,0.3s,baz=42,slow=20,SNR=2.6
SONM ScP **ScP 11 07 19.4 -0.5**
comp=Z,3.8nm,0.7s,baz=70,slow=2.0,SNR=6.4
COLD Coldfoot 29.56 41 *e*P **P 11 01 54.1 +0.9**
comp=Z,4.9nm,0.7s
COLD *e*S **S 11 06 05.6 +0.2**
KTH Kantishna Hill 29.58 49 *e*S **S 11 06 07.1 +1.2**
TOLK Toolik Lake Re 29.77 38 *e*P **P 11 01 56.0 +0.8**
comp=Z,35nm,0.4s
TOLK *e*S **S 11 06 08.8 +0.1**
TOLK Toolik Lake Re 29.77 38 P **P 11 01 56.1 +1.0**
baz=270
OHAK Old Harbor 29.81 62 *e*P **P 11 01 55.5 0.0**
comp=Z,97nm,0.3s
OHAK *e*S **S 11 06 07.7 -1.8**
TRF Thorofare Moun 29.88 49 *e*P **P 11 01 57.2 +1.0**
comp=Z,10nm,1.0s
HOM Homer 29.99 57 *e*P **P 11 01 58.0 +1.0**
comp=Z,105nm,1.0s
KDAK Kodiak Island 30.01 61 P **P 11 01 57.0 -0.3**
comp=Z,44nm,0.3s,baz=324,slow=1.8,SNR=156
KDAK PcP **PcP 11 04 38.8 +0.9**
comp=Z,14nm,0.6s,baz=170,slow=7.0,SNR=4.5
KDAK S **S 11 06 11.0 -1.4**
comp=Z,18nm,0.5s,baz=128,slow=19,SNR=22
KDAK ScP **ScP 11 07 21.3 +0.4**
comp=Z,18nm,0.8s,baz=285,slow=1.3,SNR=5.7
KDAK Kodiak Island 30.01 61 *e*P **P 11 01 57.0 -0.3**
comp=Z,65nm,0.4s
KDAK *e*PcP **PcP 11 04 38.5 +0.5**
KDAK *e*S **S 11 06 13.1 +0.6**
KDAK Kodiak Island 30.01 61*c e*P **P 11 01 56.7 -0.5**
SUA Susitna One 30.02 53 *e*P **P 11 01 57.9 +0.5**
comp=Z,10.0nm,1.1s
SUA *e*S **S 11 06 12.9 +0.2**
BWN Browne 30.13 47 *e*P **P 11 01 59.3 +1.1**
comp=Z,25nm,0.4s
BWN *e*S **S 11 06 15.6 +1.4**
ZAK Zakamensk 30.16 284 *e*P **P 11 01 59.6 +0.8**
ZAK *e* 11 04 38.3
ZAK pmax pmax
comp=Z,10.0nm,1.2s
ZAK pmax pmax
comp=Z,8.0nm,1.2s
ZAK pmax pmax
comp=Z,6.0nm,1.0s
CNPM China Poot 30.22 57 *e*P **P 11 01 59.1 +0.1**
comp=Z,38nm,0.6s
CNPM *e*S **S 11 06 15.0 -0.7**
BRLK Bradley Lake 30.33 56 *e*P **P 11 01 59.9 -0.1**
comp=Z,28nm,0.4s
BRLK *e*S **S 11 06 16.9 -0.5**
MCK McKinley 30.43 48 *e*P **P 11 02 01.8 +1.0**
comp=Z,15nm,1.2s
MCK *e*S **S 11 06 18.4 -0.4**
MCK McKinley 30.43 48 *e*P **P 11 02 01.8 +1.0**
MCK *e*S **S 11 06 18.4 -0.4**
MCK pmax pmax
comp=Z,15nm,1.2s
HHC Hu-ho-hao-te 30.51 261 *e*P **P 11 01 58.6 -3.3**
HHC S **S 11 06 14.5 -6.2**
HHC pmax pmax
comp=Z,15nm,1.0s
HHC pmax pmax
comp=Z,76nm,4.7s
RND Reindeer 30.52 49 *e*P **P 11 02 02.1 +0.5**
comp=Z,8.2nm,1.2s
RND *e*S **S 11 06 19.0 -1.3**
RND Reindeer 30.52 49 *e*P **P 11 02 02.1 +0.5**
RND *e*S **S 11 06 19.0 -1.3**
RND pmax pmax
comp=Z,8.0nm,1.2s
TIA Tai'an 30.53 249 P **P 11 02 02.2 +0.2**
TIA pmax pmax
comp=Z,9.0nm,0.5s
RC01 Rabbit Creek A 30.57 53 *e*P **P 11 02 02.4 +0.5**
comp=Z,21nm,1.2s
RC01 *e*PcP **PcP 11 04 40.2 +0.7**
RC01 *e*S **S 11 06 20.4 -0.6**
WRH Wood River Hil 30.68 47 *e*P **P 11 02 04.2 +1.3**
comp=Z,16nm,0.6s
WRH *e*S **S 11 06 24.1 +1.6**
TCOL CIGO, UAF Yank 30.72 46 P **P 11 02 04.4 +1.3**
baz=278
COLA College 30.73 46 *e*P **P 11 02 04.2 +1.0**
comp=Z,26nm,0.4s
PMR Palmer 30.75 52 *e*P **P 11 02 03.8 +0.4**
comp=Z,5.1nm,0.7s
PMR *e*PcP **PcP 11 04 40.4 +0.5**
PMR *e*S **S 11 06 24.5 +0.9**
PMR Palmer 30.75 52 *e*P **P 11 02 03.8 +0.4**
PMR *e* 11 04 40.4
PMR *e*S **S 11 06 24.5 +0.9**
PMR pmax pmax
comp=Z,5.0nm,0.7s
CCB Clear Creek Bu 30.78 46 *e*P **P 11 02 04.2 +0.5**
comp=Z,5.2nm,0.5s
CCB *e*S **S 11 06 22.0 -2.0**
GHO Glory Hole Cre 30.80 52 *e*P **P 11 02 04.4 +0.4**
comp=Z,18nm,0.8s
GHO *e*S **S 11 06 23.0 -1.7**
POKR Poker Plat Res 30.87 45 P **P 11 02 05.6 +1.1**
baz=278
SEW Seward 30.95 55 *e*P **P 11 02 05.5 +0.4**
comp=Z,22nm,0.9s
SEW *e*S **S 11 06 25.3 -1.4**
SML Sawmill 31.07 52 *e*P **P 11 02 07.3 +1.0**
comp=Z,56nm,1.2s
SML *e*S **S 11 06 28.7 0.0**
SML Sawmill 31.07 52 *e*P **P 11 02 07.3 +1.0**
SML *e*S **S 11 06 28.7 0.0**
SML pmax pmax
comp=Z,56nm,1.2s
KNK Knik Glacier 31.10 53 *e*P **P 11 02 07.5 +1.0**
comp=Z,44nm,0.6s
KNK *e*S **S 11 06 28.7 -0.4**
ILAR Eielson Array 31.15 46 P **P 11 02 07.5 +0.6**
comp=Z,8.8nm,0.6s,baz=281,slow=11,SNR=147
ILAR PcP **PcP 11 04 39.6 -1.4**
comp=Z,2.6nm,0.4s,baz=293,slow=3.7,SNR=6.5
ILAR S **S 11 06 29.2 -0.5**
comp=Z,3.2nm,0.9s,baz=267,slow=10,SNR=8.5
ILAR ScP **ScP 11 07 24.1 -0.6**
comp=Z,3.2nm,0.8s,baz=288,slow=4.8,SNR=6.2
ILAR P3KPbc 11 33 28.9
comp=Z,0.3nm,0.6s,baz=95,slow=4.5,SNR=4.7
ILB Eielson Array 31.15 46 *e*P **P 11 02 07.0 +0.2**
comp=Z,8.7nm,0.4s
ILB *e*PcP **PcP 11 04 39.6 -1.4**
ILB *e*S **S 11 06 29.8 +0.1**
HDA Harding Lake 31.18 47 *e*P **P 11 02 07.5 +0.4**
comp=Z,11nm,0.4s
HDA *e*S **S 11 06 29.9 -0.3**
HDA Harding Lake 31.18 47 P **P 11 02 07.4 +0.3**
baz=280
DHY Denali Highway 31.24 49 *e*P **P 11 02 08.6 +0.8**
comp=Z,5.0nm,0.6s
DHY *e*S **S 11 06 30.8 -0.6**

SCM Sheep Creek Mo 31.53 52 *e*P **P 11 02 11.1 +0.9**
comp=Z,16nm,0.4s
SCM *e*S **S 11 06 38.2 +2.5**
SCM Sheep Creek Mo 31.53 52 *e*P **P 11 02 11.1 +0.9**
SCM *e*S **S 11 06 38.2 +2.5**
SCM pmax pmax
comp=Z,16nm,0.4s
FYU Fort Yukon 31.57 42 *e*P **P 11 02 11.6 +1.2**
comp=Z,22nm,0.8s
PRP Porcupine Dome 31.60 44 *e*P **P 11 02 12.2 +1.4**
comp=Z,24nm,0.5s
PRP *e*S **S 11 06 38.0 +1.2**
GLI Glacier Island 31.87 53 *e*P **P 11 02 13.7 +0.7**
comp=Z,16nm,1.1s
RIDG Independent Ri 32.22 48 *e*P **P 11 02 16.0 +0.1**
comp=Z,11nm,0.4s
DIV Divide 32.43 52 *e*P **P 11 02 18.4 +0.7**
comp=Z,22nm,1.4s
DIV *e*S **S 11 06 49.5 +0.2**
DOT Dot Lake 32.58 48 *e*P **P 11 02 18.9 0.0**
comp=Z,7.1nm,0.6s
DOT *e*PcP **PcP 11 04 45.6 +0.6**
DOT *e*S **S 11 06 51.0 -0.5**
EYAK Cordova Ski Ar 32.60 54 *e*P **P 11 02 19.8 +0.7**
comp=Z,12nm,0.8s
NRIK Noril'sk 32.62 323 P **P 11 02 19.2 +0.1**
comp=Z,9.0nm,0.5s,baz=94,slow=9.4,SNR=12
NRIK PcP **PcP 11 04 44.7 -0.3**
comp=Z,9.0nm,0.5s,baz=78,slow=5.9,SNR=5.2
NRIK S **S 11 06 51.5 -0.3**
comp=Z,2.8nm,0.4s,baz=268,slow=18,SNR=13
JOW Kunigami 32.75 224 P **P 11 02 20.7 -0.2**
comp=Z,0.8nm,0.3s,baz=123,slow=12,SNR=8.2
JOW Kunigami 32.75 224 *e*P **P 11 02 21.5 +0.6**
comp=Z,32nm,1.6s
NJ2 Nanjing 32.77 242 *e*P **P 11 02 21.0 +0.1**
NJ2 pmax pmax
comp=Z,14nm,0.6s
MENT Mentasta 32.90 49 *e*P **P 11 02 22.6 +1.0**
comp=Z,3.7nm,0.6s
EGAK Eagle 33.56 45 *e*P **P 11 02 27.3 +0.2**
comp=Z,24nm,0.8s
MIDW Midway 33.70 128 *e*P **P 11 02 29.8 +1.1**
comp=Z,130nm,1.0s
CRQM Cirque 33.77 52 *e*P **P 11 02 30.6 +1.5**
comp=Z,8.9nm,0.6s
CRQM *e*PcP **PcP 11 04 50.3 +1.5**
BALM Baldy 34.05 52 *e*P **P 11 02 32.3 +1.0**
comp=Z,7.2nm,0.7s
BALM *e*PcP **PcP 11 04 50.4 +0.9**
BALM *e*S **S 11 07 13.3 -0.5**
BALM Baldy 34.05 52 *e*P **P 11 02 32.3 +1.0**
BALM *e* 11 04 50.4
BALM *e*S **S 11 07 13.3 -0.5**
BALM pmax pmax
comp=Z,7.0nm,0.7s
CTGM Chitina Glacie 34.54 52 *e*P **P 11 02 37.2 +1.8**
comp=Z,11nm,0.8s
EPYK Eagle Plains 34.96 41 *e*P **P 11 02 39.4 +0.7**
comp=Z,29nm,0.9s
EPYK Eagle Plains 34.96 41 P **P 11 02 39.7 +1.0**
baz=285
INK Inuvik 35.67 38 P **P 11 02 45.4 +1.0**
comp=Z,32nm,0.4s,baz=286,slow=7.7,SNR=352
INK PcP **PcP 11 04 54.5 +0.5**
comp=Z,17nm,0.4s,baz=304,slow=1.9,SNR=14
INK S **S 11 07 37.2 -0.3**
comp=Z,7.6nm,0.8s,baz=48,slow=15,SNR=6.9
INK ScS **ScS 11 11 46.4 -1.1**
comp=Z,1.0nm,0.7s,baz=232,slow=20,SNR=12
INK Inuvik 35.67 38 *e*P **P 11 02 45.4 +1.0**
comp=Z,37nm,0.5s
INK *e*PcP **PcP 11 04 54.5 +0.5**
INK *e*S **S 11 07 41.3 +3.9**
INK *e*ScS **ScS 11 11 46.4 -1.1**
BCPM Bancas Point 35.68 53 *e*P **P 11 02 45.8 +1.1**
comp=Z,57nm,1.2s
WHN Wuhan 36.33 245 P **P 11 02 48.3 -2.1**
HYT Haines Junctio 36.35 51 *e*P **P 11 02 52.3 +2.1**
comp=Z,6.2nm,0.8s
XAN Xi'an 36.70 255 *e*PcP **PcP 11 04 58.1 +0.2**
WHY Whitehorse 37.60 50 *e*P **P 11 03 02.3 +1.9**
comp=Z,7.7nm,0.6s
LZH Lanzhou 38.19 262 *e*P **P 11 03 05.6 0.0**
LZH pP pP 11 04 51.3 +1.4
LZH PP **PP 11 04 51.6 -1.6**
LZH sP sP 11 06 00.2 -1.5
LZH pmax pmax
comp=Z,25nm,1.4s
LZH pmax pmax
comp=Z,80nm,5.4s
LZH Lanzhou 38.19 262 ⇓P **P 11 03 06.9 +1.3**
LZH PP **pP 11 04 51.3 +1.4**
LZH sP sP 11 06 00.2 -1.5
LZH sS sS 11 11 30.9 +3.2
LZH pmax pmax
comp=Z,25nm,1.4s
LZH pmax pmax
comp=Z,80nm,5.4s
GTA Gaotai 38.33 270 ⇓P **P 11 03 08.6 +2.0**
GTA S **S 11 08 18.7 +1.1**
GTA sS sS 11 11 25.9 -3.8
GTA pmax pmax
comp=Z,16nm,1.0s
GTA pmax pmax
comp=Z,40nm,5.7s
ZAA1 Zalesovo Array 38.63 298 *e*P **P 11 03 08.5 -0.1**
ZAA1 *e*PcP **PcP 11 05 03.3 -0.2**
ZAA1 *e*ScP **ScP 11 07 51.1 -1.1**
ZAA1 *e*S **S 11 08 20.7 -0.6**
ZAA0 Zalesovo Array 38.63 298 *e*P **P 11 03 08.6 0.0**
comp=Z,5.4nm,0.7s
ZAA0 *e*pP **PP 11 04 57.1 +0.5**
ZAA0 *e*PcP **PcP 11 05 03.3 -0.2**
ZALV Zalesovo Beam 38.63 298 P **P 11 03 08.5 -0.1**
comp=Z,5.0nm,0.5s,baz=58,slow=6.9,SNR=16
ZALV pP **pP 11 04 53.1 0.0**
comp=Z,11nm,1.0s,baz=64,slow=6.8,SNR=3.7
ZALV PcP **PcP 11 05 03.3 -0.2**
comp=Z,16nm,0.4s,baz=69,slow=3.6,SNR=28
ZALV ScP **ScP 11 07 51.1 -1.1**
comp=Z,2.8nm,0.7s,baz=46,slow=6.4,SNR=3.9
ZALV S **S 11 08 20.7 -0.6**
comp=Z,1.6nm,0.7s,baz=347,slow=3.8,SNR=2.3
YULB Yu-li 38.78 230 *e*P **P 11 03 10.6 +0.3**
comp=Z,26nm,1.5s
JIS Juneau Island 38.84 54 *e*P **P 11 03 11.8 +1.6**
comp=Z,6.6nm,1.0s
NVS Novosibirsk 39.01 300 ⇑*i*P **P 11 03 12.1 +0.4**
NVS *i* *PP **PP 11 04 59.9 -0.2**
NVS *i* S **S 11 08 26.0 -0.8**
NVS pmax pmax
comp=Z,32nm,0.7s
NVS pmax pmax
comp=N,4.0nm,0.6s
NVS pmax pmax
comp=E,19nm,0.5s
NVS smax smax
comp=N,19nm,1.0s
NVS smax smax
comp=E,52nm,1.5s
ENH Enshi 39.20 250 *e*P **P 11 03 13.4 -0.2**
ENH *e* 11 03 13.5
ENH *e*pP **PcP 11 05 06.1 +0.2**
DGZ Jazzator, Alta 39.40 291*d i*P **P 11 03 16.1 +1.1**
DGZ pmax pmax
comp=Z,7.0nm,1.0s
DLBC Dease Lake 40.80 52 P **P 11 03 27.6 +1.8**
comp=Z,4.3nm,0.6s,baz=303,slow=9.0,SNR=9.3
DLBC PcP **PcP 11 05 11.2 +0.5**
comp=Z,1.7nm,0.6s,baz=284,slow=4.2,SNR=4.1
DLBC ScP **ScP 11 08 01.7 +0.9**
comp=Z,3.9nm,0.9s,baz=329,slow=2.6,SNR=4.6
DLBC Dease Lake 40.80 52 *e*P **P 11 03 28.7 +2.8**
CD2 Chengdu 41.95 257 *e*P **P 11 03 35.0 -0.3**
WMQ Urumqi 42.63 284 *e*P **P 11 03 41.8 +1.4**
WMQ S **S 11 09 22.2 +2.9**
WMQ SS **SS 11 12 50.4 +1.5**
WMQ pmax pmax
comp=Z,36nm,0.7s
WMQ pmax pmax
comp=Z,120nm,3.7s
KURK Kurchatov 43.56 297 *e*P **P 11 03 47.7 +0.3**
comp=Z,65nm,0.8s
KURK *e*S **S 11 09 31.0 -1.1**
KURK Kurchatov 43.56 297 P **P 11 03 48.5 +1.1**

KURK 11 05 20.0
KURK *PP **pP** **11 05 36.1 +0.2**
KURK S **S** **11 09 32.1 0.0**
KURBB Kurchatov Arra 43.66 297 P **P** **11 03 48.5 +0.3**
comp=Z,46nm,0.6s,baz=60,slow=7.7,SNR=247
KURBB PcP **PcP** **11 05 20.0 -0.4**
comp=Z,19nm,0.7s,baz=55,slow=3.3,SNR=19
KURBB pP **pP** **11 05 36.1 -0.6**
comp=Z,12nm,1.0s,baz=46,slow=6.8,SNR=5.0
KURBB ScP **ScP** **11 08 11.4 -1.1**
comp=Z,1.7nm,0.7s,baz=55,slow=4.3,SNR=2.8
KURBB S **S** **11 09 32.1 -1.4**
comp=Z,9.4nm,0.9s,baz=62,slow=16,SNR=18
GYA Guiyang 43.72 250 *e*P **P** **11 03 49.9 +0.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s
MK31 Makanchi Array 43.88 291 *i* P **P** **11 03 49.9 0.0**
MK31 pmax pmax
comp=Z,15nm,0.5s
MK32 Makanchi Array 43.88 291 *e*P **P** **11 03 50.1 +0.2**
MK32 *e*PcP **PcP** **11 05 20.8 -0.5**
MK32 *e*pP **pP** **11 05 37.7 -1.0**
MK32 *e*S **S** **11 09 35.9 -0.7**
MKAR Makanchi Array 43.88 291 P **P** **11 03 50.1 +0.2**
comp=Z,17nm,0.5s,baz=56,slow=7.1,SNR=195
MKAR PcP **PcP** **11 05 20.8 -0.5**
comp=Z,2.1nm,0.4s,baz=49,slow=4.8,SNR=4.3
MKAR pP **pP** **11 05 37.7 -1.0**
comp=Z,0.6nm,0.5s,baz=44,slow=5.7,SNR=2.0
MKAR S **S** **11 09 35.9 -0.7**
comp=Z,2.9nm,0.9s,baz=56,slow=16,SNR=4.1
RES Resolute Bay 43.95 21 P **P** **11 03 50.1 +0.2**
comp=Z,25nm,0.3s,baz=348,slow=5.4,SNR=213
RES PcP **PcP** **11 05 21.2 +0.2**
comp=Z,14nm,0.7s,baz=306,slow=3.3,SNR=6.9
RES ScP **ScP** **11 08 13.9 +0.8**
comp=Z,7.4nm,0.7s,baz=308,slow=5.1,SNR=8.3
RES Resolute Bay 43.95 21 *e*P **P** **11 03 50.2 +0.3**
comp=Z,64nm,1.0s
RES *e*PcP **PcP** **11 05 21.2 +0.2**
RES *e*ScP **ScP** **11 08 13.9 +0.8**
RES Resolute Bay 43.95 21 *e*P **P** **11 03 50.2 +0.3**
RES *e* 11 05 21.2
RES pmax pmax
comp=Z,64nm,1.0s
MAKZ Makanchi 44.04 291 *e*P **P** **11 03 51.3 +0.2**
comp=Z,16nm,0.6s
MAKZ Makanchi 44.04 291 *e*P **P** **11 03 51.3 +0.2**
MAKZ pmax pmax
comp=Z,17nm,0.6s
YKW3 Yellowknife Ar 45.20 41 *e*P **P** **11 04 00.2 +0.5**
comp=Z,27nm,0.5s
KBS Kingsbay 45.24 350 *e*P **P** **11 04 00.2 +0.5**
comp=Z,64nm,0.8s
KBS Kingsbay 45.24 350 *de*P **P** **11 03 59.9 +0.1**
KBS pmax pmax
comp=Z,291nm,0.9s
KBS Kingsbay 45.24 350 *e*P **P** **11 04 00.1 +0.4**
YKA Yellowknife Ar 45.24 41 P **P** **11 04 00.4 +0.4**
comp=Z,22nm,0.4s,baz=305,slow=7.1,SNR=209
YKA PcP **PcP** **11 05 26.1 +0.4**
comp=Z,4.8nm,0.4s,baz=314,slow=3.5,SNR=14
YKA ScP **ScP** **11 08 19.0 +0.3**
comp=Z,2.1nm,0.7s,baz=302,slow=4.5,SNR=6.6
YKB5 Yellowknife Ar 45.24 41 *e*P **P** **11 04 00.4 +0.4**
YKB5 *e*PcP **PcP** **11 05 26.1 +0.3**
YKB5 *e*ScP **ScP** **11 08 19.1 +0.3**
SPA0 Spitsbergen Ar 45.39 349 *e*P **P** **11 04 00.8 -0.2**
comp=Z,95nm,1.2s
SPA0 Spitsbergen Ar 45.39 349 *e*P **P** **11 04 00.2 -0.7**
SPITS Spitsbergen Ar 45.39 349 P **P** **11 04 00.5 -0.4**
comp=Z,38nm,0.5s,baz=59,slow=9.0,SNR=276
SPITS PcP **PcP** **11 05 25.3 -0.8**
comp=Z,8.3nm,0.7s,baz=45,slow=4.6,SNR=3.6
BVAR Borovoye Array 46.39 304 P **P** **11 04 09.0 +0.1**
comp=Z,85nm,0.5s,baz=58,slow=7.4,SNR=418
BVAR PcP **PcP** **11 05 29.7 -0.3**
comp=Z,25nm,0.5s,baz=59,slow=3.4,SNR=19
BRVK Borovoye 46.42 304 *e*P **P** **11 04 09.3 +0.2**
comp=Z,78nm,0.6s
BRVK Borovoye 46.42 304 *ce*P **P** **11 04 09.0 -0.1**
BRVK pmax pmax
comp=Z,66nm,0.6s
HSPB Hornsund (broa 46.47 348 *e*P **P** **11 04 08.9 -0.2**
KMI Kunming 46.95 253 P **P** **11 04 14.9 +1.2**
KMI pmax pmax
comp=Z,18nm,0.6s
KMI pmax pmax
comp=Z,100nm,5.2s
TULEG Thule 46.95 12 *e*P **P** **11 04 11.6 -1.0**
comp=Z,38nm,0.6s
PDGK Podgornoye 47.58 289 P **P** **11 04 18.1 +0.1**
PDGK pmax pmax
comp=Z,19nm,0.8s
BJO Bjornoya 48.04 345 *e*P **P** **11 04 20.2 -0.6**
SVE Sverdlovsk 48.58 313 *c i*P **P** **11 04 25.5 +0.5**
SVE pmax pmax
comp=Z,85nm,0.9s
OPA Opana 48.98 112 *e*P **P** **11 04 30.0 +1.6**
comp=Z,72nm,0.8s
OPA Opana 48.98 112 *e*P **P** **11 04 30.0 +1.6**
OPA pmax pmax
comp=Z,72nm,0.8s
LLLB Lilloet 49.11 57 *e*P **P** **11 04 30.6 +1.5**
comp=Z,5.2nm,0.5s
LLLB *e*PcP **PcP** **11 05 40.9 +0.8**
DAG Danmarks Havn 49.31 357 ||*i*P **P** **11 04 29.6 -0.4**
DAG *i* 11 05 39.8
DAG Danmarks Havn 49.31 357 ||*i*P **P** **11 04 29.6 -0.4**
DAG *i* 11 05 39.8
SLVN Son La 49.31 248 *e*P **P** **11 04 32.3 +1.3**
comp=Z,8.6nm,0.6s
ARU Arti 49.72 313 P **P** **11 04 33.3 0.0**
comp=Z,40nm,0.4s,baz=51,slow=4.8,SNR=104
ARU PcP **PcP** **11 05 41.8 -0.4**
comp=Z,12nm,0.4s,baz=64,slow=5.4,SNR=10
ARU Arti 49.72 313 *e*P **P** **11 04 33.3 0.0**
comp=Z,122nm,0.4s
ARU *e*PcP **PcP** **11 05 41.8 -0.4**
ARU Arti 49.72 313 *d i*P **P** **11 04 33.2 -0.1**
ARU *e* 11 05 41.6
ARU *PP **pP** **11 06 27.6 +1.0**
ARU 11 06 35.2
ARU *e*S **S** **11 10 55.5 -1.2**
ARU pmax pmax
comp=Z,60nm,0.5s
A04D Lummi Island 49.90 59 P **P** **11 04 33.8 -1.0**
baz=310
TKM2 Tokmak 2 50.01 291 P **P** **11 04 36.6 +0.7**
SNR=20
KULLO Kullorsuaq 50.04 10 ||*i*P **P** **11 04 34.7 -0.7**
KULLO pmax pmax
comp=Z,61nm,0.8s
KULLO Kullorsuaq 50.04 10 ||*i*P **P** **11 04 34.7 -0.7**
comp=Z,61nm,0.8s
LVZ Lovozero 50.06 334 *e*P **P** **11 04 34.9 -0.8**
comp=Z,37nm,0.9s
LVZ Lovozero 50.06 334 *ce*P **P** **11 04 35.3 -0.4**
LVZ pmax pmax
comp=Z,30nm,0.8s
ULHL Ulahol 50.10 290 P **P** **11 04 37.5 +0.9**
SNR=9.2
BOOM Boomskoye usch 50.10 290 *e*P **P** **11 04 37.5 +1.0**
comp=Z,21nm,0.6s
BOOM *e*PcP **PcP** **11 05 44.1 0.0**
BOOM Boomskoye usch 50.10 290 *e*P **P** **11 04 37.6 +1.0**
BOOM *e* 11 05 44.2
BOOM pmax pmax
comp=Z,21nm,0.6s
LSA Lhasa 50.19 267 *e*P **P** **11 04 39.6 +1.8**
comp=Z,15nm,0.8s
USP Ospenovka 50.38 292 P **P** **11 04 39.4 +1.0**
SNR=26
HAMF Hammerfest 50.41 340 *e*P **P** **11 04 36.6 -1.5**
CHMS Chumysh 50.42 291 P **P** **11 04 39.4 +0.7**
SNR=7.6
KEV Kevo 50.44 339 *e*P **P** **11 04 38.0 -0.3**
comp=Z,29nm,0.8s
KEV Kevo 50.44 339 *e*P **P** **11 04 38.0 -0.3**
KEV pmax pmax
comp=Z,29nm,0.8s
D03D Eldon 50.47 61 P **P** **11 04 40.5 +1.6**
baz=311
KHLH Kahului Airpor 50.48 111 *e*P **P** **11 04 41.2 +1.9**
comp=Z,78nm,0.8s
B05A Bryant 50.50 60 P **P** **11 04 40.3 +1.1**
baz=311
KBK Karagaybulak 50.54 291 P **P** **11 04 40.6 +0.8**
SNR=18
FRU1 Bishkek 50.61 291 *e*P **P** **11 04 41.4 +1.2**
comp=Z,69nm,0.7s
FRU1 Bishkek 50.61 291 *e*P **P** **11 04 41.4 +1.2**
FRU1 pmax pmax
comp=Z,69nm,0.7s
APA Apatity 50.62 334 ||*i*P **P** **11 04 38.0 -1.7**
APA *i* *PP **pP** **11 06 31.0 -2.6**
APA pmax pmax
comp=Z,13nm,0.8s
APA MLR MLR
comp=Z,100nm,25.0s
KZA Kyzart 50.76 290 P **P** **11 04 42.8 +1.2**
SNR=9.1
NRN Naryn 50.77 289 *e*P **P** **11 04 42.5 +0.8**
comp=Z,5.1nm,0.6s
NRN Naryn 50.77 289 *e*P **P** **11 04 42.5 +0.8**
NRN pmax pmax
comp=Z,5.0nm,0.6s
AAK Ala-Archa 50.80 291 P **P** **11 04 42.4 +0.8**
comp=Z,29nm,0.5s,baz=102,slow=5.0,SNR=33
AAK PcP **PcP** **11 05 46.4 -0.3**
comp=Z,10.0nm,0.5s,baz=146,slow=4.6,SNR=5.5
AAK pP **pP** **11 06 35.9 +0.2**
comp=Z,4.2nm,0.6s,baz=37,slow=10,SNR=2.1
AAK Ala-Archa 50.80 291 P **P** **11 04 42.5 +0.8**
SNR=15
AAK Ala-Archa 50.80 291 *e*P **P** **11 04 42.5 +0.8**
comp=Z,27nm,0.7s
AAK Ala-Archa 50.80 291 *i* P **P** **11 04 42.3 +0.7**
SNR=18
ARCES ARCESS Array B 50.93 339 P **P** **11 04 41.5 -0.5**
comp=Z,14nm,0.3s,baz=40,slow=8.3,SNR=148
ARCES PcP **PcP** **11 05 46.1 -0.4**
comp=Z,7.0nm,0.6s,baz=38,slow=4.6,SNR=5.9
ARE0 ARCESS Array S 50.93 339 *e*P **P** **11 04 41.1 -0.8**
UCH Uchtor 51.07 291 P **P** **11 04 44.7 +0.8**
SNR=7.1
EKS2 Erkin-Say 51.18 292 P **P** **11 04 45.3 +1.0**
SNR=9.5
PRGR Permogore 51.25 324 *e*P **P** **11 04 44.1 -0.2**
PRGR pmax pmax
comp=Z,82nm,0.7s
MHA Mahukona 51.34 111 *e*P **P** **11 04 47.5 +1.9**
MHA Mahukona 51.34 111 *e*P **P** **11 04 47.5 +1.9**
AML Almayashu 51.58 291 P **P** **11 04 48.9 +1.4**
SNR=7.7
B08A Colville Reser 51.83 58 *e*P **P** **11 04 49.4 +0.7**
comp=Z,6.0nm,0.8s
B08A *e*PcP **PcP** **11 05 51.3 +0.9**
KTK1 Kautokeino 51.83 339 *e*P **P** **11 04 47.9 -0.5**
LTY Liberty 51.89 60 *e*PcP **PcP** **11 05 51.0 +0.4**
KSH Kashi 52.09 287 P **P** **11 04 55.5 +4.7**
KSH pmax pmax
comp=Z,40nm,0.9s
KSH pmax pmax
comp=Z,130nm,4.9s
TRO Tromso 52.16 341 *e*P **P** **11 04 49.7 -0.9**
MLH Mauna Loa 52.18 111 *e*P **P** **11 04 53.2 +1.3**
comp=Z,204nm,1.6s
MLH Mauna Loa 52.18 111 *e*P **P** **11 04 53.2 +1.3**
MLH pmax pmax
comp=Z,204nm,1.6s
KHU Kahuku 52.26 111 *e*P **P** **11 04 53.4 +1.0**
comp=Z,324nm,1.5s
KHU Kahuku 52.26 111 *e*P **P** **11 04 53.4 +1.0**
KHU pmax pmax
comp=Z,324nm,1.5s
PANO Nakornpanom 52.34 245 P **P** **11 04 54.7 +2.0**
comp=Z,0.6nm,0.8s
ARSB Arslanbob 52.52 291 *e*P **P** **11 04 54.9 +1.0**
comp=Z,32nm,1.0s
KK31 Karatay Array 52.66 294 *e*P **P** **11 04 54.6 -0.1**
KK31 pmax pmax
comp=Z,20nm,0.6s
KKAR Karatay Array 52.66 294 *e*P **P** **11 04 54.9 +0.2**
comp=Z,27nm,0.6s
KKAR Karatay Array 52.66 294 *e*P **P** **11 04 54.9 +0.2**
KKAR pmax pmax
comp=Z,27nm,0.6s
C09A Chrisman Ranch 52.73 58 *e*P **P** **11 04 56.0 +0.8**
comp=Z,6.6nm,0.6s
SKNT Sakolnakorn 52.82 245 P **P** **11 04 57.6 +1.4**
comp=Z,35nm,0.8s
SHL Shillong 52.85 263 *e*P **P** **11 04 56.5 0.0**
comp=Z,18nm,0.7s
SHL Shillong 52.85 263 *e*P **P** **11 04 56.5 0.0**
SHL pmax pmax
comp=Z,18nm,0.7s
SHL Shillong 52.85 263 *e*P **P** **11 04 56.5 0.0**
D08A Wollman Farm, 52.91 59 *e*P **P** **11 04 56.8 +0.4**
comp=Z,3.4nm,0.8s
NEW Newport 52.99 57 P **P** **11 04 58.0 +1.0**
comp=Z,2.1nm,0.5s,baz=310,slow=7.9,SNR=6.5
NEW PcP **PcP** **11 05 55.6 +0.8**
comp=Z,4.3nm,0.7s,baz=317,slow=1.9,SNR=7.0
NEW ScP **ScP** **11 08 53.1 +0.8**
comp=Z,2.7nm,0.9s,baz=294,slow=7.1,SNR=4.1
NEW Newport 52.99 57 *e*P **P** **11 04 58.0 +1.0**
comp=Z,4.8nm,1.0s
NEW *e*PcP **PcP** **11 05 55.4 +0.6**
NEW Newport 52.99 57 P **P** **11 04 57.7 +0.7**
baz=313
HAWA Hanford 53.05 60 *e*P **P** **11 04 58.9 +1.5**
comp=Z,5.7nm,0.9s
HAWA *e*PcP **PcP** **11 05 55.7 +0.6**
PAYA Payao 53.12 251 P **P** **11 05 00.0 +1.7**
comp=Z,61μm,0.7s
E08A Dider Farm, El 53.22 60 *e*P **P** **11 04 59.6 +1.0**
comp=Z,5.7nm,0.9s
SUMG Summit 53.38 4 *e*P **P** **11 05 00.1 +0.3**
comp=Z,131nm,1.1s
SUMG Summit 53.38 4 *i* P **P** **11 05 00.1 +0.3**
SUMG pmax pmax
comp=Z,170nm,0.6s
SUMG Summit 53.38 4 *i* P **P** **11 05 00.1 +0.3**
comp=Z,174nm,0.6s
E09A Wood Farm, Sta 53.67 59 *e*P **P** **11 05 03.2 +1.5**
comp=Z,8.6nm,0.8s
AB31 Akbulak array 53.85 306 P **P** **11 05 02.5 -0.4**
AB31 pmax pmax
comp=Z,42nm,0.8s
ABKAR Akbulak array 53.85 306 *e*P **P** **11 05 03.0 +0.1**
comp=Z,45nm,0.8s
KLMR Klimovskoe 53.87 326 *e*P **P** **11 05 00.4 -2.4**
KLMR pmax pmax
comp=Z,67nm,0.6s
KLMR Klimovskoe 53.87 326 *e*P **P** **11 05 00.5 -2.4**
KLMR AMP 11 05 03.6
comp=Z,67nm,0.7s
LAMP Lampang 53.93 250 P **P** **11 05 05.4 +1.5**
comp=Z,85μm,0.7s,comp=Z,877μm
AKTO Aktyubinsk 53.95 308 P **P** **11 05 03.5 -0.1**
AKTO pmax pmax
comp=Z,24nm,0.5s
WALA Waterton Lakes 54.01 54 *e*P **P** **11 05 05.3 +1.1**
comp=Z,15nm,0.8s
KRMB Red Mountain 54.07 67 *e*P **P** **11 05 05.7 +0.9**
CMMT Chiang Mai 54.08 251 P **P** **11 05 06.0 +1.0**
comp=Z,19nm,0.7s
CHTO Chiang Mai 54.08 251 *e*P **P** **11 05 06.0 +1.0**
comp=Z,22nm,0.6s
CHTO Chiang Mai 54.08 251 *e*P **P** **11 05 06.0 +1.0**
CHTO pmax pmax
comp=Z,22nm,0.6s
G08A Pilot Rock 54.09 61 *e*P **P** **11 05 06.1 +1.2**
comp=Z,1.6nm,0.6s
J05D Fort Rock, OR 54.29 64 P **P** **11 05 08.6 +2.3**
baz=314,SNR=6.2
STEI Steigen 54.32 342 *e*P **P** **11 05 04.3 -1.5**
CMAR Chiang Mai Arr 54.37 251 P **P** **11 05 08.5 +1.5**
comp=Z,12nm,0.6s,baz=24,slow=7.1,SNR=50
CMAR PcP **PcP** **11 06 01.0 +0.5**
comp=Z,8.2nm,0.7s,baz=8.5,slow=3.0,SNR=15
CMAR ScP **ScP** **11 08 59.2 +0.5**
comp=Z,0.8nm,0.3s,baz=7.6,slow=5.5,SNR=4.1
LOF Lofoten 54.45 343 *e*P **P** **11 05 06.1 -0.7**
L04D Klamath Falls 54.45 65 P **P** **11 05 09.9 +2.5**
baz=314
F10A Beach Ranch, E 54.50 59 *e*P **P** **11 05 09.1 +1.4**
comp=Z,5.8nm,0.7s
F10A *e*PcP **PcP** **11 06 02.2 +1.4**
GUN Gumba 54.62 270 *e*P **P** **11 05 09.4 +0.3**
comp=Z,57nm,0.4s
JIRN Jiri 54.62 269 *e*P **P** **11 05 09.7 +0.6**
comp=Z,59nm,0.7s
CHAI Chaiyaphum 54.78 246 P **P** **11 05 10.8 +1.0**
comp=Z,33μm,0.6s,comp=Z,832μm
PBKT Sadao Pong 54.78 248 P **P** **11 05 11.2 +1.4**
comp=Z,9.3nm,0.8s,comp=Z,422nm
K05A Summer Lake 54.85 64 *e*P **P** **11 05 12.9 +2.6**
comp=Z,28nm,1.6s
K05A *e*PcP **PcP** **11 06 04.3 +2.0**
RAMN Ramite 54.91 268 *e*P **P** **11 05 11.5 +0.5**
comp=Z,173nm,0.6s
KKN Kakani 55.06 270 *e*P **P** **11 05 12.7 +0.7**
comp=Z,92nm,0.5s
N02D Trinity Center 55.10 67 P **P** **11 05 14.9 +3.0**
baz=314
PKI Pulchoki 55.15 270 *e*P **P** **11 05 13.2 +0.5**
comp=Z,98nm,0.7s
PKIN Phulchoki 55.15 270 *e*P **P** **11 05 13.1 +0.4**
comp=Z,73nm,0.7s
BMO Blue Mountains 55.24 60 *e*P **P** **11 05 13.9 +1.1**
comp=Z,14nm,1.6s
BMO *e*PcP **PcP** **11 06 03.7 0.0**
FCC Fort Churchill 55.25 36 *e*P **P** **11 05 12.5 +0.1**
comp=Z,55nm,0.6s
FCC Fort Churchill 55.25 36 *e*P **P** **11 05 12.5 +0.1**
FCC pmax pmax
comp=Z,55nm,0.6s
FFC Flin Flon 55.28 43 *e*P **P** **11 05 13.5 +0.7**
comp=Z,48nm,0.7s
FFC *e*PcP **PcP** **11 06 03.5 0.0**
FFC Flin Flon 55.28 43 *e*P **P** **11 05 13.5 +0.7**
FFC *e* 11 06 03.6
FFC pmax pmax
comp=Z,48nm,0.7s
DMN Daman 55.30 270 *e*P **P** **11 05 14.4 +0.7**
comp=Z,71nm,0.7s
DANN Dangsing 55.54 272 *e*P **P** **11 05 16.0 +0.6**
comp=Z,140nm,0.6s
MSO Missoula 55.54 56 *e*P **P** **11 05 15.9 +1.0**
comp=Z,10nm,0.5s
MSO Missoula 55.54 56 P **P** **11 05 15.8 +1.0**
baz=315,SNR=15
GAR Garm 55.60 291 *e*P **P** **11 05 15.9 +0.5**
comp=Z,105nm,0.5s
J08A Circle Bar Ran 55.68 62 *e*P **P** **11 05 17.5 +1.6**
comp=Z,6.6nm,0.6s
J08A *e*PcP **PcP** **11 06 06.9 +1.4**
SCO Scoresbysund 55.69 358 *e*P **P** **11 05 15.5 +0.2**
comp=Z,20nm,0.6s
SCO *e*PcP **PcP** **11 06 05.1 +0.3**
SCO Scoresbysund 55.69 358 *i* P **P** **11 05 15.2 -0.1**
SCO *i* 11 06 05.5
SCO pmax pmax
comp=Z,19nm,0.7s
SCO Scoresbysund 55.69 358 *i* P **P** **11 05 15.2 -0.1**
comp=Z,19nm,0.7s
SCO *i* 11 06 05.5
PLID Pearl Lake 55.74 59 *e*P **P** **11 05 17.2 +0.8**
comp=Z,17nm,0.6s
ILULI Ilulissat 55.76 10 *e*P **P** **11 05 15.1 -0.7**
comp=Z,65nm,0.7s
ILULI Ilulissat 55.76 10 ||*i*P **P** **11 05 14.9 -0.9**
ILULI pmax pmax
comp=Z,62nm,0.7s
ILULI Ilulissat 55.76 10 ||*i*P **P** **11 05 14.9 -0.9**
comp=Z,62nm,0.7s
KONS Konsvik 55.98 342 *e*P **P** **11 05 16.8 -0.5**
MOR8 Moi Rana 56.02 341 *e*P **P** **11 05 16.0 -1.7**
KOLN Koldanda 56.07 271 *e*P **P** **11 05 19.4 +0.5**
comp=Z,79nm,0.6s
STOK Stokkvaagen 56.15 342 *e*P **P** **11 05 17.8 -0.7**
PYUN Piuthan 56.18 272 *e*P **P** **11 05 20.2 +0.6**
comp=Z,197nm,0.8s
UMPA Umpang Tak 56.24 249 P **P** **11 05 22.8 +2.9**
comp=Z,62μm,0.6s
WVOR Wild Horse Val 56.25 63 *e*P **P** **11 05 21.1 +1.3**
comp=Z,5.8nm,0.8s
WVOR Wild Horse Val 56.25 63 *e*P **P** **11 05 21.1 +1.3**
WVOR pmax pmax
comp=Z,6.0nm,0.8s
CHGR Chuyangaron 56.48 291 *e*P **P** **11 05 23.5 +2.1**
comp=Z,76nm,0.8s
CHGR *e*PcP **PcP** **11 06 10.0 +1.3**
HRY Holter Researc 56.65 55 *e*P **P** **11 05 24.0 +1.6**
EGMT Eagleton 56.71 53 *e*P **P** **11 05 20.6 -2.1**
comp=Z,24nm,1.1s
EGMT *e*PcP **PcP** **11 06 10.1 +0.6**
EGMT Eagleton 56.71 53 P **P** **11 05 23.4 +0.6**
baz=316
DLMT Dillon 57.24 57 *e*P **P** **11 05 27.9 +1.3**
comp=Z,25nm,1.1s
FIA0 FINESS Array S 57.41 333 *e*P **P** **11 05 26.9 -0.3**
FIA0 *e*PcP **PcP** **11 06 11.2 -0.7**
FIA0 FINESS Array S 57.41 333 *e*P **P** **11 05 26.9 -0.3**
FIA0 *e* 11 06 11.2
FINES FINESS Array B 57.41 333 P **P** **11 05 26.9 -0.3**
comp=Z,57nm,0.6s,baz=32,slow=8.6,SNR=388
FINES PcP **PcP** **11 06 11.2 -0.7**
comp=Z,13nm,0.5s,baz=56,slow=3.5,SNR=8.7
AFDM Forest Hills D 57.48 67 *e*PcP **PcP** **11 06 13.4 +0.9**
MCMT McKenzie Canyo 57.50 57 *e*P **P** **11 05 29.2 +0.8**
BOZ Bozeman (W) 57.55 56 *e*P **P** **11 05 30.0 +1.4**
comp=Z,16nm,0.6s
BOZ Bozeman (W) 57.55 56 *e*P **P** **11 05 30.0 +1.4**
BOZ pmax pmax
comp=Z,16nm,0.6s
BOZ Bozeman (W) 57.55 56 P **P** **11 05 30.0 +1.4**
baz=316,SNR=37
HLID Hailey 57.62 59 *e*P **P** **11 05 30.7 +1.5**
comp=Z,4.4nm,1.1s
HLID *e*PcP **PcP** **11 06 14.4 +1.1**
HLID Hailey 57.62 59 P **P** **11 05 30.5 +1.3**
baz=316,SNR=7.1
SIJI Sorong 57.65 206 P **P** **11 05 30.6 +1.2**
comp=Z,17nm,0.5s,baz=1.7,slow=8.4,SNR=22
NIL Nilore 57.78 284 *e*P **P** **11 05 31.1 +0.9**
comp=Z,104nm,0.6s
PAHR Pah Rah Range 57.79 66 *e*P **P** **11 05 32.0 +1.7**
comp=Z,7.2nm,1.1s
SFJD Kangerlussuaq 57.94 11 *e*P **P** **11 05 30.1 -0.6**
comp=Z,50nm,0.9s
SFJD Kangerlussuaq 57.94 11 ||*i*P **P** **11 05 29.8 -0.8**
SFJD Kangerlussuaq 57.94 11 ||*i*P **P** **11 05 29.8 -0.8**
NSS Namsos 57.96 341 *e*P **P** **11 05 29.6 -1.2**
QLMT Earthquake Lak 58.20 56 *e*P **P** **11 05 34.6 +1.5**
GCMT Greycliff 58.36 55 *e*P **P** **11 05 35.6 +1.6**
YHB Horse Butte 58.37 56 *e*P **P** **11 05 35.7 +1.5**
comp=Z,26nm,0.8s
YERR Yerington 58.39 66 *e*P **P** **11 05 36.3 +1.9**
comp=Z,8.3nm,0.5s
BMN Battle Mountai 58.42 64 *e*P **P** **11 05 36.2 +1.6**
comp=Z,4.1nm,0.7s
BMN Battle Mountai 58.42 64 *e*P **P** **11 05 36.2 +1.6**
BMN pmax pmax
comp=Z,4.0nm,0.7s
MOS Moscow 58.43 323 *e*P **P** **11 05 32.8 -1.3**
MOS pmax pmax
comp=Z,104nm,0.5s
CMB Columbia Colle 58.45 68 *e*P **P** **11 05 36.4 +1.7**
comp=Z,5.8nm,1.5s
CMB *e*PcP **PcP** **11 06 17.5 +1.0**
CMB Columbia Colle 58.45 68 *e*P **P** **11 05 36.4 +1.7**
CMB *e* 11 06 17.5
CMB pmax pmax
comp=Z,6.0nm,1.5s
YHH Holmes Hill 58.51 56 *e*P **P** **11 05 36.7 +1.4**
comp=Z,16nm,0.7s
PHET Kaeng Krachan 58.52 247 P **P** **11 05 37.1 +1.8**
comp=Z,81μm,0.8s,comp=Z,697μm
YMR Madison River 58.55 56 *e*P **P** **11 05 37.2 +1.8**
comp=Z,17nm,0.7s
WAKR Walker 58.63 67 *e*P **P** **11 05 38.3 +2.3**
comp=Z,3.0nm,0.5s
YFT Old Faithful 58.77 56 *e*P **P** **11 05 39.7 +2.8**
comp=Z,20nm,0.7s
YFT *e*PcP **PcP** **11 06 20.8 +2.8**
LKWY Lake 58.90 56 *e*P **P** **11 05 40.6 +2.9**
comp=Z,14nm,0.7s
LKWY *e*PcP **PcP** **11 06 21.3 +2.9**
YPP Pitchstone Pla 58.91 57 *e*P **P** **11 05 40.4 +2.4**
comp=Z,4.7nm,0.6s
DGMT Dagmar 58.93 49 *e*P **P** **11 05 38.2 +0.6**
comp=Z,52nm,1.0s
DGMT Dagmar 58.93 49 P **P** **11 05 38.4 +0.8**
baz=318,SNR=8.5
H17A Grant Village 58.93 56 *e*P **P** **11 05 40.4 +2.3**
comp=Z,13nm,0.8s

H17A	**Grant Village**	58.93	56	P	P	11 05 41.0 +3.0
	baz=317,SNR=17					
KVN	**Kaiserville**	58.95	65	eP	P	11 05 39.8 +1.6
	comp=Z,7.1nm,0.9s					
KVN	**Kaiserville**	58.95	65	eP	P	11 05 39.8 +1.6
KVN				pmax	pmax	
	comp=Z,7.0nm,0.9s					
RYN	**Ryan**	59.03	66	ePcP	PcP	11 06 20.0 +1.0
RLMT	**Red Lodge**	59.04	55	eP	P	11 05 40.5 +1.8
	comp=Z,53nm,1.3s					
RLMT	**Red Lodge**	59.04	55	P	P	11 05 40.4 +1.8
	baz=317,SNR=22					
FLWY	**Flagg Ranch**	59.10	57	eP	P	11 05 41.3 +2.2
	comp=Z,13nm,1.0s					
IMW	**Indian Meadow**	59.12	57	eP	P	11 05 40.9 +1.6
	comp=Z,6.5nm,0.7s					
IMW				ePcP	PcP	11 06 21.3 +1.9
ELK	**Elko**	59.23	62	eP	P	11 05 41.6 +1.5
	comp=Z,3.0nm,0.6s					
ELK				ePcP	PcP	11 06 20.9 +1.0
MRSI	**Marisa**	59.24	217	P	P	11 05 40.3 +0.2
FXWY	**Fox Creek**	59.27	57	eP	P	11 05 42.1 +1.8
	comp=Z,8.7nm,0.8s					
OBN	**Obninsk**	59.29	323	eP	P	11 05 39.7 -0.1
	comp=Z,76nm,0.7s					
OBN	**Obninsk**	59.29	323	*d* iP	P	11 05 39.3 -0.5
OBN				*i*		11 06 18.6
OBN				*i* *PP	pP	11 07 39.3 -0.4
OBN				*i*		11 08 00.1
OBN				*i* S	S	11 13 33.7 +33
OBN				pmax	pmax	
	comp=Z,47nm,0.8s					
NV01	**Mina Array Sit**	59.30	66	eP	P	11 05 42.2 +1.7
NV01				ePcP	PcP	11 06 21.3 +1.1
NVAR	**Mina Array Bea**	59.30	66	P	P	11 05 42.2 +1.7
	comp=Z,3.6nm,0.7s,baz=304,slow=6.6,SNR=38					
NVAR				PcP	PcP	11 06 21.3 +1.1
	comp=Z,1.6nm,0.7s,baz=339,slow=4.8,SNR=5.5					
MOOW	**Moose Ponds**	59.32	57	eP	P	11 05 42.1 +1.6
	comp=Z,6.3nm,0.9s					
LAO	**LASA Array**	59.33	52	eP	P	11 05 41.0 +0.7
	comp=Z,26nm,1.0s					
LAO	**LASA Array**	59.33	52	P	P	11 05 41.3 +1.0
	baz=318,SNR=7.3					
FAKI	**Fak Fak**	59.37	204	P	P	11 05 41.1 +0.1
NV11	**Mina Array Sit**	59.37	66	eP	P	11 05 42.5 +1.6
	comp=Z,0.3nm,0.6s					
TPAW	**Teton Pass**	59.41	57	eP	P	11 05 43.5 +2.3
	comp=Z,12nm,0.8s					
TBLU	**Trondheim**	59.45	341	eP	P	11 05 38.9 -1.8
LOHW	**Long Hollow**	59.49	57	eP	P	11 05 43.5 +1.8
	comp=Z,14nm,1.1s					
KBL	**Kabul**	59.52	288	eP	P	11 05 41.1 -0.9
	comp=Z,36nm,0.8s					
KBL	**Kabul**	59.52	288	eP	P	11 05 41.1 -0.9
KBL				pmax	pmax	
	comp=Z,36nm,0.8s					
SNOW	**Snow King Moun**	59.53	57	eP	P	11 05 44.1 +2.1
	comp=Z,7.7nm,0.7s					
REDW	**Red Top Meadow**	59.55	57	eP	P	11 05 44.0 +1.9
	comp=Z,14nm,1.1s					
VSU	**Vasula**	59.72	331	*de*P	P	11 05 42.5 -0.1
VSU				pmax	pmax	
	comp=Z,210nm,0.6s					
VSU	**Vasula**	59.72	331	eP	P	11 05 42.5 -0.1
VSU				IAmb	IAmb	11 05 43.3
	comp=Z,290nm,0.5s					
HVU	**Hansel Valley**	59.75	60	eP	P	11 05 45.2 +1.9
	comp=Z,8.7nm,1.3s					
HVU	**Hansel Valley**	59.75	60	eP	P	11 05 45.2 +1.9
HVU				pmax	pmax	
	comp=Z,9.0nm,1.3s					
AHID	**Auburn Hatcher**	59.87	58	eP	P	11 05 45.2 +1.0
	comp=Z,11nm,1.0s					
MPSI	**Mapaga**	60.11	219	P	P	11 05 46.2 +0.4
BGU	**Big Grassy Mou**	60.24	61	eP	P	11 05 48.2 +1.6
	comp=Z,3.3nm,0.6s					
SANI	**Sanana**	60.27	212	P	P	11 05 47.0 +0.1
ANGG	**Ammassalik, Gr**	60.35	5	eP	P	11 05 46.2 -0.4
	comp=Z,30nm,0.6s					
LPSR	**Galich'ya Gora**	60.41	320	eP	P	11 05 46.3 -1.0
LPSR				*e*		11 06 22.0
LPSR				*e*S	S	11 13 13.0 -1.8
LPSR				pmax	pmax	
	comp=Z,150nm,0.7s					
LPSR				pmax	pmax	
	comp=Z,130nm,0.6s					
LPSR				smax	smax	
	comp=N,10.0nm,0.5s					
VRH	**Novokhopyorsk**	60.42	318	eP	P	11 05 46.1 -1.3
VRH				*e*S	S	11 13 12.0 -2.9
VRH				pmax	pmax	
	comp=Z,190nm,0.6s					
VRH				pmax	pmax	
	comp=Z,170nm,0.5s					
VRH				smax	smax	
	comp=N,140nm,1.0s					
HWUT	**Hardware Ranch**	60.49	59	eP	P	11 05 49.9 +1.7
	comp=N,12nm,0.8s					
MOL	**Molde**	60.57	342	eP	P	11 05 47.4 -0.7
BW06	**Boulder Array**	60.63	57	eP	P	11 05 50.3 +1.1
	comp=N,19nm,1.1s					
BW06	**Boulder Array**	60.63	57	P	P	11 05 50.2 +1.0
	baz=318,SNR=26					
PD31	**Pinedale Array**	60.63	57	eP	P	11 05 50.4 +1.1
	comp=N,16nm,1.0s					
PD31				ePcP	PcP	11 06 25.6 +0.1
PDAR	**Pinedale Array**	60.63	57	P	P	11 05 50.2 +1.1
	comp=N,18nm,0.7s,baz=358,slow=1.9,SNR=122					
PDAR				PcP	PcP	11 06 25.6 +0.1
	comp=N,2.0nm,0.6s,baz=346,slow=1.9,SNR=4.6					
DOMB	**Dombas**	60.78	341	eP	P	11 05 48.8 -0.7
R11A	**Troy Canyon, C**	60.81	64	eP	P	11 05 51.6 +1.3
	comp=N,2.7nm,1.1s					
R11A	**Troy Canyon, C**	60.81	64	P	P	11 05 51.2 +0.9
	baz=318					
GRAC	**Grapevine Rang**	60.85	66	P	P	11 05 52.3 +1.8
	baz=318					
CWC	**Cottonwood Cre**	60.87	67	P	P	11 05 52.1 +1.3
	baz=318					
DUG	**Dugway, Tooele**	60.90	61	eP	P	11 05 52.5 +1.6
	comp=N,10nm,0.8s					
DUG	**Dugway, Tooele**	60.90	61	P	P	11 05 52.4 +1.6
	baz=318,SNR=13					
AKN	**Aaknes**	61.03	343	eP	P	11 05 50.9 -0.3
PKM	**Mcpherson Peak**	61.07	70	P	P	11 05 53.7 +1.6
	baz=318					
CTU	**Camp Tracy**	61.07	60	eP	P	11 05 53.2 +1.2
	comp=N,5.0nm,0.9s					
NC303	**NORSAR Array S**	61.08	340	eP	P	11 05 51.4 -0.1
	comp=N,69nm,0.5s					
ULM	**Lac du Bonnet**	61.11	43	P	P	11 05 51.7 -0.2
	comp=N,26nm,0.5s,baz=314,slow=4.6,SNR=28					
ULM				PcP	PcP	11 06 27.1 +0.1
	comp=N,12nm,0.6s,baz=325,slow=7.6,SNR=6.9					
ULM	**Lac du Bonnet**	61.11	43	eP	P	11 05 51.6 -0.2
	comp=N,20nm,0.8s					
NC204	**NORSAR Array S**	61.15	340	eP	P	11 05 51.8 -0.2
	comp=N,136nm,0.9s					
NB201	**NORSAR Array S**	61.25	340	eP	P	11 05 52.4 -0.3
	comp=N,79nm,0.6s					
NB2	**NORSAR Subarra**	61.28	340	P	P	11 05 52.3 -0.6
	comp=Z,29nm,0.5s,baz=24,slow=6.5					
NB2	**NORSAR Subarra**	61.28	340	P	P	11 05 52.3 -0.6
	baz=24,slow=6.5					
NB200	**NORSAR Array S**	61.28	340	eP	P	11 05 52.5 -0.3
NB200				ePcP	PcP	11 06 25.4 -2.1
NOA	**NORSAR Array B**	61.28	340	P	P	11 05 52.5 -0.3
	comp=Z,37nm,0.7s,baz=25,slow=6.5,SNR=142					
NOA				PcP	PcP	11 06 25.4 -2.1
	comp=Z,3.2nm,0.8s,baz=25,slow=6.4,SNR=3.3					
JLU	**Jordanelle**	61.29	60	eP	P	11 05 54.8 +1.2
	comp=Z,5.6nm,0.8s					
SBUM	**Sibu**	61.31	228	eP	P	11 05 55.5 +1.9
	comp=Z,36nm,0.9s					
NBO00	**NORSAR Array S**	61.38	340	eP	P	11 05 53.1 -0.3
	comp=Z,52nm,0.8s					
MDND	**Maddock**	61.41	47	eP	P	11 05 54.8 +0.8
	comp=Z,94nm,1.1s					
MDND	**Maddock**	61.41	47	P	P	11 05 54.7 +0.8
	baz=320,SNR=12					
VSR	**Storozhevoye**	61.41	319	eP	P	11 05 53.2 -0.6
VSR				*e*		11 06 25.9
VSR				*e*S	S	11 13 24.9 -2.2
VSR				pmax	pmax	
	comp=Z,170nm,0.9s					
VSR				pmax	pmax	
	comp=Z,150nm,0.9s					
VSR				smax	smax	
	comp=N,20nm,0.7s					
NLU	**North Lily Min**	61.45	61	eP	P	11 05 56.1 +1.5
	comp=N,7.4nm,0.8s					
MPMC	**Manual Prospec**	61.48	67	P	P	11 05 56.1 +1.4
	baz=318,SNR=6.3					
TPNV	**Topopah Spring**	61.49	66	eP	P	11 05 56.4 +1.6
	comp=N,10nm,0.6s					
TPNV	**Topopah Spring**	61.49	66	eP	P	11 05 56.4 +1.6
TPNV				pmax	pmax	
	comp=Z,10.0nm,0.6s					
TPNV	**Topopah Spring**	61.49	66	P	P	11 05 56.2 +1.4
	baz=318,SNR=22					
NC602	**NORSAR Array S**	61.49	340	eP	P	11 05 50.5 -3.6
	comp=Z,29nm,0.6s					
FURC	**Furnace Creek,**	61.51	67	P	P	11 05 56.3 +1.6
	baz=318,SNR=5.9					
NAO01	**NORSAR Array S**	61.52	340	eP	P	11 05 54.0 -0.4
	comp=Z,97nm,1.2s					
NAO01	**NORSAR Array S**	61.52	340	eP	P	11 05 53.9 -0.4
VORD	**Divnogorie**	61.56	319	eP	P	11 05 54.3 -0.5
VORD				*e*		11 06 26.7
VORD				*e*S	S	11 13 26.8 -2.1
VORD				pmax	pmax	
	comp=Z,90nm,0.7s					
VORD				pmax	pmax	
	comp=Z,70nm,0.6s					
VORD				smax	smax	
	comp=N,140nm,2.2s					
PSUT	**Pine Spring**	61.58	63	eP	P	11 05 57.0 +1.5
	comp=N,8.8nm,0.6s					
SLIT	**Slitere, Latvi**	61.68	332	eP	P	11 05 54.8 -0.6
SLIT				IAmb	IAmb	11 05 55.7
	comp=Z,498nm,0.5s					
LRMC	**Laurel Mtn Rad**	61.80	68	P	P	11 05 57.7 +0.9
	baz=318					
EDW2	**Edwards Air Fo**	62.08	68	P	P	11 05 59.9 +1.4
	baz=318					
HYA	**Hoyanger**	62.12	343	eP	P	11 05 58.1 0.0
IZAR	**Zarasai**	62.15	329	eP	P	11 05 58.5 0.0
IZAR				IAmb	IAmb	11 05 59.2
	comp=Z,45nm,0.6s					
SKAR	**Skarslia**	62.18	341	eP	P	11 05 58.2 -0.5
K22A	**Casper**	62.20	55	eP	P	11 05 60.0 +0.6
	comp=Z,19nm,0.8s					
K22A	**Casper**	62.20	55	P	P	11 05 59.9 +0.6
	baz=319,SNR=19					
TCRU	**Three Creeks R**	62.26	62	eP	P	11 06 01.6 +1.7
	comp=Z,16nm,0.3s					
RSSD	**Black Hills**	62.27	52	eP	P	11 06 00.7 +0.9
	comp=Z,66nm,0.7s					
RSSD	**Black Hills**	62.27	52	eP	P	11 06 00.7 +0.9
RSSD				pmax	pmax	
	comp=Z,66nm,0.7s					
RSSD	**Black Hills**	62.27	52	P	P	11 06 00.5 +0.7
	baz=320					
IDID	**Didziasalis**	62.37	329	eP	P	11 05 60.0 +0.1
IDID				IAmb	IAmb	11 06 01.6
	comp=Z,39nm,0.9s					
TMUT	**Trail Mountain**	62.39	61	eP	P	11 06 02.1 +1.4
	comp=Z,14nm,0.8s					
SHPR	**Sheep Range**	62.40	65	eP	P	11 06 02.6 +2.0
	comp=Z,3.6nm,0.9s					
GSC	**Goldstone, Bar**	62.41	67	eP	P	11 06 02.3 +1.6
	comp=Z,3.7nm,0.8s					
GSC	**Goldstone, Bar**	62.41	67	eP	P	11 06 02.3 +1.6
GSC				pmax	pmax	
	comp=Z,4.0nm,0.8s					
GSC	**Goldstone, Bar**	62.41	67	P	P	11 06 01.9 +1.2
	baz=318					
SUE	**Sulen**	62.47	343	eP	P	11 06 00.3 -0.1
MSU	**Marysvale**	62.48	62	eP	P	11 06 03.1 +2.0
MSU	**Marysvale**	62.48	62	eP	P	11 06 03.2 +2.0
P17A	**Butcher Ranch,**	62.50	60	eP	P	11 06 02.9 +1.6
	comp=Z,19nm,1.3s					
IIGN	**Ignalina**	62.50	329	eP	P	11 06 01.0 +0.3
IIGN				IAmb	IAmb	11 06 01.6
	comp=Z,158nm,0.4s					
CCUT	**Cedar City**	62.58	63	eP	P	11 06 03.4 +1.5
	comp=Z,3.9nm,0.8s					
RWWY	**Rawlins**	62.59	56	eP	P	11 06 02.8 +0.8
	comp=Z,12nm,0.9s					
AGMN	**Agassiz Nation**	62.64	45	eP	P	11 06 01.0 -0.8
	comp=Z,22nm,0.4s					
AGMN	**Agassiz Nation**	62.64	45	P	P	11 06 01.2 -0.6
	baz=322,SNR=11					
Q16A	**Castle Valley**	62.69	61	eP	P	11 06 04.2 +1.6
	comp=Z,4.4nm,0.6s					
NACGM	**Naroch**	62.70	328	*e*	P	11 06 01.0 -1.1
BFSC	**Mount Baldy Ra**	62.74	69	P	P	11 06 04.0 +1.2
	baz=319					
TUQ	**Turquoise Moun**	62.79	67	P	P	11 06 04.6 +1.4
	baz=319,SNR=6.4					
SRU	**San Rafael Swe**	62.88	60	eP	P	11 06 05.2 +1.4
	comp=Z,9.8nm,0.7s					
SRU	**San Rafael Swe**	62.88	60	eP	P	11 06 05.2 +1.4
SRU				pmax	pmax	
	comp=Z,10.0nm,0.7s					
KONO	**Kongsberg**	62.88	340	eP	P	11 06 03.9 +0.8
	comp=Z,33nm,1.0s					
KONO	**Kongsberg**	62.88	340	*ce*P	P	11 06 02.8 -0.3
KONO				pmax	pmax	
	comp=Z,44nm,1.4s					
KONO	**Kongsberg**	62.88	340	eP	P	11 06 02.3 -0.8
ASK	**Askoy**	62.93	343	eP	P	11 06 03.2 -0.1
GEYT	**Alibeck**	62.94	298	P	P	11 06 04.7 +0.8
	comp=Z,44nm,0.6s,baz=29,slow=3.4,SNR=85					
GEYT				pP	pP	11 08 06.5 +0.5
	comp=Z,1.4nm,0.4s,baz=50,slow=8.5,SNR=1.8					
GYA0B	**ALIBECK ARRAY**	62.94	298	eP	P	11 06 04.7 +0.7
	comp=Z,54nm,0.6s					
BER	**Bergen**	63.00	343	eP	P	11 06 03.2 -0.6
HEC	**Hector,Ludlow**	63.02	67	P	P	11 06 05.9 +1.4
	baz=319					
KSM	**Kuching**	63.02	230	eP	P	11 06 06.3 +1.6
	comp=Z,23nm,0.8s					
PABE	**Paberze**	63.04	330	eP	P	11 06 04.0 -0.1
PABE				IAmb	IAmb	11 06 04.7
	comp=Z,175nm,0.8s					
LCMT	**Little Creek M**	63.04	64	eP	P	11 06 06.2 +1.4
	comp=Z,3.4nm,0.8s					
PBUR	**Paburg**	63.17	332	eP	P	11 06 04.6 -0.4
PBUR				IAmb	IAmb	11 06 05.5
	comp=Z,89nm,0.6s					
PKCU	**Pink Cliffs**	63.21	63	eP	P	11 06 08.1 +2.1
	comp=Z,11nm,0.8s					
ODD1	**Odda**	63.21	342	eP	P	11 06 05.3 +0.1
KNB	**Kanab**	63.26	63	eP	P	11 06 08.0 +1.8
	comp=Z,18nm,1.6s					
KNB	**Kanab**	63.26	63	eP	P	11 06 08.0 +1.8
KNB				pmax	pmax	
	comp=Z,18nm,1.6s					
O20A	**White River Ci**	63.26	58	eP	P	11 06 07.1 +0.9
	comp=Z,32nm,0.6s					
O20A	**White River Ci**	63.26	58	P	P	11 06 07.0 +0.9
	baz=320,SNR=32					
GMRC	**Granite Mounta**	63.42	67	P	P	11 06 08.6 +1.4
	baz=319,SNR=10					
LDFC	**Landfair**	63.50	66	eP	P	11 06 08.7 +1.1
	comp=Z,12nm,0.7s					
BLS5	**Blasjo**	63.70	342	eP	P	11 06 08.2 -0.1
PHWY	**Pilot Hill**	63.74	55	eP	P	11 06 09.7 +0.4
	comp=Z,3.6nm,0.6s					
N23A	**Red Feather La**	63.82	56	eP	P	11 06 10.8 +1.0
	comp=Z,12nm,0.8s					
N23A				*e*PcP	PcP	11 06 40.0 +1.3
N23A	**Red Feather La**	63.82	56	P	P	11 06 10.7 +0.9
	baz=320,SNR=10					
BELC	**Belle Mtn. Jos**	63.82	68	P	P	11 06 10.5 +0.7
	baz=319					
IVI	**Ivigtut**	63.84	11	eP	P	11 06 08.2 -0.9
	comp=Z,92nm,0.7s					
PFO	**Pinyon Flats O**	63.87	68	P	P	11 06 10.7 +0.7
	baz=319					
U15A	**North Rim**	63.98	63	eP	P	11 06 12.3 +1.4
	comp=Z,7.6nm,0.8s					
U15A				*e*PcP	PcP	11 06 41.3 +1.9
PV09	**Paradox Valley**	64.05	60	eP	P	11 06 12.7 +1.4
PV21	**Cone Mtn., Par**	64.08	60	eP	P	11 06 12.6 +1.1
	comp=Z,18nm,0.7s					
KMY	**Karmoy**	64.11	342	eP	P	11 06 11.3 +0.4
SPSI	**Sidrap Palu**	64.14	217	P	P	11 06 12.3 +0.6
W13A	**Hualapai Mount**	64.14	65	eP	P	11 06 13.4 +1.6
	comp=Z,4.3nm,0.9s					
PV23	**Carpenter Ridg**	64.15	60	eP	P	11 06 13.3 +1.4
	comp=Z,29nm,0.7s					
IRM	**Iron Mountain**	64.17	67	P	P	11 06 13.4 +1.6
	baz=319,SNR=7.5					
NRS	**Narsarsuaq**	64.18	10	*i* P	P	11 06 10.0 -1.3
NRS				pmax	pmax	
	comp=Z,31nm,0.8s					
NRS	**Narsarsuaq**	64.18	10	*i* P	P	11 06 10.0 -1.3
	comp=Z,31nm,0.8s					
PV10	**Paradox Valley**	64.19	60	eP	P	11 06 13.5 +1.3
	comp=Z,28nm,0.7s					
PV22	**Blue Mesa, Par**	64.20	60	eP	P	11 06 13.2 +1.1
	comp=Z,28nm,0.7s					
PV14	**Lion Creek, Pa**	64.20	60	eP	P	11 06 13.2 +1.0
	comp=Z,21nm,0.6s					
PV04	**Paradox Valley**	64.25	60	eP	P	11 06 13.6 +1.2
	comp=Z,17nm,0.9s					
PV20	**West Nyswonger**	64.25	60	eP	P	11 06 13.5 +1.0
	comp=Z,17nm,0.7s					
PV19	**Morning Glory**	64.27	60	eP	P	11 06 13.5 +0.9
	comp=Z,20nm,0.9s					
STAV	**Stavanger**	64.29	342	eP	P	11 06 12.3 +0.3
PV16	**Nyswonger Mesa**	64.31	60	eP	P	11 06 13.9 +1.1
	comp=Z,23nm,1.1s					
PV17	**East Wray Mesa**	64.31	60	eP	P	11 06 13.8 +0.9
	comp=Z,26nm,0.6s					
PV11	**David Mesa, Pa**	64.34	60	eP	P	11 06 14.1 +1.1
	comp=Z,17nm,0.8s					
SUSD	**Miller**	64.34	49	P	P	11 06 12.8 +0.1
	baz=322,SNR=5.1					
PV07	**Paradox Valley**	64.34	60	eP	P	11 06 14.0 +1.0
	comp=Z,14nm,0.5s					
PV18	**Skein Mesa, Pa**	64.36	60	eP	P	11 06 14.1 +1.0
	comp=Z,48nm,1.5s					
HOMB	**Homborsund**	64.38	340	eP	P	11 06 12.6 0.0
KULM	**Kulim**	64.38	241	eP	P	11 06 14.3 +1.0
	comp=Z,26nm,1.1s					
BC3	**Big Chuckawall**	64.38	68	P	P	11 06 14.1 +0.9
	baz=319					
PV03	**Paradox Valley**	64.38	60	eP	P	11 06 13.8 +0.5
	comp=Z,14nm,1.2s					
PV05	**Paradox Valley**	64.39	60	eP	P	11 06 14.6 +1.3
	comp=Z,25nm,0.7s					
MONP2	**Monument Peak**	64.43	69	P	P	11 06 14.7 +1.0
	baz=319					
PV13	**Radium Mtn., P**	64.47	60	eP	P	11 06 14.9 +1.0
	comp=Z,17nm,0.6s					
PV02	**Paradox Valley**	64.47	60	eP	P	11 06 14.7 +0.8
	comp=Z,9.8nm,0.6s					
SUW	**Suwalki**	64.56	330	eP	P	11 06 13.3 -0.4
SUW	**Suwalki**	64.56	330	eP	P	11 06 13.4 -0.4
	comp=Z,148nm,1.0s					
SUW	**Suwalki**	64.56	330	eP	P	11 06 13.4 -0.4
SUW				pmax	pmax	
	comp=Z,148nm,1.0s					
PDMCI	**Parker Dam,Lak**	64.60	66	P	P	11 06 15.4 +1.0
	baz=320					
PV01	**Paradox Valley**	64.61	60	eP	P	11 06 15.8 +1.0
	comp=Z,8.1nm,0.6s					
SMCO	**Snowmass**	64.62	58	eP	P	11 06 16.2 +1.2
	comp=Z,18nm,0.6s					
EYMN	**Ely**	64.69	42	eP	P	11 06 14.4 -0.4
	comp=Z,36nm,0.8s					
EYMN	**Ely**	64.69	42	P	P	11 06 14.3 -0.5
	baz=324,SNR=43					
IKP	**In-Ko-Pah, Jac**	64.78	69	P	P	11 06 16.8 +1.0
	baz=320					
Y12C	**Blythe**	64.81	67	eP	P	11 06 17.5 +1.7
	comp=Z,7.3nm,0.7s					
Y12C	**Blythe**	64.81	67	P	P	11 06 17.2 +1.4
	baz=320					
ISCO	**Idaho Springs**	64.82	57	eP	P	11 06 17.0 +0.9
	comp=Z,9.8nm,1.0s					
ISCO	**Idaho Springs**	64.82	57	eP	P	11 06 17.0 +0.9
ISCO				pmax	pmax	
	comp=Z,10.0nm,1.0s					
ISCO	**Idaho Springs**	64.82	57	P	P	11 06 17.2 +1.1
	baz=320,SNR=14					
IPM	**Ipoh**	64.87	240	eP	P	11 06 17.0 +0.6
	comp=Z,17nm,0.8s					
KLNR	**Kaliningrad**	64.89	332	*d* iP	P	11 06 15.3 -0.6
KLNR				pmax	pmax	
	comp=Z,137nm,0.6s					
GROC	**Groznyy**	64.93	310	eP	P	11 06 15.9 -0.4
GROC				*e*		11 06 42.7
GROC				*e**PP	pP	11 08 17.8 -1.7
GROC				pmax	pmax	
	comp=Z,48nm,0.6s					
WUAZ	**Wupatki**	65.16	63	eP	P	11 06 19.9 +1.7
	comp=Z,7.2nm,0.8s					
WUAZ	**Wupatki**	65.16	63	P	P	11 06 19.7 +1.6
	baz=320,SNR=7.6					
GLA	**Glamis**	65.18	68	P	P	11 06 19.5 +1.3
	baz=320					
MVCO	**Mesa Verde**	65.36	60	eP	P	11 06 20.4 +0.9
	comp=Z,9.9nm,0.8s					
MVCO	**Mesa Verde**	65.36	60	P	P	11 06 20.2 +0.8
	baz=320,SNR=11					
AKASG	**Malin Array Be**	65.46	324	P	P	11 06 18.6 -0.9
	comp=Z,41nm,0.3s,baz=32,slow=6.9,SNR=90					
AKASG				S	S	11 14 14.3 -1.5
	comp=Z,1.1nm,0.3s,baz=32,slow=13,SNR=12					
AKBB	**Malin Array Si**	65.46	324	eP	P	11 06 19.8 +0.3
AKBB				*e*S	S	11 14 14.3 -1.5
AKBB	**Malin Array Si**	65.46	324	eP	P	11 06 19.8 +0.3
AKBB				*e*S	S	11 14 14.3 -1.5
C40A	**Isle Royale Na**	65.63	41	eP	P	11 06 19.6 -1.0
	comp=Z,19nm,0.8s					
C40A	**Isle Royale Na**	65.63	41	P	P	11 06 19.4 -1.2
	baz=325,SNR=16					
OGNE	**Ogallala**	65.66	53	eP	P	11 06 21.7 +0.7
	comp=Z,98nm,0.7s					
OGNE	**Ogallala**	65.66	53	P	P	11 06 21.9 +0.8
	baz=322,SNR=16					
Q24A	**Divide**	65.69	57	eP	P	11 06 22.4 +0.8
	comp=Z,10nm,0.8s					
Q24A	**Divide**	65.69	57	P	P	11 06 22.4 +0.8
	baz=321					
KIV	**Kislovodsk**	65.72	312	eP	P	11 06 21.9 +0.6
	comp=Z,30nm,0.8s					
KIV	**Kislovodsk**	65.72	312	‖ *i* P	P	11 06 22.0 +0.6
KIV	**Kislovodsk**	65.72	312	*i* P	P	11 06 21.8 +0.5
	SNR=5.1					
KIV	**Kislovodsk**	65.72	312	‖ P	P	11 06 22.0 +0.6
E38A	**The Farm, Brul**	65.75	43	eP	P	11 06 21.0 -0.5
	comp=Z,136nm,0.4s					
E38A	**The Farm, Brul**	65.75	43	P	P	11 06 20.9 -0.5
	baz=324,SNR=60					
S22A	**4UR Ranch, Cre**	65.80	59	eP	P	11 06 23.8 +1.6
	comp=Z,7.4nm,0.6s					
S22A	**4UR Ranch, Cre**	65.80	59	P	P	11 06 23.2 +1.0
	baz=321					
KBZ	**Khabaz**	65.81	312	P	P	11 06 22.4 +0.7
	comp=Z,44nm,0.8s,baz=73,slow=3.9,SNR=89					
BSD	**Bornholm Skovb**	65.83	335	*i* P	P	11 06 21.1 -0.6
BSD				pmax	pmax	
	comp=Z,43nm,0.7s					
BSD	**Bornholm Skovb**	65.83	335	*i* P	P	11 06 21.1 -

SPMN	Marine on St.	66.36	45	P		P	11 06 24.7	-0.4
	baz=324,SNR=7.4							
SDCO	Great Sand Dun	66.46	58	eP		P	11 06 27.1	+0.9
	comp=Z,8.9nm,0.8s							
SDCO	Great Sand Dun	66.46	58	P		P	11 06 27.2	+0.9
	baz=321,SNR=35							
D41A	Chassel	66.56	41	eP		P	11 06 25.8	-0.5
	comp=Z,27nm,0.8s							
D41A	Chassel	66.56	41	P		P	11 06 25.8	-0.5
	baz=326,SNR=15							
TBLG	Delisi	66.57	309	eP		P	11 06 27.3	+0.7
	comp=Z,37nm,0.6s							
TBLG	Delisi	66.57	309	eP		P	11 06 27.3	+0.7
TBLG				pmax		pmax		
	comp=Z,37nm,0.6s							
F39A	Loretta	66.57	43	P		P	11 06 26.2	-0.2
	baz=325,SNR=54							
SCHQ	Schefferville	66.59	24	P		P	11 06 25.9	-0.5
	comp=Z,35nm,0.4s,baz=351,slow=5.8,SNR=41							
SCHQ	Schefferville	66.59	24	eP		P	11 06 26.0	-0.5
	comp=Z,44nm,0.4s							
X18A	Snowflake	66.66	63	eP		P	11 06 28.9	+1.4
	comp=Z,9.8nm,0.8s							
KSCO	Kaye Shedlock'	66.89	55	eP		P	11 06 29.2	+0.5
	comp=Z,11nm,0.8s							
KSCO	Kaye Shedlock'	66.89	55	P		P	11 06 28.6	-0.1
	baz=322							
F40A	Park Falls	66.89	43	P		P	11 06 28.0	-0.4
	baz=325,SNR=120							
GKP	Gorka Klasztor	66.89	333	eP		P	11 06 28.4	+0.1
GKP	Gorka Klasztor	66.89	333	eP		P	11 06 28.4	+0.1
HYB	Hyderabad	66.97	268	i P		P	11 06 29.0	-0.3
G39A	Holcombe	66.98	44	P		P	11 06 28.1	-0.8
	baz=325,SNR=14							
BGNE	Belgrade	67.10	51	eP		P	11 06 30.0	+0.1
	comp=Z,54nm,0.7s							
BGNE	Belgrade	67.10	51	P		P	11 06 29.9	+0.1
	baz=323,SNR=7.4							
214A	Organ Pipe Nat	67.11	67	P		P	11 06 31.3	+1.2
	baz=321							
COWI	Conover	67.13	42	eP		P	11 06 29.3	-0.6
	comp=Z,20nm,0.9s							
BEL	Belsk	67.17	330	eP		P	11 06 30.6	+0.7
BEL	Belsk	67.17	330	eP		P	11 06 30.7	+0.7
ANN	Anapa	67.27	316	eP		P	11 06 29.9	-0.8
ANN				pmax		pmax		
	comp=Z,29nm,0.7s							
PSI	Prapat	67.38	241	eP		P	11 06 32.7	+0.7
	comp=Z,17nm,0.6s							
PSI	Prapat	67.38	241	eP		P	11 06 32.7	+0.7
PSI				pmax		pmax		
	comp=Z,17nm,0.6s							
AKH	Akhalkalaki	67.39	310	eP		P	11 06 33.0	+1.3
	comp=Z,42nm,0.8s							
AKH	Akhalkalaki	67.39	310	⇓iP		P	11 06 33.1	+1.3
G40A	Rib Lake	67.39	43	eP		P	11 06 31.1	-0.4
	comp=Z,32nm,0.5s							
G40A	Rib Lake	67.39	43	P		P	11 06 31.1	-0.4
	baz=325,SNR=35							
T25A	Trinidad	67.48	58	eP		P	11 06 33.0	+0.6
	comp=Z,27nm,1.6s							
T25A	Trinidad	67.48	58	P		P	11 06 33.0	+0.6
	baz=322,SNR=7.0							
E43A	Lone Tree Farm	67.73	40	eP		P	11 06 32.8	-0.8
	comp=Z,24nm,0.8s							
E43A	Lone Tree Farm	67.73	40	P		P	11 06 32.7	-0.8
	baz=327,SNR=30							
GNI	Garni	67.82	308	eP		P	11 06 35.4	+1.0
	comp=Z,28nm,0.8s							
GNI	Garni	67.82	308	i P		P	11 06 35.3	+1.0
	SNR=6.7							
GNI	Garni	67.82	308	deP		P	11 06 35.5	+1.0
GNI				pmax		pmax		
	comp=Z,198nm,1.6s							
G41A	Antigo	67.84	42	P		P	11 06 33.9	-0.3
	baz=326,SNR=6.8							
TUC	Tucson	67.93	65	eP		P	11 06 36.4	+1.3
	comp=Z,2.2nm,0.6s							
TUC	Tucson	67.93	65	eP		P	11 06 36.4	+1.3
TUC				pmax		pmax		
	comp=Z,2.0nm,0.6s							
TUC	Tucson	67.93	65	P		P	11 06 36.1	+1.1
	baz=321							
E44A	Grand Marais A	67.93	40	eP		P	11 06 34.4	-0.4
	comp=Z,75nm,0.5s							
E44A	Grand Marais A	67.93	40	P		P	11 06 34.3	-0.4
	baz=327,SNR=16							
LVV	L'vov	67.94	327	eP		P	11 06 34.1	-0.6
BATM	Batumi	68.04	311	⇑iP		P	11 06 35.9	+0.4
SOEI	Soe	68.08	211	eP		P	11 06 36.5	+0.4
	comp=Z,19nm,0.7s							
F43A	Flat Rock, Esc	68.12	41	P		P	11 06 35.1	-0.8
	baz=327,SNR=9.8							
MATQ	Matagami	68.12	33	P		P	11 06 34.9	-0.9
	baz=331,SNR=19							
TASM	ASL Pad, Albuq	68.15	60	P		P	11 06 37.3	+0.8
	baz=322,SNR=8.3							
TASM	ASL Pad, Albuq	68.15	60	P		P	11 06 37.4	+0.8
	baz=322,SNR=8.0							
ANMO	Albuquerque	68.15	60	eP		P	11 06 38.0	+1.4
	comp=Z,4.3nm,0.8s							
ANMO				ePcP		PcP	11 06 58.3	+1.5
ANMO	Albuquerque	68.15	60	ceP		P	11 06 36.6	+0.1
ANMO				pmax		pmax		
	comp=Z,5.0nm,0.9s							
ANMO	Albuquerque	68.15	60	P		P	11 06 37.3	+0.7
	baz=322							
BCA	Borcka	68.20	311	⇓iP		P	11 06 36.5	0.0
LAZ	Ladron	68.23	61	eP		P	11 06 38.6	+1.7
COEN	Coen	68.28	190	eP		P	11 06 38.2	+1.1
	comp=Z,17nm,0.6s							
F44A	Big Bay de Noc	68.28	40	P		P	11 06 36.1	-0.7
	baz=327,SNR=32							
G43A	Wallace	68.40	41	eP		P	11 06 37.1	-0.4
	comp=Z,31nm,0.5s							
G43A	Wallace	68.40	41	P		P	11 06 37.1	-0.4
	baz=327,SNR=27							
D46A	Sault St. Mari	68.40	38	P		P	11 06 36.3	-1.2
	baz=328,SNR=18							
CBKS	Cedar Bluff	68.42	53	eP		P	11 06 37.6	-0.3
	comp=Z,30nm,0.7s							
CBKS	Cedar Bluff	68.42	53	eP		P	11 06 37.6	-0.3
CBKS				pmax		pmax		
	comp=Z,30nm,0.7s							
CBKS	Cedar Bluff	68.42	53	P		P	11 06 37.4	-0.5
	baz=323							
E45A	Wooded Hills,	68.43	39	P		P	11 06 36.7	-1.0
	baz=328							
SIM	Simferopol'	68.48	318	eP		P	11 06 37.9	-0.1
SIM				pmax		pmax		
	comp=Z,29nm,0.9s							
LENM	Lemitar	68.50	61	eP		P	11 06 39.9	+1.3
RUE	Ruedersdorf	68.51	335	eP		P	11 06 38.0	0.0
RUE				IAmb		IAmb	11 06 38.8	
	comp=Z,56nm,0.5s							
I41A	Arkdale	68.52	44	P		P	11 06 38.0	-0.3
	baz=326							
KWP	Kalwaria Pacla	68.52	328	eP		P	11 06 38.8	+0.6
KWP	Kalwaria Pacla	68.52	328	eP		P	11 06 38.7	+0.5
	comp=Z,1μm,1.1s							
KWP	Kalwaria Pacla	68.52	328	eP		P	11 06 38.8	+0.6
LPM	Los Pinos Moun	68.56	61	eP		P	11 06 40.3	+1.3
D47A	Chapleau	68.60	38	P		P	11 06 37.6	-1.1
	baz=328,SNR=22							
H42A	Shiocton	68.69	42	P		P	11 06 38.7	-0.6
	baz=326							
BNM	Barren Site	68.69	61	eP		P	11 06 40.8	+1.0
KIS	Kishinev	68.75	323	⇓iP		P	11 06 39.0	-0.6
	comp=Z,110nm,1.0s							
KIS	Kishinev	68.75	323	c iP		P	11 06 39.0	-0.6
KIS				pmax		pmax		
	comp=Z,110nm,1.0s							
E46A	Sault Ste Mari	68.75	39	eP		P	11 06 38.5	-1.2
	comp=Z,20nm,0.9s							
E46A	Sault Ste Mari	68.75	39	P		P	11 06 38.4	-1.2
	baz=328,SNR=6.0							
MILM	Milestii Mici	68.81	323	⇑iP		P	11 06 39.5	-0.5
F45A	CMU Biological	68.87	40	P		P	11 06 39.6	-0.7
	baz=328,SNR=24							
SCIA	State Center	68.89	47	eP		P	11 06 40.3	-0.2
	comp=Z,94nm,1.0s							
SCIA	State Center	68.89	47	P		P	11 06 40.3	-0.2
	baz=325,SNR=6.3							
OJC	Ojcow	68.89	330	eP		P	11 06 40.8	+0.3
OJC	Ojcow	68.89	330	eP		P	11 06 40.6	+0.2
	comp=Z,51nm,0.6s							
OJC	Ojcow	68.89	330	eP		P	11 06 40.6	+0.2
OJC				pmax		pmax		
	comp=Z,51nm,0.6s							
LSQQ	Lebel-sur-Quev	68.94	33	P		P	11 06 40.0	-0.7
	baz=331							
CHGQ	Chibougamau	69.00	31	P		P	11 06 40.1	-1.0
	baz=332,SNR=15							
SEVA	Sevastopol	69.00	318	⇓iP		P	11 06 40.9	-0.2
H43A	Windswept, Lux	69.02	42	eP		P	11 06 40.9	-0.3
	comp=Z,59nm,0.7s							
H43A	Wilswept, Lux	69.02	42	P		P	11 06 41.0	-0.3
	baz=327,SNR=31							
D49A	Beulah Townshi	69.03	36	P		P	11 06 40.3	-1.0
	baz=329,SNR=20							
I42A	Draeger Farm,	69.05	43	eP		P	11 06 41.0	-0.4
	comp=Z,39nm,0.8s							
I42A	Draeger Farm,	69.05	43	P		P	11 06 41.0	-0.4
	baz=326,SNR=22							
E47A	Iron Bridge	69.05	38	P		P	11 06 40.1	-1.3
	baz=328,SNR=13							
F46A	Macinaw City C	69.08	39	P		P	11 06 40.8	-0.8
	baz=328,SNR=10							
MTN	Manton Dam	69.22	203	eP		P	11 06 43.6	+0.8
	comp=Z,49nm,0.9s							
ESK	Eskdalemuir	69.22	346	eP		P	11 06 42.2	0.0
	comp=Z,40nm,0.6s							
ESK	Eskdalemuir	69.22	346	i P		P	11 06 42.6	+0.4
KOLS	Kolonicke sedl	69.27	328	eP		P	11 06 42.9	+0.2
KOLS				pmax		pmax		
	comp=Z,18nm,0.6s							
KOLS	Kolonicke sedl	69.27	328	eP		P	11 06 42.9	+0.2
JFWS	Jewell Farm	69.31	45	eP		P	11 06 42.1	-1.0
	comp=Z,23nm,0.6s							
JFWS	Jewell Farm	69.31	45	eP		P	11 06 42.1	-1.0
JFWS				pmax		pmax		
	comp=Z,23nm,0.6s							
JFWS	Jewell Farm	69.31	45	P		P	11 06 41.8	-1.2
	baz=326,SNR=14							
KSP	Ksiaz	69.33	332	eP		P	11 06 43.2	+0.2
KSP	Ksiaz	69.33	332	eP		P	11 06 43.2	+0.2
PRAR	RASCA	69.34	324	⇓iP		P	11 06 42.8	-0.4
121A	Cookes Peak, D	69.35	63	P		P	11 06 45.4	+1.7
	baz=322,SNR=15							
G45A	Suttons Bay	69.36	40	eP		P	11 06 42.9	-0.4
	comp=Z,17nm,0.6s							
G45A	Suttons Bay	69.36	40	P		P	11 06 42.3	-1.0
	baz=328,SNR=5.3							
E48A	Lockeyer	69.42	37	P		P	11 06 42.5	-1.2
	baz=329,SNR=14							
G46A	Petoskey	69.43	40	P		P	11 06 42.9	-0.7
	baz=328,SNR=13							
J42A	Columbus	69.44	44	P		P	11 06 43.3	-0.5
	baz=326,SNR=21							
BUR08	Bucovina Ar. S	69.45	325	eP		P	11 06 44.0	+0.1
	comp=Z,41nm,0.6s							
NIE	Niedzica	69.45	329	eP		P	11 06 44.5	+0.7
NIE	Niedzica	69.45	329	eP		P	11 06 44.5	+0.7
319A	Douglas	69.46	65	eP		P	11 06 45.8	+1.5
	comp=Z,19nm,0.9s							
BURAR	Bucovina Array	69.47	325	⇓iP		P	11 06 44.1	+0.1
BURAR	Bucovina Array	69.47	325	⇓P		P	11 06 44.1	+0.1
UZH	Uzhgorod	69.53	328	⇑eP		P	11 06 44.0	-0.2
L40A	Anamosa	69.61	46	eP		P	11 06 43.8	-1.0
	comp=Z,24nm,0.8s							
L40A	Anamosa	69.61	46	P		P	11 06 43.8	-1.0
	baz=326,SNR=11							
OSTC	Ostas	69.61	332	eP		P	11 06 44.9	+0.2
VLDQ	Val d'Or	69.62	33	eP		P	11 06 43.6	-1.2
	comp=Z,97nm,0.7s							
CHVC	Chvalec	69.63	332	eP		P	11 06 45.0	+0.2
KSU1	Kansas State U	69.65	51	P		P	11 06 44.4	-0.7
	baz=324,SNR=5.6							
J43A	Natural Harves	69.67	43	P		P	11 06 44.0	-1.2
	baz=327							
UPC	Upice	69.71	332	eP		P	11 06 45.6	+0.3
UPC	Upice	69.71	332	eP		P	11 06 45.6	+0.3
OKC	Ostrava-Krasne	69.71	331	eP		P	11 06 45.5	+0.2
OKC	Ostrava-Krasne	69.71	331	eP		P	11 06 45.5	+0.2
OKC				ex		x	11 06 50.1	
BIZ	Bicaz	69.75	324	⇓iP		P	11 06 45.7	+0.1
DPC	Dobruska-Polom	69.77	332	eP		P	11 06 46.2	+0.5
DPC				e			11 07 03.1	
DPC	Dobruska-Polom	69.77	332	eP		P	11 06 46.2	+0.5
DPC				ex		x	11 06 55.5	
DPC				ePCP		PcP	11 07 03.1	-0.1
CLL	Collm	69.78	335	eP		P	11 06 45.4	-0.2
	comp=Z,49nm,0.7s							
CLL	Collm	69.78	335	⇓iP		P	11 06 45.4	-0.2
	comp=Z,54nm,0.6s							
CLL	Collm	69.78	335	⇓iP		P	11 06 45.4	-0.2
CLL				pmax		pmax		
	comp=Z,54nm,0.6s							
K42A	Prairie Point,	69.80	44	P		P	11 06 45.1	-0.8
	baz=326,SNR=15							
F48A	Evansville	69.82	38	P		P	11 06 44.9	-1.1
	baz=329,SNR=13							
G47A	Hillman	69.93	39	P		P	11 06 45.4	-1.2
	baz=328							
TESR	Tescani	69.93	324	⇓iP		P	11 06 46.6	0.0
BRG	Berggiesshubel	69.93	334	⇓iP		P	11 06 46.3	-0.2
	comp=Z,14nm,0.7s							
BRG				i			11 06 55.5	
	comp=Z,5.6nm,0.6s							
BRG	Berggiesshubel	69.93	334	⇓iP		P	11 06 46.3	-0.2
BRG				pmax		pmax		
	comp=Z,14nm,0.7s							
BRG				pmax		pmax		
	comp=Z,6.0nm,0.6s							
GLMI	Grayling	69.94	40	P		P	11 06 46.2	-0.6
	baz=328							
LANS	Liptovska Anna	69.94	330	eP		P	11 06 47.9	+1.2
LANS	Liptovska Anna	69.94	330	eP		P	11 06 47.9	+1.2
MORC	Moravsky Berou	69.94	331	eP		P	11 06 47.1	+0.4
	comp=Z,50nm,0.9s							
MORC	Moravsky Berou	69.94	331	⇓iP		P	11 06 47.3	+0.6
MORC	Moravsky Berou	69.94	331	⇓P		P	11 06 47.3	+0.6
MORC	Moravsky Berou	69.94	331	⇓iP		P	11 06 47.0	+0.3
H46A	Fife Lake	69.96	40	P		P	11 06 45.9	-1.0
	baz=328							
E50A	Wahnapitae	69.98	36	P		P	11 06 45.9	-1.0
	baz=330,SNR=19							
I45A	Fountain	69.98	41	P		P	11 06 46.2	-0.8
	baz=328							
PVCC	Panska Ves	70.08	333	eP		P	11 06 47.8	+0.4
PVCC	Panska Ves	70.08	333	eP		P	11 06 47.8	+0.4
F49A	Sandfield	70.08	38	P		P	11 06 46.5	-1.1
	baz=329,SNR=19							
AKDM	Akdaman-Van	70.10	308	P		P	11 06 48.3	+0.3
ARCR	ARCALIA	70.22	325	⇓iP		P	11 06 49.3	+1.0
KECS	Kecovo	70.23	329	eP		P	11 06 48.6	+0.3
KECS				pmax		pmax		
	comp=Z,76nm,0.7s							
KECS	Kecovo	70.23	329	eP		P	11 06 48.6	+0.3
K43A	Burlington	70.27	43	eP		P	11 06 48.1	-0.6
	comp=Z,58nm,1.0s							
K43A	Burlington	70.27	43	P		P	11 06 48.0	-0.7
	baz=327,SNR=17							
H47A	Mio	70.28	40	P		P	11 06 48.0	-0.8
	baz=328							
TLCR		70.29	322	⇓iP		P	11 06 48.7	-0.1
TLCR		70.29	322	⇓P		P	11 06 48.7	-0.1
D52A	ZEK Kipawa Sen	70.30	35	P		P	11 06 48.0	-0.8
	baz=331,SNR=12							
L42A	Oliver, Polo	70.31	45	eP		P	11 06 47.9	-1.0
	comp=Z,64nm,0.5s							
L42A	Oliver, Polo	70.31	45	P		P	11 06 47.9	-1.0
	baz=326,SNR=14							
E51A	G1948 Merrick	70.31	36	P		P	11 06 47.9	-1.1
	baz=330,SNR=21							
I46A	Reed City	70.37	41	P		P	11 06 48.8	-0.5
	baz=328							
PETR	Petresti	70.41	323	⇑iP		P	11 06 50.6	+1.2
N40A	Mertquake, Sal	70.42	47	P		P	11 06 49.2	-0.5
	baz=326,SNR=15							
J45A	Montague	70.43	42	eP		P	11 06 49.5	-0.2
	comp=Z,91nm,0.4s							
J45A	Montague	70.43	42	P		P	11 06 48.7	-0.9
	baz=328							
ODBI	Odobesti	70.43	323	⇑iP		P	11 06 51.0	+1.4
D53A	Lac Vacive, Po	70.44	34	eP		P	11 06 49.1	-0.5
	comp=Z,42nm,1.1s							
D53A	Lac Vacive, Po	70.44	34	P		P	11 06 49.2	-0.5
	baz=331,SNR=23							
VRI	Vrincioaia	70.46	323	⇓iP		P	11 06 50.0	+0.2
VRI	Vrincioaia	70.46	323	⇓P		P	11 06 50.0	+0.2
M41A	Milan	70.46	46	P		P	11 06 49.1	-0.8
	baz=326,SNR=19							
PLOR	Plostina	70.50	323	⇓iP		P	11 06 50.1	0.0
PLOR	Plostina	70.50	323	⇓P		P	11 06 50.1	0.0
H48A	Harrisville	70.53	39	eP		P	11 06 49.7	-0.5
	comp=Z,94nm,1.3s							
H48A	Harrisville	70.53	39	P		P	11 06 49.6	-0.6
	baz=329,SNR=9.7							
L43A	Garden Prairie	70.54	44	P		P	11 06 49.2	-1.1
	baz=327							
CFR	Carcaliu	70.55	322	⇓iP		P	11 06 50.1	-0.2
CFR	Carcaliu	70.55	322	⇓P		P	11 06 50.1	-0.2
PRU	Pruhonice	70.58	333	eP		P	11 06 50.5	+0.1
PRU	Pruhonice	70.58	333	eP		P	11 06 50.5	+0.1
PRU				ex		x	11 06 53.9	
GOPC	GO Pecny, Ondr	70.58	333	eP		P	11 06 50.4	0.0
GOPC	GO Pecny, Ondr	70.58	333	eP		P	11 06 50.4	0.0
GOPC				ex		x	11 06 57.8	
OZUR		70.59	324	⇓iP		P	11 06 51.3	+0.7
AMTX	Amarillo	70.61	57	eP		P	11 06 51.5	+0.6
	comp=Z,45nm,1.2s							
AMTX	Amarillo	70.61	57	P		P	11 06 51.2	+0.2
	baz=323							
WTSB	Winterswijk	70.62	339	eP		P	11 06 50.2	-0.3
	comp=Z,47nm,0.5s							
VRAC	Vranov	70.63	331	⇓iP		P	11 06 51.5	+0.8
VRAC	Vranov	70.63	331	⇓P		P	11 06 51.5	+0.8
VRAC	Vranov	70.63	331	⇓iP		P	11 06 51.2	+0.5
F51A	Arnstein	70.69	36	P		P	11 06 49.9	-1.2
	baz=330,SNR=8.2							
U32A	Winter Ranch,	70.72	54	eP		P	11 06 51.8	+0.3
	comp=Z,27nm,1.1s							
D54A	Lac Fusel, La	70.72	33	P		P	11 06 50.6	-0.7
	baz=332,SNR=20							
JAVC	Velka Javorina	70.73	331	⇓iP		P	11 06 52.7	+1.3
TOBO	Tobermory, Bru	70.73	38	P		P	11 06 50.4	-1.0
	baz=330,SNR=7.4							
BISRR	Bisoca	70.74	323	⇓iP		P	11 06 52.7	+1.2
DIKM	Dikmen	70.77	315	P		P	11 06 52.0	+0.4
DIKM	Dikmen	70.77	315	⇓iP		P	11 06 52.4	+0.8
GRER		70.79	323	⇓iP		P	11 06 53.3	+1.6
CJR	Cluj-Napoca	70.79	326	⇓iP		P	11 06 52.3	+0.5
CJR	Cluj-Napoca	70.79	326	⇓P		P	11 06 52.3	+0.5
MSTX	Muleshoe	70.79	59	eP		P	11 06 52.4	+0.2
	comp=Z,15nm,0.7s							
MSTX	Muleshoe	70.79	59	P		P	11 06 52.3	+0.2
	baz=323,SNR=11							
J46A	Howard City	70.79	41	P		P	11 06 51.4	-0.4
	baz=328							
E52A	Mattawa	70.82	35	P		P	11 06 50.6	-1.2
	baz=331,SNR=8.5							
I48A	Sherman Twp	70.82	40	P		P	11 06 51.4	-0.5
	baz=329							
L44A	Lake County Fo	70.88	43	P		P	11 06 51.6	-0.7
	baz=327							
N41A	Harden Midland	70.88	46	eP		P	11 06 51.9	-0.4
	comp=Z,45nm,0.9s							
N41A	Harden Midland	70.88	46	P		P	11 06 51.3	-1.0
	baz=326							
NKC	Novy Kostel	70.90	334	eP		P	11 06 52.3	0.0
NKC	Novy Kostel	70.90	334	eP		P	11 06 52.3	0.0
NKC				ex		x	11 06 56.2	
KVT	Kavak	70.91	315	P		P	11 06 53.3	+0.8
PSZ	Piszkesteto	70.91	329	eP		P	11 06 53.1	+0.6
	comp=Z,23nm,0.9s							
PSZ	Piszkesteto	70.91	329	⇑iP		P	11 06 53.4	+0.9
PSZ	Piszkesteto	70.91	329	⇑P		P	11 06 53.4	+0.9
PSZ	Piszkesteto	70.91	329	⇓EP		P	11 06 52.1	-0.4
KRUC	Moravsky	70.91	331	⇓iP		P	11 06 52.7	+0.4
TREC	Trest	70.95	332	eP		P	11 06 52.8	+0.2
TREC	Trest	70.95	332	eP		P	11 06 52.8	+0.2
CPRX	Cap Rock	70.98	60	eP		P	11 06 54.4	+1.2
F52A	Sundridge	71.02	36	P		P	11 06 52.3	-0.7
	baz=331,SNR=18							
DRGR		71.02	326	⇓iP		P	11 06 53.2	+0.1
DRGR		71.02	326	⇓P		P	11 06 53.2	+0.1
HARR	Harsova	71.04	322	⇑iP		P	11 06 53.3	+0.1
HARR	Harsova	71.04	322	⇑P		P	11 06 53.3	+0.1
MLR	Muntele Rosu	71.06	324	eP		P	11 06 53.5	0.0
	comp=Z,60nm,0.7s							
MLR	Muntele Rosu	71.06	324	⇑iP		P	11 06 53.9	+0.5
MLR	Muntele Rosu	71.06	324	⇑P		P	11 06 53.9	+0.5
TIRR	Tirgusor	71.06	321	eP		P	11 06 53.1	-0.2
	comp=Z,113nm,0.9s							
TIRR	Tirgusor	71.06	321	⇑iP		P	11 06 53.6	+0.3
TIRR	Tirgusor	71.06	321	⇑P		P	11 06 53.6	+0.3
E53A	Dumoine, Ponti	71.07	34	P		P	11 06 52.6	-0.8
	baz=331,SNR=11							
M43A	Waltham Townsh	71.07	45	P		P	11 06 52.7	-0.7
	baz=327,SNR=9.1							
KLBO	Killbear Provi	71.09	37	P		P	11 06 52.5	-0.9
	baz=330,SNR=13							
TLB	Topalu	71.09	322	⇓iP		P	11 06 53.6	+0.2
TLB	Topalu	71.09	322	⇓P		P	11 06 53.6	+0.2
ISR	Istrita	71.17	323	⇓iP		P	11 06 54.4	+0.4
ISR	Istrita	71.17	323	⇓P		P	11 06 54.4	+0.4
E54A	Lac Daplat, Po	71.18	34	P		P	11 06 53.0	-1.0
	baz=332,SNR=13							
J47A	Sunmer	71.21	41	eP		P	11 06 54.4	+0.2
	comp=Z,55nm,0.9s							
J47A	Sunmer	71.21	41	P		P	11 06 54.1	-0.1
	baz=328,SNR=15							
MNTX	Cornudas Mount	71.26	62	eP		P	11 06 56.0	+1.3
	comp=Z,19nm,0.8s							
MNTX	Cornudas Mount	71.26	62	P		P	11 06 56.0	+1.3
	baz=323,SNR=46							
MODS	Modra-Piesok	71.28	331	eP		P	11 06 54.6	+0.1
MODS				pmax		pmax		
	comp=Z,34nm,1.0s							
MODS	Modra-Piesok

H52A **Wyevale** 71.82 37 P P 11 06 56.5 -1.2
baz=330
SIRR **Siria** 71.82 327⇑ *i*P P 11 06 58.1 +0.4
PEMO **Pembroke** 71.82 35 P P 11 06 56.8 -0.9
baz=332,SNR=5.3
BWLO **Walkerton** 71.83 38 P P 11 06 57.3 -0.5
baz=330,SNR=10
G53A **Haliburton** 71.84 36 P P 11 06 57.1 -0.7
baz=331,SNR=25
K48A **Perry** 71.85 41 P P 11 06 57.8 0.0
baz=329,SNR=14
GEC2 **GERESS Array S** 71.85 333 *e*P P 11 06 57.9 0.0
comp=Z,19nm,0.5s
GEC2 **GERESS Array S** 71.85 333 *e*P P 11 06 57.9 0.0
GEC2 pmax pmax
comp=Z,19nm,0.5s
GERES **GERESS Array B** 71.85 333 P P 11 06 57.9 0.0
comp=Z,11nm,0.4s,baz=33,slow=5.1,SNR=94
ILGA **Ilgaz** 71.90 316 *e*P P 11 06 59.8 +1.3
comp=Z,74nm,0.9s
CSKK **Cskako** 71.90 329 EP P 11 06 58.1 0.0
HGN **Heimansgroeve** 71.94 339 *e*P P 11 06 58.1 -0.1
comp=Z,41nm,1.2s
N44A **Piper City** 71.95 44 P P 11 06 58.0 -0.5
baz=327,SNR=7.9
SADO **Sadowa** 71.97 36 *e*P P 11 06 57.4 -1.2
comp=Z,11nm,0.9s
F55A **Otter Lake** 71.98 34 P P 11 06 57.7 -0.9
baz=332,SNR=7.9
MEM **Membach** 72.06 339 ⇓P P 11 06 58.8 -0.2
comp=Z,27nm,0.8s
CONA **Conrad Observa** 72.09 331 *i*P P 11 07 00.0 +0.7
comp=Z,22nm,0.5s,SNR=22
SOP **Sopron** 72.11 331 ⇓EP P 11 06 59.1 -0.2
K49A **Clarkson** 72.12 40 P P 11 06 59.5 +0.1
baz=329,SNR=10
L47A **Sherwood** 72.13 42 P P 11 06 59.3 -0.3
baz=328,SNR=44
I51A **Listowel** 72.14 38 P P 11 06 59.5 -0.1
baz=330,SNR=9.8
WMOK **Wichita Mounta** 72.15 55 *e*P P 11 07 00.2 +0.4
comp=Z,27nm,0.7s
WMOK **Wichita Mounta** 72.15 55 *e*P P 11 07 00.2 +0.4
WMOK pmax pmax
comp=Z,27nm,0.7s
WMOK **Wichita Mounta** 72.15 55 P P 11 07 00.2 +0.4
baz=324,SNR=41
M46A **Old House Fiel** 72.16 43 *e*P P 11 06 59.5 -0.2
comp=Z,49nm,0.7s
M46A **Old House Fiel** 72.16 43 P P 11 06 59.3 -0.4
baz=328,SNR=6.4
N45A **Kentland** 72.16 44 P P 11 06 59.3 -0.5
baz=328,SNR=7.6
BANO **Bancroft** 72.17 35 P P 11 06 59.2 -0.5
baz=331,SNR=11
CORM **Corum** 72.25 315 P P 11 07 05.4 +5.0
BHOU **Houvegnez** 72.31 339 P P 11 07 00.4 0.0
P43A **Skaggs, Pawnee** 72.33 46 P P 11 06 60.0 -0.8
baz=327
O44A **Mansfield** 72.35 45 P P 11 07 00.2 -0.6
baz=327,SNR=9.9
G55A **Calabogie** 72.37 34 P P 11 06 60.0 -0.9
baz=332,SNR=10
BCLA **Clavier** 72.39 339 ⇓P P 11 07 00.9 0.0
comp=Z,22nm,0.0s
BZS **Buzias** 72.41 326 ⇓ *i*P P 11 07 00.7 -0.4
BZS **Buzias** 72.41 326 ⇓P P 11 07 00.7 -0.4
YOZ **Yozgat** 72.42 314 P P 11 07 01.4 0.0
TIH **Tihany** 72.43 329 EP P 11 06 58.1 -3.0
N46A **Monticello** 72.44 43 P P 11 07 00.2 -1.1
baz=328
PLVO **Plevna** 72.44 35 *e*P P 11 07 00.5 -0.8
comp=Z,22nm,0.5s
PLVO **Plevna** 72.44 35 P P 11 07 00.5 -0.8
baz=332,SNR=8.2
AAM **Ann Arbor** 72.45 41 *e*P P 11 07 01.6 +0.3
comp=Z,75nm,0.4s
AAM **Ann Arbor** 72.45 41 *e*P P 11 07 01.6 +0.3
AAM pmax pmax
comp=Z,75nm,0.4s
AAM **Ann Arbor** 72.45 41 P P 11 07 01.3 0.0
baz=329
L48A **N Adams** 72.46 41 P P 11 07 01.3 -0.1
baz=329,SNR=21
BGES **Gesves** 72.47 339 ⇓P P 11 07 01.1 -0.2
comp=Z,15nm,0.8s
M47A **Cromwell** 72.49 42 P P 11 07 01.4 -0.2
baz=328,SNR=11
PRD **Provadia** 72.52 321 P P 11 07 02.1 +0.4
SNF **Seneffe** 72.52 340 P P 11 07 01.2 -0.4
comp=Z,27nm,0.8s
LKLB **Kalborn** 72.52 338 P P 11 07 02.2 +0.6
L49A **Milan** 72.58 41 P P 11 07 02.3 +0.3
baz=329,SNR=14
O45A **Potomac** 72.58 44 P P 11 07 01.9 -0.2
baz=328,SNR=11
ORIO **Orleans, Innes** 72.60 34 P P 11 07 01.2 -0.9
baz=333,SNR=5.7
MOA **Molln** 72.61 332 *i*P P 11 07 02.5 +0.3
comp=Z,13nm,0.6s,SNR=7.7
BMRD **Maredsous** 72.62 339 P P 11 07 02.1 0.0
comp=Z,29nm,0.9s
TUL1 **Leonard** 72.62 52 *e*P P 11 07 02.9 +0.5
comp=Z,52nm,0.8s
TUL1 **Leonard** 72.62 52 P P 11 07 02.8 +0.3
baz=325,SNR=20
I53A **Kortright Cn E** 72.64 37 P P 11 07 01.7 -0.7
baz=331
ACTO **Acton** 72.66 37 P P 11 07 02.0 -0.5
baz=331
PKRO **Pickering** 72.70 37 P P 11 07 02.0 -0.7
baz=331
BBOU **Bougnies** 72.70 340 P P 11 07 03.1 +0.5
DELO **Deloro Mine** 72.72 35 *e*P P 11 07 02.3 -0.5
comp=Z,23nm,0.6s
DELO **Deloro Mine** 72.72 35 P P 11 07 02.1 -0.7
baz=332,SNR=9.1
SFIN **Lafayette** 72.72 44 *e*P P 11 07 02.4 -0.5
comp=Z,32nm,0.4s
SFIN **Lafayette** 72.72 44 P P 11 07 02.2 -0.8
baz=328,SNR=5.9
SRE **Strehaia** 72.73 325⇑ *i*P P 11 06 57.8 -5.1
SRE **Strehaia** 72.73 325 ⇑P P 11 06 57.8 -5.1
M48A **Edgerton** 72.74 42 *e*P P 11 07 02.8 -0.3
comp=Z,88nm,0.6s
M48A **Edgerton** 72.74 42 P P 11 07 02.6 -0.4
baz=329,SNR=16
ARSA **Arzberg** 72.80 331 *i*P P 11 07 04.0 +0.7
comp=Z,12nm,0.5s,SNR=8.7
MORH **Mrgy, Hungar** 72.82 329 ⇓ *i*P P 11 07 02.6 -0.7
MORH **Mrgy, Hungar** 72.82 329 ⇓EP P 11 07 02.1 -1.3
J52A **Paris** 72.83 38 P P 11 07 03.2 -0.3
baz=330,SNR=11
H55A **Tweed** 72.84 35 P P 11 07 02.7 -0.8
baz=332,SNR=5.2
DOU **Dourbes** 72.85 339 P P 11 07 03.3 -0.1
comp=Z,11nm,0.7s
BNN **Bunyan** 72.85 313 P P 11 07 03.8 -0.1
N47A **Urbana** 72.87 43 P P 11 07 03.0 -0.7
baz=328,SNR=18
SLM **Saint Louis** 72.87 47 *e*P P 11 07 03.5 -0.3
comp=Z,23nm,0.5s
SLM **Saint Louis** 72.87 47 *e*P P 11 07 03.5 -0.3
SLM pmax pmax
comp=Z,23nm,0.5s
K51A **Iona Station** 72.90 39 P P 11 07 04.0 +0.1
baz=330,SNR=5.7
DRCO **St. Marys Ceme** 72.91 36 P P 11 07 03.4 -0.5
baz=331,SNR=5.2
CCM **Cathedral Cave** 72.91 48 *e*P P 11 07 03.6 -0.4
comp=Z,19nm,0.6s
CCM **Cathedral Cave** 72.91 48 *e*P P 11 07 03.6 -0.4
CCM pmax pmax
comp=Z,19nm,0.6s
CCM **Cathedral Cave** 72.91 48 P P 11 07 03.5 -0.6
baz=326
I55A **Frankford** 72.96 36 P P 11 07 03.4 -0.8
baz=332,SNR=5.5
WLVO **Wesleyville** 72.97 36 P P 11 07 03.9 -0.4
baz=331
L50A **Kingsville** 73.00 40 P P 11 07 04.1 -0.3
baz=330,SNR=13
M49A **Liberty Center** 73.04 41 P P 11 07 04.3 -0.4
baz=329,SNR=9.4
BR101 **Keskin Array S** 73.05 315 *e*P P 11 07 05.1 +0.1
BR131 **Keskin Array S** 73.05 315 *e*P P 11 07 05.2 +0.1
comp=Z,23nm,0.8s
BRTR **Keskin Array B** 73.05 315 P P 11 07 05.1 +0.1
comp=Z,18nm,0.6s,baz=50,slow=2.8,SNR=92
BRTR **Keskin Array B** 73.05 315 *i*P P 11 07 05.0 0.0
BRTR pmax pmax
comp=Z,19nm,0.6s
STU **Stuttgart** 73.06 336 *e*P P 11 07 05.1 +0.4
comp=Z,59nm,1.4s
STU **Stuttgart** 73.06 336 *e*P P 11 07 05.1 +0.4
STU pmax pmax
comp=Z,59nm,1.4s
H56A **Elgin** 73.11 34 P P 11 07 04.2 -0.8
baz=332,SNR=5.2
MDVR **Moldovita** 73.12 326 ⇓ *i*P P 11 07 04.8 -0.4
K52A **Tillsonburg** 73.14 38 P P 11 07 04.7 -0.6
baz=330
BEHE **Becsehely** 73.15 330 *e*P P 11 07 05.7 +0.5
BEHE **Becsehely** 73.15 330 ⇓EP P 11 07 05.1 -0.2
N48A **Decatur** 73.15 42 P P 11 07 04.8 -0.5
baz=329,SNR=19
PUNG **Punghina** 73.16 325⇑ *i*P P 11 07 05.1 -0.2
SHME **Shamm** 73.16 291 *i*P P 11 07 05.3 -0.4
SNR=7.2
HHAR **Hobbs** 73.17 51 *e*P P 11 07 05.3 -0.3
comp=Z,34nm,0.8s
HHAR *e*S S 11 15 42.9 -1.1
TYNO **Tyneside** 73.17 38 P P 11 07 05.0 -0.4
baz=331,SNR=8.5
BANOM **Banah** 73.17 291 *i*P P 11 07 05.9 +0.1
SNR=13
P45A **Graceland, Par** 73.18 45 *e*P P 11 07 05.2 -0.3
comp=Z,42nm,0.6s
P45A **Graceland, Par** 73.18 45 P P 11 07 05.0 -0.6
baz=328,SNR=15
O47A **Sheridan** 73.22 43 P P 11 07 04.7 -1.1
baz=328,SNR=5.1
ANTO **Ankara** 73.27 316 *e*P P 11 07 06.6 +0.4
comp=Z,39nm,0.6s
ANTO **Ankara** 73.27 316 ⇓ *i*P P 11 07 06.7 +0.5
ANTO **Ankara** 73.27 316 ⇓P P 11 07 06.7 +0.5
PLIO **Pelee Island,** 73.32 40 P P 11 07 06.0 -0.3
baz=330
P46A **Rosedale** 73.32 44 P P 11 07 06.0 -0.4
baz=328,SNR=5.7
STCO **Saint Catharin** 73.32 37 P P 11 07 05.3 -1.0
baz=331
FVM **French Village** 73.33 48 *e*P P 11 07 06.3 -0.1
comp=Z,51nm,0.5s
FVM **French Village** 73.33 48 *e*P P 11 07 06.3 -0.1
FVM pmax pmax
comp=Z,51nm,0.5s
FRGS **Fruska Gora** 73.40 327 ⇓ *i*P P 11 07 06.4 -0.3
MDUB **Mudurnu** 73.41 317 P P 11 07 07.3 +0.3
MDUB **Mudurnu** 73.41 317 *e*P P 11 07 07.3 +0.3
comp=Z,173nm,0.8s
N49A **Columbus Grove** 73.43 42 *e*P P 11 07 06.6 -0.3
comp=Z,40nm,0.5s
N49A **Columbus Grove** 73.43 42 P P 11 07 06.6 -0.3
baz=329,SNR=12
ABTX **Abilene, Hawle** 73.43 57 *e*P P 11 07 07.5 +0.4
comp=Z,25nm,0.6s
ABTX **Abilene, Hawle** 73.43 57 P P 11 07 07.5 +0.4
baz=324,SNR=12
SILT **Sile** 73.44 319 P P 11 07 06.9 0.0
SILT **Sile** 73.44 319⇑ *i*P P 11 07 07.0 0.0
PECO **Prince Edward** 73.44 35 *e*P P 11 07 06.4 -0.6
comp=Z,41nm,1.0s
PECO **Prince Edward** 73.44 35 P P 11 07 06.2 -0.7
baz=332,SNR=5.0
J54A **Appleton** 73.46 37 *e*P P 11 07 06.6 -0.4
comp=Z,38nm,0.6s
J54A **Appleton** 73.46 37 P P 11 07 06.5 -0.5
baz=331
JMB **Yambol** 73.46 322 P P 11 07 06.8 -0.3
M50A **Fremont** 73.46 41 *e*P P 11 07 06.8 -0.3
comp=Z,35nm,0.6s
M50A **Fremont** 73.46 41 P P 11 07 06.3 -0.8
baz=330
SOKA **Soboth** 73.46 331 *i*P P 11 07 07.5 +0.4
comp=Z,24nm,0.4s,SNR=25
KMRS **Kahramanmaras** 73.52 312 P P 11 07 08.1 +0.5
Q45A **Warren Harvey,** 73.54 45 P P 11 07 07.3 -0.3
baz=328,SNR=16
KBA **Koelnbreinsper** 73.56 333 *i*P P 11 07 08.7 +0.8
comp=Z,66nm,0.6s,SNR=51
KLYT **Kilyos** 73.58 319⇑ *i*P P 11 07 07.9 +0.1
U40A **Yellville** 73.60 50 P P 11 07 07.8 -0.3
baz=326,SNR=98
O48A **Farmland** 73.61 43 P P 11 07 07.3 -0.7
baz=329,SNR=11
MEDO **Medina** 73.61 37 *e*P P 11 07 07.5 -0.4
comp=Z,26nm,0.7s
MEDO **Medina** 73.61 37 P P 11 07 07.4 -0.6
baz=331
LONY **Lake Ozonia** 73.64 33 *e*P P 11 07 07.3 -0.8
comp=Z,27nm,0.5s
LONY **Lake Ozonia** 73.64 33 P P 11 07 07.3 -0.8
baz=333,SNR=13
YAYX **Yaylak** 73.64 315 P P 11 07 07.9 -0.4
BFO **Black Forest** 73.68 336 *e*P P 11 07 07.9 -0.4
comp=Z,20nm,0.7s
BFO **Black Forest** 73.68 336 *e*P P 11 07 07.9 -0.4
BFO pmax pmax
comp=Z,20nm,0.7s
OLIL **Olney** 73.70 46 *e*P P 11 07 08.4 -0.1
comp=Z,16nm,0.7s
GULT **Gulveren** 73.71 318 P P 11 07 08.4 -0.3
BATG **Bathurst New B** 73.73 27 *e*P P 11 07 08.6 0.0
comp=Z,30nm,0.7s
J55A **Hilton** 73.75 36 *e*P P 11 07 08.0 -0.7
comp=Z,45nm,0.9s
J55A **Hilton** 73.75 36 P P 11 07 07.9 -0.8
baz=332
MOQ **Mont Orford** 73.75 31 *e*P P 11 07 08.8 0.0
OBKA **Obir** 73.75 331 *i*P P 11 07 09.0 +0.2
comp=Z,20nm,0.5s,SNR=12
PQI **Presque Isle** 73.76 28 *e*P P 11 07 07.9 -0.8
comp=Z,7.8nm,0.6s
Q46A **CEJHS Indians,** 73.76 45 P P 11 07 08.1 -0.8
baz=328
FRNY **Flat Rock** 73.76 33 *e*P P 11 07 07.9 -0.8
comp=Z,13nm,0.6s
PALK **Pallekele** 73.78 260 *e*P P 11 07 09.2 -0.1
comp=Z,20nm,0.8s
PALK **Pallekele** 73.78 260 *e*P P 11 07 09.2 -0.1
PALK pmax pmax
comp=Z,20nm,0.8s
WATA **Walderalm** 73.80 334 *i*P P 11 07 09.2 +0.1
comp=Z,15nm,0.5s,SNR=7.8
CTKS **Kestanelik-??a** 73.80 320 P P 11 07 08.4 -0.6
P47A **Martinsville** 73.82 44 P P 11 07 08.6 -0.6
baz=328,SNR=19
PHSR **Pinarhisar** 73.83 321 ⇓ *i*P P 11 07 09.6 +0.4
M51A **Elyria** 73.85 40 P P 11 07 08.8 -0.5
baz=330,SNR=5.5
WTTA **Wattenberg** 73.85 334 *i*P P 11 07 10.1 +0.7
comp=Z,45nm,0.9s,SNR=14
RETA **Reutte** 73.87 334 *i*P P 11 07 09.7 +0.3
comp=Z,16nm,0.9s,SNR=6.3
DRLN **Deer Lake** 73.87 20 *e*P P 11 07 09.2 -0.1
comp=Z,51nm,1.3s
MYKA **Terra Mystica** 73.89 332 *i*P P 11 07 09.5 0.0
comp=Z,8.2nm,0.4s,SNR=9.2
X37A **Clayton** 73.90 53 *e*P P 11 07 10.0 +0.3
comp=Z,17nm,1.2s
MOTA **Moosalm** 73.91 334 *i*P P 11 07 10.0 +0.2
comp=Z,35nm,1.0s,SNR=14
EDRB **Edirne** 73.94 321 P P 11 07 08.9 -0.9
N50A **Nevada** 73.96 41 P P 11 07 09.8 -0.2
baz=330,SNR=9.4
M52A **Chesterland** 73.98 39 *e*P P 11 07 10.1 0.0
comp=Z,81nm,0.8s
M52A **Chesterland** 73.98 39 P P 11 07 10.0 0.0
baz=330,SNR=10
BLO **Bloomington** 73.98 44 *e*P P 11 07 09.7 -0.4
comp=Z,31nm,0.5s
ERPA **Erie** 73.98 38 *e*P P 11 07 09.9 -0.1
comp=Z,81nm,0.8s
ERPA **Erie** 73.98 38 P P 11 07 09.9 -0.1
baz=331,SNR=6.8
R45A **Skylar, Fairfi** 73.99 46 P P 11 07 09.7 -0.4
baz=328,SNR=7.1
O49A **Covington** 74.00 42 *e*P P 11 07 09.7 -0.5
comp=Z,19nm,0.6s
O49A **Covington** 74.00 42 P P 11 07 09.6 -0.5
baz=329,SNR=6.5
SQTA **Sankt Quirin** 74.00 334 *i*P P 11 07 10.7 +0.5
comp=Z,34nm,0.9s,SNR=11
UOSS **Minazif** 74.00 290 *e*P P 11 07 10.0 -0.4
comp=Z,51nm,0.9s
UOSS **Minazif** 74.00 290 *i*P P 11 07 09.7 -0.7
SNR=13
SRCK **Saricakaya, Es** 74.00 318 P P 11 07 09.8 -0.4
K54A **Basiliko Farm,** 74.02 37 P P 11 07 09.7 -0.5
baz=331,SNR=8.2
L53A **Girard** 74.03 38 P P 11 07 10.2 -0.1
baz=331,SNR=14
TX31 **Lajitas Ar. Si** 74.03 62 *e*P P 11 07 11.8 +1.1
comp=Z,17nm,0.7s
LTX **Lajitas** 74.03 62 *e*P P 11 07 12.1 +1.4
TXAR **Lajitas Array** 74.03 62 P P 11 07 12.0 +1.4
comp=Z,15nm,0.7s,baz=298,slow=4.6,SNR=233
TEKS **Tekeris** 74.03 327 ⇓ *i*P P 11 07 10.2 -0.1
ECH **Echery** 74.06 337 *e*P P 11 07 09.7 -0.7
comp=Z,26nm,0.9s
ECH **Echery** 74.06 337 *e*P P 11 07 09.7 -0.7
ECH pmax pmax
comp=Z,27nm,0.9s
SIUC **Southern Illin** 74.08 47 *e*P P 11 07 10.1 -0.5
comp=Z,36nm,0.6s
S44A **Carbondale** 74.08 47 P P 11 07 10.3 -0.3
baz=327,SNR=16
CTAO **Charters Tower** 74.09 187 *e*P P 11 07 11.4 +0.6
comp=Z,34nm,1.4s
CTAO **Charters Tower** 74.09 187 *e*P P 11 07 11.4 +0.6
CTAO pmax pmax
comp=Z,34nm,1.4s
ABTA **Abfaltersbach** 74.09 333 *i*P P 11 07 10.6 -0.1
comp=Z,19nm,0.6s,SNR=14
CRES **Cresnjev** 74.12 331 ⇓ *i*P P 11 07 10.6 -0.1
L54A **Sinclairville** 74.12 38 P P 11 07 10.4 -0.5
baz=331,SNR=10
N51A **Ashland** 74.13 40 *e*P P 11 07 10.6 -0.3
comp=Z,75nm,0.4s
N51A **Ashland** 74.13 40 P P 11 07 10.5 -0.3
baz=330,SNR=11
HATD **Hatta, Dubai** 74.13 290 *i*P P 11 07 11.1 -0.1
SNR=17
K55A **Perry** 74.13 37 P P 11 07 10.3 -0.7
baz=332,SNR=15
W39A **Magazine** 74.14 51 *e*P P 11 07 11.1 0.0
comp=Z,20nm,1.1s
W39A **Magazine** 74.14 51 P P 11 07 10.8 -0.2
baz=326,SNR=8.3
P48A **Milroy** 74.18 43 *e*P P 11 07 10.6 -0.6
comp=Z,34nm,0.8s
P48A **Milroy** 74.18 43 P P 11 07 10.5 -0.7
baz=329,SNR=11
LJU **Ljubljana** 74.18 331 ⇓ *i*P P 11 07 10.1 -1.0
MMNY **Mt. Morris Dam** 74.19 36 *e*P P 11 07 10.6 -0.6
comp=Z,63nm,0.8s
DIM **Dimitrovgrad** 74.20 322 P P 11 07 11.6 +0.3
Q47A **Bedord North L** 74.22 44 P P 11 07 11.2 -0.2
baz=328,SNR=17
CADS **Cadrg** 74.24 332 *i*P P 11 07 10.6 -0.8
ARMT **Armutlu** 74.24 319 P P 11 07 10.5 -1.1
PGB **Panagyurishte** 74.25 323 P P 11 07 11.6 0.0
NAZ **Nazwa, Dubai** 74.26 291 *i*P P 11 07 11.6 -0.3
SNR=7.2
DAVA **Damuels** 74.28 335 *i*P P 11 07 11.9 +0.1
comp=Z,43nm,1.2s,SNR=9.5
ASHO **Ashiyiah** 74.29 290 *i*P P 11 07 11.8 -0.2
SNR=10
DIVS **Divibare** 74.29 327 ⇓ *i*P P 11 07 11.3 -0.5
OZLJ **Ozalj** 74.31 331 *i*P P 11 07 12.1 +0.4
FETA **Feichten** 74.31 334 *i*P P 11 07 12.5 +0.5
comp=Z,22nm,0.7s,SNR=14
O50A **Cable** 74.31 42 P P 11 07 11.7 -0.3
baz=329,SNR=12
M53A **WI Miller and** 74.32 39 P P 11 07 11.9 -0.1
baz=331,SNR=20
CHBY **Cihanbeyli** 74.32 315 P P 11 07 11.5 -0.7
NCB **Newcomb** 74.33 33 *e*P P 11 07 11.6 -0.4
comp=Z,25nm,0.7s
ALLY **Alegheny Colle** 74.33 39 *e*P P 11 07 12.0 0.0
comp=Z,81nm,0.9s
PBMO **Poplar Bluff** 74.33 48 *e*P P 11 07 12.0 -0.1
comp=Z,33nm,0.8s
R46A **Gibon Southern** 74.38 45 P P 11 07 12.1 -0.3
baz=328
P49A **Miami Univ. Ec** 74.41 43 P P 11 07 11.8 -0.7
baz=329,SNR=8.7
CIFT **Cifteler, Eski** 74.41 317 P P 11 07 12.3 -0.3
PLD **Plovdiv** 74.45 323 P P 11 07 13.4 +0.7
BOJS **Bojanci** 74.47 331 *i*P P 11 07 12.6 -0.1
VT1 **Waterbury** 74.48 32 *e*P P 11 07 13.2 +0.4
comp=Z,48nm,0.6s
L55A **Hinsdale** 74.48 37 P P 11 07 12.2 -0.7
baz=332,SNR=5.2
N52A **McGinn's Farm,** 74.48 40 P P 11 07 12.3 -0.6
baz=330
KIZT **Kizilcal** 74.49 316 P P 11 07 12.8 -0.3
ACSO **Alum Creek Sta** 74.49 41 *e*P P 11 07 12.7 -0.2
comp=Z,46nm,1.0s
ACSO **Alum Creek Sta** 74.49 41 P P 11 07 12.6 -0.4
baz=330,SNR=11
CEY **Cerknica** 74.49 331 ⇓ *i*P P 11 07 12.4 -0.5
FAQ **Al Faqa, Dubai** 74.49 291 *i*P P 11 07 12.7 -0.5
SNR=8.7
Q48A **North Vernon** 74.51 44 P P 11 07 12.6 -0.4
baz=329,SNR=14
VTS **Vitosha** 74.52 324 *e*P P 11 07 13.2 0.0
VTS *e*P P 11 07 13.2 0.0
VTS *e*S S 11 15 55.3 -3.4
VTS **Vitosha** 74.52 324 P P 11 07 13.2 0.0
VTS **Vitosha** 74.52 324 ⇓ *i*P P 11 07 13.4 +0.2
VTS **Vitosha** 74.52 324 *e*P P 11 07 13.2 0.0
VTS *e*S S 11 15 55.3 -3.4
VTS **Vitosha** 74.52 324 P P 11 07 13.1 -0.1
KARA **Karaisali** 74.52 313 P P 11 07 13.5 +0.3
USIN **University of** 74.53 46 *e*P P 11 07 13.4 +0.2
comp=Z,47nm,0.7s
BLY **Banja Luka** 74.58 329 *e*P P 11 07 12.7 -0.6
comp=Z,13nm,0.5s
BLY **Banja Luka** 74.58 329 ⇓ *i*P P 11 07 12.7 -0.6
KDZ **Kurdzhali** 74.59 322 P P 11 07 17.9 +4.4
KDZ **Kurdzhali** 74.59 322 P P 11 07 17.7 +4.2
HAPS **Han Pijesak,BI** 74.63 328 *e*P P 11 07 12.7 -1.1
M54A **Oil Creek Stat** 74.63 38 *e*P P 11 07 13.4 -0.3
comp=Z,53nm,1.0s
M54A **Oil Creek Stat** 74.63 38 P P 11 07 13.3 -0.3
baz=331,SNR=15
YURE **YUREGIR** 74.64 312 P P 11 07 14.3 +0.5
PKME **Peaks-Kenny Pk** 74.68 30 *e*P P 11 07 13.6 -0.3
comp=Z,16nm,1.0s
PKME **Peaks-Kenny Pk** 74.68 30 P P 11 07 13.5 -0.3
baz=336
BBLS **Lazići** 74.69 327 ⇓ *i*P P 11 07 14.1 +0.1
KCTX **Karacabey (Bur** 74.70 319 P P 11 07 13.6 -0.5
P50A **Jamestown** 74.71 42 P P 11 07 13.7 -0.5
baz=329,SNR=8.9
O51A **Pataskala** 74.71 41 P P 11 07 13.7 -0.5
baz=330
R47A **Wooly Knot Far** 74.72 45 P P 11 07 13.8 -0.4
baz=328,SNR=19
PARMO **Parma** 74.73 48 *e*P P 11 07 14.4 +0.1
comp=Z,117nm,0.7s
ASUD **Al Ashush, Dub** 74.73 291 *i*P P 11 07 14.2 -0.3
SNR=18
S46A **Don Dixon Farm** 74.74 46 P P 11 07 13.9 -0.4
baz=328
WHAR **Wooly Hollow** 74.74 50 *e*P P 11 07 14.4 0.0
comp=Z,98nm,1.3s
MIAR **Mount Ida** 74.77 52 *e*P P 11 07 14.9 +0.3
comp=Z,19nm,0.7s
MIAR **Mount Ida** 74.77 52 *e*P P 11 07 14.9 +0.3
MIAR pmax pmax
comp=Z,19nm,0.7s
MIAR **Mount Ida** 74.77 52 P P 11 07 14.8 +0.3
baz=326,SNR=16
SKDS **Skadanscina** 74.78 331 *i*P P 11 07 13.8 -0.6
Q49A **Aurora** 74.78 43 P P 11 07 14.3 -0.3
baz=329,SNR=5.4
FUORN **Ofenpass-Fuorn** 74.80 334 *e*P P 11 07 15.6 +0.8
comp=Z,29nm,0.7s
N53A **Lisbon** 74.81 39 *e*P P 11 07 14.5 -0.2
comp=Z,46nm,1.0s
N53A **Lisbon** 74.81 39 P P 11 07 14.5 -0.2
baz=331,SNR=14
RZN **Rozhen** 74.81 322 P P 11 07 14.9 0.0
EDC **Edincik** 74.81 320 P P 11 07 13.9 -0.8
LBNH **Lisbon** 74.82 32 P P 11 07 14.8 +0.2
baz=335
RIY **Rijeka** 74.85 331 ⇓ *i*P P 11 07 14.3 -0.5

W41B	Gary Mavity, V	74.86	50	eP		P	11 07 15.0	0.0
	comp=Z,45nm,0.6s							
W41B	Gary Mavity, V	74.86	50	P		P	11 07 14.9	-0.2
	baz=326,SNR=33							
LADK	Ladik-KONYA	74.86	315	P		P	11 07 14.5	-0.7
WCI	Wyandotte Cave	74.88	45	eP		P	11 07 15.0	-0.1
	comp=Z,52nm,0.6s							
WCI	Wyandotte Cave	74.88	45	eP		P	11 07 15.0	-0.1
WCI				pmax	pmax			
	comp=Z,52nm,0.6s							
WCI	Wyandotte Cave	74.88	45	P		P	11 07 14.9	-0.2
	baz=328							
HPIG		74.89	65	eP		P	11 07 16.9	+1.3
	comp=Z,4.3nm,0.7s							
R48A	Northridge Ran	74.90	44	P		P	11 07 15.2	0.0
	baz=329,SNR=13							
T45A	Paducah	74.91	47	eP		P	11 07 15.3	+0.1
	comp=Z,89nm,0.6s							
T45A	Paducah	74.91	47	P		P	11 07 15.1	-0.2
	baz=328							
MGRS	Mrkonjic Grad	74.91	329	‖iP		P	11 07 15.4	+0.2
ALNE	Al Ain	74.95	290	iP		P	11 07 15.6	-0.1
	SNR=7.5							
N54A	Moraine State	74.99	39	eP		P	11 07 15.4	-0.3
	comp=Z,40nm,0.6s							
N54A	Moraine State	74.99	39	P		P	11 07 15.4	-0.3
	baz=331,SNR=15							
RDO	Rodhopi	74.99	322	eP		P	11 07 15.8	+0.1
RDO	Rodhopi	74.99	322	P		P	11 07 15.8	+0.1
M55A	Ridgway	74.99	38	P		P	11 07 15.3	-0.4
	baz=332,SNR=15							
ALN	Alexandroupoli	75.02	321	P		P	11 07 15.3	-0.5
ALN	Alexandroupoli	75.02	321	eP		P	11 07 15.7	-0.2
	comp=Z,13nm,0.6s							
ALN	Alexandroupoli	75.02	321	P		P	11 07 15.6	-0.2
ALN	Alexandroupoli	75.02	321	eP		P	11 07 15.7	-0.2
ALN				pmax	pmax			
	comp=Z,13nm,0.6s							
WHTX	Lake Whitney,	75.02	56	eP		P	11 07 16.1	+0.1
	comp=Z,22nm,0.9s							
WHTX	Lake Whitney,	75.02	56	P		P	11 07 16.2	+0.1
	baz=325,SNR=7.6							
O52A	Adamsville	75.03	40	eP		P	11 07 15.5	-0.5
	comp=Z,57nm,1.0s							
O52A	Adamsville	75.03	40	P		P	11 07 15.4	-0.5
	baz=330,SNR=9.8							
ERIK	Erikli-Kesan	75.04	321	P		P	11 07 15.7	-0.3
MERS	Mersin	75.08	313	P		P	11 07 15.9	-0.5
KONT	Konya--Tatoy	75.08	315	P		P	11 07 15.9	-0.4
JCT	Junction City	75.09	59	eP		P	11 07 16.9	+0.4
	comp=Z,19nm,1.0s							
JCT	Junction City	75.09	59	eP		P	11 07 16.9	+0.4
JCT				pmax	pmax			
	comp=Z,19nm,1.0s							
JCT	Junction City	75.09	59	P		P	11 07 16.7	+0.2
	baz=325,SNR=9.7							
P51A	Williamsport	75.11	42	eP		P	11 07 15.8	-0.5
	comp=Z,27nm,0.8s							
P51A	Williamsport	75.11	42	P		P	11 07 15.6	-0.7
	baz=330,SNR=6.0							
UALR	University of	75.15	51	eP		P	11 07 16.3	-0.4
	comp=Z,8.3nm,0.6s							
O53A	New Philadelph	75.15	40	P		P	11 07 16.2	-0.4
	baz=330,SNR=11							
X40A	Basin Creek Fa	75.16	51	eP		P	11 07 17.1	+0.4
	comp=Z,20nm,0.6s							
X40A	Basin Creek Fa	75.16	51	P		P	11 07 16.8	+0.1
	baz=326,SNR=12							
TUE	Stuetta	75.17	335	eP		P	11 07 17.3	+0.4
	comp=Z,48nm,0.8s							
S47A	Hartford	75.17	45	P		P	11 07 16.3	-0.4
	baz=328							
M56A	Emporium	75.19	37	P		P	11 07 16.1	-0.7
	baz=332,SNR=9.6							
GNAR	Gosnell	75.20	48	eP		P	11 07 17.5	+0.6
	comp=Z,92nm,1.2s							
T46A	Princeton	75.21	46	P		P	11 07 17.2	+0.2
	baz=328,SNR=18							
WVL	Waterville	75.21	30	eP		P	11 07 16.9	+0.1
	comp=Z,18nm,0.6s							
LPK	Lapseki	75.21	320	P		P	11 07 16.8	-0.1
KKB	Krupnik	75.23	324	P		P	11 07 17.2	+0.2
MMB	Musomiste	75.25	323	P		P	11 07 17.2	0.0
HBAR	Harrisburg	75.26	49	eP		P	11 07 18.0	+0.8
	comp=Z,97nm,1.2s							
GLAT	Glass	75.26	48	eP		P	11 07 17.9	+0.7
	comp=Z,96nm,1.2s							
R49A	Shelbyville	75.28	44	eP		P	11 07 17.5	+0.2
	comp=Z,15nm,0.6s							
R49A	Shelbyville	75.28	44	P		P	11 07 17.4	0.0
	baz=329,SNR=8.2							
Q50A	Georgetown	75.29	43	P		P	11 07 17.2	-0.2
	baz=329,SNR=9.1							
CLF	Chambon-Foret	75.29	340	eP		P	11 07 17.9	+0.7
	comp=Z,160nm,1.6s							
GELI	Tayfur-Gelibol	75.30	321	P		P	11 07 16.9	-0.5
SHUT	Suhut-Afyon	75.31	317	P		P	11 07 18.1	+0.5
BINY	Binghamton	75.32	35	P		P	11 07 16.8	-0.8
	baz=333							
P52A	Corning	75.33	41	P		P	11 07 16.9	-0.8
	baz=330							
LMN	Caledonia Moun	75.38	26	eP		P	11 07 17.6	-0.2
	comp=Z,36nm,0.8s							
Q51A	Peebles	75.39	42	eP		P	11 07 17.9	0.0
	comp=Z,44nm,0.8s							
Q51A	Peebles	75.39	42	P		P	11 07 17.6	-0.3
	baz=330,SNR=14							
NVR	Nevrokopi	75.42	323	P		P	11 07 18.0	-0.1
BALB	Balikesir	75.42	319	eP		P	11 07 18.1	+0.1
	comp=Z,162nm,0.8s							
NVLJ	Novalja	75.44	330	iP		P	11 07 16.9	-1.1
WRAB	Tennant Creek	75.44	198	eP		P	11 07 18.9	+0.6
	comp=Z,47nm,0.9s							
WRAB	Tennant Creek	75.44	198	deP		P	11 07 18.9	+0.6
WRAB				pmax	pmax			
	comp=Z,49nm,0.9s							
UPM	Unac-Piva	75.44	327	eP		P	11 07 17.7	-0.7
WB2	Warramunga Arr	75.45	198	eP		P	11 07 19.0	+0.7
	comp=Z,46nm,0.8s							
WR1	Warramunga Arr	75.45	198	eP		P	11 07 19.1	+0.7
WRA	Warramunga Arr	75.45	198	P		P	11 07 19.1	+0.7
	comp=Z,38nm,0.7s,baz=11,slow=6.5,SNR=225							
S48A	Wiedeman Farm,	75.46	45	P		P	11 07 18.1	-0.2
	baz=329,SNR=19							
WC3	Warramunga Arr	75.46	198	eP		P	11 07 19.0	+0.6
	comp=Z,44nm,0.8s							
KAVA	Kavala	75.49	322	eP		P	11 07 18.1	-0.3
KAVA	Kavala	75.49	322	P		P	11 07 18.1	-0.3
GGN	Saint George	75.51	28	eP		P	11 07 18.0	-0.4
	comp=Z,22nm,0.6s							
N55A	Marion Center	75.52	38	eP		P	11 07 18.1	-0.5
	comp=Z,52nm,0.8s							
N55A	Marion Center	75.52	38	P		P	11 07 18.2	-0.5
	baz=332,SNR=17							
O54A	Avella	75.53	39	P		P	11 07 18.2	-0.4
	baz=331,SNR=7.0							
KIZK	Mersin	75.57	313	P		P	11 07 17.9	-1.1
T47A	Sharon Grove	75.59	46	eP		P	11 07 19.2	+0.1
	comp=Z,45nm,0.7s							
T47A	Sharon Grove	75.59	46	P		P	11 07 19.1	+0.1
	baz=328,SNR=20							
R50A	Paris	75.63	43	eP		P	11 07 19.3	0.0
	comp=Z,35nm,1.1s							
R50A	Paris	75.63	43	P		P	11 07 19.3	0.0
	baz=329,SNR=11							
N56A	West Decatur	75.65	38	P		P	11 07 18.9	-0.4
	baz=332							
U46A	Springville	75.67	47	P		P	11 07 19.3	-0.2
	baz=328							
S49A	Springfield	75.67	44	P		P	11 07 19.5	0.0
	baz=329,SNR=19							
WLAR	White Oak Lake	75.69	52	eP		P	11 07 20.3	+0.7
	comp=Z,31nm,0.8s							
STIP	Stip	75.70	324	‖iP		P	11 07 18.6	-1.0
SKO	Skopje	75.71	325	‖iP		P	11 07 19.6	0.0
EMMW	East Machias	75.71	29	eP		P	11 07 19.3	-0.2
	comp=Z,22nm,0.7s							
SRS	Serrai	75.72	323	P		P	11 07 19.0	-0.7
P53A	Whipple	75.75	40	eP		P	11 07 19.8	-0.1
	comp=Z,33nm,1.0s							
P53A	Whipple	75.75	40	P		P	11 07 19.5	-0.4
	baz=330,SNR=6.5							
SENIN	Lac Senin/Sane	75.77	336	eP		P	11 07 20.3	+0.1
	comp=Z,8.6nm,0.8s							
KEBE	Keben-Mersin	75.78	313	P		P	11 07 19.3	-0.9
T48A	Bowling Green	75.79	45	P		P	11 07 19.9	-0.3
	baz=329,SNR=6.9							
BRY	Bratogost	75.83	327	eP		P	11 07 19.3	-1.2
Q52A	Bidwell	75.86	41	P		P	11 07 20.0	-0.6
	baz=330,SNR=5.5							
VAY	Valandovo	75.89	324	‖iP		P	11 07 20.9	+0.2
O55A	Ligonier	75.90	39	P		P	11 07 20.2	-0.6
	baz=331,SNR=12							
TEVE	Tevekalti-Mers	75.91	314	eP		P	11 07 20.5	-0.4
R51A	Hillsboro	75.92	43	P		P	11 07 20.7	-0.1
	baz=330,SNR=18							
435B	Jarrell	75.94	57	P		P	11 07 21.0	-0.2
	baz=325							
KSPA	Keystone Colle	75.97	36	eP		P	11 07 20.5	-0.5
	comp=Z,29nm,0.8s							
IKL	Isikli	75.97	313	P		P	11 07 20.1	-1.1
U47A	Clarksville	75.98	46	P		P	11 07 21.1	-0.1
	baz=328,SNR=9.5							
P54A	Burton	75.99	40	P		P	11 07 21.1	-0.2
	baz=331,SNR=9.0							
WVT	Waverly	76.01	47	eP		P	11 07 21.4	0.0
	comp=Z,32nm,0.6s							
WVT	Waverly	76.01	47	eP		P	11 07 21.4	0.0
WVT				pmax	pmax			
	comp=Z,32nm,0.6s							
WVT	Waverly	76.01	47	P		P	11 07 21.3	0.0
	baz=328							
PDG	Podgorica	76.02	327	‖iP		P	11 07 21.0	-0.3
PDG	Podgorica	76.02	327	‖iP		P	11 07 20.8	-0.6
TTG	Podgorica	76.02	327	eP		P	11 07 20.7	-0.6
	comp=Z,50nm,0.7s							
TTG	Podgorica	76.02	327	eP		P	11 07 20.7	-0.6
TTG				pmax	pmax			
	comp=Z,50nm,0.7s							
X43A	Marvell	76.02	50	eP		P	11 07 21.8	+0.3
	comp=Z,47nm,0.8s							
X43A	Marvell	76.02	50	P		P	11 07 21.7	+0.3
	baz=327							
SSPA	Standing Stone	76.04	37	eP		P	11 07 21.0	-0.5
	comp=Z,28nm,1.0s							
SSPA	Standing Stone	76.04	37	P		P	11 07 20.9	-0.5
	baz=332							
N57A	Milroy	76.05	37	P		P	11 07 21.1	-0.5
	baz=332,SNR=18							
TREB	Trebinje	76.05	327	eP		P	11 07 20.2	-1.3
BERE	Bereket-Mersin	76.08	314	eP		P	11 07 21.6	-0.4
KULA	Kula-Manisa	76.09	318	P		P	11 07 21.5	-0.4
O56A	Blue Knob Stat	76.12	38	eP		P	11 07 21.5	-0.5
	comp=Z,39nm,1.0s							
O56A	Blue Knob Stat	76.12	38	P		P	11 07 21.5	-0.5
	baz=332,SNR=12							
STON	Ston	76.12	328	iP		P	11 07 20.4	-1.4
STON	Ston	76.12	328	‖iP		P	11 07 20.4	-1.4
CCAR	Cane Creek	76.12	51	eP		P	11 07 22.7	+0.7
	comp=Z,45nm,1.0s							
S50A	Richmond	76.12	44	P		P	11 07 21.8	-0.2
	baz=329,SNR=12							
T49A	Edmonton	76.15	45	eP		P	11 07 22.2	0.0
	comp=Z,43nm,0.7s							
T49A	Edmonton	76.15	45	P		P	11 07 22.1	0.0
	baz=329,SNR=34							
MANT	Manisa	76.15	318	eP		P	11 07 22.4	0.0
	comp=Z,155nm,0.9s							
V46A	Holladay	76.16	47	P		P	11 07 22.1	-0.2
	baz=328,SNR=17							
MCWV	Mont Chateau	76.18	39	eP		P	11 07 22.2	0.0
	comp=Z,10nm,0.7s							
MCWV	Mont Chateau	76.18	39	P		P	11 07 22.2	0.0
	baz=331							
LIA	Limnos Island	76.21	321	P		P	11 07 22.1	-0.3
U48A	Cassie Pea, Po	76.23	46	P		P	11 07 22.3	-0.3
	baz=329,SNR=12							
Q53A	Leroy	76.24	41	P		P	11 07 22.6	-0.1
	baz=330,SNR=20							
HCY	Herceg Novi	76.25	327	eP		P	11 07 21.5	-1.1
R52A	Catlettsburg	76.26	42	P		P	11 07 22.3	-0.4
	baz=330,SNR=9.4							
DRME	Dracevica, Mon	76.26	326	‖iP		P	11 07 22.2	-0.5
PHP	Peshkopia	76.30	325	P		P	11 07 22.1	-0.8
TEKE	Tekeli-Mersin	76.30	314	eP		P	11 07 21.8	-1.2
KRUS	Krusevo	76.31	325	‖iP		P	11 07 22.9	-0.1
P55A	Reedsville	76.32	39	P		P	11 07 23.2	+0.1
	baz=331,SNR=19							
HORT	Hortiatis	76.35	323	eP		P	11 07 21.9	-1.4
EREN	Erenkoy	76.36	313	eP		P	11 07 23.9	+0.6
Q54A	Coxs Mills	76.40	40	eP		P	11 07 23.3	-0.2
	comp=Z,21nm,0.7s							
Q54A	Coxs Mills	76.40	40	P		P	11 07 23.3	-0.2
	baz=331,SNR=12							
V47A	Nunnelly	76.40	47	P		P	11 07 23.3	-0.2
	baz=328,SNR=21							
PLG	Polygyros	76.42	323	P		P	11 07 22.9	-0.7
S51A	Beattyville	76.48	43	eP		P	11 07 23.7	-0.2
	comp=Z,24nm,0.6s							
S51A	Beattyville	76.48	43	P		P	11 07 23.6	-0.3
	baz=330,SNR=11							
O57A	Amberson	76.50	38	P		P	11 07 23.6	-0.5
	baz=332,SNR=8.2							
T50A	Nancy	76.51	44	P		P	11 07 23.9	-0.2
	baz=329,SNR=27							
R53A	Hurricane	76.53	41	eP		P	11 07 24.2	0.0
	comp=Z,44nm,0.8s							
R53A	Hurricane	76.53	41	P		P	11 07 24.2	0.0
	baz=330,SNR=9.2							
N59A	State Game Lan	76.54	36	eP		P	11 07 23.9	-0.4
	comp=Z,34nm,0.5s							
N59A	State Game Lan	76.54	36	P		P	11 07 23.8	-0.4
	baz=333,SNR=8.1							
U49A	Red Boiling Sp	76.55	45	P		P	11 07 24.2	-0.1
	baz=329,SNR=25							
NATX	Nacogdoches	76.56	54	eP		P	11 07 25.8	+1.3
	comp=Z,43nm,0.8s							
NATX	Nacogdoches	76.56	54	P		P	11 07 25.4	+1.0
	baz=326							
SIGR	SIGRI	76.56	320	eP		P	11 07 23.1	-1.2
W46A	Michie	76.61	48	P		P	11 07 24.2	-0.5
	baz=328							
GBN	Guysborough	76.62	24	eP		P	11 07 25.2	+0.7
	comp=Z,60nm,1.5s							
S52A	Salyersville	76.65	43	P		P	11 07 24.6	-0.3
	baz=330							
Q55A	Buckhannon	76.67	40	P		P	11 07 24.9	-0.1
	baz=331,SNR=9.5							
CLTN	Cedars of Leba	76.68	46	eP		P	11 07 25.1	+0.1
	comp=Z,23nm,0.7s							
OXF	Oxford	76.69	49	eP		P	11 07 25.3	+0.2
	comp=Z,37nm,0.6s							
OXF	Oxford	76.69	49	P		P	11 07 24.6	-0.5
	baz=328							
P56A	Dayton Farm, R	76.69	39	P		P	11 07 25.2	+0.1
	baz=332,SNR=17							
OHR	Ohrid	76.69	325	‖iP		P	11 07 24.6	-0.5
KORT	Korkueli	76.72	316	eP		P	11 07 25.0	-0.4
V48A	Smith Brothers	76.77	46	eP		P	11 07 25.2	-0.3
	comp=Z,31nm,0.8s							
V48A	Smith Brothers	76.77	46	P		P	11 07 25.3	-0.3
	baz=329,SNR=18							
FNA	Florina	76.78	324	eP		P	11 07 25.0	-0.6
	comp=Z,29nm,0.8s							
FNA	Florina	76.78	324	P		P	11 07 25.1	-0.6
FNA	Florina	76.78	324	eP		P	11 07 25.0	-0.6
FNA				pmax	pmax			
	comp=Z,29nm,0.8s							
TIR	Tirane	76.79	326	‖iP		P	11 07 25.4	-0.2
TIR	Tirane	76.79	326	P		P	11 07 25.4	-0.2
PAGS	Pennsylvania G	76.81	37	eP		P	11 07 25.3	-0.4
	comp=Z,17nm,0.8s							
HAL	Halifax	76.82	26	eP		P	11 07 26.6	+1.0
	comp=Z,40nm,0.7s							
M61A	Granite Spring	76.86	34	P		P	11 07 25.3	-0.7
	baz=334							
PLAL	Pickwick Lake	76.87	48	eP		P	11 07 25.7	-0.4
	comp=Z,27nm,0.7s							
AYDB	Zeytinkoy-Aydi	76.89	318	eP		P	11 07 25.2	-1.1
T51A	Gray	76.92	44	P		P	11 07 26.0	-0.3
	baz=330,SNR=7.9							
O59A	Robesonia	76.93	36	P		P	11 07 25.6	-0.7
	baz=333							
Q56A	Snyder Ridge,	76.97	39	P		P	11 07 26.3	-0.3
	baz=332							
LIT	Litokhoron	77.00	323	eP		P	11 07 25.6	-1.2
	comp=Z,20nm,0.8s							
LIT	Litokhoron	77.00	323	P		P	11 07 25.6	-1.2
LIT	Litokhoron	77.00	323	eP		P	11 07 25.6	-1.2
LIT				pmax	pmax			
	comp=Z,20nm,0.8s							
P57A	Homestead Farm	77.01	38	P		P	11 07 26.1	-0.6
	baz=332							
X46A	Booneville	77.01	48	P		P	11 07 26.2	-0.6
	baz=328							
U50A	Jamestown	77.02	44	P		P	11 07 26.8	-0.1
	baz=329,SNR=25							
URLA	Izmir	77.03	320	eP		P	11 07 25.9	-1.0
S53A	Williamson	77.03	42	P		P	11 07 26.2	-0.7
	baz=330							
R54A	Victor	77.04	41	P		P	11 07 26.6	-0.4
	baz=331,SNR=11							
833A	Chaparral WMA,	77.05	60	eP		P	11 07 28.4	+1.2
	comp=Z,15nm,0.7s							
833A	Chaparral WMA,	77.05	60	P		P	11 07 28.0	+0.8
	baz=325							
VLC	Villacollemand	77.06	333	eP		P	11 07 27.7	+0.7
	comp=Z,97nm,1.3s							
PAL	Palisades	77.09	35	P		P	11 07 26.1	-1.0
	baz=334							
ELL	Elmali	77.11	316	eP		P	11 07 26.8	-0.8
BNI	Bardonecchia	77.15	336	eP		P	11 07 28.4	+0.8
	comp=Z,21nm,0.7s							
BNI	Bardonecchia	77.15	336	eP		P	11 07 28.4	+0.8
BNI				pmax	pmax			
	comp=Z,21nm,0.7s							
MVL	Millersville	77.15	37	eP		P	11 07 26.9	-0.6
	comp=Z,14nm,0.9s							
T52A	Hallie	77.18	43	eP		P	11 07 27.9	+0.1
	comp=Z,34nm,0.7s							
T52A	Hallie	77.18	43	P		P	11 07 27.9	+0.1
	baz=330,SNR=9.6							
O60A	Telford	77.19	36	P		P	11 07 27.0	-0.8
	baz=333							
CHOS	Chios island	77.21	320	eP		P	11 07 26.4	-1.6
CHOS	Chios island	77.21	320	P		P	11 07 27.4	-0.6
W48A	Pulaski	77.23	47	P		P	11 07 27.8	-0.3
	baz=329,SNR=16							
S54A	Dingess, Beckl	77.24	41	P		P	11 07 28.0	-0.2
	baz=331							
Q57A	Strasburg	77.26	39	P		P	11 07 27.8	-0.4
	baz=332,SNR=5.4							
X47A	Russelville	77.36	48	P		P	11 07 28.2	-0.6
	baz=328,SNR=14							
U51A	La Follette	77.39	44	P		P	11 07 28.7	-0.3
	baz=330,SNR=10							
XOR	Xorichti	77.41	322	P		P	11 07 27.7	-1.2
SSB	Saint Sauveur	77.43	338	eP		P	11 07 29.4	+0.4
	comp=Z,31nm,1.0s							
YER	Yerkesik	77.43	318	eP		P	11 07 28.9	-0.3
YER	Yerkesik	77.43	318	eP		P	11 07 28.9	-0.3
YER	Yerkesik	77.43	318	P		P	11 07 28.9	-0.3
YER	Yerkesik	77.43	318	eP		P	11 07 28.9	-0.3
TZTN	Tazewell	77.44	43	eP		P	11 07 29.1	0.0
	comp=Z,37nm,0.5s							
TZTN	Tazewell	77.44	43	P		P	11 07 29.2	0.0
	baz=330,SNR=12							
FYTO	Fytoko, Volos	77.46	323	eP		P	11 07 28.4	-0.8
FYTO	Fytoko, Volos	77.46	323	P		P	11 07 28.4	-0.8
P59A	Jarrettsville	77.47	37	P		P	11 07 28.6	-0.6
	baz=333							
T53A	Wise	77.47	43	P		P	11 07 29.4	0.0
	baz=330,SNR=13							
HKT	Hockley	77.49	56	eP		P	11 07 30.3	+0.9
	comp=Z,5.7nm,1.0s							
HKT	Hockley	77.49	56	eP		P	11 07 30.3	+0.9
HKT				pmax	pmax			
	comp=Z,6.0nm,1.0s							
MLSB	Milas	77.50	318	eP		P	11 07 29.2	-0.3
SDMD	Soldier's Deli	77.50	37	eP		P	11 07 29.3	-0.1
	comp=Z,7.6nm,0.8s							
PSUB	Penn St. - Bra	77.53	36	eP		P	11 07 28.6	-0.9
	comp=Z,10nm,0.6s							
KPRO	Kipourio	77.53	324	P		P	11 07 28.9	-0.8
TURN	Turunc	77.53	317	eP		P	11 07 30.5	+0.9
W49A	Belvidere	77.54	46	P		P	11 07 29.3	-0.4
	baz=329,SNR=6.9							
V50A	Pikevile	77.55	45	P		P	11 07 29.4	-0.4
	baz=329,SNR=9.8							
DALY	Dalyan (Mula)	77.56	317	eP		P	11 07 29.6	-0.2
P60A	Greenville	77.57	36	P		P	11 07 29.1	-0.6
	baz=333							
S55A	Lewisburg	77.58	41	P		P	11 07 29.5	-0.5
	baz=331,SNR=7.7							
SWET	Sewanee	77.59	46	eP		P	11 07 29.6	-0.4
	comp=Z,90nm,1.4s							
U52A	Thorn Hill	77.65	43	P		P	11 07 30.2	-0.1
	baz=330,SNR=21							
THL	Klokotos Trika	77.65	323	P		P	11 07 28.4	-1.8
AKAS	Kas	77.68	316	eP		P	11 07 29.8	-0.8
V51A	Loudon	77.75	44	eP		P	11 07 30.6	-0.3
	comp=Z,28nm,0.9s							
V51A	Loudon	77.75	44	P		P	11 07 30.5	-0.3
	baz=330,SNR=9.2							
X48A	Hartselle	77.77	47	eP		P	11 07 30.3	-0.7
	comp=Z,19nm,0.6s							
X48A	Hartselle	77.77	47	P		P	11 07 30.2	-0.7
	baz=329,SNR=11							
T54A	Tazewell	77.78	42	P		P	11 07 30.9	-0.1
	baz=331,SNR=15							
SMIA	Simia	77.83	322	P		P	11 07 30.4	-0.8
MRKA	Markates	77.85	322	P		P	11 07 30.1	-1.2
R57A	Stanardsville	77.87	39	P		P	11 07 31.4	0.0
	baz=332,SNR=6.2							
W50A	Signal Mountai	77.87	45	eP		P	11 07 31.1	-0.5
	comp=Z,20nm,0.9s							
W50A	Signal Mountai	77.87	45	P		P	11 07 31.1	-0.5
	baz=329,SNR=7.8							
AQU	L'Aquila	77.89	331	eP		P	11 07 32.5	+1.0
	comp=Z,38nm,0.8s							
AQU	L'Aquila	77.89	331	eP		P	11 07 31.9	+0.4
JAN	Janina	77.97	324	eP		P	11 07 32.0	0.0
JAN	Janina	77.97	324	P		P	11 07 32.0	0.0
EREA	Eretria	77.97	321	P		P	11 07 31.3	-0.7
CPCT	Cooper Cave	77.98	45	eP		P	11 07 31.9	-0.2
	comp=Z,25nm,1.1s							
U53A	Fall Branch	77.99	43	P		P	11 07 31.9	-0.2
	baz=330,SNR=14							
AGG	Agios Georgios	78.02	323	eP		P	11 07 29.9	-2.3
AGG	Agios Georgios	78.02	323	eP		P	11 07 30.7	-1.6
	comp=Z,18nm,0.8s							
AGG	Agios Georgios

PTL Penteli 78.33 321 P P 11 07 32.4 -1.5
X50B Fort Payne 78.36 46 P P 11 07 33.5 -0.7
baz=329,SNR=6.4
CBN Corbin Frederi 78.37 38 eP P 11 07 34.3 +0.2
comp=Z,34nm,0.8s
R58B Mineral 78.40 39 eP P 11 07 34.4 +0.1
comp=Z,18nm,1.0s
R58B Mineral 78.40 39 P P 11 07 33.9 -0.3
baz=332,SNR=5.7
T56A Rocky Mt 78.41 41 P P 11 07 33.9 -0.5
baz=331
MMLI Mount Malkishu 78.42 310 eP P 11 07 35.3 +0.8
MMLI Mount Malkishu 78.42 310 P P 11 07 35.3 +0.8
VILL Villia 78.43 322 P P 11 07 32.7 -1.7
MATE Matera 78.45 328⇑ iP P 11 07 34.0 -0.4
R59A King George, V 78.47 38 P P 11 07 34.2 -0.3
baz=333
U55A TA2, Sparta 78.48 42 P P 11 07 34.6 -0.2
baz=331,SNR=7.7
DSF Desfina 78.49 322 P P 11 07 32.8 -2.0
V53A Saluda 78.50 43 eP P 11 07 34.6 -0.3
comp=Z,14nm,0.6s
V53A Saluda 78.50 43 P P 11 07 34.5 -0.4
baz=330,SNR=10
W52A Murphy 78.54 45 P P 11 07 34.7 -0.4
baz=330
ANX Ano Chora 78.55 323 P P 11 07 33.8 -1.3
Y49A Blount Mountai 78.55 47 eP P 11 07 34.8 -0.4
comp=Z,28nm,0.6s
Y49A Blount Mountai 78.55 47 P P 11 07 34.7 -0.4
baz=329,SNR=16
APE Apeiranthos 78.56 320 eP P 11 07 32.7 -2.5
APE Apeiranthos 78.56 320⇓ iP P 11 07 33.7 -1.5
APE Apeiranthos 78.56 320 ⇓P P 11 07 33.7 -1.5
X51A Calhoun 78.60 45 eP P 11 07 35.4 +0.1
comp=Z,15nm,0.6s
X51A Calhoun 78.60 45 P P 11 07 34.8 -0.6
baz=330
S58A Poland Farm, P 78.65 39 eP P 11 07 35.2 -0.3
comp=Z,16nm,0.8s
S58A Poland Farm, P 78.65 39 P P 11 07 34.9 -0.6
baz=332
KALE Kalithea 78.65 323 eP P 11 07 33.8 -1.8
KALE Kalithea 78.65 323 P P 11 07 33.8 -1.8
SERG Sergoula 78.66 323 P P 11 07 34.1 -1.5
PVO Paravola 78.67 323 P P 11 07 34.9 -0.7
TRIZ Trizonia 78.69 323 P P 11 07 34.2 -1.6
EFP Efpalio 78.70 323 P P 11 07 35.1 -0.7
T57A Hurt 78.73 40 eP P 11 07 35.8 -0.2
comp=Z,16nm,0.6s
T57A Hurt 78.73 40 P P 11 07 35.5 -0.5
baz=332,SNR=7.5
147A Livingston 78.74 49 eP P 11 07 36.6 +0.5
comp=Z,60nm,0.9s
147A Livingston 78.74 49 P P 11 07 36.1 0.0
baz=328,SNR=7.0
V54A Nebo 78.75 43 P P 11 07 35.8 -0.4
baz=331,SNR=8.0
TSLK Tsoukalades, L 78.78 324 P P 11 07 35.8 -0.4
W53A Cullowhee 78.79 44 P P 11 07 36.1 -0.4
baz=330,SNR=7.8
S59A Mechanicsville 78.79 38 P P 11 07 36.1 -0.1
baz=333,SNR=5.3
PDO Prodromos 78.80 323 P P 11 07 35.4 -1.0
Y50A Piedmont 78.81 46 P P 11 07 36.0 -0.5
baz=329,SNR=8.5
LKD2 Lefkada island 78.81 324 P P 11 07 35.5 -1.0
LAKA Lakka 78.84 323 eP P 11 07 36.5 -0.1
LAKA Lakka 78.84 323 P P 11 07 36.5 -0.1
U56A King 78.87 41 P P 11 07 36.6 -0.2
baz=331,SNR=6.0
KLV Kalavryta, Ach 78.95 323 P P 11 07 35.7 -1.5
EVGI Lefkada island 78.97 324 P P 11 07 36.4 -0.8
X52A Dahlonega 78.97 45 P P 11 07 37.1 -0.2
baz=330,SNR=5.3
V55A Taylorsville 78.98 42 P P 11 07 37.1 -0.2
baz=331,SNR=5.6
GUR Goura 78.98 322 eP P 11 07 35.6 -1.8
GUR Goura 78.98 322 P P 11 07 35.6 -1.8
WALJ Wala 78.98 309 P P 11 07 38.1 +0.7
R61A Willards 78.99 37 P P 11 07 37.0 -0.3
baz=334
LRAL Lakeview Retre 79.00 48 eP P 11 07 36.9 -0.6
comp=Z,19nm,0.6s
LRAL Lakeview Retre 79.00 48 P P 11 07 36.8 -0.6
baz=329,SNR=12
DID Didima 79.04 321 eP P 11 07 34.9 -2.8
DID Didima 79.04 321 P P 11 07 34.9 -2.8
T58A Grand View Acr 79.05 40 P P 11 07 37.4 -0.3
baz=332,SNR=7.2
Z49A Columbiana 79.06 47 P P 11 07 37.4 -0.4
baz=329,SNR=16
148A Greensboro 79.08 48 P P 11 07 36.2 -1.7
baz=329
Y51A Rockmart 79.09 46 P P 11 07 37.5 -0.5
baz=330,SNR=18
ANAF Anafi Island 79.09 319 P P 11 07 35.4 -2.6
FSK Fiskardo 79.14 324 P P 11 07 36.8 -1.3
AS31 Alice Springs 79.16 198 eP P 11 07 39.1 +0.8
comp=Z,9.9nm,0.6s
ASAR Alice Springs 79.16 198 P P 11 07 39.1 +0.8
comp=Z,30nm,0.6s,baz=10,slow=5.0,SNR=688
ASAR pP pP 11 09 50.8 +2.0
comp=Z,2.9nm,0.9s,baz=20,slow=5.1,SNR=6.4
ASAR PKKPbc PKKPbc 11 26 23.0 +1.5
comp=Z,1.1nm,0.4s,baz=187,slow=2.1,SNR=27
ASAR PKPPKP P'P'df 11 34 27.3 +2.6
comp=Z,0.9nm,1.0s,baz=182,slow=3.4,SNR=4.4
RLS Riolos of Patr 79.18 323 P P 11 07 37.9 -0.5
DRO Drossia 79.19 323 P P 11 07 38.1 -0.3
U57A Blanch 79.20 41 P P 11 07 38.4 -0.1
baz=332,SNR=6.3
W54A Cherokee Point 79.26 43 P P 11 07 38.5 -0.4
baz=331,SNR=5.6
KARP Karpathos 79.26 318 eP P 11 07 37.3 -1.6
KARP Karpathos 79.26 318 eP P 11 07 37.2 -1.6
comp=Z,58nm,0.5s
KARP Karpathos 79.26 318 P P 11 07 37.0 -1.9
Z50A Ashland 79.28 47 eP P 11 07 38.7 -0.3
comp=Z,67nm,0.6s
Z50A Ashland 79.28 47 P P 11 07 38.6 -0.4
baz=329,SNR=46
V56A Mocksville 79.30 42 eP P 11 07 38.9 -0.2
comp=Z,19nm,0.8s
V56A Mocksville 79.30 42 P P 11 07 38.8 -0.2
baz=331,SNR=7.6
X53A Estanollee 79.31 44 P P 11 07 39.2 +0.1
baz=330,SNR=5.9
KFL Anninata 79.38 324 P P 11 07 38.5 -0.9
VLS Valsamata 79.39 324 P P 11 07 38.6 -0.9
T59A Double "B" Far 79.40 39 P P 11 07 39.5 +0.1
baz=333
LISJ El Lisan 79.41 309 P P 11 07 40.3 +0.7
149A Jones 79.46 48 P P 11 07 39.7 -0.2
baz=329,SNR=16
VLX Vlachokerasia 79.47 322 eP P 11 07 38.4 -1.6
VLX Vlachokerasia 79.47 322 P P 11 07 38.4 -1.6
V57A Coltrane Farms 79.51 41 P P 11 07 39.7 -0.4
baz=332,SNR=7.6
U58A Oxford 79.53 40 P P 11 07 39.9 -0.3
baz=332,SNR=9.7
Y52A Lilburn 79.54 45 eP P 11 07 40.3 0.0
comp=Z,16nm,1.0s
Y52A Lilburn 79.54 45 P P 11 07 40.4 0.0
baz=330
Z51A Franklin 79.54 46 P P 11 07 39.7 -0.6
baz=330,SNR=8.4
KMSC Kings Mountain 79.55 43 eP P 11 07 40.1 -0.3
comp=Z,23nm,0.6s
KMSC Kings Mountain 79.55 43 P P 11 07 39.8 -0.6
baz=331,SNR=8.6
T60A Surry 79.55 38 P P 11 07 39.5 -0.7
baz=333
AMT Artemida-Makis 79.57 323 P P 11 07 39.3 -1.1
PAULI Pauline 79.64 43 eP P 11 07 40.6 -0.2
comp=Z,21nm,1.2s
X54A Belton 79.65 44 P P 11 07 40.4 -0.4
baz=331,SNR=5.9
Y53A Monroe 79.75 45 P P 11 07 41.2 -0.2
baz=330,SNR=7.0
JDRJ Daraweish 79.75 309 P P 11 07 42.0 +0.3
TIP Timpagrande 79.77 327 eP P 11 07 41.5 0.0
comp=Z,32nm,0.8s
TIP Timpagrande 79.77 327⇑ iP P 11 07 41.9 +0.4
150A Eclectic 79.79 47 P P 11 07 41.3 -0.3
baz=329,SNR=22

ITM Ithomi 79.80 322 eP P 11 07 39.4 -2.2
ITM Ithomi 79.80 322 eP P 11 07 40.2 -1.4
comp=Z,47nm,0.8s
ITM Ithomi 79.80 322 P P 11 07 40.2 -1.4
LNIG Linares 79.80 62 eP P 11 07 42.1 +0.2
comp=Z,4.5nm,0.7s
249A Camden 79.84 48 P P 11 07 42.4 +0.5
baz=329,SNR=13
V58A Windy Hill, Pi 79.85 41 P P 11 07 41.7 -0.1
baz=332,SNR=9.8
W56A Indian Trail 79.85 42 P P 11 07 41.4 -0.5
baz=331
U59A Littleton 79.86 39 eP P 11 07 41.8 -0.1
comp=Z,18nm,0.8s
U59A Littleton 79.86 39 P P 11 07 42.0 +0.1
baz=332
ZAIG Zacatecas 79.90 65 eP P 11 07 43.0 +0.2
comp=Z,7.5nm,0.9s
HODGE Hodges 79.97 44 eP P 11 07 42.6 +0.1
comp=Z,12nm,0.7s
Z52A Williamson 79.97 46 P P 11 07 42.4 -0.2
baz=330,SNR=9.8
U60A Pendleton 79.99 39 P P 11 07 42.2 -0.3
baz=333
ZKR Zakros 80.01 318 eP P 11 07 41.7 -1.0
ZKR Zakros 80.01 318 eP P 11 07 41.9 -0.8
ZKR Zakros 80.01 318 P P 11 07 41.9 -0.8
X55A Gracelyn & Ava 80.01 43 P P 11 07 42.4 -0.4
baz=331,SNR=6.3
W57A Gilead 80.07 42 eP P 11 07 42.8 -0.2
comp=Z,27nm,0.6s
W57A Gilead 80.07 42 P P 11 07 42.8 -0.2
baz=332,SNR=8.2
Y54A Tignall 80.11 44 P P 11 07 43.4 +0.1
baz=331,SNR=20
PYL PYLOS 80.12 322 eP P 11 07 41.4 -1.9
PYL PYLOS 80.12 322 P P 11 07 41.4 -1.9
151A Opelika 80.16 47 P P 11 07 43.0 -0.5
baz=330,SNR=7.1
KZIT Kziot 80.18 310 P P 11 07 43.9 +0.2
GOGA Godfrey 80.18 45 eP P 11 07 43.6 0.0
comp=Z,7.5nm,0.6s
GOGA Godfrey 80.18 45 eP P 11 07 43.6 0.0
GOGA pmax pmax
comp=Z,8.0nm,0.6s
GOGA Godfrey 80.18 45 P P 11 07 43.5 -0.2
baz=330
V59A Middlesex 80.21 40 P P 11 07 43.7 0.0
baz=332,SNR=8.9
250A Grady 80.22 48 eP P 11 07 43.9 0.0
comp=Z,31nm,0.5s
250A Grady 80.22 48 P P 11 07 43.9 0.0
baz=329,SNR=6.8
X56A White Oak 80.24 43 P P 11 07 43.7 -0.3
baz=331,SNR=11
Z53A Monticello 80.25 45 P P 11 07 43.7 -0.3
baz=330,SNR=6.6
152A Waverly Hall 80.29 46 eP P 11 07 44.0 -0.3
comp=Z,12nm,0.8s
152A Waverly Hall 80.29 46 P P 11 07 43.7 -0.5
baz=330,SNR=7.0
JSC Jenkinsville 80.33 43 eP P 11 07 44.2 -0.2
comp=Z,17nm,0.7s
JSC Jenkinsville 80.33 43 eP P 11 07 44.2 -0.2
JSC pmax pmax
comp=Z,17nm,0.7s
BIRD Birdtown, Kers 80.33 42 eP P 11 07 44.4 0.0
comp=Z,25nm,1.0s
349A Repton 80.35 49 P P 11 07 45.3 +0.8
baz=329
Y55A Saluda 80.39 44 P P 11 07 44.5 -0.2
baz=331,SNR=6.1
ANKY Antikythira Is 80.46 321 eP P 11 07 43.3 -1.8
ANKY Antikythira Is 80.46 321 P P 11 07 43.3 -1.8
PSAD1 Pilbara Seismi 80.47 211 eP P 11 07 44.8 -0.3
comp=Z,20nm,0.6s
W58A Raeford 80.48 41 P P 11 07 44.9 -0.2
baz=332,SNR=8.3
251A Midway 80.49 47 P P 11 07 44.9 -0.4
baz=330,SNR=12
PSAC1 Pilbara Seismi 80.55 211 eP P 11 07 45.0 -0.5
comp=Z,20nm,0.6s
PSAC2 Pilbara Seismi 80.55 211 eP P 11 07 45.3 -0.2
comp=Z,46nm,1.1s
PSAB2 Pilbara Seismi 80.55 211 eP P 11 07 45.2 -0.4
comp=Z,38nm,1.1s
PSAA2 Pilbara Seismi 80.56 211 eP P 11 07 45.2 -0.3
comp=Z,35nm,1.1s
IMMV Iera Moni Meta 80.57 320 eP P 11 07 44.2 -1.4
IMMV Iera Moni Meta 80.57 320 P P 11 07 44.6 -1.0
PSA00 Pilbara Seismi 80.57 211 eP P 11 07 45.3 -0.3
comp=Z,41nm,1.1s
PSAA3 Pilbara Seismi 80.57 211 eP P 11 07 45.3 -0.4
comp=Z,37nm,1.1s
V60A Jim Taylor Roa 80.57 39 eP P 11 07 45.5 -0.1
comp=Z,67nm,0.6s
V60A Jim Taylor Roa 80.57 39 P P 11 07 45.4 -0.1
baz=333,SNR=7.9
PSAB1 Pilbara Seismi 80.58 211 eP P 11 07 45.0 -0.7
comp=Z,30nm,1.1s
PSAA1 Pilbara Seismi 80.58 211 eP P 11 07 45.3 -0.3
comp=Z,41nm,1.1s
PSAD2 Pilbara Seismi 80.58 211 eP P 11 07 45.2 -0.5
comp=Z,26nm,0.8s
PSAB3 Pilbara Seismi 80.59 211 eP P 11 07 45.2 -0.5
comp=Z,33nm,1.1s
Z54A Sparta 80.59 45 P P 11 07 45.8 0.0
baz=330,SNR=11
PSAC3 Pilbara Seismi 80.62 211 eP P 11 07 45.6 -0.3
comp=Z,50nm,1.1s
HRFI Mount Harif 80.63 309 P P 11 07 46.2 +0.2
X57A Johnson Farm, 80.63 42 P P 11 07 45.9 -0.1
baz=332,SNR=5.7
SIVA Sivas 80.64 319 P P 11 07 45.2 -0.8
W59A Clinton 80.66 40 P P 11 07 46.0 -0.1
baz=332
PSAD3 Pilbara Seismi 80.66 211 eP P 11 07 45.8 -0.3
comp=Z,46nm,1.3s
350A Dozier 80.67 48 P P 11 07 46.4 +0.2
baz=329
153A Fort Valley 80.69 46 P P 11 07 45.9 -0.4
baz=330
CNNC Cliffs of the 80.80 40 P P 11 07 46.6 -0.2
baz=333
449A Pace 80.84 49 P P 11 07 48.3 +1.2
baz=329
X58A Rowland 80.85 41 eP P 11 07 47.0 -0.1
comp=Z,57nm,1.0s
X58A Rowland 80.85 41 P P 11 07 47.0 -0.1
baz=332,SNR=5.6
252A Lumpkin 80.86 47 P P 11 07 46.9 -0.3
baz=330
AQBJ Aqaba 80.88 309 P P 11 07 48.1 +0.8
Z55A Blythe 80.90 44 P P 11 07 47.4 +0.1
baz=331
RAYN Ar Rayn 80.90 298 eP P 11 07 47.4 -0.2
comp=Z,29nm,0.6s
RAYN Ar Rayn 80.90 298 eP P 11 07 47.4 -0.2
RAYN pmax pmax
comp=Z,29nm,0.6s
Y57A Sumter 80.91 42 P P 11 07 46.9 -0.4
baz=332
154A Montrose 81.02 45 eP P 11 07 48.3 +0.3
comp=Z,56nm,0.8s
154A Montrose 81.02 45 P P 11 07 48.1 +0.1
baz=330,SNR=6.0
W60A Pink Hill 81.03 40 P P 11 07 47.6 -0.4
baz=333
253A Americus 81.07 46 eP P 11 07 48.3 +0.1
comp=Z,32nm,0.5s
253A Americus 81.07 46 P P 11 07 48.1 -0.1
baz=330,SNR=5.3
450A Crestview 81.08 49 P P 11 07 49.1 +0.8
baz=329
Z56A Williston 81.12 44 eP P 11 07 48.6 +0.1
comp=Z,74nm,0.6s
Z56A Williston 81.12 44 P P 11 07 48.3 -0.1
baz=331
X59A McDuffie Farm, 81.12 41 P P 11 07 48.3 -0.1
baz=332
352A Blakely 81.23 47 eP P 11 07 49.2 +0.1
comp=Z,46nm,0.8s
352A Blakely 81.23 47 P P 11 07 49.2 +0.1
baz=330,SNR=11
155A Kite 81.28 45 P P 11 07 49.4 +0.1
baz=331
Y58A Scranton 81.29 42 eP P 11 07 49.3 0.0
comp=Z,76nm,0.8s
Y58A Scranton 81.29 42 P P 11 07 49.1 -0.2
baz=332
X60A Albert Glenn T 81.36 40 P P 11 07 49.1 -0.5
baz=333
Z57A Bowman 81.41 43 P P 11 07 50.0 0.0
baz=332,SNR=5.8
254A Abbeville 81.52 46 P P 11 07 50.6 +0.1
baz=330,SNR=9.6
353A Camilla 81.65 47 P P 11 07 51.6 +0.4
baz=330,SNR=8.6
156A Sylvania 81.65 44 P P 11 07 51.5 +0.4
baz=331
Z58A St. Stephen 81.73 42 P P 11 07 51.7 +0.1
baz=332
157A Early Branch 81.83 44 P P 11 07 52.3 +0.2
baz=331
TIGA Tifton 81.83 46 eP P 11 07 52.7 +0.6
comp=Z,52nm,0.8s
TIGA Tifton 81.83 46 P P 11 07 52.5 +0.4
baz=330,SNR=11
255A Hazlehurst 81.88 45 eP P 11 07 52.8 +0.5
comp=Z,44nm,0.5s
255A Hazlehurst 81.88 45 P P 11 07 52.6 +0.2
baz=331
RGRS Roger Stewart 81.96 43 eP P 11 07 52.9 +0.2
comp=Z,468nm,0.6s
453A Whigham 82.03 47 eP P 11 07 53.8 +0.7
comp=Z,20nm,0.6s
453A Whigham 82.03 47 P P 11 07 53.2 +0.1
baz=330
256A Glennville 82.08 45 P P 11 07 52.9 -0.4
baz=331
355A Pearson 82.23 46 P P 11 07 54.4 +0.3
baz=331,SNR=5.9
454A Quitman 82.44 47 P P 11 07 55.7 +0.5
baz=330
356A Blackshear 82.55 45 P P 11 07 55.7 0.0
baz=331
455A Stateville 82.68 46 P P 11 07 56.3 -0.1
baz=331
PBRG Braganca 82.92 345 eP P 11 07 56.9 -0.5
PGAV Gavieira, Arco 82.98 346 eP P 11 07 58.1 +0.3
PCAB Cabril 83.20 346 eP P 11 07 58.6 -0.2
POLO Lamas de Olo 83.50 346 eP P 11 07 59.8 -0.6
PVRL Vila Real 83.58 345 eP P 11 08 00.3 -0.4
comp=Z,45nm,0.9s
556A Lake Butler 83.58 46 P P 11 08 01.4 +0.6
baz=331
MVO Moncorvo 83.58 345 eP P 11 07 59.5 -1.3
656A Willston 84.08 46 eP P 11 08 04.3 +1.0
comp=Z,29nm,0.9s
656A Willston 84.08 46 P P 11 08 03.9 +0.6
baz=331
PVIS Viseu 84.16 346 eP P 11 08 02.8 -0.8
MTE Manteigas 84.41 345 eP P 11 08 04.3 -0.6
MTE Manteigas 84.41 345 eP P 11 08 04.1 -0.7
comp=Z,17nm,0.8s
ESDC Sonseca Array 84.53 342 P P 11 08 04.4 -1.0
comp=Z,9.5nm,0.6s,baz=4.6,slow=4.2,SNR=51
ESDC pP pP 11 10 19.9 +1.6
comp=Z,1.1nm,0.8s,baz=17,slow=5.0,SNR=2.2
ESLA Sonseca Array 84.53 342 eP P 11 08 04.9 -0.6
comp=Z,13nm,0.8s
757A Oxford 84.65 46 P P 11 08 06.7 +0.6
baz=331
PAB San Pablo 84.72 343 eP P 11 08 05.6 -0.8
comp=Z,14nm,0.8s
PAB San Pablo 84.72 343 eP P 11 08 05.6 -0.8
PAB pmax pmax
comp=Z,14nm,0.8s
PCBR Castelo Branco 84.95 345 eP P 11 08 06.3 -1.1
758A Lake Helen 85.00 46 P P 11 08 08.4 +0.7
baz=332
857A Zephyrhills 85.17 47 P P 11 08 09.3 +0.7
baz=331
KEST Kesra 85.20 331 P P 11 08 08.8 +0.1
comp=Z,17nm,0.5s,baz=14,slow=1.0,SNR=38
KEST Kesra 85.20 331 eP P 11 08 09.0 +0.3
comp=Z,18nm,0.6s
PMRV Marv??o 85.34 345 eP P 11 08 08.4 -0.9
comp=Z,23nm,1.5s
PMTG Montargil 85.82 345 eP P 11 08 10.1 -1.4
comp=Z,23nm,1.4s
958A Wauchula 85.97 47 P P 11 08 13.1 +0.8
baz=331
PMAFR Mafra 86.08 346 eP P 11 08 11.9 -0.9
STKA Stephens Creek 86.17 190 P P 11 08 13.3 +0.3
comp=Z,4.8nm,0.8s,baz=356,slow=6.1,SNR=9.2
STKA Stephens Creek 86.17 190 eP P 11 08 13.6 +0.6
comp=Z,4.9nm,1.5s
959A Okeechobee 86.39 46 P P 11 08 15.4 +1.0
baz=332
058A Arcadia 86.41 47 P P 11 08 15.0 +0.5
baz=331
059A Moore Haven 86.77 46 P P 11 08 16.8 +0.7
baz=332
PBEJ Beja 86.78 345 eP P 11 08 16.3 +0.2
PCVE Castro Verde 87.20 345 eP P 11 08 17.4 -0.6
PVAQ Vaqueiros 87.37 345 eP P 11 08 18.0 -0.9
PVAQ Vaqueiros 87.37 345 eP P 11 08 17.9 -0.9
comp=Z,13nm,0.9s
TOA1 Torodi Ar. Sit 108.71 330 ePdif Pdif 11 09 54.0 -1.3
TOA1 ePKIKP PKiKP 11 13 54.4 -1.9
TORD Torodi Ar. Bea 108.71 330 Pdiff Pdif 11 09 54.0 -1.3
comp=Z,0.5nm,0.8s,baz=2.2,slow=4.5,SNR=4.4
TORD PKIKP PKiKP 11 13 54.4 -1.9
comp=Z,1.0nm,0.5s,baz=12,slow=2.2,SNR=14
DBIC Dimbokro 116.67 335 PKP PKPdf 11 14 10.6 -0.9
comp=Z,8.2nm,0.6s,baz=18,slow=2.3,SNR=16
DBIC Dimbokro 116.67 335 ePKPdf PKPdf 11 14 10.7 -0.7
TIC Toumodi 116.73 335 ePKP1 PKiKP 11 14 12.0 +0.4
KIC Kosan Boka 116.94 335 ePKP1 PKPdf 11 14 10.6 -1.4
comp=Z,110nm,1.6s
LIC Lamto 117.14 335 ePKP1 PKPdf 11 14 10.9 -1.5
comp=Z,114nm,1.7s
LPAZ La Paz 130.65 56 PKP PKPdf 11 14 39.1 +0.3
comp=Z,4.3nm,0.7s,baz=350,slow=2.8,SNR=17
LPAZ SKPbc SKPbc 11 17 04.2 -0.5
comp=Z,4.5nm,0.8s,baz=345,slow=4.3,SNR=10
LPAZ La Paz 130.65 56 ePKPdf PKPdf 11 14 39.0 +0.2
TSUM Tsumeb 131.35 298 ePKPdf PKPdf 11 14 39.5 0.0
VNDA Vanda 131.45 177 PKP PKiKP 11 14 38.9 0.0
comp=Z,2.9nm,0.5s,baz=318,slow=4.8,SNR=29
VNDA SKPbc SKPbc 11 17 04.4 -0.5
comp=Z,3.6nm,0.8s,baz=332,slow=3.9,SNR=15
VNDA Vanda 131.45 177 ePKPdf PKiKP 11 14 38.7 -0.1
VNDA Vanda 131.45 177 ePKIKP PKiKP 11 14 38.7 -0.1
LBTB Lobatse 131.64 285 ePKPdf PKPdf 11 14 39.9 +0.1
LBTB Lobatse 131.64 285 ePKIKP PKPdf 11 14 39.9 +0.1
MNMC Minye Minye 132.33 60 ePKPdf PKPdf 11 14 41.6 +0.2
PB11 IPOC Station P 132.82 60 ePKPdf PKiKP 11 14 43.7 +0.2
GO01 Chusmiza 132.98 60 ePKPdf PKiKP 11 14 43.9 -0.4
BOSA Boshof 134.59 282 PKhKP PKPpre 11 14 36.2
comp=Z,1.7nm,0.4s,baz=24,slow=1.1,SNR=6.9
BOSA SKPbc SKPbc 11 17 16.6 -0.3
comp=Z,3.7nm,0.8s,baz=65,slow=3.9,SNR=5.2
GO02 Mina Guanaco 137.29 65 ePKPpre PKPpre 11 14 43.5
BDFB Brasilia 138.28 31 PKP PKPdf 11 14 52.1 -0.3
comp=Z,7.4nm,0.6s,baz=184,slow=1.9,SNR=7.7
BDFB Brasilia 138.28 31 ePKPdf PKPdf 11 14 52.1 -0.3
BDFB ePKPdf PKPdf 11 14 52.1 -0.3
MAW Mawson 138.31 215 SKPbc SKPbc 11 17 26.6 +0.2
comp=Z,7.1nm,1.0s,baz=27,slow=5.7,SNR=4.4
MAW Mawson 138.31 215 eSKPbc SKPbc 11 17 27.7 +1.3
LCO Las Campanas 139.73 69 ePKPpre PKPpre 11 14 48.6
LCO Las Campanas 139.73 69 ePKHKP PKPpre 11 14 48.6
PEL Peldehue 142.86 74 ePKPpre PKPdf 11 14 58.1 -2.0
PEL Peldehue 142.86 74 ePKIKP PKPdf 11 14 58.1 -2.0
CFA Coronel Fontan 143.08 69 iP PKPab 11 14 58.7 0.0
QSPA South Pole Qui 143.83 180 ePKPbc PKPbc 11 14 59.7 -0.6
ACAN Cantantal 144.16 69 iP PKPbc 11 15 02.1 -0.2
CPUP Villa Florida 144.38 51 PKP PKPbc 11 15 03.2 +0.1
comp=Z,41nm,0.6s,baz=327,slow=2.4,SNR=133
CPUP SKPbc SKiKP 11 17 43.6 0.0
comp=Z,2.3nm,0.7s,baz=323,slow=2.3,SNR=2.8
TCA Tanti 144.85 65 iP PKPbc 11 15 04.2 -0.3
TCA IAML 11 15 05.0
comp=Z,18nm,0.5s
PLCA Paso Flores 148.18 83 PKP PKPdf 11 15 08.4 -0.4
comp=Z,12nm,0.5s,baz=316,slow=3.1,SNR=15
PLCA PKPbc PKiKP 11 15 13.8 -0.5
comp=Z,12nm,0.5s,baz=304,slow=3.5,SNR=72
PLCA Paso Flores 148.18 83 ePKPbc PKPbc 11 15 13.4 +0.3
TRQA Tornquist 151.30 70 ePKPbc PKPbc 11 15 20.6 +0.1
TRQA Tornquist 151.30 70 ePKIKP PKPbc 11 15 20.6 +0.1

SNAA	**Sanae**	**159.48**	**202**	PKPab	**PKPab**	**11 16 05.7**	**-0.6**
VNA2	**Neumayer--Watz**	**161.00**	**200**	PKPab	**PKPab**	**11 16 11.6**	**-1.3**
	baz=44,slow=0.5						
VNA3	**Neumayer Olymp**	**161.17**	**197**	PKPab	**PKPab**	**11 16 12.5**	**-1.2**

*ISCJB **11** 10:58:54.2±2.3,28°.74S×0°.04×71°.4W±0°.1, h6km±12km,*
Error ellipse: s-maj=16.5km s-min=5.7km az=13.3
*SJA **11** 10:58:54.1±0.6,28°.72S×71°.38W, h11km±13km, ML3.7, MW3.9*
*GUC **11** 10:58:55.2±0.6,28°.81S×71°.28W, h41km±4km, ML4.0*
ISC 11 10:58:52.0±1.6,**28°.81S**±0°.04×**71°.38W**±0°.08,**h6**km±12km,
n13,σ1°**78**/19,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.62**	**109**	*i* P	**Pn**	**10 59 07.6**	**-0.2**
LCO				*i* S	**Sn**	**10 59 17.1**	**-1.1**
LCO	**Las Campanas**	**0.62**	**109**	*e*P	**Pn**	**10 59 08.2**	**+0.4**
LCO				*e*S	**Sn**	**10 59 17.5**	**-0.7**
LSCH	**La Serena**	**1.10**	**174**	*e*P	**Pn**	**10 59 15.2**	**+1.2**
LSCH				*e*S	**Sn**	**10 59 30.6**	**+1.0**
GO04	**Tololo Observa**	**1.45**	**160**	*e*P	**Pg**	**10 59 21.2**	**+1.4**
GO04				*e*S	**Sg**	**10 59 40.9**	**+2.2**
GO04				IAML		10 59 53.9	
	comp=N,4μm,0.6s						
GO03	**Copiap**	**1.58**	**40**	*i* P	**Pg**	**10 59 22.2**	**0.0**
GO03	**Copiap**	**1.58**	**40**	*e*P	**Pg**	**10 59 21.8**	**-0.4**
GO03				*e*S	**Sg**	**10 59 42.0**	**-0.7**
GO03				IAML		10 59 46.9	
	comp=E,1μm,0.3s						
AGUA	**GUANDACOL**	**2.61**	**106**	*i* P	**Pb**	**10 59 39.5**	**+0.2**
VCA	**Vinchina**	**2.78**	**89**	*i* P	**Pb**	**10 59 41.8**	**-0.5**
VCA				IAML		11 00 29.1	
	comp=Z,350nm,0.2s						
RTLS	**Leoncito**	**3.48**	**149**	*i* P	**Pb**	**10 59 53.2**	**-1.1**
RTLS				IAML		11 00 48.2	
	comp=Z,126nm,0.5s						
AUSP	**Uspallata**	**3.81**	**154**	*i* P	**Pb**	**10 59 57.7**	**-2.2**
RTCV	**Cerro Valdivia**	**3.91**	**142**	*i* P	**Pb**	**10 59 58.5**	**-2.9**
GO02	**Mina Guanaco**	**3.97**	**24**	*e*P	**Pn**	**10 59 54.5**	**+0.7**
GO02				*e*S	**Sn**	**11 00 43.4**	**+2.6**
GO02				IAML		11 01 02.4	
	comp=N,292nm,0.5s						
ROC1	**El Roble**	**4.16**	**176**	*i* P	**Pb**	**11 00 02.3**	**-3.6**

ROM 11 11:15:54.5±0.1,**42°.844N**±0°.008×**12°.971E**±0°.010,
h11km±2km,**ML0.6/2**,**Error ellipse: s-maj=1.1km**
s-min=0.4km az=39.0,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**96**	P	Pg	11 15 57.8	+0.4
NRCA				S	Sg	11 16 00.1	+0.5
FEMA	**Monte Fema**	**0.13**	**26**	P	Pg	11 15 58.4	+0.6
FEMA				S	Sg	11 16 00.9	+0.6
CESI	**CESI - Serrava**	**0.17**	**343**	P	Pg	11 15 58.9	+0.5
CESI				S	Sg	11 16 01.9	+0.9
CESI				AML	AML		
	comp=E,9μm,0.2s						
CESI				AML	AML		
	comp=N,16μm,1.4s						
CESI				AML	AML		
	comp=E,9μm,0.2s						
CESI				AML	AML		
	comp=N,16μm,1.4s						
FDMO	**Fiordimonte**	**0.21**	**24**	P	Pg	11 15 59.5	+0.5
FDMO				S	Sg	11 16 03.1	+1.0
FDMO				AML	AML		
	comp=E,74μm,0.8s						
FDMO				AML	AML		
	comp=N,46μm,0.2s						
FDMO				AML	AML		
	comp=N,46μm,0.2s						
FDMO				AML	AML		
	comp=E,74μm,0.8s						
LNSS	**Leonessa**	**0.25**	**168**	P	Pg	11 16 00.2	+0.5
LNSS				S	Sg	11 16 04.2	+1.1
EL6	**Elcito**	**0.49**	**11**	AML	AML		
	comp=E,90μm,1.6s						
EL6				AML	AML		
	comp=E,90μm,1.6s						
EL6				AML	AML		
	comp=N,90μm,1.6s						
EL6				AML	AML		
	comp=N,90μm,1.6s						

BUC 11 11:17:39.1±0.5,**46°.32N**×**23°.14E**,**h2**km±4km,**MD2.4**/3,
11C-2D,**Error ellipse: s-maj=4.6km s-min=3.6km**
az=90.0,**Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRGR		**0.56**	**328**	⇑*i*P	Pg	11 17 50.4	+0.6
DRGR				*i* S	Sb	11 17 58.8	-1.3
LOT	**Lotru**	**0.98**	**153**	⇓*i*P	Pb	11 17 58.8	0.0
LOT				*i* S	Sn	11 18 13.7	-0.8
LOT	**Lotru**	**0.98**	**153**	⇓*i*P	Pb	11 17 58.8	0.0
SIRR	**Siria**	**1.02**	**268**	⇑*i*P	Pb	11 17 59.5	-0.1
SIRR				*i* S	Sb	11 18 14.1	+0.6
SIRR	**Siria**	**1.02**	**268**	⇑*i*P	Pb	11 17 59.5	-0.1
BZS	**Buzias**	**1.27**	**237**	⇑*i*P	Pn	11 18 04.1	+0.2
BZS				*i* S	Sn	11 18 22.8	+1.3
BZS	**Buzias**	**1.27**	**237**	⇑*i*P	Pn	11 18 04.1	+0.2
VOIR		**1.60**	**123**	⇑*i*P	Pb	11 18 09.5	0.0
VOIR				*i* S	Sg	11 18 31.4	+0.9
VOIR		**1.60**	**123**	⇑*i*P	Pb	11 18 09.5	0.0
MDVR	**Moldovita**	**1.83**	**214**	⇑*i*P	Pb	11 18 13.5	+0.1
MDVR				*i* S	Sb	11 18 37.1	+0.3
MDVR	**Moldovita**	**1.83**	**214**	⇑*i*P	Pb	11 18 13.5	+0.1
BURAR	**Bucovina Array**	**1.93**	**47**	⇑*i*P	Pb	11 18 14.1	-0.9
BURAR				*i* S	Sb	11 18 39.1	-0.5
BURAR	**Bucovina Array**	**1.93**	**47**	⇑*i*P	Pb	11 18 14.1	-0.9

*ISK **11** 11:21:17.5,38°.94N×27°.13E, h8km, ML2.7/10*
*DDA **11** 11:21:17.5,38°.94N×27°.11E, h6km, ML3.0*
*ISCJB **11** 11:21:18.1±0.4,38°.94N±0°.02×27°.11E±0°.03, h8km±4km,*
Error ellipse: s-maj=4.3km s-min=3.4km az=154.3
ISC 11 11:21:17.8±0.9,**38°.94N**±0°.03×**27°.11E**±0°.02,**h9**km±6km,
n21,σ0°**34**/33,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEDA	**zmir-Bergama**	**0.04**	**317**	*i* P	**Pg**	**11 21 19.4**	**-0.2**
ZEDA				*i* S	**Sg**	**11 21 20.7**	**-0.1**
ZEDA				IAML_P			
	comp=Z,73μm,0.1s						
CAND	**Candarli**	**0.24**	**274**	PG	**Pg**	**11 21 22.9**	**+0.2**
CAND				SG	**Sg**	**11 21 26.8**	**+0.9**
FOCM	**Foa**	**0.37**	**233**	PG	**Pg**	**11 21 25.2**	**+0.1**
AYVA	**Ayvalik**	**0.49**	**319**	*i* P	**Pb**	**11 21 28.9**	**+0.2**
AYVA				*i* S	**Sb**	**11 21 35.1**	**-0.8**
AYVA				IAML_P			
	comp=Z,1μm,0.1s						
AKHS	**Akhisar**	**0.55**	**96**	*i* P	**Pb**	**11 21 29.4**	**-0.3**
AKHS				*i* S	**Sb**	**11 21 37.8**	**+0.1**
AKHS				IAML_P			
	comp=Z,4μm,0.1s						
AKS	**Akhisar**	**0.55**	**96**	PG	**Pg**	**11 21 28.9**	**+0.4**
KRBN	**Karaburun**	**0.56**	**232**	PG	**Pb**	**11 21 29.3**	**-0.4**
BLCB	**Balcova**	**0.56**	**185**	PG	**Pg**	**11 21 28.7**	**+0.1**
STEP	**BALIKESIR_Sava**	**0.64**	**47**	*i* P	**Pg**	**11 21 30.1**	**-0.1**
STEP				*i* S	**Sb**	**11 21 40.3**	**0.0**
STEP				IAML_P			
	comp=Z,4μm,0.1s						
URLA	**Izmir**	**0.70**	**215**	PG	**Pg**	**11 21 31.3**	**-0.1**
URLA	**Izmir**	**0.70**	**215**	*i* P	**Pg**	**11 21 31.1**	**-0.3**
URLA				*i* S	**Sn**	**11 21 45.0**	**0.0**
URLA				IAML_P			
	comp=Z,4μm,0.2s						
DGB	**zmir**	**0.90**	**191**	*i* P	**Pg**	**11 21 35.1**	**-0.1**
DGB				*i* S	**Sb**	**11 21 48.4**	**+0.7**
DGB				IAML_P			
	comp=Z,7μm,0.2s						
DGB				IAML_P			
	comp=Z,7μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.91**	**332**	*i* P	**Pg**	**11 21 35.1**	**-0.3**
BAYC				*i* S	**Sb**	**11 21 48.0**	**0.0**
BAYC				IAML_P			
	comp=Z,776nm,0.2s						

BALB	**Balikesir**	**0.92**	**40**	PG	**Pb**	**11 21 36.1**	**+0.2**
BALB				SG	**Sb**	**11 21 48.2**	**-0.1**
CHOS	**Chios island**	**0.99**	**237**	PG	**Pb**	**11 21 37.4**	**+0.2**
CHOS				SG	**Sn**	**11 21 51.6**	**-0.5**
SIGR	**SIGRI**	**1.01**	**286**	PG	**Pn**	**11 21 38.2**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.17**	**148**	PN	**Pb**	**11 21 39.9**	**-0.3**
BOZC	**Bozcaada**	**1.22**	**318**	PN	**Pg**	**11 21 41.3**	**+0.1**
MANT	**Manisa**	**1.22**	**111**	*i* P	**Pb**	**11 21 40.9**	**-0.3**
MANT				*i* S	**Sb**	**11 21 57.0**	**0.0**
MANT				IAML_P			
	comp=Z,981nm,0.1s						
DURS	**Dursunbey**	**1.25**	**58**	*i* P	**Pg**	**11 21 41.9**	**+0.1**
DURS				*i* S	**Sn**	**11 21 58.6**	**+0.1**
DURS				IAML_P			
	comp=Z,1μm,0.2s						
KULA	**Kula-Manisa**	**1.29**	**109**	PN	**Pb**	**11 21 42.0**	**-0.2**

*ISCJB **11** 11:30:24.0±0.5,3°.65N±0°.03×126°.69E±0°.03, h58km±5km,*
mb4.6/72, MS3.6/20, Error ellipse: s-maj=5.6km
s-min=3.7km az=152.2
*NEIC **11** 11:30:24.3±1.9,3°.67N×126°.62E, h47km±6km, mb4.7/48,*
Error ellipse: s-maj=14.5km s-min=11.8km az=65.0
*IDC **11** 11:30:24.5±1.7,3°.59N×126°.46E, h42km±15km, mb4.3/25,*
mb1 4.4/29, mb1mx4.4/38, mbtmp4.6/29, ML4.7/3, MS3.5/21,
Ms1 3.5/21, ms1mx3.3/45, Error ellipse: s-maj=17.9km
s-min=8.4km az=71.0
*BJI **11** 11:30:24.8±0.0,3°.61N×126°.66E, h65km, mb4.8/35,*
mB4.9/27, Ms4.2/10, Ms7 4.0/10
*DJA **11** 11:30:25.4±0.4,4°N±4°×12°7E±°, h51km±5km, M4.7/24,*
mB5.2/12, mb4.9/24, MLv4.9/13, Mw(mB)4.5/12
*MAN **11** 11:30:27.8,3°.81N×126°.31E, h90km, mb5.2, ML4.1, MS4.2*
ISC 11 11:30:26.8±0.7,**3°.55N**±0°.03×**126°.60E**±0°.05,**h67**km±6km,
n167,σ1°**63**/181,**mb4.7**/72,**3C**,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.07**	**277**	P	**Pn**	**11 30 43.6**	**-2.5**
SGSI				S	**Sn**	**11 30 57.8**	**-2.7**
TNTI	**Ternate**	**2.87**	**164**	*e*Pn	**Pn**	**11 31 08.8**	**-1.5**
TNTI				*e*Sn	**Sn**	**11 31 42.4**	**-1.2**
TNTI	**Ternate**	**2.87**	**164**	P	**Pn**	**11 31 09.5**	**-0.7**
GSPH	**General Santos**	**3.00**	**327**	⇑*i*P	**Pn**	**11 31 10.9**	**-1.3**
DAV	**Davao City (W)**	**3.64**	**344**	P	Pn	11 31 26.8	+6.1
	74nm,0.3s,baz=220,slow=5.6,SNR=1.4						
DAV				S	**Sn**	**11 32 09.7**	**+7.2**
	43nm,0.3s,baz=67,slow=18,SNR=1.5						
DMPH	**Davao City--Mi**	**3.67**	**343**	⇑*e*P	**Pn**	**11 31 19.7**	**-1.5**
DMPH				*e*S	**Sn**	**11 32 07.0**	**+3.8**
KMSI	**Cibinong**	**3.95**	**222**	P	**Pn**	**11 31 27.3**	**+2.3**
CGP	**Cagayan de Oro**	**5.22**	**339**	*e*P	**Pn**	**11 31 44.3**	**+1.9**
MRSI	**Marisa**	**5.57**	**237**	P	**Pn**	**11 31 48.2**	**+1.1**
SANI	**Sanana**	**5.60**	**186**	P	**Pn**	**11 31 45.6**	**-2.0**
	38nm,0.5s,935nm0.2nm						
LUWI	**Luwuk**	**5.95**	**220**	*e*Pn	**Pn**	**11 31 55.7**	**+3.3**
LUWI				*e*Sn	**Sn**	**11 33 01.2**	**+1.9**
LUWI	**Luwuk**	**5.95**	**220**	P	**Pn**	**11 31 56.0**	**+3.6**
	456nm,1.0s,4μm						
SWI	**Sorong**	**6.40**	**133**	P	**Pn**	**11 31 57.8**	**-0.7**
SIJI	**Sorong**	**6.41**	**133**	P	**Pn**	**11 31 58.1**	**-0.6**
	24nm,0.3s,baz=337,slow=9.1,SNR=96						
SIJI				S	**Sn**	**11 33 09.8**	**-0.7**
	baz=218,slow=19,SNR=3.5						
SIJI				LR	LR	11 34 57.0	
	comp=Z,522nm,20.5s,baz=306,slow=42						
APSI	**Ampana**	**6.64**	**228**	P	Pn	11 32 06.4	+4.5
	261nm,0.9s,2μm						
AAI	**Ambon**	**7.37**	**167**	P	**Pn**	**11 32 12.9**	**+1.1**
MPSI	**Mapaga**	**7.42**	**245**	P	**Pn**	**11 32 13.2**	**+0.7**
	21nm,0.8s,406nm						
KDI	**Kendari**	**8.45**	**208**	P	Pn	11 32 37.0	+10
FAKI	**Fak Fak**	**8.56**	**139**	*e*Pn	**Pn**	**11 32 27.2**	**-0.9**
FAKI	**Fak Fak**	**8.56**	**139**	P	**Pn**	**11 32 27.4**	**-0.7**
TTSI	**Tana Toraja**	**9.43**	**226**	P	**Pn**	**11 32 42.6**	**+2.7**
SPSI	**Sidrap Palu**	**10.12**	**222**	P	**Pn**	**11 32 51.0**	**+1.6**
BNSI	**Bone**	**10.22**	**219**	P	**Pn**	**11 32 53.0**	**+2.2**
BAKI	**Biak**	**10.61**	**116**	P	**Pn**	**11 32 55.3**	**-0.8**
KKM	**Kota Kinabalu**	**10.64**	**284**	*e*Pn	**Pn**	**11 32 58.5**	**+1.9**
KAPI	**Kappang**	**10.92**	**219**	P	**Pn**	**11 32 58.3**	**-2.0**
	baz=38,slow=19,SNR=1.5						
KAPI				LR	LR	11 37 51.1	
	comp=Z,292nm,19.1s,baz=54,slow=41						
KAPI	**Kappang**	**10.92**	**219**	*e*Pn	**Pn**	**11 33 01.4**	**+1.1**
TGY	**Tagaytay City**	**11.88**	**332**	LR	LR	11 38 22.6	
	comp=Z,365nm,19.5s,baz=188,slow=41						
EDFI	**Ende, Flores**	**13.16**	**202**	P	**Pn**	**11 33 32.6**	**+1.5**
BATI	**Baumata**	**13.98**	**192**	P	**Pn**	**11 33 41.5**	**-0.4**
	1.7nm,0.3s,baz=41,slow=19,SNR=2.2						
SBUM	**Sibu**	**14.40**	**266**	*e*Pn	**Pn**	**11 33 49.4**	**+2.1**
GENI	**Genyem**	**14.88**	**114**	P	**P**	**11 33 57.2**	**-0.5**
WBSI	**Waikabubak, Su**	**14.95**	**209**	P	**P**	**11 33 58.1**	**-0.4**
PLAI	**Plampang**	**15.12**	**216**	P	**P**	**11 33 59.9**	**-0.5**
JAY	**Jayapura**	**15.34**	**113**	P	**P**	**11 34 01.7**	**-1.2**
	4.4nm,0.3s,baz=266,slow=3.9,SNR=18						
JAY				LR	LR	11 39 16.0	
	comp=Z,156nm,20.1s,baz=340,slow=34						
KSM	**Kuching**	**16.40**	**263**	*e*Pn	**Pn**	**11 34 10.3**	**-2.6**
	14nm,1.0s						
MTN	**Manton Dam**	**16.90**	**165**	*e*Pn	**Pn**	**11 34 15.9**	**-3.2**
	20nm,0.6s						
JAGI	**Jajag, Banyuwa**	**17.23**	**226**	*e*Pn	**P**	**11 34 23.5**	**-0.2**
	45nm,1.1s						
DLV	**T Lat**	**19.77**	**296**	*e*P	**P**	**11 34 51.1**	**-0.8**
	20nm,1.0s						
TWG	**Pinlang**	**19.89**	**345**	*e*P	**P**	**11 34 50.0**	**-2.9**
	83nm,0.4s						
YULB	**Yu-li**	**20.38**	**346**	*e*P	**P**	**11 34 54.2**	**-4.0**
	13nm,0.5s						
TPUB	**Ta-pu**	**20.46**	**344**	*e*P	**P**	**11 34 55.4**	**-3.7**
	36nm,0.7s						
GUMO	**Guam**	**20.62**	**60**	LR	LR	11 41 29.3	
	comp=Z,154nm,21.4s,baz=232,slow=32						
GUMO	**Guam**	**20.62**	**60**	*e*P	**P**	**11 34 58.6**	**-2.2**
	126nm,1.1s						
SSLB	**Suanglung**	**20.84**	**345**	*e*P	**P**	**11 35 00.7**	**-2.5**
	20nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.54**	**182**	P	**P**	**11 35 10.9**	**+0.3**
	4.5nm,0.4s,baz=16,slow=8.6,SNR=27						
FITZ				S	**S**	**11 39 03.3**	**-2.6**
	3.6nm,1.0s,baz=353,slow=17,SNR=3.4						
LEM	**Lembang**	**21.57**	**241**	LR	LR	11 45 37.0	
	comp=Z,219nm,18.3s,baz=52,slow=42						
YHNB	**Yeheng**	**21.59**	**347**	*e*P	**P**	**11 35 08.6**	**-2.6**
	28nm,1.0s						
CISI	**Cisompet, Garu**	**21.75**	**239**	*e*P	**P**	**11 35 13.0**	**0.0**
	29nm,1.0s						
JOW	**Kunigami**	**23.20**	**4**	P	**P**	**11 35 28.7**	**+0.6**
	0.8nm,0.4s,baz=185,slow=13,SNR=4.4						
JOW	**Kunigami**	**23.20**	**4**	*e*P	**P**	**11 35 27.8**	**-0.3**
PMG	**Port Moresby**	**24.20**	**122**	LR	LR	11 46 29.2	
	comp=Z,126nm,19.1s,baz=330,slow=40						
WRAB	**Tennant Creek**	**24.55**	**162**	*e*P	**P**	**11 35 40.1**	**-0.3**
	64nm,1.1s						
WRA	**Warramunga Arr**	**24.56**	**162**	P	**P**	**11 35 40.1**	**-0.5**
	21nm,0.6s,baz=346,slow=12,SNR=330						
WRA				S	**S**	**11 39 59.8**	**+3.0**
	2.4nm,0.9s,baz=302,slow=1.9,SNR=3.5						
WR1	**Warramunga Arr**	**24.56**	**162**	*e*P	**P**	**11 35 40.0**	**-0.5**
WR1				*e*S	**S**	**11 39 59.8**	**+3.0**
WB2	**Warramunga Arr**	**24.56**	**162**	*e*P	**P**	**11 35 40.7**	**+0.1**
	60nm,1.1s						
PANO	**Nakornpanom**	**25.45**	**304**	P	**P**	**11 35 50.1**	**+1.4**
PSA00	**Pilbara Seismi**	**25.83**	**195**	*e*P	**P**	**11 35 52.4**	**+0.3**
	17nm,1.0s						
SKNT	**Sakolnakorn**	**25.90**	**303**	P	**P**	**11 35 53.3**	**+0.6**
	45nm,0.9s						
NONG	**Nongkai**	**27.12**	**304**	P	**P**	**11 36 04.5**	**+0.8**
	0.3nm,1.1s,55nm						
CHAI	**Chaiyaphum**	**27.14**	**299**	P	**P**	**11 36 04.9**	**+1.0**
	19μm,0.9s						
PSI	**Prapat**	**27.64**	**269**	LR	LR	11 49 46.0	
	comp=Z,101nm,18.2s,baz=92,slow=42						
AS31	**Alice Springs**	**27.98**	**166**	*e*P	**P**	**11 36 10.8**	**-0.5**
	1.6nm,0.4s						
ASAR	**Alice Springs**	**27.98**	**166**	P	**P**	**11 36 11.5**	**+0.1**
	1.9nm,0.3s,baz=345,slow=7.3,SNR=52						
ASAR				PcP	**PcP**	**11 39 26.7**	**+1.4**
	0.9nm,0.4s,baz=0.3,slow=3.0,SNR=5.8						
ASAR				S	**S**	**11 40 50.0**	**-0.9**
	0.5nm,0.8s,baz=350,slow=22,SNR=3.4						
ASAR				ScP	**ScP**	**11 43 04.9**	**+4.5**
	0.4nm,0.8s,baz=345,slow=3.1,SNR=5.2						
PBKT	**Sadao Pong**	**28.30**	**299**	P	**P**	**11 36 15.6**	**+1.3**
	5.3nm,0.9s						

GIRL	**Giralia**	**28.70**	**204**	*e*P	**P**	**11 36 20.5**	**+2.7**
	26nm,0.9s						
NJ2	**Nanjing**	**29.27**	**346**	*e*P	**P**	**11 36 22.9**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
JNU	**Nakatsue**	**29.69**	**7**	P	**P**	**11 36 25.8**	**-0.7**
	9.4nm,0.9s,baz=163,slow=11,SNR=4.3						
JNU	**Nakatsue**	**29.69**	**7**	*e*P	**P**	**11 36 23.8**	**-2.7**
	8.0nm,0.9s						
CM31	**Chiang Mai Arr**	**30.85**	**301**	*e*P	**P**	**11 36 37.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**30.85**	**301**	P	**P**	**11 36 36.4**	**-0.5**
	4.9nm,0.8s,baz=110,slow=6.9,SNR=18						
CMAR				LR	LR	11 50 44.3	
	comp=Z,40nm,18.2s,baz=128,slow=40						
CMMT	**Chiang Mai**	**31.00**	**301**	P	**P**	**11 36 38.8**	**+0.6**
	6.6nm,1.0s						
CHTO	**Chiang Mai**	**31.00**	**301**	*e*P	**P**	**11 36 38.1**	**-0.1**
	11nm,1.0s						
ENH	**Enshi**	**31.11**	**330**	*e*P	**P**	**11 36 37.8**	**-1.3**
	13nm,1.0s						
KMI	**Kunming**	**31.41**	**315**	P	**P**	**11 36 44.2**	**+2.2**
KMI				pmax	pmax		
	comp=Z,71nm,4.3s						
KS15	**Wonju Array Si**	**33.75**	**2**	*e*P	**P**	**11 37 01.5**	**-0.5**
KS15				*e*PcP	**PcP**	**11 39 41.0**	**+0.7**
KSRS	**Korea Array**	**33.76**	**2**	P	**P**	**11 37 01.8**	**-0.3**
	4.9nm,0.6s,baz=182,slow=10.0,SNR=34						
KSRS				PcP	**PcP**	**11 39 40.9**	**+0.7**
	0.9nm,0.8s,baz=184,slow=3.4,SNR=3.7						
KSRS				LR	LR	11 51 30.4	
	comp=Z,52nm,20.5s,baz=170,slow=38						
MORW	**Morawa**	**33.98**	**197**	*e*P	**P**	**11 37 04.5**	**+0.3**
FORT	**Forrest**	**34.17**	**178**	*e*P	**P**	**11 37 06.2**	**+0.5**
	37nm,1.0s						
XAN	**Xi'an**	**34.51**	**334**	P	**P**	**11 37 06.8**	**-2.0**
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN	**Xi'an**	**34.51**	**334**	*e*P	**P**	**11 37 07.3**	**-1.5**
	16nm,1.0s						
MAJO	**Matsushiro**	**34.53**	**17**	*e*P	**P**	**11 37 06.5**	**-2.3**
MJAR	**Matsushiro Arr**	**34.53**	**17**	P	**P**	**11 37 06.5**	**-2.3**
	1.4nm,0.8s,baz=210,slow=11,SNR=3.5						
CD2	**Chengdu**	**34.71**	**324**	*e*P	**P**	**11 37 09.9**	**-0.6**
BBOO	**Buckleboo**	**37.26**	**167**	*e*P	**P**	**11 37 32.9**	**+0.7**
EIDS	**Eidsvold**	**37.30**	**142**	*e*P	**P**	**11 37 32.7**	**+0.1**
	8.7nm,1.0s						
NWAO	**Narrogin (SRO)**	**37.35**	**193**	*e*P	**P**	**11 37 34.4**	**+1.4**
	12nm,1.0s						
BJT	**Baijiatuau**	**37.51**	**347**	*e*P	**P**	**11 37 34.3**	**+0.1**
	26nm,0.8s						
BJI	**Beijing**	**37.53**	**347**	P	**P**	**11 37 33.4**	**-0.9**
BJI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**38.01**	**159**	P	**P**	**11 37 39.5**	**+1.0**
	13nm,0.5s,baz=338,slow=7.9,SNR=54						
STKA	**Stephens Creek**	**38.01**	**159**	*e*P	**P**	**11 37 39.0**	**+0.4**
	3.0nm,0.6s						
LZH	**Lanzhou**	**38.59**	**330**	*e*P	**P**	**11 37 46.0**	**+2.4**
LZH				pP	pwP	11 38 01.3	-2.5
LZH				sP	sP	11 38 07.4	+1.0
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
LZH				pmax	pmax		
	comp=Z,73nm,4.9s						
LZH				LR	LR		
	comp=N,490nm,14.7s						
LZH				LR	LR		
	comp=E,440nm,15.2s						
LZH				LR	LR		
	comp=Z,560nm,16.3s						
BRDH	**Bariadhala**	**38.82**	**302**	LR	LR	11 57 32.2	
	comp=Z,54nm,18.1s,baz=117,slow=42						
HHC	**Hu-ho-hao-te**	**39.52**	**342**	*e*P	**P**	**11 37 51.7**	**+0.5**
HHC				S	**S**	**11 43 47.9**	**-1.0**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,78nm,5.0s						
HHC				LR	LR		
	comp=N,150nm,14.7s						
HHC				LR	LR		
	comp=E,520nm,15.4s						
HHC				LR	LR		
	comp=Z,560nm,13.0s						
SHL	**Shillong**	**39.87**	**307**	*e*P	**P**	**11 37 53.2**	**-1.3**
	34nm,0.6s						
USRK	**Ussuriysk Ar.**	**40.76**	**6**	P	**P**	**11 38 01.0**	**-0.3**
	2.8nm,0.7s,baz=194,slow=7.2,SNR=8.1						
MDJ	**Mudanjiang**	**40.98**	**3**	P	**P**	**11 38 03.4**	**+0.3**
MDJ				ScP	**ScP**	**11 43 44.8**	**-1.4**
MDJ				S	**S**	**11 44 13.5**	**+3.2**
MDJ				sS	sS	11 44 39.4	+1.9
MDJ				ScS	**ScS**	**11 47 57.7**	**-3.7**
MDJ				pmax	pmax		
	comp=Z,18nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.3s						
MDJ				LR	LR		
	comp=E,52nm,4.0s						
MDJ	**Mudanjiang**	**40.98**	**3**	*e*P	**P**	**11 38 03.9**	**+0.8**
	15nm,0.9s						
LSA	**Lhasa**	**42.45**	**312**	*e*P	**P**	**11 38 16.9**	**+0.9**
	7.3nm,0.7s						
ASAJ	**Asahikawa**	**42.80**	**17**	P	**P**	**11 38 18.7**	**+0.8**
	5.5nm,0.6s,baz=242,slow=10,SNR=10						
ASAJ				LR	LR	11 58 03.7	
	comp=Z,40nm,19.

comp=Z,30nm,1.2s
KSH pmax pmax
comp=Z,270nm,5.3s
KSH LR LR
comp=Z,140nm,14.8s
NRN Naryn 58.87 317 *e*P **P 11 40 18.0 -1.2**
4.4nm,0.8s
KZA Kyzart 59.65 318 P **P 11 40 25.9 +1.2**
SNR=6.5
TKM2 Tokmak 2 59.79 319 P **P 11 40 25.0 -0.4**
SNR=7.3
UCH Uchtor 60.21 318 P **P 11 40 29.8 +1.2**
SNR=15
AAK Ala-Archa 60.40 318 LR LR 12 08 07.2
comp=Z,53nm,21.4s,baz=84,slow=38
USP Ospenovka 60.66 319 P **P 11 40 31.6 +0.4**
SNR=6.7
ZALV Zalesovo Beam 60.68 333 P **P 11 40 30.1 -0.9**
2.3nm,0.7s,baz=116,slow=6.8,SNR=5.4
ZALV LR LR 12 08 25.3
comp=Z,35nm,18.6s,baz=72,slow=38
ZAA1 Zalesovo Array 60.69 333 *e*P **P 11 40 30.1 -0.9**
EKS2 Erkin-Say 60.89 318 P **P 11 40 33.9 +1.1**
SNR=6.4
ARSB Arslanbob 60.89 316 *e*P **P 11 40 31.8 -1.1**
10nm,1.1s
KURK Kurchatov 61.82 328 *e*P **P 11 40 38.2 -0.6**
17nm,0.8s
GAR Garm 61.94 313 *e*P **P 11 40 39.8 -0.2**
35nm,1.0s
URZ Urewera 62.51 137 P **P 11 40 45.6 +2.1**
2.5nm,0.5s,baz=261,slow=19,SNR=2.6
KKAR Karatay Array 63.27 317 *e*P **P 11 40 48.4 -0.3**
12nm,1.0s
BRVK Borovoye 67.47 327 *e*P **P 11 41 14.3 -1.2**
21nm,1.0s
TIXI Tiksi 68.02 1 *e*P **P 11 41 18.4 -0.2**
3.0nm,0.5s
NRIK Noril'sk 70.57 346 P **P 11 41 34.7 +0.3**
5.8nm,0.7s,baz=147,slow=6.1,SNR=7.0
NRIK LR LR 12 15 34.4
comp=Z,35nm,18.5s,baz=158,slow=38
GEYT Alibeck 70.90 309 P **P 11 41 36.3 -0.8**
1.0nm,0.4s,baz=62,slow=3.4,SNR=3.2
ABKAR Akbulak array 72.20 321 *e*P **P 11 41 43.7 -0.9**
7.7nm,0.8s
ARU Arti 75.01 328 *e*P **P 11 42 00.2 -0.8**
14nm,1.1s
RAYN Ar Rayn 80.43 293 *e*P **P 11 42 31.2 -0.7**
5.9nm,1.0s
VNDA Vanda 83.27 173 P **P 11 42 46.3 +0.7**
1.6nm,0.9s,baz=310,slow=6.1,SNR=9.4
RC01 Rabbit Creek A 83.84 29 *e*P **P 11 42 48.6 -0.3**
9.7nm,1.2s
TOLK Toolik Lake Re 84.46 21 *e*P **P 11 42 50.1 -1.8**
2.1nm,0.7s
ILAR Eielson Array 85.32 25 P **P 11 42 56.7 +0.4**
1.1nm,1.1s,baz=251,slow=5.6,SNR=4.7
ILB Eielson Array 85.32 25 *e*P **P 11 42 56.7 +0.4**
KLMR Klimovskoe 85.49 331 *e*P **P 11 42 56.9 -0.3**
KLMR AMP 11 42 58.4
comp=Z,17nm,1.0s
KMBO Kilima Mbogo 89.42 269 P **P 11 43 17.7 +0.3**
comp=Z,4.5nm,0.9s,baz=18,slow=4.6,SNR=6.8
BR101 Keskin Array S 90.03 310 *e*P **P 11 43 19.0 -0.6**
BR131 Keskin Array S 90.03 310 *e*P **P 11 43 18.3 -1.3**
BRTR Keskin Array B 90.03 310 P **P 11 43 19.0 -0.6**
comp=Z,4.3nm,0.8s,baz=111,slow=5.6,SNR=19
ARCES ARCESS Array B 90.57 340 P **P 11 43 20.1 -1.2**
comp=Z,8.7nm,0.3s,baz=85,slow=6.5,SNR=10.0
FIA0 FINESS Array S 91.92 332 *e*P **P 11 43 28.0 +0.3**
FINES FINESS Array B 91.92 332 P **P 11 43 28.0 +0.3**
comp=Z,5.3nm,1.0s,baz=46,slow=4.0,SNR=3.2
FINES LR LR 12 29 17.2
comp=Z,26nm,18.8s,baz=84,slow=38
AKASG Malin Array Be 91.94 321 P **P 11 43 27.1 -0.9**
comp=Z,0.8nm,0.5s,baz=73,slow=4.1,SNR=4.8
AKBB Malin Array Si 91.94 321 *e*P **P 11 43 26.4 -1.6**
comp=Z,5.2nm,1.1s
SYO Syowa Base 92.21 201⇑ *e*PcP **PcP 11 43 32.8 +3.2**
BUR08 Bucovina Ar. S 95.05 318 *e*P **P 11 43 42.2 -0.3**
comp=Z,4.9nm,1.0s
NB2 NORSAR Subarra 98.88 334 P **P 11 43 58.4 -1.1**
comp=Z,0.4nm,0.6s,baz=66,slow=4.6
NB200 NORSAR Array S 98.88 334 *e*P **P 11 43 58.4 -1.1**
NOA NORSAR Array B 98.88 334 P **P 11 43 58.4 -1.1**
comp=Z,1.1nm,0.8s,baz=67,slow=4.6,SNR=4.1
NOA LR LR 12 33 15.0
comp=Z,24nm,19.2s,baz=295,slow=38
TORD Torodi Ar. Bea 122.85 288 PKP **PKPdf 11 49 15.9 -0.4**
comp=Z,0.8nm,0.8s,baz=62,slow=3.5,SNR=3.8
TOA1 Torodi Ar. Sit 122.85 288 *e*PKPdf **PKPdf 11 49 15.9 -0.4**
PLCA Paso Flores 139.89 160 PKP **PKiKP 11 49 49.8 -0.6**
comp=Z,1.8nm,0.9s,baz=23,slow=1.0,SNR=3.9

ISCJB ***11*** *11:39:36.8±1.0, 29°.42S±0°.04×69°.56W±0°.05, h133km±10km, Error ellipse: s-maj=6.7km s-min=6.0km az=177.6*
SJA ***11*** *11:39:36.7±0.6, 29°.42S×69°.50W, h134km±4km, ML3.6, MW4.1*
GUC ***11*** *11:39:37.1±0.6, 29°.48S×69°.56W, h118km±7km, ML3.8*
ISC 11 11:39:37.1±1.9,**29°.42S**±0°.04×**69°.56W**±0°.04, **h134**km±15km, **n16**, σ0°**76**/31, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGUA	**GUANDACOL**	**0.93**	**95**	*i* P	**Pn**	**11 39 59.5**	**-0.4**
AGUA				*i* S	**Sn**	**11 40 16.5**	**-0.6**
LCO	**Las Campanas**	**1.08**	**292**	*i* P	**Pn**	**11 40 02.0**	**+0.6**
LCO				*i* S	**Sn**	**11 40 21.2**	**+1.3**
LCO	**Las Campanas**	**1.08**	**292**	*e*P	**Pn**	**11 40 01.4**	**0.0**
LCO				*e*S	**Sn**	**11 40 19.9**	**0.0**
GO04	**Tololo Observa**	**1.32**	**235**	*i* P	**Pn**	**11 40 04.4**	**+0.6**
GO04				*i* S	**Sn**	**11 40 25.0**	**+0.9**
GO04	**Tololo Observa**	**1.32**	**235**	*e*P	**Pn**	**11 40 03.4**	**-0.4**
GO04				*e*S	**Sn**	**11 40 23.3**	**-0.7**
GO04				IAML		11 40 26.7	
comp=N,2μm,0.5s							
VCA	**Vinchina**	**1.36**	**60**	*i* P	**Pn**	**11 40 04.5**	**+0.3**
VCA				*i* S	**Sn**	**11 40 24.1**	**-0.6**
VCA				IAML		11 40 26.4	
comp=Z,2μm,0.2s							
VCA	**Vinchina**	**1.36**	**60**	*e*P	**Pn**	**11 40 04.7**	**+0.5**
VCA				*e*S	**Sn**	**11 40 24.7**	**-0.1**
VCA				IAML		11 40 25.9	
comp=N,2μm,0.5s							
LSCH	**La Serena**	**1.55**	**251**	*e*P	**Pn**	**11 40 05.1**	**-0.9**
LSCH				*e*S	**Sn**	**11 40 26.3**	**-1.7**
AMOG	**MOGNA**	**1.77**	**149**	*i* P	**Pn**	**11 40 08.3**	**-0.3**
AMOG				*i* S	**Sn**	**11 40 32.5**	**-0.3**
GO03	**Copiap**	**1.91**	**342**	*e*P	**Pn**	**11 40 10.9**	**+0.5**
GO03				*e*S	**Sn**	**11 40 35.7**	**-0.1**
GO03				IAML		11 40 36.8	
comp=N,506nm,0.4s							
RTLL	**Cerro Villicun**	**2.12**	**154**	*i* P	**Pn**	**11 40 13.1**	**+0.2**
RTLS	**Leoncito**	**2.38**	**175**	*i* P	**Pn**	**11 40 17.3**	**+1.0**
RTLS				IAML	**Sn**	**11 40 47.1**	**+0.7**
comp=Z,134nm,0.3s							
RTLS				*i* S	**Sn**	**11 40 47.1**	**+0.7**
RTCV	**Cerro Valdivia**	**2.59**	**161**	*i* P	**Pn**	**11 40 18.9**	**+0.3**
RTCV				*i* S	**Sn**	**11 40 50.4**	**-0.3**
AUSP	**Uspallata**	**2.80**	**177**	*i* P	**Pn**	**11 40 22.9**	**+1.3**
AUSP				*i* S	**Sn**	**11 40 56.4**	**+0.6**
CYA	**Choya**	**3.43**	**74**	*i* P	**Pn**	**11 40 29.1**	**-0.5**
CYA				IAML		11 40 29.8	
comp=Z,48nm,0.1s							
ROCH	**El Roble**	**3.76**	**199**	*e*P	**Pn**	**11 40 33.3**	**-0.7**
ROCH				*e*S	**Sn**	**11 41 17.0**	**-1.0**

IDC ***11*** *11:44:45.2±1.8, 7°.26S×130°.79E, h0km, mb4.0/2, mb1 4.4/6, mb1mx3.8/38, mbtmp4.2/6, ML4.2/4, Error ellipse: s-maj=57.8km s-min=23.5km az=82.0*
ISCJB ***11*** *11:44:47.3±0.4, 7°.21S±0°.03×131°.27E±0°.04, h100km, mb4.6/5, Error ellipse: s-maj=6.0km s-min=3.7km az=160.3*
NEIC ***11*** *11:44:50.3±2.3, 7°.24S×131°.29E, h108km±4km, mb4.5/11, Error ellipse: s-maj=12.1km s-min=6.9km az=76.0*
DJA ***11*** *11:44:51.4±0.5, 7°.S±3°×13°.1E±°, h79km±13km, M4.6/7, mb4.8/3, mB5.0/4, MLv4.6/7, Mw(mB)4.4/4*
ISC 11 11:44:48.0±0.6,**7°.13S**±0°.04×**131°.30E**±0°.06, **h100**km, **n35, σ2°69**/50, **mb4.2**/5, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**0.84**	**180**	*e*Pn	**Pn**	**11 45 09.9**	**+3.1**
SAUI				*e*Sn	**Sn**	**11 45 22.2**	**+1.3**
SAUI	**Saumlaki**	**0.84**	**180**	P	**Pn**	**11 45 10.3**	**+3.5**
SAUI				S	**Sn**	**11 45 26.2**	**+5.3**
BNDI	**Bandanaira**	**2.94**	**332**	P	**Pn**	**11 45 35.3**	**+2.4**
BNDI				S	**Sn**	**11 46 08.7**	**+1.1**
FAKI	**Fak Fak**	**4.29**	**13**	*e*Pn	**Pn**	**11 45 52.2**	**+1.1**
FAKI				*e*Sn	**Sn**	**11 46 38.0**	**-2.1**
FAKI	**Fak Fak**	**4.29**	**13**	P	**Pn**	**11 45 52.0**	**+0.9**
FAKI				S	**Sn**	**11 46 37.4**	**-2.7**
AAI	**Ambon**	**4.61**	**318**	P	**Pn**	**11 45 58.9**	**+3.4**
MTN	**Manton Dam**	**5.68**	**182**	*e*Pn	**Pn**	**11 46 14.5**	**+4.6**
MTN				*e*Sn	**Sn**	**11 47 13.7**	**-0.1**
SIJI	**Sorong**	**6.22**	**360**	Pn	**Pn**	**11 46 18.3**	**+0.9**
8.3nm,0.3s,baz=205,slow=15,SNR=20							
SIJI				Sn	Sn	11 47 20.2	-6.8
14nm,0.3s,baz=180,slow=20,SNR=19							
SWI	**Sorong**	**6.23**	**360**	P	**Pn**	**11 46 18.4**	**+1.0**
SOEI	**Soe**	**7.43**	**249**	*e*Pn	Pn	11 46 38.9	+5.1
SOEI				*e*Sn	**Sn**	**11 47 55.7**	**-0.9**
BATI	**Baumata**	**8.14**	**247**	Pn	**Pn**	**11 46 45.3**	**+1.8**
13nm,0.3s,baz=101,slow=5.2,SNR=8.0							
BATI				Sn	**Sn**	**11 48 14.9**	**+1.0**
8.8nm,0.3s,baz=72,slow=20,SNR=7.9							
BATI	**Baumata**	**8.14**	**247**	*e*Pn	**Pn**	**11 46 45.3**	**+1.8**
BATI				*e*Pn	**Pn**	**11 46 45.3**	**+1.8**
BATI				*e*Sn	**Sn**	**11 48 14.9**	**+1.0**
BATI				*e*Sn	**Sn**	**11 48 14.9**	**+1.0**
FITZ	**Fitzroy Crossi**	**12.22**	**206**	Pn	**Pn**	**11 47 38.1**	**-0.4**
3.7nm,0.3s,baz=27,slow=8.8,SNR=162							
FITZ				Sn	**Sn**	**11 49 48.5**	**-4.4**
3.8nm,0.3s,baz=324,slow=17,SNR=11							
WRAB	**Tennant Creek**	**13.06**	**167**	*e*Pn	**Pn**	**11 47 50.5**	**+0.7**
WRAB				*e*Sn	**Sn**	**11 50 10.8**	**-2.7**
WR1	**Warramunga Arr**	**13.07**	**167**	*e*Pn	**Pn**	**11 47 50.8**	**+0.9**
WR1				*e*Sn	**Sn**	**11 50 07.7**	**-6.0**
WRA	**Warramunga Arr**	**13.07**	**167**	Pn	**Pn**	**11 47 50.8**	**+0.9**
0.8nm,0.3s,baz=341,slow=13,SNR=31							
WRA				Sn	**Sn**	**11 50 07.7**	**-6.0**
3.9nm,0.3s,baz=350,slow=24,SNR=9.9							
WB2	**Warramunga Arr**	**13.07**	**167**	*e*Pn	**Pn**	**11 47 50.4**	**+0.4**
WB2				*e*Sn	**Sn**	**11 50 11.8**	**-2.1**
WC3	**Warramunga Arr**	**13.10**	**167**	*e*Pn	**Pn**	**11 47 51.2**	**+1.0**
WC3				*e*Sn	**Sn**	**11 50 11.4**	**-2.9**
COEN	**Coen**	**13.50**	**121**	*e*Pn	**Pn**	**11 47 57.9**	**+2.4**
COEN				*e*Sn	**Sn**	**11 50 21.9**	**-2.2**
AS31	**Alice Springs**	**16.63**	**172**	*e*Pn	**Pn**	**11 48 33.1**	**-2.1**
3.0nm,1.1s							
AS31				*e*Sn	**Sn**	**11 51 36.2**	**-3.5**
ASAR	**Alice Springs**	**16.63**	**172**	Pn	**P**	**11 48 37.8**	**+1.9**
0.5nm,0.3s,baz=343,slow=8.7,SNR=44							
ASAR				Sn	**Sn**	**11 51 32.2**	**-7.6**
0.7nm,0.3s,baz=355,slow=28,SNR=7.7							
JAGI	**Jajag, Banyuwa**	**17.04**	**264**	*e*Pn	**Pn**	**11 48 37.6**	**-2.6**
124nm,1.7s							
PSAD1	**Pilbara Seismi**	**18.05**	**217**	*e*P	**P**	**11 48 51.9**	**+0.4**
21nm,1.3s							
PSAC2	**Pilbara Seismi**	**18.09**	**216**	*e*P	**P**	**11 48 53.0**	**+1.1**
32nm,1.4s							
PSAB2	**Pilbara Seismi**	**18.10**	**216**	*e*P	**P**	**11 48 50.9**	**-1.2**
43nm,1.8s							
PSAC1	**Pilbara Seismi**	**18.12**	**217**	*e*P	**P**	**11 48 53.0**	**+0.8**
62nm,1.8s							
PSA00	**Pilbara Seismi**	**18.13**	**216**	*e*P	**P**	**11 48 52.2**	**-0.1**
75nm,1.9s							
KKM	**Kota Kinabalu**	**19.95**	**311**	*e*P	**P**	**11 49 13.6**	**+1.2**
22nm,1.2s							
MNAI	**Manna**	**28.33**	**274**	*e*P	**P**	**11 50 32.0**	**-0.6**
467nm,1.2s							
CM31	**Chiang Mai Arr**	**40.81**	**309**	*e*P	P	11 52 26.6	+6.6
CMAR	**Chiang Mai Arr**	**40.81**	**309**	P	P	11 52 26.6	+6.6
0.5nm,0.4s,baz=144,slow=7.8,SNR=3.6							
LSA	**Lhasa**	**53.19**	**316**	*e*P	**P**	**11 53 58.8**	**+2.1**
7.8nm,0.4s							
MK32	**Makanchi Array**	**69.05**	**326**	*e*P	P	11 55 52.0	+9.0
MKAR	**Makanchi Array**	**69.05**	**326**	P	P	11 55 52.0	+9.0
1.2nm,0.4s,baz=116,slow=7.5,SNR=18							
VNDA	**Vanda**	**72.17**	**173**	*e*P	**P**	**11 56 01.4**	**+0.1**
6.8nm,1.6s							

UCR 11 11:51:24.7±1.2,**10°.24N**×**86°.32W**, **h22**km±7km, **MD3.8, 6C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.87**	**62**	*i* P	Pb	11 51 41.3	+0.1
NY14				*i* S	Sn	11 51 54.1	+0.3
LAPC	**Finca la Perla**	**1.02**	**59**	*i* P	Pb	11 51 42.8	-0.8
LAPC				*i* S	Sb	11 51 56.3	-0.3
BUEV	**Buena Vista**	**1.05**	**58⇑**	*i*P	Pn	11 51 43.5	-0.8
BUEV				*e*S	Sn	11 51 58.3	-0.1
GB1A	**Borinquen Arri**	**1.07**	**57⇑**	*e*P	Pn	11 51 43.8	-0.8
GB1A				*e*S	Sn	11 51 59.2	+0.4
GPS2	**Hotel Rincn d**	**1.08**	**62**	*i* P	Pn	11 51 44.0	-0.6
GPS1	**Guardaparques**	**1.09**	**61**	*i* P	Pn	11 51 44.1	-0.8
LIM1	**Limonal**	**1.14**	**66**	*i* P	Pn	11 51 45.0	-0.5
CUI	**Cuipilapa**	**1.21**	**70**	*i* P	Pn	11 51 46.0	-0.4
CUI				⇑*i*P	Pb	11 51 46.1	-0.9
CUI				*e*S	Sn	11 52 03.1	+0.9
MESS	**Mesas**	**1.21**	**66⇑**	*i*P	Pn	11 51 46.0	-0.5
MESS				*e*S	Sn	11 52 03.6	+1.3
ACAL	**Aguas Claras**	**1.32**	**73**	*i* P	Pn	11 51 47.8	-0.2
JTS	**Las Juntas de**	**1.35**	**88**	*e*P	Pn	11 51 47.8	-0.4
PTEN	**Parque Tenorio**	**1.39**	**70**	*i* P	Pn	11 51 48.6	-0.4
ARE1	**Arenal 1**	**1.59**	**82⇑**	*i*P	Pn	11 51 52.3	+0.7
ACON	**Acoyapa**	**2.05**	**33⇑**	*i*P	Pn	11 51 57.7	-0.2

BJI ***11*** *11:59:31.6±0.0, 7°.03S×129°.44E, h227km, mb4.8/56, mB4.6/35*
MOS ***11*** *11:59:32.3±1.0, 6°.75S×129°.01E, h203km, mb4.9/45, Error ellipse: s-maj=11.1km s-min=5.2km az=104.0*
ISCJB ***11*** *11:59:34.8±0.2, 6°.78S±0°.01×129°.20E±0°.02, h230km±2km, mb4.8/153, Error ellipse: s-maj=3.2km s-min=2.3km az=176.2*
DJA ***11*** *11:59:35.9±0.2, 7°.S±2°×12°.9E±°, h212km±3km, M4.8/42, mb4.9/42, mB5.2/21, MLv5.4/17, Mw(mB)4.6/21*
IDC ***11*** *11:59:36.0±1.1, 6°.77S×129°.13E, h222km±10km, mb4.5/26, mb1 4.6/32, mb1mx4.4/53, mbtmp5.1/32, Error ellipse: s-maj=11.1km s-min=6.0km az=73.0*
NEIC ***11*** *11:59:35.5±2.1, 6°.79S×129°.17E, h222km±4km, mb4.9/118, Error ellipse: s-maj=10.3km s-min=9.3km az=59.0*
KLM ***11*** *11:59:42.0, 6°.62S×129°.32E, h294km, mb5.0*
ISC 11 11:59:35.1±0.5,**6°.81S**±0°.03×**129°.14E**±0°.04, **h222**km±5km, **n412**, σ1°**39**/475, **mb4.8**/153, **20C-5D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.40**	**19**	P	**Pn**	**12 00 21.1**	**+1.8**
SAUI	**Saumlaki**	**2.44**	**119**	*e*Pn	**Pn**	**12 00 20.2**	**+0.5**
SAUI				*e*S	**S**	**12 00 53.2**	**-1.3**
SAUI	**Saumlaki**	**2.44**	**119**	P	**Pn**	**12 00 20.6**	**+0.8**
SAUI				S	**S**	**12 00 52.4**	**-2.1**
AAI	**Ambon**	**3.24**	**343**	P	**Pn**	**12 00 30.6**	**+1.9**
FAKI	**Fak Fak**	**4.96**	**39**	*e*Pn	**Pn**	**12 00 48.6**	**-1.0**
FAKI				*e*S	**S**	**12 01 44.9**	**-3.5**
FAKI	**Fak Fak**	**4.96**	**39**	P	**Pn**	**12 00 48.2**	**-1.4**
KMPI	**Kaimana, Papua**	**5.52**	**56**	P	**Pn**	**12 00 57.2**	**+0.5**
2μm,0.7s,19μm9.1nm							
SOEI	**Soe**	**5.64**	**238**	*e*Pn	**Pn**	**12 00 58.9**	**+0.6**
SOEI				*e*S	**S**	**12 02 02.5**	**-1.6**
SOEI	**Soe**	**5.64**	**238**	P	**Pn**	**12 00 59.7**	**+1.5**
SANI	**Sanana**	**5.67**	**326**	P	**Pn**	**12 01 00.4**	**+1.8**
SIJI	**Sorong**	**6.27**	**20**	P	**Pn**	**12 01 04.9**	**-1.4**
36nm,0.3s,baz=213,slow=23,SNR=121							
SIJI				S	**S**	**12 02 12.3**	**-6.4**
88nm,0.3s,baz=169,slow=22,SNR=23							
SWI	**Sorong**	**6.28**	**20**	P	**Pn**	**12 01 06.2**	**-0.1**
260nm,0.5s,6μm5.1nm							
MTN	**Manton Dam**	**6.31**	**162**	*e*Pn	**Pn**	**12 01 06.6**	**-0.1**
MTN				*e*S	**S**	**12 02 15.4**	**-4.1**
MTN	**Manton Dam**	**6.31**	**162**	P	**Pn**	**12 01 06.5**	**-0.1**
baz=6.4,SNR=351							
BATI	**Baumata**	**6.38**	**238**	P	**Pn**	**12 01 07.8**	**+0.2**
166nm,0.3s,baz=123,slow=1.8,SNR=164							
BATI				S	**S**	**12 02 16.9**	**-4.2**
281nm,0.3s,baz=100,slow=23,SNR=33							
BATI	**Baumata**	**6.38**	**238**	*e*Pn	**Pn**	**12 01 07.8**	**+0.2**
BATI				*e*Pn	**Pn**	**12 01 07.8**	**+0.2**
BATI				*e*S	**S**	**12 02 16.9**	**-4.2**
BATI	**Baumata**	**6.38**	**238**	P	**Pn**	**12 01 08.5**	**+0.9**
560nm,0.8s,6μm4.6nm							
BBSI	**Bau Bau**	**6.66**	**281**	P	**Pn**	**12 01 13.1**	**+1.9**
108nm,1.0s,1μm0.3nm							
KDU	**Kakadu**	**6.70**	**151**	P	**Pn**	**12 01 11.7**	**0.0**
baz=6.8,SNR=157							
MMRI	**Maumere**	**7.07**	**255**	*e*Pn	**Pn**	**12 01 17.1**	**+0.6**
MMRI				*e*S	**S**	**12 02 38.5**	**+1.2**
MMRI	**Maumere**	**7.07**	**255**	P	**Pn**	**12 01 17.5**	**+1.0**
77nm,0.9s,2μm0.8nm							
RKPI	**Ransiki, Papua**	**7.28**	**44**	P	**Pn**	**12 01 19.4**	**+0.3**
2μm,0.8s,25μm9.4nm							
EDFI	**Ende, Flores**	**7.62**	**255**	P	**Pn**	**12 01 25.3**	**+1.6**
32nm,0.8s,2μm0.3nm							
TNTI	**Ternate**	**7.74**	**347**	*e*Pn	**Pn**	**12 01 26.2**	**+1.2**
TNTI	**Ternate**	**7.74**	**347**	P	**Pn**	**12 01 25.5**	**+0.5**
98nm,0.9s,1μm							
LUWI	**Luwuk**	**8.55**	**312**	*e*Pn	**Pn**	**12 01 36.5**	**+1.0**
LUWI				*e*S	**S**	**12 03 07.9**	**-4.2**
LUWI	**Luwuk**	**8.55**	**312**	P	**Pn**	**12 01 38.3**	**+2.8**
149nm,0.7s,2μm							
BSSI	**Bau Bau, Buton**	**8.62**	**274**	P	**Pn**	**12 01 38.3**	**+2.0**
62nm,1.0s							
SRPI	**Serui, Papua**	**8.62**	**56**	P	**Pn**	**12 01 36.9**	**+0.5**
KNRA	**Kununurra**	**8.82**	**182**	P	**Pn**	**12 01 38.3**	**-0.6**
baz=8.9,SNR=320							
BAKI	**Biak**	**8.91**	**52**	P	**Pn**	**12 01 41.1**	**+0.9**
KMSI	**Cibinong**	**8.96**	**325**	P	**Pn**	**12 01 43.8**	**+3.0**
124nm,0.6s							
BKSI	**Bulukumba**	**9.08**	**279**	P	**Pn**	**12 01 44.1**	**+1.7**
28nm,0.9s,296nm							
BASI	**Baing, Sumba**	**9.12**	**248**	P	**Pn**	**12 01 44.5**	**+1.7**
174nm,1.0s							
BNSI	**Bone**	**9.30**	**284**	P	**Pn**	**12 01 46.7**	**+1.6**
APSI	**Ampana**	**9.49**	**308**	P	**Pn**	**12 01 49.3**	**+1.7**
97nm,1.0s							
KAPI	**Kappang**	**9.50**	**280**	P	**Pn**	**12 01 50.3**	**+2.6**
1.7nm,0.3s,baz=124,slow=6.7,SNR=6.6							
SPSI	**Sidrap Palu**	**9.74**	**286**	P	**Pn**	**12 01 52.7**	**+1.9**
27nm,0.6s							
TTSI	**Tana Toraja**	**10.01**	**292**	P	**Pn**	**12 01 56.8**	**+2.6**
59nm,0.9s							
WBSI	**Waikabubak, Su**	**10.05**	**253**	P	**Pn**	**12 01 56.6**	**+1.9**
76nm,0.7s,1μm							
MRSI	**Marisa**	**10.20**	**315**	P	**Pn**	**12 01 59.4**	**+2.8**
81nm,0.6s,857nm							
SGSI	**Sangihe**	**11.03**	**341**	P	**Pn**	**12 02 08.3**	**+1.0**
350nm,0.7s,6μm							
PLAI	**Plampang**	**11.43**	**259**	P	**Pn**	**12 02 12.6**	**+0.3**
MPSI	**Mapaga**	**11.63**	**307**	P	**P**	**12 02 17.8**	**-1.6**
24nm,1.0s							
FITZ	**Fitzroy Crossi**	**11.73**	**197**	P	**Pn**	**12 02 16.5**	**+0.5**
14nm,0.3s,baz=32,slow=10,SNR=163							
FITZ				S	**S**	**12 04 21.8**	**-3.8**
3.4nm,0.3s,baz=100,slow=7.8,SNR=5.6							
FITZ	**Fitzroy Crossi**	**11.73**	**197**	*e*Pn	**Pn**	**12 02 15.2**	**-0.8**
FITZ				*e*S	**S**	**12 04 21.7**	**-4.0**
FITZ	**Fitzroy Crossi**	**11.73**	**197**	P	**Pn**	**12 02 14.5**	**-1.5**
baz=12,SNR=455							
WRAB	**Tennant Creek**	**13.99**	**159**	*e*Pn	**Pn**	**12 02 43.0**	**-1.2**
WRAB				*e*S	**S**	**12 05 17.7**	**-1.4**
WRAB	**Tennant Creek**	**13.99**	**159**	*e*P	**Pn**	**12 02 43.0**	**-1.2**
WRAB				*e*S	**S**	**12 05 17.7**	**-1.4**
WR1	**Warramunga Arr**	**14.00**	**159**	*e*Pn	**Pn**	**12 02 43.0**	**-1.3**
WR1				*e*S	**S**	**12 05 14.2**	**-5.0**
WR1				*e*ScP	**ScP**	**12 10 59.8**	**-0.9**
WRA	**Warramunga Arr**	**14.00**	**159**	P	**Pn**	**12 02 43.0**	**-1.3**
26nm,0.3s,baz=338,slow=13,SNR=296							
WRA				S	**S**	**12 05 14.2**	**-5.0**
3.8nm,0.3s,baz=325,slow=23,SNR=6.8							
WRA				ScP	**ScP**	**12 10 59.8**	**-0.9**
1.8nm,0.3s,baz=326,slow=1.2,SNR=10							
WB2	**Warramunga Arr**	**14.00**	**159**	*e*Pn	**Pn**	**12 02 42.9**	**-1.4**
WB2				*e*S	**S**	**12 05 17.3**	**-2.0**
WC3	**Warramunga Arr**	**14.02**	**159**	*e*Pn	**Pn**	**12 02 42.6**	**-2.0**
WC3				*e*S	**S**	**12 05 19.1**	**-0.7**
PALU	**Palau**	**15.04**	**21**	P	**P**	**12 02 58.2**	**+1.1**
baz=15,SNR=14							
COEN	**Coen**	**15.52**	**118**	*e*P	**Pn**	**12 03 03.4**	**+0.5**
251nm,0.7s							
COEN				*e*S	**S**	**12 05 49.3**	**-5.0**
COEN	**Coen**	**15.52**	**118**	P	**Pn**	**12 03 03.8**	**+0.9**
baz=16,SNR=271							
QIS	**Mount Isa**	**17.02**	**144**	P	**Pn**	**12 03 20.5**	**-0.2**
baz=17,SNR=164							
PSAD1	**Pilbara Seismi**	**17.11**	**211**	*e*P	**Pn**	**12 03 21.3**	**-0.4**
42nm,0.8s							
PSAC2	**Pilbara Seismi**	**17.17**	**210**	*e*P	**Pn**	**12 03 21.8**	**-0.6**
38nm,0.6s							
PSAC2				*e*S	**S**	**12 06 27.7**	**-0.2**
PSAB2	**Pilbara Seismi**	**17.18**	**211**	*e*P	**Pn**	**12 03 22.3**	**-0.2**
48nm,0.8s							
PSAB2				*e*S	**S**	**12 06 26.1**	**-2.1**
PSAD2	**Pilbara Seismi**	**17.18**	**210**	*e*P	**Pn**	**12 03 22.6**	**0.0**
24nm,0.7s							
PSAD2				*e*S	**S**	**12 06 25.4**	**-2.9**
PSAC1	**Pilbara Seismi**	**17.19**	**211**	*e*P	**Pn**	**12 03 22.3**	**-0.4**
48nm,0.8s							
PSAC1				*e*S	**S**	**12 06 26.5**	**-1.8**
PSAA2	**

GUMO	Guam	25.59	38	eP	P	12 04 44.2	0.0
GUMO				pmax	pmax		
comp=Z,315nm,1.5s							
BLDU	Ballidu	26.40	205	P	P	12 04 52.0	+0.7
baz=26,SNR=6.0							
MYKOM	Kota Tinggi	26.64	288	eP	P	12 04 53.8	+0.1
comp=Z,20nm,0.7s							
MYKOM	Kota Tinggi	26.64	288	P	P	12 04 55.0	+1.3
BBOO	Buckleboo	26.66	167	eP	P	12 04 54.6	+1.0
comp=Z,32nm,0.6s							
BBOO	Buckleboo	26.66	167	P	P	12 04 54.2	+0.6
baz=27,SNR=15							
KLBR	Kellerberrin	26.85	202	P	P	12 04 56.3	+1.0
baz=27,SNR=9.4							
RMQ	Roma	27.06	139	P	P	12 04 58.7	+1.4
baz=27,SNR=12							
STKA	Stephens Creek	27.52	157	P	P	12 05 02.1	+0.8
comp=Z,20nm,0.5s,baz=331,slow=9.5,SNR=73							
STKA	Stephens Creek	27.52	157	eP	P	12 05 02.3	+1.0
comp=Z,4.0nm,0.6s							
STKA	Stephens Creek	27.52	157	P	P	12 05 02.0	+0.8
baz=28,SNR=58							
STKA	Stephens Creek	27.52	157	eP	P	12 05 02.3	+1.0
STKA				pmax	pmax		
comp=Z,4.0nm,0.6s							
MUN	Mundaring	27.80	204	P	P	12 05 04.6	+0.9
baz=28,SNR=4.9							
EIDS	Eidsvold	27.94	134	eP	P	12 05 03.8	-1.3
comp=Z,19nm,1.4s							
HTT	Hallett	28.00	162	P	P	12 05 06.7	+1.1
baz=28,SNR=17							
NWAO	Narrogin (SRO)	28.24	202	P	P	12 05 08.5	+0.8
comp=Z,7.6nm,0.4s,baz=46,slow=8.0,SNR=19							
NWAO	Narrogin (SRO)	28.24	202	eP	P	12 05 06.7	-1.0
comp=Z,27nm,1.3s							
NWAO				eP	P	12 05 08.5	+0.8
NWAO	Narrogin (SRO)	28.24	202	eP	P	12 05 06.7	-1.0
NWAO				pmax	pmax		
comp=Z,27nm,1.3s							
CMSA	Cobar Meteorol	29.07	150	P	P	12 05 16.3	+1.4
baz=29,SNR=52							
IPM	Ipoh	30.22	291	eP	P	12 05 25.6	+0.2
comp=Z,12nm,0.9s							
KULM	Kulim	30.87	292	eP	P	12 05 31.0	-0.1
comp=Z,32nm,1.5s							
KULM	Kulim	30.87	292	P	P	12 05 34.0	+2.9
YULB	Yu-li	30.98	346	eP	P	12 05 29.2	-2.7
comp=Z,6.0nm,0.8s							
TPUB	Ta-pu	31.06	345	eP	P	12 05 31.1	-1.5
comp=Z,25nm,0.8s							
SSLB	Suanglung	31.44	346	eP	P	12 05 34.0	-1.9
comp=Z,13nm,0.8s							
ARMA	Armidale	31.58	141	eP	P	12 05 38.4	+1.1
comp=Z,13nm,0.6s							
ARMA	Armidale	31.58	141	P	P	12 05 38.9	+1.7
baz=32,SNR=14							
YOJ	Yonaguni jima	31.65	349	eP	P	12 05 37.4	-0.3
comp=Z,76nm,0.8s							
YOJ	Yonaguni jima	31.65	349	eP	P	12 05 37.4	-0.3
YOJ				pmax	pmax		
comp=Z,76nm,0.8s							
NACB	Ninganchiao	31.66	347	eP	P	12 05 36.0	-1.8
comp=Z,18nm,0.8s							
QIZ	Qiongzhong	31.95	324	eP	P	12 05 40.6	+0.2
comp=Z,11nm,0.8s							
ARPS	Mount Arapiles	32.00	161	P	P	12 05 42.3	+1.7
baz=32,SNR=32							
YHNB	Yeheng	32.19	347	eP	P	12 05 41.5	-1.0
comp=Z,38nm,0.7s							
YNG	Young	32.63	150	P	P	12 05 48.2	+2.0
baz=33,SNR=18							
JOW	Kunigami	33.45	359	P	P	12 05 54.4	+1.0
comp=Z,6.0nm,0.7s,baz=173,slow=14,SNR=19							
JOW	Kunigami	33.45	359	eP	P	12 05 54.2	+0.9
comp=Z,40nm,0.7s							
CAN	Canberra	33.74	150	eP	P	12 05 58.0	+2.1
CAN	Canberra	33.74	150	eP	P	12 05 58.0	+2.1
CNB	Canberra Magne	33.92	150	P	P	12 05 59.6	+2.2
baz=34,SNR=23							
PANO	Nakornpanom	33.98	315	P	P	12 05 58.7	+0.7
comp=Z,1.2nm,0.9s							
TOO	Toolangi	34.04	156	eP	P	12 05 58.6	+0.2
comp=Z,22nm,0.9s							
TOO	Toolangi	34.04	156	P	P	12 06 01.0	+2.6
baz=34,SNR=11							
TOO	Toolangi	34.04	156	eP	P	12 05 58.6	+0.2
TOO				pmax	pmax		
comp=Z,22nm,0.9s							
LHMI	Lhok Sumawe	34.28	290	eP	P	12 06 02.5	+1.8
comp=Z,198nm,1.2s							
SKNT	Sakolnakorn	34.31	314	P	P	12 06 01.4	+0.5
comp=Z,59nm,0.8s							
CHAI	Chaiyaphum	35.10	310	P	P	12 06 08.1	+0.4
comp=Z,52µm,0.7s,comp=Z,427µm							
MILA	Mila	35.20	152	P	P	12 06 10.7	+2.3
baz=35,SNR=7.0							
NONG	Nongkai	35.62	314	P	P	12 06 12.3	+0.2
comp=Z,1.1nm,0.8s							
SLVN	Son La	37.36	319	eP	P	12 06 27.7	+1.0
comp=Z,18nm,0.8s							
SSE	Sheshan	38.45	349	eP	P	12 06 36.0	+0.4
comp=Z,46nm,0.9s							
LAMP	Lampang	38.48	311	P	P	12 06 37.2	+1.1
comp=Z,79µm,0.9s,comp=Z,877µm							
MOO	Moorlands	38.92	159	P	P	12 06 41.2	+1.7
baz=39,SNR=4.6							
CM31	Chiang Mai Arr	38.95	311	eP	P	12 06 41.2	+1.1
CM31				eScP	ScP	12 12 13.6	+0.3
CMAR	Chiang Mai Arr	38.95	311	P	P	12 06 41.1	+1.0
comp=Z,19nm,0.7s,baz=141,slow=7.5,SNR=95							
CMAR				ScP	ScP	12 12 13.6	+0.3
comp=Z,1.8nm,0.9s,baz=159,slow=3.7,SNR=8.9							
DZM	Mont Dzumac	39.04	117	P	P	12 06 40.3	-0.6
comp=Z,12nm,0.8s,baz=246,slow=21,SNR=6.2							
CMMT	Chiang Mai	39.17	311	P	P	12 06 42.5	+0.7
comp=Z,31nm,0.9s,comp=Z,287nm							
CHTO	Chiang Mai	39.17	311	eP	P	12 06 43.0	+1.1
comp=Z,45nm,0.8s							
CHTO	Chiang Mai	39.17	311	eP	P	12 06 43.0	+1.1
CHTO				pmax	pmax		
comp=Z,45nm,0.8s							
TAU	Tasmania Unive	39.37	159	eP	P	12 06 45.7	+2.6
comp=Z,29nm,1.1s							
TAU	Tasmania Unive	39.37	159	eP	P	12 06 45.7	+2.6
TAU				pmax	pmax		
comp=Z,29nm,1.1s							
GYA	Guiyang	39.61	327⇑	iP	P	12 06 45.3	-0.2
GYA				pP	pP	12 07 32.2	+1.3
GYA				sP	sP	12 07 57.8	+2.8
GYA				PP	PP	12 08 23.5	+1.9
GYA				PcP	PcP	12 08 49.0	+0.9
GYA				S	S	12 12 27.4	-4.5
GYA				pmax	pmax		
comp=Z,20nm,0.8s							
GYA				pmax	pmax		
comp=Z,110nm,5.0s							
JNU	Nakatsue	39.74	2	P	P	12 06 46.2	-0.2
comp=Z,22nm,0.7s,baz=215,slow=2.1,SNR=17							
JNU	Nakatsue	39.74	2	eP	P	12 06 46.2	-0.2
comp=Z,35nm,0.9s							
WHN	Wuhan	39.75	340	P	P	12 06 45.7	-0.8
NJ2	Nanjing	39.87	346⇑	iP	P	12 06 48.1	+0.7
NJ2				pmax	pmax		
comp=Z,42nm,0.8s							
KMI	Kunming	40.84	322	P	P	12 06 58.0	+2.3
KMI				pmax	pmax		
comp=Z,99nm,4.2s							
KMI				LR	LR		
comp=Z,140nm,10.2s							
KMI				LR	LR		
comp=Z,190nm,10.0s							
KMI				LR	LR		
comp=Z,82nm,11.1s							
ENH	Enshi	41.41	334	eP	P	12 06 59.9	-0.1
comp=Z,13nm,0.8s							
INU	Inuyama	42.59	10	eP	P	12 07 09.2	-0.2
TJN	Taejon	42.99	358	ceP	P	12 07 13.8	+1.2
MJAR	Matsushiro Arr	43.95	11	P	P	12 07 19.3	-1.1
comp=Z,39nm,0.8s,baz=193,slow=10.0,SNR=90							
MAJO	Matsushiro	43.96	11	eP	P	12 07 19.9	-0.5
comp=Z,50nm,0.8s							
MAJO	Matsushiro	43.96	11	c iP	P	12 07 19.1	-1.3
MAJO				pmax	pmax		
comp=Z,55nm,0.8s							
MAT	Matsushiro	43.96	11	P	P	12 07 19.2	-1.2
KS15	Wonju Array Si	44.04	359	eP	P	12 07 21.8	+0.8
KS15				ePcP	PcP	12 09 03.1	+0.8
KSRS	Korea Array	44.05	359	P	P	12 07 21.9	+0.8
comp=Z,13nm,0.6s,baz=176,slow=9.2,SNR=63							
KSRS				PcP	PcP	12 09 03.1	+0.8
comp=Z,1.7nm,0.6s,baz=185,slow=3.4,SNR=4.5							
TIA	Tai'an	44.26	346	P	P	12 07 22.5	-0.3
TIA				pmax	pmax		
comp=Z,14nm,0.8s							
CD2	Chengdu	44.69	328	eP	P	12 07 26.0	-0.3
CD2				pmax	pmax		
comp=Z,40nm,0.7s							
XAN	Xi'an	44.91	336	P	P	12 07 27.1	-0.9
XAN				pmax	pmax		
comp=Z,19nm,0.9s							
XAN	Xi'an	44.91	336	eP	P	12 07 27.1	-0.9
comp=Z,14nm,0.7s							
XAN	Xi'an	44.91	336	eP	P	12 07 27.1	-0.9
XAN				pmax	pmax		
comp=Z,14nm,0.7s							
WAKE	Wake Island	45.14	54	eP	P	12 07 29.4	-0.6
comp=Z,75nm,1.0s							
DL2	Dalian	46.01	352	P	P	12 07 36.8	+0.3
DL2				pmax	pmax		
comp=Z,42nm,0.8s							
BJT	Baijiatuau	48.11	347	eP	P	12 07 53.1	+0.5
comp=Z,52nm,0.6s							
BJT	Baijiatuau	48.11	347	eP	P	12 07 53.1	+0.5
BJT				pmax	pmax		
comp=Z,52nm,0.6s							
LZH	Lanzhou	48.84	333	⇓P	P	12 07 59.5	+1.0
LZH				pP	pP	12 08 48.6	+3.4
LZH				sP	sP	12 09 12.3	+3.0
LZH				pmax	pmax		
comp=Z,29nm,1.5s							
LZH				pmax	pmax		
comp=Z,87nm,4.9s							
HHC	Hu-ho-hao-te	50.10	343	eP	P	12 08 08.7	+0.8
HHC				pmax	pmax		
comp=Z,17nm,1.0s							
HHC				pmax	pmax		
comp=Z,180nm,4.9s							
ERM	Erimo	50.25	14	eP	P	12 08 09.5	+0.7
comp=Z,16nm,0.6s							
ERM	Erimo	50.25	14	ceP	P	12 08 09.4	+0.7
ERM				pmax	pmax		
comp=Z,51nm,2.0s							
CN2	Changchun	50.48	357	eP	P	12 08 09.7	-0.8
CN2				PcP	PcP	12 09 25.9	+0.7
CN2				eS	S	12 15 03.1	-3.9
CN2				pmax	pmax		
comp=Z,20nm,0.6s							
CN2				pmax	pmax		
comp=Z,200nm,5.0s							
DCZ	Deep Cove	50.64	146	eP	P	12 08 13.8	+2.1
comp=Z,20nm,1.1s							
USA0B	Ussuriysk Arra	50.84	3	eP	P	12 08 13.8	+0.7
USA0B	Ussuriysk Arra	50.84	3	eP	P	12 08 13.8	+0.7
USRK	Ussuriysk Ar.	50.84	3	P	P	12 08 13.7	+0.5
comp=Z,24nm,0.6s,baz=191,slow=7.3,SNR=61							
FOZ	Fox Glacier	51.06	142	eP	P	12 08 12.5	-2.3
comp=Z,19nm,1.0s							
MLZ	Mavora Lakes	51.12	145	eP	P	12 08 15.0	-0.4
MDJ	Mudanjiang	51.19	0	P	P	12 08 16.5	+0.7
MDJ				S	S	12 15 18.6	+1.9
MDJ				pmax	pmax		
comp=Z,33nm,0.7s							
MDJ	Mudanjiang	51.19	0	eP	P	12 08 16.3	+0.5
comp=Z,21nm,0.8s							
WKZ	Wanaka	51.32	144	eP	P	12 08 18.4	+1.6
comp=Z,6.8nm,1.1s							
WHZ	Wether Hill Ro	51.34	146	eP	P	12 08 18.4	+1.4
comp=Z,23nm,0.6s							
LSA	Lhasa	51.47	317	eP	P	12 08 18.9	+0.2
comp=Z,17nm,0.6s							
LSA	Lhasa	51.47	317	eP	P	12 08 18.9	+0.2
LSA				pmax	pmax		
comp=Z,17nm,0.6s							
LBZ	Lake Benmore	51.75	143	eP	P	12 08 21.5	+1.5
comp=Z,27nm,1.3s							
RPZ	Rata Peaks	51.91	142	P	P	12 08 23.2	+2.0
comp=Z,20nm,0.7s,baz=302,slow=2.3,SNR=20							
RPZ	Rata Peaks	51.91	142	eP	P	12 08 22.4	+1.1
comp=Z,54nm,1.5s							
TEY	Ternei	52.04	7⇑	iP	P	12 08 22.6	+0.6
TEY				pmax	pmax		
comp=N,40nm,0.9s							
TEY				pmax	pmax		
comp=Z,70nm,0.8s							
TEY				pmax	pmax		
comp=E,20nm,0.7s							
THZ	Tophouse	52.07	139	eP	P	12 08 23.8	+1.2
comp=E,9.1nm,0.8s							
ASAJ	Asahikawa	52.13	12	P	P	12 08 23.3	+0.6
comp=E,27nm,0.5s,baz=227,slow=9.3,SNR=66							
OXZ	Oxford	52.31	141	eP	P	12 08 25.6	+1.4
comp=E,7.8nm,0.6s							
ODZ	Otahua Downs	52.39	144	eP	P	12 08 24.8	+0.1
CRLZ	Canterbury Las	52.80	141	eP	P	12 08 27.5	-0.2
comp=E,90nm,1.5s							
KHZ	Kahutara	52.80	139	eP	P	12 08 28.5	+0.7
comp=E,18nm,1.1s							
MQZ	McQueen's Vall	52.89	141	eP	P	12 08 28.8	+0.4
comp=E,2.8nm,0.8s							
RAMN	Ramite	53.13	311	eP	P	12 08 31.3	+0.6
comp=E,148nm,0.6s							
BKZ	Black Stump Fm	53.34	135	eP	P	12 08 31.8	0.0
comp=E,33nm,1.3s							
GTA	Gaotai	53.40	332	⇑P	P	12 08 32.9	+0.6
GTA				pP	pP	12 09 18.8	-1.1
GTA				ScP	ScP	12 13 13.6	+0.6
GTA				pmax	pmax		
comp=E,18nm,0.9s							
GTA				pmax	pmax		
comp=E,44nm,4.0s							
URZ	Urewera	53.42	133	P	P	12 08 32.6	+0.3
comp=E,7.5nm,0.9s,baz=243,slow=6.8,SNR=4.6							
URZ	Urewera	53.42	133	eP	P	12 08 33.2	+0.8
comp=E,51nm,1.5s							
BFZ	Birch Farm	53.81	136	eP	P	12 08 36.9	+1.7
comp=E,92nm,1.3s							
JIRN	Jiri	53.82	312	eP	P	12 08 36.2	+0.4
comp=E,62nm,0.5s							
GUN	Gumba	54.18	312	eP	P	12 08 38.8	+0.4
comp=E,84nm,0.6s							
PKI	Pulchoki	54.35	311	eP	P	12 08 39.5	-0.1
PKIN	Phulchoki	54.37	311	eP	P	12 08 39.6	-0.1
comp=E,34nm,0.6s							
KKN	Kakani	54.57	311	eP	P	12 08 41.2	+0.2
comp=E,37nm,0.6s							
DMN	Daman	54.60	311	eP	P	12 08 41.6	+0.3
comp=E,38nm,0.7s							
YSS	Yuzh-Sakhalins	54.88	11	eP	P	12 08 43.4	+0.8
comp=E,30nm,0.6s							
YSS	Yuzh-Sakhalins	54.88	11	c iP	P	12 08 43.0	+0.4
GKN	Gorkha	55.16	311	eP	P	12 08 45.5	+0.3
comp=E,92nm,0.2s							
KOLN	Koldanda	55.82	310	eP	P	12 08 50.4	+0.4
KLR	Kul'dur	55.85	2	P	P	12 08 50.1	+0.6
comp=E,16nm,0.8s,baz=200,slow=4.5,SNR=51							
KLR	Kul'dur	55.85	2	c iP	P	12 08 49.8	+0.3
KLR				pmax	pmax		
comp=Z,31nm,1.0s							
DANN	Dangsing	56.00	311	eP	P	12 08 51.3	-0.1
comp=Z,48nm,0.7s							
PYUN	Piuthan	56.45	310	eP	P	12 08 54.8	+0.3
comp=Z,152nm,0.8s							
ULN	Ulaanbaatar	57.82	343	eP	P	12 09 04.6	+1.0
comp=Z,14nm,0.7s							
ULN	Ulaanbaatar	57.82	343	eP	P	12 09 04.6	+1.0
ULN				pmax	pmax		
comp=Z,14nm,0.7s							
SONA0	Songino Array	57.99	342	eP	P	12 09 05.7	+0.9
SONA0				ePcP	PcP	12 09 54.8	+0.6
SONM	Songino Array	57.99	342	P	P	12 09 05.7	+0.9
comp=Z,7.9nm,0.6s,baz=154,slow=6.2,SNR=22							
SONM				PcP	PcP	12 09 54.8	+0.6
comp=Z,3.5nm,0.6s,baz=173,slow=4.8,SNR=5.4							
TYV	Tymovskoe	58.62	10	eP	P	12 09 10.2	+1.4
TYV				pmax	pmax		
comp=Z,19nm,1.3s							
ZEA	Zeya	60.34	359	eP	P	12 09 20.8	+0.3
ZEA				pmax	pmax		
comp=N,36nm,0.8s							
ZEA				pmax	pmax		
comp=Z,51nm,0.8s							
NKL	Nikolayevsk	60.53	8	i P	P	12 09 23.0	+1.2
NKL				pmax	pmax		
comp=N,36nm,0.9s							
NKL				pmax	pmax		
comp=Z,100nm,0.9s							
CASY	Casey	60.76	189	eP	P	12 09 23.2	0.0
comp=Z,26nm,1.5s							
ZAK	Zakamensk	61.21	341	eP	P	12 09 26.6	0.0
ZAK				e		12 10 04.4	
ZAK				pmax	pmax		
comp=Z,6.0nm,1.1s							
ZAK				pmax	pmax		
comp=Z,5.0nm,0.9s							
SKR	Severo-Kuril's	61.83	19	ceP	P	12 09 29.5	-1.0
TLY	Talaya	62.23	342	eP	P	12 09 33.9	+0.6
comp=Z,10nm,0.5s							
TLY	Talaya	62.23	342	c iP	P	12 09 34.3	+1.0
WMQ	Urumqi	62.77	327	P	P	12 09 38.3	+1.2
WMQ				sP	sP	12 10 51.3	+1.7
WMQ				pmax	pmax		
comp=Z,39nm,0.9s							
WMQ				pmax	pmax		
comp=Z,95nm,4.9s							
MOY	Mondy	63.05	341	eP	P	12 09 40.3	+1.5
MOY				pmax	pmax		
comp=Z,29nm,1.8s							
PETK	Petropavlovsk-	64.42	19	P	P	12 09 48.5	+1.0
comp=Z,30nm,0.6s,baz=172,slow=3.9,SNR=84							
PETK				PcP	PcP	12 10 19.9	0.0
comp=Z,3.8nm,0.6s,baz=219,slow=2.3,SNR=4.0							
PEA1	Petropavlovsk-	64.42	19	eP	P	12 09 48.5	+0.9
PEA1				ePcP	PcP	12 10 19.9	0.0
PET	Petropavlovsk	64.65	19	eP	P	12 09 49.6	+0.6
comp=Z,38nm,1.3s							
PET	Petropavlovsk	64.65	19	eP	P	12 09 49.6	+0.6
PET				pmax	pmax		
comp=Z,38nm,1.3s							
BOD	Bodaibo	65.58	351	eP	P	12 09 55.2	+0.3
BOD				pmax	pmax		
comp=Z,25nm,1.0s							
NIL	Nilore	66.44	311	eP	P	12 10 01.7	+0.7
comp=Z,13nm,0.6s							
NIL	Nilore	66.44	311	eP	P	12 10 01.7	+0.7
NIL				pmax	pmax		
comp=Z,13nm,0.6s							
DGZ	Jazzator, Alta	66.93	332	c iP	P	12 10 04.6	+0.7
DGZ				pmax	pmax		
comp=Z,9.0nm,0.6s							
PDGK	Podgornoye	67.13	323	P	P	12 10 05.6	+0.4
PDGK				pmax	pmax		
comp=Z,5.0nm,0.5s							
KSH	Kashi	67.30	318	P	P	12 10 07.6	+1.2
KSH				sP	sP	12 11 22.3	+2.9
KSH				PP	PP	12 12 41.6	+3.7
KSH				S	S	12 18 38.7	-5.0
KSH				SS	SS	12 23 07.5	-0.7
KSH				pmax	pmax		
comp=Z,19nm,0.6s							
KSH				pmax	pmax		
comp=Z,190nm,5.4s							
MK31	Makanchi Array	67.60	327	eP	P	12 10 08.5	+0.5
MK31	Makanchi Array	67.60	327	eP	P	12 10 08.5	+0.5
MK32	Makanchi Array	67.60	327	eP	P	12 10 08.7	+0.8
MK32				ePcP	PcP	12 10 33.9	+0.5
MKAR	Makanchi Array	67.60	327	P	P	12 10 08.7	+0.8
comp=Z,18nm,0.5s,baz=126,slow=7.7,SNR=174							
MKAR				PcP	PcP	12 10 33.9	+0.5
comp=Z,7.0nm,0.6s,baz=122,slow=4.0,SNR=7.2							
MKAR	Makanchi Array	67.60	327	ceP	P	12 10 08.6	+0.6
MKAR				pmax	pmax		
comp=Z,19nm,0.5s							
MAKZ	Makanchi	67.78	327	eP	P	12 10 09.3	+0.2
comp=Z,14nm,0.6s							
MAKZ	Makanchi	67.78	327	eP	P	12 10 09.3	+0.2
MAKZ				pmax	pmax		
comp=Z,14nm,0.6s							
MA2	Magadan	68.38	12	P	P	12 10 13.3	+0.8
comp=Z,28nm,0.8s,baz=186,slow=4.9,SNR=35							
MA2	Magadan	68.38	12	eP	P	12 10 12.9	+0.4
comp=Z,41nm,0.9s							
MA2	Magadan	68.38	12	ceP	P	12 10 13.6	+1.1
MA2				pmax	pmax		
comp=Z,46nm,0.9s							
YAK	Yakutsk	68.64	0	eP	P	12 10 14.4	+0.4
comp=Z,102nm,0.7s							
YAK	Yakutsk	68.64	0	eP	P	12 10 14.4	+0.4
YAK				pmax	pmax		
comp=Z,102nm,0.7s							
BOOM	Boomskoye usch	68.85	321	eP	P	12 10 16.7	+0.7
comp=Z,12nm,1.1s							
BOOM	Boomskoye usch	68.85	321	eP	P	12 10 16.7	+0.7
BOOM				pmax	pmax		
comp=Z,12nm,1.1s							
KZA	Kyzart	69.08	320	P	P	12 10 19.3	+1.6
SNR=6.0							
TKM2	Tokmak 2	69.29	321	P	P	12 10 19.8	+1.0
SNR=14							
UCH	Uchtor	69.63	320	P	P	12 10 22.5	+1.4
SNR=8.2							
AAK	Ala-Archa	69.84	320	P	P	12 10 23.0	+1.0
comp=Z,8.1nm,0.8s,baz=113,slow=6.4,SNR=9.5							
AAK	Ala-Archa	69.84	320	eP	P	12 10 23.5	+1.4
comp=Z,8.0nm,0.8s							
AML	Almayashu	70.11	319	P	P	12 10 25.6	+1.7
SNR=8.9							
USP	Ospenovka	70.16	321	P	P	12 10 24.9	+1.0
SNR=12							
ARSB	Arslanbob	70.18	318	eP	P	12 10 24.3	+0.2
EKS2	Erkin-Say	70.31	320	P	P	12 10 26.5	+1.6
SNR=6.5							
SMY	Shemya	70.50	27	eP	P	12 10 26.2	+0.6
comp=Z,52nm,1.0s							
SMY	Shemya	70.50	27	eP	P	12 10 26.2	+0.6
SMY				pmax	pmax		
comp=Z,52nm,1.0s							
GAR	Garm	70.93	315	eP	P	12 10 28.3	-0.3
comp=Z,23nm,0.8s							
GAR	Garm	70.93	315	eP	P	12 10 28.3	-0.3
GAR				pmax	pmax		
comp=Z,23nm,0.8s							
ZAA0	Zalesovo Array	71.04	334	eP	P	12 10 28.7	-0.1
ZALV	Zalesovo Beam	71.04	334	P	P	12 10 28.6	-0.2
comp=Z,12nm,0.5s,baz=130,slow=5.4,SNR=42							
ZAA1	Zalesovo Array	71.04	334	eP	P	12 10 28.6	-0.2
SEY	Seymchan	71.78	11	P	P	12 10 34.2	+1.2
comp=Z,69nm,0.6s,baz=197,slow=4.8,SNR=174							
SEY	Seymchan	71.78	11	ceP	P	12 10 34.1	+1.1
KURBB	Kurchatov Arra	71.90	329	P	P	12 10 34.5	+0.5
comp=Z,18nm,0.5s,baz=126,slow=4.8,SNR=53							
KURK	Kurchatov	71.91	329	eP	P	12 10 34.7	+0.6
comp=Z,16nm,0.6s							
KURK	Kurchatov	71.91	329	eP	P	12 10 34.7	+0.6
KURK				pmax	pmax		
comp=Z,16nm,0.6s							
NVS	Novosibirsk	72.32	334	⇓i P	P	12 10 36.7	+0.3
NVS				pmax	pmax		
comp=Z,6.0nm,0.4s							
NVS				pmax	pmax		
comp=N,4.0nm,0.5s							
NVS				pmax	pmax		
comp=E,6.0nm,0.5s							
KK31	Karatay Array	72.63	319	eP	P	12 10 39.0	+0.4
KK31	Karatay Array	72.63	319	eP	P	12 10 38.7	+0.1
KK31				pmax	pmax		
comp=Z,3.0nm,0.6s							
KKAR	Karatay Array	72.63	319	eP	P	12 10 38.9	+0.3
comp=Z,5.8nm,0.8s							
VNDA	Vanda	72.74	173	P	P	12 10 39.3	+0.7

comp=Z,1.9nm,1.3s
MAW Mawson 74.81 201 *e*P **P 12 10 50.6 -0.1**
MAW pmax pmax
comp=Z,2.0nm,1.3s
WSAR Wadi Sarin 75.01 296 P **P 12 10 53.8 +1.0**
comp=Z,5.4nm,0.5s,baz=178,slow=5.8,SNR=8.6
ATKA Atka Island 75.94 32 *e*P **P 12 10 57.7 +0.4**
comp=Z,27nm,0.9s
KIP Kipapa 76.70 66 *e*P **P 12 11 00.6 -1.7**
comp=Z,80nm,1.2s
KIP Kipapa 76.70 66 *e*P **P 12 11 00.6 -1.7**
KIP pmax pmax
comp=Z,80nm,1.2s
BVAR Borovoye Array 77.45 328 P **P 12 11 06.2 +0.3**
comp=Z,5.2nm,0.6s,baz=138,slow=6.9,SNR=32
BRVK Borovoye 77.52 328 *e*P **P 12 11 05.6 -0.6**
comp=Z,7.7nm,0.8s
BRVK Borovoye 77.52 328 *ce*P **P 12 11 06.7 +0.5**
BRVK pmax pmax
comp=Z,21nm,1.7s
UOSS Minazif 77.57 297 *e*P **P 12 11 07.0 -0.2**
comp=Z,13nm,1.3s
TIXI Tiksi 78.30 360 *e*P **P 12 11 10.2 +0.1**
comp=Z,35nm,0.5s
TIXI Tiksi 78.30 360 *e*P **P 12 11 10.2 +0.1**
TIXI pmax pmax
comp=Z,35nm,0.5s
BILL Biiibino 79.13 13 *i*P **P 12 11 15.8 +1.1**
BILL pmax pmax
comp=Z,6.0nm,1.4s
NIKH Nikolski High 79.16 33 *e*P **P 12 11 15.7 +0.5**
comp=Z,36nm,1.0s
SPIA Saint Paul Isl 80.41 29 *e*P **P 12 11 23.2 +1.4**
comp=Z,296nm,1.5s
UNV Unalaska Valle 80.81 33 *e*P **P 12 11 24.5 +0.6**
comp=Z,15nm,0.8s
NRIK Noril'sk 81.17 346 P **P 12 11 26.4 +0.9**
comp=Z,15nm,0.4s,baz=135,slow=5.9,SNR=30
AKUT Akutan 81.32 33 *e*P **P 12 11 27.2 +0.6**
comp=Z,31nm,1.0s
AB31 Akbulak array 81.83 322 *i*P **P 12 11 29.3 -0.1**
AB31 pmax pmax
comp=Z,12nm,0.8s
ABKAR Akbulak array 81.83 322 *e*P **P 12 11 29.9 +0.4**
comp=Z,13nm,0.8s
QSPA South Pole Qui 83.17 180 *e*P **P 12 11 36.2 -0.1**
comp=Z,5.6nm,1.2s
AKTO Aktyubinsk 83.40 322 P **P 12 11 37.1 -0.4**
AKTO pmax pmax
comp=Z,6.0nm,0.7s
SYO Syowa Base 83.53 201⇑ *e*P **P 12 11 36.8 -1.0**
SYO Syowa Base 83.53 201⇓ *e*PcP **PcP 12 11 40.8 -0.8**
SVE Sverdlovsk 84.16 329 *e*P **P 12 11 41.7 +0.5**
SVE pmax pmax
comp=Z,41nm,1.0s
SDPT Sand Point 84.62 33 *e*P **P 12 11 43.8 +0.3**
comp=Z,47nm,0.8s
ARU Arti 85.09 328 *e*P **P 12 11 45.9 0.0**
comp=Z,21nm,0.7s
ARU Arti 85.09 328 *d i*P **P 12 11 45.8 -0.1**
ARU S **SKSac 12 21 48.6 -0.5**
ARU pmax pmax
comp=Z,22nm,0.7s
CHGN Chignik 86.04 32 *e*P **P 12 11 50.9 +0.5**
comp=Z,100nm,0.9s
KDAK Kodiak Island 89.51 32 *ce*P **P 12 12 08.8 +1.9**
CAST Castle Rocks 91.05 26 *e*P **P 12 12 13.4 -0.6**
comp=Z,7.7nm,1.4s
ZEI Tsey 91.09 313 *e*P **P 12 12 15.0 0.0**
ZEI pmax pmax
comp=Z,8.0nm,1.0s
BPAW Bear Paw Mtn. 91.67 26 *e*P **P 12 12 16.9 0.0**
comp=Z,5.5nm,1.2s
KMBO Kilima Mbogo 91.74 269 *i*P **P 12 12 15.3 -3.4**
KMBO pmax pmax
comp=Z,1.0nm,0.3s
KIV Kislovodsk 92.12 314 *e*P **P 12 12 19.3 -0.3**
KIV pmax pmax
comp=Z,15nm,0.9s
SML Sawmill 92.43 28 *e*P **P 12 12 21.6 +1.1**
comp=Z,7.7nm,0.8s
RND Reindeer 92.47 26 *e*P **P 12 12 20.1 -0.6**
comp=Z,17nm,0.7s
RND Reindeer 92.47 26 *e*P **P 12 12 20.1 -0.6**
RND pmax pmax
comp=Z,17nm,0.7s
MCK McKinley 92.49 26 *e*P **P 12 12 20.1 -0.6**
comp=Z,14nm,1.2s
MCK McKinley 92.49 26 *e*P **P 12 12 20.1 -0.6**
MCK pmax pmax
comp=Z,14nm,1.2s
COLD Coldfoot 92.62 23 *e*P **P 12 12 21.8 +0.5**
comp=Z,6.0nm,1.3s
PRGR Permogore 92.86 332 *e*P **P 12 12 20.0 -2.4**
PRGR pmax pmax
comp=Z,14nm,0.9s
SCM Sheep Creek Mo 92.90 28 *e*P **P 12 12 22.9 +0.2**
comp=Z,12nm,1.0s
SCM Sheep Creek Mo 92.90 28 *e*P **P 12 12 22.9 +0.2**
SCM pmax pmax
comp=Z,12nm,1.0s
WRH Wood River Hil 92.98 25 *e*P **P 12 12 22.4 -0.6**
comp=Z,9.3nm,0.9s
DHY Denali Highway 93.08 27 *e*P **P 12 12 23.5 -0.1**
comp=Z,9.5nm,0.8s
CCB Clear Creek Bu 93.13 25 *e*P **P 12 12 22.4 -1.2**
comp=Z,9.8nm,0.8s
HDA Harding Lake 93.46 26 *e*P **P 12 12 22.8 -2.4**
comp=Z,6.3nm,0.8s
ILAR Eielson Array 93.54 25 P **P 12 12 23.8 -1.7**
comp=Z,2.5nm,0.8s,baz=246,slow=4.5,SNR=28
ILAR PP **PP 12 16 08.4 -4.9**
comp=Z,0.5nm,0.8s,baz=234,slow=6.3,SNR=4.1
ILB Eielson Array 93.54 25 *e*P **P 12 12 24.2 -1.3**
ILB *e*PP **PP 12 16 08.4 -4.9**
DOT Dot Lake 94.63 27 *e*P **P 12 12 30.6 +0.1**
comp=Z,6.5nm,0.8s
MENT Mentasta 94.71 27 *e*P **P 12 12 31.1 +0.1**
comp=Z,3.7nm,0.8s
BALM Baldy 95.19 29 *e*P **P 12 12 33.8 +0.5**
comp=Z,5.8nm,1.1s
BALM Baldy 95.19 29 *e*P **P 12 12 33.8 +0.5**
BALM pmax pmax
comp=Z,6.0nm,1.1s
EGAK Eagle 95.98 26 *e*P **P 12 12 36.8 +0.2**
comp=Z,3.6nm,0.9s
BCPM Bancas Point 96.46 30 *e*P **P 12 12 38.4 -0.6**
comp=Z,9.7nm,0.7s
OBN Obninsk 97.00 325 *i*P **P 12 12 39.3 -2.1**
OBN *i* 12 16 43.3
OBN pmax pmax
comp=Z,8.0nm,0.9s
ARCES ARCESS Array B 101.10 340 P **Pdif 12 12 58.7 -0.8**
comp=Z,10.0nm,0.4s,baz=78,slow=6.6,SNR=26
ARE0 ARCESS Array S 101.10 340 *e*Pdif **Pdif 12 12 58.9 -0.6**
SPA0 Spitsbergen Ar 101.22 349 *e*Pdif **Pdif 12 12 59.9 0.0**
HAMF Hammerfest 101.49 341 *e*Pdif **Pdif 12 13 00.8 -0.4**
KTK1 Kautokeino 102.00 339 *e*Pdif **Pdif 12 13 01.6 -1.8**
FIA0 FINESS Array S 102.19 331 *e*Pdif **Pdif 12 13 02.4 -2.0**
FIA0 *e*PP **PKiKP 12 17 25.6 +0.3**
FIA0 FINESS Array S 102.19 331 *e*P **Pdif 12 13 02.4 -2.0**
FIA0 *e* 12 17 25.6
FINES FINESS Array B 102.19 331 Pdiff **Pdif 12 13 02.4 -2.0**
comp=Z,0.7nm,0.5s,baz=31,slow=11,SNR=4.5
FINES PKiKP **PKiKP 12 17 25.6 +0.3**
comp=Z,0.6nm,0.5s,baz=14,slow=2.4,SNR=4.1
YKA Yellowknife Ar 107.96 26 Pdiff **Pdif 12 13 29.5 -0.5**
comp=Z,0.5nm,0.8s,baz=304,slow=4.3,SNR=3.8
YKA PKiKP **PKiKP 12 17 35.9 0.0**
comp=Z,0.7nm,0.6s,baz=296,slow=1.9,SNR=5.1
YKB5 Yellowknife Ar 107.96 26 *e*Pdif **Pdif 12 13 29.5 -0.5**
YKB5 *e*PKiKP **PKiKP 12 17 35.9 0.0**
NB2 NORSAR Subarra 109.22 333 P **Pdif 12 13 35.1 -0.7**
comp=Z,0.6nm,0.5s,baz=68,slow=4.4
NB2 NORSAR Subarra 109.22 333 P **Pdif 12 13 35.1 -0.7**
baz=68,slow=4.4
NB200 NORSAR Array S 109.22 333 *e*Pdif **Pdif 12 13 34.9 -0.9**
NOA NORSAR Array B 109.22 333 Pdiff **Pdif 12 13 34.9 -0.9**
comp=Z,0.4nm,0.6s,baz=67,slow=4.6,SNR=4.2
GERES GERESS Array B 111.73 320 PKiKP **PKiKP 12 17 43.7 +0.1**
comp=Z,0.9nm,0.4s,baz=37,slow=0.7,SNR=9.0
NV01 Mina Array Sit 111.85 51 *e*PKiKP **PKiKP 12 17 45.4 +1.0**
NVAR Mina Array Bea 111.85 51 PKiKP **PKiKP 12 17 45.4 +1.0**
comp=Z,0.3nm,0.6s,baz=220,slow=2.1,SNR=3.4
FXWY Fox Creek 116.09 45 *e*PKPdf **PKiKP 12 17 53.2 +0.8**
REDW Red Top Meadow 116.29 45 *e*PKPdf **PKiKP 12 17 54.0 +1.2**
LOHW Long Hollow 116.39 44 *e*PKPdf **PKPdf 12 17 52.6 -0.3**
PD31 Pinedale Array 117.37 45 *e*PKPdf **PKiKP 12 17 55.3 +0.5**
PDAR Pinedale Array 117.37 45 PKP **PKiKP 12 17 55.3 +0.5**
comp=Z,1.0nm,0.7s,baz=332,slow=1.2,SNR=9.6
PV14 Lion Creek, Pa 118.99 50 *e*PKPdf **PKiKP 12 17 58.4 +0.3**
O20A White River Ci 119.08 48 *e*PKPdf **PKPdf 12 17 58.0 -0.2**
PV11 David Mesa, Pa 119.12 50 *e*PKPdf **PKiKP 12 17 59.4 +1.1**
PV03 Paradox Valley 119.15 50 *e*PKPdf **PKiKP 12 17 59.5 +1.1**
PV01 Paradox Valley 119.39 50 *e*PKPdf **PKiKP 12 18 00.1 +1.2**
RSSD Black Hills 120.69 42 *e*PKPdf **PKiKP 12 18 01.3 0.0**
RSSD Black Hills 120.69 42 *e*PKIKP **PKiKP 12 18 01.3 0.0**
S22A 4UR Ranch, Cre 120.82 50 *e*PKPdf **PKiKP 12 18 02.7 +0.8**
SDCO Great Sand Dun 121.83 50 *e*PKPdf **PKPdf 12 18 03.0 -0.6**
ANMO Albuquerque 121.88 53 *c i*PKIKP **PKiKP 12 18 04.8 +0.9**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
T25A Trinidad 122.84 50 *e*PKPdf **PKPdf 12 18 04.3 -1.2**
MNTX Cornudas Mount 123.57 56 *e*PKPdf **PKiKP 12 18 08.0 +1.0**
LTX Lajitas 125.57 59 *e*PKPdf **PKiKP 12 18 11.8 +0.6**
LTX Lajitas 125.57 59 *e*PKIKP **PKiKP 12 18 11.8 +0.6**
TXAR Lajitas Array 125.57 59 PKP **PKiKP 12 18 11.8 +0.6**
comp=Z,0.7nm,0.5s,baz=178,slow=3.1,SNR=14
ESDC Sonseca Array 126.77 315 PKP **PKiKP 12 18 13.5 +0.3**
comp=Z,0.6nm,0.8s,baz=59,slow=5.7,SNR=4.7
TORD Torodi Ar. Bea 127.93 281 PKP **PKPdf 12 18 15.8 +0.3**
comp=Z,2.0nm,0.7s,baz=64,slow=1.5,SNR=13
TORD PKKP **PKKPdf 12 28 28.9 +2.7**
comp=Z,0.2nm,0.3s,baz=130,slow=10,SNR=4.7
TOA1 Torodi Ar. Sit 127.93 281 *e*PKPdf **PKPdf 12 18 15.8 +0.3**
TOA1 *e*Sdif **PKKPdf 12 28 28.9 +2.7**
WMOK Wichita Mounta 127.95 51 *e*PKPdf **PKiKP 12 18 16.3 +0.6**
WMOK Wichita Mounta 127.95 51 *e*PKIKP **PKiKP 12 18 16.3 +0.6**
JCT Junction City 128.50 56 *e*PKPdf **PKPdf 12 18 16.4 +0.1**
JCT Junction City 128.50 56 *e*PKIKP **PKPdf 12 18 16.4 +0.1**
PLCA Paso Flores 129.34 161 PKP **PKiKP 12 18 18.1 -0.4**
comp=Z,1.0nm,0.7s,baz=225,slow=15,SNR=3.1
PMTG Montargil 129.99 317 *i*LQ LQ 12 21 20.6
PVAO Vaqueiros 130.41 314 *i*LQ LQ 12 21 22.4
PCVE Castro Verde 130.53 315 *i*LQ LQ 12 21 22.5
PBDV Barranco-do-Ve 130.63 314 *i*LQ LQ 12 21 23.9
PNCL Nicolau / Gran 130.65 316 *i*LQ LQ 12 21 23.4
DBIC Dimbokro 134.32 273 PKP **PKiKP 12 18 29.2 +0.2**
comp=Z,2.8nm,0.5s,baz=97,slow=4.1,SNR=4.0
DBIC Dimbokro 134.32 273 *e*PKPdf **PKPdf 12 18 28.0 +0.3**
JSC Jenkinsville 140.83 42 *e*PKPdf **PKPdf 12 18 39.9 +0.8**
JSC Jenkinsville 140.83 42 *e*PKIKP **PKPdf 12 18 39.9 +0.8**
GO02 Mina Guanaco 143.36 151 *e*PKPdf **PKPdf 12 18 43.8 -0.6**
LVC Limon Verde 145.84 149 PKPbc **PKPab 12 18 50.2 -0.1**
comp=Z,1.8nm,0.4s,baz=248,slow=23,SNR=8.4
CPUP Villa Florida 146.47 169 PKPbc **PKPab 12 18 51.9 -0.3**
comp=Z,2.4nm,0.7s,baz=137,slow=1.3,SNR=7.3
LPAZ La Paz 151.39 143 PKPbc **PKiKP 12 19 04.9 +0.1**
comp=Z,0.5nm,0.4s,baz=226,slow=8.9,SNR=3.6
LPAZ PKPab **PKPab 12 19 15.7 +2.5**
comp=Z,1.0nm,0.6s,baz=174,slow=4.2,SNR=4.7
LPAZ La Paz 151.39 143 *e*PKPbc **PKiKP 12 19 04.6 -0.2**
LPAZ *e*PKPab **PKPab 12 19 12.8 -0.4**
LPAZ La Paz 151.39 143 *e*PKIKP **PKiKP 12 19 04.6 -0.2**
LPAZ *e* 12 19 12.8
SIV San Ignacio 155.19 156 PKPab **PKPab 12 19 29.4 +0.8**
comp=Z,1.0nm,0.6s,baz=218,slow=5.7,SNR=5.4

MAN 11 12:03:26.6, 11°.34N×125°.01E, h29km, mb4.1, ML2.9, MS2.6, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.49**	**58**	*e*P	Pn	12 03 38.1	+0.4
BESP				*e*S	Sn	12 03 46.7	+1.4
CNP	**Catarman**	**1.22**	**344**	*e*P	Pn	12 03 46.6	-1.0
CNP				*e*S	Sb	12 04 04.0	-0.3

*NEIC **11** 12:11:01.5±2.6, 9°.78S×107°.19E, h10km, mb4.4/23, Error ellipse: s-maj=10.0km s-min=6.4km az=318.0*
*DJA **11** 12:11:01.7±1.2, 10°.S±12°×10°.7E±°, h10km, M5.2/9, mb5.2/4, mB5.3/3, MLv5.2/9, Mw(mB)4.7/3*
*IDC **11** 12:11:01.5±0.8, 9.72S×107°.13E, h0km, mb4.2/15, mb1 4.3/18, mb1mx4.2/46, mbtmp4.2/18, ML4.3/3, MS3.2/9, Ms1 3.2/9, ms1mx2.9/31, Error ellipse: s-maj=23.3km s-min=13.8km az=52.0*
*ISCJB **11** 12:11:02.2±0.3, 9°.76S±0°.03×107°.20E±0°.03, h22km, mb4.5/35, Error ellipse: s-maj=4.9km s-min=4.0km az=21.6*

ISC 11 12:11:03.7±0.4, **9°.74S**±0°.04×**107°.16E**±0°.04, **h22**km, **n110**, σ1°**99**/110, **mb4.3**/35, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.66**	**243**	*e*Pn	**Pn**	**12 11 31.5**	**0.0**
XMIS				*e*Sn	**Sn**	**12 11 49.8**	**-2.4**
CISI	**Cisompet, Garu**	**2.26**	**17**	*e*Pn	**Pn**	**12 11 39.0**	**-0.9**
CISI				*e*Sn	**Sn**	**12 12 05.9**	**-1.2**
CISI	**Cisompet, Garu**	**2.26**	**17**	P	**Pn**	**12 11 38.8**	**-1.0**
CISI				S	Sn	12 11 56.6	-11
LEM	**Lembang**	**2.93**	**9**	Pn	**Pn**	**12 11 49.4**	**+0.3**
95nm,0.3s,baz=131,slow=20,SNR=40
LEM Sn **Sn 12 12 24.4 +0.7**
355nm,0.3s,baz=162,slow=19,SNR=25
LEM LR LR 12 13 23.5
comp=Z,578nm,20.5s,baz=222,slow=49
LEM Lembang 2.93 9 P **Pn 12 11 49.8 +0.7**
CGJI Cibinong 3.43 335 P **Pn 12 11 55.7 -0.1**
CGJI S **Sn 12 12 32.9 -2.9**
YOGI Yogyakarta 3.64 59 P **Pn 12 11 59.1 +0.4**
SBJI Serang 3.74 344 P **Pn 12 12 00.8 +0.7**
UGM Wanagama 3.79 62 *e*Pn **Pn 12 12 00.1 -0.7**
UGM *e*Sn **Sn 12 12 41.5 -3.2**
UGM Wanagama 3.79 62 P **Pn 12 12 00.0 -0.7**
WOJI Wonogiri, Jawa 4.17 63 P **Pn 12 12 07.8 +1.8**
SMRI Semarang 4.20 51 *e*Pn **Pn 12 12 06.7 +0.2**
SMRI *e*Sn **Sn 12 12 55.0 0.0**
SMRI Semarang 4.20 51 P **Pn 12 12 07.6 +1.1**
SMRI S **Sn 12 12 51.5 -3.5**
NGJI Ngawi 4.86 61 P **Pn 12 12 16.6 +1.1**
PWJI Pagerwojo 4.89 70 P **Pn 12 12 16.2 +0.2**
PWJI S **Sn 12 13 07.1 -4.9**
KASI Kota Agung 4.95 328 P **Pn 12 12 16.1 -0.7**
KASI S **Sn 12 13 08.2 -5.2**
LWLI Liwa 5.61 327 P **Pn 12 12 26.6 +0.7**
GRJI Gresik 5.96 62 P **Pn 12 12 31.3 +0.6**
MDSI Maura Dua 6.00 330 P **Pn 12 12 30.6 -0.6**
MNAI Manna 6.78 322 *e*Pn **Pn 12 12 40.8 -1.1**
MNAI *e*Sn **Sn 12 13 52.3 -6.2**
MNAI Manna 6.78 322 P **Pn 12 12 41.3 -0.6**
LHSI Lahat 6.89 328 P **Pb 12 12 59.3 -3.5**
JAGI Jajag, Banyuwa 7.02 80 *e*Pn **Pn 12 12 45.6 +0.3**
JAGI *e*Sn **Sn 12 13 58.3 -6.1**
JAGI Jajag, Banyuwa 7.02 80 P **Pn 12 12 45.5 +0.3**
SRBI Singaraja 8.12 79 P **Pn 12 13 00.9 +0.5**
PBKI Pangkalan Bun 8.30 33 P Pn 12 12 57.3 -5.5
PLAI Plampang 10.52 86 P **Pn 12 13 32.3 -0.9**
KAPI Kappang 13.34 70 LR LR 12 19 40.3
comp=Z,62nm,19.5s,baz=240,slow=39
KAPI Kappang 13.34 70 *e*Pn **Pn 12 14 11.5 -0.3**
GIRL Giralia 14.51 153 *e*Pn **Pn 12 14 25.8 -2.1**
PCI Palu 15.36 56 P Pn 12 14 28.9 -10
IPM Ipoh 15.39 336 *e*Pn **Pn 12 14 40.8 +1.2**
19nm,0.6s
BATI Baumata 16.26 93 Pn **Pn 12 14 52.0 +1.1**
3.5nm,0.3s,baz=278,slow=14,SNR=2.7
BATI Sn Sn 12 17 35.2 -16
1.8nm,0.3s,baz=255,slow=16,SNR=4.5
BATI Baumata 16.26 93 *e*P **Pn 12 14 52.0 +1.1**
BATI *e*P **Pn 12 14 52.0 +1.1**
KULM Kulim 16.28 336 *e*Pn **Pn 12 14 49.3 -1.8**
10nm,1.0s
SOEI Soe 16.86 92 *e*Pn **Pn 12 14 57.9 -0.8**
35nm,0.9s
PSA00 Pilbara Seismi 16.95 135 *e*Pn **Pn 12 14 57.0 -2.5**
21nm,1.1s
KKM Kota Kinabalu 18.09 30 *e*P **Pn 12 15 13.1 -0.7**
22nm,1.1s
FITZ Fitzroy Crossi 19.75 117 P **Pn 12 15 34.3 +0.4**
0.2nm,0.3s,baz=297,slow=11,SNR=5.4
FITZ S S 12 18 60.0 -14
0.2nm,0.3s,baz=190,slow=19,SNR=4.3
FITZ LR LR 12 23 02.6
comp=Z,54nm,19.6s,baz=318,slow=36
FITZ Fitzroy Crossi 19.75 117 *e*P **P 12 15 31.1 -1.2**
9.7nm,0.9s
TNTI Ternate 22.66 64 *e*P **P 12 16 03.3 -0.4**
20nm,1.0s
MTN Manton Dam 23.71 100 *e*P **P 12 16 15.0 +0.7**
10nm,1.0s
PHET Kaeng Krachan 23.71 341 P **P 12 16 19.5 +5.3**
DAV Davao City (W) 24.81 48 LR LR 12 27 21.7
comp=Z,24nm,21.8s,baz=214,slow=40
SIJI Sorong 25.55 71 P **P 12 16 32.1 +1.0**
1.6nm,0.4s,baz=270,slow=20,SNR=1.7
H01W3 Cape Leeuwin H 25.83 167 T T 12 43 42.2
baz=341,slow=76,SNR=5.6
H01W1 Cape Leeuwin H 25.84 167 T T 12 43 43.7
baz=341,slow=76,SNR=5.8
H01W2 Cape Leeuwin H 25.84 167 T T 12 43 42.2
baz=341,slow=76,SNR=4.1
CHAI Chaiyaphum 25.98 349 P **P 12 16 36.9 +1.9**
30μm,0.8s,113nm
WR1 Warramunga Arr 28.12 114 *e*P **P 12 16 54.7 +0.4**
WRA Warramunga Arr 28.12 114 P **P 12 16 54.7 +0.4**
2.1nm,0.8s,baz=286,slow=13,SNR=17
AS31 Alice Springs 29.05 122 *e*P **P 12 17 02.1 -0.5**
1.5nm,1.1s
ASAR Alice Springs 29.05 122 P **P 12 17 04.0 +1.4**
0.6nm,0.7s,baz=297,slow=8.0,SNR=7.0
LAMP Lampang 29.05 345 P P 12 17 08.7 +6.2
31μm,0.8s,86nm
CM31 Chiang Mai Arr 29.17 344 *e*P **P 12 17 04.4 +0.8**
CMAR Chiang Mai Arr 29.17 344 P **P 12 17 04.4 +0.8**
1.1nm,0.6s,baz=179,slow=8.7,SNR=10
CMMT Chiang Mai 29.50 344 P P 12 17 13.3 +6.7
4.5nm,1.1s
CHTO Chiang Mai 29.50 344 *e*P **P 12 17 05.1 -1.4**
4.5nm,1.0s
H08S2 Diego Garcia H 34.32 271 T T 12 54 06.3
baz=103,slow=75
H08S3 Diego Garcia H 34.33 271 T T 12 53 59.5
baz=103
H08S1 Diego Carcia H 34.34 271 T T 12 53 57.7
baz=103,slow=75
SSLB Suanglung 35.95 22 *e*P **P 12 18 02.8 0.0**
9.4nm,1.0s
SHL Shillong 38.11 337 *e*P **P 12 18 21.7 +0.3**
12nm,0.5s
STKA Stephens Creek 38.74 130 P **P 12 18 27.6 +1.1**
5.8nm,0.8s,baz=311,slow=9.1,SNR=5.1
STKA LR LR 12 34 24.5
comp=Z,47nm,19.7s,slow=36
STKA Stephens Creek 38.74 130 *e*P **P 12 18 25.5 -1.0**
2.1nm,1.1s
CTAO Charters Tower 39.06 110 *e*P **P 12 18 31.9 +2.5**
6.0nm,1.0s
ENH Enshi 39.84 3 *e*P **P 12 18 34.5 -1.1**
9.2nm,1.1s
WHN Wuhan 40.64 10 P **P 12 18 44.9 +2.7**
RAMN Ramite 41.57 332 *e*P **P 12 18 52.2 +1.9**
7.0nm,0.4s
LSA Lhasa 42.13 339 *e*P **P 12 18 54.6 -0.5**
9.8nm,0.6s
JIRN Jiri 42.36 332 *e*P **P 12 18 58.4 +1.5**
48nm,0.6s
GUN Gumba 42.72 332 *e*P **P 12 19 01.2 +1.4**
27nm,0.6s
DMN Daman 42.84 331 *e*P **P 12 19 02.1 +1.5**
22nm,0.8s
KKN Kakani 42.90 331 *e*P **P 12 19 02.6 +1.5**
XAN Xi'an 43.57 2 *e*P **P 12 19 05.1 -1.0**
7.6nm,1.1s
KOLN Koldanda 43.71 329 *e*P **P 12 19 08.9 +1.3**
29nm,0.8s
DANN Dangsing 44.11 330 *e*P **P 12 19 12.0 +1.1**
19nm,0.5s
PYUN Piuthan 44.29 329 *e*P **P 12 19 13.5 +1.2**
LZH Lanzhou 45.68 356 *e*P **P 12 19 27.7 +4.5**
LZH pP pwP 12 19 36.3 -0.5
LZH sP sP 12 19 39.5 +10
LZH PP **PP 12 21 06.1 -4.4**
LZH pmax pmax
comp=Z,18nm,1.3s
LZH pmax pmax
comp=Z,82nm,4.8s
HHC Hu-ho-hao-te 50.50 4 *e*P **P 12 20 03.2 +3.0**
HHC pmax pmax
comp=Z,71nm,5.2s
HHC pmax pmax
comp=Z,25nm,0.9s
WMQ Urumqi 56.16 343 *e*P **P 12 20 43.8 +2.0**
WMQ pmax pmax
comp=Z,28nm,0.8s
KSH Kashi 56.92 331 *e*P **P 12 20 49.4 +2.0**
SONA0 Songino Array 57.32 359 *e*P **P 12 20 51.7 +1.6**
SONM Songino Array 57.32 359 P **P 12 20 51.7 +1.6**
comp=Z,1.2nm,0.6s,baz=181,slow=12,SNR=6.9
USRK Ussuriysk Ar. 58.21 21 P **P 12 20 57.3 +1.1**
comp=Z,1.1nm,0.6s,baz=260,slow=6.6,SNR=3.2
MK31 Makanchi Array 60.50 341 *e*P **P 12 21 12.4 +0.4**
MK32 Makanchi Array 60.50 341 *e*P **P 12 21 13.0 +0.9**
MKAR Makanchi Array 60.50 341 P **P 12 21 13.0 +0.9**
comp=Z,2.7nm,0.6s,baz=143,slow=8.0,SNR=18
MKAR LR LR 12 49 50.3
comp=Z,17nm,19.5s,slow=38
MAW Mawson 64.81 197 P **P 12 21 42.6 +2.2**
comp=Z,2.7nm,0.6s,baz=29,slow=10,SNR=3.6
MAW Mawson 64.81 197 *e*P **P 12 21 42.1 +1.7**
comp=Z,0.7nm,0.8s
KURK Kurchatov 65.11 340 *e*P **P 12 21 42.0 -0.6**
comp=Z,3.0nm,0.8s
GEYT Alibeck 65.91 319 P **P 12 21 48.5 +0.4**
comp=Z,1.3nm,0.6s,baz=139,slow=3.1,SNR=3.2
GEYT LR LR 12 53 09.5
comp=Z,17nm,19.0s,baz=250,slow=38
ZALV Zalesovo Beam 66.21 346 P **P 12 21 49.9 +0.3**
comp=Z,1.2nm,0.3s,baz=158,slow=6.8,SNR=4.8
ZALV LR LR 12 56 28.9
comp=Z,15nm,18.2s,baz=70,slow=41
ZAA1 Zalesovo Array 66.21 346 *e*P **P 12 21 49.9 +0.2**
BKZ Black Stump Fm 67.90 128 *e*P **P 12 22 00.7 -0.2**
comp=Z,9.8nm,1.1s
ABKAR Akbulak array 71.83 330 *e*P **P 12 22 25.1 +0.4**
comp=Z,6.1nm,0.6s
PETK Petropavlovsk- 75.90 29 P **P 12 22 51.3 +2.9**
comp=Z,1.1nm,0.5s,baz=220,slow=3.2,SNR=4.3
MA2 Magadan 77.37 21 P **P 12 22 58.8 +2.2**
comp=Z,1.4nm,0.6s,baz=195,slow=20,SNR=2.6
KBZ Khabaz 78.78 318 P **P 12 23 06.4 +1.7**
comp=Z,1.0nm,0.4s,baz=121,slow=5.9,SNR=3.5
NIUE Niue 80.23 108 *e*P **P 12 23 09.2 -4.1**
comp=Z,151nm,1.1s
QSPA South Pole Qui 80.27 180 *e*P **P 12 23 10.8 -2.0**
BR101 Keskin Array S 83.76 312 *e*P **P 12 23 32.4 +0.9**
BRTR Keskin Array B 83.76 312 P **P 12 23 32.4 +0.9**
comp=Z,0.8nm,0.7s,baz=109,slow=5.7,SNR=4.0
TSUM Tsumeb 86.46 251 LR LR 12 56 21.4
comp=Z,22nm,18.1s,baz=346,slow=32
NC405 NORSAR Array S 101.09 330 *e*Pdif **Pdif 12 24 47.9 -3.9**
NC602 NORSAR Array S 101.17 330 *e*Pdif **Pdif 12 24 51.4 -0.7**
PV16 Nyswonger Mesa 136.93 43 *e*PKPdf **PKPdf 12 30 23.0 -2.5**
PV03 Paradox Valley 137.00 43 *e*PKPdf **PKPdf 12 30 23.8 -1.8**
LTX Lajitas 145.19 52 *e*PKPbc **PKPbc 12 30 39.8 -0.2**
TXAR Lajitas Array 145.19 52 PKPbc **PKPbc 12 30 39.8 -0.2**
comp=Z,0.5nm,0.8s,baz=306,slow=2.0,SNR=5.1

*IDC **11** 12:40:00.1±5.7, 29°.85S×179°.56E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/29, mbtmp3.8/3, Error ellipse: s-maj=258.7km s-min=88.0km az=166.0*
*WEL **11** 12:40:06.7±0.8, 33°.S±10°×17°.9W±2°.3, h111km±44km, M4.4/24, mB4.9/11, ML5.0/17, MLv4.9/24, Mw(mB)4.2/11, Error ellipse: s-maj=0.0km s-min=0.0km az=112.1*
*NEIC **11** 12:40:17.0±2.0, 33°.75S×179°.29E, h177km±58km, mb4.3/11, Error ellipse: s-maj=133.1km s-min=27.0km az=112.0*

ISC 11 12:40:06.1±1.0, **33°.21S**±0°.08×**179°.2W**±0°.2, **h150**km, **n70**, σ1°**98**/72, **mb4.3**/13, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.09**	**16**	P	**Pn**	**12 41 07.7**	**+0.3**
GLKZ				S	**Sn**	**12 41 55.7**	**+0.5**
RAO	**Raoul Island**	**4.10**	**16**	*e*Pn	Pn	12 41 31.9	+24
RIZ	**Raoul Island**	**4.10**	**16**	S	**Sn**	**12 41 56.7**	**+1.2**
MXZ	**Matakaoa Point**	**4.80**	**205**	*e*Pn	**Pn**	**12 41 16.8**	**0.0**
MXZ				*e*Sn	**Sn**	**12 42 03.3**	**-8.6**
MXZ	**Matakaoa Point**	**4.80**	**205**	P	**Pn**	**12 41 16.5**	**-0.2**
MXZ				S	**Sn**	**12 42 12.3**	**+0.4**
HAZ	**Te Kaha**	**5.16**	**208**	P	**Pn**	**12 41 22.8**	**+1.2**

HAZ			S	Sn	12 42 22.3 +1.8
PUZ	**Puketiti**	**5.28 203**	P	Pn	12 41 23.7 +0.6
PUZ			S	Sn	12 42 22.7 -0.6
RUGZ	**Raukumara Rang**	**5.39 207**	P	Pn	12 41 25.3 +0.7
RUGZ			S	Sn	12 42 23.5 -2.5
TWGZ	**Tauwhareparae**	**5.46 204**	P	Pn	12 41 26.4 +0.8
TWGZ			S	Sn	12 42 28.5 +0.7
CNGZ	**Carnagh Statio**	**5.67 201**	P	Pn	12 41 29.0 +0.7
TKGZ	**Te Karaka**	**5.74 204**	P	Pn	12 41 29.3 +0.1
TKGZ			S	Sn	12 42 33.8 -0.6
MWZ	**Matawai**	**5.76 207**	P	Pn	12 41 29.7 0.0
MWZ			S	Sn	12 42 34.8 -0.1
MARZ	**Manawahe**	**5.83 214**	P	Pn	12 41 32.5 +2.0
MARZ			S	Sn	12 42 38.0 +1.5
URZ	**Urewera**	**5.87 210**	*e*Pn	Pn	12 41 31.0 +0.1
URZ			*e*Sn	Sn	12 42 24.5 -13
URZ	**Urewera**	**5.87 210**	P	Pn	12 41 30.8 -0.1
URZ			S	Sn	12 42 36.1 -1.1
RAGZ	**Rawiri**	**5.95 207**	P	Pn	12 41 32.1 0.0
RAGZ			S	Sn	12 42 39.0 -0.4
RIGZ	**Rimuhau**	**6.01 203**	P	Pn	12 41 32.6 -0.3
RIGZ			S	Sn	12 42 39.8 -1.1
MUGZ	**Murupara**	**6.19 211**	P	Pn	12 41 35.2 -0.1
RTZ	**Ruatahuna**	**6.22 209**	P	Pn	12 41 35.3 -0.4
SNGZ	**Shannon Statio**	**6.23 206**	P	Pn	12 41 36.1 +0.4
OUZ	**Omahuta**	**6.31 250**	*e*Pn	Pn	12 41 29.9 -6.9
KNZ	**Kokohu**	**6.33 203**	P	Pn	12 41 37.1 +0.1
MHGZ	**Mahia Peninsul**	**6.38 201**	P	Pn	12 41 38.5 +0.8
RAHZ	**Arahi**	**6.44 207**	P	Pn	12 41 38.3 -0.3
MTHZ	**Maungataniwha**	**6.48 209**	P	Pn	12 41 40.0 +0.8
NMHZ	**Naumai**	**6.71 208**	P	Pn	12 41 41.9 -0.3
ARHZ	**Aropaoanui**	**6.78 206**	P	Pn	12 41 45.8 +2.7
BKZ	**Black Stump Fm**	**6.89 209**	*e*Pn	Pn	12 41 43.5 -1.1
BKZ			*e*Sn	Sn	12 42 49.4 -12
BKZ	**Black Stump Fm**	**6.89 209**	P	Pn	12 41 43.9 -0.7
MCHZ	**McNeill Hill**	**7.05 207**	P	Pn	12 41 47.9 +1.2
HIZ	**Hauiti**	**7.17 221**	*e*Pn	Pn	12 41 43.0 -5.2
HIZ	**Hauiti**	**7.17 221**	P	Pn	12 41 52.3 +4.1
KAHZ	**Kahuranaki**	**7.29 205**	P	Pn	12 41 49.2 -0.8
BHHZ	**Black Hill Sta**	**7.34 210**	P	Pn	12 41 50.0 -0.6
KRHZ	**Kereru**	**7.35 208**	P	Pn	12 41 49.4 -1.3
PNHZ	**Pukenui**	**7.65 208**	P	Pn	12 41 54.8 +0.1
BFZ	**Birch Farm**	**8.30 205**	*e*Pn	Pn	12 42 00.4 -3.0
BFZ			*e*Sn	Sn	12 43 24.0 -12
BFZ	**Birch Farm**	**8.30 205**	P	Pn	12 42 01.6 -1.8
HOWZ	**Holdsworth Sta**	**8.76 207**	P	Pn	12 42 07.6 -1.9
TMWZ	**Te Maipa**	**8.80 205**	P	Pn	12 42 09.0 -1.0
OGWZ	**Otaki Gorge**	**8.83 209**	P	Pn	12 42 09.2 -1.2
MTW	**Mount Morrison**	**8.99 207**	P	Pn	12 42 12.3 -0.2
SNZO	**South Karori**	**9.43 209**	*e*Pn	Pn	12 42 16.5 -1.9
SNZO			*e*Sn	Sn	12 43 47.3 -16
THZ	**Tophouse**	**10.59 214**	*e*Pn	Pn	12 42 31.4 -2.4
THZ			*e*Sn	Sn	12 44 14.7 -16
KHZ	**Kahutara**	**10.83 210**	*e*Pn	Pn	12 42 31.9 -5.0
KHZ			*e*Sn	Sn	12 44 18.1 -19
MQZ	**McQueen's Vall**	**12.27 209**	*e*Pn	Pn	12 42 50.9 -4.7
MQZ			*e*Sn	Sn	12 44 56.5 -15
RPZ	**Rata Peaks**	**12.97 213**	*e*Pn	Pn	12 42 59.9 -4.8
RPZ			*e*Sn	Sn	12 45 12.4 -16
FOZ	**Fox Glacier**	**13.43 217**	*e*Pn	Pn	12 43 05.4 -5.1
FOZ			*e*Sn	Sn	12 45 21.3 -18
LBZ	**Lake Benmore**	**13.88 213**	*e*Pn	Pn	12 43 13.2 -3.2
LBZ			*e*Sn	Sn	12 45 32.9 -17
ODZ	**Otahua Downs**	**14.19 211**	*e*Pn	Pn	12 43 16.9 -3.3
ODZ			*e*Sn	Sn	12 45 39.3 -18
WKZ	**Wanaka**	**14.76 215**	*e*Pn	Pn	12 43 24.2 -3.2
WKZ			*e*Sn	Sn	12 45 53.5 -18
MLZ	**Mavora Lakes**	**15.59 215**	*e*Pn	Pn	12 43 32.4 -5.3
MLZ			*e*Sn	Sn	12 46 13.6 -17
WHZ	**Wether Hill Ro**	**16.06 214**	*e*Pn	Pn	12 43 41.8 -1.5
WHZ			*e*S	S	12 46 25.2 -17
AS31	**Alice Springs**	**42.04 271**	*e*P	P	12 47 41.1 -1.9
	2.6nm,1.4s				
ASAR	**Alice Springs**	**42.04 271**	P	P	12 47 44.7 +1.7
	0.5nm,0.3s,baz=111,slow=7.6,SNR=15				
WC3	**Warramunga Arr**	**43.25 276**	*e*P	P	12 47 51.6 -1.2
	12nm,1.4s				
WB2	**Warramunga Arr**	**43.27 276**	*e*P	P	12 47 52.7 -0.3
	27nm,1.8s				
WRAB	**Tennant Creek**	**43.28 276**	*e*P	P	12 47 48.0 -5.0
	7.8nm,1.3s				
WR1	**Warramunga Arr**	**43.28 276**	*e*P	P	12 47 53.6 +0.5
WRA	**Warramunga Arr**	**43.28 276**	P	P	12 47 53.6 +0.5
	1.3nm,0.6s,baz=107,slow=8.6,SNR=24				
SBA	**Scott Base**	**45.16 184**	*e*P	P	12 48 11.6 +4.4
	20nm,1.8s				
VNDA	**Vanda**	**45.20 186**	*e*P	P	12 48 09.0 +1.5
	8.6nm,1.8s				
FITZ	**Fitzroy Crossi**	**51.42 273**	P	P	12 48 58.0 +2.1
	0.6nm,0.7s,baz=102,slow=4.7,SNR=3.6				
FITZ	**Fitzroy Crossi**	**51.42 273**	*e*P	P	12 48 54.8 -1.1
	14nm,1.4s				
FAKI	**Fak Fak**	**54.44 293**	*e*P	P	12 49 16.4 -1.6
	13nm,1.1s				
QSPA	**South Pole Qui**	**56.90 180**	*e*P	P	12 49 43.6 +8.5
	3.7nm,0.7s				
SNAA	**Sanae**	**75.37 179**	*e*P	P	12 51 40.6 +7.9
	9.3nm,1.5s				
PLID	**Pearl Lake**	**96.71 40**	*e*P	P	12 53 32.2 +13
	13nm,1.2s				
FIA0	**FINESS Array S**	**147.40 338**	*e*PKPdf	**PKPab**	**12 59 36.0 +2.3**
FINES	**FINESS Array B**	**147.40 338**	PKP	**PKPab**	**12 59 36.0 +2.3**
	4.4nm,0.9s,baz=187,slow=29,SNR=2.9				

SJA ***11*** *12:53:24.5±0.5,22.°42S×68.°48W,h110km±4km,ML1.9, MW3.4*
ISCJB ***11*** *12:53:26.1±1.1,22.°48S±0.°05×68.°61W±0.°08, h110km±11km,Error ellipse: s-maj=11.8km s-min=8.7km az=169.7*
GUC ***11*** *12:53:27.3±0.7,22.°47S×68.°68W,h100km±3km,ML2.7*
ISC 11 12:53:26.3±1.8,22.°49S±0.°06×68.°58W±0.°06, h108km±13km,n17,σ0.980/30,9C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.33**	**250**	*i* P	**Pn**	12 53 42.3	-0.1
LVC				*i* S	**Sn**	12 53 54.9	+0.4
LVC	**Limon Verde**	**0.33**	**250**	||*i*P	**Pn**	12 53 42.5	+0.1
LVC				*i* S	**Sn**	12 53 53.5	-1.0
PB06	**IPOC Station P**	**0.94**	**257**	*i* P	**Pn**	12 53 46.9	-0.1
PB06				*i* S	**Sn**	12 54 03.9	+1.4
PB06	**IPOC Station P**	**0.94**	**257**	⇑*i*P	**Pn**	12 53 46.8	-0.1
PB06				*i* S	**Sn**	12 54 02.0	-0.5
PB06				IAML		12 54 03.8	
	comp=N,172nm,0.2s						
PB15	**IPOC Station P**	**1.09**	**229**	*i* P	**Pn**	12 53 48.9	+0.4
PB15				*i* S	**Sn**	12 54 07.3	+2.0
PB15	**IPOC Station P**	**1.09**	**229**	⇑*i*P	**Pn**	12 53 48.9	+0.4
PB15				*i* S	**Sn**	12 54 05.6	+0.3
PB03	**IPOC Station P**	**1.18**	**292**	*i* P	**Pn**	12 53 49.2	-0.1
PB03				*i* S	**Sn**	12 54 07.6	+0.7
PB03	**IPOC Station P**	**1.18**	**292**	⇑*i*P	**Pn**	12 53 49.3	-0.1
PB03				*i* S	**Sn**	12 54 05.8	-1.1
PB03				IAML		12 54 06.2	
	comp=N,283nm,0.2s						
PB07	**IPOC Station P**	**1.44**	**302**	⇑*i*P	**Pn**	12 53 52.4	0.0
PB07				*i* S	**Sn**	12 54 11.3	-0.9
PB07				IAML		12 54 13.6	
	comp=E,182nm,0.2s						
PB04	**IPOC Station P**	**1.47**	**276**	⇑*i*P	**Pn**	12 53 52.4	-0.3
PB04				*i* S	**Sn**	12 54 11.8	-1.0
PB04				IAML		12 54 15.6	
	comp=E,163nm,0.1s						
PB05	**IPOC Station P**	**1.54**	**256**	⇑*i*P	**Pn**	12 53 53.2	-0.4
PB05				*i* S	**Sn**	12 54 13.6	-0.9
PB01	**IPOC Station P**	**1.68**	**329**	⇑*i*P	**Pn**	12 53 55.9	+0.7
PB01				*i* S	**Sn**	12 54 17.2	0.0
PB01				IAML		12 54 18.6	
	comp=N,106nm,0.3s						
PB02	**IPOC Station P**	**1.69**	**313**	*i* P	**Pn**	12 53 55.1	-0.3
PB02	**IPOC Station P**	**1.69**	**313**	⇑*i*P	**Pn**	12 53 55.8	+0.3
PB02				*i* S	**Sn**	12 54 16.9	-0.8
PB02				IAML		12 54 19.4	
	comp=E,166nm,0.3s						
PB10	**IPOC Station P**	**2.09**	**241**	*e*P	**Pn**	12 54 00.7	+0.4
PB08	**IPOC Station P**	**2.40**	**347**	⇑*i*P	**Pn**	12 54 06.3	+1.5
HJA	**Humahuaca**	**3.00**	**104**	*i* P	**Pn**	12 54 11.9	-0.7
HJA				IAML		12 54 18.4	
	comp=Z,3.1nm,0.4s						

IDC 11 13:00:57.1±5.6,19.°58S×170.°43E,h0km,mb3.9/4, mb1 4.1/4,mb1mx3.7/36,mbtmp3.9/4,Error ellipse: s-maj=209.8km s-min=36.2km az=145.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.92**	**263**	P	P	13 07 41.8	-0.5
	1.5nm,1.0s,baz=96,slow=8.6,SNR=2.8						
ASAR	**Alice Springs**	**34.14**	**257**	P	P	13 07 44.7	+0.6
	0.6nm,0.6s,baz=92,slow=8.2,SNR=7.3						
SONM	**Songino Array**	**88.16**	**323**	P	P	13 13 49.3	-0.7
	0.7nm,0.6s,baz=132,slow=2.1,SNR=3.1						
ILAR	**Eielson Array**	**90.22**	**17**	P	P	13 13 59.7	+0.6
	0.4nm,0.8s,baz=216,slow=4.5,SNR=4.1						

MOS ***11*** *13:02:20.4±0.8,21.°05S×178.°74W,h527km,mb4.8/42, Error ellipse: s-maj=9.2km s-min=7.8km az=69.1*
BJI ***11*** *13:02:21.6±0.0,21.°10S×178.°80W,h538km,mb4.8/38, mB4.8/23*
NEIC ***11*** *13:02:22.0±0.1,21.°14S×178.°76W,mb4.9/246,Error ellipse: s-maj=4.3km s-min=2.5km az=143.0*
ISCJB ***11*** *13:02:22.2±0.5,21.°11S±0.°03×178.°81W±0.°03, h548km±7km,mb4.8/273,Error ellipse: s-maj=4.8km s-min=3.9km az=148.9*
IDC ***11*** *13:02:22.9±0.7,21.°20S×178.°72W,h549km±7km,mb4.2/28, mb1 4.3/31,mb1mx4.3/36,mbtmp5.1/31,Error ellipse: s-maj=9.9km s-min=8.1km az=135.0*
GCMT ***11*** *13:02:24.0±0.6,21.°31S±0.°05×178.°75W±0.°05, h549km±3km,MW5.2/40,Moment Tensor Solution. s40,c53; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr-0.66±.04; Mθθ0.46±.07; Mφφ0.19±.06; Mrθ-0.70±.07; Mrφ0.08±.06; Mθφ0.06±.07; Best double couple: M=0.90000×10^17 NP1:φ=90.00000°,δ71.00000°, λ-84.00000°. NP2:φ=251.00000°,δ20.00000°, λ-108.00000°. Principal axes: T 0.8000, Plg25.0000°, Azm175.0000°; N 0.2000, Plg6.0000°, Azm268.0000°; P -1.0000, Plg64.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 11 13:02:22.5±0.4,21.°15S±0.°04×178.°69W±0.°05, h549km±4km,h550km:pP-P,n983,σ1.918/1086,mb4.9/272, 70C-30D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**8.09**	**175**	P	**P**	13 04 20.6	-0.4
RAO	**Raoul Island**	**8.10**	**175**	*e*P	**P**	13 04 20.6	-0.4
RAO	**Raoul Island**	**8.10**	**175**	*e*P	**P**	13 04 20.6	-0.4
GLKZ	**Green Lake**	**8.11**	**175**	P	**P**	13 04 20.7	-0.5
GLKZ				S	**S**	13 05 55.7	-2.8
NIUE	**Niue**	**8.49**	**77**	*e*P	**P**	13 04 24.2	-0.9
NIUE	**Niue**	**8.49**	**77**	P	**P**	13 04 23.7	-1.4
	baz=8.3,SNR=7.5						
MARNC	**Mare, Loyalty**	**12.38**	**266**	*e*P	**P**	13 05 05.3	+0.3
FUNA	**Funafuti**	**12.71**	**350**	*e*P	**P**	13 05 06.3	-2.2
PINNC	**Pines Island,**	**12.96**	**261**	*e*P	**P**	13 05 12.0	+1.1
DZM	**Mont Dzumac**	**13.86**	**263**	P	**P**	13 05 19.5	-0.8
	2.3nm,0.3s,baz=84,slow=20,SNR=24						
DZM	**Mont Dzumac**	**13.86**	**263**	*e*P	**P**	13 05 20.7	+0.4
OUZ	**Omahuta**	**15.57**	**204**	*e*P	**P**	13 05 39.3	+1.6
	50nm,0.6s						
OUZ	**Omahuta**	**15.57**	**204**	P	**P**	13 05 39.2	+1.6
WCZ	**Waipu Caves**	**15.95**	**201**	P	**P**	13 05 43.0	+1.7
KUZ	**Kuaotunu**	**16.29**	**196**	P	**P**	13 05 45.0	+0.5
MXZ	**Matakaoa Point**	**16.57**	**188**	*e*P	**P**	13 05 46.4	-0.6
	140nm,1.5s						
MXZ	**Matakaoa Point**	**16.57**	**188**	P	**P**	13 05 46.5	-0.6
HAZ	**Te Kaha**	**16.83**	**190**	P	**P**	13 05 49.5	0.0
HAZ				S	**S**	13 08 33.3	-5.1
RUGZ	**Raukumara Rang**	**17.05**	**190**	P	**P**	13 05 51.7	0.0
RUGZ				S	**S**	13 08 41.0	-1.2
PUZ	**Puketiti**	**17.07**	**188**	P	**P**	13 05 51.3	-0.4
PUZ				S	**S**	13 08 39.7	-2.6
TGRZ	**Tauranga**	**17.09**	**194**	P	**P**	13 05 54.2	+2.3
OPRZ	**Ohinepanea**	**17.14**	**193**	P	**P**	13 05 54.5	+2.1
TWGZ	**Tauwhareparae**	**17.21**	**189**	P	**P**	13 05 53.2	+0.1
TWGZ				S	**S**	13 08 40.6	-4.1
KMRZ	**Kaimai**	**17.28**	**194**	P	**P**	13 05 56.3	+2.6
KARZ	**Kaharoa**	**17.38**	**194**	P	**P**	13 05 56.8	+2.3
OMRZ	**Omania**	**17.43**	**193**	P	**P**	13 05 56.9	+1.8
URZ	**Urewera**	**17.44**	**191**	P	**P**	13 05 53.5	-1.5
	8.5nm,0.3s,baz=44,slow=16,SNR=59						
URZ				S	**S**	13 08 42.2	-6.1
	0.4nm,0.3s,baz=18,slow=20,SNR=5.4						
URZ				ScP	**ScP**	13 12 45.8	-1.8
	0.4nm,0.3s,baz=344,slow=6.0,SNR=3.9						
URZ	**Urewera**	**17.44**	**191**	*e*P	**P**	13 05 53.1	-1.9
	94nm,0.9s						
URZ				S	**S**	13 08 42.2	-6.1
URZ				ScP	**ScP**	13 12 45.8	-1.8
URZ	**Urewera**	**17.44**	**191**	P	**P**	13 05 53.6	-1.4
URZ				S	**S**	13 08 41.7	-6.5
MWZ	**Matawai**	**17.44**	**190**	P	**P**	13 05 54.2	-0.9
MWZ				S	**S**	13 08 44.1	-4.3
CNGZ	**Carnagh Statio**	**17.48**	**188**	P	**P**	13 05 56.6	+1.1
TKGZ	**Te Karaka**	**17.49**	**189**	P	**P**	13 05 56.4	+0.9
UTU	**Utuhina**	**17.54**	**193**	P	**P**	13 06 01.8	+5.8
HLRZ	**Highlands Stat**	**17.58**	**193**	P	**P**	13 05 58.3	+1.9
RRRZ	**Republican Roa**	**17.63**	**193**	P	**P**	13 05 57.7	+0.9
RAR	**Rarotonga**	**17.64**	**94**	P	**P**	13 05 56.3	-0.9
	1.9nm,0.3s,baz=272,slow=7.0,SNR=4.8						
RAR	**Rarotonga**	**17.64**	**94**	*e*P	**P**	13 05 58.0	+0.8
	258nm,1.8s						
HSRZ	**Hossack Road**	**17.66**	**193**	P	**P**	13 05 58.9	+1.9
MUGZ	**Murupara**	**17.71**	**192**	P	**P**	13 05 57.4	-0.1
GRRZ	**Galatos Road**	**17.72**	**194**	P	**P**	13 05 59.5	+1.9
HRRZ	**Handcock Road**	**17.73**	**193**	P	**P**	13 05 58.4	+0.7
RIGZ	**Rimuhau**	**17.77**	**189**	P	**P**	13 05 58.4	+0.3
RIGZ				S	**S**	13 08 51.6	-2.1
RTZ	**Ruatahuna**	**17.81**	**191**	P	**P**	13 05 59.1	+0.6
PRRZ	**Plateau Road**	**17.81**	**193**	P	**P**	13 05 58.4	-0.1
TLZ	**Tolley Road**	**17.84**	**195**	P	**P**	13 06 01.2	+2.5
ALRZ	**Allen Road**	**17.88**	**193**	P	**P**	13 05 59.8	+0.7
SNGZ	**Shannon Statio**	**17.91**	**190**	P	**P**	13 06 00.1	+0.8
KUTZ	**Kaahu Road**	**17.92**	**194**	P	**P**	13 06 01.8	+2.3
MTHZ	**Maungataniwha**	**18.06**	**191**	P	**P**	13 06 01.7	+0.9
RAHZ	**Arahi**	**18.08**	**191**	P	**P**	13 06 01.0	+0.1
KNZ	**Kokohu**	**18.09**	**189**	P	**P**	13 06 02.7	+1.8
HIZ	**Hauiti**	**18.18**	**196**	*e*P	**P**	13 06 04.2	+2.4
	254nm,1.4s						
HIZ	**Hauiti**	**18.18**	**196**	P	**P**	13 06 04.6	+2.8
RATZ	**Rangitukua**	**18.29**	**194**	P	**P**	13 06 03.6	+0.6
NMHZ	**Naumai**	**18.30**	**191**	P	**P**	13 06 02.3	-0.8
RITZ	**Rihia Road**	**18.38**	**194**	P	**P**	13 06 05.1	+1.4
BKZ	**Black Stump Fm**	**18.43**	**192**	*e*P	**P**	13 06 01.9	-2.3
	42nm,0.8s						
BKZ	**Black Stump Fm**	**18.43**	**192**	P	**P**	13 06 02.3	-1.9
TWVZ	**Taurewa**	**18.56**	**194**	P	**P**	13 06 06.3	+0.9
NGZ	**Ngauruhoe**	**18.63**	**194**	P	**P**	13 06 07.5	+1.4
MCHZ	**McNeill Hill**	**18.66**	**191**	P	**P**	13 06 06.1	-0.1
KWHZ	**Kaweka Forest**	**18.69**	**192**	P	**P**	13 06 05.9	-0.7
TUVZ	**Tukino**	**18.70**	**194**	P	**P**	13 06 07.8	+1.0
FWVZ	**Far West T-bar**	**18.71**	**194**	P	**P**	13 06 07.8	+0.8
WHVZ	**Whangaehu Hut**	**18.73**	**194**	P	**P**	13 06 07.5	+0.3
VRZ	**Vera Road**	**18.78**	**196**	P	**P**	13 06 09.5	+2.1
PKVZ	**Pokaka**	**18.79**	**194**	P	**P**	13 06 08.1	+0.6
MOVZ	**Moawhango**	**18.82**	**193**	P	**P**	13 06 07.9	+0.2
BHHZ	**Black Hill Sta**	**18.83**	**193**	P	**P**	13 06 05.9	-1.9
KRHZ	**Kereru**	**18.92**	**192**	P	**P**	13 06 08.3	-0.3
KAHZ	**Kahuranaki**	**18.97**	**191**	P	**P**	13 06 09.8	+0.7
PXZ	**Pawanui**	**19.20**	**190**	P	**P**	13 06 12.2	+1.1
PNHZ	**Pukenui**	**19.21**	**192**	P	**P**	13 06 11.1	-0.1
WAZ	**Wanganui**	**19.32**	**195**	P	**P**	13 06 15.7	+3.5
TSZ	**Takapari Road**	**19.40**	**192**	P	**P**	13 06 15.6	+2.7
DVHZ	**Dannevirke**	**19.59**	**192**	P	**P**	13 06 14.5	-0.2
ANWZ	**Angora Road**	**19.69**	**191**	P	**P**	13 06 16.0	+0.5
POWZ	**Post Office Ro**	**19.76**	**193**	P	**P**	13 06 19.5	+3.3
BFZ	**Birch Farm**	**19.95**	**191**	*e*P	**P**	13 06 16.4	-1.5
	377nm,1.9s						
BFZ	**Birch Farm**	**19.95**	**191**	P	**P**	13 06 17.4	-0.5
MRZ	**Mangataiinoka R**	**20.05**	**193**	P	**P**	13 06 16.8	-2.1
KIW	**Kapiti Island**	**20.39**	**194**	P	**P**	13 06 21.6	-0.3
TMWZ	**Te Maipa**	**20.42**	**192**	P	**P**	13 06 26.2	+4.0
MTW	**Mount Morrison**	**20.55**	**193**	P	**P**	13 06 23.6	+0.2
DUWZ	**D'Urville Isla**	**20.58**	**196**	P	**P**	13 06 25.2	+1.6
CAW	**Cannon Point**	**20.59**	**194**	P	**P**	13 06 23.2	-0.5
TRWZ	**Traveller**	**20.74**	**192**	P	**P**	13 06 26.0	+0.9
PAWZ	**Paruwai Farm**	**20.78**	**193**	P	**P**	13 06 26.2	+0.7
MSWZ	**Moikau Station**	**20.85**	**193**	P	**P**	13 06 27.0	+0.9
TCW	**Tory Channel**	**20.87**	**195**	P	**P**	13 06 27.5	+1.2
QRZ	**Quartz Range**	**20.99**	**199**	P	**P**	13 06 27.8	+0.5
NNZ	**Nelson**	**21.11**	**197**	P	**P**	13 06 27.9	-0.5
TUWZ	**Tuamarina**	**21.16**	**195**	P	**P**	13 06 28.1	-0.8
BSWZ	**Blackbirch Sta**	**21.45**	**195**	P	**P**	13 06 34.1	+2.7
THZ	**Tophouse**	**21.75**	**197**	*e*P	**P**	13 06 33.4	-0.8
	112nm,1.6s						
THZ	**Tophouse**	**21.75**	**197**	P	**P**	13 06 33.8	-0.4
DSZ	**Denniston Nort**	**22.05**	**199**	P	**P**	13 06 37.2	+0.3
KHZ	**Kahutara**	**22.19**	**195**	*e*P	**P**	13 06 36.9	-1.1
	42nm,1.0s						
KHZ	**Kahutara**	**22.19**	**195**	P	**P**	13 06 37.3	-0.8
GVZ	**Greta Valley S**	**22.84**	**196**	P	**P**	13 06 42.8	-1.1
LTZ	**Lake Taylor**	**22.87**	**197**	*e*P	**P**	13 06 42.2	-1.9
	36nm,0.8s						
OXZ	**Oxford**	**23.43**	**197**	*e*P	**P**	13 06 47.7	-1.4
	44nm,0.6s						
CRLZ	**Canterbury Las**	**23.51**	**196**	P	**P**	13 06 50.5	+0.7
RPZ	**Rata Peaks**	**24.07**	**198**	P	**P**	13 06 53.5	-1.3
	6.6nm,0.3s,baz=67,slow=3.1,SNR=12						
RPZ				ScP	**ScP**	13 13 04.3	+0.4
	2.9nm,0.6s,baz=24,slow=6.8,SNR=3.5						
RPZ	**Rata Peaks**	**24.07**	**198**	*e*P	**P**	13 06 53.7	-1.2
	51nm,1.2s						
RPZ				ScP	**ScP**	13 13 04.3	+0.4
FOZ	**Fox Glacier**	**24.30**	**201**	*e*P	**P**	13 06 55.7	-1.1
	39nm,0.7s						
DCZ	**Deep Cove**	**26.90**	**202**	*e*P	**P**	13 07 19.3	-0.4
	24nm,0.9s						
WHZ	**Wether Hill Ro**	**27.00**	**201**	*e*P	**P**	13 07 21.6	+1.0
	74nm,0.7s						
EIDS	**Eidsvold**	**28.06**	**256**	*e*P	**P**	13 07 30.6	+0.3
	20nm,0.8s						
EIDS	**Eidsvold**	**28.06**	**256**	P	**P**	13 07 30.8	+0.6
	baz=28,SNR=9.4						
ARMA	**Armidale**	**28.21**	**245**	*e*P	**P**	13 07 32.9	+1.4
	10nm,0.6s						
ARMA	**Armidale**	**28.21**	**245**	P	**P**	13 07 33.1	+1.5
	baz=28,SNR=23						
MGCD	**Mangrove Creek**	**29.32**	**239**	P	**P**	13 07 42.9	+1.8
	baz=30,SNR=21						
RMQ	**Roma**	**30.20**	**253**	P	**P**	13 07 50.5	+1.7
	baz=30,SNR=13						
CNB	**Canberra Magne**	**31.33**	**236**	P	**P**	13 07 59.9	+1.5
	baz=32,SNR=126						
CAN	**Canberra**	**31.62**	**236**	*e*P	**P**	13 08 01.9	+1.1
	13nm,0.8s						
CAN	**Canberra**	**31.62**	**236**	*e*P	**P**	13 08 01.9	+1.1
CAN				pmax	pmax		
	comp=Z,13nm,0.8s						
MILA	**Mila**	**32.07**	**233**	P	**P**	13 08 05.9	+1.2
	baz=32,SNR=3.2						
CTA	**Charters Tower**	**32.79**	**265**	P	**P**	13 08 11.7	+0.7
	comp=Z,46nm,0.6s,baz=95,slow=11,SNR=92						
CTA				PcP	**PcP**	13 10 40.1	+0.4
	comp=Z,3.8nm,0.5s,baz=116,slow=3.1,SNR=5.4						
CTAO	**Charters Tower**	**32.79**	**265**	*e*P	**P**	13 08 11.3	+0.3
	comp=Z,47nm,0.6s						
CTAO	**Charters Tower**	**32.79**	**265**	*e*P	**P**	13 08 11.3	+0.3
CTAO				pmax	pmax		
	comp=Z,47nm,0.6s						
RABL	**Rabaul**	**32.95**	**297**	*e*P	**P**	13 08 11.0	-1.4
	comp=Z,18nm,0.6s						
RABL				*e*PcP	**PcP**	13 10 40.2	-0.1
CMSA	**Cobar Meteorol**	**33.42**	**245**	P	**P**	13 08 16.9	+0.8
	baz=34,SNR=40						
PMG	**Port Moresby**	**34.87**	**284**	P	**P**	13 08 28.2	-0.2
	comp=Z,67nm,0.9s,baz=97,slow=4.4,SNR=12						
PMG	**Port Moresby**	**34.87**	**284**	*e*P	**P**	13 08 28.3	-0.2
	comp=Z,77nm,0.9s						
TOO	**Toolangi**	**35.00**	**234**	*e*P	**P**	13 08 30.1	+0.8
	comp=Z,23nm,0.6s						
TOO	**Toolangi**	**35.00**	**

MORW	Morawa	58.99	248	eP		P		13 11 29.8	0.0
	comp=Z,24nm,1.1s								
LUWI	Luwuk	60.42	281	eP		P		13 11 40.2	+0.6
	comp=Z,88nm,1.1s								
JAGI	Jajag, Banyuwa	65.74	270	eP		P		13 12 12.7	-1.1
	comp=Z,54nm,0.9s								
QSPA	South Pole Qui	68.92	180	eP		P		13 12 33.8	+1.3
	comp=Z,14nm,1.1s								
KKM	Kota Kinabalu	69.30	285	P		P		13 12 37.0	+1.4
JOW	Kunigami	70.09	311	P		P		13 12 41.0	+1.1
	comp=Z,2.7nm,0.7s,baz=151,slow=13,SNR=9.0								
MJAR	Matsushiro Arr	70.35	324	P		P		13 12 41.2	-0.1
	comp=Z,15nm,0.7s,baz=163,slow=5.8,SNR=41								
MAJO	Matsushiro	70.35	324	eP		P		13 12 41.4	+0.1
	comp=Z,20nm,0.8s								
MAJO	Matsushiro	70.35	324	diP		P		13 12 41.2	-0.1
MAJO				pmax		pmax			
	comp=Z,23nm,0.9s								
MJB9	Matsu-Tunnel	70.36	324	eP		P		13 12 41.3	0.0
	comp=Z,20nm,0.8s								
SBUM	Sibu	71.48	280	eP		P		13 12 49.1	+0.7
	comp=Z,13nm,1.0s								
SBUM	Sibu	71.48	280	P		P		13 12 50.0	+1.6
CISI	Cisompet, Garu	71.95	269	eP		P		13 12 50.4	-0.9
	comp=Z,135nm,1.6s								
JNU	Nakatsue	72.31	317	P		P		13 12 53.0	+0.2
	comp=Z,19nm,0.9s,baz=104,slow=3.2,SNR=6.5								
JNU	Nakatsue	72.31	317	eP		P		13 12 53.2	+0.3
	comp=Z,51nm,1.2s								
KSM	Kuching	72.87	278	eP		P		13 12 56.6	+0.1
	comp=Z,39nm,0.8s								
KSM	Kuching	72.87	278	P		P		13 12 57.0	+0.6
ATKA	Atka Island	73.14	3	eP		P		13 12 56.6	-0.5
	comp=Z,77nm,0.9s								
TWG	Pinlang	73.19	303	eP		P		13 12 56.1	-1.9
	comp=Z,102nm,0.7s								
YULB	Yu-li	73.32	304	eP		P		13 12 57.6	-1.2
	comp=Z,15nm,0.7s								
NACB	Ninganchiao	73.51	305	eP		P		13 12 58.8	-1.0
	comp=Z,48nm,0.9s								
TPUB	Ta-pu	73.79	303	eP		P		13 13 00.6	-0.9
	comp=Z,92nm,0.8s								
SSLB	Suanglung	73.79	304	eP		P		13 13 00.9	-0.6
	comp=Z,30nm,0.7s								
YHNB	Yeheng	73.94	305	eP		P		13 13 02.0	-0.4
	comp=Z,46nm,1.1s								
ASAJ	Asahikawa	73.99	332	P		P		13 13 03.7	+1.6
	comp=Z,19nm,0.9s,baz=211,slow=9.8,SNR=9.9								
NIKH	Nikolski High	74.30	6	eP		P		13 13 03.3	-0.4
	comp=Z,120nm,0.9s								
UNV	Unalaska Valle	75.42	7	eP		P		13 13 09.0	-0.8
	comp=Z,36nm,0.6s								
AKUT	Akutan	75.79	8	eP		P		13 13 11.2	-0.7
	comp=Z,26nm,0.7s								
YSS	Yuzh-Sakhalins	76.19	334	eP		P		13 13 13.8	-0.5
	comp=Z,86nm,1.7s								
YSS	Yuzh-Sakhalins	76.19	334	eP		P		13 13 15.2	+0.9
YSS				pmax		pmax			
	comp=Z,100nm,2.1s								
YSS				pmax		pmax			
	comp=Z,20nm,1.2s								
PETK	Petropavlovsk-	76.73	346	P		P		13 13 17.5	+0.4
	comp=Z,15nm,0.8s,baz=125,slow=6.6,SNR=24								
PEA1	Petropavlovsk-	76.74	346	eP		P		13 13 17.5	+0.3
KSRS	Korea Array	76.95	319	P		P		13 13 19.2	+0.6
	comp=Z,5.7nm,1.0s,baz=143,slow=6.8,SNR=23								
KS15	Wonju Array Si	76.96	319	eP		P		13 13 19.2	+0.5
KSAR	Wonju Array Be	76.96	319	P		P		13 13 19.2	+0.4
KSAR	Wonju Array Be	76.96	319	P		P		13 13 19.2	+0.4
TEY	Ternei	77.44	329	eP		P		13 13 22.2	+1.0
TEY				pmax		pmax			
	comp=Z,10.0nm,1.6s								
SDPT	Sand Point	77.76	11	eP		P		13 13 22.2	-0.4
	comp=Z,90nm,0.7s								
MSHR	Mys Shultsa	78.47	325	diP		P		13 13 27.9	+1.1
SCZ2	Santa Cruz Isl	78.51	47	P		P		13 13 28.8	+1.5
	baz=235								
SCI2	San Clemente I	78.68	48	P		P		13 13 29.5	+1.4
	baz=236								
SBC	Santa Barbara	78.71	46	P		P		13 13 30.0	+1.7
	baz=235								
PKM	Mcpherson Peak	78.91	46	P		P		13 13 31.0	+1.4
	baz=234								
SAO	San Andreas Ge	78.94	43	eP		P		13 13 31.0	+1.5
	comp=Z,26nm,0.9s								
SAO	San Andreas Ge	78.94	43	eP		P		13 13 31.0	+1.5
SAO				pmax		pmax			
	comp=Z,26nm,0.9s								
MYKOM	Kota Tinggi	78.96	276	P		P		13 13 32.0	+1.9
SMMC	Simmler	79.03	45	P		P		13 13 31.6	+1.6
	baz=234								
PAGB	Antelope Grade	79.11	45	eP		P		13 13 31.3	+0.9
	comp=Z,108nm,2.0s								
USRK	Ussuriysk Ar.	79.14	326	P		P		13 13 31.8	+1.4
	comp=Z,17nm,0.9s,baz=116,slow=4.4,SNR=43								
USA0B	Ussuriysk Arra	79.14	326	eP		P		13 13 31.7	+1.4
	comp=Z,40nm,1.1s								
USA0B	Ussuriysk Arra	79.14	326	eP		P		13 13 31.7	+1.4
USA0B				pmax		pmax			
	comp=Z,40nm,1.1s								
FMP	Fort Macarthur	79.27	48	P		P		13 13 32.7	+1.5
	baz=236								
HOPS	Hopland Field	79.28	41	eP		P		13 13 31.9	+0.7
	comp=Z,36nm,0.9s								
TYV	Tymovskoe	79.37	336	eP		P		13 13 32.2	+0.9
TYV				pmax		pmax			
	comp=Z,200nm,3.5s								
TYV				pmax		pmax			
	comp=Z,28nm,1.3s								
KMRM	Mail Ridge	79.66	40	eP		P		13 13 35.4	+2.1
	comp=Z,101nm,0.9s								
ARVC	Arvin	79.70	46	P		P		13 13 34.7	+1.2
	baz=235								
MWC	Mount Wilson	79.72	47	eP		P		13 13 34.9	+1.0
	comp=Z,18nm,1.0s								
MWC	Mount Wilson	79.72	47	eP		P		13 13 34.9	+1.0
MWC				pmax		pmax			
	comp=Z,18nm,1.0s								
NJ2	Nanjing	79.80	310	eP		P		13 13 34.5	+0.4
NJ2				pmax		pmax			
	comp=Z,23nm,0.9s								
BAR	Barrett	79.83	49	eP		P		13 13 35.5	+1.3
	comp=Z,6.7nm,1.0s								
VES	Vestal, Richgr	79.94	45	P		P		13 13 35.8	+1.1
	baz=235,SNR=5.5								
MURC	Murrieta	79.96	48	P		P		13 13 36.3	+1.3
	baz=236								
BFSC	Mount Baldy Ra	80.00	47	P		P		13 13 36.2	+0.9
	baz=236								
KHMM	Horse Mountain	80.06	39	eP		P		13 13 36.4	+1.0
	comp=Z,25nm,0.8s								
MONP2	Monument Peak	80.12	49	P		P		13 13 37.6	+1.6
	baz=237,SNR=16								
EDW2	Edwards Air Fo	80.13	47	P		P		13 13 37.2	+1.3
	baz=236,SNR=14								
O02D	Mt. Diablo Mer	80.18	40	P		P		13 13 38.1	+2.1
	baz=232,SNR=14								
IKP	In-Ko-Pah, Jac	80.21	49	P		P		13 13 38.0	+1.7
	baz=237,SNR=8.9								
ISA	Isabella, Lake	80.25	46	eP		P		13 13 37.7	+1.2
	comp=Z,29nm,1.3s								
ISA	Isabella, Lake	80.25	46	eP		P		13 13 37.7	+1.2
ISA				pmax		pmax			
	comp=Z,29nm,1.3s								
ISA	Isabella, Lake	80.25	46	P		P		13 13 38.0	+1.6
	baz=235,SNR=19								
CMB	Columbia Colle	80.37	43	eP		P		13 13 38.1	+1.1
	comp=Z,38nm,1.4s								
CMB	Columbia Colle	80.37	43	eP		P		13 13 38.1	+1.1
CMB				pmax		pmax			
	comp=Z,38nm,1.4s								
PFO	Pinyon Flats O	80.48	48	eP		P		13 13 39.1	+1.3
	comp=Z,13nm,1.1s								
PFO	Pinyon Flats O	80.48	48	P		P		13 13 39.1	+1.3
	baz=237,SNR=5.5								
BBRC	Big Bear Solar	80.52	48	P		P		13 13 39.2	+1.0
	baz=236								
AFDM	Forest Hills D	80.55	42	eP		P		13 13 38.8	+0.9
	comp=Z,21nm,1.1s								
WDC	Whiskeytown Da	80.58	40	eP		P		13 13 39.0	+1.0
	comp=Z,34nm,1.1s								
ORV	Oroville	80.58	41	eP		P		13 13 39.2	+1.2
	comp=Z,18nm,0.9s								
SWSC	Sam W. Stewart	80.59	49	P		P		13 13 39.6	+1.4
	baz=237								
LRMC	Laurel Mtn Rad	80.67	46	P		P		13 13 40.0	+1.2
	baz=236,SNR=13								
MDJ	Mudanjiang	80.68	325	P		P		13 13 39.7	+1.3
MDJ				S		S		13 22 57.2	-3.6
MDJ				ScS		SKKSac		13 23 10.4	+2.6
MDJ				pmax		pmax			
	comp=Z,27nm,1.4s								
MDJ	Mudanjiang	80.68	325	eP		P		13 13 38.6	+0.2
	comp=Z,32nm,1.1s								
N02D	Trinity Center	80.73	39	P		P		13 13 41.0	+2.2
	baz=232,SNR=5.6								
MAW	Mawson	80.74	200	P		P		13 13 39.3	+0.9
	comp=Z,1.7nm,0.5s,baz=130,slow=8.9,SNR=3.6								
MAW	Mawson	80.74	200	eP		P		13 13 39.0	+0.6
	comp=Z,2.2nm,0.3s								
MAW	Mawson	80.74	200	eP		P		13 13 39.0	+0.6
MAW				pmax		pmax			
	comp=Z,2.0nm,0.3s								
RRX	Edison Barstow	80.81	47	P		P		13 13 40.7	+1.4
	baz=236								
O03E	Paynes Creek	80.85	40	P		P		13 13 40.8	+1.3
	baz=232,SNR=16								
M02C	Callahan	80.90	39	P		P		13 13 41.9	+2.2
	baz=231,SNR=8.2								
L02E	Cave Junction	80.94	38	P		P		13 13 41.8	+2.0
	baz=231								
CWC	Cottonwood Cre	80.95	45	P		P		13 13 41.4	+1.2
	baz=235								
MDPB	Devils Postpil	80.98	44	eP		P		13 13 41.5	+1.0
	comp=Z,25nm,1.0s								
BELC	Belle Mtn. Jos	81.02	48	P		P		13 13 42.1	+1.5
	baz=237,SNR=16								
MPMC	Manual Prospec	81.13	46	P		P		13 13 42.2	+1.0
	baz=236,SNR=27								
MLAC	Mammoth, Mammo	81.13	44	P		P		13 13 42.8	+1.6
	baz=235								
GSC	Goldstone, Bar	81.17	47	eP		P		13 13 42.3	+1.0
	comp=Z,16nm,1.1s								
GSC	Goldstone, Bar	81.17	47	eP		P		13 13 42.3	+1.0
GSC				pmax		pmax			
	comp=Z,16nm,1.1s								
GSC	Goldstone, Bar	81.17	47	P		P		13 13 42.7	+1.4
	baz=236,SNR=9.0								
YBH	Yreka Blue Hor	81.19	39	eP		P		13 13 42.8	+1.5
	comp=Z,34nm,0.8s								
YBH	Yreka Blue Hor	81.19	39	eP		P		13 13 42.8	+1.5
YBH				pmax		pmax			
	comp=Z,34nm,0.8s								
TIN	Tinemaha, Big	81.20	45	P		P		13 13 42.8	+1.3
	baz=235								
BC3	Big Chuckawall	81.21	49	P		P		13 13 43.1	+1.6
	baz=237,SNR=11								
HEC	Hector,Ludlow	81.23	48	P		P		13 13 42.6	+1.0
	baz=237,SNR=12								
K02D	Willamette Mer	81.25	38	P		P		13 13 43.2	+1.7
	baz=231,SNR=5.5								
WAKR	Walker	81.25	43	eP		P		13 13 43.1	+1.4
	comp=Z,42nm,1.1s								
GLA	Glamis	81.33	50	eP		P		13 13 43.9	+1.8
	comp=Z,31nm,0.9s								
GLA	Glamis	81.33	50	P		P		13 13 44.2	+2.1
	baz=238,SNR=18								
BEKR	Beckworth	81.48	41	eP		P		13 13 43.9	+1.1
	comp=Z,33nm,1.3s								
PNTR	Pine Nut	81.49	42	eP		P		13 13 44.2	+1.2
	comp=Z,54nm,0.8s								
VCNR	Virginia City	81.58	42	eP		P		13 13 44.4	+1.0
	comp=Z,17nm,0.9s								
KDAK	Kodiak Island	81.59	14	P		P		13 13 42.9	+0.2
	comp=Z,6.8nm,0.5s,baz=210,slow=2.5,SNR=14								
KDAK	Kodiak Island	81.59	14	eP		P		13 13 43.2	+0.5
	comp=Z,111nm,1.8s								
HUMO	Hull Mountain	81.60	38	eP		P		13 13 45.0	+1.8
	comp=Z,48nm,1.1s								
YERR	Yerington	81.66	43	eP		P		13 13 44.8	+1.0
	comp=Z,48nm,1.2s								
GMRC	Granite Mounta	81.67	48	P		P		13 13 45.3	+1.4
	baz=237,SNR=14								
IRM	Iron Mountain	81.70	49	P		P		13 13 45.6	+1.7
	baz=238,SNR=20								
L04D	Klamath Falls	81.73	39	P		P		13 13 45.7	+1.6
	baz=232,SNR=13								
GRAC	Grapevine Rang	81.74	45	P		P		13 13 45.6	+1.5
	baz=236,SNR=15								
M04C	Macdoel	81.74	39	P		P		13 13 45.7	+1.6
	baz=232,SNR=9.9								
FURC	Furnace Creek,	81.78	46	P		P		13 13 45.3	+1.2
	baz=236,SNR=7.7								
TUQ	Turquoise Moun	81.85	47	P		P		13 13 45.9	+1.1
	baz=237,SNR=5.8								
SHOC	Shoshone, Teco	81.86	47	P		P		13 13 45.8	+1.1
	baz=237,SNR=6.5								
RYN	Ryan	81.91	43	eP		P		13 13 46.3	+1.2
	comp=Z,53nm,1.7s								
Y12C	Blythe	81.92	49	eP		P		13 13 46.4	+1.4
	comp=Z,19nm,0.8s								
Y12C	Blythe	81.92	49	P		P		13 13 46.8	+1.8
	baz=238								
NV01	Mina Array Sit	81.94	44	eP		P		13 13 46.7	+1.4
NV01				epP		pP		13 15 42.5	+0.1
NVAR	Mina Array Bea	81.94	44	P		P		13 13 46.7	+1.4
	comp=Z,16nm,0.7s,baz=224,slow=7.6,SNR=126								
NVAR				pP		pP		13 15 42.5	+0.1
	comp=Z,1.4nm,0.9s,baz=203,slow=6.6,SNR=3.5								
NVAR				PKKPbc		PKKPbc		13 32 12.8	+0.6
	comp=Z,0.8nm,0.7s,baz=74,slow=2.5,SNR=8.1								
PAHR	Pah Rah Range	81.99	42	eP		P		13 13 46.5	+1.0
	comp=Z,30nm,1.1s								
NV11	Mina Array Sit	82.03	44	eP		P		13 13 46.6	+0.9
	comp=Z,3.6nm,1.3s								
I02D	Swisshome	82.04	36	P		P		13 13 46.8	+1.5
	baz=230								
I03D	Drain, OR	82.06	37	P		P		13 13 47.1	+1.7
	baz=231								
HSIG		82.15	55	eP		P		13 13 47.2	+0.9
	comp=Z,14nm,0.8s								
LDFC	Landfair	82.21	48	eP		P		13 13 48.5	+1.8
	comp=Z,59nm,0.9s								
214A	Organ Pipe Nat	82.22	52	P		P		13 13 48.4	+1.8
	baz=239								
K04D	Chiloquin, OR	82.31	39	P		P		13 13 48.1	+1.1
	baz=232								
WHN	Wuhan	82.31	307	P		P		13 13 48.2	+1.2
NEE2	Needles Airpor	82.39	48	P		P		13 13 48.9	+1.5
	baz=238								
CN2	Changchun	82.42	323	eP		P		13 13 46.8	-0.5
CN2				ePP		PP		13 17 07.6	+0.8
CN2				SKS		SKSac		13 23 13.7	-2.1
CN2				eSS		SS		13 28 58.2	+2.1
CN2				pmax		pmax			
	comp=Z,30nm,1.4s								
CN2				pmax		pmax			
	comp=Z,200nm,3.0s								
KVN	Kaiserville	82.42	43	eP		P		13 13 48.7	+1.0
	comp=Z,40nm,1.2s								
KVN	Kaiserville	82.42	43	eP		P		13 13 48.7	+1.0
KVN				pmax		pmax			
	comp=Z,40nm,1.2s								
TPNV	Topopah Spring	82.45	46	eP		P		13 13 49.1	+1.2
	comp=Z,26nm,0.9s								
TPNV	Topopah Spring	82.45	46	eP		P		13 13 49.1	+1.2
TPNV				pmax		pmax			
	comp=Z,26nm,0.9s								
TPNV	Topopah Spring	82.45	46	P		P		13 13 49.1	+1.2
	baz=236,SNR=40								
J04D	Umpqua Nationa	82.48	38	P		P		13 13 49.6	+1.7
	baz=232,SNR=20								
PDMCI	Parker Dam,Lak	82.48	49	P		P		13 13 49.4	+1.6
	baz=238,SNR=11								
IPM	Ipoh	82.58	278	eP		P		13 13 49.3	+0.5
	comp=Z,46nm,0.7s								
IPM	Ipoh	82.58	278	P		P		13 13 50.0	+1.2
I04A	Tendick Farm,	82.65	37	P		P		13 13 49.7	+1.2
	baz=232,SNR=7.4								
MOD	Modoc Plateau	82.72	40	eP		P		13 13 50.2	+1.1
	comp=Z,25nm,0.8s								
KLR	Kul'dur	82.76	330	diP		P		13 13 50.0	+1.1
	comp=Z,5.7nm,0.9s,baz=101,slow=3.4,SNR=18								
KLR	Kul'dur	82.76	330	diP		P		13 13 49.6	+0.7
KLR				pmax		pmax			
	comp=Z,16nm,1.2s								
K05A	Summer Lake	82.87	39	eP		P		13 13 51.4	+1.6
	comp=Z,78nm,1.0s								
H04D	Lebanon	82.92	37	P		P		13 13 51.5	+1.7
	baz=231								
SHPR	Sheep Range	82.95	47	eP		P		13 13 51.6	+1.2
	comp=Z,15nm,1.1s								
J05D	Fort Rock, OR	83.01	38	P		P		13 13 52.3	+1.8
	baz=232,SNR=35								
G03D	McMinnville, O	83.06	36	P		P		13 13 52.2	+1.7
	baz=231								
W13A	Hualapai Mount	83.08	48	eP		P		13 13 52.0	+0.9
	comp=Z,12nm,0.9s								
KULM	Kulim	83.22	278	eP		P		13 13 52.9	+0.8
	comp=Z,21nm,0.8s								
KULM	Kulim	83.22	278	P		P		13 13 53.0	+1.0
TIA	Tai'an	83.24	313	P		P		13 13 52.8	+1.2
TIA				pmax		pmax			
	comp=Z,19nm,1.3s								
H04A	Detroit Lake	83.33	37	eP		P		13 13 52.6	+0.7
	comp=Z,27nm,0.7s								
CNPM	China Poot	83.47	14	eP		P		13 13 52.6	+0.4
	comp=Z,40nm,0.7s								
PINE	Pine Mountain	83.49	38	eP		P		13 13 54.3	+1.3
	comp=Z,64nm,0.9s								
I05D	Terrebonne, OR	83.59	37	P		P		13 13 54.7	+1.4
	baz=232								
R11A	Troy Canyon, C	83.66	45	eP		P		13 13 54.5	+0.7
	comp=Z,6.6nm,1.1s								
R11A	Troy Canyon, C	83.66	45	P		P		13 13 54.8	+0.9
	baz=237,SNR=12								
F04D	Rainier, OR	83.75	35	P		P		13 13 55.8	+1.9
	baz=231								
BMN	Battle Mountai	83.76	42	eP		P		13 13 55.0	+0.7
	comp=Z,22nm,1.0s								
BMN	Battle Mountai	83.76	42	eP		P		13 13 55.0	+0.7
BMN				pmax		pmax			
	comp=Z,22nm,1.0s								
BRLK	Bradley Lake	83.77	14	eP		P		13 13 53.7	0.0
	comp=Z,55nm,0.9s								
TUC	Tucson	83.88	52	eP		P		13 13 56.8	+1.8
	comp=Z,20nm,0.9s								
TUC	Tucson	83.88	52	P		P		13 13 57.0	+2.0
	baz=240								
RSO	Redoubt South	84.00	13	eP		P		13 13 54.7	-0.4
WVOR	Wild Horse Val	84.04	40	eP		P		13 13 56.4	+0.8
	comp=Z,28nm,1.1s								
NLWA	Neilton Lookou	84.13	34	eP		P		13 13 57.1	+1.3
	comp=Z,30nm,0.9s								
G05D	Wamic, OR	84.16	37	P		P		13 13 57.3	+1.3
	baz=232								
MA2	Magadan	84.24	345	P		P		13 13 55.6	-0.4
	comp=Z,5.0nm,0.7s,baz=138,slow=2.4,SNR=7.6								
MA2	Magadan	84.24	345	eP		P		13 13 55.6	-0.4
	comp=Z,12nm,1.0s								
MA2	Magadan	84.24	345	eP		P		13 13 55.6	-0.4
MA2				pmax		pmax			
	comp=Z,12nm,1.0s								
E04D	Cinebar	84.29	35	P		P		13 13 57.9	+1.4
	baz=231								
SEW	Seward	84.40	14	eP		P		13 13 56.5	-0.2
	comp=Z,23nm,0.8s								
X16A	Lo Mia Camp, P	84.45	50	eP		P		13 13 59.3	+1.4
	comp=Z,17nm,1.1s								
LCMT	Little Creek M	84.52	47	eP		P		13 13 58.8	+0.7
	comp=Z,9.1nm,0.9s								
G06A	Carlson Farm,	84.54	37	eP		P		13 13 58.4	+0.5
	comp=Z,24nm,1.1s								
D04E	Lakebay	84.57	35	P		P		13 13 59.5	+1.6
	baz=231								
D03D	Eldon	84.63	34	P		P		13 13 59.8	+1.6
	baz=231,SNR=6.8								
J08A	Circle Bar Ran	84.67	39	eP		P		13 13 59.3	+0.6
	comp=Z,40nm,1.3s								
CCUT	Cedar City	84.72	46	eP		P		13 13 59.3	+0.1
	comp=Z,8.1nm,0.9s								
KNB	Kanab	84.81	47	eP		P		13 14 00.4	+0.8
	comp=Z,10nm,0.9s								
KNB	Kanab	84.81	47	eP		P		13 14 00.4	+0.8
KNB				pmax		pmax			
	comp=Z,11nm,0.9s								
LON	Longmire	84.82	35	eP		P		13 13 59.4	+0.2
	comp=Z,7.4nm,0.9s								
LON	Longmire	84.82	35	eP		P		13 13 59.4	+0.2
LON				pmax		pmax			
	comp=Z,7.0nm,0.9s								
U15A	North Rim	84.87	48	eP		P		13 14 01.4	+1.4
	comp=Z,28nm,0.8s								
SZCU	Shurtz Canyon	84.93	47	eP		P		13 13 59.5	-0.7
	comp=Z,11nm,1.1s								
D05A	Enumclaw	84.99	35	eP		P		13 14 00.7	+0.8
	comp=Z,66nm,1.2s								
WUAZ	Wupatki	85.05	49	eP		P		13 14 02.0	+1.2
	comp=Z,16nm,1.1s								
WUAZ	Wupatki	85.05	49	P		P		13 14 02.1	+1.3
	baz=240								
PGC	Sidney	85.15	33	eP		P		13 14 01.1	+0.4
	comp=Z,33nm,0.8s								
ELK	Elko	85.19	43	eP		P		13 14 02.0	+0.6
	comp=Z,6.8nm,0.8s								
ELK	Elko	85.19	43	eP		P		13 14 02.0	+0.6
ELK				pmax		pmax			
	comp=Z,7.0nm,0.8s								
RC01	Rabbit Creek A	85.21	14	eP		P		13 14 00.6	-0.1
	comp=Z,33nm,1.0s								
HPIG		85.31	59	eP		P		13 14 03.2	+1.0
	comp=Z,9.8nm,0.9s								
F07A	Phinny Hill Vi	85.33	37	eP		P		13 14 03.0	+1.3
	comp=Z,18nm,0.9s								
SUA	Susitna One	85.33	13	eP		P		13 14 01.2	-0.2
	comp=Z,9.3nm,0.7s								
PKCU	Pink Cliffs	85.38	47	eP		P		13 14 04.6	+2.1
	comp=Z,27nm,0.9s								
G08A	Pilot Rock	85.52	38	eP		P		13 14 03.7	+1.0
	comp=Z,34nm,0.9s								
A04D	Lummi Island	85.58	33	P		P		13 14 04.2	+1.5
	baz=231								
X18A	Snowflake	85.58	51	eP		P		13 14 04.0	+0.6
	comp=Z,10nm,0.8s								
B05A	Bryant	85.61	34	P		P		13 14 04.1	+1.3
	baz=231,SNR=8.8								
GLI	Glacier Island	85.63	15	eP		P		13 14 02.6	-0.1
	comp=Z

comp=Z,71nm,0.7s
DUG Dugway, Tooele 86.46 44 P P 13 14 08.2 +0.8
baz=239
WRAK Wrangell Islan 86.56 24 eP P 13 14 08.6 +1.4
comp=Z,27nm,0.8s
D08A Wollman Farm, 86.58 36 eP P 13 14 08.8 +1.2
comp=Z,41nm,0.9s
E09A Wood Farm, Sta 86.70 37 eP P 13 14 09.2 +1.0
comp=Z,39nm,1.1s
CAST Castle Rocks 86.84 12 eP P 13 14 07.1 -1.3
comp=Z,36nm,0.8s
SEY Seymchan 86.86 347 P P 13 14 08.7 +0.3
comp=Z,16nm,0.8s,baz=153,slow=5.5,SNR=31
SEY Seymchan 86.86 347 ceP P 13 14 08.9 +0.5
F10A Beach Ranch, E 86.91 38 eP P 13 14 09.7 +0.4
comp=Z,65nm,0.9s
BALM Baldy 86.98 17 eP P 13 14 09.5 +0.3
comp=Z,32nm,0.8s
BALM Baldy 86.98 17 eP P 13 14 09.5 +0.3
BALM pmax pmax
comp=Z,32nm,0.8s
TMUT Trail Mountain 87.07 46 eP P 13 14 09.6 -0.9
comp=Z,26nm,1.1s
PLID Pearl Lake 87.12 39 eP P 13 14 11.0 +0.6
comp=Z,58nm,1.4s
B08A Colville Reser 87.13 35 eP P 13 14 10.4 +0.2
comp=Z,31nm,0.8s
LLLB Lilloet 87.18 32 eP P 13 14 11.0 +0.7
comp=Z,30nm,1.0s
CTGM Chitina Glacie 87.20 17 eP P 13 14 10.7 +0.4
comp=Z,37nm,0.8s
TRF Thorofare Moun 87.21 12 eP P 13 14 09.6 -0.8
comp=Z,17nm,0.7s
JIS Juneau Island 87.22 22 eP P 13 14 11.3 +1.1
comp=Z,14nm,1.0s
HLID Hailey 87.23 41 eP P 13 14 12.0 +1.0
comp=Z,20nm,1.0s
HLID Hailey 87.23 41 P P 13 14 12.4 +1.5
baz=237
BESE Bessie Mountai 87.29 21 eP P 13 14 11.8 +1.1
comp=Z,29nm,1.0s
HVU Hansel Valley 87.31 43 eP P 13 14 12.0 +0.7
comp=Z,12nm,1.0s
C09A Chrisman Ranch 87.37 36 eP P 13 14 11.9 +0.6
comp=Z,34nm,0.9s
SNAA Sanae 87.38 179 P P 13 14 10.9 -0.2
HARP HAARP 87.43 15 eP P 13 14 11.5 +0.3
comp=Z,36nm,0.6s
SRU San Rafael Swe 87.43 46 eP P 13 14 12.6 +0.6
comp=Z,17nm,0.8s
RND Reindeer 87.47 13 eP P 13 14 11.2 -0.2
comp=Z,86nm,0.8s
RND Reindeer 87.47 13 eP P 13 14 11.2 -0.2
RND pmax pmax
comp=Z,86nm,0.8s
P17A Butcher Ranch, 87.47 46 eP P 13 14 13.1 +0.9
comp=Z,12nm,1.0s
DHY Denali Highway 87.50 14 eP P 13 14 11.4 -0.3
comp=Z,21nm,1.1s
VNA3 Neumayer Olymp 87.54 176 P P 13 14 11.8 0.0
Y22D IRIS PASSCAL I 87.57 52 P P 13 14 14.1 +1.3
baz=242
MNTX Cornudas Mount 87.65 55 eP P 13 14 14.0 +1.1
comp=Z,20nm,0.9s
MNTX Cornudas Mount 87.65 55 P P 13 14 14.6 +1.6
baz=243,SNR=20
BPAW Bear Paw Mtn. 87.66 12 eP P 13 14 11.0 -1.3
comp=Z,5.2nm,0.8s
MCK McKinley 87.74 13 eP P 13 14 12.0 -0.6
comp=Z,38nm,0.8s
MCK McKinley 87.74 13 eP P 13 14 12.0 -0.6
MCK pmax pmax
comp=Z,38nm,0.8s
SKAG Skagway 87.81 21 eP P 13 14 14.0 +1.1
comp=Z,46nm,1.4s
PAX Paxson 87.84 15 eP P 13 14 12.8 -0.4
comp=Z,14nm,1.0s
PAX Paxson 87.84 15 eP P 13 14 12.8 -0.4
PAX pmax pmax
comp=Z,15nm,1.0s
TCUT Toone Canyon 87.86 44 eP P 13 14 14.7 +0.6
comp=Z,33nm,1.0s
ZEA Zeya 87.88 331 eP P 13 14 14.1 +0.6
ZEA pmax pmax
comp=Z,17nm,1.0s
PV05 Paradox Valley 87.90 48 eP P 13 14 15.5 +1.2
comp=Z,10nm,0.9s
MVCO Mesa Verde 87.90 49 P P 13 14 14.1 -0.2
baz=241
TX31 Lajitas Ar. Si 87.94 58 eP P 13 14 15.9 +1.4
comp=Z,23nm,1.0s
LTX Lajitas 87.95 58 eP P 13 14 16.1 +1.6
LTX epP pwP 13 16 16.7 0.0
TXAR Lajitas Array 87.95 58 P P 13 14 16.1 +1.6
comp=Z,12nm,0.9s,baz=218,slow=5.6,SNR=113
TXAR pP pwP 13 16 16.7 0.0
comp=Z,1.5nm,0.9s,baz=216,slow=6.2,SNR=5.8
TXAR PKKPbc PKKPbc 13 31 57.5 +0.1
comp=Z,1.0nm,0.6s,baz=111,slow=2.5,SNR=13
VNA2 Neumayer--Watz 87.97 177 P P 13 14 08.6 -5.2
baz=185,slow=3.1
XAN Xi'an 88.01 308 P P 13 14 16.0 +1.3
XAN pmax pmax
comp=Z,17nm,1.0s
XAN Xi'an 88.01 308 eP P 13 14 15.8 +1.1
comp=Z,25nm,1.0s
XAN Xi'an 88.01 308 eP P 13 14 15.8 +1.1
XAN pmax pmax
comp=Z,25nm,1.0s
BWN Browne 88.03 12 eP P 13 14 13.4 -0.5
comp=Z,81nm,1.0s
PV14 Lion Creek, Pa 88.09 48 eP P 13 14 15.0 -0.2
comp=Z,9.9nm,0.9s
PV18 Skein Mesa, Pa 88.11 48 eP P 13 14 15.2 0.0
comp=Z,10nm,1.2s
PV20 West Nyswonger 88.12 48 eP P 13 14 15.7 +0.5
comp=Z,9.1nm,0.9s
PV16 Nyswonger Mesa 88.14 48 eP P 13 14 15.7 +0.3
comp=Z,21nm,1.7s
PV23 Carpenter Ridg 88.14 47 eP P 13 14 15.7 +0.2
comp=Z,12nm,0.9s
PV03 Paradox Valley 88.16 48 eP P 13 14 15.9 +0.5
comp=Z,10nm,1.2s
PV11 David Mesa, Pa 88.16 48 eP P 13 14 15.2 -0.3
comp=Z,19nm,1.3s
PV04 Paradox Valley 88.19 48 eP P 13 14 16.1 +0.6
comp=Z,7.9nm,0.9s
HYT Haines Junctio 88.19 19 eP P 13 14 15.8 +0.8
comp=Z,20nm,0.9s
PV21 Cone Mtn., Par 88.22 47 eP P 13 14 16.8 +1.0
comp=Z,7.3nm,0.8s
PV12 Saucer Basin, 88.22 48 eP P 13 14 16.7 +1.0
comp=Z,16nm,0.9s
MENT Mentasta 88.23 15 eP P 13 14 15.2 +0.3
comp=Z,24nm,0.9s
NEW Newport 88.27 36 eP P 13 14 16.0 +0.5
comp=Z,14nm,1.0s
NEW Newport 88.27 36 eP P 13 14 16.0 +0.5
NEW pmax pmax
comp=Z,14nm,1.0s
NEW Newport 88.27 36 P P 13 14 16.1 +0.5
baz=235,SNR=8.1
PV01 Paradox Valley 88.29 48 eP P 13 14 16.8 +0.6
comp=Z,21nm,1.4s
TASM ASL Pad, Albuq 88.31 52 P P 13 14 17.1 +0.8
baz=243,SNR=15
TASM ASL Pad, Albuq 88.31 52 P P 13 14 17.2 +1.0
baz=243,SNR=16
ANMO Albuquerque 88.31 52 eP P 13 14 17.2 +1.0
comp=Z,15nm,1.1s
ANMO Albuquerque 88.31 52 ceP P 13 14 16.9 +0.7
ANMO pmax pmax
comp=Z,15nm,1.1s
ANMO Albuquerque 88.31 52 P P 13 14 17.2 +1.0
baz=243
PV22 Blue Mesa, Par 88.34 47 eP P 13 14 16.8 +0.6
comp=Z,10nm,1.1s
PV07 Paradox Valley 88.39 48 eP P 13 14 17.0 +0.5
comp=Z,6.3nm,1.0s
WRH Wood River Hil 88.57 13 eP P 13 14 15.9 -0.5
comp=Z,53nm,0.8s
DOT Dot Lake 88.75 15 eP P 13 14 17.6 +0.2
comp=Z,26nm,0.8s
HDA Harding Lake 88.76 13 eP P 13 14 17.0 -0.3
comp=Z,35nm,0.6s
HDA Harding Lake 88.76 13 P P 13 14 17.1 -0.3
baz=209
CCB Clear Creek Bu 88.78 13 eP P 13 14 16.7 -0.7
comp=Z,45nm,0.7s
MCMT McKenzie Canyo 88.86 40 eP P 13 14 19.4 +0.8
WHY Whitehorse 88.88 20 eP P 13 14 18.9 +0.8
comp=Z,19nm,0.8s
DLBC Dease Lake 88.90 23 eP P 13 14 19.0 +0.8
comp=Z,16nm,0.9s
MDM Murphy Dome 88.97 12 eP P 13 14 17.7 -0.7
comp=Z,23nm,0.8s
TCOL CIGO, UAF Yank 88.97 13 P P 13 14 17.8 -0.4
baz=209
COLA College 88.97 13 eP P 13 14 17.7 -0.5
comp=Z,56nm,0.8s
COLA College 88.97 13 d iP P 13 14 17.8 -0.5
COLA pmax pmax
comp=Z,52nm,0.8s
KMI Kunming 89.07 297 P P 13 14 20.3 +0.3
KMI pmax pmax
comp=Z,17nm,0.6s
KMI pmax pmax
comp=Z,94nm,3.9s
ILAR Eielson Array 89.08 13 P P 13 14 18.4 -0.4
comp=Z,17nm,0.8s,baz=222,slow=5.2,SNR=140
ILAR PKiKP PKiKP 13 19 12.7 -0.9
comp=Z,0.7nm,0.8s,baz=232,slow=4.5,SNR=4.1
ILAR PKKPbc PKKPdf 13 31 52.6 +1.4
comp=Z,0.3nm,0.5s,baz=359,slow=1.5,SNR=5.6
ILB Eielson Array 89.08 13 eP P 13 14 18.0 -0.8
comp=Z,25nm,1.0s
MSO Missoula 89.27 38 eP P 13 14 19.5 -0.8
comp=Z,14nm,1.5s
MSO Missoula 89.27 38 P P 13 14 20.4 +0.1
baz=238
POKR Poker Plat Res 89.28 13 P P 13 14 19.0 -0.7
baz=209
DLMT Dillon 89.29 40 eP P 13 14 21.1 +0.6
comp=Z,14nm,0.9s
PLCA Paso Flores 89.30 134 PKKPbc PKKPbc 13 31 53.7 -0.6
comp=Z,2.1nm,1.0s,baz=53,slow=8.2,SNR=2.9
S22A 4UR Ranch, Cre 89.33 49 eP P 13 14 21.9 +0.9
comp=Z,13nm,1.1s
S22A 4UR Ranch, Cre 89.33 49 P P 13 14 22.1 +1.1
baz=242,SNR=15
HHC Hu-ho-hao-te 89.34 315 eP P 13 14 22.2 +1.4
HHC SKS SKSac 13 23 55.9 -2.7
HHC S ScS 13 24 29.8 +2.5
HHC pmax pmax
comp=Z,18nm,1.1s
HHC pmax pmax
comp=Z,61nm,6.0s
REDW Red Top Meadow 89.34 42 eP P 13 14 21.6 +0.7
comp=Z,33nm,1.0s
TPAW Teton Pass 89.35 42 eP P 13 14 21.5 +0.5
comp=Z,16nm,0.9s
FXWY Fox Creek 89.37 42 eP P 13 14 21.3 +0.3
comp=Z,10nm,0.9s
SNOW Snow King Moun 89.45 42 eP P 13 14 22.5 +1.1
comp=Z,31nm,0.9s
O20A White River Ci 89.47 46 eP P 13 14 22.3 +0.8
comp=Z,16nm,1.0s
O20A White River Ci 89.47 46 P P 13 14 22.5 +1.0
baz=242,SNR=8.5
LNIG Linares 89.52 63 eP P 13 14 22.2 +0.4
comp=Z,17nm,0.9s
IMW Indian Meadow 89.56 42 eP P 13 14 22.6 +0.7
comp=Z,24nm,0.9s
MOOW Moose Ponds 89.61 42 eP P 13 14 23.1 +1.1
comp=Z,34nm,1.8s
BILL Bilibino 89.61 354 eP P 13 14 21.5 +0.3
comp=Z,15nm,1.2s
BILL Bilibino 89.61 354 eP P 13 14 21.5 +0.3
BILL pmax pmax
comp=Z,15nm,1.2s
LOHW Long Hollow 89.63 42 eP P 13 14 22.5 +0.4
comp=Z,11nm,0.6s
RDOG Red Dog Mine 89.69 6 eP P 13 14 22.0 +0.4
comp=Z,14nm,0.8s
CMAR Chiang Mai Arr 89.72 290 P P 13 14 24.9 +2.0
comp=Z,13nm,0.9s,baz=123,slow=3.0,SNR=67
CMAR pP pwP 13 16 25.3 -1.6
comp=Z,0.4nm,0.5s,baz=123,slow=3.3,SNR=2.4
CMAR PP PP 13 18 04.8 -0.6
comp=Z,0.5nm,0.3s,baz=126,slow=6.0,SNR=4.9
QLMT Earthquake Lak 89.73 41 eP P 13 14 24.2 +1.6
FLWY Flagg Ranch 89.80 42 eP P 13 14 24.1 +1.2
comp=Z,26nm,0.9s
YHB Horse Butte 89.83 41 eP P 13 14 24.7 +1.6
comp=Z,21nm,1.1s
CHTO Chiang Mai 89.86 290 eP P 13 14 24.8 +1.2
comp=Z,15nm,1.0s
BW06 Boulder Array 89.87 43 eP P 13 14 23.7 +0.3
comp=Z,16nm,0.8s
BW06 Boulder Array 89.87 43 P P 13 14 24.0 +0.6
baz=241,SNR=26
PD31 Pinedale Array 89.87 43 eP P 13 14 23.8 +0.5
comp=Z,14nm,0.8s
PDAR Pinedale Array 89.87 43 P P 13 14 24.2 +0.9
comp=Z,12nm,0.7s,baz=212,slow=3.2,SNR=118
PDAR PKKPbc PKKPdf 13 31 50.9 +1.7
comp=Z,0.5nm,0.8s,baz=57,slow=5.5,SNR=4.1
SMCO Snowmass 89.89 48 eP P 13 14 24.1 +0.4
comp=Z,18nm,0.9s
BOZ Bozeman (W) 90.00 40 eP P 13 14 24.3 +0.6
comp=Z,14nm,0.9s
BOZ Bozeman (W) 90.00 40 eP P 13 14 24.3 +0.6
BOZ pmax pmax
comp=Z,14nm,0.9s
BOZ Bozeman (W) 90.00 40 P P 13 14 24.8 +1.1
baz=239,SNR=21
PRP Porcupine Dome 90.02 13 eP P 13 14 22.8 -0.6
comp=Z,33nm,1.4s
H17A Grant Village 90.03 42 eP P 13 14 26.3 +2.3
comp=Z,17nm,1.0s
H17A Grant Village 90.03 42 P P 13 14 26.4 +2.3
baz=240,SNR=8.5
YHH Holmes Hill 90.06 41 eP P 13 14 25.3 +1.1
comp=Z,17nm,1.4s
LKWY Lake 90.23 42 eP P 13 14 27.0 +2.0
comp=Z,14nm,1.0s
LKWY Lake 90.23 42 eP P 13 14 27.0 +2.0
LKWY pmax pmax
comp=Z,14nm,1.0s
SDCO Great Sand Dun 90.26 49 eP P 13 14 26.1 +0.8
comp=Z,11nm,1.3s
SDCO Great Sand Dun 90.26 49 P P 13 14 26.2 +0.8
baz=243,SNR=15
EGAK Eagle 90.39 15 eP P 13 14 25.0 +0.1
comp=Z,26nm,0.8s
HRY Holter Researc 90.45 39 eP P 13 14 26.6 +0.8
WALA Waterton Lakes 90.48 37 eP P 13 14 26.4 +0.5
comp=Z,11nm,0.9s
MSTX Muleshoe 90.61 54 eP P 13 14 27.3 +0.5
comp=Z,14nm,0.9s
MSTX Muleshoe 90.61 54 P P 13 14 27.3 +0.5
baz=245
COLD Coldfoot 90.63 11 eP P 13 14 26.6 +0.7
comp=Z,9.7nm,1.1s
T25A Trinidad 90.77 50 eP P 13 14 27.9 +0.3
comp=Z,7.8nm,0.9s
T25A Trinidad 90.77 50 P P 13 14 28.2 +0.6
baz=244,SNR=5.8
RWWY Rawlins 90.89 45 eP P 13 14 28.6 +0.5
comp=Z,34nm,1.1s
833A Chaparral WMA, 90.94 60 P P 13 14 29.2 +0.9
baz=246
Q24A Divide 91.06 48 eP P 13 14 28.5 -0.5
comp=Z,6.2nm,0.8s
Q24A Divide 91.06 48 P P 13 14 29.8 +0.8
baz=244
ISCO Idaho Springs 91.11 47 eP P 13 14 29.7 +0.5
comp=Z,7.6nm,1.3s
ISCO Idaho Springs 91.11 47 eP P 13 14 29.7 +0.5
ISCO pmax pmax
comp=Z,8.0nm,1.3s
ISCO Idaho Springs 91.11 47 P P 13 14 30.0 +0.8
baz=243,SNR=5.6
RLMT Red Lodge 91.20 42 eP P 13 14 30.5 +1.1
comp=Z,5.6nm,1.0s
RLMT Red Lodge 91.20 42 P P 13 14 30.5 +1.1
baz=241
N23A Red Feather La 91.38 46 eP P 13 14 31.4 +1.0
comp=Z,11nm,1.0s
N23A Red Feather La 91.38 46 P P 13 14 31.4 +1.0
baz=243,SNR=6.7
JCT Junction City 91.47 58 eP P 13 14 31.2 +0.4
comp=Z,8.7nm,0.8s
JCT Junction City 91.47 58 eP P 13 14 31.2 +0.4
JCT pmax pmax
comp=Z,9.0nm,0.8s
JCT Junction City 91.47 58 P P 13 14 30.6 -0.2
baz=246
K22A Casper 91.79 45 eP P 13 14 32.6 +0.6
comp=Z,17nm,1.1s
K22A Casper 91.79 45 P P 13 14 32.7 +0.6
baz=243,SNR=6.5
AMTX Amarillo 91.81 53 P P 13 14 32.4 +0.1
baz=246
PHWY Pilot Hill 91.89 46 eP P 13 14 33.0 +0.3
comp=Z,7.4nm,1.1s
TOLK Toolik Lake Re 92.00 10 eP P 13 14 32.6 +0.3
comp=Z,17nm,1.5s
TOLK Toolik Lake Re 92.00 10 P P 13 14 32.6 +0.3
baz=207
EGMT Eagleton 92.33 39 P P 13 14 35.0 +0.6
baz=241
ABTX Abilene, Hawle 92.45 56 P P 13 14 35.6 +0.4
baz=246
LZH Lanzhou 92.65 308 ⇑P P 13 14 37.7 +1.5
LZH sP sP 13 17 31.1 +0.6
LZH PP PP 13 18 29.1 +1.1
LZH pmax pmax
comp=Z,17nm,1.5s
LZH pmax pmax
comp=Z,120nm,4.9s
EPYK Eagle Plains 92.78 16 eP P 13 14 36.1 +0.2
comp=Z,15nm,0.8s
EPYK Eagle Plains 92.78 16 P P 13 14 35.9 0.0
baz=219
KSCO Kaye Shedlock' 92.85 49 P P 13 14 37.6 +0.6
baz=245
LAO LASA Array 93.81 41 P P 13 14 42.3 +1.1
baz=243
WHTX Lake Whitney, 93.91 57 P P 13 14 42.0 +0.2
baz=248
RSSD Black Hills 94.06 44 eP P 13 14 42.6 +0.1
comp=Z,7.2nm,0.9s
RSSD Black Hills 94.06 44 eP P 13 14 42.6 +0.1
RSSD pmax pmax
comp=Z,7.0nm,0.9s
RSSD Black Hills 94.06 44 P P 13 14 42.8 +0.2
baz=244
INK Inuvik 95.06 15 P P 13 14 45.8 -0.4
comp=Z,5.9nm,0.8s,baz=222,slow=6.4,SNR=13
INK Inuvik 95.06 15 eP P 13 14 45.5 -0.7
comp=Z,7.1nm,1.0s
INK Inuvik 95.06 15 eP P 13 14 45.5 -0.7
INK pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 95.43 319 ceP P 13 14 48.0 -0.6
ULN pmax pmax
comp=Z,4.0nm,1.5s
SONM Songino Array 95.82 319 PP PP 13 18 48.1 -3.8
comp=Z,2.3nm,1.3s,baz=104,slow=6.3,SNR=3.6
GTA Gaotai 96.88 309 eP P 13 14 57.7 +2.4
GTA pmax pmax
comp=Z,4.0nm,1.1s
YKA Yellowknife Ar 97.37 25 P Pdif 13 14 56.5 -0.1
comp=Z,2.1nm,0.7s,baz=243,slow=4.4,SNR=14
YKA PKiKP PKiKP 13 19 27.4 -0.5
comp=Z,0.3nm,0.6s,baz=245,slow=1.3,SNR=3.5
X40A Basin Creek Fa 98.42 56 P P 13 15 02.1 0.0
baz=250
ECSD EROS Data Cent 98.85 47 P P 13 15 04.1 +0.3
baz=249
TIXI Tiksi 99.20 345 PKiKP PKiKP 13 19 30.5 -0.5
comp=Z,0.7nm,0.3s,baz=66,slow=3.9,SNR=3.6
TIXI Tiksi 99.20 345 i P Pdif 13 15 03.0 -1.6
TIXI pmax pmax
comp=Z,1.0nm,1.0s
RES Resolute Bay 108.60 16 PKiKP PKiKP 13 19 47.5 -0.6
comp=Z,2.0nm,0.7s,baz=259,slow=5.4,SNR=4.3
RES Resolute Bay 108.60 16 ePKiKP PKiKP 13 19 47.3 -0.8
E47A Iron Bridge 108.66 47 P PKiKP 13 19 48.3 -0.8
baz=259
Z59A Georgetown, SC 108.88 61 P PKiKP 13 19 48.6 -1.3
baz=257
D47A Chapleau 108.89 46 P PKiKP 13 19 48.9 -0.7
baz=259
Q54A Coxs Mills 108.91 55 P PKiKP 13 19 48.6 -1.3
baz=258
M52A Chesterland 109.05 52 P PKiKP 13 19 49.5 -0.5
baz=258
E48A Lockeyer 109.42 47 P PKiKP 13 19 49.8 -0.8
baz=260
D49A Beulah Townshi 110.11 46 P PKiKP 13 19 51.1 -0.7
baz=260
S57A Dark Hollow, R 110.11 56 P PKiKP 13 19 51.2 -0.9
baz=258
O55A Ligonier 110.32 54 P PKiKP 13 19 51.4 -1.1
baz=259
ZALV Zalesovo Beam 110.59 321 PKiKP PKiKP 13 19 51.6 -0.8
comp=Z,4.2nm,0.6s,baz=159,slow=1.0,SNR=16
F51A Arnstein 110.87 48 P PKiKP 13 19 52.4 -0.8
baz=261
R58B Mineral 110.98 56 P PKiKP 13 19 52.7 -1.1
baz=259
MKAR Makanchi Array 111.17 313 PKiKP PKiKP 13 19 53.2 -0.7
comp=Z,1.8nm,0.4s,baz=164,slow=0.6,SNR=26
MKAR PKKPbc PKKPbc 13 30 51.7 -1.0
comp=Z,0.6nm,0.7s,baz=262,slow=4.3,SNR=5.9
NVS Novosibirsk 111.62 322 i PKIKP PKiKP 13 19 54.0 -0.4
D52A ZEK Kipawa Sen 112.05 47 P PKiKP 13 19 54.8 -0.7
baz=262
E53A Dumoine, Ponti 112.48 47 P PKiKP 13 19 55.7 -0.6
baz=263
D53A Lac Vacive, Po 112.55 47 P PKiKP 13 19 55.7 -0.8
baz=263
E54A Lac Daplat, Po 112.82 47 P PKiKP 13 19 56.1 -0.9
baz=263
LSQQ Lebel-sur-Quev 113.25 45 P PKiKP 13 19 56.7 -1.1
baz=264
D54A Lac Fusel, La 113.26 47 P PKiKP 13 19 56.6 -1.2
baz=264
KURK Kurchatov 114.03 317 c iPKIKP PKPdf 13 19 58.4 -0.8
KURK pmax pmax
comp=Z,8.0nm,1.0s
KSH Kashi 114.73 305 ePKP PKiKP 13 20 01.4 +0.3
CHGQ Chibougamau 115.01 44 P PKPdf 13 19 59.9 -1.2
baz=266
AAK Ala-Archa 116.19 308 i PKIKP PKPdf 13 20 03.1 -0.7
GAR Garm 119.04 304 ePKPdf PKPdf 13 20 08.8 -0.5
KK31 Karatay Array 119.14 308 ePKPdf PKPdf 13 20 08.8 -0.5
KKAR Karatay Array 119.14 308 ePKPdf PKPdf 13 20 08.9 -0.4
PQI Presque Isle 119.14 48 ePKPdf PKPdf 13 20 08.4 -0.8
BRVK Borovoye 119.22 320 ePKPdf PKPdf 13 20 08.7 -0.4
BRVK Borovoye 119.22 320 c iPKIKP PKPdf 13 20 08.8 -0.3
BRVK pmax pmax
comp=Z,15nm,1.0s
BDFB Brasilia 119.34 123 PKP PKPdf 13 20 09.6 -1.0
comp=Z,1.1nm,0.3s,baz=171,slow=23,SNR=3.4
KBL Kabul 119.63 298 ePKPdf PKPdf 13 20 10.5 -0.3
KBL Kabul 119.63 298 ePKIKP PKPdf 13 20 10.5 -0.3
BATG Bathurst New B 120.48 47 ePKPdf PKPdf 13 20 11.2 -0.5
LMN Caledonia Moun 121.38 48 ePKPdf PKPdf 13 20 12.9 -0.6
HAL Halifax 122.26 50 ePKPdf PKiKP 13 20 15.6 +0.2
SPA0 Spitsbergen Ar 122.47 356 ePKPdf PKPdf 13 20 14.4 -0.3
SPA0 Spitsbergen Ar 122.47 356 ePKPdf PKPdf 13 20 14.8 0.0
ILULI Ilulissat 122.57 20 ePKPdf PKPdf 13 20 14.6 -0.4
ILULI Ilulissat 122.57 20 ePKIKP PKPdf 13 20 14.6 -0.4
DAG Danmarks Havn 123.44 5 ‖ iPKIKP PKPdf 13 20 15.4 -1.2
DAG pmax pmax
comp=Z,8.0nm,0.6s
DAG Danmarks Havn 123.44 5 ‖ iP PKPdf 13 20 15.4 -1.2
comp=Z,12nm,0.6s
GBN Guysborough 123.70 49 ePKPdf PKPdf 13 20 17.8 -0.1
SFJD Kangerlussuaq 123.78 22 i PKIKP PKPdf 13 20 16.7 -0.7
SFJD pmax pmax
comp=Z,11nm,0.7s
SFJD Kangerlussuaq 123.78 22 i P PKPdf 13 20 16.7 -0.7
comp=Z,11nm,0.7s
SUMG Summit 123.93 13 ePKPdf PKPdf 13 20 18.1 0.0
SUMG Summit 123.93 13 ePKIKP PKPdf 13 20 18.1 0.0
SUMG Summit 123.93 13 i P PKiKP 13 20 18.4 -0.1
comp=Z,47nm,1.0s
SVE Sverdlovsk 124.15 325 ePKIKP PKPdf 13 20 18.5 +0.1
SVE pmax pmax
comp=Z,25nm,0.8s
ARU Arti 125.36 325 PKP PKiKP 13 20 21.2 0.0
comp=Z,7.7nm,0.4s,baz=57,slow=1.2,SNR=44
ARU Arti 125.36 325 ePKPdf PKPdf 13 20 20.6 -0.2
ARU Arti 125.36 325 i PKIKP PKPdf 13 20 20.9 +0.1
ARU 13 22 20.1
ARU 13 26 36.5
BOSA Boshof 125.39 206 PKP PKiKP 13 20 22.6 +0.1
comp=Z,4.4nm,0.6s,baz=142,slow=0.4,SNR=5.2

ABKAR **Akbulak array** 126.11 316 *e*PKPdf **PKPdf** 13 20 22.0 -0.5
AKTO **Aktyubinsk** 127.11 318 PKP **PkiKP** 13 20 24.6 -0.3
comp=Z,8.2nm,0.7s,baz=82,slow=4.4,SNR=9.2
GEYT **Alibeck** 128.58 302 PKP **PkiKP** 13 20 28.2 -0.1
comp=Z,7.7nm,0.8s,baz=217,slow=1.5,SNR=15
GEYT PP **PP** 13 22 40.2 -2.0
comp=Z,0.9nm,0.5s,baz=186,slow=1.4,SNR=4.5
SCO **Scoresbysund** 128.76 10 *e*PKPdf **PKiKP** 13 20 27.2 -0.4
SCO **Scoresbysund** 128.76 10⇓*i*PKIKP **PKPdf** 13 20 26.9 +0.1
SCO pmax pmax
comp=Z,12nm,1.0s
SCO **Scoresbysund** 128.76 10⇓*i*P **PKPdf** 13 20 26.9 +0.1
comp=Z,12nm,1.0s
KIRV **Kirov** 129.20 330 PKP **PKPdf** 13 20 28.4 +0.4
comp=Z,32nm,0.5s,baz=137,slow=0.9,SNR=9.7
ARCES **ARCESS Array B** 129.44 349 PKP **PKPdf** 13 20 28.1 -0.1
comp=Z,13nm,0.6s,baz=26,slow=1.1,SNR=46
ARE0 **ARCESS Array S** 129.44 349 *e*PKPdf **PKPdf** 13 20 27.9 -0.3
TRO **Tromso** 130.35 352 *e*PKPdf **PKPdf** 13 20 29.2 -0.7
KLMR **Klimovskoe** 132.21 336 *e*PKIKP **PKPdf** 13 20 33.4 -0.2
KLMR pmax pmax
comp=Z,10.0nm,0.6s
KLMR **Klimovskoe** 132.21 336 *e*PKPdf **PKPdf** 13 20 33.4 -0.2
KLMR AMP 13 20 35.0
comp=Z,10.0nm,0.7s
LSZ **Lusaka** 135.21 218 *e*PKPdf **PKPdf** 13 20 39.9 -0.9
FIA1 **FINESS Array S** 136.20 343 *e*PKPdf **PKPdf** 13 20 40.0 -1.0
FINES **FINESS Array B** 136.20 343 PKP **PKPdf** 13 20 40.4 -0.7
comp=Z,8.6nm,0.6s,baz=100,slow=2.3,SNR=14
FINES PP **PP** 13 23 22.0 -6.9
comp=Z,2.8nm,0.8s,baz=82,slow=14,SNR=4.1
VRH **Novokhopyorsk** 136.55 324 *e*PKIKP **PKPdf** 13 20 40.4 -1.6
VRH pmax pmax
comp=Z,20nm,0.6s
OBN **Obninsk** 137.01 331 *i*PKIKP **PKPdf** 13 20 42.2 -0.5
OBN pmax pmax
comp=Z,15nm,0.8s
LPSR **Galich'ya Gora** 137.32 327 *e*PKIKP **PKPdf** 13 20 42.7 -0.7
LPSR pmax pmax
comp=Z,20nm,1.6s
VSR **Storozhevoye** 137.94 325 *e*PKIKP **PKPdf** 13 20 42.9 -1.7
VSR pmax pmax
comp=Z,10.0nm,0.5s
ZEI **Tsey** 138.47 311 *i*PKIKP **PKPdf** 13 20 46.6 +0.4
ZEI pmax pmax
comp=Z,4.0nm,0.5s
DOMB **Dombas** 138.78 354 *e*PKPdf **PKPdf** 13 20 38.8 -7.1
KBZ **Khabaz** 138.87 313 PKP **PKPdf** 13 20 44.8 -1.7
comp=Z,2.9nm,0.8s,baz=6.3,slow=2.0,SNR=4.0
KIV **Kislovodsk** 138.93 313 *e*PKIKP **PKPdf** 13 20 45.5 -1.3
KIV pmax pmax
comp=Z,19nm,1.1s
AKH **Akhalkalaki** 139.17 309⇑*i*P **PKiKP** 13 20 50.1 +0.2
NB2 **NORSAR Subarra** 139.54 353 PKP PKPdf 13 20 38.9 -8.4
comp=Z,3.1nm,0.6s,baz=13,slow=3.1
NOA **NORSAR Array B** 139.54 353 PKhKP PKPdf 13 20 39.2 -8.1
comp=Z,5.1nm,0.8s,baz=16,slow=4.7,SNR=23
NOA SKPbc **SKPbc** 13 23 31.7 +0.3
comp=Z,2.1nm,0.9s,baz=15,slow=4.4,SNR=3.4
NAO01 **NORSAR Array S** 139.77 353 *e*PKPdf **PKPdf** 13 20 40.7 -7.0
HFS **Hagfors** 140.07 350 PKhKP PKPpre 13 20 40.7
comp=Z,5.6nm,0.3s,baz=54,slow=2.6,SNR=52
HFS PKP **PKPdf** 13 20 49.2 +1.0
comp=Z,9.9nm,0.7s,baz=315,slow=0.4,SNR=8.9
BCA **Borcka** 140.50 310⇑*i*P **PkiKP** 13 20 52.3 -0.1
KONO **Kongsberg** 141.08 353 *e*PKPdf **PKPdf** 13 20 43.9 -6.1
KMY **Karmoy** 141.87 357 *e*PKPdf **PKPdf** 13 20 47.8 -3.7
HOMB **Homborsund** 142.55 354 *e*PKPdf **PKPdf** 13 20 50.9 -1.8
SUW **Suwalki** 143.21 338 *e*PKP PKPbc 13 20 52.3 0.0
SUW **Suwalki** 143.21 338 *e*PKPdf PKPbc 13 20 52.4 +0.1
SUW **Suwalki** 143.21 338 *e*PKIKP PKPbc 13 20 52.3 0.0
AKASG **Malin Array Be** 143.26 330 PKP PKPab 13 20 51.9 -0.4
comp=Z,28nm,0.7s,baz=42,slow=4.4,SNR=173
AKASG SKPbc **SkiKP** 13 23 42.3 +0.4
comp=Z,0.2nm,0.3s,baz=44,slow=3.1,SNR=4.9
AKBB **Malin Array Si** 143.26 330 *e*PKPpre PKPab 13 20 51.6 -0.6
AKBB **Malin Array Si** 143.26 330 *e*PKHKP PKPab 13 20 51.6 -0.6
URFA **Urfa** 143.75 305 P PKPab 13 20 54.7 0.0
RSDY **Resadiye-TOKAT** 143.92 310 P **PKPdf** 13 20 55.7 0.0
MBAR **Mbarara** 144.02 237 *e*PKPbc **PKPdf** 13 20 57.0 +0.1
MBAR **Mbarara** 144.02 237 *e*PKIKP **PKPdf** 13 20 57.0 +0.1
SIM **Simferopol'** 144.06 319 *de*PKIKP **PKPdf** 13 20 55.9 +0.1
SIM pmax pmax
comp=Z,101nm,0.8s
MUD **Monsted U'grnd** 144.26 353⇓*i*PKIKP PKPbc 13 20 55.4 0.0
MUD pmax pmax
comp=Z,150nm,1.2s
SVSK **Karacayir** 144.32 310 P **PKPab** 13 20 56.9 +0.3
DARE **Darende-Malaty** 144.43 307 P **PKPab** 13 20 57.4 +0.2
COP **Copenhagen** 144.52 349 *e*PKIKP **PKPdf** 13 20 55.9 -0.3
BSD **Bornholm Skovb** 144.57 347⇓*i*PKIKP **PKPdf** 13 20 55.9 -0.4
BSD pmax pmax
comp=Z,55nm,0.9s
DIKM **Dikmen** 144.86 313⇑*i*P **PKPab** 13 20 58.6 -0.1
BNN **Bunyan** 145.54 309 P **PKPbc** 13 20 59.9 -0.2
BZK **Bozkurt** 145.57 315⇑*i*P **PKPab** 13 20 00.9 -0.5
GKP **Gorka Klasztor** 145.68 343 *e*PKP **PKPbc** 13 21 00.1 +0.3
GKP **Gorka Klasztor** 145.68 343 *e*PKP2 **PKPbc** 13 21 00.1 +0.3
EKA **Eskdalemuir Ar** 145.70 5 PKPbc **PKPbc** 13 20 59.4 -0.4
comp=Z,26nm,0.7s,baz=358,slow=2.8,SNR=57
ESK **Eskdalemuir** 145.71 5 *e*PKPdf **PKPbc** 13 20 59.6 -0.2
ESL **Eskdalemuir** 145.71 5 *e*PKIKP **PKPbc** 13 20 59.6 -0.2
BEL **Belsk** 145.82 338 *e*PKP **PKPbc** 13 21 00.8 +0.5
BEL **Belsk** 145.82 338 *e*PKP2 **PKPbc** 13 21 00.8 +0.5
CORM **Corum** 145.91 311 P **PKPab** 13 21 02.2 -0.8
KIS **Kishinev** 145.91 326 *e*PKP **PKPbc** 13 21 00.0 -0.7
comp=Z,150nm,1.0s
KIS **Kishinev** 145.91 326 *e*PKIKP **PKPbc** 13 21 00.0 -0.7
KIS pmax pmax
comp=Z,150nm,1.0s
KOZT **Kozan** 146.02 306 P **PKPbc** 13 21 00.9 -0.4
ILGA **Ilgaz** 146.17 313 *e*PKPbc **PKPbc** 13 21 02.2 +0.3
LVV **L'vov** 146.20 333 *e*PKIKP **PKPbc** 13 21 01.3 -0.1
YURE **YUREGIR** 146.37 305 P **PKPbc** 13 21 03.2 +0.8
KURC **Kurucasile-Bar** 146.46 315 P **PKPbc** 13 21 01.9 -0.5
ASF **Jabal al Asfar** 146.50 297 PKPbc **PKPbc** 13 21 03.6 +0.7
baz=70,slow=1.5
BR131 **Keskin Array S** 146.79 311 *e*PKPbc **PKPbc** 13 21 03.3 -0.2
BRTR **Keskin Array B** 146.79 311 PKP **PKPdf** 13 21 00.6 -0.2
comp=Z,13nm,0.7s,baz=131,slow=1.1,SNR=65
BRTR PKPbc **PKPbc** 13 21 03.5 -0.1
comp=Z,13nm,0.6s,baz=133,slow=4.0,SNR=65
KWP **Kalwaria Pacla** 146.89 334 *e*PKPdf **PKPbc** 13 21 03.6 +0.3
KWP **Kalwaria Pacla** 146.89 334 *e*PKPbc **PKPbc** 13 21 03.7 +0.4
KWP **Kalwaria Pacla** 146.89 334⇓*e*PKP2 **PKPbc** 13 21 03.6 +0.3
YAYX **Yaylak** 146.98 310 P **PKPbc** 13 21 03.8 -0.2
PRAR **RASCA** 146.99 328⇓*i*P **PKPbc** 13 21 04.4 +0.7
TLCR 147.04 323⇑*i*P **PKPbc** 13 21 04.3 +0.5
TLCR 147.04 323⇑*i*PKP2 **PKPbc** 13 21 04.3 +0.5
MERS **Mersin** 147.20 306 P **PKPbc** 13 21 04.5 -0.1
BUR08 **Bucovina Ar. S** 147.28 330 *e*PKPdf **PKPdf** 13 21 01.6 +0.3
BUR08 *e*PKPbc **PKPbc** 13 21 05.2 +0.7
BURAR **Bucovina Array** 147.30 330⇑*i*P **PKPbc** 13 21 05.3 +0.7
BURAR **Bucovina Array** 147.30 330⇑PKP2 **PKPbc** 13 21 05.4 +0.8
ANTO **Ankara** 147.32 312 *e*PKPbc **PKPbc** 13 21 05.0 +0.1
ANTO **Ankara** 147.32 312⇑*i*P **PKPbc** 13 21 05.2 +0.3
ANTO **Ankara** 147.32 312⇑PKP2 **PKPbc** 13 21 05.2 +0.3
LOD **Lodumlu** 147.33 312 P **PKPbc** 13 21 04.8 -0.1
BIZ **Bicaz** 147.34 328⇓*i*P **PkiKP** 13 21 05.5 -0.8
TESR **Tescani** 147.36 327⇑*i*P **PKPbc** 13 21 05.1 +0.5
DSB **Dublin** 147.42 9 *e*PKPbc **PKPbc** 13 21 04.7 +0.1
CFR **Carcaliu** 147.43 324⇑*i*P **PKPbc** 13 21 04.7 -0.1
CFR **Carcaliu** 147.43 324⇑PKP2 **PKPbc** 13 21 04.7 -0.1
OJC **Ojcow** 147.52 338 *e*PKPdf **PKPbc** 13 21 05.2 +0.2
OJC **Ojcow** 147.52 338 *e*PKPbc **PKPbc** 13 21 05.2 +0.2
OJC **Ojcow** 147.52 338⇓*e*PKP2 **PKPbc** 13 21 05.2 +0.2
MMAI **Mount Meron Ar** 147.56 299 PKPbc **PKPbc** 13 21 06.4 +0.7
comp=Z,33nm,0.6s,baz=62,slow=3.4,SNR=12
PETR **Petresti** 147.57 325⇑*i*P **PKPbc** 13 21 05.4 +0.2
KOLS **Kolonicke sedl** 147.61 334 *e*PKP2 **PkiKP** 13 21 06.3 -0.5
KOLS **Kolonicke sedl** 147.61 334 *e*PKP **PkiKP** 13 21 06.3 -0.5
KIZK **Mersin** 147.62 305 P **PKPbc** 13 21 05.4 -0.2
TIRR **Tirgusor** 147.72 322 *e*PKPbc **PKPbc** 13 21 05.9 +0.3
TIRR **Tirgusor** 147.72 322⇑*i*P **PKPbc** 13 21 05.5 -0.1
TIRR **Tirgusor** 147.72 322⇑PKP2 **PKPbc** 13 21 05.5 -0.1
VRI **Vrincioaia** 147.75 326 P **PKPbc** 13 21 05.5 -0.2
VRI **Vrincioaia** 147.75 326⇑*i*P **PKPbc** 13 21 05.8 +0.1
VRI **Vrincioaia** 147.75 326⇑PKP2 **PKPbc** 13 21 05.9 +0.2
CHBY **Cihanbeyli** 147.78 310 P **PKPbc** 13 21 05.1 -1.0
PLOR **Plostina** 147.80 326⇑*i*P **PKPbc** 13 21 05.9 +0.1
PLOR **Plostina** 147.80 326⇑PKP2 **PKPbc** 13 21 05.9 +0.1
UZH **Uzhgorod** 147.84 333 *e*PKHKP **PKPdf** 13 21 02.6 +0.6
HARR **Harsova** 147.84 323⇑*i*P **PKPbc** 13 21 06.0 +0.1
HARR **Harsova** 147.84 323⇑PKP2 **PKPbc** 13 21 06.0 +0.1
TLB **Topalu** 147.85 323⇑*i*P **PKPbc** 13 21 06.3 +0.4
TLB **Topalu** 147.85 323⇑PKP2 **PKPbc** 13 21 06.3 +0.4
MFTR **Murfatlar** 147.88 322⇑*i*P **PKPbc** 13 21 05.9 -0.1
KEBE **Keben-Mersin** 147.95 305 P **PKPbc** 13 21 06.2 -0.4
BISRR **Bisoca** 147.97 325⇑*i*P **PkiKP** 13 21 07.3 -0.4
MANR **Mangalia** 148.00 321⇑*i*P **PKPbc** 13 21 06.7 +0.4
NIE **Niedzica** 148.00 336 *e*PKPdf **PKPbc** 13 21 06.8 +0.5
NIE **Niedzica** 148.00 336⇓*e*PKP2 **PKPbc** 13 21 06.8 +0.5
IKL **Isikli** 148.04 305 P **PKPbc** 13 21 06.3 -0.4
OZUR 148.08 327⇑*i*P **PKPbc** 13 21 06.9 +0.3
ARCR **ARCALIA** 148.09 330⇑*i*P **PKPbc** 13 21 07.1 +0.6
KSP **Ksiaz** 148.11 342 *e*PKPdf **PkiKP** 13 21 07.2 -0.5
KSP **Ksiaz** 148.11 342⇓*e*PKP2 **PkiKP** 13 21 07.2 -0.5
MDUB **Mudurnu** 148.14 314 P **PKPbc** 13 21 06.7 -0.3
MDUB **Mudurnu** 148.14 314 *e*PKPbc **PKPbc** 13 21 07.1 +0.1
TEVE **Tevekalti-Mers** 148.16 306 *e*P **PKPbc** 13 21 06.8 -0.3
AKKU **Akkuyu-Mersin** 148.17 305 *e*P **PKPbc** 13 21 06.9 -0.1
LADK **Ladik-KONYA** 148.31 309 P **PKPbc** 13 21 06.5 -1.0
BERE **Bereket-Mersin** 148.36 306 *e*P **PKPbc** 13 21 07.3 -0.4
KIZT **Kizilcal** 148.38 311 *e*P **PKPbc** 13 21 07.4 -0.2
OSTC **Ostas** 148.39 342 *e*PKPDF **PKPdf** 13 21 03.4 +0.5
OSTC ⇑*e*PKP **PkiKP** 13 21 08.0 -0.3
CHVC **Chvalec** 148.41 342⇑*e*PKP **PkiKP** 13 21 08.1 -0.3
MLR **Muntele Rosu** 148.41 326 PKPbc **PKPbc** 13 21 06.8 -0.7
comp=Z,25nm,0.6s,baz=32,slow=2.1,SNR=31
MLR **Muntele Rosu** 148.41 326 *e*PKPdf **PKPdf** 13 21 03.0 -0.2
MLR *e*PKPbc **PKPbc** 13 21 07.7 +0.1
MLR **Muntele Rosu** 148.41 326 ⇑PKP2 **PKPbc** 13 21 07.9 +0.4
OKC **Ostrava-Krasne** 148.41 339 *e*PKP2 **PKPbc** 13 21 07.6 +0.4
OKC **Ostrava-Krasne** 148.41 339⇑*e*PKP **PKPbc** 13 21 07.6 +0.4
OKC *e*PKPAB **PKPab** 13 21 13.0 +0.4
UPC **Upice** 148.49 342 *e*PKP2 **PkiKP** 13 21 08.2 -0.3
UPC **Upice** 148.49 342⇑*e*PKP **PkiKP** 13 21 08.2 -0.3
UPC *e*PKPAB **PKPab** 13 21 13.5 +0.6
TEKE **Tekeli-Mersin** 148.51 305 *e*P **PKPbc** 13 21 07.5 -0.4
LANS **Liptovska Anna** 148.53 337 *e*PKP2 **PkiKP** 13 21 09.1 +0.4
LANS **Liptovska Anna** 148.53 337 *e*PKP **PkiKP** 13 21 09.1 +0.4
CLL **Collm** 148.54 346 *e*PKPdf **PKPdf** 13 21 03.2 +0.1
CLL *e*PKPbc **PKPbc** 13 21 07.7 +0.2
CLL **Collm** 148.54 346 *i*PKPdf **PKPdf** 13 21 03.3 +0.3
comp=Z,11nm,1.2s
CLL *i*PKPbc **PKPbc** 13 21 07.8 +0.4
comp=Z,78nm,1.0s
CLL *i*PKPab **PKPab** 13 21 13.2 +0.2
comp=Z,21nm,0.8s
CLL *ep*PKPbc **pPKPab** 13 23 18.0 +2.5
comp=Z,5.0nm,0.8s
CLL LmV 15 02 00.0
comp=Z,400nm,18.4s
DPC **Dobruska-Polom** 148.54 341⇑*e*PKP **PKPbc** 13 21 07.7 +0.1
DPC *e*PKPAB **PKPab** 13 21 14.3 +1.1
SECR 148.64 325⇑*i*P **PKPbc** 13 21 08.3 +0.3
MORC **Moravsky Berou** 148.66 340 *e*PKPdf **PKPdf** 13 21 03.6 +0.2
MORC *e*PKPbc **PKPbc** 13 21 08.2 +0.4
MORC **Moravsky Berou** 148.66 340⇑*i*P **PkiKP** 13 21 08.7 -0.2
MORC **Moravsky Berou** 148.66 340 *e*PKP **PkiKP** 13 21 08.5 -0.4
MORC *e* 13 21 14.3
KECS **Kecovo** 148.69 335 *e*PKP2 **PkiKP** 13 21 09.1 +0.1
KECS **Kecovo** 148.69 335 *e*PKP **PkiKP** 13 21 09.1 +0.1
CJR **Cluj-Napoca** 148.71 330⇑*i*P **PKPbc** 13 21 08.6 +0.5
CJR **Cluj-Napoca** 148.71 330⇑PKP2 **PkiKP** 13 21 08.7 -0.5
BRG **Berggiesshubel** 148.72 345 *e*PKP **PKPdf** 13 21 04.2 +0.8
comp=Z,9.4nm,1.2s
BRG **Berggiesshubel** 148.72 345 *i*PKP **PkiKP** 13 21 08.6 -0.4
comp=Z,90nm,1.6s
BRG **Berggiesshubel** 148.72 345 *i*PKP **PKPab** 13 21 14.1 +0.3
comp=Z,18nm,0.9s
BRG *ep*PKP **pPKPab** 13 23 16.6 +0.4
comp=Z,4.3nm,0.9s
SRCK **Saricakaya, Es** 148.72 314 *e*P **PKPbc** 13 21 07.3 -1.0
MDB **Medias** 148.75 328⇑*i*P **PkiKP** 13 21 09.4 +0.2
MDB **Medias** 148.75 328⇑PKP2 **PkiKP** 13 21 09.4 +0.2
SILT **Sile** 148.82 316 *e*P **PKPbc** 13 21 08.1 -0.4
SILT **Sile** 148.82 316⇑*i*P **PKPbc** 13 21 06.5 -2.0
PVCC **Panska Ves** 148.87 344 *e*PKP2 **PkiKP** 13 21 09.1 -0.2
PVCC **Panska Ves** 148.87 344⇑*e*PKP **PkiKP** 13 21 09.1 -0.2
PVCC *ex* x 13 21 17.7
VOIR 148.91 327⇑*i*P **PKPbc** 13 21 09.1 +0.4
WTSB **Winterswijk** 148.94 353 *e*PKPdf **PKPdf** 13 21 03.8 +0.2
WTSB *e*PKPbc **PKPbc** 13 21 08.2 -0.2
comp=Z,106nm,0.7s
WTSB *e*PKPab **PKPab** 13 21 14.2 -0.4
LEF **Lefka** 149.01 303 *e*P **PKPbc** 13 21 08.9 -0.2
PRD **Provadia** 149.06 321 P **PKPbc** 13 21 08.9 -0.1
DRGR 149.06 331⇓*i*P **PKPbc** 13 21 08.9 -0.1
ARR **Arges** 149.16 327⇑*i*P **PKPbc** 13 21 09.7 +0.4
YLV **Yalova** 149.30 315⇑*i*P **PKPbc** 13 21 09.3 -0.5
PRU **Pruhonice** 149.37 343⇑*e*PKP **PKPbc** 13 21 09.5 0.0
PRU *e*PKPAB **PKPab** 13 21 17.0 +0.5
GOPC **GO Pecny, Ondr** 149.37 343⇑*e*PKP **PKPbc** 13 21 09.3 -0.3
VRAC **Vranov** 149.37 340 PKPbc **PKPbc** 13 21 09.9 +0.3
comp=Z,17nm,0.9s,baz=37,slow=1.3,SNR=23
VRAC PKPab **PKPab** 13 21 16.3 -0.3
comp=Z,16nm,0.9s,baz=3.3,slow=1.0,SNR=9.5
VRAC **Vranov** 149.37 340 *e*PKP **PkiKP** 13 21 10.1 -0.3
VRAC *e* 13 21 17.4
PSZ **Piszkesteto** 149.38 335 *e*PKPbc **PKPbc** 13 21 09.7 -0.1
JAVC **Velka Javorina** 149.41 339 *e*PKP **PkiKP** 13 21 11.3 +0.8
SHUT **Suhut-Afyon** 149.46 311 *e*P **PkiKP** 13 21 10.8 -0.2
CTKS **Kestanelik-??a** 149.51 317 *e*P **PKPbc** 13 21 09.8 -0.3
LOT **Lotru** 149.54 328⇑*i*P **PKPbc** 13 21 10.1 -0.1
HUMR **Humele** 149.56 325⇑*i*P **PKPbc** 13 21 09.7 -0.4
ARMT **Armutlu** 149.63 316 *e*P **PKPbc** 13 21 09.9 -0.6
KRUC **Moravsky** 149.65 340 *e*PKP **PkiKP** 13 21 10.6 -0.3
KRUC *e* 13 21 18.4
NKC **Novy Kostel** 149.67 346⇑*e*PKP **PkiKP** 13 21 11.0 0.0
TREC **Trest** 149.73 341⇑*e*PKP **PkiKP** 13 21 11.0 -0.1
ISP **Isparta** 149.79 310 *e*PKPbc **PKPbc** 13 21 10.3 -0.7
BMOL **Mol** 149.84 355 PKPbc **PkiKP** 13 21 11.4 +0.2
PHSR **Pinarhisar** 149.90 319⇑*i*P **PKPbc** 13 21 10.7 -0.4
SIRR **Siria** 149.94 331⇑*i*P **PKPbc** 13 21 11.3 +0.3
MODS **Modra-Piesok** 149.96 339 *e*PKP **PKPbc** 13 21 11.2 +0.2
MODS *e* 13 21 19.3
JMB **Yambol** 149.98 321 P **PKPbc** 13 21 11.5 +0.3
SRO **Srobarova** 150.07 337 *e*PKP **PkiKP** 13 21 12.2 +0.4
KCTX **Karacabey (Bur** 150.12 316 *e*P **PKPbc** 13 21 10.8 -0.8
BEBN **Eben Emael** 150.21 354 PKPbc **PkiKP** 13 21 11.8 -0.2
BEBN PKPab **PKPab** 13 21 19.9 0.0
HGN **Heimansgroeve** 150.22 354 *e*PKPbc **PKPbc** 13 21 11.6 +0.1
HGN *e*PKPab **PKPab** 13 21 20.0 0.0
EDRB **Edirne** 150.25 320 *e*P **PKPbc** 13 21 11.4 -0.5
EDRB **Edirne** 150.25 320 P **PKPbc** 13 21 11.9 0.0
KORT **Korkueli** 150.26 308 *e*P **PKPbc** 13 21 11.9 -0.3
MEM **Membach** 150.37 354 PKPdf **PKPdf** 13 21 06.4 +0.5
MEM PKPbc **PKPbc** 13 21 11.9 +0.1
SRE **Strehaia** 150.38 327⇑*i*P **PKPbc** 13 21 11.6 -0.5
SRE **Strehaia** 150.38 327⇑PKIKP **PKPbc** 13 21 11.6 -0.5
KHC **Kasperske Hory** 150.41 344 *e*PKPdf **PKPdf** 13 21 06.0 -0.1
KHC *e*PKPbc **PKPbc** 13 21 12.1 +0.1
KHC **Kasperske Hory** 150.41 344 *e*PKIKP **PKPdf** 13 21 06.5 +0.4
KHC *e* 13 21 21.6
KHC **Kasperske Hory** 150.41 344 *e*PKPDF **PKPdf** 13 21 06.5 +0.4
KHC ⇑*e*PKP **PKPbc** 13 21 12.3 +0.2
KHC *e*PKPAB **PKPab** 13 21 21.6 +0.6
BZS **Buzias** 150.45 330⇓*i*P **PKPbc** 13 21 12.4 +0.2
BZS **Buzias** 150.45 330⇓PKIKP **PKPbc** 13 21 12.4 +0.2
CSKK **Cskako** 150.46 336 EP **PKPbc** 13 21 12.0 -0.1
SNF **Seneffe** 150.60 356 PKPbc **PkiKP** 13 21 12.9 +0.1
BCLA **Clavier** 150.62 355 PKPbc **PkiKP** 13 21 12.7 -0.1
BCLA PKPab **PKPab** 13 21 21.6 -0.1
BHOU **Houvegnez** 150.62 354 PKPdf **PKPdf** 13 21 06.2 -0.2
BHOU PKPbc **PKPab** 13 21 21.1 -0.6
GEC2 **GERESS Array S** 150.64 343 *e*PKPdf **PKPdf** 13 21 06.0 -0.6
GEC2 *e*PKPbc **PKPbc** 13 21 12.8 +0.1
GEC2 **GERESS Array S** 150.64 343 *e*PKIKP **PKPdf** 13 21 06.0 -0.6
GERES **GERESS Array B** 150.64 343 PKP **PKPdf** 13 21 06.6 0.0
comp=Z,1.1nm,0.7s,baz=48,slow=2.0,SNR=9.4
GERES PKPbc **PkiKP** 13 21 13.2 0.0
comp=Z,20nm,0.8s,baz=42,slow=2.2,SNR=81
ELL **Elmali** 150.69 308 *e*P **PKPbc** 13 21 12.7 -0.5
KRBG **Karabiga-Canak** 150.74 317 *e*P **PKPbc** 13 21 12.9 -0.1
BALB **Balikesir** 150.76 315 *e*PKPbc **PKPbc** 13 21 12.9 -0.2
BMRD **Maredsous** 150.78 355 PKPbc **PkiKP** 13 21 13.1 -0.1
BMRD PKPab **PKPab** 13 21 22.3 0.0
KULA **Kula-Manisa** 150.79 312 *e*P **PKPbc** 13 21 13.1 -0.2
SOP **Sopron** 150.80 339 ⇓EP **PKPbc** 13 21 13.0 +0.1
CONA **Conrad Observa** 150.82 340 *e*PKPdf **PKPdf** 13 21 06.9 0.0
comp=Z,4.7nm,1.2s
CONA *e*PKiKP **PkiKP** 13 21 13.5 0.0
comp=Z,65nm,1.3s,SNR=21
LKLB **Kalborn** 150.86 354 PKPbc **PKPbc** 13 21 13.0 0.0
LKLB PKPab **PKPab** 13 21 22.7 0.0
MANT **Manisa** 150.87 312 *e*PKPbc **PKPbc** 13 21 13.8 +0.1
TIH **Tihany** 150.99 336 EP **PKPbc** 13 21 13.1 -0.3
DOU **Dourbes** 150.99 356 PKKPbc **PKPbc** 13 21 13.4 +0.2
MPEP **Malo Peshtene** 151.01 325 P **PkiKP** 13 21 13.9 0.0
MDVR **Moldovita** 151.03 329⇑*i*P **PKPbc** 13 21 12.1 -1.5
ERIK **Erikli-Kesan** 151.08 318 *e*P **PKPbc** 13 21 13.3 -0.5
LPK **Lapseki** 151.09 317 *e*P **PKPbc** 13 21 13.8 0.0
AKAS **Kas** 151.12 307 *e*P **PKPbc** 13 21 13.3 -0.9
KDZ **Kurdzhali** 151.17 321 *e*P **PkiKP** 13 21 17.6 +3.3
KDZ **Kurdzhali** 151.17 321 P **PkiKP** 13 21 17.7 +3.4
ALN **Alexandroupoli** 151.24 319 *e*P **PKPbc** 13 21 13.3 -0.8
ALN **Alexandroupoli** 151.24 319 *e*PKPbc **PKPbc** 13 21 13.4 -0.7
ALN **Alexandroupoli** 151.24 319 P **PKPbc** 13 21 13.5 -0.7
GELI **Tayfur-Gelibol** 151.25 318 *e*P **PKPbc** 13 21 13.6 -0.6
MORH **Mrgy, Hungar** 151.26 335⇓*i*P **PKPbc** 13 21 13.7 -0.3
MORH **Mrgy, Hungar** 151.26 335 EP **PKPbc** 13 21 13.1 -0.9
WLF **Walferdange** 151.28 353 *e*PKPbc **PKPbc** 13 21 13.9 0.0
WLF *e*PKPab **PKPab** 13 21 24.8 +0.3
WLF **Walferdange** 151.28 353 PKPbc **PkiKP** 13 21 14.8 +0.6
WLF PKPab **PKPab** 13 21 25.1 +0.6
PGB **Panagyurishte** 151.31 323 P **PKPbc** 13 21 14.4 0.0
FETY **Fethiye** 151.34 309 *e*P **PKPbc** 13 21 14.4 -0.2
MOA **Molln** 151.38 342 *e*PKPdf **PKPdf** 13 21 07.3 -0.3
comp=Z,4.9nm,1.0s
MOA *e*PKPbc **PKPbc** 13 21 14.2 -0.1
comp=Z,14nm,0.6s,SNR=7.4
MOA *i*PKPab **PKPab** 13 21 26.0 +1.0
comp=Z,13nm,1.4s
RDO **Rodhopi** 151.40 320 *e*P **PKPbc** 13 21 14.1 -0.4
RDO **Rodhopi** 151.40 320 P **PKPbc** 13 21 14.4 -0.1
ARSA **Arzberg** 151.52 339 *e*PKPbc **PKPbc** 13 21 14.4 -0.2
comp=Z,8.8nm,1.0s
ARSA *e*PKPab **PKPab** 13 21 26.4 +0.7
comp=Z,11nm,1.0s
RZN **Rozhen** 151.55 321 P **PKPbc** 13 21 14.6 -0.5
TURN **Turunc** 151.58 309 *e*P **PkiKP** 13 21 15.4 +0.1
AYDB **Zeytinkoy-Aydi** 151.59 312 *e*P **PKPbc** 13 21 15.3 +0.1
FRGS **Fruska Gora** 151.62 332⇓*i*P **PKPbc** 13 21 14.8 -0.1
EZN **Ezine** 151.67 317⇑*i*P **PKPbc** 13 21 13.4 -1.7
EZN **Ezine** 151.67 317⇑PKIKP **PKPbc** 13 21 13.4 -1.7
STU **Stuttgart** 151.72 349 *e*PKPbc **PKPbc** 13 21 14.9 0.0
BEHE **Becsehely** 151.76 337 EP **PKPbc** 13 21 15.1 -0.1
VTS **Vitosha** 151.78 324 *e*PKPdf **PKPdf** 13 21 08.1 -0.5
VTS *e*PKPbc **PKPbc** 13 21 15.5 -0.1
VTS **Vitosha** 151.78 324 P **PkiKP** 13 21 15.8 0.0
VTS **Vitosha** 151.78 324⇑*i*P **PKPbc** 13 21 14.1 -1.4
VTS **Vitosha** 151.78 324 *e*PKIKP **PKPdf** 13 21 08.1 -0.5
VTS **Vitosha** 151.78 324 P **PKPbc** 13 21 15.6 +0.1
GCAM **G?zelcaml?** 152.17 312 *e*P **PKPbc** 13 21 16.1 -0.2
SOKA **Soboth** 152.19 340 *i*PKPdf **PKPdf** 13 21 08.9 0.0
comp=Z,5.1nm,1.3s
SOKA *i*PKPbc **PKPbc** 13 21 15.7 -0.5
comp=Z,12nm,0.7s,SNR=8.5
SOKA *i*PKPab **PKPab** 13 21 27.9 -0.6
comp=Z,5.0nm,0.7s
MMB **Musomiste** 152.19 322 P **PKPbc** 13 21 16.1 -0.2
BFO **Black Forest** 152.30 350 *e*PKPbc **PKPbc** 13 21 16.4 0.0
BFO *e*PKPab **PKPab** 13 21 28.6 -0.3
KBA **Koelnbreinsper** 152.35 342 *e*PKPdf **PKPdf** 13 21 07.9 -1.4
comp=Z,2.3nm,0.9s
KBA *e*PKPbc **PKPbc** 13 21 15.9 -0.7
comp=Z,18nm,1.1s,SNR=8.0
DIVS **Divibare** 152.35 330⇓*i*P **PKPbc** 13 21 16.6 -0.1
KKB **Krupnik** 152.37 323 P **PKPbc** 13 21 16.4 -0.3
OBKA **Obir** 152.49 340 *i*PKPbc **PKPbc** 13 21 16.3 -0.6
comp=Z,6.8nm,0.7s
WATA **Walderalm** 152.58 345 *i*PKPbc **PKPbc** 13 21 16.7 -0.5
comp=Z,7.8nm,0.5s
WATA *i*PKPab **PKPab** 13 21 30.5 +0.2
comp=Z,6.8nm,0.6s
ECH **Echery** 152.59 351 *e*PKPab **PKPab** 13 21 29.6 -0.6
CHOS **Chios island** 152.62 314 *e*P **PKPbc** 13 21 16.2 -1.2
RETA **Reutte** 152.63 346 *e*PKPdf **PKPdf** 13 21 09.4 -0.2
comp=Z,1.6nm,0.7s
RETA *e*PKPbc **PKPbc** 13 21 17.2 0.0
comp=Z,8.9nm,0.7s
RETA *i*PKPab **PKPab** 13 21 30.9 +0.5
comp=Z,8.9nm,0.5s
WTTA **Wattenberg** 152.63 345 *e*PKPdf **PKPdf** 13 21 09.7 0.0
comp=Z,9.7nm,1.1s
WTTA *i*PKPbc **PKPbc** 13 21 17.3 0.0
comp=Z,18nm,0.7s,SNR=7.2
WTTA *i*PKPab **PKPab** 13 21 31.2 +0.6
comp=Z,20nm,0.7s
MYKA **Terra Mystica** 152.66 341 *e*PKPbc **PKPbc** 13 21 16.4 -0.8
comp=Z,14nm,0.6s,SNR=6.6
MYKA *i*PKPab **PKPab** 13 21 30.4 -0.2
comp=Z,6.2nm,0.9s
MOTA **Moosalm** 152.69 345 *e*PKPdf **PKPdf** 13 21 09.7 0.0
comp=Z,1.8nm,0.5s
MOTA *i*PKPbc **PKPbc** 13 21 17.4 0.0
comp=Z,8.8nm,0.6s,SNR=6.6
MOTA *e*PKPab **PKPab** 13 21 31.0 +0.2
comp=Z,9.7nm,0.6s
SQTA **Sankt Quirin** 152.78 345 *e*PKPdf **PKPdf** 13 21 10.0 +0.2
comp=Z,4.2nm,0.6s
SQTA *e*PKPbc **PKPbc** 13 21 17.6 0.0
comp=Z,15nm,0.6s,SNR=6.7
SQTA *i*PKPab **PKPab** 13 21 31.7 +0.6
comp=Z,11nm,1.0s
CRES **Cresnjev** 152.79 338

PCBR	Castelo Branco	159.91	20	*e*PKPab	PKPab	13 22 02.2	+0.2
PMAFR	Mafra	160.05	25	*e*PKPab	PKPab	13 22 03.4	+0.7
PMST	Lisbon--Monsan	160.28	25	*e*PKPdf	PKPdf	13 21 18.8	-0.7
PMST	Lisbon--Monsan	160.28	25	*e*PKPab	PKPab	13 22 04.0	+0.3
PMRV	Marv??o	160.31	20	*e*PKPdf	PKPdf	13 21 20.3	+0.8
PMRV	Marv??o	160.31	20	*e*PKPab	PKPab	13 22 04.1	+0.3
PMTG	Montargil	160.35	23	*e*PKPab	PKPab	13 22 04.1	+0.2
ESDC	Sonseca Array	160.99	13	PKP	PKPdf	13 21 20.8	+0.5
	comp=Z,0.2nm,0.3s,baz=10,slow=3.3,SNR=4.9						
ESDC				PKPab	PKPab	13 22 06.8	+0.1
	comp=Z,5.6nm,0.8s,baz=344,slow=4.0,SNR=21						
ESDC				PP	PP	13 25 49.9	-1.0
	comp=Z,0.1nm,0.3s,baz=311,slow=4.3,SNR=4.5						
ESLA	Sonseca Array	160.99	13	*e*PKPab	PKPab	13 22 06.8	0.0
PAB	San Pablo	161.03	14	*e*PKPdf	PKPdf	13 21 20.9	+0.5
PAB	San Pablo	161.03	14	*e*PKIKP	PKPdf	13 21 20.9	+0.5
PNCL	Nicolau / Gran	161.07	25	*e*PKPdf	PKPdf	13 21 21.5	+1.2
PNCL	Nicolau / Gran	161.07	25	*e*PKPab	PKPab	13 22 07.5	+0.4
PBEJ	Beja	161.40	23	*e*PKPdf	PKPdf	13 21 23.3	+2.6
PBEJ	Beja	161.40	23	*e*PKPab	PKPab	13 22 10.1	+1.5
MESJ	Messejana	161.43	24	*e*PKPdf	PKPdf	13 21 21.0	+0.3
PTEO	Sao Teotonio	161.49	26	*e*PKPdf	PKPdf	13 21 22.1	+1.3
PTEO	Sao Teotonio	161.49	26	*e*PKPab	PKPab	13 22 09.3	+0.3
PCVE	Castro Verde	161.68	24	*e*PKPdf	PKPdf	13 21 22.5	+1.5
PCVE	Castro Verde	161.68	24	*e*PKPab	PKPab	13 22 10.5	+0.7
MORF	Marmelete	161.72	26	*e*PKPdf	PKPdf	13 21 21.6	+0.5
MORF	Marmelete	161.72	26	*e*PKPdf	PKPdf	13 21 22.6	+1.5
MORF	Marmelete	161.72	26	*e*PKPab	PKPab	13 22 10.6	+0.5
PFVI	Vila Bisbo	161.80	27	*e*PKPdf	PKPdf	13 21 22.9	+1.8
PVAQ	Vaqueiros	162.00	24	*e*PKPab	PKPab	13 22 11.4	+0.2
PVAQ	Vaqueiros	162.00	24	*e*PKPab	PKPab	13 22 11.4	+0.2
PBDV	Barranco-do-Ve	162.06	25	*e*PKPab	PKPab	13 22 11.9	+0.3
KEST	Kesra	163.85	336	PKPab	PKPab	13 22 19.9	+0.3
	comp=Z,3.1nm,0.8s,baz=358,slow=16,SNR=4.4						
LIC	Lamto	163.94	157	*e*PKIKP	PKPdf	13 21 23.7	-0.1
	comp=Z,85nm,1.5s						
KIC	Kosan Boka	164.18	157	*e*PKIKP	PKPdf	13 21 23.9	-0.1
	comp=Z,34nm,0.9s						
TIC	Toumodi	164.34	156	*e*PKIKP	PKPdf	13 21 24.0	-0.2
DBIC	Dimbokro	164.42	157	PKP	PKPdf	13 21 23.1	-1.2
	comp=Z,12nm,1.0s,baz=229,slow=3.8,SNR=7.6						
DBIC	Dimbokro	164.42	157	*e*PKPdf	PKPdf	13 21 22.6	-1.6
DBIC	Dimbokro	164.42	157	*e*PKIKP	PKPdf	13 21 22.6	-1.6
MDT	Midelt	167.24	23	PKP	PKPdf	13 21 26.3	+0.2
	comp=Z,6.1nm,1.0s,baz=104,slow=1.8,SNR=9.5						
MDT				PKPab	PKPab	13 22 35.8	+1.1
	comp=Z,2.6nm,0.6s,baz=338,slow=5.4,SNR=8.1						
TOA0	Torodi Ar. Sit	172.04	183	*e*PKPdf	PKPdf	13 21 28.5	-0.7
TORD	Torodi Ar. Bea	172.04	183	PKP	PKPdf	13 21 27.9	-1.3
	comp=Z,6.2nm,0.9s,baz=1,0,slow=2.4,SNR=26						
TORD				PKPab	PKPab	13 22 55.7	-0.3
	comp=Z,1.2nm,0.8s,baz=156,slow=2.0,SNR=4.3						
TORD				PP	PP	13 26 53.9	+7.4
	comp=Z,0.5nm,0.8s,baz=145,slow=5.4,SNR=3.6						

NIED ***11*** *13:07:00,45.°70N×151.°70E,h50km,Mw3.8 Best double couple: M₀5.50000×10¹⁴ NP1:φs223.00000°,δ40.00000°, λ133.00000°. NP2:φs353.00000°,δ62.00000°,λ60.00000°.*
MOS ***11*** *13:07:06.9±1.2,45.°90N×151.°69E,h50km,mb4.4/1,Error ellipse: s-maj=17.8km s-min=9.0km az=47.9*
ISCJB ***11*** *13:07:06.4±0.6,45.°70N±0.°06×151.°66E±0.°07,h32km, mb3.7/8,MS3.5/1,Error ellipse: s-maj=11.1km s-min=4.1km az=142.7*
SKHL ***11*** *13:07:07.2±0.3,45.°60N×151.°85E,h51km±5km,mb4.3/6*
JMA ***11*** *13:07:07.7±0.7,45.°71N×151.°71E,h30km,M4.4*
IDC ***11*** *13:07:12.2±2.7,45.°92N×151.°32E,h63km±24km,mb3.4/8, mb1 3.6/13,mb1mx3.4/48,mbtmp3.6/13,ML3.2/4,MS3.1/2, Ms1 3.3/2,ms1mx2.5/24,Error ellipse: s-maj=24.9km s-min=15.4km az=135.0*

ISC 11 13:07:08.0±0.8,45.°61N±0.°08×151.°65E±0.°08,h32km,n58, σ2°18/70,mb3.8/8,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.69**	**263**	*c i*PN	**Pn**	**13 07 49.5**	**+0.5**
KUR				*e*S	**Sn**	**13 08 19.8**	**-0.7**
KUR	comp=Z,355nm,0.5s			pmax	pmax		
KUR	comp=N,141nm,0.4s			pmax	pmax		
KUR	comp=E,83nm,0.2s			pmax	pmax		
KUR	comp=E,528nm,0.6s			smax	smax		
KUR	comp=N,332nm,0.5s			smax	smax		
KUR	**Kuril'sk**	**2.69**	**263**	*e*P	**Pn**	**13 07 49.7**	**+0.7**
KUR	comp=N,40nm,0.3s			AMB	AMB	13 07 51.0	
KUR				*i* S	**Sn**	**13 08 21.3**	**+0.8**
KUR	comp=N,346nm,0.5s			A	A	13 08 26.0	
KUR	comp=N,300nm,0.5s			A	A	13 08 26.0	
YUK	**Yuzh-Kuril'sk**	**4.41**	**251**	*e*PN	**Pn**	**13 08 14.6**	**+2.0**
YUK				*i* S	**Sn**	**13 09 04.3**	**+1.4**
YUK	comp=Z,136nm,0.4s			pmax	pmax		
YUK	comp=N,73nm,0.2s			pmax	pmax		
YUK	comp=E,64nm,0.2s			smax	smax		
YUK	comp=N,86nm,0.5s			smax	smax		
YUK	comp=E,357nm,0.5s			smax	smax		
YUK	**Yuzh-Kuril'sk**	**4.41**	**251**	*e*P	**Pn**	**13 08 14.0**	**+1.4**
YUK	comp=E,14nm,0.4s			AMB	AMB	13 08 22.0	
YUK				*i* S	**Sn**	**13 09 04.0**	**+1.1**
YUK	comp=E,43nm,0.5s			A	A	13 09 17.0	
YUK	comp=E,170nm,0.5s			A	A	13 09 17.0	
LAGR	**Lagunnoye**	**4.45**	**252**	*e*PN	**Pn**	**13 08 16.9**	**+3.7**
LAGR				*e*S	**Sn**	**13 09 08.4**	**+4.5**
LAGR	comp=Z,206nm,0.4s			pmax	pmax		
LAGR	comp=E,480nm,0.8s			smax	smax		
LAGR	comp=N,285nm,0.9s			smax	smax		
LAGR	**Lagunnoye**	**4.45**	**252**	*e*P	**Pn**	**13 08 15.8**	**+2.6**
LAGR	comp=N,21nm,0.3s			AMB	AMB	13 08 25.0	
LAGR				*e*S	**Sn**	**13 09 07.4**	**+3.5**
LAGR	comp=N,29nm,0.6s			A	A	13 09 23.0	
LAGR	comp=N,240nm,0.6s			A	A	13 09 23.0	
GRPR	**Tuman**	**4.49**	**251**	*e*PN	**Pn**	**13 08 15.7**	**+2.0**
GRPR				*e*S	**Sn**	**13 09 06.3**	**+1.5**
GRPR	comp=Z,102nm,0.4s			pmax	pmax		
GRPR	comp=E,264nm,0.6s			smax	smax		
GRPR	comp=N,156nm,0.3s			smax	smax		
GRPR	**Tuman**	**4.49**	**251**	*e*P	**Pn**	**13 08 15.0**	**+1.3**
GRPR	comp=N,10.0nm,0.3s			AMB	AMB	13 08 19.0	
GRPR				*e*S	**Sn**	**13 09 06.0**	**+1.2**
GRPR	comp=N,156nm,0.6s			A	A	13 09 16.0	
GRPR	comp=N,264nm,0.6s			A	A	13 09 16.0	
GLVR	**Golovnino**	**4.76**	**249**	*e*PN	**Pn**	**13 08 20.1**	**+2.7**
GLVR				*e*S	**Sn**	**13 09 13.9**	**+2.5**
GLVR	comp=Z,141nm,0.5s			pmax	pmax		
GLVR	comp=N,42nm,0.3s			pmax	pmax		
GLVR	comp=E,53nm,0.2s			pmax	pmax		
GLVR	comp=N,191nm,0.3s			smax	smax		
GLVR	comp=E,272nm,0.7s			smax	smax		
GLVR	**Golovnino**	**4.76**	**249**	*e*P	**Pn**	**13 08 19.7**	**+2.3**
GLVR	comp=E,14nm,0.5s			AMB	AMB	13 08 26.0	
GLVR				*e*S	**Sn**	**13 09 13.0**	**+1.6**
GLVR	comp=E,191nm,0.6s			A	A	13 09 29.0	
GLVR	comp=E,272nm,0.6s			A	A	13 09 29.0	
NEM2	**Nemuro 2**	**4.79**	**244**	P	**Pn**	**13 08 18.1**	**+0.3**
NEM2				*e*S	**Sn**	**13 09 10.4**	**-1.7**
JRA	**Rausu**	**4.94**	**253**	P	**Pn**	**13 08 22.9**	**+3.0**
JNK	**Nakash**	**5.35**	**250**	P	**Pn**	**13 08 27.6**	**+2.0**
JNK				*e*S	**Sn**	**13 09 26.9**	**+0.9**
JAK	**Akkeshi**	**5.63**	**245**	P	**Pn**	**13 08 29.8**	**+0.3**
JAK				*e*S	**Sn**	**13 09 30.0**	**-3.0**
JTKR	**Abashiri--Toko**	**5.75**	**256**	P	**Pn**	**13 08 33.6**	**+2.6**
SKR	**Severo-Kuril's**	**5.89**	**29**	*e*PN	**Pn**	**13 08 29.1**	**-3.8**
SKR				*e*S	**Sn**	**13 09 37.9**	**-1.3**
SKR	comp=Z,64nm,1.2s			pmax	pmax		
SKR	comp=N,78nm,0.9s			smax	smax		
SKR	comp=E,56nm,1.1s			smax	smax		
SKR	**Severo-Kuril's**	**5.89**	**29**	*e*P	**Pn**	**13 08 32.3**	**-0.6**
SKR	comp=E,64nm,0.5s			AMB	AMB	13 08 35.0	
SKR				*e*S	**Sn**	**13 09 37.0**	**-2.2**
SKR	comp=E,112nm,0.5s			A	A	13 09 45.0	
SKR	comp=E,56nm,0.5s			A	A	13 09 45.0	
JAR	**Ashorobuto**	**6.10**	**251**	P	**Pn**	**13 08 37.8**	**+2.0**
JMP	**Maruseppu**	**6.11**	**258**	P	**Pn**	**13 08 39.3**	**+3.2**
JOB	**Onbets**	**6.23**	**247**	P	**Pn**	**13 08 38.7**	**+1.0**
JOB				*e*S	**Sn**	**13 09 46.7**	**-1.0**
YSS	**Yuzh-Sakhalins**	**6.31**	**285**	*e*P	**Pn**	**13 08 40.3**	**+1.6**
JSE	**Soyaes**	**6.43**	**267**	P	**Pn**	**13 08 43.1**	**+2.7**
JKK2	**Kamakawa 2**	**6.58**	**258**	P	**Pn**	**13 08 46.2**	**+3.8**
JKA	**Kamikawa-asahi**	**6.61**	**260**	*e*P	**Pn**	**13 08 44.5**	**+1.7**
ASAJ	**Asahikawa**	**6.61**	**260**	P	**Pn**	**13 08 44.4**	**+1.6**
	comp=E,1.3nm,0.3s,baz=63,slow=28,SNR=13						
JCH	**Churui**	**6.68**	**246**	P	**Pn**	**13 08 44.1**	**+0.3**
JCH				*e*S	**Sn**	**13 09 54.6**	**-4.1**
JNBK	**Urakawa-nobuka**	**7.23**	**246**	P	**Pn**	**13 08 51.6**	**+0.2**
JNBK				*e*S	**Sn**	**13 10 08.8**	**-3.6**
JBT2	**Biratori 2**	**7.25**	**250**	P	**Pn**	**13 08 53.1**	**+1.4**
JNB	**Noboribetsu**	**8.27**	**251**	P	**Pn**	**13 09 07.4**	**+1.8**
PETK	**Petropavlovsk-**	**8.48**	**26**	P	**Pn**	**13 09 11.0**	**+2.6**
	comp=E,0.3nm,0.3s,baz=170,slow=12,SNR=7.7						
PETK	**Petropavlovsk-**	**8.48**	**26**	PN	**Pn**	**13 09 11.0**	**+2.6**
JKB	**Kayabe**	**8.54**	**248**	P	**Pn**	**13 09 09.4**	**+0.1**
JKB				*e*S	**Sn**	**13 10 38.7**	**-5.8**
JANG	**Nango**	**9.08**	**238**	P	**Pn**	**13 09 15.4**	**-1.4**
JTH	**Tanohata**	**9.16**	**235**	*e*S	Sn	13 10 49.5	-10
OFUJ	**Ofunato**	**9.85**	**232**	P	**Pn**	**13 09 26.0**	**-1.4**
JIO	**Ouri**	**10.47**	**231**	P	**Pn**	**13 09 35.3**	**-0.5**
MJAR	**Matsushiro Arr**	**13.58**	**233**	P	**Pn**	**13 10 20.2**	**+1.8**
	comp=E,0.0nm,0.3s,baz=34,slow=11,SNR=3.3						
KLR	**Kul'dur**	**13.95**	**292**	LR	LR	13 14 59.7	
	comp=E,43nm,19.3s,baz=175,slow=34						
MA2	**Magadan**	**14.00**	**358**	P	**Pn**	**13 10 23.1**	**-0.8**
	comp=E,0.7nm,0.3s,baz=182,slow=11,SNR=5.9						
BMKR	**Bomnak**	**17.15**	**310**	*e*P	**Pn**	**13 11 05.0**	**0.0**
BMKR				AMB	AMB	13 11 09.5	
	comp=E,4.0nm,0.8s						
KROS	**Kirovskiy**	**18.07**	**308**	*e*P	**Pn**	**13 11 15.0**	**-1.4**
KROS				AMB	AMB	13 11 19.1	
	comp=E,3.0nm,0.4s						
KSRS	**Korea Array**	**19.49**	**254**	P	**P**	**13 11 32.9**	**+0.7**
	comp=E,0.2nm,0.3s,baz=59,slow=12,SNR=5.9						
H11N2	**WAKE ISLAND Hy 28.72**	**149**		T	T	13 43 34.7	
	baz=338,slow=75,SNR=512						
H11N1	**WAKE ISLAND Hy 28.73**	**149**		T	T	13 43 37.3	
	baz=338,slow=75,SNR=381						
H11N3	**WAKE ISLAND Hy 28.74**	**149**		T	T	13 43 37.9	
	baz=338,slow=75,SNR=355						
H11S1	**WAKE ISLAND Hy 29.78**	**150**		T	T	13 44 57.2	
	baz=339,slow=76,SNR=227						
H11S3	**WAKE ISLAND Hy 29.79**	**150**		T	T	13 45 03.6	
	baz=339,slow=76,SNR=202						
H11S2	**WAKE ISLAND Hy 29.80**	**150**		T	T	13 44 58.5	
	baz=339,slow=76,SNR=175						
ZALV	**Zalesovo Beam**	**42.46**	**306**	PcP	**PcP**	**13 16 51.5**	**-0.5**
	comp=E,0.7nm,0.4s,baz=46,slow=4.2,SNR=3.5						
MKAR	**Makanchi Array**	**46.57**	**298**	P	**P**	**13 15 30.3**	**-2.3**
	comp=E,0.3nm,0.6s,baz=69,slow=7.9,SNR=3.5						
MKAR				PcP	**PcP**	**13 17 06.0**	**-0.3**
	comp=E,0.2nm,0.5s,baz=96,slow=1.4,SNR=2.7						
CMAR	**Chiang Mai Arr**	**51.11**	**256**	P	**P**	**13 16 08.9**	**+1.1**
	comp=E,0.9nm,0.9s,baz=41,slow=7.4,SNR=3.9						
CMAR				LR	LR	13 38 49.4	
	comp=E,41nm,19.9s,baz=79,slow=37						
NVAR	**Mina Array Bea**	**63.87**	**61**	P	**P**	**13 17 40.2**	**+2.6**
	comp=E,0.1nm,0.4s,baz=289,slow=6.5,SNR=2.2						
FINES	**FINESS Array B**	**64.63**	**334**	P	**P**	**13 17 39.5**	**-2.4**
	comp=E,1.3nm,0.8s,baz=69,slow=10,SNR=4.2						
PDAR	**Pinedale Array**	**66.24**	**53**	P	**P**	**13 17 52.2**	**-0.8**
	comp=E,0.1nm,0.3s,baz=312,slow=4.3,SNR=3.1						
WRA	**Warramunga Arr**	**67.11**	**198**	P	**P**	**13 17 59.7**	**+1.3**
	comp=E,1.9nm,0.9s,baz=7,0,slow=7.6,SNR=4.9						
NB2	**NORSAR Subarra**	**68.97**	**341**	P	**P**	**13 18 08.4**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=28,slow=6.2						
NOA	**NORSAR Array B**	**68.97**	**341**	P	**P**	**13 18 07.6**	**-2.0**
	comp=Z,0.5nm,0.4s,baz=27,slow=6.4,SNR=4.7						
ASAR	**Alice Springs**	**70.81**	**197**	P	**P**	**13 18 23.6**	**+2.3**
	comp=Z,1.1nm,1.0s,baz=11,slow=5.4,SNR=4.5						

KRSC 11 13:17:00.2±1.7,59.°90N×163.°87E,h1km±12km,ML3.9, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSR	**Ossora**	**0.77**	**213**	*e*P	Pb	13 17 15.9	-0.5
OSSR				*e*S	Sb	13 17 28.2	+0.9
TILK	**Tilichiki**	**1.26**	**63**	*e*P	Pg	13 17 24.2	-0.2
TILK				*e*S	Sn	13 17 43.4	+0.9
KMSK	**Kamenskaya**	**2.81**	**23**	*e*P	Pb	13 17 49.3	-1.9
KMSK				*e*S	Sn	13 18 23.4	+2.7

IDC 11 13:27:13.7±1.5,16.°31S×178.°39W,h0km,mb3.9/6, mb1 4.3/6,mb1mx3.9/21,mbtmp3.9/6,Error ellipse: s-maj=103.9km s-min=20.7km az=149.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.43**	**239**	P	P	13 34 44.9	-0.8
	2.4nm,0.5s,baz=327,slow=22,SNR=7.6						
WRA	**Warramunga Arr**	**44.96**	**258**	P	P	13 35 31.3	+0.3
	0.7nm,0.3s,baz=97,slow=8.3,SNR=16						
ASAR	**Alice Springs**	**45.26**	**253**	P	P	13 35 33.5	+0.1
	4.3nm,0.5s,baz=88,slow=8.4,SNR=89						
NVAR	**Mina Array Bea**	**78.27**	**44**	P	P	13 39 16.1	+0.2
	0.3nm,0.3s,baz=230,slow=8.2,SNR=2.1						
ILAR	**Eielson Array**	**84.34**	**13**	P	P	13 39 46.7	-0.5
	0.4nm,0.9s,baz=210,slow=2.9,SNR=3.1						
TXAR	**Lajitas Array**	**85.13**	**58**	P	P	13 39 52.4	+0.2
	0.1nm,0.7s,baz=224,slow=3.8,SNR=3.5						

IDC 11 13:47:03.6±28.0,21.°86S×175.°05W,h0km,mb4.2/4, mb1 4.4/4,mb1mx3.8/28,mbtmp4.2/4,Error ellipse: s-maj=516.5km s-min=149.4km az=76.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.11**	**266**	P	P	13 54 08.7	+1.1
	4.0nm,0.4s,baz=90,slow=11,SNR=14						
STKA	**Stephens Creek**	**39.71**	**246**	P	P	13 54 35.9	-2.0
	2.9nm,1.0s,baz=48,slow=9.3,SNR=4.7						
ASAR	**Alice Springs**	**46.90**	**258**	P	P	13 55 35.6	-0.5
	0.7nm,0.5s,baz=93,slow=7.0,SNR=19						
WRA	**Warramunga Arr**	**47.15**	**263**	P	P	13 55 38.8	+0.7
	2.4nm,0.4s,baz=91,slow=8.9,SNR=33						

SJA 11 14:02:39.7±0.5,22.°10S×68.°44W,h129km±5km,ML2.6, MW3.5,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.66**	**220**	*i* P	Pn	14 03 01.1	+0.9
LVC				*i* S	Sn	14 03 16.2	+0.6
PB03	**IPOC Station P**	**1.22**	**272**	*i* P	Pn	14 03 05.4	+0.6
PB03				*i* S	Sn	14 03 24.7	+0.8
PB07	**IPOC Station P**	**1.39**	**285**	*i* P	Pn	14 03 07.5	+0.8
PB15	**IPOC Station P**	**1.45**	**221**	*i* P	Pn	14 03 08.1	+0.7
PB15				*i* S	Sn	14 03 29.5	+1.0
PB02	**IPOC Station P**	**1.56**	**300**	*i* P	Pn	14 03 09.5	+1.0
FSA	**Cafayete**	**4.58**	**151**	*i* P	Pn	14 03 48.6	+1.3
FSA				IAML		14 04 02.9	
	comp=Z,4.7nm,0.4s						

MAN 11 14:07:15.8,11.°08N×124.°70E,h32km,mb3.6,ML2.3, MS1.7,1D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.09**	**254**	*e*P	Pb	14 07 22.6	+1.2
OCLP				*e*S	Sb	14 07 26.4	+1.2
PLP	**Palo**	**0.29**	**72**	‖*e*P	Pn	14 07 24.4	+0.6
PLP				*e*S	Sb	14 07 27.3	-1.2

IDC ***11*** *14:07:41.7±0.6,23.°97N×109.°17W,h0km,mb4.3/16, mb1 4.4/22,mb1mx4.3/46,mbtmp4.3/22,ML3.9/6,MS4.4/29, Ms1 4.4/29,ms1mx4.4/34,Error ellipse: s-maj=17.3km s-min=12.5km az=50.0*
BJI ***11*** *14:07:42.8±0.0,24.°10N×108.°80W,h10km,mb5.1/1, Ms5.1/2,Ms7 4.9/2*
ISCJB ***11*** *14:07:44.9±0.3,24.°15N±0.°03×108.°81W±0.°02,h22km, mb4.6/80,MS4.6/41,Error ellipse: s-maj=4.6km s-min=2.1km az=26.2*
MEX ***11*** *14:07:45.3±0.3,24.°26N×109.°19W,h5km,MD4.3*
GCMT ***11*** *14:07:46.6±0.2,24.°17N±0.°01×109.°01W±0.°01,h19km, MW5.2/99,Moment Tensor Solution. s63,c69; s99,c162; Duration: 1!0 Moment tensor: Scale 10¹⁷Nm; Mrr0.02±.02; Mθθ-0.79±.02; Mφφ0.77±.02; Mrθ-0.26±.04; Mθφ-0.17±.01; Mφr0.08±.03; Best double couple: M₀0.84100×10¹⁷ NP1:φs129.00000°,δ85.00000°, λ-163.00000°. NP2:φs38.00000°,δ73.00000°,λ-6.00000°. Principal axes: T 0.8050, Plg8.0000°, Azm262.0000°; N 0.0730, Plg72.0000°, Azm147.0000°; P -0.8770, Plg16.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***11*** *14:07:47.6±1.1,24.°16N×108.°79W,h29km±7km,mb4.6/118, MD4.3(MEX) Error ellipse: s-maj=5.7km s-min=2.6km az=209.0*
NEIC Felt at Cabo San Lucas, Baja California Sur.

ISC 11 14:07:44.7±0.4,23.°98N±0.°06×108.°96W±0.°03,h22km, n569,σ1°47/543,mb4.7/81,MS4.7/41,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.23**	**276**	**Pn**	**Pn**	**14 08 02.6**	**-4.1**
	576nm,0.3s,baz=127,slow=4.1,SNR=70						
LPIG				Sn	**Sn**	**14 08 18.4**	**-4.2**
	1μm,0.3s,baz=148,slow=13,SNR=19						
LPIG	**La Paz**	**1.23**	**276**	*e*Pn	**Pn**	**14 08 02.5**	**-4.1**
LPIG				*e*Pg	**Pb**	**14 08 08.0**	**+0.7**
LPIG				*e*Sn	**Sn**	**14 08 18.4**	**-4.2**
LPIG	**La Paz**	**1.23**	**276**	*e*P	**Pn**	**14 08 02.5**	**-4.1**
LPIG				*i* S	**Sn**	**14 08 16.0**	**-6.7**
MAIG	**Mazatlaan**	**2.46**	**108**	*e*Pn	**Pb**	**14 08 26.8**	**-1.4**
MAIG				*e*Sn	**Sb**	**14 08 57.3**	**-0.8**
MAIG	**Mazatlaan**	**2.46**	**108**	*e*P	**Pb**	**14 08 27.1**	**-1.1**
MAIG				*i* S	**Sb**	**14 08 59.3**	**+1.3**
HPIG		**4.19**	**45**	*e*Pn	**Pn**	**14 08 45.0**	**-2.4**
SRIG	**Santa Rosalia**	**4.45**	**319**	*e*Pn	**Pn**	**14 08 50.4**	**-0.5**
H06E1	**SOCORRO T-PHAS**	**5.49**	**200**	T	T	14 15 01.5	
	SNR=46						
ZAIG	**Zacatecas**	**6.00**	**100**	*e*Pn	**Pn**	**14 09 12.2**	**-0.3**
LTX	**Lajitas**	**7.13**	**40**	*e*Pn	**Pn**	**14 09 25.5**	**-2.3**
LTX				*e*Sn	**Sn**	**14 10 44.3**	**-4.0**
TX31	**Lajitas Ar. Si**	**7.13**	**40**	*e*Pn	**Pn**	**14 09 25.5**	**-2.3**
TXAR	**Lajitas Array**	**7.13**	**40**	Pn	**Pn**	**14 09 25.5**	**-2.3**
	1.0nm,0.3s,baz=214,slow=14,SNR=42						
TXAR				Sn	**Sn**	**14 10 44.3**	**-3.9**
	1.6nm,0.3s,baz=213,slow=22,SNR=7.7						
TXAR				Lg	Lg	14 11 26.7	
	1.3nm,0.3s,baz=234,slow=29,SNR=2.3						
MNTX	**Cornudas Mount**	**8.32**	**22**	*e*Pn	**Pn**	**14 09 41.9**	**-2.1**
MNTX	**Cornudas Mount**	**8.32**	**22**	P	**Pn**	**14 09 42.8**	**-1.2**
	baz=203,SNR=15						
TUC	**Tucson**	**8.45**	**349**	*e*Pn	**Pn**	**14 09 45.4**	**-0.5**
TUC	**Tucson**	**8.45**	**349**	P	**Pn**	**14 09 46.7**	**+0.8**
	baz=167						
121A	**Cookes Peak, D**	**8.58**	**7**	P	**Pn**	**14 09 47.4**	**-0.4**
	baz=186						
214A	**Organ Pipe Nat**	**8.64**	**338**	P	**Pn**	**14 09 49.4**	**+0.9**
	baz=155,SNR=7.4						
LNIG	**Linares**	**8.70**	**82**	*e*Pn	**Pn**	**14 09 47.2**	**-2.1**
833A	**Chaparral WMA,**	**9.62**	**61**	*e*Pn	**Pn**	**14 10 00.0**	**-1.9**
833A	**Chaparral WMA,**	**9.62**	**61**	P	**Pn**	**14 10 00.9**	**-1.0**
	baz=246						
GLA	**Glamis**	**10.40**	**332**	P	**Pn**	**14 10 14.2**	**+1.6**
	baz=148						
JCT	**Junction City**	**10.41**	**50**	*e*Pn	**Pn**	**14 10 09.8**	**-2.9**
JCT	**Junction City**	**10.41**	**50**	P	**Pn**	**14 10 11.7**	**-0.9**
	baz=234						
X18A	**Snowflake**	**10.55**	**356**	*e*Pn	**Pn**	**14 10 15.9**	**+1.2**
X16A	**Lo Mia Camp, P**	**10.62**	**349**	*e*Pn	**Pn**	**14 10 15.5**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**10.68**	**326**	P	**Pn**	**14 10 17.9**	**+1.4**
	baz=141,SNR=8.7						
Y12C	**Blythe**	**10.88**	**335**	*e*Pn	**Pn**	**14 10 19.1**	**0.0**
Y12C	**Blythe**	**10.88**	**335**	P	**Pn**	**14 10 19.8**	**+0.6**
	baz=151						
BAR	**Barrett**	**11.01**	**324**	*e*Pn	**Pn**	**14 10 21.3**	**+0.4**
MONP2	**Monument Peak**	**11.04**	**325**	P	**Pn**	**14 10 22.9**	**+1.5**
	baz=141,SNR=9.4						
W18A	**Petrified Fore**	**11.12**	**357**	*e*Pn	**Pn**	**14 10 21.3**	**-1.3**
W18A	**Petrified Fore**	**11.12**	**357**	P	**Pn**	**14 10 21.6**	**-1.0**
	baz=176,SNR=11						
TASM	**ASL Pad, Albuq**	**11.14**	**11**	P	**Pn**	**14 10 22.7**	**-0.1**
	baz=191						
TASM	**ASL Pad, Albuq**	**

baz=149,SNR=9.8
LCMT Little Creek M 13.50 345 ePn Pn 14 10 57.2 +2.2
SHPR Sheep Range 13.58 338 ePn Pn 14 10 59.0 +2.9
SCZ2 Santa Cruz Isl 13.66 319 P Pn 14 11 00.0 +2.9
baz=133
T25A Trinidad 13.69 16 P Pn 14 10 59.2 +1.6
baz=197
PKCU Pink Cliffs 13.72 349 ePn Pn 14 10 57.3 -1.0
LRMC Laurel Mtn Rad 13.73 329 P Pn 14 10 58.6 +0.5
baz=143,SNR=12
S22A 4UR Ranch, Cre 13.84 7 P Pn 14 11 00.7 +0.9
baz=188
WMOK Wichita Mounta 13.91 37 ePn Pn 14 10 59.4 -1.2
WMOK Wichita Mounta 13.91 37 P Pn 14 10 59.1 -1.4
baz=222
SZCU Shurtz Canyon 14.02 346 ePn Pn 14 11 02.6 +0.3
ARVC Arvin 14.03 325 P Pn 14 11 03.8 +1.7
baz=139
SDCO Great Sand Dun 14.04 11 P Pn 14 11 03.8 +1.3
baz=193
MPMC Manual Prospec 14.11 330 P Pn 14 11 04.8 +1.3
baz=145,SNR=15
FURC Furnace Creek, 14.19 333 P Pn 14 11 07.2 +2.9
baz=148
PV18 Skein Mesa, Pa 14.22 0 ePn Pn 14 11 05.2 +0.2
PV03 Paradox Valley 14.23 0 ePn Pn 14 11 05.4 +0.3
PV17 East Wray Mesa 14.26 0 ePn Pn 14 11 05.5 +0.1
ISA Isabella, Lake 14.26 327 ePn Pn 14 11 06.4 +1.0
ISA Isabella, Lake 14.26 327 P Pn 14 11 08.9 +3.5
baz=141
PV11 David Mesa, Pa 14.27 0 ePn Pn 14 11 05.7 +0.1
PV19 Morning Glory 14.29 360 ePn Pn 14 11 05.1 -0.7
PV16 Nyswonger Mesa 14.29 0 ePn Pn 14 11 06.0 +0.2
PV12 Saucer Basin, 14.29 1 ePn Pn 14 11 06.1 +0.1
PV20 West Nyswonger 14.32 360 ePn Pn 14 11 06.4 +0.1
DAC Darwin (Calif) 14.34 331 ePn Pn 14 11 07.0 +0.4
PV14 Lion Creek, Pa 14.35 360 ePn Pn 14 11 06.1 -0.6
TPNV Topopah Spring 14.36 336 P Pn 14 11 09.2 +2.3
baz=151,SNR=27
PKM Mcpherson Peak 14.39 321 P Pn 14 11 10.6 +3.2
baz=135
PV07 Paradox Valley 14.42 1 ePn Pn 14 11 07.2 -0.4
PV23 Carpenter Ridg 14.43 360 ePn Pn 14 11 06.5 -1.3
PV09 Paradox Valley 14.47 359 ePn Pn 14 11 07.8 -0.7
PV22 Blue Mesa, Par 14.51 1 ePn Pn 14 11 08.7 -0.3
CWC Cottonwood Cre 14.70 330 P Pn 14 11 14.4 +3.0
baz=144
SMMC Simmler 14.80 322 P Pn 14 11 14.5 +1.8
baz=136
NATX Nacogdoches 14.82 55 P Pn 14 11 13.4 +0.4
baz=242
GRAC Grapevine Rang 14.85 333 P Pn 14 11 16.1 +2.7
baz=148,SNR=6.0
CMIG Matias Romero 14.86 115 Pn P 14 11 15.5 -3.7
0.1nm,0.3s,baz=295,slow=10,SNR=6.4
CMIG LR LR 14 16 54.1
comp=Z,4µm,19.6s,baz=280,slow=37
Q16A Castle Valley 15.01 353 ePn Pn 14 11 15.8 +0.2
SRU San Rafael Swe 15.14 355 ePn Pn 14 11 17.9 +0.5
12nm,0.9s
VOG Valley Oaks Go 15.23 326 P Pn 14 11 18.6 +0.2
baz=140
SMCO Snowmass 15.24 6 ePn Pn 14 11 19.0 0.0
57nm,1.1s
TIN Timemaha, Big 15.27 331 P Pn 14 11 19.8 +0.7
baz=145
Q24A Divide 15.29 11 P Pn 14 11 21.1 +1.6
baz=193
TMUT Trail Mountain 15.39 353 ePn Pn 14 11 21.8 +1.0
34nm,1.1s
R11A Troy Canyon, C 15.40 340 ePn Pn 14 11 22.1 +1.4
24nm,1.2s
R11A Troy Canyon, C 15.40 340 P Pn 14 11 23.0 +2.2
baz=156,SNR=29
P17A Butcher Ranch, 15.52 355 ePn Pn 14 11 22.5 +0.1
44nm,1.2s
KSCO Kaye Shedlock' 15.92 18 ePn Pn 14 11 26.0 -1.5
26nm,1.1s
KSCO Kaye Shedlock' 15.92 18 P Pn 14 11 28.5 +1.0
baz=201
MLAC Mammoth, Mammo 16.02 330 P P 14 11 30.7 -1.5
baz=145
ISCO Idaho Springs 16.02 9 ePn Pn 14 11 29.2 +0.3
39nm,1.1s
ISCO Idaho Springs 16.02 9 P Pn 14 11 29.6 +0.6
baz=191,SNR=30
O20A White River Ci 16.12 2 ePn Pn 14 11 30.3 +0.2
57nm,1.1s
O20A White River Ci 16.12 2 P Pn 14 11 30.7 +0.6
baz=182,SNR=10
NLU North Lily Min 16.14 351 ePn Pn 14 11 30.5 +0.1
21nm,1.1s
NV11 Mina Array Sit 16.40 334 ePn P 14 11 36.6 +0.3
NV01 Mina Array Sit 16.46 333 ePn P 14 11 36.5 -0.5
NVAR Mina Array Bea 16.46 333 Pn P 14 11 36.5 -0.5
0.4nm,0.3s,baz=161,slow=11,SNR=54
NVAR LR LR 14 17 29.7
comp=Z,1µm,19.1s,baz=150,slow=36
TUL1 Leonard 16.46 41 P Pn 14 11 34.6 +0.3
baz=227
DUG Dugway, Tooele 16.49 350 P P 14 11 37.1 -0.2
baz=167,SNR=15
JLU Jordanelle 16.70 353 ePn Pn 14 11 36.3 -1.3
29nm,1.2s
CBKS Cedar Bluff 16.74 26 P Pn 14 11 37.5 -0.3
baz=210
KVN Kaiserville 16.91 335 ePn P 14 11 41.4 -0.6
50nm,1.4s
Z41A Richland Creek 16.92 53 ePn Pn 14 11 39.8 -0.2
44nm,0.4s
Z41A Richland Creek 16.92 53 P Pn 14 11 39.6 -0.4
baz=241
WAKR Walker 17.00 331 ePn P 14 11 42.5 -0.6
64nm,1.5s
MIAR Mount Ida 17.04 48 ePn Pn 14 11 41.3 -0.3
12nm,0.9s
MIAR Mount Ida 17.04 48 P Pn 14 11 42.0 +0.4
baz=236
N23A Red Feather La 17.06 8 ePn Pn 14 11 42.1 +0.1
31nm,1.2s
N23A Red Feather La 17.06 8 P Pn 14 11 43.5 +1.5
baz=189,SNR=7.1
BGU Big Grassy Mou 17.24 350 ePn Pn 14 11 44.6 +0.4
37nm,1.3s
W39A Magazine 17.27 46 ePn Pn 14 11 42.9 -1.6
23nm,1.1s
W39A Magazine 17.27 46 P Pn 14 11 44.3 -0.2
baz=234
PHWY Pilot Hill 17.52 9 ePn Pn 14 11 47.5 -0.4
24nm,1.4s
X40A Basin Creek Fa 17.52 50 ePn Pn 14 11 47.0 -0.6
65nm,2.0s
X40A Basin Creek Fa 17.52 50 P Pn 14 11 47.8 +0.2
baz=238
ELK Elko 17.53 344 Pn P 14 11 50.1 +1.2
0.1nm,0.3s,baz=181,slow=9.0,SNR=32
ELK LR LR 14 18 30.4
comp=Z,1µm,18.7s,baz=172,slow=37
ELK Elko 17.53 344 ePn Pn 14 11 47.7 -0.2
22nm,1.1s
CCIG Comitan 17.55 113 ePn P 14 11 49.8 +0.6
27nm,1.3s
PNTR Pine Nut 17.56 332 ePn P 14 11 49.5 +0.3
34nm,1.1s
BMN Battle Mountai 17.81 339 ePn Pn 14 11 51.2 -0.2
25nm,1.3s
HHAR Hobbs 17.84 43 ePn Pn 14 11 51.3 -0.2
16nm,0.9s
OGNE Ogallala 17.89 17 P Pn 14 11 51.7 -0.5
baz=201
PAHR Pah Rah Range 17.98 333 eP P 14 11 54.6 +0.8
16nm,1.1s
HVU Hansel Valley 18.03 351 eP P 14 11 54.8 +0.5
55nm,1.1s
AFDM Forest Hills D 18.07 328 ePn P 14 11 56.2 +1.5
12nm,1.2s
VBMS Vicksburg 18.21 59 P P 14 11 56.1 0.0
baz=248
W41B Gary Mavity, V 18.30 49 ePn P 14 11 57.3 +0.2
39nm,1.3s
W41B Gary Mavity, V 18.30 49 P P 14 11 55.6 -1.5
baz=237
KSU1 Kansas State U 18.36 32 P P 14 11 58.0 +0.2
baz=218
BEKR Beckworth 18.53 331 eP Pn 14 12 01.4 +1.3
20nm,1.2s
U40A Yellville 18.57 45 P P 14 12 00.4 +0.2
baz=233
K22A Casper 18.73 6 eP Pn 14 12 03.1 +0.6
80nm,1.1s
K22A Casper 18.73 6 P P 14 12 01.2 -0.9
baz=186,SNR=21
BW06 Boulder Array 18.74 359 eP P 14 12 02.7 +0.5
77nm,1.3s
BW06 Boulder Array 18.74 359 P P 14 12 02.9 +0.6
baz=178,SNR=75
PD31 Pinedale Array 18.74 359 eP P 14 12 02.7 +0.4
PDAR Pinedale Array 18.74 359 P P 14 12 02.9 +0.6
0.4nm,0.3s,baz=164,slow=11,SNR=58
PDAR LR LR 14 19 18.9
comp=Z,2µm,19.2s,baz=192,slow=37
ORV Oroville 18.80 329 eP Pn 14 12 04.5 +1.3
23nm,1.4s
AHID Auburn Hatcher 18.82 355 eP P 14 12 03.5 +0.4
54nm,1.4s
X43A Marvell 18.92 52 P P 14 12 02.4 -1.7
baz=241
REDW Red Top Meadow 19.39 356 eP P 14 12 09.8 +0.4
30nm,1.1s
O03E Paynes Creek 19.53 329 P Pn 14 12 12.5 +0.4
baz=142
TPAW Teton Pass 19.53 356 eP P 14 12 11.3 +0.4
51nm,1.2s
BGNE Belgrade 19.59 25 P P 14 12 09.1 -2.2
baz=210
LOHW Long Hollow 19.63 356 eP P 14 12 12.4 +0.5
35nm,1.1s
FXWY Fox Creek 19.68 356 eP P 14 12 13.0 +0.4
30nm,1.2s
MOOW Moose Ponds 19.77 356 eP P 14 12 14.0 +0.5
13nm,1.0s
O02D Mt. Diablo Mer 19.91 327 P Pn 14 12 16.7 +0.1
baz=140
IMW Indian Meadow 19.93 356 eP P 14 12 15.4 0.0
29nm,1.1s
OXF Oxford 20.00 54 eP P 14 12 15.7 0.0
34nm,0.9s
OXF Oxford 20.00 54 P P 14 12 15.8 0.0
baz=244
HLID Hailey 20.04 348 eP P 14 12 17.5 +1.1
27nm,1.0s
HLID Hailey 20.04 348 P P 14 12 17.2 +0.8
baz=165,SNR=19
WVOR Wild Horse Val 20.08 339 eP P 14 12 16.5 -0.2
37nm,1.1s
FLWY Flagg Ranch 20.10 356 eP P 14 12 17.9 +0.8
53nm,1.1s
147A Livingston 20.14 60 P P 14 12 17.0 -0.4
baz=250
MOD Modoc Plateau 20.21 335 eP P 14 12 17.9 -0.4
19nm,1.0s
YPP Pinstone Pla 20.30 356 eP P 14 12 17.7 -1.6
18nm,1.1s
KMRM Mail Ridge 20.40 326 eP P 14 12 20.6 +0.3
77nm,1.2s
H17A Grant Village 20.41 357 eP P 14 12 20.1 -0.4
33nm,1.2s
H17A Grant Village 20.41 357 P P 14 12 22.0 +1.5
baz=175,SNR=12
449A Pace 20.44 66 P P 14 12 19.9 -0.7
baz=256
N02D Trinity Center 20.49 329 P Pn 14 12 22.9 -0.5
baz=141
RSSD Black Hills 20.49 10 eP P 14 12 21.2 -0.1
19nm,1.0s
RSSD Black Hills 20.49 10 P P 14 12 22.0 +0.7
baz=193
349A Repton 20.61 64 P P 14 12 22.4 -0.1
baz=255
CCM Cathedral Cave 20.62 43 P P 14 12 23.4 +0.8
baz=232
X46A Booneville 20.63 55 P P 14 12 21.6 -1.0
baz=245
BRAL Brewton 20.68 65 P P 14 12 23.9 +0.6
baz=255
148A Greensboro 20.69 61 P P 14 12 21.3 -2.1
baz=251
M04C Macdoel 20.74 332 P Pn 14 12 26.2 -0.2
baz=144,SNR=8.3
YHB Horse Butte 20.80 356 eP P 14 12 24.9 +0.2
25nm,1.0s
YHH Holmes Hill 20.82 356 eP P 14 12 25.9 +1.0
33nm,1.1s
249A Camden 20.84 63 P P 14 12 24.6 -0.4
baz=253
J08A Circle Bar Ran 20.86 340 eP P 14 12 25.1 0.0
46nm,1.0s
QLMT Earthquake Lak 20.90 355 eP P 14 12 26.0 +0.3
KHMM Horse Mountain 20.91 327 eP P 14 12 27.2 +1.4
48nm,1.1s
450A Crestview 20.98 66 P P 14 12 26.1 -0.4
baz=257
W46A Michie 21.03 53 P P 14 12 27.0 0.0
baz=244
MCMT McKenzie Canyo 21.04 352 eP P 14 12 28.4 +1.1
YBH Yreka Blue Hor 21.09 330 LR LR 14 20 39.8
comp=Z,384nm,18.2s,baz=159,slow=37
RLMT Red Lodge 21.09 359 eP P 14 12 28.5 +0.6
71nm,1.4s
RLMT Red Lodge 21.09 359 P P 14 12 25.9 -2.0
baz=179,SNR=18
K05A Summer Lake 21.14 335 eP P 14 12 29.7 +1.3
59nm,1.1s
X47A Russelville 21.16 55 P P 14 12 27.7 -0.7
baz=246
LRAL Lakeview Retre 21.27 60 P P 14 12 29.2 -0.4
baz=251
149A Jones 21.30 61 P P 14 12 28.2 -1.7
baz=252
350A Dozier 21.34 65 P P 14 12 28.9 -1.4
baz=256
K04D Chiloquin, OR 21.40 333 P P 14 12 31.4 +0.3
baz=146
Y48A Jasper 21.45 58 P P 14 12 32.1 +0.7
baz=248
V46A Holladay 21.52 52 P P 14 12 32.0 -0.3
baz=243
DLMT Dillon 21.54 353 eP P 14 12 34.1 +1.6
25nm,1.0s
250A Grady 21.54 63 eP P 14 12 31.9 -0.6
93nm,1.5s
250A Grady 21.54 63 P P 14 12 33.1 +0.6
baz=254
BOZ Bozeman (W) 21.68 355 eP P 14 12 35.2 +1.2
17nm,1.0s
BOZ Bozeman (W) 21.68 355 P P 14 12 36.8 +2.8
baz=173,SNR=22
S44A Carbondale 21.69 46 P P 14 12 34.2 +0.1
baz=236
Z49A Columbiana 21.70 60 P P 14 12 33.8 -0.4
baz=251
U46A Springville 21.74 51 P P 14 12 34.4 -0.3
baz=241
T45A Paducah 21.75 49 P P 14 12 33.1 -1.6
baz=239
X48A Hartselle 21.75 56 P P 14 12 34.7 0.0
baz=247
J05D Fort Rock, OR 21.75 335 P P 14 12 37.1 +2.3
baz=148
GCMT Greycliff 21.77 359 eP P 14 12 34.8 -0.1
PLID Pearl Lake 21.82 346 eP P 14 12 36.3 +0.6
22nm,1.1s
I07A Izee 21.84 339 eP P 14 12 36.7 +1.1
13nm,1.1s
WVT Waverly 21.88 52 eP P 14 12 36.4 +0.2
21nm,0.9s
WVT Waverly 21.88 52 P P 14 12 36.5 +0.4
baz=242
351A Pinckard 21.91 65 P P 14 12 34.7 -1.7
baz=257
150A Eclectic 21.92 62 P P 14 12 37.1 +0.5
baz=253,SNR=8.9
V47A Nunnelly 21.97 53 P P 14 12 33.7 -3.4
baz=243
SUSD Miller 21.99 19 P P 14 12 36.9 -0.3
baz=205
Y49A Blount Mountai 22.02 58 P P 14 12 37.5 -0.1
baz=250
J04D Umpqua Nationa 22.06 334 P P 14 12 39.1 +0.9
baz=146
PINE Pine Mountain 22.08 336 eP P 14 12 38.8 +0.5
18nm,0.9s
ECSD EROS Data Cent 22.16 24 eP P 14 12 38.5 -0.6
48nm,1.5s
ECSD EROS Data Cent 22.16 24 P P 14 12 37.6 -1.5
baz=211
452A Marianna 22.17 67 P P 14 12 37.2 -2.1
baz=258
SCIA State Center 22.17 32 P P 14 12 38.8 -0.3
baz=221
Z50A Ashland 22.20 60 P P 14 12 40.2 +0.6
baz=252
251A Midway 22.27 63 P P 14 12 40.0 -0.4
baz=255
N40A Mertquake, Sal 22.27 37 P P 14 12 39.6 -0.7
baz=226
T46A Princeton 22.28 49 P P 14 12 41.0 +0.6
baz=240,SNR=5.1
X49A Woodville 22.32 57 P P 14 12 41.1 +0.3
baz=248
U47A Clarksville 22.41 51 P P 14 12 41.2 -0.7
baz=242
V48A Smith Brothers 22.44 53 P P 14 12 40.1 -2.1
baz=245
151A Opelika 22.46 62 P P 14 12 40.9 -1.4
baz=254
352A Blakely 22.52 65 P P 14 12 41.9 -1.1
baz=257
Y50A Piedmont 22.56 59 P P 14 12 42.3 -1.1
baz=250
N41A Harden Midland 22.56 38 P P 14 12 43.6 +0.2
baz=228
W49A Belvidere 22.60 55 P P 14 12 44.3 +0.5
baz=247,SNR=7.6
P43A Skaggs, Pawnee 22.66 42 P P 14 12 43.2 -1.2
baz=232
R45A Skylar, Fairfi 22.67 46 P P 14 12 43.6 -0.9
baz=237
S46A Don Dixon Farm 22.72 48 P P 14 12 44.5 -0.6
baz=239
G08A Pilot Rock 22.76 342 eP P 14 12 45.4 -0.1
8.2nm,1.1s
LAO LASA Array 22.77 5 eP P 14 12 45.9 +0.4
73nm,0.9s
LAO LASA Array 22.77 5 P P 14 12 44.9 -0.7
baz=186
HRY Holter Researc 22.80 355 eP P 14 12 45.5 -0.4
T47A Sharon Grove 22.80 50 eP P 14 12 45.6 -0.3
26nm,0.8s
T47A Sharon Grove 22.80 50 P P 14 12 45.6 -0.3
baz=242
Z51A Franklin 22.81 61 P P 14 12 43.3 -2.8
baz=252
X50B Fort Payne 22.82 57 P P 14 12 45.7 -0.5
baz=249,SNR=5.1
SWET Sewanee 22.89 55 eP P 14 12 46.8 -0.2
17nm,0.9s
453A Whigham 22.89 67 eP P 14 12 46.4 -0.6
132nm,1.4s
453A Whigham 22.89 67 P P 14 12 47.9 +1.0
baz=259
F10A Beach Ranch, E 22.94 345 eP P 14 12 48.0 +0.7
23nm,1.2s
CLTN Cedars of Leba 22.95 53 eP P 14 12 47.2 -0.3
15nm,0.9s
U48A Cassie Pea, Po 22.98 52 P P 14 12 48.6 +0.7
baz=243
152A Waverly Hall 22.99 62 eP P 14 12 48.0 0.0
34nm,0.9s
152A Waverly Hall 22.99 62 P P 14 12 47.5 -0.5
baz=254,SNR=10
Q45A Warren Harvey, 23.08 45 P P 14 12 49.0 +0.2
baz=236
Y51A Rockmart 23.09 59 P P 14 12 48.2 -0.7
baz=251
V49A McMinnville 23.13 54 P P 14 12 48.4 -1.0
baz=246
R46A Gibon Southern 23.14 47 P P 14 12 48.5 -0.8
baz=238
MSO Missoula 23.15 351 eP P 14 12 50.3 +0.8
26nm,1.0s
MSO Missoula 23.15 351 P P 14 12 50.0 +0.4
baz=168,SNR=20
M41A Milan 23.18 37 P P 14 12 48.5 -1.3
baz=227
S47A Hartford 23.25 49 P P 14 12 48.4 -2.2
baz=241
L40A Anamosa 23.30 35 eP P 14 12 50.6 -0.3
44nm,1.1s
L40A Anamosa 23.30 35 P P 14 12 50.0 -0.9
baz=225,SNR=6.2
554A Perry 23.30 69 P P 14 12 48.9 -2.2
baz=261
253A Americus 23.32 64 P P 14 12 51.7 +0.4
baz=256
W50A Signal Mountai 23.35 56 eP P 14 12 51.2 -0.4
38nm,0.9s
W50A Signal Mountai 23.35 56 P P 14 12 50.8 -0.8
baz=248,SNR=8.5
T48A Bowling Green 23.36 51 P P 14 12 50.5 -1.1
baz=242
HDIL Hopedale 23.36 40 P P 14 12 49.7 -2.0
baz=231
Z52A Williamson 23.38 61 P P 14 12 51.0 -0.9
baz=253,SNR=10
454A Quitman 23.45 68 P P 14 12 51.4 -1.2
baz=260,SNR=9.9
G05D Wamic, OR 23.47 338 P P 14 12 52.6 -0.1
baz=150
X51A Calhoun 23.47 58 P P 14 12 51.3 -1.5
baz=250
U49A Red Boiling Sp 23.53 53 P P 14 12 52.7 -0.7
baz=244
655A Horseshoe Beac 23.59 71 P P 14 12 52.9 -1.0
baz=263
TIGA Tifton 23.63 66 eP P 14 12 53.7 -0.6
132nm,1.4s
TIGA Tifton 23.63 66 P P 14 12 53.9 -0.4
baz=258
E09A Wood Farm, Sta 23.67 344 eP P 14 12 54.4 -0.2
29nm,0.9s
V50A Pikevile 23.69 55 P P 14 12 53.7 -1.2
baz=247,SNR=9.0
P45A Graceland, Par 23.70 44 P P 14 12 51.1 -3.8
baz=235
W51A Cleveland 23.76 56 P P 14 12 54.9 -0.7
baz=249,SNR=7.9
R47A Wooly Knot Far 23.84 48 P P 14 12 55.8 -0.5
baz=240
S48A Wiedeman Farm, 23.86 50 P P 14 12 56.5 +0.1
baz=242,SNR=7.4
Y52A Lilburn 23.86 60 eP P 14 12 55.7 -0.8
19nm,0.8s
Y52A Lilburn 23.86 60 P P 14 12 54.6 -2.0
baz=252
555A McAlpin 23.92 70 P P 14 12 56.1 -1.0
baz=262
HAWA Hanford 23.93 342 eP P 14 12 57.3 +0.3
10.0nm,0.9s
455A Stateville 23.97 68 P P 14 12 58.2 +0.7
baz=260
WCI Wyandotte Cave 23.97 48 P P 14 12 54.2 -3.3
baz=240
T49A Edmonton 23.97 51 P P 14 12 54.2 -3.3
baz=244
254A Abbeville 23.98 65 P P 14 12 56.0 -1.7
baz=257
EGMT Eagleton 24.00 359 eP P 14 12 58.3 +0.5
48nm,1.1s
EGMT Eagleton 24.00 359 P P 14 12 59.0 +1.2
baz=178,SNR=8.2
CPCT Cooper Cave 24.04 56 eP P 14 12 58.8 +0.6
42nm,0.9s
Z53A Monticello 24.09 62 P P 14 12 56.6 -2.0
baz=254
L42A Oliver, Polo 24.09 37 eP P 14 12 58.6 0.0
35nm,0.9s
L42A Oliver, Polo 24.09 37 P P 14 12 56.9 -1.7
baz=228
P46A Rosedale 24.09 45 P P 14 12 56.5 -2.2
baz=236
M43A Waltham Townsh 24.12 39 P P 14 12 56.4 -2.4
baz=230
O45A Potomac 24.13 43 P P 14 12 57.1 -1.8
baz=234
U50A Jamestown 24.18 54 P P 14 12 57.1 -2.4
baz=246
GOGA Godfrey 24.21 61 eP P 14 13 00.3 +0.6
11nm,0.8s
GOGA Godfrey 24.21 61 P P 14 12 58.0 -1.7
baz=254
X52A Dahlonega 24.23 58 P P 14 12 59.3 -0.8
baz=251

Y53A	Monroe	24.24	60	P		P	14 12 57.7	-2.4
	baz=253							
V51A	Loudon	24.30	55	eP		P	14 13 00.4	-0.3
	153nm,1.8s							
V51A	Loudon	24.30	55	P		P	14 12 58.9	-1.7
	baz=248							
R48A	Northridge Ran	24.34	48	P		P	14 13 01.7	+0.7
	baz=240							
W52A	Murphy	24.37	57	eP		P	14 13 00.8	-0.5
	35nm,0.8s							
W52A	Murphy	24.37	57	P		P	14 13 00.8	-0.5
	baz=250,SNR=6.4							
JFWS	Jewell Farm	24.41	35	P		P	14 13 03.5	+2.0
	baz=225							
T50A	Nancy	24.43	52	P		P	14 13 00.9	-0.9
	baz=245,SNR=10							
S49A	Springfield	24.45	50	P		P	14 13 00.7	-1.3
	baz=242							
757A	Oxford	24.55	73	P		P	14 13 02.6	-0.3
	baz=265							
SFIN	Lafayette	24.59	43	eP		P	14 13 03.5	+0.3
	40nm,0.8s							
SFIN	Lafayette	24.59	43	P		P	14 13 03.0	-0.2
	baz=235							
N45A	Kentland	24.61	42	P		P	14 13 04.9	+1.5
	baz=233							
P47A	Martinsville	24.63	46	P		P	14 13 03.7	+0.1
	baz=238							
X53A	Estanollee	24.66	59	P		P	14 13 02.5	-1.4
	baz=252							
Z54A	Sparta	24.66	62	P		P	14 13 03.0	-0.9
	baz=255,SNR=10.0							
058A	Arcadia	24.68	77	P		P	14 13 02.8	-1.3
	baz=269							
Q48A	North Vernon	24.70	47	P		P	14 13 05.0	+0.8
	baz=240							
L43A	Garden Prairie	24.73	38	P		P	14 13 03.7	-0.7
	baz=229							
DGMT	Dagmar	24.73	8	P		P	14 13 08.0	+3.6
	baz=190							
958A	Wauchula	24.74	76	P		P	14 13 02.7	-2.0
	baz=268							
R49A	Shelbyville	24.77	49	P		P	14 13 02.6	-2.3
	baz=242							
U51A	La Follette	24.77	54	P		P	14 13 03.9	-1.0
	baz=247							
K42A	Prairie Point,	24.79	36	P		P	14 13 07.0	+2.0
	baz=227							
155A	Kite	24.82	64	P		P	14 13 05.4	+0.1
	baz=257,SNR=5.9							
V52A	Sevierville	24.89	56	eP		P	14 13 04.6	-1.4
	21nm,0.8s							
LON	Longmire	24.95	339	eP		P	14 13 07.1	+0.7
	29nm,0.9s							
Y54A	Tignall	24.96	61	P		P	14 13 07.2	+0.7
	baz=254							
W53A	Cullowhee	24.98	58	P		P	14 13 08.2	+1.2
	baz=251							
S50A	Richmond	25.03	51	P		P	14 13 10.0	+2.8
	baz=244							
E04D	Cinebar	25.04	337	P		P	14 13 10.5	+3.3
	baz=149							
LTY	Liberty	25.04	341	eP		P	14 13 08.2	+0.9
	8.8nm,0.9s							
T51A	Gray	25.06	53	P		P	14 13 07.2	-0.3
	baz=246							
NEW	Newport	25.09	347	P		P	14 13 08.1	+0.4
	7.2nm,0.8s,baz=152,slow=12,SNR=9.7							
NEW					LR	LR	14 22 04.1	
	comp=Z,904nm,21.9s,baz=170,slow=34							
NEW	Newport	25.09	347	eP		P	14 13 07.7	+0.1
	13nm,0.9s							
NEW	Newport	25.09	347	P		P	14 13 08.4	+0.8
	baz=162,SNR=12							
O47A	Sheridan	25.10	44	P		P	14 13 09.0	+1.2
	baz=237							
256A	Glennville	25.16	65	P		P	14 13 10.7	+2.4
	baz=258							
TZTN	Tazewell	25.19	54	P		P	14 13 11.0	+2.4
	baz=247							
Z55A	Blythe	25.23	63	P		P	14 13 11.1	+2.0
	baz=256							
U52A	Thorn Hill	25.26	55	P		P	14 13 10.0	+0.7
	baz=248							
059A	Moore Haven	25.27	77	P		P	14 13 09.9	+0.4
	baz=270							
J42A	Columbus	25.28	35	P		P	14 13 12.8	+3.4
	baz=226							
Q49A	Aurora	25.30	48	P		P	14 13 11.8	+2.1
	baz=241							
WALA	Waterton Lakes	25.33	352	eP		P	14 13 10.8	+0.8
	25nm,1.0s							
R50A	Paris	25.35	50	P		P	14 13 11.9	+1.8
	baz=243							
X54A	Belton	25.40	59	P		P	14 13 09.6	-1.0
	baz=253							
V53A	Saluda	25.42	57	eP		P	14 13 11.2	+0.4
	17nm,0.8s							
V53A	Saluda	25.42	57	P		P	14 13 11.1	+0.3
	baz=250							
S51A	Beattyville	25.59	52	eP		P	14 13 13.5	+1.2
	42nm,0.9s							
S51A	Beattyville	25.59	52	P		P	14 13 12.0	-0.3
	baz=245,SNR=5.5							
Y55A	Saluda	25.64	61	P		P	14 13 14.4	+1.7
	baz=254							
D04E	Lakebay	25.65	338	P		P	14 13 16.3	+3.6
	baz=149							
B08A	Colville Reser	25.68	344	eP		P	14 13 14.0	+0.9
	14nm,0.9s							
P49A	Miami Univ. Ec	25.68	47	P		P	14 13 13.6	+0.5
	baz=240							
G39A	Holcombe	25.70	30	P		P	14 13 13.7	+0.5
	baz=220							
W54A	Cherokee Point	25.71	58	P		P	14 13 14.5	+1.0
	baz=252							
N47A	Urbana	25.76	44	P		P	14 13 16.6	+2.9
	baz=236							
O48A	Farmland	25.77	45	P		P	14 13 17.0	+3.2
	baz=238							
I42A	Draeger Farm,	25.78	35	P		P	14 13 17.7	+3.7
	baz=226							
T52A	Hallie	25.82	54	P		P	14 13 17.5	+3.0
	baz=247							
U53A	Fall Branch	25.85	55	P		P	14 13 16.3	+1.7
	baz=249							
R51A	Hillsboro	25.89	51	P		P	14 13 15.0	0.0
	baz=244,SNR=7.8							
F38A	Pierce - Schro	25.91	28	P		P	14 13 14.6	-0.5
	baz=218							
060A	Indiantown	25.97	77	P		P	14 13 14.5	-1.3
	baz=270							
D03D	Eldon	26.07	338	P		P	14 13 17.7	+1.2
	baz=149							
T53A	Wise	26.11	54	P		P	14 13 16.7	-0.4
	baz=248							
V54A	Nebo	26.12	57	P		P	14 13 18.8	+1.6
	baz=251							
G40A	Rib Lake	26.14	31	eP		P	14 13 17.1	-0.1
	15nm,0.8s							
G40A	Rib Lake	26.14	31	P		P	14 13 17.2	+0.1
	baz=222							
N48A	Decatur	26.17	44	P		P	14 13 17.0	-0.5
	baz=237							
O49A	Covington	26.27	46	P		P	14 13 20.2	+1.8
	baz=239							
F39A	Loretta	26.30	29	P		P	14 13 19.7	+1.1
	baz=220							
P50A	Jamestown	26.34	48	P		P	14 13 21.5	+2.5
	baz=241							
Q51A	Peebles	26.38	49	P		P	14 13 21.2	+1.8
	baz=243							
B05A	Bryant	26.38	340	P		P	14 13 21.2	+1.9
	baz=152							
AGMN	Agassiz Nation	26.40	20	eP		P	14 13 18.9	-0.6
	9.3nm,0.8s							
AGMN	Agassiz Nation	26.40	20	P		P	14 13 19.5	0.0
	baz=208							
KMSC	Kings Mountain	26.40	59	eP		P	14 13 20.4	+0.8
	11nm,0.8s							
KMSC	Kings Mountain	26.40	59	P		P	14 13 20.3	+0.7
	baz=253							
Z57A	Bowman	26.41	63	P		P	14 13 19.4	-0.4
	baz=257							
X56A	White Oak	26.45	60	P		P	14 13 20.4	+0.3
	baz=254							
U54A	Nelsons Funny	26.47	56	P		P	14 13 21.0	+0.6
	baz=250							
E38A	The Farm, Brul	26.56	27	P		P	14 13 20.5	-0.5
	baz=218							
JTS	Las Juntas de	26.62	117		LR	LR	14 23 01.1	
	comp=Z,849nm,20.0s,baz=14,slow=34							
F40A	Park Falls	26.66	30	P		P	14 13 22.1	+0.2
	baz=221,SNR=24							
O50A	Cable	26.72	47	P		P	14 13 25.3	+2.8
	baz=240							
N49A	Columbus Grove	26.75	45	P		P	14 13 25.5	+2.9
	baz=238							
T54A	Tazewell	26.85	55	P		P	14 13 25.7	+1.9
	baz=249							
W56A	Indian Trail	26.98	59	P		P	14 13 26.9	+2.0
	baz=254							
U55A	TA2, Sparta	27.05	56	P		P	14 13 27.5	+1.9
	baz=250							
R53A	Hurricane	27.06	52	P		P	14 13 27.7	+2.1
	baz=246							
ACSO	Alum Creek Sta	27.19	47	P		P	14 13 29.5	+2.8
	baz=241							
COWI	Conover	27.25	31	eP		P	14 13 26.2	-1.0
	21nm,0.8s							
N50A	Nevada	27.34	46	P		P	14 13 30.2	+2.2
	baz=240							
W57A	Gilead	27.45	59	P		P	14 13 28.8	-0.3
	baz=254							
T55A	Pulaski	27.46	55	P		P	14 13 28.8	-0.4
	baz=250							
P52A	Corning	27.49	49	P		P	14 13 30.9	+1.4
	baz=243							
Q53A	Leroy	27.58	51	P		P	14 13 29.3	-1.0
	baz=246							
EYMN	Ely	27.65	26	eP		P	14 13 30.3	-0.5
	20nm,1.0s							
EYMN	Ely	27.65	26	P		P	14 13 30.9	+0.2
	baz=216,SNR=8.1							
V57A	Coltrane Farms	27.83	58	P		P	14 13 34.5	+2.0
	baz=253							
O52A	Adamsville	27.91	48	P		P	14 13 35.6	+2.4
	baz=243							
N51A	Ashland	27.93	46	P		P	14 13 35.4	+2.1
	baz=241							
P53A	Whipple	27.94	50	P		P	14 13 35.6	+2.1
	baz=245							
F43A	Flat Rock, Esc	28.02	34	P		P	14 13 33.7	-0.3
	baz=226,SNR=6.3							
Q54A	Coxs Mills	28.13	51	P		P	14 13 32.5	-2.6
	baz=246							
ULM	Lac du Bonnet	28.14	18	P		P	14 13 34.4	-0.6
	1.8nm,0.4s,baz=218,slow=9.2,SNR=3.1							
ULM					LR	LR	14 24 37.7	
	comp=Z,1µm,19.4s,baz=204,slow=36							
D41A	Chassel	28.23	30	eP		P	14 13 34.5	-1.3
	37nm,1.1s							
D41A	Chassel	28.23	30	P		P	14 13 36.7	+0.8
	baz=222							
V58A	Windy Hill, Pi	28.32	59	P		P	14 13 38.9	+2.0
	baz=254							
N52A	McGinn's Farm,	28.33	47	P		P	14 13 39.4	+2.5
	baz=242							
O53A	New Philadelph	28.40	49	P		P	14 13 38.1	+0.5
	baz=244,SNR=5.3							
E43A	Lone Tree Farm	28.49	33	eP		P	14 13 36.9	-1.4
	60nm,1.8s							
E43A	Lone Tree Farm	28.49	33	P		P	14 13 39.0	+0.7
	baz=226							
F44A	Big Bay de Noc	28.50	34	P		P	14 13 39.1	+0.7
	baz=227							
T57A	Hurt	28.57	56	P		P	14 13 40.5	+1.3
	baz=252							
C40A	Isle Royale Na	28.61	28	P		P	14 13 38.4	-0.8
	baz=220							
P54A	Burton	28.63	50	P		P	14 13 40.4	+0.7
	baz=246							
Q55A	Buckhannon	28.67	52	P		P	14 13 40.3	+0.3
	baz=247							
F45A	CMU Biological	28.78	35	P		P	14 13 39.8	-1.0
	baz=229							
N53A	Lisbon	28.90	48	P		P	14 13 43.1	+1.1
	baz=243							
V59A	Middlesex	29.00	59	P		P	14 13 44.6	+1.7
	baz=255							
S57A	Dark Hollow, R	29.05	55	P		P	14 13 46.0	+2.7
	baz=250							
P55A	Reedsville	29.05	51	P		P	14 13 44.8	+1.4
	baz=246							
E44A	Grand Marais A	29.19	34	P		P	14 13 43.2	-1.3
	baz=227							
I49A	Point Hope	29.23	41	P		P	14 13 46.8	+1.9
	baz=236							
F46A	Macinaw City C	29.24	36	P		P	14 13 46.0	+1.0
	baz=230							
M53A	WI Miller and	29.30	47	P		P	14 13 46.7	+1.1
	baz=242							
E45A	Wooded Hills,	29.40	35	P		P	14 13 47.7	+1.4
	baz=229							
U59A	Littleton	29.50	58	P		P	14 13 47.4	0.0
	baz=254							
N54A	Moraine State	29.55	48	P		P	14 13 48.5	+0.7
	baz=244,SNR=6.3							
R57A	Starardsville	29.55	54	P		P	14 13 48.1	+0.4
	baz=250							
O55A	Ligonier	29.70	50	P		P	14 13 51.2	+2.1
	baz=246							
P56A	Dayton Farm, R	29.75	51	P		P	14 13 51.6	+2.1
	baz=248							
T59A	Double "B" Far	29.86	57	P		P	14 13 53.2	+2.7
	baz=253							
E46A	Sault Ste Mari	29.86	35	P		P	14 13 51.8	+1.4
	baz=230							
U60A	Pendleton	30.03	58	P		P	14 13 53.0	+1.0
	baz=254							
N55A	Marion Center	30.16	49	eP		P	14 13 53.8	+0.6
	28nm,1.0s							
N55A	Marion Center	30.16	49	P		P	14 13 54.9	+1.7
	baz=245							
O56A	Blue Knob Stat	30.24	50	P		P	14 13 53.3	-0.7
	baz=247							
P57A	Homestead Farm	30.34	52	P		P	14 13 54.8	0.0
	baz=249							
D46A	Sault St. Mari	30.34	35	P		P	14 13 56.4	+1.7
	baz=230							
E47A	Iron Bridge	30.47	36	P		P	14 13 57.1	+1.3
	baz=231							
T60A	Surry	30.54	57	P		P	14 13 56.2	-0.3
	baz=254							
M55A	Ridgway	30.60	48	P		P	14 13 56.8	-0.2
	baz=245							
SSPA	Standing Stone	30.86	50	eP		P	14 14 00.4	+1.0
	25nm,0.9s							
SSPA	Standing Stone	30.86	50	P		P	14 13 59.4	+0.1
	baz=247							
D47A	Chapleau	30.94	35	P		P	14 14 00.3	+0.3
	baz=231							
M56A	Emporium	31.00	48	P		P	14 13 59.6	-1.0
	baz=245							
L55A	Hinsdale	31.13	47	P		P	14 14 01.8	0.0
	baz=244							
N57A	Milroy	31.15	50	P		P	14 14 01.6	-0.3
	baz=247							
K54A	Basiliko Farm,	31.15	46	P		P	14 14 02.3	+0.4
	baz=243							
K55A	Perry	31.61	46	P		P	14 14 06.4	+0.4
	baz=244							
DRWO	Darlington Wes	31.72	44	P		P	14 14 07.7	+0.8
	baz=241							
E50A	Wahnapitae	31.86	38	P		P	14 14 09.0	+0.9
	baz=235							
O59A	Robesonia	31.95	51	P		P	14 14 08.9	0.0
	baz=249							
D49A	Beulah Townshi	32.01	37	P		P	14 14 11.0	+1.6
	baz=233							
E51A	G1948 Merrick	32.63	39	P		P	14 14 15.4	+0.5
	baz=236							
BINY	Binghamton	32.79	48	P		P	14 14 16.4	0.0
	baz=247							
E52A	Mattawa	32.98	40	P		P	14 14 18.1	+0.2
	baz=238							
D52A	ZEK Kipawa Sen	33.50	39	P		P	14 14 21.4	-1.0
	baz=237							
D53A	Lac Vacive, Po	33.96	39	P		P	14 14 27.0	+0.5
	baz=238							
D54A	Lac Fusel, La	34.61	40	P		P	14 14 32.2	+0.2
	baz=239							
VLDQ	Val d'Or	34.66	38	eP		P	14 14 31.7	-0.7
	9.9nm,0.6s							
LSQQ	Lebel-sur-Quev	35.44	37	P		P	14 14 41.0	+1.9
	baz=237							
CHGQ	Chibougamau	37.33	37	P		P	14 14 55.2	-0.1
	baz=239							
DLBC	Dease Lake	37.56	342	eP		P	14 14 58.5	+1.2
	17nm,0.9s							
ROSC	El Rosal	38.40	114		LR	LR	14 32 24.2	
	comp=Z,572nm,18.8s,baz=352,slow=38							
YKA	Yellowknife Ar	38.69	356	P		P	14 15 06.1	-0.5
	2.0nm,0.9s,baz=170,slow=7.9,SNR=11							
YKB5	Yellowknife Ar	38.69	356	eP		P	14 15 06.1	-0.4
YKW3	Yellowknife Ar	38.75	356	eP		P	14 15 06.8	-0.3
	7.5nm,1.0s							
SCHQ	Schefferville	43.77	34	P		P	14 15 49.2	+0.8
	4.0nm,0.6s,baz=253,slow=11,SNR=2.8							
SCHQ					LR	LR	14 32 29.8	
	comp=Z,806nm,18.3s,baz=248,slow=34							
SCHQ	Schefferville	43.77	34	eP		P	14 15 49.2	+0.8
	9.3nm,0.9s							
TAOE	Nuku Hiva Isla	44.64	227	eLR		LR	14 28 29.0	
	comp=Z,650nm,23.5s							
MENT	Mentasta	45.32	338	eP		P	14 16 02.6	+1.8
	10.0nm,1.4s							
EGAK	Eagle	45.83	341	eP		P	14 16 06.6	+1.9
	4.0nm,1.0s							
EPYK	Eagle Plains	45.88	345	P		P	14 16 06.0	+0.8
	baz=143							
RIDG	Independent Ri	46.24	339	eP		P	14 16 10.5	+2.4
	12nm,1.0s							
INK	Inuvik	46.80	348	eP		P	14 16 13.7	+1.4
	8.0nm,1.1s							
HDA	Harding Lake	47.38	339	P		P	14 16 19.1	+2.2
	baz=130							
RND	Reindeer	47.41	337	eP		P	14 16 18.8	+1.5
	13nm,1.1s							
ILAR	Eielson Array	47.59	339	P		P	14 16 19.7	+1.2
	6.4nm,1.1s,baz=150,slow=6.8,SNR=20							
ILAR					LR	LR	14 35 05.5	
	comp=Z,450nm,18.8s,baz=138,slow=35							
ILB	Eielson Array	47.59	339	eP		P	14 16 19.1	+0.5
CCB	Clear Creek Bu	47.82	339	eP		P	14 16 21.1	+0.8
	2.7nm,0.9s							
TRF	Thorofare Moun	47.95	336	eP		P	14 16 22.3	+0.8
	28nm,0.6s							
BPAW	Bear Paw Mtn.	48.59	337	eP		P	14 16 27.6	+1.4
	12nm,1.1s							
CAST	Castle Rocks	48.60	336	eP		P	14 16 27.3	+0.9
	8.2nm,0.7s							
TOLK	Toolik Lake Re	50.92	342	eP		P	14 16 45.4	+1.4
	6.2nm,1.0s							
PTGA	Pitinga	53.49	110	eP		P	14 17 05.3	+1.5
	20nm,1.0s							
LPAZ	La Paz	56.50	131	P		P	14 17 27.4	+1.2
	1.5nm,0.7s,baz=15,slow=19,SNR=4.8							
LPAZ					LR	LR	14 39 45.4	
	comp=Z,270nm,21.2s,baz=328,slow=34							
LPAZ	La Paz	56.50	131	eP		P	14 17 27.5	+1.4
PPT	Papeete	57.24	228	LR		LR	14 35 19.4	
	comp=Z,285nm,20.7s,baz=31,slow=29							
PPT2	Papeete2	57.25	228	eS		S	14 25 31.7	+5.8
	236nm,25.2s							
PPT2				eLQ		LQ	14 31 53.4	
	257nm,23.2s							
PPT2				eLR		LR	14 34 13.5	
	comp=Z,1µm,26.8s,baz=30							
MNMC	Minye Minye	57.53	135	eP		P	14 17 34.9	+1.9
	100nm,2.0s							
PB11	IPOC Station P	57.94	135	eP		P	14 17 37.2	+1.4
	31nm,0.9s							
GO01	Chusmiza	58.17	135	eP		P	14 17 40.9	+3.1
PB01	IPOC Station P	58.99	136	eP		P	14 17 45.7	+2.8
	17nm,0.8s							
TBI	Tubuai	61.31	223	eLQ		LQ	14 33 35.5	
	526nm,34.8s							
TBI				eLR		LR	14 36 01.2	
	comp=Z,547nm,30.0s,baz=37							
GO02	Mina Guanaco	61.97	139	eP		P	14 18 06.6	+3.0
RAR	Rarotonga	66.80	232	LR		LR	14 40 28.3	
	comp=Z,238nm,20.7s,baz=66,slow=30							
CPUP	Villa Florida	70.66	132	P		P	14 18 58.3	-0.5
	2.8nm,0.8s,baz=314,slow=10,SNR=7.7							
CPUP					LR	LR	14 49 29.4	
	comp=Z,118nm,19.6s,baz=334,slow=35							
BDFB	Brasilia	71.36	117	P		P	14 19 04.3	+0.9
	1.0nm,0.3s,baz=31,slow=5.9,SNR=2.3							
BDFB					LR	LR	14 51 45.4	
	comp=Z,215nm,20.1s,baz=278,slow=37							
SEY	Seymchan	72.76	332	P		P	14 19 11.3	+0.3
	1.4nm,0.7s,baz=127,slow=20,SNR=3.2							
PEA1	Petropavlovsk-	73.12	321	eP		P	14 19 12.3	-1.1
PETK	Petropavlovsk-	73.12	321	P		P	14 19 12.3	-1.1
	1.8nm,0.8s,baz=91,slow=12,SNR=4.2							
PETK					LR	LR	14 45 36.6	
	comp=Z,52nm,21.5s,baz=73,slow=31							
PLCA	Paso Flores	73.62	151	P		P	14 19 18.9	+2.5
	5.2nm,0.9s,baz=337,slow=6.2,SNR=7.3							
ARCES	ARCESS Array B	81.20	15	P		P	14 19 57.8	-0.6
	3.3nm,0.8s,baz=322,slow=6.9,SNR=3.0							
ARCES					LR	LR	14 58 10.1	
	comp=Z,203nm,18.8s,baz=356,slow=37							
NB200	NORSAR Array S	82.57	25	eP		P	14 20 07.9	+2.1
NOA	NORSAR Array B	82.57	25	P		P	14 20 07.9	+2.1
	0.4nm,0.7s,baz=304,slow=4.9,SNR=2.5							
NOA					LR	LR	14 55 07.0	
	comp=Z,202nm,21.8s,baz=305,slow=34							
ESDC	Sonseca Array	85.74	48	P		P	14 20 25.0	+2.6
	0.2nm,0.4s,baz=312,slow=6.5,SNR=2.7							
ESDC					LR	LR	14 56 57.9	
	comp=Z,374nm,20.8s,baz=285,slow=34							
ASAJ	Asahikawa	85.87	317	P		P	14 20 24.1	+1.3
	2.8nm,0.8s,baz=30,slow=20,SNR=2.9							
NRIK	Noril'sk	86.18	354	LR		LR	15 01 54.3	
	comp=Z,268nm,19.0s,baz=34,slow=38							
FINES	FINESS Array B	87.51	20	LR		LR	14 59 25.0	
	comp=Z,393nm,18.9s,baz=314,slow=35							
NKC	Novy Kostel	89.79	33	AMS		AMS	15 00 00.0	
	comp=Z,400nm,17.5s							
PRU	Pruhonice	90.99	33	AMS		AMS	15 02 10.0	
	comp=Z,400nm,17.2s							
KHC	Kasperske Hory	91.06	34	AMS		AMS	14 58 50.0	
	comp=Z,500nm,22.4s							
GOPC	GO Pecny, Ondr	91.16	33	AMS		AMS	15 02 20.0	
	comp=Z,400nm,15.7s							
GERES	CERESS Array B	91.30	34	LR		LR	15 02 13.1	
	comp=Z,226nm,18.3s,baz=308,slow=36							
CHVC	Chvalec	91.33	31	AMS		AMS	15 03 50.0	
	comp=Z,400nm,16.5s							
UPC	Upice	91.36	32	AMS		AMS	15 03 50.0	
	comp=Z,500nm,15.0s							
OSTC	Ostas	91.43	31	AMS		AMS	15 00 50.0	
	comp=Z,400nm,15.2s							
DPC	Dobruska-Polom	91.61	32	AMS		AMS	15 04 00.0	
	comp=Z,500nm,15.0s							
TREC	Trest	91.91	33	AMS		AMS	15 01 40.0	
	comp=Z,400nm,15.1s							
MAJO	Matsushiro	92.65	312	eP		P	14 20 54.7	-0.4
MJAR	Matsushiro Arr	92.65	312	P		P	14 20 54.7	-0.4
	1.2nm,0.9s,baz=62,slow=3.3,SNR=2.8							
MJAR					LR	LR	14 57 30.6	
	comp=Z,145nm,19.8s,baz=70,slow=32							
OKC	Ostrava-Krasne	92.83	31	AMS		AMS	15 04 40.0	
	comp=Z,300nm,16.5s							
ZST	Bratislava	93.44	33	eP		P	14 20 58.4	-0.1
DZM	Mont Dzumac	94.07	248	eLR		LR	14 51 22.5	
	comp=Z,622nm,24.1s							
OBN	Obninsk	95.88	19	LR		LR	15 04 05.9	
	comp=Z,87nm,21.0s,baz=335,slow=35							
KEST	Kesra	96.77	46	LR		LR	15 05 09.1	
	comp=Z,251nm,18.6s,baz=268,slow=36							
AKASG	Malin Array Be	96.99	25	LR		LR	15 04 15.1	
	comp=Z,242nm,22.0s,baz=320,slow=35							
ARU	Arti	99.21	7	LR		LR	15 10 17.0	
	comp=Z,585nm,18.1s,baz=346,slow=38							
MLR	Muntele Rosu	99.61	30	LR		LR	15 09 01.3	
	comp=Z,207nm,18.1s,baz=310,slow=37							
WMQ	Ur

AS31	Alice Springs	122.94 256	ePKPdf	PKiKP	14 26 41.0	+1.0
ASAR	Alice Springs	122.94 256	PKP	PKiKP	14 26 41.0	+1.0
	0.4nm,0.9s,baz=78,slow=3.0,SNR=3.5					
CM31	Chiang Mai Arr	129.80 325	ePKPdf	PKiKP	14 26 54.4	+0.5
CMAR	Chiang Mai Arr	129.80 325	PKP	PKiKP	14 26 54.4	+0.5
	0.6nm,0.9s,baz=326,slow=2.3,SNR=2.9					

ISCJB ***11*** *14:12:42.2±0.7,37°.29N×0°.03×143°.90E±0°.05,h33km, mb3.5/3,Error ellipse: s-maj=6.1km s-min=4.6km az=11.8*
JMA ***11*** *14:12:45.3±0.2,37°.29N×143°.70E,h54km,M3.7*
IDC ***11*** *14:12:45.2±3.0,37°.37N×143°.77E,h46km±30km,mb3.1/3, mb1 3.6/6,mb1mx3.3/34,mbtmp3.7/6,ML3.6/3,Error ellipse: s-maj=31.9km s-min=17.2km az=112.0*

ISC 11 14:12:43.5±1.3,37°.30N±0°.06×143°.92E±0°.09,h35km,n28, σ1§71/43,mb3.6/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakibou	2.19	298	P	Pn	14 13 18.2	+0.8
JIKH				S	Sn	14 13 42.5	-0.8
JIO	Ouri	2.34	300	P	Pn	14 13 20.5	+1.1
JIO				S	Sn	14 13 46.1	-0.8
JFK	Kawauchi	2.43	273	P	Pn	14 13 21.0	+0.3
JKMT	Kesennumamotoy	2.45	309	P	Pn	14 13 21.9	+1.0
JKMT				eS	Sn	14 13 48.7	-1.0
ONAJ	Iwakimizuishiy	2.50	266	P	Pn	14 13 21.8	+0.1
ONAJ				eS	Sn	14 13 48.7	-2.3
JMK	Ichinoseki	2.69	309	P	Pn	14 13 25.6	+1.3
JMK				i S	Sn	14 13 55.8	+0.1
JFT	Otama	2.86	275	P	Pn	14 13 28.2	+1.6
JFT				S	Sn	14 14 00.0	+0.1
JOM	Ohasama	3.00	317	P	Pn	14 13 30.0	+1.6
JOM				S	Sn	14 14 03.3	+0.2
JYK	Kaneyama	3.24	301	P	Pn	14 13 33.5	+1.7
JYK				eS	Sn	14 14 10.4	+1.2
BSO1	Boso 1	3.56	223	P	Pn	14 13 35.7	0.0
BSO1				eS	Sn	14 14 16.3	+0.1
JAG	Ashikaga	3.69	258	P	Pn	14 13 38.7	+0.7
JRY	Ryogami san	4.23	254	P	Pn	14 13 45.8	+0.3
JOD2	Odawara 2	4.40	244	P	Pn	14 13 47.9	+0.1
MJAR	Matsushiro Arr	4.64	262	P	Pn	14 13 52.7	+1.6
	1.4nm,0.3s,baz=87,slow=15,SNR=56						
MJAR				S	Sn	14 14 42.6	-1.1
	baz=77,slow=18,SNR=2.6						
MAT	Matsushiro	4.64	262	P	Pn	14 13 53.4	+2.3
MAT				eS	Sn	14 14 43.8	+0.1
JOT	Ohata	4.65	332	P	Pn	14 13 53.1	+2.0
JOT				eS	Sn	14 14 42.1	-1.7
JKB	Kayabe	5.10	335	P	Pn	14 13 59.5	+2.2
JKB				eS	Sn	14 14 53.9	-1.0
JCH	Churui	5.33	356	P	Pn	14 14 01.4	+1.0
JCH				eS	Sn	14 14 58.2	-2.3
JHJ	Hachijo jima 2	5.37	220	P	Pn	14 14 00.3	-0.8
	9.1nm,0.3s,baz=73,slow=19,SNR=5.6						
JHJ				S	Sn	14 14 56.3	-5.5
	8.3nm,0.3s,baz=73,slow=19,SNR=3.5						
NEM2	Nemuro 2	6.22	12	P	Pn	14 14 12.2	-0.5
NEM2				eS	Sn	14 15 17.9	-4.5
JTKR	Abashiri--Toko	6.67	360	P	Pn	14 14 19.7	+0.9
JTKR				S	Sn	14 15 30.5	-3.0
ASAJ	Asahikawa	6.88	352	P	Pn	14 14 23.4	+1.6
	1.2nm,0.3s,baz=186,slow=16,SNR=22						
ASAJ				S	Sn	14 15 37.9	-1.1
	0.9nm,0.3s,baz=75,slow=27,SNR=3.6						
H11N2	WAKE ISLAND Hy	26.61	125	T	T	14 46 04.4	
	baz=319,slow=75						
H11N1	WAKE ISLAND Hy	26.61	125	T	T	14 46 07.0	
	baz=319						
H11N3	WAKE ISLAND Hy	26.62	125	T	T	14 46 03.2	
	baz=319,slow=75						
MKAR	Makanchi Array	45.67	302	P	P	14 20 59.8	-0.8
	0.1nm,0.3s,baz=96,slow=8.9,SNR=3.5						
WRA	Warramunga Arr	57.65	191	P	P	14 22 31.0	+0.8
	1.2nm,1.1s,baz=356,slow=7.6,SNR=1.2						
ASAR	Alice Springs	61.37	190	P	P	14 22 56.8	+0.9
	0.4nm,0.7s,baz=5.5,slow=7.0,SNR=4.4						

GUC 11 14:18:37.1±0.4,38°.18S×74°.93W,h18km±34km,ML3.7,1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	Chillan	2.76	56	eP	Pn	14 19 21.0	+0.5
CCHI				eS	Sn	14 19 54.2	+0.8
CCHI				IAML		14 19 57.0	
	comp=E,311nm,0.5s						
PLCA	Paso Flores	4.24	128	⇑iP	Pn	14 19 41.6	+0.7
GO07	Milladeo Hill,	5.02	169	eP	Pn	14 19 49.8	-1.8

TAP 11 14:25:14.8,23°.77N×120°.98E,h15km±1km,ML0.8,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	Suanglung	0.03	306	eP	Pg	14 25 17.8	+0.2
	baz=306						
SMLT	Sun Moon Lake	0.13	327	P	Pb	14 25 19.2	0.0
	baz=329						
SMLT				S	Sb	14 25 22.2	+0.2
	baz=329						
WHYT	Xinyi Township	0.14	238	eP	Pb	14 25 18.9	-0.2
	baz=237						
VWDT	VWDT	0.15	96	eP	Pb	14 25 19.8	+0.6
	baz=96						
TYC	Yuchr	0.17	320	P	Pb	14 25 19.6	-0.2
	baz=323						
TYC				S	Sb	14 25 22.9	-0.1
	baz=323						
OWD	Renai	0.26	44	eP	Pb	14 25 21.0	-0.2
	baz=44						
CHN5	Tsauling	0.33	238	eP	Pb	14 25 22.4	+0.1
	baz=238						
CHN5				eS	Sb	14 25 27.9	+0.4
	baz=238						

TAP 11 14:25:18.6,23°.80N×120°.93E,h9km,ML0.6,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	Suanglung	0.03	109	eP	Pg	14 25 20.7	+0.3
	baz=108						
SSLB				eS	Sg	14 25 22.3	+0.7
	baz=108						
SMLT	Sun Moon Lake	0.09	344	P	Pg	14 25 21.6	+0.4
	baz=348						
SMLT				S	Sg	14 25 23.7	+0.8
	baz=348						
WHYT	Xinyi Township	0.12	214	eP	Pg	14 25 22.0	+0.5
	baz=214						
WHYT				eS	Sg	14 25 24.9	+1.4
	baz=214						
WHYT	Xinyi Township	0.12	214	eS	Pg	14 25 22.0	+0.5
	baz=237						
TYC	Yuchr	0.12	329	P	Pg	14 25 22.3	+0.7
	baz=334						
TYC				S	Sg	14 25 24.7	+1.1
	baz=334						
VWDT	VWDT	0.20	102	eP	Pg	14 25 24.5	+1.7
	baz=102						
VWDT				eS	Sg	14 25 27.4	+1.8
	baz=102						
OWD	Renai	0.28	55	eP	Pb	14 25 25.2	-0.7
	baz=55						
OWD				eS	Sg	14 25 28.5	+0.5
	baz=55						
OWD	Renai	0.28	55	eS	Pb	14 25 25.4	-0.5
	baz=44						

ISCJB ***11*** *14:30:23.9±2.7,23°.7S±0°.4×178°.9W±0°.3,h417km,Error ellipse: s-maj=58.6km s-min=24.3km az=40.5*
IDC ***11*** *14:30:24.6±10.0,23°.53S×178°.80W,h419km±93km, mb3.8/4,mb1 3.8/5,mb1mx3.2/27,mbtmp4.6/5,Error ellipse: s-maj=81.1km s-min=25.2km az=35.0*

ISC 11 14:30:24.1±1.6,23°.5S±0°.2×178°.8W±0°.2,h417km,n7, σ0§68/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	15.12	192	P	P	14 33 37.0	-0.2
	0.4nm,0.3s,baz=30,slow=14,SNR=5.2						

CTA	Charters Tower	32.60	269	P	P	14 36 20.2	+0.8
	6.4nm,0.4s,baz=93,slow=11,SNR=26						
ASAR	Alice Springs	43.20	260	P	P	14 37 46.8	0.0
	2.2nm,0.8s,baz=98,slow=7.3,SNR=40						
ASAR				PcP	PcP	14 39 27.1	-0.3
	0.3nm,0.8s,baz=112,slow=5.1,SNR=3.3						
WRA	Warramunga Arr	43.55	265	P	P	14 37 48.4	-1.1
	3.4nm,0.7s,baz=100,slow=7.9,SNR=16						
PMSA	Palmer Station	78.83	157	P	P	14 41 42.3	+0.2
	24nm,0.9s,baz=308,slow=14,SNR=4.2						
AKASG	Malin Array Be	145.24	328	PKPbc	PKPdf	14 49 13.1	+0.3
	0.7nm,0.4s,baz=45,slow=3.9,SNR=4.7						
BRTR	Keskin Array B	148.22	308	PKPbc	PKPbc	14 49 21.9	-0.5
	0.5nm,0.6s,baz=120,slow=5.7,SNR=3.6						

ISCJB ***11*** *14:33:01.3±1.3,32°.77S±0°.07×70°.29W±0°.07,h110km±9km, Error ellipse: s-maj=13.2km s-min=6.5km az=145.6*
SJA ***11*** *14:33:01.5±0.3,32°.90S×70°.34W,h28km±5km,ML3.2, MW3.8*
GUC ***11*** *14:33:01.6±0.6,32°.76S×70°.34W,h111km±3km,ML4.0*

ISC 11 14:33:01.6±2.3,32°.74S±0°.09×70°.31W±0°.07, h107km±15km,n12,σ0§51/23,1C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	Peldehue	0.51	218	eP	Pn	14 33 17.7	-0.5
PEL				i S	Sn	14 33 30.3	-0.4
FCH	Farellones	0.58	179	eP	Pn	14 33 18.8	-0.4
FCH				i S	Sn	14 33 31.8	-0.4
FCH				IAML		14 33 32.3	
	comp=E,6μm,0.2s						
ROCH	El Roble	0.63	249	eP	Pn	14 33 19.3	0.0
ROCH				i S	Sn	14 33 32.7	0.0
ROCH				IAML		14 33 33.6	
	comp=N,8μm,0.2s						
CLCH	Cerro Calan	0.68	196	⇓iP	Pn	14 33 19.4	-0.2
CLCH				i S	Sn	14 33 32.8	-0.3
FSR	Penalolen	0.76	194	eP	Pn	14 33 21.2	+1.0
FSR				i S	Sn	14 33 34.9	+0.7
ANTU	Antumapu	0.87	198	eP	Pn	14 33 22.1	+0.8
ANTU				i S	Sn	14 33 36.8	+0.7
AUSP	Uspallata	0.94	57	eP	Pn	14 33 22.4	+0.2
AUSP				eS	Sn	14 33 37.8	+0.1
LMEL	Las Melosas	1.10	175	⇑iP	Pn	14 33 23.7	-0.1
LMEL				i S	Sn	14 33 41.0	+0.4
ARCO	CERRO ARCO	1.16	95	eP	Pn	14 33 24.4	-0.1
ARCO				eS	Sn	14 33 41.2	-0.5
ARCO				IAML		14 33 43.9	
	comp=Z,421nm,0.6s						
ASAL	Salagasta	1.25	83	eP	Pn	14 33 26.0	+0.6
AAGR	Agrelo	1.29	106	eP	Pn	14 33 25.7	-0.1
AAGR				eS	Sn	14 33 43.8	-0.5
GO05	Huala	2.63	210	eP	Pn	14 33 42.5	-0.1
GO05				i S	Sn	14 34 13.7	-0.6

IDC ***11*** *14:51:45.8±1.4,28°.51N×52°.40E,h0km,mb3.9/8, mb1 3.9/11,mb1mx3.6/42,mbtmp3.8/11,ML3.5/3,MS3.3/5, Ms1 3.3/5,ms1mx2.9/45,Error ellipse: s-maj=29.1km s-min=20.8km az=170.0*
ISCJB ***11*** *14:51:47.1±0.5,28°.52N±0°.04×52°.33E±0°.06,h16km, mb3.8/8,MS3.7/2,Error ellipse: s-maj=7.9km s-min=4.4km az=151.6*
TEH ***11*** *14:51:47.8,28°.64N×52°.44E,h10km,ML3.5*

ISC 11 14:51:48.5±0.8,28°.59N±0°.06×52°.41E±0°.06,h16km,n37, σ1§49/38,mb3.9/8,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.59	121	ePg	Pg	14 51 59.4	-0.9
JHRM	Jahrom	1.03	95	IAMB	IAmb	14 52 39.9	
	comp=Z,0.0nm,0.4s						
JHRM				ePg	Pb	14 52 08.1	+0.1
SHI	Shiraz	1.05	5	eSg	Sb	14 52 21.6	-0.4
SHI				ePg	Pb	14 52 06.6	-1.8
SHI				IAMB	IAmb	14 52 25.6	
	comp=Z,17μm,0.8s						
IKAZ	Kazeroun	1.28	337	ePg	Pn	14 52 12.3	+0.2
IKAZ				IAMB	IAmb	14 52 34.6	
	comp=Z,40μm,0.4s						
IPAR	Pars	1.36	24	ePg	Pn	14 52 12.0	-1.2
IPAR				IAMB	IAmb	14 52 52.6	
	comp=Z,8μm,0.8s						
IRAM	Ramesheh	3.21	360	ePn	Pn	14 52 39.3	+0.9
IRAM				IAMB	IAmb	14 53 45.7	
	comp=Z,1μm,0.9s						
IMEH	Mehriz	3.38	34	ePn	Pn	14 52 43.2	+2.4
IMEH				IAMB	IAmb	14 52 47.3	
	comp=Z,758nm,0.2s						
ISAD	Sadrabad	3.49	18	ePn	Pn	14 52 44.7	+2.3
ISAD				IAMB	IAmb	14 52 56.8	
	comp=N,892nm,0.5s						
ZNGN	Zangian	3.76	339	ePn	Pn	14 52 47.3	+1.2
IGAR	Gharneh	3.81	355	ePn	Pn	14 52 48.7	+1.9
IGAR				IAMB	IAmb	14 53 41.7	
	comp=Z,429nm,0.4s						
KHGB	Koh Gabri	3.96	62	ePn	Pn	14 52 50.8	+1.9
IBAF	Bafgh	4.05	42	ePn	Pn	14 52 52.4	+2.4
IBAF				IAMB	IAmb	14 53 08.1	
	comp=Z,512nm,0.4s						
SHME	Shamm	4.18	127	ePn	Pn	14 52 54.1	+2.5
NASN	Na'in	4.21	5	ePn	Pn	14 52 54.0	+1.7
IZEF	Zefreh	4.29	359	ePn	Pn	14 52 54.5	+1.1
MSFE	Esma-Masafi	4.64	133	ePn	Pn	14 52 56.9	-1.1
IKLH	Kolahrood	4.76	352	ePn	Pn	14 53 01.4	+1.5
IKLH				IAMB	IAmb	14 53 28.4	
	comp=Z,298nm,0.6s						
MDH	Madha	4.78	133	ePn	Pn	14 52 58.9	-0.9
UOSS	Minazif	4.97	136	ePn	Pn	14 53 03.9	+1.4
HATD	Hatta, Dubai	5.02	138	ePn	Pn	14 53 03.6	+0.5
ASHO	Ashiyiah	5.08	139	ePn	Pn	14 53 06.0	+1.9
KRSH	Karshahi	5.36	358	ePn	Pn	14 53 09.3	+1.2
TPRV	Parvadeh(Tabas	5.75	39	ePn	Pn	14 53 14.8	+1.5
TKDS	Koohdasht(Taba	6.43	38	ePn	Pn	14 53 23.8	+1.1
WSAR	Wadi Sarin	7.73	132	Pn	Pn	14 53 39.6	-0.8
	comp=Z,0.4nm,0.3s,baz=307,slow=11,SNR=6.4						
WSAR				Sn	Sn	14 55 05.0	-2.7
	comp=Z,0.6nm,0.3s,baz=32,slow=12,SNR=3.3						
WSAR				LR	LR	14 57 32.1	
	comp=Z,85nm,19.2s,baz=296,slow=45						
ILIN	Lien	7.83	325	ePn	Pn	14 53 43.0	+1.1
GEYT	Alibeck	10.46	26	Pn	Pn	14 54 18.1	+0.2
	comp=Z,0.3nm,0.3s,baz=210,slow=23,SNR=4.2						
GEYT				LR	LR	14 58 51.6	
	comp=Z,68nm,19.2s,baz=185,slow=40						
BRTR	Keskin Array B	19.05	311	P	Pn	14 56 11.4	+0.4
	comp=Z,0.3nm,0.3s,baz=135,slow=13,SNR=18						
BRTR				LR	LR	15 05 50.0	
	comp=Z,94nm,21.0s,baz=316,slow=44						
AKTO	Aktyubinsk	22.23	10	P	P	14 56 46.5	+2.3
	comp=Z,1.9nm,0.7s,baz=207,slow=7.8,SNR=5.4						
AKTO				LR	LR	15 08 18.6	
	comp=Z,204nm,20.2s,baz=349,slow=44						
IDI	Anoyia	24.24	293	P	P	14 57 06.5	+1.7
	comp=Z,10nm,0.9s,baz=102,slow=14,SNR=2.8						
MLR	Muntele Rosu	26.85	316	P	P	14 57 28.4	0.0
	comp=Z,1.7nm,0.5s,baz=180,slow=10,SNR=2.1						
MKAR	Makanchi Array	29.56	44	P	P	14 57 52.8	+0.3
	comp=Z,0.6nm,0.8s,baz=224,slow=6.8,SNR=5.3						
ZALV	Zalesovo Beam	34.63	34	P	P	14 58 37.0	+0.3
	comp=Z,1.1nm,0.5s,baz=240,slow=8.1,SNR=3.1						
FINES	FINESS Array B	37.23	339	P	P	14 58 58.1	-0.8
	comp=Z,0.9nm,0.5s,baz=145,slow=10,SNR=3.8						
NOA	NORSAR Array B	42.44	332	P	P	14 59 41.5	-0.8
	comp=Z,0.2nm,0.4s,baz=120,slow=8.2,SNR=2.5						
TORD	Torodi Ar. Bea	49.46	263	P	P	15 00 37.2	-1.0
	comp=Z,0.9nm,0.5s,baz=62,slow=7.7,SNR=6.2						
PETK	Petropavlovsk-	76.11	37	LR	LR	15 39 43.3	
	comp=Z,52nm,19.8s,baz=70,slow=38						

ISCJB ***11*** *15:02:13.1±0.4,29°.97N±0°.03×114°.17W±0°.03,h10km, mb4.4/21,MS3.8/22,Error ellipse: s-maj=5.5km s-min=2.6km az=31.5*
IDC ***11*** *15:02:13.4±1.0,29°.99N×114°.09W,h0km,mb4.1/6, mb1 4.1/15,mb1mx3.9/46,mbtmp3.9/15,ML3.9/8,MS3.8/27, Ms1 3.8/27,ms1mx3.6/48,Error ellipse: s-maj=19.3km s-min=9.0km az=45.0*
ECX ***11*** *15:02:13.4±0.4,30°.07N×114°.13W,h12km,MD4.3,ML4.5*
NEIC ***11*** *15:02:15.9±1.7,30°.02N×114°.07W,h10km±1km,mb4.4/31, MD4.6(MEX),ML4.5(ECX),Error ellipse: s-maj=12.7km s-min=7.7km az=61.0*
MEX ***11*** *15:02:16.4±0.6,30°.02N×114°.14W,h16km±30km,MD4.6*

ISC 11 15:02:14.7±0.6,29°.95N±0°.06×114°.21W±0°.06,h10km, n223,σ1§46/210,mb4.5/21,MS3.8/22,2C-1D,Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	San Pedro Mart	1.54	316	eP	Pn	15 02 39.9	-2.7
SPX				i S	Sn	15 02 57.1	-5.7
SPX	San Pedro Mart	1.54	316	eP	Pn	15 02 39.9	-2.7
SPX				eS	Sn	15 02 59.8	-2.9
SPX				IAML		15 03 06.9	
	comp=N,3μm,1.6s						
SPX				⇓e		15 03 06.9	
SPX				IAML		15 03 11.9	
	comp=E,3μm,1.7s						
SPX				e		15 03 11.9	
SPIG	San Pedro Mart	1.54	316	ePn	Pn	15 02 39.9	-2.7
SPIG				e		15 02 58.2	
SPIG	San Pedro Mart	1.54	316	eP	Pn	15 02 39.9	-2.7
SPIG				i S	Sn	15 02 58.9	-3.9
SPIG	San Pedro Mart	1.54	316	⇑eP	Pn	15 02 39.8	-2.7
ECBX	El Chinero	1.69	335	eP	Pn	15 02 40.6	-3.6
214A	Organ Pipe Nat	2.34	31	P	Pn	15 02 50.9	-2.4
	baz=210,SNR=148						
ZAX	El Zacaton	2.37	312	eP	Pn	15 02 51.9	-1.7
ECNX	Esteban Cantu	2.67	310	eP	Pn	15 02 55.8	-2.1
113A	Mohawk Valley,	2.84	8	ePn	Pn	15 02 57.5	-2.7
HSIG		2.99	107	ePn	Pn	15 02 59.8	-2.4
HSIG		2.99	107	eP	Pn	15 03 00.2	-2.0
HSIG		2.99	107	eP	Pn	15 03 00.0	-2.2
SRIG	Santa Rosalia	3.14	146	ePn	Pn	15 03 03.5	-0.7
SRIG	Santa Rosalia	3.14	146	eP	Pb	15 03 11.8	+1.3
SRIG				i S	Sn	15 03 39.1	-2.6
GLA	Glamis	3.14	351	ePn	Pn	15 03 02.1	-2.3
GLA	Glamis	3.14	351	P	Pn	15 03 02.0	-2.3
	baz=168						
IKP	In-Ko-Pah, Jac	3.15	329	P	Pn	15 03 02.5	-1.9
	baz=146,SNR=25						
CBX	Cerro Bola	3.16	319	ePn	Pn	15 03 02.6	-2.1
CBX	Cerro Bola	3.16	319	eP	Pn	15 03 02.6	-2.1
CBX	Cerro Bola	3.16	319	eP	Pn	15 03 02.6	-2.1
CBX				IAML		15 04 00.7	
	comp=N,2μm,1.1s						
CBX				⇑e		15 04 00.7	
SWSC	Sam W. Stewart	3.28	336	P	Pn	15 03 04.2	-2.0
	baz=153,SNR=15						
BAR	Barrett	3.44	323	ePn	Pn	15 03 06.7	-1.8
MONP2	Monument Peak	3.49	328	P	Pn	15 03 07.7	-1.5
	baz=144						
TUC	Tucson	3.77	50	ePn	Pn	15 03 09.9	-3.1
TUC	Tucson	3.77	50	P	Pn	15 03 10.3	-2.7
	baz=232						
Y12C	Blythe	3.80	356	ePn	Pn	15 03 11.5	-1.9
Y12C	Blythe	3.80	356	P	Pn	15 03 11.8	-1.5
	baz=174						
109C	Camp Elliot, M	3.84	321	P	Pn	15 03 13.2	-0.6
	baz=137						
CPE	Camp Elliot	3.84	321	ePn	Pn	15 03 12.3	-1.5
BC3	Big Chuckawall	3.85	344	P	Pn	15 03 12.9	-1.1
	baz=162						
PFO	Pinyon Flats O	4.13	333	Pn	Pn	15 03 16.5	-1.4
	comp=N,1.5nm,0.3s,baz=150,slow=11,SNR=9.9						
PFO				Pg	Pb	15 03 29.0	+1.5
	comp=N,0.6nm,0.3s,baz=155,slow=15,SNR=5.2						
PFO				Lg	Lg	15 04 23.1	
	comp=N,7.1nm,0.3s,baz=112,slow=11,SNR=4.7						
PFO	Pinyon Flats O	4.13	333	ePn	Pn	15 03 15.7	-2.2
PFO	Pinyon Flats O	4.13	333	P	Pn	15 03 16.7	-1.2
	baz=150						
IRM	Iron Mountain	4.27	350	P	Pn	15 03 18.9	-1.0
	baz=167,SNR=8.5						
BELC	Belle Mtn. Jos	4.32	340	P	Pn	15 03 20.5	-0.1
	baz=157,SNR=6.5						
PDMCI	Parker Dam,Lak	4.35	1	P	Pn	15 03 20.0	-0.8
	baz=179						
MURC	Murrieta	4.44	326	P	Pn	15 03 22.4	+0.3
	baz=143,SNR=7.3						
319A	Douglas	4.48	70	ePn	Pn	15 03 19.6	-3.2
SCI2	San Clemente I	4.78	310	P	Pn	15 03 27.2	+0.3
	baz=127						
NEE2	Needles Airpor	4.82	356	P	Pn	15 03 27.0	-0.4
	baz=174						
CIS	Catalina Islan	4.97	315	P	Pn	15 03 30.3	+0.9
	baz=131						
GMRC	Granite Mounta	4.98	346	P	Pn	15 03 28.9	-0.7
	baz=164						
X16A	Lo Mia Camp, P	5.04	27	ePn	Pn	15 03 27.6	-2.9
W13A	Hualapai Mount	5.15	3	ePn	Pn	15 03 29.7	-2.3
LDFC	Landfair	5.17	352	ePn	Pn	15 03 30.3	-2.0
BFSC	Mount Baldy Ra	5.18	327	P	Pn	15 03 32.9	+0.4
	baz=143,SNR=13						
HEC	Hector,Ludlow	5.19	340	P	Pn	15 03 33.6	+1.1
	baz=158						
MWC	Mount Wilson	5.37	324	ePn	Pn	15 03 33.1	-2.0
PASC	Pasadena Art C	5.40	322	ePn	Pn	15 03 33.7	-1.5
TUQ	Turquoise Moun	5.66	346	P	Pn	15 03 38.9	-0.1
	baz=163						
X18A	Snowflake	5.82	37	ePn	Pn	15 03 40.7	-0.6
WUAZ	Wupatki	6.05	23	ePn	Pn	15 03 44.0	-0.3
WUAZ	Wupatki	6.05	23	P	Pn	15 03 43.1	-1.3
	baz=203,SNR=6.1						
121A	Cookes Peak, D	6.08	63	P	Pn	15 03 43.3	-1.5
	baz=247						
LRMC	Laurel Mtn Rad	6.25	333	P	Pn	15 03 48.1	+1.1
	baz=150						
W18A	Petrified Fore	6.39	35	ePn	Pn	15 03 48.8	-0.4
W18A	Petrified Fore	6.39	35	P	Pn	15 03 49.2	+0.1
	baz=217						
SHPR	Sheep Range	6.59	353	ePn	Pn	15 03 52.0	+0.2
U15A	North Rim	6.66	13	ePn	Pn	15 03 52.8	-0.1
MPMC	Manual Prospec	6.69	337	P	Pn	15 03 55.0	+1.8
	baz=154						
ISA	Isabella, Lake	6.74	329	ePn	Pn	15 03 54.3	+0.6
ISA	Isabella, Lake	6.74	329	P	Pn	15 03 53.8	0.0
	baz=146						
LPIG	La Paz	6.78	148	Pn	Pn	15 03 55.0	+0.7
	comp=N,5.0nm,0.3s,baz=28,slow=1.6,SNR=6.4						
LPIG				Lg	Lg	15 05 48.6	
	comp=N,4.0nm,0.3s,baz=46,slow=22,SNR=3.8						
LPIG				LR	LR	15 06 26.0	
	comp=N,907nm,19.2s,baz=338,slow=37						
PKM	Mcpherson Peak	6.83	318	P	Pn	15 03 56.3	+1.1
	baz=134						
DAC	Darwin (Calif)	6.92	337	ePn	Pn	15 03 57.7	+1.3
LCMT	Little Creek M	7.09	6	ePn	Pn	15 03 58.9	+0.2
KNB	Kanab	7.15	9	ePn	Pn	15

comp=N,0.1nm,0.3s,baz=167,slow=12,SNR=3.1
NVAR Lg Lg 15 07 01.2
TX31 Lajitas Ar. Si 9.20 91 *e*Pn **Pn 15 04 26.5 -1.1**
LTX Lajitas 9.20 91 *e*Pn **Pn 15 04 26.8 -0.7**
LTX *e*Lg Lg 15 07 00.5
TXAR Lajitas Array 9.20 91 Pn **Pn 15 04 26.8 -0.7**
comp=N,0.6nm,0.3s,baz=272,slow=13,SNR=23
TXAR Lg Lg 15 07 00.5
comp=N,0.4nm,0.3s,baz=288,slow=32,SNR=3.7
TXAR LR LR 15 07 58.6
comp=N,807nm,21.7s,baz=0.0,slow=38
Q16A Castle Valley 9.29 15 *e*Pn **Pn 15 04 29.7 +0.8**
PV16 Nyswonger Mesa 9.43 26 *e*Pn **Pn 15 04 31.5 +0.8**
PV20 West Nyswonger 9.43 26 *e*Pn **Pn 15 04 32.2 +1.4**
PV10 Paradox Valley 9.44 26 *e*Pn **Pn 15 04 30.0 -0.9**
PV21 Cone Mtn., Par 9.62 25 *e*Pn **Pn 15 04 34.7 +1.2**
KVN Kaiserville 9.63 342 *e*Pn **Pn 15 04 35.9 +2.3**
S22A 4UR Ranch, Cre 9.91 36 P **Pn 15 04 38.1 +0.7**
baz=220
YERR Yerington 9.92 337 *e*Pn **Pn 15 04 38.4 +0.8**
PNTR Pine Nut 10.14 335 *e*Pn **Pn 15 04 41.0 +0.4**
DUG Dugway, Tooele 10.29 6 *e*Pn **Pn 15 04 42.1 -0.5**
DUG Dugway, Tooele 10.29 6 P **Pn 15 04 42.8 +0.3**
baz=186
SDCO Great Sand Dun 10.62 41 P **Pn 15 04 46.0 -1.3**
baz=225
ELK Elko 10.81 356 Pn **Pn 15 04 50.9 +1.2**
comp=N,0.1nm,0.3s,baz=161,slow=18,SNR=2.2
ELK LR LR 15 09 08.8
comp=N,177nm,18.7s,baz=174,slow=39
ELK Elko 10.81 356 *e*Pn **Pn 15 04 50.0 +0.3**
T25A Trinidad 10.87 46 *e*Pn **Pn 15 04 50.1 -0.5**
T25A Trinidad 10.87 46 P **Pn 15 04 50.8 +0.2**
baz=231
SMCO Snowmass 10.97 31 *e*Pn **Pn 15 04 51.0 -1.1**
JCT Junction City 12.48 84 P **Pn 15 05 13.5 +1.1**
baz=272
ABTX Abilene, Hawle 12.74 74 *e*Pn **Pn 15 05 14.3 -1.7**
WVOR Wild Horse Val 12.96 345 *e*Pn **Pn 15 05 20.0 +1.0**
M04C Macdoel 13.32 334 P **Pn 15 05 24.8 +0.8**
baz=150
BW06 Boulder Array 13.33 15 *e*Pn **Pn 15 05 24.4 +0.3**
BW06 Boulder Array 13.33 15 P **Pn 15 05 23.0 -1.2**
baz=197
PDAR Pinedale Array 13.33 15 Pn **Pn 15 05 26.4 +2.2**
comp=N,0.2nm,0.3s,baz=182,slow=12,SNR=8.1
PDAR Lg Lg 15 09 16.9
comp=N,0.1nm,0.3s,baz=190,slow=25,SNR=2.3
M02C Callahan 13.40 331 P **Pn 15 05 26.7 +1.7**
baz=145
HLID Hailey 13.59 359 *e*Pn **Pn 15 05 28.5 +0.8**
HLID Hailey 13.59 359 P **Pn 15 05 28.7 +1.0**
baz=179
YBH Yreka Blue Hor 13.62 332 Pn **Pn 15 05 30.4 +2.4**
comp=N,0.2nm,0.3s,baz=140,slow=17,SNR=2.4
YBH LR LR 15 10 45.2
comp=N,351nm,19.7s,baz=198,slow=38
J08A Circle Bar Ran 13.81 347 *e*Pn **Pn 15 05 32.1 +1.5**
L04D Klamath Falls 13.88 334 P **Pn 15 05 33.6 +2.0**
baz=149
WMOK Wichita Mounta 13.89 66 P **Pn 15 05 32.5 +0.8**
baz=254
LOHW Long Hollow 13.94 11 *e*Pn **Pn 15 05 33.7 +1.2**
K22A Casper 14.10 24 P **Pn 15 05 34.8 +0.1**
baz=208
FLWY Flagg Ranch 14.38 10 *e*Pn **Pn 15 05 38.5 -0.1**
J05D Fort Rock, OR 14.45 339 P **Pn 15 05 39.5 +0.1**
baz=154,SNR=5.2
H17A Grant Village 14.71 10 *e*Pn **Pn 15 05 43.6 +0.6**
H17A Grant Village 14.71 10 P **Pn 15 05 44.3 +1.3**
baz=192
I07A Izee 14.72 345 *e*Pn **Pn 15 05 44.4 +1.3**
BMO Blue Mountains 15.08 352 *e*Pn **Pn 15 05 48.6 +0.7**
comp=N,14nm,1.3s
DLMT Dillon 15.44 4 *e*Pn **Pn 15 05 53.6 +0.8**
comp=N,30nm,1.4s
RLMT Red Lodge 15.64 13 *e*Pn **Pn 15 05 56.1 +0.7**
comp=N,14nm,1.3s
RLMT Red Lodge 15.64 13 P **Pn 15 05 56.7 +1.3**
baz=196
BOZ Bozeman (W) 15.76 7 *e*Pn **Pn 15 05 58.5 +1.6**
comp=N,8.4nm,1.1s
BOZ Bozeman (W) 15.76 7 P **Pn 15 05 57.8 +1.0**
baz=188,SNR=7.3
G08A Pilot Rock 15.77 348 *e*P **Pn 15 05 58.8 +1.8**
comp=N,9.5nm,1.1s
HKT Hockley 15.94 85 *e*Pn **Pn 15 05 57.0 -2.0**
comp=N,32nm,1.6s
G05D Wamic, OR 16.26 342 P **P 15 06 05.7 -0.6**
baz=157
MSO Missoula 16.86 1 *e*Pn **Pn 15 06 11.2 +0.3**
comp=N,19nm,1.2s
MSO Missoula 16.86 1 P **Pn 15 06 11.2 +0.3**
baz=180
MIAR Mount Ida 18.04 70 *e*P **Pn 15 06 25.4 -0.1**
comp=N,27nm,1.5s
MIAR Mount Ida 18.04 70 P **Pn 15 06 25.7 +0.1**
baz=261
HHAR Hobbs 18.11 64 *e*P **P 15 06 26.7 0.0**
comp=N,20nm,1.6s
WLAR White Oak Lake 18.31 73 *e*P **Pn 15 06 27.9 -1.0**
comp=N,47nm,1.1s
EGMT Eagleton 18.38 10 P **P 15 06 32.0 +2.4**
baz=192
NEW Newport 18.43 354 P **P 15 06 30.6 +0.5**
comp=N,0.2nm,0.3s,baz=219,slow=6.5,SNR=2.1
NEW Newport 18.43 354 *e*P **P 15 06 30.7 +0.5**
comp=N,7.5nm,1.1s
X40A Basin Creek Fa 18.64 70 *e*P **P 15 06 31.9 -0.7**
comp=N,24nm,1.6s
X40A Basin Creek Fa 18.64 70 P **P 15 06 32.2 -0.4**
baz=262
D03D Eldon 18.86 341 P **P 15 06 33.2 -1.6**
baz=155
U40A Yellville 18.98 65 P **P 15 06 35.6 -0.6**
baz=256
WHAR Wooly Hollow 19.21 68 *e*P **P 15 06 37.6 -1.2**
comp=N,39nm,1.6s
ECSD EROS Data Cent 19.64 41 P **P 15 06 42.7 -0.7**
baz=231
CCM Cathedral Cave 20.65 61 P **P 15 06 54.5 -0.1**
baz=254
CMIG Matias Romero 21.82 122 P **P 15 07 06.9 -0.3**
comp=N,2.5nm,0.9s,baz=312,slow=15,SNR=2.7
CMIG LR LR 15 15 55.5
comp=N,593nm,18.1s,baz=286,slow=38
L40A Anamosa 22.11 51 P **P 15 07 09.5 -0.7**
baz=244
PLAL Pickwick Lake 22.59 70 *e*P **P 15 07 13.4 -1.9**
comp=N,40nm,1.4s
V46A Holladay 22.65 68 P **P 15 07 16.6 +0.6**
baz=262
X47A Russelville 22.73 72 P **P 15 07 16.1 -0.7**
baz=266
WVT Waverly 22.92 67 P **P 15 07 19.5 +0.6**
baz=262
AGMN Agassiz Nation 23.10 32 *e*P **P 15 07 19.8 -0.8**
comp=N,17nm,1.4s
T47A Sharon Grove 23.63 66 P **P 15 07 26.4 +0.4**
baz=261
F38A Pierce - Schro 23.67 41 P **P 15 07 25.9 -0.4**
baz=235
G39A Holcombe 23.71 43 P **P 15 07 25.3 -1.5**
baz=238
Z49A Columbiana 23.78 75 P **P 15 07 25.1 -2.4**
baz=270
W49A Belvidere 24.08 70 P **P 15 07 29.9 -0.5**
baz=266
F39A Loretta 24.20 42 P **P 15 07 32.6 +1.2**
baz=237
150A Eclectic 24.21 76 P **P 15 07 31.4 -0.2**
baz=271
E38A The Farm, Brul 24.22 40 *e*P **P 15 07 31.0 -0.5**
comp=N,23nm,1.4s
E38A The Farm, Brul 24.22 40 P **P 15 07 32.8 +1.3**
baz=234
G40A Rib Lake 24.28 44 *e*P **P 15 07 31.7 -0.4**
comp=N,25nm,1.3s
G40A Rib Lake 24.28 44 P **P 15 07 32.3 +0.1**
baz=239,SNR=5.8
Z50A Ashland 24.29 75 P **P 15 07 33.1 +0.8**
baz=270
K43A Burlington 24.32 51 *e*P **P 15 07 32.0 -0.5**
comp=N,14nm,1.0s
SWET Sewanee 24.36 70 *e*P **P 15 07 33.5 +0.5**
comp=N,25nm,1.4s

I42A Draeger Farm, 24.43 48 P **P 15 07 33.8 +0.3**
baz=244
V49A McMinnville 24.43 69 P **P 15 07 34.1 +0.5**
baz=264
BBB Bella Bella 24.48 339 LR LR 15 16 36.4
comp=N,191nm,20.7s,baz=197,slow=35
ULM Lac du Bonnet 24.54 29 P **P 15 07 34.4 0.0**
comp=N,15nm,1.2s,baz=229,slow=9.2,SNR=7.9
ULM LR LR 15 17 53.8
comp=N,100nm,18.5s,baz=246,slow=38
ULM Lac du Bonnet 24.54 29 *e*P **P 15 07 34.0 -0.3**
comp=N,24nm,1.2s
F40A Park Falls 24.67 43 P **P 15 07 35.3 -0.3**
baz=238
W50A Signal Mountai 24.87 70 P **P 15 07 39.9 +2.3**
baz=266
T49A Edmonton 24.89 66 P **P 15 07 39.6 +1.9**
baz=262
Y51A Rockmart 25.01 73 P **P 15 07 38.7 -0.2**
baz=269
EYMN Ely 25.05 38 P **P 15 07 38.6 -0.4**
baz=232
X51A Calhoun 25.20 72 P **P 15 07 41.2 +0.6**
baz=268
152A Waverly Hall 25.31 76 *e*P **P 15 07 41.6 +0.1**
comp=N,20nm,1.1s
152A Waverly Hall 25.31 76 P **P 15 07 41.6 +0.1**
baz=272
252A Lumpkin 25.32 78 P **P 15 07 42.5 +0.9**
baz=273
COWI Conover 25.35 44 *e*P **P 15 07 41.9 +0.1**
comp=N,7.9nm,0.8s
H43A Windswept, Lux 25.43 48 *e*P **P 15 07 42.4 -0.1**
comp=N,20nm,1.1s
H43A Windswept, Lux 25.43 48 P **P 15 07 44.4 +1.9**
baz=244
FFC Flin Flon 26.29 16 *e*P **P 15 07 50.4 +0.2**
comp=N,126nm,1.4s
DLBC Dease Lake 30.50 344 P **P 15 08 29.7 +1.9**
comp=N,1.2nm,0.5s,baz=142,slow=10,SNR=2.3
DLBC LR LR 15 22 22.7
comp=N,176nm,20.3s,baz=160,slow=40
SADO Sadowa 31.29 52 LR LR 15 21 27.7
comp=N,266nm,18.1s,baz=351,slow=37
ILAR Eielson Array 40.37 339 P **P 15 09 53.4 +1.0**
comp=N,3.7nm,1.0s,baz=149,slow=6.5,SNR=16
ILAR LR LR 15 26 42.7
comp=N,73nm,18.4s,baz=148,slow=36
ILB Eielson Array 40.37 339 *e*P **P 15 09 52.6 +0.2**
POKR Poker Flat Res 40.78 339 P **P 15 09 56.6 +0.8**
baz=133
FYU Fort Yukon 41.18 342 *e*P **P 15 10 01.1 +2.1**
comp=N,20nm,1.3s
CAST Castle Rocks 41.25 335 *e*P **P 15 10 00.7 +1.0**
comp=N,5.6nm,1.0s
BPAW Bear Paw Mtn. 41.28 337 *e*P **P 15 10 00.9 +1.0**
comp=N,9.3nm,1.1s
SCHQ Schefferville 41.83 40 LR LR 15 27 18.2
comp=N,188nm,18.7s,baz=276,slow=36
TOLK Toolik Lake Re 43.83 342 *e*P **P 15 10 21.9 +1.3**
comp=N,7.7nm,1.3s
TOLK Toolik Lake Re 43.83 342 P **P 15 10 22.5 +1.9**
baz=142
ROSC El Rosal 45.15 116 LR LR 15 32 03.3
comp=N,89nm,19.7s,baz=65,slow=40
PPT Papeete 58.25 220 LR LR 15 33 10.2
comp=N,52nm,18.4s,baz=338,slow=32
LPAZ La Paz 63.91 130 LR LR 15 39 28.1
comp=N,59nm,18.6s,baz=342,slow=35
PB01 IPOC Station P 66.50 134 *e*P **P 15 13 06.0 +1.1**
comp=N,7.1nm,0.8s
ARCES ARCESS Array B 76.58 14 LR LR 15 51 49.2
comp=N,46nm,18.5s,baz=22,slow=39
CPUP Villa Florida 78.08 130 P **P 15 14 13.3 -0.7**
comp=N,4.0nm,0.9s,baz=324,slow=5.5,SNR=7.2
ASAJ Asahikawa 78.35 314 LR LR 15 49 44.8
comp=N,26nm,18.2s,baz=22,slow=36
KLR Kul'dur 81.76 323 LR LR 15 49 38.8
comp=N,31nm,19.8s,baz=16,slow=35
USRK Ussuriysk Ar. 84.66 319 P **P 15 14 48.8 +0.1**
comp=N,1.1nm,0.8s,baz=91,slow=5.8,SNR=4.0
MJAR Matsushiro Arr 85.22 310 LR LR 15 46 11.6
comp=N,38nm,20.9s,baz=10.0,slow=31
DAVOX Davos/Dischmat 88.48 35 LR LR 15 55 29.3
comp=N,108nm,18.2s,baz=288,slow=36
GERES GERESS Array B 88.82 31 LR LR 15 55 51.4
comp=N,44nm,18.5s,baz=288,slow=36
VRAC Vranov 89.76 30 LR LR 15 55 48.1
comp=N,37nm,19.5s,baz=320,slow=36
HNR Honiara 91.07 260 LR LR 15 50 53.3
comp=N,64nm,19.1s,baz=54,slow=32
KSRS Korea Array 91.27 315 LR LR 15 48 15.3
comp=N,24nm,21.8s,baz=208,slow=30
ARU Arti 93.75 4 LR LR 16 02 40.6
comp=N,38nm,18.8s,baz=346,slow=39
KEST Kesra 95.83 43 LR LR 15 59 50.8
comp=N,46nm,18.2s,baz=270,slow=36
MLR Muntele Rosu 96.65 27 LR LR 16 00 46.7
comp=N,36nm,19.1s,baz=288,slow=36

*TAP **11** 15:03:06.5, 23°.97N×122°.70E, h30km±1km, ML2.6, D*
*JMA **11** 15:03:06.8±0.2, 24°.02N×122°.62E, h30km±5km, M2.0*
ISC 11 15:03:06.3±1.2, 23°.94N±0°.05×122°.66E±0°.02, h24km±14km, n29, σ0°62/55, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.57**	**27**	P		**Pb**	**15 03 17.4**	**-0.4**
JYNG				*e*S		**Sb**	**15 03 24.7**	**-0.8**
YOJ	**Yonaguni jima**	**0.61**	**32**	P		**Pb**	**15 03 18.1**	**-0.3**
baz=35								
YOJ				*e*S		**Sb**	**15 03 25.8**	**-0.8**
baz=35								
YOJ	**Yonaguni jima**	**0.61**	**32**	P		**Pb**	**15 03 18.0**	**-0.4**
YOJ				*e*S		**Sb**	**15 03 25.7**	**-0.9**
EOS1	**EOS1**	**0.77**	**322**	P		**Pn**	**15 03 21.6**	**-0.1**
baz=321								
EOS1				*e*S		**Sn**	**15 03 32.7**	**+0.2**
baz=321								
NANB	**Nanao**	**0.96**	**300**	P		**Pb**	**15 03 24.1**	**-0.2**
baz=297								
NANB				*e*S		**Sb**	**15 03 38.0**	**+1.5**
baz=297								
ENA	**Nanau**	**0.96**	**300**	*e*P		**Pb**	**15 03 24.6**	**+0.2**
baz=297								
ENA				*e*S		**Sb**	**15 03 37.8**	**+1.0**
baz=297								
TWC	**Suao**	**0.99**	**312**	P		**Pb**	**15 03 24.6**	**-0.2**
baz=309								
TWC				*e*S		**Sb**	**15 03 38.2**	**+0.7**
baz=309								
IRIF	**Iriomote-Funau**	**1.06**	**68**	P		**Pb**	**15 03 26.1**	**+0.2**
IRIF				S		**Sb**	**15 03 39.5**	**+0.1**
HATJ	**Hateruma jima**	**1.06**	**84**	P		**Pb**	**15 03 26.2**	**+0.2**
HATJ				*e*S		**Sb**	**15 03 40.1**	**+0.7**
ETLH	**Xiulin Townshi**	**1.10**	**284**	*e*P		**Pn**	**15 03 25.8**	**-0.6**
baz=269								
ETLH				*e*S		**Sb**	**15 03 40.7**	**-0.2**
baz=269								
TWE	**Neicheng**	**1.19**	**311**	*e*P		**Pb**	**15 03 28.1**	**-0.2**
baz=308								
TWE				*e*S		**Sb**	**15 03 44.3**	**+1.1**
baz=308								
ENTT	**Nioudou**	**1.21**	**305**	*e*P		**Pb**	**15 03 28.4**	**-0.2**
baz=288								
ENTT				*e*S		**Sb**	**15 03 45.1**	**+1.2**
baz=288								
HGSD	**Ruisui**	**1.22**	**249**	*e*P		**Pn**	**15 03 27.2**	**-0.6**
baz=247								
HGSD				*e*S		**Sn**	**15 03 42.6**	**-0.9**
baz=247								
SLBB	**Yuanshan**	**1.23**	**311**	*e*P		**Pb**	**15 03 28.9**	**-0.1**
baz=308								
SLBB				*e*S		**Sb**	**15 03 45.7**	**+1.2**
baz=308								
NDT	**Datong Townshi**	**1.23**	**302**	*e*P		**Pb**	**15 03 29.1**	**+0.1**
baz=286								
NDT				*e*S		**Sb**	**15 03 45.7**	**+1.2**
baz=286								
NNSB	**Datong**	**1.26**	**293**	*e*P		**Pn**	**15 03 28.7**	**+0.1**
baz=291								
JKRS	**Kuro-shima**	**1.27**	**76**	P		**Pb**	**15 03 29.7**	**+0.1**
JKRS				*e*S		**Sb**	**15 03 46.2**	**+0.7**
TIPB	**Shuangxi**	**1.27**	**324**	*e*P		**Pb**	**15 03 29.2**	**-0.5**
baz=335								
TIPB				*e*S		**Sb**	**15 03 46.3**	**+0.6**
baz=335								

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WHF	**Hehuan Shan**	**1.29**	**279**	*e*P		**Pn**	**15 03 29.1**	**-0.1**
baz=277								
WHF				*e*S		**Sn**	**15 03 45.9**	**0.0**
baz=277								
OWD	**Renai**	**1.35**	**271**	*e*P		**Pn**	**15 03 29.7**	**-0.2**
baz=269								
OWD				*e*S		**Sn**	**15 03 45.9**	**-1.2**
baz=269								
CHGB	**Renai**	**1.36**	**275**	*e*P		**Pn**	**15 03 30.1**	**+0.1**
baz=273								
CHGB				S		**Sn**	**15 03 47.6**	**+0.2**
baz=273								
YULB	**Yu-li**	**1.36**	**247**	P		**Pn**	**15 03 29.8**	**0.0**
baz=234								
YULB				*e*S		**Sn**	**15 03 46.9**	**-0.2**
baz=234								
YHNB	**Yeheng**	**1.37**	**302**	P		**Pb**	**15 03 30.5**	**-0.9**
baz=300								
YHNB				*e*S		**Sb**	**15 03 49.4**	**+0.8**
baz=300								
NWF	**Wu-fen Shan**	**1.38**	**325**	*e*P		**Pb**	**15 03 31.4**	**-0.1**
baz=322								
TWF1	**Yuli**	**1.38**	**245**	*e*S		**Sn**	**15 03 47.4**	**-0.1**
baz=243								
VWDT	**VWDT**	**1.40**	**263**	*e*P		**Pn**	**15 03 30.9**	**+0.6**
baz=261								
VWDT				*e*S		**Sn**	**15 03 47.7**	**-0.3**
baz=261								
JIJ	**Ishigaki jima**	**1.42**	**73**	P		**Pn**	**15 03 30.9**	**+0.3**
JIJ				*e*S		**Sn**	**15 03 48.5**	**-0.1**
SANB	**Taian**	**1.59**	**287**	*e*P		**Pb**	**15 03 34.4**	**-0.8**
baz=272								
SANB				*e*S		**Sb**	**15 03 54.5**	**-0.5**
baz=272								
JISG	**Ishigakijimahi**	**1.64**	**67**	P		**Pn**	**15 03 33.7**	**0.0**
JISG				*e*S		**Sn**	**15 03 54.2**	**+0.2**

KRSC 11 15:12:22.5±1.1, 49°.68N×156°.89E, h52km±22km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.12**	**334**	*e*P		Pn	15 12 42.5	+0.6
SKR				*e*S		Sn	15 12 57.0	+0.8
PAU	**Pauzhetka**	**1.79**	**358**	*e*P		Pn	15 12 53.2	+2.2
PAU				*e*S		Sn	15 13 16.0	+3.5
KDTR	**Khodutka, Kamc**	**2.26**	**19**	*e*P		Pn	15 13 00.0	+2.6
KDTR				*e*S		Sn	15 13 27.6	+3.5
MTVR	**Mutnovka**	**2.93**	**16**	*e*P		Pn	15 13 09.9	+3.3
DALK	**Dalny**	**3.56**	**18**	*e*P		Pn	15 13 18.0	+2.9
DALK				*e*S		Sn	15 13 59.5	+3.7
AVH	**Avacha**	**3.77**	**17**	*e*P		Pn	15 13 22.3	+4.1
SDLR	**Sedlovina**	**3.82**	**18**	*e*P		Pn	15 13 21.9	+3.1
KRX	**Arik**	**3.85**	**16**	*e*P		Pn	15 13 23.7	+4.5
SPN	**Mys Shipunski**	**3.95**	**29**	*e*P		Pn	15 13 23.8	+3.3
SPN				*e*S		Sn	15 14 09.6	+4.2
GNL	**Ganaly**	**4.08**	**9**	*e*P		Pn	15 13 26.5	+4.2

*IDC **11** 15:24:44.2±2.4, 7°.07S×129°.82E, h127km±22km, mb3.5/4, mb1 3.6/8, mb1mx3.3/40, mbtmp4.0/8, Error ellipse: s-maj=45.7km s-min=21.7km az=103.0*
*DJA **11** 15:24:45.6±0.4, 7°.5±3°.3×13°.0E±°.1, h127km±13km, M4.2/6, mb4.3/6, mB4.8/3, MLv4.2/3, Mw(mB)4.1/3*
ISC 11 15:24:42.3±0.8, 7°.15S±0°.05×129°.78E±0°.07, h104km, n18, σ4°19/23, mb3.7/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.71**	**119**	P		Pn	15 25 17.2	+5.8
SAUI				S		**Sn**	**15 25 38.9**	**+5.3**
AAI	**Ambon**	**3.79**	**335**	P		**Pn**	**15 25 41.8**	**+3.0**
FAKI	**Fak Fak**	**4.87**	**30**	P		**Pn**	**15 25 54.5**	**+1.1**
FAKI				S		**Sn**	**15 26 46.3**	**-2.3**
SOEI	**Soe**	**6.04**	**244**	P		**Pn**	**15 26 13.7**	**+4.4**
117nm,0.9s,1μm								
SANI	**Sanana**	**6.33**	**323**	P		**Pn**	**15 26 17.5**	**+4.4**
15nm,0.8s								
SIJI	**Sorong**	**6.42**	**13**	P		**Pn**	**15 26 15.1**	**+0.8**
1.8nm,0.3s,baz=193,slow=15,SNR=17								
SIJI				S		**Sn**	**15 27 20.6**	**-5.6**
4.1nm,0.3s,baz=103,slow=23,SNR=18								
SWI	**Sorong**	**6.42**	**13**	P		**Pn**	**15 26 16.0**	**+1.6**
BATI	**Baumata**	**6.77**	**243**	P		**Pn**	**15 26 22.6**	**+3.5**
22nm,0.3s,baz=103,slow=3.8,SNR=34								
BATI				S		**Sn**	**15 27 33.5**	**-1.2**
5.4nm,0.3s,baz=84,slow=19,SNR=2.6								
BATI	**Baumata**	**6.77**	**243**	P		**Pn**	**15 26 23.3**	**+4.2**
39nm,0.9s								
EDFI	**Ende, Flores**	**8.17**	**258**	P		**Pn**	**15 26 43.0**	**+4.7**
7.1nm,1.6s								
BAKI	**Biak**	**8.65**	**47**	P		**Pn**	**15 26 47.4**	**+2.7**
FITZ	**Fitzroy Crossi**	**11.60**	**200**	P		**Pn**	**15 27 25.8**	**+1.1**
0.5nm,0.3s,baz=25,slow=9.8,SNR=30								
FITZ				S		**Sn**	**15 29 26.2**	**-6.1**
3.1nm,0.3s,baz=116,slow=17,SNR=11								
WRA	**Warramunga Arr**	**13.46**	**161**	S		**Sn**	**15 30 10.6**	**-6.8**
1.5nm,0.3s,baz=334,slow=22,SNR=5.9								
ASAR	**Alice Springs**	**16.89**	**167**	P		**P**	**15 28 35.3**	**+2.5**
0.5nm,0.3s,baz=341,slow=8.6,SNR=27								
ASAR				S		**Sn**	**15 31 31.6**	**-8.6**
0.2nm,0.3s,baz=347,slow=25,SNR=3.3								
MKAR	**Makanchi Array**	**68.24**	**327**	P		**P**	**15 35 31.9**	**+0.1**
1.2nm,0.4s,baz=116,slow=7.9,SNR=28								
ZALV	**Zalesovo Beam**	**71.62**	**334**	P		**P**	**15 35 50.3**	**-2.1**
0.5nm,0.4s,baz=135,slow=4.5,SNR=2.7								
KURBB	**Kurchatov Arra**	**72.53**	**329**	P		**P**	**15 35 57.0**	**-0.8**
0.6nm,0.5s,baz=126,slow=4.5,SNR=6.6								
BVAR	**Borovoye Array**	**78.08**	**328**	P		**P**	**15 36 28.3**	**-1.3**
0.2nm,0.4s,baz=119,slow=1.8,SNR=3.2								

*IDC **11** 15:31:07.5±2.1, 6°.96S×129°.75E, h132km±20km, mb3.5/4, mb1 3.7/9, mb1mx3.3/44, mbtmp4.0/9, Error ellipse: s-maj=34.4km s-min=16.2km az=87.0*
ISC 11 15:31:05.0±0.8, 7°.07S±0°.06×129°.9E±0°.1, h104km, n9, σ3°14/14, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.31**	**13**	P		**Pn**	**15 32 37.0**	**+1.3**
2.5nm,0.3s,baz=189,slow=19,SNR=27								
SIJI				S		**Sn**	**15 33 42.6**	**-3.8**
4.2nm,0.3s,baz=217,slow=23,SNR=10								
BATI	**Baumata**	**6.88**	**243**	P		**Pn**	**15 32 46.1**	**+2.7**
3.9nm,0.3s,baz=69,slow=2.7,SNR=7.6								
BATI				S		**Sn**	**15 33 59.1**	**-1.2**
11nm,0.3s,baz=15,slow=13,SNR=9.3								
FITZ	**Fitzroy Crossi**	**11.71**	**200**	P		**Pn**	**15 33 49.7**	**+0.9**
0.6nm,0.3s,baz=23,slow=11,SNR=10								
FITZ				S		**Sn**	**15 35 51.8**	**-5.9**
1.6nm,0.3s,baz=47,slow=11,SNR=6.6								
WRA	**Warramunga Arr**	**13.51**	**162**	P		**Pn**	**15 34 15.4**	**+2.9**
1.2nm,0.3s,baz=341,slow=12,SNR=18								
WRA				S		**Sn**	**15 36 37.4**	**-3.9**
2.6nm,0.3s,baz=328,slow=23,SNR=11								
ASAR	**Alice Springs**	**16.95**	**167**	P		**P**	**15 34 59.8**	**+3.7**
0.5nm,0.3s,baz=341,slow=9.8,SNR=9.8								
ASAR				S		**Sn**	**15 38 02.4**	**-2.0**
0.6nm,0.3s,baz=347,slow=26,SNR=8.0								
MKAR	**Makanchi Array**	**68.21**	**327**	P		**P**	**15 41 53.3**	**-1.1**
0.4nm,0.3s,baz=133,slow=6.3,SNR=11								
VNDA	**Vanda**	**72.39**	**173**	P		**P**	**15 42 19.6**	**+0.3**
0.2nm,0.4s,baz=349,slow=5.2,SNR=6.3								
KURBB	**Kurchatov Arra**	**72.50**	**329**	P		**P**	**15 42 18.3**	**-2.0**
0.4nm,0.6s,baz=130,slow=5.1,SNR=4.6								
MAW	**Mawson**	**74.84**	**201**	P		**P**	**15 42 32.9**	**-0.8**
1.8nm,0.4s,baz=96,slow=10,SNR=6.3								

*IDC **11** 15:35:23.8±1.0, 5°.52S×152°.63E, h0km, mb3.8/8, mb1 4.1/9, mb1mx3.7/41, mbtmp3.9/9, ML2.0/1, Error ellipse: s-maj=41.5km s-min=21.1km az=126.0*
*ISCJB **11** 15:35:28.5±0.7, 5°.59S±0°.10×152°.6E±0°.1, h40km, mb3.8/10, Error ellipse: s-maj=21.8km s-min=10.4km az=30.3*
*NEIC **11** 15:35:30.7±1.3, 5°.51S×152°.49E, h46km±10km, mb4.1/2, Error ellipse: s-maj=19.1km s-min=6.6km az=118.0*
ISC 11 15:35:29.9±0.8, 5°.6S±0°.1×152°.4E±0°.2, h40km, n19, σ0°91/22, mb3.8/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.37**	**348**	*e*Pn		**Pn**	**15 35 53.5**	**+0.8**

PMG	**Port Moresby**	**6.49**	**233**	Pn	**Pn**	**15 37 04.2 +1.3**
	1.8nm,0.3s,baz=41,slow=4.2,SNR=8.1					
PMG				Sn	**Sn**	**15 38 13.5 -2.3**
	0.9nm,0.3s,baz=325,slow=18,SNR=2.8					
WR1	**Warramunga Arr**	**22.69**	**229**	*e*P	**P**	**15 40 29.3 +1.0**
WRA	**Warramunga Arr**	**22.69**	**229**	P	**P**	**15 40 29.3 +1.0**
	1.4nm,0.6s,baz=64,slow=10,SNR=2.2					
AS31	**Alice Springs**	**25.36**	**223**	*e*P	**P**	**15 40 54.2 +0.7**
	1.8nm,0.9s					
ASAR	**Alice Springs**	**25.36**	**223**	P	**P**	**15 40 55.2 +1.7**
	3.1nm,0.9s,baz=58,slow=9.0,SNR=6.4					
FITZ	**Fitzroy Crossi**	**28.99**	**242**	P	**P**	**15 41 26.3 +0.1**
	1.2nm,0.5s,baz=58,slow=7.6,SNR=3.9					
VNDA	**Vanda**	**72.10**	**178**	P	**P**	**15 46 48.8 -0.9**
	0.4nm,0.4s,baz=14,slow=8.3,SNR=5.7					
VNDA	**Vanda**	**72.10**	**178**	*e*P	**P**	**15 46 50.2 +0.5**
MK32	**Makanchi Array**	**80.65**	**319**	*e*P	**P**	**15 47 39.0 +0.3**
MKAR	**Makanchi Array**	**80.65**	**319**	P	**P**	**15 47 39.0 +0.2**
	0.3nm,0.5s,baz=109,slow=9.2,SNR=3.9					
GHO	**Glory Hole Cre**	**80.69**	**24**	*e*P	**P**	**15 47 38.0 -0.7**
	7.1nm,0.8s					
ILAR	**Eielson Array**	**82.98**	**22**	P	**P**	**15 47 50.9 +0.3**
	1.5nm,0.7s,baz=254,slow=5.2,SNR=16					
ILB	**Eielson Array**	**82.98**	**22**	*e*P	**P**	**15 47 50.9 +0.3**
BVAR	**Borovoye Array**	**89.62**	**323**	P	**P**	**15 48 22.9 -0.6**
	0.2nm,0.3s,baz=99,slow=8.9,SNR=3.2					
NV01	**Mina Array Sit**	**92.83**	**52**	*e*P	**P**	**15 48 38.5 -0.5**
NVAR	**Mina Array Bea**	**92.83**	**52**	P	**P**	**15 48 38.5 -0.5**
	0.1nm,0.3s,baz=272,slow=4.4,SNR=3.2					
TORD	**Torodi Ar. Bea**	**150.19**	**287**	PKPbc	**PKiKP**	**15 55 18.4 -0.1**
	0.3nm,0.7s,baz=41,slow=2.9,SNR=1.8					
TORD				PKPab	**PKPab**	**15 55 23.5 -0.3**
	0.3nm,0.6s,baz=41,slow=2.8,SNR=2.2					
TOA1	**Torodi Ar. Sit**	**150.19**	**287**	*e*PKPbc	**PKiKP**	**15 55 18.4 -0.1**
TOA1				*e*PKPab	**PKPab**	**15 55 23.5 -0.3**

*BJI **11** 15:47:17.5±0.0,51°.89N×89°.92E,h10km,mb4.2/1,ML4.2/2*
*MOS **11** 15:47:22.5±0.9,51°.10N×90°.22E,h10km,mb4.1/3,Error ellipse: s-maj=18.0km s-min=11.4km az=61.5*
*ASRS **11** 15:47:22.4±0.9,51°.18N×90°.15E,h15km,Ms2.9/3*
*ISCJB **11** 15:47:23.4±0.6,51°.26N±0°.04×89°.91E±0°.07,h10km, mb4.0/1,Error ellipse: s-maj=6.5km s-min=5.7km az=10.1*
*NNC **11** 15:47:28.1±6.5,51°.20N×89°.61E,h5km±32km,mb4.1, mpv3.8,Error ellipse: s-maj=37.8km s-min=18.8km az=88.0*

ISC 11 15:47:24.0±0.9,51°.10N±0°.04×90°.14E±0°.06,h10km,n28, σ1§80/35,10C-5D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**1.78**	**245**	*e*Pg	**Pb**	**15 47 55.5**	**-1.4**
AKAR				*e*Sg	**Sb**	15 48 19.9	**+0.6**
AKAR	**Aktash**	**1.78**	**245**	*e*PN	**Pb**	**15 47 55.5**	**-1.4**
AKAR				*e*		15 48 19.9	
CERR	**Cheremushki**	**1.93**	**24**	*e*Pg	**Pn**	**15 47 55.8**	**-1.1**
CERR	**Cheremushki**	**1.93**	**24**	*e*PN	**Pn**	**15 47 55.8**	**-1.1**
TASR	**Tashtagol**	**2.18**	**321**	*e*Pn	**Pn**	**15 48 00.7**	**+0.4**
TASR				*e*Pg	**Pg**	**15 48 03.9**	**-1.8**
TASR				*e*Sg	**Sn**	**15 48 27.6**	**+0.3**
TASR	**Tashtagol**	**2.18**	**321**	*e*PN	**Pn**	**15 48 00.7**	**+0.4**
TASR				*e*		15 48 03.9	
TASR				*e*		15 48 27.6	
DGZ	**Jazzator, Alta**	**2.23**	**232**	*c i*PN	**Pb**	**15 48 03.2**	**-1.3**
DGZ				*i* S	**Sb**	**15 48 33.0**	**+0.8**
ELT	**Eltsovka**	**3.24**	**314**	*e*Pn	**Pn**	**15 48 15.6**	**+0.7**
ELT				*e*Pg	**Pb**	**15 48 22.4**	**+0.8**
ELT				*e*Sg	**Sb**	**15 48 59.7**	**-1.3**
ELT	**Eltsovka**	**3.24**	**314**	*e*PN	**Pn**	**15 48 15.6**	**+0.7**
ELT				*e*		15 48 22.4	
ELT				*e*		15 48 59.7	
ZAA0	**Zalesovo Array**	**4.33**	**313**	⇑Pn	**Pn**	**15 48 30.8**	**+0.9**
	2.9nm,0.8s						
ZAA0				⇑Lg	Lg	15 49 33.2	
	12nm,0.7s						
NVS	**Novosibirsk**	**5.61**	**315**	*e*Pg	**Pb**	**15 49 02.3**	**+0.3**
NVS				*e*Sn	**Sn**	**15 49 50.0**	**-1.9**
NVS				*e*Sg	**Sb**	**15 50 14.6**	**+5.4**
NVS	**Novosibirsk**	**5.61**	**315**	*i* PN	**Pb**	**15 49 02.3**	**+0.3**
NVS				*i*		15 50 14.6	
MK31	**Makanchi Array**	**6.73**	**233**	⇑Pn	**Pn**	**15 49 04.1**	**+1.2**
	7.7nm,0.5s,baz=61,slow=12,SNR=123						
MK31				⇓Lg	Lg	15 50 54.4	
	18nm,0.6s,baz=52,slow=30,SNR=6.2						
MK31	**Makanchi Array**	**6.73**	**233**	*e*PN	**Pn**	**15 49 04.0**	**+1.2**
MK31				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MKAR	**Makanchi Array**	**6.73**	**233**	*i* PN	**Pn**	**15 49 04.4**	**+1.5**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MAKZ	**Makanchi**	**6.88**	**235**	⇑Pn	**Pn**	**15 49 05.7**	**+0.7**
	comp=Z,4.1nm,0.6s						
MAKZ				⇑Lg	Lg	15 51 01.9	
	comp=Z,24nm,0.8s						
MAKZ	**Makanchi**	**6.88**	**235**	PN	**Pn**	**15 49 05.6**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	**Kurchatov**	**7.30**	**271**	⇑Pn	**Pn**	**15 49 13.5**	**+2.9**
	comp=Z,5.7nm,0.7s						
KURK				⇑Lg	Lg	15 51 10.3	
	comp=Z,36nm,0.7s						
KURK	**Kurchatov**	**7.30**	**271**	*i* P	**Pn**	**15 49 12.7**	**+2.1**
KURBB	**Kurchatov Arra**	**7.37**	**271**	⇑Pn	**Pn**	**15 49 11.6**	**0.0**
	comp=Z,5.9nm,0.5s						
KURBB				⇓Lg	Lg	15 51 13.3	
	comp=Z,38nm,0.8s						
PDGK	**Podgornoye**	**10.62**	**227**	⇓Lg	Lg	15 52 59.7	
	comp=Z,18nm,1.1s						
BRVK	**Borovoye**	**12.37**	**287**	⇓Pn	**Pn**	**15 50 17.6**	**-2.5**
	comp=Z,2.7nm,1.0s						
BRVK				⇑Sn	**Sn**	**15 52 34.0**	**-3.9**
	comp=Z,5.9nm,0.8s						
BRVK	**Borovoye**	**12.37**	**287**	P	**Pn**	**15 50 17.6**	**-2.5**
BRVK						15 52 33.9	
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK				smax	smax		
	comp=Z,6.0nm,0.8s						
TKM2	**Tokmak 2**	**12.85**	**236**	⇓Lg	Lg	15 54 10.2	
	comp=Z,5.1nm,0.9s						
KLR	**Kul'dur**	**26.47**	**78**	*i* P	**P**	**15 53 01.8**	**+0.8**
KLR				pmax	pmax		
	comp=Z,7.0nm,3.9s						
TIXI	**Tiksi**	**26.87**	**26**	*i* P	**P**	**15 53 04.1**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,3.9s						
WHN	**Wuhan**	**27.30**	**130**	P	**P**	**15 53 11.0**	**+2.4**
OBN	**Obninsk**	**31.75**	**299**	*i* P	**P**	**15 53 49.0**	**+1.1**
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						

MAN 11 16:04:51.9,12°.52N×124°.85E,h28km,mb4.4,ML3.2, MS3.0,1D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataman**	**0.18**	**266**	*e*P	Pn	16 04 59.1	+0.3
CNP				*e*S	Sb	16 05 05.7	+4.1
BESP	**Borongan**	**1.08**	**148**	*e*P	Pn	16 05 10.3	-0.9
BESP				*e*S	Sb	16 05 26.1	+0.3
PVCP	**Virac**	**1.26**	**328**	*e*P	Pn	16 05 13.4	-0.3
PVCP				*e*S	Sn	16 05 30.1	+0.3
PLP	**Palo**	**1.36**	**175**	⇓*e*P	Pn	16 05 14.3	-0.7
PLP				*e*S	Sn	16 05 32.4	+0.4
OCLP	**Ormoc**	**1.48**	**189**	*e*P	Pn	16 05 17.2	+0.5
OCLP				*e*S	Sb	16 05 38.0	+0.8
LLP	**Lapu-Lapu**	**2.36**	**202**	*e*P	Pb	16 05 32.4	-1.3
LLP				*e*S	Sb	16 06 08.2	+5.8
MSLP	**Maasin**	**2.37**	**180**	*e*P	Pn	16 05 30.5	+1.5
MSLP				*e*S	Sb	16 06 00.7	-2.2
GUIM	**Jordan**	**2.91**	**230**	*e*P	Pn	16 05 37.4	+1.0
GUIM				*e*S	Sn	16 06 11.3	+0.9

MEX 11 16:08:18.4±0.3,16°.37N×92°.53W,h55km±8km,MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.39**	**103**	*e*P	Pn	16 08 27.7	-1.3
CCIG				*i* S	Sn	16 08 34.9	-1.8
PCIG		**0.93**	**225**	*i* P	Pn	16 08 33.6	-1.8
PCIG				*i* S	Sn	16 08 46.7	-1.2

*IDC **11** 16:26:36.9±31.0,33°.50N×72°.80E,h0km,mb3.6/3, mb1 3.7/4,mb1mx3.3/54,mbtmp3.7/4,ML3.3/1,Error ellipse: s-maj=574.3km s-min=47.6km az=155.0*
*NNC **11** 16:27:34.5±2.9,37°.87N×71°.81E,h330km±174km,mb2.0, mpv3.4,Error ellipse: s-maj=111.3km s-min=18.2km az=2.0*

ISC 11 16:27:32.9±2.3,37°.5N±0°.2×72°.0E±0°.1,h250km,n13, σ1§20/16,4C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.83**	**15**	P	**Pn**	**16 28 47.0**	**+0.1**
	SNR=50						
UCH	**Uchtor**	**5.12**	**22**	P	**Pn**	**16 28 50.7**	**+0.1**
	SNR=8.4						
KZA	**Kyzart**	**5.24**	**28**	P	**Pn**	**16 28 51.4**	**-0.4**
	SNR=8.6						
AAK	**Ala-Archa**	**5.50**	**20**	⇑P	**Pn**	**16 28 54.8**	**0.0**
	2.7nm,0.5s						
AAK				⇑S	**S**	**16 30 01.2**	**+0.9**
	5.0nm,0.7s						
KK31	**Karatay Array**	**5.73**	**349**	⇑P	**Pn**	**16 28 57.5**	**-0.1**
	0.8nm,0.3s,baz=165,slow=11,SNR=8.2						
KK31				⇓S	**S**	**16 30 03.3**	**-2.0**
	4.5nm,0.3s,baz=163,slow=15,SNR=10						
ULHL	**Ulahol**	**5.78**	**33**	P	**Pn**	**16 28 58.3**	**-0.1**
	SNR=5.8						
TKM2	**Tokmak 2**	**6.10**	**26**	P	**Pn**	**16 29 02.6**	**+0.3**
	SNR=15						
TKM2	**Tokmak 2**	**6.10**	**26**	⇓P	**Pn**	**16 29 02.4**	**+0.1**
	4.5nm,0.5s						
TKM2				⇑S	**S**	**16 30 14.5**	**+0.6**
	2.2nm,0.9s						
MKAR	**Makanchi Array**	**12.04**	**36**	Pn	**Pn**	**16 30 13.6**	**-3.2**
	0.1nm,0.3s,baz=215,slow=12,SNR=9.0						
ZALV	**Zalesovo Beam**	**18.70**	**24**	P	**P**	**16 31 33.5**	**+0.8**
	1.2nm,0.3s,baz=208,slow=11,SNR=5.8						
FINES	**FINESS Array B**	**37.12**	**325**	P	**P**	**16 34 19.8**	**+0.5**
	1.5nm,1.0s,baz=110,slow=12,SNR=1.3						
ARCES	**ARCESS Array B**	**40.55**	**337**	P	**P**	**16 34 48.7**	**+1.1**
	7.5nm,0.3s,baz=106,slow=9.5,SNR=3.3						
NOA	**NORSAR Array B**	**44.08**	**322**	P	**P**	**16 35 15.1**	**-1.0**
	0.4nm,0.6s,baz=91,slow=7.6,SNR=3.0						

*ISK **11** 16:32:17.9,40°.76N×41°.38E,h22km,ML1.8/4*
*DDA **11** 16:32:18.2,40°.74N×41°.34E,h7km±2km,MD2.5*
*TIF **11** 16:32:18.6,40°.76N×41°.42E,h29km±1km*
*ISCJB **11** 16:32:19.1±1.0,40°.75N±0°.03×41°.32E±0°.07,h21km±32km, Error ellipse: s-maj=9.2km s-min=4.5km az=21.6*

ISC 11 16:32:18.5±1.1,40°.75N±0°.04×41°.36E±0°.05,h26km±11km, n11,σ0§58/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBAD	**Bademkaya**	**0.37**	**44**	*i* P	**Pb**	**16 32 27.0**	**+0.3**
DBAD				*i* S	**Sb**	**16 32 32.3**	**0.0**
DAGI	**Agillar**	**0.53**	**52**	*i* P	**Pn**	**16 32 30.1**	**-0.5**
DAGI				*i* S	**Sn**	**16 32 38.0**	**-0.7**
KRIK	**Erzurum-spir**	**0.53**	**218**	*i* P	**Pb**	**16 32 28.7**	**-0.7**
KRIK				*i* S	**Sb**	**16 32 36.6**	**-0.2**
DBOC	**Borcka**	**0.63**	**21**	*i* P	**Pn**	**16 32 31.6**	**-0.3**
DBOC				*i* S	**Sn**	**16 32 40.6**	**-0.6**
AKDA	**Akdag**	**0.65**	**180**	*i* P	**Pb**	**16 32 31.6**	**+0.3**
BCA	**Borcka**	**0.72**	**16**	PG	**Pn**	**16 32 32.6**	**-0.4**
BCA				SG	**Sn**	**16 32 42.8**	**-0.4**
SENK	**Senkaya-Erzuru**	**0.78**	**104**	PG	**Pb**	**16 32 33.3**	**-0.2**
KOPR	**Koprukoy-ERZUR**	**0.85**	**153**	PG	**Pn**	**16 32 34.9**	**-0.1**
KOPR				SG	**Sn**	**16 32 47.5**	**+0.8**
BATM	**Batumi**	**0.89**	**16**	PG	**Pn**	**16 32 35.4**	**+0.1**
BATM				SG	**Sn**	**16 32 48.1**	**+0.8**
BATM	**Batumi**	**0.89**	**16**	P	**Pn**	**16 32 36.2**	**+0.9**
BATM				S	**Sn**	**16 32 48.1**	**+0.8**
BAYT	**Aydıntepe-Bayb**	**0.99**	**249**	PG	**Pn**	**16 32 37.2**	**+0.3**

*ISCJB **11** 16:33:06.4±0.7,5°.75S±0°.08×145°.9E±0°.1,h100km, mb3.7/8,Error ellipse: s-maj=18.9km s-min=8.2km az=154.4*
*IDC **11** 16:33:08.8±2.0,5°.85S×145°.85E,h111km±21km,mb3.5/8, mb1 3.7/11,mb1mx3.5/32,mbtmp4.0/11,Error ellipse: s-maj=23.2km s-min=15.6km az=65.0*

ISC 11 16:33:08.2±0.9,5°.77S±0°.09×145°.9E±0°.1,h100km,n13, σ1§30/13,mb3.9/8,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.83**	**161**	P	**Pn**	**16 34 05.9**	**+0.8**
	31nm,0.3s,baz=359,slow=5.7,SNR=116						
PMG				S	**Sn**	**16 34 48.5**	**-0.6**
	20nm,0.3s,baz=338,slow=21,SNR=15						
JAY	**Jayapura**	**6.09**	**302**	P	**Pn**	**16 34 36.2**	**+0.4**
	0.8nm,0.3s,baz=100,slow=17,SNR=4.5						
CTA	**Charters Tower**	**14.24**	**179**	P	**P**	**16 36 30.8**	**+1.3**
	0.8nm,0.3s,baz=2.8,slow=15,SNR=7.9						
SIJI	**Sorong**	**15.38**	**288**	P	**Pn**	**16 36 41.6**	**+1.8**
	0.9nm,0.3s,baz=93,slow=9.5,SNR=9.6						
ASAR	**Alice Springs**	**21.20**	**212**	P	**P**	**16 37 43.6**	**-2.4**
	0.3nm,0.6s,baz=44,slow=8.1,SNR=13						
FITZ	**Fitzroy Crossi**	**23.25**	**236**	P	**P**	**16 38 06.2**	**-0.8**
	0.6nm,0.4s,baz=42,slow=8.9,SNR=1.4						
STKA	**Stephens Creek**	**26.28**	**188**	P	**P**	**16 38 34.9**	**+0.5**
	4.5nm,1.1s,baz=12,slow=9.1,SNR=5.2						
CMAR	**Chiang Mai Arr**	**52.16**	**299**	P	**P**	**16 42 08.7**	**-0.3**
	1.2nm,0.6s,baz=118,slow=6.1,SNR=17						
PETK	**Petropavlovsk-**	**59.51**	**8**	P	**P**	**16 43 01.8**	**+1.0**
	1.2nm,0.5s,baz=160,slow=6.1,SNR=7.0						
MKAR	**Makanchi Array**	**76.61**	**321**	P	**P**	**16 44 47.5**	**-0.5**
	0.7nm,0.6s,baz=100,slow=7.1,SNR=7.9						
ZALV	**Zalesovo Beam**	**78.23**	**328**	P	**P**	**16 44 55.3**	**-1.5**
	0.7nm,0.4s,baz=126,slow=7.3,SNR=3.0						
ILAR	**Eielson Array**	**85.71**	**23**	P	**P**	**16 45 34.8**	**-0.9**
	1.0nm,0.7s,baz=250,slow=4.8,SNR=12						
TORD	**Torodi Ar. Bea**	**143.95**	**284**	PKP	PKPab	16 52 30.3	-0.2
	0.4nm,0.6s,baz=88,slow=1.9,SNR=2.3						

*ISCJB **11** 16:42:16.5±0.5,5°.45S±0°.06×153°.53E±0°.06,h82km, mb4.2/16,Error ellipse: s-maj=9.2km s-min=8.9km az=160.6*
*IDC **11** 16:42:16.6±5.1,5°.36S×153°.56E,h67km±42km,mb3.9/9, mb1 4.0/10,mb1mx3.6/40,mbtmp4.2/10,ML2.4/1,MS3.3/6, Ms1 3.3/6,ms1mx2.9/28,Error ellipse: s-maj=31.4km s-min=20.6km az=50.0*
*NEIC **11** 16:42:17.9±0.8,5°.42S×153°.54E,h82km±6km,mb4.4/8, Error ellipse: s-maj=10.1km s-min=7.1km az=50.0*

ISC 11 16:42:18.1±0.7,5°.41S±0°.08×153°.55E±0°.08,h82km,n38, σ0§80/33,mb4.2/16,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.84**	**311**	*e*Pn	**Pn**	**16 42 46.7**	**-1.2**
MANU	**Manus Island**	**7.02**	**298**	*e*Pn	**Pn**	**16 43 59.4**	**+1.1**
PMG	**Port Moresby**	**7.47**	**238**	P	**Pn**	**16 44 04.1**	**-0.4**
	3.2nm,0.3s,baz=56,slow=9.7,SNR=9.6						
PMG				S	**Sn**	**16 45 28.3**	**+0.5**
	2.3nm,0.3s,baz=174,slow=11,SNR=4.0						
PMG	**Port Moresby**	**7.47**	**238**	*e*Pn	**Pn**	**16 44 03.5**	**-1.0**
PMG				*e*Sn	**Sn**	**16 45 28.2**	**+0.5**
HNR	**Honiara**	**7.50**	**123**	LR	LR	16 47 15.6	
	comp=Z,108nm,18.8s,baz=277,slow=40						
HNR	**Honiara**	**7.50**	**123**	*e*Pn	**Pn**	**16 44 05.1**	**+0.3**
DZM	**Mont Dzumac**	**20.73**	**144**	P	**P**	**16 46 52.0**	**-0.2**
	7.9nm,0.4s,baz=216,slow=8.1,SNR=19						
AS31	**Alice Springs**	**26.22**	**224**	*e*P	**P**	**16 47 44.5**	**-1.0**
	1.6nm,1.0s						
ASAR	**Alice Springs**	**26.22**	**224**	P	**P**	**16 47 45.1**	**-0.4**
	1.3nm,0.9s,baz=57,slow=9.1,SNR=17						
ASAR				PcP	**PcP**	**16 51 11.6**	**+1.1**
	1.2nm,0.8s,baz=63,slow=2.8,SNR=8.2						
ASAR				LR	LR	16 57 45.8	
	comp=Z,51nm,20.0s,baz=90,slow=35						
H11S3	**WAKE ISLAND Hy**	**27.06**	**28**	T	T	17 16 07.8	
	baz=207,slow=72,SNR=6.4						
H11S2	**WAKE ISLAND Hy**	**27.06**	**28**	T	T	17 16 11.8	
	baz=207,slow=72,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	**27.08**	**28**	T	T	17 15 59.1	
	baz=207,slow=72,SNR=4.5						
STKA	**Stephens Creek**	**28.61**	**202**	LR	LR	17 00 07.2	
	comp=Z,52nm,18.9s,baz=28,slow=37						
STKA	**Stephens Creek**	**28.61**	**202**	*e*P	**P**	**16 48 06.3**	**-0.4**
	5.0nm,1.5s						

SOEI	**Soe**	**29.33**	**260**	*e*P	**P**	**16 48 13.2**	**-0.3**
	28nm,0.9s						
FITZ	**Fitzroy Crossi**	**30.03**	**243**	P	**P**	**16 48 19.2**	**-0.3**
	1.3nm,0.4s,baz=54,slow=9.1,SNR=11						
FITZ	**Fitzroy Crossi**	**30.03**	**243**	*e*P	**P**	**16 48 19.2**	**-0.3**
	15nm,1.6s						
MJAR	**Matsushiro Arr**	**44.14**	**342**	LR	LR	17 08 31.1	
	comp=Z,36nm,18.0s,baz=245,slow=36						
PPT	**Papeete**	**56.83**	**107**	LR	LR	17 12 02.4	
	comp=Z,45nm,19.6s,baz=280,slow=31						
CM31	**Chiang Mai Arr**	**58.81**	**295**	*e*P	**P**	**16 52 09.4**	**+1.0**
CMAR	**Chiang Mai Arr**	**58.81**	**295**	P	**P**	**16 52 09.4**	**+1.0**
	2.0nm,0.8s,baz=121,slow=5.7,SNR=14						
VNDA	**Vanda**	**72.20**	**178**	P	**P**	**16 53 34.9**	**+1.2**
	0.6nm,0.7s,baz=337,slow=6.7,SNR=7.3						
VNDA	**Vanda**	**72.20**	**178**	*e*P	**P**	**16 53 34.3**	**+0.6**
MK31	**Makanchi Array**	**81.27**	**319**	*e*P	**P**	**16 54 25.8**	**+0.4**
MK32	**Makanchi Array**	**81.27**	**319**	*e*P	**P**	**16 54 25.5**	**+0.1**
MKAR	**Makanchi Array**	**81.27**	**319**	P	**P**	**16 54 25.5**	**+0.1**
	1.9nm,0.7s,baz=98,slow=6.5,SNR=17						
MAKZ	**Makanchi**	**81.48**	**319**	*e*P	**P**	**16 54 26.3**	**-0.2**
	2.9nm,0.8s						
ZALV	**Zalesovo Beam**	**82.07**	**326**	P	**P**	**16 54 28.6**	**-0.8**
	1.0nm,0.6s,baz=97,slow=6.3,SNR=4.0						
ZAA1	**Zalesovo Array**	**82.07**	**326**	*e*P	**P**	**16 54 28.6**	**-0.8**
QSPA	**South Pole Qui**	**84.55**	**180**	*e*P	**P**	**16 54 42.8**	**+0.7**
	20nm,1.7s						
KURK	**Kurchatov**	**84.71**	**322**	*e*P	**P**	**16 54 42.2**	**-0.8**
	3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**84.74**	**322**	P	**P**	**16 54 42.6**	**-0.5**
	1.9nm,0.9s,baz=106,slow=4.1,SNR=11						
AAK	**Ala-Archa**	**85.63**	**313**	P	**P**	**16 54 49.0**	**+1.0**
	2.9nm,0.5s,baz=108,slow=4.4,SNR=5.7						
BRVK	**Borovoye**	**90.24**	**323**	*e*P	**P**	**16 55 08.2**	**-1.4**
	2.3nm,0.8s						
H17A	**Grant Village**	**97.95**	**46**	*e*P	**P**	**16 55 45.1**	**-0.3**
	9.9nm,1.0s						
PDAR	**Pinedale Array**	**98.71**	**48**	LR	LR	17 34 09.2	
	comp=Z,22nm,20.1s,baz=266,slow=32						
TORD	**Torodi Ar. Bea**	**151.20**	**287**	PKPbc	**PKPbc**	**17 02 02.0**	**-1.1**
	1.3nm,0.5s,baz=40,slow=2.9,SNR=10						
TOA1	**Torodi Ar. Sit**	**151.20**	**287**	*e*PKPbc	**PKPbc**	**17 02 02.0**	**-1.1**

*ISCJB **11** 16:45:56.5±0.4,23°.41N±0°.02×122°.03E±0°.02,h20km±3km, Error ellipse: s-maj=3.0km s-min=2.0km az=142.3*
*JMA **11** 16:45:57.5±0.1,23°.43N×121°.95E,h44km±4km,M2.3*
*TAP **11** 16:45:58.3,23°.42N×121°.97E,h36km,ML2.8,D*

ISC 11 16:45:53.1±1.1,23°.37N±0°.02×122°.11E±0°.02,h7km±9km, n82,σ1§18/153,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.64**	**281**	*i* P	**Pn**	**16 46 08.1**	**-0.5**
	baz=278						
HGSD				S	**Sb**	**16 46 15.2**	**-0.6**
	baz=278						
EGFH	**Guangfu**	**0.69**	**295**	*e*P	**Pn**	**16 46 09.1**	**-0.2**
	baz=303						
EGFH				*e*S	**Sb**	**16 46 17.1**	**-0.1**
	baz=303						
ENLB	**Shoufeng**	**0.70**	**319**	*e*P	**Pn**	**16 46 09.1**	**-0.4**
	baz=333						
ENLB				*e*S	**Sb**	**16 46 17.3**	**-0.3**
	baz=333						
EHY	**Hungye**	**0.73**	**281**	*e*P	**Pn**	**16 46 09.9**	**-0.1**
	baz=278						
EHY				*e*S	**Sb**	**16 46 18.5**	**0.0**
	baz=278						
CHKT	**Chengkung**	**0.73**	**248**	*e*P	**Pn**	**16 46 11.0**	**+1.1**
	baz=233						
CHKT				*e*S	**Sb**	**16 46 18.3**	**-0.2**
	baz=233						
YULB	**Yu-li**	**0.74**	**272**	P	**Pn**	**16 46 10.2**	**+0.1**
	baz=265						
YULB				S	**Sb**	**16 46 19.3**	**+0.5**
	baz=265						
TWF1	**Yuli**	**0.74**	**269**	P	**Pn**	**16 46 10.1**	**0.0**
	baz=259						
TWF1				S	**Sb**	**16 46 19.4**	**+0.6**
	baz=259						
HWA	**Hwalien**	**0.76**	**323**	*e*P	**Pn**	**16 46 10.3**	**+0.1**
	baz=335						
HWA				*e*S	**Sb**	**16 46 19.7**	**+0.5**
	baz=335						
ESL	**Shilin**	**0.76**	**306**	P	**Pn**	**16 46 09.6**	**-0.6**
	baz=308						
ESL				*e*S	**Sg**	**16 46 17.8**	**+0.2**
	baz=308						
TWD	**Chiawan**	**0.84**	**327**	*e*P	**Pn**	**16 46 11.4**	**0.0**
	baz=332						
TWD				*e*S	**Sb**	**16 46 21.2**	**-0.5**
	baz=332						
NACB	**Ninganchiao**	**0.93**	**330**	*i* P	**Pn**	**16 46 12.4**	**-0.2**
	baz=335						
NACB				S	**Sg**	**16 46 23.1**	**+0.2**
	baz=335						
VWDT	**VWDT**	**0.96**	**293**	P	**Pn**	**16 46 13.4**	**+0.3**
	baz=293						
VWDT				S	**Sg**	**16 46 23.9**	**-0.2**
	ba

	baz=331						
TWC	**Suao**	**1.25**	**349**	*e*P	**Pn**	**16 46 18.8**	**+1.8**
	baz=354						
TWC				*e*S	**Sn**	**16 46 34.0**	**-0.2**
	baz=354						
NNS	**Nan Shan**	**1.26**	**328**	*e*P	**Pn**	**16 46 17.9**	**+0.6**
	baz=331						
NNS				*e*S	**Sg**	**16 46 32.4**	**-1.2**
	baz=331						
STYT	**Tauyuan**	**1.26**	**261**	*e*P	**Pb**	**16 46 18.2**	**+1.0**
	baz=251						
STYT				*e*S	**Sg**	**16 46 32.4**	**-1.2**
	baz=251						
TYC	**Yuchr**	**1.26**	**295**	*e*P	**Pg**	**16 46 18.1**	**+0.7**
	baz=295						
TYC				*e*S	**Sg**	**16 46 33.1**	**-0.6**
	baz=295						
DPDB	**Guoxing**	**1.27**	**302**	P	**Pb**	**16 46 18.2**	**+0.8**
	baz=310						
DPDB				*e*S	**Sg**	**16 46 32.4**	**-1.5**
	baz=310						
ECL	**Taimali**	**1.31**	**234**	*e*P	**Pg**	**16 46 18.3**	**0.0**
	baz=229						
ECL				*e*S	**Sb**	**16 46 32.9**	**-2.3**
	baz=229						
JYNG	**Yonagunijimaku**	**1.32**	**35**	P	**Pg**	**16 46 20.7**	**+2.2**
JYNG				*e*S	**Sn**	**16 46 38.1**	**+2.3**
CHN5	**Tsauling**	**1.33**	**280**	*e*P	**Pg**	**16 46 20.0**	**+1.3**
	baz=284						
CHN5				*e*S	**Sb**	**16 46 35.4**	**-0.4**
	baz=284						
NDT	**Datong Townshi**	**1.34**	**336**	P	**Pg**	**16 46 19.5**	**+0.7**
	baz=340						
NDT				*e*S	**Sb**	**16 46 35.3**	**-0.7**
	baz=340						
WJS	**Zhushan**	**1.34**	**290**	*e*P	**Pg**	**16 46 20.4**	**+1.6**
	baz=289						
WJS				*e*S	**Sb**	**16 46 35.2**	**-0.8**
	baz=289						
ENTT	**Nioudou**	**1.35**	**339**	*e*P	**Pg**	**16 46 20.0**	**+0.8**
	baz=343						
ENTT				*e*S	**Sb**	**16 46 35.9**	**-0.5**
	baz=343						
TPUB	**Ta-pu**	**1.36**	**267**	*e*P	**Pg**	**16 46 20.2**	**+1.0**
	baz=264						
TPUB				*e*S	**Sb**	**16 46 36.2**	**-0.4**
	baz=264						
YOJ	**Yonaguni jima**	**1.36**	**37**	*e*P	**Pg**	**16 46 21.5**	**+2.2**
	baz=52						
YOJ				*e*S	**Sn**	**16 46 39.1**	**+2.2**
	baz=52						
YOJ	**Yonaguni jima**	**1.36**	**37**	P	**Pg**	**16 46 21.7**	**+2.4**
YOJ				*e*S	**Sn**	**16 46 39.4**	**+2.5**
WTP	**Ta-pu**	**1.38**	**265**	P	**Pg**	**16 46 20.7**	**+1.1**
	baz=262						
WTP				S	**Sb**	**16 46 37.1**	**0.0**
	baz=262						
CHN4	**Tsaushan**	**1.39**	**269**	*e*P	**Pg**	**16 46 21.2**	**+1.4**
	baz=267						
CHN4				*e*S	**Sb**	**16 46 37.7**	**+0.3**
	baz=267						
WHP	**Taichung City**	**1.39**	**311**	*e*P	**Pg**	**16 46 21.2**	**+1.3**
	baz=312						
WHP				*e*S	**Sb**	**16 46 36.4**	**-1.2**
	baz=312						
SLGT	**Liugui**	**1.40**	**255**	*e*P	**Pg**	**16 46 20.6**	**+0.7**
	baz=247						
SLGT				*e*S	**Sb**	**16 46 37.1**	**-0.4**
	baz=247						
TWE	**Neicheng**	**1.40**	**343**	*e*P	**Pg**	**16 46 20.7**	**+0.6**
	baz=339						
TWE				*e*S	**Sb**	**16 46 36.5**	**-1.2**
	baz=339						
SGST	**Jiashian**	**1.43**	**259**	*e*P	**Pg**	**16 46 20.7**	**+0.1**
	baz=255						
SGST				*e*S	**Sg**	**16 46 39.2**	**+0.1**
	baz=255						
SANB	**Taian**	**1.45**	**315**	*e*P	**Pg**	**16 46 21.5**	**+0.6**
	baz=325						
SANB				*e*S	**Sb**	**16 46 37.2**	**-2.0**
	baz=325						
YHNB	**Yeheng**	**1.45**	**333**	P	**Pg**	**16 46 21.4**	**+0.3**
	baz=336						
YHNB				*e*S	**Sb**	**16 46 35.2**	**-4.1**
	baz=336						
CHN1	**Nanshi**	**1.46**	**263**	*e*P	**Pg**	**16 46 22.4**	**+1.2**
	baz=260						
CHN1				*e*S	**Sb**	**16 46 39.9**	**+0.4**
	baz=260						
WDLH	**Douliu**	**1.47**	**283**	*e*P	**Pg**	**16 46 21.2**	**-0.2**
	baz=281						
WDLH				*e*S	**Sn**	**16 46 38.9**	**-0.7**
	baz=281						
NWLT	**Wulai**	**1.50**	**339**	*e*P	**Pg**	**16 46 22.0**	**0.0**
	baz=332						
NWLT				*e*S	**Sn**	**16 46 38.8**	**-1.7**
	baz=332						
TCU	**Taichung**	**1.52**	**301**	*e*P	**Pb**	**16 46 21.6**	**-0.1**
	baz=301						
TCU				*e*S	**Sn**	**16 46 40.5**	**-0.3**
	baz=301						
EAST	**Anshuo**	**1.52**	**230**	*e*P	**Pb**	**16 46 21.8**	**+0.1**
	baz=233						
MASBT	**Mashibuluo**	**1.56**	**241**	*e*P	**Pg**	**16 46 22.6**	**-0.3**
	baz=234						
MASBT				*e*S	**Sn**	**16 46 41.0**	**-0.6**
	baz=234						
TWQ1	**Liyutan**	**1.56**	**309**	*e*P	**Pg**	**16 46 23.3**	**+0.2**
	baz=322						
TWQ1				*e*S	**Sn**	**16 46 41.7**	**-0.1**
	baz=322						
WCHH	**Zhanghua**	**1.58**	**297**	*e*P	**Pb**	**16 46 22.8**	**0.0**
	baz=296						
WCHH				*e*S	**Sn**	**16 46 42.8**	**+0.5**
	baz=296						
NSTT	**Nanjuang**	**1.61**	**321**	*e*P	**Pg**	**16 46 23.6**	**-0.4**
	baz=323						
NSTT				*e*S	**Sn**	**16 46 41.3**	**-1.7**
	baz=323						
LIOB	**Emei**	**1.61**	**322**	*e*P	**Pg**	**16 46 24.8**	**+0.7**
	baz=324						
LIOB				*e*S	**Sn**	**16 46 42.0**	**-1.1**
	baz=324						
TIPB	**Shuangxi**	**1.61**	**351**	*e*P	**Pg**	**16 46 24.7**	**+0.6**
	baz=7.0						
TIPB				*e*S	**Sb**	**16 46 43.4**	**-0.5**
	baz=7.0						
WDJ	**Dajia District**	**1.66**	**306**	*e*P	**Pb**	**16 46 23.9**	**-0.1**
	baz=320						
WDJ				*e*S	**Sn**	**16 46 44.0**	**-0.2**
	baz=320						
WLTB	**Daxi**	**1.67**	**332**	*e*P	**Pg**	**16 46 25.3**	**+0.2**
	baz=345						
WLTB				*e*S	**Sn**	**16 46 44.5**	**+0.1**
	baz=345						
RLNB	**Erlin**	**1.68**	**288**	*e*P	**Pg**	**16 46 25.8**	**+0.4**
	baz=278						
RLNB				*e*S	**Sn**	**16 46 45.1**	**+0.3**
	baz=278						
HATJ	**Hateruma jima**	**1.70**	**66**	P	**Pg**	**16 46 26.7**	**+1.0**
HATJ				*e*S	**Sg**	**16 46 47.9**	**+0.1**
IRIF	**Iriomote-Funau**	**1.77**	**57**	P	**Pg**	**16 46 28.1**	**+1.0**
IRIF				*e*S	**Sg**	**16 46 50.2**	**+0.2**
YM05	**YM05**	**1.85**	**345**	*e*P	**Pb**	**16 46 27.5**	**+0.1**
	baz=334						
YM11	**YM11**	**1.85**	**345**	*e*P	**Pb**	**16 46 27.4**	**0.0**
	baz=334						
TWKBT	**Hengchun**	**1.86**	**220**	*e*S	**Sn**	**16 46 49.6**	**+0.4**
	baz=216						
TWK1	**Hengchun**	**1.86**	**220**	*e*P	**Pg**	**16 46 29.4**	**+0.5**
	baz=216						
TWK1				*e*S	**Sn**	**16 46 48.9**	**-0.3**
	baz=216						
JKRS	**Kuro-shima**	**1.94**	**63**	P	**Pg**	**16 46 30.5**	**+0.1**
JKRS				S	**Sg**	**16 46 54.7**	**-0.9**
JIJ	**Ishigaki jima**	**2.11**	**62**	P	**Pg**	**16 46 32.3**	**-1.3**
JIJ				S	**Sb**	**16 46 57.2**	**-0.9**
JISG	**Ishigakijimahi**	**2.35**	**59**	P	**Pb**	**16 46 35.3**	**-0.5**
JISG				*e*S	**Sb**	**16 47 02.8**	**-2.3**
PNG	**Penghu**	**2.35**	**275**	*e*P	**Pn**	**16 46 33.9**	**+1.7**
	baz=274						
JTJ	**Tarama**	**2.69**	**61**	P	**Pb**	**16 46 40.4**	**-1.2**
JTJ				S	**Sb**	**16 47 12.7**	**-2.1**
JIRB	**Irabujima**	**3.15**	**62**	*e*S	**Sn**	**16 47 23.9**	**+2.8**
PTMZ	**Houxiangcun**	**3.19**	**302**	*e*P	**Pn**	**16 46 44.8**	**+1.1**
	baz=302						
JMJ2	**Miyako jima3**	**3.24**	**65**	*e*S	**Sb**	**16 47 26.4**	**-4.4**
JIKM	**Ikemajima**	**3.26**	**61**	*e*S	**Sn**	**16 47 26.6**	**+2.9**
JOGS	**Gusukube**	**3.32**	**65**	*e*S	**Sb**	**16 47 28.5**	**-4.4**
KNMB	**Chin-men Tao**	**3.57**	**288**	*e*P	**Pn**	**16 46 49.7**	**+0.8**
	baz=288						

*IDC **11** 16:46:25.7±1.7, 38.°89N×110.°34E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/36, mbtmp3.7/7, ML2.8/1, MS3.5/2, Ms1 3.6/2, ms1mx2.5/42, Error ellipse: s-maj=50.7km s-min=20.5km az=65.0*

ISC 11 16:46:30.3±0.7, 38.°87N±0.°05×110.°01E±0.°05, h10km, n18, σ2§16/20, mb3.8/7, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**1.73**	**0**	*e*Pg	**Pn**	**16 46 58.7**	**-1.9**
BTO				Sg	**Sn**	**16 47 23.8**	**+1.0**
BTO				smax	smax		
	comp=N,448μm,0.5s						
BTO				smax	smax		
	comp=E,499μm,0.8s						
BTO				SMZ			
	comp=E,652μm,0.9s						
XAN	**Xi'an**	**4.90**	**191**	Pn	**Pn**	**16 47 43.1**	**-1.0**
XAN				P*	Pb	16 47 51.4	-4.9
XAN				Pg	Pg	16 48 00.8	-3.4
XAN				Sn	**Sn**	**16 48 39.9**	**-1.1**
XAN				S*	**Sb**	**16 48 51.0**	**-4.4**
XAN				Sg	Sg	16 49 00.0	-7.8
XAN				smax	smax		
	comp=N,55nm,0.5s						
XAN				smax	smax		
	comp=E,34nm,1.0s						
LZH	**Lanzhou**	**5.64**	**242**	*e*Pn	**Pn**	**16 47 53.2**	**-1.1**
LZH				Pg	Pb	16 48 16.0	+7.1
LZH				Sn	**Sn**	**16 49 03.8**	**+4.6**
LZH				Sg	**Sg**	**16 49 34.5**	**+3.2**
LZH				smax	smax		
	comp=N,79nm,0.8s						
LZH				smax	smax		
	comp=E,72nm,0.8s						
LZH				LR	LR		
	comp=N,150nm,7.1s						
LZH				LR	LR		
	comp=E,140nm,6.5s						
LZH				LR	LR		
	comp=Z,56nm,6.0s						
TIA	**Tai'an**	**6.25**	**113**	Pg	**Pb**	**16 48 20.0**	**+0.9**
TIA				Sg	**Sb**	**16 49 36.7**	**+2.8**
TIA				smax	smax		
	comp=N,31nm,0.7s						
TIA				smax	smax		
	comp=E,22nm,0.7s						
GTA	**Gaotai**	**7.94**	**277**	*e*P	**Pn**	**16 48 26.8**	**+0.9**
GTA				pP	Pb	16 48 31.7	-16
GTA				sP	Pg	16 48 33.9	-28
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				smax	smax		
	comp=N,14nm,1.0s						
GTA				smax	smax		
	comp=E,10.0nm,1.0s						
WHN	**Wuhan**	**9.04**	**155**	P	**Pn**	**16 48 41.1**	**+0.2**
SONM	**Songino Array**	**9.34**	**345**	Pn	Pn	16 48 41.8	-3.2
	comp=E,0.1nm,0.3s,baz=163,slow=12,SNR=6.7						
SONM				Lg	Lg	16 51 14.0	
	comp=E,0.2nm,0.3s,baz=157,slow=24,SNR=3.1						
WMQ	**Urumqi**	**17.45**	**294**	*e*P	**Pn**	**16 50 33.4**	**-0.4**
LSA	**Lhasa**	**18.05**	**245**	P	**Pn**	**16 50 42.2**	**+0.6**
LSA				pmax	pmax		
	comp=Z,19nm,0.7s						
NONG	**Nongkai**	**21.58**	**198**	P	**P**	**16 51 21.4**	**+1.2**
	comp=Z,0.3nm,1.1s,comp=Z,241nm						
MKAR	**Makanchi Array**	**21.73**	**300**	P	**P**	**16 51 20.5**	**-1.2**
	comp=Z,3.3nm,0.8s,baz=100,slow=12,SNR=31						
CMAR	**Chiang Mai Arr**	**22.50**	**208**	P	**P**	**16 51 28.3**	**-1.8**
	comp=Z,4.5nm,0.9s,baz=14,slow=9.1,SNR=25						
ZALV	**Zalesovo Beam**	**22.83**	**320**	P	**P**	**16 51 32.0**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=57,slow=10,SNR=3.1						
KURBB	**Kurchatov Arra**	**25.06**	**308**	P	**P**	**16 51 53.2**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=105,slow=10,SNR=7.1						
BATI	**Baumata**	**50.46**	**162**	LR	LR	17 18 31.6	
	comp=Z,44nm,18.0s,baz=185,slow=38						
BRTR	**Keskin Array B**	**57.33**	**297**	P	**P**	**16 56 17.5**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=70,slow=8.5,SNR=6.9						
ILAR	**Eielson Array**	**60.73**	**29**	LR	LR	17 27 10.7	
	comp=Z,35nm,18.0s,baz=352,slow=40						
ASAR	**Alice Springs**	**66.12**	**156**	P	P	16 57 14.2	-3.6
	comp=Z,1.7nm,1.1s,baz=345,slow=6.7,SNR=5.4						

RSNC 11 16:50:21.0±0.5, 12.°21N×70.°17W, h92km±13km, ML3.6, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DABV	**Dabajuro**	**1.36**	**200**	*e*P	Pn	16 50 44.5	-0.7
DABV				*e*S	Sn	16 51 03.1	-0.2
URIC	**Uribia, Colomb**	**1.85**	**254**	*e*P	Pn	16 50 50.7	-0.7
URIC				*e*S	Sn	16 51 14.2	-0.4
URIC				*i*		16 51 15.0	
	comp=N,245nm,0.2s						
VIRV	**Villa del Rosa**	**2.77**	**233**	⇑*e*P	Pn	16 51 02.9	-0.7
CODC	**Agustn Codazz**	**3.93**	**235**	*e*P	Pn	16 51 18.7	-0.5
CODC				*e*Pg	Pn	16 51 19.5	+0.3
CODC				*e*S	Sn	16 52 03.6	-0.6
CODC				*i*		16 52 08.0	
	comp=N,57nm,0.3s						
OCAC	**Ocana**	**5.02**	**218**	*e*P	Pn	16 51 34.6	+0.5
OCAC				*e*S	Sn	16 52 29.0	-1.9
OCAC				*i*		16 52 36.2	
	comp=N,104nm,0.6s						
PTBC	**PUERTO BERRIO,**	**7.04**	**217**	*e*P	Pn	16 52 01.7	+0.2

MAN 11 17:05:14.4, 10.°34N×122.°13E, h20km, mb4.1, ML2.9, MS2.6, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.53**	**57**	*e*P	Pb	17 05 25.9	+0.8
GUIM				*e*S	Sn	17 05 36.0	+0.8
CUYO	**Cuyo Island**	**1.21**	**295**	*e*P	Pn	17 05 35.4	-0.8
CUYO				*e*S	Sn	17 05 52.5	+0.5
SNPH	**Sibulan**	**1.47**	**132**	⇑*i*P	Pn	17 05 38.8	-1.1
SNPH				*i* S	Sb	17 05 59.3	-0.1
MSLP	**Maasin**	**2.69**	**94**	*e*P	Pn	17 05 58.0	+1.5
MSLP				*e*S	Sn	17 06 26.4	-2.2

*ISCJB **11** 17:07:17.2±0.6, 57.°72S±0.°08×23.°7W±0.°2, h10km, mb3.9/5, MS3.4/2, Error ellipse: s-maj=16.2km s-min=10.1km az=152.2*

*IDC **11** 17:07:18.0±1.0, 57.°62S×23.°66W, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.9/23, mbtmp3.9/6, ML4.0/1, MS3.5/2, Ms1 3.4/2, ms1mx2.8/20, Error ellipse: s-maj=33.3km s-min=25.8km az=54.0*

*NEIC **11** 17:07:22.2±2.1, 57.°48S×23.°64W, h32km±5km, mb4.9/4, Error ellipse: s-maj=22.4km s-min=12.6km az=110.0*

ISC 11 17:07:19.1±0.7, 57.°7S±0.°1×23.°6W±0.°1, h10km, n24, σ1§10/23, mb3.9/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.58**	**159**	P	**Pn**	**17 10 44.5**	**-0.6**
VNA3	**Neumayer Olymp**	**14.83**	**162**	P	**Pn**	**17 10 46.8**	**-1.8**
VNA3				S	Sn	17 13 20.1	-13
VNA2	**Neumayer--Watz**	**14.97**	**159**	P	**Pn**	**17 10 48.7**	**-1.7**
	baz=324,slow=15						
VNA2				S	Sn	17 13 20.7	-15
	baz=325,slow=20						
SNAA	**Sanae**	**16.47**	**157**	P	**Pn**	**17 11 09.3**	**-0.7**
SNAA				S	Sn	17 14 00.2	-12
SNAA	**Sanae**	**16.47**	**157**	Pn	**Pn**	**17 11 09.1**	**-0.9**
	0.5nm,0.3s,baz=320,slow=16,SNR=38						
SNAA	**Sanae**	**16.47**	**157**	*e*Pn	**Pn**	**17 11 09.4**	**-0.6**
	14nm,1.2s						
PMSA	**Palmer Station**	**20.41**	**233**	LR	LR	17 17 59.1	
	comp=Z,124nm,18.9s,baz=211,slow=31						
PMSA	**Palmer Station**	**20.41**	**233**	*e*P	**P**	**17 11 58.1**	**+2.2**
	73nm,1.3s						
EFI	**East Falkland**	**20.64**	**272**	*e*P	**P**	**17 11 57.3**	**-1.2**
	300nm,1.7s						
CPUP	**Villa Florida**	**39.36**	**308**	P	**P**	**17 14 48.0**	**-0.5**
	1.8nm,0.8s,baz=145,slow=10,SNR=4.0						
BOSA	**Boshof**	**44.55**	**71**	P	**P**	**17 15 31.4**	**+0.4**
	1.8nm,0.8s,baz=190,slow=6.1,SNR=3.0						
BOSA				LR	LR	17 32 07.3	
	comp=Z,43nm,18.3s,baz=144,slow=33						
BOSA	**Boshof**	**44.55**	**71**	*e*P	**P**	**17 15 30.6**	**-0.4**
	41nm,1.9s						
VNDA	**Vanda**	**45.04**	**182**	P	**P**	**17 15 35.5**	**+1.4**
	1.2nm,1.0s,baz=172,slow=8.8,SNR=5.8						
VNDA	**Vanda**	**45.04**	**182**	*e*P	**P**	**17 15 35.1**	**+0.9**
LPAZ	**La Paz**	**52.91**	**302**	P	**P**	**17 16 36.4**	**+0.4**
	1.2nm,0.6s,baz=120,slow=6.7,SNR=7.5						
LPAZ	**La Paz**	**52.91**	**302**	*e*P	**P**	**17 16 34.3**	**-1.7**
TORD	**Torodi Ar. Bea**	**73.57**	**26**	P	**P**	**17 18 53.0**	**+0.9**
	0.8nm,0.8s,baz=194,slow=6.2,SNR=3.9						
TOA1	**Torodi Ar. Sit**	**73.58**	**26**	*e*P	**P**	**17 18 53.0**	**+0.9**
YKA	**Yellowknife Ar**	**138.70**	**315**	PKP	**PKPdf**	**17 26 43.6**	**-0.1**
	1.1nm,0.9s,baz=126,slow=2.4,SNR=6.1						
YKB5	**Yellowknife Ar**	**138.70**	**315**	*e*PKPdf	**PKPdf**	**17 26 43.6**	**-0.1**
INK	**Inuvik**	**148.31**	**318**	*e*PKPbc	**PKPbc**	**17 27 02.5**	**-1.3**
ILAR	**Eielson Array**	**152.66**	**309**	PKPbc	**PKPbc**	**17 27 14.2**	**-0.1**
	1.7nm,0.7s,baz=144,slow=1.8,SNR=18						
ILB	**Eielson Array**	**152.66**	**309**	*e*PKPbc	**PKiKP**	**17 27 15.3**	**+0.7**
WRH	**Wood River Hil**	**153.11**	**308**	*e*PKPbc	**PKPbc**	**17 27 14.9**	**-0.4**

*ISCJB **11** 17:09:24.7±0.2, 13.°67N±0.°03×120.°66E±0.°04, h105km±2km, mb4.4/41, Error ellipse: s-maj=6.8km s-min=4.6km az=161.9*

*IDC **11** 17:09:25.0±0.8, 13.°68N×120.°84E, h101km±5km, mb3.8/11, mb1 3.8/11, mb1mx3.6/36, mbtmp4.1/11, MS2.8/1, Ms1 2.8/1, ms1mx2.3/33, Error ellipse: s-maj=25.7km s-min=13.8km az=70.0*

*MAN **11** 17:09:25.5, 13.°68N×120.°57E, h81km, mb4.5, ML3.4, MS3.2*

*BJI **11** 17:09:28.0±0.0, 13.°80N×120.°80E, h133km, mb4.4/14, mB4.6/5*

*NEIC **11** 17:09:29.2±1.4, 13.°70N×120.°78E, h138km±9km, mb4.4/28, Error ellipse: s-maj=20.3km s-min=16.3km az=93.0*

ISC 11 17:09:25.8±0.5, 13.°67N±0.°03×120.°60E±0.°04, h100km±5km, n97, σ1§22/114, mb4.4/41, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.35**	**280**	*e*P	**Pn**	**17 09 40.2**	**-0.4**
LUBP				*e*S	**Sn**	**17 09 50.3**	**-1.4**
PGP	**Puerto Galera**	**0.38**	**116**	⇑*e*P	**Pn**	**17 09 40.1**	**-0.7**
PGP				*i* S	**Sn**	**17 09 50.9**	**-1.3**
TGY	**Tagaytay City**	**0.54**	**37**	P	**Pn**	**17 09 41.9**	**-0.1**
	762nm,0.3s,baz=242,slow=2.3,SNR=46						
TGY				LR	LR	17 09 47.7	
	comp=Z,125nm,19.9s,baz=278,slow=53						
TGY				S	**Sn**	**17 09 53.7**	**-0.3**
	8μm,0.3s,baz=336,slow=23,SNR=129						
TGY	**Tagaytay City**	**0.54**	**37**	⇓*i*P	**Pn**	**17 09 41.8**	**-0.2**
TGY				*i* S	**Sn**	**17 09 54.0**	**-0.1**
BOAC	**Boac**	**1.23**	**100**	*e*P	**Pn**	**17 09 48.7**	**0.0**
BOAC				*e*S	**Sn**	**17 10 05.9**	**-0.3**
BOAC	**Boac**	**1.23**	**100**	*e*P	**Pn**	**17 09 48.8**	**0.0**
BOAC				*e*S	**Sn**	**17 10 06.0**	**-0.3**
SJMP	**San Jose**	**1.31**	**157**	*e*P	**Pn**	**17 09 50.1**	**+0.3**
SJMP				*e*S	**Sn**	**17 10 07.5**	**-0.4**
SJMP	**San Jose**	**1.31**	**157**	*e*P	**Pn**	**17 09 50.2**	**+0.4**
SJMP				*e*S	**Sn**	**17 10 07.6**	**-0.3**
POLP	**Polilio Island**	**1.67**	**51**	*e*P	**Pn**	**17 09 54.5**	**+0.3**
POLP				*e*S	**Sn**	**17 10 18.4**	**+2.6**
POLP	**Polilio Island**	**1.67**	**51**	*e*P	**Pn**	**17 09 54.7**	**+0.5**
BUSP	**Coron**	**1.71**	**193**	*e*P	**Pn**	**17 09 54.5**	**-0.2**
BUSP				*e*S	**Sn**	**17 10 15.7**	**-0.8**
BUSP	**Coron**	**1.71**	**193**	*e*P	**Pn**	**17 09 54.5**	**-0.2**
BUSP				*e*S	**Sn**	**17 10 15.8**	**-0.8**
OTRP	**Odiongan**	**1.90**	**133**	*e*P	**Pn**	**17 09 57.4**	**+0.2**
OTRP				*e*S	**Sn**	**17 10 20.4**	**-0.6**
OTRP	**Odiongan**	**1.90**	**133**	*e*P	**Pn**	**17 09 57.5**	**+0.4**
OTRP				*e*S	**Sn**	**17 10 20.1**	**-0.9**
SCZP	**Santa Cruz**	**2.19**	**342**	*e*P	**Pn**	**17 10 00.3**	**-0.7**
SCZP				*e*S	**Sn**	**17 10 26.4**	**-1.4**
SCZP	**Santa Cruz**	**2.19**	**342**	*e*P	**Pn**	**17 10 00.4**	**-0.5**
SCZP				*e*S	**Sn**	**17 10 25.9**	**-1.9**
ENPP	**El Nido**	**2.71**	**205**	*e*P	**Pn**	**17 10 07.5**	**-0.2**
CUYO	**Cuyo Island**	**2.83**	**172**	*e*P	**Pn**	**17 10 09.5**	**+0.1**
CUYO				*e*S	**Sn**	**17 10 41.0**	**-2.0**
GUIM	**Jordan**	**3.60**	**147**	*e*P	**Pn**	**17 10 21.4**	**+1.7**
GUIM				*e*S	**Sn**	**17 10 59.8**	**-1.5**
DAV	**Davao City (W)**	**8.19**	**143**	LR	LR	17 15 16.8	
	comp=Z,60nm,19.9s,baz=318,slow=44						
YOJ	**Yonaguni jima**	**10.97**	**12**	*e*Pn	**Pn**	**17 12 00.1**	**+0.3**
SBUM	**Sibu**	**13.89**	**217**	*e*P	**P**	**17 12 46.5**	**+3.1**
JOW	**Kunigami**	**14.93**	**28**	*e*Pn	**P**	**17 12 55.9**	**+1.0**
SLVN	**Son La**	**17.64**	**298**	*e*P	**Pn**	**17 13 26.5**	**+1.1**
	20nm,1.7s						
WHN	**Wuhan**	**17.75**	**342**	P	**Pn**	**17 13 31.8**	**+5.2**
CHAI	**Chaiyaphum**	**18.13**	**279**	P	**Pn**	**17 13 33.4**	**+2.1**
	52μm,0.7s,382μm						
LAMP	**Lampang**	**20.71**	**286**	P	Pn	17 14 03.6	+2.0
	14μm,0.8s						
CM31	**Chiang Mai Arr**	**21.34**	**286**	*e*P	**P**	**17 14 07.6**	**+2.5**
CMAR	**Chiang Mai Arr**	**21.34**	**286**	P	**P**	**17 14 07.1**	**+2.0**
	4.7nm,0.8s,baz=96,slow=7.0,SNR=32						
CMMT	**Chiang Mai**	**21.40**	**287**	P	**P**	**17 14 08.9**	**+3.2**
	2.9nm,0.9s						
CHTO	**Chiang Mai**	**21.40**	**287**	*e*P	**P**	**17 14 07.7**	**+1.9**
	3.7nm,0.8s						
JNU	**Nakatsue**	**21.51**	**24**	*e*P	**P**	**17 14 07.4**	**+0.6**
	20nm,1.3s						
XAN	**Xi'an**	**22.88**	**334**	*e*P	**P**	**17 14 19.9**	**-1.1**
	7.4nm,0.6s						
JAGI	**Jajag, Banyuwa**	**22.91**	**197**	*e*P	**P**	**17 14 23.0**	**+1.6**
	62nm,1.3s						
KS15	**Wonju Array Si**	**24.55**	**14**	*e*P	**P**	**17 14 35.4**	**-0.8**
KSRS	**Korea Array**	**24.57**	**14**	P	**P**	**17 14 35.4**	**-1.0**
	0.6nm,0.6s,baz=192,slow=11,SNR=3.7						
SHL	**Shillong**	**29.45**	**298**	*e*P	**P**	**17 15 20.9**	**+0.3**
	32nm,0.6s						
GTA	**Gaotai**	**31.51**	**328**	⇑P	**P**	**17 15 39.0**	**+0.5**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,77nm,6.0s						
GTA				LR	LR		
	comp=N,62nm,15.9s						
GTA				LR	LR		
	comp=E,49nm,16.5s						
GTA				LR	LR		
	comp=Z,82nm,16.2s						
**LS

MKAR	Makanchi Array	46.00	324	P		P	17 17 39.6	+0.5
	3.7nm,0.5s,baz=129,slow=9.1,SNR=48						
MAKZ	Makanchi	46.18	324	*eP*		P	17 17 40.8	+0.2
	4.1nm,0.6s						
KSH	Kashi	46.84	312	*eP*		P	17 17 44.8	-1.2
NIL	Nilore	47.24	303	*eP*		P	17 17 49.2	+0.1
	7.8nm,1.0s						
NRN	Naryn	47.52	314	*eP*		P	17 17 52.3	+0.8
	6.7nm,0.6s						
ULHL	Ulahol	47.67	315	P		P	17 17 53.8	+1.2
	SNR=8.2						
BOOM	Boomskoye usch	47.97	316	*eP*		P	17 17 55.7	+0.9
	2.5nm,0.6s						
KZA	Kyzart	48.29	315	P		P	17 17 59.0	+1.5
	SNR=9.0						
TKM2	Tokmak 2	48.38	316	P		P	17 17 58.8	+0.9
	SNR=7.7						
KBK	Karagaybulak	48.71	315	P		P	17 18 01.8	+1.3
	SNR=8.1						
UCH	Uchtor	48.85	315	P		P	17 18 03.4	+1.5
	SNR=12						
ZALV	Zalesovo Beam	49.04	333	P		P	17 18 01.7	-0.8
	3.1nm,0.4s,baz=126,slow=6.4,SNR=17						
ZAA1	Zalesovo Array	49.04	333	*eP*		P	17 18 01.7	-0.8
EKS2	Erkin-Say	49.52	315	P		P	17 18 07.7	+1.1
	SNR=5.8						
KURK	Kurchatov	50.16	326	*eP*		P	17 18 11.2	+0.1
	24nm,0.6s						
BTK	Batken	50.78	311	*eP*		P	17 18 16.5	+0.4
	15nm,1.5s						
GAR	Garm	50.86	309	*eP*		P	17 18 17.0	+0.3
	19nm,1.3s						
KK31	Karatay Array	51.92	314	*eP*		P	17 18 25.1	+0.6
KKAR	Karatay Array	51.92	314	*eP*		P	17 18 24.7	+0.2
	5.6nm,0.8s						
BRVK	Borovoye	55.81	326	*eP*		P	17 18 52.6	0.0
	10nm,0.9s						
TIXI	Tiksi	58.16	3	*eP*		P	17 19 06.4	-2.4
	2.8nm,0.8s						
GEYT	Alibeck	60.07	306	P		P	17 19 23.6	+0.9
	4.7nm,0.8s,baz=158,slow=4.7,SNR=13						
GYA0B	ALIBECK ARRAY	60.07	306	*eP*		P	17 19 24.0	+1.3
ABKAR	Akbulak array	60.69	319	*eP*		P	17 19 26.2	-0.4
	4.2nm,0.6s						
BILL	Bilibino	61.76	18	*eP*		P	17 19 32.6	-1.0
	3.3nm,0.7s						
ARU	Arti	63.35	327	*eP*		P	17 19 43.1	-1.2
	5.4nm,0.6s						
RAYN	Ar Rayn	71.17	290	*eP*		P	17 20 34.5	+0.1
	6.0nm,0.9s						
KIV	Kislovodsk	71.97	312	*eP*		P	17 20 38.2	-0.7
	5.4nm,0.8s						
CAST	Castle Rocks	76.69	28	*eP*		P	17 21 05.3	-0.5
	4.4nm,0.8s						
BPAW	Bear Paw Mtn.	77.12	27	*eP*		P	17 21 07.9	-0.3
	5.7nm,1.2s						
MLY	Manley	77.16	26	*eP*		P	17 21 07.9	-0.5
	5.8nm,1.5s						
ARCES	ARCESS Array B	79.08	339	P		P	17 21 17.8	-1.0
	6.8nm,0.3s,baz=78,slow=7.2,SNR=17						
BR101	Keskin Array S	79.09	308	*eP*		P	17 21 19.1	-0.7
BRTR	Keskin Array B	79.09	308	P		P	17 21 19.1	-0.7
	0.7nm,0.6s,baz=134,slow=5.3,SNR=6.0						
FIA0	FINESS Array S	80.26	331	*eP*		P	17 21 24.3	-1.0
FINES	FINESS Array B	80.26	331	P		P	17 21 24.3	-1.0
	0.5nm,0.4s,baz=52,slow=7.5,SNR=4.8						
BUR08	Bucovina Ar. S	83.62	317	*eP*		P	17 21 42.7	-0.8
	1.9nm,0.7s						
NB2	NORSAR Subarra	87.24	333	P		P	17 21 58.7	-2.3
	comp=Z,1.0nm,0.7s,baz=68,slow=4.8						
NB200	NORSAR Array S	87.24	333	*eP*		P	17 21 59.3	-1.7
NOA	NORSAR Array B	87.24	333	P		P	17 21 59.3	-1.7
	comp=Z,0.5nm,0.6s,baz=70,slow=4.5,SNR=4.1						

*ISCJB **11** 17:14:34.9±0.3, 32°.55N±0°.02×35°.58E±0°.04, h11^{km}±4^{km}, Error ellipse: s-maj=5.9km s-min=2.3km az=10.4*
*JSO **11** 17:14:35.6±0.6, 33°.N±5°×3°.6E±°, h7^{km}±3^{km}, M2.7/9, Mjma3.0/9, ML1.4/6, MLv3.2/9*
*GII **11** 17:14:35.0±0.1, 32°.57N×35°.54E, h17^{km}, MD2.8/9*
*GRAL **11** 17:14:36.0±0.4, 32°.56N×35°.58E, h3^{km}±2^{km}, MD3.2*
*NSSC **11** 17:14:36.8±0.5, 32°.60N×35°.75E, h8^{km}±6^{km}, ML2.7*

ISC 11 17:14:35.6±0.9, 32°.57N±0°.02×35°.55E±0°.03, h17^{km}±8^{km}, n35, σ0^{s}.60/52, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMLI	Mount Malkishu	0.17	220	Pg	Pb	17 14 40.2	-0.2
MMLI				Sg	Sb	17 14 43.1	-0.4
MMLI	Mount Malkishu	0.17	220	P	Pb	17 14 39.8	-0.6
SHMJ	Saham	0.23	49	P	Pb	17 14 41.2	-0.2
HMDT	Nahal Hemdat	0.32	184	Pg	Pg	17 14 42.3	-0.1
HMDT				Sg	Sg	17 14 47.2	+0.2
MMA0B	Mount Meron ar	0.46	344	Pg	Pg	17 14 44.7	-0.2
MMA0B				Sg	Sg	17 14 51.2	0.0
KSHT	Keshet	0.46	28	Pg	Pg	17 14 45.2	+0.2
OFRI	`Ofer	0.48	276	Pg	Pb	17 14 45.1	-0.2
OFRI				Sg	Sg	17 14 52.0	+0.1
SLTI	Sal'it	0.55	233	Pg	Pb	17 14 46.2	-0.5
SLTI				Sg	Sb	17 14 54.3	+0.1
HNTI	Hanita	0.60	328	Pg	Pb	17 14 47.2	-0.5
HNTI				Sg	Sb	17 14 56.3	+0.4
KSDI	Kefar Szold	0.62	8	Pg	Pb	17 14 47.6	-0.4
KSDI				Sg	Sb	17 14 56.9	+0.4
GEM	Giv'at Ha'Em	0.64	8	Pg	Pb	17 14 47.9	-0.5
GEM				Sg	Sg	17 14 57.6	+0.7
NATI	Neve Ativ	0.70	13	Pg	Pb	17 14 48.9	-0.5
NATI				Sg	Sb	17 14 58.8	0.0
HSUJ	Al Zarqa	0.71	131	P	Pb	17 14 49.4	-0.2
SHBL	Chebaa	0.79	12	*eP*	Pb	17 14 50.5	-0.5
SHBL				*eS*	Sb	17 15 01.1	-0.3
BRBR	Barbar	0.90	22	*eP*	Pb	17 14 52.4	-0.5
BRBR				*eS*	Sb	17 15 04.5	-0.2
BRBR				AML	AML	17 15 06.7	
	comp=E,533nm,0.7s						
BRBR				AML	AML	17 15 11.4	
	comp=N,296nm,0.4s						
RCY	Rachaya	0.95	14	*eP*	Pb	17 14 53.2	-0.5
QRWL	Qaraoun	0.98	6	*eP*	Pb	17 14 53.7	-0.5
DSI	Dead Sea	1.01	188	Pg	Pb	17 14 53.5	-1.1
DSI				Sg	Sb	17 15 07.6	0.0
WALJ	Wala	1.03	168	P	Pb	17 14 54.5	-0.4
TOTH	TOTAH	1.08	43	*eP*	Pb	17 14 55.4	-0.4
TOTH				*eS*	Sb	17 15 08.0	-1.6
TOTH				AML	AML	17 15 14.6	
	comp=E,189nm,0.2s						
TOTH				AML	AML	17 15 14.7	
	comp=N,81nm,0.3s						
DQRL	Deir Qamar	1.13	1	*eP*	Pn	17 14 56.6	-0.1
DQRL				*eS*	Sb	17 15 11.7	+0.5
QASN	Qassioun	1.13	32	*eP*	Pn	17 14 56.9	+0.1
QASN				*eS*	Sb	17 15 10.2	-1.1
QASN				AML	AML	17 15 14.1	
	comp=E,211nm,0.2s						
QASN				AML	AML	17 15 14.1	
	comp=N,496nm,0.3s						
AMAZ	Amatzia	1.17	208	Pg	Pn	17 14 56.7	-0.4
AMAZ	Amatzia	1.17	208	P	Pn	17 14 56.8	-0.4
YTIR	Yattir	1.26	197	Pg	Pn	17 14 57.9	-0.6
YTIR				Sg	Sb	17 15 14.8	-0.1
MZDA	Masada	1.27	187	Pg	Pn	17 14 57.7	-0.8
MZDA				Sg	Sn	17 15 15.1	+0.1
LISJ	El Lisan	1.33	183	P	Pn	17 15 00.0	+0.7
BHL	Bhannes	1.33	4	*eP*	Pn	17 14 59.8	+0.3
HWQ	Hawqa	1.73	11	*eP*	Pn	17 15 06.5	+1.5
JDRJ	Daraweish	1.84	177	P	Pn	17 15 07.7	+1.2
KZIT	Kziot	1.93	211	Pn	Pn	17 15 08.3	+0.7
KZIT	Kziot	1.93	211	P	Pn	17 15 08.6	+1.0
PRNI	Paran	2.26	192	Pn	Pn	17 15 12.8	+0.6
MBRI	Mt Berech	2.82	191	Pn	Pn	17 15 20.5	+0.5
AQBJ	Aqaba	2.87	189	P	Pb	17 15 26.9	+0.6

*ISCJB **11** 17:27:33.5±0.7, 47°.54N±0°.08×154°.1E±0°.1, h31^{km}, mb3.7/6, Error ellipse: s-maj=16.3km s-min=6.2km az=42.2*
*KRSC **11** 17:27:33.5±2.1, 47°.39N×154°.73E, h88^{km}±32^{km}, ML4.2*
*NEIC **11** 17:27:37.0±1.0, 47°.57N×154°.04E, h44^{km}±10^{km}, mb4.3/1, Error ellipse: s-maj=25.2km s-min=13.7km az=173.0*
*IDC **11** 17:27:38.9±4.6, 47°.64N×153°.99E, h59^{km}±40^{km}, mb3.3/5, mb1 3.6/7, mb1mx3.3/44, mbtmp3.7/7, ML4.9/1, MS2.3/1, Ms1 2.3/1, ms1mx2.0/27, Error ellipse: s-maj=34.5km s-min=26.3km az=153.0*

ISC 11 17:27:35.2±0.9, 47°.5N±0°.1×154°.2E±0°.1, h31^{km}, n38, σ1^{s}.56/35, mb3.6/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.44	21	*eP*	Pn	17 28 27.0	+0.5
SKR				*eS*	Sn	17 29 05.5	-0.6
PAU	Pauzhetka	4.33	22	*eP*	Pn	17 28 39.6	+0.8
KDTR	Khodutka, Kamc	5.00	29	*eP*	Pn	17 28 47.4	-0.6
ASAK	Asacha	5.45	24	*eP*	Pn	17 28 55.3	+1.1
MTVR	Mutnovka	5.62	26	*eP*	Pn	17 28 56.8	+0.2
RUS	Russkaya	5.67	28	*eP*	Pn	17 28 56.9	-0.3
APC	Apacha	5.76	18	*eP*	Pn	17 29 00.5	+2.0
PETK	Petropavlovsk-	6.05	20	P	Pn	17 29 03.7	+1.3
	1.6nm,0.3s,baz=179,slow=14,SNR=10						
PETK				LR	LR	17 31 43.8	
	comp=Z,32nm,21.7s,baz=155,slow=41						
PEA1	Petropavlovsk-	6.06	20	*e*Pn	Pn	17 29 03.7	+1.2
PET	Petropavlovsk	6.23	25	*e*Pn	Pn	17 29 04.5	-0.3
DALK	Dalny	6.27	26	*eP*	Pn	17 29 05.3	-0.1
DALK				*eS*	Sn	17 30 12.3	-3.5
AVH	Avacha	6.47	25	*eP*	Pn	17 29 09.4	+1.2
SDLR	Sedlovina	6.52	25	*eP*	Pn	17 29 09.4	+0.4
KRX	Arik	6.53	24	*eP*	Pn	17 29 10.6	+1.5
GNL	Ganaly	6.65	19	*eP*	Pn	17 29 12.5	+1.7
SPN	Mys Shipunski	6.74	31	*eP*	Pn	17 29 11.3	-0.5
YSS	Yuzh-Sakhalins	7.83	270	*e*Pn	Pn	17 29 27.4	+0.6
MKZ	Mys Kozlova	8.51	31	*eP*	Pn	17 29 34.9	-1.2
ERM	Erimo	9.58	239	*e*Pn	Pn	17 29 51.1	+0.3
ERM				*e*Sn	Sn	17 31 32.6	-4.7
MA2	Magadan	12.28	352	P	Pn	17 30 29.5	+1.8
	0.7nm,0.3s,baz=163,slow=14,SNR=6.4						
MA2	Magadan	12.28	352	*e*Pn	Pn	17 30 29.1	+1.4
KS15	Wonju Array Si	21.77	252	*eP*	P	17 32 27.4	+3.2
H11N2	WAKE ISLAND Hy	29.55	155	T	T	18 04 45.4	
	baz=334,slow=74,SNR=27						
H11N1	WAKE ISLAND Hy	29.56	155	T	T	18 04 45.8	
	baz=334,slow=74,SNR=34						
H11N3	WAKE ISLAND Hy	29.56	155	T	T	18 04 50.5	
	baz=334						
H11S1	WAKE ISLAND Hy	30.66	156	T	T	18 06 12.5	
	baz=343,slow=76,SNR=104						
H11S3	WAKE ISLAND Hy	30.66	156	T	T	18 06 13.2	
	baz=343,slow=76,SNR=166						
H11S2	WAKE ISLAND Hy	30.67	156	T	T	18 06 13.8	
	baz=343,slow=76,SNR=92						
DHY	Denali Highway	35.31	42	*eP*	P	17 34 27.7	+0.5
	6.9nm,1.6s						
ILAR	Eielson Array	35.50	39	P	P	17 34 29.2	+0.5
	0.4nm,0.9s,baz=274,slow=5.3,SNR=5.7						
ILB	Eielson Array	35.50	39	*eP*	P	17 34 29.2	+0.5
MK32	Makanchi Array	47.27	297	*eP*	P	17 36 03.9	-1.5
MKAR	Makanchi Array	47.27	297	P	P	17 36 03.9	-1.5
	0.2nm,0.6s,baz=64,slow=7.2,SNR=3.1						
FIA0	FINESS Array S	63.69	335	*eP*	P	17 38 02.5	-0.6
FINES	FINESS Array B	63.69	335	P	P	17 38 02.5	-0.6
	1.4nm,0.8s,baz=39,slow=9.0,SNR=3.6						
ASAR	Alice Springs	73.15	199	P	P	17 39 03.7	+1.2
	0.3nm,0.8s,baz=17,slow=6.8,SNR=4.0						
LTX	Lajitas	76.47	61	*eP*	P	17 39 22.9	+0.8
TXAR	Lajitas Array	76.47	61	P	P	17 39 22.9	+0.8
	0.8nm,0.5s,baz=305,slow=4.9,SNR=9.6						

*ATH **11** 17:55:21.2, 36°.69N×25°.94E, h25^{km}±1^{km}, ML3.0/5, Error ellipse: s-maj=2.0km s-min=1.1km az=114.0*
*ISK **11** 17:55:22.7, 36°.66N×25°.84E, h9^{km}±1^{km}, MD2.7/12*
*ISCJB **11** 17:55:23.5±0.4, 36°.69N±0°.02×25°.83E±0°.03, h7^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.1km az=143.3*
*THE **11** 17:55:23.0, 36°.71N×25°.84E, h12^{km}, ML2.8/13, Error ellipse: s-maj=1.1km s-min=0.5km az=133.0*

ISC 11 17:55:22.7±0.9, 36°.69N±0°.02×25°.84E±0°.02, h12^{km}±6^{km}, n49, σ0^{s}.78/75, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMGA	Amorgos Island	0.15	18	P	Pg	17 55 26.3	0.0
AMGA				S	Sg	17 55 28.9	+0.1
AMGA	Amorgos Island	0.15	18	P	Pg	17 55 26.3	0.0
AMGA				AML	AML	17 55 28.9	
	comp=E,16320μm,0.3s						
AMGA				S	Sg	17 55 28.9	+0.1
AMGA				AML	AML	17 55 29.1	
	comp=N,14209μm,0.3s						
ANAF	Anafi Island	0.34	189	P	Pg	17 55 29.7	+0.1
ANAF				S	Sb	17 55 35.6	-0.5
ANAF	Anafi Island	0.34	189	P	Pg	17 55 29.6	+0.1
ANAF				AML	AML	17 55 35.6	
	comp=E,15476μm,0.2s						
ANAF				S	Sb	17 55 35.6	-0.5
ANAF				AML	AML	17 55 36.1	
	comp=N,13425μm,0.1s						
THR2	Thira island,	0.41	233	P	Pb	17 55 31.5	-0.4
CMBO	Columbo, Santo	0.41	238	P	Pb	17 55 32.0	0.0
CMBO				S	Sb	17 55 37.8	-0.4
THT2	Imerovigli	0.42	233	P	Pb	17 55 32.2	+0.1
THT2				S	Sb	17 55 38.1	-0.4
SFIR	Foira Santorin	0.42	231	P	Pb	17 55 32.1	-0.1
SFIR				S	Sb	17 55 39.0	+0.4
THR7	Fira-Santorini	0.42	231	P	Pb	17 55 32.0	-0.2
IOSP	Ios island	0.44	274	P	Pg	17 55 31.7	+0.2
IOSP				S	Sg	17 55 38.1	+0.7
IOSP	Ios island	0.44	274	P	Pg	17 55 31.6	+0.2
IOSP				AML	AML	17 55 41.2	
	comp=E,4191μm,0.2s						
IOSP				AML	AML	17 55 41.3	
	comp=N,4496μm,0.3s						
SANT	Santorini	0.44	224	PG	Pg	17 55 31.5	0.0
SANT				SG	Sb	17 55 38.3	-0.8
SANT	Santorini	0.44	224	P	Pg	17 55 32.0	+0.5
SANT				S	Sb	17 55 38.9	-0.2
SANT	Santorini	0.44	224	P	Pg	17 55 31.9	+0.5
SANT				S	Sb	17 55 38.8	-0.3
APE	Apeiranthos	0.45	327	PG	Pg	17 55 31.7	+0.1
APE	Apeiranthos	0.45	327	P	Pg	17 55 31.6	0.0
APE	Apeiranthos	0.45	327	P	Pg	17 55 31.8	+0.1
APE				AML	AML	17 55 42.0	
	comp=E,2378μm,0.2s						
APE				AML	AML	17 55 42.1	
	comp=N,3194μm,0.2s						
THT1	Athinios (Pele	0.45	227	P	Pg	17 55 31.8	+0.2
THT1				S	Sb	17 55 38.8	-0.4
THR3	Thira Island,	0.45	231	P	Pb	17 55 32.3	-0.3
SAP3	Santorini-Thir	0.47	237	P	Pb	17 55 32.6	-0.4
SAP3				S	Sb	17 55 40.0	+0.1
SAP3	Santorini-Thir	0.47	237	P	Pb	17 55 32.6	-0.4
SAP3				S	Sb	17 55 40.3	+0.4
THR5	Thira Island,	0.48	235	P	Pg	17 55 32.5	+0.3
SAP1	Santorini-Akro	0.49	227	P	Pb	17 55 33.4	+0.1
SAP1				S	Sb	17 55 41.4	+1.1
SAP1	Santorini-Akro	0.49	227	P	Pb	17 55 33.1	-0.1
SAP1				S	Sb	17 55 40.8	+0.4
THR6	Thira Island,	0.49	227	P	Pb	17 55 33.0	-0.2
TNSA	Tinos	1.00	328	P	Pb	17 55 41.9	-0.1
TNSA				S	Sn	17 55 56.4	-0.3
MHLO	Agia Marina, M	1.15	270	P	Pb	17 55 44.2	-0.4
MHLO				S	Sn	17 56 01.5	+1.1
SERI	Serifos	1.18	294	P	Pn	17 55 44.0	-1.1
SERI				S	Sb	17 56 00.1	-0.2
BODT	Bodrum	1.24	72	PN	Pg	17 55 47.2	+0.6
BODT				SN	Sg	17 56 04.6	+1.9
SMG	Samos	1.29	38	P	Pn	17 55 45.1	-1.5
SMG				S	Sb	17 56 02.6	-0.9
SMG	Samos	1.29	38	P	Pn	17 55 45.1	-1.5
SMG				AML	AML	17 56 08.5	
	comp=N,236μm,0.5s						
SMG				AML	AML	17 56 09.0	
	comp=E,275μm,0.4s						
BDRM	Kayabasi	1.34	73	*i* P	Pg	17 55 49.6	+1.1
BDRM				*i* S	Sg	17 56 07.0	+1.1
BDRM				IAML_P			
	comp=Z,371nm,0.2s						
DAT	Datca	1.40	88	PN	Pg	17 55 49.2	-0.5
DAT	Datca	1.40	88	*i* P	Pg	17 55 49.2	-0.5
DAT				*i* S	Sg	17 56 08.2	+0.3
DAT				IAML_P			
	comp=Z,34nm,0.2s						
NPS	Neapolis	1.44	187	P	Pn	17 55 47.2	-1.4
GCAM	G?zelcaml?	1.50	48	PN	Pg	17 55 51.7	+0.1
GCAM	G?zelcaml?	1.50	48	*i* P	Pg	17 55 53.0	+1.4
GCAM				*i* S	Sg	17 56 13.1	+2.0
GCAM				IAML_P			
	comp=Z,535nm,0.2s						
KARP	Karpathos	1.57	136	PN	Pn	17 55 49.3	-1.1
DGB	zmir	1.59	31	*i* P	Pg	17 55 52.7	-0.6
DGB				IAML_P			
	comp=Z,342nm,0.2s						
ZKR	Zakros	1.60	169	PN	Pn	17 55 51.3	+0.4
ZEY	zmir	1.63	19	*i* P	Pn	17 55 50.5	-0.8
ZEY				*i* S	Sg	17 56 16.4	+1.1
ZEY				IAML_P			
	comp=Z,354nm,0.1s						
CHOS	Chios island	1.70	6	PN	Pn	17 55 52.4	+0.1
URLA	Izmir	1.77	20	PN	Pb	17 55 55.4	+0.2
URLA	Izmir	1.77	20	*i* P	Pg	17 55 58.0	+1.2
URLA				*i* S	Sg	17 56 20.4	+0.7
URLA				IAML_P			
	comp=Z,938nm,0.3s						
AYDN	Tasoluk	1.90	59	*i* P	Pg	17 55 59.0	-0.1
AYDN				IAML_P			
	comp=Z,225nm,0.3s						
ARG	Arkhangelos	1.91	104	PN	Pn	17 55 56.1	+1.1
BLCB	Balcova	1.94	29	PN	Pb	17 55 58.6	+0.5
AYDB	Zeytinkoy-Aydi	2.06	52	PN	Pb	17 55 59.4	-0.8
TURN	Turunc	2.23	85	PN	Pn	17 55 56.7	-2.8

*DDA **11** 17:59:02.9, 38°.83N×26°.49E, h7^{km}±3^{km}, ML2.5*
*ISK **11** 17:59:02.9, 38°.85N×26°.48E, h13^{km}±2^{km}, ML2.2/9*
*ISCJB **11** 17:59:03.3±0.5, 38°.84N±0°.02×26°.45E±0°.05, h5^{km}±6^{km}, Error ellipse: s-maj=6.5km s-min=3.8km az=168.5*

ISC 11 17:59:03.5±1.0, 38°.83N±0°.02×26°.48E±0°.04, h14^{km}±8^{km}, n17, σ0^{s}.51/26, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	Foa	0.23	121	PG	Pg	17 59 08.3	-0.3
KRBN	Karaburun	0.25	166	PG	Pg	17 59 08.5	-0.3
KRBN				SG	Sg	17 59 13.2	+0.8
URLA	Izmir	0.48	169	PG	Pg	17 59 12.9	-0.1
URLA				SG	Sb	17 59 20.5	-0.1
URLA	Izmir	0.48	169	*i* P	Pb	17 59 13.2	-0.5
URLA				*i* S	Sb	17 59 20.6	0.0
URLA				IAML_P			
	comp=Z,917nm,0.1s						
ZEDA	zmir-Bergama	0.49	74	*i* P	Pb	17 59 13.6	-0.2
ZEDA				*i* S	Sb	17 59 20.1	-0.7
ZEDA				IAML_P			
	comp=Z,1μm,0.1s						
AYVA	Ayvalik	0.50	19	*i* P	Pb	17 59 13.7	-0.3
CHOS	Chios island	0.55	217	PG	Pb	17 59 14.6	-0.4
ZEY	zmir	0.59	178	*i* P	Pb	17 59 15.1	-0.4
ZEY				*i* S	Sg	17 59 23.1	+0.1
ZEY				IAML_P			
	comp=Z,1μm,0.1s						
SIGR	SIGRI	0.61	308	PG	Pb	17 59 15.4	-0.5
BLCB	Balcova	0.63	135	PG	Pb	17 59 15.9	-0.3
GPNR	Gulpinar-Canak	0.68	337	PG	Pg	17 59 16.2	-0.5
DGB	zmir	0.84	158	*i* P	Pg	17 59 18.8	-1.0
DGB				*i* S	Sb	17 59 31.0	0.0
DGB				IAML_P			
	comp=Z,255nm,0.1s						
BAYC	CANAKKALE_Bayr	0.91	3	*i* P	Pb	17 59 20.8	-0.2
BAYC				*i* S	Sn	17 59 34.7	0.0
EZN	Ezine	1.00	353	PG	Pg	17 59 22.1	-0.7
BOZC	Bozcaada	1.06	342	PG	Pb	17 59 23.3	-0.2
BOZC	Bozcaada	1.06	342	*i* P	Pn	17 59 25.0	+1.1
BOZC				*i* S	Sb	17 59 37.1	-0.1
STEP	BALIKESIR_Sava	1.11	60	*i* P	Pn	17 59 25.0	+0.4
STEP				*i* S	Sn	17 59 40.1	+0.5
STEP				IAML_P			
	comp=Z,560nm,0.1s						

*IDC **11** 18:22:33.0±1.5, 24°.01N×125°.29E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.3/31, mbtmp3.5/3, ML2.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/31, Error ellipse: s-maj=56.9km s-min=26.8km az=70.0*
*ISCJB **11** 18:22:34.6±1.5, 24°.01N±0°.08×125°.67E±0°.05, h27^{km}±11^{km}, MS3.2/1, Error ellipse: s-maj=13.7km s-min=8.2km az=5.5*
*JMA **11** 18:22:34.2±0.2, 23°.99N×125°.72E, h42^{km}, M3.4*

ISC 11 18:22:35.9±2.0, 24°.11N±0°.08×125°.66E±0°.07, h25^{km}±14^{km}, n18, σ0^{s}.80/24, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	0.69	341	P	Pb	18 22 49.6	+0.2
JOGS				*e*S	Sn	18 23 00.4	+0.3
JMJ2	Miyako jima3	0.70	335	P	Pb	18 22 49.5	0.0
JMJ2				*e*S	Sn	18 23 00.4	+0.1
JIRB	Irabujima	0.84	329	P	Pb	18 22 51.7	-0.2
JIRB				*e*S	Sn	18 23 04.4	+0.6
JIKM	Ikemajima	0.90	336	P	Pb	18 22 52.6	-0.2
JTJ	Tarama	1.02	302	P	Pn	18 22 53.9	-0.8
JTJ				*e*S	Sn	18 23 09.1	+0.9
JISG	Ishigakijimahi	1.32	292	P	Pn	18 22 58.1	-0.7
JISG				*e*S	Sb	18 23 17.3	+0.8
JIJ	Ishigaki jima	1.41	281	P	Pn	18 22 59.3	-0.7
JIJ				S	Sn	18 23 17.2	-0.5
JKRS	Kuro-shima	1.51	275	P	Pn	18 23 00.8	-0.6
JKRS				S	Sn	18 23 20.0	-0.3
HATJ	Hateruma jima	1.69	269	P	Pn	18 23 03.1	-0.8
IRIF	Iriomote-Funau	1.77	278	P	Pn	18 23 04.3	-0.7
JKE	Kume jima

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**0.32**	**38**	⇑*iP*	Pn	18 59 36.9	+0.4
DCPH				*i* S	Sb	18 59 41.1	+0.2

ISCJB ***11*** *19:01:21.1±0.3, 7.°25S±0.°06×120.°22E±0.°07, h600km, mb3.9/7, Error ellipse: s-maj=9.7km s-min=6.7km az=144.7*

IDC ***11*** *19:01:22.1±0.8, 7.°33S×120.°44E, h625km±10km, mb3.3/8, mb1 3.4/13, mb1mx3.1/40, mbtmp4.3/13, Error ellipse: s-maj=28.0km s-min=10.2km az=63.0*

DJA ***11*** *19:01:22.5±0.5, 7.°S±4.°×12.°0E±.°, h605km±6km, M3.9/15, mb3.9/6, mB4.3/3, MLv4.0/15, Mw(mB)3.4/3*

ISC 11 19:01:21.0±0.6, 7.°37S±0.°08×120.°28E±0.°09, h600km, n39, σ1§92/46, mb3.9/7, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.96**	**135**	P	**P**	**19 02 36.2**	**+0.9**
EDFI				S	**S**	**19 03 35.3**	**-0.3**
BKSI	**Bulukumba**	**2.04**	**356**	P	**P**	**19 02 39.1**	**+3.6**
WSI	**Waingapu**	**2.28**	**180**	P	**P**	**19 02 38.6**	**+2.1**
WSI				S	**S**	**19 03 39.3**	**+1.3**
MMRI	**Maumere**	**2.31**	**123**	P	**P**	**19 02 37.9**	**+1.3**
KAPI	**Kappang**	**2.40**	**347**	P	P	19 02 42.0	+4.9
13nm,0.3s,baz=182,slow=1.8,SNR=62							
WBSI	**Waikabubak, Su**	**2.42**	**201**	P	**P**	**19 02 39.3**	**+2.1**
WBSI				S	**S**	**19 03 40.2**	**+1.0**
BASI	**Baing, Sumba**	**2.85**	**174**	P	**P**	**19 02 41.2**	**+1.9**
PLAI	**Plampang**	**2.87**	**240**	P	**P**	**19 02 41.9**	**+2.5**
PLAI				S	**S**	**19 03 44.6**	**+1.3**
BNSI	**Bone**	**2.96**	**357**	P	**P**	**19 02 43.6**	**+3.6**
SPSI	**Sidrap Palu**	**3.42**	**351**	P	**P**	**19 02 46.1**	**+3.4**
TTSI	**Tana Toraja**	**4.32**	**354**	P	**P**	**19 02 52.2**	**+3.4**
BATI	**Baumata**	**4.37**	**130**	P	**P**	**19 02 51.3**	**+2.1**
44nm,0.3s,baz=120,slow=3.5,SNR=84							
BATI				S	**S**	**19 04 03.1**	**+2.1**
12nm,0.3s,baz=333,slow=18,SNR=5.7							
BATI	**Baumata**	**4.37**	**130**	P	**P**	**19 02 50.9**	**+1.7**
SOEI	**Soe**	**4.60**	**121**	P	**P**	**19 02 52.5**	**+1.5**
JAGI	**Jajag, Banyuwa**	**6.17**	**259**	P	**P**	**19 03 04.5**	**+0.9**
36nm,0.9s,0.2nm							
PCI	**Palu**	**6.44**	**356**	P	**P**	**19 03 02.7**	**-3.3**
APSI	**Ampana**	**6.56**	**12**	P	**P**	**19 03 10.3**	**+3.2**
20nm,1.3s,0.1nm							
MPSI	**Mapaga**	**7.67**	**357**	P	**P**	**19 03 20.0**	**+2.8**
24nm,0.8s,337nm0.1nm							
SANI	**Sanana**	**7.76**	**47**	P	**P**	**19 03 19.5**	**+1.3**
23nm,0.7s,0.1nm							
MRSI	**Marisa**	**7.97**	**12**	P	**P**	**19 03 23.0**	**+2.9**
45nm,0.8s,535nm							
FITZ	**Fitzroy Crossi**	**11.87**	**154**	P	**P**	**19 03 58.7**	**+0.3**
0.6nm,0.3s,baz=335,slow=7.0,SNR=22							
CISI	**Cisompet, Garu**	**12.36**	**268**	P	**P**	**19 04 04.3**	**+0.8**
SIJI	**Sorong**	**12.71**	**60**	P	**P**	**19 04 07.0**	**-0.1**
1.2nm,0.3s,baz=188,slow=15,SNR=6.7							
WRA	**Warramunga Arr**	**18.50**	**134**	P	**P**	**19 05 01.0**	**-0.2**
baz=300,slow=10,SNR=0.2							
ASAR	**Alice Springs**	**20.82**	**143**	P	**P**	**19 05 21.8**	**-0.4**
2.8nm,0.3s,baz=322,slow=8.5,SNR=156							
ASAR				PcP	**PcP**	**19 09 02.6**	**-1.6**
0.3nm,0.5s,baz=344,slow=1.8,SNR=4.7							
ASAR				ScP	**ScP**	**19 11 41.0**	**-4.2**
0.5nm,0.6s,baz=327,slow=2.3,SNR=13							
NWAO	**Narrogin (SRO)**	**25.59**	**186**	P	**P**	**19 06 04.5**	**+0.2**
7.6nm,0.9s,baz=17,slow=5.6,SNR=5.7							
STKA	**Stephens Creek**	**31.45**	**144**	P	**P**	**19 06 55.0**	**-0.1**
6.5nm,0.3s,baz=326,slow=7.4,SNR=43							
CMAR	**Chiang Mai Arr**	**33.19**	**321**	P	**P**	**19 07 10.5**	**+0.5**
0.8nm,0.7s,baz=152,slow=7.2,SNR=7.3							
RAMN	**Ramite**	**47.21**	**318**	*e*P	**P**	**19 09 01.3**	**-0.2**
11nm,0.5s							
GUN	**Gumba**	**48.33**	**318**	*e*P	**P**	**19 09 09.8**	**-0.1**
PKI	**Pulchoki**	**48.42**	**317**	*e*P	**P**	**19 09 09.7**	**-0.9**
5.6nm,0.4s							
PKIN	**Phulchoki**	**48.43**	**317**	*e*P	**P**	**19 09 09.6**	**-1.0**
7.4nm,0.4s							
KOLN	**Koldanda**	**49.77**	**316**	*e*P	**P**	**19 09 19.9**	**-0.5**
DANN	**Dangsing**	**50.03**	**317**	*e*P	**P**	**19 09 21.8**	**-0.6**
25nm,0.5s							
PYUN	**Piuthan**	**50.40**	**316**	*e*P	**P**	**19 09 24.4**	**-0.6**
11nm,0.4s							
MKAR	**Makanchi Array**	**63.61**	**332**	P	**P**	**19 10 54.0**	**-0.3**
1.4nm,0.5s,baz=140,slow=7.4,SNR=20							
MKAR				PcP	**PcP**	**19 11 23.2**	**-0.9**
0.2nm,0.4s,baz=125,slow=4.9,SNR=4.0							
ZALV	**Zalesovo Beam**	**67.99**	**338**	P	**P**	**19 11 19.6**	**-1.6**
2.0nm,0.5s,baz=142,slow=4.3,SNR=8.3							
PETK	**Petropavlovsk-**	**68.08**	**23**	P	**P**	**19 11 20.5**	**-1.4**
5.9nm,1.1s,baz=140,slow=7.2,SNR=3.7							
VNDA	**Vanda**	**73.39**	**171**	P	**P**	**19 11 52.0**	**-0.6**
0.6nm,0.4s,baz=317,slow=6.7,SNR=7.6							

ISCJB ***11*** *19:12:52.8±0.9, 17.°99S±0.°03×168.°34E±0.°03, h60km±8km, mb5.3/217, Error ellipse: s-maj=4.7km s-min=4.0km az=13.6*

MOS ***11*** *19:12:54.2±1.0, 17.°89S×168.°31E, h69km, mb5.5/39, MS4.8/10, Error ellipse: s-maj=9.0km s-min=7.4km az=122.7*

IDC ***11*** *19:12:54.0±2.0, 17.°99S×168.°43E, h59km±16km, mb4.6/22, mb1 4.7/22, mb1mx4.6/30, mbtmp4.9/22, MS4.2/20, Ms1 4.2/20, ms1mx4.2/23, Error ellipse: s-maj=17.8km s-min=11.6km az=86.0*

NEIC ***11*** *19:12:55.8±1.6, 18.°02S×168.°38E, h77km±4km, mb5.3/169, MW5.4, Error ellipse: s-maj=14.0km s-min=12.3km az=99.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^17^Nm; Mrr-0.92; Mθθ 1.02; Mφφ-0.10; Mrθ-1.09; Mθφ 0.74; Mφr0.11; Best double couple: M0 1.60000×10^17^ NP1:φs215.00000°, δ33.00000°, λ-139.00000°. NP2: φs88.00000°, δ69.00000°, λ-64.00000°. Principal axes: T 1.7400, Plg20.0000°, Azm159.0000°; N -0.2000, Plg24.0000°, Azm259.0000°; P -1.5400, Plg58.0000°, Azm33.0000°;*

NEIC Felt at Port-Vila.

BJI ***11*** *19:12:56.7±0.0, 17.°42S×168.°31E, h74km, mb5.2/63, mB5.2/46, Ms4.9/40, Ms7 4.6/34*

GCMT ***11*** *19:12:57.8±0.1, 18.°07S±0.°01×168.°20E±0.°01, h84km, MW5.4/111, Moment Tensor Solution. s105, c183; s111, c198; Duration: 1§2 Moment tensor: Scale 10^17^ Nm; Mrr-0.93±.02; Mθθ 1.04±.02; Mφφ-0.11±.02; Mrθ-0.62±.01; Mθφ 0.77±.02; Mφr 0.37±.01; Best double couple: M0 1.44400×10^17^ NP1:φs93.00000°, δ63.00000°, λ-52.00000°. NP2:φs213.00000°, δ45.00000°, λ-140.00000°. Principal axes: T 1.4920, Plg10.0000°, Azm156.0000°; N -0.0960, Plg33.0000°, Azm253.0000°; P -1.3960, Plg55.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 19:12:54.8±0.5, 18.°10S±0.°04×168.°45E±0.°05, h71km±3km, h71km:pP-P, n693, σ1§46/706, mb5.3/218, 33C-32D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.39**	**187**	*e*Pn	**Pn**	**19 13 43.9**	**-1.5**
MARNC				*e*Sn	**Sn**	**19 14 16.4**	**-8.0**
DZM	**Mont Dzumac**	**4.38**	**205**	P	**Pn**	**19 13 58.7**	**-0.2**
401nm,0.3s,baz=311,slow=23,SNR=1170							
DZM				S	**Sn**	**19 14 45.6**	**-3.2**
972nm,0.3s,baz=128,slow=24,SNR=26							
DZM				LR	LR	19 15 22.7	
comp=Z,4μm,18.8s,baz=18,slow=33							
DZM	**Mont Dzumac**	**4.38**	**205**	*e*Pn	**Pn**	**19 13 58.8**	**-0.2**
1μm,0.3s							
DZM				*e*Sn	**Sn**	**19 14 47.5**	**-1.3**
3μm,0.2s							
DZM				*e*LR	LR	19 15 00.4	
comp=Z,13μm,26.9s							
OUENC	**Ouen Island, N**	**4.56**	**199**	*e*Pn	**Pn**	**19 14 01.7**	**+0.4**
OUENC				*e*Sn	Sn	19 14 43.3	-10
PINNC	**Pines Island,**	**4.59**	**192**	*e*Pn	**Pn**	**19 14 02.1**	**+0.4**
PINNC				*e*Sn	Sn	19 14 40.8	-13
NFK	**Norfolk Island**	**10.91**	**182**	P	**Pn**	**19 15 30.7**	**+2.7**
baz=11,SNR=11							
HNR	**Honiara**	**11.93**	**315**	*e*P	**Pn**	**19 15 42.0**	**0.0**
HNR	**Honiara**	**11.93**	**315**	P	**Pn**	**19 15 42.1**	**0.0**
149nm,0.3s,baz=170,slow=9.5,SNR=100							
HNR				LR	LR	19 19 25.4	
comp=Z,1μm,21.5s,baz=154,slow=33							
FUNA	**Funafuti**	**14.13**	**49**	*e*Pn	**Pn**	**19 16 13.4**	**+1.9**
LHI	**Lord Howe Isla**	**15.84**	**211**	*e*Pn	**P**	**19 16 35.7**	**-0.2**
82nm,1.1s							
OUZ	**Omahuta**	**17.66**	**166**	*e*P	**P**	**19 16 57.5**	**+1.6**
240nm,1.6s							
EIDS	**Eidsvold**	**17.68**	**243**	*e*P	**P**	**19 16 58.0**	**+1.7**
149nm,1.8s							
EIDS	**Eidsvold**	**17.68**	**243**	P	**P**	**19 16 59.2**	**+2.9**
baz=18,SNR=12							
EIDS				S	S	19 20 29.9	+14
baz=18							
ARMA	**Armidale**	**19.61**	**228**	*e*P	**Pn**	**19 17 19.7**	**+0.1**
42nm,0.9s							
RMQ	**Roma**	**20.03**	**242**	P	Pn	19 17 26.7	+2.3
baz=20,SNR=11							
CTA	**Charts Tower**	**21.07**	**261**	P	**P**	**19 17 34.8**	**+1.4**
6.3nm,0.5s,baz=90,slow=12,SNR=14							
CTAO	**Charters Tower**	**21.07**	**261**	*e*P	**P**	**19 17 34.7**	**+1.4**
138nm,1.4s							
CTAO	**Charters Tower**	**21.07**	**261**	*e*P	**P**	**19 17 34.7**	**+1.4**
CTAO				pmax	pmax		
comp=Z,138nm,1.4s							
HIZ	**Hauiti**	**21.10**	**166**	*e*P	**P**	**19 17 36.7**	**+3.3**
comp=Z,546nm,2.0s							
RABL	**Rabaul**	**21.10**	**309**	*e*P	**P**	**19 17 33.1**	**-0.6**
comp=Z,146nm,1.0s							
MXZ	**Matakaoa Point**	**21.23**	**158**	*e*P	**P**	**19 17 37.6**	**+2.7**
comp=Z,93nm,1.1s							
URZ	**Urewera**	**21.47**	**161**	P	**P**	**19 17 39.7**	**+2.3**
comp=Z,12nm,0.3s,baz=257,slow=0.8,SNR=19							
URZ	**Urewera**	**21.47**	**161**	*e*P	**P**	**19 17 40.0**	**+2.6**
comp=Z,65nm,0.9s							
MGCD	**Mangrove Creek**	**21.65**	**223**	P	**P**	**19 17 42.5**	**+3.1**
baz=22,SNR=7.0							
BKZ	**Black Stump Fm**	**22.13**	**163**	*e*P	**P**	**19 17 46.0**	**+1.5**
comp=Z,67nm,0.7s							
NNZ	**Nelson**	**23.43**	**171**	P	**P**	**19 18 00.9**	**+3.2**
BFZ	**Birch Farm**	**23.49**	**165**	*e*P	**P**	**19 17 58.7**	**+0.4**
comp=Z,106nm,0.7s							
TUWZ	**Tuamarina**	**23.73**	**170**	P	**P**	**19 18 02.7**	**+2.3**
SNZO	**South Karori**	**23.75**	**168**	*e*P	**P**	**19 18 02.5**	**+2.0**
comp=Z,190nm,1.4s							
THZ	**Tophouse**	**23.89**	**172**	*e*P	**P**	**19 18 03.4**	**+1.5**
comp=Z,67nm,0.7s							
THZ	**Tophouse**	**23.89**	**172**	P	**P**	**19 18 03.8**	**+1.8**
MSWZ	**Mokau Station**	**23.96**	**167**	P	**P**	**19 18 03.9**	**+1.4**
BSWZ	**Blackbirch Sta**	**23.99**	**170**	P	**P**	**19 18 05.7**	**+2.9**
TRWZ	**Traveller**	**24.04**	**167**	P	**P**	**19 18 04.8**	**+1.6**
YNG	**Young**	**24.10**	**224**	P	**P**	**19 18 05.7**	**+1.9**
baz=24,SNR=10							
CNB	**Canberra Magne**	**24.11**	**221**	P	**P**	**19 18 05.7**	**+1.7**
baz=24,SNR=25							
CAN	**Canberra**	**24.34**	**221**	*e*P	**P**	**19 18 07.5**	**+1.4**
CAN	**Canberra**	**24.34**	**221**	*e*P	**P**	**19 18 07.5**	**+1.4**
CMSA	**Cobar Meteorol**	**24.55**	**233**	P	**P**	**19 18 08.8**	**+0.9**
baz=25,SNR=44							
KHZ	**Kahutara**	**24.63**	**171**	*e*P	**P**	**19 18 09.1**	**+0.7**
comp=Z,192nm,1.6s							
KHZ	**Kahutara**	**24.63**	**171**	P	**P**	**19 18 09.3**	**+0.8**
COEN	**Coen**	**24.63**	**276**	*e*P	**P**	**19 18 10.3**	**+1.4**
comp=Z,39nm,1.1s							
LTZ	**Lake Taylor**	**24.82**	**173**	*e*P	**P**	**19 18 11.7**	**+1.4**
comp=Z,48nm,0.8s							
LTZ	**Lake Taylor**	**24.82**	**173**	P	**P**	**19 18 12.3**	**+2.0**
WVZ	**Waitaha Valley**	**24.98**	**176**	P	**P**	**19 18 13.3**	**+1.7**
GVZ	**Greta Valley S**	**25.10**	**172**	P	**P**	**19 18 14.0**	**+1.2**
AMCZ	**Amberley**	**25.25**	**173**	P	**P**	**19 18 16.1**	**+1.9**
OXZ	**Oxford**	**25.33**	**174**	*e*P	**P**	**19 18 16.0**	**+1.0**
comp=Z,187nm,1.6s							
OXZ	**Oxford**	**25.33**	**174**	P	**P**	**19 18 16.5**	**+1.5**
FOZ	**Fox Glacier**	**25.38**	**178**	*e*P	**P**	**19 18 17.7**	**+2.3**
comp=Z,50nm,1.0s							
MILA	**Mila**	**25.39**	**218**	P	**P**	**19 18 17.2**	**+1.5**
baz=26,SNR=4.3							
RPZ	**Rata Peaks**	**25.63**	**176**	P	**P**	**19 18 19.6**	**+1.9**
comp=Z,17nm,0.6s,baz=305,slow=3.1,SNR=13							
RPZ	**Rata Peaks**	**25.63**	**176**	*e*P	**P**	**19 18 19.3**	**+1.6**
comp=Z,33nm,0.9s							
RPZ	**Rata Peaks**	**25.63**	**176**	P	**P**	**19 18 19.6**	**+1.9**
MQZ	**McQueen's Vall**	**25.78**	**173**	*e*P	**P**	**19 18 20.2**	**+1.3**
comp=Z,76nm,1.4s							
MANU	**Manus Island**	**26.13**	**305**	*e*P	**P**	**19 18 23.8**	**+1.4**
comp=Z,125nm,1.6s							
LBZ	**Lake Benmore**	**26.25**	**177**	*e*P	**P**	**19 18 24.4**	**+1.2**
comp=Z,52nm,1.5s							
WKZ	**Wanaka**	**26.66**	**179**	*e*P	**P**	**19 18 28.4**	**+1.5**
comp=Z,194nm,1.7s							
PATS	**Pohnpei**	**26.72**	**337**	*e*P	**P**	**19 18 28.1**	**+0.4**
comp=Z,212nm,1.3s							
ODZ	**Otahua Downs**	**26.93**	**177**	*e*P	**P**	**19 18 29.7**	**+0.4**
comp=Z,15nm,1.2s							
MLZ	**Mavora Lakes**	**27.19**	**181**	*e*P	**P**	**19 18 32.1**	**+0.3**
comp=Z,108nm,1.8s							
DCZ	**Deep Cove**	**27.31**	**182**	*e*P	**P**	**19 18 33.9**	**+1.2**
comp=Z,116nm,1.6s							
QIS	**Mount Isa**	**27.32**	**260**	P	**P**	**19 18 35.1**	**+2.0**
baz=28,SNR=3.4							
WHZ	**Wether Hill Ro**	**27.72**	**181**	*e*P	**P**	**19 18 37.3**	**+0.9**
comp=Z,126nm,1.9s							
STKA	**Stephens Creek**	**27.85**	**235**	P	**P**	**19 18 39.2**	**+1.4**
comp=Z,10nm,0.6s,baz=68,slow=8.9,SNR=28							
STKA				LR	LR	19 28 38.5	
comp=Z,694nm,21.2s,baz=54,slow=34							
STKA	**Stephens Creek**	**27.85**	**235**	*e*P	**P**	**19 18 38.8**	**+1.1**
comp=Z,6.0nm,0.8s							
STKA	**Stephens Creek**	**27.85**	**235**	P	**P**	**19 18 40.1**	**+2.3**
baz=28,SNR=20							
TOO	**Toolangi**	**27.95**	**221**	*e*P	**P**	**19 18 38.1**	**-0.5**
comp=Z,23nm,1.0s							
TOO	**Toolangi**	**27.95**	**221**	*e*P	**P**	**19 18 38.1**	**-0.5**
TOO				pmax	pmax		
comp=Z,23nm,1.0s							
RAR	**Rarotonga**	**30.06**	**101**	*e*P	**P**	**19 18 56.4**	**-1.0**
comp=Z,401nm,2.0s							
RAR	**Rarotonga**	**30.06**	**101**	*e*P	**P**	**19 18 56.4**	**-1.0**
RAR				pmax	pmax		
comp=Z,401nm,2.0s							
MOO	**Moorlands**	**30.27**	**212**	P	**P**	**19 19 00.7**	**+1.7**
baz=31,SNR=5.0							
HTT	**Hallett**	**30.53**	**234**	P	**P**	**19 19 03.2**	**+1.6**
baz=31,SNR=12							
GENI	**Genyem**	**31.72**	**296**	P	**P**	**19 19 12.0**	**-0.2**
comp=Z,109nm,2.0s,comp=Z,2μm							
WB2	**Warramunga Arr**	**32.26**	**261**	*e*P	**P**	**19 19 16.4**	**-0.5**
comp=Z,37nm,1.6s							
WRAB	**Tennant Creek**	**32.26**	**261**	*e*P	**P**	**19 19 16.2**	**-0.7**
comp=Z,43nm,1.7s							
WRAB	**Tennant Creek**	**32.26**	**261**	*c*eP	**P**	**19 19 16.5**	**-0.4**
WRAB				pmax	pmax		
comp=Z,8.0nm,0.6s							
WRA	**Warramunga Arr**	**32.27**	**261**	P	**P**	**19 19 15.8**	**-1.2**
comp=Z,51nm,0.3s,baz=87,slow=7.5,SNR=2.0							
BBOO	**Buckleboo**	**32.56**	**237**	*e*P	**P**	**19 19 19.9**	**+0.5**
comp=Z,128nm,1.6s							
BBOO	**Buckleboo**	**32.56**	**237**	P	**P**	**19 19 21.3**	**+1.9**
baz=33,SNR=5.6							
AS31	**Alice Springs**	**32.70**	**254**	*e*P	**P**	**19 19 19.4**	**-1.4**
comp=Z,14nm,0.4s							
ASAR	**Alice Springs**	**32.70**	**254**	P	**P**	**19 19 20.2**	**-0.5**
comp=Z,22nm,0.5s,baz=80,slow=8.7,SNR=226							
ASAR				PKiKP	**PKiKP**	**19 29 30.2**	**-1.8**
comp=Z,0.4nm,0.4s,baz=93,slow=1.1,SNR=17							
ASAR				LR	LR	19 32 09.9	
comp=Z,479nm,20.4s,baz=88,slow=35							
KDU	**Kakadu**	**35.06**	**274**	P	**P**	**19 19 41.1**	**-0.1**
baz=35,SNR=9.4							
BAKI	**Biak**	**35.93**	**294**	P	**P**	**19 19 48.5**	**-0.2**
MTN	**Manton Dam**	**36.30**	**273**	*e*P	**P**	**19 19 51.9**	**0.0**
comp=Z,72nm,1.6s							
MTN	**Manton Dam**	**36.30**	**273**	P	**P**	**19 19 52.1**	**+0.2**
baz=36,SNR=6.7							
WRKA	**Warakurna**	**37.88**	**252**	P	**P**	**19 20 05.5**	**+0.3**
baz=38,SNR=26							
KNRA	**Kununurra**	**38.01**	**268**	P	**P**	**19 20 06.0**	**-0.3**
baz=38,SNR=15							
FAKI	**Fak Fak**	**38.54**	**289**	*e*P	**P**	**19 20 10.9**	**0.0**
comp=Z,67nm,1.3s							
FAKI	**Fak Fak**	**38.54**	**289**	P	**P**	**19 20 10.8**	**0.0**
comp=Z,52nm,1.3s,comp=Z,671nm							
FORT	**Forrest**	**38.68**	**243**	*e*P	**P**	**19 20 12.4**	**+0.6**
comp=Z,53nm,0.8s							
FORT	**Forrest**	**38.68**	**243**	P	**P**	**19 20 12.9**	**+1.1**
baz=39,SNR=11							
GUMO	**Guam**	**39.15**	**322**	LR	LR	19 34 24.9	
comp=Z,590nm,21.8s,baz=142,slow=33							
TBI	**Tubuai**	**39.61**	**105**	*e*S	**S**	**19 26 16.0**	**-1.7**
comp=Z,357nm,30.0s							
TBI				*e*LQ	LQ	19 29 36.9	
comp=Z,3μm,30.0s							
TBI				*e*LR	LR	19 31 19.3	
comp=Z,1μm,31.8s							
PPT2	**Papeete2**	**39.89**	**96**	*e*S	**S**	**19 26 24.6**	**+2.4**
comp=Z,488nm,28.2s							
PPT2				*e*LQ	LQ	19 29 46.3	
comp=Z,3μm,32.0s							
PPT2				*e*LR	LR	19 31 23.5	
comp=Z,2μm,27.8s							
PPT	**Papeete**	**39.90**	**96**	LR	LR	19 32 52.0	
comp=Z,929nm,19.1s,baz=258,slow=30							
SIJI	**Sorong**	**40.33**	**291**	LR	LR	19 37 15.4	
comp=Z,306nm,18.3s,baz=58,slow=36							
FITZ	**Fitzroy Crossi**	**40.63**	**263**	*e*P	**P**	**19 20 28.5**	**+0.4**
comp=Z,60nm,0.7s							
FITZ	**Fitzroy Crossi**	**40.63**	**263**	P	**P**	**19 20 28.6**	**+0.5**
baz=41,SNR=76							
AAI	**Ambon**	**41.92**	**285**	P	**P**	**19 20 40.4**	**+1.6**
comp=Z,37nm,1.1s							
SOEI	**Soe**	**43.59**	**275**	*e*P	**P**	**19 20 52.6**	**+0.2**
comp=Z,70nm,1.1s							
SOEI	**Soe**	**43.59**	**275**	P	**P**	**19 20 54.2**	**+1.8**
comp=Z,36nm,0.7s							
KMBL	**Kambalda**	**44.01**	**243**	P	**P**	**19 20 56.1**	**+0.6**
baz=44,SNR=7.4							
BATI	**Baumata**	**44.04**	**274**	P	**P**	**19 20 57.8**	**+1.8**
comp=Z,52nm,0.9s							
TNTI	**Ternate**	**44.55**	**290**	P	**P**	**19 21 02.1**	**+2.2**
SANI	**Sanana**	**44.59**	**286**	P	**P**	**19 21 00.7**	**+0.4**
comp=Z,46nm,0.9s,comp=Z,795nm							
PSA00	**Pilbara Seismi**	**45.71**	**257**	*e*P	**P**	**19 21 08.6**	**-0.6**
comp=Z,35nm,0.8s							
MMRI	**Maumere**	**45.83**	**276**	*e*P	**P**	**19 21 09.5**	**-0.6**
comp=Z,44nm,0.9s							
MMRI	**Maumere**	**45.83**	**276**	P	**P**	**19 21 10.2**	**+0.1**
comp=Z,52nm,0.7s							
EDFI	**Ende, Flores**	**46.31**	**275**	P	**P**	**19 21 14.3**	**+0.3**
comp=Z,26nm,0.9s							
KLBR	**Kellerberrin**	**47.54**	**244**	P	**P**	**19 21 23.1**	**-0.2**
baz=48,SNR=27							
LUWI	**Luwuk**	**47.94**	**286**	*e*P	**P**	**19 21 27.2**	**+0.6**
comp=Z,64nm,0.9s							
LUWI	**Luwuk**	**47.94**	**286**	P	**P**	**19 21 27.7**	**+1.2**
comp=Z,91nm,1.2s,comp=Z,1μm							
NWAO	**Narrogin (SRO)**	**48.08**	**242**	*e*P	**P**	**19 21 27.4**	**0.0**
comp=Z,34nm,0.6s							
NWAO	**Narrogin (SRO)**	**48.08**	**242**	*e*P	**P**	**19 21 27.5**	**0.0**
NWAO				pmax	pmax		
comp=Z,34nm,0.6s							
WBSI	**Waikabubak, Su**	**48.25**	**273**	P	**P**	**19 21 29.6**	**+0.6**
comp=Z,68nm,0.8s							
MUN	**Mundaring**	**48.88**	**243**	P	**P**	**19 21 33.7**	**+0.1**
baz=49,SNR=3.9							
MORW	**Morawa**	**48.92**	**247**	*e*P	**P**	**19 21 33.8**	**-0.1**
comp=Z,91nm,1.8s							
MORW	**Morawa**	**48.92**	**247**	P	**P**	**19 21 34.7**	**+0.7**
baz=49,SNR=8.6							
APSI	**Ampana**	**49.02**	**285**	P	**P**	**19 21 35.6**	**+0.7**
comp=Z,58nm,1.6s,comp=Z,806nm							
BNSI	**Bone**	**49.17**	**280**	P	**P**	**19 21 37.2**	**+1.2**
comp=Z,56nm,1.3s,comp=Z,710nm							
KAPI	**Kappang**	**49.30**	**279**	*e*P	**P**	**19 21 37.8**	**+0.8**
KAPI	**Kappang**	**49.30**	**279**	*e*P	**P**	**19 21 37.8**	**+0.8**
MRSI	**Marisa**	**49.31**	**287**	P	P	19 21 52.5	+15
SPSI	**Sidrap Palu**	**49.63**	**280**	P	**P**	**19 21 38.9**	**-0.7**
comp=Z,21nm,1.2s							
TTSI	**Tana Toraja**	**49.91**	**282**	P	**P**	**19 21 42.6**	**+0.9**
comp=Z,32nm,1.1s,comp=Z,474nm							
PLAI	**Plampang**	**50.00**	**274**	P	**P**	**19 21 43.2**	**+0.8**
comp=Z,49nm,0.9s							
KEKH	**Kekaha**	**50.57**	**39**	*e*P	**P**	**19 21 46.8**	**+0.3**
comp=Z,408nm,1.7s							
TAOE	**Nuku Hiva Isla**	**50.68**	**87**	*e*LR	LR	19 36 21.2	
comp=Z,2μm,29.6s							
GIRL	**Giralia**	**50.81**	**255**	*e*P	**P**	**19 21 49.9**	**+1.5**
comp=Z,410nm,1.7s							
MPSI	**Mapaga**	**51.12**	**286**	P	**P**	**19 21 50.9**	**+0.1**
comp=Z,70nm,0.8s,comp=Z,607nm							
KHU	**Kahuku**	**51.21**	**45**	*e*P	**P**	**19 21 49.4**	**-2.2**
comp=Z,266nm,1.4s							
KHU	**Kahuku**	**51.21**	**45**	*e*P	**P**	**19 21 49.4**	**-2.2**
KHU				pmax	pmax		
comp=Z,266nm,1.4s							
HLP	**Hilina Pali**	**51.45**	**46**	*e*P	**P**	**19 21 51.5**	**-1.7**
comp=Z,182nm,1.0s							
HMH	**Humu'ula Sheep**	**51.55**	**45**	*e*P	**P**	**19 21 53.8**	**-0.4**
comp=Z,240nm,1.5s							
DNP	**Denpasar**	**52.48**	**273**	P	**P**	**19 22 00.6**	**-0.3**

comp=Z,119nm,0.8s
MDSI Maura Dua 64.18 274 P P 19 23 21.7 -0.8
comp=Z,30nm,0.6s
ERM Erimo 64.22 339 *e*P **P 19 23 22.1 0.0**
comp=Z,28nm,1.5s
ERM Erimo 64.22 339 *e*P **P 19 23 22.1 0.0**
ERM pmax pmax
comp=Z,28nm,1.5s
ASAJ Asahikawa 66.28 340 P P 19 23 36.6 +1.2
comp=Z,12nm,0.7s,baz=212,slow=6.4,SNR=15
TJN Taejon 66.66 325*ce*P **P 19 23 39.1 +1.1**
SSE Sheshan 66.73 317 *e*P **P 19 23 37.0 -1.6**
comp=Z,17nm,0.9s
KSRS Korea Array 67.15 326 P P 19 23 41.1 0.0
comp=Z,5.5nm,0.8s,baz=152,slow=6.5,SNR=26
KSRS LR LR 19 53 28.6
comp=Z,93nm,18.1s,baz=152,slow=36
KS15 Wonju Array Si 67.16 326 *e*P **P 19 23 41.0 -0.2**
SDSI Sungai Dareh 67.90 277 P P 19 23 46.5 +0.1
comp=Z,15nm,1.0s
BKNI Bangkinang 68.68 278 *e*P **P 19 23 50.5 -0.8**
comp=Z,86nm,1.0s
BKNI Bangkinang 68.68 278 P P 19 23 53.0 +1.7
comp=Z,100nm,1.0s,comp=Z,1μm
YSS Yuzh-Sakhalins 68.76 341 *e*P **P 19 23 51.2 +0.1**
comp=Z,58nm,1.2s
YSS Yuzh-Sakhalins 68.76 341 *de*P **P 19 23 52.0 +1.0**
YSS *e**PP **pP 19 24 12.2 +2.4**
YSS *e**SP **sP 19 24 16.6 -1.1**
YSS *e*S **S 19 32 45.4 -3.5**
YSS *e*PPS PPS 19 33 19.6
YSS pmax pmax
comp=Z,40nm,1.1s
YSS pmax pmax
comp=Z,200nm,5.2s
PDSI Padang 68.82 276 P P 19 23 52.5 +0.3
comp=Z,18nm,0.6s
NJ2 Nanjing 68.87 316 *e*P **P 19 23 53.4 +1.3**
NJ2 pmax pmax
comp=Z,9.0nm,0.7s
TEY Ternei 69.20 336⇑*e*P **P 19 23 54.0 +0.2**
TEY pmax pmax
comp=Z,10.0nm,1.9s
IPM Ipoh 70.12 282 *e*P **P 19 23 59.5 -0.7**
comp=Z,34nm,0.9s
IPM Ipoh 70.12 282 P P 19 24 01.0 +0.8
MNSI Mandailing Nat 70.21 278 P P 19 24 01.4 +0.7
comp=Z,50nm,0.8s
USA0B Ussuriysk Arra 70.39 333 *e*P **P 19 24 01.7 +0.6**
USRK Ussuriysk Ar. 70.39 333 P P 19 24 01.6 +0.5
comp=Z,8.7nm,0.6s,baz=123,slow=5.3,SNR=25
USRK LR LR 19 52 00.5
comp=Z,123nm,20.4s,baz=135,slow=33
SMY Shemya 70.70 4 *e*P **P 19 24 03.0 +0.2**
comp=Z,475nm,1.8s
SMY Shemya 70.70 4 *e*P **P 19 24 03.0 +0.2**
SMY pmax pmax
comp=Z,475nm,1.8s
KULM Kulim 70.76 282 *e*P **P 19 24 03.8 -0.2**
comp=Z,20nm,0.8s
WHN Wuhan 71.03 312 P P 19 24 03.3 -2.0
WHN S **S 19 33 15.6 -0.6**
WHN LR LR
comp=Z,540nm,21.4s
PET Petropavlovsk 71.33 354 *e*P **P 19 24 06.3 -0.3**
comp=Z,15nm,0.7s
PET Petropavlovsk 71.33 354 *e*P **P 19 24 06.5 -0.1**
PET *e*S **S 19 33 16.4 -2.3**
PET pmax pmax
comp=Z,25nm,0.7s
PSI Prapat 71.50 279 *e*P **P 19 24 07.6 -1.1**
comp=Z,26nm,0.9s
PSI Prapat 71.50 279 *e*P **P 19 24 07.6 -1.1**
PSI pmax pmax
comp=Z,26nm,0.9s
PEA0B Petropavlovsk- 71.52 353 *e*P **P 19 24 08.0 +0.3**
PETK Petropavlovsk- 71.52 353 P P 19 24 07.9 +0.1
comp=Z,14nm,0.6s,baz=135,slow=8.0,SNR=41
PETK LR LR 19 50 40.4
comp=Z,283nm,21.6s,baz=171,slow=32
ATKA Atka Island 71.61 11 *e*P **P 19 24 08.0 -0.4**
comp=Z,37nm,1.1s
DL2 Dalian 71.66 323 P P 19 24 09.7 +0.8
DL2 *e*S **S 19 33 22.4 -0.7**
DL2 SS **SS 19 37 57.3 -3.1**
DL2 pmax pmax
comp=Z,110nm,0.9s
DL2 pmax pmax
comp=Z,320nm,4.8s
DL2 LR LR
comp=Z,250nm,18.0s
DL2 LR LR
comp=Z,240nm,29.8s
DL2 LR LR
comp=Z,380nm,23.7s
MDJ Mudanjiang 71.77 332 P P 19 24 10.2 +0.7
MDJ pP PcP 19 24 28.6 +0.5
MDJ sP sP 19 24 38.4 +2.5
MDJ S **S 19 33 26.2 +2.0**
MDJ sS sS 19 33 58.4 +3.1
MDJ ScS **ScS 19 34 08.3 -0.4**
MDJ pmax pmax
comp=Z,50nm,1.1s
MDJ pmax pmax
comp=Z,310nm,2.9s
MDJ LR LR
comp=Z,250nm,22.8s
MDJ LR LR
comp=Z,250nm,24.2s
MDJ LR LR
comp=Z,460nm,28.5s
MDJ Mudanjiang 71.77 332 *e*P **P 19 24 09.1 -0.4**
QSPA South Pole Qui 71.95 180 *e*P **P 19 24 11.5 +1.0**
TYV Tymovskoe 72.31 343 *e*P **P 19 24 13.6 +1.1**
TYV pmax pmax
comp=Z,19nm,0.7s
TYV pmax pmax
comp=Z,200nm,3.0s
SKNT Sakolnakorn 72.38 295 P P 19 24 15.0 +1.3
TIA Tai'an 72.60 319 P P 19 24 15.3 +0.7
TIA pmax pmax
comp=Z,19nm,1.1s
CN2 Changchun 73.10 329 *e*P **P 19 24 17.2 -0.2**
CN2 *e*pP pP 19 24 37.2 +1.0
CN2 *e*S **S 19 33 37.8 -1.6**
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,110nm,21.0s
CN2 LR LR
comp=Z,190nm,21.0s
CN2 LR LR
comp=Z,180nm,18.0s
NIKH Nikolski High 73.45 14 *e*P **P 19 24 17.7 -1.6**
comp=Z,36nm,0.6s
GRNR Gornyy 74.13 340 *e*P **P 19 24 23.3 0.0**
GRNR pmax pmax
comp=Z,55nm,1.0s
SLVN Son La 74.37 299 *e*P **P 19 24 24.9 -0.5**
comp=Z,5.0nm,0.9s
ENH Enshi 74.37 310 *e*P **P 19 24 24.4 -0.8**
KLR Kul'dur 74.53 336 *e*P **P 19 24 26.5 +0.8**
comp=Z,14nm,0.9s,baz=125,slow=2.1,SNR=37
KLR Kul'dur 74.53 336*d i*P **P 19 24 26.1 +0.5**
KLR pmax pmax
comp=Z,49nm,1.8s
GYA Guiyang 74.56 305⇑*i*P **P 19 24 27.1 +0.6**
GYA pP pP 19 24 47.6 +2.5
GYA PP **PP 19 27 12.8 -1.4**
GYA S **S 19 33 56.9 +0.1**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.4s
GYA LR LR
comp=Z,210nm,22.0s
GYA LR LR
comp=Z,230nm,21.8s
GYA LR LR
comp=Z,220nm,22.7s
UNV Unalaska Valle 74.82 15 *e*P **P 19 24 28.6 +1.5**
comp=Z,8.7nm,0.6s
PBKT Sadao Pong 74.82 293 P P 19 24 29.8 +1.8
comp=Z,12nm,0.8s,comp=Z,786nm

NKL Nikolayevsk 74.90 343 *e*P **P 19 24 28.3 +0.6**
NKL pmax pmax
comp=Z,46nm,0.6s
RPN Rapa Nui 75.23 114 LR LR 19 51 15.5
comp=Z,117nm,20.3s,baz=342,slow=31
AKUT Akutan 75.26 15 *e*P **P 19 24 27.7 -2.0**
comp=Z,18nm,1.3s
BJT Baijiatuau 75.58 321 *e*P **P 19 24 32.4 +0.5**
BJT Baijiatuau 75.58 321 *e*P **P 19 24 32.4 +0.5**
BJI Beijing 75.59 321 P P 19 24 32.4 +0.5
BJI S **S 19 34 06.6 -0.7**
BJI pmax pmax
comp=Z,6.0nm,0.7s
BJI LR LR
comp=Z,93nm,29.2s
BJI LR LR
comp=Z,98nm,26.1s
TIY Taiyuan 76.49 317 *e*P **P 19 24 38.8 +1.5**
TIY S **S 19 34 16.3 -1.3**
TIY pmax pmax
comp=Z,23nm,0.6s
TIY pmax pmax
comp=Z,180nm,7.6s
TIY LR LR
comp=Z,81nm,5.1s
TIY LR LR
comp=Z,120nm,4.2s
LAMP Lampang 76.79 295 P P 19 24 40.9 +1.7
XAN Xi'an 76.79 313 P P 19 24 38.8 -0.2
XAN pmax pmax
comp=Z,23nm,1.1s
XAN LR LR
comp=Z,190nm,15.8s
XAN LR LR
comp=Z,190nm,7.8s
XAN Xi'an 76.79 313 *e*P **P 19 24 38.8 -0.2**
XAN Xi'an 76.79 313 *e*P **P 19 24 38.8 -0.2**
PAYA Payao 76.93 296 P P 19 24 42.1 +2.1
KMI Kunming 77.04 302 P P 19 24 43.0 +2.2
KMI pP pP 19 25 02.1 +2.6
KMI sP sP 19 25 09.6 +2.5
KMI S **S 19 34 25.2 +0.8**
KMI sS sS 19 35 00.6 +5.0
KMI pmax pmax
comp=Z,27nm,1.0s
KMI pmax pmax
comp=Z,230nm,5.9s
KMI LR LR
comp=Z,140nm,17.3s
KMI LR LR
comp=Z,160nm,23.3s
KMI LR LR
comp=Z,300nm,28.3s
KMI Kunming 77.04 302 *e*P **P 19 24 40.4 -0.4**
comp=Z,71nm,1.5s
KMI Kunming 77.04 302 *e*P **P 19 24 40.4 -0.4**
KMI pmax pmax
comp=Z,71nm,1.5s
CM31 Chiang Mai Arr 77.36 294 *e*P **P 19 24 43.3 +0.9**
CMAR Chiang Mai Arr 77.36 294 P P 19 24 43.6 +1.2
comp=Z,9.4nm,0.8s,baz=134,slow=4.6,SNR=64
CMAR PKiKP **PKiKP 19 30 23.1 +0.2**
comp=Z,0.4nm,0.7s,baz=180,slow=1.0,SNR=4.2
CMMT Chiang Mai 77.50 295 P P 19 24 44.4 +1.2
CHTO Chiang Mai 77.50 295 *e*P **P 19 24 41.8 -1.4**
comp=Z,13nm,0.8s
CHTO Chiang Mai 77.50 295 *e*P **P 19 24 41.8 -1.4**
CHTO pmax pmax
comp=Z,13nm,0.8s
SDPT Sand Point 77.77 18 *e*P **P 19 24 42.8 -1.1**
comp=Z,48nm,1.1s
MA2 Magadan 78.73 351 P P 19 24 48.6 -0.5
comp=Z,12nm,0.8s,baz=152,slow=5.6,SNR=19
MA2 Magadan 78.73 351 *e*P **P 19 24 47.4 -1.7**
comp=Z,13nm,0.8s
MA2 Magadan 78.73 351*de*P **P 19 24 49.0 -0.1**
MA2 pmax pmax
comp=Z,52nm,2.5s
HHC Hu-ho-hao-te 78.87 320 *e*P **P 19 24 51.6 +1.1**
HHC sP sP 19 25 18.4 +1.2
HHC S **S 19 34 44.1 +0.8**
HHC sS sS 19 35 13.5 -1.8
HHC pmax pmax
comp=Z,45nm,0.9s
HHC pmax pmax
comp=Z,280nm,6.4s
HHC LR LR
comp=Z,150nm,18.4s
HHC LR LR
comp=Z,600nm,17.3s
HHC LR LR
comp=Z,840nm,17.5s
CD2 Chengdu 78.95 308 *e*P **P 19 24 51.0 -0.1**
CD2 pP pP 19 25 12.6 +2.6
CD2 PP **PP 19 27 46.2 -4.8**
CD2 S **S 19 34 42.0 -2.4**
CD2 pmax pmax
comp=Z,470nm,4.5s
CD2 LR LR
comp=Z,540nm,23.5s
CD2 LR LR
comp=Z,550nm,19.1s
CHGN Chignik 79.18 18 *e*P **P 19 24 51.2 -0.4**
comp=Z,138nm,1.9s
MAW Mawson 79.21 202 LR LR 19 55 05.6
comp=Z,370nm,20.7s,baz=99,slow=32
MAW Mawson 79.21 202 P P 19 24 47.7 -4.1
baz=79,SNR=13
BTO Baotou 79.69 319 *e*P **P 19 24 54.8 -0.1**
ZEA Zeya 79.82 337 *e*P **P 19 24 55.9 +0.7**
ZEA *e*S **S 19 34 57.0 +4.6**
ZEA *e* 19 35 30.0
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,32nm,1.0s
ZEA pmax pmax
comp=Z,400nm,5.0s
ZEA smax smax
comp=N,200nm,6.0s
LZH Lanzhou 81.41 312⇑P **P 19 25 05.7 +1.3**
LZH pP pP 19 25 25.6 +2.3
LZH sP sP 19 25 32.4 +1.5
LZH S **S 19 35 10.8 +0.5**
LZH sS sS 19 35 42.2 +0.2
LZH pmax pmax
comp=N,61nm,1.3s
LZH pmax pmax
comp=N,110nm,5.0s
LZH LR LR
comp=N,490nm,17.3s
LZH LR LR
comp=N,380nm,16.7s
LZH LR LR
comp=N,510nm,18.5s
OHAK Old Harbor 81.53 20 *e*P **P 19 25 03.4 -0.8**
comp=N,41nm,1.5s
SEY Seymchan 81.75 353 P **P 19 25 05.3 +0.1**
comp=N,14nm,0.7s,baz=156,slow=5.0,SNR=41
SEY Seymchan 81.75 353*ce*P **P 19 25 05.2 0.0**
KDAK Kodiak Island 82.21 20 *e*P **P 19 25 08.3 +0.5**
comp=N,65nm,1.7s
KDAK Kodiak Island 82.21 20 *e*P **P 19 25 08.3 +0.5**
KDAK pmax pmax
comp=Z,65nm,1.7s
CNPM China Poot 84.03 19 *e*P **P 19 25 17.7 +0.5**
comp=Z,28nm,0.6s
BRLK Bradley Lake 84.33 19 *e*P **P 19 25 18.7 0.0**
comp=Z,16nm,0.6s
KCPM Cahto Peak 85.47 46 *e*P **P 19 25 25.6 +0.5**
comp=Z,39nm,1.1s
HOPS Hopland Field 85.50 47 *e*P **P 19 25 23.5 -1.5**
comp=Z,53nm,1.3s
ULN Ulaanbaatar 85.51 324 *e*P **P 19 25 24.7 -0.3**
comp=Z,153nm,2.0s
ULN Ulaanbaatar 85.51 324*de*P **P 19 25 25.5 +0.4**
ULN pmax pmax
comp=Z,55nm,1.7s
YAK Yakutsk 85.56 343 *e*P **P 19 25 24.0 -0.7**
comp=Z,65nm,0.7s
YAK Yakutsk 85.56 343 *e*P **P 19 25 24.5 -0.3**
YAK *e*S **S 19 35 48.4 -2.2**
YAK *e* 19 36 46.4
KMRM Mail Ridge 85.63 45 *e*P **P 19 25 26.8 +1.0**
comp=Z,146nm,1.9s
SAO San Andreas Ge 85.64 49 *e*P **P 19 25 26.3 +0.5**

comp=Z,23nm,1.0s
SCZ2 Santa Cruz Isl 85.78 52 P P 19 25 27.4 +0.9
baz=245
GTA Gaotai 85.80 314⇓P **P 19 25 27.3 +0.6**
GTA pP pP 19 25 46.9 +1.1
GTA sP sP 19 25 56.6 +3.2
GTA S **S 19 35 57.9 +3.6**
GTA pmax pmax
comp=Z,38nm,0.9s
GTA pmax pmax
comp=Z,200nm,4.9s
GTA LR LR
comp=Z,100nm,20.6s
GTA LR LR
comp=Z,120nm,20.6s
GTA LR LR
comp=Z,220nm,21.6s
SYO Syowa Base 85.82 196⇑*e*P **P 19 25 26.0 -0.1**
SYO Syowa Base 85.82 196⇑*e*PcP **PcP 19 25 30.6 +1.8**
SYO Syowa Base 85.82 196⇓*i*pP pP 19 25 44.8 -0.4
SONM Songino Array 85.86 323 P P 19 25 26.9 +0.1
comp=Z,10nm,0.6s,baz=142,slow=5.8,SNR=22
SONM LR LR 20 01 39.8
comp=Z,80nm,21.8s,baz=96,slow=34
BILL Bilibino 85.90 359 *e*P **P 19 25 26.0 -0.3**
comp=Z,33nm,0.9s
BILL Bilibino 85.90 359*d i*P **P 19 25 26.1 -0.3**
BILL *i* *PP **pP 19 25 46.9 +1.2**
BILL pmax pmax
comp=Z,37nm,0.9s
KHMM Horse Mountain 85.92 45 *e*P **P 19 25 28.5 +1.2**
comp=Z,43nm,1.4s
PKM Mcpherson Peak 86.03 51 P P 19 25 29.3 +1.3
baz=245
PAGB Antelope Grade 86.06 51 *e*P **P 19 25 29.2 +1.3**
comp=Z,16nm,0.9s
SMMC Simmler 86.07 51 P P 19 25 29.9 +1.9
baz=245
SHL Shillong 86.16 298 *e*P **P 19 25 29.2 +0.3**
comp=Z,27nm,0.8s
SHL Shillong 86.16 298 *e*P **P 19 25 29.2 +0.3**
SHL pmax pmax
comp=Z,27nm,0.8s
SHL Shillong 86.16 298 *e*P **P 19 25 29.0 +0.2**
O02D Mt. Diablo Mer 86.24 46 P P 19 25 30.1 +1.3
baz=243,SNR=8.3
GHO Glory Hole Cre 86.49 19 *e*P **P 19 25 28.6 -0.9**
comp=Z,5.4nm,0.8s
WDC Whiskeytown Da 86.59 45 *e*P **P 19 25 30.7 +0.3**
comp=Z,48nm,1.8s
WDC Whiskeytown Da 86.59 45 *e*P **P 19 25 30.7 +0.3**
WDC pmax pmax
comp=Z,48nm,1.8s
L02E Cave Junction 86.61 44 P P 19 25 31.5 +1.0
baz=242
N02D Trinity Center 86.66 45 P P 19 25 32.2 +1.3
baz=243
M02C Callahan 86.75 45 P P 19 25 32.6 +1.4
baz=243
K02D Willamette Mer 86.82 43 P P 19 25 33.4 +1.9
baz=242
ORV Oroville 86.84 47 *e*P **P 19 25 32.2 +0.6**
comp=Z,33nm,1.5s
ORV Oroville 86.84 47 *e*P **P 19 25 32.2 +0.6**
ORV pmax pmax
comp=Z,33nm,1.5s
ARVC Arvin 86.86 52 P P 19 25 33.5 +1.7
baz=245
CAST Castle Rocks 86.87 17 *e*P **P 19 25 29.2 -2.0**
comp=Z,7.4nm,0.8s
J01E Myrtle Point 86.87 43 P P 19 25 32.6 +1.0
baz=242
AFDM Forest Hills D 86.94 47 *e*P **P 19 25 32.5 +0.4**
comp=Z,26nm,1.1s
CMB Columbia Colle 86.95 48 *e*P **P 19 25 32.7 +0.4**
comp=Z,22nm,0.9s
CMB Columbia Colle 86.95 48 *e*P **P 19 25 32.7 +0.4**
CMB pmax pmax
comp=Z,22nm,0.9s
O03E Paynes Creek 86.96 46 P P 19 25 32.7 +0.4
baz=243,SNR=8.6
YBH Yreka Blue Hor 87.00 44 *e*P **P 19 25 33.2 +0.7**
comp=Z,12nm,1.0s
YBH Yreka Blue Hor 87.00 44 *e*P **P 19 25 33.2 +0.7**
YBH pmax pmax
comp=Z,12nm,1.0s
MWC Mount Wilson 87.07 53 *e*P **P 19 25 33.6 +0.5**
comp=Z,15nm,0.7s
MWC Mount Wilson 87.07 53 *e*P **P 19 25 33.6 +0.5**
MWC pmax pmax
comp=Z,15nm,0.7s
HUMO Hull Mountain 87.24 43 *e*P **P 19 25 35.2 +1.7**
comp=Z,13nm,1.0s
KTH Kantishna Hill 87.29 17 *e*P **P 19 25 32.0 -1.4**
comp=Z,4.3nm,0.7s
ISA Isabella, Lake 87.34 51 *e*P **P 19 25 35.3 +1.0**
comp=Z,18nm,0.9s
ISA Isabella, Lake 87.34 51 P P 19 25 35.2 +0.9
baz=246,SNR=18
BFSC Mount Baldy Ra 87.38 53 P P 19 25 34.7 +0.2
baz=246,SNR=5.8
EDW2 Edwards Air Fo 87.38 52 P P 19 25 34.9 +0.4
baz=246,SNR=11
TRF Thorofare Moun 87.39 17 *e*P **P 19 25 32.7 -1.2**
comp=Z,7.6nm,1.0s
MURC Murrieta 87.47 54 P P 19 25 35.6 +0.7
baz=246
L04D Klamath Falls 87.49 44 P P 19 25 35.6 +0.7
baz=243
M04C Macdoel 87.61 45 P P 19 25 36.5 +1.0
baz=243
MDPB Devils Postpil 87.72 49 *e*P **P 19 25 37.2 +1.0**
comp=Z,19nm,0.9s
RND Reindeer 87.77 18 *e*P **P 19 25 34.1 -1.5**
comp=Z,5.9nm,0.9s
RND Reindeer 87.77 18 *e*P **P 19 25 34.1 -1.5**
RND pmax pmax
comp=Z,6.0nm,0.9s
OMMB Old Mammoth Mi 87.77 49 *e*P **P 19 25 37.2 +0.6**
comp=Z,24nm,1.4s
MONP2 Monument Peak 87.79 54 P P 19 25 37.0 +0.4
baz=247,SNR=12
WAKR Walker 87.83 48 *e*P **P 19 25 37.5 +0.8**
comp=Z,25nm,1.1s
LRMC Laurel Mtn Rad 87.86 52 P P 19 25 37.4 +0.6
baz=246
IKP In-Ko-Pah, Jac 87.94 55 P P 19 25 37.9 +0.7
baz=247
CWC Cottonwood Cre 87.95 51 P P 19 25 38.1 +0.8
baz=246
PNTR Pine Nut 87.96 48 *e*P **P 19 25 37.6 +0.2**
comp=Z,22nm,1.0s
BOD Bodaibo 87.98 334 *e*P **P 19 25 36.0 -0.7**
BOD pmax pmax
comp=Z,24nm,1.6s
PFO Pinyon Flats O 88.04 54 P P 19 25 38.5 +0.8
baz=247
TIN Tinemaha, Big 88.10 50 P P 19 25 38.6 +0.7
baz=246
I04A Tendick Farm, 88.14 43 P P 19 25 38.8 +1.0
baz=243
MPMC Manual Prospec 88.24 51 P P 19 25 39.3 +0.6
baz=246,SNR=11
DAC Darwin (Calif) 88.25 51 *e*P **P 19 25 41.4 +2.7**
comp=Z,14nm,1.2s
G03D McMinnville, O 88.26 41 P P 19 25 39.7 +1.4
baz=242
H04D Lebanon 88.27 42 P P 19 25 40.0 +1.6
baz=243
SWSC Sam W. Stewart 88.29 55 P P 19 25 39.8 +1.1
baz=247
LSA Lhasa 88.30 302 *e*P **P 19 25 38.5 -0.9**
LSA Lhasa 88.30 302 *e*P **P 19 25 38.5 -0.9**
PAHR Pah Rah Range 88.38 47 *e*P **P 19 25 40.1 +0.9**
comp=Z,35nm,1.4s
GSC Goldstone, Bar 88.44 52 *e*P **P 19 25 41.0 +1.5**
comp=Z,25nm,1.5s
GSC Goldstone, Bar 88.44 52 *e*P **P 19 25 41.0 +1.5**
GSC pmax pmax
comp=Z,25nm,1.5s
GSC Goldstone, Bar 88.44 52 P P 19 25 40.7 +1.2
baz=247
RYN Ryan 88.53 49 *e*P **P 19 25 40.8 +0.9**
comp=Z,15nm,1.0s
BELC Belle Mtn. Jos 88.55 54 P P 19 25 41.1 +1.0
baz=247,SNR=16
NVAR Mina Array Bea 88.61 49 P P 19 25 41.2 +0.8

comp=Z,6.3nm,0.7s,baz=226,slow=8.0,SNR=24
NVAR LR LR 19 57 18.1
comp=Z,154nm,20.8s,baz=264,slow=30
K05A Summer Lake 88.65 44 *e*P **P 19 25 41.5 +1.0**
comp=Z,44nm,1.4s
J05D Fort Rock, OR 88.68 43 P **P 19 25 41.7 +1.2**
baz=244
MOD Modoc Plateau 88.69 45 *e*P **P 19 25 41.1 +0.5**
comp=Z,60nm,1.8s
H04A Detroit Lake 88.69 42 *e*P **P 19 25 41.4 +1.0**
comp=Z,39nm,1.5s
NV11 Mina Array Sit 88.72 49 *e*P **P 19 25 41.3 +0.5**
WRH Wood River Hil 88.80 17 *e*P **P 19 25 38.2 -2.2**
comp=Z,3.4nm,0.9s
BC3 Big Chuckawall 88.83 54 P **P 19 25 42.5 +1.1**
baz=247,SNR=7.1
FURC Furnace Creek, 88.86 51 P **P 19 25 41.9 +0.6**
baz=247,SNR=9.0
ZAK Zakamensk 88.94 324 *e*P **P 19 25 40.9 -0.6**
ZAK *e* 19 25 57.3
ZAK pmax pmax
comp=Z,11nm,1.6s
ZAK pmax pmax
comp=Z,8.0nm,1.6s
KVN Kaiserville 89.01 48 *e*P **P 19 25 42.2 0.0**
comp=Z,46nm,1.7s
KVN Kaiserville 89.01 48 *e*P **P 19 25 42.2 0.0**
KVN pmax pmax
comp=Z,46nm,1.7s
CCB Clear Creek Bu 89.01 17 *e*P **P 19 25 39.7 -1.7**
comp=Z,3.0nm,0.8s
I05D Terrebonne, OR 89.08 42 P **P 19 25 43.2 +0.9**
baz=244
HDA Harding Lake 89.08 18 *e*P **P 19 25 41.3 -0.4**
comp=Z,8.8nm,0.9s
GLA Glamis 89.09 55 *e*P **P 19 25 43.0 +0.5**
comp=Z,64nm,1.8s
GLA Glamis 89.09 55 P **P 19 25 43.7 +1.1**
baz=248,SNR=5.1
PINE Pine Mountain 89.09 43 *e*P **P 19 25 43.2 +0.6**
comp=Z,43nm,1.5s
GMRC Granite Mounta 89.11 53 P **P 19 25 42.5 -0.2**
baz=247,SNR=7.3
TUQ Turquoise Moun 89.16 52 P **P 19 25 43.2 +0.3**
baz=247,SNR=11
RIDG Independent Ri 89.22 19 *e*P **P 19 25 41.1 -1.3**
comp=Z,5.8nm,1.1s
IRM Iron Mountain 89.26 54 P **P 19 25 44.6 +1.3**
baz=248,SNR=7.9
E04D Cinebar 89.31 40 P **P 19 25 44.5 +1.3**
baz=243
ILAR Eielson Array 89.37 18 P **P 19 25 41.0 -2.1**
comp=Z,2.8nm,0.6s,baz=237,slow=4.6,SNR=32
ILAR LR LR 19 58 52.6
comp=Z,213nm,21.9s,baz=246,slow=31
ILB Eielson Array 89.37 18 *e*P **P 19 25 41.4 -1.6**
TLY Talaya 89.40 326 *e*P **P 19 25 42.5 -1.0**
comp=Z,14nm,0.7s
TLY Talaya 89.40 326 *e*P **P 19 25 43.6 +0.1**
TLY *e*PS **PS 19 37 53.5 +11**
TLY pmax pmax
comp=Z,31nm,0.8s
TLY MLR MLR
comp=Z,249nm,19.0s
D03D Eldon 89.45 39 P **P 19 25 45.3 +1.5**
baz=242
TPNV Topopah Spring 89.51 51 *e*P **P 19 25 43.5 -1.1**
comp=Z,17nm,0.9s
TPNV Topopah Spring 89.51 51 *e*P **P 19 25 43.5 -1.1**
TPNV pmax pmax
comp=Z,17nm,0.9s
TPNV Topopah Spring 89.51 51 P **P 19 25 44.6 +0.1**
baz=247,SNR=19
Y12C Blythe 89.58 54 *e*P **P 19 25 45.6 +0.8**
comp=Z,41nm,1.6s
LDFC Landfair 89.64 53 *e*P **P 19 25 45.8 +0.7**
comp=Z,24nm,0.8s
113A Mohawk Valley, 89.81 55 *e*P **P 19 25 47.5 +1.7**
comp=Z,9.4nm,0.9s
D05A Enumclaw 89.95 40 *e*P **P 19 25 47.2 +1.0**
comp=Z,56nm,1.3s
WVOR Wild Horse Val 90.03 45 *e*P **P 19 25 47.7 +0.8**
comp=Z,33nm,1.4s
PDMCI Parker Dam,Lak 90.09 54 P **P 19 25 47.6 +0.5**
baz=248,SNR=8.8
SHPR Sheep Range 90.14 52 *e*P **P 19 25 48.5 +1.0**
comp=Z,9.9nm,1.0s
I07A Izee 90.15 43 *e*P **P 19 25 48.1 +0.8**
comp=Z,30nm,1.3s
BMN Battle Mountai 90.19 47 *e*P **P 19 25 48.4 +0.8**
comp=Z,25nm,1.2s
A04D Lummi Island 90.23 38 P **P 19 25 48.8 +1.4**
baz=242
SNAA Sanae 90.26 183 P **P 19 25 48.0 +0.6**
SNAA Sanae 90.26 183 *e*P **P 19 25 47.5 0.0**
comp=Z,13nm,0.7s
SNAA Sanae 90.26 183 *d i*P **P 19 25 47.9 +0.5**
214A Organ Pipe Nat 90.27 56 P **P 19 25 48.8 +0.7**
baz=249
B05A Bryant 90.38 39 P **P 19 25 49.4 +1.3**
baz=243
J08A Circle Bar Ran 90.53 44 *e*P **P 19 25 49.7 +0.6**
comp=Z,27nm,1.1s
R11A Troy Canyon, C 90.53 50 *e*P **P 19 25 49.9 +0.5**
comp=Z,3.4nm,1.0s
R11A Troy Canyon, C 90.53 50 P **P 19 25 49.4 +0.1**
baz=247,SNR=9.5
W13A Hualapai Mount 90.58 53 *e*P **P 19 25 50.2 +0.6**
comp=Z,9.7nm,0.8s
LTY Liberty 90.79 40 *e*P **P 19 25 50.4 +0.2**
comp=Z,25nm,1.6s
VNA3 Neumayer Olymp 90.88 181 P **P 19 25 50.5 +0.3**
G08A Pilot Rock 91.02 42 *e*P **P 19 25 52.0 +0.6**
comp=Z,19nm,1.0s
HAWA Hanford 91.12 41 *e*P **P 19 25 51.8 +0.1**
comp=Z,22nm,1.3s
VNA2 Neumayer--Watz 91.16 181 P **P 19 25 52.1 +0.6**
baz=197,slow=3.5
E08A Dider Farm, El 91.46 41 *e*P **P 19 25 53.1 -0.1**
comp=Z,17nm,1.0s
VNA1 Neumayer--Stat 91.46 181 P **P 19 25 53.4 +0.6**
TOLK Toolik Lake Re 91.62 14 P **P 19 25 53.3 -0.2**
baz=220
ELK Elko 91.70 48 *e*P **P 19 25 55.2 +0.4**
comp=Z,5.4nm,0.9s
ELK Elko 91.70 48 *e*P **P 19 25 55.2 +0.4**
ELK pmax pmax
comp=Z,5.0nm,0.9s
LCMT Little Creek M 91.76 52 *e*P **P 19 25 55.6 +0.6**
comp=Z,10nm,1.0s
PSUT Pine Spring 91.86 50 *e*P **P 19 25 56.5 +0.9**
comp=Z,5.6nm,0.7s
CCUT Cedar City 91.87 51 *e*P **P 19 25 55.8 +0.2**
comp=Z,7.1nm,1.0s
BMO Blue Mountains 91.91 43 *e*P **P 19 25 55.5 +0.1**
comp=Z,18nm,1.7s
BMO Blue Mountains 91.91 43 *e*P **P 19 25 55.6 +0.1**
BMO pmax pmax
comp=Z,18nm,1.7s
TUC Tucson 92.00 57 P **P 19 25 57.5 +1.3**
baz=250
KNB Kanab 92.08 52 *e*P **P 19 25 58.0 +1.5**
comp=Z,12nm,1.1s
KNB Kanab 92.08 52 *e*P **P 19 25 58.0 +1.5**
KNB pmax pmax
comp=Z,12nm,1.1s
B08A Colville Reser 92.08 39 *e*P **P 19 25 56.3 +0.2**
comp=Z,23nm,1.6s
SZCU Shurtz Canyon 92.09 51 *e*P **P 19 25 56.7 +0.1**
comp=Z,5.5nm,0.7s
X16A Lo Mia Camp, P 92.21 55 *e*P **P 19 25 58.0 +0.7**
comp=Z,9.9nm,0.9s
U15A North Rim 92.26 52 *e*P **P 19 25 58.1 +0.5**
comp=Z,18nm,1.1s
F10A Beach Ranch, E 92.41 42 *e*P **P 19 25 58.3 +0.5**
comp=Z,36nm,1.8s
WUAZ Wupatki 92.64 54 *e*P **P 19 25 59.3 +0.1**
comp=Z,9.3nm,1.1s
WUAZ Wupatki 92.64 54 P **P 19 26 00.6 +1.4**
baz=250
319A Douglas 92.89 58 *e*P **P 19 26 00.8 +0.5**
comp=Z,12nm,0.8s
MTPU Mount Pierson 92.91 51 *e*P **P 19 26 02.0 +1.4**
comp=Z,6.0nm,1.0s
DUG Dugway, Tooele 93.22 49 P **P 19 26 02.5 +0.8**
baz=249
HLID Hailey 93.33 45 P **P 19 26 02.9 +0.7**
baz=248

NEW Newport 93.38 40 P **P 19 26 03.6 +1.5**
baz=247
TIXI Tiksi 93.48 348 P **P 19 26 00.9 -1.0**
comp=Z,3.1nm,0.4s,baz=131,slow=6.8,SNR=18
TIXI Tiksi 93.48 348 *e*P **P 19 25 59.7 -2.2**
comp=Z,7.7nm,1.1s
TIXI Tiksi 93.48 348 *c e*P **P 19 26 01.4 -0.5**
TIXI pmax pmax
comp=Z,7.0nm,1.1s
EPYK Eagle Plains 93.54 19 P **P 19 26 04.1 +1.7**
baz=231
INK Inuvik 95.70 18 P **P 19 26 11.9 -0.3**
comp=Z,1.6nm,0.8s,baz=300,slow=4.6,SNR=4.6
INK PKiKP **PKiKP 19 30 52.0 +0.6**
comp=Z,1.6nm,1.0s,baz=209,slow=6.3,SNR=3.6
INK Inuvik 95.70 18 *e*P **P 19 26 11.3 -0.8**
comp=Z,10nm,1.5s
WMQ Urumqi 95.88 314 P **P 19 26 14.2 +0.5**
WMQ pP pP 19 26 32.7 -0.3
WMQ sP sP 19 26 40.9 +0.4
WMQ pmax pmax
comp=Z,28nm,1.1s
WMQ pmax pmax
comp=Z,160nm,5.5s
WMQ LR LR
comp=Z,260nm,16.3s
WMQ LR LR
comp=Z,280nm,26.5s
WMQ LR LR
comp=Z,590nm,24.5s
BOZ Bozeman (W) 95.91 44 P **P 19 26 15.2 +1.3**
baz=250
MNTX Cornudas Mount 96.15 59 P **P 19 26 16.1 +0.9**
baz=253
TASM ASL Pad, Albuq 96.26 55 P **P 19 26 16.7 +0.8**
baz=252
TASM ASL Pad, Albuq 96.26 55 P **P 19 26 16.5 +0.6**
baz=252
ANMO Albuquerque 96.27 55 P **P 19 26 16.5 +0.6**
baz=252
PDAR Pinedale Array 96.39 47 LR LR 20 01 02.1
comp=Z,78nm,21.2s,baz=260,slow=30
TX31 Lajitas Ar. Si 96.88 62 *e*P **P 19 26 19.9 +1.3**
TXAR Lajitas Array 96.88 62 P **P 19 26 19.6 +1.0**
comp=Z,1.2nm,0.7s,baz=220,slow=6.1,SNR=16
TXAR LR LR 20 03 11.0
comp=Z,78nm,18.9s,baz=0.0,slow=31
SDCO Great Sand Dun 97.83 53 P Pdif 19 26 23.1 +0.1
baz=253
MSTX Muleshoe 98.91 57 P **P 19 26 27.5 -0.1**
baz=254
PLCA Paso Flores 99.88 139 LR LR 20 03 24.8
comp=Z,68nm,21.4s,baz=270,slow=30
YKA Yellowknife Ar 100.00 27 P **Pdif 19 26 31.3 -0.4**
comp=Z,0.4nm,0.4s,baz=256,slow=5.1,SNR=4.2
MK31 Makanchi Array 100.40 316 *e*Pdif **Pdif 19 26 33.0 -0.8**
MK31 Makanchi Array 100.40 316 *e*P **Pdif 19 26 33.1 -0.8**
MKAR Makanchi Array 100.40 316 P **Pdif 19 26 33.9 0.0**
comp=Z,3.6nm,0.5s,baz=90,slow=6.6,SNR=52
MKAR PKiKP **PKiKP 19 31 00.4 -0.1**
comp=Z,0.7nm,0.6s,baz=99,slow=1.6,SNR=7.1
MKAR PKKPbc **PKKPbc 19 42 48.4 -2.8**
comp=Z,0.5nm,0.6s,baz=269,slow=4.3,SNR=6.1
MAKZ Makanchi 100.62 316 *e*Pdif **Pdif 19 26 34.7 -0.1**
MAKZ Makanchi 100.62 316 *e*P **Pdif 19 26 34.7 -0.1**
ZAA0 Zalesovo Array 100.76 323 *e*Pdif **Pdif 19 26 33.7 -1.6**
ZALV Zalesovo Beam 100.76 323 P **Pdif 19 26 34.3 -0.9**
comp=Z,1.9nm,0.6s,baz=127,slow=3.2,SNR=9.5
ZALV PKiKP **PKiKP 19 31 00.2 -0.6**
comp=Z,0.4nm,0.5s,baz=354,slow=1.5,SNR=3.5
PDGK Podgornoye 101.45 312 P **Pdif 19 26 40.9 +2.1**
PDGK pmax pmax
comp=Z,4.0nm,0.8s
ABKAR Akbulak array 115.54 316 *e*PKPdf **PKiKP 19 31 27.4 -1.2**
ARU Arti 115.88 325 *e*PKPdf **PKPdf 19 31 27.6 -1.4**
ARU Arti 115.88 325 *i* PKIKP **PKPdf 19 31 28.4 -0.6**
ARU 19 32 35.0
ARU 19 38 34.2
ARU SP SP 19 42 08.5 +2.0
GEYT Alibeck 116.77 304 PKP **PKPdf 19 31 31.1 -0.3**
comp=Z,5.4nm,0.7s,baz=222,slow=2.0,SNR=16
GYA0B ALIBECK ARRAY 116.77 304 *e*PKPdf **PKPdf 19 31 30.6 -0.8**
SPA0 Spitsbergen Ar 118.39 354 *e*PKPdf **PKPdf 19 31 32.7 -0.6**
PRGR Permogore 121.16 332 *e*PKIKP **PKPdf 19 31 37.2 -1.8**
PRGR pmax pmax
comp=Z,13nm,0.8s
BOSA Boshof 121.50 218 PKP **PKPdf 19 31 41.3 +0.3**
comp=Z,2.3nm,0.4s,baz=160,slow=1.2,SNR=20
HAMF Hammerfest 123.38 347 *e*PKPdf **PKPdf 19 31 41.1 -1.9**
ARCES ARCESS Array B 123.78 345 PKP **PKPdf 19 31 43.5 -0.4**
comp=Z,6.2nm,0.3s,baz=82,slow=2.0,SNR=54
ARCES PKKPab **PKKPab 19 41 30.5 +0.6**
comp=Z,2.9nm,1.0s,baz=220,slow=2.2,SNR=3.9
ARE0 ARCESS Array S 123.78 345 *e*PKPdf **PKPdf 19 31 43.7 -0.2**
KLMR Klimovskoe 124.18 333 *e*PKIKP **PKPdf 19 31 43.9 -0.9**
KLMR pmax pmax
comp=Z,12nm,0.7s
KLMR Klimovskoe 124.18 333 *e*PKPdf **PKPdf 19 31 43.9 -0.9**
KLMR AMP 19 31 45.3
comp=Z,12nm,0.7s
KTK1 Kautokeino 124.71 346 *e*PKPdf **PKPdf 19 31 44.7 -0.9**
TRO Tromso 125.18 347 *e*PKPdf **PKPdf 19 31 45.9 -0.6**
VRH Novokhopyorsk 126.72 321 *e*PKIKP **PKPdf 19 31 49.5 -0.5**
VRH pmax pmax
comp=Z,30nm,0.7s
GNI Garni 127.08 307 *e*PKPdf **PKiKP 19 31 52.1 +0.3**
GNI Garni 127.08 307 *c i*PKIKP **PKiKP 19 31 52.6 +0.8**
GNI pmax pmax
comp=Z,100nm,1.7s
SALU Saltoluokta 127.10 346 *e*P **PKPdf 19 31 49.9 -0.4**
ZEI Tsey 127.31 310 *i* PKIKP **PKPdf 19 31 51.6 -0.1**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
AKH Akhalkalaki 127.84 309 *e*PKPdf **PKiKP 19 31 53.6 +0.3**
AKH Akhalkalaki 127.84 309 ⇑*i*P **PKiKP 19 31 54.4 +1.1**
AKH Akhalkalaki 127.84 309 *e*PKIKP **PKiKP 19 31 53.6 +0.3**
KBZ Khabaz 127.85 312 PKP **PKiKP 19 31 53.1 +0.2**
comp=Z,2.5nm,0.7s,baz=112,slow=4.2,SNR=6.4
LPSR Galich'ya Gora 127.87 323 *e*PKIKP **PKiKP 19 31 53.1 +0.4**
LPSR pmax pmax
comp=Z,20nm,0.9s
KIV Kislovodsk 127.95 312 *i* PKIKP **PKPdf 19 31 52.2 -0.5**
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,215nm,23.0s
OBN Obninsk 128.14 327 *i* PKIKP **PKPdf 19 31 52.5 0.0**
OBN *i* 19 34 04.3
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,175nm,22.0s
VSR Storozhevoye 128.23 322 *e*PKIKP **PKPdf 19 31 52.6 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.8s
LSZ Lusaka 128.69 232 *e*PKPdf **PKiKP 19 31 56.0 +0.3**
LSZ Lusaka 128.69 232 *e*PKIKP **PKiKP 19 31 56.0 +0.3**
DAGI Agilar 129.06 309 *i* P **PKiKP 19 31 55.8 +0.1**
DAGI IAML_P
comp=Z,139nm,0.7s
BATM Batumi 129.13 309 ⇑*i*P **PKiKP 19 31 56.1 +0.5**
BCA Borcka 129.22 309 ⇓*i*P **PKiKP 19 31 55.7 -0.1**
DBAD Bademkaya 129.24 308 *i* P **PKiKP 19 31 56.4 +0.4**
DBAD IAML_P
comp=Z,420nm,0.6s
FINES FINESS Array B 129.25 338 PKP **PKPdf 19 31 54.2 -0.3**
comp=Z,3.0nm,0.5s,baz=20,slow=3.2,SNR=24
VSU Vasula 130.93 334 *e*P **PKPdf 19 31 57.4 -0.4**
VSU IAmb IAmb 19 31 59.1
comp=Z,37nm,0.7s
KELT Kelkit 131.23 308 *i* P **PKiKP 19 32 01.3 +1.2**
KELT IAML_P
comp=Z,218nm,0.8s
IDID Didziasalis 132.85 331 *e*P **PKPdf 19 32 01.6 +0.1**
IDID IAmb IAmb 19 32 03.5
comp=Z,7.0nm,0.8s
IIGN Ignalina 133.07 331 *e*P **PKPdf 19 32 01.6 -0.3**
IIGN IAmb IAmb 19 32 04.0
comp=Z,8.2nm,0.6s
SIM Simferopol' 133.58 315 *i* PKIKP **PKPdf 19 32 03.7 +0.5**
SIM pmax pmax
comp=Z,11nm,0.8s
SIM MLR MLR
comp=N,70nm,20.0s
DOMB Dombas 133.78 347 *e*PKPdf **PKPdf 19 32 03.9 +0.7**

NC303 NORSAR Array S 133.95 345 *e*PKPdf **PKPdf 19 32 03.9 +0.4**
PABE Paberze 133.98 333 *e*P **PKPdf 19 32 03.7 +0.1**
PABE IAmb IAmb 19 32 05.6
comp=Z,19nm,0.7s
AKASG Malin Array Be 134.13 325 PKP **PKPdf 19 32 03.5 -0.5**
comp=Z,3.8nm,0.6s,baz=78,slow=2.5,SNR=12
AKBB Malin Array Si 134.13 325 *e*PKPdf **PKPdf 19 32 03.5 -0.5**
AKBB Malin Array Si 134.13 325 *e*PKIKP **PKPdf 19 32 03.6 -0.5**
NB2 NORSAR Subarra 134.15 345 PKPdf **PKPdf 19 32 04.1 +0.2**
comp=Z,4.5nm,0.9s,baz=31,slow=1.9
NOA NORSAR Array B 134.15 345 PKP **PKPdf 19 32 03.4 -0.4**
comp=Z,2.6nm,0.6s,baz=30,slow=2.0,SNR=20
NBO00 NORSAR Array S 134.27 345 *e*PKPdf **PKiKP 19 32 05.2 -0.3**
NC602 NORSAR Array S 134.33 344 *e*PKPdf **PKPdf 19 32 03.9 -0.2**
SIRC Yozgat 134.50 308 *i* P **PKPdf 19 32 05.8 +0.5**
SIRC IAML_P
comp=Z,278nm,0.6s
PBUR Paburg 134.50 334 *e*P **PKPdf 19 32 04.7 +0.1**
PBUR IAmb IAmb 19 32 05.9
comp=Z,18nm,0.7s
CDAG Cicekdag 135.00 308 *i* P **PKPdf 19 32 06.5 +0.3**
CDAG IAML_P
comp=Z,208nm,0.3s
DELI KIRIKKALE 135.24 309 *i* P **PKPdf 19 32 07.0 +0.4**
DELI IAML_P
comp=Z,322nm,0.8s
GULE Gulek 135.25 305 *i* P **PKiKP 19 32 08.6 +0.3**
MMAI Mount Meron Ar 135.48 299 SKPbc **SKPbc 19 35 34.1 +1.8**
comp=Z,1.8nm,0.7s,baz=86,slow=2.8,SNR=4.4
BR131 Keskin Array S 135.52 309 *e*PKPdf **PKPdf 19 32 06.2 -1.1**
BRTR Keskin Array B 135.52 309 PKhKP PKPpre 19 31 53.8
comp=Z,0.6nm,0.7s,baz=350,slow=1.4,SNR=3.6
BRTR PKP **PKPdf 19 32 07.9 +0.7**
comp=Z,2.3nm,0.7s,baz=116,slow=4.4,SNR=9.8
BRTR SKP 19 35 38.5
comp=Z,0.6nm,0.7s,baz=59,slow=4.8,SNR=3.9
MILM Milestii Mici 136.19 320 ⇑*i*P **PKPdf 19 32 06.9 -1.1**
KKUL Konya-Kulu 136.21 308 *i* P **PKiKP 19 32 09.8 -0.4**
KKUL IAML_P
comp=Z,131nm,0.7s
AUMIH MIHALICIK 137.07 310 *i* P **PKiKP 19 32 11.2 -0.7**
MDUB Mudurnu 137.10 310 *e*PKPdf **PKPdf 19 32 10.7 +0.6**
LEF Lefka 137.19 302 ⇑*i*P **PKPdf 19 32 10.4 +0.1**
CFR Carcaliu 137.39 318 ⇑*i*P **PKPdf 19 32 10.3 0.0**
CFR Carcaliu 137.39 318 ⇑PKIKP **PKPdf 19 32 10.3 0.0**
TIRR Tirgusor 137.53 317 ⇑*i*P **PKPdf 19 32 11.4 +0.8**
TIRR Tirgusor 137.53 317 ⇑PKIKP **PKPdf 19 32 11.4 +0.8**
MFTR Murfatlar 137.64 317 ⇓*i*P **PKPdf 19 32 11.5 +0.7**
TESR Tescani 137.69 321 ⇑*i*P **PKPdf 19 32 11.5 +0.6**
TLB Topalu 137.71 317 ⇓*i*P **PKPdf 19 32 11.3 +0.4**
TLB Topalu 137.71 317 ⇓PKIKP **PKPdf 19 32 11.3 +0.4**
KEPZ Antalya-Kepez 137.80 305 *i* P **PKPdf 19 32 10.9 -0.5**
KEPZ IAML_P
comp=Z,250nm,0.5s
BIZ Bicaz 137.81 321 ⇑*i*P PKPdf 19 32 03.0 -8.1
VRI Vrincioaia 137.95 320 ⇑*i*P **PKiKP 19 32 13.3 -0.1**
VRI Vrincioaia 137.95 320 ⇑PKIKP **PKiKP 19 32 13.3 -0.1**
BUR08 Bucovina Ar. S 137.97 323 *e*PKPdf **PKPdf 19 32 11.5 0.0**
BURAR Bucovina Array 137.98 323 ⇑*i*P **PKPdf 19 32 11.8 +0.3**
BURAR Bucovina Array 137.98 323 ⇑PKIKP **PKPdf 19 32 11.8 +0.3**
KWP Kalwaria Pacla 138.22 327 *e*PKPdf **PKPdf 19 32 11.7 -0.1**
MLR Muntele Rosu 138.62 320 *e*PKPdf **PKPdf 19 32 11.2 -1.6**
MLR Muntele Rosu 138.62 320 ⇑*i*P **PKPdf 19 32 11.0 -1.8**
MLR Muntele Rosu 138.62 320 ⇑PKIKP **PKPdf 19 32 11.0 -1.8**
KOLS Kolonicke sedl 138.87 326 *e*PKIKP **PKPdf 19 32 13.7 +0.8**
KOLS Kolonicke sedl 138.87 326 *e*PKP **PKPdf 19 32 13.7 +0.8**
OJC Ojcow 139.33 329 *e*PKPdf **PKPdf 19 32 12.1 -1.7**
HUMR Humele 139.68 319 ⇑*i*P **PKPdf 19 32 14.5 0.0**
ZIMR 139.85 317 ⇓*i*P **PKiKP 19 32 17.2 -0.1**
ZIMR 139.85 317 ⇓PKIKP **PKiKP 19 32 17.2 -0.1**
DRGR 139.86 323 ⇓*i*P PKPdf 19 32 06.6 -8.3
OKC Ostrava-Krasne 140.38 330 AMS AMS 20 31 10.0
comp=Z,400nm,29.1s
MORC Moravsky Berou 140.71 330 *e*PKPpre **PKPdf 19 32 10.2 -6.1**
MORC Moravsky Berou 140.71 330 ⇑*i*P PKPdf 19 32 08.4 -7.9
MORC Moravsky Berou 140.71 330 *e*PKP **PKPdf 19 32 11.1 -5.2**
PSZ Piszkesteto 140.74 326 *e*PKPpre **PKPdf 19 32 12.2 -4.3**
PSZ Piszkesteto 140.74 326 *e*PKIKP **PKPdf 19 32 12.2 -4.3**
OSTC Ostas 140.77 332 AMS AMS 20 28 30.0
comp=Z,400nm,25.4s
CHVC Chvalec 140.82 332 AMS AMS 20 28 10.0
comp=Z,400nm,24.1s
DPC Dobruska-Polom 140.87 332 *e*PKPpre **PKPdf 19 32 11.0 -5.6**
DPC AMS AMS 20 29 00.0
comp=Z,300nm,25.6s
UPC Upice 140.90 332 AMS AMS 20 28 20.0
comp=Z,500nm,30.6s
BZS Buzias 141.15 322 ⇑*i*P **PKPdf 19 32 14.4 -2.8**
BZS Buzias 141.15 322 ⇑PKIKP **PKPdf 19 32 14.4 -2.8**
JAVC Velka Javorina 141.27 329 *e*PKP **PKPdf 19 32 13.5 -3.9**
VRAC Vranov 141.48 330 ⇓*i*P **PKPdf 19 32 12.4 -5.3**
VRAC Vranov 141.48 330 *e*PKP **PKPdf 19 32 11.9 -5.8**
PVCC Panska Ves 141.51 333 *e*PKIKP **PKiKP 19 32 21.0 +0.5**
PVCC MLR MLR
comp=Z,400nm,31.0s
PVCC Panska Ves 141.51 333 *e*PKPDF **PKiKP 19 32 21.0 +0.5**
PVCC AMS AMS 20 29 20.0
comp=Z,400nm,31.0s
BRG Berggiesshubel 141.52 334 *e*PKP **PKPdf 19 32 12.7 -5.0**
comp=Z,7.4nm,0.7s
BRG PP **PP 19 35 23.0 +1.9**
BRG SS SS 19 54 03.0 +17
comp=N,182nm,23.4s
comp=E,124nm,20.1s
comp=Z,169nm,25.9s
MDVR Moldovita 141.55 321 ⇓*i*P **PKPdf 19 32 12.9 -5.1**
CLL Collm 141.57 335 *e*PKPpre **PKPdf 19 32 17.0 -0.7**
CLL *i* PKPdf **PKPdf 19 32 18.1 +0.4**
comp=Z,9.0nm,0.7s
CLL *i* pPKiKP **sPKPdf 19 32 42.9 -2.3**
comp=Z,4.0nm,0.8s
CLL LmV 19 35 00.0
comp=Z,200nm,21.5s
CLL *e*PP **PP 19 35 22.0 +0.6**
CLL *e*PKSdf **PKSdf 19 35 50.0 -3.4**
CLL *e*PSKS 19 45 30.0
CLL *e*SKKSacre 19 48 06.0
CLL *e*SS SS 19 53 54.0 +7.9
CLL *e*(SSS) 19 58 42.0
CLL Collm 141.57 335 *i* PKIKP **PKPdf 19 32 18.1 +0.4**
CLL pmax pmax
comp=Z,9.0nm,0.7s
VTS Vitosha 141.71 317 ⇑*i*P **PKPdf 19 32 13.3 -5.2**
KRUC Moravsky 141.74 330 *e*PKP **PKPdf 19 32 12.0 -6.1**
MODS Modra-Piesok 141.79 329 *e*PKIKP **PKPdf 19 32 18.3 0.0**
MODS Modra-Piesok 141.79 329 *e*PKP **PKPdf 19 32 18.3 0.0**
GOPC GO Pecny, Ondr 141.87 332 *e*PKIKP **PKiKP 19 32 21.4 +0.1**
GOPC MLR MLR
comp=Z,500nm,29.4s
GOPC GO Pecny, Ondr 141.87 332 *e*PKPDF **PKiKP 19 32 21.4 +0.1**
GOPC AMS AMS 20 29 40.0
comp=Z,500nm,29.4s
PRU Pruhonice 141.92 333 *e*PKIKP **PKPdf 19 32 15.8 -2.6**
PRU MLR MLR
comp=Z,500nm,26.6s
PRU Pruhonice 141.92 333 *e*PKPpre **PKPdf 19 32 15.8 -2.6**
PRU *e*PKPDF **PKiKP 19 32 21.0 -0.3**
PRU AMS AMS 20 29 40.0
comp=Z,500nm,26.6s
TREC Trest 142.00 331 AMS AMS 20 31 50.0
comp=Z,400nm,22.3s
FRGS Fruska Gora 142.45 323 ⇓*i*P **PKPdf 19 32 14.4 -5.2**
MORH Mrgy, Hungar 142.47 325 *e*P **PKPdf 19 32 20.7 +1.2**
NKC Novy Kostel 142.63 335 *e*PKIKP **PKPdf 19 32 16.1 -3.6**
NKC MLR MLR
comp=Z,200nm,17.7s
NKC Novy Kostel 142.63 335 *e*PKPpre **PKPdf 19 32 16.1 -3.6**
NKC *e*PKPDF **PKiKP 19 32 19.0 -3.8**
NKC AMS AMS 20 36 00.0
comp=Z,200nm,17.7s
CONA Conrad Observa 142.78 329 *e*PKPdf **PKPdf 19 32 18.0 -2.2**
comp=Z,7.3nm,0.8s,SNR=7.6
DIVS Divibare 142.96 321 *e*P **PKPdf 19 32 16.6 -4.0**
KHC Kasperske Hory 142.98 332 *e*PKIKP **PKPdf 19 32 16.7 -3.7**
KHC MLR MLR
comp=Z,300nm,22.3s
KHC Kasperske Hory 142.98 332 *e*PKPpre **PKPdf 19 32 16.7 -3.7**
KHC *e*PKPDF **PKiKP 19 32 23.1 -0.5**
KHC AMS AMS 20 31 50.0
comp=Z,300nm,22.3s
GEC2 GERESS Array S 143.14 332 *e*PKPpre **PKPdf 19 32 17.6 -3.2**
GEC2 GERESS Array S 143.14 332 *e*PKIKP PKPbc 19 32 17.6 -0.2
GERES GERESS Array B 143.14 332 PKhKP **PKPdf 19 32 17.6 -3.2**
comp=Z,6.1nm,0.7s,baz=37,slow=3.0,SNR=36

MOS ***11*** *19:27:55.6±1.0, 41°.15N×142°.86E, h50km, mb4.6/16, Error ellipse: s-maj=9.0km s-min=5.6km az=93.9*
NEIC ***11*** *19:27:58.6±1.5, 41°.28N×142°.59E, h47km±10km, mb4.5/28, Error ellipse: s-maj=22.8km s-min=11.5km az=126.0*
NEIC Recorded [1 JMA] in southwestern Hokkaido. Also recorded [1 JMA] in Aomori and Iwate, Honshu.
IDC ***11*** *19:27:58.9±2.2, 41°.18N×142°.76E, h58km±19km, mb3.9/19, mb1 4.0/24, mb1mx3.8/61, mbtmp4.2/24, ML3.4/4, MS3.7/3, Ms1 3.7/3, ms1mx3.0/34, Error ellipse: s-maj=20.3km s-min=13.4km az=111.0*
ISC 11 19:27:56.6±0.8, 41°.10N±0°.04×142°.89E±0°.04, h45km±7km, n148, σ1§68/166, mb4.4/52, 4C-16D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.94**	**12**	*e*Pn	**Pn**	**19 28 12.9**	**-0.4**
ERM				*e*Sn	**Sn**	**19 28 26.0**	**+0.3**
ERM	**Erimo**	**0.94**	**12**	*de*P	**Pn**	**19 28 13.0**	**-0.4**
ERM				pmax	pmax		
comp=Z,156nm,0.6s							
JEM	**Erimo**	**0.94**	**12**	P	**Pn**	**19 28 12.7**	**-0.7**
JEM				*e*S	**Sn**	**19 28 25.2**	**-0.5**
JARK	**Aomorirokkasho**	**1.16**	**266**	P	**Pn**	**19 28 14.9**	**-1.4**
JARK				*e*S	**Sn**	**19 28 28.9**	**-2.0**
JAHD	**Aomorihigashid**	**1.18**	**279**	⇓P	**Pn**	**19 28 15.2**	**-1.5**
JNBK	**Urakawa-nobuka**	**1.19**	**355**	⇓P	**Pn**	**19 28 16.6**	**-0.2**
JNBK				*e*S	**Sn**	**19 28 32.3**	**+0.5**
JKEN	**Kujiedanarisaw**	**1.26**	**226**	P	**Pn**	**19 28 16.3**	**-1.5**
JANG	**Nango**	**1.27**	**236**	⇓P	**Pn**	**19 28 16.6**	**-1.3**
JTM	**Tenmabayashi**	**1.41**	**258**	⇓P	**Pn**	**19 28 19.2**	**-0.7**
JTM				S	**Sn**	**19 28 36.3**	**-1.0**
JOT	**Ohata**	**1.42**	**282**	⇓P	**Pn**	**19 28 18.7**	**-1.2**
JOT				*e*S	**Sn**	**19 28 36.2**	**-1.2**
JCH	**Churui**	**1.56**	**13**	⇓P	**Pn**	**19 28 21.7**	**-0.1**
JCH				*e*S	**Sn**	**19 28 41.4**	**+0.6**
JKB	**Kayabe**	**1.60**	**300**	⇓P	**Pn**	**19 28 21.2**	**-1.2**
JKB				*e*S	**Sn**	**19 28 40.6**	**-1.3**
JIAM	**Iburiatsuma**	**1.69**	**335**	P	**Pn**	**19 28 24.7**	**+1.1**
JIAM				*e*S	**Sn**	**19 28 46.3**	**+2.3**
JBT2	**Biratori 2**	**1.73**	**347**	P	**Pn**	**19 28 24.2**	**0.0**
JBT2				*e*S	**Sn**	**19 28 45.6**	**+0.6**
JOM	**Ohasama**	**2.03**	**218**	⇓P	**Pn**	**19 28 28.5**	**+0.2**
JOM				*e*S	**Sn**	**19 28 52.7**	**+0.2**
JEW	**Eniwo**	**2.05**	**329**	P	**Pn**	**19 28 28.9**	**+0.3**
JEW				S	**Sn**	**19 28 54.4**	**+1.5**
JFR	**Furan**	**2.08**	**354**	P	**Pn**	**19 28 30.6**	**+1.6**
JFR				S	**Sn**	**19 28 56.1**	**+2.4**
JAR	**Ashorobuto**	**2.29**	**16**	P	**Pn**	**19 28 31.4**	**-0.6**
JAR				*e*S	**Sn**	**19 28 57.0**	**-2.0**
JAK	**Akkeshi**	**2.33**	**35**	⇓P	**Pn**	**19 28 31.8**	**-0.6**
JAK				*e*S	**Sn**	**19 28 58.5**	**-1.2**
ASAJ	**Asahikawa**	**3.03**	**356**	P	**Pn**	**19 28 43.0**	**+1.0**
comp=Z,21nm,0.3s,baz=210,slow=13,SNR=91							
GLVR	**Golovnino**	**3.28**	**36**	⇓*i*P	**Pn**	**19 28 45.0**	**-0.5**
GLVR				*i*S	**Sn**	**19 29 21.0**	**-2.2**
GLVR				pmax	pmax		
comp=Z,216nm,0.5s							
GLVR				pmax	pmax		
comp=E,165nm,0.4s							
GLVR				pmax	pmax		
comp=N,130nm,0.2s							
GLVR				smax	smax		
comp=N,480nm,0.3s							
GLVR				smax	smax		
comp=E,861nm,0.6s							
GRPR	**Tuman**	**3.59**	**35**	*d*iP	**Pn**	**19 28 49.1**	**-0.7**
GRPR				*i*S	**Sn**	**19 29 28.2**	**-2.7**
GRPR				pmax	pmax		
comp=Z,170nm,0.3s							
GRPR				pmax	pmax		
comp=E,77nm,0.2s							
GRPR				pmax	pmax		
comp=N,71nm,0.1s							
GRPR				smax	smax		
comp=E,647nm,0.3s							
GRPR				smax	smax		
comp=N,848nm,0.4s							
LAGR	**Lagunnoye**	**3.65**	**35**	⇓*i*P	**Pn**	**19 28 50.6**	**+0.1**
LAGR				*i*S	**Sn**	**19 29 31.0**	**-1.3**
LAGR				pmax	pmax		
comp=Z,450nm,0.3s							
LAGR				pmax	pmax		
comp=E,148nm,0.2s							
LAGR				pmax	pmax		
comp=N,361nm,0.3s							
LAGR				smax	smax		
comp=N,2μm,0.4s							
LAGR				smax	smax		
comp=E,1μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**3.67**	**36**	*d*iP	**Pn**	**19 28 50.3**	**-0.5**
YUK				*i*S	**Sn**	**19 29 30.3**	**-2.4**
YUK				pmax	pmax		
comp=E,178nm,0.3s							
YUK				pmax	pmax		
comp=Z,291nm,0.3s							
YUK				pmax	pmax		
comp=N,171nm,0.5s							
YUK				smax	smax		
comp=N,950nm,0.5s							
YUK				smax	smax		
comp=E,959nm,0.5s							
KUR	**Kuril'sk**	**5.51**	**40**	*d*iP	**Pn**	**19 29 16.3**	**+0.3**
KUR				*i*S	**Sn**	**19 30 16.9**	**-1.1**
KUR				pmax	pmax		
comp=Z,147nm,0.7s							
KUR				pmax	pmax		
comp=N,27nm,0.4s							
KUR				pmax	pmax		
comp=E,16nm,0.3s							
KUR				pmax	pmax		
comp=Z,223nm,2.8s							
KUR				pmax	pmax		
comp=N,308nm,2.9s							
KUR				smax	smax		
comp=N,98nm,0.3s							
KUR				smax	smax		
comp=E,32nm,0.2s							
KUR				smax	smax		
comp=Z,387nm,5.0s							
KUR				smax	smax		
comp=N,499nm,4.0s							
KUR				smax	smax		
comp=E,384nm,4.0s							
MJB9	**Matsu-Tunnel**	**5.83**	**220**	*e*Pn	**Pn**	**19 29 21.7**	**+1.1**
MAJO	**Matsushiro**	**5.83**	**220**	*e*Pn	**Pn**	**19 29 21.9**	**+1.3**
MAJO	**Matsushiro**	**5.83**	**220**	*e*P	**Pn**	**19 29 21.9**	**+1.3**
MAT	**Matsushiro**	**5.83**	**220**	P	**Pn**	**19 29 22.1**	**+1.5**
MJAR	**Matsushiro Arr**	**5.83**	**220**	P	**Pn**	**19 29 22.6**	**+2.0**
comp=E,0.4nm,0.3s,baz=26,slow=12,SNR=24							
MJAR				LR	LR	19 32 01.3	
comp=E,354nm,18.6s,baz=90,slow=42							
YSS	**Yuzh-Sakhalins**	**5.86**	**359**	*e*Pn	**Pn**	**19 29 20.6**	**-0.2**
YSS	**Yuzh-Sakhalins**	**5.86**	**359**	*e*P	**Pn**	**19 29 21.7**	**+0.9**
YSS				*e*S	**Sn**	**19 30 26.5**	**-0.1**
YSS				pmax	pmax		
comp=Z,10.0nm,0.9s							
YSS				MLR	MLR		
comp=Z,100nm,15.0s							
YSS				MLR	MLR		
comp=N,100nm,11.0s							
YSS				MLR	MLR		
comp=E,100nm,12.0s							
TEY	**Ternei**	**6.06**	**313**	⇑*e*P	**Pn**	**19 29 26.7**	**+3.1**
TEY				pmax	pmax		
comp=N,20nm,0.6s							
TEY				pmax	pmax		
comp=Z,20nm,0.6s							
INU	**Inuyama**	**7.37**	**221**	*e*Pn	**Pn**	**19 29 43.5**	**+1.9**
USA0B	**Ussuriysk Arra**	**8.61**	**295**	*e*Pn	**Pn**	**19 29 55.4**	**-3.2**
USA0B	**Ussuriysk Arra**	**8.61**	**295**	*e*P	**Pn**	**19 29 55.4**	**-3.2**
USRK	**Ussuriysk Ar.**	**8.61**	**295**	P	**Pn**	**19 30 00.1**	**+1.5**
comp=Z,0.6nm,0.3s,baz=95,slow=14,SNR=12							
USRK				LR	LR	19 33 26.1	
comp=Z,200nm,20.6s,baz=154,slow=38							
MDJ	**Mudanjiang**	**10.38**	**294**	*e*Pn	**Pn**	**19 30 20.0**	**-2.7**
KLR	**Kul'dur**	**11.30**	**320**	P	**Pn**	**19 30 37.4**	**+2.0**
comp=Z,0.1nm,0.3s,baz=117,slow=14,SNR=5.1							
KSRS	**Korea Array**	**12.15**	**257**	P	Pn	19 30 52.8	+5.8
comp=Z,0.7nm,0.3s,baz=64,slow=13,SNR=15							
KS15	**Wonju Array Si**	**12.19**	**257**	*e*Pn	**Pn**	**19 30 50.2**	**+2.7**
JNU	**Nakatsue**	**12.45**	**234**	*e*Pn	**Pn**	**19 30 52.5**	**+1.3**
SKR	**Severo-Kuril's**	**13.28**	**39**	*ce*P	Pn	19 30 56.5	-5.8
ZEA	**Zeya**	**16.44**	**326**	*e*P	**Pn**	**19 31 41.1**	**-2.8**
ZEA				pmax	pmax		
comp=Z,10.0nm,0.8s							
MA2	**Magadan**	**19.15**	**12**	P	**P**	**19 32 15.3**	**-0.5**
comp=Z,0.8nm,0.3s,baz=214,slow=11,SNR=3.8							
TIA	**Tai'an**	**20.67**	**265**	P	**P**	**19 32 30.9**	**-1.8**
TIA				pmax	pmax		
comp=Z,4.0nm,0.7s							
NJ2	**Nanjing**	**21.26**	**253**	*e*P	**P**	**19 32 38.8**	**-0.1**
NJ2				pmax	pmax		
comp=Z,9.0nm,0.6s							
YAK	**Yakutsk**	**22.43**	**344**	*e*P	**P**	**19 32 46.6**	**-4.7**
comp=Z,8.0nm,0.6s							
YAK	**Yakutsk**	**22.43**	**344**	*e*P	**P**	**19 32 46.5**	**-4.7**
SEY	**Seymchan**	**22.59**	**11**	P	**P**	**19 32 51.7**	**-1.2**
comp=Z,1.9nm,0.7s,baz=193,slow=12,SNR=5.9							
HHC	**Hu-ho-hao-te**	**23.59**	**280**	*e*P	**P**	**19 33 03.1**	**-0.2**
HHC				S	**S**	**19 37 04.3**	**-10**
HHC				SS	**SnSn**	**19 37 58.7**	**+4.6**
HHC				pmax	pmax		
comp=Z,12nm,1.1s							
HHC				pmax	pmax		
comp=Z,220nm,5.6s							
HHC				LR	LR		
comp=Z,200nm,15.2s							
HHC				LR	LR		
comp=Z,390nm,12.2s							
HHC				LR	LR		
comp=Z,710nm,16.0s							
WHN	**Wuhan**	**25.32**	**255**	P	**P**	**19 33 18.7**	**-0.4**
ULN	**Ulaanbaatar**	**26.27**	**297**	*e*P	**P**	**19 33 26.7**	**-1.1**
comp=Z,3.8nm,0.7s							
ULN	**Ulaanbaatar**	**26.27**	**297**	*e*P	**P**	**19 33 26.7**	**-1.1**
ULN				pmax	pmax		
comp=Z,4.0nm,0.7s							
SONM	**Songino Array**	**26.72**	**297**	P	**P**	**19 33 31.7**	**0.0**
comp=Z,3.7nm,0.6s,baz=87,slow=8.0,SNR=7.5							
H11N2	**WAKE ISLAND Hy**	**29.53**	**129**	T	T	20 05 11.4	
baz=320,slow=75,SNR=196							
H11N1	**WAKE ISLAND Hy**	**29.54**	**129**	T	T	20 05 28.2	
baz=320,slow=75,SNR=92							
H11N3	**WAKE ISLAND Hy**	**29.55**	**129**	T	T	20 05 12.7	
baz=320,slow=75,SNR=103							
BILL	**Bilibino**	**29.81**	**17**	*i*P	**P**	**19 33 56.5**	**-2.4**
BILL				pmax	pmax		
comp=Z,1.0nm,1.0s							
H11S1	**WAKE ISLAND Hy**	**30.37**	**131**	T	T	20 06 38.5	
baz=324,slow=76,SNR=84							
H11S3	**WAKE ISLAND Hy**	**30.38**	**131**	T	T	20 06 36.8	
baz=324,slow=76,SNR=62							
H11S2	**WAKE ISLAND Hy**	**30.39**	**131**	T	T	20 06 39.7	
baz=324,slow=76,SNR=44							
LZH	**Lanzhou**	**30.74**	**274**	*e*P	**P**	**19 34 10.5**	**+2.8**
LZH				pP	pP	19 34 21.8	+2.6
LZH				sP	sP	19 34 26.2	+1.8
LZH				PP	**PnPn**	**19 35 12.3**	**+3.6**
LZH				pmax	pmax		
comp=Z,17nm,1.6s							
LZH				pmax	pmax		
comp=Z,110nm,4.9s							
TIXI	**Tiksi**	**31.42**	**352**	*i*P	**P**	**19 34 11.5**	**-1.5**
CD2	**Chengdu**	**33.01**	**265**	*e*P	**P**	**19 34 26.5**	**-1.0**
DGZ	**Jazzator, Alta**	**39.08**	**302**	*i*P	**P**	**19 35 19.3**	**0.0**
DGZ				pmax	pmax		
comp=Z,5.0nm,0.7s							
ZAA0	**Zalesovo Array**	**40.14**	**309**	*e*P	**P**	**19 35 27.2**	**-0.7**
ZALV	**Zalesovo Beam**	**40.14**	**309**	P	**P**	**19 35 28.0**	**+0.1**
comp=Z,4.4nm,0.5s,baz=89,slow=9.1,SNR=17							
WMQ	**Urumqi**	**40.17**	**293**	*e*P	**P**	**19 35 28.9**	**+0.5**
WMQ				sP	sP	19 35 46.7	+1.5
WMQ				pmax	pmax		
comp=Z,19nm,1.3s							
WMQ				pmax	pmax		
comp=Z,150nm,4.7s							
WMQ	**Urumqi**	**40.17**	**293**	*e*P	**P**	**19 35 27.7**	**-0.7**
comp=Z,7.7nm,0.8s							
WMQ	**Urumqi**	**40.17**	**293**	*e*P	**P**	**19 35 27.7**	**-0.7**
WMQ				pmax	pmax		
comp=Z,8.0nm,0.8s							
MK31	**Makanchi Array**	**43.05**	**299**	*e*P	**P**	**19 35 51.3**	**-0.6**
MK31	**Makanchi Array**	**43.05**	**299**	*e*P	**P**	**19 35 51.3**	**-0.6**
MKAR	**Makanchi Array**	**43.05**	**299**	P	**P**	**19 35 51.6**	**-0.3**
comp=Z,2.1nm,0.5s,baz=84,slow=10,SNR=34							
SIJI	**Sorong**	**43.09**	**197**	P	**P**	**19 35 54.1**	**+1.7**
comp=Z,3.4nm,0.7s,baz=101,slow=13,SNR=5.0							
MAKZ	**Makanchi**	**43.26**	**299**	*e*P	**P**	**19 35 52.6**	**-0.8**
comp=Z,4.9nm,0.5s							
MAKZ	**Makanchi**	**43.26**	**299**	*e*P	**P**	**19 35 52.7**	**-0.8**
MAKZ				pmax	pmax		
comp=Z,5.0nm,0.5s							
KDAK	**Kodiak Island**	**43.36**	**45**	*e*P	**P**	**19 35 56.0**	**+1.9**
comp=Z,46nm,1.6s							
KDAK	**Kodiak Island**	**43.36**	**45**	*e*P	**P**	**19 35 56.0**	**+1.9**
KDAK				pmax	pmax		
comp=Z,47nm,1.6s							
CHTO	**Chiang Mai**	**43.50**	**253**	*e*P	**P**	**19 35 56.2**	**+0.5**
comp=Z,3.2nm,0.8s							
CM31	**Chiang Mai Arr**	**43.73**	**252**	*e*P	**P**	**19 35 58.3**	**+0.7**
comp=Z,22nm,1.9s							
CMAR	**Chiang Mai Arr**	**43.73**	**252**	P	**P**	**19 35 58.0**	**+0.4**
comp=Z,1.2nm,0.6s,baz=42,slow=7.4,SNR=13							
CMAR	**Chiang Mai Arr**	**43.73**	**252**	*ce*P	**P**	**19 35 58.2**	**+0.6**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
MLY	**Manley**	**43.82**	**34**	*e*P	**P**	**19 36 00.1**	**+2.3**
comp=Z,3.3nm,1.2s							
KURK	**Kurchatov**	**44.43**	**305**	*e*P	**P**	**19 36 02.3**	**-0.5**
comp=Z,6.0nm,0.8s							
KURK	**Kurchatov**	**44.43**	**305**	*ce*P	**P**	**19 36 02.5**	**-0.3**
KURK				pmax	pmax		
comp=Z,4.0nm,0.7s							
WRH	**Wood River Hil**	**44.98**	**35**	*e*P	**P**	**19 36 08.9**	**+1.9**
comp=Z,18nm,1.8s							
DHY	**Denali Highway**	**45.40**	**37**	*e*P	**P**	**19 36 10.9**	**+0.4**
comp=Z,9.9nm,1.8s							
ILAR	**Eielson Array**	**45.48**	**34**	P	**P**	**19 36 12.6**	**+1.6**
comp=Z,0.8nm,0.7s,baz=270,slow=6.4,SNR=10							
ILB	**Eielson Array**	**45.48**	**34**	*e*P	**P**	**19 36 11.7**	**+0.8**
comp=Z,1.6nm,0.6s							
PRP	**Porcupine Dome**	**45.99**	**33**	*e*P	**P**	**19 36 17.5**	**+2.3**
comp=Z,2.6nm,0.9s							
PDGK	**Podgornoye**	**46.00**	**295**	P	**P**	**19 36 17.7**	**+2.2**
FYU	**Fort Yukon**	**46.04**	**32**	*e*P	**P**	**19 36 17.7**	**+2.4**
comp=Z,26nm,1.9s							
DOT	**Dot Lake**	**46.82**	**36**	*e*P	**P**	**19 36 23.5**	**+1.9**
comp=Z,9.2nm,1.8s							
RAMN	**Ramite**	**47.96**	**271**	*e*P	**P**	**19 36 31.1**	**-0.1**
comp=Z,13nm,0.4s							
GUN	**Gumba**	**48.00**	**273**	*e*P	**P**	**19 36 31.5**	**-0.1**
comp=Z,27nm,0.4s							
KKN	**Kakani**	**48.52**	**273**	*e*P	**P**	**19 36 35.4**	**0.0**
comp=Z,18nm,0.7s							
PKI	**Pulchoki**	**48.53**	**273**	*e*P	**P**	**19 36 35.5**	**-0.2**
comp=Z,7.9nm,0.6s							
PKIN	**Phulchoki**	**48.54**	**273**	*e*P	**P**	**19 36 35.6**	**-0.1**
comp=Z,6.6nm,0.5s							
BOOM	**Boomskoye usch**	**48.73**	**295**	*e*P	**P**	**19 36 36.9**	**0.0**
comp=Z,7.4nm,1.1s							
BOOM	**Boomskoye usch**	**48.73**	**295**	*e*P	**P**	**19 36 36.9**	**0.0**
BOOM				pmax	pmax		
comp=Z,7.0nm,1.1s							
BRVK	**Borovoye**	**48.82**	**310**	*e*P	**P**	**19 36 37.1**	**0.0**
comp=Z,4.9nm,0.7s							
BRVK	**Borovoye**	**48.82**	**310**	*i*P	**P**	**19 36 36.6**	**-0.5**
BRVK				pmax	pmax		
comp=Z,2.0nm,0.8s							
GKN	**Gorkha**	**48.89**	**274**	*e*P	**P**	**19 36 38.3**	**+0.1**
comp=Z,8.3nm,0.3s							
DANN	**Dangsing**	**49.37**	**275**	*e*P	**P**	**19 36 42.6**	**+0.5**
comp=Z,28nm,0.4s							
EPYK	**Eagle Plains**	**49.45**	**32**	*e*P	**P**	**19 36 44.4**	**+2.6**
PYUN	**Piuthan**	**50.08**	**275**	*e*P	**P**	**19 36 48.1**	**+0.7**
comp=Z,7.5nm,0.4s							
INK	**Inuvik**	**50.27**	**29**	P	**P**	**19 36 49.7**	**+1.8**
comp=Z,1.1nm,0.5s,baz=263,slow=4.2,SNR=8.3							
INK	**Inuvik**	**50.27**	**29**	*e*P	**P**	**19 36 49.5**	**+1.6**
comp=Z,2.3nm,1.0s							
KULM	**Kulim**	**51.89**	**238**	*e*P	**P**	**19 37 02.4**	**+1.6**
comp=Z,30nm,1.3s							
KK31	**Karatay Array**	**52.16**	**298**	*e*P	**P**	**19 37 01.4**	**-1.1**
KK31	**Karatay Array**	**52.16**	**298**	*e*P	**P**	**19 37 01.4**	**-1.1**
KKAR	**Karatay Array**	**52.16**	**298**	*e*P	**P**	**19 37 01.6**	**-1.0**
comp=Z,3.3nm,0.8s							
KKAR	**Karatay Array**	**52.16**	**298**	*e*P	**P**	**19 37 01.6**	**-1.0**
KKAR				pmax	pmax		
comp=Z,3.0nm,0.8s							
ARU	**Arti**	**54.13**	**317**	*e*P	**P**	**19 37 16.1**	**-0.7**
comp=Z,3.6nm,0.9s							
ARU	**Arti**	**54.13**	**317**	*d*iP	**P**	**19 37 16.7**	**0.0**

NIED ***11*** *19:27:00, 41°.10N×142°.80E, h32km, Mw4.1 Best double couple: M0 1.63000×10^15 NP1:φs 201.00000°, δ14.00000°, λ96.00000°. NP2:φs 15.00000°, δ76.00000°, λ88.00000°.*
BJI ***11*** *19:27:53.8±0.0, 41°.01N×143°.03E, h48km, mb4.5/34, mB4.8/26, Ms4.1/5, Ms7 3.9/3*
JMA ***11*** *19:27:55.1±0.2, 41°.08N×142°.81E, h25km±4km, M4.1*
JMA Felt I J1.
ISCJB ***11*** *19:27:55.5±0.4, 41°.11N±0°.03×142°.89E±0°.04, h48km±3km, mb4.3/52, MS4.3/2, Error ellipse: s-maj=5.9km s-min=2.9km az=40.5*

ARU				*PP	**pwP**	**19 37 31.2**	**+0.1**
ARU						19 39 13.7	
ARU				S	**S**	**19 44 52.4**	**+2.5**
ARU				SS	**SS**	**19 48 36.3**	**+4.9**
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ABKAR	**Akbulak array**	**56.26**	**309**	*eP*	**P**	**19 37 31.6**	**-0.6**
	comp=Z,4.1nm,0.6s						
ARCES	**ARCESS Array B**	**60.61**	**339**	P	**P**	**19 38 02.7**	**+0.5**
	comp=Z,6.4nm,0.3s,baz=57,slow=8.7,SNR=4.0						
GEYT	**Alibeck**	**62.92**	**298**	P	**P**	**19 38 17.9**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=45,slow=4.4,SNR=5.7						
ASAR	**Alice Springs**	**64.97**	**189**	P	**P**	**19 38 32.5**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=9.4,slow=6.1,SNR=9.8						
OBN	**Obninsk**	**65.55**	**323**	*i* P	**P**	**19 38 34.7**	**-0.4**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FIA1	**FINESS Array S**	**65.77**	**332**	*eP*	**P**	**19 38 35.9**	**-0.6**
	comp=Z,6.0nm,0.7s						
FINES	**FINESS Array B**	**65.77**	**332**	P	**P**	**19 38 36.2**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=42,slow=7.3,SNR=23						
SUMG	**Summit**	**66.62**	**0**	*eP*	**P**	**19 38 42.4**	**+0.1**
	comp=Z,12nm,1.4s						
SUMG	**Summit**	**66.62**	**0**	*eP*	**P**	**19 38 42.4**	**+0.1**
SUMG				pmax	pmax		
	comp=Z,12nm,1.4s						
KIV	**Kislovodsk**	**69.13**	**310**	*eP*	**P**	**19 38 57.0**	**-1.2**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KBZ	**Khabaz**	**69.15**	**310**	P	**P**	**19 38 59.4**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=21,slow=3.3,SNR=5.6						
HFS	**Hagfors**	**70.86**	**336**	P	**P**	**19 39 08.3**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=44,slow=6.6,SNR=12						
NB2	**NORSAR Subarra**	**70.89**	**337**	P	**P**	**19 39 08.0**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**70.89**	**337**	P	**P**	**19 39 08.3**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=37,slow=6.1,SNR=8.7						
AKASG	**Malin Array Be**	**71.79**	**322**	P	**P**	**19 39 13.9**	**-0.2**
	comp=Z,2.4nm,0.4s,baz=44,slow=6.7,SNR=12						
AKASG	**Malin Array Be**	**71.79**	**322**	P	**P**	**19 39 14.0**	**-0.2**
AKBB	**Malin Array Si**	**71.79**	**322**	*eP*	**P**	**19 39 13.7**	**-0.4**
	comp=Z,4.4nm,0.7s						
AKBB	**Malin Array Si**	**71.79**	**322**	*eP*	**P**	**19 39 13.7**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BUR08	**Bucovina Ar. S**	**75.82**	**322**	*eP*	**P**	**19 39 38.1**	**+0.2**
	comp=Z,3.3nm,0.8s						
KOLS	**Kolonicke sedl**	**76.21**	**324**	*eP*	**P**	**19 39 40.9**	**+0.9**
KOLS	**Kolonicke sedl**	**76.21**	**324**	*eP*	**P**	**19 39 40.9**	**+0.9**
MORC	**Moravsky Berou**	**77.58**	**327**	*eP*	**P**	**19 39 47.9**	**+0.2**
	comp=Z,3.5nm,0.9s						
MORC	**Moravsky Berou**	**77.58**	**327**	*eP*	**P**	**19 39 47.9**	**+0.2**
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	**Collm**	**78.14**	**331**	*i* P	**P**	**19 39 51.0**	**+0.3**
	comp=Z,4.0nm,1.0s						
CLL	**Collm**	**78.14**	**331**	*i* P	**P**	**19 39 51.0**	**+0.3**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**79.68**	**341**	P	**P**	**19 39 59.7**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=26,slow=5.6,SNR=4.3						
GERES	**GERESS Array B**	**79.86**	**329**	P	**P**	**19 40 00.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=56,slow=5.0,SNR=5.3						
MMAI	**Mount Meron Ar**	**80.54**	**306**	P	**P**	**19 40 05.2**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=39,slow=5.4,SNR=7.4						
SCHQ	**Schefferville**	**81.12**	**17**	LR	LR	20 18 16.6	
	comp=Z,216nm,21.5s,baz=305,slow=37						
SNAA	**Sanae**	**144.96**	**198**	PKPdf	**PKPdf**	**19 47 27.3**	**-0.3**
VNA2	**Neumayer--Watz**	**146.53**	**197**	PKPdf	**PKPbc**	**19 47 32.1**	**+0.4**
	baz=118,slow=1.7						
VNA3	**Neumayer Olymp**	**146.78**	**196**	PKPdf	**PKPbc**	**19 47 32.5**	**0.0**

THE ***11*** *19:31:26.0, 38.°15N×23.°19E, h13km±1km, ML1.8/7, Error ellipse: s-maj=1.7km s-min=0.5km az=72.0*

ATH 11 19:31:26.1, 38.°16N×23.°20E, h13km±2km, ML2.0/7, Error ellipse: s-maj=2.7km s-min=0.8km az=86.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIL2	**Platees**	**0.08**	**44**	P	Pg	19 31 28.6	-0.3
VIL2				S	Sg	19 31 30.9	0.0
VIL2				AML	AML	19 31 31.1	
	comp=N,1695μm,0.2s						
VIL2				AML	AML	19 31 31.2	
	comp=E,2818μm,0.3s						
VILL	**Villia**	**0.09**	**85**	P	Pg	19 31 28.8	-0.3
VILL				S	Sg	19 31 30.9	-0.2
LTK	**Loutraki**	**0.23**	**234**	P	Pg	19 31 30.9	-0.2
LTK				S	Sg	19 31 35.0	+0.6
LOUT	**Loutraki**	**0.24**	**227**	P	Pg	19 31 30.7	-0.7
LOUT	**Loutraki**	**0.24**	**227**	P	Pg	19 31 31.2	-0.2
PROD	**Prodromos**	**0.26**	**294**	P	Pg	19 31 31.3	-0.3
PROD				S	Sg	19 31 35.8	+0.5
PROD	**Prodromos**	**0.26**	**294**	P	Pg	19 31 31.3	-0.3
PROD				S	Sg	19 31 36.1	+0.8
PROD				AML	AML	19 31 36.6	
	comp=E,1290μm,0.4s						
PROD				AML	AML	19 31 36.7	
	comp=N,1800μm,0.3s						
ATH	**Athens Observa**	**0.45**	**114**	P	Pg	19 31 35.3	+0.3
ATH				S	Sg	19 31 41.5	+0.6
ATH				AML	AML	19 31 42.2	
	comp=E,349μm,0.3s						
ATH				AML	AML	19 31 43.6	
	comp=N,184μm,0.4s						
ATHU	**Athens Univers**	**0.50**	**112**	P	Pg	19 31 36.0	0.0
LKR	**Lokris**	**0.52**	**342**	P	Pg	19 31 35.5	-0.8
LKR				S	Sb	19 31 44.0	-0.5
LKR	**Lokris**	**0.52**	**342**	P	Pg	19 31 35.7	-0.6
LKR				S	Sb	19 31 44.0	-0.5
LKR				AML	AML	19 31 44.5	
	comp=N,992μm,0.2s						
LKR				AML	AML	19 31 44.5	
	comp=E,842μm,0.2s						
VLY	**Voula,Athens**	**0.56**	**123**	P	Pg	19 31 36.8	-0.3
VLY	**Voula,Athens**	**0.56**	**123**	P	Pg	19 31 37.0	-0.1
VLY				AML	AML	19 31 47.5	
	comp=E,424μm,0.2s						
VLY				AML	AML	19 31 47.8	
	comp=N,265μm,0.2s						
DSF	**Desfina**	**0.59**	**296**	P	Pg	19 31 37.0	-0.7
DSF				S	Sb	19 31 46.3	-0.3
DSF	**Desfina**	**0.59**	**296**	P	Pg	19 31 37.0	-0.7
DSF				S	Sb	19 31 46.2	-0.4
DSF				AML	AML	19 31 47.9	
	comp=E,327μm,0.2s						
DSF				AML	AML	19 31 48.2	
	comp=N,308μm,0.2s						
MRKA	**Markates**	**0.63**	**29**	P	Pg	19 31 38.1	-0.3
MRKA				S	Sb	19 31 47.6	-0.1
MRKA	**Markates**	**0.63**	**29**	P	Pg	19 31 38.2	-0.2
MRKA				S	Sb	19 31 47.6	-0.1
EREA	**Eretria**	**0.63**	**65**	P	Pg	19 31 38.2	-0.3
EREA				S	Sb	19 31 48.5	+0.7
EREA	**Eretria**	**0.63**	**65**	P	Pg	19 31 38.3	-0.2
EREA				AML	AML	19 31 50.9	
	comp=N,169μm,0.4s						
EREA				AML	AML	19 31 51.2	
	comp=E,178μm,0.2s						
DID	**Didima**	**0.65**	**177**	P	Pg	19 31 38.0	-0.8
DID				S	Sb	19 31 48.2	-0.1
DID	**Didima**	**0.65**	**177**	P	Pg	19 31 38.5	-0.3
GUR	**Goura**	**0.71**	**252**	P	Pg	19 31 39.5	-0.5
GUR				S	Sg	19 31 49.3	-0.1
GUR	**Goura**	**0.71**	**252**	P	Pg	19 31 39.8	-0.2
KRND	**KRANIDI**	**0.77**	**183**	P	Pg	19 31 41.1	0.0
KLV	**Kalavryta, Ach**	**0.84**	**263**	P	Pb	19 31 42.5	-0.1
KALE	**Kalithea**	**0.87**	**286**	P	Pg	19 31 42.3	-0.7
TRIP	**Tripoli**	**0.97**	**230**	P	Pg	19 31 44.9	0.0

ATH ***11*** *19:36:16.1, 38.°17N×23.°23E, h23km, ML3.5/33, Error ellipse: s-maj=0.9km s-min=0.6km az=298.0*

ISCJB ***11*** *19:36:17.2±0.2, 38.°16N±0.°01×23.°24E±0.°01, h16km±2km, mb3.5/4, MS3.1/1, Error ellipse: s-maj=2.1km s-min=1.9km az=19.3*

THE ***11*** *19:36:17.1, 38.°16N×23.°20E, h7km±1km, ML3.5/13, Error ellipse: s-maj=1.2km s-min=0.4km az=91.0*

IDC ***11*** *19:36:21.1±3.3, 37.°96N×23.°06E, h56km±45km, mb3.4/4, mb1 3.6/7, mb1mx3.2/37, mbtmp3.7/7, ML3.4/3, MS3.0/2, Ms1 3.0/2, ms1mx2.3/36, Error ellipse: s-maj=28.9km s-min=21.3km az=18.0*

ISC 11 19:36:16.6±0.7, 38.°16N±0.°01×23.°22E±0.°01, h14km±4km, n179, σ1°12/223, mb3.6/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIL2	**Platees**	**0.06**	**38**	P	**Pg**	**19 36 19.6**	**+0.2**
VIL2				S	**Sg**	**19 36 21.7**	**+0.4**
VIL2				AML	AML	19 36 22.2	
VIL2				AML	AML	19 36 22.5	
	comp=N,52708μm,0.3s						
VILL	**Villia**	**0.07**	**89**	P	**Pg**	**19 36 19.5**	**0.0**
VILL				S	**Sg**	**19 36 21.4**	**-0.1**
LOUT	**Loutraki**	**0.26**	**228**	P	**Pg**	**19 36 21.6**	**-0.5**
LOUT				S	**Sg**	**19 36 25.7**	**-0.2**
LOUT	**Loutraki**	**0.26**	**228**	P	**Pg**	**19 36 21.7**	**-0.5**
LOUT				S	**Sg**	**19 36 25.7**	**-0.2**
PROD	**Prodromos**	**0.27**	**291**	P	**Pg**	**19 36 22.1**	**-0.3**
PROD				S	**Sg**	**19 36 25.9**	**-0.3**
PROD	**Prodromos**	**0.27**	**291**	P	**Pg**	**19 36 22.0**	**-0.3**
PROD				S	**Sg**	**19 36 26.8**	**+0.6**
PROD				AML	AML	19 36 27.5	
PROD				AML	AML	19 36 27.6	
	comp=N,94929μm,0.3s						
ATH	**Athens Observa**	**0.44**	**116**	P	**Pb**	**19 36 25.9**	**-0.2**
ATH				S	**Sb**	**19 36 33.0**	**+0.6**
ATH	**Athens Observa**	**0.44**	**116**	P	**Pb**	**19 36 25.7**	**-0.4**
ATH				S	**Sg**	**19 36 31.0**	**-0.1**
ATH				AML	AML	19 36 36.0	
	comp=N,11280μm,0.5s						
ATH				AML	AML	19 36 36.3	
	comp=E,16046μm,0.3s						
ATHU	**Athens Univers**	**0.49**	**114**	P	**Pg**	**19 36 26.4**	**+0.2**
ATHU				S	**Sb**	**19 36 33.6**	**-0.3**
ATHU	**Athens Univers**	**0.49**	**114**	P	**Pb**	**19 36 26.5**	**-0.4**
ATHU				S	**Sb**	**19 36 33.6**	**-0.3**
ATHU				AML	AML	19 36 35.5	
	comp=E,2863μm,0.5s						
ATHU				AML	AML	19 36 36.7	
	comp=N,5670μm,0.5s						
LKR	**Lokris**	**0.52**	**340**	P	**Pg**	**19 36 26.4**	**-0.5**
LKR				S	**Sg**	**19 36 33.8**	**+0.1**
LKR	**Lokris**	**0.52**	**340**	P	**Pg**	**19 36 26.3**	**-0.5**
LKR				S	**Sb**	**19 36 34.9**	**+0.1**
LKR				AML	AML	19 36 35.4	
	comp=N,24655μm,0.3s						
LKR				AML	AML	19 36 39.9	
	comp=E,17910μm,0.7s						
PTL	**Penteli**	**0.52**	**102**	P	**Pg**	**19 36 27.1**	**+0.2**
PTL				S	**Sb**	**19 36 34.8**	**-0.1**
PTL	**Penteli**	**0.52**	**102**	P	**Pg**	**19 36 27.2**	**+0.2**
PTL				S	**Sb**	**19 36 34.8**	**-0.1**
PTL				AML	AML	19 36 38.2	
	comp=E,7688μm,0.4s						
PTL				AML	AML	19 36 40.3	
	comp=N,5783μm,0.4s						
VLY	**Voula,Athens**	**0.55**	**124**	P	**Pb**	**19 36 27.8**	**-0.2**
VLY				S	**Sb**	**19 36 35.8**	**+0.1**
VLY	**Voula,Athens**	**0.55**	**124**	P	**Pb**	**19 36 27.8**	**-0.2**
VLY				S	**Sb**	**19 36 35.3**	**-0.5**
VLY				AML	AML	19 36 38.5	
	comp=E,12394μm,0.2s						
VLY				AML	AML	19 36 38.7	
	comp=N,12946μm,0.2s						
EPID	**Epidavros**	**0.55**	**188**	P	**Pg**	**19 36 27.3**	**-0.2**
EPID				S	**Sb**	**19 36 35.9**	**0.0**
DSF	**Desfina**	**0.60**	**295**	P	**Pg**	**19 36 27.7**	**-0.7**
DSF				S	**Sb**	**19 36 37.1**	**-0.1**
DSF	**Desfina**	**0.60**	**295**	P	**Pg**	**19 36 27.7**	**-0.8**
DSF				S	**Sb**	**19 36 37.1**	**-0.1**
DSF				AML	AML	19 36 38.7	
	comp=E,20845μm,0.3s						
DSF				AML	AML	19 36 40.7	
	comp=N,16680μm,0.2s						
MRKA	**Markates**	**0.61**	**28**	P	**Pb**	**19 36 29.2**	**+0.1**
MRKA				S	**Sb**	**19 36 38.3**	**+0.7**
MRKA	**Markates**	**0.61**	**28**	P	**Pg**	**19 36 28.6**	**0.0**
MRKA				S	**Sb**	**19 36 37.4**	**-0.2**
MRKA				AML	AML	19 36 43.2	
	comp=E,6499μm,0.5s						
MRKA				AML	AML	19 36 43.4	
	comp=N,7773μm,0.6s						
EREA	**Eretria**	**0.62**	**65**	P	**Pb**	**19 36 29.0**	**-0.2**
EREA				S	**Sb**	**19 36 38.8**	**+1.1**
EREA	**Eretria**	**0.62**	**65**	P	**Pb**	**19 36 28.8**	**-0.3**
EREA				AML	AML	19 36 41.9	
	comp=N,6705μm,0.4s						
EREA				AML	AML	19 36 42.1	
	comp=E,10814μm,0.2s						
DLFA	**Delphi**	**0.65**	**299**	P	**Pg**	**19 36 28.5**	**-0.8**
DLFA				S	**Sg**	**19 36 38.2**	**+0.2**
DLFA				AML	AML	19 36 39.2	
	comp=N,11132μm,0.6s						
DLFA				AML	AML	19 36 42.6	
	comp=E,9701μm,0.2s						
DID	**Didima**	**0.66**	**179**	P	**Pg**	**19 36 29.1**	**-0.3**
DID				S	**Sb**	**19 36 38.6**	**-0.2**
DID	**Didima**	**0.66**	**179**	P	**Pg**	**19 36 29.1**	**-0.3**
DID				S	**Sg**	**19 36 38.4**	**+0.3**
DID				AML	AML	19 36 43.1	
	comp=N,11389μm,0.3s						
DID				AML	AML	19 36 43.8	
	comp=E,12343μm,0.3s						
SMIA	**Simia**	**0.71**	**359**	P	**Pg**	**19 36 30.4**	**-0.1**
SMIA				S	**Sb**	**19 36 41.4**	**+0.8**
SMIA	**Simia**	**0.71**	**359**	P	**Pg**	**19 36 30.5**	**-0.1**
SMIA				S	**Sb**	**19 36 40.5**	**-0.1**
SMIA				AML	AML	19 36 48.2	
	comp=N,19161μm,0.7s						
SMIA				AML	AML	19 36 48.8	
	comp=E,14474μm,0.7s						
GUR	**Goura**	**0.73**	**252**	P	**Pg**	**19 36 30.0**	**-0.8**
GUR	**Goura**	**0.73**	**252**	P	**Pg**	**19 36 30.1**	**-0.7**
GUR				S	**Sg**	**19 36 40.4**	**0.0**
GUR				AML	AML	19 36 45.4	
	comp=N,13556μm,0.3s						
GUR				AML	AML	19 36 46.4	
	comp=E,11252μm,0.3s						
KRND	**KRANIDI**	**0.78**	**184**	P	**Pg**	**19 36 31.2**	**-0.6**
KRND				S	**Sn**	**19 36 43.6**	**-1.1**
KRND	**KRANIDI**	**0.78**	**184**	P	**Pg**	**19 36 31.2**	**-0.6**
KRND				S	**Sb**	**19 36 42.8**	**+0.4**
KRND				AML	AML	19 36 46.2	
	comp=E,12158μm,0.3s						
KRND				AML	AML	19 36 47.0	
	comp=N,8169μm,0.4s						
YDRA	**Hydra**	**0.83**	**166**	P	**Pg**	**19 36 32.6**	**-0.2**
YDRA				S	**Sb**	**19 36 44.4**	**+0.4**
YDRA				AML	AML	19 36 47.2	
	comp=N,6175μm,0.4s						
YDRA				AML	AML	19 36 48.0	
	comp=E,10118μm,0.4s						
AIG1	**Aigion**	**0.85**	**273**	P	**Pg**	**19 36 33.6**	**+0.5**
KLV	**Kalavryta, Ach**	**0.85**	**262**	P	**Pg**	**19 36 32.2**	**-0.9**
KLV	**Kalavryta, Ach**	**0.85**	**262**	P	**Pg**	**19 36 32.6**	**-0.6**
KLV				S	**Sn**	**19 36 45.7**	**-0.9**
KLV				AML	AML	19 36 46.5	
	comp=N,3194μm,0.7s						
KLV				AML	AML	19 36 48.9	
	comp=E,1453μm,0.5s						
ALIK	**Aliki, Aigiali**	**0.88**	**277**	P	**Pg**	**19 36 34.1**	**+0.5**
KALE	**Kalithea**	**0.88**	**285**	P	**Pb**	**19 36 32.8**	**-0.9**
KALE	**Kalithea**	**0.88**	**285**	P	**Pb**	**19 36 32.7**	**-0.9**
KALE				S	**Sb**	**19 36 46.0**	**+0.6**
KALE				AML	AML	19 36 49.1	
	comp=N,7388μm,0.7s						
KALE				AML	AML	19 36 50.4	
	comp=E,6704μm,0.5s						
AIG3	**Aigion**	**0.88**	**276**	P	**Pg**	**19 36 34.2**	**+0.4**
AIG4	**Aigion**	**0.91**	**276**	P	**Pb**	**19 36 34.0**	**-0.1**
AIG2	**Aigio**	**0.91**	**275**	P	**Pb**	**19 36 33.7**	**-0.4**
TRIZ	**Trizonia**	**0.93**	**283**	P	**Pb**	**19 36 33.6**	**-0.8**
TRIZ				S	**Sn**	**19 36 48.5**	**+0.3**
TRIZ	**Trizonia**	**0.93**	**283**	P	**Pb**	**19 36 33.7**	**-0.7**
SERG	**Sergoula**	**0.95**	**286**	P	**Pb**	**19 36 34.4**	**-0.5**
SERG	**Sergoula**	**0.95**	**286**	P	**Pb**	**19 36 34.0**	**-0.8**
SERG				S	**Sg**	**19 36 47.8**	**+0.4**
SERG				AML	AML	19 36 52.4	
	comp=N,4226μm,0.3s						
SERG				AML	AML	19 36 54.6	
	comp=E,5178μm,0.7s						
LAKA	**Lakka**	**0.98**	**275**	P	**Pg**	**19 36 35.8**	**+0.2**
LAKA	**Lakka**	**0.98**	**275**	P	**Pg**	**19 36 35.7**	**+0.2**
TRIP	**Tripoli**	**0.98**	**230**	P	**Pb**	**19 36 35.2**	**-0.3**
TRIP				S	**Sg**	**19 36 49.0**	**+0.6**
TRIP				AML	AML	19 36 50.5	
	comp=E,4656μm,0.4s						
TRIP				AML	AML	19 36 52.7	
	comp=N,6217μm,0.9s						
VLX	**Vlachokerasia**	**1.03**	**220**	P	**Pb**	**19 36 36.3**	**-0.1**
VLX	**Vlachokerasia**	**1.03**	**220**	P	**Pb**	**19 36 36.4**	**+0.1**
VLX				S	**Sn**	**19 36 51.3**	**+0.1**
VLX				AML	AML	19 36 52.5	
	comp=E,12605μm,0.7s						
VLX				AML	AML	19 36 53.1	
	comp=N,11687μm,0.5s						
EFP	**Efpalio**	**1.07**	**285**	P	**Pb**	**19 36 36.2**	**-0.6**
EFP				S	**Sn**	**19 36 51.6**	**-0.1**
EFP				AML	AML	19 36 57.6	
	comp=E,4894μm,1.1s						
EFP				AML	AML	19 36 59.0	
	comp=N,3391μm,0.4s						
AGG	**Agios Georgios**	**1.10**	**321**	P	**Pb**	**19 36 36.9**	**-0.6**
AGG	**Agios Georgios**	**1.10**	**321**	P	**Pb**	**19 36 37.0**	**-0.6**
AGG				S	**Sn**	**19 36 53.7**	**+0.9**
AGG				AML	AML	19 36 57.2	
	comp=N,3926μm,0.9s						
AGG				AML	AML	19 36 57.5	
	comp=E,4412μm,0.6s						
ALNA	**Alonissos**	**1.10**	**27**	P	**Pn**	**19 36 37.5**	**-0.1**
ALNA				S	**Sn**	**19 36 53.1**	**+0.4**
ALNA				AML	AML	19 36 56.2	
	comp=E,6589μm,0.8s						
ALNA				AML	AML	19 36 57.7	
	comp=N,4801μm,0.7s						
ANX	**Ano Chora**	**1.11**	**293**	P	**Pb**	**19 36 37.0**	**-0.6**
ANX	**Ano Chora**	**1.11**	**293**	P	**Pb**	**19 36 37.2**	**-0.4**
ANX				S	**Sg**	**19 36 52.3**	**-0.1**
ANX				AML	AML	19 36 55.9	
	comp=N,9599μm,0.4s						
ANX				AML	AML	19 37 00.1	
	comp=E,10387μm,0.5s						
UPR	**University Cam**	**1.14**	**277**	P	**Pg**	**19 36 39.2**	**+0.7**
UPR	**University Cam**	**1.14**	**277**	P	**Pg**	**19 36 38.6**	**+0.1**
UPR				S	**Sg**	**19 36 54.6**	**+1.3**
NEO	**Neokhori**	**1.14**	**0**	P	**Pg**	**19 36 38.4**	**-0.2**
NEO	**Neokhori**	**1.14**	**0**	P	**Pg**	**19 36 38.4**	**-0.2**
NEO				S	**Sg**	**19 36 53.2**	**-0.4**
NEO				AML	AML	19 36 58.3	
	comp=N,3998μm,0.5s						
NEO				AML	AML	19 36 59.7	
	comp=E,3044μm,0.4s						
XOR	**Xorichti**	**1.20**	**359**	P	**Pn**	**19 36 38.9**	**-0.1**
XOR	**Xorichti**	**1.20**	**359**	P	**Pb**	**19 36 39.1**	**-0.1**
XOR				AML	AML	19 37 01.1	
	comp=E,2330μm,0.5s						
XOR				AML	AML	19 37 03.0	
	comp=N,2636μm,0.8s						
DRO	**Drossia**	**1.21**	**260**	P	**Pb**	**19 36 39.4**	**+0.1**
DRO	**Drossia**	**1.21**	**260**	P	**Pb**	**19 36 39.6**	**+0.3**
DRO				S	**Sg**	**19 36 56.4**	**+0.7**
DRO				AML	AML	19 37 00.0	
	comp=E,3399μm,0.3s						
DRO				AML	AML	19 37 04.0	
	comp=N,2576μm,0.4s						
FYTO	**Fytoko, Volos**	**1.26**	**350**	P	**Pb**	**19 36 40.0**	**-0.2**
FYTO				S	**Sg**	**19 36 57.5**	**+0.1**
SKY	**Skiros Island**	**1.26**	**55**	P	**Pg**	**19 36 41.0**	**0.0**
EVR	**Evrytania**	**1.34**	**305**	P	**Pn**	**19 36 41.0**	**0.0**
EVR	**Evrytania**	**1.34**	**305**	P	**Pn**	**19 36 41.2**	**+0.2**
AMT	**Artemida-Makis**	**1.35**	**243**	P	**Pb**	**19 36 42.2**	**+0.5**
AMT	**Artemida-Makis**	**1.35**	**243**	P	**Pb**	**19 36 42.2**	**+0.5**
RLS	**Riolos of Patr**	**1.39**	**266**	P	**Pn**	**19 36 41.8**	**+0.3**
RLS				AML	AML	19 37 12.4	
	comp=E,1100μm,0.5s						
RLS				AML	AML	19 37 13.2	
	comp=N,1295μm,0.7s						
PVO	**Paravola**	**1.41**	**289**	P	**Pb**	**19 36 43.1**	**+0.5**
PVO	**Paravola**	**1.41**	**289**	P	**Pb**	**19 36 43.1**	**+0.5**
PVO				AML	AML	19 37 09.5	
	comp=E,1958μm,0.8s						
PVO				AML	AML	19 37 12.4	
	comp=N,1292μm,0.5s						
SERI	**Serifos**	**1.42**	**135**	P	**Pn**	**19 36 41.6**	**-0.4**
ITM	**Ithomi**	**1.42**	**227**	P	**Pb**	**19 36 43.2**	**+0.3**
ITM	**Ithomi**	**1.42**	**227**	P	**Pb**	**19 36 43.2**	**+0.3**
ITM				AML	AML	19 37 04.6	
	comp=N,1357μm,0.4s						
ITM				AML	AML	19 37 06.1	
	comp=E,1956μm,0.7s						
VLI	**Veliai**	**1.46**	**189**	P	**Pn**	**19 36 42.5**	**0.0**
VLI	**Veliai**	**1.46**	**189**	P	**Pn**	**19 36 42.6**	**0.0**
VLI				AML	AML	19 37 10.0	
	comp=E,1697μm,0.6s						
VLI				AML	AML	19 37 10.1	
	comp=N,2240μm,0.7s						
MNVA	**Monemvasia**	**1.48**	**186**	P	**Pn**	**19 36 42.7**	**-0.1**
MES3	**Kyparissia**	**1.53**	**234**	P	**Pb**	**19 36 45.4**	**+0.7**
PDO	**Prodromos**	**1.66**	**286**	P	**Pb**	**19 36 47.0**	**+0.1**
PDO	**Prodromos**	**1.66**	**286**	P	**Pb**	**19 36 46.9**	**0.0**
PDO				AML	AML	19 37 19.0	
	comp=N,2212μm,0.4s						
PDO				AML	AML	19 37 23.2	
	comp=E,1995μm,0.6s						
TNSA	**Tinos**	**1.66**	**111**	P	**Pb**	**19 36 46.4**	**-0.5**
THL	**Klokotos Trika**	**1.69**	**326**	P	**Pn**	**19 36 46.0**	**+0.4**
THL	**Klokotos Trika**	**1.69**	**326**	P	**Pn**	**19 36 46.1**	**+0.4**
MHLA	**Plaka, Milos I**	**1.71**	**146**	P	**Pn**	**19 36 46.0**	**+0.1**
PYL	**PYLOS**	**1.73**	**223**	P	**Pb**	**19 36 48.0**	**-0.1**
MHLO	**Agia Marina, M**	**1.75**	**147**	P	**Pn**	**19 36 46.6**	**+0.1**
MHLO	**Agia Marina, M**	**1.75**	**147**	P	**Pn**	**19 36 46.7**	**+0.3**
MES2	**Methoni**	**1.80**	**222**	P	**Pb**	**19 36 49.2**	**-0.1**
KYTH	**Kithira**	**1.90**	**184**	P	**Pn**	**19 36 49.1**	**+0.5**
KTHR	**Kythira**	**1.91**	**185**	P	**Pn**	**19 36 49.1**	**+0.4**
KFL	**Anninata**	**1.92**	**269**	P	**Pb**	**19 36 50.2**	**-1.2**
LIT	**Litokhoron**	**2.02**	**344**	P	**Pn**	**19 36 50.5**	**+0.3**
LIT	**Litokhoron**	**2.02**	**344**	P	**Pn**	**19 36 50.5**	**+0.3**
EVGI	**Lefkada island**	**2.07**	**284**	P

KEK	Kerkira	3.08	301	P	Pn	19 37 06.9	+2.0
IDI	Anoyia	3.17	154	P	Pn	19 37 06.8	+0.7
	comp=Z,13nm,0.3s,baz=348,slow=12,SNR=40						
IDI				S	Sn	19 37 42.9	-0.8
	comp=Z,4.2nm,0.3s,baz=285,slow=19,SNR=2.7						
VAY	Valandovo	3.19	351	*e*Pn	Pn	19 37 08.7	+2.3
GCAM	G?zelcaml?	3.21	97	P	Pn	19 37 08.9	+2.4
GCAM	G?zelcaml?	3.21	97	*i* P	Pn	19 37 02.6	-3.9
GCAM				IAML_P			
	comp=Z,281nm,0.1s						
GELI	Tayfur-Gelibol	3.37	48	P	Pn	19 37 09.5	+0.7
ENEZ	Enez	3.43	41	P	Pn	19 37 11.2	+1.6
BODT	Bodrum	3.43	107	P	Pn	19 37 10.3	+0.7
RDO	Rodhopi	3.47	30	P	Pn	19 37 09.3	-0.9
NPS	Neapolis	3.48	146	P	Pn	19 37 10.8	+0.5
OHR	Ohrid	3.49	328	*e*Pn	Pb	19 37 14.3	-3.8
ALN	Alexandroupoli	3.50	38	P	Pn	19 37 09.7	-0.8
ALN	Alexandroupoli	3.50	38	P	Pn	19 37 10.4	-0.1
LAST	Lasithi	3.50	148	P	Pn	19 37 12.1	+1.4
LAST	Lasithi	3.50	148	P	Pn	19 37 12.2	+1.5
BDRM	Kayabasi	3.53	107	*i* P	Pb	19 37 21.4	+2.6
KRUS	Krusevo	3.54	335	*e*Pn	Pn	19 37 12.8	+1.5
ERIK	Erikli-Kesan	3.57	44	P	Pn	19 37 13.8	+2.2
STIP	Stip	3.62	348	*e*Pn	Pn	19 37 13.8	+1.6
AYDB	Zeytinkoy-Aydi	3.69	92	P	Pn	19 37 16.1	+2.7
AYDN	Tasoluk	3.72	96	*i* P	Pn	19 37 16.6	+3.0
AYDN				IAML_P			
	comp=Z,147nm,0.2s						
STEP	BALIKESIR_Sava	3.72	70	*i* P	Pg	19 37 27.2	-0.6
STEP				IAML_P			
	comp=Z,151nm,0.4s						
DAT	Datca	3.75	111	*e*P	Pn	19 37 16.6	+2.4
DAT	Datca	3.75	111	*i* P	Pb	19 37 19.0	-3.7
DAT				IAML_P			
	comp=Z,69nm,0.1s						
KARP	Karpathos	4.10	128	*e*P	Pn	19 37 20.6	+1.7
DURS	Dursunbey	4.34	69	*i* P	Pn	19 37 25.1	+2.9
DURS				IAML_P			
	comp=Z,98nm,0.2s						
TURN	Turunc	4.47	105	*e*P	Pn	19 37 22.9	-1.0
TURN	Turunc	4.47	105	*i* P	Pn	19 37 23.4	-0.5
TURN				IAML_P			
	comp=Z,237nm,0.3s						
DALY	Dalyan (Mula)	4.53	106	*i* P	Pb	19 37 33.0	-2.8
DALY				IAML_P			
	comp=Z,121nm,0.3s						
USAK	Uak-Merkez	4.58	81	*i* P	Pn	19 37 29.2	+3.7
USAK				IAML_P			
	comp=Z,82nm,0.3s						
FETY	Fethiye	4.91	106	*e*P	Pn	19 37 33.2	+3.2
FETY	Fethiye	4.91	106	*i* P	Pn	19 37 34.5	+4.5
FETY				IAML_P			
	comp=Z,418nm,0.4s						
KHAL	Karahalli	4.94	86	*i* P	Pn	19 37 36.2	+5.7
KHAL				IAML_P			
	comp=Z,54nm,0.2s						
AKAS	Kas	5.45	109	*e*P	Pn	19 37 40.6	+3.1
STON	Ston	6.31	320	*e*Pn	Pn	19 37 48.9	-0.3
STON				Sn	Sn	19 38 57.4	-3.6
BRTR	Keskin Array B	8.27	76	P	Pn	19 38 21.0	+4.7
	comp=Z,0.1nm,0.3s,baz=260,slow=14,SNR=3.5						
EIL	Elat	12.90	128	P	Pn	19 39 19.6	0.0
	comp=Z,0.3nm,0.3s,baz=337,slow=16,SNR=4.7						
KVAR	Kislovodsk Arr	15.78	62	LR	LR	19 48 02.6	
	comp=Z,43nm,19.8s,baz=42,slow=44						
ESDC	Sonseca Array	21.18	283	P	P	19 41 01.1	-0.4
	comp=Z,0.6nm,0.7s,baz=78,slow=11,SNR=6.2						
EKA	Eskdalemuir Ar	24.70	323	P	P	19 41 37.1	+0.1
	comp=Z,1.9nm,0.6s,baz=124,slow=9.9,SNR=8.9						
DBIC	Dimbokro	40.37	226	LR	LR	20 02 33.0	
	comp=Z,29nm,21.3s,baz=248,slow=39						
MKAR	Makanchi Array	43.49	59	P	P	19 44 20.6	+1.2
	comp=Z,0.4nm,0.6s,baz=273,slow=8.3,SNR=4.8						
ZALV	Zalesovo Beam	44.11	48	P	P	19 44 25.4	+1.2
	comp=Z,0.9nm,0.5s,baz=280,slow=10,SNR=5.5						

*ISCJB **11** 19:40:48.3±0.7,27°.0S±0°.2×177°.7W±0°.2,h200km,mb4.0/8, Error ellipse: s-maj=23.0km s-min=18.9km az=162.1*
*IDC **11** 19:41:06.3±14.0,26°.87S×178°.00W,h360km±150km, mb3.5/7,mb1 3.8/7,mb1mx3.5/22,mbtmp4.2/7,Error ellipse: s-maj=40.7km s-min=21.8km az=75.0*

ISC 11 19:40:49.4±0.8,26°.9S±0°.2×177°.6W±0°.2,h200km,n12, σ1°29/12,mb3.9/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	33.72	274	P	P	19 47 13.3	+1.2
	5.7nm,0.6s,baz=106,slow=9.6,SNR=6.9						
ASAR	Alice Springs	43.73	263	P	P	19 48 34.7	-0.5
	2.0nm,0.5s,baz=95,slow=7.1,SNR=59						
WRA	Warramunga Arr	44.40	268	P	P	19 48 39.6	-0.9
	38nm,0.3s,baz=98,slow=9.4,SNR=1.9						
VNDA	Vanda	51.59	186	P	P	19 49 36.3	+1.6
	1.8nm,0.5s,baz=6.2,slow=8.6,SNR=27						
MAW	Mawson	75.69	200	P	P	19 52 12.3	+0.1
	2.8nm,0.5s,baz=130,slow=8.5,SNR=6.8						
SNAA	Sanae	81.63	178	Pdiff	P	19 52 43.1	-1.6
VNA3	Neumayer Olymp	81.76	176	Pdiff	P	19 52 44.0	-1.3
VNA2	Neumayer--Watz	82.20	177	Pdiff	P	19 52 46.7	-0.9
	baz=193,slow=4.4						
NVAR	Mina Array Bea	85.46	43	P	P	19 53 05.5	+0.7
	0.8nm,0.7s,baz=216,slow=6.8,SNR=5.9						
TXAR	Lajitas Array	90.23	57	P	P	19 53 28.0	+0.4
	0.5nm,0.8s,baz=225,slow=4.8,SNR=4.0						
PDAR	Pinedale Array	93.38	43	P	P	19 53 42.3	+0.3
	0.7nm,0.8s,baz=198,slow=5.6,SNR=3.6						
FINES	FINESS Array B	141.96	342	PKP	PKPdf	19 59 54.7	-2.0
	4.1nm,1.1s,baz=5.7,slow=1.9,SNR=3.4						

*BJI **11** 20:13:39.5±0.0,8°.80S×106°.10E,h10km,mb4.7/42, mB4.8/32,Ms4.5/14,Ms7 4.2/11*
*NEIC **11** 20:13:39.4±2.5,8°.85S×106°.14E,h6km±1km,mb4.6/48, Error ellipse: s-maj=10.4km s-min=6.7km az=115.0*
*IDC **11** 20:13:40.7±1.0,8°.52S×106°.36E,h0km,mb4.2/16, mb1 4.3/16,mb1mx4.1/42,mbtmp4.3/16,MS3.4/4, Ms1 3.5/4,ms1mx3.0/31,Error ellipse: s-maj=31.6km s-min=14.6km az=44.0*
*DJA **11** 20:13:41.0±1.1,9°.S±11°.×10°.6E±°.,h10km,M4.7/7,mb4.7/5, mB5.4/1,MLv4.7/7,Mw(mB)4.8/1*
*ISCJB **11** 20:13:42.3±0.3,8°.79S±0°.04×106°.23E±0°.03,h33km, mb4.6/62,MS4.0/7,Error ellipse: s-maj=6.7km s-min=4.2km az=23.6*

ISC 11 20:13:43.8±0.4,8°.85S±0°.05×106°.18E±0°.05,h35km,n122, σ1°66/119,mb4.6/62,MS4.2/7,1D,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	Christmas Isla	1.70	198	*e*Pn	Pn	20 14 08.7	-2.3
CISI	Cisompet, Garu	2.07	52	*e*Pn	Pn	20 14 14.8	-1.4
CISI	Cisompet, Garu	2.07	52	P	Pn	20 14 14.7	-1.4
CISI				S	Sn	20 14 39.1	-1.7
CGJI	Cibinong	2.28	348	P	Pn	20 14 18.1	-0.9
LEM	Lembang	2.47	35	Pn	Pn	20 14 22.1	+0.4
	470nm,0.3s,baz=230,slow=9.3,SNR=95						
LEM				LR	LR	20 15 13.6	
	comp=Z,573nm,20.2s,baz=67,slow=44						
SBJI	Serang	2.72	359	P	Pn	20 14 24.6	-0.4
KASI	Kota Agung	3.71	333	P	Pn	20 14 37.4	-1.2
KLI	Kotabumi	4.18	342	P	Pn	20 14 43.6	-1.5
LWLI	Liwa	4.35	331	P	Pn	20 14 47.7	0.0
UGM	Wanagama	4.40	78	*e*Pn	Pn	20 14 47.1	-1.0
UGM	Wanagama	4.40	78	P	Pn	20 14 48.7	+0.5
SMRI	Semarang	4.58	67	*e*Pn	Pn	20 14 50.6	-0.1
SMRI	Semarang	4.58	67	P	Pn	20 14 53.5	+2.8
MDSI	Maura Dua	4.77	335	P	Pn	20 14 52.5	-0.8
NGJI	Ngawi	5.43	75	P	Pn	20 15 14.5	+12
MNAI	Manna	5.39	324	*e*Pn	Pn	20 15 00.5	-2.8
MNAI				*e*Sn	Sn	20 15 59.5	-5.7
PWJI	Pagerwojo	5.62	82	P	Pn	20 15 06.2	+1.2
	69nm,0.7s						
LHSI	Lahat	5.65	332	P	Pn	20 15 05.7	+0.3
	48nm,1.1s						
JAGI	Jajag, Banyuwa	7.89	88	*e*Pn	Pn	20 15 36.5	+0.3
JAGI				*e*Sn	Sn	20 16 58.4	-5.9
JAGI	Jajag, Banyuwa	7.89	88	P	Pn	20 15 36.5	+0.3
PLAI	Plampang	11.46	91	P	Pn	20 16 25.2	+0.1
SBUM	Sibu	12.74	28	*e*Pn	Pn	20 16 41.5	-1.2
GSI	Gunungsitoli	13.24	319	*e*Pn	Pn	20 16 43.5	-6.0
PSI	Prapat	13.65	328	*e*Pn	Pn	20 16 48.3	-6.9
KAPI	Kappang	14.00	75	LR	LR	20 23 14.2	
	comp=Z,213nm,19.7s,baz=254,slow=42						
KULM	Kulim	15.09	338	*e*Pn	Pn	20 17 10.7	-3.9
	16nm,1.1s						
GIRL	Giralia	15.74	152	*e*Pn	Pn	20 17 20.1	-2.9
	202nm,1.5s						
MMRI	Maumere	15.87	90	*e*Pn	Pn	20 17 22.7	-2.0
	47nm,0.9s						
KKM	Kota Kinabalu	17.86	34	*e*P	Pn	20 17 48.6	-1.2
	27nm,1.2s						
SOEI	Soe	17.87	94	*e*Pn	Pn	20 17 47.5	-2.5
	29nm,0.8s						
LUWI	Luwuk	18.25	66	*e*P	P	20 17 55.6	+1.2
	21nm,0.8s						
DLV	T Lat	20.79	6	*e*P	P	20 18 21.2	-1.2
	79nm,1.5s						
FITZ	Fitzroy Crossi	21.02	118	P	P	20 18 26.9	+2.2
	6.2nm,0.9s,baz=246,slow=5.1,SNR=7.5						
FITZ				LR	LR	20 26 19.0	
	comp=Z,53nm,21.5s,baz=310,slow=36						
FITZ	Fitzroy Crossi	21.02	118	*e*P	P	20 18 24.4	-0.2
	6.8nm,0.9s						
TNTI	Ternate	23.17	67	*e*P	P	20 18 47.1	-0.5
	18nm,0.8s						
MTN	Manton Dam	24.82	101	*e*P	P	20 19 05.7	+2.6
	27nm,1.5s						
SIJI	Sorong	26.20	74	P	P	20 19 15.1	-0.5
	5.2nm,0.8s,baz=293,slow=10.0,SNR=6.0						
H01W3	Cape Leeuwin H	26.91	165	T	T	20 47 26.6	
	baz=344,slow=76,SNR=13						
H01W1	Cape Leeuwin H	26.93	165	T	T	20 47 29.2	
	baz=344,slow=76,SNR=10						
H01W2	Cape Leeuwin H	26.93	165	T	T	20 47 27.3	
	baz=344,slow=76,SNR=13						
CM31	Chiang Mai Arr	28.06	345	*e*P	P	20 19 30.7	-1.5
	4.9nm,0.9s						
CMAR	Chiang Mai Arr	28.06	345	P	P	20 19 30.9	-1.3
	3.1nm,0.7s,baz=180,slow=9.0,SNR=23						
CMAR				PcP	PcP	20 22 49.5	+3.1
	0.9nm,0.7s,baz=196,slow=3.8,SNR=4.6						
CMAR				LR	LR	20 32 46.0	
	comp=Z,145nm,18.8s,baz=187,slow=41						
CHTO	Chiang Mai	28.40	345	*e*P	P	20 19 35.2	0.0
	3.7nm,0.8s						
WRA	Warramunga Arr	29.36	115	P	P	20 19 45.8	+1.9
	75nm,0.3s,baz=295,slow=10.0,SNR=2.0						
WB2	Warramunga Arr	29.38	115	*e*P	P	20 19 45.4	+1.5
	4.4nm,0.9s						
ASAR	Alice Springs	30.33	122	P	P	20 19 53.6	+1.2
	0.3nm,0.7s,baz=304,slow=8.5,SNR=5.2						
H08S2	Diego Garcia H	33.35	270	T	T	20 55 26.7	
	baz=94,slow=75,SNR=19						
H08S3	Diego Garcia H	33.37	270	T	T	20 55 27.7	
	baz=94,slow=75,SNR=18						
H08S1	Diego Garcia H	33.37	270	T	T	20 55 28.7	
	baz=94,slow=75,SNR=13						
KMI	Kunming	33.94	354	P	P	20 20 26.8	+2.6
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,65nm,4.0s						
KMI				LR	LR		
	comp=N,330nm,13.2s						
KMI				LR	LR		
	comp=E,210nm,13.5s						
KMI				LR	LR		
	comp=Z,300nm,13.2s						
TPUB	Ta-pu	34.94	24	*e*P	P	20 20 31.4	-1.3
	40nm,1.6s						
YULB	Yu-li	35.29	24	*e*P	P	20 20 36.9	+1.2
	63nm,1.9s						
SSLB	Suanglung	35.51	24	*e*P	P	20 20 37.2	-0.3
	26nm,1.7s						
NACB	Ningancheiao	36.11	24	*e*P	P	20 20 41.3	-1.4
	16nm,0.9s						
YHNB	Yeheng	36.47	24	*e*P	P	20 20 42.9	-2.9
	51nm,1.5s						
COEN	Coen	36.59	101	*e*P	P	20 20 46.6	-0.4
	10.0nm,0.9s						
CD2	Chengdu	39.60	357	*e*P	P	20 21 12.5	+0.4
WHN	Wuhan	39.95	11	P	P	20 21 19.1	+4.2
STKA	Stephens Creek	40.04	130	P	P	20 21 17.7	+1.9
	2.9nm,0.8s,baz=304,slow=13,SNR=3.8						
STKA	Stephens Creek	40.04	130	*e*P	P	20 21 17.0	+1.2
	4.9nm,1.4s						
LSA	Lhasa	40.97	340	*e*P	P	20 21 25.2	+1.2
	9.7nm,1.1s						
JIRN	Jiri	41.14	333	*e*P	P	20 21 26.9	+1.6
PKI	Pulchoki	41.42	332	*e*P	P	20 21 28.6	+1.0
PKIN	Phulchoki	41.43	332	*e*P	P	20 21 28.6	+1.0
JOW	Kunigami	41.45	31	*e*P	P	20 21 26.4	-1.0
	23nm,1.3s						
GUN	Gumba	41.49	332	*e*P	P	20 21 29.4	+1.3
DMN	Daman	41.60	331	*e*P	P	20 21 30.0	+1.1
KKN	Kakani	41.67	332	*e*P	P	20 21 30.5	+1.1
GKN	Gorkha	42.15	331	*e*P	P	20 21 34.5	+1.2
NJ2	Nanjing	42.44	16	*e*P	P	20 21 37.0	+1.6
NJ2				pmax	pmax		
	comp=Z,18nm,0.7s						
KOLN	Koldanda	42.47	330	*e*P	P	20 21 37.3	+1.4
	51nm,0.7s						
XAN	Xi'an	42.73	3	P	P	20 21 37.9	+0.1
XAN				pP	pP	20 21 45.7	-1.4
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	42.73	3	*e*P	P	20 21 37.0	-0.8
	8.0nm,0.8s						
DANN	Dangsing	42.87	330	*e*P	P	20 21 40.3	+1.0
	55nm,0.6s						
PYUN	Piuthan	43.04	329	*e*P	P	20 21 41.9	+1.3
LZH	Lanzhou	44.75	357	*e*P	P	20 21 55.9	+1.7
LZH				pP	pP	20 22 01.2	-2.3
LZH				sP	sP	20 22 04.6	-2.7
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=N,190nm,14.1s						
LZH				LR	LR		
	comp=E,160nm,11.9s						
LZH				LR	LR		
	comp=Z,200nm,14.1s						
TIA	Tai'an	45.99	12	P	P	20 22 03.2	-0.6
TIA				pmax	pmax		
	comp=Z,12nm,0.7s						
JNU	Nakatsue	47.91	28	*e*P	P	20 22 17.2	-1.7
	39nm,1.6s						
GTA	Gaotai	48.38	353	⇓P	P	20 22 24.2	+1.7
GTA				pP	pP	20 22 29.0	-2.8
GTA				sP	sP	20 22 31.3	-4.2
GTA				ScP	ScP	20 27 39.0	-1.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,51nm,6.3s						
GTA				LR	LR		
	comp=N,73nm,17.1s						
GTA				LR	LR		
	comp=E,110nm,17.8s						
BJT	Baijiatuau	49.50	10	*e*P	P	20 22 31.0	+0.1
	12nm,0.8s						
HHC	Hu-ho-hao-te	49.70	5	*e*P	P	20 22 33.4	+0.8
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,85nm,5.2s						
HHC				LR	LR		
	comp=N,180nm,11.3s						
HHC				LR	LR		
	comp=E,160nm,14.9s						
HHC				LR	LR		
	comp=Z,710nm,14.1s						
KS15	Wonju Array Si	50.34	22	*e*P	P	20 22 36.4	-0.9
	12nm,1.4s						
KSRS	Korea Array	50.36	23	P	P	20 22 37.1	-0.4
	4.5nm,1.0s,baz=206,slow=9.7,SNR=12						
NIL	Nilore	52.59	325	*e*P	P	20 22 54.0	-0.3
	6.6nm,1.1s						
MAJO	Matsushiro	54.26	32	*e*P	P	20 23 03.9	-2.6
	6.8nm,0.9s						
MAT	Matsushiro	54.26	32	P	P	20 23 04.0	-2.5
MJAR	Matsushiro Arr	54.26	32	P	P	20 23 04.4	-2.2
	2.3nm,0.5s,baz=208,slow=8.1,SNR=10						
MJB9	Matsu-Tunnel	54.26	32	*e*P	P	20 23 04.0	-2.6
	22nm,1.6s						
WMQ	Urumqi	55.05	344	*e*P	P	20 23 14.1	+2.0
WMQ				sP	pP	20 23 20.2	-1.4
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,92nm,3.7s						
WMQ	Urumqi	55.05	344	*e*P	P	20 23 12.6	+0.5
	7.6nm,0.6s						
CN2	Changchun	55.25	17	*e*P	P	20 23 12.6	-0.9
CN2				PcP	PcP	20 24 12.2	-1.9
CN2				*e*S	S	20 30 56.3	+1.5
CN2				*e*SS	SS	20 34 41.1	+1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,240nm,17.0s						
CN2				LR	LR		
	comp=E,360nm,17.0s						
CN2				LR	LR		
	comp=Z,310nm,18.0s						
KBL	Kabul	55.66	323	*e*P	P	20 23 16.7	-0.3
	3.2nm,0.5s						
KSH	Kashi	55.69	332	*e*P	P	20 23 22.2	+5.3
SONM	Songino Array	56.44	0	P	P	20 23 23.1	+1.0
	3.6nm,0.8s,baz=172,slow=7.8,SNR=10						
ULN	Ulaanbaatar	56.47	1	*e*P	P	20 23 22.9	+0.5
	5.4nm,0.7s						
NRN	Naryn	57.21	333	*e*P	P	20 23 27.8	-0.1
	4.9nm,1.2s						
USRK	Ussuriysk Ar.	57.75	22	P	P	20 23 30.3	-0.9
	2.3nm,0.7s,baz=180,slow=0.7,SNR=5.6						
ARSB	Arslanbob	58.52	331	*e*P	P	20 23 37.0	+0.1
	8.7nm,1.3s						
BTK	Batken	58.63	329	*e*P	P	20 23 37.2	-0.5
	21nm,2.0s						
MK31	Makanchi Array	59.35	341	*e*P	P	20 23 42.9	+0.4
	2.4nm,0.7s						
MKAR	Makanchi Array	59.35	341	P	P	20 23 42.9	+0.4
	3.6nm,0.6s,baz=154,slow=7.4,SNR=37						
MAKZ	Makanchi	59.47	341	*e*P	P	20 23 44.0	+0.8
	3.0nm,1.1s						
TLY	Talaya	60.33	358	*e*P	P	20 23 50.6	+1.5
	4.5nm,0.7s						
KURK	Kurchatov	63.97	341	*e*P	P	20 24 14.1	+0.6
	6.3nm,0.8s						
YSS	Yuzh-Sakhalins	64.39	27	*e*P	P	20 24 15.8	-0.5
	15nm,0.8s						
GEYT	Alibeck	64.62	319	P	P	20 24 19.4	+1.3
	1.6nm,0.8s,baz=180,slow=10,SNR=5.3						
GYA0B	ALIBECK ARRAY	64.62	319	*e*P	P	20 24 18.2	+0.2
	5.5nm,1.1s						
ZAA0	Zalesovo Array	65.12	346	*e*P	P	20 24 20.4	-0.5
ZALV	Zalesovo Beam	65.12	346	P	P	20 24 21.1	+0.2
	2.9nm,0.3s,baz=154,slow=6.5,SNR=14						
BRVK	Borovoye	68.82	338	*e*P	P	20 24 44.7	+0.2
	3.7nm,0.9s						
ABKAR	Akbulak array	70.59	330	*e*P	P	20 24 55.3	-0.2
	7.6nm,0.8s						
YAK	Yakutsk	73.00	11	*e*P	P	20 25 09.4	-0.2
	13nm,0.8s						
PETK	Petropavlovsk-	75.60	29	P	P	20 25 25.4	+0.4
	3.5nm,0.7s,baz=204,slow=3.2,SNR=6.6						
ARU	Arti	75.94	335	*e*P	P	20 25 27.6	+0.7
	4.7nm,0.9s						
KBZ	Khabaz	77.48	318	P	P	20 25 37.6	+1.7
	2.4nm,0.8s,baz=123,slow=4.2,SNR=5.8						
NRIK	Noril'sk	79.08	353	P	P	20 25 45.1	+1.0
	3.5nm,0.7s,baz=126,slow=3.2,SNR=4.3						
TIXI	Tiksi	81.73	7	*e*P	P	20 25 57.8	-0.5
	3.7nm,0.8s						
BR101	Keskin Array S	82.45	312	*e*P	P	20 26 04.2	+1.1
BRTR	Keskin Array B	82.45	312	P	P	20 26 04.2	+1.1
	1.0nm,0.8s,baz=128,slow=8.0,SNR=6.5						
SNAA	Sanae	87.53	197	*e*P	P	20 26 29.3	+1.4
	2.5nm,0.9s						
LTX	Lajitas	145.38	50	*e*PKPbc	PKPdf	20 33 21.1	+2.1
TXAR	Lajitas Array	145.38	50	PKPbc	PKPdf	20 33 21.1	+2.1
	3.6nm,0.8s,baz=298,slow=2.7,SNR=16						

*IDC **11** 20:17:22.6±2.7,17°.54S×178°.87W,h512km±29km, mb3.6/11,mb1 3.9/12,mb1mx3.5/36,mbtmp4.4/12,Error ellipse: s-maj=24.0km s-min=14.4km az=139.0*
*ISCJB **11** 20:17:23.6±0.5,17°.7S±0°.1×178°.9W±0°.1,h539km, mb4.1/12,Error ellipse: s-maj=17.3km s-min=11.9km az=142.7*

ISC 11 20:17:24.5±0.6,17°.6S±0°.1×178°.9W±0°.1,h539km,n68, σ0°77/71,mb4.1/12,14C-2D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.47	250	P	P	20 20 28.1	-0.7
	1.1nm,0.3s,baz=128,slow=17,SNR=7.2						
STKA	Stephens Creek	38.35	241	P	P	20 24 00.5	+0.9
	3.7nm,0.5s,baz=90,slow=10,SNR=12						
WRA	Warramunga Arr	44.22	259	P	P	20 24 45.7	-0.5
	70nm,0.3s,baz=84,slow=9.3,SNR=2.7						
ASAR	Alice Springs	44.41	254	P	P	20 24 47.9	+0.1
	15nm,0.5s,baz=88,slow=8.2,SNR=255						
ASAR				PcP	PcP	20 26 19.7	-0.1
	1.5nm,0.4s,baz=104,slow=4.1,SNR=8.5						
ASAR				ScP	ScP	20 29 24.3	+3.6
	0.4nm,0.7s,baz=97,slow=5.6,SNR=4.1						
ASAR				S	S	20 30 42.2	-1.3
	1.5nm,1.0s,baz=91,slow=13,SNR=9.6						
VNDA	Vanda	60.70	185	P	P	20 26 43.9	+0.7
	0.5nm,0.6s,baz=6.9,slow=7.5,SNR=5.4						
MJAR	Matsushiro Arr	67.38	324	P	P	20 27 26.6	+0.2
	2.8nm,0.7s,baz=165,slow=6.0,SNR=8.0						
PETK	Petropavlovsk-	73.27	346	P	P	20 28 01.3	+0.5
	5.3nm,0.7s,baz=133,slow=7.3,SNR=7.6						
NVAR	Mina Array Bea	79.54	44	P	P	20 28 36.3	+0.4
	2.7nm,0.7s,baz=226,slow=9.0,SNR=16						
ILAR	Eielson Array	85.71	13	P	P	20 29 04.8	-1.2
	1.9nm,0.4s,baz=222,slow=5.3,SNR=30						
TXAR	Lajitas Array	86.24	58	P	P	20 29 10.8	+1.2
	2.8nm,0.7s,baz=217,slow=6.2,SNR=22						
PDAR	Pinedale Array	87.47	44	P	P	20 29 14.9	-0.3
	1.8nm,0.5s,baz=211,slow=3.7,SNR=17						
CMAR	Chiang Mai Arr	88.33	290	P	P	20 29 21.3	+1.8
	0.7nm,0

GERES	**GERESS Array B**	147.20 345	PKPbc	**PKPbc**	20 36 07.5	+0.2
	comp=Z,3.8nm,0.6s,baz=26,slow=3.2,SNR=30					
BZS	**Buzias**	147.25 333⇑	*i*P	**PKPbc**	20 36 07.6	+0.1
CONA	**Conrad Observa**	147.43 341	*e*PKPbc	**PKiKP**	20 36 08.6	-1.0
	comp=Z,4.0nm,0.6s,SNR=9.1					
HERR	**Herculane**	147.47 331⇑	*i*P	**PKPbc**	20 36 08.3	+0.2
MDVR	**Moldovita**	147.86 332⇑	*i*P	**PKPbc**	20 36 09.2	0.0
MOA	**Molln**	147.97 343	*e*PKPbc	**PKiKP**	20 36 09.6	-1.0
	comp=Z,1.1nm,0.5s					
ARSA	**Arzberg**	148.14 341	*e*PKPbc	**PKPbc**	20 36 09.7	-0.1
	comp=Z,3.1nm,1.0s					
VTS	**Vitosha**	148.75 328⇑	*i*P	**PKiKP**	20 36 11.9	-0.7
SOKA	**Soboth**	148.80 341	*i* PKPbc	**PKPbc**	20 36 11.1	-0.3
	comp=Z,1.7nm,0.6s					
KBA	**Koelnbreinsper**	148.92 344	*i* PKPbc	**PKPbc**	20 36 11.2	-0.6
	comp=Z,1.7nm,0.4s					
WATA	**Walderalm**	149.12 346	*i* PKPbc	**PKPbc**	20 36 12.1	-0.2
	comp=Z,3.5nm,0.5s,SNR=4.5					
RETA	**Reutte**	149.16 347	*i* PKPbc	**PKiKP**	20 36 12.4	-0.8
	comp=Z,2.2nm,0.4s					
WTTA	**Wattenberg**	149.18 346	*e*PKPbc	**PKiKP**	20 36 12.6	-0.8
	comp=Z,5.9nm,0.4s,SNR=14					
MOTA	**Moosalm**	149.22 347	*e*PKPbc	**PKPbc**	20 36 12.5	-0.1
	comp=Z,1.2nm,0.4s,SNR=4.6					
MYKA	**Terra Mystica**	149.25 343	*i* PKPbc	**PKPbc**	20 36 11.8	-0.8
	comp=Z,3.6nm,0.4s,SNR=4.1					
SQTA	**Sankt Quirin**	149.32 346	*i* PKPbc	**PKiKP**	20 36 12.8	-0.7
	comp=Z,2.7nm,0.4s					
ABTA	**Abfaltersbach**	149.45 344	*i* PKPbc	**PKPbc**	20 36 12.5	-0.5
	comp=Z,4.0nm,0.6s,SNR=6.8					
DAVA	**Damuels**	149.53 348	*e*PKPbc	**PKiKP**	20 36 13.4	-0.7
	comp=Z,6.5nm,0.9s					
FETA	**Feichten**	149.61 347	*i* PKPbc	**PKiKP**	20 36 13.8	-0.4
	comp=Z,2.0nm,0.5s,SNR=4.5					

IDC 11 20:20:14.4±1.9, 0°.69S×133°.25E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/29, mbtmp3.7/3, ML5.7/1, Error ellipse: s-maj=37.9km s-min=23.0km az=49.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**1.99**	**265**	Pn	Pn	20 20 49.9	+0.5
	24nm,0.3s,baz=85,slow=15,SNR=129						
SIJI				Sn	Sn	20 21 15.8	+0.7
	31nm,0.3s,baz=267,slow=20,SNR=13						
WRA	**Warramunga Arr**	**19.16**	**177**	P	Pn	20 24 40.1	-0.3
	26nm,0.3s,baz=349,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**22.85**	**178**	P	P	20 25 19.5	0.0
	1.2nm,0.6s,baz=357,slow=12,SNR=7.4						
STKA	**Stephens Creek**	**32.01**	**167**	P	P	20 26 42.1	-0.6
	3.3nm,0.9s,baz=347,slow=7.7,SNR=4.1						
MKAR	**Makanchi Array**	**64.91**	**324**	P	P	20 30 55.8	0.0
	0.2nm,0.6s,baz=116,slow=8.0,SNR=3.8						

IDC 11 20:28:55.1±3.0, 4°.58S×133°.71E, h0km, mb3.4/1, mb1 3.7/4, mb1mx3.5/21, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=117.1km s-min=24.8km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.41**	**326**	Pn	Pn	20 30 04.6	+1.2
	0.8nm,0.3s,baz=212,slow=22,SNR=13						
SIJI				Sn	Sn	20 30 52.1	-3.4
	1.0nm,0.3s,baz=248,slow=23,SNR=5.5						
WRA	**Warramunga Arr**	**15.29**	**178**	Pn	Pn	20 32 31.8	-0.6
	17nm,0.3s,baz=350,slow=12,SNR=1.7						
FITZ	**Fitzroy Crossi**	**15.59**	**210**	Pn	Pn	20 32 36.4	+0.2
	0.3nm,0.3s,baz=22,slow=8.4,SNR=13						
ASAR	**Alice Springs**	**18.98**	**179**	P	Pn	20 33 18.8	-0.1
	0.3nm,0.3s,baz=3.7,slow=12,SNR=22						
MKAR	**Makanchi Array**	**68.31**	**325**	P	P	20 39 57.8	-0.4
	0.2nm,0.5s,baz=119,slow=8.2,SNR=3.9						

TRN 11 20:36:30.6, 17°.16N×61°.11W, h11km, MD3.8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	**Boggy Peak**	**0.72**	**261**	*e*P	Pn	20 36 48.7	+2.0
BPA				*e*S	Sn	20 36 59.5	+1.7
ABD	**La Joyeuse, An**	**0.77**	**208**	*e*P	Pn	20 36 48.0	+0.7
ANWB	**Willy Bob**	**0.82**	**309**	*e*P	Pn	20 36 48.6	+0.5
ANWB				*e*S	Sn	20 37 02.8	+2.6
MLYT	**Lee's Yard**	**1.12**	**247**	*e*P	Pn	20 36 54.6	+2.4
MLYT				*e*S	Sn	20 37 11.6	+4.0
CBE	**Ff, Capester**	**1.18**	**204**	*e*P	Pg	20 36 54.5	+1.2
MAGL	**Barre de l'ile**	**1.21**	**188**	*e*P	Pg	20 36 54.8	+0.9
NEV	**Hard Times**	**1.39**	**269**	*e*P	Pg	20 36 58.0	+0.6
NEV				*e*S	Sg	20 37 16.7	+1.2
TBG	**Guadaloupe-3**	**1.39**	**202**	*e*P	Pg	20 36 57.8	+0.4
TBG				*e*S	Sg	20 37 17.9	+2.4
TDBA	**Terre de Bas,**	**1.39**	**201**	*e*P	Pg	20 36 57.6	+0.3
NVRH	**Round Hill, Ne**	**1.42**	**271**	*e*P	Pg	20 36 58.8	+0.9
NVRH				*e*S	Sg	20 37 17.7	+1.3
NVBH	**Bath Hotel, Ne**	**1.44**	**269**	*e*P	Pg	20 36 59.3	+1.1
NVBH				*e*S	Sg	20 37 19.0	+2.1
SKOC	**St. Kitts, UWI**	**1.55**	**275**	*e*P	Pg	20 37 00.6	+0.2
SKOC				*e*S	Sg	20 37 21.5	+0.9
SKI	**Saint Kitts**	**1.56**	**277**	*e*P	Pg	20 37 00.8	+0.2
SKI				*e*S	Sg	20 37 22.6	+1.7
DWS	**Wesley**	**1.59**	**187**	*e*P	Pg	20 37 01.2	+0.1
DWS				*e*S	Sg	20 37 22.6	+0.8
MDPO	**Dominica; Chan**	**1.60**	**192**	*e*P	Pg	20 37 01.4	0.0
MDPO				*e*S	Sg	20 37 22.9	+0.7
SKDB	**Saint Kitts 2**	**1.64**	**279**	*e*P	Pg	20 37 01.9	-0.1
SKDB				*e*S	Sg	20 37 23.8	+0.6
BBL	**Barber's Block**	**1.66**	**192**	*e*P	Pg	20 37 02.1	-0.3
BBL				*e*S	Sg	20 37 23.5	-0.4
BSK	**Brimstone Hill**	**1.66**	**277**	*e*P	Pg	20 37 01.9	-0.6
BSK				*e*S	Sg	20 37 24.3	+0.3
SEUS	**St. Eustatius**	**1.81**	**281**	*e*P	Pb	20 37 04.2	+0.4
SEUS				*e*S	Sb	20 37 27.7	+1.1
DLPL	**La Plaine**	**1.82**	**184**	*e*S	Sg	20 37 28.6	-0.5
MDN	**Morne-Daniel**	**1.85**	**188**	*e*S	Sg	20 37 29.7	-0.4
DBCT	**Belle View Cho**	**1.89**	**187**	*e*S	Sb	20 37 29.8	+1.0
SMRT	**St. Maarten**	**2.07**	**296**	*e*P	Pb	20 37 07.7	-0.5
SMRT				*e*S	Sb	20 37 33.7	-0.3
GBMF	**Grand Be**	**2.35**	**181**	*e*P	Pb	20 37 11.1	-1.8
FDF	**Fort de France**	**2.41**	**181**	*e*P	Pb	20 37 12.1	-1.9
FDF				*e*S	Sb	20 37 43.4	-0.4
LPMF	**Morne Lapointe**	**2.57**	**177**	*e*P	Pn	20 37 13.3	+1.1
MPOM	**Morne Pois Mar**	**2.71**	**175**	*e*P	Pn	20 37 15.7	+1.6
SLBI	**Saint Lucia, B**	**3.12**	**178**	*e*P	Pn	20 37 21.9	+2.1
SLBI				*e*S	Sn	20 37 59.8	+2.8

MAN 11 20:38:59.4, 11°.29N×124°.53E, h6km, mb4.0, ML2.8, MS2.4, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.25**	**162**	*e*P	Pg	20 39 05.2	+1.0
OCLP				*e*S	Sg	20 39 10.0	+2.4
PLP	**Palo**	**0.46**	**106**⇓	*e*P	Pg	20 39 08.6	+0.4
BESP	**Borongan**	**0.94**	**71**	*e*P	Pg	20 39 17.1	-0.3
BESP				*e*S	Sg	20 39 28.7	-1.1
LLP	**Lapu-Lapu**	**1.11**	**210**	*e*P	Pg	20 39 20.1	-0.6
LLP				*e*S	Sn	20 39 37.1	-0.1
MSLP	**Maasin**	**1.19**	**164**	*e*P	Pn	20 39 22.9	+0.3
MSLP				*e*S	Sn	20 39 39.8	+0.6
CNP	**Catarman**	**1.22**	**6**	*e*P	Pg	20 39 22.0	-0.8
CNP				*e*S	Sg	20 39 37.3	-1.4
GUIM	**Jordan**	**2.02**	**251**	*e*P	Pn	20 39 34.4	+0.5
GUIM				*e*S	Sn	20 40 00.2	+0.7

TIF ***11*** *20:57:49.8, 39°.19N×44°.09E, h25km±3km*
ISK ***11*** *20:57:51.1, 39°.40N×44°.13E, h5km, ML2.8/15*
TEH ***11*** *20:57:51.9, 39°.42N×44°.11E, h10km, ML3.0*
DDA ***11*** *20:57:52.1, 39°.43N×44°.02E, h5km±1km, ML2.9*
ISC 11 20:57:51.9±1.1, 39°.41N±0°.02×44°.13E±0°.03, h6km±10km, n63, σ1°.05/77, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.32**	**212**	PG	**Pg**	**20 57 57.8**	**-0.4**
CLDR	**Caldiran**	**0.32**	**212**	*i* P	**Pg**	**20 57 58.7**	**+0.5**
CLDR				*i* S	**Sg**	**20 58 01.7**	**-0.7**
CLDR				IAML_P			
	comp=Z,36μm,0.1s						
CLDR	**Caldiran**	**0.32**	**212**	*e*Pg	**Pg**	**20 57 58.3**	**+0.1**
DYDN	**Diyadin**	**0.36**	**291**	*i* P	**Pg**	**20 57 59.4**	**+0.3**
DYDN				IAML_P			
	comp=Z,49μm,0.2s						
IGDI	**IGDIR**	**0.46**	**355**	*i* P	**Pb**	**20 58 01.8**	**-0.6**
IGDI				*i* S	**Sb**	**20 58 08.9**	**-0.6**
TASB	**TASBURUN-IGDIR**	**0.57**	**8**	PG	**Pg**	**20 58 03.2**	**+0.2**
TASB				SG	**Sb**	**20 58 12.9**	**0.0**
TASB	**TASBURUN-IGDIR**	**0.57**	**8**	*e*Pg	**Pb**	**20 58 03.9**	**-0.5**
VMUR	**Van-Muradiye**	**0.61**	**226**	*i* P	**Pg**	**20 58 04.0**	**+0.4**
VMUR				*i* S	**Sg**	**20 58 11.6**	**+0.1**
VMUR				IAML_P			
	comp=Z,2μm,0.2s						
ERCV	**ERCIS-VAN**	**0.73**	**238**	PG	**Pg**	**20 58 05.8**	**-0.2**
ERCV	**ERCIS-VAN**	**0.73**	**238**	*e*Pg	**Pb**	**20 58 07.3**	**+0.2**
GNI	**Garni**	**0.87**	**32**	PG	**Pb**	**20 58 09.2**	**-0.4**
AGRB	**Hanur-Agry**	**0.90**	**281**	PG	**Pg**	**20 58 07.9**	**-1.2**
AGRB	**Hanur-Agry**	**0.90**	**281**	*e*Pg	**Pg**	**20 58 07.7**	**-1.4**
VANB	**Van**	**1.00**	**215**	PG	**Pn**	**20 58 13.1**	**+0.5**
VANB	**Van**	**1.00**	**215**	*e*Pn	**Pn**	**20 58 13.0**	**+0.5**
TUTA	**Tutak**	**1.02**	**270**	*i* P	**Pg**	**20 58 10.5**	**-1.0**
TUTA				*i* S	**Sg**	**20 58 23.2**	**-1.5**
TUTA				IAML_P			
	comp=Z,6μm,0.2s						
TVAN	**Van**	**1.05**	**213**	*i* P	**Pn**	**20 58 13.8**	**+0.5**
TVAN				*i* S	**Sn**	**20 58 28.3**	**-0.1**
TVAN				IAML_P			
	comp=Z,4μm,0.2s						
DIGO	**Kars**	**1.16**	**330**	*i* P	**Pb**	**20 58 13.6**	**-0.8**
DIGO				IAML_P			
	comp=Z,2μm,0.2s						
ADCV	**BITLIS_Adilcev**	**1.25**	**241**	*i* P	**Pg**	**20 58 16.5**	**+0.6**
ADCV				*i* S	**Sn**	**20 58 33.1**	**-0.1**
ADCV				IAML_P			
	comp=Z,775nm,0.2s						
MLAZ	**Malazgirt-MUS**	**1.26**	**258**	PN	**Pg**	**20 58 16.5**	**+0.5**
EAK	**Akyaka**	**1.33**	**343**	*i* P	**Pg**	**20 58 18.5**	**+1.0**
EAK				*i* S	**Sg**	**20 58 38.3**	**+3.5**
EAK				IAML_P			
	comp=Z,2μm,0.3s						
EATA	**Eleskirt**	**1.34**	**290**	*i* P	**Pn**	**20 58 16.8**	**-0.7**
EATA				IAML_P			
	comp=Z,3μm,0.3s						
BASK	**Baskale_VAN**	**1.36**	**184**	*i* P	**Pg**	**20 58 19.2**	**+1.2**
BASK				IAML_P			
	comp=Z,963nm,0.2s						
GEVA	**Gevas**	**1.38**	**218**	*i* P	**Pg**	**20 58 18.5**	**+0.1**
GEVA				IAML_P			
	comp=Z,745nm,0.2s						
AKDM	**Akdamar-Van**	**1.41**	**220**	PN	**Pb**	**20 58 18.1**	**-0.6**
AKDM	**Akdamar-Van**	**1.41**	**220**	*e*Pn	**Pb**	**20 58 18.5**	**-0.2**
IMRD	**Marand**	**1.41**	**119**	*e*Pn	**Pn**	**20 58 18.2**	**-0.1**
IMRD				IAMB	IAmb	20 58 47.6	
	comp=Z,5μm,0.8s						
ISHB	**Shabestar**	**1.62**	**134**	*e*Pn	**Pb**	**20 58 22.0**	**-0.3**
ISHB				IAMB	IAmb	20 58 27.8	
	comp=Z,2μm,0.3s						
SENK	**Senkaya-Erzuru**	**1.78**	**311**	PN	**Pg**	**20 58 25.8**	**-0.3**
SENK	**Senkaya-Erzuru**	**1.78**	**311**	*e*Pn	**Pb**	**20 58 24.2**	**-0.9**
HOMI	**Horasan**	**1.83**	**291**	*i* P	**Pb**	**20 58 25.9**	**+0.1**
HOMI				*i* S	**Sg**	**20 58 54.2**	**+3.5**
HOMI				IAML_P			
	comp=Z,1μm,0.4s						
KOPR	**Koprukoy-ERZUR**	**1.85**	**289**	PN	**Pb**	**20 58 25.6**	**-0.6**
BLIS	**Bitlis-Merkez**	**1.86**	**238**	*i* P	**Pb**	**20 58 26.3**	**-0.1**
BLIS				*i* S	**Sg**	**20 58 50.6**	**-1.2**
BLIS				IAML_P			
	comp=Z,915nm,0.3s						
HAKT	**HAKKARI**	**1.88**	**190**	*i* P	**Pg**	**20 58 28.2**	**+0.2**
HAKT				IAML_P			
	comp=Z,487nm,0.3s						
KZRT	**Kazreti**	**1.98**	**6**	P	**Pb**	**20 58 28.0**	**-0.4**
KZRT				S	**Sg**	**20 58 55.2**	**-0.4**
AKH	**Akhalkalaki**	**2.05**	**346**	PN	**Pb**	**20 58 28.3**	**-1.3**
AKH	**Akhalkalaki**	**2.05**	**346**	P	**Pb**	**20 58 28.4**	**-1.3**
AKH				S	**Sb**	**20 58 55.8**	**+0.3**
VRTB	**Varto-Mus**	**2.09**	**264**	PN	**Pb**	**20 58 29.1**	**-1.2**
VRTB	**Varto-Mus**	**2.09**	**264**	*i* P	**Pg**	**20 58 32.5**	**+0.5**
VRTB	**Varto-Mus**	**2.09**	**264**	*e*Pn	**Pb**	**20 58 28.8**	**-1.5**
MUSM	**Mu-Merkez**	**2.15**	**252**	*i* P	**Pb**	**20 58 30.8**	**-0.5**
MUSM				*i* S	**Sg**	**20 59 01.1**	**+0.1**
MUSM				IAML_P			
	comp=Z,334nm,0.6s						
CUKT	**Cukurca**	**2.20**	**191**	PN	**Pn**	**20 58 29.7**	**+0.6**
CUKT	**Cukurca**	**2.20**	**191**	*e*Pn	**Pb**	**20 58 30.5**	**-1.7**
AKDA	**Akdag**	**2.24**	**289**	*i* P	**Pg**	**20 58 33.5**	**-1.4**
BTNK	**Botanikuri**	**2.32**	**12**	*i* P	**Pb**	**20 58 34.4**	**+0.2**
BTNK				IAML_P			
	comp=Z,138nm,0.1s						
EPOS	**Posof**	**2.35**	**333**	*i* P	**Pg**	**20 58 37.0**	**+0.1**
TBLG	**Delisi**	**2.36**	**11**	PN	**Pb**	**20 58 32.9**	**-1.9**
TBLG	**Delisi**	**2.36**	**11**	P	**Pb**	**20 58 35.0**	**+0.1**
TBLG				S	**Sg**	**20 59 06.9**	**-0.8**
BNGL	**BINGOL**	**2.36**	**260**	*i* P	**Pg**	**20 58 36.7**	**-0.5**
DAGI	**Agillar**	**2.38**	**315**	*i* P	**Pg**	**20 58 36.9**	**-0.6**
DAGI				*i* S	**Sg**	**20 59 08.1**	**-0.1**
DAGI				IAML_P			
	comp=Z,134nm,0.5s						
DBAD	**Bademkaya**	**2.46**	**311**	*i* P	**Pg**	**20 58 39.1**	**0.0**
IHRS	**Heris**	**2.52**	**115**	*e*Pn	**Pb**	**20 58 36.7**	**-1.0**
IHRS				IAMB	IAmb	20 58 42.3	
	comp=Z,372nm,0.5s						
KRIK	**Erzurum-spir**	**2.63**	**292**	*i* P	**Pg**	**20 58 41.0**	**-1.4**
DBOC	**Borcka**	**2.69**	**316**	*i* P	**Pg**	**20 58 42.6**	**-1.0**
YEDI	**Yedisu-Bingol**	**2.78**	**272**	PN	**Pn**	**20 58 38.4**	**+1.4**
YEDI	**Yedisu-Bingol**	**2.78**	**272**	*e*Pn	**Pn**	**20 58 38.8**	**+1.8**
BCA	**Borcka**	**2.79**	**317**	PN	**Pn**	**20 58 38.4**	**+1.3**
KOPT	**Kop Dagi**	**2.87**	**283**	*i* P	**Pg**	**20 58 46.4**	**-0.5**
BINT	**Bingol**	**2.88**	**260**	*e*Pn	**Pn**	**20 58 38.0**	**-0.5**
GUDG	**Gudauri**	**3.06**	**5**	P	**Pb**	**20 58 45.0**	**-1.8**
ISRB	**Sarab**	**3.19**	**119**	IAMB	IAmb	20 59 05.3	
	comp=Z,216nm,0.6s						
MAZI	**Mazidag**	**3.49**	**237**	*e*Pn	**Pn**	**20 58 48.0**	**+1.2**
KELT	**Kelkit**	**3.83**	**283**	*i* P	**Pb**	**20 59 02.0**	**+2.0**

MAN 11 21:08:01.9, 16°.51N×122°.41E, h22km, mb4.0, ML2.8, MS2.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.55**	**2**	*e*P	Pb	21 08 13.3	+0.3
PALP				*e*S	Sb	21 08 21.6	+1.1
CAUP	**Cauayan**	**0.71**	**308**	*e*P	Pb	21 08 14.9	-0.7
CVP	**Callao Caves**	**1.31**	**335**⇑	*i*P	Pn	21 08 23.8	-1.2
CVP				*i* S	Sn	21 08 41.4	-0.4
SMPP	**San Manuel, Pa**	**1.70**	**258**	*e*P	Pn	21 08 31.1	+0.8
SMPP				*e*S	Sn	21 08 51.5	+0.2
APYP	**Conner**	**1.75**	**321**	*e*P	Pn	21 08 31.2	+0.3
APYP				*e*S	Sb	21 08 54.3	-0.5

ISCJB ***11*** *21:22:15.0±0.5, 30°.56N±0°.03×35°.27E±0°.07, h22km±7km, Error ellipse: s-maj=10.9km s-min=3.6km az=15.8*
JSO ***11*** *21:22:14.5±0.4, 31°.N±3°.×3°.5E±°., h10km, M2.9/7, Mjma2.7/7, MLv3.0/7*
GII ***11*** *21:22:14.0±0.0, 30°.55N×35°.34E, h10km, MD3.3/4*
ISC 11 21:22:14.6±1.0, 30°.56N±0°.03×35°.26E±0°.05, h16km±7km, n22, σ0°.55/31, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFRI	**Zfri**	**0.07**	**264**	Pg	**Pg**	**21 22 18.0**	**+0.2**
PRNI	**Paran**	**0.31**	**227**	Pg	**Pb**	**21 22 21.8**	**+0.1**
PRNI				Sg	**Sb**	**21 22 26.9**	**+0.4**
JDRJ	**Daraweish**	**0.38**	**64**	P	**Pb**	**21 22 24.2**	**+1.1**
HRFI	**Mount Harif**	**0.56**	**201**	Pg	**Pg**	**21 22 25.6**	**-0.1**
HRFI				Sg	**Sb**	**21 22 33.7**	**-0.1**
HRFI	**Mount Harif**	**0.56**	**201**	P	**Pg**	**21 22 25.7**	**0.0**
KRMI	**Paran Flat**	**0.64**	**227**	Pg	**Pg**	**21 22 27.1**	**-0.2**
KRMI				Sg	**Sb**	**21 22 36.8**	**+0.6**
LISJ	**El Lisan**	**0.70**	**15**	P	**Pb**	**21 22 28.8**	**+0.4**
MZDA	**Masada**	**0.75**	**6**	Pg	**Pg**	**21 22 28.6**	**-0.7**
MZDA				Sg	**Sg**	**21 22 39.0**	**-0.2**
YTIR	**Yattir**	**0.81**	**351**	Pg	**Pg**	**21 22 29.9**	**-0.5**
YTIR				Sg	**Sg**	**21 22 40.7**	**-0.4**
KZIT	**Kziot**	**0.82**	**295**	Pg	**Pg**	**21 22 30.5**	**-0.2**
KZIT	**Kziot**	**0.82**	**295**	P	**Pg**	**21 22 30.4**	**-0.2**
MBRI	**Mt Berech**	**0.82**	**202**	Pg	**Pg**	**21 22 30.1**	**-0.6**
MBRI				Sg	**Sb**	**21 22 41.7**	**+0.2**
AQBJ	**Aqaba**	**0.85**	**193**	P	**Pb**	**21 22 31.1**	**+0.1**
EIL	**Elat**	**0.93**	**197**	Pg	**Pg**	**21 22 31.7**	**-1.0**
EIL				Sg	**Sg**	**21 22 44.6**	**-0.3**
DSI	**Dead Sea**	**1.01**	**6**	Pg	**Pg**	**21 22 33.4**	**-0.8**
DSI				Sg	**Sb**	**21 22 47.7**	**+0.9**
AMAZ	**Amatzia**	**1.01**	**343**	Pg	**Pg**	**21 22 33.9**	**-0.4**
AMAZ	**Amatzia**	**1.01**	**343**	P	**Pg**	**21 22 33.7**	**-0.6**
WALJ	**Wala**	**1.10**	**25**	P	**Pb**	**21 22 34.6**	**-0.7**
SLTI	**Sal'it**	**1.68**	**354**	Pn	**Pn**	**21 22 42.8**	**-0.6**
SLTI				Sn	**Sn**	**21 23 05.6**	**+1.0**
HMDT	**Nahal Hemdat**	**1.70**	**8**	Pn	**Pn**	**21 22 43.3**	**-0.3**
MMLI	**Mount Malkishu**	**1.88**	**4**	Pn	**Pn**	**21 22 46.1**	**0.0**
OFRI	**`Ofer**	**2.07**	**353**	Pn	**Pn**	**21 22 48.9**	**+0.2**

SJA ***11*** *21:31:43.2±0.6, 23°.34S×66°.79W, h229km±4km, ML2.4, MW2.9*
ISCJB ***11*** *21:31:44.5±0.9, 23°.34S±0°.05×66°.88W±0°.04, h215km±9km, Error ellipse: s-maj=8.2km s-min=5.1km az=31.5*
GUC ***11*** *21:31:45.7±0.6, 23°.18S×67°.41W, h256km±10km, ML3.5*
ISC 11 21:31:42.9±2.1, 23°.34S±0°.05×66°.84W±0°.05, h229km±17km, n29, σ1°.26/47, 9C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.69**	**47**	*e*P	**Pn**	**21 32 21.9**	**+0.6**
YJA				*e*S	**Sn**	**21 32 51.2**	**-0.1**
YJA				IAML		21 32 53.6	
	comp=Z,4.1nm,0.8s						
SLA	**San Lorenzo**	**1.83**	**139**	*e*P	**Pn**	**21 32 23.0**	**+0.6**
SLA				IAML		21 32 24.2	
	comp=Z,18nm,0.7s						
SLA				*e*S	**Sn**	**21 32 52.3**	**-1.0**
AZAP	**Zapla**	**1.84**	**119**	*e*P	**Pn**	**21 32 22.6**	**+0.1**
AZAP				IAML		21 32 22.9	
	comp=Z,18nm,0.6s						
AZAP				*e*S	**Sn**	**21 32 52.7**	**-0.8**
LVC	**Limon Verde**	**2.04**	**290**	*e*P	**Pn**	**21 32 25.6**	**+1.0**
LVC				IAML		21 32 26.2	
	comp=Z,34nm,0.4s						
LVC				*e*S	**Sn**	**21 32 56.9**	**-0.2**
PB15	**IPOC Station P**	**2.43**	**273**	*e*P	**Pn**	**21 32 29.5**	**+1.3**
PB15				*e*S	**Sn**	**21 33 03.4**	**-0.3**
PB15	**IPOC Station P**	**2.43**	**273**⇑	*i*P	**Pn**	**21 32 29.5**	**+1.3**
PB15				*i* S	**Sn**	**21 33 03.3**	**-0.3**
PB06	**IPOC Station P**	**2.60**	**284**	*e*P	**Pn**	**21 32 31.2**	**+1.2**
PB06				*e*S	**Sn**	**21 33 06.1**	**-0.7**
PB06	**IPOC Station P**	**2.60**	**284**⇑	*i*P	**Pn**	**21 32 31.3**	**+1.3**
PB06				*e*S	**Sn**	**21 33 05.6**	**-1.2**
PB06				IAML		21 33 07.2	
	comp=E,139nm,0.2s						
PB09	**IPOC Station P**	**2.70**	**304**	*e*P	**Pn**	**21 32 32.5**	**+1.3**
PB09	**IPOC Station P**	**2.70**	**304**⇑	*i*P	**Pn**	**21 32 32.7**	**+1.6**
PB09				*e*S	**Sn**	**21 33 08.5**	**-0.4**
PB09				IAML		21 33 19.8	
	comp=N,29nm,0.4s						
FSA	**Cafayete**	**2.87**	**164**	*e*P	**Pn**	**21 32 33.7**	**+0.9**
FSA				IAML		21 32 34.8	
	comp=Z,4.6nm,0.3s						
PB03	**IPOC Station P**	**2.98**	**295**	*e*P	**Pn**	**21 32 35.2**	**+1.0**
PB03				*e*S	**Sn**	**21 33 13.4**	**-1.1**
PB03	**IPOC Station P**	**2.98**	**295**⇑	*i*P	**Pn**	**21 32 35.2**	**+1.0**
PB03				*e*S	**Sn**	**21 33 12.5**	**-2.0**
PB03				IAML		21 33 13.5	
	comp=E,69nm,0.2s						
GO02	**Mina Guanaco**	**3.10**	**234**⇓	*i*P	**Pn**	**21 32 37.0**	**+1.4**
GO02				*i* S	**Sn**	**21 33 17.0**	**0.0**
PB05	**IPOC Station P**	**3.14**	**278**	*e*P	**Pn**	**21 32 37.0**	**+1.1**
PB05	**IPOC Station P**	**3.14**	**278**⇑	*i*P	**Pn**	**21 32 36.9**	**+1.0**
PB05				*e*S	**Sn**	**21 33 15.7**	**-1.8**
PB05				IAML		21 33 20.4	
	comp=N,54nm,0.2s						
PB04	**IPOC Station P**	**3.22**	**288**	*e*P	**Pn**	**21 32 37.9**	**+1.1**
PB04	**IPOC Station P**	**3.22**	**288**⇑	*i*P	**Pn**	**21 32 37.5**	**+0.6**
PB04				*e*S	**Sn**	**21 33 16.7**	**-2.5**
PB04				IAML		21 33 23.1	
	comp=E,87nm,0.4s						
PB07	**IPOC Station P**	**3.25**

1.5nm,1.1s,baz=126,slow=6.8,SNR=6.2
BRTR Keskin Array B 85.21 309 P **P 21 54 52.6 -1.7**
0.7nm,0.8s,baz=101,slow=4.0,SNR=4.5

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*IDC **11** 21:48:12.9±1.1,38°.02N×21°.34E,h0km,mb4.1/11, mb1 4.0/15,mb1mx3.8/51,mbtmp3.9/15,ML3.9/4,MS3.2/7, Ms1 3.2/7,ms1mx2.6/50,Error ellipse: s-maj=21.3km s-min=16.7km az=11.0*
*PDG **11** 21:48:14.4±0.7,38°.01N×21°.19E,h8km±1km,ML3.9/14, Error ellipse: s-maj=1.0km s-min=1.2km az=0.0*
*MOS **11** 21:48:14.9±1.2,38°.00N×21°.30E,h21km,mb4.2/10,Error ellipse: s-maj=9.7km s-min=5.2km az=82.1*
*THE **11** 21:48:15.8,38°.02N×21°.36E,h4km,ML3.8/20,Error ellipse: s-maj=0.7km s-min=0.3km az=293.0*
*ISCJB **11** 21:48:15.1±0.3,38°.00N±0°.01×21°.25E±0°.02,h23km±2km, mb4.1/29,MS3.1/6,Error ellipse: s-maj=2.8km s-min=1.7km az=32.6*
*NEIC **11** 21:48:15.0±0.0,38°.03N×21°.37E,h6km,mb4.3/10, ML3.8(ATH),ML4.0(THE),After ATH.*
*ATH **11** 21:48:15.2,37°.97N×21°.35E,h20km,ML3.8/29,Error ellipse: s-maj=0.9km s-min=0.6km az=267.0*
ISC 11 21:48:15.8±0.7,38°.01N±0°.02×21°.34E±0°.01,h15km±4km, n279,σ1°37/372,mb4.1/29,MS3.0/5,26C-7D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.12**	**63**	P	**Pg**	**21 48 18.3**	**-1.0**
RLS	**Riolos of Patr**	**0.12**	**63**	P	**Pg**	**21 48 18.6**	**-0.7**
RLS				S	**Sg**	**21 48 21.0**	**-0.5**
RLS				AML	AML	21 48 21.1	
RLS				AML	AML	21 48 21.2	
VTN	**Vitineika**	**0.15**	**233**	P	**Pg**	**21 48 20.0**	**+0.4**
VTN	**Vitineika**	**0.15**	**233**	P	**Pg**	**21 48 20.2**	**+0.6**
DRO	**Drossia**	**0.30**	**100**	P	**Pg**	**21 48 21.3**	**-0.8**
DRO				S	**Sg**	**21 48 25.5**	**-0.9**
DRO	**Drossia**	**0.30**	**100**	P	**Pg**	**21 48 21.4**	**-0.7**
DRO				S	**Sg**	**21 48 26.0**	**-0.4**
DRO				AML	AML	21 48 27.4	
DRO				AML	AML	21 48 28.5	
KFL	**Anninata**	**0.44**	**284**	P	**Pb**	**21 48 24.7**	**-0.6**
KFL				S	**Sb**	**21 48 31.3**	**-0.5**
KFL	**Anninata**	**0.44**	**284**	P	**Pb**	**21 48 25.0**	**-0.3**
KFL				S	**Sb**	**21 48 31.3**	**-0.5**
UPR	**University Cam**	**0.45**	**52**	P	**Pg**	**21 48 24.3**	**-0.5**
UPR	**University Cam**	**0.45**	**52**	P	**Pb**	**21 48 24.9**	**-0.5**
UPR				S	**Sb**	**21 48 32.3**	**+0.4**
AMT	**Artemida-Makis**	**0.56**	**148**	P	**Pb**	**21 48 26.6**	**-0.6**
AMT				S	**Sb**	**21 48 34.4**	**-0.6**
AMT	**Artemida-Makis**	**0.56**	**148**	P	**Pg**	**21 48 26.4**	**-0.3**
AMT				S	**Sg**	**21 48 32.9**	**-1.3**
AMT				AML	AML	21 48 37.5	
	comp=E,27932µm,0.8s						
AMT				AML	AML	21 48 37.9	
	comp=N,29366µm,0.6s						
LAKA	**Lakka**	**0.56**	**65**	P	**Pb**	**21 48 26.3**	**-1.0**
LAKA	**Lakka**	**0.56**	**65**	P	**Pb**	**21 48 26.9**	**-0.4**
LAKA				S	**Sb**	**21 48 35.5**	**+0.4**
LAKA				AML	AML	21 48 36.3	
	comp=E,24418µm,0.6s						
LAKA				AML	AML	21 48 37.2	
	comp=N,22685µm,0.6s						
PDO	**Prodromos**	**0.60**	**349**	P	**Pb**	**21 48 27.2**	**-0.8**
PDO	**Prodromos**	**0.60**	**349**	P	**Pb**	**21 48 27.3**	**-0.7**
PDO				S	**Sb**	**21 48 37.4**	**+1.0**
PDO				AML	AML	21 48 40.0	
	comp=E,68676µm,0.3s						
PDO				AML	AML	21 48 40.0	
	comp=N,84385µm,0.3s						
VLS	**Valsamata**	**0.61**	**286**	P	**Pg**	**21 48 27.2**	**-0.6**
VLS				S	**Sb**	**21 48 36.9**	**+0.3**
VLS	**Valsamata**	**0.61**	**286**	P	**Pg**	**21 48 27.1**	**-0.8**
VLS				S	**Sb**	**21 48 37.4**	**+0.8**
VLS				AML	AML	21 48 40.1	
	comp=N,23762µm,0.4s						
VLS				AML	AML	21 48 45.0	
	comp=E,10560µm,0.5s						
EFP	**Efpalio**	**0.62**	**47**	P	**Pg**	**21 48 26.9**	**-1.0**
EFP				S	**Sb**	**21 48 35.7**	**-1.0**
EFP	**Efpalio**	**0.62**	**47**	P	**Pg**	**21 48 27.0**	**-0.9**
EFP				S	**Sb**	**21 48 36.8**	**+0.1**
EFP				AML	AML	21 48 38.5	
	comp=N,26151µm,0.5s						
EFP				AML	AML	21 48 38.8	
	comp=E,28292µm,0.3s						
PVO	**Paravola**	**0.63**	**14**	P	**Pb**	**21 48 27.7**	**-0.8**
PVO				S	**Sb**	**21 48 36.4**	**-0.7**
PVO	**Paravola**	**0.63**	**14**	P	**Pb**	**21 48 27.8**	**-0.6**
PVO				S	**Sb**	**21 48 38.2**	**+1.2**
PVO				AML	AML	21 48 40.2	
	comp=E,29920µm,0.2s						
PVO				AML	AML	21 48 40.9	
	comp=N,18402µm,0.3s						
KLV	**Kalavryta, Ach**	**0.65**	**86**	P	**Pg**	**21 48 27.0**	**-1.4**
KLV				S	**Sb**	**21 48 36.8**	**-0.8**
KLV	**Kalavryta, Ach**	**0.65**	**86**	P	**Pg**	**21 48 26.8**	**-1.7**
KLV				S	**Sb**	**21 48 37.1**	**-0.5**
KLV				AML	AML	21 48 39.2	
	comp=E,17284µm,0.6s						
KLV				AML	AML	21 48 40.1	
	comp=N,15575µm,0.7s						
ALIK	**Aliki, Aigiali**	**0.66**	**67**	P	**Pg**	**21 48 27.9**	**-0.8**
ALIK				S	**Sb**	**21 48 37.1**	**-0.9**
TRIZ	**Trizonia**	**0.68**	**58**	P	**Pg**	**21 48 27.8**	**-1.3**
TRIZ				S	**Sb**	**21 48 38.0**	**-0.6**
TRIZ	**Trizonia**	**0.68**	**58**	P	**Pg**	**21 48 28.3**	**-0.9**
TRIZ				S	**Sb**	**21 48 39.7**	**+1.1**
SERG	**Sergoula**	**0.70**	**54**	P	**Pg**	**21 48 28.1**	**-1.3**
SERG				S	**Sb**	**21 48 38.5**	**-0.6**
SERG	**Sergoula**	**0.70**	**54**	P	**Pg**	**21 48 28.3**	**-1.2**
SERG				S	**Sb**	**21 48 39.4**	**+0.2**
SERG				AML	AML	21 48 42.1	
	comp=E,26844µm,0.3s						
SERG				AML	AML	21 48 42.1	
	comp=N,30581µm,0.3s						
KALE	**Kalithea**	**0.74**	**58**	P	**Pg**	**21 48 28.9**	**-1.3**
KALE				S	**Sb**	**21 48 40.1**	**-0.3**
KALE	**Kalithea**	**0.74**	**58**	P	**Pg**	**21 48 29.1**	**-1.2**
KALE				S	**Sb**	**21 48 40.6**	**+0.2**
KALE				AML	AML	21 48 42.8	
	comp=N,25998µm,0.3s						
KALE				AML	AML	21 48 43.1	
	comp=E,19997µm,0.2s						
ANX	**Ano Chora**	**0.75**	**38**	P	**Pg**	**21 48 29.4**	**-1.0**
ANX				S	**Sb**	**21 48 40.1**	**-0.5**
ANX	**Ano Chora**	**0.75**	**38**	P	**Pg**	**21 48 29.4**	**-1.0**
ANX				S	**Sb**	**21 48 40.7**	**+0.2**
ANX				AML	AML	21 48 43.3	
	comp=E,26298µm,0.5s						
ANX				AML	AML	21 48 44.3	
	comp=N,36318µm,0.5s						
FSK	**Fiskardo**	**0.76**	**307**	P	**Pg**	**21 48 29.8**	**-0.7**
FSK				S	**Sb**	**21 48 41.5**	**+0.7**
FSK	**Fiskardo**	**0.76**	**307**	P	**Pg**	**21 48 29.8**	**-0.7**
FSK				S	**Sb**	**21 48 42.2**	**+1.4**
MGNA	**Meganis**	**0.78**	**327**	P	**Pb**	**21 48 31.0**	**0.0**
MGNA				S	**Sb**	**21 48 42.6**	**+1.3**
MGNA				AML	AML	21 48 50.1	
	comp=N,7762µm,0.3s						
MGNA				AML	AML	21 48 50.1	
	comp=E,10384µm,0.5s						
GUR	**Goura**	**0.80**	**95**	P	**Pg**	**21 48 29.9**	**-1.4**
GUR				S	**Sb**	**21 48 41.6**	**-0.5**
GUR	**Goura**	**0.80**	**95**	P	**Pg**	**21 48 29.6**	**-1.8**
GUR				S	**Sb**	**21 48 41.6**	**-0.5**
GUR				AML	AML	21 48 48.2	
	comp=E,28514µm,0.4s						
GUR				AML	AML	21 48 49.9	
	comp=N,57949µm,0.4s						
EVGI	**Lefkada island**	**0.81**	**319**	P	**Pg**	**21 48 30.8**	**-0.8**
EVGI				S	**Sb**	**21 48 42.9**	**+0.5**
EVGI	**Lefkada island**	**0.81**	**319**	P	**Pg**	**21 48 30.8**	**-0.8**
EVGI				S	**Sn**	**21 48 44.1**	**-0.4**
TRIP	**Tripoli**	**0.88**	**122**	P	**Pg**	**21 48 32.0**	**-0.9**
TRIP				S	**Sg**	**21 48 43.8**	**-0.6**
TRIP				AML	AML	21 48 47.0	
	comp=E,10911µm,0.6s						
TRIP				AML	AML	21 48 47.1	
	comp=N,12628µm,0.8s						
LKD2	**Lefkada island**	**0.95**	**326**	P	**Pb**	**21 48 33.9**	**0.0**
LKD2				S	**Sn**	**21 48 47.6**	**-0.2**
LKD2	**Lefkada island**	**0.95**	**326**	P	**Pn**	**21 48 34.1**	**-0.4**
LKD2				S	**Sb**	**21 48 47.1**	**+0.8**
LKD2				AML	AML	21 48 54.0	
	comp=E,10350µm,0.4s						
LKD2				AML	AML	21 48 55.2	
	comp=N,17173µm,0.7s						
ITM	**Ithomi**	**0.95**	**150**	*e*Pg	**Pg**	**21 48 33.4**	**-0.7**
ITM				*e*Sn	**Sg**	**21 48 43.4**	**-3.2**
ITM	**Ithomi**	**0.95**	**150**	P	**Pg**	**21 48 33.5**	**-0.7**
ITM				S	**Sb**	**21 48 47.3**	**+1.0**
ITM	**Ithomi**	**0.95**	**150**	P	**Pg**	**21 48 33.5**	**-0.7**
ITM				S	**Sg**	**21 48 46.0**	**-0.6**
ITM				AML	AML	21 48 51.5	
	comp=N,11361µm,0.7s						
ITM				AML	AML	21 48 55.2	
	comp=E,4449µm,0.4s						
TSLK	**Tsoukalades, L**	**0.98**	**327**	P	**Pb**	**21 48 34.0**	**-0.4**
TSLK	**Tsoukalades, L**	**0.98**	**327**	P	**Pg**	**21 48 33.7**	**-1.0**
TSLK				S	**Sn**	**21 48 48.9**	**+0.3**
EVR	**Evrytania**	**0.98**	**22**	P	**Pg**	**21 48 33.5**	**-1.3**
EVR				S	**Sb**	**21 48 48.0**	**+0.6**
EVR	**Evrytania**	**0.98**	**22**	P	**Pb**	**21 48 34.5**	**0.0**
EVR				S	**Sn**	**21 48 48.8**	**0.0**
EVR				AML	AML	21 48 54.0	
	comp=N,6185µm,0.6s						
EVR				AML	AML	21 48 59.1	
	comp=E,7157µm,0.8s						
DSF	**Desfina**	**1.02**	**66**	P	**Pg**	**21 48 34.2**	**-1.3**
DSF				S	**Sb**	**21 48 49.0**	**+0.5**
DSF	**Desfina**	**1.02**	**66**	P	**Pg**	**21 48 34.3**	**-1.2**
DSF				S	**Sn**	**21 48 50.1**	**+0.4**
DSF				AML	AML	21 48 52.3	
	comp=N,5227µm,0.5s						
DSF				AML	AML	21 48 52.8	
	comp=E,6146µm,0.6s						
DLFA	**Delphi**	**1.03**	**62**	P	**Pg**	**21 48 34.2**	**-1.4**
DLFA				S	**Sn**	**21 48 50.2**	**+0.4**
VLX	**Vlachokerasia**	**1.04**	**127**	P	**Pb**	**21 48 35.4**	**-0.2**
VLX				S	**Sn**	**21 48 50.0**	**-0.3**
VLX	**Vlachokerasia**	**1.04**	**127**	P	**Pg**	**21 48 35.2**	**-0.8**
VLX				S	**Sg**	**21 48 48.6**	**-1.0**
VLX				AML	AML	21 48 55.2	
	comp=N,21517µm,0.5s						
VLX				AML	AML	21 48 56.2	
	comp=E,17862µm,0.6s						
PYL	**PYLOS**	**1.15**	**164**	P	**Pg**	**21 48 36.7**	**-1.3**
PYL	**PYLOS**	**1.15**	**164**	P	**Pg**	**21 48 36.5**	**-1.5**
PYL				S	**Sb**	**21 48 52.5**	**+0.3**
PRUD	**Prodromos**	**1.26**	**78**	P	**Pn**	**21 48 38.7**	**-0.1**
PROD				S	**Sn**	**21 48 57.1**	**+1.6**
PROD				AML	AML	21 49 01.8	
	comp=N,4720µm,0.3s						
PROD				AML	AML	21 49 03.3	
	comp=E,6497µm,0.6s						
AGG	**Agios Georgios**	**1.28**	**37**	*e*Pg	**Pn**	**21 48 38.7**	**-0.5**
AGG				*e*Sn	**Sb**	**21 48 55.0**	**-0.8**
AGG	**Agios Georgios**	**1.28**	**37**	P	**Pn**	**21 48 39.1**	**0.0**
AGG				S	**Sn**	**21 48 57.7**	**+1.6**
AGG	**Agios Georgios**	**1.28**	**37**	*e*P	**Pn**	**21 48 38.7**	**-0.5**
AGG				*e*		21 48 55.0	
AGG	**Agios Georgios**	**1.28**	**37**	P	**Pn**	**21 48 38.9**	**-0.2**
AGG				S	**Sn**	**21 48 58.9**	**+2.9**
AGG				AML	AML	21 49 00.0	
	comp=E,6271µm,0.8s						
AGG				AML	AML	21 49 03.4	
	comp=N,3875µm,0.5s						
LTK	**Loutraki**	**1.29**	**89**	P	**Pn**	**21 48 38.9**	**-0.3**
LTK	**Loutraki**	**1.29**	**89**	P	**Pn**	**21 48 38.5**	**-0.8**
LTK				S	**Sn**	**21 48 56.8**	**+0.6**
LOUT	**Loutraki**	**1.29**	**90**	P	**Pn**	**21 48 39.3**	**0.0**
LOUT				S	**Sn**	**21 48 57.9**	**+1.5**
LOUT	**Loutraki**	**1.29**	**90**	P	**Pn**	**21 48 39.4**	**0.0**
LOUT				S	**Sn**	**21 48 58.4**	**+2.0**
LKR	**Lokris**	**1.46**	**63**	P	**Pn**	**21 48 41.4**	**-0.1**
LKR	**Lokris**	**1.46**	**63**	P	**Pn**	**21 48 41.7**	**+0.2**
LKR				S	**Sg**	**21 49 02.1**	**-0.7**
LKR				AML	AML	21 49 06.9	
	comp=E,3266µm,0.4s						
LKR				AML	AML	21 49 07.4	
	comp=N,2998µm,0.3s						
EPID	**Epidavros**	**1.47**	**105**	P	**Pb**	**21 48 42.2**	**-0.6**
VIL2	**Platees**	**1.54**	**82**	P	**Pg**	**21 48 44.7**	**-0.7**
VIL2				S	**Sg**	**21 49 05.7**	**+0.4**
VIL2				AML	AML	21 49 10.6	
	comp=N,4876µm,0.7s						
VIL2				AML	AML	21 49 14.4	
	comp=E,6433µm,0.6s						
KRND	**KRANIDI**	**1.57**	**113**	P	**Pb**	**21 48 43.7**	**-0.7**
KRND	**KRANIDI**	**1.57**	**113**	P	**Pb**	**21 48 44.3**	**-0.2**
VILL	**Villia**	**1.57**	**84**	P	**Pn**	**21 48 43.2**	**+0.1**
DID	**Didima**	**1.59**	**108**	P	**Pb**	**21 48 44.2**	**-0.6**
DID	**Didima**	**1.59**	**108**	P	**Pb**	**21 48 44.0**	**-0.8**
DID				S	**Sg**	**21 49 06.2**	**-0.7**
DID				AML	AML	21 49 11.2	
	comp=E,6342µm,0.4s						
DID				AML	AML	21 49 13.7	
	comp=N,6696µm,0.5s						
THL	**Klokotos Trika**	**1.65**	**19**	P	**Pb**	**21 48 44.9**	**-0.9**
THL	**Klokotos Trika**	**1.65**	**19**	P	**Pg**	**21 48 46.7**	**-0.6**
THL				S	**Sg**	**21 49 07.8**	**-1.0**
THL				AML	AML	21 49 15.4	
	comp=E,6008µm,0.6s						
THL				AML	AML	21 49 15.8	
	comp=N,3651µm,0.7s						
JAN	**Janina**	**1.69**	**347**	P	**Pg**	**21 48 47.1**	**-1.2**
JAN				S	**Sg**	**21 49 09.2**	**-1.0**
SMIA	**Simia**	**1.71**	**59**	P	**Pn**	**21 48 45.3**	**+0.3**
SMIA	**Simia**	**1.71**	**59**	P	**Pb**	**21 48 45.9**	**-1.0**
IGT	**Igoumenitsa**	**1.71**	**333**	P	**Pb**	**21 48 46.0**	**-1.0**
VLI	**Veliai**	**1.81**	**135**	P	**Pb**	**21 48 48.4**	**-0.2**
YDRA	**Hydra**	**1.81**	**111**	P	**Pb**	**21 48 47.9**	**-0.7**
YDRA				S	**Sb**	**21 49 11.1**	**0.0**
FYTO	**Fytoko, Volos**	**1.88**	**41**	P	**Pb**	**21 48 48.8**	**-1.0**
FYTO				S	**Sb**	**21 49 12.8**	**-0.3**
ATH	**Athens Observa**	**1.88**	**90**	P	**Pn**	**21 48 48.1**	**+0.8**
ATH	**Athens Observa**	**1.88**	**90**	P	**Pn**	**21 48 48.0**	**+0.6**
ATH				S	**Sb**	**21 49 13.7**	**+0.6**
ATH				AML	AML	21 49 21.1	
	comp=N,4384µm,0.8s						
ATH				AML	AML	21 49 23.2	
	comp=E,4716µm,0.9s						
MRKA	**Markates**	**1.90**	**68**	P	**Pn**	**21 48 48.0**	**+0.3**
MRKA	**Markates**	**1.90**	**68**	P	**Pn**	**21 48 48.0**	**+0.3**
MRKA				AML	AML	21 49 20.1	
	comp=N,2205µm,1.1s						
MRKA				AML	AML	21 49 31.7	
	comp=E,1867µm,0.7s						
ATHU	**Athens Univers**	**1.94**	**90**	P	**Pn**	**21 48 48.1**	**0.0**
ATHU				S	**Sb**	**21 49 13.9**	**-0.8**
ATHU	**Athens Univers**	**1.94**	**90**	P	**Pn**	**21 48 48.6**	**+0.5**
ATHU				S	**Sb**	**21 49 13.8**	**-0.8**
VLY	**Voula,Athens**	**1.95**	**94**	P	**Pn**	**21 48 48.5**	**+0.2**
VLY	**Voula,Athens**	**1.95**	**94**	P	**Pn**	**21 48 48.4**	**+0.2**
VLY				S	**Sb**	**21 49 14.1**	**-1.0**
NEO	**Neokhori**	**1.97**	**48**	P	**Pb**	**21 48 50.3**	**-1.0**
NEO				S	**Sb**	**21 49 15.3**	**-0.4**
XOR	**Xorichti**	**1.99**	**46**	P	**Pn**	**21 48 49.5**	**+0.6**
XOR	**Xorichti**	**1.99**	**46**	P	**Pn**	**21 48 49.6**	**+0.8**
PTL	**Penteli**	**2.00**	**88**	P	**Pn**	**21 48 49.4**	**+0.4**
PTL				S	**Sb**	**21 49 15.3**	**-1.2**
PTL	**Penteli**	**2.00**	**88**	P	**Pn**	**21 48 49.6**	**+0.6**
PTL				AML	AML	21 49 21.9	
	comp=N,1748µm,0.7s						
PTL				AML	AML	21 49 30.9	
	comp=E,1606µm,0.9s						
EREA	**Eretria**	**2.09**	**78**	P	**Pn**	**21 48 50.9**	**+0.7**
LIT	**Litokhoron**	**2.28**	**23**	*e*Pn	**Pn**	**21 48 53.7**	**+0.9**
LIT	**Litokhoron**	**2.28**	**23**	*e*P	**Pn**	**21 48 53.7**	**+0.9**
OHR	**Ohrid**	**3.13**	**353**	*i* Pn	**Pn**	**21 49 06.5**	**+2.0**
SOH	**Sokhos**	**3.22**	**28**	P	**Pn**	**21 49 08.7**	**+2.9**
KRUS	**Krusevo**	**3.36**	**359**	*i* Pn	**Pn**	**21 49 09.3**	**+1.5**
VAY	**Valandovo**	**3.45**	**16**	*e*Pn	**Pn**	**21 49 10.6**	**+1.7**
APE	**Apeiranthos**	**3.46**	**104**	⇑*i*P	**Pn**	**21 49 10.1**	**+0.9**
APE	**Apeiranthos**	**3.46**	**104**	S	**Sn**	**21 49 53.9**	**+4.0**
APE	**Apeiranthos**	**3.46**	**104**	*i* P	**Pn**	**21 49 10.1**	**+0.9**
TIR	**Tirane**	**3.53**	**342**	*e*Pn	**Pn**	**21 49 10.6**	**+0.7**
TIR	**Tirane**	**3.53**	**342**	⇑P	**Pn**	**21 49 10.7**	**+0.7**
TIR	**Tirane**	**3.53**	**342**	*e*P	**Pn**	**21 49 10.6**	**+0.7**
SANT	**Santorini**	**3.67**	**115**	*e*Pn	**Pn**	**21 49 10.7**	**-1.4**
STIP	**Stip**	**3.74**	**10**	*i* Pn	**Pn**	**21 49 15.8**	**+2.8**
TIP	**Timpagrande**	**3.77**	**290**	*e*Pn	**Pn**	**21 49 14.6**	**+1.2**
TIP				*e*Sn	**Sn**	**21 49 51.2**	**-6.4**
TIP	**Timpagrande**	**3.77**	**290**	⇑*i*P	**Pn**	**21 49 12.4**	**-1.0**
TIP	**Timpagrande**	**3.77**	**290**	S	**Sn**	**21 49 56.2**	**-1.4**
IDI	**Anoyia**	**3.94**	**132**	Pn	**Pn**	**21 49 18.8**	**+3.0**
	comp=E,1.8nm,0.3s,baz=312,slow=14,SNR=11						
IDI				Sn	**Sn**	**21 50 03.8**	**+2.1**
	comp=E,3.6nm,0.3s,baz=154,slow=23,SNR=3.3						
SKO	**Skopje**	**3.96**	**1**	*e*Pn	**Pn**	**21 49 15.9**	**0.0**
CGL1	**Ceglie Messapi**	**3.99**	**313**	*e*Pn	**Pn**	**21 49 17.3**	**+0.9**
CGL1				Sn	**Sn**	**21 50 02.7**	**-0.2**
ZEY	**zmir**	**4.08**	**85**	*i* P	**Pn**	**21 49 19.1**	**+1.6**
ZEY				IAML_P			
	comp=Z,816nm,0.3s						
BOZC	**Bozcaada**	**4.11**	**62**	*i* P	**Pn**	**21 49 20.4**	**+2.4**
BOZC				IAML_P			
	comp=Z,482nm,0.5s						
URLA	**Izmir**	**4.16**	**83**	*i* P	**Pn**	**21 49 20.6**	**+1.9**
URLA				IAML_P			
	comp=Z,1µm,0.3s						
FASA	**Fasano**	**4.17**	**314**	*e*Pn	**Pn**	**21 49 19.5**	**+0.7**
MASS	**Massafra**	**4.18**	**310**	*e*Pn	**Pn**	**21 49 19.9**	**+1.0**
ULC	**Ulcinj**	**4.27**	**339**	⇑*i*Pn	**Pn**	**21 49 20.0**	**-0.2**
ULC				*e*Sn	**Sn**	**21 50 10.3**	**+0.6**
CEL	**Celeste**	**4.30**	**275**	*e*Pn	**Pn**	**21 49 16.9**	**-3.7**
BAYC	**CANAKKALE_Bayr**	**4.42**	**65**	*i* P	**Pn**	**21 49 23.0**	**+0.7**
BAYC				IAML_P			
	comp=Z,342nm,0.3s						
MATE	**Matera**	**4.46**	**308**	⇓*i*P	**Pn**	**21 49 22.7**	**0.0**
MATE	**Matera**	**4.46**	**308**	S	**Sn**	**21 50 13.9**	**-0.4**
DRME	**Dracevica, Mon**	**4.49**	**339**	⇓*i*Pn	**Pn**	**21 49 23.1**	**-0.1**
DRME				*e*Sn	**Sn**	**21 50 15.4**	**+0.2**
DRME	**Dracevica, Mon**	**4.49**	**339**	*e*Pn	**Pn**	**21 49 23.2**	**0.0**
SG1	**Sgolgore (BA)**	**4.58**	**310**	*e*Pn	**Pn**	**21 49 25.3**	**+0.8**
SG1				Sn	**Sn**	**21 50 16.5**	**-1.0**
ZEDA	**zmir-Bergama**	**4.61**	**76**	*i* P	**Pn**	**21 49 24.2**	**-0.6**
ZEDA				IAML_P			
	comp=Z,79nm,0.1s						
BAI	**Bari**	**4.63**	**313**	*e*Pn	**Pn**	**21 49 25.9**	**+0.8**
ALN	**Alexandroupoli**	**4.65**	**50**	*e*Pn	**Pn**	**21 49 24.2**	**-1.2**
ALN	**Alexandroupoli**	**4.65**	**50**	*e*P	**Pn**	**21 49 24.2**	**-1.2**
BUM	**Brajici-Budva**	**4.68**	**337**	⇓*i*Pn	**Pn**	**21 49 26.1**	**+0.2**
BUM				*e*Sn	**Sn**	**21 50 20.5**	**+0.5**
PDG	**Podgorica**	**4.70**	**341**	⇑*i*P	**Pn**	**21 49 26.6**	**+0.5**
PDG	**Podgorica**	**4.70**	**341**	S	**Sn**	**21 50 21.0**	**+0.8**
PDG	**Podgorica**	**4.70**	**341**	*e*Pn	**Pn**	**21 49 25.8**	**-0.3**
TTG	**Podgorica**	**4.70**	**341**	⇑*i*Pn	**Pn**	**21 49 26.2**	**+0.2**
TTG				*e*Sn	**Sn**	**21 50 21.2**	**+1.0**
TTG	**Podgorica**	**4.70**	**341**	*e*Pn	**Pn**	**21 49 26.2**	**+0.2**
TTG	**Podgorica**	**4.70**	**341**	*e*P	**Pn**	**21 49 26.2**	**+0.2**
PVY	**Plav**	**4.70**	**348**	⇑*i*Pn	**Pn**	**21 49 26.4**	**+0.1**
PVY				*e*Sn	**Sn**	**21 50 21.2**	**+0.6**
VTS	**Vitosha**	**4.83**	**17**	*e*Pn	**Pn**	**21 49 29.2**	**+1.1**
VTS	**Vitosha**	**4.83**	**17**	⇑*i*P	**Pn**	**21 49 29.5**	**+1.5**
VTS	**Vitosha**	**4.83**	**17**	S	**Sn**	**21 50 26.4**	**+2.6**
VTS	**Vitosha**	**4.83**	**17**	*e*P	**Pn**	**21 49 29.2**	**+1.1**
CEME	**Cevo**	**4.90**	**339**	⇓*i*Pn	**Pn**	**21 49 28.9**	**0.0**
CEME				*e*Sn	**Sn**	**21 50 25.5**	**+0.2**
HCY	**Herceg Novi**	**4.94**	**335**	⇑*i*Pn	**Pn**	**21 49 29.3**	**-0.1**
HCY				*e*Sn	**Sn**	**21 50 26.4**	**+0.1**
HCY	**Herceg Novi**	**4.94**	**335**	*e*Pn	**Pn**	**21 49 28.5**	**-0.9**
IVA	**Berane**	**4.98**	**348**	⇓*i*Pn	**Pn**	**21 49 30.6**	**+0.5**
IVA				*e*Sn	**Sn**	**21 50 27.9**	**+0.4**
KOME	**Kolasin**	**5.04**	**345**	⇑*i*Pn	**Pn**	**21 49 31.2**	**+0.4**
KOME				*e*Sn	**Sn**	**21 50 29.1**	**+0.4**
NKME	**Niksic**	**5.09**	**340**	⇑*i*Pn	**Pn**	**21 49 31.9**	**+0.4**
NKME				*e*Sn	**Sn**	**21 50 30.6**	**+0.5**
NKY	**Niksic**	**5.12**	**340**	⇑*i*Pn	**Pn**	**21 49 31.8**	**-0.2**
NKY				*e*Sn	**Sn**	**21 50 31.3**	**+0.4**
STEP	**BALIKESIR_Sava**	**5.18**	**73**	*i* P	**Pn**	**21 49 37.4**	**+4.7**
STEP				IAML_P			
	comp=Z,78nm,0.3s						
BALY	**Balya**	**5.20**	**69**	*i* P	**Pn**	**21 49 33.2**	**+0.2**
BALY				IAML_P			
	comp=Z,102nm,0.2s						
TREB	**Trebinje**	**5.23**	**335**	*e*Pn	**Pn**	**21 49 32.3**	**-1.1**
BRY	**Bratogost**	**5.33**	**337**	⇑*i*Pn	**Pn**	**21 49 34.9**	**-0.1**
BRY				*e*Sn	**Sn**	**21 50 36.2**	**0.0**
BRY	**Bratogost**	**5.33**	**337**	*e*Pn	**Pn**	**21 49 36.0**	**+1.0**
BALB	**Balikesir**	**5.37**	**70**	*e*Pn	**Pn**	**21 49 36.1**	**+0.9**
UPM	**Unac-Piva**	**5.51**	**341**	⇓*i*Pn	**Pn**	**21 49 37.9**	**+0.5**
UPM				*e*Sn	**Sn**	**21 50 40.7**	**+0.1**
UPM	**Unac-Piva**	**5.51**	**341**	*e*Pn	**Pn**	**21 49 38.8**	**+1.4**
PLE	**Pljevlja**	**5.52**	**345**	⇑*i*Pn	**Pn**	**21 49 37.9**	**+0.4**
PLE				*e*Sn	**Sn**	**21 50 41.1**	**+0.4**
STON	**Ston**	**5.60**	**331**	*e*Pn	**Pn**	**21 49 37.7**	**-0.

MOA				*e*Sn	**Sn**	**21 52 56.0**	**-2.0**
	comp=Z,1.5nm,0.5s						
WTTA	**Wattenberg**	**11.68**	**325**	*e*Pn	**Pn**	**21 51 03.9**	**+1.9**
	comp=Z,1.1nm,0.3s						
WATA	**Walderalm**	**11.76**	**326**	*e*Pn	**Pn**	**21 51 05.6**	**+2.6**
	comp=Z,2.0nm,0.3s						
VRAC	**Vranov**	**11.80**	**345**	LR	LR	21 56 59.7	
	comp=Z,71nm,19.9s,baz=142,slow=45						
SQTA	**Sankt Quirin**	**11.84**	**324**	*e*Pn	**Pn**	**21 51 05.0**	**+0.9**
	comp=Z,1.3nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**11.88**	**320**	*e*Pn	**Pn**	**21 51 04.0**	**-0.7**
MOTA	**Moosalm**	**11.98**	**324**	*e*Pn	**Pn**	**21 51 06.7**	**+0.6**
	comp=Z,1.3nm,0.3s						
GEC2	**GERESS Array S**	**12.16**	**335**	*e*Pn	**Pn**	**21 51 08.6**	**+0.1**
GEC2	**GERESS Array S**	**12.16**	**335**	*e*P	**Pn**	**21 51 08.6**	**+0.1**
GERES	**GERESS Array B**	**12.16**	**335**	Pn	**Pn**	**21 51 08.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=162,slow=14,SNR=8.1						
KHC	**Kasperske Hory**	**12.45**	**336**	*e*P	**Pn**	**21 51 11.5**	**-0.9**
KHC	**Kasperske Hory**	**12.45**	**336**	*e*P	**Pn**	**21 51 11.5**	**-0.9**
MMAI	**Mount Meron Ar**	**12.49**	**109**	Pn	**Pn**	**21 51 12.0**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=293,slow=12,SNR=4.6						
SENIN	**Lac Senin/Sane**	**13.33**	**313**	*e*Pn	**Pn**	**21 51 24.4**	**-0.1**
SENIN				*e*Sn	**Sn**	**21 53 44.4**	**-8.1**
CLL	**Collm**	**14.55**	**339**	*i* PP	**P**	**21 51 48.7**	**+1.3**
CLL	**Collm**	**14.55**	**339**	*i* P	**P**	**21 51 48.7**	**+1.3**
SUW	**Suwalki**	**16.06**	**4**	*e*Pn	**Pn**	**21 52 02.3**	**+1.5**
SUW	**Suwalki**	**16.06**	**4**	*e*P	**Pn**	**21 52 02.3**	**+1.5**
ESDC	**Sonseca Array**	**19.76**	**283**	P	**P**	**21 52 45.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=83,slow=12,SNR=3.9						
OBN	**Obninsk**	**19.99**	**26**	*i* P	**P**	**21 52 47.1**	**-0.3**
OBN				*i*		21 53 01.8	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,40nm,17.0s						
VSU	**Vasula**	**20.77**	**8**	*ce*P	**P**	**21 52 55.6**	**-0.3**
VSU				pmax	pmax		
	comp=Z,190nm,1.0s						
HFS	**Hagfors**	**22.68**	**350**	P	**P**	**21 53 15.4**	**-1.0**
	comp=Z,2.1nm,0.4s,baz=163,slow=11,SNR=18						
HFS				LR	LR	22 03 42.6	
	comp=Z,47nm,19.2s,baz=212,slow=41						
NC602	**NORSAR Array S**	**23.58**	**348**	*e*P	**P**	**21 53 24.4**	**-1.1**
	comp=Z,9.1nm,0.9s						
FIA0	**FINESS Array S**	**23.65**	**6**	*e*P	**P**	**21 53 24.9**	**-1.3**
FIA0	**FINESS Array S**	**23.65**	**6**	*e*P	**P**	**21 53 24.9**	**-1.3**
FINES	**FINESS Array B**	**23.65**	**6**	P	**P**	**21 53 24.9**	**-1.3**
	comp=Z,3.1nm,0.6s,baz=166,slow=11,SNR=13						
FINES				LR	LR	22 03 38.2	
	comp=Z,48nm,19.7s,baz=238,slow=39						
FINES	**FINESS Array B**	**23.65**	**6**	*ce*P	**P**	**21 53 25.2**	**-1.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FIA1	**FINESS Array S**	**23.65**	**6**	*e*P	**P**	**21 53 25.0**	**-1.2**
	comp=Z,14nm,1.1s						
NAO01	**NORSAR Array S**	**23.79**	**347**	*e*P	**P**	**21 53 27.3**	**-0.3**
NC405	**NORSAR Array S**	**23.91**	**348**	*e*P	**P**	**21 53 27.9**	**-0.8**
	comp=Z,9.7nm,0.9s						
NB201	**NORSAR Array S**	**23.91**	**348**	*e*P	**P**	**21 53 28.0**	**-0.8**
NB2	**NORSAR Subarra**	**23.92**	**348**	P	**P**	**21 53 27.2**	**-1.6**
	comp=Z,2.7nm,0.7s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	**23.92**	**348**	P	**P**	**21 53 27.6**	**-1.2**
	comp=Z,2.4nm,0.9s,baz=157,slow=8.8,SNR=16						
NOA				LR	LR	22 04 24.9	
	comp=Z,31nm,18.1s,baz=30,slow=41						
EKA	**Eskdalemuir Ar**	**23.94**	**324**	P	**P**	**21 53 28.8**	**-0.3**
	comp=Z,4.5nm,0.5s,baz=127,slow=10.0,SNR=26						
ESK	**Eskdalemuir**	**23.95**	**324**	*e*P	**P**	**21 53 29.9**	**+0.7**
ESK	**Eskdalemuir**	**23.95**	**324**	*e*P	**P**	**21 53 29.9**	**+0.7**
NBO00	**NORSAR Array S**	**23.98**	**347**	*e*P	**P**	**21 53 29.1**	**-0.3**
	comp=Z,8.0nm,0.8s						
NC303	**NORSAR Array S**	**24.07**	**348**	*e*P	**P**	**21 53 28.7**	**-1.5**
	comp=Z,12nm,0.9s						
NC204	**NORSAR Array S**	**24.22**	**348**	*e*P	**P**	**21 53 31.4**	**-0.2**
KIRV	**Kirov**	**27.45**	**32**	LR	LR	22 05 48.4	
	comp=Z,37nm,18.6s,baz=176,slow=38						
ABKAR	**Akbulak array**	**29.81**	**55**	*e*P	**P**	**21 54 21.6**	**-0.3**
	comp=Z,1.0nm,0.9s						
TOA1	**Torodi Ar. Sit**	**30.30**	**220**	*e*P	**P**	**21 54 25.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**30.31**	**220**	P	**P**	**21 54 25.6**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=34,slow=9.2,SNR=24						
ARU	**Arti**	**30.76**	**41**	*i* P	**P**	**21 54 30.6**	**+0.3**
ARU				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARCES	**ARCESS Array B**	**31.67**	**3**	P	**P**	**21 54 37.0**	**-1.1**
	comp=Z,8.9nm,0.3s,baz=192,slow=9.6,SNR=8.0						
BRVK	**Borovoye**	**36.68**	**50**	*ce*P	**P**	**21 55 21.9**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
BVAR	**Borovoye Array**	**36.74**	**50**	P	**P**	**21 55 22.0**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=284,slow=6.3,SNR=10.0						
DBIC	**Dimbokro**	**39.21**	**224**	*e*P	**P**	**21 55 43.5**	**+0.1**
	comp=Z,2.8nm,0.9s						
DBIC	**Dimbokro**	**39.21**	**224**	*e*P	**P**	**21 55 43.5**	**+0.1**
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	**Ala-Archa**	**40.24**	**66**	*i* P	**P**	**21 55 56.1**	**+4.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**41.82**	**53**	P	**P**	**21 56 03.6**	**-1.0**
	comp=Z,2.3nm,0.7s,baz=282,slow=8.8,SNR=19						
KURK	**Kurchatov**	**41.86**	**53**	*ce*P	**P**	**21 56 04.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
NVS	**Novosibirsk**	**44.32**	**47**	*i* P	**P**	**21 56 24.4**	**-0.5**
MK31	**Makanchi Array**	**44.84**	**58**	*e*P	**P**	**21 56 28.4**	**-0.8**
	comp=Z,2.5nm,0.6s						
MK31	**Makanchi Array**	**44.84**	**58**	*e*P	**P**	**21 56 28.4**	**-0.8**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**44.84**	**58**	P	**P**	**21 56 28.2**	**-1.0**
	comp=Z,3.8nm,0.6s,baz=277,slow=7.4,SNR=58						
ZAA0	**Zalesovo Array**	**45.33**	**48**	*e*P	**P**	**21 56 31.9**	**-1.0**
	comp=Z,4.0nm,0.6s						
ZAA1	**Zalesovo Array**	**45.33**	**48**	*e*P	**P**	**21 56 31.7**	**-1.2**
ZALV	**Zalesovo Beam**	**45.33**	**48**	P	**P**	**21 56 31.7**	**-1.2**
	comp=Z,4.4nm,0.5s,baz=277,slow=8.5,SNR=19						
WMQ	**Urumqi**	**49.28**	**61**	*e*P	**P**	**21 57 04.9**	**+1.0**
ULN	**Ulaanbaatar**	**60.46**	**51**	*ce*P	**P**	**21 58 24.6**	**-0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LZH	**Lanzhou**	**63.70**	**64**	*e*P	**P**	**21 58 47.5**	**+0.6**
LZH				pP	sP	21 58 57.9	+4.3
LZH				sP	pP	21 59 01.2	+9.4
LZH				PP	**PP**	**22 01 08.8**	**+2.1**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,58nm,4.9s						
HHC	**Hu-ho-hao-te**	**66.60**	**56**	*e*P	**P**	**21 59 04.2**	**-1.4**
HHC				pmax	pmax		
	comp=Z,54nm,5.4s						
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
BILL	**Bilibino**	**71.04**	**13**	*i* P	**P**	**21 59 34.8**	**+2.2**
BILL				*i*		21 59 46.4	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ILAR	**Eielson Array**	**77.14**	**355**	P	**P**	**22 00 09.1**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=351,slow=3.1,SNR=6.9						
ILB	**Eielson Array**	**77.14**	**355**	*e*P	**P**	**22 00 09.1**	**+0.8**
KS15	**Wonju Array Si**	**78.92**	**51**	*e*P	**P**	**22 00 17.6**	**-1.1**
KSRS	**Korea Array**	**78.94**	**51**	P	**P**	**22 00 17.6**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=314,slow=4.9,SNR=4.8						
DLBC	**Dease Lake**	**80.98**	**345**	LR	LR	22 39 05.3	
	comp=Z,42nm,18.1s,baz=280,slow=38						

GUC 11 22:07:10.6±0.8, 33°.85S×71°.98W, h9km±10km, ML3.5, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTU	**Antumapu**	**1.16**	**77**	*e*P	Pn	22 07 33.1	+0.1
ANTU				*e*S	Sn	22 07 49.9	+0.9
ANTU				IAML		22 07 51.6	
	comp=E,2μm,0.4s						
GO05	**Huala**	**1.16**	**178**	*e*P	Pn	22 07 33.5	+0.4
GO05				*e*S	Sn	22 07 49.8	+0.6
ROCH	**El Roble**	**1.19**	**43**	⇓*i*P	Pn	22 07 33.7	0.0
ROCH				*i* S	Sn	22 07 51.7	+1.6
ROCH				IAML		22 07 57.3	
	comp=N,2μm,0.6s						
CLCH	**Cerro Calan**	**1.29**	**70**	*e*P	Pg	22 07 35.5	+0.2
CLCH				*i* S	Sn	22 07 53.8	+1.5
PEL	**Peldehue**	**1.29**	**58**	*e*P	Pb	22 07 35.2	+0.1
PEL				*i* S	Sn	22 07 54.5	+2.2
PEL				IAML		22 07 58.7	
	comp=E,2μm,0.3s						
LMEL	**Las Melosas**	**1.48**	**91**	*e*P	Pb	22 07 38.5	0.0
LMEL				*i* S	Sg	22 08 00.1	+1.8
FCH	**Farellones**	**1.50**	**70**	*e*P	Pb	22 07 39.1	+0.2
FCH				*i* S	Sg	22 07 58.6	-0.4
FCH				IAML		22 08 04.3	
	comp=N,1μm,0.4s						

BJI ***11*** *22:37:01.9±0.0, 21°.86S×178°.79W, h582km, mb4.6/13, mB4.9/10*
ISCJB ***11*** *22:37:04.8±0.4, 21°.86S±0°.06×179°.41W±0°.08, h600km, mb4.4/31, Error ellipse: s-maj=9.7km s-min=7.9km az=179.6*
NEIC ***11*** *22:37:04.1±2.6, 21°.73S×179°.34W, h582km±8km, mb4.5/26, Error ellipse: s-maj=20.0km s-min=18.0km az=73.0*
IDC ***11*** *22:37:08.8±2.5, 21°.77S×179°.58W, h626km±30km, mb3.6/10, mb1 3.8/11, mb1mx3.5/21, mbtmp4.5/11, Error ellipse: s-maj=16.0km s-min=14.3km az=133.0*
ISC 11 22:37:05.5±0.4, 21°.94S±0°.07×179°.33W±0°.09, h600km, σ1§61/118, mb4.4/31, 24C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.39**	**170**	*e*P	**P**	**22 38 59.5**	**+0.5**
RAO				*e*S	**S**	**22 40 25.7**	**-6.3**
MARNC	**Mare, Loyalty**	**11.76**	**270**	*e*P	**P**	**22 39 41.8**	**0.0**
DZM	**Mont Dzumac**	**13.20**	**267**	P	**P**	**22 39 55.9**	**-0.6**
	1.2nm,0.3s,baz=84,slow=20,SNR=6.3						
DZM	**Mont Dzumac**	**13.20**	**267**	*e*P	**P**	**22 39 55.2**	**-1.3**
OUZ	**Omahuta**	**14.61**	**204**	*e*P	**P**	**22 40 12.6**	**+2.6**
URZ	**Urewera**	**16.55**	**190**	P	**P**	**22 40 27.0**	**-0.7**
	3.9nm,0.3s,baz=286,slow=2.8,SNR=14						
URZ	**Urewera**	**16.55**	**190**	*e*P	**P**	**22 40 27.2**	**-0.5**
	21nm,1.1s						
URZ				*e*S	**S**	**22 43 08.4**	**-3.9**
BKZ	**Black Stump Fm**	**17.54**	**191**	*e*P	**P**	**22 40 37.6**	**+0.8**
	3.6nm,0.3s						
BFZ	**Birch Farm**	**19.06**	**190**	*e*P	**P**	**22 40 52.0**	**+1.5**
	32nm,1.2s						
LBZ	**Lake Benmore**	**24.00**	**199**	*e*P	**P**	**22 41 34.2**	**-0.5**
	9.2nm,1.1s						
EIDS	**Eidsvold**	**27.29**	**257**	*e*P	**P**	**22 42 04.1**	**+0.2**
	5.8nm,0.8s						
ARMA	**Armidale**	**27.34**	**246**	*e*P	**P**	**22 42 06.2**	**+1.9**
	8.3nm,0.8s						
STKA	**Stephens Creek**	**36.06**	**246**	P	**P**	**22 43 19.2**	**+1.1**
	3.4nm,0.4s,baz=88,slow=11,SNR=14						
AS31	**Alice Springs**	**43.00**	**258**	*e*P	**P**	**22 44 13.0**	**-0.7**
	3.2nm,0.6s						
ASAR	**Alice Springs**	**43.00**	**258**	P	**P**	**22 44 13.8**	**+0.1**
	15nm,0.8s,baz=93,slow=8.2,SNR=104						
ASAR				PcP	**PcP**	**22 45 50.8**	**+0.7**
	1.3nm,0.6s,baz=105,slow=4.6,SNR=4.5						
ASAR				S	**S**	**22 49 54.9**	**-2.2**
	2.4nm,0.9s,baz=94,slow=16,SNR=12						
WB2	**Warramunga Arr**	**43.18**	**264**	*e*P	**P**	**22 44 14.2**	**-1.0**
	14nm,0.8s						
WRA	**Warramunga Arr**	**43.19**	**264**	P	**P**	**22 44 14.5**	**-0.7**
	49nm,0.3s,baz=95,slow=7.9,SNR=1.5						
MTN	**Manton Dam**	**47.96**	**272**	*e*P	**P**	**22 44 50.8**	**-0.6**
	20nm,0.6s						
SOEI	**Soe**	**55.32**	**273**	*e*P	**P**	**22 45 45.8**	**+1.3**
	37nm,0.7s						
SBA	**Scott Base**	**56.36**	**184**	*e*P	**P**	**22 45 54.6**	**+4.2**
	9.9nm,1.0s						
VNDA	**Vanda**	**56.38**	**185**	P	**P**	**22 45 53.4**	**+2.9**
	2.0nm,0.7s,baz=350,slow=8.0,SNR=22						
QSPA	**South Pole Qui**	**68.14**	**180**	*e*P	**P**	**22 47 08.8**	**+2.2**
	9.4nm,0.8s						
MJAR	**Matsushiro Arr**	**70.64**	**325**	P	**P**	**22 47 21.5**	**-0.3**
	4.2nm,0.6s,baz=164,slow=6.2,SNR=14						
MAT	**Matsushiro**	**70.65**	**325**	P	**P**	**22 47 21.2**	**-0.7**
TPUB	**Ta-pu**	**73.73**	**304**	*e*P	**P**	**22 47 38.5**	**-1.4**
	17nm,0.8s						
SSLB	**Suanglung**	**73.74**	**305**	*e*P	**P**	**22 47 38.5**	**-1.5**
	13nm,0.7s						
PETK	**Petropavlovsk-**	**77.35**	**346**	P	**P**	**22 47 59.1**	**-0.1**
	8.9nm,0.7s,baz=126,slow=6.7,SNR=17						
USRK	**Ussuriysk Ar.**	**79.46**	**327**	P	**P**	**22 48 11.7**	**+1.0**
	3.1nm,0.8s,baz=114,slow=4.6,SNR=8.0						
NJ2	**Nanjing**	**79.85**	**311**	*e*P	**P**	**22 48 14.2**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MDPB	**Devils Postpil**	**81.96**	**44**	*e*P	**P**	**22 48 22.5**	**-1.5**
	12nm,0.8s						
WHN	**Wuhan**	**82.31**	**307**	P	P	22 48 30.3	+4.7
SUA	**Susitna One**	**86.23**	**13**	*e*P	**P**	**22 48 44.0**	**-0.2**
	7.8nm,0.6s						
SNAA	**Sanae**	**86.61**	**179**	P	**P**	**22 48 45.9**	**0.0**
VNA3	**Neumayer Olymp**	**86.79**	**177**	P	**P**	**22 48 46.7**	**0.0**
GHO	**Glory Hole Cre**	**86.91**	**14**	*e*P	**P**	**22 48 46.8**	**-0.5**
	10nm,0.7s						
VNA2	**Neumayer--Watz**	**87.22**	**177**	P	**P**	**22 48 49.1**	**+0.4**
	baz=197,slow=4.0						
SCM	**Sheep Creek Mo**	**87.33**	**15**	*e*P	**P**	**22 48 49.5**	**+0.2**
	10nm,0.6s						
VNA1	**Neumayer--Stat**	**87.45**	**177**	P	**P**	**22 48 48.8**	**-1.0**
CAST	**Castle Rocks**	**87.73**	**12**	*e*P	**P**	**22 48 49.9**	**-1.1**
	5.8nm,0.8s						
TXAR	**Lajitas Array**	**88.87**	**58**	P	**P**	**22 48 59.4**	**+2.1**
	0.9nm,0.9s,baz=216,slow=6.2,SNR=8.2						
PLCA	**Paso Flores**	**89.18**	**134**	P	**P**	**22 49 01.1**	**+2.6**
	2.7nm,0.8s,baz=206,slow=4.9,SNR=4.6						
CMAR	**Chiang Mai Arr**	**89.43**	**290**	P	**P**	**22 49 01.5**	**+1.5**
	3.7nm,0.8s,baz=136,slow=3.4,SNR=16						
HHC	**Hu-ho-hao-te**	**89.47**	**315**	*e*P	**P**	**22 49 00.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,21nm,1.2s						
HHC				pmax	pmax		
	comp=Z,92nm,6.0s						
CHTO	**Chiang Mai**	**89.57**	**290**	*e*P	**P**	**22 49 01.5**	**+0.9**
	6.1nm,0.8s						
ILAR	**Eielson Array**	**89.99**	**13**	P	**P**	**22 49 00.9**	**-0.6**
	0.6nm,0.6s,baz=216,slow=6.1,SNR=6.6						
LZH	**Lanzhou**	**92.66**	**308**	*e*P	**P**	**22 49 17.5**	**+2.8**
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,95nm,5.0s						
ARCES	**ARCESS Array B**	**130.09**	**349**	PKP	**PKiKP**	**22 55 08.1**	**-0.2**
	2.4nm,0.9s,baz=5.7,slow=3.7,SNR=6.7						
FINES	**FINESS Array B**	**136.78**	**342**	PKP	**PKiKP**	**22 55 21.8**	**-0.3**
	0.7nm,0.5s,baz=95,slow=3.5,SNR=8.0						
NB2	**NORSAR Subarra**	**140.24**	**352**	PKP	**PKPdf**	**22 55 20.5**	**-6.0**
	comp=Z,0.5nm,0.6s,baz=6.2,slow=2.7						
NOA	**NORSAR Array B**	**140.24**	**352**	PKhKP	**PKPdf**	**22 55 19.5**	**-7.0**
	comp=Z,0.4nm,0.5s,baz=13,slow=4.5,SNR=3.6						
AKASG	**Malin Array Be**	**143.63**	**329**	PKP	**PKPdf**	**22 55 30.9**	**-1.8**
	comp=Z,4.7nm,0.4s,baz=50,slow=4.3,SNR=23						
SUW	**Suwalki**	**143.71**	**338**	*e*PKP	**PKPdf**	**22 55 31.9**	**-0.9**
MILM	**Milestii Mici**	**146.27**	**324**	⇑*i*P	**PKPbc**	**22 55 38.7**	**-1.1**
IAS	**Iasi**	**146.76**	**326**	⇑*i*P	**PKPab**	**22 55 43.6**	**-0.7**
BR131	**Keskin Array S**	**146.84**	**310**	*e*PKPbc	**PKiKP**	**22 55 41.1**	**-2.5**
BRTR	**Keskin Array B**	**146.84**	**310**	PKPbc	**PKPbc**	**22 55 40.9**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=140,slow=4.6,SNR=17						
KWP	**Kalwaria Pacla**	**147.33**	**333**	*e*PKP	**PKiKP**	**22 55 43.1**	**-1.0**
BUR08	**Bucovina Ar. S**	**147.65**	**328**	*e*PKPbc	**PKPab**	**22 55 44.6**	**-3.5**
BURAR	**Bucovina Array**	**147.66**	**328**	⇑*i*P	**PKiKP**	**22 55 44.4**	**-0.6**
BIZ	**Bicaz**	**147.68**	**327**	⇑*i*P	**PKiKP**	**22 55 44.5**	**-0.4**
CFR	**Carcaliu**	**147.70**	**322**	⇑*i*P	**PKiKP**	**22 55 43.9**	**-1.1**
OJC	**Ojcow**	**148.01**	**337**	*e*PKP	**PKiKP**	**22 55 44.7**	**-0.8**
KOLS	**Kolonicke sedl**	**148.05**	**333**	*e*PKP	**PKiKP**	**22 55 45.4**	**-0.2**
VRI	**Vrincioaia**	**148.05**	**325**	⇑*i*P	**PKiKP**	**22 55 44.6**	**-1.2**
PLOR	**Plostina**	**148.10**	**325**	⇑*i*P	**PKiKP**	**22 55 43.8**	**-2.1**
TLB	**Topalu**	**148.10**	**322**	⇑*i*P	**PKiKP**	**22 55 45.1**	**-0.7**
MANR	**Mangalia**	**148.23**	**320**	⇓*i*P	**PKiKP**	**22 55 45.5**	**-0.6**
NIE	**Niedzica**	**148.47**	**335**	*e*PKP	**PKiKP**	**22 55 46.4**	**-0.2**
KSP	**Ksiaz**	**148.66**	**341**	*e*PKP	**PKiKP**	**22 55 46.4**	**-0.4**
MLR	**Muntele Rosu**	**148.71**	**325**	⇑*i*P	**PKiKP**	**22 55 47.0**	**-0.3**
OSTC	**Ostas**	**148.94**	**341**	*e*PKP	**PKiKP**	**22 55 47.2**	**-0.2**
OSTC				*e*PKPAB	**PKPab**	**22 55 53.8**	**+0.7**
CHVC	**Chvalec**	**148.96**	**341**	*e*PKP	**PKiKP**	**22 55 47.3**	**-0.2**
CHVC				*ex*	x	22 55 53.7	
UPC	**Upice**	**149.04**	**341**	⇑*e*PKP	**PKiKP**	**22 55 47.4**	**-0.2**
UPC				*ex*	x	22 55 54.0	
DPC	**Dobruska-Polom**	**149.09**	**340**	⇑*e*PKP	**PKiKP**	**22 55 47.8**	**0.0**
DPC				*e*PKPAB	**PKPab**	**22 55 54.5**	**+0.7**
CLL	**Collm**	**149.15**	**345**	*i* PKPbc	**PKiKP**	**22 55 46.2**	**-1.6**
	comp=Z,9.0nm,1.1s						
CLL				*i* PKPab	**PKPab**	**22 55 52.8**	**-1.1**
	comp=Z,5.0nm,0.8s						
CLL				*i* pPKPbc	**pPKPab**	**22 58 08.9**	**+3.6**
	comp=Z,4.0nm,0.9s						
MORC	**Moravsky Berou**	**149.18**	**338**	⇑*i*P	**PKiKP**	**22 55 47.2**	**-0.8**
MORC	**Moravsky Berou**	**149.18**	**338**	*e*PKP	**PKiKP**	**22 55 47.5**	**-0.5**
MORC				*e*		22 55 54.4	
VOIR		**149.22**	**325**	⇑*i*P	**PKiKP**	**22 55 47.1**	**-1.2**
BRG	**Berggiesshubel**	**149.31**	**343**	*i* PKP	**PKiKP**	**22 55 47.6**	**-0.5**
	comp=Z,7.1nm,0.9s						
BRG				*e*		22 55 54.6	
	comp=Z,6.0nm,1.1s						
PVCC	**Panska Ves**	**149.45**	**342**	⇑*e*PKP	**PKiKP**	**22 55 48.1**	**-0.4**
DRGR		**149.45**	**330**	⇑*i*P	**PKiKP**	**22 55 48.2**	**-0.5**
ARR	**Arges**	**149.49**	**326**	⇑*i*P	**PKiKP**	**22 55 49.5**	**+0.7**
HUMR	**Humele**	**149.86**	**324**	⇑*i*P	**PKiKP**	**22 55 48.5**	**-1.0**
KOLL	**Kolacno**	**149.88**	**336**	*e*PKP	**PKiKP**	**22 55 49.6**	**+0.2**
LOT	**Lotru**	**149.88**	**327**	⇓*i*P	**PKiKP**	**22 55 48.5**	**-1.2**
VRAC	**Vranov**	**149.90**	**339**	*e*PKP	**PKiKP**	**22 55 49.4**	**-0.1**
JAVC	**Velka Javorina**	**149.91**	**337**	*e*PKP	**PKiKP**	**22 55 50.1**	**+0.5**
PRU	**Pruhonice**	**149.94**	**342**	⇑*e*PKP	**PKiKP**	**22 55 49.1**	**-0.4**
PRU				*e*PKPAB	**PKPab**	**22 55 57.6**	**+0.3**
KRUC	**Moravsky**	**150.18**	**339**	*e*PKP	**PKiKP**	**22 55 49.5**	**-0.5**
KRUC				*e*		22 55 58.6	
NKC	**Novy Kostel**	**150.28**	**345**	⇑*e*PKP	**PKiKP**	**22 55 49.8**	**-0.4**
NKC				*e*PKPAB	**PKPab**	**22 55 59.0**	**+0.3**
MODS	**Modra-Piesok**	**150.47**	**337**	*e*PKP	**PKiKP**	**22 55 50.1**	**-0.6**
BZS	**Buzias**	**150.83**	**329**	⇑*i*P	**PKiKP**	**22 55 50.5**	**-1.0**
HERR	**Herculane**	**150.96**	**327**	⇑*i*P	**PKiKP**	**22 55 51.2**	**-0.6**
KHC	**Kasperske Hory**	**150.99**	**342**	*e*PKPbc	**PKiKP**	**22 55 51.1**	**-0.6**
KHC				*e*PKPab	**PKPab**	**22 56 01.8**	**+0.1**
KHC	**Kasperske Hory**	**150.99**	**342**	⇑*e*PKP	**PKiKP**	**22 55 51.9**	**+0.2**
KHC				*e*PKPAB	**PKPab**	**22 56 02.3**	**+0.6**
GERES	**GERESS Array B**	**151.21**	**342**	PKPbc	**PKiKP**	**22 55 52.0**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=50,slow=2.1,SNR=12						
GERES				PKPab	**PKPab**	**22 56 02.8**	**0.0**
	comp=Z,0.7nm,0.6s,baz=20,slow=4.3,SNR=5.2						
CONA	**Conrad Observa**	**151.34**	**338**	*e*PKiKP	**PKiKP**	**22 55 52.6**	**0.0**
	comp=Z,1.4nm,0.6s						
CONA				*e*PKPab	**PKPab**	**22 56 04.1**	**+0.8**
	comp=Z,2.8nm,0.8s						
MDVR	**Moldovita**	**151.39**	**328**	⇑*i*P	**PKiKP**	**22 55 51.9**	**-0.8**
WATA	**Walderalm**	**153.17**	**343**	*e*PKPab	**PKPab**	**22 56 12.0**	**+0.8**
	comp=Z,1.8nm,0.6s						
WTTA	**Wattenberg**	**153.22**	**343**	*e*PKPab	**PKPab**	**22 56 12.0**	**+0.5**
	comp=Z,2.2nm,0.5s						
MOTA	**Moosalm**	**153.29**	**344**	*e*PKPab	**PKPab**	**22 56 11.7**	**0.0**
	comp=Z,1.5nm,0.6s						
ABTA	**Abfaltersbach**	**153.45**	**342**	*e*PKPab	**PKPab**	**22 56 12.5**	**+0.1**
	comp=Z,7.0nm,1.2s						
DAVA	**Damuels**	**153.64**	**346**	*e*PKPab	**PKPab**	**22 56 13.1**	**-0.1**
	comp=Z,3.4nm,0.8s						
ESDC	**Sonseca Array**	**161.88**	**12**	PKPab	**PKPab**	**22 56 48.8**	**-0.3**

ISC 11 23:10:09.0±0.5, 1°.34N±0°.05×127°.03E±0°.07, h76km, n59, σ1°.29/60, mb4.5/35, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.66	149	ePn	Pn	23 10 23.9	-0.1
TNTI	Ternate	0.66	149	P	Pn	23 10 24.4	+0.4
SGSI	Sangihe	2.77	327	P	Pn	23 10 53.5	+2.4
SANI	Sanana	3.53	197	P	Pn	23 11 01.6	+0.1
SANI				S	Sn	23 11 40.8	-1.3
SIJI	Sorong	4.78	117	P	Pn	23 11 20.8	+2.2
	2.7nm,0.3s,baz=320,slow=16,SNR=7.0						
SIJI				LR	LR	23 13 34.2	
	comp=Z,559nm,20.0s,baz=286,slow=42						
LUWI	Luwuk	4.87	241	ePn	Pn	23 11 22.0	+2.2
LUWI	Luwuk	4.87	241	P	Pn	23 11 22.8	+3.0
APSI	Ampana	5.83	247	P	Pn	23 11 31.1	-1.7
FITZ	Fitzroy Crossi	19.37	184	P	P	23 14 29.5	+0.8
	0.8nm,0.3s,baz=12,slow=8.8,SNR=12						
LEM	Lembang	21.00	247	LR	LR	23 22 48.6	
	comp=Z,74nm,20.4s,baz=36,slow=36						
WR1	Warramunga Arr	22.34	162	eP	P	23 15 00.9	+0.1
WRA	Warramunga Arr	22.34	162	P	P	23 15 00.9	+0.1
	11nm,0.3s,baz=346,slow=12,SNR=6.9						
WB2	Warramunga Arr	22.34	162	eP	P	23 15 00.9	+0.1
	18nm,0.8s						
TPUB	Ta-pu	22.69	345	eP	P	23 15 01.2	-3.3
	38nm,0.4s						
PMG	Port Moresby	22.72	118	LR	LR	23 25 02.6	
	comp=Z,108nm,18.1s,baz=286,slow=39						
AS31	Alice Springs	25.74	165	eP	P	23 15 33.1	+0.4
	4.7nm,0.6s						
ASAR	Alice Springs	25.75	165	P	P	23 15 33.1	+0.4
	5.7nm,0.5s,baz=343,slow=7.3,SNR=39						
WHN	Wuhan	31.43	339	P	P	23 16 26.1	+2.9
NJ2	Nanjing	31.50	347	eP	P	23 16 23.9	+0.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CM31	Chiang Mai Arr	32.38	303	eP	P	23 16 29.9	-1.7
CMAR	Chiang Mai Arr	32.38	303	P	P	23 16 30.0	-1.7
	0.4nm,0.4s,baz=117,slow=6.4,SNR=5.3						
HNR	Honiara	34.49	109	LR	LR	23 30 34.4	
	comp=Z,76nm,21.0s,baz=212,slow=35						
STKA	Stephens Creek	35.81	159	P	P	23 17 02.1	+0.9
	3.3nm,0.5s,baz=327,slow=11,SNR=7.5						
STKA	Stephens Creek	35.81	159	eP	P	23 17 02.1	+0.9
	12nm,2.0s						
KS15	Wonju Array Si	35.93	1	eP	P	23 17 01.8	-0.4
KSRS	Korea Array	35.94	1	P	P	23 17 01.8	-0.5
	1.3nm,0.8s,baz=180,slow=11,SNR=7.5						
MAJO	Matsushiro	36.52	15	eP	P	23 17 05.8	-1.4
MJAR	Matsushiro Arr	36.52	15	P	P	23 17 05.8	-1.4
	0.7nm,0.3s,baz=194,slow=10,SNR=4.1						
ARMA	Armidale	39.34	145	eP	P	23 17 33.2	+2.1
	17nm,1.0s						
BJT	Baijiatuau	39.74	347	eP	P	23 17 34.3	+0.1
	21nm,1.3s						
LZH	Lanzhou	40.71	331	eP	P	23 17 40.9	-1.6
LZH				pP	pwP	23 18 01.8	-1.4
LZH				sP	sP	23 18 09.2	+0.6
LZH				PP	PnPn	23 19 22.8	+0.5
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
HHC	Hu-ho-hao-te	41.74	342	eP	P	23 17 51.7	+0.9
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.7s						
CAN	Canberra	41.86	153	eP	P	23 17 54.1	+2.3
USRK	Ussuriysk Ar.	42.90	5	P	P	23 18 00.0	0.0
	4.6nm,1.0s,baz=214,slow=6.5,SNR=5.3						
GTA	Gaotai	45.29	330	eP	P	23 18 21.8	+2.4
GTA				pP	pwP	23 18 39.3	-1.2
GTA				sP	sP	23 18 44.2	-1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLR	Kul'dur	47.88	4	P	P	23 18 39.0	-0.3
	1.5nm,0.9s,baz=352,slow=1.8,SNR=4.9						
ULN	Ulaanbaatar	49.47	342	eP	P	23 18 52.3	+0.6
	15nm,1.2s						
SONA0	Songino Array	49.64	342	eP	P	23 18 52.9	-0.1
SONM	Songino Array	49.64	342	P	P	23 18 52.9	-0.1
	4.4nm,1.0s,baz=161,slow=7.7,SNR=20						
WMQ	Urumqi	54.84	326	eP	P	23 19 33.2	+1.6
WMQ				sP	sP	23 20 01.1	+2.7
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,97nm,4.5s						
MK31	Makanchi Array	59.68	326	eP	P	23 20 05.2	-0.3
	8.1nm,0.9s						
MK32	Makanchi Array	59.68	326	eP	P	23 20 05.1	-0.4
MK32				epP	pwP	23 20 25.9	-1.3
MKAR	Makanchi Array	59.68	326	P	P	23 20 05.1	-0.4
	5.2nm,0.7s,baz=122,slow=8.4,SNR=69						
MKAR				pP	pwP	23 20 25.9	-1.3
	2.7nm,0.6s,baz=116,slow=8.5,SNR=6.6						
MAKZ	Makanchi	59.86	326	eP	P	23 20 07.0	+0.2
	13nm,1.0s						
ZAA0	Zalesovo Array	62.84	333	eP	P	23 20 27.0	+0.3
	8.9nm,1.4s						
ZALV	Zalesovo Beam	62.84	333	P	P	23 20 25.8	-0.9
	1.0nm,0.6s,baz=132,slow=8.2,SNR=7.0						
ZAA1	Zalesovo Array	62.84	333	eP	P	23 20 25.8	-0.9
GAR	Garm	63.76	313	eP	P	23 20 32.9	-0.3
	13nm,1.0s						
KURK	Kurchatov	63.90	328	eP	P	23 20 33.6	-0.2
	18nm,1.0s						
KK31	Karatay Array	65.17	318	eP	P	23 20 42.8	+0.5
	6.7nm,1.0s						
KKAR	Karatay Array	65.17	318	eP	P	23 20 42.1	-0.2
	6.7nm,1.0s						
BRVK	Borovoye	69.54	327	eP	P	23 21 08.8	-0.8
	4.9nm,0.9s						
GEYT	Alibeck	72.62	309	P	P	23 21 28.9	+0.3
	4.5nm,0.9s,baz=130,slow=4.6,SNR=12						
NRIK	Noril'sk	72.80	346	P	P	23 21 28.6	-0.4
	0.9nm,0.3s,baz=158,slow=8.8,SNR=4.2						
ABKAR	Akbulak array	74.18	321	eP	P	23 21 36.7	-0.7
	3.5nm,1.1s						
VNDA	Vanda	81.04	173	P	P	23 22 15.7	+0.6
	1.8nm,0.5s,baz=320,slow=6.6,SNR=29						
VNDA	Vanda	81.04	173	eP	P	23 22 15.4	+0.3
	7.2nm,1.4s						
SUA	Susitna One	85.11	29	eP	P	23 22 35.0	-1.6
	7.2nm,0.7s						
SMCO	Snowmass	116.24	45	ePdif	Pdif	23 24 58.4	-0.4

JMA 11 23:26:58.6±0.2, 28°.02N×126°.86E, h194km, M3.8, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	Iheya	1.39	135	P	Pn	23 27 31.4	+0.6
JIH				eS	Sn	23 27 56.2	+0.5
JAGN	Aguni-jima	1.47	166	P	Pn	23 27 31.8	+0.3
JOKE	Okinoerabujima	1.65	113	P	Pn	23 27 33.5	+0.3
JOKE				S	Sn	23 27 59.7	-0.3
JKE	Kume jima 2	1.69	182	P	Pn	23 27 33.3	-0.3
JKE				S	Sn	23 28 01.3	+0.6
JOW	Kunigami	1.73	133	P	Pn	23 27 34.2	+0.3
JOW				S	Sn	23 28 00.6	-0.7
JYRO	Yoronjima	1.73	125	P	Pn	23 27 34.2	+0.3
JYRO				S	Sn	23 28 00.9	-0.4
JNTH	Nagotoyohara	1.82	145	P	Pn	23 27 35.3	+0.5
JNTH				S	Sn	23 28 02.3	-0.7
JTK	Tokunoshima	1.86	97	P	Pn	23 27 35.3	0.0
JTK				S	Sn	23 28 03.5	-0.2
JJT3	Tamagusuku3	2.04	156	S	Sn	23 28 07.5	+0.4
JAMN	Amaminishikomi	2.06	83	P	Pn	23 27 37.1	-0.1
JTAJ	Takarajima	2.35	61	P	Pn	23 27 40.9	+0.5
JAM	Amami Oshima	2.45	80	P	Pn	23 27 41.6	0.0
JAM				S	Sn	23 28 14.5	-0.5
JZK	Kikaishima	2.76	83	P	Pn	23 27 46.0	+0.9
JZK				eS	Sn	23 28 21.7	+0.3
JNN	Nakanoshima	3.21	55	P	Pn	23 27 51.9	+1.5
JTJ	Tarama	3.88	210	P	Pn	23 27 56.6	-2.1
JTJ				S	Sn	23 28 41.0	-4.9
JYAK	Yakushimahirau	3.88	54	P	Pn	23 27 59.0	+0.3
JMTN	Minamitane	4.25	55	P	Pn	23 28 02.6	-0.7
JIJ	Ishigaki jima	4.38	214	P	Pn	23 28 01.0	-4.0
JIJ				S	Sn	23 28 50.2	-7.0
JTN	Tanegashima 3	4.45	53	P	Pn	23 28 05.2	-0.6
JMZ	Minamidaito 2	4.47	118	eS	Sn	23 28 56.9	-2.2
HATJ	Hateruma jima	4.81	216	eS	Sn	23 29 01.4	-5.6
JTZ	Takazaki	5.33	42	P	Pn	23 28 16.3	-0.8

MEX 11 23:30:43.1±0.4, 15°.16N×91°.79W, h180km±9km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	Comitan	1.17	343	eP	Pn	23 31 11.0	-1.3
CCIG				i S	Sn	23 31 32.2	-2.8
PCIG		1.49	292	i P	Pn	23 31 13.6	-1.3

*HEL **11** 23:51:03.8, 67°.80N×20°.16E, h0km, ML1.8, Explosion*

UPP 11 23:51:04.1±0.0, 67°.83N×20°.20E, h0km, ML2.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	23	P	Pg	23 51 06.9	+0.2
KUA				S	Sg	23 51 08.7	+0.4
KUA	Kurravaara	0.13	23	i P	Pg	23 51 06.9	+0.2
KUA				i S	Sg	23 51 08.7	+0.4
NIKU	Nikkaluokta	0.44	275	P	Pg	23 51 12.6	0.0
NIKU				S	Sg	23 51 18.7	+0.4
NIKU	Nikkaluokta	0.44	275	i P	Pg	23 51 12.6	0.0
NIKU				i S	Sg	23 51 18.7	+0.4
LANU	Lannavaara	0.71	71	P	Pg	23 51 17.5	-0.2
LANU	Lannavaara	0.71	71	eP	Pg	23 51 17.3	-0.4
	baz=251						
LANU				eS	Sg	23 51 26.6	-0.2
DUNU	Dundret	0.73	169	P	Pg	23 51 17.7	-0.3
DUNU	Dundret	0.73	169	i P	Pg	23 51 17.7	-0.3
MASU	Masugnsbyn	0.78	118	P	Pg	23 51 18.9	-0.2
MASU	Masugnsbyn	0.78	118	i P	Pg	23 51 18.9	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	23 51 19.0	-0.2
SALU	Saltoluokta	0.79	236	i P	Pg	23 51 19.0	-0.2
KIF	Kilpisjarvi	1.20	10	eP	Pg	23 51 27.0	0.0
KIF	Kilpisjarvi	1.20	10	ePB	Pg	23 51 26.9	-0.1
KIF				MSG		23 51 42.2	
	comp=Z,15nm,0.2s						
KIF				eSB	Sg	23 51 42.9	+0.4
PAJU	Pajala	1.39	125	P	Pg	23 51 29.4	-1.2
PAJU	Pajala	1.39	125	eP	Pg	23 51 29.4	-1.2
HEF	Hetta	1.42	64	eP	Pn	23 51 30.1	-1.0
HEF	Hetta	1.42	64	ePG	Pn	23 51 29.9	-1.2
HEF				MSG		23 51 47.4	
	comp=Z,8.7nm,0.2s						
HEF				eSN	Sb	23 51 50.0	0.0
ERTU	Ertsjaerv	1.50	148	eP	Pn	23 51 31.3	-0.9
	baz=327						
ERTU				eSN	Sn	23 51 52.4	0.0
KALU	Kalix	2.34	146	P	Pn	23 51 44.9	+1.1
KALU	Kalix	2.34	146	ePB	Pn	23 51 44.7	+1.0
KALU				eSG	Sb	23 52 16.6	+0.2
TOF	Tornio	2.39	135	ePB	Pn	23 51 45.8	+1.3
	baz=320						
TOF				MSG		23 52 14.3	
	comp=Z,2.7nm,0.2s						
TOF				eSG	Sb	23 52 18.4	+0.5
RNF	Rovaniemi	2.57	116	ePB	Pn	23 51 48.7	+1.7
RNF				eSG	Sb	23 52 22.9	-0.3
ARE0	ARCESS Array S	2.58	46	ePB	Pn	23 51 48.4	+1.3
ARE0				eSG	Sb	23 52 23.0	-0.5

UPP 11 23:51:14.2±0.5, 67°.88N×20°.09E, h0km±25km, ML1.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	50	P	Pg	23 51 16.8	+0.3
KUA				S	Sg	23 51 18.6	+0.6
PAJU	Pajala	1.45	125	P	Pn	23 51 40.9	-0.7

MEX 12 00:16:24.6±0.5, 16°.68N×97°.03W, h8km±4km, MD3.6, Oaxaca

*IGQ **12** 00:40:16.6±0.5, 2°.5S±3°.7×7°.8W±°, h13km, MLv3.5*

ISC 12 00:40:12.6±1.9, 2°.21S±0°.07×77°.60W±0°.05, h16km±11km, n40, σ0°.59/49, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APUY	Puyo	0.84	332	P	Pn	00 40 29.6	-0.3
APUY				S	Sn	00 40 41.4	-0.6
BPAT	Tungurahua Vol	1.09	310	P	Pg	00 40 34.0	+0.2
BPAT				S	Sb	00 40 47.3	-0.1
PAT1	Patacocha	1.09	310	P	Pg	00 40 34.1	+0.3
ARRY	Arrayan	1.10	309	P	Pb	00 40 33.1	-0.4
BULB	Ulba Tungurahu	1.11	313	P	Pb	00 40 33.6	-0.1
BULB				S	Sb	00 40 48.0	-0.1
BMAS	Trigal station	1.12	308	P	Pb	00 40 33.6	-0.3
BMAS				S	Sb	00 40 47.3	-1.1
BRUN	Tungurahua Vol	1.12	314	P	Pb	00 40 33.9	0.0
BRUN				S	Sb	00 40 48.8	+0.3
RETU	Refugio	1.13	312	P	Pb	00 40 34.0	-0.1
BBIL	Ulba Tungurahu	1.16	310	P	Pb	00 40 34.6	0.0
ATEN	Tena	1.21	350	P	Pg	00 40 35.9	-0.1
ATEN				S	Sg	00 40 52.5	+0.7
ARDO	Archidona, Ten	1.22	351	P	Pg	00 40 35.9	-0.3
ARDO				S	Sg	00 40 52.9	+0.8
PIS1	Pisayambo	1.38	325	P	Pg	00 40 39.1	-0.3
PIS1				S	Sg	00 40 57.3	-0.2
PISA	Pisayambo	1.38	325	P	Pb	00 40 38.9	+0.4
COHC	Cochancay	1.67	261	P	Pb	00 40 42.8	-0.2
COHC				S	Sn	00 41 03.1	+0.7
BMOR	Cotopaxi Volca	1.70	330	P	Pb	00 40 44.0	+0.2
BMOR				S	Sg	00 41 06.2	-1.3
COV1	Cotopaxi Volc	1.70	334	P	Pg	00 40 45.5	0.0
BTAM	Cotopaxi Volca	1.72	332	P	Pb	00 40 44.5	+0.4
BVC2	Cotopaxi Volca	1.74	332	P	Pb	00 40 44.7	+0.2
BREF	Cotopaxi Volca	1.74	331	P	Pb	00 40 45.2	+0.6
VC1	Cotopaxi 1	1.75	333	P	Pb	00 40 45.3	+0.6
BNAS	Cotopaxi Volca	1.76	330	P	Pb	00 40 45.5	+0.7
CAMI	Rancho Maria	1.77	329	P	Pb	00 40 45.7	+0.7
ANTM	Antisana-La Mi	1.77	339	P	Pb	00 40 45.2	+0.1
ANTS	Antisana-Sarah	1.79	341	P	Pb	00 40 45.5	+0.1
ANTG	Antisana-Guama	1.81	339	P	Pb	00 40 46.0	+0.2
ANTI	Antisana	1.83	342	P	Pb	00 40 46.1	0.0
PITA	Cotopaxi Volc	1.83	333	P	Pb	00 40 46.8	+0.7
ILLI	Illinizas Sur	1.86	323	P	Pb	00 40 46.8	+0.3
MILO	Milagro-Astudi	1.96	268	P	Pb	00 40 48.3	+0.5
REVS	Reventador Sur	2.09	359	P	Pb	00 40 50.2	-0.1
LAV4	Lava4-Reventad	2.10	359	P	Pb	00 40 50.5	0.0
YANA	Yana	2.29	335	P	Pb	00 40 55.1	+1.3
CASC	Dorado de Casc	2.34	6	P	Pb	00 40 55.1	+0.6
PULU	Pululahua	2.39	338	P	Pb	00 40 55.8	+0.3
OTAV	Otavalo	2.57	341	eP	Pb	00 40 59.5	+0.8
URCU	Urcuqui	2.71	346	P	Pb	00 41 01.8	+0.8
GCUF	Volcan Galeras	3.42	4	eP	Pg	00 41 16.9	-1.3
PTLC	Puerto Leguiza	3.67	50	eP	Pn	00 41 08.1	-0.6
BBAC	Balboa, Cauca	4.21	5	eP	Pg	00 41 45.4	+12
FLOC	Florencia	4.24	27	eP	Pn	00 41 18.0	+1.4

SJA 12 01:08:30.2±0.6, 28°.43S×66°.08W, h15km±4km, ML3.0, MW3.7, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	Choya	0.24	94	i P	Pb	01 08 36.1	-0.3
CYA				IAML		01 08 39.5	
	comp=Z,3μm,0.1s						
CYA				i S	Sg	01 08 39.8	+0.5
AHML	Horco Molle	1.76	22	i P	Pg	01 09 03.4	-0.7
AHML				i S	Sg	01 09 28.2	+1.2
AHML				IAML		01 09 32.2	
	comp=Z,74nm,0.2s						
VCA	Vinchina	1.90	260	i P	Pb	01 09 05.2	+0.6
VCA				i S	Sg	01 09 32.0	+0.7
VCA				IAML		01 09 36.3	
	comp=Z,133nm,0.4s						
FSA	Cafayete	2.31	2	i P	Pb	01 09 11.9	+0.3
FSA				IAML		01 09 47.5	
	comp=Z,88nm,0.2s						
TCA	Tanti	3.18	156	i P	Pb	01 09 23.8	-2.6
TCA				IAML		01 10 09.1	
	comp=Z,94nm,0.3s						

IDC 12 02:13:37.2±5.0, 22°.34S×177°.14W, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.6/37, mbtmp4.0/2, Error ellipse: s-maj=270.4km s-min=44.0km az=152.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	34.15	267	P	P	02 20 27.4	+3.1
	4.6nm,0.5s,baz=97,slow=11,SNR=10						
ASAR	Alice Springs	44.91	258	P	P	02 21 53.5	-0.5
	0.9nm,0.4s,baz=96,slow=6.9,SNR=12						
WRA	Warramunga Arr	45.17	264	P	P	02 21 56.2	+0.1
	1.0nm,0.3s,baz=94,slow=9.2,SNR=14						
ARCES	ARCESS Array B	130.86	350	PKP	PKPdf	02 32 49.8	-0.1
	1.5nm,0.9s,baz=46,slow=2.6,SNR=3.7						
AKASG	Matin Array Be	145.00	331	PKPbc	PKPbc	02 33 15.5	-0.1
	0.9nm,0.5s,baz=52,slow=3.9,SNR=4.6						
BRTR	Keskin Array B	148.65	311	PKPbc	PKPbc	02 33 25.6	-1.1
	0.7nm,0.6s,baz=151,slow=5.5,SNR=5.5						

*IDC **12** 02:22:00.8±3.1, 39°.60S×177°.06E, h0km, mb4.3/2, mb1 4.6/2, mb1mx3.8/33, mbtmp4.3/2, Error ellipse: s-maj=62.2km s-min=17.7km az=110.0*

*ISCJB **12** 02:22:05.2±0.4, 39°.52S±0°.02×177°.15E±0°.04, h31km±2km, mb4.1/2, Error ellipse: s-maj=4.9km s-min=2.8km az=23.2*

*WEL **12** 02:22:05.8, 39°.4S±0°.7×17°.7E±°, h22km±2km, M4.2/25, ML4.6/18, MLv4.2/25, Error ellipse: s-maj=0.0km s-min=0.0km az=104.1*

ISC 12 02:22:05.8±0.9, 39°.47S±0°.02×177°.09E±0°.03, h32km±5km, n113, σ0°.90/122, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKHZ	Cape Kidnapper	0.19	183	P	Pb	02 22 12.8	+0.6
CKHZ				S	Sb	02 22 18.4	+1.9
ARHZ	Aropaoanui	0.22	340	P	Pb	02 22 11.3	-1.3
ARHZ				S	Sb	02 22 15.9	-1.1
MCHZ	McNeill Hill	0.31	275	P	Pb	02 22 13.2	-0.4
MCHZ				S	Sn	02 22 18.8	-0.7
KAHZ	Kahuranaki	0.36	207	P	Pn	02 22 15.8	+0.9
KAHZ				S	Sn	02 22 23.9	+2.9
WHHZ	Waihua	0.41	16	P	Pb	02 22 14.6	-0.4
NMHZ	Naumai	0.43	329	P	Pb	02 22 14.6	-0.8
NMHZ				S	Sb	02 22 21.5	-0.5
KWHZ	Kaweka Forest	0.52	275	P	Pb	02 22 16.4	-0.3
KWHZ				S	Sn	02 22 24.6	-0.3
RAHZ	Arahi	0.56	360	P	Pb	02 22 16.7	-0.5
RAHZ				S	Sb	02 22 25.3	+0.2
BKZ	Black Stump Fm	0.56	303	P	Pb	02 22 16.4	-0.8
KRHZ	Kereru	0.58	253	P	Pn	02 22 17.9	0.0
KRHZ				S	Sn	02 22 27.3	+1.0
PXZ	Pawanui	0.59	197	P	Pn	02 22 18.5	+0.6
KNZ	Kokohu	0.64	45	P	Pb	02 22 18.6	0.0
MTHZ	Maungataniwha	0.65	342	P	Pb	02 22 17.8	-1.0
MHGZ	Mahia Peninsul	0.71	64	P	Pn	02 22 20.0	+0.4
SNGZ	Shannon Statio	0.72	16	P	Pb	02 22 19.8	-0.1
SNGZ				S	Sn	02 22 30.9	+1.3
WPHZ	Waipukurau	0.78	220	P	Pn	02 22 21.6	+1.0
BHHZ	Black Hill Sta	0.80	268	P	Pn	02 22 20.9	+0.1
PNHZ	Pukenui	0.82	237	P	Pn	02 22 21.7	+0.6
PRGZ	Paritu Road	0.82	49	P	Pb	02 22 21.4	-0.3
MRHZ	Matea Rd	0.82	320	P	Pb	02 22 20.9	-0.8
RTZ	Ruatahuna	0.86	354	P	Pb	02 22 21.5	-0.8
PRHZ	Porangahau	0.87	204	P	Pn	02 22 22.2	+0.4
RIGZ	Rimuhau	0.93	35	P	Pb	02 22 22.6	-0.8
HATZ	Hinemaiaia	0.97	306	P	Pn	02 22 23.7	+0.5
RAGZ	Rawiri	1.01	15	P	Pb	02 22 24.0	-0.8
MUGZ	Murupara	1.02	346	P	Pb	02 22 24.2	-0.8
MOVZ	Moawhango	1.04	273	P	Pb	02 22 25.1	+0.9
TSZ	Takapari Road	1.05	236	P	Pn	02 22 25.0	+0.7
RITZ	Rihia Road	1.08	297	P	Pb	02 22 26.0	+0.1
ALRZ	Allen Road	1.08	327	P	Pn	02 22 25.3	+0.6
DVHZ	Dannevirke	1.09	220	P	Pb	02 22 25.3	-0.8
ANWZ	Angora Road	1.09	205	P	Pb	02 22 25.9	-0.3
PRRZ	Plateau Road	1.11	331	P	Pn	02 22 25.7	+0.6
TUVZ	Tukino	1.13	280	P	Pb	02 22 26.9	0.0
WHVZ	Whangaehu Hut	1.18	279	P	Pb	02 22 27.5	-0.3
MWZ	Matawai	1.19	17	P	Pn	02 22 26.0	-0.2
KRVZ	Karewarewa	1.19	288	P	Pb	02 22 27.3	-0.6
TKGZ	Te Karaka	1.19	30	P	Pn	02 22 26.0	-0.2
RATZ	Rangitukua	1.19	300	P	Pb	02 22 27.3	-0.5
KATZ	Kakaramea	1.19	294	P	Pb	02 22 27.3	-0.6
NGZ	Ngauruhoe	1.19	284	P	Pb	02 22 27.5	-0.5
WHTZ	Whakaora	1.19	312	P	Pb	02 22 27.2	-0.7
WPRZ	Whakapapatarin	1.20	322	P	Pn	02 22 26.8	+0.5
DRZ	Dome Shelter	1.20	279	P	Pb	02 22 28.4	+0.2
URZ	Urewera	1.21	1	Pg	Pn	02 22 26.5	0.0
	191nm,0.3s,baz=220,slow=8.2,SNR=463						
URZ				Lg	Lg	02 22 43.7	
	193nm,0.3s,baz=163,slow=23,SNR=21						
URZ				LR	LR	02 23 12.6	
	comp=Z,444nm,18.5s,baz=315,slow=53						
URZ	Urewera	1.21	1	P	Pn	02 22 26.6	+0.2
FWVZ	Far West T-bar	1.21	280	P	Pb	02 22 27.8	-0.6
RRRZ	Republican Roa	1.22	338	P	Pn	02 22 27.3	+0.7
WTVZ	West Tongariro	1.22	287	P	Pb	02 22 27.8	-0.5
HRRZ	Handcock Road	1.25	330	P	Pb	02 22 27.8	+0.7
MTVZ	Mangateitei	1.26	273	P	Pb	02 22 28.6	-0.4
WATZ	Wairara	1.30	305	P	Pb	02 22 28.6	+0.8
CNGZ	Carnagh Statio	1.31	42	P	Pn	02 22 28.0	+0.1
TARZ	Mount Tarawera	1.32	340	P	Pn	02 22 28.8	+0.8
HSRZ	Hossack Road	1.33	330	P	Pn	02 22 28.8	+0.6
TWVZ	Taurewa	1.34	287	P	Pn	02 22 29.0	+0.5
GRRZ	Galatos Road	1.36	325	P	Pn	02 22 29.5	+0.9
PKVZ	Pokaka	1.36	277	P	Pb	02 22 29.8	-0.9
POWZ	Post Office Ro	1.37	227	P	Pb

ODZ	Otahua Downs	7.34	219	P	Pn	02 23 49.2	-1.5
ASAR	Alice Springs	39.63	280	P	P	02 29 34.5	-0.1
	3.3nm,0.8s,baz=124,slow=7.6,SNR=24						
WRA	Warramunga Arr	41.46	285	P	P	02 29 49.2	-0.6
	3.4nm,0.6s,baz=130,slow=6.8,SNR=18						
ARCES	ARCESS Array B	146.32	342	PKPbc	PKPdf	02 41 41.6	+0.8
	3.0nm,0.9s,baz=67,slow=5.0,SNR=3.8						

NIED ***12*** *02:29:00,41°.70N×143°.50E,h32km,Mw3.7 Best double couple: M0:3.99000×10^14 NP1:φ0=153.00000°,δ36.00000°, λ-36.00000°. NP2:φ0=274.00000°,δ69.00000°, λ-121.00000°.*
IDC ***12*** *02:29:39.5±0.9,41°.62N×143°.67E,h0km,mb3.9/6, mb1 4.0/8,mb1mx3.6/34,mbtmp3.8/8,ML3.1/2,MS2.7/3, Ms1 2.7/3,ms1mx2.4/36,Error ellipse: s-maj=40.3km s-min=17.3km az=101.0*
ISCJB ***12*** *02:29:43.9±0.9,41°.65N±0°.07×143°.61E±0°.08,h46km±9km, mb4.0/8,Error ellipse: s-maj=14.8km s-min=6.3km az=143.2*
MOS ***12*** *02:29:43.2±0.4,41°.56N×143°.55E,h38km,mb4.4/1,Error ellipse: s-maj=32.5km s-min=9.4km az=69.9*
JMA ***12*** *02:29:45.7±0.1,41°.72N×143°.49E,h43km±2km,M3.6*
JMA Felt I J1.

ISC 12 02:29:44.9±2.1,41°.7N±0°.1×143°.55E±0°.09,h32km±13km, n32,σ1§11/31,mb4.0/8,9C-1D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.46**	**320**	⇓P	**Pb**	**02 29 54.8**	**+0.1**
JEM				*e*S	**Sb**	**02 30 01.8**	**+0.3**
JTHR	**Tokachihiroo**	**0.66**	**344**	⇑P	**Pb**	**02 29 57.7**	**-0.2**
JTHR				*e*S	**Sb**	**02 30 06.8**	**0.0**
JNBK	**Urakawa-nobuka**	**0.86**	**316**	⇑P	**Pn**	**02 30 00.8**	**+0.1**
JCH	**Churui**	**0.96**	**352**	⇑P	**Pn**	**02 30 01.8**	**-0.3**
JOB	**Onbets**	**1.26**	**10**	⇑P	**Pn**	**02 30 06.4**	**+0.2**
JBT2	**Biratori 2**	**1.42**	**322**	⇑P	**Pn**	**02 30 08.9**	**+0.4**
JAK	**Akkeshi**	**1.58**	**32**	⇑P	**Pn**	**02 30 10.6**	**0.0**
JAR	**Ashorobuto**	**1.64**	**6**	⇑P	**Pn**	**02 30 11.0**	**-0.5**
GLVR	**Golovnino**	**2.53**	**34**	*e*P	**Pn**	**02 30 23.9**	**+0.2**
GLVR				*i*S	**Sn**	**02 30 52.1**	**-1.4**
GLVR				pmax	pmax		
	comp=Z,265nm,0.2s						
GLVR				smax	smax		
	comp=N,84nm,0.3s						
GLVR				smax	smax		
	comp=E,456nm,0.3s						
ASAJ	**Asahikawa**	**2.55**	**344**	Pn	**Pn**	**02 30 24.5**	**+0.6**
	comp=E,4.0nm,0.3s,baz=202,slow=8.5,SNR=8.5						
GRPR	**Tuman**	**2.84**	**34**	*e*P	**Pn**	**02 30 28.4**	**+0.4**
GRPR				*i*S	**Sn**	**02 30 59.8**	**-1.4**
GRPR				pmax	pmax		
	comp=Z,216nm,0.4s						
GRPR				smax	smax		
	comp=N,288nm,0.3s						
GRPR				smax	smax		
	comp=E,479nm,0.3s						
LAGR	**Lagunnoye**	**2.90**	**34**	*e*P	**Pn**	**02 30 29.4**	**+0.6**
LAGR				*i*S	**Sn**	**02 31 01.7**	**-0.9**
LAGR				pmax	pmax		
	comp=Z,249nm,0.2s						
LAGR				smax	smax		
	comp=E,671nm,0.5s						
LAGR				smax	smax		
	comp=N,569nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.92**	**35**	*c i*P	**Pn**	**02 30 29.2**	**+0.2**
YUK				*i*S	**Sn**	**02 31 01.2**	**-1.7**
YUK				pmax	pmax		
	comp=N,49nm,0.2s						
YUK				pmax	pmax		
	comp=Z,292nm,0.2s						
YUK				pmax	pmax		
	comp=E,31nm,0.1s						
YUK				smax	smax		
	comp=E,343nm,0.6s						
YUK				smax	smax		
	comp=N,406nm,0.5s						
KUR	**Kuril'sk**	**4.75**	**40**	⇑*i*P	**Pn**	**02 30 56.0**	**+1.7**
KUR				*i*S	**Sn**	**02 31 48.7**	**+0.5**
KUR				pmax	pmax		
	comp=Z,57nm,0.3s						
KUR				smax	smax		
	comp=E,92nm,0.2s						
KUR				smax	smax		
	comp=N,35nm,0.3s						
MJAR	**Matsushiro Arr**	**6.59**	**221**	Pn	**Pn**	**02 31 19.3**	**-0.2**
	comp=N,0.2nm,0.3s,baz=36,slow=13,SNR=5.6						
MJAR				LR	LR	02 34 22.5	
	comp=N,58nm,20.5s,baz=80,slow=43						
KLR	**Kul'dur**	**11.21**	**316**	LR	LR	02 36 22.7	
	comp=N,37nm,21.5s,baz=98,slow=36						
MA2	**Magadan**	**18.49**	**12**	LR	LR	02 41 56.1	
	comp=N,23nm,18.7s,baz=80,slow=40						
SEY	**Seymchan**	**21.94**	**11**	P	**P**	**02 34 32.7**	**-2.7**
	comp=N,3.5nm,0.4s,baz=192,slow=15,SNR=11						
H11N2	**WAKE ISLAND Hy**	**29.51**	**131**	T	T	03 07 00.8	
	baz=323,slow=75,SNR=201						
H11N1	**WAKE ISLAND Hy**	**29.52**	**131**	T	T	03 06 58.7	
	baz=323,slow=75,SNR=221						
H11N3	**WAKE ISLAND Hy**	**29.53**	**131**	T	T	03 07 02.1	
	baz=323,slow=75,SNR=189						
H11S1	**WAKE ISLAND Hy**	**30.38**	**132**	T	T	03 08 20.2	
	baz=325,slow=76,SNR=166						
H11S3	**WAKE ISLAND Hy**	**30.38**	**132**	T	T	03 08 20.5	
	baz=325,slow=76,SNR=148						
H11S2	**WAKE ISLAND Hy**	**30.40**	**132**	T	T	03 08 13.7	
	baz=325,slow=76,SNR=194						
ILAR	**Eielson Array**	**44.73**	**35**	P	**P**	**02 37 54.5**	**-0.2**
	comp=N,1.3nm,1.1s,baz=269,slow=7.4,SNR=6.8						
INK	**Inuvik**	**49.53**	**29**	P	**P**	**02 38 32.1**	**+0.1**
	comp=N,1.2nm,0.8s,baz=257,slow=5.6,SNR=4.4						
YKA	**Yellowknife Ar**	**58.99**	**32**	P	**P**	**02 39 44.1**	**+3.2**
	comp=N,0.3nm,0.6s,baz=308,slow=6.8,SNR=4.3						
ARCES	**ARCESS Array B**	**60.26**	**339**	P	**P**	**02 39 50.3**	**+0.7**
	comp=N,9.5nm,0.3s,baz=49,slow=9.7,SNR=4.8						
WRA	**Warramunga Arr**	**61.88**	**190**	P	**P**	**02 39 60.0**	**-1.1**
	comp=N,1.8nm,0.9s,baz=354,slow=7.5,SNR=4.2						
WRA	**Warramunga Arr**	**61.88**	**190**	P	**P**	**02 40 00.0**	**-1.1**
FINES	**FINESS Array B**	**65.50**	**332**	P	**P**	**02 40 23.8**	**-0.7**
	comp=N,0.6nm,0.4s,baz=54,slow=7.0,SNR=8.8						
ASAR	**Alice Springs**	**65.61**	**190**	P	**P**	**02 40 25.2**	**-0.5**
	comp=N,0.3nm,0.7s,baz=11,slow=7.0,SNR=4.6						

IDC 12 03:05:17.4±1.9,5°.28S×149°.40E,h0km,mb4.0/4, mb1 4.3/4,mb1mx3.7/42,mbtmp4.0/4,MS3.1/4,Ms1 3.1/4, ms1mx2.8/31,Error ellipse: s-maj=108.6km s-min=26.5km az=128.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.67**	**208**	Pn	Pb	03 06 35.8	-4.3
	2.2nm,0.3s,baz=27,slow=16,SNR=3.3						
PMG				Sn	Sn	03 07 29.8	+5.8
	2.5nm,0.3s,baz=53,slow=20,SNR=3.8						
PMG				LR	LR	03 08 18.4	
	comp=Z,115nm,19.5s,baz=219,slow=39						
HNR	**Honiara**	**11.24**	**112**	LR	LR	03 11 55.6	
	comp=Z,114nm,21.3s,baz=277,slow=35						
WRA	**Warramunga Arr**	**20.67**	**224**	P	P	03 09 58.6	-0.5
	7.2nm,0.8s,baz=49,slow=10,SNR=10						
ASAR	**Alice Springs**	**23.61**	**218**	P	P	03 10 30.2	0.0
	3.1nm,0.6s,baz=52,slow=8.5,SNR=16						
FITZ	**Fitzroy Crossi**	**26.48**	**239**	P	P	03 10 56.7	+0.2
	5.7nm,0.7s,baz=52,slow=9.7,SNR=10.0						
KAPI	**Kappang**	**29.53**	**269**	LR	LR	03 25 04.8	
	comp=Z,20nm,20.9s,baz=36,slow=40						
AAK	**Ala-Archa**	**82.55**	**314**	LR	LR	03 53 43.2	
	comp=Z,24nm,18.9s,baz=92,slow=35						
ILAR	**Eielson Array**	**83.89**	**23**	P	P	03 17 48.9	0.0
	0.2nm,0.7s,baz=271,slow=5.0,SNR=2.8						

SKHL ***12*** *03:11:23.3±0.5,52°.83N×142°.53E,h12km±6km,mb4.5/10*
ISCJB ***12*** *03:11:24.9±0.3,52°.74N±0°.02×142°.61E±0°.06,h11km, mb3.7/10,Error ellipse: s-maj=5.1km s-min=3.2km az=10.7*
IDC ***12*** *03:11:24.6±0.7,52°.79N×142°.93E,h0km,mb3.7/7, mb1 3.9/12,mb1mx3.6/54,mbtmp3.7/12,ML3.3/4,MS3.1/1, Ms1 3.1/1,ms1mx2.4/41,Error ellipse: s-maj=24.1km s-min=14.8km az=136.0*
MOS ***12*** *03:11:24.2±1.1,52°.68N×143°.02E,h8km,mb4.0/4,Error ellipse: s-maj=17.4km s-min=7.9km az=77.1*

ISC 12 03:11:26.3±0.5,52°.76N±0°.03×142°.82E±0°.04,h11km,n33, σ2§20/47,mb3.8/10,2D,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**0.80**	**5**	⇓*i*PN	**Pn**	**03 11 41.3**	**-2.2**
OKH				*i*S	**Sn**	**03 11 53.8**	**-1.5**
OKH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OKH				smax	smax		
	comp=N,76nm,0.8s						
OKH				smax	smax		
	comp=E,119nm,0.8s						
OKH	**Okha**	**0.80**	**5**	⇓*i*Pg	**Pn**	**03 11 41.5**	**-2.0**
OKH				AMB	AMB	03 11 41.9	
	comp=E,4μm,0.4s						
OKH				pP	**Pb**	**03 11 44.1**	**+1.9**
OKH				*i*Sg	**Sn**	**03 11 53.9**	**-1.4**
OKH				A	A	03 11 56.0	
	comp=E,16μm,0.6s						
OKH				A	A	03 11 56.0	
	comp=E,19μm,0.6s						
TYV	**Tymovskoe**	**1.90**	**183**	*e*PN	**Pn**	**03 11 57.7**	**-0.9**
TYV				*e*S	**Sn**	**03 12 20.9**	**-1.6**
TYV				pmax	pmax		
	comp=Z,139nm,1.0s						
TYV				smax	smax		
	comp=N,188nm,0.3s						
TYV	**Tymovskoe**	**1.90**	**183**	*e*P	**Pn**	**03 11 57.6**	**-1.0**
TYV				AMB	AMB	03 11 58.2	
	comp=N,139nm,1.0s						
TYV				*e*Pb	**Pb**	**03 12 00.1**	**-0.9**
TYV				AMB	AMB	03 12 00.1	
	comp=N,130nm,0.4s						
TYV				*e*Pg	**Pg**	**03 12 00.2**	**-2.5**
TYV				AMB	AMB	03 12 02.3	
	comp=N,80nm,0.3s						
TYV				pP		03 12 02.9	
TYV				*e*S	**Sn**	**03 12 20.1**	**-2.4**
TYV				A	A	03 12 20.7	
	comp=N,250nm,0.4s						
TYV				*e*Sb	**Sb**	**03 12 23.0**	**-1.7**
TYV				A	A	03 12 24.2	
	comp=N,330nm,0.5s						
TYV				*e*Sg	**Sg**	**03 12 28.0**	**+0.6**
TYV				A	A	03 12 29.8	
	comp=N,400nm,0.5s						
TYV				A	A	03 12 29.8	
	comp=N,300nm,0.5s						
UGL	**Uglegorsk**	**3.72**	**188**	*e*PN	**Pg**	**03 12 35.9**	**-1.5**
UGL	**Uglegorsk**	**3.72**	**188**	*e*Pg	**Pg**	**03 12 40.0**	**+2.6**
UGL				AMB	AMB	03 12 44.5	
	comp=N,100nm,0.7s						
UGL				*e*Sg	**Sg**	**03 13 31.7**	**+6.2**
UGL				A	A	03 13 34.0	
	comp=N,120nm,0.7s						
UGL				A	A	03 13 34.0	
	comp=N,100nm,0.7s						
UGL				AMS	AMS	03 14 45.5	
	comp=N,250nm,3.0s						
UGL				AMS	AMS	03 14 45.5	
	comp=N,220nm,3.0s						
GRNR	**Gornyy**	**4.45**	**246**	*e*PN	**Pn**	**03 12 32.1**	**-1.6**
GRNR				pmax	pmax		
	comp=Z,14nm,0.8s						
GRNR	**Gornyy**	**4.45**	**246**	*e*P	**Pn**	**03 12 32.0**	**-1.6**
GRNR				AMB	AMB	03 12 34.4	
	comp=Z,22nm,0.5s						
GRNR				*e*Pg	**Pb**	**03 12 46.8**	**+2.5**
GRNR				AMB	AMB	03 12 47.2	
	comp=Z,14nm,0.8s						
GRNR				*e*Sg	**Sg**	**03 13 46.5**	**-2.4**
GRNR				A	A	03 13 47.1	
	comp=Z,70nm,0.4s						
YSS	**Yuzh-Sakhalins**	**5.81**	**180**	*e*PN	**Pn**	**03 12 52.1**	**-0.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
EKMR	**Ekimchan**	**5.98**	**277**	*e*P	**Pn**	**03 12 53.5**	**-1.2**
EKMR				AMB	AMB	03 12 54.4	
	comp=Z,2.0nm,0.7s						
EKMR				*e*Pg	**Pg**	**03 13 19.5**	**-1.3**
EKMR				AMB	AMB	03 13 20.2	
	comp=Z,10.0nm,0.6s						
EKMR				*e*Sg	**Sg**	**03 14 40.0**	**+1.9**
EKMR				A	A	03 14 53.2	
	comp=Z,220nm,0.8s						
KLR	**Kul'dur**	**7.83**	**248**	Pn	**Pn**	**03 13 21.9**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=55,slow=12,SNR=5.6						
KLR				Lg	Lg	03 15 36.6	
	comp=Z,2.2nm,0.3s,baz=131,slow=20,SNR=9.2						
KLR				LR	LR	03 16 42.1	
	comp=Z,129nm,19.4s,baz=106,slow=40						
MA2	**Magadan**	**8.14**	**30**	*i*PN	**Pn**	**03 13 26.4**	**+2.1**
BMKR	**Bomnak**	**8.52**	**289**	*e*Sg	**Sg**	**03 15 51.8**	**-7.5**
BMKR				A	A	03 15 58.0	
	comp=Z,14nm,0.5s						
ASAJ	**Asahikawa**	**8.65**	**181**	Pn	**Pn**	**03 13 31.7**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=19,slow=8.8,SNR=6.1						
TEY	**Ternei**	**8.74**	**210**	*e*P	**Pn**	**03 13 33.3**	**+0.7**
TEY				AMB	AMB	03 13 33.9	
	comp=Z,6.0nm,0.5s						
TEY				*e*S	**Sn**	**03 15 15.0**	**+4.0**
TEY				A	A	03 15 15.4	
	comp=Z,6.0nm,0.1s						
PETK	**Petropavlovsk-**	**9.00**	**82**	Pn	**Pn**	**03 13 34.3**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=294,slow=10.0,SNR=11						
KROS	**Kirovskiy**	**9.57**	**286**	*e*P	**Pn**	**03 13 44.0**	**0.0**
KROS				AMB	AMB	03 13 46.0	
	comp=Z,2.0nm,0.4s						
KROS				*e*Sg	Sn	03 16 30.0	+59
PET	**Petropavlovsk**	**9.58**	**82**	*i*PN	**Pn**	**03 13 43.3**	**-0.7**
KSRS	**Korea Array**	**18.51**	**220**	P	**Pn**	**03 15 43.2**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=34,slow=11,SNR=11						
KSRS	**Korea Array**	**18.51**	**220**	*e*P	**Pn**	**03 15 43.8**	**+1.3**
BILL	**Bilibino**	**19.00**	**27**	*i*P	**Pn**	**03 15 50.7**	**+2.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TIXI	**Tiksi**	**19.94**	**347**	P	**Pn**	**03 15 58.0**	**-1.4**
	baz=165,slow=7.2,SNR=2.6						
TIXI	**Tiksi**	**19.94**	**347**	*i*P	**Pn**	**03 16 01.3**	**+1.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**23.20**	**272**	*i*P	**P**	**03 16 35.3**	**+2.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAK	**Zakamensk**	**24.48**	**280**	*e*P	**P**	**03 16 45.1**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NRIK	**Noril'sk**	**30.08**	**324**	*e*P	P	03 17 41.9	+6.7
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ILAR	**Eielson Array**	**36.36**	**43**	P	**P**	**03 18 29.4**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=287,slow=6.7,SNR=8.3						
MKAR	**Makanchi Array**	**38.52**	**286**	P	**P**	**03 18 47.9**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=60,slow=8.2,SNR=13						
YKA	**Yellowknife Ar**	**50.07**	**36**	P	**P**	**03 20 20.2**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=310,slow=7.8,SNR=4.9						
PDAR	**Pinedale Array**	**66.31**	**50**	P	**P**	**03 22 14.2**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=343,slow=2.8,SNR=3.2						
WRA	**Warramunga Arr**	**72.77**	**188**	P	**P**	**03 22 55.1**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=2.8,slow=5.1,SNR=3.6						
ASAR	**Alice Springs**	**76.50**	**188**	P	**P**	**03 23 15.8**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=2.8,slow=5.5,SNR=11						
TXAR	**Lajitas Array**	**79.90**	**54**	P	**P**	**03 23 35.0**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=280,slow=4.1,SNR=4.8						

IDC 12 03:25:03.9±2.8,7°.45S×156°.42E,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.7/28,mbtmp3.8/4,Error ellipse: s-maj=153.6km s-min=29.2km az=135.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.75**	**238**	P	P	03 30 27.9	+0.4
	0.9nm,0.4s,baz=66,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**26.96**	**231**	P	P	03 30 48.2	+0.8
	0.6nm,0.6s,baz=64,slow=9.3,SNR=5.4						
H11S3	**WAKE ISLAND Hy**	**27.70**	**21**	T	T	03 59 29.2	
	baz=202,slow=75,SNR=26						
H11S2	**WAKE ISLAND Hy**	**27.70**	**21**	T	T	03 59 29.1	
	baz=202,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**27.71**	**21**	T	T	03 59 26.0	
	baz=202,slow=75,SNR=10						
FITZ	**Fitzroy Crossi**	**31.78**	**248**	P	P	03 31 29.2	-1.1
	1.2nm,0.4s,baz=66,slow=10,SNR=8.8						
ILAR	**Eielson Array**	**83.28**	**21**	P	P	03 37 32.2	+0.1
	0.2nm,0.4s,baz=244,slow=5.5,SNR=6.5						

IDC ***12*** *03:56:33.5±4.3,12°.94N×125°.85E,h0km,mb3.6/2, mb1 3.7/2,mb1mx3.3/25,mbtmp3.6/2,Error ellipse: s-maj=329.2km s-min=27.4km az=65.0*
ISCJB ***12*** *03:56:39.2±2.0,12°.82N±0°.05×125°.15E±0°.10, h24km±12km,Error ellipse: s-maj=16.9km s-min=6.6km az=157.4*
MAN ***12*** *03:56:39.8,12°.78N×125°.05E,h18km,mb4.3,ML3.2, MS2.9*

ISC 12 03:56:35.7±1.7,12°.89N±0°.05×125°.27E±0°.08,h11km±10km, n16,σ1§58/19,1D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.70**	**238**	*e*P	**Pb**	**03 56 50.1**	**+0.2**
CNP				*e*S	**Sg**	**03 56 57.9**	**-0.6**
BESP	**Borongan**	**1.29**	**173**	*e*P	**Pg**	**03 57 00.9**	**+0.4**
BESP				*e*S	**Sg**	**03 57 19.2**	**+1.9**
PVCP	**Virac**	**1.29**	**303**	*e*P	**Pg**	**03 57 00.6**	**0.0**
PVCP				*e*S	**Sg**	**03 57 17.9**	**+0.4**
PLP	**Palo**	**1.74**	**189**	⇓*e*P	**Pn**	**03 57 06.3**	**+0.5**
PLP				*e*S	**Sn**	**03 57 27.9**	**0.0**
MSLP	**Maasin**	**2.77**	**188**	*e*P	**Pb**	**03 57 23.4**	**-1.7**
MSLP				*e*S	**Sb**	**03 57 58.6**	**-0.5**
LLP	**Lapu-Lapu**	**2.86**	**207**	*e*P	**Pg**	**03 57 30.3**	**-0.2**
LLP				*e*S	**Sn**	**03 57 54.8**	**-0.8**
OTRP	**Odiongan**	**3.21**	**261**	*e*P	**Pn**	**03 57 27.2**	**+1.1**
BOAC	**Boac**	**3.38**	**280**	*e*P	**Pn**	**03 57 31.4**	**+2.9**
GUIM	**Jordan**	**3.46**	**230**	*e*P	**Pn**	**03 57 30.4**	**+0.9**
GUIM				*e*S	Sn	03 57 59.6	-11
POLP	**Polilio Island**	**3.72**	**300**	*e*P	**Pb**	**03 57 38.3**	**-3.1**
WRA	**Warramunga Arr**	**33.82**	**165**	P	**P**	**04 03 15.8**	**-2.3**
	122nm,0.3s,baz=348,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**37.30**	**167**	P	**P**	**04 03 47.7**	**-0.2**
	0.5nm,0.5s,baz=348,slow=7.4,SNR=5.8						
H11N1	**WAKE ISLAND Hy**	**40.44**	**75**	T	T	04 47 37.9	
	baz=266,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy**	**40.45**	**75**	T	T	04 47 39.1	
	baz=266,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**40.46**	**75**	T	T	04 47 38.8	
	baz=266,slow=75,SNR=16						
MKAR	**Makanchi Array**	**49.37**	**322**	P	**P**	**04 05 27.1**	**+1.8**
	0.5nm,0.6s,baz=110,slow=8.1,SNR=5.7						

MAN 12 04:06:25.5,12°.92N×125°.24E,h3km,mb4.6,ML3.4,MS3.3, 1D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.70**	**235**	*e*P	Pg	04 06 39.4	+0.4
CNP				*e*S	Sg	04 06 48.5	+0.6
PVCP	**Virac**	**1.26**	**303**	*e*P	Pg	04 06 49.2	-0.5
PVCP				*e*S	Sn	04 07 07.0	-0.4
BESP	**Borongan**	**1.32**	**172**	*e*P	Pn	04 06 50.6	-0.3
BESP				*e*S	Sg	04 07 07.5	-0.6
PLP	**Palo**	**1.76**	**188**	⇓*e*P	Pn	04 06 56.0	-1.0
PLP				*i*S	Sb	04 07 20.7	-0.3
OCLP	**Ormoc**	**1.96**	**199**	*e*P	Pb	04 07 01.2	-0.6
OCLP				*e*S	Sn	04 07 25.4	+0.6
AUQP	**San Andres**	**2.54**	**279**	*e*P	Pn	04 07 08.4	+0.9
MSLP	**Maasin**	**2.79**	**188**	*e*P	Pb	04 07 13.9	-2.2
MSLP				*e*S	Sb	04 07 48.8	-1.9
LLP	**Lapu-Lapu**	**2.87**	**206**	*e*P	Pb	04 07 16.2	-1.3
LLP				*e*S	Sn	04 07 45.8	-1.6
OTRP	**Odiongan**	**3.19**	**260**	*e*P	Pn	04 07 16.9	+0.3
OTRP				*e*S	Sn	04 07 56.8	+1.5
BOAC	**Boac**	**3.35**	**280**	*e*P	Pn	04 07 20.5	+1.6
BOAC				*e*S	Sn	04 08 01.4	+2.1

MEX 12 04:10:50.0±0.6,18°.01N×95°.28W,h26km±26km,MD3.9, Veracruz

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.99**	**158**	*i*P	Pn	04 11 05.5	-2.8
CMIG				*i*S	Sb	04 11 17.8	-3.4
LVIG	**Laguna Verde**	**2.02**	**328**	*i*S	Sn	04 11 39.7	-7.0
TPIG	**Tehuac#an**	**2.02**	**282**	*e*P	Pn	04 11 20.8	-1.8
TPIG				*e*S	Sn	04 11 44.0	-3.2
TLIG	**Tlapa**	**3.17**	**262**	*i*P	Pn	04 11 36.9	-1.4
TLIG				*i*S	Sn	04 12 12.2	-3.1

NNC ***12*** *04:11:52.0±0.7,42°.56N×78°.38E,h0km,mb3.5,mpv3.6, Error ellipse: s-maj=5.2km s-min=2.1km az=166.0*
SOME ***12*** *04:11:52.1,42°.53N×78°.35E,h15km*
KRNET ***12*** *04:11:52.4±0.1,42°.54N×78°.38E,h21km,mb3.5*

ISC 12 04:11:50.1±1.3,42°.50N±0°.03×78°.41E±0°.02,h2km±10km, n68,σ1§04/125,21C-6D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.56**	**360**	P	**Pb**	**04 12 02.4**	**-0.4**
	50nm,0.1s						
SATY				S	**Sb**	**04 12 09.6**	**-1.8**
	448nm,0.2s						
SATY	**Saty**	**0.56**	**360**	*e*P	**Pb**	**04 12 02.4**	**-0.4**
	50nm,0.1s						
SATY				*e*S	**Sb**	**04 12 09.6**	**-1.8**
	448nm,0.2s						
UZB	**Uzynbulak**	**0.79**	**35**	P	**Pb**	**04 12 06.9**	**+0.2**
	12nm,0.1s						
UZB				S	**Sb**	**04 12 17.3**	**-0.7**
	103nm,0.1s						
UZB	**Uzynbulak**	**0.79**	**35**	*e*P	**Pb**	**04 12 06.9**	**+0.2**
	baz=38						
UZB				*e*S	**Sb**	**04 12 17.2**	**-0.7**
	baz=38						
UZB	**Uzynbulak**	**0.79**	**35**	*e*P	**Pb**	**04 12 06.9**	**+0.2**
	12nm,0.1s						
UZB				*e*S	**Sb**	**04 12 17.3**	**-0.7**
	103nm,0.1s						
KPKS	**Kokpek**	**0.99**	**12**	*e*P	**Pb**	**04 12 10.1**	**0.0**
	baz=14						
KPKS				*e*S	**Sb**	**04 12 22.6**	**-1.0**
	baz=14						
KPKS	**Kokpek**	**0.99**	**12**	*e*P	**Pb**	**04 12 10.1**	**0.0**
	120nm,0.1s						
KPKS				*e*S	**Sb**	**04 12 22.6**	**-1.0**
	216nm,0.2s						
KURS	**Kuram**	**1.00**	**350**	P	**Pn**	**04 12 10.6**	**-0.8**
	13nm,0.1s						
KURS				S	**Sb**	**04 12 23.4**	**-0.6**
	24nm,0.1s						
KURS	**Kuram**	**1.00**	**350**	*e*P	**Pn**	**04 12 10.6**	**-0.8**
	baz=51						
KURS				*e*S	**Sb**	**04 12 23.5**	**-0.6**
	baz=51						
KURS	**Kuram**	**1.00**	**350**	*e*P	**Pn**	**04 12 10.6**	**-0.8**
	13nm,0.1s						
KURS				*e*S	**Sb**	**04 12 23.4**	**-0.6**
	24

68nm,0.2s
TNSS Tian-Shan 1.20 297 *e*P Pn 04 12 13.9 -0.5
baz=96
TNSS *e*S Sb 04 12 29.3 -0.8
baz=96
TNSS Tian-Shan 1.20 297 *e*P Pn 04 12 13.9 -0.5
20nm,0.1s
TNSS *e*S Sb 04 12 29.3 -0.8
68nm,0.2s
KOTS Kotyrbulak 1.20 308 P Pn 04 12 13.8 -0.4
19nm,0.2s
KOTS S Sb 04 12 28.9 -1.0
189nm,0.3s
KOTS Kotyrbulak 1.20 308 *e*P Pn 04 12 13.8 -0.4
baz=7.0
KOTS *e*S Sb 04 12 28.9 -1.0
baz=7.0
KOTS Kotyrbulak 1.20 308 *e*P Pn 04 12 13.8 -0.4
19nm,0.2s
KOTS *e*S Sb 04 12 28.9 -1.0
189nm,0.3s
AAA Alma-Ata 1.31 303 P Pg 04 12 16.2 +1.0
31nm,0.1s
AAA S Sg 04 12 33.0 +0.8
172nm,0.1s
AAA Alma-Ata 1.31 303 *e*P Pg 04 12 16.2 +1.0
baz=2.0
AAA *e*S Sg 04 12 33.0 +0.8
AAA Alma-Ata 1.31 303 *e*P Pg 04 12 16.2 +1.0
31nm,0.1s
AAA *e*S Sg 04 12 33.0 +0.8
172nm,0.1s
IZV Izvestkoviy 1.43 293 P Pg 04 12 17.8 +0.3
18nm,0.2s
IZV S Sg 04 12 36.2 +0.2
161nm,0.1s
IZV Izvestkoviy 1.43 293 *e*P Pg 04 12 17.8 +0.3
baz=92
IZV *e*S Sg 04 12 36.2 +0.2
baz=92
IZV Izvestkoviy 1.43 293 *e*P Pg 04 12 17.8 +0.3
18nm,0.2s
IZV *e*S Sg 04 12 36.2 +0.2
161nm,0.1s
MNBS Baschi 1.58 360 P Pg 04 12 21.1 +0.6
36nm,0.2s
MNBS S Sg 04 12 41.7 +0.8
102nm,0.3s
MNBS Baschi 1.58 360 *e*P Pg 04 12 21.1 +0.6
36nm,0.2s
MNBS *e*S Sg 04 12 41.7 +0.8
102nm,0.3s
ULHL Ulahol 1.62 262⇑*i*P Pg 04 12 21.3 0.0
baz=60
ULHL ⇑*i*S Sg 04 12 42.7 +0.4
baz=60
CHKK Chushkaly 1.71 323 P Pg 04 12 22.6 -0.3
66nm,0.1s
CHKK S Sb 04 12 44.0 -0.2
155nm,0.2s
CHKK Chushkaly 1.71 323 *e*P Pg 04 12 22.6 -0.3
baz=23
CHKK *e*S Sb 04 12 44.0 -0.2
baz=23
CHKK Chushkaly 1.71 323 *e*P Pg 04 12 22.6 -0.3
66nm,0.1s
CHKK *e*S Sb 04 12 44.0 -0.2
155nm,0.2s
KTMS Ketmen 1.71 56 P Pg 04 12 23.2 +0.2
17nm,0.1s
KTMS S Sg 04 12 45.3 +0.1
113nm,0.3s
KTMS Ketmen 1.71 56 *e*P Pg 04 12 23.2 +0.2
baz=57
KTMS *e*S Sg 04 12 45.3 +0.1
baz=57
KTMS Ketmen 1.71 56 *e*P Pg 04 12 23.1 +0.2
17nm,0.1s
KTMS *e*S Sg 04 12 45.3 +0.1
113nm,0.3s
KTBS Karatobe 1.75 314 P Pg 04 12 23.6 -0.2
30nm,0.2s
KTBS S Sg 04 12 45.9 -0.6
120nm,0.3s
KTBS Karatobe 1.75 314 *e*P Pg 04 12 23.6 -0.2
30nm,0.2s
KTBS *e*S Sg 04 12 45.9 -0.6
120nm,0.3s
ARXS Arharly 1.77 346 P Pg 04 12 23.6 -0.3
32nm,0.3s
ARXS S Sb 04 12 45.8 -0.2
59nm,0.3s
ARXS Arharly 1.77 346 *e*P Pg 04 12 23.6 -0.3
32nm,0.3s
ARXS *e*S Sb 04 12 45.8 -0.2
59nm,0.3s
BOOM Boomskoye usch 1.82 271⇑*i*P Pb 04 12 24.3 -0.1
baz=69
BOOM ⇑*i*S Sg 04 12 48.2 -0.6
baz=69
KST Kastek 1.88 288 P Pg 04 12 26.1 -0.1
18nm,0.2s
KST S Sg 04 12 50.1 -0.5
71nm,0.3s
KST Kastek 1.88 288 *e*P Pg 04 12 26.1 -0.1
baz=87
KST *e*S Sg 04 12 50.1 -0.5
baz=87
KST Kastek 1.88 288 *e*P Pg 04 12 26.1 -0.1
18nm,0.2s
KST *e*S Sg 04 12 50.1 -0.5
71nm,0.3s
KUU Kurty 2.06 313 Pg Pb 04 12 28.6 +0.3
33nm,0.3s
KUU Lg Lg 04 12 54.2
83nm,0.3s
KUU Kurty 2.06 313 *e*P Pb 04 12 28.6 +0.3
baz=13
KUU *e*S Sb 04 12 54.3 0.0
baz=13
KUU Kurty 2.06 313 *e*P Pb 04 12 28.6 +0.3
33nm,0.3s
KUU *e*S Sb 04 12 54.2 0.0
83nm,0.3s
DGS Degeres 2.08 292 Pg Pg 04 12 29.3 -0.6
8.8nm,0.4s
DGS Lg Lg 04 12 55.8
71nm,0.4s
DGS Degeres 2.08 292 *e*P Pg 04 12 29.3 -0.6
baz=91
DGS *e*S Sg 04 12 55.8 -1.0
baz=91
DGS Degeres 2.08 292 *e*P Pg 04 12 29.3 -0.6
8.8nm,0.4s
DGS *e*S Sg 04 12 55.8 -1.0
71nm,0.4s
NRN Naryn 2.09 240⇑*i*P Pb 04 12 28.8 -0.1
baz=39
NRN ⇑*i*S Sb 04 12 55.4 0.0
baz=39
DJR Jarkent 2.09 28 Pg Pb 04 12 28.8 -0.1
22nm,0.1s
DJR Lg Lg 04 12 54.6
79nm,0.3s
DJR Jarkent 2.09 28 *e*P Pb 04 12 29.1 +0.2
19nm,0.2s
DJR *e*S Sg 04 12 56.2 -1.2
79nm,0.3s
TKM2 Tokmak 2 2.12 282 ⇓Pg Pb 04 12 29.6 +0.2
3.0nm,0.4s
TKM2 ⇑Lg Lg 04 12 57.0
28nm,0.3s
TKM2 Tokmak 2 2.12 282⇑*i*P Pb 04 12 29.3 0.0
baz=81
TKM2 ⇑*i*S Sb 04 12 56.4 +0.3
baz=81
KZA Kyzart 2.38 261⇑*i*P Pb 04 12 32.1 -1.9
baz=60
KZA ⇑*i*S Sb 04 13 01.6 -2.4
baz=60
KAPS Kapalarasan 2.87 14 Pg Pb 04 12 42.9 +0.7
2.0nm,0.2s
KAPS Lg Lg 04 13 18.7
5.8nm,0.2s
KAPS Kapalarasan 2.87 14 *e*P Pg 04 12 43.9 -1.3
2.3nm,0.2s
KAPS *e*S Sg 04 13 20.3 -2.0
13nm,0.2s

AAK Ala-Archa 2.89 274 ⇑Pg Pg 04 12 45.6 0.0
1.9nm,0.3s
AAK ⇑Lg Lg 04 13 21.9
8.7nm,0.5s
ARLS Aral 3.10 260⇑*i*P Pn 04 12 42.5 +2.2
baz=59
ARLS ⇑*i*S Sn 04 13 18.6 +0.6
baz=59
MRKS Merke 3.83 275 Pg Pb 04 13 01.0 +2.4
2.5nm,0.2s
MRKS Lg Lg 04 13 49.9
16nm,0.2s
MRKS Merke 3.83 275 *e*P Pb 04 13 01.0 +2.4
2.5nm,0.2s
MRKS *e*S Sg 04 13 49.9 -3.3
16nm,0.2s
BTLS Baital 4.05 310 Pg Pb 04 13 04.2 +1.9
1.7nm,0.6s
BTLS Lg Lg 04 13 55.3
2.8nm,0.4s
BTLS Baital 4.05 310 *e*P Pb 04 13 04.2 +1.9
1.7nm,0.6s
BTLS *e*S Sb 04 13 55.3 +3.5
2.8nm,0.4s
MAKZ Makanchi 5.00 29 ⇑Pn Pn 04 13 08.6 +2.3
0.9nm,0.7s
MAKZ ⇓Lg Lg 04 14 26.3
0.7nm,0.4s
MK31 Makanchi Array 5.11 31 ⇑Pn Pn 04 13 11.4 +3.7
0.3nm,0.2s,baz=217,slow=12,SNR=16
MK31 ⇑Sn Sn 04 14 08.9 +1.6
0.2nm,0.3s
MK31 ⇓Lg Lg 04 14 30.7
1.1nm,0.6s,baz=210,slow=29,SNR=5.5
KK31 Karatay Array 5.84 279 ⇓Pg Pg 04 13 39.7 -2.4
0.5nm,0.3s
KK31 ⇓Lg Lg 04 14 55.2
1.2nm,0.4s,baz=90,slow=30,SNR=11

NSSP ***12*** *04:31:49.7,38°.52N×43°.85E,h10km,Ms3.7*
AZER ***12*** *04:31:50.4±0.9,38°.31N×43°.87E,h2km,ml3.8/26,Error ellipse: s-maj=8.8km s-min=7.1km az=96.0*
DDA ***12*** *04:31:51.6,38°.56N×43°.85E,h5km±2km,ML3.9*
TEH ***12*** *04:31:51.5,38°.54N×43°.86E,h8km,ML3.8*
ISK ***12*** *04:31:52.1,38°.51N×43°.79E,h5km,ML3.8/18*
ISC 12 04:31:52.5±1.1,38°.51N±0°.02×43°.88E±0°.02,h7km±9km,
n136,σ1°59/167,2C-4D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.37**	**273**	*i* P		**Pg**	**04 31 59.9**	**+0.1**
TVAN					IAML_P			
comp=Z,148μm,0.5s								
TVAN	**Van**	**0.37**	**273**	*e*Pg		**Pg**	**04 31 58.9**	**-0.9**
VANB	**Van**	**0.40**	**282**	PG		**Pg**	**04 31 58.9**	**-1.3**
VANB	**Van**	**0.40**	**282**	*e*Pg		**Pg**	**04 31 58.9**	**-1.3**
BASK	**Baskale_VAN**	**0.47**	**168**	*i* P		**Pb**	**04 32 02.3**	**-0.9**
BASK				*i* S		**Sb**	**04 32 11.7**	**+1.3**
BASK					IAML_P			
comp=Z,91μm,0.3s								
BASK	**Baskale_VAN**	**0.47**	**168**	*e*Pg		**Pg**	**04 32 02.1**	**+0.5**
VMUR	**Van-Muradiye**	**0.53**	**333**	*i* P		**Pg**	**04 32 02.9**	**0.0**
VMUR				*i* S		**Sb**	**04 32 12.0**	**-0.3**
VMUR					IAML_P			
comp=Z,16μm,0.3s								
VMUR	**Van-Muradiye**	**0.53**	**333**	*e*Pg		**Pg**	**04 32 01.9**	**-0.9**
CLDR	**Caldiran**	**0.63**	**2**	*i* P		**Pg**	**04 32 03.8**	**-0.8**
CLDR				*i* S		**Sg**	**04 32 13.4**	**+0.5**
CLDR	**Caldiran**	**0.63**	**2**	*e*Pg		**Pg**	**04 32 03.4**	**-1.3**
GEVA	**Gevas**	**0.68**	**253**	*i* P		**Pg**	**04 32 04.7**	**-0.9**
GEVA				*i* S		**Sb**	**04 32 16.8**	**+0.4**
GEVA					IAML_P			
comp=Z,24μm,0.1s								
GEVA	**Gevas**	**0.68**	**253**	*e*Pg		**Pg**	**04 32 04.3**	**-1.2**
AKDM	**Akdamar-Van**	**0.73**	**256**	PG		**Pg**	**04 32 05.4**	**-1.2**
AKDM				SG		**Sb**	**04 32 16.5**	**-1.5**
AKDM	**Akdamar-Van**	**0.73**	**256**	*e*Pg		**Pg**	**04 32 05.3**	**-1.3**
ADCV	**BITLIS_Adilcev**	**0.95**	**288**	*i* P		**Pg**	**04 32 10.1**	**-0.7**
ADCV					IAML_P			
comp=Z,6μm,0.3s								
ADCV	**BITLIS_Adilcev**	**0.95**	**288**	*e*Pg		**Pg**	**04 32 09.5**	**-1.3**
HAKT	**HAKKARI**	**0.96**	**188**	*i* P		**Pg**	**04 32 10.6**	**-0.4**
HAKT				*i* S		**Sn**	**04 32 25.5**	**-1.2**
DYDN	**Diyadin**	**1.04**	**352**	*i* P		**Pg**	**04 32 11.2**	**-1.3**
DYDN					IAML_P			
comp=Z,19μm,0.4s								
DYDN	**Diyadin**	**1.04**	**352**	*e*Pg		**Pg**	**04 32 11.1**	**-1.4**
MLAZ	**Malazgirt-MUS**	**1.22**	**301**	PN		**Pb**	**04 32 14.8**	**-1.1**
TUTA	**Tutak**	**1.22**	**317**	*i* P		**Pb**	**04 32 14.9**	**-1.1**
AGRB	**Hanur-Agry**	**1.27**	**327**	PN		**Pn**	**04 32 15.9**	**-0.9**
AGRB	**Hanur-Agry**	**1.27**	**327**	*e*Pn		**Pn**	**04 32 15.8**	**-1.0**
IGDI	**IGDIR**	**1.36**	**6**	*i* P		**Pn**	**04 32 17.4**	**-0.6**
IGDI				*i* S		**Sg**	**04 32 38.9**	**+2.6**
IGDI					IAML_P			
comp=Z,11μm,0.3s								
IGDI	**IGDIR**	**1.36**	**6**	*e*Pg		**Pn**	**04 32 17.2**	**-0.8**
ISHB	**Shabestar**	**1.38**	**99**	*e*Pn		**Pn**	**04 32 17.5**	**-0.9**
ISHB					IAMB	IAmb	04 32 22.5	
comp=Z,15μm,0.4s								
BLIS	**Bitlis-Merkez**	**1.39**	**266**	*i* P		**Pn**	**04 32 17.7**	**-0.8**
BLIS	**Bitlis-Merkez**	**1.39**	**266**	*e*Pg		**Pn**	**04 32 16.8**	**-1.7**
HYR	**Heyderabad**	**1.42**	**32**	*e*Pg		**Pg**	**04 32 20.0**	**+0.3**
HYR	**Heyderabad**	**1.42**	**32**	P		**Pg**	**04 32 20.0**	**+0.3**
HYR				S		**Sg**	**04 32 42.7**	**+4.5**
NAX	**Nakhchivan**	**1.42**	**62**	*e*Pg		**Pn**	**04 32 18.5**	**-0.3**
NAX	**Nakhchivan**	**1.42**	**62**	P		**Pn**	**04 32 18.6**	**-0.3**
NAX				S		**Sg**	**04 32 40.0**	**+1.8**
IMRD	**Marand**	**1.44**	**81**	*e*Pn		**Pn**	**04 32 18.5**	**-0.7**
IMRD					IAMB	IAmb	04 32 23.2	
comp=Z,35μm,0.4s								
TASB	**TASBURUN-IGDIR**	**1.50**	**11**	PN		**Pg**	**04 32 20.5**	**-0.6**
TASB				SN		**Sg**	**04 32 43.0**	**+2.5**
TASB	**TASBURUN-IGDIR**	**1.50**	**11**	*e*Pn		**Pg**	**04 32 20.5**	**-0.6**
SIRN	**Sırnak**	**1.54**	**229**	*i* P		**Pg**	**04 32 23.1**	**+1.0**
SIRN				*i* S		**Sg**	**04 32 45.4**	**+3.3**
SIRN					IAML_P			
comp=Z,14μm,0.4s								
SIRN	**Sırnak**	**1.54**	**229**	*e*Pn		**Pg**	**04 32 22.5**	**+0.5**
SBZ	**Shahbuz**	**1.57**	**55**	*e*Pn		**Pb**	**04 32 21.5**	**-0.4**
SBZ	**Shahbuz**	**1.57**	**55**	P		**Pb**	**04 32 21.6**	**-0.4**
SBZ				S		**Sg**	**04 32 45.0**	**+1.9**
ORD	**Ordubad**	**1.70**	**75**	*e*Pn		**Pb**	**04 32 23.1**	**-1.1**
ORD	**Ordubad**	**1.70**	**75**	P		**Pb**	**04 32 23.1**	**-1.1**
ORD				S		**Sg**	**04 32 48.0**	**+0.8**
EATA	**Eleskirt**	**1.73**	**322**	*i* P		**Pb**	**04 32 23.7**	**-1.0**
EATA				*i* S		**Sg**	**04 32 51.8**	**+3.8**
EATA	**Eleskirt**	**1.73**	**322**	*e*Pn		**Pn**	**04 32 23.3**	**0.0**
GNI	**Garni**	**1.77**	**22**	PN		**Pg**	**04 32 25.8**	**-0.5**
GNI	**Garni**	**1.77**	**22**	⇓*i*P		**Pg**	**04 32 25.4**	**-0.9**
GNI				⇑*i*S		**Sg**	**04 32 49.9**	**+0.7**
ARUZ	**Aruch**	**1.77**	**5**	⇓*i*P		**Pb**	**04 32 25.4**	**0.0**
ARUZ				⇓*i*S		**Sg**	**04 32 50.9**	**+1.4**
ITBZ	**Tabriz**	**1.80**	**98**	*e*Pn		**Pb**	**04 32 25.1**	**-0.8**
ITBZ					IAMB	IAmb	04 32 34.4	
comp=Z,3μm,0.3s								
IAZR	**Azarshahr**	**1.85**	**116**	*e*Pn		**Pb**	**04 32 26.8**	**0.0**
IAZR					IAMB	IAmb	04 32 34.7	
comp=Z,10μm,0.4s								
MUSM	**Mu-Merkez**	**1.87**	**277**	*i* P		**Pn**	**04 32 24.9**	**-0.1**
MUSM	**Mu-Merkez**	**1.87**	**277**	*e*Pn		**Pn**	**04 32 24.4**	**-0.6**
DIGO	**Kars**	**1.94**	**348**	*i* P		**Pg**	**04 32 28.9**	**-0.8**
DIGO	**Kars**	**1.94**	**348**	*e*Pn		**Pb**	**04 32 28.4**	**+0.1**
SVAN	**Silvan-Diyarba**	**2.14**	**261**	PN		**Pb**	**04 32 29.5**	**-2.2**
SVAN	**Silvan-Diyarba**	**2.14**	**261**	*i* P		**Pb**	**04 32 30.4**	**-1.2**
SVAN	**Silvan-Diyarba**	**2.14**	**261**	*e*Pn		**Pb**	**04 32 29.4**	**-2.2**
GRS	**Goris**	**2.15**	**62**	⇑*i*P		**Pn**	**04 32 27.0**	**-1.9**
GRS				⇓*i*S		**Sb**	**04 32 58.0**	**-0.7**
BTMN	**Batman**	**2.15**	**254**	*i* P		**Pb**	**04 32 29.9**	**-1.9**
KOPR	**Koprukoy-ERZUR**	**2.16**	**314**	PN		**Pb**	**04 32 30.2**	**-1.8**
HOMI	**Horasan**	**2.17**	**316**	*i* P		**Pg**	**04 32 33.0**	**-1.1**
EAK	**Akyaka**	**2.18**	**354**	*i* P		**Pg**	**04 32 33.2**	**-1.1**
EAK					IAML_P			
comp=Z,4μm,0.5s								
EAK	**Akyaka**	**2.18**	**354**	*e*Pn		**Pg**	**04 32 33.1**	**-1.2**
BNGL	**BINGOL**	**2.18**	**282**	*i* P		**Pb**	**04 32 31.5**	**-0.9**
KARS	**Kars**	**2.20**	**344**	PN		**Pb**	**04 32 31.1**	**-1.7**
KARS	**Kars**	**2.20**	**344**	*e*Pn		**Pb**	**04 32 31.0**	**-1.7**
KARO	**Karliova-Bingo**	**2.35**	**291**	PN		**Pb**	**04 32 32.8**	**-2.4**
SENK	**Senkaya-Erzuru**	**2.36**	**330**	PN		**Pb**	**04 32 33.5**	**-2.0**
SENK	**Senkaya-Erzuru**	**2.36**	**330**	*e*Pn		**Pb**	**04 32 33.5**	**-2.0**
IHRS	**Heris**	**2.49**	**94**	*e*Pn		**Pb**	**04 32 36.3**	**-1.4**
IHRS					IAMB	IAmb	04 32 45.9	
comp=Z,5μm,0.5s								
ECAT	**Cat-ERZURUM**	**2.51**	**297**	*i* P		**Pb**	**04 32 37.0**	**-1.0**
AKDA	**Akdag**	**2.52**	**310**	*i* P		**Pb**	**04 32 38.2**	**0.0**
BNGB	**Bingl**	**2.55**	**282**	PN		**Pn**	**04 32 35.5**	**+1.1**
BGOL	**Bingol**	**2.56**	**282**	*i* P		**Pb**	**04 32 36.4**	**-2.4**
GDB	**GEDABAY**	**2.64**	**33**	*e*Pn		**Pn**	**04 32 37.3**	**+1.7**
GDB	**GEDABAY**	**2.64**	**33**	P		**Pn**	**04 32 37.4**	**+1.7**
GDB				S		**Sb**	**04 33 11.9**	**-0.9**
BINT	**Bingol**	**2.68**	**279**	*e*Pn		**Pn**	**04 32 35.4**	**-0.8**
MARD	**Mardin**	**2.73**	**245**	*i* P		**Pb**	**04 32 38.8**	**-2.9**
HANI	**Diyarbakir_Han**	**2.74**	**269**	*i* P		**Pb**	**04 32 39.1**	**-2.7**
YEDI	**Yedisu-Bingol**	**2.76**	**291**	PN		**Pn**	**04 32 38.6**	**+1.2**
YEDI	**Yedisu-Bingol**	**2.76**	**291**	*e*Pn		**Pn**	**04 32 38.5**	**+1.2**
QZX	**Qazax, Azerbai**	**2.79**	**24**	*e*Pn		**Pn**	**04 32 39.1**	**+1.5**
QZX	**Qazax, Azerbai**	**2.79**	**24**	P		**Pn**	**04 32 39.1**	**+1.5**
QZX				S		**Sb**	**04 33 16.1**	**-0.9**
GANJ	**Ganja**	**2.84**	**41**	*e*Pn		**Pn**	**04 32 39.6**	**+1.3**
GANJ	**Ganja**	**2.84**	**41**	P		**Pn**	**04 32 39.6**	**+1.3**
GANJ				S		**Sb**	**04 33 17.5**	**-1.1**
AKH	**Akhalkalaki**	**2.91**	**354**	PN		**Pb**	**04 32 41.9**	**-2.9**
MAZI	**Mazidag**	**2.91**	**250**	PN		**Pn**	**04 32 40.1**	**+0.8**
MAZI	**Mazidag**	**2.91**	**250**	*e*Pn		**Pn**	**04 32 40.1**	**+0.8**
KRIK	**Erzurum-spir**	**2.92**	**309**	*i* P		**Pg**	**04 32 47.7**	**-0.9**
DAGI	**Agillar**	**2.98**	**330**	*i* P		**Pg**	**04 32 47.8**	**-1.7**
DYBB	**Diyarbakir**	**3.00**	**260**	PN		**Pn**	**04 32 41.9**	**+1.4**
DBAD	**Bademkaya**	**3.02**	**327**	*i* P		**Pg**	**04 32 48.6**	**-1.7**
DIYA	**Diyarbakir**	**3.02**	**260**	*i* P		**Pb**	**04 32 46.0**	**-0.7**
KOPT	**Kop Dagi**	**3.03**	**301**	*i* P		**Pb**	**04 32 47.8**	**+1.0**
ISRB	**Sarab**	**3.06**	**102**	*e*Pn		**Pb**	**04 32 44.2**	**-3.2**
ISRB					IAMB	IAmb	04 32 58.9	
comp=Z,1μm,0.4s								
BRDA	**Brd**	**3.10**	**55**	*e*Pn		**Pn**	**04 32 42.3**	**+0.6**
BRDA	**Brd**	**3.10**	**55**	P		**Pn**	**04 32 42.3**	**+0.6**
BRDA				S		**Sb**	**04 33 22.8**	**-3.0**
EPOS	**Posof**	**3.12**	**344**	*i* P		**Pg**	**04 32 50.5**	**-1.6**
TBLG	**Delisi**	**3.28**	**11**	PN		**Pn**	**04 32 46.9**	**+2.6**
DBOC	**Borcka**	**3.30**	**330**	*i* P		**Pg**	**04 32 53.4**	**-2.3**
MNGR	**Mingechevir, A**	**3.35**	**47**	*e*Pn		**Pn**	**04 32 46.0**	**+0.8**
MNGR	**Mingechevir, A**	**3.35**	**47**	P		**Pn**	**04 32 46.1**	**+0.8**
MNGR				S		**Sb**	**04 33 29.1**	**-4.0**
BCA	**Borcka**	**3.40**	**330**	PN		**Pn**	**04 32 48.7**	**+2.7**
ERZN	**Erzincan**	**3.41**	**290**	PN		**Pn**	**04 32 47.9**	**+1.7**
BAYT	**Aydıntepe-Bayb**	**3.45**	**304**	PN		**Pn**	**04 32 48.7**	**+1.9**
LRK	**Lerik**	**3.50**	**86**	P		**Pn**	**04 32 46.2**	**-1.2**
GLBA	**Clilabad**	**3.59**	**77**	*e*Pn		**Pn**	**04 32 48.2**	**-0.4**
GLBA	**Clilabad**	**3.59**	**77**	P		**Pn**	**04 32 48.3**	**-0.4**
GLBA				S		**Sn**	**04 33 32.9**	**+1.6**
SVRC	**Sivrice-ELAZID**	**3.59**	**269**	PN		**Pn**	**04 32 49.8**	**+1.0**
SEKA	**Sheki**	**3.71**	**42**	*e*Pn		**Pn**	**04 32 51.8**	**+1.6**
SEKA	**Sheki**	**3.71**	**42**	P		**Pn**	**04 32 51.8**	**+1.6**
SEKA				S		**Sb**	**04 33 39.9**	**-3.7**
ZKTA	**Zakatala**	**3.76**	**33**	P		**Pn**	**04 32 51.6**	**+0.7**
ZKTA				S		**Sb**	**04 33 40.6**	**-4.4**
LKRN	**Lenkeran, Azer**	**3.84**	**86**	P		**Pn**	**04 32 51.4**	**-0.6**
LKRN				S		**Sn**	**04 33 37.9**	**+0.5**
ELZG	**Elazig**	**3.84**	**271**	*i* P		**Pb**	**04 32 56.1**	**-4.6**
ASTR	**Astara**	**3.85**	**88**	P		**Pn**	**04 32 51.4**	**-0.7**
ASTR				S		**Sn**	**04 33 38.1**	**+0.5**
QBL	**Gabala**	**3.90**	**50**	*e*Pn		**Pn**	**04 32 53.0**	**+0.2**
QBL	**Gabala**	**3.90**	**50**	P		**Pn**	**04 32 53.1**	**+0.2**
QBL				S		**Sn**	**04 33 42.6**	**+3.7**
KELT	**Kelkit**	**3.94**	**296**	*i* P		**Pb**	**04 33 03.5**	**+1.1**
IML	**Ismayilli**	**4.03**	**54**	S		**Sn**	**04 33 45.8**	**+3.8**
URFA	**Urfa**	**4.14**	**257**	PN		**Pn**	**04 32 58.1**	**+1.9**
XNQ	**Khinaliq**	**4.22**	**50**	*e*Pn		**Pn**	**04 32 57.7**	**+0.3**
XNQ	**Khinaliq**	**4.22**	**50**	P		**Pn**	**04 32 57.8**	**+0.3**
PQL	**Pirkuli**	**4.29**	**57**	*e*Pn		**Pn**	**04 32 58.3**	**0.0**
PQL	**Pirkuli**	**4.29**	**57**	P		**Pn**	**04 32 58.3**	**0.0**
GBS	**Qobustan**	**4.40**	**61**	*e*Pn		**Pn**	**04 32 59.8**	**0.0**
GBS	**Qobustan**	**4.40**	**61**	P		**Pn**	**04 32 59.8**	**0.0**
GBS				S		**Sn**	**04 33 53.9**	**+2.5**
QUB	**Quba**	**4.48**	**49**	*e*Pn		**Pn**	**04 33 01.7**	**+0.9**
QSAR	**Qusar**	**4.50**	**47**	*e*Pn		**Pn**	**04 33 01.5**	**+0.4**
QSAR	**Qusar**	**4.50**	**47**	P		**Pn**	**04 33 01.6**	**+0.4**
QSAR				S		**Sn**	**04 33 56.4**	**+2.5**
QUBA	**Quba, Azerbaij**	**4.54**	**50**	P		**Pn**	**04 33 01.8**	**+0.1**
ATGJ	**Altiaghaj**	**4.55**	**57**	*e*Pn		**Pn**	**04 33 01.4**	**-0.4**
ATGJ	**Altiaghaj**	**4.55**	**57**	P		**Pn**	**04 33 01.4**	**-0.4**
SIZA	**Siyzn**	**4.63**	**55**	*e*Pn		**Pn**	**04 33 02.7**	**-0.3**
SIZA	**Siyzn**	**4.63**	**55**	P		**Pn**	**04 33 02.7**	**-0.3**
SIZA				S		**Sn**	**04 33 59.2**	**+2.1**
GOBA	**Gobu**	**4.91**	**66**	*e*Pn		**Pn**	**04 33 06.0**	**-0.6**
GOBA	**Gobu**	**4.91**	**66**	P		**Pn**	**04 33 06.1**	**-0.6**
NDR	**Nardaran**	**5.15**	**64**	*e*Pn		**Pn**	**04 33 09.1**	**-0.8**
NDR	**Nardaran**	**5.15**	**64**	P		**Pn**	**04 33 09.2**	**-0.8**

SJA ***12*** *04:45:50.1±0.6,20°.53S×69°.02W,h101km±4km,ML1.9, MW3.3*
ISCJB ***12*** *04:45:51.0±0.8,20°.50S±0°.02×69°.05W±0°.08,h108km±8km, Error ellipse: s-maj=12.4km s-min=4.1km az=1.4*
GUC ***12*** *04:45:51.1±0.6,20°.50S×68°.96W,h101km±2km,ML3.3*
ISC 12 04:45:52.6±1.5,20°.51S±0°.03×69°.05W±0°.07,h92km±10km,
n24,σ0°80/41,7C-4D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.38**	**345**	*i* P		**Pn**	**04 46 06.6**	**-0.6**
PB08				*i* S		**Sn**	**04 46 18.5**	**+0.5**
PB08	**IPOC Station P**	**0.38**	**345**	⇑*i*P		**Pn**	**04 46 06.6**	**-0.6**
PB08				*i* S		**Sn**	**04 46 18.5**	**+0.5**
PB08					IAML		04 46 19.1	
comp=E,2μm,0.2s								
PB01	**IPOC Station P**	**0.67**	**217**	⇑*i*P		**Pn**	**04 46 08.4**	**-0.7**
PB01				*i* S		**Sn**	**04 46 21.8**	**+0.4**
PB01					IAML		04 46 23.2	
comp=N,810nm,0.1s								
GO01	**Chusmiza**	**0.85**	**351**	⇓*i*P		**Pn**	**04 46 10.6**	**-0.7**
GO01				*i* S		**Sn**	**04 46 25.7**	**+0.5**
PB11	**IPOC Station P**	**0.94**	**323**	*i* P		**Pn**	**04 46 11.2**	**-0.7**
PB11				*i* S		**Sn**	**04 46 27.3**	**+1.0**
PB11	**IPOC Station P**	**0.94**	**323**	⇑*i*P		**Pn**	**04 46 11.2**	**-0.7**
PB11				*i* S		**Sn**	**04 46 26.8**	**+0.4**
PB02	**IPOC Station P**	**1.13**	**224**	*i* P		**Pn**	**04 46 13.3**	**-0.7**
PB02	**IPOC Station P**	**1.13**	**224**	⇑*i*P		**Pn**	**04 46 13.4**	**-0.6**
PB02				*i* S		**Sn**	**04 46 31.4**	**+1.2**
PB02					IAML		04 46 32.8	
comp=E,794nm,0.1s								
PB09	**IPOC Station P**	**1.29**	**188**	⇓*i*P		**Pn**	**04 46 15.3**	**-0.8**
PB09				*i* S		**Sn**	**04 46 35.5**	**+1.8**
PSGC	**Pisagua**	**1.36**	**312**	⇓*i*P		**Pn**	**04 46 16.0**	**-0.7**
PSGC				*i* S		**Sn**	**04 46 35.5**	**+0.5**
PSGCX	**Pisagua**	**1.36**	**312**	*i* P		**Pn**	**04 46 16.2**	**-0.6**
PB07	**IPOC Station P**	**1.44**	**213**	*i* P		**Pn**	**04 46 16.9**	**-0.9**
PB07	**IPOC Station P**	**1.44**	**213**	⇑*i*P		**Pn**	**04 46 17.0**	**-0.9**
PB07				*i* S		**Sn**	**04 46 37.6**	**+0.7**
PB07					IAML		04 46 43.1	
comp=E,312nm,0.2s								
MNMC	**Minye Minye**	**1.46**	**339**	*e*P		**Pn**	**04 46 17.7**	**-0.6**
MNMC				*i* S		**Sn**	**04 46 37.7**	**+0.1**
MNMC					IAML		04 46 41.0	
comp=N,490nm,0.5s								
**

s-min=0.0km az=130.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.63**	**191**	P	Pn	04 56 32.9	0.0
MXZ				S	S	04 57 11.4	+0.2
WMGZ	**Waiomatatini S**	**2.87**	**188**	P	Pn	04 56 36.0	+0.6
WMGZ				S	S	04 57 16.1	+0.4
HAZ	**Te Kaha**	**2.92**	**198**	P	Pn	04 56 36.3	+0.4
HAZ				S	S	04 57 17.2	+0.4
PKGZ	**Pakihiroa**	**2.98**	**193**	P	Pn	04 56 36.7	0.0
PKGZ				S	S	04 57 18.2	+0.1
PUZ	**Puketiti**	**3.13**	**190**	P	Pn	04 56 38.1	-0.2
PUZ				S	S	04 57 20.7	-0.3
RUGZ	**Raukumara Rang**	**3.15**	**198**	P	Pn	04 56 38.3	-0.3
RUGZ				S	S	04 57 21.2	-0.2
TWGZ	**Tauwhareparae**	**3.28**	**193**	P	Pn	04 56 40.2	+0.2
TWGZ				S	S	04 57 25.1	+1.1
MWZ	**Matawai**	**3.53**	**198**	P	Pn	04 56 42.9	+0.1
MWZ				S	S	04 57 29.9	+0.8
CNGZ	**Carnagh Statio**	**3.55**	**189**	P	Pn	04 56 43.2	+0.4
URZ	**Urewera**	**3.59**	**204**	P	Pn	04 56 42.9	-0.5
URZ				S	S	04 57 30.6	+0.5
RIGZ	**Rimuhau**	**3.84**	**194**	P	Pn	04 56 45.7	-0.6
MUGZ	**Murupara**	**3.90**	**206**	P	Pn	04 56 47.5	+0.5
RTZ	**Ruatahuna**	**3.95**	**203**	P	Pn	04 56 47.1	-0.6
RAHZ	**Arahi**	**4.20**	**200**	P	Pn	04 56 50.5	-0.1
NMHZ	**Naumai**	**4.45**	**202**	P	Pn	04 56 53.8	+0.3
NMHZ				S	S	04 57 50.8	+2.3
ARHZ	**Aropaoanui**	**4.55**	**199**	P	Pn	04 56 54.4	-0.2
ARHZ				S	S	04 57 52.9	+2.3
BKZ	**Black Stump Fm**	**4.61**	**204**	P	Pn	04 56 55.3	-0.2
BKZ				S	S	04 57 53.4	+1.4
HIZ	**Hauiti**	**4.81**	**222**	P	Pn	04 57 00.9	+3.0
KWHZ	**Kaweka Forest**	**4.87**	**204**	P	Pn	04 56 58.0	-0.6
KWHZ				S	S	04 57 58.6	+0.9
BHHZ	**Black Hill Sta**	**5.05**	**206**	P	Pn	04 57 00.6	-0.2
FWVZ	**Far West T-bar**	**5.05**	**211**	P	Pn	04 57 01.0	0.0
KAHZ	**Kahuranaki**	**5.08**	**198**	P	Pn	04 57 00.3	-0.9
KRHZ	**Kereru**	**5.08**	**203**	P	Pn	04 56 58.9	-2.2
PNHZ	**Pukenui**	**5.38**	**203**	P	Pn	04 57 03.2	-1.6
TSZ	**Takapari Road**	**5.59**	**204**	P	Pn	04 57 06.0	-1.4
BFZ	**Birch Farm**	**6.08**	**200**	P	Pn	04 57 11.9	-1.6

IDC 12 05:03:51.9±6.1, 7°.08S×150°.17E, h91km±51km, mb3.3/2, mb1 3.6/3, mb1mx3.2/29, mbtmp3.7/3, ML1.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/13, Error ellipse: s-maj=114.5km s-min=33.4km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.77**	**232**	P	Pn	05 04 47.3	-0.5
	3.5nm,0.3s,baz=38,slow=13,SNR=7.4						
PMG				S	Sn	05 05 32.3	+1.2
	4.3nm,0.3s,baz=150,slow=16,SNR=6.0						
JAY	**Jayapura**	**10.46**	**295**	LR	LR	05 10 04.3	
	comp=Z,52nm,19.9s,baz=52,slow=36						
WRA	**Warramunga Arr**	**19.98**	**229**	P	P	05 08 17.0	-0.2
	52nm,0.3s,baz=55,slow=9.9,SNR=1.9						
ASAR	**Alice Springs**	**22.71**	**222**	P	P	05 08 45.8	-0.6
	0.9nm,0.3s,baz=54,slow=9.3,SNR=11						
ILAR	**Eielson Array**	**85.25**	**23**	P	P	05 16 18.7	+0.6
	0.5nm,0.8s,baz=241,slow=4.9,SNR=4.9						

*MOS **12** 05:35:53.9±1.1, 54°.75N×153°.66E, h605km, mb4.0/1, Error ellipse: s-maj=18.9km s-min=12.6km az=115.0*
*ISCJB **12** 05:35:54.4±0.5, 54°.79N±0°.08×153°.8E±0°.1, h600km, mb3.1/1, Error ellipse: s-maj=12.2km s-min=9.2km az=136.9*
*IDC **12** 05:35:55.3±1.1, 54°.75N×153°.59E, h599km±14km, mb2.9/5, mb1 3.0/8, mb1mx2.7/31, mbtmp3.9/8, Error ellipse: s-maj=17.6km s-min=16.7km az=125.0*
*KRSC **12** 05:35:56.3±2.4, 54°.45N×154°.85E, h618km±36km, ML4.3*
ISC 12 05:35:54.6±0.8, 54°.69N±0°.09×154°.04E±0°.09, h600km, n56, σ19°93/66, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNL	**Ganaly**	**2.50**	**112**	*e*P	**P**	**05 37 13.0**	**+1.8**
GNL	**Ganaly**	**2.50**	**112**	P	**P**	**05 37 13.0**	**+1.8**
APC	**Apacha**	**2.56**	**133**	*e*P	**P**	**05 37 12.9**	**+1.6**
APC	**Apacha**	**2.56**	**133**	P	**P**	**05 37 12.9**	**+1.6**
PETK	**Petropavlovsk-**	**2.68**	**125**	P	**P**	**05 37 13.3**	**+1.4**
	5.4nm,0.3s,baz=1.5,slow=1.6,SNR=107						
KRX	**Arik**	**3.03**	**114**	*e*P	**P**	**05 37 16.1**	**+2.1**
KRX	**Arik**	**3.03**	**114**	P	**P**	**05 37 16.1**	**+2.1**
KRMR	**Karymshinskiy**	**3.06**	**126**	*e*P	**P**	**05 37 15.4**	**+1.4**
KRMR	**Karymshinskiy**	**3.06**	**126**	P	**P**	**05 37 15.4**	**+1.4**
KRER	**Koryakskii**	**3.10**	**115**	*e*P	**P**	**05 37 16.8**	**+2.3**
KRER	**Koryakskii**	**3.10**	**115**	P	**P**	**05 37 16.8**	**+2.3**
AVH	**Avacha**	**3.12**	**115**	*e*P	**P**	**05 37 17.1**	**+2.7**
AVH	**Avacha**	**3.12**	**115**	P	**P**	**05 37 17.1**	**+2.7**
SMAR	**Somma**	**3.15**	**115**	*e*P	**P**	**05 37 17.0**	**+2.2**
SMAR	**Somma**	**3.15**	**115**	P	**P**	**05 37 17.0**	**+2.2**
SDLR	**Sedlovina**	**3.19**	**114**	*e*P	**P**	**05 37 16.9**	**+2.0**
SDLR	**Sedlovina**	**3.19**	**114**	P	**P**	**05 37 16.9**	**+2.0**
UGLR	**Uglovaya**	**3.19**	**116**	*e*P	**P**	**05 37 16.9**	**+2.0**
UGLR	**Uglovaya**	**3.19**	**116**	P	**P**	**05 37 16.9**	**+2.0**
PET	**Petropavlovsk**	**3.20**	**120**	*e*P	**P**	**05 37 16.8**	**+2.0**
PET	**Petropavlovsk**	**3.20**	**120**	P	**P**	**05 37 16.8**	**+2.0**
DALK	**Dalny**	**3.25**	**119**	*e*P	**P**	**05 37 16.6**	**+1.5**
DALK	**Dalny**	**3.25**	**119**	P	**P**	**05 37 16.6**	**+1.5**
ASAK	**Asacha**	**3.26**	**134**	*e*P	**P**	**05 37 17.0**	**+1.7**
ASAK	**Asacha**	**3.26**	**134**	P	**P**	**05 37 17.0**	**+1.7**
MTVR	**Mutnovka**	**3.31**	**130**	*e*P	**P**	**05 37 17.5**	**+1.8**
MTVR	**Mutnovka**	**3.31**	**130**	P	**P**	**05 37 17.5**	**+1.8**
NLC	**Nalytchevo**	**3.48**	**114**	*e*P	**P**	**05 37 18.1**	**+1.6**
NLC				*e*S	**S**	**05 38 23.3**	**-0.2**
NLC	**Nalytchevo**	**3.48**	**114**	P	**P**	**05 37 18.1**	**+1.6**
NLC				S	**S**	**05 38 23.3**	**-0.2**
RUS	**Russkaya**	**3.50**	**129**	*e*P	**P**	**05 37 16.8**	**+0.2**
RUS	**Russkaya**	**3.50**	**129**	P	**P**	**05 37 16.8**	**+0.2**
KZV	**Kizimen**	**3.63**	**81**	*e*P	**P**	**05 37 18.8**	**+1.2**
KZV	**Kizimen**	**3.63**	**81**	P	**P**	**05 37 18.8**	**+1.2**
KDTR	**Khodutka, Kamc**	**3.77**	**138**	*e*P	**P**	**05 37 17.8**	**-0.6**
KDTR				*e*S	**S**	**05 38 23.7**	**-3.1**
KDTR	**Khodutka, Kamc**	**3.77**	**138**	P	**P**	**05 37 17.8**	**-0.6**
KDTR				S	**S**	**05 38 23.7**	**-3.1**
SPN	**Mys Shipunski**	**3.88**	**112**	*e*P	**P**	**05 37 19.0**	**-0.1**
SPN				*e*S	**S**	**05 38 24.9**	**-3.3**
SPN	**Mys Shipunski**	**3.88**	**112**	P	**P**	**05 37 19.0**	**-0.1**
SPN				S	**S**	**05 38 24.9**	**-3.3**
MKZ	**Mys Kozlova**	**4.47**	**89**	*e*P	**P**	**05 37 22.0**	**-1.2**
MKZ				*e*S	**S**	**05 38 32.5**	**-3.3**
MKZ	**Mys Kozlova**	**4.47**	**89**	P	**P**	**05 37 22.0**	**-1.2**
MKZ				S	**S**	**05 38 32.5**	**-3.3**
BDR	**Baidarnaya**	**4.47**	**62**	*e*P	**P**	**05 37 25.7**	**+2.4**
BDR	**Baidarnaya**	**4.47**	**62**	P	**P**	**05 37 25.7**	**+2.4**
MA2	**Magadan**	**5.21**	**341**	P	**P**	**05 37 28.7**	**-0.1**
	0.6nm,0.3s,baz=158,slow=9.8,SNR=6.2						
KBTR	**Krutoberegovo**	**5.22**	**70**	*e*P	**P**	**05 37 29.3**	**+0.3**
KBTR				*e*S	**S**	**05 38 43.7**	**-2.7**
KBTR	**Krutoberegovo**	**5.22**	**70**	P	**P**	**05 37 29.3**	**+0.3**
KBTR				S	**S**	**05 38 43.7**	**-2.7**
BKI	**Bering**	**6.89**	**81**	*e*P	**P**	**05 37 46.3**	**+2.9**
BKI	**Bering**	**6.89**	**81**	P	**P**	**05 37 46.3**	**+2.9**
SEY	**Seymchan**	**8.31**	**355**	P	**P**	**05 37 56.9**	**+0.5**
	0.6nm,0.3s,baz=177,slow=8.4,SNR=7.1						
KDAK	**Kodiak Island**	**29.18**	**62**	P	**P**	**05 41 11.1**	**+2.3**
	3.9nm,0.7s,baz=257,slow=1.0,SNR=9.9						
ILAR	**Eielson Array**	**30.28**	**47**	P	**P**	**05 41 20.6**	**+2.4**
	0.5nm,0.6s,baz=274,slow=10,SNR=9.6						
MKAR	**Makanchi Array**	**44.23**	**291**	P	**P**	**05 43 10.5**	**-1.3**
	1.0nm,0.4s,baz=52,slow=6.0,SNR=18						
ARCES	**ARCESS Array B**	**50.58**	**339**	P	**P**	**05 43 57.8**	**-0.9**
	10nm,0.4s,baz=43,slow=7.9,SNR=7.2						
NB2	**NORSAR Subarra**	**60.91**	**340**	P	**P**	**05 45 09.2**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=23,slow=6.5						
NOA	**NORSAR Array B**	**60.91**	**340**	P	**P**	**05 45 09.6**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=24,slow=6.5,SNR=4.7						
WRA	**Warramunga Arr**	**76.22**	**199**	P	**P**	**05 46 43.1**	**+0.7**
	comp=Z,110nm,0.3s,baz=13,slow=7.7,SNR=2.6						
ASAR	**Alice Springs**	**79.93**	**199**	P	**P**	**05 47 03.0**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=13,slow=4.8,SNR=5.2						
CPUP	**Villa Florida**	**143.52**	**52**	PKP	**PKPdf**	**05 54 21.8**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=336,slow=6.5,SNR=4.1						

*SOME **12** 05:38:23.8, 39°.38N×74°.97E, h10km*

*NNC **12** 05:38:25.7±1.6, 39°.46N×74°.97E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=13.7km s-min=10.2km az=101.0*
*KRNET **12** 05:38:40.2±0.1, 39°.77N×75°.73E, mb2.8*
ISC 12 05:38:38.9±2.8, 39°.8N±0°.1×75°.6E±0°.1, h10km, n17, σ2°40/26, 8C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.70**	**12**	⇓*i*P	**Pn**	**05 39 09.5**	**+0.5**
	baz=6.0						
NRN				⇓*i*S	**Sn**	**05 39 30.9**	**-0.1**
	baz=6.0						
KZA	**Kyzart**	**2.32**	**355**	⇑*i*P	**Pn**	**05 39 19.0**	**+1.4**
	baz=51						
KZA				⇑*i*S	**Sn**	**05 39 47.1**	**+0.7**
	baz=51						
ULHL	**Ulahol**	**2.53**	**12**	⇑*i*P	**Pn**	**05 39 21.4**	**+1.1**
	baz=9.0						
ULHL				⇑*i*S	**Sn**	**05 39 51.5**	**+0.2**
	baz=9.0						
UCH	**Uchtor**	**2.58**	**343**	⇓*i*P	**Pn**	**05 39 22.6**	**+1.4**
	baz=40						
UCH				⇓*i*S	**Sn**	**05 39 53.7**	**+0.9**
	baz=40						
AAK	**Ala-Archa**	**2.98**	**345**	⇑Pg	Pn	05 39 23.4	-3.0
	2.0nm,0.5s						
AAK				⇑Lg	Lg	05 40 08.0	
	8.4nm,1.2s						
TKM2	**Tokmak 2**	**3.15**	**1**	⇑Pg	**Pn**	**05 39 29.4**	**+0.6**
	2.8nm,0.7s						
TKM2				⇑Lg	Lg	05 40 14.8	
	4.7nm,0.7s						
KST	**Kastek**	**3.29**	**5**	Pg	**Pn**	**05 39 33.0**	**+2.3**
	5.0nm,0.3s						
KST				Lg	Lg	05 40 22.9	
	6.4nm,0.6s						
KST	**Kastek**	**3.29**	**5**	*e*P	**Pn**	**05 39 31.1**	**+0.5**
	5.1nm,0.4s						
KST				*e*S	**Sb**	**05 40 18.9**	**+1.3**
	7.1nm,0.7s						
TNSS	**Tian-Shan**	**3.43**	**17**	Pg	**Pn**	**05 39 36.8**	**+3.9**
	0.8nm,0.0s						
TNSS				Lg	Lg	05 40 29.4	
	5.8nm,0.5s						
TNSS	**Tian-Shan**	**3.43**	**17**	*e*P	**Pn**	**05 39 36.8**	**+3.9**
	0.8nm,0.0s						
TNSS				*e*S	**Sg**	**05 40 29.4**	**+0.2**
	5.8nm,0.5s						
DGS	**Degeres**	**3.48**	**3**	Pg	**Pn**	**05 39 35.4**	**+2.2**
	2.7nm,0.4s						
DGS				Lg	Lg	05 40 27.5	
	5.8nm,0.5s						
DGS	**Degeres**	**3.48**	**3**	*e*P	**Pn**	**05 39 35.4**	**+2.2**
	2.7nm,0.4s						
DGS				*e*S	**Sb**	**05 40 27.5**	**+4.5**
	5.8nm,0.5s						
KTBS	**Karatobe**	**4.03**	**12**	Pg	**Pb**	**05 39 47.5**	**-2.5**
	1.3nm,0.4s						
KTBS				Lg	Lg	05 40 47.8	
	3.6nm,0.8s						
KTBS	**Karatobe**	**4.03**	**12**	*e*P	**Pb**	**05 39 47.5**	**-2.5**
	1.3nm,0.4s						
KTBS				*e*S	**Sg**	**05 40 47.9**	**-0.6**
	3.6nm,0.8s						
KUU	**Kurty**	**4.17**	**8**	Pg	**Pb**	**05 39 48.6**	**-3.7**
	1.4nm,0.1s						
KUU				Lg	Lg	05 40 49.7	
	2.1nm,0.3s						
KUU	**Kurty**	**4.17**	**8**	*e*P	**Pb**	**05 39 48.6**	**-3.7**
	1.4nm,0.1s						
KUU				*e*S	**Sg**	**05 40 49.8**	**-2.9**
	2.1nm,0.3s						
KPKS	**Kokpek**	**4.38**	**31**	*e*P	**Pb**	**05 39 53.5**	**-2.5**
	2.1nm,0.3s						
KPKS				*e*S	**Sg**	**05 40 58.1**	**-1.4**
	5.1nm,0.3s						

TAP 12 06:10:36.1, 23°.81N×120°.94E, h11km, ML1.4, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.03**	**147**	P	Pg	06 10 38.5	+0.3
	baz=148						
SSLB				S	Sg	06 10 40.2	+0.6
	baz=148						
SMLT	**Sun Moon Lake**	**0.08**	**334**	P	Pg	06 10 39.3	+0.6
	baz=338						
SMLT				*e*S	Sg	06 10 42.0	+1.3
	baz=338						
TYC	**Yuchr**	**0.12**	**322**	*i* P	Pg	06 10 39.5	+0.4
	baz=326						
TYC				*i* S	Sg	06 10 42.1	+0.8
	baz=326						
WHYT	**Xinyi Township**	**0.14**	**215**	*e*P	Pg	06 10 38.3	-1.1
	baz=215						
WHYT				*e*S	Sg	06 10 42.3	+0.6
	baz=215						
VWDT	**VWDT**	**0.19**	**107**	P	Pb	06 10 41.7	+0.1
	baz=106						
VWDT				*e*S	Sg	06 10 46.0	+2.9
	baz=106						
WJS	**Zhushan**	**0.19**	**274**	*e*S	Sg	06 10 45.4	+2.2
	baz=273						
DPDB	**Guoxing**	**0.22**	**357**	*e*P	Pg	06 10 40.7	-0.1
	baz=356						
DPDB				*e*S	Sg	06 10 46.0	+1.9
	baz=356						
WNT	**Mingjian**	**0.24**	**286**	P	Pb	06 10 41.8	-0.7
	baz=286						
WNT				*e*S	Sg	06 10 46.5	+1.9
	baz=286						
OWD	**Renai**	**0.26**	**56**	*i* P	Pb	06 10 42.7	-0.1
	baz=56						
OWD				*i* S	Sb	06 10 46.5	-0.9
	baz=56						
YUS	**Yu-Shan**	**0.32**	**178**	P	Pg	06 10 43.3	+0.6
	baz=178						
YUS				*e*S	Sb	06 10 49.0	-0.4
	baz=178						
CHN5	**Tsauling**	**0.32**	**229**	*e*S	Sb	06 10 48.8	-0.2
	baz=228						
ALS	**Alishan**	**0.32**	**202**	*i* P	Pg	06 10 43.3	+0.6
	baz=201						
ALS				S	Sb	06 10 48.9	-0.3
	baz=201						
CHGB	**Renai**	**0.33**	**41**	*e*P	Pg	06 10 43.4	+0.6
	baz=40						
CHGB				*e*S	Sb	06 10 49.4	-0.1
	baz=40						
EHY	**Hungye**	**0.46**	**131**	*e*S	Sb	06 10 54.0	+0.9
	baz=130						
YULB	**Yu-li**	**0.53**	**142**	P	Pb	06 10 47.3	0.0
	baz=141						
YULB				*e*S	Sb	06 10 54.7	-0.3
	baz=141						
TWF1	**Yuli**	**0.56**	**144**	*e*S	Sb	06 10 56.5	+0.6
	baz=143						
SANB	**Taian**	**0.59**	**4**	*e*P	Pb	06 10 48.5	+0.1
	baz=4.0						
ETLH	**Xiulin Townshi**	**0.64**	**51**	*e*P	Pb	06 10 49.0	-0.2
	baz=51						
ETLH	**Xiulin Townshi**	**0.64**	**51**	S	Pb	06 10 49.0	-0.3
	baz=168						
NACB	**Ninganchiao**	**0.70**	**59**	*e*S	Sg	06 10 57.9	-0.9
	baz=58						

TAP 12 06:10:42.6, 24°.35N×121°.45E, h8km±1km, ML0.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.10**	**320**	P	Pg	06 10 45.4	+0.4
	baz=323						
NNSB				*e*S	Sg	06 10 46.8	0.0
	baz=323						
NNS	**Nan Shan**	**0.11**	**320**	*e*P	Pg	06 10 45.9	+0.6
	baz=325						
NNS				S	Sg	06 10 47.4	+0.3
	baz=325						
ETLH	**Xiulin Townshi**	**0.15**	**170**	*e*P	Pg	06 10 46.6	+0.8
	baz=168						
NDT	**Datong Townshi**	**0.26**	**12**	*e*P	Pg	06 10 47.5	-0.2
	baz=14						
NDT				*e*S	Sg	06 10 52.6	+1.4
	baz=14						
ENTT	**Nioudou**	**0.30**	**20**	*e*P	Pb	06 10 49.7	-0.6
	baz=23						
ENTT				*e*S	Sg	06 10 53.8	+1.1
	baz=23						
YHNB	**Yeheng**	**0.32**	**347**	*e*S	Sg	06 10 53.6	+0.3
	baz=349						

*SOME **12** 06:11:38.4, 40°.78N×69°.48E, h20km*
*NNC **12** 06:11:40.0±1.9, 40°.91N×69°.75E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=13.7km s-min=7.1km az=35.0*
ISC 12 06:11:39.3±3.1, 40°.8N±0°.2×69°.83E±0°.09, h10km, n12, σ2°67/17, 2C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.31**	**6**	*e*P	**Pg**	**06 12 05.4**	**+0.9**
	86nm,0.2s						
IUG				*e*S	**Sn**	**06 12 24.3**	**+2.9**
	188nm,0.5s						
BRLS	**Borolday**	**2.18**	**0**	Pg	**Pn**	**06 12 14.2**	**-1.5**
	18nm,0.5s						
BRLS				Lg	Lg	06 12 40.4	
	16nm,0.6s						
BRLS	**Borolday**	**2.18**	**0**	*e*P	**Pn**	**06 12 14.2**	**-1.5**
	18nm,0.5s						
BRLS				*e*S	**Sn**	**06 12 40.4**	**-2.4**
	16nm,0.6s						
KK31	**Karatay Array**	**2.31**	**12**	⇑Pg	**Pb**	**06 12 21.4**	**+0.3**
	4.4nm,0.3s,baz=202,slow=15,SNR=98						
KK31				⇓Lg	Lg	06 12 51.2	
	12nm,0.3s,baz=200,slow=26,SNR=6.1						
MRKS	**Merke**	**3.17**	**52**	Pg	**Pb**	**06 12 38.4**	**+2.7**
	6.9nm,0.3s						
MRKS				Lg	Lg	06 13 22.2	
	12nm,0.5s						
MRKS	**Merke**	**3.17**	**52**	*e*P	**Pb**	**06 12 38.4**	**+2.7**
	6.9nm,0.3s						
MRKS				*e*S	**Sg**	**06 13 22.2**	**+1.2**
	12nm,0.5s						
AAK	**Ala-Archa**	**3.92**	**61**	⇑Pg	**Pg**	**06 12 53.1**	**-1.3**
	2.9nm,0.5s						
AAK				⇓Lg	Lg	06 13 46.4	
	3.5nm,0.5s						
TKM2	**Tokmak 2**	**4.78**	**62**	⇓Pg	**Pb**	**06 13 06.6**	**+3.4**
	2.5nm,0.7s						
TKM2				⇓Lg	Lg	06 14 11.2	
	5.5nm,0.8s						
DGS	**Degeres**	**5.03**	**60**	Pg	**Pg**	**06 13 12.8**	**-2.8**
	3.8nm,0.6s						
DGS				Lg	Lg	06 14 20.8	
	8.7nm,0.6s						
DGS	**Degeres**	**5.03**	**60**	*e*P	**Pg**	**06 13 12.8**	**-2.8**
	3.8nm,0.6s						
DGS				*e*S	**Sg**	**06 14 20.9**	**+0.1**
	8.7nm,0.6s						
KST	**Kastek**	**5.07**	**62**	Pg	**Pb**	**06 13 11.7**	**+3.5**
	4.6nm,0.6s						
KST				Lg	Lg	06 14 19.1	
	3.9nm,0.5s						
KST	**Kastek**	**5.07**	**62**	*e*P	**Pb**	**06 13 11.7**	**+3.5**
	4.6nm,0.6s						
KST				*e*S	**Sg**	**06 14 19.1**	**-3.0**
	3.9nm,0.5s						

*DSN **12** 06:35:07.2±2.9, 26°.56N×58°.06E, h10km, ML3.6/8, Error ellipse: s-maj=39.4km s-min=12.5km az=11.0*
*ISCJB **12** 06:35:09.9±0.6, 26°.61N±0°.04×57°.70E±0°.07, h10km, Error ellipse: s-maj=9.7km s-min=5.8km az=8.3*
*TEH **12** 06:35:10.7, 26°.73N×57°.78E, h10km, ML3.6*
*OMAN **12** 06:35:13.0±2.9, 26°.54N×57°.86E, h0km±96km, ml3.5/7, Error ellipse: s-maj=192.9km s-min=41.5km az=39.0*
ISC 12 06:35:10.6±1.0, 26°.68N±0°.04×57°.73E±0°.05, h10km, n38, σ2°00/36, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**1.04**	**178**	*e*Pg	**Pb**	**06 35 31.1**	**+0.4**
NIAN	**Nian**	**1.18**	**318**	*e*Pn	**Pg**	**06 35 33.7**	**+0.4**
NIAN				IAMB	IAmb	06 35 54.7	
	comp=Z,0.0nm,0.3s						
KHNJ	**Kahnooj**	**1.26**	**359**	*e*Pg	**Pn**	**06 35 33.0**	**-1.4**
BANOM	**Banah**	**1.49**	**240**	*e*P	**Pn**	**06 35 36.7**	**-0.8**
	SNR=122						
BANOM	**Banah**	**1.49**	**240**	P	**Pn**	**06 35 36.7**	**-0.8**
	SNR=122						
BANOM				S	**Sb**	**06 35 59.6**	**+2.3**
SHME	**Shamm**	**1.56**	**246**	*e*P	**Pn**	**06 35 38.6**	**+0.2**
	SNR=18						
SHME				S	**Sg**	**06 36 01.9**	**+1.2**
SHME	**Shamm**	**1.56**	**246**	*e*Pn	**Pn**	**06 35 38.6**	**+0.2**
BNDS	**Bandar-Abbas**	**1.56**	**298**	*e*Pg	Pn	06 35 31.0	-7.6
GENO	**Geno**	**1.56**	**298**	*e*Pn	**Pb**	**06 35 39.9**	**+0.2**
MDH	**Madha**	**1.88**	**223**	*e*P	**Pn**	**06 35 40.4**	**-2.5**
	SNR=9.3						
MDH	**Madha**	**1.88**	**223**	P	**Pn**	**06 35 40.4**	**-2.5**
MDH	**Madha**	**1.88**	**223**	*e*Pn	**Pn**	**06 35 40.3**	**-2.6**
MSFE	**Esma-Masafi**	**1.93**	**227**	P	**Pn**	**06 35 41.2**	**-2.3**
MSFE	**Esma-Masafi**	**1.93**	**227**	*e*Pn	**Pn**	**06 35 39.8**	**-3.8**
UOSS	**Minazif**	**2.21**	**219**	P	**Pn**	**06 35 44.3**	**-3.1**
UOSS	**Minazif**	**2.21**	**219**	P	**Pn**	**06 35 43.8**	**-3.6**
UOSS	**Minazif**	**2.21**	**219**	*e*Pn	**Pn**	**06 35 44.2**	**-3.1**
HATD	**Hatta, Dubai**	**2.34**	**218**	P	**Pn**	**06 35 48.1**	**-1.1**
HATD	**Hatta, Dubai**	**2.34**	**218**	P	**Pn**	**06 35 50.6**	**+1.4**
HATD	**Hatta, Dubai**	**2.34**	**218**	*e*Pn	**Pn**	**06 35 48.1**	**-1.1**
ASHO	**Ashiyiah**	**2.50**	**217**	*e*P	**Pn**	**06 35 49.4**	**-1.9**
	SNR=8.3						
ASHO	**Ashiyiah**	**2.50**	**217**	P	**Pn**	**06 35 50.8**	**-0.5**
ASHO	**Ashiyiah**	**2.50**	**217**	*e*Pn	**Pn**	**06 35 48.9**	**-2.5**
CHBR	**Chabahar**	**2.70**	**113**	*e*Pn	**Pn**	**06 35 56.2**	**+2.0**
FAQ	**Al Faqa, Dubai**	**2.73**	**225**	P	**Pn**	**06 35 54.1**	**-0.4**
FAQ	**Al Faqa, Dubai**	**2.73**	**225**	*e*Pn	**Pn**	**06 35 55.1**	**+0.6**
ASUD	**Al Ashush, Dub**	**2.98**	**227**	P	**Pn**	**06 35 57.2**	**-0.8**
CHMN	**Cheshme madani**	**3.17**	**357**	IAMB	IAmb	06 37 06.0	
	comp=N,0.0nm

ILAR	Eielson Array	60.11	28	P		P	07 29 48.9	-0.7
	2.1nm,1.0s,baz=256,slow=5.8,SNR=15							
INK	Inuvik	65.43	24	P		P	07 30 24.6	-0.1
	1.0nm,0.4s,baz=297,slow=6.3,SNR=9.0							
YKA	Yellowknife Ar	74.54	28	P		P	07 31 19.7	-0.5
	0.9nm,0.6s,baz=295,slow=5.8,SNR=9.4							
NVAR	Mina Array Bea	82.64	51	P		P	07 32 05.8	+0.6
	0.6nm,0.6s,baz=296,slow=5.4,SNR=7.7							
TXAR	Lajitas Array	97.70	53	LR		LR	08 17 58.0	
	comp=Z,10nm,18.2s,baz=0.0,slow=36							
LPAZ	La Paz	151.36	78	PKPbc		PKPbc	07 39 35.4	-0.1
	0.7nm,0.5s,baz=21,slow=4.5,SNR=6.6							

*ISCJB **12** 07:23:14.0±0.5,20°.36S±0°.06×169°.47E±0°.07,h55km, mb4.4/10,MS3.3/7,Error ellipse: s-maj=11.2km s-min=6.0km az=136.8*
*IDC **12** 07:23:16.4±4.8,20°.54S×169°.49E,h67km±47km,mb4.0/8, mb1 4.3/9,mb1mx3.9/27,mbtmp4.3/9,ML4.1/1,MS3.2/9, Ms1 3.2/9,ms1mx3.1/24,Error ellipse: s-maj=69.8km s-min=29.3km az=165.0*
*NEIC **12** 07:23:16.1±2.5,20°.32S×169°.47E,h62km±8km,mb4.2/6, Error ellipse: s-maj=27.2km s-min=16.0km az=148.0*
ISC 12 07:23:15.2±0.7,20°.4S±0°.1×169°.51E±0°.10,h55km,n35, σ0°.99/32,mb4.3/10,MS3.2/7,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.77	231	ePn	Pn	07 23 44.2	+0.8
MARNC				eSn	Sn	07 24 03.5	-1.3
PINNC	Pines Island,	2.94	220	ePn	Pn	07 24 00.7	+1.2
PINNC				eSn	Sn	07 24 32.2	-1.3
OUENC	Ouen Island, N	3.21	230	ePn	Pn	07 24 04.9	+1.7
OUENC				eSn	Sn	07 24 40.4	+0.2
DZM	Mont Dzumac	3.32	239	P	Pn	07 24 05.8	+1.0
	21nm,0.3s,baz=105,slow=10.0,SNR=237						
DZM				S	Sn	07 24 42.1	-1.0
	115nm,0.3s,baz=133,slow=22,SNR=21						
DZM				LR	LR	07 24 55.9	
	comp=Z,108nm,20.2s,baz=40,slow=31						
HNR	Honiara	14.27	318	LR	LR	07 31 21.3	
	comp=Z,67nm,18.4s,baz=131,slow=34						
ARMA	Armidale	18.97	235	eP	Pn	07 27 33.5	+0.1
	3.3nm,0.7s						
URZ	Urewera	19.00	161	eP	Pn	07 27 34.7	+1.2
	11nm,1.0s						
BKZ	Black Stump Fm	19.67	164	eP	Pn	07 27 41.3	-0.2
	20nm,1.2s						
CTA	Charters Tower	21.82	267	P	P	07 28 04.5	+1.4
	10nm,0.8s,baz=105,slow=13,SNR=11						
CTAO	Charters Tower	21.82	267	eP	P	07 28 03.8	+0.7
	17nm,1.1s						
PMG	Port Moresby	24.16	294	P	P	07 28 26.7	+0.2
	33nm,0.8s,baz=125,slow=6.9,SNR=7.0						
STKA	Stephens Creek	27.48	240	LR	LR	07 38 59.1	
	comp=Z,68nm,19.4s,baz=25,slow=34						
RAR	Rarotonga	28.71	97	LR	LR	07 38 07.7	
	comp=Z,61nm,21.2s,baz=276,slow=31						
WR1	Warramunga Arr	32.98	265	eP	P	07 29 44.0	-1.1
WRA	Warramunga Arr	32.98	265	P	P	07 29 44.0	-1.1
	2.0nm,0.6s,baz=92,slow=8.3,SNR=8.8						
AS31	Alice Springs	33.12	258	eP	P	07 29 45.9	-0.5
	3.3nm,0.6s						
ASAR	Alice Springs	33.12	258	P	P	07 29 45.8	-0.6
	8.2nm,0.7s,baz=82,slow=9.0,SNR=70						
ASAR				LR	LR	07 43 20.2	
	comp=Z,65nm,18.1s,baz=96,slow=36						
JAY	Jayapura	33.24	299	LR	LR	07 42 18.2	
	comp=Z,38nm,19.6s,baz=274,slow=34						
MTN	Manton Dam	37.46	275	eP	P	07 30 23.1	-0.6
	15nm,0.6s						
FITZ	Fitzroy Crossi	41.40	265	LR	LR	07 47 51.7	
	comp=Z,42nm,21.6s,baz=87,slow=36						
NWAO	Narrogin (SRO)	47.93	244	LR	LR	07 51 51.1	
	comp=Z,53nm,21.1s,baz=112,slow=36						
PETK	Petropavlovsk-	73.89	353	LR	LR	08 01 36.4	
	comp=Z,13nm,20.9s,baz=137,slow=31						
CM31	Chiang Mai Arr	79.20	294	eP	P	07 35 15.7	+0.9
CMAR	Chiang Mai Arr	79.20	294	P	P	07 35 15.7	+0.9
	2.3nm,0.7s,baz=132,slow=5.0,SNR=9.9						
SNAA	Sanae	88.04	182	P	P	07 35 58.2	-1.1
SONA0	Songino Array	88.28	323	eP	P	07 36 00.6	-0.2
SONM	Songino Array	88.28	323	P	P	07 36 00.6	-0.2
	0.6nm,0.5s,baz=129,slow=7.3,SNR=3.7						
VNA3	Neumayer Olymp	88.62	180	P	P	07 36 01.0	-1.0
VNA2	Neumayer--Watz	88.92	181	P	P	07 36 02.7	-0.6
	baz=181,slow=3.8						
VNA1	Neumayer--Stat	89.20	181	P	P	07 36 03.6	-1.1
NV01	Mina Array Sit	89.36	48	eP	P	07 36 07.2	+1.0
NVAR	Mina Array Bea	89.36	48	P	P	07 36 07.2	+1.0
	0.6nm,0.7s,baz=219,slow=6.9,SNR=6.1						
ILAR	Eielson Array	91.24	17	P	P	07 36 12.8	-1.2
	0.4nm,0.8s,baz=242,slow=5.0,SNR=3.8						
ILB	Eielson Array	91.24	17	eP	P	07 36 12.8	-1.2
GERES	GERESS Array B	145.61	331	PKPbc	PKPdf	07 42 47.3	-0.1
	1.2nm,0.6s,baz=46,slow=3.9,SNR=8.5						

*IDC **12** 07:37:38.2±0.6,1°.78N×123°.39E,h0km,mb4.2/16, mb1 4.4/18,mb1mx4.1/57,mbtmp4.3/18,ML4.6/2,MS3.3/5, Ms1 3.3/5,ms1mx2.9/32,Error ellipse: s-maj=30.8km s-min=12.2km az=77.0*
*NEIC **12** 07:37:40.0±2.2,1°.78N×123°.33E,h13km±6km,mb4.5/18, Error ellipse: s-maj=19.1km s-min=11.5km az=95.0*
*ISCJB **12** 07:37:41.3±0.2,1°.77N±0°.03×123°.38E±0°.04,h33km, mb4.5/34,MS3.8/5,Error ellipse: s-maj=5.9km s-min=3.6km az=5.1*
*DJA **12** 07:37:41.4±1.1,2°N±4°×12°3E±°,h37km±24km,M4.7/11, mb5.0/5,mB5.0/5,MLv4.7/11,Mw(mB)4.3/5*
ISC 12 07:37:43.3±0.5,1°.79N±0°.05×123°.36E±0°.06,h35km,n69, σ1°.06/72,mb4.5/34,MS3.2/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	2.87	192	ePn	Pn	07 38 26.7	0.0
LUWI				eSn	Sn	07 39 01.1	+1.2
LUWI	Luwuk	2.87	192	P	Pn	07 38 26.3	-0.3
LUWI				S	Sn	07 39 01.2	+1.2
SGSI	Sangihe	2.87	49	P	Pn	07 38 26.0	-0.7
SGSI				S	Sn	07 38 58.4	-1.6
APSI	Ampana	3.18	213	P	Pn	07 38 31.6	+0.7
MPSI	Mapaga	3.75	247	P	Pn	07 38 36.1	-2.6
MPSI				S	Sn	07 39 19.1	-2.6
TNTI	Ternate	4.13	104	ePn	Pn	07 38 43.5	-0.4
TNTI	Ternate	4.13	104	P	Pn	07 38 49.6	+5.7
SANI	Sanana	4.63	145	P	Pn	07 38 49.7	-1.1
DAV	Davao City (W)	5.70	23	Pn	Pn	07 39 00.4	-5.1
	126nm,0.3s,baz=76,slow=1.2,SNR=4.1						
DAV				LR	LR	07 42 00.5	
	comp=Z,220nm,18.2s,baz=136,slow=46						
KDI	Kendari	5.75	187	P	Pn	07 39 05.7	-0.6
TTSI	Tana Toraja	5.96	216	P	Pn	07 39 09.3	+0.1
SPSI	Sidrap Palu	6.75	212	P	Pn	07 39 19.8	-0.2
BNSI	Bone	6.95	208	P	Pn	07 39 22.6	-0.2
KAPI	Kappang	7.66	208	Pn	Pn	07 39 32.1	-0.3
	4.9nm,0.3s,baz=26,slow=6.8,SNR=12						
KAPI				LR	LR	07 42 57.6	
	comp=Z,227nm,20.1s,baz=41,slow=42						
FITZ	Fitzroy Crossi	19.89	174	P	P	07 42 11.1	-0.7
	1.7nm,0.3s,baz=3.2,slow=7.9,SNR=74						
YULB	Yu-li	21.57	355	eP	P	07 42 28.9	-1.1
	11nm,0.9s						
SSLB	Suanglung	22.00	354	eP	P	07 42 35.5	+0.9
	23nm,0.9s						
YHNB	Yeheng	22.83	355	eP	P	07 42 43.6	0.0
	21nm,0.8s						
PSA00	Pilbara Seismi	23.47	188	eP	P	07 42 47.8	-2.1
	13nm,0.6s						
WRAB	Tennant Creek	24.13	154	eP	P	07 42 55.3	-0.9
	20nm,0.6s						
WR1	Warramunga Arr	24.13	154	eP	P	07 42 55.4	-0.8
WRA	Warramunga Arr	24.13	154	P	P	07 42 55.4	-0.8
	9.0nm,0.5s,baz=338,slow=11,SNR=88						
WB2	Warramunga Arr	24.14	154	eP	P	07 42 55.7	-0.5
	27nm,0.6s						
PSI	Prapat	24.44	273	LR	LR	07 53 53.2	
	comp=Z,72nm,20.0s,baz=100,slow=40						
COEN	Coen	25.11	129	eP	P	07 43 05.8	+0.7
	16nm,1.1s						
GIRL	Giralia	25.86	200	eP	P	07 43 11.4	-0.4
	58nm,1.0s						
AS31	Alice Springs	27.30	159	eP	P	07 43 24.1	-0.8
	1.2nm,0.5s						
ASAR	Alice Springs	27.30	159	P	P	07 43 24.8	-0.1
	2.8nm,0.6s,baz=338,slow=7.4,SNR=38						
CMAR	Chiang Mai Arr	29.12	306	LR	LR	07 55 50.4	
	comp=Z,60nm,19.9s,baz=154,slow=38						
FORT	Forrest	32.69	173	eP	P	07 44 10.2	-2.3
	49nm,0.6s						
KS15	Wonju Array Si	35.73	6	eP	P	07 44 40.0	+1.3
KSRS	Korea Array	35.74	6	P	P	07 44 40.0	+1.2
	1.5nm,0.8s,baz=186,slow=9.5,SNR=6.7						
MAJO	Matsushiro	37.21	20	eP	P	07 44 50.7	-0.7
MJAR	Matsushiro Arr	37.21	20	P	P	07 44 50.7	-0.7
	1.1nm,0.3s,baz=196,slow=10,SNR=5.7						
STKA	Stephens Creek	37.68	154	P	P	07 44 55.7	+0.2
	2.8nm,0.5s,baz=329,slow=10,SNR=5.4						
STKA				LR	LR	08 03 41.0	
	comp=Z,28nm,18.4s,baz=20,slow=42						
GTA	Gaotai	43.16	333	P	P	07 45 42.4	+1.5
GTA				pP	pP	07 45 45.7	-3.8
GTA				sP	sP	07 45 48.5	-4.5
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
GTA				pmax	pmax		
	comp=Z,68nm,5.5s						
GTA				LR	LR		
	comp=N,150nm,21.6s						
GTA				LR	LR		
	comp=E,190nm,22.5s						
RAMN	Ramite	43.22	309	eP	P	07 45 41.6	-0.1
JIRN	Jiri	43.88	309	eP	P	07 45 47.8	+0.6
	41nm,0.9s						
GUN	Gumba	44.25	309	eP	P	07 45 50.7	+0.6
	32nm,0.8s						
PKI	Pulchoki	44.45	309	eP	P	07 45 51.6	-0.1
PKIN	Phulchoki	44.46	309	eP	P	07 45 51.8	+0.1
KKN	Kakani	44.65	309	eP	P	07 45 53.5	+0.3
DMN	Daman	44.70	309	eP	P	07 45 54.1	+0.5
	40nm,1.0s						
KOLN	Koldanda	45.96	308	eP	P	07 46 04.3	+0.8
	57nm,0.7s						
DANN	Dangsing	46.10	309	eP	P	07 46 05.2	+0.5
	55nm,0.7s						
PYUN	Piuthan	46.59	308	eP	P	07 46 09.4	+0.9
	96nm,0.9s						
KLR	Kul'dur	47.81	7	P	P	07 46 17.2	-0.1
	1.0nm,0.7s,baz=180,slow=9.1,SNR=4.1						
SONA0	Songino Array	48.16	345	eP	P	07 46 20.7	+0.4
SONM	Songino Array	48.16	345	P	P	07 46 20.7	+0.4
	1.3nm,0.5s,baz=162,slow=9.3,SNR=7.7						
KSH	Kashi	57.11	317	P	P	07 47 28.7	+2.1
KSH				pP	sP	07 47 38.5	-0.6
KSH				PP	PP	07 49 37.1	+3.3
KSH				S	S	07 55 19.1	-0.5
KSH				ScS	ScS	07 57 11.4	-2.3
KSH				pmax	pmax		
	comp=Z,15nm,0.9s						
KSH				pmax	pmax		
	comp=Z,180nm,7.0s						
KSH				LR	LR		
	comp=N,1μm,13.4s						
KSH				LR	LR		
	comp=E,660nm,10.4s						
KSH				LR	LR		
	comp=Z,200nm,17.3s						
MK31	Makanchi Array	57.30	328	eP	P	07 47 28.8	+1.1
MK32	Makanchi Array	57.30	328	eP	P	07 47 28.7	+1.0
MKAR	Makanchi Array	57.30	328	P	P	07 47 28.7	+1.0
	3.3nm,0.5s,baz=125,slow=8.4,SNR=43						
MAKZ	Makanchi	57.48	327	eP	P	07 47 29.5	+0.5
	3.4nm,0.6s						
PETK	Petropavlovsk-	58.51	24	P	P	07 47 37.3	+1.2
	2.1nm,0.7s,baz=158,slow=1.6,SNR=4.5						
PEA1	Petropavlovsk-	58.52	23	eP	P	07 47 37.3	+1.2
KBL	Kabul	60.08	309	eP	P	07 47 47.5	-0.1
	13nm,0.8s						
ZAA0	Zalesovo Array	60.85	335	eP	P	07 47 52.3	+0.2
	8.5nm,1.1s						
ZALV	Zalesovo Beam	60.85	335	P	P	07 47 52.0	-0.2
	3.3nm,0.8s,baz=131,slow=7.4,SNR=11						
ZAA1	Zalesovo Array	60.85	335	eP	P	07 47 52.0	-0.2
KURBB	Kurchatov Arra	61.62	329	P	P	07 47 57.6	+0.2
	2.2nm,0.7s,baz=130,slow=5.8,SNR=21						
KURK	Kurchatov	61.63	329	eP	P	07 47 56.5	-0.9
	6.8nm,0.7s						
KKAR	Karatay Array	62.41	319	eP	P	07 48 02.6	-0.3
	3.0nm,0.8s						
BVAR	Borovoye Array	67.16	328	P	P	07 48 33.9	+0.3
	1.2nm,0.7s,baz=128,slow=9.7,SNR=7.7						
GEYT	Alibeck	69.52	310	P	P	07 48 49.3	+0.5
	2.0nm,0.6s,baz=158,slow=4.3,SNR=4.8						
TIXI	Tiksi	69.85	2	P	P	07 48 49.4	-0.7
	1.7nm,0.3s,baz=203,slow=1.4,SNR=6.3						
NRIK	Noril'sk	71.54	347	P	P	07 49 00.6	+0.2
	3.4nm,0.7s,baz=116,slow=4.8,SNR=5.9						
ABKAR	Akbulak array	71.55	322	eP	P	07 48 59.9	-1.0
	2.3nm,0.8s						
VNDA	Vanda	81.95	172	P	P	07 49 59.3	+0.2
	1.2nm,0.6s,baz=308,slow=5.4,SNR=9.1						

MAN 12 07:38:37.7,8°.22N×126°.00E,h22km,MS2.1,4C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.36	95	eP	Pn	07 38 46.6	-1.0
BIPH				i S	Sn	07 38 53.0	-1.0
BUTP	Butuan	0.83	333	eP	Pn	07 38 57.2	+3.1
BUTP				eS	Sn	07 39 08.6	+2.7
BUKP	Musuan	0.99	250	eP	Pb	07 38 54.9	-1.3
BUKP				eS	Sb	07 39 07.9	-0.9
DMPH	Davao City--Mi	1.23	203	eP	Pn	07 38 59.4	-0.2
DMPH				eS	Sb	07 39 16.7	+1.0
MATI	Mati	1.29	169	eP	Pn	07 38 60.0	-0.4
MATI				eS	Sn	07 39 17.1	0.0
CGP	Cagayan de Oro	1.31	280	eP	Pn	07 39 00.9	+0.1
CGP				eS	Sb	07 39 17.9	-0.2
SCPH	Surigao	1.63	342	eP	Pb	07 39 17.4	+10
DDMP	Don Marcelino,	2.12	188	eP	Sn	07 39 35.2	-2.3
DDMP				eS	Sb	07 39 47.8	+6.5
SKMP	Bagumbayan, Su	2.22	221	eP	Sn	07 39 35.2	-4.9
SKMP				eS	Sn	07 39 43.2	+3.2
GSPH	General Santos	2.36	206	iP	Sn	07 39 41.8	-1.9
IPIL	Ipil	3.42	263	eP	Pb	07 39 53.8	+16
IPIL				eS	Sn	07 40 09.6	-0.2

*ISCJB **12** 07:41:44.9±0.3,21°.34S±0°.04×179°.20W±0°.08,h602km, mb4.3/38,Error ellipse: s-maj=9.6km s-min=4.8km az=3.4*
*NEIC **12** 07:41:45.0±1.4,21°.30S×179°.10W,h594km±10km, mb4.4/29,Error ellipse: s-maj=33.1km s-min=16.8km az=108.0*
*IDC **12** 07:41:50.8±1.8,21°.28S×179°.32W,h656km±20km, mb3.6/23,mb1 3.7/24,mb1mx3.5/51,mbtmp4.6/24,Error ellipse: s-maj=14.2km s-min=10.9km az=77.0*
ISC 12 07:41:45.9±0.4,21°.34S±0°.06×179°.15W±0°.08,h602km, n131,σ1°.89/143,mb4.4/38,1C-3D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	7.95	172	P	P	07 43 46.4	+1.7
RAO	Raoul Island	7.96	172	eP	P	07 43 46.4	+1.6
GLKZ	Green Lake	7.96	172	P	P	07 43 46.0	+1.2
GLKZ				S	S	07 45 23.3	+0.9
DZM	Mont Dzumac	13.41	264	P	P	07 44 40.0	+0.9
	0.6nm,0.3s,baz=90,slow=19,SNR=5.8						
OUZ	Omahuta	15.22	203	eP	P	07 44 57.6	+1.8
	87nm,1.0s						
OUZ	Omahuta	15.22	203	P	P	07 44 59.5	+3.6
GRZ	Great Barrier	15.58	196	P	P	07 45 00.1	+0.9
WCZ	Waipu Caves	15.62	200	P	P	07 45 03.6	+4.1
KUZ	Kuaotunu	15.99	195	P	P	07 45 05.7	+2.8
MXZ	Matakaoa Point	16.32	187	P	P	07 45 06.8	+1.0
HAZ	Te Kaha	16.57	189	P	P	07 45 08.6	+0.3
HAZ				S	S	07 47 46.5	-6.4
PUZ	Puketiti	16.82	187	P	P	07 45 11.4	+0.8
PUZ				S	S	07 47 53.9	-3.2
TOZ	Tahuroa Road	16.98	195	P	P	07 45 14.7	+2.7
URZ	Urewera	17.17	190	P	P	07 45 13.9	+0.3
	13nm,0.3s,baz=267,slow=3.2,SNR=66						
URZ	Urewera	17.17	190	eP	P	07 45 12.6	-1.0
	28nm,0.8s						
URZ				eS	S	07 48 00.3	-2.3
URZ	Urewera	17.17	190	P	P	07 45 12.6	-1.0
URZ				S	S	07 47 55.8	-6.8
MWZ	Matawai	17.18	189	P	P	07 45 13.2	-0.6
MWZ				S	S	07 47 57.0	-5.9
HIZ	Hauiti	17.88	195	eP	P	07 45 20.0	-0.2
	38nm,0.9s						
HIZ	Hauiti	17.88	195	P	P	07 45 23.2	+3.0
KATZ	Kakaramea	18.12	193	P	P	07 45 23.8	+1.3
BKZ	Black Stump Fm	18.16	191	eP	P	07 45 21.8	-0.9
	12nm,0.7s						
BKZ	Black Stump Fm	18.16	191	P	P	07 45 21.5	-1.3
NGZ	Ngauruhoe	18.34	193	P	P	07 45 24.9	+0.4
VRZ	Vera Road	18.48	195	P	P	07 45 28.3	+2.7
KAHZ	Kahuranaki	18.70	190	P	S	07 48 39.3	+12
NEZ	North Egmont	18.79	196	P	P	07 45 32.0	+3.4
PXZ	Pawanui	18.94	189	P	P	07 45 29.4	-0.4
WAZ	Wanganui	19.03	194	P	P	07 45 30.6	0.0
TSZ	Takapari Road	19.12	192	P	S	07 48 36.7	+2.6
DVHZ	Dannevirke	19.31	191	P	S	07 48 35.8	-1.4
BFZ	Birch Farm	19.67	190	eP	P	07 45 35.7	-0.7
	43nm,1.1s						
BFZ	Birch Farm	19.67	190	P	P	07 45 35.9	-0.5
BFZ	Birch Farm	19.67	190	P	S	07 48 44.7	+1.9
MRZ	Mangatainoka R	19.77	192	P	P	07 45 36.1	-1.3
MRZ	Mangatainoka R	19.77	192	P	S	07 48 45.8	+1.4
KNTN	Kanton	19.82	22	eP	P	07 45 37.4	-0.8
	61nm,0.9s						
MTW	Mount Morrison	20.27	192	P	S	07 48 50.8	-1.5
DUWZ	D'Urville Isla	20.27	195	P	P	07 45 41.7	-0.2
DUWZ	D'Urville Isla	20.27	195	P	S	07 48 52.0	-0.4
CAW	Cannon Point	20.31	193	P	S	07 48 49.0	-3.8
SNZO	South Karori	20.58	193	eP	P	07 45 44.3	-0.3
	31nm,0.9s						
TCW	Tory Channel	20.58	194	P	P	07 45 44.8	+0.2
TCW	Tory Channel	20.58	194	P	S	07 48 55.8	-1.2
QRZ	Quartz Range	20.67	198	P	P	07 45 46.5	+1.1
QRZ	Quartz Range	20.67	198	P	S	07 48 59.8	+1.3
PLWZ	Palliser	20.71	192	P	S	07 48 57.0	-2.3
NNZ	Nelson	20.80	196	P	P	07 45 46.5	-0.1
NNZ				S	S	07 48 53.6	-7.0
NNZ	Nelson	20.80	196	P	S	07 48 57.3	-3.3
TUWZ	Tuamarina	20.86	195	P	P	07 45 46.5	-0.6
TUWZ	Tuamarina	20.86	195	P	S	07 49 01.9	+0.4
BSWZ	Blackbirch Sta	21.15	195	P	P	07 45 50.1	+0.4
THZ	Tophouse	21.43	196	eP	P	07 45 52.2	-0.1
	18nm,0.9s						
THZ	Tophouse	21.43	196	P	P	07 45 51.9	-0.4
THZ	Tophouse	21.43	196	P	S	07 49 06.4	-4.4
DSZ	Denniston Nort	21.73	199	P	P	07 45 55.8	+0.9
DSZ	Denniston Nort	21.73	199	P	S	07 49 13.1	-2.2
KHZ	Kahutara	21.89	195	eP	P	07 45 55.9	-0.4
	13nm,1.0s						
KHZ	Kahutara	21.89	195	P	P	07 45 55.7	-0.6
GVZ	Greta Valley S	22.53	195	P	P	07 46 01.3	-0.7
LTZ	Lake Taylor	22.55	197	eP	P	07 46 00.8	-1.5
	8.8nm,1.1s						
LTZ	Lake Taylor	22.55	197	P	P	07 46 01.0	-1.3
INZ	Inchbonnie	22.73	198	P	P	07 46 03.5	-0.3
AMCZ	Amberley	22.82	196	P	P	07 46 04.5	-0.1
OXZ	Oxford	23.12	197	eP	P	07 46 07.0	-0.3
	14nm,1.0s						
OXZ	Oxford	23.12	197	P	P	07 46 06.7	-0.5
WVZ	Waitaha Valley	23.26	199	P	P	07 46 08.8	+0.3
MQZ	McQueen's Vall	23.32	195	eP	P	07 46 08.7	-0.3
MQZ	McQueen's Vall	23.32	195	P	P	07 46 08.4	-0.5
RPZ	Rata Peaks	23.75	198	eP	P	07 46 13.1	+0.2
	7.1nm,0.5s						
RPZ	Rata Peaks	23.75	198	P	P	07 46 13.6	+0.7
FOZ	Fox Glacier	23.96	200	eP	P	07 46 14.6	-0.1
	14nm,1.0s						
LBZ	Lake Benmore	24.62	199	eP	P	07 46 20.2	-0.3
CTA	Charters Tower	32.35	266	P	P	07 47 28.7	+0.9
	2.1nm,0.4s,baz=90,slow=9.7,SNR=5.3						
PMG	Port Moresby	34.50	285	P	P	07 47 46.2	+0.4
	27nm,0.9s,baz=130,slow=3.6,SNR=4.3						
STKA	Stephens Creek	36.46	245	P	P	07 48 02.8	+1.1
	4.6nm,0.4s,baz=100,slow=11,SNR=9.8						
AS31	Alice Springs	43.28	258	eP	P	07 48 56.4	+0.1
	1.8nm,0.6s						
ASAR	Alice Springs	43.28	258	P	P	07 48 56.5	+0.2
	6.5nm,0.5s,baz=98,slow=7.6,SNR=82						
ASAR				PcP	PcP	07 50 31.2	-0.2
	1.4nm,0.7s,baz=102,slow=3.9,SNR=4.1						
ASAR				ScP	ScP	07 53 26.6	+0.5
	1.7nm,0.7s,baz=107,slow=4.2,SNR=9.0						
ASAR				S	S	07 54 37.9	-3.5
	2.4nm,0.7s,baz=94,slow=17,SNR=13						
JAY	Jayapura	43.30	290	P	P	07 48 56.7	+0.1
	37nm,0.7s,baz=140,slow=4.6,SNR=19						
WRA	Warramunga Arr	43.43	263	P	P	07 48 56.9	-0.5
	1.3nm,0.3s,baz=88,slow=7.6,SNR=45						
FITZ	Fitzroy Crossi	51.86	263	P	P	07 50 00.5	+0.4
	0.7nm,0.3s,baz=99,slow=6.2,SNR=7.1						
SIJI	Sorong	52.42	286	P	P	07 50 04.3	0.0
	44nm,0.7s,baz=68,slow=6.6,SNR=13						
VNDA	Vanda	56.98	185	P	P	07 50 36.8	+1.9
	4.1nm,0.5s,baz=358,slow=6.5,SNR=19						
VNDA	Vanda	56.98	185	eP	P	07 50 37.0	+2.1
	5.8nm,0.8s						
CASY	Casey	62.75	205	eP	P	07 51 13.9	+0.7
	24nm,1.1s						
QSPA	South Pole Qui	68.73	180	eP	P	07 51 51.6	+1.1
	32nm,0.9s						
MJAR	Matsushiro Arr	70.26	325	P	P	07 51 59.4	-0.5
	6.7nm,0.6s,baz=161,slow=6.1,SNR=11						
ASAJ	Asahikawa	73.96	332	P	P	07 52 22.3	+1.3
	6.6nm,0.6s,baz=211,slow=7.9,SNR=7.1						
KSRS	Korea Array	76.

1.3nm,0.6s,baz=278,slow=2.4,SNR=4.1
ARU Arti 125.28 325 PKP **PKPdf 07 59 38.3 -0.5**
1.9nm,0.2s,baz=312,slow=21,SNR=4.0
KIRV Kirov 129.15 330 PP PP 08 02 09.8 +5.6
8.1nm,0.6s,baz=49,slow=7.3,SNR=3.8
ARCES ARCESS Array B 129.54 349 PKP **PKPdf 07 59 45.7 -0.9**
6.7nm,0.4s,baz=71,slow=1.4,SNR=13
ARCES PP **PP 08 02 12.4 +6.1**
13nm,0.9s,baz=46,slow=5.2,SNR=16
HFS Hagfors 140.19 350 PKhKP PKPpre 07 59 59.0
0.8nm,0.3s,baz=67,slow=4.3,SNR=8.8
AKASG Malin Array Be 143.21 330 PKP PKPab 08 00 09.1 -1.4
2.9nm,0.6s,baz=42,slow=4.5,SNR=9.6
AKBB Malin Array Si 143.21 330 *e*PKPdf PKPab 08 00 09.5 -1.1
EKA Eskdalemuir Ar 145.93 4 PKPbc **PKPdf 08 00 17.6 +0.8**
1.0nm,0.5s,baz=341,slow=2.3,SNR=4.7
BR131 Keskin Array S 146.59 311 *e*PKPdf **PKPbc 08 00 20.8 -0.6**
BRTR Keskin Array B 146.59 311 PKPbc **PKPbc 08 00 20.3 -1.1**
1.3nm,0.6s,baz=123,slow=4.9,SNR=7.1
BRTR SKP 08 02 45.4
2.1nm,1.0s,baz=159,slow=3.7,SNR=5.6
BURAR Bucovina Array 147.24 329 ||*iP* **PKPdf 08 00 14.2 -5.2**
MORC Moravsky Berou 148.69 339 ||*iP* **PKPab 08 00 32.3 -0.1**
ARR Arges 149.09 326 ||*iP* **PKiKP 08 00 27.9 -0.4**
GERES GERESS Array B 150.70 343 PKPbc **PKPbc 08 00 30.6 -0.5**
0.9nm,0.4s,baz=46,slow=3.9,SNR=9.4
GERES SKP 08 02 56.2
0.8nm,0.2s,baz=46,slow=5.8,SNR=5.2
DBIC Dimbokro 164.41 158 PKP **PKPdf 08 00 41.2 -1.2**
3.7nm,0.7s,baz=195,slow=4.7,SNR=3.5
DBIC PKPab **PKPab 08 01 41.5 +0.5**
2.6nm,0.5s,baz=191,slow=3.4,SNR=4.1
TORD Torodi Ar. Bea 171.81 186 PKP **PKPdf 08 00 45.9 -1.3**
1.4nm,0.8s,baz=0.5,slow=0.9,SNR=6.8
TORD PKPab **PKPab 08 02 13.4 -0.2**
1.2nm,0.7s,baz=173,slow=2.3,SNR=6.8
TORD PP **PP 08 06 04.2 0.0**
0.8nm,0.8s,baz=178,slow=3.8,SNR=3.7

SNET ***12*** *07:54:40.3±0.8, 14°.00N×91°.65W, h35km±434km, ML4.9*
IDC ***12*** *07:54:40.8±0.7, 14°.28N×91°.03W, h58km±5km, mb4.2/19, mb1 4.3/20, mb1mx4.1/47, mbtmp4.4/20, MS3.4/15, Ms1 3.4/15, ms1mx3.3/22, Error ellipse: s-maj=24.2km s-min=9.9km az=64.0*
UCR ***12*** *07:54:40.1±1.4, 13°.89N×91°.65W, h59km±32km, MD4.3, ML4.6, mb4.6(NEIC)*
GCG ***12*** *07:54:41.0±0.7, 13°.81N×91°.51W, h21km±7km, MD4.7*
NEIC ***12*** *07:54:42.2±2.9, 14°.03N×91°.54W, h80km±5km, mb4.6/201, MD4.9(SNET), Error ellipse: s-maj=14.5km s-min=10.7km az=217.0*
NEIC Felt [I] at Ahuachapan, El Salvador.
BJI ***12*** *07:54:43.0±0.0, 14°.10N×91°.40W, h91km*
ISC 12 07:54:40.3±0.6, 14°.00N±0°.05×91°.63W±0°.05, h65km±4km, h65km: pP-P, n635, σ1°.30/656, mb4.5/71, 11C-6D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.44**	**7**	||*eP*	**Pn**	**07 54 53.0 +0.8**
STG3	**Santiaguito 3,**	**0.71**	**4**	||*eP*	**Pn**	**07 54 55.2 0.0**
FUG	**Fuego 3**	**0.88**	**60**	||*iP*	**Pn**	**07 54 58.1 +0.8**
FUG	**Fuego 3**	**0.88**	**60**	||*iP*	**Pn**	**07 54 58.1 +0.8**
PCG	**Pacaya**	**1.06**	**68**	||*eP*	**Pn**	**07 55 00.6 +0.9**
PCG	**Pacaya**	**1.06**	**68**	||*eP*	**Pn**	**07 55 00.6 +0.9**
IXG	**Ixpaco**	**1.16**	**82**	||*eP*	**Pn**	**07 55 01.2 +0.3**
IXG	**Ixpaco**	**1.16**	**82**	||*eP*	**Pn**	**07 55 01.2 +0.3**
NBG	**Las Nubes**	**1.37**	**65**	||*iP*	**Pn**	**07 55 06.1 +2.4**
NBG	**Las Nubes**	**1.37**	**65**	||*iP*	**Pn**	**07 55 06.1 +2.4**
APG	**El Apazote**	**1.50**	**48**	P		**Pn**	**07 55 06.8 +1.3**
	1μm,0.3s,baz=68,slow=20,SNR=3978						
APG				S		**Sn**	**07 55 28.4 +4.1**
	556nm,0.3s,baz=188,slow=19,SNR=5.2						
RTR	**El Retiro**	**1.93**	**93**	*eP*		**Pn**	**07 55 11.7 +0.6**
RTR	**El Retiro**	**1.93**	**93**	*eP*		**Pn**	**07 55 11.7 +0.6**
SBLS	**San Blas**	**1.95**	**95**	*eP*		**Pn**	**07 55 11.7 +0.2**
SBLS	**San Blas**	**1.95**	**95**	*eP*		**Pn**	**07 55 11.7 +0.2**
SNJE	**San Jose**	**1.97**	**94**	*eP*		**Pn**	**07 55 12.0 +0.3**
SNJE	**San Jose**	**1.97**	**94**	*eP*		**Pn**	**07 55 12.0 +0.3**
UNIC	**Santa Ana**	**2.01**	**90**	*eP*		**Pn**	**07 55 12.6 +0.6**
UNIC				IAML			07 55 40.9
	comp=Z,3μm,0.3s						
UNIC	**Santa Ana**	**2.01**	**90**	*eP*		**Pn**	**07 55 12.6 +0.6**
UNIC				IAML			07 55 40.9
	comp=Z,3μm,0.3s						
MRL	**Marmol**	**2.17**	**60**	||*eP*	**Pn**	**07 55 16.3 +2.0**
MRL	**Marmol**	**2.17**	**60**	||*eP*	**Pn**	**07 55 16.3 +2.0**
CEDA	**San Andres**	**2.18**	**95**	*eP*		**Pn**	**07 55 14.8 +0.4**
CEDA				*eS*		**Sn**	**07 55 41.6 +1.3**
CEDA				IAML			07 55 55.0
	comp=Z,8μm,0.4s						
CEDA	**San Andres**	**2.18**	**95**	*eP*		**Pn**	**07 55 14.8 +0.4**
CEDA				*eS*		**Sn**	**07 55 41.6 +1.3**
CEDA				IAML			07 55 55.0
	comp=Z,8μm,0.4s						
MTO3	**Montecristo**	**2.23**	**80**	||*iP*	**Pn**	**07 55 15.4 +0.2**
MTO3	**Montecristo**	**2.23**	**80**	||*iP*	**Pn**	**07 55 15.4 +0.2**
BOQS	**Boqueron**	**2.29**	**96**	*eP*		**Pn**	**07 55 16.8 +0.6**
CCIG	**Comitan**	**2.32**	**348**	*e*Pn		**Pn**	**07 55 19.1 +2.7**
CCIG				*e*Sn		**Sn**	**07 55 39.7 -4.2**
UEES	**San Salvador**	**2.33**	**96**	||*iP*	**Pn**	**07 55 17.1 +0.6**
UEES				IAML			07 55 48.0
	comp=Z,6μm,0.3s						
UEES	**San Salvador**	**2.33**	**96**	||*iP*	**Pn**	**07 55 17.1 +0.6**
UEES				IAML			07 55 48.0
	comp=Z,6μm,0.3s						
SNET	**Serv Nac Est T**	**2.35**	**97**	*iP*		**Pn**	**07 55 17.1 +0.3**
SNET				*e*S		**Sn**	**07 55 45.3 +0.8**
SNET				IAML			07 55 49.3
	comp=Z,11μm,0.3s						
SNET	**Serv Nac Est T**	**2.35**	**97**	*iP*		**Pn**	**07 55 17.1 +0.3**
SNET				*e*S		**Sn**	**07 55 45.3 +0.8**
SNET				IAML			07 55 49.3
	comp=Z,11μm,0.3s						
OPAM	**San Salvador**	**2.37**	**97**	*eP*		**Pn**	**07 55 17.6 +0.5**
OPAM	**San Salvador**	**2.37**	**97**	*eP*		**Pn**	**07 55 17.6 +0.5**
LOMA	**San Marcos**	**2.41**	**98**	*eP*		**Pn**	**07 55 18.1 +0.6**
LOMA				IAML			07 55 50.5
	comp=Z,8μm,0.4s						
LOMA	**San Marcos**	**2.41**	**98**	*eP*		**Pn**	**07 55 18.1 +0.6**
LOMA				IAML			07 55 50.5
	comp=Z,8μm,0.4s						
UDBS	**Soyapango**	**2.41**	**96**	*eP*		**Pn**	**07 55 18.4 +0.8**
UDBS				IAML			07 55 52.7
	comp=Z,8μm,0.3s						
UDBS	**Soyapango**	**2.41**	**96**	*eP*		**Pn**	**07 55 18.4 +0.8**
UDBS				IAML			07 55 52.7
	comp=Z,8μm,0.3s						
LFU	**La Fuente**	**2.45**	**96**	*eP*		**Pn**	**07 55 18.7 +0.5**
LFU	**La Fuente**	**2.45**	**96**	*eP*		**Pn**	**07 55 18.7 +0.5**
LFRS	**El Faro**	**2.52**	**98**	*iP*		**Pn**	**07 55 19.4 +0.3**
LBRS	**Las Brisas**	**2.52**	**96**	*eP*		**Pn**	**07 55 19.6 +0.5**
LLGN	**La Laguna**	**2.60**	**86**	*eP*		**Pn**	**07 55 20.5 +0.4**
LLGN				*e*S		**Sn**	**07 55 52.9 +2.2**
LLGN	**La Laguna**	**2.60**	**86**	*eP*		**Pn**	**07 55 20.5 +0.4**
LLGN				*e*S		**Sn**	**07 55 52.9 +2.2**
PAVA	**Las Pavas**	**2.63**	**96**	*iP*		**Pn**	**07 55 21.1 +0.6**
PAVA	**Las Pavas**	**2.63**	**96**	*iP*		**Pn**	**07 55 21.1 +0.6**
SNVI	**San Vicente**	**2.74**	**98**	*eP*		**Pn**	**07 55 22.9 +0.8**
UESV	**Ojushtada**	**2.83**	**102**	*eP*		**Pn**	**07 55 23.1 -0.1**
UESV				IAML			07 56 03.2
	comp=Z,4μm,0.4s						
UESV	**Ojushtada**	**2.83**	**102**	*eP*		**Pn**	**07 55 23.1 -0.1**
UESV				IAML			07 56 03.2
	comp=Z,4μm,0.4s						
VICT	**Victoria**	**2.90**	**90**	*eP*		**Pn**	**07 55 24.4 +0.1**
VICT				*e*S		**Sn**	**07 55 59.6 +1.5**
VICT	**Victoria**	**2.90**	**90**	*eP*		**Pn**	**07 55 24.4 +0.1**
VICT				*e*S		**Sn**	**07 55 59.6 +1.5**
PACA	**Pacayal**	**3.25**	**99**	*eP*		**Pn**	**07 55 29.7 +0.6**
PACA	**Pacayal**	**3.25**	**99**	*eP*		**Pn**	**07 55 29.7 +0.6**
LCND	**La Caada**	**3.70**	**100**	*eP*		**Pn**	**07 55 35.5 +0.5**
LCND	**La Caada**	**3.70**	**100**	*eP*		**Pn**	**07 55 35.5 +0.5**
CNCH	**Conchagua**	**3.76**	**101**	*eP*		**Pn**	**07 55 36.7 +0.7**
CNCH	**Conchagua**	**3.76**	**101**	*eP*		**Pn**	**07 55 36.7 +0.7**
CSGN	**Cosiguina Volc**	**4.09**	**104**	*e*Pn		**Pn**	**07 55 41.6 +1.2**
CSGN				*e*Sn		**Sn**	**07 56 25.4 -1.7**
CSGN	**Cosiguina Volc**	**4.09**	**104**	*eP*		**Pn**	**07 55 41.9 +1.5**
TGUH	**Tegucigalpa,Un**	**4.23**	**89**	*e*Pn		**Pn**	**07 55 42.6 +0.4**
TGUH	**Tegucigalpa,Un**	**4.23**	**89**	*eP*		**Pn**	**07 55 42.4 +0.2**
CMIG	**Matias Romero**	**4.39**	**315**	P		**Pn**	**07 55 44.3 -0.3**
	comp=Z,35nm,0.3s,baz=130,slow=11,SNR=345						
CRIN	**San Cristobal**	**4.64**	**106**	*eP*		**Pn**	**07 55 48.8 +0.8**
CRIN				IAML			07 57 00.2
	comp=E,1μm,0.4s						
CNGN	**Cerro Negro**	**5.03**	**107**	*eP*		**Pn**	**07 55 52.0 -1.2**
ESTN	**Estel**	**5.19**	**99**	*e*Pn		**Pn**	**07 55 56.1 +0.5**
ESTN	**Estel**	**5.19**	**99**	*eP*		**Pn**	**07 55 56.2 +0.5**
MOMN	**Momotombo**	**5.20**	**107**	*eP*		**Pn**	**07 55 55.3 -0.4**
MGAN	**Managua**	**5.56**	**109**	*eP*		**Pn**	**07 56 00.7 +0.1**
MATN	**Matagalpa**	**5.65**	**100**	*eP*		**Pn**	**07 56 01.9 +0.1**
ACON	**Acoyapa**	**6.61**	**107**	*e*Pn		**Pn**	**07 56 14.4 -0.4**
ACON	**Acoyapa**	**6.61**	**107**	*eP*		**Pn**	**07 56 14.5 -0.4**
TEIG	**Tepich**	**6.97**	**27**	*e*Pn		**Pn**	**07 56 20.8 +0.9**
TEIG	**Tepich**	**6.97**	**27**	*eP*		**Pn**	**07 56 21.0 +1.1**
MYIG	**Mrida**	**7.15**	**14**	*e*Pn		**Pn**	**07 56 23.0 +0.7**
ESPN	**Las Esperanzas**	**7.36**	**103**	*eP*		**Pn**	**07 56 25.5 +0.3**
JTS	**Las Juntas de**	**7.50**	**119**	P		**Pn**	**07 56 28.4 +1.3**
	comp=E,13nm,0.3s,baz=15,slow=19,SNR=112						
JTS				S		**Sn**	**07 57 48.5 -2.3**
	comp=E,6.8nm,0.3s,baz=287,slow=23,SNR=2.2						
JTS	**Las Juntas de**	**7.50**	**119**	*e*Pn		**Pn**	**07 56 28.5 +1.4**
JTS				*e*			07 57 48.5
JTS				*e*Sn		**Sn**	**07 57 50.7 0.0**
JTS	**Las Juntas de**	**7.50**	**119**	*eP*		**Pn**	**07 56 28.1 +1.1**
TLIG	**Tlapa**	**7.56**	**299**	*e*Pn		**Pn**	**07 56 30.0 +2.0**
TLIG				*e*Sn		**Sn**	**07 57 50.4 -2.0**
HDC	**Heredia**	**8.36**	**118**	*e*Pn		**Pn**	**07 56 38.5 -0.5**
LNIG	**Linares**	**13.11**	**327**	*e*Pn		**Pn**	**07 57 46.1 +2.3**
ZAIG	**Zacatecas**	**13.55**	**312**	*e*Pn		**Pn**	**07 57 52.1 +2.2**
062Z	**Marathon**	**14.60**	**41**	P		**Pn**	**07 58 02.8 -0.6**
baz=225							
061Z	**Ochoppi**	**15.51**	**39**	P		**Pn**	**07 58 14.6 -0.6**
baz=222							
058A	**Arcadia**	**15.90**	**34**	P		**Pn**	**07 58 19.9 -0.3**
baz=217							
833A	**Chaparral WMA,**	**15.98**	**334**	*e*Pn		**Pn**	**07 58 22.5 +1.4**
comp=E,15nm,0.6s							
833A	**Chaparral WMA,**	**15.98**	**334**	P		**Pn**	**07 58 22.9 +1.9**
baz=151							
060Z	**West Palm Beac**	**16.12**	**38**	P		**Pn**	**07 58 22.7 -0.2**
baz=222							
059A	**Moore Haven**	**16.20**	**36**	*e*Pn		**Pn**	**07 58 24.0 +0.1**
comp=E,63nm,0.8s							
059A	**Moore Haven**	**16.20**	**36**	P		**Pn**	**07 58 23.5 -0.4**
baz=219							
HKT	**Hockley**	**16.34**	**347**	*e*Pn		**Pn**	**07 58 26.9 +1.4**
comp=E,4.9nm,1.0s							
958A	**Wauchula**	**16.35**	**33**	P		**Pn**	**07 58 25.4 -0.4**
baz=216							
DBBC	**Dabeiba**	**16.66**	**113**	*eP*		Pn	07 58 20.1 -10
857A	**Zephyrhills**	**16.67**	**30**	P		**Pn**	**07 58 29.3 -0.5**
baz=213							
060A	**Indiantown**	**16.70**	**37**	P		**Pn**	**07 58 29.2 -0.9**
baz=221							
959A	**Okeechobee**	**16.78**	**35**	P		**Pn**	**07 58 30.4 -0.7**
baz=218							
DWPF	**Disney Wildern**	**16.94**	**32**	*e*Pn		**Pn**	**07 58 33.3 +0.2**
comp=E,47nm,0.6s							
DWPF	**Disney Wildern**	**16.94**	**32**	P		**Pn**	**07 58 32.4 -0.7**
baz=216							
858A	**St. Cloud**	**17.06**	**32**	P		**Pn**	**07 58 33.4 -1.2**
baz=216							
552A	**Lynn Haven**	**17.09**	**19**	P		**Pn**	**07 58 34.8 -0.1**
baz=201							
655A	**Horseshoe Beac**	**17.27**	**25**	P		**Pn**	**07 58 37.1 -0.1**
baz=208							
757A	**Oxford**	**17.31**	**29**	P		**Pn**	**07 58 37.4 -0.3**
baz=212							
450A	**Crestview**	**17.36**	**15**	P		**Pn**	**07 58 38.6 +0.3**
baz=196							
656A	**Willston**	**17.46**	**27**	*e*Pn		**P**	**07 58 40.0 +0.1**
comp=E,88nm,0.8s							
656A	**Willston**	**17.46**	**27**	P		**Pn**	**07 58 39.2 -0.3**
baz=210							
435B	**Jarrell**	**17.58**	**343**	*eP*		**P**	**07 58 42.5 +1.3**
comp=E,11nm,0.6s							
435B	**Jarrell**	**17.58**	**343**	P		**P**	**07 58 42.7 +1.5**
baz=160							
BRAL	**Brewton**	**17.60**	**13**	P		**P**	**07 58 42.5 +1.1**
baz=194							
554A	**Perry**	**17.61**	**23**	P		**P**	**07 58 41.7 +0.2**
baz=206,SNR=6.5							
349A	**Repton**	**17.74**	**13**	P		**Pn**	**07 58 43.3 +0.4**
baz=194							
758A	**Lake Helen**	**17.75**	**31**	P		**Pn**	**07 58 42.7 -0.4**
baz=215							
452A	**Marianna**	**17.79**	**18**	P		**Pn**	**07 58 43.5 0.0**
baz=201							
NATX	**Nacogdoches**	**17.89**	**352**	*eP*		**P**	**07 58 45.2 +0.5**
comp=E,42nm,1.1s							
NATX	**Nacogdoches**	**17.89**	**352**	P		**P**	**07 58 45.6 +0.9**
baz=170							
555A	**McAlpin**	**17.92**	**25**	*eP*		**P**	**07 58 46.0 +1.1**
comp=E,306nm,0.7s							
555A	**McAlpin**	**17.92**	**25**	P		**Pn**	**07 58 45.2 0.0**
baz=208,SNR=30							
657A	**Interlachen**	**17.95**	**29**	P		**P**	**07 58 44.7 -0.5**
baz=212							
350A	**Dozier**	**18.01**	**15**	P		**P**	**07 58 46.1 +0.2**
baz=196							
JCT	**Junction City**	**18.05**	**337**	*eP*		**Pn**	**07 58 48.8 +2.1**
comp=E,6.1nm,0.8s							
JCT	**Junction City**	**18.05**	**337**	P		**Pn**	**07 58 48.8 +2.1**
baz=153							
556A	**Lake Butler**	**18.06**	**27**	P		**P**	**07 58 46.5 0.0**
baz=210,SNR=9.3							
YOTC	**Yotoco, Valle**	**18.07**	**122**	*eP*		**Pn**	**07 58 47.7 +0.5**
453A	**Whigham**	**18.07**	**21**	*eP*		**Pn**	**07 58 48.8 +1.8**
comp=E,83nm,1.1s							
453A	**Whigham**	**18.07**	**21**	P		**P**	**07 58 46.5 -0.1**
baz=203							
658A	**Bunnell**	**18.10**	**30**	*eP*		**Pn**	**07 58 47.6 +0.3**
comp=E,59nm,0.8s							
658A	**Bunnell**	**18.10**	**30**	P		**P**	**07 58 47.1 +0.2**
baz=214							
VBMS	**Vicksburg**	**18.16**	**3**	*eP*		**Pn**	**07 58 49.8 +1.8**
comp=E,58nm,0.8s							
VBMS	**Vicksburg**	**18.16**	**3**	P		**Pn**	**07 58 48.9 +0.9**
baz=183							
454A	**Quitman**	**18.19**	**23**	P		**Pn**	**07 58 48.7 +0.3**
baz=205							
249A	**Camden**	**18.36**	**12**	P		**Pn**	**07 58 50.9 +0.5**
baz=194							
HPIG		**18.38**	**317**	*eP*		**Pn**	**07 58 52.8 +1.8**
comp=E,10nm,0.8s							
RREF	**El Recreo**	**18.42**	**118**	*eP*		**Pn**	**07 58 53.4 +1.5**
455A	**Stateville**	**18.45**	**24**	P		**P**	**07 58 51.0 +0.3**
baz=207							
352A	**Blakely**	**18.45**	**18**	P		**Pn**	**07 58 51.9 +0.3**
baz=201							
250A	**Grady**	**18.55**	**14**	P		**Pn**	**07 58 52.8 0.0**
baz=196							
353A	**Camilla**	**18.56**	**20**	P		**P**	**07 58 52.3 +0.3**
baz=203							
POPC	**Popayan, Colom**	**18.65**	**126**	*eP*		**Pn**	**07 58 55.6 +1.3**
WHTX	**Lake Whitney,**	**18.68**	**344**	*eP*		**Pn**	**07 58 55.5 +1.1**
comp=E,20nm,0.7s							
WHTX	**Lake Whitney,**	**18.68**	**344**	P		**P**	**07 58 54.7 +1.3**
baz=162							
147A	**Livingston**	**18.84**	**9**	*eP*		**Pn**	**07 58 58.0 +1.9**
comp=E,79nm,0.8s							
147A	**Livingston**	**18.84**	**9**	P		**Pn**	**07 58 57.0 +0.8**
baz=190,SNR=7.8							
456A	**Hilliard**	**18.85**	**26**	P		**P**	**07 58 55.5 +0.4**
baz=210							
TIGA	**Tifton**	**18.86**	**22**	P		**P**	**07 58 56.0 +0.7**
baz=204							
251A	**Midway**	**18.89**	**17**	P		**P**	**07 58 56.2 +0.6**
baz=199							
LTX	**Lajitas**	**18.90**	**326**	*e*PcP		**PcP**	**08 03 22.6 +2.7**
TXAR	**Lajitas Array**	**18.90**	**326**	P		**Pn**	**07 58 58.3 +1.3**
comp=E,0.2nm,0.3s,baz=152,slow=11,SNR=25							
TXAR				PcP		**PcP**	**08 03 22.6 +2.7**
comp=E,0.2nm,0.3s,baz=170,slow=3.1,SNR=10							
TXAR				LR		LR	08 06 28.9
comp=E,40nm,20.9s,baz=0.0,slow=37							
TXAR				ScP		**ScP**	**08 06 56.2 +6.0**
comp=E,0.0nm,0.3s,baz=145,slow=4.6,SNR=14							
TX31	**Lajitas Ar. Si**	**18.90**	**326**	*eP*		**Pn**	**07 58 58.1 +1.1**
comp=E,10.0nm,1.1s							
OTAV	**Otavalo**	**18.90**	**135**	*eP*		**P**	**07 58 56.7 +0.4**
comp=E,5.2nm,0.9s							
148A	**Greensboro**	**18.93**	**11**	P		**P**	**07 58 56.8 +0.8**
baz=192							
SOTA	**Rioblanco**	**18.96**	**127**	*eP*		**Pn**	**07 59 02.6 +4.4**
252A	**Lumpkin**	**18.99**	**18**	P		**P**	**07 58 57.3 +0.6**
baz=201							
PCON	**Cinco Dias**	**19.00**	**126**	*eP*		**Pn**	**07 59 01.9 +3.0**
149A	**Jones**	**19.03**	**13**	P		**P**	**07 58 57.8 +0.7**
baz=194							
355A	**Pearson**	**19.05**	**24**	P		**P**	**07 58 57.5 +0.2**
baz=207							
CRUC	**La Cruz**	**19.06**	**129**	*eP*		**Pn**	**07 58 59.6 +0.2**
Z41A	**Richland Creek**	**19.20**	**357**	*eP*		**P**	**07 59 00.5 +1.5**
comp=E,97nm,1.0s							
Z41A	**Richland Creek**	**19.20**	**357**	P		**P**	**07 59 00.3 +1.4**
baz=176							
150A	**Eclectic**	**19.21**	**15**	P		**P**	**07 59 00.1 +0.9**
baz=196							
253A	**Americus**	**19.24**	**20**	P		**P**	**07 59 00.3 +0.8**
baz=202							
151A	**Opelika**	**19.32**	**16**	P		**P**	**07 59 01.3 +1.1**
baz=198							
356A	**Blackshear**	**19.32**	**25**	P		**P**	**07 59 00.4 +0.1**
baz=209							
ROSC	**El Rosal**	**19.33**	**116**	P		**Pn**	**07 59 04.4 +1.8**
comp=E,0.6nm,0.3s,baz=96,slow=22,SNR=11							
ROSC	**El Rosal**	**19.33**	**116**	*eP*		**Pn**	**07 59 03.4 +0.7**
comp=E,18nm,1.0s							
LRAL	**Lakeview Retre**	**19.41**	**12**	*eP*		**Pn**	**07 59 02.8 -0.2**
comp=E,43nm,0.9s							
LRAL	**Lakeview Retre**	**19.41**	**12**	P		**P**	**07 59 02.3 +1.1**
baz=193							
254A	**Abbeville**	**19.43**	**22**	P		**P**	**07 59 01.6 +0.2**
baz=205							
PRAC	**Prado**	**19.43**	**120**	*eP*		**Pn**	**07 59 03.0 -0.4**
152A	**Waverly Hall**	**19.62**	**18**	P		**P**	**07 59 04.4 +0.8**
baz=200							
WLAR	**White Oak Lake**	**19.64**	**356**	*eP*		**P**	**07 59 04.0 +0.2**
comp=E,59nm,0.8s							
Z49A	**Columbiana**	**19.66**	**13**	P		**P**	**07 59 05.0 +1.0**
baz=195							
255A	**Hazlehurst**	**19.71**	**24**	P		**P**	**07 59 05.4 +0.9**
baz=207							
Z50A	**Ashland**	**19.86**	**14**	P		**P**	**07 59 07.2 +1.0**
baz=196							
153A	**Fort Valley**	**19.88**	**20**	P		**P**	**07 59 06.9 +0.5**
baz=202							
ABTX	**Abilene, Hawle**	**19.93**	**340**	P		**P**	**07 59 07.7 +0.7**
baz=156							
256A	**Glennville**	**19.99**	**25**	P		**P**	**07 59 07.8 +0.1**
baz=208							
154A	**Montrose**	**20.09**	**21**	P		**P**	**07 59 09.0 +0.3**
baz=204							
Z51A	**Franklin**	**20.11**	**16**	P		**P**	**07 59 09.5 +0.6**
baz=198							
Z52A	**Williamson**	**20.20**	**18**	P		**P**	**07 59 10.4 +0.6**
baz=200							
Y48A	**Jasper**	**20.23**	**11**	P		**P**	**07 59 10.2 0.0**
baz=192							
Y49A	**Blount Mountai**	**20.33**	**13**	P		**P**	**07 59 12.1 +0.9**
baz=194							
155A	**Kite**	**20.34**	**23**	P		**P**	**07 59 11.4 +0.1**
baz=206							
X40A	**Basin Creek Fa**	**20.43**	**357**	*eP*		**P**	**07 59 12.8 +0.6**
comp=E,12nm,0.8s							
X40A	**Basin Creek Fa**	**20.43**	**357**	P		**P**	**07 59 13.5 +1.3**
baz=176							
X43A	**Marvell**	**20.44**	**2**	*eP*		**P**	**07 59 13.8 +1.4**
comp=E,52nm,1.1s							
Y50A	**Piedmont**	**20.51**	**14**	P		**P**	**07 59 13.4 +0.2**
baz=196							
OXF	**Oxford**	**20.52**	**5**	P		**P**	**07 59 12.7 -0.6**
baz=186							
MIAR	**Mount Ida**	**20.53**	**355**	*eP*		**P**	**07 59 13.0 -0.4**
comp=E,12nm,1.0s							
MIAR	**Mount Ida**	**20.53**	**355**	P		**P**	**07 59 13.1 -0.3**
baz=174							
Z53A	**Monticello**	**20.55**	**20**	P		**P**	**07 59 13.7 +0.1**
baz=202							
X46A	**Booneville**	**20.65**	**7**	P		**P**	**07 59 14.7 0.0**
baz=188							
Y51A	**Rockmart**	**20.69**	**16**	P		**P**	**07 59 15.7 +0.5**
baz=198							
UALR	**University of**	**20.69**	**358**	*eP*		**P**	**07 59 15.1 0.0**
comp=E,25nm,0.5s							
GOGA	**Godfrey**	**20.70**	**20**	*eP*		**P**	**07 59 15.6 +0.3**
comp=E,20nm,0.9s							
GOGA	**Godfrey**	**20.70**	**20**	P		**P**	**07 59 14.8 -0.4**
baz=203							
X47A	**Russelville**	**20.71**	**9**	P		**P**	**07 59 14.8 -0.5**
baz=190							
156A	**Sylvania**	**20.74**	**25**	P		**P**	**07 59 16.2 +0.5**
baz=208							
Z54A	**Sparta**	**20.75**	**21**	P		**P**	**07 59 14.9 -1.0**
baz=204							
X48A	**Hartselle**	**20.78**	**11**	P		**P**	**07 59 15.9 -0.2**
baz=192							
BANI	**BANI**	**20.88**	**75**	*eP*		**P**	**07 59 15.1 -2.4**
Y52A	**Lilburn**	**20.93**	**18**	P		**P**	**07 59 18.3 +0.5**
baz=201							
X49A	**Woodville**	**20.98**	**12**	P		**P**	**07 59 18.4 +0.1**
baz=194							
Z55A	**Blythe**	**20.99**	**23**	P		**P**	**07 59 18.0 -0.5**

Y57A	Sumter	22.38	25	P		P	07 59 32.6	-0.6
	baz=210							
W53A	Cullowhee	22.42	18	P		P	07 59 32.6	-1.2
	baz=202,SNR=5.8							
U46A	Springville	22.48	7	P		P	07 59 33.2	-1.1
	baz=188							
X56A	White Oak	22.54	23	P		P	07 59 33.7	-1.3
	baz=208							
W54A	Cherokee Point	22.66	20	P		P	07 59 35.8	-0.5
	baz=204							
V51A	Loudon	22.67	15	P		P	07 59 35.8	-0.6
	baz=198,SNR=5.5							
U47A	Clarksville	22.68	9	P		P	07 59 34.9	-1.5
	baz=191							
AMTX	Amarillo	22.69	338	P		P	07 59 36.5	-0.1
	baz=154							
U48A	Cassie Pea, Po	22.87	11	P		P	07 59 37.0	-1.5
	baz=192							
V52A	Sevierville	22.91	17	P		P	07 59 38.7	-0.2
	baz=200							
V53A	Saluda	22.99	19	P		P	07 59 39.6	0.0
	baz=202							
KMSC	Kings Mountain	23.01	22	P		P	07 59 39.1	-0.7
	baz=206							
U49A	Red Boiling Sp	23.02	12	P		P	07 59 38.8	-1.1
	baz=194							
U50A	Jamestown	23.13	14	P		P	07 59 40.1	-0.9
	baz=197							
T46A	Princeton	23.19	8	P		P	07 59 40.3	-1.2
	baz=189							
T47A	Sharon Grove	23.25	9	P		P	07 59 41.2	-0.9
	baz=191							
W56A	Indian Trail	23.28	23	P		P	07 59 40.7	-1.8
	baz=208							
X58A	Rowland	23.29	26	P		P	07 59 40.8	-1.7
	baz=211							
U51A	La Follette	23.30	16	P		P	07 59 42.4	-0.3
	baz=199							
Y60A	Bolivia	23.33	29	P		P	07 59 41.6	-1.3
	baz=214							
V54A	Nebo	23.36	20	P		P	07 59 43.0	-0.2
	baz=204							
T48A	Bowling Green	23.48	11	P		P	07 59 42.8	-1.5
	baz=193							
U52A	Thorn Hill	23.49	17	P		P	07 59 44.0	-0.5
	baz=200							
W57A	Gilead	23.53	24	P		P	07 59 42.7	-2.1
	baz=209							
TZTN	Tazewell	23.59	16	P		P	07 59 44.9	-0.4
	baz=200							
121A	Cookes Peak, D	23.62	324	P		P	07 59 46.9	+1.0
	baz=138,SNR=6.8							
X59A	McDuffie Farm,	23.63	28	P		P	07 59 44.7	-1.0
	baz=213							
T49A	Edmonton	23.64	12	P		P	07 59 44.4	-1.4
	baz=195							
V55A	Taylorsville	23.68	21	P		P	07 59 45.6	-0.6
	baz=206							
S44A	Carbondale	23.69	5	P		P	07 59 45.0	-1.2
	baz=186							
319A	Douglas	23.70	320	eP		P	07 59 49.4	+2.9
	comp=E,33nm,0.9s							
U53A	Fall Branch	23.70	18	P		P	07 59 45.6	-0.8
	baz=202							
T50A	Nancy	23.71	14	P		P	07 59 45.3	-1.1
	baz=196							
W58A	Raeford	23.73	26	P		P	07 59 45.5	-1.1
	baz=211							
S46A	Don Dixon Farm	23.84	8	P		P	07 59 47.0	-0.6
	baz=189,SNR=16							
S47A	Hartford	23.88	9	P		P	07 59 46.6	-1.2
	baz=191							
T51A	Gray	23.88	15	P		P	07 59 47.2	-0.7
	baz=198							
V56A	Mocksville	23.91	23	P		P	07 59 47.0	-1.2
	baz=207							
X60A	Albert Glenn T	23.92	29	P		P	07 59 47.1	-1.2
	baz=214							
CCM	Cathedral Cave	23.96	1	eP		P	07 59 47.6	-1.1
	comp=E,24nm,0.9s							
CCM	Cathedral Cave	23.96	1	P		P	07 59 47.1	-1.6
	baz=181							
S48A	Wiedeman Farm,	24.08	11	P		P	07 59 49.3	-0.4
	baz=193,SNR=8.1							
U54A	Nelsons Funny	24.08	20	P		P	07 59 48.8	-1.0
	baz=204							
W59A	Clinton	24.20	27	P		P	07 59 50.1	-0.7
	baz=212							
BNM	Barren Site	24.23	328	eP		P	07 59 53.4	+2.0
V57A	Coltrane Farms	24.25	24	P		P	07 59 50.2	-1.1
	baz=209							
T52A	Hallie	24.27	17	eP		P	07 59 50.1	-1.4
	comp=E,13nm,0.8s							
T52A	Hallie	24.27	17	P		P	07 59 50.9	-0.6
	baz=200							
T53A	Wise	24.29	18	P		P	07 59 50.7	-0.9
	baz=202							
Y22D	IRIS PASSCAL I	24.32	328	P		P	07 59 54.8	+2.6
	baz=142							
U55A	TA2, Sparta	24.33	21	P		P	07 59 51.5	-0.6
	baz=205							
S49A	Springfield	24.35	12	P		P	07 59 51.0	-1.2
	baz=195							
LPM	Los Pinos Moun	24.36	329	eP		P	07 59 54.6	+2.0
R45A	Skylar, Fairfi	24.38	6	P		P	07 59 51.6	-0.8
	baz=188,SNR=7.7							
U56A	King	24.43	22	P		P	07 59 52.4	-0.5
	baz=207							
W60A	Pink Hill	24.43	28	P		P	07 59 52.0	-0.9
	baz=214							
V58A	Windy Hill, Pi	24.44	25	P		P	07 59 52.2	-0.8
	baz=210							
S50A	Richmond	24.44	14	P		P	07 59 52.0	-1.0
	baz=197							
CNNC	Cliffs of the	24.50	28	P		P	07 59 52.7	-0.8
	baz=214,SNR=13							
WCI	Wyandotte Cave	24.59	10	eP		P	07 59 53.6	-0.8
	comp=E,22nm,0.7s							
WCI	Wyandotte Cave	24.59	10	P		P	07 59 53.1	-1.2
	baz=192							
S51A	Beattyville	24.60	15	eP		P	07 59 53.2	-1.3
	comp=E,10nm,0.8s							
S51A	Beattyville	24.60	15	P		P	07 59 53.7	-0.8
	baz=199							
R47A	Wooly Knot Far	24.62	10	P		P	07 59 53.4	-1.2
	baz=192,SNR=8.3							
T54A	Tazewell	24.66	20	P		P	07 59 54.1	-1.0
	baz=204							
LAZ	Ladron	24.69	328	eP		P	07 59 57.4	+1.8
ATAH	Atahualpa	24.77	147	P		P	07 59 58.7	+2.0
	comp=E,11nm,0.8s,baz=347,slow=2.7,SNR=8.6							
S52A	Salyersville	24.78	16	P		P	07 59 55.3	-0.8
	baz=200							
ANMO	Albuquerque	24.78	330	P		P	07 59 58.5	+2.1
	comp=E,3.0nm,0.7s,baz=145,slow=12,SNR=20							
ANMO	Albuquerque	24.78	330	eP		P	07 59 58.1	+1.7
	comp=E,3.4nm,0.7s							
ANMO	Albuquerque	24.78	330	P		P	07 59 57.7	+1.4
	baz=144							
TASM	ASL Pad, Albuq	24.78	330	P		P	07 59 57.8	+1.4
	baz=144,SNR=7.4							
TASM	ASL Pad, Albuq	24.78	330	P		P	07 59 57.4	+1.0
	baz=144,SNR=6.4							
V59A	Middlesex	24.79	27	P		P	07 59 55.2	-0.9
	baz=212,SNR=6.7							
R48A	Northridge Ran	24.83	11	P		P	07 59 55.9	-0.7
	baz=193							
R49A	Shelbyville	24.86	12	P		P	07 59 55.5	-1.3
	baz=195							
W61A	Ground Anchor	24.87	29	P		P	07 59 55.2	-1.8
	baz=215							
U57A	Blanch	24.90	24	P		P	07 59 55.6	-1.7
	baz=209,SNR=5.6							
T55A	Pulaski	24.97	21	P		P	07 59 55.9	-2.1
	baz=205							
Q45A	Warren Harvey,	24.98	6	P		P	07 59 56.6	-1.3
	baz=188							
R50A	Paris	25.04	14	P		P	07 59 56.6	-1.8
	baz=197							
S53A	Williamson	25.05	18	P		P	07 59 57.7	-0.9
	baz=202							
T56A	Rocky Mt	25.16	22	P		P	07 59 58.4	-1.2
	baz=207							
BLA	Blacksburg	25.18	21	eP		P	07 59 59.3	-0.5
	comp=E,12nm,0.9s							
U58A	Oxford	25.19	25	P		P	07 59 58.5	-1.4
	baz=211							
V60A	Jim Taylor Roa	25.23	28	P		P	07 59 58.8	-1.4
	baz=214,SNR=5.5							
R51A	Hillsboro	25.23	15	P		P	07 59 58.9	-1.3
	baz=198,SNR=5.3							
Q47A	Bedord North L	25.26	10	P		P	07 59 58.8	-1.7
	baz=192							
TUC	Tucson	25.27	319	eP		P	08 00 02.4	+1.6
	comp=E,8.0nm,0.9s							
TUC	Tucson	25.27	319	P		P	08 00 02.6	+1.9
	baz=132							
Q48A	North Vernon	25.37	11	P		P	07 59 59.8	-1.6
	baz=193,SNR=6.4							
S54A	Dingess, Beckl	25.41	19	P		P	07 59 59.8	-2.2
	baz=204,SNR=6.0							
T57A	Hurt	25.43	24	P		P	08 00 01.0	-1.0
	baz=209							
BLO	Bloomington	25.47	9	eP		P	08 00 01.3	-1.1
	comp=E,11nm,0.7s							
U59A	Littleton	25.48	27	P		P	08 00 00.9	-1.5
	baz=212							
R52A	Catlettsburg	25.51	17	P		P	08 00 01.8	-0.9
	baz=200							
V61A	Roper	25.57	29	P		P	08 00 02.1	-1.2
	baz=216							
P43A	Skaggs, Pawnee	25.61	4	P		P	08 00 02.5	-1.1
	baz=184							
Q50A	Georgetown	25.65	14	P		P	08 00 02.6	-1.4
	baz=197							
P45A	Graceland, Par	25.66	7	eP		P	08 00 03.1	-0.9
	comp=E,20nm,0.9s							
P45A	Graceland, Par	25.66	7	P		P	08 00 02.8	-1.2
	baz=188							
S55A	Lewisburg	25.66	21	P		P	08 00 02.9	-1.3
	baz=205							
T58A	Grand View Acr	25.67	25	P		P	08 00 03.0	-1.1
	baz=210							
R53A	Hurricane	25.71	18	P		P	08 00 02.9	-1.6
	baz=202							
T25A	Trinidad	25.71	336	eP		P	08 00 04.2	-0.6
	comp=E,3.4nm,0.7s							
P46A	Rosedale	25.81	8	P		P	08 00 04.6	-0.9
	baz=190							
P47A	Martinsville	25.82	10	P		P	08 00 04.1	-1.4
	baz=192							
U60A	Pendleton	25.86	28	P		P	08 00 04.6	-1.2
	baz=214,SNR=9.7							
R54A	Victor	25.87	19	P		P	08 00 04.5	-1.5
	baz=204							
S56A	Natural Bridge	25.91	22	P		P	08 00 05.2	-1.2
	baz=207							
P48A	Milroy	25.94	11	P		P	08 00 04.6	-2.1
	baz=194,SNR=6.5							
Q51A	Peebles	25.98	15	P		P	08 00 05.7	-1.3
	baz=198							
T59A	Double "B" Far	26.10	26	eP		P	08 00 06.9	-1.2
	comp=E,28nm,0.7s							
T59A	Double "B" Far	26.10	26	P		P	08 00 07.2	-0.9
	baz=212,SNR=8.4							
O44A	Mansfield	26.20	5	P		P	08 00 07.9	-1.0
	baz=187							
Q52A	Bidwell	26.20	17	P		P	08 00 08.1	-0.9
	baz=201							
S57A	Dark Hollow, R	26.21	23	P		P	08 00 08.2	-0.8
	baz=209							
X18A	Snowflake	26.31	324	eP		P	08 00 10.7	+0.5
	comp=E,9.5nm,0.8s							
Q53A	Leroy	26.32	18	P		P	08 00 09.2	-0.9
	baz=202							
214A	Organ Pipe Nat	26.36	316	P		P	08 00 11.9	+1.3
	baz=128							
O45A	Potomac	26.37	7	P		P	08 00 09.2	-1.3
	baz=188							
P50A	Jamestown	26.42	14	P		P	08 00 09.6	-1.4
	baz=197							
S58A	Poland Farm, P	26.44	25	P		P	08 00 10.0	-1.1
	baz=210							
P51A	Williamsport	26.48	15	P		P	08 00 10.2	-1.3
	baz=199							
HDIL	Hopedale	26.53	4	P		P	08 00 10.4	-1.5
	baz=185							
O47A	Sheridan	26.57	9	P		P	08 00 10.8	-1.5
	baz=192							
SFIN	Lafayette	26.58	8	eP		P	08 00 11.1	-1.3
	comp=E,13nm,0.8s							
SFIN	Lafayette	26.58	8	P		P	08 00 11.2	-1.1
	baz=190							
T60A	Surry	26.60	27	P		P	08 00 11.4	-1.2
	baz=214							
N41A	Harden Midland	26.61	1	P		P	08 00 11.6	-1.1
	baz=182							
Q54A	Coxs Mills	26.65	19	P		P	08 00 12.1	-0.9
	baz=204,SNR=7.0							
SDCO	Great Sand Dun	26.67	335	P		P	08 00 14.5	+0.9
	baz=149							
KSCO	Kaye Shedlock'	26.74	341	P		P	08 00 14.2	+0.1
	baz=156							
O48A	Farmland	26.77	11	P		P	08 00 13.1	-0.9
	baz=194							
N40A	Mertquake, Sal	26.78	0	P		P	08 00 12.4	-1.8
	baz=180,SNR=5.4							
R58B	Mineral	26.81	25	P		P	08 00 13.6	-0.9
	baz=210							
R57A	Stanardsville	26.84	23	P		P	08 00 14.3	-0.5
	baz=209							
O49A	Covington	26.86	12	P		P	08 00 13.4	-1.5
	baz=196							
P52A	Corning	26.87	16	P		P	08 00 13.9	-1.0
	baz=200							
N44A	Piper City	26.87	6	P		P	08 00 13.6	-1.4
	baz=187							
Q55A	Buckhannon	26.90	20	P		P	08 00 14.5	-0.9
	baz=205							
N43A	Stutzman Famil	26.92	4	P		P	08 00 14.3	-1.1
	baz=185,SNR=9.7							
P53A	Whipple	26.94	18	P		P	08 00 14.8	-0.8
	baz=202							
O50A	Cable	26.98	14	P		P	08 00 14.8	-1.1
	baz=197							
N45A	Kentland	26.99	7	P		P	08 00 14.9	-1.1
	baz=189							
R58A	Rapidan	27.05	24	P		P	08 00 15.5	-1.1
	baz=210							
X16A	Lo Mia Camp, P	27.10	322	eP		P	08 00 17.8	+0.4
	comp=E,8.3nm,0.8s							
N46A	Monticello	27.13	8	P		P	08 00 14.3	-3.0
	baz=190,SNR=6.9							
ACSO	Alum Creek Sta	27.21	15	P		P	08 00 16.9	-1.2
	baz=198							
CBN	Corbin Frederi	27.22	25	P		P	08 00 15.8	-2.4
	baz=211							
O51A	Pataskala	27.22	15	P		P	08 00 17.1	-1.1
	baz=199							
S22A	4UR Ranch, Cre	27.24	333	P		P	08 00 19.5	+0.8
	baz=146							
Q56A	Snyder Ridge,	27.25	21	P		P	08 00 17.9	-0.6
	baz=207							
N47A	Urbana	27.27	10	P		P	08 00 16.4	-2.2
	baz=192							
M41A	Milan	27.29	2	P		P	08 00 16.9	-1.8
	baz=182,SNR=6.0							
P54A	Burton	27.32	19	P		P	08 00 18.1	-1.0
	baz=204,SNR=6.7							
R59A	King George, V	27.32	25	P		P	08 00 18.2	-0.9
	baz=212							
N48A	Decatur	27.37	11	P		P	08 00 17.6	-1.9
	baz=194							
O52A	Adamsville	27.40	16	P		P	08 00 18.6	-1.1
	baz=201							
M43A	Waltham Townsh	27.43	4	P		P	08 00 19.7	-0.3
	baz=185							
M44A	Midewin, Midew	27.46	6	P		P	08 00 18.6	-1.7
	baz=187							
113A	Mohawk Valley,	27.50	317	eP		P	08 00 21.0	+0.2
	comp=E,2.9nm,1.1s							
Q57A	Strasburg	27.53	23	P		P	08 00 20.2	-0.7
	baz=208							
MVCO	Mesa Verde	27.58	330	eP		P	08 00 21.7	0.0
	comp=E,7.0nm,0.9s							
MVCO	Mesa Verde	27.58	330	P		P	08 00 21.6	0.0
	baz=142,SNR=5.1							
N50A	Nevada	27.68	14	P		P	08 00 21.0	-1.3
	baz=198							
O53A	New Philadelph	27.70	17	P		P	08 00 21.0	-1.4
	baz=202							
P56A	Dayton Farm, R	27.79	22	P		P	08 00 22.5	-0.8
	baz=207							
WUAZ	Wupatki	27.83	324	eP		P	08 00 26.3	+2.5
	comp=E,11nm,0.9s							
WUAZ	Wupatki	27.83	324	P		P	08 00 24.4	+0.6
	baz=135,SNR=5.5							
O54A	Avella	27.89	19	P		P	08 00 22.5	-1.6
	baz=204,SNR=5.6							
L42A	Oliver, Polo	27.95	3	P		P	08 00 24.1	-0.6
	baz=184							
L40A	Anamosa	27.96	1	P		P	08 00 23.5	-1.2
	baz=181							
P57A	Homestead Farm	28.07	23	P		P	08 00 25.4	-0.4
	baz=209							
N52A	McGinn's Farm,	28.09	16	P		P	08 00 25.0	-0.9
	baz=201							
M49A	Liberty Center	28.17	12	P		P	08 00 25.5	-1.1
	baz=196							
R61A	Willards	28.21	28	P		P	08 00 25.9	-1.0
	baz=215							
O55A	Ligonier	28.25	20	P		P	08 00 26.4	-1.0
	baz=206							
N53A	Lisbon	28.32	17	P		P	08 00 26.8	-1.2
	baz=202							
PV01	Paradox Valley	28.35	331	eP		P	08 00 28.6	+0.1
	comp=E,1.7nm,1.1s							
L47A	Sherwood	28.43	10	P		P	08 00 27.4	-1.4
	baz=193							
M51A	Elyria	28.45	15	P		P	08 00 28.0	-1.1
	baz=199							
L48A	N Adams	28.53	11	P		P	08 00 28.1	-1.7
	baz=194							
Q60A	Greensboro	28.54	26	P		P	08 00 28.5	-1.4
	baz=213							
O56A	Blue Knob Stat	28.56	21	P		P	08 00 29.5	-0.7
	baz=207							
PDMCI	Parker Dam,Lak	28.70	319	P		P	08 00 31.3	-0.1
	baz=129,SNR=8.7							
PV04	Paradox Valley	28.71	331	eP		P	08 00 31.9	+0.2
	comp=E,5.0nm,0.7s							
N54A	Moraine State	28.72	19	P		P	08 00 30.5	-1.0
	baz=204							
K43A	Burlington	28.74	5	P		P	08 00 30.6	-1.1
	baz=186							
K42A	Prairie Point,	28.74	3	P		P	08 00 31.2	-0.5
	baz=184							
PV22	Blue Mesa, Par	28.77	331	eP		P	08 00 34.1	+1.9
	comp=E,3.2nm,0.8s							
P59A	Jarrettsville	28.80	25	P		P	08 00 31.3	-0.9
	baz=212							
L49A	Milan	28.82	12	P		P	08 00 31.8	-0.6
	baz=196							
JFWS	Jewell Farm	28.84	2	eP		P	08 00 30.9	-1.6
	comp=E,11nm,0.6s							
JFWS	Jewell Farm	28.84	2	P		P	08 00 30.7	-1.8
	baz=183,SNR=7.2							
O57A	Amberson	28.85	23	P		P	08 00 31.7	-0.9
	baz=209							
M52A	Chesterland	28.86	16	P		P	08 00 31.8	-0.9
	baz=201							
N55A	Marion Center	28.88	20	P		P	08 00 31.7	-1.2
	baz=206							
M53A	WI Miller and	28.95	17	P		P	08 00 32.6	-0.9
	baz=202							
IKP	In-Ko-Pah, Jac	29.03	314	P		P	08 00 35.3	+0.8
	baz=124							
W13A	Hualapai Mount	29.05	320	eP		P	08 00 35.5	+0.8
	comp=E,10nm,0.9s							
SSPA	Standing Stone	29.13	22	P		P	08 00 34.1	-1.0
	baz=208							
BC3	Big Chuckawall	29.16	316	P		P	08 00 34.5	-1.2
	baz=126,SNR=7.0							
N56A	West Decatur	29.23	21	P		P	08 00 35.1	-1.0
	baz=207							
IRM	Iron Mountain	29.26	317	P		P	08 00 37.2	+0.8
	baz=128,SNR=6.2							
P60A	Greenville	29.30	26	P		P	08 00 34.4	-2.3
	baz=213							
M54A	Oil Creek Stat	29.32	19	P		P	08 00 35.9	-0.9
	baz=204							
N57A	Milroy	29.36	22	P		P	08 00 35.9	-1.2
	baz=209							
K48A	Perry	29.42	11	P		P	08 00 35.9	-1.8
	baz=195							
O59A	Robesonia	29.50	24	P		P	08 00 37.5	-0.9
	baz=211							
K49A	Clarkson	29.54	12	P		P	08 00 36.4	-2.3
	baz=196							
M55A	Ridgway	29.57	20	P		P	08 00 37.6	-1.4
	baz=206							
J47A	Sunmer	29.72	10	P		P	08 00 39.5	-0.8
	baz=193							
PKCU	Pink Cliffs	29.73	325	eP		P	08 00 42.8	+1.8
	comp=E,3.3nm,1.0s							
M56A	Emporium	29.77	21	P		P	08 00 39.9	-1.0
	baz=207							
O60A	Telford	29.82	25	P		P	08 00 41.1	-0.1
	baz=213							
O20A	White River Ci	29.83	334	P		P	08 00 42.9	+1.2
	baz=146							
I42A	Draeger Farm,	29.88	4	P		P	08 00 40.5	-1.2
	baz=185							
ECSD	EROS Data Cent	29.94	353	P		P	08 00 41.9	-0.4
	baz=170							
LCMT	Little Creek M	29.95	324	eP		P	08 00 43.8	+1.1
	comp=E,5.2nm,0.9s							
GMRC	Granite Mounta	29.98	318	P		P	08 00 42.9	0.0
	baz=128,SNR=5.8							
I41A	Arkdale	29.99	3	P		P	08 00 41.3	-1.5
	baz=183							
L54A	Sinclairville	30.08	18	P		P	08 00 42.5	-1.1
	baz=204							
MTPU	Mount Pierson	30.10	326	eP		P	08 00 45.3	+1.1
	comp=E,6.4nm,1.0s							
J49A	Marlette	30.15	12	P		P	08 00 42.2	-2.0
	baz=196							
N59A	State Game Lan	30.18	24	P		P	08 00 43.9	-0.6
	baz=212							
K52A	Tillsonburg	30.18	16	P		P	08 00 43.5	-1.0
	baz=201							
SZCU	Shurtz Canyon	30.27	325	eP		P	08 00 48.1	+2.5
	comp=E,11nm,0.9s							
L55A	Hinsdale	30.32	20	P		P	08 00 44.4	-1.3
	baz=206							
CCUT	Cedar City	30.40	324	eP		P	08 00 48.2	+1.5
	comp=E,11nm,0.9s							
MSU	Marysvale	30.44	327	eP		P	08 00 48.9	+1.8
MSU				epP		pP	08 01 04.3	+1.4
K54A	Basiliko Farm,	30.62	19	P		P	08 00 47.3	-1.0
	baz=205							
J52A	Paris	30.68	16	P		P	08 00 47.1	-1.7
	baz=201							
TYNO	Tyneside	30.71	17	P		P	08 00 47.5	-1.6
	baz=203							
SHPR	Sheep Range	30.75	321	eP		P	08 00 51.4	+1.7
	comp=E,11nm,0.9s							
I49A	Point Hope	30.77	12	P		P	08 00 47.3	-2.3
	baz=197							
H46A	Fife Lake	30.93	9	P		P	08 00 48.1	-2.9
	baz=192							
I51A	Listowel	31.06	15	P		P	08 00 50.1	-2.1
	baz=200,SNR=6.6							
BASO	Ashfield	31.10	14	P		P	08 00 50.9	-1.6
	baz=199							
ACTO	Acton	31.13	16	P		P	08 00 51.3	-1.5
	baz=202							
SPMN	Marine on St.	31.14	358	P		P	08 00 51.1	-1.7
	baz=178,SNR=7.4							
G39A	Holcombe	31.18	1	P		P	08 00 51.1	-2.2
	baz=181,SNR=7.9							
BINY	Binghamton	31.19	23	P		P	08 00 52.6	-0.7
	baz=210							
MEDO	Medina	31.19	19	P		P	08 00 52.6	-0.8
	baz=205							
J54A	Appleton	31.23	18	P		P	08 00 52.0	-1.6
	baz=205							
K22A	Casper	31.31	339	P		P	08 00 54.7	+0.1
	baz=151							
BWLO	Walkerton	31.33	15	P		P	08 00 52.4	-2.0
	baz=200,SNR=6.1							
M61A	Granite Spring	31.34	26	P		P	08 00 53.0	-1.7
	baz=215							
G45A	Suttons Bay	31.35	8	P		P	08 00 53.1	-1.6
	baz=191							
PSUT	Pine Spring	31.36	325	eP		P	08 00 56.9	+1.7
	comp=E,7.2nm,1.1s							
BRCO	Bruce Peninsul	31.37	14	P		P	08 00 53.0	-1.9
	baz=199,SNR=6.3							
H48A	Harrisville	31.40	11	P		P	08 00 53.8	-1.4
	baz=195							
J55A	Hilton	31.49	20	P		P	08 00 54.9	-1.0
	baz=206							
TPNV	Topopah Spring	31.70	321	P		P	08 00 57.0	-1.1
	baz=130,SNR=7.7							

PKRO	Pickering	31.74	17	P	P	08 00 56.9	-1.2
	baz=203						
BMRO	Meriville Lake	31.76	14	P	P	08 00 56.8	-1.5
	baz=199						
G47A	Hillman	31.76	10	P	P	08 00 57.0	-1.3
	baz=194						
FURC	Furnace Creek,	31.78	319	P	P	08 00 58.0	-0.5
	baz=128,SNR=7.1						
F39A	Loretta	31.82	1	P	P	08 00 56.7	-2.1
	baz=181						
F40A	Park Falls	31.84	2	P	P	08 00 57.9	-1.2
	baz=183						
F38A	Pierce - Schro	31.86	360	P	P	08 00 56.3	-2.8
	baz=179,SNR=5.5						
WLVO	Wesleyville	31.90	18	P	P	08 00 57.9	-1.6
	baz=205						
MPMC	Manual Prospec	31.93	318	P	P	08 00 59.8	-0.4
	baz=127,SNR=9.1						
TCUT	Toone Canyon	32.05	331	*e*P	P	08 01 01.3	+0.1
	comp=E,7.5nm,0.8s						
H52A	Wyevale	32.13	16	P	P	08 01 00.0	-1.6
	baz=202						
R11A	Troy Canyon, C	32.22	323	P	P	08 01 03.9	+1.3
	baz=132,SNR=10						
TOBO	Tobermory, Bru	32.28	13	P	P	08 01 00.3	-2.5
	baz=198,SNR=7.5						
PECO	Prince Edward	32.35	20	P	P	08 01 01.7	-1.8
	baz=207						
I55A	Frankford	32.38	19	P	P	08 01 01.9	-1.8
	baz=206,SNR=6.5						
GRAC	Grapevine Rang	32.43	320	P	P	08 01 06.1	+1.7
	baz=128,SNR=12						
SADO	Sadowa	32.45	17	P	P	08 01 03.0	-1.4
	comp=E,4.6nm,0.5s,baz=248,slow=7.0,SNR=9.0						
E38A	The Farm, Brul	32.50	0	P	P	08 01 02.9	-1.9
	baz=180,SNR=8.5						
E43A	Lone Tree Farm	32.51	6	P	P	08 01 03.2	-1.6
	baz=188						
BW06	Boulder Array	32.57	335	P	P	08 01 04.8	-0.9
	baz=146						
PD31	Pinedale Array	32.57	335	*e*PcP	PcP	08 03 51.7	+0.7
PDAR	Pinedale Array	32.57	335	P	P	08 01 05.9	+0.2
	comp=E,21nm,0.3s,baz=127,slow=10,SNR=7.2						
PDAR				PcP	PcP	08 03 51.7	+0.7
	comp=E,0.7nm,0.6s,baz=150,slow=5.8,SNR=6.6						
PDAR				LR	LR	08 15 42.0	
	comp=E,29nm,20.9s,baz=144,slow=39						
F48A	Evansville	32.62	12	P	P	08 01 04.0	-1.8
	baz=196						
DELO	Deloro Mine	32.68	19	P	P	08 01 04.9	-1.4
	baz=206,SNR=7.0						
F49A	Sandfield	32.68	12	P	P	08 01 04.3	-2.0
	baz=197						
BGU	Big Grassy Mou	32.68	329	*e*P	P	08 01 07.4	+0.8
	comp=E,3.0nm,0.8s						
E45A	Wooded Hills,	32.71	8	P	P	08 01 06.8	+0.2
	baz=191						
KLBO	Killbear Provi	32.72	15	P	P	08 01 04.6	-2.1
	baz=201,SNR=5.1						
H55A	Tweed	32.84	19	P	P	08 01 06.4	-1.4
	baz=206						
E46A	Sault Ste Mari	32.85	9	P	P	08 01 06.5	-1.3
	baz=193						
G53A	Haliburton	32.92	17	P	P	08 01 06.6	-1.9
	baz=204,SNR=6.4						
BUKO	Buck Lake	33.01	16	P	P	08 01 07.9	-1.4
	baz=202						
BANO	Bancroft	33.03	18	P	P	08 01 07.8	-1.7
	baz=205						
D41A	Chassel	33.06	4	P	P	08 01 08.3	-1.3
	baz=185						
E47A	Iron Bridge	33.10	11	P	P	08 01 08.5	-1.6
	baz=195						
H56A	Elgin	33.18	20	P	P	08 01 10.1	-0.6
	baz=208						
HVU	Hansel Valley	33.21	330	*e*P	P	08 01 10.7	-0.5
	comp=E,5.2nm,0.9s						
HRV	Adam Dziewonsk	33.28	28	P	P	08 01 10.1	-1.5
	baz=217						
PLVO	Plevna	33.31	19	P	P	08 01 10.3	-1.6
	baz=206						
F51A	Arnstein	33.33	15	P	P	08 01 09.5	-2.5
	baz=201						
E48A	Lockeyer	33.34	12	P	P	08 01 10.9	-1.2
	baz=197						
F52A	Sundridge	33.35	16	P	P	08 01 10.5	-1.7
	baz=202,SNR=5.7						
D46A	Sault St. Mari	33.40	9	P	P	08 01 10.4	-2.3
	baz=193						
E50A	Wahnapitae	33.59	14	P	P	08 01 11.8	-2.5
	baz=199						
G55A	Calabogie	33.62	19	P	P	08 01 12.4	-2.2
	baz=207						
ELK	Elko	33.69	327	*e*P	P	08 01 17.1	+1.5
	comp=E,4.4nm,0.8s						
D47A	Chapleau	33.72	11	P	P	08 01 13.2	-2.2
	baz=195						
LONY	Lake Ozonia	33.79	22	P	P	08 01 14.3	-1.8
	baz=211						
EYMN	Ely	33.84	0	P	P	08 01 14.0	-2.5
	baz=180						
ALGO	Algonquin Park	33.85	17	P	P	08 01 14.7	-1.9
	baz=204						
C40A	Isle Royale Na	33.88	3	P	P	08 01 15.0	-1.8
	baz=184						
NV01	Mina Array Sit	33.90	321	*e*pP	pP	08 01 34.5	+1.3
NV01				*e*PcP	PcP	08 03 57.5	+2.8
NVAR	Mina Array Bea	33.90	321	P	P	08 01 20.2	+2.8
	comp=E,3.6nm,0.7s,baz=131,slow=8.5,SNR=28						
NVAR				pP	pP	08 01 34.5	+1.3
	comp=E,32nm,0.7s,baz=132,slow=8.0,SNR=64						
NVAR				PcP	PcP	08 03 57.5	+2.8
	comp=E,3.9nm,0.7s,baz=133,slow=3.2,SNR=12						
NVAR				ScP	ScP	08 07 38.6	+4.5
	comp=E,1.0nm,0.8s,baz=128,slow=4.0,SNR=6.9						
NVAR				LR	LR	08 16 37.1	
	comp=E,47nm,19.8s,baz=1.5,slow=39						
E52A	Mattawa	33.98	16	P	P	08 01 15.5	-2.2
	baz=203						
E51A	G1948 Merrick	34.00	15	P	P	08 01 16.2	-1.6
	baz=201,SNR=6.8						
ORIO	Orleans, Innes	34.19	20	P	P	08 01 18.0	-1.4
	baz=208						
F55A	Otter Lake	34.25	19	P	P	08 01 18.1	-2.0
	baz=207						
D49A	Beulah Townshi	34.26	12	P	P	08 01 17.9	-2.2
	baz=198						
E53A	Dumoine, Ponti	34.35	17	P	P	08 01 18.6	-2.2
	baz=204						
AGMN	Agassiz Nation	34.38	355	P	P	08 01 19.9	-1.2
	baz=173						
E54A	Lac Daplat, Po	34.54	18	P	P	08 01 20.9	-1.6
	baz=205,SNR=7.5						
BMN	Battle Mountai	34.56	324	*e*P	P	08 01 24.7	+1.7
	comp=E,16nm,0.8s						
D52A	ZEK Kipawa Sen	34.69	16	P	P	08 01 21.7	-2.0
	baz=203,SNR=5.5						
D53A	Lac Vacive, Po	34.98	17	P	P	08 01 24.7	-1.5
	baz=204,SNR=6.0						
PNTR	Pine Nut	35.10	321	*e*P	P	08 01 30.1	+2.4
	comp=E,26nm,0.8s						
D54A	Lac Fusel, La	35.34	18	P	P	08 01 27.9	-1.5
	baz=206,SNR=9.1						
HLID	Hailey	35.35	331	P	P	08 01 30.0	+0.2
	baz=139,SNR=6.7						
BOZ	Bozeman (W)	35.75	336	P	P	08 01 33.7	+0.5
	baz=145						
ULM	Lac du Bonnet	36.31	355	LR	LR	08 19 46.2	
	comp=E,65nm,18.2s,baz=148,slow=42						
PKME	Peaks-Kenny Pk	36.46	27	P	P	08 01 37.9	-1.1
	baz=218						
WVOR	Wild Horse Val	36.69	326	*e*P	P	08 01 42.3	+1.1
WVOR				*e*pP	pP	08 01 58.6	+1.4
LATQ	La Tuque	36.81	21	P	P	08 01 40.7	-1.2
	baz=211						
LSQQ	Lebel-sur-Quev	36.98	16	P	P	08 01 41.6	-1.8
	baz=204						
EGMT	Eagleton	37.11	340	P	P	08 01 44.7	0.0
	baz=150						
MATQ	Matagami	37.45	15	P	P	08 01 44.9	-2.4
	baz=202,SNR=13						
MSO	Missoula	37.69	335	P	P	08 01 50.3	+0.8
	baz=143						
O02D	Mt. Diablo Mer	37.73	320	P	P	08 01 51.2	+1.2
	baz=125						
LPAZ	La Paz	38.01	142	P	P	08 01 53.3	+0.2
	comp=E,1.7nm,0.6s,baz=334,slow=8.0,SNR=9.4						
LPAZ				LR	LR	08 17 50.9	
	comp=E,38nm,18.2s,baz=303,slow=37						
LPAZ	La Paz	38.01	142	*e*P	P	08 01 51.5	-1.6
	comp=E,2.6nm,0.7s						
CHGQ	Chibougamau	38.49	18	P	P	08 01 54.0	-2.1
	baz=207,SNR=5.3						
L04D	Klamath Falls	38.64	323	P	P	08 01 59.1	+1.4
	baz=128						
PINE	Pine Mountain	38.86	326	*e*P	P	08 02 00.7	+1.2
	comp=E,15nm,1.0s						
I05D	Terrebonne, OR	39.43	326	P	P	08 02 06.1	+1.9
	baz=131						
MNMC	Minye Minye	39.43	146	*e*P	P	08 02 05.8	+1.2
	comp=E,14nm,1.0s						
G05D	Wamic, OR	40.01	327	P	P	08 02 11.2	+2.3
	baz=132						
H04A	Detroit Lake	40.12	326	*e*P	P	08 02 11.4	+1.6
	comp=E,19nm,0.8s						
NEW	Newport	40.16	334	P	P	08 02 10.8	+0.7
	baz=140						
F05D	White Salmon	40.52	328	P	P	08 02 15.0	+1.9
	baz=132						
SIV	San Ignacio	42.43	134	P	P	08 02 28.8	-0.3
	comp=E,7.7nm,0.6s,baz=312,slow=7.8,SNR=39						
SIV				PcP	PcP	08 04 21.8	+0.6
	comp=E,1.4nm,0.6s,baz=327,slow=1.5,SNR=5.5						
B05A	Bryant	42.45	330	P	P	08 02 29.0	+0.2
	baz=133						
D03D	Eldon	42.45	328	P	P	08 02 29.8	+1.0
	baz=131						
LVC	Limon Verde	42.65	148	*e*P	P	08 02 30.9	-0.3
	comp=E,28nm,1.0s						
A04D	Lummi Island	43.06	330	P	P	08 02 34.8	+1.1
	baz=133						
LLLB	Lillooet	43.98	332	*e*P	P	08 02 41.6	+0.4
	comp=E,5.8nm,0.8s						
SCHQ	Schefferville	45.10	20	P	P	08 02 48.1	-1.9
	comp=E,26nm,0.6s,baz=218,slow=7.5,SNR=13						
SCHQ				LR	LR	08 22 34.1	
	comp=E,240nm,20.9s,baz=290,slow=38						
SCHQ	Schefferville	45.10	20	*e*P	P	08 02 48.1	-1.9
	comp=E,27nm,0.6s						
CFA	Coronel Fontan	50.60	154	P	P	08 03 33.3	+0.5
	comp=E,7.6nm,0.8s,baz=342,slow=6.1,SNR=21						
YKA	Yellowknife Ar	51.11	347	P	P	08 03 35.5	-0.7
	comp=E,3.3nm,0.7s,baz=150,slow=7.4,SNR=55						
YKA				pP	pP	08 03 51.0	-1.8
	comp=E,2.9nm,0.6s,baz=148,slow=7.4,SNR=14						
YKA				PcP	PcP	08 04 50.9	-0.1
	comp=E,1.2nm,0.6s,baz=150,slow=3.6,SNR=6.4						
YKA				LR	LR	08 27 28.9	
	comp=E,5.0nm,20.7s,baz=158,slow=39						
YKB5	Yellowknife Ar	51.11	347	*e*PcP	PcP	08 04 50.9	-0.1
YKW3	Yellowknife Ar	51.17	347	*e*P	P	08 03 35.6	-1.0
	comp=E,4.9nm,0.8s						
CPUP	Villa Florida	52.15	140	P	P	08 03 43.3	-1.2
	comp=E,3.8nm,0.8s,baz=329,slow=8.4,SNR=13						
CPUP				LR	LR	08 25 21.0	
	comp=E,52nm,20.9s,baz=276,slow=35						
TAOE	Nuku Hiva Isla	53.23	248	*e*T	T	09 00 53.8	
	comp=E,20nm,0.3s						
RKT	Rikitea	56.22	229	*e*T	T	09 04 28.9	
	comp=E,5.0nm,0.3s						
PLCA	Paso Flores	57.86	161	P	P	08 04 25.8	+0.3
	comp=E,2.2nm,0.8s,baz=335,slow=7.0,SNR=7.3						
PLCA				LR	LR	08 23 21.3	
	comp=E,46nm,20.7s,baz=271,slow=30						
EPYK	Eagle Plains	60.25	341	P	P	08 04 41.4	-0.3
	baz=128						
INK	Inuvik	60.54	343	*e*P	P	08 04 43.6	+0.1
	comp=E,4.3nm,0.6s						
EYAK	Cordova Ski Ar	60.65	333	*e*P	P	08 04 44.9	+0.5
	comp=E,9.5nm,0.9s						
DOT	Dot Lake	61.36	336	*e*P	P	08 04 49.2	-0.1
	comp=E,4.1nm,0.9s						
DOT				*e*pP	pP	08 05 06.8	+0.4
PAX	Paxson	61.61	335	*e*P	P	08 04 50.0	-1.0
	comp=E,4.8nm,0.8s						
PAX				*e*pP	pP	08 05 08.6	+0.4
RC01	Rabbit Creek A	62.66	332	*e*P	P	08 04 57.9	-0.1
	comp=E,13nm,0.8s						
HDA	Harding Lake	62.84	336	P	P	08 04 59.5	+0.3
	baz=116						
ILAR	Eielson Array	62.98	337	P	P	08 05 00.3	+0.3
	comp=E,3.3nm,0.8s,baz=148,slow=4.2,SNR=27						
ILAR				pP	pP	08 05 17.1	-0.1
	comp=E,1.5nm,0.7s,baz=147,slow=4.0,SNR=4.5						
ILAR				LR	LR	08 36 34.1	
	comp=E,39nm,18.4s,baz=160,slow=40						
BWN	Browne	63.74	336	*e*P	P	08 05 04.6	-0.5
PPT	Papeete	65.21	243	LR	LR	08 26 58.6	
	comp=E,60nm,18.6s,baz=109,slow=29						
PPT2	Papeete2	65.22	243	*e*LR	LR	08 24 35.3	
	comp=E,141nm,28.0s						
TOLK	Toolik Lake Re	65.64	340	P	P	08 05 17.3	-0.2
	baz=115						
SUMG	Summit	66.14	15	*e*P	P	08 05 19.4	-1.6
	comp=E,8.1nm,0.7s						
SUMG	Summit	66.14	15⇑	*i*P	P	08 05 19.4	-1.6
	comp=E,21nm,0.6s						
DAG	Danmarks Havn	72.58	13	*i*P	P	08 05 57.6	-2.6
	comp=E,9.4nm,0.6s						
EKA	Eskdalemuir Ar	77.75	36	P	P	08 06 27.8	-2.5
	comp=E,2.9nm,0.5s,baz=267,slow=5.8,SNR=17						
ESDC	Sonseca Array	79.43	52	P	P	08 06 37.2	-2.7
	comp=E,0.5nm,0.4s,baz=288,slow=4.8,SNR=6.1						
SPITS	Spitsbergen Ar	80.01	11	P	P	08 06 41.6	-0.7
	comp=E,2.1nm,0.6s,baz=195,slow=1.6,SNR=6.9						
NB200	NORSAR Array S	83.97	28	*e*P	P	08 07 02.5	-0.9
NOA	NORSAR Array B	83.97	28	P	P	08 07 02.5	-0.9
	comp=E,0.7nm,0.6s,baz=289,slow=5.3,SNR=3.5						
DBIC	Dimbokro	85.29	84	LR	LR	08 39 37.3	
	comp=E,26nm,21.0s,baz=241,slow=32						
HFS	Hagfors	85.42	29	P	P	08 07 09.1	-1.6
	comp=E,1.5nm,0.5s,baz=302,slow=3.3,SNR=8.2						
ARCES	ARCESS Array B	86.02	18	P	P	08 07 12.2	-1.3
	comp=E,0.9nm,0.5s,baz=284,slow=4.9,SNR=9.7						
ARCES				LR	LR	08 44 55.3	
	comp=E,64nm,21.4s,baz=350,slow=35						
TORD	Torodi Ar. Bea	90.03	77	LR	LR	08 44 58.3	
	comp=E,23nm,20.9s,baz=270,slow=34						
TIXI	Tiksi	90.33	348	P	P	08 07 32.9	-1.0
	comp=E,2.0nm,0.6s,baz=343,slow=2.6,SNR=5.4						
TIXI	Tiksi	90.33	348	*e*P	P	08 07 33.1	-0.8
	comp=E,2.6nm,0.5s						
NRIK	Noril'sk	96.87	0	LR	LR	08 54 45.8	
	comp=E,54nm,21.0s,baz=42,slow=37						
KSRS	Korea Array	116.75	325	PKP	PKiKP	08 13 19.4	+1.7
	comp=E,1.5nm,0.6s,baz=25,slow=1.7,SNR=8.3						
KS15	Wonju Array Si	116.78	325	*e*PKPdf	PKiKP	08 13 19.4	+1.6
MK32	Makanchi Array	119.24	5	*e*PKPdf	PKPdf	08 13 22.0	-0.4
MKAR	Makanchi Array	119.24	5	PKP	PKPdf	08 13 22.0	-0.4
	comp=E,0.7nm,0.7s,baz=35,slow=3.0,SNR=7.0						
BOSA	Boshof	120.03	115	PKP	PKPdf	08 13 25.4	+0.9
	comp=E,2.0nm,0.8s,baz=188,slow=1.4,SNR=4.9						
HHC	Hu-ho-hao-te	121.34	340	*e*PKP	PKPdf	08 13 24.4	-2.3
WMQ	Urumqi	122.46	1	*e*PKP	PKPdf	08 13 28.5	-0.2
WMQ				LR	LR		
	comp=E,480nm,27.9s						
WMQ				LR	LR		
	comp=E,430nm,25.7s						
WMQ				LR	LR		
	comp=E,220nm,27.9s						
NJ2	Nanjing	125.69	328	*e*PKP	PKPdf	08 13 34.3	-0.8
LZH	Lanzhou	128.08	344	*e*PKP	PKPdf	08 13 38.9	-0.9
LZH				sPKP		08 14 16.0	
WR1	Warramunga Arr	135.75	256	*e*PKPdf	PKPdf	08 13 54.9	+0.4
WRA	Warramunga Arr	135.75	256	PKP	PKPdf	08 13 54.9	+0.4
	comp=E,1.3nm,0.9s,baz=119,slow=1.0,SNR=3.9						
CM31	Chiang Mai Arr	146.10	342	*e*PKPdf	PKPdf	08 14 14.9	+1.8
CMAR	Chiang Mai Arr	146.10	342	PKPbc	PKPdf	08 14 14.3	+1.2
	comp=E,9.7nm,0.7s,baz=343,slow=4.2,SNR=25						
CMAR				pPKPbc	pPKPdf	08 14 31.5	-0.4
	comp=E,6.2nm,0.8s,baz=337,slow=3.2,SNR=4.1						

UCR 12 08:07:28.2±1.8, 9°.68N×83°.95W, h6km±7km, MD3.9, 3C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDC	Heredia	0.36	333	⇓*i*P	Pg	08 07 35.5	+0.1
HDC				*e*S	Sg	08 07 40.9	+0.7
CVTR	Volcan Turrial	0.39	28	⇓*i*P	Pg	08 07 36.4	+0.5
CVTR				*e*S	Sg	08 07 42.1	+1.0
EDLM	Las Mercedes	0.53	138	⇑*e*P	Pg	08 07 38.3	-0.1
EDLM				*e*S	Sb	08 07 46.6	-1.2
DRK0	Durika	0.81	120	⇓*i*P	Pg	08 07 42.8	-0.9
DRK0				*e*S	Sb	08 07 55.2	-0.8
EDPN	Palmar Norte	0.86	146	*e*P	Pb	08 07 45.3	-0.2
FORC	Fortuna	1.06	318	*i*P	Pg	08 07 47.8	-0.8
FORC				*i*S	Sg	08 08 02.5	+0.1
CASO	Castillo	1.08	314	*i*P	Pg	08 07 48.1	-0.9
ARE1	Arenal 1	1.09	316	⇑*i*P	Pg	08 07 48.1	-1.0
ARE1				*e*S	Sg	08 08 03.2	-0.1
CEDE	Laguna Cedeo	1.10	317	*i*P	Pg	08 07 48.5	-0.8
JTS	Las Juntas de	1.16	302	⇑*i*P	Pg	08 07 48.9	-1.6
JTS				*e*S	Sg	08 08 04.3	-1.4
CUI	Cuipilapa	1.54	309	*i*P	Pn	08 07 55.8	-0.6
CUI				*e*S	Sn	08 08 16.3	-0.4
BUEV	Buena Vista	1.82	308	*i*P	Pn	08 07 59.6	-0.5
GB1A	Borinquen Arri	1.82	309	*e*S	Sb	08 08 24.9	-0.3
NY14	Universidad de	1.84	302	*i*P	Pn	08 08 00.4	+0.1

MEX 12 08:15:02.7±27.0, 17°.18N×101°.09W, h17km±830km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.56	320	*e*P	Pg	08 15 12.1	-1.7
	baz=26,slow=11						
ZIIG				*i*S	Sg	08 15 18.3	-3.1
CAIG	El Cayaco	0.79	99	*e*P	Pb	08 15 15.5	-2.5
ARIG	Puente Sto Nin	1.30	33	*e*P	Pn	08 15 23.2	-3.0
ARIG				*e*S	Sn	08 15 37.4	-5.8

IDC 12 08:25:09.4±2.7, 7°.98S×119°.55E, h0km, mb3.2/2, mb1 3.7/3, mb1mx3.4/33, mbtmp3.4/3, ML3.9/1, Error ellipse: s-maj=255.1km s-min=28.3km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.62	131	P	P	08 29 28.6	0.0
	0.4nm,0.3s,baz=295,slow=13,SNR=20						
ASAR	Alice Springs	20.80	140	P	P	08 29 52.6	+0.1
	0.4nm,0.4s,baz=320,slow=11,SNR=11						
MKAR	Makanchi Array	63.80	332	P	P	08 35 43.3	-0.1
	0.3nm,0.6s,baz=124,slow=7.7,SNR=3.8						

PRE ***12*** *08:41:21.1±1.7, 26°.95S×26°.78E, h2km, ML3.3*
IDC ***12*** *08:41:22.6±1.7, 26°.88S×26°.66E, h0km, mb3.6/1, mb1 3.9/6, mb1mx3.6/35, mbtmp3.9/6, ML4.0/5, Error ellipse: s-maj=29.0km s-min=12.3km az=101.0*
EAF ***12*** *08:41:23.7±0.9, 26°.80S×26°.61E, h4km±10km, MD4.0*
ISC 12 08:41:22.1±1.3, 26°.86S±0°.04×26°.74E±0°.05, h14km±9km, n29, σ2°.14/50, 2D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	Parys	0.55	97	*e*P	Pg	08 41 31.7	-1.4
PRYS				*e*S	Sg	08 41 39.1	-1.4
PRYS				AML	AML	08 41 44.0	
	comp=Z,1μm,0.7s						
WDLM	Western Deep L	0.75	55	*e*P	Pg	08 41 36.8	+0.1
WDLM				*e*S	Sg	08 41 45.7	-0.8
WDLM				AML	AML	08 41 54.3	
	comp=Z,1μm,0.3s						
KLOF	Kloof	0.93	57	*e*P	Pg	08 41 39.5	-0.7
KLOF				*e*S	Sg	08 41 52.2	-0.1
KLOF				AML	AML	08 41 56.9	
	comp=Z,3μm,0.1s						
KSR	Koster	1.01	8	*e*P	Pg	08 41 42.1	+0.3
KSR				*e*S	Sb	08 41 58.3	+3.5
KSR				AML	AML	08 42 00.6	
	comp=Z,483nm,0.2s						
SWZ	Schweizer	1.30	255	*e*P	Pn	08 41 47.6	+1.6
SWZ				*e*S	Sn	08 42 04.4	+1.1
SWZ				AML	AML	08 42 08.0	
	comp=Z,1μm,0.3s						
ERPM	east rand prop	1.44	69	*e*P	Pn	08 41 50.0	+2.0
ERPM				*e*S	Sb	08 42 09.8	+2.8
ERPM				AML	AML	08 42 11.5	
	comp=Z,345nm,0.4s						
LBTB	Lobatse	2.11	330	Pn	Pb	08 42 00.2	0.0
	comp=Z,20nm,0.3s,baz=150,slow=17,SNR=264						
LBTB				Lg	Lg	08 42 28.9	
	comp=Z,216nm,0.3s,baz=240,slow=11,SNR=76						
BOSA	Boshof	2.19	217	*i*P	Pn	08 41 59.9	+1.7
BOSA				*i*S	Sn	08 42 27.1	+1.9
BOSA	Boshof	2.19	217	Pn	Pn	08 41 59.6	+1.4
	comp=Z,27nm,0.3s,baz=34,slow=12,SNR=410						
BOSA				Lg	Lg	08 42 29.8	
	comp=Z,41nm,0.3s,baz=130,slow=16,SNR=19						
BOSA	Boshof	2.19	217	*i*P	Pn	08 41 59.9	+1.7
BOSA				*i*S	Sn	08 42 27.1	+1.9
PKA	Prieska	4.50	231	*e*P	Pn	08 42 30.0	0.0
PKA				*e*S	Sn	08 43 20.7	-1.4
PKA				AML	AML	08 43 49.5	
	comp=Z,23nm,0.3s						
UPI	Upington	5.10	252	*e*P	Pn	08 42 39.8	+1.6
UPI				*e*S	Sn	08 43 35.9	-1.0
UPI				AML	AML	08 44 02.3	
	comp=Z,66nm,0.4s						
MSNA	Messina	5.39	34	*i*P	Pn	08 42 44.4	+2.2
MSNA				*i*S	Sn	08 43 43.3	-0.9
MSNA	Messina	5.39	34	*i*P	Pn	08 42 44.4	+2.2
MSNA				*i*S	Sn	08 43 43.3	-0.9
KEIM	Keimoes	5.44	249	*e*P	Pn	08 42 45.4	+2.5
KEIM				*e*S	Sn	08 43 43.3	-2.0
KEIM				AML	AML	08 44 16.4	
	comp=Z,46nm,0.5s						
MATP	Matopo	6.60	14	*i*P	Pn	08 43 01.0	+2.0
MATP				*i*S	Sn	08 44 10.8	-3.4
MATP	Matopo	6.60	14	Pn	Pn	08 43 00.8	+1.8
	comp=Z,1.8nm,0.3s,baz=193,slow=13,SNR=25						
MATP				Sn	Sn	08 44 14.0	-0.1
	comp=Z,2.8nm,0.3s,baz=181,slow=3.0,SNR=7.4						
MATP				Lg	Lg	08 44 46.8	
	comp=Z,11nm,0.3s,baz=295,slow=19,SNR=16						
MATP	Matopo	6.60	14	*i*P	Pn	08 43 01.0	+2.0
MATP				*i*S	Sn	08 44 10.8	-3.4
BLWY	Bulawayo	6.90	15	*i*P	Pn	08 43 04.7	+1.6
BLWY				*i*S	Sn	08 44 17.6	-4.0
BLWY	Bulawayo	6.90	15	*i*P	Pn	08 43 04.7	+1.6
BLWY				*i*S	Sn	08 44 17.6	-4.0
SUR	Sutherland	7.54	222	Pn	Pn	08

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.74**	**76**	*i* P	**Pn**	**09 09 44.1**	**+0.5**
HJA				IAML		09 09 44.7	
	comp=Z,248nm,0.5s						
LVC	**Limon Verde**	**1.85**	**304**	*e*Pn	**Pn**	**09 09 45.9**	**+1.1**
LVC	**Limon Verde**	**1.85**	**304**	⇑*i*P	**Pn**	**09 09 46.0**	**+1.1**
LVC				*e*S	**Sn**	**09 10 13.1**	**-0.1**
SLA	**San Lorenzo**	**1.91**	**124**	*i* P	**Pn**	**09 09 45.8**	**+0.7**
SLA				IAML		09 09 47.4	
	comp=Z,110nm,0.6s						
AZAP	**Zapla**	**2.07**	**106**	*i* P	**Pn**	**09 09 47.1**	**+0.2**
AZAP				IAML		09 09 49.1	
	comp=Z,39nm,0.7s						
PB15	**IPOC Station P**	**2.10**	**282**	*i* P	**Pn**	**09 09 48.1**	**+0.9**
PB15	**IPOC Station P**	**2.10**	**282**	*e*P	**Pn**	**09 09 48.0**	**+0.9**
PB15				*e*S	**Sn**	**09 10 17.2**	**-0.3**
YJA	**Yavi**	**2.17**	**48**	*i* P	**Pn**	**09 09 48.7**	**+0.6**
YJA				*i* S	**Sn**	**09 10 18.6**	**-0.6**
YJA				IAML		09 10 19.8	
	comp=Z,13nm,0.7s						
PB06	**IPOC Station P**	**2.34**	**293**	*e*P	**Pn**	**09 09 50.9**	**+1.2**
PB06				*e*S	**Sn**	**09 10 21.4**	**-0.8**
PB06				IAML		09 10 23.4	
	comp=N,600nm,0.2s						
PB09	**IPOC Station P**	**2.61**	**315**	*e*P	**Pn**	**09 09 54.5**	**+1.6**
PB09				*i* S	**Sn**	**09 10 27.5**	**-0.3**
GO02	**Mina Guanaco**	**2.62**	**234**	*e*Pn	**Pn**	**09 09 54.3**	**+1.3**
GO02	**Mina Guanaco**	**2.62**	**234**	⇓*i*P	**Pn**	**09 09 54.2**	**+1.2**
GO02				*i* S	**Sn**	**09 10 28.4**	**+0.3**
FSA	**Cafayete**	**2.70**	**155**	*i* P	**Pn**	**09 09 54.6**	**+0.8**
FSA				IAML		09 09 56.4	
	comp=Z,3.0nm,0.3s						
PB03	**IPOC Station P**	**2.81**	**304**	*e*P	**Pn**	**09 09 55.8**	**+0.6**
PB03				*e*S	**Sn**	**09 10 30.4**	**-1.5**
PB03				IAML		09 10 31.3	
	comp=N,479nm,0.5s						
PB05	**IPOC Station P**	**2.84**	**286**	*e*P	**Pn**	**09 09 56.1**	**+0.8**
PB05				*e*S	**Sn**	**09 10 30.3**	**-2.0**
PB04	**IPOC Station P**	**2.98**	**296**	*e*Pn	**Pn**	**09 09 58.0**	**+0.9**
PB04	**IPOC Station P**	**2.98**	**296**	*i* P	**Pn**	**09 09 58.0**	**+0.9**
PB04	**IPOC Station P**	**2.98**	**296**	*e*P	**Pn**	**09 09 58.2**	**+1.0**
PB04				*e*S	**Sn**	**09 10 33.9**	**-1.7**
PB10	**IPOC Station P**	**3.04**	**272**	*e*Pn	**Pn**	**09 09 58.9**	**+1.2**
PB10	**IPOC Station P**	**3.04**	**272**	*e*P	**Pn**	**09 09 58.4**	**+0.7**
PB10				*e*S	**Sn**	**09 10 35.0**	**-1.5**
PB07	**IPOC Station P**	**3.10**	**308**	*i* P	**Pn**	**09 09 59.5**	**+0.9**
PB07				*i* S	**Sn**	**09 10 37.4**	**-0.8**
PB07	**IPOC Station P**	**3.10**	**308**	*e*P	**Pn**	**09 09 59.2**	**+0.6**
PB07				*e*S	**Sn**	**09 10 36.5**	**-1.7**
PB07				IAML		09 10 38.4	
	comp=E,444nm,0.2s						
PB01	**IPOC Station P**	**3.33**	**321**	*e*Pn	**Pn**	**09 10 02.4**	**+1.1**
PB01	**IPOC Station P**	**3.33**	**321**	*e*P	**Pn**	**09 10 02.2**	**+0.9**
PB01				*e*S	**Sn**	**09 10 41.6**	**-1.3**
PB01				IAML		09 10 44.5	
	comp=E,236nm,0.3s						
PB02	**IPOC Station P**	**3.38**	**313**	*e*P	**Pn**	**09 10 02.6**	**+0.7**
PB02				*e*S	**Sn**	**09 10 42.1**	**-1.9**
PB02				IAML		09 10 46.8	
	comp=E,382nm,0.2s						
PB08	**IPOC Station P**	**3.92**	**333**	⇑*i*P	**Pn**	**09 10 10.9**	**+2.0**
PB08				*e*S	**Sn**	**09 10 57.0**	**+0.4**
PB08				IAML		09 11 01.1	
	comp=E,133nm,0.3s						
GO01	**Chusmiza**	**4.36**	**335**	*e*Pn	**Pn**	**09 10 16.2**	**+1.7**
PB11	**IPOC Station P**	**4.48**	**329**	*e*Pn	**Pn**	**09 10 16.6**	**+0.9**
PB11	**IPOC Station P**	**4.48**	**329**	*e*P	**Pn**	**09 10 16.1**	**+0.5**
PB11				*e*S	**Sn**	**09 11 06.6**	**-2.3**
GO03	**Copiap**	**4.76**	**214**	*e*Pn	**Pn**	**09 10 19.4**	**+0.3**
MNMC	**Minye Minye**	**5.01**	**334**	*e*Pn	**Pn**	**09 10 24.1**	**+1.5**
MNMC				*e*S	**Sn**	**09 11 19.8**	**-1.4**
LCO	**Las Campanas**	**6.17**	**209**	*e*Pn	**Pn**	**09 10 38.3**	**+0.7**
GO04	**Tololo Observa**	**7.23**	**205**	*e*Pn	**Pn**	**09 10 50.1**	**-1.2**
LPAZ	**La Paz**	**7.38**	**353**	*e*Pn	**Pn**	**09 10 55.9**	**+2.2**

KRSC 12 09:30:26.2±1.5, 49°.92N×156°.86E, h33km±19km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.90**	**328**	*e*P	Pn	09 30 42.8	+0.2
SKR				*e*S	Sb	09 30 55.0	0.0
ALID	**Alaid**	**1.27**	**319**	*e*P	Pn	09 30 48.6	+0.8
ALID				*e*S	Sb	09 31 05.2	-0.5
PAU	**Pauzhetka**	**1.55**	**359**	*e*P	Pb	09 30 53.7	-0.6
PAU				*e*S	Sb	09 31 13.4	-0.1
KDTR	**Khodutka, Kamc**	**2.04**	**22**	*e*P	Pn	09 31 00.2	+2.0
KDTR				*e*S	Sb	09 31 25.5	-2.1
ASAK	**Asacha**	**2.55**	**14**	*e*P	Pn	09 31 06.9	+1.6
RUS	**Russkaya**	**2.72**	**22**	*e*S	Sb	09 31 43.5	-3.6
DALK	**Dalny**	**3.33**	**20**	*e*S	Sn	09 31 58.3	+3.9
UGLR	**Uglovaya**	**3.51**	**20**	*e*P	Pb	09 31 23.5	-4.2
AVH	**Avacha**	**3.55**	**19**	*e*P	Pn	09 31 23.4	+4.4
KOK	**Koryaka**	**3.55**	**17**	*e*P	Pn	09 31 23.7	+4.6
SDLR	**Sedlovina**	**3.59**	**20**	P	Pn	09 31 23.8	+4.1
KRX	**Arik**	**3.62**	**17**	*e*P	Pb	09 31 25.4	-4.1
SPN	**Mys Shipunski**	**3.74**	**31**	*e*P	Pn	09 31 24.7	+3.1
SPN				*e*S	Sn	09 32 08.3	+3.7

WEL 12 09:30:55.9±0.7, 33°S±5°×18°0E±1°0, h158km±19km, M4.2/18, mB4.6/6, MLv4.6/18, Mw(mB)3.8/6, Error ellipse: s-maj=0.0km s-min=0.0km az=112.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.37**	**26**	S	Sn	09 32 50.6	-1.5
MXZ	**Matakaoa Point**	**4.51**	**197**	P	Pn	09 32 06.2	+3.2
MXZ				S	Sn	09 32 57.4	+2.0
WMGZ	**Waiomatatini S**	**4.73**	**195**	P	Pn	09 32 06.9	+1.0
WMGZ				S	Sn	09 33 03.5	+2.9
GRZ	**Great Barrier**	**4.75**	**230**	S	Sn	09 33 03.1	+2.1
WSRZ	**White Island S**	**4.82**	**207**	S	Sn	09 33 07.0	+4.3
WIZ	**White Island**	**4.83**	**207**	P	Pn	09 32 07.8	+0.7
HAZ	**Te Kaha**	**4.83**	**201**	P	Pn	09 32 08.0	+0.8
HAZ				S	Sn	09 33 04.6	+1.7
PKGZ	**Pakihiroa**	**4.88**	**197**	P	Pn	09 32 07.8	0.0
PKGZ				S	Sn	09 33 05.8	+1.6
PUZ	**Puketiti**	**5.01**	**195**	P	Pn	09 32 09.3	-0.3
PUZ				S	Sn	09 33 08.3	+1.2
RUGZ	**Raukumara Rang**	**5.06**	**201**	P	Pn	09 32 10.3	0.0
RUGZ				S	Sn	09 33 08.7	+0.2
TWGZ	**Tauwhareparae**	**5.17**	**197**	P	Pn	09 32 12.7	+0.9
TWGZ				S	Sn	09 33 13.7	+2.6
WCZ	**Waipu Caves**	**5.33**	**238**	P	Pn	09 32 14.7	+0.9
OPRZ	**Ohinepanea**	**5.35**	**210**	P	Pn	09 32 16.0	+1.9
OPRZ				S	Sn	09 33 08.5	-6.7
CNGZ	**Carnagh Statio**	**5.42**	**194**	P	Pn	09 32 14.4	-0.5
MWZ	**Matawai**	**5.44**	**200**	P	Pn	09 32 14.1	-1.3
MWZ				S	Sn	09 33 17.1	-0.4
TKGZ	**Te Karaka**	**5.46**	**197**	P	Pn	09 32 13.8	-1.6
TKGZ				S	Sn	09 33 17.8	+0.1
URZ	**Urewera**	**5.51**	**204**	P	Pn	09 32 15.5	-0.6
URZ				S	Sn	09 33 18.2	-0.7
RIGZ	**Rimuhau**	**5.73**	**197**	P	Pn	09 32 20.5	+1.4
RIGZ				S	Sn	09 33 23.2	-1.0
RTZ	**Ruatahuna**	**5.87**	**203**	P	Pn	09 32 20.6	-0.5
RTZ				S	Sn	09 33 25.4	-2.3
SNGZ	**Shannon Statio**	**5.91**	**200**	P	Pn	09 32 21.1	-0.5
SNGZ				S	Sn	09 33 27.6	-1.0
PRRZ	**Plateau Road**	**5.98**	**208**	P	Pn	09 32 23.7	+1.3
KNZ	**Kokohu**	**6.05**	**197**	P	Pn	09 32 23.9	+0.6
KNZ				S	Sn	09 33 29.5	-2.3
ALRZ	**Allen Road**	**6.05**	**208**	P	Pn	09 32 24.0	+0.7
RAHZ	**Arahi**	**6.11**	**201**	P	Pn	09 32 23.6	-0.5
RAHZ				S	Sn	09 33 31.6	-1.8
MTHZ	**Maungataniwha**	**6.13**	**203**	P	Pn	09 32 24.3	-0.1
MTHZ				S	Sn	09 33 32.6	-1.2
MRHZ	**Matea Rd**	**6.26**	**206**	P	Pn	09 32 26.3	+0.1
MRHZ				S	Sn	09 33 33.6	-3.4
NMHZ	**Naumai**	**6.37**	**202**	P	Pn	09 32 25.6	-2.0
NMHZ				S	Sn	09 33 38.3	-1.2
ARHZ	**Aropaoanui**	**6.46**	**201**	P	Pn	09 32 28.2	-0.5
BKZ	**Black Stump Fm**	**6.53**	**204**	P	Pn	09 32 28.3	-1.5
BKZ				S	Sn	09 33 41.7	-1.7
HIZ	**Hauiti**	**6.68**	**217**	P	Pn	09 32 32.5	+0.8
MCHZ	**McNeill Hill**	**6.72**	**202**	P	Pn	09 32 30.0	-2.2
KWHZ	**Kaweka Forest**	**6.79**	**204**	P	Pn	09 32 32.3	-0.9
TWVZ	**Taurewa**	**6.86**	**211**	P	Pn	09 32 35.1	+0.9
COVZ	**Chateau Observ**	**6.92**	**210**	P	Pn	09 32 41.4	+6.4
BHHZ	**Black Hill Sta**	**6.97**	**205**	P	Pn	09 32 34.0	-1.6
KAHZ	**Kahuranaki**	**6.99**	**200**	P	Pn	09 32 35.6	-0.2
KRHZ	**Kereru**	**7.00**	**203**	P	Pn	09 32 33.4	-2.5
MOVZ	**Moawhango**	**7.01**	**207**	P	Pn	09 32 36.3	+0.1
VRZ	**Vera Road**	**7.21**	**214**	P	Pn	09 32 40.3	+1.7
PXZ	**Pawanui**	**7.21**	**199**	P	Pn	09 32 38.0	-0.7
PNHZ	**Pukenui**	**7.30**	**203**	P	Pn	09 32 38.0	-2.0
PRHZ	**Porangahau**	**7.49**	**200**	P	Pn	09 32 41.2	-1.3
TSZ	**Takapari Road**	**7.51**	**204**	P	Pn	09 32 39.1	-3.6
DVHZ	**Dannevirke**	**7.66**	**202**	P	Pn	09 32 43.0	-1.8
POWZ	**Post Office Ro**	**7.88**	**204**	P	Pn	09 32 45.0	-2.6
PRWZ	**Pori Road**	**7.96**	**202**	P	Pn	09 32 47.3	-1.3

JMA 12 09:57:26.4±0.2, 24°.81N×123°.38E, h22km, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.48**	**224**	P	Pb	09 57 36.1	-0.1
YOJ				*e*S	Sb	09 57 43.1	+0.2
IRIF	**Iriomote-Funau**	**0.57**	**146**	P	Pb	09 57 37.4	-0.4
IRIF				S	Sb	09 57 45.5	0.0
JKRS	**Kuro-shima**	**0.81**	**135**	P	Pb	09 57 41.4	-0.4
JIJ	**Ishigaki jima**	**0.82**	**122**	P	Pb	09 57 41.8	-0.2
JIJ				*e*S	Sb	09 57 52.2	-0.5
HATJ	**Hateruma jima**	**0.84**	**153**	P	Pb	09 57 42.2	-0.2
HATJ				*e*S	Sb	09 57 53.2	-0.1

TAP 12 09:57:53.4, 23°.80N×120°.96E, h12km, ML2.3, 1C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung** baz=198	**0.01**	**198**	⇓*i*P	Pg	09 57 55.6	0.0
SSLB				S	Sg	09 57 57.2	+0.2
SMLT	**Sun Moon Lake** baz=330	**0.10**	**326**	⇑*i*P	Pg	09 57 56.5	+0.2
SMLT				S	Sg	09 57 59.2	+0.7
WHYT	**Xinyi Township** baz=223	**0.14**	**223**	*i* P	Pg	09 57 57.3	+0.5
WHYT				*i* S	Sg	09 58 00.0	+0.7
VWDT	**VWDT** baz=99	**0.17**	**106**	⇓*i*P	Pb	09 57 58.0	-0.5
VWDT				*e*S	Sg	09 58 00.6	+0.6
WJS	**Zhushan** baz=276	**0.21**	**275**	P	Pb	09 57 59.2	0.0
WJS				S	Sg	09 58 03.6	+2.5
OWD	**Renai** baz=52	**0.25**	**53**	*i* P	Pg	09 57 59.0	+0.3
OWD				S	Sg	09 58 02.4	+0.1
WNT	**Mingjian** baz=288	**0.26**	**287**	*i* P	Pb	09 58 00.1	0.0
WNT				S	Sb	09 58 05.3	+0.7
YUS	**Yu-Shan** baz=171	**0.31**	**181**	P	Pb	09 58 00.6	-0.6
YUS				S	Sb	09 58 05.6	-0.8
ALS	**Alishan** baz=196	**0.32**	**206**	*i* P	Pg	09 58 00.1	0.0
ALS				S	Sb	09 58 06.3	-0.2
CHGB	**Renai** baz=45	**0.32**	**37**	*i* P	Pg	09 58 00.1	+0.1
CHGB				S	Sg	09 58 04.5	-0.1
CHN5	**Tsauling** baz=232	**0.33**	**232**	*i* P	Pb	09 58 00.9	-0.4
CHN5				S	Sb	09 58 07.0	+0.5
WGK	**Gukeng** baz=252	**0.38**	**252**	P	Pb	09 58 02.0	-0.1
WGK				S	Sb	09 58 09.1	+1.2
WDLH	**Douliu** baz=254	**0.40**	**254**	P	Pb	09 58 02.3	-0.1
WDLH				S	Sb	09 58 09.3	+0.8
TCU	**Taichung** baz=325	**0.43**	**323**	*e*S	Sb	09 58 09.6	+0.2
WHF	**Hehuan Shan** baz=46	**0.44**	**39**	*e*P	Pg	09 58 02.8	+0.6
WHF				S	Sg	09 58 09.0	+0.7
EGFH	**Guangfu** baz=106	**0.45**	**107**	P	Pg	09 58 02.7	+0.5
WHP	**Taichung City** baz=5.0	**0.47**	**359**	P	Pb	09 58 03.5	-0.3
WHP				*e*S	Sb	09 58 10.4	-0.4
TDCB	**Techi** baz=28	**0.48**	**22**	*e*P	Pg	09 58 03.1	+0.1
TDCB				S	Sg	09 58 09.0	-0.5
TWT	**Tachien** baz=29	**0.49**	**24**	*i* P	Pg	09 58 03.3	+0.2
TWT				S	Sg	09 58 09.1	-0.5
YULB	**Yu-li** baz=142	**0.51**	**143**	*i* P	Pg	09 58 03.8	+0.3
YULB				S	Sg	09 58 10.7	+0.4
HGSD	**Ruisui** baz=119	**0.53**	**126**	P	Pb	09 58 04.6	0.0
TWF1	**Yuli** baz=143	**0.55**	**145**	*i* P	Pb	09 58 04.5	-0.4
TWF1				S	Sb	09 58 12.1	-0.6
RLNB	**Erlin** baz=281	**0.56**	**279**	P	Pb	09 58 05.2	+0.1
RLNB				S	Sb	09 58 14.0	+1.0
CHN4	**Tsaushan** baz=217	**0.56**	**217**	*e*P	Pb	09 58 05.4	+0.2
TWQ1	**Liyutan** baz=330	**0.57**	**343**	P	Pb	09 58 06.0	+0.7
TWQ1				*e*S	Sb	09 58 14.2	+0.7
CHY	**Chiayi** baz=238	**0.58**	**238**	P	Pb	09 58 05.5	+0.1
CHY				*e*S	Sb	09 58 14.4	+0.8
TPUB	**Ta-pu** baz=211	**0.58**	**211**	P	Pb	09 58 05.7	+0.1
TPUB				S	Sb	09 58 14.6	+0.8
ELDTW	**Lidau** baz=174	**0.61**	**175**	P	Pg	09 58 05.1	-0.2
ELDTW				*e*S	Sb	09 58 14.6	-0.2
ETLH	**Xiulin Townshi** baz=45	**0.62**	**50**	*i* P	Pg	09 58 05.8	+0.2
NSY	**Sanyi** baz=331	**0.64**	**344**	*e*P	Pb	09 58 06.4	-0.1
NSY				*e*S	Sn	09 58 17.1	-1.3
WTP	**Ta-pu** baz=209	**0.64**	**210**	P	Pb	09 58 06.4	-0.1
WTP				S	Sb	09 58 16.6	+1.3
STYT	**Tauyuan** baz=190	**0.66**	**196**	P	Pb	09 58 06.8	-0.2
STYT				S	Sb	09 58 16.2	+0.1
TWK	**Hsinying** baz=218	**0.69**	**219**	P	Pb	09 58 07.3	-0.1
TWK				S	Sb	09 58 18.0	+1.2
CHN1	**Nanshi** baz=212	**0.73**	**213**	P	Pb	09 58 08.2	+0.1
CHN1				*i* S	Sb	09 58 19.1	+1.0
NNSB	**Datong** baz=36	**0.73**	**32**	P	Pg	09 58 07.3	-0.4
NNSB				*e*S	Sg	09 58 17.0	-0.3
NNS	**Nan Shan** baz=36	**0.74**	**31**	*e*P	Pb	09 58 08.1	-0.2
NNS				*e*S	Sg	09 58 17.4	-0.1
SLGT	**Liugui** baz=199	**0.85**	**200**	*e*S	Sn	09 58 23.3	-0.4
NSK	**Sanguang** baz=24	**0.94**	**23**	*e*P	Pg	09 58 11.5	-0.1
NDT	**Datong Townshi** baz=33	**0.94**	**32**	*e*P	Pn	09 58 12.2	-0.3
NDT				*e*S	Sb	09 58 24.5	+0.3
YHNB	**Yeheng** baz=24	**0.94**	**24**	P	Pg	09 58 11.0	-0.7
YHNB				*e*S	Sb	09 58 24.2	-0.1
ENA	**Nanau** baz=49	**0.95**	**49**	*e*P	Pn	09 58 12.3	-0.3
NWLT	**Wulai** baz=27	**1.09**	**27**	*e*P	Pb	09 58 14.1	-0.2
NWLT				*e*S	Sb	09 58 28.3	-0.1
TWE	**Neicheng** baz=46	**1.12**	**35**	*e*P	Pg	09 58 15.0	0.0
PHUB	**P'eng-hu** baz=258	**1.30**	**258**	*e*P	Pn	09 58 16.4	-1.0
PHUB				*e*S	Sn	09 58 35.0	+0.2
WDGT	**Dungji** baz=247	**1.31**	**246**	*e*P	Pn	09 58 17.0	-0.5

TAP 12 09:58:00.6, 23°.84N×121°.53E, h18km, ML2.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	**Shoufeng** baz=44	**0.09**	**44**	P	Pg	09 58 03.9	-0.4
ENLB				S	Sg	09 58 08.1	+1.4
ESL	**Shilin** baz=252	**0.10**	**255**	*e*S	Sg	09 58 07.9	+1.3
HWA	**Hwalien** baz=28	**0.15**	**25**	P	Pg	09 58 05.6	+0.7
HWA				*e*S	Sg	09 58 09.1	+1.3
EGFH	**Guangfu** baz=209	**0.19**	**210**	*e*P	Pg	09 58 05.8	+0.3
EGFH				S	Sg	09 58 09.5	+0.8
TWD	**Chiawan** baz=15	**0.25**	**13**	P	Pb	09 58 06.9	+0.3
TWD				S	Sb	09 58 11.7	+1.2
NACB	**Ninganchiao** baz=9.0	**0.34**	**10**	*e*P	Pb	09 58 08.2	0.0
NACB				S	Sb	09 58 13.5	+0.3
OWD	**Renai** baz=289	**0.35**	**290**	P	Pb	09 58 08.6	+0.2
OWD				S	Sb	09 58 14.0	+0.4
VWDT	**VWDT** baz=256	**0.37**	**257**	*e*P	Pb	09 58 09.1	+0.4
VWDT				*e*S	Sb	09 58 14.5	+0.4
ETLH	**Xiulin Townshi** baz=352	**0.37**	**353**	*e*S	Sb	09 58 14.4	+0.1
WHF	**Hehuan Shan** baz=321	**0.39**	**321**	*e*S	Sb	09 58 15.6	+0.4
CHGB	**Renai** baz=303	**0.40**	**304**	*e*P	Pb	09 58 09.8	+0.6
CHGB				*e*S	Sb	09 58 16.3	+1.2
YULB	**Yu-li** baz=205	**0.49**	**206**	*e*S	Sb	09 58 18.8	+1.1
TWT	**Tachien** baz=320	**0.53**	**322**	*e*S	Sb	09 58 20.3	+1.5
SSLB	**Suanglung** baz=264	**0.53**	**265**	*e*S	Sb	09 58 20.1	+1.2
TDCB	**Techi** baz=320	**0.54**	**320**	*e*S	Sb	09 58 20.4	+1.3
SMLT	**Sun Moon Lake** baz=274	**0.58**	**275**	P	Pb	09 58 12.8	+0.5
SMLT				*e*S	Sb	09 58 21.4	+1.1
NNSB	**Datong** baz=346	**0.60**	**347**	*e*P	Pb	09 58 13.2	+0.5
NNSB				*e*S	Sb	09 58 21.4	+0.5
ENA	**Nanau** baz=18	**0.62**	**18**	*e*P	Pb	09 58 12.8	0.0
ENA				S	Sn	09 58 23.1	-0.9
NNS	**Nan Shan** baz=346	**0.62**	**346**	*e*P	Pb	09 58 13.4	+0.5
NNS				S	Sb	09 58 21.6	+0.3
YUS	**Yu-Shan** baz=236	**0.64**	**237**	*e*P	Pb	09 58 13.8	+0.3
YUS				*e*S	Sb	09 58 22.8	+0.6
WHYT	**Xinyi Township** baz=257	**0.64**	**257**	*e*P	Pn	09 58 14.1	-0.7
WHYT				*e*S	Sn	09 58 23.4	-1.2
CHKT	**Chengkung** baz=191	**0.75**	**192**	*e*S	Sg	09 58 26.2	+0.8
NDT	**Datong Townshi** baz=358	**0.76**	**359**	*e*P	Pn	09 58 16.2	-0.3
NDT				*e*S	Sn	09 58 27.1	-0.4
CHN5	**Tsauling** baz=252	**0.82**	**253**	*e*S	Sn	09 58 29.3	+0.2
TWC	**Suao** baz=21	**0.82**	**21**	*e*P	Pg	09 58 16.8	+0.1
TWC				*e*S	Sn	09 58 28.8	-0.2
YHNB	**Yeheng** baz=350	**0.84**	**350**	*e*S	Sg	09 58 28.8	+0.6
NSK	**Sanguang** baz=349	**0.85**	**349**	*e*S	Sg	09 58 28.9	+0.4
TWE	**Neicheng** baz=8.0	**0.89**	**8**	*e*P	Pg	09 58 18.0	+0.1
EOS1	**EOS1** baz=37	**0.89**	**37**	*e*P	Pn	09 58 18.6	+0.3
EOS1				*e*S	Sn	09 58 31.1	+0.4
NWLT	**Wulai** baz=358	**0.94**	**358**	*e*P	Pb	09 58 18.2	-0.2
NWLT				*e*S	Sg	09 58 31.4	+0.2
STYT	**Tauyuan** baz=226	**0.98**	**227**	*e*S	Sn	09 58 33.2	+0.2
TPUB	**Ta-pu** baz=237	**0.99**	**237**	*e*S	Sn	09 58 33.8	+0.7
WTP	**Ta-pu** baz=234	**1.03**	**235**	*e*S	Sn	09 58 34.5	+0.3
TWK	**Hsinying** baz=238	**1.11**	**240**	*e*S	Sg	09 58 37.2	+0.3
CHN1	**Nanshi** baz=234	**1.13**	**235**	*e*S	Sg	09 58 37.7	+0.4

*NEIC **12** 10:05:40.2±0.0, 18°.49N×68°.38W, h161km, MD3.7(RSPR), After RSPR.*

RSPR 12 10:05:40.2, 18°.49N×68°.38W, h161km±2km, MD3.7/9, 1C-10D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.03**	**4**	⇓*e*P	Pn	10 06 01.3	-0.3
PCDR	**Punta Cana, DR**	**0.03**	**4**	*e*Pn	Pn	10 06 01.7	0.0
AGP	**Aguadilla**	**1.18**	**94**	*e*Pn	Pn	10 06 08.8	+1.2
AGPR	**Aguadilla, PR**	**1.21**	**91**	*e*S	Sn	10 06 29.5	+0.6
AGPR	**Aguadilla, PR**	**1.21**	**91**	⇓*e*P	Pn	10 06 08.5	+0.6
MPR	**Mayaguez**	**1.21**	**103**	*e*Pn	Pn	10 06 07.8	-0.1
LSP	**Las Mesas**	**1.27**	**104**	*e*S	Sn	10 06 30.5	+0.4
LSP	**Las Mesas**	**1.27**	**104**	⇓*e*P	Pn	10 06 08.2	-0.2
LSP	**Las Mesas**	**1.27**	**104**	*e*Pn	Pn	10 06 08.2	-0.2
LSP				*e*Sn	Sn	10 06 30.5	+0.4
CRPR	**Cabo Rojo, PR**	**1.30**	**111**	⇑*e*P	Pn	10 06 08.0	-0.7
CRPR	**Cabo Rojo, PR**	**1.30**	**111**	*e*Pn	Pn	10 06 08.7	0.0
MLPR	**Magueyes Islan**	**1.37**	**112**	*e*S	Sn	10 06 31.5	-0.3
MLPR	**Magueyes Islan**	**1.37**	**112**	⇓*e*P	Pn	10 06 08.7	-0.6
SDD	**Santo Domingo**	**1.45**	**269**	*e*Pn	Pn	10 06 07.9	-2.2
SDD				*e*Sn	Sn	10 06 30.5	-2.6
AOPR	**Arecibo Observ**	**1.55**	**95**	⇓*e*P	Pn	10 06 11.5	+0.3

AOPR	**Arecibo Observ**	**1.55**	**95**	*e*S	Sn	10 06 35.5	+0.5
AOPR	**Arecibo Observ**	**1.55**	**95**	*e*Pn	Pn	10 06 11.7	+0.5
AOPR				*e*Sn	Sn	10 06 36.5	+1.5
OBIP	**Obispado Ponce**	**1.75**	**104**	⇓*i*P	Pn	10 06 12.9	-0.3
OBIP	**Obispado Ponce**	**1.75**	**104**	*e*S	Sn	10 06 38.8	+0.2
OBIP	**Obispado Ponce**	**1.75**	**104**	*e*Pn	Pn	10 06 13.2	0.0
OBIP				*e*Sn	Sn	10 06 38.5	-0.1
EMPR	**Esperanza - Ma**	**1.76**	**90**	⇓*e*P	Pn	10 06 13.7	+0.4
EMPR	**Esperanza - Ma**	**1.76**	**90**	*e*S	Sn	10 06 39.1	+0.3
EMPR	**Esperanza - Ma**	**1.76**	**90**	*e*Pn	Pn	10 06 13.5	+0.1
EMPR				*e*Pn	Pn	10 06 13.7	+0.4
EMPR				*e*Sn	Sn	10 06 39.1	+0.3
EMPR				*e*Sn	Sn	10 06 43.7	+4.9
CELP	**Cerrillos**	**1.76**	**103**	⇓*e*P	Pn	10 06 13.1	-0.3
CELP				*e*S	Sn	10 06 38.1	-0.8
CELP	**Cerrillos**	**1.76**	**103**	*e*Pn	Pn	10 06 13.1	-0.3
CELP				*e*Sn	Sn	10 06 38.1	-0.8
ICMP	**Isla Caja de M**	**1.86**	**108**	*e*Pn	Pn	10 06 14.5	0.0
ICMP				*e*Sn	Sn	10 06 40.5	-0.4
SJG	**San Juan**	**2.15**	**100**	*e*Pn	Pn	10 06 17.7	-0.1
SJG				*e*Sn	Sn	10 06 46.8	0.0
IGPR	**InterUniversit**	**2.23**	**103**	⇓*e*P	Pn	10 06 18.4	-0.3
IGPR	**InterUniversit**	**2.23**	**103**	*e*S	Sn	10 06 48.8	+0.5
PDPR	**Patillas Dam,**	**2.29**	**101**	⇓*e*P	Pn	10 06 19.2	-0.2
PDPR	**Patillas Dam,**	**2.29**	**101**	*e*S	Sn	10 06 49.9	+0.3
CBYP	**Canovanas**	**2.41**	**95**	*e*Pn	Pn	10 06 20.8	-0.1
CBYP				*e*Sn	Sn	10 06 51.3	-0.9
HUMP	**Col San Antoni**	**2.43**	**98**	*e*Pn	Pn	10 06 20.8	-0.3
HUMP				*e*Sn	Sn	10 06 51.9	-0.7
MTP	**Monte Pirata**	**2.72**	**98**	*e*Pn	Pn	10 06 25.1	+0.5
MTP				*e*Sn	Sn	10 06 58.6	-0.2
SDDR	**Presa de Saban**	**2.80**	**281**	*e*Pn	Pn	10 06 24.3	-1.3
CUPR	**Culebra, Puert**	**2.95**	**93**	*e*Pn	Pn	10 06 27.1	-0.3
CUPR				*e*Sn	Sn	10 07 02.3	-1.7
GRTK	**Grand Turk**	**3.97**	**320**	*e*Pn	Pn	10 06 38.8	-1.5
GRTK				*e*Sn	Sn	10 07 24.4	-2.8

MEX 12 10:17:25.8±0.3, 14°.02N×92°.48W, h52km±50km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.91**	**13**	*e*P	Pn	10 17 40.8	-1.6
THIG				*i*S	Sn	10 17 55.9	+1.3
PCIG		**1.82**	**337**	*e*P	Pn	10 17 53.2	-1.6
CCIG	**Comitan**	**2.28**	**8**	*e*P	Pn	10 18 03.5	+2.4
CCIG				*i*S	Sn	10 18 34.9	+6.7

IDC 12 10:26:16.0±3.0, 4°.32S×127°.54E, h0km, mb3.0/2, mb1 3.4/3, mb1mx3.2/37, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=370.8km s-min=28.3km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.89**	**157**	Pn	Pn	10 30 13.7	-0.3
	0.1nm,0.3s,baz=333,slow=12,SNR=3.9						
ASAR	**Alice Springs**	**20.20**	**163**	P	P	10 30 52.6	+0.1
	0.2nm,0.4s,baz=348,slow=10,SNR=6.1						
MKAR	**Makanchi Array**	**64.66**	**327**	P	P	10 36 55.7	0.0
	0.1nm,0.3s,baz=145,slow=6.3,SNR=2.9						

*ZUR **12** 10:41:02.8, 47°.30N×9°.70E, h-1km, MLh1.8/11, Error ellipse: s-maj=1.3km s-min=0.6km az=246.0*
*ISCJB **12** 10:41:03.5±0.3, 47°.31N±0°.03×9°.70E±0°.02, h3km±7km, Error ellipse: s-maj=4.6km s-min=2.1km az=13.4*
*VIE **12** 10:41:03.6±0.4, 47°.31N×9°.66E, h2km±4km, mb1.8/6, ml2.5/8, Error ellipse: s-maj=3.3km s-min=1.7km az=171.0, felt 3-4 ems98 at Weiler / Vorarlberg*
*BGR **12** 10:41:03.8±0.3, 47°.29N×9°.72E, h10km, ML2.0/9, Error ellipse: s-maj=4.4km s-min=2.2km az=2.0*
BGR Felt IV EMS.
*STR **12** 10:41:14.8±0.9, 48°.N±5°.×°.±°., h0km, M1.8/6, MLv1.8/6*

ISC 12 10:41:04.0±1.0, 47°.30N±0°.03×9°.70E±0°.02, h4km±8km, n36, σ0°.88/57, 3C-2D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.12**	**95**	*e*Pg	**Pg**	**10 41 05.8**	**-0.7**
	58nm,0.1s						
DAVA				*i*Sg	**Sg**	**10 41 08.3**	**0.0**
	514nm,0.2s						
DAVA	**Damuels**	**0.12**	**95**	⇓Pg	**Pg**	**10 41 05.8**	**-0.7**
DAVA				Sg	**Sg**	**10 41 08.2**	**0.0**
DAVA	**Damuels**	**0.12**	**95**	*e*Pg	**Pg**	**10 41 05.9**	**-0.7**
LIENZ	**Kamor/St.Gall**	**0.14**	**269**	⇑Pg	**Pg**	**10 41 05.8**	**-1.0**
SBUA2	**Buchs, Altendo**	**0.21**	**228**	Pg	**Pg**	**10 41 07.2**	**-0.8**
SGT05	**Eggersriet**	**0.22**	**311**	⇓Pg	**Pg**	**10 41 08.1**	**-0.2**
SGT05				Sg	**Sg**	**10 41 12.3**	**+1.2**
SBUB	**Buchserberg Ma**	**0.23**	**230**	Pg	**Pg**	**10 41 07.8**	**-0.7**
SGT00	**Sennhlsen**	**0.29**	**296**	⇑Pg	**Pg**	**10 41 09.6**	**0.0**
SGT00				Sg	**Sg**	**10 41 14.5**	**+1.0**
PLONS	**Plons/SG**	**0.33**	**221**	Pg	**Pg**	**10 41 09.6**	**-0.7**
PLONS	**Plons/SG**	**0.33**	**221**	*e*Pg	**Pg**	**10 41 09.9**	**-0.4**
PLONS				*e*Sg	**Sg**	**10 41 15.1**	**+0.4**
SGT03	**Degersheim**	**0.35**	**282**	Sg	**Sg**	**10 41 16.3**	**+1.1**
SGT02	**Zihlschlacht**	**0.37**	**305**	⇑Pg	**Pg**	**10 41 11.2**	**0.0**
SGT02				Sg	**Sg**	**10 41 17.3**	**+1.2**
DAVOX	**Davos/Dischmat**	**0.53**	**166**	Pg	**Pg**	**10 41 13.7**	**-0.5**
DAVOX				Sg	**Sg**	**10 41 22.3**	**+1.2**
WILA	**Wila**	**0.55**	**283**	*e*Pg	**Pg**	**10 41 14.5**	**0.0**
WILA				*e*Sg	**Sg**	**10 41 22.8**	**+1.1**
FETA	**Feichten**	**0.76**	**111**	Pg	**Pg**	**10 41 18.4**	**-0.1**
	1.1nm,0.3s						
FETA				Sg	**Sb**	**10 41 29.6**	**-0.9**
	3.7nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**0.78**	**150**	Pg	**Pg**	**10 41 18.5**	**-0.5**
SLE	**Schleitheim**	**0.94**	**300**	Pg	**Pg**	**10 41 21.4**	**-0.6**
SLE	**Schleitheim**	**0.94**	**300**	*e*Pg	**Pg**	**10 41 21.5**	**-0.6**
SLE				*e*Pn	**Pb**	**10 41 22.8**	**0.0**
SLE				*e*Sg	**Sg**	**10 41 34.2**	**0.0**
MOTA	**Moosalm**	**0.96**	**87**	Pg	**Pb**	**10 41 23.0**	**-0.2**
	3.5nm,0.1s,SNR=7.0						
MOTA				*i*Sg	**Sb**	**10 41 37.4**	**+1.1**
	11nm,0.1s						
SQTA	**Sankt Quirin**	**1.03**	**94**	*e*Pg	**Pn**	**10 41 25.6**	**+0.3**
	10nm,0.1s,SNR=6.7						
SQTA				Sg	**Sb**	**10 41 38.4**	**0.0**
	13nm,0.1s,SNR=4.8						
SULZ	**Cheisacher**	**1.10**	**283**	*e*Sg	**Sb**	**10 41 40.4**	**+0.1**
WATA	**Walderalm**	**1.28**	**88**	*e*Pg	**Pn**	**10 41 29.7**	**+0.9**
	3.2nm,0.1s						
WATA				*e*Sg	**Sn**	**10 41 47.2**	**+0.8**
	6.5nm,0.2s						
WTTA	**Wattenberg**	**1.32**	**91**	*e*Pg	**Pb**	**10 41 30.1**	**+0.7**
	3.1nm,0.2s,SNR=5.2						
WTTA				Sg	**Sn**	**10 41 49.3**	**+1.8**
	13nm,0.3s,SNR=9.9						
BALST	**Balsthal**	**1.36**	**272**	*e*Pg	**Pb**	**10 41 30.1**	**+0.1**
BALST				*e*Sg	**Sn**	**10 41 48.3**	**-0.1**
KIZ	**Kirchzarten**	**1.37**	**299**	Pg	**Pn**	**10 41 29.4**	**-0.5**
FUR	**Furstenfeldbru**	**1.38**	**50**	*e*Sg	**Sg**	**10 41 47.6**	**-0.5**
BFO	**Black Forest**	**1.39**	**319**	*e*Pg	**Pn**	**10 41 30.0**	**-0.1**
BFO				*e*Sg	**Sb**	**10 41 48.3**	**-0.2**
WLS	**Welschbruch**	**1.93**	**306**	Pn	**Pb**	**10 41 40.1**	**+0.3**
ECH	**Echery**	**1.94**	**299**	Pn	**Pb**	**10 41 39.9**	**-0.1**
ECH				Sg	**Sn**	**10 41 58.9**	**-3.8**
ECH	**Echery**	**1.94**	**299**	*e*Sg	**Sb**	**10 42 05.2**	**+0.6**
LOMF	**Lomont**	**1.95**	**273**	Pn	**Pb**	**10 41 40.6**	**+0.5**
ABTA	**Abfaltersbach**	**2.00**	**105**	Pg	**Pg**	**10 41 41.8**	**-0.5**
	3.6nm,0.5s						
ABTA				*e*Sg	**Sg**	**10 42 08.8**	**+0.5**
	5.4nm,0.4s,SNR=5.2						
CHMF	**Charmoille**	**2.08**	**270**	Pn	**Pb**	**10 41 42.2**	**+0.1**
RJOB	**Jochberg**	**2.15**	**77**	*e*Sg	**Sg**	**10 42 11.9**	**-1.0**
KBA	**Koelnbreinsper**	**2.50**	**94**	*e*Pg	**Pb**	**10 41 50.2**	**+0.7**
	2.0nm,0.3s						
KBA				Sg	**Sg**	**10 42 23.1**	**-1.0**
	3.5nm,0.3s						
KBA	**Koelnbreinsper**	**2.50**	**94**	*e*Pg	**Pb**	**10 41 50.1**	**+0.7**
KBA				*e*Sg	**Sg**	**10 42 23.0**	**-1.1**

MEX 12 10:56:04.9±0.7, 16°.10N×97°.01W, h31km±9km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.93**	**110**	*i*P	Pn	10 56 19.8	-1.9
HUIG				*i*S	Sn	10 56 30.9	-3.1
VHO	**Vista Hermosa**	**1.01**	**15**	*e*P	Pn	10 56 20.7	-2.4
VHO				*e*S	Sn	10 56 33.4	-2.9

IDC 12 10:59:10.8±2.3, 3°.33S×102°.38W, h0km, mb3.3/5, mb1 3.7/5, mb1mx3.6/26, mbtmp3.3/5, MS3.3/9, Ms1 3.3/9, ms1mx3.2/15, Error ellipse: s-maj=183.9km s-min=29.9km az=68.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**21.60**	**20**	LR	LR	11 10 43.9	
	comp=Z,61nm,21.3s,baz=218,slow=32						
APG	**El Apazote**	**21.71**	**33**	LR	LR	11 10 33.8	
	comp=Z,134nm,21.6s,baz=138,slow=32						
JTS	**Las Juntas de**	**22.01**	**52**	LR	LR	11 10 33.0	
	comp=Z,158nm,19.7s,baz=316,slow=31						
ATAH	**Atahualpa**	**24.18**	**100**	LR	LR	11 11 08.0	
	comp=Z,46nm,19.6s,baz=280,slow=30						
NNA	**Nana**	**26.70**	**110**	LR	LR	11 12 35.4	
	comp=Z,79nm,18.3s,baz=280,slow=30						
LPIG	**La Paz**	**28.34**	**345**	LR	LR	11 13 51.9	
	comp=Z,40nm,21.1s,baz=194,slow=31						
ROSC	**El Rosal**	**29.18**	**74**	LR	LR	11 14 47.2	
	comp=Z,52nm,18.6s,baz=44,slow=32						
TXAR	**Lajitas Array**	**32.51**	**358**	P	P	11 05 44.0	+0.4
	0.1nm,0.5s,baz=188,slow=12,SNR=2.5						
TXAR				LR	LR	11 17 18.9	
	comp=Z,56nm,21.2s,baz=0.0,slow=34						
NVAR	**Mina Array Bea**	**44.09**	**342**	P	P	11 07 21.6	+0.4
	0.2nm,0.6s,baz=173,slow=8.2,SNR=2.2						
PLCA	**Paso Flores**	**46.99**	**147**	P	P	11 07 44.0	0.0
	0.5nm,0.6s,baz=315,slow=18,SNR=3.1						
PLCA				LR	LR	11 22 12.4	
	comp=Z,47nm,21.0s,baz=226,slow=29						
YKA	**Yellowknife Ar**	**66.31**	**354**	P	P	11 10 00.4	-0.5
	0.8nm,0.8s,baz=162,slow=6.2,SNR=4.7						
ILAR	**Eielson Array**	**75.35**	**342**	P	P	11 10 55.6	-0.2
	0.3nm,0.7s,baz=142,slow=6.5,SNR=4.4						
H11N3	**WAKE ISLAND Hy**	**91.78**	**290**	T	T	12 53 43.0	
	baz=94,slow=75,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	**91.79**	**290**	T	T	12 53 45.5	
	baz=94,slow=75,SNR=5.6						
H11N1	**WAKE ISLAND Hy**	**91.80**	**290**	T	T	12 53 47.0	
	baz=94,slow=75,SNR=5.2						

KRSC 12 11:15:01.6±0.5, 59°.84N×163°.97E, h31km±13km, ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSR	**Ossora**	**0.75**	**219**	*e*P	Pn	11 15 15.2	-0.8
OSSR				*e*S	Sn	11 15 27.3	+1.0
TILK	**Tilichiki**	**1.25**	**60**	*e*P	Pn	11 15 23.2	+0.4
TILK				*e*S	Sb	11 15 41.6	+1.5
KMSK	**Kamenskaya**	**2.85**	**21**	*e*P	Pn	11 15 47.8	+3.0
KMSK				*e*S	Sb	11 16 22.2	-3.8
BKI	**Bering**	**4.77**	**166**	*e*P	Pn	11 16 15.7	+4.5

*ISCJB **12** 11:20:41.5±0.5, 23°.95N±0°.02×122°.63E±0°.02, h27km±4km, Error ellipse: s-maj=3.8km s-min=2.4km az=160.9*
*JMA **12** 11:20:41.8±0.1, 24°.06N×122°.57E, h32km, M1.9*
*TAP **12** 11:20:41.1, 23°.98N×122°.69E, h45km±1km, ML2.8, D*

ISC 12 11:20:41.4±1.1, 23°.96N±0°.03×122°.64E±0°.02, h28km±12km, n61, σ0°.94/114, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.56**	**30**	P	**Pb**	**11 20 52.3**	**-0.5**
JYNG				*e*S	**Sb**	**11 20 59.6**	**-1.0**
YOJ	**Yonaguni jima**	**0.60**	**34**	P	**Pb**	**11 20 53.1**	**-0.5**
	baz=30						
YOJ				S	**Sn**	**11 21 01.7**	**-1.2**
	baz=30						
YOJ	**Yonaguni jima**	**0.60**	**34**	P	**Pb**	**11 20 53.0**	**-0.5**
YOJ				S	**Sb**	**11 21 01.2**	**-0.5**
EOS1	**EOS1**	**0.75**	**322**	P	**Pb**	**11 20 56.0**	**+0.1**
	baz=318						
EOS1				*e*S	**Sb**	**11 21 07.6**	**+1.9**
	baz=318						
ENA	**Nanau**	**0.94**	**300**	P	**Pn**	**11 20 58.7**	**-0.1**
	baz=298						
ENA				S	**Sb**	**11 21 12.5**	**+1.2**
	baz=298						
ENLB	**Shoufeng**	**0.95**	**267**	*e*P	**Pn**	**11 20 58.2**	**-0.6**
	baz=258						
ENLB				*e*S	**Sn**	**11 21 11.4**	**-0.1**
	baz=258						
TWD	**Chiawan**	**0.96**	**277**	*e*P	**Pn**	**11 20 58.6**	**-0.4**
	baz=277						
TWD				*e*S	**Sn**	**11 21 11.4**	**-0.4**
	baz=277						
TWC	**Suao**	**0.97**	**312**	P	**Pn**	**11 20 59.0**	**-0.1**
	baz=310						
TWC				S	**Sb**	**11 21 12.8**	**+0.8**
	baz=310						
NACB	**Ninganchiao**	**0.98**	**283**	P	**Pn**	**11 20 58.7**	**-0.6**
	baz=271						
NACB				S	**Sn**	**11 21 11.7**	**-0.5**
	baz=271						
IRIF	**Iriomote-Funau**	**1.06**	**69**	P	**Pb**	**11 21 01.5**	**+0.3**
IRIF				*e*S	**Sb**	**11 21 15.6**	**+0.8**
HATJ	**Hateruma jima**	**1.07**	**85**	*e*S	**Sb**	**11 21 16.7**	**+1.7**
ETLH	**Xiulin Townshi**	**1.08**	**283**	P	**Pn**	**11 21 00.4**	**-0.5**
	baz=282						
ETLH				S	**Sn**	**11 21 14.4**	**-0.6**
	baz=282						
ESL	**Shilin**	**1.11**	**263**	*e*P	**Pn**	**11 21 00.5**	**-0.7**
	baz=262						
ESL				S	**Sn**	**11 21 14.5**	**-1.1**
	baz=262						
EGFH	**Guangfu**	**1.15**	**256**	*e*P	**Pn**	**11 21 01.2**	**-0.4**
	baz=246						
EGFH				S	**Sn**	**11 21 16.5**	**+0.1**
	baz=246						
TWE	**Neicheng**	**1.17**	**311**	P	**Pn**	**11 21 02.0**	**+0.1**
	baz=310						
TWE				*e*S	**Sb**	**11 21 17.7**	**+0.1**
	baz=310						
HGSD	**Ruisui**	**1.21**	**247**	P	**Pn**	**11 21 01.6**	**-0.8**
	baz=248						
HGSD				*e*S	**Sn**	**11 21 17.2**	**-0.6**
	baz=248						
NDT	**Datong Townshi**	**1.21**	**302**	P	**Pn**	**11 21 02.7**	**+0.2**
	baz=291						
NDT				*e*S	**Sb**	**11 21 19.3**	**+0.4**
	baz=291						
NNSB	**Datong**	**1.24**	**292**	P	**Pn**	**11 21 02.8**	**-0.1**
	baz=291						
NNSB				S	**Sn**	**11 21 18.8**	**0.0**
	baz=291						
NNS	**Nan Shan**	**1.25**	**293**	*e*P	**Pn**	**11 21 02.6**	**-0.6**
	baz=292						
NNS				*e*S	**Sn**	**11 21 19.7**	**+0.6**
	baz=292						
WHF	**Hehuan Shan**	**1.27**	**279**	P	**Pn**	**11 21 03.3**	**-0.4**
	baz=278						
WHF				S	**Sn**	**11 21 19.8**	**-0.2**
	baz=278						
JKRS	**Kuro-shima**	**1.28**	**77**	P	**Pb**	**11 21 05.4**	**+0.5**
JKRS				*e*S	**Sb**	**11 21 22.2**	**+1.2**
EHY	**Hungye**	**1.29**	**250**	P	**Pn**	**11 21 03.3**	**-0.2**
	baz=250						
EHY				S	**Sn**	**11 21 19.6**	**-0.3**
	baz=250						
NWLT	**Wulai**	**1.32**	**308**	P	**Pn**	**11 21 03.7**	**-0.3**
	baz=308						
NWLT				*e*S	**Sn**	**11 21 21.4**	**+0.8**
	baz=308						
OWD	**Renai**	**1.34**	**270**	*i*P	**Pn**	**11 21 04.2**	**-0.2**
	baz=281						
OWD				S	**Sn**	**11 21 20.7**	**-0.7**
	baz=281						
CHGB	**Renai**	**1.34**	**275**	P	**Pn**	**11 21 04.5**	**0.0**
	baz=274						
CHGB				S	**Sn**	**11 21 21.3**	**-0.2**
	baz=274						
YHNB	**Yeheng**	**1.35**	**302**	P	**Pn**	**11 21 04.2**	**-0.3**
	baz=301						
YHNB				*e*S	**Sn**	**11 21 22.6**	**+1.0**
	baz=301						
NWF	**Wu-fen Shan**	**1.35**	**325**	*e*P	**Pn**	**11 21 04.3**	**-0.2**
	baz=324						
NWF				*e*S	**Sn**	**11 21 21.4**	**-0.2**
	baz=324						
WFSB	**Wu-fen Shan**	**1.35**	**325**	*e*P	**Pn**	**11 21 04.4**	**-0.1**
	baz=324						
WFSB				*e*S	**Sn**	**11 21 21.4**	**0.0**
	baz=324						
YULB	**Yu-li**	**1.35**	**246**	*i*P	**Pn**	**11 21 04.4**	**-0.1**
	baz=237						
YULB				S	**Sn**	**11 21 20.6**	**-0.9**
	baz=237						
NSK	**Sanguang**	**1.37**	**302**	P	**Pn**	**11 21 05.0**	**+0.3**
	baz=301						
NSK				*e*S	**Sn**	**11 21 22.7**	**+0.8**
	baz=301						
TWF1	**Yuli**	**1.37**	**244**	P	**Pn**	**11 21 04.6**	**-0.1**
	baz=236						
TWF1				*e*S	**Sn**	**11 21 21.7**	**-0.3**
	baz=236						
VWDT	**VWDT**	**1.39**	**262**	P	**Pn**	**11 21 05.1**	**+0.2**
	baz=262						
VWDT				S	**Sn**	**11 21 22.3**	**+0.1**
	baz=262						
JIJ	**Ishigaki jima**	**1.43**	**73**	P	**Pb**	**11 21 06.5**	**-1.0**
JIJ				*e*S	**Sb**	**11 21 25.3**	**0.0**
CHKT	**Chengkung**	**1.45**	**234**	*e*P	**Pn**	**11 21 04.8**	**-0.9**
	baz=225						
CHKT				S	**Sn**	**11 21 22.1**	**-1.7**
	baz=225						
TATO	**Taipei**	**1.46**	**314**	*e*P	**Pn**	**11 21 06.5**	**+0.7**
	baz=327						
TATO				*e*S	**Sb**	**11 21 25.2**	**-0.7**
	baz=327						
YM07	**YM07**	**1.52**	**323**	*e*P	**Pn**	**11 21 06.5**	**-0.3**
	baz=323						
YM07				*e*S	**Sn**	**11 21 25.6**	**-0.2**
	baz=323						
YM01	**YM01**	**1.53**	**321**	*e*P	**Pn**	**11 21 06.3**	**-0.6**
	baz=321						
YM01				*e*S	**Sn**	**11 21 25.4**	**-0.5**
	baz=321						
YM11	**YM11**	**1.54**	**321**	*e*P	**Pn**	**11 21 07.4**	**+0.3**
	baz=320						
SSLB	**Suanglung**	**1.55**	**264**	P	**Pn**	**11 21 07.9**	**+0.7**
	baz=264						
SSLB				*e*S	**Sn**	**11 21 26.6**	**+0.1**
	baz=264						
WHP	**Taichung City**	**1.58**	**282**	*e*P	**Pn**	**11 21 08.8**	**+1.1**
	baz=281						
SMLT	**Sun Moon Lake**	**1.59**	**268**	*e*P	**Pn**	**11 21 08.4**	**+0.6**
	baz=267						
SMLT				*e*S	**Sn**	**11 21 27.5**	**-0.1**
	baz=267						
YUS	**Yu-Shan**	**1.61**	**253**	*e*S	**Sn**	**11 21 28.2**	**-0.4**
	baz=254						
TYC	**Yuchr**	**1.63**	**268**	*e*P	**Pn**	**11 21 08.8**	**+0.5**
	baz=268						
TYC				*e*S	**Sn**	**11 21 28.4**	**+0.1**
	baz=268						
JISG	**Ishigakijimahi**	**1.65**	**67**	P	**Pn**	**11 21 08.8**	**+0.3**
JISG				*e*S	**Sb**	**11 21 29.5**	**-2.0**
WHYT	**Xinyi Township**	**1.66**	**261**	P	**Pn**	**11 21 09.7**	**+1.0**
	baz=253						
WHYT				*e*S	**Sn**	**11 21 30.0**	**+1.0**
	baz=253						
ELDTW	**Lidau**	**1.68**	**243**	*e*P	**Pn**	**11 21 08.8**	**-0.1**
	baz=243						
ELDTW				*e*S	**Sn**	**11 21 28.6**	**-0.9**
	baz=243						
TWQ1	**Liyutan**	**1.75**	**283**	*e*P	**Pn**	**11 21 11.5**	**+1.6**
	baz=282						
WJS	**Zhushan**	**1.75**	**266**	*e*P	**Pn**	**11 21 11.0**	**+1.1**
	baz=266						
WJS				*e*S	**Sb**	**11 21 34.8**	**+0.2**
	baz=266						
STYT	**Tauyuan**	**1.90**	**246**	*e*P	**Pn**	**11 21 12.1**	**+0.1**
	baz=239						
STYT				*e*S	**Sn**	**11 21 35.0**	**-0.1**
	baz=239						
WDLH	**Douliu**	**1.94**	**262**	*e*P	**Pn**	**11 21 13.4**	**+0.8**
	baz=263						
WDLH				*e*S	**Sb**	**11 21 39.7**	**-0.2**
	baz=263						
TPUB	**Ta-pu**	**1.96**	**251**	*e*P	**Pn**	**11 21 13.9**	**+1.1**
	baz=242						
TPUB				S	**Sn**	**11 21 38.0**	**+1.6**
	baz=242						
WTP	**Ta-pu**	**1.99**	**249**	*e*P	**Pn**	**11 21 15.2**	**+1.9**
	baz=241						
WTP				*e*S	**Sn**	**11 21 39.1**	**+1.8**
	baz=241						
SLGT	**Liugui**	**2.07**	**243**	*e*P	**Pn**	**11 21 16.6**	**+2.3**
	baz=235						
SLGT				*e*S	**Sn**	**11 21 41.5**	**+2.4**
	baz=235						
CHN1	**Nanshi**	**2.08**	**249**	P	**Pn**	**11 21 16.3**	**+1.7**
	baz=242						
CHN1				S	**Sn**	**11 21 42.2**	**+2.6**
	baz=242						
RLNB	**Erlin**	**2.09**	**269**	*e*P	**Pb**	**11 21 16.9**	**-1.7**
	baz=281						
RLNB				*e*S	**Sb**	**11 21 43.4**	**-0.7**
	baz=281						
TWK	**Hsinying**	**2.09**	**251**	*e*P	**Pn**	**11 21 16.9**	**+2.3**
	baz=251						
TWK				S	**Sn**	**11 21 42.6**	**+2.8**
	baz=251						
SNST	**Tainan City**	**2.10**	**250**	S	**Sb**	**11 21 43.1**	**-1.4**
	baz=250						
EAST	**Anshuo**	**2.28**	**227**	*e*P	**Pn**	**11 21 16.9**	**-0.2**
	baz=233						
EAST				*e*S	**Sn**	**11 21 43.2**	**-1.1**
	baz=233						
MASBT	**Mashibuluo**	**2.28**	**234**	*e*P	**Pn**	**11 21 17.4**	**+0.2**
	baz=230						
MASBT				*e*S	**Sn**	**11 21 44.7**	**+0.3**
	baz=230						
PHUB	**P'eng-hu**	**2.84**	**262**	*e*S	**Sn**	**11 21 59.4**	**+1.1**
	baz=276						
PTMZ	**Houxiangcun**	**3.38**	**289**	*e*P	**Pn**	**11 21 32.5**	**+0.2**
	baz=289						

*ISCJB **12** 11:30:28.5±1.2, 4°.6S±0°.1×144°.1E±0°.1, h110km, mb3.4/3, Error ellipse: s-maj=22.5km s-min=10.0km az=136.6*
*IDC **12** 11:30:29.7±2.4, 4°.52S×144°.13E, h112km±24km, mb3.2/3, mb1 3.3/5, mb1mx3.1/36, mbtmp3.6/5, Error ellipse: s-maj=27.6km s-min=17.5km az=58.0*

ISC 12 11:30:29.3±1.2, 4°.6S±0°.1×144°.2E±0°.1, h110km, n6, σ1°.71/8, mb3.5/3, Near north coast of New Guinea

| Code | Station Name | Δ° | AZ°

PB15	**IPOC Station P**	**0.41**	**182**	*e*P	**Pn**	**11 33 05.8**	**-0.9**
PB15				*e*S	**Sn**	**11 33 15.9**	**+0.1**
LVC	**Limon Verde**	**0.54**	**70**	*i* P	**Pn**	**11 33 07.2**	**-0.8**
LVC				*i* S	**Sn**	**11 33 19.1**	**+1.0**
LVC	**Limon Verde**	**0.54**	**70**	*e*P	**Pn**	**11 33 07.2**	**-0.8**
LVC				*e*S	**Sn**	**11 33 17.6**	**-0.4**
PB05	**IPOC Station P**	**0.69**	**265**	*e*P	**Pn**	**11 33 08.8**	**-0.5**
PB05				*e*S	**Sn**	**11 33 21.0**	**+0.6**
PB04	**IPOC Station P**	**0.79**	**306**	*e*P	**Pn**	**11 33 09.8**	**-0.7**
PB04				*e*S	**Sn**	**11 33 22.9**	**+0.4**
PB04				IAML		11 33 25.3	
	comp=N,305nm,0.1s						
PB03	**IPOC Station P**	**0.80**	**340**	*i* P	**Pn**	**11 33 10.1**	**-0.5**
PB03				*i* S	**Sn**	**11 33 23.4**	**+0.8**
PB03	**IPOC Station P**	**0.80**	**340**	*e*P	**Pn**	**11 33 10.0**	**-0.5**
PB03				*e*S	**Sn**	**11 33 23.0**	**+0.4**
PB03				IAML		11 33 23.6	
	comp=E,461nm,0.2s						
PB09	**IPOC Station P**	**1.02**	**11**	*e*P	**Pn**	**11 33 13.2**	**-0.1**
PB09				*e*S	**Sn**	**11 33 27.6**	**+0.2**
PB07	**IPOC Station P**	**1.14**	**339**	*e*P	**Pn**	**11 33 14.4**	**-0.4**
PB07				*e*S	**Sn**	**11 33 30.0**	**-0.1**
PB07				IAML		11 33 31.3	
	comp=E,224nm,0.2s						
PB10	**IPOC Station P**	**1.24**	**235**	*e*P	**Pn**	**11 33 15.6**	**-0.2**
PB10				*e*S	**Sn**	**11 33 32.4**	**+0.3**
PB02	**IPOC Station P**	**1.53**	**344**	*i* P	**Pn**	**11 33 19.3**	**-0.5**
PB02	**IPOC Station P**	**1.53**	**344**	*e*P	**Pn**	**11 33 19.1**	**-0.7**
PB02				*e*S	**Sn**	**11 33 39.2**	**+0.2**
PB02				IAML		11 33 42.9	
	comp=E,192nm,0.3s						
PB01	**IPOC Station P**	**1.75**	**359⇑**	*i*P	**Pn**	**11 33 22.6**	**-0.1**
PB01				*e*S	**Sn**	**11 33 44.7**	**+0.5**
HJA	**Humahuaca**	**3.75**	**97**	*i* P	**Pn**	**11 33 50.2**	**+0.1**
HJA				IAML		11 33 52.4	
	comp=Z,2.8nm,0.5s						

ISCJB ***12*** *11:35:10.7±0.7, 7°.57S±0°.05×128°.88E±0°.08, h150km, mb3.9/4, Error ellipse: s-maj=11.3km s-min=6.8km az=21.5*
IDC ***12*** *11:35:13.4±1.7, 7°.37S×128°.64E, h141km±16km, mb3.7/4, mb1 3.6/7, mb1mx3.3/38, mbtmp4.1/7, MS3.3/3, Ms1 3.3/3, ms1mx2.7/33, Error ellipse: s-maj=26.4km s-min=14.1km az=127.0*
ISC 12 11:35:12.3±0.8, 7°.63S±0°.06×128°.89E±0°.09, h150km, n12, σ2§78/14, mb4.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.76**	**243**	P	**Pn**	**11 36 36.6**	**+0.7**
	18nm,0.3s,baz=270,slow=1.7,SNR=14						
BATI				S	**Sn**	**11 37 40.1**	**-1.1**
	14nm,0.3s,baz=104,slow=20,SNR=8.9						
SIJI	**Sorong**	**7.12**	**20**	P	**Pn**	**11 36 54.0**	**0.0**
	0.8nm,0.3s,baz=240,slow=23,SNR=8.8						
SIJI				S	**Sn**	**11 38 10.4**	**-3.4**
	1.7nm,0.3s,baz=233,slow=20,SNR=3.4						
FITZ	**Fitzroy Crossi**	**10.88**	**197**	P	**Pn**	**11 37 44.0**	**+0.2**
	1.3nm,0.3s,baz=21,slow=11,SNR=32						
FITZ				S	**Sn**	**11 39 38.8**	**-5.4**
	2.2nm,0.3s,baz=290,slow=21,SNR=7.3						
WRA	**Warramunga Arr**	**13.33**	**157**	P	**P**	**11 38 19.7**	**-0.4**
	4.5nm,0.3s,baz=328,slow=14,SNR=2.0						
WRA				S	**Sn**	**11 40 40.4**	**-3.0**
	7.5nm,0.3s,baz=337,slow=22,SNR=2.2						
DAV	**Davao City (W)**	**14.97**	**347**	LR	LR	11 44 12.2	
	comp=Z,43nm,20.5s,baz=171,slow=37						
ASAR	**Alice Springs**	**16.66**	**164**	P	**Pn**	**11 39 02.6**	**+5.5**
	0.3nm,0.3s,baz=339,slow=9.8,SNR=11						
ASAR				S	**Sn**	**11 42 03.4**	**+0.1**
	0.7nm,0.3s,baz=318,slow=15,SNR=7.5						
MJAR	**Matsushiro Arr**	**44.80**	**11**	LR	LR	12 01 00.5	
	comp=Z,42nm,21.7s,baz=95,slow=35						
KLR	**Kul'dur**	**56.67**	**2**	LR	LR	12 07 13.9	
	comp=Z,55nm,20.4s,baz=193,slow=34						
PETK	**Petropavlovsk-**	**65.27**	**19**	P	**P**	**11 45 39.2**	**+1.4**
	1.3nm,0.7s,baz=176,slow=4.0,SNR=3.1						
MKAR	**Makanchi Array**	**68.15**	**327**	P	**P**	**11 45 56.3**	**+0.1**
	1.1nm,0.5s,baz=126,slow=7.9,SNR=12						
ZALV	**Zalesovo Beam**	**71.66**	**334**	P	**P**	**11 46 16.9**	**-0.6**
	0.5nm,0.3s,baz=146,slow=4.7,SNR=4.0						
KURBB	**Kurchatov Arra**	**72.47**	**329**	P	**P**	**11 46 22.5**	**+0.1**
	1.7nm,0.5s,baz=128,slow=4.9,SNR=15						

ISCJB ***12*** *11:45:58.6±0.2, 14°.51N±0°.04×154°.82E±0°.05, h10km, mb4.5/82, MS3.7/16, Error ellipse: s-maj=7.2km s-min=5.7km az=41.4*
IDC ***12*** *11:45:58.9±0.7, 14°.52N×154°.89E, h0km, mb4.1/18, mb1 4.2/18, mb1mx4.0/40, mbtmp4.1/18, ML5.1/1, MS3.5/13, Ms1 3.5/13, ms1mx3.3/35, Error ellipse: s-maj=21.0km s-min=14.9km az=110.0*
MOS ***12*** *11:45:58.3±0.9, 14°.51N×154°.92E, h10km, mb4.6/21, Error ellipse: s-maj=12.3km s-min=8.5km az=96.3*
NEIC ***12*** *11:46:00.1±2.3, 14°.53N×154°.80E, h10km, mb4.6/57, Error ellipse: s-maj=16.6km s-min=12.8km az=156.0*
BJI ***12*** *11:46:00.3±0.0, 14°.59N×154°.51E, h10km, mb4.7/28, mB4.9/23, Ms4.1/7, Ms7 3.9/6*
ISC 12 11:46:00.9±0.5, 14°.48N±0°.07×154°.65E±0°.08, h10km, n151, σ1§61/135, mb4.6/82, MS3.6/16, 9C-7D, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANA2	**Anatahan**	**8.81**	**283**	*e*P	Pn	11 48 01.6	-6.8
ANA2				*e*Sn	**Sn**	**11 49 45.0**	**-2.9**
SARN	**Sarigan**	**8.82**	**286**	*e*P	Pn	11 47 59.9	-8.7
GUMO	**Guam**	**9.53**	**266**	Pn	**Pn**	**11 48 18.9**	**+0.7**
	18nm,0.3s,baz=144,slow=8.0,SNR=14						
GUMO				Sn	Sn	11 50 01.4	-4.1
	42nm,0.3s,baz=17,slow=20,SNR=8.0						
GUMO				LR	LR	11 53 19.9	
	comp=Z,98nm,18.3s,baz=71,slow=45						
GUMO	**Guam**	**9.53**	**266**	*e*Pn	**Pn**	**11 48 17.4**	**-0.8**
GUMO				*e*Sn	**Sn**	**11 50 02.0**	**-3.5**
GUMO	**Guam**	**9.53**	**266**	*e*P	**Pn**	**11 48 17.4**	**-0.8**
WAKE	**Wake Island**	**12.44**	**66**	*e*Pn	Pn	11 48 50.2	-8.0
WAKE				*e*		11 50 54.6	
H11N1	**WAKE ISLAND Hy**	**12.81**	**64**	T	T	12 01 26.2	
	baz=244,slow=75,SNR=35						
H11N2	**WAKE ISLAND Hy**	**12.82**	**64**	T	T	12 01 20.0	
	baz=244,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**12.83**	**64**	T	T	12 01 25.9	
	baz=244,slow=75,SNR=42						
MANU	**Manus Island**	**17.93**	**204**	*e*Pn	**Pn**	**11 50 07.9**	**-2.7**
MANU				*e*P	**sP**	**11 50 14.7**	**+1.7**
RABL	**Rabaul**	**18.72**	**188**	*e*P	**Pn**	**11 50 21.1**	**+0.9**
	52nm,1.0s						
JAY	**Jayapura**	**21.82**	**220**	P	**P**	**11 50 54.6**	**+1.1**
	30nm,1.0s,baz=2.0,slow=4.7,SNR=7.2						
JAY				LR	LR	11 58 29.6	
	comp=Z,180nm,19.9s,baz=358,slow=34						
HNR	**Honiara**	**24.34**	**167**	LR	LR	12 01 04.2	
	comp=Z,133nm,19.4s,baz=312,slow=37						
PMG	**Port Moresby**	**24.87**	**198**	LR	LR	12 00 12.8	
	comp=Z,145nm,20.2s,baz=50,slow=34						
PMG	**Port Moresby**	**24.87**	**198⇑**	*e*P	**P**	**11 51 23.6**	**-0.3**
PMG				pmax	pmax		
	comp=Z,95nm,1.3s						
MJAR	**Matsushiro Arr**	**26.42**	**329**	P	**P**	**11 51 38.8**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=168,slow=8.2,SNR=2.5						
MAJO	**Matsushiro**	**26.43**	**329**	*e*P	**P**	**11 51 38.8**	**+0.9**
MAJO	**Matsushiro**	**26.43**	**329**	*e*P	**P**	**11 51 38.8**	**+0.9**
SIJI	**Sorong**	**27.72**	**239**	LR	LR	12 00 40.7	
	comp=Z,194nm,21.1s,baz=42,slow=32						
JNU	**Nakatsue**	**28.47**	**315**	P	**P**	**11 51 57.8**	**+1.5**
	comp=Z,3.9nm,0.9s,baz=70,slow=8.8,SNR=3.0						
JNU				LR	LR	12 01 49.5	
	comp=Z,69nm,20.2s,baz=160,slow=33						
JNU	**Nakatsue**	**28.47**	**315**	*e*P	**P**	**11 51 56.1**	**-0.2**
	comp=Z,18nm,1.1s						
ASAJ	**Asahikawa**	**31.27**	**343**	LR	LR	12 04 12.0	
	comp=Z,77nm,19.1s,baz=182,slow=35						
YULB	**Yu-li**	**32.70**	**291**	*e*P	**P**	**11 52 33.8**	**0.0**
	comp=Z,12nm,0.7s						
KSRS	**Korea Array**	**32.96**	**319**	P	**P**	**11 52 37.0**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=134,slow=8.2,SNR=8.6						
KSRS				LR	LR	12 04 14.9	
	comp=Z,63nm,20.9s,baz=142,slow=33						
KS15	**Wonju Array Si**	**32.98**	**319**	*e*P	**P**	**11 52 37.0**	**+1.0**
SSLB	**Suanglung**	**33.08**	**291**	*e*P	**P**	**11 52 37.4**	**+0.3**
	comp=Z,10nm,0.6s						
MTN	**Manton Dam**	**35.77**	**222**	*e*P	**P**	**11 53 00.8**	**+0.4**
	comp=Z,13nm,0.8s						
NJ2	**Nanjing**	**37.02**	**304**	*e*P	**P**	**11 53 08.7**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
DZM	**Mont Dzumac**	**38.13**	**162**	LR	LR	12 07 07.0	
	comp=Z,86nm,19.3s,baz=35,slow=33						
DZM	**Mont Dzumac**	**38.13**	**162**	*e*LR	LR	12 03 41.2	
	comp=Z,426nm,24.1s						
PETK	**Petropavlovsk-**	**38.61**	**3**	P	**P**	**11 53 26.6**	**+2.5**
	comp=Z,2.5nm,0.7s,baz=166,slow=8.3,SNR=4.8						
PEA1	**Petropavlovsk-**	**38.61**	**3**	*e*P	**P**	**11 53 26.6**	**+2.4**
KLR	**Kul'dur**	**39.41**	**336**	P	**P**	**11 53 31.7**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=120,slow=8.1,SNR=4.2						
KLR	**Kul'dur**	**39.41**	**336⇓**	*e*P	**P**	**11 53 31.6**	**+0.7**
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRAB	**Tennant Creek**	**39.60**	**211**	*e*P	**P**	**11 53 33.6**	**+0.8**
	comp=Z,23nm,0.9s						
WRAB	**Tennant Creek**	**39.60**	**211**	*e*P	**P**	**11 53 33.6**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,23nm,0.9s						
WB2	**Warramunga Arr**	**39.61**	**211**	*e*P	**P**	**11 53 33.6**	**+0.8**
	comp=Z,24nm,0.9s						
WR1	**Warramunga Arr**	**39.62**	**211**	*e*P	**P**	**11 53 33.9**	**+1.0**
WRA	**Warramunga Arr**	**39.62**	**211**	P	**P**	**11 53 33.9**	**+1.0**
	comp=Z,23nm,0.3s,baz=27,slow=6.4,SNR=2.4						
WHN	**Wuhan**	**40.27**	**300**	⇑P	**P**	**11 53 39.2**	**+1.0**
AS31	**Alice Springs**	**43.00**	**208**	*e*P	**P**	**11 54 00.3**	**-0.5**
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**43.00**	**208**	P	**P**	**11 54 01.6**	**+0.9**
	comp=Z,9.1nm,0.8s,baz=37,slow=7.1,SNR=68						
ASAR				LR	LR	12 11 48.5	
	comp=Z,158nm,20.0s,slow=36						
FITZ	**Fitzroy Crossi**	**43.20**	**222**	*e*P	**P**	**11 54 01.6**	**-0.7**
HHC	**Hu-ho-hao-te**	**45.68**	**314**	*e*P	**P**	**11 54 24.4**	**+2.2**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
STKA	**Stephens Creek**	**47.77**	**195**	P	**P**	**11 54 39.0**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=344,slow=10,SNR=5.3						
STKA	**Stephens Creek**	**47.77**	**195**	*e*P	**P**	**11 54 37.4**	**-0.9**
	comp=Z,2.1nm,1.1s						
STKA	**Stephens Creek**	**47.77**	**195**	P	**P**	**11 54 39.0**	**+0.6**
SEY	**Seymchan**	**48.41**	**359**	P	**P**	**11 54 42.5**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=168,slow=10,SNR=2.8						
SEY	**Seymchan**	**48.41**	**359⇓**	*e*P	**P**	**11 54 43.1**	**+0.1**
SLVN	**Son La**	**48.59**	**286**	*e*P	**P**	**11 54 45.3**	**+0.2**
	comp=Z,6.9nm,0.8s						
KMI	**Kunming**	**49.71**	**291**	P	**P**	**11 54 53.9**	**+0.1**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YAK	**Yakutsk**	**50.72**	**345⇑**	*e*P	**P**	**11 55 01.1**	**+0.6**
SONA0	**Songino Array**	**51.81**	**320**	*e*P	**P**	**11 55 10.1**	**+0.9**
SONM	**Songino Array**	**51.81**	**320**	P	**P**	**11 55 10.1**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=117,slow=7.3,SNR=17						
CM31	**Chiang Mai Arr**	**53.40**	**282**	*e*P	**P**	**11 55 22.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**53.40**	**282**	P	**P**	**11 55 22.1**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=72,slow=6.1,SNR=12						
CMAR				LR	LR	12 16 21.4	
	comp=Z,19nm,21.8s,baz=114,slow=34						
GTA	**Gaotai**	**53.89**	**308**	P	**P**	**11 55 25.8**	**+1.1**
GTA				pP	pwP	11 55 30.9	-1.8
GTA				sP	sP	11 55 33.7	+6.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,35nm,5.4s						
GTA				LR	LR		
	comp=Z,69nm,17.8s						
GTA				LR	LR		
	comp=Z,80nm,17.1s						
GTA				LR	LR		
	comp=Z,110nm,17.1s						
BILL	**Bilibino**	**54.05**	**5**	*e*P	**P**	**11 55 25.8**	**+0.6**
	comp=Z,19nm,0.8s						
BILL	**Bilibino**	**54.05**	**5**	*c i*P	P	11 55 30.6	+5.4
BILL				*i*		11 55 39.0	
BILL				*i*		11 56 30.5	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZAK	**Zakamensk**	**54.68**	**322**	*e*P	**P**	**11 55 28.1**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
TLY	**Talaya**	**54.97**	**324⇑**	*e*P	**P**	**11 55 33.2**	**+1.0**
TIXI	**Tiksi**	**59.20**	**351⇑**	*e*P	P	11 56 06.3	+4.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRDH	**Bariadhala**	**59.91**	**288**	LR	LR	12 23 47.6	
	comp=Z,44nm,18.0s,baz=162,slow=38						
CAST	**Castle Rocks**	**61.15**	**24**	*e*P	**P**	**11 56 12.6**	**-2.7**
	comp=Z,5.8nm,0.9s						
RND	**Reindeer**	**62.45**	**25**	*e*P	**P**	**11 56 22.2**	**-1.9**
	comp=Z,5.7nm,1.0s						
RND	**Reindeer**	**62.45**	**25**	*e*P	**P**	**11 56 22.2**	**-1.9**
RND				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SCM	**Sheep Creek Mo**	**62.47**	**27**	*e*P	**P**	**11 56 22.7**	**-1.7**
	comp=Z,14nm,0.8s						
SCM	**Sheep Creek Mo**	**62.47**	**27**	*e*P	**P**	**11 56 22.7**	**-1.7**
SCM				pmax	pmax		
	comp=Z,14nm,0.8s						
DIV	**Divide**	**62.91**	**28**	*e*P	**P**	**11 56 25.7**	**-1.6**
	comp=Z,9.5nm,0.7s						
WRH	**Wood River Hil**	**63.19**	**24**	*e*P	**P**	**11 56 26.6**	**-2.4**
	comp=Z,5.3nm,0.7s						
CCB	**Clear Creek Bu**	**63.38**	**24**	*e*P	**P**	**11 56 27.9**	**-2.3**
	comp=Z,11nm,1.5s						
COLA	**College**	**63.45**	**24⇑**	*e*P	P	11 56 34.8	+4.1
COLA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	**Urumqi**	**63.51**	**312**	*e*P	**P**	**11 56 33.3**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,90nm,4.3s						
WMQ				LR	LR		
	comp=Z,320nm,28.5s						
WMQ				LR	LR		
	comp=Z,400nm,39.0s						
WMQ				LR	LR		
	comp=Z,130nm,31.7s						
PPT2	**Papeete2**	**63.58**	**118**	*e*LR	LR	12 15 31.5	
	comp=Z,191nm,24.0s						
HDA	**Harding Lake**	**63.62**	**24**	*e*P	**P**	**11 56 30.2**	**-1.6**
	comp=Z,5.0nm,0.6s						
ILAR	**Eielson Array**	**63.79**	**24**	P	**P**	**11 56 30.8**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=247,slow=6.2,SNR=4.6						
ILAR				LR	LR	12 20 21.3	
	comp=Z,28nm,21.9s,baz=258,slow=32						
ILB	**Eielson Array**	**63.79**	**24**	*e*P	**P**	**11 56 30.8**	**-2.1**
RIDG	**Independent Ri**	**64.23**	**25**	*e*P	**P**	**11 56 32.9**	**-3.1**
	comp=Z,8.2nm,1.0s						
DGZ	**Jazzator, Alta**	**64.37**	**318**	*de*P	**P**	**11 56 38.0**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DOT	**Dot Lake**	**64.53**	**26**	*e*P	**P**	**11 56 37.3**	**-0.6**
	comp=Z,3.2nm,0.7s						
CTGM	**Chitina Glacie**	**64.92**	**29**	*e*P	**P**	**11 56 37.9**	**-2.7**
	comp=Z,7.3nm,1.0s						
FYU	**Fort Yukon**	**65.12**	**22**	*e*P	**P**	**11 56 42.6**	**+1.1**
	comp=Z,8.2nm,0.9s						
EGAK	**Eagle**	**66.09**	**25**	*e*P	**P**	**11 56 47.0**	**-1.0**
	comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	**66.55**	**323**	P	**P**	**11 56 50.8**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=115,slow=5.2,SNR=3.6						
ZAA1	**Zalesovo Array**	**66.55**	**323**	*e*P	**P**	**11 56 50.8**	**-0.2**
HYT	**Haines Junctio**	**66.70**	**30**	*e*P	**P**	**11 56 51.5**	**-0.5**
	comp=Z,7.4nm,0.9s						
MK31	**Makanchi Array**	**67.52**	**315**	*e*P	**P**	**11 56 54.7**	**-2.7**
MK31	**Makanchi Array**	**67.52**	**315**	*e*P	**P**	**11 56 54.7**	**-2.7**
MK32	**Makanchi Array**	**67.52**	**315**	*e*P	**P**	**11 56 57.8**	**+0.4**
MKAR	**Makanchi Array**	**67.52**	**315**	P	**P**	**11 56 57.8**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=90,slow=8.2,SNR=10						
MAKZ	**Makanchi**	**67.74**	**315**	*e*P	**P**	**11 56 58.5**	**-0.3**
	comp=Z,3.4nm,0.9s						
MAKZ	**Makanchi**	**67.74**	**315**	*e*P	**P**	**11 56 58.5**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EPYK	**Eagle Plains**	**68.30**	**24**	*e*P	**P**	**11 57 02.6**	**+0.6**
	comp=Z,17nm,1.6s						
NRIK	**Noril'sk**	**68.52**	**339**	P	**P**	**11 57 03.1**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=101,slow=7.7,SNR=5.8						
INK	**Inuvik**	**69.94**	**22**	P	**P**	**11 57 12.6**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=255,slow=3.4,SNR=3.6						
INK	**Inuvik**	**69.94**	**22**	*e*P	**P**	**11 57 11.2**	**-0.8**
	comp=Z,6.3nm,1.1s						
KURK	**Kurchatov**	**70.09**	**319**	*e*P	**P**	**11 57 13.1**	**-0.1**
	comp=Z,4.9nm,0.7s						
KURK	**Kurchatov**	**70.09**	**319**	*d i*P	**P**	**11 57 12.6**	**-0.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSH	**Kashi**	**72.26**	**307**	*e*P	**P**	**11 57 29.1**	**+2.2**
AAK	**Ala-Archa**	**73.14**	**311⇓**	*e*P	**P**	**11 57 33.5**	**+1.4**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NIL	**Nilore**	**75.05**	**301**	*e*P	**P**	**11 57 44.0**	**+0.8**
	comp=Z,14nm,0.9s						
BRVK	**Borovoye**	**75.19**	**322**	*e*P	**P**	**11 57 43.8**	**+0.2**
	comp=Z,4.8nm,1.0s						
BRVK	**Borovoye**	**75.19**	**322**	*d i*P	**P**	**11 57 43.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KK31	**Karatay Array**	**76.01**	**311**	*e*P	**P**	**11 57 49.1**	**+0.5**
KK31	**Karatay Array**	**76.01**	**311**	*e*P	**P**	**11 57 49.1**	**+0.5**
KKAR	**Karatay Array**	**76.01**	**311**	*e*P	**P**	**11 57 48.8**	**+0.2**
	comp=Z,4.6nm,0.8s						
KKAR	**Karatay Array**	**76.01**	**311**	*e*P	**P**	**11 57 48.8**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PINE	**Pine Mountain**	**76.13**	**48**	*e*P	**P**	**11 57 49.0**	**-0.5**
	comp=Z,9.2nm,1.0s						
BEKR	**Beckworth**	**77.07**	**52**	*e*P	**P**	**11 57 52.3**	**-2.6**
	comp=Z,8.5nm,1.2s						
YKA	**Yellowknife Ar**	**77.63**	**28**	P	**P**	**11 57 54.5**	**-2.8**
	comp=Z,0.4nm,0.6s,baz=275,slow=6.3,SNR=4.6						
YKB5	**Yellowknife Ar**	**77.63**	**28**	*e*P	**P**	**11 57 54.5**	**-2.8**
PAHR	**Pah Rah Range**	**77.84**	**52**	*e*P	**P**	**11 57 57.5**	**-1.6**
	comp=Z,4.9nm,1.1s						
WVOR	**Wild Horse Val**	**77.99**	**49**	*e*P	**P**	**11 57 56.3**	**-3.6**
	comp=Z,6.3nm,1.3s						
WVOR	**Wild Horse Val**	**77.99**	**49**	*e*P	**P**	**11 57 56.3**	**-3.6**
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KBL	**Kabul**	**78.37**	**303**	*e*P	**P**	**11 58 01.2**	**-1.0**
	comp=Z,10nm,1.3s						
KBL	**Kabul**	**78.37**	**303**	*e*P	**P**	**11 58 01.2**	**-1.0**
KBL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BMO	**Blue Mountains**	**78.57**	**46**	*e*P	**P**	**11 58 00.2**	**-2.8**
	comp=Z,4.7nm,1.1s						
BMO	**Blue Mountains**	**78.57**	**46**	*e*P	**P**	**11 58 00.2**	**-2.8**
BMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RYN	**Ryan**	**78.67**	**53**	*e*P	**P**	**11 58 01.8**	**-2.0**
	comp=Z,10.0nm,1.3s						
NV01	**Mina Array Sit**	**78.87**	**53**	*e*P	**P**	**11 58 03.9**	**-1.1**
NVAR	**Mina Array Bea**	**78.87**	**53**	P	**P**	**11 58 03.9**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=268,slow=5.7,SNR=7.5						
KVN	**Kaiserville**	**78.93**	**52**	*e*P	**P**	**11 58 01.2**	**-4.0**
	comp=Z,5.0nm,1.0s						
KVN	**Kaiserville**	**78.93**	**52**	*e*P	**P**	**11 58 01.2**	**-4.0**
KVN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NV11	**Mina Array Sit**	**78.99**	**53**	*e*P	P	11 58 09.0	+3.5
GSC	**Goldstone, Bar**	**80.62**	**56**	*e*P	**P**	**11 58 12.4**	**-1.9**
	comp=Z,5.1nm,1.0s						
GSC	**Goldstone, Bar**	**80.62**	**56**	*e*P	**P**	**11 58 12.4**	**-1.9**
GSC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ELK	**Elko**	**80.79**	**50**	*e*P	**P**	**11 58 12.9**	**-2.4**
	comp=Z,4.1nm,1.2s						
ELK	**Elko**	**80.79**	**50**	*e*P	**P**	**11 58 12.9**	**-2.4**
ELK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HLID	**Hailey**	**80.84**	**47**	*e*P	**P**	**11 58 13.8**	**-1.7**
	comp=Z,2.5nm,1.1s						
R11A	**Troy Canyon, C**	**80.99**	**53**	*e*P	**P**	**11 58 15.0**	**-1.4**
	comp=Z,7.1nm,1.4s						
PFO	**Pinyon Flats O**	**81.23**	**58**	*i* P	P	11 58 24.4	+6.8
ARU	**Artí**	**81.39**	**326**	*d i*P	**P**	**11 58 17.8**	**-0.1**
ARU						12 01 22.3	
ARU				S	**S**	**12 08 28.9**	**-0.1**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MCMT	**McKenzie Canyo**	**81.69**	**46**	*e*P	**P**	**11 58 18.6**	**-1.5**
ABKAR	**Akbulak array**	**82.20**	**319**	*e*P	**P**	**11 58 22.1**	**-0.1**
	comp=Z,2.4nm,1.1s						
PSUT	**Pine Spring**	**82.28**	**52**	*e*P	**P**	**11 58 21.4**	**-1.8**
	comp=Z,4.7nm,1.1s						
BOZ	**Bozeman (W)**	**82.37**	**45**	*e*P	**P**	**11 58 23.4**	**-0.1**
	comp=Z,3.3nm,1.3s

YUK	**Yuzh-Kuril'sk**	**4.05**	**245**	*i* P	**Pn**	**11 54 38.0**	**0.0**
YUK				AMB	AMB	11 54 41.0	
	comp=N,48nm,0.4s						
YUK				*i* S	**Sn**	**11 55 23.0**	**-1.2**
YUK				A	A	11 55 30.0	
	comp=N,16nm,0.4s						
YUK				A	A	11 55 30.0	
	comp=N,156nm,0.4s						
LAGR	**Lagunnoye**	**4.09**	**245**	PN	**Pn**	**11 54 40.6**	**+2.1**
LAGR				*e*S	**Sn**	**11 55 26.7**	**+1.5**
LAGR				smax	smax		
	comp=E,301nm,0.4s						
LAGR				smax	smax		
	comp=N,269nm,0.5s						
LAGR	**Lagunnoye**	**4.09**	**245**	*e*P	**Pn**	**11 54 40.0**	**+1.5**
LAGR				*e*S	**Sn**	**11 55 26.0**	**+0.8**
LAGR				A	A	11 55 39.0	
	comp=N,27nm,0.4s						
LAGR				A	A	11 55 39.0	
	comp=N,301nm,0.4s						
GRPR	**Tuman**	**4.12**	**245**	*e*PN	**Pn**	**11 54 40.2**	**+1.1**
GRPR				*i* S	**Sn**	**11 55 26.1**	**-0.1**
GRPR				smax	smax		
	comp=E,164nm,0.4s						
GRPR				smax	smax		
	comp=N,183nm,0.3s						
GRPR	**Tuman**	**4.12**	**245**	*e*P	**Pn**	**11 54 40.0**	**+0.9**
GRPR				*i* S	**Sn**	**11 55 26.0**	**-0.1**
GRPR				A	A	11 55 27.0	
	comp=N,18nm,0.4s						
GRPR				A	A	11 55 27.0	
	comp=N,164nm,0.4s						
GLVR	**Golovnino**	**4.41**	**243**	*e*PN	**Pn**	**11 54 44.3**	**+1.4**
GLVR				*e*S	**Sn**	**11 55 33.3**	**+0.3**
GLVR				smax	smax		
	comp=N,231nm,0.4s						
GLVR				smax	smax		
	comp=E,295nm,0.3s						
GLVR	**Golovnino**	**4.41**	**243**	*e*P	**Pn**	**11 54 44.0**	**+1.1**
GLVR				*e*S	**Sn**	**11 55 33.0**	**0.0**
GLVR				A	A	11 55 39.0	
	comp=E,23nm,0.4s						
GLVR				A	A	11 55 39.0	
	comp=E,29nm,0.4s						
JKA	**Kamikawa-asahi**	**6.17**	**256**	*e*P	**Pn**	**11 55 09.6**	**+2.7**
ASAJ	**Asahikawa**	**6.17**	**256**	P	**Pn**	**11 55 09.6**	**+2.7**
	comp=E,0.4nm,0.3s,baz=78,slow=14,SNR=3.8						
ERM	**Erimo**	**6.81**	**238⇑**	*e*PN	**Pn**	**11 55 16.4**	**+0.7**
PETK	**Petropavlovsk-**	**8.47**	**29**	P	**Pn**	**11 55 39.8**	**+1.7**
	comp=E,0.7nm,0.3s,baz=188,slow=10,SNR=12						
MAJO	**Matsushiro**	**13.36**	**230⇑**	*e*PN	**Pn**	**11 56 43.7**	**-0.7**
TIXI	**Tiksi**	**27.90**	**345**	P	**P**	**11 59 17.2**	**-2.4**
	comp=E,1.7nm,0.4s,baz=146,slow=6.7,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	**29.21**	**148**	T	T	12 30 21.0	
	baz=337,slow=76						
H11N1	**WAKE ISLAND Hy**	**29.22**	**148**	T	T	12 30 29.1	
	baz=337,slow=76						
H11N3	**WAKE ISLAND Hy**	**29.23**	**148**	T	T	12 30 27.2	
	baz=337,slow=76						
H11S1	**WAKE ISLAND Hy**	**30.26**	**149**	T	T	12 31 41.2	
	baz=338,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.27**	**149**	T	T	12 31 47.1	
	baz=338						
H11S2	**WAKE ISLAND Hy**	**30.28**	**149**	T	T	12 31 39.4	
	baz=338,slow=76						
COLA	**College**	**37.75**	**38⇑**	*e*P	**P**	**12 00 45.8**	**+0.5**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**38.17**	**38**	P	**P**	**12 00 49.1**	**+0.3**
	comp=Z,0.7nm,1.0s,baz=280,slow=7.1,SNR=5.0						
ILAR	**Eielson Array**	**38.17**	**38**	*e*P	**P**	**12 00 51.4**	**+2.6**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	**Inuvik**	**43.19**	**32**	P	**P**	**12 01 30.6**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=297,slow=10,SNR=16						
MKAR	**Makanchi Array**	**46.00**	**297**	P	**P**	**12 01 51.4**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=67,slow=6.1,SNR=3.1						
RES	**Resolute Bay**	**52.14**	**18**	P	**P**	**12 02 38.9**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=334,slow=9.0,SNR=8.7						
YKA	**Yellowknife Ar**	**52.52**	**36**	P	**P**	**12 02 42.5**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=299,slow=6.9,SNR=3.7						
NB2	**NORSAR Subarra**	**68.55**	**340**	P	**P**	**12 04 29.7**	**-1.5**
	comp=Z,0.6nm,0.4s,baz=30,slow=6.2						
NOA	**NORSAR Array B**	**68.55**	**340**	P	**P**	**12 04 29.5**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=29,slow=6.2,SNR=4.0						
NOA	**NORSAR Array B**	**68.55**	**340**	*e*P	**P**	**12 04 30.5**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**70.92**	**197**	P	**P**	**12 04 45.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=13,slow=6.7,SNR=5.8						
AKASG	**Malin Array Be**	**71.42**	**325**	P	**P**	**12 04 47.0**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=42,slow=5.9,SNR=5.0						
BRTR	**Keskin Array B**	**77.97**	**316**	P	**P**	**12 05 27.4**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=36,slow=6.1,SNR=4.0						
BRTR	**Keskin Array B**	**77.97**	**316**	*i* P	**P**	**12 05 28.2**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	**GERESS Array B**	**78.56**	**333**	P	**P**	**12 05 29.1**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=309,slow=4.5,SNR=3.6						
GERES	**GERESS Array B**	**78.56**	**333**	*e*P	**P**	**12 05 30.5**	**+0.4**
TXAR	**Lajitas Array**	**79.23**	**59**	P	**P**	**12 05 34.2**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=295,slow=4.1,SNR=6.4						

ISCJB ***12*** *11:58:35.6±0.2,2˙44S±0˙03×12˙22W±0˙03,h11km, mb5.0/197,MS4.4/45,Error ellipse: s-maj=5.1km s-min=3.1km az=143.5*

MOS ***12*** *11:58:35.2±0.9,2˙43S×12˙28W,h10km,mb5.2/52, MS4.3/12,Error ellipse: s-maj=9.9km s-min=5.7km az=59.1*

IDC ***12*** *11:58:35.6±0.4,2˙45S×12˙28W,h0km,mb4.6/23, mb1 4.7/24,mb1mx4.6/35,mbtmp4.6/24,ML4.1/1,MS4.3/24, Ms1 4.3/24,ms1mx4.3/24,Error ellipse: s-maj=14.3km s-min=11.9km az=139.0*

NEIC ***12*** *11:58:37.0±1.6,2˙46S×12˙32W,h10km±2km,mb5.2/171, Error ellipse: s-maj=14.7km s-min=12.2km az=118.0*

GCMT ***12*** *11:58:40.0±0.2,2˙34S±0˙02×12˙24W±0˙01,h12km, MW5.1/105,Moment Tensor Solution. s48,c60; s105,c156; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=4.43±.10; Mθθ=0.09±.10; Mφφ4.52±.08; Mrθ0.15±.33; Mθφ=0.55±.08; Mφr=2.15±.26; Best double couple: M0=4.99600×10^16^ NP1=φs355.00000°,δ58.00000°, λ=89.00000°. NP2=φs172.00000°,δ32.00000°, λ=92.00000°. Principal axes: T 5.0730, Plg13.0000°, Azm84.0000°; N -0.1540, Plg1.0000°; Azm174.0000°; P -4.9200, Plg77.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 11:58:37.1±0.3,2˙48S±0˙05×12˙26W±0˙06,h11km,n756, σ1§10/739,mb5.2/196,MS4.4/46,24C-23D,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**5.76**	**203**	T	T	12 05 53.5	
	baz=22,slow=74,SNR=238						
H10N1	**ASCENSION HYDR**	**5.77**	**202**	T	T	12 05 54.5	
	baz=22,slow=74,SNR=680						
H10N3	**ASCENSION HYDR**	**5.78**	**203**	T	T	12 05 54.8	
	baz=22,slow=74,SNR=199						
ASCN	**Ascension**	**5.81**	**201**	*e*Pn	**Pn**	**12 00 02.5**	**-0.8**
ASCN				*e*Sn	**Sn**	**12 01 07.8**	**-2.2**
H10S1	**ASCENSION HYDR**	**6.85**	**200**	T	T	12 07 32.4	
	baz=22,slow=75,SNR=14						
H10S2	**ASCENSION HYDR**	**6.86**	**200**	T	T	12 07 21.8	
	baz=22,slow=75,SNR=38						
H10S3	**ASCENSION HYDR**	**6.86**	**200**	T	T	12 07 26.6	
	baz=22,slow=75,SNR=12						
LIC	**Lamto**	**11.26**	**40**	*e*P	**Pn**	**12 01 18.9**	**+0.7**
	70nm,1.4s						
KIC	**Kosan Boka**	**11.55**	**40**	*e*P	**Pn**	**12 01 21.7**	**-0.4**
	101nm,1.5s						
TIC	**Toumodi**	**11.59**	**39**	*e*P	**Pn**	**12 01 19.4**	**-3.3**
DBIC	**Dimbokro**	**11.71**	**39**	Pn	**Pn**	**12 01 22.7**	**-1.6**
	1.1nm,0.3s,baz=200,slow=12,SNR=9.5						
DBIC				Sn	Sn	12 03 23.3	-12
	0.4nm,0.3s,baz=286,slow=15,SNR=2.4						
DBIC				LR	LR	12 05 06.3	
	comp=Z,2μm,20.5s,baz=198,slow=33						
DBIC	**Dimbokro**	**11.71**	**39**	*e*Pn	**Pn**	**12 01 24.1**	**-0.2**
DBIC	**Dimbokro**	**11.71**	**39**	*e*P	**Pn**	**12 01 24.1**	**-0.2**
TOA0	**Torodi Ar. Sit**	**20.80**	**41**	*e*P	**P**	**12 03 15.7**	**-3.0**
TORD	**Torodi Ar. Bea**	**20.80**	**41**	P	**P**	**12 03 15.4**	**-3.3**
	9.5nm,0.7s,baz=251,slow=9.1,SNR=33						
TORD				S	S	12 06 57.9	-13
	1.4nm,0.8s,baz=228,slow=23,SNR=2.9						
TORD				LR	LR	12 10 30.7	
	comp=Z,2μm,19.2s,baz=285,slow=34						
RCBR	**Riachuelo**	**23.81**	**261**	*e*P	**P**	**12 03 50.4**	**-0.1**
	39nm,1.0s						
RCBR	**Riachuelo**	**23.81**	**261**	*e*P	**P**	**12 03 50.4**	**-0.1**
RCBR				pmax	pmax		
	comp=Z,39nm,1.0s						
RCBR	**Riachuelo**	**23.81**	**261**	*e*P	**P**	**12 03 52.4**	**+1.9**
RIB01	**Linhares ES**	**32.20**	**237**	*e*P	**P**	**12 05 06.8**	**+1.2**
BSFB	**Barra de Sao F**	**32.37**	**238**	*e*P	**P**	**12 05 08.8**	**+1.8**
SJMB	**Sao Joao De Ma**	**32.59**	**238**	*e*P	**P**	**12 05 10.8**	**+1.7**
ALF01	**Guarapari-ES**	**33.10**	**235**	*e*P	**P**	**12 05 14.4**	**+1.0**
TSUM	**Tsumeb**	**33.59**	**122**	P	**P**	**12 05 18.3**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=291,slow=11,SNR=3.9						
JANB	**Januaria**	**33.99**	**247**	*e*P	**P**	**12 05 21.9**	**+0.6**
MCI9	**Montes Claros**	**34.16**	**244**	*e*P	**P**	**12 05 23.4**	**+0.6**
MCI8	**Montes Claros**	**34.17**	**244**	*e*P	**P**	**12 05 24.1**	**+1.3**
MCI6	**Montes Claros**	**34.20**	**243**	*e*P	**P**	**12 05 24.1**	**+1.0**
CAM01	**Campos-RJ**	**34.45**	**234**	*e*P	**P**	**12 05 26.7**	**+1.5**
DUB01	**Friburgo-RJ**	**35.15**	**234**	*e*P	**P**	**12 05 32.2**	**+1.0**
SMTB	**Santa Maria do**	**35.71**	**258**	*e*P	**P**	**12 05 36.8**	**+0.6**
BSCB	**Bom Sucesso**	**36.63**	**237**	*e*P	**P**	**12 05 43.6**	**-0.4**
PMNB	**Patos De Minas**	**37.09**	**242**	*e*P	**P**	**12 05 49.2**	**+1.2**
ESAR	**Angra dos Reis**	**37.28**	**234**	*e*P	**P**	**12 05 50.8**	**+1.4**
BDFB	**Brasilia**	**37.57**	**247**	P	**P**	**12 05 52.2**	**+0.1**
	comp=Z,12nm,1.0s,baz=54,slow=8.5,SNR=11						
BDFB				LR	LR	12 18 51.8	
	comp=Z,684nm,19.7s,baz=74,slow=32						
BDFB	**Brasilia**	**37.57**	**247**	*e*P	**P**	**12 05 52.0**	**-0.1**
	comp=Z,42nm,1.3s						
BDFB				*e*P	**P**	**12 05 52.2**	**+0.1**
BDFB	**Brasilia**	**37.57**	**247**	*e*P	**P**	**12 05 52.0**	**-0.1**
BDFB				*e*		12 05 52.2	
BDFB				pmax	pmax		
	comp=Z,42nm,1.3s						
PARB	**Paraibuna**	**38.38**	**235**	*e*P	**P**	**12 05 60.0**	**+1.1**
RCLB	**Rio Claro- Sao**	**39.55**	**237**	*e*P	**P**	**12 06 09.7**	**+1.1**
BB19B	**Bebedouro**	**39.86**	**240**	*e*P	**P**	**12 06 12.4**	**+1.3**
SPB	**Sao Paulo**	**39.98**	**235**	*e*P	**P**	**12 06 10.6**	**-1.5**
SPB	**Sao Paulo**	**39.98**	**235**	*e*P	**P**	**12 06 13.2**	**+1.1**
ITRB	**Iturama**	**40.97**	**242**	*e*P	**P**	**12 06 21.6**	**+1.3**
FRTB	**Fartura**	**41.64**	**237**	*e*P	**P**	**12 06 28.3**	**+2.4**
LSZ	**Lusaka**	**41.84**	**110**	P	**P**	**12 06 28.9**	**+1.2**
	comp=Z,4.8nm,0.8s,baz=296,slow=4.1,SNR=7.5						
LSZ	**Lusaka**	**41.84**	**110**	*e*P	**P**	**12 06 28.9**	**+1.2**
	comp=Z,10nm,0.9s						
LSZ	**Lusaka**	**41.84**	**110**	*e*P	**P**	**12 06 28.9**	**+1.2**
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PAB	**San Pablo**	**42.45**	**9**	*e*P	**P**	**12 06 32.2**	**0.0**
	comp=Z,3.3nm,1.0s						
PAB	**San Pablo**	**42.45**	**9**	*e*P	**P**	**12 06 32.2**	**0.0**
PAB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ESDC	**Sonseca Array**	**42.63**	**9**	P	**P**	**12 06 33.9**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=187,slow=8.9,SNR=5.4						
ESDC				LR	LR	12 25 25.1	
	comp=Z,180nm,18.0s,baz=155,slow=38						
LBTB	**Lobatse**	**42.80**	**125**	P	**P**	**12 06 35.7**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=294,slow=12,SNR=2.9						
LBTB	**Lobatse**	**42.80**	**125**	*e*P	**P**	**12 06 35.7**	**+0.4**
	comp=Z,33nm,1.5s						
LBTB	**Lobatse**	**42.80**	**125**	*e*P	**P**	**12 06 35.7**	**+0.4**
LBTB				pmax	pmax		
	comp=Z,33nm,1.5s						
MBAR	**Mbarara**	**43.02**	**88**	*e*P	**P**	**12 06 39.5**	**+2.1**
	comp=Z,22nm,1.2s						
MBAR	**Mbarara**	**43.02**	**88**	*ce*P	**P**	**12 06 39.5**	**+2.1**
MBAR				pmax	pmax		
	comp=Z,19nm,1.4s						
KEST	**Kesra**	**43.05**	**26**	P	**P**	**12 06 37.5**	**+0.4**
	comp=Z,12nm,1.1s,baz=176,slow=5.8,SNR=5.5						
KEST				LR	LR	12 25 19.1	
	comp=Z,748nm,19.0s,baz=190,slow=37						
KEST	**Kesra**	**43.05**	**26**	*e*P	**P**	**12 06 37.7**	**+0.5**
	comp=Z,6.3nm,1.1s						
MATP	**Matopo**	**43.56**	**117**	P	**P**	**12 06 41.6**	**0.0**
	comp=Z,8.2nm,0.7s,baz=295,slow=8.0,SNR=8.9						
CLDB	**Colider**	**43.99**	**257**	*e*P	**P**	**12 06 45.8**	**+0.7**
BOSA	**Boshof**	**44.17**	**130**	P	**P**	**12 06 46.5**	**0.0**
	comp=Z,8.4nm,1.0s,baz=280,slow=9.4,SNR=6.8						
BOSA				LR	LR	12 22 32.4	
	comp=Z,328nm,19.1s,baz=283,slow=32						
BOSA	**Boshof**	**44.17**	**130**	*e*P	**P**	**12 06 45.6**	**-0.8**
	comp=Z,22nm,0.9s						
BOSA	**Boshof**	**44.17**	**130**	*e*P	**P**	**12 06 45.6**	**-0.8**
BOSA				pmax	pmax		
	comp=Z,22nm,0.9s						
PTGB	**Pitanga**	**44.29**	**236**	*e*P	**P**	**12 06 49.0**	**+1.6**
CNLB	**Canela**	**45.34**	**230**	*e*P	**P**	**12 06 57.7**	**+2.0**
ITAB	**Concordia**	**45.39**	**233**	*e*P	**P**	**12 06 57.9**	**+1.8**
AQDB	**Aquidauana**	**45.97**	**244**	*e*P	**P**	**12 07 01.6**	**+0.9**
PTGA	**Pitinga**	**47.72**	**271**	P	**P**	**12 07 14.8**	**+0.3**
	comp=Z,3.7nm,0.6s,baz=97,slow=12,SNR=8.9						
PTGA				PcP	**PcP**	**12 08 44.3**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=78,slow=4.0,SNR=5.0						
PTGA	**Pitinga**	**47.72**	**271**	*e*P	**P**	**12 07 14.0**	**-0.5**
	comp=Z,20nm,1.2s						
PTGA				*e*PcP	**PcP**	**12 08 44.3**	**+0.4**
PTGA	**Pitinga**	**47.72**	**271**	*e*P	**P**	**12 07 15.5**	**+1.0**
CPUP	**Villa Florida**	**49.30**	**237**	P	**P**	**12 07 26.6**	**+0.1**
	comp=Z,20nm,1.3s,baz=81,slow=8.6,SNR=9.2						
CPUP				PcP	**PcP**	**12 08 48.5**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=84,slow=6.0,SNR=4.3						
CPUP				LR	LR	12 25 11.8	
	comp=Z,603nm,21.9s,baz=76,slow=32						
CPUP	**Villa Florida**	**49.30**	**237**	*e*P	**P**	**12 07 26.8**	**+0.3**
	comp=Z,40nm,1.5s						
CPUP				*e*PcP	**PcP**	**12 08 48.5**	**-0.9**
CPUP	**Villa Florida**	**49.30**	**237**	*e*P	**P**	**12 07 26.8**	**+0.3**
CPUP				*e*		12 08 48.5	
CPUP				pmax	pmax		
	comp=Z,40nm,1.5s						
CPUP	**Villa Florida**	**49.30**	**237**	*e*P	**P**	**12 07 27.4**	**+0.9**
KMBO	**Kilima Mbogo**	**49.50**	**89**	LR	LR	12 26 46.6	
	comp=Z,2μm,19.5s,baz=271,slow=34						
BNI	**Bardonecchia**	**50.24**	**17**	*e*P	**P**	**12 07 33.4**	**-0.1**
	comp=Z,18nm,1.3s						
BNI	**Bardonecchia**	**50.24**	**17**	*e*P	**P**	**12 07 33.4**	**-0.1**
BNI				pmax	pmax		
	comp=Z,18nm,1.3s						
OGAUY	**Aigu**	**50.65**	**226**	*e*P	**P**	**12 07 38.2**	**+1.6**
GRGR	**Grenville**	**51.18**	**288**	*e*P	**P**	**12 07 41.1**	**+0.2**
	comp=Z,190nm,0.7s						
APE	**Apeiranthos**	**52.72**	**38⇑**	*e*P	**P**	**12 07 52.4**	**+0.3**
APE				pmax	pmax		
	comp=Z,83nm,1.5s						
DAVA	**Damuels**	**53.23**	**19**	*e*P	**P**	**12 07 55.9**	**+0.1**
	comp=Z,6.0nm,0.7s						
FETA	**Feichten**	**53.28**	**19**	*e*P	**P**	**12 07 56.3**	**+0.1**
	comp=Z,6.7nm,1.2s						
SQTA	**Sankt Quirin**	**53.61**	**20**	*e*P	**P**	**12 07 58.6**	**+0.1**
	comp=Z,10nm,0.8s						
ABTA	**Abfaltersbach**	**53.66**	**21**	*e*P	**P**	**12 07 59.9**	**+1.0**
	comp=Z,2.9nm,0.5s						
MOTA	**Moosalm**	**53.69**	**20**	*e*P	**P**	**12 07 59.8**	**+0.6**
	comp=Z,2.3nm,0.5s						
BFO	**Black Forest**	**53.69**	**17**	*i* P	**P**	**12 08 00.5**	**+1.5**
RETA	**Reutte**	**53.70**	**19**	*e*P	**P**	**12 07 58.8**	**-0.3**
	comp=Z,2.6nm,0.6s						
WTTA	**Wattenberg**	**53.79**	**20**	*e*P	**P**	**12 07 59.7**	**-0.3**
	comp=Z,7.6nm,1.0s,SNR=6.4						
WATA	**Walderalm**	**53.84**	**20**	*e*P	**P**	**12 08 00.5**	**+0.3**
	comp=Z,2.3nm,0.4s						
MYKA	**Terra Mystica**	**53.97**	**22**	*e*P	**P**	**12 08 02.7**	**+1.6**
	comp=Z,5.2nm,0.8s						
OBKA	**Obir**	**54.21**	**23**	*e*P	P	12 08 07.9	+4.9
	comp=Z,11nm,1.2s						
KBA	**Koelnbreinsper**	**54.24**	**21**	pP	**P**	**12 08 07.1**	**+3.9**
	comp=Z,2.3nm,0.8s						
SOKA	**Soboth**	**54.54**	**23**	*e*P	**P**	**12 08 06.5**	**+1.2**
	comp=Z,5.5nm,0.9s,SNR=5.2						
VTS	**Vitosha**	**55.15**	**31**	*e*P	**P**	**12 08 10.0**	**+0.1**
	comp=Z,13nm,1.1s						
VTS	**Vitosha**	**55.15**	**31**	⇓*i*P	**P**	**12 08 11.1**	**+1.2**
VTS	**Vitosha**	**55.15**	**31**	⇓P	**P**	**12 08 11.1**	**+1.2**
MOA	**Molln**	**55.22**	**21**	*e*P	**P**	**12 08 09.8**	**-0.4**
	comp=Z,6.3nm,1.2s						
MORH	**Mrgy, Hungar**	**55.64**	**26**	EP	P	12 08 19.1	+5.9
GEC2	**GERESS Array S**	**55.86**	**20**	*e*P	**P**	**12 08 14.7**	**-0.2**
	comp=Z,60nm,1.6s						
GEC2	**GERESS Array S**	**55.86**	**20**	*e*P	**P**	**12 08 14.7**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,60nm,1.6s						
GERES	**GERESS Array B**	**55.86**	**20**	P	**P**	**12 08 15.0**	**+0.1**
	comp=Z,5.6nm,0.7s,baz=190,slow=6.8,SNR=41						
GERES				LR	LR	12 32 56.9	
	comp=Z,204nm,19.5s,baz=213,slow=37						
CONA	**Conrad Observa**	**55.89**	**23**	P	**P**	**12 08 15.5**	**+0.5**
	comp=Z,8.2nm,1.2s						
MDVR	**Moldovita**	**55.95**	**29⇑**	*i*P	**P**	**12 08 16.2**	**+0.7**
SOP	**Sopron**	**55.96**	**23**	EP	**P**	**12 08 17.0**	**+1.6**
KHC	**Kasperske Hory**	**56.06**	**20**	*e*P	**P**	**12 08 17.1**	**+0.9**
	comp=Z,2.8nm,1.2s						
KHC	**Kasperske Hory**	**56.06**	**20**	*e*P	**P**	**12 08 17.0**	**+0.8**
KHC				MLR	MLR		
	comp=Z,300nm,14.8s						
KHC	**Kasperske Hory**	**56.06**	**20**	*e*P	**P**	**12 08 17.0**	**+0.8**
KHC				*ex*	x	12 08 27.6	
KHC				*ex*	x	12 08 36.2	
KHC				AMS	AMS	12 33 40.0	
	comp=Z,300nm,14.8s						
HERR	**Herculane**	**56.36**	**29⇑**	*i*P	**P**	**12 08 19.0**	**+0.6**
BZS	**Buzias**	**56.52**	**28⇑**	*i*P	**P**	**12 08 20.3**	**+0.8**
BZS	**Buzias**	**56.52**	**28** ⇑P		**P**	**12 08 20.3**	**+0.8**
LPAZ	**La Paz**	**56.62**	**252**	P	**P**	**12 08 20.9**	**-0.5**
	comp=Z,4.8nm,0.8s,baz=87,slow=5.4,SNR=18						
LPAZ				LR	LR	12 30 34.0	
	comp=Z,593nm,22.0s,baz=82,slow=34						
LPAZ	**La Paz**	**56.62**	**252**	*e*P	**P**	**12 08 20.9**	**-0.5**
	comp=Z,23nm,1.5s						
LPAZ	**La Paz**	**56.62**	**252**	*e*P	**P**	**12 08 20.9**	**-0.5**
LPAZ				pmax	pmax		
	comp=Z,23nm,1.5s						
LPAZ	**La Paz**	**56.62**	**252**	*e*P	**P**	**12 08 21.7**	**+0.2**
NKC	**Novy Kostel**	**56.64**	**19**	*e*P	**P**	**12 08 21.0**	**+0.7**
NKC				MLR	MLR		
	comp=Z,300nm,19.5s						
NKC	**Novy Kostel**	**56.64**	**19**	*e*P	**P**	**12 08 21.0**	**+0.7**
NKC				AMS	AMS	12 33 10.0	
	comp=Z,300nm,19.5s						
TREC	**Trest**	**56.88**	**21**	AMS	AMS	12 31 30.0	
	comp=Z,400nm,22.0s						
KRUC	**Moravsky**	**57.02**	**22**	*e*P	**P**	**12 08 22.9**	**-0.1**
SIRR	**Siria**	**57.03**	**27⇑**	*i*P	**P**	**12 08 23.6**	**+0.5**
PRU	**Pruhonice**	**57.12**	**20**	AMS	AMS	12 34 20.0	
	comp=Z,300nm,15.3s						
GOPC	**GO Pecny, Ondr**	**57.15**	**20**	*e*P	**P**	**12 08 23.4**	**-0.5**
GOPC				MLR	MLR		
	comp=Z,300nm,21.3s						
GOPC	**GO Pecny, Ondr**	**57.15**	**20**	*e*P	**P**	**12 08 23.4**	**-0.5**
GOPC				AMS	AMS	12 32 50.0	
	comp=Z,300nm,21.3s						
VRAC	**Vranov**	**57.30**	**22**	*e*P	**P**	**12 08 24.9**	**-0.1**
JAVC	**Velka Javorina**	**57.34**	**23**	*e*P	**P**	**12 08 26.4**	**+1.0**
LOT	**Lotru**	**57.43**	**29** ⇓*i*P		**P**	**12 08 27.1**	**+1.0**
PSZ	**Piszkesteto**	**57.51**	**25**	*e*P	**P**	**12 08 26.9**	**+0.4**
	comp=Z,25nm,1.3s						
PSZ	**Piszkesteto**	**57.51**	**25⇑**	*i*P	**P**	**12 08 26.5**	**0.0**
PSZ	**Piszkesteto**	**57.51**	**25** ⇑P		**P**	**12 08 26.5**	**0.0**
PSZ	**Piszkesteto**	**57.51**	**25** ⇓EP		**P**	**12 08 26.1**	**-0.5**
VYHS	**Vyhne**	**57.52**	**24**	*e*P	**P**	**12 08 27.4**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,21nm,1.7s						
VYHS	**Vyhne**	**57.52**	**24**	*e*P	**P**	**12 08 27.4**	**+0.9**
TRQA	**Tornquist**	**57.57**	**226**	*e*P	**P**	**12 08 26.6**	**-0.6**
	comp=Z,37nm,1.4s						
TRQA	**Tornquist**	**57.57**	**226**	*e*P	**P**	**12 08 26.6**	**-0.6**
TRQA				pmax	pmax		
	comp=Z,37nm,1.4s						
TRQA	**Tornquist**	**57.57**	**226**	*e*P	**P**	**12 08 28.0**	**+0.8**
PVCC	**Panska Ves**	**57.59**	**20**	AMS	AMS	12 34 40.0	
	comp=Z,300nm,16.3s						
BRG	**Berggiesshubel**	**57.67**	**19**	*e*P	**P**	**12 08 27.6**	**0.0**
	comp=Z,7.4nm,1.0s						
BRG				S	**S**	**12 16 33.0**	**+7.1**
	comp=N,259nm,15.5s						
	comp=E,171nm,14.2s						
	comp=Z,370nm,15.9s						
BRG	**Berggiesshubel**	**57.67**	**19**	*e*P	**P**	**12 08 27.6**	**0.0**
BRG				S	**S**	**12 16 33.0**	**+7.1**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRG				MLR	ML

PB04	IPOC Station P	59.48	246	eP	P	12 08 40.7 -0.2
	comp=Z,48nm,1.1s					
GO02	Mina Guanaco	59.55	242	eP	P	12 08 42.4 +0.9
TESR	Tescani	59.61	30⇑	iP	P	12 08 41.1 -0.1
BIZ	Bicaz	59.63	30⇓	iP	P	12 08 41.2 -0.1
BURAR	Bucovina Array	59.68	28⇓	iP	P	12 08 42.0 +0.3
BURAR	Bucovina Array	59.68	28	⇓P	P	12 08 42.0 +0.3
BUR08	Bucovina Ar. S	59.69	28	eP	P	12 08 43.1 +1.3
	comp=Z,27nm,1.4s					
KWP	Kalwaria Pacla	60.02	25	eP	P	12 08 45.1 +1.2
	comp=Z,530nm,1.6s					
KWP	Kalwaria Pacla	60.02	25	eP	P	12 08 45.1 +1.2
KWP				pmax	pmax	
	comp=Z,530nm,1.6s					
TAMC	Tame, Arauca	60.09	279	eP	P	12 08 46.9 +1.8
YOPC	Yopal, Colombi	60.60	278	eP	P	12 08 48.9 +0.2
GO03	Copiap	60.66	240	eP	P	12 08 49.3 +0.5
	comp=Z,21nm,1.1s					
LVV	L'vov	60.73	26	eP	P	12 08 49.5 +0.7
RUSC	La Rusia	61.31	278	eP	P	12 08 54.9 +0.9
LCO	Las Campanas	61.40	238	eP	P	12 08 53.5 -0.6
	comp=Z,16nm,1.0s					
LCO	Las Campanas	61.40	238	eP	P	12 08 53.5 -0.6
LCO				pmax	pmax	
	comp=Z,16nm,1.0s					
LCO	Las Campanas	61.40	238	eP	P	12 08 55.0 +0.9
VILC	Villavicencio,	61.74	276	eP	P	12 08 56.9 +0.4
GO04	Tololo Observa	61.77	237	eP	P	12 08 55.9 -0.7
SDDR	Presa de Saban	61.80	293	eP	P	12 08 56.5 -0.1
	comp=Z,35nm,1.1s					
CHIC	Chingaza	61.83	277	eP	P	12 08 58.2 +0.8
CHIC				eP	sP	12 09 02.2 +1.3
BRRC	Barranca, Sant	62.06	279	eP	P	12 08 55.5 -2.9
ROSC	El Rosal	62.43	277	P	P	12 09 02.0 +0.6
	comp=Z,9.1nm,0.4s,baz=156,slow=2.9,SNR=9.3					
ROSC				LR	LR	12 33 47.2
	comp=Z,489nm,20.2s,baz=71,slow=34					
ROSC	El Rosal	62.43	277	eP	P	12 09 02.1 +0.7
	comp=Z,7.4nm,0.4s					
ROSC	El Rosal	62.43	277	eP	P	12 09 00.2 -1.2
PTLC	Puerto Leguiza	62.58	271	eP	P	12 09 00.8 -1.1
PTBC	PUERTO BERRIO,	62.74	279	eP	P	12 08 57.5 -5.5
PRAC	Prado	62.90	275	eP	P	12 09 01.5 -2.6
FLOC	Florencia	63.51	273	eP	P	12 09 08.8 +0.6
AKASG	Malin Array Be	63.72	28	P	P	12 09 07.9 -0.8
	comp=Z,2.1nm,0.6s,baz=230,slow=6.0,SNR=18					
AKASG				LR	LR	12 38 35.1
	comp=Z,106nm,21.4s,baz=210,slow=38					
AKASG	Malin Array Be	63.72	28	iP	P	12 09 08.3 -0.4
AKASG				pmax	pmax	
	comp=Z,2.0nm,0.6s					
AKBB	Malin Array Si	63.72	28	eP	P	12 09 08.0 -0.7
	comp=Z,2.3nm,0.9s					
AKBB	Malin Array Si	63.72	28	eP	P	12 09 08.0 -0.7
AKBB				pmax	pmax	
	comp=Z,2.0nm,0.9s					
HELC	Santa Helena	63.76	278	eP	P	12 09 06.2 -4.1
MARP	Paez Belalcaza	63.90	274	eP	P	12 09 08.8 -2.2
KONO	Kongsberg	64.29	12⇓	eP	P	12 09 12.8 +0.5
KONO				pmax	pmax	
	comp=Z,57nm,2.5s					
PCON	Cinco Dias	64.30	274	eP	P	12 09 15.5 +1.4
YOTC	Yotoco, Valle	64.37	276	eP	P	12 09 11.5 -2.5
PLMC	San Jos del P	64.39	277	eP	P	12 09 08.8 -5.2
ANN	Anapa	64.53	37	eP	P	12 09 13.8 -0.4
ANN				e*PP	pP	12 09 17.1 +0.4
ANN				eS	S	12 17 58.2 +4.7
ANN				pmax	pmax	
	comp=Z,36nm,1.3s					
POPC	Popayan, Colom	64.59	274	eP	P	12 09 14.8 -0.7
PLCA	Paso Flores	64.73	226	P	P	12 09 15.2 -0.6
	comp=Z,6.7nm,1.0s,baz=106,slow=6.7,SNR=9.4					
PLCA				LR	LR	12 32 35.8
	comp=Z,192nm,21.0s,baz=102,slow=32					
PLCA	Paso Flores	64.73	226	eP	P	12 09 15.6 -0.2
	comp=Z,12nm,1.1s					
PLCA	Paso Flores	64.73	226	eP	P	12 09 15.6 -0.2
PLCA				pmax	pmax	
	comp=Z,12nm,1.1s					
PLCA	Paso Flores	64.73	226	eP	P	12 09 16.9 +1.1
CRUC	La Cruz	64.80	273	eP	P	12 09 18.1 +1.0
BBAC	Balboa, Cauca	65.13	273	eP	P	12 09 18.1 -0.9
SOC	Sochi	65.31	39	eP	P	12 09 18.5 -0.8
SOC				e		12 11 40.2
SOC				eS	S	12 18 06.8 +3.7
SOC				eSS	SS	12 22 13.6 -2.7
SOC				MLR	MLR	
	comp=Z,136nm,18.0s					
NB2	NORSAR Subarra	65.89	12	P	P	12 09 22.5 -0.3
	comp=Z,15nm,1.2s,baz=204,slow=6.9					
NB200	NORSAR Array S	65.89	12	eP	P	12 09 23.0 +0.2
NOA	NORSAR Array B	65.89	12	P	P	12 09 23.0 +0.2
	comp=Z,2.1nm,0.7s,baz=205,slow=6.1,SNR=8.2					
NOA				LR	LR	12 39 24.4
	comp=Z,76nm,19.5s,baz=210,slow=37					
OTAV	Otavalo	66.23	271	eP	P	12 09 24.3 -2.1
	comp=Z,32nm,1.4s					
OTAV	Otavalo	66.23	271	eP	P	12 09 24.3 -2.1
OTAV				pmax	pmax	
	comp=Z,32nm,1.4s					
OTAV	Otavalo	66.23	271	eP	P	12 09 22.5 -3.9
NEY	Neytrino	67.07	41⇓	eP	P	12 09 32.1 +1.2
NEY				pmax	pmax	
	comp=Z,1.0nm,0.9s					
GNI	Garni	67.08	44⇓	eP	P	12 09 32.3 +1.3
GNI				pmax	pmax	
	comp=Z,111nm,1.7s					
KIV	Kislovodsk	67.37	40	eP	P	12 09 33.4 +0.7
KIV				pmax	pmax	
	comp=Z,32nm,1.1s					
KIV				MLR	MLR	
	comp=Z,160nm,17.0s					
NCK	Nalchik	67.75	41⇑	iP	P	12 09 35.8 +0.8
NCK				pmax	pmax	
	comp=Z,5.0nm,0.5s					
VNA1	Neumayer--Stat	68.12	179	P	P	12 09 38.1 +1.4
VSU	Vasula	68.19	21d	iP	P	12 09 36.7 -0.6
VSU				pmax	pmax	
	comp=Z,64nm,1.3s					
VNA2	Neumayer--Watz	68.42	178	P	P	12 09 39.3 +0.6
	baz=347,slow=7.7					
VNA3	Neumayer Olymp	68.68	179	P	P	12 09 40.8 +0.5
VORD	Divnogorie	68.93	32	eP	P	12 09 42.0 -0.1
VORD				pmax	pmax	
	comp=Z,30nm,1.1s					
VSR	Storozhevoye	69.00	32d	iP	P	12 09 41.6 -1.0
VSR				pmax	pmax	
	comp=Z,21nm,0.8s					
SNAA	Sanae	69.35	177	P	P	12 09 45.0 +0.4
SNAA	Sanae	69.35	177	P	P	12 09 44.8 +0.2
	comp=Z,18nm,1.0s,baz=350,slow=6.3,SNR=43					
SNAA	Sanae	69.35	177	eP	P	12 09 45.1 +0.6
	comp=Z,31nm,1.0s					
SNAA	Sanae	69.35	177	deP	P	12 09 45.0 +0.4
LPSR	Galich'ya Gora	69.64	30	eP	P	12 09 45.3 -1.2
LPSR				pmax	pmax	
	comp=Z,10.0nm,0.8s					
OBN	Obninsk	69.96	27	iP	P	12 09 47.3 -1.1
OBN				pmax	pmax	
	comp=Z,7.0nm,0.9s					
OBN				MLR	MLR	
	comp=Z,302nm,19.0s					
MAK	Makhachkala	70.11	42	eP	P	12 09 44.1 -5.5
MAK				eS	S	12 18 53.4 -7.3
MAK				pmax	pmax	
	comp=Z,264nm,1.1s					
MAK				MLR	MLR	
	comp=Z,100nm,16.0s					
VRH	Novokhopyorsk	70.35	33	eP	P	12 09 50.1 -0.8
VRH				pmax	pmax	
	comp=Z,20nm,1.2s					
V62A	Hyde County Ai	70.36	309	P	P	12 09 52.0 +0.6
	baz=108					
MOS	Moscow	70.81	27	eP	P	12 09 52.2 -1.4
MOS				pmax	pmax	
	comp=Z,39nm,1.0s					
S61A	Accomac	70.82	311	P	P	12 09 54.9 +0.8
	baz=109					
T60A	Surry	71.45	310	P	P	12 09 58.7 +0.8
	baz=108					
P60A	Greenville	71.49	313	P	P	12 09 58.7 +0.6
	baz=110					
O60A	Telford	71.50	314	P	P	12 09 58.7 +0.6
	baz=110					
N59A	State Game Lan	71.96	314	eP	P	12 10 01.4 +0.4
	comp=Z,47nm,1.4s					
N59A	State Game Lan	71.96	314	P	P	12 10 01.8 +0.8
	baz=110					
P59A	Jarrettsville	72.01	313	P	P	12 10 01.8 +0.5
	baz=109					
T59A	Double "B" Far	72.02	310	eP	P	12 10 01.0 -0.4
	comp=Z,24nm,1.2s					
T59A	Double "B" Far	72.02	310	P	P	12 10 02.1 +0.7
	baz=108					
U59A	Littleton	72.02	309	eP	P	12 10 00.9 -0.5
	comp=Z,35nm,1.4s					
U59A	Littleton	72.02	309	P	P	12 10 02.1 +0.7
	baz=107					
O59A	Robesonia	72.06	314	P	P	12 10 02.3 +0.8
	baz=110					
V59A	Middlesex	72.20	309	P	P	12 10 02.9 +0.4
	baz=107					
PMSA	Palmer Station	72.33	201	eP	P	12 10 03.8 +1.2
LONY	Lake Ozonia	72.47	318	P	P	12 10 04.4 +0.5
	baz=112					
SCHQ	Schefferville	72.54	330	LR	LR	12 36 44.2
	comp=Z,113nm,20.6s,baz=158,slow=32					
BINY	Binghamton	72.55	316	P	P	12 10 05.6 +1.1
	baz=110					
R58B	Mineral	72.57	311	eP	P	12 10 04.5 -0.1
	comp=Z,12nm,0.9s					
R58B	Mineral	72.57	311	P	P	12 10 05.2 +0.6
	baz=108					
S58A	Poland Farm, P	72.59	311	P	P	12 10 05.4 +0.7
	baz=107					
U58A	Oxford	72.62	309	P	P	12 10 05.6 +0.6
	baz=107					
R58A	Rapidan	72.76	311	P	P	12 10 06.4 +0.6
	baz=108					
T58A	Grand View Acr	72.77	310	P	P	12 10 06.3 +0.4
	baz=107					
V58A	Windy Hill, Pi	72.89	309	P	P	12 10 06.8 +0.2
	baz=106					
DWPF	Disney Wildern	72.93	300	P	P	12 10 07.6 +0.6
	baz=102					
ESPN	Las Esperanzas	73.02	283	eP	P	12 10 04.0 -3.7
	comp=Z,104nm,1.4s					
NHSC	New Hope	73.03	306	P	P	12 10 08.1 +0.7
	baz=105					
O57A	Amberson	73.08	313	P	P	12 10 08.2 +0.6
	baz=108					
P57A	Homestead Farm	73.13	312	P	P	12 10 09.0 +1.1
	baz=108					
R57A	Stanardsville	73.15	311	P	P	12 10 08.6 +0.5
	baz=107					
N57A	Milroy	73.19	314	P	P	12 10 08.9 +0.7
	baz=109					
U57A	Blanch	73.24	309	P	P	12 10 09.4 +0.8
	baz=106					
Q57A	Strasburg	73.28	312	P	P	12 10 10.0 +1.1
	baz=108					
S57A	Dark Hollow, R	73.32	311	eP	P	12 10 08.7 -0.4
	comp=Z,16nm,1.1s					
S57A	Dark Hollow, R	73.32	311	P	P	12 10 09.9 +0.8
	baz=107					
T57A	Hurt	73.33	310	P	P	12 10 09.7 +0.5
	baz=106					
SSPA	Standing Stone	73.39	314	eP	P	12 10 09.8 +0.4
	comp=Z,31nm,1.1s					
SSPA	Standing Stone	73.39	314	P	P	12 10 10.1 +0.7
	baz=108					
W57A	Gilead	73.41	308	P	P	12 10 10.2 +0.5
	baz=105					
V57A	Coltrane Farms	73.43	308	P	P	12 10 10.4 +0.6
	baz=106					
P56A	Dayton Farm, R	73.74	312	P	P	12 10 12.8 +1.3
	baz=107					
S56A	Natural Bridge	73.76	310	P	P	12 10 12.9 +1.2
	baz=106					
O56A	Blue Knob Stat	73.77	313	eP	P	12 10 10.4 -1.3
	comp=Z,50nm,1.5s					
O56A	Blue Knob Stat	73.77	313	P	P	12 10 12.5 +0.8
	baz=108					
N56A	West Decatur	73.77	314	P	P	12 10 12.5 +0.7
	baz=108					
ACON	Acoyapa	73.84	283	eP	P	12 10 12.0 -0.6
	comp=Z,85nm,1.2s					
Q56A	Snyder Ridge,	73.86	312	P	P	12 10 13.4 +1.1
	baz=107					
M56A	Emporium	73.87	314	P	P	12 10 13.0 +0.7
	baz=108					
W56A	Indian Trail	73.87	308	P	P	12 10 12.9 +0.5
	baz=105					
T56A	Rocky Mt	73.94	310	P	P	12 10 13.7 +0.9
	baz=106					
V56A	Mocksville	73.98	308	eP	P	12 10 13.3 +0.3
	comp=Z,14nm,1.0s					
V56A	Mocksville	73.98	308	P	P	12 10 13.7 +0.7
	baz=105					
U56A	King	74.03	309	P	P	12 10 14.3 +1.0
	baz=105					
X56A	White Oak	74.07	307	P	P	12 10 14.5 +0.9
	baz=104					
G55A	Calabogie	74.11	318	P	P	12 10 14.1 +0.6
	baz=110					
656A	Willston	74.14	301	P	P	12 10 14.9 +0.9
	baz=102					
556A	Lake Butler	74.16	302	P	P	12 10 14.1 -0.1
	baz=102					
H55A	Tweed	74.18	318	P	P	12 10 14.3 +0.3
	baz=110					
J55A	Hilton	74.18	316	eP	P	12 10 14.8 +0.8
	comp=Z,55nm,1.3s					
J55A	Hilton	74.18	316	P	P	12 10 14.3 +0.2
	baz=109					
K55A	Perry	74.18	316	P	P	12 10 14.5 +0.4
	baz=109					
JSC	Jenkinsville	74.20	307	eP	P	12 10 15.5 +1.2
	comp=Z,20nm,1.0s					
JSC	Jenkinsville	74.20	307	eP	P	12 10 15.5 +1.2
JSC				pmax	pmax	
	comp=Z,20nm,1.0s					
N55A	Marion Center	74.23	314	P	P	12 10 14.9 +0.4
	baz=108					
L55A	Hinsdale	74.27	315	P	P	12 10 15.5 +0.8
	baz=108					
M55A	Ridgway	74.28	314	P	P	12 10 15.3 +0.6
	baz=108					
BLA	Blacksburg	74.29	310	eP	P	12 10 16.5 +1.6
	comp=Z,40nm,1.1s					
BLA	Blacksburg	74.29	310	eP	P	12 10 16.5 +1.6
BLA				pmax	pmax	
	comp=Z,40nm,1.1s					
O55A	Ligonier	74.29	313	P	P	12 10 15.6 +0.8
	baz=107					
CHGQ	Chibougamau	74.38	324	P	P	12 10 16.2 +1.1
	baz=114					
I55A	Frankford	74.40	317	P	P	12 10 15.9 +0.6
	baz=110					
KMSC	Kings Mountain	74.47	307	eP	P	12 10 16.9 +1.1
	comp=Z,20nm,1.0s					
KMSC	Kings Mountain	74.47	307	P	P	12 10 16.4 +0.5
	baz=104					
P55A	Reedsville	74.47	312	P	P	12 10 16.7 +0.8
	baz=107					
S55A	Lewisburg	74.50	310	P	P	12 10 17.2 +1.1
	baz=106					
Q55A	Buckhannon	74.52	312	P	P	12 10 17.2 +1.0
	baz=106					
MCWV	Mont Chateau	74.53	312	P	P	12 10 16.6 +0.4
	baz=107					
X55A	Gracelyn & Ava	74.54	307	P	P	12 10 17.3 +1.0
	baz=104					
T55A	Pulaski	74.54	309	P	P	12 10 17.5 +1.2
	baz=105					
V55A	Taylorsville	74.55	308	P	P	12 10 17.5 +1.1
	baz=105					
K54A	Basiliko Farm,	74.58	315	P	P	12 10 17.2 +0.8
	baz=108					
U55A	TA2, Sparta	74.59	309	P	P	12 10 17.7 +1.1
	baz=105					
Y55A	Saluda	74.60	306	P	P	12 10 17.4 +0.8
	baz=104					
KLMR	Klimovskoe	74.62	24	eP	P	12 10 13.4 -2.8
KLMR				pmax	pmax	
	comp=Z,25nm,1.3s					
KLMR	Klimovskoe	74.62	24	eP	P	12 10 13.5 -2.8
KLMR				AMP		12 10 31.7
	comp=Z,25nm,1.2s					
555A	McAlpin	74.66	302	P	P	12 10 17.5 +0.4
	baz=102					
D54A	Lac Fusel, La	74.74	320	P	P	12 10 17.3 +0.1
	baz=111					
655A	Horseshoe Beac	74.78	301	P	P	12 10 18.4 +0.6
	baz=102					
SYO	Syowa Base	74.78	163⇑	eP	P	12 10 15.0 -2.0
SYO	Syowa Base	74.78	163⇓	epP	pP	12 10 20.4 +0.8
SYO	Syowa Base	74.78	163⇓	esP	sP	12 10 22.0 +1.6
155A	Kite	74.79	305	P	P	12 10 19.0 +1.2
	baz=103					
E54A	Lac Daplat, Po	74.83	320	P	P	12 10 17.9 +0.2
	baz=110,SNR=6.6					
455A	Stateville	74.84	303	P	P	12 10 19.3 +1.2
	baz=102					
L54A	Sinclairville	74.91	315	P	P	12 10 18.9 +0.6
	baz=108					
M54A	Oil Creek Stat	74.94	314	eP	P	12 10 18.9 +0.4
	comp=Z,36nm,1.3s					
M54A	Oil Creek Stat	74.94	314	P	P	12 10 18.9 +0.4
	baz=107					
R54A	Victor	74.98	311	P	P	12 10 19.8 +0.9
	baz=106					
P54A	Burton	74.98	312	P	P	12 10 19.3 +0.5
	baz=106					
HODGE	Hodges	74.99	306	eP	P	12 10 19.5 +0.6
	comp=Z,23nm,1.2s					
DRWO	Darlington Wes	75.00	317	P	P	12 10 19.7 +0.9
	baz=109					
N54A	Moraine State	75.01	313	P	P	12 10 19.2 +0.3
	baz=107					
O54A	Avella	75.07	313	P	P	12 10 20.2 +0.9
	baz=106					
Q54A	Coxs Mills	75.08	311	eP	P	12 10 20.7 +1.3
	comp=Z,45nm,1.4s					
Q54A	Coxs Mills	75.08	311	P	P	12 10 20.3 +1.0
	baz=106					
V54A	Nebo	75.11	308	P	P	12 10 20.5 +0.9
	baz=104					
E53A	Dumoine, Ponti	75.12	319	P	P	12 10 20.7 +1.3
	baz=110					
S54A	Dingess, Beckl	75.13	310	P	P	12 10 20.4 +0.7
	baz=105					
W54A	Cherokee Point	75.13	307	P	P	12 10 20.8 +1.0
	baz=104					
T54A	Tazewell	75.14	309	P	P	12 10 20.8 +0.9
	baz=105					
X54A	Belton	75.16	307	P	P	12 10 20.6 +0.7
	baz=104					
U54A	Nelsons Funny	75.19	309	eP	P	12 10 21.2 +1.0
	comp=Z,38nm,1.1s					
U54A	Nelsons Funny	75.19	309	P	P	12 10 21.2 +1.0
	baz=104					
Z54A	Sparta	75.23	305	P	P	12 10 21.1 +0.7
	baz=103					
Y54A	Tignall	75.25	306	P	P	12 10 21.3 +0.9
	baz=103					
554A	Perry	75.26	302	P	P	12 10 21.2 +0.6
	baz=102					
154A	Montrose	75.31	304	P	P	12 10 21.3 +0.5
	baz=103					
ALLY	Alegheny Colle	75.32	314	eP	P	12 10 21.4 +0.7
	comp=Z,52nm,1.0s					
G53A	Haliburton	75.33	318	P	P	12 10 21.2 +0.5
	baz=109,SNR=7.5					
454A	Quitman	75.35	302	P	P	12 10 22.2 +1.1
	baz=102					
ERPA	Erie	75.35	315	P	P	12 10 21.4 +0.5
	baz=107					
D53A	Lac Vacive, Po	75.38	320	eP	P	12 10 20.6 -0.3
	comp=Z,18nm,1.0s					
D53A	Lac Vacive, Po	75.38	320	P	P	12 10 21.1 +0.2
	baz=110					
L53A	Girard	75.49	314	P	P	12 10 22.4 +0.7
	baz=107					
Q53A	Leroy	75.57	311	P	P	12 10 22.7 +0.5
	baz=105					
SADO	Sadowa	75.57	317	eP	P	12 10 21.7 -0.3
	comp=Z,26nm,1.1s					
N53A	Lisbon	75.58	313	eP	P	12 10 22.2 -0.1
	comp=Z,27nm,1.0s					
N53A	Lisbon	75.58	313	P	P	12 10 22.6 +0.4
	baz=106					
VLDQ	Val d'Or	75.58	321	eP	P	12 10 23.3 +1.3
	comp=Z,20nm,1.1s					
LSQQ	Lebel-sur-Quev	75.63	322	P	P	12 10 22.4 +0.2
	baz=111					
P53A	Whipple	75.63	312	P	P	12 10 22.9 +0.4
	baz=106					
M53A	WI Miller and	75.64	314	P	P	12 10 23.0 +0.4
	baz=107					
O53A	New Philadelph	75.70	313	P	P	12 10 23.6 +0.7
	baz=106					
E52A	Mattawa	75.73	319	P	P	12 10 22.8 -0.1
	baz=109					
U53A	Fall Branch	75.75	308	P	P	12 10 24.1 +0.8
	baz=104					
R53A	Hurricane	75.75	310	P	P	12 10 23.8 +0.6
	baz=105					
V53A	Saluda	75.77	308	eP	P	12 10 23.5 0.0
	comp=Z,17nm,0.9s					
V53A	Saluda	75.77	308	P	P	12 10 24.2 +0.7
	baz=104					
GOGA	Godfrey	75.78	305	P	P	12 10 24.3 +0.8
	baz=103					
D52A	ZEK Kipawa Sen	75.80	320	P	P	12 10 23.5 +0.1
	baz=110,SNR=8.4					
Z53A	Monticello	75.84	305	P	P	12 10 24.6 +0.7
	baz=103					
T53A	Wise	75.86	309	P	P	12 10 24.5 +0.5
	baz=104					
X53A	Estanollee	75.89	306	P	P	12 10 25.1 +1.0
	baz=103					
W53A	Cullowhee	75.93	307	P	P	12 10 25.4 +0.9
	baz=103,SNR=5.2					
BUKO	Buck Lake	75.95	318	P	P	12 10 24.3 +0.1
	baz=108					
353A	Camilla	75.97	303	P	P	12 10 25.8 +1.2
	baz=102					
Y53A	Monroe	75.97	306	P	P	12 10 25.4 +0.8
	baz=103					
F52A	Sundridge	76.02	318	P	P	12 10 24.5 0.0
	baz=109					
J52A	Paris	76.02	316	P	P	12 10 24.8 +0.1
	baz=107					
K52A	Tillsonburg	76.05	315	P	P	12 10 25.1 +0.3
	baz=107					
TGUH	Tegucigalpa,Un	76.10	285	eP	P	12 10 26.1 +0.4
	comp=Z,82nm,1.3s					
O52A	Adamsville	76.13	312	eP	P	12 10 26.9 +1.5
	comp=Z,74nm,1.3s					
O52A	Adamsville	76.13	312	P	P	12 10 26.2 +0.9
	baz=105					
Q52A	Bidwell	76.15	311	P	P	12 10 26.0 +0.5
	baz=105					
M52A	Chesterland	76.16	314	P	P	12 10 25.8 +0.3
	baz=106					
GEYT	Alibeck	76.17	50	P	P	12 10 25.5 -0.2
	comp=Z,1.5nm,0.7s,baz=309,slow=9.4,SNR=3.9					
GEYT				LR	LR	12 45 43.0
	comp=Z,169nm,20.1s,baz=240,slow=37					
N52A	McGinn's Farm,	76.20	313	P	P	12 10 26.7 +0.9
	baz=106					
P52A	Corning	76.22	312	P	P	12 10 26.5 +0.6
	baz=105					
T52A	Hallie	76.24	309	P	P	12 10 27.0 +0.9
	baz=104					
ARCES	ARCESS Array B	76.26	13	P	P	12 10 25.5 0.0
	comp=Z,12nm,0.4s,baz=212,slow=4.3,SNR=34					
ARCES				LR	LR	12 47 11.3
	comp=Z,58nm,18.3s,baz=180,slow=38					
MATQ	Matagami	76.28	323	P	P	12 10 25.9 -0.1
	baz=111					
R52A	Catlettsburg	76.28	310	P	P	12 10 27.3 +1.0
	baz=104					
E51A	G1948 Merrick	76.36	319	P	P	12 10 26.7 +0.1
	baz=109,SNR=6.8					
Y52A	Lilburn	76.37	306	eP	P	12 10 26.7 -0.1
	comp=Z,30nm,1.3s					
Y52A	Lilburn	76.37	306	P	P	12 10 27.6 +0.7
	baz=102					
U52A	Thorn Hill	76.37	308	P	P	12 10 27.5 +0.6
	baz=104,SNR=5.3					
X52A	Dahlonega	76.39	306	P	P	12 10 27.7 +0.7
	baz=103					
V52A	Sevierville	76.43	308	eP	P	12 10 26.3 -0.9
	comp=Z,20nm,1.1s					
V52A	Sevierville	76.43	308	P	P	12 10 27.4 +0.3
	baz=103					
F51A	Arnstein	76.45	318	P	P	12 10 27.2 +0.2
	baz=108					
S52A	Salyersville	76.45	310	P	P	12 10 27.9 +0.7

	baz=104							
KLBO	Killbear Provi	76.47	318	P	P	12	10	27.3 +0.1
	baz=108							
Z52A	Williamson	76.51	305	P	P	12	10	28.4 +0.7
	baz=102							
W52A	Murphy	76.52	307	eP	P	12	10	28.2 +0.4
	comp=Z,20nm,1.0s							
W52A	Murphy	76.52	307	P	P	12	10	28.4 +0.6
	baz=103							
252A	Lumpkin	76.53	304	P	P	12	10	28.6 +0.8
	baz=102							
TZTN	Tazewell	76.55	308	P	P	12	10	28.5 +0.7
	baz=103							
I51A	Listowel	76.56	316	P	P	12	10	28.2 +0.4
	baz=107,SNR=7.6							
152A	Waverly Hall	76.65	304	eP	P	12	10	29.3 +0.8
	comp=Z,37nm,1.5s							
152A	Waverly Hall	76.65	304	P	P	12	10	29.3 +0.8
	baz=102							
452A	Marianna	76.68	302	P	P	12	10	29.6 +0.9
	baz=101							
M51A	Elyria	76.70	313	P	P	12	10	29.4 +0.8
	baz=106							
O51A	Pataskala	76.71	312	P	P	12	10	29.3 +0.6
	baz=105							
BWLO	Walkerton	76.73	316	P	P	12	10	29.1 +0.4
	baz=107							
N51A	Ashland	76.74	313	eP	P	12	10	30.1 +1.3
	comp=Z,83nm,1.1s							
N51A	Ashland	76.74	313	P	P	12	10	29.3 +0.6
	baz=105							
SUMG	Summit	76.76	352	eP	P	12	10	29.1 +0.4
	comp=Z,17nm,1.1s							
SUMG	Summit	76.76	352	eP	P	12	10	29.2 +0.4
SUMG				pmax	pmax			
	comp=Z,17nm,1.1s							
SUMG	Summit	76.76	352	i P	P	12	10	29.1 +0.4
APA	Apatity	76.80	16⇑	iP	P	12	10	22.2 -6.4
APA				pmax	pmax			
	comp=Z,3.0nm,1.1s							
APA				MLR	MLR			
	comp=Z,200nm,17.0s							
S51A	Beattyville	76.84	309	eP	P	12	10	28.1 -1.3
	comp=Z,22nm,0.9s							
S51A	Beattyville	76.84	309	P	P	12	10	30.4 +0.9
	baz=104,SNR=6.9							
U51A	La Follette	76.88	308	P	P	12	10	30.4 +0.7
	baz=103,SNR=6.9							
BMRO	Meriville Lake	76.93	317	P	P	12	10	30.5 +0.7
	baz=107							
T51A	Gray	76.96	309	P	P	12	10	31.0 +0.8
	baz=103							
BRCO	Bruce Peninsul	76.98	316	P	P	12	10	30.5 +0.4
	baz=107							
Q51A	Peebles	76.98	311	eP	P	12	10	29.9 -0.3
	comp=Z,16nm,0.9s							
Q51A	Peebles	76.98	311	P	P	12	10	30.6 +0.4
	baz=104							
R51A	Hillsboro	76.99	310	P	P	12	10	30.9 +0.6
	baz=104							
ACSO	Alum Creek Sta	77.01	312	eP	P	12	10	30.3 0.0
	comp=Z,59nm,1.2s							
ACSO	Alum Creek Sta	77.01	312	P	P	12	10	30.9 +0.5
	baz=105,SNR=6.7							
V51A	Loudon	77.02	307	eP	P	12	10	30.1 -0.4
	comp=Z,37nm,1.0s							
V51A	Loudon	77.02	307	P	P	12	10	31.4 +0.9
	baz=103,SNR=8.2							
CPCT	Cooper Cave	77.08	307	eP	P	12	10	31.2 +0.4
	comp=Z,17nm,1.1s							
251A	Midway	77.11	304	P	P	12	10	31.8 +0.8
	baz=101							
351A	Pinckard	77.12	303	P	P	12	10	32.0 +0.9
	baz=101							
151A	Opelika	77.13	304	P	P	12	10	31.7 +0.5
	baz=101,SNR=6.3							
PLIO	Pelee Island,	77.14	314	P	P	12	10	31.3 +0.3
	baz=105							
E50A	Wahnapitae	77.15	319	P	P	12	10	31.2 +0.3
	baz=108,SNR=6.1							
X51A	Calhoun	77.16	306	eP	P	12	10	31.1 -0.2
	comp=Z,57nm,1.3s							
X51A	Calhoun	77.16	306	P	P	12	10	32.0 +0.7
	baz=102							
Y51A	Rockmart	77.19	305	P	P	12	10	31.7 +0.2
	baz=102							
W51A	Cleveland	77.20	307	P	P	12	10	32.2 +0.7
	baz=102,SNR=5.7							
N50A	Nevada	77.27	313	P	P	12	10	32.9 +1.1
	baz=105							
TOBO	Tobermory, Bru	77.32	317	P	P	12	10	32.2 +0.3
	baz=107							
L50A	Kingsville	77.34	314	P	P	12	10	32.6 +0.5
	baz=105,SNR=6.0							
M50A	Fremont	77.35	313	eP	P	12	10	32.9 +0.7
	comp=Z,47nm,0.9s							
M50A	Fremont	77.35	313	P	P	12	10	32.6 +0.4
	baz=105							
K50A	Casco	77.40	315	P	P	12	10	32.8 +0.3
	baz=106							
Q50A	Georgetown	77.42	311	P	P	12	10	33.1 +0.4
	baz=104							
O50A	Cable	77.46	312	P	P	12	10	33.2 +0.3
	baz=104							
P50A	Jamestown	77.46	311	P	P	12	10	33.2 +0.2
	baz=104							
S50A	Richmond	77.47	309	P	P	12	10	33.8 +0.8
	baz=103							
PRGR	Permogore	77.53	24	eP	P	12	10	30.7 -2.0
PRGR				pmax	pmax			
	comp=Z,14nm,0.6s							
U50A	Jamestown	77.54	308	P	P	12	10	33.9 +0.5
	baz=103,SNR=9.6							
R50A	Paris	77.55	310	P	P	12	10	34.0 +0.5
	baz=103							
V50A	Pikevile	77.58	307	P	P	12	10	34.1 +0.5
	baz=102,SNR=6.4							
W50A	Signal Mountai	77.66	307	P	P	12	10	34.6 +0.4
	baz=102							
T50A	Nancy	77.67	309	P	P	12	10	34.9 +0.8
	baz=103,SNR=10							
150A	Eclectic	77.72	304	P	P	12	10	35.1 +0.6
	baz=101,SNR=6.1							
Y50A	Piedmont	77.73	305	P	P	12	10	34.8 +0.3
	baz=102							
350A	Dozier	77.76	303	P	P	12	10	35.5 +0.8
	baz=101							
Z50A	Ashland	77.76	305	eP	P	12	10	35.3 +0.6
	comp=Z,15nm,1.0s							
Z50A	Ashland	77.76	305	P	P	12	10	35.0 +0.3
	baz=101							
X50B	Fort Payne	77.78	306	P	P	12	10	34.9 +0.1
	baz=102							
D49A	Beulah Townshi	77.81	319	P	P	12	10	34.8 +0.2
	baz=107							
250A	Grady	77.81	303	P	P	12	10	35.4 +0.4
	baz=101							
F49A	Sandfield	77.82	318	P	P	12	10	34.7 0.0
	baz=106,SNR=7.2							
I49A	Point Hope	77.86	316	eP	P	12	10	36.0 +1.0
	comp=Z,27nm,0.9s							
I49A	Point Hope	77.86	316	P	P	12	10	34.8 -0.2
	baz=106							
J49A	Marlette	77.92	315	P	P	12	10	35.5 +0.1
	baz=105,SNR=6.7							
O49A	Covington	78.00	312	eP	P	12	10	36.0 +0.1
	comp=Z,38nm,1.1s							
O49A	Covington	78.00	312	P	P	12	10	36.2 +0.3
	baz=104,SNR=5.6							
M49A	Liberty Center	78.05	313	P	P	12	10	36.3 +0.2
	baz=104							
L49A	Milan	78.05	314	P	P	12	10	36.4 +0.3
	baz=104							
N49A	Columbus Grove	78.06	313	eP	P	12	10	36.1 -0.1
	comp=Z,23nm,1.0s							
N49A	Columbus Grove	78.06	313	P	P	12	10	36.2 0.0
	baz=104							
E48A	Lockeyer	78.11	318	P	P	12	10	36.2 -0.1
	baz=107							
P49A	Miami Univ. Ec	78.14	311	P	P	12	10	36.6 -0.1
	baz=103							
Q49A	Aurora	78.15	311	P	P	12	10	37.0 +0.3
	baz=103							
SWET	Sewanee	78.16	307	eP	P	12	10	36.5 -0.4
	comp=Z,31nm,1.3s							
S49A	Springfield	78.18	309	P	P	12	10	37.1 +0.1
	baz=103							
R49A	Shelbyville	78.20	310	P	P	12	10	36.9 -0.1
	baz=103							
T49A	Edmonton	78.23	309	eP	P	12	10	37.5 +0.3
	comp=Z,26nm,1.0s							
T49A	Edmonton	78.23	309	P	P	12	10	37.6 +0.3
	baz=102,SNR=8.6							
V49A	McMinnville	78.24	307	P	P	12	10	36.9 -0.4
	baz=102							
Z49A	Columbiana	78.25	304	P	P	12	10	37.5 0.0
	baz=101,SNR=7.4							
Y49A	Blount Mountai	78.28	305	eP	P	12	10	36.4 -1.2
	comp=Z,8.8nm,0.8s							
Y49A	Blount Mountai	78.28	305	P	P	12	10	37.5 -0.1
	baz=101							
U49A	Red Boiling Sp	78.30	308	P	P	12	10	37.9 +0.3
	baz=102,SNR=9.9							
X49A	Woodville	78.33	306	P	P	12	10	38.0 +0.1
	baz=101							
149A	Jones	78.36	304	P	P	12	10	38.2 +0.2
	baz=101,SNR=6.2							
H48A	Harrisville	78.40	316	eP	P	12	10	37.7 -0.3
	comp=Z,41nm,1.2s							
H48A	Harrisville	78.40	316	P	P	12	10	37.9 -0.1
	baz=105							
W49A	Belvidere	78.40	306	P	P	12	10	38.3 +0.1
	baz=101,SNR=6.4							
349A	Repton	78.47	303	P	P	12	10	38.6 -0.1
	baz=100							
K48A	Perry	78.47	314	P	P	12	10	38.5 0.0
	baz=104							
L48A	N Adams	78.49	314	P	P	12	10	38.4 -0.2
	baz=104							
I48A	Sherman Twp	78.53	316	P	P	12	10	38.6 -0.1
	baz=105							
LRAL	Lakeview Retre	78.61	304	eP	P	12	10	39.6 +0.2
	comp=Z,18nm,0.9s							
LRAL	Lakeview Retre	78.61	304	P	P	12	10	39.3 -0.1
	baz=101,SNR=6.3							
O48A	Farmland	78.63	312	P	P	12	10	39.1 -0.3
	baz=103							
CLTN	Cedars of Leba	78.65	307	eP	P	12	10	39.8 +0.3
	comp=Z,14nm,1.1s							
P48A	Milroy	78.65	311	P	P	12	10	39.0 -0.5
	baz=103							
N48A	Decatur	78.67	312	P	P	12	10	39.3 -0.3
	baz=103							
S48A	Wiedeman Farm,	78.75	309	P	P	12	10	39.6 -0.5
	baz=102,SNR=6.4							
R48A	Northridge Ran	78.76	310	P	P	12	10	40.4 +0.2
	baz=102							
Q48A	North Vernon	78.77	310	P	P	12	10	40.2 +0.1
	baz=102,SNR=6.6							
E47A	Iron Bridge	78.84	318	P	P	12	10	40.0 -0.3
	baz=106							
D47A	Chapleau	78.89	319	P	P	12	10	40.2 -0.4
	baz=106							
G47A	Hillman	78.89	317	P	P	12	10	40.6 -0.1
	baz=105							
U48A	Cassie Pea, Po	78.90	308	P	P	12	10	40.8 -0.1
	baz=102,SNR=6.4							
T48A	Bowling Green	78.90	308	P	P	12	10	40.9 0.0
	baz=102							
X48A	Hartselle	78.91	306	eP	P	12	10	41.0 0.0
	comp=Z,52nm,1.5s							
X48A	Hartselle	78.91	306	P	P	12	10	41.0 0.0
	baz=101,SNR=6.1							
Y48A	Jasper	78.91	305	P	P	12	10	40.9 -0.1
	baz=101							
W48A	Pulaski	78.94	306	P	P	12	10	41.0 -0.3
	baz=101							
V48A	Smith Brothers	78.97	307	eP	P	12	10	41.2 -0.2
	comp=Z,24nm,1.0s							
V48A	Smith Brothers	78.97	307	P	P	12	10	41.0 -0.4
	baz=101,SNR=6.3							
H47A	Mio	78.98	316	P	P	12	10	41.0 -0.2
	baz=105							
148A	Greensboro	79.01	304	P	P	12	10	41.7 +0.1
	baz=100							
WCI	Wyandotte Cave	79.05	310	P	P	12	10	41.8 +0.1
	baz=102							
L47A	Sherwood	79.06	313	P	P	12	10	41.3 -0.3
	baz=104							
K47A	Vermntville	79.07	314	P	P	12	10	41.5 -0.2
	baz=104							
N47A	Urbana	79.17	312	P	P	12	10	42.0 -0.3
	baz=103,SNR=6.3							
DAG	Danmarks Havn	79.23	359	i P	P	12	10	42.4 +0.5
DAG				pmax	pmax			
	comp=Z,10.0nm,0.9s							
DAG	Danmarks Havn	79.23	359	i P	P	12	10	42.4 +0.5
	comp=Z,12nm,0.9s							
R47A	Wooly Knot Far	79.25	310	P	P	12	10	42.5 -0.3
	baz=102							
P47A	Martinsville	79.30	311	P	P	12	10	42.7 -0.4
	baz=102							
Q47A	Bedord North L	79.30	310	P	P	12	10	42.6 -0.5
	baz=102							
GLMI	Grayling	79.32	316	P	P	12	10	43.0 -0.1
	baz=104							
S47A	Hartford	79.38	309	P	P	12	10	43.1 -0.4
	baz=102							
O47A	Sheridan	79.39	312	P	P	12	10	42.9 -0.6
	baz=102							
T47A	Sharon Grove	79.44	308	eP	P	12	10	43.3 -0.5
	comp=Z,67nm,1.6s							
T47A	Sharon Grove	79.44	308	P	P	12	10	43.3 -0.5
	baz=101							
D46A	Sault St. Mari	79.46	318	P	P	12	10	43.3 -0.4
	baz=105							
U47A	Clarksville	79.48	308	P	P	12	10	43.5 -0.6
	baz=101							
W47A	Westpoint	79.50	306	P	P	12	10	43.8 -0.5
	baz=101							
E46A	Sault Ste Mari	79.50	318	eP	P	12	10	43.9 -0.1
	comp=Z,22nm,1.4s							
E46A	Sault Ste Mari	79.50	318	P	P	12	10	43.3 -0.7
	baz=105							
V47A	Nunnelly	79.55	307	P	P	12	10	44.0 -0.5
	baz=101,SNR=5.9							
X47A	Russelville	79.58	306	P	P	12	10	44.2 -0.5
	baz=100,SNR=6.3							
PLAL	Pickwick Lake	79.84	306	eP	P	12	10	45.2 -0.8
	comp=Z,24nm,1.1s							
WVT	Waverly	79.85	307	eP	P	12	10	45.4 -0.7
	comp=Z,29nm,1.1s							
WVT	Waverly	79.85	307	eP	P	12	10	45.4 -0.7
WVT				pmax	pmax			
	comp=Z,29nm,1.1s							
WVT	Waverly	79.85	307	P	P	12	10	45.5 -0.7
	baz=101							
N46A	Monticello	79.94	312	P	P	12	10	46.2 -0.4
	baz=102							
V46A	Holladay	80.02	307	P	P	12	10	46.2 -0.8
	baz=100,SNR=7.3							
S46A	Don Dixon Farm	80.05	309	P	P	12	10	46.3 -0.9
	baz=101							
T46A	Princeton	80.07	308	P	P	12	10	46.6 -0.6
	baz=101,SNR=6.0							
E45A	Wooded Hills,	80.08	318	P	P	12	10	46.5 -0.7
	baz=104							
SFIN	Lafayette	80.10	312	P	P	12	10	46.3 -1.1
	baz=102							
W46A	Michie	80.11	306	P	P	12	10	46.5 -1.0
	baz=100							
F45A	CMU Biological	80.15	317	P	P	12	10	46.9 -0.6
	baz=104							
U46A	Springville	80.17	307	P	P	12	10	47.0 -0.9
	baz=100							
X46A	Booneville	80.17	306	P	P	12	10	46.9 -1.0
	baz=100							
ABKAR	Akbulak array	80.35	39	eP	P	12	10	48.2 -0.3
	comp=Z,14nm,1.5s							
P45A	Graceland, Par	80.42	311	P	P	12	10	47.7 -1.5
	baz=101							
N45A	Kentland	80.51	312	P	P	12	10	48.6 -1.0
	baz=102							
OLIL	Olney	80.54	310	eP	P	12	10	48.6 -1.1
	comp=Z,48nm,1.3s							
O45A	Potomac	80.55	311	P	P	12	10	48.5 -1.3
	baz=101							
R45A	Skylar, Fairfi	80.60	309	P	P	12	10	49.0 -1.1
	baz=101							
Q45A	Warren Harvey,	80.62	310	P	P	12	10	48.9 -1.3
	baz=101							
OXF	Oxford	80.84	305	eP	P	12	10	48.7 -2.8
	comp=Z,25nm,1.0s							
OXF	Oxford	80.84	305	eP	P	12	10	48.7 -2.8
OXF				pmax	pmax			
	comp=Z,25nm,1.0s							
OXF	Oxford	80.84	305	P	P	12	10	50.0 -1.4
	baz=99							
N44A	Piper City	80.96	312	P	P	12	10	50.9 -1.1
	baz=101							
CCIG	Comitan	80.99	287	eP	P	12	10	51.6 -1.2
	comp=Z,33nm,1.0s							
M44A	Midewin, Midew	81.01	312	P	P	12	10	51.0 -1.2
	baz=101							
L44A	Lake County Fo	81.07	313	P	P	12	10	51.7 -0.9
	baz=102							
S44A	Carbondale	81.25	309	P	P	12	10	52.2 -1.4
	baz=100							
E43A	Lone Tree Farm	81.31	317	eP	P	12	10	53.3 -0.5
	comp=Z,32nm,1.1s							
E43A	Lone Tree Farm	81.31	317	P	P	12	10	53.2 -0.5
	baz=103							
H43A	Windswept, Lux	81.44	315	P	P	12	10	53.9 -0.5
	baz=102							
K43A	Burlington	81.48	314	eP	P	12	10	54.5 -0.2
	comp=Z,34nm,1.0s							
K43A	Burlington	81.48	314	P	P	12	10	54.2 -0.5
	baz=101							
KULLO	Kullorsuaq	81.50	349	i P	P	12	10	54.5 +0.3
KULLO	Kullorsuaq	81.50	349	i P	P	12	10	54.5 +0.3
ARU	Arti	81.57	32	eP	P	12	10	55.1 +0.2
	comp=Z,20nm,1.2s							
ARU	Arti	81.57	32c	iP	P	12	10	54.7 -0.2
ARU						12	13	57.0
ARU				S	S	12	21	07.5 +0.8
ARU				SS	SS	12	26	20.0 -3.7
ARU				pmax	pmax			
	comp=Z,30nm,1.7s							
M43A	Waltham Townsh	81.69	312	P	P	12	10	55.1 -0.8
	baz=101							
N43A	Stutzman Famil	81.76	312	P	P	12	10	55.0 -1.2
	baz=101							
F42A	Maple Grove Fa	81.95	317	P	P	12	10	56.7 -0.5
	baz=102							
H42A	Shiocton	81.98	315	P	P	12	10	57.0 -0.3
	baz=102							
X43A	Marvell	82.04	305	P	P	12	10	57.9 +0.1
	baz=99							
MAW	Mawson	82.07	158	P	P	12	10	59.1 +1.8
	comp=Z,22nm,0.7s,baz=285,slow=6.0,SNR=54							
MAW				LR	LR	12	39	16.6
	comp=Z,87nm,21.9s,baz=288,slow=30							
MAW	Mawson	82.07	158	eP	P	12	10	58.1 +0.8
	comp=Z,0.9nm,1.1s							
I42A	Draeger Farm,	82.12	315	eP	P	12	10	57.3 -0.8
	comp=Z,24nm,1.1s							
I42A	Draeger Farm,	82.12	315	P	P	12	10	57.6 -0.5
	baz=101							
FVM	French Village	82.21	309	eP	P	12	10	57.8 -0.9
	comp=Z,32nm,1.1s							
FVM	French Village	82.21	309	eP	P	12	10	57.8 -0.9
FVM				pmax	pmax			
	comp=Z,32nm,1.1s							
K42A	Prairie Point,	82.23	314	P	P	12	10	58.0 -0.7
	baz=101							
L42A	Oliver, Polo	82.32	313	eP	P	12	10	58.6 -0.5
	comp=Z,31nm,1.1s							
L42A	Oliver, Polo	82.32	313	P	P	12	10	58.3 -0.8
	baz=100							
D41A	Chassel	82.51	318	eP	P	12	10	59.4 -0.7
	comp=Z,69nm,1.3s							
D41A	Chassel	82.51	318	P	P	12	10	59.8 -0.3
	baz=102							
G41A	Antigo	82.57	316	P	P	12	10	59.7 -0.7
	baz=101							
COWI	Conover	82.71	317	eP	P	12	11	00.1 -1.0
	comp=Z,14nm,1.0s							
I41A	Arkdale	82.83	315	eP	P	12	11	01.6 -0.2
	comp=Z,17nm,0.8s							
I41A	Arkdale	82.83	315	P	P	12	11	01.2 -0.6
	baz=100							
M41A	Milan	82.86	312	P	P	12	11	00.9 -1.1
	baz=100							
CCM	Cathedral Cave	82.86	309	eP	P	12	11	01.3 -0.8
	comp=Z,21nm,0.9s							
CCM	Cathedral Cave	82.86	309	eP	P	12	11	01.3 -0.8
CCM				pmax	pmax			
	comp=Z,21nm,0.9s							
CCM	Cathedral Cave	82.86	309	P	P	12	11	01.3 -0.8
	baz=99							
JFWS	Jewell Farm	82.90	314	eP	P	12	11	01.7 -0.5
	comp=Z,19nm,0.9s							
JFWS	Jewell Farm	82.90	314	eP	P	12	11	01.7 -0.5
JFWS				pmax	pmax			
	comp=Z,19nm,0.9s							
JFWS	Jewell Farm	82.90	314	P	P	12	11	01.5 -0.6
	baz=100							
C40A	Isle Royale Na	83.07	319	eP	P	12	11	01.9 -1.0
	comp=Z,14nm,1.0s							
C40A	Isle Royale Na	83.07	319	P	P	12	11	02.2 -0.7
	baz=102							
W41B	Gary Mavity, V	83.25	306	eP	P	12	11	03.3 -0.8
	comp=Z,23nm,1.1s							
W41B	Gary Mavity, V	83.25	306	P	P	12	11	03.3 -0.8
	baz=98							
UALR	University of	83.27	305	eP	P	12	11	03.7 -0.6
	comp=Z,34nm,1.1s							
G40A	Rib Lake	83.28	316	eP	P	12	11	02.8 -1.3
	comp=Z,12nm,1.3s							
G40A	Rib Lake	83.28	316	P	P	12	11	03.2 -0.9
	baz=100							
WHAR	Wooly Hollow	83.30	306	eP	P	12	11	03.2 -1.1
	comp=Z,29nm,1.1s							
F40A	Park Falls	83.35	317	P	P	12	11	03.9 -0.6
	baz=100							
L40A	Anamosa	83.47	313	eP	P	12	11	04.6 -0.5
	comp=Z,16nm,0.9s							
L40A	Anamosa	83.47	313	P	P	12	11	04.2 -1.0
	baz=99							
N40A	Mertquake, Sal	83.55	311	P	P	12	11	04.3 -1.3
	baz=99							
X40A	Basin Creek Fa	83.63	305	eP	P	12	11	05.3 -0.9
	comp=Z,16nm,1.1s							
X40A	Basin Creek Fa	83.63	305	P	P	12	11	05.5 -0.6
	baz=97							
WLAR	White Oak Lake	83.76	304	eP	P	12	11	06.0 -0.7
	comp=Z,67nm,1.3s							
U40A	Yellville	83.89	307	P	P	12	11	06.5 -1.0
	baz=98							
F39A	Loretta	83.89	316	P	P	12	11	06.4 -0.9
	baz=100							
G39A	Holcombe	83.96	316	P	P	12	11	06.4 -1.2
	baz=100							
MIAR	Mount Ida	84.25	305	eP	P	12	11	08.5 -0.8
	comp=Z,17nm,1.2s							
MIAR	Mount Ida	84.25	305	eP	P	12	11	08.5 -0.8
MIAR				pmax	pmax			
	comp=Z,17nm,1.2s							
MIAR	Mount Ida	84.25	305	P	P	12	11	08.7 -0.6
	baz=97							
E38A	The Farm, Brul	84.45	317	eP	P	12	11	09.1 -1.0
	comp=Z,15nm,1.2s							
E38A	The Farm, Brul	84.45	317	P	P	12	11	09.0 -1.0
	baz=100							
W39A	Magazine	84.50	306	eP	P	12	11	10.1 -0.4
	comp=Z,24nm,1.4s							
W39A	Magazine	84.50	306	P	P	12	11	10.3 -0.2
	baz=97							
F38A	Pierce - Schro	84.56	316	P	P	12	11	10.0 -0.6
	baz=99							
EYMN	Ely	84.63	318	eP	P	12	11	09.4 -1.5
	comp=Z,13nm,1.1s							
EYMN	Ely	84.63	318	P	P	12	11	10.0 -0.9
	baz=100							
HHAR	Hobbs	84.75	307	eP	P	12	11	11.0 -0.9
	comp=Z,17nm,1.2s							
NATX	Nacogdoches	84.84	302	P	P	12	11	12.3 0.0

comp=Z,49nm,1.1s
BRVK Borovoye 87.47 37 *d iP* **P 12 11 24.8 -0.1**
BRVK pmax pmax
comp=Z,2.0nm,1.1s
AGMN Agassiz Nation 87.58 318 *eP* **P 12 11 25.1 -0.4**
comp=Z,20nm,1.3s
AGMN Agassiz Nation 87.58 318 P **P 12 11 24.7 -0.7**
baz=96
QSPA South Pole Qui 87.61 180 *eP* **P 12 11 26.1 +0.7**
comp=Z,31nm,1.0s
ECSD EROS Data Cent 87.62 314 *eP* **P 12 11 25.2 -0.5**
comp=Z,51nm,1.4s
ECSD EROS Data Cent 87.62 314 P **P 12 11 25.3 -0.5**
baz=96
ULM Lac du Bonnet 87.80 320 LR LR 12 45 25.6
comp=Z,108nm,20.6s,baz=92,slow=32
ARSB Arslanbob 88.04 49 *eP* **P 12 11 28.4 +0.4**
comp=Z,21nm,1.5s
LNIG Linares 88.50 295 *eP* **P 12 11 28.4 -2.0**
comp=Z,8.6nm,0.9s
BGNE Belgrade 88.54 311 *eP* **P 12 11 29.8 -0.5**
comp=Z,106nm,1.4s
BGNE Belgrade 88.54 311 P **P 12 11 29.7 -0.5**
baz=95
WMOK Wichita Mounta 88.54 305 *eP* **P 12 11 29.7 -0.7**
comp=Z,21nm,1.1s
WMOK Wichita Mounta 88.54 305 *eP* **P 12 11 29.7 -0.7**
WMOK pmax pmax
comp=Z,21nm,1.1s
WMOK Wichita Mounta 88.54 305 P **P 12 11 30.2 -0.2**
baz=94
833A Chaparral WMA, 88.64 298 P **P 12 11 31.1 +0.1**
baz=94
ABTX Abilene, Hawle 89.12 303 *eP* **P 12 11 33.0 -0.2**
comp=Z,54nm,1.3s
ABTX Abilene, Hawle 89.12 303 P **P 12 11 33.5 +0.3**
baz=94
JCT Junction City 89.13 300 *eP* **P 12 11 33.0 -0.3**
comp=Z,22nm,1.0s
JCT Junction City 89.13 300 *eP* **P 12 11 33.0 -0.3**
JCT pmax pmax
comp=Z,22nm,1.0s
JCT Junction City 89.13 300 P **P 12 11 33.4 +0.1**
baz=93
AAK Ala-Archa 89.27 47 *eP* **P 12 11 34.5 +0.7**
comp=Z,25nm,1.6s
AAK Ala-Archa 89.27 47 *ceP* **P 12 11 34.8 +1.0**
AAK pmax pmax
comp=Z,12nm,1.7s
CBKS Cedar Bluff 89.57 309 *eP* **P 12 11 35.5 +0.4**
comp=Z,67nm,1.3s
CBKS Cedar Bluff 89.57 309 *eP* **P 12 11 35.6 +0.4**
CBKS pmax pmax
comp=Z,67nm,1.3s
CBKS Cedar Bluff 89.57 309 P **P 12 11 35.4 +0.2**
baz=94
MDND Maddock 90.03 318 P **P 12 11 36.6 -0.5**
baz=94
KSH Kashi 90.19 51 *eP* **P 12 11 37.4 -0.8**
KSH S **S 12 22 25.8 -6.5**
KSH pmax pmax
comp=Z,230nm,5.6s
KSH LR LR
comp=Z,540nm,8.1s
KSH LR LR
comp=Z,420nm,11.9s
KSH LR LR
comp=Z,600nm,22.5s
AMTX Amarillo 90.93 305 P **P 12 11 41.2 -0.4**
baz=92
OGNE Ogallala 91.44 311 *eP* **P 12 11 44.5 +0.6**
comp=Z,41nm,1.1s
OGNE Ogallala 91.44 311 P **P 12 11 44.6 +0.6**
baz=92
MSTX Muleshoe 91.80 304 *eP* **P 12 11 45.9 +0.2**
comp=Z,29nm,1.1s
MSTX Muleshoe 91.80 304 P **P 12 11 46.2 +0.5**
baz=92
FFC Flin Flon 91.84 325 *eP* **P 12 11 45.1 -0.2**
comp=Z,17nm,1.3s
FFC Flin Flon 91.84 325 *eP* **P 12 11 45.1 -0.2**
FFC pmax pmax
comp=Z,17nm,1.3s
LTX Lajitas 92.43 299 *eP* **P 12 11 49.1 +0.4**
LTX Lajitas 92.43 299 *eP* **P 12 11 49.1 +0.4**
TXAR Lajitas Array 92.43 299 P **P 12 11 49.1 +0.4**
comp=Z,2.2nm,0.8s,baz=112,slow=7.4,SNR=16
TXAR LR LR 12 50 00.1
comp=Z,75nm,19.9s,baz=0.0,slow=33
KURK Kurchatov 92.46 40 ‖ *eP* **P 12 11 48.9 +0.7**
KURK pmax pmax
comp=Z,6.0nm,1.8s
RSSD Black Hills 92.99 314 P **P 12 11 51.0 -0.2**
baz=91
T25A Trinidad 93.20 307 *eP* **P 12 11 52.0 -0.3**
comp=Z,19nm,1.6s
T25A Trinidad 93.20 307 P **P 12 11 52.7 +0.4**
baz=91
Q24A Divide 93.80 309 P **P 12 11 55.5 +0.4**
baz=90
SDCO Great Sand Dun 94.07 307 *eP* **P 12 11 57.1 +0.7**
comp=Z,7.9nm,1.1s
SDCO Great Sand Dun 94.07 307 P **P 12 11 56.6 +0.2**
baz=90
ISCO Idaho Springs 94.16 310 *eP* **P 12 11 57.2 +0.5**
comp=Z,3.7nm,1.2s
ISCO Idaho Springs 94.16 310 *eP* **P 12 11 57.2 +0.5**
ISCO pmax pmax
comp=Z,4.0nm,1.2s
ISCO Idaho Springs 94.16 310 P **P 12 11 57.4 +0.6**
baz=90
N23A Red Feather La 94.40 311 *eP* **P 12 11 57.2 -0.6**
comp=Z,11nm,1.2s
N23A Red Feather La 94.40 311 P **P 12 11 57.8 0.0**
baz=90
K22A Casper 94.81 312 P **P 12 11 59.9 +0.4**
baz=89
ANMO Albuquerque 94.86 305 *eP* **P 12 11 59.7 -0.2**
comp=Z,4.3nm,1.0s
ANMO Albuquerque 94.86 305 *deP* **P 12 12 00.1 +0.2**
ANMO pmax pmax
comp=Z,5.0nm,1.1s
ANMO Albuquerque 94.86 305 P **P 12 11 60.0 0.0**
baz=90
TASM ASL Pad, Albuq 94.86 305 P **P 12 12 00.0 +0.1**
baz=90
TASM ASL Pad, Albuq 94.86 305 P **P 12 12 00.1 +0.1**
baz=90
MK32 Makanchi Array 94.91 43 *eP* **P 12 11 58.9 -0.8**
MKAR Makanchi Array 94.91 43 P **P 12 11 58.9 -0.8**
comp=Z,0.4nm,0.6s,baz=254,slow=2.1,SNR=4.3
MKAR LR LR 13 02 40.9
comp=Z,97nm,18.2s,baz=254,slow=40
BNM Barren Site 95.00 304 *eP* **P 12 11 58.5 -2.2**
S22A 4UR Ranch, Cre 95.13 307 *eP* **P 12 11 59.9 -1.4**
comp=Z,6.6nm,1.4s
S22A 4UR Ranch, Cre 95.13 307 P **P 12 12 01.2 0.0**
baz=89
SMCO Snowmass 95.22 309 *eP* **P 12 11 57.7 -4.1**
comp=Z,3.2nm,1.0s
Y22D IRIS PASSCAL I 95.25 304 *eP* **P 12 12 00.4 -1.3**
comp=Z,68nm,0.4s
LAZ Ladron 95.42 304 *eP* **P 12 12 02.9 +0.4**
NRIK Noril'sk 95.77 21 LR LR 12 58 24.6
comp=Z,141nm,21.3s,baz=222,slow=38
ZALV Zalesovo Beam 96.17 36 LR LR 13 00 32.9
comp=Z,82nm,18.9s,baz=250,slow=39
O20A White River Ci 96.17 310 P **P 12 12 04.7 -1.1**
baz=88
MVCO Mesa Verde 96.47 307 P **P 12 12 07.3 0.0**
baz=88
PV13 Radium Mtn., P 96.69 308 *eP* **P 12 12 07.3 -1.0**
comp=Z,9.1nm,1.4s
PDAR Pinedale Array 97.04 313 LR LR 12 50 47.2
comp=Z,185nm,21.2s,baz=112,slow=32
YKA Yellowknife Ar 97.89 333 P Pdif 12 12 13.0 +0.2
comp=Z,0.9nm,0.8s,baz=78,slow=5.2,SNR=11
YKA LR LR 12 52 39.7
comp=Z,6.7nm,18.1s,baz=84,slow=33
YKB5 Yellowknife Ar 97.89 333 *eP* Pdif 12 12 13.1 +0.2
WMQ Urumqi 98.89 46 *eP* Pdif 12 12 19.2 +1.4
MTPU Mount Pierson 99.34 308 *eP* **Pdif 12 12 19.1 -1.3**
comp=Z,4.9nm,1.0s
GTA Gaotai 108.54 49 *eP* **Pdif 12 12 58.7 -2.2**
GTA pP sPdif 12 13 05.3 +0.9
GTA sP pPdif 12 13 08.0 +4.5
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,15nm,5.7s
GTA LR LR
comp=N,140nm,22.5s
GTA LR LR
comp=E,180nm,21.9s
GTA LR LR
comp=Z,130nm,17.1s
LZH Lanzhou 112.41 52 *e*PKP PKiKP 12 17 05.1 -9.0
LZH sPKP 12 17 18.6
CD2 Chengdu 113.49 57 PKP **PKiKP 12 17 15.5 -0.7**
KMI Kunming 113.63 64 PKP **PKiKP 12 17 15.1 -1.7**
BILL Bilibino 114.55 1 *i* PKIKP PKPdf 12 17 17.9 +0.9
BILL *i* 12 18 14.2
BILL pmax pmax
comp=Z,2.0nm,1.2s
HHC Hu-ho-hao-te 116.73 45 *e*PKP **PKiKP 12 17 23.5 +1.3**
HHC AMB AMB
comp=Z,83nm,5.7s
GYA Guiyang 116.88 62 *e*PKP **PKiKP 12 17 23.2 +0.3**
GYA PP **PP 12 18 37.4 +5.8**
GYA AMB AMB
comp=Z,120nm,7.8s
KLR Kul'dur 124.22 28 ⇑ *i* PKIKP **PKPdf 12 17 35.3 -0.9**
NJ2 Nanjing 125.49 52 *e*PKP **PKPdf 12 17 37.7 -1.4**
TAOE Nuku Hiva Isla 126.86 257 *e*LR LR 12 57 22.7
comp=Z,230nm,21.8s
PPT2 Papeete2 133.44 243 *e*SS SS 12 38 10.2 +2.3
comp=Z,96nm,25.8s
PPT2 Papeete2 133.44 243 *e*LR LR 13 00 36.0
comp=Z,221nm,24.2s
ASAR Alice Springs 138.05 130 PKhKP PKPpre 12 17 50.9
comp=Z,1.6nm,0.8s,baz=221,slow=2.9,SNR=14
AS31 Alice Springs 138.05 130 *e*PKPpre PKPpre 12 17 50.9
WR1 Warramunga Arr 140.36 126 *e*PKPpre PKPpre 12 17 59.5
WRA Warramunga Arr 140.36 126 PKhKP PKPpre 12 17 59.5
comp=Z,30nm,0.3s,baz=229,slow=3.2,SNR=1.8
FAKI Fak Fak 144.12 98 *e*PKPdf **PKPab 12 18 11.5 -0.3**
EIDS Eidsvold 147.95 151 *e*PKPdf **PKPdf 12 18 20.0 -0.4**
EIDS *e*PKPbc **sPKPdf 12 18 24.0 -0.2**
CTAO Charters Tower 149.21 138 *e*PKPdf **PKPdf 12 18 20.5 -2.2**
COEN Coen 150.67 124 *e*PKPbc **PKPbc 12 18 30.7 +0.2**
DZM Mont Dzumac 155.57 177 *e*LR LR 13 10 44.0
comp=Z,243nm,23.0s

ISCJB ***12*** *12:00:51.7±0.3, 17°.49S±0°.08×177°.24W±0°.07, h372km, mb4.2/37, Error ellipse: s-maj=11.7km s-min=6.4km az=145.1*
NEIC ***12*** *12:00:51.6±1.0, 17°.46S×177°.13W, h360km±7km, mb4.3/27, Error ellipse: s-maj=24.9km s-min=18.1km az=140.0*
IDC ***12*** *12:00:51.2±2.9, 17°.51S×177°.13W, h352km±27km, mb3.8/12, mb1 4.0/13, mb1mx3.7/33, mbtmp4.4/13, Error ellipse: s-maj=19.5km s-min=13.6km az=138.0*
ISC 12 12:00:52.8±0.4, 17°.63S±0°.10×177°.16W±0°.08, h372km, n90, σ1s 05/97, mb4.2/37, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.02**	**103**	*e*Pn	**Pn**	**12 02 35.0**	**-1.0**
DZM	**Mont Dzumac**	**16.05**	**251**	P	**Pn**	**12 04 19.7**	**+1.7**
	0.8nm,0.3s,baz=293,slow=22,SNR=7.5						
URZ	**Urewera**	**21.16**	**193**	P	**P**	**12 05 09.0**	**-0.7**
	12nm,0.9s,baz=248,slow=2.9,SNR=6.6						
URZ				S	**S**	**12 08 36.2**	**-3.2**
	6.2nm,0.9s,baz=0.0,slow=20,SNR=3.8						
CTAO	**Charters Tower**	**34.67**	**260**	*e*P	**P**	**12 07 08.3**	**-0.8**
	8.0nm,0.8s						
CAN	**Canberra**	**34.82**	**233**	*e*P	**P**	**12 07 11.4**	**+1.1**
TOO	**Toolangi**	**38.27**	**231**	*e*P	**P**	**12 07 38.6**	**-0.4**
	22nm,0.8s						
STKA	**Stephens Creek**	**39.81**	**241**	P	**P**	**12 07 53.3**	**+1.7**
	9.1nm,0.8s,baz=89,slow=10,SNR=14						
STKA	**Stephens Creek**	**39.81**	**241**	*e*P	**P**	**12 07 51.3**	**-0.4**
	2.5nm,0.9s						
WB2	**Warramunga Arr**	**45.84**	**259**	*e*P	**P**	**12 08 39.9**	**+0.2**
	6.4nm,0.8s						
WR1	**Warramunga Arr**	**45.85**	**259**	*e*P	**P**	**12 08 39.3**	**-0.5**
WRA	**Warramunga Arr**	**45.85**	**259**	P	**P**	**12 08 39.3**	**-0.5**
	31nm,0.3s,baz=92,slow=8.3,SNR=2.0						
AS31	**Alice Springs**	**46.01**	**254**	*e*P	**P**	**12 08 41.4**	**+0.4**
	8.3nm,0.6s						
AS31				*e*ScP	**ScP**	**12 13 30.1**	**+2.5**
AS31				*e*S	**S**	**12 14 56.2**	**-1.5**
ASAR	**Alice Springs**	**46.01**	**254**	P	**P**	**12 08 41.4**	**+0.4**
	24nm,0.6s,baz=88,slow=8.1,SNR=79						
ASAR				PcP	**PcP**	**12 10 10.7**	**+0.1**
	0.8nm,0.6s,baz=100,slow=4.4,SNR=2.7						
ASAR				ScP	**ScP**	**12 13 30.1**	**+2.5**
	1.0nm,0.7s,baz=100,slow=4.5,SNR=6.3						
ASAR				S	**S**	**12 14 56.2**	**-1.5**
	2.3nm,1.0s,baz=87,slow=16,SNR=11						
PETK	**Petropavlovsk-**	**73.72**	**345**	P	**P**	**12 11 46.0**	**-0.8**
	1.5nm,0.7s,baz=169,slow=3.0,SNR=4.4						
PEA1	**Petropavlovsk-**	**73.72**	**345**	*e*P	**P**	**12 11 46.0**	**-0.8**
KSRS	**Korea Array**	**75.29**	**318**	P	**P**	**12 11 57.0**	**+0.9**
	0.6nm,0.6s,baz=120,slow=5.4,SNR=4.2						
KS15	**Wonju Array Si**	**75.31**	**318**	*e*P	**P**	**12 11 57.0**	**+0.8**
NV01	**Mina Array Sit**	**78.40**	**43**	*e*P	**P**	**12 12 13.7**	**+0.1**
NVAR	**Mina Array Bea**	**78.40**	**43**	P	**P**	**12 12 13.7**	**+0.1**
	1.8nm,0.6s,baz=226,slow=8.9,SNR=17						
KVN	**Kaiserville**	**78.87**	**43**	*e*P	**P**	**12 12 15.4**	**-0.7**
	11nm,1.5s						
WVOR	**Wild Horse Val**	**80.42**	**40**	*e*P	**P**	**12 12 23.6**	**-0.6**
	2.1nm,0.8s						
X16A	**Lo Mia Camp, P**	**81.09**	**50**	*e*P	**P**	**12 12 29.1**	**+1.1**
	4.3nm,0.9s						
CCUT	**Cedar City**	**81.25**	**46**	*e*P	**P**	**12 12 29.8**	**+1.0**
	3.8nm,1.3s						
U15A	**North Rim**	**81.45**	**48**	*e*P	**P**	**12 12 29.9**	**+0.1**
	5.4nm,1.3s						
WUAZ	**Wupatki**	**81.66**	**49**	*e*P	**P**	**12 12 30.0**	**-0.9**
	6.2nm,1.2s						
G08A	**Pilot Rock**	**81.86**	**37**	*e*P	**P**	**12 12 30.8**	**-0.8**
	5.0nm,1.3s						
MSU	**Marysvale**	**82.54**	**46**	*e*P	**P**	**12 12 34.8**	**-0.6**
F10A	**Beach Ranch, E**	**83.25**	**37**	*e*P	**P**	**12 12 36.2**	**-2.5**
	4.1nm,0.8s						
TRF	**Thorofare Moun**	**83.49**	**12**	*e*P	**P**	**12 12 38.0**	**-1.6**
	1.5nm,0.8s						
TMUT	**Trail Mountain**	**83.58**	**45**	*e*P	**P**	**12 12 40.4**	**-0.3**
	5.2nm,0.8s						
HLID	**Hailey**	**83.64**	**41**	*e*P	**P**	**12 12 40.3**	**-0.4**
	3.2nm,0.8s						
RND	**Reindeer**	**83.73**	**12**	*e*P	**P**	**12 12 39.2**	**-1.4**
	7.2nm,0.8s						
SRU	**San Rafael Swe**	**83.96**	**46**	*e*P	**P**	**12 12 41.6**	**-0.9**
	5.4nm,0.8s						
WRH	**Wood River Hil**	**84.84**	**12**	*e*P	**P**	**12 12 44.6**	**-1.4**
	6.0nm,0.9s						
LTX	**Lajitas**	**84.84**	**57**	*e*P	**P**	**12 12 48.3**	**+1.3**
TX31	**Lajitas Ar. Si**	**84.84**	**57**	*e*P	**P**	**12 12 48.7**	**+1.7**
TXAR	**Lajitas Array**	**84.84**	**57**	P	**P**	**12 12 48.3**	**+1.3**
	4.4nm,0.8s,baz=216,slow=7.2,SNR=22						
DOT	**Dot Lake**	**85.00**	**14**	*e*P	**P**	**12 12 45.4**	**-1.5**
	4.6nm,0.8s						
HDA	**Harding Lake**	**85.02**	**13**	*e*P	**P**	**12 12 45.5**	**-1.4**
	8.1nm,0.6s						
COLA	**College**	**85.24**	**12**	*e*P	**P**	**12 12 46.6**	**-1.3**
	8.7nm,0.8s						
MCMT	**McKenzie Canyo**	**85.25**	**40**	*e*P	**P**	**12 12 48.1**	**-0.7**
ILAR	**Eielson Array**	**85.35**	**13**	P	**P**	**12 12 47.2**	**-1.3**
	1.9nm,0.5s,baz=227,slow=5.6,SNR=48						
ILB	**Eielson Array**	**85.35**	**13**	*e*P	**P**	**12 12 47.5**	**-1.1**
DLMT	**Dillon**	**85.68**	**40**	*e*P	**P**	**12 12 49.5**	**-1.3**
	4.4nm,1.0s						
PD31	**Pinedale Array**	**86.33**	**43**	*e*P	**P**	**12 12 53.5**	**-0.6**
PDAR	**Pinedale Array**	**86.33**	**43**	P	**P**	**12 12 53.5**	**-0.6**
	0.5nm,0.6s,baz=212,slow=4.5,SNR=4.7						
BOZ	**Bozeman (W)**	**86.38**	**40**	*e*P	**P**	**12 12 54.0**	**-0.2**
	2.1nm,0.8s						
EGAK	**Eagle**	**86.64**	**15**	*e*P	**P**	**12 12 53.9**	**-0.8**
	3.0nm,0.9s						
PLCA	**Paso Flores**	**90.66**	**133**	P	**P**	**12 13 16.1**	**+1.7**
	2.4nm,0.8s,baz=267,slow=6.0,SNR=8.1						
PLCA	**Paso Flores**	**90.66**	**133**	*e*P	**P**	**12 13 15.1**	**+0.7**
	20nm,1.6s						
SNAA	**Sanae**	**90.85**	**178**	P	**P**	**12 13 14.5**	**-0.1**
SNAA	**Sanae**	**90.85**	**178**	P	**P**	**12 13 14.9**	**+0.3**
	1.9nm,1.0s,baz=175,slow=2.5,SNR=7.2						
SNAA	**Sanae**	**90.85**	**178**	*e*P	**P**	**12 13 15.2**	**+0.6**
	9.3nm,1.5s						
VNA3	**Neumayer Olymp**	**90.94**	**176**	P	**P**	**12 13 15.7**	**+0.7**
VNA2	**Neumayer--Watz**	**91.39**	**177**	P	**P**	**12 13 18.0**	**+1.0**
	baz=196,slow=4.0						
VNA1	**Neumayer--Stat**	**91.61**	**176**	P	**P**	**12 13 19.7**	**+1.6**
YKA	**Yellowknife Ar**	**93.58**	**24**	P	**P**	**12 13 26.4**	**-0.6**
	0.9nm,0.7s,baz=243,slow=4.4,SNR=12						
YKB5	**Yellowknife Ar**	**93.58**	**24**	*e*P	**P**	**12 13 26.4**	**-0.6**
TLY	**Talaya**	**97.14**	**322**	*e*S	**S**	**12 24 35.2**	**+1.9**
147A	**Livingston**	**98.40**	**58**	*e*S	**S**	**12 24 46.8**	**+2.0**
ARCES	**ARCESS Array B**	**126.24**	**350**	PKP	**PKPdf**	**12 19 10.9**	**-0.2**
	3.1nm,0.7s,baz=45,slow=1.9,SNR=11						
KWP	**Kalwaria Pacla**	**144.27**	**338**	*e*PKPbc	**PKPab**	**12 19 43.9**	**-0.3**
BUR08	**Bucovina Ar. S**	**144.89**	**333**	*e*PKPbc	PKPbc	12 19 46.0	-0.4
BR101	**Keskin Array S**	**145.42**	**316**	*e*PKPdf	**PKPbc**	**12 19 48.2**	**-0.1**
BR131	**Keskin Array S**	**145.42**	**316**	*e*PKPdf	**PKPab**	**12 19 48.7**	**-0.4**
BRTR	**Keskin Array B**	**145.42**	**316**	PKPbc	**PKPbc**	**12 19 48.2**	**-0.1**
	5.2nm,0.8s,baz=140,slow=3.6,SNR=20						
CLL	**Collm**	**145.43**	**349**	*e*PKPdf	**PKPdf**	**12 19 46.5**	**-0.4**
CLL	**Collm**	**145.43**	**349** ‖	*i* PKPbc	**PKPdf**	**12 19 46.5**	**-0.4**
	comp=Z,15nm,1.0s						
BRG	**Berggiesshubel**	**145.66**	**348**	*e*PKP	**PKPbc**	**12 19 48.4**	**0.0**
	comp=Z,12nm,1.4s						
KHC	**Kasperske Hory**	**147.39**	**347**	*e*PKPbc	**PKPbc**	**12 19 53.5**	**+0.1**
GEC2	**GERESS Array S**	**147.63**	**347**	*e*PKPbc	**PKPbc**	**12 19 53.7**	**-0.4**
GERES	**GERESS Array B**	**147.63**	**347**	PKPbc	**PKPbc**	**12 19 53.7**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=42,slow=2.2,SNR=9.9						
CONA	**Conrad Observa**	**147.95**	**343**	*e*PKiKP	**PKiKP**	**12 19 55.6**	**-0.9**
	comp=Z,4.5nm,0.7s						
MOA	**Molln**	**148.43**	**345**	*e*PKiKP	**PKiKP**	**12 19 56.8**	**-0.6**
	comp=Z,1.7nm,0.6s						
ARSA	**Arzberg**	**148.66**	**343**	*i* PKiKP	**PKiKP**	**12 19 57.6**	**-0.3**
	comp=Z,3.4nm,0.8s						
SOKA	**Soboth**	**149.32**	**343**	*i* PKiKP	**PKPbc**	**12 19 58.1**	**-0.3**
	comp=Z,3.4nm,0.7s						
KBA	**Koelnbreinsper**	**149.38**	**346**	*e*PKiKP	**PKPbc**	**12 19 58.7**	**+0.1**
	comp=Z,3.4nm,0.6s						
WATA	**Walderalm**	**149.51**	**348**	*i* PKiKP	**PKiKP**	**12 19 59.3**	**-0.5**
	comp=Z,4.3nm,0.5s						
RETA	**Reutte**	**149.51**	**349**	*i* PKiKP	**PKiKP**	**12 19 59.5**	**-0.1**
	comp=Z,7.0nm,1.1s						
WTTA	**Wattenberg**	**149.57**	**348**	*i* PKiKP	**PKPbc**	**12 19 59.4**	**+0.3**
	comp=Z,6.9nm,0.6s						
OBKA	**Obir**	**149.61**	**344**	*i* PKPbc	**PKPbc**	**12 19 58.4**	**-0.7**
	comp=Z,2.1nm,0.6s						
SQTA	**Sankt Quirin**	**149.69**	**349**	*i* PKiKP	**PKPbc**	**12 19 59.2**	**-0.1**
	comp=Z,4.8nm,0.5s						
MYKA	**Terra Mystica**	**149.73**	**345**	*e*PKPbc	**PKPbc**	**12 19 58.6**	**-0.8**
	comp=Z,5.1nm,0.6s						
DAVA	**Damuels**	**149.86**	**350**	*e*PKiKP	**PKiKP**	**12 20 00.1**	**-0.4**
	comp=Z,7.2nm,0.8s						
ABTA	**Abfaltersbach**	**149.88**	**347**	*e*PKiKP	**PKPbc**	**12 19 59.8**	**+0.1**
	comp=Z,7.2nm,0.5s						
FETA	**Feichten**	**149.97**	**349**	*i* PKiKP	**PKiKP**	**12 20 00.7**	**-0.1**
	comp=Z,4.1nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**150.44**	**350**	*e*PKPbc	**PKiKP**	**12 20 01.7**	**-0.2**
TUE	**Stuetta**	**150.73**	**351**	*e*PKPbc	**PKPbc**	**12 20 01.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**175.41**	**166**	PKP	**PKPdf**	**12 20 18.8**	**-0.8**
	comp=Z,1.7nm,1.0s,baz=354,slow=1.6,SNR=5.0						
TORD				PKPab	**PKPab**	**12 22 00.1**	**+1.6**
	comp=Z,0.9nm,0.8s,baz=192,slow=4.2,SNR=4.2						
TOA1	**Torodi Ar. Sit**	**175.42**	**166**	*e*PKPdf	**PKPdf**	**12 20 18.8**	**-0.8**
TOA1				*e*PKPab	**PKPab**	**12 22 00.1**	**+1.6**

WEL 12 12:25:09.7±1.2, 35°S±13°×17°9W±2°1, h33km, M4.0/11, mB4.3/2, ML4.3/15, MLv4.0/11, Mw(mB)3.4/2, Error ellipse: s-maj=0.0km s-min=0.0km az=118.9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.51**	**213**	P	Pn	12 26 02.4	+0.5
WMGZ				S	Sn	12 26 42.8	+0.6
HAZ	**Te Kaha**	**3.77**	**220**	P	Pn	12 26 06.3	+0.9
HAZ				S	Sn	12 26 50.3	+1.7
PUZ	**Puketiti**	**3.79**	**212**	P	Pn	12 26 05.5	-0.2
PUZ				S	Sn	12 26 49.1	-0.1
RUGZ	**Raukumara Rang**	**3.98**	**218**	P	Pn	12 26 08.6	+0.1
RUGZ				S	Sn	12 26 54.9	+0.9
TWGZ	**Tauwhareparae**	**4.00**	**214**	P	Pn	12 26 09.1	+0.4
TWGZ				S	Sn	12 26 54.3	-0.1
CNGZ	**Carnagh Statio**	**4.16**	**209**	P	Pn	12 26 10.8	0.0
CNGZ				S	Sn	12 27 01.2	+2.9
MWZ	**Matawai**	**4.34**	**217**	P	Pn	12 26 12.6	-0.8
MWZ				S	Sn	12 27 02.0	-0.8
URZ	**Urewera**	**4.50**	**220**	P	Pn	12 26 14.9	-0.5
OPRZ	**Ohinepanea**	**4.53**	**228**	P	Pn	12 26 15.9	0.0
RIGZ	**Rimuhau**	**4.53**	**212**	P	Pn	12 26 15.7	-0.3
SNGZ	**Shannon Statio**	**4.78**	**215**	P	Pn	12 26 19.8	+0.4
MUGZ	**Murupara**	**4.84**	**221**	P	Pn	12 26 20.1	-0.1
KMRZ	**Kaimai**	**4.92**	**232**	P	Pn	12 26 21.9	+0.7
RAHZ	**Arahi**	**5.01**	**215**	P	Pn	12 26 23.4	+0.8
MTHZ	**Maungataniwha**	**5.08**	**218**	P	Pn	12 26 23.7	+0.2
TOZ	**Tahuroa Road**	**5.14**	**235**	P	Pn	12 26 24.6	+0.3
MRHZ	**Matea Rd**	**5.29**	**220**	P	Pn	12 26 26.0	-0.4
BKZ	**Black Stump Fm**	**5.49**	**218**	P	Pn	12 26 28.4	-0.9
KWHZ	**Kaweka Forest**	**5.73**	**216**	P	Pn	12 26 31.8	-0.6

IDC ***12*** *12:28:15.7±1.2, 11°.41S×166°.29E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.9/31, mbtmp4.0/7, ML4.1/1, Error ellipse: s-maj=42.2km s-min=22.4km az=134.0*
ISCJB ***12*** *12:28:21.9±0.9, 11°.6S±0°.1×166°.3E±0°.2, h59km, mb4.3/6, Error ellipse: s-maj=24.8km s-min=17.0km az=21.4*
ISC 12 12:28:23.3±1.0, 11°.6S±0°.1×166°.3E±0°.2, h59km, n8, σ1s 13/8, mb3.9/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.45**	**179**	Pn	**Pn**	**12 30 50.8**	**+0.3**
	1.4nm,0.3s,baz=322,slow=9.4,SNR=41						
DZM				Sn	Sn	12 32 36.8	-9.3
	0.3nm,0.3s,baz=311,slow=19,SNR=3.4						
CTA	**Charters Tower**	**21.07**	**244**	P	**P**	**12 33 04.0**	**+1.1**
	2.8nm,0.5s,baz=75,slow=15,SNR=5.1						
WRA	**Warramunga Arr**	**31.85**	**251**	P	**P**	**12 34 42.0**	**-1.0**
	103nm,0.3s,baz=79,slow=8.6,SNR=3.0						
ASAR	**Alice Springs**	**33.08**	**244**	P	**P**	**12 34 52.5**	**-1.3**
	2.6nm,0.7s,baz=68,slow=9.7,SNR=27						
SONM	**Songino Array**	**79.42**	**324**	P	**P**	**12 40 24.5**	**+1.1**
	0.7nm,0.6s,baz=121,slow=5.2,SNR=3.4						
ILAR	**Eielson Array**	**83.82**	**18**	P	**P**	**12 40 45.0**	**-1.0**
	0.4nm,0.8s,baz=209,slow=6.9,SNR=4.9						
NVAR	**Mina Array Bea**	**85.92**	**50**	P	**P**	**12 40 57.6**	**+0.2**
	0.2nm,0.6s,baz=224,slow=5.0,SNR=2.6						
MKAR	**Makanchi Array**	**94.29**	**317**	P	**P**	**12 41 36.7**	**+0.3**
	1.5nm,0.6s,baz=91,slow=6.2,SNR=14						

SJA 12 12:32:26.8±0.7, 31°.96S×69°.42W, h119km±3km, ML3.4, MW3.9, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.19**	**33**	*i* P	Pn	12 32 44.7	+1.1
RTLS				IAML		12 32 44.9	
	comp=Z,713nm,0.2s						
RTLS				*i* S	Sn	12 32 57.5	+1.3
AUSP	**Uspallata**	**0.27**	**174**	*i* P	Pn	12 32 44.7	+0.9
AUSP				*i* S	Sn	12 32 58.2	+1.5
RTCV	**Cerro Valdivia**	**0.75**	**83**	*i* P	Pn	12 32

KLR Kul'dur 27.96 344 P P 13 02 51.0 -1.2
0.9nm,0.6s,baz=135,slow=8.6,SNR=4.5
WRA Warramunga Arr 43.24 192 P P 13 05 02.0 -0.2
130nm,0.3s,baz=9.1,slow=8.5,SNR=2.1
ASAR Alice Springs 46.95 192 P P 13 05 31.1 -0.3
0.2nm,0.3s,baz=14,slow=6.4,SNR=8.8
MKAR Makanchi Array 53.97 312 P P 13 06 23.8 +0.1
0.3nm,0.7s,baz=88,slow=9.1,SNR=4.2
PLCA Paso Flores 146.47 130 PKPbc PKPbc 13 16 38.3 0.0
1.9nm,1.0s,baz=278,slow=7.1,SNR=3.0

MEX 12 12:58:27.9±0.8, 16°.14N×97°.11W, h32km±16km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**0.99**	**21**	*eP*	Pn	12 58 43.8	-2.1
VHO				*eS*	Sn	12 58 56.3	-2.6

TAP 12 13:01:41.1, 24°.27N×121°.45E, h7km±1km, ML0.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETLH	**Xiulin Townshi**	**0.07**	**155**	P	Pg	13 01 43.7	+0.6
	baz=154						
ETLH				S	Sg	13 01 45.3	+0.9
	baz=154						
NACB	**Ninganchiao**	**0.17**	**126**	*eP*	Pg	13 01 45.3	+0.8
	baz=126						
NACB				*eS*	Sg	13 01 48.5	+1.6
	baz=126						
NNSB	**Datong**	**0.17**	**339**	*eP*	Pg	13 01 45.6	+1.0
	baz=339						
NNSB				*eS*	Sg	13 01 48.4	+1.4
	baz=339						
WHF	**Hehuan Shan**	**0.21**	**233**	*eP*	Pg	13 01 46.4	+0.9
	baz=231						
WHF				*eS*	Sg	13 01 49.8	+1.4
	baz=231						

JMA 12 13:02:13.8±0.2, 24°.07N×123°.59E, h19km±2km, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.20**	**94**	P	Pg	13 02 18.5	-0.3
HATJ				*eS*	Sg	13 02 22.0	-0.2
IRIF	**Iriomote-Funau**	**0.29**	**26**	P	Pg	13 02 20.2	-0.1
IRIF				S	Sg	13 02 24.4	-0.4
JKRS	**Kuro-shima**	**0.42**	**66**	P	Pg	13 02 22.4	-0.1
JKRS				*eS*	Sg	13 02 28.4	+0.1
JIJ	**Ishigaki jima**	**0.58**	**60**	P	Pb	13 02 24.8	-0.5
JIJ				S	Sb	13 02 32.8	-0.4
JYNG	**Yonagunijimaku**	**0.70**	**303**	*eS*	Sb	13 02 36.2	-0.4
JISG	**Ishigakijimahi**	**0.83**	**52**	P	Pb	13 02 29.4	-0.3
JISG				S	Sg	13 02 40.9	-0.3

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*ISCJB **12** 13:08:58.7±1.5, 9°.30N±0°.03×127°.16E±0°.04, h1km±9km, mb4.4/15, MS3.0/1, Error ellipse: s-maj=6.6km s-min=4.7km az=177.4*
*IDC **12** 13:09:01.1±0.7, 9°.25N×126°.76E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/41, mbtmp3.9/10, ML4.2/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/37, Error ellipse: s-maj=38.5km s-min=14.1km az=81.0*
*MAN **12** 13:09:02.8, 9°.27N×126°.93E, h7km, MS3.8*
*NEIC **12** 13:09:04.9±3.9, 9°.22N×126°.69E, h27km±28km, mb4.6/6, Error ellipse: s-maj=21.0km s-min=6.7km az=77.0*
ISC 12 13:09:03.1±0.7, 9°.19N±0°.03×127°.16E±0°.07, h20km±5km, n47, σ2§06/61, mb4.2/15, 4C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.53**	**262**	*eP*	**Pn**	**13 09 25.9**	**-3.3**
BUTP				*eS*	**Sn**	**13 09 43.9**	**-4.7**
SCPH	**Surigao**	**1.75**	**290⇑**	*iP*	**Pg**	**13 09 37.6**	**+0.9**
SCPH				*i S*	**Sg**	**13 09 59.5**	**0.0**
MATI	**Mati**	**2.40**	**202**	*eP*	**Pn**	**13 09 41.7**	**+0.5**
MATI				*eS*	**Sb**	**13 10 13.2**	**-1.5**
BUKP	**Musuan**	**2.44**	**238**	*eP*	**Pn**	**13 09 42.1**	**+0.2**
BUKP				*eS*	**Sn**	**13 10 10.8**	**-0.4**
MSLP	**Maasin**	**2.45**	**293**	*eP*	**Pn**	**13 09 40.6**	**-1.4**
MSLP				*eS*	**Sn**	**13 10 10.9**	**-0.4**
CGP	**Cagayan de Oro**	**2.54**	**254⇓**	*eP*	**Pn**	**13 09 42.7**	**-0.4**
CGP				*eS*	**Sn**	**13 10 09.8**	**-3.8**
DAV	**Davao City (W)**	**2.62**	**217**	Pn	**Pn**	**13 09 44.3**	**+0.1**
	57nm,0.3s,baz=137,slow=4.0,SNR=3.5						
DAV				Sn	**Sg**	**13 10 27.5**	**+0.2**
	47nm,0.3s,baz=138,slow=21,SNR=6.6						
DAV				LR	LR	13 10 53.4	
	comp=Z,974nm,19.5s,baz=48,slow=46						
DMPH	**Davao City--Mi**	**2.65**	**218⇑**	*eP*	**Pn**	**13 09 42.5**	**-2.2**
DMPH				*eS*	**Sb**	**13 10 20.6**	**-1.4**
PLP	**Palo**	**2.91**	**313⇑**	*eP*	**Pn**	**13 09 45.5**	**-2.8**
PLP				*eS*	**Sn**	**13 10 21.3**	**-1.4**
BESP	**Borongan**	**2.94**	**325**	*eP*	**Pn**	**13 09 47.8**	**-0.9**
BESP				*eS*	**Sn**	**13 10 22.2**	**-1.1**
OCLP	**Ormoc**	**3.12**	**307**	*eP*	**Pn**	**13 09 50.3**	**-0.8**
LLP	**Lapu-Lapu**	**3.34**	**290**	*eP*	**Pn**	**13 09 53.1**	**-1.1**
LLP				*eS*	**Sn**	**13 10 34.3**	**+1.0**
DDMP	**Don Marcelino,**	**3.38**	**205**	*eP*	**Pb**	**13 09 59.5**	**-2.8**
DDMP				*eS*	**Sb**	**13 10 39.6**	**-3.4**
DCPH	**Dipolog City**	**3.81**	**261⇓**	*eP*	**Pn**	**13 10 03.7**	**+3.1**
SNPH	**Sibulan**	**3.87**	**273⇑**	*eP*	**Pn**	**13 09 59.8**	**-1.8**
SNPH				*eS*	**Sn**	**13 10 46.7**	**+0.2**
PAGZ	**Pagadian**	**3.96**	**251**	*eP*	**Pn**	**13 10 02.6**	**-0.1**
CNP	**Cataman**	**4.11**	**324**	*eP*	**Pn**	**13 10 03.6**	**-1.2**
CNP				*eS*	**Sn**	**13 10 45.1**	**-7.2**
IPIL	**Ipil**	**4.74**	**253**	*eP*	**Pn**	**13 10 14.4**	**+0.9**
PVCP	**Virac**	**5.28**	**326**	*eP*	**Pn**	**13 10 21.1**	**+0.3**
PVCP				*eS*	**Sb**	**13 11 36.6**	**-1.1**
TPUB	**Ta-pu**	**15.36**	**337**	*ePn*	**Pn**	**13 12 36.0**	**-2.9**
	119nm,1.6s						
KAPI	**Kappang**	**15.92**	**208**	LR	LR	13 19 23.4	
	comp=Z,91nm,19.2s,baz=40,slow=39						
HKPS	**Hong Kong Po S**	**18.05**	**318**	*ePn*	**Pn**	**13 13 09.7**	**-3.1**
	73nm,1.3s						
JHJ	**Hachijo jima 2**	**26.52**	**24**	LR	LR	13 27 35.3	
	comp=Z,43nm,18.1s,baz=302,slow=42						
FITZ	**Fitzroy Crossi**	**27.15**	**183**	P	**P**	**13 14 47.2**	**+2.0**
	1.2nm,0.4s,baz=353,slow=8.1,SNR=10						
FITZ	**Fitzroy Crossi**	**27.15**	**183**	*eP*	**P**	**13 14 45.4**	**+0.3**
	15nm,1.4s						
KS15	**Wonju Array Si**	**28.14**	**1**	*eP*	**P**	**13 14 54.2**	**+0.3**
KSAR	**Wonju Array Be**	**28.14**	**1**	P	**P**	**13 14 54.2**	**+0.3**
KSRS	**Korea Array**	**28.15**	**1**	P	**P**	**13 14 54.2**	**+0.2**
	0.5nm,0.5s,baz=177,slow=10,SNR=6.1						
WR1	**Warramunga Arr**	**29.80**	**166**	*eP*	**P**	**13 15 10.4**	**+1.6**
WRA	**Warramunga Arr**	**29.80**	**166**	P	**P**	**13 15 10.4**	**+1.6**
	133nm,0.3s,baz=352,slow=11,SNR=1.4						
AS31	**Alice Springs**	**33.31**	**169**	*eP*	**P**	**13 15 40.7**	**+1.0**
	1.0nm,1.0s						
ASAR	**Alice Springs**	**33.31**	**169**	P	**P**	**13 15 41.6**	**+1.9**
	0.5nm,0.4s,baz=354,slow=7.0,SNR=17						
ASAR				PcP	**PcP**	**13 18 22.8**	**+1.1**
	0.4nm,0.7s,baz=350,slow=1.4,SNR=4.2						
SONA0	**Songino Array**	**42.34**	**339**	*eP*	**P**	**13 16 56.0**	**+0.2**
SONM	**Songino Array**	**42.34**	**339**	P	**P**	**13 16 56.0**	**+0.2**
	0.6nm,0.5s,baz=159,slow=9.3,SNR=3.2						
MK32	**Makanchi Array**	**53.41**	**323**	*eP*	**P**	**13 18 20.4**	**-1.2**
MKAR	**Makanchi Array**	**53.41**	**323**	P	**P**	**13 18 20.4**	**-1.2**
	2.3nm,0.7s,baz=124,slow=8.1,SNR=23						
MAKZ	**Makanchi**	**53.61**	**323**	*eP*	**P**	**13 18 21.7**	**-1.3**
	8.7nm,0.6s						
ZALV	**Zalesovo Beam**	**55.99**	**331**	P	**P**	**13 18 38.9**	**-1.2**
	0.5nm,0.3s,baz=119,slow=8.6,SNR=2.7						
ZAA1	**Zalesovo Array**	**55.99**	**331**	*eP*	**P**	**13 18 38.9**	**-1.2**
KURK	**Kurchatov**	**57.45**	**326**	*eP*	**P**	**13 18 49.1**	**-1.4**
	4.1nm,0.9s						
KURBB	**Kurchatov Arra**	**57.46**	**325**	P	**P**	**13 18 49.1**	**-1.4**
	2.3nm,0.7s,baz=125,slow=6.6,SNR=16						
ILAR	**Eielson Array**	**80.03**	**26**	P	**P**	**13 21 13.3**	**+2.3**
	0.2nm,0.7s,baz=243,slow=4.9,SNR=4.0						
ILB	**Eielson Array**	**80.03**	**26**	*eP*	**P**	**13 21 13.3**	**+2.3**
ARCES	**ARCESS Array B**	**85.51**	**340**	P	**P**	**13 21 39.5**	**+0.1**
	3.3nm,1.0s,baz=76,slow=7.6,SNR=5.8						
KWP	**Kalwaria Pacla**	**92.28**	**321**	*eP*	**P**	**13 22 09.3**	**-2.6**
	312nm,0.6s						
YKA	**Yellowknife Ar**	**94.39**	**24**	P	**P**	**13 22 24.1**	**+2.9**
	0.3nm,0.6s,baz=300,slow=4.6,SNR=5.5						
YKB5	**Yellowknife Ar**	**94.39**	**24**	*eP*	**P**	**13 22 24.1**	**+2.9**

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*ISK **12** 13:14:45.0, 39°.74N×32°.58E, h9km, ML1.8/5*
*DDA **12** 13:14:46.3, 39°.71N×32°.61E, h7km±4km, ML2.6*
ISC 12 13:14:45.4±1.3, 39°.72N±0°.03×32°.59E±0°.03, h2km±11km, n12, σ0§93/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LOD	**Lodumlu**	**0.22**	**39**	PG	**Pg**	**13 14 49.6**	**0.0**
LOD				SG	**Sg**	**13 14 53.1**	**+0.7**
AUMIH	**MIHALICIK**	**0.86**	**280**	*i* P	**Pn**	**13 15 03.9**	**-0.8**
AUMIH				*i* S	**Sn**	**13 15 16.6**	**-1.4**
SVRH	**Sivrihisar-ESK**	**0.87**	**252**	PG	**Pg**	**13 15 02.2**	**+0.2**
SVRH				SG	**Sb**	**13 15 14.7**	**-0.6**
KIBS	**BOLU**	**0.90**	**321**	*i* P	**Pn**	**13 15 05.7**	**+0.6**
KIBS				*i* S	**Sn**	**13 15 20.1**	**+1.3**
KIBS				IAML_P			
	comp=Z,757nm,0.3s						
ELDT	**Eldivan**	**1.00**	**40**	*i* P	**Pg**	**13 15 04.8**	**+0.1**
ELDT				*i* S	**Sn**	**13 15 22.7**	**+1.2**
KIZT	**Kizilcal**	**1.00**	**213**	PG	**Pb**	**13 15 05.1**	**-0.5**
DELI	**KIRIKKALE**	**1.06**	**75**	*i* P	**Pn**	**13 15 07.0**	**-0.5**
DELI				*i* S	**Sn**	**13 15 23.0**	**+0.1**
BCAM	**Yenicaga**	**1.16**	**340**	*i* P	**Pb**	**13 15 07.4**	**-0.9**
BCAM				*i* S	**Sn**	**13 15 27.1**	**+1.7**
YAYX	**Yaylak**	**1.23**	**129**	PN	**Pg**	**13 15 09.1**	**+0.1**
YAYX				SN	**Sn**	**13 15 26.7**	**-0.3**
KDHN	**Kadinhani**	**1.25**	**197**	*i* P	**Pg**	**13 15 10.4**	**+0.9**
KDHN				*i* S	**Sn**	**13 15 29.2**	**+1.7**
CDAG	**Cicekdag**	**1.38**	**94**	*i* P	**Pb**	**13 15 11.5**	**-0.5**
CDAG				*i* S	**Sg**	**13 15 29.8**	**+0.1**
CDAG				IAML_P			
	comp=Z,315nm,0.1s						
YOZ	**Yozgat**	**2.11**	**91**	PN	**Pn**	**13 15 21.7**	**-0.2**

IDC 12 13:15:55.9±1.9, 6°.13S×146°.66E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.2/34, mbtmp3.3/3, ML0.8/1, Error ellipse: s-maj=60.3km s-min=22.1km az=93.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.29**	**171**	Pn	Pn	13 16 50.1	+1.3
	0.7nm,0.3s,baz=40,slow=16,SNR=2.9						
PMG				Sn	Sn	13 17 29.6	+0.9
	1.1nm,0.3s,baz=18,slow=20,SNR=4.7						
WRA	**Warramunga Arr**	**18.22**	**220**	P	Pn	13 20 10.3	-0.1
	17nm,0.3s,baz=45,slow=12,SNR=1.4						
ASAR	**Alice Springs**	**21.32**	**214**	P	P	13 20 43.9	-0.8
	0.3nm,0.4s,baz=53,slow=9.3,SNR=16						
MJAR	**Matsushiro Arr**	**43.18**	**350**	P	P	13 23 58.4	-0.2
	0.4nm,0.5s,baz=165,slow=9.7,SNR=2.5						

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*ISCJB **12** 13:30:34.4±0.5, 22°.76S±0°.04×127°.69E±0°.04, h10km, Error ellipse: s-maj=6.7km s-min=5.6km az=150.8*
*IDC **12** 13:30:35.5±2.4, 22°.84S×127°.63E, h0km, mb1 3.9/4, mb1mx3.6/26, mbtmp3.9/4, ML3.7/3, Error ellipse: s-maj=33.1km s-min=21.1km az=50.0*
*AUST **12** 13:30:39.9±0.3, 22°.75S×127°.74E, h0km±3km, Error ellipse: s-maj=1.2km s-min=0.8km az=296.0*
ISC 12 13:30:36.7±0.8, 22°.79S±0°.06×127°.75E±0°.06, h10km, n17, σ2§42/21, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	**2.29**	**168**	P	**Pg**	**13 31 20.3**	**-0.3**
	baz=2.3,SNR=65						
FITZ	**Fitzroy Crossi**	**5.07**	**337**	Pn	**Pn**	**13 31 53.4**	**+0.5**
	0.7nm,0.3s,baz=162,slow=10.0,SNR=62						
FITZ				Sn	**Sn**	**13 32 50.0**	**-1.6**
	3.8nm,0.3s,baz=348,slow=7.9,SNR=8.3						
FITZ				Lg	Lg	13 33 15.8	
	2.0nm,0.3s,baz=243,slow=17,SNR=3.6						
FITZ	**Fitzroy Crossi**	**5.07**	**337**	P	**Pn**	**13 31 54.8**	**+1.9**
	baz=5.1,SNR=12						
ASAR	**Alice Springs**	**5.73**	**100**	**Pn**	**Pn**	**13 32 05.2**	**+3.4**
	1.2nm,0.3s,baz=284,slow=12,SNR=41						
ASAR				Sn	**Sn**	**13 33 10.9**	**+3.2**
	5.5nm,0.3s,baz=274,slow=25,SNR=9.0						
ASAR				Lg	Lg	13 33 33.2	
	10.0nm,0.3s,baz=286,slow=28,SNR=6.9						
WRA	**Warramunga Arr**	**6.76**	**66**	Pn	**Pn**	**13 32 16.9**	**+0.8**
	24nm,0.3s,baz=242,slow=14,SNR=1.7						
WRA				Sn	**Sn**	**13 33 33.5**	**+0.2**
	28nm,0.3s,baz=233,slow=25,SNR=1.5						
WRA				Lg	Lg	13 34 04.8	
	29nm,0.3s,baz=239,slow=27,SNR=3.0						
KNRA	**Kununurra**	**7.14**	**8**	P	**Pn**	**13 32 23.4**	**+2.0**
	baz=7.1,SNR=42						
KNRA				S	**Sn**	**13 33 39.2**	**-3.4**
	baz=7.1,SNR=7.2						
MTN	**Manton Dam**	**10.40**	**19**	P	**Pn**	**13 33 06.0**	**-0.1**
	baz=10,SNR=21						
KDU	**Kakadu**	**11.01**	**25**	P	**Pn**	**13 33 14.3**	**-0.1**
	baz=11,SNR=13						
MORW	**Morawa**	**12.25**	**237**	P	**Pn**	**13 33 32.0**	**+0.7**
	baz=12,SNR=4.6						
BBOO	**Buckleboo**	**12.39**	**145**	P	**Pn**	**13 33 34.3**	**+1.1**
	baz=12,SNR=5.8						
GIRL	**Giralia**	**12.48**	**268**	P	**Pn**	**13 33 35.0**	**+0.6**
	baz=12,SNR=16						
KLBR	**Kellerberrin**	**12.48**	**223**	P	**Pn**	**13 33 34.6**	**+0.1**
	baz=12,SNR=7.0						
BLDU	**Ballidu**	**12.57**	**229**	P	**Pn**	**13 33 35.8**	**+0.2**
	baz=13,SNR=9.2						
NWAO	**Narrogin (SRO)**	**13.72**	**220**	Pn	**Pn**	**13 33 50.0**	**-1.4**
	1.0nm,0.3s,baz=52,slow=12,SNR=8.9						
NWAO				Sn	Sn	13 36 13.6	-10
	3.8nm,0.3s,baz=235,slow=3.9,SNR=14						
NWAO				Lg	Lg	13 37 40.8	
	0.6nm,0.3s,baz=331,slow=19,SNR=2.5						
MUN	**Mundaring**	**13.73**	**226**	P	**Pn**	**13 33 51.1**	**-0.4**
	baz=14,SNR=4.8						
STKA	**Stephens Creek**	**15.26**	**129**	Pn	**Pn**	**13 34 11.4**	**-0.9**
	0.4nm,0.3s,baz=299,slow=12,SNR=6.4						
STKA				Sn	**Sn**	**13 36 53.9**	**-7.5**
	0.6nm,0.3s,baz=304,slow=17,SNR=4.6						
CTA	**Charters Tower**	**17.43**	**85**	Lg	Lg	13 39 38.9	
	0.3nm,0.3s,baz=180,slow=20,SNR=2.9						

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*IDC **12** 13:45:04.7±2.1, 4°.44N×123°.84E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/31, mbtmp3.5/3, Error ellipse: s-maj=247.2km s-min=26.6km az=63.0*
*ISCJB **12** 13:45:09.3±1.0, 5°.11N±0°.07×126°.3E±0°.1, h35km, mb3.4/3, Error ellipse: s-maj=17.7km s-min=7.2km az=157.3*
*MAN **12** 13:45:12.8, 5°.26N×126°.23E, h43km, MS3.2*
ISC 12 13:45:10.5±1.4, 5°.16N±0°.10×126°.4E±0°.1, h35km, n8, σ1§40/11, mb3.5/3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.15**	**325**	*eP*	**Pn**	**13 45 30.7**	**+0.5**
DDMP				*eS*	**Sn**	**13 45 44.2**	**-0.5**
MATI	**Mati**	**1.78**	**356**	*eP*	Pn	13 45 44.7	+5.9
MATI				*eS*	**Sn**	**13 46 01.1**	**+0.9**
DMPH	**Davao City--Mi**	**2.10**	**336⇑**	*eP*	**Pn**	**13 45 40.4**	**-2.8**
DMPH				*eS*	**Sn**	**13 46 08.9**	**+0.8**
SKMP	**Bagumbayan, Su**	**2.28**	**307**	*eP*	**Pn**	**13 45 46.5**	**+0.9**
SKMP				*eS*	**Sn**	**13 46 11.4**	**-1.1**
BUKP	**Musuan**	**3.00**	**334**	*eP*	**Pn**	**13 45 56.9**	**+1.2**
BUKP				*eS*	**Sn**	**13 46 30.6**	**+0.1**
WRA	**Warramunga Arr**	**26.14**	**163**	P	**P**	**13 50 43.0**	**+1.4**
	1.2nm,0.9s,baz=335,slow=12,SNR=0.2						
ASAR	**Alice Springs**	**29.57**	**166**	P	**P**	**13 51 11.4**	**-0.8**
	0.4nm,0.8s,baz=354,slow=8.2,SNR=5.1						
MKAR	**Makanchi Array**	**56.19**	**325**	P	P	13 54 40.4	-6.7
	0.2nm,0.4s,baz=125,slow=7.2,SNR=5.7						

SJA 12 13:49:08.2±0.6, 22°.59S×69°.45W, h15km±5km, ML2.9, MW4.3, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB06	**IPOC Station P**	**0.16**	**223**	*i* P	Pg	13 49 12.6	+0.1
LVC	**Limon Verde**	**0.50**	**93**	*i* P	Pb	13 49 19.2	+0.2
LVC				*i* S	Sb	13 49 26.5	+0.2
PB15	**IPOC Station P**	**0.62**	**181**	*i* P	Pb	13 49 20.8	0.0
PB15				*i* S	Sb	13 49 30.0	+0.6
AZAP	**Zapla**	**4.35**	**113**	*i* P	Pn	13 50 17.5	+3.6
AZAP				IAML		13 50 44.3	
	comp=Z,12nm,0.1s						

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*IDC **12** 13:50:03.3±1.0, 29°.23N×130°.59E, h0km, mb3.3/4, mb1 3.4/8, mb1mx3.3/33, mbtmp3.3/8, ML2.7/4, MS3.0/6, Ms1 3.0/6, ms1mx2.8/38, Error ellipse: s-maj=33.7km s-min=16.7km az=101.0*
*JMA **12** 13:50:06.8±0.1, 29°.27N×130°.71E, h65km±3km, M3.4*
*ISCJB **12** 13:50:07.0±0.7, 29°.25N±0°.04×130°.71E±0°.07, h51km±9km, Error ellipse: s-maj=12.0km s-min=3.7km az=25.4*
ISC 12 13:50:08.2±1.4, 29°.26N±0°.05×130°.69E±0°.08, h37km±2km, n26, σ0§90/36, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.92**	**309**	P	**Pn**	**13 50 23.9**	**-0.6**
JNN				*eS*	**Sn**	**13 50 37.9**	**+1.3**
JYAK	**Yakushimahirau**	**0.99**	**351**	P	**Pn**	**13 50 24.9**	**-0.6**
JYAK				*eS*	**Sn**	**13 50 38.8**	**+0.6**
JZK	**Kikaishima**	**1.14**	**214**	P	**Pn**	**13 50 27.6**	**+0.1**
JMTN	**Minamitane**	**1.15**	**9**	P	**Pn**	**13 50 27.0**	**-0.7**
JKC	**Kuchinoerabu**	**1.27**	**340**	P	**Pn**	**13 50 29.1**	**-0.3**
JKC				S	**Sn**	**13 50 45.4**	**+0.2**
JAM	**Amami Oshima**	**1.28**	**229**	P	**Pn**	**13 50 28.9**	**-0.5**
JAM				*eS*	**Sn**	**13 50 45.7**	**+0.5**
JTAJ	**Takarajima**	**1.31**	**266**	P	**Pn**	**13 50 29.8**	**0.0**
JTAJ				*eS*	**Sn**	**13 50 47.1**	**+1.1**
JTN	**Tanegashima 3**	**1.41**	**10**	P	**Pn**	**13 50 30.6**	**-0.7**
JTN				*eS*	**Sn**	**13 50 48.2**	**-0.5**
JAMN	**Amaminishikomi**	**1.68**	**233**	P	**Pn**	**13 50 34.7**	**-0.2**
JAMN				*eS*	**Sn**	**13 50 54.6**	**-0.5**
JTSR	**Tashiro 2**	**1.91**	**6**	P	**Pn**	**13 50 38.0**	**-0.2**
JTSR				*eS*	**Sn**	**13 51 00.5**	**-0.5**
JTK	**Tokunoshima**	**2.12**	**227**	P	**Pn**	**13 50 41.0**	**-0.1**
JTK				*eS*	**Sn**	**13 51 06.3**	**+0.1**
JSU	**Suzuyama**	**2.25**	**355**	P	**Pn**	**13 50 42.1**	**-0.7**
JSU				*eS*	**Sn**	**13 51 08.6**	**-0.7**
JNAR	**Kushima--Naru**	**2.31**	**12**	P	**Pn**	**13 50 43.6**	**-0.1**
JNAR				*eS*	**Sn**	**13 51 12.5**	**+1.6**
JSJ	**Shimokoshiki**	**2.55**	**341**	P	**Pn**	**13 50 46.2**	**-0.8**
JOW	**Kunigami**	**3.23**	**222**	Pn	**Pn**	**13 50 55.9**	**-0.4**
	0.6nm,0.3s,baz=94,slow=19,SNR=13						
JOW				Sn	**Sn**	**13 51 32.1**	**-1.4**
	1.0nm,0.3s,baz=76,slow=19,SNR=3.6						
JNU	**Nakatsue**	**3.85**	**2**	Pn	**Pn**	**13 51 05.2**	**+0.3**
	2.6nm,0.3s,baz=190,slow=12,SNR=34						
JNU				Sn	**Sn**	**13 51 46.2**	**-2.7**
	2.0nm,0.3s,baz=232,slow=14,SNR=3.9						
JNU				LR	LR	13 52 40.0	
	comp=Z,83nm,21.2s,baz=156,slow=40						
KSRS	**Korea Array**	**8.49**	**345**	Pn	**Pn**	**13 52 09.2**	**+0.7**
	0.1nm,0.3s,baz=156,slow=13,SNR=3.4						
KSRS				LR	LR	13 55 44.1	
	comp=Z,135nm,21.2s,baz=152,slow=40						
MJAR	**Matsushiro Arr**	**9.62**	**39**	Pn	**Pn**	**13 52 26.1**	**+2.0**
	0.0nm,0.3s,baz=199,slow=18,SNR=3.0						
KLR	**Kul'dur**	**19.96**	**2**	P	**P**	**13 54 36.6**	**-0.3**
	1.2nm,0.7s,baz=155,slow=14,SNR=5.1						
KLR				LR	LR	14 03 18.2	
	comp=Z,39nm,18.1s,baz=136,slow=40						
GUMO	**Guam**	**20.39**	**137**	LR	LR	14 00 26.5	
	comp=Z,29nm,19.5s,baz=57,slow=30						
SONM	**Songino Array**	**26.37**	**321**	LR	LR	14 06 59.5	
	comp=Z,71nm,20.8s,baz=57,slow=39						
CMAR	**Chiang Mai Arr**	**30.87**	**257**	LR	LR	14 10 14.9	
	comp=Z,36nm,19.1s,baz=102,slow=39						
MKAR	**Makanchi Array**	**41.24**	**309**	P	**P**	**13 57 49.0**	**-0.6**
	0.2nm,0.5s,baz=80,slow=7.5,SNR=4.3						
WRA	**Warramunga Arr**	**49.04**	**175**	P	**P**	**13 58 51.3**	**-0.3**
	139nm,0.3s,baz=352,slow=8.5,SNR=1.3						
ASAR	**Alice Springs**	**52.71**	**176**	P	**P**	**13 59 19.7**	**+0.5**
	0.3nm,0.5s,baz=9.9,slow=13,SNR=20						
ILAR	**Eielson Array**	**60.74**	**29**	P	**P**	**14 00 16.3**	**+0.6**
	0.2nm,0.5s,baz=289,slow=7.2,SNR=2.8						

WEL 12 14:23:58.1±1.5, 33°S±31°×18°0E±4°3, h337km±38km, M3.9/5, mB4.3/2, MLv3.9/5, Mw(mB)3.4/2, Error ellipse: s-maj=0.1km s-min=0.0km az=121.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**4.66**	**199**	P	Pn	14 25 12.7	-0.5
HAZ				S	S	14 26 15.0	+1.1
RUGZ	**Raukumara Rang**	**4.88**	**199**	P	Pn	14 25 15.8	-0.1
RUGZ				S	S	14 26 15.9	-2.8
TWGZ	**Tauwhareparae**	**5.01**	**195**	P	Pn	14 25 18.8	+1.6
TWGZ				S	S	14 26 21.9	+0.8
MWZ	**Matawai**	**5.27**	**199**	P	Pn	14 25 19.2	-0.9
MWZ				S	S	14 26 30.5	+4.1
URZ	**Urewera**	**5.32**	**202**	P	Pn	14 25 21.3	+0.7
URZ				S	S	14 26 25.3	-2.0
MUGZ	**Murupara**	**5.63**	**204

PSI Prapat 4.59 339 *e*Pn **Pn 14 26 11.7 -0.3**
PSI Prapat 4.59 339 *e*P **Pn 14 26 11.7 -0.3**
TPRI Tanjung Pinang 4.67 59 P **Pn 14 26 14.8 +1.8**
MYKOM Kota Tinggi 4.67 45 *e*Pn **Pn 14 26 14.8 +1.8**
MYKOM Kota Tinggi 4.67 45 P **Pn 14 26 15.0 +1.9**
MDSI Maura Dua 4.68 129 P **Pn 14 26 14.8 +1.6**
LWLI Liwa 4.94 135 P **Pn 14 26 18.7 +1.8**
TSI Tuntungan 5.36 339 P **Pn 14 26 25.3 +2.8**
KASI Kota Agung 5.61 135 P **Pn 14 26 26.3 +0.5**
KCSI Kotacane, Aceh 5.72 331 P **Pn 14 26 26.9 -0.5**
SNSI Sinabang, Aceh 5.74 313 P **Pn 14 26 28.6 +1.0**
TPTI 5.81 325 P **Pn 14 26 28.8 +0.2**
45nm,0.5s,1µm0.5nm
IPM Ipoh 5.98 5 *e*Pn **Pn 14 26 33.7 +2.7**
BLSI Bandar Lampung 6.06 129 P **Pn 14 26 34.8 +2.8**
KULM Kulim 6.77 1 *e*Pn **Pn 14 26 44.1 +2.4**
KULM Kulim 6.77 1 P **Pn 14 26 44.0 +2.3**
MLSI Meulaboh, Aceh 7.08 324 P **Pn 14 26 45.6 -0.3**
CGJI Cibinong 7.21 135 P **Pn 14 26 46.8 -1.0**
LHMI Lhok Sumawe 7.60 332 *e*Pn **Pn 14 26 54.6 +1.5**
LHMI Lhok Sumawe 7.60 332 P **Pn 14 26 52.8 -0.3**
SKLT Songkhla 8.64 1 P **Pn 14 27 10.8 +3.6**
38nm,0.7s,0.2nm
LEM Lembang 8.81 127 LR LR 14 31 02.4
comp=Z,344nm,20.7s,baz=335,slow=41
TRTT Trang 9.34 355 P **Pn 14 27 20.2 +3.4**
CISI Cisompet, Garu 9.41 130 *e*Pn **Pn 14 27 14.9 -3.0**
CISI Cisompet, Garu 9.41 130 P **Pn 14 27 13.9 -4.0**
XMIS Christmas Isla 10.25 150 *e*Pn Pn 14 27 21.4 -7.9
UGM Wanagama 11.80 123 *e*Pn **Pn 14 27 49.6 -0.9**
UGM Wanagama 11.80 123 P **Pn 14 27 49.5 -1.0**
JAGI Jajag, Banyuwa 15.22 117 *e*Pn **Pn 14 28 35.6 -0.1**
60nm,1.1s
CHAI Chaiyaphum 17.37 5 P **P 14 29 08.0 +5.1**
13µm,1.1s
PLAI Plampang 18.63 114 P **P 14 29 16.0 -0.9**
PANO Nakornpanom 18.98 12 P Pn 14 29 29.3 +7.2
0.3nm,1.0s,190nm
TTSI Tana Toraja 19.33 95 P **Pn 14 29 28.3 +2.1**
SPSI Sidrap Palu 19.37 98 P **P 14 29 25.5 +0.6**
MPSI Mapaga 19.45 85 P **Pn 14 29 28.5 +0.8**
KAPI Kappang 19.50 101 P **Pn 14 29 27.3 -0.9**
6.2nm,0.3s,baz=240,slow=12,SNR=5.2
KAPI Kappang 19.50 101 *e*P **Pn 14 29 27.8 -0.4**
94nm,1.5s
KAPI Kappang 19.50 101 *e*P **Pn 14 29 27.8 -0.4**
KAPI pmax pmax
comp=Z,94nm,1.5s
BNSI Bone 19.75 99 P **Pn 14 29 31.0 -0.2**
BKSI Bulukumba 19.91 101 P **P 14 29 31.4 +0.6**
comp=Z,20nm,0.6s
CM31 Chiang Mai Arr 19.92 356 *e*P **P 14 29 31.2 +0.4**
CMAR Chiang Mai Arr 19.92 356 P **Pn 14 29 32.6 -0.4**
comp=Z,1.2nm,0.3s,baz=187,slow=10,SNR=68
CMAR LR LR 14 37 34.9
comp=Z,135nm,18.5s,baz=180,slow=38
CMAR Chiang Mai Arr 19.92 356 *ce*P **Pn 14 29 32.7 -0.4**
CMAR pmax pmax
comp=Z,10.0nm,0.7s
APSI Ampana 21.12 89 P **P 14 29 46.4 +2.5**
SLVN Son La 22.95 8 *e*P **P 14 30 03.5 +0.1**
comp=Z,14nm,1.3s
MDRS Chennai 24.80 306 *e*P **P 14 30 23.2 +3.0**
BWNR Bhubaneshwar 26.05 327 *ex* **P 14 30 26.1 -5.4**
KMI Kunming 26.57 4 P **P 14 30 39.0 +2.5**
KMI pP pP 14 30 56.4 +2.4
KMI pmax pmax
comp=Z,12nm,0.9s
KMI pmax pmax
comp=Z,73nm,3.7s
KOHI KOHIMA 27.79 347 *e*P **P 14 30 47.7 +0.5**
KOHI IAmb IAmb 14 30 51.8
comp=Z,20nm,1.7s
SHL Shillong 28.20 343 *e*P **P 14 30 51.7 +0.7**
SHL Shillong 28.20 343 *e*P **P 14 30 53.0 +2.0**
BOK Bokaro 28.92 331 *e*P **P 14 30 58.7 +1.5**
BOK IAmb IAmb 14 31 02.1
comp=Z,29nm,0.5s
TEZP TEZPUR 28.95 346 *e*P **P 14 30 57.9 +0.4**
LKP Lekhapani 29.04 351 *e*P **P 14 30 59.9 +1.7**
LKP IAmb IAmb 14 31 02.0
comp=Z,923nm,0.1s
ZIRO ZIRO 29.59 348 *ex* **P 14 30 58.8 -4.5**
FITZ Fitzroy Crossi 29.64 125 P **P 14 31 02.7 -0.9**
comp=Z,1.6nm,0.3s,baz=302,slow=5.7,SNR=11
FITZ PcP **PcP 14 34 07.1 +0.4**
comp=Z,0.9nm,0.4s,baz=288,slow=2.1,SNR=3.7
FITZ Fitzroy Crossi 29.64 125 *e*P **P 14 31 02.3 -1.4**
comp=Z,23nm,1.8s
TAWA Tawang 30.13 345 *e*P **P 14 31 06.7 -1.5**
TAWA IAmb IAmb 14 31 12.3
comp=Z,9.9nm,0.8s
FAKI Fak Fak 31.72 93 P **P 14 31 21.1 -1.0**
JIRN Jiri 32.13 336 *e*P **P 14 31 27.4 +1.5**
comp=Z,54nm,0.3s
LSA Lhasa 32.32 345 *e*P **P 14 31 29.2 +1.6**
comp=Z,7.5nm,0.6s
LSA Lhasa 32.32 345 *e*P **P 14 31 29.2 +1.6**
LSA pmax pmax
comp=Z,8.0nm,0.6s
PKI Pulchoki 32.38 334 *e*P **P 14 31 28.8 +0.8**
comp=Z,18nm,0.4s
PKIN Phulchoki 32.39 334 *e*P **P 14 31 28.9 +0.8**
comp=Z,13nm,0.4s
CD2 Chengdu 32.40 5 *e*P **P 14 31 30.3 +2.5**
CD2 S **S 14 36 41.0 +4.0**
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 LR LR
comp=Z,340nm,20.6s
CD2 LR LR
comp=Z,340nm,20.6s
GUN Gumba 32.48 335 *e*P **P 14 31 30.4 +1.5**
comp=Z,118nm,0.5s
KKN Kakani 32.63 334 *e*P **P 14 31 31.1 +1.0**
comp=Z,38nm,0.4s
KOLN Koldanda 33.37 332 *e*P **P 14 31 38.0 +1.5**
comp=Z,50nm,0.6s
DANN Dangsing 33.78 333 *e*P **P 14 31 41.1 +0.9**
comp=Z,96nm,0.5s
PYUN Piuthan 33.93 332 *e*P **P 14 31 43.0 +1.6**
comp=Z,45nm,0.3s
NWAO Narrogin (SRO) 34.96 155 P **P 14 31 50.0 0.0**
comp=Z,8.6nm,0.8s,baz=320,slow=4.2,SNR=5.9
H01W3 Cape Leeuwin H 35.53 161 T T 15 10 38.6
baz=335,slow=76,SNR=10
H01W2 Cape Leeuwin H 35.54 161 T T 15 10 25.9
baz=335,slow=76,SNR=14
H01W1 Cape Leeuwin H 35.55 161 T T 15 10 41.0
baz=335,slow=76,SNR=9.2
XAN Xi'an 36.24 12 P **P 14 32 00.7 -0.3**
XAN pmax pmax
comp=Z,3.0nm,0.5s
LZH Lanzhou 37.54 4 *e*P **P 14 32 09.7 -2.5**
LZH pmax pmax
comp=Z,16nm,1.0s
NJ2 Nanjing 37.64 26 *e*P **P 14 32 14.3 +1.5**
NJ2 pmax pmax
comp=Z,13nm,0.5s
WR1 Warramunga Arr 37.78 121 *e*P **P 14 32 13.1 -1.2**
WRA Warramunga Arr 37.78 121 P **P 14 32 13.1 -1.2**
comp=Z,133nm,0.3s,baz=291,slow=11,SNR=2.6
WRAB Tennant Creek 37.78 121⇑ *i*P **P 14 32 11.1 -3.2**
WRAB pmax pmax
comp=Z,4.0nm,1.0s
WB2 Warramunga Arr 37.79 121 *e*P **P 14 32 12.2 -2.1**
comp=Z,25nm,1.7s
AS31 Alice Springs 39.11 127 *e*P **P 14 32 24.3 -1.1**
comp=Z,2.8nm,0.6s
ASAR Alice Springs 39.11 127 P **P 14 32 24.4 -1.0**
comp=Z,3.1nm,0.4s,baz=302,slow=8.4,SNR=71
ASAR PcP **PcP 14 34 34.0 +0.1**
comp=Z,1.1nm,0.5s,baz=314,slow=2.3,SNR=6.9
ASAR S **S 14 38 14.0 -5.9**
comp=Z,0.4nm,0.6s,baz=301,slow=15,SNR=4.6
ASAR LR LR 14 51 22.8
comp=Z,39nm,18.5s,baz=282,slow=40
SMLA Simla 39.34 328 *e*P **P 14 32 27.4 +0.3**
SMLA IAmb IAmb 14 32 29.8
comp=Z,8.1nm,0.5s
DHRM DHARAMSHALA 40.68 328 *e*P **P 14 32 38.5 0.0**
DHRM IAmb IAmb 14 32 41.8
comp=Z,102nm,0.2s
GTA Gaotai 40.74 359 *e*P **P 14 32 40.6 +1.8**
GTA pP pP 14 32 57.8 +0.8
GTA sP sP 14 33 08.2 +2.5
GTA pmax pmax
comp=Z,3.0nm,1.0s
HHC Hu-ho-hao-te 43.35 12 *e*P **P 14 33 02.4 +2.4**
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,68nm,5.1s
NIL Nilore 43.40 326 *e*P **P 14 33 00.2 -0.1**
comp=Z,18nm,0.8s
NIL Nilore 43.40 326 *e*P **P 14 33 00.3 -0.1**
NIL pmax pmax
comp=Z,18nm,0.8s
TJN Taejon 45.23 31⇓ *e*P **P 14 33 13.6 -1.3**
KS15 Wonju Array Si 46.31 30 *e*P **P 14 33 23.8 +0.4**
KSRS Korea Array 46.34 30 P **P 14 33 23.8 +0.2**
comp=Z,1.7nm,0.8s,baz=222,slow=9.1,SNR=7.4
KSRS LR LR 14 52 33.0
comp=Z,34nm,21.1s,baz=200,slow=36
WMQ Urumqi 46.59 347 *e*P **P 14 33 27.4 +1.8**
WMQ LR LR
comp=Z,90nm,4.1s
WMQ LR LR
comp=Z,55nm,8.1s
KSH Kashi 46.64 334 P **P 14 33 26.0 -0.1**
KSH pP pP 14 33 45.1 +0.5
KSH PP **PP 14 35 17.0 +0.2**
KSH S **S 14 40 04.4 -5.7**
KSH pmax pmax
comp=Z,21nm,0.7s
KSH pmax pmax
comp=Z,220nm,4.3s
KSH LR LR
comp=Z,200nm,6.3s
KSH LR LR
comp=Z,260nm,7.0s
KSH LR LR
comp=Z,170nm,17.9s
NRN Naryn 48.21 335 *e*P **P 14 33 39.0 +0.5**
comp=Z,55nm,1.0s
NRN Naryn 48.21 335 *e*P **P 14 33 39.0 +0.5**
NRN pmax pmax
comp=Z,55nm,1.0s
PDGK Podgornoye 48.49 340 P **P 14 33 41.5 +1.1**
PDGK pmax pmax
comp=Z,22nm,1.0s
GAR Garm 48.96 329 *e*P **P 14 33 42.8 -1.3**
comp=Z,29nm,1.2s
GAR Garm 48.96 329 *e*P **P 14 33 42.8 -1.3**
GAR pmax pmax
comp=Z,29nm,1.2s
KZA Kyzart 49.06 335 P **P 14 33 47.0 +1.9**
SNR=8.4
STKA Stephens Creek 49.07 132 P **P 14 33 44.6 -0.3**
comp=Z,3.6nm,0.4s,baz=310,slow=7.3,SNR=22
STKA LR LR 14 56 50.5
comp=Z,36nm,19.1s,baz=318,slow=39
STKA Stephens Creek 49.07 132 *e*P **P 14 33 44.6 -0.3**
comp=Z,13nm,1.9s
BOOM Boomskoye usch 49.11 336 *e*P **P 14 33 46.2 +0.9**
comp=Z,29nm,0.8s
BOOM Boomskoye usch 49.11 336 *e*P **P 14 33 46.2 +0.9**
BOOM pmax pmax
comp=Z,29nm,0.8s
SONA0 Songino Array 49.42 5 *e*P **P 14 33 47.8 +0.3**
SONA0 *e*PcP **PcP 14 35 09.1 +0.3**
SONA0 *e*ScP **ScP 14 38 57.9 +0.2**
SONM Songino Array 49.42 5 P **P 14 33 47.8 +0.3**
comp=Z,1.9nm,0.4s,baz=189,slow=10,SNR=15
SONM PcP **PcP 14 35 09.1 +0.3**
comp=Z,1.9nm,0.5s,baz=179,slow=4.4,SNR=5.4
SONM ScP **ScP 14 38 57.9 +0.2**
comp=Z,0.4nm,0.3s,baz=205,slow=6.0,SNR=3.8
SONM LR LR 14 57 56.6
comp=Z,54nm,19.7s,baz=194,slow=40
UCH Uchtor 49.49 335 P **P 14 33 50.0 +1.5**
SNR=37
ULN Ulaanbaatar 49.52 6⇑ *e*P **P 14 33 45.9 -2.3**
ULN pmax pmax
comp=Z,1.0nm,1.0s
TKM2 Tokmak 2 49.61 336 P **P 14 33 50.4 +1.3**
SNR=54
TKM2 Tokmak 2 49.61 336 P **P 14 33 50.2 +1.1**
TKM2 pmax pmax
comp=Z,29nm,0.6s
KBK Karagaybulak 49.66 335 P **P 14 33 51.5 +2.0**
SNR=20
AML Almayashu 49.77 334 P **P 14 33 52.3 +1.7**
SNR=6.3
AAK Ala-Archa 49.84 335 P **P 14 33 52.5 +1.7**
SNR=13
AAK Ala-Archa 49.84 335 *e*P **P 14 33 51.6 +0.9**
comp=Z,16nm,0.6s
AAK Ala-Archa 49.84 335 P **P 14 33 52.3 +1.6**
AAK pmax pmax
comp=Z,14nm,0.7s
FRU1 Bishkek 49.92 335 *e*P **P 14 33 51.9 +0.6**
comp=Z,39nm,0.6s
FRU1 Bishkek 49.92 335 *e*P **P 14 33 51.9 +0.6**
FRU1 pmax pmax
comp=Z,39nm,0.6s
CHMS Chumysh 50.02 335 P **P 14 33 53.2 +1.2**
SNR=17
EKS2 Erkin-Say 50.16 334 P **P 14 33 55.0 +1.9**
SNR=86
USP Ospenovka 50.35 335 P **P 14 33 55.7 +1.2**
SNR=34
MK31 Makanchi Array 50.72 344 *e*P **P 14 33 57.3 +0.1**
MK31 Makanchi Array 50.72 344 *e*P **P 14 33 57.3 +0.1**
MK32 Makanchi Array 50.72 344 *e*P **P 14 33 57.5 +0.4**
MKAR Makanchi Array 50.72 344 P **P 14 33 57.5 +0.4**
comp=Z,3.8nm,0.3s,baz=158,slow=9.0,SNR=110
MKAR LR LR 15 01 26.3
comp=Z,22nm,19.1s,baz=164,slow=43
MAKZ Makanchi 50.82 344 *e*P **P 14 33 57.8 -0.2**
comp=Z,3.3nm,0.9s
MAKZ Makanchi 50.82 344 P **P 14 33 57.9 0.0**
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
MAJO Matsushiro 51.57 39 *e*P **P 14 34 03.6 -0.1**
MAJO Matsushiro 51.57 39 *e*P **P 14 34 03.7 -0.1**
MJAR Matsushiro Arr 51.57 39 P **P 14 34 03.7 -0.1**
comp=Z,1.0nm,0.4s,baz=207,slow=8.0,SNR=7.4
MJAR LR LR 14 57 11.2
comp=Z,26nm,18.5s,baz=160,slow=37
KK31 Karatay Array 51.98 332 *e*P **P 14 34 07.2 +0.6**
KK31 Karatay Array 51.98 332 *e*P **P 14 34 07.2 +0.6**
KKAR Karatay Array 51.98 332 *e*P **P 14 34 07.2 +0.6**
comp=Z,9.9nm,1.2s
KKAR Karatay Array 51.98 332 *e*P **P 14 34 07.2 +0.6**
KKAR pmax pmax
comp=Z,10.0nm,1.2s
DGZ Jazzator, Alta 52.26 349 *d i*P **P 14 34 09.2 +0.4**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
TLY Talaya 53.07 2⇓ *e*P **P 14 34 12.8 -1.8**
USA0B Ussuriysk Arra 53.49 28 *e*P **P 14 34 17.4 -0.3**
USA0B Ussuriysk Arra 53.49 28 *e*P **P 14 34 17.4 -0.3**
USRK Ussuriysk Ar. 53.49 28 P **P 14 34 17.9 +0.2**
comp=Z,5.8nm,0.5s,baz=233,slow=3.6,SNR=18
KURK Kurchatov 55.30 343 *e*P **P 14 34 30.8 0.0**
comp=Z,13nm,0.8s
KURK Kurchatov 55.30 343 *d i*P **P 14 34 30.9 +0.1**
KURK pmax pmax
comp=Z,16nm,0.9s
GEYT Alibeck 55.43 320 P **P 14 34 32.9 +0.9**
comp=Z,9.7nm,0.8s,baz=140,slow=7.7,SNR=18
GYA0B ALIBECK ARRAY 55.43 320 *e*P **P 14 34 32.5 +0.5**
ZAA0 Zalesovo Array 56.80 349 *e*P **P 14 34 41.0 -0.4**
ZALV Zalesovo Beam 56.80 349 P **P 14 34 41.2 -0.2**
comp=Z,4.5nm,0.3s,baz=172,slow=10,SNR=18
ZALV Zalesovo Beam 56.80 349 *i* P **P 14 34 41.2 -0.2**
ZALV pmax pmax
comp=Z,4.0nm,0.3s
ZAA1 Zalesovo Array 56.81 349 *e*P **P 14 34 41.2 -0.2**
KLR Kul'dur 57.28 24⇑ *e*P **P 14 34 45.2 +0.3**
KLR pmax pmax
comp=Z,2.0nm,0.8s
NVS Novosibirsk 57.96 348 *e*P **P 14 34 46.9 -2.6**
BRVK Borovoye 59.99 339 *e*P **P 14 35 03.2 -0.4**
comp=Z,9.5nm,0.8s
BRVK Borovoye 59.99 339 *d i*P **P 14 35 03.3 -0.3**
BRVK *i* *PP **pP 14 35 21.4 -1.4**
BRVK pmax pmax
comp=Z,7.0nm,0.9s
AB31 Akbulak array 61.48 331 P **P 14 35 13.8 0.0**
AB31 pmax pmax
comp=Z,9.0nm,0.5s
ABKAR Akbulak array 61.48 331 *e*P **P 14 35 13.4 -0.4**
comp=Z,17nm,0.5s
KMBO Kilima Mbogo 63.26 270 P **P 14 35 28.0 +1.3**
comp=Z,2.0nm,0.8s,baz=64,slow=9.3,SNR=4.5
KMBO Kilima Mbogo 63.26 270 *e*P **P 14 35 28.0 +1.3**
comp=Z,19nm,1.9s
KMBO Kilima Mbogo 63.26 270 *e*P **P 14 35 28.0 +1.3**
KMBO pmax pmax
comp=Z,19nm,1.9s
GNI Garni 65.55 316 *ce*P **P 14 35 42.5 +1.4**
GNI pmax pmax
comp=Z,77nm,1.3s
TBLG Delisi 66.23 317 *e*P **P 14 35 45.0 -0.2**
TBLG Delisi 66.23 317 *e*P **P 14 35 45.0 -0.2**
SVE Sverdlovsk 66.45 337⇓ *i*P **P 14 35 46.8 +0.5**
SVE pmax pmax
comp=Z,21nm,0.8s
AKH Akhalkalaki 66.94 317 *e*P **P 14 35 49.4 -0.6**
comp=Z,7.5nm,0.9s
ARU Arti 66.99 336 *e*P **P 14 35 49.0 -0.7**
comp=Z,7.8nm,0.8s
ARU Arti 66.99 336 *d i*P **P 14 35 49.5 -0.2**
ARU S **S 14 44 40.7 +3.4**
ARU pmax pmax
comp=Z,10.0nm,0.9s
YAK Yakutsk 67.15 14⇓ *e*P **P 14 35 49.1 -1.5**
ZEI Tsey 67.24 318 *e*P **P 14 35 52.2 +0.3**
ZEI pmax pmax
comp=Z,13nm,0.8s
NCK Nalchik 67.74 319⇑ *e*P **P 14 35 55.9 +1.1**
NCK pmax pmax
comp=Z,8.0nm,0.8s
NEY Neytrino 68.22 318⇑ *e*P **P 14 35 59.6 +1.6**
NEY pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 68.30 319 P **P 14 35 59.1 +0.9**
comp=Z,9.8nm,0.9s,baz=146,slow=4.8,SNR=19
KIV Kislovodsk 68.53 319 *e*P **P 14 36 00.4 +0.6**
comp=Z,16nm,1.1s
KIV Kislovodsk 68.53 319 *e*P **P 14 36 00.4 +0.6**
KIV pmax pmax
comp=Z,16nm,1.1s
MBAR Mbarara 69.78 270⇑ *e*P **P 14 36 09.3 +1.0**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
MAW Mawson 70.87 194 P **P 14 36 14.6 +1.0**
comp=Z,2.4nm,0.7s,baz=46,slow=13,SNR=3.6
MAW Mawson 70.87 194 *e*P **P 14 36 14.6 +1.0**
comp=Z,2.6nm,1.3s
MAW Mawson 70.87 194 *e*P **P 14 36 14.6 +1.0**
MAW pmax pmax
comp=Z,3.0nm,1.3s
NRIK Noril'sk 71.27 355 P **P 14 36 15.1 -0.9**
comp=Z,5.4nm,0.9s,baz=168,slow=7.5,SNR=8.7
NRIK LR LR 15 11 25.3
comp=Z,27nm,18.6s,baz=143,slow=39
PETK Petropavlovsk- 72.20 32 P **P 14 36 20.6 -1.3**
comp=Z,3.0nm,0.9s,baz=259,slow=2.3,SNR=4.5
PEA1 Petropavlovsk- 72.20 32 *e*P **P 14 36 20.6 -1.3**
VRH Novokhopyorsk 72.23 326 *e*P **P 14 36 21.5 -0.6**
VRH pmax pmax
comp=Z,20nm,0.6s
LSZ Lusaka 72.57 255 *e*P **P 14 36 27.1 +2.1**
comp=Z,23nm,1.7s
BR101 Keskin Array S 73.40 312 *e*P **P 14 36 29.2 -0.2**
BR131 Keskin Array S 73.40 312 *e*P **P 14 36 27.1 -2.4**
BR131 Keskin Array S 73.40 312 *e*P **P 14 36 27.1 -2.4**
BRTR Keskin Array B 73.40 312 P **P 14 36 29.2 -0.2**
comp=Z,5.8nm,0.8s,baz=127,slow=7.0,SNR=22
VORD Divnogorie 73.52 325 *e*P **P 14 36 28.9 -0.8**
VORD pmax pmax
comp=Z,9.0nm,0.6s
VSR Storozhevoye 73.69 325 *e*P **P 14 36 29.8 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.5s
ILGA Ilgaz 73.72 314 *e*P **P 14 36 29.1 -2.3**
comp=Z,24nm,1.2s
LPSR Galich'ya Gora 74.39 326 *e*P **P 14 36 32.6 -2.2**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
SEY Seymchan 74.99 22⇓ *e*P **P 14 36 35.8 -2.2**
TIXI Tiksi 75.31 9 *e*P **P 14 36 38.4 -1.2**
comp=Z,16nm,1.4s
TIXI Tiksi 75.31 9⇑ *e*P **P 14 36 38.9 -0.7**
TIXI pmax pmax
comp=Z,6.0nm,1.1s
PRGR Permogore 75.45 336 *e*P **P 14 36 40.5 -0.1**
PRGR pmax pmax
comp=Z,18nm,0.6s
BOSA Boshof 76.35 241 P **P 14 36 46.7 0.0**
comp=Z,2.6nm,0.4s,baz=77,slow=3.1,SNR=5.9
MOS Moscow 76.37 329 *e*P P 14 36 40.4 -5.6
OBN Obninsk 76.67 328 *i* P **P 14 36 48.3 +0.6**
OBN *i* 14 37 06.1
OBN pmax pmax
comp=Z,13nm,1.0s
OBN MLR MLR
comp=Z,24nm,19.0s
KLMR Klimovskoe 77.64 334 *e*P **P 14 36 52.4 -0.6**
KLMR pmax pmax
comp=Z,13nm,1.5s
KLMR Klimovskoe 77.64 334 *e*P **P 14 36 52.4 -0.6**
KLMR AMP 14 36 54.8
comp=Z,13nm,1.4s
SYO Syowa Base 78.49 199⇓ *e*P **P 14 36 58.4 +0.8**
AKASG Malin Array Be 79.44 322 P **P 14 37 03.2 +0.1**
comp=Z,1.9nm,0.5s,baz=83,slow=4.8,SNR=7.7
MLR Muntele Rosu 80.32 317 *e*P **P 14 37 08.7 +0.4**
comp=Z,17nm,1.0s
MLR Muntele Rosu 80.32 317 *e*P **P 14 37 08.7 +0.4**
MLR pmax pmax
comp=Z,17nm,1.0s
BUR08 Bucovina Ar. S 81.27 319 *e*P **P 14 37 14.4 +1.1**
comp=Z,7.6nm,0.9s
VNDA Vanda 82.52 169 P **P 14 37 20.0 +0.9**
comp=Z,2.4nm,0.9s,baz=298,slow=5.1,SNR=7.2
VNDA LR LR 15 10 16.3
comp=Z,32nm,21.8s,baz=262,slow=33
VNDA Vanda 82.52 169 *e*P **P 14 37 20.0 +0.9**
TSUM Tsumeb 82.84 251 *e*P **P 14 37 22.5 +0.4**
comp=Z,6.8nm,1.0s
KOLS Kolonicke sedl 83.44 319 *e*P **P 14 37 26.2 +1.8**
KOLS pmax pmax
comp=Z,14nm,1.1s
KOLS Kolonicke sedl 83.44 319 *e*P **P 14 37 26.2 +1.8**
SUW Suwalki 83.81 325 *e*P **P 14 37 26.4 +0.3**
comp=Z,66nm,1.2s
SUW Suwalki 83.81 325 *e*P **P 14 37 26.4 +0.3**
SUW pmax pmax
comp=Z,66nm,1.2s
VYHS Vyhne 85.62 319 *e*P **P 14 37 36.5 +1.1**
VYHS Vyhne 85.62 319 *e*P **P 14 37 36.5 +1.1**
ARCES ARCESS Array B 86.21 340 P **P 14 37 38.4 +0.6**
comp=Z,5.7nm,0.3s,baz=110,slow=3.9,SNR=23
MORC Moravsky Berou 86.62 320 *e*P **P 14 37 40.6 +0.3**
comp=Z,7.8nm,1.1s
MORC Moravsky Berou 86.62 320 *e*P **P 14 37 40.6 +0.3**
MORC pmax pmax
comp=Z,8.0nm,1.1s
MODS Modra-Piesok 86.64 318 *e*P **P 14 37 40.8 +0.3**
MODS pmax pmax
comp=Z,10.0nm,1.2s
MODS Modra-Piesok 86.64 318 *e*P **P 14 37 40.8 +0.3**
DPC Dobruska-Polom 87.46 320 *e*P **P 14 37 46.0 +1.6**
DPC Dobruska-Polom 87.46 320 *e*P **P 14 37 46.0 +1.6**
QSPA South Pole Qui 88.44 180 *e*P **P 14 37 49.1 +0.3**
comp=Z,4.4nm,0.7s
BRG Berggiesshubel 89.01 321 *e*P **P 14 37 53.2 +1.5**
comp=Z,9.5nm,1.2s
BRG Berggiesshubel 89.01 321 *e*P **P 14 37 53.2 +1.5**
BRG pmax pmax
comp=Z,10.0nm,1.2s
GEC2 GERESS Array S 89.04 319 *e*P **P 14 37 52.7 +0.7**
GEC2 GERESS Array S 89.04 319 *e*P **P 14 37 52.7 +0.7**
GERES GERESS Array B 89.04 319 P **P 14 37 52.6 +0.5**
comp=Z,2.1nm,0.9s,baz=102,slow=5.6,SNR=14
CLL Collm 89.63 321 *i* P **P 14 37 55.7 +1.2**
comp=Z,6.0nm,1.1s
CLL Collm 89.63 321 *i* P **P 14 37 55.7 +1.2**
CLL pmax pmax
comp=Z,6.0nm,1.1s
NB200 NORSAR Array S 90.99 331 *e*P **P 14 38 00.4 -0.3**
NOA NORSAR Array B 90.99 331 P **P 14 38 00.4 -0.3**
comp=Z,1.5nm,1.0s,baz=95,slow=5.4,SNR=3.0

NOA				LR	LR	15 22 42.2	
	comp=Z,10.0nm,19.3s,baz=90,slow=38						
FUORN	**Ofenpass-Fuorn**	**91.28**	**316**	*e*P	**P**	**14 38 03.7**	**+1.0**
	comp=Z,20nm,1.5s						
KEST	**Kesra**	**91.84**	**306**	P	**P**	**14 38 06.7**	**+1.4**
	comp=Z,7.4nm,0.9s,baz=3.2,slow=19,SNR=5.6						
COLA	**College**	**100.44**	**24**	*e*P	**Pdif**	**14 38 43.8**	**+0.3**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MNTX	**Cornudas Mount**	**141.28**	**37**	P	**PKPdf**	**14 44 24.7**	**-3.1**
	baz=316						
WMOK	**Wichita Mounta**	**142.37**	**26**	P	**PKPdf**	**14 44 26.2**	**-3.5**
	baz=327						
X37A	**Clayton**	**143.91**	**23**	*e*PKPdf	PKPbc	14 44 29.8	-0.4
S57A	**Dark Hollow, R**	**143.94**	**359**	P	PKPab	14 44 29.4	-0.2
	baz=0.8						
TX31	**Lajitas Ar. Si**	**144.00**	**38**	*e*PKPdf	PKPbc	14 44 31.2	+0.4
LTX	**Lajitas**	**144.00**	**38**	*e*PKPdf	PKPbc	14 44 31.5	+0.6
LTX	**Lajitas**	**144.00**	**38**	*e*PKIKP	PKPbc	14 44 31.5	+0.6
TXAR	**Lajitas Array**	**144.00**	**38**	PKP	PKPbc	14 44 31.5	+0.6
	comp=Z,2.4nm,0.4s,baz=205,slow=0.9,SNR=65						
S56A	**Natural Bridge**	**144.02**	**0**	P	**PKPab**	**14 44 29.7**	**-0.3**
	baz=360						
S58A	**Poland Farm, P**	**144.06**	**358**	P	PKPbc	14 44 30.6	0.0
	baz=2.3						
T50A	**Nancy**	**144.33**	**7**	P	**PKPab**	**14 44 30.4**	**-0.8**
	baz=351						
WHAR	**Wooly Hollow**	**144.35**	**18**	*e*PKPdf	**PKPab**	**14 44 31.1**	**-0.2**
T52A	**Hallie**	**144.44**	**5**	P	**PKPab**	**14 44 30.4**	**-1.2**
	baz=354						
W41B	**Gary Mavity, V**	**144.47**	**18**	*e*PKPdf	**PKPab**	**14 44 31.3**	**-0.4**
W41B	**Gary Mavity, V**	**144.47**	**18**	P	**PKPab**	**14 44 30.8**	**-0.9**
	baz=338						
T51A	**Gray**	**144.49**	**6**	P	**PKPab**	**14 44 31.6**	**-0.2**
	baz=352						
U47A	**Clarksville**	**144.51**	**11**	P	**PKPab**	**14 44 30.1**	**-1.7**
	baz=346						
T55A	**Pulaski**	**144.56**	**2**	P	**PKPab**	**14 44 30.8**	**-1.3**
	baz=358						
U48A	**Cassie Pea, Po**	**144.58**	**10**	P	**PKPab**	**14 44 31.0**	**-1.0**
	baz=348						
T54A	**Tazewell**	**144.58**	**3**	P	**PKPab**	**14 44 31.4**	**-0.8**
	baz=356						
T53A	**Wise**	**144.60**	**4**	P	**PKPab**	**14 44 31.7**	**-0.5**
	baz=355						
MIAR	**Mount Ida**	**144.60**	**20**	*e*PKPdf	**PKPab**	**14 44 32.0**	**-0.2**
MIAR	**Mount Ida**	**144.60**	**20**	*e*PKIKP	**PKPab**	**14 44 32.1**	**-0.2**
MIAR	**Mount Ida**	**144.60**	**20**	P	**PKPab**	**14 44 32.1**	**-0.2**
	baz=335,SNR=18						
T56A	**Rocky Mt**	**144.66**	**1**	P	PKPbc	14 44 32.6	0.0
	baz=359						
T59A	**Double "B" Far**	**144.68**	**357**	P	**PKPab**	**14 44 32.3**	**-0.1**
	baz=3.2						
U49A	**Red Boiling Sp**	**144.70**	**9**	P	**PKPab**	**14 44 31.9**	**-0.6**
	baz=349						
T57A	**Hurt**	**144.70**	**360**	P	**PKPab**	**14 44 31.7**	**-0.8**
	baz=0.2						
WVT	**Waverly**	**144.70**	**12**	*e*PKPdf	**PKPab**	**14 44 32.3**	**-0.2**
WVT	**Waverly**	**144.70**	**12**	*e*PKIKP	**PKPab**	**14 44 32.3**	**-0.2**
WVT	**Waverly**	**144.70**	**12**	P	**PKPab**	**14 44 32.2**	**-0.4**
	baz=345						
T58A	**Grand View Acr**	**144.74**	**359**	P	**PKPab**	**14 44 32.0**	**-0.7**
	baz=1.5						
X40A	**Basin Creek Fa**	**144.91**	**19**	P	**PKPab**	**14 44 32.9**	**-0.5**
	baz=336,SNR=7.1						
U50A	**Jamestown**	**144.93**	**8**	P	**PKPab**	**14 44 32.3**	**-1.1**
	baz=350,SNR=10						
TZTN	**Tazewell**	**144.95**	**6**	*e*PKPbc	**PKPab**	**14 44 33.0**	**-0.5**
TZTN	**Tazewell**	**144.95**	**6**	P	**PKPab**	**14 44 32.7**	**-0.7**
	baz=353,SNR=6.8						
V46A	**Holladay**	**144.96**	**12**	P	**PKPab**	**14 44 33.0**	**-0.5**
	baz=345						
CPUP	**Villa Florida**	**145.02**	**216**	PKPbc	**PKPdf**	**14 44 35.1**	**+0.6**
	comp=Z,17nm,0.9s,baz=132,slow=3.4,SNR=35						
CLTN	**Cedars of Leba**	**145.02**	**10**	*e*PKPbc	**PKPbc**	**14 44 33.2**	**-0.5**
V47A	**Nunnelly**	**145.06**	**11**	P	**PKPbc**	**14 44 33.0**	**-0.9**
	baz=346						
U51A	**La Follette**	**145.06**	**6**	P	**PKPbc**	**14 44 32.9**	**-1.0**
	baz=352						
U54A	**Nelsons Funny**	**145.11**	**3**	P	**PKPbc**	**14 44 32.8**	**-1.3**
	baz=356						
U52A	**Thorn Hill**	**145.12**	**6**	P	**PKPbc**	**14 44 33.1**	**-1.0**
	baz=353						
U55A	**TA2, Sparta**	**145.16**	**2**	P	**PKPbc**	**14 44 33.0**	**-1.3**
	baz=357						
U53A	**Fall Branch**	**145.21**	**4**	P	**PKPbc**	**14 44 33.2**	**-1.1**
	baz=354						
U57A	**Blanch**	**145.26**	**360**	P	**PKPbc**	**14 44 33.5**	**-0.9**
	baz=0.1						
WHTX	**Lake Whitney,**	**145.27**	**27**	P	**PKPbc**	**14 44 34.3**	**-0.3**
	baz=327						
V48A	**Smith Brothers**	**145.28**	**11**	*e*PKPbc	**PKPbc**	**14 44 33.9**	**-0.6**
V48A	**Smith Brothers**	**145.28**	**11**	P	**PKPbc**	**14 44 33.7**	**-0.8**
	baz=347,SNR=11						
U58A	**Oxford**	**145.29**	**359**	P	**PKPbc**	**14 44 34.4**	**-0.2**
	baz=1.5						
U59A	**Littleton**	**145.31**	**358**	P	**PKPbc**	**14 44 34.5**	**-0.1**
	baz=2.8						
U56A	**King**	**145.34**	**1**	P	**PKPbc**	**14 44 34.5**	**-0.3**
	baz=358						
JCT	**Junction City**	**145.34**	**32**	*e*PKPbc	**PKPbc**	**14 44 34.9**	**-0.1**
JCT	**Junction City**	**145.34**	**32**	*e*PKIKP	**PKPbc**	**14 44 34.9**	**-0.1**
JCT	**Junction City**	**145.34**	**32**	P	**PKPab**	**14 44 35.0**	**-0.2**
	baz=322						
V49A	**McMinnville**	**145.41**	**9**	P	**PKPbc**	**14 44 33.9**	**-1.1**
	baz=348						
W46A	**Michie**	**145.55**	**13**	P	**PKPdf**	**14 44 34.3**	**-0.9**
	baz=344						
V51A	**Loudon**	**145.59**	**7**	P	**PKPdf**	**14 44 34.5**	**-0.8**
	baz=351						
W47A	**Westpoint**	**145.60**	**12**	P	**PKPdf**	**14 44 35.0**	**-0.3**
	baz=345						
V50A	**Pikevile**	**145.62**	**8**	P	**PKPdf**	**14 44 34.6**	**-0.8**
	baz=350,SNR=7.5						
V52A	**Sevierville**	**145.64**	**6**	*e*PKPdf	**PKPdf**	**14 44 35.0**	**-0.4**
V52A	**Sevierville**	**145.64**	**6**	P	**PKPdf**	**14 44 34.6**	**-0.8**
	baz=353						
PLAL	**Pickwick Lake**	**145.76**	**13**	*e*PKPdf	**PKPdf**	**14 44 35.4**	**-0.1**
V55A	**Taylorsville**	**145.81**	**3**	P	**PKPdf**	**14 44 35.5**	**-0.1**
	baz=357						
V57A	**Coltrane Farms**	**145.81**	**0**	P	**PKPdf**	**14 44 35.3**	**-0.3**
	baz=359						
W48A	**Pulaski**	**145.84**	**11**	P	**PKPdf**	**14 44 35.2**	**-0.5**
	baz=347,SNR=8.0						
V54A	**Nebo**	**145.84**	**4**	P	**PKPdf**	**14 44 35.6**	**-0.1**
	baz=356						
V56A	**Mocksville**	**145.87**	**1**	P	**PKPdf**	**14 44 35.6**	**-0.1**
	baz=358						
V53A	**Saluda**	**145.88**	**5**	*e*PKPdf	**PKPdf**	**14 44 36.0**	**+0.2**
V53A				*ep*PKPdf	**pPKPdf**	**14 44 54.0**	**-3.1**
V53A	**Saluda**	**145.88**	**5**	P	**PKPdf**	**14 44 35.5**	**-0.3**
	baz=354						
OXF	**Oxford**	**145.89**	**15**	P	**PKPdf**	**14 44 35.5**	**-0.3**
	baz=342						
V58A	**Windy Hill, Pi**	**145.90**	**359**	P	**PKPbc**	**14 44 36.0**	**-0.5**
	baz=0.5						
V59A	**Middlesex**	**145.91**	**358**	P	**PKPbc**	**14 44 36.2**	**-0.3**
	baz=2.0						
CPCT	**Cooper Cave**	**145.92**	**7**	*e*PKPdf	**PKPdf**	**14 44 36.0**	**+0.2**
CPCT				*ep*PKPdf	**pPKPdf**	**14 44 54.1**	**-2.9**
SWET	**Sewanee**	**145.94**	**9**	*e*PKPdf	**PKPdf**	**14 44 35.7**	**-0.2**
V62A	**Hyde County Ai**	**145.98**	**355**	P	**PKPdf**	**14 44 35.9**	**0.0**
	baz=6.1						
W49A	**Belvidere**	**145.98**	**10**	P	**PKPdf**	**14 44 35.3**	**-0.7**
	baz=348,SNR=7.1						
X46A	**Booneville**	**146.05**	**14**	P	**PKPdf**	**14 44 36.2**	**+0.1**
	baz=344						
W50A	**Signal Mountai**	**146.06**	**9**	P	**PKPdf**	**14 44 36.4**	**+0.2**
	baz=349						
W51A	**Cleveland**	**146.17**	**8**	P	**PKPdf**	**14 44 36.2**	**-0.1**
	baz=350						
X47A	**Russelville**	**146.25**	**13**	P	**PKPdf**	**14 44 36.3**	**-0.2**
	baz=345						
W52A	**Murphy**	**146.34**	**7**	P	**PKPbc**	**14 44 37.3**	**-0.6**
	baz=352						
W53A	**Cullowhee**	**146.35**	**5**	P	**PKPdf**	**14 44 36.8**	**+0.1**
	baz=353						
X48A	**Hartselle**	**146.49**	**11**	*e*PKPdf	**PKPdf**	**14 44 36.9**	**+0.1**
X48A	**Hartselle**	**146.49**	**11**	P	**PKPdf**	**14 44 36.9**	**+0.1**
	baz=346						
KMSC	**Kings Mountain**	**146.51**	**3**	*e*PKPdf	**PKPbc**	**14 44 38.1**	**-0.2**
KMSC	**Kings Mountain**	**146.51**	**3**	P	**PKPbc**	**14 44 38.0**	**-0.3**
	baz=356						
W54A	**Cherokee Point**	**146.51**	**4**	P	**PKPdf**	**14 44 37.2**	**+0.3**
	baz=355						
W57A	**Gilead**	**146.54**	**1**	P	**PKPbc**	**14 44 37.7**	**-0.7**
	baz=359						
W56A	**Indian Trail**	**146.54**	**2**	P	**PKPbc**	**14 44 37.7**	**-0.8**
	baz=358						
W49A	**Woodville**	**146.56**	**10**	P	**PKPdf**	**14 44 37.4**	**+0.5**
	baz=347,SNR=7.2						
W58A	**Raeford**	**146.67**	**360**	P	**PKPbc**	**14 44 38.4**	**-0.3**
	baz=0.3						
X50B	**Fort Payne**	**146.73**	**9**	P	**PKPdf**	**14 44 37.9**	**+0.6**
	baz=349						
X51A	**Calhoun**	**146.74**	**8**	P	**PKPdf**	**14 44 38.0**	**+0.7**
	baz=350						
X52A	**Dahlonega**	**146.83**	**7**	P	**PKPbc**	**14 44 38.7**	**-0.6**
	baz=352						
Y48A	**Jasper**	**146.98**	**12**	P	**PKPbc**	**14 44 38.6**	**-1.1**
	baz=346						
X53A	**Estanollee**	**147.00**	**6**	P	**PKPbc**	**14 44 38.8**	**-1.0**
	baz=353						
X54A	**Belton**	**147.03**	**4**	P	**PKPbc**	**14 44 39.2**	**-0.6**
	baz=354						
X60A	**Albert Glenn T**	**147.09**	**358**	P	**PKPbc**	**14 44 39.4**	**-0.6**
	baz=2.6						
X55A	**Gracelyn & Ava**	**147.16**	**3**	P	**PKPbc**	**14 44 39.1**	**-1.0**
	baz=356						
X56A	**White Oak**	**147.17**	**2**	P	**PKPdf**	**14 44 38.9**	**+1.0**
	baz=357						
Y49A	**Blount Mountai**	**147.18**	**11**	*e*PKPbc	**PKPbc**	**14 44 39.8**	**-0.5**
Y49A	**Blount Mountai**	**147.18**	**11**	P	**PKPbc**	**14 44 39.3**	**-1.0**
	baz=347						
Y50A	**Piedmont**	**147.27**	**10**	P	**PKPbc**	**14 44 39.4**	**-1.1**
	baz=348						
Y51A	**Rockmart**	**147.37**	**9**	P	**PKPbc**	**14 44 39.6**	**-1.2**
	baz=350						
Y52A	**Lilburn**	**147.54**	**7**	P	**PKPbc**	**14 44 40.9**	**-0.4**
	baz=351						
Y53A	**Monroe**	**147.61**	**6**	P	**PKPbc**	**14 44 40.3**	**-1.1**
	baz=352						
Y55A	**Saluda**	**147.68**	**4**	P	**PKPbc**	**14 44 40.6**	**-1.0**
	baz=355						
Y54A	**Tignall**	**147.69**	**5**	P	**PKPbc**	**14 44 40.5**	**-1.1**
	baz=354						
Z49A	**Columbiana**	**147.81**	**11**	P	**PKPbc**	**14 44 40.5**	**-1.5**
	baz=347						
Z50A	**Ashland**	**147.86**	**10**	P	**PKPbc**	**14 44 41.3**	**-0.9**
	baz=348						
LRAL	**Lakeview Retre**	**147.87**	**12**	P	**PKPbc**	**14 44 41.4**	**-0.7**
	baz=346						
GOGA	**Godfrey**	**148.06**	**6**	P	**PKPbc**	**14 44 41.9**	**-0.8**
	baz=352						
Z52A	**Williamson**	**148.16**	**8**	P	**PKPbc**	**14 44 42.6**	**-0.4**
	baz=350						
Z53A	**Monticello**	**148.18**	**7**	P	**PKPbc**	**14 44 42.8**	**-0.2**
	baz=352						
Z54A	**Sparta**	**148.29**	**5**	P	**PKPbc**	**14 44 42.9**	**-0.4**
	baz=354						
Z57A	**Bowman**	**148.37**	**2**	P	**PKPbc**	**14 44 43.3**	**-0.2**
	baz=358						
150A	**Eclectic**	**148.47**	**11**	P	**PKPbc**	**14 44 43.4**	**-0.4**
	baz=347						
LCO	**Las Campanas**	**148.50**	**195**	*e*PKPdf	**PKPdf**	**14 44 42.3**	**+1.6**
LCO	**Las Campanas**	**148.50**	**195**	*e*PKIKP	**PKPdf**	**14 44 42.3**	**+1.6**
152A	**Waverly Hall**	**148.63**	**9**	P	**PKPbc**	**14 44 43.8**	**-0.4**
	baz=350						
151A	**Opelika**	**148.67**	**10**	P	**PKPbc**	**14 44 44.0**	**-0.3**
	baz=349						
155A	**Kite**	**148.94**	**5**	P	**PKPbc**	**14 44 44.4**	**-0.5**
	baz=354						
158A	**Hollywood**	**148.94**	**1**	P	**PKPbc**	**14 44 44.0**	**-1.0**
	baz=358						
252A	**Lumpkin**	**149.28**	**9**	P	**PKPbc**	**14 44 45.9**	**0.0**
	baz=350						
LNIG	**Linares**	**149.78**	**38**	*e*PKPbc	**PKPbc**	**14 44 46.3**	**-1.1**

*IDC **12** 14:31:15.9±5.5, 17°.89S×177°.89W, h435km±61km, mb3.5/5, mb1 3.7/6, mb1mx3.3/24, mbtmp4.3/6, Error ellipse: s-maj=37.9km s-min=24.1km az=168.0*
*ISCJB **12** 14:31:16.4±0.8, 18°.0S±0°.2×178°.0W±0°.1, h450km, Error ellipse: s-maj=26.5km s-min=17.2km az=156.5*

ISC 12 14:31:17.2±0.9, 18°.0S±0°.2×177°.9W±0°.2, h450km, n10, σ0°79/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.24**	**252**	P	**P**	**14 34 30.4**	**-0.6**
	0.2nm,0.3s,baz=86,slow=15,SNR=2.6						
URZ	**Urewera**	**20.69**	**191**	P	**P**	**14 35 24.0**	**-0.7**
	6.1nm,0.7s,baz=268,slow=2.9,SNR=5.6						
STKA	**Stephens Creek**	**39.00**	**241**	P	**P**	**14 38 04.9**	**+1.3**
	4.4nm,0.5s,baz=75,slow=7.9,SNR=10						
WRA	**Warramunga Arr**	**45.06**	**260**	P	**P**	**14 38 51.2**	**-0.6**
	132nm,0.3s,baz=88,slow=8.3,SNR=1.1						
ASAR	**Alice Springs**	**45.21**	**254**	P	**P**	**14 38 53.4**	**+0.4**
	30nm,0.6s,baz=88,slow=8.3,SNR=345						
ASAR				PcP	**PcP**	**14 40 23.2**	**-0.9**
	0.4nm,0.6s,baz=96,slow=4.8,SNR=3.0						
NVAR	**Mina Array Bea**	**79.15**	**44**	P	**P**	**14 42 33.9**	**-0.6**
	0.4nm,0.6s,baz=234,slow=7.4,SNR=3.9						
TXAR	**Lajitas Array**	**85.64**	**57**	P	**P**	**14 43 08.4**	**+0.8**
	0.7nm,0.8s,baz=206,slow=5.4,SNR=5.9						
VNA3	**Neumayer Olymp**	**90.67**	**176**	P	**P**	**14 43 30.3**	**0.0**
VNA2	**Neumayer--Watz**	**91.11**	**177**	P	**P**	**14 43 32.6**	**+0.2**
	baz=186,slow=4.0						
VNA1	**Neumayer--Stat**	**91.33**	**177**	P	**P**	**14 43 33.4**	**0.0**

WEL 12 14:51:18.6±1.4, 35°S±25°×177°W±2°.4, h197km±32km, M3.9/9, MLv3.9/9, Error ellipse: s-maj=0.0km s-min=0.0km az=137.5, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.29**	**215**	P	Pn	14 52 11.5	+0.1
WMGZ				S	Sn	14 52 53.1	+0.2
PKGZ	**Pakihiroa**	**3.51**	**218**	P	Pn	14 52 13.8	-0.4
PKGZ				S	Sn	14 52 56.8	-1.0
HAZ	**Te Kaha**	**3.56**	**222**	P	Pn	14 52 14.6	-0.2
HAZ				S	Sn	14 53 00.7	+1.8
PUZ	**Puketiti**	**3.56**	**214**	P	Pn	14 52 13.6	-1.2
PUZ				S	Sn	14 52 58.1	-0.9
RUGZ	**Raukumara Rang**	**3.77**	**221**	P	Pn	14 52 17.5	0.0
RUGZ				S	Sn	14 53 04.9	+1.1
TWGZ	**Tauwhareparae**	**3.78**	**216**	P	Pn	14 52 17.8	+0.3
TWGZ				S	Sn	14 53 04.8	+1.0
CNGZ	**Carnagh Statio**	**3.93**	**211**	P	Pn	14 52 19.3	0.0
CNGZ				S	Sn	14 53 08.5	+1.5
MWZ	**Matawai**	**4.13**	**219**	P	Pn	14 52 21.3	-0.5
MWZ				S	Sn	14 53 11.7	+0.1
URZ	**Urewera**	**4.30**	**223**	P	Pn	14 52 23.6	-0.2
URZ				S	Sn	14 53 13.1	-2.2
OPRZ	**Ohinepanea**	**4.36**	**231**	P	Pn	14 52 25.1	+0.5
MUGZ	**Murupara**	**4.64**	**223**	P	Pn	14 52 28.0	-0.3
MUGZ				S	Sn	14 53 24.3	+1.2
RAHZ	**Arahi**	**4.79**	**217**	P	Pn	14 52 31.4	+1.2
MTHZ	**Maungataniwha**	**4.87**	**220**	P	Pn	14 52 32.0	+0.8
MRZ	**Mangatainoka R**	**6.88**	**215**	P	Pn	14 52 56.5	-0.7

UCR 12 14:58:23.0±2.0, 9°.79N×83°.36W, h6km±8km, MD4.0, ML4.5, 2C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVTR	**Volcan Turrial**	**0.45**	**300**	*i* P	Pg	14 58 32.2	+0.3
CVTR				*e*S	Sg	14 58 39.0	+1.2
DRK0	**Durika**	**0.54**	**167**	*i* P	Pb	14 58 34.2	-0.7
DRK0				*i* S	Sg	14 58 41.7	+1.3
EDLM	**Las Mercedes**	**0.56**	**204**	*i* P	Pg	14 58 34.0	+0.2
EDLM				*e*S	Sb	14 58 42.5	-0.9
EDBA	**Buenos Aires**	**0.63**	**172**	*e*P	Pg	14 58 34.9	-0.2
EDDO	**Dominical**	**0.73**	**223**	*i* P	Pb	14 58 37.6	-0.5
HDC	**Heredia**	**0.77**	**286**	*i* S	Sb	14 58 49.2	-0.5
BRU2	**Volcan**	**1.19**	**146**	*e*P	Pg	14 58 45.0	-0.9
BRU2				*i* S	Sg	14 59 01.5	+0.1
TBS2		**1.21**	**145**	*e*P	Pg	14 58 44.9	-1.4
TBS2				*e*S	Sg	14 59 00.6	-1.4
ARE1	**Arenal 1**	**1.49**	**297**	*e*P	Pn	14 58 48.8	-1.6
ARE1				*e*S	Sn	14 59 10.3	+0.1
DVD	**David**	**1.62**	**146**	*i* P	Pg	14 58 58.1	+4.1
DVD				*i* S	Sb	14 59 14.4	+0.4
JTS	**Las Juntas de**	**1.64**	**288**	*e*P	Pn	14 58 52.1	-0.3
JTS				AMP		14 58 53.3	
	comp=Z,7μm,0.4s						
JTS				*i* S	Sn	14 59 14.1	+0.2

IDC 12 14:59:18.0±2.0, 6°.89S×128°.75E, h0km, mb3.7/1, mb1 3.6/2, mb1mx3.3/20, mbtmp3.5/2, ML5.6/1, Error ellipse: s-maj=121.9km s-min=31.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.07**	**158**	Pn	Pn	15 02 38.0	-0.7
	28nm,0.3s,baz=336,slow=13,SNR=1.4						
WRA				Sn	Sn	15 05 01.1	-15
	24nm,0.3s,baz=343,slow=20,SNR=2.0						
ASAR	**Alice Springs**	**17.40**	**164**	P	Pn	15 03 22.9	+0.4
	0.1nm,0.3s,baz=342,slow=11,SNR=17						
ASAR				S	Sn	15 06 23.5	-13
	0.1nm,0.3s,baz=354,slow=27,SNR=4.1						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	15 10 15.7	0.0
	0.4nm,0.5s,baz=117,slow=8.2,SNR=7.3						

IDC 12 15:08:18.2±2.5, 5°.85S×130°.24E, h0km, mb3.4/1, mb1 3.3/2, mb1mx3.1/24, mbtmp3.2/2, ML5.6/1, Error ellipse: s-maj=160.9km s-min=32.0km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.56**	**164**	Pn	Pn	15 11 46.4	+0.7
	29nm,0.3s,baz=348,slow=13,SNR=2.1						
WRA				Sn	Sn	15 14 13.4	-15
	23nm,0.3s,baz=343,slow=23,SNR=1.8						
ASAR	**Alice Springs**	**18.06**	**169**	P	Pn	15 12 30.1	-0.7
	0.1nm,0.3s,baz=350,slow=10,SNR=6.9						
MKAR	**Makanchi Array**	**67.40**	**326**	P	P	15 19 15.6	+0.1
	0.2nm,0.4s,baz=120,slow=5.8,SNR=4.5						

MEX 12 15:21:51.1±0.3, 16°.75N×95°.72W, h129km±15km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.02**	**289**	*i* P	Pn	15 22 13.0	-1.3
VHO				*i* S	Sn	15 22 30.1	-1.8
HUIG	**Huatulco**	**1.04**	**201**	*e*P	Pn	15 22 12.9	-1.4
PCIG		**2.62**	**113**	*i* P	Pn	15 22 31.5	-1.3
PCIG				*i* S	Sn	15 23 02.2	-2.6

*ISCJB **12** 15:35:35.8±1.2, 33°.86N±0°.07×35°.89E±0°.07, h15km±10km, Error ellipse: s-maj=13.1km s-min=6.7km az=37.4*
*NSSC **12** 15:35:35.5±1.5, 33°.93N×36°.07E, h22km±58km, ML1.2*
*GRAL **12** 15:35:38.3±0.3, 33°.80N×35°.77E, h13km±3km, MD2.8*

ISC 12 15:35:34.4±2.1, 33°.83N±0°.08×35°.94E±0°.06, h15km±13km, n7, σ0°85/13, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.25**	**287**	*e*P	**Pb**	**15 35 41.7**	**+1.1**
BHL				*e*S	**Sb**	**15 35 44.3**	**-0.5**
DQRL	**Deir Qamar**	**0.33**	**247**	*e*P	**Pb**	**15 35 42.4**	**+0.4**
DQRL				*e*S	**Sg**	**15 35 45.5**	**-0.6**
RCY	**Rachaya**	**0.35**	**194**	*e*P	**Pn**	**15 35 44.3**	**-0.7**
RCY				*e*S	**Sb**	**15 35 48.7**	**+1.0**
QASN	**Qassioun**	**0.41**	**137**	*e*P	**Pn**	**15 35 45.4**	**-0.4**
QASN				*e*S	**Sb**	**15 35 50.5**	**+1.0**
QASN				AML	AML	15 35 56.9	
	comp=E,24nm,0.3s						
QASN				AML	AML	15 35 58.5	
	comp=N,54nm,0.5s						
BRBR	**Barbar**	**0.42**	**178**	*e*P	**Pn**	**15 35 46.2**	**+0.2**
BRBR				*e*S	**Sn**	**15 35 53.5**	**-0.1**
BRBR				AML	AML	15 35 55.9	
	comp=N,20nm,0.3s						
BRBR				AML	AML	15 35 58.0	
	comp=E,24nm,0.5s						
SHBL	**Chebaa**	**0.51**	**198**	*e*P	**Pn**	**15 35 46.7**	**-0.6**
TOTH	**TOTAH**	**0.62**	**139**	*e*P	**Pb**	**15 35 47.4**	**+0.4**
TOTH				*e*S	**Sn**	**15 35 57.3**	**-1.2**
TOTH				AML	AML	15 36 06.2	
	comp=E,6.0nm,0.3s						
TOTH				AML	AML	15 36 15.0	
	comp=N,5.1nm,0.4s						

*ISCJB **12** 15:39:54.1±1.2, 22°.72N±0°.05×12°.2W±0°.1, h10km, mb3.8/6, Error ellipse: s-maj=19.6km s-min=7.1km az=172.0*
*IDC **12** 15:39:54.4±1.9, 22°.67N×12°.10W, h0km, mb3.9/6, mb1 3.9/10, mb1mx3.7/41, mbtmp3.8/10, ML4.1/3, Error ellipse: s-maj=48.0km s-min=17.2km az=83.0*

ISC 12 15:39:54.8±1.4, 22°.64N±0°.08×12°.3W±0°.2, h10km, n13, σ1°11/15, mb3.9/6, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**12.19**	**32**	Pn	**Pn**	**15 42 48.8**	**+0.2**
	0.1nm,0.3s,baz=221,slow=9.3,SNR=1.9						
MDT				Sn	**Sn**	**15 45 05.7**	**+1.1**
	0.1nm,0.3s,baz=81,slow=13,SNR=2.3						
MDT				Lg	Lg	15 46 10.9	
	0.3nm,0.3s,baz=317,slow=16,SNR=4.5						
II1CV	**MAIO ISLAND IN**	**12.67**	**236**	*i*		16 57 30.0	
	baz=51,slow=305,SNR=1.5						
TORD	**Torodi Ar. Bea**	**16.29**	**123**	Pn	**Pn**	**15 43 43.4**	**-0.4**
	0.2nm,0.3s,baz=307,slow=12,SNR=14						
TORD				Sn	**Sn**	**15 46 43.3**	**-1.4**
	0.1nm,0.3s,baz=306,slow=25,SNR=3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUY	**Buyukada**	**0.26**	**92**	PG	Pg	15 58 53.3	+0.7
BUY				SG	Sg	15 58 57.2	+1.1
ISK	**Istanbul-Kandi**	**0.30**	**47**	PG	Pg	15 58 54.0	+0.7
KAVV	**Kandilli-Istan**	**0.30**	**47**	PG	Pg	15 58 54.1	+0.8
KAVV				SG	Sg	15 58 58.5	+1.3
ARMT	**Armutlu**	**0.30**	**167**	PG	Pg	15 58 54.3	+0.9
ARMT				SG	Sg	15 58 58.5	+1.1
BGKT	**Bogazkoy**	**0.32**	**0**	PG	Pg	15 58 54.3	+0.6
BGKT				SG	Sg	15 58 59.2	+1.3
CTKS	**Kestanelik-??a**	**0.42**	**332**	PG	Pg	15 58 56.4	+0.7
CTKS				SG	Sg	15 59 02.3	+1.0
KLYT	**Kilyos**	**0.44**	**28**	PG	Pg	15 58 56.8	+0.8
KLYT				SG	Sg	15 59 03.0	+1.2
KCTX	**Karacabey (Bur**	**0.67**	**208**	PG	Pb	15 59 01.1	-0.6
HRT	**Hereke**	**0.68**	**93**	PG	Pg	15 59 00.9	+0.3
SILT	**Sile**	**0.72**	**66**	PG	Pg	15 59 01.8	+0.5

UCR 12 16:08:30.7±1.5, 11°.54N×86°.10W, h119km, MD3.9, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGAN	**Managua**	**0.62**	**347**	*eP*	Pn	16 08 49.7	+0.4
MGAN				*eS*	Sn	16 09 04.7	+1.3
COPN	**Copaltepe**	**0.80**	**323**	*eP*	Pn	16 08 50.8	0.0
MOMN	**Momotombo**	**0.97**	**334**	*eP*	Pn	16 08 52.4	0.0
GBS3	**Finca Las Img**	**0.98**	**140**	*iP*	Pn	16 08 52.9	+0.4
GBS3				*iS*	Sn	16 09 08.6	-0.4
BUEV	**Buena Vista**	**1.00**	**137**	*iP*	Pn	16 08 53.2	+0.5
ACON	**Acoyapa**	**1.00**	**65**	*eP*	Pn	16 08 53.1	+0.5
ACON				*eS*	Sn	16 09 09.5	+0.3
LAPC	**Finca la Perla**	**1.01**	**139**	*iP*	Pn	16 08 53.0	+0.2
LAPC				*iS*	Sn	16 09 09.1	-0.3
NY14	**Universidad de**	**1.04**	**148**	*iP*	Pn	16 08 54.2	+1.2
CNGN	**Cerro Negro**	**1.12**	**329**	*eP*	Pn	16 08 53.1	-0.8
CNGN				*eS*	Sn	16 09 12.0	+0.5
TEL3	**Telica 3**	**1.26**	**325**	*eP*	Pn	16 08 55.7	+0.3
CUI	**Cuipilapa**	**1.27**	**133**	*iP*	Pn	16 08 56.1	+0.6
MATN	**Matagalpa**	**1.40**	**7**	*eP*	Pn	16 08 57.4	+0.5
MATN				*eS*	Sn	16 09 17.4	+0.5
CRIN	**San Cristobal**	**1.48**	**321**	*eS*	Sn	16 09 19.3	+0.7
ESTN	**Estel**	**1.58**	**350**	*eP*	Pn	16 08 59.8	+0.7
ESTN				*eS*	Sn	16 09 22.1	+1.4
JTS	**Las Juntas de**	**1.68**	**138**	*eP*	Pn	16 09 00.2	0.0
ESPN	**Las Esperanzas**	**1.88**	**69**	*eP*	Pn	16 09 03.1	+0.5
ESPN				*eS*	Sn	16 09 27.4	+0.4
CSGN	**Cosiguina Volc**	**2.02**	**315**	*eP*	Pn	16 09 05.5	+1.1
CSGN				*eS*	Sn	16 09 31.1	+0.9

*ISCJB **12** 16:20:08.8±0.8, 19°.51N±0°.06×146°.3E±0°.2, h100km, mb3.7/10, Error ellipse: s-maj=23.1km s-min=8.0km az=0.4*
*IDC **12** 16:20:08.4±3.9, 19°.60N×146°.52E, h81km±36km, mb3.5/9, mb1 3.7/12, mb1mx3.5/44, mbtmp3.9/12, MS2.7/2, Ms1 2.7/2, ms1mx2.3/38, Error ellipse: s-maj=26.8km s-min=15.6km az=78.0*

ISC 12 16:20:10.2±0.9, 19°.53N±0°.08×146°.4E±0°.2, h100km, n21, σ1§36/14, mb3.7/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.08**	**194**	P	**Pn**	**16 21 37.9**	**+0.2**
	12nm,0.3s,baz=23,slow=18,SNR=13						
GUMO				S	**Sn**	**16 22 43.8**	**-2.1**
	5.3nm,0.3s,baz=148,slow=19,SNR=2.5						
GUMO				LR	LR	16 23 48.0	
	comp=Z,40nm,19.4s,baz=105,slow=36						
MJAR	**Matsushiro Arr**	**18.41**	**339**	P	**Pn**	**16 24 16.7**	**-2.1**
	0.1nm,0.3s,baz=164,slow=9.1,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**19.22**	**90**	T	T	16 45 34.2	
	baz=275,slow=74,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**19.23**	**90**	T	T	16 45 39.6	
	baz=275,slow=74,SNR=8.9						
H11S2	**WAKE ISLAND Hy**	**19.23**	**90**	T	T	16 45 41.4	
	baz=275,slow=74,SNR=9.5						
H11N1	**WAKE ISLAND Hy**	**19.31**	**86**	T	T	16 45 45.2	
	baz=273						
H11N2	**WAKE ISLAND Hy**	**19.32**	**86**	T	T	16 45 53.1	
	baz=273						
H11N3	**WAKE ISLAND Hy**	**19.33**	**86**	T	T	16 45 50.8	
	baz=273						
JNU	**Nakatsue**	**19.38**	**317**	P	**Pn**	**16 24 28.8**	**-1.5**
	0.3nm,0.3s,baz=130,slow=6.3,SNR=4.4						
JAY	**Jayapura**	**22.61**	**195**	LR	LR	16 32 58.1	
	comp=Z,38nm,19.9s,baz=118,slow=34						
KSRS	**Korea Array**	**24.06**	**322**	P	**P**	**16 25 15.5**	**-0.6**
	2.1nm,0.7s,baz=150,slow=8.0,SNR=13						
KAPI	**Kappang**	**35.80**	**230**	LR	LR	16 41 10.6	
	comp=Z,593nm,22.0s,baz=341,slow=35						
WRA	**Warramunga Arr**	**40.97**	**197**	P	**P**	**16 27 43.6**	**+0.2**
	1.3nm,0.3s,baz=20,slow=9.9,SNR=25						
SONM	**Songino Array**	**42.92**	**321**	P	**P**	**16 27 58.2**	**-1.0**
	0.5nm,0.4s,baz=99,slow=4.7,SNR=2.7						
ASAR	**Alice Springs**	**44.63**	**196**	P	**P**	**16 28 13.3**	**+0.4**
	0.4nm,0.5s,baz=21,slow=12,SNR=16						
CMAR	**Chiang Mai Arr**	**44.77**	**277**	P	**P**	**16 28 16.6**	**+2.4**
	0.7nm,0.5s,baz=82,slow=5.1,SNR=8.7						
ZALV	**Zalesovo Beam**	**57.77**	**322**	P	**P**	**16 29 50.6**	**-0.1**
	2.4nm,0.5s,baz=113,slow=8.1,SNR=11						
MKAR	**Makanchi Array**	**58.37**	**313**	P	**P**	**16 29 55.7**	**+0.6**
	1.3nm,0.7s,baz=94,slow=8.2,SNR=14						
YKA	**Yellowknife Ar**	**76.95**	**28**	P	**P**	**16 31 51.3**	**-0.2**
	0.2nm,0.5s,baz=288,slow=5.1,SNR=3.2						
ARCES	**ARCESS Array B**	**81.91**	**342**	P	**P**	**16 32 19.6**	**+1.2**
	0.8nm,0.6s,baz=56,slow=4.8,SNR=3.4						
NVAR	**Mina Array Bea**	**82.11**	**52**	P	**P**	**16 32 20.4**	**0.0**
	0.5nm,0.6s,baz=265,slow=7.2,SNR=2.3						

MEX 12 16:47:51.8±0.6, 15°.99N×98°.16W, h5km±14km, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.61**	**346**	*eP*	Pn	16 48 18.0	-3.1
TLIG				*iS*	Sn	16 48 37.5	-4.9
VHO	**Vista Hermosa**	**1.74**	**52**	*iP*	Pn	16 48 19.7	-3.2
VHO				*iS*	Sn	16 48 39.9	-5.8
ACP2	**Acapulco**	**1.88**	**298**	*iP*	Pb	16 48 26.8	+0.2
ACP2				*eS*	Sn	16 48 45.1	-3.6
CAIG	**El Cayaco**	**2.28**	**298**	*eP*	Pn	16 48 26.0	-4.1
CAIG				*eS*	Sn	16 48 53.0	-5.6
ARIG	**Puente Sto Nin**	**3.09**	**318**	*eP*	Pn	16 48 40.8	-0.6
ARIG				*eS*	Sb	16 49 22.7	-2.8

*KRNET **12** 17:07:32.7±0.1, 41°.03N×72°.38E, h12km, mb2.2*
*NNC **12** 17:07:37.6±3.8, 41°.26N×72°.46E, h0km, mb2.6, mpv2.5, Error ellipse: s-maj=32.9km s-min=13.2km az=165.0*
*SOME **12** 17:07:37.2, 41°.15N×72°.48E, h20km*

ISC 12 17:07:33.4±1.6, 41°.03N±0°.06×72°.43E±0°.03, h6km±12km, n17, σ1§83/30, 11C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.51**	**54**	⇓*iP*	**Pg**	**17 07 43.0**	**-0.3**
	baz=57						
ARSB				⇓*iS*	**Sg**	**17 07 50.4**	**+0.4**
	baz=57						
ARK	**Arkit**	**0.85**	**336**	⇑*iP*	**Pg**	**17 07 48.1**	**-1.6**
	baz=38						
ARK				⇑*iS*	**Sg**	**17 07 59.1**	**-1.6**
	baz=38						
BTK	**Batken**	**1.56**	**232**	⇓*iP*	**Pn**	**17 08 01.5**	**-0.3**
	baz=31						
BTK				⇓*iS*	**Sn**	**17 08 22.2**	**-0.2**
	baz=31						
MRKS	**Merke**	**1.82**	**19**	P	**Pb**	**17 08 08.2**	**+1.1**
	1.8nm,0.3s						
MRKS				S	**Sb**	**17 08 30.1**	**0.0**
	7.1nm,0.4s						
MRKS	**Merke**	**1.82**	**19**	*eP*	**Pb**	**17 08 08.2**	**+1.1**
	1.8nm,0.3s						
MRKS				*eS*	**Sb**	**17 08 30.1**	**0.0**
	7.1nm,0.4s						
EKS2	**Erkin-Say**	**1.92**	**31**	⇑*iP*	**Pn**	**17 08 08.5**	**+1.8**
	baz=32						
EKS2				⇑*iS*	**Sg**	**17 08 34.9**	**-0.2**
	baz=32						
UCH	**Uchtor**	**1.97**	**52**	⇑*iP*	**Pn**	**17 08 10.1**	**+2.4**
	baz=53						
UCH				⇑*iS*	**Sg**	**17 08 37.0**	**+0.3**
	baz=53						
IUG	**Iuzhnay**	**2.12**	**303**	Pg	**Pb**	**17 08 13.6**	**+1.4**
	1.0nm,0.2s						
IUG				Lg	Lg	17 08 39.2	
	6.3nm,0.3s						
IUG	**Iuzhnay**	**2.12**	**303**	*eP*	**Pb**	**17 08 13.6**	**+1.4**
	1.0nm,0.2s						
IUG				*eS*	**Sb**	**17 08 39.2**	**+0.4**
	6.3nm,0.3s						
AAK	**Ala-Archa**	**2.23**	**43**	⇓Pg	**Pn**	**17 08 13.8**	**+2.8**
	1.9nm,0.6s						
AAK				⇓Lg	Lg	17 08 40.5	
	2.4nm,0.5s						
KZA	**Kyzart**	**2.36**	**63**	⇑*iP*	**Pn**	**17 08 16.0**	**+2.9**
	baz=63						
KZA				⇑*iS*	**Sb**	**17 08 46.9**	**+0.7**
	baz=63						
KBK	**Karagaybulak**	**2.49**	**48**	⇑*eP*	**Pn**	**17 08 16.7**	**+2.1**
	baz=49						
KBK				⇑*iS*	**Sb**	**17 08 48.8**	**-0.7**
	baz=49						
KK31	**Karatay Array**	**2.52**	**326**	⇑Pn	**Pn**	**17 08 17.8**	**+2.9**
	0.4nm,0.4s,baz=141,slow=14						
KK31				⇓Lg	Lg	17 08 52.5	
	0.6nm,0.3s,baz=135,slow=28,SNR=5.3						
BRLS	**Borolday**	**2.78**	**317**	Pg	**Pb**	**17 08 24.1**	**+0.5**
	0.5nm,0.2s						
BRLS				Lg	Lg	17 08 57.0	
	1.7nm,0.4s						
BRLS	**Borolday**	**2.78**	**317**	*eP*	**Pb**	**17 08 24.1**	**+0.5**
	0.5nm,0.2s						
BRLS				*eS*	**Sb**	**17 08 57.0**	**-0.9**
	1.7nm,0.4s						
KST	**Kastek**	**3.31**	**51**	*eP*	**Pn**	**17 08 27.9**	**+2.0**
	2.5nm,0.2s						
KST				*eS*	**Sn**	**17 09 00.8**	**-4.9**
	0.9nm,0.1s						
DGS	**Degeres**	**3.33**	**47**	*eP*	**Pb**	**17 08 32.0**	**-0.8**
DGS				*eS*	**Sb**	**17 09 11.0**	**-2.6**

*DSN **12** 17:23:49.9±3.3, 26°.75N×58°.10E, h10km, ML3.7/7, Error ellipse: s-maj=46.0km s-min=14.4km az=4.0*
*ISCJB **12** 17:23:52.3±0.9, 26°.65N±0°.04×57°.9E±0°.1, h10km, Error ellipse: s-maj=13.2km s-min=5.8km az=7.2*
*TEH **12** 17:23:54.9, 26°.58N×57°.52E, h27km, ML3.6*

ISC 12 17:23:54.7±1.2, 26°.60N±0°.04×57°.81E±0°.06, h10km, n30, σ1§60/30, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.96**	**182**	*ePg*	**Pn**	**17 24 15.0**	**+0.8**
NIAN	**Nian**	**1.29**	**318**	*ePg*	**Pn**	**17 24 17.6**	**-1.2**
NIAN				IAMB	IAmb	17 24 41.2	
	comp=Z,0.0nm,0.3s						
BANOM	**Banah**	**1.52**	**244**	*eP*	**Pn**	**17 24 21.0**	**-0.9**
	SNR=114						
SHME	**Shamm**	**1.60**	**250**	*eP*	**Pn**	**17 24 22.7**	**-0.3**
	SNR=25						
SHME				S	**Sb**	**17 24 47.1**	**+2.6**
SHME	**Shamm**	**1.60**	**250**	*ePn*	**Pn**	**17 24 22.6**	**-0.4**
GENO	**Geno**	**1.66**	**299**	*ePn*	**Pn**	**17 24 23.8**	**-0.3**
GENO				IAMB	IAmb	17 24 56.0	
	comp=Z,0.0nm,0.6s						
BNDS	**Bandar-Abbas**	**1.67**	**299**	*ePg*	Pn	17 24 15.6	-8.5
MDH	**Madha**	**1.88**	**227**	*eP*	**Pn**	**17 24 24.5**	**-2.4**
	SNR=18						
MDH	**Madha**	**1.88**	**227**	*ePn*	**Pn**	**17 24 24.3**	**-2.6**
MSFE	**Esma-Masafi**	**1.93**	**231**	*eP*	**Pn**	**17 24 25.7**	**-2.0**
	SNR=8.9						
MSFE	**Esma-Masafi**	**1.93**	**231**	*ePn*	**Pn**	**17 24 25.6**	**-2.0**
UOSS	**Minazif**	**2.19**	**222**	P	**Pn**	**17 24 29.6**	**-1.6**
UOSS	**Minazif**	**2.19**	**222**	*ePn*	**Pn**	**17 24 29.2**	**-2.0**
HATD	**Hatta, Dubai**	**2.33**	**221**	P	**Pn**	**17 24 32.4**	**-0.6**
HATD	**Hatta, Dubai**	**2.33**	**221**	*ePn*	**Pn**	**17 24 32.0**	**-1.1**
ASHO	**Ashiyiah**	**2.48**	**220**	P	**Pn**	**17 24 35.0**	**-0.2**
ASHO	**Ashiyiah**	**2.48**	**220**	*ePn*	**Pn**	**17 24 33.3**	**-1.9**
CHBR	**Chabahar**	**2.60**	**112**	*ePn*	**Pb**	**17 24 41.5**	**+0.1**
FAQ	**Al Faqa, Dubai**	**2.73**	**228**	P	**Pn**	**17 24 39.3**	**+0.8**
FAQ	**Al Faqa, Dubai**	**2.73**	**228**	*ePn*	**Pn**	**17 24 39.3**	**+0.8**
HOQ	**Hoqain**	**3.04**	**189**	*ePn*	**Pn**	**17 24 40.8**	**-2.1**
ALNE	**Al Ain**	**3.15**	**217**	*ePg*	**Pb**	**17 24 51.1**	**+0.4**
NGRK	**Negar Kerman**	**3.18**	**343**	*ePn*	**Pn**	**17 24 44.8**	**-0.3**
NGRK				IAMB	IAmb	17 25 36.4	
	comp=N,0.0nm,0.3s						
CHMN	**Cheshme madani**	**3.26**	**356**	*ePn*	**Pn**	**17 24 48.4**	**+2.3**
CHMN				IAMB	IAmb	17 25 47.9	
	comp=N,0.0nm,0.8s						
KHGB	**Koh Gabri**	**3.94**	**343**	*ePn*	**Pn**	**17 24 56.1**	**+0.7**
KHGB				IAMB	IAmb	17 25 09.7	
	comp=Z,0.0nm,0.8s						
IPAR	**Pars**	**5.30**	**309**	*ePn*	**Pn**	**17 25 12.8**	**-1.4**
BSRN	**Basiran**	**5.47**	**12**	*ePn*	**Pn**	**17 25 14.0**	**-2.3**
IKOO	**Kooshah**	**5.89**	**10**	*ePn*	**Pn**	**17 25 20.8**	**-1.5**
IKAZ	**Kazeroun**	**6.15**	**302**	*ePn*	**Pn**	**17 25 23.7**	**-2.2**
IRAM	**Ramesheh**	**7.03**	**319**	*ePn*	**Pn**	**17 25 37.0**	**-0.9**

GUC 12 17:55:06.5±0.7, 33°.56S×70°.33W, h112km±3km, ML3.7, 1C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSR	**Penalolen**	**0.19**	**297**	*eP*	Pn	17 55 22.4	+0.2
FSR				*iS*	Sn	17 55 33.5	-0.4
FCH	**Farellones**	**0.24**	**8**	*eP*	Pn	17 55 21.9	-0.9
FCH				*iS*	Sn	17 55 34.0	-0.8
FCH				IAML		17 55 36.9	
	comp=E,3μm,0.3s						
CLCH	**Cerro Calan**	**0.24**	**314**	*eP*	Pn	17 55 21.8	-0.6
CLCH				*iS*	Sn	17 55 33.2	-1.1
CLCH				IAML		17 55 34.7	
	comp=E,9μm,0.6s						
ANTU	**Antumapu**	**0.26**	**269**	*eP*	Pn	17 55 21.8	-0.5
ANTU				*iS*	Sn	17 55 33.3	-1.0
ANTU				IAML		17 55 34.1	
	comp=E,3μm,0.3s						
STL	**Santa Lucia**	**0.29**	**296**	*eP*	Pn	17 55 22.2	-0.3
STL				*iS*	Sn	17 55 33.8	-0.7
STL				IAML		17 55 35.0	
	comp=N,4μm,0.3s						
RCDM	**Rinconada Maip**	**0.41**	**280**	*eP*	Pn	17 55 22.8	-0.2
RCDM				*eS*	Sn	17 55 34.5	-0.9
PEL	**Peldehue**	**0.52**	**324**	*eP*	Pn	17 55 22.9	-0.8
PEL				*iS*	Sn	17 55 35.9	-0.8
PEL				IAML		17 55 37.2	
	comp=N,2μm,0.1s						
ROCH	**El Roble**	**0.82**	**316**	⇑*iP*	Pn	17 55 26.0	-0.4
ROCH				*eS*	Sn	17 55 41.0	-0.3
ROCH				IAML		17 55 43.5	
	comp=N,2μm,0.6s						
GO04	**Tololo Observa**	**3.41**	**353**	*eP*	Pn	17 55 58.2	+0.1

*ISCJB **12** 18:09:46.3±0.4, 37°.05N±0°.03×71°.24E±0°.05, h88km, mb3.8/11, Error ellipse: s-maj=6.1km s-min=3.6km az=161.0*
*IDC **12** 18:09:47.2±3.2, 36°.99N×71°.21E, h75km±26km, mb3.6/9, mb1 3.7/15, mb1mx3.4/53, mbtmp3.9/15, MS2.6/1, Ms1 2.6/1, ms1mx2.1/43, Error ellipse: s-maj=27.8km s-min=17.8km az=164.0*
*NNC **12** 18:09:48.5±2.4, 37°.57N×70°.79E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=23.2km s-min=11.2km az=151.0*
*SOME **12** 18:09:51.7, 38°.58N×72°.20E, h20km*

ISC 12 18:09:47.8±0.5, 37°.08N±0°.05×71°.15E±0°.05, h88km, n57, σ2§56/68, mb3.7/11, 10C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.31**	**169**	P	Pn	18 10 42.4	+4.9
CEP				S	**Sn**	**18 11 22.0**	**+6.1**
CHCP	**Chirah Chowk**	**3.82**	**153**	⇓P	Pn	18 10 49.3	+4.9
THW	**Thamme Wali**	**4.30**	**173**	P	**Pn**	**18 10 54.8**	**+3.9**
KSH	**Kashi**	**4.51**	**56**	Pn	**Pn**	**18 10 52.5**	**-1.3**
KSH				Sn	Sn	18 11 33.9	-11
KSH				smax	smax		
	comp=N,570nm,0.5s						
KSH				smax	smax		
	comp=E,600nm,0.7s						
IUG	**Iuzhnay**	**5.14**	**351**	*eP*	**Pn**	**18 11 03.8**	**+1.5**
	comp=E,8.5nm,0.3s						
IUG				*eS*	**Sn**	**18 11 59.7**	**-0.6**
	comp=E,111nm,0.5s						
AML	**Almayashu**	**5.41**	**20**	P	Pn	18 11 12.5	+6.1
	SNR=7.3						
UCH	**Uchtor**	**5.76**	**26**	P	**Pn**	**18 11 12.2**	**+1.1**
	SNR=13						
MRKS	**Merke**	**5.88**	**15**	*eP*	**Pn**	**18 11 13.6**	**+1.2**
	comp=E,33nm,0.4s						
MRKS				*eS*	**Sn**	**18 12 16.8**	**-1.6**
	comp=E,23nm,0.5s						
KZA	**Kyzart**	**5.91**	**31**	P	**Pn**	**18 11 14.1**	**+1.0**
	SNR=15						
EKS2	**Erkin-Say**	**5.93**	**19**	P	**Pn**	**18 11 15.0**	**+1.8**
	SNR=15						
BRLS	**Borolday**	**6.03**	**351**	*eP*	**Pn**	**18 11 12.2**	**-2.2**
	comp=E,0.4nm,0.1s						
BRLS				*eS*	Sn	18 12 14.5	-7.5
	comp=E,18nm,0.3s						
KK31	**Karatay Array**	**6.04**	**356**	⇑P	**Pn**	**18 11 13.5**	**-1.0**
	comp=E,6.8nm,0.3s,baz=297,slow=2.2,SNR=76						
KK31				⇑S	**Sn**	**18 12 18.6**	**-3.6**
	comp=E,18nm,0.6s						
AAK	**Ala-Archa**	**6.12**	**24**	P	**Pn**	**18 11 17.6**	**+2.0**
	comp=E,3.9nm,0.3s,baz=192,slow=8.8,SNR=19						
AAK				S	**Sn**	**18 12 23.4**	**-0.9**
	comp=E,2.2nm,0.3s,baz=143,slow=22,SNR=6.9						
AAK	**Ala-Archa**	**6.12**	**24**	P	**Pn**	**18 11 17.7**	**+2.0**
	SNR=13						
AAK	**Ala-Archa**	**6.12**	**24**	⇑P	**Pn**	**18 11 17.1**	**+1.4**
	comp=E,11nm,0.6s						
AAK				⇑S	**Sn**	**18 12 23.1**	**-1.2**
	comp=E,15nm,0.7s						
KBK	**Karagaybulak**	**6.29**	**26**	P	**Pn**	**18 11 19.9**	**+1.9**
	SNR=7.0						
DHRM	**DHARAMSHALA**	**6.42**	**137**	*eP*	**Pn**	**18 11 21.8**	**+1.9**
DHRM				*eS*	**Sn**	**18 12 30.0**	**-1.8**
DHRM				IAML		18 12 34.5	
	comp=N,616nm,0.2s						
DHRM				IAML		18 12 35.5	
	comp=E,664nm,0.4s						
CHMS	**Chumysh**	**6.53**	**24**	P	**Pn**	**18 11 22.6**	**+1.5**
	SNR=37						
USP	**Ospenovka**	**6.69**	**21**	P	**Pn**	**18 11 24.3**	**+0.9**
	SNR=9.2						
TKM2	**Tokmak 2**	**6.76**	**29**	P	**Pn**	**18 11 25.7**	**+1.2**
	SNR=25						
TKM2	**Tokmak 2**	**6.76**	**29**	⇑P	**Pn**	**18 11 25.4**	**+0.9**
	comp=E,14nm,0.5s						
TKM2				⇑S	**Sn**	**18 12 40.3**	**+0.3**
	comp=E,8.4nm,0.7s						
KST	**Kastek**	**7.01**	**30**	*eP*	**Pn**	**18 11 28.9**	**+1.1**
	comp=E,15nm,0.7s						
KST				*eS*	**Sn**	**18 12 43.9**	**-2.0**
	comp=E,15nm,1.1s						
DGS	**Degeres**	**7.10**	**28**	*eP*	**Pn**	**18 11 30.2**	**+1.1**
	comp=E,11nm,0.8s						
SMLA	**Simla**	**7.75**	**138**	*eP*	**Pn**	**18 11 40.0**	**+2.2**
SMLA				*eS*	**Sn**	**18 12 59.5**	**-4.5**
SMLA				IAML		18 13 04.6	
	comp=E,146nm,0.3s						
SMLA				IAML		18 13 04.6	
	comp=N,154nm,0.4s						
DDI	**Dehra Dun**	**8.86**	**138**	*eS*	**Sn**	**18 13 25.4**	**-5.7**
JOSI	**Joshimath**	**9.55**	**131**	*eS*	**Sn**	**18 13 45.9**	**-2.3**
JOSI				IAML		18 13 49.0	
	comp=E,112nm,0.2s						
JOSI				IAML		18 13 49.2	
	comp=N,131nm,0.7s						
GEYT	**Alibeck**	**10.39**	**279**	P	**Pn**	**18 12 14.7**	**+0.8**
	comp=N,0.6nm,0.3s,baz=136,slow=8.9,SNR=6.9						
GEYT				S	**Sn**	**18 14 04.1**	**-4.4**
	comp=N,0.6nm,0.3s,baz=113,slow=15,SNR=3.5						
GYA0B	**ALIBECK ARRAY**	**10.39**	**279**	⇑P	**Pn**	**18 12 13.6**	**-0.3**
GYA0B				⇓S	**Sn**	**18 14 06.3**	**-2.2**
MKAR	**Makanchi Array**	**12.75**	**37**	P	**Pn**	**18 12 45.7**	**0.0**
	comp=N,0.2nm,0.3s,baz=226,slow=15,SNR=10						
PYUN	**Piuthan**	**13.39**	**129**	*eP*	**Pn**	**18 12 52.1**	**-2.4**
	comp=N,16nm,0.3s						
DANN	**Dangsing**	**13.71**	**126**	*eP*	**Pn**	**18 12 57.0**	**-1.7**
	comp=N,8.9nm,0.3s						
KOLN	**Koldanda**	**14.01**	**128**	*eP*	**Pn**	**18 13 01.1**	**-1.4**
	comp=N,6.7nm,0.3s						
GKN	**Gorkha**	**14.52**	**125**	*eP*	**Pn**	**18 13 06.3**	**-2.7**
	comp=N,20nm,0.3s						
KURBB	**Kurchatov Arra**	**14.54**	**19**	P	**Pn**	**18 13 07.1**	**-1.8**
	comp=N,0.0nm,0.3s,baz=215,slow=12,SNR=4.4						
AB31	**Akbulak array**	**14.64**	**330**	⇑P	**Pn**	**18 13 08.9**	**-1.4**
	comp=N,0.9nm,0.4s,baz=149,slow=11,SNR=42						
AB31				S	**Sn**	**18 15 46.1**	**-5.3**
	comp=N,2.5nm,0.6s,baz=142,slow=26,SNR=10						
BHPL	**Bhopal**	**14.81**	**157**	*eP*	**Pn**	**18 13 09.5**	**-3.2**
BHPL				*eS*	**Sn**	**18 15 47.6**	**-8.3**
KKN	**Kakani**	**15.09**	**124**	*eP*	**Pn**	**18 13 13.8**	**-2.5**
PKIN	**Phulchoki**	**15.30**	**124**	*eP*	**Pn**	**18 13 17.1**	**-2.1**
	comp=N,10nm,0.5s						
PKI	**Pulchoki**	**15.32**	**124**	*eP*	**Pn**	**18 13 17.6**	**-1.8**
	comp=N,7.2nm,0.4s						
JIRN	**Jiri**	**15.78**	**122**	*eP*	**Pn**	**18 13 22.1**	**-3.2**
	comp=N,24nm,0.3s						
BVAR	**Borovoye Array**	**15.96**	**358**	P	**Pn**	**18 13 26.3**	**-0.6**
	comp=N,0.4nm,0.3s,baz=158,slow=12,SNR=11						
AKTO	**Aktyubinsk**	**16.35**	**329**	P	**Pn**	**18 13 31.4**	**-0.4**
	comp=N,0.2nm,0.3s,baz=133,slow=17,SNR=3.5						
AKTO				S	Sn	18 16 21.0	-12
	comp=N,0.1nm,0.3s,baz=24,slow=20,SNR=2.6						
AKTO	**Aktyubinsk**	**16.35**	**329**	⇑P	**P

ISC 12 18:22:02.6±0.5, 18°33S±0°.04×69°46W±0°.05, h131km±4km, h131km:pP-P, n119, σ1°25/143, mb4.2/17, 9C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	**0.81**	**189**	*e*Pn	**Pn**	**18 22 24.9**	**+0.6**
MNMC	**Minye Minye**	**0.81**	**189**	⇑*i*P	**Pn**	**18 22 25.5**	**+1.2**
MNMC				*e*S	**Sn**	**18 22 42.0**	**+1.3**
MNMCX	**Minye Minye**	**0.81**	**189**	*e*P	**Pn**	**18 22 25.6**	**+1.3**
MNMCX				*e*S	**Sn**	**18 22 41.8**	**+1.1**
PB12	**IPOC Station P**	**0.88**	**251**	*e*P	**Pn**	**18 22 24.8**	**+0.3**
PB12				*e*S	**Sn**	**18 22 41.2**	**0.0**
PB12	**IPOC Station P**	**0.88**	**251**	⇑*i*P	**Pn**	**18 22 24.8**	**+0.3**
PB12				*e*S	**Sn**	**18 22 41.3**	**0.0**
PB12				IAML		18 22 42.9	
	comp=E,7μm,0.5s						
GO01	**Chusmiza**	**1.36**	**170**	*e*Pn	**Pn**	**18 22 31.5**	**+1.8**
GO01	**Chusmiza**	**1.36**	**170**	⇓*i*P	**Pn**	**18 22 31.5**	**+1.8**
GO01				*e*S	**Sn**	**18 22 52.5**	**+2.2**
PSGC	**Pisagua**	**1.41**	**206**	⇑*i*P	**Pn**	**18 22 30.5**	**+0.6**
PSGC				*i* S	**Sn**	**18 22 50.7**	**0.0**
PSGC				IAML		18 22 52.4	
	comp=N,5μm,0.4s						
PSGCX	**Pisagua**	**1.41**	**206**	*e*P	**Pn**	**18 22 30.6**	**+0.7**
PSGCX				*e*S	**Sn**	**18 22 51.2**	**+0.5**
PB11	**IPOC Station P**	**1.44**	**188**	*e*Pn	**Pn**	**18 22 31.1**	**+0.8**
PB11	**IPOC Station P**	**1.44**	**188**	*e*P	**Pn**	**18 22 31.4**	**+1.1**
PB11	**IPOC Station P**	**1.44**	**188**	⇑*i*P	**Pn**	**18 22 31.4**	**+1.1**
PB11				*i* S	**Sn**	**18 22 52.3**	**+1.0**
PB11				IAML		18 22 53.8	
	comp=E,5μm,0.5s						
PB08	**IPOC Station P**	**1.83**	**171**	*e*P	**Pn**	**18 22 36.8**	**+1.9**
PB08	**IPOC Station P**	**1.83**	**171**	⇑*i*P	**Pn**	**18 22 36.7**	**+1.8**
PB08				*e*S	**Sn**	**18 23 01.2**	**+1.5**
LPAZ	**La Paz**	**2.39**	**32**	P	**Pn**	**18 22 44.0**	**+1.9**
	comp=E,98nm,0.3s,baz=229,slow=4.4,SNR=1477						
LPAZ				S	**Sn**	**18 23 12.7**	**+0.4**
	comp=E,17nm,0.3s,baz=302,slow=24,SNR=5.9						
LPAZ				LR	LR	18 23 31.8	
	comp=E,164nm,18.6s,baz=106,slow=38						
LPAZ	**La Paz**	**2.39**	**32**	*e*Pn	**Pn**	**18 22 43.8**	**+1.7**
LPAZ	**La Paz**	**2.39**	**32**	*e*P	**Pn**	**18 22 43.9**	**+1.9**
PB01	**IPOC Station P**	**2.70**	**181**	*e*P	**Pn**	**18 22 46.3**	**+0.9**
PB01	**IPOC Station P**	**2.70**	**181**	⇓*i*P	**Pn**	**18 22 46.4**	**+0.9**
PB01				*e*S	**Sn**	**18 23 17.9**	**-0.7**
PB01				IAML		18 23 19.3	
	comp=E,771nm,0.5s						
PB02	**IPOC Station P**	**3.00**	**188**	*e*P	**Pn**	**18 22 50.4**	**+0.9**
PB02	**IPOC Station P**	**3.00**	**188**	⇑*i*P	**Pn**	**18 22 50.3**	**+0.9**
PB02				*e*S	**Sn**	**18 23 24.0**	**-1.6**
PB07	**IPOC Station P**	**3.41**	**187**	*e*P	**Pn**	**18 22 55.5**	**+0.8**
PB07	**IPOC Station P**	**3.41**	**187**	⇑*i*P	**Pn**	**18 22 55.4**	**+0.7**
PB07				IAML		18 23 46.3	
	comp=E,465nm,0.3s						
PB09	**IPOC Station P**	**3.46**	**177**	*e*P	**Pn**	**18 22 57.2**	**+1.8**
PB09	**IPOC Station P**	**3.46**	**177**	*e*P	**Pn**	**18 22 56.6**	**+1.3**
PB03	**IPOC Station P**	**3.71**	**184**	*e*P	**Pn**	**18 22 59.3**	**+0.6**
PB03	**IPOC Station P**	**3.71**	**184**	⇑*i*P	**Pn**	**18 22 59.1**	**+0.4**
PB04	**IPOC Station P**	**4.04**	**189**	*e*Pn	**Pn**	**18 23 03.2**	**+0.2**
PB04	**IPOC Station P**	**4.04**	**189**	*e*P	**Pn**	**18 23 03.5**	**+0.4**
PB04	**IPOC Station P**	**4.04**	**189**	*e*P	**Pn**	**18 23 03.5**	**+0.4**
LVC	**Limon Verde**	**4.29**	**173**	P	**Pn**	**18 23 08.0**	**+1.5**
	comp=E,12nm,0.3s,baz=28,slow=10,SNR=160						
LVC				S	**Sn**	**18 23 55.4**	**-0.8**
	comp=E,19nm,0.3s,baz=337,slow=18,SNR=5.9						
LVC	**Limon Verde**	**4.29**	**173**	*e*P	**Pn**	**18 23 08.5**	**+1.9**
LVC				IAML		18 24 01.2	
	comp=Z,75nm,0.3s						
LVC	**Limon Verde**	**4.29**	**173**	*e*P	**Pn**	**18 23 07.9**	**+1.4**
LVC				*i* S	**Sn**	**18 23 55.5**	**-0.8**
LVC	**Limon Verde**	**4.29**	**173**	*e*P	**Pn**	**18 23 08.4**	**+1.9**
PB06	**IPOC Station P**	**4.36**	**181**	*e*P	**Pn**	**18 23 07.7**	**+0.4**
PB06	**IPOC Station P**	**4.36**	**181**	⇓*i*P	**Pn**	**18 23 07.7**	**+0.4**
PB06				*i* S	**Sn**	**18 23 57.4**	**-0.1**
PB05	**IPOC Station P**	**4.56**	**189**	*e*P	**Pn**	**18 23 09.8**	**0.0**
PB05	**IPOC Station P**	**4.56**	**189**	⇑*i*P	**Pn**	**18 23 09.8**	**0.0**
PB15	**IPOC Station P**	**4.86**	**180**	*e*P	**Pn**	**18 23 14.6**	**+0.6**
PB15	**IPOC Station P**	**4.86**	**180**	⇓*i*P	**Pn**	**18 23 14.4**	**+0.4**
PB15				*i* S	**Sn**	**18 24 09.6**	**+0.1**
PB10	**IPOC Station P**	**5.26**	**191**	*e*Pn	**Pn**	**18 23 18.2**	**-1.0**
PB10	**IPOC Station P**	**5.26**	**191**	*e*P	**Pn**	**18 23 18.2**	**-1.0**
YJA	**Yavi**	**5.32**	**137**	*e*P	**Pn**	**18 23 22.6**	**+2.1**
YJA				IAML		18 23 27.3	
	comp=Z,19nm,0.3s						
HJA	**Humahuaca**	**6.16**	**143**	*e*P	**Pn**	**18 23 33.5**	**+1.9**
HJA				IAML		18 23 35.5	
	comp=Z,60nm,0.5s						
GO02	**Mina Guanaco**	**6.80**	**181**	*e*Pn	**Pn**	**18 23 39.1**	**-1.1**
AZAP	**Zapla**	**7.15**	**146**	*e*P	**Pn**	**18 23 44.6**	**-0.2**
AZAP				IAML		18 25 07.9	
	comp=Z,24nm,0.4s						
SIV	**San Ignacio**	**8.34**	**75**	P	**Pn**	**18 23 58.5**	**-2.2**
	comp=Z,11nm,0.3s,baz=274,slow=9.8,SNR=137						
SIV				S	Sn	18 25 19.5	-14
	baz=260,slow=17,SNR=2.3						
NNA	**Nana**	**9.52**	**310**	P	**Pn**	**18 24 15.4**	**-1.1**
	comp=Z,9.8nm,0.3s,baz=143,slow=12,SNR=10						
NNA				S	Sn	18 25 51.4	-10
	comp=Z,1.3nm,0.3s,baz=186,slow=18,SNR=1.6						
NNA				LR	LR	18 29 02.4	
	comp=Z,44nm,20.1s,baz=176,slow=43						
NNA	**Nana**	**9.52**	**310**	*e*Pn	**Pn**	**18 24 15.3**	**-1.2**
LCO	**Las Campanas**	**10.70**	**186**	*e*P	**Pn**	**18 24 34.5**	**+2.0**
GO04	**Tololo Observa**	**11.86**	**186**	*e*Pn	**Pn**	**18 24 44.2**	**-3.5**
AQDB	**Aquidauana**	**13.15**	**102**	*e*P	**Pn**	**18 25 03.5**	**-1.0**
CFA	**Coronel Fontan**	**13.27**	**175**	P	**Pn**	**18 25 04.5**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=258,slow=14,SNR=7.8						
CFA				S	Sn	18 27 22.5	-10
	comp=Z,1.3nm,0.3s,baz=167,slow=16,SNR=5.9						
CPUP	**Villa Florida**	**13.75**	**128**	P	**Pn**	**18 25 09.3**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=304,slow=12,SNR=5.5						
CPUP	**Villa Florida**	**13.75**	**128**	*e*P	**Pn**	**18 25 10.8**	**-1.3**
CLDB	**Colider**	**15.15**	**63**	*e*P	**Pn**	**18 25 28.9**	**-1.0**
PTGB	**Pitanga**	**17.38**	**114**	*e*P	**Pn**	**18 25 57.2**	**+0.1**
ITRB	**Iturama**	**18.11**	**97**	*e*P	**P**	**18 26 04.6**	**+0.1**
ITAB	**Concordia**	**18.25**	**122**	*e*P	**Pn**	**18 26 07.0**	**-0.5**
FRTB	**Fartura**	**19.25**	**108**	*e*P	**P**	**18 26 16.3**	**-0.6**
PTGA	**Pitinga**	**19.82**	**29**	P	**P**	**18 26 21.8**	**-1.2**
	comp=Z,6.3nm,0.3s,baz=207,slow=15,SNR=50						
PTGA	**Pitinga**	**19.82**	**29**	*e*P	**P**	**18 26 21.9**	**-1.2**
BB19B	**Bebedouro**	**19.89**	**101**	*e*P	**P**	**18 26 23.1**	**-0.8**
CNLB	**Canela**	**20.20**	**126**	*e*P	**P**	**18 26 27.9**	**+0.8**
TIJ01	**Guaruva-PR**	**20.21**	**114**	*e*P	**P**	**18 26 28.6**	**+1.3**
OTAV	**Otavalo**	**20.46**	**333**	*e*P	**P**	**18 26 29.3**	**-1.1**
OGAUY	**Aigu**	**20.66**	**143**	*e*P	**P**	**18 26 32.5**	**+0.4**
BDFB	**Brasilia**	**20.68**	**86**	P	**P**	**18 26 31.2**	**-1.2**
	comp=Z,16nm,0.5s,baz=246,slow=11,SNR=18						
TRQA	**Tornquist**	**20.71**	**163**	*e*P	**P**	**18 26 33.8**	**+1.3**
	comp=Z,8.1nm,1.0s						
RCLB	**Rio Claro- Sao**	**20.95**	**105**	*e*P	**P**	**18 26 34.4**	**-0.8**
SPB	**Sao Paulo**	**21.21**	**108**	*e*P	**P**	**18 26 37.5**	**-0.5**
PMNB	**Patos De Minas**	**21.84**	**94**	*e*P	**P**	**18 26 43.5**	**-1.3**
PLCA	**Paso Flores**	**22.35**	**182**	P	**P**	**18 26 50.5**	**+0.7**
	comp=Z,6.4nm,0.9s,baz=19,slow=11,SNR=8.6						
PLCA	**Paso Flores**	**22.35**	**182**	*e*P	**P**	**18 26 51.2**	**+1.5**
PARB	**Paraibuna**	**22.82**	**107**	*e*P	**P**	**18 26 53.6**	**-0.9**
SMTB	**Santa Maria do**	**23.22**	**69**	*e*P	**P**	**18 26 57.5**	**-0.7**
BSCB	**Bom Sucesso**	**23.39**	**101**	*e*P	**P**	**18 26 59.7**	**-0.1**
ESAR	**Angra dos Reis**	**23.85**	**106**	*e*P	**P**	**18 27 03.8**	**-0.1**
MCI8	**Montes Claros**	**24.41**	**90**	*e*P	**P**	**18 27 08.6**	**-0.4**
MCI6	**Montes Claros**	**24.41**	**90**	*e*P	**P**	**18 27 09.6**	**+0.5**
MCI9	**Montes Claros**	**24.43**	**90**	*e*P	**P**	**18 27 09.7**	**+0.5**
BSFB	**Barra de Sao F**	**27.11**	**96**	*e*P	**P**	**18 27 34.1**	**+0.7**
RIB01	**Linhares ES**	**27.51**	**97**	*e*P	**P**	**18 27 37.4**	**+0.4**
MDP	**Montagnes des**	**28.58**	**37**	P	**P**	**18 27 45.6**	**-0.9**
	comp=Z,2.5nm,0.4s,baz=215,slow=9.6,SNR=4.2						
NBLI	**Livramento-PB**	**33.45**	**75**	*e*P	**P**	**18 28 29.4**	**-0.1**
LTX	**Lajitas**	**57.75**	**325**	*e*P	**P**	**18 31 40.9**	**+0.8**
LTX				epP	**pP**	**18 32 12.1**	**-0.4**
TXAR	**Lajitas Array**	**57.75**	**325**	P	**P**	**18 31 40.9**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=144,slow=9.6,SNR=3.2						
TXAR				pP	**pP**	**18 32 12.1**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=128,slow=5.8,SNR=2.9						
SDCO	**Great Sand Dun**	**65.27**	**329**	*e*P	**P**	**18 32 32.6**	**+2.0**
	comp=Z,2.5nm,1.0s						
LIC	**Lamto**	**68.04**	**75**	*e*P	**P**	**18 32 47.3**	**-1.1**
	comp=Z,69nm,1.5s						
TIC	**Toumodi**	**68.21**	**75**	*e*P	**P**	**18 32 48.8**	**-0.7**
KIC	**Kosan Boka**	**68.35**	**75**	*e*P	**P**	**18 32 49.8**	**-0.6**
	comp=Z,12nm,0.6s						
DBIC	**Dimbokro**	**68.37**	**75**	P	**P**	**18 32 49.6**	**-0.8**
	comp=Z,8.0nm,0.8s,baz=217,slow=3.4,SNR=11						
DBIC	**Dimbokro**	**68.37**	**75**	*e*P	**P**	**18 32 49.6**	**-0.8**
	comp=Z,21nm,1.4s						
KNB	**Kanab**	**68.57**	**324**	*e*P	**P**	**18 32 53.8**	**+2.3**
	comp=Z,26nm,1.8s						
CCUT	**Cedar City**	**69.25**	**324**	*e*P	**P**	**18 32 58.5**	**+2.8**
	comp=Z,20nm,1.9s						
TPNV	**Topopah Spring**	**70.49**	**322**	*e*P	**P**	**18 33 05.7**	**+2.5**
	comp=Z,3.4nm,0.6s						
PDAR	**Pinedale Array**	**71.12**	**330**	P	**P**	**18 33 08.3**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=101,slow=9.3,SNR=3.8						
NV01	**Mina Array Sit**	**72.69**	**322**	*e*P	**P**	**18 33 18.4**	**+2.0**
NVAR	**Mina Array Bea**	**72.69**	**322**	P	**P**	**18 33 18.4**	**+2.0**
	comp=Z,1.1nm,0.7s,baz=130,slow=4.6,SNR=3.8						
HLID	**Hailey**	**74.10**	**328**	*e*P	**P**	**18 33 26.7**	**+2.2**
	comp=Z,2.4nm,0.9s						
MOD	**Modoc Plateau**	**76.13**	**323**	*e*P	**P**	**18 33 38.7**	**+2.5**
	comp=Z,2.7nm,0.6s						
TOA1	**Torodi Ar. Sit**	**76.80**	**71**	*e*P	**P**	**18 33 37.9**	**-2.5**
TOA1				epP	**pP**	**18 34 14.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**76.80**	**71**	P	**P**	**18 33 37.9**	**-2.5**
	comp=Z,5.7nm,0.9s,baz=243,slow=5.1,SNR=22						
TORD				pP	**pP**	**18 34 14.8**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=275,slow=5.3,SNR=1.7						
ESDC	**Sonseca Array**	**83.95**	**45**	P	**P**	**18 34 18.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=256,slow=5.2,SNR=5.3						
YKA	**Yellowknife Ar**	**88.04**	**341**	P	**P**	**18 34 38.7**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=134,slow=4.8,SNR=39						
YKA				pP	**pP**	**18 35 11.4**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=134,slow=5.2,SNR=4.3						
YKB5	**Yellowknife Ar**	**88.04**	**341**	*e*P	**P**	**18 34 38.7**	**+1.2**
YKB5				epP	**pP**	**18 35 11.4**	**-1.0**
YKW3	**Yellowknife Ar**	**88.09**	**341**	*e*P	**P**	**18 34 39.0**	**+1.2**
ASAR	**Alice Springs**	**132.44**	**210**	PKP	**PKiKP**	**18 41 03.5**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=130,slow=1.8,SNR=16						
WR1	**Warramunga Arr**	**135.37**	**213**	*e*PKPdf	**PKiKP**	**18 41 08.9**	**-0.4**
WRA	**Warramunga Arr**	**135.37**	**213**	PKP	**PKiKP**	**18 41 08.9**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=200,slow=2.4,SNR=7.4						
ZAA1	**Zalesovo Array**	**139.28**	**23**	*e*PKPdf	**PKiKP**	**18 41 15.8**	**-0.4**
ZAA1				epPKPdf	**pPKPdf**	**18 41 52.1**	**+1.5**
ZALV	**Zalesovo Beam**	**139.28**	**23**	PKP	**PKiKP**	**18 41 15.8**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=280,slow=4.2,SNR=3.4						
ZALV				pPKP	**pPKPdf**	**18 41 52.1**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=323,slow=3.8,SNR=2.3						
MK32	**Makanchi Array**	**143.32**	**33**	*e*SKPbc	**SKPbc**	**18 44 48.3**	**+0.5**
MKAR	**Makanchi Array**	**143.32**	**33**	SKPbc	**SKPbc**	**18 44 48.3**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=358,slow=3.5,SNR=4.8						
MJAR	**Matsushiro Arr**	**149.63**	**312**	PKPbc	**PKiKP**	**18 41 39.1**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=88,slow=1.1,SNR=5.4						
MAJO	**Matsushiro**	**149.64**	**312**	*e*PKPbc	**PKiKP**	**18 41 39.1**	**+1.0**
SONA0	**Songino Array**	**150.38**	**6**	*e*PKPbc	**PKiKP**	**18 41 39.9**	**+0.5**
SONM	**Songino Array**	**150.38**	**6**	PKPbc	**PKiKP**	**18 41 39.9**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=343,slow=2.0,SNR=4.7						
SIJI	**Sorong**	**152.08**	**229**	PKPbc	**PKiKP**	**18 41 46.0**	**+2.3**
	comp=Z,6.1nm,0.8s,baz=11,slow=11,SNR=5.2						

ISC 12 18:28:58.3±0.9, 50°08N±0°.04×18°40E±0°.02, h0km, n19, σ0°88/33, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.13**	**271**	*e*Pg	**Pg**	**18 29 02.3**	**+1.5**
RAC				*e*Sg	**Sg**	**18 29 05.5**	**+3.0**
OKC	**Ostrava-Krasne**	**0.29**	**214**	*e*PG	**Pg**	**18 29 04.5**	**+0.6**
OKC				*e*SG	**Sg**	**18 29 08.0**	**+0.3**
	comp=Z,25nm,0.5s						
MORC	**Moravsky Berou**	**0.63**	**242**	*e*PG	**Pg**	**18 29 11.0**	**+0.6**
MORC				*e*SG	**Sg**	**18 29 18.7**	**+0.1**
OJC	**Ojcow**	**0.91**	**81**	*e*Pg	**Pg**	**18 29 15.3**	**-0.4**
OJC				*e*Sg	**Sg**	**18 29 28.0**	**+0.5**
LANS	**Liptovska Anna**	**1.16**	**143**	*e*PG	**Pg**	**18 29 20.7**	**+0.2**
LANS				*e*SG	**Sb**	**18 29 37.1**	**+0.2**
JAVC	**Velka Javorina**	**1.31**	**202**	*e*PG	**Pg**	**18 29 22.8**	**-0.6**
DPC	**Dobruska-Polom**	**1.36**	**282**	*e*PG	**Pg**	**18 29 24.1**	**-0.3**
DPC				*e*SG	**Sb**	**18 29 42.6**	**0.0**
	comp=Z,11nm,0.6s						
NIE	**Niedzica**	**1.40**	**118**	*e*Pg	**Pg**	**18 29 25.1**	**0.0**
NIE				*e*Sg	**Sn**	**18 29 44.5**	**+0.2**
VRAC	**Vranov**	**1.41**	**237**	*e*PG	**Pg**	**18 29 24.3**	**-0.9**
VRAC				*e*SG	**Sg**	**18 29 42.8**	**-0.6**
OSTC	**Ostas**	**1.48**	**290**	*e*PG	**Pn**	**18 29 26.2**	**0.0**
OSTC				*e*SG	**Sn**	**18 29 46.6**	**+0.4**
	comp=Z,5.2nm,0.5s						
CHVC	**Chvalec**	**1.59**	**290**	*e*PG	**Pn**	**18 29 27.4**	**-0.3**
CHVC				*e*SG	**Sb**	**18 29 49.4**	**+0.3**
UPC	**Upice**	**1.59**	**286**	*e*SG	**Sg**	**18 29 49.9**	**+0.6**
	comp=Z,4.8nm,0.5s						
VYHS	**Vyhne**	**1.61**	**170**	*e*PN	**Pn**	**18 29 27.8**	**-0.2**
VYHS				*e*SN	**Sn**	**18 29 49.4**	**-0.1**
KRUC	**Moravsky**	**1.66**	**233**	*e*PG	**Pn**	**18 29 28.7**	**+0.1**
KRUC				*e*SG	**Sn**	**18 29 50.8**	**+0.2**
GOPC	**GO Pecny, Ondr**	**2.34**	**267**	*e*PG	**Pb**	**18 29 41.6**	**+0.3**
GOPC				*e*SG	**Sg**	**18 30 12.2**	**-1.1**
	comp=Z,6.2nm,1.0s						
PRU	**Pruhonice**	**2.49**	**269**	*e*SG	**Sg**	**18 30 16.8**	**-1.4**
	comp=Z,1.8nm,0.4s						
PVCC	**Panska Ves**	**2.50**	**282**	*e*SG	**Sg**	**18 30 17.5**	**-0.9**
	comp=Z,5.2nm,0.3s						
BRG	**Berggiesshubel**	**2.96**	**287**	SG	**Sg**	**18 30 31.8**	**-1.4**
	2.3nm,0.4s						
KHC	**Kasperske Hory**	**3.28**	**255**	*e*PG	**Pg**	**18 30 00.0**	**-1.1**
KHC				*e*SG	**Sg**	**18 30 42.4**	**-1.1**
	comp=Z,2.2nm,0.4s						

*IDC **12** 18:45:42.4±3.6, 38°51N×142°35E, h0km, mb3.7/2, mb1 3.7/5, mb1mx3.4/41, mbtmp3.8/5, ML2.9/3, Error ellipse: s-maj=61.8km s-min=28.5km az=95.0*
*ISCJB **12** 18:45:49.1±1.0, 38°30N±0°.04×141°8E±0°.1, h53km±6km, mb3.6/2, Error ellipse: s-maj=14.3km s-min=5.3km az=19.1*
*JMA **12** 18:45:49.8±0.1, 38°30N×141°85E, h47km±1km, M3.8*
JMA Felt II J1.

ISC 12 18:45:49.4±1.8, 38°29N±0°05×141°9E±0°.1, h43km±12km, n26, σ0°93/32, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.34**	**273**	P	**Pn**	**18 45 58.6**	**+0.3**
JIKH				S	**Sn**	**18 46 04.7**	**+0.1**
JIO	**Ouri**	**0.46**	**291**	⇓P	**Pn**	**18 45 59.9**	**+0.2**
JIO				S	**Sn**	**18 46 07.0**	**0.0**
JKMT	**Kesennumamotoy**	**0.61**	**327**	P	**Pn**	**18 46 02.0**	**+0.3**
JKMT				S	**Sn**	**18 46 10.5**	**0.0**
OFUJ	**Ofunato**	**0.81**	**347**	⇓P	**Pn**	**18 46 04.5**	**+0.2**
OFUJ				S	**Sn**	**18 46 14.9**	**-0.3**
JMK	**Ichinoseki**	**0.84**	**321**	⇓P	**Pn**	**18 46 05.1**	**+0.3**
JMK				S	**Sn**	**18 46 16.1**	**0.0**
JMM	**Marumori**	**0.97**	**244**	⇓P	**Pn**	**18 46 06.1**	**-0.4**
JMM				S	**Sn**	**18 46 18.1**	**-1.0**
JOU	**Okura**	**0.97**	**275**	⇓P	**Pn**	**18 46 06.8**	**+0.2**
JOU				S	**Sn**	**18 46 19.3**	**0.0**
JFK	**Kawauchi**	**1.23**	**221**	P	**Pn**	**18 46 09.9**	**-0.3**
JFK				S	**Sn**	**18 46 24.6**	**-1.0**
JOM	**Ohasama**	**1.27**	**338**	⇓P	**Pn**	**18 46 11.2**	**+0.6**
JYK	**Kaneyama**	**1.36**	**298**	⇓P	**Pn**	**18 46 12.1**	**+0.3**
JYS	**Shirataka**	**1.44**	**268**	⇓P	**Pn**	**18 46 13.3**	**+0.3**
JFT	**Otama**	**1.46**	**238**	⇓P	**Pn**	**18 46 13.5**	**+0.3**
JFT				S	**Sn**	**18 46 31.1**	**0.0**
JRG	**Rokugo**	**1.48**	**319**	⇓P	**Pn**	**18 46 14.1**	**+0.6**
MJAR	**Matsushiro Arr**	**3.42**	**240**	Pn	**Pn**	**18 46 42.3**	**+2.2**
	0.3nm,0.3s,baz=15,slow=17,SNR=13						
MJAR				Sn	Sn	18 47 29.0	+10
	0.3nm,0.3s,baz=57,slow=29,SNR=3.8						
MAT	**Matsushiro**	**3.42**	**240**	P	**Pn**	**18 46 41.8**	**+1.6**
MAT				S	**Sn**	**18 47 18.6**	**-0.9**
JHJ	**Hachijo jima 2**	**5.44**	**199**	Pn	**Pn**	**18 47 09.6**	**+1.6**
	7.5nm,0.3s,baz=53,slow=20,SNR=2.7						
JHJ				Sn	**Sn**	**18 48 07.3**	**-2.0**
	9.4nm,0.3s,baz=47,slow=19,SNR=4.2						
ASAJ	**Asahikawa**	**5.84**	**5**	Pn	**Pn**	**18 47 12.8**	**-0.6**
	1.4nm,0.3s,baz=217,slow=11,SNR=19						
ASAJ				Sn	**Sn**	**18 48 16.7**	**-2.3**
	0.4nm,0.3s,baz=305,slow=14,SNR=2.3						
USRK	**Ussuriysk Ar.**	**9.51**	**311**	Pn	**Pn**	**18 48 03.5**	**-0.1**
	0.4nm,0.3s,baz=122,slow=14,SNR=5.7						
H11N2	**WAKE ISLAND Hy 28.49 123**			T	T	19 21 55.8	
	baz=316,slow=75,SNR=156						
H11N1	**WAKE ISLAND Hy 28.50 123**			T	T	19 21 56.6	
	baz=316,slow=75,SNR=268						
H11N3	**WAKE ISLAND Hy 28.51 123**			T	T	19 21 57.2	
	baz=316,slow=75,SNR=229						
H11S1	**WAKE ISLAND Hy 29.25 125**			T	T	19 22 54.5	
	baz=318,slow=76,SNR=73						
H11S3	**WAKE ISLAND Hy 29.25 125**			T	T	19 22 54.8	
	baz=318,slow=76,SNR=80						
H11S2	**WAKE ISLAND Hy 29.25 125**			T	T	19 22 55.9	
	baz=318,slow=76,SNR=58						
ZALV	**Zalesovo Beam**	**41.36**	**311**	P	**P**	**18 53 31.0**	**+0.1**
	0.7nm,0.3s,baz=87,slow=6.3,SNR=3.1						
MKAR	**Makanchi Array**	**43.79**	**301**	P	**P**	**18 53 50.5**	**-0.2**
	0.6nm,0.6s,baz=85,slow=10,SNR=6.9						

MEX 12 19:01:17.0±0.7, 30°45N×109°58W, h3km, MD3.5, Sonora

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGIG		**1.39**	**93**	*e*P	**Pn**	**19 01 43.3**	**-0.2**
CGIG				*e*S	Sg	19 02 01.3	-0.4
HSIG		**1.86**	**220**	*e*P	Pn	19 01 46.5	-3.2
HSIG				*i* S	Sn	19 02 08.6	-5.2
121A	**Cookes Peak, D**	**2.58**	**36**	*i* P	Pn	19 01 58.0	-1.9
121A				*e*S	Sb	19 02 35.0	-1.1

*ISK **12** 19:02:50.9, 38°60N×43°68E, h1km, ML4.6/26*
*BJI **12** 19:02:50.7±0.0, 38°65N×43°27E, h16km, mb4.6/38, mB4.8/30, Ms4.5/16, Ms7 4.2/17*
*IDC **12** 19:02:51.8±0.6, 38°58N×43°58E, h0km, mb4.3/25, mb1 4.3/35, mb1mx4.2/54, mbtmp4.2/35, ML3.3/10, MS3.7/28, Ms1 3.7/28, ms1mx3.6/48, Error ellipse: s-maj=11.2km s-min=8.0km az=162.0*
*DDA **12** 19:02:51.5, 38°63N×43°69E, h16km±1km, ML4.6*
*AZER **12** 19:02:52.1±2.9, 38°47N×43°30E, h19km±80km, ml4.7/24, Error ellipse: s-maj=76.1km s-min=16.9km az=61.0*
*TEH **12** 19:02:52.1, 38°64N×43°63E, h10km, ML4.5*
*ISCJB **12** 19:02:53.0±0.3, 38°60N±0°.01×43°60E±0°.01, h10km±2km, mb4.4/89, MS3.8/38, Error ellipse: s-maj=2.1km s-min=1.7km az=3.2*
*NEIC **12** 19:02:54.0±1.4, 38°65N×43°58E, h12km±4km, mb4.5/50, ML4.6(ISK), Error ellipse: s-maj=12.6km s-min=8.5km az=133.0*
*MOS **12** 19:02:53.5±1.1, 38°60N×43°63E, h19km, mb4.6/30, Error ellipse: s-maj=4.9km s-min=3.5km az=111.3*
*GII **12** 19:02:56.5±0.0, 38°62N×43°62E, h14km*
*NSSP **12** 19:03:47.4, 38°52N×43°52E, h10km, Ms4.4*

ISC 12 19:02:53.5±0.7, 38°61N±0°02×43°64E±0°.01, h9km±4km, n574, σ2°10/684, mb4.5/92, MS3.9/38, 56C-23D, Turkey

| Code | Station Name | Δ

comp=Z,88nm,0.3s,baz=235,slow=3.0,SNR=356
GNI Lg Lg 19 03 53.2
comp=Z,81nm,0.3s,baz=73,slow=19,SNR=24
GNI LR LR 19 04 19.7
comp=Z,347nm,18.6s,baz=218,slow=48
GNI Garni 1.75 29 *e*Pn **Pn 19 03 24.1 -0.1**
GNI Garni 1.75 29 *d i*P **Pn 19 03 24.4 +0.2**
GNI pmax pmax
comp=Z,9μm,0.7s
GNI Garni 1.75 29 ⇓*i*P **Pn 19 03 24.5 +0.2**
GNI ⇓*i*S **Sg 19 03 49.9 -0.1**
GNI Garni 1.75 29 *e*Pn **Pn 19 03 23.9 -0.4**
VRTB Varto-Mus 1.79 288 PN **Pn 19 03 25.1 +0.4**
VRTB Varto-Mus 1.79 288 ⇑*i*P **Pb 19 03 26.2 -0.4**
VRTB *i*S **Sg 19 03 59.5 +8.3**
VRTB IAML_P
comp=Z,96μm,0.5s
DIGO Kars 1.81 354 ⇑*i*P **Pn 19 03 25.3 +0.2**
DIGO *i*S **Sg 19 03 52.8 +0.9**
ORD Ordubad 1.86 80 *e*Pn **Pn 19 03 26.2 +0.6**
ORD Ordubad 1.86 80 P **Pn 19 03 26.3 +0.6**
SNR=1316
ORD S **Sg 19 03 54.2 +0.7**
ORD Ordubad 1.86 80 Pn **Pn 19 03 26.3 +0.6**
SNR=1316
ORD Sn **Sg 19 03 54.2 +0.7**
ORD Ordubad 1.86 80 Pn **Pn 19 03 26.3 +0.6**
SNR=1316
ORD Sn **Sg 19 03 54.2 +0.7**
KAPZ Kaputan 1.89 25 ⇑*i*P **Pn 19 03 22.9 -3.3**
KAPZ ⇑*i*S **Sb 19 03 51.4 -0.7**
KOPR Koprukoy-ERZUR 1.96 315 PN **Pn 19 03 26.9 -0.1**
HOMI Horasan 1.96 317 ⇑*i*P **Pn 19 03 27.2 0.0**
HOMI *i*S **Sg 19 04 00.5 +3.8**
SVAN Silvan-Diyarba 1.98 257 PN **Pn 19 03 27.1 -0.1**
SVAN Silvan-Diyarba 1.98 257 ⇑*i*P **Pn 19 03 27.5 +0.3**
SVAN *i*S **Sg 19 03 56.1 -0.9**
SVAN Silvan-Diyarba 1.98 257 *e*Pn **Pn 19 03 26.8 -0.4**
BNGL BINGOL 1.98 281 ⇑*i*P **Pn 19 03 27.6 +0.2**
BNGL *i*S **Sg 19 03 57.9 +0.8**
BTMN Batman 2.00 250 ⇑*i*P **Pb 19 03 28.6 -1.5**
BTMN *i*S **Sg 19 03 56.5 -1.4**
BTMN IAML_P
comp=Z,12μm,0.5s
ITBZ Tabriz 2.00 100 *e*Pn **Pn 19 03 28.2 +0.5**
KARS Kars 2.06 348 PN **Pn 19 03 28.6 +0.2**
KARS Kars 2.06 348 *e*Pn **Pn 19 03 27.6 -0.8**
KARS Kars 2.06 348 *e*P **Pn 19 03 27.6 -0.8**
KARS Kars 2.06 348 *e*Pn **Pn 19 03 27.9 -0.5**
IAZR Azarshahr 2.07 116 *e*Pn **Pn 19 03 29.5 +0.9**
IAZR IAMB IAmb 19 03 34.0
comp=Z,56μm,0.6s
EAK Akyaka 2.07 359 ⇑*i*P **Pb 19 03 30.1 -1.2**
EAK *i*S **Sg 19 04 06.3 +6.1**
KARO Karliova-Bingo 2.14 290 PN **Pn 19 03 29.6 +0.1**
SENK Senkaya-Erzuru 2.19 333 PN **Pn 19 03 29.8 -0.4**
SENK Senkaya-Erzuru 2.19 333 *e*Pn **Pn 19 03 29.9 -0.3**
ECAT Cat-ERZURUM 2.30 296 *e*P **Pn 19 03 31.8 0.0**
ECAT *i*S **Sg 19 04 08.7 +1.2**
AKDA Akdag 2.31 311 *i*P **Pn 19 03 32.8 +0.9**
AKDA *i*S **Sg 19 04 12.4 +4.6**
BNGB Bingl 2.34 280 PN **Pn 19 03 32.7 +0.4**
STEZ Stepenevan 2.45 14 ⇑*e*P **Pn 19 03 32.5 -1.3**
MAHB Mahabad 2.46 138 *e*Pn **Pn 19 03 35.9 +1.9**
BINT Bingol 2.48 277 P **Pn 19 03 32.4 -1.8**
BINT Bingol 2.48 277 *e*Pn **Pn 19 03 32.4 -1.8**
YEDI Yedisu-Bingol 2.55 290 PN **Pn 19 03 35.3 +0.1**
YEDI SN **Sn 19 04 07.5 +1.1**
YEDI Yedisu-Bingol 2.55 290 *e*Pn **Pn 19 03 35.5 +0.3**
HANI Diyarbakir_Han 2.55 267 ⇑*i*P **Pn 19 03 35.9 +0.7**
HANI *i*S **Sg 19 04 15.2 -0.3**
MARD Mardin 2.61 241 ⇑*i*P **Pn 19 03 37.0 +1.0**
MARD *i*S **Sg 19 04 21.3 +3.9**
BGD Bogdanovka 2.65 359 P **Pb 19 03 41.1 -0.2**
GDB GEDABAY 2.66 37 *e*Pn **Pn 19 03 38.2 +1.5**
GDB GEDABAY 2.66 37 P **Pn 19 03 38.3 +1.5**
SNR=246
GDB S **Sb 19 04 13.3 -1.0**
GDB GEDABAY 2.66 37 Pn **Pn 19 03 38.3 +1.5**
SNR=246
GDB Sn **Sb 19 04 13.3 -1.0**
GDB GEDABAY 2.66 37 Pn **Pn 19 03 38.3 +1.5**
SNR=246
GDB Sn **Sb 19 04 13.3 -1.0**
IHRS Heris 2.69 95 *e*Pn **Pn 19 03 38.5 +1.4**
IHRS IAMB IAmb 19 03 45.0
comp=Z,12μm,0.7s
KRIK Erzurum-spir 2.72 310 ⇑*i*P **Pn 19 03 39.0 +1.5**
KRIK *i*S **Sg 19 04 21.2 +0.3**
MAZI Mazidag 2.77 246 PN **Pn 19 03 37.9 -0.3**
MAZI Mazidag 2.77 246 *e*Pn **Pn 19 03 37.8 -0.4**
QZX Qazax, Azerbai 2.78 28 *e*Pn **Pn 19 03 40.1 +1.9**
QZX Qazax, Azerbai 2.78 28 P **Pn 19 03 40.2 +1.9**
SNR=91
QZX S **Sb 19 04 17.1 -0.5**
QZX Qazax, Azerbai 2.78 28 Pn **Pn 19 03 40.2 +1.9**
SNR=91
QZX Sn **Sb 19 04 17.1 -0.5**
QZX Qazax, Azerbai 2.78 28 Pn **Pn 19 03 40.2 +1.9**
SNR=91
QZX Sn **Sb 19 04 17.1 -0.5**
AKH Akhalkalaki 2.80 358 PN **Pn 19 03 38.9 +0.3**
AKH Akhalkalaki 2.80 358 P **Pb 19 03 44.2 +0.5**
AKH Akhalkalaki 2.80 358 *e*Pn **Pn 19 03 38.6 0.0**
AKH Akhalkalaki 2.80 358 *e*P **Pn 19 03 38.6 0.0**
AKH Akhalkalaki 2.80 358 *e*Pn **Pn 19 03 39.4 +0.8**
DAGI Agillar 2.80 332 ⇑*i*P **Pn 19 03 39.1 +0.6**
DAGI *i*S **Sg 19 04 25.5 +2.0**
KOPT Kop Dagi 2.81 301 ⇑*i*P **Pn 19 03 39.3 +0.4**
KOPT *i*S **Sg 19 04 25.6 +1.7**
KZRT Kazreti 2.83 12 P **Pb 19 03 44.1 -0.2**
DBAD Bademkaya 2.83 329 ⇑*i*P **Pn 19 03 39.2 +0.2**
DBAD *i*S **Sg 19 04 25.6 +1.1**
DYBB Diyarbakir 2.83 258 PN **Pn 19 03 39.4 +0.4**
DIYA Diyarbakir 2.86 257 *i*P **Pn 19 03 39.9 +0.6**
DIYA *i*S **Sg 19 04 28.4 +3.1**
GANJ Ganja 2.90 45 P **Pn 19 03 40.9 +1.1**
GANJ Ganja 2.90 45 *e*Pn **Pn 19 03 40.9 +1.1**
GANJ Ganja 2.90 45 P **Pn 19 03 41.0 +1.1**
SNR=185
GANJ S **Sb 19 04 18.6 -2.3**
GANJ Ganja 2.90 45 Pn **Pn 19 03 41.0 +1.1**
SNR=185
GANJ Sn **Sb 19 04 18.6 -2.3**
GANJ Ganja 2.90 45 Pn **Pn 19 03 41.0 +1.1**
SNR=185
GANJ Sn **Sb 19 04 18.6 -2.3**
EPOS Posof 2.97 347 *i*P **Pn 19 03 40.5 -0.4**
EPOS *i*S **Sb 19 04 25.3 +2.2**
BRDA Brd 3.20 58 *e*Pn **Pn 19 03 45.6 +1.8**
BRDA Brd 3.20 58 P **Pn 19 03 45.7 +1.8**
SNR=77
BRDA S **Sb 19 04 27.8 -1.6**
BRDA Brd 3.20 58 Pn **Pn 19 03 45.7 +1.8**
SNR=77
BRDA Sn **Sb 19 04 27.8 -1.6**
BRDA Brd 3.20 58 Pn **Pn 19 03 45.7 +1.8**
SNR=77
BRDA Sn **Sb 19 04 27.8 -1.6**
ERZN Erzincan 3.20 289 PN **Pn 19 03 44.4 +0.3**
BCA Borcka 3.23 332 PN **Pn 19 03 44.6 +0.3**
TBLG Delisi 3.23 15 PN **Pn 19 03 45.1 +0.7**
TBLG Delisi 3.23 15 *e*Pn **Pn 19 03 45.0 +0.7**
TBLG Delisi 3.23 15 *e*P **Pn 19 03 45.0 +0.7**
TBLG Delisi 3.23 15 *e*Pn **Pn 19 03 45.4 +1.1**
TNCL Tunceli-Merkez 3.24 280 *i*P **Pb 19 03 48.0 -3.3**
TNCL *i*S Sg 19 04 50.7 +13
BAYT Aydıntepe-Bayb 3.24 304 PN **Pn 19 03 45.1 +0.4**
ISRB Sarab 3.27 103 *e*Pn **Pn 19 03 46.4 +1.3**
ISRB IAMB IAmb 19 03 55.0
comp=Z,6μm,1.0s
CHAY Cayeli-Rize 3.34 319 PN **Pn 19 03 46.6 +0.8**
BATM Batumi 3.34 334 PN **Pn 19 03 46.2 +0.3**
BATM Batumi 3.34 334 P **Pb 19 03 49.7 -3.2**
DDFL Dedoflistskaro 3.41 33 P **Pb 19 03 50.9 -3.2**
SVRC Sivrice-ELAZID 3.41 267 PN **Pn 19 03 47.3 +0.3**
MNGR Mingechevir, A 3.42 50 P **Pn 19 03 48.3 +1.3**
MNGR Mingechevir, A 3.42 50 *e*Pn **Pn 19 03 48.3 +1.3**
MNGR Mingechevir, A 3.42 50 P **Pn 19 03 48.3 +1.3**
SNR=15
MNGR S **Sb 19 04 32.5 -3.4**
MNGR Mingechevir, A 3.42 50 Pn **Pn 19 03 48.3 +1.3**
SNR=15
MNGR Sn **Sb 19 04 32.5 -3.4**
EZC Erzincan 3.52 290 P **Pn 19 03 44.8 -3.7**
LRK Lerik 3.68 88 *e*Pn **Pn 19 03 52.2 +1.6**
LRK Lerik 3.68 88 P **Pn 19 03 52.3 +1.6**
SNR=49
LRK S **Sn 19 04 36.9 +2.6**
LRK Lerik 3.68 88 Pn **Pn 19 03 52.3 +1.6**
SNR=49
LRK Sn **Sn 19 04 36.9 +2.6**
LRK Lerik 3.68 88 Pn **Pn 19 03 52.3 +1.6**
SNR=49
LRK Sn **Sn 19 04 36.9 +2.6**
GLBA Clilabad 3.76 79 *e*Pn **Pn 19 03 52.1 +0.5**
GLBA Clilabad 3.76 79 P **Pn 19 03 52.1 +0.5**
SNR=10
GLBA S **Sb 19 04 40.6 -5.0**
GLBA Clilabad 3.76 79 Pn **Pn 19 03 52.1 +0.5**
SNR=10
GLBA Sn **Sb 19 04 40.6 -5.0**
GLBA Clilabad 3.76 79 Pn **Pn 19 03 52.1 +0.5**
SNR=10
GLBA Sn **Sb 19 04 40.6 -5.0**
TKB Tkibuli 3.77 353 P **Pn 19 03 53.4 +1.6**
SEKA Sheki 3.77 45 P **Pb 19 03 57.1 -3.2**
SNR=76
SEKA S **Sb 19 04 42.7 -3.3**
SEKA Sheki 3.77 45 Pn **Pb 19 03 57.1 -3.2**
SNR=76
SEKA Sn **Sb 19 04 42.7 -3.3**
SEKA Sheki 3.77 45 Pn **Pb 19 03 57.1 -3.2**
SNR=76
SEKA Sn **Sb 19 04 42.7 -3.3**
ZKTA Zakatala 3.79 36 P **Pn 19 03 54.1 +2.0**
SNR=70
ZKTA S **Sb 19 04 41.9 -4.6**
ZKTA Zakatala 3.79 36 Pn **Pn 19 03 54.1 +2.0**
SNR=70
ZKTA Sn **Sb 19 04 41.9 -4.6**
ZKTA Zakatala 3.79 36 Pn **Pn 19 03 54.1 +2.0**
SNR=70
ZKTA Sn **Sb 19 04 41.9 -4.6**
KTUT Trabzon 3.81 310 PN **Pn 19 03 53.7 +1.3**
ZKT Zaqatala 3.82 36 *e*Pn **Pn 19 03 54.0 +1.5**
ONI Oni 3.98 358 PN **Pn 19 03 55.4 +0.7**
ONI Oni 3.98 358 P **Pb 19 04 04.9 +1.2**
URFA Urfa 3.98 254 PN **Pn 19 03 55.6 +0.8**
QBL Gabala 3.98 53 *e*Pn **Pn 19 03 55.5 +0.7**
QBL Gabala 3.98 53 P **Pn 19 03 55.5 +0.7**
SNR=86
QBL S **Sb 19 04 46.9 -5.3**
QBL Gabala 3.98 53 Pn **Pn 19 03 55.5 +0.7**
SNR=86
QBL Sn **Sb 19 04 46.9 -5.3**
QBL Gabala 3.98 53 Pn **Pn 19 03 55.5 +0.7**
SNR=86
QBL Sn **Sb 19 04 46.9 -5.3**
LKRN Lenkeran, Azer 4.02 87 P **Pn 19 03 56.9 +1.7**
LKRN Lenkeran, Azer 4.02 87 *e*Pn **Pn 19 03 56.9 +1.7**
LKRN Lenkeran, Azer 4.02 87 P **Pn 19 03 57.0 +1.7**
SNR=16
LKRN S **Sn 19 04 45.0 +2.5**
LKRN Lenkeran, Azer 4.02 87 Pn **Pn 19 03 57.0 +1.7**
SNR=16
LKRN Sn **Sn 19 04 45.0 +2.5**
LKRN Lenkeran, Azer 4.02 87 Pn **Pn 19 03 57.0 +1.7**
SNR=16
LKRN Sn **Sn 19 04 45.0 +2.5**
ASTR Astara 4.04 89 *e*Pn **Pn 19 03 57.9 +2.5**
ASTR Astara 4.04 89 P **Pn 19 03 58.0 +2.5**
SNR=45
ASTR S **Sn 19 04 46.6 +3.9**
ASTR Astara 4.04 89 Pn **Pn 19 03 58.0 +2.5**
SNR=45
ASTR Sn **Sn 19 04 46.6 +3.9**
ASTR Astara 4.04 89 Pn **Pn 19 03 58.0 +2.5**
SNR=45
ASTR Sn **Sn 19 04 46.6 +3.9**
IML Ismayilli 4.12 57 *e*Pn **Pn 19 03 58.5 +1.8**
IML Ismayilli 4.12 57 P **Pn 19 03 58.5 +1.8**
SNR=7.2
IML S **Sn 19 04 49.0 +4.0**
IML Ismayilli 4.12 57 Pn **Pn 19 03 58.5 +1.8**
SNR=7.2
IML Sn **Sn 19 04 49.0 +4.0**
IML Ismayilli 4.12 57 Pn **Pn 19 03 58.5 +1.8**
SNR=7.2
IML Sn **Sn 19 04 49.0 +4.0**
ZEI Tsey 4.17 3 *e*P **Pn 19 03 58.5 +0.9**
ZEI pmax pmax
comp=Z,60nm,0.6s
XNQ Khinaliq 4.30 52 *e*Pn **Pn 19 04 00.7 +1.5**
XNQ Khinaliq 4.30 52 P **Pn 19 04 00.8 +1.5**
SNR=11
XNQ S **Sn 19 04 52.8 +3.2**
XNQ Khinaliq 4.30 52 Pn **Pn 19 04 00.8 +1.5**
SNR=11
XNQ Sn **Sn 19 04 52.8 +3.2**
XNQ Khinaliq 4.30 52 Pn **Pn 19 04 00.8 +1.5**
SNR=11
XNQ Sn **Sn 19 04 52.8 +3.2**
PQL Pirkuli 4.39 59 *e*Pn **Pn 19 04 01.8 +1.4**
PQL Pirkuli 4.39 59 P **Pn 19 04 01.9 +1.4**
SNR=24
PQL Pirkuli 4.39 59 Pn **Pn 19 04 01.9 +1.4**
SNR=24
PQL Pirkuli 4.39 59 Pn **Pn 19 04 01.9 +1.4**
SNR=24
IDHR Dehrash 4.49 150 *e*Pn **Pn 19 04 03.8 +2.0**
GBS Qobustan 4.52 63 *e*Pn **Pn 19 04 04.4 +2.3**
GBS Qobustan 4.52 63 P **Pn 19 04 04.5 +2.3**
SNR=22
GBS S **Sn 19 05 00.1 +5.2**
GBS Qobustan 4.52 63 Pn **Pn 19 04 04.5 +2.3**
SNR=22
GBS Sn **Sn 19 05 00.1 +5.2**
GBS Qobustan 4.52 63 Pn **Pn 19 04 04.5 +2.3**
SNR=22
GBS Sn **Sn 19 05 00.1 +5.2**
ILIN Lien 4.55 143 *e*Pn **Pn 19 04 05.5 +2.7**
QUB Quba 4.56 51 *e*Pn **Pn 19 04 06.2 +3.5**
QSAR Qusar 4.58 49 *e*Pn **Pn 19 04 04.0 +1.1**
QSAR Qusar 4.58 49 P **Pn 19 04 04.1 +1.1**
SNR=5.4
QSAR S **Sn 19 05 01.5 +5.3**
QSAR Qusar 4.58 49 Pn **Pn 19 04 04.1 +1.1**
SNR=5.4
QSAR Sn **Sn 19 05 01.5 +5.3**
QSAR Qusar 4.58 49 Pn **Pn 19 04 04.1 +1.1**
SNR=5.4
QSAR Sn **Sn 19 05 01.5 +5.3**
QUBA Quba, Azerbaij 4.62 52 P **Pn 19 04 06.3 +2.7**
SNR=21
QUBA S **Sb 19 05 03.9 -6.7**
QUBA Quba, Azerbaij 4.62 52 Pn **Pn 19 04 06.3 +2.7**
SNR=21
QUBA Sn **Sb 19 05 03.9 -6.7**
QUBA Quba, Azerbaij 4.62 52 Pn **Pn 19 04 06.3 +2.7**
SNR=21
QUBA Sn **Sb 19 05 03.9 -6.7**
ATGJ Altiaghaj 4.66 60 *e*Pn **Pn 19 04 06.6 +2.5**
ATGJ Altiaghaj 4.66 60 P **Pn 19 04 06.7 +2.5**
SNR=19
ATGJ S **Sb 19 05 05.7 -6.0**
ATGJ Altiaghaj 4.66 60 Pn **Pn 19 04 06.7 +2.5**
SNR=19
ATGJ Sn **Sb 19 05 05.7 -6.0**
ATGJ Altiaghaj 4.66 60 Pn **Pn 19 04 06.7 +2.5**
SNR=19
ATGJ Sn **Sb 19 05 05.7 -6.0**
NEY Neytrino 4.68 352 ⇓*e*P **Pn 19 04 06.1 +1.6**
SIZA Siyzn 4.74 57 P **Pn 19 04 09.1 +3.9**
SNR=14
SIZA S **Sb 19 05 07.7 -6.1**
SIZA Siyzn 4.74 57 Pn **Pn 19 04 09.1 +3.9**
SNR=14
SIZA Sn **Sb 19 05 07.7 -6.1**
SIZA Siyzn 4.74 57 Pn **Pn 19 04 09.1 +3.9**
SNR=14
SIZA Sn **Sb 19 05 07.7 -6.1**
IVIS Veis 4.83 147 *e*Pn **Pn 19 04 08.6 +2.2**
IVIS IAMB IAmb 19 06 00.1
comp=Z,4μm,1.3s
GROC Groznyy 4.87 19 *e*P **Pb 19 04 17.9 -1.0**
GROC *e* 19 05 02.8
GROC pmax pmax
comp=Z,220nm,1.2s
GROC smax smax
comp=E,589nm,1.6s
GROC smax smax
comp=E,208nm,1.7s
IGHG Ghaleghazi 4.88 150 *e*Pn **Pn 19 04 09.4 +2.1**
IGHG IAMB IAmb 19 05 56.6
comp=Z,11μm,1.3s
DOMR Dombai 4.92 343 ⇓*e*P **Pn 19 04 10.8 +3.1**
KBZ Khabaz 5.14 354 Pn **Pn 19 04 13.9 +3.3**
comp=Z,0.1nm,0.3s,baz=173,slow=9.3,SNR=9.3
SHA1 Shidzhatmaz 5.17 352 ⇓P **Pn 19 04 12.7 +1.4**
IBZA Bozab 5.35 139 *e*Pn **Pn 19 04 16.3 +2.5**
KVAR Kislovodsk Arr 5.38 353 Pn **Pn 19 04 17.9 +3.8**
baz=156,slow=12,SNR=5.2
KVAR LR LR 19 06 50.6
comp=Z,765nm,21.3s,baz=39,slow=44
KIV Kislovodsk 5.39 353 *e*Pn **Pn 19 04 14.4 +0.3**
KIV Kislovodsk 5.39 353 *e*P **Pn 19 04 14.6 +0.5**
KIV pmax pmax
comp=Z,33nm,1.1s
KIV MLR MLR
comp=Z,1μm,9.0s
IKOM Komasi 5.42 144 *e*Pn **Pn 19 04 15.0 +0.4**
QABG Abgarm-Qazvin 5.56 120 *e*Pn **Pn 19 04 19.9 +3.3**
IGZV Ghazvin 5.68 111 *e*Pn **Pn 19 04 22.0 +3.7**
SOC Sochi 5.78 330 *e*P **Pn 19 04 18.5 -0.9**
SOC *e* 19 05 26.3
SOC MLR MLR
comp=Z,2μm,12.0s
HSAM Samen 5.94 136 *e*Pn **Pn 19 04 25.3 +3.4**
QALM Alamut, Qazvin 5.98 109 *e*Pn **Pn 19 04 26.0 +3.6**
IDOB Doab 6.05 141 *e*Pn **Pn 19 04 25.8 +2.4**
IKFM Kafar-mosalman 6.11 145 *e*Pn **Pn 19 04 26.4 +2.4**
GOF Gofitskoye 6.46 356 ⇑*e*P **Pn 19 04 28.6 -0.1**
GOF pmax pmax
comp=Z,7.0nm,0.4s
IPRN Peran 7.31 106 *e*Pn **Pn 19 04 44.1 +3.5**
IDMV Damavand 7.36 112 *e*Pn **Pn 19 04 45.1 +3.7**
HWQ Hawqa 7.56 237 *e*P **Pn 19 04 45.1 +1.1**
IALA Alasht 7.73 106 *e*Pn **Pn 19 04 50.7 +4.3**
ANN Anapa 7.73 325 *e*P **Pn 19 04 49.5 +3.4**
ANN *e*S **Sn 19 06 20.2 +6.5**
ANN pmax pmax
comp=Z,19nm,1.3s
ANN MLR MLR
comp=E,411nm,11.0s
ANN MLR MLR
comp=Z,642nm,11.0s
BR101 Keskin Array S 7.85 281 *e*Pn **Pn 19 04 50.4 +2.4**
BR131 Keskin Array S 7.85 281 *e*Pn **Pn 19 04 48.2 +0.2**
BRTR Keskin Array B 7.85 281 Pn **Pn 19 04 50.4 +2.4**
comp=Z,0.1nm,0.3s,baz=97,slow=11,SNR=18
BRTR Keskin Array B 7.85 281 *e*P Pn 19 04 52.5 +4.5
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BHL Bhannes 7.98 236 *e*P **Pn 19 04 53.7 +3.9**
DQRL Deir Qamar 8.16 236 *e*P **Pn 19 04 54.5 +2.4**
KRSH Karshahi 8.28 121 *e*Pn **Pn 19 04 57.1 +3.3**
SHBL Chebaa 8.28 233 *e*P **Pn 19 04 56.0 +2.1**
NATI Neve Ativ 8.34 233 Pn **Pn 19 04 56.9 +2.3**
IPIR Pirpir 8.35 133 *e*Pn **Pn 19 04 57.4 +2.4**
GEM Giv'at Ha'Em 8.42 233 Pn **Pn 19 04 57.9 +2.2**
KSDI Kefar Szold 8.44 233 Pn **Pn 19 04 58.6 +2.7**
ASF Jabal al Asfar 8.46 223 Pn **Pn 19 04 56.9 +0.6**
comp=Z,0.6nm,0.3s,baz=354,slow=9.3,SNR=12
ASF Lg Lg 19 07 19.6
comp=Z,0.2nm,0.3s,baz=156,slow=19,SNR=2.2
ASF Jabal al Asfar 8.46 223 P Pn 19 05 03.5 +7.2
comp=Z,34nm,1.2s
KSHT Keshet 8.48 231 Pn **Pn 19 04 59.3 +2.7**
JHBN Jahan bin 8.56 136 *e*Pn **Pn 19 04 59.5 +1.5**
MMA0B Mount Meron ar 8.71 233 Pn **Pn 19 05 02.4 +2.6**
MMAI Mount Meron Ar 8.71 233 Pn **Pn 19 05 02.2 +2.4**
comp=Z,4.3nm,0.3s,baz=71,slow=16,SNR=29
MMAI Lg Lg 19 07 39.5
comp=Z,0.7nm,0.3s,baz=58,slow=19,SNR=2.7
MMAI LR LR 19 08 56.3
comp=Z,553nm,18.6s,baz=50,slow=42
ZNGN Zangian 8.76 136 *e*Pn **Pn 19 05 02.5 +1.9**
MMLI Mount Malkishu 9.10 230 Pn **Pn 19 05 07.7 +2.7**
MMLI Mount Malkishu 9.10 230 P **Pn 19 05 08.3 +3.3**
comp=Z,33nm,1.0s
HMDT Nahal Hemdat 9.17 229 Pn **Pn 19 05 08.8 +2.9**
OFRI `Ofer 9.24 232 Pn **Pn 19 05 09.5 +2.6**
SLTI Sal'it 9.47 230 Pn **Pn 19 05 13.1 +3.1**
WALJ Wala 9.52 225 P Pn 19 05 16.7 +6.0
comp=Z,47nm,0.8s
SIM Simferopol' 9.52 315 P Pn 19 05 16.1 +5.4
SIM pmax pmax
comp=Z,11nm,0.9s
YTIR Yattir 10.06 227 Pn **Pn 19 05 21.1 +2.9**
ZFRI Zfri 10.64 223 Pn **Pn 19 05 29.2 +3.1**
PRNI Paran 10.89 223 Pn **Pn 19 05 32.6 +3.1**
GEYT Alibeck 11.40 89 Pn **Pn 19 05 35.4 -1.1**
comp=Z,0.1nm,0.3s,baz=294,slow=14,SNR=9.9
GEYT LR LR 19 11 41.9
comp=Z,185nm,18.8s,baz=325,slow=46
EIL Elat 11.46 221 Pn **Pn 19 05 35.4 -1.9**
comp=Z,0.1nm,0.3s,baz=21,slow=14,SNR=3.4
EIL Lg Lg 19 09 06.2
comp=Z,0.1nm,0.3s,baz=104,slow=19,SNR=3.7
EIL LR LR 19 10 15.3
comp=Z,431nm,19.5s,baz=33,slow=39
EIL Elat 11.46 221 Pn **Pn 19 05 39.6 +2.3**
EIL Elat 11.46 221 P Pn 19 05 43.6 +6.3
comp=Z,15nm,1.6s
VRH Novokhopyorsk 12.66 354 *e*P **Pn 19 05 56.7 +3.1**
VRH pmax pmax
comp=Z,10.0nm,0.6s
VRH MLR MLR
comp=Z,1μm,12.0s
VSR Storozhevoye 12.99 347 ⇓*i*P **Pn 19 05 58.6 +0.5**
KIS Kishinev 13.72 312 *e*P **Pn 19 06 11.0 +2.9**
KIS *e*S **Sn 19 08 42.0 +1.5**
KIS *e*Li 19 09 40.0
KIS *e*LQ LQ 19 10 20.0
KIS LRM MLR 19 13 24.0
comp=Z,500nm,12.0s
KIS Kishinev 13.72 312 *e*P **Pn 19 06 11.0 +2.9**
KIS *e*S **Sn 19 08 42.0 +1.5**
KIS MLR MLR
comp=Z,500nm,12.0s
KIS MLR MLR
comp=N,200nm,13.0s
LPSR Galich'ya Gora 14.37 348 *e*P **Pn 19 06 16.4 -0.5**
LPSR pmax pmax
comp=Z,30nm,1.0s
LPSR MLR MLR
comp=Z,1μm,14.0s
VRI Vrincioaia 14.46 305 ⇑*i*P **Pn 19 06 19.1 +0.8**
VRI Vrincioaia 14.46 305 ⇑P **Pn 19 06 19.2 +0.9**
PLOR Plostina 14.50 305 ⇑*i*P **Pn 19 06 19.9 +1.0**
PLOR Plostina 14.50 305 ⇑P **Pn 19 06 19.9 +1.0**
TESR Tescani 14.78 308 ⇑*i*P **Pn 19 06 23.8 +1.2**
RZN Rozhen 14.80 288 *e*P **P 19 06 28.7 -0.3**
MLR Muntele Rosu 14.82 303 Pn **Pn 19 06 24.4 +1.2**
comp=Z,0.1nm,0.3s,baz=126,slow=6.1,SNR=8.5
MLR Muntele Rosu 14.82 303 *e*Pn **Pn 19 06 22.3 -0.9**
MLR Muntele Rosu 14.82 303 ⇑*i*P **Pn 19 06 24.8 +1.5**
MLR Muntele Rosu 14.82 303 ⇑P **Pn 19 06 24.8 +1.5**
HUMR Humele 15.15 299 ⇑*i*P **Pn 19 06 28.8 +1.2**
BIZ Bicaz 15.31 309 ⇑*i*P **Pn 19 06 30.1 +0.4**
IDI Anoyia 15.36 263 Pn **P 19 06 32.7 -2.5**
comp=Z,0.3nm,0.3s,baz=76,slow=12,SNR=3.1
VOIR 15.39 302 ⇑*i*P **Pn 19 06 32.2 +1.4**
VOIR 15.39 302 ⇑P **Pn 19 06 32.2 +1.4**
VLAD Vladila 15.42 297 ⇑*i*P **P 19 06 34.2 -1.5**
MMB Musomiste 15.53 287 *e*P **P 19 06 38.2 +1.2**
AKTO Aktyubinsk 15.61 36 Pn **Pn 19 06 30.8 -2.8**
comp=Z,0.2nm,0.3s,baz=231,slow=12,SNR=17
AKTO LR LR 19 14 12.5
comp=Z,168nm,21.6s,baz=223,slow=43
ARR Arges 15.64 302 ⇑*i*P **P 19 06 36.0 -2.3**
AB31 Akbulak array 15.81 42 *i*P **Pn 19 06 36.2 0.0**
AB31 pmax pmax
comp=Z,5.0nm,0.8s
ABKAR Akbulak array 15.81 42 *e*Pn **Pn 19 06 35.9 -0.3**
comp=Z,6.9nm,0.8s

AKASG Malin Array Be 15.82 324 Pn **Pn 19 06 33.8 -2.4**
comp=Z,0.4nm,0.3s,baz=138,slow=10,SNR=4.1
AKBB Malin Array Si 15.82 324 *e*Pn **Pn 19 06 35.3 -0.9**
comp=Z,12nm,0.9s
AKBB Malin Array Si 15.82 324 *e*P **Pn 19 06 35.3 -0.9**
AKBB pmax pmax
comp=Z,12nm,0.9s
VTS Vitosha 16.00 291 *e*Pn **Pn 19 06 37.2 -1.6**
comp=Z,10nm,1.1s
VTS Vitosha 16.00 291 ⇓*i*P **P 19 06 41.2 -1.2**
VTS Vitosha 16.00 291 ⇓P **P 19 06 41.2 -1.2**
VTS Vitosha 16.00 291 *e*P **P 19 06 40.6 -1.8**
KKB Krupnik 16.03 288 *e*P **P 19 06 40.8 -1.7**
BURAR Bucovina Array 16.15 310 ⇓*i*P **P 19 06 42.6 -1.4**
BURAR Bucovina Array 16.15 310 ⇓P **P 19 06 42.6 -1.4**
BUR08 Bucovina Ar. S 16.18 310 *e*Pn **Pn 19 06 39.7 -1.3**
comp=Z,9.8nm,0.9s
LOT Lotru 16.25 301 ⇑*i*P **Pn 19 06 42.9 +0.9**
PUNG Punghina 16.51 297 ⇑*i*P **P 19 06 48.0 +0.2**
HERR Herculane 17.01 298 ⇑*i*P **P 19 06 54.6 +1.2**
OBN Obninsk 17.18 346 P **Pn 19 06 51.1 -2.5**
comp=Z,0.9nm,0.3s,baz=324,slow=18,SNR=5.6
OBN Obninsk 17.18 346 *e*P **Pn 19 06 51.5 -2.1**
comp=Z,22nm,0.6s
OBN Obninsk 17.18 346 *i*P **Pn 19 06 52.1 -1.5**
OBN pmax pmax
comp=Z,16nm,1.4s
OBN MLR MLR
comp=Z,707nm,15.0s
MDVR Moldovita 17.47 298 ⇑*i*P **P 19 06 59.7 +1.1**
MOS Moscow 17.60 349 *e*P **Pn 19 06 56.2 -2.6**
MOS pmax pmax
comp=Z,28nm,0.6s
MOS MLR MLR
comp=N,400nm,14.0s
MOS MLR MLR
comp=Z,600nm,14.0s
BZS Buzias 17.75 300 ⇓*i*P **P 19 07 02.3 +0.8**
BZS Buzias 17.75 300 ⇓P **P 19 07 02.3 +0.8**
LVV L'vov 17.92 315 *e*P **P 19 07 05.3 +1.9**
LVV *e*S **Sn 19 10 22.2 -0.3**
LVV MLR MLR
comp=N,100nm,12.0s
LVV MLR MLR
comp=E,300nm,12.0s
LVV MLR MLR
comp=Z,200nm,13.0s
TRPA Tarpa 18.00 309 ⇑*i*P **P 19 07 05.0 +0.7**
TRPA Tarpa 18.00 309 ⇓EP **Pn 19 07 03.0 -0.7**
UZH Uzhgorod 18.36 310 *e*P **Pn 19 07 05.7 -2.5**
UZH *e*S **Sn 19 10 24.9 -8.3**
UZH MLR MLR
comp=N,100nm,16.0s
UZH MLR MLR
comp=E,100nm,16.0s
UZH MLR MLR
comp=Z,60nm,16.0s
KOLS Kolonicke sedl 18.50 311 *e*P **Pn 19 07 10.2 +0.3**
KOLS Kolonicke sedl 18.50 311 *e*P **Pn 19 07 10.2 +0.3**
KWP Kalwaria Pacla 18.57 313 *e*P **P 19 07 10.1 -0.5**
comp=Z,267nm,1.1s
KWP Kalwaria Pacla 18.57 313 *e*P **P 19 07 10.1 -0.5**
KWP pmax pmax
comp=Z,267nm,1.1s
TTG Podgorica 18.91 289 *e*P **P 19 07 13.6 -0.7**
comp=Z,26nm,1.1s
TTG Podgorica 18.91 289 *e*P **P 19 07 13.6 -0.7**
TTG pmax pmax
comp=Z,26nm,1.1s
PSZ Piszkesteto 19.57 306 *e*P **Pn 19 07 22.2 -0.7**
comp=Z,16nm,1.1s
PSZ Piszkesteto 19.57 306 ⇑*i*P **Pn 19 07 24.6 +1.7**
PSZ Piszkesteto 19.57 306 ⇑P **Pn 19 07 24.6 +1.7**
PSZ Piszkesteto 19.57 306 EP **Pn 19 07 22.0 -0.9**
NIE Niedzica 19.88 310 *e*P **Pn 19 07 26.6 0.0**
NIE Niedzica 19.88 310 *e*P **Pn 19 07 26.6 0.0**
MORH Mrgy, Hungar 19.90 300 EP **P 19 07 25.1 -0.1**
WSAR Wadi Sarin 19.96 136 P **Pn 19 07 27.4 -0.3**
comp=Z,0.5nm,0.3s,baz=341,slow=11,SNR=7.6
WSAR LR LR 19 17 28.0
comp=Z,386nm,21.5s,baz=339,slow=44
IDID Didziasalis 20.21 331 *e*P **P 19 07 26.4 -2.0**
IDID IAmb IAmb 19 07 36.4
comp=Z,7.8nm,1.1s
KIRV Kirov 20.33 9 P **P 19 07 26.9 -2.8**
comp=Z,6.7nm,0.6s,baz=96,slow=10,SNR=3.8
KIRV LR LR 19 16 16.5
comp=Z,124nm,20.4s,baz=13,slow=40
ARU Arti 20.39 24 P **P 19 07 30.6 +0.1**
comp=Z,2.9nm,0.7s,baz=216,slow=7.4,SNR=15
ARU LR LR 19 18 10.4
comp=Z,109nm,19.5s,baz=221,slow=45
ARU Arti 20.39 24 *e*P **P 19 07 30.2 -0.2**
comp=Z,28nm,1.0s
ARU Arti 20.39 24*d i*P Pn 19 07 31.1 -1.4
ARU 19 07 49.1
ARU S Sn 19 11 22.0 -0.1
ARU SS **SnSn 19 11 42.1 +5.4**
ARU pmax pmax
comp=Z,17nm,1.0s
ARU MLR MLR
comp=Z,204nm,14.0s
VYHS Vyhne 20.43 307 *e*P Pn 19 07 31.8 -1.2
VYHS Vyhne 20.43 307 *e*P Pn 19 07 31.8 -1.2
IIGN Ignalina 20.43 331 *e*P **P 19 07 29.7 -1.2**
IIGN IAmb IAmb 19 07 38.7
comp=Z,26nm,1.6s
CSKK Cskako 20.45 303 EP Pn 19 07 33.0 -0.2
OJC Ojcow 20.51 312 *e*P **P 19 07 32.2 +0.4**
OJC Ojcow 20.51 312 *e*P **P 19 07 31.0 -0.7**
comp=Z,18nm,1.1s
OJC Ojcow 20.51 312 *e*P **P 19 07 32.2 +0.4**
TIH Tihany 20.57 302 EP **P 19 07 32.1 -0.3**
IZAR Zarasai 20.72 331 *e*P Pn 19 07 37.2 +0.9
IZAR IAmb IAmb 19 07 47.1
comp=Z,9.5nm,0.6s
GAR Garm 20.77 81 *e*P **P 19 07 34.9 +0.1**
comp=Z,30nm,0.8s
GAR Garm 20.77 81 *e*P **P 19 07 34.9 +0.1**
GAR pmax pmax
comp=Z,30nm,0.8s
KK31 Karatay Array 20.77 69 *e*P **P 19 07 35.1 +0.4**
comp=Z,25nm,0.8s
KK31 Karatay Array 20.77 69 *i*P **P 19 07 34.7 0.0**
KK31 pmax pmax
comp=Z,20nm,0.8s
KKAR Karatay Array 20.77 69 *e*P **P 19 07 35.1 +0.4**
comp=Z,25nm,0.8s
KBL Kabul 20.78 93 *e*P **P 19 07 35.6 +0.6**
comp=Z,16nm,1.1s
KBL Kabul 20.78 93 *e*P **P 19 07 35.6 +0.6**
KBL pmax pmax
comp=Z,16nm,1.1s
SUW Suwalki 20.79 324 *e*P **P 19 07 35.3 +0.6**
SUW Suwalki 20.79 324 *e*P **P 19 07 35.0 +0.3**
comp=Z,68nm,1.0s
SUW Suwalki 20.79 324 *e*P **P 19 07 35.3 +0.6**
TIP Timpagrande 20.91 280 *e*P **P 19 07 36.0 -0.3**
comp=Z,26nm,1.0s
BTK Batken 21.04 77 *e*P **P 19 07 38.2 +0.5**
comp=Z,32nm,1.1s
BTK Batken 21.04 77 *e*P **P 19 07 38.2 +0.5**
BTK pmax pmax
comp=Z,32nm,1.1s
BEHE Becsehely 21.22 300 EP **P 19 07 42.1 +2.6**
JAVC Velka Javorina 21.28 307 *e*P **P 19 07 41.4 +1.2**
OKC Ostrava-Krasne 21.33 310 *e*S Sn 19 11 43.0 -1.8
OKC AMS AMS 19 18 40.0
comp=Z,400nm,11.7s
MODS Modra-Piesok 21.38 306 *e*P **P 19 07 43.8 +2.7**
MODS Modra-Piesok 21.38 306 *e*P **P 19 07 43.8 +2.7**
SVE Sverdlovsk 21.40 26⇓*e*P **P 19 07 48.0 +6.7**
SVE pmax pmax
comp=Z,40nm,1.5s
PABE Paberze 21.44 328 *e*P **P 19 07 40.3 -1.4**
PABE IAmb IAmb 19 07 46.5
comp=Z,53nm,1.4s
SOP Sopron 21.65 304 EP **P 19 07 44.0 0.0**
MORC Moravsky Berou 21.67 309 *e*P **P 19 07 45.1 +0.7**
comp=Z,6.8nm,1.0s
MORC Moravsky Berou 21.67 309 *e*P **P 19 07 45.1 +0.7**
MORC pmax pmax
comp=Z,7.0nm,1.0s
MORC Moravsky Berou 21.67 309 *e*P **P 19 07 46.0 +1.6**
VRAC Vranov 22.10 308 P **P 19 07 48.7 -0.2**
comp=Z,8.3nm,0.8s,baz=108,slow=8.8,SNR=14
VRAC LR LR 19 18 26.6
comp=Z,116nm,18.0s,baz=118,slow=42
VRAC Vranov 22.10 308 *e*P **P 19 07 49.1 +0.2**
BOJS Bojanci 22.10 297 *e*P **P 19 07 51.5 +2.6**
KRUC Moravsky 22.14 307 *e*P **P 19 07 49.5 +0.2**
CONA Conrad Observa 22.16 304 *i*P **P 19 07 49.9 +0.2**
comp=Z,12nm,1.1s,SNR=8.5
ARSA Arzberg 22.23 302 *i*P **P 19 07 51.7 +1.3**
comp=Z,5.9nm,0.9s
KLMR Klimovskoe 22.41 355 *e*P **P 19 07 50.8 -1.3**
KLMR pmax pmax
comp=Z,84nm,1.0s
KLMR Klimovskoe 22.41 355 *e*P **P 19 07 50.9 -1.2**
KLMR AMP 19 08 00.8
comp=Z,84nm,1.1s
VISS Visnje 22.43 298 *e*P **P 19 07 53.6 +1.1**
SOKA Soboth 22.44 300 *i*P **P 19 07 55.9 +3.3**
comp=Z,10nm,1.6s
ARSB Arslanbob 22.60 74 *e*P **P 19 07 55.2 +0.7**
comp=Z,36nm,1.1s
DPC Dobruska-Polom 22.61 310 *e*P **P 19 07 55.1 +0.7**
DPC MLR MLR
comp=Z,300nm,9.8s
DPC Dobruska-Polom 22.61 310 *e*P **P 19 07 55.1 +0.7**
DPC *e*S **S 19 12 05.6 +3.5**
DPC AMS AMS 19 20 20.0
comp=Z,300nm,9.8s
VSU Vasula 22.68 337*ce*P **P 19 07 54.9 0.0**
VSU pmax pmax
comp=Z,29nm,0.8s
VSU Vasula 22.68 337 *e*P **P 19 07 52.7 -2.2**
VSU IAmb IAmb 19 08 11.1
comp=Z,50nm,0.9s
OBKA Obir 22.74 300 *i*P **P 19 08 00.6 +4.7**
comp=Z,6.4nm,1.1s
OSTC Ostas 22.75 311 *e*P **P 19 07 57.0 +1.1**
OSTC AMS AMS 19 19 50.0
comp=Z,400nm,11.6s
TREC Trest 22.78 307 *e*P **P 19 07 57.4 +1.2**
TREC *e*S **S 19 12 05.8 +0.7**
TREC MLR MLR
comp=Z,300nm,12.1s
TREC Trest 22.78 307 *e*P **P 19 07 57.4 +1.2**
TREC *e*S **S 19 12 05.8 +0.7**
TREC AMS AMS 19 20 00.0
comp=Z,300nm,12.1s
KSP Ksiaz 22.81 311 *e*P **P 19 08 01.1 +4.7**
KSP Ksiaz 22.81 311 *e*P **P 19 08 01.1 +4.7**
UPC Upice 22.86 310 *e*P **P 19 07 57.5 +0.6**
UPC *e*S **S 19 12 09.3 +2.9**
UPC MLR MLR
comp=Z,300nm,13.1s
UPC Upice 22.86 310 *e*P **P 19 07 57.5 +0.6**
UPC *e*S **S 19 12 09.3 +2.9**
UPC AMS AMS 19 19 30.0
comp=Z,300nm,13.1s
CHVC Chvalec 22.86 311 *e*P **P 19 07 57.9 +0.9**
CHVC AMS AMS 19 20 00.0
comp=Z,400nm,12.0s
JAVS Javornik 22.98 298 *i*P **P 19 07 57.6 -0.8**
VAE Valguarnera 23.01 276 LR LR 19 18 32.4
comp=Z,235nm,18.5s,baz=177,slow=41
PRGR Permogore 23.08 2 *e*P **P 19 07 56.5 -2.6**
PRGR pmax pmax
comp=Z,17nm,0.8s
EKS2 Erkin-Say 23.16 70 P **P 19 08 01.0 +0.7**
SNR=12
MOA Molln 23.19 303 *i*P **P 19 08 01.0 +0.6**
comp=Z,16nm,1.4s,SNR=7.1
AQU L'Aquila 23.24 289 *e*P **P 19 08 00.9 -0.1**
comp=Z,45nm,1.1s
AQU L'Aquila 23.24 289 *e*P **P 19 08 00.9 -0.1**
AQU pmax pmax
comp=Z,45nm,1.1s
BRVK Borovoye 23.34 43 *e*P **P 19 08 03.0 +1.2**
comp=Z,14nm,0.9s
BRVK Borovoye 23.34 43⇑*e*P **P 19 08 02.7 +0.9**
BRVK pmax pmax
comp=Z,8.0nm,0.9s
MYKA Terra Mystica 23.38 300 *i*P **P 19 08 05.9 +3.5**
comp=Z,7.6nm,1.3s
BVAR Borovoye Array 23.38 43 P **P 19 08 02.8 +0.5**
comp=Z,1.6nm,0.7s,baz=247,slow=20,SNR=5.5
GOPC GO Pecny, Ondr 23.40 308 *e*P **P 19 08 03.0 +0.5**
GOPC *e*S **S 19 12 18.7 +3.1**
GOPC MLR MLR
comp=Z,300nm,14.9s
GOPC GO Pecny, Ondr 23.40 308 *e*P **P 19 08 03.0 +0.5**
GOPC *e*S **S 19 12 18.7 +3.1**
GOPC AMS AMS 19 19 20.0
comp=Z,300nm,14.9s
PRU Pruhonice 23.58 308 *e*P **P 19 08 04.7 +0.5**
PRU *e*S **S 19 12 19.0 +0.6**
PRU MLR MLR
comp=Z,300nm,12.4s
PRU Pruhonice 23.58 308 *e*P **P 19 08 04.7 +0.5**
PRU *e*S **S 19 12 19.0 +0.6**
PRU AMS AMS 19 19 40.0
comp=Z,300nm,12.4s
KBA Koelnbreinsper 23.65 301 *i*P **P 19 08 05.1 -0.1**
comp=Z,20nm,1.2s,SNR=12
AAK Ala-Archa 23.69 70 P **P 19 08 06.9 +1.2**
comp=Z,5.3nm,0.8s,baz=253,slow=12,SNR=7.2
AAK Ala-Archa 23.69 70 *e*P **P 19 08 06.5 +0.9**
comp=Z,8.8nm,0.9s
AAK Ala-Archa 23.69 70*ce*P **P 19 08 07.4 +1.8**
AAK pmax pmax
comp=Z,9.0nm,1.3s
PVCC Panska Ves 23.73 310 *e*P **P 19 08 06.2 +0.5**
PVCC MLR MLR
comp=Z,500nm,13.8s
PVCC Panska Ves 23.73 310 *e*P **P 19 08 06.2 +0.5**
PVCC AMS AMS 19 19 50.0
comp=Z,500nm,13.8s
GEC2 GERESS Array S 23.79 305 *e*P **P 19 08 05.8 -0.6**
comp=Z,13nm,1.2s
GEC2 GERESS Array S 23.79 305 *e*P **P 19 08 05.8 -0.6**
GEC2 pmax pmax
comp=Z,13nm,1.2s
GERES GERESS Array B 23.79 305 P **P 19 08 05.7 -0.8**
comp=Z,4.8nm,1.0s,baz=106,slow=9.8,SNR=21
GERES LR LR 19 18 16.4
comp=Z,56nm,20.0s,baz=90,slow=39
CHMS Chumysh 23.88 69 P **P 19 08 08.8 +1.5**
SNR=9.3
KHC Kasperske Hory 23.94 306 *e*P **P 19 08 07.2 -0.6**
comp=Z,7.4nm,1.1s
KHC Kasperske Hory 23.94 306 *e*P **P 19 08 07.6 -0.2**
KHC *e* 19 08 35.0
KHC *e*S **S 19 12 22.5 -1.8**
KHC MLR MLR
comp=Z,300nm,12.5s
KHC Kasperske Hory 23.94 306 *e*P **P 19 08 07.6 -0.2**
KHC *e*x x 19 08 35.0
KHC *e*S **S 19 12 22.5 -1.8**
KHC AMS AMS 19 20 00.0
comp=Z,300nm,12.5s
KBK Karagaybulak 24.02 70 P **P 19 08 10.6 +1.7**
SNR=14
ABTA Abfaltersbach 24.16 300 *i*pP **P 19 08 11.4 +1.4**
comp=Z,6.4nm,0.8s
BRG Berggiesshubel 24.22 310 *e*P **P 19 08 09.7 -0.6**
comp=Z,5.7nm,1.2s
BRG S **S 19 12 35.0 +6.4**
BRG Berggiesshubel 24.22 310 *e*P **P 19 08 09.7 -0.6**
BRG pmax pmax
comp=Z,6.0nm,1.2s
KZA Kyzart 24.27 72 P **P 19 08 12.8 +1.4**
SNR=5.8
NIL Nilore 24.37 93 *e*P **P 19 08 11.9 0.0**
comp=Z,12nm,1.0s
NIL Nilore 24.37 93 *e*P **P 19 08 11.9 0.0**
NIL pmax pmax
comp=Z,12nm,1.0s
TKM2 Tokmak 2 24.50 70 P **P 19 08 15.9 +2.6**
SNR=10
TKM2 Tokmak 2 24.50 70 P **P 19 08 14.8 +1.6**
TKM2 pmax pmax
comp=Z,23nm,1.4s
WTTA Wattenberg 24.83 301 *i*P **P 19 08 16.1 -0.1**
comp=Z,14nm,1.0s
NRN Naryn 24.86 73 *e*P **P 19 08 17.9 +1.2**
comp=Z,8.2nm,0.9s
NRN Naryn 24.86 73 *e*P **P 19 08 17.9 +1.2**
NRN pmax pmax
comp=Z,8.0nm,0.9s
RUE Ruedersdorf 24.87 314 *e*P **P 19 08 14.0 -2.2**
RUE IAmb IAmb 19 08 22.2
comp=Z,32nm,0.8s
WATA Walderalm 24.89 301 *i*P **P 19 08 16.1 -0.5**
comp=Z,23nm,1.1s
CLL Collm 24.92 311 *e*P **P 19 08 16.4 -0.3**
comp=Z,17nm,1.1s
CLL Collm 24.92 311 *i*P **P 19 08 16.6 -0.1**
comp=Z,17nm,1.0s
CLL *i*sP **sP 19 08 21.7 0.0**
CLL *e*S **S 19 12 46.0 +6.1**
CLL Collm 24.92 311 *i*P **P 19 08 16.6 -0.1**
CLL pmax pmax
comp=Z,17nm,1.0s
NKC Novy Kostel 24.94 308 *e*P **P 19 08 16.4 -0.5**
NKC *e*S **S 19 12 42.8 +2.5**
NKC MLR MLR
comp=Z,300nm,14.5s
NKC Novy Kostel 24.94 308 *e*P **P 19 08 16.4 -0.5**
NKC *e*S **S 19 12 42.8 +2.5**
NKC AMS AMS 19 21 00.0
comp=Z,300nm,14.5s
KSH Kashi 25.05 78 *e*P **P 19 08 18.9 +0.7**
SQTA Sankt Quirin 25.11 301 *i*P **P 19 08 17.3 -1.4**
comp=Z,11nm,0.8s
MOTA Moosalm 25.20 301 *i*P **P 19 08 19.7 +0.2**
comp=Z,25nm,1.2s
FETA Feichten 25.41 300 *i*P **P 19 08 21.0 -0.4**
comp=Z,12nm,1.2s
RETA Reutte 25.45 301 *i*P **P 19 08 21.3 -0.3**
comp=Z,12nm,1.0s
GRA1 Grafenberg Arr 25.57 306 *e*P **P 19 08 23.0 +0.4**
comp=Z,24nm,1.0s
GRF Grafenberg Arr 25.57 306 *e*P **P 19 08 23.0 +0.4**
GRF pmax pmax
comp=Z,24nm,1.0s
GRFO Grafenberg 25.57 306 *e*P **P 19 08 23.5 +0.9**
comp=Z,24nm,1.0s
GRFO Grafenberg 25.57 306 *e*P **P 19 08 23.5 +0.9**
GRFO pmax pmax
comp=Z,24nm,1.0s
DAVOX Davos/Dischmat 25.96 299 P **P 19 08 25.6 -0.8**
comp=Z,4.3nm,0.8s,baz=105,slow=12,SNR=6.5
DAVOX LR LR 19 20 03.8
comp=Z,111nm,20.6s,baz=82,slow=40
DAVA Damuels 26.02 300 *i*P **P 19 08 26.1 -0.8**
comp=Z,16nm,1.0s
TUE Stuetta 26.30 298 *e*P **P 19 08 28.2 -1.3**
comp=Z,6.8nm,0.9s
KURBB Kurchatov Arra 27.32 53 P **P 19 08 39.6 +1.2**
comp=Z,9.6nm,1.0s,baz=262,slow=9.1,SNR=30
PDGK Podgornoye 27.34 69 P **P 19 08 38.3 -0.5**
PDGK pmax pmax
comp=Z,8.0nm,1.3s
KEST Kesra 27.39 275 P **P 19 08 38.3 -0.9**
comp=Z,9.2nm,0.9s,baz=340,slow=4.3,SNR=8.3
KURK Kurchatov 27.40 52 *e*P **P 19 08 39.3 +0.2**
comp=Z,14nm,0.9s
KURK Kurchatov 27.40 52 P **P 19 08 39.7 +0.6**
BNI Bardonecchia 28.10 295 *e*P **P 19 08 45.1 -0.5**
comp=Z,9.3nm,1.0s
BNI Bardonecchia 28.10 295 *e*P **P 19 08 45.1 -0.5**
BNI pmax pmax
comp=Z,9.0nm,1.0s
HFS Hagfors 28.62 329 P **P 19 08 49.0 -0.9**
comp=Z,4.7nm,1.0s,baz=74,slow=2.2,SNR=4.1
HFS LR LR 19 21 39.5
comp=Z,154nm,19.2s,baz=115,slow=39
MAKZ Makanchi 29.10 61 *e*P **P 19 08 55.2 +0.8**
comp=Z,5.6nm,0.9s
MAKZ Makanchi 29.10 61 *e*P **P 19 08 55.2 +0.8**
MAKZ pmax pmax
comp=Z,6.0nm,0.9s
MK31 Makanchi Array 29.31 61 *e*P **P 19 08 57.0 +0.7**
comp=Z,3.8nm,0.8s
MK31 Makanchi Array 29.31 61 *e*P **P 19 08 57.0 +0.7**
MK31 pmax pmax
comp=Z,4.0nm,0.8s
MK32 Makanchi Array 29.31 61 *e*P **P 19 08 57.1 +0.8**
MKAR Makanchi Array 29.31 61 P **P 19 08 57.1 +0.8**
comp=Z,5.2nm,0.8s,baz=264,slow=7.1,SNR=29
MKAR LR LR 19 22 32.3
comp=Z,172nm,20.0s,baz=267,slow=40
MKAR Makanchi Array 29.31 61*ce*P **P 19 08 57.2 +0.9**
MKAR pmax pmax
comp=Z,5.0nm,0.8s
NB2 NORSAR Subarra 30.14 329 P **P 19 09 01.6 -1.8**
comp=Z,6.3nm,1.4s,baz=126,slow=9.3
NB200 NORSAR Array S 30.14 329 *e*P **P 19 09 01.6 -1.8**
NOA NORSAR Array B 30.14 329 P **P 19 09 01.6 -1.8**
comp=Z,0.7nm,0.7s,baz=121,slow=8.9,SNR=2.7
NOA LR LR 19 21 53.1
comp=Z,137nm,19.7s,baz=125,slow=38
NVS Novosibirsk 31.11 46 *e*P **P 19 09 12.9 +0.9**
ZALV Zalesovo Beam 31.80 48 P **P 19 09 18.3 +0.2**
comp=Z,2.3nm,0.7s,baz=262,slow=10,SNR=9.7
ZALV LR LR 19 24 05.4
comp=Z,62nm,19.4s,baz=250,slow=40
ZAA1 Zalesovo Array 31.81 48 *e*P **P 19 09 18.3 +0.2**
ARCES ARCESS Array B 32.47 348 P **P 19 09 22.4 -1.4**
comp=Z,6.0nm,0.3s,baz=147,slow=5.4,SNR=5.5
ARCES LR LR 19 23 19.7
comp=Z,411nm,18.2s,baz=180,slow=38
DGZ Jazzator, Alta 32.87 56*ce*P **P 19 09 28.8 +1.1**
DGZ pmax pmax
comp=Z,7.0nm,1.1s
WMQ Urumqi 33.24 67 *e*P **P 19 09 31.8 +0.9**
WMQ pP pP 19 09 34.7 +0.2
WMQ pmax pmax
comp=Z,26nm,0.9s
WMQ pmax pmax
comp=Z,19nm,3.8s
WMQ LR LR
comp=Z,120nm,13.9s
WMQ LR LR
comp=Z,150nm,18.1s
WMQ LR LR
comp=Z,240nm,22.3s
PYUN Piuthan 34.27 96 *e*P **P 19 09 40.2 0.0**
comp=Z,40nm,1.0s
DANN Dangsing 34.75 95 *e*P **P 19 09 44.8 +0.3**
comp=Z,48nm,0.9s
KOLN Koldanda 34.90 96 *e*P **P 19 09 45.5 -0.1**
comp=Z,23nm,0.9s
GKN Gorkha 35.60 95 *e*P **P 19 09 51.6 0.0**
TAM Tamanrasset 36.08 255 *e*P **P 19 09 56.0 +0.3**
comp=Z,8.1nm,0.9s
TAM Tamanrasset 36.08 255 *e*P **P 19 09 56.1 +0.3**
TAM pmax pmax
comp=Z,8.0nm,0.9s
DMN Daman 36.15 95 *e*P **P 19 09 56.7 +0.2**
comp=Z,55nm,1.2s
KKN Kakani 36.20 95 *e*P **P 19 09 56.8 0.0**
PKIN Phulchoki 36.39 95 *e*P **P 19 09 58.7 +0.2**
PKI Pulchoki 36.41 95 *e*P **P 19 09 58.8 +0.1**
comp=Z,21nm,1.0s
ESDC Sonseca Array 36.60 287 P **P 19 09 58.3 -1.6**
comp=Z,5.2nm,0.7s,baz=67,slow=8.7,SNR=36
ESDC LR LR 19 26 22.5
comp=Z,62nm,19.6s,baz=40,slow=39
ESLA Sonseca Array 36.60 287 *e*P **P 19 09 58.5 -1.4**
comp=Z,6.1nm,0.8s
GUN Gumba 36.61 94 *e*P **P 19 10 00.8 +0.3**
comp=Z,31nm,0.8s
JIRN Jiri 36.97 94 *e*P **P 19 10 03.9 +0.3**
comp=Z,42nm,0.9s
RAMN Ramite 37.63 95 *e*P **P 19 10 09.2 +0.1**
comp=Z,18nm,0.5s
MVO Moncorvo 38.52 290 *e*LR LR 19 24 52.9
comp=Z,73nm,20.0s
NRIK Noril'sk 38.62 23 P **P 19 10 16.9 +0.4**
comp=Z,2.6nm,0.7s,baz=169,slow=5.2,SNR=2.3
NRIK LR LR 19 29 12.6
comp=Z,120nm,20.2s,baz=212,slow=41
NRIK Noril'sk 38.62 23 P **P 19 10 17.0 +0.4**
PVRL Vila Real 39.00 291 *e*P **P 19 10 19.0 -1.2**
MTE Manteigas 39.08 289 *e*P **P 19 10 20.2 -0.7**
comp=Z,21nm,1.3s
MTE Manteigas 39.08 289 *e*LR LR 19 26 17.1
comp=Z,127nm,20.0s
MTE Manteigas 39.08 289 *e*P **P 19 10 19.8 -1.1**
comp=Z,20nm,1.0s
PCBR Castelo Branco 39.18 288 *e*P **P 19 10 20.9 -0.7**
comp=Z,22nm,1.6s
PMRV Marv??o 39.22 288 *e*P **P 19 10 21.0 -1.0**
PMRV Marv??o 39.22 288 *e*LR LR 19 26 45.0

comp=Z,125nm,18.0s
MDT Midelt 39.24 277 P **P 19 10 22.2 -0.1**
comp=Z,4.1nm,0.9s,baz=78,slow=8.1,SNR=9.2
PGAV Gavieira, Arco 39.24 292 *e*LR LR 19 25 35.8
comp=Z,132nm,18.0s
PVIS Viseu 39.26 290 *e*P **P 19 10 20.4 -2.0**
PTOM Tomar 39.93 288 *e*P **P 19 10 27.2 -0.7**
comp=Z,32nm,1.6s
LSA Lhasa 39.93 88 *e*P **P 19 10 29.3 +0.7**
comp=Z,11nm,0.9s
LSA Lhasa 39.93 88 *e*P **P 19 10 29.3 +0.7**
LSA pmax pmax
comp=Z,11nm,0.9s
PMTG Montargil 39.94 287 *e*P **P 19 10 27.0 -1.0**
PBEJ Beja 39.97 286 *e*P **P 19 10 28.5 +0.2**
PVAQ Vaqueiros 40.05 285 *e*P **P 19 10 27.1 -1.8**
PCVE Castro Verde 40.22 285 *e*P **P 19 10 29.4 -1.0**
GTA Gaotai 43.04 71 P **P 19 10 54.6 +1.0**
GTA pP sP 19 10 59.2 +0.6
GTA sP pP 19 11 01.7 +4.5
GTA PcP **PcP 19 12 40.8 -2.9**
GTA ScP **ScP 19 16 35.6 +0.7**
GTA S **S 19 17 22.7 +3.3**
GTA sS sS 19 17 33.0 +7.6
GTA pmax pmax
comp=Z,5.0nm,1.5s
GTA pmax pmax
comp=Z,29nm,5.0s
GTA LR LR
comp=Z,140nm,17.8s
GTA LR LR
comp=Z,130nm,16.2s
GTA LR LR
comp=Z,120nm,16.5s
TOA1 Torodi Ar. Sit 44.92 247 *e*P **P 19 11 06.8 -2.0**
TORD Torodi Ar. Bea 44.92 247 P **P 19 11 06.8 -2.0**
comp=Z,3.0nm,1.0s,baz=9.6,slow=9.8,SNR=10
ULN Ulaanbaatar 45.92 57 *e*P **P 19 11 17.6 +1.1**
comp=Z,8.9nm,1.1s
ULN Ulaanbaatar 45.92 57⇓ *e*P **P 19 11 19.6 +3.0**
ULN pmax pmax
comp=Z,6.0nm,0.8s
LZH Lanzhou 47.17 73 *e*P **P 19 11 26.1 -0.4**
LZH pmax pmax
comp=Z,36nm,1.1s
LZH LR LR
comp=Z,360nm,17.1s
LZH LR LR
comp=Z,260nm,12.8s
LZH LR LR
comp=Z,290nm,17.8s
BOD Bodaibo 48.25 43 *e*P **P 19 11 35.3 +1.0**
BOD pmax pmax
comp=Z,7.0nm,0.9s
HHC Hu-ho-hao-te 51.07 65 *e*P **P 19 11 55.7 -0.6**
HHC PP **PP 19 13 52.8 +0.1**
HHC S **S 19 19 10.0 -3.9**
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,65nm,5.3s
HHC LR LR
comp=Z,250nm,16.7s
HHC LR LR
comp=Z,170nm,11.2s
HHC LR LR
comp=Z,890nm,18.6s
KMI Kunming 51.16 87 P **P 19 11 58.9 +1.6**
KMI pmax pmax
comp=Z,21nm,0.5s
KMI LR LR
comp=Z,210nm,16.9s
CHTO Chiang Mai 51.56 96 *e*P **P 19 11 59.4 -0.7**
comp=Z,4.7nm,1.0s
CHTO Chiang Mai 51.56 96 *e*P **P 19 11 59.4 -0.7**
CHTO pmax pmax
comp=Z,5.0nm,1.0s
CMMT Chiang Mai 51.57 96 P P 19 12 06.4 +6.3
comp=Z,3.2nm,2.3s
CM31 Chiang Mai Arr 51.77 97 *e*P **P 19 11 59.9 -1.7**
comp=Z,5.6nm,1.0s
CMAR Chiang Mai Arr 51.77 97 P **P 19 12 00.9 -0.7**
comp=Z,1.5nm,0.8s,baz=300,slow=7.3,SNR=8.4
CMAR LR LR 19 39 05.5
comp=Z,61nm,21.2s,baz=285,slow=42
XAN Xi'an 51.80 74 P **P 19 12 01.9 +0.2**
XAN pmax pmax
comp=Z,7.0nm,1.1s
XAN Xi'an 51.80 74 *e*P **P 19 12 02.0 +0.2**
comp=Z,5.8nm,0.8s
XAN Xi'an 51.80 74 *e*P **P 19 12 02.0 +0.2**
XAN pmax pmax
comp=Z,6.0nm,0.8s
TIXI Tiksi 52.40 23 P **P 19 12 05.8 +0.2**
comp=Z,1.3nm,0.7s,baz=110,slow=15,SNR=4.7
TIXI Tiksi 52.40 23 *e*P **P 19 12 06.1 +0.5**
comp=Z,3.9nm,0.9s
TIXI Tiksi 52.40 23⇑ *e*P **P 19 12 08.0 +2.4**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
KIC Kosan Boka 54.16 246 *e*P **P 19 12 17.4 -1.9**
comp=Z,45nm,1.3s
TIC Toumodi 54.16 247 *e*P **P 19 12 18.3 -1.0**
LIC Lamto 54.46 247 *e*P **P 19 12 19.6 -1.9**
comp=Z,68nm,1.4s
NJ2 Nanjing 60.13 71 *e*P **P 19 13 00.5 -0.9**
NJ2 pmax pmax
comp=Z,15nm,0.5s
PSI Prapat 61.59 111 LR LR 19 41 01.3
comp=Z,101nm,19.4s,baz=300,slow=37
GRNR Gornyy 62.87 45 *e*P P 19 13 07.8 -12
KS15 Wonju Array Si 63.97 62 *e*P **P 19 13 26.9 -0.2**
comp=Z,8.2nm,0.9s
KSRS Korea Array 63.99 62 P **P 19 13 27.1 -0.2**
comp=Z,9.0nm,1.0s,baz=287,slow=6.2,SNR=30
SEY Seymchan 64.06 29 P **P 19 13 27.1 -0.1**
comp=Z,7.0nm,0.8s,baz=283,slow=6.9,SNR=7.1
SEY Seymchan 64.06 29⇓ *e*P **P 19 13 28.4 +1.2**
MA2 Magadan 65.32 32 LR LR 19 47 15.9
comp=Z,39nm,18.2s,baz=292,slow=41
BILL Bilibino 65.36 20 *i* P **P 19 13 34.3 -1.3**
BILL *i* 19 14 10.1
BILL *i* 19 15 58.1
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL MLR MLR
comp=Z,69nm,18.0s
JNU Nakatsue 68.30 64 P **P 19 13 56.3 +1.2**
comp=Z,3.9nm,0.8s,baz=1.4,slow=3.0,SNR=4.2
BOSA Boshof 69.05 197 P **P 19 13 58.8 -0.8**
comp=Z,4.4nm,0.8s,baz=28,slow=7.5,SNR=7.3
SCHQ Schefferville 69.61 325 LR LR 19 45 20.7
comp=Z,37nm,18.9s,baz=50,slow=37
MAJO Matsushiro 71.44 58 *e*P **P 19 14 15.1 +0.8**
MAJO Matsushiro 71.44 58 *e*P **P 19 14 15.1 +0.8**
MJAR Matsushiro Arr 71.45 58 P **P 19 14 15.1 +0.7**
comp=Z,2.7nm,0.9s,baz=327,slow=2.9,SNR=7.8
INK Inuvik 73.38 359 LR LR 19 50 15.4
comp=Z,70nm,20.3s,baz=18,slow=39
COLD Coldfoot 73.96 6 *e*P **P 19 14 28.9 +0.2**
comp=Z,1.5nm,0.8s
LEM Lembang 74.46 112 LR LR 19 50 02.1
comp=Z,30nm,18.9s,baz=7.5,slow=38
EPYK Eagle Plains 75.35 0 *e*P **P 19 14 36.6 -0.2**
comp=Z,4.4nm,1.1s
ILAR Eielson Array 76.62 5 LR LR 19 50 21.7
comp=Z,48nm,21.1s,baz=311,slow=37
EGAK Eagle 76.88 2 *e*P **P 19 14 45.5 0.0**
comp=Z,3.4nm,0.9s
YKA Yellowknife Ar 77.72 350 P **P 19 14 49.7 -0.5**
comp=Z,1.4nm,0.9s,baz=16,slow=6.1,SNR=11
YKB5 Yellowknife Ar 77.72 350 *e*P **P 19 14 49.7 -0.5**
SUA Susitna One 79.59 7 *e*P **P 19 14 60.0 -0.7**
comp=Z,3.3nm,0.8s
MMNY Mt. Morris Dam 83.21 321 *e*P **P 19 15 18.8 -1.4**
comp=Z,22nm,0.8s
ULM Lac du Bonnet 84.61 335 LR LR 19 52 53.4
comp=Z,76nm,18.7s,baz=327,slow=36
PDAR Pinedale Array 95.42 341 LR LR 20 01 04.7
comp=Z,63nm,18.6s,baz=58,slow=37

CRAAG ***12*** *19:09:42.0,35.°39N×1.°73E,Ml2.5*
MDD ***12*** *19:09:44.8±0.6,35.°34N×1.°78E,h0km,mb4.0/9,Error ellipse: s-maj=5.0km s-min=3.3km az=136.0,PRXIMO*

ISC 12 19:09:42.0±2.6,35.°4N±0.°1×1.°7E±0.°1,h10km,n19,
σ1$45/30,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETRT	**Tiaret**	**0.35**	**273**	P	**Pb**	**19 09 50.5**	**0.0**
ETRT	**Tiaret**	**0.35**	**273**	P	**Pb**	**19 09 50.5**	**0.0**
EANR	**'Ain N'Sour**	**0.77**	**319**	P	**Pg**	**19 09 56.2**	**-0.7**
EANR	**'Ain N'Sour**	**0.77**	**319**	P	**Pg**	**19 09 56.2**	**-0.7**
ECHA	**Ech Chlef**	**0.83**	**339**	P	**Pb**	**19 09 58.6**	**0.0**
ECHF	**Ech Chlef**	**0.84**	**338**	P	**Pb**	**19 09 58.6**	**-0.2**
EBNR	**Beni Rached**	**0.93**	**350**	P	**Pb**	**19 10 00.0**	**-0.3**
OKGL	**Djebel Kef Gue**	**1.11**	**307**	P	**Pn**	**19 10 04.2**	**+0.6**
	11nm,0.1s,SNR=7.9						
OKGL				S	**Sn**	**19 10 19.1**	**+0.1**
	355nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**3.43**	**317**	P	**Pn**	**19 10 36.6**	**+1.0**
	2.1nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**19 11 15.1**	**-1.3**
	5.7nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**3.56**	**298**	S	**Sn**	**19 11 17.0**	**-2.5**
	4.9nm,0.2s,SNR=7.9						
EBEN2	**Beniarda presa**	**3.64**	**336**	P	**Pn**	**19 10 41.0**	**+2.6**
	6.6nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**19 11 21.3**	**-0.2**
	7.4nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**3.66**	**355**	P	**Pn**	**19 10 40.5**	**+1.7**
	3.8nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**19 11 20.6**	**-1.4**
	7.9nm,0.2s,SNR=7.9						
EBER	**Berja**	**4.04**	**294**	P	**Pn**	**19 10 44.6**	**+0.5**
	1.2nm,0.2s,SNR=14						
EBER				S	**Sn**	**19 11 30.7**	**-0.8**
	2.5nm,0.2s,SNR=4.6						
SESP	**Santiago Espad**	**4.39**	**310**	P	**Pn**	**19 10 51.5**	**+2.6**
	7.9nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**19 11 40.7**	**+0.4**
	25nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**4.47**	**11**	P	**Pn**	**19 10 50.1**	**+0.2**
	0.8nm,0.3s,SNR=7.9						
ETOS				S	**Sn**	**19 11 40.5**	**-1.5**
	1.9nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.56**	**304**	P	**Pn**	**19 10 53.4**	**+2.2**
	2.6nm,0.2s,SNR=16						
EQES				S	**Sn**	**19 11 45.4**	**+1.1**
	9.7nm,0.2s,SNR=6.7						
ELGU	**Los Guajares,**	**4.58**	**291**	P	**Pn**	**19 10 51.7**	**+0.2**
	1.8nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**19 11 43.0**	**-1.9**
	1.7nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.73**	**334**	P	**Pn**	**19 10 55.6**	**+2.2**
	0.7nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**19 11 46.7**	**-1.6**
	1.8nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.28**	**341**	P	**Pn**	**19 11 03.6**	**+2.4**
	1.0nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	**19 12 01.0**	**-1.1**
	2.1nm,0.3s,SNR=7.9						

AEIC ***12*** *19:14:32.2±0.0,61.°54N×140.°71W,h5km*
NEIC ***12*** *19:14:32.0±0.0,61.°55N×140.°64W,h5km,ML2.8(OTT), ML2.9(AEIC),After OTT.*
PGC ***12*** *19:14:32.2,61.°55N×140.°64W,h5km,ML2.8/9,189km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada*
ISC 12 19:14:31.5±0.8,61.°54N±0.°02×140.°65W±0.°02,h10km,n55,
σ1$73/70,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK3	**Moose Creek**	**0.26**	**21**	P	**Pg**	**19 14 36.5**	**-0.4**
YUK3				S	**Sg**	**19 14 40.4**	**-0.1**
YUK2	**White River**	**0.27**	**340**	S	**Sg**	**19 14 40.5**	**-0.2**
YUK1	**Sand Pete Hill**	**0.62**	**5**	P	**Pg**	**19 14 42.9**	**-0.7**
YUK1				S	**Sg**	**19 14 51.5**	**-0.4**
BALM	**Baldy**	**0.96**	**239**	*e*Pg	**Pg**	**19 14 49.0**	**-0.9**
BALM	**Baldy**	**0.96**	**239**	P	**Pg**	**19 14 49.0**	**-0.9**
BALM				S	**Sg**	**19 15 02.4**	**0.0**
YUK4	**Talbot Arm**	**0.98**	**100**	*e*Pg	**Pg**	**19 14 50.1**	**-0.4**
YUK4	**Talbot Arm**	**0.98**	**100**	P	**Pg**	**19 14 50.0**	**-0.4**
KIAG	**Kiagna River**	**1.03**	**234**	P	**Pg**	**19 14 50.4**	**-0.9**
KIAG				S	**Sg**	**19 15 05.1**	**+0.5**
YUK6	**Outpost Mounta**	**1.26**	**117**	P	**Pn**	**19 14 54.4**	**-0.9**
RKAV	**Rock Avalanche**	**1.28**	**196**	P	**Pn**	**19 14 55.1**	**-0.6**
RKAV				S	**Sb**	**19 15 12.3**	**-0.2**
TGL	**Tana Glacier**	**1.31**	**234**	*e*Pn	**Pn**	**19 14 55.5**	**-0.5**
YUK5	**Granite Creek**	**1.41**	**106**	Pn	**Pn**	**19 14 56.6**	**-0.7**
SAMH	**Samovar Hills**	**1.41**	**183**	Pn	**Pn**	**19 14 58.0**	**+0.7**
SAMH				Sg	**Sg**	**19 15 17.7**	**+0.8**
CRQM	**Cirque**	**1.44**	**238**	*e*Pn	**Pn**	**19 14 56.8**	**-1.0**
CRQM				*e*Pn	**Pb**	**19 14 57.2**	**-1.2**
PCA	**Pinnacle**	**1.46**	**172**	*e*Pn	**Pn**	**19 14 58.5**	**+0.5**
CHX	**Chaix Hills**	**1.50**	**189**	*e*Pn	**Pn**	**19 14 59.6**	**+1.1**
MESA	**MESA**	**1.50**	**206**	Pn	**Pn**	**19 14 59.8**	**+1.1**
MESA				Sg	**Sg**	**19 15 20.6**	**+0.9**
YUK7	**Dusty Glacier**	**1.58**	**128**	*e*Pn	**Pb**	**19 15 01.1**	**+0.1**
YUK7	**Dusty Glacier**	**1.58**	**128**	Pn	**Pn**	**19 15 00.9**	**+1.1**
BCA3	**Beaver Creek A**	**1.62**	**342**	*e*Pn	**Pn**	**19 15 00.8**	**+0.5**
BCPM	**Bancas Point**	**1.66**	**162**	*e*Pn	**Pn**	**19 14 58.0**	**-2.8**
HYT	**Haines Junctio**	**1.68**	**114**	*e*Pn	**Pn**	**19 15 01.9**	**+0.7**
SNH	**Sunshine Point**	**1.73**	**219**	*e*Pn	**Pb**	**19 15 03.6**	**+0.3**
PNL	**Peninsula**	**1.97**	**161**	*e*Pn	**Pn**	**19 15 06.8**	**+1.8**
PNL	**Peninsula**	**1.97**	**161**	Pn	**Pb**	**19 15 07.3**	**-0.2**
PNL				Sg	**Sb**	**19 15 34.5**	**+2.3**
MENT	**Mentasta**	**2.01**	**316**	*e*Pn	**Pn**	**19 15 06.2**	**+0.6**
NICHA	**Nichawak Mount**	**2.08**	**233**	*e*Pn	**Pb**	**19 15 09.6**	**+0.3**
HMT	**Hamilton**	**2.13**	**237**	*e*Pn	**Pn**	**19 15 08.8**	**+1.6**
HARP	**HAARP**	**2.30**	**294**	*e*Pn	**Pb**	**19 15 12.4**	**-0.6**
HARP	**HAARP**	**2.30**	**294**	Pn	**Pb**	**19 15 13.0**	**0.0**
HARP				Sg	**Sb**	**19 15 43.5**	**+2.0**
SGAM	**Sherman Glacie**	**2.45**	**247**	*e*Pn	**Pn**	**19 15 14.3**	**+2.8**
DIV	**Divide**	**2.50**	**263**	Pn	**Pb**	**19 15 15.2**	**-1.3**
DIV				Sg	**Sb**	**19 15 47.8**	**+0.5**
DOT	**Dot Lake**	**2.64**	**325**	*e*Pn	**Pn**	**19 15 14.7**	**+0.5**
DOT	**Dot Lake**	**2.64**	**325**	Pn	**Pn**	**19 15 15.2**	**+1.0**
DOT				Sg	**Sb**	**19 15 54.1**	**+2.7**
EYAK	**Cordova Ski Ar**	**2.67**	**250**	*e*Pn	**Pn**	**19 15 16.3**	**+1.8**
WHY	**Whitehorse**	**2.94**	**105**	*e*Pn	**Pn**	**19 15 19.1**	**+0.8**
WHY	**Whitehorse**	**2.94**	**105**	Pn	**Pn**	**19 15 19.0**	**+0.6**
WHY				Sg	**Sg**	**19 16 03.5**	**-2.3**
RIDG	**Independent Ri**	**2.94**	**321**	*e*Pn	**Pn**	**19 15 18.9**	**+0.6**
PLBC	**Pleasant Camp**	**2.98**	**133**	Pn	**Pb**	**19 15 25.4**	**+0.9**
PLBC				Sg	**Sg**	**19 16 06.2**	**-0.8**
GLI	**Glacier Island**	**3.19**	**261**	*e*Pn	**Pn**	**19 15 23.5**	**+1.9**
SCM	**Sheep Creek Mo**	**3.19**	**278**	*e*Pn	**Pn**	**19 15 25.2**	**+3.4**
EGAK	**Eagle**	**3.26**	**356**	*e*Pn	**Pn**	**19 15 23.7**	**+1.0**
DHY	**Denali Highway**	**3.50**	**299**	*e*Pn	**Pn**	**19 15 29.6**	**+3.5**
SML	**Sawmill**	**3.67**	**278**	*e*Pn	**Pn**	**19 15 30.3**	**+2.0**
KNK	**Knik Glacier**	**3.75**	**272**	*e*Pn	**Pn**	**19 15 30.0**	**+0.7**
HDA	**Harding Lake**	**4.07**	**318**	*e*Pn	**Pn**	**19 15 33.5**	**-0.2**
BESE	**Bessie Mountai**	**4.15**	**133**	*e*Pn	**Pn**	**19 15 37.5**	**+2.5**
RND	**Reindeer**	**4.24**	**300**	*e*Pn	**Pn**	**19 15 36.3**	**+0.1**
ILB	**Eielson Array**	**4.30**	**322**	*e*Pn	**Pn**	**19 15 37.0**	**0.0**
RC01	**Rabbit Creek A**	**4.40**	**268**	*e*Pn	**Pn**	**19 15 40.5**	**+2.1**
SUA	**Susitna One**	**4.83**	**274**	*e*Pn	**Pn**	**19 15 46.5**	**+2.2**
FYU	**Fort Yukon**	**5.43**	**340**	*e*Pn	**Pn**	**19 15 54.3**	**+1.8**
DLBC	**Dease Lake**	**6.17**	**116**	Sg	**Sg**	**19 17 43.5**	**-5.9**
COLD	**Coldfoot**	**7.05**	**328**	Pn	**Pn**	**19 16 14.0**	**-0.6**
COLD				Sg	**Sg**	**19 18 10.7**	**-6.7**
INK	**Inuvik**	**7.44**	**21**	Pn	**Pn**	**19 16 20.0**	**+0.1**

IDC ***12*** *19:26:42.9±1.1,31.°26N×49.°71E,h0km,mb3.6/13, mb1 3.8/16,mb1mx3.6/61,mbtmp3.7/16,ML3.3/3,MS2.7/1, Ms1 2.7/1,ms1mx2.1/37,Error ellipse: s-maj=25.2km s-min=16.2km az=4.0*
TEH ***12*** *19:26:44.9,31.°32N×49.°74E,h10km,ML3.5*
ISC 12 19:26:44.4±0.7,31.°25N±0.°07×49.°77E±0.°05,h10km,n50,
σ2$42/51,mb3.7/13,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHWZ	**Ahwaz**	**0.96**	**275**	*e*Sg	**Sn**	**19 27 18.7**	**+0.9**
AHWZ				*e*Pg	**Pn**	**19 27 08.0**	**+4.0**
SHGR	**Shooshtar-Gavs**	**1.19**	**316**	*e*Pg	**Pb**	**19 27 07.6**	**+0.6**
JHBN	**Jahan bin**	**1.24**	**38**	*e*Pg	**Pn**	**19 27 07.9**	**-0.3**
ZNGN	**Zangian**	**1.27**	**47**	IAMB	IAmb	19 27 16.0
	comp=Z,0.0nm,0.3s					
ZNGN				*e*Pg	**Pn**	**19 27 08.0**	**-0.5**
ROKH	**ROKH**	**1.53**	**44**	*e*Pn	**Pn**	**19 27 13.5**	**+1.4**
IPIR	**Pirpir**	**1.72**	**34**	*e*Pn	**Pn**	**19 27 16.7**	**+2.0**
IPIR				IAMB	IAmb	19 27 43.8
	comp=Z,7μm,0.8s					
IGAR	**Gharneh**	**2.25**	**59**	*e*Pn	**Pn**	**19 27 25.4**	**+3.4**
IGAR				IAMB	IAmb	19 28 01.1
	comp=Z,3μm,0.7s					
IRAM	**Ramesheh**	**2.30**	**75**	*e*Pn	**Pn**	**19 27 26.2**	**+3.5**
IKAZ	**Kazeroun**	**2.31**	**129**	*e*Pn	**Pn**	**19 27 26.3**	**+3.4**
IKAZ				IAMB	IAmb	19 28 25.0
	comp=Z,4μm,0.5s					
KHMZ	**Khomeyn**	**2.48**	**4**	*e*Pn	**Pn**	**19 27 29.2**	**+4.0**
IKMR	**Kamar-syah**	**2.54**	**333**	*e*Pn	**Pn**	**19 27 27.4**	**+1.6**
IKLH	**Kolahrood**	**2.57**	**36**	*e*Pn	**Pn**	**19 27 30.1**	**+3.7**
IKLH				IAMB	IAmb	19 28 14.0
	comp=Z,3μm,0.6s					
IZEF	**Zefreh**	**2.72**	**52**	*e*Pn	**Pn**	**19 27 31.4**	**+2.9**
IZEF				IAMB	IAmb	19 28 20.8
	comp=Z,2μm,0.5s					
IKFM	**Kafar-mosalman**	**2.79**	**325**	*e*Pn	**Pn**	**19 27 30.6**	**+1.5**
IDOB	**Doab**	**2.86**	**332**	*e*Pn	**Pn**	**19 27 30.7**	**+0.3**
NASN	**Na'in**	**3.01**	**58**	*e*Pn	**Pn**	**19 27 35.9**	**+3.4**
HSAM	**Samen**	**3.11**	**342**	*e*Pn	**Pn**	**19 27 35.7**	**+1.9**
IPAR	**Pars**	**3.16**	**116**	*e*Pn	**Pn**	**19 27 37.7**	**+3.1**
IPAR				IAMB	IAmb	19 28 43.0
	comp=Z,1μm,0.8s					
ASAO	**Ashtian**	**3.29**	**4**	*e*Pn	**Pn**	**19 27 38.6**	**+2.3**
KRSH	**Karshahi**	**3.37**	**36**	*e*Pn	**Pn**	**19 27 40.5**	**+3.2**
ISAD	**Sadrabad**	**3.41**	**78**	*e*Pn	**Pn**	**19 27 41.8**	**+3.9**
ISAD				IAMB	IAmb	19 27 48.4
	comp=Z,694nm,0.4s					
GHVR	**GHOM**	**3.47**	**21**	*e*Pn	**Pn**	**19 27 40.7**	**+2.1**
IKOM	**Komasi**	**3.48**	**327**	*e*Pn	**Pn**	**19 27 40.9**	**+2.1**
IGHG	**Ghaleghazi**	**4.08**	**320**	*e*Pn	**Pn**	**19 27 47.8**	**+0.6**
IGHG				IAMB	IAmb	19 29 26.6
	comp=Z,933nm,0.8s					
IVIS	**Veis**	**4.08**	**324**	*e*Pn	**Pn**	**19 27 47.5**	**+0.4**
IVIS				IAMB	IAmb	19 29 25.2
	comp=Z,579nm,1.1s					
IMEH	**Mehriz**	**4.15**	**87**	*e*Pn	**Pn**	**19 27 51.9**	**+3.8**
IMEH				IAMB	IAmb	19 27 56.4
	comp=Z,472nm,0.4s					
QABG	**Abgarm-Qazvin**	**4.45**	**358**	*e*Pn	**Pn**	**19 27 54.2**	**+2.0**
IDMV	**Damavand**	**4.71**	**23**	*e*Pn	**Pn**	**19 27 57.8**	**+1.9**
IBAF	**Bafgh**	**4.97**	**85**	*e*Pn	**Pn**	**19 28 02.5**	**+3.2**
IFIR	**Firoozkooh**	**5.04**	**29**	*e*Pn	**Pn**	**19 28 03.0**	**+2.7**
ISHM	**Shahmirzad**	**5.41**	**32**	*e*Pn	**Pn**	**19 28 08.5**	**+3.0**
GEYT	**Alibeck**	**9.57**	**44**	Pn	**Pn**	**19 29 05.0**	**+2.6**
	comp=Z,0.7nm,0.3s,baz=233,slow=12,SNR=16						
ASF	**Jabal al Asfar**	**11.00**	**278**	Pn	**Pn**	**19 29 20.1**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=14,slow=4.2,SNR=3.3						
ASF				Sn	Sn	19 31 14.1	-11
	comp=Z,0.2nm,0.3s,baz=180,slow=20,SNR=1.9						
ASF				Lg	Lg	19 32 39.2
	comp=Z,0.2nm,0.3s,baz=47,slow=19,SNR=2.0						
WSAR	**Wadi Sarin**	**11.21**	**133**	Pn	**Pn**	**19 29 26.1**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=350,slow=7.8,SNR=21						
WSAR				Sn	**Sn**	**19 31 23.4**	**-7.0**
	comp=Z,0.1nm,0.3s,baz=139,slow=19,SNR=4.8						
EIL	**Elat**	**12.88**	**267**	Lg	Lg	19 33 29.4
	comp=Z,0.2nm,0.3s,baz=357,slow=19,SNR=2.2						
BRTR	**Keskin Array B**	**15.61**	**307**	Pn	**Pn**	**19 30 24.5**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=102,slow=13,SNR=2.9						
AKTO	**Aktyubinsk**	**20.13**	**15**	P	**P**	**19 31 18.1**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=208,slow=13,SNR=3.7						
AKTO				LR	LR	19 40 33.0
	comp=Z,24nm,20.3s,baz=303,slow=41						
MLR	**Muntele Rosu**	**23.36**	**314**	P	**P**	**19 31 54.2**	**+1.1**
	comp=Z,3.6nm,0.9s,baz=133,slow=4.4,SNR=6.2						
AKASG	**Malin Array Be**	**24.71**	**328**	P	**P**	**19 32 04.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=134,slow=8.5,SNR=4.3						
ARU	**Arti**	**25.91**	**11**	P	**P**	**19 32 16.0**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=356,slow=18,SNR=3.5						
BVAR	**Borovoye Array**	**26.41**	**29**	P	**P**	**19 32 20.9**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=212,slow=8.2,SNR=7.1						
KURBB	**Kurchatov Arra**	**28.81**	**39**	P	**P**	**19 32 43.3**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=239,slow=9.8,SNR=3.0						
MKAR	**Makanchi Array**	**29.39**	**49**	P	**P**	**19 32 48.6**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=249,slow=10,SNR=4.5						
GERES	**GERESS Array B**	**32.34**	**313**	P	**P**	**19 33 13.5**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=124,slow=12,SNR=3.1						
ZALV	**Zalesovo Beam**	**33.81**	**38**	P	**P**	**19 33 26.7**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=237,slow=13,SNR=4.3						
ARCES	**ARCESS Array B**	**40.72**	**347**	P	**P**	**19 34 25.2**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=146,slow=8.2,SNR=3.4						
CMAR	**Chiang Mai Arr**	**46.06**	**94**	P	**P**	**19 35 08.8**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=294,slow=8.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**47.61**	**259**	P	**P**	**19 35 20.4**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=41,slow=11,SNR=4.0						
KSRS	**Korea Array**	**63.09**	**61**	P	**P**	**19 37 11.7**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=278,slow=6.3,SNR=5.4						
YKA	**Yellowknife Ar**	**85.74**	**353**	P	**P**	**19 39 23.0**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=18,slow=5.4,SNR=5.1						

MEX 12 19:32:04.9±0.4,17.°25N×101.°02W,h9km±3km,MD3.6,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.56**	**310**	*i* P	Pg	19 32 14.7	-1.0
ZIIG				*e*S	Sg	19 32 22.7	-0.4
CAIG	**El Cayaco**	**0.74**	**105**	*i* P	Pg	19 32 17.6	-1.6
CAIG				*e*S	Sg	19 32 27.1	-1.8
ARIG	**Puente Sto Nin**	**1.21**	**32**	*i* P	Pb	19 32 24.2	-3.8
ARIG				*i* S	Sb	19 32 39.4	-4.3
MEIG	**Mezcala**	**1.49**	**63**	*i* P	Pg	19 32 34.2	+0.6
PLIG	**Platanillo**	**1.84**	**51**	*i* P	Pn	19 32 35.4	-1.3
PLIG				*i* S	Sn	19 32 56.9	-3.3

ISK ***12*** *19:34:45.1,34.°20N×26.°60E,h5km,ML3.8/14*
IDC ***12*** *19:34:46.0±0.9,34.°32N×26.°46E,h0km,mb3.9/15, mb1 4.0/26,mb1mx3.9/56,mbtmp3.9/26,ML3.8/9,MS3.3/1, Ms1 3.3/1,ms1mx2.4/33,Error ellipse: s-maj=19.9km s-min=13.5km az=9.0*
HLW ***12*** *19:34:47.0,34.°47N×26.°53E,h24km±17km,Md4.1,Ml3.9*
ISCJB ***12*** *19:34:48.3±0.9,34.°

VAM	Vamos	2.21	302	P	Pb	19 35 26.8	-0.6
SANT	Santorini	2.28	339	PN	Pn	19 35 26.5	+1.3
THR3	Thira Island,	2.34	338	P	Pn	19 35 27.6	+1.8
THR3	Thira Island,	2.34	338	P	Pn	19 35 27.4	+1.6
ARG	Arkhangelos	2.39	34	P	Pb	19 35 28.8	-1.6
ARG	Arkhangelos	2.39	34	P	Pb	19 35 29.1	-1.4
IMMV	Iera Moni Meta	2.39	301	PN	Pn	19 35 28.4	+1.8
IMMV	Iera Moni Meta	2.39	301	P	Pn	19 35 28.4	+1.8
IMMV	Iera Moni Meta	2.39	301	P	Pn	19 35 28.8	+2.3
AMGA	Amorgos Island	2.63	350	P	Pn	19 35 30.5	+0.6
AMGA	Amorgos Island	2.63	350	P	Pn	19 35 30.9	+1.0
DAT	Datca	2.64	20	PN	Pn	19 35 31.0	+0.9
DAT	Datca	2.64	20	*i* P	Pn	19 35 31.0	+0.9
DAT				*i* S	Sn	19 36 04.1	+1.9
DAT	Datca	2.64	20	*i* P	Pn	19 35 30.9	+0.8
DAT				IAML_P			
	comp=Z,60nm,0.2s						
IOSP	Ios island	2.66	339	P	Pn	19 35 30.7	+0.4
IOSP	Ios island	2.66	339	P	Pn	19 35 31.2	+0.9
BODT	Bodrum	2.89	13	PN	Pn	19 35 33.8	+0.3
BDRM	Kayabasi	2.92	15	*i* P	Pn	19 35 35.9	+1.9
BDRM	Kayabasi	2.92	15	*i* P	Pn	19 35 35.6	+1.7
BDRM				IAML_P			
	comp=Z,431nm,0.5s						
APE	Apeiranthos	2.93	345	PN	Pn	19 35 35.3	+1.3
APE	Apeiranthos	2.93	345	P	Pn	19 35 34.6	+0.6
APE	Apeiranthos	2.93	345	P	Pn	19 35 35.0	+1.0
DALY	Dalyan (Mula)	3.12	34	PN	Pn	19 35 37.8	+1.2
DALY	Dalyan (Mula)	3.12	34	*i* P	Pn	19 35 38.7	+2.1
DALY				*i* S	Sn	19 36 16.7	+2.8
DALY				IAML_P			
	comp=Z,559nm,0.3s						
DALY	Dalyan (Mula)	3.12	34	*i* P	Pn	19 35 38.1	+1.5
DALY				IAML_P			
	comp=Z,595nm,0.3s						
TURN	Turunc	3.14	33	PN	Pn	19 35 34.6	-2.3
TURN	Turunc	3.14	33	*i* P	Pn	19 35 36.9	0.0
TURN				*i* S	Sn	19 36 10.9	-3.6
TURN	Turunc	3.14	33	*i* P	Pn	19 35 36.7	-0.3
TURN				*i* S	Sn	19 36 12.2	-2.2
TURN				IAML_P			
	comp=Z,487nm,0.4s						
FETY	Fethiye	3.20	41	PN	Pn	19 35 38.1	+0.4
FETY	Fethiye	3.20	41	*i* P	Pn	19 35 38.8	+1.1
FETY	Fethiye	3.20	41	*i* P	Pn	19 35 38.4	+0.7
FETY				IAML_P			
	comp=Z,428nm,0.4s						
AKAS	Kas	3.24	51	PN	Pn	19 35 38.9	+0.5
AKAS	Kas	3.24	51	*i* P	Pn	19 35 40.3	+1.9
AKAS				*i* S	Sn	19 36 15.7	-1.3
AKAS				IAML_P			
	comp=Z,2µm,0.3s						
AKAS	Kas	3.24	51	*i* P	Pn	19 35 39.3	+1.0
AKAS				*i* S	Sb	19 36 23.8	-0.7
AKAS				IAML_P			
	comp=Z,623nm,0.3s						
YER	Yerkesik	3.24	26	PN	Pn	19 35 39.4	+1.1
AYDN	Tasoluk	3.59	18	*i* P	Pn	19 35 44.4	+1.2
AYDN	Tasoluk	3.59	18	*i* P	Pn	19 35 44.8	+1.6
AYDN				IAML_P			
	comp=Z,62nm,0.2s						
ELL	Elmali	3.75	47	PN	Pn	19 35 45.7	+0.3
VLI	Veliai	3.80	312	P	Pn	19 35 46.9	+0.9
VLI	Veliai	3.80	312	P	Pn	19 35 46.6	+0.6
URLA	Izmir	4.11	1	PN	Pn	19 35 51.7	+1.4
CHOS	Chios island	4.15	355	PN	Pn	19 35 52.2	+1.3
KORT	Korkueli	4.18	48	PN	Pn	19 35 51.8	+0.4
DID	Didima	4.19	322	P	Pn	19 35 51.9	+0.5
DID	Didima	4.19	322	P	Pn	19 35 52.2	+0.8
KHAL	Karahalli	4.78	30	*i* P	Pn	19 36 00.5	+1.0
KHAL				*i* S	Sn	19 36 54.9	-0.2
KHAL				IAML_P			
	comp=Z,37nm,0.1s						
KHAL	Karahalli	4.78	30	*i* P	Pn	19 36 00.4	+0.8
KEPZ	Antalya-Kepez	4.95	56	*i* P	Pn	19 36 04.1	+2.4
KEPZ				*i* S	Sn	19 36 58.5	-0.6
KEPZ				IAML_P			
	comp=Z,511nm,0.9s						
KEPZ	Antalya-Kepez	4.95	56	*i* P	Pn	19 36 03.9	+2.2
SWA2		5.06	190	P	Pn	19 36 04.8	+1.5
	baz=191						
SWA2				AMP		19 37 00.0	
	baz=191						
SWA2				S	Sn	19 37 01.2	-0.6
	baz=191						
GAZI	Gazipasa	5.17	66	PN	Pn	19 36 05.3	+0.5
GAZI	Gazipasa	5.17	66	*i* P	Pn	19 36 05.5	+0.7
GAZI				IAML_P			
	comp=Z,413nm,0.6s						
LEF	Lefka	5.35	79	PN	Pn	19 36 07.0	-0.3
TEKE	Tekeli-Mersin	5.75	69	PN	Pn	19 36 13.4	+0.6
AGG	Agios Georgios	5.82	326	PN	Pn	19 36 16.4	+2.6
BERE	Bereket-Mersin	5.90	67	PN	Pn	19 36 15.4	+0.4
AKKU	Akkuyu-Mersin	6.09	70	PN	Pn	19 36 18.1	+0.6
TEVE	Tevekalti-Mers	6.10	67	PN	Pn	19 36 18.4	+0.8
IKL	Isikli	6.22	69	PN	Pn	19 36 20.0	+0.8
KEBE	Keben-Mersin	6.31	68	PN	Pn	19 36 21.5	+1.0
HSAF	As Saff	6.31	136	P	Pn	19 36 20.6	0.0
	baz=137						
GLL	Jalalah	6.43	135	P	Pn	19 36 22.7	+0.6
	baz=136						
EREN	Erenkoy	6.45	76	PN	Pn	19 36 23.6	+1.3
KIZK	Mersin	6.65	68	PN	Pn	19 36 25.7	+0.6
NBNS	Bani Suef	6.95	142	P	Pn	19 36 29.8	+0.6
	baz=143						
NBNS				S	Sn	19 37 45.0	-3.3
	baz=143						
MERS	Mersin	7.06	66	PN	Pn	19 36 31.7	+0.9
HFRF	Wahat Farafira	7.24	167	P	Pn	19 36 34.1	+0.9
	baz=167						
KZIT	Kziot	7.46	114	PN	Pn	19 36 37.5	+1.2
MMAI	Mount Meron Ar	7.54	97	Pn	Pn	19 36 37.1	-0.4
	comp=Z,0.0nm,0.3s,baz=280,slow=12,SNR=14						
MMAI				Sn	Sn	19 37 58.5	-4.6
	comp=Z,2.7nm,0.3s,baz=272,slow=22,SNR=7.2						
TAMRE	El Minia	7.57	149	P	Pn	19 36 39.2	+1.4
	baz=149						
KARA	Karaisali	7.59	64	PN	Pn	19 36 38.9	+0.8
MMLI	Mount Malkishu	7.69	101	PN	Pn	19 36 40.3	+0.8
BRTR	Keskin Array B	7.92	44	Pn	Pn	19 36 43.5	+0.8
	comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=6.3						
KOZT	Kozan	8.24	64	PN	Pn	19 36 47.5	+0.5
HRFI	Mount Harif	8.38	118	PN	Pn	19 36 49.8	+0.9
EIL	Elat	8.52	120	Pn	Pn	19 36 51.2	+0.5
	comp=Z,0.5nm,0.3s,baz=293,slow=5.9,SNR=9.1						
EIL				Sn	Sn	19 38 20.2	-6.7
	comp=Z,0.3nm,0.3s,baz=315,slow=17,SNR=2.8						
ASF	Jabal al Asfar	8.97	100	Pn	Pn	19 36 57.0	0.0
	comp=Z,0.3nm,0.3s,baz=285,slow=12,SNR=2.8						
ASF				Sn	Sn	19 38 29.8	-8.4
	comp=Z,0.1nm,0.3s,baz=327,slow=17,SNR=1.5						
GTR	Jabal at Tayr	9.39	157	P	Pn	19 37 04.0	+1.2
	baz=157						
VYHS	Vyhne	15.34	340	*e*PN	Pn	19 38 19.5	-4.4
VYHS	Vyhne	15.34	340	*e*P	P	19 38 34.9	+6.3
GNI	Garni	15.69	63	Pn	P	19 38 32.6	-0.1
	comp=Z,0.4nm,0.3s,baz=246,slow=20,SNR=3.0						
KVAR	Kislovodsk Arr	15.87	48	Pn	P	19 38 33.4	-1.2
	baz=282,slow=20,SNR=3.7						
KBZ	Khabaz	15.87	49	Pn	Pn	19 38 32.9	+2.1
	comp=Z,0.1nm,0.3s,baz=233,slow=12,SNR=3.5						
KBA	Koelnbreinsper	16.21	326	*i* Pn	P	19 38 44.5	+6.1
	comp=Z,0.6nm,0.3s						
ABTA	Abfaltersbach	16.37	324	Pn	P	19 38 44.0	+3.9
	comp=Z,2.7nm,0.6s						
AKASG	Malin Array Be	16.57	6	Pn	Pn	19 38 38.8	-0.9
	comp=Z,1.2nm,0.3s,baz=194,slow=11,SNR=8.5						
KRUC	Moravsky	16.59	336	*e*PN	Pn	19 38 40.5	+0.5
VRAC	Vranov	16.74	337	Pn	Pn	19 38 42.1	+0.2
	comp=Z,0.4nm,0.3s,baz=140,slow=9.2,SNR=4.2						
VRAC	Vranov	16.74	337	*e*PN	Pn	19 38 41.5	-0.4
MORC	Moravsky Berou	16.86	340	*e*PN	Pn	19 38 42.2	-1.3
WTTA	Wattenberg	17.16	324	Pn	P	19 38 54.9	+5.9
	comp=Z,2.3nm,0.6s						
GERES	GERESS Array B	17.41	331	P	Pn	19 38 49.7	-0.6
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=7.9						
FETA	Feichten	17.45	322	pP	P	19 38 54.0	+1.8
	comp=Z,3.0nm,0.8s						
KHC	Kasperske Hory	17.69	331	*e*P	P	19 38 58.5	+3.9
DAVOX	Davos/Dischmat	17.74	320	P	P	19 38 55.4	0.0
	comp=Z,0.3nm,0.3s,baz=102,slow=7.7,SNR=3.3						
DPC	Dobruska-Polom	17.74	338	*e*P	Pn	19 38 53.0	-1.4
OSTC	Ostas	17.95	338	*e*P	Pn	19 38 55.6	-1.4
BRG	Berggiesshubel	18.97	335	*e*P	Pn	19 39 11.6	+2.2
	comp=Z,4.6nm,1.2s						
CLL	Collm	19.66	334	*i* P	P	19 39 15.9	-0.4
OBN	Obninsk	22.02	16	P	P	19 39 37.7	-4.0
	comp=Z,1.2nm,0.4s,baz=224,slow=23,SNR=3.6						
ESDC	Sonseca Array	24.86	292	P	P	19 40 10.4	+0.3
	comp=Z,0.7nm,0.6s,baz=82,slow=9.8,SNR=7.2						
GEYT	Alibeck	25.76	73	P	P	19 40 19.5	+1.2
	comp=Z,0.9nm,0.4s,baz=255,slow=12,SNR=6.0						
HFS	Hagfors	27.22	346	P	P	19 40 29.1	-2.0
	comp=Z,1.9nm,0.8s,baz=150,slow=15,SNR=4.7						
AKTO	Aktyubinsk	28.10	45	P	P	19 40 39.4	+0.2
	comp=Z,0.5nm,0.4s,baz=271,slow=9.3,SNR=4.0						
EKA	Eskdalemuir Ar	29.42	325	P	P	19 40 51.2	+0.4
	comp=Z,0.2nm,0.4s,baz=98,slow=9.4,SNR=2.4						
TORD	Torodi Ar. Bea	30.77	233	P	P	19 41 03.8	+0.7
	comp=Z,1.5nm,0.9s,baz=45,slow=8.6,SNR=6.3						
TORD				LR	LR	19 54 58.2	
	comp=Z,58nm,19.2s,baz=5.0,slow=39						
ARCES	ARCESS Array B	35.35	359	P	P	19 41 41.5	-1.1
	comp=Z,10nm,0.4s,baz=170,slow=9.4,SNR=5.6						
KURBB	Kurchatov Arra	40.86	50	P	P	19 42 29.1	-0.1
	comp=Z,3.1nm,0.8s,baz=277,slow=8.7,SNR=24						
MKAR	Makanchi Array	43.38	56	P	P	19 42 51.0	+1.1
	comp=Z,1.2nm,0.6s,baz=274,slow=6.6,SNR=14						
ZALV	Zalesovo Beam	44.86	46	P	P	19 43 01.8	+0.2
	comp=Z,3.4nm,0.6s,baz=265,slow=9.2,SNR=16						
SONM	Songino Array	59.23	51	P	P	19 44 48.2	-0.7
	comp=Z,1.5nm,0.9s,baz=284,slow=10.0,SNR=7.4						
CMAR	Chiang Mai Arr	65.59	84	P	P	19 45 32.1	+0.4
	comp=Z,1.2nm,0.9s,baz=296,slow=6.9,SNR=5.5						
USRK	Ussuriysk Ar.	76.71	45	P	P	19 46 39.2	+0.5
	comp=Z,1.6nm,0.7s,baz=271,slow=7.9,SNR=3.4						
YKA	Yellowknife Ar	78.65	343	P	P	19 46 48.3	-0.8
	comp=Z,0.2nm,0.4s,baz=358,slow=6.8,SNR=3.8						
ILAR	Eielson Array	81.18	357	P	P	19 47 02.2	-0.6
	comp=Z,0.2nm,0.6s,baz=348,slow=4.0,SNR=2.8						
MJAR	Matsushiro Arr	85.12	49	P	P	19 47 24.1	+0.3
	comp=Z,1.5nm,0.8s,baz=309,slow=6.0,SNR=3.8						
ASAR	Alice Springs	116.81	101	PKP	PKPdf	19 53 31.9	-0.6
	comp=Z,0.2nm,0.8s,baz=323,slow=1.4,SNR=3.6						

IDC 12 19:41:47.3±9.0, 5.13N×96.25E, h220km±86km, mb3.1/6, mb1 3.3/7, mb1mx3.0/35, mbtmp3.7/7, Error ellipse: s-maj=57.4km s-min=15.0km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.51	11	P	Pn	19 44 50.6	+0.1
	0.3nm,0.3s,baz=199,slow=11,SNR=24						
MKAR	Makanchi Array	43.23	346	P	P	19 49 26.6	-0.2
	0.6nm,0.3s,baz=160,slow=8.4,SNR=18						
SONM	Songino Array	43.43	10	P	P	19 49 28.8	+0.2
	0.5nm,0.4s,baz=190,slow=12,SNR=5.1						
WRA	Warramunga Arr	44.97	125	P	P	19 49 40.8	-0.3
	0.5nm,0.6s,baz=299,slow=9.4,SNR=1.4						
ASAR	Alice Springs	46.55	130	P	P	19 49 53.5	0.0
	0.3nm,0.5s,baz=298,slow=7.5,SNR=6.3						
ZALV	Zalesovo Beam	49.56	351	P	P	19 50 15.3	-0.5
	0.5nm,0.3s,baz=165,slow=7.3,SNR=4.2						
BRTR	Keskin Array B	65.81	311	P	P	19 52 09.5	+0.1
	0.3nm,0.4s,baz=119,slow=6.6,SNR=1.9						

*ISCJB **12** 19:58:12.8±0.2, 1.33S±0.02×78.89W±0.02, h132km±1km, mb4.6/228, Error ellipse: s-maj=3.9km s-min=2.6km az=159.4*
*VAO **12** 19:58:13.8±0.8, 1.42S×78.96W, h127km±7km, mb4.8*
*IDC **12** 19:58:13.6±0.8, 1.30S×78.77W, h119km±6km, mb4.2/17, mb1 4.3/23, mb1mx4.2/29, mbtmp4.6/23, MS3.2/1, Ms1 3.2/1, ms1mx2.8/18, Error ellipse: s-maj=17.3km s-min=8.7km az=61.0*
*IGQ **12** 19:58:14.3±0.3, 1.5S±2.×7.9W±., h0km, MLv4.6*
*NEIC **12** 19:58:14.1±1.7, 1.32S×78.78W, h124km±5km, mb4.8/232, MD4.6(IGQ), Error ellipse: s-maj=17.5km s-min=9.0km az=87.0*
NEIC Felt at Ambato, Cuenca, Guaranda, Guayaquil, Montecristi, Pajan and Portoviejo.
*BJI **12** 19:58:15.4±0.0, 1.30S×78.80W, h122km, mB5.2/12*
ISC 12 19:58:13.1±0.5, 1.40S±0.03×78.96W±0.04, h119km±4km, h120km:pP-P, n810, σ1s13/831, mb4.8/228, 2D, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIO	Riobamba	0.36	133	P	Pn	19 58 31.1	+0.3
AAM2	Ambato 2 (Merc	0.38	69	P	Pn	19 58 29.9	-0.8
BBIL	Ulba Tungurahu	0.48	95	P	Pn	19 58 31.0	-0.3
BMAS	Trigal station	0.49	101	P	Pn	19 58 31.3	-0.1
POND	Pondoa	0.51	92	P	Pn	19 58 31.3	-0.2
ARRY	Arrayan	0.52	101	P	Pn	19 58 31.2	-0.4
RETU	Refugio	0.52	95	P	Pn	19 58 31.7	-0.1
PAT1	Patacocha	0.54	101	P	Pn	19 58 31.8	-0.1
BPAT	Tungurahua Vol	0.54	100	P	Pn	19 58 31.8	-0.1
RUN5	Runtun	0.54	91	P	Pn	19 58 31.6	-0.1
BRUN	Tungurahua Vol	0.55	92	P	Pn	19 58 31.5	-0.3
BRUN				S	Sn	19 58 45.6	-0.2
BULB	Ulba Tungurahu	0.56	93	P	Pn	19 58 31.6	-0.2
BULB				S	Sn	19 58 45.8	-0.1
ALAT	Latacunga	0.59	36	P	Pn	19 58 31.7	-0.4
AQUE	Quevedo	0.64	304	P	Pn	19 58 31.5	-0.4
AQUE				S	Sn	19 58 45.9	-0.2
PIS1	Pisayambo	0.67	59	P	Pn	19 58 33.0	+0.2
PISA	Pisayambo	0.67	59	P	Pn	19 58 32.9	+0.1
ILLI	Illinizas Sur	0.72	19	P	Pn	19 58 33.0	-0.2
BMOR	Cotopaxi Volca	0.84	37	P	Pn	19 58 34.2	-0.1
BMOR				S	Sn	19 58 49.7	-0.4
BNAS	Cotopaxi Volca	0.87	34	P	Pn	19 58 34.5	0.0
BREF	Cotopaxi Volca	0.90	36	P	Pn	19 58 35.0	+0.1
BTAM	Cotopaxi Volca	0.92	38	P	Pn	19 58 35.0	0.0
BVC2	Cotopaxi Volca	0.93	37	P	Pn	19 58 35.2	+0.1
VC1	Cotopaxi 1	0.94	37	P	Pn	19 58 35.4	+0.2
COV1	Cotopaxi Volc	0.96	40	P	Pn	19 58 35.1	-0.4
APUY	Puyo	0.97	93	P	Pn	19 58 35.7	+0.8
PITA	Cotopaxi Volc	0.99	32	P	Pn	19 58 35.6	0.0
MILO	Milagro-Astudi	1.05	214	P	Pn	19 58 34.7	-0.9
NINA	Atacazo Ninahu	1.06	19	P	Pn	19 58 36.3	-0.1
COHC	Cochancay	1.09	195	P	Pn	19 58 35.7	-0.4
ANTM	Antisana-La Mi	1.14	41	P	Pn	19 58 37.0	-0.1
ANTG	Antisana-Guama	1.14	38	P	Pn	19 58 37.0	-0.2
ANTS	Antisana-Sarah	1.20	41	P	Pn	19 58 37.8	0.0
ARDO	Archidona, Ten	1.23	71	P	Pn	19 58 37.6	0.0
ARDO				S	Sn	19 58 56.1	-0.1
ANTI	Antisana	1.24	40	P	Pn	19 58 38.2	-0.1
TERV	Terraza Guagua	1.27	16	P	Pn	19 58 38.7	+0.1
GGP	Refugio Guagua	1.28	17	P	Pn	19 58 39.2	+0.5
PINO	Pino	1.29	16	P	Pn	19 58 38.8	0.0
YANA	Yana	1.34	17	P	Pn	19 58 39.0	-0.2
PULU	Pululahua	1.49	18	P	Pn	19 58 40.7	-0.2
MAG1	Magdalena	1.55	329	P	Pn	19 58 40.4	-0.8
PAC1	Pacto, Paraso	1.67	6	P	Pn	19 58 42.3	-0.4
OTAV	Otavalo	1.71	17	*e*Pn	Pn	19 58 43.2	-0.3
OTAV				*e*Sn	Sn	19 59 05.9	-0.7
OTAV	Otavalo	1.71	17	*e*P	Pn	19 58 43.6	+0.1
CAYA	Cayambe	1.76	34	P	Pn	19 58 44.5	+0.3
CABP	Cabo Pasado	1.78	305	P	Pn	19 58 43.6	-0.3
CUSW	Cuicocha Oeste	1.79	20	P	Pn	19 58 44.5	+0.1
CUSE	Cuicocha Este	1.79	18	P	Pn	19 58 44.5	0.0
CUIC	Cuicocha-Domo	1.80	20	P	Pn	19 58 44.4	-0.1
CUIC				S	Sn	19 59 08.6	+0.2
ACOT	Cotacachi (Cas	1.82	22	P	Pn	19 58 45.6	+0.8
IMBA	Imbabura, San	1.84	25	P	Pn	19 58 45.7	+0.6
COTA	Cotacachi	1.84	20	P	Pn	19 58 45.6	+0.5
MORR	Playas El Morr	1.84	228	P	Pn	19 58 45.0	+0.4
REVS	Reventador Sur	1.86	46	P	Pn	19 58 45.1	0.0
LAV4	Lava4-Reventad	1.86	46	P	Pn	19 58 45.1	-0.2
CONE	Cono NE Rev Vo	1.87	45	P	Pn	19 58 45.2	-0.2
APLA	Playas - Guaya	1.88	229	P	Pn	19 58 44.9	-0.2
AIB2	Ibarra (Univer	1.94	26	P	Pn	19 58 46.5	+0.4
URCU	Urcuqui	1.96	21	P	Pn	19 58 46.6	0.0
YAHU	Yahuarcocha	1.98	27	P	Pn	19 58 46.8	+0.1
SALI	Salinas	2.17	249	P	Pn	19 58 48.2	-0.5
CASC	Dorado de Casc	2.23	47	P	Pn	19 58 49.6	0.0
CASC				S	Sn	19 59 18.0	+0.4
LITE1	Lita	2.27	15	P	Pn	19 58 49.7	-0.4
ATUL	Tulcn	2.49	30	P	Pn	19 58 53.6	+0.4
GONZ	Gonzanam	2.85	189	P	Pn	19 58 58.9	+1.0
GONZ				S	Sn	19 59 32.0	-0.2
CPAS1	Pasto	3.06	33	*e*P	Pn	19 59 01.6	+1.0
GCUF	Volcan Galeras	3.07	32	*e*P	Pn	19 59 00.8	0.0
MCRA	Macar, Loja	3.11	199	P	Pn	19 58 57.7	-3.2
CTUM2	Tumaco	3.21	4	*e*P	Pn	19 59 02.0	-0.3
CRUC	La Cruz	3.57	34	*e*P	Pn	19 59 07.5	+0.1
BBAC	Balboa, Cauca	3.81	27	*e*P	Pn	19 59 09.7	-0.7
CFLOR	Florencia	4.45	48	*e*P	Pn	19 59 17.1	-1.6
FLOC	Florencia	4.45	48	*e*P	Pn	19 59 17.1	-1.6
GRGC	Isla de Gorgon	4.45	10	*e*P	Pn	19 59 17.1	-1.6
BETC	Betania	5.37	41	*e*P	Pn	19 59 30.8	-0.4
MALC	Bahia Malaga	5.62	17	*e*P	Pn	19 59 33.0	-1.5
ATAH	Atahualpa	5.72	174	P	Pn	19 59 38.0	+1.8
	17nm,0.3s,baz=8.9,slow=8.9,SNR=66						
ATAH				S	Sn	20 00 40.0	-0.9
	37nm,0.3s,baz=136,slow=13,SNR=14						
ROSC	El Rosal	7.75	37	P	Pn	20 00 01.7	-1.9
	2.8nm,0.3s,baz=149,slow=6.5,SNR=7.3						
ROSC	El Rosal	7.75	37	*e*Pn	Pn	20 00 01.5	-2.1
NNA	Nana	10.72	169	P	Pn	20 00 43.6	+0.1
	5.7nm,0.3s,baz=335,slow=12,SNR=19						
NNA				S	Sn	20 02 32.7	-9.0
	4.0nm,0.3s,baz=283,slow=19,SNR=3.2						
JTS	Las Juntas de	13.06	333	P	Pn	20 01 16.9	+2.7
	0.3nm,0.3s,baz=222,slow=9.8,SNR=5.4						
JTS				LR	LR	20 05 42.1	
	comp=Z,105nm,19.4s,baz=203,slow=34						
SDV	Santo Domingo	13.17	39	P	Pn	20 01 13.5	-2.3
	2.8nm,0.3s,baz=252,slow=6.4,SNR=3.8						
SDV	Santo Domingo	13.17	39	*e*P	Pn	20 01 18.2	+2.3
ACON	Acoyapa	14.65	335	*e*P	P	20 01 36.5	-1.1
CSGN	Cosiguina Volc	16.64	329	*e*P	P	20 02 01.9	+2.0
	51nm,0.9s						
TGUH	Tegucigalpa,Un	17.43	332	*e*P	Pn	20 02 09.1	+0.2
	51nm,1.1s						
LPAZ	La Paz	18.24	145	P	Pn	20 02 18.8	-0.5
	0.9nm,0.3s,baz=334,slow=11,SNR=41						
LPAZ	La Paz	18.24	145	*e*P	P	20 02 18.4	+0.3
	29nm,0.9s						
LPAZ	La Paz	18.24	145	*e*P	P	20 02 17.6	-0.4
PTGA	Pitinga	19.01	88	P	Pn	20 02 26.9	-0.9
	1.6nm,0.3s,baz=266,slow=12,SNR=14						
PTGA	Pitinga	19.01	88	*e*P	P	20 02 24.9	-0.8
	8.9nm,0.6s						
MTDJ	Mount Denham	19.56	4	*e*P	Pn	20 02 33.1	-1.2
	101nm,0.6s						
MNMC	Minye Minye	19.87	153	*e*P	P	20 02 35.3	0.0
	92nm,0.9s						
APG	El Apazote	19.88	325	P	Pn	20 02 37.5	-0.7
	0.4nm,0.3s,baz=166,slow=7.4,SNR=11						
PB11	IPOC Station P	20.39	154	*e*P	P	20 02 41.5	+0.7
	56nm,0.7s						
GO01	Chusmiza	20.52	153	*e*P	P	20 02 43.6	+1.1
	55nm,0.7s						
FSCY	Frank Sound, G	20.70	354	*e*P	P	20 02 45.1	+1.1
	443nm,1.0s						
GTBY	Guantanamo Bay	21.53	10	*e*P	P	20 02 52.7	-0.2
	172nm,1.0s						
PB01	IPOC Station P	21.60	155	*e*P	P	20 02 54.0	+0.3
	29nm,0.9s						
SDDR	Presa de Saban	21.62	20	*e*P	P	20 02 53.3	-0.6
	27nm,0.9s						
PB04	IPOC Station P	22.50	158	*e*P	P	20 03 04.9	+1.8
	28nm,0.8s						
MPR	Mayaguez	22.70	30	*e*P	P	20 03 04.3	-0.7
	51nm,0.8s						
SIV	San Ignacio	22.83	130	P	P	20 03 06.1	-0.1
	15nm,0.8s,baz=316,slow=9.8,SNR=57						
OBIP	Obispado Ponce	22.84	32	*e*P	P	20 03 05.2	-1.1
AOPR	Arecibo Observ	23.01	31	*e*P	P	20 03 07.8	-0.2
	108nm,0.7s						
SJG	San Juan	23.14	32	P	P	20 03 08.7	-0.3
	46nm,0.6s,baz=219,slow=6.3,SNR=20						
SJG	San Juan	23.14	32	*e*P	P	20 03 08.6	-0.4
	48nm,0.6s						
LVC	Limon Verde	23.23	156	P	P	20 03 12.2	+1.9
	11nm,0.7s,baz=322,slow=8.

BDFB

			eP		P	20 04 42.5	-0.3
252A	Lumpkin	33.67	351	P	P	20 04 42.5	-0.1
	baz=169						
251A	Midway	33.87	350	P	P	20 04 44.0	-0.4
	baz=168						
155A	Kite	34.00	355	P	P	20 04 45.6	+0.1
	baz=173						
154A	Montrose	34.06	354	P	P	20 04 46.0	-0.1
	baz=172						
249A	Camden	34.09	348	P	P	20 04 46.0	-0.3
	baz=165						
153A	Fort Valley	34.18	353	P	P	20 04 46.9	-0.2
	baz=171						
151A	Opelika	34.28	350	P	P	20 04 47.4	-0.6
	baz=168,SNR=6.7						
152A	Waverly Hall	34.32	351	eP	P	20 04 47.8	-0.5
	30nm,0.9s						
152A	Waverly Hall	34.32	351	P	P	20 04 47.9	-0.5
	baz=170,SNR=13						
NHSC	New Hope	34.34	358	P	P	20 04 47.5	-1.0
	baz=178						
150A	Eclectic	34.48	349	P	P	20 04 48.9	-0.7
	baz=167,SNR=12						
Z57A	Bowman	34.55	357	P	P	20 04 49.9	-0.4
	baz=177						
149A	Jones	34.62	348	P	P	20 04 50.3	-0.6
	baz=166,SNR=8.7						
Z53A	Monticello	34.77	353	P	P	20 04 51.3	-0.9
	baz=172,SNR=7.6						
Z52A	Williamson	34.79	352	P	P	20 04 51.7	-0.7
	baz=170,SNR=13						
148A	Greensboro	34.83	347	P	P	20 04 51.9	-0.8
	baz=164						
GOGA	Godfrey	34.89	353	eP	P	20 04 52.9	-0.3
	16nm,0.8s						
GOGA	Godfrey	34.89	353	P	P	20 04 52.7	-0.5
	baz=172,SNR=7.2						
Z51A	Franklin	35.03	351	P	P	20 04 54.3	-0.1
	baz=169						
Y56A	Pelion	35.08	357	P	P	20 04 54.4	-0.5
	baz=176						
LRAL	Lakeview Retre	35.08	348	eP	P	20 04 54.2	-0.6
	28nm,0.9s						
LRAL	Lakeview Retre	35.08	348	P	P	20 04 54.6	-0.3
	baz=166,SNR=18						
Z50A	Ashland	35.09	350	eP	P	20 04 54.5	-0.4
	29nm,0.8s						
Z50A	Ashland	35.09	350	P	P	20 04 54.6	-0.4
	baz=168,SNR=20						
Y58A	Scranton	35.13	359	P	P	20 04 54.8	-0.4
	baz=178						
Z49A	Columbiana	35.15	349	P	P	20 04 55.1	-0.4
	baz=166,SNR=9.4						
VBMS	Vicksburg	35.19	343	P	P	20 04 55.8	+0.1
	baz=159						
Y60A	Bolivia	35.23	1	eP	P	20 04 56.5	+0.4
	83nm,0.9s						
Y60A	Bolivia	35.23	1	P	P	20 04 56.1	0.0
	baz=181						
Y54A	Tignall	35.25	355	P	P	20 04 55.9	-0.4
	baz=173						
Y55A	Saluda	35.26	356	P	P	20 04 56.2	-0.2
	baz=175						
Y53A	Monroe	35.34	353	P	P	20 04 56.6	-0.5
	baz=172						
Y52A	Lilburn	35.41	353	eP	P	20 04 56.0	-1.7
	9.0nm,0.8s						
Y52A	Lilburn	35.41	353	P	P	20 04 57.1	-0.5
	baz=171						
833A	Chaparral WMA,	35.47	328	eP	P	20 04 59.2	+0.9
	18nm,0.8s						
833A	Chaparral WMA,	35.47	328	P	P	20 04 59.6	+1.3
	baz=143						
BB19B	Bebedouro	35.54	126	eP	P	20 04 59.1	+0.1
Y51A	Rockmart	35.58	351	P	P	20 04 58.5	-0.6
	baz=169,SNR=13						
X56A	White Oak	35.76	357	P	P	20 05 00.3	-0.3
	baz=176						
Y49A	Blount Mountai	35.77	349	eP	P	20 04 60.0	-0.8
	12nm,0.6s						
Y49A	Blount Mountai	35.77	349	P	P	20 04 59.9	-0.8
	baz=167,SNR=7.7						
X55A	Gracelyn & Ava	35.77	356	P	P	20 05 00.3	-0.5
	baz=175						
FRTB	Fartura	35.90	130	eP	P	20 05 00.5	-1.6
X54A	Belton	35.91	355	P	P	20 05 01.5	-0.4
	baz=174						
X53A	Estanollee	35.95	354	P	P	20 05 01.5	-0.7
	baz=172						
Y48A	Jasper	35.97	348	P	P	20 05 01.5	-1.0
	baz=166						
X52A	Dahlonega	36.12	353	P	P	20 05 03.1	-0.7
	baz=171						
PMNB	Patos De Minas	36.16	120	eP	P	20 05 04.4	0.0
NATX	Nacogdoches	36.19	337	P	P	20 05 04.8	+0.5
	baz=152						
X51A	Calhoun	36.21	352	eP	P	20 05 03.6	-0.9
	15nm,0.8s						
X51A	Calhoun	36.21	352	P	P	20 05 03.5	-1.0
	baz=170						
X50B	Fort Payne	36.23	351	P	P	20 05 03.9	-0.8
	baz=168,SNR=7.1						
W58A	Raeford	36.24	360	P	P	20 05 04.3	-0.4
	baz=179						
W60A	Pink Hill	36.29	2	P	P	20 05 05.1	0.0
	baz=182						
ITAB	Concordia	36.35	137	eP	P	20 05 05.5	-0.4
W57A	Gilead	36.38	359	P	P	20 05 05.3	-0.6
	baz=178						
W56A	Indian Trail	36.38	358	P	P	20 05 05.0	-0.9
	baz=177						
X49A	Woodville	36.39	350	P	P	20 05 05.3	-0.7
	baz=167,SNR=6.2						
KMSC	Kings Mountain	36.42	357	eP	P	20 05 05.9	-0.4
	12nm,0.8s						
KMSC	Kings Mountain	36.42	357	P	P	20 05 05.9	-0.4
	baz=176						
W61A	Ground Anchor	36.44	3	P	P	20 05 06.3	-0.1
	baz=183						
X48A	Hartselle	36.47	349	eP	P	20 05 05.8	-0.9
	16nm,0.6s						
X48A	Hartselle	36.47	349	P	P	20 05 05.8	-0.9
	baz=166,SNR=7.8						
435B	Jarrell	36.59	333	P	P	20 05 06.4	-1.4
	baz=147						
W53A	Cullowhee	36.59	354	P	P	20 05 07.6	-0.3
	baz=173,SNR=5.3						
W52A	Murphy	36.60	353	P	P	20 05 07.4	-0.5
	baz=171						
X47A	Russelville	36.70	348	P	P	20 05 07.5	-1.1
	baz=165,SNR=5.9						
W51A	Cleveland	36.78	352	P	P	20 05 09.0	-0.3
	baz=170,SNR=7.0						
Z41A	Richland Creek	36.87	340	P	P	20 05 09.8	-0.2
	baz=156						
V62A	Hyde County Ai	36.88	4	P	P	20 05 09.2	-0.9
	baz=185						
X46A	Booneville	36.89	347	P	P	20 05 09.0	-1.3
	baz=164						
W50A	Signal Mountai	36.90	351	eP	P	20 05 09.3	-1.0
	15nm,0.8s						
W50A	Signal Mountai	36.90	351	P	P	20 05 09.8	-0.6
	baz=169						
W49A	Belvidere	36.97	350	P	P	20 05 10.0	-1.0
	baz=168						
V59A	Middlesex	36.98	1	P	P	20 05 10.8	-0.2
	baz=181,SNR=6.8						
V58A	Windy Hill, Pi	37.01	360	P	P	20 05 10.7	-0.5
	baz=179,SNR=5.2						
SWET	Sewanee	37.01	351	eP	P	20 05 09.9	-1.4
	20nm,1.0s						
V60A	Jim Taylor Roa	37.01	2	P	P	20 05 11.5	+0.3
	baz=182						
V61A	Roper	37.07	3	P	P	20 05 11.0	-0.7
	baz=184						
V54A	Nebo	37.09	356	P	P	20 05 11.5	-0.5
	baz=175						
V57A	Coltrane Farms	37.11	359	P	P	20 05 11.8	-0.2
	baz=178						
W48A	Pulaski	37.11	349	P	P	20 05 11.0	-1.1
	baz=166,SNR=12						
V55A	Taylorsville	37.12	357	P	P	20 05 11.7	-0.5
	baz=176						
PLAL	Pickwick Lake	37.19	348	eP	P	20 05 11.6	-1.2
	15nm,1.1s						
V52A	Sevierville	37.31	354	P	P	20 05 13.0	-0.8
	baz=172						
V50A	Pikevile	37.33	352	P	P	20 05 12.1	-1.9
	baz=170						
W47A	Westpoint	37.35	348	P	P	20 05 13.2	-1.0
	baz=165,SNR=6.2						
V51A	Loudon	37.36	353	P	P	20 05 13.6	-0.6
	baz=171						
W46A	Michie	37.40	347	P	P	20 05 13.2	-1.4
	baz=164						
JCT	Junction City	37.41	330	eP	P	20 05 16.2	+1.4
	26nm,0.9s						
JCT	Junction City	37.41	330	P	P	20 05 16.2	+1.4
	baz=144,SNR=7.0						
X43A	Marvell	37.44	344	P	P	20 05 13.5	-1.5
	baz=160						
V49A	McMinnville	37.54	351	P	P	20 05 14.5	-1.3
	baz=168,SNR=6.4						
WHTX	Lake Whitney,	37.55	334	eP	P	20 05 16.2	+0.3
	13nm,0.7s						
WHTX	Lake Whitney,	37.55	334	P	P	20 05 16.5	+0.6
	baz=148						
U59A	Littleton	37.58	2	eP	P	20 05 15.9	-0.1
	21nm,1.0s						
U59A	Littleton	37.58	2	P	P	20 05 14.8	-1.2
	baz=182						
U56A	King	37.58	358	P	P	20 05 15.9	-0.2
	baz=177						
U58A	Oxford	37.61	1	P	P	20 05 15.6	-0.7
	baz=180						
U61A	Possum Corner	37.62	3	P	P	20 05 16.7	+0.3
	baz=184						
U57A	Blanch	37.65	360	P	P	20 05 16.1	-0.5
	baz=179,SNR=5.4						
V48A	Smith Brothers	37.67	350	eP	P	20 05 16.1	-0.8
	35nm,0.8s						
V48A	Smith Brothers	37.67	350	P	P	20 05 16.1	-0.8
	baz=167,SNR=11						
MCI8	Montes Claros	37.68	116	eP	P	20 05 16.6	-0.7
MCI9	Montes Claros	37.71	116	eP	P	20 05 17.3	-0.3
U60A	Pendleton	37.72	2	P	P	20 05 16.6	-0.6
	baz=183						
U53A	Fall Branch	37.73	355	P	P	20 05 16.5	-0.9
	baz=174						
MCI6	Montes Claros	37.75	116	eP	P	20 05 17.4	-0.5
U55A	TA2, Sparta	37.76	357	P	P	20 05 16.8	-0.9
	baz=176						
U54A	Nelsons Funny	37.83	356	P	P	20 05 17.7	-0.5
	baz=175						
U52A	Thorn Hill	37.83	354	P	P	20 05 17.3	-0.9
	baz=172						
U51A	La Follette	37.88	353	P	P	20 05 17.4	-1.3
	baz=172						
V47A	Nunnelly	37.89	349	P	P	20 05 17.1	-1.6
	baz=166						
CLTN	Cedars of Leba	37.93	350	eP	P	20 05 18.4	-0.6
	14nm,1.1s						
V46A	Holladay	37.99	348	P	P	20 05 17.5	-2.0
	baz=165						
TZTN	Tazewell	37.99	354	P	P	20 05 18.7	-0.9
	baz=172						
X40A	Basin Creek Fa	38.00	341	eP	P	20 05 19.4	-0.2
	7.1nm,0.7s						
X40A	Basin Creek Fa	38.00	341	P	P	20 05 19.8	+0.2
	baz=157						
U50A	Jamestown	38.02	352	P	P	20 05 18.9	-0.9
	baz=170						
UALR	University of	38.11	342	eP	P	20 05 20.2	-0.3
	34nm,0.8s						
T58A	Grand View Acr	38.16	1	P	P	20 05 20.9	-0.1
	baz=180						
T59A	Double "B" Far	38.20	2	eP	P	20 05 21.2	-0.1
	23nm,0.8s						
T59A	Double "B" Far	38.20	2	P	P	20 05 21.3	+0.1
	baz=182,SNR=7.9						
T57A	Hurt	38.21	360	eP	P	20 05 21.1	-0.2
	12nm,0.8s						
T57A	Hurt	38.21	360	P	P	20 05 20.9	-0.4
	baz=179,SNR=5.7						
WVT	Waverly	38.25	348	eP	P	20 05 19.8	-1.8
	15nm,0.6s						
WVT	Waverly	38.25	348	P	P	20 05 20.1	-1.5
	baz=165						
T56A	Rocky Mt	38.25	359	P	P	20 05 20.6	-1.2
	baz=178						
U49A	Red Boiling Sp	38.25	351	P	P	20 05 20.3	-1.4
	baz=169						
MIAR	Mount Ida	38.30	340	eP	P	20 05 21.7	-0.5
	12nm,1.1s						
MIAR	Mount Ida	38.30	340	P	P	20 05 21.7	-0.5
	baz=156						
T53A	Wise	38.34	355	P	P	20 05 20.5	-2.0
	baz=174						
T54A	Tazewell	38.35	357	P	P	20 05 21.9	-0.7
	baz=176						
T55A	Pulaski	38.36	358	P	P	20 05 21.6	-1.1
	baz=177						
U48A	Cassie Pea, Po	38.38	350	P	P	20 05 21.4	-1.3
	baz=168,SNR=8.2						
T60A	Surry	38.41	3	P	P	20 05 21.0	-1.9
	baz=183						
U47A	Clarksville	38.44	349	P	P	20 05 21.7	-1.6
	baz=166						
W41B	Gary Mavity, V	38.45	342	eP	P	20 05 22.6	-0.8
	19nm,0.8s						
W41B	Gary Mavity, V	38.45	342	P	P	20 05 22.5	-0.8
	baz=158,SNR=10						
T51A	Gray	38.45	354	P	P	20 05 22.2	-1.2
	baz=172						
T52A	Hallie	38.50	355	P	P	20 05 23.0	-0.8
	baz=173						
U46A	Springville	38.54	348	P	P	20 05 22.3	-1.8
	baz=165						
CNLB	Canela	38.56	139	eP	P	20 05 24.5	0.0
WHAR	Wooly Hollow	38.57	342	eP	P	20 05 23.7	-0.7
	26nm,0.8s						
BSCB	Bom Sucesso	38.62	123	eP	P	20 05 24.2	-0.9
T50A	Nancy	38.62	352	P	P	20 05 23.6	-1.2
	baz=170						
LTX	Lajitas	38.63	324	eP	P	20 05 26.4	+1.2
LTX				ePcP	PcP	20 07 35.9	+0.7
TXAR	Lajitas Array	38.63	324	P	P	20 05 26.4	+1.2
	3.0nm,0.7s,baz=143,slow=9.2,SNR=30						
TXAR				PcP	PcP	20 07 35.9	+0.7
	1.7nm,0.8s,baz=153,slow=6.1,SNR=8.5						
TX31	Lajitas Ar. Si	38.63	324	eP	P	20 05 26.1	+1.0
	5.2nm,1.0s						
TX31				ePcP	PcP	20 07 36.2	+1.1
T49A	Edmonton	38.80	352	P	P	20 05 25.0	-1.3
	baz=169						
S58A	Poland Farm, P	38.83	1	P	P	20 05 26.1	-0.5
	baz=181						
S56A	Natural Bridge	38.89	359	P	P	20 05 26.9	-0.2
	baz=179						
NBMO	Morrinhos-CE	38.93	94	eP	P	20 05 27.3	-0.5
T48A	Bowling Green	38.94	351	P	P	20 05 25.7	-1.8
	baz=168,SNR=7.3						
T47A	Sharon Grove	38.94	350	eP	P	20 05 26.1	-1.4
	26nm,0.7s						
T47A	Sharon Grove	38.94	350	P	P	20 05 25.8	-1.6
	baz=167,SNR=6.5						
W39A	Magazine	38.96	341	eP	P	20 05 27.7	0.0
	28nm,0.8s						
W39A	Magazine	38.96	341	P	P	20 05 27.8	+0.2
	baz=156,SNR=11						
S57A	Dark Hollow, R	38.97	0	eP	P	20 05 28.1	+0.4
	15nm,1.1s						
S57A	Dark Hollow, R	38.97	0	P	P	20 05 27.0	-0.7
	baz=180						
X37A	Clayton	38.97	338	eP	P	20 05 27.7	-0.1
	13nm,0.6s						
PARB	Paraibuna	38.99	127	eP	P	20 05 27.4	-0.8
S53A	Williamson	39.00	356	P	P	20 05 27.1	-0.9
	baz=175						
S59A	Mechanicsville	39.00	2	P	P	20 05 24.4	-3.6
	baz=182						
S54A	Dingess, Beckl	39.07	357	P	P	20 05 28.0	-0.6
	baz=176						
S52A	Salyersville	39.07	355	P	P	20 05 27.5	-1.1
	baz=173						
FCAR	Ozark Folk Cen	39.08	343	eP	P	20 05 27.6	-1.1
	14nm,0.9s						
S51A	Beattyville	39.08	354	P	P	20 05 27.1	-1.6
	baz=172						
ABTX	Abilene, Hawle	39.09	332	eP	P	20 05 29.9	+1.1
	33nm,0.8s						
ABTX	Abilene, Hawle	39.09	332	P	P	20 05 29.9	+1.1
	baz=146,SNR=7.8						
T46A	Princeton	39.14	349	P	P	20 05 27.6	-1.5
	baz=166,SNR=9.4						
R58B	Mineral	39.19	1	eP	P	20 05 29.5	+0.1
	22nm,1.1s						
R58B	Mineral	39.19	1	P	P	20 05 29.4	-0.1
	baz=181,SNR=5.8						
S50A	Richmond	39.21	353	P	P	20 05 28.9	-0.9
	baz=171						
T45A	Paducah	39.27	348	P	P	20 05 28.8	-1.4
	baz=164						
S48A	Wiedeman Farm,	39.42	351	P	P	20 05 29.2	-2.2
	baz=168						
S49A	Springfield	39.43	352	P	P	20 05 30.4	-1.1
	baz=170						
R54A	Victor	39.43	357	P	P	20 05 30.8	-0.8
	baz=176						
R59A	King George, V	39.45	2	P	P	20 05 30.0	-1.6
	baz=183						
PBMO	Poplar Bluff	39.46	345	eP	P	20 05 31.0	-0.8
	25nm,0.9s						
S47A	Hartford	39.49	350	P	P	20 05 30.5	-1.5
	baz=167,SNR=9.8						
R57A	Stanardsville	39.51	1	P	P	20 05 31.8	-0.3
	baz=180						
R58A	Rapidan	39.52	1	P	P	20 05 32.7	+0.5
	baz=181,SNR=11						
R60A	Leonardtown, M	39.54	3	P	P	20 05 31.3	-1.1
	baz=183						
R53A	Hurricane	39.63	356	P	P	20 05 32.4	-0.8
	baz=175						
TRQA	Tornquist	39.67	159	eP	P	20 05 34.0	+0.4
	7.9nm,0.9s						
R61A	Willards	39.68	4	P	P	20 05 32.6	-1.0
	baz=185						
S46A	Don Dixon Farm	39.73	349	P	P	20 05 32.5	-1.5
	baz=166						
U40A	Yellville	39.73	342	P	P	20 05 33.6	-0.5
	baz=158,SNR=21						
R51A	Hillsboro	39.74	354	P	P	20 05 32.6	-1.5
	baz=172						
ESAR	Angra dos Reis	39.80	125	eP	P	20 05 34.8	0.0
R50A	Paris	39.80	353	P	P	20 05 33.2	-1.3
	baz=171						
OGAUY	Aigu	39.83	148	eP	P	20 05 35.3	+0.4
PLCA	Paso Flores	39.88	170	P	P	20 05 36.6	+1.3
	13nm,0.7s,baz=9.0,slow=10.0,SNR=38						
PLCA	Paso Flores	39.88	170	eP	P	20 05 36.7	+1.3
	17nm,0.8s						
PLCA	Paso Flores	39.88	170	eP	P	20 05 36.7	+1.3
R49A	Shelbyville	39.91	352	P	P	20 05 34.2	-1.3
	baz=170						
USIN	University of	39.99	349	eP	P	20 05 34.6	-1.6
	62nm,0.8s						
HHAR	Hobbs	40.01	341	eP	P	20 05 35.6	-0.8
	18nm,0.8s						
WCI	Wyandotte Cave	40.01	351	eP	P	20 05 35.1	-1.3
	38nm,1.0s						
WCI	Wyandotte Cave	40.01	351	P	P	20 05 34.6	-1.7
	baz=168						
S44A	Carbondale	40.05	347	P	P	20 05 35.2	-1.4
	baz=164,SNR=5.5						
SIUC	Southern Illin	40.06	347	eP	P	20 05 35.4	-1.4
	45nm,0.9s						
R48A	Northridge Ran	40.12	352	P	P	20 05 36.0	-1.2
	baz=169						
Q59A	Harwood	40.13	3	P	P	20 05 36.4	-0.8
	baz=183						
Q53A	Leroy	40.13	357	P	P	20 05 36.7	-0.7
	baz=176						
R46A	Gibon Southern	40.20	350	P	P	20 05 36.4	-1.5
	baz=166						
Q54A	Coxs Mills	40.23	358	P	P	20 05 34.5	-3.6
	baz=177						
Q57A	Strasburg	40.24	1	P	P	20 05 38.1	-0.1
	baz=181						
Q56A	Snyder Ridge,	40.25	360	P	P	20 05 37.0	-1.3
	baz=179						
Q52A	Bidwell	40.28	356	P	P	20 05 37.7	-0.8
	baz=175						
TUL1	Leonard	40.31	339	eP	P	20 05 39.0	+0.2
	22nm,0.8s						
TUL1	Leonard	40.31	339	P	P	20 05 38.5	-0.3
	baz=153						
R45A	Skylar, Fairfi	40.43	349	P	P	20 05 38.4	-1.3
	baz=165						
WMOK	Wichita Mounta	40.47	335	eP	P	20 05 40.6	+0.3
	17nm,0.8s						
WMOK	Wichita Mounta	40.47	335	P	P	20 05 40.5	+0.3
	baz=148,SNR=15						
Q49A	Aurora	40.58	353	P	P	20 05 39.5	-1.6
	baz=171						
FVM	French Village	40.60	346	eP	P	20 05 40.3	-0.9
	36nm,0.8s						
Q48A	North Vernon	40.62	352	P	P	20 05 39.6	-1.7
	baz=169						
P56A	Dayton Farm, R	40.71	0	P	P	20 05 42.6	+0.6
	baz=180,SNR=6.5						
Q47A	Bedord North L	40.73	351	P	P	20 05 40.7	-1.5
	baz=168,SNR=9.2						
P53A	Whipple	40.75	357	P	P	20 05 41.3	-1.1
	baz=176						
OLIL	Olney	40.82	349	eP	P	20 05 41.6	-1.4
	51nm,0.8s						
SJMB	Sao Joao De Ma	40.83	117	eP	P	20 05 42.7	-0.7
CCM	Cathedral Cave	40.87	345	eP	P	20 05 41.9	-1.5
	17nm,0.6s						
CCM	Cathedral Cave	40.87	345	P	P	20 05 41.9	-1.5
	baz=161						
BLO	Bloomington	40.97	351	eP	P	20 05 42.6	-1.6
	32nm,0.7s						
Q45A	Warren Harvey,	40.98	349	P	P	20 05 42.8	-1.6
	baz=166,SNR=6.9						
P50A	Jamestown	41.05	354	P	P	20 05 43.3	-1.6
	baz=172						
P49A	Miami Univ. Ec	41.08	353	P	P	20 05 43.0	-2.1
	baz=171						
DUB01	Friburgo-RJ	41.10	123	eP	P	20 05 45.0	-0.6
P48A	Milroy	41.10	352	P	P	20 05 42.9	-2.3
	baz=170						
BSFB	Barra de Sao F	41.17	117	eP	P	20 05 45.3	-0.9
GDL2	Guadalupe Moun	41.17	326	eP	P	20 05 47.5	+1.4
P47A	Martinsville	41.24	351	P	P	20 05 44.5	-1.9
	baz=169,SNR=5.7						
MVL	Millersville	41.27	3	eP	P	20 05 46.7	0.0
	21nm,0.8s						
MNTX	Cornudas Mount	41.37	325	eP	P	20 05 48.5	+0.9
	13nm,0.8s						
MNTX	Cornudas Mount	41.37	325	P	P	20 05 48.6	+0.9
	baz=138,SNR=18						
O52A	Adamsville	41.41	357	P	P	20 05 46.4	-1.4
	baz=175						
O55A	Ligonier	41.41	360	P	P	20 05 47.4	-0.4
	baz=179						
O57A	Amberson	41.43	2	P	P	20 05 48.0	0.0
	baz=182,SNR=6.0						
O56A	Blue Knob Stat	41.48	0	eP	P	20 05 48.4	0.0
	22nm,0.9s						
O56A	Blue Knob Stat	41.48	0	P	P	20 05 48.7	+0.3
	baz=180,SNR=7.6						
PAGS	Pennsylvania G	41.48	3	eP	P	20 05 48.3	-0.1
	15nm,0.7s						
P46A	Rosedale	41.52	350	P	P	20 05 46.4	-2.3
	baz=167						
P45A	Graceland, Par	41.52	350	P	P	20 05 46.4	-2.3
	baz=166						
O59A	Robesonia	41.59	3	P	P	20 05 49.6	+0.3
	baz=184,SNR=7.3						
CAM01	Campos-RJ	41.60	122	eP	P	20 05 49.4	-0.2
ACSO	Alum Creek Sta	41.60	355	P	P	20 05 49.0	-0.3
	baz=174						
O60A	Telford	41.65	4	P	P	20 05 48.7	-1.0
	baz=185						
MSTX	Muleshoe	41.70	330	eP	P	20 05 51.2	+0.8
	35nm,0.8s						
MSTX	Muleshoe	41.70	330	P	P	20 05 51.3	+0.9
	baz=142,SNR=9.0						
RIB01	Linhares ES	41.74	118	eP	P	20 05 49.9	-0.9
O48A	Farmland	41.85	353	P	P	20 05 49.5	-1.9
	baz=170						
SSPA	Standing Stone	41.85	1	eP	P	20 05 51.5	+0.1
	27nm,0.9s						
SSPA	Standing Stone	41.85	1	P	P	20 05 51.8	+0.4
	baz=181						
AMTX	Amarillo	41.91	332	eP	P	20 05 52.8	+0.7
	27nm,0.8s						
AMTX	Amarillo	41.91	332	P	P	20 05 52.7	+0.7
	baz=144						
ALF01	Guarapari-ES	41.92	120	eP	P	20 05 51.7	-0.6
LUPA	Lehigh Univers	41.93	4	eP	P	20 05 53.0	+1.0
	2.5nm,0.9s						
O47A	Sheridan	41.96	352	P	P	20 05 50.0	-2.3

	baz=169,SNR=6.3							
P43A	Skaggs, Pawnee	41.98	348	P	P	20 05 50.6	-1.8	
	baz=164							
N57A	Milroy	41.98	2	P	P	20 05 52.1	-0.3	
	baz=182							
NBPA	Parau_RN	41.98	97	eP	P	20 05 52.1	-0.8	
N55A	Marion Center	41.99	360	eP	P	20 05 52.3	-0.2	
	14nm,0.8s							
N55A	Marion Center	41.99	360	P	P	20 05 52.3	-0.2	
	baz=180,SNR=5.6							
N56A	West Decatur	42.13	1	P	P	20 05 53.2	-0.5	
	baz=181							
N50A	Nevada	42.15	355	P	P	20 05 52.0	-1.8	
	baz=174							
N54A	Moraine State	42.18	359	eP	P	20 05 53.2	-0.8	
	12nm,0.8s							
N54A	Moraine State	42.18	359	P	P	20 05 53.8	-0.3	
	baz=178							
O45A	Potomac	42.22	350	P	P	20 05 52.2	-2.1	
	baz=167							
N59A	State Game Lan	42.22	4	eP	P	20 05 54.9	+0.5	
	21nm,0.7s							
N59A	State Game Lan	42.22	4	P	P	20 05 54.8	+0.5	
	baz=184,SNR=7.7							
N51A	Ashland	42.24	356	P	P	20 05 52.9	-1.6	
	baz=175							
SFIN	Lafayette	42.24	351	P	P	20 05 52.7	-1.8	
	baz=168							
O44A	Mansfield	42.26	349	P	P	20 05 52.7	-2.0	
	baz=166							
NBLI	Livramento-PB	42.28	99	eP	P	20 05 55.2	-0.3	
N49A	Columbus Grove	42.39	354	eP	P	20 05 54.4	-1.3	
	12nm,0.9s							
N49A	Columbus Grove	42.39	354	P	P	20 05 53.8	-1.9	
	baz=172							
N47A	Urbana	42.53	352	P	P	20 05 55.0	-1.9	
	baz=170							
M51A	Elyria	42.64	356	P	P	20 05 56.3	-1.5	
	baz=175							
M53A	WI Miller and	42.67	358	P	P	20 05 57.3	-0.7	
	baz=177							
M55A	Ridgway	42.67	0	P	P	20 05 57.6	-0.4	
	baz=180							
N46A	Monticello	42.69	351	P	P	20 05 56.3	-1.8	
	baz=168							
M56A	Emporium	42.69	1	P	P	20 05 57.5	-0.7	
	baz=181,SNR=8.6							
M54A	Oil Creek Stat	42.72	359	eP	P	20 05 58.2	-0.2	
	13nm,0.8s							
M54A	Oil Creek Stat	42.72	359	P	P	20 05 57.9	-0.5	
	baz=179							
N45A	Kentland	42.77	350	P	P	20 05 56.2	-2.6	
	baz=167							
M50A	Fremont	42.77	355	P	P	20 05 57.2	-1.5	
	baz=174							
HDIL	Hopedale	42.81	348	eP	P	20 05 57.5	-1.6	
	77nm,0.6s							
HDIL	Hopedale	42.81	348	P	P	20 05 57.1	-2.0	
	baz=164,SNR=5.6							
N44A	Piper City	42.82	350	P	P	20 05 56.5	-2.7	
	baz=166,SNR=6.6							
KSPA	Keystone Colle	42.86	4	eP	P	20 06 00.2	+0.6	
	28nm,1.0s							
M49A	Liberty Center	42.92	354	P	P	20 05 58.1	-1.9	
	baz=172							
M47A	Cromwell	42.99	353	P	P	20 05 58.7	-1.9	
	baz=170							
N43A	Stutzman Famil	43.16	349	P	P	20 05 59.9	-2.1	
	baz=165,SNR=8.3							
L53A	Girard	43.17	359	P	P	20 06 00.4	-1.6	
	baz=178							
N41A	Harden Midland	43.29	347	P	P	20 06 00.9	-2.1	
	baz=162							
121A	Cookes Peak, D	43.38	324	P	P	20 06 06.4	+2.3	
	baz=135,SNR=18							
L50A	Kingsville	43.39	356	P	P	20 06 02.1	-1.7	
	baz=174							
L55A	Hinsdale	43.39	1	P	P	20 06 03.3	-0.6	
	baz=180,SNR=5.6							
L48A	N Adams	43.43	354	P	P	20 06 02.4	-1.8	
	baz=172							
L54A	Sinclairville	43.44	360	P	P	20 06 03.6	-0.6	
	baz=179							
KSU1	Kansas State U	43.45	340	P	P	20 06 03.8	-0.6	
	baz=154							
BINY	Binghamton	43.49	3	eP	P	20 06 04.7	+0.1	
	34nm,0.8s							
BINY	Binghamton	43.49	3	P	P	20 06 04.8	+0.2	
	baz=184,SNR=7.1							
319A	Douglas	43.49	321	eP	P	20 06 06.8	+1.8	
	33nm,1.0s							
L49A	Milan	43.53	355	P	P	20 06 03.9	-1.0	
	baz=173							
L47A	Sherwood	43.55	353	P	P	20 06 03.3	-1.8	
	baz=171,SNR=7.4							
M43A	Waltham Townsh	43.60	349	P	P	20 06 03.2	-2.2	
	baz=165							
N40A	Mertquake, Sal	43.63	346	P	P	20 06 03.9	-1.9	
	baz=161							
K54A	Basiliiko Farm,	43.81	0	P	P	20 06 06.6	-0.6	
	baz=180,SNR=5.3							
M41A	Milan	43.86	347	P	P	20 06 06.1	-1.5	
	baz=163							
BNM	Barren Site	43.89	326	eP	P	20 06 09.5	+1.3	
K55A	Perry	43.94	1	P	P	20 06 07.5	-0.7	
	baz=181							
LPM	Los Pinos Moun	44.01	326	eP	P	20 06 10.4	+1.3	
LENM	Lemitar	44.09	326	eP	P	20 06 11.2	+1.4	
K47A	Vermontville	44.21	354	P	P	20 06 08.2	-2.1	
	baz=171							
HRV	Adam Dziewonsk	44.22	8	P	P	20 06 09.7	-0.7	
	baz=190							
K48A	Perry	44.25	355	P	P	20 06 09.0	-1.7	
	baz=172,SNR=7.7							
L43A	Garden Prairie	44.28	350	P	P	20 06 08.5	-2.4	
	baz=166							
L42A	Oliver, Polo	44.28	349	eP	P	20 06 09.1	-1.8	
	22nm,1.0s							
L42A	Oliver, Polo	44.28	349	P	P	20 06 08.6	-2.3	
	baz=164,SNR=5.4							
K46A	Dorr	44.32	353	P	P	20 06 08.9	-2.3	
	baz=170							
CBKS	Cedar Bluff	44.35	337	eP	P	20 06 12.7	+1.0	
	49nm,0.8s							
CBKS	Cedar Bluff	44.35	337	P	P	20 06 12.6	+1.0	
	baz=149							
LAZ	Ladron	44.36	326	eP	P	20 06 12.6	+0.7	
ANMO	Albuquerque	44.39	327	eP	P	20 06 13.3	+1.2	
	28nm,0.8s							
ANMO	Albuquerque	44.39	327	P	P	20 06 13.7	+1.5	
	baz=139							
TASM	ASL Pad, Albuq	44.39	327	P	P	20 06 13.7	+1.5	
	baz=139,SNR=40							
TASM	ASL Pad, Albuq	44.39	327	P	P	20 06 13.3	+1.2	
	baz=139,SNR=37							
J55A	Hilton	44.48	1	P	P	20 06 11.7	-0.8	
	baz=181							
L40A	Anamosa	44.67	347	eP	P	20 06 12.2	-1.8	
	38nm,1.1s							
L40A	Anamosa	44.67	347	P	P	20 06 12.2	-1.8	
	baz=162,SNR=12							
J48A	Bridge Port	44.71	355	eP	P	20 06 12.7	-1.6	
	33nm,0.8s							
J48A	Bridge Port	44.71	355	P	P	20 06 12.3	-2.1	
	baz=173							
K43A	Burlington	44.71	350	P	P	20 06 11.8	-2.5	
	baz=166							
J49A	Marlette	44.72	356	P	P	20 06 11.9	-2.5	
	baz=174,SNR=6.5							
J47A	Sunmer	44.75	354	eP	P	20 06 13.4	-1.2	
	42nm,0.8s							
J47A	Sunmer	44.75	354	P	P	20 06 12.7	-2.0	
	baz=171							
J46A	Howard City	44.95	353	P	P	20 06 14.1	-2.2	
	baz=170							
K42A	Prairie Point,	44.97	349	P	P	20 06 14.0	-2.4	
	baz=165							
SCIA	State Center	45.00	345	eP	P	20 06 15.2	-1.5	
	52nm,0.6s							
SCIA	State Center	45.00	345	P	P	20 06 15.0	-1.7	
	baz=159							
T25A	Trinidad	45.03	331	P	P	20 06 18.6	+1.4	
	baz=142							
I51A	Listowel	45.04	358	P	P	20 06 15.4	-1.6	
	baz=177,SNR=6.2							
TUC	Tucson	45.06	321	eP	P	20 06 18.4	+1.0	
	14nm,0.8s							
TUC	Tucson	45.06	321	P	P	20 06 18.6	+1.2	
	baz=132							
JFWS	Jewell Farm	45.27	348	eP	P	20 06 16.7	-2.1	
	40nm,0.7s							
JFWS	Jewell Farm	45.27	348	P	P	20 06 17.1	-1.7	
	baz=164,SNR=11							
I49A	Point Hope	45.27	356	eP	P	20 06 17.0	-1.8	
	30nm,0.8s							
I49A	Point Hope	45.27	356	P	P	20 06 17.0	-1.8	
	baz=174,SNR=6.3							
I55A	Frankford	45.43	1	P	P	20 06 19.2	-0.8	
	baz=182							
I47A	Gladwin	45.49	354	P	P	20 06 18.7	-1.8	
	baz=172							
I46A	Reed City	45.52	353	P	P	20 06 18.2	-2.4	
	baz=171							
I48A	Sherman Twp	45.59	355	P	P	20 06 19.5	-1.7	
	baz=173,SNR=7.7							
KSCO	Kaye Shedlock'	45.73	334	P	P	20 06 23.8	+1.2	
	baz=146							
DELO	Deloro Mine	45.74	1	eP	P	20 06 21.6	-0.8	
	23nm,1.0s							
H55A	Tweed	45.78	2	P	P	20 06 22.0	-0.7	
	baz=182,SNR=6.7							
H56A	Elgin	45.86	3	P	P	20 06 22.8	-0.5	
	baz=184,SNR=11							
LBNH	Lisbon	45.88	7	P	P	20 06 23.9	+0.4	
	baz=190							
I42A	Draeger Farm,	45.97	350	eP	P	20 06 22.7	-1.5	
	15nm,0.7s							
I42A	Draeger Farm,	45.97	350	P	P	20 06 22.6	-1.6	
	baz=166,SNR=5.7							
SADO	Sadowa	45.97	360	eP	P	20 06 22.9	-1.3	
	19nm,1.1s							
LONY	Lake Ozonia	45.99	4	eP	P	20 06 24.3	-0.1	
	8.7nm,0.7s							
LONY	Lake Ozonia	45.99	4	P	P	20 06 24.1	-0.3	
	baz=186							
BGNE	Belgrade	46.04	340	P	P	20 06 24.3	-0.6	
	baz=153							
H47A	Mio	46.04	355	P	P	20 06 22.8	-2.0	
	baz=172							
SDCO	Great Sand Dun	46.04	331	eP	P	20 06 26.7	+1.4	
	22nm,0.8s							
SDCO	Great Sand Dun	46.04	331	P	P	20 06 26.8	+1.5	
	baz=142,SNR=17							
X18A	Snowflake	46.06	324	eP	P	20 06 27.3	+1.9	
	7.4nm,0.7s							
H46A	Fife Lake	46.08	354	P	P	20 06 23.1	-2.0	
	baz=171							
214A	Organ Pipe Nat	46.14	319	P	P	20 06 27.5	+1.6	
	baz=129,SNR=7.0							
I41A	Arkdale	46.30	349	eP	P	20 06 25.2	-1.6	
	19nm,0.9s							
I41A	Arkdale	46.30	349	P	P	20 06 25.8	-1.1	
	baz=165							
G53A	Haliburton	46.33	0	P	P	20 06 25.8	-1.2	
	baz=180							
H43A	Windswept, Lux	46.34	351	eP	P	20 06 25.4	-1.7	
	49nm,0.8s							
H43A	Windswept, Lux	46.34	351	P	P	20 06 25.3	-1.8	
	baz=168,SNR=10							
W18A	Petrified Fore	46.35	325	eP	P	20 06 29.3	+1.7	
	26nm,0.8s							
W18A	Petrified Fore	46.35	325	P	P	20 06 29.3	+1.7	
	baz=135,SNR=14							
G55A	Calabogie	46.50	2	P	P	20 06 27.5	-0.8	
	baz=183,SNR=5.8							
H42A	Shiocton	46.50	351	P	P	20 06 26.3	-2.0	
	baz=166							
G47A	Hillman	46.58	355	P	P	20 06 27.4	-1.6	
	baz=173,SNR=6.0							
G45A	Suttons Bay	46.62	353	eP	P	20 06 27.9	-1.5	
	36nm,0.8s							
G45A	Suttons Bay	46.62	353	P	P	20 06 27.5	-1.9	
	baz=170							
S22A	4UR Ranch, Cre	46.70	329	eP	P	20 06 32.4	+1.9	
	4.4nm,0.8s							
X16A	Lo Mia Camp, P	46.88	323	eP	P	20 06 33.4	+1.6	
	20nm,0.7s							
F52A	Sundridge	47.00	360	P	P	20 06 30.4	-1.9	
	baz=179							
F49A	Sandfield	47.04	357	P	P	20 06 30.9	-1.7	
	baz=176							
OGNE	Ogallala	47.09	336	P	P	20 06 34.1	+1.0	
	baz=148							
F55A	Otter Lake	47.09	2	P	P	20 06 32.2	-0.7	
	baz=183							
MVCO	Mesa Verde	47.17	328	eP	P	20 06 35.4	+1.3	
	7.7nm,0.9s							
F45A	CMU Biological	47.24	354	P	P	20 06 32.3	-1.8	
	baz=171							
113A	Mohawk Valley,	47.27	319	eP	P	20 06 36.1	+1.5	
	8.6nm,1.0s							
E52A	Mattawa	47.49	0	P	P	20 06 34.1	-2.0	
	baz=180							
G40A	Rib Lake	47.53	349	eP	P	20 06 34.9	-1.6	
	7.7nm,1.1s							
G40A	Rib Lake	47.53	349	P	P	20 06 34.6	-1.8	
	baz=164							
WUAZ	Wupatki	47.59	324	eP	P	20 06 38.8	+1.6	
	30nm,0.9s							
WUAZ	Wupatki	47.59	324	P	P	20 06 39.1	+1.8	
	baz=133,SNR=15							
E53A	Dumoine, Ponti	47.59	1	P	P	20 06 35.4	-1.5	
	baz=182							
ECSD	EROS Data Cent	47.64	343	eP	P	20 06 35.9	-1.4	
	10nm,0.8s							
ECSD	EROS Data Cent	47.64	343	P	P	20 06 35.9	-1.4	
	baz=156,SNR=7.0							
E50A	Wahnapitae	47.65	358	P	P	20 06 35.0	-2.3	
	baz=177							
E54A	Lac Daplat, Po	47.66	2	P	P	20 06 36.1	-1.2	
	baz=182							
G39A	Holcombe	47.74	348	P	P	20 06 36.2	-1.8	
	baz=163,SNR=6.7							
E51A	G1948 Merrick	47.74	360	P	P	20 06 36.3	-1.6	
	baz=179,SNR=10.0							
E48A	Lockeyer	47.77	357	P	P	20 06 36.0	-2.2	
	baz=175,SNR=9.3							
E46A	Sault Ste Mari	47.80	355	eP	P	20 06 36.6	-1.8	
	10nm,0.9s							
E46A	Sault Ste Mari	47.80	355	P	P	20 06 36.0	-2.4	
	baz=173							
E47A	Iron Bridge	47.81	356	P	P	20 06 36.5	-1.9	
	baz=174,SNR=5.3							
SMCO	Snowmass	47.88	331	eP	P	20 06 41.2	+1.5	
	10nm,1.0s							
SPMN	Marine on St.	48.03	347	eP	P	20 06 38.7	-1.6	
	16nm,1.0s							
SPMN	Marine on St.	48.03	347	P	P	20 06 38.6	-1.6	
	baz=161							
PV13	Radium Mtn., P	48.05	328	eP	P	20 06 42.0	+1.2	
	32nm,0.8s							
E43A	Lone Tree Farm	48.10	353	eP	P	20 06 38.7	-2.1	
	13nm,0.9s							
E43A	Lone Tree Farm	48.10	353	P	P	20 06 38.8	-2.0	
	baz=169,SNR=9.2							
PV03	Paradox Valley	48.13	328	eP	P	20 06 42.1	+0.7	
	20nm,0.8s							
PV05	Paradox Valley	48.14	328	eP	P	20 06 42.0	+0.5	
	24nm,0.7s							
F40A	Park Falls	48.15	350	P	P	20 06 39.2	-1.9	
	baz=165,SNR=9.2							
PV18	Skein Mesa, Pa	48.16	328	eP	P	20 06 42.5	+0.9	
	23nm,0.7s							
PV11	David Mesa, Pa	48.18	328	eP	P	20 06 43.0	+1.2	
	19nm,0.7s							
D52A	ZEK Kipawa Sen	48.18	1	P	P	20 06 40.0	-1.3	
	baz=180							
E44A	Grand Marais A	48.21	354	P	P	20 06 40.6	-1.0	
	baz=170							
F39A	Loretta	48.29	349	P	P	20 06 40.6	-1.6	
	baz=164							
D53A	Lac Vacive, Po	48.30	1	eP	P	20 06 41.0	-1.3	
	13nm,0.7s							
D46A	Sault St. Mari	48.30	355	P	P	20 06 40.1	-2.2	
	baz=173							
D47A	Chapleau	48.40	356	P	P	20 06 40.4	-2.6	
	baz=174,SNR=6.4							
D54A	Lac Fusel, La	48.40	2	P	P	20 06 41.5	-1.5	
	baz=183,SNR=6.3							
D49A	Beulah Townshi	48.52	358	P	P	20 06 41.8	-2.1	
	baz=177							
F38A	Pierce - Schro	48.52	348	P	P	20 06 42.2	-1.8	
	baz=162							
N23A	Red Feather La	48.74	333	P	P	20 06 47.0	+0.9	
	baz=143							
U15A	North Rim	48.76	324	eP	P	20 06 48.0	+1.7	
	6.6nm,0.9s							
IKP	In-Ko-Pah, Jac	48.76	317	P	P	20 06 47.4	+1.2	
	baz=126							
W13A	Hualapai Mount	48.84	321	eP	P	20 06 48.5	+1.6	
	13nm,0.8s							
PHWY	Pilot Hill	48.84	333	eP	P	20 06 47.8	+0.9	
	9.4nm,0.8s							
LATQ	La Tuque	48.89	6	P	P	20 06 47.1	+0.4	
	baz=188							
BC3	Big Chuckawall	48.93	319	P	P	20 06 48.7	+1.2	
	baz=128							
D41A	Chassel	48.99	351	eP	P	20 06 46.5	-1.1	
	29nm,1.0s							
D41A	Chassel	48.99	351	P	P	20 06 45.9	-1.6	
	baz=167,SNR=6.0							
SUSD	Miller	49.01	341	P	P	20 06 46.6	-1.1	
	baz=153							
IRM	Iron Mountain	49.04	320	P	P	20 06 49.8	+1.6	
	baz=128,SNR=5.2							
E38A	The Farm, Brul	49.08	349	eP	P	20 06 46.7	-1.5	
	9.4nm,0.8s							
E38A	The Farm, Brul	49.08	349	P	P	20 06 46.4	-1.8	
	baz=163							
MONP2	Monument Peak	49.12	317	P	P	20 06 50.4	+1.3	
	baz=126							
BAR	Barrett	49.16	317	eP	P	20 06 51.0	+1.9	
	8.2nm,1.1s							
BELC	Belle Mtn. Jos	49.50	319	P	P	20 06 53.2	+1.3	
	baz=128							
PFO	Pinyon Flats O	49.57	318	eP	P	20 06 54.1	+1.7	
	6.9nm,1.1s							
PFO	Pinyon Flats O	49.57	318	P	P	20 06 53.9	+1.5	
	baz=127							
LCMT	Little Creek M	49.71	324	eP	P	20 06 55.2	+1.8	
	4.6nm,0.8s							
GMRC	Granite Mounta	49.76	320	P	P	20 06 55.5	+1.6	
	baz=128,SNR=6.8							
C40A	Isle Royale Na	49.92	351	eP	P	20 06 53.2	-1.4	
	14nm,0.8s							
C40A	Isle Royale Na	49.92	351	P	P	20 06 53.1	-1.4	
	baz=166							
MSU	Marysvale	50.13	326	eP	P	20 06 58.2	+1.6	
CCUT	Cedar City	50.15	324	eP	P	20 06 58.5	+1.7	
	7.5nm,1.1s							
HEC	Hector,Ludlow	50.23	319	P	P	20 06 59.1	+1.8	
	baz=128							
LSQQ	Lebel-sur-Quev	50.29	2	P	P	20 06 55.9	-1.4	
	baz=182							
EYMN	Ely	50.35	349	eP	P	20 06 56.1	-1.8	
	9.1nm,0.6s							
EYMN	Ely	50.35	349	P	P	20 06 56.0	-1.8	
	baz=163,SNR=8.8							
SHPR	Sheep Range	50.54	322	eP	P	20 07 00.9	+1.3	
	9.6nm,1.2s							
RSSD	Black Hills	50.56	337	eP	P	20 07 00.8	+1.0	
	20nm,0.8s							
RSSD	Black Hills	50.56	337	P	P	20 07 00.8	+1.0	
	baz=147							
BFSC	Mount Baldy Ra	50.74	318	P	P	20 07 02.8	+1.6	
	baz=126							
GSC	Goldstone, Bar	50.82	320	eP	P	20 07 03.8	+2.0	
	11nm,0.9s							
GSC	Goldstone, Bar	50.82	320	P	P	20 07 03.3	+1.5	
	baz=128,SNR=6.6							
SHOC	Shoshone, Teco	50.85	321	P	P	20 07 03.5	+1.6	
	baz=126							
MPU	Maple Canyon	50.90	328	eP	P	20 07 02.8	+0.5	
	6.2nm,0.9s							
MATQ	Matagami	50.98	1	P	P	20 07 00.5	-2.0	
	baz=182							
CHGQ	Chibougamau	51.27	4	P	P	20 07 03.6	-1.1	
	baz=186							
EDW2	Edwards Air Fo	51.35	318	P	P	20 07 07.1	+1.4	
	baz=126,SNR=9.0							
TPNV	Topopah Spring	51.49	322	eP	P	20 07 08.5	+1.7	
	9.0nm,0.9s							
TPNV	Topopah Spring	51.49	322	P	P	20 07 09.0	+2.1	
	baz=129							
LRMC	Laurel Mtn Rad	51.50	319	P	P	20 07 08.6	+1.7	
	baz=127							
FURC	Furnace Creek,	51.58	321	P	P	20 07 08.5	+1.3	
	baz=128							
TCUT	Toone Canyon	51.58	329	eP	P	20 07 08.3	+0.8	
	28nm,0.7s							
AGMN	Agassiz Nation	51.64	346	eP	P	20 07 06.0	-1.5	
	20nm,1.0s							
AGMN	Agassiz Nation	51.64	346	P	P	20 07 06.4	-1.1	
	baz=158,SNR=6.6							
DUG	Dugway, Tooele	51.66	327	eP	P	20 07 09.4	+1.4	
	4.9nm,0.8s							
DUG	Dugway, Tooele	51.66	327	P	P	20 07 09.4	+1.4	
	baz=135,SNR=6.4							
MPMC	Manual Prospec	51.72	320	P	P	20 07 09.6	+1.0	
	baz=127							
BW06	Boulder Array	51.89	332	eP	P	20 07 10.4	+0.7	
	28nm,0.6s							
BW06	Boulder Array	51.89	332	P	P	20 07 11.5	+1.8	
	baz=140,SNR=29							
PDAR	Pinedale Array	51.89	332	P	P	20 07 10.2	+0.5	
	2.7nm,0.9s,baz=133,slow=8.3,SNR=10							
SCZ2	Santa Cruz Isl	51.95	317	P	P	20 07 10.9	+0.8	
	baz=124							
R11A	Troy Canyon, C	51.99	323	eP	P	20 07 11.9	+1.4	
	3.6nm,0.9s							
R11A	Troy Canyon, C	51.99	323	P	P	20 07 12.0	+1.5	
	baz=131,SNR=8.1							
HWUT	Hardware Ranch	52.01	329	eP	P	20 07 11.1	+0.5	
	15nm,0.8s							
ISA	Isabella, Lake	52.12	319	P	P	20 07 12.9	+1.5	
	baz=126							
MDND	Maddock	52.25	343	P	P	20 07 12.1	+0.1	
	baz=153							
SPUT	South Promonto	52.26	328	eP	P	20 07 13.6	+1.2	
	20nm,0.9s							
CWC	Cottonwood Cre	52.33	320	P	P	20 07 14.3	+1.3	
	baz=127							
PKM	Mcpherson Peak	52.57	317	P	P	20 07 16.3	+1.4	
	baz=124							
VES	Vestal, Richgr	52.63	319	P	P	20 07 16.0	+0.9	
	baz=126							
AHID	Auburn Hatcher	52.63	330	eP	P	20 07 15.8	+0.6	
	9.8nm,0.8s							
LOHW	Long Hollow	53.03	332	eP	P	20 07 18.4	+0.3	
	7.9nm,1.1s							
TPAW	Teton Pass	53.10	331	eP	P	20 07 19.3	+0.6	
	4.5nm,0.8s							
MOOW	Moose Ponds	53.20	332	eP	P	20 07 20.0	+0.7	
	5.6nm,1.0s							
FXWY	Fox Creek	53.25	331	eP	P	20 07 19.7	0.0	
	3.0nm,0.9s							
ELK	Elko	53.38	326	eP	P	20 07 21.2	+0.4	
	4.1nm,0.8s							
IMW	Indian Meadow	53.40	332	eP	P	20 07 21.6	+0.7	
	5.9nm,0.9s							
FLWY	Flagg Ranch	53.43	332	eP	P	20 07 21.8	+0.8	
	14nm,1.1s							
ULM	Lac du Bonnet	53.46	347	P	P	20 07 19.5	-1.4	
	14nm,0.5s,baz=156,slow=6.9,SNR=11							
ULM	Lac du Bonnet	53.46	347	eP	P	20 07 19.5	-1.4	
	15nm,0.6s							
LAO	LASA Array	53.55	337	eP	P	20 07 20.2	-1.5	
	15nm,0.8s							
RLMT	Red Lodge	53.57	334	eP	P	20 07 22.4	+0.4	
	8.9nm,0.9s							
RLMT	Red Lodge	53.57	334	P	P	20 07 22.3	+0.2	
	baz=141							
NV11	Mina Array Sit	53.60	322	eP	P	20 07 22.6	+0.2	
	0.7nm,1.0s							
YPP	Pitchstone Pla	53.62	332	eP	P	20 07 23.0	+0.5	
	3.7nm,0.9s							
NV01	Mina Array Sit	53.69	322	eP	P	20 07 23.9	+0.9	
NV01				epP	pP	20 07 53.1	+1.8	
NVAR	Mina Array Bea	53.69	322	P	P	20 07 23.9	+0.9	
	5.0

baz=139
MCMT McKenzie Canyo 55.01 331 *e*P **P 20 07 34.1 +1.5**
DLMT Dillon 55.28 332 *e*P **P 20 07 35.1 +0.8**
3.6nm,0.8s
EGMT Eagleton 56.05 336 P **P 20 07 40.1 +0.4**
baz=142
ORV Oroville 56.35 321 *e*P **P 20 07 43.2 +1.2**
16nm,1.0s
WVOR Wild Horse Val 56.41 325 *e*P **P 20 07 43.4 +0.9**
18nm,1.0s
J08A Circle Bar Ran 56.91 326 *e*P **P 20 07 46.6 +0.7**
8.1nm,1.0s
SCHQ Schefferville 56.93 8 P **P 20 07 44.9 -0.8**
9.9nm,1.0s,baz=208,slow=12,SNR=2.7
SCHQ Schefferville 56.93 8 *e*P **P 20 07 44.7 -1.0**
6.7nm,0.8s
O03E Paynes Creek 56.97 322 P **P 20 07 46.4 0.0**
baz=126
MSO Missoula 56.99 332 *e*P **P 20 07 47.2 +0.7**
9.2nm,0.9s
MSO Missoula 56.99 332 P **P 20 07 47.1 +0.7**
baz=137,SNR=7.5
O02D Mt. Diablo Mer 57.52 321 P **P 20 07 50.9 +0.6**
baz=125
M04C Macdoel 57.88 323 P **P 20 07 53.5 +0.7**
baz=126
K05A Summer Lake 57.89 324 *e*P **P 20 07 54.6 +1.7**
17nm,1.1s
I07A Izee 57.95 326 *e*P **P 20 07 53.9 +0.6**
8.1nm,1.1s
F10A Beach Ranch, E 58.00 329 *e*P **P 20 07 54.0 +0.5**
6.6nm,0.8s
M02C Callahan 58.26 322 P **P 20 07 56.2 +0.8**
baz=125
L04D Klamath Falls 58.41 323 P **P 20 07 57.2 +0.7**
baz=126
J05D Fort Rock, OR 58.43 325 P **P 20 07 57.6 +1.0**
baz=128,SNR=9.8
G08A Pilot Rock 58.44 328 *e*P **P 20 07 56.7 +0.1**
14nm,0.9s
PINE Pine Mountain 58.57 325 *e*P **P 20 07 58.7 +1.1**
19nm,0.8s
WALA Waterton Lakes 58.62 334 *e*P **P 20 07 58.2 +0.4**
15nm,0.8s
E09A Wood Farm, Sta 58.83 329 *e*P **P 20 07 59.4 +0.2**
6.6nm,0.6s
J04D Umpqua Nationa 58.91 324 P **P 20 08 00.7 +0.7**
baz=127
FFC Flin Flon 59.07 345 *e*P **P 20 08 00.5 -0.1**
83nm,0.9s
I05D Terrebonne, OR 59.14 326 P **P 20 08 03.1 +1.7**
baz=128
L02E Cave Junction 59.16 323 P **P 20 08 02.4 +0.9**
baz=125
G06A Carlson Farm, 59.31 327 *e*P **P 20 08 03.4 +0.9**
6.6nm,0.8s
I04A Tendick Farm, 59.42 325 P **P 20 08 04.0 +0.7**
baz=127
K02D Willamette Mer 59.51 323 P **P 20 08 05.2 +1.2**
baz=125
NEW Newport 59.53 331 *e*P **P 20 08 04.3 +0.4**
11nm,0.9s
NEW Newport 59.53 331 P **P 20 08 04.4 +0.4**
baz=134,SNR=6.3
G05D Wamic, OR 59.69 327 P **P 20 08 06.4 +1.3**
baz=129
J01E Myrtle Point 59.94 323 P **P 20 08 08.3 +1.5**
baz=125
H04D Lebanon 60.04 325 P **P 20 08 08.1 +0.6**
baz=127
I02D Swisshome 60.44 324 P **P 20 08 11.3 +1.2**
baz=126
LTY Liberty 60.62 329 *e*P **P 20 08 11.8 +0.3**
9.4nm,1.1s
LON Longmire 60.90 328 *e*P **P 20 08 14.1 +0.7**
6.9nm,0.8s
B05A Bryant 62.01 329 P **P 20 08 21.1 +0.4**
baz=129
D03D Eldon 62.07 328 P **P 20 08 21.9 +0.8**
baz=128
A04D Lummi Island 62.61 329 P **P 20 08 25.7 +1.0**
baz=129,SNR=7.0
LLLB Lillooet 63.40 331 *e*P **P 20 08 30.5 +0.5**
16nm,1.1s
YKA Yellowknife Ar 69.17 343 P **P 20 09 05.6 -0.8**
3.2nm,0.8s,baz=136,slow=6.1,SNR=37
YKA pP **pP 20 09 35.2 -1.1**
0.9nm,0.9s,baz=132,slow=6.7,SNR=2.6
YKB5 Yellowknife Ar 69.17 343 *e*P **P 20 09 05.7 -0.8**
YKB5 *e*pP **pP 20 09 35.2 -1.1**
YKW3 Yellowknife Ar 69.22 343 *e*P **P 20 09 05.7 -1.1**
4.4nm,1.0s
SFJD Kangerlussuaq 71.13 11 *i* P **P 20 09 16.8 -1.5**
11nm,0.8s
DLBC Dease Lake 71.95 335 *e*P **P 20 09 23.4 -0.1**
6.1nm,0.7s
ANGG Ammassalik, Gr 73.17 17 *e*P **P 20 09 28.5 -2.0**
21nm,0.9s
LIC Lamto 74.19 83 *e*P **P 20 09 37.9 +0.4**
70nm,1.7s
TIC Toumodi 74.22 83 *e*P **P 20 09 38.0 +0.2**
DBIC Dimbokro 74.39 83 P **P 20 09 38.1 -0.5**
9.9nm,1.1s,baz=270,slow=6.3,SNR=4.6
KIC Kosan Boka 74.48 83 *e*P **P 20 09 39.7 +0.5**
16nm,0.8s
MORF Marmelete 75.30 51 *e*P **P 20 09 43.2 -0.3**
MORF AMb AMB 20 09 53.3
comp=Z,37nm,0.9s
MORF Marmelete 75.30 51 *e*P **P 20 09 44.6 +1.1**
PNCL Nicolau / Gran 75.58 50 *e*P **P 20 09 43.6 -1.4**
PBDV Barranco-do-Ve 75.84 51 *e*P **P 20 09 47.0 +0.4**
PCVE Castro Verde 75.84 51 *e*P **P 20 09 47.2 +0.6**
PMTG Montargil 76.03 49 *e*P **P 20 09 47.6 0.0**
PCAS Casmilo, Conde 76.06 48 *e*P **P 20 09 48.4 +0.7**
PBEJ Beja 76.06 50 *e*P **P 20 09 49.6 +1.8**
COI Coimbra 76.16 48 *e*P **P 20 09 49.1 +0.8**
PVIS Viseu 76.66 48 *e*P **P 20 09 51.0 -0.2**
PMRV Marv??o 76.74 49 *e*P **P 20 09 51.3 -0.3**
PCBR Castelo Branco 76.77 49 *e*P **P 20 09 51.8 +0.1**
MTE Manteigas 76.85 48 *e*P **P 20 09 52.2 -0.1**
POLO Lamas de Olo 76.89 47 *e*P **P 20 09 53.1 +0.6**
PVRL Vila Real 76.92 47 *e*P **P 20 09 53.0 +0.3**
MVO Moncorvo 77.40 47 *e*P **P 20 09 55.6 +0.2**
PBRG Braganca 77.76 47 *e*P **P 20 09 57.5 +0.2**
SUMG Summit 78.12 12 *e*P **P 20 09 58.6 -0.6**
comp=Z,16nm,0.7s
SUMG Summit 78.12 12⇓*i*P **P 20 09 59.0 -0.1**
comp=Z,43nm,0.8s
BALM Baldy 78.65 334 *e*P **P 20 10 02.6 +0.8**
comp=Z,5.3nm,0.8s
INK Inuvik 78.88 342 *e*P **P 20 10 02.9 +0.2**
comp=Z,17nm,0.9s
EPYK Eagle Plains 78.89 340 *e*P **P 20 10 03.2 +0.2**
comp=Z,11nm,0.9s
EPYK Eagle Plains 78.89 340 P **P 20 10 03.7 +0.7**
baz=120
PAB San Pablo 79.07 49 *e*P **P 20 10 04.3 -0.3**
comp=Z,8.2nm,0.9s
ESDC Sonseca Array 79.39 49 P **P 20 10 06.6 +0.3**
comp=Z,3.9nm,0.7s,baz=264,slow=6.1,SNR=28
ESLA Sonseca Array 79.39 49 *e*P **P 20 10 06.3 0.0**
comp=Z,6.7nm,0.9s
EGAK Eagle 79.76 337 *e*P **P 20 10 08.3 +0.7**
comp=Z,16nm,0.9s
MENT Mentasta 80.02 335 *e*P **P 20 10 09.1 -0.1**
comp=Z,3.9nm,0.8s
DOT Dot Lake 80.44 336 *e*P **P 20 10 11.8 +0.4**
comp=Z,7.7nm,1.0s
PAX Paxson 80.77 335 *e*P **P 20 10 13.1 -0.1**
comp=Z,7.7nm,1.0s
SCO Scoresbysund 80.79 17 *i* P **P 20 10 13.1 0.0**
comp=Z,5.4nm,0.8s
RIDG Independent Ri 80.80 336 *e*P **P 20 10 13.8 +0.4**
comp=Z,8.6nm,1.0s
SCM Sheep Creek Mo 81.17 333 *e*P **P 20 10 15.3 0.0**
comp=Z,14nm,1.0s
TOA1 Torodi Ar. Sit 81.22 77 *e*P **P 20 10 16.1 -0.4**
TORD Torodi Ar. Bea 81.22 77 P **P 20 10 16.1 -0.4**
comp=Z,0.4nm,0.4s,baz=280,slow=5.5,SNR=14
GHO Glory Hole Cre 81.87 333 *e*P **P 20 10 19.1 0.0**
comp=Z,15nm,0.8s
HDA Harding Lake 81.90 336 *e*P **P 20 10 19.0 -0.1**
comp=Z,9.9nm,0.8s
ILAR Eielson Array 82.01 336 P **P 20 10 19.5 -0.1**
comp=Z,4.4nm,0.9s,baz=124,slow=3.8,SNR=38
ILAR pP **pP 20 10 50.2 -0.4**
comp=Z,1.0nm,0.8s,baz=116,slow=2.9,SNR=2.9
ILAR PP **PP 20 13 29.9 +0.9**
comp=Z,1.2nm,0.9s,baz=110,slow=8.7,SNR=10
ILB Eielson Array 82.01 336 *e*P **P 20 10 19.3 -0.3**
comp=Z,5.6nm,0.8s
ILB *e*PP **PP 20 13 29.9 +0.9**
RC01 Rabbit Creek A 82.03 332 *e*P **P 20 10 20.1 +0.2**
comp=Z,12nm,0.8s
FYU Fort Yukon 82.03 338 *e*P **P 20 10 20.2 +0.5**
comp=Z,13nm,0.9s
VNA3 Neumayer Olymp 82.10 162 P **P 20 10 21.0 +1.0**
BRLK Bradley Lake 82.18 331 *e*P **P 20 10 20.6 -0.1**
comp=Z,12nm,0.9s
CCB Clear Creek Bu 82.33 336 *e*P **P 20 10 20.8 -0.5**
comp=Z,4.9nm,1.0s
VNA1 Neumayer--Stat 82.35 161 P **P 20 10 22.5 +1.2**
RND Reindeer 82.36 335 *e*P **P 20 10 21.7 +0.1**
comp=Z,8.2nm,0.8s
MCK McKinley 82.50 335 *e*P **P 20 10 22.5 +0.3**
comp=Z,10.0nm,1.2s
SUA Susitna One 82.60 333 *e*P **P 20 10 23.1 +0.2**
comp=Z,12nm,0.7s
VNA2 Neumayer--Watz 82.71 162 P **P 20 10 23.9 +0.7**
baz=307,slow=5.8
RSO Redoubt South 83.27 331 *e*P **P 20 10 26.3 -0.2**
KTH Kantishna Hill 83.29 335 *e*P **P 20 10 26.3 -0.1**
comp=Z,11nm,1.0s
BPAW Bear Paw Mtn. 83.47 335 *e*P **P 20 10 26.9 -0.3**
comp=Z,19nm,0.8s
COLD Coldfoot 84.10 338 *e*P **P 20 10 31.0 +0.6**
comp=Z,2.7nm,0.9s
SNAA Sanae 84.32 162 P **P 20 10 32.2 +0.7**
SNAA Sanae 84.32 162 *e*P **P 20 10 32.0 +0.5**
comp=Z,4.1nm,0.9s
TOLK Toolik Lake Re 84.32 340 P **P 20 10 31.3 -0.2**
baz=108
SVW2 Sparrevohn 84.77 332 *e*P **P 20 10 33.2 -0.7**
comp=Z,3.2nm,0.9s
DAG Danmarks Havn 84.82 12⇓*i*P **P 20 10 33.4 -0.4**
comp=Z,14nm,0.9s
TAM Tamanrasset 85.45 67 *e*P **P 20 10 38.7 +0.4**
comp=Z,2.7nm,0.9s
QSPA South Pole Qui 88.66 180 *e*P **P 20 10 54.2 +1.4**
comp=Z,5.5nm,0.9s
ARCES ARCESS Array B 96.35 20 P **P 20 11 27.2 -0.9**
comp=Z,6.5nm,0.3s,baz=327,slow=6.5,SNR=3.5
BOSA Boshof 101.79 119 P **Pdif 20 11 51.4 -2.1**
comp=Z,1.1nm,0.7s,baz=0.0,slow=8.1,SNR=3.3
ZAA1 Zalesovo Array 125.94 12 *e*PKPdf **PKPdf 20 17 00.8 -0.2**
ZALV Zalesovo Beam 125.95 12 PKP **PKPdf 20 17 00.8 -0.2**
comp=Z,1.1nm,0.4s,baz=270,slow=1.5,SNR=7.5
MK32 Makanchi Array 131.92 17 *e*PKPdf **PKPdf 20 17 12.6 -0.2**
MKAR Makanchi Array 131.92 17 PKP **PKPdf 20 17 12.6 -0.2**
comp=Z,1.3nm,0.9s,baz=345,slow=2.9,SNR=7.4
MKAR SKPbc **SKPbc 20 20 27.5 -0.5**
comp=Z,0.2nm,0.6s,baz=8.8,slow=6.6,SNR=3.5
SONA0 Songino Array 133.52 355 *e*PKPdf **PKPdf 20 17 16.2 +0.4**
SONM Songino Array 133.52 355 PKP **PKPdf 20 17 16.2 +0.4**
comp=Z,0.6nm,0.5s,baz=332,slow=3.9,SNR=5.6
KSH Kashi 135.72 28 *e*PKP **PKiKP 20 17 23.8 +2.0**
WMQ Urumqi 136.13 14 *e*PKP **PKPdf 20 17 20.7 -0.1**
WMQ LR LR
comp=Z,59nm,6.9s
WMQ LR LR
comp=Z,180nm,7.5s
WMQ LR LR
comp=Z,140nm,6.9s
KSRS Korea Array 136.41 329 PKP **PKPdf 20 17 21.8 +0.5**
comp=Z,2.6nm,0.8s,baz=17,slow=0.9,SNR=14
ASAR Alice Springs 139.48 230 PKhKP PKPpre 20 17 21.4
comp=Z,0.4nm,0.5s,baz=121,slow=3.5,SNR=9.9
ASAR SKPbc **SKPbc 20 20 51.0 -1.2**
comp=Z,0.8nm,0.8s,baz=129,slow=3.8,SNR=5.3
HHC Hu-ho-hao-te 139.59 348 *e*PKP **PKiKP 20 17 30.0 +0.3**
HHC AMB AMB
comp=Z,89nm,5.4s
WR1 Warramunga Arr 141.06 235 *e*PKPdf **PKPdf 20 17 28.0 -2.4**
WRA Warramunga Arr 141.06 235 PKhKP PKPpre 20 17 28.0
comp=Z,1.8nm,0.9s,baz=120,slow=3.0,SNR=3.8
GTA Gaotai 142.16 2 *e*PKP **PKiKP 20 17 34.8 -0.2**
NJ2 Nanjing 145.19 333 *e*PKPbc **PKPdf 20 17 37.5 +0.2**
LZH Lanzhou 145.39 356 *e*PKPbc **PKPab 20 17 38.7 +0.6**
LZH pPKP pPKPab 20 18 08.6 -2.2
XAN Xi'an 146.71 348 PKPbc **PKPdf 20 17 40.5 +0.6**
XAN Xi'an 146.71 348 *e*PKPdf **PKPdf 20 17 38.6 -1.3**
ENH Enshi 150.19 345 *e*PKPdf **PKPdf 20 17 45.8 +0.1**
LSA Lhasa 150.33 18 *e*PKPdf **PKPdf 20 17 47.5 +1.1**
CD2 Chengdu 150.54 355 PKPbc **PKPdf 20 17 45.0 -1.2**
CMAR Chiang Mai Arr 162.93 7 PKPab **PKPab 20 18 51.2 -0.7**
comp=Z,2.7nm,0.8s,baz=332,slow=5.6,SNR=16

SJA 12 20:03:37.7±0.3,29°.75S×67°.99W,h265km±4km,ML3.5, MW3.2,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ACDV	**Cuesta del Vie**	**1.06**	**247**	*e*P		Pn	20 04 15.1	+0.2
ACDV				*e*S		S	20 04 42.7	-1.5
ACDV				IAML			20 04 49.5	
comp=Z,19nm,0.7s								
ACCO	**Cerro Coronel**	**1.25**	**228**	*e*P		Pn	20 04 16.8	+0.6
ACCO				IAML			20 04 18.3	
comp=Z,11μm,0.5s								
ACCO				*e*S		S	20 04 45.6	-0.9
AMOG	**MOGNA**	**1.26**	**200**	*e*P		Pn	20 04 15.8	-0.1
CYA	**Choya**	**2.32**	**56**	IAML			20 04 37.3	
comp=Z,15nm,0.6s								
RTLS	**Leoncito**	**2.33**	**209**	*e*P		Pn	20 04 25.4	+0.7
ASAL	**Salagasta**	**2.92**	**194**	*e*P		Pn	20 04 30.7	+0.3
TCA	**Tanti**	**3.33**	**119**	*e*P		Pn	20 04 35.1	+0.4

*ISCJB **12** 20:19:06.9±1.9,27°.88S±0°.04×71°.12W±0°.09,h6km±10km, Error ellipse: s-maj=14.3km s-min=6.0km az=13.4*
*SJA **12** 20:19:06.9±0.3,27°.91S×71°.04W,h10km±2km,ML4.2, MW3.5*
*GUC **12** 20:19:08.7±0.8,27°.97S×70°.85W,h52km±8km,ML3.5*
ISC 12 20:19:03.3±2.1,27°.79S±0°.05×71°.26W±0°.10,h1km±13km, n15,σ2°.15/22,2C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.93**	**78**	*e*P		**Pg**	**20 19 22.4**	**+1.2**
GO03				*e*S		**Sg**	**20 19 33.6**	**+0.4**
GO03	**Copiap**	**0.93**	**78**	*e*P		**Pn**	**20 19 23.6**	**0.0**
GO03				*e*S		**Sg**	**20 19 33.5**	**+0.3**
GO03				IAML			20 19 35.5	
comp=N,3μm,0.4s								
LCO	**Las Campanas**	**1.32**	**158**	*e*P		**Pg**	**20 19 28.8**	**+0.1**
LCO	**Las Campanas**	**1.32**	**158**	⇑*i*P		**Pg**	**20 19 29.1**	**+0.5**
LCO				*e*S		**Sb**	**20 19 44.2**	**-2.4**
LCO				IAML			20 19 45.2	
comp=E,1μm,0.3s								
LSCH	**La Serena**	**2.12**	**180**	*e*P		**Pb**	**20 19 41.0**	**-1.5**
LSCH				*e*S		**Sn**	**20 20 06.2**	**-0.6**
GO04	**Tololo Observa**	**2.41**	**170**	⇑*i*P		**Pb**	**20 19 45.4**	**-2.3**
GO04				*e*S		**Sn**	**20 20 13.5**	**-1.1**
GO04				IAML			20 20 28.1	
comp=E,848nm,0.4s								
AROD	**Rodeo**	**2.84**	**147**	*e*P		**Pb**	**20 19 52.7**	**-2.4**
AGUA	**GUANDACOL**	**2.97**	**125**	*e*P		**Pn**	**20 19 53.6**	**+1.9**
GO02	**Mina Guanaco**	**3.01**	**30**	*e*P		**Pb**	**20 19 56.5**	**-1.5**
GO02				*e*S		**Sb**	**20 20 33.3**	**-2.0**
GO02				IAML			20 20 53.7	
comp=E,131nm,0.4s								
ACDV	**Cuesta del Vie**	**3.03**	**142**	*e*P		**Pb**	**20 19 55.0**	**-3.2**
ACDV				IAML			20 20 45.1	
comp=Z,35nm,0.6s								
ACCO	**Cerro Coronel**	**3.39**	**146**	*e*P		**Pn**	**20 20 00.5**	**+2.8**
ACCO				IAML			20 20 49.8	
comp=Z,172μm,0.5s								
AMOG	**MOGNA**	**3.96**	**143**	*e*P		**Pn**	**20 20 07.9**	**+2.5**
AMOG				*e*S		**Sn**	**20 20 53.1**	**+0.5**
RTLS	**Leoncito**	**4.35**	**157**	*e*P		**Pn**	**20 20 14.4**	**+3.5**
AUSP	**Uspallata**	**4.71**	**160**	*e*S		**Sn**	**20 21 13.5**	**+2.2**
CYA	**Choya**	**4.87**	**99**	*e*P		**Pn**	**20 20 20.7**	**+3.0**
CYA				IAML			20 20 21.5	
comp=Z,18nm,0.2s								

TAP 12 20:30:03.5,23°.81N×120°.92E,h11km,ML0.8,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.04**	**122**	P		Pg	20 30 05.6	+0.1
baz=122								
SSLB				S		Sg	20 30 07.2	+0.2
baz=122								
WHYT	**Xinyi Township**	**0.13**	**207**	*e*P		Pb	20 30 07.4	-0.6
baz=206								
WHYT				*e*S		Sg	20 30 09.2	+0.4
baz=206								
VWDT	**VWDT**	**0.21**	**105**	*e*P		Pb	20 30 09.1	-0.3
baz=98								
VWDT				*e*S		Sg	20 30 11.6	+0.6
baz=98								
OWD	**Renai**	**0.28**	**59**	P		Pg	20 30 09.6	+0.3
baz=59								
CHN5	**Tsauling**	**0.30**	**226**	*e*P		Pg	20 30 09.9	+0.3
baz=226								
CHN5				*e*S		Sb	20 30 16.1	0.0
baz=226								

TAP 12 20:30:06.9,24°.20N×120°.76E,h9km,ML1.5,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TCU	**Taichung**	**0.09**	**234**	P		Pg	20 30 10.1	+0.8
baz=228								
TCU				S		Sg	20 30 12.0	+1.0
baz=228								
WDJ	**Dajia District**	**0.18**	**325**	P		Pg	20 30 11.9	+1.2
baz=332								
WDJ				*e*S		Sg	20 30 15.4	+2.0
baz=332								
WHP	**Taichung City**	**0.19**	**66**	P		Pg	20 30 12.4	+1.4
baz=67								
NSY	**Sanyi**	**0.21**	**1**	*e*P		Pg	20 30 10.8	-0.6
baz=5.0								
NSY				*e*S		Sg	20 30 17.0	+2.6
baz=5.0								
WCHH	**Zhanghua**	**0.22**	**236**	*e*P		Pg	20 30 12.2	+0.9
baz=224								
WCHH				*e*S		Sg	20 30 17.1	+2.7
baz=224								
TYC	**Yuchr**	**0.31**	**162**	P		Pb	20 30 14.7	0.0
baz=149								
TYC				*e*S		Sb	20 30 20.5	+0.7
baz=149								
NMLH	**Miaoli**	**0.34**	**6**	*e*P		Pb	20 30 14.9	-0.3
baz=6.0								
NMLH				*e*S		Sb	20 30 21.2	+0.6
baz=6.0								
SMLT	**Sun Moon Lake**	**0.34**	**157**	*e*P		Pb	20 30 15.4	+0.1
baz=144								
WJS	**Zhushan**	**0.38**	**184**	*e*P		Pb	20 30 15.9	+0.1
baz=184								
WJS				*e*S		Sb	20 30 21.5	-0.2
baz=184								
CHGB	**Renai**	**0.41**	**110**	P		Pb	20 30 16.7	+0.3
baz=110								
CHGB				*e*S		Sb	20 30 23.1	+0.3
baz=110								
SSLB	**Suanglung**	**0.45**	**156**	P		Pb	20 30 16.8	-0.2
baz=157								
SSLB				*e*S		Sb	20 30 24.1	+0.3
baz=157								
OWD	**Renai**	**0.46**	**122**	*e*P		Pb	20 30 17.5	+0.2
baz=123								
OWD				*e*S		Sb	20 30 24.3	+0.2
baz=123								
OWD	**Renai**	**0.46**	**122**	*e*S		Pb	20 30 17.4	+0.2
baz=30								
WHF	**Hehuan Shan**	**0.47**	**97**	*e*P		Pb	20 30 18.1	+0.5
baz=98								
NSTT	**Nanjuang**	**0.48**	**28**	*e*P		Pb	20 30 18.2	+0.5
baz=40								
NSTT				*e*S		Sb	20 30 24.3	-0.5
baz=40								
WHYT	**Xinyi Township**	**0.51**	**170**	P		Pb	20 30 18.1	+0.1
baz=171								
WHYT				*e*S		Sb	20 30 25.7	+0.1
baz=171								
VWDT	**VWDT**	**0.57**	**141**	*e*P		Pg	20 30 18.4	+0.5
baz=136								
CHN5	**Tsauling**	**0.60**	**187**	*e*P		Pb	20 30 19.7	0.0
baz=186								
CHN5				*e*S		Sb	20 30 28.6	+0.2
baz=186								
NNS	**Nan Shan**	**0.61**	**67**	*e*P		Pb	20 30 20.4	+0.5
baz=80								
NNSB	**Datong**	**0.62**	**68**	*e*P		Pb	20 30 20.3	+0.4
baz=79								
ETLH	**Xiulin Townshi**	**0.66**	**89**	*e*P		Pn	20 30 21.8	-0.8
baz=90								
ALS	**Alishan**	**0.69**	**176**	*e*P		Pb	20 30 21.3	0.0
baz=176								
NSK	**Sanguang**	**0.73**	**49**	*e*P		Pb	20 30 22.1	+0.3
baz=50								
YHNB	**Yeheng**	**0.73**	**50**	*e*P		Pb	20 30 21.9	0.0
baz=51								
CHY	**Chiayi**	**0.76**	**204**	*e*P		Pg	20 30 21.3	-0.4
baz=203								
NDT	**Datong Townshi**	**0.80**	**60**	*e*P		Pb	20 30 23.3	+0.3
baz=60								
TPUB	**Ta-pu**	**0.90**	**187**	*e*P		Pg	20 30 23.8	-0.6
baz=188								
HGSD	**Ruisui**	**0.93**	**139**	*e*P		Pn	20 30 26.5	+0.3
baz=135								
YULB	**Yu-li**	**0.94**	**148**	*e*P		Pg	20 30 25.1	-0.1
baz=150								
WTP	**Ta-pu**	**0.96**	**188**	*e*P		Pg	20 30 25.1	-0.3
baz=187								
TWK	**Hsinying**	**0.96**	**195**	*e*P		Pg	20 30 23.9	-1.5
baz=194								
TWF1	**Yuli**	**0.98**	**149**	*e*P		Pn	20 30 26.5	-0.3
baz=151								
TWE	**Neicheng**	**0.98**	**58**	*e*P		Pb	20 30 26.3	+0.3
baz=45								

TAP 12 20:30:07.1,23°.73N×121°.03E,h4km,ML0.8,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.09**	**312**	P		Pg	20 30 09.2	+0.2
baz=311								
SSLB				S		Sg	20 30 11.0	+0.7
baz=311								
WHYT	**Xinyi Township**	**0.16**	**259**	P		Pg	20 30 10.8	+0.5
baz=259								
WHYT				S		Sg	20 30 13.9	+1.4
baz=259								
SMLT	**Sun Moon Lake**	**0.20**	**323**	P		Pg	20 30 11.7	+0.8
baz=315								
OWD	**Renai**	**0.26**	**31**	*e*P		Pg	20 30 13.4	+1.1
baz=30								
OWD	**Renai**	**0.26**	**31**	*e*S		Pg	20 30 13.1	+0.9
baz=59								
CHGB	**Renai**	**0.36**	**22**	*e*P		Pg	20 30 13.9	-0.2
baz=359								
YULB	**Yu-li**	**0.41**	**143**	*e*P		Pb	20 30 17.8	+0.8
baz=150								
TWF1	**Yuli**	**0.45**	**146**	*e*P		Pb	20 30 17.2	-0.3
baz=152								

*SJA **12** 20:46:59.5±0.9,28°.52S×71°.84W,h36km±23km,ML3.3, MW3.8*
*GUC **12** 20:47:00.9±0.6,28°.71S×71°.37W,h25km±7km,ML2.9*
*ISCJB **12** 20:47:06.5±1.5,28°.73S±0°.06×71°.3W±0°.1,h29km,Error ellipse: s-maj=16.3km s-min=6.8km az=16.9*
ISC 12 20:47:02.9±2.3,28°.65S±0°.06×71°.5W±0°.1,h29km,n18, σ2°.74/22,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.76**	**118**	*e*P		**Pb**	**20 47 15.1**	**-2.8**
LCO				*i* S		**Sb**	**20 47 25.1**	**-2.8**
LCO				IAML			20 47 28.6	
comp=E,596nm,0.7s								
LSCH	**La Serena**	**1.27**	**171**	*i* S		**Sn**	**20 47 39.5**	**-1.2**
GO03	**Copiap**	**1.51**	**46**	*e*P		**Pn**	**20 47 28.5**	**+0.3**
GO03				*e*S		**Sn**	**20 47 50.1**	**+3.2**
GO03	**Copiap**	**1.51**	**46**	*e*P		**Pn**	**20 47 27.5**	**-0.6**
GO03				*i* S		**Sn**	**20 47 48.6**	**+1.7**
GO03				IAML			20 47 53.0	
comp=E,631nm,0.4s								
GO04	**Tololo Observa**	**1.63**	**159**	*e*P		**Pn**	**20 47 29.5**	**-0.4**
GO04	**Tololo Observa**	**1.63**	**159**	*e*P		**Pn**	**20 47 29.1**	**-0.7**
GO04				*i* S		**Sn**	**20 47 50.6**	**+0.7**
ACDV	**Cuesta del Vie**	**2.55**	**127**	*e*P		**Pb**	**20 47 45.8**	**-2.2**

ACDV IAML 20 47 54.2
comp=Z,70nm,0.6s
AGUA GUANDACOL 2.73 108 *eP* **Pb 20 47 49.2 -2.0**
ACCO Cerro Coronel 2.85 133 *eP* **Pn 20 47 50.1 +3.4**
VCA Vinchina 2.87 93 *eP* **Pb 20 47 51.8 -1.7**
VCA IAML 20 48 39.4
comp=Z,64nm,0.4s
AMOG MOGNA 3.45 132 *eP* **Pn 20 47 58.2 +3.4**
RTLS Leoncito 3.66 150 *eP* **Pn 20 48 01.9 +4.0**
RTLS IAML 20 48 58.9
comp=Z,56nm,0.5s
AUSP Uspallata 3.99 154 *eP* **Pn 20 48 06.0 +3.6**
CFA Coronel Fontan 4.06 137 *eP* **Pn 20 48 06.1 +3.0**
RTCV Cerro Valdivia 4.08 142 *eP* **Pn 20 48 06.7 +3.3**
ASAL Salagasta 4.54 151 *eP* **Pn 20 48 13.0 +3.3**
ARCO CERRO ARCO 4.71 153 *eP* **Pn 20 48 15.6 +3.4**
CYA Choya 4.99 89 *eP* **Pn 20 48 17.9 +2.1**

*IDC **12** 20:47:41.0±10.0, 58°.04S×26°.43W, h146km±91km, mb3.9/4, mb1 3.9/5, mb1mx3.5/24, mbtmp4.2/5, Error ellipse: s-maj=57.9km s-min=25.9km az=104.0*
*NEIC **12** 20:47:41.0±1.1, 58°.12S×26°.58W, h142km±8km, mb4.3/5, Error ellipse: s-maj=53.2km s-min=17.3km az=90.0*
ISC 12 20:47:42.1±0.9, **58°.2S**±0°.1×**26°.2W**±0°.3, **h150**km, **n20**, σ1§**81**/24, **mb4.1/6, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.57**	**156**	P	P	20 51 08.5	+5.4
VNA1				S	**Sn**	**20 53 42.5**	**+0.4**
VNA3	**Neumayer Olymp**	**14.75**	**159**	P	**P**	**20 51 06.9**	**+1.7**
VNA3				S	**Sn**	**20 53 42.2**	**-4.4**
VNA2	**Neumayer--Watz**	**14.97**	**156**	P	**P**	**20 51 09.6**	**+2.0**
baz=314,slow=12
VNA2 S **Sn 20 53 47.6 -4.1**
baz=323,slow=9.8
SNAA Sanae 16.53 154 P **Pn 20 51 26.4 +1.4**
SNAA S **Sn 20 54 28.8 -0.4**
SNAA Sanae 16.53 154 P **Pn 20 51 26.4 +1.4**
0.4nm,0.3s,baz=308,slow=12,SNR=33
SNAA S **S 20 54 27.2 -1.1**
0.1nm,0.3s,baz=331,slow=19,SNR=4.8
SNAA Sanae 16.53 154 *eP* **Pn 20 51 26.5 +1.6**
33nm,1.9s
QSPA South Pole Qui 32.02 180 *eP* **P 20 53 54.4 +0.4**
9.5nm,0.6s
MAW Mawson 38.08 142 P **P 20 54 46.8 +1.2**
0.7nm,0.5s,baz=220,slow=5.6,SNR=3.6
MAW Mawson 38.08 142 *eP* **P 20 54 47.1 +1.6**
6.9nm,1.9s
VNDA Vanda 44.42 182 P **P 20 55 38.0 +0.8**
2.3nm,0.6s,baz=181,slow=6.5,SNR=16
VNDA Vanda 44.42 182 *eP* **P 20 55 38.0 +0.8**
2.9nm,0.8s
TOA0 Torodi Ar. Sit 74.70 28 *eP* **P 20 59 06.5 +1.4**
21nm,1.8s
TORD Torodi Ar. Bea 74.70 28 P **P 20 59 03.8 -1.3**
1.0nm,0.4s,baz=197,slow=6.3,SNR=20
TOA1 Torodi Ar. Sit 74.70 28 *eP* **P 20 59 03.8 -1.3**
ASAR Alice Springs 96.74 162 P **P 21 00 54.6 -0.9**
0.7nm,0.6s,baz=186,slow=4.4,SNR=12
YKA Yellowknife Ar 138.14 316 PKP **PKPdf 21 06 46.2 -1.4**
0.3nm,0.6s,baz=127,slow=2.5,SNR=4.3
YKB5 Yellowknife Ar 138.14 316 *e*PKPdf **PKPdf 21 06 46.2 -1.4**
SONA0 Songino Array 150.25 89 *e*PKPbc **PKiKP 21 07 14.5 -0.7**
SONM Songino Array 150.25 89 PKPbc **PKiKP 21 07 14.5 -0.7**
1.5nm,0.5s,baz=201,slow=3.3,SNR=9.6
ILAR Eielson Array 151.94 308 PKPbc **PKPbc 21 07 16.4 -1.2**
0.6nm,0.8s,baz=139,slow=3.7,SNR=5.6

IDC 12 20:49:27.1±2.4, **13°.36S×167°.74E, h0**km, **mb4.1**/5, **mb1 4.2**/5, **mb1mx3.8**/38, **mbtmp4.0**/5, **MS3.1**/3, **Ms1 3.1**/3, **ms1mx2.7**/24, **Error ellipse: s-maj=80.5km s-min=36.6km az=126.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.58**	**296**	LR	LR	20 55 25.5	
comp=Z,20nm,18.4s,baz=112,slow=42
STKA Stephens Creek 30.23 228 P P 20 55 40.8 +1.1
2.4nm,0.3s,baz=49,slow=9.1,SNR=16
WRA Warramunga Arr 32.62 254 P P 20 56 00.3 -0.6
0.7nm,0.6s,baz=68,slow=11,SNR=1.3
ASAR Alice Springs 33.60 247 P P 20 56 08.7 -0.8
1.3nm,0.6s,baz=74,slow=9.1,SNR=34
ASAR PcP PcP 20 58 48.5 -1.6
0.3nm,0.5s,baz=89,slow=1.9,SNR=5.5
CMAR Chiang Mai Arr 74.82 294 P P 21 01 10.3 +0.5
0.6nm,0.7s,baz=132,slow=5.2,SNR=4.5
PDAR Pinedale Array 93.69 47 LR LR 21 40 22.9
comp=Z,17nm,18.4s,baz=46,slow=33
MKAR Makanchi Array 96.53 316 P P 21 02 59.1 +0.4
0.3nm,0.5s,baz=85,slow=5.1,SNR=4.6
ZALV Zalesovo Beam 96.56 324 LR LR 21 44 25.1
comp=Z,17nm,21.2s,baz=70,slow=34
ARCES ARCESS Array B 119.05 346 PKP PKPdf 21 08 17.1 -0.2
1.0nm,0.7s,baz=5.0,slow=2.1,SNR=3.6

*ISCJB **12** 20:59:46.6±0.2, 6°.93S±0°.03×129°.56E±0°.03, h150km, mb4.1/19, Error ellipse: s-maj=4.3km s-min=3.5km az=153.5*
*BJI **12** 20:59:46.0±0.0, 7°.00S×129°.60E, h144km, mb4.5/8, mB4.9/7*
*DJA **12** 20:59:47.9±0.2, 7°.S±2°.×13°.0E±°, h169km±3km, M4.6/31, mB5.0/11, mb4.6/31, MLv5.0/13, Mw(mB)4.3/11, Mwp8.0/1*
*IDC **12** 20:59:47.0±2.1, 6°.87S×129°.67E, h141km±20km, mb3.7/11, mb1 4.0/15, mb1mx3.9/27, mbtmp4.3/15, MS3.1/5, Ms1 3.1/5, ms1mx2.8/26, Error ellipse: s-maj=22.1km s-min=12.9km az=87.0*
*NEIC **12** 20:59:48.1±2.2, 6°.85S×129°.59E, h154km±8km, mb4.7/13, Error ellipse: s-maj=17.3km s-min=16.7km az=148.0*
ISC 12 20:59:47.5±0.4, **6°.91S**±0°.04×**129°.56E**±0°.04, **h150**km, **n82**, σ1§**94**/87, **mb4.2**/19, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.03**	**122**	*e*Pn	**Pn**	**21 00 24.9**	**+2.0**
SAUI	**Saumlaki**	**2.03**	**122**	P	**Pn**	**21 00 26.0**	**+3.0**
SAUI S **Sn 21 00 51.8 +1.5**
BNDI Bandanaira 2.39 8 P **Pn 21 00 30.1 +2.7**
MSAI Masohi 3.59 350 P **Pn 21 00 45.1 +2.6**
FAKI Fak Fak 4.78 34 *e*Pn **Pn 21 00 57.5 -0.6**
FAKI Fak Fak 4.78 34 P **Pn 21 00 57.6 -0.5**
SOEI Soe 5.95 241 *e*Pn **Pn 21 01 14.6 +0.9**
SOEI Soe 5.95 241 P **Pn 21 01 14.6 +0.9**
SANI Sanana 6.00 323 P **Pn 21 01 16.1 +1.9**
MTN Manton Dam 6.10 165 *e*Pn **Pn 21 01 16.1 +0.6**
MTN Manton Dam 6.10 165 P **Pn 21 01 16.0 +0.5**
baz=6.1,SNR=683
MTN S **Sn 21 02 22.8 -1.7**
baz=6.1
SIJI Sorong 6.24 16 P **Pn 21 01 16.7 -0.7**
27nm,0.3s,baz=213,slow=9.6,SNR=37
SIJI S **Sn 21 02 22.9 -4.9**
16nm,0.3s,baz=267,slow=21,SNR=24
SWI Sorong 6.24 16 P **Pn 21 01 16.8 -0.6**
KDU Kakadu 6.42 154 P **Pn 21 01 20.5 +0.7**
baz=6.5,SNR=297
KDU S **Sn 21 02 30.0 -2.2**
baz=6.5
BATI Baumata 6.69 240 P **Pn 21 01 24.5 +1.1**
23nm,0.3s,baz=188,slow=3.0,SNR=62
BATI S **Sn 21 02 34.0 -4.7**
94nm,0.3s,baz=188,slow=21,SNR=11
BATI Baumata 6.69 240 P **Pn 21 01 24.4 +0.9**
98nm,0.7s,2μm
MMRI Maumere 7.46 256 *e*Pn **Pn 21 01 34.4 +0.7**
MMRI Maumere 7.46 256 P **Pn 21 01 34.6 +0.9**
120nm,1.5s,1μm
TNTI Ternate 7.94 344 *e*Pn **Pn 21 01 40.7 +0.6**
TNTI Ternate 7.94 344 P **Pn 21 01 41.2 +1.1**
67nm,0.9s,806nm
EDFI Ende, Flores 8.01 256 P **Pn 21 01 42.1 +0.9**
BAKI Biak 8.65 49 P **Pn 21 01 46.9 -2.8**
75nm,0.7s,1μm
KNRA Kununurra 8.75 185 P **Pn 21 01 50.3 -0.7**
baz=8.8,SNR=108
KNRA S Sn 21 03 20.4 -7.8
baz=8.8
WSI Waingapu 9.57 253 P **Pn 21 02 00.7 -1.1**
APSI Ampana 9.88 307 P **Pn 21 02 08.7 +2.6**
33nm,1.6s,333nm
KAPI Kappang 9.93 280 LR LR 21 05 46.0
comp=Z,55nm,20.5s,baz=95,slow=36
SGSI Sangihe 11.27 339 P **Pn 21 02 24.6 +0.3**
113nm,0.7s
FITZ Fitzroy Crossi 11.76 199 P **Pn 21 02 28.9 -1.9**
2.5nm,0.3s,baz=35,slow=11,SNR=102
FITZ S Sn 21 04 29.4 -11
9.3nm,0.3s,baz=77,slow=14,SNR=9.9
FITZ Fitzroy Crossi 11.76 199 *e*Pn **Pn 21 02 29.0 -1.7**
FITZ Fitzroy Crossi 11.76 199 P **Pn 21 02 28.8 -1.9**
baz=12,SNR=134
FITZ S Sn 21 04 28.9 -12
baz=12
PLAI Plampang 11.83 260 P **Pn 21 02 31.2 -0.4**
JAY Jayapura 11.93 69 P **Pn 21 02 36.2 +3.2**
1.1nm,0.3s,baz=186,slow=23,SNR=6.8
JAY S **Sn 21 04 40.9 -4.1**
0.4nm,0.3s,baz=275,slow=12,SNR=2.7
WRAB Tennant Creek 13.76 161 *e*Pn **Pn 21 02 54.7 -1.8**
WRA Warramunga Arr 13.76 161 P **Pn 21 02 54.7 -1.9**
4.7nm,0.3s,baz=334,slow=13,SNR=69
WRA S Sn 21 05 19.6 -9.4
15nm,0.3s,baz=336,slow=22,SNR=14
WB2 Warramunga Arr 13.77 161 *e*Pn **Pn 21 02 54.8 -1.8**
IGBI Denpasar 14.40 261 P **Pn 21 03 04.6 0.0**
DAV Davao City (W) 14.44 344 LR LR 21 09 56.8
comp=Z,35nm,19.1s,baz=103,slow=42
PALU Palau 14.98 19 P **P 21 03 13.9 +0.3**
baz=15,SNR=4.0
COEN Coen 15.11 119 *e*Pn **Pn 21 03 12.9 -0.5**
19nm,0.8s
COEN Coen 15.11 119 P **Pn 21 03 13.1 -0.3**
baz=15,SNR=25
JAGI Jajag, Banyuwa 15.35 263 *e*Pn **Pn 21 03 16.4 +0.1**
39nm,0.8s
JAGI Jajag, Banyuwa 15.35 263 P **Pn 21 03 11.6 -4.8**
GMJI Gumukmas 16.03 264 P **Pn 21 03 24.6 -0.2**
QIS Mount Isa 16.70 145 P **Pn 21 03 34.1 +1.2**
baz=17,SNR=10
AS31 Alice Springs 17.18 166 *e*P **Pn 21 03 40.0 +1.3**
8.9nm,0.4s
ASAR Alice Springs 17.18 166 P **P 21 03 39.5 +1.6**
2.0nm,0.3s,baz=341,slow=9.9,SNR=166
ASAR S **S 21 06 41.9 -7.5**
2.9nm,0.3s,baz=350,slow=27,SNR=6.4
PSA00 Pilbara Seismi 17.34 212 *e*P **P 21 03 40.8 +1.2**
42nm,0.6s
PMG Port Moresby 17.60 99 P **Pn 21 03 44.4 +0.7**
1.6nm,0.3s,baz=233,slow=13,SNR=3.0
PMG S **S 21 06 54.4 -3.6**
0.2nm,0.3s,baz=276,slow=18,SNR=3.7
PWJI Pagerwojo 17.64 265 P **P 21 03 42.6 -0.4**
WRKA Warakurna 18.07 184 P **Pn 21 03 50.0 +0.8**
baz=18,SNR=95
SBUM Sibu 19.64 298 *e*P **P 21 04 06.7 +1.9**
9.5nm,0.8s
CTA Charters Tower 20.83 131 P Pn 21 04 20.6 -1.3
2.2nm,0.8s,baz=300,slow=14,SNR=3.0
CTA S Sn 21 08 14.9 -3.4
1.8nm,0.5s,baz=47,slow=18,SNR=2.5
KSM Kuching 20.94 293 *e*P **P 21 04 20.0 +1.4**
66nm,1.9s
GIRL Giralia 21.51 222 P **P 21 04 26.0 +1.3**
baz=22,SNR=6.9
CISI Cisompet, Garu 21.58 267 *e*P **P 21 04 23.8 -1.9**
47nm,0.6s
CISI Cisompet, Garu 21.58 267 P **P 21 04 23.4 -2.2**
LEM Lembang 21.78 269 P **P 21 04 25.8 -2.1**
25nm,0.7s,baz=180,slow=3.8,SNR=7.5
LEM Lembang 21.78 269 P **P 21 04 25.5 -2.4**
CGJI Cibinong 23.70 269 P **P 21 04 42.9 -3.0**
FORT Forrest 23.79 183 *e*P **P 21 04 47.3 +0.8**
32nm,0.8s
KMBL Kambalda 25.37 195 P **P 21 05 02.3 +1.4**
baz=26,SNR=6.9
MORW Morawa 25.47 208 P **P 21 05 02.3 +0.6**
baz=26,SNR=5.2
KLBR Kellerberrin 26.92 203 P **P 21 05 16.0 +1.2**
baz=27,SNR=6.2
STKA Stephens Creek 27.27 157 P **P 21 05 18.4 +0.5**
2.2nm,0.9s,baz=320,slow=9.0,SNR=8.5
STKA LR LR 21 17 28.6
comp=Z,94nm,18.7s,baz=35,slow=39
NWAO Narrogin (SRO) 28.31 202 P **P 21 05 27.7 +0.6**
8.7nm,0.8s,baz=50,slow=5.6,SNR=5.6
NWAO LR LR 21 17 05.5
comp=Z,42nm,21.8s,baz=310,slow=37
MNSI Mandailing Nat 30.88 283 P **P 21 05 50.0 0.0**
DZM Mont Dzumac 38.62 117 P **P 21 06 58.9 +2.4**
2.9nm,0.5s,baz=288,slow=20,SNR=3.7
CMAR Chiang Mai Arr 39.34 310 P **P 21 07 02.9 +0.4**
1.0nm,0.6s,baz=137,slow=7.0,SNR=7.0
MJAR Matsushiro Arr 43.97 10 P **P 21 07 38.6 -1.2**
5.4nm,0.9s,baz=192,slow=10,SNR=9.2
MJB9 Matsu-Tunnel 43.98 10 *e*P **P 21 07 38.6 -1.3**
53nm,2.0s
KSRS Korea Array 44.16 358 P **P 21 07 41.9 +0.7**
0.6nm,0.3s,baz=180,slow=9.7,SNR=5.7
KSRS LR LR 21 27 57.3
comp=Z,32nm,18.3s,baz=167,slow=38
SONM Songino Array 58.22 342 P **P 21 09 26.9 +0.8**
0.5nm,0.6s,baz=188,slow=4.2,SNR=3.5
PETK Petropavlovsk- 64.37 18 P **P 21 10 07.3 +0.1**
2.7nm,0.9s,baz=222,slow=1.9,SNR=2.8
NIL Nilore 66.83 311 *e*P **P 21 10 24.1 +0.7**
4.9nm,0.4s
MK31 Makanchi Array 67.91 327 *e*P **P 21 10 30.7 +0.8**
1.9nm,1.0s
MKAR Makanchi Array 67.91 327 P **P 21 10 30.9 +0.9**
1.2nm,0.4s,baz=117,slow=8.2,SNR=50
ZALV Zalesovo Beam 71.31 334 P **P 21 10 51.1 +0.6**
0.4nm,0.5s,baz=36,slow=25,SNR=2.6
GEYT Alibeck 79.82 310 P **P 21 11 40.7 +1.2**
0.6nm,0.6s,baz=94,slow=8.7,SNR=3.1
ABKAR Akbulak array 82.16 322 *e*P **P 21 11 51.8 +0.2**
8.1nm,1.8s
ILAR Eielson Array 93.45 25 P **P 21 12 44.4 -1.2**
0.6nm,0.8s,baz=245,slow=4.8,SNR=5.7
TXAR Lajitas Array 125.25 59 PKP **PKiKP 21 18 32.7 +1.1**
0.2nm,0.6s,baz=158,slow=2.6,SNR=4.5
TORD Torodi Ar. Bea 128.36 281 PKP **PKPdf 21 18 37.7 +0.4**
0.4nm,0.8s,baz=147,slow=0.6,SNR=3.3

*KRNET **12** 21:18:48.2±0.1, 41°.33N×76°.86E, h18km, mb2.0*
*NNC **12** 21:18:48.2±1.3, 41°.27N×76°.86E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=8.8km s-min=6.0km az=169.0*
*SOME **12** 21:18:48.4, 41°.23N×76°.85E, h10km*
ISC 12 21:18:47.5±2.1, **41°.25N**±0°.08×**76°.74E**±0°.04, **h4**km±12km, **n25**, σ0§**75**/42, **17C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.58**	**289**	⇑*iP*	**Pb**	**21 19 01.1**	**+0.6**
baz=78
NRN ⇑*iS* **Sn 21 19 10.6 -2.5**
baz=78
ULHL Ulahol 1.06 340 ⇑*iP* **Pg 21 19 07.9 0.0**
baz=33
ULHL ⇑*iS* **Sg 21 19 21.8 +0.1**
baz=33
BOOM Boomskoye usch 1.38 335 ⇑*iP* **Pn 21 19 13.4 -0.3**
baz=30
BOOM ⇑*iS* **Sn 21 19 31.9 -0.6**
baz=30
KZA Kyzart 1.39 307 ⇑*iP* **Pg 21 19 14.8 +0.6**
baz=2.0
KZA ⇑*iS* **Sn 21 19 34.2 +1.1**
baz=2.0
TNSS Tian-Shan 1.79 5 P **Pb 21 19 21.0 -0.2**
2.6nm,0.3s
TNSS S **Sb 21 19 44.5 +0.3**
2.8nm,0.2s
TNSS Tian-Shan 1.79 5 *eP* **Pb 21 19 21.0 -0.2**
2.6nm,0.3s
TNSS *eS* **Sb 21 19 44.5 +0.3**
2.8nm,0.2s
TKM2 Tokmak 2 1.87 333 ⇓Pg **Pb 21 19 22.1 -0.3**
2.4nm,1.0s
TKM2 ⇑Lg Lg 21 19 48.7
1.0nm,0.5s
TKM2 Tokmak 2 1.87 333 ⇑*iP* **Pb 21 19 21.7 -0.8**
baz=30
TKM2 ⇑*iS* **Sg 21 19 46.9 -0.9**
baz=30
KST Kastek 1.88 343 P **Pg 21 19 23.3 -0.4**
1.7nm,0.2s
KST S **Sg 21 19 48.2 +0.1**
2.3nm,0.5s
KST Kastek 1.88 343 *eP* **Pg 21 19 23.3 -0.4**
1.7nm,0.2s
KST *eS* **Sg 21 19 48.2 +0.1**
2.3nm,0.5s
MDOK Medeo 1.93 7 Pg **Pb 21 19 23.4 +0.1**
2.3nm,0.4s
MDOK Lg Lg 21 19 48.5
3.1nm,0.3s
MDOK Medeo 1.93 7 *eP* **Pb 21 19 23.4 +0.1**
2.3nm,0.4s
MDOK *eS* **Sb 21 19 48.5 +0.7**
3.1nm,0.3s
UCH Uchtor 1.93 301 ⇑*eP* **Pg 21 19 23.9 -0.6**
baz=98
UCH ⇑*iS* **Sg 21 19 50.7 +1.2**
baz=98
KBK Karagaybulak 1.94 317 ⇑*iP* **Pb 21 19 23.4 -0.1**
baz=14
KBK ⇑*iS* **Sg 21 19 49.9 +0.1**
baz=14
KNDC Almaty 1.98 5 ⇑Pg **Pn 21 19 22.3 +0.4**
5.0nm,0.4s
KNDC ⇑Lg Lg 21 19 50.4
6.5nm,0.5s
KOTS Kotyrbulak 2.00 8 Pg **Pb 21 19 24.9 +0.2**
1.9nm,0.2s
KOTS Lg Lg 21 19 51.0
6.1nm,0.3s
KOTS Kotyrbulak 2.00 8 *eP* **Pb 21 19 24.9 +0.2**
1.9nm,0.2s
KOTS *eS* **Sb 21 19 51.0 +0.9**
6.1nm,0.3s
AAK Ala-Archa 2.17 310 ⇓Pg **Pg 21 19 28.7 -0.5**
0.9nm,0.4s
AAK ⇓Lg Lg 21 19 58.9
2.5nm,0.7s
SATY Saty 2.19 34 Pg **Pb 21 19 27.5 -0.4**
1.4nm,0.2s
SATY Lg Lg 21 19 55.8
6.9nm,0.2s
SATY Saty 2.19 34 *eP* **Pb 21 19 27.5 -0.4**
1.4nm,0.2s
SATY *eS* **Sb 21 19 55.8 +0.3**
6.9nm,0.2s
KTBS Karatobe 2.46 359 Pg **Pb 21 19 33.3 +0.9**
1.4nm,0.4s
KTBS Lg Lg 21 20 05.6
6.1nm,0.6s
KTBS Karatobe 2.46 359 *eP* **Pb 21 19 33.3 +0.9**
1.4nm,0.4s
KTBS *eS* **Sg 21 20 05.6 -1.0**
6.1nm,0.6s
UZB Uzynbulak 2.55 41 *eP* **Pb 21 19 34.2 +0.3**
0.2nm,0.0s
UZB *eS* **Sb 21 20 07.4 +1.7**
2.4nm,0.3s
KPKS Kokpek 2.65 32 *eP* **Pb 21 19 35.5 -0.1**
2.9nm,0.4s
KPKS *eS* **Sb 21 20 09.1 +0.7**
6.4nm,0.5s
PDGK Podgornoye 2.92 44 Pg **Pb 21 19 39.6 -0.6**
0.4nm,0.5s
PDGK Lg Lg 21 20 16.7
1.6nm,0.8s

*DDA **12** 21:44:23.5, 38°.63N×43°.64E, h7km±4km, ML2.8*
*ISK **12** 21:44:23.2, 38°.64N×43°.66E, h7km, ML2.7/13*
*ISCJB **12** 21:44:24.4±0.5, 38°.64N±0°.03×43°.65E±0°.05, h13km, Error ellipse: s-maj=5.8km s-min=3.9km az=179.6*
ISC 12 21:44:24.2±0.9, **38°.64N**±0°.03×**43°.64E**±0°.04, **h13**km, **n28**, σ0§**77**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.20**	**256**	PG	**Pg**	**21 44 28.8**	**0.0**
TVAN	**Van**	**0.22**	**238**	*iP*	**Pb**	**21 44 29.5**	**-0.7**
VMUR	**Van-Muradiye**	**0.35**	**351**	*iP*	**Pg**	**21 44 31.6**	**+0.2**
VMUR *iS* **Sb 21 44 39.0 +1.0**
ERCV ERCIS-VAN 0.45 328 PG **Pg 21 44 32.7 -0.4**
CLDR Caldiran 0.54 23 PG **Pg 21 44 34.6 -0.3**
CLDR Caldiran 0.54 23 *iP* **Pg 21 44 34.7 -0.2**
CLDR IAML_P
comp=Z,5μm,0.3s
GEVA Gevas 0.57 234 *iP* **Pg 21 44 35.1 -0.2**
AKDM Akdamar-Van 0.61 239 PG **Pg 21 44 35.4 -0.7**
BASK Baskale_VAN 0.66 154 *iP* **Pg 21 44 36.6 -0.4**
ADCV BITLIS_Adilcev 0.74 283 *iP* **Pg 21 44 38.6 0.0**
MLAZ Malazgirt-MUS 0.99 301 PG **Pb 21 44 42.3 -1.0**
MLAZ SG **Sn 21 44 57.2 -0.7**
TUTA Tutak 0.99 320 *iP* **Pb 21 44 42.1 -1.4**
TUTA *iS* **Sn 21 44 58.4 +0.2**
AGRB Hanur-Agry 1.06 332 PG **Pb 21 44 43.5 -1.0**
AGRB SG **Sn 21 44 59.4 -0.3**
HAKT HAKKARI 1.08 177 *iP* **Pb 21 44 44.4 -0.6**
BLIS Bitlis-Merkez 1.22 260 *iP* **Pn 21 44 46.6 -0.5**
IGDI IGDIR 1.27 15 *iP* **Pg 21 44 49.7 +1.0**
IGDI IAML_P
comp=Z,455nm,0.3s
CUKT Cukurca 1.39 181 PN **Pb 21 44 49.5 -0.7**
CUKT Cukurca 1.39 181 *iP* **Pb 21 44 49.8 -0.4**
CUKT IAML_P
comp=Z,980nm,0.2s
TASB TASBURUN-IGDIR 1.42 19 PN **Pn 21 44 49.6 -0.2**
SIRN Sırnak 1.50 221 *iP* **Pg 21 44 53.6 +0.5**
SRTM Siirt_Merkez 1.50 245 *iP* **Pg 21 44 53.6 +0.5**
SRTM IAML_P
comp=Z,1μm,0.4s
EATA Eleskirt 1.51 324 *iP* **Pb 21 44 52.3 0.0**
EATA IAML_P
comp=Z,748nm,0.2s
MUSM Mu-Merkez 1.67 273 *iP* **Pb 21 44 54.2 -0.7**
MUSM IAML_P
comp=Z,457nm,0.2s
KOPR Koprukoy-ERZUR 1.93 315 PN **Pb 21 44 58.1 -1.3**
SVAN Silvan-Diyarba 1.98 256 PN **Pn 21 44 57.9 +0.4**
SENK Senkaya-Erzuru 2.16 333 PN **Pn 21 45 00.9 +0.8**
YEDI Yedisu-Bingol 2.54 289 PN **Pn 21 45 06.3 +1.0**
MAZI Mazidag 2.79 246 PN **Pn 21 45 10.3 +1.7**

*SOME **12** 21:50:25.1, 37°.70N×71°.00E, h10km*
*NNC **12** 21:50:32.1±3.8, 36°.96N×70°.44E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=33.8km s-min=27.5km az=138.0*
ISC 12 21:50:32.6±3.5, **36°.9N**±0°.2×**70°.2E**±0°.1, **h10**km, **n10**, σ1§**15**/14, **2C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.85**	**26**	P	**Pn**	**21 52 00.4**	**+0.6**
SNR=11
BRLS Borolday 6.11 357 *eP* **Pn 21 52 01.7 -1.3**
0.9nm,0.2s
BRLS *eS* **Sn 21 53 10.7 -2.3**
3.9nm,0.3s
KK31 Karatay Array 6.18 2 ⇑Pn **Pn 21 52 04.9 +1.0**
1.3nm,0.3s,baz=190,slow=14,SNR=4.4
KK31 ⇓Sn **Sn 21 53 16.1 +1.4**
0.8nm,0.3s,baz=186,slow=25,SNR=4.5
UCH Uchtor 6.25 31 P **Pn 21 52 05.4 +0.1**
SNR=16
MRKS Merke 6.26 21 *eP* **Pn 21 52 05.7 +0.5**
12nm,0.4s
MRKS *eS* **Sn 21 53 17.4 +0.7**
10nm,0.4s
EKS2 Erkin-Say 6.35 24 P **Pn 21 52 07.1 +0.7**
SNR=8.1
KZA Kyzart 6.45 35 P **Pn 21 52 07.6 -0.4**
SNR=7.0
AAK Ala-Archa 6.59 29 ⇓Pn **Pn 21 52 08.2 -1.5**
3.3nm,0.6s
AAK ⇓Sn **Sn 21 53 24.5 -0.4**
4.5nm,0.5s
TKM2 Tokmak 2 7.28 33 P **Pn 21 52 18.5 -0.7**
SNR=8.8
AB31 Akbulak array 14.42 332 ⇑Pn **Pn 21 53 57.2 +0.5**
0.3nm,0.3s,baz=149,slow=12,SNR=19

*DDA **12** 22:12:26.7, 38°.64N×43°.63E, h11km±2km, ML2.8*

*ISK **12** 22:12:26.0, 38°.67N×43°.62E, h1km, ML2.6/13*
ISC 12 22:12:28.1±1.0, 38°.66N±0°.03×43°.61E±0°.03, h13km±8km, n29, σ1s72/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.19	249	PG	Pg	22 12 31.9	-0.6
TVAN	Van	0.21	231	*i* P	Pg	22 12 32.8	-0.1
TVAN				*i* S	Sg	22 12 37.6	+1.4
VMUR	Van-Muradiye	0.33	354	*i* P	Pb	22 12 34.3	-1.6
VMUR				*i* S	Sb	22 12 41.5	+0.4
ERCV	ERCIS-VAN	0.42	329	PG	Pg	22 12 35.4	-1.1
CLDR	Caldiran	0.53	26	PG	Pg	22 12 37.3	-1.4
CLDR	Caldiran	0.53	26	*i* P	Pb	22 12 37.9	-1.6
CLDR				IAML_P			
	comp=Z,6μm,0.1s						
GEVA	Gevas	0.56	231	*i* P	Pb	22 12 38.1	-1.8
AKDM	Akdamar-Van	0.60	236	PG	Pg	22 12 38.4	-1.5
BASK	Baskale_VAN	0.68	153	*i* P	Pb	22 12 40.5	-1.5
ADCV	BITLIS_Adilcev	0.71	282	*i* P	Pb	22 12 41.7	-0.7
MLAZ	Malazgirt-MUS	0.96	300	PG	Pb	22 12 45.5	-1.1
TUTA	Tutak	0.97	320	*i* P	Pb	22 12 45.6	-1.2
TUTA				*i* S	Sn	22 13 02.8	+1.5
AGRB	Hanur-Agry	1.03	332	PG	Pg	22 12 46.2	-1.8
AGRB				SG	Sn	22 13 01.8	-1.0
HAKT	HAKKARI	1.11	176	*i* P	Pb	22 12 47.8	-1.4
BLIS	Bitlis-Merkez	1.20	259	*i* P	Pg	22 12 49.0	-2.3
BLIS				*i* S	Sn	22 13 08.8	+1.9
IGDI	IGDIR	1.26	17	*i* P	Pb	22 12 51.6	-0.1
IGDI				*i* S	Sn	22 13 13.1	+4.9
IGDI				IAML_P			
	comp=Z,298nm,0.3s						
TASB	TASBURUN-IGDIR	1.41	20	PN	Pg	22 12 54.0	-1.1
CUKT	Cukurca	1.41	180	PN	Pg	22 12 53.6	-1.7
EATA	Eleskirt	1.48	324	*i* P	Pg	22 12 55.4	-1.2
EATA				IAML_P			
	comp=Z,664nm,0.2s						
SRTM	Siirt_Merkez	1.49	244	*i* P	Pg	22 12 56.5	-0.2
SRTM				*i* S	Sg	22 13 19.3	+3.2
MUSM	Mu-Merkez	1.65	273	*i* P	Pb	22 12 57.5	-0.8
MUSM				IAML_P			
	comp=Z,499nm,0.1s						
VRTB	Varto-Mus	1.76	287	PN	Pb	22 12 59.2	-1.0
VRTB	Varto-Mus	1.76	287	*i* P	Pg	22 13 00.3	-1.5
VRTB				IAML_P			
	comp=Z,132nm,0.2s						
KOPR	Koprukoy-ERZUR	1.90	315	PN	Pn	22 13 00.4	0.0
BNGL	BINGOL	1.95	279	*i* P	Pg	22 13 03.4	-2.1
SVAN	Silvan-Diyarba	1.97	256	PN	Pn	22 13 01.4	+0.3
BTMN	Batman	2.00	248	*i* P	Pb	22 13 03.6	-0.7
BTMN				IAML_P			
	comp=Z,234nm,0.3s						
SENK	Senkaya-Erzuru	2.13	333	PN	Pn	22 13 03.8	+0.2
BNGB	Bingl	2.32	279	PN	Pb	22 13 07.2	-2.6

*ISCJB **12** 22:40:54.5±0.5, 7°.08S±0°.08×155°.74E±0°.06, h100km, mb4.0/11, Error ellipse: s-maj=12.1km s-min=7.9km az=16.0*
*IDC **12** 22:40:57.6±7.1, 7°.04S×155°.63E, h111km±54km, mb3.8/5, mb1 3.8/7, mb1mx3.5/35, mbtmp4.2/7, MS3.2/3, Ms1 3.2/3, ms1mx2.7/20, Error ellipse: s-maj=52.2km s-min=27.6km az=95.0*
*NEIC **12** 22:40:57.4±1.6, 7°.19S×155°.77E, h114km±10km, mb4.1/6, Error ellipse: s-maj=21.7km s-min=20.5km az=59.0*
ISC 12 22:40:56.5±0.7, 7°.2S±0°.1×155°.73E±0°.09, h100km, n33, σ1s13/27, mb3.9/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	4.63	310	*e*Pn	Pn	22 42 06.7	+2.4
RABL				eSn	Sn	22 43 12.3	+15
HNR	Honiara	4.73	118	S	Sn	22 43 00.1	+0.7
	6.7nm,0.3s,baz=252,slow=20,SNR=2.4						
HNR	Honiara	4.73	118	*e*Pn	Pn	22 42 05.8	+0.1
PMG	Port Moresby	8.77	255	P	Pn	22 43 00.6	+0.1
	3.5nm,0.3s,baz=25,slow=14,SNR=4.2						
PMG				LR	LR	22 46 25.2	
	comp=Z,68nm,19.6s,baz=322,slow=38						
CTA	Charters Tower	15.78	215	P	Pn	22 44 35.0	+1.8
	0.2nm,0.3s,baz=45,slow=11,SNR=2.6						
WRAB	Tennant Creek	24.30	236	*e*P	P	22 46 03.4	-1.5
	4.9nm,0.5s						
WB2	Warramunga Arr	24.31	236	*e*P	P	22 46 04.5	-0.5
	3.5nm,0.8s						
WR1	Warramunga Arr	24.32	236	*e*P	P	22 46 05.4	+0.4
WRA	Warramunga Arr	24.32	236	P	P	22 46 05.4	+0.4
	13nm,0.3s,baz=62,slow=9.6,SNR=3.1						
MTN	Manton Dam	24.86	255	*e*P	P	22 46 10.6	+0.6
	12nm,1.0s						
AS31	Alice Springs	26.60	230	*e*P	P	22 46 25.5	-0.2
	0.9nm,0.4s						
AS31				*e*PcP	PcP	22 49 47.6	-0.1
ASAR	Alice Springs	26.60	230	P	P	22 46 25.5	-0.3
	0.9nm,0.5s,baz=59,slow=10.0,SNR=12						
ASAR				PcP	PcP	22 49 47.6	-0.1
	0.4nm,0.5s,baz=68,slow=2.7,SNR=5.3						
H11S3	WAKE ISLAND Hy 27.71	23		T	T	23 14 56.8	
	baz=202,slow=75,SNR=54						
H11S2	WAKE ISLAND Hy 27.71	23		T	T	23 14 56.3	
	baz=202,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy 27.73	23		T	T	23 14 59.4	
	baz=202,slow=75,SNR=23						
STKA	Stephens Creek	27.89	206	LR	LR	22 56 58.5	
	comp=Z,54nm,19.6s,baz=28,slow=34						
H11N1	WAKE ISLAND Hy 28.90	22		T	T	23 16 26.3	
	baz=204						
H11N3	WAKE ISLAND Hy 28.91	22		T	T	23 16 21.9	
	baz=204						
H11N2	WAKE ISLAND Hy 28.91	22		T	T	23 16 41.6	
	baz=204						
FITZ	Fitzroy Crossi	31.25	247	P	P	22 47 06.6	-0.4
	3.5nm,0.6s,baz=76,slow=6.7,SNR=15						
FITZ	Fitzroy Crossi	31.25	247	*e*P	P	22 47 06.6	-0.4
	3.3nm,0.6s						
SONA0	Songino Array	69.89	327	*e*P	P	22 51 56.3	-0.5
SONM	Songino Array	69.89	327	P	P	22 51 56.3	-0.5
	1.2nm,0.9s,baz=158,slow=4.3,SNR=5.1						
MK31	Makanchi Array	84.03	319	*e*P	P	22 53 16.0	0.0
	1.4nm,0.8s						
MK32	Makanchi Array	84.03	319	*e*P	P	22 53 14.9	-1.2
MKAR	Makanchi Array	84.03	319	P	P	22 53 14.9	-1.2
	1.6nm,0.6s,baz=100,slow=5.5,SNR=18						
ZALV	Zalesovo Beam	84.74	326	P	P	22 53 17.4	-2.0
	0.8nm,0.5s,baz=114,slow=5.1,SNR=3.8						
ZAA1	Zalesovo Array	84.75	326	*e*P	P	22 53 17.4	-2.0
PDAR	Pinedale Array	98.28	48	LR	LR	23 35 31.4	
	comp=Z,19nm,18.2s,baz=232,slow=33						
GERES	GERESS Array B	127.59	329	PKP	PKPdf	22 59 49.9	-0.4
	0.2nm,0.3s,baz=72,slow=3.2,SNR=4.7						
BDFB	Brasilia	147.33	134	PKPbc	PKPdf	23 00 29.0	+1.7
	1.2nm,0.4s,baz=284,slow=8.3,SNR=4.4						
TORD	Torodi Ar. Bea	153.78	285	PKPbc	PKPbc	23 00 43.8	-1.3
	0.6nm,0.6s,baz=120,slow=2.8,SNR=4.1						
TOA1	Torodi Ar. Sit	153.78	285	*e*PKPbc	PKPbc	23 00 43.8	-1.3

*ISCJB **12** 22:51:53.0±2.4, 25°.02N±0°.06×123°.45E±0°.04, h13km±17km, Error ellipse: s-maj=10.2km s-min=6.6km az=5.9*
*JMA **12** 22:51:53.5±0.1, 25°.01N×123°.45E, h25km±5km, M3.0*
*IDC **12** 22:51:55.5±1.5, 24°.29N×122°.31E, h0km, mb3.4/2, mb1 3.5/3, mb1mx3.2/33, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=71.5km s-min=24.6km az=68.0*
ISC 12 22:51:54.0±1.9, 24°.95N±0°.09×123°.47E±0°.04, h9km±11km, n11, σ0s50/17, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.65	221	P	Pg	22 52 06.3	-0.2
YOJ				eS	Sg	22 52 15.3	+0.4
IRIF	Iriomote-Funau	0.66	159	P	Pg	22 52 07.0	+0.2
IRIF				eS	Sb	22 52 16.7	-0.3
JYNG	Yonagunijimaku	0.69	224	P	Pg	22 52 07.0	-0.4
JYNG				S	Sg	22 52 16.6	+0.2
JISG	Ishigakijimahi	0.85	115	P	Pg	22 52 10.0	-0.3
JISG				eS	Sg	22 52 22.2	+0.9
JIJ	Ishigaki jima	0.85	134	P	Pg	22 52 09.8	-0.5
JIJ				S	Sg	22 52 21.1	-0.3
JKRS	Kuro-shima	0.86	145	P	Pg	22 52 10.4	-0.3
JKRS				S	Sg	22 52 22.3	+0.4
HATJ	Hateruma jima	0.94	161	P	Pg	22 52 11.7	-0.5
HATJ				eS	Sb	22 52 25.5	+0.3
KSRS	Korea Array	13.03	16	Pn	P	22 55 15.7	+5.8
	0.2nm,0.3s,baz=199,slow=12,SNR=5.6						
MKAR	Makanchi Array	39.26	314	P	P	22 59 23.2	+0.2
	0.3nm,0.7s,baz=116,slow=9.8,SNR=3.1						
WRA	Warramunga Arr	45.86	166	P	P	23 00 16.0	-0.8
	123nm,0.3s,baz=355,slow=7.1,SNR=1.6						
ASAR	Alice Springs	49.38	167	P	P	23 00 44.7	+0.6
	0.3nm,0.5s,baz=342,slow=8.9,SNR=3.8						

*DDA **12** 23:11:30.3, 39°.12N×29°.12E, h7km±2km, ML2.5*
*ISK **12** 23:11:30.9, 39°.10N×29°.10E, h10km, ML1.4/6*
*ISCJB **12** 23:11:31.1±0.5, 39°.11N±0°.03×29°.09E±0°.04, h11km±3km, Error ellipse: s-maj=5.8km s-min=5.2km az=175.7*
ISC 12 23:11:30.7±1.0, 39°.12N±0°.03×29°.09E±0°.03, h13km±7km, n12, σ0s23/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.09	257	PG	Pg	23 11 33.6	-0.1
SMAA				SG	Sg	23 11 36.1	+0.3
SHAP	Saphane-Kutahy	0.14	134	PG	Pg	23 11 34.3	-0.1
SHAP				SG	Sg	23 11 36.8	-0.1
GEDZ	Gediz	0.26	107	PG	Pg	23 11 36.1	-0.2
GEDZ				SG	Sg	23 11 40.3	+0.3
GDZ	Gediz	0.30	96	*i* P	Pg	23 11 37.0	-0.1
GDZ				*i* Sn	Sg	23 11 41.7	+0.3
USAK	Uak-Merkez	0.41	188	*i* P	Pg	23 11 39.2	+0.2
USAK				*i* S	Sb	23 11 45.9	-0.1
USAK				IAML_P			
	comp=Z,1μm,0.1s						
DURS	Dursunbey	0.68	315	*i* P	Pg	23 11 44.1	+0.1
KULA	Kula-Manisa	0.69	209	PG	Pg	23 11 44.1	-0.1
MANT	Manisa	0.76	214	*i* P	Pg	23 11 45.3	-0.1
MANT				*i* S	Sg	23 11 55.1	-0.3
MANT				IAML_P			
	comp=Z,446nm,0.1s						
KHAL	Karahalli	0.81	157	*i* P	Pb	23 11 47.1	+0.3
KHAL				*i* S	Sb	23 11 57.4	-0.2
ULDT	Uludag	1.02	2	*i* P	Pb	23 11 50.1	-0.3
ULDT				IAML_P			
	comp=Z,254nm,0.1s						
ARMT	Armutlu	1.45	353	PN	Pb	23 11 57.7	+0.1
ARMT				SN	Sg	23 12 17.9	+0.3
SRCK	Saricakaya, Es	1.50	52	PN	Pb	23 11 58.3	-0.1

GCG 12 23:42:49.5±0.6, 14°.58N×91°.70W, h45km±8km, MD3.6, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.18	45	*e*P	Pn	23 42 58.1	+0.6
ERG	Entre ros, C	0.19	138	*e*P	Pn	23 42 57.2	-0.1
FUG	Fuego 3	0.84	99	*e*P	Pn	23 43 05.3	+0.2
FUG				eS	Sn	23 43 18.0	+1.4
PCG	Pacaya	1.08	100	*e*P	Pn	23 43 08.9	+0.4
PCG				eS	Sn	23 43 24.2	+1.9
IXG	Ixpaco	1.29	108	*e*P	Pn	23 43 12.1	+0.9
IXG				eS	Sn	23 43 29.3	+1.9

*IDC **12** 23:59:53.2±1.2, 13°.70N×92°.39W, h0km, mb3.7/6, mb1 4.0/10, mb1mx3.8/34, mbtmp3.7/10, ML3.4/4, MS3.5/8, Ms1 3.5/8, ms1mx3.1/32, Error ellipse: s-maj=33.4km s-min=18.6km az=36.0*
*NEIC **12** 23:59:55.8±0.0, 13°.68N×92°.40W, h8km, mb4.2/18, MD4.1(MEX), After MEX.*
*MEX **12** 23:59:55.8±0.6, 13°.68N×92°.40W, h8km±376km, MD4.1*
ISC 12 23:59:54.2±2.2, 13°.79N±0°.07×92°.44W±0°.07, h4km±13km, n41, σ1s49/43, mb4.2/18, MS3.4/7, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.12	9	*e*Pn	Pg	00 00 15.8	+0.1
THIG				eSn	Sb	00 00 30.5	-0.6
THIG		1.12	9	*e*P	Pg	00 00 15.8	+0.1
THIG				eS	Sb	00 00 30.5	-0.6
PCIG		2.04	338	*e*Pn	Pn	00 00 28.8	-0.5
PCIG				eSn	Sn	00 00 54.5	-0.8
PCIG		2.04	338	*e*P	Pn	00 00 28.8	-0.5
PCIG				eS	Sn	00 00 54.5	-0.8
APG	El Apazote	2.26	58	Pn	Pn	00 00 32.3	-0.2
	9.2nm,0.3s,baz=215,slow=7.8,SNR=103						
APG				Sn	Sb	00 01 02.9	-1.3
	19nm,0.3s,baz=331,slow=18,SNR=5.6						
APG				LR	LR	00 01 40.4	
	comp=Z,946nm,18.3s,baz=172,slow=47						
CCIG	Comitan	2.49	7	*e*Pn	Pn	00 00 37.8	+2.2
CCIG				eSn	Sn	00 01 08.2	+1.6
CCIG	Comitan	2.49	7	*e*P	Pb	00 00 38.1	-1.5
CCIG				*i* S	Sn	00 01 07.7	+1.1
CMIG	Matias Romero	4.04	325	Pn	Pn	00 00 56.9	+0.1
	1.4nm,0.3s,baz=142,slow=10.0,SNR=7.5						
CMIG				Sn	Sn	00 01 42.4	-2.2
	6.1nm,0.3s,baz=73,slow=18,SNR=3.9						
TGUH	Tegucigalpa,Un	5.02	86	*e*Pn	Pn	00 01 13.1	+2.8
TLIG	Tlapa	6.99	303	*e*Pn	Pn	00 01 41.0	+3.5
TEIG	Tepich	7.53	31	*e*Pn	Pn	00 01 45.7	+0.8
JTS	Las Juntas de	8.11	115	Pn	Pn	00 01 53.1	+0.3
	0.5nm,0.3s,baz=265,slow=5.7,SNR=2.8						
JTS				Lg	Lg	00 03 58.3	
	0.4nm,0.3s,baz=307,slow=20,SNR=2.7						
H06E1	SOCORRO T-PHASE	8.42	288	T	T	00 23 09.3	
	SNR=4.3						
TXAR	Lajitas Array	18.64	328	P	Pn	00 04 14.9	+1.7
	0.0nm,0.3s,baz=154,slow=12,SNR=5.5						
MSTX	Muleshoe	22.17	337	*e*P	P	00 04 51.4	0.0
	6.9nm,0.7s						
AMTX	Amarillo	22.60	340	*e*P	P	00 04 56.2	+0.3
	13nm,0.7s						
BNM	Barren Site	24.00	330	*e*P	P	00 05 13.5	+3.2
ANMO	Albuquerque	24.57	331	P	P	00 05 16.2	+0.7
	1.0nm,0.7s,baz=163,slow=14,SNR=4.0						
ANMO	Albuquerque	24.57	331	*e*P	P	00 05 16.8	+1.3
	2.5nm,1.0s						
SJG	San Juan	25.63	77	LR	LR	00 16 12.8	
	comp=Z,110nm,19.4s,baz=263,slow=38						
S22A	4UR Ranch, Cre	27.07	334	*e*P	P	00 05 40.2	+2.0
	3.4nm,1.0s						
PV01	Paradox Valley	28.16	332	*e*P	P	00 05 49.2	+1.3
	1.8nm,0.7s						
PV05	Paradox Valley	28.35	332	*e*P	P	00 05 50.9	+1.2
	3.7nm,1.0s						
PV18	Skein Mesa, Pa	28.40	332	*e*P	P	00 05 50.8	+0.8
	6.0nm,1.0s						
NNA	Nana	29.92	148	LR	LR	00 15 42.4	
	comp=Z,40nm,21.1s,baz=319,slow=32						
PDAR	Pinedale Array	32.43	336	P	P	00 06 27.0	+1.3
	0.1nm,0.3s,baz=138,slow=9.6,SNR=3.1						
REDW	Red Top Meadow	33.45	335	*e*P	P	00 06 36.1	+1.5
	7.4nm,0.9s						
SNOW	Snow King Moun	33.49	336	*e*P	P	00 06 36.8	+1.8
	11nm,0.9s						
NVAR	Mina Array Bea	33.56	322	P	P	00 06 37.9	+2.3
	0.8nm,0.5s,baz=120,slow=8.8,SNR=5.0						
NVAR				LR	LR	00 22 23.1	
	comp=Z,64nm,19.1s,baz=280,slow=40						
HLID	Hailey	35.15	332	*e*P	P	00 06 51.5	+2.2
	2.6nm,1.1s						
SIV	San Ignacio	42.86	133	P	P	00 07 52.2	-1.7
	0.3nm,0.4s,baz=4.9,slow=7.1,SNR=4.0						
SCHQ	Schefferville	45.56	20	LR	LR	00 28 16.1	
	comp=Z,132nm,19.4s,baz=241,slow=37						
YKA	Yellowknife Ar	51.13	347	P	P	00 08 56.9	-1.0
	2.5nm,0.7s,baz=150,slow=7.4,SNR=22						
YKA				PcP	PcP	00 10 12.7	-0.7
	0.5nm,0.7s,baz=140,slow=3.8,SNR=5.0						
YKW3	Yellowknife Ar	51.19	347	*e*P	P	00 08 57.5	-0.8
	2.7nm,0.7s						
INK	Inuvik	60.51	344	*e*P	P	00 10 05.2	+0.1
	3.8nm,0.9s						
MENT	Mentasta	60.75	336	*e*P	P	00 10 06.0	-0.9
	25nm,0.2s						
ILAR	Eielson Array	62.86	337	P	P	00 10 20.7	-0.3
	0.8nm,0.8s,baz=126,slow=5.4,SNR=10						
NOA	NORSAR Array B	84.53	28	LR	LR	00 48 36.4	
	comp=Z,14nm,21.6s,baz=270,slow=35						
DBIC	Dimbokro	86.10	84	LR	LR	00 50 25.1	
	comp=Z,19nm,18.1s,baz=122,slow=35						
NRIK	Noril'sk	97.08	0	LR	LR	01 01 52.2	
	comp=Z,46nm,18.4s,baz=55,slow=38						
CMAR	Chiang Mai Arr	146.04	340	PKPbc	PKPdf	00 19 35.5	0.0
	3.2nm,0.7s,baz=340,slow=3.4,SNR=13						

*ISK **13** 00:15:06.3, 38°.65N×43°.64E, h8km, ML2.2/7*
*DDA **13** 00:15:06.7, 38°.64N×43°.66E, h7km±2km, ML2.8*
*ISCJB **13** 00:15:07.0±0.6, 38°.67N±0°.03×43°.66E±0°.06, h13km, Error ellipse: s-maj=7.3km s-min=4.9km az=173.0*
ISC 13 00:15:07.0±1.0, 38°.65N±0°.03×43°.65E±0°.04, h13km, n17, σ0s53/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.21	255	PG	Pg	00 15 11.5	-0.2
TVAN	Van	0.23	238	*i* P	Pg	00 15 12.3	+0.3
TVAN				IAML_P			
	comp=Z,7μm,0.1s						
VMUR	Van-Muradiye	0.34	350	*i* P	Pg	00 15 14.1	-0.1
VMUR				IAML_P			
	comp=Z,1μm,0.2s						
ERCV	ERCIS-VAN	0.44	327	PG	Pg	00 15 15.6	-0.3
CLDR	Caldiran	0.54	23	PG	Pg	00 15 17.4	-0.2
CLDR	Caldiran	0.54	23	*i* P	Pb	00 15 18.2	-0.2
AKDM	Akdamar-Van	0.61	239	PG	Pg	00 15 18.4	-0.6
BASK	Baskale_VAN	0.66	155	*i* P	Pb	00 15 20.2	-0.3
BASK				IAML_P			
	comp=Z,1μm,0.1s						
ADCV	BITLIS_Adilcev	0.74	283	*i* P	Pg	00 15 21.1	-0.3
ADCV				*i* S	Sn	00 15 34.1	-0.4
ADCV				IAML_P			
	comp=Z,556nm,0.1s						
MLAZ	Malazgirt-MUS	0.99	300	PG	Pb	00 15 25.7	-0.4
TUTA	Tutak	0.99	319	*i* P	Pb	00 15 26.2	0.0
TUTA				*i* S	Sn	00 15 42.0	+1.1
TUTA				IAML_P			
	comp=Z,9μm,0.1s						
AGRB	Hanur-Agry	1.06	331	PG	Pb	00 15 26.2	-1.1
AGRB				SG	Sg	00 15 41.9	+0.7
HAKT	HAKKARI	1.09	178	*i* P	Pg	00 15 27.9	-0.1
HAKT				IAML_P			
	comp=Z,564nm,0.2s						
BLIS	Bitlis-Merkez	1.23	259	*i* P	Pn	00 15 29.6	-0.4
BLIS				IAML_P			
	comp=Z,824nm,0.2s						
CUKT	Cukurca	1.40	181	PN	Pn	00 15 32.5	+0.1
SRTM	Siirt_Merkez	1.51	245	*i* P	Pg	00 15 36.5	+0.6
VRTB	Varto-Mus	1.79	287	PN	Pn	00 15 38.2	+0.5

IDC 13 00:33:34.8±2.4, 10°.57N×127°.37E, h0km, mb4.2/3, mb1 4.3/3, mb1mx3.6/36, mbtmp4.2/3, Error ellipse: s-maj=207.4km s-min=30.2km az=69.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	2.01	247	*e*P	Pg	00 34 13.6	+0.2
SCPH				eS	Sn	00 34 31.1	-4.7
ASAR	Alice Springs	34.63	169	P	P	00 40 25.9	-0.1
	0.2nm,0.5s,baz=343,slow=7.7,SNR=4.4						
MKAR	Makanchi Array	52.44	322	P	P	00 42 49.3	0.0
	1.6nm,0.7s,baz=119,slow=8.3,SNR=15						
ARCES	ARCESS Array B	84.28	340	P	P	00 46 08.1	-0.1
	5.4nm,0.3s,baz=64,slow=7.1,SNR=3.8						

MEX 13 00:37:08.6±0.4, 16°.37N×98°.08W, h6km±7km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.27	338	*e*P	Pg	00 37 29.3	-3.7
TLIG				eS	Sg	00 37 44.7	-4.9
VHO	Vista Hermosa	1.46	61	*i* P	Pn	00 37 31.2	-4.6

*ISCJB **13** 01:37:07.0±2.8, 18°.0S±0°.3×18°.3E±0°.2, h10km, Error ellipse: s-maj=47.4km s-min=12.3km az=151.4*
*EAF **13** 01:37:07.6±0.6, 17°.87S×18°.03E, h0km±46km, MD4.1*
*BUL **13** 01:37:09.7±1.0, 17°.86S×17°.88E, h15km±38km, MD4.8*
ISC 13 01:37:08.7±2.2, 18°.1S±0°.2×18°.3E±0°.1, h10km, n10, σ2s13/12, Namibia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	Tsumeb	1.28	214	*i* P	Pg	01 37 32.6	-0.7
TSUM	Tsumeb	1.28	214	*i* P	Pg	01 37 32.6	-0.7
LSZ	Lusaka	9.85	75	*i* P	Pn	01 39 31.2	+0.6
LSZ	Lusaka	9.85	75	*i* P	Pn	01 39 31.2	+0.6
MATP	Matopo	9.86	105	*i* P	Pn	01 39 33.4	+2.7
MATP				*i* S	Sn	01 41 19.2	-2.4
MATP	Matopo	9.86	105	*i* P	Pn	01 39 33.4	+2.7
MATP				*i* S	Sn	01 41 19.2	-2.4
BLWY	Bulawayo	9.91	103	*i* P	Pn	01 39 32.9	+1.5
BLWY	Bulawayo	9.91	103	*i* P	Pn	01 39 32.9	+1.5
MSNA	Messina	11.74	113	*i* P	Pn	01 39 58.3	+2.0
MSNA	Messina	11.74	113	*i* P	Pn	01 39 58.3	+2.0

*SOME **13** 01:57:36.5, 41°.82N×79°.37E, h15km*
*NNC **13** 01:57:37.9±0.9, 41°.88N×79°.36E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=6.4km s-min=3.9km az=154.0*
*KRNET **13** 01:57:37.0±0.1, 41°.82N×79°.69E, mb3.2*
ISC 13 01:57:36.0±1.8, 41°.70N±0°.05×79°.18E±0°.05, h13km±11km, n58, σ1s27/99, 32C-18D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	Uzynbulak	1.45	355	P	Pn	01 58 01.8	-0.2
	6.5nm,0.2s						
UZB				S	Sn	01 58 19.9	-1.2
	64nm,0.3s						
UZB	Uzynbulak	1.45	355	⇓*i* P	Pn	01 58 01.8	-0.2
	7.8nm,0.1s						
UZB				⇓*i* S	Sn	01 58 19.9	-1.2
	88nm,0.3s						
SATY	Saty	1.47	337	P	Pb	01 58 03.4	+0.1
	20nm,0.1s						
SATY				S	Sn	01 58 22.3	+0.7
	172nm,0.2s						
SATY	Saty	1.47	337	⇓*i* P	Pb	01 58 03.4	+0.1
	8.5nm,0.2s						
SATY				⇑*i* S	Sn	01 58 22.3	+0.7
	175nm,0.1s						
PDGK	Podgornoye	1.64	8	P	Pn	01 58 04.

	39nm,0.2s						
MDOK				Lg	Lg	01 58 45.9	
	113nm,0.5s						
MDOK	**Medeo**	**2.15**	**314**	⇑*i*P	**Pg**	**01 58 16.7**	**-0.5**
	34nm,0.2s						
MDOK				⇓*i*S	**Sg**	**01 58 45.9**	**+0.8**
	101nm,0.6s						
KOTS	**Kotyrbulak**	**2.16**	**316**	Pg	**Pg**	**01 58 16.9**	**-0.5**
	30nm,0.2s						
KOTS				Lg	Lg	01 58 46.0	
	58nm,0.4s						
KOTS	**Kotyrbulak**	**2.16**	**316**	*e*P	**Pg**	**01 58 16.9**	**-0.5**
	30nm,0.2s						
KOTS				*e*S	**Sg**	**01 58 46.0**	**+0.5**
	58nm,0.4s						
AAA	**Alma-Ata**	**2.25**	**313**	Pg	**Pg**	**01 58 19.2**	**+0.1**
	76nm,0.1s						
AAA				Lg	Lg	01 58 50.0	
	121nm,0.2s						
AAA	**Alma-Ata**	**2.25**	**313**	*e*P	**Pg**	**01 58 19.2**	**+0.1**
	76nm,0.1s						
AAA				*e*S	**Sg**	**01 58 50.0**	**+1.7**
	121nm,0.2s						
ULHL	**Ulahol**	**2.25**	**285**	⇑*i*P	**Pg**	**01 58 19.8**	**+0.6**
	baz=80						
ULHL				⇑*i*S	**Sg**	**01 58 51.2**	**+2.7**
	baz=80						
IZV	**Izvestkoviy**	**2.32**	**306**	Pg	**Pg**	**01 58 20.1**	**-0.3**
	70nm,0.2s						
IZV				Lg	Lg	01 58 51.4	
IZV	**Izvestkoviy**	**2.32**	**306**	*e*P	**Pg**	**01 58 20.1**	**-0.3**
	19nm,0.3s						
IZV				*e*S	**Sg**	**01 58 51.4**	**+0.8**
	70nm,0.3s						
NRN	**Naryn**	**2.40**	**265**	⇑*i*P	**Pg**	**01 58 23.0**	**+1.0**
	baz=63						
NRN				⇑*i*S	**Sg**	**01 58 56.3**	**+3.2**
	baz=63						
MNBS	**Baschi**	**2.44**	**347**	Pg	**Pb**	**01 58 20.3**	**+0.5**
	12nm,0.1s						
MNBS				Lg	Lg	01 58 51.8	
	262nm,0.2s						
MNBS	**Baschi**	**2.44**	**347**	*e*P	**Pb**	**01 58 20.3**	**+0.5**
	12nm,0.1s						
MNBS				*e*S	**Sb**	**01 58 51.8**	**+1.9**
	262nm,0.2s						
BOOM	**Boomskoye usch**	**2.53**	**289**	⇑*i*P	**Pg**	**01 58 23.3**	**-1.2**
	baz=85						
BOOM				⇑*i*S	**Sg**	**01 58 57.4**	**0.0**
	baz=85						
DJR	**Jarkent**	**2.67**	**9**	Pg	**Pb**	**01 58 22.6**	**-1.1**
	15nm,0.3s						
DJR				Lg	Lg	01 58 56.0	
	78nm,0.4s						
DJR	**Jarkent**	**2.67**	**9**	⇑*i*P	**Pb**	**01 58 22.6**	**-1.1**
	14nm,0.3s						
DJR				⇓*i*S	**Sb**	**01 58 56.0**	**-0.3**
	76nm,0.4s						
CHKK	**Chushkaly**	**2.69**	**324**	Pg	**Pb**	**01 58 25.5**	**+1.5**
	19nm,0.2s						
CHKK				Lg	Lg	01 59 00.8	
	133nm,0.2s						
CHKK	**Chushkaly**	**2.69**	**324**	*e*P	**Pb**	**01 58 25.5**	**+1.5**
	19nm,0.2s						
CHKK				⇑*i*S	**Sg**	**01 59 00.8**	**-1.5**
	133nm,0.3s						
ARXS	**Arharly**	**2.70**	**339**	Pg	**Pb**	**01 58 24.5**	**+0.4**
	5.3nm,0.1s						
ARXS				Lg	Lg	01 58 59.0	
	53nm,0.6s						
ARXS	**Arharly**	**2.70**	**339**	*e*P	**Pb**	**01 58 24.5**	**+0.4**
	5.3nm,0.1s						
ARXS				*e*S	**Sb**	**01 58 59.0**	**+1.8**
	53nm,0.6s						
KTBS	**Karatobe**	**2.72**	**318**	Pg	**Pg**	**01 58 26.7**	**-1.5**
	12nm,0.3s						
KTBS				Lg	Lg	01 59 02.6	
	135nm,0.3s						
KTBS	**Karatobe**	**2.72**	**318**	*e*P	**Pg**	**01 58 26.7**	**-1.5**
	12nm,0.3s						
KTBS				*e*S	**Sg**	**01 59 02.5**	**-0.9**
	135nm,0.3s						
KST	**Kastek**	**2.73**	**300**	Pg	**Pg**	**01 58 26.7**	**-1.7**
	20nm,0.4s						
KST				Lg	Lg	01 59 03.2	
	31nm,0.6s						
KST	**Kastek**	**2.73**	**300**	*e*P	**Pg**	**01 58 26.7**	**-1.7**
	20nm,0.4s						
KST				*e*S	**Sg**	**01 59 03.2**	**-0.5**
	28nm,0.7s						
TKM2	**Tokmak 2**	**2.92**	**296**	⇑Pn	**Pb**	**01 58 28.4**	**+0.3**
	3.1nm,0.3s						
TKM2				⇓Lg	Lg	01 59 11.2	
	12nm,0.4s						
TKM2	**Tokmak 2**	**2.92**	**296**	⇑*i*P	**Pb**	**01 58 28.4**	**+0.3**
	baz=91						
TKM2				⇑*i*S	**Sb**	**01 59 06.1**	**+2.3**
	baz=91						
DGS	**Degeres**	**2.95**	**303**	Pg	**Pg**	**01 58 30.7**	**-1.9**
	13nm,0.3s						
DGS				Lg	Lg	01 59 09.4	
	26nm,0.3s						
DGS	**Degeres**	**2.95**	**303**	*e*P	**Pg**	**01 58 30.6**	**-1.9**
	13nm,0.3s						
DGS				*e*S	**Sg**	**01 59 09.4**	**-1.3**
	26nm,0.3s						
KZA	**Kyzart**	**2.96**	**279**	⇑*i*P	**Pb**	**01 58 30.0**	**+1.2**
	baz=76						
KZA				⇑*i*S	**Sg**	**01 59 08.6**	**-2.4**
	baz=76						
KUU	**Kurty**	**3.03**	**317**	Pg	**Pb**	**01 58 31.4**	**+1.7**
	5.6nm,0.2s						
KUU				Lg	Lg	01 59 11.6	
	45nm,0.3s						
KUU	**Kurty**	**3.03**	**317**	⇑*i*P	**Pb**	**01 58 31.4**	**+1.7**
	5.7nm,0.3s						
KUU				*e*S	**Sg**	**01 59 11.1**	**-2.0**
	53nm,0.3s						
KBK	**Karagaybulak**	**3.29**	**288**	⇑*i*P	**Pb**	**01 58 34.0**	**-0.2**
	baz=85						
KBK				⇑*i*S	**Sb**	**01 59 15.3**	**+1.1**
	baz=85						
TDK	**Taldyqorghan**	**3.34**	**351**	Pg	**Pb**	**01 58 35.6**	**+0.4**
	69nm,0.3s						
TDK				Lg	Lg	01 59 18.1	
	58nm,0.2s						
TDK	**Taldyqorghan**	**3.34**	**351**	*e*P	**Pb**	**01 58 35.6**	**+0.4**
	69nm,0.3s						
TDK				*e*S	**Sb**	**01 59 18.1**	**+2.3**
	58nm,0.2s						
UCH	**Uchtor**	**3.52**	**280**	⇑*i*P	**Pb**	**01 58 37.6**	**-0.8**
	baz=78						
UCH				⇑*i*S	**Sb**	**01 59 22.0**	**+0.8**
	baz=78						
KAPS	**Kapalarasan**	**3.58**	**2**	Pg	**Pb**	**01 58 39.1**	**-0.2**
	2.1nm,0.3s						
KAPS				Lg	Lg	01 59 24.4	
	24nm,0.3s						
KAPS	**Kapalarasan**	**3.58**	**2**	*e*P	**Pb**	**01 58 39.1**	**-0.2**
	2.1nm,0.3s						
KAPS				⇓*i*S	**Sb**	**01 59 24.4**	**+1.7**
	23nm,0.2s						
AAK	**Ala-Archa**	**3.60**	**287**	⇑Pg	**Pg**	**01 58 45.7**	**+0.7**
	2.1nm,0.5s						
AAK				⇑Lg	Lg	01 59 33.5	
	3.4nm,0.4s						
ARLS	**Aral**	**3.63**	**274**	⇑*i*P	**Pb**	**01 58 39.0**	**-1.2**
	baz=72						
ARLS				⇑*i*S	**Sb**	**01 59 25.0**	**+0.8**
	baz=72						
AML	**Almayashu**	**4.11**	**278**	⇓*i*P	**Pb**	**01 58 46.2**	**-2.3**
	baz=76						
AML				⇓*i*S	**Sb**	**01 59 36.6**	**-1.7**
	baz=76						
EKS2	**Erkin-Say**	**4.13**	**285**	⇑*i*P	**Pb**	**01 58 45.8**	**-2.7**
	baz=83						
EKS2				⇑*i*S	**Sb**	**01 59 35.7**	**-2.6**
	baz=83						
MRKS	**Merke**	**4.54**	**285**	Pg	**Pg**	**01 59 01.4**	**-1.5**
	9.0nm,0.4s						
MRKS				Lg	Lg	02 00 02.5	
	5.2nm,0.2s						
MRKS	**Merke**	**4.54**	**285**	*e*P	**Pg**	**01 59 01.4**	**-1.5**
	9.0nm,0.4s						
MRKS				⇑*i*S	**Sg**	**02 00 02.5**	**+0.7**
	5.4nm,0.3s						
MAKZ	**Makanchi**	**5.49**	**21**	⇓Pn	**Pn**	**01 58 59.3**	**+1.9**
	0.8nm,0.7s						
MAKZ				⇑Sn	**Sn**	**01 59 59.9**	**-0.5**
	1.5nm,1.0s						
MAKZ				⇑Lg	Lg	02 00 21.8	
	1.7nm,0.8s						
MK31	**Makanchi Array**	**5.56**	**23**	⇓Pn	**Pn**	**01 59 00.4**	**+2.0**
	0.2nm,0.1s,baz=8.5,slow=19,SNR=8.1						
MK31				⇑Pg	**Pb**	**01 59 13.5**	**+0.6**
	0.6nm,0.5s,baz=207,slow=15,SNR=4.6						
MK31				⇓Sn	**Sn**	**02 00 00.7**	**-1.5**
	1.6nm,0.7s,baz=203,slow=18,SNR=5.8						
MK31				⇓Lg	Lg	02 00 23.6	
	1.4nm,0.6s,baz=206,slow=23,SNR=4.7						

TAP 13 02:07:27.6, 24°.34N×121°.78E, h9km±1km, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.09**	**342**	P	Pg	02 07 30.9	+0.8
	baz=341						
NANB				S	Sg	02 07 32.7	+1.0
	baz=341						
ENA	**Nanau**	**0.10**	**337**	P	Pg	02 07 30.9	+0.8
	baz=341						
ENA				S	Sg	02 07 32.7	+0.9
	baz=341						
NACB	**Ninganchiao**	**0.24**	**226**	P	Pg	02 07 33.5	+1.0
	baz=225						
NACB				*e*S	Sg	02 07 37.3	+1.6
	baz=225						
TWC	**Suao**	**0.28**	**13**	*e*P	Pb	02 07 34.1	-0.6
	baz=15						
TWC				*e*S	Sg	02 07 37.2	+0.4
	baz=15						
ETLH	**Xiulin Townshi**	**0.30**	**244**	*e*P	Pb	02 07 34.8	-0.5
	baz=244						
ETLH				*e*S	Sb	02 07 39.8	-0.7
	baz=244						
TWD	**Chiawan**	**0.31**	**213**	*e*P	Pb	02 07 34.8	-0.5
	baz=211						
NDT	**Datong Townshi**	**0.36**	**317**	*e*P	Pb	02 07 35.7	-0.5
	baz=316						
NDT				*e*S	Sb	02 07 41.6	-0.3
	baz=316						
EOS1	**EOS1**	**0.38**	**57**	*e*P	Pb	02 07 35.9	-0.6
	baz=56						
EOS1				*e*S	Sb	02 07 42.2	-0.2
	baz=56						

JMA 13 02:08:09.2±0.2, 22°.73N×122°.99E, h50km, M3.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.52**	**29**	P	Pn	02 08 34.7	+0.7
HATJ				S	Sn	02 08 52.8	+0.2
YOJ	**Yonaguni jima**	**1.72**	**1**	P	Pn	02 08 37.9	+1.1
YOJ				*e*S	Sn	02 08 58.9	+1.3
IRIF	**Iriomote-Funau**	**1.74**	**23**	P	Pn	02 08 38.0	+1.1
IRIF				*e*S	Sn	02 08 57.9	0.0
JKRS	**Kuro-shima**	**1.77**	**32**	P	Pn	02 08 38.4	+1.0
JKRS				S	Sn	02 08 59.2	+0.5
JIJ	**Ishigaki jima**	**1.94**	**33**	P	Pn	02 08 40.5	+0.8
JIJ				S	Sn	02 09 02.3	-0.6
JISG	**Ishigakijimahi**	**2.21**	**33**	P	Pn	02 08 44.1	+0.7
JISG				S	Sn	02 09 09.5	0.0
JTJ	**Tarama**	**2.47**	**39**	P	Pn	02 08 47.7	+0.8
JTJ				S	Sn	02 09 15.9	+0.1
JIRB	**Irabujima**	**2.89**	**43**	S	Sn	02 09 23.8	-2.5
JMJ2	**Miyako jima3**	**2.93**	**46**	*e*S	Sn	02 09 25.2	-2.1

*DDA **13** 02:10:31.9, 36°.95N×27°.88E, h7km±2km, ML2.0*
ISK 13 02:10:31.1, 36°.94N×27°.88E, h19km, ML2.1/11, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DATC	**Datca-Mugla**	**0.26**	**224**	PG	Pg	02 10 37.2	+0.2
DATC				SG	Sg	02 10 41.8	+0.8
BBRN	**Bozburun-Marma**	**0.30**	**152**	PG	Pb	02 10 38.1	+0.3
DAT	**Datca**	**0.32**	**229**	PG	Pb	02 10 38.4	0.0
DAT				SG	Sb	02 10 43.9	+0.7
DAT	**Datca**	**0.32**	**229**	*i* P	Pb	02 10 38.7	+0.3
DAT				*i* S	Sb	02 10 44.9	+1.8
MRSB	**Marmaris-Mugla**	**0.34**	**132**	PG	Pb	02 10 38.6	0.0
BDRM	**Kayabasi**	**0.37**	**289**	*i* P	Pn	02 10 40.4	-1.1
BDRM				*i* S	Sb	02 10 45.8	+1.2
BDRM				IAML_P			
	comp=Z,553nm,0.2s						
YER	**Yerkesik**	**0.37**	**59**	PG	Pb	02 10 39.4	+0.1
YER				SG	Sb	02 10 45.3	+0.5
BODT	**Bodrum**	**0.47**	**285**	PG	Pb	02 10 40.9	0.0
BODT				SG	Sb	02 10 48.5	+1.0
TURN	**Turunc**	**0.58**	**97**	PG	Pb	02 10 38.7	-3.9
TURN	**Turunc**	**0.58**	**97**	*i* P	Pb	02 10 39.2	-3.3
TURN				*i* S	Sb	02 10 44.6	-5.7
TURN				IAML_P			
	comp=Z,1μm,0.1s						
DALY	**Dalyan (Mula)**	**0.63**	**101**	PG	Pg	02 10 44.1	+0.5
DALY	**Dalyan (Mula)**	**0.63**	**101**	*i* P	Pn	02 10 44.5	-0.5
DALY				*i* S	Sn	02 10 55.6	+1.0
DALY				IAML_P			
	comp=Z,234nm,0.2s						
AYDN	**Tasoluk**	**0.72**	**360**	*i* P	Pn	02 10 46.3	+0.1
GCAM	**G?zelcaml?**	**0.92**	**326**	PG	Pg	02 10 49.3	+0.3
GCAM	**G?zelcaml?**	**0.92**	**326**	*i* P	Pg	02 10 50.1	+1.1
AYDB	**Zeytinkoy-Aydi**	**1.00**	**0**	PG	Pg	02 10 50.6	0.0
FETY	**Fethiye**	**1.01**	**107**	PG	Pg	02 10 50.9	+0.1

*ISCJB **13** 02:37:57.3±0.9, 8°.22S±0°.08×74°.40W±0°.07, h147km, mb3.2/2, Error ellipse: s-maj=11.2km s-min=10.0km az=5.1*
*IDC **13** 02:37:58.6±2.2, 8°.38S×74°.34W, h174km±30km, mb3.1/2, mb1 3.3/5, mb1mx3.1/32, mbtmp3.7/5, Error ellipse: s-maj=29.8km s-min=21.0km az=43.0*
ISC 13 02:37:57.4±1.0, 8°.19S±0°.09×74°.35W±0°.09, h147km, n6, σ1§71/8, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**4.14**	**284**	P	**Pn**	**02 39 00.6**	**+0.7**
	8.1nm,0.3s,baz=135,slow=7.1,SNR=11						
ATAH				S	**Sn**	**02 39 46.9**	**-1.4**
	8.5nm,0.3s,baz=116,slow=19,SNR=17						
NNA	**Nana**	**4.50**	**213**	P	**Pn**	**02 39 05.6**	**+1.4**
	baz=14,slow=8.3						
NNA				S	**Sn**	**02 39 55.2**	**-1.1**
	9.1nm,0.3s,baz=300,slow=20,SNR=6.1						
LPAZ	**La Paz**	**10.08**	**144**	P	**Pn**	**02 40 19.2**	**-0.1**
	0.1nm,0.3s,baz=333,slow=11,SNR=4.0						
PTGA	**Pitinga**	**16.13**	**63**	P	**P**	**02 41 37.9**	**+1.3**
	0.4nm,0.3s,baz=320,slow=20,SNR=3.1						
TXAR	**Lajitas Array**	**46.79**	**324**	P	**P**	**02 46 13.6**	**+1.2**
	0.2nm,0.5s,baz=148,slow=7.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**78.43**	**75**	P	**P**	**02 49 40.2**	**-2.4**
	0.7nm,0.6s,baz=256,slow=3.6,SNR=12						

IDC 13 02:55:53.9±2.0, 1°.15N×126°.16E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/25, mbtmp3.7/3, Error ellipse: s-maj=174.4km s-min=25.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.44**	**159**	P	P	03 00 54.1	-0.6
	1.5nm,0.4s,baz=338,slow=11,SNR=14						
ASAR	**Alice Springs**	**25.79**	**164**	P	P	03 01 27.2	+0.4
	0.7nm,0.5s,baz=350,slow=14,SNR=11						
MKAR	**Makanchi Array**	**59.36**	**326**	P	P	03 05 57.9	-0.1
	0.4nm,0.4s,baz=116,slow=8.5,SNR=6.9						

*ISK **13** 02:57:30.2, 38°.77N×43°.42E, h19km±2km, ML2.3/4*
*DDA **13** 02:57:31.6, 38°.77N×43°.46E, h7km±5km, ML2.6*
ISC 13 02:57:30.9±1.4, 38°.78N±0°.03×43°.43E±0°.04, h14km±13km, n10, σ0§51/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.19**	**189**	PG	**Pb**	**02 57 36.6**	**+0.3**
VMUR	**Van-Muradiye**	**0.23**	**29**	*i* P	**Pb**	**02 57 37.1**	**-0.1**
VMUR				*i* S	**Sb**	**02 57 41.8**	**+0.5**
VMUR				IAML_P			
	comp=Z,5μm,0.2s						
TVAN	**Van**	**0.26**	**183**	*i* P	**Pb**	**02 57 37.3**	**-0.2**
TVAN				*i* S	**Sb**	**02 57 42.2**	**+0.3**
TVAN				IAML_P			
	comp=Z,5μm,0.3s						
CLDR	**Caldiran**	**0.53**	**47**	PG	**Pg**	**02 57 41.3**	**0.0**
CLDR				SG	**Sb**	**02 57 49.5**	**-0.2**
CLDR	**Caldiran**	**0.53**	**47**	*i* P	**Pg**	**02 57 41.4**	**0.0**
CLDR				*i* S	**Sb**	**02 57 50.3**	**+0.6**
CLDR				IAML_P			
	comp=Z,3μm,0.1s						
ADCV	**BITLIS_Adilcev**	**0.55**	**273**	*i* P	**Pb**	**02 57 42.6**	**+0.1**
ADCV				*i* S	**Sn**	**02 57 52.8**	**-0.9**
ADCV				IAML_P			
	comp=Z,679nm,0.1s						
GEVA	**Gevas**	**0.55**	**212**	*i* P	**Pb**	**02 57 42.5**	**-0.1**
GEVA				*i* S	**Sb**	**02 57 51.4**	**+1.0**
GEVA				IAML_P			
	comp=Z,795nm,0.2s						
AKDM	**Akdamar-Van**	**0.57**	**218**	PG	**Pg**	**02 57 42.0**	**-0.2**
MLAZ	**Malazgirt-MUS**	**0.77**	**298**	PG	**Pg**	**02 57 45.8**	**-0.1**
AGRB	**Hanur-Agry**	**0.86**	**337**	PG	**Pg**	**02 57 47.5**	**-0.1**
AGRB				SG	**Sb**	**02 58 00.1**	**+0.8**

*ISCJB **13** 02:59:30.3±0.3, 9°.53N±0°.04×84°.06W±0°.04, h53km±3km, mb3.9/11, MS3.2/4, Error ellipse: s-maj=8.6km s-min=2.6km az=40.0*
*UCR **13** 02:59:30.7±1.7, 9°.45N×84°.09W, h40km±6km, MD4.1, ML4.1, mb4.2(NEIC)*
*IDC **13** 02:59:30.9±1.8, 9°.36N×84°.25W, h46km±16km, mb3.4/6, mb1 3.9/9, mb1mx3.6/31, mbtmp4.0/9, ML2.9/2, MS3.2/7, Ms1 3.2/7, ms1mx3.0/18, Error ellipse: s-maj=38.1km s-min=12.8km az=42.0*
*NEIC **13** 02:59:32.4±2.3, 9°.58N×84°.09W, h51km±10km, mb4.2/7, ML4.3(UCR), Error ellipse: s-maj=22.5km s-min=3.7km az=57.0*
NEIC Felt [IV] at Quepos and [III] at Curridabat, Escazu and San Jose. Also felt at Alajuela, Alajuelita, Atenas, Colon, Guadalupe, Heredia, Jaco, Parrita, San Isidro de Coronado, San Isidro de El General, San Jose, San Pedro, San Rafael, San Vicente, Santa Ana, Santiago and Turrialba.
*SNET **13** 03:00:23.6±1.5, 12°.70N×86°.60W, h16km, ML3.5*
ISC 13 02:59:31.7±0.7, 9°.51N±0°.05×84°.05W±0°.05, h49km±7km, n119, σ1§33/133, mb4.1/11, MS3.1/4, 12C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.23**	**12**	*e*P	**Pn**	**02 59 39.0**	**-1.5**
LCR2				*e*S	**Sn**	**02 59 45.8**	**-0.9**
EDDO	**Dominical**	**0.32**	**144**	⇑*e*P	**Pn**	**02 59 39.0**	**-1.9**
EDDO				*e*S	**Sn**	**02 59 46.0**	**-1.4**
SJS	**Escuela Geolog**	**0.43**	**360**	*e*P	**Pn**	**02 59 41.5**	**-0.7**
HDC	**Heredia**	**0.49**	**353**	*e*Pn	**Pn**	**02 59 42.0**	**-0.9**
HDC				*e*Sn	**Sn**	**02 59 50.5**	**-0.6**
HDC	**Heredia**	**0.49**	**353**	*e*P	**Pn**	**02 59 41.7**	**-1.3**
HDC				*e*S	**Sn**	**02 59 50.9**	**-0.2**
EDLM	**Las Mercedes**	**0.51**	**117**	⇑*i*P	**Pn**	**02 59 42.0**	**-1.1**
EDLM				*e*S	**Sn**	**02 59 51.0**	**-0.3**
CVTR	**Volcan Turrial**	**0.58**	**30**	⇓*i*P	**Pn**	**02 59 43.8**	**-0.6**
SRA1	**San Ramn**	**0.71**	**324**	*e*P	**Pn**	**02 59 44.3**	**-1.4**
EDPN	**Palmar Norte**	**0.80**	**133**	⇑*i*P	**Pn**	**02 59 45.3**	**-1.4**
DRK0	**Durika**	**0.83**	**107**	⇑*i*P	**Pn**	**02 59 46.1**	**-1.3**
DRK0				*e*S	**Sn**	**02 59 58.3**	**-0.4**
EDBA	**Buenos Aires**	**0.84**	**114**	⇑*i*P	**Pn**	**02 59 45.6**	**-1.8**
FORC	**Fortuna**	**1.13**	**327**	*i* P	**Pn**	**02 59 50.8**	**-0.4**
ARE1	**Arenal 1**	**1.15**	**325**	⇑*i*P	**Pn**	**02 59 51.1**	**-0.4**
CEDE	**Laguna Cedeo**	**1.16**	**327**	*i* P	**Pn**	**02 59 51.4**	**-0.4**
CEDE				*i* S	**Sn**	**03 00 08.7**	**+2.1**
JTS	**Las Juntas de**	**1.18**	**311**	P	**Pn**	**02 59 50.6**	**-1.2**
	3μm,0.3s,baz=8.2,slow=21						
JTS				LR	LR	02 59 56.9	
	comp=Z,136nm,20.4s,baz=312,slow=22						
JTS				S	**Sn**	**03 00 05.5**	**-1.3**
	838nm,0.3s,baz=342,slow=19,SNR=8.3						
JTS	**Las Juntas de**	**1.18**	**311**	*e*Pn	**Pn**	**02 59 50.3**	**-1.6**
JTS				*e*Sn	**Sn**	**03 00 04.9**	**-1.9**
JTS	**Las Juntas de**	**1.18**	**311**	*e*P	**Pn**	**02 59 50.7**	**-1.2**
JTS				*e*S	**Sn**	**03 00 06.9**	**+0.1**
PTJ1	**Puerto Jimnez**	**1.22**	**143**	*e*P	**Pn**	**02 59 50.7**	**-1.7**
EDSV	**San Vito**	**1.27**	**123**	⇑*e*P	**Pn**	**02 59 52.2**	**-1.0**
ACAL	**Aguas Claras**	**1.48**	**319**	⇑*i*P	**Pn**	**02 59 55.3**	**-0.7**
CUI	**Cuipilapa**	**1.58**	**316**	*i* P	**Pn**	**02 59 56.5**	**-0.9**
COLC	**Colonia**	**1.61**	**315**	*i* P	**Pn**	**02 59 56.9**	**-1.0**
HORNC	**Hornillas**	**1.63**	**317**	*i* P	**Pn**	**02 59 57.0**	**-1.1**
GUAB	**Guayabo de Bag**	**1.66**	**316**	*i* P	**Pn**	**02 59 57.4**	**-1.1**
MESS	**Mesas**	**1.66**	**317**	*i* P	**Pn**	**02 59 57.4**	**-1.0**
MESS				*e*P	**Pn**	**02 59 57.5**	**-1.0**
GPS3	**Bodega del ICE**	**1.79**	**314**	*i* P	**Pn**	**02 59 58.9**	**-1.3**
GPS1	**Guardaparques**	**1.79**	**315**	*i* P	**Pn**	**02 59 59.2**	**-1.2**
NY14	**Universidad de**	**1.85**	**308**	*i* P	**Pn**	**03 00 00.5**	**-0.5**
BUEV	**Buena Vista**	**1.85**	**314**	*i* P	**Pn**	**02 59 59.2**	**-1.8**
BUEV				⇑*i*P	**Pn**	**02 59 59.7**	**-1.4**
BUAI	**Buenos Aires**	**1.85**	**317**	⇑*i*P	**Pn**	**02 59 59.9**	**-1.2**
GB1A	**Borinquen Arri**	**1.86**	**315**	*e*P	**Pn**	**02 59 60.0**	**-1.2**
ESPN	**Las Esperanzas**	**2.68**	**355**	*e*Pn	**Pn**	**03 00 11.7**	**-0.7**
ESPN				*e*Sn	**Sn**	**03 00 40.6**	**-3.0**
ESPN	**Las Esperanzas**	**2.68**	**355**	⇑*i*P	**Pn**	**03 00 11.9**	**-0.4**
ESPN				*i* P	**Pn**	**03 00 12.1**	**-0.3**
ESPN				*e*S	**Sn**	**03 00 43.7**	**0.0**
ACON	**Acoyapa**	**2.68**	**336**	*e*Pn	**Pn**	**03 00 11.2**	**-1.2**
ACON				*e*Sn	**Sn**	**03 00 41.7**	**-1.9**
ACON	**Acoyapa**	**2.68**	**336**	⇑*i*P	**Pn**	**03 00 11.7**	**-0.7**
ACON				*e*P	**Pn**	**03 00 11.9**	**-0.5**
MATN	**Matagalpa**	**3.86**	**332**	*e*P	**Pn**	**03 00 28.2**	**-0.6**
CNGN	**Cerro Negro**	**3.95**	**319**	*e*P	**Pn**	**03 00 29.0**	**-0.9**
CNGN	**Cerro Negro**	**3.95**	**319**	*e*P	**Pn**	**03 00 28.8**	**-1.1**
AZU	**Azuero**	**4.11**	**114**	*e*P	**Pn**	**03 00 31.2**	**-0.8**
ZANG	**Zanguenga, Cho**	**4.17**	**97**	*e*P	**Pn**	**03 00 32.5**	**-0.3**
BCIP	**Isla Barro Col**	**4.17**	**94**	*e*Pn	**Pn**	**03 00 32.5**	**-0.4**
BCIP	**Isla Barro Col**	**4.17**	**94**	⇓*e*P	**Pn**	**03 00 32.5**	**-0.4**
BCIP				*e*P	**Pn**	**03 00 32.7**	**-0.2**
ESTN	**Estel**	**4.23**	**328**	*e*Pn	**Pn**	**03 00 32.8**	**-0.9**
ESTN				*e*Sn	**Sn**	**03 01 21.0**	**-1.0**
ESTN	**Estel**	**4.23**	**328**	*e*P	**Pn**	**03 00 32.6**	**-1.2**
ESTN	**Estel**	**4.23**	**328**	*e*P	**Pn**

comp=Z,386nm,0.4s
LFU La Fuente 6.51 311 *e*P **Pn 03 01 06.2 +1.2**
LFU La Fuente 6.51 311 *e*P **Pn 03 01 06.2 +1.2**
UEES San Salvador 6.59 310 *e*P **Pn 03 01 06.3 +0.1**
UEES San Salvador 6.59 310 *e*P **Pn 03 01 06.3 +0.1**
BOQS Boqueron 6.62 310 IAML 03 01 11.9
comp=Z,102nm,0.6s
SBLS San Blas 6.95 309 *e*P **Pn 03 01 12.2 +1.0**
APG El Apazote 8.31 312 P **Pn 03 01 31.2 +1.3**
comp=Z,4.6nm,0.3s,baz=122,slow=6.7,SNR=37
HELC Santa Helena 9.06 111 *e*P **Pn 03 01 40.8 +0.5**
YOTC Yotoco, Valle 9.42 125 *e*P **Pn 03 01 45.0 +0.1**
SMLC San Martn de 9.88 93 *e*P **Pn 03 01 49.7 -1.5**
NORC Norcasia 9.91 113 *e*P **Pn 03 01 53.2 +1.5**
PTBC PUERTO BERRIO, 9.95 107 *e*P **Pn 03 01 52.4 +0.3**
BBAC Balboa, Cauca 10.06 137 *e*P **Pn 03 01 55.6 +1.8**
POPC Popayan, Colom 10.08 133 *e*P **Pn 03 01 55.4 +1.2**
CCIG Comitan 10.36 311 *e*Pn **Pn 03 01 56.8 -1.1**
SOTA Rioblanco 10.41 134 *e*P **Pn 03 02 01.7 +2.8**
PCON Cinco Dias 10.43 133 *e*P **Pn 03 02 03.4 +4.1**
CODC Agustn Codazz 10.46 87 *e*P **Pn 03 02 00.4 +1.2**
ROSC El Rosal 10.71 115 P **Pn 03 02 04.6 +1.7**
comp=Z,0.7nm,0.3s,baz=357,slow=5.0,SNR=8.5
ROSC LR LR 03 05 58.6
comp=Z,88nm,21.7s,baz=20,slow=36
ROSC El Rosal 10.71 115 *e*Pn **Pn 03 02 06.6 +3.7**
OTAV Otavalo 10.77 149 *e*Pn **Pn 03 02 06.0 +2.2**
PRAC Prado 10.77 122 *e*P **Pn 03 02 05.8 +2.4**
BARC Barichara 11.15 104 *e*P **Pn 03 02 09.6 +0.9**
CHIC Chingaza 11.33 115 *e*P **Pn 03 02 15.7 +4.3**
TEIG Tepich 11.41 340 *e*Pn **Pn 03 02 12.4 +0.3**
RUSC La Rusia 11.45 108 *e*P **Pn 03 02 14.4 +1.3**
FLOC Florencia 11.48 133 *e*P **Pn 03 02 16.7 +3.6**
CMIG Matias Romero 12.95 307 P **Pn 03 02 30.7 -2.5**
comp=Z,3.3nm,0.3s,baz=141,slow=9.5,SNR=31
SDV Santo Domingo 13.26 92 P **Pn 03 02 39.1 +1.5**
comp=Z,2.5nm,0.3s,baz=320,slow=6.4,SNR=3.6
TLIG Tlapa 16.21 301 *e*Pn **Pn 03 03 17.4 +1.0**
comp=Z,19nm,0.8s
ATAH Atahualpa 17.47 161 LR LR 03 09 28.2
comp=Z,102nm,20.4s,baz=356,slow=34
SJG San Juan 19.36 62 LR LR 03 10 12.0
comp=Z,46nm,21.2s,baz=259,slow=33
LNIG Linares 21.20 318 *e*P **P 03 04 12.2 -1.1**
comp=Z,13nm,1.4s
ZAIG Zacatecas 22.10 309 *e*P **P 03 04 23.1 -0.2**
comp=Z,3.6nm,0.7s
435B Jarrell 24.64 331 *e*P **P 03 04 47.4 -0.3**
comp=Z,10nm,0.6s
PTGA Pitinga 26.05 112 P **P 03 05 01.1 +0.3**
comp=Z,3.4nm,0.7s,baz=304,slow=9.8,SNR=7.5
PTGA LR LR 03 15 08.5
comp=Z,46nm,19.6s,baz=280,slow=36
PTGA Pitinga 26.05 112 *e*P **P 03 05 02.0 +1.2**
comp=Z,7.2nm,1.0s
MIAR Mount Ida 26.40 342 *e*P **P 03 05 04.2 +0.5**
comp=Z,4.9nm,0.8s
TXAR Lajitas Array 26.96 320 P **P 03 05 07.7 -1.2**
comp=Z,0.7nm,0.5s,baz=134,slow=11,SNR=12
GLAT Glass 27.06 351 *e*P **P 03 05 11.0 +1.4**
comp=Z,41nm,0.5s
LPAZ La Paz 30.09 148 LR LR 03 17 25.8
comp=Z,52nm,20.9s,baz=313,slow=36
NVAR Mina Array Bea 42.10 319 P **P 03 07 18.2 -1.1**
comp=Z,0.6nm,0.7s,baz=149,slow=7.2,SNR=3.8
SCHQ Schefferville 47.23 13 LR LR 03 27 37.7
comp=Z,54nm,19.3s,baz=359,slow=36
PLCA Paso Flores 51.52 167 P **P 03 08 31.3 -1.4**
comp=Z,2.8nm,1.0s,baz=326,slow=11,SNR=4.9
ILAR Eielson Array 70.04 336 P **P 03 10 39.2 +1.0**
comp=Z,0.2nm,0.7s,baz=98,slow=6.5,SNR=3.5
ESDC Sonseca Array 76.38 51 P **P 03 11 16.7 +0.5**
comp=Z,0.3nm,0.7s,baz=275,slow=5.5,SNR=2.7
NOA NORSAR Array B 84.30 29 LR LR 03 46 23.7
comp=Z,8.2nm,21.1s,baz=40,slow=33
ASAR Alice Springs 141.14 244 PKP **PKPdf 03 18 54.7 -2.9**
comp=Z,0.6nm,0.9s,baz=116,slow=4.2,SNR=3.4

IDC 13 02:59:37.8±999.0, 33°.82S×96°.46W, h0km, Error ellipse: s-maj=635.3km s-min=200.8km az=105.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02AR	**USHUAIA INFRAS**	**29.11**	**144**	*i*		05 56 50.0	
	baz=306,slow=328,SNR=1.2						
I08BO	**LAS PENAS INFR**	**30.70**	**62**	*i*		06 04 50.0	
	baz=230,slow=326,SNR=2.1						
I41PY	**VILLA FLORIDA**	**34.53**	**88**	*i*		06 36 40.0	
	baz=246,slow=322,SNR=3.6						
I09BR	**BRASILIA INFRA**	**47.12**	**80**	*i*		07 45 10.0	
	baz=237,slow=325,SNR=1.8						

SKO ***13*** *03:03:48.8, 42°.00N×20°.17E, h0km, M1.4, ML1.7*
TIR ***13*** *03:03:48.9, 41°.84N×20°.08E, h7km, Md2.7/4*
BEO ***13*** *03:03:49.5±0.4, 41°.85N×20°.10E, h0km, ML1.7/6*
ISC 13 03:03:48.9±1.0, 41°.84N±0°.03×20°.10E±0°.03, h8km±10km, n18, σ2°.07/30, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.25 323**		*i* PG	**Pg**	**03 03 58.5**	**+4.5**
PUK				*i* SG	**Sg**	**03 03 54.3**	**-3.2**
PHP	**Peshkopia**	**0.30 121**		*i* PG	**Pn**	**03 04 00.4**	**+0.8**
PHP				*i* SG	**Sg**	**03 03 55.4**	**-3.4**
TIR	**Tirane**	**0.52 200**		*e*Pg	**Pg**	**03 03 59.4**	**+0.4**
TIR				*e*Sg	**Sg**	**03 04 05.9**	**+0.1**
TIR	**Tirane**	**0.52 200**		*e*Pg	**Pn**	**03 04 02.4**	**-0.2**
BCI	**Bajram Curri**	**0.53 357**		*i* PG	Pn	03 04 07.7	+4.9
BCI				*i* SG	**Sg**	**03 03 58.8**	**-7.2**
ULC	**Ulcinj**	**0.65 281**		*e*Pg	**Pg**	**03 04 01.3**	**-0.1**
PDG	**Podgorica**	**0.86 313**		*e*Pg	**Pb**	**03 04 05.9**	**-0.2**
PDG				*e*Sg	**Sg**	**03 04 16.2**	**-0.4**
OHR	**Ohrid**	**0.90 144**		*e*Pg	**Pg**	**03 04 06.3**	**+0.1**
OHR				*i* Sg	**Sn**	**03 04 20.4**	**-0.6**
OHR				*e*Lg	Lg	03 04 21.8	
	comp=E,8.8nm,0.4s						
OHR				*e*Lg	Lg	03 04 23.3	
	comp=N,12nm,0.2s						
KRUS	**Krusevo**	**0.98 118**		*i* Pg	**Pg**	**03 04 07.2**	**-0.6**
KRUS				*i* Sg	**Sn**	**03 04 22.4**	**-0.8**
SJES	**Sjenica**	**1.42 356**		*e*Pg	**Pn**	**03 04 14.9**	**-0.2**
SJES				*e*Sg	**Sg**	**03 04 34.0**	**-0.6**
FNA	**Florina**	**1.43 137**		*i* Pg	**Pg**	**03 04 17.0**	**+0.8**
FNA				*i* Sg	**Sg**	**03 04 37.0**	**+2.2**
TREB	**Trebinje**	**1.57 305**		*e*Pn	**Pb**	**03 04 18.1**	**0.0**
TREB				*e*Sg	**Sg**	**03 04 39.4**	**+0.2**
STIP	**Stip**	**1.57 95**		*i* Pg	**Pg**	**03 04 20.2**	**+1.3**
STIP				*i* Sg	**Sg**	**03 04 41.6**	**+2.3**
SELS	**Selova**	**1.57 28**		*e*Pg	**Pb**	**03 04 17.9**	**-0.3**
SELS				*e*Sg	**Sg**	**03 04 38.9**	**-0.5**
BARS	**Barje**	**1.60 52**		*e*Pg	**Pb**	**03 04 18.0**	**-0.7**
BARS				*e*Sg	**Sg**	**03 04 40.6**	**+0.2**
IVAS	**Ivanjica**	**1.73 1**		*e*Sg	**Pn**	**03 04 19.7**	**+0.3**
IVAS	**Ivanjica**	**1.73 1**		*e*Pg	**Sb**	**03 04 43.9**	**+0.9**
DIVS	**Divibare**	**2.26 358**		*e*Sg	**Sg**	**03 05 01.0**	**-0.4**

IDC 13 03:04:27.1±2.0, 6°.61S×128°.96E, h0km, mb3.9/1, mb1 3.8/3, mb1mx3.4/30, mbtmp3.6/3, ML3.3/2, Error ellipse: s-maj=132.4km s-min=31.0km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.25**	**159**	Pn	Pn	03 07 48.2	-2.1
	0.1nm,0.3s,baz=337,slow=14,SNR=4.9						
WRA				Sn	Sn	03 10 14.4	-15
	0.8nm,0.3s,baz=345,slow=24,SNR=8.5						
ASAR	**Alice Springs**	**17.62**	**165**	P	P	03 08 35.5	+0.3
	0.1nm,0.3s,baz=345,slow=10,SNR=7.3						
ASAR				S	Sn	03 11 41.5	-10
	0.2nm,0.3s,baz=346,slow=26,SNR=4.7						
MKAR	**Makanchi Array**	**67.33**	**327**	P	P	03 15 24.0	0.0
	0.5nm,0.4s,baz=123,slow=7.1,SNR=8.8						

MAN 13 03:19:08.8, 7°.39N×124°.88E, h23km, mb4.3, ML3.1, MS2.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.69**	**116**	⇑*e*P	Pn	03 19 31.5	+8.3
CGP	**Cagayan de Oro**	**1.08**	**350**	⇑*e*P	Pn	03 19 27.2	-1.3
CGP				*e*S	Sb	03 19 42.3	-0.2

NIED ***13*** *03:19:00, 35°.80N×141°.10E, h14km, Mw3.7 Best double couple: M₀3.62000×10¹⁴ NP1:φ₀183.00000°, δ41.00000°, λ-75.00000°. NP2:φ₀343.00000°, δ51.00000°, λ-103.00000°.*
IDC ***13*** *03:19:44.9±1.2, 35°.74N×140°.84E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.5/29, mbtmp3.5/5, ML2.8/1, Error ellipse: s-maj=30.2km s-min=23.1km az=57.0*
ISCJB ***13*** *03:19:46.5±0.8, 35°.80N±0°.04×140°.98E±0°.07, h25km±4km, mb3.6/4, Error ellipse: s-maj=9.7km s-min=5.8km az=162.4*
JMA ***13*** *03:19:46.9±0.2, 35°.81N×140°.98E, h17km±1km, M4.0*
JMA Felt I J1.
ISC 13 03:19:46.5±3.3, 35°.82N±0°.03×140°.97E±0°.07, h14km±23km, n21, σ0°.76/23, mb3.6/4, 1C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.14**	**218**	⇓P	**Pb**	**03 19 50.9**	**-0.1**
CHOJ				S	**Sb**	**03 19 53.6**	**-0.3**
JIHU	**Itakohorinouch**	**0.39**	**293**	P	**Pb**	**03 19 55.6**	**+0.4**
JIHU				S	**Sb**	**03 20 02.0**	**+1.0**
JSMT	**Sammumatsuo**	**0.46**	**248**	P	**Pb**	**03 19 56.7**	**+0.4**
JSMT				*e*S	**Sb**	**03 20 03.5**	**+0.6**
JHYU	**Hitachinakayam**	**0.61**	**330**	P	**Pb**	**03 19 59.3**	**+0.4**
JHYU				S	**Sb**	**03 20 07.6**	**+0.2**
JYT	**Yasato**	**0.75**	**304**	P	**Pb**	**03 20 00.7**	**-0.6**
JYT				*e*S	**Sb**	**03 20 10.5**	**-0.9**
JHO	**Hitachi**	**0.86**	**338**	⇓P	**Pb**	**03 20 02.6**	**-0.6**
JHO				S	**Sb**	**03 20 14.5**	**-0.1**
BSO4	**Boso 4**	**0.97**	**212**	P	**Pn**	**03 20 06.0**	**+0.4**
BSO3	**Boso 3**	**1.08**	**200**	P	**Pb**	**03 20 06.6**	**-0.2**
BSO1	**Boso 1**	**1.16**	**180**	⇑P	**Pn**	**03 20 06.9**	**-0.9**
MJAR	**Matsushiro Arr**	**2.35**	**289**	Pn	**Pn**	**03 20 24.2**	**-0.5**
	2.7nm,0.3s,baz=88,slow=21,SNR=90						
MJAR				Sn	**Sn**	**03 20 51.5**	**-1.8**
	1.7nm,0.3s,baz=88,slow=33,SNR=8.3						
MAT	**Matsushiro**	**2.35**	**289**	P	**Pn**	**03 20 24.8**	**+0.1**
MAT				S	**Sn**	**03 20 53.3**	**-0.1**
H11N2	**WAKE ISLAND Hy**	**27.86**	**118**	T	T	03 54 38.6	
	baz=311,slow=75,SNR=76						
H11N1	**WAKE ISLAND Hy**	**27.87**	**118**	T	T	03 54 39.2	
	baz=311,slow=75,SNR=62						
H11N3	**WAKE ISLAND Hy**	**27.88**	**118**	T	T	03 54 40.0	
	baz=311,slow=75,SNR=70						
H11S1	**WAKE ISLAND Hy**	**28.53**	**120**	T	T	03 55 29.5	
	baz=312,slow=75,SNR=118						
H11S3	**WAKE ISLAND Hy**	**28.53**	**120**	T	T	03 55 29.5	
	baz=312,slow=75,SNR=120						
H11S2	**WAKE ISLAND Hy**	**28.54**	**120**	T	T	03 55 30.6	
	baz=312,slow=75,SNR=91						
MKAR	**Makanchi Array**	**44.47**	**303**	P	**P**	**03 27 57.1**	**-0.1**
	0.4nm,0.7s,baz=79,slow=10,SNR=4.4						
ILAR	**Eielson Array**	**50.72**	**32**	P	**P**	**03 28 46.8**	**+1.4**
	0.5nm,0.8s,baz=253,slow=6.4,SNR=6.8						
WRA	**Warramunga Arr**	**55.81**	**188**	P	**P**	**03 29 22.6**	**-0.7**
	0.8nm,0.7s,baz=359,slow=6.6,SNR=5.4						
ASAR	**Alice Springs**	**59.53**	**188**	P	**P**	**03 29 50.0**	**+0.5**
	0.4nm,0.5s,baz=19,slow=6.0,SNR=3.7						

ISCJB ***13*** *03:38:40.4±0.3, 23°.34N±0°.01×121°.99E±0°.01, h16km±2km, Error ellipse: s-maj=2.5km s-min=1.7km az=38.3*
JMA ***13*** *03:38:41.3±0.1, 23°.34N×121°.92E, h40km, M3.2*
TAP ***13*** *03:38:42.3, 23°.36N×121°.91E, h30km, ML3.7, B*
ISC 13 03:38:41.8±1.0, 23°.36N±0°.02×121°.92E±0°.02, h30km±10km, n126, σ0°.95/214, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.47**	**287**	*e*P	**Pb**	**03 38 51.4**	**-0.4**
	baz=287						
HGSD				*e*S	**Sb**	**03 38 58.0**	**-0.5**
	baz=287						
EGFH	**Guangfu**	**0.54**	**305**	P	**Pn**	**03 38 52.9**	**-0.7**
	baz=315						
EGFH				S	**Sn**	**03 39 00.8**	**-0.9**
	baz=315						
EHY	**Hungye**	**0.56**	**285**	P	**Pn**	**03 38 53.0**	**-0.8**
	baz=286						
EHY				*e*S	**Sn**	**03 39 01.2**	**-1.0**
	baz=286						
CHKT	**Chengkung**	**0.57**	**243**	P	**Pn**	**03 38 52.6**	**-1.2**
	baz=235						
CHKT				S	**Sn**	**03 39 00.0**	**-2.2**
	baz=235						
TWF1	**Yuli**	**0.57**	**270**	*i* P	**Pn**	**03 38 53.1**	**-0.8**
	baz=265						
TWF1				S	**Sn**	**03 39 01.1**	**-1.2**
	baz=265						
YULB	**Yu-li**	**0.57**	**274**	*e*P	**Pn**	**03 38 53.1**	**-0.8**
	baz=269						
YULB				*e*S	**Sb**	**03 39 01.9**	**+0.6**
	baz=269						
ENLB	**Shoufeng**	**0.61**	**332**	*e*P	**Pn**	**03 38 52.9**	**-1.6**
	baz=333						
ENLB				*e*S	**Sn**	**03 39 01.4**	**-2.0**
	baz=333						
ESL	**Shilin**	**0.63**	**316**	P	**Pn**	**03 38 53.7**	**-1.1**
	baz=317						
ESL				*e*S	**Sn**	**03 39 02.0**	**-1.9**
	baz=317						
HWA	**Hwalien**	**0.68**	**335**	*e*P	**Pn**	**03 38 54.8**	**-0.6**
	baz=336						
HWA				*e*S	**Sn**	**03 39 04.5**	**-0.5**
	baz=336						
TWD	**Chiawan**	**0.78**	**338**	P	**Pn**	**03 38 56.1**	**-0.7**
	baz=339						
TWD				S	**Sn**	**03 39 06.0**	**-1.4**
	baz=339						
VWDT	**VWDT**	**0.81**	**299**	*e*P	**Pb**	**03 38 57.3**	**-0.1**
	baz=300						
VWDT				*e*S	**Sn**	**03 39 07.6**	**-0.7**
	baz=300						
ELDTW	**Lidau**	**0.84**	**259**	P	**Pn**	**03 38 56.8**	**-1.0**
	baz=247						
ELDTW				S	**Sn**	**03 39 07.3**	**-1.9**
	baz=247						
NACB	**Ninganchiao**	**0.86**	**340**	*e*P	**Pn**	**03 38 57.2**	**-0.7**
	baz=341						
NACB				*e*S	**Sn**	**03 39 07.9**	**-1.7**
	baz=341						
YUS	**Yu-Shan**	**0.90**	**279**	*i* P	**Pn**	**03 38 58.7**	**-0.1**
	baz=290						
YUS				*i* S	**Sn**	**03 39 10.2**	**-0.8**
	baz=290						
OWD	**Renai**	**0.90**	**311**	P	**Pn**	**03 38 58.2**	**-0.4**
	baz=320						
OWD				S	**Sn**	**03 39 09.4**	**-1.4**
	baz=320						
TTN	**Taitung**	**0.93**	**230**	*e*S	**Sn**	**03 39 10.3**	**-0.9**
	baz=229						
ETLH	**Xiulin Townshi**	**0.93**	**335**	*e*P	**Pn**	**03 38 58.6**	**-0.4**
	baz=335						
ETLH				*e*S	**Sn**	**03 39 10.2**	**-1.3**
	baz=335						
TWGBT	**Beinan**	**0.94**	**235**	*e*P	**Pn**	**03 38 58.3**	**-0.7**
	baz=230						
TWGBT				*e*S	**Sn**	**03 39 09.6**	**-1.8**
	baz=230						
TWG	**Pinlang**	**0.94**	**236**	P	**Pn**	**03 38 58.3**	**-0.7**
	baz=230						
TWG				*e*S	**Sn**	**03 39 09.8**	**-1.7**
	baz=230						
CHGB	**Renai**	**0.97**	**316**	*e*P	**Pn**	**03 38 59.6**	**-0.1**
	baz=317						
CHGB				*e*S	**Sn**	**03 39 12.4**	**-0.2**
	baz=317						
SSLB	**Suanglung**	**0.98**	**296**	*e*P	**Pn**	**03 38 59.5**	**-0.1**
	baz=288						
SSLB				*e*S	**Sn**	**03 39 12.0**	**-0.5**
	baz=288						
WHF	**Hehuan Shan**	**0.98**	**323**	P	**Pn**	**03 38 59.5**	**-0.5**
	baz=324						
WHF				S	**Sn**	**03 39 11.9**	**-1.2**
	baz=324						
WHYT	**Xinyi Township**	**1.03**	**289**	P	**Pb**	**03 39 00.9**	**-0.2**
	baz=290						
WHYT				S	**Sn**	**03 39 13.7**	**0.0**
	baz=290						
SMLT	**Sun Moon Lake**	**1.07**	**299**	P	**Pn**	**03 39 01.1**	**+0.3**
	baz=307						
SMLT				*e*S	**Sb**	**03 39 15.7**	**+0.2**
	baz=307						
NANB	**Nanao**	**1.07**	**352**	*e*P	**Pn**	**03 39 00.6**	**-0.2**
	baz=352						
NANB				*e*S	**Sn**	**03 39 13.8**	**-1.1**
	baz=352						
ENA	**Nanau**	**1.08**	**352**	P	**Pn**	**03 39 00.7**	**-0.2**
	baz=352						
ENA				*e*S	**Sn**	**03 39 14.2**	**-0.6**
	baz=352						
TYC	**Yuchr**	**1.11**	**299**	P	**Pb**	**03 39 01.8**	**-0.6**
	baz=301						
TYC				*e*S	**Sb**	**03 39 16.4**	**-0.1**
	baz=301						
TWT	**Tachien**	**1.12**	**323**	P	**Pn**	**03 39 01.3**	**-0.4**
	baz=323						
TWT				*e*S	**Sn**	**03 39 16.0**	**-0.2**
	baz=323						
DPDB	**Guoxing**	**1.13**	**307**	*e*P	**Pb**	**03 39 02.2**	**-0.6**
	baz=307						
TDCB	**Techi**	**1.13**	**322**	*e*P	**Pn**	**03 39 02.1**	**+0.3**
	baz=323						
TDCB				*e*S	**Sn**	**03 39 16.0**	**-0.3**
	baz=323						
ECL	**Taimali**	**1.17**	**230**	P	**Pn**	**03 39 01.1**	**-1.0**
	baz=229						
ECL				*e*S	**Sn**	**03 39 15.0**	**-2.0**
	baz=229						
NNSB	**Datong**	**1.17**	**336**	*e*P	**Pn**	**03 39 02.5**	**+0.2**
	baz=336						
NNSB				*e*S	**Sn**	**03 39 16.8**	**-0.6**
	baz=336						
TPUB	**Ta-pu**	**1.18**	**267**	*e*P	**Pb**	**03 39 03.7**	**+0.1**
	baz=268						
TPUB				*e*S	**Sb**	**03 39 19.0**	**+0.4**
	baz=268						
WJS	**Zhushan**	**1.18**	**293**	P	**Pb**	**03 39 04.1**	**+0.5**
	baz=286						
WJS				*e*S	**Sb**	**03 39 19.4**	**+0.8**
	baz=286						
NNS	**Nan Shan**	**1.19**	**335**	*e*P	**Pn**	**03 39 02.6**	**+0.1**
	baz=336						
NNS				*e*S	**Sn**	**03 39 17.2**	**-0.5**
	baz=336						
EOS1	**EOS1**	**1.20**	**9**	*e*P	**Pn**	**03 39 03.0**	**+0.4**
	baz=20						
EOS1				*e*S	**Sb**	**03 39 18.7**	**-0.3**
	baz=20						
WTP	**Ta-pu**	**1.20**	**265**	P	**Pb**	**03 39 03.7**	**-0.3**
	baz=257						
WTP				*e*S	**Sb**	**03 39 19.7**	**+0.5**
	baz=257						
CHN4	**Tsaushan**	**1.22**	**270**	P	**Pb**	**03 39 04.3**	**+0.1**
	baz=270						
CHN4				*e*S	**Sb**	**03 39 20.6**	**+1.0**
	baz=270						
SLGT	**Liugui**	**1.22**	**253**	*e*P	**Pn**	**03 39 03.3**	**+0.4**
	baz=253						
SLGT				*e*S	**Sb**	**03 39 19.1**	**-0.6**
	baz=253						
WNT	**Mingjian**	**1.24**	**295**	P	**Pb**	**03 39 04.8**	**+0.2**
	baz=295						
TWC	**Suao**	**1.25**	**357**	P	**Pn**	**03 39 03.8**	**+0.6**
	baz=358						
TWC				S	**Sn**	**03 39 19.3**	**+0.3**
	baz=358						
SGST	**Jiashian**	**1.26**	**258**	P	**Pb**	**03 39 05.1**	**+0.2**
	baz=255						
SGST				S	**Sb**	**03 39 21.0**	**+0.3**
	baz=255						
WHP	**Taichung City**	**1.27**	**316**	*e*P	**Pb**	**03 39 05.3**	**0.0**
	baz=316						
WGK	**Gukeng**	**1.28**	**285**	*e*P	**Pb**	**03 39 05.2**	**-0.1**
	baz=285						
CHN1	**Nanshi**	**1.29**	**263**	P	**Pb**	**03 39 05.3**	**-0.1**
	baz=255						
CHN1				S	**Sb**	**03 39 22.7**	**+1.1**
	baz=255						
NDT	**Datong Townshi**	**1.29**	**344**	*e*P	**Pn**	**03 39 04.3**	**+0.5**
	baz=344						
NDT				*e*S	**Sn**	**03 39 19.8**	**-0.3**
	baz=344						
WDLH	**Douliu**	**1.31**	**285**	P	**Pb**	**03 39 05.8**	**+0.1**
	baz=285						
WDLH				*e*S	**Sb**	**03 39 23.4**	**+1.3**
	baz=285						
SNST	**Tainan City**	**1.31**	**264**	*e*P	**Pb**	**03 39 05.7**	**-0.1**
	baz=264						
SNST				*e*S	**Sb**	**03 39 22.7**	**+0.4**
	baz=264						
TWK	**Hsinying**	**1.32**	**266**	P	**Pb**	**03 39 05.8**	**-0.1**
	baz=266						
TWK				S	**Sb**	**03 39 23.4**	**+1.0**
	baz=266						
SANB	**Taian**	**1.34**	**321**	P	**Pb**	**03 39 05.7**	**-0.7**
	baz=331						
LAY	**Lan-yu**	**1.36**	**194**	*e*P	**Pn**	**03 39 04.3**	**-0.4**
	baz=183						
TAW	**Tawu**	**1.37**	**224**	*e*S	**Sn**	**03 39 20.3**	**-1.8**
	baz=233						
TWE	**Neicheng**	**1.38**	**351**	P	**Pb**	**03 39 06.0**	**-0.9**
	baz=351						
TWE				*e*S	**Sn**	**03 39 23.0**	**+0.8**
	baz=351						
CHY	**Chiayi**	**1.38**	**276**	*e*P	**Pb**	**03 39 06.9**	**0.0**
	baz=277						
CHY				*e*S	**Sb**	**03 39 25.1**	**+1.0**
	baz=277						
TCU	**Taichung**	**1.38**	**305**	*e*P	**Pb**	**03 39 07.2**	**+0.2**
	baz=305						
EAST	**Anshuo**	**1.38**	**226**	*e*P	**Pn**	**03 39 04.4**	**-0.7**
	baz=225						
MASBT	**Mashibuluo**	**1.40**	**238**	*e*P	**Pn**	**03 39 05.4**	**+0.1**
	baz=231						
YHNB	**Yeheng**	**1.40**	**339**	*e*P	**Pn**	**03 39 06.0**	**+0.7**
	baz=340						
YHNB				*e*S	**Sn**	**03 39 23.1**	**+0.3**
	baz=340						
NSK	**Sanguang**	**1.41**	**339**	*e*P	**Pn**	**03 39 06.2**	**+0.8**
	baz=340						
NSK				*e*S	**Sn**	**03 39 23.1**	**-0.1**
	baz=340						
ILA	**Ilan**	**1.41**	**354**	*e*P	**Pn**	**03 39 05.1**	**-0.4**
	baz=354						
SLBB	**Yuanshan**	**1.41**	**350**	*e*P	**Pb**	**03 39 06.7**	**-0.9**
	baz=350						
SLBB				*e*S	**Sb**	**03 39 24.4**	**-0.8**
	baz=350						
WCHH	**Zhanghua**	**1.44**	**300**	*e*P	**Pb**	**03 39 08.0**	**+0.1**
	baz=301						
WCHH				*e*S	**Sb**	**03 39 27.4**	**+1.6**
	baz=301						
JYNG	**Yonagunijimaku**	**1.44**	**41**	P	**Pn**	**03 39 06.5**	**+0.6**
JYNG				S	**Sn**	**03 39 24.0**	**+0.2**
CHN3	**Shinhua**	**1.45**	**259**	*e*P	**Pb**	**03 39 08.7**	**+0.4**
	baz=259						
CHN3				*e*S	**Sb**	**03 39 30.3**	**+4.0**
	baz=259						
NWLT	**Wulai**	**1.46**	**345**	*e*P	**Pb**	**03 39 07.7**	**-0.7**
	baz=346						
NWLT				*e*S	**Sn**	**03 39 24.3**	**-0.1**
	baz=346						
TWM1	**Shoushan**	**1.47**	**249**	*e*S	**Sb**	**03 39 29.6**	**+2.7**
	baz=249						
YOJ	**Yonaguni jima**	**1.49**	**42**	*e*P	**Pn**	**03 39 06.8**	**+0.3**
	baz=54						
YOJ				*e*S	**Sn**	**03 39 25.1**	**+0.2**
	baz=54						
YOJ	**Yonaguni jima**	**1.49**	**42**	P	**Pn**	**03 39 06.8**	**+0.3**
YOJ				*e*S	**Sn**	**03 39 25.0**	**+0.1**
NSY	**Sanyi**	**1.49**	**315**	*e*P	**Pb**	**03 39 08.9**	**+0.1**
	baz=316						
NSY				*e*S	**Sb**	**

	baz=291						
WDJ	**Dajia District**	**1.53**	**310**	*e*P	**Pb**	**03 39 09.3**	**-0.2**
	baz=311						
WDJ				*e*S	**Sb**	**03 39 28.9**	**+0.5**
	baz=311						
SCZT	**Fangliau**	**1.55**	**231**	*e*P	**Pn**	**03 39 07.6**	**+0.3**
	baz=224						
SCZT				*e*S	**Sb**	**03 39 27.5**	**-1.5**
	baz=224						
PTSB	**Yuanli**	**1.55**	**315**	*e*P	**Pb**	**03 39 09.3**	**-0.6**
	baz=315						
PTSB				*e*S	**Sb**	**03 39 29.7**	**+0.6**
	baz=315						
NMLH	**Miaoli**	**1.56**	**319**	*e*P	**Pb**	**03 39 09.5**	**-0.5**
	baz=320						
NMLH				*e*S	**Sb**	**03 39 29.9**	**+0.5**
	baz=320						
CHN8	**Yiju**	**1.57**	**270**	*e*P	**Pb**	**03 39 09.5**	**-0.6**
	baz=270						
CHN8				*e*S	**Sb**	**03 39 29.6**	**+0.1**
	baz=270						
SNJT	**Kaohsiung City**	**1.57**	**248**	*e*S	**Sb**	**03 39 32.4**	**+2.6**
	baz=248						
WTCT	**Ta-ch'eng**	**1.58**	**289**	*e*P	**Pb**	**03 39 09.8**	**-0.6**
	baz=289						
WLTB	**Daxi**	**1.61**	**338**	*e*S	**Sb**	**03 39 30.5**	**-0.2**
	baz=346						
TIPB	**Shuangxi**	**1.61**	**357**	*e*P	**Pb**	**03 39 09.7**	**-1.2**
	baz=357						
TIPB				*e*S	**Sn**	**03 39 29.0**	**+1.0**
	baz=357						
NHDH	**Xindian Distri**	**1.64**	**347**	*e*S	**Sn**	**03 39 29.9**	**+1.2**
	baz=348						
TWB1	**Santiao Chiao**	**1.64**	**2**	*e*P	**Pn**	**03 39 09.6**	**+1.0**
	baz=2.0						
TWB1				*e*S	**Sn**	**03 39 29.0**	**+0.2**
	baz=2.0						
TATO	**Taipei**	**1.66**	**346**	*e*S	**Sn**	**03 39 30.2**	**+1.1**
	baz=347						
SBCB	**Hsinchu**	**1.66**	**329**	*e*S	**Sb**	**03 39 33.4**	**+1.1**
	baz=330						
HSN	**Hsinchu**	**1.68**	**329**	*e*S	**Sb**	**03 39 32.7**	**-0.1**
	baz=331						
NWF	**Wu-fen Shan**	**1.71**	**356**	*e*P	**Pb**	**03 39 11.4**	**-1.2**
	baz=356						
NWF				*e*S	**Sn**	**03 39 31.9**	**+1.4**
	baz=356						
WFSB	**Wu-fen Shan**	**1.71**	**356**	*e*P	**Pb**	**03 39 11.4**	**-1.1**
	baz=356						
WFSB				*e*S	**Sb**	**03 39 32.2**	**-1.4**
	baz=356						
TAP	**Taipei**	**1.71**	**347**	*e*P	**Pn**	**03 39 10.5**	**+0.8**
	baz=347						
TSEB	**Hengchuen, Pin**	**1.73**	**213**	*e*S	**Sb**	**03 39 32.3**	**-1.8**
	baz=214						
HEN	**Hengchun**	**1.73**	**219**	*e*P	**Pb**	**03 39 12.4**	**-0.5**
	baz=218						
HEN				*e*S	**Sn**	**03 39 31.0**	**0.0**
	baz=218						
NCUH	**Zhongli**	**1.74**	**338**	*e*S	**Sb**	**03 39 33.6**	**-0.8**
	baz=353						
WLCH	**Liuqiu**	**1.74**	**235**	*e*P	**Pb**	**03 39 14.9**	**+1.9**
	baz=235						
NCU	**National Centr**	**1.74**	**338**	*e*S	**Sb**	**03 39 33.5**	**-1.0**
	baz=353						
TWKBT	**Hengchun**	**1.74**	**216**	*e*P	**Pn**	**03 39 09.6**	**-0.4**
	baz=216						
TWKBT				*e*S	**Sn**	**03 39 30.5**	**-0.7**
	baz=216						
TWK1	**Hengchun**	**1.74**	**216**	*e*P	**Pn**	**03 39 10.8**	**+0.8**
	baz=215						
TWK1				*e*S	**Sn**	**03 39 31.2**	**-0.1**
	baz=215						
TWP	**Hsiaoliuchiu**	**1.75**	**235**	*e*S	**Sb**	**03 39 38.8**	**+3.9**
	baz=235						
YM01	**YM01**	**1.81**	**350**	*e*P	**Pn**	**03 39 12.1**	**+1.1**
	baz=336						
YM01				*e*S	**Sn**	**03 39 33.6**	**+0.6**
	baz=336						
YM10	**YM10**	**1.82**	**350**	*e*P	**Pb**	**03 39 12.8**	**-1.6**
	baz=350						
YM10				*e*S	**Sn**	**03 39 34.5**	**+1.2**
	baz=350						
YM04	**YM04**	**1.82**	**349**	*e*P	**Pb**	**03 39 13.2**	**-1.3**
	baz=349						
YM04				*e*S	**Sn**	**03 39 34.2**	**+0.9**
	baz=349						
YM05	**YM05**	**1.83**	**350**	*e*P	**Pb**	**03 39 14.5**	**-0.1**
	baz=335						
YM11	**YM11**	**1.83**	**350**	*e*S	**Sn**	**03 39 34.5**	**+1.0**
	baz=336						
YM07	**YM07**	**1.83**	**352**	*e*P	**Pn**	**03 39 12.3**	**+1.1**
	baz=336						
YM07				*e*S	**Sn**	**03 39 34.5**	**+1.0**
	baz=336						
YM03	**YM03**	**1.84**	**349**	*e*P	**Pn**	**03 39 12.7**	**+1.2**
	baz=349						
YM08	**YM08**	**1.85**	**351**	*e*P	**Pn**	**03 39 12.1**	**+0.6**
	baz=336						
NTST	**Danshui**	**1.85**	**347**	*e*S	**Sn**	**03 39 35.5**	**+1.6**
	baz=347						
HATJ	**Hateruma jima**	**1.87**	**68**	P	**Pn**	**03 39 11.6**	**-0.1**
HATJ				*e*S	**Sn**	**03 39 33.5**	**-0.8**
IRIF	**Iriomote-Funau**	**1.93**	**59**	S	**Sn**	**03 39 36.2**	**+0.5**
TWY	**Chenhua**	**1.93**	**351**	*e*S	**Sn**	**03 39 36.9**	**+1.0**
	baz=338						
WDGT	**Dungji**	**2.08**	**268**	*e*P	**Pn**	**03 39 15.5**	**+0.9**
	baz=268						
WDGT				*e*S	**Sn**	**03 39 39.9**	**+0.4**
	baz=268						
JKRS	**Kuro-shima**	**2.11**	**65**	P	**Pn**	**03 39 15.5**	**+0.5**
JKRS				S	**Sn**	**03 39 40.2**	**-0.1**
PHUB	**P'eng-hu**	**2.16**	**275**	*e*P	**Pn**	**03 39 16.7**	**+0.9**
	baz=275						
PHUB				S	**Sn**	**03 39 42.0**	**+0.5**
	baz=275						
PNG	**Penghu**	**2.18**	**276**	*e*P	**Pn**	**03 39 17.1**	**+1.1**
	baz=276						
PNG				*e*S	**Sn**	**03 39 42.6**	**+0.6**
	baz=276						
PCYT	**Pengchaiyu**	**2.27**	**4**	*e*S	**Sn**	**03 39 45.5**	**+1.3**
	baz=3.0						
JIJ	**Ishigaki jima**	**2.27**	**63**	P	**Pn**	**03 39 17.4**	**+0.1**
JIJ				S	**Sn**	**03 39 43.7**	**-0.6**
VCHM	**Qimei**	**2.29**	**267**	*e*P	**Pn**	**03 39 18.3**	**+0.7**
	baz=267						
VCHM				*e*S	**Sn**	**03 39 44.1**	**-0.7**
	baz=267						
JISG	**Ishigakijimahi**	**2.51**	**60**	P	**Pn**	**03 39 20.6**	**0.0**
JISG				*e*S	**Sn**	**03 39 49.9**	**-0.3**
JTJ	**Tarama**	**2.85**	**63**	P	**Pn**	**03 39 25.6**	**+0.3**
JTJ				*e*S	**Sn**	**03 39 58.7**	**+0.1**
PTTC	**Pingtan**	**2.89**	**318**	*e*P	**Pn**	**03 39 26.1**	**+0.2**
	baz=319						
PTTC				*e*S	**Sn**	**03 39 59.0**	**-0.7**
	baz=319						
PTMZ	**Houxiangcun**	**3.05**	**304**	*e*P	**Pn**	**03 39 28.7**	**+0.7**
	baz=304						
PTMZ				*e*S	**Sn**	**03 40 02.9**	**-0.7**
	baz=304						
MATB	**Ma-tsu**	**3.31**	**328**	*e*P	**Pn**	**03 39 31.5**	**-0.1**
	baz=326						
JIRB	**Irabujima**	**3.32**	**63**	P	**Pn**	**03 39 31.6**	**-0.1**
JIRB				*e*S	**Sn**	**03 40 10.6**	**+0.5**
JMJ2	**Miyako jima3**	**3.41**	**66**	P	**Pn**	**03 39 33.5**	**+0.5**
JMJ2				*e*S	**Sn**	**03 40 12.5**	**+0.1**
KNMB	**Chin-men Tao**	**3.41**	**290**	*e*P	**Pn**	**03 39 33.3**	**+0.3**
	baz=289						
JMJ	**Miyako jima 2**	**3.41**	**64**	*e*S	**Sn**	**03 40 11.3**	**-1.2**
	baz=64						

SKO ***13*** *03:43:46.8, 41°.96N×20°.12E, h0km, M1.5, ML1.9*
TIR ***13*** *03:43:46.4, 41°.85N×20°.12E, h10km, Md2.5/4*
BEO ***13*** *03:43:47.8±0.4, 41°.91N×20°.20E, h0km, ML1.7/5*
ISC 13 03:43:47.5±1.1,**41°.90N**±0°.03×**20°.16E**±0°.03,**h7**km±11km,
n18,σ0**°78**/29,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.24**	**306**	*i* PG	**Pg**	**03 43 52.4**	**0.0**
PUK				*i* PG		03 43 56.5	
PHP	**Peshkopia**	**0.30**	**136**	*i* PG	**Pg**	**03 43 53.2**	**-0.3**
PHP				*i* PG	**Pn**	**03 43 57.7**	**-0.7**
BCI	**Bajram Curri**	**0.47**	**352**	*i* PG	**Pg**	**03 43 57.1**	**+0.5**
BCI				*i* PG	Pn	03 44 05.1	+4.4
TIR	**Tirane**	**0.59**	**202**	*e*Pg	**Pb**	**03 44 00.1**	**-0.1**
TIR				*e*Sg	**Sg**	**03 44 06.7**	**0.0**
TIR	**Tirane**	**0.59**	**202**	*i* Pg	**Pg**	**03 43 58.2**	**-0.8**
PDG	**Podgorica**	**0.85**	**308**	*e*Pg	**Pg**	**03 44 02.7**	**-1.2**
PDG				*e*Sg	**Sb**	**03 44 16.7**	**+0.4**
OHR	**Ohrid**	**0.92**	**148**	*i* Pg	**Pg**	**03 44 05.1**	**-0.1**
OHR				*i* Sg	**Sb**	**03 44 18.4**	**+0.1**
OHR				*e*Lg	Lg	03 44 18.7	
	comp=E,18nm,0.5s						
OHR				*e*Lg	Lg	03 44 20.9	
	comp=N,21nm,0.5s						
KRUS	**Krusevo**	**0.97**	**123**	*i* Pg	**Pg**	**03 44 05.3**	**-0.9**
KRUS				*i* Sg	**Sg**	**03 44 19.5**	**+0.7**
SJES	**Sjenica**	**1.37**	**354**	*e*Pg	**Pn**	**03 44 11.6**	**-1.5**
SJES				*e*Sg	**Sb**	**03 44 30.8**	**-0.4**
FNA	**Florina**	**1.44**	**140**	*i* Pg	**Pn**	**03 44 13.9**	**-0.1**
FNA				*i* Sg	**Sg**	**03 44 34.9**	**+1.0**
FNA	**Florina**	**1.44**	**140**	*i* PN	**Pn**	**03 44 14.2**	**+0.1**
FNA				*i* PN	**Sg**	**03 44 35.0**	**+1.1**
SELS	**Selova**	**1.50**	**28**	*e*Sg	**Pn**	**03 44 13.8**	**-1.0**
SELS	**Selova**	**1.50**	**28**	*e*Pg	**Sn**	**03 44 35.0**	**+0.4**
BARS	**Barje**	**1.53**	**53**	*e*Pg	**Pn**	**03 44 14.8**	**-0.4**
BARS				*e*Sg	**Sn**	**03 44 36.1**	**+0.7**
TREB	**Trebinje**	**1.57**	**302**	*e*Pg	**Pn**	**03 44 16.4**	**+0.6**
TREB				*e*Sg	**Sg**	**03 44 38.9**	**+0.9**
IVAS	**Ivanjica**	**1.68**	**360**	*e*Sg	**Pn**	**03 44 16.9**	**-0.4**
IVAS	**Ivanjica**	**1.68**	**360**	*e*Pg	**Sg**	**03 44 41.2**	**-0.1**
DIVS	**Divibare**	**2.20**	**357**	*e*Pg	**Pb**	**03 44 27.1**	**-0.5**
DIVS				*e*Sg	**Sb**	**03 44 56.8**	**+1.7**

NEIC 13 03:55:34.3±0.0,**59°.10N**×**151°.97W**,**h48**km,**ML3.5**(AEIC),
After AEIC.,Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNPM	**China Poot**	**0.57**	**41**	P	Pn	03 55 45.4	-0.9
CNPM				S	Sn	03 55 54.6	-0.3
HOM	**Homer**	**0.58**	**16**	P	Pn	03 55 45.9	-0.6
HOM				S	Sn	03 55 55.5	+0.3
AUJK	**Augustine Jueg**	**0.78**	**289**	P	Pn	03 55 48.3	-0.8
AUI	**Augustine Isla**	**0.79**	**288**	P	Pn	03 55 48.2	-0.9
AUI				S	Sn	03 56 00.1	+0.2
AUH	**Augustine H**	**0.80**	**290**	P	Pn	03 55 48.9	-0.6
AUW	**Augustine West**	**0.82**	**290**	P	Pn	03 55 48.9	-0.6
BRLK	**Bradley Lake**	**0.86**	**39**	P	Pn	03 55 49.3	-0.9
BRLK				S	Sn	03 56 01.6	-0.1
ILS	**Iliamna Low So**	**1.03**	**327**	P	Pn	03 55 51.5	-1.0
FONW	**Fourpeaked Sta**	**1.05**	**256**	P	Pn	03 55 51.9	-0.7
IVE	**Iliamna Volcan**	**1.06**	**330**	P	Pn	03 55 51.9	-1.0
ILW	**Iliamna West**	**1.13**	**329**	P	Pn	03 55 53.1	-0.8
KDAK	**Kodiak Island**	**1.36**	**194**	P	Pn	03 55 56.2	-0.7
KDAK				S	Sn	03 56 12.9	-0.8
RED	**Redoubt Volcan**	**1.38**	**343**	P	Pn	03 55 56.3	-1.0
RED				S	Sn	03 56 14.5	+0.1
RDSO	**Redoubt South**	**1.41**	**344**	P	Pn	03 55 56.8	-0.9
RDSO				S	Sn	03 56 15.6	+0.3
RDWB	**Redoubt West**	**1.46**	**343**	P	Pn	03 55 57.4	-1.0
RDWB				S	Sn	03 56 16.1	-0.3
KAHG	**Katmai Hook Gl**	**1.48**	**247**	P	Pn	03 55 58.2	-0.3
KARR	**Katmai Rainbow**	**1.55**	**248**	P	Pn	03 55 59.3	-0.2
RDJH	**Redoubt Jeurge**	**1.55**	**345**	P	Pn	03 55 58.9	-0.8
RDJH				S	Sn	03 56 18.9	+0.2
SEW	**Seward**	**1.63**	**51**	P	Pn	03 55 59.4	-1.1
KAHC	**Katmai Hardscr**	**1.64**	**255**	P	Pn	03 55 59.9	-0.9
SLKM	**Skilak Lake**	**1.66**	**31**	P	Pn	03 56 00.5	-0.5
NKA	**Nikishka**	**1.69**	**12**	P	Pn	03 56 02.5	+1.2
MGLS	**Mageik Landsli**	**1.93**	**241**	P	Pn	03 56 04.8	+0.1
ACHA	**Angle Creek He**	**1.97**	**244**	P	Pn	03 56 05.3	0.0
OHAK	**Old Harbor**	**2.01**	**201**	P	Pn	03 56 04.7	-1.0
KELA	**Mount Kelaz**	**2.08**	**253**	P	Pn	03 56 05.9	-0.8
CKT	**Bend**	**2.11**	**357**	P	Pn	03 56 07.0	-0.2
CKL	**Chakachamna La**	**2.11**	**355**	P	Pn	03 56 07.1	-0.2
SPCP	**Crater Peak Br**	**2.17**	**358**	P	Pn	03 56 08.2	+0.1
SPWE	**Spurr West**	**2.20**	**353**	P	Pn	03 56 08.7	+0.2
CGLM	**Capps Glacier**	**2.21**	**359**	P	Pn	03 56 08.6	-0.1
FIB	**Fire Island**	**2.26**	**23**	P	Pn	03 56 09.6	+0.5
RC01	**Rabbit Creek A**	**2.29**	**28**	P	Pn	03 56 09.1	-0.4
RC01				S	Sn	03 56 36.2	-0.2
SUA	**Susitna One**	**2.45**	**14**	P	Pn	03 56 11.6	-0.3
PWL	**Port Wells**	**2.54**	**44**	P	Pn	03 56 12.1	-0.9
PWL				S	Sn	03 56 40.3	-2.3
PLK2	**Peulik 2**	**2.66**	**242**	P	Pn	03 56 14.8	+0.2
PLK3	**Peulik 3**	**2.67**	**240**	P	Pn	03 56 15.2	+0.3
SVW2	**Sparrevohn**	**2.70**	**319**	P	Pn	03 56 14.1	-1.1
PLK1	**Peulik 1**	**2.77**	**244**	P	Pn	03 56 15.6	-0.4
SII	**Sitkinak Islan**	**2.81**	**206**	P	Pn	03 56 15.6	-1.2
PMR	**Palmer**	**2.87**	**28**	P	Pn	03 56 16.6	-0.9
SKT	**Skwentna**	**2.90**	**4**	P	Pn	03 56 17.9	0.0
KNK	**Knik Glacier**	**2.90**	**35**	P	Pn	03 56 17.1	-0.9
MID	**Middleton Isla**	**2.91**	**81**	P	Pn	03 56 17.0	-1.0
GL1	**Glacier Island**	**3.03**	**52**	P	Pn	03 56 17.9	-1.8
HIN	**Hinchinbrook I**	**3.06**	**62**	P	Pn	03 56 19.2	-0.9
GHO	**Glory Hole Cre**	**3.08**	**28**	P	Pn	03 56 19.7	-0.7
GHO				S	Sn	03 56 53.9	-2.0
SML	**Sawmill**	**3.26**	**32**	P	Pn	03 56 22.3	-0.6
EYAK	**Cordova Ski Ar**	**3.46**	**63**	P	Pn	03 56 24.1	-1.4
SCM	**Sheep Creek Mo**	**3.58**	**38**	P	Pn	03 56 26.8	-0.5
SGAM	**Sherman Glacie**	**3.69**	**65**	P	Pn	03 56 27.8	-1.0
DIV	**Divide**	**3.71**	**54**	P	Pn	03 56 28.4	-0.7
NICHA	**Nichawak Mount**	**4.21**	**71**	P	Pn	03 56 35.2	-0.8
TT01	**Tatalina**	**4.30**	**334**	P	Pn	03 56 36.5	-0.5
TTA	**Tatalina**	**4.32**	**335**	P	Pn	03 56 36.6	-0.8
CAST	**Castle Rocks**	**4.33**	**359**	P	Pn	03 56 36.5	-1.1
PS11	**TAPS Pump St11**	**4.38**	**44**	P	Pn	03 56 37.5	-0.7
TRF	**Thorofare Moun**	**4.44**	**10**	P	Pn	03 56 39.2	0.0
KTH	**Kantishna Hill**	**4.50**	**6**	P	Pn	03 56 39.9	0.0
DHY	**Denali Highway**	**4.57**	**27**	P	Pn	03 56 40.6	-0.4
RND	**Reindeer**	**4.57**	**18**	P	Pn	03 56 40.5	-0.4
KHIT	**Khitrov Hills**	**4.61**	**69**	P	Pn	03 56 40.0	-1.4
SNH	**Sunshine Point**	**4.76**	**73**	P	Pn	03 56 42.9	-0.5
KULT	**Kultieth River**	**4.83**	**72**	P	Pn	03 56 43.5	-0.9
MCK	**McKinley**	**4.87**	**16**	P	Pn	03 56 44.7	-0.2
BPAW	**Bear Paw Mtn.**	**5.04**	**5**	P	Pn	03 56 46.5	-0.8
KIAG	**Kiagna River**	**5.16**	**65**	P	Pn	03 56 48.7	-0.3
BALM	**Baldy**	**5.19**	**64**	P	Pn	03 56 48.8	-0.7
MESA	**MESA**	**5.20**	**74**	P	Pn	03 56 49.3	-0.3
RKAV	**Rock Avalanche**	**5.51**	**73**	P	Pn	03 56 53.5	-0.4
CHX	**Chaix Hills**	**5.60**	**75**	P	Pn	03 56 54.9	-0.1
NEA	**Nenana**	**5.66**	**13**	P	Pn	03 56 55.0	-0.7
WRH	**Wood River Hil**	**5.69**	**17**	P	Pn	03 56 55.5	-0.7
SAMH	**Samovar Hills**	**5.77**	**75**	P	Pn	03 56 57.5	+0.1
RIDG	**Independent Ri**	**5.77**	**33**	P	Pn	03 56 56.9	-0.5
CCB	**Clear Creek Bu**	**5.90**	**18**	P	Pn	03 56 58.1	-0.9
PS08	**TAPS Pump Stn8**	**5.98**	**22**	P	Pn	03 56 59.3	-0.8
MLY	**Manley**	**5.98**	**5**	P	Pn	03 56 59.2	-1.0
COLA	**College**	**6.11**	**17**	P	Pn	03 57 01.0	-0.9
YUK2	**White River**	**6.13**	**59**	P	Pn	03 57 01.7	-0.5
YUK3	**Moose Creek**	**6.29**	**60**	P	Pn	03 57 03.9	-0.8
PNL	**Peninsula**	**6.45**	**80**	P	Pn	03 57 05.5	-1.0
YUK4	**Talbot Arm**	**7.00**	**66**	P	Pn	03 57 14.7	+0.3

IDC ***13*** *04:06:34.6±1.1, 50°.59N×160°.03E, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.6/34, mbtmp3.5/6, ML2.7/1, Error ellipse: s-maj=28.8km s-min=24.3km az=15.0*
ISCJB ***13*** *04:06:38.0±0.7, 50°.74N±0°.04×160°.23E±0°.07, h33km, mb3.6/5, Error ellipse: s-maj=6.9km s-min=5.8km az=143.4*
KRSC ***13*** *04:06:37.2±1.9, 50°.80N×160°.18E, h86km±37km, ML3.9*
ISC 13 04:06:38.4±1.4,**50°.71N**±0°.08×**160°.31E**±0°.08,**h35**km,**n29,**
σ1**°15**/32,**mb3.7/5,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**1.78**	**309**	*e*P	**Pn**	**04 07 06.0**	**-0.6**
KDTR				*e*S	**Sn**	**04 07 27.0**	**-1.0**
RUS	**Russkaya**	**2.06**	**328**	*e*P	**Pn**	**04 07 09.8**	**-0.6**
RUS				*e*S	**Sn**	**04 07 34.0**	**-0.8**
MTVR	**Mutnovka**	**2.21**	**324**	*e*P	**Pn**	**04 07 12.5**	**-0.2**
MTVR				*e*S	**Sn**	**04 07 38.9**	**0.0**
ASAK	**Asacha**	**2.25**	**319**	*e*P	**Pn**	**04 07 13.4**	**+0.2**
ASAK				*e*S	**Sn**	**04 07 40.3**	**+0.6**
SPN	**Mys Shipunski**	**2.40**	**356**	*e*P	**Pn**	**04 07 14.3**	**-0.8**
SPN				*e*S	**Sn**	**04 07 41.2**	**-2.0**
DALK	**Dalny**	**2.52**	**338**	*e*P	**Pn**	**04 07 15.7**	**-1.0**
DALK				*e*S	**Sn**	**04 07 45.6**	**-0.5**
KRMR	**Karymshinskiy**	**2.52**	**328**	*e*P	**Pn**	**04 07 16.9**	**+0.2**
KRMR				*e*S	**Sn**	**04 07 46.2**	**+0.1**
PET	**Petropavlovsk**	**2.53**	**337**	*e*P	**Pn**	**04 07 15.9**	**-1.0**
PET				*e*S	**Sn**	**04 07 45.4**	**-1.1**
NLC	**Nalytchevo**	**2.53**	**347**	S	**Sn**	**04 07 45.9**	**-0.7**
UGLR	**Uglovaya**	**2.66**	**340**	P	**Pn**	**04 07 19.5**	**+0.6**
SKR	**Severo-Kuril's**	**2.67**	**271**	*e*P	**Pn**	**04 07 18.2**	**-0.5**
SKR				*e*S	**Sn**	**04 07 47.6**	**-2.2**
SDLR	**Sedlovina**	**2.72**	**342**	*e*P	**Pn**	**04 07 19.9**	**+0.3**
AVH	**Avacha**	**2.73**	**340**	*e*P	Pn	04 07 21.3	+1.5
KOK	**Koryaka**	**2.78**	**339**	P	Pn	04 07 21.8	+1.3
KRX	**Arik**	**2.84**	**340**	*e*P	**Pn**	**04 07 22.1**	**+0.7**
PETK	**Petropavlovsk-**	**2.89**	**327**	Pn	**Pn**	**04 07 22.6**	**+0.6**
	5.0nm,0.3s,baz=126,slow=18,SNR=22						
PETK				Sn	**Sn**	**04 07 57.5**	**+2.0**
	4.1nm,0.3s,baz=113,slow=23,SNR=11						
APC	**Apacha**	**2.96**	**320**	*e*P	Pn	04 07 24.4	+1.7
ALID	**Alaid**	**3.02**	**275**	*e*P	Pn	04 07 23.9	+0.1
GNL	**Ganaly**	**3.32**	**335**	*e*P	Pn	04 07 29.2	+1.3
MKZ	**Mys Kozlova**	**3.95**	**12**	*e*P	**Pn**	**04 07 35.6**	**-0.8**
KZV	**Kizimen**	**4.41**	**360**	*e*P	**Pn**	**04 07 43.5**	**+0.6**
TUMD	**Tumrok D**	**4.50**	**1**	*e*P	**Pn**	**04 07 45.6**	**+1.6**
TUMD				*e*S	**Sn**	**04 08 31.8**	**-3.3**
TUMR	**Tumrok**	**4.58**	**359**	*e*P	**Pn**	**04 07 46.3**	**+1.1**
KBTR	**Krutoberegovo**	**5.71**	**14**	*e*P	**Pn**	**04 08 00.8**	**+0.3**
MKAR	**Makanchi Array**	**49.34**	**298**	P	**P**	**04 15 24.5**	**+0.6**
	0.3nm,0.5s,baz=67,slow=7.7,SNR=4.2						
NVAR	**Mina Array Bea**	**56.46**	**69**	P	P	04 16 20.4	+3.6
	0.4nm,0.5s,baz=298,slow=7.8,SNR=3.0						
PDAR	**Pinedale Array**	**58.59**	**60**	P	P	04 16 34.4	+2.6
	0.4nm,0.7s,baz=259,slow=1.5,SNR=4.4						
TXAR	**Lajitas Array**	**71.46**	**66**	P	P	04 17 57.8	+2.5
	0.5nm,0.5s,baz=299,slow=4.8,SNR=21						
ASAR	**Alice Springs**	**77.64**	**205**	P	**P**	**04 18 31.6**	**+0.7**
	0.2nm,0.4s,baz=12,slow=5.0,SNR=2.7						

IDC 13 04:30:28.7±1.3,**17°.39S**×**69°.58W**,**h0**km,**mb3.8/4,**
mb1 3.9/4,mb1mx3.6/32,mbtmp3.8/4,Error ellipse:
s-maj=38.6km s-min=32.0km az=72.0,Peru-Bolivia
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**23.28**	**182**	P	P	04 35 38.1	0.0
	2.1nm,0.8s,baz=0.0,slow=8.1,SNR=5.6						
TXAR	**Lajitas Array**	**56.92**	**324**	P	P	04 40 16.0	0.0
	0.1nm,0.7s,baz=144,slow=7.4,SNR=3.5						
DBIC	**Dimbokro**	**68.24**	**75**	P	P	04 41 33.8	+1.9
	2.8nm,0.9s,baz=242,slow=8.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**76.62**	**72**	P	P	04 42 20.4	-1.4
	0.6nm,0.7s,baz=248,slow=4.9,SNR=9.2						

ISCJB ***13*** *05:15:44.7±0.2, 24°.44N±0°.02×122°.02E±0°.02, h21km±3km, Error ellipse: s-maj=3.1km s-min=2.5km az=156.0*
JMA ***13*** *05:15:44.6±0.1, 24°.38N×121°.98E, h31km, M2.6*
TAP ***13*** *05:15:44.7, 24°.45N×121°.96E, h21km, ML3.3, B*
ISC 13 05:15:44.4±0.9,**24°.42N**±0°.02×**122°.01E**±0°.02,**h19**km±1km,
n73,σ0**°60**/107,**7C-9D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.17**	**40**	⇓P	**Pg**	**05 15 50.0**	**+0.9**
	baz=50						
EOS1				S	**Sg**	**05 15 53.9**	**+1.8**
	baz=50						
NANB	**Nanao**	**0.24**	**272**	⇓P	**Pb**	**05 15 50.0**	**+0.1**
	baz=271						
NANB				S	**Sb**	**05 15 53.4**	**-0.1**
	baz=271						
TWC	**Suao**	**0.24**	**322**	⇓P	**Pb**	**05 15 49.9**	**0.0**
	baz=329						
TWC				*i* S	**Sb**	**05 15 53.1**	**-0.3**
	baz=329						
ENA	**Nanau**	**0.25**	**272**	⇓*i*P	**Pb**	**05 15 50.0**	**-0.1**
	baz=270						
ENA				*i* S	**Sb**	**05 15 53.5**	**-0.2**
	baz=270						
ILA	**Ilan**	**0.42**	**325**	⇑*i*P	**Pg**	**05 15 53.1**	**0.0**
	baz=325						
ILA				S	**Sg**	**05 15 58.7**	**-0.3**
	baz=325						
TWE	**Neicheng**	**0.43**	**314**	⇑*i*P	**Pg**	**05 15 53.2**	**-0.2**
	baz=317						
TWE				S	**Sg**	**05 15 57.9**	**-1.5**
	baz=317						
NTC	**Toucheng**	**0.46**	**339**	⇑P	**Pg**	**05 15 53.7**	**-0.2**
	baz=343						
NTC				*

CHGB				eS	Sb	05 16 11.3	-0.4
	baz=249						
JYNG	Yonagunijimaku	0.85	88	P	Pb	05 16 00.6	0.0
JYNG				eS	Sg	05 16 12.5	+0.1
YM08	YM08	0.85	333	P	Pb	05 16 00.7	0.0
	baz=335						
TWS1	Kuangyinshan	0.87	322	P	Pn	05 16 01.8	+0.2
	baz=318						
TWS1				eS	Sn	05 16 14.0	+0.3
	baz=318						
OWD	Renai	0.89	239	eP	Pb	05 16 01.0	-0.4
	baz=227						
NTST	Danshui	0.90	325	eP	Pg	05 16 02.0	0.0
	baz=326						
YOJ	Yonaguni jima	0.91	87	P	Pb	05 16 01.4	-0.2
	baz=89						
YOJ	Yonaguni jima	0.91	87	P	Pb	05 16 01.7	+0.1
YOJ				S	Sg	05 16 14.4	+0.1
EGFH	Guangfu	0.92	216	eP	Pg	05 16 03.2	+0.8
	baz=199						
NCU	National Centr	0.93	306	eP	Pg	05 16 03.7	+1.1
	baz=313						
NCU				S	Sn	05 16 15.6	+0.3
	baz=313						
NCUH	Zhongli	0.93	306	eP	Pg	05 16 02.7	+0.1
	baz=306						
LIOB	Emei	0.94	284	eP	Pg	05 16 03.0	+0.3
	baz=283						
SANB	Taian	0.94	269	eP	Pg	05 16 02.5	-0.3
	baz=269						
SANB				S	Sb	05 16 14.0	-0.2
	baz=269						
NSTT	Nanjuang	0.94	283	eP	Pb	05 16 02.3	+0.1
	baz=282						
WHP	Taichung City	0.98	262	eP	Pg	05 16 03.6	0.0
	baz=260						
SBCB	Hsinchu	1.00	292	eP	Pg	05 16 04.7	+0.7
	baz=292						
SBCB				eS	Sg	05 16 18.6	+1.3
	baz=292						
VWDT	VWDT	1.04	230	eP	Pg	05 16 04.4	-0.2
	baz=234						
DPDB	Guoxing	1.06	249	eP	Pn	05 16 04.6	+0.2
	baz=254						
HGSD	Ruisui	1.07	210	eP	Pg	05 16 05.0	-0.2
	baz=223						
EHY	Hungye	1.11	215	eP	Pn	05 16 04.8	-0.2
	baz=212						
NMLH	Miaoli	1.12	276	eP	Pg	05 16 07.6	+1.4
	baz=275						
TWQ1	Liyutan	1.13	267	eP	Pg	05 16 07.3	+0.9
	baz=265						
SMLT	Sun Moon Lake	1.15	242	P	Pb	05 16 06.2	+0.5
	baz=229						
SSLB	Suanglung	1.15	237	⇑P	Pb	05 16 06.2	+0.4
	baz=235						
TYC	Yuchr	1.17	244	eP	Pb	05 16 06.3	+0.2
	baz=233						
PCYT	Pengchaiyu	1.21	3	eP	Pn	05 16 05.5	-0.8
	baz=5.0						
YULB	Yu-li	1.22	213	eP	Pn	05 16 06.4	0.0
	baz=210						
TWF1	Yuli	1.25	212	eP	Pn	05 16 07.0	+0.1
	baz=222						
YUS	Yu-Shan	1.34	226	eP	Pb	05 16 09.4	+0.2
	baz=224						
CHN5	Tsauling	1.47	236	eP	Pg	05 16 12.4	-0.5
	baz=234						
IRIF	Iriomote-Funau	1.57	93	P	Pn	05 16 10.9	-0.3
IRIF				S	Sn	05 16 30.6	-0.4
HATJ	Hateruma jima	1.68	102	eS	Sn	05 16 34.7	+1.0
TWK	Hsinying	1.81	231	eP	Pb	05 16 17.5	+0.5
	baz=228						
JKRS	Kuro-shima	1.83	95	P	Pn	05 16 15.5	+0.6
JKRS				S	Sn	05 16 37.7	+0.2
CHN1	Nanshi	1.83	228	eP	Pb	05 16 18.1	+0.7
	baz=226						
JIJ	Ishigaki jima	1.94	91	P	Pn	05 16 16.3	-0.1
JIJ				eS	Sn	05 16 39.0	-1.3
JISG	Ishigakijimahi	2.10	85	P	Pn	05 16 17.6	-1.0
JISG				S	Sn	05 16 43.1	-1.1
MASBT	Mashibuluo	2.20	215	eP	Pb	05 16 22.7	-0.9
	baz=213						
PHUB	P'eng-hu	2.41	248	eP	Pn	05 16 24.1	+1.3
	baz=246						
JTJ	Tarama	2.46	84	P	Pn	05 16 24.4	+0.9
JTJ				eS	Sn	05 16 53.4	+0.4
LYJJ	Jianjiangzhen	2.94	317	eP	Pn	05 16 30.8	+0.7
	baz=317						
AXDP	Jialang	3.71	278	eP	Pn	05 16 41.1	+0.4
	baz=278						

IDC 13 05:36:48.6±1.9, 5°.75S×150°.00E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/31, mbtmp3.7/4, MS3.3/5, Ms1 3.3/5, ms1mx3.1/19, Error ellipse: s-maj=64.1km s-min=26.6km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.76	226	P	P	05 41 30.4	-0.9
	122nm,0.3s,baz=46,slow=11,SNR=2.6						
ASAR	Alice Springs	23.61	219	P	P	05 42 02.1	+0.6
	2.4nm,0.7s,baz=50,slow=8.9,SNR=29						
ASAR				LR	LR	05 52 41.2	
	comp=Z,110nm,18.6s,baz=60,slow=40						
STKA	Stephens Creek	27.16	196	LR	LR	05 54 42.2	
	comp=Z,91nm,18.1s,baz=23,slow=40						
MJAR	Matsushiro Arr	43.49	346	LR	LR	06 01 25.3	
	comp=Z,21nm,18.2s,baz=160,slow=34						
CMAR	Chiang Mai Arr	55.78	297	P	P	05 46 27.1	-0.9
	0.4nm,0.3s,baz=122,slow=6.1,SNR=4.0						
CMAR				LR	LR	06 11 12.1	
	comp=Z,12nm,19.0s,baz=150,slow=37						
MKAR	Makanchi Array	79.22	320	P	P	05 48 56.7	+0.9
	0.3nm,0.7s,baz=111,slow=7.9,SNR=3.7						
ILAR	Eielson Array	84.09	23	P	P	05 49 20.7	-0.4
	0.3nm,0.7s,baz=258,slow=4.5,SNR=3.2						
GEYT	Alibeck	94.98	308	LR	LR	06 34 40.4	
	comp=Z,17nm,19.4s,baz=165,slow=37						
TORD	Torodi Ar. Bea	147.91	286	PKPbc	PKPbc	05 56 36.2	-0.7
	0.8nm,1.0s,baz=62,slow=3.1,SNR=3.8						

NNC 13 05:38:03.0±1.8, 41°.86N×83°.42E, h13km±6km, mb3.7, mpv3.3, Error ellipse: s-maj=15.0km s-min=9.5km az=171.0

SOME 13 05:38:04.3, 41°.73N×83°.27E, h10km

ISC 13 05:38:04.0±2.5, 41°.81N±0°.10×83°.26E±0°.09, h15km, n28, σ2°48/45, 7C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	2.70	308	Pg	Pg	05 38 55.5	-0.2
	12nm,0.3s						
KTMS				Lg	Lg	05 39 33.3	
	21nm,0.4s						
KTMS	Ketmen	2.70	308	eP	Pg	05 38 55.5	-0.2
	12nm,0.3s						
KTMS				eS	Sg	05 39 32.4	+1.7
	21nm,0.4s						
PDGK	Podgornoye	3.17	300	Pg	Pb	05 39 01.8	+1.7
	1.2nm,0.4s						
PDGK				Lg	Lg	05 39 43.9	
	12nm,0.4s						
PDGK	Podgornoye	3.17	300	⇓Pn	Pn	05 38 52.4	-1.0
	1.6nm,0.6s						
PDGK				⇓Pg	Pb	05 39 02.7	+2.6
	2.8nm,0.5s						
PDGK				⇑Sn	Sn	05 39 33.9	+2.8
	4.9nm,0.5s						
PDGK				⇑Lg	Lg	05 39 44.8	
	39nm,0.8s						
UZB	Uzynbulak	3.41	294	Pg	Pb	05 39 06.8	+2.7
	6.7nm,0.5s						
UZB				Lg	Lg	05 39 52.5	
	31nm,0.2s						
UZB	Uzynbulak	3.41	294	eP	Pb	05 39 06.8	+2.7
	3.8nm,0.3s						
UZB				eS	Sg	05 39 52.5	-0.9
	31nm,0.2s						
DJR	Jarkent	3.58	316	Pg	Pb	05 39 08.8	+1.8
	7.7nm,0.4s						
DJR				Lg	Lg	05 39 55.7	
	4.4nm,0.4s						
DJR	Jarkent	3.58	316	eP	Pb	05 39 08.8	+1.8
	7.7nm,0.4s						
DJR				eS	Sg	05 39 55.7	-3.3
	4.4nm,0.4s						
KPKS	Kokpek	3.76	298	eP	Pb	05 39 13.1	+3.0
	3.7nm,0.3s						
KPKS				eS	Sg	05 40 03.2	-1.6
	42nm,0.3s						
SATY	Saty	3.81	291	Pg	Pg	05 39 15.1	-1.8
	13nm,0.5s						
SATY				Lg	Lg	05 40 06.7	
	23nm,0.4s						
SATY	Saty	3.81	291	eP	Pg	05 39 15.1	-1.8
	13nm,0.5s						
SATY				eS	Sg	05 40 06.7	+0.5
	23nm,0.4s						
KURS	Kuram	4.11	296	Pg	Pb	05 39 19.3	+3.2
	5.4nm,0.5s						
KURS				Lg	Lg	05 40 13.9	
	6.5nm,0.5s						
KURS	Kuram	4.11	296	eP	Pb	05 39 19.3	+3.2
	5.4nm,0.5s						
KURS				eS	Sg	05 40 13.9	-2.1
	6.5nm,0.5s						
MNBS	Baschi	4.23	304	Pg	Pg	05 39 22.7	-2.2
	3.0nm,0.5s						
MNBS				Lg	Lg	05 40 19.7	
	9.6nm,0.4s						
MNBS	Baschi	4.23	304	eP	Pg	05 39 22.7	-2.2
	3.0nm,0.5s						
MNBS				eS	Sg	05 40 19.7	0.0
	9.6nm,0.4s						
KAPS	Kapalarasan	4.49	322	Pg	Pg	05 39 26.9	-2.9
	2.7nm,0.5s						
KAPS				Lg	Lg	05 40 27.0	
	3.5nm,0.5s						
KAPS	Kapalarasan	4.49	322	eP	Pg	05 39 28.6	-1.3
	1.2nm,0.2s						
KAPS				eS	Sg	05 40 29.7	+1.8
	3.8nm,0.5s						
ARXS	Arharly	4.65	303	Pg	Pg	05 39 30.4	-2.7
	3.9nm,0.7s						
ARXS				Lg	Lg	05 40 32.9	
	6.7nm,0.3s						
ARXS	Arharly	4.65	303	eP	Pg	05 39 30.4	-2.7
	3.9nm,0.7s						
ARXS				eS	Sg	05 40 32.9	-0.4
	6.7nm,0.3s						
KOTS	Kotyrbulak	4.76	289	Pg	Pb	05 39 31.8	+4.5
	3.7nm,0.6s						
KOTS				Lg	Lg	05 40 35.3	
	36nm,0.6s						
KOTS	Kotyrbulak	4.76	289	eP	Pb	05 39 31.8	+4.5
	3.7nm,0.6s						
KOTS				eS	Sg	05 40 35.3	-1.6
	36nm,0.6s						
MDOK	Medeo	4.79	288	eP	Pb	05 39 32.1	+4.4
	4.4nm,0.7s						
MDOK				eS	Sg	05 40 35.3	-2.4
	9.7nm,0.8s						
TNSS	Tian-Shan	4.83	287	Pg	Pg	05 39 33.7	-2.9
	4.0nm,0.3s						
TNSS				Lg	Lg	05 40 38.3	
	8.1nm,0.7s						
TNSS	Tian-Shan	4.83	287	eP	Pg	05 39 33.7	-2.9
	4.0nm,0.3s						
TNSS				eS	Sg	05 40 38.3	-0.9
	8.1nm,0.7s						
MK31	Makanchi Array	5.03	352	⇑Pn	Pn	05 39 18.3	-0.6
	0.7nm,0.7s						
MK31				⇑Pg	Pb	05 39 33.5	+1.8
	0.6nm,0.4s,baz=166,slow=15,SNR=4.0						
MK31				⇑Sn	Sn	05 40 16.8	0.0
	1.4nm,0.6s,baz=167,slow=30,SNR=4.1						
MK31				⇑Lg	Lg	05 40 43.9	
	3.3nm,0.6s,baz=167,slow=28,SNR=4.7						
IZV	Izvestkoviy	5.07	286	Pg	Pg	05 39 37.5	-3.6
	3.1nm,0.2s						
IZV				Lg	Lg	05 40 44.9	
	15nm,0.4s						
IZV	Izvestkoviy	5.07	286	eP	Pg	05 39 37.5	-3.6
	3.1nm,0.2s						
IZV				eS	Sg	05 40 44.9	-1.9
	15nm,0.4s						
MAKZ	Makanchi	5.08	350	⇑Pg	Pb	05 39 34.5	+1.9
	1.3nm,0.7s						
MAKZ				⇓Lg	Lg	05 40 43.6	
	2.5nm,0.7s						

MED_RC 13 05:44:52.0±0.5, 43°.53N×13°.86E, h12km±3km, MW4.1/9, Moment Tensor Solution. Mantle waves: s9,c10; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}1.28±.33; $M_{\theta\theta}$-0.30±.21; $M_{\phi\phi}$-0.98±.19; $M_{r\theta}$-1.02±.61; $M_{\theta\phi}$1.03±.13; $M_{\phi r}$0.80±.43; Best double couple: $M_0$1.99000×10^{15} NP1:ϕ_s311.00000°, δ66.00000°, λ77.00000°. NP2: ϕ_s161.00000°, δ27.00000°, λ117.00000°. Principal axes: T 1.8100, Plg66.0000°, Azm197.0000°; N 0.3700, Plg12.0000°, Azm317.0000°; P -2.1800, Plg20.0000°, Azm51.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.

IDC 13 05:44:53.2±1.1, 43°.50N×13°.94E, h0km, mb3.5/5, mb1 3.6/9, mb1mx3.5/44, mbtmp3.5/9, ML3.7/4, MS3.1/12, Ms1 3.1/12, ms1mx2.9/39 Error ellipse: s-maj=19.7km s-min=13.9km az=70.0

ROM 13 05:44:54.6±0.2, 43°.515N±0°.006×13°.73E±0°.01, h8km, ML3.9/59, Mw3.8, Error ellipse: s-maj=1.0km s-min=0.3km az=240.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.38; $M_{\theta\theta}$-1.39; $M_{\phi\phi}$2.77; $M_{r\theta}$-2.90; $M_{\theta\phi}$4.64; $M_{\phi r}$-0.94; Fault plane solution: $M_0$5.97948×10^{14} NP1:ϕ_s169.00000°, δ57.00000°, λ-172.00000°. NP2: ϕ_s74.00000°, δ83.00000°, λ-33.00000°.

LDG 13 05:44:54.9±0.1, 43°.54N×13°.81E, h6km, Ml3.3/29 Error ellipse: s-maj=2.7km s-min=1.6km az=4.0

ISCJB 13 05:44:55.6±0.2, 43°.48N±0°.01×13°.66E±0°.02, h27km±2km, mb3.6/6, MS3.3/5, Error ellipse: s-maj=2.5km s-min=2.2km az=23.4

PRU 13 05:44:56.4±0.0, 43°.61N×13°.75E, h0km

ISC 13 05:44:54.7±0.8, 43°.49N±0°.02×13°.67E±0°.02, h15km±5km, n227, σ1°97/246, mb3.6/6, MS3.4/5, 10C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOI	Ancona	0.08	322	eP	Pg	05 44 57.1	-0.6
AOI				S	Sg	05 44 59.4	-0.4
AOI				AML	AML		
	comp=E,67150μm,0.3s						
AOI				AML	AML		
	comp=N,87250μm,0.5s						
PCRO	Pietralacroce	0.16	321	P	Pg	05 44 58.7	0.0
PCRO				S	Sg	05 45 02.1	+0.8
PCRO				AML	AML		
	comp=E,47600μm,0.7s						
PCRO				AML	AML		
	comp=N,53950μm,0.6s						
PCRO				AML	AML		
	comp=E,47600μm,0.7s						
PCRO				AML	AML		
	comp=N,53950μm,0.6s						
PCRO				AML	AML		
	comp=E,47600μm,0.7s						
PCRO				AML	AML		
	comp=N,53950μm,0.6s						
PCRO				AML	AML		
	comp=E,47600μm,0.7s						
PCRO				AML	AML		
	comp=N,53950μm,0.6s						
CIMA	Civitanova Mar	0.18	180	P	Pb	05 45 00.2	+0.5
CIMA				S	Sb	05 45 05.4	+2.3
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CADA	Capodarco di F	0.30	167	eP	Pb	05 45 02.1	+0.3
CADA				S	Sb	05 45 07.7	+1.1
CADA				AML	AML		
	comp=E,68150μm,0.6s						
CADA				AML	AML		
	comp=N,58000μm,0.4s						
CADA				AML	AML		
	comp=E,68150μm,0.6s						
CADA				AML	AML		
	comp=N,58000μm,0.4s						
CADA				AML	AML		
	comp=E,68150μm,0.6s						
CADA				AML	AML		
	comp=N,58000μm,0.4s						
CADA				AML	AML		
	comp=E,68150μm,0.6s						
CADA				AML	AML		
	comp=N,58000μm,0.4s						
CING	Cingoli	0.36	252	eP	Pg	05 45 03.0	+0.9
CING				S	Sb	05 45 09.8	+1.4
MNTP	Montappone	0.38	203	P	Pb	05 45 04.1	+1.0
MNTP				AML	AML		
	comp=E,18400μm,0.4s						
MNTP				AML	AML		
	comp=N,15350μm,1.0s						
MNTP				AML	AML		
	comp=E,18400μm,0.4s						
MNTP				AML	AML		
	comp=N,15350μm,1.0s						
MNTP				AML	AML		
	comp=E,18400μm,0.4s						
MNTP				AML	AML		
	comp=N,15350μm,1.0s						
MNTP				AML	AML		
	comp=E,18400μm,0.4s						
MNTP				AML	AML		
	comp=N,15350μm,1.0s						
SENI	Senigallia	0.38	305	P	Pb	05 45 03.7	+0.4
SENI				S	Sb	05 45 11.0	+2.0
EL6	Elcito	0.44	249	eP	Pg	05 45 04.5	+0.9
EL6				S	Sb	05 45 13.2	+2.4
GAG1	Gagliole	0.50	241	P	Pb	05 45 06.1	+0.8
COR1	Corinaldo	0.51	287	eP	Pb	05 45 06.1	+0.7
ARVD	Arcevia	0.53	271	eP	Pg	05 45 05.7	+0.5
ARVD				S	Sb	05 45 14.8	+1.6
SNTG	Esanatoglia	0.58	247	eP	Pg	05 45 06.7	+0.6
FDMO	Fiordimonte	0.62	224	eP	Pg	05 45 07.5	+0.7
FDMO				S	Sn	05 45 18.9	+0.2
SSFR	Montelago di S	0.65	266	eP	Pg	05 45 07.8	+0.5
MPAG	Monte Paganucc	0.68	282	eP	Pg	05 45 08.1	+0.2
FSSB	Fossombrone	0.68	288	P	Pg	05 45 08.4	+0.4
FSSB				S	Sn	05 45 20.5	+0.3
FRON	Frontone	0.69	273	eP	Pg	05 45 08.4	+0.3
FOSV	Fossato di Vic	0.69	254	eP	Pg	05 45 08.6	+0.4
FOSV				AML	AML		
	comp=E,2635μm,0.6s						
FOSV				AML	AML		
	comp=N,2595μm,0.3s						
FOSV				AML	AML		
	comp=E,2635μm,0.6s						
FOSV				AML	AML		
	comp=N,2595μm,0.3s						
FOSV				AML	AML		
	comp=E,2630μm,0.6s						
FOSV				AML	AML		
	comp=N,2595μm,0.3s						
FOSV				AML	AML		
	comp=E,2630μm,0.6s						
FOSV				AML	AML		
	comp=N,2595μm,0.3s						
CESI	CESI - Serrava	0.74	229	eP	Pg	05 45 09.7	+0.6
PESA	Pesaro	0.75	307	P	Pb	05 45 09.0	-0.6
NRCA	Norcia	0.77	212	eP	Pb	05 45 10.0	+0.2
NARO	Abbazia di Nar	0.80	279	eP	Pb	05 45 10.3	0.0
ATFO	Monte Foce - G	0.81	262	eP	Pb	05 45 10.9	+0.3
ATCC	AVT- Casa Cast	0.81	248	eP	Pb	05 45 11.0	+0.5
PIEI	Pieia	0.83	274	eP	Pb	05 45 10.8	0.0
ASSB	Assisi San Ben	0.86	239	eP	Pb	05 45 11.7	+0.3
MURB	Monte Urbino	0.86	255	eP	Pb	05 45 11.8	+0.3
TERO	Teramo	0.86	183	eP	Pb	05 45 11.4	-0.1
TERO				AML	AML		
	comp=E,7105μm,0.5s						
TERO				AML	AML		
	comp=N,4945μm,0.8s						
TERO				AML	AML		
	comp=E,3020μm,0.5s						
TERO				AML	AML		
	comp=N,2070μm,0.7s						
TERO				AML	AML		
	comp=E,7105μm,0.5s						
TERO				AML	AML		
	comp=N,4950μm,0.8s						
TERO				AML	AML		
	comp=E,3020μm,0.5s						
TERO				AML	AML		
	comp=N,2070μm,0.7s						
TERO				AML	AML		
	comp=N,4950μm,0.8s						
TERO				AML	AML		
	comp=N,2070μm,0.7s						
TERO				AML	AML		
	comp=E,3020μm,0.5s						
TERO				AML	AML		
	comp=E,7105μm,0.5s						
PE3	Peglio	0.88	284	P	Pn	05 45 12.8	+0.3
SMA1	SAN MARTINO	0.89	196	P	Pb	05 45 11.9	0.0
SMA1				AML	AML		
	comp=E,8625μm,0.9s						
SMA1				AML	AML		
	comp=N,15000μm,1.0s						
SMA1				AML	AML		
	comp=E,8625μm,0.9s						
SMA1				AML	AML		
	comp=N,15000μm,1.0s						
SMA1				AML	AML		
	comp=E,8625μm,0.9s						
SMA1				AML	AML		
	comp=N,15000μm,1.0s						
ATPI	Pietralunga -	0.92	268	eP	Pb	05 45 12.8	+0.3
ATVO	AVT- Monte Val	0.93	264	eP	Pb	05 45 12.8	+0.3
CAMP	Campotosto	0.97	191	eP	Pb	05 45 13.1	-0.2
LNSS	Leonessa	1.00	208	P	Pb	05 45 13.9	+0.2
LNSS				AML	AML		
	comp=E,8750μm,0.7s						
LNSS				AML	AML		
	comp=N,6360μm,1.2s						
LNSS				AML	AML		
	comp=E,8750μm,0.7s						
LNSS				AML	AML		
	comp=N,6360μm,1.2s						
ATTE	AVT- Monte Tez	1.00	254	P	Pn	05 45 14.8	+0.5
CPGN	Carpegna, Ital	1.03	288	P	Pg	05 45 15.8	+1.2
ATMI	Monte Miggiano	1.03	262	P	Pn	05 45 15.3	+0.6
BADI	Badiali	1.04	272	P	Pn	05 45 15.4	+0.6
PARC	Parchiule	1.05	279	P	Pb	05 45 15.3	+0.6
MOMA	Monte Martano	1.05	230	eP	Pb	05 45 15.2	+0.4
ARRO	Arrone	1.12	216	eP	Pn	05 45 16.2	+0.2
AQU	L'Aquila	1.15	190	ePn	Pn	05 45 16.5	+0.2
AQU	L'Aquila	1.15	190	P	Pb	05 45 16.8	+0.4
AQU				AML	AML		
	comp=E,7960μm,1.2s						
AQU				AML	AML		
	comp=N,7050μm,1.2s						
AQU				AML	AML		
	comp=E,7940μm,1.3s						
AQU				AML	AML		
	comp=N,7140μm,1.2s						
AQU				AML	AML		
	comp=N,7140μm,1.2s						
AQU				AML	AML		
	comp=N,7050μm,1.2s						
AQU				AML	AML		
	comp=E,7940μm,1.3s						
AQU				AML	AML		
	comp=E,7960μm,1.2s						
CESX	Cesi	1.19	223	eP	Pn	05 45 17.1	+0.3
FAGN	Fagnano	1.22	183	P	Pg	05 45 19.5	+1.3
FAGN				AML	AML		
	comp=E,17000μm,0.5s						
FAGN				AML	AML		
	comp=N,9705μm,0.7s						
FAGN				AML	AML		
	comp=E,17000μm,0.5s						
FAGN				AML	AML		
	comp=N,9705μm,0.7s						
CAFI	Castiglion Fio	1.25	263	P	Pb	05 45 19.1	+1.1
MGAB	Montegabbione	1.27	244	eP	Pb	05 45 19.5	+1.1
FIAM	Fiamignano	1.28	199	eP	Pn	05 45 18.5	+0.3
FIAM				AML	AML		
	comp=E,586μm,0.4s						
FIAM				AML	AML		
	comp=N,1120μm,1.2s						
NVLJ	Novalja	1.38	38	ePn	Pn	05 45 19.3	-0.1

NVLJ			Sn	Sb	05 45 37.7 0.0
SFI	**Santa Sofia**	**1.39 288**	P	**Pg**	**05 45 22.2 +0.8**
ASQU	**Asqua**	**1.40 283**	P	**Pg**	**05 45 22.5 +0.9**
SACS	**San Casciano d**	**1.44 244**	P	**Pg**	**05 45 22.8 +0.5**
INTR	**Introdacqua**	**1.48 173**	*e*P	**Pb**	**05 45 22.1 0.0**
INTR	comp=E,5370μm,0.9s		AML	AML	
INTR	comp=N,9300μm,0.7s		AML	AML	
INTR	comp=E,5370μm,0.9s		AML	AML	
INTR	comp=N,9300μm,0.7s		AML	AML	
INTR	comp=E,5370μm,0.9s		AML	AML	
INTR	comp=N,9300μm,0.7s		AML	AML	
LPEL	**Lama dei Peligni**	**1.49 165**	P	**Pg**	**05 45 23.5 +0.1**
LPEL	comp=E,4135μm,0.8s		AML	AML	
LPEL	comp=N,4140μm,0.7s		AML	AML	
LPEL	comp=E,4135μm,0.8s		AML	AML	
LPEL	comp=N,4140μm,0.7s		AML	AML	
RUFI	**Rufina**	**1.61 283**	P	**Pg**	**05 45 25.6 0.0**
CERT	**Cerreto**	**1.62 198**	P	**Pb**	**05 45 24.8 +0.4**
CERT	comp=E,2420μm,1.1s		AML	AML	
CERT	comp=N,2580μm,1.2s		AML	AML	
CERT	comp=N,2580μm,1.2s		AML	AML	
CERT	comp=E,2420μm,1.1s		AML	AML	
BRIS	**BRISIGHELLA**	**1.70 294**	*e*P	**Pn**	**05 45 25.0 +1.2**
GUAR	**Guarcino**	**1.71 189**	P	**Pb**	**05 45 25.9 0.0**
GUAR	comp=E,1435μm,1.0s		AML	AML	
GUAR	comp=N,1900μm,1.2s		AML	AML	
GUAR	comp=N,1900μm,1.2s		AML	AML	
GUAR	comp=E,1435μm,1.0s		AML	AML	
POFI	**Posta Fibreno**	**1.77 179**	*e*P	**Pb**	**05 45 27.0 +0.1**
POFI	comp=E,1144μm,0.7s		AML	AML	
POFI	comp=N,1627μm,0.8s		AML	AML	
POFI	comp=E,1215μm,0.9s		AML	AML	
POFI	comp=N,1390μm,0.8s		AML	AML	
POFI	comp=E,1755μm,1.1s		AML	AML	
POFI	comp=N,1745μm,1.0s		AML	AML	
POFI	comp=E,1755μm,1.1s		AML	AML	
POFI	comp=N,1745μm,1.0s		AML	AML	
RNI2	**Rionero Sannitio**	**1.82 169**	AML	AML	
RNI2	comp=E,2705μm,0.6s		AML	AML	
RNI2	comp=N,2565μm,1.6s		AML	AML	
RNI2	comp=E,2770μm,0.6s		AML	AML	
RNI2	comp=N,2665μm,1.6s		AML	AML	
RNI2	comp=E,2770μm,0.6s		AML	AML	
RNI2	comp=E,2705μm,0.6s		AML	AML	
RNI2	comp=N,2665μm,1.6s		AML	AML	
RNI2	comp=N,2565μm,1.6s		AML	AML	
RMP	**Rome, Mte Porzio**	**1.82 203**	AML	AML	
RMP	comp=N,1360μm,1.5s		AML	AML	
RMP	comp=E,1200μm,0.9s		AML	AML	
RMP	comp=E,1935μm,1.1s		AML	AML	
RMP	comp=N,2050μm,1.6s		AML	AML	
RMP	comp=N,2050μm,1.6s		AML	AML	
RMP	comp=E,1935μm,1.1s		AML	AML	
UDBI	**Udbina**	**1.84 55**	*e*Pn	**Pb**	**05 45 26.9 -1.1**
UDBI			Sn	**Sb**	**05 45 51.4 +0.6**
TRIV	**Trivento**	**1.84 159**	AML	AML	
TRIV	comp=N,2135μm,0.6s		AML	AML	
TRIV	comp=E,1915μm,0.7s		AML	AML	
TRIV	comp=N,2135μm,0.6s		AML	AML	
TRIV	comp=E,1915μm,0.7s		AML	AML	
TOLF	**Tolfa**	**1.88 221**	AML	AML	
TOLF	comp=N,646μm,1.0s		AML	AML	
TOLF	comp=E,730μm,1.1s		AML	AML	
TOLF	comp=E,730μm,1.1s		AML	AML	
TOLF	comp=N,646μm,1.0s		AML	AML	
MIDA	**Miranda**	**1.89 167**	P	**Pb**	**05 45 28.3 -0.7**
MIDA	comp=E,2185μm,1.1s		AML	AML	
MIDA	comp=N,1770μm,0.7s		AML	AML	
MIDA	comp=N,1770μm,0.7s		AML	AML	
MIDA	comp=E,2185μm,1.1s		AML	AML	
CERA	**Filignano**	**1.91 172**	*e*P	**Pn**	**05 45 26.7 -0.1**
CERA	comp=E,3070μm,0.9s		AML	AML	
CERA	comp=N,2875μm,0.7s		AML	AML	
CERA	comp=E,3120μm,0.9s		AML	AML	
CERA	comp=N,2985μm,0.7s		AML	AML	
CERA	comp=N,2985μm,0.7s		AML	AML	
CERA	comp=N,2875μm,0.7s		AML	AML	
CERA	comp=E,3120μm,0.9s		AML	AML	
CERA	comp=E,3070μm,0.9s		AML	AML	
RIY	**Rijeka**	**1.93 17**	*e*Pn	**Pn**	**05 45 27.2 +0.2**
CIGN	**Sant'Elia a Pi**	**2.05 153**	AML	AML	
CIGN	comp=E,2300μm,0.9s		AML	AML	
CIGN	comp=N,2555μm,0.7s		AML	AML	
CIGN	comp=N,2555μm,0.7s		AML	AML	
CIGN	comp=E,2300μm,0.9s		AML	AML	
BSSO	**Busso**	**2.06 160**	AML	AML	
BSSO	comp=N,806μm,1.4s		AML	AML	
BSSO	comp=E,793μm,0.9s		AML	AML	
BSSO	comp=N,806μm,1.4s		AML	AML	
BSSO	comp=E,793μm,0.9s		AML	AML	
MELA	**Melanico ??? S**	**2.08 148**	P	**Pn**	**05 45 29.9 +0.9**
MELA	comp=E,5110μm,1.0s		AML	AML	
MELA	comp=N,4090μm,0.7s		AML	AML	
MELA	comp=E,5255μm,1.0s		AML	AML	
MELA	comp=N,4245μm,0.7s		AML	AML	
MELA	comp=E,5255μm,1.0s		AML	AML	
MELA	comp=E,5110μm,1.0s		AML	AML	
MELA	comp=N,4090μm,0.7s		AML	AML	
MELA	comp=N,4245μm,0.7s		AML	AML	
GATE	**Gambatesa**	**2.18 155**	AML	AML	
GATE	comp=N,1740μm,1.0s		AML	AML	
GATE	comp=E,1990μm,1.1s		AML	AML	
GATE	comp=N,1740μm,1.0s		AML	AML	
GATE	comp=E,1112μm,1.1s		AML	AML	
GATE	comp=N,1750μm,1.0s		AML	AML	
GATE	comp=E,1112μm,1.1s		AML	AML	
GATE	comp=N,1750μm,1.0s		AML	AML	
GATE	comp=E,1990μm,1.1s		AML	AML	
SGRT	**San Giovanni R**	**2.31 138**	P	**Pn**	**05 45 32.8 +0.4**
SGRT	comp=E,1995μm,0.6s		AML	AML	
SGRT	comp=N,1815μm,0.6s		AML	AML	
SGRT	comp=E,1995μm,0.6s		AML	AML	
SGRT	comp=N,1815μm,0.6s		AML	AML	
BOJS	**Bojanci**	**2.31 29**	P	**Pn**	**05 45 33.8 +1.5**
BOJS	comp=E,768μm,0.4s		AML	AML	
BOJS	comp=N,513μm,0.7s		AML	AML	
BOJS	comp=E,768μm,0.4s		AML	AML	
BOJS	comp=N,513μm,0.7s		AML	AML	
CEY	**Cerknica**	**2.32 13**	*e*Pn	**Pn**	**05 45 33.1 +0.7**
MAIM	**Mastiano**	**2.34 282**	*e*P	**Pb**	**05 45 35.2 -1.4**
MAIM	comp=E,169μm,1.0s		AML	AML	
MAIM	comp=N,178μm,1.4s		AML	AML	
MAIM	comp=E,169μm,1.0s		AML	AML	
MAIM	comp=N,178μm,1.4s		AML	AML	
MSAG	**Monte S. Angelo**	**2.43 136**	*e*P	**Pn**	**05 45 34.2 +0.3**
MSAG	comp=E,1885μm,1.6s		AML	AML	
MSAG	comp=N,3290μm,0.5s		AML	AML	
MSAG	comp=E,2070μm,1.5s		AML	AML	
MSAG	comp=N,3420μm,0.5s		AML	AML	
MSAG	comp=E,1885μm,1.6s		AML	AML	
MSAG	comp=N,3420μm,0.5s		AML	AML	
MSAG	comp=N,3290μm,0.5s		AML	AML	
MSAG	comp=E,2070μm,1.5s		AML	AML	
OZLJ	**Ozalj**	**2.49 31**	*e*Pn	**Pn**	**05 45 36.4 +1.7**
SABO	**M.te Sabotino**	**2.49 359**	*e*P	**Pn**	**05 45 35.4 +0.6**
SABO	comp=E,902μm,1.2s		AML	AML	
SABO	comp=N,1340μm,0.6s		AML	AML	
SABO	comp=N,1340μm,0.6s		AML	AML	
SABO	comp=E,902μm,1.2s		AML	AML	
LJU	**Ljubljana**	**2.63 13**	*e*Pn	**Pn**	**05 45 37.9 +1.3**
LJU	**Ljubljana**	**2.63 13**	P	**Pn**	**05 45 38.0 +1.3**
LJU	comp=E,1700μm,1.5s		AML	AML	
LJU	comp=N,1615μm,0.8s		AML	AML	
LJU	comp=E,1700μm,1.5s		AML	AML	
LJU	comp=N,1615μm,0.8s		AML	AML	
MGRS	**Mrkonjic Grad**	**2.64 68**	*e*Pn	**Pn**	**05 45 38.5 +1.7**
CRES	**Cresnjev**	**2.66 28**	*e*Pn	**Pn**	**05 45 37.6 +0.5**
POLC	**Polcenigo**	**2.67 342**	P	**Pn**	**05 45 39.0 +1.8**
POLC	comp=E,780μm,1.2s		AML	AML	
POLC	comp=N,995μm,0.5s		AML	AML	
POLC	comp=N,995μm,0.5s		AML	AML	
POLC	comp=E,780μm,1.2s		AML	AML	
CGRP	**Cima Grappa**	**2.74 332**	P	**Pn**	**05 45 39.6 +1.3**
CGRP	comp=E,724μm,1.2s		AML	AML	
CGRP	comp=N,588μm,0.6s		AML	AML	
CGRP	comp=N,588μm,0.6s		AML	AML	
CGRP	comp=E,724μm,1.2s		AML	AML	
MRAK	**Mrakovica**	**2.78 56**	*e*Pn	**Pb**	**05 45 44.1 0.0**
BLY	**Banja Luka**	**2.83 62**	‖ *i*P	**Pb**	**05 45 42.1 -2.8**
BLY	**Banja Luka**	**2.83 62**	*e*Pn	**Pn**	**05 45 41.7 +2.3**
ROVR	**Rover Verones**	**2.85 320**	P	**Pn**	**05 45 40.6 +0.9**
STAL	**STALIGIAL**	**2.85 347**	*e*P	**Pn**	**05 45 40.5 +0.7**
STAL	comp=E,608μm,1.3s		AML	AML	
STAL	comp=N,574μm,1.3s		AML	AML	
STAL	comp=E,678μm,1.5s		AML	AML	
STAL	comp=N,538μm,1.3s		AML	AML	
STAL	comp=E,608μm,1.3s		AML	AML	
STAL	comp=N,538μm,1.3s		AML	AML	
STAL	comp=E,678μm,1.5s		AML	AML	
STAL	comp=N,574μm,1.3s		AML	AML	
MCRV	**Calabrutti - M**	**2.92 157**	AML	AML	
MCRV	comp=E,809μm,0.7s		AML	AML	
MCRV	comp=N,587μm,1.4s		AML	AML	
MCRV	comp=N,587μm,1.4s		AML	AML	
MCRV	comp=E,809μm,0.7s		AML	AML	
PTCC	**Patocco-Chiusa**	**2.93 356**	P	**Pn**	**05 45 41.7 +0.9**
PTCC	comp=E,432μm,1.2s		AML	AML	
PTCC	comp=N,331μm,1.1s		AML	AML	
PTCC	comp=N,331μm,1.1s		AML	AML	
PTCC	comp=E,432μm,1.2s		AML	AML	
CTI	**Castel Tesino**	**2.94 331**	P	**Pn**	**05 45 42.3 +1.3**
CTI	comp=E,404μm,0.6s		AML	AML	
CTI	comp=N,426μm,0.8s		AML	AML	
CTI	comp=N,426μm,0.8s		AML	AML	
CTI	comp=E,404μm,0.6s		AML	AML	
STON	**Ston**	**3.01 100**	*e*Pn	**Pn**	**05 45 42.9 +1.0**
STON			Sn	**Sn**	**05 46 18.1 +0.4**
STON	**Ston**	**3.01 100**	*e*Pn	**Pn**	**05 45 42.6 +0.7**
STON	**Ston**	**3.01 100**	AML	AML	
STON	comp=N,688μm,0.5s		AML	AML	
STON	comp=E,511μm,0.4s		AML	AML	
STON	comp=N,688μm,0.5s		AML	AML	
STON	comp=E,511μm,0.4s		AML	AML	
ACOM	**Acomizza, Ital**	**3.06 358**	*e*P	**Pn**	**05 45 44.3 +1.6**
ACOM	comp=E,1006μm,1.0s		AML	AML	
ACOM	comp=N,773μm,0.7s		AML	AML	
ACOM	comp=E,1006μm,1.0s		AML	AML	
OBKA	**Obir**	**3.09 11**	*e*Pn	**Pn**	**05 45 44.5 +1.5**
OBKA	comp=N,773μm,0.7s		Sg	**Sg**	**05 46 35.0 +1.2**
MSSA	**Maissana**	**3.11 287**	*e*P	**Pn**	**05 45 45.9 +2.5**
MYKA	**Terra Mystica**	**3.14 360**	*e*Pn	**Pn**	**05 45 45.7 +2.0**
MYKA	comp=N,6.2nm,0.2s,SNR=8.1		*e*Sn	**Sb**	**05 46 29.4 +0.9**
MAGA	**Magasa**	**3.15 318**	P	**Pn**	**05 45 45.2 +1.3**
MAGA	comp=N,221nm,0.7s		AML	AML	
MAGA	comp=E,908μm,0.5s		AML	AML	
MAGA	comp=N,575μm,1.1s		AML	AML	
MAGA	comp=E,908μm,0.5s		AML	AML	
MAGA	comp=N,575μm,1.1s		AML	AML	
BOB	**Bobbio (Coli)**	**3.30 294**	AML	AML	
BOB	comp=E,269μm,1.2s		AML	AML	
BOB	comp=N,233μm,1.0s		AML	AML	
BOB	comp=E,269μm,1.2s		AML	AML	
BOB	comp=N,233μm,1.0s		AML	AML	
SOKA	**Soboth**	**3.33 16**	*e*Pn	**Pn**	**05 45 48.4 +2.0**
SOKA	comp=N,0.1nm,0.1s		Sg	**Sg**	**05 46 41.5 -0.3**
ABTA	**Abfaltersbach**	**3.36 346**	*e*Pn	**Pn**	**05 45 48.5 +1.7**
ABTA	comp=N,26nm,0.4s,SNR=30		*e*Sn	**Sb**	**05 46 31.0 -3.8**
AMUR	**Altamura**	**3.38 139**	P	**Pn**	**05 45 47.1 +0.2**
AMUR	comp=N,91nm,0.7s		AML	AML	
AMUR	comp=E,563μm,0.9s		AML	AML	
AMUR	comp=N,418μm,0.8s		AML	AML	
AMUR	comp=N,418μm,0.8s		AML	AML	
AMUR	comp=E,563μm,0.9s		AML	AML	
KOSI	**Kohlern**	**3.39 332**	*e*P	**Pn**	**05 45 48.8 +1.5**
KOSI	comp=E,794μm,1.1s		AML	AML	
KOSI	comp=N,560μm,1.1s		AML	AML	
KOSI	comp=E,794μm,1.1s		AML	AML	
KOSI	comp=N,560μm,1.1s		AML	AML	
MABI	**Malga Bissina**	**3.41 320**	*e*P	**Pn**	**05 45 49.1 +1.6**
MABI	comp=E,112μm,1.6s		AML	AML	
MABI	comp=N,122μm,1.2s		AML	AML	
MABI	comp=E,112μm,1.6s		AML	AML	
MABI	comp=N,122μm,1.2s		AML	AML	
DOB	**Doboj**	**3.43 67**	*e*Pn	**Pb**	**05 45 55.1 0.0**
APPI	**Appiano**	**3.46 331**	*e*P	**Pn**	**05 45 49.4 +1.3**
APPI	comp=E,380μm,0.6s		AML	AML	
APPI	comp=N,298μm,0.7s		AML	AML	
APPI	comp=N,298μm,0.7s		AML	AML	
APPI	comp=E,380μm,0.6s		AML	AML	
TREB	**Trebinje**	**3.51 101**	*e*Pn	**Pn**	**05 45 49.6 +0.8**
PGF	**Pioggiola**	**3.55 256**	*e*Pn	**Pn**	**05 45 50.7 +1.3**
PGF	SNR=1.0		*e*Sn	**Sn**	**05 46 32.4 +1.2**
MTSN	**Montesano sull**	**3.57 154**	AML	AML	
MTSN	comp=E,2.7nm,0.3s		AML	AML	
MTSN	comp=E,263μm,0.7s		AML	AML	
MTSN	comp=N,244μm,1.2s		AML	AML	
MTSN	comp=N,244μm,1.2s		AML	AML	
MTSN	comp=E,263μm,0.7s		AML	AML	
KBA	**Koelnbreinsper**	**3.60 356**	Pn	**Pn**	**05 45 51.8 +1.6**
KBA	comp=E,9.0nm,0.2s,SNR=15		*e*Sn	**Sn**	**05 46 34.3 +1.9**
BRY	**Bratogost**	**3.61 98**	*e*Pn	**Pn**	**05 45 50.3 +0.1**
MATE	**Matera**	**3.63 140**	‖ *i*P	**Pg**	**05 46 04.0 -0.1**
RISI	**Rein**	**3.64 343**	AML	AML	
RISI	comp=N,498μm,1.4s		AML	AML	
RISI	comp=E,620μm,0.6s		AML	AML	
RISI	comp=N,498μm,1.4s		AML	AML	
RISI	comp=E,620μm,0.6s		AML	AML	
ABSI	**Aberstueckl**	**3.64 334**	AML	AML	
ABSI	comp=E,528μm,0.6s		AML	AML	
ABSI	comp=E,528μm,0.6s		AML	AML	
ABSI	comp=N,660μm,0.7s		AML	AML	
ABSI	comp=N,660μm,0.7s		AML	AML	
HCY	**Herceg Novi**	**3.69 105**	*e*Pn	**Pn**	**05 45 51.8 +0.6**
NOCI	**Noci**	**3.69 136**	AML	AML	
NOCI	comp=N,485μm,1.1s		AML	AML	
NOCI	comp=E,366μm,1.3s		AML	AML	
NOCI	comp=N,485μm,1.1s		AML	AML	
NOCI	comp=E,366μm,1.3s		AML	AML	
BEHE	**Becsehely**	**3.71 35**	*e*Pn	**Pb**	**05 46 01.9 +2.0**
ROSI	**Rosskopf**	**3.79 336**	*e*P	**Pn**	**05 45 54.5 +1.7**
ROSI	comp=E,422μm,0.7s		AML	AML	
ROSI	comp=N,570μm,0.7s		AML	AML	
ROSI	comp=E,422μm,0.7s		AML	AML	
ROSI	comp=N,570μm,0.7s		AML	AML	
BRMO	**Bormio**	**3.79 323**	*e*P	**Pn**	**05 45 54.9 +2.1**
BRMO	comp=E,105μm,1.6s		AML	AML	
BRMO	comp=N,146μm,0.8s		AML	AML	
BRMO	comp=N,146μm,0.8s		AML	AML	
BRMO	comp=E,105μm,1.6s		AML	AML	
MOSI	**Grossmontoni**	**3.83 326**	AML	AML	
MOSI	comp=E,651μm,1.1s		AML	AML	
MOSI	comp=N,778μm,0.8s		AML	AML	
MOSI	comp=N,778μm,0.8s		AML	AML	
MOSI	comp=E,651μm,1.1s		AML	AML	
HAPS	**Han Pijesak,Bl**	**3.87 79**	*e*Pn	**Pn**	**05 45 54.8 +1.0**
FUORN	**Ofenpass-Fuorn**	**3.95 324**	*e*P	**Pn**	**05 45 57.4 +2.4**
FUORN	comp=E,135μm,1.6s		AML	AML	
FUORN	comp=N,172μm,1.6s		AML	AML	
FUORN	comp=N,172μm,1.6s		AML	AML	
FUORN	comp=E,135μm,1.6s		AML	AML	
ARSA	**Arzberg**	**3.98 19**	*i* Pn	**Pn**	**05 45 56.9 +1.6**
ARSA	comp=E,3.3nm,0.3s **Arzberg**	**3.98 19**	AML	AML	
ARSA	comp=E,139μm,1.4s		AML	AML	
ARSA	comp=E,139μm,1.4s		AML	AML	
ARSA	comp=N,134μm,1.2s		AML	AML	
ARSA	comp=N,134μm,1.2s		AML	AML	
WTTA	**Wattenberg**	**4.04 340**	*e*Pn	**Pn**	**05 45 59.1 +2.9**
WTTA	comp=N,6.5nm,0.2s,SNR=8.9		*i* Sn	**Sn**	**05 46 45.9 +2.6**

comp=N,35nm,0.4s
WTTA Wattenberg 4.04 340 P Pn 05 45 58.9 +2.8
WTTA AML AML
comp=E,312μm,1.3s
WTTA AML AML
comp=N,236μm,1.2s
WTTA AML AML
comp=N,236μm,1.2s
WTTA AML AML
comp=E,312μm,1.3s
FETA Feichten 4.10 331 *e*Pn **Pn 05 45 59.5 +2.5**
comp=E,8.1nm,0.3s,SNR=11
FETA *e*Sn **Sn 05 46 47.2 +2.4**
comp=E,21nm,0.6s
MUGIO Muggio 4.10 308 AML AML
comp=E,53μm,1.2s
MUGIO AML AML
comp=N,75μm,1.3s
MUGIO AML AML
comp=N,75μm,1.3s
MUGIO AML AML
comp=E,53μm,1.2s
SQTA Sankt Quirin 4.12 336 Pn **Pn 05 46 00.4 +3.3**
comp=E,36nm,0.4s,SNR=9.3
SQTA *e*Sn **Sn 05 46 48.9 +3.8**
comp=E,45nm,0.4s
WATA Walderalm 4.12 340 *i* Pn **Pn 05 46 00.4 +3.1**
comp=E,12nm,0.2s,SNR=17
BBLS Lazići 4.18 83 *e*Pn **Pn 05 45 59.7 +1.7**
PDG Podgorica 4.23 103 ⇑*iP* **Pn 05 46 00.0 +1.3**
PDG Podgorica 4.23 103 *e*Pn **Pn 05 46 00.0 +1.3**
DAVOX Davos/Dischmat 4.25 322 Pn **Pn 05 46 03.0 +3.9**
comp=E,2.7nm,0.3s,baz=144,slow=14,SNR=11
DAVOX Sn **Sn 05 46 54.7 +6.2**
comp=E,4.0nm,0.3s,baz=341,slow=16,SNR=4.4
DRME Dracevica, Mon 4.26 106 *e*Pn **Pn 05 46 00.2 +1.2**
MOTA Moosalm 4.26 336 *i* Pn **Pn 05 46 02.0 +2.9**
comp=E,7.5nm,0.2s,SNR=10
MOTA *i* Sn **Sn 05 46 52.0 +3.3**
comp=E,16nm,0.3s
MOA Molln 4.38 5 *e*Pn **Pn 05 46 02.8 +2.0**
comp=E,2.8nm,0.1s,SNR=9.9
MOA *i* Sn **Sn 05 46 53.6 +2.0**
comp=E,46nm,0.6s
RETA Reutte 4.49 334 *e*Pn **Pn 05 46 05.8 +3.5**
comp=E,16nm,0.4s
SBF Sospel 4.54 277 *e*Pn **Pn 05 46 04.0 +1.1**
SNR=1.0
SBF *e*Sn **Sn 05 46 55.5 +0.1**
comp=E,7.9nm,0.3s
DIVS Divibare 4.62 80 *e*Pn **Pn 05 46 05.4 +1.3**
FUSIO Fusio 4.63 312 AML AML
comp=E,114μm,1.0s
FUSIO AML AML
comp=N,52μm,1.2s
FUSIO AML AML
comp=N,52μm,1.2s
FUSIO AML AML
comp=E,114μm,1.0s
DAVA Damuels 4.64 326 *i* Pn **Pn 05 46 07.6 +3.2**
comp=E,7.6nm,0.2s
DAVA *e*Sn **Sn 05 47 01.4 +3.3**
comp=E,16nm,0.3s
TRAV Traversella 4.70 298 AML AML
comp=N,48μm,1.3s
TRAV AML AML
comp=E,51μm,1.1s
TRAV AML AML
comp=E,51μm,1.1s
TRAV AML AML
comp=N,48μm,1.3s
CONA Conrad Observa 4.70 18 *e*Pn **Pn 05 46 06.4 +1.3**
comp=N,5.6nm,0.3s
CONA Sn **Sn 05 47 01.1 +1.6**
comp=N,17nm,0.5s
FRGS Fruska Gora 4.71 67 *e*Pn **Pn 05 46 08.4 +3.1**
TIP Timpagrande 4.89 151 ⇑*iP* **Pb 05 46 23.4 +3.3**
FRF La Foret Royal 5.11 273 *e*Pn **Pn 05 46 12.3 +1.6**
SNR=1.0
FRF *e*Sn **Sn 05 47 08.6 -0.8**
comp=N,3.9nm,0.2s
MBDF Montbardon 5.12 286 *e*Pn **Pn 05 46 11.5 +0.5**
SNR=1.0
MBDF *e*Sn **Sn 05 47 09.0 -0.9**
comp=N,9.4nm,0.4s,SNR=1.0
VSL Villasalto 5.13 220 P **Pn 05 46 15.2 +4.3**
LMR La Mourre 5.22 271 *e*Pn **Pn 05 46 13.4 +1.2**
SNR=1.0
LMR *e*Sn **Sn 05 47 11.4 -0.7**
comp=N,2.1nm,0.2s
VLO Vlora 5.29 123 P **Pg 05 46 31.6 -4.3**
LPG La Plagne 5.34 294 *e*Pn **Pn 05 46 14.8 +0.6**
SNR=1.0
LPG *e*Sn **Sn 05 47 14.1 -1.5**
comp=N,7.1nm,0.3s
GERES GERESS Array B 5.36 0 Pn **Pn 05 46 14.6 +0.4**
comp=N,2.7nm,0.3s,baz=174,slow=13,SNR=42
GERES Sn **Sn 05 47 15.8 +0.1**
comp=N,1.9nm,0.3s,baz=176,slow=26,SNR=6.5
GERES LR LR 05 49 00.3
comp=N,100nm,18.6s,baz=180,slow=46
LPL La Plagne 5.36 295 *e*Pn **Pn 05 46 15.0 +0.6**
SNR=1.0
LPL *e*Sn **Sn 05 47 13.7 -2.2**
comp=N,19nm,0.5s
MODS Modra-Piesok 5.50 26 *e*PN **Pn 05 46 18.8 +2.8**
MODS *e*SN **Sn 05 47 14.8 -4.2**
KHC Kasperske Hory 5.65 359 *e*PN **Pn 05 46 18.6 +0.5**
KHC *e*PG **Pg 05 46 39.0 -3.7**
KHC *e*SN **Sn 05 47 22.0 -0.7**
KHC *e*SG Sg 05 48 13.0 +17
KHC AMS AMS 05 48 30.0
comp=N,400nm,9.9s
ORIF Oris-en-Rattie 5.78 287 *e*Pn **Pn 05 46 21.5 +1.5**
SNR=1.0
ORIF *e*Sn **Sn 05 47 25.2 -0.9**
comp=N,7.6nm,0.4s,SNR=1.0
ORIF Oris-en-Rattie 5.78 287 P **Pn 05 46 23.0 +3.0**
OHR Ohrid 5.80 112 *e*Pn **Pn 05 46 20.6 +0.4**
SMRF Simiane la Rot 5.88 278 *e*Pn **Pn 05 46 22.7 +1.3**
SNR=1.0
SMRF *e*Sn **Sn 05 47 27.6 -1.0**
comp=N,3.3nm,0.4s
KRUC Moravsky 5.89 18 *e*PN **Pn 05 46 22.7 +1.3**
KRUS Krusevo 6.00 108 *i* Pn **Pn 05 46 24.4 +1.4**
JAVC Velka Javorina 6.05 26 *e*PN **Pn 05 46 26.1 +2.4**
BZS Buzias 6.07 67 ⇑*iP* **Pn 05 46 24.7 +0.9**
VRAC Vranov 6.16 18 Pn Pn 05 46 32.7 +7.5
comp=N,0.9nm,0.3s,baz=200,slow=15,SNR=2.2
VRAC LR LR 05 49 24.9
comp=N,243nm,18.2s,baz=205,slow=45
VRAC Vranov 6.16 18 ⇑*iP* **Pb 05 46 38.6 -3.1**
VYHS Vyhne 6.17 34 *e*PG **Pb 05 46 45.2 +3.4**
VYHS *e* 05 47 49.6
CABF La Chapelle 6.21 303 *e*Pn **Pn 05 46 26.3 +0.4**
SNR=1.0
CABF *e*Sn **Sn 05 47 32.8 -3.9**
comp=N,3.7nm,0.3s,SNR=1.0
HERR Herculane 6.44 74 ⇑*iP* **Pn 05 46 29.4 +0.4**
HINF Hinteralfeld 6.45 315 *e*Pn **Pn 05 46 29.3 +0.2**
SNR=1.0
HINF *e*Sn **Sn 05 47 38.0 -4.4**
comp=N,14nm,0.3s,SNR=1.0
GOPC GO Pecny, Ondr 6.47 6 AMS AMS 05 49 00.0
comp=N,300nm,9.6s
PRU Pruhonice 6.53 5 AMS AMS 05 49 00.0
comp=N,300nm,13.7s
STIP Stip 6.54 103 *i* Pn **Pn 05 46 33.4 +3.1**
VIVF Saint-Julien-l 6.61 285 *e*Pn **Pn 05 46 31.8 +0.4**
SNR=1.0
VIVF *e*Sn **Sn 05 47 43.9 -2.6**
comp=N,1.6nm,0.3s
CDF Champ du Feu 6.64 320 *e*Pn **Pn 05 46 31.6 -0.2**
SNR=1.0
CDF *e*Sn **Sn 05 47 43.4 -3.9**
comp=N,3.7nm,0.3s,SNR=1.0
NKC Novy Kostel 6.80 353 AMS AMS 05 49 20.0
comp=N,300nm,12.5s
HAU Haudompre 6.83 314 *e*Pn **Pn 05 46 34.6 +0.3**
SNR=1.0
HAU *e*Sn **Sn 05 47 47.8 -4.0**
comp=N,20nm,0.3s,SNR=1.0
MORC Moravsky Berou 6.83 22 ⇓*iP* Pb 05 46 45.2 -7.9
VAY Valandovo 6.94 105 *i* Pn **Pn 05 46 36.3 +0.6**
OKC Ostrava-Krasne 7.06 24 AMS AMS 05 49 50.0
comp=N,300nm,17.1s
VTS Vitosha 7.06 94 ⇑*iP* **Pn 05 46 37.4 -0.3**
VTS Vitosha 7.06 94 *e*P Sn 05 47 48.3 -9.5
PVCC Panska Ves 7.07 5 AMS AMS 05 49 30.0
comp=N,200nm,13.5s
DPC Dobruska-Polom 7.10 14 *e*SN **Sn 05 47 56.2 -2.3**
DPC AMS AMS 05 49 20.0
comp=N,400nm,13.1s
KKB Krupnik 7.12 100 *e*P **Sn 05 48 01.0 +1.9**
LASF Ste Croix 7.13 278 *e*Pn **Pn 05 46 37.2 -1.2**
LASF *e*Sn **Sn 05 47 56.8 -2.4**
comp=N,0.7nm,0.3s
LASF *e*Sg **Sg 05 48 41.4 -1.9**
comp=N,2.5nm,0.5s,SNR=1.0
UPC Upice 7.20 12 AMS AMS 05 49 30.0
comp=N,500nm,9.6s
OSTC Ostas 7.28 13 AMS AMS 05 49 30.0
comp=N,400nm,10.4s
CHVC Chvalec 7.29 12 *e*SG **Sg 05 48 42.7 -5.7**
CHVC AMS AMS 05 49 30.0
comp=N,400nm,8.9s
BRG Berggiesshubel 7.39 1 PN Pn 05 46 50.7 +8.6
BRG SN **Sn 05 48 03.1 -2.5**
BRG SG **Sb 05 48 36.2 +5.7**
comp=N,45nm,1.4s
comp=N,176nm,12.2s
comp=E,181nm,12.9s
comp=Z,296nm,14.1s
LOT Lotru 7.49 71 ⇑*iP* **Pn 05 46 43.5 0.0**
PAGF Fort de Pagny 7.50 315 *e*Sn **Sn 05 48 04.1 -4.1**
comp=Z,6.8nm,0.4s
SMF Signal de Mont 7.64 298 *e*Pn **Pn 05 46 45.7 +0.2**
SNR=1.0
SMF *e*Sn **Sn 05 48 06.8 -5.0**
comp=Z,9.9nm,0.4s
MMB Musomiste 7.67 101 *e*P **Sn 05 48 15.0 +2.5**
PGB Panagyurishte 7.75 93 *e*P **Sn 05 48 13.4 -1.2**
CLL Collm 7.84 357 *e*Sn Sn 05 48 02.0 -15
CLL *e* 05 48 14.0
CLL *e* 05 48 41.0
CLL *e*Sg Sb 05 49 05.0 +22
comp=Z,52nm,1.4s
LOR Lormes 7.87 302 *e*Pn **Pn 05 46 49.0 +0.3**
SNR=1.0
LOR *e*Sn **Sn 05 48 12.9 -4.6**
comp=Z,4.8nm,0.2s,SNR=1.0
AVF Avril sur Loir 8.01 298 *e*Pn **Pn 05 46 50.7 +0.3**
SNR=1.0
AVF *e*Sn **Sn 05 48 16.9 -3.8**
comp=Z,1.6nm,0.4s
SSF Saint Saulge 8.01 300 *e*Pn **Pn 05 46 50.3 -0.2**
SNR=1.0
SSF *e*Sn **Sn 05 48 15.9 -4.9**
comp=Z,2.8nm,0.3s
BGF Bois d'Agland 8.26 296 *e*Pn **Pn 05 46 54.1 +0.2**
SNR=1.0
BGF *e*Sn **Sn 05 48 23.4 -3.5**
comp=Z,6.3nm,0.3s
MTLF Montolieu 8.34 273 *e*Pn **Pn 05 46 55.5 +0.4**
MTLF *e*Sn **Sn 05 48 26.3 -2.7**
comp=Z,1.6nm,0.4s
VOIR 8.37 73 ⇑*iP* **Pn 05 46 55.8 +0.2**
KEST Kesra 8.43 205 Pn Pn 05 47 02.9 +6.5
comp=Z,0.3nm,0.3s,baz=29,slow=19,SNR=6.8
KEST LR LR 05 50 36.2
comp=Z,227nm,18.9s,baz=272,slow=40
CAF Calviac 8.46 284 *e*Pn **Pn 05 46 56.1 -0.6**
CAF *e*Sn **Sn 05 48 28.4 -3.6**
comp=Z,0.6nm,0.2s
PVL Pavlikeni 8.51 88 *e*P **Sn 05 48 35.9 +2.9**
TCF Toulx Ste Croi 8.60 293 *e*Pn **Pn 05 46 59.1 +0.4**
SNR=1.0
TCF *e*Sn **Sn 05 48 31.1 -4.4**
comp=Z,0.8nm,0.2s
HYF Humbligny 8.63 300 *e*Pn **Pn 05 46 58.9 -0.2**
HYF *e*Sn **Sn 05 48 30.9 -5.3**
TESR Tescani 9.68 67 ⇑*iP* **Pn 05 47 15.3 +1.9**
EPF Esparros 9.74 272 *e*Sn **Sn 05 48 58.5 -4.9**
comp=Z,1.4nm,0.2s
IDI Anoyia 11.92 130 LR LR 05 53 07.1
comp=Z,20nm,19.0s,baz=64,slow=42
SGMF Saint Gilles 12.27 298 *e*Pn **Pn 05 47 48.3 -0.5**
QUIF Quistinic 12.57 296 *e*Pn **Pn 05 47 52.6 -0.3**
AKASG Malin Array Be 12.81 50 Pn **Pn 05 47 53.0 -3.1**
comp=Z,1.0nm,0.3s,baz=251,slow=8.4,SNR=4.6
BRTR Keskin Array B 15.40 97 Pn **Pn 05 48 30.1 -1.5**
comp=Z,0.1nm,0.3s,baz=283,slow=13,SNR=2.2
BRTR LR LR 05 54 19.9
comp=Z,48nm,21.7s,baz=290,slow=37
HFS Hagfors 16.67 0 LR LR 05 55 31.2
comp=Z,40nm,19.4s,baz=177,slow=38
NOA NORSAR Array B 17.64 356 LR LR 05 55 46.9
comp=Z,36nm,18.6s,baz=170,slow=37
KBZ Khabaz 21.12 79 P **P 05 49 41.5 +2.7**
comp=Z,1.1nm,0.4s,baz=282,slow=7.2,SNR=4.2
KBZ LR LR 06 01 05.6
comp=Z,40nm,19.3s,baz=320,slow=46
TORD Torodi Ar. Bea 31.94 202 P **P 05 51 20.1 +0.1**
comp=Z,0.9nm,0.9s,baz=2.2,slow=9.9,SNR=3.4
TORD LR LR 06 05 53.5
comp=Z,78nm,18.0s,baz=355,slow=39
GEYT Alibeck 33.84 84 LR LR 06 09 32.4
comp=Z,22nm,18.3s,baz=20,slow=44
BVAR Borovoye Array 38.02 55 P **P 05 52 11.7 -0.4**
comp=Z,0.6nm,0.6s,baz=262,slow=7.0,SNR=5.3
ZALV Zalesovo Beam 46.20 51 LR LR 06 14 39.7
comp=Z,48nm,18.4s,baz=195,slow=39
MKAR Makanchi Array 47.11 61 P **P 05 53 26.5 +0.5**
comp=Z,0.5nm,0.8s,baz=277,slow=5.7,SNR=4.0
SONM Songino Array 61.09 50 P **P 05 55 09.7 +1.6**
comp=Z,0.4nm,0.5s,baz=311,slow=7.5,SNR=3.0
YKA Yellowknife Ar 66.54 337 P **P 05 55 45.0 +1.4**
comp=Z,0.2nm,0.4s,baz=40,slow=6.0,SNR=3.5
PDAR Pinedale Array 80.20 321 LR LR 06 35 27.4
comp=Z,28nm,18.7s,baz=256,slow=38

IDC ***13*** *05:51:25.1±0.6, 33°.15N×139°.81E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/39, mbtmp3.5/7, ML2.2/1, Error ellipse: s-maj=6.4km s-min=4.9km az=172.0*
ISCJB ***13*** *05:51:26.3±0.7, 33°.31N±0°.05×139°.53E±0°.10, h10km, mb3.5/6, Error ellipse: s-maj=13.3km s-min=4.3km az=149.4*
JMA ***13*** *05:51:26.1±0.1, 33°.28N×139°.55E, h30km±3km, M3.0*
ISC 13 05:51:27.2±0.8, 33°.33N±0°.07×139°.6E±0°.1, h10km, n16,
σ1§52/17, mb3.6/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**0.24**	**148**	Pn	**Pb**	**05 51 33.0**	**+0.9**
	453nm,0.3s,baz=350,slow=13,SNR=17						
JHJ				Sn	**Sb**	**05 51 38.3**	**+2.9**
	1μm,0.3s,baz=205,slow=23,SNR=57						
JHJ2	**Mitsune**	**0.27**	**143**	P	**Pb**	**05 51 33.1**	**-0.9**
JHJ2				S	**Sb**	**05 51 38.1**	**-0.5**
JHCJ	**Hachijojimakas**	**0.29**	**151**	P	**Pb**	**05 51 33.2**	**-1.3**
JHCJ				S	**Sb**	**05 51 38.1**	**-1.2**
JMKN	**Mikurajimanish**	**0.57**	**357**	P	**Pg**	**05 51 37.9**	**-0.3**
JMKN				S	**Sb**	**05 51 46.9**	**-0.5**
JKO	**Kozu shima**	**0.95**	**335**	P	**Pg**	**05 51 43.6**	**-1.9**
JIZS	**Izushimoda**	**1.52**	**336**	P	**Pn**	**05 51 52.3**	**-2.2**
MJAR	**Matsushiro Arr**	**3.42**	**340**	Pn	**Pn**	**05 52 22.7**	**+2.2**
	0.2nm,0.3s,baz=156,slow=12,SNR=8.2						
H11N2	**WAKE ISLAND Hy**	**27.80**	**112**	T	T	06 25 57.0	
	baz=305,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**27.81**	**112**	T	T	06 25 54.7	
	baz=305,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**27.82**	**112**	T	T	06 25 56.6	
	baz=305,slow=75,SNR=13						
SONM	**Songino Array**	**28.85**	**310**	P	**P**	**05 57 26.4**	**+0.6**
	0.4nm,0.4s,baz=98,slow=4.4,SNR=3.0						
MKAR	**Makanchi Array**	**44.95**	**305**	P	**P**	**05 59 43.4**	**+1.1**
	0.2nm,0.6s,baz=94,slow=7.7,SNR=2.7						
KURBB	**Kurchatov Arra**	**47.21**	**311**	P	**P**	**06 00 02.1**	**+2.0**
	0.3nm,0.7s,baz=96,slow=6.6,SNR=3.1						
ILAR	**Eielson Array**	**53.41**	**31**	P	**P**	**06 00 46.7**	**-0.1**
	0.7nm,0.8s,baz=279,slow=5.8,SNR=8.8						
INK	**Inuvik**	**58.35**	**26**	P	**P**	**06 01 22.2**	**+0.2**
	0.7nm,0.7s,baz=292,slow=5.4,SNR=4.1						
TXAR	**Lajitas Array**	**93.56**	**51**	P	**P**	**06 04 43.7**	**-0.2**
	0.2nm,0.7s,baz=298,slow=2.7,SNR=3.9						

ISCJB ***13*** *06:05:35.5±0.3, 4°.74S±0°.04×153°.12E±0°.05, h55km, mb4.4/30, MS3.0/5, Error ellipse: s-maj=7.1km s-min=6.1km az=167.3*
NEIC ***13*** *06:05:36.0±1.8, 4°.76S×153°.12E, h48km±3km, mb4.5/14, Error ellipse: s-maj=12.6km s-min=8.1km az=223.0*
IDC ***13*** *06:05:40.0±0.8, 4°.72S×152°.95E, h77km±6km, mb4.1/21, mb1 4.1/24, mb1mx4.1/32, mbtmp4.4/24, MS3.0/8, Ms1 3.1/8, ms1mx2.9/26, Error ellipse: s-maj=14.9km s-min=10.3km az=89.0*
ISC 13 06:05:37.2±0.5, 4°.71S±0°.05×153°.11E±0°.07, h55km, n57,
σ1§21/62, mb4.5/30, MS3.1/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.07**	**299**	*e*Pn	**Pn**	**06 05 55.2**	**-0.8**
RABL				*e*Sn	**Sn**	**06 06 09.8**	**-0.2**
MANU	**Manus Island**	**6.31**	**295**	*e*Pn	**Pn**	**06 07 09.7**	**+2.0**
PMG	**Port Moresby**	**7.52**	**231**	P	**Pn**	**06 07 26.1**	**+1.8**
	6.6nm,0.3s,baz=24,slow=8.6,SNR=8.5						
PMG				S	**Sn**	**06 08 47.2**	**-1.0**
	3.0nm,0.3s,baz=25,slow=17,SNR=3.3						
PMG	**Port Moresby**	**7.52**	**231**	*e*Pn	**Pn**	**06 07 22.8**	**-1.5**
PMG				*e*Sn	**Sn**	**06 08 47.2**	**-1.0**
HNR	**Honiara**	**8.25**	**125**	LR	LR	06 11 14.4	
	comp=Z,120nm,20.6s,baz=344,slow=40						
HNR	**Honiara**	**8.25**	**125**	*e*Pn	**Pn**	**06 07 33.4**	**-0.8**
JAY	**Jayapura**	**12.57**	**280**	P	**Pn**	**06 08 35.3**	**+2.0**
	0.4nm,0.3s,baz=108,slow=19,SNR=2.1						
JAY				LR	LR	06 13 27.9	
	comp=Z,52nm,18.9s,baz=12,slow=38						
CTA	**Charters Tower**	**16.68**	**203**	P	**P**	**06 09 28.3**	**-0.5**
	0.3nm,0.3s,baz=33,slow=17,SNR=3.1						
GUMO	**Guam**	**19.94**	**336**	LR	LR	06 18 38.5	
	comp=Z,22nm,18.5s,baz=109,slow=39						
DZM	**Mont Dzumac**	**21.56**	**144**	P	**P**	**06 10 24.2**	**+2.0**
	20nm,0.6s,baz=323,slow=11,SNR=21						
DZM				LR	LR	06 17 31.3	
	comp=Z,115nm,19.4s,baz=324,slow=33						
DZM	**Mont Dzumac**	**21.56**	**144**	*e*P	**P**	**06 10 22.4**	**+0.2**
	20nm,0.7s						
SIJI	**Sorong**	**22.14**	**279**	P	**P**	**06 10 28.6**	**+0.1**
	18nm,0.6s,baz=76,slow=8.3,SNR=6.0						
SIJI				LR	LR	06 17 53.5	
	comp=Z,83nm,20.6s,baz=92,slow=33						
WRAB	**Tennant Creek**	**23.72**	**229**	*e*P	**P**	**06 10 43.6**	**-0.8**
	20nm,0.8s						
WB2	**Warramunga Arr**	**23.72**	**229**	*e*P	**P**	**06 10 43.2**	**-1.2**
	22nm,0.7s						
WR1	**Warramunga Arr**	**23.73**	**229**	*e*P	**P**	**06 10 43.8**	**-0.7**
WRA	**Warramunga Arr**	**23.73**	**229**	P	**P**	**06 10 43.8**	**-0.7**
	27nm,0.3s,baz=52,slow=9.9,SNR=2.0						
AS31	**Alice Springs**	**26.42**	**223**	*e*P	**P**	**06 11 07.8**	**-1.1**
	2.6nm,0.4s						
ASAR	**Alice Springs**	**26.42**	**223**	P	**P**	**06 11 08.2**	**-0.7**
	2.7nm,0.6s,baz=54,slow=9.2,SNR=24						
ASAR				pP	**sP**	**06 11 27.4**	**-1.4**
	2.6nm,0.8s,baz=35,slow=11,SNR=5.7						
ASAR				PP	**PnPn**	**06 11 54.5**	**+3.3**
	0.9nm,0.5s,baz=50,slow=9.6,SNR=4.5						
STKA	**Stephens Creek**	**29.10**	**200**	P	**P**	**06 11 33.2**	**+0.4**
	1.2nm,0.4s,baz=22,slow=16,SNR=2.2						
FITZ	**Fitzroy Crossi**	**29.97**	**241**	P	**P**	**06 11 39.0**	**-1.6**
	15nm,0.6s,baz=46,slow=7.0,SNR=48						
FITZ	**Fitzroy Crossi**	**29.97**	**241**	*e*P	**P**	**06 11 39.0**	**-1.6**
	13nm,0.8s						
KKM	**Kota Kinabalu**	**38.35**	**286**	*e*P	**P**	**06 12 55.6**	**+2.2**
	125nm,1.1s						
URZ	**Urewera**	**39.91**	**150**	P	**P**	**06 13 07.1**	**+1.2**
	4.0nm,0.6s,baz=307,slow=5.1,SNR=4.6						
RPZ	**Rata Peaks**	**41.95**	**160**	P	**P**	**06 13 23.4**	**+0.8**
	8.3nm,0.6s,baz=228,slow=15,SNR=5.2						
JNU	**Nakatsue**	**43.13**	**332**	P	**P**	**06 13 31.8**	**-0.6**
	8.7nm,0.7s,baz=117,slow=4.0,SNR=9.2						
JNU				LR	LR	06 27 29.7	
	comp=Z,49nm,20.0s,baz=174,slow=30						
JNU	**Nakatsue**	**43.13**	**332**	*e*P	**P**	**06 13 29.7**	**-2.6**
	11nm,0.9s						
MJAR	**Matsushiro Arr**	**43.34**	**342**	P	**P**	**06 13 35.3**	**+1.3**
	0.6nm,0.3s,baz=178,slow=6.9,SNR=2.5						
MJAR				LR	LR	06 31 16.7	
	comp=Z,7.3nm,19.0s,baz=225,slow=36						
MAJO	**Matsushiro**	**43.34**	**342**	*e*P	**P**	**06 13 35.3**	**+1.3**
KSRS	**Korea Array**	**48.06**	**330**	P	**P**	**06 14 10.8**	**-0.3**
	1.9nm,0.7s,baz=149,slow=7.6,SNR=9.8						
KSRS				pP	**sP**	**06 14 30.9**	**-1.5**
	0.5nm,0.3s,baz=151,slow=9.0,SNR=2.0						
KS15	**Wonju Array Si**	**48.07**	**333**	*e*P	**P**	**06 14 10.6**	**-0.7**
	7.2nm,1.1s						
KS15				*e*S	**S**	**06 21 06.7**	**+0.9**
ASAJ	**Asahikawa**	**49.52**	**350**	P	**P**	**06 14 22.5**	**+0.2**
	2.1nm,0.3s,baz=96,slow=27,SNR=2.7						
USRK	**Ussuriysk Ar.**	**52.27**	**341**	P	**P**	**06 14 43.1**	**+0.2**
	2.5nm,0.6s,baz=179,slow=8.8,SNR=4.9						
PETK	**Petropavlovsk-**	**57.74**	**3**	P	**P**	**06 15 22.9**	**+0.6**
	1.7nm,0.5s,baz=208,slow=8.4,SNR=2.9						
PEA1	**Petropavlovsk-**	**57.74**	**3**	*e*P	**P**	**06 15 22.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**58.12**	**295**	P	**P**	**06 15 25.4**	**-0.2**
	1.9nm,0.3s,baz=108,slow=5.6,SNR=8.0						
CMAR				LR	LR	06 38 49.4	
	comp=Z,8.7nm,21.6s,baz=175,slow=34						
SONA0	**Songino Array**	**66.41**	**328**	*e*P	**P**	**06 16 21.1**	**+0.4**
SONM	**Songino Array**	**66.41**	**328**	P	**P**	**06 16 21.1**	**+0.4**
	2.1nm,0.3s,baz=142,slow=4.8,SNR=7.3						
VNDA	**Vanda**	**72.91**	**178**	P	**P**	**06 17 01.1**	**+1.1**
	1.5nm,0.8s,baz=322,slow=7.9,SNR=11						
VNDA				pP	**sP**	**06 17 20.8**	**0.0**
	1.0nm,0.9s,baz=5.2,slow=6.3,SNR=2.8						
VNDA	**Vanda**	**72.91**	**178**	*e*P	**P**	**06 17 01.5**	**+1.5**
SPU	**Mount Spurr**	**78.07**	**24**	*e*P	**P**	**06 17 30.1**	**+0.1**
MK31	**Makanchi Array**	**80.46**	**319**	*e*P	**P**	**06 17 42.9**	**-0.4**
	1.2nm,0.8s						
MK32	**Makanchi Array**	**80.46**	**319**	*e*P	**P**	**06 17 43.0**	**-0.3**
MKAR	**Makanchi Array**	**80.46**	**319**	P	**P**	**06 17 43.0**	**-0.3**
	0.7nm,0.4s,baz=93,slow=8.0,SNR=10						
MAKZ	**Makanchi**	**80.67**	**319**	*e*P	**P**	**06 17 43.7**	**-0.7**
	3.6nm,0.8s						
ZALV	**Zalesovo Beam**	**81.25**	**326**	P	**P**	**06 17 46.5**	**-0.7**
	1.1nm,0.4s,baz=117,slow=7.7,SNR=3.6						
ZAA1	**Zalesovo Array**	**81.25**	**326**	*e*P	**P**	**06 17 46.5**	**-0.7**
ILAR	**Eielson Array**	**81.97**	**22**	P	**P**	**06 17 49.9**	**-0.9**
	0.7nm,0.9s,baz=250,slow=5.0,SNR=5.2						
ILAR				pP	**sP**	**06 18 10.9**	**0.0**
	0.2nm,0.6s,baz=252,slow=5.6,SNR=1.6						
ILB	**Eielson Array**	**81.97**	**22**	*e*P	**P**	**06 17 50.3**	**-0.5**
	4.2nm,1.6s						
KURK	**Kurchatov**	**83.89**	**322**	*e*P	**P**	**06 18 00.2**	**-0.8**
	2.2nm,0.8s						
H02S1	**DAWSON INLET T**	**84.50**	**36**	T	T	07 52 06.7	
	SNR=2692						
GEYT	**Alibeck**	**96.81**	**308**	P	**P**	**06 19 03.2**	**+0.8**
	1.2nm,0.3s,baz=103,slow=1.9,SNR=3.4						
PD31	**Pinedale Array**	**98.57**	**48**	*e*P	**P**	**06 19 09.3**	**-1.2**
	2.5nm,1.6s						
PDAR	**Pinedale Array**	**98.57**	**48**	P	Pdif	06 19 11.5	+1.0
	1.4nm,1.3s,baz=299,slow=2.6,SNR=2.6						
GERES	**GERESS Array B**	**124.14**	**329**	PKP	**PKiKP**	**06 24 31.6**	**+1.4**
	0.3nm,0.4s,baz=34,slow=3.7,SNR=2.5						
TORD	**Torodi Ar. Bea**	**150.57**	**288**	PKPbc	**PKPbc**	**06 25 21.9**	**-2.1**
	2.1nm,0.4s,baz=81,slow=2.5,SNR=30						
TOA1	**Torodi Ar. Sit**	**150.57**	**288**	*e*PKPbc	**PKPbc**	**06 25 21.9**	**-2.1**
BDFB	**Brasilia**	**150.91**	**134**	PKPbc	**PKiKP**	**06 25 25.7**	**+0.2**
	1.1nm,0.6s,baz=348,slow=8.2,SNR=3.2						

NNC 13 06:10:25.3±1.6, 54°.05N×86°.50E, h0km, mb3.7, mpv2.8, 6C-1D, Error ellipse: s-maj=15.0km s-min=9.3km az=21.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.00**	**265**	⇑P	Pg	06 10 44.3	-0.1
	0.3nm,0.3s						
ZAA0				⇑S	Sb	06 10 58.5	-0.6
	4.8nm,0.9s						
KURBB	**Kurchatov Arra**	**5.97**	**238**	⇑Pn	Pn	06 11 55.5	+0.6
	1.5nm,0.3s						
KURBB				⇑Sn	Sn	06 13 05.2	+1.3
	5.8nm,0.9s						
KURBB				⇑Lg	Lg	06 13 34.1	
	14nm,0.8s						
MK31	**Makanchi Array**	**7.75**	**202**	⇑Pn	Pn	06 12 20.6	+1.3
	0.7nm,0.6s,baz=24,slow=14,SNR=6.8						
MK31				⇓Sn	Sn	06 13 48.1	+0.4
	1.3nm,0.7s						
MK31				Lg	Lg	06 14 28.8	
	4.1nm,0.9s,baz=31,slow=30,SNR=6.5						

**IDC 13 06:17:18.8±3.8,

mb1 3.9/4, mb1mx3.4/38, mbtmp3.7/4, ML2.6/2, MS3.4/1, Ms1 3.4/1, ms1mx2.4/21, Error ellipse: s-maj=89.3km s-min=29.2km az=50.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.24**	**276**	Pn	Pn	06 17 56.5	-0.7
	42nm,0.3s,baz=109,slow=23,SNR=8.3						
MJAR	**Matsushiro Arr**	**5.01**	**317**	Pn	Pn	06 18 35.2	-0.1
	0.0nm,0.3s,baz=128,slow=13,SNR=2.9						
TGY	**Tagaytay City**	**27.10**	**231**	LR	LR	06 33 08.1	
	comp=Z,77nm,18.9s,baz=116,slow=35						
WRA	**Warramunga Arr**	**53.14**	**190**	P	P	06 26 37.3	-1.2
	1.3nm,0.5s,baz=11,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**56.86**	**189**	P	P	06 27 06.5	+1.1
	0.4nm,0.4s,baz=17,slow=7.5,SNR=8.1						

MAN 13 06:30:12.8, 12°.24N×124°.88E, h68km, mb3.9, ML2.6, MS2.2, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.34**	**322**	*e*P	Pn	06 30 25.6	+1.5
CNP				*e*S	Sn	06 30 35.7	+3.3
BESP	**Borongan**	**0.84**	**139**	*e*P	Pn	06 30 30.2	+1.0
BESP				*e*S	Sn	06 30 44.0	+2.7
PLP	**Palo**	**1.07**	**175**	⇑*i*P	Pn	06 30 32.9	+0.7
PLP				*i* S	Sn	06 30 48.3	+1.8
PVCP	**Virac**	**1.52**	**332**	*e*P	Pn	06 30 39.2	+1.1
PVCP				*e*S	Sn	06 30 58.8	+1.7

MEX 13 06:36:49.0±0.8, 17°.60N×94°.93W, h144km±11km, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.51**	**175**	*e*P	Pn	06 37 08.5	-1.2
CMIG				*i* S	Sn	06 37 22.6	-2.9
VHO	**Vista Hermosa**	**1.80**	**253**	*e*P	Pn	06 37 20.5	-1.2
VHO				*i* S	Sn	06 37 45.0	-1.7
PCIG		**2.50**	**139**	*e*P	Pn	06 37 30.6	+0.8
PCIG				*i* S	Sn	06 38 01.7	+0.5

DJA 13 07:24:02.4±0.9, 8°S×13°×10°6E±°, h65km±37km, M4.0/8, MLv4.0/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.17**	**9**	P	Pn	07 24 23.6	+0.8
CGJI				S	Sn	07 24 38.5	+0.5
SBJI	**Serang**	**1.75**	**21**	P	Pn	07 24 31.4	+0.7
CBJI	**Citeko**	**1.90**	**45**	P	Pn	07 24 30.8	-1.8
CBJI				S	Sn	07 24 52.1	-3.4
LEM	**Lembang**	**2.30**	**66**	P	Pn	07 24 37.8	-0.4
CISI	**Cisompet, Garu**	**2.31**	**85**	P	Pn	07 24 38.8	+0.6
KASI	**Kota Agung**	**2.44**	**336**	P	Pn	07 24 40.5	+0.5
LWLI	**Liwa**	**3.09**	**332**	P	Pn	07 24 49.5	+0.6
MDSI	**Maura Dua**	**3.52**	**338**	P	Pn	07 24 55.4	+0.7
MNAI	**Manna**	**4.23**	**323**	P	Pn	07 25 03.8	-0.6

*IDC **13** 07:27:08.2±1.1, 35°.25N×26°.00E, h0km, mb3.8/4, mb1 3.8/8, mb1mx3.5/42, mbtmp3.7/8, ML3.5/4, Error ellipse: s-maj=26.1km s-min=8.9km az=173.0*
*ISK **13** 07:27:10.9, 35°.59N×25°.94E, h11km, ML3.2/9*
*ATH **13** 07:27:10.1, 35°.46N×25°.87E, h29km±1km, ML3.5/9, Error ellipse: s-maj=1.3km s-min=0.7km az=200.0*
*ISCJB **13** 07:27:11.2±0.3, 35°.46N±0°.02×25°.87E±0°.02, h27km±3km, mb3.7/4, Error ellipse: s-maj=4.1km s-min=3.0km az=172.9*
*THE **13** 07:27:11.2, 35°.47N×25°.85E, h15km±1km, ML3.5/10, Error ellipse: s-maj=1.3km s-min=0.3km az=171.0*
*DDA **13** 07:28:06.2, 35°.99N×26°.95E, h13km, ML3.1*

ISC 13 07:27:09.7±0.9, 35°.46N±0°.02×25°.96E±0°.02, h15km±7km, n83, σ1s52/108, mb3.9/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.35**	**235**	P	**Pb**	**07 27 17.5**	**-0.2**
NPS				S	**Sg**	**07 27 22.0**	**+0.3**
	44μm,0.3s						
NPS	**Neapolis**	**0.35**	**235**	P	**Pb**	**07 27 17.5**	**-0.2**
NPS				S	**Sg**	**07 27 22.0**	**+0.3**
NPS				AML	AML	07 27 22.4	
	comp=N,46134μm,0.3s						
NPS				AML	AML	07 27 22.5	
	comp=E,61551μm,0.3s						
ZKR	**Zakros**	**0.41**	**149**	P	**Pn**	**07 27 20.6**	**-0.5**
ZKR				S	**Sn**	**07 27 27.2**	**-1.2**
	comp=E,5μm,0.3s						
ZKR	**Zakros**	**0.41**	**149**	P	**Pn**	**07 27 20.5**	**-0.5**
ZKR				S	**Sn**	**07 27 26.9**	**-1.6**
ZKR				AML	AML	07 27 27.6	
	comp=E,13937μm,0.4s						
ZKR				AML	AML	07 27 27.8	
	comp=N,7371μm,0.2s						
LAST	**Lasithi**	**0.50**	**233**	P	**Pg**	**07 27 19.8**	**+0.2**
LAST				S	**Sg**	**07 27 26.3**	**0.0**
	comp=N,3μm,0.2s						
LAST	**Lasithi**	**0.50**	**233**	P	**Pg**	**07 27 19.9**	**+0.3**
LAST				S	**Sg**	**07 27 26.3**	**0.0**
LAST				AML	AML	07 27 27.1	
	comp=N,5289μm,0.2s						
LAST				AML	AML	07 27 27.5	
	comp=E,4048μm,0.2s						
IACM	**Heraklion**	**0.74**	**258**	P	**Pb**	**07 27 24.1**	**-0.3**
IACM				S	**Sb**	**07 27 33.9**	**-0.5**
	comp=E,22μm,0.4s						
IDI	**Anoyia**	**0.89**	**259**	Pg	**Pb**	**07 27 26.6**	**-0.4**
	comp=E,67nm,0.3s,baz=84,slow=8.9,SNR=330						
IDI				Lg	Lg	07 27 37.2	
	comp=E,472nm,0.3s,baz=344,slow=18,SNR=155						
IDI	**Anoyia**	**0.89**	**259**	P	**Pb**	**07 27 25.6**	**-1.4**
ANAF	**Anafi Island**	**0.91**	**350**	P	**Pn**	**07 27 27.6**	**-0.4**
ANAF				S	**Sn**	**07 27 40.1**	**-0.7**
ANAF				AML	AML	07 27 41.0	
	comp=N,30330μm,0.4s						
ANAF				AML	AML	07 27 41.0	
	comp=E,45718μm,0.4s						
KARP	**Karpathos**	**0.98**	**85**	PG	**Pn**	**07 27 30.5**	**+1.4**
KARP				SG	**Sn**	**07 27 44.7**	**+1.9**
KARP	**Karpathos**	**0.98**	**85**	P	**Pn**	**07 27 30.4**	**+1.4**
KARP	**Karpathos**	**0.98**	**85**	P	**Pn**	**07 27 30.3**	**+1.2**
KARP				S	**Sn**	**07 27 45.2**	**+2.4**
KARP				AML	AML	07 27 46.9	
	comp=E,5250μm,0.4s						
KARP				AML	AML	07 27 47.5	
	comp=N,4528μm,0.6s						
SANT	**Santorini**	**0.99**	**336**	P	**Pn**	**07 27 28.7**	**-0.5**
SANT				S	**Sg**	**07 27 41.9**	**-0.1**
	comp=N,3μm,0.5s						
SANT	**Santorini**	**0.99**	**336**	P	**Pn**	**07 27 29.1**	**-0.1**
SANT				S	**Sn**	**07 27 42.1**	**-0.9**
SANT				AML	AML	07 27 43.0	
	comp=N,2767μm,0.7s						
SANT				AML	AML	07 27 45.2	
	comp=E,7827μm,0.3s						
THR6	**Thira Island,**	**1.00**	**333**	P	**Pg**	**07 27 29.0**	**-0.1**
THT1	**Athinios (Pele**	**1.02**	**335**	P	**Pg**	**07 27 29.0**	**-0.4**
THT1				S	**Sg**	**07 27 42.6**	**-0.1**
	comp=E,2μm,0.4s						
THT1	**Athinios (Pele**	**1.02**	**335**	P	**Pg**	**07 27 29.5**	**+0.1**
THR9	**Santorini-Faro**	**1.02**	**331**	P	**Pg**	**07 27 29.8**	**+0.4**
SIVA	**Sivas**	**1.04**	**245**	P	**Pb**	**07 27 29.2**	**-0.3**
SIVA				S	**Sb**	**07 27 42.2**	**-0.7**
	comp=E,3μm,0.4s						
SIVA	**Sivas**	**1.04**	**245**	P	**Pb**	**07 27 29.4**	**-0.1**
SIVA				S	**Sb**	**07 27 42.8**	**-0.1**
SIVA				AML	AML	07 27 43.7	
	comp=N,4788μm,0.5s						
SIVA				AML	AML	07 27 46.8	
	comp=E,5894μm,0.6s						
THR3	**Thira Island,**	**1.05**	**334**	P	**Pg**	**07 27 30.0**	**0.0**
THR7	**Fira-Santorini**	**1.05**	**336**	P	**Pg**	**07 27 29.8**	**-0.2**
THT2	**Imerovigli**	**1.06**	**336**	P	**Pg**	**07 27 30.4**	**+0.1**
THR2	**Thira island,**	**1.07**	**337**	P	**Pg**	**07 27 29.9**	**-0.5**
THR5	**Thira Island,**	**1.07**	**333**	P	**Pg**	**07 27 30.1**	**-0.4**
SAP3	**Santorini-Thir**	**1.09**	**333**	P	**Pg**	**07 27 30.7**	**-0.1**
CMBO	**Columbo, Santo**	**1.10**	**336**	P	**Pg**	**07 27 30.5**	**-0.5**
CMBO				S	**Sn**	**07 27 44.8**	**-0.8**
	comp=E,7μm,0.5s						
CMBO	**Columbo, Santo**	**1.10**	**336**	P	**Pg**	**07 27 31.2**	**+0.2**
AMGA	**Amorgos Island**	**1.37**	**358**	P	**Pn**	**07 27 33.8**	**-0.6**
AMGA	**Amorgos Island**	**1.37**	**358**	P	**Pn**	**07 27 33.7**	**-0.6**
IOSP	**Ios island**	**1.37**	**337**	P	**Pn**	**07 27 33.6**	**-0.8**
IOSP	**Ios island**	**1.37**	**337**	P	**Pn**	**07 27 33.6**	**-0.8**
VAM	**Vamos**	**1.44**	**268**	P	**Pn**	**07 27 35.8**	**+0.5**
VAM				S	**Sn**	**07 27 53.9**	**0.0**
VAM				AML	AML	07 27 56.8	
	comp=N,4352μm,0.3s						
VAM				AML	AML	07 27 59.0	
	comp=E,2609μm,0.3s						
NISR	**Nisiros**	**1.49**	**39**	P	**Pg**	**07 27 38.4**	**0.0**
IMMV	**Iera Moni Meta**	**1.62**	**270**	P	**Pn**	**07 27 36.9**	**-0.8**
IMMV				S	**Sn**	**07 27 56.4**	**-1.9**
	comp=E,1μm,0.6s						
IMMV	**Iera Moni Meta**	**1.62**	**270**	P	**Pn**	**07 27 37.3**	**-0.5**
APE	**Apeiranthos**	**1.64**	**348**	P	**Pn**	**07 27 37.5**	**-0.6**
APE	**Apeiranthos**	**1.64**	**348**	P	**Pn**	**07 27 37.6**	**-0.5**
GVD	**Gavdhos**	**1.66**	**248**	P	**Pb**	**07 27 40.3**	**+0.3**
MHLO	**Agia Marina, M**	**1.76**	**315**	P	**Pn**	**07 27 40.1**	**+0.3**
MHLA	**Plaka, Milos I**	**1.79**	**316**	P	**Pb**	**07 27 41.4**	**-0.8**
DAT	**Datca**	**1.82**	**46**	PN	**Pb**	**07 27 41.8**	**-1.0**
DAT	**Datca**	**1.82**	**46**	*i* P	**Pb**	**07 27 41.9**	**-1.0**
DAT				*i* S	**Sg**	**07 28 10.8**	**+2.4**
ARG	**Arkhangelos**	**1.91**	**66**	P	**Pb**	**07 27 43.5**	**-0.9**
ARG				S	**Sb**	**07 28 07.6**	**-0.5**
ARG				AML	AML	07 28 08.3	
	comp=N,771μm,0.8s						
ARG				AML	AML	07 28 12.6	
	comp=E,1030μm,0.5s						
BODT	**Bodrum**	**1.93**	**34**	PN	**Pb**	**07 27 43.3**	**-1.4**
BDRM	**Kayabasi**	**2.00**	**36**	*i* P	**Pb**	**07 27 43.8**	**-2.1**
BDRM				*i* S	**Sg**	**07 28 18.1**	**+4.1**
SERI	**Serifos**	**2.07**	**325**	P	**Pn**	**07 27 44.7**	**+0.7**
BBRN	**Bozburun-Marma**	**2.09**	**54**	PN	**Pb**	**07 27 45.9**	**-1.5**
ANKY	**Antikythira Is**	**2.20**	**281**	P	**Pn**	**07 27 45.2**	**-0.6**
KYTH	**Kithira**	**2.50**	**290**	P	**Pn**	**07 27 50.0**	**+0.1**
YER	**Yerkesik**	**2.51**	**48**	PN	**Pb**	**07 27 51.8**	**-2.8**
YER	**Yerkesik**	**2.51**	**48**	P	**Pn**	**07 27 51.2**	**+1.1**
TURN	**Turunc**	**2.56**	**56**	PN	**Pn**	**07 27 48.5**	**-2.2**
TURN	**Turunc**	**2.56**	**56**	*i* P	**Pn**	**07 27 48.9**	**-1.8**
TURN				*i* S	**Sn**	**07 28 18.1**	**-3.5**
TURN				IAML_P			
	comp=Z,1μm,0.3s						
DALY	**Dalyan (Mula)**	**2.56**	**57**	PN	**Pb**	**07 27 53.0**	**-2.5**
DALY	**Dalyan (Mula)**	**2.56**	**57**	*i* P	**Pb**	**07 27 54.3**	**-1.1**
DALY				*i* S	**Sb**	**07 28 25.2**	**-1.6**
DALY				IAML_P			
	comp=Z,1μm,0.2s						
AYDN	**Tasoluk**	**2.68**	**35**	*i* P	**Pb**	**07 27 57.6**	**0.0**
AYDN				IAML_P			
	comp=Z,1μm,0.2s						
VLI	**Veliai**	**2.75**	**298**	P	**Pn**	**07 27 52.4**	**-0.9**
VLI	**Veliai**	**2.75**	**298**	P	**Pn**	**07 27 53.1**	**-0.3**
FETY	**Fethiye**	**2.79**	**64**	PN	**Pb**	**07 27 56.2**	**-3.1**
FETY	**Fethiye**	**2.79**	**64**	*i* P	**Pb**	**07 27 56.8**	**-2.5**
FETY				IAML_P			
	comp=Z,2μm,0.2s						
URLA	**Izmir**	**2.94**	**10**	*i* P	**Pg**	**07 28 04.2**	**-1.9**
URLA				IAML_P			
	comp=Z,2μm,0.5s						
DID	**Didima**	**3.00**	**314**	P	**Pn**	**07 27 57.2**	**+0.5**
KSL	**Kastellorizon**	**3.02**	**76**	P	**Pb**	**07 27 59.8**	**-3.4**
AKAS	**Kas**	**3.06**	**74**	PN	**Pb**	**07 28 00.3**	**-3.7**
AKAS	**Kas**	**3.06**	**74**	*i* P	**Pb**	**07 28 01.2**	**-2.8**
AKAS				*i* S	**Sb**	**07 28 38.3**	**-2.9**
AKAS				IAML_P			
	comp=Z,1μm,0.2s						
AKUM	**Antalya-Kumluc**	**3.66**	**75**	*i* P	**Pn**	**07 28 08.5**	**+2.7**
MANT	**Manisa**	**3.67**	**34**	*i* P	**Pn**	**07 28 09.2**	**+3.1**
GUR	**Goura**	**3.81**	**311**	P	**Pn**	**07 28 08.0**	**-0.1**
KORT	**Korkueli**	**3.87**	**65**	PN	**Pn**	**07 28 11.6**	**+2.8**
KHAL	**Karahalli**	**4.05**	**43**	*i* P	**Pn**	**07 28 13.5**	**+2.1**
BAYC	**CANAKKALE_Bayr**	**4.30**	**6**	*i* P	**Pn**	**07 28 15.0**	**+0.4**
BOZC	**Bozcaada**	**4.37**	**1**	*i* P	**Pb**	**07 28 26.6**	**+0.3**
KEPZ	**Antalya-Kepez**	**4.79**	**71**	*i* P	Pn	07 28 25.8	+4.4
BRTR	**Keskin Array B**	**7.43**	**53**	Pn	**Pn**	**07 29 00.8**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=228,slow=14,SNR=6.3						
BRTR				Sn	**Sn**	**07 30 25.5**	**+3.5**
	comp=Z,0.1nm,0.3s,baz=220,slow=19,SNR=2.3						
EIL	**Elat**	**9.53**	**125**	Pn	**Pn**	**07 29 24.7**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=227,slow=19,SNR=2.0						
EIL				Sn	**Sn**	**07 31 10.6**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=309,slow=3.6,SNR=5.3						
AKASG	**Malin Array Be**	**15.41**	**8**	Pn	**P**	**07 30 50.6**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=195,slow=11,SNR=5.8						
KBZ	**Khabaz**	**15.43**	**53**	Pn	**P**	**07 30 53.5**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=237,slow=13,SNR=3.6						
GEYT	**Alibeck**	**25.84**	**75**	P	**P**	**07 32 42.0**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=270,slow=7.2,SNR=3.4						
TORD	**Torodi Ar. Bea**	**31.19**	**231**	P	**P**	**07 33 28.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=45,slow=8.8,SNR=3.5						
MKAR	**Makanchi Array**	**43.06**	**57**	P	**P**	**07 35 09.9**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=268,slow=8.2,SNR=10						
ZALV	**Zalesovo Beam**	**44.32**	**46**	P	**P**	**07 35 18.8**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=268,slow=7.1,SNR=3.0						

*ISCJB **13** 07:55:24.6±0.4, 6°.85N±0°.02×73°.14W±0°.03, h159km±3km, mb3.4/4, Error ellipse: s-maj=5.7km s-min=3.6km az=17.3*
*IDC **13** 07:55:25.1±0.8, 6°.73N×72°.96W, h167km±11km, mb3.2/4, mb1 3.7/6, mb1mx3.3/24, mbtmp3.8/6, Error ellipse: s-maj=35.4km s-min=8.2km az=132.0*
*RSNC **13** 07:55:26.0±0.9, 6°.82N×73°.14W, h152km±3km, ML3.7, Mw3.9*

ISC 13 07:55:25.0±0.8, 6°.83N±0°.03×73°.13W±0°.04, h156km±6km, n42, σ0s85/64, mb3.4/4, 4C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**193**	⇑*i*P	**Pn**	**07 55 46.4**	**0.0**
BARC				*e*S	**Sn**	**07 56 01.8**	**-0.9**
BARC				*i*		07 56 03.2	
	comp=Z,1μm,0.3s						
GIRC	**Giron, Santand**	**0.26**	**345**	*e*P	**Pn**	**07 55 46.4**	**+0.1**
BRRC	**Barranca, Sant**	**0.64**	**296**	⇓*e*P	**Pn**	**07 55 48.3**	**+0.5**
BRRC				*e*S	**Sn**	**07 56 05.7**	**+0.5**
BRRC				*i*		07 56 09.4	
	comp=Z,512nm,0.3s						
RUSC	**La Rusia**	**0.93**	**177**	*i* P	**Pn**	**07 55 50.2**	**-0.1**
RUSC				*i*		07 55 51.5	
	comp=Z,346nm,0.2s						
RUSC				*e*S	**Sn**	**07 56 09.2**	**-0.5**
GRMC	**Gramalote, San**	**0.94**	**20**	⇑*i*P	**Pn**	**07 55 51.9**	**+1.9**
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	*e*P	**Pn**	**07 55 53.0**	**-0.5**
PTBC				*e*S	**Sn**	**07 56 14.3**	**-1.0**
PTBC				*i*		07 56 15.7	
	comp=Z,449nm,0.4s						
TAMC	**Tame, Arauca**	**1.38**	**106**	⇓*i*P	**Pn**	**07 55 54.6**	**+0.8**
TAMC				*i*		07 56 15.3	
	comp=Z,362nm,0.3s						
TAMC				*e*S	**Sn**	**07 56 16.5**	**+0.5**
OCAC	**Ocana**	**1.42**	**352**	*e*P	**Pn**	**07 55 54.6**	**+0.3**
OCAC				*e*S	**Sn**	**07 56 16.6**	**-0.3**
OCAC				*i*		07 56 23.5	
	comp=Z,418nm,0.4s						
YOPC	**Yopal, Colombi**	**1.62**	**154**	⇓*i*P	**Pn**	**07 55 56.9**	**+0.5**
YOPC				*i*		07 55 57.9	
	comp=Z,344nm,0.6s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P	**Pn**	**07 55 58.9**	**+0.2**
ZARC				*e*S	**Sn**	**07 56 24.6**	**+0.1**
ZARC				*i*		07 56 30.3	
	comp=Z,414nm,0.3s						
NORC	**Norcasia**	**2.14**	**234**	*e*P	**Pn**	**07 56 02.1**	**0.0**
NORC				*i* S	**Sn**	**07 56 30.9**	**+0.1**
NORC				*e*S	**Sn**	**07 56 30.9**	**+0.1**
NORC				*i*		07 56 34.7	
	comp=Z,361nm,0.5s						
SMLC	**San Martn de**	**2.17**	**335**	*e*P	**Pn**	**07 56 02.5**	**0.0**
SMLC				*e*S	**Sn**	**07 56 31.4**	**-0.1**
SMLC				*i*		07 56 36.1	
	comp=Z,319nm,0.2s						
CHIC	**Chingaza**	**2.26**	**195**	*e*P	**Pn**	**07 56 04.4**	**+0.4**
CHIC				*e*S	**Sn**	**07 56 33.8**	**-0.3**
CHIC				*i*		07 56 42.1	
	comp=Z,290nm,0.4s						
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**07 56 06.0**	**+1.6**
	comp=Z,45nm,0.3s,baz=90,slow=18,SNR=290						
ROSC				S	**Sn**	**07 56 36.5**	**+1.7**
	comp=Z,84nm,0.3s,baz=79,slow=22,SNR=18						
ROSC	**El Rosal**	**2.30**	**211**	*e*P	**Pn**	**07 56 05.8**	**+1.4**
HELC	**Santa Helena**	**2.47**	**255**	*e*P	**Pn**	**07 56 07.0**	**+0.6**
HELC				*e*S	**Sn**	**07 56 38.8**	**+0.5**
HELC				*i*		07 56 44.6	
	comp=Z,234nm,0.5s						
CVER	**Cruz Verde, Cu**	**2.48**	**202**	*e*P	**Pn**	**07 56 07.7**	**+1.1**
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	**Pn**	**07 56 09.4**	**-0.3**
VILC				*e*S	**Sn**	**07 56 43.8**	**-0.5**
VILC				*i*		07 56 53.7	
	comp=Z,437nm,0.4s						
RREF	**El Recreo**	**2.92**	**229**	*e*P	**Pn**	**07 56 13.4**	**+1.2**
DBBC	**Dabeiba**	**3.07**	**274**	*e*P	**Pn**	**07 56 13.7**	**+0.2**
DBBC				*e*S	**Sn**	**07 56 50.5**	**-0.6**
CODC	**Agustn Codazz**	**3.10**	**354**	*e*P	**Pn**	**07 56 13.8**	**-0.2**
CODC				*e*S	**Sn**	**07 56 51.5**	**-0.4**
CODC				*i*		07 57 03.0	
	comp=Z,114nm,0.7s						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	**Pn**	**07 56 16.3**	**+1.1**
ARGC				*e*S	**Sn**	**07 56 55.4**	**+1.1**
ARGC				*i*		07 57 08.8	
	comp=Z,105nm,0.3s						
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**07 56 15.9**	**+0.5**
	comp=Z,69nm,0.3s,baz=240,slow=14,SNR=34						
SDV				S	**Sn**	**07 56 54.1**	**-0.4**
	comp=Z,17nm,0.3s,baz=253,slow=22,SNR=6.2						
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	**Pn**	**07 56 15.9**	**+0.5**
SDV				*e*S	**Sn**	**07 56 54.0**	**-0.6**
PRAC	**Prado**	**3.55**	**210**	*e*P	**Pn**	**07 56 19.3**	**-0.5**
PRAC				*e*S	**Sn**	**07 57 02.1**	**-0.2**
PRAC				*i*		07 57 08.1	
	comp=Z,438nm,0.3s						
PLMC	**San Jos del P**	**3.67**	**239**	⇑*i*P	**Pn**	**07 56 21.8**	**+0.5**
PLMC				*i*		07 56 23.4	
	comp=Z,181nm,0.1s						
YOTC	**Yotoco, Valle**	**4.27**	**229**	*e*P	**Pn**	**07 56 28.7**	**-0.4**
SMRC	**Santa Marta, M**	**4.44**	**346**	*e*P	**Pn**	**07 56 31.7**	**+0.5**
MARP	**Paez Belalcaza**	**4.86**	**216**	*e*P	**Pn**	**07 56 37.2**	**+0.3**
URIC	**Uribia, Colomb**	**4.97**	**13**	*e*S	**Sn**	**07 57 32.7**	**-2.7**
MALC	**Bahia Malaga**	**5.04**	**236**	*e*P	**Pn**	**07 56 40.1**	**+1.1**
PCON	**Cinco Dias**	**5.53**	**216**	*e*P	**Pn**	**07 56 47.3**	**+1.2**
POPC	**Popayan, Colom**	**5.54**	**220**	*e*P	**Pn**	**07 56 45.7**	**-0.2**
POPC				*e*S	**Sn**	**07 57 49.3**	**+0.3**
FLOC	**Florencia**	**5.79**	**206**	*e*P	**Pn**	**07 56 48.5**	**-0.5**
BBAC	**Balboa, Cauca**	**6.30**	**221**	*e*P	**Pn**	**07 56 57.0**	**+1.1**
BBAC				*e*S	**Sn**	**07 58 06.5**	**-0.7**
CRUC	**La Cruz**	**6.47**	**216**	*e*P	**Pn**	**07 57 00.1**	**+1.8**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**08 02 15.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=126,slow=8.8,SNR=11						
PDAR	**Pinedale Array**	**48.07**	**324**	P	**P**	**08 03 49.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=121,slow=8.1,SNR=4.4						
NVAR	**Mina Array Bea**	**51.47**	**315**	P	**P**	**08 04 15.5**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=126,slow=7.1,SNR=3.7						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**08 05 36.4**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=133,slow=6.6,SNR=38						
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc	**PKPbc**	**08 14 54.4**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=124,slow=3.3,SNR=2.4						
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc	**PKPbc**	**08 14 57.3**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=112,slow=3.7,SNR=1.2						

*ISCJB **13** 07:58:47.9±0.5, 41°.77N±0°.02×8°.47W±0°.05, h33km±3km, Error ellipse: s-maj=5.7km s-min=4.1km az=6.6*
*MDD **13** 07:58:47.8±0.5, 41°.75N×8°.50W, h20km±4km, mb3.9/10, mbLg2.8/12, Error ellipse: s-maj=5.9km s-min=3.6km az=73.0, PRXIMO*
MDD EMS: II INTENSIDAD MAXIMA ESPAA. EMS: III INTENSIDAD MAXIMA PORTUGAL (IMPA).
*IGIL **13** 07:58:48.6, 41°.76N×8°.51W, h19km, ML2.2*
*INMG **13** 07:58:49.0±2.0, 41°.75N×8°.51W, h17km±3km, MD2.8, ML2.8, Error ellipse: s-maj=4.4km s-min=2.1km az=98.0*

ISC 13 07:58:48.3±1.0, 41°.77N±0°.02×8°.49W±0°.03, h27km±8km, n63, σ1s88/105, 2C-4D, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGAV	**Gavieira, Arco**	**0.26**	**40**	⇑*i*Pg	**Pb**	**07 58 55.0**	**0.0**
PGAV				*e*Sg	**Sb**	**07 58 59.1**	**-0.5**
PGAV				A	A	07 58 59.7	
	994nm,0.2s						
PGAV	**Gavieira, Arco**	**0.26**	**40**	Pg	**Pb**	**07 58 55.0**	**0.0**
PGAV				Lg	Lg	07 58 59.1	
	994nm,0.2s						
PCAB	**Cabril**	**0.35**	**99**	⇑*i*Pg	**Pn**	**07 58 56.4**	**-1.3**
PCAB				*e*Sg	**Sb**	**07 59 01.6**	**-0.1**
PCAB				A	A	07 59 02.3	
	1μm,0.1s						
PCAB	**Cabril**	**0.35**	**99**	Pg	**Pn**	**07 58 56.4**	**-1.3**
PCAB				Lg	Lg	07 59 01.6	
	719nm,0.1s						
EZAM	**Zamans**	**0.41**	**339**	⇓Pg	**Pb**	**07 58 57.0**	**-0.2**
	90nm,0.1s,SNR=18						
EZAM				Lg	Lg	07 59 02.4	
	159nm,0.1s,SNR=7.9						
PTO	**Porto**	**0.63**	**187**	*e*Pg	**Pn**	**07 59 00

COI				A	A	07 59 38.8
	125nm,0.2s					
COI	**Coimbra**	**1.56 178**		Lg	Lg	07 59 36.2
	62nm,0.2s					
PCAS	**Casmilo, Conde**	**1.71 180**	*e*Pg		**Pb**	**07 59 19.4 +0.3**
PCAS			*e*Sg		**Sb**	**07 59 40.7 +0.5**
PCAS			A		A	07 59 48.6
	38nm,0.5s					
PCAS	**Casmilo, Conde**	**1.71 180**	Pg		**Pb**	**07 59 19.4 +0.3**
PCAS			Lg		Lg	07 59 40.7
	38nm,0.5s					
PCBR	**Castelo Branco**	**2.07 158**	*e*Pn		**Pn**	**07 59 21.2 -0.1**
PCBR	**Castelo Branco**	**2.07 158**	*e*Pg		**Pb**	**07 59 26.3 +1.1**
PCBR			*e*Sg		**Sb**	**07 59 52.8 +2.3**
PCBR			A		A	07 59 56.7
	31nm,0.4s					
PCBR	**Castelo Branco**	**2.07 158**	Pn		**Pn**	**07 59 21.2 -0.1**
PCBR			Pg		**Pb**	**07 59 26.3 +1.1**
PCBR			Lg		Lg	07 59 52.8
	15nm,0.4s					
PTOM	**Tomar**	**2.15 178**	*e*Sn		**Sn**	**07 59 46.7 -1.4**
PTOM			*e*Sg		**Sb**	**07 59 54.6 +1.9**
PTOM			A		A	07 59 56.9
	57nm,0.4s					
PTOM	**Tomar**	**2.15 178**	Sn		**Sn**	**07 59 46.7 -1.4**
PTOM			Lg		Lg	07 59 54.6
	29nm,0.4s					
PMRV	**Marv??o**	**2.48 160**	*e*Pn		**Pn**	**07 59 27.1 +0.1**
PMRV	**Marv??o**	**2.48 160**	*e*Pg		**Pb**	**07 59 34.4 +2.2**
PMRV			*e*Sg		**Sb**	**08 00 05.0 +2.7**
PMRV			A		A	08 00 08.8
	26nm,0.3s					
PMRV	**Marv??o**	**2.48 160**	Pn		**Pn**	**07 59 27.1 +0.1**
PMRV			Pg		**Pb**	**07 59 34.4 +2.2**
PMRV			Lg		Lg	08 00 05.0
	26nm,0.3s					
EPLA	**Plasencia**	**2.50 132**	Pn		**Pn**	**07 59 27.4 +0.1**
	0.8nm,0.2s,SNR=7.9					
EPLA			Pg		**Pb**	**07 59 32.4 -0.1**
	4.3nm,0.2s,SNR=7.9					
EPLA			Lg		Lg	08 00 06.0
	5.9nm,0.1s,SNR=7.9					
PMTG	**Montargil**	**2.70 176**	*e*Pn		**Pn**	**07 59 30.2 +0.2**
PMTG			*e*Sn		**Sn**	**08 00 00.0 -1.8**
PMTG			*e*Sg		**Sb**	**08 00 11.4 +2.8**
PMTG			A		A	08 00 20.0
	20nm,0.6s					
PMTG	**Montargil**	**2.70 176**	Pn		**Pn**	**07 59 30.2 +0.2**
PMTG			Sn		**Sn**	**08 00 00.0 -1.8**
PMTG			Lg		Lg	08 00 11.4
	20nm,0.6s					
EARI	**Arriondas**	**2.87 57**	Pn		**Pn**	**07 59 33.3 +0.9**
	6.0nm,0.2s,SNR=35					
EARI			Pg		**Pb**	**07 59 39.0 +0.2**
	2.2nm,0.2s,SNR=7.9					
EARI			Sn		**Sn**	**08 00 06.0 -0.1**
	4.6nm,0.3s,SNR=7.9					
EARI			Lg		Lg	08 00 16.6
	6.1nm,0.4s,SNR=7.9					
PMAFR	**Mafra**	**2.87 192**	*e*Sn		**Sn**	**08 00 03.8 -2.2**
PMAFR			*e*Sg		**Sb**	**08 00 14.4 +0.9**
PMAFR			A		A	08 00 22.0
	36nm,0.6s					
PMAFR	**Mafra**	**2.87 192**	Sn		**Sn**	**08 00 03.6 -2.4**
	11nm,0.1s,SNR=7.9					
PMAFR			Lg		Lg	08 00 15.4
	61nm,0.4s,SNR=7.9					
GUD	**Guadarrama**	**3.46 107**	Pn		**Pn**	**07 59 40.9 +0.3**
	1.5nm,0.2s,SNR=7.9					
GUD			Sn		**Sn**	**08 00 19.1 -1.7**
	4.0nm,0.3s,SNR=7.9					
GUD			Lg		Lg	08 00 35.6
	5.3nm,0.2s,SNR=7.9					
PNCL	**Nicolau / Gran**	**3.65 180**	*e*Pn		**Pn**	**07 59 43.5 +0.5**
PNCL			*e*Sn		**Sn**	**08 00 22.5 -2.7**
PNCL			*e*Sg		**Sb**	**08 00 40.1 +4.2**
PNCL			A		A	08 00 50.3
	6.2nm,0.5s					
PNCL	**Nicolau / Gran**	**3.65 180**	Pn		**Pn**	**07 59 43.5 +0.5**
PNCL			Sn		**Sn**	**08 00 22.5 -2.7**
PNCL			Lg		Lg	08 00 40.1
	6.2nm,0.5s					
PBEJ	**Beja**	**3.77 172**	*e*Sg		**Sb**	**08 00 44.6 +5.3**
PBEJ			A		A	08 00 51.7
	7.8nm,0.3s					
PBEJ	**Beja**	**3.77 172**	Lg		Lg	08 00 44.6
	3.9nm,0.3s					
PAB	**San Pablo**	**3.85 124**	Pn		**Pn**	**07 59 46.2 +0.3**
	1.5nm,0.2s,SNR=7.9					
PAB			Sn		**Sn**	**08 00 28.3 -2.1**
	1.2nm,0.1s,SNR=7.9					
PAB			Lg		Lg	08 00 47.0
	2.0nm,0.1s,SNR=7.9					
MESJ	**Messejana**	**3.93 177**	*e*P		**Pn**	**07 59 46.2 -0.6**
MESJ			*e*S		**Sn**	**08 00 28.4 -3.6**
MESJ			AML		AML	08 00 42.8
	comp=N,5.4nm,0.6s					
MESJ	**Messejana**	**3.93 177**	Pn		**Pn**	**07 59 46.2 -0.6**
MESJ			Sn		**Sn**	**08 00 28.4 -3.6**
	comp=N,5.4nm,0.6s					
ELAN	**Lanestosa**	**4.02 67**	Pn		**Pn**	**07 59 48.9 +0.8**
	comp=N,1.4nm,0.2s,SNR=7.9					
ELAN			Sn		**Sn**	**08 00 32.6 -1.7**
	comp=N,8.6nm,0.7s					
ESDC	**Sonseca Array**	**4.03 120**	Pn		**Pn**	**07 59 48.5 +0.2**
	comp=N,0.7nm,0.3s,baz=305,slow=13,SNR=8.7					
ESDC			Sn		**Sn**	**08 00 32.4 -2.2**
	comp=N,0.9nm,0.2s,baz=307,slow=23,SNR=42					
ESDC			Lg		Lg	08 00 53.2
	comp=N,1.0nm,0.2s,baz=304,slow=29,SNR=7.2					
PCVE	**Castro Verde**	**4.14 175**	*e*Pn		**Pn**	**07 59 49.7 -0.1**
PCVE			*e*Sn		**Sn**	**08 00 34.1 -3.3**
PCVE			*e*Sg		Sb	08 00 56.8 +6.7
PCVE			A		A	08 01 13.5
	comp=N,5.2nm,0.4s					
PCVE	**Castro Verde**	**4.14 175**	Pn		**Pn**	**07 59 49.7 -0.1**
PCVE			Sn		**Sn**	**08 00 34.1 -3.3**
PCVE			Lg		Lg	08 00 56.8
	comp=N,5.2nm,0.4s					
PTEO	**Sao Teotonio**	**4.22 182**	*e*Sg		Sb	08 00 59.2 +6.9
PTEO			A		A	08 01 04.2
	comp=N,8.7nm,1.0s					
PTEO	**Sao Teotonio**	**4.22 182**	Lg		Lg	08 00 59.2
	comp=N,4.3nm,1.0s					
EMIN	**Mina Concepcio**	**4.23 160**	Pn		**Pn**	**07 59 51.2 +0.1**
	comp=N,1.3nm,0.1s,SNR=7.9					
EMIN			Sn		**Sn**	**08 00 36.3 -3.3**
	comp=N,5.5nm,0.4s					
EMIN			Lg		Lg	08 01 00.3
	comp=N,5.5nm,0.4s					
PVAQ	**Vaqueiros**	**4.40 172**	*e*Pn		**Pn**	**07 59 53.4 +0.1**
PVAQ			*e*Sn		**Sn**	**08 00 40.1 -3.6**
PVAQ			*e*Sg		**Sb**	**08 01 04.0 +6.6**
PVAQ			A		A	08 01 11.9
	comp=N,7.0nm,0.6s					
PVAQ	**Vaqueiros**	**4.40 172**	Pn		**Pn**	**07 59 53.4 +0.1**
PVAQ			Sn		**Sn**	**08 00 40.1 -3.6**
PVAQ			Lg		Lg	08 01 04.0
	comp=N,7.0nm,0.6s					
MORF	**Marmelete**	**4.46 182**	*e*Sn		**Sn**	**08 00 41.4 -3.8**
MORF	**Marmelete**	**4.46 182**	Sn		**Sn**	**08 00 41.4 -3.8**
PBDV	**Barranco-do-Ve**	**4.54 174**	*e*Sn		**Sn**	**08 00 43.5 -3.7**
PBDV			A		A	08 01 48.1
	comp=N,5.9nm,0.2s					
PBDV	**Barranco-do-Ve**	**4.54 174**	Sn		**Sn**	**08 00 43.5 -3.7**
	comp=N,5.9nm,0.2s					
EADA	**Adamuz**	**4.69 139**	Pn		**Pn**	**07 59 57.1 -0.2**
	comp=N,0.4nm,0.1s,SNR=7.9					
EADA			Sn		**Sn**	**08 00 47.6 -3.3**
	comp=N,7.4nm,0.5s,SNR=6.9					
EADA			Lg		Lg	08 01 14.2
	comp=N,54nm,2.3s,SNR=7.9					
ETOR	**Torete**	**4.94 99**	Lg		Lg	08 01 22.7
	comp=N,8.8nm,0.4s,SNR=6.9					

IDC 13 08:52:27.9±3.0, 55°.49N×86°.13E, h0km, mb1 3.1/3, mb1mx3.0/43, mbtmp3.1/3, ML2.8/2, Error ellipse: s-maj=27.2km s-min=18.8km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.72 207**		*i*		09 03 40.0	
	baz=25,slow=313,SNR=3.7						
ZALV	**Zalesovo Beam**	**1.72 207**		Pg	Pn	08 52 58.2	-1.0
	4.3nm,0.3s,baz=29,slow=16,SNR=28						
ZALV				Lg	Lg	08 53 22.7	
	2.0nm,0.3s,baz=23,slow=28,SNR=6.4						
KURBB	**Kurchatov Arra**	**6.69 226**		Pn	Pn	08 54 07.4	0.0
	baz=41,slow=14,SNR=2.3						
KURBB				Lg	Lg	08 56 02.2	
	0.0nm,0.3s,baz=44,slow=30,SNR=4.7						
MKAR	**Makanchi Array**	**9.04 197**		Pn	Pn	08 54 40.1	+0.5
	0.1nm,0.3s,baz=18,slow=14,SNR=3.1						
MKAR				Lg	Lg	08 57 09.3	
	0.1nm,0.3s,baz=21,slow=25,SNR=3.9						
BVAR	**Borovoye Array**	**9.54 261**		Pn	Pn	08 54 45.2	-1.2
	0.2nm,0.3s,baz=72,slow=14,SNR=5.1						

MEX 13 08:53:51.0±0.5, 15°.13N×92°.72W, h107km±7km, MD3.5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.49**	**117**	*i* P	Pn	08 54 06.3	-1.2
THIG				*i* S	Sn	08 54 18.1	-1.7
PCIG		**0.74**	**320**	*e*P	Pn	08 54 08.4	-1.1
PCIG				*i* S	Sn	08 54 21.4	-1.9

*IGIL **13** 09:15:13.6, 37°.17N×12°.87W, h4km, ML2.8*
*MDD **13** 09:15:14.3±0.2, 37°.12N×13°.08W, h32km±13km, mb4.5/10, Error ellipse: s-maj=3.5km s-min=2.6km az=45.0, PRXIMO*
*LDG **13** 09:15:14.0±0.3, 37°.20N×13°.13W, h30km, Ml3.5/3, Error ellipse: s-maj=5.1km s-min=4.3km az=66.0*
*INMG **13** 09:15:15.7±1.3, 37°.03N×13°.13W, h10km, ML2.9, Error ellipse: s-maj=5.5km s-min=2.2km az=129.0*

ISC 13 09:15:07.7±1.0, 37°.20N±0°.04×13°.01W±0°.05, h10km, n75, σ3°.01/124, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.34**	**90**	*e*Pn	**Pn**	**09 16 03.5**	**+3.5**
PFVI				*e*Sn	**Sn**	**09 16 38.4**	**-1.4**
PFVI				A	A	09 16 50.6	
	12nm,0.9s						
PFVI	**Vila Bisbo**	**3.34**	**90**	P	**Pn**	**09 16 03.5**	**+3.5**
	10nm,0.4s,SNR=7.7						
PFVI				S	**Sn**	**09 16 38.4**	**-1.4**
	34nm,1.3s,SNR=7.9						
PMAFR	**Mafra**	**3.42**	**58**	*e*Pn	**Pn**	**09 16 05.5**	**+4.3**
PMAFR				*e*Sn	**Sn**	**09 16 43.2**	**+1.4**
PMAFR				A	A	09 16 52.0	
	35nm,0.5s						
PMAFR	**Mafra**	**3.42**	**58**	P	**Pn**	**09 16 04.7**	**+3.5**
	3.8nm,0.1s,SNR=14						
PMAFR				S	**Sn**	**09 16 42.9**	**+1.1**
	49nm,0.5s,SNR=6.5						
PTEO	**Sao Teotonio**	**3.43**	**83**	*e*Pn	**Pn**	**09 16 05.3**	**+4.0**
PTEO				*e*Sn	**Sn**	**09 16 40.6**	**-1.4**
PTEO				A	A	09 16 48.5	
	14nm,0.2s						
PTEO	**Sao Teotonio**	**3.43**	**83**	P	**Pn**	**09 16 05.3**	**+4.0**
PTEO				S	**Sn**	**09 16 40.6**	**-1.4**
	6.9nm,0.2s						
MORF	**Marmelete**	**3.48**	**87**	*e*P	**Pn**	**09 16 05.1**	**+3.1**
MORF				*e*S	**Sn**	**09 16 42.9**	**-0.3**
MORF				AML	AML	09 16 47.3	
	comp=N,31nm,0.4s						
MORF	**Marmelete**	**3.48**	**87**	*e*Pn	**Pn**	**09 16 05.4**	**+3.4**
MORF				*e*Sn	**Sn**	**09 16 43.0**	**-0.3**
MORF				A	A	09 16 51.4	
	comp=N,23nm,0.3s						
MORF	**Marmelete**	**3.48**	**87**	P	**Pn**	**09 16 05.4**	**+3.4**
MORF				S	**Sn**	**09 16 43.0**	**-0.3**
	comp=N,23nm,0.3s						
PNCL	**Nicolau / Gran**	**3.67**	**74**	*e*Pn	**Pn**	**09 16 08.1**	**+3.5**
PNCL				*e*Sn	**Sn**	**09 16 47.4**	**-0.5**
PNCL				A	A	09 16 55.7	
	comp=N,16nm,0.2s						
PNCL	**Nicolau / Gran**	**3.67**	**74**	P	**Pn**	**09 16 08.1**	**+3.5**
PNCL				S	**Sn**	**09 16 47.4**	**-0.5**
	comp=N,16nm,0.2s						
MESJ	**Messejana**	**3.86**	**79**	*e*P	**Pn**	**09 16 10.8**	**+3.6**
MESJ				*e*S	**Sn**	**09 16 52.0**	**-0.6**
MESJ				AML	AML	09 16 55.4	
	comp=E,19nm,0.1s						
MESJ	**Messejana**	**3.86**	**79**	P	**Pn**	**09 16 10.8**	**+3.6**
MESJ				S	**Sn**	**09 16 52.0**	**-0.6**
	comp=E,19nm,0.1s						
PCVE	**Castro Verde**	**3.98**	**82**	*e*Pn	**Pn**	**09 16 12.5**	**+3.7**
PCVE				*e*Sn	**Sn**	**09 16 54.7**	**-0.9**
PCVE				A	A	09 17 02.9	
	comp=E,7.0nm,0.4s						
PCVE	**Castro Verde**	**3.98**	**82**	P	**Pn**	**09 16 12.5**	**+3.7**
PCVE				S	**Sn**	**09 16 54.7**	**-0.9**
	comp=E,7.0nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.05**	**88**	*e*Pn	**Pn**	**09 16 13.8**	**+3.9**
PBDV				*e*Sn	**Sn**	**09 16 58.4**	**+1.0**
PBDV				A	A	09 17 05.0	
	comp=E,8.0nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.05**	**88**	P	**Pn**	**09 16 13.8**	**+3.9**
PBDV				S	**Sn**	**09 16 58.4**	**+1.0**
	comp=E,8.0nm,0.1s						
PBEJ	**Beja**	**4.17**	**77**	*e*Pn	Pn	09 16 16.9	+5.5
PBEJ				*e*Sn	**Sn**	**09 16 59.9**	**-0.3**
PBEJ				A	A	09 17 05.8	
	comp=E,14nm,0.2s						
PBEJ	**Beja**	**4.17**	**77**	P	Pn	09 16 16.9	+5.5
PBEJ				S	**Sn**	**09 16 59.9**	**-0.3**
	comp=E,7.1nm,0.2s						
PMTG	**Montargil**	**4.21**	**62**	*e*Pn	**Pn**	**09 16 15.7**	**+3.7**
PMTG				*e*Sn	**Sn**	**09 17 01.5**	**+0.3**
PMTG				A	A	09 17 08.5	
	comp=E,8.8nm,0.1s						
PMTG	**Montargil**	**4.21**	**62**	P	**Pn**	**09 16 15.7**	**+3.7**
PMTG				S	**Sn**	**09 17 01.5**	**+0.3**
	comp=E,8.8nm,0.1s						
PVAQ	**Vaqueiros**	**4.23**	**86**	*e*Pn	**Pn**	**09 16 16.1**	**+3.9**
PVAQ				*e*Sn	**Sn**	**09 17 00.7**	**-0.9**
PVAQ				A	A	09 17 06.8	
	comp=E,17nm,0.1s						
PVAQ	**Vaqueiros**	**4.23**	**86**	P	**Pn**	**09 16 16.1**	**+3.9**
PVAQ				S	**Sn**	**09 17 00.7**	**-0.9**
	comp=E,17nm,0.1s						
PTOM	**Tomar**	**4.35**	**55**	*e*Pn	Pn	09 16 18.5	+4.7
PTOM				*e*Sn	**Sn**	**09 17 05.7**	**+1.2**
PTOM				A	A	09 17 10.6	
	comp=E,26nm,0.4s						
PTOM	**Tomar**	**4.35**	**55**	P	Pn	09 16 18.5	+4.7
PTOM				S	**Sn**	**09 17 05.7**	**+1.2**
	comp=E,13nm,0.4s						
PCAS	**Casmilo, Conde**	**4.54**	**50**	*e*Pn	Pn	09 16 21.2	+4.7
PCAS				*e*Sn	**Sn**	**09 17 10.3**	**+1.0**
PCAS				A	A	09 17 17.3	
	comp=E,8.6nm,0.4s						
PCAS	**Casmilo, Conde**	**4.54**	**50**	P	Pn	09 16 21.2	+4.7
PCAS				S	**Sn**	**09 17 10.3**	**+1.0**
	comp=E,8.6nm,0.4s						
PBAR	**Barrancos**	**4.84**	**77**	*e*Pn	Pn	09 16 25.7	+5.1
PBAR				*e*Sn	**Sn**	**09 17 16.6**	**0.0**
PBAR	**Barrancos**	**4.84**	**77**	P	Pn	09 16 25.7	+5.1
PBAR				S	**Sn**	**09 17 16.6**	**0.0**
PMPST	**Porto Santo, M**	**4.93**	**214**	*e*Pn	**Pn**	**09 16 21.1**	**-0.8**
PMPST				*e*Sn	Sn	09 17 09.4	-10
PMPST				A	A	09 17 16.5	
	comp=E,28nm,0.6s						
PMRV	**Marv??o**	**4.95**	**62**	*e*Pn	**Pn**	**09 16 26.1**	**+4.0**
PMRV				*e*Sn	**Sn**	**09 17 18.6**	**-0.8**
PMRV				A	A	09 17 25.4	
	comp=E,7.9nm,0.3s						
PMRV	**Marv??o**	**4.95**	**62**	P	**Pn**	**09 16 26.1**	**+4.0**
PMRV				S	**Sn**	**09 17 18.6**	**-0.8**
	comp=E,7.9nm,0.3s						
PMPS	**Porto Santo**	**4.95**	**214**	*e*Sn	**Sn**	**09 17 10.9**	**-8.5**
PMPS	**Porto Santo**	**4.95**	**214**	P	**Pn**	**09 16 21.1**	**-1.0**
PMPS				S	Sn	09 17 09.4	-10
	comp=E,14nm,0.6s						
PMPS				S	**Sn**	**09 17 10.9**	**-8.5**
EMIN	**Mina Concepcio**	**5.07**	**82**	P	**Pn**	**09 16 27.6**	**+3.8**
	comp=E,2.1nm,0.1s,SNR=33						
EMIN				S	**Sn**	**09 17 21.7**	**-0.7**
	comp=E,25nm,1.1s,SNR=6.1						
PCBR	**Castelo Branco**	**5.08**	**57**	*e*Pn	Pn	09 16 28.7	+4.8
PCBR				*e*Sn	**Sn**	**09 17 22.5**	**-0.1**
PCBR				A	A	09 17 27.2	
	comp=E,8.4nm,0.7s						
PCBR	**Castelo Branco**	**5.08**	**57**	P	Pn	09 16 28.7	+4.8
PCBR				S	**Sn**	**09 17 22.5**	**-0.1**
	comp=E,4.2nm,0.7s						
PVIS	**Viseu**	**5.31**	**47**	*e*Pn	**Pn**	**09 16 30.8**	**+3.6**
PVIS				*e*Sn	**Sn**	**09 17 27.6**	**-0.9**
PVIS				A	A	09 17 32.1	
	comp=E,9.7nm,0.3s						
PVIS	**Viseu**	**5.31**	**47**	P	**Pn**	**09 16 30.8**	**+3.6**
PVIS				S	**Sn**	**09 17 27.6**	**-0.9**
	comp=E,4.8nm,0.3s						
MTE	**Manteigas**	**5.33**	**52**	*e*Pn	Pn	09 16 32.2	+4.7
MTE				*e*Sn	**Sn**	**09 17 29.2**	**+0.2**
MTE				A	A	09 17 33.7	
	comp=E,24nm,0.2s						
MTE	**Manteigas**	**5.33**	**52**	P	Pn	09 16 32.2	+4.7
MTE				S	**Sn**	**09 17 29.2**	**+0.2**
	comp=E,12nm,0.2s						
PMAR	**Madeira**	**5.50**	**217**	*e*Sn	Sn	09 17 24.0	-9.2
PMAR	**Madeira**	**5.50**	**217**	S	Sn	09 17 24.0	-9.2
PMOZ	**Porto Moniz, M**	**5.55**	**219**	*e*Pn	**Pn**	**09 16 29.9**	**-0.7**
PMOZ				*e*Sn	Sn	09 17 25.3	-9.2
PMOZ	**Porto Moniz, M**	**5.55**	**219**	P	**Pn**	**09 16 29.9**	**-0.7**
PMOZ				S	Sn	09 17 25.3	-9.2
ESPR	**Espera**	**5.73**	**91**	S	**Sn**	**09 17 39.1**	**+0.3**
	comp=E,7.0nm,0.8s,SNR=7.9						
PVRL	**Vila Real**	**5.78**	**44**	*e*Pn	**Pn**	**09 16 37.4**	**+3.8**
PVRL				*e*Sn	**Sn**	**09 17 40.3**	**+0.2**
PVRL				A	A	09 17 57.8	
	comp=E,11nm,0.3s						
PVRL	**Vila Real**	**5.78**	**44**	P	**Pn**	**09 16 37.4**	**+3.8**
PVRL				S	**Sn**	**09 17 40.3**	**+0.2**
	comp=E,5.3nm,0.3s						
POLO	**Lamas de Olo**	**5.81**	**43**	*e*Pn	**Pn**	**09 16 38.1**	**+4.1**
POLO				*e*Sn	**Sn**	**09 17 39.4**	**-1.3**
POLO				A	A	09 17 45.2	
	comp=E,2.6nm,0.4s						
POLO	**Lamas de Olo**	**5.81**	**43**	P	**Pn**	**09 16 38.1**	**+4.1**
POLO				S	**Sn**	**09 17 39.4**	**-1.3**
	comp=E,2.6nm,0.4s						
PCAB	**Cabril**	**5.93**	**39**	*e*Pn	**Pn**	**09 16 40.2**	**+4.6**
PCAB				*e*Sn	**Sn**	**09 17 43.3**	**-0.3**
PCAB				A	A	09 17 54.0	
	comp=E,8.4nm,0.3s						
PCAB	**Cabril**	**5.93**	**39**	P	**Pn**	**09 16 40.2**	**+4.6**
PCAB				S	**Sn**	**09 17 43.3**	**-0.3**
	comp=E,4.2nm,0.3s						
EZAM	**Zamans**	**5.96**	**33**	P	**Pn**	**09 16 40.3**	**+4.2**
	comp=E,0.3nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**09 17 42.0**	**-2.4**
	comp=E,3.6nm,0.9s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.00**	**36**	*e*Pn	Pn	09 16 41.6	+4.9
PGAV				*e*Sn	**Sn**	**09 17 43.9**	**-1.7**
PGAV				A	A	09 17 53.5	
	comp=E,5.4nm,0.2s						
PGAV	**Gavieira, Arco**	**6.00**	**36**	P	Pn	09 16 41.6	+4.9
PGAV				S	**Sn**	**09 17 43.9**	**-1.7**
	comp=E,5.4nm,0.2s						
MVO	**Moncorvo**	**6.10**	**48**	*e*Pn	**Pn**	**09 16 42.3**	**+4.2**
MVO				*e*Sn	**Sn**	**09 17 46.4**	**-1.6**
MVO				A	A	09 17 53.3	
	comp=E,7.8nm,0.2s						
MVO	**Moncorvo**	**6.10**	**48**	P	**Pn**	**09 16 41.0**	**+2.9**
	comp=E,3.5nm,0.5s,SNR=7.9						
MVO				S	**Sn**	**09 17 46.5**	**-1.4**
	comp=E,14nm,1.0s,SNR=7.9						
EPLA	**Plasencia**	**6.13**	**60**	P	**Pn**	**09 16 42.2**	**+3.8**
	comp=E,11nm,0.3s,SNR=23						
EPLA				S	**Sn**	**09 17 47.2**	**-1.4**
	comp=E,13nm,1.0s						
EMAZ	**Mazaricos**	**6.52**	**27**	P	**Pn**	**09 16 46.6**	**+2.9**
	comp=E,0.9nm,0.3s,SNR=7.9						
EMAZ				S	**Sn**	**09 17 53.6**	**-4.5**
	comp=E,41nm,1.4s,SNR=7.9						
PBRG	**Braganca**	**6.68**	**45**	*e*Pn	**Pn**	**09 16 50.3**	**+4.3**
PBRG				*e*Sn	**Sn**	**09 18 01.6**	**-0.6**
PBRG				A	A	09 18 04.6	
	comp=E,4.3nm,0.2s						
PBRG	**Braganca**	**6.68**	**45**	P	**Pn**	**09 16 50.3**	**+4.3**
PBRG				S	**Sn**	**09 18 01.6**	**-0.6**
	comp=E,2.2nm,0.2s						
EADA	**Adamuz**	**6.76**	**79**	P	**Pn**	**09 16 50.6**	**+3.5**
	comp=E,1.4nm,0.3s,SNR=35						
EADA				S	**Sn**	**09 18 02.3**	**-1.7**
	comp=E,3.0nm,1.5s,SNR=7.9						
ECAL	**Calabor**	**6.77**	**44**	P	**Pn**	**09 16 51.2**	**+3.9**
	comp=E,1.2nm,0.1s,SNR=13						
ECAL				S	**Sn**	**09 18 03.0**	**-1.5**
	comp=E,21nm,1.1s,SNR=5.9						
PAB	**San Pablo**	**7.20**	**68**	P	**Pn**	**09 16 56.6**	**+3.6**
	comp=E,7.6nm,0.5s,SNR=7.9						
PAB				S	**Sn**	**09 18 12.8**	**-2.1**
	comp=E,8.6nm,1.3s,SNR=7.9						
ESDC	**Sonseca Array**	**7.52**	**68**	P	**Pn**	**09 17 01.1**	**+3.7**
	comp=E,12nm,0.2s,baz=253,slow=13,SNR=27						
GUD	**Guadarrama**	**7.71**	**61**	P	**Pn**	**09 17 03.3**	**+3.1**
	comp=E,0.1nm,0.1s,SNR=7.2						
GUD				S	**Sn**	**09 18 25.4**	**-2.3**
	comp=E,5.0nm,0.8s,SNR=7.9						
EARI	**Arriondas**	**8.52**	**42**	P	**Pn**	**09 17 14.8**	**+3.5**
	comp=E,4.4nm,0.4s,SNR=4.0						
EARI				S	**Sn**	**09 18 44.2**	**-3.3**
	comp=E,25nm,1.7s,SNR=4.0						
ETOR	**Torete**	**9.26**	**64**	P	**Pn**	**09 17 25.2**	**+3.8**
	comp=E,0.9nm,0.3s,SNR=25						
ETOR				S	**Sn**	**09 19 01.7**	**-4.0**
	comp=E,52nm,1.7s,SNR=7.9						
SJPF	**Ste Jean**	**10.78**	**53**	*e*Pn	**Pn**	**09 17 45.6**	**+3.5**
SJPF				*e*Sn	**Sn**	**09 19 38.7**	**-4.0**
	comp=E,0.9nm,0.3s						
SJPF	**Ste Jean**	**10.78**	**53**	P	**Pn**	**09 17 45.6**	**+3.5**
SJPF				S	**Sn**	**09 19 38.7**	**-4.0**
	comp=E,0.4nm,0.3s						
ETSF	**Etsaut**	**11.11**	**55**	*e*Pn	**Pn**	**09 17 50.2**	**+3.5**
ETSF	**Etsaut**	**11.11**	**55**	*e*P	Pn	09 17 55.0	+8.3
ETSF				*e*Sn	**Sn**	**09 19 46.7**	**-4.2**
	comp=E,1.5nm,0.3s						
**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**0.74**	**109**	*eP*	Pg	09 43 41.9	-2.1
PSET				*eS*	Sg	09 43 52.3	-1.3
PSET				A	A	09 43 53.6	
	63nm,0.3s						
PSCM	**Serra do Cume**	**0.75**	**328**	*eP*	Pg	09 43 42.6	-1.5
PSCM				*eS*	Sg	09 43 52.2	-1.6
PSCM				A	A	09 43 53.4	
	155nm,0.2s						
ADH	**Angra Heroismo**	**0.77**	**320**	*eP*	Pg	09 43 42.7	-1.8
ADH				*eS*	Sg	09 43 52.7	-1.7
ADH				A	A	09 43 53.7	
	107nm,0.2s						
ROSA	**Rosais**	**1.44**	**297**	*eP*	Pn	09 43 52.7	-4.4
ROSA				*eS*	Sg	09 44 09.3	-6.7
ROSA				A	A	09 44 11.3	
	8.6nm,0.2s						
PCAN	**Candelaria**	**1.53**	**285**	*eP*	Pn	09 43 51.8	-6.6
PCAN				*eS*	Sg	09 44 10.9	-8.1
PCAN				A	A	09 44 12.8	
	30nm,0.5s						
PSMA	**Santa Maria**	**1.59**	**132**	*eS*	Sn	09 44 13.0	-7.5
PSMA				A	A	09 44 16.6	
	5.6nm,0.1s						

*ATH **13** 09:44:07.7, 35°.83N×27°.39E, h15km±2km, ML2.3/3, Error ellipse: s-maj=3.7km s-min=1.3km az=136.0*
*THE **13** 09:44:07.6, 35°.79N×27°.45E, h4km±5km, ML2.3/3, Error ellipse: s-maj=6.8km s-min=0.9km az=138.0*
*ISK **13** 09:44:07.8, 35°.78N×27°.40E, h15km, ML2.8/9*
*ISCJB **13** 09:44:08.1±0.7, 35°.79N±0°.04×27°.44E±0°.06, h11km±5km, Error ellipse: s-maj=9.7km s-min=4.1km az=39.7*

ISC 13 09:44:07.6±1.0, 35°.79N±0°.05×27°.43E±0°.04, h16km±10km, n18, σ0s84/29, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.32**	**223**	PG	**Pg**	**09 44 14.4**	**+0.2**
KARP				SG	**Sb**	**09 44 19.5**	**-0.5**
KARP	**Karpathos**	**0.32**	**223**	P	**Pg**	**09 44 14.5**	**+0.2**
KARP				S	**Sb**	**09 44 19.7**	**-0.3**
	1μm,0.3s						
KARP	**Karpathos**	**0.32**	**223**	P	**Pg**	**09 44 14.5**	**+0.2**
KARP				S	**Sb**	**09 44 19.5**	**-0.5**
KARP				AML	AML	09 44 20.8	
	comp=N,2605μm,0.3s						
KARP				AML	AML	09 44 21.1	
	comp=E,3212μm,0.3s						
ARG	**Arkhangelos**	**0.71**	**53**	P	**Pg**	**09 44 20.7**	**-0.8**
ARG				S	**Sb**	**09 44 31.6**	**+0.4**
	comp=E,175nm,0.3s						
ARG	**Arkhangelos**	**0.71**	**53**	P	**Pg**	**09 44 21.5**	**0.0**
ARG				S	**Sg**	**09 44 31.1**	**+0.2**
ARG				AML	AML	09 44 35.5	
	comp=N,323μm,0.3s						
ARG				AML	AML	09 44 36.4	
	comp=E,419μm,0.3s						
DAT	**Datca**	**0.95**	**7**	PG	**Pn**	**09 44 26.9**	**+0.5**
DAT				SG	**Sn**	**09 44 40.5**	**+0.8**
DATC	**Datca-Mugla**	**0.99**	**11**	PG	**Pn**	**09 44 27.5**	**+0.6**
DATC				SG	**Sn**	**09 44 41.9**	**+1.4**
BBRN	**Bozburun-Marma**	**1.03**	**30**	PG	**Pn**	**09 44 28.4**	**+1.0**
ZKR	**Zakros**	**1.19**	**236**	P	**Pg**	**09 44 30.4**	**-0.2**
ZKR				S	**Sg**	**09 44 46.7**	**+0.5**
	comp=E,88nm,0.4s						
ZKR	**Zakros**	**1.19**	**236**	P	**Pg**	**09 44 30.5**	**-0.2**
ZKR				S	**Sg**	**09 44 47.3**	**+1.1**
ZKR				AML	AML	09 44 51.1	
	comp=E,240μm,0.3s						
ZKR				AML	AML	09 44 51.3	
	comp=N,100μm,0.5s						
BODT	**Bodrum**	**1.28**	**356**	PN	**Pg**	**09 44 31.8**	**-0.4**
DALY	**Dalyan (Mula)**	**1.43**	**44**	PN	**Pb**	**09 44 34.1**	**+0.3**
TURN	**Turunc**	**1.44**	**41**	PN	**Pn**	**09 44 30.3**	**-2.7**
ANAF	**Anafi Island**	**1.46**	**294**	P	**Pb**	**09 44 34.1**	**-0.3**
YER	**Yerkesik**	**1.51**	**27**	PN	**Pb**	**09 44 35.5**	**+0.2**
AMGA	**Amorgos Island**	**1.62**	**311**	P	**Pb**	**09 44 36.3**	**-0.8**
AMGA				S	**Sb**	**09 44 56.5**	**-0.9**
LAST	**Lasithi**	**1.71**	**249**	P	**Pb**	**09 44 38.2**	**-0.4**
LAST				S	**Sg**	**09 45 01.9**	**-0.8**
APE	**Apeiranthos**	**2.00**	**310**	PN	**Pn**	**09 44 41.3**	**+0.6**

*SJA **13** 09:44:23.5±0.6, 29°.85S×71°.74W, h4km±5km, ML3.6, MW3.6*
*GUC **13** 09:44:28.3±0.6, 29°.79S×71°.26W, h46km±1km, ML4.0*
*NEIC **13** 09:44:28.0±0.0, 29°.79S×71°.26W, h47km, ML4.0(GUC), After GUC.*
NEIC Felt [III] at La Higuera and [II] at Paiguano.

ISC 13 09:44:27.5±2.1, 29°.78S±0°.03×71°.56W±0°.09, h23km±14km, n32, σ1s62/51, 2C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.30**	**115**	⇑*iP*	**Pn**	**09 44 36.3**	**-0.2**
LSCH				*i* S	**Sb**	**09 44 41.8**	**+2.8**
GO04	**Tololo Observa**	**0.76**	**121**	*e*Pn	**Pn**	**09 44 41.6**	**-1.5**
GO04				*e*Sn	**Sb**	**09 44 51.8**	**-0.7**
GO04	**Tololo Observa**	**0.76**	**121**	*eP*	**Pn**	**09 44 41.1**	**-2.1**
GO04				*eS*	**Sb**	**09 44 51.7**	**-0.7**
GO04	**Tololo Observa**	**0.76**	**121**	*eP*	**Pn**	**09 44 41.5**	**-1.6**
GO04				*i* S	**Sb**	**09 44 51.4**	**-1.0**
LCO	**Las Campanas**	**1.07**	**44**	*e*Pn	**Pn**	**09 44 46.6**	**-0.7**
LCO				*e*Sn	**Sn**	**09 45 00.9**	**-0.8**
LCO	**Las Campanas**	**1.07**	**44**	⇓*iP*	**Pn**	**09 44 46.7**	**-0.7**
LCO				*i* S	**Sn**	**09 45 00.3**	**-1.4**
GO03	**Copiap**	**2.47**	**28**	*e*Pn	**Pn**	**09 45 07.7**	**+1.2**
GO03				*e*Sn	**Sn**	**09 45 35.0**	**-1.0**
GO03	**Copiap**	**2.47**	**28**	*eP*	**Pn**	**09 45 07.1**	**+0.6**
GO03				*i* S	**Sn**	**09 45 36.4**	**+0.4**
GO03				IAML		09 45 45.9	
	comp=E,536nm,0.5s						
AGUA	**GUANDACOL**	**2.69**	**84**	*eP*	**Pb**	**09 45 12.8**	**-2.2**
AGUA				*eS*	**Sb**	**09 45 49.2**	**+1.6**
RTLS	**Leoncito**	**2.80**	**137**	*eP*	**Pn**	**09 45 13.6**	**+2.4**
RTLS				*eS*	**Sb**	**09 45 50.3**	**-0.7**
RTLS				IAML		09 45 55.9	
	comp=Z,172nm,0.3s						
AMOG	**MOGNA**	**2.89**	**114**	*eP*	**Pn**	**09 45 14.9**	**+2.6**
AMOG				*eS*	**Sb**	**09 45 53.5**	**+0.2**
ZON	**Zonda**	**3.04**	**126**	*eP*	**Pn**	**09 45 16.6**	**+2.3**
ZON				IAML		09 46 02.0	
	comp=Z,109nm,0.2s						
AUSP	**Uspallata**	**3.06**	**143**	*eP*	**Pn**	**09 45 17.1**	**+2.2**
AUSP				*eS*	**Sb**	**09 45 56.0**	**-2.6**
RTLL	**Cerro Villicun**	**3.07**	**121**	*eP*	**Pn**	**09 45 17.3**	**+2.5**
VCA	**Vinchina**	**3.11**	**71**	*eP*	**Pn**	**09 45 18.7**	**+3.4**
VCA				*eS*	**Sb**	**09 45 59.8**	**0.0**
ROCH	**El Roble**	**3.21**	**172**	*eP*	**Pn**	**09 45 17.2**	**+0.4**
ROCH				*i* S	**Sn**	**09 45 55.3**	**+0.7**
ROCH				IAML		09 46 05.4	
	comp=N,445nm,0.3s						
ROC1	**El Roble**	**3.22**	**172**	*e*Sn	**Sn**	**09 45 55.1**	**+0.5**
ROC1	**El Roble**	**3.22**	**172**	*eP*	**Pn**	**09 45 17.4**	**+0.5**
RTCV	**Cerro Valdivia**	**3.32**	**129**	*eP*	**Pn**	**09 45 20.5**	**+2.3**
PEL	**Peldehue**	**3.43**	**168**	*e*Pn	**Pn**	**09 45 20.5**	**+0.8**
PEL	**Peldehue**	**3.43**	**168**	⇑*iP*	**Pn**	**09 45 20.5**	**+0.8**
PEL				*i* S	**Sn**	**09 46 00.6**	**+0.9**
PEL				IAML		09 46 17.0	
	comp=E,239nm,0.6s						
ASAL	**Salagasta**	**3.64**	**141**	*eP*	**Pn**	**09 45 24.9**	**+2.3**
FCH	**Farellones**	**3.70**	**163**	⇓*iP*	**Pn**	**09 45 25.0**	**+1.4**
FCH				*i* S	**Sn**	**09 46 08.2**	**+1.6**
FCH				IAML		09 46 21.1	
	comp=N,185nm,0.3s						
CLCH	**Cerro Calan**	**3.71**	**167**	⇓*iP*	**Pn**	**09 45 24.6**	**+1.1**
CLCH				*i* S	**Sn**	**09 46 07.5**	**+1.0**
STL	**Santa Lucia**	**3.73**	**168**	*eP*	**Pn**	**09 45 25.0**	**+1.3**
STL				*i* S	**Sn**	**09 46 08.4**	**+1.5**
ARCO	**CERRO ARCO**	**3.79**	**144**	*eP*	**Pn**	**09 45 27.1**	**+2.4**
ARCO				IAML		09 46 24.4	
	comp=Z,120nm,0.4s						
AAGR	**Agrelo**	**4.04**	**145**	*eP*	**Pn**	**09 45 30.3**	**+2.2**
LMEL	**Las Melosas**	**4.21**	**164**	⇓*iP*	**Pn**	**09 45 32.3**	**+1.8**
LMEL				*i* S	**Sn**	**09 46 20.0**	**+0.8**
ACAN	**Cantantal**	**4.50**	**125**	*eP*	**Pn**	**09 45 35.5**	**+1.1**
GO02	**Mina Guanaco**	**4.92**	**21**	*e*Pn	**Pn**	**09 45 40.0**	**-0.4**
GO05	**Huala**	**5.22**	**183**	*e*Pn	**Pn**	**09 45 43.2**	**-1.1**
TRQA	**Tornquist**	**11.46**	**139**	*e*Pn	**Pn**	**09 47 09.0**	**-0.8**

*IDC **13** 09:49:07.7±1.5, 3°.19S×142°.96E, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.7/39, mbtmp3.8/7, ML3.6/2, MS2.8/4, Ms1 2.8/4, ms1mx2.5/32, Error ellipse: s-maj=36.9km s-min=23.4km az=93.0*
*ISCJB **13** 09:49:10.8±1.0, 3°.2S±0°.1×142°.73E±0°.10, h23km, mb3.7/5, MS2.9/2, Error ellipse: s-maj=18.1km s-min=11.5km az=37.4*

ISC 13 09:49:11.9±1.2, 3°.2S±0°.1×142°.7E±0°.1, h23km, n15, σ1s34/9, mb3.8/5, 1C, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.08**	**288**	Pn	**Pb**	**09 49 48.3**	**-0.7**
	3.2nm,0.3s,baz=101,slow=9.5,SNR=10						
JAY				Sn	**Sn**	**09 50 10.9**	**+0.2**
	6.5nm,0.3s,baz=117,slow=16,SNR=6.2						
JAY				LR	LR	09 50 22.5	
	comp=Z,18nm,18.8s,baz=322,slow=32						
SIJI	**Sorong**	**11.64**	**281**	LR	LR	09 57 41.6	
	comp=Z,79nm,18.6s,baz=29,slow=43						
WRA	**Warramunga Arr**	**18.57**	**205**	P	**Pn**	**09 53 27.8**	**+0.1**
	0.4nm,0.3s,baz=26,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**22.09**	**202**	P	**P**	**09 54 06.9**	**+1.3**
	2.2nm,0.6s,baz=26,slow=10,SNR=15						
ASAR				LR	LR	10 03 55.0	
	comp=Z,43nm,19.8s,baz=44,slow=40						
FITZ	**Fitzroy Crossi**	**22.35**	**227**	P	**P**	**09 54 09.1**	**+0.6**
	3.7nm,0.8s,baz=32,slow=12,SNR=6.1						
FITZ				LR	LR	10 04 32.6	
	comp=Z,55nm,19.3s,baz=50,slow=41						
STKA	**Stephens Creek**	**28.59**	**182**	P	**P**	**09 55 03.9**	**-2.4**
	1.8nm,0.7s,baz=349,slow=16,SNR=2.5						
H11S3	**WAKE ISLAND Hy 31.96**	**47**		T	T	10 29 18.8	
	baz=229,slow=75,SNR=102						
H11S2	**WAKE ISLAND Hy 31.97**	**47**		T	T	10 29 19.5	
	baz=229,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy 31.98**	**47**		T	T	10 29 20.8	
	baz=229,slow=75,SNR=40						
H11N1	**WAKE ISLAND Hy 32.89**	**45**		T	T	10 30 32.9	
	baz=71,slow=74,SNR=2.8						
H11N2	**WAKE ISLAND Hy 32.91**	**45**		T	T	10 30 31.3	
	baz=323,slow=74,SNR=3.4						
H11N3	**WAKE ISLAND Hy 32.91**	**45**		T	T	10 30 32.6	
MKAR	**Makanchi Array**	**72.59**	**321**	P	**P**	**10 00 37.5**	**0.0**
	0.2nm,0.6s,baz=112,slow=6.2,SNR=2.0						
ILAR	**Eielson Array**	**84.61**	**24**	P	**P**	**10 01 43.4**	**+0.1**
	0.3nm,0.7s,baz=246,slow=4.5,SNR=2.9						
SYO	**Syowa Base**	**91.75**	**201**	⇑*eP*	**P**	**10 02 18.8**	**+1.5**

*IDC **13** 09:52:38.4±0.9, 15°.01N×125°.13E, h0km, mb3.8/7, mb1 4.1/9, mb1mx3.7/57, mbtmp3.9/9, ML3.9/2, MS2.9/5, Ms1 3.0/5, ms1mx2.6/48, Error ellipse: s-maj=27.0km s-min=17.6km az=79.0*
*ISCJB **13** 09:52:40.8±0.6, 15°.02N±0°.03×125°.02E±0°.05, h33km, mb3.8/7, MS2.7/4, Error ellipse: s-maj=6.6km s-min=4.8km az=168.1*
*MAN **13** 09:52:40.9, 14°.99N×125°.02E, h32km, mb4.5, ML3.3, MS3.1*

ISC 13 09:52:42.9±0.8, 14°.98N±0°.04×125°.00E±0°.07, h35km, n20, σ1s74/25, mb4.0/7, MS2.7/4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.60**	**211**	*eP*	**Pn**	**09 53 07.2**	**-1.5**
PVCP				*eS*	**Sn**	**09 53 26.8**	**-1.3**
CNP	**Catarman**	**2.48**	**188**	*eP*	**Pn**	**09 53 20.3**	**-0.5**
CNP				*eS*	**Sn**	**09 53 49.4**	**-0.5**
AUQP	**San Andres**	**2.79**	**234**	*eP*	Pn	09 53 29.0	+3.9
AUQP				*eS*	**Sn**	**09 54 00.4**	**+2.8**
POLP	**Polilio Island**	**2.97**	**265**	*eP*	**Pn**	**09 53 25.9**	**-1.6**
POLP				*eS*	**Sn**	**09 54 02.1**	**+0.2**
BOAC	**Boac**	**3.41**	**244**	*eP*	**Pn**	**09 53 33.6**	**0.0**
BOAC				*eS*	**Sn**	**09 54 14.1**	**+1.3**
CAUP	**Cauayan**	**3.62**	**303**	*eP*	**Pn**	**09 53 36.0**	**-0.5**
CAUP				*eS*	**Sn**	**09 54 17.6**	**-0.4**
TGY	**Tagaytay City**	**4.03**	**258**	Pn	**Pn**	**09 53 42.8**	**+0.7**
	42nm,0.3s,baz=164,slow=23,SNR=3.0						
TGY				Sn	**Sn**	**09 54 22.5**	**-5.6**
	71nm,0.3s,baz=97,slow=5.8,SNR=3.7						
CVP	**Callao Caves**	**4.07**	**312**	⇓*iP*	**Pn**	**09 53 41.5**	**-1.2**
CVP				*i* S	**Sn**	**09 54 27.9**	**-1.3**
APYP	**Conner**	**4.60**	**309**	*eP*	**Pn**	**09 53 50.4**	**+0.4**
APYP				*eS*	**Sn**	**09 54 43.4**	**+1.3**
JOW	**Kunigami**	**12.18**	**14**	Pn	**Pn**	**09 55 32.5**	**-1.4**
	0.6nm,0.3s,baz=193,slow=14,SNR=10						
JNU	**Nakatsue**	**18.83**	**15**	LR	LR	10 04 22.3	
	comp=Z,48nm,20.0s,baz=224,slow=38						
KAPI	**Kappang**	**20.54**	**195**	LR	LR	10 05 55.6	
	comp=Z,36nm,20.9s,baz=34,slow=39						
KSRS	**Korea Array**	**22.53**	**6**	P	**P**	**09 57 39.5**	**-0.2**
	1.0nm,0.6s,baz=189,slow=11,SNR=7.8						
KSRS				LR	LR	10 05 56.4	
	comp=Z,31nm,20.6s,baz=170,slow=36						
MJAR	**Matsushiro Arr**	**24.50**	**26**	LR	LR	10 06 19.3	
	comp=Z,24nm,18.8s,baz=195,slow=34						
CMAR	**Chiang Mai Arr**	**25.18**	**282**	P	**P**	**09 58 07.2**	**+1.8**
	4.5nm,0.8s,baz=94,slow=7.8,SNR=10						
CMAR				LR	LR	10 09 04.9	
	comp=Z,28nm,19.1s,baz=167,slow=39						
WRA	**Warramunga Arr**	**35.90**	**165**	P	**P**	**09 59 42.1**	**+2.2**
	1.8nm,0.9s,baz=341,slow=10.0,SNR=3.9						
ASAR	**Alice Springs**	**39.39**	**167**	P	**P**	**10 00 09.3**	**-0.1**
	1.7nm,0.6s,baz=354,slow=7.5,SNR=14						
MKAR	**Makanchi Array**	**47.58**	**321**	P	**P**	**10 01 16.0**	**+0.8**
	0.8nm,0.8s,baz=128,slow=7.9,SNR=3.7						
STKA	**Stephens Creek**	**49.24**	**161**	P	**P**	**10 01 27.1**	**-1.0**
	1.8nm,0.7s,baz=333,slow=9.1,SNR=3.3						
ILAR	**Eielson Array**	**75.78**	**26**	P	**P**	**10 04 25.5**	**+0.6**
	0.2nm,0.7s,baz=282,slow=4.5,SNR=3.6						

SVSA 13 09:55:26.2±1.1, 38°.11N×26°.57W, h5km, MD3.7, ML2.9, 1C, Error ellipse: s-maj=7.3km s-min=1.7km az=37.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.72**	**324**	*eP*	Pg	09 55 38.0	-2.1
PSCM				*eS*	Sg	09 55 47.4	-2.2
PSCM				A	A	09 55 49.9	
	287nm,0.3s						
PSET	**Sete Cidades**	**0.73**	**113**	*eP*	Pg	09 55 38.2	-2.1
PSET				*eS*	Sg	09 55 47.8	-2.0
PSET				A	A	09 55 48.7	
	453nm,0.2s						
ADH	**Angra Heroismo**	**0.75**	**316**	⇑*iP*	Pg	09 55 38.1	-2.5
ADH				*eS*	Sg	09 55 47.8	-2.5
ADH				A	A	09 55 50.2	
	338nm,0.8s						
PDA	**Ponta Delgada**	**0.81**	**117**	*eP*	Pg	09 55 39.2	-2.5
PDA				*eS*	Sg	09 55 49.5	-2.7
PDA				A	A	09 55 50.8	
	244nm,0.2s						
GRON	**Grota Negra**	**0.89**	**112**	*eP*	Pg	09 55 42.1	-1.2
GRON				*eS*	Sg	09 55 54.4	-0.5
GRON				A	A	09 55 55.4	
	80nm,0.2s						
PCALD	**Caldeiras da R**	**0.92**	**110**	*eP*	Pg	09 55 40.7	-3.1
PCALD				*eS*	Sg	09 55 51.8	-3.8
PCALD				A	A	09 55 52.2	
	153nm,0.1s						
BART	**Pico Bartolome**	**1.16**	**106**	*eP*	Pg	09 55 43.6	-4.9
BART				*eS*	Sg	09 55 57.7	-5.8
BART				A	A	09 56 00.4	
	68nm,0.5s						
ROSA	**Rosais**	**1.44**	**295**	*eP*	Pn	09 55 48.5	-4.5
ROSA				*eS*	Sb	09 56 04.8	-7.4
ROSA				A	A	09 56 07.5	
	19nm,0.2s						
PICO	**Pico**	**1.51**	**285**	*eP*	Pn	09 55 49.2	-4.7
PICO				*eS*	Sn	09 56 06.2	-7.8
PICO				A	A	09 56 09.1	
	24nm,0.2s						
PCAN	**Candelaria**	**1.54**	**284**	*eS*	Sn	09 56 05.3	-10
PSMA	**Santa Maria**	**1.60**	**134**	*eP*	Pn	09 55 50.6	-4.6
PSMA				*eS*	Sn	09 56 08.4	-7.8
PSMA				A	A	09 56 10.6	
	45nm,0.2s						
PSMN	**Pico do Norte,**	**1.63**	**132**	*eP*	Pn	09 55 50.2	-5.4
PSMN				*eS*	Sn	09 56 08.0	-9.0
PSMN				A	A	09 56 11.3	
	18nm,0.2s						

*NSSC **13** 09:56:45.8±1.1, 33°.60N×35°.52E, h10km±64km, ML1.3*
*GRAL **13** 09:56:49.4±0.3, 33°.40N×35°.67E, h2km±13km, MD2.6*

ISC 13 09:56:51.0±1.4, 33°.57N±0°.09×35°.79E±0°.07, h5km±18km, n7, σ1s04/10, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.08**	**152**	*eP*	**Pg**	**09 56 52.5**	**-0.4**
RCY				*eS*	**Sg**	**09 56 54.9**	**+0.6**
QRWL	**Qaraoun**	**0.09**	**255**	*eP*	**Pg**	**09 56 52.1**	**-0.9**
BRBR	**Barbar**	**0.21**	**140**	*eP*	**Pg**	**09 56 54.3**	**-0.8**
BRBR				*eS*	**Sg**	**09 56 59.3**	**+1.4**
BRBR				AML	AML	09 57 01.7	
	comp=N,45nm,0.5s						
BRBR				AML	AML	09 57 01.9	
	comp=E,23nm,0.4s						
SHBL	**Chebaa**	**0.23**	**190**	*eP*	Pg	09 56 51.0	-4.5
DQRL	**Deir Qamar**	**0.23**	**306**	*eP*	**Pg**	**09 56 55.1**	**-0.4**
DQRL				*eS*	**Sg**	**09 56 59.3**	**+0.8**
QASN	**Qassioun**	**0.41**	**95**	*eP*	**Pg**	**09 56 58.2**	**-0.7**
TOTH	**TOTAH**	**0.57**	**111**	*eP*	**Pg**	**09 57 01.1**	**-1.0**
TOTH				*eS*	**Sb**	**09 57 12.5**	**+0.4**
TOTH				AML	AML	09 57 17.4	
	comp=N,9.2nm,0.4s						
TOTH				AML	AML	09 57 19.9	
	comp=E,10nm,0.4s						

SNET 13 09:58:48.4±1.0, 15°.50N×89°.67W, h6km±11km, ML3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTO3	**Montecristo**	**1.14**	**165**	*eP*	Pg	09 59 09.6	-0.7
MTO3				*eS*	Sn	09 59 26.9	-0.2
LLGN	**La Laguna**	**1.50**	**152**	*eP*	Pn	09 59 15.2	-0.7
LLGN				*eS*	Sg	09 59 36.7	+0.2
LLGN				IAML		09 59 38.6	
	comp=Z,1μm,0.3s						
UNIC	**Santa Ana**	**1.51**	**176**	*eP*	Pn	09 59 15.2	-0.8
RTR	**El Retiro**	**1.60**	**179**	*eP*	Pn	09 59 17.2	-0.1
SNJE	**San Jose**	**1.62**	**178**	*eP*	Pn	09 59 17.6	-0.1
SBLS	**San Blas**	**1.65**	**178**	*eP*	Pn	09 59 18.4	+0.2
SBLS				*eS*	Sb	09 59 41.1	+0.5
UEES	**San Salvador**	**1.81**	**167**	*eP*	Pn	09 59 20.9	+0.7
UEES				IAML		09 59 54.5	
	comp=Z,618nm,0.2s						
LFU	**La Fuente**	**1.82**	**163**	*eP*	Pn	09 59 20.0	-0.4
VICT	**Victoria**	**1.83**	**147**	*eP*	Pn	09 59 19.6	-0.9
VICT				IAML		09 59 47.6	
	comp=Z,466nm,0.3s						
UDBS	**Soyapango**	**1.84**	**164**	*eP*	Pn	09 59 20.1	-0.4
UDBS				IAML		09 59 50.4	
	comp=Z,1μm,0.3s						
SNET	**Serv Nac Est T**	**1.85**	**167**	*eP*	Pn	09 59 20.9	+0.1
LOMA	**San Marcos**	**1.90**	**165**	IAML		09 59 54.7	
	comp=Z,407nm,0.3s						
PAVA	**Las Pavas**	**1.92**	**158**	*eP*	Pn	09 59 21.6	0.0
PAVA				IAML		09 59 52.1	
	comp=Z,697nm,0.4s						

IDC 13 10:03:51.2±1.6, 57°.92N×32°.25W, h0km, mb3.3/6, mb1 3.7/6, mb1mx3.4/48, mbtmp3.3/6, Error ellipse: s-maj=66.3km s-min=29.2km az=41.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**38.56**	**312**	P	P	10 11 14.2	-0.9
	0.2nm,0.6s,baz=55,slow=9.5,SNR=4.8						
ILAR	**Eielson Array**	**48.03**	**328**	P	P	10 12 31.9	+0.4
	0.5nm,0.8s,baz=43,slow=6.0,SNR=5.6						
PDAR	**Pinedale Array**	**48.81**	**287**	P	P	10 12 38.8	+0.6
	0.5nm,0.8s,baz=65,slow=7.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**51.51**	**136**	P	P	10 12 58.3	-0.2
	0.3nm,0.6s,baz=336,slow=6.3,SNR=1.4						
TXAR	**Lajitas Array**	**55.90**	**272**	P	P	10 13 30.7	0.0
	0.1nm,0.6s,baz=63,slow=4.4,SNR=1.9						
NVAR	**Mina Array Bea**	**56.47**	**290**	P	P	10 13 34.4	-0.5
	0.4nm,0.7s,baz=70,slow=9.6,SNR=3.7						

*ISK **13** 10:03:54.8, 38°.70N×43°.19E, h16km, ML2.2/4*
*DDA **13** 10:03:55.8, 38°.72N×43°.19E, h7km±4km, ML2.7*

ISC 13 10:03:55.8±1.0, 38°.70N±0°.03×43°.18E±0°.04, h17km±10km, n9, σ0s71/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.20**	**123**	PG	**Pb**	**10 04 00.8**	**-0.2**
VANB				SG	**Sg**	**10 04 05.3**	**+1.3**
TVAN	**Van**	**0.25**	**134**	*i* P	**Pb**	**10 04 01.6**	**-0.3**
TVAN				*i* S	**Sg**	**10 04 05.7**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.37**	**287**	*i* P	**Pb**	**10 04 03.5**	**-0.5**
ADCV				*i* S	**Sb**	**10 04 10.1**	**+0.6**
ADCV				IAML_P			
	comp=Z,973nm,0.1s						
GEVA	**Gevas**	**0.40**	**193**	*i* P	**Pb**	**10 04 04.3**	**-0.2**
GEVA				*i* S	**Sb**	**10 04 11.2**	**+0.8**
GEVA				IAML_P			
	comp=Z,3μm,0.1s						
AKDM	**Akdamar-Van**	**0.40**	**202**	PG	**Pg**	**10 04 03.5**	**-0.6**
VMUR	**Van-Muradiye**	**0.42**	**47**	*i* P	**Pb**	**10 04 04.9**	**0.0**
VMUR				*i* S	**Sb**	**10 04 11.6**	**+0.6**
CLDR	**Caldiran**	**0.73**	**52**	PG	**Pg**	**10 04 09.3**	**-0.8**
CLDR				SG	**Sb**	**10 04 19.8**	**-0.1**
TUTA	**Tutak**	**0.75**	**338**	*i* P	**Pb**	**10 04 10.7**	**+0.1**
TUTA				*i* S	**Sb**	**10 04 21.6**	**+0.9**
AGRB	**Hanur-Agry**	**0.88**	**351**	PG	**Pg**	**10 04 12.2**	**-0.8**
AG

ESDC LR LR 10 22 52.2
comp=Z,76nm,19.7s,baz=295,slow=33
GRFO Grafenberg 26.45 89 *e*S **S 10 18 50.6 -0.7**
CLL Collm 26.49 85 *e*P **P 10 14 20.0 +1.4**
CLL LmV 10 25 00.0
comp=Z,200nm,18.7s
ARCES ARCESS Array B 26.73 41 P **P 10 14 19.4 -1.3**
comp=Z,3.9nm,0.9s,baz=283,slow=6.1,SNR=5.5
ARCES LR LR 10 22 48.9
comp=Z,43nm,20.1s,baz=224,slow=32
DAVOX Davos/Dischmat 27.50 96 LR LR 10 24 50.9
comp=Z,174nm,19.9s,baz=264,slow=35
RES Resolute Bay 28.23 330 LR LR 10 25 44.1
comp=Z,104nm,18.4s,baz=124,slow=36
GERES GERESS Array B 28.26 89 LR LR 10 26 14.9
comp=Z,164nm,18.2s,baz=296,slow=37
VRAC Vranov 29.52 86 LR LR 10 26 25.1
comp=Z,171nm,20.8s,baz=238,slow=36
KLMR Klimovskoe 34.84 54 *e*P **P 10 15 31.9 -0.3**
KLMR AMP 10 15 34.8
comp=Z,36nm,1.4s
KEST Kesra 35.23 111 LR LR 10 29 05.1
comp=Z,148nm,22.0s,baz=258,slow=35
AKASG Malin Array Be 35.31 75 P **P 10 15 36.1 -0.2**
AKASG LR LR 10 29 19.8
comp=Z,68nm,20.6s,baz=20,slow=35
AKBB Malin Array Si 35.31 75 *e*P **P 10 15 36.1 -0.2**
comp=Z,2.6nm,0.7s
EYMN Ely 36.02 280 *e*P **P 10 15 41.6 -0.9**
comp=Z,7.3nm,1.0s
ULM Lac du Bonnet 36.87 286 LR LR 10 29 49.8
comp=Z,192nm,18.1s,baz=45,slow=34
YKA Yellowknife Ar 38.54 312 P **P 10 16 02.8 -0.8**
comp=Z,1.1nm,0.7s,baz=58,slow=9.2,SNR=13
YKA LR LR 10 31 16.5
comp=Z,32nm,19.1s,baz=57,slow=35
YKB5 Yellowknife Ar 38.54 312 *e*P **P 10 16 02.8 -0.8**
ECSD EROS Data Cent 41.49 279 *e*P **P 10 16 28.1 -0.2**
comp=Z,4.2nm,1.1s
INK Inuvik 41.67 327 P **P 10 16 28.8 -0.7**
comp=Z,1.5nm,0.8s,baz=17,slow=13,SNR=5.0
INK Inuvik 41.67 327 *e*P **P 10 16 29.3 -0.2**
comp=Z,2.5nm,1.0s
IDI Anoyia 43.59 96 LR LR 10 36 20.4
comp=Z,52nm,20.4s,baz=284,slow=38
BR101 Keskin Array S 44.94 84 *e*P **P 10 16 57.5 +1.0**
BRTR Keskin Array B 44.94 84 P **P 10 16 57.5 +1.0**
comp=Z,4.0nm,1.1s,baz=313,slow=6.2,SNR=13
ARU Arti 45.49 51 LR LR 10 34 38.1
comp=Z,94nm,20.2s,baz=268,slow=34
TOLK Toolik Lake Re 45.72 333 *e*P **P 10 17 01.4 -0.8**
comp=Z,6.9nm,1.0s
WALA Waterton Lakes 46.56 296 *e*P **P 10 17 10.3 +1.2**
comp=Z,4.3nm,1.0s
MIAR Mount Ida 46.57 267 *e*P **P 10 17 09.5 +0.3**
comp=Z,4.0nm,1.0s
KBZ Khabaz 46.89 74 P **P 10 17 13.2 +1.6**
comp=Z,2.7nm,0.8s,baz=295,slow=7.3,SNR=4.6
COLD Coldfoot 46.95 332 *e*P **P 10 17 12.6 +0.7**
comp=Z,2.9nm,1.1s
ILAR Eielson Array 47.96 328 P **P 10 17 20.1 +0.4**
comp=Z,1.6nm,0.8s,baz=34,slow=6.3,SNR=17
YPP Pitchstone Pla 48.41 290 *e*P **P 10 17 25.8 +2.1**
comp=Z,3.7nm,1.1s
PD31 Pinedale Array 48.87 287 *e*P **P 10 17 27.7 +0.5**
comp=Z,1.9nm,0.8s
PDAR Pinedale Array 48.87 287 P **P 10 17 26.6 -0.6**
comp=Z,1.4nm,0.8s,baz=73,slow=6.6,SNR=11
PDAR LR LR 10 36 58.1
comp=Z,156nm,19.2s,baz=55,slow=35
FXWY Fox Creek 48.98 289 *e*P **P 10 17 30.8 +2.7**
comp=Z,3.0nm,1.1s
TIXI Tiksi 49.90 8 LR LR 10 35 43.8
comp=Z,16nm,21.8s,baz=269,slow=32
CAST Castle Rocks 50.45 330 *e*P **P 10 17 39.6 +0.9**
comp=Z,3.2nm,0.7s
ABKAR Akbulak array 51.13 57 *e*P **P 10 17 44.4 +0.4**
comp=Z,6.5nm,1.1s
TOA1 Torodi Ar. Sit 51.53 136 *e*P **P 10 17 46.0 -1.4**
TOA0 Torodi Ar. Sit 51.54 136 *e*P **P 10 17 47.1 -0.4**
comp=Z,3.6nm,0.8s
TORD Torodi Ar. Bea 51.54 136 P **P 10 17 46.0 -1.4**
comp=Z,4.0nm,1.1s,baz=338,slow=8.5,SNR=11
TORD LR LR 10 38 15.2
comp=Z,50nm,21.0s,baz=340,slow=34
PV03 Paradox Valley 51.83 283 *e*P **P 10 17 49.7 0.0**
comp=Z,2.7nm,1.0s
TTA Tatalina 51.88 331 *e*P **P 10 17 49.3 -0.3**
comp=Z,1.3nm,0.9s
PV13 Radium Mtn., P 51.89 283 *e*P **P 10 17 51.5 +1.3**
comp=Z,3.7nm,0.8s
BRVK Borovoye 52.65 48 *e*P **P 10 17 55.8 +0.5**
comp=Z,5.2nm,1.1s
EIL Elat 53.29 92 LR LR 10 43 59.9
comp=Z,18nm,19.7s,baz=332,slow=40
MOD Modoc Plateau 54.84 294 *e*P **P 10 18 11.3 -0.4**
comp=Z,3.0nm,1.0s
DBIC Dimbokro 55.43 147 LR LR 10 39 07.6
comp=Z,95nm,21.1s,baz=326,slow=33
LTX Lajitas 55.99 272 *e*P **P 10 18 18.6 -1.5**
TXAR Lajitas Array 55.99 272 P **P 10 18 18.6 -1.5**
comp=Z,1.1nm,1.1s,baz=44,slow=4.0,SNR=3.5
NV01 Mina Array Sit 56.52 290 *e*P **P 10 18 24.2 +0.4**
NVAR Mina Array Bea 56.52 290 P **P 10 18 24.2 +0.4**
comp=Z,0.7nm,0.7s,baz=60,slow=5.8,SNR=4.2
KURK Kurchatov 57.70 45 *e*P **P 10 18 32.3 +0.6**
comp=Z,3.5nm,0.9s
MAKZ Makanchi 62.18 45 *e*P **P 10 19 03.3 +0.7**
comp=Z,2.2nm,1.0s
MK31 Makanchi Array 62.31 45 *e*P **P 10 19 04.0 +0.5**
comp=Z,1.5nm,1.1s
MK32 Makanchi Array 62.31 45 *e*P **P 10 19 03.6 +0.2**
MKAR Makanchi Array 62.31 45 P **P 10 19 03.6 +0.2**
comp=Z,1.0nm,0.7s,baz=327,slow=4.9,SNR=9.2
H10S1 ASCENSION HYDR68.26 161 T T 11 33 48.9
baz=350,slow=75,SNR=9.1
H10S3 ASCENSION HYDR68.27 161 T T 11 33 49.5
baz=350,slow=75,SNR=7.3
H10S2 ASCENSION HYDR68.28 161 T T 11 33 50.2
baz=350,slow=75,SNR=7.2
SONA0 Songino Array 69.04 29 *e*P **P 10 19 47.0 0.0**
SONM Songino Array 69.04 29 P **P 10 19 47.0 0.0**
comp=Z,2.2nm,1.0s,baz=335,slow=6.6,SNR=8.8
ULN Ulaanbaatar 69.18 28 *e*P **P 10 19 49.1 +1.2**
comp=Z,5.5nm,1.0s
SIV San Ignacio 77.56 209 LR LR 10 49 43.3
comp=Z,57nm,20.4s,baz=116,slow=32
GO01 Chusmiza 83.33 215 *e*P **P 10 21 10.4 +1.5**
comp=Z,8.0nm,1.1s
KSRS Korea Array 83.38 16 P **P 10 21 08.6 +0.1**
comp=Z,0.6nm,0.5s,baz=348,slow=5.3,SNR=7.4
MAJO Matsushiro 85.41 8 *e*P **P 10 21 19.4 +0.5**
MJAR Matsushiro Arr 85.41 8 P **P 10 21 19.4 +0.5**
comp=Z,2.8nm,1.1s,baz=332,slow=5.4,SNR=4.2
ASAR Alice Springs 144.19 22 PKP PKPbc 10 28 14.8 -0.6
comp=Z,0.5nm,0.9s,baz=354,slow=2.0,SNR=6.8

*IDC **13** 10:10:40.5±0.8, 58°.00N×32°.28W, h0km, mb3.8/15, mb1 4.0/18, mb1mx3.8/46, mbtmp3.9/18, ML2.7/2, Error ellipse: s-maj=23.9km s-min=13.9km az=9.0*
*ISCJB **13** 10:10:41.6±0.5, 58°.07N±0°.09×32°.3W±0°.1, h18km, mb4.1/19, Error ellipse: s-maj=13.1km s-min=7.4km az=9.8*
*NEIC **13** 10:10:42.6±1.8, 58°.12N×32°.26W, h10km, mb4.2/7, Error ellipse: s-maj=20.1km s-min=11.7km az=156.0*
ISC 13 10:10:43.5±0.7, 58°.1N±0°.1×32°.31W±0°.07, h18km, n40, σ19 08/36, mb4.0/19, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**8.52**	**33**	Pn	**Pn**	**10 12 46.9**	**+1.2**
	0.6nm,0.3s,baz=231,slow=12,SNR=3.1						
SFJD	**Kangerlussuaq**	**12.26**	**324**	*e*Pn	**Pn**	**10 13 36.0**	**-0.9**
EKA	**Eskdalemuir Ar**	**16.18**	**87**	Pn	**Pn**	**10 14 28.6**	**-1.0**
	baz=293,slow=9.2,SNR=2.5						
SCHQ	**Schefferville**	**19.22**	**275**	P	**Pn**	**10 15 07.5**	**+0.2**
	0.1nm,0.3s,baz=68,slow=17,SNR=3.3						
NB2	**NORSAR Subarra**	**21.95**	**64**	P	**P**	**10 15 37.3**	**+1.5**
	comp=Z,12nm,1.4s,baz=280,slow=4.6						
NB2	**NORSAR Subarra**	**21.95**	**64**	P	**P**	**10 15 37.3**	**+1.5**
	baz=280,slow=4.6						
NB200	**NORSAR Array S**	**21.95**	**64**	*e*P	**P**	**10 15 34.4**	**-1.4**
NOA	**NORSAR Array B**	**21.95**	**64**	P	**P**	**10 15 34.4**	**-1.4**
	comp=Z,5.4nm,1.0s,baz=282,slow=9.5,SNR=3.9						
HFS	**Hagfors**	**23.35**	**65**	P	**P**	**10 15 50.8**	**+0.4**
	comp=Z,4.7nm,0.9s,baz=204,slow=3.3,SNR=3.8						
ESDC	**Sonseca Array**	**25.89**	**123**	P	**P**	**10 16 14.4**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=318,slow=7.6,SNR=4.7						
KLMR	**Klimovskoe**	**34.94**	**54**	*e*	**P**	**10 17 31.4**	**-2.4**
KLMR				AMP		10 17 35.1	
	comp=Z,26nm,1.3s						
AKASG	**Malin Array Be**	**35.43**	**75**	P	**P**	**10 17 37.3**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=306,slow=8.3,SNR=5.8						
CLTB	**Caltabellotta**	**35.88**	**105**	*e*P	**P**	**10 17 44.5**	**+2.3**
	comp=Z,11nm,1.0s						
YKA	**Yellowknife Ar**	**38.44**	**312**	P	**P**	**10 18 03.3**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=59,slow=9.1,SNR=6.2						
YKB5	**Yellowknife Ar**	**38.44**	**312**	*e*P	**P**	**10 18 03.3**	**-0.2**
INK	**Inuvik**	**41.59**	**327**	P	**P**	**10 18 29.6**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=34,slow=8.6,SNR=3.2						
BR101	**Keskin Array S**	**45.07**	**84**	*e*P	**P**	**10 18 59.2**	**+1.0**
BRTR	**Keskin Array B**	**45.07**	**84**	P	**P**	**10 18 59.2**	**+1.0**
	comp=Z,3.3nm,1.0s,baz=317,slow=6.7,SNR=9.7						
ILAR	**Eielson Array**	**47.89**	**328**	P	**P**	**10 19 21.2**	**+1.3**
	comp=Z,1.4nm,1.0s,baz=30,slow=7.2,SNR=5.6						
ILB	**Eielson Array**	**47.89**	**328**	*e*P	**P**	**10 19 21.2**	**+1.3**
	comp=Z,1.2nm,0.8s						
PD31	**Pinedale Array**	**48.74**	**287**	*e*P	**P**	**10 19 27.0**	**0.0**
	comp=Z,2.7nm,1.1s						
PDAR	**Pinedale Array**	**48.74**	**287**	P	**P**	**10 19 27.0**	**0.0**
	comp=Z,1.0nm,0.8s,baz=60,slow=8.8,SNR=5.9						
BCPM	**Bancas Point**	**49.29**	**321**	*e*P	**P**	**10 19 31.3**	**+0.6**
	comp=Z,129nm,0.9s						
ABKAR	**Akbulak array**	**51.23**	**57**	*e*P	**P**	**10 19 45.9**	**+0.4**
	comp=Z,4.1nm,0.9s						
TOA1	**Torodi Ar. Sit**	**51.62**	**136**	*e*P	**P**	**10 19 47.3**	**-1.4**
TORD	**Torodi Ar. Bea**	**51.63**	**136**	P	**P**	**10 19 47.3**	**-1.5**
	comp=Z,2.9nm,1.0s,baz=350,slow=7.9,SNR=8.1						
SZCU	**Shurtz Canyon**	**54.39**	**285**	*e*P	**P**	**10 20 11.1**	**+1.8**
	comp=Z,8.2nm,1.0s						
LTX	**Lajitas**	**55.86**	**272**	*e*P	**P**	**10 20 19.4**	**-0.4**
TXAR	**Lajitas Array**	**55.86**	**272**	P	**P**	**10 20 19.4**	**-0.4**
	comp=Z,0.7nm,1.1s,baz=54,slow=4.6,SNR=2.5						
ZAA1	**Zalesovo Array**	**57.32**	**39**	*e*P	**P**	**10 20 29.3**	**-0.4**
ZALV	**Zalesovo Beam**	**57.33**	**39**	P	**P**	**10 20 29.3**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=318,slow=8.4,SNR=1.9						
MK32	**Makanchi Array**	**62.40**	**45**	*e*P	**P**	**10 21 04.8**	**0.0**
MKAR	**Makanchi Array**	**62.40**	**45**	P	**P**	**10 21 04.8**	**0.0**
	comp=Z,0.9nm,0.7s,baz=324,slow=6.0,SNR=5.6						
H10S1	**ASCENSION HYDR68.30**		**161**	T	T	11 35 39.2	
	baz=350,slow=75,SNR=13						
H10S3	**ASCENSION HYDR68.31**		**161**	T	T	11 35 40.0	
	baz=350,slow=75,SNR=16						
H10S2	**ASCENSION HYDR68.32**		**161**	T	T	11 35 40.7	
	baz=350,slow=75,SNR=19						
SONA0	**Songino Array**	**69.10**	**28**	*e*P	**P**	**10 21 48.5**	**+0.4**
SONM	**Songino Array**	**69.10**	**28**	P	**P**	**10 21 48.5**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=335,slow=6.6,SNR=5.7						
KSRS	**Korea Array**	**83.41**	**16**	P	**P**	**10 23 08.5**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=350,slow=5.1,SNR=4.0						
ASAR	**Alice Springs**	**144.24**	**22**	PKP	PKPbc	10 30 16.6	+0.5
	comp=Z,0.4nm,0.8s,baz=3.4,slow=4.6,SNR=4.1						

MEX 13 10:14:14.9±0.6, 16°.28N×98°.04W, h5km±13km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.37**	**338**	*e*P	Pn	10 14 36.8	-4.0
TLIG				*e*S	Sg	10 14 54.7	-4.3
VHO	**Vista Hermosa**	**1.47**	**58**	*e*P	Pn	10 14 39.2	-3.2
VHO				*i* S	Sb	10 14 56.7	-5.3

*LJU **13** 10:34:34.3, 45°.56N×14°.28E, h10km, ML2.4*
*ROM **13** 10:34:35.2±0.3, 45°.58N±0°.03×14°.33E±0°.02, h10km, ML2.9/13, Error ellipse: s-maj=3.0km s-min=1.4km az=12.0*
ISC 13 10:34:34.8±0.8, 45°.58N±0°.02×14°.29E±0°.02, h10km±5km, n67, σ0 90/110, 7C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDS	**Knezji Dol**	**0.08**	**127⇑**	*e*Pg	**Pg**	**10 34 37.1**	**-0.2**
KNDS	**Knezji Dol**	**0.08**	**127⇑**	*i*Pg	**Pg**	**10 34 37.0**	**-0.2**
KNDS				*e*Sg	**Sg**	**10 34 39.9**	**+0.8**
	comp=Z,514nm,0.1s						
CEY	**Cerknica**	**0.19**	**30⇓**	*e*Pg	**Pg**	**10 34 39.0**	**0.0**
CEY				*e*Sg	**Sg**	**10 34 42.4**	**+0.7**
CEY	**Cerknica**	**0.19**	**30**	*i*Pg	**Pg**	**10 34 38.9**	**0.0**
CEY				*i* Sg	**Sg**	**10 34 42.2**	**+0.5**
	comp=Z,377nm,0.1s						
SKDS	**Skadanscina**	**0.20**	**262⇑**	*e*Pg	**Pg**	**10 34 38.5**	**-0.5**
SKDS				*e*Sg	**Sg**	**10 34 41.5**	**-0.4**
SKDS	**Skadanscina**	**0.20**	**262⇑**	*i*Pg	**Pg**	**10 34 38.5**	**-0.5**
SKDS				*i* Sg	**Sg**	**10 34 41.5**	**-0.4**
	comp=Z,544nm,0.1s						
JAVS	**Javornik**	**0.36**	**334⇓**	*e*Pg	**Pg**	**10 34 41.6**	**-0.3**
JAVS				*e*Sg	**Sg**	**10 34 47.6**	**+0.8**
JAVS	**Javornik**	**0.36**	**334**	*i*Pg	**Pg**	**10 34 41.6**	**-0.3**
JAVS				*i* Sg	**Sg**	**10 34 47.7**	**+1.0**
	comp=Z,232nm,0.1s						
GBRS	**Gornja Briga**	**0.37**	**97**	*i*Pg	**Pg**	**10 34 42.2**	**+0.1**
GBRS				*e*Sg	**Sb**	**10 34 48.2**	**-1.1**
	comp=Z,82nm,0.1s						
GBAS	**Gorenja Brezov**	**0.38**	**16**	*i*Pg	**Pg**	**10 34 42.1**	**-0.2**
GBAS				*i* Sg	**Sg**	**10 34 48.0**	**+0.7**
	comp=Z,128nm,0.1s						
VISS	**Visnje**	**0.45**	**59**	*e*Pg	**Pg**	**10 34 43.7**	**+0.1**
VISS				*e*Sg	**Sg**	**10 34 50.0**	**+0.5**
	comp=Z,83nm,0.1s						
LJU	**Ljubljana**	**0.50**	**19**	*e*Pg	**Pg**	**10 34 44.9**	**+0.3**
LJU				*e*Sg	**Sb**	**10 34 52.4**	**-0.7**
	comp=Z,91nm,0.1s						
LJU	**Ljubljana**	**0.50**	**19**	P	**Pg**	**10 34 44.8**	**+0.3**
LJU				S	**Sb**	**10 34 52.7**	**-0.3**
LJU				AML	AML		
	comp=E,1068μm,0.2s						
LJU				AML	AML		
	comp=N,1290μm,0.2s						
LJU				AML	AML		
	comp=E,1064μm,0.2s						
LJU				AML	AML		
	comp=N,1290μm,0.2s						
LJU				AML	AML		
	comp=N,1290μm,0.2s						
LJU				AML	AML		
	comp=E,1064μm,0.2s						
CRNS	**Crni Vrh**	**0.51**	**358**	*i*Pg	**Pg**	**10 34 44.2**	**-0.5**
CRNS				*e*Sg	**Sb**	**10 34 53.3**	**-0.1**
	comp=Z,215nm,0.3s						
VOJS	**Vojsko**	**0.54**	**328**	*i*Pg	**Pg**	**10 34 44.8**	**-0.6**
VOJS				*e*Sg	**Sg**	**10 34 53.3**	**+0.8**
	comp=Z,146nm,0.2s						
VNDS	**Vrh nad Dolski**	**0.60**	**28**	*i*Pg	**Pg**	**10 34 46.6**	**+0.1**
VNDS				*e*Sg	**Sb**	**10 34 55.1**	**-0.9**
	comp=Z,67nm,0.1s						
SABO	**M.te Sabotino**	**0.63**	**310⇑**	*e*Pg	**Pg**	**10 34 46.2**	**-0.9**
SABO				*e*Sg	**Sg**	**10 34 56.1**	**+0.7**
SABO	**M.te Sabotino**	**0.63**	**310**	P	**Pg**	**10 34 46.2**	**-0.9**
SABO				S	**Sg**	**10 34 56.1**	**+0.7**
SABO				AML	AML		
	comp=E,1180μm,0.4s						
SABO				AML	AML		
	comp=N,2005μm,1.6s						
SABO				AML	AML		
	comp=E,1180μm,0.4s						
SABO				AML	AML		
	comp=N,2005μm,1.6s						
BOJS	**Bojanci**	**0.68**	**96**	*e*Pg	**Pg**	**10 34 47.5**	**-0.4**
BOJS				*e*Sg	**Sb**	**10 34 57.2**	**-1.0**
	comp=Z,32nm,0.1s						
BOJS	**Bojanci**	**0.68**	**96**	P	**Pg**	**10 34 47.7**	**-0.3**
BOJS				S	**Sb**	**10 34 58.3**	**+0.1**
PDKS	**Podkum**	**0.69**	**45**	*e*Pg	**Pb**	**10 34 48.5**	**-0.5**
	comp=Z,63nm,0.1s						
MOZS	**Mozjanca**	**0.73**	**8**	*e*Pg	**Pg**	**10 34 48.9**	**0.0**
MOZS				*e*Sg	**Sb**	**10 35 00.9**	**+1.2**
	comp=Z,46nm,0.1s						
DRE	**Drenchia**	**0.75**	**323⇓**	*e*Pg	**Pg**	**10 34 48.5**	**-0.8**
DRE				*e*Sg	**Sb**	**10 35 00.1**	**-0.3**
CADS	**Cadrg**	**0.76**	**330⇓**	*e*Pg	**Pg**	**10 34 48.8**	**-0.7**
CADS				*e*Sg	**Sb**	**10 35 01.1**	**+0.5**
CADS	**Cadrg**	**0.76**	**330**	*i*Pg	**Pg**	**10 34 48.6**	**-0.9**
CADS				*e*Sg	**Sb**	**10 35 00.6**	**0.0**
	comp=Z,67nm,0.1s						
GORS	**Gorjuse**	**0.77**	**345⇑**	*e*Pg	**Pg**	**10 34 49.6**	**-0.1**
GORS				*e*Sg	**Sb**	**10 35 00.5**	**-0.5**
GORS	**Gorjuse**	**0.77**	**345**	*e*Pg	**Pg**	**10 34 49.4**	**-0.4**
	comp=Z,78nm,0.2s						
LEGS	**Legarje**	**0.81**	**62**	*e*Pg	**Pb**	**10 34 50.8**	**-0.2**
LEGS				*e*Sg	**Sg**	**10 35 01.2**	**+0.2**
OZLJ	**Ozalj**	**0.83**	**87**	*e*Pg	**Pg**	**10 34 50.8**	**0.0**
OZLJ				Sg	**Sg**	**10 35 01.3**	**-0.2**
COLI	**Coloredo**	**0.85**	**312**	*e*Pg	**Pg**	**10 34 50.4**	**-0.8**
COLI				*e*Sg	**Sb**	**10 35 03.7**	**+0.7**
CRES	**Cresnjev**	**0.85**	**72**	*e*Pg	**Pg**	**10 34 51.1**	**-0.2**
CRES				*e*Sg	**Sb**	**10 35 02.8**	**-0.5**
	comp=Z,104nm,0.3s						
ROBS	**Robic**	**0.86**	**321**	*e*Pg	**Pg**	**10 34 50.8**	**-0.7**
TLI	**Talmassons**	**0.90**	**293⇑**	*e*Pg	**Pg**	**10 34 51.1**	**-1.1**
OBKA	**Obir**	**0.95**	**11**	*e*Pg	**Pg**	**10 34 53.0**	**-0.2**
	SNR=30						
OBKA				*e*Sg	**Sb**	**10 35 06.7**	**+0.5**
	comp=Z,104nm,0.3s						
GCIS	**Gornji Cirnik**	**0.98**	**72**	*e*Pg	**Pn**	**10 34 54.2**	**-0.4**
GCIS				*e*Sg	**Sn**	**10 35 07.6**	**-1.0**
VINO	**Villanova**	**0.98**	**314**	*e*Pg	**Pg**	**10 34 52.4**	**-1.3**
VINO				*e*Sg	**Sn**	**10 35 08.3**	**-0.3**
BAD	**Bernadia**	**0.99**	**313**	*e*Pg	**Pg**	**10 34 53.4**	**-0.5**
LSR	**Lussari**	**1.05**	**330**	*e*Pg	**Pg**	**10 34 54.1**	**-0.9**
PTCC	**Patocco-Chiusa**	**1.06**	**322**	P	**Pg**	**10 34 54.0**	**-1.1**
PTCC				AML	AML		
	comp=E,210μm,0.4s						
PTCC				AML	AML		
	comp=N,184μm,0.3s						
PTCC				AML	AML		
	comp=E,210μm,0.4s						
PTCC				AML	AML		
	comp=N,184μm,0.3s						
GEPF	**Gemona**	**1.07**	**311**	P	**Pg**	**10 34 54.8**	**-0.6**
GEPF				S	**Sn**	**10 35 10.6**	**-0.1**
GEPF				AML	AML		
	comp=E,262μm,1.0s						
GEPF				AML	AML		
	comp=N,266μm,0.8s						
GEPF				AML	AML		
	comp=N,266μm,0.8s						
GEPF				AML	AML		
	comp=E,262μm,1.0s						
NVLJ	**Novalja**	**1.09**	**158**	*e*Pg	**Pb**	**10 34 54.8**	**-0.9**
NVLJ				Sg	**Sn**	**10 35 11.5**	**+0.2**
ACOM	**Acomizza, Ital**	**1.11**	**331**	P	**Pg**	**10 34 55.7**	**-0.6**
ACOM				AML	AML		
	comp=E,770μm,0.3s						
ACOM				AML	AML		
	comp=N,494μm,0.4s						
ACOM				AML	AML		
	comp=N,494μm,0.4s						
ACOM				AML	AML		
	comp=E,770μm,0.3s						
MYKA	**Terra Mystica**	**1.15**	**337**	*e*Pg	**Pb**	**10 34 56.9**	**+0.1**
	comp=E,4.9nm,0.2s,SNR=10.0						
MYKA				*e*Sg	**Sg**	**10 35 12.2**	**+0.3**
	comp=E,31nm,0.2s						
PERS	**Pernice**	**1.21**	**28**	*i*Pg	**Pb**	**10 34 57.7**	**-0.1**
PERS				*i* Sg	**Sg**	**10 35 13.6**	**-0.1**
	comp=Z,72nm,0.2s						
SOKA	**Soboth**	**1.22**	**25**	*e*Pg	**Pg**	**10 34 58.1**	**-0.2**
	comp=Z,12nm,0.3s,SNR=33						
SOKA				Sg	**Sn**	**10 35 14.5**	**-0.1**
	comp=Z,23nm,0.3s						
BISS	**Bistriski jare**	**1.22**	**28**	*i*Pg	**Pg**	**10 34 58.1**	**-0.2**
	comp=Z,49nm,0.1s						
STAL	**STALIGIAL**	**1.30**	**302**	P	**Pb**	**10 34 59.6**	**+0.2**
STAL				AML	AML		
	comp=E,528μm,0.3s						
STAL				AML	AML		
	comp=N,643μm,0.8s						
STAL				AML	AML		
	comp=E,680μm,0.2s						
STAL				AML	AML		
	comp=N,537μm,1.5s						
STAL				AML	AML		
	comp=N,643μm,0.8s						
STAL				AML	AML		
	comp=E,528μm,0.3s						
STAL				AML	AML		
	comp=N,537μm,1.5s						
STAL				AML	AML		
	comp=E,680μm,0.2s						
POLC	**Polcenigo**	**1.33**	**290**	P	**Pg**	**10 35 00.6**	**+0.2**
POLC				S	**Sg**	**10 35 18.7**	**+1.0**
POLC				AML	AML		
	comp=E,686μm,0.3s						
POLC				AML	AML		
	comp=N,1065μm,0.5s						
POLC				AML	AML		
	comp=N,1065μm,0.5s						
POLC				AML	AML		
	comp=E,686μm,0.3s						
FVI	**Forni Avoltri**	**1.47**	**315**	P	**Pb**	**10 35 02.5**	**+0.3**
FVI				AML	AML		
	comp=E,370μm,0.4s						
FVI				AML	AML		
	comp=N,302μm,0.9s						
FVI				AML	AML		
	comp=E,370μm,0.4s						
FVI				AML	AML		
	comp=N,302μm,0.9s						
UDBI	**Udbina**	**1.48**	**135**	*i*Pn	**Pg**	**10 35 03.8**	**+0.6**
UDBI				Sn	**Sg**	**10 35 24.4**	**+2.0**
KBA	**Koelnbreinsper**	**1.64**	**337**	*e*Pg	**Pg**	**10 35 05.9**	**-0.4**
	comp=N,7.6nm,0.3s,SNR=16						
KBA				Sg	**Sg**	**10 35 28.3**	**+0.7**
	comp=N,20nm,0.3s						
ABTA	**Abfaltersbach**	**1.70**	**314**	Pg	**Pb**	**10 35 06.3**	**0.0**
	comp=N,3.9nm,0.2s,SNR=18						
ABTA				Sn	**Sg**	**10 35 29.8**	**+0.1**
	comp=N,21nm,0.2s						
CGRP	**Cima Grappa**	**1.77**	**281**	P	**Pn**	**10 35 05.9**	**+0.2**
CGRP				AML	AML		
	comp=E,226μm,0.5s						
CGRP				AML	AML		
	comp=N,303μm,0.6s						
CGRP				AML	AML		
	comp=E,226μm,0.5s						
CGRP				AML	AML		
	comp=N,303μm,0.6s						
ARSA	**Arzberg**	**1.88**	**27**	Pn	**Pn**	**10 35 07.8**	**+0.8**
	comp=N,2.2nm,0.2s						
ARSA				*e*Sn	**Sn**	**10 35 31.6**	**+0.7**
	comp=N,8.8nm,0.3s						
KOSI	**Kohlern**	**2.22**	**295**	AML	AML		
	comp=N,167μm,1.0s						
KOSI				AML	AML		
	comp=E,175μm,1.0s						
KOSI				AML	AML		
	comp=E,175μm,1.0s						
KOSI				AML	AML		
	comp=N,167μm,1.0s						
ROSI	**Rosskopf**	**2.41**	**305**	AML	AML		
	comp=E,98μm,0.4s						
ROSI				AML	AML		
	comp=N,114μm,1.0s						
ROSI				AML	AML		
	comp=N,114μm,1.0s						
ROSI				AML	AML		
	comp=E,98μm,0.4s						
WTTA	**Wattenberg**	**2.50**	**314**	Pg	**Pb**	**10 35 17.9**	**-1.9**
	comp=E,7.0nm,0.3s,SNR=7.2						
WTTA				Sg

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
MOSI				AML	AML		
	comp=N,143μm,0.4s						
MOSI				AML	AML		
	comp=E,130μm,0.6s						
MOTA	**Moosalm**	**2.83**	**310**	*e*Pg	**Pb**	**10 35 22.9**	**-2.5**
	comp=E,2.0nm,0.2s,SNR=4.8						
MOTA				*i* Sn	**Sb**	**10 36 00.1**	**-0.1**
	comp=E,8.3nm,0.4s						
FETA	**Feichten**	**2.86**	**302**	Pg	**Pn**	**10 35 23.0**	**+2.3**
	comp=E,2.5nm,0.4s						
FETA				Sg	**Sb**	**10 36 02.4**	**+1.2**
	comp=E,4.0nm,0.4s						
RETA	**Reutte**	**3.10**	**309**	Pg	**Pn**	**10 35 26.0**	**+2.2**
	comp=E,1.5nm,0.2s						
RETA				*i* Sn	**Sb**	**10 36 06.9**	**-1.0**
	comp=E,8.4nm,0.3s						
DAVA	**Damuels**	**3.50**	**301**	Pn	**Pn**	**10 35 31.6**	**+2.1**
	comp=E,1.2nm,0.2s						
CLL	**Collm**	**5.80**	**352**	*e*Sg	**Sg**	**10 37 40.0**	**-0.9**
CLL				LmH		12 11 00.0	
	comp=N,100nm,18.6s						
CLL				LmH		12 11 00.0	

SJA 13 10:40:07.7±0.7,23°.97S×66°.81W,h201km±11km,ML2.2, MW2.8,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.40**	**123**	*e*P	Pn	10 40 41.4	+0.6
SLA				*e*S	S	10 41 06.4	+0.2
SLA				IAML		10 41 09.4	
	comp=Z,12nm,0.7s						
HJA	**Humahuaca**	**1.49**	**60**	*e*P	Pn	10 40 43.2	+1.4
HJA				IAML		10 40 43.6	
	comp=Z,12nm,0.5s						
HJA				*e*S	S	10 41 08.5	+0.7
AZAP	**Zapla**	**1.61**	**99**	*e*P	Pn	10 40 43.3	+0.6
AZAP				IAML		10 40 43.9	
	comp=Z,8.2nm,0.3s						
FSA	**Cafayete**	**2.26**	**161**	*e*P	Pn	10 40 48.5	-0.7
LVC	**Limon Verde**	**2.36**	**305**	*e*P	Pn	10 40 51.4	+0.9
LVC				IAML		10 41 28.3	
	comp=Z,10nm,0.3s						
PB15	**IPOC Station P**	**2.56**	**287**	*e*P	Pn	10 40 53.3	+0.7
PB06	**IPOC Station P**	**2.84**	**296**	*e*P	Pn	10 40 56.3	+0.6
PB05	**IPOC Station P**	**3.31**	**289**	*e*P	Pn	10 41 01.6	+0.3
PB03	**IPOC Station P**	**3.32**	**305**	*e*P	Pn	10 40 54.6	-6.8
PB14	**IPOC Station P**	**3.35**	**258**	*e*P	Pn	10 41 01.0	-0.8
PB10	**IPOC Station P**	**3.46**	**277**	*e*P	Pn	10 41 01.9	-1.0
PB04	**IPOC Station P**	**3.48**	**297**	*e*P	Pn	10 41 03.7	+0.4

*ISCJB **13** 10:41:37.2±0.2,32°.26S±0°.02×70°.73W±0°.03,h95km±2km, mb4.7/39,Error ellipse: s-maj=4.2km s-min=3.0km az=8.3*
*SJA **13** 10:41:37.2±0.8,32°.24S×70°.81W,h75km±6km,ML4.8, MW4.7*
*IDC **13** 10:41:37.9±0.6,32°.22S×70°.75W,h84km±5km,mb4.2/13, mb1 4.3/15,mb1mx4.2/22,mbtmp4.6/15,MS3.5/5, Ms1 3.4/5,ms1mx3.1/17,Error ellipse: s-maj=12.5km s-min=8.8km az=167.0*
*NEIC **13** 10:41:37.3±2.0,32°.25S×70°.60W,h79km±2km,mb4.8/60, ML4.9(GUC),Error ellipse: s-maj=13.1km s-min=4.7km az=92.0*
NEIC Felt [IV] at Quillota, Santiago and Zapallar; [III] at Illapel, Los Andes, Los Vilos, Nogales, Puente Alto, San Bernardo, Talagante, Valparaiso and Vina del Mar; [II] at Salamanca and San Felipe.
*BJI **13** 10:41:38.3±0.0,32°.30S×70°.60W,h80km,mB5.3/4, Ms5.3/1*
*GUC **13** 10:41:38.1±0.7,32°.27S×70°.83W,h86km±8km,ML5.0*
*VAO **13** 10:41:39.4±0.5,32°.39S×70°.60W,h107km,mb4.7*
ISC 13 10:41:37.1±0.5,32°28S±0°.03×70°76W±0°.04,h80km±4km, h80km:pP-P,n443,σ19°11/467,mb4.8/39,6C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**0.73**	**197**	⇓*i*P	Pn	**10 41 54.4**	**+1.1**
ROCH				*i* S	Sn	**10 42 06.7**	**+1.4**
ROCH				IAML		10 42 08.2	
	comp=N,57μm,0.3s						
ROC1	**El Roble**	**0.73**	**197**	*e*Pn	Pn	**10 41 54.5**	**+1.1**
ROC1				*e*Sn	Sn	**10 42 06.2**	**+0.7**
ROC1	**El Roble**	**0.73**	**197**	*e*P	Pn	**10 41 54.4**	**+1.0**
ROC1				*e*S	Sn	**10 42 06.9**	**+1.5**
PEL	**Peldehue**	**0.87**	**176**	*e*Pn	Pn	**10 41 55.6**	**+1.0**
PEL				*e*Sn	Sn	**10 42 09.0**	**+1.3**
PEL	**Peldehue**	**0.87**	**176**	⇓*i*P	Pn	**10 41 55.7**	**+1.0**
PEL				*i* S	Sn	**10 42 09.6**	**+1.8**
PEL				IAML		10 42 11.2	
	comp=E,52μm,0.4s						
FCH	**Farellones**	**1.12**	**159**	⇓*i*P	Pn	**10 41 59.4**	**+1.5**
FCH				*i* S	Sn	**10 42 15.7**	**+2.2**
CLCH	**Cerro Calan**	**1.13**	**170**	⇑*i*P	Pn	**10 41 59.0**	**+1.1**
CLCH				*i* S	Sn	**10 42 15.0**	**+1.6**
CLCH				IAML		10 42 17.8	
	comp=N,58μm,0.5s						
AUSP	**Uspallata**	**1.17**	**88**	*e*P	Pn	**10 42 00.3**	**+1.9**
AUSP				*e*S	Sn	**10 42 17.5**	**+3.1**
RCDM	**Rinconada Maip**	**1.21**	**182**	*e*P	Pn	**10 42 00.0**	**+1.3**
RCDM				*e*S	Sn	**10 42 17.3**	**+2.3**
ANTU	**Antumapu**	**1.29**	**175**	*e*P	Pn	**10 42 01.6**	**+1.8**
ANTU				*e*S	Sn	**10 42 18.9**	**+2.0**
ANTU				IAML		10 42 21.3	
	comp=E,33μm,0.6s						
RTLS	**Leoncito**	**1.33**	**69**	*e*P	Pn	**10 42 02.6**	**+2.1**
RTLS				*e*S	Sn	**10 42 21.0**	**+2.9**
RTLS				IAML		10 42 22.9	
	comp=Z,6μm,0.7s						
LMEL	**Las Melosas**	**1.64**	**164**	⇑*i*P	Pn	**10 42 05.9**	**+1.5**
LMEL				*i* S	Sn	**10 42 27.2**	**+2.3**
LMEL				IAML		10 42 31.4	
	comp=E,21μm,0.5s						
ARCO	**CERRO ARCO**	**1.64**	**111**	*e*P	Pn	**10 42 07.2**	**+2.8**
ARCO				IAML		10 42 31.8	
	comp=Z,3μm,0.3s						
ASAL	**Salagasta**	**1.66**	**101**	*e*P	Pn	**10 42 06.9**	**+2.4**
AAGR	**Agrelo**	**1.82**	**117**	*e*P	Pn	**10 42 09.0**	**+2.3**
AAGR				*e*S	Sn	**10 42 32.5**	**+3.3**
ZON	**Zonda**	**1.92**	**68**	*e*P	Pn	**10 42 09.8**	**+1.9**
ZON				*e*S	Sn	**10 42 33.8**	**+2.5**
ZON				IAML		10 42 35.6	
	comp=Z,4μm,0.4s						
RTCV	**Cerro Valdivia**	**1.93**	**78**	*e*P	Pn	**10 42 10.1**	**+2.0**
GO04	**Tololo Observa**	**2.10**	**359**	*e*Pn	Pn	**10 42 11.9**	**+1.4**
GO04				*e*Sn	Sn	**10 42 36.0**	**+0.1**
GO04	**Tololo Observa**	**2.10**	**359**	*e*P	Pn	**10 42 11.9**	**+1.4**
GO04	**Tololo Observa**	**2.10**	**359**	⇑*i*P	Pn	**10 42 11.8**	**+1.3**
GO04				*i* S	Sn	**10 42 37.7**	**+1.7**
RTLL	**Cerro Villicun**	**2.16**	**65**	*e*P	Pn	**10 42 13.2**	**+2.0**
RTLL				*e*S	Sn	**10 42 39.7**	**+2.4**
RTLL				AMSG		10 42 42.4	
	comp=Z,132μm,0.3s						
RTLL				IAML		10 42 42.8	
	comp=E,23μm,0.4s						
AVIZ	**Vizcacheras**	**2.23**	**123**	*e*P	Pn	**10 42 14.3**	**+2.1**
CFA	**Coronel Fontan**	**2.25**	**73**	P	Pn	**10 42 13.9**	**+1.6**
	comp=E,361nm,0.3s,baz=233,slow=7.2,SNR=2423						
CFA				S	Sn	**10 42 40.6**	**+1.4**
	comp=E,1μm,0.3s,baz=253,slow=19,SNR=24						
CFA	**Coronel Fontan**	**2.25**	**73**	*e*P	Pn	**10 42 14.1**	**+1.7**
AMOG	**MOGNA**	**2.35**	**56**	*e*P	Pn	**10 42 15.8**	**+2.0**
LSCH	**La Serena**	**2.40**	**350**	*e*P	Pn	**10 42 15.4**	**+1.1**
LSCH				*i* S	Sn	**10 42 43.9**	**+1.1**
GO05	**Huala**	**2.90**	**199**	*e*Pn	Pn	**10 42 20.3**	**-0.7**
GO05	**Huala**	**2.90**	**199**	*e*P	Pn	**10 42 20.4**	**-0.7**
ACAN	**Cantantal**	**3.03**	**91**	*e*P	Pn	**10 42 23.6**	**+0.8**
LCO	**Las Campanas**	**3.25**	**1**	*e*Pn	Pn	**10 42 27.5**	**+1.3**
LCO				*e*Sn	Sn	**10 43 05.0**	**+1.0**
LCO	**Las Campanas**	**3.25**	**1**	⇑*i*P	Pn	**10 42 27.0**	**+0.8**
LCO				*i* S	Sn	**10 43 04.8**	**+0.9**
AGUA	**GUANDACOL**	**3.40**	**36**	*e*P	Pn	**10 42 30.1**	**+2.2**
VCA	**Vinchina**	**4.16**	**33**	*e*P	Pn	**10 42 40.1**	**+1.8**
VCA				IAML		10 43 38.2	
	comp=Z,2μm,0.4s						
GO03	**Copiap**	**4.69**	**6**	*e*Pn	Pn	**10 42 46.2**	**+0.7**
GO03				*e*Sn	Sn	**10 43 37.3**	**-1.3**
GO03	**Copiap**	**4.69**	**6**	*e*P	Pn	**10 42 46.1**	**+0.7**
TCA	**Tanti**	**5.33**	**82**	*e*P	Pn	**10 42 54.1**	**-0.2**
CYA	**Choya**	**5.74**	**50**	*e*P	Pn	**10 42 58.9**	**-0.9**
CYA				IAML		10 43 02.6	
	comp=Z,593nm,0.5s						
GO02	**Mina Guanaco**	**7.16**	**9**	*e*Pn	Pn	**10 43 18.2**	**-1.2**
FSA	**Cafayete**	**7.43**	**35**	*e*P	Pn	**10 43 22.1**	**-0.9**
FSA				IAML		10 43 27.6	
	comp=Z,80nm,0.5s						
PLCA	**Paso Flores**	**8.44**	**179**	P	Pn	**10 43 35.8**	**-0.9**
	comp=Z,4.4nm,0.3s,baz=15,slow=12,SNR=47						
PLCA				S	Sn	**10 45 15.2**	**+4.9**
	baz=227,slow=18,SNR=1.4						
PLCA				LR	LR	10 47 09.7	
	comp=Z,125nm,20.0s,baz=38,slow=39						
PLCA	**Paso Flores**	**8.44**	**179**	*e*Pn	Pn	**10 43 35.2**	**-1.4**
PLCA				*e*		10 47 09.7	
PLCA	**Paso Flores**	**8.44**	**179**	*e*P	Pn	**10 43 35.9**	**-0.7**
PB10	**IPOC Station P**	**8.73**	**1**	*e*Pn	Pn	**10 43 39.6**	**-1.0**
TRQA	**Tornquist**	**9.21**	**131**	*e*Pn	Pn	**10 43 47.0**	**-0.1**
TRQA				*e*Sn	Sn	**10 45 23.6**	**-5.4**
LVC	**Limon Verde**	**9.77**	**10**	P	Pn	**10 43 51.2**	**-3.8**
	comp=Z,1.6nm,0.3s,baz=184,slow=10.0,SNR=8.2						
LVC				S	Sn	**10 45 43.2**	**0.0**
	comp=Z,2.3nm,0.3s,baz=138,slow=20,SNR=2.5						
LVC				LR	LR	10 48 18.0	
	comp=Z,94nm,18.9s,baz=200,slow=41						
LVC	**Limon Verde**	**9.77**	**10**	*e*Pn	Pn	**10 43 51.8**	**-3.3**
PB04	**IPOC Station P**	**9.92**	**3**	*e*Pn	Pn	**10 43 55.8**	**-1.2**
GO07	**Milladeo Hill,**	**11.06**	**191**	*e*Pn	Pn	**10 44 08.0**	**-4.3**
PB01	**IPOC Station P**	**11.24**	**6**	*e*Pn	Pn	10 44 09.2	-5.8
PB01				*e*Sn	Sn	**10 46 14.6**	**-4.3**
PB11	**IPOC Station P**	**12.50**	**5**	*e*Pn	Pn	**10 44 31.9**	**-0.3**
GO01	**Chusmiza**	**12.63**	**7**	*e*Pn	Pn	**10 44 33.1**	**-1.1**
MNMC	**Minye Minye**	**13.13**	**5**	*e*Pn	Pn	**10 44 41.2**	**+0.5**
ITAB	**Concordia**	**16.93**	**78**	*e*P	Pn	**10 45 28.8**	**-0.1**
CNLB	**Canela**	**17.36**	**85**	*e*P	Pn	**10 45 34.0**	**-0.2**
AQDB	**Aquidauana**	**17.87**	**53**	*e*P	P	**10 45 39.2**	**-0.8**
PTGB	**Pitanga**	**18.06**	**70**	*e*P	P	**10 45 41.3**	**-0.9**
SIV	**San Ignacio**	**18.45**	**31**	P	P	**10 45 45.9**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=226,slow=9.6,SNR=40						
GO09	**Cerro Castillo**	**19.02**	**183**	*e*P	P	**10 45 52.6**	**+0.2**
	comp=Z,48nm,1.1s						
TIJ01	**Guaruva-PR**	**20.27**	**76**	*e*P	P	**10 46 02.6**	**-3.6**
FRTB	**Fartura**	**20.73**	**70**	*e*P	P	**10 46 11.3**	**+0.1**
NNA	**Nana**	**20.95**	**343**	P	P	**10 46 13.7**	**0.0**
	comp=Z,3.2nm,0.3s,baz=176,slow=16,SNR=2.6						
C2SB	**Chapadao do Su**	**20.99**	**54**	*e*P	P	**10 46 14.0**	**0.0**
EFI	**East Falkland**	**21.50**	**158**	*e*P	P	**10 46 18.1**	**-1.1**
	comp=Z,40nm,0.6s						
ITRB	**Iturama**	**22.16**	**61**	*e*P	P	**10 46 24.8**	**-1.7**
SPB	**Sao Paulo**	**22.32**	**73**	*e*P	P	**10 46 27.2**	**-1.0**
USHA	**Ushuaia**	**22.61**	**176**	P	P	**10 46 32.0**	**+1.1**
	comp=Z,70nm,0.9s,baz=352,slow=7.8,SNR=18						
BB19B	**Bebedouro**	**22.74**	**66**	*e*P	P	**10 46 30.5**	**-2.3**
RCLB	**Rio Claro- Sao**	**22.81**	**70**	*e*P	P	**10 46 32.5**	**-1.0**
ESAR	**Angra dos Reis**	**25.02**	**75**	*e*P	P	**10 46 52.9**	**-0.8**
CLDB	**Colider**	**25.38**	**36**	*e*P	P	**10 46 57.1**	**+0.1**
BSCB	**Bom Sucesso**	**25.73**	**71**	*e*P	P	**10 46 59.0**	**-1.3**
PMNB	**Patos De Minas**	**25.80**	**64**	*e*P	P	**10 46 59.9**	**-1.0**
VAS01	**Vassouras-RJ**	**26.18**	**74**	*e*P	P	**10 47 04.3**	**+0.1**
BDFB	**Brasilia**	**26.49**	**57**	P	P	**10 47 06.1**	**-1.0**
	comp=Z,17nm,0.4s,baz=236,slow=7.9,SNR=30						
BDFB				LR	LR	10 58 31.0	
	comp=Z,80nm,18.3s,baz=113,slow=38						
BDFB	**Brasilia**	**26.49**	**57**	*e*P	P	**10 47 06.1**	**-1.0**
BDFB				*e*P	P	**10 47 06.2**	**-0.9**
CAM01	**Campos-RJ**	**27.85**	**75**	*e*P	P	**10 47 18.5**	**-0.7**
MCI6	**Montes Claros**	**28.78**	**64**	*e*P	P	**10 47 26.6**	**-0.9**
PEXB	**Peixe**	**28.79**	**51**	*e*P	P	**10 47 27.3**	**-0.3**
MCI9	**Montes Claros**	**28.84**	**64**	*e*P	P	**10 47 27.0**	**-1.1**
MCI8	**Montes Claros**	**28.84**	**64**	*e*P	P	**10 47 26.8**	**-1.3**
ALF01	**Guarapari-ES**	**29.19**	**74**	*e*P	P	**10 47 30.7**	**-0.4**
JANB	**Januaria**	**29.55**	**61**	*e*P	P	**10 47 33.3**	**-1.1**
SJMB	**Sao Joao De Ma**	**29.81**	**70**	*e*P	P	**10 47 35.6**	**-1.0**
BSFB	**Barra de Sao F**	**30.01**	**71**	*e*P	P	**10 47 37.3**	**-1.1**
RIB01	**Linhares ES**	**30.12**	**72**	*e*P	P	**10 47 38.8**	**-0.6**
SMTB	**Santa Maria do**	**31.69**	**48**	*e*P	P	**10 47 52.6**	**-0.6**
PTGA	**Pitinga**	**32.99**	**20**	*e*P	P	**10 48 03.2**	**-1.4**
	comp=Z,7.2nm,0.8s						
PTGA	**Pitinga**	**32.99**	**20**	*e*P	P	**10 48 04.2**	**-0.3**
SDV	**Santo Domingo**	**40.93**	**0**	*e*P	P	**10 49 12.3**	**+0.3**
RCBR	**Riachuelo**	**41.83**	**59**	*e*P	P	**10 49 18.2**	**-1.1**
	comp=Z,22nm,1.1s						
RCBR	**Riachuelo**	**41.83**	**59**	*e*P	P	**10 49 18.4**	**-0.9**
GRGR	**Grenville**	**45.01**	**13**	*e*P	P	**10 49 44.6**	**-0.1**
	comp=Z,153nm,1.1s						
ESPN	**Las Esperanzas**	**46.08**	**341**	*e*P	P	**10 49 50.8**	**-2.4**
	comp=Z,15nm,0.5s						
VNA3	**Neuayer Olymp**	**50.56**	**158**	P	P	**10 50 27.7**	**+0.7**
VNA2	**Neumayer--Watz**	**51.19**	**158**	P	P	**10 50 32.1**	**+0.3**
	baz=251,slow=17						
SNAA	**Sanae**	**52.78**	**158**	P	P	**10 50 44.0**	**+0.4**
SNAA	**Sanae**	**52.78**	**158**	P	P	**10 50 44.1**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=268,slow=6.1,SNR=28						
SNAA	**Sanae**	**52.78**	**158**	*e*P	P	**10 50 44.2**	**+0.5**
	comp=Z,11nm,1.1s						
TEIG	**Tepich**	**54.83**	**340**	*e*P	P	**10 51 00.2**	**+1.2**
	comp=Z,29nm,0.6s						
QSPA	**South Pole Qui**	**57.96**	**180**	*e*P	P	**10 51 22.2**	**+1.2**
	comp=Z,17nm,0.9s						
656A	**Willston**	**62.32**	**348**	P	P	**10 51 51.5**	**+0.6**
	baz=169						
657A	**Interlachen**	**62.42**	**349**	P	P	**10 51 51.9**	**+0.4**
	baz=169						
655A	**Horseshoe Beac**	**62.58**	**348**	P	P	**10 51 53.2**	**+0.5**
	baz=168						
555A	**McAlpin**	**63.13**	**348**	P	P	**10 51 56.8**	**+0.6**
	baz=168						
356A	**Blackshear**	**64.17**	**349**	P	P	**10 52 04.0**	**+0.9**
	baz=169						
353A	**Camilla**	**64.55**	**347**	P	P	**10 52 05.7**	**+0.2**
	baz=167						
254A	**Abbeville**	**64.97**	**348**	P	P	**10 52 08.5**	**+0.2**
	baz=168						
349A	**Repton**	**65.17**	**345**	P	P	**10 52 10.3**	**+0.7**
	baz=165						
253A	**Americus**	**65.23**	**348**	P	P	**10 52 10.1**	**+0.1**
	baz=167						
252A	**Lumpkin**	**65.28**	**347**	P	P	**10 52 10.6**	**+0.4**
	baz=167						
155A	**Kite**	**65.49**	**349**	P	P	**10 52 12.0**	**+0.4**
	baz=169						
251A	**Midway**	**65.50**	**346**	P	P	**10 52 11.9**	**+0.2**
	baz=166						
154A	**Montrose**	**65.58**	**349**	P	P	**10 52 12.3**	**0.0**
	baz=168						
249A	**Camden**	**65.75**	**345**	P	P	**10 52 13.7**	**+0.3**
	baz=165						
Z58A	**St. Stephen**	**65.82**	**352**	P	P	**10 52 14.4**	**+0.7**
	baz=172						
151A	**Opelika**	**65.91**	**347**	P	P	**10 52 14.4**	**0.0**
	baz=166						
152A	**Waverly Hall**	**65.93**	**347**	P	P	**10 52 14.3**	**-0.2**
	baz=167						
VNDA	**Vanda**	**66.00**	**191**	P	P	**10 52 16.3**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=122,slow=6.0,SNR=11						
VNDA	**Vanda**	**66.00**	**191**	*e*P	P	**10 52 15.9**	**+1.4**
	comp=Z,1.8nm,1.1s						
Z55A	**Blythe**	**66.02**	**350**	P	P	**10 52 15.3**	**+0.3**
	baz=169						
150A	**Eclectic**	**66.12**	**346**	P	P	**10 52 15.9**	**+0.2**
	baz=166						
833A	**Chaparral WMA,**	**66.13**	**332**	P	P	**10 52 17.8**	**+1.9**
	baz=154						
Z54A	**Sparta**	**66.15**	**349**	P	P	**10 52 15.8**	**-0.1**
	baz=169						
149A	**Jones**	**66.28**	**345**	P	P	**10 52 16.7**	**0.0**
	baz=165						
Z52A	**Williamson**	**66.38**	**348**	P	P	**10 52 17.6**	**+0.2**
	baz=167						
GOGA	**Godfrey**	**66.43**	**348**	P	P	**10 52 17.8**	**+0.2**
	baz=168						
Y55A	**Saluda**	**66.69**	**350**	P	P	**10 52 19.5**	**+0.2**
	baz=170						
Z50A	**Ashland**	**66.73**	**346**	P	P	**10 52 19.9**	**+0.2**
	baz=166						
Y54A	**Tignall**	**66.74**	**349**	P	P	**10 52 19.7**	**+0.1**
	baz=169						
Z49A	**Columbiana**	**66.80**	**346**	P	P	**10 52 20.2**	**+0.2**
	baz=165						
X60A	**Albert Glenn T**	**66.84**	**354**	P	P	**10 52 21.0**	**+0.7**
	baz=173						
Y53A	**Monroe**	**66.88**	**348**	P	P	**10 52 20.8**	**+0.3**
	baz=168						
Y52A	**Lilburn**	**66.97**	**348**	P	P	**10 52 21.4**	**+0.3**
	baz=168						
SYO	**Syowa Base**	**67.07**	**158**	⇑*e*P	P	**10 52 19.8**	**-1.6**
SYO	**Syowa Base**	**67.07**	**158**	⇑*e*X	P	10 52 34.0	+13
X56A	**White Oak**	**67.11**	**351**	P	P	**10 52 22.2**	**+0.2**
	baz=170						
X55A	**Gracelyn & Ava**	**67.18**	**350**	P	P	**10 52 22.7**	**+0.3**
	baz=170						
Y51A	**Rockmart**	**67.19**	**347**	P	P	**10 52 22.5**	**0.0**
	baz=167						
W60A	**Pink Hill**	**67.29**	**354**	P	P	**10 52 23.8**	**+0.7**
	baz=174						
X54A	**Belton**	**67.36**	**350**	P	P	**10 52 24.1**	**+0.5**
	baz=169						
W58A	**Raeford**	**67.41**	**352**	P	P	**10 52 24.5**	**+0.7**
	baz=172						
Y49A	**Blount Mountai**	**67.41**	**346**	P	P	**10 52 24.2**	**+0.3**
	baz=166						
X53A	**Estanollee**	**67.47**	**349**	P	P	**10 52 24.8**	**+0.6**
	baz=168						
NATX	**Nacogdoches**	**67.58**	**338**	P	P	**10 52 25.2**	**+0.2**
	baz=158						
W57A	**Gilead**	**67.63**	**352**	P	P	**10 52 25.5**	**+0.3**
	baz=171						
X52A	**Dahlonega**	**67.66**	**348**	P	P	**10 52 25.9**	**+0.4**
	baz=168,SNR=6.7						
W56A	**Indian Trail**	**67.69**	**351**	P	P	**10 52 25.8**	**+0.2**
	baz=171						
KMSC	**Kings Mountain**	**67.79**	**351**	P	P	**10 52 26.7**	**+0.4**
	baz=170						
X51A	**Calhoun**	**67.80**	**347**	*e*P	P	**10 52 26.8**	**+0.5**
	comp=Z,25nm,0.8s						
X51A	**Calhoun**	**67.80**	**347**	P	P	**10 52 27.2**	**+0.9**
	baz=167						
X50B	**Fort Payne**	**67.84**	**347**	P	P	**10 52 27.0**	**+0.3**
	baz=166						
W54A	**Cherokee Point**	**67.86**	**350**	P	P	**10 52 27.4**	**+0.7**
	baz=170						
V59A	**Middlesex**	**68.05**	**353**	P	P	**10 52 28.2**	**+0.3**
	baz=173						
W53A	**Cullowhee**	**68.09**	**349**	P	P	**10 52 28.4**	**+0.1**
	baz=169,SNR=6.2						
X48A	**Hartselle**	**68.12**	**346**	*e*P	P	**10 52 28.3**	**0.0**
	comp=Z,12nm,0.8s						
X48A	**Hartselle**	**68.12**	**346**	P	P	**10 52 28.8**	**+0.5**
	baz=165,SNR=7.0						
W52A	**Murphy**	**68.15**	**348**	P	P	**10 52 29.0**	**+0.5**
	baz=168						
V58A	**Windy Hill, Pi**	**68.17**	**353**	P	P	**10 52 29.0**	**+0.4**
	baz=172						
JCT	**Junction City**	**68.21**	**333**	P	P	**10 52 30.7**	**+1.6**
	baz=154						
V57A	**Coltrane Farms**	**68.33**	**352**	P	P	**10 52 30.0**	**+0.4**
	baz=172						
V56A	**Mocksville**	**68.34**	**351**	*e*P	P	**10 52 28.5**	**-1.2**
	comp=Z,8.8nm,0.6s						
V56A	**Mocksville**	**68.34**	**351**	P	P	**10 52 30.2**	**+0.5**
	baz=171						
W51A	**Cleveland**	**68.36**	**348**	P	P	**10 52 30.3**	**+0.5**
	baz=167						
X47A	**Russelville**	**68.36**	**345**	P	P	**10 52 30.3**	**+0.4**
	baz=164,SNR=5.0						
V55A	**Taylorsville**	**68.48**	**351**	P	P	**10 52 31.0**	**+0.4**
	baz=170,SNR=5.1						
W50A	**Signal Mountai**	**68.50**	**347**	*e*P	P	**10 52 30.3**	**-0.5**
	comp=Z,15nm,0.8s						
W50A	**Signal Mountai**	**68.50**	**347**	P	P	**10 52 31.3**	**+0.6**
	baz=167,SNR=7.0						
V54A	**Nebo**	**68.50**	**350**	P	P	**10 52 30.9**	**+0.2**
	baz=170,SNR=6.2						
V53A	**Saluda**	**68.53**	**349**	*e*P	P	**10 52 30.5**	**-0.4**
	comp=Z,9.3nm,0.7s						
V53A	**Saluda**	**68.53**	**349**	P	P	**10 52 31.3**	**+0.4**
	baz=169,SNR=5.9						
U59A	**Littleton**	**68.59**	**354**	P	P	**10 52 32.0**	**+0.8**
	baz=174						
SWET	**Sewanee**	**68.63**	**347**	*e*P	P	**10 52 32.2**	**+0.7**
	comp=Z,19nm,0.7s						
U58A	**Oxford**	**68.70**	**353**	P	P	**10 52 32.5**	**+0.6**
	baz=173						
OXF	**Oxford**	**68.71**	**344**	P	P	**10 52 32.2**	**+0.2**
	baz=163						
WHTX	**Lake Whitney,**	**68.72**	**336**	*e*P	P	**10 52 33.4**	**+1.3**
	comp=Z,9.3nm,0.8s						
WHTX	**Lake Whitney,**	**68.72**	**336**	P	P	**10 52 33.2**	**+1.1**
	baz=156						
W48A	**Pulaski**	**68.76**	**346**	P	P	**10 52 32.8**	**+0.5**
	baz=165						
LTX	**Lajitas**	**68.78**	**329**	*e*pP	pP	10 52 55.1	+1.3
TXAR	**Lajitas Array**	**68.78**	**329**	P	P	**10 52 34.2**	**+1.5**
	comp=Z,1.7nm,0.6s,baz=154,slow=8.8,SNR=38						
TXAR				pP	**pP**	**10 52 55.1**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=156,slow=9.3,SNR=3.6						
U57A	**Blanch**	**68.82**	**353**	P	P	**10 52 32.9**	**+0.3**
	baz=172						
V52A	**Sevierville**	**68.82**	**349**	*e*P	P	**10 52 32.9**	**+0.1**
	comp=Z,10nm,0.8s						
V52A	**Sevierville**	**68.82**	**349**	P	P	**10 52 32.8**	**+0.1**
	baz=168						
PLAL	**Pickwick Lake**	**68.85**	**345**	*e*P	P	**10 52 33.2**	**+0.3**
	comp=Z,6.6nm,0.5s						
U56A	**King**	**68.86**	**352**	P	P	**10 52 33.5**	**+0.6**
	baz=171						
V51A	**Loudon**	**68.91**	**348**	P

U46A	Springville	70.20	345	P	P	10 52 41.8 +0.6
	baz=164,SNR=14					
S55A	Lewisburg	70.28	352	P	P	10 52 42.2 +0.6
	baz=171					
T49A	Edmonton	70.39	348	P	P	10 52 42.3 0.0
	baz=167					
S54A	Dingess, Beckl	70.41	351	P	P	10 52 42.5 0.0
	baz=170					
W39A	Magazine	70.51	340	P	P	10 52 44.5 +1.4
	baz=159,SNR=16					
R58A	Rapidan	70.54	354	P	P	10 52 44.2 +1.0
	baz=173					
T48A	Bowling Green	70.56	347	P	P	10 52 43.5 +0.2
	baz=166					
S51A	Beattyville	70.58	349	P	P	10 52 43.6 +0.2
	baz=168					
T47A	Sharon Grove	70.58	346	P	P	10 52 43.7 +0.2
	baz=165					
R57A	Stanardsville	70.58	354	P	P	10 52 44.4 +1.0
	baz=173,SNR=6.9					
R54A	Victor	70.74	351	P	P	10 52 44.6 +0.1
	baz=171					
S50A	Richmond	70.75	349	P	P	10 52 44.8 +0.4
	baz=168					
T46A	Princeton	70.79	346	P	P	10 52 45.0 +0.3
	baz=165,SNR=6.1					
R53A	Hurricane	71.02	351	P	P	10 52 46.3 +0.2
	baz=170					
S48A	Wiedeman Farm,	71.02	347	P	P	10 52 46.2 +0.1
	baz=166					
S47A	Hartford	71.12	347	P	P	10 52 46.4 -0.3
	baz=166					
R51A	Hillsboro	71.22	349	P	P	10 52 47.6 +0.3
	baz=168					
Q57A	Strasburg	71.31	354	P	P	10 52 49.3 +1.4
	baz=173,SNR=5.2					
R50A	Paris	71.33	349	P	P	10 52 48.0 +0.1
	baz=168					
U40A	Yellville	71.34	341	P	P	10 52 48.6 +0.5
	baz=160,SNR=9.6					
S46A	Don Dixon Farm	71.38	346	P	P	10 52 48.1 -0.2
	baz=165					
Q56A	Snyder Ridge,	71.39	353	P	P	10 52 49.1 +0.8
	baz=172					
Q55A	Buckhannon	71.44	352	P	P	10 52 49.5 +0.9
	baz=172					
Q53A	Leroy	71.48	351	P	P	10 52 48.9 +0.1
	baz=170					
R49A	Shelbyville	71.48	348	P	P	10 52 48.8 0.0
	baz=167					
MNTX	Cornudas Mount	71.56	329	eP	P	10 52 49.6 0.0
	comp=Z,4.0nm,0.8s					
MNTX	Cornudas Mount	71.56	329	P	P	10 52 50.1 +0.5
	baz=150,SNR=11					
WCI	Wyandotte Cave	71.62	347	P	P	10 52 50.2 +0.5
	baz=166					
WMOK	Wichita Mounta	71.67	336	P	P	10 52 50.5 +0.4
	baz=155					
R48A	Northridge Ran	71.71	348	P	P	10 52 50.2 0.0
	baz=166					
P57A	Homestead Farm	71.71	354	P	P	10 52 51.5 +1.3
	baz=173					
P59A	Jarrettsville	71.72	355	P	P	10 52 51.5 +1.2
	baz=175					
S44A	Carbondale	71.72	345	P	P	10 52 50.6 +0.3
	baz=164					
TUL1	Leonard	71.77	339	P	P	10 52 51.3 +0.6
	baz=158					
Q51A	Peebles	71.90	350	P	P	10 52 51.7 +0.3
	baz=169					
P55A	Reedsville	71.92	353	P	P	10 52 52.0 +0.5
	baz=172					
P53A	Whipple	72.08	351	P	P	10 52 52.8 +0.4
	baz=170					
R45A	Skylar, Fairfi	72.08	346	P	P	10 52 52.4 0.0
	baz=164					
P54A	Burton	72.08	352	P	P	10 52 52.9 +0.4
	baz=171					
Q49A	Aurora	72.13	348	P	P	10 52 52.9 +0.1
	baz=167,SNR=5.3					
Q48A	North Vernon	72.20	348	P	P	10 52 53.1 -0.1
	baz=167					
P51A	Williamsport	72.30	350	P	P	10 52 53.9 +0.1
	baz=169					
P52A	Corning	72.32	351	P	P	10 52 54.0 +0.1
	baz=170					
O60A	Telford	72.36	356	P	P	10 52 55.4 +1.4
	baz=176					
O59A	Robesonia	72.40	356	P	P	10 52 55.7 +1.3
	baz=175					
O57A	Amberson	72.40	354	P	P	10 52 55.4 +1.0
	baz=174					
MSTX	Muleshoe	72.46	332	P	P	10 52 55.9 +0.9
	baz=152					
P50A	Jamestown	72.54	349	P	P	10 52 55.5 +0.3
	baz=168					
O56A	Blue Knob Stat	72.54	354	P	P	10 52 56.3 +1.0
	baz=173					
O55A	Ligonier	72.55	353	P	P	10 52 56.1 +0.8
	baz=172					
P49A	Miami Univ. Ec	72.61	349	P	P	10 52 55.4 -0.2
	baz=168					
Q45A	Warren Harvey,	72.63	346	P	P	10 52 55.6 -0.2
	baz=164					
P48A	Milroy	72.66	348	P	P	10 52 55.6 -0.3
	baz=167					
O52A	Adamsville	72.75	351	P	P	10 52 56.6 +0.1
	baz=170					
SSPA	Standing Stone	72.85	354	P	P	10 52 57.7 +0.7
	baz=174					
AMTX	Amarillo	72.85	334	P	P	10 52 58.4 +1.1
	baz=153					
O51A	Pataskala	72.89	351	P	P	10 52 57.3 +0.1
	baz=169					
N57A	Milroy	72.94	355	P	P	10 52 58.3 +0.8
	baz=174					
N59A	State Game Lan	72.97	356	P	P	10 52 59.0 +1.2
	baz=175					
PAL	Palisades	72.97	358	P	P	10 52 59.2 +1.5
	baz=177					
ACSO	Alum Creek Sta	73.03	350	P	P	10 52 58.2 +0.1
	baz=169					
O50A	Cable	73.04	350	P	P	10 52 57.9 -0.2
	baz=168					
N55A	Marion Center	73.09	353	P	P	10 52 59.2 +0.8
	baz=173					
P46A	Rosedale	73.14	347	P	P	10 52 58.3 -0.5
	baz=165					
P45A	Graceland, Par	73.16	346	P	P	10 52 58.7 -0.2
	baz=165					
O49A	Covington	73.19	349	P	P	10 52 59.0 0.0
	baz=168					
LIC	Lamto	73.21	71	eP	P	10 52 59.3 -0.5
	comp=Z,26nm,0.4s					
121A	Cookes Peak, D	73.33	328	P	P	10 53 02.5 +2.3
	baz=148					
N54A	Moraine State	73.37	353	P	P	10 53 00.8 +0.7
	baz=172					
O48A	Farmland	73.39	349	P	P	10 53 00.0 -0.2
	baz=167					
TIC	Toumodi	73.46	71	eP	P	10 53 00.9 -0.4
KIC	Kosan Boka	73.52	71	eP	P	10 53 01.3 -0.3
	comp=Z,126nm,1.2s					
O47A	Sheridan	73.55	348	P	P	10 53 00.7 -0.4
	baz=166					
N50A	Nevada	73.58	350	P	P	10 53 01.4 +0.1
	baz=169					
DBIC	Dimbokro	73.61	71	P	P	10 53 02.0 -0.1
	comp=Z,16nm,0.5s,baz=215,slow=6.9,SNR=23					
DBIC	Dimbokro	73.61	71	eP	P	10 53 01.6 -0.5
	comp=Z,15nm,0.6s					
N51A	Ashland	73.62	351	P	P	10 53 02.1 +0.6
	baz=170					
P43A	Skaggs, Pawnee	73.64	345	P	P	10 53 01.9 +0.2
	baz=163					
M56A	Emporium	73.71	354	P	P	10 53 02.5 +0.4
	baz=173					
M55A	Ridgway	73.75	354	P	P	10 53 03.0 +0.7
	baz=173					
O45A	Potomac	73.85	347	P	P	10 53 02.5 -0.4
	baz=165					
SFIN	Lafayette	73.86	347	P	P	10 53 03.1 +0.2
	baz=166					
M54A	Oil Creek Stat	73.88	353	P	P	10 53 03.6 +0.6
	baz=172					
N49A	Columbus Grove	73.88	349	P	P	10 53 03.1 +0.1
	baz=168					
O44A	Mansfield	73.91	346	P	P	10 53 02.9 -0.4
	baz=164					
N48A	Decatur	73.96	349	P	P	10 53 03.1 -0.4
	baz=167					
N47A	Urbana	74.09	348	P	P	10 53 03.8 -0.5
	baz=167					
M50A	Fremont	74.19	350	P	P	10 53 04.7 -0.1
	baz=169					
M49A	Liberty Center	74.39	350	P	P	10 53 06.4 +0.4
	baz=168					
HRV	Adam Dziewonsk	74.42	359	P	P	10 53 07.8 +1.7
	baz=179					
L55A	Hinsdale	74.43	354	P	P	10 53 06.9 +0.7
	baz=173					
N44A	Piper City	74.46	346	P	P	10 53 06.6 +0.2
	baz=165					
HDIL	Hopedale	74.47	345	P	P	10 53 06.8 +0.3
	baz=164					
MAW	Mawson	74.52	163	P	P	10 53 06.8 +0.2
	comp=Z,3.7nm,0.7s,baz=315,slow=11,SNR=4.9					
MAW	Mawson	74.52	163	eP	P	10 53 06.8 +0.2
	comp=Z,0.9nm,0.8s					
TUC	Tucson	74.54	326	P	P	10 53 08.7 +1.5
	baz=146					
L54A	Sinclairville	74.56	353	P	P	10 53 08.0 +1.0
	baz=172					
ANMO	Albuquerque	74.80	330	P	P	10 53 10.6 +1.8
	baz=149					
TASM	ASL Pad, Albuq	74.81	330	P	P	10 53 10.5 +1.7
	baz=149					
TASM	ASL Pad, Albuq	74.81	330	P	P	10 53 10.5 +1.7
	baz=149					
K54A	Basiliko Farm,	74.88	354	P	P	10 53 09.7 +0.9
	baz=173					
L48A	N Adams	74.92	349	P	P	10 53 08.7 -0.4
	baz=168					
K55A	Perry	74.94	354	P	P	10 53 09.6 +0.4
	baz=174					
N41A	Harden Midland	74.96	344	P	P	10 53 09.2 -0.1
	baz=162,SNR=5.8					
L47A	Sherwood	75.07	349	P	P	10 53 09.6 -0.3
	baz=167					
N40A	Mertquake, Sal	75.30	344	P	P	10 53 11.4 +0.2
	baz=162,SNR=5.7					
K50A	Casco	75.47	351	P	P	10 53 12.2 0.0
	baz=170					
M41A	Milan	75.52	345	P	P	10 53 12.5 -0.1
	baz=163					
J54A	Appleton	75.53	354	P	P	10 53 13.0 +0.5
	baz=173					
K48A	Perry	75.71	350	P	P	10 53 13.5 0.0
	baz=168					
T25A	Trinidad	75.88	333	eP	P	10 53 15.7 +0.8
	comp=Z,7.2nm,0.8s					
T25A	Trinidad	75.88	333	P	P	10 53 17.0 +2.1
	baz=151,SNR=6.5					
L43A	Garden Prairie	75.92	346	P	P	10 53 15.0 +0.3
	baz=164					
L42A	Oliver, Polo	75.94	346	P	P	10 53 14.7 -0.1
	baz=164					
PECO	Prince Edward	76.06	355	P	P	10 53 15.8 +0.3
	baz=174					
LBNH	Lisbon	76.16	359	P	P	10 53 17.3 +1.3
	baz=179					
I51A	Listowel	76.29	352	P	P	10 53 17.0 +0.2
	baz=171					
L40A	Anamosa	76.33	344	P	P	10 53 17.1 0.0
	baz=162,SNR=12					
I55A	Frankford	76.39	355	P	P	10 53 17.7 +0.4
	baz=174					
LONY	Lake Ozonia	76.61	357	P	P	10 53 18.5 -0.2
	baz=176					
K42A	Prairie Point,	76.61	346	P	P	10 53 18.8 +0.1
	baz=164					
BWLO	Walkerton	76.62	352	P	P	10 53 18.6 0.0
	baz=171					
H56A	Elgin	76.67	356	P	P	10 53 19.4 +0.5
	baz=175					
DELO	Deloro Mine	76.68	355	P	P	10 53 20.2 +1.2
	baz=174					
H55A	Tweed	76.68	355	P	P	10 53 20.2 +1.2
	baz=174					
SDCO	Great Sand Dun	76.83	332	eP	P	10 53 20.7 +0.3
	comp=Z,3.5nm,0.8s					
SDCO	Great Sand Dun	76.83	332	P	P	10 53 22.0 +1.6
	baz=150,SNR=12					
JFWS	Jewell Farm	76.93	345	P	P	10 53 20.8 +0.3
	baz=163					
I47A	Gladwin	76.96	350	P	P	10 53 20.8 +0.1
	baz=168					
PLVO	Plevna	77.16	355	P	P	10 53 22.4 +0.7
	baz=174					
PKME	Peaks-Kenny Pk	77.19	1	P	P	10 53 22.5 +0.7
	baz=181					
G53A	Haliburton	77.36	354	P	P	10 53 23.7 +0.8
	baz=173					
Y12C	Blythe	77.53	324	P	P	10 53 25.2 +1.1
	baz=143					
MVCO	Mesa Verde	77.59	330	P	P	10 53 26.2 +1.6
	baz=148					
I42A	Greger Farm,	77.59	347	P	P	10 53 24.7 +0.5
	baz=164					
KLBO	Killbear Provi	77.74	353	P	P	10 53 25.3 +0.4
	baz=172					
BUKO	Buck Lake	77.75	354	P	P	10 53 25.7 +0.7
	baz=172					
Q24A	Divide	77.75	333	eP	P	10 53 25.4 -0.2
	comp=Z,6.9nm,0.7s					
Q24A	Divide	77.75	333	P	P	10 53 26.4 +0.8
	baz=151					
TOBO	Tobermory, Bru	77.75	352	P	P	10 53 25.0 0.0
	baz=171					
PEMO	Pembroke	77.81	355	P	P	10 53 25.8 +0.5
	baz=174					
H43A	Windswept, Lux	77.94	348	P	P	10 53 26.4 +0.3
	baz=165					
I41A	Arkdale	77.95	346	P	P	10 53 26.4 +0.3
	baz=163					
ALGO	Algonquin Park	78.14	355	P	P	10 53 27.4 +0.3
	baz=174					
RAR	Rarotonga	78.18	252	LR	LR	11 19 42.9
	comp=Z,83nm,20.5s,baz=100,slow=29					
F51A	Arnstein	78.28	353	P	P	10 53 28.0 +0.1
	baz=172					
F49A	Sandfield	78.34	352	P	P	10 53 28.2 0.0
	baz=170					
PV13	Radium Mtn., P	78.53	330	eP	P	10 53 31.4 +1.5
	comp=Z,4.4nm,0.9s					
E53A	Dumoine, Ponti	78.54	355	P	P	10 53 29.5 +0.1
	baz=174					
E54A	Lac Daplat, Po	78.56	355	P	P	10 53 29.8 +0.3
	baz=174					
ISCO	Idaho Springs	78.65	333	P	P	10 53 32.1 +1.5
	baz=150					
E51A	G1948 Merrick	78.84	354	P	P	10 53 31.2 +0.3
	baz=172					
E50A	Wahnapitae	78.85	353	P	P	10 53 31.5 +0.5
	baz=171					
E48A	Lockeyer	79.07	352	P	P	10 53 32.5 +0.3
	baz=170					
E47A	Iron Bridge	79.18	351	P	P	10 53 33.3 +0.5
	baz=169					
D52A	ZEK Kipawa Sen	79.19	355	P	P	10 53 33.5 +0.6
	baz=173					
E46A	Sault Ste Mari	79.23	350	P	P	10 53 33.4 +0.3
	baz=168					
D53A	Lac Vacive, Po	79.24	355	P	P	10 53 33.6 +0.5
	baz=174					
D54A	Lac Fusel, La	79.24	356	P	P	10 53 33.0 -0.2
	baz=175					
ECSD	EROS Data Cent	79.25	341	P	P	10 53 34.0 +0.6
	baz=158,SNR=14					
G39A	Holcombe	79.39	345	P	P	10 53 34.5 +0.5
	baz=162					
E43A	Lone Tree Farm	79.65	349	P	P	10 53 35.8 +0.4
	baz=166					
SPMN	Marine on St.	79.69	344	P	P	10 53 35.7 0.0
	baz=161					
D48A	Paudash Townsh	79.71	352	P	P	10 53 35.6 -0.1
	baz=170					
N23A	Red Feather La	79.73	334	P	P	10 53 37.6 +1.2
	baz=150					
SNCC	San Nicolas Is	79.75	320	P	P	10 53 36.6 +0.3
	baz=140					
D49A	Beulah Townshi	79.76	353	P	P	10 53 36.4 +0.5
	baz=171					
F40A	Park Falls	79.78	346	P	P	10 53 37.0 +0.8
	baz=163					
BOSA	Boshof	79.92	117	P	P	10 53 37.8 +0.1
	comp=Z,2.3nm,0.5s,baz=263,slow=2.7,SNR=7.0					
O20A	White River Ci	79.97	332	P	P	10 53 39.1 +1.5
	baz=148					
SRU	San Rafael Swe	80.05	330	eP	P	10 53 38.3 +0.3
	comp=Z,3.2nm,0.9s					
F38A	Pierce - Schro	80.18	345	P	P	10 53 38.7 +0.4
	baz=162					
D41A	Chassel	80.58	348	P	P	10 53 41.1 +0.7
	baz=165					
E38A	The Farm, Brul	80.73	346	P	P	10 53 41.8 +0.6
	baz=162					
LSQQ	Lebel-sur-Quev	81.16	356	P	P	10 53 43.9 +0.4
	baz=175					
R11A	Troy Canyon, C	81.72	326	P	P	10 53 48.3 +1.4
	baz=143					
RSSD	Black Hills	81.87	336	P	P	10 53 48.8 +1.2
	baz=152					
CHGQ	Chibougamau	81.89	358	P	P	10 53 47.9 +0.6
	baz=177					
MATQ	Matagami	81.90	356	P	P	10 53 47.4 +0.1
	baz=174					
EYMN	Ely	82.00	346	P	P	10 53 47.8 -0.1
	baz=162					
TOA0	Torodi Ar. Sit	82.61	69	eP	P	10 53 51.9 0.0
	comp=Z,12nm,0.6s					
TOA1	Torodi Ar. Sit	82.61	69	eP	P	10 53 50.2 -1.6
TOA1				epP	pP	10 54 15.2 +0.8
TORD	Torodi Ar. Bea	82.61	69	P	P	10 53 50.2 -1.6
	comp=Z,7.1nm,0.6s,baz=287,slow=6.2,SNR=40					
TORD				pP	pP	10 54 15.2 +0.8
	comp=Z,1.9nm,0.7s,baz=241,slow=4.6,SNR=2.6					
PDAR	Pinedale Array	82.72	332	P	P	10 53 52.3 +0.2
	comp=Z,0.6nm,0.8s,baz=127,slow=6.3,SNR=5.7					
NV01	Mina Array Sit	83.10	324	epP	pP	10 54 14.7 -1.3
NVAR	Mina Array Bea	83.10	324	P	P	10 53 52.8 -1.3
	comp=Z,0.9nm,0.8s,baz=162,slow=5.6,SNR=5.7					
NVAR				pP	pP	10 54 14.7 -1.3
	comp=Z,0.8nm,0.7s,baz=153,slow=6.1,SNR=3.2					
AGMN	Agassiz Nation	83.30	343	P	P	10 53 54.9 +0.3
	baz=159					
ELK	Elko	83.47	328	LR	LR	11 28 08.4
	comp=Z,43nm,18.6s,baz=70,slow=33					
ULM	Lac du Bonnet	85.13	344	P	P	10 54 03.6 -0.2
	comp=Z,3.4nm,0.6s,baz=159,slow=6.8,SNR=3.4					
HLID	Hailey	85.38	330	P	P	10 54 06.9 +1.4
	baz=144					
BOZ	Bozeman (W)	85.91	333	P	P	10 54 09.4 +1.4
	baz=146					
J08A	Circle Bar Ran	87.01	327	eP	P	10 54 14.2 +0.8
	comp=Z,6.6nm,0.8s					
YKA	Yellowknife Ar	100.78	341	P	Pdif	10 55 15.5 -0.5
	comp=Z,0.2nm,0.5s,baz=148,slow=5.0,SNR=2.7					
YKB5	Yellowknife Ar	100.78	341	ePdif	Pdif	10 55 15.5 -0.5
ZST	Bratislava	111.95	46	ePDIF	Pdif	10 56 07.2 +1.1
BRTR	Keskin Array B	120.05	60	PKP	PKiKP	11 00 18.8 +0.1
	comp=Z,0.7nm,0.7s,baz=195,slow=3.7,SNR=4.8					
BR101	Keskin Array S	120.05	60	ePKPdf	PKiKP	11 00 18.8 +0.1
AKASG	Malin Array Be	120.23	46	PKP	PKPdf	11 00 17.6 -0.7
	comp=Z,0.3nm,0.3s,baz=258,slow=2.5,SNR=4.4					
WR1	Warramunga Arr	122.78	208	ePKPdf	PKPdf	11 00 24.3 -0.1
WR1				epPKPdf	pPKPdf	11 00 46.5 -0.8
WRA	Warramunga Arr	122.78	208	PKP	PKPdf	11 00 24.3 -0.1
	comp=Z,1.3nm,0.8s,baz=189,slow=1.5,SNR=7.4					
WRA				pPKP	pPKPdf	11 00 46.5 -0.8
H11S2	WAKE ISLAND Hyl	26.86	270	T	T	13 20 03.6
	baz=118,slow=75,SNR=174					
H11S1	WAKE ISLAND Hyl	26.87	270	T	T	13 20 02.0
	baz=118,slow=75,SNR=163					
H11S3	WAKE ISLAND Hyl	26.88	270	T	T	13 20 03.3
	baz=118,slow=75,SNR=137					
H11N3	WAKE ISLAND Hyl	27.23	271	T	T	13 20 24.3
	baz=117,slow=76,SNR=23					
H11N1	WAKE ISLAND Hyl	27.24	271	T	T	13 20 27.4
	baz=117,slow=76,SNR=9.9					
H11N2	WAKE ISLAND Hyl	27.25	271	T	T	13 20 25.4
	baz=117,slow=76,SNR=30					
BRVK	Borovoye	145.22	42	ePKPbc	PKPdf	11 01 05.7 +0.8
BVAR	Borovoye Array	145.29	42	PKPbc	PKPab	11 01 06.0 +0.8
	comp=Z,13nm,0.6s,baz=297,slow=3.3,SNR=78					
KK31	Karatay Array	147.76	59	ePKPbc	PKPbc	11 01 12.6 +0.1
KKAR	Karatay Array	147.76	59	ePKPbc	PKPbc	11 01 12.7 +0.2
GAR	Garm	147.84	67	ePKPbc	PKPbc	11 01 13.8 +0.7
ARSB	Arslanbob	149.78	62	ePKPbc	PKPbc	11 01 18.2 +0.4
AAK	Ala-Archa	150.73	59	ePKPbc	PKPbc	11 01 20.3 +0.2
KURK	Kurchatov	150.89	42	ePKPbc	PKPbc	11 01 20.0 +0.1
NRN	Naryn	152.02	61	ePKPbc	PKiKP	11 01 24.3 +0.6
ZAA1	Zalesovo Array	152.20	32	ePKPbc	PKiKP	11 01 23.4 +0.2
ZAA1				e		11 01 46.7
ZAA0	Zalesovo Array	152.20	32	ePKPbc	PKiKP	11 01 23.3 +0.1
ZALV	Zalesovo Beam	152.20	32	PKPbc	PKiKP	11 01 23.4 +0.2
	comp=Z,15nm,0.6s,baz=295,slow=3.2,SNR=53					
ZALV				pPKPbc	pPKPbc	11 01 46.7 +0.7
	comp=Z,3.6nm,0.5s,baz=295,slow=3.2,SNR=4.5					
KSH	Kashi	152.21	66	ePKPbc	PKPdf	11 01 12.8 -4.0
MAKZ	Makanchi	154.62	47	ePKPbc	PKPbc	11 01 28.2 -0.2
MKAR	Makanchi Array	154.82	47	PKP	PKPdf	11 01 20.2 +0.1
	comp=Z,0.5nm,0.8s,baz=48,slow=1.8,SNR=3.7					
MKAR				PKPbc	PKiKP	11 01 29.1 +0.2
	comp=Z,1.6nm,0.8s,baz=318,slow=1.6,SNR=6.6					
MKAR				PKPab	PKPab	11 01 44.7 +0.3
	comp=Z,5.5nm,0.6s,baz=295,slow=4.1,SNR=29					
WMQ	Urumqi	159.55	50	ePKP	PKPdf	11 01 25.8 -0.5
HHC	Hu-ho-hao-te	171.24	348	ePKP	PKPdf	11 01 42.3 +6.1
HHC				LR	LR	
	comp=Z,190nm,11.9s					
HHC				LR	LR	
	comp=Z,130nm,11.1s					
NJ2	Nanjing	171.84	271	ePKP	PKPdf	11 01 36.8 +0.2
LZH	Lanzhou	174.13	48	ePKP	PKPdf	11 01 36.3 -1.3
LZH				pPKP	pPKPdf	11 02 02.9 +2.0
LZH				sPKP		11 02 12.3

ISCJB ***13*** *10:44:55.0±0.5,58°.35N±0°.03×19°.83E±0°.05, h0km, Error ellipse: s-maj=5.6km s-min=3.2km az=147.2*
HEL ***13*** *10:44:56.6±0.1,58°.34N×19°.84E, h0km, ML2.0, ML3.0(UPP), Explosion*
UPP ***13*** *10:44:56.9±0.3,58°.36N×19°.68E, h0km, ML3.0, Explosion*
NAO ***13*** *10:45:02.3±1.9,58°.75N×19°.48E, ML2.3*
BER ***13*** *10:45:04.7±4.6,58°.81N×19°.49E, h0km, ML2.3(NAO), Suspected explosion*

ISC 13 10:44:55.6±0.7,58°.41N±0°.03×19°.69E±0°.02, h0km, n45, σ1§62/67, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOTU	Gotland	0.94	220	P	Pg	10 45 13.7	+0.2
GOTU				S	Sg	10 45 24.9	-0.7
GOTU	Gotland	0.94	220	eP	Pg	10 45 13.7	+0.2
GOTU				eS	Sg	10 45 24.9	-0.7
NYNU	Nynaeshamn	1.06	305	P	Pb	10 45 17.1	+0.3
NYNU				S	Sb	10 45 32.0	+0.7
NYNU	Nynaeshamn	1.06	305	eP	Pb	10 45 17.1	+0.3
NYNU				eS	Sb	10 45 32.0	+0.7
NRTU	Norrtaelje	1.39	337	P	Pb	10 45 23.2	+0.8
NRTU	Norrtaelje	1.39	337	eP	Pb	10 45 23.2	+0.8
VIKU	Vikbolandet	1.58	275	P	Pb	10 45 25.7	+0.2
VIKU	Vikbolandet	1.58	275	eP	Pb	10 45 25.7	+0.2
AAL	Aland	1.78	5	P	Pb	10 45 29.2	+0.1
AAL	Aland	1.78	5	eP	Pb	10 45 29.3	+0.2
AAL				eS	Sb	10 45 53.1	+1.1
UPP	Uppsala	1.80	325	P	Pg	10 45 30.5	+0.4
UPP	Uppsala	1.80	325	eP	Pg	10 45 30.5	+0.4
BYXU	Byxelkrok	1.82	233	P	Pb	10 45 29.5	-0.2
BYXU	Byxelkrok	1.82	233	eP	Pb	10 45 29.5	-0.2
VSTU	Vaestervik	1.84	247	P	Pb	10 45 29.8	-0.2
VSTU	Vaestervik	1.84	247	eP	Pb	10 45 29.8	-0.2
ESKU	Eskilstuna	1.90	297	P	Pb	10 45 31.5	+0.4
ESKU	Eskilstuna	1.90	297	eP	Pb	10 45 31.5	+0.4
FIBU	Brunna	1.92	322	P	Pb	10 45 32.1	+0.7
ASPU	Aespoe	1.93	240	P	Pb	10 45 31.3	-0.1
ASPU	Aespoe	1.93	240	eP	Pb	10 45 31.3	-0.1
BACU	Backbrunna	1.97	319	P	Pb	10 45 32.6	+0.4
BACU	Backbrunna	1.97	319	eP	Pb	10 45 32.6	+0.4
GRAU	Graesoe	2.02	344	P	Pb	10 45 33.5	+0.4
GRAU	Graesoe	2.02	344	eP	Pb	10 45 33.5	+0.4
MTSE	Matsula	2.18	80	eP	Pn	10 45 32.9	-0.2
MTSE				eS	Sn	10 46 00.2	-0.5
RAF	Rauma	2.83	21	eP	Pn	10 45 43.0	+1.1
RAF

MEF MSG 10 46 32.4
comp=Z,4.8nm,0.1s
HFS Hagfors 3.53 302 Pn **Pn 10 45 54.0 +2.4**
baz=117,slow=11
HFS Lg Lg 10 46 45.5
baz=120,slow=28
HFS Hagfors 3.53 302 Pn **Pn 10 45 54.0 +2.4**
baz=117,slow=11
HFS Sg **Sb 10 46 45.5 +3.3**
baz=120,slow=28
VSU Vasula 3.70 86 Pn **Pb 10 46 03.6 +1.9**
VSU Sn **Sb 10 46 47.7 +0.5**
VSU Vasula 3.70 86 Pn **Pb 10 46 03.6 +1.9**
VSU Sn **Sb 10 46 47.7 +0.5**
PVF Pernaja 3.81 53 *eP* **Pn 10 45 56.0 +0.7**
PVF *eS* **Sn 10 46 41.1 +0.3**
BSD Bornholm Skovb 4.22 221 *i* P **Pn 10 46 00.6 -0.4**
BSD *i* S **Sn 10 46 49.6 -1.3**
FIA1 FINESS Array S 4.43 44 *eP* **Pn 10 46 04.5 +0.6**
FIA1 *eS* **Sn 10 46 55.1 -0.9**
KEF Keuruu 4.57 32 *eP* **Pn 10 46 07.4 +1.6**
KEF *eS* **Sn 10 47 00.5 +0.9**
NRA0 NORESS Array S 4.76 303 Pn **Pn 10 46 09.8 +1.4**
baz=100,slow=16
NRA0 Sn **Sn 10 47 06.2 +2.0**
baz=111,slow=16
NRA0 Lg Lg 10 47 23.9
baz=112,slow=22
NRA0 NORESS Array S 4.76 303 Pn **Pn 10 46 09.8 +1.4**
baz=100,slow=16
NRA0 Sn **Sn 10 47 06.2 +2.0**
baz=111,slow=16
NRA0 Sg **Sg 10 47 23.9 -4.3**
baz=112,slow=22
NB2 NORSAR Subarra 5.04 305 Pn **Pn 10 46 13.8 +1.5**
baz=116,slow=14
NB2 Lg Lg 10 47 32.8
baz=120,slow=37
NB2 NORSAR Subarra 5.04 305 Pn **Pn 10 46 13.8 +1.5**
baz=116,slow=14
NB2 Sg **Sg 10 47 32.8 -4.4**
baz=120,slow=37
SUF Sumiainen 5.37 34 *eP* **Pn 10 46 17.4 +0.5**
SUF *eS* **Sn 10 47 18.3 -1.0**
KIF Kilpisjarvi 10.65 2 Pn **Pn 10 47 29.2 +0.1**
KIF Sn **Sn 10 49 23.8 -5.2**
KIF Kilpisjarvi 10.65 2 Pn **Pn 10 47 29.2 +0.1**
KIF Sn **Sn 10 49 23.8 -5.2**
ARA0 ARCESS Array S 11.45 10 Pn **Pn 10 47 38.2 -2.0**
baz=191,slow=14
ARA0 Sn Sn 10 49 38.8 -10
baz=195,slow=22
ARA0 ARCESS Array S 11.45 10 Pn **Pn 10 47 38.2 -2.0**
baz=191,slow=14
ARA0 Sn Sn 10 49 38.8 -10
baz=195,slow=22

*ISCJB **13** 10:56:43.6±0.8, 57°.7N±0°.2×32°.4W±0°.2, h14km, mb3.2/6, MS3.2/16, Error ellipse: s-maj=36.4km s-min=12.7km az=15.5*
*IDC **13** 10:56:43.2±1.1, 57°.74N×32°.34W, h0km, mb3.2/6, mb1 3.5/7, mb1mx3.3/49, mbtmp3.2/7, ML3.8/1, MS3.2/21, Ms1 3.2/21, ms1mx3.1/32, Error ellipse: s-maj=47.7km s-min=18.5km az=20.0*
ISC 13 10:56:45.1±1.1, 57.8N±0°.3×32°.2W±0°.1, h14km, n27, σ1°26/7, mb3.3/6, MS3.2/16, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**8.68**	**32**	LR	LR	11 01 13.6	
	comp=Z,103nm,19.6s,baz=223,slow=31						
SFJD	**Kangerlussuaq**	**12.50**	**325**	LR	LR	11 03 44.1	
	comp=Z,120nm,21.7s,baz=143,slow=34						
EKA	**Eskdalemuir Ar**	**16.12**	**86**	Pn	**P**	**11 00 32.6**	**-1.6**
	baz=278,slow=16,SNR=2.9						
JMIC	**Jan Mayen**	**16.52**	**28**	LR	LR	11 05 23.6	
	comp=Z,28nm,20.9s,baz=240,slow=31						
FRB	**Frobisher Bay**	**18.51**	**304**	LR	LR	11 07 12.9	
	comp=Z,117nm,19.2s,baz=154,slow=34						
SCHQ	**Schefferville**	**19.32**	**276**	LR	LR	11 07 31.6	
	comp=Z,105nm,18.2s,baz=68,slow=34						
NOA	**NORSAR Array B**	**21.99**	**63**	LR	LR	11 09 04.6	
	comp=Z,33nm,19.7s,baz=275,slow=34						
HFS	**Hagfors**	**23.39**	**65**	LR	LR	11 09 48.1	
	comp=Z,42nm,19.0s,baz=303,slow=33						
ESDC	**Sonseca Array**	**25.69**	**123**	P	**P**	**11 02 14.5**	**-0.1**
	0.1nm,0.4s,baz=348,slow=8.7,SNR=2.9						
DAVOX	**Davos/Dischmat**	**27.53**	**95**	LR	LR	11 12 28.3	
	comp=Z,58nm,19.1s,baz=260,slow=34						
GERES	**GERESS Array B**	**28.32**	**88**	LR	LR	11 13 39.8	
	comp=Z,46nm,19.7s,baz=288,slow=36						
VRAC	**Vranov**	**29.59**	**85**	LR	LR	11 14 53.3	
	comp=Z,52nm,19.0s,baz=294,slow=37						
KEST	**Kesra**	**35.20**	**111**	LR	LR	11 16 42.3	
	comp=Z,65nm,21.9s,baz=216,slow=34						
ULM	**Lac du Bonnet**	**36.88**	**286**	LR	LR	11 17 41.1	
	comp=Z,63nm,20.0s,baz=25,slow=34						
YKA	**Yellowknife Ar**	**38.66**	**313**	P	**P**	**11 04 08.4**	**+0.9**
	0.1nm,0.4s,baz=71,slow=9.4,SNR=3.2						
YKA				LR	LR	11 19 15.2	
	comp=Z,5.9nm,19.4s,baz=50,slow=35						
INK	**Inuvik**	**41.84**	**327**	LR	LR	11 19 50.4	
	comp=Z,35nm,19.6s,baz=74,slow=33						
BRTR	**Keskin Array B**	**45.02**	**84**	P	**P**	**11 05 01.6**	**+1.5**
	0.3nm,0.3s,baz=249,slow=4.0,SNR=2.8						
BRTR				LR	LR	11 25 03.5	
	comp=Z,20nm,18.6s,baz=286,slow=38						
KBZ	**Khabaz**	**47.01**	**73**	LR	LR	11 24 26.4	
	comp=Z,21nm,19.7s,baz=70,slow=35						
DLBC	**Dease Lake**	**47.16**	**315**	LR	LR	11 23 36.3	
	comp=Z,48nm,20.4s,baz=118,slow=34						
ILAR	**Eielson Array**	**48.14**	**328**	P	**P**	**11 05 23.3**	**-0.7**
	0.3nm,0.7s,baz=32,slow=6.2,SNR=2.8						
NEW	**Newport**	**48.70**	**298**	LR	LR	11 24 45.4	
	comp=Z,57nm,20.3s,baz=39,slow=35						
PDAR	**Pinedale Array**	**48.88**	**287**	P	**P**	**11 05 29.9**	**-0.4**
	0.2nm,0.5s,baz=74,slow=7.6,SNR=3.2						
PDAR				LR	LR	11 24 57.9	
	comp=Z,38nm,18.8s,baz=74,slow=35						
BBB	**Bella Bella**	**50.84**	**308**	LR	LR	11 25 31.3	
	comp=Z,30nm,19.0s,baz=170,slow=34						
TXAR	**Lajitas Array**	**55.94**	**272**	P	**P**	**11 06 22.6**	**-0.1**
	0.2nm,1.0s,baz=71,slow=6.9,SNR=3.0						
TXAR				LR	LR	11 29 43.0	
	comp=Z,19nm,18.6s,baz=0.0,slow=35						
H10S1	**ASCENSION HYDR**	**68.05**	**161**	T	T	12 21 47.2	
H10S3	**ASCENSION HYDR**	**68.06**	**161**	T	T	12 21 50.0	
	baz=349,slow=74,SNR=4.7						
H10S2	**ASCENSION HYDR**	**68.07**	**161**	T	T	12 21 50.0	
	baz=231,slow=74,SNR=5.3						

*NNC **13** 10:56:46.4±2.5, 43°.62N×69°.71E, h0km, mb3.5, mpv2.8, Error ellipse: s-maj=14.9km s-min=12.2km az=150.0*
*SOME **13** 10:56:46.3, 43°.67N×69°.55E*
ISC 13 10:56:47.1±2.1, 43°.67N±0°.08×69°.8E±0°.1, h0km, n7, σ0°88/10, 1C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Borolday**	**0.64**	**179**	P	**Pb**	**10 57 01.6**	**+0.4**
	0.5nm,0.2s						
BRLS				S	**Sn**	**10 57 14.2**	**-0.2**
	2.4nm,0.3s						
KK31	**Karatay Array**	**0.76**	**138**	⇑P	**Pg**	**10 57 00.6**	**-1.0**
	0.2nm,0.2s,baz=322,slow=17,SNR=32						
KK31				S	**Sg**	**10 57 12.1**	**+0.7**
	6.1nm,0.3s,baz=290,slow=30,SNR=100						
KK31				⇓Rg	Rg	10 57 17.5	
	17nm,0.6s,baz=303,slow=36,SNR=3.9						
IUG	**Iuzhnay**	**1.53**	**174**	P	**Pn**	**10 57 15.5**	**-0.3**
	5.6nm,0.2s						
IUG				S	**Sb**	**10 57 37.3**	**+0.9**
	21nm,0.8s						
BTLS	**Baital**	**3.32**	**64**	Pg	**Pg**	**10 57 50.9**	**+0.2**
	4.1nm,0.7s						
BTLS				Lg	Lg	10 58 38.2	
	5.0nm,0.8s						
DGS	**Degeres**	**4.35**	**94**	Pg	**Pg**	**10 58 10.9**	**+0.4**
	8.7nm,0.5s						
DGS				Lg	Lg	10 59 12.1	
	10nm,0.5s						
KUU	**Kurty**	**4.72**	**85**	Pg	**Pg**	**10 58 16.0**	**-1.5**
	2.1nm,1.1s						
KUU				Lg	Lg	10 59 21.0	
	5.1nm,0.6s						
CHKK	**Chushkaly**	**5.19**	**86**	Pg	**Pg**	**10 58 26.0**	**-0.5**
	1.0nm,0.2s						
CHKK				Lg	Lg	10 59 38.3	
	3.2nm,0.3s						

NNC 13 11:06:51.7±1.4, 51°.67N×75°.33E, h0km, mb3.8, mpv3.6, 4C-3D, Error ellipse: s-maj=14.8km s-min=8.1km az=13.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.27**	**116**	⇓Pg	Pn	11 07 31.9	+1.4
	5.7nm,0.6s						
KURBB				⇑Lg	Lg	11 08 01.6	
	51nm,0.6s						
SEM	**Semipalatinsk**	**3.35**	**110**	Pg	Pg	11 07 57.0	+1.0
	13nm,0.1s						
SEM				Lg	Lg	11 08 43.9	
	25nm,0.3s						
BRVK	**Borovoye**	**3.39**	**296**	⇑Pg	Pb	11 07 52.4	-0.2
	2.6nm,0.8s						
BRVK				⇓Lg	Lg	11 08 39.3	
	15nm,0.7s						
MAKZ	**Makanchi**	**6.53**	**136**	⇓Lg	Lg	11 10 15.9	
	6.3nm,0.8s						
MK31	**Makanchi Array**	**6.68**	**134**	Pn	Pn	11 08 31.5	+0.5
	0.6nm,0.6s,baz=292,slow=12,SNR=5.0						
MK31				⇑Sn	Sn	11 09 45.1	-2.6
	0.5nm,0.5s,baz=227,slow=58,SNR=5.2						
MK31				⇑Lg	Lg	11 10 19.5	
	4.8nm,0.7s,baz=324,slow=27,SNR=9.4						
BTLS	**Baital**	**6.69**	**188**	Pg	Pb	11 08 53.7	+4.9
	1.6nm,0.4s						
BTLS				Lg	Lg	11 10 20.9	
	4.3nm,0.7s						
KAPS	**Kapalarasan**	**6.93**	**156**	Pg	Pg	11 09 00.7	-3.7
	1.1nm,0.8s						
KAPS				Lg	Lg	11 10 32.9	
	5.1nm,0.7s						
ARXS	**Arharly**	**7.65**	**166**	Pg	Pb	11 09 11.5	+6.4
	2.8nm,0.7s						
ARXS				Lg	Lg	11 10 51.9	
	5.5nm,0.7s						
KUU	**Kurty**	**7.81**	**175**	Pg	Pb	11 09 13.8	+5.9
	1.5nm,0.2s						
KUU				Lg	Lg	11 10 55.9	
	8.1nm,0.2s						
CHKK	**Chushkaly**	**7.90**	**171**	Pg	Pg	11 09 18.7	-4.2
	1.6nm,0.4s						
CHKK				Lg	Lg	11 11 03.8	
	5.9nm,0.6s						
DJR	**Jarkent**	**7.93**	**156**	Pg	Pg	11 09 20.0	-3.4
	3.0nm,0.1s						
DJR				Lg	Lg	11 11 06.1	
	2.2nm,0.6s						
KTBS	**Karatobe**	**8.02**	**173**	Pg	Pg	11 09 20.1	-5.0
	1.7nm,0.3s						
KTBS				Lg	Lg	11 11 06.5	
	5.3nm,0.7s						

*IDC **13** 11:07:50.4±1.1, 30°.63N×142°.59E, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.4/47, mbtmp3.5/7, ML3.0/3, MS2.7/2, Ms1 2.7/2, ms1mx2.2/56, Error ellipse: s-maj=32.7km s-min=20.1km az=77.0*
*ISCJB **13** 11:07:51.8±0.9, 30°.6N±0°.1×142°.6E±0°.2, h24km, mb3.9/5, Error ellipse: s-maj=22.4km s-min=10.3km az=144.1*
ISC 13 11:07:54.0±1.1, 30°.6N±0°.1×142°.6E±0°.1, h24km, n9, σ0°86/9, mb3.8/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.44**	**317**	Pn	**Pn**	**11 08 46.0**	**0.0**
	3.4nm,0.3s,baz=213,slow=23,SNR=1.7						
JHJ				Sn	**Sn**	**11 09 25.8**	**-0.2**
	6.5nm,0.3s,baz=18,slow=12,SNR=1.8						
JHJ				LR	LR	11 10 09.7	
	comp=Z,85nm,20.4s,baz=301,slow=41						
MJAR	**Matsushiro Arr**	**6.93**	**330**	Pn	**Pn**	**11 09 35.0**	**+0.9**
	0.1nm,0.3s,baz=138,slow=13,SNR=7.5						
JNU	**Nakatsue**	**10.24**	**287**	LR	LR	11 14 01.0	
	comp=Z,49nm,19.8s,baz=166,slow=36						
KSRS	**Korea Array**	**13.91**	**303**	Pn	**Pn**	**11 11 10.7**	**+1.1**
	0.2nm,0.3s,baz=108,slow=12,SNR=1.7						
MKAR	**Makanchi Array**	**48.55**	**307**	P	**P**	**11 16 33.8**	**-1.5**
	0.2nm,0.4s,baz=93,slow=10,SNR=1.8						
WRA	**Warramunga Arr**	**50.89**	**190**	P	**P**	**11 16 53.1**	**0.0**
	6.4nm,0.3s,baz=6.3,slow=8.4,SNR=2.3						
ILAR	**Eielson Array**	**54.49**	**30**	P	**P**	**11 17 19.2**	**-0.1**
	0.3nm,0.7s,baz=262,slow=6.2,SNR=2.3						
ASAR	**Alice Springs**	**54.61**	**190**	P	**P**	**11 17 21.2**	**+0.6**
	0.6nm,0.5s,baz=6.7,slow=6.6,SNR=15						
YKA	**Yellowknife Ar**	**68.90**	**29**	P	**P**	**11 18 56.6**	**+0.1**
	0.4nm,0.6s,baz=296,slow=6.5,SNR=4.9						

*ISCJB **13** 11:18:49.8±0.9, 57°.25N±0°.03×154°.42W±0°.06, h31km±9km, mb3.2/1, Error ellipse: s-maj=5.8km s-min=5.6km az=145.2*
*IDC **13** 11:18:49.3±3.4, 56°.91N×153°.54W, h0km, mb3.1/2, mb1 3.6/4, mb1mx3.3/49, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=65.5km s-min=18.0km az=103.0*
*NEIC **13** 11:18:51.5±0.0, 57°.24N×154°.45W, h24km, ML3.0(AEIC), After AEIC.*
ISC 13 11:18:50.6±1.1, 57°.25N±0°.05×154°.36W±0°.05, h57km±12km, n37, σ1°18/42, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.58**	**92**	*e*Pg	**Pn**	**11 19 03.0**	**-0.2**
OHAK				*e*Sn	**Sn**	**11 19 12.3**	**0.0**
SII	**Sitkinak Islan**	**0.70**	**172**	*e*Pg	**Pn**	**11 19 03.9**	**-0.7**
SII				*e*Sn	**Sn**	**11 19 15.0**	**+0.2**
KDAK	**Kodiak Island**	**1.10**	**60**	Pg	**Pn**	**11 19 09.8**	**+0.1**
	21nm,0.3s,baz=200,slow=3.9,SNR=551						
KDAK				Lg	Lg	11 19 23.2	
	38nm,0.3s,baz=249,slow=13,SNR=9.8						
KDAK	**Kodiak Island**	**1.10**	**60**	*e*Pn	**Pn**	**11 19 10.0**	**+0.2**
KDAK				*e*Sn	**Sn**	**11 19 25.0**	**+1.1**
ACHA	**Angle Creek He**	**1.10**	**332**	*e*Pn	**Pn**	**11 19 09.3**	**-0.5**
ACHA				*e*Sn	**Sn**	**11 19 23.6**	**-0.5**
KABU	**Katmai Buttres**	**1.14**	**335**	*e*Pn	**Pn**	**11 19 10.4**	**0.0**
KAHG	**Katmai Hook Gl**	**1.25**	**355**	*e*Pn	**Pn**	**11 19 12.6**	**+0.7**
KAHG				*e*Sn	**Sn**	**11 19 29.3**	**+1.4**
KARR	**Katmai Rainbow**	**1.27**	**352**	*e*Pn	**Pn**	**11 19 12.5**	**+0.5**
KELA	**Mount Kelaz**	**1.41**	**329**	*e*Pn	**Pn**	**11 19 13.5**	**-0.4**
KELA				*e*Sn	**Sn**	**11 19 31.4**	**-0.1**
KAHC	**Katmai Hardscr**	**1.45**	**346**	*e*Pn	**Pn**	**11 19 14.5**	**0.0**
FONW	**Fourpeaked Sta**	**1.61**	**8**	*e*Pn	**Pn**	**11 19 17.4**	**+0.7**
ANNW	**Aniakchak Nort**	**2.12**	**264**	*e*Pn	**Pn**	**11 19 23.8**	**+0.2**
AZAC	**Aniakchak**	**2.15**	**262**	*e*Pn	**Pn**	**11 19 24.2**	**+0.2**
AUI	**Augustine Isla**	**2.15**	**13**	*e*Pn	**Pn**	**11 19 25.0**	**+1.0**
AUE	**Augustine Isla**	**2.18**	**13**	*e*Pn	**Pn**	**11 19 25.7**	**+1.3**
CHGN	**Chignik**	**2.43**	**249**	*e*Pn	**Pn**	**11 19 26.7**	**-1.0**
CNPM	**China Poot**	**2.81**	**34**	*e*Pn	**Pn**	**11 19 33.9**	**+0.8**
BRLK	**Bradley Lake**	**3.11**	**34**	*e*Pn	**Pn**	**11 19 37.5**	**+0.3**
RDSO	**Redoubt South**	**3.33**	**14**	*e*Pn	**Pn**	**11 19 41.4**	**+1.2**
RSO	**Redoubt South**	**3.33**	**14**	*e*Pn	**Pn**	**11 19 41.4**	**+1.2**
RDWB	**Redoubt West**	**3.34**	**13**	*e*Pn	**Pn**	**11 19 41.5**	**+1.1**
SDPT	**Sand Point**	**3.90**	**243**	*e*Pn	**Pn**	**11 19 47.9**	**0.0**
SVW2	**Sparrevohn**	**3.91**	**351**	*e*Pn	**Pn**	**11 19 48.5**	**+0.4**
SUA	**Susitna One**	**4.62**	**22**	*e*Pn	**Pn**	**11 19 59.2**	**+1.4**
GLI	**Glacier Island**	**5.22**	**43**	*e*Pn	**Pn**	**11 20 05.2**	**-0.8**
EYAK	**Cordova Ski Ar**	**5.55**	**50**	*e*Pn	**Pn**	**11 20 10.2**	**-0.3**
TT01	**Tatalina**	**5.74**	**352**	*e*Pn	**Pn**	**11 20 13.7**	**+0.7**
TTA	**Tatalina**	**5.76**	**352**	*e*Pn	**Pn**	**11 20 14.2**	**+0.8**
CAST	**Castle Rocks**	**6.29**	**9**	*e*Pn	Pn	11 20 23.3	+2.6
RND	**Reindeer**	**6.75**	**22**	*e*Pn	**Pn**	**11 20 28.1**	**+1.2**
DHY	**Denali Highway**	**6.80**	**28**	*e*Pn	**Pn**	**11 20 27.3**	**-0.4**
PAX	**Paxson**	**7.25**	**34**	*e*Pn	**Pn**	**11 20 35.1**	**+1.3**
ILAR	**Eielson Array**	**8.37**	**23**	Pn	**Pn**	**11 20 48.4**	**-0.6**
	0.1nm,0.3s,baz=225,slow=12,SNR=3.1						
ILAR				Sn	**Sn**	**11 22 16.6**	**-5.3**
	0.1nm,0.3s,baz=299,slow=36,SNR=0.9						
IM3	**Indian Mountai**	**8.77**	**2**	*e*Pn	**Pn**	**11 20 54.6**	**+0.1**
INK	**Inuvik**	**14.52**	**32**	Pn	**P**	**11 22 16.7**	**-0.9**
	0.2nm,0.3s,baz=204,slow=13,SNR=7.4						
YKA	**Yellowknife Ar**	**20.37**	**59**	P	Pn	11 23 26.3	+1.7
	0.6nm,0.7s,baz=268,slow=11,SNR=7.8						
TXAR	**Lajitas Array**	**44.78**	**106**	P	**P**	**11 26 59.9**	**+1.4**
	0.3nm,0.8s,baz=318,slow=7.3,SNR=4.2						

*VAO **13** 11:27:52.9±0.6, 23°.66S×68°.27W, h340km, mb4.0*
*NEIC **13** 11:27:56.7±2.1, 23°.39S×66°.80W, h186km±6km, mb4.0/8, MD3.7(SJA), Error ellipse: s-maj=45.2km s-min=20.6km az=87.0*
*ISCJB **13** 11:27:56.8±0.2, 23°.32S±0°.03×66°.91W±0°.03, h218km±3km, mb3.8/11, Error ellipse: s-maj=4.8km s-min=3.5km az=42.6*
*SJA **13** 11:27:56.3±0.6, 23°.27S×66°.85W, h230km±3km, ML3.6, MW3.7*
*IDC **13** 11:27:57.7±1.0, 23°.29S×66°.77W, h198km±9km, mb3.4/6, mb1 3.8/12, mb1mx3.6/27, mbtmp4.0/12, Error ellipse: s-maj=15.9km s-min=14.8km az=166.0*
*GUC **13** 11:27:58.9±0.4, 23°.23S×67°.17W, h244km±5km, ML4.8*
ISC 13 11:27:57.6±0.6, 23°.36S±0°.04×66°.91W±0°.03, h212km±6km, n98, σ1°69/132, mb4.0/11, 15C-4D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.39**	**84**	*e*P	**Pn**	**11 28 32.2**	**+0.3**
HJA				IAML		11 28 32.9	
	comp=Z,1μm,0.7s						
YJA	**Yavi**	**1.75**	**48**	*e*P	**Pn**	**11 28 35.2**	**0.0**
YJA				IAML		11 28 36.7	
	comp=Z,167nm,0.2s						
YJA				*e*S	**S**	**11 29 04.3**	**+0.3**
SLA	**San Lorenzo**	**1.87**	**137**	*e*P	**Pn**	**11 28 37.3**	**+1.4**
SLA				IAML		11 28 38.5	
	comp=Z,611nm,0.6s						
SLA				*e*S	**S**	**11 29 07.0**	**+1.3**
AZAP	**Zapla**	**1.90**	**117**	*e*P	**Pn**	**11 28 36.6**	**+0.3**
AZAP				IAML		11 28 36.9	
	comp=Z,683nm,0.5s						
AZAP				*e*S	**S**	**11 29 07.4**	**+1.3**
LVC	**Limon Verde**	**1.99**	**292**	P	**Pn**	**11 28 38.3**	**+1.0**
	comp=Z,118nm,0.3s,baz=171,slow=2.5,SNR=1942						
LVC				S	**S**	**11 29 08.2**	**+0.4**
	comp=Z,51nm,0.3s,baz=5.0,slow=23,SNR=20						
LVC	**Limon Verde**	**1.99**	**292**	*e*Pn	**Pn**	**11 28 38.5**	**+1.1**
LVC				*e*Sn	**S**	**11 29 05.9**	**-2.0**
LVC	**Limon Verde**	**1.99**	**292**	*e*P	**Pn**	**11 28 38.1**	**+0.7**
LVC				IAML		11 28 38.9	
	comp=Z,433nm,0.3s						
LVC				⇓*e*S	**S**	**11 29 08.8**	**+0.9**
LVC	**Limon Verde**	**1.99**	**292**	⇓*i*P	**Pn**	**11 28 38.4**	**+1.0**
LVC				*i* S	**S**	**11 29 08.4**	**+0.5**
LVC	**Limon Verde**	**1.99**	**292**	*e*P	**Pn**	**11 28 38.3**	**+1.0**
PB15	**IPOC Station P**	**2.36**	**273**	*e*P	**Pn**	**11 28 42.1**	**+1.1**
PB15				*e*S	**S**	**11 29 15.6**	**+1.2**
PB15	**IPOC Station P**	**2.36**	**273**	⇑*i*P	**Pn**	**11 28 42.3**	**+1.3**
PB15				*i* S	**S**	**11 29 15.1**	**+0.7**
PB06	**IPOC Station P**	**2.53**	**284**	*e*P	**Pn**	**11 28 43.5**	**+0.7**
PB06				⇓*e*S	**S**	**11 29 18.4**	**+0.7**
PB06	**IPOC Station P**	**2.53**	**284**	⇑*i*P	**Pn**	**11 28 43.9**	**+1.0**
PB06				*i* S	**S**	**11 29 17.7**	**-0.1**
PB06				IAML		11 29 20.8	
	comp=N,1μm,0.1s						
FSA	**Cafayete**	**2.87**	**163**	*e*P	**Pn**	**11 28 47.9**	**+1.4**
FSA				IAML		11 28 48.8	
	comp=Z,10nm,0.3s						
PB03	**IPOC Station P**	**2.93**	**296**	*e*P	**Pn**	**11 28 47.6**	**+0.4**
PB03	**IPOC Station P**	**2.93**	**296**	⇓*i*P	**Pn**	**11 28 47.7**	**+0.4**
PB03				*i* S	**S**	**11 29 24.6**	**-1.1**
PB03				IAML		11 29 25.9	
	comp=E,1μm,0.2s						
GO02	**Mina Guanaco**	**3.03**	**233**	*e*Pn	**Pn**	**11 28 50.1**	**+1.5**
GO02				*e*Sn	**S**	**11 29 29.6**	**+1.5**
GO02	**Mina Guanaco**	**3.03**	**233**	⇑*i*P	**Pn**	**11 28 50.1**	**+1.5**
GO02				*i* S	**S**	**11 29 29.9**	**+1.8**
PB05	**IPOC Station P**	**3.07**	**279**	*e*P	**Pn**	**11 28 49.5**	**+0.6**
PB05	**IPOC Station P**	**3.07**	**279**	⇑*i*P	**Pn**	**11 28 49.5**	**+0.6**
PB05				*i* S	**S**	**11 29 27.3**	**-1.2**
PB05				IAML		11 29 30.1	
	comp=N,523nm,0.3s						
PB04	**IPOC Station P**	**3.15**	**288**	*e*Pn	**Pn**	**11 28 50.3**	**+0.4**
PB04				*e*Sn	**S**	**11 29 29.4**	**-1.1**
PB04	**IPOC Station P**	**3.15**	**288**	*e*P	**Pn**	**11 28 50.7**	**+0.8**
PB04	**IPOC Station P**	**3.15**	**288**	⇑*i*P	**Pn**	**11 28 50.4**	**+0.5**
PB04				*i* S	**S**	**11 29 29.1**	**-1.3**
PB04				IAML		11 29 33.5	
	comp=N,1μm,0.2s						
PB07	**IPOC Station P**	**3.19**	**300**	*e*P	**Pn**	**11 28 50.5**	**+0.2**
PB07	**IPOC Station P**	**3.19**	**300**	⇑*i*P	**Pn**	**11 28 50.7**	**+0.3**
PB07				*i* S	**S**	**11 29 29.8**	**-1.5**
PB07				IAML		11 29 30.5	
	comp=N,3μm,0.4s						
PB01	**IPOC Station P**	**3.32**	**314**	*e*Pn	**Pn**	**11 28 51.7**	**-0.1**
PB01				*e*Sn	**S**	**11 29 32.9**	**-0.9**
PB01	**IPOC Station P**	**3.32**	**314**	⇑*i*P	**Pn**	**11 28 51.6**	**-0.1**
PB01				*i* S	**S**	**11 29 32.3**	**-1.5**
PB01				IAML		11 29 34.3	
	comp=E,793nm,0.1s						
PB10	**IPOC Station P**	**3.35**	**267**	*e*Pn	**Pn**	**11 28 52.9**	**+0.9**
PB10				*e*Sn	**S**	**11 29 33.2**	**-1.0**
PB10	**IPOC Station P**	**3.35**	**267**	*e*P	**Pn**	**11 28 52.7**	**+0.7**
PB10	**IPOC Station P**	**3.35**	**267**	⇑*i*P	**Pn**	**11 28 52.9**	**+0.9**
PB10				*i* S	**S**	**11 29 33.4**	**-0.8**
PB02	**IPOC Station P**	**3.43**	**306**	*e*P	**Pn**	**11 28 52.9**	**-0.1**
PB02	**IPOC Station P**	**3.43**	**306**	⇑*i*P	**Pn**	**11 28 52.9**	**-0.1**
PB02				*i* S	**S**	**11 29 33.9**	**-2.2**
PB02				IAML		11 29 36.9	
	comp=E,1μm,0.4s						
PB14	**IPOC Station P**	**3.43**	**248**	*e*P	**Pn**	**11 28 54.4**	**+1.1**
PB14	**IPOC Station P**	**3.43**	**248**	⇑*i*P	**Pn**	**11 28 54.3**	**+1.1**
AHML	**Horco Molle**	**3.70**	**158**	*e*P	**Pn**	**11 28 57.0**	**+0.8**
AHML				IAML		11 28 57.8	
	comp=Z,28nm,0.3s						
AHML				*e*S	**S**	**11 29 41.9**	**-0.1**
PB08	**IPOC Station P**	**3.82**	**327**	*e*P	**Pn**	**11 28 57.9**	**-0.2**
PB08	**IPOC Station P**	**3.82**	**327**	⇑*i*P	**Pn**	**11 28 58.5**	**+0.4**

RCLB	Rio Claro- Sao	17.89	91	eP		Pn	11 31 51.6 -2.2
BDFB	Brasilia	19.39	70	P		P	11 32 07.9 0.0
comp=Z,1.3nm,0.3s,baz=243,slow=12,SNR=25							
PARB	Paraibuna	19.55	94	eP		P	11 32 08.7 -0.8
PMNB	Patos De Minas	19.71	80	eP		P	11 32 10.5 -0.8
BSCB	Bom Sucesso	20.63	88	eP		P	11 32 20.5 -0.6
ESAR	Angra dos Reis	20.66	94	eP		P	11 32 19.9 -1.4
PEXB	Peixe	20.94	61	eP		P	11 32 22.7 -1.6
VAS01	Vassouras-RJ	21.66	92	eP		P	11 32 29.6 -2.1
MCI8	Montes Claros	22.59	77	eP		P	11 32 36.5 -4.0
JANB	Januaria	22.86	73	eP		P	11 32 39.3 -3.6
SMTB	Santa Maria do	23.46	55	eP		P	11 32 44.1 -4.2
PTGA	Pitinga	23.48	18	P		P	11 32 48.3 -0.1
comp=Z,1.5nm,0.5s,baz=241,slow=19,SNR=3.6							
PTGA	Pitinga	23.48	18	eP		P	11 32 48.5 +0.1
comp=Z,3.0nm,1.0s							
PTGA	Pitinga	23.48	18	eP		P	11 32 39.6 -8.8
SJMB	Sao Joao De Ma	24.44	84	eP		P	11 32 53.2 -3.9
BSFB	Barra de Sao F	24.72	84	eP		P	11 32 57.2 -2.4
OTAV	Otavalo	26.00	333	eP		P	11 32 52.7 -19
RCBR	Riachuelo	34.57	65	eP		P	11 34 26.6 0.0
comp=Z,22nm,1.1s							
TEIG	Tepich	48.07	333	eP		P	11 36 16.9 +1.0
comp=Z,6.3nm,0.5s							
TXAR	Lajitas Array	63.21	324	P		P	11 38 05.0 +1.5
comp=Z,0.5nm,0.7s,baz=142,slow=7.4,SNR=8.4							
CCUT	Cedar City	74.69	323	eP		P	11 39 17.6 +3.4
comp=Z,2.6nm,0.8s							
TORD	Torodi Ar. Bea	76.27	69	P		P	11 39 24.5 +1.1
comp=Z,1.5nm,0.4s,baz=257,slow=5.7,SNR=19							
PDAR	Pinedale Array	76.64	329	P		P	11 39 27.0 +1.8
comp=Z,0.4nm,0.6s,baz=116,slow=6.8,SNR=4.5							
NVAR	Mina Array Bea	78.09	321	P		P	11 39 35.4 +2.1
comp=Z,0.7nm,0.8s,baz=154,slow=8.5,SNR=4.3							
YHH	Holmes Hill	78.79	330	eP		P	11 39 39.1 +2.1
comp=Z,2.9nm,0.8s							
HLID	Hailey	79.60	327	eP		P	11 39 43.7 +2.4
comp=Z,2.3nm,0.8s							
MCMT	McKenzie Canyo	79.76	329	eP		P	11 39 44.5 +2.2
YKA	Yellowknife Ar	93.55	340	P		P	11 40 50.2 +1.3
comp=Z,0.7nm,0.6s,baz=131,slow=4.4,SNR=17							
ASAR	Alice Springs	129.07	205	PKP		PKiKP	11 46 42.4 +0.7
comp=Z,0.2nm,0.3s,baz=135,slow=1.5,SNR=3.6							
WRA	Warramunga Arr	132.23	207	PKP		PKiKP	11 46 49.5 +1.4
comp=Z,1nm,0.3s,baz=156,slow=2.2,SNR=3.3							
MK31	Makanchi Array	145.98	39	ePKPdf		PKPab	11 47 12.8 -0.3
MKAR	Makanchi Array	145.98	39	PKPbc		PKPbc	11 47 12.4 +0.1
comp=Z,2.9nm,0.8s,baz=304,slow=3.3,SNR=19							
KLR	Kul'dur	150.28	335	PKPbc		PKiKP	11 47 24.6 +0.5
comp=Z,0.7nm,0.3s,baz=2.0,slow=6.8,SNR=4.1							

*MOS **13** 11:31:45.9±0.4, 50°.78N×157°.22E, h139km, mb3.8/1, Error ellipse: s-maj=20.1km s-min=4.7km az=74.8*
*KRSC **13** 11:31:45.7±1.7, 50°.81N×157°.31E, h133km±16km, ML4.2*
*ISCJB **13** 11:31:46.3±0.7, 50°.83N±0°.08×157°.2E±0°.1, h137km±5km, mb3.5/2, Error ellipse: s-maj=19.3km s-min=5.4km az=41.6*
*IDC **13** 11:31:47.6±2.7, 50°.92N×157°.00E, h140km±33km, mb3.2/2, mb1 3.2/6, mb1mx3.0/58, mbtmp3.6/6, Error ellipse: s-maj=48.3km s-min=30.6km az=128.0*

ISC 13 11:31:46.3±1.1, 50°.78N±0°.09×157°.27E±0°.08, h137km±8km, n68, σ1§10/95, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.74	263	eP	Pn	11 32 07.9	+0.2
SKR				eS	Sn	11 32 23.2	-0.7
SKR	Severo-Kuril's	0.74	263	PN	Pn	11 32 07.9	+0.2
SKR				S	Sn	11 32 23.2	-0.7
PAU	Pauzhetka	0.74	337	eP	Pn	11 32 08.2	+0.5
PAU	Pauzhetka	0.74	337	PN	Pn	11 32 08.2	+0.5
ALID	Alaid	1.09	275	eP	Pn	11 32 10.3	-0.6
ALID	Alaid	1.09	275	PN	Pn	11 32 10.3	-0.6
KDTR	Khodutka, Kamc	1.15	26	eP	Pn	11 32 12.2	+1.0
KDTR				eS	Sn	11 32 30.1	-0.1
KDTR	Khodutka, Kamc	1.15	26	PN	Pn	11 32 12.2	+1.0
KDTR				S	Sn	11 32 30.1	-0.1
ASAK	Asacha	1.65	14	eP	Pn	11 32 17.5	+0.8
ASAK	Asacha	1.65	14	PN	Pn	11 32 17.5	+0.8
MTVR	Mutnovka	1.80	18	eP	Pn	11 32 19.3	+0.9
MTVR				eS	Sn	11 32 42.9	-0.1
MTVR	Mutnovka	1.80	18	PN	Pn	11 32 19.3	+0.9
MTVR				S	Sn	11 32 42.9	-0.1
RUS	Russkaya	1.83	25	eP	Pn	11 32 19.0	+0.4
RUS				eS	Sn	11 32 42.4	-0.9
RUS	Russkaya	1.83	25	PN	Pn	11 32 19.0	+0.4
RUS				S	Sn	11 32 42.4	-0.9
KRMR	Karymshinskiy	2.12	14	eP	Pn	11 32 22.8	+0.7
KRMR	Karymshinskiy	2.12	14	PN	Pn	11 32 22.8	+0.7
APC	Apacha	2.15	358	eP	Pn	11 32 21.9	-0.5
APC	Apacha	2.15	358	PN	Pn	11 32 21.9	-0.5
PETK	Petropavlovsk-	2.35	6	P	Pn	11 32 24.9	0.0
21nm,0.3s,baz=170,slow=11,SNR=514							
PETK				S	Sn	11 32 54.2	-0.3
3.4nm,0.3s,baz=153,slow=16,SNR=6.6							
PET	Petropavlovsk	2.40	20	eP	Pn	11 32 26.0	+0.5
PET				eS	Sn	11 32 54.5	-1.3
PET	Petropavlovsk	2.40	20	||/PN	Pn	11 32 26.1	+0.5
PET				eS	Sn	11 32 55.1	-0.7
PET				pmax	pmax		
comp=Z,62nm,0.4s							
PET				smax	smax		
comp=N,200nm,0.5s							
PET				smax	smax		
comp=N,310nm,0.4s							
PET				smax	smax		
comp=E,156nm,0.5s							
DALK	Dalny	2.43	22	eP	Pn	11 32 26.6	+0.7
DALK				eS	Sn	11 32 55.9	-0.5
DALK	Dalny	2.43	22	PN	Pn	11 32 26.6	+0.7
DALK				S	Sn	11 32 55.9	-0.5
UGLR	Uglovaya	2.62	21	eP	Pn	11 32 29.8	+1.5
UGLR				eS	Sn	11 33 00.9	+0.2
UGLR	Uglovaya	2.62	21	PN	Pn	11 32 29.8	+1.5
UGLR				S	Sn	11 33 00.9	+0.2
AVH	Avacha	2.65	19	eP	Pn	11 32 30.2	+1.5
AVH	Avacha	2.65	19	PN	Pn	11 32 30.2	+1.5
KOK	Koryaka	2.65	18	eP	Pn	11 32 30.3	+1.5
KOK				eS	Sn	11 33 02.7	+1.1
KOK	Koryaka	2.65	18	PN	Pn	11 32 30.3	+1.5
KOK				S	Sn	11 33 02.7	+1.1
SMAR	Somma	2.66	20	eP	Pn	11 32 30.3	+1.3
SMAR	Somma	2.66	20	PN	Pn	11 32 30.3	+1.3
KRER	Koryakskii	2.69	19	eP	Pn	11 32 30.7	+1.4
KRER				eS	Sn	11 33 02.3	-0.2
KRER	Koryakskii	2.69	19	PN	Pn	11 32 30.7	+1.4
KRER				S	Sn	11 33 02.3	-0.2
SDLR	Sedlovina	2.69	21	eP	Pn	11 32 30.1	+0.8
SDLR				eS	Sn	11 33 01.5	-1.0
SDLR	Sedlovina	2.69	21	PN	Pn	11 32 30.1	+0.8
SDLR				S	Sn	11 33 01.5	-1.0
NLC	Nalytchevo	2.72	27	eP	Pn	11 32 29.4	-0.1
NLC				eS	Sn	11 33 00.0	-2.8
NLC	Nalytchevo	2.72	27	PN	Pn	11 32 29.4	-0.1
NLC				S	Sn	11 33 00.0	-2.8
KRX	Arik	2.72	18	eP	Pn	11 32 30.8	+1.1
KRX				eS	Sn	11 33 02.6	-0.5
KRX	Arik	2.72	18	PN	Pn	11 32 30.8	+1.1
KRX				S	Sn	11 33 02.6	-0.5
SPN	Mys Shipunski	2.88	35	eP	Pn	11 32 32.4	+0.8
SPN				eS	Sn	11 33 05.1	-1.4
SPN	Mys Shipunski	2.88	35	PN	Pn	11 32 32.4	+0.8
SPN				S	Sn	11 33 05.1	-1.4
GNL	Ganaly	2.95	8	eP	Pn	11 32 32.5	-0.1
GNL	Ganaly	2.95	8	PN	Pn	11 32 32.5	-0.1
MKZ	Mys Kozlova	4.65	34	eP	Pn	11 32 54.7	-0.1
MKZ				eS	Sn	11 33 44.1	-4.0
MKZ	Mys Kozlova	4.65	34	PN	Pn	11 32 54.7	-0.1
MKZ				S	Sn	11 33 44.1	-4.0
KZV	Kizimen	4.71	22	eP	Pn	11 32 56.4	+0.7
KZV	Kizimen	4.71	22	PN	Pn	11 32 56.4	+0.7
TUMD	Tumrok D	4.82	22	eP	Pn	11 32 57.6	+0.6
TUMR	Tumrok	4.83	20	eP	Pn	11 32 58.8	+1.5
TUMR	Tumrok	4.83	20	PN	Pn	11 32 58.8	+1.5
SRDR	Sredinnyy	5.74	14	eP	Pn	11 33 09.9	+0.6
SRDR	Sredinnyy	5.74	14	PN	Pn	11 33 09.9	+0.6
BDR	Baidarnaya	6.25	20	eP	Pn	11 33 16.9	+0.7
BDR	Baidarnaya	6.25	20	PN	Pn	11 33 16.9	+0.7
SRKR	Sorokina	6.32	20	eP	Pn	11 33 17.5	+0.4
SRKR	Sorokina	6.32	20	PN	Pn	11 33 17.5	+0.4
KBTR	Krutoberegovo	6.36	29	eP	Pn	11 33 17.4	-0.2
KBTR	Krutoberegovo	6.36	29	PN	Pn	11 33 17.4	-0.2
KBG	Krutoberegovo	6.37	28	eP	Pn	11 33 18.2	+0.5
KBG	Krutoberegovo	6.37	28	PN	Pn	11 33 18.2	+0.5
BKI	Bering	6.87	46	eP	Pn	11 33 25.1	+0.7
BKI	Bering	6.87	46	PN	Pn	11 33 25.1	+0.7
YSS	Yuzh-Sakhalins	10.30	254	ePN	Pn	11 34 18.2	+7.8
ASAJ	Asahikawa	11.95	242	P	Pn	11 34 31.8	-0.5
comp=E,0.5nm,0.3s,baz=74,slow=15,SNR=6.6							
KLR	Kul'dur	16.46	275	P	Pn	11 35 28.9	-0.1
comp=E,0.1nm,0.3s,baz=12,slow=6.8,SNR=3.8							
MJAR	Matsushiro Arr	19.73	231	P	P	11 36 06.9	+1.7
comp=E,0.0nm,0.3s,baz=13,slow=11,SNR=3.5							
KSRS	Korea Array	24.73	249	P	P	11 36 55.8	+1.0
comp=E,0.3nm,0.4s,baz=55,slow=11,SNR=4.1							
CMAR	Chiang Mai Arr	55.98	257	P	P	11 41 09.0	-1.3
comp=E,0.8nm,0.6s,baz=28,slow=6.8,SNR=5.2							

IDC 13 11:38:41.3±6.2, 6°.58S×147°.25E, h126km±65km, mb3.0/2, mb1 3.2/3, mb1mx2.9/39, mbtmp3.4/3, Error ellipse: s-maj=94.7km s-min=34.2km az=133.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.81	182	P	Pn	11 39 24.8	-0.5
3.2nm,0.3s,baz=347,slow=7.9,SNR=8.1							
PMG				S	Sn	11 40 00.2	+0.9
7.5nm,0.3s,baz=223,slow=20,SNR=10.0							
WRA	Warramunga Arr	18.27	222	P	P	11 42 44.2	-1.1
4.5nm,0.3s,baz=49,slow=10,SNR=3.4							
ASAR	Alice Springs	21.29	216	P	P	11 43 17.6	-0.4
0.3nm,0.4s,baz=52,slow=9.4,SNR=11							
ILAR	Eielson Array	85.91	23	P	P	11 51 06.2	-0.5
0.2nm,0.5s,baz=264,slow=4.2,SNR=4.1							
TORD	Torodi Ar. Bea	145.47	284	PKPbc	PKPab	11 58 06.0	-0.1
1.1nm,0.6s,baz=79,slow=4.3,SNR=5.6							

MAN 13 11:42:45.5, 14°.20N×120°.60E, h122km, mb3.9, ML2.7, MS2.2, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.34	106	eP	Pn	11 43 03.5	+0.5
LUBP	Lubang	0.57	216	eP	Pn	11 43 05.9	+1.7
LUBP				eS	Sn	11 43 20.5	+2.3
PGP	Puerto Galera	0.78	153	eP	Pn	11 43 07.2	+1.4
PGP				eS	Sn	11 43 24.0	+2.9
SCZP	Santa Cruz	1.70	337	eP	Pn	11 43 16.7	+1.2
SCZP				eS	Sn	11 43 39.1	+0.8
SJMP	San Jose	1.80	163	eP	Pn	11 43 17.6	+0.9
SJMP				eS	Sn	11 43 41.0	+0.5

*IDC **13** 11:55:40.4±0.8, 58°.07N×32°.28W, h0km, mb3.8/13, mb1 3.9/15, mb1mx3.8/50, mbtmp3.8/15, ML3.8/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/22, Error ellipse: s-maj=25.6km s-min=14.1km az=15.0*
*ISCJB **13** 11:55:41.1±0.5, 58°.08N±0°.09×32°.2W±0°.1, h14km, mb4.0/20, MS3.5/5, Error ellipse: s-maj=13.7km s-min=7.6km az=9.5*
*NEIC **13** 11:55:42.4±2.4, 58°.07N×32°.19W, h10km, mb4.3/13, Error ellipse: s-maj=20.8km s-min=12.2km az=239.0*

ISC 13 11:55:43.1±0.7, 58°.1N±0°.1×32°.15W±0°.08, h14km, n40, σ1§05/32, mb4.0/20, MS3.5/5, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	8.43	33	Pn	Pn	11 57 46.5	+1.9
0.7nm,0.3s,baz=106,slow=3.0,SNR=2.9							
BORG				Sn	Sn	11 59 18.1	-1.4
0.2nm,0.3s,baz=147,slow=5.1,SNR=1.5							
BORG				LR	LR	12 00 04.1	
comp=Z,543nm,18.4s,baz=220,slow=31							
BORG	Borgarnes	8.43	33	ePn	Pn	11 57 44.8	+0.2
SFJD	Kangerlussuaq	12.27	324	LR	LR	12 02 35.8	
comp=Z,973nm,18.1s,baz=132,slow=34							
EKA	Eskdalemuir Ar	16.09	87	Pn	Pn	11 59 29.0	+0.4
baz=300,slow=11,SNR=2.0							
JMIC	Jan Mayen	16.25	28	LR	LR	12 03 27.5	
comp=Z,36nm,18.6s,baz=226,slow=29							
FRB	Frobisher Bay	18.37	303	LR	LR	12 06 05.0	
comp=Z,692nm,18.4s,baz=52,slow=34							
SCHQ	Schefferville	19.30	275	LR	LR	12 06 22.9	
comp=Z,534nm,18.4s,baz=83,slow=33							
NB200	NORSAR Array S	21.85	64	eP	P	12 00 34.1	-0.8
NOA	NORSAR Array B	21.85	64	P	P	12 00 34.1	-0.8
3.8nm,1.1s,baz=280,slow=9.5,SNR=3.5							
NOA				LR	LR	12 07 45.1	
comp=Z,145nm,21.1s,baz=285,slow=33							
HFS	Hagfors	23.25	65	P	P	12 00 49.0	-0.7
4.8nm,1.0s,baz=336,slow=3.3,SNR=4.5							
HFS				LR	LR	12 08 37.4	
comp=Z,138nm,20.0s,baz=292,slow=33							
ESDC	Sonseca Array	25.84	123	P	P	12 01 13.3	-0.6
0.5nm,0.6s,baz=329,slow=7.8,SNR=6.3							
ESDC				LR	LR	12 09 33.1	
comp=Z,146nm,21.3s,baz=280,slow=32							
RES	Resolute Bay	28.17	330	LR	LR	12 12 01.1	
comp=Z,112nm,19.3s,baz=167,slow=35							
FCC	Fort Churchill	31.41	298	eP	P	12 02 04.0	+0.7
3.9nm,0.8s							
FFC	Flin Flon	37.20	296	eP	P	12 02 54.2	+0.7
40nm,0.8s							
YKA	Yellowknife Ar	38.47	312	P	P	12 03 02.8	-1.3
0.9nm,0.7s,baz=58,slow=9.4,SNR=14							
YKB5	Yellowknife Ar	38.47	312	eP	P	12 03 02.8	-1.2
INK	Inuvik	41.60	327	P	P	12 03 28.1	-1.8
0.9nm,0.6s,baz=26,slow=10,SNR=7.0							
BR101	Keskin Array S	44.98	84	eP	P	12 03 59.1	+1.4
BRTR	Keskin Array B	44.98	84	P	P	12 03 59.1	+1.4
2.5nm,1.0s,baz=308,slow=6.2,SNR=9.1							
BOZ	Bozeman (W)	47.82	291	eP	P	12 04 19.6	-0.4
1.6nm,0.8s							
ILAR	Eielson Array	47.90	328	P	P	12 04 20.0	-0.2
1.4nm,0.9s,baz=34,slow=6.9,SNR=19							
ILAR				PcP	PcP	12 05 48.9	+0.5
0.6nm,0.8s,baz=4.8,slow=2.5,SNR=5.7							
RIDG	Independent Ri	48.10	327	eP	P	12 04 22.3	+0.5
2.6nm,0.8s							
HDA	Harding Lake	48.19	328	eP	P	12 04 23.6	+1.1
2.8nm,0.8s							
PDAR	Pinedale Array	48.81	287	P	P	12 04 25.9	-1.8
1.5nm,0.8s,baz=66,slow=7.3,SNR=12							
PAX	Paxson	48.87	326	eP	P	12 04 29.8	+2.0
2.7nm,0.9s							
TOA1	Torodi Ar. Sit	51.60	136	eP	P	12 04 48.0	-0.9
TORD	Torodi Ar. Bea	51.61	136	P	P	12 04 48.0	-0.9
1.3nm,0.7s,baz=335,slow=7.8,SNR=6.6							
MVCO	Mesa Verde	52.39	282	eP	P	12 04 56.3	+1.4
3.7nm,0.8s							
LTX	Lajitas	55.95	272	eP	P	12 05 20.4	-0.3
TXAR	Lajitas Array	55.95	272	P	P	12 05 20.4	-0.3
0.5nm,0.8s,baz=54,slow=6.6,SNR=6.4							
NV01	Mina Array Sit	56.46	290	eP	P	12 05 24.4	0.0
NVAR	Mina Array Bea	56.46	290	P	P	12 05 24.4	0.0
0.6nm,0.6s,baz=56,slow=5.6,SNR=4.3							
MK32	Makanchi Array	62.30	45	eP	P	12 06 04.2	-0.2
MKAR	Makanchi Array	62.30	45	P	P	12 06 04.2	-0.2
0.9nm,0.8s,baz=298,slow=5.2,SNR=6.2							
H10S1	ASCENSION HYDR	68.32	161	T	T	13 20 47.4	
baz=350,slow=75,SNR=20							
H10S3	ASCENSION HYDR	68.33	161	T	T	13 20 48.2	
baz=350,slow=75,SNR=17							
H10S2	ASCENSION HYDR	68.34	161	T	T	13 20 43.1	
baz=350,slow=75,SNR=18							
KSRS	Korea Array	83.34	16	P	P	12 08 09.4	+0.1
0.5nm,0.6s,baz=2.2,slow=5.5,SNR=2.1							
BOSA	Boshof	98.76	131	LR	LR	12 51 21.9	
comp=Z,44nm,20.6s,baz=20,slow=34							
ASAR	Alice Springs	144.16	22	PKP	PKPbc	12 15 15.7	-0.5
0.3nm,0.7s,baz=352,slow=2.3,SNR=4.3							

IDC 13 11:56:46.3±1.6, 58°.08N×32°.16W, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/48, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=45.9km s-min=30.3km az=41.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	8.46	33	Pn	Pn	11 58 51.0	+1.1
0.5nm,0.3s,baz=0.5,slow=4.8,SNR=0.9							
YKA	Yellowknife Ar	38.49	312	P	P	12 04 09.0	-0.5
0.3nm,0.6s,baz=56,slow=9.1,SNR=4.3							
ILAR	Eielson Array	47.92	328	P	P	12 05 26.3	+0.6
1.2nm,1.1s,baz=41,slow=7.8,SNR=3.0							
TORD	Torodi Ar. Bea	51.59	136	P	P	12 05 54.4	+0.2
0.7nm,0.8s,baz=334,slow=6.0,SNR=2.4							
MKAR	Makanchi Array	62.33	45	P	P	12 07 09.1	-0.9
0.7nm,1.0s,baz=335,slow=6.4,SNR=1.6							

MAN 13 11:57:15.8, 7°.50N×124°.84E, h22km, mb3.7, ML2.4, MS1.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	0.96	351	eP	Pb	11 57 33.4	-0.4
CGP				eS	Sn	11 57 47.4	+0.5

IDC 13 12:08:35.1±1.4, 3°.07S×139°.20E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/34, mbtmp3.7/3, ML5.0/1, Error ellipse: s-maj=34.8km s-min=21.8km az=141.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.60	70	Pn	Pg	12 09 05.8	-0.1
2.2nm,0.3s,baz=222,slow=12,SNR=12							
JAY				Sn	Sn	12 09 25.5	-0.7
8.9nm,0.3s,baz=72,slow=22,SNR=11							
WRA	Warramunga Arr	17.43	195	P	Pn	12 12 38.0	-1.9
5.5nm,0.3s,baz=16,slow=12,SNR=2.0							
ASAR	Alice Springs	21.11	194	P	P	12 13 22.2	+0.7
2.3nm,0.6s,baz=23,slow=9.9,SNR=58							
MKAR	Makanchi Array	70.37	322	P	P	12 19 51.6	+0.7
0.3nm,0.6s,baz=121,slow=7.2,SNR=2.3							
ILAR	Eielson Array	85.95	24	P	P	12 21 15.8	-1.2
0.4nm,0.7s,baz=270,slow=4.5,SNR=3.3							

*DDA **13** 12:19:40.1, 37°.51N×41°.58E, h7km±3km, ML2.5*
*ISK **13** 12:19:41.3, 37°.50N×41°.50E, h9km, ML2.3/5*

ISC 13 12:19:41.0±1.2, 37°.49N±0°.04×41°.55E±0°.03, h13km±16km, n11, σ0§71/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTMN	Batman	0.46	331	i P	Pg	12 19 49.8	-0.3
BTMN				IAML_P			
comp=Z,613nm,0.5s							
SRTM	Siirt_Merkez	0.58	31	i P	Pg	12 19 50.9	-1.5
SRTM				i S	Sb	12 20 01.4	0.0
SRTM				IAML_P			
comp=Z,437nm,0.2s							
MARD	Mardin	0.64	254	i P	Pg	12 19 53.1	-0.4
MARD				i S	Sg	12 20 02.3	+0.4
MARD				IAML_P			
comp=Z,3μm,0.3s							
SVAN	Silvan-Diyarba	0.71	337	PG	Pb	12 19 55.2	-0.2
SVAN				SG	Sg	12 20 05.1	+0.8
MAZI	Mazidag	0.88	268	PG	Pb	12 19 57.8	-0.4
MAZI				SG	Sg	12 20 10.1	+0.6
MUSM	Mu-Merkez	1.23	359	i P	Pb	12 20 04.3	0.0
MUSM				i S	Sg	12 20 20.5	-0.2
MUSM				IAML_P			
comp=Z,519nm,0.3s							
HANI	Diyarbakir_Han	1.29	316	i P	Pg	12 20 05.9	0.0
HANI				i S	Sg	12 20 23.5	+0.8
HANI				IAML_P			
comp=Z,2μm,0.4s							
AKDM	Akdamar-Van	1.41	53	PN	Pg	12 20 07.9	-0.2
AKDM				SN	Sg	12 20 27.5	+1.1
BNGL	BINGOL	1.49	348	i P	Pg	12 20 09.7	-0.1
BNGL				i S	Sg	12 20 30.3	+1.2
BNGB	Bingl	1.65	336	PN	Pb	12 20 10.7	-0.7
CUKT	Cukurca	1.66	98	PN	Pb	12 20 11.8	+0.2

WEL 13 12:50:12.5±1.5, 47°S±11°×16°6E±°, h12km, M3.3/2, ML3.9/8, MLv3.3/2, Error ellipse: s-maj=0.0km s-min=0.0km az=2.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ	The Paps	1.44	71	P	Pn	12 50 37.7	-0.7
APZ				S	Sb	12 50 57.6	0.0
WHZ	Wether Hill Ro	1.96	44	P	Pn	12 50 44.6	-0.8
WHZ				S	Sn	12 51 09.9	0.0
DCZ	Deep Cove	2.02	24	P	Pn	12 50 44.5	-1.7
SYZ	Scrubby Hill	2.29	71	P	Pn	12 50 50.4	+0.5
SYZ				S	Sn	12 51 19.2	+1.2
MLZ	Mavora Lakes	2.44	38	P	Pn	12 50 52.0	-0.1
MLZ				S	Sn	12 51 22.9	+1.0
TUZ	Tuapeka	2.85	63	P	Pn	12 50 57.8	+0.1
TUZ				S	Sn	12 51 32.6	+0.8
MSZ	Milford Sound	2.96	28	P	Pn	12 51 01.0	+1.8
EAZ	Earnscleugh	3.10	49	P	Pn	12 51 01.3	+0.1
WKZ	Wanaka	3.25	41	P	Pn	12 51 04.0	+0.6
JCZ	Jackson Bay	3.78	32	P	Pn	12 51 11.8	+1.1
ODZ	Otahua Downs	3.94	57	P	Pn	12 51 10.8	-1.9

*IDC **13** 12:52:10.4±2.1, 61°.52N×152°.20W, h135km±29km, mb3.3/1, mb1 2.9/5, mb1mx2.7/64, mbtmp3.2/5, MS2.3/1, Ms1 2.3/1, ms1mx2.0/26, Error ellipse: s-maj=41.4km s-min=18.3km az=116.0*
*ISCJB **13** 12:52:13.8±0.3, 61°.26N±0°.02×150°.49W±0°.04, h59km±5km, mb3.7/1, Error ellipse: s-maj=3.6km s-min=2.8km az=138.1*
*NEIC **13** 12:52:15.4±0.

KTH				*e*Sn	**Sn**	**12 53 18.8**	**+1.0**
DHY	**Denali Highway**	**2.34**	**37**	*e*Pn	**Pn**	**12 52 51.4**	**+0.4**
DHY				*e*Sn	**Sn**	**12 53 16.8**	**-1.7**
EYAK	**Cordova Ski Ar**	**2.42**	**105**	*e*Pn	**Pn**	**12 52 50.7**	**-1.1**
SVW2	**Sparrevohn**	**2.47**	**269**	*e*Pn	**Pn**	**12 52 52.1**	**-0.4**
MCK	**McKinley**	**2.59**	**15**	*e*Pn	**Pn**	**12 52 54.8**	**+0.6**
SGAM	**Sherman Glacie**	**2.69**	**104**	*e*Pn	**Pn**	**12 52 54.7**	**-0.8**
CHUM	**Lake Minchumin**	**2.77**	**343**	*e*Pn	**Pn**	**12 52 56.8**	**+0.2**
HARP	**HAARP**	**2.78**	**63**	*e*Pn	**Pn**	**12 52 57.2**	**+0.4**
BPAW	**Bear Paw Mtn.**	**2.87**	**356**	*e*Pn	**Pn**	**12 52 58.1**	**+0.1**
PAX	**Paxson**	**2.92**	**52**	*e*Pn	**Pn**	**12 52 59.8**	**+1.0**
FONW	**Fourpeaked Sta**	**2.97**	**217**	*e*Pn	**Pn**	**12 52 60.0**	**+0.5**
TT01	**Tatalina**	**3.09**	**305**	*e*Pn	**Pn**	**12 53 00.6**	**-0.4**
TTA	**Tatalina**	**3.09**	**305**	*e*Pn	**Pn**	**12 53 00.7**	**-0.5**
HMT	**Hamilton**	**3.19**	**104**	*e*Pn	**Pn**	**12 53 00.2**	**-2.1**
HDA	**Harding Lake**	**3.56**	**26**	*e*Pn	**Pn**	**12 53 08.9**	**+1.4**
MENT	**Mentasta**	**3.61**	**59**	*e*Pn	**Pn**	**12 53 08.1**	**0.0**
KDAK	**Kodiak Island**	**3.64**	**198**	P	**Pn**	**12 53 07.3**	**-1.2**
	1.0nm,0.3s,baz=42,slow=8.7,SNR=2.9						
KDAK				S	**Sn**	**12 53 46.5**	**-3.6**
	2.2nm,0.3s,baz=352,slow=9.3,SNR=2.1						
KDAK				LR	LR	12 54 52.5	
	comp=Z,45nm,21.8s,baz=112,slow=43						
KDAK	**Kodiak Island**	**3.64**	**198**	*e*Pn	**Pn**	**12 53 07.5**	**-1.0**
MLY	**Manley**	**3.80**	**358**	*e*Pn	**Pn**	**12 53 09.9**	**-0.8**
COLA	**College**	**3.83**	**17**	*e*Pn	**Pn**	**12 53 12.1**	**+1.0**
DOT	**Dot Lake**	**3.83**	**48**	*e*Pn	**Pn**	**12 53 11.4**	**+0.1**
KELA	**Mount Kelaz**	**3.87**	**226**	*e*Pn	**Pn**	**12 53 11.8**	**+0.1**
ILAR	**Eielson Array**	**3.90**	**23**	P	**Pn**	**12 53 12.0**	**0.0**
	1.4nm,0.3s,baz=206,slow=14,SNR=38						
ILAR				S	**Sn**	**12 53 57.2**	**+0.7**
	2.2nm,0.3s,baz=212,slow=17,SNR=2.0						
BALM	**Baldy**	**3.96**	**90**	*e*Pn	**Pn**	**12 53 13.1**	**+0.1**
OHAK	**Old Harbor**	**4.29**	**201**	*e*Pn	**Pn**	**12 53 16.1**	**-1.2**
BCA3	**Beaver Creek A**	**4.47**	**62**	*e*Pn	**Pn**	**12 53 20.2**	**+0.3**
IM3	**Indian Mountai**	**4.97**	**344**	*e*Pn	**Pn**	**12 53 26.7**	**0.0**
EGAK	**Eagle**	**5.53**	**46**	*e*Pn	**Pn**	**12 53 34.4**	**+0.1**
BM3	**Burnt Mountain**	**6.70**	**20**	*e*Pn	**Pn**	**12 53 50.6**	**+0.2**
INK	**Inuvik**	**10.09**	**38**	P	**Pn**	**12 54 35.7**	**-1.0**
	0.1nm,0.3s,baz=234,slow=15,SNR=1.8						
INK				S	**Sn**	**12 56 32.4**	**+4.1**
	0.1nm,0.3s,baz=297,slow=7.7,SNR=4.6						
YKA	**Yellowknife Ar**	**16.83**	**70**	P	**P**	**12 56 06.9**	**-1.1**
	0.0nm,0.3s,baz=276,slow=10,SNR=4.8						
SONA0	**Songino Array**	**55.04**	**307**	*e*P	P	13 01 21.0	-20
SONM	**Songino Array**	**55.04**	**307**	P	P	13 01 21.0	-20
	0.4nm,0.5s,baz=46,slow=4.2,SNR=1.9						

ISK ***13*** *13:02:49.5,36°.96N×27°.57E,h14km±1km,ML2.4/8*
ISCJB ***13*** *13:02:50.0±0.8,36°.96N±0°.05×27°.60E±0°.08,h12km±11km, Error ellipse: s-maj=13.1km s-min=5.0km az=142.9*
DDA ***13*** *13:02:50.0,36°.95N×27°.57E,h7km±1km,ML2.5*
ISC 13 13:02:48.5±1.5,36°.91N±0°.06×27°.66E±0°.05,h21km±1km, n12,σ1°53/18,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DATC	**Datca-Mugla**	**0.15**	**189**	PG	**Pb**	**13 02 54.5**	**0.0**
DATC				SG	**Sb**	**13 02 58.4**	**-0.4**
DAT	**Datca**	**0.20**	**206**	PG	**Pb**	**13 02 54.9**	**+0.4**
DAT	**Datca**	**0.20**	**206**	*i* P	**Pb**	**13 02 56.0**	**+1.4**
DAT				*i* S	**Sb**	**13 02 58.1**	**-0.7**
DAT				IAML_P			
	comp=Z,2μm,0.1s						
BDRM	**Kayabasi**	**0.25**	**309**	*i* P	**Pb**	**13 02 54.5**	**-0.2**
BDRM				*i* S	**Sb**	**13 02 56.5**	**-2.4**
BODT	**Bodrum**	**0.34**	**297**	PG	**Pb**	**13 02 54.9**	**-0.9**
BODT				SG	**Sb**	**13 02 58.9**	**-1.8**
BBRN	**Bozburun-Marma**	**0.38**	**128**	PG	**Pn**	**13 02 59.5**	**+0.8**
MRSB	**Marmaris-Mugla**	**0.45**	**115**	PG	**Pn**	**13 03 00.9**	**+1.2**
YER	**Yerkesik**	**0.53**	**64**	PG	**Pn**	**13 03 01.7**	**+0.9**
TURN	**Turunc**	**0.73**	**93**	PG	**Pb**	**13 03 01.2**	**-1.3**
TURN	**Turunc**	**0.73**	**93**	*i* P	**Pb**	**13 03 01.7**	**-0.8**
TURN				*i* S	**Sb**	**13 03 09.8**	**-2.3**
TURN				IAML_P			
	comp=Z,2μm,0.2s						
AYDN	**Tasoluk**	**0.77**	**11**	*i* P	**Pn**	**13 03 05.3**	**+1.2**
AYDN				*i* S	**Sb**	**13 03 13.9**	**+0.8**
DALY	**Dalyan (Mula)**	**0.78**	**96**	PG	**Pn**	**13 03 06.9**	**+2.7**

ATH 13 13:19:25.7,37°.62N×23°.47E,h13km±5km,ML1.0/1, Error ellipse: s-maj=5.9km s-min=1.1km az=149.0,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DID	**Didima**	**0.22**	**239**	P	Pg	13 19 30.1	-0.4
DID				S	Sg	13 19 33.9	+0.2
DID				AML	AML	13 19 37.3	
	comp=N,117μm,0.2s						
DID				AML	AML	13 19 37.5	
	comp=E,93μm,0.1s						
DID	**Didima**	**0.22**	**239**	P	Pg	13 19 30.2	-0.3
DID				S	Sg	13 19 34.0	+0.2
DID				AML	AML	13 19 35.0	
	comp=N,119μm,0.2s						
DID				AML	AML	13 19 37.5	
	comp=E,93μm,0.1s						
EPID	**Epidavros**	**0.28**	**270**	P	Pg	13 19 31.7	+0.1
EPID	**Epidavros**	**0.28**	**270**	P	Pg	13 19 32.0	+0.4
KRND	**KRANIDI**	**0.35**	**228**	P	Pg	13 19 32.2	-0.6
KRND	**KRANIDI**	**0.35**	**228**	P	Pg	13 19 32.6	-0.1
VLY	**Voula,Athens**	**0.35**	**47**	P	Pg	13 19 32.6	-0.2
VLY				S	Sg	13 19 37.7	+0.1
VLY	**Voula,Athens**	**0.35**	**47**	P	Pg	13 19 32.9	+0.1
VLY				S	Sg	13 19 38.0	+0.5
LTK	**Loutraki**	**0.57**	**316**	P	Pg	13 19 36.3	-0.6
LTK	**Loutraki**	**0.57**	**316**	P	Pg	13 19 36.4	-0.5
LTK				S	Sg	13 19 43.0	-1.5
VIL2	**Platees**	**0.61**	**345**	P	Pg	13 19 36.2	-1.6
VIL2	**Platees**	**0.61**	**345**	P	Pg	13 19 36.6	-1.2
GUR	**Goura**	**0.95**	**290**	P	Pg	13 19 43.6	-0.5
GUR	**Goura**	**0.95**	**290**	P	Pg	13 19 43.3	-0.8
TRIP	**Tripoli**	**0.96**	**265**	P	Pb	13 19 43.9	-0.3
VLI	**Veliai**	**0.99**	**206**	P	Pg	13 19 44.9	0.0
VLI	**Veliai**	**0.99**	**206**	P	Pg	13 19 45.1	+0.2
VLI				S	Sn	13 20 00.5	+1.3
MRKA	**Markates**	**1.09**	**5**	P	Pn	13 19 46.7	0.0
KLV	**Kalavryta, Ach**	**1.13**	**293**	P	Pg	13 19 47.6	+0.1

NIED ***13*** *13:24:00,26°.40N×129°.00E,h20km,Mw5.6 Best double couple: M0 3.02000×10^17 NP1:φs 66.00000°,δ47.00000°, λ-29.00000°. NP2:φs 177.00000°,δ69.00000°, λ-134.00000°.*
BJI ***13*** *13:24:39.6±0.0,26°.33N×129°.14E,h18km,mb5.8/78, mB5.6/68,Ms5.8/98,Ms7 5.8/89*
ISCJB ***13*** *13:24:43.0±0.5,26°.56N±0°.01×128°.93E±0°.01,h15km±3km, mb5.7/248,MS5.4/640,Error ellipse: s-maj=2.5km s-min=2.0km az=135.7*
NEIC ***13*** *13:24:44.0±0.0,26°.44N×128°.99E,h21km,Moment Tensor Solution. s22 Moment tensor: Scale 10^17Nm; Mrr-1.01; Mθθ-1.26; Mφφ2.28; Mrθ-0.81; Mθφ1.96; Mφr2.06; Best double couple: M0 3.50000×10^17 NP1:φs 165.00000°, δ79.00000°,λ-136.00000°. NP2:φs 65.00000°,δ48.00000°, λ-15.00000°. Principal axes: T 3.7100, Plg19.0000°, Azm288.0000°; N -0.3300, Plg45.0000°, Azm176.0000°; P -3.3700, Plg37.0000°, Azm34.0000°;*
JMA ***13*** *13:24:45.4±1.8,26°.53N×128°.89E,h20km,mb5.9/224, ME6.4,MS5.3/592,MW5.6,MW5.6,Error ellipse: s-maj=12.5km s-min=10.8km az=17.0,Moment Tensor Solution. s51 Moment tensor: Scale 10^17Nm; Mrr-0.93; Mθθ-0.18; Mφφ1.11; Mrθ-0.52; Mθφ1.26; Mφr2.46; Best double couple: M0 3.00000×10^17 NP1:φs 66.00000°, δ29.00000°,λ-21.00000°. NP2:φs 175.00000°,δ80.00000°, λ-118.00000°. Principal axes: T 2.9500, Plg30.0000°, Azm287.0000°; N 0.0800, Plg27.0000°, Azm180.0000°; P -3.0400, Plg48.0000°, Azm56.0000°; Broadband fault plane solution: P waves. NP1:φs 82.00000°,δ60.00000°, λ-6.00000°. NP2:φs 175.00000°,δ85.00000°, λ-150.00000°. Principal axes: T Plg17.0000°, Azm305.0000°; N Plg0.0000°, Azm0.0000°; P Plg24.0000°, Azm43.0000°; Apparent Stress 4.80 MPa.*
Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.
NEIC Felt [III] at Chatan, Ishikawa, Okinawa and Yomitan. Also felt at Gushikawa, Itoman, Nago, Naha and Nishihara. Recorded [3 JMA] on Yoron-jima.
MOS ***13*** *13:24:46.6±1.2,26°.63N×128°.91E,h39km,mb6.0/74, MS5.4/33 Error ellipse: s-maj=5.9km s-min=3.5km az=105.1*
GCMT ***13*** *13:24:46.4±0.1,26°.51N±0°.01×128°.96E±0°.01,h18km, MW5.7/132,Moment Tensor Solution. s108,c197; s132,c348; Duration: 1s7 Moment tensor: Scale 10^17 Nm; Mrr-1.02±.03; Mθθ-1.08±.03; Mφφ2.10±.03; Mrθ-0.53±.07; Mθφ2.25±.03; Mφr3.23±.13; Best double couple: M0 4.34100×10^17 NP1:φs 170.00000°,δ82.00000°, λ-127.00000°. NP2:φs 69.00000°,δ38.00000°, λ-14.00000°. Principal axes: T 4.6210, Plg27.0000°, Azm289.0000°; N -0.5600, Plg37.0000°, Azm177.0000°; P -4.0610, Plg41.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
IDC ***13*** *13:24:48.4±1.1,26°.64N×128°.86E,h38km±9km,mb5.2/62, mb1 5.3/69,mb1mx5.2/73,mbtmp5.5/69,ML4.8/6,MS5.3/41, Ms1 5.3/41,ms1mx5.2/47 Error ellipse: s-maj=7.8km s-min=6.6km az=74.0*
ISC 13 13:24:46.7±0.4,26°.54N±0°.02×128°.97E±0°.02,h30km±2km, h31km:pP-P,n1627,σ1°83/1245,mb5.7/290,MS5.4/656, 77C-42D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**0.67**	**316**	P	**Pb**	**13 24 59.0**	**-0.9**
JYRO				S	**Sb**	**13 25 08.7**	**-0.2**
JOW	**Kunigami**	**0.68**	**295**	Pn	**Pb**	**13 24 59.3**	**-1.0**
	4μm,0.3s,baz=113,slow=14						
JOW				Sn	**Sb**	**13 25 08.8**	**-0.6**
JOW	**Kunigami**	**0.68**	**295**	↑P	**Pb**	**13 24 59.2**	**-1.0**
JOW				*e*S	**Sb**	**13 25 09.2**	**-0.2**
JNTH	**Nagotoyohara**	**0.85**	**269**	P	**Pn**	**13 25 00.9**	**-1.7**
JNTH				*e*S	**Sn**	**13 25 12.6**	**-1.4**
JOKE	**Okinoerabujima**	**0.89**	**337**	P	**Pn**	**13 25 02.8**	**-0.4**
JOKE				S	**Sn**	**13 25 14.9**	**-0.2**
JIH	**Iheya**	**1.02**	**299**	↑P	**Pn**	**13 25 04.4**	**-0.6**
JIH				*e*S	**Sn**	**13 25 18.0**	**-0.3**
JJT3	**Tamagusuku3**	**1.13**	**250**	P	**Pn**	**13 25 05.3**	**-1.2**
JJT3				S	**Sn**	**13 25 19.7**	**-1.3**
JTK	**Tokunoshima**	**1.24**	**359**	↓P	**Pn**	**13 25 07.5**	**-0.5**
JTK				*e*S	**Sn**	**13 25 23.2**	**-0.5**
JAGN	**Aguni-jima**	**1.54**	**272**	↑P	**Pn**	**13 25 11.6**	**-0.6**
JAGN				*e*S	**Sn**	**13 25 31.1**	**-0.1**
JAMN	**Amaminishikomi**	**1.71**	**6**	↓P	**Pn**	**13 25 14.0**	**-0.4**
JAMN				*e*S	**Sn**	**13 25 36.7**	**+1.5**
JAM	**Amami Oshima**	**1.95**	**17**	↓P	**Pn**	**13 25 17.0**	**-0.7**
JAM				*e*S	**Sn**	**13 25 41.4**	**+0.2**
JKE	**Kume jima 2**	**1.97**	**264**	↑P	**Pn**	**13 25 16.4**	**-1.6**
JKE				S	**Sn**	**13 25 40.4**	**-1.2**
JZK	**Kikaishima**	**1.98**	**27**	↓P	**Pn**	**13 25 18.0**	**-0.2**
JZK				S	**Sn**	**13 25 43.8**	**+1.8**
JMZ	**Minamidaito 2**	**2.15**	**109**	↑P	**Pn**	**13 25 18.3**	**-2.2**
JMZ				*e*S	**Sn**	**13 25 41.7**	**-4.5**
YOJ	**Yonaguni jima**	**5.76**	**250**	*e*Pn	**Pn**	**13 26 06.9**	**-3.3**
YOJ	**Yonaguni jima**	**5.76**	**250**	*e*P	**Pn**	**13 26 06.9**	**-3.3**
JNU	**Nakatsue**	**6.76**	**14**	Pn	**Pn**	**13 26 24.3**	**+0.3**
	99nm,0.3s,baz=246,slow=2.6,SNR=856						
JNU				Sn	**Sn**	**13 27 39.0**	**-1.1**
	baz=298,slow=16,SNR=1.8						
JNU	**Nakatsue**	**6.76**	**14**	*e*Pn	**Pn**	**13 26 23.9**	**-0.1**
JNU				*e*Sn	**Sn**	**13 27 39.0**	**-1.1**
TATO	**Taipei**	**6.92**	**259**	*e*Pn	**Pn**	**13 26 25.4**	**-0.7**
NACB	**Ninganchiao**	**7.07**	**252**	*e*Pn	**Pn**	**13 26 24.3**	**-3.9**
YHNB	**Yeheng**	**7.10**	**256**	*e*Pn	**Pn**	**13 26 27.3**	**-1.4**
YULB	**Yu-li**	**7.63**	**247**	*e*Pn	Pn	13 26 30.6	-5.4
SSLB	**Suanglung**	**7.76**	**251**	*e*Pn	**Pn**	**13 26 33.1**	**-4.6**
TWG	**Pinlang**	**8.08**	**244**	*e*Pn	Pn	13 26 35.7	-6.4
SSE	**Sheshan**	**8.19**	**305**	P	**Pn**	**13 26 44.6**	**+1.0**
SSE				S	**Sn**	**13 28 15.9**	**+0.8**
SSE				pmax	pmax		
	comp=Z,240nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1μm,5.4s						
SSE				LR	LR		
	comp=N,7μm,12.6s						
SSE				LR	LR		
	comp=E,5μm,15.6s						
SSE	**Sheshan**	**8.19**	**305**	*e*Pn	**Pn**	**13 26 44.9**	**+1.4**
TPUB	**Ta-pu**	**8.23**	**249**	*e*Pn	**Pn**	**13 26 40.6**	**-3.5**
JMMH	**Miemihama**	**9.48**	**38**	P	**Pn**	**13 26 59.9**	**-1.3**
QZH	**Quanzhou**	**9.49**	**263**	↑*i*P	**Pn**	**13 27 00.0**	**-1.3**
QZH				S	**Sn**	**13 28 50.0**	**+3.0**
QZH				LR	LR		
	comp=N,27μm,18.7s						
QZH				LR	LR		
	comp=E,13μm,15.9s						
QZH				LR	LR		
	comp=Z,21μm,24.2s						
KNMB	**Chin-men Tao**	**9.78**	**260**	*e*Pn	**Pn**	**13 27 01.9**	**-3.4**
TJN	**Taejon**	**9.90**	**352**	*i* P	**Pn**	**13 27 08.6**	**+1.7**
JKN2	**Miekihoku**	**9.93**	**38**	P	**Pn**	**13 27 06.4**	**-1.0**
JIE	**Ise**	**10.28**	**39**	P	**Pn**	**13 27 11.7**	**-0.5**
NJ2	**Nanjing**	**10.39**	**304**	↑*i*P	**Pn**	**13 27 14.4**	**+0.7**
NJ2				sP		13 27 20.8	
NJ2				S	**Sn**	**13 29 08.1**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,230nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,1μm,3.5s						
NJ2				LR	LR		
	comp=N,44μm,11.9s						
NJ2				LR	LR		
	comp=E,58μm,14.1s						
NJ2				LR	LR		
	comp=Z,78μm,13.6s						
JFM	**Mihama**	**10.79**	**32**	P	**Pn**	**13 27 18.3**	**-0.8**
KS15	**Wonju Array Si**	**10.91**	**355**	*e*Pn	**Pn**	**13 27 22.1**	**+1.3**
KS15				*e*Sn	**Sn**	**13 29 24.8**	**+3.1**
KSRS	**Korea Array**	**10.92**	**356**	Pn	**Pn**	**13 27 21.6**	**+0.8**
	2.2nm,0.3s,baz=175,slow=14,SNR=537						
KSRS				Sn	**Sn**	**13 29 24.8**	**+2.9**
	2.2nm,0.3s,baz=189,slow=9.0,SNR=6.7						
KSRS				LR	LR	13 31 55.3	
	comp=Z,14μm,19.0s,baz=170,slow=40						
KSRS				PKiKP	**PKiKP**	**13 41 17.6**	**-0.5**
	0.2nm,0.3s,baz=211,slow=1.9,SNR=4.7						
INU	**Inuyama**	**11.17**	**36**	*e*Pn	**Pn**	**13 27 22.7**	**-1.6**
HMMJ	**Hamamatsu 2**	**11.20**	**40**	P	**Pn**	**13 27 23.5**	**-1.2**
JYTA	**Yamagatataniai**	**11.21**	**35**	P	**Pn**	**13 27 23.7**	**-1.2**
JAO	**Obara**	**11.23**	**37**	P	**Pn**	**13 27 23.7**	**-1.6**
JHJ	**Hachijo jima 2**	**11.45**	**53**	Pn	**Pn**	**13 27 28.7**	**+0.6**
	49nm,0.3s,baz=134,slow=23,SNR=16						
JHJ				LR	LR	13 31 29.3	
	comp=Z,15μm,18.1s,baz=253,slow=35						
JHJ2	**Mitsune**	**11.47**	**53**	*e*Pn	**Pn**	**13 27 29.3**	**+0.8**
JIZS	**Izushimoda**	**11.79**	**44**	P	**Pn**	**13 27 33.5**	**+0.6**
JGN	**Niukaw**	**11.99**	**34**	P	**Pn**	**13 27 34.0**	**-1.7**
JNG	**Nsakai**	**12.54**	**36**	P	**Pn**	**13 27 41.7**	**-1.5**
MAJO	**Matsushiro**	**12.70**	**36**	*e*Pn	**Pn**	**13 27 43.8**	**-1.5**
MAJO	**Matsushiro**	**12.70**	**36**	*i* P	**Pn**	**13 27 44.8**	**-0.5**
MAT	**Matsushiro**	**12.70**	**36**	P	**Pn**	**13 27 43.5**	**-1.8**
MAT				S	**Sn**	**13 30 07.8**	**+2.1**
MJAR	**Matsushiro Arr**	**12.70**	**36**	Pn	**Pn**	**13 27 44.9**	**-0.5**
	1.0nm,0.3s,baz=232,slow=13,SNR=60						
MJB9	**Matsu-Tunnel**	**12.70**	**36**	*e*Pn	**Pn**	**13 27 43.8**	**-1.5**
WHN	**Wuhan**	**13.45**	**291**	↑P	**Pn**	**13 27 55.0**	**-0.5**
WHN				S	**Sn**	**13 30 24.3**	**+0.3**
WHN				pmax	pmax		
	comp=Z,300nm,1.3s						
WHN				pmax	pmax		
	comp=Z,6μm,9.7s						
WHN				LR	LR		
	comp=N,37μm,15.3s						
WHN				LR	LR		
	comp=E,65μm,13.3s						
WHN				LR	LR		
	comp=Z,84μm,14.4s						
SCZP	**Santa Cruz**	**13.63**	**220**	*e*P	**Pn**	**13 27 55.4**	**-2.7**
PVCP	**Virac**	**13.65**	**200**	*e*P	**Pn**	**13 27 56.6**	**-1.6**
DL2	**Dalian**	**13.78**	**335**	P	**Pn**	**13 28 00.3**	**+0.3**
DL2				S	**Sn**	**13 30 33.8**	**+1.8**
DL2				SS	**S**	**13 30 50.8**	**-2.9**
DL2				pmax	pmax		
	comp=Z,40nm,1.2s						
DL2				pmax	pmax		
	comp=Z,930nm,7.4s						
DL2				LR	LR		
	comp=N,12μm,18.4s						
DL2				LR	LR		
	comp=E,21μm,19.4s						
DL2				LR	LR		
	comp=Z,24μm,16.9s						
JSD	**Sado**	**13.89**	**32**	P	**Pn**	**13 28 00.0**	**-1.5**
TIA	**Tai'an**	**13.96**	**317**	P	**Pn**	**13 28 03.0**	**+0.5**
TIA				S	**Sn**	**13 30 40.9**	**+4.5**
TIA				pmax	pmax		
	comp=Z,21nm,1.0s						
TIA				pmax	pmax		
	comp=Z,2μm,9.3s						
TIA				LR	LR		
	comp=N,25μm,14.7s						
TIA				LR	LR		
	comp=Z,31μm,14.1s						
HKPS	**Hong Kong Po S**	**14.15**	**256**	*e*Pn	**Pn**	**13 28 03.5**	**-1.8**
TGY	**Tagaytay City**	**14.48**	**213**	LR	LR	13 33 18.6	
	comp=Z,6μm,20.9s,baz=19,slow=35						
CNP	**Catarman**	**14.53**	**197**	*e*P	**Pn**	**13 28 09.8**	**-0.6**
GZH	**Guangzhou**	**14.60**	**260**	P	Pn	13 28 01.3	-10
GZH				S	Sn	13 30 38.3	-14
GZH				LR	LR		
	comp=N,20μm,12.5s						
GZH				LR	LR		
	comp=E,19μm,15.5s						
BOAC	**Boac**	**14.63**	**209**	*e*P	**Pn**	**13 28 11.2**	**-0.4**
PGP	**Puerto Galera**	**14.99**	**212**	‖*e*P	**P**	**13 28 23.2**	**+1.4**
LUBP	**Lubang**	**15.14**	**214**	*e*P	**Pn**	**13 28 12.2**	**-6.3**
JYK	**Kaneyama**	**15.61**	**35**	P	**Pn**	**13 28 23.8**	**-0.7**
SJMP	**San Jose**	**15.83**	**209**	*e*P	**Pn**	**13 28 26.4**	**-1.1**
SNY	**Shenyang**	**15.88**	**345**	‖P	**Pn**	**13 28 28.3**	**+0.3**
SNY				S	**Sn**	**13 31 22.8**	**-0.2**
SNY				pmax	pmax		
	comp=E,690nm,6.9s						
SNY				LR	LR		
	comp=E,17μm,17.8s						
SNY				LR	LR		
	comp=E,12μm,14.2s						
SNY				LR	LR		
	comp=E,25μm,17.8s						
JYW	**Yuwa**	**16.01**	**33**	P	**Pn**	**13 28 29.5**	**-0.2**
MSHR	**Mys Shultsa**	**16.10**	**6**	*i* P	**Pn**	**13 28 29.2**	**-1.6**
JRG	**Rokugo**	**16.11**	**34**	P	**Pn**	**13 28 30.1**	**-0.9**
JOM	**Ohasama**	**16.51**	**36**	P	**Pn**	**13 28 33.7**	**-2.3**
VLA	**Vladivostok**	**16.71**	**7**	*i* P	**Pn**	**13 28 35.2**	**-3.3**
JAH	**Hinai**	**16.72**	**33**	P	**Pn**	**13 28 37.6**	**-1.1**
MSLP	**Maasin**	**16.78**	**194**	*e*P	**P**	**13 28 40.9**	**-0.6**
BJT	**Baijiatuau**	**17.15**	**325**	*e*Pn	**Pn**	**13 28 44.9**	**+0.7**
	comp=E,187nm,0.6s						
BJT	**Baijiatuau**	**17.15**	**325**	*e*P	**Pn**	**13 28 44.9**	**+0.7**
BJT				pmax	pmax		
	comp=Z,187nm,0.6s						
BJI	**Beijing**	**17.17**	**325**	P	**Pn**	**13 28 44.8**	**+0.5**
BJI				S	**Sn**	**13 31 54.8**	**+0.5**
BJI				pmax	pmax		
	comp=Z,120nm,0.8s						
BJI				LR	LR		
	comp=Z,8μm,17.2s						
BJI				LR	LR		
	comp=Z,10μm,18.1s						
JANG	**Nango**	**17.29**	**34**	P	**Pn**	**13 28 43.5**	**-2.4**
CN2	**Changchun**	**17.46**	**351**	*e*P	**Pn**	**13 28 48.3**	**+0.4**
CN2				*e*pP	P	13 28 51.9	+3.0
CN2				*e*PP	**pwP**	**13 29 02.9**	**+2.9**
CN2				*e*S	**Sn**	**13 32 01.4**	**+0.1**
CN2				sS	S	13 32 08.1	-0.7
CN2				pmax	pmax		
	comp=Z,1μm,4.0s						
CN2				LR	LR		
	comp=Z,12μm,13.0s						
CN2				LR	LR		
	comp=Z,8μm,13.0s						
CN2				LR	LR		
	comp=Z,10μm,14.0s						
ENH	**Enshi**	**17.53**	**287**	*e*Pn	**P**	**13 28 49.5**	**-0.4**
	comp=Z,403nm,0.8s						
BUTP	**Butuan**	**17.76**	**191**	*e*P	Pn	13 28 42.5	-9.4
USA0B	**Ussuriysk Arra**	**17.79**	**7**	*e*Pn	**Pn**	**13 28 51.0**	**-1.0**
	comp=Z,130nm,0.8s						
USA0B	**Ussuriysk Arra**	**17.79**	**7**	P	**Pn**	**13 28 51.0**	**-1.0**
USRK	**Ussuriysk Ar.**	**17.79**	**7**	P	**Pn**	**13 28 51.5**	**-0.5**
	comp=Z,3.8nm,0.3s,baz=182,slow=8.3,SNR=122						
USRK				LR	LR	13 35 21.4	
	comp=Z,5μm,21.0s,baz=181,slow=36						
TIY	**Taiyuan**	**17.86**	**313**	*e*P	**P**	**13 28 54.1**	**+0.6**
TIY				pP	**pwP**	**13 29 03.3**	**-0.6**
TIY				S	**S**	**13 32 14.4**	**-2.9**
TIY				LR	LR		
	comp=Z,25μm,12.2s						
TIY				LR	LR		
	comp=Z,18μm,13.1s						
TIY				LR	LR		
	comp=Z,34μm,14.4s						
MDJ	**Mudanjiang**	**18.04**	**1**	P	**Pn**	**13 28 55.1**	**0.0**
MDJ				S	**Sn**	**13 32 12.8**	**-2.7**
MDJ				pmax	pmax		
	comp=Z,970nm,4.4s						
MDJ				LR	LR		
	comp=Z,8μm,14.9s						
MDJ				LR	LR		
	comp=Z,7μm,17.1s						
SARN	**Sarigan**	**18.43**	**119**	*e*P	**Pn**	**13 29 01.2**	**+1.2**
	comp=Z,414nm,1.4s						
CGP	**Cagayan de Oro**	**18.44**	**193**	*e*P	**P**	**13 28 58.5**	**-1.3**
ANA2	**Anatahan**	**18.58**	**120**	*e*P	**Pn**	**13 29 03.2**	**+1.3**
	comp=Z,287nm,1.1s						
XAN	**Xi'an**	**18.84**	**298**	P	**P**	**13 29 03.1**	**-1.1**
XAN				pP	pP

DAV Davao City (W) 19.63 190 P **Pn** **13 29 14.7 +0.2**
comp=Z,50nm,0.3s,baz=343,slow=5.9,SNR=7.1
DAV LR LR 13 36 51.7
comp=Z,4μm,20.5s,baz=357,slow=37
DAV Davao City (W) 19.63 190⇑ *e*P **P** **13 29 12.1 -0.9**
MATI Mati 19.66 188 *e*P **Pn** **13 29 15.1 +0.3**
GUMO Guam 19.70 128 P **Pn** **13 29 15.4 +0.2**
comp=Z,8.3nm,0.3s,baz=188,slow=2.7,SNR=8.3
GUMO LR LR 13 35 32.7
comp=Z,3μm,19.0s,baz=316,slow=32
GUMO Guam 19.70 128 *e*P **P** **13 29 14.1 +0.4**
comp=Z,814nm,1.3s
GYA Guiyang 19.96 275⇑ *i*P **P** **13 29 16.8 +0.1**
GYA PP **PnPn** **13 29 34.1 +1.2**
GYA S **S** **13 32 52.6 -7.2**
GYA SS **SnSn** **13 33 20.3 +3.6**
GYA pmax pmax
comp=Z,190nm,0.9s
GYA pmax pmax
comp=Z,2μm,6.4s
GYA LR LR
comp=Z,17μm,13.1s
GYA LR LR
comp=Z,30μm,14.3s
GYA LR LR
comp=Z,38μm,14.0s
HHC Hu-ho-hao-te 20.28 319 *e*P **P** **13 29 19.8 -0.2**
HHC pP Pn 13 29 23.3 +1.2
HHC sP pP 13 29 27.0 -0.4
HHC PP **sP** **13 29 37.0 +6.0**
HHC S **S** **13 33 04.9 -1.0**
HHC sS sS 13 33 14.1 -3.3
HHC SS **SnSn** **13 33 32.1 +7.8**
HHC pmax pmax
comp=Z,85nm,0.8s
HHC pmax pmax
comp=Z,970nm,5.0s
HHC LR LR
comp=Z,25μm,15.3s
HHC LR LR
comp=Z,14μm,15.0s
HHC LR LR
comp=Z,30μm,16.5s
SKMP Bagumbayan, Su 20.35 193 *e*P Pn 13 29 23.1 +0.1
DDMP Don Marcelino, 20.56 189 *e*P **P** **13 29 23.1 0.0**
ASAJ Asahikawa 20.71 29 P **P** **13 29 23.3 -1.3**
comp=Z,417nm,1.0s,baz=232,slow=16,SNR=43
BTO Baotou 21.06 317 *e*P **P** **13 29 28.9 +0.5**
JNK Nakash 21.28 33 P **P** **13 29 30.3 -0.3**
NEM2 Nemuro 2 21.63 35 P **P** **13 29 34.1 -0.3**
GLVR Golovnino 21.79 34 *e*P **P** **13 29 36.2 +0.2**
GLVR *e*S **S** **13 33 34.6 -0.7**
GLVR pmax pmax
comp=Z,3μm,2.1s
GLVR pmax pmax
comp=Z,1μm,1.0s
GLVR pmax pmax
comp=N,204nm,0.8s
GLVR pmax pmax
comp=E,443nm,1.0s
GLVR MLR MLR
comp=Z,1μm,16.0s
GLVR MLR MLR
comp=N,949nm,12.0s
GRPR Tuman 22.10 34 *e*P **P** **13 29 39.4 0.0**
GRPR *e* 13 29 57.2
GRPR *e*PPP PPP 13 30 05.3
GRPR *e*S **S** **13 33 45.2 +3.9**
GRPR *e*SS **SnSn** **13 34 05.8 -2.9**
GRPR *e*SSS SSS 13 34 19.2
GRPR pmax pmax
comp=N,876nm,1.2s
GRPR pmax pmax
comp=E,337nm,1.2s
GRPR pmax pmax
comp=Z,996nm,1.2s
GRPR pmax pmax
comp=Z,1μm,2.0s
GRPR MLR MLR
comp=Z,597nm,18.0s
GRPR MLR MLR
comp=E,513nm,18.0s
GRPR MLR MLR
comp=N,439nm,18.0s
LAGR Lagunnoye 22.15 34 *e*P **P** **13 29 40.4 +0.5**
LAGR pmax pmax
comp=Z,2μm,1.6s
LAGR pmax pmax
comp=Z,3μm,1.0s
LAGR pmax pmax
comp=N,2μm,1.1s
LAGR pmax pmax
comp=E,3μm,0.8s
LAGR MLR MLR
comp=Z,550nm,12.0s
YUK Yuzh-Kuril'sk 22.17 34*d i*P **P** **13 29 40.8 +0.6**
YUK *e*PPP PPP 13 30 10.9
YUK *e*S **S** **13 33 44.0 +1.4**
YUK *e*SS **SnSn** **13 34 12.5 +2.0**
YUK *e*SSS SSS 13 34 25.8
YUK pmax pmax
comp=Z,1μm,1.7s
YUK pmax pmax
comp=Z,1μm,1.2s
YUK pmax pmax
comp=E,792nm,1.1s
YUK pmax pmax
comp=N,822nm,1.0s
YUK pmax pmax
comp=Z,6μm,19.0s
YUK MLR MLR
comp=E,6μm,19.0s
YUK MLR MLR
comp=N,5μm,18.0s
CD2 Chengdu 22.51 287⇑ *i*P **P** **13 29 41.3 -2.8**
CD2 S **S** **13 33 44.8 -4.5**
CD2 sS pS 13 33 53.6 -5.3
CD2 pmax pmax
comp=N,860nm,0.7s
CD2 pmax pmax
comp=N,2μm,4.7s
CD2 LR LR
comp=N,82μm,15.7s
KLR Kul'dur 22.75 5 P **P** **13 29 43.2 -3.1**
comp=N,147nm,1.0s,baz=189,slow=8.7,SNR=43
KLR LR LR 13 38 28.7
comp=N,4μm,20.9s,baz=180,slow=36
KLR Kul'dur 22.75 5 *i* P **P** **13 29 44.0 -2.4**
KLR pmax pmax
comp=Z,246nm,1.1s
SGSI Sangihe 22.96 189 P **P** **13 29 50.9 +2.1**
comp=Z,391nm,0.8s,comp=Z,4μm
YSS Yuzh-Sakhalins 23.11 25 *e*P **P** **13 29 49.9 -0.1**
comp=Z,2μm,1.4s
YSS Yuzh-Sakhalins 23.11 25*d i*P **P** **13 29 48.9 -1.1**
YSS *e* 13 30 02.4
YSS *e*S **S** **13 33 57.9 -1.3**
YSS pmax pmax
comp=Z,820nm,1.3s
YSS pmax pmax
comp=N,410nm,1.2s
YSS pmax pmax
comp=Z,8μm,4.3s
YSS pmax pmax
comp=N,4μm,3.7s
YSS pmax pmax
comp=E,2μm,5.1s
YSS smax smax
comp=N,40nm,2.3s
YSS smax smax
comp=N,4μm,14.3s
YSS MLR MLR
comp=N,4μm,19.0s
YSS MLR MLR
comp=Z,3μm,19.0s
LZH Lanzhou 23.42 300 *e*P **P** **13 29 51.8 -1.7**
LZH pP pP 13 29 55.3 -5.8
LZH sP pwP 13 29 57.8 -6.9
LZH PP **PnPn** **13 30 22.9 +2.6**
LZH *e*S **S** **13 34 02.6 -2.4**
LZH SS **SnSn** **13 34 47.8 +6.3**
LZH pmax pmax
comp=Z,410nm,1.2s
LZH pmax pmax
comp=Z,3μm,5.2s
LZH LR LR
comp=Z,23μm,15.4s
LZH LR LR
comp=Z,10μm,14.3s
LZH LR LR
comp=Z,29μm,15.7s
SLVN Son La 23.47 263 *e*P **P** **13 29 53.7 -0.2**
comp=Z,309nm,1.1s
SLVN LR LR
comp=Z,8μm,20.0s
KMI Kunming 23.64 272 P **P** **13 29 54.8 -0.9**
KMI pP pP 13 30 04.3 +0.9
KMI sP sP 13 30 07.3 +0.4
KMI PP **PnPn** **13 30 28.6 +5.2**
KMI S **S** **13 34 04.6 -4.1**
KMI sS pS 13 34 17.4 -0.4
KMI SS **SnSn** **13 34 50.4 +3.4**
KMI pmax pmax
comp=Z,600nm,1.4s
KMI pmax pmax
comp=Z,3μm,6.6s
KMI LR LR
comp=Z,6μm,14.7s
KMI LR LR
comp=Z,34μm,13.6s
KMI LR LR
comp=Z,33μm,14.2s
KMI Kunming 23.64 272 PFAKE 13 30 10.0 +14
KMI LR LR
comp=Z,11μm,19.0s
KKM Kota Kinabalu 23.74 213 *e*P **P** **13 29 56.0 -0.5**
comp=Z,200nm,1.2s
KKM LR LR
comp=Z,5μm,18.0s
KKM Kota Kinabalu 23.74 213 P **P** **13 29 57.0 +0.5**
HIA Hailar 23.79 345 PFAKE 13 30 10.0 +13
HIA LR LR
comp=Z,9μm,18.0s
KUR Kuril'sk 24.03 34*d i*P **P** **13 29 59.0 +0.1**
KUR *e* 13 30 27.2
KUR *e*PPP PPP 13 30 42.0
KUR *i* S **S** **13 34 17.6 +3.5**
KUR *e*SS **SnSn** **13 34 59.7 +3.7**
KUR pmax pmax
comp=Z,1μm,1.2s
KUR pmax pmax
comp=Z,6μm,3.4s
KUR MLR MLR
comp=Z,7μm,18.0s
KUR MLR MLR
comp=N,3μm,16.0s
KUR MLR MLR
comp=E,3μm,16.0s
DLV T Lat 24.13 237 *e*P **P** **13 29 59.2 -1.1**
comp=E,258nm,1.3s
DLV LR LR
comp=Z,8μm,20.0s
PANO Nakornpanom 24.43 252 P **P** **13 30 03.9 +1.1**
comp=Z,6.4nm,1.3s,comp=Z,136nm
GRNR Gornyy 24.86 11⇓ *i*P **P** **13 30 06.0 -0.5**
GRNR *e* 13 33 42.0
GRNR pmax pmax
comp=N,400nm,1.0s
GRNR pmax pmax
comp=Z,460nm,1.0s
SKNT Sakolnakorn 25.04 253 P **P** **13 30 09.0 +0.6**
comp=Z,263nm,1.1s,comp=Z,5μm
NONG Nongkai 25.30 256 P **P** **13 30 11.2 +0.5**
comp=Z,11nm,0.9s,comp=Z,105nm
TNTI Ternate 25.67 184 P **P** **13 30 16.8 +2.7**
comp=Z,188nm,1.2s,comp=Z,2μm
KMSI Cibinong 26.26 191 P **P** **13 30 23.7 +4.3**
comp=Z,293nm,0.9s,comp=Z,3μm
KHON Khomkaen 26.32 253 P **P** **13 30 20.5 +0.5**
comp=Z,491μm,0.7s
TYV Tymovskoe 26.44 20 *e*P **P** **13 30 21.9 +1.1**
TYV *e*S **S** **13 34 57.6 +5.1**
TYV pmax pmax
comp=Z,2μm,3.8s
TYV pmax pmax
comp=Z,451nm,2.1s
TYV smax smax
comp=N,3μm,7.0s
MRSI Marisa 26.78 196 P **P** **13 30 25.1 +1.0**
comp=N,72nm,1.2s,comp=N,1μm
ZEA Zeya 27.20 358 *e*P **P** **13 30 26.2 -1.4**
ZEA *e* 13 31 20.0
ZEA *e*S **S** **13 34 59.0 -5.3**
ZEA pmax pmax
comp=N,52nm,0.8s
ZEA pmax pmax
comp=E,21nm,0.8s
ZEA pmax pmax
comp=Z,100nm,0.8s
ZEA pmax pmax
comp=Z,700nm,10.0s
ZEA pmax pmax
comp=N,500nm,9.0s
ZEA pmax pmax
comp=Z,600nm,10.0s
ZEA pmax pmax
comp=N,500nm,9.0s
ZEA smax smax
comp=E,1μm,16.0s
ZEA MLR MLR
comp=Z,6μm,16.0s
ZEA MLR MLR
comp=E,5μm,15.0s
ZEA MLR MLR
comp=N,4μm,17.0s
CHAI Chaiyaphum 27.23 253 P **P** **13 30 28.2 0.0**
comp=N,234μm,0.8s
SIJI Sorong 27.34 175 P **P** **13 30 27.8 -1.4**
comp=N,9.8nm,0.8s,baz=344,slow=13,SNR=5.6
SIJI LR LR 13 40 28.6
comp=N,3μm,20.8s,baz=6.0,slow=34
ULN Ulaanbaatar 27.35 327 *e*P **P** **13 30 28.0 -1.3**
comp=N,113nm,1.0s
ULN LR LR
comp=Z,11μm,18.0s
ULN Ulaanbaatar 27.35 327*c e*P **P** **13 30 28.1 -1.1**
ULN pmax pmax
comp=Z,115nm,1.3s
MPSI Mapaga 27.48 200 P **P** **13 30 32.1 +1.7**
comp=Z,51nm,1.4s,comp=Z,905nm
GTA Gaotai 27.49 305 ⇑P **P** **13 30 28.9 -1.6**
GTA pP pP 13 30 33.0 -5.5
GTA sP sP 13 30 36.5 -5.4
GTA S **S** **13 35 02.6 -6.9**
GTA pmax pmax
comp=Z,370nm,1.0s
GTA pmax pmax
comp=Z,1μm,6.7s
GTA LR LR
comp=Z,12μm,13.6s
GTA LR LR
comp=Z,16μm,17.1s
GTA LR LR
comp=Z,30μm,15.6s
SONA0 Songino Array 27.66 326 *e*P **P** **13 30 30.7 -1.2**
SONA0 *e*ScP ScP 13 37 41.5 +14
SONM Songino Array 27.66 326 P **P** **13 30 30.7 -1.2**
comp=Z,64nm,0.8s,baz=145,slow=8.9,SNR=104
SONM ScP ScP 13 37 41.5 +14
comp=Z,7.5nm,1.1s,baz=164,slow=3.2,SNR=6.4
SONM LR LR 13 43 26.4
comp=Z,11μm,18.5s,baz=134,slow=41
PAYA Payao 27.69 261 P **P** **13 30 32.8 +0.4**
comp=Z,190μm,1.2s
PBKT Sadao Pong 27.81 255 P **P** **13 30 33.7 +0.3**
comp=Z,138nm,1.0s,comp=Z,2μm
CIT Chita 27.98 340 *e*P **P** **13 30 34.3 -0.4**
CIT *e* 13 30 50.7
CIT *e* 13 31 23.8
CIT *e* 13 31 32.7
CIT pmax pmax
comp=Z,62nm,1.0s
LUWI Luwuk 28.07 193 PFAKE 13 30 50.0 +14
LUWI LR LR
comp=Z,3μm,21.0s
APSI Ampana 28.19 196 P P 13 30 48.2 +11
LAMP Lampang 28.20 260 P **P** **13 30 37.4 +0.5**
comp=Z,238μm,0.9s
BAKI Biak 28.42 165 P **P** **13 30 39.6 +0.8**
comp=Z,68nm,1.1s,comp=Z,1μm
CHBT CHBT 28.51 246 P **P** **13 30 41.9 +2.2**
comp=Z,72nm,0.5s
SANI Sanana 28.57 186 P **P** **13 30 41.5 +1.4**
comp=Z,137nm,0.8s,comp=Z,1μm
CMMT Chiang Mai 28.70 261 P **P** **13 30 41.2 -0.1**
comp=Z,61nm,0.9s,comp=Z,921nm
CHTO Chiang Mai 28.70 261 *e*P **P** **13 30 41.0 -0.4**
comp=Z,90nm,0.9s
CHTO LR LR
comp=Z,8μm,19.0s
CHTO Chiang Mai 28.70 261 *e*P **P** **13 30 41.0 -0.4**
CHTO pmax pmax
comp=Z,90nm,0.9s
CHTO MLR MLR
comp=Z,8μm,19.0s
CM31 Chiang Mai Arr 28.83 260 *e*P **P** **13 30 41.9 -0.6**
comp=Z,64nm,0.9s
CMAR Chiang Mai Arr 28.83 260 P **P** **13 30 42.6 +0.1**
comp=Z,30nm,0.8s,baz=58,slow=7.4,SNR=88
CMAR LR LR 13 43 46.7
comp=Z,8μm,18.1s,baz=76,slow=40
CMAR P3KPbc 14 02 56.1
comp=Z,0.5nm,0.3s,baz=256,slow=5.7,SNR=4.5
SBUM Sibu 28.85 217 *e*P **P** **13 30 42.1 -0.5**
comp=Z,151nm,1.9s
SBUM LR LR
comp=Z,4μm,21.0s
SBUM Sibu 28.85 217 P **P** **13 30 43.0 +0.4**
FAKI Fak Fak 29.46 173 *e*P **P** **13 30 47.4 -0.6**
comp=Z,110nm,1.0s
FAKI LR LR
comp=Z,3μm,20.0s
FAKI Fak Fak 29.46 173 P **P** **13 30 48.7 +0.6**
comp=Z,122nm,1.1s,comp=Z,1μm
LKP Lekhapani 29.49 279 *e*P **P** **13 30 47.5 -0.8**
LKP IAmb IAmb 13 30 50.0
comp=Z,341nm,1.1s
MSAI Masohi 29.71 180 P **P** **13 30 54.9 +4.6**
comp=Z,37nm,1.1s
UMPA Umpang Tak 29.79 256 P **P** **13 30 52.9 +1.8**
comp=Z,296μm,1.0s
BKB Balikpapan 29.99 205 P **P** **13 30 55.4 +2.6**
comp=Z,113nm,0.8s,comp=Z,3μm
DIBR DIBRUGARH 30.30 280 *e*P **P** **13 30 54.6 -0.9**
KMPI Kaimana, Papua 30.37 171 P P 13 31 06.8 +11
SRDT SRDT 30.40 252 P **P** **13 30 57.5 +1.1**
comp=Z,64nm,1.3s,comp=Z,1μm
MTKI Muara Teweh, K 30.51 209 P **P** **13 31 00.3 +2.9**
comp=Z,61nm,0.9s
PHET Kaeng Krachan 30.67 249 P **P** **13 31 00.3 +1.5**
comp=Z,263μm,0.9s
KSM Kuching 30.70 219 *e*P **P** **13 30 59.2 +0.1**
comp=Z,226nm,1.6s
KSM LR LR
comp=Z,3μm,21.0s
KSM Kuching 30.70 219 P **P** **13 31 00.0 +0.9**
MOKO MOKOCHONG 30.80 277 *e*P **P** **13 30 57.6 -2.4**
MOKO IAmb IAmb 13 30 59.5
comp=Z,108nm,0.6s
ZAK Zakamensk 30.88 327 *e*P **P** **13 30 57.4 -3.1**
ZAK pmax pmax
comp=Z,15nm,2.1s
ZAK pmax pmax
comp=Z,9.0nm,1.2s
GENI Genyem 30.92 158 P **P** **13 31 03.1 +2.1**
comp=Z,102nm,1.1s,comp=Z,2μm
JORH JORHAT 30.97 278 *e*P **P** **13 31 00.3 -1.1**
JORH IAmb IAmb 13 31 01.9
comp=Z,306nm,0.9s
JAY Jayapura 31.03 157 P **P** **13 31 02.8 +0.8**
comp=Z,14nm,1.0s,baz=290,slow=5.4,SNR=4.0
JAY LR LR 13 43 19.2
comp=Z,1μm,18.4s,baz=357,slow=36
ZIRO ZIRO 31.23 280 *e*P **P** **13 31 02.6 -1.3**
ZIRO IAmb IAmb 13 31 04.7
comp=Z,132nm,1.2s
KOHI KOHIMA 31.25 276 *e*P **P** **13 31 00.8 -3.3**
KOHI IAmb IAmb 13 31 05.0
comp=Z,77nm,1.0s
TLY Talaya 31.58 329 *e*P **P** **13 31 05.0 -1.5**
comp=Z,108nm,1.9s
TLY LR LR
comp=Z,8μm,18.0s
TLY Talaya 31.58 329 *e*P **P** **13 31 08.7 +2.2**
TLY *e* 13 32 05.8
TLY *e*PPP PPP 13 32 21.2
TLY *e*S **S** **13 36 18.7 +5.5**
TLY *e*SS **SnSn** **13 38 07.6 +7.6**
TLY pmax pmax
comp=Z,88nm,1.4s
TLY MLR MLR
comp=Z,25μm,16.0s
IRK Irkutsk 31.69 331 *e*P **P** **13 31 11.1 +3.7**
IRK *e* 13 41 41.7
IRK pmax pmax
comp=Z,88nm,2.2s
SKR Severo-Kuril's 31.79 33 *e*P **P** **13 31 08.2 -0.1**
SKR *e* 13 32 15.8
SKR *e*S **S** **13 36 15.4 -1.0**
SKR pmax pmax
comp=Z,2μm,3.3s
SKR pmax pmax
comp=Z,490nm,1.0s
SKR MLR MLR
comp=Z,4μm,20.0s
TEZP TEZPUR 32.28 278 *e*P **P** **13 31 10.5 -2.4**
TEZP IAmb IAmb 13 31 13.5
comp=Z,292nm,1.1s
KAPI Kappang 32.61 197 P **P** **13 31 17.1 +1.2**
comp=Z,26nm,1.2s,baz=360,slow=3.5,SNR=3.9
KAPI Kappang 32.61 197 PFAKE 13 31 30.0 +14
KAPI LR LR
comp=Z,2μm,21.0s
BKSI Bulukumba 32.81 196 P P 13 31 24.9 +7.3
MOY Mondy 32.81 327 *e*P **P** **13 31 15.9 -1.5**
MOY pmax pmax
comp=Z,53nm,2.2s
TAWA Tawang 32.98 280 *e*P **P** **13 31 18.4 -1.1**
TAWA IAmb IAmb 13 31 21.7
comp=Z,133nm,0.6s
BOD Bodaibo 33.01 345 *e*P **P** **13 31 18.0 -0.9**
BOD pmax pmax
comp=Z,10.0nm,1.0s
SKLT Songkhla 33.13 240 P **P** **13 31 22.6 +2.2**
comp=Z,47nm,1.4s,comp=Z,767nm
SHL Shillong 33.26 277 *e*P **P** **13 31 20.3 -1.4**
comp=Z,645nm,1.0s
SHL LR LR
comp=Z,14μm,19.0s
SHL Shillong 33.26 277 *e*P **P** **13 31 20.3 -1.4**
SHL pmax pmax
comp=Z,645nm,1.0s
SHL MLR MLR
comp=Z,14μm,19.0s
SHL Shillong 33.26 277 *e*P **P** **13 31 19.5 -2.2**
SHL IAmb IAmb 13 31 22.3
comp=Z,336nm,0.8s
SHL *i* x x 13 36 35.0
GUWA GUWAHATI 33.32 278⇓ *e*P **P** **13 31 19.9 -2.1**
GUWA IAmb IAmb 13 31 22.6
comp=Z,2μm,0.1s
LSA Lhasa 33.41 284 P **P** **13 31 22.5 -0.8**
LSA pP **pP** **13 31 26.0 -5.3**
LSA S S 13 36 32.8 -10
LSA pmax pmax
comp=Z,210nm,1.0s
LSA LR LR
comp=Z,15μm,14.4s
LSA LR LR
comp=Z,14μm,16.7s
LSA LR LR
comp=Z,23μm,15.0s
LSA Lhasa 33.41 284 *e*P **P** **13 31 23.1 -0.2**
comp=Z,70nm,0.7s
LSA LR LR
comp=Z,6μm,19.0s
LSA Lhasa 33.41 284 *i* P **P** **13 31 23.2 -0.1**
SNR=14
LSA Lhasa 33.41 284 *e*P **P** **13 31 23.1 -0.2**
LSA pmax pmax
comp=Z,70nm,0.7s
LSA MLR MLR
comp=Z,6μm,19.0s
TRTT Trang 33.45 242 P **P** **13 31 24.5 +1.3**
comp=Z,55nm,1.3s,comp=Z,2μm
MANU Manus Island 33.52 145 PFAKE 13 31 40.0 +16
MANU LR LR
comp=Z,2μm,19.0s

BRDH	**Bariadhala**	**34.07 272**	P	**P**	**13 31 28.6**	**0.0**
	comp=Z,234nm,0.5s,baz=258,slow=23,SNR=10					
PEA0B	**Petropavlovsk-**	**34.09 31**	*e*P	**P**	**13 31 27.9**	**-0.6**
	comp=Z,346nm,1.1s					
PEA0B			LR	LR		
	comp=Z,3μm,20.0s					
PETK	**Petropavlovsk-**	**34.09 31**	P	**P**	**13 31 28.4**	**0.0**
	comp=Z,134nm,0.9s,baz=213,slow=4.4,SNR=146					
PETK			LR	LR	13 45 39.9	
	comp=Z,3μm,21.3s,baz=226,slow=37					
BELO	**BELONIA**	**34.11 273**	*e*P	**P**	**13 31 30.2**	**+1.3**
PATS	**Pohnpei**	**34.11 120**	*e*P	**P**	**13 31 29.4**	**+0.4**
	comp=Z,387nm,1.4s					
PATS			LR	LR		
	comp=Z,3μm,20.0s					
KULM	**Kulim**	**34.31 237**	*e*P	**P**	**13 31 30.4**	**-0.3**
	comp=Z,393nm,1.7s					
KULM			LR	LR		
	comp=Z,5μm,20.0s					
KULM	**Kulim**	**34.31 237**	P	**P**	**13 31 32.0**	**+1.3**
MYKOM	**Kota Tinggi**	**34.46 229**	*e*P	**P**	**13 31 31.9**	**-0.1**
	comp=Z,57nm,0.9s					
MYKOM			LR	LR		
	comp=Z,4μm,18.0s					
MYKOM	**Kota Tinggi**	**34.46 229**	P	**P**	**13 31 33.0**	**+1.0**
PET	**Petropavlovsk**	**34.48 32**	*e*P	**P**	**13 31 31.8**	**0.0**
	comp=Z,513nm,1.1s					
PET			LR	LR		
	comp=Z,4μm,19.0s					
PET	**Petropavlovsk**	**34.48 32**κ	*i*P	**P**	**13 31 31.9**	**+0.1**
PET			*i* S	**S**	**13 36 56.1**	**-2.1**
PET			pmax	pmax		
	comp=Z,3μm,3.2s					
PET			pmax	pmax		
	comp=Z,491nm,1.0s					
PET			pmax	pmax		
	comp=Z,800nm,11.6s					
PET			MLR	MLR		
	comp=Z,6μm,18.0s					
PET			MLR	MLR		
	comp=Z,5μm,18.0s					
PKDT	**Phuket**	**34.49 243**	P	**P**	**13 31 34.2**	**+1.9**
	comp=Z,170nm,1.1s					
IPM	**Ipoh**	**34.56 235**	*e*P	**P**	**13 31 31.9**	**-1.0**
	comp=Z,570nm,2.0s					
IPM			LR	LR		
	comp=Z,4μm,22.0s					
IPM	**Ipoh**	**34.56 235**	P	**P**	**13 31 34.0**	**+1.1**
TPRI	**Tanjung Pinang**	**34.66 227**	P	**P**	**13 31 36.0**	**+2.3**
	comp=Z,63nm,2.1s					
DHUB	**DHUBRI**	**34.86 278**	*e*P	**P**	**13 31 33.1**	**-2.2**
WAKE	**Wake Island**	**35.36 94**	PFAKE		13 31 50.0	+10
WAKE			LR	LR		
	comp=Z,4μm,19.0s					
H11N2	**WAKE ISLAND Hy**	**35.44 93**	T	T	14 09 43.8	
	baz=290,slow=75,SNR=14					
H11N1	**WAKE ISLAND Hy**	**35.44 93**	T	T	14 09 53.5	
	baz=290,slow=75,SNR=10					
H11N3	**WAKE ISLAND Hy**	**35.45 93**	T	T	14 09 44.4	
	baz=290,slow=75,SNR=12					
YAK	**Yakutsk**	**35.49 1**	*e*P	**P**	**13 31 39.5**	**-0.8**
	comp=Z,229nm,0.8s					
YAK			LR	LR		
	comp=Z,3μm,18.0s					
YAK	**Yakutsk**	**35.49 1**	*e*P	**P**	**13 31 39.6**	**-0.7**
YAK			*e**PP	**pP**	**13 31 47.8**	**-0.6**
YAK			*e*PPP	PPP	13 33 24.6	
YAK			*e*S	**S**	**13 37 10.7**	**-2.7**
MMRI	**Maumere**	**35.57 191**	PFAKE		13 31 50.0	+8.5
MMRI			LR	LR		
	comp=Z,1μm,19.0s					
MMRI	**Maumere**	**35.57 191**	P	P	13 31 48.2	+6.7
H11S3	**WAKE ISLAND Hy**	**35.65 95**	T	T	14 10 01.5	
H11S1	**WAKE ISLAND Hy**	**35.66 95**	T	T	14 09 53.0	
H11S2	**WAKE ISLAND Hy**	**35.67 95**	T	T	14 09 56.4	
	SNR=3.9					
DSRI	**Dabo**	**35.69 225**	P	**P**	**13 31 43.6**	**+1.0**
	comp=Z,113nm,1.2s					
EDFI	**Ende, Flores**	**35.78 192**	P	**P**	**13 31 42.0**	**-1.5**
	comp=Z,36nm,0.8s,comp=Z,963nm					
GTK	**Tadong**	**35.89 281**	*e*P	**P**	**13 31 43.1**	**-1.3**
GTK			IAmb	IAmb	13 31 44.4	
	comp=Z,53nm,0.8s					
DGPR	**DIGLIPUR**	**36.27 256**	*e*P	**P**	**13 31 47.5**	**-0.1**
MA2	**Magadan**	**36.30 19**	P	**P**	**13 31 46.9**	**-0.5**
	comp=Z,136nm,0.9s,baz=209,slow=9.9					
MA2			LR	LR	13 48 01.3	
	comp=Z,2μm,18.3s,baz=213,slow=38					
MA2	**Magadan**	**36.30 19**	*e*P	**P**	**13 31 47.4**	**0.0**
	comp=Z,154nm,0.9s					
MA2			LR	LR		
	comp=Z,2μm,20.0s					
MA2	**Magadan**	**36.30 19**	*e*P	**P**	**13 31 47.4**	**0.0**
MA2			pmax	pmax		
	comp=Z,153nm,0.9s					
MA2			MLR	MLR		
	comp=Z,2μm,20.0s					
SOEI	**Soe**	**36.37 188**	*e*P	**P**	**13 31 45.9**	**-2.6**
	comp=Z,175nm,0.9s					
SOEI			LR	LR		
	comp=Z,2μm,20.0s					
SOEI	**Soe**	**36.37 188**	P	**P**	**13 31 47.5**	**-1.0**
	comp=Z,153nm,1.1s,comp=Z,2μm					
PLAI	**Plampang**	**36.80 199**	P	**P**	**13 31 51.8**	**-0.2**
	comp=Z,203nm,1.2s,comp=Z,3μm					
BATI	**Baumata**	**36.89 189**	P	**P**	**13 31 50.6**	**-2.2**
	comp=Z,140nm,0.8s,baz=306,slow=1.6,SNR=24					
BATI	**Baumata**	**36.89 189**	P	**P**	**13 31 50.6**	**-2.2**
	comp=Z,81nm,0.8s					
RGRI	**Rengat**	**37.05 228**	P	**P**	**13 31 53.2**	**-1.1**
PBA	**Port Blair**	**37.14 254**	PFAKE		13 32 10.0	+15
PBA			LR	LR		
	comp=Z,10μm,19.0s					
PBA	**Port Blair**	**37.14 254**	*e*P	P	13 31 54.4	-0.6
JMBI	**JAMBI**	**37.17 225**	P	**P**	**13 31 58.5**	**+3.3**
	comp=Z,466nm,0.8s,comp=Z,7μm					
PSI	**Prapat**	**37.24 236**	P	**P**	**13 31 56.0**	**0.0**
	comp=Z,42nm,0.9s,baz=21,slow=3.9,SNR=15					
PSI			LR	LR	13 46 37.3	
	comp=Z,4μm,21.8s,baz=30,slow=35					
PSI	**Prapat**	**37.24 236**	PFAKE		13 32 10.0	+14
PSI			LR	LR		
	comp=Z,4μm,22.0s					
PSI	**Prapat**	**37.24 236**	P	**P**	**13 31 56.0**	**0.0**
WMQ	**Urumqi**	**37.44 308**	*e*P	**P**	**13 31 56.3**	**-1.1**
WMQ			sP	sP	13 32 08.5	-0.2
WMQ			PP	**PnPn**	**13 33 23.8**	**0.0**
WMQ			S	**S**	**13 37 47.4**	**+3.5**
WMQ			ScS	**ScS**	**13 42 07.8**	**-1.1**
WMQ			pmax	pmax		
	comp=Z,150nm,2.4s					
WMQ			pmax	pmax		
	comp=Z,920nm,3.6s					
WMQ			LR	LR		
	comp=Z,7μm,16.5s					
WMQ			LR	LR		
	comp=Z,10μm,19.5s					
WMQ			LR	LR		
	comp=Z,19μm,19.5s					
WMQ	**Urumqi**	**37.44 308**	*e*P	**P**	**13 31 56.9**	**-0.4**
	comp=Z,558nm,1.6s					
WMQ			LR	LR		
	comp=Z,13μm,18.0s					
WMQ	**Urumqi**	**37.44 308**	*e*P	**P**	**13 31 56.9**	**-0.4**
WMQ			pmax	pmax		
	comp=Z,558nm,1.6s					
WMQ			MLR	MLR		
	comp=Z,13μm,18.0s					
BKNI	**Bangkinang**	**37.44 230**	PFAKE		13 32 10.0	+12
BKNI			LR	LR		
	comp=Z,2μm,19.0s					
BKNI	**Bangkinang**	**37.44 230**	P	**P**	**13 31 58.7**	**+1.2**
	comp=Z,184nm,1.1s,comp=Z,4μm					
KCSI	**Kotacane, Aceh**	**37.63 238**	P	**P**	**13 31 58.8**	**-0.4**
	comp=Z,57nm,1.2s,comp=Z,1μm					
RAMN	**Ramite**	**37.71 280**	*e*P	**P**	**13 31 59.2**	**-0.8**
	comp=Z,226nm,0.8s					
NGJI	**Ngawi**	**37.74 209**	P	**P**	**13 32 01.9**	**+1.9**
	comp=Z,182nm,1.2s					
RABL	**Rabaul**	**37.91 140**	*e*P	**P**	**13 32 02.7**	**+1.2**
	comp=Z,196nm,1.2s					
SMRI	**Semarang**	**37.92 211**	PFAKE		13 32 10.0	+8.4
SMRI			LR	LR		
	comp=Z,3μm,19.0s					
SMRI	**Semarang**	**37.92 211**	P	P	13 32 16.3	+15
JIRN	**Jiri**	**37.96 282**	*e*P	**P**	**13 32 01.6**	**-0.7**
	comp=Z,112nm,0.4s					
SDSI	**Sungai Dareh**	**38.09 229**	P	**P**	**13 32 03.5**	**+0.5**
	comp=Z,72nm,1.4s,comp=Z,1μm					
MNSI	**Mandailing Nat**	**38.13 233**	P	**P**	**13 32 03.4**	**0.0**
	comp=Z,140nm,1.0s,comp=Z,3μm					
GUN	**Gumba**	**38.19 282**	*e*P	**P**	**13 32 03.5**	**-0.7**
	comp=Z,206nm,0.4s					
MLSI	**Meulaboh, Aceh**	**38.21 240**	P	**P**	**13 32 04.0**	**0.0**
	comp=Z,350nm,0.8s,comp=Z,4μm					
TPTI		**38.25 238**	P	P	13 32 15.7	+11
WOJI	**Wonogiri, Jawa**	**38.40 210**	P	**P**	**13 32 06.1**	**+0.5**
	comp=Z,168nm,1.4s,comp=Z,3μm					
UGM	**Wanagama**	**38.64 210**	PFAKE		13 32 20.0	+12
UGM			LR	LR		
	comp=Z,4μm,19.0s					
UGM	**Wanagama**	**38.64 210**	P	**P**	**13 32 09.3**	**+1.6**
	comp=Z,376nm,1.4s					
PKI	**Pulchoki**	**38.66 282**	*e*P	**P**	**13 32 07.1**	**-1.0**
	comp=Z,262nm,0.4s					
PKIN	**Phulchoki**	**38.67 282**	*e*P	**P**	**13 32 07.1**	**-1.0**
	comp=Z,282nm,0.4s					
PDSI	**Padang**	**38.73 230**	P	**P**	**13 32 10.1**	**+1.7**
	comp=Z,39nm,1.1s,comp=Z,3μm					
KKN	**Kakani**	**38.74 282**	*e*P	**P**	**13 32 07.9**	**-0.8**
	comp=Z,234nm,0.4s					
DMN	**Daman**	**38.92 282**	*e*P	**P**	**13 32 09.4**	**-0.8**
	comp=Z,831nm,1.3s					
KRJI	**Kerinci**	**38.93 227**	P	**P**	**13 32 13.3**	**+3.1**
	comp=Z,188nm,1.1s,comp=Z,4μm					
BOK	**Bokaro**	**38.95 276**	*e*P	**P**	**13 32 10.2**	**0.0**
BOK			IAmb	IAmb	13 32 12.4	
	comp=Z,371nm,1.1s					
MDSI	**Maura Dua**	**39.08 222**	P	**P**	**13 32 11.8**	**+0.5**
	comp=Z,63nm,1.6s,comp=Z,1μm					
LEM	**Lembang**	**39.10 215**	P	**P**	**13 32 12.4**	**+0.8**
	comp=Z,71nm,0.8s,baz=108,slow=5.5,SNR=5.1					
CBJI	**Citeko**	**39.16 216**	P	**P**	**13 32 14.4**	**+2.5**
MTN	**Manton Dam**	**39.20 177**	*e*P	**P**	**13 32 11.3**	**-1.0**
	comp=Z,118nm,1.1s					
GSI	**Gunungsitoli**	**39.24 235**	PFAKE		13 32 20.0	+7.3
GSI			LR	LR		
	comp=Z,4μm,21.0s					
GSI	**Gunungsitoli**	**39.24 235**	P	**P**	**13 32 12.7**	**0.0**
	comp=Z,187nm,1.5s,comp=Z,4μm					
GKN	**Gorkha**	**39.27 283**	*e*P	**P**	**13 32 12.2**	**-0.8**
	comp=Z,400nm,0.6s					
SBJI	**Serang**	**39.30 218**	P	**P**	**13 32 14.8**	**+1.7**
	comp=Z,236nm,1.6s					
DGZ	**Jazzator, Alta**	**39.34 317**	*i* P	**P**	**13 32 11.9**	**-1.4**
DGZ			pmax	pmax		
	comp=Z,4.0nm,1.1s					
SNSI	**Sinabang, Aceh**	**39.44 238**	P	**P**	**13 32 14.5**	**+0.1**
	comp=Z,254nm,1.1s					
SEY	**Seymchan**	**39.53 17**	P	**P**	**13 32 14.8**	**+0.2**
	comp=Z,107nm,0.9s,baz=229,slow=9.3,SNR=12					
SEY			LR	LR	13 50 28.4	
	comp=Z,5μm,18.3s,baz=210,slow=39					
SEY	**Seymchan**	**39.53 17***d*	*i* P	**P**	**13 32 15.3**	**+0.7**
LWLI	**Liwa**	**39.57 221**	P	**P**	**13 32 17.2**	**+1.6**
	comp=Z,38nm,0.7s					
CISI	**Cisompet, Garu**	**39.62 214**	PFAKE		13 32 30.0	+14
CISI			LR	LR		
	comp=Z,4μm,21.0s					
CISI	**Cisompet, Garu**	**39.62 214**	P	**P**	**13 32 18.1**	**+2.2**
	comp=Z,118nm,1.3s,comp=Z,2μm					
MNAI	**Manna**	**39.72 223**	PFAKE		13 32 30.0	+13
MNAI			LR	LR		
	comp=Z,2μm,19.0s					
KASI	**Kota Agung**	**39.73 220**	P	P	13 32 23.5	+6.8
PMG	**Port Moresby**	**39.86 151**	P	**P**	**13 32 18.0**	**+0.2**
	comp=Z,29nm,0.8s,baz=1.9,slow=2.3,SNR=7.7					
PMG	**Port Moresby**	**39.86 151**	*e*P	**P**	**13 32 18.9**	**+1.1**
	comp=Z,71nm,1.0s					
PMG	**Port Moresby**	**39.86 151***c*	*e*P	P	13 32 27.1	+9.3
PMG			pmax	pmax		
	comp=Z,285nm,1.0s					
CGJI	**Cibinong**	**39.94 218**	P	**P**	**13 32 18.3**	**-0.2**
	comp=Z,60nm,1.3s					
SISI	**Saibi**	**39.97 231**	P	P	13 32 30.1	+11
DANN	**Dangsing**	**39.98 283**	*e*P	**P**	**13 32 18.7**	**-0.4**
	comp=Z,645nm,0.5s					
KOLN	**Koldanda**	**40.21 282**	*e*P	**P**	**13 32 20.3**	**-0.6**
	comp=Z,198nm,0.6s					
ZSN	**Zaisan**	**40.27 313**	*e*P	**P**	**13 32 19.2**	**-1.7**
ZSN	**Zaisan**	**40.27 313**	*e*P	**P**	**13 32 19.3**	**-1.7**
PYUN	**Piuthan**	**40.69 283**	*e*P	**P**	**13 32 24.4**	**-0.5**
	comp=Z,325nm,0.6s					
MK31	**Makanchi Array**	**41.82 311**	*i* P	**P**	**13 32 32.1**	**-1.6**
MK31			pmax	pmax		
	comp=Z,29nm,0.6s					
MK32	**Makanchi Array**	**41.82 311**	*e*PcP	**PcP**	**13 34 29.3**	**-0.1**
MK32			*e*ScP	ScP	13 38 29.4	+12
MKAR	**Makanchi Array**	**41.82 311**	P	**P**	**13 32 32.3**	**-1.4**
	comp=Z,20nm,0.6s,baz=92,slow=10,SNR=112					
MKAR			PcP	**PcP**	**13 34 29.3**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=229,slow=37,SNR=1.4					
MKAR			ScP	ScP	13 38 29.4	+12
	comp=Z,9.5nm,0.8s,baz=92,slow=5.2,SNR=8.7					
MKAR			ScS	**ScS**	**13 42 33.8**	**-0.7**
	comp=Z,1.7nm,1.0s,baz=98,slow=6.2,SNR=3.6					
MKAR			LR	LR	13 52 29.6	
	comp=Z,4μm,19.2s,baz=92,slow=40					
MKAR			PKP2ab		14 05 49.6	
	comp=Z,0.4nm,0.7s,baz=5.2,slow=3.2,SNR=3.7					
MKAR	**Makanchi Array**	**41.82 311**	*i* P	**P**	**13 32 32.2**	**-1.5**
MKAR			pmax	pmax		
	comp=Z,20nm,0.6s					
MAKZ	**Makanchi**	**42.03 311**	*e*P	**P**	**13 32 34.3**	**-1.2**
	comp=Z,621nm,1.9s					
MAKZ			LR	LR		
	comp=Z,7μm,18.0s					
MAKZ	**Makanchi**	**42.03 311**	*e*P	**P**	**13 32 34.3**	**-1.2**
MAKZ			pmax	pmax		
	comp=Z,621nm,1.9s					
MAKZ			MLR	MLR		
	comp=Z,7μm,18.0s					
ZAA0	**Zalesovo Array**	**42.40 322**	*e*P	**P**	**13 32 36.8**	**-1.5**
	comp=Z,40nm,0.6s					
ZAA0			LR	LR		
	comp=Z,8μm,19.0s					
ZALV	**Zalesovo Beam**	**42.40 322**	P	**P**	**13 32 36.9**	**-1.4**
	comp=Z,25nm,0.4s,baz=113,slow=9.1,SNR=117					
ZALV			PcP	**PcP**	**13 34 31.3**	**+0.2**
	comp=Z,21nm,1.0s,baz=134,slow=4.7,SNR=3.0					
ZALV			ScP	ScP	13 38 30.5	+11
	comp=Z,12nm,0.8s,baz=127,slow=3.1,SNR=9.3					
ZALV			ScS	**ScS**	**13 42 41.9**	**+4.2**
	comp=Z,1.2nm,0.6s,baz=150,slow=6.3,SNR=3.7					
ZALV			LR	LR	13 52 07.2	
	comp=Z,6μm,19.5s,baz=131,slow=39					
ZAA1	**Zalesovo Array**	**42.40 322**	*e*PcP	**PcP**	**13 34 31.3**	**+0.2**
ZAA1			*e*ScP	ScP	13 38 30.5	+11
SMY	**Shemya**	**42.51 40**	PFAKE		13 32 50.0	+11
SMY			LR	LR		
	comp=Z,2μm,20.0s					
COEN	**Coen**	**42.56 159**	*e*P	**P**	**13 32 40.1**	**+0.2**
	comp=Z,54nm,1.1s					
PDGK	**Podgornoye**	**43.23 306**	P	**P**	**13 32 44.3**	**-1.1**
PDGK			pmax	pmax		
	comp=Z,152nm,0.8s					
UZB	**Uzynbulak**	**43.55 306**	*e*P	**P**	**13 32 46.7**	**-1.2**
UZB			*i* S	**S**	**13 39 10.7**	**-4.5**
UZB			pmax	pmax		
	comp=Z,112nm,1.4s					
UZB			smax	smax		
	comp=N,96nm,3.3s					
UZB	**Uzynbulak**	**43.55 306**	*e*P	**P**	**13 32 46.8**	**-1.2**
	comp=N,112nm,1.4s					
UZB			*i* S	**S**	**13 39 10.7**	**-4.5**
	comp=N,96nm,3.3s					
NVS	**Novosibirsk**	**43.59 323**⇓	*i* P	**P**	**13 32 47.0**	**-0.9**
NVS			*e*		13 34 35.0	
NVS			*e*S	**S**	**13 39 09.0**	**-6.2**
NVS			pmax	pmax		
	comp=Z,209nm,2.0s					
NVS			pmax	pmax		
	comp=N,67nm,2.2s					
NVS			pmax	pmax		
	comp=E,104nm,2.0s					
NVS			smax	smax		
	comp=N,29nm,1.8s					
NVS			smax	smax		
	comp=E,26nm,2.0s					
KPKS	**Kokpek**	**43.83 306***c*	*i* P	**P**	**13 32 48.8**	**-1.3**
KPKS			*i* S	**S**	**13 39 14.9**	**-4.2**
KPKS			pmax	pmax		
	comp=Z,119nm,1.0s					
KPKS			smax	smax		
	comp=N,120nm,3.0s					
KPKS			MLR	MLR		
	comp=Z,3μm,14.0s					
KPKS	**Kokpek**	**43.83 306**⇑	*i* P	**P**	**13 32 48.9**	**-1.3**
	comp=Z,119nm,1.0s					
KPKS			*i* S	**S**	**13 39 15.0**	**-4.2**
	comp=Z,120nm,3.0s					
KPKS			*e*LR	LR	13 54 17.7	
	comp=Z,3μm,13.9s					
SATY	**Saty**	**43.99 305***c*	*i* P	**P**	**13 32 50.5**	**-1.0**
SATY			*i* S	**S**	**13 39 17.8**	**-3.8**
SATY			pmax	pmax		
	comp=Z,181nm,1.3s					
SATY			smax	smax		
	comp=N,138nm,3.5s					
SATY			MLR	MLR		
	comp=Z,2μm,15.0s					
SATY	**Saty**	**43.99 305**⇑	*i* P	**P**	**13 32 50.6**	**-1.0**
	comp=Z,181nm,1.3s					
SATY			*i* S	**S**	**13 39 17.9**	**-3.8**
	comp=Z,138nm,3.5s					
SATY			*e*LR	LR	13 52 34.7	
	comp=Z,2μm,15.0s					
JBP	**Jabalpur**	**44.36 277**⇑	*e*P	**P**	**13 32 55.2**	**+0.7**
	comp=Z,176nm,2.6s					
JBP			*e*S	**S**	**13 39 28.9**	**+1.6**
DDI	**Dehra Dun**	**44.63 287**	*e*P	**P**	**13 32 56.1**	**-0.5**
MDOK	**Medeo**	**44.99 305**	*i* P	**P**	**13 32 58.9**	**-0.6**
MDOK			*e*S	**S**	**13 39 33.1**	**-3.1**
MDOK			pmax	pmax		
	comp=Z,914nm,1.2s					
MDOK			MLR	MLR		
	comp=Z,4μm,14.0s					
MDOK	**Medeo**	**44.99 305**	*i* P	**P**	**13 32 58.9**	**-0.6**
	comp=Z,914nm,1.2s					
MDOK			*e*S	**S**	**13 39 33.1**	**-3.1**
MDOK			*e*LR	LR	13 55 02.2	
	comp=Z,4μm,13.6s					
KURK	**Kurchatov**	**45.05 316**	*e*P	**P**	**13 32 58.3**	**-1.3**
	comp=Z,288nm,1.5s					
KURK			LR	LR		
	comp=Z,15μm,18.0s					
KURK	**Kurchatov**	**45.05 316**	P	**P**	**13 32 58.7**	**-0.9**
KURK					13 34 41.6	
KURK			S	**S**	**13 39 30.1**	**-6.4**
KURBB	**Kurchatov Arra**	**45.09 316**	P	**P**	**13 32 58.7**	**-1.2**
	comp=Z,26nm,0.7s,baz=102,slow=8.8,SNR=200					
KURBB			PcP	**PcP**	**13 34 41.5**	**+1.3**
	comp=Z,6.7nm,0.8s,baz=104,slow=33,SNR=1.6					
KURBB			ScP	ScP	13 38 41.8	+11
	comp=Z,2.8nm,0.9s,baz=92,slow=3.7,SNR=4.1					
KURBB			S	**S**	**13 39 30.1**	**-6.9**
	comp=Z,1.8nm,1.0s,baz=107,slow=15,SNR=3.3					
KURBB			ScS	**SS**	**13 43 00.1**	**+0.6**
	comp=Z,2.1nm,1.1s,baz=93,slow=4.9,SNR=5.0					
AAA	**Alma-Ata**	**45.09 306**	*e*P	**P**	**13 33 00.2**	**0.0**
AAA			*e*S	**S**	**13 39 37.1**	**-0.4**
AAA			pmax	pmax		
	comp=Z,400nm,1.8s					
AAA			smax	smax		
	comp=N,400nm,6.8s					
AAA			MLR	MLR		
	comp=Z,4μm,16.0s					
AAA	**Alma-Ata**	**45.09 306**	*e*P	**P**	**13 32 57.1**	**-3.1**
	comp=Z,171nm,2.3s					
AAA			*e*LR	LR	13 55 08.0	
	comp=Z,3μm,13.4s					
TIXI	**Tiksi**	**45.15 360**	P	**P**	**13 32 59.6**	**-0.5**
	comp=Z,42nm,0.6s,baz=146,slow=7.7,SNR=88					
TIXI			S	**S**	**13 39 34.8**	**-2.5**
	comp=Z,9.4nm,1.2s,baz=238,slow=23,SNR=6.1					
TIXI	**Tiksi**	**45.15 360**	*e*P	**P**	**13 32 59.5**	**-0.5**
	comp=Z,204nm,1.3s					
TIXI			LR	LR		
	comp=Z,6μm,18.0s					
SMLA	**Simla**	**45.28 288**	*e*P	**P**	**13 33 00.9**	**-0.8**
ULHL	**Ulahol**	**45.53 304**	P	**P**	**13 33 03.6**	**-0.2**
	SNR=27					
KUU	**Kurty**	**45.56 306***c*	*i* P	**P**	**13 33 02.6**	**-1.3**
KUU			pmax	pmax		
	comp=Z,88nm,0.7s					
KUU			MLR	MLR		
	comp=Z,4μm,15.0s					
KUU	**Kurty**	**45.56 306**⇑	*i* P	**P**	**13 33 02.7**	**-1.2**
	comp=Z,88nm,0.7s					
KUU			*e*LR	LR	13 54 39.3	
	comp=Z,4μm,15.1s					
NDI	**New Delhi**	**45.61 285**	*e*P	**P**	**13 33 03.5**	**-1.0**
KSH	**Kashi**	**45.67 300**	P	**P**	**13 33 08.4**	**+3.5**
KSH			sP	sP	13 33 16.0	-0.4
KSH			PP	**PP**	**13 34 55.0**	**+2.9**
KSH			S	**S**	**13 39 52.8**	**+6.7**
KSH			ScS	**ScS**	**13 43 01.6**	**+2.4**
KSH			pmax	pmax		
	comp=Z,230nm,1.2s					
KSH			pmax	pmax		
	comp=Z,1μm,4.9s					
KSH			LR	LR		
	comp=Z,15μm,15.1s					
KSH			LR	LR		
	comp=Z,17μm,14.5s					
KSH			LR	LR		
	comp=Z,14μm,14.1s					
DHRM	**DHARAMSHALA**	**45.87 290**	*e*P	**P**	**13 33 04.8**	**-1.8**
DHRM			IAmb	IAmb	13 33 08.5	
	comp=Z,77nm,0.7s					
TKM2	**Tokmak 2**	**46.04 305**	P	**P**	**13 33 07.7**	**-0.2**
	SNR=166					
TKM2	**Tokmak 2**	**46.04 305**	P	**P**	**13 33 07.5**	**-0.4**
TKM2			pmax	pmax		
	comp=Z,130nm,0.7s					
KZA	**Kyzart**	**46.26 304**	P	**P**	**13 33 10.3**	**+0.4**
	SNR=153					
WRAB	**Tennant Creek**	**46.49 173**	*e*P	**P**	**13 33 11.1**	**-0.2**
	comp=Z,129nm,1.3s					
WRAB	**Tennant Creek**	**46.49 173**	*e*P	**P**	**13 33 11.1**	**-0.2**
WRAB			pmax	pmax		
	comp=Z,129nm,1.3s					
WRA	**Warramunga Arr**	**46.50 173**	P	**P**	**13 33 12.3**	**+0.9**
	comp=Z,36nm,0.3s,baz=341,slow=8.1,SNR=5.6					
KBK	**Karagaybulak**	**46.50 305**	P	**P**	**13 33 11.4**	**-0.1**
	SNR=73					
BHPL	**Bhopal**	**46.62 278**	*e*P	**P**	**13 33 10.9**	**-1.6**
CHMS	**Chumysh**	**46.66 305**	P	**P**	**13 33 12.2**	**-0.3**
	SNR=81					
FRU1	**Bishkek**	**46.74 305**	PFAKE		13 33 20.0	+6.8
FRU1			LR	LR		
	comp=Z,8μm,19.0s					
UCH	**Uchtor**	**46.81 304**	P	**P**	**13 33 14.5**	**+0.2**
	SNR=315					
AAK	**Ala-Archa**	**46.84 305**	P	**P**	**13 33 13.9**	**-0.2**
	comp=Z,42nm,0.6s,baz=99,slow=5.4,SNR=54					
AAK			ScP	ScP	13 38 50.0	+12
	comp=Z,10.0nm,0.8s,baz=135,slow=2.7,SNR=6.3					
AAK	**Ala-Archa**	**46.84 305**	P	**P**	**13 33 14.7**	**+0.6**
	SNR=26					
AAK	**Ala-Archa**	**46.84 305**	*e*P	**P**	**13 33 13.7**	**-0.4**
	comp=Z,140nm,1.4s					
AAK			LR	LR		
	comp=Z,7μm,20.0s					
AAK	**Ala-Archa**	**46.84 305**	*i* P	**P**	**13 33 14.4**	**+0.3**
	SNR=30					
AAK	**Ala-Archa**	**46.84 305**	P	**P**	**13 33 13.6**	**-0.5**
AAK			pmax	pmax		
	comp=Z,34nm,0.5s					
USP	**Ospenovka**	**46.86 305**	P	**P**	**13 33 13.6**	**-0.5**
	SNR=39					
BILL	**Bilibino**	**47.17 18**	*e*P	**P**	**13 33 16.5**	**+0.5**

comp=Z,2μm,15.0s
BTLS Baital 47.28 308 *e*P **P 13 33 16.2 -1.2**
comp=Z,51nm,1.0s
BTLS *i* S **S 13 40 04.1 -4.6**
comp=Z,47nm,2.6s
BTLS *e*LR LR 13 54 42.5
comp=Z,2μm,15.4s
MIDW Midway 47.36 75 *e*P **P 13 33 19.0 +0.9**
comp=Z,231nm,1.0s
EKS2 Erkin-Say 47.37 305 P **P 13 33 18.9 +0.7**
SNR=26
HYB Hyderabad 47.37 270 *i* P **P 13 33 18.0 -0.4**
HYB *e*PP **PP 13 35 10.0 +0.1**
HYB *e*S **S 13 40 14.0 +3.3**
AML Almayashu 47.42 304 P **P 13 33 20.6 +1.7**
SNR=5.6
KIWB Kanaga Island 47.46 43 *e*P **P 13 33 18.3 -0.3**
MDRS Chennai 47.49 263 *e*P **P 13 33 19.7 +0.5**
MDRS IAmb IAmb 13 33 22.3
comp=Z,108nm,0.8s
ADK Adak 47.75 43 PFAKE 13 33 30.0 +9.2
ADK LR LR
comp=Z,2μm,21.0s
NIL Nilore 48.24 292 *e*P **P 13 33 24.6 -0.3**
comp=Z,227nm,0.8s
NIL LR LR
comp=Z,2μm,19.0s
NIL Nilore 48.24 292 *e*P **P 13 33 24.6 -0.3**
NIL pmax pmax
comp=Z,227nm,0.8s
NIL MLR MLR
comp=Z,2μm,19.0s
PSAD2 Pilbara Seismi 48.66 191 PFAKE 13 33 40.0 +12
PSAD2 LR LR
comp=Z,2μm,20.0s
BRZS Berezniki 48.67 314*c i*P **P 13 33 26.9 -1.1**
BRZS *e*S **S 13 40 23.1 -5.2**
BRZS pmax pmax
comp=Z,64nm,1.6s
BRZS MLR MLR
comp=Z,1μm,12.0s
BRZS Berezniki 48.67 314⇑ *i*P **P 13 33 27.0 -1.1**
comp=Z,64nm,1.6s
BRZS *e*S **S 13 40 23.2 -5.2**
BRZS *e*LR LR 13 55 50.9
comp=Z,1μm,12.2s
TARA Tarawa 49.07 113 PFAKE 13 33 40.0 +8.5
TARA LR LR
comp=Z,3μm,20.0s
NRIK Noril'sk 49.16 342 P **P 13 33 31.1 -0.3**
comp=Z,26nm,0.8s,baz=118,slow=8.8,SNR=19
NRIK LR LR 13 56 28.8
comp=Z,7μm,18.1s,baz=132,slow=39
CTA Charters Tower 49.29 158 P **P 13 33 33.1 +0.1**
comp=Z,37nm,0.8s,baz=336,slow=9.9,SNR=51
CTAO Charters Tower 49.29 158 *e*P **P 13 33 33.3 +0.3**
comp=Z,103nm,1.3s
CTAO LR LR
comp=Z,1μm,20.0s
CTAO Charters Tower 49.29 158 *e*P **P 13 33 33.3 +0.3**
CTAO pmax pmax
comp=Z,103nm,1.3s
CTAO MLR MLR
comp=Z,1μm,20.0s
ATKA Atka Island 49.32 43 *e*P **P 13 33 32.5 -0.3**
comp=Z,225nm,1.0s
BTK Batken 49.63 301 PFAKE 13 33 50.0 +14
BTK LR LR
comp=Z,8μm,19.0s
PALK Pallekele 49.65 256 P **P 13 33 35.8 -0.2**
comp=Z,41nm,0.9s,baz=115,slow=4.7,SNR=8.2
PALK Pallekele 49.65 256 PFAKE 13 33 50.0 +14
PALK LR LR
comp=Z,4μm,20.0s
PALK Pallekele 49.65 256 P **P 13 33 36.7 +0.7**
KK31 Karatay Array 49.77 305 *i* P **P 13 33 36.2 -0.3**
KK31 pmax pmax
comp=Z,28nm,0.6s
GAR Garm 50.08 300 PFAKE 13 33 50.0 +11
GAR LR LR
comp=Z,10μm,20.0s
ASAR Alice Springs 50.14 174 P **P 13 33 39.3 -0.1**
comp=Z,56nm,0.8s,baz=8.1,slow=11,SNR=202
ASAR S **S 13 40 53.4 +4.1**
comp=Z,3.5nm,1.1s,baz=8.0,slow=20,SNR=7.4
ASAR PKP2ab 14 05 20.0
comp=Z,1.2nm,1.0s,baz=180,slow=4.3,SNR=4.3
BVAR Borovoye Array 50.48 318 P **P 13 33 41.0 -0.8**
comp=Z,21nm,0.5s,baz=86,slow=9.1,SNR=155
BVAR PcP **PcP 13 34 58.2 -1.4**
comp=Z,10nm,0.6s,baz=74,slow=8.7,SNR=1.4
BVAR ScP **ScP 13 39 01.8 +8.3**
comp=Z,6.9nm,0.9s,baz=111,slow=3.8,SNR=4.9
BVAR S **S 13 40 50.1 -3.5**
comp=Z,3.1nm,0.7s,baz=81,slow=19,SNR=5.8
BVAR ScS **ScS 13 43 34.0 +3.6**
comp=Z,0.7nm,0.5s,baz=71,slow=9.6,SNR=4.2
BRVK Borovoye 50.55 318 *e*P **P 13 33 41.5 -0.7**
comp=Z,125nm,0.8s
BRVK LR LR
comp=Z,21μm,18.0s
BRVK Borovoye 50.55 318*c i*P **P 13 33 41.7 -0.6**
BRVK pmax pmax
comp=Z,114nm,1.1s
CHGR Chuyangaron 51.01 299 PFAKE 13 34 00.0 +14
CHGR LR LR
comp=Z,14μm,18.0s
POO Poona 51.21 273 *e*P **P 13 33 46.9 -0.8**
POO IAmb IAmb 13 33 48.8
comp=Z,202nm,0.9s
KBL Kabul 51.58 294 *e*P **P 13 33 50.3 -0.3**
comp=Z,255nm,0.6s
KBL LR LR
comp=Z,3μm,20.0s
KBL Kabul 51.58 294 *e*P **P 13 33 50.3 -0.3**
KBL pmax pmax
comp=Z,255nm,0.6s
KBL MLR MLR
comp=Z,3μm,20.0s
GOA Goa 52.29 269 *e*P **P 13 33 55.4 -0.4**
GOA IAMs_20 IAMs_20 14 01 56.7
comp=Z,5μm,5.0s
SPIA Saint Paul Isl 52.35 37 PFAKE 13 34 10.0 +14
SPIA LR LR
comp=Z,1μm,21.0s
TRD Trivandrum 52.36 260 IAMs_20 IAMs_20 14 01 08.7
comp=Z,7μm,5.0s
NIKH Nikolski High 52.64 42 PFAKE 13 34 10.0 +12
NIKH LR LR
comp=Z,2μm,20.0s
BHJ Bhuj 53.49 280 *e*P **P 13 34 04.3 -0.2**
BHJ IAmb IAmb 13 34 05.0
comp=Z,182nm,1.1s
BHJ IAMs_20 IAMs_20 14 00 00.8
comp=Z,6μm,11.6s
UNV Unalaska Valle 54.11 41 PFAKE 13 34 20.0 +11
UNV LR LR
comp=Z,1μm,22.0s
AKUT Akutan 54.55 41 PFAKE 13 34 20.0 +8.2
AKUT LR LR
comp=Z,900nm,20.0s
EIDS Eidsvold 55.85 156 *e*P **P 13 34 21.3 -0.2**
comp=Z,27nm,0.9s
EIDS LR LR
comp=Z,1μm,18.0s
ANM Nome 55.92 28 *e*P **P 13 34 23.1 +1.5**
comp=Z,127nm,1.1s
ANM LR LR
comp=Z,2μm,19.0s
ANM Nome 55.92 28 *e*P **P 13 34 23.1 +1.5**
ANM pmax pmax
comp=Z,127nm,1.1s
ANM MLR MLR
comp=Z,2μm,19.0s
FALS False Pass 55.95 40 PFAKE 13 34 30.0 +8.1
FALS LR LR
comp=Z,1μm,20.0s
SVE Sverdlovsk 56.42 322*d i*P **P 13 34 25.1 -0.1**
SVE *e*S **S 13 42 13.5 -0.5**
SVE pmax pmax
comp=Z,273nm,1.9s
SVE MLR MLR
comp=Z,16μm,15.0s
SVE MLR MLR
comp=E,11μm,15.0s
AB31 Akbulak array 56.92 313 *i* P **P 13 34 28.2 -0.7**
AB31 pmax pmax
comp=Z,41nm,0.7s
FORT Forrest 57.00 181 *e*P **P 13 34 29.9 +0.3**
comp=Z,236nm,0.8s
RDOG Red Dog Mine 57.50 24 PFAKE 13 34 50.0 +17
RDOG LR LR
comp=Z,3μm,21.0s
ARU Arti 57.56 322 P **P 13 34 32.6 -0.7**
comp=Z,9.6nm,0.7s,baz=98,slow=4.7,SNR=32
ARU Arti 57.56 322 *e*P **P 13 34 32.6 -0.7**
comp=Z,200nm,1.2s
ARU LR LR
comp=Z,4μm,19.0s
ARU Arti 57.56 322*c i*P **P 13 34 32.5 -0.7**
ARU S **S 13 42 30.5 +1.5**
ARU 13 44 16.8
ARU SS **SS 13 46 24.9 +6.1**
ARU pmax pmax
comp=Z,37nm,0.8s
ARU MLR MLR
comp=Z,18μm,16.0s
SDPT Sand Point 57.65 40 PFAKE 13 34 50.0 +16
SDPT LR LR
comp=Z,1μm,21.0s
AKTO Aktyubinsk 58.09 315 P **P 13 34 36.8 -0.3**
comp=Z,21nm,0.8s,baz=81,slow=5.8,SNR=40
STKA Stephens Creek 59.33 168 P **P 13 34 46.1 +0.3**
comp=Z,22nm,0.8s,baz=343,slow=5.8,SNR=19
STKA LR LR 14 00 06.3
comp=Z,566nm,21.6s,baz=339,slow=36
STKA Stephens Creek 59.33 168 *e*P **P 13 34 45.9 0.0**
comp=Z,9.8nm,1.1s
GEYT Alibeck 59.71 300 P **P 13 34 49.0 +0.4**
comp=Z,29nm,0.5s,baz=64,slow=3.4,SNR=80
GEYT ScP **ScP 13 39 43.6 +9.3**
comp=Z,5.3nm,0.9s,baz=131,slow=4.1,SNR=3.5
GEYT LR LR 14 04 26.1
comp=Z,6μm,18.9s,baz=55,slow=40
GYA0B ALIBECK ARRAY 59.71 300 PFAKE 13 35 00.0 +11
GYA0B LR LR
comp=Z,6μm,18.0s
FUNA Funafuti 59.91 119 PFAKE 13 35 00.0 +10
FUNA LR LR
comp=Z,10μm,19.0s
TTA Tatalina 59.93 31 *e*P **P 13 34 50.8 +1.0**
comp=Z,129nm,1.1s
TTA LR LR
comp=Z,1μm,20.0s
TTA Tatalina 59.93 31 *e*P **P 13 34 50.8 +1.0**
TTA pmax pmax
comp=Z,129nm,1.1s
TTA MLR MLR
comp=Z,1μm,20.0s
NWAO Narrogin (SRO) 60.18 191 P **P 13 34 51.2 -0.5**
comp=Z,27nm,1.0s,baz=332,slow=6.4,SNR=5.3
DZM Mont Dzumac 60.44 140 *e*P **P 13 34 56.4 +2.6**
comp=Z,46nm,1.1s
DZM *e*S **S 13 43 10.1 +2.9**
comp=Z,4μm,29.4s
DZM *e*LR LR 13 52 41.1
comp=Z,2μm,22.1s
DZM Mont Dzumac 60.44 140 *e*P **P 13 34 54.1 +0.4**
comp=Z,36nm,1.0s
ARMA Armidale 60.65 158 *e*P **P 13 34 55.5 +0.5**
comp=Z,71nm,1.3s
SII Sitkinak Islan 61.12 38 PFAKE 13 35 10.0 +12
SII LR LR
comp=Z,2μm,22.0s
OHAK Old Harbor 61.55 37 PFAKE 13 35 10.0 +9.2
OHAK LR LR
comp=Z,2μm,21.0s
CAST Castle Rocks 61.70 30 PFAKE 13 35 10.0 +8.3
CAST LR LR
comp=Z,2μm,22.0s
KDAK Kodiak Island 61.88 37 P **P 13 35 03.2 +0.3**
comp=Z,202nm,0.9s,baz=318,slow=2.3,SNR=89
KDAK Kodiak Island 61.88 37 *e*P **P 13 35 03.3 +0.3**
comp=Z,271nm,0.9s
KDAK LR LR
comp=Z,1μm,20.0s
BPAW Bear Paw Mtn. 62.14 29 PFAKE 13 35 20.0 +15
BPAW LR LR
comp=Z,2μm,21.0s
HOM Homer 62.18 34 PFAKE 13 35 20.0 +15
HOM LR LR
comp=Z,700nm,21.0s
MLY Manley 62.19 28 PFAKE 13 35 20.0 +15
MLY LR LR
comp=Z,2μm,19.0s
KTH Kantishna Hill 62.21 30 PFAKE 13 35 20.0 +15
KTH LR LR
comp=Z,2μm,20.0s
COLD Coldfoot 62.29 26 PFAKE 13 35 20.0 +14
COLD LR LR
comp=Z,1μm,21.0s
KIRV Kirov 62.37 324 P **P 13 35 06.0 -0.3**
comp=Z,19nm,0.5s,baz=86,slow=7.0,SNR=12
CNPM China Poot 62.40 34 PFAKE 13 35 20.0 +13
CNPM LR LR
comp=Z,800nm,21.0s
SUA Susitna One 62.46 32 PFAKE 13 35 20.0 +13
SUA LR LR
comp=Z,900nm,20.0s
TOLK Toolik Lake Re 62.47 24 PFAKE 13 35 20.0 +13
TOLK LR LR
comp=Z,2μm,20.0s
TOLK Toolik Lake Re 62.47 24 P **P 13 35 08.0 +1.1**
baz=273,SNR=107
TRF Thorofare Moun 62.50 30 PFAKE 13 35 20.0 +13
TRF LR LR
comp=Z,400nm,20.0s
BRLK Bradley Lake 62.55 34 PFAKE 13 35 20.0 +12
BRLK LR LR
comp=Z,800nm,19.0s
BWN Browne 62.80 29 PFAKE 13 35 20.0 +11
BWN LR LR
comp=Z,2μm,20.0s
RC01 Rabbit Creek A 62.98 33 PFAKE 13 35 20.0 +10
RC01 LR LR
comp=Z,1μm,19.0s
MCK McKinley 63.08 30 PFAKE 13 35 20.0 +9.0
MCK LR LR
comp=Z,2μm,21.0s
RND Reindeer 63.15 30 PFAKE 13 35 20.0 +8.5
RND LR LR
comp=Z,2μm,21.0s
WSAR Wadi Sarin 63.15 284 P **P 13 35 12.5 +0.4**
comp=Z,103nm,0.7s,baz=118,slow=6.5,SNR=46
PMR Palmer 63.21 32 PFAKE 13 35 20.0 +8.2
PMR LR LR
comp=Z,1μm,21.0s
SEW Seward 63.23 34 PFAKE 13 35 20.0 +8.0
SEW LR LR
comp=Z,1μm,22.0s
MDM Murphy Dome 63.26 28 PFAKE 13 35 20.0 +7.8
MDM LR LR
comp=Z,2μm,21.0s
GHO Glory Hole Cre 63.29 32 PFAKE 13 35 30.0 +18
GHO LR LR
comp=Z,1μm,22.0s
WRH Wood River Hil 63.37 29 PFAKE 13 35 30.0 +17
WRH LR LR
comp=Z,1μm,20.0s
TCOL CIGO, UAF Yank 63.42 28 P **P 13 35 14.0 +0.8**
baz=276,SNR=38
COLA College 63.43 28 *e*P **P 13 35 14.0 +0.8**
comp=Z,120nm,0.9s
COLA LR LR
comp=Z,1μm,19.0s
COLA College 63.43 28*d i*P **P 13 35 14.0 +0.8**
COLA pmax pmax
comp=Z,89nm,0.9s
CCB Clear Creek Bu 63.47 29 PFAKE 13 35 30.0 +16
CCB LR LR
comp=Z,1μm,21.0s
SML Sawmill 63.57 32 PFAKE 13 35 30.0 +16
SML LR LR
comp=Z,1μm,20.0s
POKR Poker Plat Res 63.58 28 P **P 13 35 15.0 +0.8**
baz=276,SNR=66
DHY Denali Highway 63.85 30 PFAKE 13 35 30.0 +14
DHY LR LR
comp=Z,1μm,21.0s
ILAR Eielson Array 63.85 28 P **P 13 35 15.6 -0.4**
comp=Z,33nm,0.8s,baz=277,slow=5.7,SNR=170
ILAR PKP2bc 14 04 15.4
comp=Z,0.9nm,0.9s,baz=135,slow=1.4,SNR=4.1
ILAR LR LR 14 06 44.2
comp=Z,962nm,18.7s,baz=300,slow=39
HDA Harding Lake 63.87 29 PFAKE 13 35 30.0 +14
HDA LR LR
comp=Z,1μm,19.0s
HDA Harding Lake 63.87 29 P **P 13 35 15.8 -0.4**
baz=277,SNR=303
PRGR Permogore 63.89 328 *e*P **P 13 35 15.5 -0.8**
PRGR *e*S **S 13 43 54.1 +4.5**
PRGR pmax pmax
comp=Z,63nm,1.1s
SCM Sheep Creek Mo 64.03 32 PFAKE 13 35 30.0 +13
SCM LR LR
comp=Z,1μm,19.0s
GLI Glacier Island 64.28 33 PFAKE 13 35 30.0 +11
GLI LR LR
comp=Z,900nm,20.0s
BANOM Banah 64.31 287 *i* P **P 13 35 20.9 +1.1**
SNR=11
FYU Fort Yukon 64.31 26 PFAKE 13 35 30.0 +11
FYU LR LR
comp=Z,900nm,19.0s
PRP Porcupine Dome 64.33 27 PFAKE 13 35 30.0 +11
PRP LR LR
comp=Z,2μm,19.0s
SHME Shamm 64.40 288 P **P 13 35 20.7 +0.4**
MSFE Esma-Masafi 64.60 287 P **P 13 35 22.3 +0.6**
UOSS Minazif 64.70 286 *e*P **P 13 35 22.2 0.0**
comp=Z,40nm,0.9s
UOSS LR LR
comp=Z,2μm,19.0s
UOSS Minazif 64.70 286 P **P 13 35 23.2 +0.9**
PAX Paxson 64.72 30 PFAKE 13 35 30.0 +8.1
PAX LR LR
comp=Z,1μm,21.0s
HATD Hatta, Dubai 64.80 286 *i* P **P 13 35 23.6 +0.7**
SNR=11
RIDG Independent Ri 64.88 29 PFAKE 13 35 40.0 +17
RIDG LR LR
comp=Z,1μm,20.0s
DIV Divide 64.88 32 PFAKE 13 35 40.0 +17
DIV LR LR
comp=Z,1μm,20.0s
ASHO Ashiyiah 64.91 286 P **P 13 35 24.1 +0.4**
HARP HAARP 64.96 31 PFAKE 13 35 40.0 +17
HARP LR LR
comp=Z,900nm,19.0s
EYAK Cordova Ski Ar 64.99 33 PFAKE 13 35 40.0 +16
EYAK LR LR
comp=Z,2μm,18.0s
NAZ Nazwa, Dubai 65.15 287 *i* P **P 13 35 25.3 +0.1**
SNR=12
DOT Dot Lake 65.24 29 PFAKE 13 35 40.0 +15
DOT LR LR
comp=Z,1μm,21.0s
FAQ Al Faqa, Dubai 65.29 286 *i* P **P 13 35 25.8 -0.3**
SNR=56
ALNE Al Ain 65.38 286 *i* P **P 13 35 27.0 +0.2**
SNR=18
MENT Mentasta 65.52 30 PFAKE 13 35 40.0 +13
MENT LR LR
comp=Z,1μm,18.0s
ASUD Al Ashush, Dub 65.55 286 *i* P **P 13 35 28.1 +0.3**
SNR=12
TOO Toolangi 65.64 166 *e*P **P 13 35 29.3 +1.4**
comp=Z,91nm,1.3s
TOO Toolangi 65.64 166 *e*P **P 13 35 29.3 +1.4**
TOO pmax pmax
comp=Z,91nm,1.3s
HMT Hamilton 65.75 33 PFAKE 13 35 40.0 +11
HMT LR LR
comp=Z,1μm,18.0s
KIP Kipapa 66.10 77*ce*P **P 13 35 33.2 +1.8**
KIP pmax pmax
comp=Z,247nm,2.5s
EGAK Eagle 66.27 28 PFAKE 13 35 40.0 +8.3
EGAK LR LR
comp=Z,1μm,22.0s
MAK Makhachkala 66.46 308 *e*P P 13 35 26.0 -7.3
MAK *e*S S 13 44 10.9 -11
MAK pmax pmax
comp=Z,284nm,1.4s
MAK MLR MLR
comp=Z,5μm,16.0s
BALM Baldy 66.53 32 PFAKE 13 35 50.0 +16
BALM LR LR
comp=Z,1μm,22.0s
AKT Akhty 66.68 306 *e*P **P 13 35 34.8 -0.2**
AKT *e* 13 36 02.6
AKT pmax pmax
comp=Z,85nm,1.0s
KLMR Klimovskoe 66.94 328 *e*P **P 13 35 34.5 -1.5**
KLMR pmax pmax
comp=Z,183nm,1.5s
KLMR Klimovskoe 66.94 328 *e*P **P 13 35 34.6 -1.5**
KLMR AMP 13 35 52.7
comp=Z,183nm,1.4s
CTGM Chitina Glacie 67.03 32 PFAKE 13 35 50.0 +13
CTGM LR LR
comp=Z,1μm,20.0s
LVZ Lovozero 67.30 336 PFAKE 13 35 50.0 +12
LVZ LR LR
comp=Z,3μm,21.0s
GROC Groznyy 67.60 308 *e*P **P 13 35 39.2 -1.4**
GROC *e* 13 36 05.7
GROC *e* 13 38 07.2
GROC *e*S **S 13 44 32.0 -3.6**
GROC pmax pmax
comp=Z,120nm,1.0s
EPYK Eagle Plains 67.69 26 PFAKE 13 35 50.0 +9.2
EPYK LR LR
comp=Z,1μm,21.0s
EPYK Eagle Plains 67.69 26 P **P 13 35 41.7 +0.9**
baz=285
MZR Muzera 67.69 285 *i* P **P 13 35 41.8 +0.3**
SNR=19
APA Apatity 67.85 336⇓ *i*P **P 13 35 41.7 0.0**
APA *i* 13 36 05.0
APA pmax pmax
comp=Z,22nm,1.0s
VRH Novokhopyorsk 68.13 317 *e*P **P 13 35 42.7 -1.0**
VRH pmax pmax
comp=Z,70nm,0.6s
VRH MLR MLR
comp=Z,5μm,20.0s
INK Inuvik 68.34 23 P **P 13 35 45.5 +0.8**
comp=Z,52nm,0.8s,baz=288,slow=5.7,SNR=176
SPA0 Spitsbergen Ar 68.66 348 *e*P **P 13 35 47.0 +0.3**
SPITS Spitsbergen Ar 68.66 348 P **P 13 35 46.8 +0.1**
comp=Z,52nm,1.0s,baz=78,slow=7.8,SNR=24
HYT Haines Junctio 68.88 32 PFAKE 13 36 00.0 +12
HYT LR LR
comp=Z,1μm,21.0s
GOF Gofitskoye 68.98 311⇑ *e*P **P 13 35 49.6 +0.4**
GOF pmax pmax
comp=Z,101nm,0.8s
ZEI Tsey 69.05 308 *e*P **P 13 35 47.3 -2.7**
ZEI pmax pmax
comp=Z,76nm,0.6s
NCK Nalchik 69.06 309 *i* P **P 13 35 49.8 +0.1**
NCK pmax pmax
comp=Z,34nm,0.4s
KBS Kingsbay 69.06 349 PFAKE 13 36 00.0 +11
KBS LR LR
comp=Z,2μm,19.0s
KBS Kingsbay 69.06 349*ce*P **P 13 35 48.9 -0.2**
KBS pmax pmax
comp=Z,222nm,1.0s
KBS Kingsbay 69.06 349 *e*P **P 13 35 47.8 -1.4**
MOS Moscow 69.23 323 *e*P **P 13 35 48.5 -2.0**
MOS *e* 13 36 03.1
MOS *e* 13 36 12.5
MOS *e* 13 38 20.2
MOS *e* 13 40 02.1
MOS *e*S **S 13 44 50.9 -3.5**
MOS *e* 13 45 45.5
MOS pmax pmax
comp=Z,69nm,0.7s
MOS MLR MLR
comp=E,8μm,17.0s
MOS MLR MLR
comp=Z,10μm,17.0s
MOS MLR MLR
comp=N,6μm,18.0s
GNI Garni 69.23 305 P **P 13 35 52.1 +1.0**

comp=N,21nm,0.8s,baz=132,slow=2.0,SNR=25
GNI Garni 69.23 305 PFAKE 13 36 00.0 +8.9
GNI LR LR
comp=Z,2μm,18.0s
GNI Garni 69.23 305 *i* P **P 13 35 52.0 +0.9**
SNR=8.3
HSPB Hornsund (broa 69.37 347 *e*P **P 13 35 51.8 +0.7**
HSPB LMZ LR 14 10 06.0
comp=Z,22μm,16.5s
HSPB Hornsund (broa 69.37 347 *e*P **P 13 35 51.8 +0.7**
HSPB MLR MLR
comp=Z,22μm,16.5s
HSPB Hornsund (broa 69.37 347 *e*P **P 13 35 51.5 +0.5**
LPSR Galich'ya Gora 69.40 319 *e*P **P 13 35 50.9 -0.7**
LPSR pmax pmax
comp=Z,70nm,0.8s
LPSR MLR MLR
comp=Z,11μm,18.0s
KBZ Khabaz 69.47 309 P **P 13 35 52.6 +0.4**
comp=Z,124nm,0.9s,baz=84,slow=5.4,SNR=193
KBZ PKP2bc 14 03 59.2
comp=Z,0.5nm,0.3s,baz=291,slow=4.5,SNR=6.7
KBZ LR LR 14 09 22.5
comp=Z,4μm,19.1s,baz=56,slow=39
VORR Voronezh 69.51 318 P **P 13 35 51.0 -1.3**
VORR pmax pmax
comp=Z,300nm,1.0s
KIV Kislovodsk 69.55 310 *e*P **P 13 35 53.3 +0.4**
comp=Z,290nm,1.3s
KIV LR LR
comp=Z,4μm,18.0s
KIV Kislovodsk 69.55 310 *i* P **P 13 35 53.4 +0.5**
SNR=26
KIV Kislovodsk 69.55 310 *e*P **P 13 35 53.3 +0.4**
KIV *e* 13 45 00.2
KIV pmax pmax
comp=Z,430nm,1.1s
KIV MLR MLR
comp=Z,10μm,17.0s
VSR Storozhevoye 69.67 318 *e*P **P 13 35 52.1 -1.2**
VSR pmax pmax
comp=Z,120nm,1.2s
VSR MLR MLR
comp=Z,6μm,22.0s
BJO Bjornoya 69.72 344 *e*P **P 13 35 54.4 +1.1**
NEY Neytrino 69.74 309 *i* P **P 13 35 55.0 +0.8**
NEY pmax pmax
comp=Z,16nm,0.8s
AKH Akhalkalaki 69.75 307 PFAKE 13 36 10.0 +16
AKH LR LR
comp=Z,3μm,19.0s
AKH Akhalkalaki 69.75 307⇑ *i*P **P 13 35 55.7 +1.4**
ARCES ARCESS Array B 69.96 339 P **P 13 35 54.5 -0.4**
comp=Z,8.6nm,0.5s,baz=84,slow=8.2,SNR=27
ARCES LR LR 14 11 40.1
comp=Z,2μm,18.1s,baz=6.0,slow=40
ARE0 ARCESS Array S 69.96 339 *e*P **P 13 35 55.4 +0.5**
comp=Z,3.5nm,1.1s
ARE0 LR LR
comp=Z,100nm,20.0s
ARE0 ARCESS Array S 69.96 339 *e*P **P 13 35 54.6 -0.2**
OBN Obninsk 69.99 322 P **P 13 35 54.4 -0.8**
comp=Z,8.4nm,0.5s,baz=235,slow=1.9,SNR=8.7
OBN Obninsk 69.99 322 PFAKE 13 36 10.0 +15
OBN LR LR
comp=Z,11μm,18.0s
OBN Obninsk 69.99 322 *i* P **P 13 35 53.6 -1.6**
OBN *i* 13 36 06.7
OBN *i* 13 36 17.6
OBN *i* S S 13 44 52.0 -11
OBN pmax pmax
comp=Z,32nm,0.9s
OBN MLR MLR
comp=Z,10μm,18.0s
HAMF Hammerfest 70.11 340 *e*P **P 13 35 56.2 +0.5**
WHY Whitehorse 70.15 31 PFAKE 13 36 10.0 +14
WHY LR LR
comp=Z,1μm,21.0s
SKAG Skagway 70.33 33 PFAKE 13 36 10.0 +13
SKAG LR LR
comp=Z,1μm,19.0s
HAKT HAKKARI 70.82 303 *i* P **P 13 36 01.8 +0.8**
HAKT IAML_P
comp=Z,1μm,0.7s
BESE Bessie Mountai 70.85 33 PFAKE 13 36 10.0 +9.5
BESE LR LR
comp=Z,700nm,20.0s
KTK1 Kautokeino 70.91 338 *e*P **P 13 36 01.2 +0.6**
EATA Eleskirt 70.97 306 *i* P **P 13 36 04.0 +2.1**
EATA IAML_P
comp=Z,620nm,0.5s
BATM Batumi 70.98 308 P **P 13 36 01.7 +0.2**
BATM Batumi 70.98 308⇑ *i*P **P 13 36 02.1 +0.6**
DAGI Agillar 70.99 307 *i* P **P 13 36 02.8 +1.0**
DAGI IAML_P
comp=Z,760nm,0.5s
BCA Borcka 71.08 307 P **P 13 36 02.3 +0.1**
BCA Borcka 71.08 307⇑ *i*P **P 13 36 02.7 +0.5**
AKDM Akdamar-Van 71.11 304 P **P 13 36 03.2 +0.6**
DBAD Bademkaya 71.17 307 *i* P **P 13 36 03.7 +0.9**
DBAD IAML_P
comp=Z,559nm,0.8s
HOMI Horasan 71.33 306 *i* P **P 13 36 06.0 +1.9**
HOMI IAML_P
comp=Z,1μm,0.8s
SOC Sochi 71.71 310 *e*P **P 13 36 05.7 -0.2**
SOC *e* 13 36 20.7
SOC *e* 13 38 46.6
SOC *e*PPP PPP 13 40 22.2
SOC *e*S **S 13 45 24.6 +0.7**
SOC *e* 13 46 05.3
SOC pmax pmax
comp=Z,142nm,0.7s
SOC pmax pmax
comp=Z,142nm,0.7s
SOC MLR MLR
comp=Z,3μm,17.0s
TRO Tromso 72.01 340 *e*P **P 13 36 07.0 -0.2**
MUSM Mu-Merkez 72.06 305 *i* P **P 13 36 09.2 +0.9**
MUSM IAML_P
comp=Z,408nm,0.6s
YEDI Yedisu-Bingol 72.52 306 P **P 13 36 11.9 +0.8**
KTUT Trabzon 72.55 307⇓ *i*P **P 13 36 11.3 +0.3**
BNGB Bingl 72.58 305 P **P 13 36 11.4 0.0**
CRAG Craig 72.83 36 PFAKE 13 36 20.0 +7.6
CRAG LR LR
comp=Z,800nm,22.0s
ANN Anapa 72.84 312 *e*P **P 13 36 11.6 -1.0**
ANN *e*S **S 13 45 35.3 -1.4**
ANN pmax pmax
comp=Z,171nm,0.9s
WRAK Wrangell Islan 72.88 35 PFAKE 13 36 20.0 +7.4
WRAK LR LR
comp=Z,700nm,20.0s
FINES FINESS Array B 72.92 331 P **P 13 36 12.9 +0.2**
comp=Z,17nm,0.5s,baz=69,slow=5.7,SNR=103
FINES LR LR 14 13 43.2
comp=Z,4μm,18.2s,baz=72,slow=40
HANI Diyarbakir_Han 72.98 305 *i* P **P 13 36 14.7 +0.9**
HANI IAML_P
comp=Z,1μm,0.9s
MARD Mardin 73.09 304 *i* P **P 13 36 15.5 +1.0**
MARD IAML_P
comp=Z,3μm,0.7s
KELT Kelkit 73.21 307 *i* P **P 13 36 16.1 +1.0**
KELT IAML_P
comp=Z,697nm,0.8s
DLBC Dease Lake 73.26 33 P **P 13 36 16.4 +1.4**
comp=Z,53nm,1.0s,baz=300,slow=5.5,SNR=80
DLBC Dease Lake 73.26 33 PFAKE 13 36 30.0 +15
DLBC LR LR
comp=Z,600nm,20.0s
DYBB Diyarbakir 73.34 304 P **P 13 36 12.3 -3.5**
SVRC Sivrice-ELAZID 73.80 305 P **P 13 36 18.7 0.0**
VSU Vasula 73.84 328 *e*P **P 13 36 18.4 +0.1**
VSU IAmb IAmb 13 36 33.5
comp=Z,237nm,1.0s
ELZG Elazig 73.99 305 *i* P **P 13 36 21.3 +1.5**
ELZG IAML_P
comp=Z,724nm,0.5s
STEI Steigen 74.02 339 *e*P **P 13 36 19.1 -0.1**
DIB Dawson Inlet, 74.05 38 PFAKE 13 36 30.0 +10
DIB LR LR
comp=Z,700nm,20.0s
KEMA Kemaliye 74.07 306 *i* P **P 13 36 21.4 +1.2**
KEMA IAML_P
comp=Z,31nm,0.5s
RAYN Ar Rayn 74.34 289 PFAKE 13 36 30.0 +8.1
RAYN LR LR
comp=Z,2μm,20.0s
LOF Lofoten 74.45 339 *e*P **P 13 36 21.6 -0.1**
URFA Urfa 74.50 304 P **P 13 36 22.5 -0.2**
HEKM Malatya_Hekimh 74.60 306 *i* P **P 13 36 24.4 +1.1**
HEKM IAML_P
comp=Z,1μm,0.6s
ERBA Erbaa 74.79 308 *i* P **P 13 36 25.4 +1.2**
ERBA IAML_P
comp=Z,2μm,0.7s
MICGM Minsk 74.90 324⇓ *e*P **P 13 36 25.0 +0.5**
MICGM PM 13 36 26.0
comp=Z,0.1nm,2.0s
MICGM *e*S **S 13 46 00.0 +0.4**
MICGM *e*LQ LQ 14 01 24.0
MICGM LQM 14 06 34.0
comp=N,11nm,18.0s
MICGM *e*LR LR 14 09 34.0
MICGM LRM MLR 14 13 42.0
comp=Z,18nm,18.0s
MICGM LRM MLR 14 13 44.0
comp=E,8.1nm,18.0s
MNK Minsk 74.90 324⇓ *e*P **P 13 36 25.0 +0.5**
MNK *e*S **S 13 46 00.0 +0.4**
MNK pmax pmax
comp=Z,140nm,2.0s
MNK MLR MLR
comp=Z,18μm,18.0s
MNK MLR MLR
comp=E,8μm,18.0s
SVSK Karacayir 74.91 307 P **P 13 36 24.2 -0.6**
SIM Simferopol' 74.98 313 *c i*P **P 13 36 25.4 +0.2**
SIM *i* S **S 13 46 00.1 -0.8**
SIM pmax pmax
comp=Z,86nm,1.0s
SIM MLR MLR
comp=Z,490nm,12.9s
DAG Danmarks Havn 75.03 353⇓ *i*P **P 13 36 24.7 -0.2**
DAG pmax pmax
comp=Z,37nm,0.8s
DAG MLR MLR
comp=Z,1μm,18.0s
DAG Danmarks Havn 75.03 353⇓ *i*P **P 13 36 24.7 -0.2**
comp=Z,50nm,0.8s
comp=Z,1μm,18.0s
DARE Darende-Malaty 75.06 306 P **P 13 36 26.3 +0.4**
TOKT Tokat 75.08 308 P **P 13 36 25.4 -0.5**
RES Resolute Bay 75.12 11 P **P 13 36 25.8 +0.4**
comp=Z,116nm,0.9s,baz=307,slow=5.5,SNR=42
RES Resolute Bay 75.12 11 PFAKE 13 36 40.0 +15
RES LR LR
comp=Z,2μm,19.0s
KVT Kavak 75.14 309 P **P 13 36 26.5 +0.3**
IDID Didziasalis 75.16 325 *e*P **P 13 36 26.2 +0.2**
IDID IAmb IAmb 13 36 45.2
comp=Z,75nm,1.4s
IZAR Zarasai 75.22 325 *e*P **P 13 36 27.1 +0.8**
IZAR IAmb IAmb 13 36 45.6
comp=Z,35nm,1.0s
MOR8 Moi Rana 75.22 338 *e*P **P 13 36 24.9 -1.3**
NACGM Naroch 75.31 324 *e*P **P 13 36 27.0 +0.2**
NACGM *e*S **SKiKP 13 45 54.0 +6.6**
NACGM *e*PS **PnS 13 46 36.0 -6.0**
NACGM *e*LQ LQ 14 00 20.0
NACGM *e*LR LR 14 06 34.0
NACGM LRM MLR 14 13 10.0
comp=Z,8.4nm,18.0s
SINO SINOP_Merkez 75.37 310 *i* P **P 13 36 28.1 +0.6**
SINO IAML_P
comp=Z,2μm,0.4s
HAVZ Havza 75.37 309 *i* P **P 13 36 28.2 +0.6**
HAVZ IAML_P
comp=Z,60nm,0.4s
IIGN Ignalina 75.41 325 *e*P **P 13 36 27.7 +0.3**
IIGN IAmb IAmb 13 36 46.7
comp=Z,27nm,1.0s
ELBS KAHRAMANMARAS 75.41 306 *i* P **P 13 36 29.9 +2.0**
ELBS IAML_P
comp=Z,686nm,0.8s
SEVA Sevastopol 75.43 313⇑ *i*P **P 13 36 27.9 +0.2**
GZT Gaziantep 75.46 305 *i* P **P 13 36 29.8 +1.5**
GZT IAML_P
comp=Z,9.5nm,0.4s
DIKM Dikmen 75.47 309⇑ *i*P **P 13 36 29.0 +0.9**
KONS Konsvik 75.49 338 *e*P **P 13 36 28.1 +0.4**
STOK Stokkvaagen 75.62 338 *e*P **P 13 36 28.9 +0.5**
CUSAR Sarkisla-SIVAS 75.63 307 *i* P **P 13 36 30.2 +0.9**
AKASG Malin Array Be 75.72 320 P **P 13 36 29.0 -0.3**
comp=Z,32nm,0.7s,baz=52,slow=6.4,SNR=108
AKASG S **S 13 46 05.5 -3.4**
comp=Z,0.3nm,0.3s,baz=55,slow=12,SNR=7.5
AKASG LR LR 14 12 31.7
comp=Z,13μm,18.5s,baz=70,slow=38
AKBB Malin Array Si 75.72 320 PFAKE 13 36 40.0 +11
AKBB LR LR
comp=Z,15μm,18.0s
GAZ Gaziantep 75.79 305 P **P 13 36 30.5 +0.4**
KMRS Kahramanmaras 75.89 305 P **P 13 36 28.4 -2.2**
BNN Bunyan 76.14 307 P **P 13 36 31.6 -0.5**
COAL Corum-Alaca 76.20 308 *i* P **P 13 36 33.5 +1.1**
COAL IAML_P
comp=Z,421nm,0.8s
YOZ Yozgat 76.21 307 P **P 13 36 31.6 -0.9**
KAGI orum-Kargı 76.21 309 *i* P **P 13 36 33.8 +1.5**
KAGI IAML_P
comp=Z,1μm,0.5s
BZK Bozkurt 76.22 310⇑ *i*P **P 13 36 32.9 +0.6**
ANDN Andirin 76.27 305 *i* P **P 13 36 33.4 +0.6**
ANDN IAML_P
comp=Z,1μm,0.6s
SLIT Slitere, Latvi 76.33 328 *e*P **P 13 36 30.9 -1.7**
SLIT IAmb IAmb 13 36 48.9
comp=Z,509nm,1.2s
CORM Corum 76.48 308 P **P 13 36 33.8 -0.2**
PABE Paberze 76.49 326 *e*P **P 13 36 33.9 +0.4**
PABE IAmb IAmb 13 36 50.3
comp=Z,218nm,1.2s
TULEG Thule 76.57 4 PFAKE 13 36 50.0 +16
TULEG LR LR
comp=Z,3μm,18.0s
KOZT Kozan 76.69 305 P **P 13 36 34.9 -0.2**
ILGA Ilgaz 76.78 309 *i* P **P 13 36 37.5 +1.7**
ILGA IAML_P
comp=Z,948nm,0.5s
YAHY KAYSERI_Yahyal 76.78 306 *i* P **P 13 36 36.3 +0.6**
YAHY IAML_P
comp=Z,730nm,0.5s
BBB Bella Bella 76.89 38 P **P 13 36 35.8 0.0**
comp=Z,25nm,1.0s,baz=279,slow=4.1,SNR=13
CDAG Cicekdag 76.89 308 *i* P **P 13 36 36.5 +0.2**
CDAG IAML_P
comp=Z,2μm,0.9s
NSS Namsos 77.00 337 *e*P **P 13 36 36.0 -0.3**
DELI KIRIKKALE 77.06 308 *i* P **P 13 36 37.9 +0.7**
DELI IAML_P
comp=Z,2μm,0.5s
KURC Kurucasile-Bar 77.12 310 P **P 13 36 36.6 -0.8**
ELDT Eldivan 77.20 309 *i* P **P 13 36 38.9 +0.8**
ELDT IAML_P
comp=Z,1μm,0.7s
PBUR Paburg 77.27 327 *e*P **P 13 36 36.8 -1.2**
PBUR IAmb IAmb 13 36 51.3
comp=Z,93nm,0.8s
KARA Karaisali 77.34 305 P **P 13 36 38.5 -0.3**
BRTR Keskin Array B 77.36 308 P **P 13 36 39.1 +0.1**
comp=Z,76nm,0.9s,baz=96,slow=5.0,SNR=308
BRTR LR LR 14 14 58.1
comp=Z,1μm,20.1s,baz=60,slow=39
KIRS Kırehir-Merke 77.41 307 *i* P **P 13 36 39.1 -0.1**
KIRS IAML_P
comp=Z,1μm,0.8s
MSEY Mahe Island 77.42 258 PFAKE 13 36 50.0 +10
MSEY LR LR
comp=Z,2μm,22.0s
MSEY Mahe Island 77.42 258 P **P 13 36 40.0 +0.5**
MSEY Mahe Island 77.42 258 *i* P **P 13 36 41.3 +1.7**
KIS Kishinev 77.53 316⇑ *i*P **P 13 36 38.0 -1.6**
comp=Z,140nm,1.2s
KIS Kishinev 77.53 316 *i* PcP **PcP 13 36 51.0 +1.2**
KIS *e*S **S 13 46 24.0 -4.8**
KIS *e*ScS **SKSac 13 46 41.0 -10**
KIS Kishinev 77.53 316 *e*PS **PnS 13 47 10.0 -0.8**
KIS *e*LQ LQ 14 04 10.0
comp=Z,6μm,20.0s
KIS *e*LR LR 14 09 26.0
comp=Z,4μm,18.0s
KIS Kishinev 77.53 316⇑ *i*P **P 13 36 38.0 -1.6**
KIS *i* 13 36 51.0
KIS *e*S **S 13 46 24.0 -4.8**
KIS *e* 13 46 41.0
KIS *e*PS **PnS 13 47 10.0 -0.8**
KIS pmax pmax
comp=Z,140nm,1.2s
KIS MLR MLR
comp=Z,4μm,18.0s
BTIN Bartın 77.55 310 *i* P **P 13 36 39.4 -0.4**
BTIN IAML_P
comp=Z,2μm,0.7s
YAYX Yaylak 77.56 307 P **P 13 36 39.6 -0.5**
MILM Milestii Mici 77.56 316⇑ *i*P **P 13 36 40.0 +0.2**
SUW Suwalki 77.59 324 *e*P **P 13 36 40.3 +0.5**
SUW *e*S **S 13 46 26.8 -2.4**
SUW LMZ LR 14 14 28.6
comp=Z,8μm,17.4s
SUW Suwalki 77.59 324 PFAKE 13 36 50.0 +10
SUW LR LR
comp=Z,7μm,18.0s
SUW Suwalki 77.59 324 *e*P **P 13 36 40.3 +0.5**
SUW *e*S **S 13 46 26.8 -2.4**
SUW MLR MLR
comp=Z,8μm,17.4s
AKSY AKSARAY - Alti 77.71 307 *i* P **P 13 36 41.8 +0.8**
AKSY IAML_P
comp=Z,740nm,0.9s
SERE Sereflikochisa 77.73 307 P **P 13 36 38.9 -2.2**
TOTH TOTAH 77.87 301 *e*P **P 13 36 42.3 +0.4**
MERS Mersin 77.89 305 P **P 13 36 40.8 -1.1**
ANTO Ankara 77.90 309 *e*P **P 13 36 42.8 +0.9**
comp=Z,170nm,1.2s
ANTO LR LR
comp=Z,2μm,21.0s
ANTO Ankara 77.90 309⇑ *i*P **P 13 36 42.3 +0.4**
ANTO Ankara 77.90 309 *e*P **P 13 36 42.8 +0.9**
ANTO pmax pmax
comp=Z,170nm,1.2s
ANTO MLR MLR
comp=Z,2μm,21.0s
LOD Lodumlu 77.91 309 P **P 13 36 41.5 -0.5**
QASN Qassioun 77.92 301 *e*P P 13 36 36.8 -5.4
YKW3 Yellowknife Ar 77.92 25 PFAKE 13 36 50.0 +8.5
YKW3 LR LR
comp=Z,800nm,19.0s
KERG Konya-Eregli 77.95 306 *i* P **P 13 36 42.2 -0.1**
KERG IAML_P
comp=Z,304nm,0.8s
YKA Yellowknife Ar 77.97 25 P **P 13 36 42.3 +0.6**
comp=Z,44nm,0.7s,baz=299,slow=5.4,SNR=525
YKA PKKPbc **PKKPbc 13 55 48.7 +5.8**
comp=Z,0.4nm,0.9s,baz=124,slow=2.6,SNR=3.8
YKA LR LR 14 15 09.6
comp=Z,48nm,18.6s,baz=302,slow=39
ASF Jabal al Asfar 77.99 300 P **P 13 36 43.4 +0.8**
comp=Z,109nm,1.3s
BCAM Yenicaga 78.01 310 *i* P **P 13 36 43.1 +0.5**
BCAM IAML_P
comp=Z,739nm,0.5s
SULT Sultanhani-AKS 78.07 307 P **P 13 36 42.3 -0.6**
KKUL Konya-Kulu 78.10 308 *i* P **P 13 36 44.1 +1.0**
KKUL IAML_P
comp=Z,754nm,0.8s
BRBR Barbar 78.22 301 *e*P **P 13 36 44.3 +0.3**
BHL Bhannes 78.25 302 *e*P **P 13 36 43.9 0.0**
JMIC Jan Mayen 78.26 347 P **P 13 36 44.2 +1.0**
comp=Z,81nm,0.9s,baz=95,slow=2.0,SNR=10.0
JMIC Jan Mayen 78.26 347 *e*P **P 13 36 44.5 +1.3**
RCY Rachaya 78.27 302 *e*P **P 13 36 44.9 +0.7**
KIZK Mersin 78.32 305 P **P 13 36 40.5 -3.7**
KIBS BOLU 78.33 309 *i* P **P 13 36 45.2 +0.9**
KIBS IAML_P
comp=Z,20nm,0.2s
TBLU Trondheim 78.37 336 *e*P **P 13 36 43.2 -0.7**
YIGI Dzce 78.38 310 *i* P **P 13 36 44.7 +0.2**
YIGI IAML_P
comp=Z,77nm,0.2s
SHMJ Saham 78.64 301 P **P 13 36 46.0 -0.1**
comp=Z,188nm,1.1s
KEBE Keben-Mersin 78.65 305 P **P 13 36 45.4 -0.7**
CFR Carcaliu 78.75 315⇑ *i*P **P 13 36 46.6 +0.2**
MDUB Mudurnu 78.76 310 P **P 13 36 45.8 -0.9**
MDUB Mudurnu 78.76 310 PFAKE 13 37 00.0 +13
MDUB LR LR
comp=Z,5μm,20.0s
IKL Isikli 78.76 305 P **P 13 36 45.1 -1.5**
MMAI Mount Meron Ar 78.80 301 LR LR 14 16 29.5
comp=Z,1μm,18.7s,baz=40,slow=39
AUMIH MIHALICIK 78.81 309 *i* P **P 13 36 47.7 +0.7**
SAHE Sakarya_HENDEK 78.83 310 *i* P **P 13 36 47.6 +0.6**
SAHE IAML_P
comp=Z,306nm,0.7s
HFS Hagfors 78.85 333 P **P 13 36 46.7 0.0**
comp=Z,12nm,0.8s,baz=60,slow=8.8,SNR=15
HFS LR LR 14 15 22.6
comp=Z,2μm,18.8s,baz=54,slow=38
TEVE Tevekalti-Mers 78.86 305 P **P 13 36 46.6 -0.7**
DAMY Dhamar 78.86 281 PFAKE 13 37 00.0 +12
DAMY LR LR
comp=Z,1μm,21.0s
GULN MERSIN_Gulnar 78.89 305 *i* P **P 13 36 47.3 0.0**
GULN IAML_P
comp=Z,1μm,0.7s
TIRR Tirgusor 78.89 314 PFAKE 13 37 00.0 +13
TIRR LR LR
comp=Z,6μm,19.0s
TIRR Tirgusor 78.89 314⇑ *i*P **P 13 36 47.0 -0.2**
LADK Ladik-KONYA 78.90 307 P **P 13 36 46.5 -1.0**
KDHN Kadinhani 78.94 307 *i* P **P 13 36 47.9 +0.2**
KDHN IAML_P
comp=Z,1μm,0.8s
PRAR RASCA 78.95 317⇓ *i*P **P 13 36 48.5 +1.0**
KIZT Kizilcal 78.95 308 P **P 13 36 46.7 -1.1**
AUSIV SIVRIHISAR 78.96 309 *i* P **P 13 36 48.3 +0.5**
SVRH Sivrihisar-ESK 78.97 309 P **P 13 36 46.7 -1.1**
GIRR Girov 78.97 317⇑ *i*P **P 13 36 48.5 +0.9**
KONT Konya--Tatoy 79.01 307 P **P 13 36 45.9 -2.1**
KONT Konya--Tatoy 79.01 307 *i* P **P 13 36 48.7 +0.7**
KONT IAML_P
comp=Z,62nm,0.2s
MMLI Mount Malkishu 79.02 301 P **P 13 36 49.2 +1.0**
comp=Z,119nm,1.6s
KULLO Kullorsuaq 79.05 2⇓ *i*P **P 13 36 47.4 -0.1**
KULLO pmax pmax
comp=Z,56nm,0.9s
KULLO MLR MLR
comp=Z,2μm,16.0s
KULLO Kullorsuaq 79.05 2⇓ *i*P **P 13 36 47.4 -0.1**
comp=Z,56nm,0.9s
comp=Z,2μm,16.0s
BERE Bereket-Mersin 79.05 305 P **P 13 36 47.7 -0.7**
TLB Topalu 79.07 314⇑ *i*P **P 13 36 48.7 +0.6**
TESR Tescani 79.08 317⇓ *i*P **P 13 36 48.6 +0.4**
WALJ Wala 79.08 300 P **P 13 36 49.8 +1.3**
comp=Z,113nm,0.8s
LVV L'vov 79.10 320 *e*P **P 13 36 49.5 +1.2**
LVV *e* 13 37 01.8
LVV *e* 13 39 55.0
LVV *e*S **S 13 46 46.2 +0.6**
LVV *e*SSS SSS 13 55 10.2
LVV MLR MLR
comp=E,6μm,18.0s
LVV MLR MLR
comp=N,6μm,19.0s
LVV MLR MLR
comp=Z,7μm,18.0s
ERMK Ermenek 79.16 305 *i* P **P 13 36 49.6 +0.5**
ERMK IAML_P
comp=Z,3μm,0.4s
ODBI Odobesti 79.17 316⇑ *i*P **P 13 36 50.1 +1.4**
BIZ Bicaz 79.22 317⇑ *i*P **P 13 36 49.7 +0.7**
VRI Vrincioaia 79.32 316⇑ *i*P **P 13 36 50.8 +1.2**
NB2 NORSAR Subarra 79.33 334 P **P 13 36 48.9 -0.4**
comp=Z,91nm,1.2s,baz=50,slow=5.6
NB2 NORSAR Subarra 79.33 334 P **P 13 36 48.9 -0.4**
baz=50,slow=5.6
NOA NORSAR Array B 79.33 334 P **P 13 36 48.9 -0.4**
comp=Z,61nm,1.1s,baz=51,slow=5.5,SNR=66
NOA LR LR 14 16 41.8
comp=Z,5μm,18.3s,baz=55,slow=39

SRCK	**Saricakaya, Es**	**79.34 309**	*i* P	**P**	**13 36 50.8 +1.0**
SRCK			IAML_P		
	comp=Z,173nm,0.1s				
PLOR	**Plostina**	**79.38 316**⇑	*i* P	**P**	**13 36 51.3 +1.4**
DOGA	**KONYA_Doganhis**	**79.43 307**	*i* P	**P**	**13 36 51.0 +0.5**
DOGA			IAML_P		
	comp=Z,1μm,0.4s				
ICOR	**Ion Corvin**	**79.43 314**⇑	*i* P	**P**	**13 36 51.1 +0.9**
BURAR	**Bucovina Array**	**79.44 318**⇑	*i* P	**P**	**13 36 50.8 +0.5**
LISJ	**El Lisan**	**79.47 300**	P	**P**	**13 36 51.7 +1.2**
	comp=Z,131nm,1.4s				
BORA	**Eskisehir**	**79.53 309**	*i* P	**P**	**13 36 51.0 +0.1**
BORA			IAML_P		
	comp=Z,2μm,0.7s				
JDRJ	**Daraweish**	**79.54 299**	P	**P**	**13 36 51.5 +0.3**
	comp=Z,180nm,1.4s				
DOMB	**Dombas**	**79.54 335**	*e*P	**P**	**13 36 50.6 +0.2**
NAO01	**NORSAR Array S**	**79.57 334**	*e*P	**P**	**13 36 50.4 -0.2**
BOLV	**Bolvadin**	**79.68 308**	*i* P	**P**	**13 36 52.3 +0.5**
BOLV			IAML_P		
	comp=Z,2μm,0.6s				
HSNJ	**Maan**	**79.72 299**	P	**P**	**13 36 53.0 +0.8**
	comp=Z,377nm,0.9s				
GAZI	**Gazipasa**	**79.77 305**	*i* P	**P**	**13 36 52.3 +0.1**
GAZI			IAML_P		
	comp=Z,2μm,0.6s				
MOL	**Molde**	**79.77 336**	*e*P	**P**	**13 36 52.4 +0.8**
AMAZ	**Amatzia**	**79.79 300**	P	**P**	**13 36 52.7 +0.3**
	comp=Z,245nm,1.0s				
OZUR		**79.80 316**⇓	*i* P	**P**	**13 36 53.6 +1.4**
RPZ	**Rata Peaks**	**79.86 150**	*e*P	**P**	**13 36 52.2 -0.1**
	comp=Z,122nm,1.3s				
KLYT	**Kilyos**	**79.89 311**⇑	*i* P	**P**	**13 36 52.9 +0.2**
BEL	**Belsk**	**79.91 323**	*e*P	**P**	**13 36 54.1 +1.5**
BEL			*e*S	**S**	**13 46 55.8 +1.7**
BEL			LMZ	LR	14 15 46.4
	comp=Z,12μm,17.1s				
BEL	**Belsk**	**79.91 323**	*e*P	**P**	**13 36 54.1 +1.5**
BEL			*e*S	**S**	**13 46 55.8 +1.7**
BEL			MLR	MLR	
	comp=Z,12μm,17.1s				
KWP	**Kalwaria Pacla**	**79.95 321**	*e*P	**P**	**13 36 54.0 +1.1**
KWP			*e*S	**S**	**13 46 52.8 -1.8**
KWP			LMZ	LR	14 14 50.4
	comp=Z,12μm,19.4s				
KWP	**Kalwaria Pacla**	**79.95 321**	PFAKE		13 37 00.0 +7.1
KWP			LR	LR	
	comp=Z,99μm,20.0s				
KWP	**Kalwaria Pacla**	**79.95 321**	*e*P	**P**	**13 36 54.0 +1.1**
KWP			*e*S	**S**	**13 46 52.8 -1.8**
KWP			MLR	MLR	
	comp=Z,12μm,19.4s				
YLV	**Yalova**	**79.97 310**⇑	*i* P	**P**	**13 36 53.2 -0.1**
SZAC	**Souni**	**79.98 304**	P	**P**	**13 36 53.4 0.0**
MLR	**Muntele Rosu**	**79.98 316**	P	**P**	**13 36 54.3 +1.0**
	comp=Z,28nm,0.5s,baz=340,slow=7.2,SNR=40				
MLR			LR	LR	14 15 10.6
	comp=Z,3μm,20.2s,baz=48,slow=38				
MLR	**Muntele Rosu**	**79.98 316**	PFAKE		13 37 00.0 +6.7
MLR			LR	LR	
	comp=Z,4μm,18.0s				
MLR	**Muntele Rosu**	**79.98 316**⇑	*i* P	**P**	**13 36 54.4 +1.1**
KEPZ	**Antalya-Kepez**	**80.00 306**	*i* P	**P**	**13 36 52.5 -1.0**
KEPZ			IAML_P		
	comp=Z,503nm,0.6s				
ALFC	**Alefka**	**80.02 304**	P	**P**	**13 36 53.7 +0.1**
DOPR	**Dopca**	**80.11 317**⇓	*i* P	**P**	**13 36 55.0 +1.2**
PRD	**Provadia**	**80.11 313**	*e*P	**P**	**13 36 54.6 +0.8**
PRD	**Provadia**	**80.11 313**	*e*P	**S**	**13 46 55.9 -0.5**
BAGO	**Egridir - ISPA**	**80.11 307**	*i* P	**P**	**13 36 54.8 +0.7**
BAGO			IAML_P		
	comp=Z,2μm,0.9s				
SECR		**80.12 315**⇓	*i* P	**P**	**13 36 55.0 +1.1**
AKN	**Aaknes**	**80.22 336**	*e*P	**P**	**13 36 54.4 +0.3**
CTYL	**Yalikoy Yolu**	**80.30 311**⇑	*i* P	**P**	**13 36 55.2 +0.3**
PPCY	**Paphos**	**80.32 304**	P	**P**	**13 36 55.3 +0.2**
HRFI	**Mount Harif**	**80.32 299**	P	**P**	**13 36 55.6 +0.3**
	comp=Z,87nm,1.4s				
ISP	**Isparta**	**80.37 307**	PFAKE		13 37 10.0 +14
ISP			LR	LR	
	comp=Z,2μm,20.0s				
AQBJ	**Aqaba**	**80.44 298**	P	**P**	**13 36 56.1 +0.2**
	comp=Z,101nm,1.0s				
KZIT	**Kziot**	**80.45 300**	P	**P**	**13 36 56.5 +0.5**
	comp=Z,128nm,1.1s				
KOLS	**Kolonicke sedl**	**80.54 320**	*e*P	**P**	**13 36 56.9 +0.8**
KOLS			pmax	pmax	
	comp=Z,20nm,1.0s				
KOLS	**Kolonicke sedl**	**80.54 320**	*e*P	**P**	**13 36 56.8 +0.7**
KOLS	**Kolonicke sedl**	**80.54 320**	*e*S	**S**	**13 46 57.6 -3.2**
EIL	**Elat**	**80.54 298**	P	**P**	**13 36 57.3 +0.8**
	comp=Z,55nm,1.6s				
VOIR		**80.57 316**⇑	*i* P	**P**	**13 36 57.2 +0.8**
UZH	**Uzhgorod**	**80.67 320**⇑	*i* P	**P**	**13 36 58.2 +1.4**
UZH			*e*		13 37 09.2
UZH			*e*		13 37 15.0
UZH			*e*S	**S**	**13 47 04.2 +2.0**
UZH			*e*		13 48 06.7
UZH			*e*		13 52 18.4
UZH			MLR	MLR	
	comp=N,300nm,17.0s				
UZH			MLR	MLR	
	comp=E,2μm,17.0s				
UZH			MLR	MLR	
	comp=Z,890nm,17.0s				
SKAR	**Skarslia**	**80.67 335**	*e*P	**P**	**13 36 56.6 0.0**
PHSR	**Pinarhisar**	**80.74 312**⇓	*i* P	**P**	**13 36 57.7 +0.4**
SUMG	**Summit**	**80.77 356**	PFAKE		13 37 10.0 +13
SUMG			LR	LR	
	comp=Z,1μm,20.0s				
SUMG	**Summit**	**80.77 356**⇓	*i* P	**P**	**13 36 58.3 +0.9**
SUMG			pmax	pmax	
	comp=Z,380nm,1.0s				
SUMG			MLR	MLR	
	comp=Z,3μm,18.0s				
SUMG	**Summit**	**80.77 356**⇓	*i* P	**P**	**13 36 58.3 +0.9**
	comp=Z,384nm,1.0s				
	comp=Z,3μm,18.0s				
TRPA	**Tarpa**	**80.78 319**	EP	**P**	**13 36 57.1 -0.2**
KONO	**Kongsberg**	**80.81 333**	PFAKE		13 37 10.0 +13
KONO			LR	LR	
	comp=Z,7μm,18.0s				
KONO	**Kongsberg**	**80.81 333**	*e*P	**P**	**13 36 58.2 +0.9**
CJR	**Cluj-Napoca**	**80.84 318**⇑	*i* P	**P**	**13 36 58.9 +1.1**
ARR	**Arges**	**80.86 316**⇑	*i* P	**P**	**13 36 59.1 +1.2**
KORT	**Korkueli**	**80.86 307**	*i* P	**P**	**13 36 58.4 +0.3**
KORT			IAML_P		
	comp=Z,1μm,0.8s				
KHAL	**Karahalli**	**80.86 308**	*i* P	**P**	**13 36 58.7 +0.6**
KHAL			IAML_P		
	comp=Z,220nm,0.9s				
KIRK	**Kırklareli**	**80.95 312**	*i* P	**P**	**13 36 58.6 +0.2**
KIRK			IAML_P		
	comp=Z,245nm,0.6s				
JMB	**Yambol**	**80.98 313**	*e*P	**P**	**13 36 59.0 +0.5**
DURS	**Dursunbey**	**81.02 310**	*i* P	**P**	**13 36 59.2 +0.2**
DURS			IAML_P		
	comp=Z,625nm,0.6s				
HUMR	**Humele**	**81.04 315**⇑	*i* P	**P**	**13 36 59.0 +0.2**
SCO	**Scoresbysund**	**81.06 350**	PFAKE		13 37 10.0 +12
SCO			LR	LR	
	comp=Z,900nm,20.0s				
SCO	**Scoresbysund**	**81.06 350**⇓	*i* P	**P**	**13 36 59.1 +0.7**
SCO			pmax	pmax	
	comp=Z,56nm,0.9s				
SCO			MLR	MLR	
	comp=Z,880nm,19.0s				
SCO	**Scoresbysund**	**81.06 350**⇓	*i* P	**P**	**13 36 59.1 +0.7**
	comp=Z,56nm,0.9s				
	comp=Z,880nm,19.0s				
LLLB	**Lillooet**	**81.07 38**	PFAKE		13 37 10.0 +11
LLLB			LR	LR	
	comp=Z,900nm,21.0s				
BSD	**Bornholm Skovb**	**81.14 328**	*i* P	**P**	**13 36 59.9 +0.8**
BSD			MLR	MLR	
	comp=Z,10μm,15.0s				
BSD	**Bornholm Skovb**	**81.14 328**	*i* P	**P**	**13 36 59.9 +0.8**
	comp=Z,10μm,15.0s				
AKUM	**Antalya-Kumluc**	**81.16 306**	*i* P	**P**	**13 36 58.9 -0.7**
AKUM			IAML_P		
	comp=Z,2μm,0.5s				
HYA	**Hoyanger**	**81.16 336**	*e*P	**P**	**13 36 59.5 +0.4**
OJC	**Ojcow**	**81.28 322**	*e*P	**P**	**13 37 00.9 +1.0**
OJC			*e*S	**S**	**13 47 06.8 -1.6**
OJC			LMZ	LR	14 15 52.4
	comp=Z,10μm,17.9s				
OJC	**Ojcow**	**81.28 322**	*e*P	**P**	**13 37 01.0 +1.0**
OJC			*e*S	**S**	**13 47 06.8 -1.6**
OJC			MLR	MLR	
	comp=Z,10μm,17.9s				
DRGR		**81.34 318**⇑	*i* P	**P**	**13 37 01.1 +0.6**
LOT	**Lotru**	**81.35 317**⇓	*i* P	**P**	**13 37 01.9 +1.3**
BALB	**Balikesir**	**81.41 310**	PFAKE		13 37 10.0 +9.1
BALB			LR	LR	
	comp=Z,4μm,20.0s				
NIE	**Niedzica**	**81.41 321**	*e*P	**P**	**13 37 01.6 +0.8**
NIE			*e*S	**S**	**13 47 08.8 -1.1**
NIE			LMZ	LR	14 16 12.6
	comp=Z,7μm,19.6s				
NIE	**Niedzica**	**81.41 321**	*e*P	**P**	**13 37 01.6 +0.8**
NIE			*e*S	**S**	**13 47 08.8 -1.1**
NIE			MLR	MLR	
	comp=Z,7μm,19.6s				
MANT	**Manisa**	**81.46 309**	*i* P	**P**	**13 37 02.2 +0.8**
MANT			IAML_P		
	comp=Z,127nm,0.2s				
ATD	**Arta Tunnel**	**81.51 279**	P	**P**	**13 37 03.1 +1.2**
	comp=Z,41nm,0.9s,baz=6.8,slow=4.2,SNR=8.8				
ATD	**Arta Tunnel**	**81.51 279**	PFAKE		13 37 10.0 +8.1
ATD			LR	LR	
	comp=Z,1μm,21.0s				
A04D	**Lummi Island**	**81.58 39**	P	**P**	**13 37 02.8 +1.2**
	baz=301,SNR=18				
STEP	**BALIKESIR_Sava**	**81.64 310**	*i* P	**P**	**13 37 02.4 +0.3**
STEP			IAML_P		
	comp=Z,1μm,0.6s				
SUE	**Sulen**	**81.76 336**	*e*P	**P**	**13 37 02.5 +0.3**
KECS	**Kecovo**	**81.79 320**	*e*P	**P**	**13 37 04.1 +1.4**
KECS			pmax	pmax	
	comp=Z,173nm,1.5s				
KECS	**Kecovo**	**81.79 320**	*e*P	**P**	**13 37 04.1 +1.4**
ODD1	**Odda**	**81.81 335**	*e*P	**P**	**13 37 03.0 +0.3**
DIM	**Dimitrovgrad**	**81.86 313**	*e*P	**P**	**13 37 04.3 +1.1**
D03D	**Eldon**	**81.96 41**	P	**P**	**13 37 05.2 +1.5**
	baz=301,SNR=55				
ASK	**Askoy**	**81.98 335**	*e*P	**P**	**13 37 03.8 +0.4**
BER	**Bergen**	**81.99 335**	*e*P	**P**	**13 37 03.8 +0.3**
LANS	**Liptovska Anna**	**82.02 321**	*e*P	**P**	**13 37 05.2 +1.2**
LANS	**Liptovska Anna**	**82.02 321**	*e*P	**P**	**13 37 05.2 +1.2**
ALN	**Alexandroupoli**	**82.07 312**	PFAKE		13 37 20.0 +16
ALN			LR	LR	
	comp=Z,1μm,20.0s				
ALN	**Alexandroupoli**	**82.07 312**	P	**P**	**13 37 04.0 -0.3**
HOMB	**Homborsund**	**82.11 333**	*e*P	**P**	**13 37 05.8 +1.6**
KDZ	**Kurdzhali**	**82.13 313**	*e*P	**P**	**13 37 09.4 +4.7**
KDZ	**Kurdzhali**	**82.13 313**	*e*P	**S**	**13 47 20.1 +2.5**
B05A	**Bryant**	**82.16 40**	P	**P**	**13 37 05.5 +0.9**
	baz=301,SNR=21				
BLS5	**Blasjo**	**82.19 334**	*e*P	**P**	**13 37 05.0 +0.3**
RGN	**Rugen**	**82.22 328**	PFAKE		13 37 20.0 +15
RGN			LR	LR	
	comp=Z,3μm,22.0s				
RGN	**Rugen**	**82.22 328**	*e*P	**P**	**13 37 05.0 +0.2**
RGN			IAmb	IAmb	13 37 21.3
	comp=Z,102nm,1.1s				
BAYC	**CANAKKALE_Bayr**	**82.27 311**	*i* P	**P**	**13 37 06.0 +0.6**
BAYC			IAML_P		
	comp=Z,7.5nm,0.5s				
RDO	**Rodhopi**	**82.29 312**	P	**P**	**13 37 05.8 +0.3**
AYDN	**Tasoluk**	**82.32 308**	*i* P	**P**	**13 37 06.9 +1.1**
AYDN			IAML_P		
	comp=Z,998nm,0.5s				
D04E	**Lakebay**	**82.33 41**	P	**P**	**13 37 07.4 +1.9**
	baz=301,SNR=13				
B06A	**Marblemount**	**82.38 39**	PFAKE		13 37 20.0 +14
B06A			LR	LR	
	comp=Z,700nm,20.0s				
PLD	**Plovdiv**	**82.38 313**	*e*P	**P**	**13 37 06.5 +0.6**
PLD	**Plovdiv**	**82.38 313**	*e*P	**S**	**13 47 20.1 0.0**
EZN	**Ezine**	**82.38 311**⇑	*i* P	**P**	**13 37 06.2 +0.2**
OKC	**Ostrava-Krasne**	**82.38 322**	*e*P	**P**	**13 37 07.3 +1.5**
OKC			*e*		13 37 20.4
OKC			*e*S	**S**	**13 47 16.0 -3.8**
OKC			MLR	MLR	
	comp=Z,7μm,16.5s				
OKC	**Ostrava-Krasne**	**82.38 322**	*e*P	**P**	**13 37 07.3 +1.5**
OKC			*ex*	x	13 37 20.4
OKC			*e*S	**S**	**13 47 16.0 -3.8**
OKC			AMS	AMS	14 16 30.0
	comp=Z,7μm,16.5s				
MPEP	**Malo Peshtene**	**82.39 315**	P	**P**	**13 37 06.9 +0.9**
MPEP	**Malo Peshtene**	**82.39 315**	P	**S**	**13 47 19.5 -0.7**
PSZ	**Piszkesteto**	**82.42 320**	PFAKE		13 37 20.0 +14
PSZ			LR	LR	
	comp=Z,10μm,18.0s				
PSZ	**Piszkesteto**	**82.42 320**	EP	**P**	**13 37 07.0 +0.9**
HERR	**Herculane**	**82.47 317**⇑	*i* P	**P**	**13 37 06.8 +0.5**
PGB	**Panagyurishte**	**82.51 314**	*e*P	**P**	**13 37 08.0 +1.3**
PGB	**Panagyurishte**	**82.51 314**	*e*P	**S**	**13 47 20.5 -1.1**
RZN	**Rozhen**	**82.57 313**	*e*P	**P**	**13 37 07.8 +0.6**
RZN	**Rozhen**	**82.57 313**	*e*P	**S**	**13 47 21.3 -1.2**
BZS	**Buzias**	**82.58 318**⇑	*i* P	**P**	**13 37 07.0 +0.1**
VYHS	**Vyhne**	**82.72 321**	*e*P	**P**	**13 37 08.8 +1.2**
VYHS			*e*		13 37 20.3
VYHS			*e*S	**S**	**13 47 20.8 -2.6**
VYHS			pmax	pmax	
	comp=Z,50nm,1.0s				
VYHS	**Vyhne**	**82.72 321**	*e*P	**P**	**13 37 08.8 +1.2**
VYHS			*e*PP	**pwP**	**13 37 20.3 +0.4**
VYHS			*e*S	**S**	**13 47 20.8 -2.6**
MORC	**Moravsky Berou**	**82.75 323**	PFAKE		13 37 20.0 +12
MORC			LR	LR	
	comp=Z,6μm,19.0s				
MORC	**Moravsky Berou**	**82.75 323**⇑	*i* P	**P**	**13 37 08.9 +1.1**
MORC	**Moravsky Berou**	**82.75 323**	*e*P	**P**	**13 37 08.3 +0.5**
F04D	**Rainier, OR**	**82.75 42**	P	**P**	**13 37 09.2 +1.4**
	baz=301				
E04D	**Cinebar**	**82.77 41**	P	**P**	**13 37 09.3 +1.4**
	baz=301,SNR=19				
STAV	**Stavanger**	**82.81 334**	*e*P	**P**	**13 37 08.3 +0.5**
KSP	**Ksiaz**	**82.83 324**	*e*P	**P**	**13 37 08.8 +0.7**
KSP			*e*S	**S**	**13 47 22.4 -2.0**
KSP			LMZ	LR	14 17 52.9
	comp=Z,11μm,16.7s				
KSP	**Ksiaz**	**82.83 324**	*e*P	**P**	**13 37 08.9 +0.7**
KSP			*e*S	**S**	**13 47 22.4 -2.0**
KSP			MLR	MLR	
	comp=Z,11μm,16.7s				
MDVR	**Moldovita**	**82.95 317**⇑	*i* P	**P**	**13 37 09.4 +0.5**
MUD	**Monsted U'grnd**	**82.96 331**	*i* P	**P**	**13 37 09.5 +0.9**
MUD			MLR	MLR	
	comp=Z,5μm,14.0s				
MUD	**Monsted U'grnd**	**82.96 331**	*i* P	**P**	**13 37 09.5 +0.9**
	comp=Z,5μm,14.0s				
DAT	**Datca**	**82.96 307**	*i* P	**P**	**13 37 09.1 -0.1**
DAT			IAML_P		
	comp=Z,380nm,0.5s				
C06D	**Leavenworth**	**83.03 40**	P	**P**	**13 37 10.1 +0.9**
	baz=302				
OSTC	**Ostas**	**83.03 324**	*e*P	**P**	**13 37 11.2 +2.0**
OSTC			*ex*	x	13 37 24.2
OSTC			*e*S	**S**	**13 47 24.1 -2.4**
OSTC			AMS	AMS	14 17 40.0
	comp=Z,11μm,16.2s				
KAVA	**Kavala**	**83.04 312**	P	**P**	**13 37 09.5 +0.1**
G03D	**McMinnville, O**	**83.04 43**	P	**P**	**13 37 10.5 +1.2**
	baz=301				
VTS	**Vitosha**	**83.08 314**	PFAKE		13 37 20.0 +10
VTS			LR	LR	
	comp=Z,2μm,18.0s				
VTS	**Vitosha**	**83.08 314**	P	**P**	**13 37 10.5 +0.7**
VTS	**Vitosha**	**83.08 314**⇑	*i* P	**P**	**13 37 10.8 +1.0**
VTS	**Vitosha**	**83.08 314**	*e*P	**P**	**13 37 11.5 +1.7**
VTS	**Vitosha**	**83.08 314**	*e*P	**S**	**13 47 25.5 -2.0**
DPC	**Dobruska-Polom**	**83.09 323**	*e*P	**P**	**13 37 10.6 +1.1**
DPC			*e*		13 37 21.1
DPC			*e*S	**S**	**13 47 24.1 -3.1**
DPC			MLR	MLR	
	comp=Z,8μm,16.7s				
DPC	**Dobruska-Polom**	**83.09 323**	*e*P	**P**	**13 37 10.6 +1.1**
DPC			*ex*	x	13 37 21.1
DPC			*e*S	**S**	**13 47 24.1 -3.1**
DPC			AMS	AMS	14 17 50.0
	comp=Z,8μm,16.7s				
THAS	**Thassos island**	**83.09 312**	P	**P**	**13 37 09.5 -0.1**
CHVC	**Chvalec**	**83.10 324**	*e*P	**P**	**13 37 11.3 +1.7**
CHVC			*ex*	x	13 37 22.0
CHVC			AMS	AMS	14 17 50.0
	comp=Z,11μm,15.9s				
LIA	**Limnos Island**	**83.12 311**	P	**P**	**13 37 09.8 0.0**
UPC	**Upice**	**83.17 324**	*e*P	**P**	**13 37 10.8 +0.9**
UPC			*e*		13 37 23.1
UPC			*e*S	**S**	**13 47 23.3 -4.5**
UPC			MLR	MLR	
	comp=Z,12μm,15.8s				
UPC			smax	smax	
	comp=N,5.0nm,0.4s				
UPC			smax	smax	
	comp=N,10.0nm,0.8s				
UPC	**Upice**	**83.17 324**	*e*P	**P**	**13 37 10.8 +0.9**
UPC			*ex*	x	13 37 23.1
UPC			*e*S	**S**	**13 47 23.3 -4.5**
UPC			AMS	AMS	14 17 50.0
	comp=N,12μm,15.8s				
JAVC	**Velka Javorina**	**83.17 322**	*e*P	**P**	**13 37 11.9 +1.9**
RUE	**Ruedersdorf**	**83.20 326**	*e*P	**P**	**13 37 09.6 -0.3**
RUE			IAmb	IAmb	13 37 24.9
	comp=Z,153nm,1.1s				
I02D	**Swisshome**	**83.25 44**	P	**P**	**13 37 11.7 +1.4**
	baz=301				
MMB	**Musomiste**	**83.27 313**	*e*P	**P**	**13 37 10.8 +0.2**
MMB	**Musomiste**	**83.27 313**	*e*P	**S**	**13 47 24.3 -4.9**
NVR	**Nevrokopi**	**83.29 313**	P	**P**	**13 37 10.5 -0.3**
LTY	**Liberty**	**83.51 40**	PFAKE		13 37 20.0 +8.2
LTY			LR	LR	
	comp=Z,600nm,20.0s				
VRAC	**Vranov**	**83.52 322**	P	**P**	**13 37 12.5 +0.8**
	comp=Z,38nm,1.1s,baz=66,slow=4.6,SNR=31				
VRAC			LR	LR	14 18 10.8
	comp=Z,8μm,18.3s,baz=61,slow=38				
VRAC	**Vranov**	**83.52 322**⇑	*i* P	**P**	**13 37 12.9 +1.2**
VRAC	**Vranov**	**83.52 322**	*e*P	**P**	**13 37 12.9 +1.2**
KKB	**Krupnik**	**83.55 314**	*e*P	**P**	**13 37 12.0 0.0**
KKB	**Krupnik**	**83.55 314**	*e*P	**S**	**13 47 29.9 -2.1**
SRS	**Serrai**	**83.59 313**	P	**P**	**13 37 11.7 -0.5**
CSKK	**Cskako**	**83.65 320**	EP	P	13 37 20.1 +7.7
MODS	**Modra-Piesok**	**83.66 321**	*e*P	**P**	**13 37 13.4 +0.9**
MODS			*e*		13 37 26.0
MODS			*e*S	**S**	**13 47 31.9 -1.0**
MODS			pmax	pmax	
	comp=Z,92nm,1.2s				
MODS	**Modra-Piesok**	**83.66 321**	*e*P	**P**	**13 37 13.4 +0.9**
MODS			*e*PP	**pwP**	**13 37 26.0 +1.2**
B08A	**Colville Reser**	**83.67 39**	PFAKE		13 37 20.0 +7.4
B08A			LR	LR	
	comp=Z,600nm,20.0s				
J01E	**Myrtle Point**	**83.67 45**	P	**P**	**13 37 13.9 +1.3**
	baz=301,SNR=7.7				
OUR	**Ouranopolis**	**83.71 312**	P	**P**	**13 37 12.8 -0.1**
H04D	**Lebanon**	**83.72 43**	P	**P**	**13 37 14.5 +1.7**
	baz=301				
KRUC	**Moravsky**	**83.77 322**	*e*P	**P**	**13 37 15.3 +2.3**
I03D	**Drain, OR**	**83.77 44**	P	**P**	**13 37 14.6 +1.5**
	baz=301,SNR=13				
F05D	**White Salmon**	**83.78 41**	P	**P**	**13 37 14.1 +1.0**
	baz=302,SNR=7.1				
KARP	**Karpathos**	**83.81 307**	PFAKE		13 37 20.0 +6.5
KARP			LR	LR	
	comp=Z,1μm,19.0s				
ZST	**Bratislava**	**83.85 321**	*e*P	**P**	**13 37 14.0 +0.6**
ZST			*e*S	**S**	**13 47 34.3 -0.5**
ZST	**Bratislava**	**83.85 321**	*e*P	**P**	**13 37 14.0 +0.6**
FRGS	**Fruska Gora**	**83.91 318**⇑	*i* P	**P**	**13 37 14.3 +0.5**
PVCC	**Panska Ves**	**83.92 324**	*e*P	**P**	**13 37 14.8 +1.1**
PVCC			*e*		13 37 28.8
PVCC			MLR	MLR	
	comp=Z,9μm,15.7s				
PVCC	**Panska Ves**	**83.92 324**	*e*P	**P**	**13 37 14.8 +1.1**
PVCC			*ex*	x	13 37 28.8
PVCC			AMS	AMS	14 18 20.0
	comp=Z,9μm,15.7s				
MORH	**Mrgy, Hungar**	**84.04 319**⇑	*i* P	**P**	**13 37 14.6 +0.2**
MORH	**Mrgy, Hungar**	**84.04 319**	EP	**P**	**13 37 14.1 -0.4**
BRG	**Berggiesshubel**	**84.04 325**	*i* P	**P**	**13 37 15.2 +0.9**
	comp=Z,35nm,1.1s				
BRG			*i*		13 37 26.2
	comp=Z,132nm,1.5s				
BRG			*e*PP	**PP**	**13 40 34.3 +6.4**
	comp=Z,16nm,1.5s				
BRG			S	**S**	**13 47 38.0 +1.4**
	comp=N,4μm,17.0s				
	comp=E,7μm,16.5s				
	comp=Z,10μm,15.7s				
BRG	**Berggiesshubel**	**84.04 325**	*i* P	**P**	**13 37 15.2 +0.9**
BRG			*i*		13 37 26.2
BRG			*e*		13 40 34.3
BRG			S	**S**	**13 47 38.0 +1.4**
BRG			pmax	pmax	
	comp=Z,35nm,1.1s				
BRG			pmax	pmax	
	comp=Z,132nm,1.5s				
BRG			pmax	pmax	
	comp=Z,16nm,1.5s				
BRG			MLR	MLR	
	comp=N,4μm,17.0s				
BRG			MLR	MLR	
	comp=E,7μm,16.5s				
BRG			MLR	MLR	
	comp=Z,10μm,15.7s				
PLG	**Polygyros**	**84.05 312**	P	**P**	**13 37 14.7 0.0**
K02D	**Willamette Mer**	**84.08 45**	P	**P**	**13 37 15.9 +1.1**
	baz=301,SNR=11				
TREC	**Trest**	**84.13 323**	*e*P	**P**	**13 37 16.0 +1.1**
TREC			*e*		13 37 29.5
TREC			MLR	MLR	
	comp=Z,9μm,16.8s				
TREC	**Trest**	**84.13 323**	*e*P	**P**	**13 37 16.0 +1.1**
TREC			*ex*	x	13 37 29.5
TREC			AMS	AMS	14 17 30.0
	comp=Z,9μm,16.8s				
GOPC	**GO Pecny, Ondr**	**84.15 324**	*e*P	**P**	**13 37 15.4 +0.4**
GOPC			*e*		13 37 26.3
GOPC			*e*S	**S**	**13 47 31.4 -6.4**
GOPC			MLR	MLR	
	comp=Z,9μm,16.3s				
GOPC			smax	smax	
	comp=N,3.0nm,0.5s				
GOPC	**GO Pecny, Ondr**	**84.15 324**	*e*P	**P**	**13 37 15.4 +0.4**
GOPC			*ex*	x	13 37 26.3
GOPC			*ex*	x	13 47 31.4
GOPC			AMS	AMS	14 18 30.0
	comp=N,9μm,16.3s				
G05D	**Wamic, OR**	**84.20 42**	P	**P**	**13 37 16.7 +1.4**
	baz=302,SNR=13				
PRU	**Pruhonice**	**84.24 324**	*e*P	**P**	**13 37 16.1 +0.7**
PRU			*e*		13 37 28.4
PRU			*e*S	**S**	**13 47 38.7 +0.1**
PRU			MLR	MLR	
	comp=Z,8μm,15.9s				
PRU			smax	smax	
	comp=N,4.0nm,0.7s				
PRU	**Pruhonice**	**84.24 324**	*e*P	**P**	**13 37 16.1 +0.7**
PRU			*ex*	x	13 37 28.4
PRU			*e*S	**S**	**13 47 38.7 +0.1**
PRU			AMS	AMS	14 18 40.0
	comp=N,8μm,15.9s				
CLL	**Collm**	**84.27 325**	PFAKE		13 37 30.0 +15
CLL			LR	LR	
	comp=Z,10μm,18.0s				
CLL	**Collm**	**84.27 325**⇑	*i* P	**P**	**13 37 15.3 -0.2**
	comp=Z,98nm,1.3s				
CLL			*i* pP	**sP**	**13 37 26.9 -0.4**
	comp=Z,83nm,0.8s				
CLL			*e*sP	**pwP**	**13 37 33.0 +5.2**
CLL			*e*PP	**PP**	**13 40 30.0 +0.3**
CLL			*e*pPP		13 40 40.0
CLL			*e*		13 40 50.0
CLL			*e*S	**S**	**13 47 39.0 +0.1**
CLL			*e*PPS	PPS

CLL pmax pmax
comp=Z,98nm,1.3s
I04A Tendick Farm, 84.30 44 P **P 13 37 16.8 +1.0**
baz=302,SNR=27
DIVS Divibare 84.36 317⇑ *iP* **P 13 37 16.3 +0.1**
L02E Cave Junction 84.39 45 P **P 13 37 17.7 +1.4**
baz=301,SNR=5.7
SOP Sopron 84.44 321 EP **P 13 37 18.1 +1.6**
LRW Lerwick 84.51 337 *eP* **P 13 37 16.5 0.0**
LRW IAmb IAmb 13 37 17.1
comp=Z,62nm,0.9s
LRW IAMs_20 IAMs_20 14 21 00.1
comp=Z,4μm,14.3s
ILULI Ilulissat 84.53 0 PFAKE 13 37 30.0 +14
ILULI LR LR
comp=Z,2μm,18.0s
ILULI Ilulissat 84.53 0⇓ *iP* **P 13 37 16.6 +0.2**
ILULI *i* 13 37 28.9
ILULI MLR MLR
comp=Z,2μm,19.0s
ILULI Ilulissat 84.53 0⇓ *iP* **P 13 37 16.6 +0.2**
ILULI *i* 13 37 28.9
comp=Z,2μm,19.0s
C09A Chrisman Ranch 84.57 39 PFAKE 13 37 30.0 +13
C09A LR LR
comp=Z,500nm,21.0s
D08A Wollman Farm, 84.62 40 PFAKE 13 37 30.0 +13
D08A LR LR
comp=Z,700nm,20.0s
SANT Santorini 84.63 308 PFAKE 13 37 30.0 +12
SANT LR LR
comp=Z,1μm,20.0s
HAWA Hanford 84.63 40 PFAKE 13 37 30.0 +13
HAWA LR LR
comp=Z,700nm,20.0s
I05D Terrebonne, OR 84.67 43 P **P 13 37 18.9 +1.1**
baz=302,SNR=37
CONA Conrad Observa 84.69 322 *i* PcP **P 13 37 19.2 +1.4**
comp=Z,68nm,1.2s,SNR=34
EREA Eretria 84.69 310 P **P 13 37 17.2 -0.7**
ZKR Zakros 84.70 307 P **P 13 37 18.1 +0.1**
J04D Umpqua Nationa 84.78 44 P **P 13 37 19.9 +1.4**
baz=302,SNR=47
JCC Jacoby Creek, 84.80 47 PFAKE 13 37 30.0 +12
JCC LR LR
comp=Z,800nm,21.0s
LIT Litokhoron 84.82 312 PFAKE 13 37 30.0 +11
LIT LR LR
comp=Z,1μm,20.0s
LIT Litokhoron 84.82 312 P **P 13 37 17.9 -0.6**
BBLS Lazići 84.84 317⇑ *iP* **P 13 37 19.0 +0.4**
E08A Dider Farm, El 84.85 40 PFAKE 13 37 30.0 +11
E08A LR LR
comp=Z,700nm,20.0s
NEW Newport 84.95 38 P **P 13 37 20.1 +1.0**
comp=Z,59nm,0.9s,baz=299,slow=4.2,SNR=65
NEW Newport 84.95 38 PFAKE 13 37 30.0 +11
NEW LR LR
comp=Z,700nm,19.0s
NEW Newport 84.95 38 P **P 13 37 20.1 +1.0**
baz=305,SNR=56
KHMM Horse Mountain 84.97 47 PFAKE 13 37 30.0 +11
KHMM LR LR
comp=Z,1μm,22.0s
BEHE Becsehely 84.99 320 *eP* **P 13 37 20.3 +1.1**
BEHE Becsehely 84.99 320 EP **P 13 37 18.1 -1.2**
HAPS Han Pijesak,Bl 85.00 317 *eP* **P 13 37 19.2 -0.3**
NPS Neapolis 85.06 307 P **P 13 37 19.3 -0.5**
ATAL Atalanti 85.17 311 P **P 13 37 20.3 0.0**
L04D Klamath Falls 85.19 45 P **P 13 37 21.6 +1.1**
baz=302,SNR=22
KZN Kozani 85.19 313 P **P 13 37 20.1 -0.4**
NKC Novy Kostel 85.19 325 *eP* **P 13 37 21.7 +1.5**
NKC *e* 13 37 33.4
NKC MLR MLR
comp=Z,10μm,15.3s
NKC Novy Kostel 85.19 325 *eP* **P 13 37 21.7 +1.5**
NKC *ex* x 13 37 33.4
NKC AMS AMS 14 18 40.0
comp=Z,10μm,15.3s
FNA Florina 85.20 313 PFAKE 13 37 30.0 +10
FNA LR LR
comp=Z,2μm,18.0s
FNA Florina 85.20 313 P **P 13 37 20.0 -0.5**
PINE Pine Mountain 85.20 43 PFAKE 13 37 30.0 +9.4
PINE LR LR
comp=Z,600nm,19.0s
LAST Lasithi 85.20 307 P **P 13 37 20.9 +0.3**
LKR Lokris 85.21 311 P **P 13 37 18.8 -1.7**
KHC Kasperske Hory 85.25 323 PFAKE 13 37 30.0 +9.5
KHC LR LR
comp=Z,2μm,19.0s
KHC Kasperske Hory 85.25 323 *eP* **P 13 37 21.5 +1.0**
KHC *e* 13 37 33.4
KHC *eS* **S 13 47 46.7 -2.1**
KHC MLR MLR
comp=Z,9μm,15.4s
KHC Kasperske Hory 85.25 323 *eP* **P 13 37 21.5 +1.0**
KHC *ex* x 13 37 33.4
KHC *eS* **S 13 47 46.7 -2.1**
KHC AMS AMS 14 18 30.0
comp=Z,9μm,15.4s
ARSA Arzberg 85.26 321 *i* PcP **P 13 37 21.5 +0.9**
comp=Z,26nm,1.1s,SNR=11
M02C Callahan 85.27 46 P **P 13 37 22.4 +1.6**
baz=302,SNR=12
J05D Fort Rock, OR 85.29 44 P **P 13 37 22.5 +1.5**
baz=302
KOGS Kog 85.30 320 *i* P **P 13 37 20.9 +0.2**
KMRM Mail Ridge 85.32 47 PFAKE 13 37 30.0 +8.9
KMRM LR LR
comp=Z,1μm,20.0s
K04D Chiloquin, OR 85.32 44 P **P 13 37 22.6 +1.5**
baz=302,SNR=6.9
PHP Peshkopia 85.34 315 P **P 13 37 20.9 -0.2**
GERES GERESS Array B 85.35 323 LR LR 14 18 50.2
comp=Z,7μm,18.1s,baz=66,slow=38
E09A Wood Farm, Sta 85.36 40 PFAKE 13 37 30.0 +8.9
E09A LR LR
comp=Z,600nm,20.0s
THL Klokotos Trika 85.41 312 P **P 13 37 20.2 -1.2**
AGG Agios Georgios 85.47 312 PFAKE 13 37 30.0 +8.2
AGG LR LR
comp=Z,1μm,21.0s
AGG Agios Georgios 85.47 312 P **P 13 37 19.5 -2.3**
PROD Prodromos 85.47 311 P **P 13 37 20.0 -1.8**
LTK Loutraki 85.55 310 P **P 13 37 20.2 -2.0**
IDI Anoyia 85.56 307 LR LR 14 19 10.4
comp=Z,971nm,19.9s,baz=62,slow=38
G08A Pilot Rock 85.58 41 PFAKE 13 37 30.0 +7.7
G08A LR LR
comp=Z,500nm,20.0s
N02D Trinity Center 85.58 46 P **P 13 37 23.7 +1.3**
baz=302,SNR=7.2
MOA Molln 85.62 322 *i* PcP **P 13 37 24.0 +1.6**
comp=Z,37nm,1.1s,SNR=12
DID Didima 85.62 310 P **P 13 37 20.4 -2.2**
PDG Podgorica 85.69 316⇑ *iP* **P 13 37 23.7 +0.9**
PDG Podgorica 85.69 316 *eP* **P 13 37 23.8 +0.9**
TTG Podgorica 85.69 316 PFAKE 13 37 30.0 +7.2
TTG LR LR
comp=Z,3μm,19.0s
BLY Banja Luka 85.70 318 PFAKE 13 37 30.0 +7.2
BLY LR LR
comp=Z,5μm,19.0s
BLY Banja Luka 85.70 318⇑ *iP* **P 13 37 24.1 +1.3**
BLY Banja Luka 85.70 318 *eP* **P 13 37 23.2 +0.4**
M04C Macdoel 85.71 45 P **P 13 37 24.3 +1.2**
baz=302,SNR=36
PERS Pernice 85.84 321 *i* P **P 13 37 24.0 +0.4**
PERS *eS* **S 13 47 52.0 -2.8**
SOKA Soboth 85.87 321 *i* PcP **P 13 37 24.3 +0.6**
comp=Z,37nm,1.2s,SNR=13
DRME Dracevica, Mon 85.87 315 *eP* **P 13 37 24.4 +0.7**
EVR Evrytania 85.88 312 P **P 13 37 23.3 -0.6**
TIR Tirane 85.88 314 PFAKE 13 37 30.0 +6.2
TIR LR LR
comp=Z,2μm,18.0s
BRY Bratogost 85.89 316 *eP* **P 13 37 25.2 +1.2**
WDC Whiskeytown Da 85.90 46 PFAKE 13 37 40.0 +16
WDC LR LR
comp=Z,700nm,22.0s
O02D Mt. Diablo Mer 85.94 47 P **P 13 37 25.5 +1.3**
baz=302,SNR=12
ANX Ano Chora 85.97 311 P **P 13 37 23.4 -1.0**

SERG Sergoula 85.97 311 P **P 13 37 22.5 -1.8**
TRIZ Trizonia 85.98 311 P **P 13 37 23.2 -1.1**
VAM Vamos 86.00 308 P **P 13 37 24.8 +0.3**
GUR Goura 86.02 311 P **P 13 37 23.0 -1.7**
EFP Efpalio 86.06 311 P **P 13 37 24.3 -0.4**
KLV Kalavryta, Ach 86.09 311 P **P 13 37 23.9 -1.1**
TREB Trebinje 86.10 316 *eP* **P 13 37 24.3 -0.6**
CRES Cresnjev 86.11 320 *eP* **P 13 37 24.9 +0.1**
LAKA Lakka 86.11 311 P **P 13 37 29.2 +4.2**
BORG Borgarnes 86.12 348 P **P 13 37 25.6 +1.2**
comp=Z,20nm,1.0s,baz=57,slow=2.4,SNR=6.8
BORG LR LR 14 17 57.1
comp=Z,563nm,19.0s,baz=43,slow=37
BORG Borgarnes 86.12 348 PFAKE 13 37 40.0 +16
BORG LR LR
comp=Z,1μm,19.0s
IMMV Iera Moni Meta 86.12 308 P **P 13 37 24.9 -0.2**
JAN Janina 86.13 313 P **P 13 37 25.4 +0.3**
GRA1 Grafenberg Arr 86.15 325 PFAKE 13 37 40.0 +15
GRA1 LR LR
comp=Z,9μm,19.0s
GRFO Grafenberg 86.15 325 PFAKE 13 37 40.0 +15
GRFO LR LR
comp=Z,9μm,18.0s
F10A Beach Ranch, E 86.20 40 PFAKE 13 37 40.0 +15
F10A LR LR
comp=Z,800nm,21.0s
PVO Paravola 86.22 311 P **P 13 37 24.9 -0.6**
OZLJ Ozalj 86.22 320 P **P 13 37 26.1 +0.8**
VLI Veliai 86.23 309 P **P 13 37 24.0 -1.6**
OBKA Obir 86.24 321 *i* PcP **P 13 37 26.5 +0.9**
comp=Z,22nm,0.9s,SNR=8.6
FURI Furi 86.34 278 PFAKE 13 37 40.0 +13
FURI LR LR
comp=Z,1μm,20.0s
GVD Gavdhos 86.36 307 P **P 13 37 26.2 0.0**
HOPS Hopland Field 86.37 48 PFAKE 13 37 40.0 +14
HOPS LR LR
comp=Z,1μm,20.0s
BOJS Bojanci 86.41 320 *i* P **P 13 37 26.9 +0.6**
KTHR Kythira 86.41 309 P **P 13 37 25.6 -0.9**
STON Ston 86.42 317 P **P 13 37 28.0 +1.6**
STON Ston 86.42 317 *eP* **P 13 37 25.2 -1.2**
DRO Drossia 86.44 311 P **P 13 37 27.6 +1.0**
PDO Prodromos 86.46 312 P **P 13 37 25.6 -1.1**
LJU Ljubljana 86.52 321 *eP* **P 13 37 27.2 +0.4**
O03E Paynes Creek 86.53 46 P **P 13 37 27.4 +0.3**
baz=302,SNR=15
IGT Igoumenitsa 86.54 313 P **P 13 37 26.8 -0.3**
RLS Riolos of Patr 86.55 311 P **P 13 37 27.2 +0.1**
KBA Koelnbreinsper 86.58 322 *i* PcP **P 13 37 28.1 +0.8**
comp=Z,56nm,1.1s,SNR=19
AMT Artemida-Makis 86.66 310 P **P 13 37 25.5 -2.2**
GDXM Geysers 86.66 48 PFAKE 13 37 40.0 +12
GDXM LR LR
comp=Z,1μm,18.0s
UDBI Udbina 86.67 319 P **P 13 37 27.8 +0.1**
BIGH Upper Bighouse 86.67 337 *eP* **P 13 37 26.4 -0.9**
BIGH IAmb IAmb 13 37 29.6
comp=Z,103nm,1.2s
BIGH IAMs_20 IAMs_20 14 22 30.0
comp=Z,4μm,16.4s
MYKA Terra Mystica 86.68 321 *i* PcP **P 13 37 28.3 +0.6**
comp=Z,39nm,1.2s
ITM Ithomi 86.69 310 PFAKE 13 37 40.0 +12
ITM LR LR
comp=Z,1μm,22.0s
ITM Ithomi 86.69 310 P **P 13 37 27.2 -0.7**
CEY Cerknica 86.75 320⇑ *iP* **P 13 37 27.8 -0.2**
SFJD Kangerlussuaq 86.75 360 P **P 13 37 27.6 0.0**
comp=Z,40nm,0.9s,baz=1.5,slow=4.5,SNR=11
SFJD Kangerlussuaq 86.75 360 PFAKE 13 37 40.0 +12
SFJD LR LR
comp=Z,2μm,19.0s
SFJD Kangerlussuaq 86.75 360 *i* P **P 13 37 27.4 -0.1**
SFJD MLR MLR
comp=Z,1μm,20.0s
SFJD Kangerlussuaq 86.75 360 *i* P **P 13 37 27.4 -0.1**
comp=Z,1μm,20.0s
BMO Blue Mountains 86.79 41 PFAKE 13 37 40.0 +12
BMO LR LR
comp=Z,700nm,18.0s
KEK Kerkira 86.79 313 P **P 13 37 30.6 +2.3**
EVGI Lefkada island 86.80 312 P **P 13 37 27.7 -0.7**
RIY Rijeka 86.96 320 *eP* **P 13 37 30.0 +1.0**
PYL PYLOS 86.96 310 P **P 13 37 28.0 -1.2**
KFL Anninata 86.98 311 P **P 13 37 29.0 -0.2**
ORV Oroville 87.11 47 PFAKE 13 37 40.0 +10
ORV LR LR
comp=Z,600nm,20.0s
NVLJ Novalja 87.17 319 P **P 13 37 29.5 -0.5**
ABTA Abfaltersbach 87.23 322 *i* PcP **P 13 37 30.8 +0.4**
comp=Z,41nm,0.8s,SNR=20
DRUM Mains of Drumt 87.34 336 *eP* **P 13 37 29.9 -0.7**
WVOR Wild Horse Val 87.36 43 PFAKE 13 37 40.0 +8.8
WVOR LR LR
comp=Z,700nm,19.0s
WATA Walderalm 87.39 323 *i* PcP **P 13 37 31.8 +0.6**
comp=Z,25nm,0.8s,SNR=7.7
WTTA Wattenberg 87.40 323 *i* PcP **P 13 37 31.8 +0.4**
comp=Z,32nm,0.9s,SNR=23
MSO Missoula 87.54 38 PFAKE 13 37 40.0 +8.1
MSO LR LR
comp=Z,600nm,21.0s
MSO Missoula 87.54 38 P **P 13 37 32.4 +0.5**
baz=307,SNR=30
ANGG Ammassalik, Gr 87.56 354 PFAKE 13 37 40.0 +8.6
ANGG LR LR
comp=Z,2μm,18.0s
MOTA Moosalm 87.64 323 *i* PcP **P 13 37 32.8 +0.4**
comp=Z,20nm,0.8s,SNR=11
SQTA Sankt Quirin 87.66 323 *i* PcP **P 13 37 32.7 +0.2**
comp=Z,49nm,1.3s,SNR=11
RETA Reutte 87.74 323 *i* PcP **P 13 37 34.1 +1.3**
comp=Z,29nm,1.3s
STU Stuttgart 87.76 325 PFAKE 13 37 40.0 +7.2
STU LR LR
comp=Z,9μm,18.0s
FCC Fort Churchill 87.81 21 PFAKE 13 37 40.0 +7.2
FCC LR LR
comp=Z,2μm,22.0s
KAC Achnashellach 87.91 337 *eP* **P 13 37 32.9 -0.4**
FFC Flin Flon 88.02 27 *eP* **P 13 37 34.0 +0.1**
comp=Z,222nm,0.9s
FFC LR LR
comp=Z,800nm,19.0s
FFC Flin Flon 88.02 27 *eP* **P 13 37 34.0 +0.1**
FFC pmax pmax
comp=Z,222nm,0.9s
FFC MLR MLR
comp=Z,800nm,19.0s
FETA Feichten 88.04 323 *i* PcP **P 13 37 35.3 +0.9**
comp=Z,31nm,1.2s,SNR=8.6
KPL Plockton 88.15 337 *eP* **P 13 37 34.5 +0.1**
KPL IAMs_20 IAMs_20 14 23 31.9
comp=Z,3μm,15.2s
MEM Membach 88.17 328 x pP 13 37 46.8 +3.4
BEBN Eben Emael 88.20 328 x pP 13 37 46.9 +3.4
RUBR Rubicon Trail 88.27 47 PFAKE 13 37 50.0 +14
RUBR LR LR
comp=Z,1μm,22.0s
INVG Invergeldie, C 88.28 336 IAMs_20 IAMs_20 14 22 43.5
comp=Z,4μm,16.8s
DAVA Damuels 88.33 323 *i* PcP **P 13 37 36.6 +0.9**
comp=Z,21nm,0.5s,SNR=11
EDI Edinburgh 88.34 335 *eP* **P 13 37 35.6 +0.3**
EDI IAMs_20 IAMs_20 14 23 05.4
comp=Z,4μm,14.9s
BSTI Sart Tilman 88.39 328 PcP **P 13 37 36.0 +0.2**
BSTI x x 13 37 40.0
BSTI pP **pP 13 37 41.4 -3.0**
BSTI x x 13 37 51.7
EBL Broad Law 88.40 335 *eP* **P 13 37 35.4 -0.2**
PAHR Pah Rah Range 88.40 46 PFAKE 13 37 50.0 +14
PAHR LR LR
comp=Z,700nm,20.0s
VCNR Virginia City 88.46 46 PFAKE 13 37 50.0 +13
VCNR LR LR
comp=Z,700nm,20.0s
BFO Black Forest 88.49 325 PFAKE 13 37 50.0 +14
BFO LR LR
comp=Z,11μm,18.0s
BFO Black Forest 88.49 325 *i* P **P 13 37 37.4 +1.1**
FUORN Ofenpass-Fuorn 88.54 323 PFAKE 13 37 50.0 +13

FUORN LR LR
comp=Z,13μm,19.0s
EAB Aberfoyle 88.57 336 *eP* **P 13 37 36.2 -0.2**
PNTR Pine Nut 88.61 46 PFAKE 13 37 50.0 +13
PNTR LR LR
comp=Z,900nm,20.0s
BCLA Clavier 88.63 328 sP **sP 13 37 45.6 -3.0**
BCLA x x 13 37 52.6
DAVOX Davos/Dischmat 88.65 323 P **P 13 37 37.0 -0.3**
comp=Z,24nm,0.5s,baz=353,slow=0.4,SNR=20
CMB Columbia Colle 88.67 48 PFAKE 13 37 50.0 +13
CMB LR LR
comp=Z,901nm,22.0s
EDMD Edmundbyers 88.69 334 IAMs_20 IAMs_20 14 23 48.2
comp=Z,7μm,14.8s
WLF Walferdange 88.72 327 PFAKE 13 37 50.0 +13
WLF LR LR
comp=Z,16μm,18.0s
WLF Walferdange 88.72 327 P **P 13 37 36.2 -1.1**
WLF x x 13 37 49.7
EKA Eskdalemuir Ar 88.77 335 P **P 13 37 37.1 -0.4**
comp=Z,3.2nm,0.5s,baz=32,slow=4.8,SNR=10.0
EKA LR LR 14 22 03.7
comp=Z,2μm,19.6s,baz=70,slow=39
ESK Eskdalemuir 88.80 335 PFAKE 13 37 50.0 +12
ESK LR LR
comp=Z,4μm,18.0s
ESK Eskdalemuir 88.80 335 IAMs_20 IAMs_20 14 23 02.0
comp=Z,22μm,17.9s
UCC Uccle 88.82 329 PFAKE 13 37 50.0 +12
UCC LR LR
comp=Z,4μm,22.0s
UCC Uccle 88.82 329 PcP **P 13 37 38.1 +0.4**
UCC x x 13 37 48.7
LAWE Loch Awe, Argy 88.89 336 IAMs_20 IAMs_20 14 24 10.3
comp=Z,4μm,15.3s
YERR Yerington 88.90 46 PFAKE 13 37 50.0 +11
YERR LR LR
comp=Z,1μm,22.0s
BMRD Maredsous 88.96 328 P **P 13 37 37.5 -0.9**
BMRD PcP **PcP 13 37 38.8 -1.1**
BMRD x x 13 37 48.0
EGMT Eagleton 89.02 35 PFAKE 13 37 50.0 +11
EGMT LR LR
comp=Z,700nm,20.0s
EGMT Eagleton 89.02 35 P **P 13 37 39.7 +0.8**
baz=310
WAKR Walker 89.03 47 PFAKE 13 37 50.0 +11
WAKR LR LR
comp=Z,1μm,22.0s
SNF Seneffe 89.05 328 PcP **P 13 37 39.7 +0.9**
SNF x x 13 37 55.8
TIP Timpagrande 89.06 314 PFAKE 13 37 50.0 +11
TIP LR LR
comp=Z,2μm,21.0s
TIP Timpagrande 89.06 314⇓ *iP* **P 13 37 40.2 +1.0**
TUE Stuetta 89.13 323 PFAKE 13 37 50.0 +10
TUE LR LR
comp=Z,13μm,19.0s
ECH Echery 89.16 325 PFAKE 13 37 50.0 +11
ECH LR LR
comp=Z,7μm,19.0s
DLMT Dillon 89.17 38 PFAKE 13 37 50.0 +10
DLMT LR LR
comp=Z,600nm,21.0s
DOU Dourbes 89.18 328 P **P 13 37 39.4 -0.1**
DOU x x 13 37 51.0
HLID Hailey 89.23 41 PFAKE 13 37 50.0 +10
HLID LR LR
comp=Z,600nm,18.0s
HLID Hailey 89.23 41 P **P 13 37 41.7 +1.6**
baz=307
AQU L'Aquila 89.33 318 PFAKE 13 37 50.0 +10
AQU LR LR
comp=Z,6μm,19.0s
AQU L'Aquila 89.33 318 *eP* **P 13 37 41.1 +0.7**
BOZ Bozeman (W) 89.56 38 PFAKE 13 37 50.0 +8.4
BOZ LR LR
comp=Z,800nm,20.0s
BOZ Bozeman (W) 89.56 38 P **P 13 37 42.6 +1.0**
baz=309,SNR=50
RYN Ryan 89.56 46 PFAKE 13 37 50.0 +8.3
RYN LR LR
comp=Z,800nm,21.0s
KVN Kaiserville 89.59 46 PFAKE 13 37 50.0 +8.1
KVN LR LR
comp=Z,700nm,18.0s
GAL1 Galloway 89.71 335 *eP* **P 13 37 41.7 -0.1**
GAL1 IAmb IAmb 13 37 42.9
comp=Z,19nm,1.1s
GAL1 IAMs_20 IAMs_20 14 23 32.6
comp=Z,2μm,17.3s
MDPB Devils Postpil 89.75 47 PFAKE 13 37 50.0 +7.2
MDPB LR LR
comp=Z,800nm,20.0s
NVAR Mina Array Bea 89.81 46 P **P 13 37 44.0 +1.1**
comp=Z,11nm,0.8s,baz=278,slow=5.1,SNR=44
NVAR LR LR 14 11 26.4
comp=Z,693nm,21.9s,baz=293,slow=31
NV11 Mina Array Sit 89.91 46 PFAKE 13 38 00.0 +17
NV11 LR LR
comp=Z,100nm,22.0s
MLAC Mammoth, Mammo 89.91 47 P **P 13 37 44.5 +1.1**
baz=304
VLC Villacollemand 89.99 321 PFAKE 13 37 50.0 +6.6
VLC LR LR
comp=Z,5μm,20.0s
PAGB Antelope Grade 90.01 50 PFAKE 13 38 00.0 +16
PAGB LR LR
comp=Z,2μm,19.0s
ELSH Elham, Standar 90.05 330 IAMs_20 IAMs_20 14 23 26.9
comp=Z,6μm,14.7s
CLGH Cloghs, Cushen 90.06 336 *eP* **P 13 37 42.6 -0.9**
CLGH IAmb IAmb 13 37 47.0
comp=Z,49nm,1.2s
CLGH IAMs_20 IAMs_20 14 22 27.3
comp=Z,3μm,19.5s
CEL Celeste 90.13 314 PFAKE 13 38 00.0 +16
CEL LR LR
comp=Z,2μm,19.0s
VOG Valley Oaks Go 90.28 49 P **P 13 37 44.7 -0.2**
baz=304
SENIN Lac Senin/Sane 90.29 324 PFAKE 13 38 00.0 +15
SENIN LR LR
comp=Z,7μm,19.0s
PPT Papeete 90.37 109 LR LR 14 10 49.5
comp=Z,922nm,20.9s,baz=304,slow=30
PPT2 Papeete2 90.38 109 *eS* **S 13 48 34.0 -4.7**
comp=Z,969nm,26.5s
PPT2 *eSS* **SS 13 54 32.9 -6.8**
comp=Z,448nm,25.0s
PPT2 *eLQ* LQ 14 02 45.2
comp=Z,957nm,27.2s
PPT2 *eLR* LR 14 06 31.4
comp=Z,3μm,28.2s,baz=285
ELK Elko 90.41 43 PFAKE 13 38 00.0 +14
ELK LR LR
comp=Z,800nm,19.0s
SMMC Simmler 90.42 50 P **P 13 37 44.7 -0.9**
baz=303
FOEL Foel Wylfa 90.62 333 IAMs_20 IAMs_20 14 25 15.3
comp=Z,6μm,13.9s
TIN Tinemaha, Big 90.64 48 P **P 13 37 47.4 +0.7**
baz=304
VES Vestal, Richgr 90.74 49 P **P 13 37 47.0 -0.1**
baz=304
PKM Mcpherson Peak 90.77 50 P **P 13 37 48.5 +1.1**
baz=304
H17A Grant Village 90.90 38 PFAKE 13 38 00.0 +12
H17A LR LR
comp=Z,1μm,18.0s
H17A Grant Village 90.90 38 P **P 13 37 51.1 +3.1**
baz=310,SNR=32
STRD Stroud 91.02 332 IAMs_20 IAMs_20 14 25 11.2
comp=Z,4μm,14.2s
FLWY Flagg Ranch 91.03 38 PFAKE 13 38 00.0 +11
FLWY LR LR
comp=Z,500nm,20.0s
CWC Cottonwood Cre 91.08 48 P **P 13 37 49.2 +0.4**
baz=305
SBC Santa Barbara 91.09 50 P **P 13 37 49.6 +0.9**
baz=304
OPO Ambohidratompo 91.10 250 P **P 13 37 49.0 -0.1**
comp=Z,9.0nm,1.0s,baz=358,slow=7.0,SNR=4.9
RLMT Red Lodge 91.15 37 PFAKE 13 38 00.0 +11
RLMT LR LR

comp=Z,800nm,19.0s
RLMT Red Lodge 91.15 37 P **P 13 37 50.4 +1.3**
baz=310,SNR=23
MCH1 Michaelchurch 91.20 333 IAMs_20 IAMs_20 14 24 05.7
comp=Z,4μm,17.4s
MOOW Moose Ponds 91.21 39 PFAKE 13 38 00.0 +11
MOOW LR LR
comp=Z,600nm,22.0s
GRAC Grapevine Rang 91.24 47 P **P 13 37 50.7 +1.3**
baz=305,SNR=8.2
ISA Isabella, Lake 91.25 49 PFAKE 13 38 00.0 +10
ISA LR LR
comp=Z,1μm,20.0s
ISA Isabella, Lake 91.25 49 P **P 13 37 49.7 +0.1**
baz=304
TPAW Teton Pass 91.26 39 PFAKE 13 38 00.0 +10
TPAW LR LR
comp=Z,600nm,20.0s
ABPO Ambohimpanom 91.27 249 *e*P **P 13 37 49.9 0.0**
comp=Z,151nm,1.8s
ABPO LR LR
comp=Z,2μm,21.0s
ABPO Ambohimpanom 91.27 249 *e*P **P 13 37 49.9 0.0**
ABPO pmax pmax
comp=Z,151nm,1.8s
ABPO MLR MLR
comp=Z,2μm,21.0s
ARVC Arvin 91.31 49 P **P 13 37 50.0 +0.3**
baz=304
LOHW Long Hollow 91.38 39 PFAKE 13 38 00.0 +10
LOHW LR LR
comp=Z,500nm,18.0s
SCZ2 Santa Cruz Isl 91.39 51 P **P 13 37 50.5 +0.4**
baz=304
SNOW Snow King Moun 91.39 39 PFAKE 13 38 00.0 +10
SNOW LR LR
comp=Z,600nm,19.0s
REDW Red Top Meadow 91.40 39 PFAKE 13 38 00.0 +10
REDW LR LR
comp=Z,600nm,19.0s
BNI Bardonecchia 91.47 323 PFAKE 13 38 00.0 +10
BNI LR LR
comp=Z,9μm,18.0s
DGMT Dagmar 91.47 32 PFAKE 13 38 00.0 +10
DGMT LR LR
comp=Z,1μm,20.0s
DGMT Dagmar 91.47 32 P **P 13 37 51.1 +0.9**
baz=314
DAC Darwin (Calif) 91.50 48 PFAKE 13 38 00.0 +9.2
DAC LR LR
comp=Z,900nm,19.0s
DSB Dublin 91.59 335 PFAKE 13 38 00.0 +9.4
DSB LR LR
comp=Z,4μm,18.0s
R11A Troy Canyon, C 91.61 45 PFAKE 13 38 00.0 +8.7
R11A LR LR
comp=Z,800nm,22.0s
R11A Troy Canyon, C 91.61 45 P **P 13 37 52.3 +1.1**
baz=306
AHID Auburn Hatcher 91.63 40 PFAKE 13 38 00.0 +8.7
AHID LR LR
comp=Z,700nm,18.0s
OSI Osito Audit: C 91.67 50 PFAKE 13 38 00.0 +8.5
OSI LR LR
comp=Z,2μm,20.0s
OSI Osito Audit: C 91.67 50 P **P 13 37 52.4 +0.9**
baz=304
MPMC Manual Prospec 91.69 48 P **P 13 37 52.7 +0.9**
baz=305,SNR=15
LAO LASA Array 91.70 34 PFAKE 13 38 00.0 +8.6
LAO LR LR
comp=Z,800nm,19.0s
LAO LASA Array 91.70 34 P **P 13 37 52.5 +1.2**
baz=313
BLG Laguna Peak, P 91.72 50 P **P 13 37 51.9 +0.3**
baz=304
CLF Chambon-Foret 91.72 327 PFAKE 13 38 00.0 +8.7
CLF LR LR
comp=Z,4μm,20.0s
FURC Furnace Creek, 91.87 47 P **P 13 37 53.4 +1.2**
baz=305,SNR=15
SNCC San Nicolas Is 91.88 51 P **P 13 37 52.6 +0.2**
baz=304
LRMC Laurel Mtn Rad 91.89 49 P **P 13 37 53.2 +0.6**
baz=305
TPNV Topopah Spring 92.00 47 PFAKE 13 38 00.0 +6.9
TPNV LR LR
comp=Z,700nm,19.0s
TPNV Topopah Spring 92.00 47 P **P 13 37 54.2 +1.1**
baz=306,SNR=43
EDW2 Edwards Air Fo 92.02 49 P **P 13 37 54.0 +1.0**
baz=305,SNR=11
KMBO Kilima Mbogo 92.03 270 P **P 13 37 54.0 +0.3**
comp=Z,5.9nm,0.9s,baz=46,slow=8.5,SNR=14
KMBO PP **PP 13 41 32.1 -1.5**
comp=Z,3.1nm,0.9s,baz=57,slow=8.9,SNR=4.8
KMBO LR LR 14 22 55.1
comp=Z,683nm,18.7s,baz=67,slow=38
KMBO Kilima Mbogo 92.03 270 PFAKE 13 38 00.0 +6.3
KMBO LR LR
comp=Z,1μm,19.0s
KMBO Kilima Mbogo 92.03 270 *i* P **P 13 37 54.4 +0.8**
SNR=7.1
HWUT Hardware Ranch 92.09 41 PFAKE 13 38 10.0 +17
HWUT LR LR
comp=Z,700nm,22.0s
DECC Green Verdugo 92.14 50 P **P 13 37 53.8 +0.2**
baz=304
DUG Dugway, Tooele 92.22 42 PFAKE 13 38 10.0 +16
DUG LR LR
comp=Z,700nm,20.0s
DUG Dugway, Tooele 92.22 42 P **P 13 37 55.5 +1.5**
baz=308
CLTB Caltabellotta 92.25 314 PFAKE 13 38 10.0 +16
CLTB LR LR
comp=Z,2μm,18.0s
PASC Pasadena Art C 92.29 50 PFAKE 13 38 10.0 +16
PASC LR LR
comp=Z,2μm,19.0s
MWC Mount Wilson 92.34 50 PFAKE 13 38 10.0 +15
MWC LR LR
comp=Z,2μm,19.0s
WDD Wied Dalam 92.41 312 PFAKE 13 38 10.0 +15
WDD LR LR
comp=Z,1μm,21.0s
SSB Saint Sauveur 92.45 324 PFAKE 13 38 10.0 +15
SSB LR LR
comp=Z,3μm,21.0s
FMP Fort Macarthur 92.47 50 P **P 13 37 55.7 +0.6**
baz=304
NRS Narsarsuaq 92.50 357 PFAKE 13 38 10.0 +15
NRS LR LR
comp=Z,1μm,21.0s
NAI Nairobi 92.50 270 PFAKE 13 38 10.0 +14
NAI LR LR
comp=Z,1μm,20.0s
BW06 Boulder Array 92.51 39 PFAKE 13 38 10.0 +15
BW06 LR LR
comp=Z,700nm,22.0s
BW06 Boulder Array 92.51 39 P **P 13 37 55.9 +0.4**
baz=310
PDAR Pinedale Array 92.51 39 P **P 13 37 55.9 +0.5**
comp=Z,20nm,1.1s,baz=318,slow=2.0,SNR=62
PDAR PP PP 13 41 27.7 -8.4
comp=Z,0.9nm,0.7s,baz=327,slow=2.5,SNR=3.9
IVI Ivigtut 92.54 359 PFAKE 13 38 10.0 +15
IVI LR LR
comp=Z,2μm,18.0s
CIS Catalina Islan 92.56 51 P **P 13 37 56.1 +0.5**
baz=304
GSC Goldstone, Bar 92.58 48 PFAKE 13 38 10.0 +14
GSC LR LR
comp=Z,800nm,20.0s
GSC Goldstone, Bar 92.58 48 P **P 13 37 56.7 +1.0**
baz=305,SNR=30
SHOC Shoshone, Teco 92.59 48 P **P 13 37 56.5 +0.9**
baz=306
PSUT Pine Spring 92.59 44 *e*P **P 13 37 55.9 +0.1**
comp=Z,24nm,0.9s
BFSC Mount Baldy Ra 92.61 50 P **P 13 37 56.3 +0.4**
baz=305,SNR=11
RRX Edison Barstow 92.70 49 P **P 13 37 57.0 +0.9**
baz=305
SCI2 San Clemente I 92.70 51 P **P 13 37 56.6 +0.4**
baz=304
SHPR Sheep Range 92.97 47 *e*P **P 13 37 59.1 +1.6**
comp=Z,42nm,1.0s
TUQ Turquoise Moun 93.09 48 P **P 13 37 59.3 +1.2**
baz=306,SNR=8.9
BBRC Big Bear Solar 93.10 49 P **P 13 37 59.0 +0.7**
baz=305
HEC Hector,Ludlow 93.17 48 P **P 13 37 59.6 +1.2**
baz=306,SNR=23
MURC Murrieta 93.29 50 P **P 13 37 59.8 +0.9**
baz=305,SNR=6.4
CASY Casey 93.59 187 *e*P **P 13 37 59.6 +0.3**
comp=Z,28nm,1.1s
GMRC Granite Mounta 93.64 48 P **P 13 38 01.7 +1.0**
baz=306,SNR=35
109C Camp Elliot, M 93.76 50 P **P 13 38 01.6 +0.6**
baz=305
CPE Camp Elliot 93.76 50 PFAKE 13 38 10.0 +9.0
CPE LR LR
comp=Z,800nm,20.0s
PFO Pinyon Flats O 93.78 50 *e*P **P 13 38 02.3 +0.9**
comp=Z,70nm,1.0s
PFO LR LR
comp=Z,2μm,20.0s
PFO Pinyon Flats O 93.78 50 *e*P **P 13 38 02.3 +0.9**
PFO pmax pmax
comp=Z,70nm,1.0s
PFO MLR MLR
comp=Z,2μm,20.0s
PFO Pinyon Flats O 93.78 50 P **P 13 38 02.2 +0.9**
baz=305,SNR=52
LDFC Landfair 93.84 48 PFAKE 13 38 10.0 +8.5
LDFC LR LR
comp=Z,800nm,20.0s
ULM Lac du Bonnet 93.84 27 P **P 13 38 01.2 +0.1**
comp=Z,52nm,0.9s,baz=324,slow=5.5,SNR=25
ULM LR LR 14 22 03.2
comp=Z,722nm,20.5s,baz=340,slow=37
ULM Lac du Bonnet 93.84 27 PFAKE 13 38 10.0 +8.9
ULM LR LR
comp=Z,800nm,21.0s
BELC Belle Mtn. Jos 93.87 49 P **P 13 38 02.5 +0.7**
baz=306,SNR=25
MDND Maddock 94.06 30 PFAKE 13 38 10.0 +7.8
MDND LR LR
comp=Z,1μm,20.0s
MDND Maddock 94.06 30 P **P 13 38 02.9 +0.7**
baz=318
BAR Barrett 94.17 50 PFAKE 13 38 10.0 +7.0
BAR LR LR
comp=Z,900nm,21.0s
MONP2 Monument Peak 94.22 50 P **P 13 38 04.5 +1.0**
baz=305,SNR=31
K22A Casper 94.27 38 P **P 13 38 03.3 -0.1**
baz=312
NEE2 Needles Airpor 94.35 48 P **P 13 38 04.7 +1.0**
baz=307
IRM Iron Mountain 94.36 48 P **P 13 38 05.1 +1.3**
baz=306,SNR=31
BC3 Big Chuckawall 94.44 49 P **P 13 38 05.5 +1.2**
baz=306,SNR=26
RWWY Rawlins 94.53 39 PFAKE 13 38 20.0 +15
RWWY LR LR
comp=Z,800nm,19.0s
IKP In-Ko-Pah, Jac 94.58 50 P **P 13 38 06.2 +1.3**
baz=306,SNR=19
RSSD Black Hills 94.58 35 *e*P **P 13 38 05.6 +0.7**
comp=Z,19nm,0.9s
RSSD Black Hills 94.58 35 *e*P **P 13 38 05.6 +0.7**
RSSD pmax pmax
comp=Z,19nm,0.9s
RSSD Black Hills 94.58 35 P **P 13 38 05.4 +0.5**
baz=314
SWSC Sam W. Stewart 94.62 50 P **P 13 38 05.9 +0.9**
baz=306,SNR=5.2
W13A Hualapai Mount 94.63 47 PFAKE 13 38 20.0 +15
W13A LR LR
comp=Z,900nm,19.0s
TAOE Nuku Hiva Isla 94.68 98 *e*SS SS 13 55 35.3 -6.3
comp=Z,377nm,24.8s
TAOE Nuku Hiva Isla 94.68 98 *e*LR LR 14 08 36.3
comp=Z,2μm,25.1s,baz=305
U15A North Rim 94.86 45 PFAKE 13 38 20.0 +14
U15A LR LR
comp=Z,500nm,19.0s
PDMCI Parker Dam,Lak 94.94 48 P **P 13 38 07.5 +1.0**
baz=307,SNR=16
O20A White River Ci 94.97 40 PFAKE 13 38 20.0 +13
O20A LR LR
comp=Z,800nm,22.0s
O20A White River Ci 94.97 40 P **P 13 38 07.1 +0.4**
baz=311
Y12C Blythe 95.01 48 P **P 13 38 07.0 +0.2**
baz=307,SNR=9.7
GLA Glamis 95.22 49 PFAKE 13 38 20.0 +12
GLA LR LR
comp=Z,1μm,20.0s
GLA Glamis 95.22 49 P **P 13 38 09.1 +1.3**
baz=306,SNR=14
AGMN Agassiz Nation 95.36 28 PFAKE 13 38 20.0 +12
AGMN LR LR
comp=Z,1μm,20.0s
AGMN Agassiz Nation 95.36 28 P **P 13 38 07.8 -0.3**
baz=321
PV14 Lion Creek, Pa 95.65 42 PFAKE 13 38 20.0 +10
PV14 LR LR
comp=Z,700nm,19.0s
PV19 Morning Glory 95.72 42 PFAKE 13 38 20.0 +10
PV19 LR LR
comp=Z,500nm,21.0s
PHWY Pilot Hill 95.77 38 PFAKE 13 38 20.0 +10
PHWY LR LR
comp=Z,600nm,20.0s
N23A Red Feather La 95.77 39 PFAKE 13 38 20.0 +10
N23A LR LR
comp=Z,600nm,19.0s
N23A Red Feather La 95.77 39 P **P 13 38 11.4 +0.9**
baz=313
PV12 Saucer Basin, 95.82 42 PFAKE 13 38 20.0 +9.3
PV12 LR LR
comp=Z,600nm,22.0s
KEST Kesra 95.84 315 P **P 13 38 11.1 +0.5**
comp=Z,10nm,0.9s,baz=317,slow=4.5,SNR=10
KEST LR LR 14 26 42.2
comp=Z,2μm,19.0s,baz=334,slow=39
KEST Kesra 95.84 315 PFAKE 13 38 20.0 +9.3
KEST LR LR
comp=Z,2μm,19.0s
PV02 Paradox Valley 95.93 42 PFAKE 13 38 20.0 +8.8
PV02 LR LR
comp=Z,1μm,20.0s
WUAZ Wupatki 96.00 45 PFAKE 13 38 20.0 +8.5
WUAZ LR LR
comp=Z,600nm,19.0s
WUAZ Wupatki 96.00 45 P **P 13 38 12.3 +0.8**
baz=309
113A Mohawk Valley, 96.11 49 PFAKE 13 38 20.0 +8.2
113A LR LR
comp=Z,2μm,20.0s
ISCO Idaho Springs 96.70 39 PFAKE 13 38 30.0 +15
ISCO LR LR
comp=Z,900nm,21.0s
ISCO Idaho Springs 96.70 39 P **P 13 38 15.0 +0.2**
baz=313
MVCO Mesa Verde 96.72 43 PFAKE 13 38 30.0 +15
MVCO LR LR
comp=Z,700nm,20.0s
MVCO Mesa Verde 96.72 43 P **P 13 38 15.4 +0.6**
baz=311
SUSD Miller 96.89 32 P **P 13 38 15.4 +0.3**
baz=318
214A Organ Pipe Nat 97.24 49 P Pdif 13 38 18.0 +1.0
baz=308
W18A Petrified Fore 97.30 45 PFAKE 13 38 30.0 +13
W18A LR LR
comp=Z,900nm,19.0s
W18A Petrified Fore 97.30 45 P Pdif 13 38 18.3 +0.9
baz=310
S22A 4UR Ranch, Cre 97.37 41 PFAKE 13 38 30.0 +12
S22A LR LR
comp=Z,800nm,19.0s
EYMN Ely 97.42 26 PFAKE 13 38 30.0 +12
EYMN LR LR
comp=Z,1μm,19.0s
Q24A Divide 97.53 40 PFAKE 13 38 30.0 +11
Q24A LR LR
comp=Z,700nm,21.0s
Q24A Divide 97.53 40 P Pdif 13 38 18.7 +0.1
baz=313
X18A Snowflake 97.53 45 PFAKE 13 38 30.0 +11
X18A LR LR
comp=Z,700nm,22.0s
MBAR Mbarara 97.63 273 PFAKE 13 38 30.0 +11
MBAR LR LR
comp=Z,1μm,19.0s
SCHQ Schefferville 97.83 9 LR LR 14 25 57.6
comp=Z,1μm,20.6s,baz=356,slow=38
SCHQ Schefferville 97.83 9 PFAKE 13 38 30.0 +11
SCHQ LR LR
comp=Z,1μm,20.0s
OGNE Ogallala 97.87 36 PFAKE 13 38 30.0 +10
OGNE LR LR
comp=Z,900nm,19.0s
OGNE Ogallala 97.87 36 P **P 13 38 19.2 -0.6**
baz=316
SDCO Great Sand Dun 98.15 41 PFAKE 13 38 30.0 +8.6
SDCO LR LR
comp=Z,700nm,18.0s
C40A Isle Royale Na 98.35 25 PFAKE 13 38 30.0 +8.4
C40A LR LR
comp=Z,1μm,19.0s
C40A Isle Royale Na 98.35 25 P Pdif 13 38 21.8 +0.2
baz=326
TUC Tucson 98.38 48 PFAKE 13 38 30.0 +7.8
TUC LR LR
comp=Z,2μm,19.0s
TUC Tucson 98.38 48 P Pdif 13 38 23.2 +1.0
baz=309
E38A The Farm, Brul 98.49 27 PFAKE 13 38 30.0 +7.7
E38A LR LR
comp=Z,800nm,18.0s
E38A The Farm, Brul 98.49 27 P Pdif 13 38 22.3 +0.1
baz=324
ECSD EROS Data Cent 98.53 32 PFAKE 13 38 30.0 +7.4
ECSD LR LR
comp=Z,700nm,20.0s
ECSD EROS Data Cent 98.53 32 P Pdif 13 38 22.6 +0.1
baz=320,SNR=7.0
F38A Pierce - Schro 98.88 28 Pdiff **P 13 38 23.7 -0.3**
baz=324
KSCO Kaye Shedlock' 98.91 38 Pdiff **P 13 38 22.7 -1.9**
baz=315
SPMN Marine on St. 99.08 28 PFAKE 13 38 40.0 +15
SPMN LR LR
comp=Z,800nm,20.0s
T25A Trinidad 99.20 41 PFAKE 13 38 40.0 +14
T25A LR LR
comp=Z,600nm,20.0s
T25A Trinidad 99.20 41 Pdiff **Pdif 13 38 25.2 -0.7**
baz=313
D41A Chassel 99.28 25 PFAKE 13 38 40.0 +14
D41A LR LR
comp=Z,1μm,19.0s
F39A Loretta 99.30 27 Pdiff **Pdif 13 38 25.2 -0.7**
baz=325
TASM ASL Pad, Albuq 99.45 43 Pdiff **Pdif 13 38 25.5 -1.6**
baz=312
TASM ASL Pad, Albuq 99.45 43 Pdiff **Pdif 13 38 25.3 -1.8**
baz=312
ANMO Albuquerque 99.45 43 PFAKE 13 38 40.0 +13
ANMO LR LR
comp=Z,700nm,19.0s
ANMO Albuquerque 99.45 43 Pdiff **Pdif 13 38 25.3 -1.7**
baz=312
BGNE Belgrade 99.54 34 PFAKE 13 38 40.0 +13
BGNE LR LR
comp=Z,900nm,20.0s
BGNE Belgrade 99.54 34 Pdiff **Pdif 13 38 25.3 -1.8**
baz=319
F40A Park Falls 99.62 27 Pdiff **Pdif 13 38 26.6 -0.8**
baz=325
G39A Holcombe 99.71 27 Pdiff **Pdif 13 38 26.5 -1.3**
baz=324
Y22D IRIS PASSCAL I 99.74 44 PFAKE 13 38 40.0 +12
Y22D LR LR
comp=Z,900nm,18.0s
COWI Conover 99.86 26 PFAKE 13 38 40.0 +12
COWI LR LR
comp=Z,1μm,19.0s
319A Douglas 99.96 48 PFAKE 13 38 40.0 +11
319A LR LR
comp=Z,1μm,20.0s
G40A Rib Lake 100.12 27 PFAKE 13 38 40.0 +10
G40A LR LR
comp=Z,1μm,18.0s
G40A Rib Lake 100.12 27 Pdiff **Pdif 13 38 29.9 +0.3**
baz=325
121A Cookes Peak, D 100.20 46 Pdiff **Pdif 13 38 31.0 +0.6**
baz=311
HSIG 100.30 50 PFAKE 13 38 40.0 +9.3
HSIG LR LR
comp=Z,800nm,20.0s
SRIG Santa Rosalia 100.43 52 PFAKE 13 38 40.0 +8.7
SRIG LR LR
comp=Z,1μm,22.0s
MATQ Matagami 100.44 17 Pdiff **Pdif 13 38 29.7 -1.2**
baz=336
E43A Lone Tree Farm 100.45 24 PFAKE 13 38 40.0 +9.0
E43A LR LR
comp=Z,900nm,20.0s
E43A Lone Tree Farm 100.45 24 Pdiff **Pdif 13 38 29.5 -1.5**
baz=328
F42A Maple Grove Fa 100.53 25 Pdiff **Pdif 13 38 31.0 -0.4**
baz=327
G41A Antigo 100.58 26 Pdiff **Pdif 13 38 31.4 -0.3**
baz=326
CBKS Cedar Bluff 100.63 37 PFAKE 13 38 40.0 +8.0
CBKS LR LR
comp=Z,800nm,20.0s
E44A Grand Marais A 100.63 24 PFAKE 13 38 40.0 +8.2
E44A LR LR
comp=Z,1μm,20.0s
E44A Grand Marais A 100.63 24 Pdiff **Pdif 13 38 31.9 +0.1**
baz=329
ESDC Sonseca Array 100.85 325 P **Pdif 13 38 31.9 -1.2**
comp=Z,1.8nm,0.8s,baz=38,slow=4.6,SNR=8.8
ESDC PP **PP 13 42 39.2 -1.0**
comp=Z,1.5nm,0.9s,baz=54,slow=8.8,SNR=4.9
ESDC PKKPab PKKPab 13 55 11.0
comp=Z,0.1nm,0.3s,baz=267,slow=4.2,SNR=5.4
ESDC PKPPKP 14 02 58.1
comp=Z,0.2nm,0.3s,baz=0.0,slow=1.6,SNR=4.3
ESLA Sonseca Array 100.85 325 PFAKE 13 38 40.0 +7.0
ESLA LR LR
comp=Z,5μm,18.0s
CHGQ Chibougamau 101.11 15 Pdiff **Pdif 13 38 32.3 -1.6**
baz=339
PAB San Pablo 101.15 325 PFAKE 13 38 50.0 +16
PAB LR LR
comp=Z,6μm,18.0s
PGAV Gavieira, Arco 101.21 329 *e*PP **PP 13 42 44.1 +1.3**
PGAV Gavieira, Arco 101.21 329 *e*LQ LQ 14 18 47.6
PGAV *e*LR LR 14 20 45.3
comp=Z,4μm,18.0s
D47A Chapleau 101.23 22 Pdiff **Pdif 13 38 32.9 -1.6**
baz=331
MVO Moncorvo 101.25 328 *e*PP **PP 13 42 44.1 +1.0**
MVO *e*S **SKSac 13 49 12.8 +0.6**
MVO *e*SS **SS 13 57 17.7 +6.6**
MVO Moncorvo 101.25 328 *e*LR LR 14 19 03.0
comp=Z,5μm,18.0s
I41A Arkdale 101.25 27 PFAKE 13 38 50.0 +15
I41A LR LR
comp=Z,1μm,18.0s
I41A Arkdale 101.25 27 Pdiff **Pdif 13 38 32.8 -1.8**
baz=325
LSQQ Lebel-sur-Quev 101.25 17 Pdiff **Pdif 13 38 33.7 -0.8**
baz=337
E46A Sault Ste Mari 101.42 23 PFAKE 13 38 50.0 +15
E46A LR LR
comp=Z,900nm,22.0s
E46A Sault Ste Mari 101.42 23 Pdiff **Pdif 13 38 34.2 -1.2**
baz=330
H42A Shiocton 101.42 26 PFAKE 13 38 50.0 +15
H42A LR LR
comp=Z,1μm,19.0s
POLO Lamas de Olo 101.45 328 *e*PP **PP 13 42 47.7 +3.1**
EPT El Paso 101.51 46 PFAKE 13 38 50.0 +14
EPT LR LR
comp=Z,800nm,20.0s
SCIA State Center 101.52 31 PFAKE 13 38 50.0 +14
SCIA LR LR
comp=Z,900nm,19.0s
E47A Iron Bridge 101.69 22 Pdiff **Pdif 13 38 35.9 -0.6**
baz=331
H43A Windswept, Lux 101.75 26 PFAKE 13 38 50.0 +13

H43A LR LR
comp=Z,900nm,21.0s
H43A Windswept, Lux 101.75 26 Pdiff **Pdif 13 38 35.2 -1.7**
baz=327
I42A Draeger Farm, 101.78 27 PFAKE 13 38 50.0 +13
I42A LR LR
comp=Z,1μm,20.0s
VLDQ Val d'Or 101.99 18 PFAKE 13 38 50.0 +12
VLDQ LR LR
comp=Z,1μm,20.0s
JFWS Jewell Farm 102.03 28 PFAKE 13 38 50.0 +12
JFWS LR LR
comp=Z,1μm,21.0s
JFWS Jewell Farm 102.03 28 Pdiff **Pdif 13 38 36.2 -1.9**
baz=325
KSU1 Kansas State U 102.05 35 PFAKE 13 38 50.0 +12
KSU1 LR LR
comp=Z,1μm,21.0s
KSU1 Kansas State U 102.05 35 Pdiff **Pdif 13 38 36.7 -1.6**
baz=319
G45A Suttons Bay 102.08 24 PFAKE 13 38 50.0 +12
G45A LR LR
comp=Z,1μm,21.0s
G45A Suttons Bay 102.08 24 Pdiff **Pdif 13 38 35.3 -2.9**
baz=329
MTE Manteigas 102.09 327 *e*PP **PP 13 42 53.0 +3.6**
MTE *e*S **SKSac 13 49 22.9 +6.7**
MTE *e*SS **SS 13 57 28.8 +6.0**
MTE Manteigas 102.09 327 *e*LR LR 14 18 54.1
comp=Z,5μm,20.0s
MTE Manteigas 102.09 327 PFAKE 13 38 50.0 +11
MTE LR LR
comp=Z,5μm,19.0s
MNTX Cornudas Mount 102.28 45 PFAKE 13 38 50.0 +11
MNTX LR LR
comp=Z,700nm,19.0s
MNTX Cornudas Mount 102.28 45 Pdiff **Pdif 13 38 39.4 -0.1**
baz=312
L40A Anamosa 102.30 29 PFAKE 13 38 50.0 +11
L40A LR LR
comp=Z,1μm,21.0s
L40A Anamosa 102.30 29 Pdiff **Pdif 13 38 38.9 -0.4**
baz=324
MSTX Muleshoe 102.35 42 Pdiff **Pdif 13 38 39.2 -0.7**
baz=314
AMTX Amarillo 102.35 41 PFAKE 13 38 50.0 +10
AMTX LR LR
comp=Z,1μm,19.0s
K42A Prairie Point, 102.52 28 Pdiff **Pdif 13 38 39.7 -0.6**
baz=326
GLMI Grayling 102.64 24 PFAKE 13 38 50.0 +9.2
GLMI LR LR
comp=Z,800nm,19.0s
COI Coimbra 102.65 328 *e*PP **PP 13 42 56.6 +3.0**
COI Coimbra 102.65 328 PFAKE 13 38 50.0 +9.1
COI LR LR
comp=Z,6μm,18.0s
I45A Fountain 102.71 25 PFAKE 13 38 50.0 +8.9
I45A LR LR
comp=Z,900nm,21.0s
PMRV Marv??o 102.77 327 *e*PP **PP 13 42 57.0 +2.5**
PMRV Marv??o 102.77 327 *e*SS SS 13 57 35.9 +3.8
PMRV Marv??o 102.77 327 *e*LQ LQ 14 18 00.3
PMRV *e*LR LR 14 21 04.7
comp=Z,6μm,18.0s
U32A Winter Ranch, 102.80 38 PFAKE 13 38 50.0 +8.3
U32A LR LR
comp=Z,900nm,20.0s
D53A Lac Vacive, Po 102.86 18 PFAKE 13 38 50.0 +8.2
D53A LR LR
comp=Z,1μm,19.0s
K43A Burlington 103.00 27 PFAKE 13 38 50.0 +7.6
K43A LR LR
comp=Z,1μm,19.0s
L42A Oliver, Polo 103.02 29 PFAKE 13 38 50.0 +7.5
L42A LR LR
comp=Z,1μm,21.0s
J45A Montague 103.16 26 PFAKE 13 38 50.0 +6.9
J45A LR LR
comp=Z,1μm,19.0s
H48A Harrisville 103.21 23 PFAKE 13 38 50.0 +6.7
H48A LR LR
comp=Z,1μm,21.0s
I47A Gladwin 103.37 24 PFAKE 13 39 00.0 +16
I47A LR LR
comp=Z,900nm,21.0s
N41A Harden Midland 103.55 30 PFAKE 13 39 00.0 +15
N41A LR LR
comp=Z,1μm,19.0s
J47A Sunmer 103.93 25 PFAKE 13 39 00.0 +13
J47A LR LR
comp=Z,1μm,20.0s
I49A Point Hope 104.05 23 PFAKE 13 39 00.0 +13
I49A LR LR
comp=Z,900nm,21.0s
WMOK Wichita Mounta 104.12 39 PFAKE 13 39 00.0 +12
WMOK LR LR
comp=Z,800nm,20.0s
M44A Midewin, Midew 104.21 28 PFAKE 13 39 00.0 +12
M44A LR LR
comp=Z,900nm,19.0s
J48A Bridge Port 104.26 24 PFAKE 13 39 00.0 +12
J48A LR LR
comp=Z,900nm,18.0s
PNCL Nicolau / Gran 104.35 327 *e*PP **PP 13 43 05.0 -1.2**
HDIL Hopedale 104.36 29 PFAKE 13 39 00.0 +11
HDIL LR LR
comp=Z,900nm,20.0s
L46A Eue Claire 104.40 26 PFAKE 13 39 00.0 +11
L46A LR LR
comp=Z,900nm,20.0s
SFS San Fernando 104.43 324 PFAKE 13 39 00.0 +11
SFS LR LR
comp=Z,4μm,18.0s
PCVE Castro Verde 104.47 326 *e*PP **PP 13 43 06.8 -0.4**
PVAQ Vaqueiros 104.49 326 *e*PP **PP 13 43 09.1 +1.7**
PVAQ *e*S **SKSac 13 49 33.2 +5.9**
PVAQ Vaqueiros 104.49 326 *e*LQ LQ 14 18 03.2
PVAQ *e*LR LR 14 19 35.2
comp=Z,3μm,18.0s
PVAQ Vaqueiros 104.49 326 PFAKE 13 39 00.0 +11
PVAQ LR LR
comp=Z,4μm,18.0s
SADO Sadowa 104.53 20 PFAKE 13 39 00.0 +11
SADO LR LR
comp=Z,2μm,21.0s
PBDV Barranco-do-Ve 104.72 326 *e*PP **PP 13 43 12.4 +3.3**
TUL1 Leonard 104.88 36 PFAKE 13 39 00.0 +9.0
TUL1 LR LR
comp=Z,1μm,22.0s
M46A Old House Fiel 104.89 27 PFAKE 13 39 00.0 +9.1
M46A LR LR
comp=Z,900nm,18.0s
PLVO Plevna 104.91 19 PFAKE 13 39 00.0 +9.1
PLVO LR LR
comp=Z,1μm,20.0s
LTX Lajitas 104.96 46 *e*Pdif **Pdif 13 38 52.7 +1.1**
LTX Lajitas 104.96 46 *e*P **Pdif 13 38 52.7 +1.1**
TXAR Lajitas Array 104.96 46 Pdiff **Pdif 13 38 52.7 +1.1**
comp=Z,1.0nm,0.8s,baz=281,slow=2.5,SNR=9.2
PP **PKiKP 13 43 03.4 -3.1**
comp=Z,1.1nm,1.0s,baz=303,slow=7.0,SNR=4.3
TXAR PKKPab **PKKPab 13 54 50.3 -3.5**
comp=Z,1.1nm,1.0s,baz=146,slow=6.9,SNR=4.2
RKT Rikitea 105.11 109 *e*LR LR 14 13 05.6
comp=Z,2μm,32.2s
K50A Casco 105.14 24 PFAKE 13 43 20.0 +14
K50A LR LR
comp=Z,800nm,20.0s
ABTX Abilene, Hawle 105.15 41 PFAKE 13 43 20.0 +13
ABTX LR LR
comp=Z,800nm,20.0s
AAM Ann Arbor 105.17 24 PFAKE 13 43 20.0 +14
AAM LR LR
comp=Z,1μm,19.0s
DELO Deloro Mine 105.22 19 PFAKE 13 43 20.0 +14
DELO LR LR
comp=Z,2μm,19.0s
HPIG 105.23 49 PFAKE 13 43 20.0 +13
HPIG LR LR
comp=Z,1μm,20.0s
PFVI Vila Bisbo 105.26 326 PFAKE 13 43 20.0 +13
PFVI LR LR
comp=Z,3μm,19.0s
BATG Bathurst New B 105.28 11 PFAKE 13 43 20.0 +14
BATG LR LR
comp=Z,1μm,22.0s
SFIN Lafayette 105.45 28 PFAKE 13 43 20.0 +13
SFIN LR LR
comp=Z,900nm,20.0s
M48A Edgerton 105.47 26 PFAKE 13 43 20.0 +13
M48A LR LR
comp=Z,1μm,21.0s
CCM Cathedral Cave 105.50 32 PFAKE 13 43 20.0 +13
CCM LR LR
comp=Z,1μm,19.0s
PQI Presque Isle 105.53 12 PFAKE 13 43 20.0 +13
PQI LR LR
comp=Z,2μm,20.0s
HHAR Hobbs 105.56 35 PFAKE 13 43 20.0 +13
HHAR LR LR
comp=Z,1μm,22.0s
VNDA Vanda 105.67 173 PKKPbc PKKPbc 13 54 30.3 -2.5
comp=Z,0.8nm,0.9s,baz=219,slow=1.7,SNR=4.8
MAW Mawson 105.75 201 PKKPbc PKKPbc 13 54 29.2 -3.2
comp=Z,4.3nm,0.9s,baz=273,slow=7.6,SNR=7.3
P45A Graceland, Par 105.88 29 PFAKE 13 43 20.0 +12
P45A LR LR
comp=Z,900nm,22.0s
PECO Prince Edward 105.94 19 PFAKE 13 43 20.0 +12
PECO LR LR
comp=Z,1μm,20.0s
FVM French Village 105.94 31 PFAKE 13 43 20.0 +12
FVM LR LR
comp=Z,900nm,21.0s
LONY Lake Ozonia 105.98 17 PFAKE 13 43 20.0 +12
LONY LR LR
comp=Z,900nm,21.0s
J54A Appleton 106.04 21 PFAKE 13 43 20.0 +12
J54A LR LR
comp=Z,2μm,19.0s
FRNY Flat Rock 106.04 16 PFAKE 13 43 20.0 +12
FRNY LR LR
comp=Z,900nm,18.0s
X37A Clayton 106.11 37 PFAKE 13 43 20.0 +12
X37A LR LR
comp=Z,1μm,20.0s
LSZ Lusaka 106.14 261 PFAKE 13 43 20.0 +11
LSZ LR LR
comp=Z,2μm,19.0s
N49A Columbus Grove 106.16 26 PFAKE 13 43 20.0 +12
N49A LR LR
comp=Z,2μm,22.0s
M50A Fremont 106.18 25 PFAKE 13 43 20.0 +12
M50A LR LR
comp=Z,1μm,20.0s
MEDO Medina 106.19 21 PFAKE 13 43 20.0 +12
MEDO LR LR
comp=Z,2μm,20.0s
J55A Hilton 106.30 20 PFAKE 13 43 20.0 +12
J55A LR LR
comp=Z,2μm,22.0s
OLIL Olney 106.39 29 PFAKE 13 43 20.0 +11
OLIL LR LR
comp=Z,700nm,20.0s
W39A Magazine 106.48 35 PFAKE 13 43 20.0 +11
W39A LR LR
comp=Z,1μm,18.0s
TAM Tamanrasset 106.52 307 PFAKE 13 43 20.0 +10
TAM LR LR
comp=Z,2μm,19.0s
JCT Junction City 106.58 43 PFAKE 13 43 20.0 +11
JCT LR LR
comp=Z,600nm,20.0s
PKME Peaks-Kenny Pk 106.63 13 PFAKE 13 43 20.0 +11
PKME LR LR
comp=Z,1μm,21.0s
ERPA Erie 106.63 22 PFAKE 13 43 20.0 +11
ERPA LR LR
comp=Z,900nm,19.0s
RTC Rabat Centre 106.65 323 PFAKE 13 43 20.0 +11
RTC LR LR
comp=Z,5μm,22.0s
M52A Chesterland 106.67 23 PFAKE 13 43 20.0 +11
M52A LR LR
comp=Z,1μm,19.0s
BLO Bloomington 106.70 28 PFAKE 13 43 20.0 +11
BLO LR LR
comp=Z,800nm,22.0s
SIUC Southern Illin 106.72 31 PFAKE 13 43 20.0 +11
SIUC LR LR
comp=Z,900nm,19.0s
VT1 Waterbury 106.72 16 PFAKE 13 43 20.0 +11
VT1 LR LR
comp=Z,1μm,19.0s
O49A Covington 106.73 26 PFAKE 13 43 20.0 +11
O49A LR LR
comp=Z,1μm,20.0s
MMNY Mt. Morris Dam 106.75 20 PFAKE 13 43 20.0 +11
MMNY LR LR
comp=Z,2μm,21.0s
N51A Ashland 106.85 24 PFAKE 13 43 20.0 +11
N51A LR LR
comp=Z,700nm,20.0s
LMN Caledonia Moun 106.87 10 PFAKE 13 43 20.0 +11
LMN LR LR
comp=Z,2μm,20.0s
WHTX Lake Whitney, 106.88 40 PFAKE 13 43 20.0 +10
WHTX LR LR
comp=Z,900nm,20.0s
PBMO Poplar Bluff 106.91 32 PFAKE 13 43 20.0 +10
PBMO LR LR
comp=Z,800nm,20.0s
ALLY Alegheny Colle 107.00 22 PFAKE 13 43 20.0 +10
ALLY LR LR
comp=Z,1μm,18.0s
LBNH Lisbon 107.01 16 PFAKE 13 43 20.0 +10
LBNH LR LR
comp=Z,1μm,19.0s
MIAR Mount Ida 107.09 36 PFAKE 13 43 20.0 +10
MIAR LR LR
comp=Z,900nm,20.0s
WHAR Wooly Hollow 107.18 34 PFAKE 13 43 20.0 +10
WHAR LR LR
comp=Z,600nm,20.0s
USIN University of 107.21 30 PFAKE 13 43 20.0 +10
USIN LR LR
comp=Z,700nm,20.0s
ACSO Alum Creek Sta 107.22 25 PFAKE 13 43 20.0 +10
ACSO LR LR
comp=Z,800nm,19.0s
WVL Waterville 107.22 14 PFAKE 13 43 20.0 +10
WVL LR LR
comp=Z,1μm,19.0s
GGN Saint George 107.24 12 PFAKE 13 43 20.0 +10
GGN LR LR
comp=Z,2μm,19.0s
M54A Oil Creek Stat 107.28 22 PFAKE 13 43 20.0 +10
M54A LR LR
comp=Z,1μm,19.0s
W41B Gary Mavity, V 107.29 34 PFAKE 13 43 20.0 +10
W41B LR LR
comp=Z,600nm,21.0s
PARMO Parma 107.32 32 PFAKE 13 43 20.0 +10
PARMO LR LR
comp=Z,1μm,19.0s
ACCN Adirondack Com 107.37 17 PFAKE 13 43 20.0 +10
ACCN LR LR
comp=Z,900nm,20.0s
HNH Hanover 107.43 16 PFAKE 13 43 20.0 +10
HNH LR LR
comp=Z,1μm,20.0s
N53A Lisbon 107.50 23 PFAKE 13 43 20.0 +9.3
N53A LR LR
comp=Z,1μm,18.0s
EMMW East Machias 107.52 12 PFAKE 13 43 20.0 +9.4
EMMW LR LR
comp=Z,2μm,20.0s
X40A Basin Creek Fa 107.53 35 PFAKE 13 43 20.0 +9.1
X40A LR LR
comp=Z,800nm,20.0s
T45A Paducah 107.55 31 PFAKE 13 43 20.0 +9.1
T45A LR LR
comp=Z,1μm,19.0s
UALR University of 107.55 35 PFAKE 13 43 20.0 +9.1
UALR LR LR
comp=Z,1μm,18.0s
WCI Wyandotte Cave 107.59 28 PFAKE 13 43 20.0 +9.1
WCI LR LR
comp=Z,800nm,20.0s
N54A Moraine State 107.66 23 PFAKE 13 43 20.0 +9.0
N54A LR LR
comp=Z,1μm,20.0s
435B Jarrell 107.69 41 PFAKE 13 43 20.0 +8.7
435B LR LR
comp=Z,1μm,19.0s
O52A Adamsville 107.75 24 PFAKE 13 43 20.0 +8.8
O52A LR LR
comp=Z,800nm,20.0s
GNAR Gosnell 107.76 32 PFAKE 13 43 20.0 +8.7
GNAR LR LR
comp=Z,1μm,20.0s
HBAR Harrisburg 107.78 33 PFAKE 13 43 20.0 +8.7
HBAR LR LR
comp=Z,1μm,22.0s
FFD Franklin Falls 107.80 16 PFAKE 13 43 20.0 +8.8
FFD LR LR
comp=Z,1μm,20.0s
BINY Binghamton 107.82 19 PFAKE 13 43 20.0 +8.7
BINY LR LR
comp=Z,1μm,20.0s
P51A Williamsport 107.84 26 PFAKE 13 43 20.0 +8.6
P51A LR LR
comp=Z,1μm,21.0s
GLAT Glass 107.86 32 PFAKE 13 43 20.0 +8.5
GLAT LR LR
comp=Z,900nm,18.0s
TRY Troy 107.98 17 PFAKE 13 43 20.0 +8.5
TRY LR LR
comp=Z,900nm,21.0s
WLAR White Oak Lake 108.00 36 PFAKE 13 43 20.0 +8.2
WLAR LR LR
comp=Z,1μm,20.0s
Q51A Peebles 108.12 26 PFAKE 13 43 20.0 +8.1
Q51A LR LR
comp=Z,1μm,21.0s
N55A Marion Center 108.16 22 PFAKE 13 43 20.0 +8.0
N55A LR LR
comp=Z,1μm,21.0s
T47A Sharon Grove 108.27 30 PFAKE 13 43 20.0 +7.8
T47A LR LR
comp=Z,800nm,20.0s
833A Chaparral WMA, 108.36 44 PFAKE 13 43 20.0 +7.4
833A LR LR
comp=Z,1μm,20.0s
P53A Whipple 108.46 24 PFAKE 13 43 20.0 +7.5
P53A LR LR
comp=Z,900nm,21.0s
KSPA Keystone Colle 108.48 19 PFAKE 13 43 20.0 +7.5
KSPA LR LR
comp=Z,1μm,19.0s
MET Memphis--Engin 108.48 33 PFAKE 13 43 20.0 +7.3
MET LR LR
comp=Z,1μm,18.0s
X43A Marvell 108.49 34 PFAKE 13 43 20.0 +7.3
X43A LR LR
comp=Z,1μm,22.0s
Z41A Richland Creek 108.50 36 PFAKE 13 43 20.0 +7.3
Z41A LR LR
comp=Z,1μm,20.0s
CCAR Cane Creek 108.52 35 PFAKE 13 43 20.0 +7.2
CCAR LR LR
comp=Z,1μm,20.0s
NATX Nacogdoches 108.64 38 PFAKE 13 43 20.0 +6.9
NATX LR LR
comp=Z,1μm,20.0s
WVT Waverly 108.65 31 PFAKE 13 43 20.0 +7.0
WVT LR LR
comp=Z,1μm,19.0s
SSPA Standing Stone 108.66 21 PFAKE 13 43 20.0 +7.1
SSPA LR LR
comp=Z,2μm,19.0s
HRV Adam Dziewonsk 108.73 16 PFAKE 13 43 20.0 +7.1
HRV LR LR
comp=Z,1μm,20.0s
QUA2 Belchertown 108.75 17 PFAKE 13 43 20.0 +7.0
QUA2 LR LR
comp=Z,1μm,20.0s
O56A Blue Knob Stat 108.76 22 PFAKE 13 43 20.0 +6.9
O56A LR LR
comp=Z,1μm,19.0s
T49A Edmonton 108.86 29 PFAKE 13 43 30.0 +17
T49A LR LR
comp=Z,1μm,19.0s
MCWV Mont Chateau 108.87 23 PFAKE 13 43 30.0 +17
MCWV LR LR
comp=Z,800nm,20.0s
WES Weston 108.91 16 PFAKE 13 43 20.0 +6.8
WES LR LR
comp=Z,900nm,20.0s
KSCT Kent School, K 108.97 18 PFAKE 13 43 30.0 +17
KSCT LR LR
comp=Z,1μm,21.0s
N59A State Game Lan 109.06 20 PFAKE 13 43 30.0 +16
N59A LR LR
comp=Z,2μm,22.0s
Q54A Coxs Mills 109.11 24 PFAKE 13 43 30.0 +16
Q54A LR LR
comp=Z,1μm,21.0s
S51A Beattyville 109.21 27 PFAKE 13 43 30.0 +16
S51A LR LR
comp=Z,900nm,22.0s
OXF Oxford 109.22 33 PFAKE 13 43 30.0 +16
OXF LR LR
comp=Z,900nm,19.0s
ODNJ Ogdensburg 109.25 19 PFAKE 13 43 30.0 +16
ODNJ LR LR
comp=Z,1μm,20.0s
R53A Hurricane 109.26 25 PFAKE 13 43 30.0 +16
R53A LR LR
comp=Z,900nm,20.0s
BRYW Bryant College 109.29 16 PFAKE 13 43 30.0 +16
BRYW LR LR
comp=Z,900nm,19.0s
HKT Hockley 109.32 40 PFAKE 13 43 30.0 +16
HKT LR LR
comp=Z,1μm,18.0s
CLTN Cedars of Leba 109.36 30 PFAKE 13 43 30.0 +16
CLTN LR LR
comp=Z,600nm,19.0s
PAGS Pennsylvania G 109.40 21 PFAKE 13 43 30.0 +16
PAGS LR LR
comp=Z,2μm,20.0s
V48A Smith Brothers 109.43 30 PFAKE 13 43 30.0 +16
V48A LR LR
comp=Z,800nm,19.0s
LUPA Lehigh Univers 109.47 19 PFAKE 13 43 30.0 +16
LUPA LR LR
comp=Z,100nm,22.0s
PLAL Pickwick Lake 109.48 32 PFAKE 13 43 30.0 +15
PLAL LR LR
comp=Z,700nm,19.0s
YLE Yale 109.50 17 PFAKE 13 43 30.0 +16
YLE LR LR
comp=Z,1μm,21.0s
PAL Palisades 109.52 18 PFAKE 13 43 30.0 +16
PAL LR LR
comp=Z,900nm,21.0s
BRNJ Basking Ridge 109.63 19 PFAKE 13 43 30.0 +15
BRNJ LR LR
comp=Z,1μm,20.0s
KVTX Kingsville 109.84 44 PFAKE 13 43 30.0 +15
KVTX LR LR
comp=Z,800nm,19.0s
T52A Hallie 109.92 27 PFAKE 13 43 30.0 +15
T52A LR LR
comp=Z,1μm,22.0s
PSUB Penn St. - Bra 110.07 20 PFAKE 13 43 30.0 +14
PSUB LR LR
comp=Z,2μm,22.0s
ZAIG Zacatecas 110.08 50 PFAKE 13 43 30.0 +14
ZAIG LR LR
comp=Z,800nm,19.0s
SDMD Soldier's Deli 110.11 21 PFAKE 13 43 30.0 +14
SDMD LR LR
comp=Z,800nm,21.0s
TZTN Tazewell 110.17 27 PFAKE 13 43 30.0 +14
TZTN LR LR
comp=Z,1μm,19.0s
SWET Sewanee 110.27 30 PFAKE 13 43 30.0 +14
SWET LR LR
comp=Z,1μm,19.0s
X48A Hartselle 110.40 31 PFAKE 13 43 30.0 +14
X48A LR LR
comp=Z,900nm,19.0s

V51A	**Loudon**	**110.47**	**28**	PFAKE		13 43 30.0	+14
V51A				LR	LR		
comp=Z,900nm,20.0s							
VBMS	**Vicksburg**	**110.50**	**35**	PFAKE		13 43 30.0	+13
VBMS				LR	LR		
comp=Z,700nm,20.0s							
W50A	**Signal Mountai**	**110.56**	**30**	PFAKE		13 43 30.0	+13
W50A				LR	LR		
comp=Z,900nm,19.0s							
CPCT	**Cooper Cave**	**110.69**	**29**	PFAKE		13 43 30.0	+13
CPCT				LR	LR		
comp=Z,800nm,20.0s							
LNIG	**Linares**	**110.71**	**47**	PFAKE		13 43 30.0	+13
LNIG				LR	LR		
comp=Z,700nm,19.0s							
V52A	**Sevierville**	**110.75**	**28**	PFAKE		13 43 30.0	+13
V52A				LR	LR		
comp=Z,800nm,20.0s							
BLA	**Blacksburg**	**110.83**	**25**	PFAKE		13 43 30.0	+13
BLA				LR	LR		
comp=Z,1μm,18.0s							
S57A	**Dark Hollow, R**	**110.88**	**23**	PFAKE		13 43 30.0	+13
S57A				LR	LR		
comp=Z,1μm,19.0s							
U54A	**Nelsons Funny**	**110.89**	**26**	PFAKE		13 43 30.0	+13
U54A				LR	LR		
comp=Z,1μm,18.0s							
CBN	**Corbin Frederi**	**111.02**	**22**	PFAKE		13 43 30.0	+13
CBN				LR	LR		
comp=Z,1μm,19.0s							
R58B	**Mineral**	**111.07**	**22**	PFAKE		13 43 30.0	+13
R58B				LR	LR		
comp=Z,2μm,18.0s							
Y49A	**Blount Mountai**	**111.18**	**31**	PFAKE		13 43 30.0	+12
Y49A				LR	LR		
comp=Z,900nm,18.0s							
V53A	**Saluda**	**111.23**	**27**	PFAKE		13 43 30.0	+12
V53A				LR	LR		
comp=Z,1μm,20.0s							
W52A	**Murphy**	**111.25**	**29**	PFAKE		13 43 30.0	+12
W52A				LR	LR		
comp=Z,900nm,20.0s							
X51A	**Calhoun**	**111.29**	**30**	PFAKE		13 43 30.0	+12
X51A				LR	LR		
comp=Z,800nm,19.0s							
S58A	**Poland Farm, P**	**111.33**	**23**	PFAKE		13 43 30.0	+12
S58A				LR	LR		
comp=Z,2μm,19.0s							
T57A	**Hurt**	**111.45**	**24**	PFAKE		13 43 30.0	+12
T57A				LR	LR		
comp=Z,1μm,19.0s							
LRAL	**Lakeview Retre**	**111.59**	**32**	PFAKE		13 43 30.0	+11
LRAL				LR	LR		
comp=Z,1μm,20.0s							
CMLA	**Cha da Macela**	**111.70**	**338**	PFAKE		13 43 30.0	+11
CMLA				LR	LR		
comp=Z,2μm,20.0s							
Z50A	**Ashland**	**111.91**	**31**	PFAKE		13 43 30.0	+11
Z50A				LR	LR		
comp=Z,700nm,19.0s							
V56A	**Mocksville**	**112.03**	**26**	PFAKE		13 43 30.0	+11
V56A				LR	LR		
comp=Z,900nm,19.0s							
S61A	**Accomac**	**112.06**	**21**	PFAKE		13 43 30.0	+11
S61A				LR	LR		
comp=Z,2μm,20.0s							
T59A	**Double "B" Far**	**112.07**	**23**	PFAKE		13 43 30.0	+11
T59A				LR	LR		
comp=Z,2μm,18.0s							
T60A	**Surry**	**112.20**	**22**	PFAKE		13 43 30.0	+10
T60A				LR	LR		
comp=Z,2μm,18.0s							
Y52A	**Lilburn**	**112.24**	**29**	PFAKE		13 43 30.0	+10
Y52A				LR	LR		
comp=Z,2μm,21.0s							
KMSC	**Kings Mountain**	**112.28**	**27**	PFAKE		13 43 30.0	+10
KMSC				LR	LR		
comp=Z,1μm,21.0s							
PAULI	**Pauline**	**112.37**	**27**	PFAKE		13 43 30.0	+10
PAULI				LR	LR		
comp=Z,800nm,22.0s							
U59A	**Littleton**	**112.55**	**23**	PFAKE		13 43 30.0	+10
U59A				LR	LR		
comp=Z,2μm,19.0s							
HODGE	**Hodges**	**112.69**	**28**	PFAKE		13 43 30.0	+9.3
HODGE				LR	LR		
comp=Z,1μm,18.0s							
PMOZ	**Porto Moniz, M**	**112.75**	**329**	*e*PP	**PP**	**13 44 07.8**	**+0.2**
PMOZ	**Porto Moniz, M**	**112.75**	**329**	*e*LR	LR	14 23 08.6	
comp=Z,2μm,20.0s							
W57A	**Gilead**	**112.80**	**25**	PFAKE		13 43 30.0	+9.2
W57A				LR	LR		
comp=Z,900nm,18.0s							
250A	**Grady**	**112.81**	**32**	PFAKE		13 43 30.0	+9.1
250A				LR	LR		
comp=Z,1μm,19.0s							
GOGA	**Godfrey**	**112.88**	**29**	PFAKE		13 43 30.0	+9.0
GOGA				LR	LR		
comp=Z,1μm,20.0s							
152A	**Waverly Hall**	**112.95**	**31**	PFAKE		13 43 30.0	+8.8
152A				LR	LR		
comp=Z,1μm,20.0s							
U61A	**Possum Corner**	**113.03**	**22**	PFAKE		13 43 30.0	+8.8
U61A				LR	LR		
comp=Z,1μm,21.0s							
JSC	**Jenkinsville**	**113.06**	**27**	PFAKE		13 43 30.0	+8.6
JSC				LR	LR		
comp=Z,900nm,20.0s							
BIRD	**Birdtown, Kers**	**113.06**	**26**	PFAKE		13 43 30.0	+8.6
BIRD				LR	LR		
comp=Z,900nm,19.0s							
BRAL	**Brewton**	**113.09**	**33**	PFAKE		13 43 30.0	+8.5
BRAL				LR	LR		
comp=Z,900nm,19.0s							
V60A	**Jim Taylor Roa**	**113.26**	**23**	PFAKE		13 43 30.0	+8.3
V60A				LR	LR		
comp=Z,1μm,20.0s							
V61A	**Roper**	**113.47**	**22**	PFAKE		13 43 30.0	+7.9
V61A				LR	LR		
comp=Z,1μm,21.0s							
CNNC	**Cliffs of the**	**113.51**	**24**	PFAKE		13 43 30.0	+7.8
CNNC				LR	LR		
comp=Z,2μm,19.0s							
X58A	**Rowland**	**113.58**	**25**	PFAKE		13 43 30.0	+7.7
X58A				LR	LR		
comp=Z,2μm,20.0s							
Y57A	**Sumter**	**113.64**	**26**	PFAKE		13 43 30.0	+7.5
Y57A				LR	LR		
comp=Z,1μm,18.0s							
154A	**Montrose**	**113.72**	**29**	PFAKE		13 43 30.0	+7.3
154A				LR	LR		
comp=Z,900nm,19.0s							
253A	**Americus**	**113.73**	**30**	PFAKE		13 43 30.0	+7.3
253A				LR	LR		
comp=Z,800nm,20.0s							
Z56A	**Williston**	**113.85**	**28**	PFAKE		13 43 30.0	+7.1
Z56A				LR	LR		
comp=Z,1μm,21.0s							
352A	**Blakely**	**113.85**	**31**	PFAKE		13 43 30.0	+7.1
352A				LR	LR		
comp=Z,700nm,19.0s							
V62A	**Hyde County Ai**	**113.89**	**22**	PFAKE		13 43 30.0	+7.1
V62A				LR	LR		
comp=Z,2μm,22.0s							
Y58A	**Scranton**	**114.03**	**26**	PFAKE		13 43 40.0	+17
Y58A				LR	LR		
comp=Z,1μm,19.0s							
SYO	**Syowa Base**	**114.27**	**203⇑**	*e*PKPdf	PKPdf	13 43 22.0	-0.4
Y60A	**Bolivia**	**114.49**	**25**	PFAKE		13 43 40.0	+16
Y60A				LR	LR		
comp=Z,1μm,19.0s							
TIGA	**Tifton**	**114.50**	**30**	PFAKE		13 43 40.0	+16
TIGA				LR	LR		
comp=Z,1μm,19.0s							
NHSC	**New Hope**	**114.52**	**27**	PFAKE		13 43 40.0	+16
NHSC				LR	LR		
comp=Z,900nm,19.0s							
255A	**Hazlehurst**	**114.58**	**29**	PFAKE		13 43 40.0	+16
255A				LR	LR		
comp=Z,1μm,20.0s							
453A	**Whigham**	**114.66**	**31**	PFAKE		13 43 40.0	+15
453A				LR	LR		
comp=Z,800nm,21.0s							
257A	**Skidaway Islan**	**115.16**	**28**	PFAKE		13 43 40.0	+15
257A				LR	LR		
comp=Z,1μm,22.0s							
TOC2	**Torodi Ar. Sit**	**115.32**	**301**	PFAKE		13 43 40.0	+14
TOC2				LR	LR		
comp=Z,1μm,21.0s							
TOC1	**Torodi Ar. Sit**	**115.32**	**301**	PFAKE		13 43 40.0	+14
TOC1				LR	LR		
comp=Z,2μm,21.0s							
TOC3	**Torodi Ar. Sit**	**115.33**	**301**	PFAKE		13 43 40.0	+14
TOC3				LR	LR		
comp=Z,1μm,22.0s							
TOA1	**Torodi Ar. Sit**	**115.34**	**301**	*e*PKPdf	**PKiKP**	**13 43 25.4**	**-0.8**
TOA1				LR	LR		
comp=Z,1μm,20.0s							
TOB3	**Torodi Ar. Sit**	**115.34**	**301**	PFAKE		13 43 40.0	+14
TOB3				LR	LR		
comp=Z,1μm,21.0s							
TOA0	**Torodi Ar. Sit**	**115.34**	**301**	PFAKE		13 43 40.0	+14
TOA0				LR	LR		
comp=Z,1μm,20.0s							
TORD	**Torodi Ar. Bea**	**115.34**	**301**	PKP	**PKiKP**	**13 43 25.4**	**-0.8**
comp=Z,1.5nm,0.7s,baz=50,slow=1.3,SNR=5.5							
TORD				PP	**PP**	**13 44 19.4**	**-7.4**
comp=Z,5.8nm,1.0s,baz=59,slow=6.3,SNR=5.1							
TORD				PKKPbc	**PKKPbc**	**13 53 59.8**	**+0.2**
comp=Z,1.8nm,0.9s,baz=292,slow=3.2,SNR=6.2							
TOC7	**Torodi Ar. Sit**	**115.34**	**301**	PFAKE		13 43 40.0	+14
TOC7				LR	LR		
comp=Z,1μm,20.0s							
TOA3	**Torodi Ar. Sit**	**115.34**	**301**	PFAKE		13 43 40.0	+14
TOA3				LR	LR		
comp=Z,1μm,22.0s							
TOB5	**Torodi Ar. Sit**	**115.35**	**301**	PFAKE		13 43 40.0	+14
TOB5				LR	LR		
comp=Z,1μm,20.0s							
TOC4	**Torodi Ar. Sit**	**115.35**	**301**	PFAKE		13 43 40.0	+14
TOC4				LR	LR		
comp=Z,1μm,22.0s							
TOB4	**Torodi Ar. Sit**	**115.36**	**301**	PFAKE		13 43 40.0	+14
TOB4				LR	LR		
comp=Z,1μm,20.0s							
TOC5	**Torodi Ar. Sit**	**115.37**	**301**	PFAKE		13 43 40.0	+14
TOC5				LR	LR		
comp=Z,1μm,20.0s							
456A	**Hilliard**	**115.81**	**30**	PFAKE		13 43 40.0	+13
456A				LR	LR		
comp=Z,1μm,19.0s							
555A	**McAlpin**	**115.90**	**31**	PFAKE		13 43 40.0	+13
555A				LR	LR		
comp=Z,900nm,20.0s							
QSPA	**South Pole Qui**	**116.32**	**180**	*e*PKPdf	**PKiKP**	**13 43 27.3**	**+0.7**
LVIG	**Laguna Verde**	**116.33**	**48**	PFAKE		13 43 40.0	+12
LVIG				LR	LR		
comp=Z,700nm,18.0s							
656A	**Willston**	**116.73**	**31**	PFAKE		13 43 40.0	+11
656A				LR	LR		
comp=Z,1μm,18.0s							
TSUM	**Tsumeb**	**117.00**	**261**	PFAKE		13 43 40.0	+11
TSUM				LR	LR		
comp=Z,1μm,20.0s							
658A	**Bunnell**	**117.26**	**30**	PFAKE		13 43 40.0	+10
658A				LR	LR		
comp=Z,700nm,19.0s							
DWPF	**Disney Wildern**	**118.31**	**31**	PFAKE		13 43 40.0	+8.4
DWPF				LR	LR		
comp=Z,1μm,20.0s							
957A	**Wimauma**	**118.31**	**31**	PFAKE		13 43 40.0	+8.4
957A				LR	LR		
comp=Z,900nm,19.0s							
059A	**Moore Haven**	**119.42**	**31**	PFAKE		13 43 50.0	+16
059A				LR	LR		
comp=Z,1μm,20.0s							
060A	**Indiantown**	**119.71**	**30**	PFAKE		13 43 50.0	+16
060A				LR	LR		
comp=Z,700nm,21.0s							
061Z	**Ochoppi**	**120.47**	**31**	PFAKE		13 43 50.0	+14
061Z				LR	LR		
comp=Z,900nm,22.0s							
TEIG	**Tepich**	**121.13**	**42**	PFAKE		13 43 50.0	+13
TEIG				LR	LR		
comp=Z,500nm,22.0s							
DBIC	**Dimbokro**	**124.39**	**300**	PKP	**PKPdf**	**13 43 43.7**	**+0.1**
comp=Z,4.6nm,0.8s,baz=33,slow=3.0,SNR=3.2							
TGUH	**Tegucigalpa,Un**	**126.43**	**45**	PFAKE		13 44 00.0	+12
TGUH				LR	LR		
comp=Z,600nm,20.0s							
SNAA	**Sanae**	**127.63**	**197**	PKiKP	**PKiKP**	**13 43 48.6**	**-0.1**
GTBY	**Guantanamo Bay**	**128.24**	**29**	PFAKE		13 44 00.0	+8.6
GTBY				LR	LR		
comp=Z,600nm,20.0s							
GRTK	**Grand Turk**	**128.41**	**24**	PFAKE		13 44 00.0	+8.3
GRTK				LR	LR		
comp=Z,1μm,21.0s							
MTDJ	**Mount Denham**	**128.59**	**33**	PFAKE		13 44 00.0	+7.7
MTDJ				LR	LR		
comp=Z,800nm,19.0s							
VNA2	**Neumayer--Watz**	**129.26**	**197**	PKiKP	**PKPdf**	**13 43 50.8**	**-0.5**
baz=212,slow=19							
VNA3	**Neumayer Olymp**	**129.65**	**196**	PKiKP	**PKiKP**	**13 43 52.5**	**-0.2**
VNA1	**Neumayer--Stat**	**129.66**	**197**	PKiKP	**PKPdf**	**13 43 52.0**	**+0.1**
ESPN	**Las Esperanzas**	**129.72**	**44**	PFAKE		13 44 10.0	+15
ESPN				LR	LR		
comp=Z,400nm,20.0s							
SDDR	**Presa de Saban**	**130.66**	**26**	PFAKE		13 44 10.0	+14
SDDR				LR	LR		
comp=Z,1μm,20.0s							
SDD	**Santo Domingo**	**131.66**	**24**	PFAKE		13 44 10.0	+12
SDD				LR	LR		
comp=Z,2μm,22.0s							
SJG	**San Juan**	**133.25**	**20**	PFAKE		13 44 10.0	+8.4
SJG				LR	LR		
comp=Z,400nm,20.0s							
SMRT	**St. Maarten**	**134.16**	**16**	PFAKE		13 44 10.0	+6.6
SMRT				LR	LR		
comp=Z,800nm,22.0s							
BCIP	**Isla Barro Col**	**134.81**	**42**	PFAKE		13 44 20.0	+15
BCIP				LR	LR		
comp=Z,700nm,19.0s							
SDV	**Santo Domingo**	**139.97**	**31**	PFAKE		13 44 30.0	+14
SDV				LR	LR		
comp=Z,1μm,22.0s							
PTBC	**PUERTO BERRIO**	**140.03**	**38**	*e*P	PKPdf	13 44 03.8	-9.3
NORC	**Norcasia**	**140.61**	**39**	*e*P	**PKPdf**	**13 44 11.9**	**-2.3**
YOTC	**Yotoco, Valle**	**141.01**	**43**	*e*P	**PKPdf**	**13 44 09.2**	**-5.8**
ROSC	**El Rosal**	**141.51**	**39**	PKhKP	PKPpre	13 44 13.5	
comp=Z,11nm,0.6s,baz=233,slow=22,SNR=6.0							
POPC	**Popayan, Colom**	**141.93**	**45**	*e*P	**PKPdf**	**13 44 11.2**	**-5.5**
BBAC	**Balboa, Cauca**	**141.96**	**46**	*e*P	**PKPdf**	**13 44 11.2**	**-5.6**
CHIC	**Chingaza**	**142.01**	**39**	*e*P	**PKPdf**	**13 44 09.9**	**-7.2**
PRAC	**Prado**	**142.09**	**41**	*e*P	**PKPdf**	**13 44 10.6**	**-6.3**
PCON	**Cinco Dias**	**142.27**	**44**	*e*P	**PKPdf**	**13 44 12.6**	**-5.2**
SOTA	**Rioblanco**	**142.28**	**45⇓**	*e*P	**PKPdf**	**13 44 11.9**	**-5.8**
OTAV	**Otavalo**	**142.50**	**49**	PFAKE		13 44 30.0	+8.8
OTAV				LR	LR		
comp=Z,400nm,21.0s							
FLOC	**Florencia**	**143.31**	**44**	*e*P	PKPab	13 44 13.2	-1.6
PTLC	**Puerto Leguiza**	**144.94**	**45**	*e*P	**PKPab**	**13 44 20.6**	**-0.4**
MDP	**Montagnes des**	**148.51**	**3**	PKPbc	**PKPbc**	**13 44 31.9**	**+0.6**
comp=Z,41nm,1.0s,baz=44,slow=0.8,SNR=3.8							
GO09	**Cerro Castillo**	**150.47**	**152**	*e*PKPbc	**PKiKP**	**13 44 36.5**	**+0.7**
NNA	**Nana**	**151.74**	**64**	PKPbc	**PKPbc**	**13 44 39.0**	**-0.2**
comp=Z,79nm,0.9s,baz=340,slow=6.1,SNR=25							
NNA	**Nana**	**151.74**	**64**	PKiKP	**PKPbc**	**13 44 39.0**	**-0.2**
PTGA	**Pitinga**	**152.94**	**20**	PKP	**PKPdf**	**13 44 34.7**	**+0.1**
comp=Z,6.2nm,0.9s,baz=101,slow=1.9,SNR=6.1							
PTGA				PKPbc	**PKiKP**	**13 44 42.0**	**0.0**
comp=Z,31nm,0.9s,baz=344,slow=1.9,SNR=23							
PTGA				PKPab	**PKPab**	**13 44 52.6**	**-0.3**
comp=Z,43nm,1.0s,baz=323,slow=6.9,SNR=12							
PTGA	**Pitinga**	**152.94**	**20**	PFAKE		13 44 50.0	-2.9
PTGA				LR	LR		
comp=Z,900nm,19.0s							
RCBR	**Riachuelo**	**154.84**	**322**	PFAKE		13 44 50.0	+4.0
RCBR				LR	LR		
comp=Z,900nm,20.0s							
PLCA	**Paso Flores**	**158.52**	**136**	PKPab	**PKPab**	**13 45 17.6**	**+1.3**
comp=Z,12nm,1.1s,baz=202,slow=5.0,SNR=7.3							
LPAZ	**La Paz**	**161.12**	**61**	PKP	**PKPdf**	**13 44 45.8**	**+0.2**
comp=Z,5.1nm,1.0s,baz=48,slow=3.7,SNR=8.3							
LPAZ				PKPab	**PKPab**	**13 45 28.4**	**-0.6**
comp=Z,6.4nm,0.9s,baz=340,slow=7.1,SNR=5.4							
LVC	**Limon Verde**	**163.28**	**80**	PKP	**PKPdf**	**13 44 49.0**	**+1.6**
comp=Z,2.1nm,0.5s,baz=71,slow=2.4,SNR=3.3							
LVC				PKPab	**PKPab**	**13 45 39.1**	**+1.1**
comp=Z,20nm,0.9s,baz=279,slow=5.2,SNR=14							
LVC	**Limon Verde**	**163.28**	**80**	PKIKP	**PKPdf**	**13 44 49.0**	**+1.6**
CFA	**Coronel Fontan**	**164.14**	**113**	PKP	**PKPdf**	**13 44 47.5**	**0.0**
comp=Z,8.6nm,1.1s,baz=246,slow=3.4,SNR=6.1							
CFA				PKPab	**PKPab**	**13 45 42.0**	**+0.8**
comp=Z,7.3nm,1.1s,baz=231,slow=2.2,SNR=4.0							
SIV	**San Ignacio**	**165.95**	**44**	PKP	**PKPdf**	**13 44 49.7**	**+0.2**
comp=Z,4.7nm,0.9s,baz=353,slow=1.7,SNR=15							
SIV				PKPab	**PKPab**	**13 45 48.7**	**-0.6**
comp=Z,5.4nm,0.8s,baz=324,slow=4.3,SNR=7.3							
SIV				PP	**PP**	**13 49 35.5**	**-0.5**
comp=Z,10.0nm,1.0s,baz=6.1,slow=5.4,SNR=10.0							
BDFB	**Brasilia**	**168.79**	**345**	PKP	**PKPdf**	**13 44 51.0**	**-0.6**
comp=Z,7.2nm,0.9s,baz=72,slow=5.5,SNR=6.8							
BDFB				PKPab	**PKPab**	**13 46 01.2**	**-0.7**
comp=Z,5.0nm,0.6s,baz=359,slow=4.7,SNR=3.9							

ISCJB ***13*** *13:35:15.2±0.9, 38°.93N±0°.05×142°.1E±0°.1, h54km±6km, mb4.3/8, Error ellipse: s-maj=13.9km s-min=6.4km az=18.9*

JMA ***13*** *13:35:16.8, 38°.92N×141°.94E, h52km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φ±13.00000°, δ63.00000°, λ103.00000°. NP2: φ±165.00000°, δ30.00000°, λ66.00000°. Principal axes: T Plg69.0000°, Azm309.0000°; N Plg12.0000°, Azm187.0000°; P Plg17.0000°, Azm93.0000°;*

JMA Felt II J1.

IDC ***13*** *13:35:18.0±2.2, 38°.98N×142°.04E, h64km±18km, mb3.7/7, mb1 3.7/11, mb1mx3.4/54, mbtmp3.9/11 Error ellipse: s-maj=23.4km s-min=10.7km az=111.0*

ISC 13 13:35:16.7±1.3, 38°.94N±0°.06×142°.0E±0°.1, h46km±10km, n29, σ1°.73/32, mb4.1/8, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.32**	**296**	⇓P	**Pn**	**13 35 25.9**	**+0.2**
OFUJ				S	**Sn**	**13 35 32.1**	**0.0**
JKMT	**Kesennumamotoy**	**0.46**	**254**	P	**Pn**	**13 35 26.8**	**-0.4**
JKMT				S	**Sn**	**13 35 33.7**	**-1.0**
JMK	**Ichinoseki**	**0.64**	**271**	⇓P	**Pn**	**13 35 28.9**	**-0.6**
JMK				S	**Sn**	**13 35 37.5**	**-1.2**
JIO	**Ouri**	**0.73**	**229**	⇓P	**Pn**	**13 35 29.8**	**-0.8**
JIO				*e*S	**Sn**	**13 35 38.8**	**-1.9**
JOM	**Ohasama**	**0.79**	**313**	⇓P	**Pn**	**13 35 31.3**	**-0.2**
JOM				S	**Sn**	**13 35 41.9**	**-0.4**
JRG	**Rokugo**	**1.19**	**293**	⇓P	**Pn**	**13 35 36.2**	**-0.6**
JOU	**Okura**	**1.22**	**243**	⇓P	**Pn**	**13 35 36.3**	**-1.0**
JOU				S	**Sn**	**13 35 51.1**	**-1.6**
JYK	**Kaneyama**	**1.31**	**270**	⇓P	**Pn**	**13 35 37.8**	**-0.8**
JMM	**Marumori**	**1.45**	**223**	P	**Pn**	**13 35 39.3**	**-1.2**
JANG	**Nango**	**1.49**	**344**	⇓P	**Pn**	**13 35 41.1**	**+0.1**
MAT	**Matsushiro**	**3.87**	**233**	P	**Pn**	**13 36 14.8**	**+1.2**
MAT				*e*S	**Sn**	**13 37 03.6**	**+5.8**
MJAR	**Matsushiro Arr**	**3.87**	**233**	P	**Pn**	**13 36 15.0**	**+1.3**
0.5nm,0.3s,baz=34,slow=12,SNR=35							
MJAR				S	**Sn**	**13 37 00.1**	**+2.3**
0.1nm,0.3s,baz=1.3,slow=11,SNR=2.9							
ASAJ	**Asahikawa**	**5.19**	**4**	P	**Pn**	**13 36 33.2**	**+1.4**
1.1nm,0.3s,baz=206,slow=19,SNR=14							
ASAJ				S	**Sn**	**13 37 28.9**	**-1.4**
0.8nm,0.3s,baz=251,slow=22,SNR=3.5							
USRK	**Ussuriysk Ar.**	**9.19**	**308**	P	**Pn**	**13 37 29.0**	**+2.6**
0.6nm,0.3s,baz=131,slow=12,SNR=11							
KSRS	**Korea Array**	**11.21**	**267**	P	**Pn**	**13 37 57.5**	**+3.2**
0.2nm,0.3s,baz=78,slow=14,SNR=6.3							
H11N2	**WAKE ISLAND Hy**	**28.76**	**125**	T	T	14 11 45.1	
baz=317,slow=75,SNR=39							
H11N1	**WAKE ISLAND Hy**	**28.77**	**125**	T	T	14 11 45.8	
baz=317,slow=75,SNR=62							
H11N3	**WAKE ISLAND Hy**	**28.77**	**125**	T	T	14 11 37.8	
baz=317,slow=75,SNR=54							
H11S1	**WAKE ISLAND Hy**	**29.53**	**127**	T	T	14 12 34.4	
baz=319,slow=76,SNR=26							
H11S3	**WAKE ISLAND Hy**	**29.54**	**127**	T	T	14 12 41.2	
baz=319,slow=76,SNR=31							
H11S2	**WAKE ISLAND Hy**	**29.55**	**127**	T	T	14 12 42.3	
baz=319,slow=76,SNR=26							
ZALV	**Zalesovo Beam**	**41.02**	**311**	P	**P**	**13 42 54.4**	**-0.7**
2.0nm,0.6s,baz=106,slow=7.6,SNR=4.8							
MKAR	**Makanchi Array**	**43.56**	**301**	P	**P**	**13 43 15.2**	**-0.7**
2.9nm,0.7s,baz=85,slow=11,SNR=8.3							
KURBB	**Kurchatov Arra**	**45.24**	**307**	P	**P**	**13 43 27.7**	**-1.5**
3.1nm,0.6s,baz=81,slow=8.4,SNR=14							
ILAR	**Eielson Array**	**47.63**	**33**	P	**P**	**13 43 48.6**	**+0.8**
0.3nm,0.7s,baz=278,slow=6.2,SNR=2.8							
BVAR	**Borovoye Array**	**49.68**	**311**	P	**P**	**13 44 03.1**	**-0.5**
1.4nm,0.4s,baz=61,slow=7.9,SNR=8.1							
WRA	**Warramunga Arr**	**59.01**	**188**	P	**P**	**13 45 10.5**	**-1.2**
116nm,0.3s,baz=15,slow=6.7,SNR=3.4							
ASAR	**Alice Springs**	**62.74**	**188**	P	**P**	**13 45 36.4**	**-0.6**
0.6nm,0.8s,baz=360,slow=5.1,SNR=5.8							
FINES	**FINESS Array B**	**67.36**	**332**	P	**P**	**13 46 05.7**	**-0.9**
1.2nm,0.7s,baz=124,slow=9.5,SNR=3.7							

MAN 13 13:57:28.2, 13°.63N×119°.78E, h4km, mb3.5, ML2.2, MS1.6, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.46**	**77**	*e*P	Pg	13 57 37.8	+0.6
LUBP				*e*S	Sb	13 57 49.7	+3.5
PGP	**Puerto Galera**	**1.15**	**96⇑**	*e*P	Pb	13 57 50.7	0.0
PGP				*i* S	Sn	13 58 07.7	+0.4
SJMP	**San Jose**	**1.75**	**132**	*e*P	Pn	13 57 58.6	-0.8
SJMP				*e*S	Sb	13 58 22.9	-0.3

MEX 13 13:58:40.7±0.7, 16°.96N×94°.64W, h130km±7km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.26**	**299**	*i* P	Pn	13 58 57.8	-1.0
CMIG				*i* S	Sn	13 59 10.2	-2.2
HUIG	**Huatulco**	**1.84**	**230**	*i* P	Pn	13 59 11.1	-1.7
HUIG				*i* S	Sn	13 59 36.1	-1.1
PCIG		**1.85**	**132**	*e*P	Pn	13 59 13.2	+0.3
PCIG				*i* S	Sn	13 59 40.5	+2.9
VHO	**Vista Hermosa**	**2.00**	**273**	*i* P	Pn	13 59 13.8	-1.2
VHO				*i* S	Sn	13 59 39.4	-1.7

MAN 13 14:13:36.4, 10°.28N×121°.93E, h5km, mb4.3, ML3.1, MS2.8, 1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.73**	**62**	*e*P	Pg	14 13 50.3

JIZS	Izushimoda	1.49	342	P	Pn	14 20 17.0	-0.9
TK02	Tokai 2	1.55	295	P	Pn	14 20 18.4	-0.1
TK01	Tokai 1	1.61	287	S	Sn	14 20 40.2	+0.1
MJAR	Matsushiro Arr	3.39	343	Pn	Pn	14 20 44.6	+0.6
0.1nm,0.3s,baz=156,slow=11,SNR=6.1							
MJAR				Sn	Sg	14 21 38.1	-1.7
0.0nm,0.3s,baz=172,slow=21,SNR=4.1							
JNU	Nakatsue	7.18	271	Pn	Pn	14 21 36.0	-0.1
0.2nm,0.3s,baz=140,slow=10.0,SNR=5.6							
H11N2	WAKE ISLAND Hy	27.94	112	T	T	14 54 46.1	
baz=305,slow=75,SNR=26							
H11N1	WAKE ISLAND Hy	27.94	112	T	T	14 54 46.5	
baz=305,slow=75,SNR=28							
H11N3	WAKE ISLAND Hy	27.96	112	T	T	14 54 47.4	
baz=305,slow=75,SNR=29							
H11S3	WAKE ISLAND Hy	28.49	114	T	T	14 55 30.1	
baz=307,slow=74							
H11S1	WAKE ISLAND Hy	28.49	114	T	T	14 55 30.7	
baz=307,slow=74							
H11S2	WAKE ISLAND Hy	28.51	114	T	T	14 55 32.4	
baz=307							
SONM	Songino Array	28.74	310	P	P	14 25 50.2	+1.4
0.3nm,0.4s,baz=120,slow=8.5,SNR=3.2							
MKAR	Makanchi Array	44.83	305	P	P	14 28 07.2	+1.9
0.2nm,0.5s,baz=86,slow=9.2,SNR=2.4							
WRA	Warramunga Arr	53.17	186	P	P	14 29 07.5	-1.8
0.3nm,0.4s,baz=354,slow=6.8,SNR=3.5							
ILAR	Eielson Array	53.51	31	P	P	14 29 11.8	+0.4
0.4nm,0.7s,baz=277,slow=5.2,SNR=4.8							
ASAR	Alice Springs	56.90	186	P	P	14 29 35.1	-1.2
0.2nm,0.5s,baz=2.0,slow=6.4,SNR=10							
NVAR	Mina Array Bea	78.54	52	P	P	14 31 52.8	-0.3
0.2nm,0.4s,baz=307,slow=7.6,SNR=2.3							
TXAR	Lajitas Array	93.69	51	P	P	14 33 08.1	-0.3
0.2nm,0.6s,baz=352,slow=3.6,SNR=2.4							

*MEX **13** 14:36:27.2±0.4, 15°.34N×98°.57W, h15km, MD4.0*
NEIC 13 14:36:27.2±0.0, 15°.34N×98°.57W, h15km, mb3.9/2, MD4.0(MEX), After MEX., Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	2.21	0	ePn	Pn	14 37 00.6	-3.0
TLIG				eSn	Sn	14 37 25.0	-5.7
TLIG	Tlapa	2.21	0	i P	Pn	14 37 00.6	-2.9
TLIG				eS	Sn	14 37 25.6	-5.1
CAIG	El Cayaco	2.35	316	ePn	Pn	14 37 02.1	-3.3
CAIG				eSn	Sn	14 37 25.4	-8.6
CAIG	El Cayaco	2.35	316	i P	Pn	14 37 02.1	-3.3
CAIG				i S	Sn	14 37 25.4	-8.6
VHO	Vista Hermosa	2.47	45	ePn	Pn	14 37 04.6	-2.6
VHO				eSn	Sn	14 37 33.1	-4.0
VHO	Vista Hermosa	2.47	45	eP	Pn	14 37 04.6	-2.6
VHO				i S	Sn	14 37 33.1	-4.0
LVIG	Laguna Verde	4.82	25	ePn	Pn	14 37 35.5	-3.8
CCIG	Comitan	6.26	81	ePn	Pn	14 37 56.5	-2.8
ZAIG	Zacatecas	8.30	334	ePn	Pn	14 38 23.9	-3.5
LNIG	Linares	9.55	355	ePn	Pn	14 38 40.7	-3.5
TEIG	Tepich	10.94	62	ePn	Pn	14 39 01.9	-1.5
JTS	Las Juntas de	14.19	109	ePn	Pn	14 39 47.1	-0.7
JCT	Junction City	15.11	356	ePn	Pn	14 39 55.8	-4.5
2.5nm,0.6s							
WHTX	Lake Whitney,	16.61	3	ePn	Pn	14 40 12.6	-6.9
6.5nm,0.5s							

*ISCJB **13** 14:50:35.0±0.6, 44°.54N±0°.04×74°.51E±0°.06, h0km, Error ellipse: s-maj=6.4km s-min=4.8km az=30.5*
*SOME **13** 14:50:34.1, 44°.45N×74°.27E*
*NNC **13** 14:50:36.2±0.4, 44°.47N×74°.36E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=3.7km s-min=2.8km az=59.0, Suspected Mining explosion.*
ISC 13 14:50:35.1±0.9, 44°.45N±0°.03×74°.32E±0°.03, h0km, n29, σ0°.73/38, 6C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLS	Baital	0.62	342	P	Pb	14 50 48.2	-0.7
17nm,0.1s							
BTLS				S	Sb	14 50 58.3	0.0
44nm,0.4s							
USP	Ospenovka	1.19	174	P	Pg	14 50 57.4	-0.4
SNR=54							
CHMS	Chumysh	1.48	168	P	Pn	14 51 02.6	-0.4
SNR=30							
KUU	Kurty	1.56	110	P	Pb	14 51 04.6	-0.2
19nm,0.2s							
KUU				S	Sg	14 51 26.3	+1.2
52nm,0.4s							
DGS	Degeres	1.60	138	P	Pg	14 51 05.5	-0.2
20nm,0.1s							
DGS				S	Sg	14 51 27.8	+1.4
62nm,0.3s							
TKM2	Tokmak 2	1.79	148	P	Pb	14 51 08.0	-0.8
SNR=21							
TKM2	Tokmak 2	1.79	148	⇑P	Pn	14 51 07.8	+0.4
4.4nm,0.3s							
TKM2				⇑S	Sg	14 51 33.3	+0.9
3.1nm,0.1s							
AAK	Ala-Archa	1.81	176	P	Pb	14 51 09.1	-0.2
SNR=9.4							
AAK	Ala-Archa	1.81	176	⇓P	Pb	14 51 08.5	-0.7
6.4nm,0.3s							
AAK				⇑S	Sg	14 51 33.7	+0.4
18nm,0.5s							
EKS2	Erkin-Say	1.83	193	P	Pb	14 51 09.2	-0.3
SNR=14							
KST	Kastek	1.84	139	Pg	Pg	14 51 09.8	-0.5
18nm,0.2s							
KST				Lg	Lg	14 51 35.9	
12nm,0.3s							
KBK	Karagaybulak	1.85	165	P	Pb	14 51 09.6	-0.2
SNR=9.0							
KTBS	Karatobe	1.85	113	P	Pb	14 51 10.0	+0.1
32nm,0.2s							
KTBS				S	Sg	14 51 35.7	+1.1
28nm,0.3s							
MRKS	Merke	1.88	205	Pg	Pb	14 51 09.9	-0.4
3.9nm,0.1s							
MRKS				Lg	Lg	14 51 35.6	
12nm,0.2s							
CHKK	Chushkaly	2.01	106	Pg	Pb	14 51 12.0	-0.5
14nm,0.1s							
CHKK				Lg	Lg	14 51 39.1	
62nm,0.2s							
IZV	Izvestkoviy	2.18	130	Pg	Pb	14 51 15.3	-0.2
13nm,0.2s							
IZV				Lg	Lg	14 51 45.1	
21nm,0.2s							
UCH	Uchtor	2.22	176	P	Pb	14 51 16.0	-0.4
SNR=12							
MDOK	Medeo	2.35	122	Pg	Pb	14 51 18.2	-0.3
3.8nm,0.2s							
MDOK				Lg	Lg	14 51 49.6	
8.1nm,0.3s							
KOTS	Kotyrbulak	2.36	120	Pg	Pb	14 51 18.5	0.0
9.1nm,0.3s							
KOTS				Lg	Lg	14 51 49.9	
22nm,0.4s							
AML	Almayashu	2.36	191	P	Pb	14 51 17.8	-0.9
SNR=18							
TNSS	Tian-Shan	2.37	126	Pg	Pb	14 51 18.2	-0.6
5.2nm,0.1s							
TNSS				Lg	Lg	14 51 50.2	
7.2nm,0.5s							
KZA	Kyzart	2.46	164	P	Pb	14 51 19.7	-0.7
SNR=34							
ARXS	Arharly	2.53	94	Pg	Pb	14 51 20.7	-0.7
5.0nm,0.3s							
ARXS				Lg	Lg	14 51 54.3	
19nm,0.2s							
ULHL	Ulahol	2.61	147	P	Pb	14 51 21.2	-1.6
SNR=13							
KK31	Karatay Array	3.07	245	Pn	Pn	14 51 26.2	+1.3
0.2nm,0.3s,baz=69,slow=12,SNR=14							
KK31				⇑Pg	Pg	14 51 34.5	+0.7
0.3nm,0.2s,baz=74,slow=15,SNR=13							
KK31				⇓Lg	Lg	14 52 11.4	
0.7nm,0.2s,baz=61,slow=29,SNR=7.2							
KAPS	Kapalarasan	3.68	75	Pg	Pb	14 51 41.0	0.0
0.6nm,0.2s							
KAPS				Lg	Lg	14 52 29.4	
2.2nm,0.2s							
DJR	Jarkent	3.92	90	Pg	Pb	14 51 46.2	+1.0
2.3nm,0.2s							
DJR				Lg	Lg	14 52 37.9	
2.7nm,0.5s							
MAKZ	Makanchi	5.87	64	⇑Pn	Pn	14 52 02.6	-0.7
0.9nm,0.2s							
MAKZ				⇑Sn	Sn	14 53 10.6	-0.6
0.7nm,0.6s							
MAKZ				⇓Lg	Lg	14 53 41.1	
1.5nm,0.9s							
MK31	Makanchi Array	6.06	64	Pn	Pn	14 52 05.5	-0.5
0.7nm,0.4s,baz=239,slow=9.5,SNR=30							
MK31				⇓Sn	Sn	14 53 15.4	-0.7
0.3nm,0.3s,baz=239,slow=9.5,SNR=30							
MK31				⇓Lg	Lg	14 53 46.7	
0.3nm,0.4s							

MAN 13 15:17:00.2, 6°.87N×125°.86E, h22km, mb3.5, ML2.1, MS1.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	0.40	301	⇑eP	Pb	15 17 09.4	+0.7
DMPH				i S	Sn	15 17 19.4	+1.7

IDC 13 15:18:07.7±18.0, 22°.47S×178°.27E, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.8/26, mbtmp4.2/4, ML4.1/1, Error ellipse: s-maj=343.4km s-min=60.9km az=60.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	15.77	183	Pn	Pn	15 21 51.2	0.0
0.7nm,0.3s,baz=359,slow=17,SNR=2.5							
STKA	Stephens Creek	33.81	246	P	P	15 24 52.2	+0.4
1.0nm,0.4s,baz=78,slow=11,SNR=5.3							
ASAR	Alice Springs	40.72	259	P	P	15 25 50.0	-0.5
1.9nm,0.6s,baz=98,slow=8.1,SNR=19							
WRA	Warramunga Arr	40.93	265	P	P	15 25 52.1	-0.1
1.5nm,0.3s,baz=102,slow=8.7,SNR=4.8							

*IDC **13** 15:20:46.7±2.7, 1°.09N×126°.14E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/32, mbtmp3.8/3, Error ellipse: s-maj=312.2km s-min=24.5km az=65.0*
*ISCJB **13** 15:20:54.6±0.7, 1°.58N±0°.06×127°.47E±0°.07, h100km, mb4.0/7, Error ellipse: s-maj=11.1km s-min=7.2km az=148.6*
*NEIC **13** 15:20:54.3±0.7, 0°.89N×126°.04E, h63km±14km, mb4.3/4, Error ellipse: s-maj=41.1km s-min=10.4km az=66.0*
*DJA **13** 15:20:55.8±1.0, 2°.N±4°.×12°.7E±°., h112km±9km, M3.9/5, MLv3.9/5*
ISC 13 15:20:56.5±1.0, 1°.58N±0°.06×127°.38E±0°.10, h100km, n14, σ1°.58/18, mb4.1/7, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.80	181	ePn	Pn	15 21 16.6	+1.7
TNTI	Ternate	0.80	181	P	Pn	15 21 16.2	+1.3
TNTI				S	Sn	15 21 32.2	+3.6
SGSI	Sangihe	2.79	319	P	Pn	15 21 39.0	-0.6
SGSI				S	Sn	15 22 12.8	+0.1
KMSI	Cibinong	3.54	254	P	Pn	15 21 50.6	+1.1
KMSI				S	Sn	15 22 32.2	+1.7
SANI	Sanana	3.86	201	P	Pn	15 21 53.0	-0.8
SANI				S	Sn	15 22 35.3	-2.9
WR1	Warramunga Arr	22.45	163	eP	P	15 25 46.3	-1.2
WRA	Warramunga Arr	22.45	163	P	P	15 25 46.3	-1.2
1.6nm,0.4s,baz=337,slow=9.9,SNR=6.8							
ASAR	Alice Springs	25.88	166	P	P	15 26 19.4	+0.2
0.4nm,0.3s,baz=344,slow=13,SNR=8.3							
BBOO	Buckleboo	35.17	167	eP	P	15 27 39.9	-1.0
30nm,1.4s							
STKA	Stephens Creek	35.90	159	eP	P	15 27 46.0	-1.1
6.4nm,1.9s							
MK31	Makanchi Array	59.69	326	eP	P	15 30 51.0	+0.5
0.9nm,0.9s							
MK32	Makanchi Array	59.69	326	eP	P	15 30 51.1	+0.6
MKAR	Makanchi Array	59.69	326	P	P	15 30 51.1	+0.6
0.8nm,0.5s,baz=124,slow=8.5,SNR=9.5							
MAKZ	Makanchi	59.87	326	eP	P	15 30 52.6	+0.8
4.9nm,1.5s							

*NIED **13** 15:46:00, 38°.80N×142°.60E, h35km, Mw3.6 Best double couple: Mo3.35000×10^14 NP1:φ=244.00000°, δ16.00000°, λ115.00000°. NP2:φ=38.00000°, δ76.00000°, λ83.00000°.*
*ISCJB **13** 15:46:12.1±1.3, 38°.81N±0°.04×142°.61E±0°.08, h16km±7km, mb3.7/3, Error ellipse: s-maj=10.7km s-min=6.0km az=21.3*
*IDC **13** 15:46:12.8±6.1, 38°.61N×143°.27E, h50km±30km, mb3.5/3, mb1 3.4/7, mb1mx3.2/34, mbtmp3.5/7, ML2.8/4, MS2.8/4, Ms1 2.8/4, ms1mx2.5/30, Error ellipse: s-maj=74.5km s-min=14.7km az=121.0*
*JMA **13** 15:46:13.2±0.1, 38°.83N×142°.57E, h30km±2km, M3.7*
ISC 13 15:46:11.8±3.6, 38°.80N±0°.05×142°.56E±0°.08, h10km±23km, n28, σ1°.74/30, mb3.7/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.75	292	P	Pb	15 46 27.5	+0.6
OFUJ				S	Sb	15 46 37.3	+0.2
JKMT	Kesennumamotoy	0.84	271	P	Pb	15 46 28.9	+0.4
JKMT				S	Sb	15 46 39.9	0.0
MIYJ	Miyakonagasawa	0.96	324	P	Pb	15 46 30.0	-0.6
MIYJ				S	Sb	15 46 42.1	-1.3
JIO	Ouri	1.00	250	P	Pb	15 46 31.3	0.0
JIO				S	Sb	15 46 44.1	-0.4
JMK	Ichinoseki	1.05	279	P	Pb	15 46 32.3	+0.2
JMK				S	Sb	15 46 45.7	-0.2
JOM	Ohasama	1.19	305	P	Pn	15 46 34.2	-0.3
JOM				S	Sb	15 46 49.2	-0.7
JTH	Tanohata	1.26	335	P	Pn	15 46 34.6	-0.8
JOU	Okura	1.54	254	P	Pn	15 46 39.9	+0.5
JRG	Rokugo	1.61	292	P	Pn	15 46 41.3	+1.1
JRG				S	Sn	15 47 02.1	+1.1
JMM	Marumori	1.67	237	P	Pn	15 46 41.3	+0.2
JMM				eS	Sn	15 47 01.8	-0.7
JYK	Kaneyama	1.72	275	P	Pn	15 46 42.8	+1.1
JANG	Nango	1.77	333	P	Pn	15 46 42.3	-0.1
JANG				S	Sn	15 47 05.1	+0.2
MAT	Matsushiro	4.12	238	P	Pn	15 47 18.5	+3.7
MAT				eS	Sb	15 48 10.1	-4.1
MJAR	Matsushiro Arr	4.12	238	P	Pn	15 47 18.3	+3.5
0.4nm,0.3s,baz=59,slow=9.1,SNR=20							
MJAR				S	Sb	15 48 10.3	-3.9
baz=80,slow=16,SNR=3.1							
MJAR				LR	LR	15 49 12.1	
comp=Z,58nm,18.5s,baz=75,slow=40							
ASAJ	Asahikawa	5.31	0	P	Pn	15 47 32.0	+0.9
0.6nm,0.3s,baz=194,slow=8.3,SNR=15							
ASAJ				S	Sn	15 48 35.5	+3.2
0.5nm,0.3s,baz=49,slow=34,SNR=2.1							
USRK	Ussuriysk Ar.	9.59	308	P	Pn	15 48 36.5	+6.7
0.1nm,0.3s,baz=120,slow=11,SNR=3.7							
USRK				LR	LR	15 52 28.9	
comp=Z,57nm,19.4s,baz=24,slow=37							
JNU	Nakatsue	11.02	243	LR	LR	15 53 24.6	
comp=Z,71nm,18.1s,baz=10,slow=38							
KSRS	Korea Array	11.61	268	P	Pn	15 49 03.5	+6.0
0.1nm,0.3s,baz=87,slow=14,SNR=4.2							
KLR	Kul'dur	12.99	327	LR	LR	15 54 46.8	
comp=Z,46nm,20.8s,baz=40,slow=38							
H11N2	WAKE ISLAND Hy	28.35	125	T	T	16 21 46.9	
baz=318,slow=75,SNR=61							
H11N1	WAKE ISLAND Hy	28.36	125	T	T	16 21 43.1	
baz=318,slow=75,SNR=52							
H11N3	WAKE ISLAND Hy	28.37	125	T	T	16 21 45.6	
baz=318,slow=75,SNR=60							
H11S1	WAKE ISLAND Hy	29.13	127	T	T	16 22 47.2	
baz=319,slow=76,SNR=4.7							
H11S3	WAKE ISLAND Hy	29.13	127	T	T	16 22 53.5	
baz=319,slow=76,SNR=4.5							
H11S2	WAKE ISLAND Hy	29.15	127	T	T	16 22 50.1	
baz=319,slow=76,SNR=4.9							
ZALV	Zalesovo Beam	41.42	311	P	P	15 53 58.1	0.0
1.1nm,0.7s,baz=90,slow=10,SNR=4.2							
MKAR	Makanchi Array	43.97	301	P	P	15 54 18.8	-0.2
0.6nm,0.6s,baz=83,slow=8.9,SNR=6.5							
AKASG	Malin Array Be	73.45	322	P	P	15 57 43.1	-1.0
0.5nm,0.3s,baz=43,slow=6.7,SNR=3.1							

*NSSC **13** 15:55:39.7±1.5, 33°.81N×35°.60E, h3km±62km, ML1.5*
*GRAL **13** 15:55:42.8±0.3, 33°.79N×35°.79E, h2km±21km, MD2.5*
ISC 13 15:55:42.4±1.2, 33°.80N±0°.04×35°.79E±0°.05, h3km±21km, n7, σ0°.39/11, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.16	313	eP	Pg	15 55 45.6	+0.1
BHL				eS	Sg	15 55 47.7	+0.1
DQRL	Deir Qamar	0.21	244	eP	Pg	15 55 46.3	-0.1
DQRL				eS	Sg	15 55 49.1	0.0
RCY	Rachaya	0.30	173	eP	Pg	15 55 48.2	-0.1
BRBR	Barbar	0.41	161	eP	Pg	15 55 50.1	-0.2
BRBR				eS	Sg	15 55 56.2	+0.6
BRBR				AML	AML	15 55 58.6	
comp=E,31nm,0.3s							
BRBR				AML	AML	15 55 58.7	
comp=N,17nm,0.3s							
QASN	Qassioun	0.48	123	eP	Pg	15 55 51.5	-0.1
HWQ	Hawqa	0.50	15	eP	Pg	15 55 51.9	-0.1
TOTH	TOTAH	0.69	129	eP	Pb	15 55 56.5	-0.5
TOTH				eS	Sb	15 56 07.6	+0.7
TOTH				AML	AML	15 56 12.0	
comp=N,105nm,0.1s							
TOTH				AML	AML	15 56 12.0	
comp=E,8.2nm,0.5s							

MAN 13 16:07:08.6, 7°.72N×124°.59E, h1km, mb4.0, ML2.8, MS2.4, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	0.74	8	⇑iP	Pb	16 07 23.6	-0.7
CGP				i S	Sn	16 07 38.1	-0.1
DMPH	Davao City--Mi	1.10	125	⇑eP	Pb	16 07 30.5	0.0

*KRNET **13** 16:18:17.9±0.1, 43°.74N×76°.66E, h18km, mb2.6*
*NNC **13** 16:18:17.8±0.2, 43°.73N×76°.65E, h6km±2km, mb2.7, mpv2.6, Error ellipse: s-maj=2.1km s-min=1.4km az=157.0*
*SOME **13** 16:18:18.5, 43°.75N×76°.65E, h15km*
ISC 13 16:18:17.5±0.8, 43°.67N±0°.02×76°.67E±0°.02, h15km±4km, n56, σ1°.22/103, 14C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTBS	Karatobe	0.04	9	P	Pg	16 18 20.1	-0.2
141nm,0.1s							
KTBS				S	Sg	16 18 21.5	-0.7
981nm,0.1s							
KTBS	Karatobe	0.04	9	eP	Pg	16 18 20.2	-0.2
baz=67							
KTBS				eS	Sg	16 18 21.6	-0.7
baz=67							
KTBS	Karatobe	0.04	9	eP	Pg	16 18 20.1	-0.2
141nm,0.1s							
KTBS				eS	Sg	16 18 21.5	-0.7
981nm,0.1s							
CHKK	Chushkaly	0.30	51	P	Pb	16 18 23.7	-0.8
8.2nm,0.1s							
CHKK				S	Sg	16 18 27.6	-0.4
162nm,0.2s							
CHKK	Chushkaly	0.30	51	eP	Pb	16 18 23.7	-0.8
baz=64							
CHKK				⇑iS	Sg	16 18 27.6	-0.4
baz=64							
CHKK	Chushkaly	0.30	51	eP	Pb	16 18 23.7	-0.8
8.2nm,0.1s							
CHKK				⇑iS	Sg	16 18 27.6	-0.4
162nm,0.2s							
KUU	Kurty	0.33	313	P	Pg	16 18 24.2	-0.1
5.0nm,0.1s							
KUU				S	Sg	16 18 28.3	-0.7
60nm,0.2s							
KUU	Kurty	0.33	313	eP	Pg	16 18 24.2	-0.1
baz=4.0							
KUU				eS	Sg	16 18 28.3	-0.7
baz=4.0							
KUU	Kurty	0.33	313	eP	Pg	16 18 24.2	-0.1
5.0nm,0.1s							
KUU				eS	Sg	16 18 28.3	-0.7
60nm,0.2s							
KOTS	Kotyrbulak	0.54	143	P	Pn	16 18 29.9	-0.9
0.9nm,0.1s							
KOTS				S	Sb	16 18 38.1	+1.7
18nm,0.3s							
KOTS	Kotyrbulak	0.54	143	eP	Pn	16 18 29.9	-0.9
baz=47							
KOTS				eS	Sb	16 18 38.0	+1.7
baz=47							
KOTS	Kotyrbulak	0.54	143	eP	Pn	16 18 29.9	-0.9
0.9nm,0.1s							
KOTS				eS	Sb	16 18 38.1	+1.7
18nm,0.3s							
MDOK	Medeo	0.57	151	Pg	Pn	16 18 30.5	-0.8
0.6nm,0.2s							
MDOK				Lg	Lg	16 18 39.1	
16nm,0.3s							
MDOK	Medeo	0.57	151	eP	Pn	16 18 30.5	-0.8
baz=54							
MDOK				eS	Sb	16 18 39.1	+1.7
baz=54							
MDOK	Medeo	0.57	151	eP	Pn	16 18 30.5	-0.8
0.7nm,0.1s							
MDOK				eS	Sb	16 18 39.1	+1.7
16nm,0.3s							
IZV	Izvestkoviy	0.63	184	P	Pn	16 18 31.7	-0.4
2.4nm,0.1s							
IZV				S	Sb	16 18 41.4	+2.4
7.2nm,0.1s							
IZV	Izvestkoviy	0.63	184	eP	Pn	16 18 31.7	-0.4
baz=83							
IZV				eS	Sb	16 18 41.4	+2.4
baz=83							
IZV	Izvestkoviy	0.63	184	eP	Pn	16 18 31.7	-0.4
2.4nm,0.1s							
IZV				eS	Sb	16 18 41.4	+2.4
7.2nm,0.1s							
TNSS	Tian-Shan	0.66	162	P	Pn	16 18 32.2	-0.4
1.2nm,0.2s							
TNSS				S	Sb	16 18 42.1	+2.0
7.8nm,0.2s							
TNSS	Tian-Shan	0.66	162	eP	Pn	16 18 32.3	-0.4
baz=63							
TNSS				eS	Sb	16 18 42.1	+2.0
baz=63							
TNSS	Tian-Shan	0.66	162	eP	Pn	16 18 32.2	-0.4
1.2nm,0.2s							
TNSS				eS	Sb	16 18 42.1	+2.0
7.8nm,0.2s							
DGS	Degeres	0.78	237	P	Pn	16 18 33.6	-0.4
2.8nm,0.2s							
DGS				S	Sn	16 18 44.6	-1.0
20nm,0.4s							
DGS	Degeres	0.78	237	eP	Pn	16 18 33.6	-0.4
baz=33							
DGS				eS	Sn	16 18 44.5	-1.0
baz=33							
DGS	Degeres	0.78	237	eP	Pn	16 18 33.6	-0.4
2.8nm,0.2s							
DGS				eS	Sn	16 18 44.6	-1.0
20nm,0.4s							
KST	Kastek	0.81	220	P	Pn	16 18 34.5	0.0
2.7nm,0.2s							
KST				S	Sn	16 18 46.1	-0.2
3.0nm,0.2s							
KST	Kastek	0.81	220	eP	Pn	16 18 34.5	0.0
baz=16							
KST				eS	Sn	16 18 46.1	-0.2
baz=16							
KST	Kastek	0.81	220	eP	Pn	16 18 34.5	0.0
2.7nm,0.2s							
KST				eS	Sn	16 18 46.1	-0.2
3.0nm,0.2s							
ARXS	Arharly	1.00	56	P	Pn	16 18 36.4	-0.6
2.6nm,0.1s							
ARXS				S	Sg	16 18 49.3	-0.5
12nm,0.4s							
ARXS	Arharly	1.00	56	eP	Pn	16 18 36.4	-0.6
2.6nm,0.1s							
ARXS				eS	Sg	16 18 49.3	-0.5
12nm,0.4s							
TKM2	Tokmak 2	1.08	227	⇑P	Pn	16 18 39.3	+1.0
0.4nm,0.3s							
TKM2				⇑S

	0.9nm,0.1s							
TKM2	**Tokmak 2**	**1.08**	**227**	⇑*i*P		**Pn**	**16 18 39.1**	**+0.8**
	baz=24							
TKM2				⇑*i*S		**Sn**	**16 18 53.9**	**+0.7**
	baz=24							
BOOM	**Boomskoye usch**	**1.29**	**205**	⇑*i*P		Pn	16 18 43.3	+2.1
	baz=3.0							
BOOM				⇑*i*S		**Sn**	**16 19 01.2**	**+2.9**
	baz=3.0							
MNBS	**Baschi**	**1.32**	**71**	P		**Pg**	**16 18 42.9**	**0.0**
	1.4nm,0.1s							
MNBS				S		**Sg**	**16 19 00.4**	**+0.5**
	27nm,0.1s							
MNBS	**Baschi**	**1.32**	**71**	*e*P		**Pg**	**16 18 42.9**	**0.0**
	baz=80							
MNBS				*e*S		**Sg**	**16 19 00.5**	**+0.5**
	baz=80							
MNBS	**Baschi**	**1.32**	**71**	*e*P		**Pg**	**16 18 42.9**	**0.0**
	1.4nm,0.1s							
MNBS				*e*S		**Sg**	**16 19 00.4**	**+0.5**
	27nm,0.1s							
ULHL	**Ulahol**	**1.46**	**193**	⇓*i*P		Pg	16 18 46.5	+1.0
	baz=92							
ULHL				⇓*i*S		Sg	16 19 06.7	+2.3
	baz=92							
KPKS	**Kokpek**	**1.48**	**97**	*e*P		**Pg**	**16 18 45.6**	**-0.3**
	baz=1.0							
KPKS				*e*S		**Sg**	**16 19 05.0**	**-0.1**
	baz=1.0							
KPKS	**Kokpek**	**1.48**	**97**	*e*P		**Pg**	**16 18 45.6**	**-0.3**
	3.6nm,0.2s							
KPKS				*e*S		**Sg**	**16 19 05.0**	**-0.1**
	7.8nm,0.2s							
CHMS	**Chumysh**	**1.55**	**245**	⇓*i*P		**Pg**	**16 18 47.3**	**0.0**
	baz=43							
CHMS				⇓*i*S		**Sg**	**16 19 07.8**	**+0.3**
	baz=43							
KBK	**Karagaybulak**	**1.62**	**232**	⇓*i*P		**Pg**	**16 18 48.7**	**+0.2**
	baz=30							
KBK				⇓*i*S		**Sg**	**16 19 10.5**	**+1.0**
	baz=30							
UZB	**Uzynbulak**	**1.79**	**106**	P		**Pg**	**16 18 51.1**	**-0.7**
	1.2nm,0.1s							
UZB				S		**Sg**	**16 19 14.6**	**-0.5**
	2.9nm,0.2s							
UZB	**Uzynbulak**	**1.79**	**106**	*e*P		**Pg**	**16 18 51.1**	**-0.7**
	baz=8.0							
UZB				*e*S		**Sg**	**16 19 14.6**	**-0.5**
	baz=8.0							
UZB	**Uzynbulak**	**1.79**	**106**	*e*P		**Pg**	**16 18 51.1**	**-0.7**
	1.2nm,0.1s							
UZB				*e*S		**Sg**	**16 19 14.6**	**-0.5**
	2.9nm,0.2s							
AAK	**Ala-Archa**	**1.90**	**238**	⇑Pg		**Pg**	**16 18 52.3**	**-1.5**
	2.1nm,0.8s							
AAK				⇑Lg		Lg	16 19 19.1	
	2.2nm,0.4s							
KZA	**Kyzart**	**1.90**	**214**	⇑*i*P		**Pg**	**16 18 54.1**	**+0.1**
	baz=12							
KZA				⇑*i*S		**Sg**	**16 19 20.0**	**+1.3**
	baz=12							
PDGK	**Podgornoye**	**2.08**	**98**	Pg		**Pg**	**16 18 56.3**	**-1.1**
	0.4nm,0.2s							
PDGK				Lg		Lg	16 19 23.2	
	1.4nm,0.5s							
UCH	**Uchtor**	**2.14**	**228**	⇓*i*P		**Pg**	**16 18 57.4**	**-1.2**
	baz=27							
UCH				⇓*i*S		**Sg**	**16 19 25.7**	**-0.7**
	baz=27							
BTLS	**Baital**	**2.33**	**307**	Pg		**Pb**	**16 18 59.9**	**+0.7**
	1.3nm,0.2s							
BTLS				Lg		Lg	16 19 29.5	
	1.8nm,0.2s							
BTLS	**Baital**	**2.33**	**307**	*e*P		**Pb**	**16 18 59.9**	**+0.7**
	baz=6.0							
BTLS				*e*S		**Sb**	**16 19 29.6**	**+1.8**
	baz=6.0							
BTLS	**Baital**	**2.33**	**307**	*e*P		**Pb**	**16 18 59.9**	**+0.7**
	1.3nm,0.2s							
BTLS				*e*S		**Sb**	**16 19 29.5**	**+1.8**
	1.8nm,0.2s							
EKS2	**Erkin-Say**	**2.34**	**246**	⇓*i*P		**Pg**	**16 18 59.7**	**-2.7**
	baz=44							
EKS2				⇓*i*S		**Sg**	**16 19 29.7**	**-3.1**
	baz=44							
DJR	**Jarkent**	**2.35**	**72**	Pg		**Pg**	**16 19 00.6**	**-1.9**
	0.8nm,0.2s							
DJR				Lg		Lg	16 19 30.8	
	2.4nm,0.2s							
DJR	**Jarkent**	**2.35**	**72**	*e*P		**Pg**	**16 19 00.6**	**-1.9**
	0.8nm,0.2s							
DJR				*e*S		**Sg**	**16 19 30.8**	**-2.1**
	2.4nm,0.2s							
ARLS	**Aral**	**2.50**	**225**	⇑*i*P		**Pg**	**16 19 01.8**	**-3.6**
	baz=23							
ARLS				⇑*i*S		**Sg**	**16 19 34.0**	**-3.8**
	baz=23							
KAPS	**Kapalarasan**	**2.51**	**49**	Pg		**Pb**	**16 19 02.8**	**+0.5**
	0.3nm,0.1s							
KAPS				Lg		Lg	16 19 34.6	
	2.2nm,0.1s							
KAPS	**Kapalarasan**	**2.51**	**49**	*e*P		**Pb**	**16 19 02.8**	**+0.5**
	0.3nm,0.1s							
KAPS				*e*S		**Sb**	**16 19 34.6**	**+1.5**
	2.2nm,0.1s							

SVSA 13 16:25:10.1±1.4, 38°.12N×26°.58W, h5km, MD3.5, ML2.5, 1C, Error ellipse: s-maj=11.0km s-min=2.5km az=43.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.72**	**324**	*e*P	Pg	16 25 21.5	-2.5
PSCM				*e*S	Sg	16 25 31.2	-2.2
PSCM				A	A	16 25 36.3	
	104nm,0.3s						
PSET	**Sete Cidades**	**0.74**	**113**	*e*P	Pg	16 25 23.4	-0.8
PSET				*e*S	Sg	16 25 31.5	-2.3
PSET				A	A	16 25 32.6	
	141nm,0.3s						
ADH	**Angra Heroismo**	**0.75**	**316**	⇑*i*P	Pg	16 25 21.9	-2.5
ADH				*e*S	Sg	16 25 31.6	-2.5
ADH				A	A	16 25 34.0	
	162nm,0.8s						
PDA	**Ponta Delgada**	**0.81**	**117**	*e*S	Sg	16 25 33.6	-2.6
PDA				A	A	16 25 34.5	
	92nm,0.2s						
PCALD	**Caldeiras da R**	**0.92**	**110**	*e*S	Sg	16 25 35.9	-3.7
BART	**Pico Bartolome**	**1.16**	**106**	*e*S	Sg	16 25 41.7	-5.8
BART				A	A	16 25 43.3	
	24nm,0.7s						
ROSA	**Rosais**	**1.44**	**295**	*e*P	Pn	16 25 32.5	-4.4
ROSA				*e*S	Sb	16 25 48.7	-7.4
ROSA				A	A	16 25 51.6	
	20nm,0.3s						
PSMA	**Santa Maria**	**1.60**	**134**	*e*S	Sn	16 25 52.6	-7.6
PSMN	**Pico do Norte,**	**1.64**	**132**	*e*P	Pn	16 25 34.6	-4.9
PSMN				*e*S	Sn	16 25 52.6	-8.4
PSMN				A	A	16 25 55.6	
	10nm,0.2s						

KRSC 13 16:29:06.1±1.3, 52°.36N×160°.72E, h16km±15km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.85**	**330**	*e*P	Pb	16 29 21.3	-1.2
SPN				*e*S	Sb	16 29 33.0	-0.6
NLC	**Nalytchevo**	**1.17**	**315**	*e*P	Pn	16 29 26.7	-0.9
NLC				*e*S	Sb	16 29 41.8	-0.8
RUS	**Russkaya**	**1.35**	**274**	*e*P	Pb	16 29 30.8	-0.2
RUS				*e*S	Sb	16 29 48.9	+0.8
DALK	**Dalny**	**1.37**	**300**	*e*P	Pn	16 29 30.4	-0.1
DALK				*e*S	Sn	16 29 48.4	+0.1
PET	**Petropavlovsk**	**1.42**	**299**	*e*P	Pn	16 29 31.5	+0.3
PET				*e*S	Sb	16 29 50.0	0.0
UGLR	**Uglovaya**	**1.43**	**307**	*e*P	Pb	16 29 32.0	-0.4
UGLR				*e*S	Sg	16 29 51.7	-0.6
SDLR	**Sedlovina**	**1.44**	**310**	*e*P	Pn	16 29 31.4	-0.2
SMAR	**Somma**	**1.47**	**309**	*e*P	Pn	16 29 32.4	+0.3
AVH	**Avacha**	**1.51**	**308**	*e*P	Pn	16 29 33.0	+0.6
AVH				*e*S	Sb	16 29 53.5	+1.0
KRER	**Koryakskii**	**1.52**	**309**	*e*P	Pn	16 29 33.3	+0.5
MTVR	**Mutnovka**	**1.56**	**275**	*e*P	Pb	16 29 34.1	-0.5
MTVR				*e*S	Sg	16 29 55.3	-1.1
KOK	**Koryaka**	**1.57**	**307**	*e*P	Pb	16 29 34.3	-0.5
KRX	**Arik**	**1.60**	**309**	*e*P	Pn	16 29 33.7	-0.2
KRMR	**Karymshinskiy**	**1.65**	**288**	*e*P	Pn	16 29 34.5	+0.2
KRMR				*e*S	Sb	16 29 56.1	-0.4
KDTR	**Khodutka, Kamc**	**1.72**	**252**	*e*P	Pn	16 29 35.8	+0.5
KDTR				*e*S	Sn	16 29 56.7	-0.2
ASAK	**Asacha**	**1.73**	**272**	*e*P	Pb	16 29 37.0	-0.5
ASAK				*e*S	Sb	16 30 00.2	+1.3
GNL	**Ganaly**	**2.15**	**310**	*e*P	Pb	16 29 43.0	-1.6
GNL				*e*S	Sb	16 30 10.3	-0.6
APC	**Apacha**	**2.24**	**286**	*e*P	Pb	16 29 44.4	-1.8
MKZ	**Mys Kozlova**	**2.28**	**15**	*e*P	Pb	16 29 45.7	-1.1
KZV	**Kizimen**	**2.77**	**355**	*e*P	Pn	16 29 51.0	+1.1
KZV				*e*S	Sn	16 30 24.6	+1.6
TUMD	**Tumrok D**	**2.85**	**356**	*e*P	Pn	16 29 53.2	+2.3
TUMR	**Tumrok**	**2.95**	**354**	*e*P	Pb	16 29 55.5	-2.7
SRKR	**Sorokina**	**4.31**	**3**	*e*P	Pb	16 30 16.4	-5.0

SVSA 13 16:38:53.2±1.2, 38°.16N×26°.52W, h0km±5km, MD3.6, ML2.8, 1C, Error ellipse: s-maj=7.0km s-min=1.7km az=34.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.72**	**320**	*e*P	Pg	16 39 05.5	-1.4
PSCM				*e*S	Sg	16 39 15.2	-1.0
PSCM				A	A	16 39 20.1	
	395nm,0.2s						
PSET	**Sete Cidades**	**0.72**	**117**	*e*P	Pg	16 39 05.5	-1.4
PSET				*e*S	Sg	16 39 15.1	-1.1
PSET				A	A	16 39 16.1	
	367nm,0.2s						
ADH	**Angra Heroismo**	**0.75**	**312**	⇑*i*P	Pg	16 39 05.6	-2.0
ADH				*e*S	Sg	16 39 15.5	-1.8
ADH				A	A	16 39 17.5	
	328nm,0.5s						
PDA	**Ponta Delgada**	**0.79**	**121**	*e*P	Pg	16 39 06.4	-2.0
PDA				*e*S	Sg	16 39 17.0	-1.7
PDA				A	A	16 39 18.1	
	192nm,0.2s						
CMLA	**Cha da Macela**	**0.88**	**116**	*e*P	Pg	16 39 07.9	-2.2
CMLA				*e*S	Sg	16 39 19.5	-2.0
CMLA				A	A	16 39 23.2	
	298nm,0.3s						
PCALD	**Caldeiras da R**	**0.89**	**113**	*e*P	Pg	16 39 08.1	-2.2
PCALD				*e*S	Sg	16 39 19.2	-2.7
PCALD				A	A	16 39 21.8	
	193nm,0.3s						
BART	**Pico Bartolome**	**1.14**	**109**	*e*P	Pg	16 39 11.3	-3.7
BART				*e*S	Sg	16 39 25.4	-4.3
BART				A	A	16 39 27.7	
	44nm,0.2s						
PPNO	**Prainha do Nor**	**1.40**	**284**	*e*S	Sg	16 39 31.5	-6.8
PPNO				A	A	16 39 31.9	
	31nm,0.2s						
ROSA	**Rosais**	**1.46**	**293**	*e*P	Pn	16 39 15.9	-5.0
ROSA				*e*S	Sg	16 39 33.1	-7.1
ROSA				A	A	16 39 34.6	
	19nm,0.1s						
PICO	**Pico**	**1.54**	**284**	*e*P	Pn	16 39 17.6	-4.3
PICO				*e*S	Sg	16 39 34.9	-7.6
PICO				A	A	16 39 36.6	
	30nm,0.3s						
PCAN	**Candelaria**	**1.57**	**282**	*e*S	Sn	16 39 36.2	-7.3
PSMA	**Santa Maria**	**1.60**	**136**	*e*S	Sn	16 39 36.2	-8.0
PSMA				A	A	16 39 37.6	
	41nm,0.2s						
PSMN	**Pico do Norte,**	**1.63**	**134**	*e*P	Pn	16 39 18.1	-5.1
PSMN				*e*S	Sn	16 39 36.1	-8.8
PSMN				A	A	16 39 37.9	
	12nm,0.2s						

IDC ***13*** *16:47:22.7±0.3, 10°.00S×107°.23E, h0km, mb5.7/52, mb1 5.7/57, mb1mx5.7/59, mbtmp5.7/57, ML5.3/5, MS6.1/27, Ms1 6.1/27, ms1mx6.0/38, Error ellipse: s-maj=8.7km s-min=7.7km az=31.0*

BJI ***13*** *16:47:22.3±0.0, 10°.00S×107°.30E, h10km, mb5.9/80, mB6.5/85, Ms6.6/98, Ms7 6.4/92*

MOS ***13*** *16:47:23.1±0.8, 9°.94S×107°.27E, h16km, mb6.5/93, MS6.1/101, Error ellipse: s-maj=6.6km s-min=3.9km az=113.2*

NEIC ***13*** *16:47:23.3±1.7, 10°.00S×107°.24E, h9km±2km, mb6.5/206, ME6.9, MS6.4/656, MW6.7, MW6.7, Error ellipse: s-maj=9.3km s-min=8.9km az=136.0 Broadband fault plane solution: P waves. NP1:φs105.00000°, δ25.00000°, λ-90.00000°. NP2:φs285.00000°, δ65.00000°, λ-90.00000°. Principal axes: T Plg20.0000°, Azm15.0000°; N Plg0.0000°, Azm0.0000°; P Plg70.0000°, Azm195.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [III] at Bandung, Ciamis, Cilacap, Cisarua, Jakarta, Pangandaran, Sleman and Yogyakarta. Also felt at Bantul, Bogor, Kasihan and Sukabumi. Felt at Kuta, Bali and at Mataram, Lombok. Felt [II] on Christmas Island, Australia.

NEIC ***13*** *16:47:23.0±0.0, 10°.23S×107°.39E, h15km, Moment Tensor Solution. s66 Moment tensor: Scale 10^19Nm; Mrr-1.04; Mθθ1.04; Mφφ0.00; Mrθ-0.27; Mθφ-0.60; Mφr0.64; Best double couple: Mo1.40000×10^19 NP1:φs136.00000°, δ61.00000°, λ-64.00000°. NP2:φs272.00000°, δ38.00000°, λ-127.00000°. Principal axes: T 1.4200, Plg12.0000°, Azm207.0000°; N -0.0800, Plg22.0000°, Azm302.0000°; P -1.3400, Plg64.0000°, Azm91.0000°;*

ISCJB ***13*** *16:47:23.2±0.5, 9°.98S±0°.02×107°.29E±0°.01, h15km±3km, mb6.2/302, MS6.3/688 Error ellipse: s-maj=2.8km s-min=2.3km az=31.1*

DJA ***13*** *16:47:24.1±0.1, 10°S±1°×10°7E±°, h10km, M6.6/97, mb6.3/97, mB6.8/96, MLv6.9/25, Mw(mB)6.6/96, Mwp6.4/61*

KLM ***13*** *16:47:26.0, 9°.94S×107°.30E, h14km, mb6.4*

GCMT ***13*** *16:47:31.3±0.0, 10°.15S×107°.37E, h13km, MW6.6/141, Moment Tensor Solution. s141,c351; s133,c636; Duration: 5s0 Moment tensor: Scale 10^19Nm; Mrr-0.90±.00; Mθθ0.92±.00; Mφφ-0.02±.00; Mrθ0.30±.01; Mθφ-0.56±.00; Mφr-0.11±.01; Best double couple: Mo1.08400×10^19 NP1:φs293.00000°, δ53.00000°, λ-93.00000°. NP2:φs118.00000°, δ37.00000°, λ-86.00000°. Principal axes: T 1.2240, Plg8.0000°, Azm25.0000°; N -0.2800, Plg2.0000°, Azm294.0000°; P -0.9440, Plg81.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***13*** *16:47:42.1±0.0, 10°.17S×107°.10E, h10km Best double couple: NP1:φs269.00000°, δ54.00000°, λ-125.00000°. NP2:φs139.00000°, δ48.00000°, λ-51.00000°. Principal axes: T 1.2100, Plg3.0000°, Azm23.0000°; N 0.0400, Plg28.0000°, Azm291.0000°; P -1.2400, Plg62.0000°, Azm120.0000°;*

ISC 13 16:47:25.8±0.3, 9°.95S±0°.02×107°.30E±0°.03, h21km±2km, h21km:pP-P, n2585, σ1982/2550, mb6.3/319, MS6.3/689, 40C-116D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.71**	**252**	*e*Pn	**Pn**	**16 47 50.5**	**-3.9**
XMIS				*e*Sn	**Sn**	**16 48 08.7**	**-6.9**
CISI	**Cisompet, Garu**	**2.43**	**12**	*e*Pn	**Pn**	**16 48 04.2**	**-0.3**
CISI	**Cisompet, Garu**	**2.43**	**12**	P	**Pn**	**16 48 04.1**	**-0.3**
LEM	**Lembang**	**3.12**	**6**	Pn	**Pn**	**16 48 15.2**	**+1.2**
	2μm,0.3s,baz=208,slow=3.2,SNR=485						
LEM				Sn	**Sb**	**16 48 55.7**	**-2.7**
	4μm,0.3s,baz=338,slow=17,SNR=8.9						
LEM	**Lembang**	**3.12**	**6**	P	**Pn**	**16 48 15.4**	**+1.4**
YOGI	**Yogyakarta**	**3.64**	**55**	P	**Pn**	**16 48 21.1**	**+0.1**
CGJI	**Cibinong**	**3.68**	**334**	P	**Pn**	**16 48 20.3**	**-1.2**
UGM	**Wanagama**	**3.77**	**58**	*e*Pn	**Pn**	**16 48 23.3**	**+0.5**
UGM				*e*Sn	**Sn**	**16 49 02.0**	**-4.7**
UGM	**Wanagama**	**3.77**	**58**	P	**Pn**	**16 48 23.1**	**+0.3**
SBJI	**Serang**	**3.98**	**343**	P	**Pn**	**16 48 25.8**	**+0.1**
SBJI				S	**Sn**	**16 49 13.2**	**+1.5**
WOJI	**Wonogiri, Jawa**	**4.15**	**60**	P	**Pn**	**16 48 28.6**	**+0.6**
WOJI				S	**Sn**	**16 49 14.9**	**-1.0**
SMRI	**Semarang**	**4.24**	**47**	*e*Pn	**Pn**	**16 48 29.0**	**-0.2**
SMRI	**Semarang**	**4.24**	**47**	P	**Pn**	**16 48 31.1**	**+1.9**
PWJI	**Pagerwojo**	**4.84**	**67**	P	**Pn**	**16 48 38.5**	**+1.0**
PWJI				S	**Sn**	**16 49 30.5**	**-2.5**
NGJI	**Ngawi**	**4.85**	**58**	P	**Pn**	**16 48 40.9**	**+3.3**
BLSI	**Bandar Lampung**	**4.99**	**336**	P	**Pn**	**16 48 38.7**	**-0.9**
KASI	**Kota Agung**	**5.20**	**328**	P	**Pn**	**16 48 40.4**	**-2.1**
KASI				S	**Sn**	**16 49 38.0**	**-3.9**
KLI	**Kotabumi**	**5.61**	**334**	P	**Pn**	**16 48 47.2**	**-0.8**
LWLI	**Liwa**	**5.86**	**327**	P	**Pn**	**16 48 50.9**	**-0.8**
GRJI	**Gresik**	**5.94**	**60**	P	**Pn**	**16 48 54.3**	**+1.6**
MDSI	**Maura Dua**	**6.25**	**330**	P	**Pn**	**16 48 55.4**	**-1.5**
	1μm,0.8s,24μm289μm9.5nm						
GMJI	**Gumukmas**	**6.29**	**75**	P	**Pn**	**16 48 58.8**	**+1.4**
JAGI	**Jajag, Banyuwa**	**6.92**	**78**	*e*Pn	**Pn**	**16 49 07.2**	**+1.0**
JAGI				*e*Sn	**Sn**	**16 50 18.3**	**-6.0**
JAGI	**Jajag, Banyuwa**	**6.92**	**78**	P	**Pn**	**16 49 07.0**	**+0.9**
	7μm,0.7s,129μm459μm103nm						
MNAI	**Manna**	**7.03**	**322**	*e*Pn	**Pn**	**16 49 05.5**	**-2.2**
MNAI				*e*Sn	**Sn**	**16 50 20.9**	**-6.1**
MNAI	**Manna**	**7.03**	**322**	P	**Pn**	**16 49 05.6**	**-2.0**
LHSI	**Lahat**	**7.15**	**328**	P	**Pn**	**16 49 08.8**	**-0.4**
	3μm,1.3s,41μm278μm21nm						
TPI	**Tanjungpandan**	**7.16**	**3**	P	**Pn**	**16 49 09.6**	**+0.2**
KMMI	**Kalianget**	**7.19**	**67**	P	**Pn**	**16 49 10.6**	**+0.7**
PMBI	**Palembang**	**7.42**	**340**	P	**Pn**	**16 49 13.8**	**+0.9**
	2μm,0.8s,49μm456μm20nm						
DNP	**Denpasar**	**7.91**	**81**	P	**Pn**	**16 49 20.6**	**+0.9**
SRBI	**Singaraja**	**8.03**	**77**	P	**Pn**	**16 49 22.7**	**+1.3**
PBKI	**Pangkalan Bun**	**8.40**	**31**	P	**Pn**	**16 49 28.0**	**+1.5**
JMBI	**JAMBI**	**9.03**	**336**	P	**Pn**	**16 49 34.4**	**-0.7**
KRJI	**Kerinci**	**9.73**	**323**	P	**Pn**	**16 49 42.3**	**-2.5**
PPSI	**Pulau Pagai**	**10.17**	**314**	P	**Pn**	**16 49 47.9**	**-2.8**
	2μm,0.9s,30μm						
PLAI	**Plampang**	**10.39**	**85**	P	**Pn**	**16 49 52.7**	**-1.1**
	7μm,0.9s,63μm177μm						
SDSI	**Sungai Dareh**	**10.70**	**327**	P	**Pn**	**16 49 53.7**	**-4.2**
TPRI	**Tanjung Pinang**	**11.15**	**345**	P	**Pn**	**16 50 05.3**	**+1.2**
	305nm,1.1s,11μm293μm						
PDSI	**Padang**	**11.27**	**322**	P	**Pn**	**16 50 01.5**	**-4.3**
MTKI	**Muara Teweh, K**	**11.71**	**41**	P	**Pn**	**16 50 13.4**	**+1.6**
KSM	**Kuching**	**11.74**	**15**	*e*Pn	**Pn**	**16 50 12.2**	**+0.1**
KSM	**Kuching**	**11.74**	**15**	P	**Pn**	**16 50 14.0**	**+1.8**
SISI	**Saibi**	**11.84**	**316**	P	**Pn**	**16 50 10.8**	**-2.7**
WBSI	**Waikabubak, Su**	**11.92**	**90**	P	**Pn**	**16 50 12.1**	**-2.6**
BKNI	**Bangkinang**	**11.96**	**328**	*e*Pn	**Pn**	**16 50 12.4**	**-2.8**
BKNI	**Bangkinang**	**11.96**	**328**	P	**Pn**	**16 50 17.8**	**+2.5**
MYKOM	**Kota Tinggi**	**12.16**	**343**	*e*Pn	**Pn**	**16 50 16.0**	**-1.9**
MYKOM	**Kota Tinggi**	**12.16**	**343**	P	**Pn**	**16 50 17.0**	**-1.0**
WSI	**Waingapu**	**12.81**	**90**	P	**Pn**	**16 50 24.5**	**-2.4**
BKB	**Balikpapan**	**12.87**	**48**	P	**Pn**	**16 50 31.3**	**+3.7**
BASI	**Baing, Sumba**	**13.07**	**92**	P	**Pn**	**16 50 29.7**	**-0.8**
	2μm,1.1s,27μm						
MNSI	**Mandailing Nat**	**13.16**	**324**	P	Pn	16 50 26.7	-4.9
SBUM	**Sibu**	**13.26**	**22**	*e*Pn	**Pn**	**16 50 34.2**	**+1.2**
SBUM	**Sibu**	**13.26**	**22**	P	**Pn**	**16 50 36.0**	**+3.0**
KAPI	**Kappang**	**13.28**	**69**	Pn	**Pn**	**16 50 35.2**	**+2.0**
	19nm,0.3s,baz=250,slow=10.0,SNR=149						
KAPI				Sn	**Sn**	**16 52 57.5**	**-2.9**
	2.0nm,0.3s,baz=251,slow=21,SNR=1.0						
KAPI				LR	LR	16 56 41.2	
	comp=Z,123μm,21.1s,baz=247,slow=42						
KAPI	**Kappang**	**13.28**	**69**	*e*Pn	**Pn**	**16 50 33.5**	**+0.3**
BKSI	**Bulukumba**	**13.51**	**71**	P	**Pn**	**16 50 36.9**	**+0.5**
BSSI	**Bau Bau, Buton**	**13.59**	**75**	P	**Pn**	**16 50 36.9**	**-0.7**
SPSI	**Sidrap Palu**	**13.73**	**65**	P	**Pn**	**16 50 39.8**	**+0.4**
TTSI	**Tana Toraja**	**14.20**	**62**	P	**Pn**	**16 50 48.1**	**+2.3**
	6μm,1.8s,105μm317μm						
EDFI	**Ende, Flores**	**14.25**	**86**	P	Pn	16 50 41.4	-5.2
GIRL	**Giralia**	**14.26**	**153**	*e*Pn	Pn	16 50 41.8	-4.8
GIRL	**Giralia**	**14.26**	**153**	P	Pn	16 50 41.2	-5.4
	baz=14,SNR=752						
GSI	**Gunungsitoli**	**14.79**	**319**	*e*Pn	Pn	16 50 47.6	-6.3
GSI	**Gunungsitoli**	**14.79**	**319**	P	Pn	16 50 48.4	-5.6
MMRI	**Maumere**	**14.80**	**86**	*e*Pn	**Pn**	**16 50 49.8**	**-4.3**
MMRI	**Maumere**	**14.80**	**86**	P	**Pn**	**16 50 49.8**	**-4.3**
PSI	**Prapat**	**15.17**	**326**	Pn	**Pn**	**16 50 56.9**	**-2.2**
	1.4nm,0.3s,baz=160,slow=9.5,SNR=6.5						
PSI				Sn	**Sn**	**16 53 46.5**	**-0.2**
	6.5nm,0.3s,baz=105,slow=16,SNR=1.8						
PSI				LR	LR	16 57 44.9	
	comp=Z,32μm,19.7s,baz=145,slow=41						
PSI	**Prapat**	**15.17**	**326**	*e*Pn	Pn	16 50 51.8	-7.3
	560nm,0.8s						
IPM	**Ipoh**	**15.64**	**336**	*e*Pn	**Pn**	**16 51 01.0**	**-4.2**
	2μm,1.1s						
IPM	**Ipoh**	**15.64**	**336**	P	**P**	**16 51 09.0**	**-0.2**
TSI	**Tuntungan**	**15.95**	**327**	P	**P**	**16 51 13.4**	**+0.8**
BATI	**Baumata**	**16.11**	**92**	Pn	**Pn**	**16 51 10.7**	**-0.6**
	18nm,0.3s,baz=296,slow=0.3,SNR=32						
BATI				Sn	Sn	16 53 54.7	-15
	34nm,0.3s,baz=200,slow=23,SNR=2.2						
BATI	**Baumata**	**16.11**	**92**	P	**Pn**	**16 51 10.4**	**-0.9**
	1μm,0.8s,20μm36μm						
MPSI	**Mapaga**	**16.17**	**52**	P	**Pn**	**16 51 13.3**	**+1.3**
	2μm,1.4s,32μm164μm						
KCSI	**Kotacane, Aceh**	**16.41**	**324**	P	**Pn**	**16 51 12.5**	**-2.6**
	831nm,1.5s,12μm71μm						
SNSI	**Sinabang, Aceh**	**16.44**	**318**	P	**P**	**16 51 19.9**	**+1.9**
KULM	**Kulim**	**16.53**	**336**	*e*Pn	**Pn**	**16 51 11.9**	**-4.7**
	866nm,1.2s						
KULM	**Kulim**	**16.53**	**336**	P	**Pn**	**16 51 16.0**	**-0.5**
TPTI		**16.55**	**322**	P	**Pn**	**16 51 13.7**	**-3.1**
	1μm,0.9s,12μm30μm						
PSA00	**Pilbara Seismi**	**16.70**	**135**	*e*Pn	**Pn**	**16 51 13.3**	**-5.4**
	1μm,1.1s						
SOEI	**Soe**	**16.72**	**91**	*e*Pn	**Pn**	**16 51 15.4**	**-3.7**
	12μm,1.5s						
SOEI	**Soe**	**16.72**	**91**	P	**Pn**	**16 51 17.6**	**-1.5**
	4μm,0.

comp=Z,10μm,1.5s
TNTI eS **S** **16 56 32.9 +0.1**
TNTI Ternate 22.63 63 P **P** **16 52 26.3 +0.6**
comp=Z,4μm,1.6s,comp=Z,51μmcomp=Z,80μm
SGSI Sangihe 22.65 54 P **P** **16 52 31.2 +5.3**
comp=Z,750nm,0.8s,comp=Z,7μm
BNDI Bandanaira 23.05 78 P **P** **16 52 31.6 +1.5**
comp=Z,6μm,1.4s,comp=Z,82μmcomp=Z,110μm
IPIL Ipil 23.28 41 eP **P** **16 52 32.8 +0.4**
MUN Mundaring 23.42 161 P **P** **16 52 33.7 +0.1**
baz=24,SNR=26
MTN Manton Dam 23.53 99 eP **P** **16 52 34.1 -0.8**
comp=Z,668nm,0.7s
MTN Manton Dam 23.53 99 P **P** **16 52 34.9 0.0**
baz=24,SNR=94
KLBR Kellerberrin 23.62 157 P **P** **16 52 35.0 -0.5**
baz=24,SNR=73
SKMP Bagumbayan, Su 23.72 47 eP **P** **16 52 37.8 +1.1**
GSPH General Santos 23.73 49 ⇓iP P 16 52 46.2 +9.3
SAUI Saumlaki 23.78 87 eP **P** **16 52 34.9 -2.4**
comp=Z,7μm,1.1s
SAUI Saumlaki 23.78 87 P **P** **16 52 37.9 +0.6**
comp=Z,6μm,1.2s,comp=Z,59μmcomp=Z,100μm
PAGZ Pagadian 23.86 43 eP **P** **16 52 39.7 +1.7**
ENPP El Nido 24.23 30 eP **P** **16 52 43.1 +1.7**
DDMP Don Marcelino, 24.30 50 eP **P** **16 52 41.0 -1.2**
SRAK Srakaew 24.37 348 P **P** **16 52 42.2 -0.5**
NWAO Narrogin (SRO) 24.63 160 P **P** **16 52 44.2 -0.8**
comp=Z,115nm,0.7s,baz=343,slow=8.4,SNR=53
NWAO S **S** **16 57 12.8 +7.5**
comp=Z,194nm,0.6s,baz=269,slow=12,SNR=5.7
NWAO LR LR 17 02 58.9
NWAO Narrogin (SRO) 24.63 160 eP **P** **16 52 43.3 -1.6**
comp=Z,3μm,1.9s
NWAO LR LR
comp=Z,90μm,19.0s
NWAO Narrogin (SRO) 24.63 160 P **P** **16 52 44.0 -1.0**
baz=25,SNR=73
CUYO Cuyo Island 24.76 34 eP **P** **16 52 48.2 +1.9**
DMPH Davao City--Mi 24.80 48 ⇑eP **P** **16 52 47.0 +0.3**
KDU Kakadu 24.83 99 P **P** **16 52 46.9 0.0**
baz=25,SNR=158
DAV Davao City (W) 24.85 48 P **P** **16 52 48.7 +1.6**
comp=Z,126nm,0.3s,baz=138,slow=0.2,SNR=23
DAV S **S** **16 57 14.0 +4.9**
comp=Z,145nm,0.4s,baz=162,slow=4.9,SNR=1.7
DAV LR LR 17 05 28.6
comp=Z,95μm,19.0s,baz=210,slow=44
DAV Davao City (W) 24.85 48 eP **P** **16 52 47.0 -0.1**
comp=Z,10μm,1.6s
DAV Davao City (W) 24.85 48 P **P** **16 52 46.9 -0.2**
SNPH Sibulan 24.88 40 eP **P** **16 52 50.1 +2.7**
WRKA Warakurna 24.96 130 P **P** **16 52 47.6 -0.5**
baz=25,SNR=196
BUKP Musuan 25.03 46 eP **P** **16 52 50.2 +1.4**
CGP Cagayan de Oro 25.18 44 ⇓eP **P** **16 52 50.2 +0.1**
JAP San Jose, Anti 25.20 36 ⇑eP **P** **16 52 51.1 +0.9**
KMBL Kambalda 25.25 150 P **P** **16 52 49.4 -1.2**
baz=25,SNR=32
MATI Mati 25.26 49 eP **P** **16 52 49.0 -1.9**
BUSP Coron 25.30 31 eP **P** **16 52 53.1 +2.0**
GUIM Jordan 25.48 37 eP **P** **16 52 53.8 +1.0**
SWI Sorong 25.48 71 P **P** **16 52 53.3 +0.5**
comp=Z,661nm,1.5s,comp=Z,16μmcomp=Z,74μm
SIJI Sorong 25.48 71 P **P** **16 52 53.6 +0.7**
comp=Z,142nm,0.8s,baz=254,slow=8.4,SNR=110
SIJI S **S** **16 57 23.1 +3.8**
comp=Z,16nm,0.9s,baz=314,slow=21,SNR=1.0
H01W3 Cape Leeuwin H 25.59 167 P **P** **16 52 53.8 +0.4**
baz=348,slow=7.1,SNR=17
H01W3 S S 16 57 32.0 +12
baz=46,slow=18,SNR=25
H01W3 T T 17 20 12.7
baz=341,slow=76,SNR=12
H01W1 Cape Leeuwin H 25.60 167 P **P** **16 52 53.1 -0.4**
baz=348,slow=7.1,SNR=13
H01W1 S S 16 57 35.2 +15
baz=46,slow=18,SNR=29
H01W1 T T 17 20 14.7
baz=341,slow=76,SNR=13
H01W2 Cape Leeuwin H 25.61 167 P **P** **16 52 54.2 +0.7**
baz=348,slow=7.1,SNR=10
H01W2 S S 16 57 34.9 +14
baz=46,slow=18,SNR=23
H01W2 T T 17 20 12.6
baz=341,slow=76,SNR=14
FAKI Fak Fak 25.74 76 eP **P** **16 52 52.8 -2.4**
comp=Z,4μm,1.4s
FAKI Fak Fak 25.74 76 P **P** **16 52 54.7 -0.5**
comp=Z,2μm,1.3s,comp=Z,32μmcomp=Z,71μm
PBA Port Blair 25.89 326 eP P 16 52 53.2 -3.3
comp=Z,1μm,1.4s
PBA LR LR
comp=Z,50μm,21.0s
PBA Port Blair 25.89 326 eP P 16 52 56.8 +0.3
LLP Lapu-Lapu 26.08 40 eP **P** **16 52 58.8 +0.5**
LLP eS **S** **16 57 27.5 -1.2**
SJMP San Jose 26.16 32 eP **P** **16 53 00.8 +1.9**
BUTP Butuan 26.19 45 eP **P** **16 53 02.9 +3.6**
CHAI Chaiyaphum 26.22 348 P **P** **16 53 00.8 +1.3**
KHON Khomkaen 26.49 350 P **P** **16 53 03.2 +1.3**
comp=Z,887μm,0.9s
MSLP Maasin 26.52 42 eP **P** **16 53 01.8 -0.4**
OTRP Odiongan 26.56 34 eP **P** **16 53 04.5 +2.0**
LUBP Lubang 26.81 29 eP **P** **16 53 07.6 +2.8**
KMPI Kaimana, Papua 26.94 78 P **P** **16 53 08.5 +2.5**
comp=Z,3μm,1.2s,comp=Z,42μm
PGP Puerto Galera 26.95 30 ⇑eP **P** **16 53 08.0 +1.8**
OCLP Ormoc 27.05 40 eP **P** **16 53 08.3 +1.3**
DGPR DIGLIPUR 27.05 328 eP **P** **16 53 07.7 +0.7**
DGPR IAmb IAmb 16 53 13.3
comp=Z,609nm,0.9s
PLP Palo 27.37 40 ⇑eP **P** **16 53 09.6 -0.3**
BOAC Boac 27.37 32 eP **P** **16 53 11.3 +1.4**
TGY Tagaytay City 27.46 30 P **P** **16 53 12.2 +1.5**
comp=Z,251nm,0.7s,baz=166,slow=2.5,SNR=9.3
TGY Tagaytay City 27.46 30 ⇓eP **P** **16 53 15.1 +4.3**
AUQP San Andres 27.70 34 eP **P** **16 53 14.3 +1.4**
WC1 Warramunga Arr 27.90 114 PFAKE 16 53 30.0 +15
WC1 LR LR
comp=Z,118μm,19.0s
WC1 Warramunga Arr 27.90 114 P **P** **16 53 14.1 -0.6**
baz=28
WRA Warramunga Arr 27.91 114 P **P** **16 53 14.6 -0.1**
comp=Z,172nm,0.9s,baz=283,slow=12,SNR=241
WRA PcP **PcP** **16 56 31.0 +0.7**
comp=Z,33nm,0.7s,baz=254,slow=3.1,SNR=2.1
WRA S S 16 58 31.3 +34
comp=Z,34nm,0.9s,baz=289,slow=24,SNR=2.9
WRAB Tennant Creek 27.91 114 eP **P** **16 53 13.8 -1.0**
comp=Z,408nm,0.9s
WRAB LR LR
comp=Z,159μm,20.0s
WRAB Tennant Creek 27.91 114 *d iP* **P** **16 53 14.3 -0.5**
WRAB pmax pmax
comp=Z,464nm,1.7s
WRAB MLR MLR
comp=Z,153μm,19.0s
WB2 Warramunga Arr 27.92 114 eP **P** **16 53 13.7 -1.2**
comp=Z,1μm,1.5s
WB2 LR LR
comp=Z,165μm,20.0s
WC3 Warramunga Arr 27.94 114 PFAKE 16 53 30.0 +15
WC3 LR LR
comp=Z,160μm,19.0s
BESP Borongan 27.99 41 eP **P** **16 53 15.7 +0.3**
RKPI Ransiki, Papua 28.00 74 P **P** **16 53 20.2 +4.6**
comp=Z,4μm,1.5s,comp=Z,45μm
NONG Nongkai 28.14 352 P **P** **16 53 17.6 +0.9**
comp=Z,10nm,1.7s,comp=Z,422nm
CNP Catarman 28.20 38 eP **P** **16 53 17.8 +0.5**
UTTA Uttaradit 28.32 346 P **P** **16 53 20.2 +1.9**
comp=Z,427μm,1.1s
FORT Forrest 28.33 140 eP **P** **16 53 16.9 -1.4**
comp=Z,550nm,0.7s
FORT LR LR
comp=Z,144μm,18.0s
FORT Forrest 28.33 140 P **P** **16 53 17.6 -0.7**
baz=28,SNR=37
SCZP Santa Cruz 28.45 26 eP **P** **16 53 20.9 +1.4**
POLP Polillo Island 28.49 31 eP **P** **16 53 20.7 +0.8**
PVCP Virac 28.76 36 eP **P** **16 53 21.7 -0.5**
ASAR Alice Springs 28.82 122 P **P** **16 53 22.4 -0.4**
comp=Z,54nm,0.9s,baz=292,slow=7.9,SNR=168
ASAR PcP **PcP** **16 56 32.8 +0.3**
comp=Z,38nm,0.7s,baz=302,slow=2.6,SNR=4.3
ASAR S S 16 58 53.1 +41
comp=Z,42nm,1.0s,baz=305,slow=24,SNR=4.8
ASAR LR LR 17 07 00.9
comp=Z,99μm,18.0s,baz=298,slow=41
ASAR P3KPbc 17 25 37.4
comp=Z,1.7nm,0.7s,baz=124,slow=4.1,SNR=15
AS31 Alice Springs 28.82 122 eP **P** **16 53 21.9 -0.9**
comp=Z,74nm,0.8s
AS31 LR LR
comp=Z,2μm,18.0s
QIZ Qiongzhong 28.91 5 P **P** **16 53 26.3 +2.8**
QIZ S **S** **16 58 16.3 +3.2**
QIZ pmax pmax
comp=Z,100nm,1.9s
QIZ pmax pmax
comp=Z,5μm,4.5s
QIZ LR LR
comp=Z,52μm,20.0s
QIZ LR LR
comp=Z,49μm,18.8s
QIZ LR LR
comp=Z,46μm,20.6s
QIZ Qiongzhong 28.91 5 eP **P** **16 53 24.9 +1.4**
comp=Z,1μm,1.6s
BOLP Bolinao 28.99 26 eP **P** **16 53 23.1 -1.2**
SMPP San Manuel, Pa 29.12 27 eP **P** **16 53 24.8 -0.6**
BALP Baler 29.18 29 eP **P** **16 53 26.6 +0.6**
CM31 Chiang Mai Arr 29.41 344 eP **P** **16 53 27.7 -0.3**
comp=Z,2μm,1.8s
CMAR Chiang Mai Arr 29.41 344 P **P** **16 53 29.0 +1.0**
comp=Z,83nm,0.9s,baz=179,slow=8.3,SNR=227
CMAR PcP **PcP** **16 56 34.8 +0.9**
comp=Z,22nm,0.8s,baz=193,slow=2.9,SNR=4.1
CMAR S **S** **16 58 18.8 -2.3**
comp=Z,3.7nm,1.0s,baz=163,slow=9.4,SNR=1.6
CMAR P3KPbc 17 25 34.4
comp=Z,1.8nm,0.9s,baz=324,slow=5.7,SNR=10
CMMT Chiang Mai 29.75 344 P **P** **16 53 31.8 +0.8**
comp=Z,213nm,1.5s,comp=Z,6μmcomp=Z,25μm
CHTO Chiang Mai 29.75 344 eP **P** **16 53 30.3 -0.7**
comp=Z,501nm,1.1s
CHTO LR LR
comp=Z,26μm,20.0s
CHTO Chiang Mai 29.75 344 eP **P** **16 53 30.3 -0.7**
CHTO pmax pmax
comp=Z,501nm,1.1s
CHTO MLR MLR
comp=Z,26μm,20.0s
SRPI Serui, Papua 29.86 76 P **P** **16 53 32.3 +0.2**
comp=Z,1μm,1.6s,comp=Z,19μmcomp=Z,43μm
CAUP Cauayan 30.34 28 eP **P** **16 53 35.9 -0.3**
ABRA Dolores 30.46 26 eP **P** **16 53 38.4 +1.1**
PALP Palanan 30.73 29 eP **P** **16 53 40.1 +0.5**
APYP Conner 30.88 27 eP **P** **16 53 41.0 0.0**
SLVN Son La 31.27 354 eP **P** **16 53 45.0 +0.5**
comp=Z,478nm,1.0s
PALK Pallekele 31.54 302 P **P** **16 53 47.0 0.0**
comp=Z,70nm,1.0s,baz=116,slow=9.1,SNR=1.3
PALK Pallekele 31.54 302 eP **P** **16 53 47.3 +0.3**
comp=Z,1μm,1.9s
PALK LR LR
comp=Z,25μm,20.0s
PALK Pallekele 31.54 302 eP **P** **16 53 47.3 +0.3**
PALK pmax pmax
comp=Z,1μm,1.9s
PALK MLR MLR
comp=Z,25μm,20.0s
SGCP Mt. Cagua 31.57 28 eP **P** **16 53 46.0 -1.1**
PALU Palau 32.05 59 P **P** **16 53 50.2 -1.2**
baz=32,SNR=7.4
MCO Taipa Grande 32.46 11 P **P** **16 53 57.0 +2.1**
MMPI Merauke 32.68 90 P P 16 54 02.6 +5.6
HKPS Hong Kong Po S 32.72 12 eP **P** **16 53 58.0 +0.8**
comp=Z,723nm,1.4s
HKPS LR LR
comp=Z,54μm,18.0s
HKC Hong Kong Obse 32.75 12 ⇑P **P** **16 54 01.0 +3.6**
QIS Mount Isa 32.84 113 P **P** **16 53 58.3 0.0**
baz=33,SNR=39
GZH Guangzhou 33.36 10 P P 16 54 10.3 +7.6
GZH S S 16 59 36.0 +13
GZH pmax pmax
comp=Z,7μm,4.5s
GZH LR LR
comp=N,33μm,17.5s
GZH LR LR
comp=E,28μm,17.7s
GENI Genyem 33.45 80 P **P** **16 54 03.4 -0.3**
comp=E,482nm,1.4s,comp=E,9μmcomp=E,31μm
BBP Basco 33.47 25 eP **P** **16 54 05.7 +2.0**
JAY Jayapura 33.99 80 P **P** **16 54 09.2 +0.8**
comp=E,79nm,0.9s,baz=253,slow=8.5,SNR=15
JAY LR LR 17 10 18.1
comp=E,35μm,21.4s,baz=264,slow=40
JAY Jayapura 33.99 80 P **P** **16 54 08.7 +0.2**
comp=E,1μm,1.0s,comp=E,31μmcomp=E,188μm
H08S2 Diego Garcia H 34.47 271 P **P** **16 54 12.6 +0.3**
baz=49,slow=11,SNR=5.0
H08S2 T T 17 28 54.6
baz=97,slow=76,SNR=65
H08S3 Diego Garcia H 34.48 271 P **P** **16 54 11.9 -0.5**
baz=49,slow=11,SNR=7.1
H08S3 T T 17 29 06.6
baz=97,slow=76,SNR=59
H08S1 Diego Carcia H 34.48 271 P **P** **16 54 10.5 -1.9**
baz=49,slow=11,SNR=8.8
H08S1 T T 17 29 12.7
baz=97,slow=76,SNR=68
DGAR Diego Garcia 34.53 271 eP **P** **16 54 11.6 -1.5**
comp=E,940nm,1.4s
DGAR LR LR
comp=Z,30μm,19.0s
DGAR Diego Garcia 34.53 271 eP **P** **16 54 11.6 -1.5**
DGAR pmax pmax
comp=Z,940nm,1.4s
DGAR MLR MLR
comp=Z,30μm,19.0s
BBOO Buckleboo 34.93 135 eP **P** **16 54 14.7 -1.6**
comp=Z,925nm,1.5s
BBOO LR LR
comp=Z,139μm,19.0s
BBOO Buckleboo 34.93 135 P **P** **16 54 15.2 -1.1**
baz=35,SNR=34
KMI Kunming 35.14 353 P **P** **16 54 21.0 +2.5**
KMI pP pwP 16 54 28.3 -3.1
KMI sP sP 16 54 30.8 +6.3
KMI PP **PP** **16 55 39.6 +1.1**
KMI S **S** **16 59 48.3 -2.4**
KMI sS sS 17 00 00.4 +1.2
KMI SS **SnSn** **17 02 02.8 -5.4**
KMI pmax pmax
comp=Z,260nm,1.2s
KMI pmax pmax
comp=Z,7μm,5.3s
KMI LR LR
comp=Z,78μm,16.0s
KMI LR LR
comp=Z,35μm,16.7s
KMI LR LR
comp=Z,69μm,14.2s
KMI Kunming 35.14 353 eP **P** **16 54 20.3 +1.9**
comp=Z,563nm,1.1s
KMI LR LR
comp=Z,55μm,21.0s
KMI Kunming 35.14 353 eP **P** **16 54 20.3 +1.9**
KMI pmax pmax
comp=Z,563nm,1.1s
KMI MLR MLR
comp=Z,55μm,21.0s
TWG Pinlang 35.25 22 eP **P** **16 54 19.8 +0.6**
comp=Z,2μm,1.0s
TWG LR LR
comp=Z,100μm,22.0s
MDRS Chennai 35.28 310 eP **P** **16 54 20.4 +0.9**
MDRS IAmb IAmb 16 54 26.9
comp=Z,1μm,2.4s
COEN Coen 35.30 100 eP **P** **16 54 20.1 +0.4**
comp=Z,920nm,1.1s
COEN LR LR
comp=Z,72μm,20.0s
COEN Coen 35.30 100 P **P** **16 54 20.4 +0.7**
baz=35,SNR=67
TRD Trivandrum 35.34 300 eP **P** **16 54 20.7 +0.6**
TPUB Ta-pu 35.53 21 eP **P** **16 54 21.9 +0.3**
comp=Z,365nm,0.8s
TPUB LR LR
comp=Z,29μm,21.0s
YULB Yu-li 35.86 22 eP **P** **16 54 23.9 -0.5**
comp=Z,393nm,0.9s
YULB LR LR
comp=Z,28μm,20.0s
BRDH Bariadhala 35.87 335 P **P** **16 54 25.6 +1.1**
comp=Z,165nm,0.4s,baz=136,slow=6.3,SNR=16
BRDH S **S** **16 59 57.4 -4.1**
comp=Z,72nm,0.3s,baz=276,slow=21,SNR=1.1
BRDH LR LR 17 11 00.3
comp=Z,31μm,21.6s,baz=124,slow=40
KNMB Chin-men Tao 35.88 17 eP **P** **16 54 25.6 +1.1**
comp=Z,553nm,1.3s
KNMB LR LR
comp=Z,39μm,20.0s
H08N1 Diego Carcia H 36.09 273 P **P** **16 54 26.0 -0.1**
baz=110,slow=11,SNR=10
SSLB Suanglung 36.09 22 eP **P** **16 54 26.6 +0.2**
comp=Z,741nm,0.9s
SSLB LR LR
comp=Z,33μm,21.0s
H08N2 Diego Garcia H 36.10 273 P **P** **16 54 24.7 -1.6**
baz=110,slow=11,SNR=6.7
H08N3 Diego Garcia H 36.11 273 P **P** **16 54 24.0 -2.3**
baz=110,slow=11,SNR=6.7
GYA Guiyang 36.20 359 ⇓*iP* **P** **16 54 28.8 +1.4**
GYA PP **PnPn** **16 55 45.9 -3.3**
GYA S **S** **17 00 09.0 +2.4**
GYA SS **SnSn** **17 02 29.3 -4.2**
GYA pmax pmax
comp=Z,190nm,0.8s
GYA pmax pmax
comp=Z,4μm,5.4s
GYA LR LR
comp=Z,45μm,20.8s
GYA LR LR
comp=Z,33μm,20.2s
GYA LR LR
comp=Z,61μm,20.8s
VIS Vishakhapatnam 36.29 319 *i* P **P** **16 54 29.2 +1.1**
VIS *i* S **S** **17 00 06.3 -1.6**
QZH Quanzhou 36.39 17 ⇑*iP* **P** **16 54 32.4 +3.5**
QZH PP **PP** **16 55 55.8 +3.9**
QZH S **S** **17 00 09.0 -0.3**
QZH pmax pmax
comp=Z,8μm,5.4s
QZH LR LR
comp=Z,18μm,21.3s
QZH LR LR
comp=Z,24μm,19.0s
QZH LR LR
comp=Z,54μm,36.9s
BELO BELONIA 36.46 335 eP **P** **16 54 29.5 -0.1**
BELO IAmb IAmb 16 54 42.2
comp=Z,11μm,1.0s
NACB Ninganchiao 36.68 22 eP **P** **16 54 32.0 +0.6**
comp=Z,318nm,0.8s
NACB LR LR
comp=Z,42μm,21.0s
BWNR Bhubaneshwar 36.76 325 eP **P** **16 54 31.6 -0.5**
YHNB Yeheng 37.05 22 eP **P** **16 54 35.3 +0.7**
comp=Z,295nm,0.8s
YHNB LR LR
comp=Z,48μm,22.0s
HTT Hallett 37.28 134 P **P** **16 54 36.4 -0.1**
baz=37,SNR=31
TATO Taipei 37.37 21 eP **P** **16 54 37.2 -0.1**
comp=Z,3μm,2.0s
TATO LR LR
comp=Z,41μm,21.0s
YOJ Yonaguni jima 37.48 24 eP **P** **16 54 38.6 +0.4**
comp=Z,799nm,0.8s
YOJ LR LR
comp=Z,27μm,20.0s
YOJ Yonaguni jima 37.48 24 eP **P** **16 54 38.6 +0.4**
YOJ pmax pmax
comp=Z,799nm,0.8s
YOJ MLR MLR
comp=Z,27μm,20.0s
KOHI KOHIMA 37.71 340 eP **P** **16 54 39.5 -0.8**
KOHI IAmb IAmb 16 54 44.9
comp=Z,963nm,1.1s
MOKO MOKOCHONG 38.14 341 eP **P** **16 54 44.1 +0.2**
MOKO IAmb IAmb 16 54 47.3
comp=Z,867nm,0.7s
SHL Shillong 38.36 337 eP **P** **16 54 45.8 0.0**
comp=Z,2μm,1.6s
SHL LR LR
comp=Z,12μm,21.0s
SHL Shillong 38.36 337 eP **P** **16 54 45.8 0.0**
SHL pmax pmax
comp=Z,2μm,1.6s
SHL MLR MLR
comp=Z,12μm,21.0s
SHL Shillong 38.36 337 eP **P** **16 54 45.8 0.0**
SHL IAmb IAmb 16 54 52.9
comp=Z,6μm,2.4s
STKA Stephens Creek 38.49 130 P **P** **16 54 46.8 +0.1**
comp=Z,267nm,0.7s,baz=301,slow=8.6,SNR=423
STKA S **S** **17 00 41.7 +0.3**
comp=Z,14nm,0.9s,baz=58,slow=18,SNR=1.3
STKA LR LR 17 11 02.4
comp=Z,99μm,19.8s,baz=286,slow=37
STKA Stephens Creek 38.49 130 eP **P** **16 54 46.1 -0.7**
comp=Z,157nm,1.1s
STKA LR LR
comp=Z,24μm,19.0s
STKA Stephens Creek 38.49 130 P **P** **16 54 46.8 +0.1**
baz=38,SNR=379
MNCI Minicoy 38.61 297 eP **P** **16 54 45.6 -2.3**
comp=Z,4μm,1.8s
MNCI LR LR
comp=Z,22μm,20.0s
JORH JORHAT 38.61 341 eP **P** **16 54 46.7 -1.0**
JORH IAmb IAmb 16 54 53.9
comp=Z,5μm,2.1s
MNCY Minicoy 38.62 297 eP **P** **16 54 46.7 -1.3**
LKP Lekhapani 38.69 344 eP **P** **16 54 48.1 -0.2**
CTA Charters Tower 38.86 110 P **P** **16 54 51.0 +1.0**
comp=Z,83nm,0.9s,baz=280,slow=11,SNR=74
CTA S **S** **17 00 44.0 -3.1**
comp=Z,23nm,1.0s,baz=207,slow=5.9,SNR=2.3
CTA Charters Tower 38.86 110 P **P** **16 54 51.0 +1.0**
CTAO Charters Tower 38.86 110 eP **P** **16 54 50.3 +0.3**
comp=Z,919nm,1.7s
CTAO LR LR
comp=Z,113μm,19.0s
CTAO Charters Tower 38.86 110 eP **P** **16 54 50.3 +0.3**
CTAO pmax pmax
comp=Z,919nm,1.7s
CTAO MLR MLR
comp=Z,113μm,19.0s
TEZP TEZPUR 38.98 339 eP **P** **16 54 51.2 +0.4**
TEZP IAmb IAmb 16 54 57.1
comp=Z,523nm,0.8s
DIBR DIBRUGARH 39.09 342 eP **P** **16 54 51.9 +0.2**
DIBR IAmb IAmb 16 54 55.0
comp=Z,2μm,0.2s
PMG Port Moresby 39.28 93 P **P** **16 54 55.1 +1.6**
comp=Z,170nm,0.9s,baz=301,slow=6.4,SNR=54
PMG Port Moresby 39.28 93 eP **P** **16 54 53.4 -0.2**
comp=Z,967nm,1.1s
PMG Port Moresby 39.28 93 *d iP* **P** **16 54 53.3 -0.2**
PMG pmax pmax
comp=Z,3μm,1.7s
PMG MLR MLR
comp=Z,215μm,19.0s
HYB Hyderabad 39.33 314 *i* P **P** **16 54 53.0 -0.9**
HYB ePP **PnPn** **16 56 32.0 +4.8**
HYB eS **S** **17 00 56.0 +1.8**
ZIRO ZIRO 39.47 341 eP **P** **16 54 55.3 +0.2**
BOK Bokaro 39.54 328 eP **P** **16 54 54.3 -1.3**
BOK IAmb IAmb 16 55 03.1
comp=Z,323nm,0.7s
ENH Enshi 40.05 3 eP **P** **16 54 59.9 +0.3**
comp=Z,1μm,1.4s
TAWA Tawang 40.21 339 eP **P** **16 55 02.2 +0.7**
TAWA IAmb IAmb 16 55 09.4
comp=Z,3μm,1.5s
MANU Manus Island 40.57 81 eP **P** **16 55 05.2 +0.9**
comp=Z,884nm,1.4s
MANU LR LR
comp=Z,36μm,22.0s
CD2 Chengdu 40.77 355 ⇓P **P** **16 55 06.3 +0.6**
CD2 pP pP 16 55 09.9 -0.2
CD2 PcP **PcP** **16 57 08.4 +1.6**
CD2 S **S** **17 01 17.0 +1.6**

CD2				sS	sS	17 01 24.5	+0.2
CD2				pmax	pmax		
	comp=Z,300nm,0.7s						
CD2				pmax	pmax		
	comp=Z,11μm,4.8s						
CD2				LR	LR		
	comp=Z,82μm,18.1s						
CD2				LR	LR		
	comp=Z,117μm,16.7s						
CD2				LR	LR		
	comp=Z,87μm,16.2s						
WHN	**Wuhan**	**40.83**	**9**	⇑P	**P**	**16 55 07.6**	**+1.5**
WHN				S	**S**	**17 01 18.9**	**+2.7**
WHN				pmax	pmax		
	comp=Z,990nm,1.7s						
WHN				pmax	pmax		
	comp=Z,14μm,4.7s						
WHN				LR	LR		
	comp=Z,74μm,15.9s						
WHN				LR	LR		
	comp=Z,28μm,15.9s						
WHN				LR	LR		
	comp=Z,89μm,24.5s						
ARPS	**Mount Arapiles**	**41.06**	**136**	P	**P**	**16 55 08.5**	**+0.4**
	baz=41,SNR=19						
GTK	**Tadong**	**41.25**	**334**	*e*P	**P**	**16 55 09.9**	**+0.1**
GTK				IAmb	IAmb	16 55 24.4	
	comp=Z,6μm,2.5s						
CMSA	**Cobar Meteorol**	**41.52**	**127**	P	**P**	**16 55 12.3**	**+0.4**
	baz=42,SNR=57						
NGP	**Nagpur**	**41.54**	**318**⇑	*e*P	**P**	**16 55 12.4**	**+0.3**
NGP				IAmb	IAmb	16 55 20.6	
NGP				*ex*	x	17 01 22.3	
GOA	**Goa**	**41.70**	**307**	*e*P	**P**	**16 55 13.1**	**-0.4**
RAMN	**Ramite**	**41.82**	**332**	*e*P	**P**	**16 55 15.6**	**+0.9**
	comp=Z,4μm,1.4s						
JOW	**Kunigami**	**41.85**	**29**	P	**P**	**16 55 16.4**	**+1.9**
	comp=Z,14nm,0.8s,baz=178,slow=14,SNR=18						
JOW	**Kunigami**	**41.85**	**29**	*e*P	**P**	**16 55 14.0**	**-0.5**
	comp=Z,686nm,1.3s						
JOW				LR	LR		
	comp=Z,24μm,22.0s						
LSA	**Lhasa**	**42.38**	**339**	P	**P**	**16 55 20.6**	**+1.2**
LSA				pP	**sP**	**16 55 26.8**	**+1.3**
LSA				S	**S**	**17 01 34.5**	**-5.7**
LSA				pmax	pmax		
	comp=Z,430nm,0.6s						
LSA				LR	LR		
	comp=Z,22μm,15.9s						
LSA				LR	LR		
	comp=Z,45μm,15.8s						
LSA				LR	LR		
	comp=Z,72μm,13.2s						
LSA	**Lhasa**	**42.38**	**339**	*e*P	**P**	**16 55 20.0**	**+0.6**
	comp=Z,623nm,1.0s						
LSA				LR	LR		
	comp=Z,10μm,22.0s						
LSA	**Lhasa**	**42.38**	**339**	*e*P	**P**	**16 55 20.0**	**+0.6**
LSA				pmax	pmax		
	comp=Z,623nm,1.0s						
LSA				MLR	MLR		
	comp=Z,10μm,22.0s						
JBP	**Jabalpur**	**42.41**	**321**	*e*P	**P**	**16 55 20.4**	**+1.2**
JBP				AMB	AMB	16 55 25.9	
	comp=Z,628nm,1.2s						
JBP				*ex*	x	17 01 39.6	
RMQ	**Roma**	**42.45**	**118**	P	**P**	**16 55 20.5**	**+0.9**
	baz=42,SNR=41						
JIRN	**Jiri**	**42.62**	**332**	*e*P	**P**	**16 55 22.1**	**+0.8**
	comp=Z,2μm,0.8s						
PKI	**Pulchoki**	**42.91**	**331**	*e*P	**P**	**16 55 23.8**	**+0.2**
	comp=Z,811nm,1.1s						
PKIN	**Phulchoki**	**42.92**	**331**	*e*P	**P**	**16 55 23.8**	**+0.2**
	comp=Z,2μm,1.8s						
SSE	**Sheshan**	**42.93**	**18**	P	**P**	**16 55 24.9**	**+1.6**
SSE				S	**S**	**17 01 49.1**	**+1.8**
SSE				pmax	pmax		
	comp=Z,25nm,0.8s						
SSE				pmax	pmax		
	comp=Z,5μm,6.6s						
SSE				LR	LR		
	comp=Z,7μm,17.1s						
SSE				LR	LR		
	comp=Z,7μm,16.5s						
SSE	**Sheshan**	**42.93**	**18**	*e*P	**P**	**16 55 23.4**	**+0.2**
	comp=Z,1μm,1.5s						
GUN	**Gumba**	**42.98**	**332**	*e*P	**P**	**16 55 24.9**	**+0.8**
	comp=Z,2μm,1.1s						
DMN	**Daman**	**43.09**	**331**	*e*P	**P**	**16 55 25.4**	**+0.4**
	comp=Z,1μm,0.9s						
KKN	**Kakani**	**43.16**	**331**	*e*P	**P**	**16 55 25.9**	**+0.4**
	comp=Z,1μm,0.9s						
NJ2	**Nanjing**	**43.20**	**14**⇓	*i*P	**P**	**16 55 26.8**	**+1.3**
NJ2				pP	**sP**	**16 55 31.3**	**-0.2**
NJ2				sP	**pwP**	**16 55 35.8**	**-2.5**
NJ2				S	**S**	**17 01 52.9**	**+1.7**
NJ2				sS	**sS**	**17 02 02.3**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,64nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,7μm,6.2s						
NJ2				LR	LR		
	comp=Z,35μm,19.5s						
NJ2				LR	LR		
	comp=Z,31μm,21.7s						
NJ2				LR	LR		
	comp=Z,47μm,19.0s						
POO	**Poona**	**43.48**	**311**	*e*P	**P**	**16 55 26.3**	**-1.7**
POO				IAmb	IAmb	16 55 34.8	
	comp=Z,191nm,0.8s						
GKN	**Gorkha**	**43.65**	**330**	*e*P	**P**	**16 55 29.9**	**+0.6**
	comp=Z,3μm,1.3s						
XAN	**Xi'an**	**43.77**	**2**	P	**P**	**16 55 30.3**	**+0.2**
XAN				S	**S**	**17 01 57.3**	**-2.4**
XAN				pmax	pmax		
	comp=Z,81nm,0.7s						
XAN				pmax	pmax		
	comp=Z,6μm,4.7s						
XAN				LR	LR		
	comp=Z,36μm,17.9s						
XAN				LR	LR		
	comp=Z,31μm,15.7s						
XAN				LR	LR		
	comp=Z,44μm,19.0s						
XAN	**Xi'an**	**43.77**	**2**	*e*P	**P**	**16 55 29.7**	**-0.4**
	comp=Z,458nm,0.9s						
XAN	**Xi'an**	**43.77**	**2**	*e*P	**P**	**16 55 29.7**	**-0.4**
XAN				pmax	pmax		
	comp=Z,458nm,0.9s						
KOLN	**Koldanda**	**43.97**	**329**	*e*P	**P**	**16 55 32.5**	**+0.5**
	comp=Z,2μm,1.0s						
TOO	**Toolangi**	**43.99**	**135**	*e*P	**P**	**16 55 32.3**	**+0.4**
	comp=Z,937nm,1.4s						
TOO				LR	LR		
	comp=Z,115μm,18.0s						
TOO	**Toolangi**	**43.99**	**135**	P	**P**	**16 55 33.4**	**+1.5**
	baz=44,SNR=12						
GUMO	**Guam**	**44.01**	**59**	P	**P**	**16 55 32.2**	**-0.1**
	comp=Z,82nm,0.7s,baz=187,slow=5.7,SNR=3.6						
GUMO	**Guam**	**44.01**	**59**	*e*P	**P**	**16 55 31.9**	**-0.4**
	comp=Z,661nm,1.3s						
GUMO				LR	LR		
	comp=Z,14μm,20.0s						
BHPL	**Bhopal**	**44.08**	**319**	*e*P	**P**	**16 55 31.6**	**-1.2**
BHPL				IAmb	IAmb	16 55 39.1	
	comp=Z,374nm,1.2s						
EIDS	**Eidsvold**	**44.22**	**116**	*e*P	**P**	**16 55 34.3**	**+0.4**
	comp=Z,409nm,1.5s						
EIDS				LR	LR		
	comp=Z,91μm,19.0s						
EIDS	**Eidsvold**	**44.22**	**116**	P	**P**	**16 55 34.8**	**+0.9**
	baz=44,SNR=25						
DANN	**Dangsing**	**44.36**	**330**	*e*P	**P**	**16 55 35.6**	**+0.4**
	comp=Z,2μm,0.9s						
PYUN	**Piuthan**	**44.55**	**329**	*e*P	**P**	**16 55 37.0**	**+0.4**
	comp=Z,1μm,0.9s						
YNG	**Young**	**44.69**	**129**	P	**P**	**16 55 38.2**	**+0.6**
	baz=45,SNR=36						
RABL	**Rabaul**	**44.85**	**86**	*e*P	**P**	**16 55 37.9**	**-1.3**
	comp=Z,254nm,0.9s						
RABL				LR	LR		
	comp=Z,16μm,21.0s						
CAN	**Canberra**	**45.55**	**130**	*e*P	**P**	**16 55 44.8**	**+0.4**
	comp=Z,901nm,1.5s						
CAN				LR	LR		
	comp=Z,101μm,20.0s						
CAN	**Canberra**	**45.55**	**130**	P	**P**	**16 55 45.2**	**+0.8**
	baz=46						
CAN	**Canberra**	**45.55**	**130**	*e*P	**P**	**16 55 44.8**	**+0.4**
CAN				pmax	pmax		
	comp=Z,901nm,1.5s						
CAN				MLR	MLR		
	comp=Z,101μm,20.0s						
CNB	**Canberra Magne**	**45.82**	**130**	P	**P**	**16 55 47.2**	**+0.6**
	baz=46,SNR=20						
LZH	**Lanzhou**	**45.91**	**356**	*e*P	**P**	**16 55 48.6**	**+1.4**
LZH				pP	sP	16 55 52.8	-0.5
LZH				sP	pwP	16 55 56.6	-3.6
LZH				PP	**PP**	**16 57 37.6**	**+2.5**
LZH				*e*S	**S**	**17 02 31.0**	**+0.2**
LZH				SS	**SS**	**17 05 53.5**	**-2.4**
LZH				pmax	pmax		
	comp=Z,410nm,1.2s						
LZH				pmax	pmax		
	comp=Z,3μm,5.8s						
LZH				LR	LR		
	comp=Z,19μm,14.3s						
LZH				LR	LR		
	comp=Z,54μm,14.9s						
LZH				LR	LR		
	comp=Z,40μm,17.5s						
ARMA	**Armidale**	**45.95**	**123**	*e*P	**P**	**16 55 48.3**	**+0.6**
	comp=Z,288nm,1.5s						
ARMA				LR	LR		
	comp=Z,81μm,22.0s						
ARMA	**Armidale**	**45.95**	**123**	P	**P**	**16 55 49.2**	**+1.4**
	baz=46,SNR=20						
ANA2	**Anatahan**	**46.12**	**56**	*e*P	**P**	**16 55 47.9**	**-1.2**
	comp=Z,508nm,1.0s						
SARN	**Sarigan**	**46.36**	**55**	*e*P	**P**	**16 55 50.3**	**-0.7**
	comp=Z,395nm,1.4s						
MILA	**Mila**	**46.37**	**132**	P	**P**	**16 55 52.1**	**+1.3**
	baz=46,SNR=8.7						
MGCD	**Mangrove Creek**	**46.40**	**127**	P	**P**	**16 55 52.3**	**+1.2**
	baz=46,SNR=28						
RIV	**Riverview**	**46.65**	**128**	P	**P**	**16 55 54.4**	**+1.4**
	baz=47,SNR=5.7						
TIA	**Tai'an**	**46.84**	**11**	P	**P**	**16 55 53.9**	**-0.5**
TIA				S	**S**	**17 02 42.3**	**-1.5**
TIA				pmax	pmax		
	comp=Z,120nm,1.6s						
TIA				pmax	pmax		
	comp=Z,3μm,6.1s						
TIA				LR	LR		
	comp=Z,34μm,30.4s						
TIA				LR	LR		
	comp=Z,14μm,26.5s						
MOO	**Moorlands**	**47.55**	**140**	P	**P**	**16 56 01.0**	**+1.1**
	baz=48,SNR=13						
TIY	**Taiyuan**	**47.66**	**6**	*e*P	**P**	**16 56 01.8**	**+1.0**
TIY				PP	**PP**	**16 57 54.4**	**+1.7**
TIY				S	**S**	**17 02 54.8**	**-0.8**
TIY				pmax	pmax		
	comp=Z,68nm,0.6s						
TIY				pmax	pmax		
	comp=Z,5μm,6.1s						
TIY				LR	LR		
	comp=Z,14μm,15.2s						
TIY				LR	LR		
	comp=Z,14μm,14.4s						
TIY				LR	LR		
	comp=Z,16μm,18.8s						
TAU	**Tasmania Unive**	**47.87**	**140**	*e*P	**P**	**16 56 01.8**	**-0.6**
	comp=Z,695nm,1.3s						
TAU				LR	LR		
	comp=Z,41μm,18.0s						
TAU	**Tasmania Unive**	**47.87**	**140**	*e*P	**P**	**16 56 01.8**	**-0.6**
TAU				pmax	pmax		
	comp=Z,695nm,1.3s						
TAU				MLR	MLR		
	comp=Z,41μm,18.0s						
NDI	**New Delhi**	**48.16**	**324**	*e*P	**P**	**16 56 04.0**	**-0.8**
NDI				*ex*	x	17 03 00.0	
JNU	**Nakatsue**	**48.37**	**27**	P	**P**	**16 56 06.3**	**0.0**
	comp=Z,60nm,1.0s,baz=198,slow=5.6,SNR=29						
JNU				S	**S**	**17 03 01.3**	**-4.5**
	comp=Z,5.0nm,1.1s,baz=44,slow=17,SNR=1.1						
JNU				LR	LR	17 18 15.8	
	comp=Z,22μm,21.0s,baz=196,slow=38						
JNU	**Nakatsue**	**48.37**	**27**	*e*P	**P**	**16 56 04.7**	**-1.7**
	comp=Z,1μm,1.6s						
JNU				LR	LR		
	comp=Z,26μm,21.0s						
DDI	**Dehra Dun**	**48.93**	**326**	*e*P	**P**	**16 56 09.8**	**-1.0**
DDI				IAmb	IAmb	16 56 16.8	
	comp=Z,316nm,0.8s						
MRIV	**Mauritius Mete**	**49.00**	**252**	*e*P	**P**	**16 56 08.5**	**-3.0**
	comp=Z,164nm,1.6s						
MRIV				LR	LR		
	comp=Z,10μm,19.0s						
BHJ	**Bhuj**	**49.46**	**312**	*e*P	**P**	**16 56 13.9**	**-0.9**
BHJ				IAmb	IAmb	16 56 22.6	
	comp=Z,370nm,1.2s						
GTA	**Gaotai**	**49.60**	**352**	⇓P	**P**	**16 56 17.3**	**+1.5**
GTA				pP	sP	16 56 21.4	-0.6
GTA				sP	pP	16 56 24.3	+4.0
GTA				S	**S**	**17 03 24.5**	**+1.4**
GTA				pmax	pmax		
	comp=Z,53nm,1.0s						
GTA				pmax	pmax		
	comp=Z,5μm,5.8s						
GTA				LR	LR		
	comp=Z,28μm,17.5s						
GTA				LR	LR		
	comp=Z,55μm,24.0s						
GTA				LR	LR		
	comp=Z,38μm,18.9s						
TJN	**Taejon**	**49.80**	**21***d*	*i*P	**P**	**16 56 16.6**	**-0.6**
SMLA	**Simla**	**50.04**	**326**	*e*P	**P**	**16 56 18.5**	**-0.5**
SMLA				IAmb	IAmb	16 56 26.3	
	comp=Z,817nm,1.1s						
BTO	**Baotou**	**50.36**	**3**	*e*P	**P**	**16 56 22.9**	**+1.4**
BJT	**Baijiatuau**	**50.39**	**9**	*e*P	**P**	**16 56 21.2**	**-0.4**
	comp=Z,1μm,1.8s						
BJT	**Baijiatuau**	**50.39**	**9**	*e*P	**P**	**16 56 21.2**	**-0.4**
BJT				pmax	pmax		
	comp=Z,1μm,1.8s						
DL2	**Dalian**	**50.41**	**15**⇓	*i*P	**P**	**16 56 21.0**	**-0.7**
DL2				PcS	**PcS**	**17 01 40.8**	**+3.7**
DL2				S	**S**	**17 03 32.0**	**-2.0**
DL2				pmax	pmax		
	comp=Z,110nm,1.0s						
DL2				pmax	pmax		
	comp=Z,2μm,5.1s						
DL2				LR	LR		
	comp=Z,19μm,22.2s						
DL2				LR	LR		
	comp=Z,14μm,23.7s						
DL2				LR	LR		
	comp=Z,37μm,21.1s						
BJI	**Beijing**	**50.41**	**9**	P	**P**	**16 56 21.9**	**+0.1**
BJI				S	**S**	**17 03 33.1**	**-1.0**
BJI				pmax	pmax		
	comp=Z,55nm,1.1s						
BJI				LR	LR		
	comp=Z,7μm,20.1s						
BJI				LR	LR		
	comp=Z,10μm,23.5s						
HHC	**Hu-ho-hao-te**	**50.70**	**4**	*e*P	**P**	**16 56 25.4**	**+1.3**
HHC				sP	sP	16 56 32.8	+2.5
HHC				PcP	**PcP**	**16 57 41.0**	**-0.2**
HHC				S	**S**	**17 03 40.8**	**+2.5**
HHC				sS	sS	17 03 47.5	+0.6
HHC				SS	**SS**	**17 07 15.3**	**+2.1**
HHC				pmax	pmax		
	comp=Z,150nm,1.3s						
HHC				pmax	pmax		
	comp=Z,5μm,6.8s						
HHC				LR	LR		
	comp=Z,33μm,19.6s						
HHC				LR	LR		
	comp=Z,24μm,14.1s						
HHC				LR	LR		
	comp=Z,47μm,17.6s						
RER	**Riviere de l'E**	**50.70**	**251**	*e*P	**P**	**16 56 23.8**	**-0.7**
	comp=Z,438nm,1.5s						
RER				LR	LR		
	comp=Z,15μm,22.0s						
KS15	**Wonju Array Si**	**50.94**	**21**	*e*P	**P**	**16 56 25.9**	**+0.1**
	comp=Z,216nm,1.3s						
KSRS	**Korea Array**	**50.97**	**21**	P	**P**	**16 56 26.4**	**+0.4**
	comp=Z,9.0nm,0.6s,baz=212,slow=7.7,SNR=39						
KSRS				S	**S**	**17 03 37.7**	**-4.1**
	comp=Z,0.4nm,0.5s,baz=59,slow=41,SNR=1.1						
KSRS				LR	LR	17 20 00.8	
	comp=Z,13μm,19.3s,baz=188,slow=38						
KSRS				PKPPKP		17 27 09.6	
	comp=Z,0.2nm,0.3s,baz=356,slow=1.7,SNR=5.0						
DHRM	**DHARAMSHALA**	**51.37**	**326**	*e*P	**P**	**16 56 28.5**	**-0.9**
MSEY	**Mahe Island**	**51.62**	**272**	*e*P	**P**	**16 56 31.5**	**0.0**
	comp=Z,753nm,1.9s						
MSEY				LR	LR		
	comp=Z,22μm,20.0s						
MSEY	**Mahe Island**	**51.62**	**272**	*e*P	**P**	**16 56 31.5**	**0.0**
MSEY				pmax	pmax		
	comp=Z,753nm,1.9s						
MSEY				MLR	MLR		
	comp=Z,22μm,20.0s						
HNR	**Honiara**	**51.85**	**94**	*e*P	**P**	**16 56 33.0**	**-0.1**
HNR				*e*S	**PP**	**16 58 33.0**	**+1.9**
HNR	**Honiara**	**51.85**	**94**	*e*P	**P**	**16 56 32.7**	**-0.4**
	comp=Z,3μm,1.4s						
HNR	**Honiara**	**51.85**	**94**	*e*P	**P**	**16 56 32.7**	**-0.4**
HNR				pmax	pmax		
	comp=Z,3μm,1.4s						
LHI	**Lord Howe Isla**	**52.41**	**122**	*e*P	**P**	**16 56 36.2**	**-0.8**
	comp=Z,402nm,1.3s						
LHI				LR	LR		
	comp=Z,57μm,18.0s						
LHI	**Lord Howe Isla**	**52.41**	**122**	P	**P**	**16 56 37.0**	**+0.1**
	baz=52						
JHJ	**Hachijo jima 2**	**52.84**	**34**	P	**P**	**16 56 40.9**	**+0.8**
	comp=Z,165nm,0.9s,baz=240,slow=8.1,SNR=2.8						
JHJ2	**Mitsune**	**52.85**	**34**	*e*P	**P**	**16 56 41.5**	**+1.4**
	comp=Z,1μm,1.4s						
JHJ2				LR	LR		
	comp=Z,15μm,19.0s						
INU	**Inuyama**	**53.09**	**30**	*e*P	**P**	**16 56 39.6**	**-2.2**
INU				LR	LR		
	comp=Z,16μm,20.0s						
PATS	**Pohnpei**	**53.47**	**74**	*e*P	**P**	**16 56 44.5**	**-0.6**
	comp=Z,532nm,1.4s						
PATS				LR	LR		
	comp=Z,19μm,21.0s						
SNY	**Shenyang**	**53.65**	**15**⇓	P	**P**	**16 56 44.6**	**-1.2**
SNY				S	**S**	**17 04 15.3**	**-3.2**
SNY				pmax	pmax		
	comp=Z,64nm,2.0s						
SNY				pmax	pmax		
	comp=Z,4μm,4.7s						
SNY				LR	LR		
	comp=Z,20μm,25.6s						
SNY				LR	LR		
	comp=Z,9μm,29.2s						
SNY				LR	LR		
	comp=Z,48μm,20.2s						
NIL	**Nilore**	**54.11**	**325**	*e*P	**P**	**16 56 48.0**	**-1.5**
	comp=Z,568nm,0.9s						
NIL				LR	LR		
	comp=Z,4μm,20.0s						
NIL	**Nilore**	**54.11**	**325**	*e*P	**P**	**16 56 48.0**	**-1.5**
NIL				pmax	pmax		
	comp=Z,568nm,0.9s						
NIL				MLR	MLR		
	comp=Z,4μm,20.0s						
MAJO	**Matsushiro**	**54.62**	**30**	*e*P	**P**	**16 56 50.4**	**-2.7**
	comp=Z,307nm,1.0s						
MAJO				LR	LR		
	comp=Z,21μm,20.0s						
MAJO	**Matsushiro**	**54.62**	**30***d*	*i*P	**P**	**16 56 50.8**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,381nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,19μm,19.0s						
MAT	**Matsushiro**	**54.62**	**30**	P	**P**	**16 56 50.8**	**-2.3**
MAT				S	**S**	**17 04 28.8**	**-3.1**
MJAR	**Matsushiro Arr**	**54.62**	**30**	P	**P**	**16 56 52.8**	**-0.3**
	comp=Z,54nm,1.0s,baz=208,slow=6.7,SNR=59						
MJAR				S	**S**	**17 04 24.5**	**-7.4**
	comp=Z,0.4nm,0.3s,baz=226,slow=0.9,SNR=1.5						
MJAR				LR	LR	17 23 09.1	
	comp=Z,11μm,18.6s,baz=215,slow=39						
MJAR				PKPPKP		17 26 58.5	
	comp=Z,0.9nm,0.7s,baz=25,slow=2.7,SNR=4.5						
MJAR				PKP2bc		17 27 20.5	
	comp=Z,2.3nm,0.9s,baz=11,slow=2.2,SNR=4.0						
MJB9	**Matsu-Tunnel**	**54.62**	**30**	*e*P	**P**	**16 56 50.8**	**-2.3**
	comp=Z,313nm,1.0s						
MJB9				LR	LR		
	comp=Z,23μm,20.0s						
CN2	**Changchun**	**55.98**	**16**⇓	*i*P	**P**	**16 57 01.8**	**-0.9**
CN2				PcP	**PcP**	**16 58 02.3**	**+1.3**
CN2				*e*PP	**PP**	**16 59 10.9**	**+3.0**
CN2				*e*S	**S**	**17 04 50.5**	**+0.7**
CN2				SS	**SS**	**17 08 36.5**	**+0.1**
CN2				pmax	pmax		
	comp=Z,3μm,6.0s						
CN2				LR	LR		
	comp=Z,20μm,18.0s						
CN2				LR	LR		
	comp=Z,16μm,18.0s						
CN2				LR	LR		
	comp=Z,27μm,20.0s						
CASY	**Casey**	**56.30**	**178**	*e*P	**P**	**16 57 03.7**	**-1.0**
	comp=Z,557nm,1.6s						
CASY				LR	LR		
	comp=Z,36μm,18.0s						
WMQ	**Urumqi**	**56.41**	**343**	P	**P**	**16 57 07.0**	**+1.1**
WMQ				pP	pP	16 57 09.9	-0.5
WMQ				PcP	**PcP**	**16 58 05.3**	**+2.5**
WMQ				PP	**PP**	**16 59 17.6**	**+5.8**
WMQ				PcS	**PcS**	**17 02 02.3**	**-1.0**
WMQ				S	**S**	**17 04 56.0**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,380nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,11μm,5.5s						
WMQ				LR	LR		
	comp=Z,7μm,31.1s						
WMQ				LR	LR		
	comp=Z,19μm,25.9s						
WMQ				LR	LR		
	comp=Z,55μm,36.3s						
WMQ	**Urumqi**	**56.41**	**343**	*e*P	**P**	**16 57 06.5**	**+0.6**
	comp=Z,2μm,1.8s						
WMQ				LR	LR		
	comp=Z,23μm,21.0s						
WMQ	**Urumqi**	**56.41**	**343**	*e*P	**P**	**16 57 06.5**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,2μm,1.8s						
WMQ				MLR	MLR		
	comp=Z,23μm,21.0s						
MSHR	**Mys Shultsa**	**56.65**	**21***d*	*i*P	**P**	**16 57 07.2**	**-0.3**
KSH	**Kashi**	**57.17**	**331**	P	**P**	**16 57 10.1**	**-1.4**
KSH				pP	pP	16 57 15.6	-0.4
KSH				PP	**PP**	**16 59 19.8**	**+1.1**
KSH				S	**S**	**17 05 01.9**	**-4.1**
KSH				SS	**SS**	**17 08 54.4**	**-1.1**
KSH				pmax	pmax		
	comp=Z,740nm,1.2s						
KSH				pmax	pmax		
	comp=Z,10μm,4.7s						
KSH				LR	LR		
	comp=Z,22μm,14.2s						
KSH				LR	LR		
	comp=Z,22μm,15.5s						
KSH				LR	LR		
	comp=Z,24μm,23.5s						
KBL	**Kabul**	**57.20**	**323**	*e*P	**P**	**16 57 10.8**	**-1.0**
	comp=Z,986nm,1.5s						
KBL	**Kabul**	**57.20**	**323**	*e*P	**P**	**16 57 10.9**	**-1.0**
KBL				pmax	pmax		
	comp=Z,986nm,1.5s						
VLA	**Vladivostok**	**57.38**	**21***d*	*i*P	**P**	**16 57 12.4**	**-0.3**
VLA				pmax	pmax		
	comp=Z,535nm,1.8s						
SONM	**Songino Array**	**57.53**	**359**	P	**P**	**16 57 14.7**	**+0.9**
	comp=Z,84nm,0.6s,baz=176,slow=7.7,SNR=226						
SONM				S	**S**	**17 05 11.5**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=182,slow=9.7,SNR=2.8						
SONM				LR	LR	17 23 49.7	
	comp=Z,35μm,21.2s,baz=171,slow=38						
SONM				PKPPKP		17 26 59.3	
	comp=Z,5.2nm,1.2s,baz=3.4,slow=2.3,SNR=6.8						
SONM				PKP2bc		17 27 09.4	
	comp=Z,4.8nm,1.0s,baz=300,slow=0.9,SNR=6.9						
ULN	**Ulaanbaatar**	**57.56**	**360**	*e*P	**P**	**16 57 14.4**	**+0.3**
	comp=Z,1μm,1.9s						
ULN				LR	LR		
	comp=Z,34μm,18.0s						

ULN	**Ulaanbaatar**	**57.56 360**	*d*	*i* P	**P**	**16 57 14.7 +0.6**
ULN				pmax	pmax	
	comp=Z,216nm,1.7s					
ULN				MLR	MLR	
	comp=Z,34μm,22.0s					
DZM	**Mont Dzumac**	**57.80 110**		*e*S	**S**	**17 05 17.8 +2.9**
	comp=Z,26μm,27.2s					
DZM				*e*SS	**SS**	**17 09 12.3 +6.5**
	comp=Z,9μm,24.6s					
DZM				*e*LQ	LQ	17 11 52.2
	comp=Z,27μm,28.6s					
DZM				*e*LR	LR	17 14 20.3
	comp=Z,87μm,24.9s					
DZM	**Mont Dzumac**	**57.80 110**		*e*P	**P**	**16 57 16.7 +0.4**
	comp=Z,1μm,1.8s					
DZM				LR	LR	
	comp=Z,50μm,18.0s					
ONTNC	**Ouen Toro**	**57.82 110**		PFAKE		16 57 30.0 +14
ONTNC				LR	LR	
	comp=Z,39μm,20.0s					
WSAR	**Wadi Sarin**	**57.92 305**		PKP2bc	**P'P'bc**	**17 27 11.7 +0.1**
	comp=Z,3.6nm,0.8s,baz=349,slow=10,SNR=3.7					
MDJ	**Mudanjiang**	**57.94 19**		P	**P**	**16 57 16.6 0.0**
MDJ				pmax	pmax	
	comp=Z,34nm,0.9s					
MDJ				pmax	pmax	
	comp=Z,4μm,5.1s					
MDJ				LR	LR	
	comp=Z,10μm,29.2s					
MDJ				LR	LR	
	comp=Z,12μm,24.9s					
MDJ				LR	LR	
	comp=Z,15μm,28.5s					
MDJ	**Mudanjiang**	**57.94 19**		*e*P	**P**	**16 57 15.5 -1.1**
	comp=Z,559nm,1.7s					
USA0B	**Ussuriysk Arra**	**58.36 21**		*e*P	**P**	**16 57 18.9 -0.7**
	comp=Z,955nm,1.5s					
USRK	**Ussuriysk Ar.**	**58.36 21**		P	**P**	**16 57 19.5 -0.1**
	comp=Z,34nm,0.6s,baz=203,slow=7.4,SNR=54					
USRK				S	**S**	**17 05 15.9 -5.3**
	comp=Z,1.2nm,0.8s,baz=185,slow=14,SNR=2.3					
USRK				LR	LR	17 25 04.2
	comp=Z,11μm,19.8s,baz=206,slow=39					
USRK				PKPPKP		17 26 58.7
	comp=Z,2.8nm,0.8s,baz=57,slow=7.0,SNR=5.3					
DMTO	**DMTO**	**58.56 298**		P	**P**	**16 57 20.5 -0.9**
ABPO	**Ambohimpanom**	**58.63 254**		*e*P	**P**	**16 57 20.5 -1.7**
	comp=Z,202nm,1.1s					
ABPO				LR	LR	
	comp=Z,15μm,20.0s					
ABPO	**Ambohimpanom**	**58.63 254**		*e*P	**P**	**16 57 20.5 -1.7**
ABPO				pmax	pmax	
	comp=Z,202nm,1.1s					
ABPO				MLR	MLR	
	comp=Z,15μm,20.0s					
NRN	**Naryn**	**58.69 333**		*e*P	**P**	**16 57 21.0 -1.3**
NRN				LR	LR	
	comp=Z,7μm,20.0s					
NRN	**Naryn**	**58.69 333**		*e*P	**P**	**16 57 21.0 -1.3**
NRN				MLR	MLR	
	comp=Z,7μm,20.0s					
PINNC	**Pines Island,**	**58.75 110**		*e*P	**P**	**16 57 23.0 +0.3**
	comp=Z,931nm,1.5s					
PINNC				LR	LR	
	comp=Z,86μm,19.0s					
PDGK	**Podgornoye**	**58.77 337**		P	**P**	**16 57 21.8 -0.8**
PDGK				pmax	pmax	
	comp=Z,321nm,0.8s					
UZB	**Uzynbulak**	**58.80 336**	*d*	*i* P	**P**	**16 57 22.9 0.0**
UZB				*e*S	**S**	**17 05 24.9 -2.4**
UZB				pmax	pmax	
	comp=Z,1μm,3.3s					
UZB	**Uzynbulak**	**58.80 336**	⇓	*i* P	**P**	**16 57 22.9 0.0**
	comp=Z,1μm,3.3s					
UZB				*e*S	**S**	**17 05 24.9 -2.4**
UZB				*e*LR	LR	17 28 29.0
	comp=Z,5μm,18.9s					
KPKS	**Kokpek**	**59.21 336**	*d*	*i* P	**P**	**16 57 25.3 -0.3**
KPKS				*e*S	**S**	**17 05 30.6 -1.7**
KPKS				pmax	pmax	
	comp=Z,1μm,3.4s					
KPKS				smax	smax	
	comp=N,1μm,5.0s					
KPKS	**Kokpek**	**59.21 336**	⇓	*i* P	**P**	**16 57 25.3 -0.3**
	comp=N,1μm,3.4s					
KPKS				*e*S	**S**	**17 05 30.7 -1.7**
KPKS				*e*LR	LR	17 26 20.1
	comp=N,1μm,5.0s					
	comp=N,4μm,14.4s					
ULHL	**Ulahol**	**59.23 334**		P	**P**	**16 57 28.0 +2.1**
	SNR=91					
MARNC	**Mare, Loyalty**	**59.26 109**		*e*P	**P**	**16 57 27.5 +1.2**
	comp=N,2μm,1.3s					
MARNC				LR	LR	
	comp=Z,44μm,18.0s					
CRZF	**Crozet Islands**	**59.30 221**		*e*P	**P**	**16 57 24.9 -1.2**
	comp=Z,358nm,1.4s					
CRZF				LR	LR	
	comp=Z,17μm,22.0s					
KZA	**Kyzart**	**59.54 333**		P	**P**	**16 57 29.3 +1.0**
	SNR=6.7					
BOOM	**Boomskoye usch**	**59.56 333**		*e*P	**P**	**16 57 26.8 -1.3**
	comp=Z,1μm,1.9s					
BOOM	**Boomskoye usch**	**59.56 333**		*e*P	**P**	**16 57 26.8 -1.3**
BOOM				pmax	pmax	
	comp=Z,1μm,1.9s					
NFK	**Norfolk Island**	**59.61 118**		P	**P**	**16 57 30.3 +1.7**
	baz=60,SNR=6.2					
MDOK	**Medeo**	**59.63 335**		*i* P	**P**	**16 57 28.3 -0.3**
MDOK				*e*S	**S**	**17 05 35.9 -2.1**
MDOK				MLR	MLR	
	comp=Z,8μm,20.0s					
MDOK	**Medeo**	**59.63 335**		*i* P	**P**	**16 57 28.4 -0.3**
	comp=Z,8μm,4.1s					
MDOK				*e*S	**S**	**17 05 35.9 -2.1**
	comp=Z,4μm,5.6s					
MDOK				*e*LR	LR	17 26 12.2
	comp=Z,8μm,19.8s					
GAR	**Garm**	**59.63 327**		*e*P	**P**	**16 57 26.9 -1.7**
	comp=Z,725nm,1.1s					
GAR				LR	LR	
	comp=Z,17μm,22.0s					
GAR	**Garm**	**59.63 327**		*e*P	**P**	**16 57 26.9 -1.7**
GAR				pmax	pmax	
	comp=Z,725nm,1.1s					
GAR				MLR	MLR	
	comp=Z,17μm,22.0s					
WHFO	**Wadi Hawf**	**59.67 297**		P	**P**	**16 57 30.3 +1.1**
AAA	**Alma-Ata**	**59.72 335**	*d*	*i* P	**P**	**16 57 28.9 -0.2**
AAA				*e*S	**S**	**17 05 38.3 -0.7**
AAA				MLR	MLR	
	comp=Z,8μm,20.0s					
AAA	**Alma-Ata**	**59.72 335**	⇓	*i* P	**P**	**16 57 28.9 -0.2**
	comp=Z,3μm,4.7s					
AAA				*e*S	**S**	**17 05 38.4 -0.7**
AAA				*e*LR	LR	17 26 32.8
	comp=Z,8μm,19.9s					
ABTO	**Aybut**	**59.86 297**		P	**P**	**16 57 32.3 +1.8**
HIA	**Hailar**	**59.97 9**		*e*P	**P**	**16 57 29.7 -0.9**
	comp=Z,199nm,1.3s					
HIA				LR	LR	
	comp=Z,35μm,22.0s					
HIA	**Hailar**	**59.97 9**		*e*P	**P**	**16 57 29.7 -0.9**
HIA				pmax	pmax	
	comp=Z,199nm,1.3s					
HIA				MLR	MLR	
	comp=Z,35μm,22.0s					
UCH	**Uchtor**	**59.99 332**		P	**P**	**16 57 31.3 -0.1**
	SNR=46					
ARSB	**Arslanbob**	**60.01 331**		PFAKE		16 57 40.0 +8.8
ARSB				LR	LR	
	comp=Z,16μm,22.0s					
CHGR	**Chuyangaron**	**60.01 326**		*e*P	P	16 57 38.5 +7.3
	comp=Z,937nm,1.0s					
SOHO	**SOHO**	**60.04 305**		P	**P**	**16 57 31.2 -0.4**
TKM2	**Tokmak 2**	**60.05 334**		P	**P**	**16 57 32.1 +0.5**
	SNR=6.0					
TKM2	**Tokmak 2**	**60.05 334**		P	**P**	**16 57 31.2 -0.4**
TKM2				pmax	pmax	
	comp=Z,273nm,0.9s					
KBK	**Karagaybulak**	**60.13 333**		P	**P**	**16 57 32.4 +0.3**
	SNR=39					
BTK	**Batken**	**60.14 328**		*e*P	**P**	**16 57 31.7 -0.4**
BTK				LR	LR	
	comp=Z,5μm,22.0s					
BTK	**Batken**	**60.14 328**		*e*P	**P**	**16 57 31.7 -0.4**
BTK				pmax	pmax	
	comp=Z,465nm,1.0s					
BTK				MLR	MLR	
	comp=Z,5μm,22.0s					
ZAK	**Zakamensk**	**60.18 357**		*e*P	**P**	**16 57 32.6 +0.4**
ZAK				*e*		16 59 49.4
ZAK				*e*		17 05 47.7
ZAK				pmax	pmax	
	comp=Z,194nm,1.7s					
ZAK				pmax	pmax	
	comp=Z,76nm,1.8s					
MCQ	**Macquarie Isla**	**60.27 148**		*e*P	**P**	**16 57 32.9 +0.3**
	comp=Z,332nm,1.2s					
MCQ				LR	LR	
	comp=Z,31μm,19.0s					
MCQ	**Macquarie Isla**	**60.27 148**		*e*P	**P**	**16 57 32.9 +0.3**
MCQ				pmax	pmax	
	comp=Z,332nm,1.2s					
MCQ				MLR	MLR	
	comp=Z,31μm,19.0s					
AML	**Almayashu**	**60.29 332**		P	**P**	**16 57 33.3 -0.1**
	SNR=11					
AAK	**Ala-Archa**	**60.32 333**		P	**P**	**16 57 33.4 +0.1**
	comp=Z,68nm,1.2s,baz=131,slow=5.9,SNR=41					
AAK	**Ala-Archa**	**60.32 333**		P	**P**	**16 57 33.5 +0.1**
	SNR=33					
AAK	**Ala-Archa**	**60.32 333**		*e*P	**P**	**16 57 33.3 -0.1**
	comp=Z,701nm,1.7s					
AAK				LR	LR	
	comp=Z,10μm,20.0s					
FRU1	**Bishkek**	**60.40 333**		*e*P	**P**	**16 57 33.1 -0.7**
	comp=Z,225nm,0.9s					
FRU1				LR	LR	
	comp=Z,12μm,20.0s					
FRU1	**Bishkek**	**60.40 333**		*e*P	**P**	**16 57 33.1 -0.7**
FRU1				pmax	pmax	
	comp=Z,225nm,0.9s					
FRU1				MLR	MLR	
	comp=Z,12μm,20.0s					
CHMS	**Chumysh**	**60.49 333**		P	**P**	**16 57 33.7 -0.7**
	SNR=42					
KUU	**Kurty**	**60.52 335**	*d*	*i* P	**P**	**16 57 33.9 -0.6**
KUU				*e*S	**S**	**17 05 47.4 -1.7**
KUU				pmax	pmax	
	comp=Z,3μm,3.5s					
KUU				smax	smax	
	comp=N,901nm,4.7s					
KUU	**Kurty**	**60.52 335**	⇓	*i* P	**P**	**16 57 33.9 -0.6**
	comp=N,3μm,3.5s					
KUU				*e*S	**S**	**17 05 47.5 -1.7**
	comp=N,901nm,4.7s					
ZSN	**Zaisan**	**60.53 343**	*d*	*i* P	**P**	**16 57 35.4 +0.9**
ZSN				*e*S	**S**	**17 05 48.0 -1.2**
ZSN				pmax	pmax	
	comp=Z,1μm,4.0s					
ZSN				smax	smax	
	comp=E,585nm,5.5s					
ZSN	**Zaisan**	**60.53 343**	⇓	*i* P	**P**	**16 57 35.4 +0.9**
	comp=E,1μm,4.0s					
ZSN				*e*S	**S**	**17 05 48.0 -1.2**
	comp=E,585nm,5.5s					
TDK	**Taldyqorghan**	**60.60 337**		*i* P	**P**	**16 57 34.7 -0.3**
TDK				*e*S	**S**	**17 05 47.3 -2.8**
TDK				smax	smax	
	comp=N,957nm,5.1s					
TDK	**Taldyqorghan**	**60.60 337**		*i* P	**P**	**16 57 34.7 -0.3**
	comp=N,4μm,4.6s					
TDK				*e*S	**S**	**17 05 47.4 -2.8**
	comp=N,957nm,5.1s					
EKS2	**Erkin-Say**	**60.67 332**		P	**P**	**16 57 35.9 +0.2**
	SNR=74					
UOSS	**Minazif**	**60.69 306**		*e*P	**P**	**16 57 34.5 -1.5**
	comp=N,383nm,1.4s					
HATD	**Hatta, Dubai**	**60.69 306**		P	**P**	**16 57 35.7 -0.3**
MK31	**Makanchi Array**	**60.75 341**		*e*P	**P**	**16 57 35.9 -0.1**
	comp=N,366nm,1.3s					
MK31	**Makanchi Array**	**60.75 341**		*e*P	**P**	**16 57 35.9 -0.1**
MK31				pmax	pmax	
	comp=Z,366nm,1.3s					
MKAR	**Makanchi Array**	**60.75 341**		P	**P**	**16 57 36.1 0.0**
	comp=Z,58nm,0.6s,baz=144,slow=7.6,SNR=234					
MKAR				S	**S**	**17 05 52.1 +0.1**
	comp=Z,3.7nm,1.0s,baz=145,slow=18,SNR=3.3					
MKAR				PKPPKP		17 26 55.8
	comp=Z,3.0nm,1.0s,baz=303,slow=2.5,SNR=6.7					
MKAR				PKP2bc		17 27 07.5
	comp=Z,4.5nm,1.0s,baz=309,slow=0.8,SNR=8.8					
MKAR				LR	LR	17 27 51.3
	comp=Z,9μm,20.2s,baz=139,slow=40					
MDH	**Madha**	**60.78 306**		P	**P**	**16 57 35.4 -1.2**
TEY	**Ternei**	**60.79 23**	⇓	*e*P	**P**	**16 57 35.8 -0.4**
TEY				*e*S	**S**	**17 05 46.9 -5.5**
TEY				pmax	pmax	
	comp=N,10.0nm,2.7s					
TEY				pmax	pmax	
	comp=Z,3μm,3.8s					
USP	**Ospenovka**	**60.82 333**		P	**P**	**16 57 36.3 -0.3**
	SNR=40					
MAKZ	**Makanchi**	**60.87 340**		*e*P	**P**	**16 57 36.0 -0.8**
	comp=Z,859nm,1.8s					
MAKZ				LR	LR	
	comp=Z,15μm,22.0s					
MAKZ	**Makanchi**	**60.87 340**		P	**P**	**16 57 36.0 -0.8**
MAKZ				pmax	pmax	
	comp=Z,198nm,1.1s					
FAQ	**Al Faqa, Dubai**	**61.08 305**		P	**P**	**16 57 38.9 +0.2**
NAZ	**Nazwa, Dubai**	**61.14 306**		P	**P**	**16 57 38.7 -0.4**
ASUD	**Al Ashush, Dub**	**61.24 305**		P	**P**	**16 57 40.7 +1.0**
ERM	**Erimo**	**61.28 30**		*e*P	**P**	**16 57 38.8 -0.9**
	comp=Z,194nm,1.0s					
ERM				LR	LR	
	comp=Z,19μm,21.0s					
ERM	**Erimo**	**61.28 30**	*d*	*i* P	**P**	**16 57 38.9 -0.8**
ERM				pmax	pmax	
	comp=Z,180nm,1.1s					
ERM				MLR	MLR	
	comp=Z,19μm,21.0s					
TLY	**Talaya**	**61.46 357**		*e*P	**P**	**16 57 41.5 +0.7**
	comp=Z,452nm,1.5s					
TLY				LR	LR	
	comp=Z,26μm,20.0s					
TLY	**Talaya**	**61.46 357**	*d*	*i* P	**P**	**16 57 41.7 +1.0**
TLY				*e*S	**S**	**17 05 58.3 -2.5**
TLY				*e*		17 07 22.5
TLY				pmax	pmax	
	comp=Z,682nm,1.5s					
TLY				MLR	MLR	
	comp=Z,69μm,23.0s					
MOY	**Mondy**	**61.61 356**		*e*P	**P**	**16 57 42.5 +0.6**
MOY				pmax	pmax	
	comp=Z,1μm,3.3s					
DGZ	**Jazzator, Alta**	**61.90 346**	*d*	*i* P	**P**	**16 57 44.8 +0.9**
DGZ				pmax	pmax	
	comp=Z,293nm,0.6s					
DGZ				MLR	MLR	
	comp=Z,18μm,18.0s					
DCZ	**Deep Cove**	**61.95 136**		*e*P	**P**	**16 57 44.5 +0.3**
	comp=Z,707nm,1.4s					
DCZ				LR	LR	
	comp=Z,40μm,20.0s					
CIT	**Chita**	**61.95 4**		*e*P	**P**	**16 57 45.0 +0.9**
CIT				*e*		16 58 17.5
CIT				*e*		17 06 09.8
CIT				pmax	pmax	
	comp=Z,532nm,1.7s					
IRK	**Irkutsk**	**62.00 358**	⇓	*i* P	**P**	**16 57 44.9 +0.6**
IRK				*e*		17 00 08.5
IRK				*e*		17 06 11.0
IRK				pmax	pmax	
	comp=Z,958nm,3.1s					
JBG	**Jabagly**	**62.03 330**		*e*P	**P**	**16 57 45.6 +0.7**
JBG				*i* S	**S**	**17 06 07.3 -1.4**
JBG				pmax	pmax	
	comp=Z,1μm,3.4s					
JBG				smax	smax	
	comp=N,984nm,6.3s					
IUG	**Iuzhnay**	**62.08 329**	*d*	*i* P	**P**	**16 57 44.8 -0.4**
IUG				*e*S	**S**	**17 06 08.6 -0.6**
IUG				pmax	pmax	
	comp=Z,504nm,2.5s					
IUG				smax	smax	
	comp=E,2μm,4.4s					
IUG	**Iuzhnay**	**62.08 329**	⇓	*i* P	**P**	**16 57 44.9 -0.4**
	comp=E,504nm,2.5s					
IUG				*e*S	**S**	**17 06 08.6 -0.6**
	comp=E,2μm,4.5s					
BTLS	**Baital**	**62.42 334**	*d*	*i* P	**P**	**16 57 46.3 -1.0**
BTLS				*i* S	**S**	**17 06 09.1 -4.1**
BTLS				pmax	pmax	
	comp=Z,561nm,3.5s					
BTLS				smax	smax	
	comp=N,261nm,5.6s					
BTLS	**Baital**	**62.42 334**	⇓	*i* P	**P**	**16 57 46.4 -1.0**
	comp=N,561nm,3.5s					
BTLS				*i* S	**S**	**17 06 09.1 -4.1**
	comp=N,261nm,5.6s					
KK31	**Karatay Array**	**62.55 330**		*e*P	**P**	**16 57 46.7 -1.6**
	comp=N,632nm,1.8s					
KK31	**Karatay Array**	**62.55 330**		*i* P	**P**	**16 57 47.2 -1.1**
KK31				pmax	pmax	
	comp=Z,209nm,1.4s					
KKAR	**Karatay Array**	**62.55 330**		*e*P	**P**	**16 57 47.0 -1.3**
	comp=Z,632nm,1.8s					
KKAR	**Karatay Array**	**62.55 330**		*e*P	**P**	**16 57 47.0 -1.3**
KKAR				pmax	pmax	
	comp=Z,632nm,1.8s					
MLZ	**Mavora Lakes**	**62.59 136**		*e*P	**P**	**16 57 48.5 -0.1**
	comp=Z,569nm,1.3s					
MLZ				LR	LR	
	comp=Z,59μm,19.0s					
WHZ	**Wether Hill Ro**	**62.60 137**		*e*P	**P**	**16 57 48.9 +0.2**
	comp=Z,273nm,1.2s					
WHZ				LR	LR	
	comp=Z,47μm,20.0s					
ASAJ	**Asahikawa**	**62.61 28**		P	**P**	**16 57 48.5 -0.1**
	comp=Z,48nm,0.7s,baz=225,slow=10,SNR=46					
KLR	**Kul'dur**	**62.73 18**	*d*	*i* P	**P**	**16 57 48.7 -0.6**
KLR				pmax	pmax	
	comp=Z,351nm,1.2s					
KLR				MLR	MLR	
	comp=Z,16μm,18.0s					
WKZ	**Wanaka**	**63.08 135**		*e*P	**P**	**16 57 51.2 -0.6**
	comp=Z,1μm,1.6s					
WKZ				LR	LR	
	comp=Z,85μm,19.0s					
FOZ	**Fox Glacier**	**63.35 134**		*e*P	**P**	**16 57 53.2 -0.4**
	comp=Z,396nm,1.8s					
FOZ				LR	LR	
	comp=Z,57μm,18.0s					
LBZ	**Lake Benmore**	**63.79 135**		*e*P	**P**	**16 57 55.8 -0.7**
	comp=Z,600nm,1.7s					
LBZ				LR	LR	
	comp=Z,46μm,18.0s					
YUK	**Yuzh-Kuril'sk**	**64.11 30**		*e*P	P	16 57 51.6 -6.9
YUK				*e*S	**S**	**17 06 32.4 -1.8**
YUK				*e*SS	**SS**	**17 10 39.0 -4.8**
YUK				*e*SSS	SSS	17 13 31.7
YUK				pmax	pmax	
	comp=Z,1μm,2.8s					
YUK				pmax	pmax	
	comp=Z,540nm,1.9s					
YUK				pmax	pmax	
	comp=N,203nm,1.4s					
YUK				pmax	pmax	
	comp=E,270nm,1.0s					
ODZ	**Otahua Downs**	**64.25 135**		*e*P	**P**	**16 57 59.3 -0.3**
	comp=E,240nm,1.4s					
ODZ				LR	LR	
	comp=Z,66μm,19.0s					
RPZ	**Rata Peaks**	**64.27 134**		*e*P	**P**	**16 57 59.7 -0.1**
	comp=Z,339nm,1.1s					
RPZ				LR	LR	
	comp=Z,73μm,18.0s					
SEM	**Semipalatinsk**	**64.57 341**		*e*LR	LR	17 28 17.1
	comp=Z,7μm,15.4s					
MAW	**Mawson**	**64.65 197**		P	**P**	**16 58 01.6 -0.2**
	comp=Z,48nm,0.5s,baz=59,slow=6.0,SNR=120					
MAW				S	**S**	**17 06 39.0 -1.3**
	comp=Z,1.4nm,0.7s,baz=340,slow=18,SNR=1.3					
MAW				LR	LR	17 23 00.6
	comp=Z,5μm,18.2s,baz=42,slow=33					
MAW	**Mawson**	**64.65 197**		*e*P	**P**	**16 58 01.0 -0.7**
	comp=Z,75nm,1.5s					
MAW				LR	LR	
	comp=Z,3μm,22.0s					
MAW	**Mawson**	**64.65 197**		P	**P**	**16 58 01.5 -0.2**
	baz=65,SNR=158					
MAW	**Mawson**	**64.65 197**		*e*P	**P**	**16 58 01.0 -0.7**
MAW				pmax	pmax	
	comp=Z,75nm,1.5s					
MAW				MLR	MLR	
	comp=Z,3μm,22.0s					
YSS	**Yuzh-Sakhalins**	**64.87 26**		*e*P	**P**	**16 58 02.6 -0.8**
	comp=Z,1μm,1.4s					
YSS				LR	LR	
	comp=Z,8μm,22.0s					
YSS	**Yuzh-Sakhalins**	**64.87 26**	κ	*e*P	**P**	**16 58 03.2 -0.2**
YSS				*e*		17 00 26.0
YSS				*e*S	**S**	**17 06 41.3 -2.3**
YSS				*e*SS	**SS**	**17 11 01.0 +5.4**
YSS				pmax	pmax	
	comp=Z,280nm,1.1s					
YSS				pmax	pmax	
	comp=Z,4μm,6.3s					
YSS				pmax	pmax	
	comp=N,2μm,5.1s					
YSS				pmax	pmax	
	comp=E,2μm,5.6s					
YSS				smax	smax	
	comp=N,5μm,9.5s					
OXZ	**Oxford**	**64.90 133**		*e*P	**P**	**16 58 03.0 -0.9**
	comp=N,128nm,0.8s					
OXZ				LR	LR	
	comp=Z,51μm,19.0s					
LTZ	**Lake Taylor**	**64.97 133**		*e*P	**P**	**16 58 03.7 -0.6**
	comp=Z,493nm,1.5s					
LTZ				LR	LR	
	comp=Z,82μm,20.0s					
OUZ	**Omahuta**	**64.98 124**		*e*P	**P**	**16 58 04.5 0.0**
	comp=Z,433nm,1.5s					
OUZ				LR	LR	
	comp=Z,110μm,20.0s					
H11S3	**WAKE ISLAND Hy**	**65.04 64**		P	P	16 58 00.2 -4.7
	baz=139,slow=74					
H11S2	**WAKE ISLAND Hy**	**65.06 64**		P	**P**	**16 58 06.0 +1.0**
	baz=139					
H11S1	**WAKE ISLAND Hy**	**65.06 64**		P	**P**	**16 58 04.2 -0.8**
	baz=139,slow=74					
THZ	**Tophouse**	**65.27 131**		*e*P	**P**	**16 58 06.0 -0.4**
	comp=Z,1μm,1.8s					
THZ				LR	LR	
	comp=Z,68μm,18.0s					
WAKE	**Wake Island**	**65.29 63**		*e*P	**P**	**16 58 06.3 -0.4**
	comp=Z,2μm,1.6s					
KURBB	**Kurchatov Arra**	**65.31 340**		P	**P**	**16 58 07.7 +1.5**
	baz=156,slow=5.1					
KURBB				S	**S**	**17 06 46.7 -2.2**
	comp=Z,0.6nm,0.8s,baz=144,slow=11,SNR=2.8					
KURK	**Kurchatov**	**65.36 340**		*e*P	**P**	**16 58 06.2 -0.3**
	comp=Z,599nm,0.9s					
KURK				LR	LR	
	comp=Z,19μm,19.0s					
KURK	**Kurchatov**	**65.36 340**	*d*	*i* P	**P**	**16 58 06.7 +0.2**
KURK				pmax	pmax	
	comp=Z,446nm,1.3s					
KURK				MLR	MLR	
	comp=Z,16μm,17.0s					
CRLZ	**Canterbury Las**	**65.36 133**		*e*P	**P**	**16 58 06.4 -0.4**
	comp=Z,2μm,1.9s					
CRLZ				LR	LR	
	comp=Z,42μm,18.0s					
MQZ	**McQueen's Vall**	**65.41 134**		*e*P	**P**	**16 58 07.3 +0.2**
	comp=Z,602nm,1.5s					
MQZ				LR	LR	
	comp=Z,49μm,18.0s					
GRNR	**Gornyy**	**65.55 20**	⇓	*i* P	**P**	**16 58 07.1 -0.7**
GRNR				pmax	pmax	
	comp=N,160nm,2.0s					
GRNR				pmax	pmax	
	comp=Z,276nm,2.0s					
H11N1	**WAKE ISLAND Hy**	**65.65 63**		P	**P**	**16 58 09.1 +0.3**
	baz=288,slow=6.8,SNR=7.1					
H11N2	**WAKE ISLAND Hy**	**65.67 63**		P	**P**	**16 58 09.8 +1.0**
	baz=288,slow=6.8,SNR=5.0					
ZEA	**Zeya**	**65.67 13**	*d*	*e*P	**P**	**16 58 09.0 +0.5**
ZEA				*e*		17 00 41.0
ZEA				*e*PPP	PPP	17 02 12.0
ZEA				*e*S	**S**	**17 06 48.0 -5.1**
ZEA				pmax	pmax	
	comp=N,450nm,1.8s					
ZEA				pmax	pmax	
	comp=E,320nm,1.8s					
ZEA				pmax	pmax	

comp=Z,1μm,1.8s
ZEA pmax pmax
comp=Z,11μm,7.0s
ZEA pmax pmax
comp=N,4μm,5.0s
ZEA pmax pmax
comp=Z,2μm,8.0s
ZEA smax smax
comp=N,10μm,11.0s
H11N3 WAKE ISLAND Hy 65.67 63 P **P 16 58 11.3 +2.3**
baz=288,slow=6.8,SNR=10
KHZ Kahutara 65.84 132 *e*P **P 16 58 09.3 -0.5**
comp=N,594nm,1.6s
KHZ LR LR
comp=Z,75μm,20.0s
KUR Kuril'sk 65.96 30*d i*P **P 16 58 10.2 -0.3**
KUR *e* 17 00 40.0
KUR *i* S **S 17 06 55.1 -1.9**
KUR pmax pmax
comp=N,480nm,1.8s
KUR pmax pmax
comp=E,375nm,1.8s
KUR pmax pmax
comp=Z,994nm,1.8s
KUR pmax pmax
comp=Z,7μm,4.1s
KUR MLR MLR
comp=Z,6μm,17.0s
KUR MLR MLR
comp=E,1μm,13.0s
KUR MLR MLR
comp=N,2μm,18.0s
GEYT Alibeck 66.17 319 P **P 16 58 12.0 -0.1**
comp=N,68nm,1.0s,baz=150,slow=6.8,SNR=83
GEYT PP **PP 17 00 42.4 +4.4**
comp=N,75nm,1.1s,baz=112,slow=6.7,SNR=4.3
GEYT S **S 17 06 56.7 -3.3**
comp=N,2.0nm,0.9s,baz=175,slow=23,SNR=2.3
GEYT LR LR 17 27 59.2
comp=N,6μm,20.8s,baz=90,slow=37
GYA0B ALIBECK ARRAY 66.17 319 *e*P **P 16 58 11.6 -0.5**
comp=N,385nm,1.0s
GYA0B LR LR
comp=Z,8μm,21.0s
TARA Tarawa 66.27 84 *e*P **P 16 58 13.2 +0.1**
comp=Z,1μm,1.4s
TARA LR LR
comp=Z,13μm,18.0s
HIZ Hauiti 66.32 128 *e*P **P 16 58 13.4 +0.2**
comp=Z,1μm,1.5s
HIZ LR LR
comp=Z,74μm,18.0s
ZAA0 Zalesovo Array 66.45 346 *e*P **P 16 58 12.2 -1.2**
comp=Z,374nm,1.2s
ZAA0 LR LR
comp=Z,12μm,21.0s
ZALV Zalesovo Beam 66.45 346 P **P 16 58 13.7 +0.3**
comp=Z,27nm,0.5s,baz=142,slow=3.8,SNR=97
ZALV S **S 17 06 59.0 -3.6**
comp=Z,0.9nm,0.6s,baz=148,slow=22,SNR=3.1
ZALV PKPPKP 17 26 45.2
comp=Z,7.3nm,1.0s,baz=316,slow=4.1,SNR=8.9
ZALV LR LR 17 29 58.9
comp=Z,9μm,18.5s,baz=150,slow=38
HARA HARA 66.52 285 *e*P P 16 58 22.8 +7.7
HARA *e*S S 17 07 16.0 +10
SNZO South Karori 66.54 131 *e*P **P 16 58 13.1 -1.4**
comp=Z,494nm,1.3s
SNZO LR LR
comp=Z,49μm,20.0s
BRZS Berezniki 66.91 336*d i*P **P 16 58 16.7 +0.2**
BRZS *i* S **S 17 07 07.1 -1.3**
BRZS pmax pmax
comp=Z,3μm,3.4s
BRZS smax smax
comp=N,512nm,5.2s
BRZS Berezniki 66.91 336⇓ *i*P **P 16 58 16.8 +0.2**
comp=N,3μm,3.4s
BRZS *i* S **S 17 07 07.1 -1.3**
comp=N,512nm,5.2s
DAMY Dhamar 66.96 290 *e*P **P 16 58 18.5 +0.6**
comp=N,730nm,1.3s
DAMY LR LR
comp=Z,8μm,19.0s
ATD Arta Tunnel 67.53 287 LR LR 17 21 52.6
comp=Z,5μm,21.2s,baz=98,slow=31
ATD Arta Tunnel 67.53 287 *e*P **P 16 58 21.9 +0.7**
comp=Z,584nm,1.6s
ATD LR LR
comp=Z,6μm,20.0s
ATD Arta Tunnel 67.53 287 *i* P **P 16 58 22.2 +1.0**
BFZ Birch Farm 67.62 130 *e*P **P 16 58 21.0 -0.4**
comp=Z,835nm,1.4s
BFZ LR LR
comp=Z,98μm,18.0s
NVS Novosibirsk 67.65 345⇓ *i*P **P 16 58 21.3 +0.2**
NVS *e* 17 00 58.6
NVS *i* S **S 17 07 20.0 +3.0**
NVS *i* PS **SKSac 17 08 17.0 -0.7**
NVS *e*SS **SS 17 11 43.4 +4.9**
NVS pmax pmax
comp=Z,44nm,1.6s
NVS pmax pmax
comp=N,380nm,1.9s
NVS pmax pmax
comp=E,211nm,1.7s
NVS pmax pmax
comp=Z,114nm,1.6s
NVS pmax pmax
comp=N,82nm,1.7s
NVS pmax pmax
comp=E,77nm,1.5s
NVS smax smax
comp=N,142nm,2.2s
NVS smax smax
comp=E,156nm,2.6s
BKZ Black Stump Fm 67.66 128 *e*P **P 16 58 21.2 -0.5**
comp=E,1μm,1.5s
BKZ LR LR
comp=Z,97μm,18.0s
BOD Bodaibo 67.75 4 *e*P **P 16 58 21.5 -0.2**
BOD pmax pmax
comp=Z,440nm,1.9s
TYV Tymovskoe 67.89 23 *e*P **P 16 58 23.5 +0.8**
TYV *e*S **S 17 07 25.0 +4.9**
TYV pmax pmax
comp=Z,5μm,5.5s
TYV smax smax
comp=N,4μm,6.1s
URZ Urewera 68.06 127 *e*P **P 16 58 23.1 -1.1**
comp=N,482nm,1.5s
URZ LR LR
comp=Z,54μm,18.0s
RAYN Ar Rayn 68.95 300 PFAKE 16 58 40.0 +10
RAYN LR LR
comp=Z,11μm,19.0s
MXZ Matakaoa Point 68.96 126 *e*P **P 16 58 28.7 -1.1**
comp=Z,778nm,1.5s
MXZ LR LR
comp=Z,55μm,20.0s
ANKE Ethiopia-Afar 69.98 284 *e*P **P 16 58 39.3 +2.4**
ANKE *e*S **S 17 07 55.2 +8.1**
ANKE Ethiopia-Afar 69.98 284 *i* P **P 16 58 39.5 +2.5**
ANKE *e*S **S 17 07 54.5 +7.4**
KMBO Kilima Mbogo 70.16 272 P **P 16 58 38.1 +0.2**
comp=Z,28nm,1.0s,baz=69,slow=7.2,SNR=35
KMBO S **S 17 07 42.5 -6.4**
comp=Z,0.5nm,0.4s,baz=214,slow=20,SNR=1.3
KMBO LR LR 17 24 33.2
comp=Z,16μm,20.4s,baz=104,slow=32
KMBO Kilima Mbogo 70.16 272 *e*P **P 16 58 37.9 0.0**
comp=Z,794nm,2.0s
KMBO LR LR
comp=Z,16μm,21.0s
KMBO Kilima Mbogo 70.16 272 *i* P **P 16 58 38.7 +0.8**
KMBO pmax pmax
comp=Z,28nm,1.0s
KMBO Kilima Mbogo 70.16 272 *i* P **P 16 58 38.6 +0.8**
KMBO *e*S **S 17 07 53.2 +4.3**
KMBO Kilima Mbogo 70.16 272 *e*S **S 17 07 53.2 +4.3**
BVAR Borovoye Array 70.19 337 P **P 16 58 37.4 +0.5**
comp=Z,168nm,0.7s,baz=143,slow=8.6,SNR=35
BVAR PKP2ab 17 26 38.0
comp=Z,1.0nm,0.8s,baz=317,slow=8.3,SNR=10
BVAR LR LR 17 33 12.4
comp=Z,374nm,20.6s,baz=345,slow=39
BRVK Borovoye 70.25 337 *e*P **P 16 58 36.9 -0.4**
comp=Z,341nm,0.9s
BRVK LR LR
comp=Z,14μm,20.0s
BRVK Borovoye 70.25 337*d i*P **P 16 58 37.5 +0.2**
BRVK pmax pmax
comp=Z,1μm,2.1s
BRVK MLR MLR
comp=Z,13μm,17.0s
DESE Dese 70.46 286 *i* P **P 16 58 40.7 +0.9**
DESE *e*S **S 17 08 00.7 +8.2**
DESE Dese 70.46 286 *e*P **P 16 58 39.7 -0.1**
DESE *e*S **S 17 08 00.7 +8.2**
NAI Nairobi 70.57 272 *e*P **P 16 58 41.3 +0.9**
comp=Z,338nm,1.0s
NAI LR LR
comp=Z,15μm,22.0s
NAI Nairobi 70.57 272 *e*P **P 16 58 41.3 +0.9**
NAI pmax pmax
comp=Z,338nm,1.0s
NAI MLR MLR
comp=Z,15μm,22.0s
AAE Adis Abeba 70.77 283 *i* P **P 16 58 44.5 +2.7**
AAE *e*S S 17 08 05.6 +9.4
AAE Adis Abeba 70.77 283 *e*S S 17 08 05.6 +9.4
FURI Furi 70.83 283 *e*P **P 16 58 44.5 +2.5**
comp=Z,1μm,1.5s
FURI LR LR
comp=Z,18μm,18.0s
FURI Furi 70.83 283 *i* P **P 16 58 45.2 +3.1**
FURI *e*S S 17 08 08.2 +11
FURI Furi 70.83 283 *e*S S 17 08 08.2 +11
FUNA Funafuti 70.85 96 *e*P **P 16 58 42.3 +0.6**
comp=Z,1μm,1.4s
RAO Raoul Island 71.97 118 PFAKE 16 59 00.0 +12
RAO LR LR
comp=Z,44μm,20.0s
AB31 Akbulak array 72.09 330 *i* P **P 16 58 48.1 -0.4**
AB31 pmax pmax
comp=Z,244nm,0.8s
ABKAR Akbulak array 72.09 330 *e*P **P 16 58 47.8 -0.7**
comp=Z,2μm,1.6s
SYO Syowa Base 72.86 200⇑ *i*P **P 16 58 51.0 -1.8**
SYO Syowa Base 72.86 200⇓ *i*sP sP 16 58 58.0 -1.1
SYO Syowa Base 72.86 200⇑ *i*PcP **PcP 16 59 09.4 -0.4**
VNDA Vanda 73.03 169 P **P 16 58 53.3 -0.4**
comp=Z,48nm,0.9s,baz=303,slow=6.2,SNR=169
VNDA S **S 17 08 18.6 -0.8**
comp=Z,1.0nm,1.0s,baz=68,slow=15,SNR=1.1
VNDA PKPPKP **P'P'df 17 26 32.7 -3.6**
comp=Z,1.8nm,0.9s,baz=122,slow=3.6,SNR=4.5
VNDA Vanda 73.03 169 *e*P **P 16 58 53.1 -0.7**
comp=Z,303nm,1.4s
SKR Severo-Kuril's 73.73 30 *e*P **P 16 58 58.0 -0.2**
SKR *e* 16 59 18.4
SKR *e*PPP PPP 17 01 38.2
SKR *e*S **SKiKP 17 08 27.1 +0.2**
SKR pmax pmax
comp=Z,6μm,3.6s
SKR pmax pmax
comp=Z,513nm,0.8s
SKR MLR MLR
comp=Z,4μm,18.0s
AKTO Aktyubinsk 73.80 330 P **P 16 58 58.5 -0.2**
comp=Z,74nm,0.9s,baz=127,slow=7.2,SNR=95
AKTO S **S 17 08 24.7 -4.2**
comp=Z,1.7nm,0.9s,baz=358,slow=21,SNR=1.3
YAK Yakutsk 73.86 11 *e*P **P 16 58 57.9 -0.7**
comp=Z,487nm,0.9s
YAK LR LR
comp=Z,12μm,18.0s
YAK Yakutsk 73.86 11 *e*P **P 16 58 58.1 -0.6**
YAK *e**PP **pwP 16 59 12.5 +0.7**
YAK *e*S **S 17 08 26.8 -2.2**
SBA Scott Base 74.11 169 *e*P **P 16 59 00.2 +0.1**
comp=Z,374nm,1.4s
SBA LR LR
comp=Z,12μm,18.0s
SBA Scott Base 74.11 169 *e*P **P 16 59 00.2 +0.1**
SBA pmax pmax
comp=Z,374nm,1.4s
SBA MLR MLR
comp=Z,12μm,18.0s
AKT Akhty 74.83 318⇓ *i*P **P 16 59 04.9 -0.1**
AKT *e* 16 59 18.1
AKT *e* 17 01 53.8
AKT pmax pmax
comp=Z,630nm,2.0s
MAK Makhachkala 75.69 319 *e*P P 16 59 04.1 -5.6
MAK pmax pmax
comp=Z,528nm,1.3s
CUKT Cukurca 75.82 312 P **P 16 59 09.4 -1.5**
CUKT Cukurca 75.82 312 *i* P **P 16 59 10.4 -0.5**
CUKT IAML_P
comp=Z,3μm,0.4s
HAKT HAKKARI 75.88 313 *i* P **P 16 59 11.4 +0.1**
HAKT IAML_P
comp=Z,776nm,0.5s
DDFL Dedoflistskaro 75.89 317 P **P 16 59 08.7 -2.4**
PEA0B Petropavlovsk- 76.02 29 *e*P **P 16 59 11.3 -0.1**
comp=Z,519nm,1.2s
PEA0B LR LR
comp=Z,12μm,21.0s
PETK Petropavlovsk- 76.02 29 P **P 16 59 11.6 +0.2**
comp=Z,52nm,0.6s,baz=210,slow=2.2,SNR=64
PETK S **S 17 08 50.3 -3.2**
comp=Z,0.3nm,0.4s,baz=297,slow=25,SNR=1.6
PETK PKP2bc 17 26 38.9
comp=Z,2.5nm,0.8s,baz=133,slow=8.3,SNR=4.1
PETK LR LR 17 35 09.2
comp=Z,8μm,20.2s,baz=214,slow=38
GNI Garni 76.25 316 P **P 16 59 13.1 -0.1**
comp=Z,70nm,1.1s,baz=156,slow=2.4,SNR=20
GNI S **S 17 08 54.0 -2.9**
comp=Z,2.6nm,0.3s,baz=158,slow=21,SNR=1.4
GNI Garni 76.25 316 *e*P **P 16 59 12.7 -0.5**
comp=Z,332nm,1.2s
GNI LR LR
comp=Z,3μm,21.0s
CLDR Caldiran 76.39 314 P **P 16 59 13.7 -0.5**
CLDR Caldiran 76.39 314 *i* P **P 16 59 15.0 +0.8**
CLDR IAML_P
comp=Z,2μm,0.5s
PET Petropavlovsk 76.42 29 *e*P **P 16 59 13.5 -0.2**
comp=Z,1μm,1.7s
PET LR LR
comp=Z,6μm,21.0s
PET Petropavlovsk 76.42 29⇓ *i*P **P 16 59 13.7 0.0**
PET *e*PPP PPP 17 03 49.9
PET *i* S **S 17 08 58.1 +0.3**
PET *e*PS 17 09 31.8
PET pmax pmax
comp=Z,5μm,5.7s
PET pmax pmax
comp=Z,152nm,0.9s
PET pmax pmax
comp=Z,5μm,15.8s
PET MLR MLR
comp=Z,6μm,20.0s
TVAN Van 76.50 314 *i* P **P 16 59 16.9 +2.1**
TVAN IAML_P
comp=Z,2μm,0.6s
TASB TASBURUN-IGDIR 76.53 315 P **P 16 59 14.6 -0.1**
VANB Van 76.54 314 P **P 16 59 13.8 -1.1**
IGDI IGDIR 76.59 315 *i* P **P 16 59 15.4 +0.3**
IGDI IAML_P
comp=Z,525nm,0.6s
GEVA Gevas 76.66 313 *i* P **P 16 59 15.8 +0.2**
GEVA IAML_P
comp=Z,961nm,0.9s
MBAR Mbarara 76.66 272 *e*P **P 16 59 16.1 -0.1**
comp=Z,225nm,1.0s
MBAR LR LR
comp=Z,15μm,19.0s
MBAR Mbarara 76.66 272 *e*P **P 16 59 16.1 -0.1**
MBAR pmax pmax
comp=Z,225nm,1.0s
MBAR MLR MLR
comp=Z,15μm,19.0s
AKDM Akdamar-Van 76.72 313 P **P 16 59 15.9 -0.1**
DYDN Diyadin 76.72 315 *i* P **P 16 59 16.0 0.0**
DYDN IAML_P
comp=Z,619nm,0.1s
SVE Sverdlovsk 76.81 336*c i*P **P 16 59 16.4 +0.6**
SVE *e* 17 02 10.1
SVE *e*S **S 17 09 01.7 -0.3**
SVE *e*SSS SSS 17 17 12.7
SVE pmax pmax
comp=Z,1μm,1.5s
SVE MLR MLR
comp=Z,11μm,22.0s
SVE MLR MLR
comp=E,9μm,22.0s
BTNK Botanikuri 76.88 317 P **P 16 59 16.7 +0.1**
GROC Groznyy 76.91 319 *e*P **P 16 59 15.1 -1.6**
GROC *e* 16 59 25.6
GROC *e*S **S 17 09 02.4 -1.2**
GROC pmax pmax
comp=Z,516nm,1.3s
TBLG Delisi 76.94 317 P **P 16 59 17.0 0.0**
TBLG Delisi 76.94 317 *e*P **P 16 59 16.7 -0.3**
comp=Z,2μm,1.7s
TBLG Delisi 76.94 317 *e*P **P 16 59 17.0 0.0**
KZRT Kazreti 77.02 317 P **P 16 59 17.3 -0.2**
LSZ Lusaka 77.03 257 *e*P **P 16 59 18.3 +0.2**
comp=Z,302nm,1.0s
LSZ LR LR
comp=Z,17μm,20.0s
LSZ Lusaka 77.03 257 *e*P **P 16 59 18.3 +0.2**
LSZ pmax pmax
comp=Z,302nm,1.0s
LSZ MLR MLR
comp=Z,17μm,20.0s
ADCV BITLIS_Adilcev 77.10 314 *i* P **P 16 59 18.9 +0.8**
ADCV IAML_P
comp=Z,2μm,0.6s
EAK Akyaka 77.26 316 *i* P **P 16 59 20.4 +1.5**
EAK IAML_P
comp=Z,7μm,0.7s
TUTA Tutak 77.28 314 *i* P **P 16 59 20.0 +0.8**
TUTA IAML_P
comp=Z,2μm,0.6s
MLAZ Malazgirt-MUS 77.36 314 P **P 16 59 19.5 -0.1**
ARU Arti 77.40 335 P **P 16 59 19.4 +0.2**
comp=Z,39nm,0.7s,baz=135,slow=3.1,SNR=126
ARU S **S 17 09 05.6 -2.8**
comp=Z,0.5nm,0.3s,baz=112,slow=23,SNR=1.3
ARU PKPPKP 17 26 27.0
comp=Z,0.4nm,0.3s,baz=248,slow=1.9,SNR=4.4
ARU Arti 77.40 335 *e*P **P 16 59 19.1 0.0**
comp=Z,845nm,1.3s
ARU LR LR
comp=Z,12μm,18.0s
ARU Arti 77.40 335*d i*P **P 16 59 19.3 +0.2**
ARU 17 02 13.0
ARU PPP PPP 17 04 03.9
ARU S **S 17 09 11.7 +3.3**
ARU SS **SS 17 14 06.6 -1.0**
ARU pmax pmax
comp=Z,249nm,1.3s
GUDG Gudauri 77.44 318 P **P 16 59 20.7 +0.7**
BGD Bogdanovka 77.51 316 P **P 16 59 21.9 +1.4**
MA2 Magadan 77.52 21 P **P 16 59 20.5 +0.8**
comp=Z,73nm,0.7s,baz=211,slow=5.2,SNR=49
MA2 S **S 17 09 07.0 -2.6**
comp=Z,0.7nm,0.3s,baz=64,slow=23,SNR=0.6
MA2 Magadan 77.52 21 *e*P **P 16 59 19.9 +0.1**
comp=Z,253nm,0.8s
MA2 LR LR
comp=Z,11μm,19.0s
AKH Akhalkalaki 77.65 316 P **P 16 59 21.4 +0.3**
AKH Akhalkalaki 77.65 316 *e*P **P 16 59 21.1 0.0**
comp=Z,666nm,1.6s
AKH Akhalkalaki 77.65 316⇑ *i*P **P 16 59 21.8 +0.7**
AKH Akhalkalaki 77.65 316 *e*P **P 16 59 21.1 0.0**
AKH pmax pmax
comp=Z,667nm,1.6s
EATA Eleskirt 77.69 315 *i* P **P 16 59 22.0 +0.4**
EATA IAML_P
comp=Z,1μm,0.7s
BTMN Batman 77.78 312 *i* P **P 16 59 22.2 +0.4**
BTMN IAML_P
comp=Z,732nm,0.7s
MARD Mardin 77.92 312 *i* P **P 16 59 23.3 +0.6**
MARD IAML_P
comp=Z,2μm,0.7s
MUSM Mu-Merkez 77.93 313 *i* P **P 16 59 23.2 +0.5**
MUSM IAML_P
comp=Z,927nm,0.9s
SVAN Silvan-Diyarba 77.94 313 P **P 16 59 22.3 -0.3**
SVAN Silvan-Diyarba 77.94 313 *i* P **P 16 59 22.5 -0.1**
SVAN IAML_P
comp=Z,2μm,0.3s
ZEI Tsey 77.97 318 *e*P **P 16 59 21.0 -1.9**
ZEI *e*S **S 17 09 18.5 +2.9**
ZEI pmax pmax
comp=Z,247nm,1.3s
ZEI pmax pmax
comp=N,104nm,0.7s
ZEI pmax pmax
comp=E,113nm,0.9s
VRTB Varto-Mus 78.15 314 P **P 16 59 25.6 +1.7**
ONI Oni 78.17 317 P **P 16 59 24.4 +0.5**
ONI Oni 78.18 317 *e*P **P 16 59 24.4 +0.5**
HOMI Horasan 78.18 315 *i* P **P 16 59 24.8 +0.6**
HOMI IAML_P
comp=Z,2μm,0.7s
KOPR Koprukoy-ERZUR 78.20 314 P **P 16 59 24.7 +0.5**
MAZI Mazidag 78.22 312 P **P 16 59 23.8 -0.5**
BNGL BINGOL 78.28 313 *i* P **P 16 59 25.7 +0.9**
BOSA Boshof 78.37 243 P **P 16 59 25.5 +0.1**
comp=Z,32nm,1.0s,baz=96,slow=5.8,SNR=20
BOSA S **S 17 09 15.1 -5.3**
comp=Z,2.4nm,0.9s,baz=240,slow=22,SNR=1.6
BOSA PKKPbc **PKKPbc 17 18 26.8 +3.7**
comp=Z,4.1nm,0.8s,baz=208,slow=6.8,SNR=3.6
BOSA LR LR 17 29 44.0
comp=Z,23μm,18.1s,baz=91,slow=32
BOSA Boshof 78.37 243 *e*P **P 16 59 25.3 -0.1**
comp=Z,326nm,1.4s
BOSA Boshof 78.37 243 *e*P **P 16 59 25.3 -0.1**
BOSA pmax pmax
comp=Z,326nm,1.4s
TKB Tkibuli 78.38 317 P **P 16 59 25.1 0.0**
LBTB Lobatse 78.40 246 *e*P **P 16 59 25.5 -0.1**
comp=Z,906nm,1.8s
LBTB Lobatse 78.40 246 *e*P **P 16 59 25.5 -0.1**
LBTB pmax pmax
comp=Z,906nm,1.8s
NCK Nalchik 78.47 318*d i*P **P 16 59 25.8 +0.3**
NCK pmax pmax
comp=Z,168nm,0.8s
NCK MLR MLR
comp=Z,4μm,20.0s
AKDA Akdag 78.58 314 *i* P **P 16 59 27.6 +1.2**
DAGI Agillar 78.59 315 *i* P **P 16 59 27.0 +0.7**
DAGI IAML_P
comp=Z,355nm,0.8s
HANI Diyarbakir_Han 78.62 313 *i* P **P 16 59 26.7 +0.2**
HANI IAML_P
comp=Z,1μm,0.8s
DYBB Diyarbakir 78.63 312 P **P 16 59 26.7 +0.2**
BNGB Bingl 78.64 313 P **P 16 59 26.2 -0.4**
ECAT Cat-ERZURUM 78.67 314 *i* P **P 16 59 27.8 +0.9**
DBAD Bademkaya 78.72 315 *i* P **P 16 59 27.4 +0.4**
DBAD IAML_P
comp=Z,2μm,0.8s
YEDI Yedisu-Bingol 78.91 314 P **P 16 59 28.2 +0.1**
BCA Borcka 78.94 316 P **P 16 59 27.5 -0.6**
BCA Borcka 78.94 316⇓ *i*P **P 16 59 27.8 -0.3**
NEY Neytrino 78.94 318*d i*P **P 16 59 28.7 +0.4**
NEY pmax pmax
comp=Z,49nm,1.1s
BATM Batumi 78.96 316 P **P 16 59 27.7 -0.5**
BATM Batumi 78.96 316⇓ *i*P **P 16 59 28.1 0.0**
KRIK Erzurum-spir 78.98 314 *i* P **P 16 59 29.9 +1.3**
KRIK IAML_P
comp=Z,872nm,0.7s
KBZ Khabaz 79.03 318 P **P 16 59 28.6 +0.1**
comp=Z,55nm,0.7s,baz=115,slow=4.4,SNR=95
KBZ S **S 17 09 20.1 -6.4**
comp=Z,1.4nm,0.6s,baz=148,slow=4.9,SNR=1.7
KBZ PKKPbc **PKKPbc 17 18 22.5 -0.3**
comp=Z,3.5nm,0.8s,baz=232,slow=1.5,SNR=7.3
KBZ PKPPKP **P'P'df 17 26 24.6 +1.5**
comp=Z,2.9nm,1.1s,baz=347,slow=19,SNR=3.5
ITZ Itezhi-Tezhi 79.05 256⇓ *i*P **P 16 59 30.1 +0.7**
ITZ Itezhi-Tezhi 79.05 256 *i* P **P 16 59 28.9 -0.4**
ITZ *i* S **S 17 09 31.7 +3.7**
ASF Jabal al Asfar 79.09 306 P **P 16 59 30.2 +0.9**
comp=Z,83nm,0.9s,baz=79,slow=2.7,SNR=66
ASF S **S 17 09 34.1 +6.2**

comp=Z,0.6nm,0.3s,baz=93,slow=18,SNR=1.2
ASF Jabal al Asfar 79.09 306 P P 16 59 30.1 +0.9
comp=Z,390nm,2.3s
ASF Jabal al Asfar 79.09 306 P P 16 59 30.2 +0.9
comp=Z,390nm,2.3s,comp=Z,9μm
KVAR Kislovodsk Arr 79.26 318 P P 16 59 31.0 +1.1
comp=Z,15nm,0.7s,baz=76,slow=19,SNR=41
KVAR S **S 17 09 24.0 -5.2**
comp=Z,1.2nm,0.3s,baz=201,slow=8.8,SNR=1.7
KIV Kislovodsk 79.27 318 *eP* **P 16 59 29.3 -0.6**
comp=Z,318nm,1.2s
KIV LR LR
comp=Z,3μm,21.0s
KIV Kislovodsk 79.27 318⇑ *iP* **P 16 59 30.3 +0.4**
KIV Kislovodsk 79.27 318 *eP* **P 16 59 29.6 -0.3**
KIV *e* 17 02 29.0
KIV *e* 17 09 30.5
KIV pmax pmax
comp=Z,219nm,0.9s
SVRC Sivrice-ELAZID 79.40 312 P P 16 59 30.7 -0.2
URFA Urfa 79.42 311 P P 16 59 31.1 +0.2
GOF Gofitskoye 79.51 320⇑ *eP* **P 16 59 31.2 +0.1**
GOF pmax pmax
comp=Z,457nm,1.3s
JDRJ Daraweish 79.63 304 P P 16 59 32.3 0.0
comp=Z,462nm,1.5s
JDRJ Daraweish 79.63 304 P P 16 59 32.3 0.0
comp=Z,462nm,1.5s,comp=Z,14μm
HSUJ Al Zarqa 79.64 305 P P 16 59 34.3 +2.2
HSUJ Al Zarqa 79.64 305 P P 16 59 32.7 +0.6
comp=Z,368nm,1.5s,comp=Z,13μm
WALJ Wala 79.77 305 P P 16 59 33.9 +1.1
comp=Z,247nm,1.0s
WALJ Wala 79.77 305 P P 16 59 33.9 +1.1
comp=Z,247nm,1.0s,comp=Z,2μm
AQBJ Aqaba 79.83 303 P P 16 59 33.9 +0.8
comp=Z,528nm,1.1s
AQBJ Aqaba 79.83 303 P P 16 59 34.0 +0.8
comp=Z,528nm,1.1s,comp=Z,4μm
EIL Elat 79.90 303 P P 16 59 33.7 +0.2
comp=Z,78nm,0.9s,baz=76,slow=2.4,SNR=39
EIL LR LR 17 32 23.9
comp=Z,6μm,20.7s,baz=114,slow=34
EIL Elat 79.90 303 P P 16 59 33.8 +0.2
comp=Z,299nm,1.3s
EIL Elat 79.90 303 P P 16 59 33.9 +0.4
comp=Z,299nm,1.3s,comp=Z,8μm
HRFI Mount Harif 79.94 303 P P 16 59 34.2 +0.4
comp=Z,855nm,1.4s
HRFI Mount Harif 79.94 303 P P 16 59 34.5 +0.7
comp=Z,856nm,1.4s,comp=Z,13μmcomp=Z,21μm
LISJ El Lisan 79.94 304 P P 16 59 35.2 +1.6
comp=Z,352nm,1.3s
LISJ El Lisan 79.94 304 P P 16 59 35.2 +1.6
comp=Z,352nm,1.3s,comp=Z,10μm
NIUE Niue 80.04 108 *eP* **P 16 59 33.7 -0.8**
comp=Z,955nm,1.3s
NIUE LR LR
comp=Z,16μm,21.0s
KTUT Trabzon 80.05 315 P P 16 59 33.8 -0.3
QSPA South Pole Qui 80.06 180 *eP* **P 16 59 33.0 -0.9**
comp=Z,1μm,1.6s
QSPA LR LR
comp=Z,32μm,18.0s
SHMJ Saham 80.18 306 P P 16 59 36.4 +1.4
comp=Z,581nm,1.1s
SHMJ Saham 80.18 306 P P 16 59 36.7 +1.7
comp=Z,581nm,1.1s,comp=Z,5μm
NRIK Noril'sk 80.30 353 P P 16 59 34.9 +0.1
comp=Z,224nm,1.0s,baz=157,slow=5.4
NRIK S **S 17 09 33.7 -5.2**
comp=Z,3.7nm,0.5s,baz=14,slow=17,SNR=7.0
NRIK LR LR 17 37 24.4
comp=Z,17μm,21.2s,baz=160,slow=37
MMLI Mount Malkishu 80.36 305 P P 16 59 37.2 +1.2
comp=Z,312nm,1.4s
MMLI Mount Malkishu 80.36 305 P P 16 59 37.2 +1.2
comp=Z,312nm,1.4s,comp=Z,5μm
RCY Rachaya 80.37 307 *eP* **P 16 59 37.1 +1.0**
SHBL Chebaa 80.39 306 *eP* **P 16 59 37.3 +1.0**
SEY Seymchan 80.47 19 P P 16 59 36.6 +0.8
comp=Z,42nm,0.6s,baz=222,slow=4.3,SNR=105
SEY S **S 17 09 37.5 -3.4**
comp=Z,1.9nm,1.0s,baz=74,slow=20,SNR=1.6
SEY PKKPbc **PKKPbc 17 18 17.5 -3.0**
comp=Z,3.1nm,0.7s,baz=81,slow=7.8,SNR=5.3
AMAZ Amatzia 80.49 304 P P 16 59 37.4 +0.7
comp=Z,515nm,1.5s
AMAZ Amatzia 80.49 304 P P 16 59 37.7 +1.0
comp=Z,515nm,1.5s,comp=Z,12μm
QRWL Qaraoun 80.50 307 *eP* **P 16 59 37.7 +0.8**
GAZ Gaziantep 80.52 310 P P 16 59 37.1 +0.3
HWQ Hawqa 80.53 307 *eP* **P 16 59 36.9 -0.1**
MMAI Mount Meron Ar 80.56 306 P P 16 59 38.2 +1.1
comp=Z,57nm,0.6s,baz=96,slow=7.8,SNR=80
MMAI S **S 17 09 44.8 +1.5**
comp=Z,2.3nm,1.0s,baz=84,slow=34,SNR=2.6
BHL Bhannes 80.64 307 *eP* **P 16 59 38.3 +0.7**
DQRL Deir Qamar 80.64 307 *eP* **P 16 59 38.5 +1.0**
KNTN Kanton 80.64 91 *eP* **P 16 59 38.1 +0.2**
comp=Z,774nm,1.4s
KNTN LR LR
comp=Z,10μm,22.0s
KZIT Kziot 80.73 304 P P 16 59 38.5 +0.5
comp=Z,506nm,1.1s
KZIT Kziot 80.73 304 P P 16 59 38.5 +0.5
comp=Z,506nm,1.1s,comp=Z,13μmcomp=Z,20μm
BEYL Beirut 80.76 307 *eP* **P 16 59 38.3 +0.2**
DARE Darende-Malaty 80.81 312 P P 16 59 38.5 +0.1
KMRS Kahramanmaras 80.87 311 P P 16 59 38.7 +0.1
TAHT Tahtakopru-Hat 81.03 309 P P 16 59 39.9 +0.4
SOC Sochi 81.08 317 *iP* **P 16 59 38.9 -0.7**
SOC *e* 17 02 42.1
SOC *e*PPP PPP 17 04 33.5
SOC *e*S **S 17 09 48.1 0.0**
SOC pmax pmax
comp=Z,79nm,1.0s
SOC pmax pmax
comp=Z,4μm,4.5s
RSDY Resadiye-TOKAT 81.56 313 P P 16 59 42.9 +0.7
SVSK Karacayir 81.63 313 P P 16 59 43.3 +0.8
KOZT Kozan 81.67 310 P P 16 59 42.9 +0.1
SUR Sutherland 81.81 239 *eP* **P 16 59 43.9 -0.1**
comp=Z,584nm,1.3s
SUR LR LR
comp=Z,13μm,18.0s
MIDW Midway 81.98 60 *eP* **P 16 59 45.4 +0.7**
comp=Z,362nm,1.1s
MIDW LR LR
comp=Z,7μm,22.0s
TOKT Tokat 82.09 313 P P 16 59 45.3 +0.2
BNN Bunyan 82.10 312 P P 16 59 45.2 -0.1
KARA Karaisali 82.17 310 P P 16 59 45.7 +0.2
EREN Erenkoy 82.31 308 P P 16 59 46.4 +0.2
MERS Mersin 82.45 309 P P 16 59 46.8 -0.3
KIZK Mersin 82.62 309 P P 16 59 47.5 -0.4
KIRV Kirov 82.64 333 P P 16 59 47.8 +0.4
comp=Z,150nm,0.7s,baz=132,slow=2.3,SNR=54
KIRV S **S 17 10 00.9 -2.6**
comp=Z,4.8nm,0.6s,baz=11,slow=21,SNR=6.6
TIXI Tiksi 82.68 7 P P 16 59 47.4 0.0
comp=Z,416nm,0.6s,baz=167,slow=2.9,SNR=24
TIXI S **S 17 09 55.9 -7.6**
comp=Z,1.6nm,0.8s,baz=128,slow=16,SNR=1.8
TIXI Tiksi 82.68 7 *eP* **P 16 59 46.5 -0.9**
comp=Z,436nm,0.7s
TIXI LR LR
comp=Z,19μm,19.0s
TIXI Tiksi 82.68 7*d iP* **P 16 59 47.1 -0.3**
TIXI pmax pmax
comp=Z,448nm,0.7s
TIXI MLR MLR
comp=Z,16μm,21.0s
KVT Kavak 82.71 314 P P 16 59 48.6 +0.3
YOZ Yozgat 82.75 312 P P 16 59 48.4 -0.2
SILI Silifke-Mersin 82.76 309 P P 16 59 48.5 0.0
CSS Mathiatis 82.79 307 P P 16 59 49.3 +0.5
IKL Isikli 82.90 309 P P 16 59 48.9 -0.4
KEBE Keben-Mersin 82.94 309 P P 16 59 49.8 +0.2
MAMC Mammari 82.94 307 P P 16 59 49.9 +0.3
AKKU Akkuyu-Mersin 82.98 308 P P 16 59 49.9 +0.2
ANN Anapa 83.06 318*d iP* **P 16 59 49.0 -0.9**
ANN *e* 17 02 59.5
ANN *e*PPP PPP 17 04 51.7
ANN *e*S **S 17 10 09.0 +0.6**
ANN pmax pmax
comp=Z,291nm,1.8s
SZAC Souni 83.08 307 P P 16 59 50.2 -0.1
TEVE Tevekalti-Mers 83.15 309 P P 16 59 50.9 +0.2
LEF Lefka 83.18 307⇑ *iP* **P 16 59 51.0 +0.2**
BERE Bereket-Mersin 83.29 309 P P 16 59 51.5 0.0
TEKE Tekeli-Mersin 83.31 308 P P 16 59 51.2 -0.2
ALFC Alefka 83.42 307 P P 16 59 51.3 -0.8
CORM Corum 83.43 313 P P 16 59 52.3 +0.2
DIKM Dikmen 83.46 314 P P 16 59 51.9 -0.2
DIKM Dikmen 83.46 314⇓ *iP* **P 16 59 52.1 0.0**
PPCY Paphos 83.54 307 P P 16 59 51.5 -1.1
SERE Serefiikochisa 83.82 311 P P 16 59 53.8 -0.4
BR131 Keskin Array S 84.01 312 *eP* **P 16 59 54.1 -1.1**
comp=Z,340nm,1.3s
BRTR Keskin Array B 84.01 312 P P 16 59 55.0 -0.1
comp=Z,55nm,0.7s,baz=136,slow=6.5,SNR=158
BRTR PKPPKP 17 26 10.4
comp=Z,0.7nm,0.9s,baz=261,slow=5.7,SNR=3.8
BRTR Keskin Array B 84.01 312 P P 16 59 55.0 -0.1
CHBY Cihanbeyli 84.21 311 P P 16 59 55.6 -0.5
VORD Divnogorie 84.25 324 *eP* **P 16 59 55.2 -0.6**
VORD *e* 16 59 57.3
VORD *e*S **S 17 10 19.7 -0.4**
VORD pmax pmax
comp=Z,160nm,1.0s
VORD smax smax
comp=N,2μm,5.0s
SMY Shemya 84.28 34 *eP* **P 16 59 55.7 -0.2**
comp=N,727nm,1.3s
SMY LR LR
comp=Z,6μm,21.0s
SMY Shemya 84.28 34 *eP* **P 16 59 55.7 -0.2**
SMY pmax pmax
comp=Z,727nm,1.3s
SMY MLR MLR
comp=Z,6μm,21.0s
CANT Cankiri 84.29 313 P P 16 59 56.7 +0.2
ILGA Ilgaz 84.36 313 *eP* **P 16 59 57.0 0.0**
VSR Storozhevoye 84.42 324 *eP* **P 16 59 55.6 -1.1**
VSR *e* 16 59 57.8
VSR *e*S **S 17 10 21.1 -0.7**
VSR pmax pmax
comp=Z,760nm,1.9s
VSR smax smax
comp=N,2μm,4.8s
VSR MLR MLR
comp=Z,10μm,23.0s
KONT Konya--Tatoy 84.42 310 P P 16 59 57.0 -0.1
BZK Bozkurt 84.45 314 P P 16 59 57.6 +0.5
LADK Ladik-KONYA 84.49 310 P P 16 59 57.1 -0.5
VORR Voronezh 84.58 325 *eP* **P 16 59 56.0 -1.5**
VORR pmax pmax
comp=Z,750nm,2.2s
ANTO Ankara 84.67 312 *eP* **P 16 59 57.8 -0.6**
comp=Z,514nm,1.4s
ANTO Ankara 84.67 312⇑ *iP* **P 16 59 59.1 +0.7**
ANTO Ankara 84.67 312 *eP* **P 16 59 57.8 -0.6**
ANTO pmax pmax
comp=Z,514nm,1.4s
BR231 Keskin MP Arra 84.67 312 *eP* **P 16 59 58.4 -0.1**
comp=Z,400nm,1.1s
LOD Lodumlu 84.70 312 P P 16 59 58.5 0.0
KIZT Kizilcal 85.06 311 P P 16 59 59.9 -0.5
LPSR Galich'ya Gora 85.10 325 *eP* **P 16 59 59.7 -0.4**
LPSR *e* 17 00 02.0
LPSR *e*S **S 17 10 27.7 -0.8**
LPSR pmax pmax
comp=Z,290nm,1.0s
LPSR smax smax
comp=N,2μm,4.1s
KURC Kurucasile-Bar 85.30 314 P P 17 00 01.3 -0.1
SIM Simferopol' 85.33 317*d iP* **P 17 00 01.8 +0.3**
SIM *i* 17 03 19.5
SIM *i*S **S 17 10 28.0 -3.1**
SIM *i*PS 17 11 48.0
SIM *e*SS **SS 17 16 06.0 -0.3**
SIM pmax pmax
comp=Z,3μm,4.3s
SIM pmax pmax
comp=Z,2μm,7.1s
ANTB Antalya 85.43 309 P P 17 00 01.1 -1.0
SVRH Sivrihisar-ESK 85.48 311 P P 17 00 02.6 +0.1
SEVA Sevastopol 85.49 317⇓ *iP* **P 17 00 03.1 +0.8**
KORT Korkueli 85.69 309 P P 17 00 03.5 -0.1
CIFT Cifteler, Eski 85.80 311 P P 17 00 03.9 -0.2
PRGR Permogore 85.85 335⇑ *iP* **P 17 00 04.1 +0.5**
PRGR *i*S **S 17 10 28.7 -6.8**
PRGR pmax pmax
comp=Z,421nm,1.1s
SHUT Suhut-Afyon 85.96 310 P P 17 00 04.8 -0.1
ELL Elmali 85.96 308 P P 17 00 04.5 -0.5
MDUB Mudurnu 86.02 312 P P 17 00 05.0 -0.1
MDUB Mudurnu 86.02 312 *eP* **P 17 00 04.8 -0.3**
comp=Z,1μm,0.9s
MDUB LR LR
comp=Z,17μm,20.0s
AKAS Kas 86.06 308 P P 17 00 04.3 -1.2
SRCK Saricakaya, Es 86.31 312 P P 17 00 06.3 -0.2
JOHN Johnston Islan 86.38 72 *eP* **P 17 00 07.6 +0.3**
comp=Z,3μm,1.8s
JOHN LR LR
comp=Z,7μm,21.0s
GULT Gulveren 86.50 312 P P 17 00 07.4 -0.1
TSUM Tsumeb 86.52 251 *eP* **P 17 00 07.9 -0.2**
comp=Z,222nm,1.3s
TSUM LR LR
comp=Z,13μm,19.0s
FETY Fethiye 86.57 308 *eP* **P 17 00 06.6 -1.3**
FETY Fethiye 86.57 308 P P 17 00 06.6 -1.3
SPNC Sapanca-Adapaz 86.73 312 P P 17 00 08.5 0.0
SAUV Serdivan-Sakar 86.73 312 P P 17 00 07.8 -0.7
SNAA Sanae 86.82 197 P P 17 00 08.9 +0.4
SNAA Sanae 86.82 197 PKKPbc PKKPbc 17 18 01.4 -3.7
comp=Z,3.8nm,0.8s,baz=255,slow=6.4,SNR=12
SNAA Sanae 86.82 197 *eP* **P 17 00 08.3 -0.1**
comp=Z,1μm,1.9s
SNAA LR LR
comp=Z,14μm,19.0s
SNAA Sanae 86.82 197 *eP* **P 17 00 08.4 -0.1**
SNAA pmax pmax
comp=Z,1μm,1.9s
SNAA MLR MLR
comp=Z,14μm,19.0s
GEDZ Gediz 86.95 310 P P 17 00 09.8 +0.1
DALY Dalyan (Mula) 86.95 308 P P 17 00 09.5 -0.2
TURN Turunc 87.01 308 P P 17 00 11.6 +1.7
MOS Moscow 87.02 328 *eP* **P 17 00 06.9 -2.7**
MOS *e* 17 03 33.7
MOS *e*S **SKSac 17 10 30.0 -5.5**
MOS *e*SS **SS 17 16 27.2 -3.4**
MOS pmax pmax
comp=Z,477nm,1.3s
MOS pmax pmax
comp=N,108nm,0.9s
ADVT Abdulvahap 87.08 312 P P 17 00 10.3 +0.1
ARG Arkhangelos 87.21 307 *eP* **P 17 00 10.6 -0.4**
ARG Arkhangelos 87.21 307 P P 17 00 10.6 -0.4
ARG Arkhangelos 87.21 307 *eP* **P 17 00 10.6 -0.4**
HRT Hereke 87.23 312 P P 17 00 10.9 -0.1
YER Yerkesik 87.32 308 P P 17 00 11.7 +0.1
YER Yerkesik 87.32 308 *eP* **P 17 00 11.3 -0.2**
YER Yerkesik 87.32 308 P P 17 00 11.3 -0.2
YER Yerkesik 87.32 308 *eP* **P 17 00 11.3 -0.2**
SILT Sile 87.34 312⇑ *iP* **P 17 00 11.8 +0.4**
OBN Obninsk 87.35 327 P P 17 00 11.1 0.0
comp=N,32nm,0.6s,baz=17,slow=1.6,SNR=42
OBN S **SKSac 17 10 35.8 -1.6**
comp=N,3.3nm,0.4s,baz=167,slow=19,SNR=1.6
OBN Obninsk 87.35 327 *eP* **P 17 00 10.3 -0.9**
comp=N,2μm,1.6s
OBN LR LR
comp=Z,7μm,19.0s
OBN Obninsk 87.35 327⇑ *iP* **P 17 00 11.8 +0.7**
OBN Obninsk 87.35 327*d iP* **P 17 00 11.0 -0.1**
OBN *i* 17 00 14.3
OBN *i* 17 00 20.8
OBN *i* 17 03 35.1
OBN *i*S **S 17 10 46.7 -3.6**
OBN pmax pmax
comp=Z,119nm,0.9s
OBN MLR MLR
comp=Z,7μm,23.0s
KULA Kula-Manisa 87.38 310 P P 17 00 12.1 +0.3
KULA Kula-Manisa 87.38 310 P P 17 00 12.3 +0.5
YLV Yalova 87.38 312 P P 17 00 11.6 -0.2
YLV Yalova 87.38 312⇓ *iP* **P 17 00 12.5 +0.7**
MANT Manisa 87.45 310 *eP* **P 17 00 11.9 -0.5**
comp=Z,1μm,1.2s
GEMT Gemlik 87.48 312 P P 17 00 11.8 -0.4
BUY Buyukada 87.64 312 P P 17 00 12.6 -0.3
MDNY Mudanya-Bursa 87.69 311 P P 17 00 12.9 -0.2
KAVV Kandilli-Istan 87.74 312 P P 17 00 13.4 0.0
ISK Istanbul-Kandi 87.74 312 P P 17 00 13.4 0.0
ISK Istanbul-Kandi 87.74 312 P P 17 00 13.0 -0.4
ARMT Armutlu 87.75 312 P P 17 00 13.3 -0.2
DAT Datca 87.77 308 P P 17 00 13.5 -0.3
KLYT Kilyos 87.80 312 P P 17 00 13.2 -0.4
KLYT Kilyos 87.80 312⇓ *iP* **P 17 00 14.3 +0.7**
KARP Karpathos 87.81 306 *eP* **P 17 00 13.9 0.0**
comp=Z,1μm,0.9s
KARP Karpathos 87.81 306 P P 17 00 13.7 -0.2
AYDB Zeytinkoy-Aydi 87.82 309 P P 17 00 14.7 +0.7
BGKT Bogazkoy 87.98 312 P P 17 00 14.3 -0.2
KCTX Karacabey (Bur 88.05 311 P P 17 00 14.9 0.0
BODT Bodrum 88.06 308 *eP* **P 17 00 13.7 -1.3**
BODT Bodrum 88.06 308 P P 17 00 13.7 -1.3
KLMR Klimovskoe 88.13 333*d iP* **P 17 00 14.3 -0.5**
KLMR *e* 17 03 45.1
KLMR *e*S **SKSac 17 10 42.2 +0.2**
KLMR pmax pmax
comp=Z,954nm,1.3s
KLMR Klimovskoe 88.13 333⇓ *iP* **P 17 00 14.3 -0.5**
KLMR ⇓ *iP* **P 17 00 14.3 -0.5**
KLMR ⇓ *iP* **P 17 00 14.3 -0.5**
KLMR AMP 17 00 32.9
comp=Z,954nm,1.3s
KLMR *e*PP **PP 17 03 45.2 +3.4**
KLMR *e*S **SKSac 17 10 42.2 +0.2**
KLMR *e*S **SKSac 17 10 42.2 +0.2**
BILL Bilibino 88.17 19 *eP* **P 17 00 14.5 -0.3**
comp=Z,116nm,0.9s
BILL LR LR
comp=Z,9μm,21.0s
BILL Bilibino 88.17 19*d iP* **P 17 00 14.7 -0.1**
BILL *i* 17 00 21.5
BILL *i*S **SKSac 17 10 40.7 -1.3**
BILL pmax pmax
comp=Z,201nm,1.7s
BILL MLR MLR
comp=Z,14μm,22.0s
CTKS Kestanelik-??a 88.19 312 P P 17 00 15.2 -0.3
BALB Balikesir 88.25 311 P P 17 00 15.9 +0.1
BALB Balikesir 88.25 311 *eP* **P 17 00 15.3 -0.5**
comp=Z,3μm,1.7s
BALB LR LR
comp=Z,18μm,19.0s
GCAM G?zelcaml? 88.27 309 P P 17 00 16.6 +0.6
CTYL Yalikoy Yolu 88.41 312 P P 17 00 16.3 -0.2
EDC Edincik 88.44 311 P P 17 00 16.8 +0.1
ZKR Zakros 88.46 306 *eP* **P 17 00 17.0 0.0**
ZKR *eP* **P 17 00 17.0 0.0**
ZKR Zakros 88.46 306 P P 17 00 17.0 0.0
VNA2 Neumayer--Watz 88.46 197 P P 17 00 16.9 +0.6
baz=213,slow=19
SMG Samos 88.58 309 P P 17 00 17.7 +0.2
BLCB Balcova 88.58 309 P P 17 00 17.9 +0.5
CRLT Corlu 88.72 312 P P 17 00 18.2 +0.1
VNA1 Neumayer--Stat 88.84 198 P P 17 00 18.9 +0.8
KRBG Karabiga-Canak 88.87 311 P P 17 00 18.4 -0.3
URLA Izmir 88.91 309 P P 17 00 18.5 -0.6
VNA3 Neumayer Olymp 88.97 197 P P 17 00 19.2 +0.5
KIWB Kanaga Island 88.98 37 *eP* **P 17 00 18.5 -0.5**
NPS Neapolis 88.98 306 P P 17 00 19.8 +0.4
TLCR 88.99 316⇑ *iP* **P 17 00 20.4 +1.2**
PHSR Pinarhisar 89.00 312 P P 17 00 19.6 +0.2
PHSR Pinarhisar 89.00 312⇓ *iP* **P 17 00 20.0 +0.6**
PSN Preselentsi 89.04 315 P P 17 00 18.0 -1.5
LAST Lasithi 89.06 306 P P 17 00 20.0 +0.1
TIRR Tirgusor 89.08 315 *eP* **P 17 00 19.0 -0.6**
comp=Z,548nm,1.0s
TIRR LR LR
comp=Z,7μm,20.0s
TIRR Tirgusor 89.08 315 *eP* **P 17 00 19.0 -0.6**
TIRR pmax pmax
comp=Z,548nm,1.0s
TIRR MLR MLR
comp=Z,7μm,20.0s
ANAF Anafi Island 89.09 307 P P 17 00 19.3 -0.6
AMGA Amorgos Island 89.11 307 P P 17 00 19.3 -0.7
RAR Rarotonga 89.15 111 *eP* **P 17 00 20.1 -0.4**
comp=Z,403nm,1.6s
RAR LR LR
comp=Z,18μm,19.0s
RAR Rarotonga 89.15 111 *eP* **P 17 00 20.1 -0.4**
RAR pmax pmax
comp=Z,403nm,1.6s
RAR MLR MLR
comp=Z,18μm,19.0s
LPK Lapseki 89.26 311 P P 17 00 20.7 +0.1
ADK Adak 89.26 37 *eP* **P 17 00 20.5 +0.2**
comp=Z,578nm,1.5s
ADK LR LR
comp=Z,7μm,22.0s
ADK Adak 89.26 37 *eP* **P 17 00 20.5 +0.2**
ADK pmax pmax
comp=Z,578nm,1.5s
ADK MLR MLR
comp=Z,7μm,22.0s
CVDA Cernavoda 89.31 315⇓ *iP* **P 17 00 22.0 +1.3**
CHOS Chios island 89.33 309 P P 17 00 21.4 +0.3
SANT Santorini 89.34 307 *eP* **P 17 00 20.6 -0.5**
comp=Z,709nm,1.3s
SANT Santorini 89.34 307⇓ *iP* **P 17 00 21.1 0.0**
PRK Paraskevi 89.36 310 P P 17 00 21.9 +0.8
TLB Topalu 89.37 315⇓ *iP* **P 17 00 21.3 +0.3**
ICOR Ion Corvin 89.42 315⇓ *iP* **P 17 00 22.4 +1.2**
MILM Milestii Mici 89.44 318⇑ *iP* **P 17 00 21.4 +0.1**
CFR Carcaliu 89.45 316⇑ *iP* **P 17 00 22.2 +0.9**
EZN Ezine 89.46 310 P P 17 00 21.3 -0.2
EZN Ezine 89.46 310 *eP* **P 17 00 20.9 -0.6**
EZN Ezine 89.46 310 P P 17 00 20.9 -0.6
EZN Ezine 89.46 310⇑ *iP* **P 17 00 22.4 +0.9**
EZN Ezine 89.46 310 *eP* **P 17 00 20.9 -0.6**
KIS Kishinev 89.46 318⇓ *iP* **P 17 00 20.0 -1.3**
comp=Z,2μm,3.0s
KIS Kishinev 89.46 318 *i* PP PP 17 03 57.0 +4.1
KIS Kishinev 89.46 318 *i* PS PS 17 12 12.0 -6.4
KIS Kishinev 89.46 318⇓ *iP* **P 17 00 20.0 -1.3**
KIS *i* 17 03 57.0
KIS *e*S **S 17 11 06.0 -4.7**
KIS *i* PS PS 17 12 12.0 -6.4
KIS *e*SSS SSS 17 20 42.0
KIS pmax pmax
comp=Z,2μm,3.0s
KIS pmax pmax
comp=Z,3μm,19.0s
PRD Provadia 89.47 314 P P 17 00 22.0 +0.5
ERIK Erikli-Kesan 89.51 311 P P 17 00 21.9 +0.2
IOSP Ios island 89.56 307 P P 17 00 21.4 -0.7
IDI Anoyia 89.56 306 P P 17 00 22.7 +0.4
comp=Z,80nm,0.8s,baz=120,slow=5.6,SNR=39
IDI S **S 17 11 10.4 -1.9**
comp=Z,16nm,1.2s,baz=201,slow=9.7,SNR=2.3
IDI Anoyia 89.56 306 *eP* **P 17 00 20.7 -1.5**
IDI Anoyia 89.56 306 P P 17 00 20.7 -1.5
SIVA Sivas 89.57 306 P P 17 00 22.8 +0.7
EDRB Edirne 89.62 313 P P 17 00 22.3 +0.1
EDRB Edirne 89.62 313 P P 17 00 21.9 -0.3
BOZC Bozcaada 89.67 310 P P 17 00 22.4 -0.1
SIGR SIGRI 89.67 310 P P 17 00 22.6 +0.1
GSTR Great Sitkin T 89.69 37 *eP* **P 17 00 22.9 +0.5**
ENEZ Enez 89.80 311 P P 17 00 23.1 0.0
JMB Yambol 89.88 313 P P 17 00 23.0 -0.4
ALN Alexandroupoli 89.91 311 *eP* **P 17 00 23.0 -0.6**
comp=Z,118nm,1.1s
ALN Alexandroupoli 89.91 311 P P 17 00 23.3 -0.3
ALN Alexandroupoli 89.91 311 *eP* **P 17 00 23.0 -0.6**
ALN pmax pmax
comp=Z,118nm,1.1s
VAM Vamos 90.14 306 P P 17 00 25.6 +0.8
AKASG Malin Array Be 90.18 322 P P 17 00 23.6 -1.0
comp=Z,14nm,0.7s,baz=82,slow=4.1,SNR=34
AKASG PP **PP 17 03 57.9 -0.6**
comp=Z,20nm,0.8s,baz=92,slow=5.9,SNR=4.7
AKASG PKKP **PKKPdf 17 17 52.2 -0.7**
comp=Z,0.4nm,0.4s,baz=282,slow=3.2,SNR=4.0
AKASG PKPPKP 17 26 02.5

comp=Z,0.2nm,0.3s,baz=265,slow=3.1,SNR=4.9
AKBB Malin Array Si 90.18 322 *e*P **P 17 00 23.2 -1.3**
comp=Z,114nm,1.0s
AKBB LR LR
comp=Z,6μm,22.0s
AKBB Malin Array Si 90.18 322 *e*P **P 17 00 23.3 -1.3**
AKBB pmax pmax
comp=Z,114nm,1.0s
AKBB MLR MLR
comp=Z,6μm,22.0s
SMTH Samothraki Isl 90.20 311 *e*P **P 17 00 24.2 -0.8**
SMTH Samothraki Isl 90.20 311 P **P 17 00 24.2 -0.8**
CHAN Chania 90.28 306 P **P 17 00 26.3 +0.8**
IMMV Iera Moni Meta 90.32 306 P **P 17 00 26.1 +0.4**
LIA Limnos Island 90.33 310 P **P 17 00 24.6 -1.0**
IAS Iasi 90.34 318⇑*i*P **P 17 00 25.4 -0.1**
RDO Rodhopi 90.34 312 *e*P **P 17 00 24.7 -0.9**
RDO Rodhopi 90.34 312 P **P 17 00 24.7 -0.9**
KDZ Kurdzhali 90.54 312 P **P 17 00 30.0 +3.4**
PLOR Plostina 90.63 316⇓*i*P **P 17 00 28.3 +1.4**
TESR Tescani 90.78 317⇓*i*P **P 17 00 28.6 +1.0**
ATKA Atka Island 90.83 37 *e*P **P 17 00 26.6 -1.0**
comp=Z,722nm,1.5s
THAS Thassos island 90.83 311 P **P 17 00 27.5 -0.4**
PTL Penteli 90.94 308 *e*P **P 17 00 27.4 -1.2**
PTL Penteli 90.94 308 P **P 17 00 27.4 -1.2**
ANKY Antikythira Is 90.95 306 *e*P **P 17 00 29.2 +0.6**
ANKY Antikythira Is 90.95 306 P **P 17 00 29.2 +0.6**
PVL Pavlikeni 90.95 314 P **P 17 00 28.0 -0.4**
VLY Voula,Athens 90.96 308 *e*P **P 17 00 26.4 -2.2**
VLY Voula,Athens 90.96 308 P **P 17 00 26.4 -2.2**
ATHU Athens Univers 90.99 308 *e*P **P 17 00 28.4 -0.3**
ATHU Athens Univers 90.99 308 P **P 17 00 28.4 -0.3**
MLR Muntele Rosu 91.03 316 P **P 17 00 29.0 +0.2**
comp=Z,61nm,0.9s,baz=183,slow=2.5,SNR=46
MLR Muntele Rosu 91.03 316 *e*P **P 17 00 28.4 -0.5**
comp=Z,719nm,1.3s
MLR LR LR
comp=Z,6μm,22.0s
MLR Muntele Rosu 91.03 316⇓*i*P **P 17 00 29.1 +0.2**
RZN Rozhen 91.06 312 P **P 17 00 29.0 -0.2**
KAVA Kavala 91.06 311 *e*P **P 17 00 28.9 -0.1**
KAVA Kavala 91.06 311 P **P 17 00 28.9 -0.1**
PLD Plovdiv 91.16 312 P **P 17 00 29.0 -0.4**
BIZ Bicaz 91.25 317⇑*i*P **P 17 00 29.5 -0.2**
KTHR Kythira 91.26 306 P **P 17 00 29.4 -0.6**
DID Didima 91.32 308 *e*P **P 17 00 28.9 -1.4**
DID Didima 91.32 308 P **P 17 00 28.9 -1.4**
OUR Ouranopolis 91.32 311 *e*P **P 17 00 28.6 -1.6**
OUR Ouranopolis 91.32 311 P **P 17 00 28.6 -1.6**
OUR Ouranopolis 91.32 311 *e*P **P 17 00 28.6 -1.6**
KRND KRANIDI 91.37 308 P **P 17 00 29.0 -1.5**
VILL Villia 91.39 308 P **P 17 00 29.4 -1.3**
VLI Veliai 91.40 307 *e*P **P 17 00 30.1 -0.6**
VLI Veliai 91.40 307 P **P 17 00 30.1 -0.6**
HUMR Humele 91.48 315⇓*i*P **P 17 00 30.9 +0.1**
DOPR Dopca 91.51 316⇑*i*P **P 17 00 31.3 +0.3**
NVR Nevrokopi 91.62 312 P **P 17 00 29.4 -2.2**
VOIR 91.63 316⇓*i*P **P 17 00 31.8 +0.2**
LTK Loutraki 91.63 308 *e*P **P 17 00 30.1 -1.6**
LTK Loutraki 91.63 308 P **P 17 00 30.1 -1.6**
PGB Panagyurishte 91.64 313 P **P 17 00 30.0 -1.7**
ATAL Atalanti 91.72 309 *e*P **P 17 00 28.3 -3.8**
ATAL Atalanti 91.72 309 P **P 17 00 28.3 -3.8**
LKR Lokris 91.73 309 P **P 17 00 29.8 -2.3**
PLG Polygyros 91.73 311 P **P 17 00 30.5 -1.7**
SRS Serrai 91.77 311 P **P 17 00 31.9 -0.4**
VLAD Vladila 91.77 314⇑*i*P **P 17 00 33.0 +0.8**
SOH Sokhos 91.89 311 P **P 17 00 31.3 -1.6**
ARR Arges 91.90 316⇑*i*P **P 17 00 33.3 +0.4**
MICGM Minsk 91.95 325⇓*e*P **P 17 00 32.0 -0.7**
MICGM ⇓*e*P **P 17 00 32.0 -0.7**
MICGM PM 17 00 34.0
comp=Z,2.7nm,5.0s
MICGM *e*PP **PP 17 04 10.0 -2.4**
MICGM PPM 17 04 11.0
comp=Z,2.7nm,4.0s
MICGM *e*PPP PPP 17 06 22.0
MICGM *e*SKS **SKSac 17 11 06.0 +1.5**
MICGM *e*S **S 17 11 30.0 -3.2**
MICGM SM 17 11 36.0
comp=N,7.0nm,14.0s
MICGM *e*PS PS 17 12 40.0 -5.8
MICGM *e*SS **SS 17 17 40.0 -2.1**
MICGM *e*SSS SSS 17 21 20.0
MICGM *e*LQ LQ 17 30 28.0
MICGM LQM 17 37 22.0
comp=N,8.6nm,24.0s
MICGM *e*LR LR 17 42 28.0
MICGM LRM MLR 17 48 00.0
comp=Z,22nm,24.0s
MICGM LRM MLR 17 48 08.0
comp=Z,13nm,22.0s
MICGM LRM MLR 17 48 10.0
comp=E,8.2nm,22.0s
MNK Minsk 91.95 325⇓*e*P **P 17 00 32.0 -0.7**
MNK *e* 17 04 10.0
MNK *e* 17 06 22.0
MNK *e* 17 11 06.0
MNK *e*S **S 17 11 30.0 -3.2**
MNK *e* 17 12 40.0
MNK *e* 17 17 40.0
MNK *e* 17 21 20.0
MNK pmax pmax
comp=Z,3μm,5.0s
MNK pmax pmax
comp=Z,3μm,4.0s
MNK smax smax
comp=N,7μm,14.0s
VLX Vlachokerasia 91.97 307 *e*P **P 17 00 32.0 -1.4**
VLX Vlachokerasia 91.97 307 P **P 17 00 32.0 -1.4**
BURAR Bucovina Array 91.99 318⇑*i*P **P 17 00 34.7 +1.4**
BUR08 Bucovina Ar. S 92.00 318 *e*P **P 17 00 33.2 -0.2**
comp=N,430nm,1.9s
DSF Desfina 92.05 308 P **P 17 00 30.9 -2.8**
PUL Pulkovo 92.05 330 *e*P **P 17 00 32.4 -0.7**
GUR Goura 92.10 308 *e*P **P 17 00 32.0 -2.0**
GUR Goura 92.10 308 P **P 17 00 32.0 -2.0**
MPEP Malo Peshtene 92.11 314 P **P 17 00 33.6 -0.2**
KLV Kalavryta, Ach 92.27 308 P **P 17 00 33.6 -1.2**
ITM Ithomi 92.28 307 *e*P **P 17 00 33.2 -1.6**
comp=N,936nm,2.0s
ITM Ithomi 92.28 307 P **P 17 00 33.9 -0.9**
KKB Krupnik 92.30 312 P **P 17 00 33.0 -1.7**
KNT Kendrikon 92.30 311 P **P 17 00 33.2 -1.5**
AGG Agios Georgios 92.32 309 *e*P **P 17 00 33.3 -1.6**
comp=N,228nm,1.3s
AGG Agios Georgios 92.32 309 P **P 17 00 33.6 -1.3**
AGG Agios Georgios 92.32 309 *e*P **P 17 00 33.3 -1.6**
AGG pmax pmax
comp=Z,228nm,1.3s
VTS Vitosha 92.33 313 *e*P **P 17 00 34.1 -0.9**
comp=Z,68nm,1.1s
VTS *e*P **P 17 00 34.7 -0.3**
VTS LR LR
comp=Z,5μm,22.0s
VTS Vitosha 92.33 313 P **P 17 00 34.7 -0.3**
VTS Vitosha 92.33 313⇓*i*P **P 17 00 35.4 +0.4**
VTS Vitosha 92.33 313 P **P 17 00 34.0 -1.0**
KALE Kalithea 92.34 308 *e*P **P 17 00 33.6 -1.5**
KALE Kalithea 92.34 308 P **P 17 00 33.6 -1.5**
PYL PYLOS 92.38 307 *e*P **P 17 00 33.9 -1.3**
PYL PYLOS 92.38 307 P **P 17 00 33.9 -1.3**
TRIZ Trizonia 92.39 308 P **P 17 00 33.6 -1.6**
LIT Litokhoron 92.40 310 *e*P **P 17 00 33.6 -1.6**
comp=Z,139nm,0.8s
LIT Litokhoron 92.40 310 P **P 17 00 33.9 -1.3**
LIT Litokhoron 92.40 310 *e*P **P 17 00 33.6 -1.6**
LIT pmax pmax
comp=Z,139nm,0.8s
SERG Sergoula 92.41 308 P **P 17 00 33.9 -1.5**
LAKA Lakka 92.44 308 *e*P **P 17 00 35.8 +0.3**
LAKA Lakka 92.44 308 P **P 17 00 35.8 +0.3**
ARCR ARCALIA 92.45 317⇑*i*P **P 17 00 36.5 +1.2**
LOT Lotru 92.51 316⇑*i*P **P 17 00 36.0 +0.2**
AMT Artemida-Makis 92.52 307 P **P 17 00 33.6 -2.3**
EFP Efpalio 92.53 308 P **P 17 00 35.5 -0.3**
ANX Ano Chora 92.55 309 P **P 17 00 35.8 -0.3**
DRO Drossia 92.60 308 P **P 17 00 37.4 +1.2**
THL Klokotos Trika 92.66 310 P **P 17 00 34.7 -1.7**
NACGM Naroch 92.66 325 *e*P **P 17 00 35.0 -1.0**
NACGM *e*PP **PP 17 04 20.0 +2.0**
NACGM *e*PPP PPP 17 06 29.0
NACGM *e*SKS **SKSac 17 11 13.0 +4.5**
NACGM *e*SKKS **SKKSac 17 11 26.0 -0.4**
NACGM *e*SKKKS 17 11 50.0
NACGM *e*PS PS 17 12 48.0 -5.7
NACGM *e*SS **SS 17 17 42.0 -10**
NACGM *e*SSS SSS 17 21 20.0
NACGM *e*LQ LQ 17 32 06.0
NACGM *e*LR LR 17 40 10.0
EVR Evrytania 92.70 309 P **P 17 00 35.1 -1.6**
LVZ Lovozero 92.74 339 *e*P **P 17 00 35.1 -1.1**
comp=Z,68nm,0.8s
LVZ LR LR
comp=Z,18μm,20.0s
LVZ Lovozero 92.74 339 *ce*P **P 17 00 36.3 +0.1**
LVZ pmax pmax
comp=Z,91nm,1.7s
IDID Didziasalis 92.78 326 *e*P **P 17 00 36.3 -0.3**
IDID IAmb IAmb 17 00 53.9
comp=Z,116nm,1.2s
RLS Riolos of Patr 92.80 308 P **P 17 00 35.8 -1.3**
PVO Paravola 92.86 309 P **P 17 00 37.0 -0.4**
PUNG Punghina 92.87 314⇑*i*P **P 17 00 36.9 -0.3**
CJR Cluj-Napoca 92.88 317⇑*i*P **P 17 00 38.9 +1.6**
APA Apatity 93.08 338⇓*i*P **P 17 00 36.7 -1.0**
APA *i* 17 04 24.0
APA *i* 17 11 08.0
APA *i* S **S 17 11 40.0 -2.8**
APA *i* PS PS 17 12 54.0 -3.8
APA *i* PPS PPS 17 13 07.0
APA pmax pmax
comp=Z,27nm,1.2s
IIGN Ignalina 93.08 326 *e*P **P 17 00 37.8 -0.1**
IIGN IAmb IAmb 17 00 56.6
comp=Z,192nm,1.4s
IZAR Zarasai 93.15 326 *e*P **P 17 00 37.8 -0.5**
IZAR IAmb IAmb 17 00 56.7
comp=Z,32nm,0.9s
LVV L'vov 93.21 320 *e*P **P 17 00 38.1 -0.6**
LVV *e* 17 04 20.5
LVV *e* 17 11 10.5
LVV *e*S **S 17 11 47.6 +2.9**
LVV *e*SS **SS 17 18 09.8 +9.3**
HERR Herculane 93.34 315⇑*i*P **P 17 00 39.5 +0.1**
DRGR 93.49 317⇓*i*P **P 17 00 40.8 +0.6**
VSU Vasula 93.51 329 *d i*P **P 17 00 39.7 -0.1**
VSU pmax pmax
comp=Z,222nm,1.3s
VSU MLR MLR
comp=Z,17μm,24.0s
VSU Vasula 93.51 329 *e*P **P 17 00 39.5 -0.4**
VSU IAmb IAmb 17 00 57.0
comp=Z,217nm,0.8s
MDVR Moldovita 93.82 315⇑*i*P **P 17 00 42.5 +0.8**
TRPA Tarpa 93.86 318⇑*i*P **P 17 00 42.2 +0.5**
TRPA Tarpa 93.86 318 EP **P 17 00 41.0 -0.7**
TRPA EPP 17 04 24.0
KWP Kalwaria Pacla 94.02 320 *e*P **P 17 00 42.1 -0.4**
KWP *e*S **SS 17 18 15.8 +3.7**
KWP Kalwaria Pacla 94.02 320 *e*P **P 17 00 41.8 -0.7**
comp=Z,4μm,1.9s
KWP LR LR
comp=Z,34μm,21.0s
KWP Kalwaria Pacla 94.02 320 *e*P **P 17 00 42.1 -0.4**
KWP *e*S **SS 17 18 15.8 +3.7**
BZS Buzias 94.03 315⇓*i*P **P 17 00 43.2 +0.6**
UZH Uzhgorod 94.11 319 *e*P **P 17 00 44.3 +1.4**
UZH *i* 17 00 53.5
UZH *e* 17 04 30.3
UZH *e* 17 06 33.6
UZH *e* 17 11 14.7
UZH *e*S **S 17 11 52.8 +0.2**
SIRR Siria 94.11 316⇓*i*P **P 17 00 43.8 +0.8**
KOLS Kolonicke sedl 94.17 319 *e*P **P 17 00 43.9 +0.7**
KOLS pmax pmax
comp=Z,209nm,1.7s
KOLS Kolonicke sedl 94.17 319 *e*P **P 17 00 43.9 +0.7**
KOLS *e*PP **PP 17 04 26.4 -3.6**
KOLS *e*S **S 17 11 59.6 +6.3**
KOLS *e*SS **SS 17 18 25.0 +11**
KOLS *e*L L 17 51 31.6
NIKH Nikolski High 94.18 37 *e*P **P 17 00 42.2 -0.9**
comp=Z,907nm,1.7s
SPIA Saint Paul Isl 94.22 33 *e*P **P 17 00 42.5 -0.6**
comp=Z,939nm,1.6s
BANR Banloc 94.32 315⇑*i*P **P 17 00 45.4 +1.5**
PABE Paberze 94.37 325 *e*P **P 17 00 40.6 -3.3**
PABE IAmb IAmb 17 01 01.9
comp=Z,314nm,1.2s
FIA1 FINESS Array S 94.49 332 *e*P **P 17 00 43.4 -0.9**
comp=Z,102nm,1.1s
FINES FINESS Array B 94.49 332 P **P 17 00 44.2 -0.2**
comp=Z,25nm,1.1s,baz=82,slow=4.2,SNR=17
FINES PKKPbc **PKKPdf 17 17 44.5 -0.9**
comp=Z,1.4nm,0.6s,baz=299,slow=2.0,SNR=5.1
FINES LR LR 17 49 46.1
comp=Z,6μm,18.9s,baz=106,slow=40
FINES FINESS Array B 94.49 332 *i* P **P 17 00 43.7 -0.6**
FINES pmax pmax
comp=Z,15nm,0.9s
SUW Suwalki 94.53 324 *e*P **P 17 00 43.7 -1.0**
SUW Suwalki 94.53 324 *e*P **P 17 00 43.3 -1.4**
comp=Z,370nm,1.1s
SUW LR LR
comp=Z,11μm,22.0s
SUW Suwalki 94.53 324 *e*P **P 17 00 43.7 -1.0**
TIR Tirane 94.58 311 PFAKE 17 01 00.0 +15
TIR LR LR
comp=Z,6μm,21.0s
DIVS Divibare 94.92 314⇓*i*P **P 17 00 46.6 -0.2**
PDG Podgorica 95.20 312⇓*i*P **P 17 00 47.3 -0.7**
TTG Podgorica 95.20 312 *e*P **P 17 00 46.7 -1.3**
comp=Z,145nm,1.3s
TTG LR LR
comp=Z,5μm,21.0s
TTG Podgorica 95.20 312 *e*P **P 17 00 46.7 -1.3**
TTG pmax pmax
comp=Z,145nm,1.3s
TTG MLR MLR
comp=Z,5μm,21.0s
DRME Dracevica, Mon 95.21 312⇓*i*P **P 17 00 47.3 -0.8**
FRGS Fruska Gora 95.21 315⇓*i*P **P 17 00 47.4 -0.7**
KECS Kecovo 95.27 318 *e*P **P 17 00 47.9 -0.3**
KECS Kecovo 95.27 318 *e*P **P 17 00 47.9 -0.3**
BBLS Lazići 95.30 313⇓*i*P **P 17 00 48.1 -0.5**
XMAS Kiritimati 95.52 89 PFAKE 17 01 00.0 +10
XMAS LR LR
comp=Z,11μm,20.0s
NIE Niedzica 95.53 319 *e*P **P 17 00 49.7 +0.3**
NIE *e*PP **PP 17 04 34.5 -6.1**
NIE *e*S SS 17 18 51.9 +18
NIE Niedzica 95.53 319 *e*P **P 17 00 49.7 +0.3**
NIE *e* 17 04 34.5
PSZ Piszkesteto 95.57 318 *e*P **P 17 00 48.4 -1.3**
comp=Z,66nm,1.2s
PSZ Piszkesteto 95.57 318⇓*i*P **P 17 00 50.2 +0.5**
PSZ Piszkesteto 95.57 318 *e*P **P 17 00 48.4 -1.3**
PSZ pmax pmax
comp=Z,66nm,1.2s
PSZ Piszkesteto 95.57 318⇓EP **P 17 00 49.1 -0.6**
PSZ EPP 17 04 35.0
PSZ ES **S 17 12 12.0 +6.4**
BEL Belsk 95.59 322 *e*P **P 17 00 49.5 0.0**
BEL Belsk 95.59 322 *e*P **P 17 00 49.6 0.0**
PBUR Paburg 95.59 326 *e*P **P 17 00 47.9 -1.5**
PBUR IAmb IAmb 17 01 07.4
comp=Z,210nm,1.2s
SLIT Slitere, Latvi 95.66 327 *e*P **P 17 00 48.7 -1.1**
SLIT IAmb IAmb 17 00 57.2
comp=Z,312nm,1.2s
UNV Unalaska Valle 95.72 36 *e*P **P 17 00 49.3 -0.7**
comp=Z,253nm,1.1s
OJC Ojcow 95.97 320 *e*P **P 17 00 51.1 -0.3**
OJC *e*S **SS 17 18 48.4 +8.6**
OJC Ojcow 95.97 320 *e*P **P 17 00 50.3 -1.0**
comp=Z,170nm,2.0s
OJC Ojcow 95.97 320 *e*P **P 17 00 51.1 -0.3**
OJC *e*S **SS 17 18 48.4 +8.6**
LANS Liptovska Anna 96.03 319 *e*P **P 17 00 51.7 0.0**
LANS Liptovska Anna 96.03 319 *e*P **P 17 00 51.7 0.0**
MORH Mrgy, Hungar 96.17 316⇓*i*P **P 17 00 51.8 -0.6**
MORH Mrgy, Hungar 96.17 316⇓EP **P 17 00 51.1 -1.3**
MORH EPP **PP 17 04 42.0 -3.6**
MORH ES SKSac 17 11 44.0 +16
MORH ES **ScS 17 12 15.0 +3.8**
AKUT Akutan 96.18 36 *e*P **P 17 00 52.0 -0.2**
comp=Z,1μm,1.6s
AKUT LR LR
comp=Z,7μm,22.0s
VYHS Vyhne 96.35 318 *e*P **P 17 00 53.3 +0.1**
VYHS *e* 17 04 43.6
VYHS *e*SS SS 17 18 50.2 +4.8
VYHS Vyhne 96.35 318 *e*P **P 17 00 53.3 +0.1**
VYHS *e*PP **PP 17 04 43.6 -3.4**
VYHS *e*S **S 17 12 18.5 +6.3**
VYHS *e*SS **SS 17 18 50.2 +4.8**
VYHS *e*L L 17 52 43.5
ARCES ARCESS Array B 96.39 339 P **P 17 00 52.4 -0.4**
comp=Z,25nm,1.0s,baz=90,slow=5.0,SNR=20
ARCES PP **PP 17 04 50.7 +4.0**
comp=Z,12nm,1.0s,baz=113,slow=6.9,SNR=2.3
ARCES LR LR 17 51 37.8
comp=Z,8μm,18.6s,baz=98,slow=40
ARE0 ARCESS Array S 96.39 339 *e*P **P 17 00 52.1 -0.7**
comp=Z,6.3nm,1.2s
ARE0 LR LR
comp=Z,500nm,19.0s
STON Ston 96.39 312⇓*i*P **P 17 00 52.4 -1.0**
KEKH Kekaha 96.40 69 PFAKE 17 01 00.0 +6.0
KEKH LR LR
comp=Z,10μm,21.0s
SRO2 Moca 96.55 317 *e*P **P 17 00 53.4 -0.6**
SRO2 Moca 96.55 317 *e*P **P 17 00 53.3 -0.7**
CSKK Cskako 96.59 317 EP **P 17 00 54.0 -0.2**
CSKK EPP 17 04 52.0
SRO Srobarova 96.61 317 *e*P **P 17 00 54.2 -0.1**
SRO Srobarova 96.61 317 *e*P **P 17 00 54.2 -0.1**
TIP Timpagrande 96.62 309⇑*i*P **P 17 00 55.1 +0.4**
TIH Tihany 96.78 316⇓EP **P 17 00 54.0 -1.1**
TIH EPP **PP 17 04 50.0 -0.2**
TIH ES **S 17 12 21.1 +5.2**
OKC Ostrava-Krasne 96.97 319 *e*P **P 17 00 54.7 -1.2**
OKC *e* 17 12 13.8
OKC MLR MLR
comp=Z,8μm,19.3s
OKC smax smax
comp=N,4.0nm,0.5s
OKC Ostrava-Krasne 96.97 319 *e*P **P 17 00 54.7 -1.2**
OKC *e*SKS **S 17 12 13.8 -3.7**
OKC AMS AMS 17 54 00.0
comp=N,8μm,19.3s
RAC Raciborz 96.97 320 *e*P **P 17 00 55.9 0.0**
RAC *e* 17 11 34.4
RAC MLR MLR
comp=Z,10μm,20.2s
BLY Banja Luka 97.00 314 *e*P **P 17 00 55.2 -0.9**
comp=Z,57nm,1.1s
BLY Banja Luka 97.00 314⇑*i*P **P 17 00 56.5 +0.3**
BLY Banja Luka 97.00 314⇓*i*P **P 17 00 56.0 -0.2**
JAVC Velka Javorina 97.17 318⇓*i*P Pdif 17 00 57.2 +0.2
MORC Moravsky Berou 97.36 319 *e*P **P 17 00 57.2 -0.6**
comp=Z,34nm,1.1s
MORC LR LR
comp=Z,6μm,22.0s
MORC Moravsky Berou 97.36 319⇓*i*P Pdif 17 00 57.8 0.0
MORC Moravsky Berou 97.36 319 *e*P **P 17 00 57.2 -0.6**
MORC pmax pmax
comp=Z,34nm,1.1s
MORC MLR MLR
comp=Z,6μm,22.0s
MORC Moravsky Berou 97.36 319⇓*i*P **P 17 00 57.5 -0.2**
MORC *e*SKS **SKSac 17 11 34.6 +0.6**
MORC *e*SS **SS 17 19 07.8 +8.3**
MODS Modra-Piesok 97.37 318 *e*P **P 17 00 56.5 -1.3**
MODS *e*S **S 17 12 26.0 +5.0**
MODS *e*SS **SS 17 19 09.5 +10**
MODS Modra-Piesok 97.37 318 *e*P **P 17 00 56.5 -1.3**
MODS *e*PP PP 17 04 47.1 -7.7
MODS *e*S **S 17 12 26.0 +5.0**
MODS *e*SS **SS 17 19 09.5 +10**
MODS *e*L L 17 53 12.1
ZST Bratislava 97.46 318 *e*P **P 17 00 56.7 -1.5**
ZST *e* 17 04 49.9
ZST *e*SS SS 17 19 14.7 +14
ZST Bratislava 97.46 318 *e*P **P 17 00 56.7 -1.5**
ZST *e*PP **PP 17 04 49.9 -5.6**
ZST *e*SS SS 17 19 14.7 +14
BEHE Becsehely 97.49 316⇓*i*P Pdif 17 00 58.5 +0.1
BEHE Becsehely 97.49 316⇓EP **P 17 00 58.0 -0.3**
BEHE EPP 17 04 59.0
BEHE ES **S 17 12 21.1 -0.9**
ANM Nome 97.76 26 *e*P Pdif 17 01 00.3 +1.2
comp=Z,286nm,2.0s
ANM LR LR
comp=Z,6μm,20.0s
ANM Nome 97.76 26 *e*P Pdif 17 01 00.3 +1.1
ANM pmax pmax
comp=Z,286nm,2.0s
ANM MLR MLR
comp=Z,6μm,20.0s
SOP Sopron 97.77 317⇓EP **P 17 00 59.0 -0.6**
SOP EPP 17 04 53.1
KOGS Kog 97.85 316 *i* Pdiff **P 17 00 59.7 -0.3**
KOGS *e*PP **PP 17 04 56.6 -2.0**
HON Honolulu 97.89 70 PFAKE 17 01 10.0 +9.3
HON LR LR
comp=Z,9μm,20.0s
KIP Kipapa 97.89 70 PFAKE 17 01 10.0 +9.2
KIP LR LR
comp=Z,8μm,19.0s
VRAC Vranov 97.92 319 P **P 17 01 00.2 0.0**
comp=Z,1.4nm,0.5s,baz=107,slow=4.9,SNR=8.3
VRAC PP **PP 17 05 01.7 +2.7**
comp=Z,12nm,1.1s,baz=95,slow=9.4,SNR=5.9
VRAC Vranov 97.92 319⇓*i*P **P 17 01 00.1 -0.1**
VRAC Vranov 97.92 319⇓*i*P **P 17 00 59.7 -0.5**
OPA Opana 97.93 69 PFAKE 17 01 10.0 +9.1
OPA LR LR
comp=Z,7μm,21.0s
KRUC Moravsky 98.02 318⇓*e*P **P 17 00 59.9 -0.8**
KRUC *e*SKS **SKSac 17 11 36.6 -0.7**
KRUC *e*SS **SS 17 19 17.3 +8.5**
DPC Dobruska-Polom 98.20 320 *e*P **P 17 00 59.8 -1.7**
DPC MLR MLR
comp=Z,11μm,20.2s
DPC Dobruska-Polom 98.20 320 *e*PDIFF **P 17 00 59.8 -1.7**
DPC AMS AMS 17 54 40.0
comp=Z,11μm,20.2s
VAE Valguarnera 98.25 307 P Pdif 17 01 05.2 +3.0
comp=Z,5.6nm,0.4s,baz=91,slow=4.1,SNR=2.1
CONA Conrad Observa 98.26 317 *i* pP **P 17 01 03.6 +1.7**
comp=Z,22nm,1.3s,SNR=6.9
CONA *i* PP **PP 17 05 00.6 -1.2**
comp=Z,151nm,1.7s
KSP Ksiaz 98.27 320 *e*P Pdif 17 01 01.8 0.0
KSP *e*S **SS 17 19 20.5 +8.3**
KSP Ksiaz 98.27 320 *e*P Pdif 17 01 01.8 0.0
KSP *e*S **SS 17 19 20.5 +8.3**
OSTC Ostas 98.29 320 *e*P **P 17 00 59.8 -2.1**
OSTC AMS AMS 17 54 40.0
comp=Z,9μm,20.7s
CRES Cresnjev 98.33 315⇓*i*P **P 17 01 01.5 -0.7**
CHVC Chvalec 98.39 320 *e*P **P 17 00 59.8 -2.5**
CHVC AMS AMS 17 54 50.0
comp=Z,8μm,19.7s
UPC Upice 98.41 320 *e*P **P 17 01 01.1 -1.3**
UPC *e* 17 11 41.2
UPC MLR MLR
comp=Z,10μm,22.9s
UPC Upice 98.41 320 *e*P **P 17 01 01.1 -1.3**
UPC *e*SKS **SKSac 17 11 41.2 +2.0**
UPC AMS AMS 17 52 40.0
comp=Z,10μm,22.9s
ARSA Arzberg 98.42 316 *i* Pdiff Pdif 17 01 02.9 +0.3
comp=Z,36nm,1.1s,SNR=6.9
ARSA *i* PKiKP **PKiKP 17 05 29.2 -5.5**
comp=Z,101nm,1.5s
BOJS Bojanci 98.44 315 *e*Pdiff **P 17 01 02.4 -0.3**
BOJS *e* 17 04 23.4
BOJS *e*PP **PP 17 05 02.1 -1.0**
BOJS *e* 17 11 49.0
BOJS *e*S **S 17 12 35.3 +5.1**
BOJS *e* 17 14 26.1
BOJS *e*SS SS 17 19 26.8 +12
BOJS *e* 17 23 22.4
BOJS *e* 17 26 38.0

TREC	**Trest**	**98.64**	**319**	*e*P	**P**	**17 01 01.1**	**-2.4**
TREC				*e*		17 11 44.9	
TREC				MLR	MLR		
	comp=Z,11μm,22.5s						
TREC				smax	smax		
	comp=N,3.0nm,0.2s						
TREC	**Trest**	**98.64**	**319**	*e*P	**P**	**17 01 01.1**	**-2.4**
TREC				*e*SKS	**SKSac**	**17 11 44.9**	**+4.4**
TREC				AMS	AMS	17 55 10.0	
	comp=N,11μm,22.5s						
SOKA	**Soboth**	**98.71**	**316**	*i* Pdiff	Pdif	17 01 04.0	+0.1
	comp=N,46nm,1.9s,SNR=19						
SOKA				*i* PP	**PP**	**17 05 08.5**	**+3.3**
	comp=N,56nm,1.4s						
LJU	**Ljubljana**	**99.00**	**315**	*i* Pdiff	**P**	**17 01 04.6**	**-0.5**
LJU	**Ljubljana**	**99.00**	**315**	‖ *i*P	**P**	**17 01 04.9**	**-0.2**
OBKA	**Obir**	**99.02**	**316**	*i* pPdiff	**Pdif**	**17 01 08.0**	**+2.7**
	comp=N,43nm,1.6s						
OBKA				*i* PP	**PP**	**17 05 14.7**	**+7.0**
	comp=N,82nm,1.7s						
CEY	**Cerknica**	**99.04**	**315**	‖ *i*P	**Pdif**	**17 01 04.6**	**-0.8**
RDOG	**Red Dog Mine**	**99.08**	**22**	*e*P	**Pdif**	**17 01 05.8**	**+0.8**
	comp=N,273nm,1.8s						
GOPC	**GO Pecny, Ondr**	**99.14**	**319**	*e*P	**Pdif**	**17 01 03.7**	**-2.0**
GOPC				*e*		17 11 37.6	
GOPC				MLR	MLR		
	comp=Z,11μm,22.3s						
GOPC				smax	smax		
	comp=N,5.0nm,0.7s						
GOPC	**GO Pecny, Ondr**	**99.14**	**319**	*e*P	**Pdif**	**17 01 03.7**	**-2.0**
GOPC				*e*SKS	**SKSac**	**17 11 37.6**	**-5.4**
GOPC				AMS	AMS	17 53 10.0	
	comp=N,11μm,22.3s						
KHLH	**Kahului Airpor**	**99.29**	**70**	PFAKE		17 01 20.0	+13
KHLH				LR	LR		
	comp=Z,9μm,19.0s						
PPT2	**Papeete2**	**99.31**	**110**	*e*PP	PP	17 05 01.6	-8.7
	comp=Z,2μm,25.2s						
PPT2				*e*SKSac	**SKSac**	**17 11 45.2**	**-0.1**
	comp=Z,3μm,27.8s						
PPT2				*e*S	**S**	**17 12 38.1**	**-0.7**
	comp=Z,6μm,24.2s						
PPT2				*e*SP	SP	17 14 05.1	+0.1
	comp=Z,7μm,26.0s						
PPT2				*e*SS	**SS**	**17 19 36.1**	**+8.0**
	comp=Z,7μm,27.0s						
PPT2				*e*LQ	LQ	17 29 17.3	
	comp=Z,18μm,32.5s						
PPT2				*e*LR	LR	17 33 36.4	
	comp=Z,24μm,23.8s,baz=248						
PRU	**Pruhonice**	**99.31**	**319**	*e*P	**Pdif**	**17 01 03.7**	**-2.7**
PRU				*e*		17 11 37.6	
PRU				MLR	MLR		
	comp=Z,12μm,22.5s						
PRU				smax	smax		
	comp=N,7.0nm,0.3s						
PRU	**Pruhonice**	**99.31**	**319**	*e*P	**Pdif**	**17 01 03.7**	**-2.7**
PRU				*e*SKS	**SKSac**	**17 11 37.6**	**-6.1**
PRU				AMS	AMS	17 53 10.0	
	comp=N,12μm,22.5s						
PPT	**Papeete**	**99.31**	**110**	LR	LR	17 45 10.9	
	comp=N,13μm,19.1s,baz=257,slow=35						
PPTF	**Pamatai, Papee**	**99.32**	**110**	PFAKE		17 01 20.0	+13
PPTF				LR	LR		
	comp=Z,16μm,19.0s						
MOA	**Molln**	**99.33**	**317**	*i* pPdiff	**Pdif**	**17 01 08.5**	**+1.9**
	comp=Z,21nm,1.5s						
MOA				*i* PP	**PP**	**17 05 11.1**	**+1.3**
	comp=Z,97nm,1.4s						
PVCC	**Panska Ves**	**99.33**	**320**	*e*P	**Pdif**	**17 01 03.7**	**-2.8**
PVCC				MLR	MLR		
	comp=Z,8μm,25.0s						
PVCC	**Panska Ves**	**99.33**	**320**	*e*P	**Pdif**	**17 01 03.7**	**-2.8**
PVCC				AMS	AMS	17 50 50.0	
	comp=Z,8μm,25.0s						
SDPT	**Sand Point**	**99.37**	**35**	*e*P	**Pdif**	**17 01 06.5**	**0.0**
	comp=Z,130nm,1.0s						
SDPT				LR	LR		
	comp=Z,7μm,22.0s						
HLK	**Haleakala**	**99.44**	**71**	PFAKE		17 01 20.0	+12
HLK				LR	LR		
	comp=Z,9μm,19.0s						
AQU	**L'Aquila**	**99.49**	**311**	PFAKE		17 01 20.0	+12
AQU				LR	LR		
	comp=Z,3μm,20.0s						
AQU	**L'Aquila**	**99.49**	**311**	‖ *i*P	**Pdif**	**17 01 06.2**	**-1.3**
KHLU	**Kahalu`u**	**99.63**	**72**	PFAKE		17 01 20.0	+11
KHLU				LR	LR		
	comp=Z,7μm,19.0s						
MYKA	**Terra Mystica**	**99.66**	**316**	*i* Pdiff	**Pdif**	**17 01 08.3**	**+0.2**
	comp=Z,40nm,1.8s,SNR=8.1						
BRG	**Berggiesshubel**	**99.75**	**320**	*e*P	**Pdif**	**17 01 08.8**	**+0.4**
	comp=Z,42nm,1.6s						
BRG				*e*PP	**PP**	**17 05 11.5**	**-1.5**
	comp=Z,225nm,1.8s						
BRG				SKS	**SKSac**	**17 11 51.0**	**+5.1**
BRG				S	**ScS**	**17 12 37.0**	**-3.9**
BRG				SS	SS	17 19 17.0	-16
BRG				*e*PKPPKP		17 25 51.6	
	comp=Z,24nm,1.7s						
	comp=N,9μm,21.0s						
	comp=E,5μm,21.7s						
	comp=Z,6μm,23.3s						
BRG	**Berggiesshubel**	**99.75**	**320**	*e*P	**Pdif**	**17 01 08.8**	**+0.4**
BRG				*e*		17 05 11.5	
BRG						17 11 51.0	
BRG				S	**ScS**	**17 12 37.0**	**-3.9**
BRG				pmax	pmax		
	comp=Z,43nm,1.6s						
BRG				pmax	pmax		
	comp=Z,225nm,1.8s						
BRG				MLR	MLR		
	comp=N,9μm,21.0s						
BRG				MLR	MLR		
	comp=E,5μm,21.7s						
BRG				MLR	MLR		
	comp=Z,6μm,23.3s						
GEC2	**GERESS Array S**	**99.77**	**318**	*e*Pdif	**Pdif**	**17 01 07.7**	**-1.0**
	comp=Z,52nm,1.3s						
GEC2				LR	LR		
	comp=Z,8μm,22.0s						
GEC2	**GERESS Array S**	**99.77**	**318**	*e*P	**Pdif**	**17 01 07.7**	**-1.0**
GEC2				pmax	pmax		
	comp=Z,52nm,1.3s						
GEC2				MLR	MLR		
	comp=Z,8μm,22.0s						
GERES	**GERESS Array B**	**99.77**	**318**	P	**Pdif**	**17 01 08.7**	**0.0**
	comp=Z,3.8nm,1.0s,baz=101,slow=5.1,SNR=17						
KHU	**Kahuku**	**99.85**	**72**	PFAKE		17 01 20.0	+10
KHU				LR	LR		
	comp=Z,7μm,19.0s						
SPA0	**Spitsbergen Ar**	**99.86**	**348**	*e*Pdif	**Pdif**	**17 01 06.8**	**-1.5**
	comp=Z,595nm,1.8s						
HPAH	**Hawaii Prepara**	**99.87**	**71**	PFAKE		17 01 20.0	+10
HPAH				LR	LR		
	comp=Z,5μm,21.0s						
KHC	**Kasperske Hory**	**99.87**	**318**	*e*Pdif	**Pdif**	**17 01 08.7**	**-0.3**
	comp=Z,7.7nm,1.2s						
KHC				LR	LR		
	comp=Z,2μm,21.0s						
KHC	**Kasperske Hory**	**99.87**	**318**	*e*P	**Pdif**	**17 01 05.1**	**-3.9**
KHC				*e*		17 11 46.7	
KHC				MLR	MLR		
	comp=Z,12μm,20.0s						
KHC				smax	smax		
	comp=N,2.0nm,0.4s						
KHC	**Kasperske Hory**	**99.87**	**318**	*e*P	**Pdif**	**17 01 05.1**	**-3.9**
KHC				*e*x	x	17 01 25.5	
KHC				*e*x	x	17 05 25.5	
KHC				*e*SKS	**SKSac**	**17 11 46.7**	**0.0**
KHC				*e*PKKP	**PKKPbc**	**17 17 29.5**	**-1.2**
KHC				AMS	AMS	17 55 50.0	
	comp=N,12μm,20.0s						
KBA	**Koelnbreinsper**	**99.89**	**316**	*i* pPdiff	**Pdif**	**17 01 11.1**	**+1.7**
	comp=N,16nm,1.2s						
MLOA	**Mauna Loa Obse**	**99.92**	**72**	PFAKE		17 01 20.0	+10
MLOA				LR	LR		
	comp=Z,6μm,20.0s						
RUE	**Ruedersdorf**	**99.95**	**322**	*e*P	**Pdif**	**17 01 09.5**	**+0.3**
POHA	**Pohakuloa**	**99.99**	**72**	PFAKE		17 01 20.0	+10
POHA				LR	LR		
	comp=Z,6μm,21.0s						
HSPB	**Hornsund (broa**	**100.03**	**347**	*e*P	**Pdif**	**17 01 04.5**	**-4.5**
HSPB	**Hornsund (broa**	**100.03**	**347**	*e*P	**Pdif**	**17 01 04.5**	**-4.5**
RGN	**Rugen**	**100.33**	**324**	PFAKE		17 01 20.0	+9.2
RGN				LR	LR		
	comp=Z,9μm,18.0s						
HFS	**Hagfors**	**100.35**	**329**	P	**Pdif**	**17 01 11.2**	**+0.4**
	comp=Z,5.7nm,0.7s,baz=132,slow=4.4,SNR=6.8						
HFS				PP	**PP**	**17 05 15.4**	**-1.7**
	comp=Z,15nm,0.8s,baz=91,slow=6.1,SNR=4.2						
CLL	**Collm**	**100.37**	**320**	PFAKE		17 01 20.0	+8.9
CLL				LR	LR		
	comp=Z,4μm,18.0s						
CLL	**Collm**	**100.37**	**320**	*e*Pdif	**Pdif**	**17 01 11.0**	**-0.1**
	comp=Z,41nm,1.8s						
CLL				*e*		17 01 27.0	
	comp=Z,39nm,1.5s						
CLL				*e*		17 04 32.0	
CLL				*e*		17 04 43.0	
CLL				*e*PP	**PP**	**17 05 13.0**	**-4.6**
CLL				*i*		17 05 28.6	
	comp=Z,93nm,1.6s						
CLL				*i*		17 05 46.2	
CLL				*e*PPP	PPP	17 07 26.0	
CLL				*e*PPPP		17 09 05.0	
CLL				*e*SKSac	**SKSac**	**17 11 54.0**	**+5.1**
CLL				*e*Sdif	**Sdif**	**17 12 48.0**	**+1.9**
CLL				*e*PS	PS	17 14 13.0	-5.0
CLL				*e*PPS	PPS	17 15 00.0	
CLL				*e*		17 17 10.0	
CLL				*e*SS	**SS**	**17 19 42.0**	**+0.5**
CLL				*e*SSS	SSS	17 23 24.0	
CLL				*e*PKPPKPdif		17 25 46.0	
CLL				*e*SSSS		17 26 54.0	
CLL				LmV		18 00 00.0	
	comp=Z,5μm,20.2s						
CLL	**Collm**	**100.37**	**320**	*e*P	**Pdif**	**17 01 11.0**	**-0.1**
CLL				pmax	pmax		
	comp=Z,41nm,1.8s						
CLL				MLR	MLR		
	comp=Z,5μm,20.2s						
ABTA	**Abfaltersbach**	**100.44**	**316**	*i* Pdiff	**Pdif**	**17 01 10.9**	**-0.8**
	comp=Z,16nm,1.4s						
ABTA				*i* PP	**PP**	**17 05 25.1**	**+6.7**
	comp=Z,56nm,1.4s						
CHGN	**Chignik**	**100.58**	**34**	PFAKE		17 01 20.0	+8.1
CHGN				LR	LR		
	comp=Z,7μm,22.0s						
NKC	**Novy Kostel**	**100.67**	**319**	*e*P	**Pdif**	**17 01 10.0**	**-2.5**
NKC				MLR	MLR		
	comp=Z,6μm,20.4s						
NKC	**Novy Kostel**	**100.67**	**319**	*e*PDIFF	**Pdif**	**17 01 10.0**	**-2.5**
NKC				AMS	AMS	17 54 10.0	
	comp=Z,6μm,20.4s						
KBS	**Kingsbay**	**100.73**	**349**	PFAKE		17 01 20.0	+7.8
KBS				LR	LR		
	comp=Z,14μm,22.0s						
COP	**Copenhagen**	**100.89**	**325**	*i* P	**Pdif**	**17 01 14.5**	**+1.3**
COP				MLR	MLR		
	comp=Z,4μm,17.0s						
COP	**Copenhagen**	**100.89**	**325**	*i* P	**Pdif**	**17 01 14.5**	**+1.3**
	comp=Z,4μm,17.0s						
WTTA	**Wattenberg**	**101.07**	**316**	*i* Pdiff	**Pdif**	**17 01 13.1**	**-1.5**
	comp=Z,15nm,1.1s						
WTTA				*i* PKiKP	**PP**	**17 05 30.6**	**+7.3**
	comp=Z,101nm,1.4s						
SQTA	**Sankt Quirin**	**101.36**	**316**	*i* Pdiff	**Pdif**	**17 01 15.3**	**-0.5**
	comp=Z,15nm,1.3s						
MOTA	**Moosalm**	**101.43**	**316**	*i* Pdiff	**Pdif**	**17 01 16.4**	**+0.3**
	comp=Z,7.2nm,0.7s						
GRA1	**Grafenberg Arr**	**101.44**	**319**	PFAKE		17 01 30.0	+14
GRA1				LR	LR		
	comp=Z,4μm,22.0s						
GRFO	**Grafenberg**	**101.44**	**319**	PFAKE		17 01 30.0	+14
GRFO				LR	LR		
	comp=Z,4μm,21.0s						
NB2	**NORSAR Subarra**	**101.58**	**330**	P	**Pdif**	**17 01 15.3**	**-1.0**
	comp=Z,160nm,2.5s,baz=92,slow=4.6						
NB2	**NORSAR Subarra**	**101.58**	**330**	P	**Pdif**	**17 01 15.3**	**-1.0**
	baz=92,slow=4.6						
NOA	**NORSAR Array B**	**101.58**	**330**	P	**Pdif**	**17 01 16.7**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=93,slow=4.7,SNR=5.4						
NOA				PP	**PP**	**17 05 28.8**	**+2.3**
	comp=Z,9.6nm,0.9s,baz=95,slow=7.5,SNR=4.9						
RETA	**Reutte**	**101.67**	**317**	*i* Pdiff	**Pdif**	**17 01 16.9**	**-0.1**
	comp=Z,15nm,1.3s						
RETA				*i* pPKiKP	**PKiKP**	**17 05 43.3**	**+2.7**
	comp=Z,92nm,1.5s						
FETA	**Feichten**	**101.68**	**316**	*i* pPdiff	**Pdif**	**17 01 18.7**	**+1.5**
	comp=Z,22nm,1.8s						
VLC	**Villacollemand**	**101.80**	**313**	PFAKE		17 01 30.0	+12
VLC				LR	LR		
	comp=Z,4μm,22.0s						
TTA	**Tatalina**	**101.84**	**28**	*e*Pdif	**Pdif**	**17 01 18.1**	**+0.6**
TTA				LR	LR		
	comp=Z,5μm,22.0s						
TTA	**Tatalina**	**101.84**	**28**	*e*P	**Pdif**	**17 01 18.1**	**+0.6**
TTA				MLR	MLR		
	comp=Z,5μm,22.0s						
FUORN	**Ofenpass-Fuorn**	**101.98**	**316**	*e*Pdif	**Pdif**	**17 01 17.4**	**-1.3**
FUORN				LR	LR		
	comp=Z,5μm,22.0s						
SVW2	**Sparrevohn**	**102.08**	**30**	*e*Pdif	**Pdif**	**17 01 18.9**	**+0.3**
KEST	**Kesra**	**102.17**	**304**	P	**Pdif**	**17 01 19.8**	**+0.2**
	comp=Z,7.0nm,1.0s,baz=284,slow=5.5,SNR=4.6						
KEST				PP	**PP**	**17 05 34.1**	**+2.3**
	comp=Z,8.4nm,1.0s,baz=126,slow=3.4,SNR=4.2						
KEST	**Kesra**	**102.17**	**304**	*e*Pdif	**Pdif**	**17 01 19.5**	**-0.1**
KEST				LR	LR		
	comp=Z,6μm,22.0s						
DAVOX	**Davos/Dischmat**	**102.25**	**316**	P	**Pdif**	**17 01 19.7**	**-0.2**
	comp=Z,2.3nm,0.4s,baz=74,slow=6.1,SNR=7.3						
DAVOX				PP	**PKiKP**	**17 05 38.1**	**-3.7**
	comp=Z,1.6nm,0.3s,baz=117,slow=11,SNR=3.8						
DAVA	**Damuels**	**102.26**	**316**	*i* Pdiff	**Pdif**	**17 01 20.0**	**+0.2**
	comp=Z,22nm,1.2s						
DAVA				*i* PP	**PP**	**17 05 35.3**	**+3.1**
	comp=Z,158nm,1.7s						
KONO	**Kongsberg**	**102.41**	**329**	PFAKE		17 01 30.0	+10
KONO				LR	LR		
	comp=Z,5μm,19.0s						
TUE	**Stuetta**	**102.61**	**315**	PFAKE		17 01 30.0	+8.5
TUE				LR	LR		
	comp=Z,5μm,21.0s						
MUD	**Monsted U'grnd**	**102.72**	**326**	*i* P	**Pdif**	**17 01 23.5**	**+2.1**
MUD				MLR	MLR		
	comp=Z,7μm,19.0s						
MUD	**Monsted U'grnd**	**102.72**	**326**	*i* P	**Pdif**	**17 01 23.5**	**+2.1**
	comp=Z,7μm,19.0s						
STU	**Stuttgart**	**102.75**	**318**	PFAKE		17 01 30.0	+8.2
STU				LR	LR		
	comp=Z,7μm,22.0s						
SII	**Sitkinak Islan**	**102.93**	**34**	PFAKE		17 01 30.0	+7.6
SII				LR	LR		
	comp=Z,7μm,22.0s						
BFO	**Black Forest**	**103.32**	**317**	PFAKE		17 01 40.0	+16
BFO				LR	LR		
	comp=Z,6μm,19.0s						
OHAK	**Old Harbor**	**103.40**	**33**	*e*Pdif	**Pdif**	**17 01 24.3**	**-0.1**
OHAK				LR	LR		
	comp=Z,7μm,21.0s						
CAST	**Castle Rocks**	**103.59**	**27**	PFAKE		17 01 40.0	+15
CAST				LR	LR		
	comp=Z,5μm,21.0s						
ABSA	**Djebel Ababsia**	**103.71**	**305**	P	PKiKP	17 05 54.3	+10
KDAK	**Kodiak Island**	**103.75**	**33**	Pdiff	**Pdif**	**17 01 26.5**	**+0.6**
	comp=Z,14nm,0.9s,baz=30,slow=8.6,SNR=6.7						
KDAK	**Kodiak Island**	**103.75**	**33**	*e*Pdif	**Pdif**	**17 01 26.1**	**+0.1**
KDAK				LR	LR		
	comp=Z,6μm,20.0s						
KDAK	**Kodiak Island**	**103.75**	**33**	*e*P	**Pdif**	**17 01 26.1**	**+0.1**
KDAK				MLR	MLR		
	comp=Z,6μm,20.0s						
CMAH	**Djebel Manchou**	**103.77**	**305**	P	**PKiKP**	**17 05 46.2**	**+1.4**
TOLK	**Toolik Lake Re**	**103.99**	**22**	PFAKE		17 01 40.0	+13
TOLK				LR	LR		
	comp=Z,7μm,22.0s						
TOLK	**Toolik Lake Re**	**103.99**	**22**	PKPdf	**Pdif**	**17 01 27.4**	**+0.5**
	baz=279						
BPAW	**Bear Paw Mtn.**	**104.01**	**26**	*e*Pdif	**Pdif**	**17 01 27.6**	**+0.6**
BPAW				LR	LR		
	comp=Z,5μm,20.0s						
MLY	**Manley**	**104.01**	**25**	PFAKE		17 01 40.0	+13
MLY				LR	LR		
	comp=Z,5μm,20.0s						
SENIN	**Lac Senin/Sane**	**104.03**	**315**	PFAKE		17 01 40.0	+12
SENIN				LR	LR		
	comp=Z,5μm,19.0s						
KTH	**Kantishna Hill**	**104.10**	**27**	PFAKE		17 01 40.0	+12
KTH				LR	LR		
	comp=Z,4μm,21.0s						
ECH	**Echery**	**104.10**	**317**	PFAKE		17 01 40.0	+12
ECH				LR	LR		
	comp=Z,5μm,20.0s						
HOM	**Homer**	**104.11**	**31**	PFAKE		17 01 40.0	+12
HOM				LR	LR		
	comp=Z,5μm,22.0s						
CKFL	**Kef-Lekhel**	**104.32**	**305**	P	**PKiKP**	**17 05 52.7**	**+6.8**
CNPM	**China Poot**	**104.33**	**31**	PFAKE		17 01 40.0	+11
CNPM				LR	LR		
	comp=Z,4μm,19.0s						
TRF	**Thorofare Moun**	**104.39**	**27**	PFAKE		17 01 40.0	+11
TRF				LR	LR		
	comp=Z,1μm,22.0s						
BNI	**Bardonecchia**	**104.47**	**314**	PFAKE		17 01 40.0	+10
BNI				LR	LR		
	comp=Z,6μm,22.0s						
BRLK	**Bradley Lake**	**104.48**	**31**	*e*Pdif	**Pdif**	**17 01 28.6**	**-0.6**
BRLK				LR	LR		
	comp=Z,5μm,22.0s						
TAM	**Tamanrasset**	**104.58**	**291**	PFAKE		17 01 40.0	+9.3
TAM				LR	LR		
	comp=Z,6μm,20.0s						
BWN	**Browne**	**104.66**	**26**	PFAKE		17 01 40.0	+10
BWN				LR	LR		
	comp=Z,5μm,21.0s						
WLF	**Walferdange**	**104.73**	**319**	PFAKE		17 01 40.0	+9.5
WLF				LR	LR		
	comp=Z,35μm,22.0s						
WLF	**Walferdange**	**104.73**	**319**	PKiKP	**PKiKP**	**17 05 43.8**	**-2.2**
WLF				PP	**PP**	**17 05 52.4**	**+2.0**
MEM	**Membach**	**104.79**	**320**	PP	**PP**	**17 05 49.6**	**-1.2**
BHOU	**Houvegnez**	**104.80**	**319**	PP	**PP**	**17 05 52.0**	**+1.1**
RC01	**Rabbit Creek A**	**104.92**	**29**	PFAKE		17 01 40.0	+8.9
RC01				LR	LR		
	comp=Z,5μm,22.0s						
MCK	**McKinley**	**104.95**	**27**	*e*Pdif	**Pdif**	**17 01 31.0**	**-0.2**
MCK				LR	LR		
	comp=Z,5μm,22.0s						
MCK	**McKinley**	**104.95**	**27**	*e*P	**Pdif**	**17 01 31.0**	**-0.2**
MCK				MLR	MLR		
	comp=Z,5μm,22.0s						
BEBN	**Eben Emael**	**104.99**	**320**	PP	**PP**	**17 05 48.9**	**-3.4**
DFRA	**Djebel Bou Aff**	**105.01**	**305**	P	PKiKP	17 06 03.0	+16
RND	**Reindeer**	**105.03**	**27**	*e*Pdif	**Pdif**	**17 01 31.4**	**-0.3**
RND				LR	LR		
	comp=Z,5μm,22.0s						
RND	**Reindeer**	**105.03**	**27**	*e*P	**Pdif**	**17 01 31.4**	**-0.3**
RND				MLR	MLR		
	comp=Z,5μm,22.0s						
MDM	**Murphy Dome**	**105.08**	**25**	PFAKE		17 06 00.0	+14
MDM				LR	LR		
	comp=Z,5μm,22.0s						
PMR	**Palmer**	**105.15**	**29**	*e*Pdif	**Pdif**	**17 01 31.9**	**-0.2**
PMR				LR	LR		
	comp=Z,4μm,20.0s						
PMR	**Palmer**	**105.15**	**29**	*e*P	**Pdif**	**17 01 31.9**	**-0.2**
PMR				MLR	MLR		
	comp=Z,4μm,20.0s						
SEW	**Seward**	**105.17**	**30**	*e*Pdif	**Pdif**	**17 01 32.4**	**+0.2**
PMSA	**Palmer Station**	**105.20**	**184**	PFAKE		17 06 00.0	+14
PMSA				LR	LR		
	comp=Z,14μm,18.0s						
WRH	**Wood River Hil**	**105.21**	**26**	*e*Pdif	**Pdif**	**17 01 30.9**	**-1.4**
WRH				LR	LR		
	comp=Z,5μm,21.0s						
GHO	**Glory Hole Cre**	**105.22**	**29**	PFAKE		17 06 00.0	+13
GHO				LR	LR		
	comp=Z,5μm,21.0s						
TCOL	**CIGO, UAF Yank**	**105.25**	**25**	PKiKP	**PKiKP**	**17 05 46.9**	**+0.5**
	baz=279						
COLA	**College**	**105.25**	**25**	PFAKE		17 06 00.0	+14
COLA				LR	LR		
	comp=Z,5μm,22.0s						
CCB	**Clear Creek Bu**	**105.31**	**26**	*e*Pdif	**Pdif**	**17 01 31.5**	**-1.2**
CCB				LR	LR		
	comp=Z,5μm,20.0s						
POKR	**Poker Plat Res**	**105.39**	**25**	PKiKP	**PKiKP**	**17 05 45.3**	**-1.4**
	baz=280						
SET	**Setif**	**105.39**	**305**	P	**PKiKP**	**17 05 53.0**	**+5.2**
KNK	**Knik Glacier**	**105.49**	**29**	PFAKE		17 06 00.0	+13
KNK				LR	LR		
	comp=Z,5μm,20.0s						
SML	**Sawmill**	**105.50**	**29**	PFAKE		17 06 00.0	+13
SML				LR	LR		
	comp=Z,4μm,21.0s						
BMRD	**Maredsous**	**105.60**	**319**	PP	**PP**	**17 05 53.5**	**-3.2**
BMRD				x	x	17 06 26.5	
ILAR	**Eielson Array**	**105.67**	**25**	Pdiff	**Pdif**	**17 01 33.9**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=269,slow=4.2,SNR=7.8						
ILAR				PKiKP	**PKiKP**	**17 05 49.2**	**+1.9**
	comp=Z,2.1nm,0.7s,baz=277,slow=3.1,SNR=7.4						
ILAR				PP	**PP**	**17 06 00.7**	**+3.9**
	comp=Z,9.5nm,1.1s,baz=286,slow=7.4,SNR=5.4						
ILAR				PKKPbc	**PKKPbc**	**17 17 11.7**	**-2.2**
	comp=Z,2.4nm,0.9s,baz=92,slow=1.8,SNR=7.2						
ILAR				PKPPKP		17 25 28.6	
	comp=Z,1.1nm,1.2s,baz=93,slow=1.8,SNR=3.2						
ILB	**Eielson Array**	**105.67**	**25**	*e*Pdif	**Pdif**	**17 01 33.0**	**-1.4**
HDA	**Harding Lake**	**105.71**	**26**	PFAKE		17 06 00.0	+13
HDA				LR	LR		
	comp=Z,6μm,21.0s						
DOU	**Dourbes**	**105.72**	**319**	x	**PKiKP**	**17 05 52.0**	**+4.2**
DOU				PP	**PP**	**17 05 59.9**	**+2.2**
DHY	**Denali Highway**	**105.75**	**27**	*e*Pdif	**Pdif**	**17 01 34.0**	**-1.0**
DHY				LR	LR		
	comp=Z,3μm,20.0s						
UCC	**Uccle**	**105.83**	**320**	PFAKE		17 06 00.0	+12
UCC				LR	LR		
	comp=Z,11μm,19.0s						
UCC	**Uccle**	**105.83**	**320**	PP	**PP**	**17 05 56.1**	**-2.3**
SNF	**Seneffe**	**105.89**	**320**	PP	**PP**	**17 05 57.2**	**-1.7**
SCM	**Sheep Creek Mo**	**105.96**	**28**	PFAKE		17 06 00.0	+12
SCM				LR	LR		
	comp=Z,4μm,21.0s						
SSB	**Saint Sauveur**	**105.97**	**314**	PFAKE		17 06 00.0	+11
SSB				LR	LR		
	comp=Z,4μm,22.0s						
FYU	**Fort Yukon**	**106.00**	**23**	PFAKE		17 06 00.0	+12
FYU				LR	LR		
	comp=Z,4μm,21.0s						
PRP	**Porcupine Dome**	**106.10**	**24**	PFAKE		17 06 00.0	+12
PRP				LR	LR		
	comp=Z,6μm,21.0s						
GLI	**Glacier Island**	**106.22**	**29**	PFAKE		17 06 00.0	+12
GLI				LR	LR		
	comp=Z,5μm,22.0s						
TRIS	**Tristan da Cun**	**106.64**	**227**	PFAKE		17 06 00.0	+10
TRIS				LR	LR		
	comp=Z,7μm,20.0s						
RIDG	**Independent Ri**	**106.75**	**26**	PFAKE		17 06 00.0	+11
RIDG				LR	LR		
	comp=Z,6μm,22.0s						
EYAK	**Cordova Ski Ar**	**106.93**	**30**	*e*Pdif	**Pdif**	**17 01 41.0**	**+1.0**
TOC3	**Torodi Ar.

TOA3 Torodi Ar. Sit 107.28 281 PFAKE 17 06 00.0 +8.3
TOA3 LR LR
comp=Z,10µm,18.0s
TOA1 Torodi Ar. Sit 107.28 281 PFAKE 17 06 00.0 +8.3
TOA1 LR LR
comp=Z,10µm,18.0s
TOB4 Torodi Ar. Sit 107.29 281 PFAKE 17 06 00.0 +8.3
TOB4 LR LR
comp=Z,10µm,18.0s
TOB5 Torodi Ar. Sit 107.29 281 PFAKE 17 06 00.0 +8.3
TOB5 LR LR
comp=Z,8µm,20.0s
TOC5 Torodi Ar. Sit 107.29 281 PFAKE 17 06 00.0 +8.3
TOC5 LR LR
comp=Z,11µm,18.0s
TOC7 Torodi Ar. Sit 107.30 281 PFAKE 17 06 00.0 +8.3
TOC7 LR LR
comp=Z,8µm,20.0s
CLF Chambon-Foret 107.39 317 PFAKE 17 06 00.0 +9.0
CLF LR LR
comp=Z,6µm,22.0s
MENT Mentasta 107.41 27 PFAKE 17 06 00.0 +9.4
MENT LR LR
comp=Z,4µm,21.0s
HMT Hamilton 107.69 30 PFAKE 17 06 00.0 +8.8
HMT LR LR
comp=Z,6µm,21.0s
EGAK Eagle 108.07 25 PFAKE 17 06 00.0 +8.3
EGAK LR LR
comp=Z,4µm,22.0s
BALM Baldy 108.47 29 PFAKE 17 06 00.0 +7.2
BALM LR LR
comp=Z,5µm,22.0s
SHEL Horse Pasture 108.91 249 PFAKE 17 06 10.0 +15
SHEL LR LR
comp=Z,10µm,19.0s
CTGM Chitina Glacie 108.96 29 PFAKE 17 06 00.0 +6.3
CTGM LR LR
comp=Z,6µm,22.0s
HOPE Hope Point 109.09 202 PFAKE 17 06 00.0 +6.0
HOPE LR LR
comp=Z,21µm,22.0s
EPYK Eagle Plains 109.33 23 PFAKE 17 06 10.0 +16
EPYK LR LR
comp=Z,6µm,19.0s
EPYK Eagle Plains 109.33 23 PKiKP **PKiKP 17 05 54.0 -0.1**
baz=290
PCA Pinnacle 109.69 29 PFAKE 17 06 10.0 +15
PCA LR LR
comp=Z,4µm,21.0s
INK Inuvik 109.75 20 Pdiff **Pdif 17 01 53.9 +1.5**
comp=Z,2.3nm,0.9s,baz=297,slow=3.6,SNR=7.9
INK PKiKP **PKiKP 17 05 55.5 +0.7**
comp=Z,9.4nm,0.9s,baz=270,slow=1.0,SNR=7.4
INK PP **PP 17 06 31.0 +4.6**
comp=Z,8.8nm,0.8s,baz=294,slow=10,SNR=4.1
INK PKKPbc **PKKPbc 17 16 58.7 -2.4**
comp=Z,3.7nm,1.0s,baz=96,slow=3.0,SNR=4.8
INK Inuvik 109.75 20 *e*Pdif **Pdif 17 01 52.6 +0.2**
INK *e*PKiKP **PKiKP 17 05 55.3 +0.6**
INK *e*PP **PP 17 06 28.8 +2.4**
INK *e*PKKPbc **PKKPbc 17 17 00.9 -0.1**
INK LR LR
comp=Z,10µm,22.0s
INK Inuvik 109.75 20 *e*P **Pdif 17 01 52.6 +0.2**
INK *e* 17 06 28.8
INK *e* 17 17 00.9
INK MLR MLR
comp=Z,10µm,22.0s
ESK Eskdalemuir 109.76 325 PFAKE 17 06 10.0 +15
ESK LR LR
comp=Z,7µm,20.0s
BCPM Bancas Point 110.03 30 PFAKE 17 06 10.0 +14
BCPM LR LR
comp=Z,5µm,22.0s
YKU2 Yakutat 110.13 30 PFAKE 17 06 10.0 +14
YKU2 LR LR
comp=Z,4µm,20.0s
TAOE Nuku Hiva Isla 110.31 103 *e*PP **PP 17 06 34.2 +2.0**
comp=Z,2µm,24.9s
TAOE Nuku Hiva Isla 110.31 103 *e*SS SS 17 22 04.5 +5.3
comp=Z,9µm,26.2s
TAOE Nuku Hiva Isla 110.31 103 *e*LQ LQ 17 33 21.9
comp=Z,14µm,31.8s
TAOE *e*LR LR 17 38 42.2
comp=Z,21µm,24.1s,baz=245
TAOE Nuku Hiva Isla 110.31 103 PFAKE 17 06 10.0 +12
TAOE LR LR
comp=Z,9µm,18.0s
RKT Rikitea 110.79 119 *e*SP SP 17 16 03.8 +0.2
comp=Z,4µm,29.5s
RKT *e*SS SS 17 22 12.5 +7.9
comp=Z,9µm,28.0s
RKT Rikitea 110.79 119 *e*LQ LQ 17 34 07.0
comp=Z,8µm,33.2s
RKT *e*LR LR 17 38 53.0
comp=Z,25µm,27.2s
HYT Haines Junctio 110.80 28 PFAKE 17 06 10.0 +13
HYT LR LR
comp=Z,6µm,20.0s
SCO Scoresbysund 111.79 344 PFAKE 17 06 10.0 +11
SCO LR LR
comp=Z,12µm,21.0s
SCO Scoresbysund 111.79 344 *i* P **Pdif 17 02 02.8 +1.4**
SCO MLR MLR
comp=Z,12µm,21.0s
SCO Scoresbysund 111.79 344 *i* P **Pdif 17 02 02.8 +1.4**
comp=Z,12µm,21.0s
WHY Whitehorse 112.08 28 PFAKE 17 06 10.0 +10
WHY LR LR
comp=Z,5µm,21.0s
MELI Melilla 112.18 304 Pdif **Pdif 17 02 04.9 +1.0**
MELI Melilla 112.18 304 *i* PS PS 17 16 11.0 -8.0
SKAG Skagway 112.27 29 PFAKE 17 06 10.0 +10
SKAG LR LR
comp=Z,4µm,21.0s
ESDC Sonseca Array 112.64 309 PKiKP **PKiKP 17 06 01.4 +0.2**
comp=Z,0.3nm,0.3s,baz=42,slow=3.6,SNR=5.0
ESDC PP **PP 17 06 48.5 +0.2**
comp=Z,11nm,0.9s,baz=70,slow=7.0,SNR=12
ESDC PKKPbc **PKKPbc 17 16 50.1 -0.8**
comp=Z,0.7nm,0.5s,baz=281,slow=3.7,SNR=5.4
ESLA Sonseca Array 112.64 309 PFAKE 17 06 10.0 +8.8
ESLA LR LR
comp=Z,4µm,22.0s
KIC Kosan Boka 112.73 273 *e*P **PKiKP 17 06 00.7 -1.4**
comp=Z,328nm,2.2s
DBIC Dimbokro 112.89 273 PKiKP **PKiKP 17 06 03.1 +0.8**
comp=Z,4.1nm,0.8s,baz=156,slow=3.5,SNR=3.1
PAB San Pablo 112.95 309 PFAKE 17 06 10.0 +8.1
PAB LR LR
comp=Z,3µm,20.0s
LIC Lamto 112.99 273 *e*P **PKiKP 17 05 57.3 -5.2**
comp=Z,129nm,1.8s
TIC Toumodi 113.04 273 *e*P **PKiKP 17 06 02.0 -0.7**
JIS Juneau Island 113.12 30 PFAKE 17 06 10.0 +8.6
JIS LR LR
comp=Z,4µm,21.0s
PVLZ Peæn de 113.30 304 Pdif **Pdif 17 02 04.9 -4.1**
PVLZ Peæn de 113.30 304 *i* PS PS 17 16 31.6 +2.3
TULEG Thule 113.40 359 PFAKE 17 06 10.0 +8.4
TULEG LR LR
comp=Z,8µm,22.0s
MDT Midelt 113.71 301 PKKPbc PKKPbc 17 16 46.0 -1.1
comp=Z,2.0nm,0.8s,baz=290,slow=3.9,SNR=3.6
RES Resolute Bay 114.07 6 PKP **PKiKP 17 06 03.0 +0.1**
comp=Z,18nm,0.9s,baz=327,slow=1.6,SNR=17
RES PKKPab **PKKPab 17 16 50.2 -0.3**
comp=Z,4.9nm,0.9s,baz=168,slow=4.4,SNR=5.6
RES Resolute Bay 114.07 6 PFAKE 17 06 10.0 +7.1
RES LR LR
comp=Z,8µm,19.0s
IFR Ifrane 114.10 302 Pdif **Pdif 17 02 15.7 +2.8**
IFR Ifrane 114.10 302 *i* PS PS 17 16 46.9 +10
CEU Ceuta 114.12 305 Pdif **Pdif 17 02 12.0 -0.6**
CEU Ceuta 114.12 305 *i* PS PS 17 16 45.7 +9.0
PTCN Pitcairn Islan 114.14 123 PFAKE 17 06 20.0 +16
PTCN LR LR
comp=Z,25µm,21.0s
SUMG Summit 114.15 349 PFAKE 17 06 10.0 +6.4
SUMG LR LR
comp=Z,7µm,20.0s
PBRG Braganca 114.46 311 *e*Pdif **Pdif 17 02 21.5 +7.4**
PBRG Braganca 114.46 311 *e*PKP PKPdf 17 06 04.5 -0.1
PBRG Braganca 114.46 311 *e*PP **PP 17 06 59.7 -1.5**

CRAG Craig 114.71 33 PFAKE 17 06 20.0 +15
CRAG LR LR
comp=Z,6µm,22.0s
SFS San Fernando 114.73 306 PFAKE 17 06 20.0 +15
SFS LR LR
comp=Z,4µm,20.0s
BORG Borgarnes 114.77 338 PFAKE 17 06 20.0 +16
BORG LR LR
comp=Z,6µm,20.0s
MVO Moncorvo 114.77 311 *e*Pdif **Pdif 17 02 21.4 +5.9**
MVO Moncorvo 114.77 311 *e*PKP PKPdf 17 06 06.9 +1.6
MVO Moncorvo 114.77 311 *e*PP **PP 17 07 03.0 -0.4**
MVO Moncorvo 114.77 311 *e*LQ LQ 17 17 10.5
MVO *e*SS SS 17 22 57.2 -0.1
MVO Moncorvo 114.77 311 *i* LQ LQ 17 34 38.7
MVO *e*LR LR 17 44 27.0
comp=Z,4µm,20.0s
WRAK Wrangell Islan 114.79 32 PFAKE 17 06 20.0 +15
WRAK LR LR
comp=Z,4µm,21.0s
KULLO Kullorsuaq 114.80 355 *i* P **Pdif 17 02 17.7 +2.9**
KULLO MLR MLR
comp=Z,7µm,22.0s
KULLO Kullorsuaq 114.80 355 *i* P **Pdif 17 02 17.7 +2.9**
comp=Z,7µm,22.0s
DLBC Dease Lake 115.20 29 PKP **PKiKP 17 06 05.5 -0.1**
comp=Z,14nm,1.1s,baz=314,slow=2.5,SNR=10.0
DLBC PP **PP 17 07 07.9 +2.2**
comp=Z,6.9nm,0.8s,baz=290,slow=8.6,SNR=4.3
DLBC PKKPbc **PKKPbc 17 16 41.4 -1.3**
comp=Z,4.1nm,0.8s,baz=69,slow=4.7,SNR=4.6
DLBC Dease Lake 115.20 29 PFAKE 17 06 20.0 +14
DLBC LR LR
comp=Z,5µm,20.0s
PVRL Vila Real 115.27 311 *e*PKP **PKPdf 17 06 07.8 +1.6**
PVRL Vila Real 115.27 311 *e*PP PP 17 07 10.3 +3.4
MTE Manteigas 115.28 310 *e*Pdif **Pdif 17 02 23.3 +5.5**
MTE Manteigas 115.28 310 *e*PKP **PKPdf 17 06 09.9 +3.6**
MTE Manteigas 115.28 310 *e*PP PP 17 07 08.3 +1.3
MTE Manteigas 115.28 310 *e*SS SS 17 23 14.2 +10
MTE Manteigas 115.28 310 *i* LQ LQ 17 34 45.1
MTE Manteigas 115.28 310 *e*LR LR 17 50 28.0
comp=Z,6µm,20.0s
MTE Manteigas 115.28 310 PFAKE 17 06 20.0 +14
MTE LR LR
comp=Z,4µm,19.0s
PMRV Marv??o 115.30 309 *e*Pdif **Pdif 17 02 23.3 +5.5**
PMRV Marv??o 115.30 309 *e*PKP **PKPdf 17 06 07.1 +0.8**
PMRV Marv??o 115.30 309 *e*PP PP 17 07 07.0 -0.1
PMRV *e*LQ LQ 17 16 52.0
PMRV *e*SS SS 17 23 13.8 +10
PMRV Marv??o 115.30 309 *e*LR LR 17 47 57.0
comp=Z,4µm,18.0s
PCBR Castelo Branco 115.31 309 *e*PKP **PKPdf 17 06 06.3 +0.1**
PCBR Castelo Branco 115.31 309 *e*PP PP 17 07 08.3 +1.2
POLO Lamas de Olo 115.31 311 *e*Pdif **Pdif 17 02 23.8 +5.9**
POLO Lamas de Olo 115.31 311 *e*PKP **PKPdf 17 06 07.2 +0.9**
POLO Lamas de Olo 115.31 311 *e*PP PP 17 07 07.9 +0.7
POLO Lamas de Olo 115.31 311 *e*SS SS 17 23 14.0 +10
PCAB Cabril 115.43 311 *e*PP PP 17 07 07.9 -0.1
PVIS Viseu 115.49 310 *e*PKP **PKPdf 17 06 07.4 +0.7**
PVIS Viseu 115.49 310 *e*PP PP 17 07 13.5 +5.0
RTC Rabat Centre 115.50 303 PFAKE 17 06 20.0 +13
RTC LR LR
comp=Z,16µm,19.0s
PGAV Gavieira, Arco 115.56 312 *e*Pdif **Pdif 17 02 25.0 +6.0**
PGAV Gavieira, Arco 115.56 312 *e*PKP **PKiKP 17 06 06.8 0.0**
PGAV Gavieira, Arco 115.56 312 *e*PP PP 17 07 09.1 +0.1
PGAV *e*LQ LQ 17 16 53.5
PGAV *e*SS SS 17 23 20.6 +13
PGAV Gavieira, Arco 115.56 312 *i* LQ LQ 17 34 44.5
PGAV *e*LR LR 17 43 55.6
comp=Z,6µm,20.0s
PVAQ Vaqueiros 115.83 307 *e*Pdif **Pdif 17 02 24.2 +4.0**
PVAQ Vaqueiros 115.83 307 *e*PKP **PKiKP 17 06 07.7 +0.4**
PVAQ Vaqueiros 115.83 307 *e*PP **PP 17 07 05.0 -5.9**
PVAQ *e*LQ LQ 17 16 53.0
PVAQ *e*SS SS 17 23 28.0 +17
PVAQ Vaqueiros 115.83 307 *e*LR LR 17 45 39.7
comp=Z,3µm,20.0s
PVAQ Vaqueiros 115.83 307 *e*PKPdf **PKPdf 17 06 06.8 -0.5**
PVAQ *e*PP **PP 17 07 03.4 -7.5**
PVAQ LR LR
comp=Z,3µm,21.0s
PBEJ Beja 115.86 307 *e*PKP **PKiKP 17 06 09.0 +1.6**
PBEJ Beja 115.86 307 *e*PP **PP 17 07 04.2 -6.9**
EVO Evora 115.91 308 *e*Pdif **Pdif 17 02 24.4 +3.9**
EVO Evora 115.91 308 *e*PKP **PKiKP 17 06 10.0 +2.6**
EVO Evora 115.91 308 *e*PP PP 17 07 12.4 +1.0
COI Coimbra 115.96 310 *e*Pdif **Pdif 17 02 25.1 +4.4**
COI Coimbra 115.96 310 *e*PP PP 17 07 13.5 +1.8
COI Coimbra 115.96 310 PFAKE 17 06 20.0 +13
COI LR LR
comp=Z,4µm,20.0s
PMTG Montargil 115.99 309 *e*Pdif **Pdif 17 02 27.4 +6.5**
PMTG Montargil 115.99 309 *e*PKP **PKPdf 17 06 07.3 -0.3**
PMTG Montargil 115.99 309 *e*PP PP 17 07 11.1 -0.9
PMTG Montargil 115.99 309 *e*SS SS 17 23 28.9 +16
PBDV Barranco-do-Ve 116.02 307 *e*Pdif **Pdif 17 02 25.6 +4.5**
PBDV Barranco-do-Ve 116.02 307 *e*PKP **PKPdf 17 06 06.8 -0.9**
PBDV Barranco-do-Ve 116.02 307 *e*PP PP 17 07 09.1 -3.1
PCVE Castro Verde 116.05 307 *e*Pdif **Pdif 17 02 26.2 +5.0**
PCVE Castro Verde 116.05 307 *e*PKP **PKiKP 17 06 08.6 +0.8**
PCVE Castro Verde 116.05 307 *e*PP PP 17 07 03.8 -8.6
PCVE *e*LQ LQ 17 16 58.4
PCVE Castro Verde 116.05 307 *i* LQ LQ 17 37 23.3
PCAS Casmilo, Conde 116.05 310 *e*Pdif **Pdif 17 02 26.2 +5.1**
PCAS Casmilo, Conde 116.05 310 *e*PKP **PKiKP 17 06 10.3 +2.6**
PCAS Casmilo, Conde 116.05 310 *e*PP PP 17 07 16.4 +4.0
PCAS Casmilo, Conde 116.05 310 *e*SS SS 17 23 21.8 +7.9
PTOM Tomar 116.05 309 *e*PKP **PKiKP 17 06 08.3 +0.6**
PTOM Tomar 116.05 309 *e*PP PP 17 07 09.3 -3.1
MESJ Messejana 116.16 307 *e*Pdif **Pdif 17 02 19.9 -1.7**
MESJ *e*PKPdf **PKPdf 17 06 06.8 -1.1**
MESJ *e*SS SS 17 23 16.3 +0.8
MESJ AMS AMS 18 09 16.7
comp=Z,3µm,24.5s
MESJ Messejana 116.16 307 *e*P **Pdif 17 02 19.9 -1.7**
MESJ *e* 17 06 06.8
MESJ *e*SS SS 17 23 16.3 +0.8
PNCL Nicolau / Gran 116.37 308 *e*Pdif **Pdif 17 02 25.8 +3.2**
PNCL Nicolau / Gran 116.37 308 *e*PKP **PKiKP 17 06 08.6 +0.3**
PNCL Nicolau / Gran 116.37 308 *e*PP PP 17 07 15.2 +0.6
PNCL Nicolau / Gran 116.37 308 *e*SS SS 17 23 31.4 +13
MORF Marmelete 116.58 307 *e*Pdif **Pdif 17 02 21.9 -1.7**
MORF AMS AMS 18 02 15.6
comp=Z,4µm,22.7s
MORF Marmelete 116.58 307 *e*PKP **PKiKP 17 06 09.3 +0.5**
MORF Marmelete 116.58 307 *e*PP PP 17 07 15.2 -1.0
MORF Marmelete 116.58 307 *e*P **Pdif 17 02 21.9 -1.7**
PTEO Sao Teotonio 116.60 307 *e*PP PP 17 07 13.5 -2.8
PFVI Vila Bisbo 116.74 307 *e*Pdif **Pdif 17 02 28.0 +3.8**
PFVI Vila Bisbo 116.74 307 *e*PKP **PKPdf 17 06 05.2 -3.9**
PFVI Vila Bisbo 116.74 307 *e*PP PP 17 07 14.4 -2.9
PFVI Vila Bisbo 116.74 307 PFAKE 17 06 20.0 +11
PFVI LR LR
comp=Z,5µm,22.0s
PMAFR Mafra 116.82 309 *e*Pdif **Pdif 17 02 27.4 +2.8**
PMAFR Mafra 116.82 309 *e*PP PP 17 07 20.3 +2.5
EFI East Falkland 117.33 190 PFAKE 17 06 20.0 +10
EFI LR LR
comp=Z,10µm,19.0s
BBB Bella Bella 118.66 35 PKP **PKiKP 17 06 12.7 +0.4**
comp=Z,16nm,0.9s,baz=301,slow=2.5,SNR=12
BBB Bella Bella 118.66 35 *e*PKPdf **PKPdf 17 06 11.4 -0.9**
BBB LR LR
comp=Z,4µm,21.0s
GO09 Cerro Castillo 119.03 180 *e*PKPdf **PKPdf 17 06 11.3 -1.8**
GO09 LR LR
comp=Z,14µm,19.0s
ILULI Ilulissat 119.17 351 PFAKE 17 06 20.0 +7.2
ILULI LR LR
comp=Z,14µm,21.0s
ILULI Ilulissat 119.17 351 *i* P **Pdif 17 02 36.3 +2.0**
ILULI MLR MLR
comp=Z,14µm,21.0s
ILULI Ilulissat 119.17 351 *i* P **Pdif 17 02 36.3 +2.0**
comp=Z,14µm,21.0s
ASCN Ascension 119.25 255 PFAKE 17 06 30.0 +15
ASCN LR LR
comp=Z,92µm,20.0s
ANGG Ammassalik, Gr 119.40 344 *e*PKPdf **PKPdf 17 06 12.0 -1.3**

ANGG *e*PP **PP 17 07 32.4 -2.0**
ANGG LR LR
comp=Z,12µm,21.0s
YKW3 Yellowknife Ar 119.45 21 *e*PKPdf **PKPdf 17 06 12.2 -1.3**
YKW3 *e*PP **PP 17 07 35.8 +0.8**
YKW3 LR LR
comp=Z,6µm,21.0s
YKA Yellowknife Ar 119.50 21 PKP **PKPdf 17 06 13.2 -0.4**
comp=Z,19nm,0.8s,baz=310,slow=1.7,SNR=74
YKA PKKPab **PKKPab 17 16 24.9 -1.9**
comp=Z,3.9nm,0.8s,baz=116,slow=4.6,SNR=18
YKA SKKPbc SKKPbc 17 20 16.2 +0.8
comp=Z,0.9nm,0.7s,baz=130,slow=3.2,SNR=5.4
SFJD Kangerlussuaq 121.11 350 *e*PKPdf **PKiKP 17 06 16.7 0.0**
SFJD *e*PP **PP 17 07 39.7 -6.4**
SFJD LR LR
comp=Z,9µm,21.0s
SFJD Kangerlussuaq 121.11 350 *e*PKIKP **PKiKP 17 06 16.7 0.0**
SFJD MLR MLR
comp=Z,9µm,21.0s
LLLB Lilloet 122.86 35 PFAKE 17 06 30.0 +9.3
LLLB LR LR
comp=Z,5µm,22.0s
NLWA Neilton Lookou 123.07 39 *e*PKPdf **PKPdf 17 06 20.8 -0.2**
NLWA *e*PP **PP 17 07 55.2 -5.0**
NLWA LR LR
comp=Z,3µm,21.0s
A04D Lummi Island 123.22 37 PKiKP **PKPdf 17 06 20.2 -0.9**
baz=296
PMPST Porto Santo, M 123.46 303 *e*PKP **PKiKP 17 06 30.0 +7.6**
PMPST Porto Santo, M 123.46 303 *e*PP PP 17 08 01.3 -2.3
PMPS Porto Santo 123.47 303 *e*PKP **PKiKP 17 06 26.1 +3.7**
PMPS Porto Santo 123.47 303 *e*PP PP 17 08 03.2 -0.4
D03D Eldon 123.49 39 PKiKP **PKPdf 17 06 20.3 -1.5**
baz=295
B05A Bryant 123.79 38 PKiKP **PKiKP 17 06 22.8 +0.3**
baz=296
D04E Lakebay 123.84 39 PKiKP **PKPdf 17 06 21.3 -1.1**
baz=295
F03A Seaside 123.84 41 PFAKE 17 06 30.0 +7.2
F03A LR LR
comp=Z,4µm,20.0s
FUL Funchal 124.00 303 *e*PP PP 17 08 10.1 +2.9
PMAR Madeira 124.01 303 *e*PKP **PKiKP 17 06 27.3 +3.6**
PMAR Madeira 124.01 303 *e*PP PP 17 08 04.9 -2.6
B06A Marblemount 124.04 37 *e*PKPdf **PKPdf 17 06 22.2 -0.5**
B06A *e*PP **PP 17 08 02.0 -4.6**
B06A LR LR
comp=Z,5µm,22.0s
F04D Rainier, OR 124.14 40 PKiKP **PKPdf 17 06 22.8 -0.2**
baz=294
E04D Cinebar 124.22 40 PKiKP **PKPdf 17 06 21.3 -1.9**
baz=294
PMOZ Porto Moniz, M 124.22 303 *e*PKP **PKiKP 17 06 23.9 -0.1**
PMOZ Porto Moniz, M 124.22 303 *e*PP PP 17 08 06.5 -2.3
PMOZ Porto Moniz, M 124.22 303 *e*LR LR 17 50 19.7
comp=Z,5µm,18.0s
G03D McMinnville, O 124.32 41 PKiKP **PKPdf 17 06 22.6 -0.8**
baz=293
D05A Enumclaw 124.32 39 PFAKE 17 06 30.0 +6.4
D05A LR LR
comp=Z,4µm,20.0s
I02D Swisshome 124.35 43 PKiKP **PKPdf 17 06 22.2 -1.3**
baz=292
COR Corvallis 124.53 42 PFAKE 17 06 30.0 +5.9
COR LR LR
comp=Z,6µm,19.0s
LON Longmire 124.62 39 *e*PKPdf **PKPdf 17 06 23.5 -0.5**
LON LR LR
comp=Z,4µm,21.0s
LON Longmire 124.62 39 *e*PKIKP **PKPdf 17 06 23.5 -0.5**
LON MLR MLR
comp=Z,4µm,21.0s
J01E Myrtle Point 124.64 44 PKiKP **PKPdf 17 06 21.7 -2.4**
baz=291
C06D Leavenworth 124.66 38 PKiKP **PKPdf 17 06 23.1 -0.9**
baz=297
I03D Drain, OR 124.84 43 PKiKP **PKPdf 17 06 23.1 -1.4**
baz=292
H04D Lebanon 124.93 42 PKiKP **PKPdf 17 06 24.1 -0.5**
baz=293
K02D Willamette Mer 124.99 44 PKiKP **PKPdf 17 06 24.0 -0.9**
baz=291
NRS Narsarsuaq 125.08 344 *e*PKPdf **PKPdf 17 06 23.7 -0.6**
NRS LR LR
comp=Z,10µm,21.0s
NRS Narsarsuaq 125.08 344 *e*PKIKP **PKPdf 17 06 23.7 -0.6**
NRS MLR MLR
comp=Z,10µm,21.0s
LTY Liberty 125.10 38 *e*PKPdf **PKPdf 17 06 24.4 -0.5**
LTY LR LR
comp=Z,4µm,20.0s
F05D White Salmon 125.20 40 PKiKP **PKPdf 17 06 24.5 -0.6**
baz=295
L02E Cave Junction 125.22 45 PKiKP **PKiKP 17 06 25.8 +0.2**
baz=291
H04A Detroit Lake 125.23 42 *e*PKPdf **PKiKP 17 06 25.6 0.0**
H04A LR LR
comp=Z,4µm,20.0s
JCC Jacoby Creek, 125.38 47 PFAKE 17 06 40.0 +14
JCC LR LR
comp=Z,6µm,20.0s
B08A Colville Reser 125.39 36 *e*PKPdf **PKPdf 17 06 24.6 -0.9**
B08A *e*PP **PP 17 08 11.3 -4.4**
B08A LR LR
comp=Z,5µm,22.0s
I04A Tendick Farm, 125.43 43 PKiKP **PKiKP 17 06 26.2 +0.1**
baz=293
HUMO Hull Mountain 125.51 44 *e*PKPdf **PKPdf 17 06 25.8 -0.1**
HUMO LR LR
comp=Z,5µm,22.0s
G05D Wamic, OR 125.56 41 PKiKP **PKiKP 17 06 26.8 +0.6**
baz=295
KHMM Horse Mountain 125.57 46 PFAKE 17 06 40.0 +13
KHMM LR LR
comp=Z,6µm,20.0s
IVI Ivigtut 125.74 346 *e*PKPdf **PKPdf 17 06 25.0 -0.6**
IVI LR LR
comp=Z,7µm,20.0s
KMRM Mail Ridge 125.81 47 PFAKE 17 06 40.0 +13
KMRM LR LR
comp=Z,8µm,22.0s
J04D Umpqua Nationa 125.84 43 PKiKP **PKiKP 17 06 27.6 +0.5**
baz=293
I05D Terrebonne, OR 125.92 42 PKiKP **PKiKP 17 06 27.5 +0.5**
baz=294
YBH Yreka Blue Hor 125.99 45 *e*PKPdf **PKiKP 17 06 27.2 -0.1**
YBH LR LR
comp=Z,7µm,21.0s
YBH Yreka Blue Hor 125.99 45 *e*PKIKP **PKiKP 17 06 27.2 -0.1**
YBH MLR MLR
comp=Z,7µm,21.0s
M02C Callahan 126.02 46 PKiKP **PKiKP 17 06 27.8 +0.5**
baz=291
KCPM Cahto Peak 126.07 48 PFAKE 17 06 40.0 +12
KCPM LR LR
comp=Z,6µm,20.0s
L04D Klamath Falls 126.10 44 PKiKP **PKPdf 17 06 26.5 -0.7**
baz=292
HAWA Hanford 126.18 39 *e*PKPdf **PKPdf 17 06 25.9 -1.0**
FRB Frobisher Bay 126.21 358 PKP **PKPdf 17 06 26.1 -0.4**
comp=Z,32nm,0.9s,baz=7.5,slow=2.9,SNR=5.2
D08A Wollman Farm, 126.25 38 *e*PKPdf **PKPdf 17 06 26.2 -0.8**
N02D Trinity Center 126.27 46 PKiKP **PKiKP 17 06 28.5 +0.7**
baz=291
C09A Chrisman Ranch 126.28 37 *e*PKPdf **PKPdf 17 06 27.1 0.0**
C09A LR LR
comp=Z,5µm,22.0s
K04D Chiloquin, OR 126.32 44 PKiKP **PKiKP 17 06 28.1 +0.2**
baz=293
PINE Pine Mountain 126.41 42 PFAKE 17 06 40.0 +12
PINE LR LR
comp=Z,7µm,20.0s
J05D Fort Rock, OR 126.42 43 PKiKP **PKiKP 17 06 28.0 -0.1**
baz=294
E08A Dider Farm, El 126.43 38 *e*PKPdf **PKiKP 17 06 28.1 +0.2**
O02D Mt. Diablo Mer 126.48 47 PKiKP **PKiKP 17 06 28.4 +0.1**
baz=290
WDC Whiskeytown Da 126.52 46 *e*PKPdf **PKPdf 17 06 27.6 -0.2**
WDC LR LR
comp=Z,8µm,22.0s
WDC Whiskeytown Da 126.52 46 *e*PKIKP **PKPdf 17 06 27.6 -0.2**
WDC MLR MLR
comp=Z,8µm,22.0s
M04C Macdoel 126.58 45 PKiKP **PKiKP 17 06 28.6 +0.1**
baz=292

HOPS	**Hopland Field**	**126.67**	**48**	PFAKE		17 06 40.0	+11
HOPS				LR	LR		
	comp=Z,8μm,20.0s						
NEW	**Newport**	**126.72**	**36**	PKP	**PKiKP**	**17 06 28.3**	**-0.2**
	comp=Z,20nm,0.9s,baz=297,slow=1.5,SNR=28						
NEW	**Newport**	**126.72**	**36**	*e*PKPdf	**PKPdf**	**17 06 27.6**	**-0.4**
NEW				LR	LR		
	comp=Z,5μm,22.0s						
NEW	**Newport**	**126.72**	**36**	*e*PKIKP	**PKPdf**	**17 06 27.6**	**-0.4**
NEW				MLR	MLR		
	comp=Z,5μm,22.0s						
NEW	**Newport**	**126.72**	**36**	PKiKP	**PKiKP**	**17 06 28.4**	**0.0**
	baz=301						
K05A	**Summer Lake**	**126.87**	**43**	*e*PKPdf	**PKiKP**	**17 06 29.6**	**+0.4**
K05A				LR	LR		
	comp=Z,6μm,21.0s						
GDXM	**Geysers**	**126.94**	**49**	PFAKE		17 06 40.0	+11
GDXM				LR	LR		
	comp=Z,9μm,20.0s						
E09A	**Wood Farm, Sta**	**126.98**	**38**	*e*PKPdf	**PKPdf**	**17 06 28.1**	**-0.3**
E09A				LR	LR		
	comp=Z,5μm,21.0s						
G08A	**Pilot Rock**	**127.04**	**40**	*e*PKPdf	**PKPdf**	**17 06 28.4**	**-0.5**
MCCM	**Marconi Confer**	**127.08**	**49**	PFAKE		17 06 40.0	+11
MCCM				LR	LR		
	comp=Z,7μm,20.0s						
O03E	**Paynes Creek**	**127.15**	**46**	PKiKP	**PKPdf**	**17 06 29.3**	**+0.2**
	baz=291						
GO07	**Milladeo Hill,**	**127.18**	**179**	*e*PKPdf	**PKPdf**	**17 06 28.0**	**-1.0**
GO07				LR	LR		
	comp=Z,19μm,18.0s						
I07A	**Izee**	**127.23**	**41**	*e*PKPdf	**PKPdf**	**17 06 29.3**	**+0.1**
I07A				LR	LR		
	comp=Z,5μm,21.0s						
MOD	**Modoc Plateau**	**127.60**	**44**	*e*PKPdf	**PKiKP**	**17 06 30.4**	**-0.2**
MOD				LR	LR		
	comp=Z,6μm,21.0s						
ORV	**Oroville**	**127.63**	**47**	*e*PKPdf	**PKPdf**	**17 06 29.9**	**0.0**
ORV				LR	LR		
	comp=Z,4μm,20.0s						
ORV	**Oroville**	**127.63**	**47**	*e*PKIKP	**PKPdf**	**17 06 29.9**	**0.0**
ORV				MLR	MLR		
	comp=Z,4μm,20.0s						
F10A	**Beach Ranch, E**	**127.79**	**38**	*e*PKPdf	**PKPdf**	**17 06 29.6**	**-0.6**
F10A				LR	LR		
	comp=Z,5μm,22.0s						
WALA	**Waterton Lakes**	**128.08**	**33**	*e*PKPdf	**PKPdf**	**17 06 30.4**	**-0.3**
WALA				LR	LR		
	comp=Z,5μm,22.0s						
J08A	**Circle Bar Ran**	**128.22**	**42**	*e*PKPdf	**PKiKP**	**17 06 31.6**	**-0.1**
AFDM	**Forest Hills D**	**128.23**	**48**	*e*PKPdf	**PKPdf**	**17 06 31.2**	**+0.1**
AFDM				LR	LR		
	comp=Z,6μm,20.0s						
BMO	**Blue Mountains**	**128.28**	**40**	*e*PKPdf	**PKPdf**	**17 06 30.4**	**-0.8**
BMO				LR	LR		
	comp=Z,5μm,21.0s						
BEKR	**Beckworth**	**128.34**	**46**	*e*PKPdf	**PKiKP**	**17 06 32.1**	**0.0**
BEKR				LR	LR		
	comp=Z,5μm,20.0s						
WVOR	**Wild Horse Val**	**128.51**	**43**	PFAKE		17 06 40.0	+7.7
WVOR				LR	LR		
	comp=Z,7μm,20.0s						
SAO	**San Andreas Ge**	**128.60**	**51**	PFAKE		17 06 40.0	+7.5
SAO				LR	LR		
	comp=Z,7μm,21.0s						
FCC	**Fort Churchill**	**128.65**	**14**	*e*PKPdf	**PKPdf**	**17 06 30.9**	**-0.3**
FCC				LR	LR		
	comp=Z,6μm,20.0s						
RUBR	**Rubicon Trail**	**128.78**	**47**	PFAKE		17 06 40.0	+6.9
RUBR				LR	LR		
	comp=Z,6μm,21.0s						
RPN	**Rapa Nui**	**128.81**	**137**	PFAKE		17 06 40.0	+6.8
RPN				LR	LR		
	comp=Z,16μm,20.0s						
CMB	**Columbia Colle**	**128.98**	**49**	*e*PKPdf	**PKPdf**	**17 06 32.5**	**-0.1**
CMB				LR	LR		
	comp=Z,5μm,21.0s						
PLID	**Pearl Lake**	**128.98**	**39**	*e*PKPdf	**PKiKP**	**17 06 33.1**	**-0.2**
VCNR	**Virginia City**	**129.06**	**47**	PFAKE		17 06 40.0	+6.4
VCNR				LR	LR		
	comp=Z,6μm,22.0s						
PAHR	**Pah Rah Range**	**129.09**	**46**	PFAKE		17 06 40.0	+6.4
PAHR				LR	LR		
	comp=Z,6μm,22.0s						
PNTR	**Pine Nut**	**129.17**	**47**	*e*PKPdf	**PKPdf**	**17 06 32.3**	**-0.9**
PNTR				LR	LR		
	comp=Z,5μm,20.0s						
BART	**Pico Bartolome**	**129.19**	**311**	*e*PP	PP	17 08 41.0	-0.3
MSO	**Missoula**	**129.30**	**36**	*e*PKPdf	**PKPdf**	**17 06 32.9**	**-0.2**
MSO	**Missoula**	**129.30**	**36**	PKiKP	**PKPdf**	**17 06 33.3**	**+0.3**
	baz=303						
PSMN	**Pico do Norte,**	**129.37**	**310**	*e*PKP	**PKPdf**	**17 06 33.3**	**0.0**
PSMN	**Pico do Norte,**	**129.37**	**310**	*e*PP	PP	17 08 42.3	-0.2
PSMA	**Santa Maria**	**129.42**	**310**	*e*PKP	**PKiKP**	**17 06 34.2**	**+0.1**
PSMA	**Santa Maria**	**129.42**	**310**	*e*PP	PP	17 08 47.1	+4.3
CMLA	**Cha da Macela**	**129.45**	**311**	*e*PKP	**PKiKP**	**17 06 35.1**	**+0.9**
CMLA	**Cha da Macela**	**129.45**	**311**	*e*PP	PP	17 08 43.2	+0.2
CMLA	**Cha da Macela**	**129.45**	**311**	PFAKE		17 06 40.0	+5.8
CMLA				LR	LR		
	comp=Z,6μm,22.0s						
YERR	**Yerington**	**129.47**	**47**	*e*PKPdf	**PKPdf**	**17 06 33.5**	**-0.2**
YERR				LR	LR		
	comp=Z,6μm,19.0s						
WAKR	**Walker**	**129.51**	**48**	PFAKE		17 06 50.0	+15
WAKR				LR	LR		
	comp=Z,7μm,21.0s						
PLCA	**Paso Flores**	**129.53**	**182**	PKP	**PKPdf**	**17 06 34.0**	**+0.3**
	comp=Z,12nm,0.9s,baz=229,slow=0.9,SNR=16						
PLCA	**Paso Flores**	**129.53**	**182**	PKiKP	**PKPdf**	**17 06 34.0**	**+0.3**
PLCA	**Paso Flores**	**129.53**	**182**	*e*P	**PKiKP**	**17 06 36.3**	**+1.9**
PSET	**Sete Cidades**	**129.58**	**311**	*e*PKP	**PKiKP**	**17 06 34.4**	**-0.1**
PSET	**Sete Cidades**	**129.58**	**311**	*e*PP	PP	17 08 44.8	+1.0
FFC	**Flin Flon**	**129.67**	**22**	*e*PKPdf	**PKPdf**	**17 06 33.3**	**-0.1**
FFC				LR	LR		
	comp=Z,6μm,22.0s						
PAGB	**Antelope Grade**	**129.85**	**51**	PFAKE		17 06 50.0	+15
PAGB				LR	LR		
	comp=Z,7μm,21.0s						
MDPB	**Devils Postpil**	**130.09**	**49**	PFAKE		17 06 50.0	+14
MDPB				LR	LR		
	comp=Z,6μm,22.0s						
RYN	**Ryan**	**130.12**	**47**	PFAKE		17 06 50.0	+14
RYN				LR	LR		
	comp=Z,7μm,21.0s						
OMMB	**Old Mammoth Mi**	**130.15**	**49**	PFAKE		17 06 50.0	+14
OMMB				LR	LR		
	comp=Z,6μm,21.0s						
SMMC	**Simmler**	**130.18**	**52**	PKiKP	**PKiKP**	**17 06 36.2**	**+0.4**
	baz=289						
KVN	**Kaiserville**	**130.26**	**47**	*e*PKPdf	**PKPdf**	**17 06 33.0**	**-2.2**
KVN				LR	LR		
	comp=Z,6μm,21.0s						
MLAC	**Mammoth, Mammt**	**130.27**	**49**	PKiKP	**PKiKP**	**17 06 36.0**	**-0.2**
	baz=292						
PSCM	**Serra do Cume**	**130.27**	**313**	*e*PKP	**PKiKP**	**17 06 36.8**	**+1.0**
BMN	**Battle Mountai**	**130.32**	**45**	*e*PKPdf	**PKPdf**	**17 06 35.1**	**-0.2**
BMN				LR	LR		
	comp=Z,5μm,21.0s						
VOG	**Valley Oaks Go**	**130.32**	**50**	PKiKP	**PKiKP**	**17 06 35.9**	**0.0**
	baz=290						
NVAR	**Mina Array Bea**	**130.36**	**47**	PKP	**PKPdf**	**17 06 35.8**	**+0.4**
	comp=Z,11nm,0.8s,baz=242,slow=2.7,SNR=17						
NVAR				SKP		17 10 08.5	
	comp=Z,14nm,1.0s,baz=292,slow=4.8,SNR=3.9						
NVAR				SKKPbc	SKKPbc	17 19 30.1	-7.7
	comp=Z,3.6nm,1.0s,baz=123,slow=3.3,SNR=4.3						
PKM	**Mcpherson Peak**	**130.46**	**52**	PKiKP	**PKiKP**	**17 06 37.2**	**+0.6**
	baz=288						
NV11	**Mina Array Sit**	**130.47**	**47**	PFAKE		17 06 50.0	+14
NV11				LR	LR		
	comp=Z,500nm,22.0s						
HRY	**Holter Researc**	**130.57**	**35**	*e*PKPdf	**PKPdf**	**17 06 35.3**	**-0.2**
SBC	**Santa Barbara**	**130.68**	**53**	PKiKP	**PKiKP**	**17 06 37.5**	**+0.7**
	baz=288						
VES	**Vestal, Richgr**	**130.71**	**51**	PKiKP	**PKPdf**	**17 06 36.1**	**+0.2**
	baz=290						
HLID	**Hailey**	**130.73**	**40**	*e*PKPdf	**PKiKP**	**17 06 36.5**	**-0.3**
HLID				LR	LR		
	comp=Z,6μm,21.0s						
HLID	**Hailey**	**130.73**	**40**	PKiKP	**PKiKP**	**17 06 37.5**	**+0.7**
	baz=300						
PGRA	**Graciosa**	**130.76**	**314**	*e*PKP	**PKPdf**	**17 06 36.3**	**+0.4**
PGRA	**Graciosa**	**130.76**	**314**	*e*PP	PP	17 08 53.0	+1.6
SCZ2	**Santa Cruz Isl**	**130.88**	**53**	PKiKP	**PKPdf**	**17 06 36.1**	**-0.2**
	baz=288						
DLMT	**Dillon**	**130.89**	**37**	*e*PKPdf	**PKiKP**	**17 06 36.8**	**-0.3**
DLMT				LR	LR		
	comp=Z,6μm,22.0s						
EGMT	**Eagleton**	**130.92**	**32**	PFAKE		17 06 50.0	+13
EGMT				LR	LR		
	comp=Z,4μm,22.0s						
EGMT	**Eagleton**	**130.92**	**32**	PKiKP	**PKiKP**	**17 06 36.8**	**-0.1**
	baz=308						
TIN	**Tinemaha, Big**	**130.93**	**49**	PKiKP	**PKiKP**	**17 06 37.6**	**+0.2**
	baz=292						
MCMT	**McKenzie Canyo**	**131.03**	**37**	*e*PKPdf	**PKPdf**	**17 06 36.4**	**-0.1**
ROSA	**Rosais**	**131.07**	**313**	*e*PP	PP	17 08 54.3	+0.9
ROSA	**Rosais**	**131.07**	**313**	PFAKE		17 06 50.0	+13
ROSA				LR	LR		
	comp=Z,6μm,20.0s						
ARVC	**Arvin**	**131.14**	**52**	PKiKP	**PKiKP**	**17 06 37.9**	**+0.2**
	baz=290						
SNCC	**San Nicolas Is**	**131.19**	**54**	PFAKE		17 06 50.0	+12
SNCC				LR	LR		
	comp=Z,8μm,22.0s						
SNCC	**San Nicolas Is**	**131.19**	**54**	PKiKP	**PKiKP**	**17 06 38.0**	**+0.1**
	baz=287						
PPNO	**Prainha do Nor**	**131.19**	**313**	*e*PP	PP	17 08 55.0	+0.8
TRQA	**Tornquist**	**131.20**	**191**	*e*PKPdf	**PKPdf**	**17 06 35.0**	**-1.9**
ISA	**Isabella, Lake**	**131.24**	**51**	PFAKE		17 06 50.0	+12
ISA				LR	LR		
	comp=Z,7μm,20.0s						
ISA	**Isabella, Lake**	**131.24**	**51**	PKiKP	**PKiKP**	**17 06 37.9**	**-0.1**
	baz=290						
CWC	**Cottonwood Cre**	**131.26**	**50**	PKiKP	**PKiKP**	**17 06 38.2**	**+0.1**
	baz=291						
BLG	**Laguna Peak, P**	**131.29**	**53**	PKiKP	**PKiKP**	**17 06 37.8**	**-0.3**
	baz=288						
PICO	**Pico**	**131.29**	**313**	*e*PP	PP	17 09 00.9	+6.0
BOZ	**Bozeman (W)**	**131.32**	**36**	*e*PKPdf	**PKPdf**	**17 06 36.9**	**0.0**
BOZ				LR	LR		
	comp=Z,5μm,21.0s						
BOZ	**Bozeman (W)**	**131.32**	**36**	PKiKP	**PKPdf**	**17 06 37.4**	**+0.5**
	baz=305						
PCAN	**Candelaria**	**131.35**	**313**	*e*PKP	**PKiKP**	**17 06 41.1**	**+3.1**
OSI	**Osito Audit: C**	**131.40**	**52**	PFAKE		17 06 50.0	+12
OSI				LR	LR		
	comp=Z,8μm,21.0s						
OSI	**Osito Audit: C**	**131.40**	**52**	PKiKP	**PKiKP**	**17 06 38.5**	**+0.2**
	baz=289						
PCED	**Cedros**	**131.44**	**313**	*e*PKP	**PKPdf**	**17 06 34.6**	**-2.6**
PCED	**Cedros**	**131.44**	**313**	*e*PP	PP	17 08 56.9	+1.1
ELK	**Elko**	**131.54**	**43**	PKP	**PKiKP**	**17 06 38.9**	**+0.2**
	comp=Z,6.2nm,0.4s,baz=234,slow=0.5,SNR=33						
GRAC	**Grapevine Rang**	**131.59**	**49**	PKiKP	**PKiKP**	**17 06 38.4**	**-0.2**
	baz=292						
DAC	**Darwin (Calif)**	**131.69**	**50**	*e*PKPdf	**PKPdf**	**17 06 37.7**	**-0.3**
DAC				LR	LR		
	comp=Z,6μm,19.0s						
DECC	**Green Verdugo**	**131.82**	**53**	PKiKP	**PKPdf**	**17 06 38.5**	**+0.4**
	baz=289						
MPMC	**Manual Prospec**	**131.84**	**50**	PKiKP	**PKiKP**	**17 06 38.9**	**-0.4**
	baz=291						
QLMT	**Earthquake Lak**	**131.87**	**37**	*e*PKPdf	**PKPdf**	**17 06 37.2**	**-0.9**
EDW2	**Edwards Air Fo**	**131.87**	**52**	PKiKP	**PKPdf**	**17 06 38.6**	**+0.4**
	baz=290						
SACV	**Santiago Islan**	**131.88**	**281**	PFAKE		17 06 50.0	+10
SACV				LR	LR		
	comp=Z,6μm,19.0s						
LRMC	**Laurel Mtn Rad**	**131.91**	**51**	PKiKP	**PKiKP**	**17 06 39.2**	**-0.2**
	baz=291						
PASC	**Pasadena Art C**	**131.96**	**53**	PFAKE		17 06 50.0	+11
PASC				LR	LR		
	comp=Z,8μm,19.0s						
FMP	**Fort Macarthur**	**132.02**	**53**	PKiKP	**PKPdf**	**17 06 38.0**	**-0.4**
	baz=289						
CIS	**Catalina Islan**	**132.03**	**54**	PKiKP	**PKPdf**	**17 06 38.2**	**-0.4**
	baz=288						
MWC	**Mount Wilson**	**132.04**	**53**	*e*PKPdf	**PKPdf**	**17 06 36.0**	**-2.7**
MWC				LR	LR		
	comp=Z,8μm,20.0s						
SCI2	**San Clemente I**	**132.05**	**54**	PKiKP	**PKPdf**	**17 06 37.6**	**-0.9**
	baz=288						
FURC	**Furnace Creek,**	**132.16**	**49**	PKiKP	**PKiKP**	**17 06 39.4**	**-0.3**
	baz=292						
YHH	**Holmes Hill**	**132.24**	**36**	*e*PKPdf	**PKPdf**	**17 06 37.9**	**-1.0**
R11A	**Troy Canyon, C**	**132.35**	**46**	PFAKE		17 06 50.0	+10
R11A				LR	LR		
	comp=Z,6μm,22.0s						
R11A	**Troy Canyon, C**	**132.35**	**46**	PKiKP	**PKiKP**	**17 06 40.2**	**-0.1**
	baz=295						
BFSC	**Mount Baldy Ra**	**132.35**	**52**	PKiKP	**PKPdf**	**17 06 38.9**	**-0.4**
	baz=290						
TPNV	**Topopah Spring**	**132.43**	**48**	*e*PKPdf	**PKPdf**	**17 06 36.7**	**-2.6**
TPNV				LR	LR		
	comp=Z,6μm,21.0s						
TPNV	**Topopah Spring**	**132.43**	**48**	PKiKP	**PKiKP**	**17 06 40.0**	**-0.5**
	baz=293						
H17A	**Grant Village**	**132.62**	**37**	PFAKE		17 06 50.0	+9.3
H17A				LR	LR		
	comp=Z,7μm,21.0s						
H17A	**Grant Village**	**132.62**	**37**	PKiKP	**PKiKP**	**17 06 40.8**	**+0.1**
	baz=305						
GSC	**Goldstone, Bar**	**132.64**	**51**	*e*PKPdf	**PKPdf**	**17 06 38.9**	**-0.8**
GSC				LR	LR		
	comp=Z,6μm,19.0s						
RRX	**Edison Barstow**	**132.64**	**51**	PKiKP	**PKPdf**	**17 06 40.0**	**+0.4**
	baz=291						
HVU	**Hansel Valley**	**132.67**	**41**	*e*PKPdf	**PKPdf**	**17 06 38.7**	**-0.9**
IMW	**Indian Meadow**	**132.69**	**37**	*e*PKPdf	**PKPdf**	**17 06 40.2**	**+0.5**
IMW				LR	LR		
	comp=Z,4μm,21.0s						
FLWY	**Flagg Ranch**	**132.72**	**37**	PFAKE		17 06 50.0	+9.1
FLWY				LR	LR		
	comp=Z,4μm,20.0s						
FXWY	**Fox Creek**	**132.78**	**38**	*e*PKPdf	**PKPdf**	**17 06 40.0**	**0.0**
SHOC	**Shoshone, Teco**	**132.82**	**50**	PKiKP	**PKiKP**	**17 06 41.1**	**0.0**
	baz=292						
MOOW	**Moose Ponds**	**132.88**	**38**	*e*PKPdf	**PKPdf**	**17 06 40.0**	**-0.1**
MOOW				LR	LR		
	comp=Z,6μm,22.0s						
TPAW	**Teton Pass**	**132.91**	**38**	*e*PKPdf	**PKPdf**	**17 06 39.9**	**-0.3**
TPAW				LR	LR		
	comp=Z,5μm,21.0s						
BBRC	**Big Bear Solar**	**132.92**	**52**	PKiKP	**PKPdf**	**17 06 40.8**	**+0.4**
	baz=290						
MURC	**Murrieta**	**132.93**	**53**	PKiKP	**PKiKP**	**17 06 41.2**	**-0.2**
	baz=290						
BGU	**Big Grassy Mou**	**132.93**	**42**	*e*PKPdf	**PKPdf**	**17 06 40.7**	**+0.5**
RLMT	**Red Lodge**	**132.95**	**35**	*e*PKPdf	**PKPdf**	**17 06 40.1**	**0.0**
RLMT				LR	LR		
	comp=Z,7μm,22.0s						
LOHW	**Long Hollow**	**133.05**	**38**	*e*PKPdf	**PKPdf**	**17 06 40.4**	**0.0**
LOHW				LR	LR		
	comp=Z,5μm,20.0s						
SPUT	**South Promonto**	**133.12**	**41**	*e*PKPdf	**PKPdf**	**17 06 40.7**	**+0.1**
HEC	**Hector,Ludlow**	**133.17**	**51**	PKiKP	**PKiKP**	**17 06 41.6**	**-0.3**
	baz=291						
AHID	**Auburn Hatcher**	**133.21**	**39**	PFAKE		17 06 50.0	+8.1
AHID				LR	LR		
	comp=Z,5μm,21.0s						
109C	**Camp Elliot, M**	**133.23**	**54**	PKiKP	**PKiKP**	**17 06 41.6**	**-0.3**
	baz=289						
CPE	**Camp Elliot**	**133.23**	**54**	PFAKE		17 06 50.0	+8.1
CPE				LR	LR		
	comp=Z,7μm,20.0s						
LPA	**La Plata**	**133.24**	**197**	*de*PKIKP	**PKPdf**	**17 06 41.0**	**+0.2**
LPA				*e*PP	**PP**	**17 09 07.0**	**+0.8**
TUQ	**Turquoise Moun**	**133.26**	**50**	PKiKP	**PKPdf**	**17 06 41.4**	**+0.5**
	baz=292						
DGMT	**Dagmar**	**133.41**	**29**	PFAKE		17 06 50.0	+8.1
DGMT				LR	LR		
	comp=Z,5μm,21.0s						
DGMT	**Dagmar**	**133.41**	**29**	PKiKP	**PKiKP**	**17 06 41.5**	**-0.4**
	baz=315						
SHPR	**Sheep Range**	**133.41**	**48**	PFAKE		17 06 50.0	+7.5
SHPR				LR	LR		
	comp=Z,5μm,20.0s						
DUG	**Dugway, Tooele**	**133.43**	**43**	*e*PKPdf	**PKPdf**	**17 06 37.5**	**-3.6**
DUG	**Dugway, Tooele**	**133.43**	**43**	PKiKP	**PKPdf**	**17 06 41.7**	**+0.6**
	baz=299						
PSUT	**Pine Spring**	**133.49**	**45**	*e*PKPdf	**PKPdf**	**17 06 40.5**	**-0.8**
PFO	**Pinyon Flats O**	**133.50**	**53**	PKP	**PKiKP**	**17 06 42.4**	**-0.3**
	comp=Z,19nm,0.8s,baz=239,slow=2.1,SNR=14						
PFO	**Pinyon Flats O**	**133.50**	**53**	*e*PKPdf	**PKPdf**	**17 06 40.0**	**-1.4**
PFO				LR	LR		
	comp=Z,9μm,18.0s						
PFO	**Pinyon Flats O**	**133.50**	**53**	PKiKP	**PKPdf**	**17 06 42.0**	**+0.6**
	baz=290						
HWUT	**Hardware Ranch**	**133.53**	**40**	*e*PKPdf	**PKPdf**	**17 06 40.5**	**-0.8**
LAO	**LASA Array**	**133.62**	**32**	*e*PKPdf	**PKPdf**	**17 06 40.4**	**-0.8**
LAO				LR	LR		
	comp=Z,5μm,22.0s						
LAO	**LASA Array**	**133.62**	**32**	PKiKP	**PKiKP**	**17 06 42.0**	**-0.4**
	baz=311						
BAR	**Barrett**	**133.64**	**54**	*e*PKPdf	**PKPdf**	**17 06 39.7**	**-1.9**
BAR				LR	LR		
	comp=Z,7μm,18.0s						
GMRC	**Granite Mounta**	**133.70**	**51**	PKiKP	**PKiKP**	**17 06 43.0**	**0.0**
	baz=292						
BELC	**Belle Mtn. Jos**	**133.72**	**52**	PKiKP	**PKiKP**	**17 06 42.8**	**-0.3**
	baz=291						
MONP2	**Monument Peak**	**133.77**	**54**	PKiKP	**PKiKP**	**17 06 42.8**	**-0.6**
	baz=290						
CTU	**Camp Tracy**	**133.89**	**42**	*e*PKPdf	**PKPdf**	**17 06 39.3**	**-2.7**
LDFC	**Landfair**	**134.01**	**50**	PFAKE		17 06 50.0	+6.4
LDFC				LR	LR		
	comp=Z,8μm,19.0s						
NLU	**North Lily Min**	**134.04**	**43**	*e*PKPdf	**PKPdf**	**17 06 42.4**	**0.0**
IKP	**In-Ko-Pah, Jac**	**134.10**	**54**	PKiKP	**PKiKP**	**17 06 43.4**	**-0.5**
	baz=290						
JLU	**Jordanelle**	**134.13**	**42**	*e*PKPdf	**PKPdf**	**17 06 41.6**	**-1.0**
BW06	**Boulder Array**	**134.15**	**38**	PKiKP	**PKPdf**	**17 06 42.9**	**+0.4**
	baz=305						
PDAR	**Pinedale Array**	**134.16**	**38**	PKP	**PKPdf**	**17 06 43.0**	**+0.5**
	comp=Z,4.5nm,0.7s,baz=204,slow=1.6,SNR=20						
PDAR				PP	**PP**	**17 09 16.8**	**+3.7**
	comp=Z,3.2nm,0.8s,baz=328,slow=3.2,SNR=6.1						
SWSC	**Sam W. Stewart**	**134.25**	**53**	PKiKP	**PKiKP**	**17 06 43.8**	**-0.2**
	baz=290						
BC3	**Big Chuckawall**	**134.27**	**52**	PKiKP	**PKiKP**	**17 06 44.2**	**0.0**
	baz=291						
CCUT	**Cedar City**	**134.28**	**46**	*e*PKPdf	**PKiKP**	**17 06 43.6**	**-0.6**
IRM	**Iron Mountain**	**134.33**	**51**	PKiKP	**PKiKP**	**17 06 44.2**	**0.0**
	baz=292						
NEE2	**Needles Airpor**	**134.50**	**50**	PKiKP	**PKiKP**	**17 06 44.4**	**-0.1**
	baz=293						
MSU	**Marysvale**	**134.67**	**45**	*e*PKPdf	**PKPdf**	**17 06 43.3**	**-0.3**
MTPU	**Mount Pierson**	**134.88**	**45**	*e*PKPdf	**PKPdf**	**17 06 42.8**	**-1.4**
KNB	**Kanab**	**134.90**	**47**	*e*PKPdf	**PKPdf**	**17 06 40.3**	**-3.8**
W13A	**Hualapai Mount**	**134.93**	**50**	PFAKE		17 07 00.0	+14
W13A				LR	LR		
	comp=Z,7μm,20.0s						
Y12C	**Blythe**	**134.96**	**52**	*e*PKPpre	PKPpre	17 06 31.4	
Y12C				*e*PKPdf	**PKPdf**	**17 06 39.9**	**-4.0**
Y12C	**Blythe**	**134.96**	**52**	PKiKP	**PKiKP**	**17 06 44.8**	**-0.6**
	baz=292						
GLA	**Glamis**	**134.98**	**53**	PFAKE		17 07 00.0	+14
GLA				LR	LR		
	comp=Z,8μm,22.0s						
GLA	**Glamis**	**134.98**	**53**	PKiKP	**PKiKP**	**17 06 45.1**	**-0.4**
	baz=291						
SCHQ	**Schefferville**	**134.99**	**355**	PKP	**PKPdf**	**17 06 43.7**	**+0.3**
	comp=Z,19nm,0.7s,baz=30,slow=4.8,SNR=11						
SCHQ				PP	**PP**	**17 09 22.7**	**+5.5**
	comp=Z,11nm,0.7s,baz=18,slow=5.9,SNR=4.7						
SCHQ	**Schefferville**	**134.99**	**355**	*e*PKPdf	**PKPdf**	**17 06 43.5**	**+0.1**
SCHQ				LR	LR		
	comp=Z,8μm,20.0s						
PDMCI	**Parker Dam,Lak**	**135.04**	**51**	PKiKP	**PKiKP**	**17 06 45.1**	**-0.5**
	baz=293						
PKCU	**Pink Cliffs**	**135.07**	**46**	*e*PKPpre	PKPpre	17 06 29.8	
PKCU				*e*PKPdf	**PKPdf**	**17 06 40.5**	**-4.0**
P17A	**Butcher Ranch,**	**135.17**	**43**	*e*PKPdf	**PKPdf**	**17 06 40.1**	**-4.4**
GO05	**Huala**	**135.28**	**181**	*e*PKPdf	**PKPdf**	**17 06 41.1**	**-3.5**
GO05				LR	LR		
	comp=Z,9μm,18.0s						
ULM	**Lac du Bonnet**	**135.48**	**21**	PKP	**PKPdf**	**17 06 45.1**	**+0.6**
	comp=Z,16nm,0.7s,baz=335,slow=3.2,SNR=14						
ULM	**Lac du Bonnet**	**135.48**	**21**	*e*PKPpre	PKPpre	17 06 30.1	
ULM				LR	LR		
	comp=Z,7μm,19.0s						
U15A	**North Rim**	**135.54**	**47**	*e*PKPpre	PKPpre	17 06 30.9	
U15A				*e*PKPdf	**PKPdf**	**17 06 42.7**	**-2.7**
CNLB	**Canela**	**135.64**	**208**	*e*P	**PKiKP**	**17 06 47.5**	**+0.5**
113A	**Mohawk Valley,**	**135.91**	**53**	*e*PKPdf	**PKPdf**	**17 06 45.0**	**-0.8**
113A				LR	LR		
	comp=Z,8μm,22.0s						
MDND	**Maddock**	**135.94**	**26**	PFAKE		17 07 00.0	+13
MDND				LR	LR		
	comp=Z,4μm,20.0s						
MDND	**Maddock**	**135.94**	**26**	PKiKP	**PKPdf**	**17 06 45.4**	**0.0**
	baz=320						
K22A	**Casper**	**136.03**	**36**	*e*PKPpre	PKPpre	17 06 34.3	
K22A				*e*PKPdf	**PKPdf**	**17 06 45.2**	**-0.7**
K22A				LR	LR		
	comp=Z,5μm,22.0s						
K22A	**Casper**	**136.03**	**36**	PKiKP	**PKPdf**	**17 06 45.7**	**-0.2**
	baz=308						
CAM01	**Campos-RJ**	**136.12**	**224**	*e*P	**PKiKP**	**17 06 48.4**	**+0.3**

baz=307
TUC Tucson 138.41 52 *e*PKPpre PKPpre 17 06 41.4
TUC *e*PKPdf **PKPdf 17 06 46.8 -3.7**
TUC LR LR
comp=Z,10μm,21.0s
TUC Tucson 138.41 52 *e*PKHKP PKPpre 17 06 41.4
TUC *e* 17 06 46.8
TUC MLR MLR
comp=Z,10μm,21.0s
TUC Tucson 138.41 52 PKiKP **PKPdf 17 06 51.0 +0.5**
baz=294
CFA Coronel Fontan 138.46 186 PKhKP PKPpre 17 06 40.0
comp=Z,3.3nm,0.5s,baz=245,slow=1.9,SNR=6.4
CFA PKP **PKPdf 17 06 50.4 -0.3**
comp=Z,21nm,0.6s,baz=219,slow=2.4,SNR=18
CFA PP **PP 17 09 41.6 +2.6**
comp=Z,13nm,1.1s,baz=200,slow=5.4,SNR=3.8
SPB Sao Paulo 138.50 216 PFAKE 17 07 00.0 +7.0
SPB LR LR
comp=Z,7μm,18.0s
SPB Sao Paulo 138.50 216 *e*P **PKiKP 17 06 52.0 -1.0**
S22A 4UR Ranch, Cre 138.69 42 PFAKE 17 07 00.0 +6.7
S22A LR LR
comp=Z,8μm,19.0s
BSCB Bom Sucesso 138.78 222 *e*P **PKPdf 17 06 52.6 +1.0**
DRLN Deer Lake 138.82 345 *e*PKPdf **PKPdf 17 06 50.9 +0.3**
DRLN LR LR
comp=Z,11μm,21.0s
SUSD Miller 138.82 29 PKiKP **PKPdf 17 06 50.0 -0.8**
baz=319
EYMN Ely 138.95 19 *e*PKPpre PKPpre 17 06 41.6
EYMN *e*PKPdf **PKPdf 17 06 50.6 -0.3**
EYMN LR LR
comp=Z,6μm,22.0s
EYMN Ely 138.95 19 PKiKP **PKPdf 17 06 50.8 -0.1**
baz=331
SRIG Santa Rosalia 138.96 60 PFAKE 17 07 00.0 +6.2
SRIG LR LR
comp=Z,9μm,18.0s
Q24A Divide 139.08 40 *e*PKPpre PKPpre 17 06 40.8
Q24A *e*PKPdf **PKPdf 17 06 49.0 -2.9**
Q24A LR LR
comp=Z,6μm,20.0s
Q24A Divide 139.08 40 PKiKP **PKPdf 17 06 52.1 +0.2**
baz=306
HSIG 139.50 57 *e*PKPpre PKPpre 17 06 41.1
HSIG *e*PKPdf **PKPdf 17 06 51.4 -1.1**
HSIG LR LR
comp=Z,8μm,22.0s
SDCO Great Sand Dun 139.56 41 PFAKE 17 07 00.0 +4.9
SDCO LR LR
comp=Z,8μm,22.0s
SDCO Great Sand Dun 139.56 41 PKiKP **PKPdf 17 06 53.1 +0.3**
baz=305
C40A Isle Royale Na 139.69 17 *e*PKPpre PKPpre 17 06 42.5
C40A *e*PKPdf **PKPdf 17 06 52.7 +0.4**
C40A LR LR
comp=Z,5μm,21.0s
C40A Isle Royale Na 139.69 17 PKiKP **PKPdf 17 06 52.4 +0.1**
baz=335
OGNE Ogallala 139.70 35 *e*PKPpre PKPpre 17 06 42.6
OGNE LR LR
comp=Z,7μm,21.0s
OGNE Ogallala 139.70 35 PKiKP **PKPdf 17 06 52.7 0.0**
baz=312
FRTB Fartura 139.91 214 *e*P **PKPdf 17 06 53.8 +0.3**
319A Douglas 139.96 52 PFAKE 17 07 00.0 +4.1
319A LR LR
comp=Z,7μm,20.0s
GO04 Tololo Observa 140.07 183 *e*PKPpre PKPpre 17 06 44.8
GO04 *e*PKPdf **PKPdf 17 06 51.6 -2.3**
GO04 LR LR
comp=Z,8μm,20.0s
PTGB Pitanga 140.09 210 *e*P **PKPdf 17 06 54.9 +1.1**
E38A The Farm, Brul 140.10 20 *e*PKPpre PKPpre 17 06 44.7
E38A *e*PKPdf **PKPdf 17 06 53.3 +0.2**
E38A LR LR
comp=Z,8μm,22.0s
E38A The Farm, Brul 140.10 20 PKiKP **PKPdf 17 06 52.8 -0.3**
baz=330
MATQ Matagami 140.10 5 PKiKP **PKPdf 17 06 52.7 -0.2**
baz=352
RCBR Riachuelo 140.13 248 PFAKE 17 07 10.0 +13
RCBR LR LR
comp=Z,12μm,20.0s
CHGQ Chibougamau 140.14 2 PKiKP **PKPdf 17 06 52.9 -0.2**
baz=358
TASM ASL Pad, Albuq 140.42 46 PKiKP **PKPdf 17 06 55.1 +0.8**
baz=301
TASM ASL Pad, Albuq 140.42 46 PKiKP **PKPdf 17 06 55.2 +1.0**
baz=301
ANMO Albuquerque 140.42 46 PKhKP PKPpre 17 06 47.1
comp=Z,9.3nm,0.8s,baz=258,slow=7.8,SNR=10.0
ANMO PP **PP 17 09 55.8 +3.3**
comp=Z,12nm,1.1s,baz=317,slow=7.8,SNR=3.9
ANMO Albuquerque 140.42 46 *e*PKPpre PKPpre 17 06 46.0
ANMO *e*PKPdf **PKPdf 17 06 54.8 +0.6**
ANMO LR LR
comp=Z,6μm,20.0s
ANMO Albuquerque 140.42 46 *e*PKHKP PKPpre 17 06 46.0
ANMO *e* 17 06 54.8
ANMO MLR MLR
comp=Z,6μm,20.0s
ANMO Albuquerque 140.42 46 PKiKP **PKPdf 17 06 55.5 +1.2**
baz=301
ECSD EROS Data Cent 140.45 27 *e*PKPpre PKPpre 17 06 46.3
ECSD *e*PKPdf **PKPdf 17 06 53.9 +0.1**
ECSD LR LR
comp=Z,5μm,20.0s
ECSD EROS Data Cent 140.45 27 PKiKP **PKPdf 17 06 54.0 +0.1**
baz=321
F37A Hinrichs Farm, 140.47 22 PKiKP **PKPdf 17 06 54.3 +0.6**
baz=328
Y22D IRIS PASSCAL I 140.52 47 PFAKE 17 07 10.0 +13
Y22D LR LR
comp=Z,7μm,21.0s
F38A Pierce - Schro 140.54 21 PKiKP **PKPdf 17 06 54.6 +0.7**
baz=330
KSCO Kaye Shedlock' 140.61 38 *e*PKPpre PKPpre 17 06 43.6
KSCO *e*PKPdf **PKPdf 17 06 52.5 -2.0**
KSCO LR LR
comp=Z,5μm,19.0s
KSCO Kaye Shedlock' 140.61 38 PKiKP **PKPdf 17 06 54.9 +0.5**
baz=309
121A Cookes Peak, D 140.61 50 PKiKP **PKPdf 17 06 55.6 +0.9**
baz=297
T25A Trinidad 140.62 41 *e*PKPdf **PKPdf 17 06 51.6 -3.0**
T25A LR LR
comp=Z,6μm,20.0s
T25A Trinidad 140.62 41 PKiKP **PKPdf 17 06 55.2 +0.6**
baz=305
D41A Chassel 140.64 17 *e*PKPdf **PKPdf 17 06 51.7 -2.4**
D41A LR LR
comp=Z,5μm,21.0s
D41A Chassel 140.64 17 PKiKP **PKPdf 17 06 54.6 +0.6**
baz=335
BNM Barren Site 140.70 47 *e*PKPpre PKPpre 17 06 47.9
SPMN Marine on St. 140.83 23 *e*PKPpre PKPpre 17 06 47.0
SPMN *e*PKPdf **PKPdf 17 06 54.3 -0.1**
SPMN LR LR
comp=Z,10μm,22.0s
SPMN Marine on St. 140.83 23 PKiKP **PKPdf 17 06 54.5 +0.1**
baz=328
LSQQ Lebel-sur-Quev 140.85 4 PKiKP **PKPdf 17 06 54.3 0.0**
baz=353
F39A Loretta 140.91 20 PKiKP **PKPdf 17 06 54.9 +0.3**
baz=331
MCI6 Montes Claros 141.03 227 *e*P **PKPdf 17 06 54.9 -0.8**
BB19B Bebedouro 141.09 218 *e*P **PKPdf 17 06 57.0 +1.3**
F40A Park Falls 141.18 19 PKiKP **PKPdf 17 06 55.4 +0.3**
baz=332
LCO Las Campanas 141.22 183 *e*PKPpre **PKPdf 17 06 51.0 -5.0**
LCO LR LR
comp=Z,9μm,18.0s
LCO Las Campanas 141.22 183 *e*PKIKP **PKPdf 17 06 51.0 -5.0**
LCO MLR MLR
comp=Z,9μm,18.0s
LCO Las Campanas 141.22 183 *e*P **PKPdf 17 06 57.1 +1.1**
COWI Conover 141.33 18 PFAKE 17 07 10.0 +12
COWI LR LR
comp=Z,6μm,21.0s
G39A Holcombe 141.37 21 PKiKP **PKPdf 17 06 55.8 +0.4**
baz=330
BGNE Belgrade 141.47 31 *e*PKPpre PKPpre 17 06 49.4
BGNE *e*PKPdf **PKPdf 17 06 54.4 -1.4**
BGNE LR LR
comp=Z,6μm,20.0s
BGNE Belgrade 141.47 31 PKiKP **PKPdf 17 06 55.8 +0.1**
baz=317
LPIG La Paz 141.53 64 PKP **PKPdf 17 06 56.3 0.0**
comp=Z,26nm,0.3s,baz=54,slow=2.2,SNR=8.7
PMNB Patos De Minas 141.62 223 *e*P **PKPdf 17 06 57.0 +0.2**
E43A Lone Tree Farm 141.71 16 *e*PKPdf **PKPdf 17 06 53.6 -2.4**
E43A LR LR
comp=Z,6μm,21.0s
E43A Lone Tree Farm 141.71 16 PKiKP **PKPdf 17 06 56.5 +0.6**
baz=337
G40A Rib Lake 141.72 20 *e*PKPpre **PKPdf 17 06 49.8 -6.3**
G40A *e*PKPdf **PKiKP 17 06 55.5 -3.4**
G40A LR LR
comp=Z,6μm,22.0s
G40A Rib Lake 141.72 20 PKPdf **PKPdf 17 06 49.7 -6.3**
baz=332
VLDQ Val d'Or 141.75 5 *e*PKPdf **PKPdf 17 06 53.7 -2.2**
E44A Grand Marais A 141.76 15 PFAKE 17 07 10.0 +11
E44A LR LR
comp=Z,5μm,20.0s
E44A Grand Marais A 141.76 15 PKPdf **PKPdf 17 06 50.7 -5.4**
baz=339
EPT El Paso 141.92 50 PFAKE 17 07 10.0 +10
EPT LR LR
comp=Z,8μm,20.0s
F42A Maple Grove Fa 141.94 18 PKPdf **PKPdf 17 06 51.4 -5.0**
baz=335
D46A Sault St. Mari 141.94 13 PKPdf **PKPdf 17 06 50.6 -5.8**
baz=342
D47A Chapleau 141.98 12 PKPdf **PKPdf 17 06 50.5 -6.0**
baz=343
D49A Beulah Townshi 142.09 10 PKPdf **PKPdf 17 06 50.3 -6.3**
baz=346
G41A Antigo 142.11 19 PKPdf **PKPdf 17 06 50.8 -6.0**
baz=333
BATG Bathurst New B 142.38 353 PFAKE 17 07 10.0 +10
BATG LR LR
comp=Z,7μm,22.0s
E46A Sault Ste Mari 142.38 13 *e*PKPpre PKPdf 17 06 49.5 -7.7
E46A *e*PKPdf **PKiKP 17 06 57.5 -2.7**
E46A LR LR
comp=Z,8μm,22.0s
E46A Sault Ste Mari 142.38 13 PKPdf **PKPdf 17 06 51.0 -6.1**
baz=341
CBKS Cedar Bluff 142.44 36 *e*PKPpre **PKPdf 17 06 51.9 -5.7**
CBKS LR LR
comp=Z,5μm,20.0s
CBKS Cedar Bluff 142.44 36 *e*PKHKP **PKPdf 17 06 51.9 -5.7**
CBKS MLR MLR
comp=Z,5μm,20.0s
CBKS Cedar Bluff 142.44 36 PKPdf **PKPdf 17 06 50.9 -6.7**
baz=313
JANB Januaria 142.47 229 *e*P **PKPdf 17 06 58.5 +0.2**
E47A Iron Bridge 142.52 12 PKPdf **PKPdf 17 06 51.1 -6.3**
baz=343
GO03 Copiap 142.60 184 PFAKE 17 07 10.0 +8.6
GO03 LR LR
comp=Z,13μm,22.0s
LATQ La Tuque 142.69 0 PKPdf **PKPdf 17 06 52.1 -5.6**
baz=360
E48A Lockeyer 142.71 11 PKPdf **PKPdf 17 06 52.4 -5.4**
baz=345
F45A CMU Biological 142.73 15 PKPdf **PKPdf 17 06 53.2 -4.6**
baz=339
D53A Lac Vacive, Po 142.75 6 *e*PKPpre **PKPdf 17 06 53.0 -4.9**
D53A LR LR
comp=Z,5μm,20.0s
D53A Lac Vacive, Po 142.75 6 PKPdf **PKPdf 17 06 52.4 -5.4**
baz=352
D54A Lac Fusel, La 142.77 4 PKPdf **PKPdf 17 06 52.6 -5.2**
baz=354
D52A ZEK Kipawa Sen 142.78 6 PKPdf **PKPdf 17 06 52.7 -5.1**
baz=351
MNTX Cornudas Mount 142.80 50 *e*PKPpre **PKPdf 17 06 54.6 -3.9**
MNTX LR LR
comp=Z,7μm,20.0s
MNTX Cornudas Mount 142.80 50 PKPdf **PKPdf 17 06 54.5 -3.9**
baz=298
I41A Arkdale 142.90 21 PFAKE 17 07 10.0 +8.7
I41A LR LR
comp=Z,6μm,22.0s
I41A Arkdale 142.90 21 PKPdf **PKPdf 17 06 53.9 -4.3**
baz=331
H42A Shiocton 142.95 19 PFAKE 17 07 10.0 +8.6
H42A LR LR
comp=Z,5μm,20.0s
H42A Shiocton 142.95 19 PKPdf **PKPdf 17 06 54.1 -4.1**
baz=334
E50A Wahnapitae 143.01 9 PKPdf PKPab 17 06 53.5 +0.1
baz=347
E51A G1948 Merrick 143.09 8 PKPdf PKPab 17 06 54.0 +0.2
baz=349
PQI Presque Isle 143.19 355 *e*PKPpre PKPpre 17 06 55.4
PQI LR LR
comp=Z,5μm,22.0s
H43A Windswept, Lux 143.22 18 *e*PKPpre PKPab 17 06 55.3 +0.9
H43A LR LR
comp=Z,6μm,20.0s
H43A Windswept, Lux 143.22 18 PKPdf PKPab 17 06 54.4 +0.1
baz=335
G46A Petoskey 143.24 14 PKPdf PKPab 17 06 54.8 +0.4
baz=340
CPRX Cap Rock 143.25 47 *e*PKPdf **PKPdf 17 06 58.7 -0.7**
G45A Suttons Bay 143.30 15 *e*PKPdf **PKPdf 17 06 57.6 -1.3**
G45A LR LR
comp=Z,7μm,22.0s
G45A Suttons Bay 143.30 15 PKPdf PKPab 17 06 54.8 +0.1
baz=338
GDL2 Guadalupe Moun 143.31 48 *e*PKPdf PKPbc 17 06 57.5 +1.0
I42A Draeger Farm, 143.37 20 *e*PKPdf PKPbc 17 06 56.2 +0.1
I42A LR LR
comp=Z,6μm,21.0s
I42A Draeger Farm, 143.37 20 PKPdf PKPab 17 06 55.3 +0.3
baz=333
GBN Guysborough 143.38 347 *e*PKPdf PKPbc 17 06 57.1 +1.1
SCIA State Center 143.41 26 *e*PKPdf PKPbc 17 06 56.4 +0.1
SCIA LR LR
comp=Z,12μm,20.0s
SCIA State Center 143.41 26 PKPdf PKPbc 17 06 56.0 -0.3
baz=325
F49A Sandfield 143.43 11 PKPdf PKPab 17 06 55.4 +0.2
baz=345
E52A Mattawa 143.44 7 PKPdf PKPab 17 06 54.8 -0.4
baz=350
E54A Lac Daplat, Po 143.44 5 PKPdf PKPab 17 06 54.4 -0.8
baz=353
E53A Dumoine, Ponti 143.45 6 PKPdf PKPab 17 06 54.5 -0.7
baz=352
MSTX Muleshoe 143.51 44 *e*PKPdf PKPbc 17 06 57.4 +0.4
MSTX LR LR
comp=Z,7μm,22.0s
MSTX Muleshoe 143.51 44 PKPdf PKPbc 17 06 56.7 -0.2
baz=304
H45A Beulah 143.58 16 PKPdf PKPab 17 06 56.1 +0.3
baz=338
G47A Hillman 143.61 13 PKPdf PKPbc 17 06 56.6 -0.1
baz=341
F51A Arnstein 143.62 9 PKPdf PKPab 17 06 55.5 -0.3
baz=348
CLNB Carlsbad 143.64 48 *e*PKPdf PKPbc 17 06 58.4 +1.0
AMTX Amarillo 143.73 42 *e*PKPdf PKPbc 17 06 58.4 +0.9
AMTX LR LR
comp=Z,8μm,20.0s
AMTX Amarillo 143.73 42 PKPdf PKPbc 17 06 58.2 +0.7
baz=306
JFWS Jewell Farm 143.76 22 *e*PKPpre PKPbc 17 06 56.8 -0.5
JFWS LR LR
comp=Z,8μm,21.0s
JFWS Jewell Farm 143.76 22 *e*PKIKP PKPab 17 06 56.8 +0.3
JFWS MLR MLR
comp=Z,8μm,21.0s
JFWS Jewell Farm 143.76 22 PKPdf PKPab 17 06 56.4 -0.1
baz=330
GLMI Grayling 143.76 14 *e*PKPdf PKPbc 17 06 58.2 +1.0
GLMI LR LR
comp=Z,6μm,21.0s
GLMI Grayling 143.76 14 PKPdf PKPbc 17 06 57.0 -0.2
baz=340
ALGO Algonquin Park 143.83 6 PKPdf PKPab 17 06 56.5 -0.2
baz=351
F52A Sundridge 143.83 8 PKPdf PKPbc 17 06 57.1 -0.3
baz=349
H46A Fife Lake 143.88 15 PKPdf PKPab 17 06 57.2 +0.2
baz=339
KSU1 Kansas State U 143.96 32 PFAKE 17 07 10.0 +6.3
KSU1 LR LR
comp=Z,5μm,19.0s
KSU1 Kansas State U 143.96 32 PKPdf PKPbc 17 06 58.0 0.0
baz=317
TOBO Tobermory, Bru 144.04 11 PKPdf **PKPab 17 06 57.4 -0.1**
baz=345
I45A Fountain 144.07 17 *e*PKPdf PKPbc 17 06 58.4 +0.3
I45A LR LR
comp=Z,6μm,20.0s
I45A Fountain 144.07 17 PKPdf PKPbc 17 06 58.1 -0.1
baz=337
H47A Mio 144.07 14 PKPdf PKPbc 17 06 58.1 0.0
baz=341
F55A Otter Lake 144.11 4 PKPdf **PKPab 17 06 57.6 -0.1**
baz=354
L40A Anamosa 144.11 24 *e*PKPdf **PKPab 17 06 57.3 -0.6**
L40A LR LR
comp=Z,10μm,22.0s
L40A Anamosa 144.11 24 PKPdf **PKPab 17 06 58.1 +0.2**
baz=328
KLBO Killbear Provi 144.13 9 PKPdf **PKPab 17 06 57.8 -0.1**
baz=347
BUKO Buck Lake 144.17 8 PKPdf **PKPab 17 06 57.9 -0.1**
baz=349
H48A Harrisville 144.18 13 PFAKE 17 07 10.0 +6.1
H48A LR LR
comp=Z,5μm,21.0s
H48A Harrisville 144.18 13 PKPdf **PKPab 17 06 58.2 +0.2**
baz=342
PEMO Pembroke 144.19 5 PKPdf **PKPab 17 06 58.0 0.0**
baz=352
K42A Prairie Point, 144.20 21 PKPdf **PKPab 17 06 58.1 -0.2**
baz=331
I46A Reed City 144.37 16 PKPdf PKPbc 17 06 59.2 +0.1
baz=338
U32A Winter Ranch, 144.50 38 *e*PKPdf PKPbc 17 07 00.2 +0.4
U32A LR LR
comp=Z,7μm,20.0s
I47A Gladwin 144.54 15 *e*PKPdf PKPbc 17 06 59.8 +0.2
I47A LR LR
comp=Z,5μm,18.0s
I47A Gladwin 144.54 15 PKPdf PKPbc 17 06 59.8 +0.2
baz=340
ORIO Orleans, Innes 144.54 3 PKPdf **PKPab 17 06 59.4 +0.1**
baz=355
J45A Montague 144.57 17 *e*PKPdf PKPbc 17 06 59.7 0.0
J45A LR LR
comp=Z,7μm,22.0s
J45A Montague 144.57 17 PKPdf PKPbc 17 06 59.7 0.0
baz=336
I48A Sherman Twp 144.58 14 PKPdf PKPbc 17 06 59.8 +0.1
baz=341
G53A Haliburton 144.59 7 PKPdf **PKPab 17 06 59.2 -0.3**
baz=350
GGN Saint George 144.60 353 *e*PKPdf **PKPab 17 06 59.6 0.0**
HPIG 144.61 57 *e*PKPdf PKPbc 17 07 00.6 0.0
HPIG LR LR
comp=Z,10μm,18.0s
K43A Burlington 144.62 20 *e*PKPdf **PKPab 17 06 59.5 -0.2**
K43A LR LR
comp=Z,6μm,21.0s
K43A Burlington 144.62 20 PKPdf **PKPab 17 06 59.7 0.0**
baz=333
G55A Calabogie 144.66 5 PKPdf **PKPab 17 06 59.3 -0.5**
baz=353
PKME Peaks-Kenny Pk 144.69 356 *e*PKPdf PKPbc 17 07 00.0 0.0
PKME LR LR
comp=Z,7μm,21.0s
PKME Peaks-Kenny Pk 144.69 356 PKPdf PKPbc 17 07 00.4 +0.3
baz=5.9
BMRO Meriville Lake 144.71 11 PKPdf PKPbc 17 07 00.2 +0.1
baz=346
BDFB Brasilia 144.73 224 PKP PKPbc 17 07 01.5 +0.4
comp=Z,49nm,0.7s,baz=122,slow=2.5,SNR=68
BDFB Brasilia 144.73 224 *e*PKPdf **PKPab 17 07 01.0 0.0**
BDFB LR LR
comp=Z,9μm,20.0s
L42A Oliver, Polo 144.76 22 *e*PKPdf **PKPab 17 07 00.1 -0.2**
L42A LR LR
comp=Z,10μm,20.0s
L42A Oliver, Polo 144.76 22 PKPdf **PKPab 17 07 00.3 0.0**
baz=330
MOQ Mont Orford 144.76 359 *e*PKPdf **PKPab 17 06 60.0 -0.3**
BANO Bancroft 144.77 6 PKPdf **PKPab 17 07 00.2 0.0**
baz=351
PLVO Plevna 144.84 5 *e*PKPdf **PKPab 17 07 00.1 -0.3**
PLVO LR LR
comp=Z,5μm,20.0s
PLVO Plevna 144.84 5 PKPdf **PKPab 17 07 00.3 -0.1**
baz=353
SADO Sadowa 144.87 8 PKP **PKPab 17 07 00.3 -0.3**
comp=Z,62nm,0.8s,baz=328,slow=1.5,SNR=38
SADO Sadowa 144.87 8 *e*PKPdf **PKPab 17 07 00.6 0.0**
SADO LR LR
comp=Z,7μm,21.0s
J46A Howard City 144.87 17 PKPdf PKPbc 17 07 00.9 +0.2
baz=338
H52A Wyevale 144.88 9 PKPdf **PKPab 17 07 00.3 -0.4**
baz=348
NBMO Morrinhos-CE 144.91 250 *e*P PKPbc 17 07 01.7 0.0
L43A Garden Prairie 144.94 21 PKPdf **PKPab 17 07 00.9 -0.1**
baz=332
N40A Mertquake, Sal 144.95 25 PKPdf PKPbc 17 07 01.1 +0.1
baz=326
M41A Milan 144.97 24 PKPdf **PKPab 17 07 01.0 -0.1**
baz=328
GO02 Mina Guanaco 144.97 185 *e*PKPdf **PKPab 17 07 01.6 -0.3**
GO02 LR LR
comp=Z,12μm,22.0s
BRCO Bruce Peninsul 145.00 11 PKPdf **PKPab 17 07 01.1 0.0**
baz=345
I49A Point Hope 145.01 13 *e*PKPbc **PKPbc 17 07 01.0 -0.1**
I49A LR LR
comp=Z,7μm,21.0s
I49A Point Hope 145.01 13 PKPdf **PKPab 17 07 01.4 +0.3**
baz=343
EMMW East Machias 145.07 353 *e*PKPbc **PKPbc 17 07 00.6 -0.7**
EMMW LR LR
comp=Z,7μm,20.0s
BWLO Walkerton 145.18 11 PKPdf **PKPbc 17 07 01.7 0.0**
baz=346
BASO Ashfield 145.18 11 PKPdf **PKPdf 17 07 02.1 0.0**
baz=344
J47A Sunmer 145.19 16 *e*PKPbc **PKPbc 17 07 01.7 0.0**
J47A LR LR
comp=Z,7μm,22.0s
J47A Sunmer 145.19 16 PKPdf **PKPdf 17 07 02.3 +0.1**
baz=339
TX31 Lajitas Ar. Si 145.21 52 *e*PKPbc **PKPdf 17 07 02.8 0.0**
TXAR Lajitas Array 145.21 52 PKPbc **PKPdf 17 07 03.8 +1.0**
comp=Z,154nm,0.9s,baz=252,slow=2.0,SNR=304
L44A Lake County Fo 145.23 20 PKPdf **PKPdf 17 07 02.2 -0.1**
baz=333
FRNY Flat Rock 145.24 1 *e*PKPbc **PKPbc 17 07 01.1 -0.7**
FRNY LR LR
comp=Z,6μm,22.0s
DELO Deloro Mine 145.30 6 *e*PKPbc **PKPbc 17 07 01.8 -0.3**
DELO LR LR
comp=Z,6μm,20.0s
DELO Deloro Mine 145.30 6 PKPdf **PKPab 17 07 02.1 -0.1**
baz=352
H55A Tweed 145.31 6 PKPdf **PKPdf 17 07 02.3 -0.1**
baz=352
H56A Elgin 145.35 4 PKPdf **PKPab 17 07 02.3 -0.1**
baz=354
I52A Shelburne 145.40 10 PKPdf **PKPbc 17 07 02.3 -0.1**
baz=347
J48A Bridge Port 145.40 14 *e*PKPdf **PKPdf 17 07 02.5 -0.1**
J48A LR LR
comp=Z,5μm,19.0s
J48A Bridge Port 145.40 14 PKPdf **PKPab 17 07 02.9 +0.3**
baz=341
N41A Harden Midland 145.40 25 *e*PKPdf **PKPbc 17 07 01.7 -0.8**
N41A LR LR
comp=Z,9μm,22.0s
N41A Harden Midland 145.40 25 PKPdf **PKPbc 17 07 02.2 -0.3**
baz=327
WVL Waterville 145.41 356 *e*PKPdf **PKPbc 17 07 02.2 -0.2**
WVL LR LR
comp=Z,6μm,19.0s
LONY Lake Ozonia 145.42 2 *e*PKPdf **PKPbc 17 07 01.9 -0.5**
LONY LR LR
comp=Z,6μm,19.0s
LONY Lake Ozonia 145.42 2 PKPdf **PKPab 17 07 02.7 0.0**
baz=357
K46A Dorr 145.44 17 PKPdf **PKPbc 17 07 02.4 -0.2**
baz=337
J49A Marlette 145.50 13 PKPdf **PKPdf 17 07 02.5 -0.2**

	baz=342							
I51A	Listowel	145.51	11	PKPdf		PKPab	17 07 02.9	0.0
	baz=346							
M43A	Waltham Townsh	145.52	22	PKPdf		PKPdf	17 07 02.8	0.0
	baz=331							
I55A	Frankford	145.59	6	PKPdf		PKPdf	17 07 02.7	-0.2
	baz=351							
PKRO	Pickering	145.66	8	PKPdf		PKPdf	17 07 03.1	+0.1
	baz=349							
K47A	Vermontville	145.67	16	PKPdf		PKPdf	17 07 03.1	+0.1
	baz=338							
WMOK	Wichita Mounta	145.70	40	ePKPdf		PKPdf	17 07 03.3	-0.1
WMOK				LR		LR		
	comp=Z,6μm,19.0s							
WMOK	Wichita Mounta	145.70	40	PKPdf		PKPbc	17 07 03.6	-0.1
	baz=310							
I53A	Kortright Cn E	145.73	9	PKPdf		PKPdf	17 07 03.2	+0.1
	baz=348							
VT1	Waterbury	145.75	0	ePKPdf		PKPdf	17 07 02.8	-0.4
VT1				LR		LR		
	comp=Z,9μm,21.0s							
K48A	Perry	145.78	15	PKPdf		PKPbc	17 07 03.7	0.0
	baz=340							
WLVO	Wesleyville	145.79	7	PKPdf		PKPbc	17 07 03.4	-0.2
	baz=350							
DRCO	St. Marys Ceme	145.80	8	PKPdf		PKPbc	17 07 03.7	0.0
	baz=350							
DRWO	Darlington Wes	145.80	8	PKPdf		PKPbc	17 07 03.6	-0.1
	baz=350							
LBNH	Lisbon	145.83	359	ePKPdf		PKPdf	17 07 03.1	-0.2
LBNH				LR		LR		
	comp=Z,8μm,20.0s							
LBNH	Lisbon	145.83	359	ePKP2		PKPdf	17 07 03.1	-0.2
LBNH				MLR		MLR		
	comp=Z,8μm,20.0s							
LBNH	Lisbon	145.83	359	PKPdf		PKPbc	17 07 03.9	+0.1
	baz=1.5							
ACTO	Acton	145.86	10	PKPdf		PKPbc	17 07 03.7	-0.2
	baz=347							
N43A	Stutzman Famil	145.87	23	PKPdf		PKPdf	17 07 03.5	+0.1
	baz=330							
M44A	Midewin, Midew	145.89	21	ePKPdf		PKPdf	17 07 03.5	0.0
M44A				LR		LR		
	comp=Z,6μm,21.0s							
M44A	Midewin, Midew	145.89	21	PKPdf		PKPdf	17 07 03.6	+0.2
	baz=332							
L46A	Eue Claire	145.90	18	ePKPdf		PKPdf	17 07 03.5	0.0
L46A				LR		LR		
	comp=Z,7μm,21.0s							
L46A	Eue Claire	145.90	18	PKPdf		PKPbc	17 07 03.8	-0.3
	baz=336							
PECO	Prince Edward	145.94	6	ePKPdf		PKPdf	17 07 03.5	+0.1
PECO				LR		LR		
	comp=Z,6μm,21.0s							
PECO	Prince Edward	145.94	6	PKPdf		PKPbc	17 07 03.8	-0.3
	baz=353							
K49A	Clarkson	145.97	14	PKPdf		PKPdf	17 07 02.8	-0.8
	baz=341							
TORO	Toronto--Lesli	145.97	9	PKPdf		PKPdf	17 07 02.6	-0.9
	baz=348							
NCB	Newcomb	146.08	2	ePKPdf		PKPdf	17 07 03.8	0.0
NCB				LR		LR		
	comp=Z,6μm,21.0s							
J52A	Paris	146.15	10	PKPdf		PKPdf	17 07 03.1	-0.7
	baz=346							
HDIL	Hopedale	146.15	23	ePKPdf		PKPdf	17 07 04.2	+0.2
HDIL				LR		LR		
	comp=Z,7μm,20.0s							
HDIL	Hopedale	146.15	23	PKPdf		PKPdf	17 07 03.4	-0.5
	baz=330							
M45A	Boilermakers S	146.16	20	PKPdf		PKPdf	17 07 03.4	-0.5
	baz=334							
K50A	Casco	146.17	13	ePKPdf		PKPdf	17 07 04.0	+0.1
K50A	Casco	146.17	13	PKPdf		PKPdf	17 07 03.5	-0.4
	baz=342							
L47A	Sherwood	146.26	17	PKPdf		PKPdf	17 07 03.6	-0.5
	baz=338							
AAM	Ann Arbor	146.37	15	ePKPdf		PKPdf	17 07 04.7	+0.5
AAM				LR		LR		
	comp=Z,7μm,20.0s							
AAM	Ann Arbor	146.37	15	ePKP2		PKPdf	17 07 04.7	+0.5
AAM				MLR		MLR		
	comp=Z,7μm,20.0s							
AAM	Ann Arbor	146.37	15	PKPdf		PKPdf	17 07 03.9	-0.3
	baz=340							
HNH	Hanover	146.37	359	PFAKE			17 07 20.0	+12
HNH				LR		LR		
	comp=Z,7μm,20.0s							
N44A	Piper City	146.38	21	PKPdf		PKPdf	17 07 04.2	-0.1
	baz=332							
STCO	Saint Catharin	146.39	9	PKPdf		PKPdf	17 07 03.8	-0.4
	baz=349							
TYNO	Tyneside	146.39	10	PKPdf		PKPdf	17 07 04.0	-0.2
	baz=347							
J54A	Appleton	146.40	8	ePKPdf		PKPdf	17 07 04.6	+0.4
J54A				LR		LR		
	comp=Z,8μm,19.0s							
J54A	Appleton	146.40	8	PKPdf		PKPdf	17 07 04.2	0.0
	baz=350							
ABTX	Abilene, Hawle	146.43	44	ePKPdf		PKPdf	17 07 05.3	+0.6
ABTX				LR		LR		
	comp=Z,8μm,20.0s							
ABTX	Abilene, Hawle	146.43	44	PKPdf		PKPdf	17 07 04.5	-0.1
	baz=306							
M46A	Old House Fiel	146.43	19	ePKPdf		PKPdf	17 07 04.5	+0.1
M46A				LR		LR		
	comp=Z,7μm,20.0s							
M46A	Old House Fiel	146.43	19	PKPdf		PKPdf	17 07 04.1	-0.2
	baz=335							
K51A	Iona Station	146.46	12	PKPdf		PKPdf	17 07 04.2	-0.2
	baz=344							
L48A	N Adams	146.50	16	PKPdf		PKPdf	17 07 04.1	-0.4
	baz=339							
J55A	Hilton	146.51	7	ePKPdf		PKPdf	17 07 04.1	-0.3
J55A	Hilton	146.51	7	PKPdf		PKPdf	17 07 04.1	-0.3
	baz=351							
L49A	Milan	146.52	15	PKPdf		PKPdf	17 07 04.0	-0.5
	baz=340							
MEDO	Medina	146.53	8	ePKPdf		PKPdf	17 07 04.6	+0.2
MEDO				LR		LR		
	comp=Z,9μm,19.0s							
MEDO	Medina	146.53	8	PKPdf		PKPdf	17 07 04.3	-0.2
	baz=350							
N45A	Kentland	146.55	21	PKPdf		PKPdf	17 07 04.6	0.0
	baz=333							
K52A	Tillsonburg	146.55	11	PKPdf		PKPdf	17 07 04.1	-0.5
	baz=346							
FFD	Franklin Falls	146.60	359	PFAKE			17 07 20.0	+11
FFD				LR		LR		
	comp=Z,10μm,21.0s							
PB10	IPOC Station P	146.68	184	ePKPbc		PKPab	17 07 08.2	+0.2
PB10				LR		LR		
	comp=Z,10μm,22.0s							
ACCN	Adirondack Com	146.68	1	ePKPdf		PKPdf	17 07 04.0	-0.7
ACCN				LR		LR		
	comp=Z,7μm,22.0s							
M47A	Cromwell	146.70	18	PKPdf		PKPdf	17 07 04.5	-0.3
	baz=336							
TUL1	Leonard	146.71	35	ePKPdf		PKPdf	17 07 04.8	-0.2
TUL1				LR		LR		
	comp=Z,8μm,20.0s							
TUL1	Leonard	146.71	35	PKPdf		PKPdf	17 07 04.8	-0.2
	baz=315							
N46A	Monticello	146.77	20	PKPdf		PKPdf	17 07 04.8	-0.2
	baz=334							
O44A	Mansfield	146.82	22	PKPdf		PKPdf	17 07 04.8	-0.2
	baz=331							
L50A	Kingsville	146.82	14	PKPdf		PKPdf	17 07 04.8	-0.2
	baz=342							
P43A	Skaggs, Pawnee	146.85	24	PKPdf		PKPdf	17 07 05.0	-0.1
	baz=329							
M48A	Edgerton	146.85	17	ePKPdf		PKPdf	17 07 04.5	-0.6
M48A				ePKPbc		PKPbc	17 07 07.2	+0.3
M48A				LR		LR		
	comp=Z,7μm,22.0s							
M48A	Edgerton	146.85	17	PKPdf		PKPdf	17 07 04.6	-0.4
	baz=338							
O45A	Potomac	147.01	21	PKPdf		PKPdf	17 07 05.3	-0.1
	baz=332							
K55A	Perry	147.01	7	PKPdf		PKPdf	17 07 05.2	-0.2
	baz=350							
MMNY	Mt. Morris Dam	147.03	7	ePKPdf		PKPdf	17 07 05.3	0.0
MMNY				LR		LR		
	comp=Z,7μm,20.0s							
K54A	Basiliko Farm,	147.05	8	PKPdf		PKPdf	17 07 04.8	-0.6
	baz=349							
M49A	Liberty Center	147.06	16	PKPdf		PKPdf	17 07 05.1	-0.3

	baz=339							
SFIN	Lafayette	147.11	20	PFAKE			17 07 20.0	+10
SFIN				LR		LR		
	comp=Z,6μm,20.0s							
SFIN	Lafayette	147.11	20	PKPdf		PKPdf	17 07 05.4	-0.1
	baz=333							
N47A	Urbana	147.12	18	PKPdf		PKPdf	17 07 05.1	-0.4
	baz=336							
PLIO	Pelee Island,	147.14	14	PKPdf		PKPdf	17 07 05.0	-0.5
	baz=342							
PEXB	Peixe	147.32	228	eP		PKPdf	17 07 07.0	+0.4
L54A	Sinclairville	147.32	9	PKPdf		PKPdf	17 07 05.6	-0.2
	baz=348							
ERPA	Erie	147.32	10	PFAKE			17 07 20.0	+9.5
ERPA				LR		LR		
	comp=Z,6μm,20.0s							
ERPA	Erie	147.32	10	PKPdf		PKPdf	17 07 05.3	-0.5
	baz=347							
TRY	Troy	147.34	1	ePKPdf		PKPdf	17 07 06.9	+1.1
TRY				LR		LR		
	comp=Z,6μm,20.0s							
N48A	Decatur	147.34	17	PKPdf		PKPdf	17 07 05.5	-0.5
	baz=337							
M50A	Fremont	147.37	15	ePKPbc		PKPbc	17 07 07.7	-0.7
M50A				LR		LR		
	comp=Z,10μm,22.0s							
M50A	Fremont	147.37	15	PKPdf		PKPdf	17 07 05.4	-0.5
	baz=341							
SLM	Saint Louis	147.40	26	ePKPdf		PKPdf	17 07 05.0	-1.1
SLM				ePKPbc		PKPbc	17 07 08.7	+0.2
SLM				LR		LR		
	comp=Z,9μm,21.0s							
SLM	Saint Louis	147.40	26	ePKIKP		PKPdf	17 07 05.0	-1.1
SLM				e			17 07 08.7	
SLM				MLR		MLR		
	comp=Z,9μm,21.0s							
CCM	Cathedral Cave	147.43	28	PFAKE			17 07 20.0	+9.2
CCM				LR		LR		
	comp=Z,8μm,20.0s							
CCM	Cathedral Cave	147.43	28	PKPdf		PKPdf	17 07 06.0	-0.2
	baz=325							
LVC	Limon Verde	147.43	187	PKPbc		PKPbc	17 07 09.1	-0.4
	comp=Z,90nm,0.9s,baz=152,slow=3.3,SNR=35							
LVC				PP		PP	17 10 42.1	+8.6
	comp=Z,16nm,0.9s,baz=165,slow=5.3,SNR=3.5							
LVC	Limon Verde	147.43	187	ePKPbc		PKPdf	17 07 08.3	+1.2
LVC				LR		LR		
	comp=Z,7μm,20.0s							
LVC	Limon Verde	147.43	187	eP		PKPbc	17 07 08.8	-0.7
L53A	Girard	147.44	11	PKPdf		PKPdf	17 07 05.7	-0.3
	baz=346							
HHAR	Hobbs	147.47	33	ePKPdf		PKPdf	17 07 04.6	-1.7
HHAR				ePKPbc		PKPbc	17 07 08.0	-0.8
HHAR				LR		LR		
	comp=Z,9μm,22.0s							
L55A	Hinsdale	147.50	8	PKPdf		PKPdf	17 07 06.0	-0.2
	baz=350							
N49A	Columbus Grove	147.52	16	ePKPdf		PKPdf	17 07 05.5	-0.7
N49A				ePKPbc		PKPbc	17 07 08.3	-0.4
N49A				LR		LR		
	comp=Z,7μm,22.0s							
N49A	Columbus Grove	147.52	16	PKPdf		PKPdf	17 07 05.8	-0.5
	baz=339							
JCT	Junction City	147.54	47	ePKPbc		PKPbc	17 07 08.2	-1.0
JCT	Junction City	147.54	47	PKPdf		PKPdf	17 07 06.4	-0.2
	baz=303							
O47A	Sheridan	147.55	19	PKPdf		PKPdf	17 07 06.0	-0.3
	baz=335							
HRV	Adam Dziewonsk	147.56	358	ePKPbc		PKPbc	17 07 08.5	-0.3
HRV	Adam Dziewonsk	147.56	358	PKPdf		PKPdf	17 07 05.5	-0.7
	baz=2.2							
M52A	Chesterland	147.62	12	ePKPbc		PKPbc	17 07 09.0	0.0
M52A				LR		LR		
	comp=Z,7μm,21.0s							
M52A	Chesterland	147.62	12	PKPdf		PKPdf	17 07 06.2	-0.2
	baz=344							
P45A	Graceland, Par	147.63	22	ePKPdf		PKPdf	17 07 05.4	-1.1
P45A				ePKPbc		PKPbc	17 07 08.9	-0.2
P45A				LR		LR		
	comp=Z,6μm,22.0s							
P45A	Graceland, Par	147.63	22	PKPdf		PKPdf	17 07 06.5	0.0
	baz=332							
M51A	Elyria	147.64	13	PKPdf		PKPdf	17 07 06.1	-0.3
	baz=342							
WES	Weston	147.67	358	ePKPbc		PKPbc	17 07 07.8	-1.3
BCX	Boston College	147.72	358	ePKPdf		PKPdf	17 07 04.6	-1.8
BCX				LR		LR		
	comp=Z,8μm,20.0s							
BINY	Binghamton	147.75	5	ePKPdf		PKPdf	17 07 06.5	-0.1
BINY				ePKPbc		PKPbc	17 07 10.0	+0.6
BINY				LR		LR		
	comp=Z,5μm,20.0s							
BINY	Binghamton	147.75	5	PKPdf		PKPdf	17 07 06.7	+0.1
	baz=354							
P46A	Rosedale	147.75	21	PKPdf		PKPdf	17 07 06.7	0.0
	baz=333							
ALLY	Alegheny Colle	147.75	10	ePKPdf		PKPdf	17 07 06.1	-0.5
ALLY				ePKPbc		PKPbc	17 07 10.3	+0.9
QUA2	Belchertown	147.80	360	PFAKE			17 07 20.0	+8.2
QUA2				LR		LR		
	comp=Z,6μm,21.0s							
PB04	IPOC Station P	147.82	184	ePKPdf		PKPdf	17 07 08.2	+0.7
PB04				LR		LR		
	comp=Z,8μm,22.0s							
O48A	Farmland	147.85	18	PKPdf		PKPdf	17 07 06.6	-0.2
	baz=337							
FVM	French Village	147.85	27	ePKPdf		PKPdf	17 07 06.7	-0.2
FVM				LR		LR		
	comp=Z,13μm,22.0s							
FVM	French Village	147.85	27	ePKIKP		PKPdf	17 07 06.7	-0.2
FVM				MLR		MLR		
	comp=Z,13μm,22.0s							
M53A	Wt Miller and	147.86	11	PKPdf		PKPdf	17 07 06.4	-0.4
	baz=345							
X37A	Clayton	147.88	37	ePKPdf		PKPdf	17 07 06.5	-0.5
X37A				LR		LR		
	comp=Z,7μm,20.0s							
N50A	Nevada	147.94	15	PKPdf		PKPdf	17 07 06.7	-0.2
	baz=340							
M54A	Oil Creek Stat	147.97	10	ePKPdf		PKPdf	17 07 06.9	-0.1
M54A				LR		LR		
	comp=Z,6μm,21.0s							
M54A	Oil Creek Stat	147.97	10	PKPdf		PKPdf	17 07 06.7	-0.3
	baz=347							
U40A	Yerville	147.98	32	PKPdf		PKPdf	17 07 06.8	-0.4
	baz=320							
N51A	Ashland	147.99	14	ePKPdf		PKPdf	17 07 07.2	+0.2
N51A				LR		LR		
	comp=Z,8μm,22.0s							
N51A	Ashland	147.99	14	PKPdf		PKPdf	17 07 06.6	-0.4
	baz=342							
Q45A	Warren Harvey,	148.03	23	PKPdf		PKPdf	17 07 07.2	+0.1
	baz=330							
BRYW	Bryant College	148.14	358	ePKPdf		PKPdf	17 07 07.8	+0.6
BRYW				LR		LR		
	comp=Z,7μm,20.0s							
M55A	Ridgway	148.16	9	PKPdf		PKPdf	17 07 06.9	-0.4
	baz=349							
O49A	Covington	148.16	17	ePKPdf		PKPdf	17 07 06.9	-0.4
O49A				LR		LR		
	comp=Z,8μm,22.0s							
O49A	Covington	148.16	17	PKPdf		PKPdf	17 07 06.9	-0.4
	baz=338							
OLIL	Olney	148.19	23	ePKPdf		PKPdf	17 07 07.4	0.0
OLIL				LR		LR		
	comp=Z,8μm,19.0s							
P47A	Martinsville	148.19	20	PKPdf		PKPdf	17 07 07.2	-0.2
	baz=334							
Q46A	CEJHS Indians,	148.22	22	PKPdf		PKPdf	17 07 07.0	-0.4
	baz=332							
M56A	Emporium	148.22	8	PKPdf		PKPdf	17 07 07.4	0.0
	baz=350							
N52A	McGinn's Farm,	148.25	13	PKPdf		PKPdf	17 07 07.3	-0.2
	baz=343							
WHTX	Lake Whitney,	148.29	43	ePKPdf		PKPdf	17 07 07.1	-0.6
WHTX				LR		LR		
	comp=Z,10μm,20.0s							
WHTX	Lake Whitney,	148.29	43	PKPdf		PKPdf	17 07 08.3	+0.5
	baz=308							
KSCT	Kent School, K	148.34	1	PFAKE			17 07 20.0	+6.0
KSCT				LR		LR		
	comp=Z,6μm,20.0s							
W39A	Magazine	148.36	34	ePKPdf		PKPdf	17 07 07.0	-0.8
W39A				LR		LR		
	comp=Z,9μm,22.0s							
W39A	Magazine	148.36	34	PKPdf		PKPdf	17 07 07.9	+0.1

	baz=318							
BLO	Bloomington	148.39	21	ePKPdf		PKPdf	17 07 08.0	+0.3
BLO				LR		LR		
	comp=Z,9μm,21.0s							
BLO	Bloomington	148.39	21	ePKIKP		PKPdf	17 07 08.0	+0.3
BLO				MLR		MLR		
	comp=Z,9μm,21.0s							
O50A	Cable	148.40	16	PKPdf		PKPdf	17 07 07.6	-0.1
	baz=339							
KSPA	Keystone Colle	148.40	4	ePKPdf		PKPdf	17 07 07.6	-0.1
KSPA				LR		LR		
	comp=Z,9μm,22.0s							
N53A	Lisbon	148.44	12	ePKPdf		PKPdf	17 07 08.0	+0.2
N53A				LR		LR		
	comp=Z,7μm,20.0s							
N53A	Lisbon	148.44	12	PKPdf		PKPdf	17 07 07.7	-0.1
	baz=345							
N54A	Moraine State	148.45	11	ePKPdf		PKPdf	17 07 08.1	+0.3
N54A				LR		LR		
	comp=Z,7μm,20.0s							
N54A	Moraine State	148.45	11	PKPdf		PKPdf	17 07 07.9	+0.2
	baz=346							
M65A	Busby, Falmout	148.46	357	PKPdf		PKPdf	17 07 07.8	+0.1
	baz=4.0							
ACSO	Alum Creek Sta	148.49	15	ePKPdf		PKPdf	17 07 06.8	-1.1
ACSO				LR		LR		
	comp=Z,7μm,22.0s							
ACSO	Alum Creek Sta	148.49	15	PKPdf		PKPdf	17 07 07.8	-0.1
	baz=340							
P48A	Milroy	148.50	19	ePKPdf		PKPdf	17 07 07.1	-0.8
P48A				LR		LR		
	comp=Z,6μm,22.0s							
P48A	Milroy	148.50	19	PKPdf		PKPdf	17 07 07.7	-0.2
	baz=336							
R45A	Skylar, Fairfi	148.50	24	PKPdf		PKPdf	17 07 08.4	+0.5
	baz=330							
SIUC	Southern Illin	148.61	26	ePKPdf		PKPdf	17 07 07.9	-0.2
SIUC				LR		LR		
	comp=Z,9μm,22.0s							
S44A	Carbondale	148.61	26	PKPdf		PKPdf	17 07 08.4	+0.3
	baz=328							
Q47A	Bedord North L	148.63	21	PKPdf		PKPdf	17 07 08.1	0.0
	baz=334							
P49A	Miami Univ. Ec	148.65	18	PKPdf		PKPdf	17 07 07.8	-0.3
	baz=337							
O51A	Pataskala	148.66	15	PKPdf		PKPdf	17 07 07.7	-0.4
	baz=341							
ZAIG	Zacatecas	148.71	62	ePKPdf		PKPdf	17 07 09.2	+0.1
ZAIG				LR		LR		
	comp=Z,6μm,20.0s							
FCAR	Ozark Folk Cen	148.72	31	ePKPdf		PKPdf	17 07 07.3	-1.0
FCAR				LR		LR		
	comp=Z,10μm,20.0s							
M61A	Granite Spring	148.75	2	PKPdf		PKPdf	17 07 08.3	0.0
	baz=358							
YLE	Yale	148.76	0	ePKPdf		PKPdf	17 07 08.2	0.0
YLE				LR		LR		
	comp=Z,6μm,21.0s							
N56A	West Decatur	148.76	8	PKPdf		PKPdf	17 07 08.5	+0.2
	baz=350							
SMTB	Santa Maria do	148.79	234	eP		PKPdf	17 07 10.3	+1.2
N55A	Marion Center	148.79	9	ePKPdf		PKPdf	17 07 08.5	+0.2
N55A				LR		LR		
	comp=Z,7μm,22.0s							
N55A	Marion Center	148.79	9	PKPdf		PKPdf	17 07 08.0	-0.3
	baz=348							
PBMO	Poplar Bluff	148.84	28	ePKPdf		PKPdf	17 07 07.5	-1.0
PBMO				LR		LR		
	comp=Z,12μm,22.0s							
P50A	Jamestown	148.85	17	PKPdf		PKPdf	17 07 07.9	-0.5
	baz=339							
R46A	Gibon Southern	148.87	23	PKPdf		PKPdf	17 07 08.7	+0.2
	baz=331							
Q48A	North Vernon	148.88	20	PKPdf		PKPdf	17 07 08.3	-0.2
	baz=335							
O52A	Adamsville	148.88	14	ePKPdf		PKPdf	17 07 08.0	-0.5
O52A	Adamsville	148.88	14	PKPdf		PKPdf	17 07 08.3	-0.2
	baz=342							
O53A	New Philadelph	148.89	13	PKPdf		PKPdf	17 07 08.6	+0.1
	baz=344							
435B	Jarrell	148.93	45	ePKPdf		PKPdf	17 07 07.9	-0.9
435B				LR		LR		
	comp=Z,8μm,20.0s							
435B	Jarrell	148.93	45	PKPdf		PKPdf	17 07 09.2	+0.4
	baz=307							
ODNJ	Ogdensburg	148.95	3	ePKPdf		PKPdf	17 07 08.2	-0.4
ODNJ				LR		LR		
	comp=Z,7μm,20.0s							
MIAR	Mount Ida	148.95	35	ePKPdf		PKPdf	17 07 08.2	-0.6
MIAR				LR		LR		
	comp=Z,9μm,20.0s							
MIAR	Mount Ida	148.95	35	ePKIKP		PKPdf	17 07 08.2	-0.6
MIAR				MLR		MLR		
	comp=Z,9μm,20.0s							
MIAR	Mount Ida	148.95	35	PKPdf		PKPdf	17 07 09.1	+0.3
	baz=317							
833A	Chaparral WMA,	148.98	50	PFAKE			17 07 20.0	+2.9
833A				LR		LR		
	comp=Z,8μm,18.0s							
833A	Chaparral WMA,	148.98	50	PKPdf		PKPdf	17 07 10.2	+1.2
	baz=301							
N57A	Milroy	149.02	7	PKPdf		PKPdf	17 07 08.7	0.0
	baz=351							
USIN	University of	149.03	23	PFAKE			17 07 20.0	+3.1
USIN				LR		LR		
	comp=Z,6μm,20.0s							
PB01	IPOC Station P	149.04	186	PFAKE			17 07 20.0	+2.5
PB01				LR		LR		
	comp=Z,6μm,21.0s							
N59A	State Game Lan	149.04	5	ePKPdf		PKPdf	17 07 08.9	+0.2
N59A				LR		LR		
	comp=Z,8μm,20.0s							
N59A	State Game Lan	149.04	5	PKPdf		PKPdf	17 07 08.7	0.0
	baz=354							
PAL	Palisades	149.05	2	PFAKE			17 07 20.0	+3.1
PAL				LR		LR		
	comp=Z,7μm,20.0s							
PAL	Palisades	149.05	2	PKPdf		PKPdf	17 07 09.0	+0.3
	baz=358							
Q49A	Aurora	149.08	19	PKPdf		PKPdf	17 07 08.3	-0.5
	baz=336							
WHAR	Wooly Hollow	149.09	32	ePKPdf		PKPdf	17 07 07.7	-1.2
WHAR				LR		LR		
	comp=Z,9μm,21.0s							
SSPA	Standing Stone	149.10	8	ePKPdf		PKPdf	17 07 07.7	-1.1
SSPA				LR		LR		
	comp=Z,6μm,19.0s							
SSPA	Standing Stone	149.10	8	PKPdf		PKPdf	17 07 08.9	+0.1
	baz=350							
O54A	Avella	149.13	12	PKPdf		PKPdf	17 07 09.4	+0.5
	baz=345							
R47A	Wooly Knot Far	149.16	22	PKPdf		PKPdf	17 07 09.2	+0.3
	baz=333							
P51A	Williamsport	149.17	16	PFAKE			17 07 20.0	+2.6
P51A				LR		LR		
	comp=Z,8μm,22.0s							
P51A	Williamsport	149.17	16	PKPdf		PKPdf	17 07 08.6	-0.3
	baz=340							
W41B	Gary Mavity, V	149.20	32	ePKPdf		PKPdf	17 07 08.3	-0.8
W41B				LR		LR		
	comp=Z,8μm,20.0s				

comp=Z,10µm,22.0s
O56A Blue Knob Stat 149.36 9 PKPdf **PKPdf 17 07 09.3 -0.1**
baz=349
LUPA Lehigh Univers 149.38 4 PFAKE 17 07 20.0 +1.7
LUPA LR LR
comp=Z,800nm,20.0s
X40A Basin Creek Fa 149.41 34 *e*PKPdf **PKPdf 17 07 09.5 +0.1**
X40A LR LR
comp=Z,7µm,22.0s
X40A Basin Creek Fa 149.41 34 PKPdf **PKPdf 17 07 09.9 +0.4**
baz=318
T45A Paducah 149.44 26 *e*PKPdf **PKPdf 17 07 09.2 -0.3**
T45A *e*PKPbc **PKPbc 17 07 14.1 +0.2**
T45A LR LR
comp=Z,9µm,21.0s
T45A Paducah 149.44 26 PKPdf **PKPdf 17 07 09.7 +0.2**
baz=328
UALR University of 149.46 33 *e*PKPdf **PKPdf 17 07 09.3 -0.2**
UALR *e*PKPbc **pPKPdf 17 07 14.5 +0.1**
UALR LR LR
comp=Z,7µm,20.0s
PVMO Portageville 149.48 28 PFAKE 17 07 20.0 +1.2
PVMO LR LR
comp=Z,10µm,22.0s
Q50A Georgetown 149.51 18 PKPdf **PKPdf 17 07 09.6 +0.1**
baz=338
Q51A Peebles 149.52 16 *e*PKPdf **PKPdf 17 07 08.4 -1.1**
Q51A *e*PKPbc **PKPbc 17 07 14.0 0.0**
Q51A LR LR
comp=Z,8µm,22.0s
Q51A Peebles 149.52 16 PKPdf **PKPdf 17 07 09.4 -0.1**
baz=339
O57A Amberson 149.55 7 PKPdf **PKPdf 17 07 09.5 0.0**
baz=350
P53A Whipple 149.58 13 PFAKE 17 07 20.0 +0.9
P53A LR LR
comp=Z,8µm,21.0s
P53A Whipple 149.58 13 PKPdf **PKPdf 17 07 10.1 +0.5**
baz=343
O59A Robesonia 149.61 5 PKPdf **PKPdf 17 07 09.7 +0.1**
baz=353
PAGS Pennsylvania G 149.64 6 *e*PKPdf **PKPdf 17 07 09.2 -0.5**
PAGS *e*PKPbc **PKPbc 17 07 14.2 -0.1**
R49A Shelbyville 149.64 20 *e*PKPdf **PKPdf 17 07 09.2 -0.6**
R49A *e*PKPbc **pPKPdf 17 07 14.8 +0.1**
R49A LR LR
comp=Z,8µm,22.0s
R49A Shelbyville 149.64 20 PKPdf **PKPdf 17 07 10.0 +0.2**
baz=335
S47A Hartford 149.65 23 PKPdf **PKPdf 17 07 09.9 +0.1**
baz=332
O60A Telford 149.66 4 PKPdf **PKPdf 17 07 10.1 +0.4**
baz=355
P54A Burton 149.67 12 PKPdf **PKPdf 17 07 09.7 0.0**
baz=345
GNAR Gosnell 149.69 29 PFAKE 17 07 20.0 +0.3
GNAR LR LR
comp=Z,9µm,21.0s
HBAR Harrisburg 149.72 30 *e*PKPdf **PKPdf 17 07 09.2 -0.7**
HBAR *e*PKPbc **pPKPdf 17 07 15.2 +0.4**
HBAR LR LR
comp=Z,9µm,21.0s
T46A Princeton 149.73 25 PKPdf **PKPdf 17 07 10.1 +0.2**
baz=329
MCWV Mont Chateau 149.74 11 PFAKE 17 07 20.0 +0.3
MCWV LR LR
comp=Z,5µm,22.0s
MCWV Mont Chateau 149.74 11 PKPdf **PKPdf 17 07 10.3 +0.5**
baz=346
GLAT Glass 149.78 27 PFAKE 17 07 20.0 0.0
GLAT LR LR
comp=Z,9µm,21.0s
WLAR White Oak Lake 149.84 35 PFAKE 17 07 20.0 -0.3
WLAR LR LR
comp=Z,7µm,20.0s
Q52A Bidwell 149.87 15 PKPdf **PKPdf 17 07 10.0 -0.1**
baz=341
P55A Reedsville 149.89 11 PKPdf **PKPdf 17 07 10.1 -0.1**
baz=346
MVL Millersville 149.90 6 PFAKE 17 07 20.0 -0.3
MVL LR LR
comp=Z,9µm,20.0s
S48A Wiedeman Farm, 149.90 21 PKPdf **PKPdf 17 07 10.2 0.0**
baz=333
UTMT University of 149.91 27 *e*PKPdf **PKPdf 17 07 09.5 -0.7**
UTMT *e*PKPbc **PKPbc 17 07 15.2 +0.1**
R50A Paris 149.92 18 *e*PKPdf **PKPdf 17 07 09.8 -0.4**
R50A *e*PKPbc **pPKPdf 17 07 14.8 -0.3**
R50A LR LR
comp=Z,8µm,21.0s
R50A Paris 149.92 18 PKPdf **PKPdf 17 07 10.2 0.0**
baz=337
O61A Allentown 149.94 3 PKPdf **PKPdf 17 07 10.0 -0.1**
baz=356
PSUB Penn St. - Bra 150.05 4 PFAKE 17 07 20.0 -0.9
PSUB LR LR
comp=Z,10µm,20.0s
HALT Halls 150.06 28 PFAKE 17 07 20.0 -1.1
HALT LR LR
comp=Z,8µm,20.0s
S49A Springfield 150.06 20 PKPdf **PKPdf 17 07 10.2 -0.2**
baz=335
P56A Dayton Farm, R 150.06 10 PKPdf **PKPdf 17 07 10.9 +0.6**
baz=348
T47A Sharon Grove 150.09 24 *e*PKPdf **PKPdf 17 07 10.3 -0.2**
T47A *e*PKPbc **sPKPdf 17 07 16.9 -0.1**
T47A LR LR
comp=Z,10µm,22.0s
T47A Sharon Grove 150.09 24 PKPdf **PKPdf 17 07 10.8 +0.3**
baz=331
R51A Hillsboro 150.13 17 PKPdf **PKPdf 17 07 10.2 -0.4**
baz=338
P60A Greenville 150.15 5 PKPdf **PKPdf 17 07 10.5 0.0**
baz=354
Q53A Leroy 150.15 14 PKPdf **PKPdf 17 07 10.4 -0.1**
baz=342
Q54A Coxs Mills 150.19 13 *e*PKPdf **PKPdf 17 07 10.8 +0.2**
Q54A LR LR
comp=Z,10µm,20.0s
Q54A Coxs Mills 150.19 13 PKPdf **PKPdf 17 07 10.7 +0.1**
baz=344
U46A Springville 150.19 26 PKPdf **PKPdf 17 07 11.0 +0.3**
baz=328
P57A Homestead Farm 150.21 8 PKPdf **PKPdf 17 07 10.6 0.0**
baz=350
NATX Nacogdoches 150.25 40 PFAKE 17 07 20.0 -2.1
NATX LR LR
comp=Z,9µm,19.0s
NATX Nacogdoches 150.25 40 PKPdf **PKPdf 17 07 11.5 +0.6**
baz=312
T48A Bowling Green 150.26 22 PKPdf **PKPdf 17 07 10.9 +0.1**
baz=332
P59A Jarrettsville 150.28 6 PKPdf **PKPdf 17 07 10.5 -0.2**
baz=353
PB11 IPOC Station P 150.32 186 *e*PKPdf **PKPdf 17 07 10.9 -0.6**
PB11 *e*PKPbc **PKPbc 17 07 16.7 -0.1**
PB11 LR LR
comp=Z,6µm,19.0s
Z41A Richland Creek 150.33 36 *e*PKPdf **PKPdf 17 07 09.5 -1.5**
Z41A *e*PKPbc **PKiKP 17 07 16.7 -0.2**
Z41A LR LR
comp=Z,11µm,21.0s
Z41A Richland Creek 150.33 36 PKPdf **PKPdf 17 07 11.0 +0.1**
baz=317
Q55A Buckhannon 150.33 12 PKPdf **PKPdf 17 07 11.0 +0.1**
baz=345
P61A Hammonton 150.34 3 PKPdf **PKPdf 17 07 10.8 0.0**
baz=356
R52A Catlettsburg 150.36 16 PKPdf **PKPdf 17 07 10.6 -0.3**
baz=340
GO01 Chusmiza 150.37 187 *e*PKPdf **PKPdf 17 07 11.7 -0.3**
GO01 *e*PKPbc **pPKPdf 17 07 16.9 0.0**
GO01 LR LR
comp=Z,10µm,19.0s
CCAR Cane Creek 150.41 33 *e*PKPdf **PKPdf 17 07 11.4 +0.3**
CCAR *e*PKPbc **PKiKP 17 07 17.2 +0.1**
CCAR LR LR
comp=Z,12µm,20.0s
MET Memphis--Engin 150.42 29 PFAKE 17 07 20.0 -2.7
MET LR LR
comp=Z,9µm,19.0s
X43A Marvell 150.42 31 *e*PKPdf **PKPdf 17 07 11.5 +0.5**
X43A *e*PKPbc **sPKPdf 17 07 17.7 +0.1**
X43A LR LR
comp=Z,8µm,20.0s
X43A Marvell 150.42 31 PKPdf **PKPdf 17 07 11.4 +0.3**
baz=322
SDMD Soldier's Deli 150.43 7 PFAKE 17 07 20.0 -2.6
SDMD LR LR
comp=Z,4µm,21.0s
S50A Richmond 150.45 19 PKPdf **PKPdf 17 07 10.8 -0.3**
baz=336
Q56A Snyder Ridge, 150.46 10 PKPdf **PKPdf 17 07 11.3 +0.3**
baz=347
U47A Clarksville 150.50 24 PKPdf **PKPdf 17 07 11.7 +0.5**
baz=330
KVTX Kingsville 150.51 50 *e*PKPdf **PKPbc 17 07 14.5 -2.2**
KVTX *e*PKPbc **pPKPbc 17 07 20.4 -1.2**
KVTX LR LR
comp=Z,9µm,18.0s
LNIG Linares 150.53 56 *e*PKPdf **PKPdf 17 07 10.4 -1.2**
LNIG *e*PKPbc **PKPbc 17 07 16.9 0.0**
WVT Waverly 150.54 25 *e*PKPdf **PKPdf 17 07 10.2 -1.0**
WVT *e*PKPbc **PKPbc 17 07 16.4 -0.2**
WVT LR LR
comp=Z,9µm,20.0s
WVT Waverly 150.54 25 *e*PKIKP **PKPdf 17 07 10.2 -1.0**
WVT *e* 17 07 16.4
WVT MLR MLR
comp=Z,9µm,20.0s
WVT Waverly 150.54 25 PKPdf **PKPdf 17 07 11.1 -0.1**
baz=329
R53A Hurricane 150.54 15 PFAKE 17 07 20.0 +2.7
R53A LR LR
comp=Z,7µm,20.0s
R53A Hurricane 150.54 15 PKPdf **PKPdf 17 07 11.3 +0.1**
baz=341
T49A Edmonton 150.58 21 *e*PKPdf **PKPdf 17 07 09.4 -1.9**
T49A *e*PKPbc **pPKPbc 17 07 20.7 -0.9**
T49A LR LR
comp=Z,11µm,21.0s
T49A Edmonton 150.58 21 PKPdf **PKPdf 17 07 11.2 -0.1**
baz=334
Q57A Strasburg 150.59 9 PKPdf **PKPdf 17 07 11.8 +0.5**
baz=349
HKT Hockley 150.64 44 *e*PKPdf **PKPdf 17 07 10.8 -0.6**
HKT LR LR
comp=Z,11µm,20.0s
HKT Hockley 150.64 44 *e*PKIKP **PKPdf 17 07 10.8 -0.6**
HKT MLR MLR
comp=Z,11µm,20.0s
V46A Holladay 150.69 26 PKPdf **PKPdf 17 07 11.2 -0.3**
baz=328
U48A Cassie Pea, Po 150.73 23 PKPdf **PKPdf 17 07 11.6 +0.1**
baz=331
S51A Beattyville 150.74 18 PFAKE 17 07 20.0 +2.3
S51A LR LR
comp=Z,6µm,21.0s
S51A Beattyville 150.74 18 PKPdf **PKPdf 17 07 11.4 0.0**
baz=338
S52A Salyersville 150.85 17 PKPdf **PKPdf 17 07 11.7 +0.1**
baz=339
T50A Nancy 150.90 20 PKPdf **PKPdf 17 07 11.5 -0.3**
baz=335
R54A Victor 150.92 14 PKPdf **PKPdf 17 07 11.5 -0.3**
baz=343
V47A Nunnelly 150.93 25 PKPdf **PKPdf 17 07 11.9 +0.1**
baz=329
Q60A Greensboro 150.94 5 PKPdf **PKPdf 17 07 11.6 -0.1**
baz=354
MNMC Minye Minye 150.94 186 *e*PKPdf **PKPdf 17 07 11.8 -0.9**
MNMC *e*PKPbc **PKiKP 17 07 18.9 -0.1**
MNMC LR LR
comp=Z,7µm,22.0s
Q59A Harwood 150.99 6 PKPdf **PKPdf 17 07 12.0 +0.2**
baz=352
U49A Red Boiling Sp 151.02 22 PKPdf **PKPdf 17 07 11.9 -0.1**
baz=333
Q61A Milford 151.10 4 PKPdf **PKPdf 17 07 12.4 +0.4**
baz=355
S53A Williamson 151.11 16 PKPdf **PKPdf 17 07 11.9 -0.2**
baz=341
W46A Michie 151.14 27 PKPdf **PKPdf 17 07 11.8 -0.4**
baz=327
OXF Oxford 151.16 29 *e*PKPdf **PKPdf 17 07 11.6 -0.6**
OXF LR LR
comp=Z,10µm,21.0s
OXF Oxford 151.16 29 *e*PKIKP **PKPdf 17 07 11.6 -0.6**
OXF MLR MLR
comp=Z,10µm,21.0s
CLTN Cedars of Leba 151.18 23 *e*PKPdf **PKPdf 17 07 10.6 -1.6**
CLTN *e*PKPbc **PKPbc 17 07 17.8 -0.3**
CLTN LR LR
comp=Z,4µm,19.0s
S54A Dingess, Beckl 151.21 14 PKPdf **PKPdf 17 07 12.0 -0.2**
baz=342
T51A Gray 151.25 19 PKPdf **PKPdf 17 07 12.2 -0.1**
baz=337
V48A Smith Brothers 151.29 24 *e*PKPdf **PKPdf 17 07 11.7 -0.7**
V48A *e*PKPbc **pPKPdf 17 07 17.6 +0.3**
V48A LR LR
comp=Z,8µm,22.0s
V48A Smith Brothers 151.29 24 PKPdf **PKPdf 17 07 12.1 -0.3**
baz=330
R57A Stanardsville 151.29 10 PKPdf **PKPdf 17 07 12.7 +0.4**
baz=348
R58A Rapidan 151.37 9 PKPdf **PKPdf 17 07 12.5 +0.1**
baz=349
W47A Westpoint 151.38 26 PKPdf **PKPdf 17 07 12.1 -0.4**
baz=328
PLAL Pickwick Lake 151.40 27 *e*PKPdf **PKPdf 17 07 11.2 -1.4**
PLAL *e*PKPbc **pPKPdf 17 07 17.6 +0.1**
PLAL LR LR
comp=Z,9µm,21.0s
T52A Hallie 151.41 17 PFAKE 17 07 20.0 +0.9
T52A LR LR
comp=Z,8µm,20.0s
T52A Hallie 151.41 17 PKPdf **PKPdf 17 07 12.6 0.0**
baz=339
S55A Lewisburg 151.42 13 PKPdf **PKPdf 17 07 12.2 -0.4**
baz=344
U50A Jamestown 151.44 21 PKPdf **PKPdf 17 07 12.9 +0.2**
baz=334
X46A Booneville 151.52 28 PKPdf **PKPdf 17 07 12.8 0.0**
baz=326
CBN Corbin Frederi 151.56 8 PFAKE 17 07 20.0 +0.7
CBN LR LR
comp=Z,10µm,21.0s
CBN Corbin Frederi 151.56 8 PKPdf **PKPdf 17 07 13.2 +0.5**
baz=350
R60A Leonardtown, M 151.59 6 PKPdf **PKPdf 17 07 12.5 -0.3**
baz=352
R59A King George, V 151.59 7 PKPdf **PKPdf 17 07 13.3 +0.5**
baz=351
V49A McMinnville 151.63 23 PKPdf **PKPdf 17 07 12.8 -0.1**
baz=332
R61A Willards 151.64 4 PKPdf **PKPdf 17 07 12.8 0.0**
baz=355
T53A Wise 151.66 17 PKPdf **PKPdf 17 07 13.3 +0.3**
baz=339
S56A Natural Bridge 151.71 12 PKPdf **PKPdf 17 07 12.5 -0.6**
baz=346
R58B Mineral 151.72 9 *e*PKPdf **PKPdf 17 07 12.1 -0.9**
R58B *e*PKPbc **pPKPdf 17 07 18.3 +0.5**
R58B LR LR
comp=Z,8µm,20.0s
R58B Mineral 151.72 9 PKPdf **PKPdf 17 07 13.1 +0.2**
baz=349
S57A Dark Hollow, R 151.74 11 *e*PKPdf **PKPdf 17 07 12.1 -0.9**
S57A *e*PKPbc **PKPbc 17 07 18.6 -0.7**
S57A LR LR
comp=Z,10µm,22.0s
S57A Dark Hollow, R 151.74 11 PKPdf **PKPdf 17 07 13.3 +0.3**
baz=347
TZTN Tazewell 151.76 19 *e*PKPdf **PKPdf 17 07 12.7 -0.4**
TZTN *e*PKPbc **PKiKP 17 07 19.9 0.0**
TZTN LR LR
comp=Z,9µm,22.0s
TZTN Tazewell 151.76 19 PKPdf **PKPdf 17 07 13.2 +0.1**
baz=337
U51A La Follette 151.76 20 PKPdf **PKPdf 17 07 13.1 0.0**
baz=336
W48A Pulaski 151.76 25 PKPdf **PKPdf 17 07 12.9 -0.2**
baz=329
SIV San Ignacio 151.77 204 PKP **PKPdf 17 07 13.6 -0.1**
comp=Z,12nm,0.8s,baz=131,slow=2.7,SNR=55
SIV PKPbc **PKPbc 17 07 19.7 -0.3**
comp=Z,70nm,0.8s,baz=145,slow=1.9,SNR=79
T54A Tazewell 151.84 15 PKPdf **PKPdf 17 07 13.0 -0.3**
baz=341
X47A Russelville 151.88 27 PKPdf **PKPdf 17 07 13.0 -0.3**
baz=327
U52A Thorn Hill 151.95 19 PKPdf **PKPdf 17 07 13.4 0.0**
baz=337
BLA Blacksburg 151.98 13 *e*PKPdf **PKPdf 17 07 12.3 -1.2**
BLA *e*PKPbc **PKiKP 17 07 20.2 -0.1**
BLA LR LR
comp=Z,10µm,21.0s
BLA Blacksburg 151.98 13 *e*PKIKP **PKPdf 17 07 12.3 -1.2**
BLA *e* 17 07 20.2
BLA MLR MLR
comp=Z,10µm,21.0s
BLA Blacksburg 151.98 13 PKPdf **PKPdf 17 07 13.1 -0.4**
baz=344
T55A Pulaski 151.98 14 PKPdf **PKPdf 17 07 13.4 0.0**
baz=343
S59A Mechanicsville 152.00 8 PKPdf **PKPdf 17 07 13.8 +0.4**
baz=350
V50A Pikevile 152.02 22 PKPdf **PKPdf 17 07 13.2 -0.3**
baz=333
S58A Poland Farm, P 152.04 9 *e*PKPdf **PKPdf 17 07 12.9 -0.5**
S58A *e*PKPbc **PKPbc 17 07 20.2 +0.2**
S58A LR LR
comp=Z,8µm,20.0s
S58A Poland Farm, P 152.04 9 PKPdf **PKPdf 17 07 13.7 +0.3**
baz=349
W49A Belvidere 152.05 24 PKPdf **PKPdf 17 07 13.5 -0.1**
baz=331
SWET Sewanee 152.10 24 *e*PKPdf **PKPdf 17 07 12.9 -0.8**
SWET *e*PKPbc **PKPbc 17 07 20.3 0.0**
SWET LR LR
comp=Z,10µm,20.0s
S60A Water View 152.14 7 PKPdf **PKPdf 17 07 14.2 +0.6**
baz=352
V51A Loudon 152.17 21 *e*PKPdf **PKPdf 17 07 13.3 -0.4**
V51A *e*PKPbc **PKPbc 17 07 20.5 +0.1**
V51A LR LR
comp=Z,8µm,22.0s
V51A Loudon 152.17 21 PKPdf **PKPdf 17 07 14.2 +0.5**
baz=335
U53A Fall Branch 152.22 17 PKPdf **PKPdf 17 07 14.0 +0.2**
baz=339
T56A Rocky Mt 152.24 13 PKPdf **PKPdf 17 07 13.8 0.0**
baz=344
S61A Accomac 152.26 5 *e*PKPdf **PKPdf 17 07 12.1 -1.6**
S61A *e*PKPbc **sPKPdf 17 07 19.8 -0.6**
S61A LR LR
comp=Z,7µm,20.0s
S61A Accomac 152.26 5 PKPdf **PKPdf 17 07 14.3 +0.5**
baz=354
U54A Nelsons Funny 152.29 16 *e*PKPdf **PKPdf 17 07 12.6 -1.4**
U54A LR LR
comp=Z,7µm,21.0s
U54A Nelsons Funny 152.29 16 PKPdf **PKPdf 17 07 14.0 0.0**
baz=341
X48A Hartselle 152.30 26 *e*PKPdf **PKPdf 17 07 13.2 -0.8**
X48A LR LR
comp=Z,6µm,21.0s
X48A Hartselle 152.30 26 PKPdf **PKPdf 17 07 13.6 -0.3**
baz=328
W50A Signal Mountai 152.36 23 *e*PKPdf **PKPdf 17 07 13.7 -0.4**
W50A *e*PKPbc **PKPbc 17 07 21.0 +0.1**
W50A LR LR
comp=Z,8µm,22.0s
W50A Signal Mountai 152.36 23 PKPdf **PKPdf 17 07 14.0 0.0**
baz=333
VBMS Vicksburg 152.38 34 *e*PKPdf **PKPdf 17 07 14.2 +0.1**
VBMS LR LR
comp=Z,8µm,22.0s
VBMS Vicksburg 152.38 34 PKPdf **PKPdf 17 07 14.2 +0.1**
baz=320
V52A Sevierville 152.38 19 *e*PKPdf **PKPdf 17 07 13.7 -0.4**
V52A *e*PKPbc **PKiKP 17 07 21.3 +0.2**
V52A LR LR
comp=Z,9µm,22.0s
V52A Sevierville 152.38 19 PKPdf **PKPdf 17 07 14.4 +0.3**
baz=336
CPCT Cooper Cave 152.43 21 *e*PKPdf **PKPdf 17 07 13.7 -0.5**
CPCT LR LR
comp=Z,8µm,22.0s
T57A Hurt 152.43 11 *e*PKPdf **PKPdf 17 07 13.5 -0.6**
T57A LR LR
comp=Z,10µm,21.0s
T57A Hurt 152.43 11 PKPdf **PKPdf 17 07 14.3 +0.3**
baz=346
U55A TA2, Sparta 152.50 15 PKPdf **PKPdf 17 07 14.2 -0.1**
baz=342
X49A Woodville 152.55 25 PKPdf **PKPdf 17 07 14.3 0.0**
baz=330
W51A Cleveland 152.60 22 PKPdf **PKPdf 17 07 14.5 +0.1**
baz=334
T58A Grand View Acr 152.61 10 PKPdf **PKPdf 17 07 14.6 +0.3**
baz=348
T60A Surry 152.69 7 *e*PKPdf **PKPdf 17 07 14.3 -0.1**
T60A *e*PKPbc **PKiKP 17 07 21.9 +0.2**
T60A LR LR
comp=Z,9µm,20.0s
T60A Surry 152.69 7 PKPdf **PKPdf 17 07 14.6 +0.2**
baz=352
Y48A Jasper 152.70 27 PKPdf **PKPdf 17 07 14.3 -0.2**
baz=328
T59A Double "B" Far 152.74 9 *e*PKPdf **PKPdf 17 07 14.6 +0.1**
T59A *e*PKPbc **PKiKP 17 07 22.5 +0.7**
T59A LR LR
comp=Z,9µm,20.0s
T59A Double "B" Far 152.74 9 PKPdf **PKPdf 17 07 14.9 +0.4**
baz=350
V53A Saluda 152.79 18 *e*PKPdf **PKPdf 17 07 14.0 -0.7**
V53A *e*PKPbc **PKiKP 17 07 22.3 +0.3**
V53A LR LR
comp=Z,7µm,21.0s
V53A Saluda 152.79 18 PKPdf **PKPdf 17 07 15.1 +0.4**
baz=338
U56A King 152.81 14 PKPdf **PKPdf 17 07 14.8 +0.1**
baz=343
X50B Fort Payne 152.87 24 PKPdf **PKPdf 17 07 15.0 +0.2**
baz=331
V54A Nebo 152.95 17 PKPdf **PKPdf 17 07 14.8 -0.1**
baz=340
W52A Murphy 152.95 21 *e*PKPdf **PKPdf 17 07 15.1 +0.2**
W52A *e*PKPbc **PKiKP 17 07 22.6 +0.2**
W52A LR LR
comp=Z,7µm,22.0s
W52A Murphy 152.95 21 PKPdf **PKPdf 17 07 15.1 +0.2**
baz=335
U57A Blanch 152.96 12 PKPdf **PKPdf 17 07 14.9 0.0**
baz=346
V55A Taylorsville 153.08 15 PKPdf **PKPdf 17 07 15.2 +0.1**
baz=341
Y49A Blount Mountai 153.08 26 *e*PKPdf **PKPdf 17 07 14.3 -0.8**
Y49A LR LR
comp=Z,8µm,21.0s
Y49A Blount Mountai 153.08 26 PKPdf **PKPdf 17 07 15.1 0.0**
baz=329
X51A Calhoun 153.09 23 *e*PKPdf **PKPdf 17 07 14.9 -0.2**
X51A LR LR
comp=Z,6µm,20.0s
X51A Calhoun 153.09 23 PKPdf **PKPdf 17 07 15.6 +0.5**
baz=333
W53A Cullowhee 153.14 19 PKPdf **PKPdf 17 07 15.9 +0.5**
baz=337
U58A Oxford 153.15 10 PKPdf **PKPdf 17 07 15.4 +0.2**
baz=347
U60A Pendleton 153.29 8 PKPdf **PKPdf 17 07 15.7 +0.4**
baz=350
V56A Mocksville 153.30 14 *e*PKPdf **PKPdf 17 07 15.4 +0.1**
V56A Mocksville 153.30 14 PKPdf **PKPdf 17 07 15.6 +0.2**
baz=343
U59A Littleton 153.31 9 *e*PKPdf **PKPdf 17 07 15.2 -0.2**
U59A LR LR
comp=Z,8µm,22.0s
U59A Littleton 153.31 9 PKPdf **PKPdf 17 07 15.5 +0.1**
baz=349
Y50A Piedmont 153.34 25 PKPdf **PKPdf 17 07 15.7 +0.2**
baz=330
CLDB Colider 153.34 220 *e*P **PKPdf 17 07 19.0 +2.9**
V57A Coltrane Farms 153.39 13 PKPdf **PKPdf 17 07 15.6 +0.1**
baz=344
X52A Dahlonega 153.41 21 PKPdf **PKPdf 17 07 16.1 +0.5**
baz=335
LRAL Lakeview Retre 153.51 28 *e*PKPdf **PKPdf 17 07 15.2 -0.5**
LRAL Lakeview Retre 153.51 28 PKPdf **PKPdf 17 07 16.2 +0.4**
baz=327
U61A Possum Corner 153.52 7 PFAKE 17 07 30.0 -5.5
U61A LR LR
comp=Z,8µm,20.0s
U61A Possum Corner 153.52 7 PKPdf **PKPdf 17 07 15.9 +0.3**
baz=352
W54A Cherokee Point 153.52 18 PKPdf **PKPdf 17 07 16.1 +0.3**

baz=339
LPAZ La Paz 153.54 190 PKP **PKPdf 17 07 17.2 +0.2**
comp=Z,13nm,0.9s,baz=69,slow=1.7,SNR=29
LPAZ PKPbc **PKiKP 17 07 25.1 +0.3**
comp=Z,33nm,0.8s,baz=154,slow=2.8,SNR=31
LPAZ PP PP 17 11 17.1 +8.0
comp=Z,8.8nm,1.0s,baz=147,slow=6.5,SNR=2.7
LPAZ La Paz 153.54 190 *e*PKPdf **PKPdf 17 07 16.4 -0.6**
LPAZ La Paz 153.54 190 *e*P **PKPdf 17 07 18.8 +1.8**
148A Greensboro 153.57 29 PKPdf **PKPdf 17 07 16.2 +0.3**
baz=326
Z49A Columbiana 153.59 27 PKPdf **PKPdf 17 07 16.3 +0.4**
baz=328
Y51A Rockmart 153.60 24 PKPdf **PKPdf 17 07 16.2 +0.3**
baz=332
V58A Windy Hill, Pi 153.62 12 PKPdf **PKPdf 17 07 15.9 +0.1**
baz=346
X53A Estanollee 153.70 20 PKPdf **PKPdf 17 07 16.7 +0.7**
baz=336
KMSC Kings Mountain 153.72 16 *e*PKPdf **PKPdf 17 07 14.9 -1.1**
KMSC Kings Mountain 153.72 16 PKPdf **PKPdf 17 07 16.2 +0.2**
baz=341
TLIG Tlapa 153.78 70 *e*PKPdf **PKPdf 17 07 17.1 +0.4**
TLIG LR LR
comp=Z,8μm,20.0s
Z50A Ashland 153.81 26 *e*PKPdf **PKPdf 17 07 15.6 -0.6**
Z50A LR LR
comp=Z,8μm,20.0s
Z50A Ashland 153.81 26 PKPdf **PKPdf 17 07 16.7 +0.5**
baz=330
V59A Middlesex 153.81 10 PKPdf **PKPdf 17 07 16.4 +0.4**
baz=348
PAULI Pauline 153.88 17 *e*PKPdf **PKPdf 17 07 16.1 -0.1**
W56A Indian Trail 153.92 15 PKPdf **PKPdf 17 07 16.4 +0.1**
baz=342
X54A Belton 153.97 18 PKPdf **PKPdf 17 07 17.1 +0.8**
baz=338
V60A Jim Taylor Roa 153.97 8 *e*PKPdf **PKPdf 17 07 16.8 +0.5**
V60A LR LR
comp=Z,12μm,22.0s
V60A Jim Taylor Roa 153.97 8 PKPdf **PKPdf 17 07 16.8 +0.5**
baz=350
149A Jones 153.97 28 PKPdf **PKPdf 17 07 16.9 +0.4**
baz=327
Y52A Lilburn 154.01 22 *e*PKPdf **PKPdf 17 07 16.3 -0.1**
Y52A LR LR
comp=Z,12μm,22.0s
Y52A Lilburn 154.01 22 PKPdf **PKPdf 17 07 17.0 +0.5**
baz=334
V61A Roper 154.04 7 *e*PKPdf **PKPdf 17 07 16.5 +0.1**
V61A LR LR
comp=Z,7μm,21.0s
V61A Roper 154.04 7 PKPdf **PKPdf 17 07 16.9 +0.5**
baz=351
W57A Gilead 154.04 14 *e*PKPdf **PKPdf 17 07 15.7 -0.8**
W57A LR LR
comp=Z,8μm,22.0s
W57A Gilead 154.04 14 PKPdf **PKPdf 17 07 16.6 +0.1**
baz=344
Z51A Franklin 154.06 24 PKPdf **PKPdf 17 07 16.9 +0.3**
baz=331
Y53A Monroe 154.19 21 PKPdf **PKPdf 17 07 17.4 +0.7**
baz=335
X55A Gracelyn & Ava 154.26 17 PKPdf **PKPdf 17 07 17.2 +0.4**
baz=340
HODGE Hodges 154.29 18 *e*PKPdf **PKPdf 17 07 17.1 +0.3**
150A Eclectic 154.31 27 PKPdf **PKPdf 17 07 17.1 +0.2**
baz=329
249A Camden 154.33 29 PKPdf **PKPdf 17 07 17.6 +0.7**
baz=326
V62A Hyde County Ai 154.33 6 PFAKE 17 07 30.0 +4.9
V62A LR LR
comp=Z,8μm,21.0s
V62A Hyde County Ai 154.33 6 PKPdf **PKPdf 17 07 17.7 +0.9**
baz=353
W58A Raeford 154.34 12 PKPdf **PKPdf 17 07 17.1 +0.2**
baz=345
W59A Clinton 154.36 11 PKPdf **PKPdf 17 07 17.4 +0.6**
baz=347
CNNC Cliffs of the 154.39 10 PFAKE 17 07 30.0 +4.7
CNNC LR LR
comp=Z,8μm,21.0s
CNNC Cliffs of the 154.39 10 PKPdf **PKPdf 17 07 17.0 +0.1**
baz=348
X56A White Oak 154.41 16 PKPdf **PKPdf 17 07 17.2 +0.2**
baz=341
BIRD Birdtown, Kers 154.41 15 *e*PKPdf **PKPdf 17 07 17.1 +0.2**
BIRD LR LR
comp=Z,8μm,20.0s
Z52A Williamson 154.48 23 PKPdf **PKPdf 17 07 17.5 +0.4**
baz=332
Y54A Tignall 154.49 20 PKPdf **PKPdf 17 07 17.6 +0.4**
baz=337
JSC Jenkinsville 154.54 17 PFAKE 17 07 30.0 +4.4
JSC LR LR
comp=Z,9μm,22.0s
W61A Ground Anchor 154.59 8 PKPdf **PKPdf 17 07 17.4 +0.2**
baz=350
W60A Pink Hill 154.60 10 PKPdf **PKPdf 17 07 17.1 -0.1**
baz=349
GOGA Godfrey 154.63 21 *e*PKPdf **PKPdf 17 07 17.6 +0.2**
GOGA LR LR
comp=Z,7μm,21.0s
GOGA Godfrey 154.63 21 *e*PKIKP **PKPdf 17 07 17.6 +0.2**
GOGA MLR MLR
comp=Z,7μm,21.0s
GOGA Godfrey 154.63 21 PKPdf **PKPdf 17 07 17.5 +0.2**
baz=335
X57A Johnson Farm, 154.68 14 PKPdf **PKPdf 17 07 17.0 -0.4**
baz=343
151A Opelika 154.69 26 PKPdf **PKPdf 17 07 17.6 +0.2**
baz=330
Y55A Saluda 154.69 18 PKPdf **PKPdf 17 07 17.7 +0.3**
baz=339
Z53A Monticello 154.72 22 PKPdf **PKPdf 17 07 17.5 +0.1**
baz=334
250A Grady 154.73 28 *e*PKPdf **PKPdf 17 07 17.3 -0.2**
250A LR LR
comp=Z,6μm,20.0s
250A Grady 154.73 28 PKPdf **PKPdf 17 07 17.8 +0.3**
baz=327
X58A Rowland 154.77 13 PFAKE 17 07 30.0 +3.9
X58A LR LR
comp=Z,10μm,20.0s
X58A Rowland 154.77 13 PKPdf **PKPdf 17 07 17.5 0.0**
baz=345
349A Repton 154.81 30 PKPdf **PKPdf 17 07 18.5 +0.9**
baz=325
152A Waverly Hall 154.81 24 *e*PKPdf **PKPdf 17 07 17.7 +0.1**
152A LR LR
comp=Z,8μm,21.0s
152A Waverly Hall 154.81 24 PKPdf **PKPdf 17 07 17.8 +0.1**
baz=331
X59A McDuffie Farm, 154.91 12 PKPdf **PKPdf 17 07 17.9 +0.2**
baz=346
Y56A Pelion 154.99 17 PKPdf **PKPdf 17 07 18.0 +0.2**
baz=340
Z54A Sparta 155.01 20 PKPdf **PKPdf 17 07 18.3 +0.4**
baz=336
X60A Albert Glenn T 155.02 10 PKPdf **PKPdf 17 07 17.7 -0.1**
baz=348
251A Midway 155.02 26 PKPdf **PKPdf 17 07 18.5 +0.6**
baz=329
BRAL Brewton 155.03 30 PFAKE 17 07 30.0 +12
BRAL LR LR
comp=Z,7μm,22.0s
BRAL Brewton 155.03 30 PKPdf **PKPdf 17 07 18.6 +0.6**
baz=325
Y57A Sumter 155.03 15 PFAKE 17 07 30.0 -12
Y57A LR LR
comp=Z,6μm,20.0s
Y57A Sumter 155.03 15 PKPdf **PKPdf 17 07 18.2 +0.3**
baz=342
350A Dozier 155.17 29 PKPdf **PKPdf 17 07 18.5 +0.4**
baz=327
153A Fort Valley 155.18 23 PKPdf **PKPdf 17 07 18.2 +0.1**
baz=333
Z55A Blythe 155.26 19 PKPdf **PKPdf 17 07 18.2 0.0**
baz=338
449A Pace 155.28 31 PKPdf **PKPdf 17 07 19.1 +0.9**
baz=324
Y58A Scranton 155.31 14 *e*PKPdf **PKPdf 17 07 17.4 -0.8**
Y58A LR LR
comp=Z,10μm,22.0s
Y58A Scranton 155.31 14 PKPdf **PKPdf 17 07 18.1 -0.1**
baz=344
252A Lumpkin 155.39 25 PKPdf **PKPdf 17 07 18.8 +0.4**
baz=331
Z56A Williston 155.41 18 PFAKE 17 07 30.0 +12
Z56A LR LR
comp=Z,9μm,20.0s
Z56A Williston 155.41 18 PKPdf **PKPdf 17 07 18.2 -0.1**
baz=339
154A Montrose 155.48 22 PFAKE 17 07 30.0 +11
154A LR LR
comp=Z,8μm,22.0s
154A Montrose 155.48 22 PKPdf **PKPdf 17 07 18.9 +0.4**
baz=335
Y60A Bolivia 155.53 11 PFAKE 17 07 30.0 +11
Y60A LR LR
comp=Z,7μm,20.0s
Y60A Bolivia 155.53 11 PKPdf **PKPdf 17 07 18.2 -0.4**
baz=347
450A Crestview 155.56 30 PKPdf **PKPdf 17 07 19.1 +0.4**
baz=325
253A Americus 155.59 24 PFAKE 17 07 30.0 +11
253A LR LR
comp=Z,7μm,22.0s
253A Americus 155.59 24 PKPdf **PKPdf 17 07 19.0 +0.3**
baz=332
Z57A Bowman 155.62 16 PKPdf **PKPdf 17 07 18.5 -0.1**
baz=341
155A Kite 155.70 20 PKPdf **PKPdf 17 07 19.2 +0.4**
baz=336
352A Blakely 155.76 26 PFAKE 17 07 30.0 +11
352A LR LR
comp=Z,7μm,21.0s
352A Blakely 155.76 26 PKPdf **PKPdf 17 07 19.3 +0.4**
baz=330
Z58A St. Stephen 155.82 15 PKPdf **PKPdf 17 07 18.8 -0.1**
baz=343
NHSC New Hope 155.95 16 PFAKE 17 07 30.0 +11
NHSC LR LR
comp=Z,13μm,22.0s
NHSC New Hope 155.95 16 PKPdf **PKPdf 17 07 18.8 -0.3**
baz=342
156A Sylvania 155.99 18 PKPdf **PKPdf 17 07 19.3 +0.1**
baz=338
254A Abbeville 156.01 23 PKPdf **PKPdf 17 07 19.5 +0.3**
baz=334
Z59A Georgetown, SC 156.04 14 PKPdf **PKPdf 17 07 19.5 +0.3**
baz=344
157A Early Branch 156.12 18 PKPdf **PKPdf 17 07 19.4 +0.1**
baz=340
353A Camilla 156.17 25 PKPdf **PKPdf 17 07 19.7 +0.3**
baz=331
452A Marianna 156.18 27 PKPdf **PKPdf 17 07 20.0 +0.5**
baz=328
158A Hollywood 156.29 16 PKPdf **PKPdf 17 07 19.4 -0.2**
baz=342
255A Hazlehurst 156.33 21 PFAKE 17 07 30.0 +10
255A LR LR
comp=Z,5μm,20.0s
255A Hazlehurst 156.33 21 PKPdf **PKPdf 17 07 19.9 +0.3**
baz=336
TIGA Tifton 156.35 24 PFAKE 17 07 30.0 +10
TIGA LR LR
comp=Z,6μm,20.0s
TIGA Tifton 156.35 24 PKPdf **PKPdf 17 07 20.0 +0.3**
baz=333
256A Glennville 156.48 20 PKPdf **PKPdf 17 07 19.9 +0.1**
baz=337
453A Whigham 156.56 26 *e*PKPdf **PKPdf 17 07 20.0 +0.1**
453A LR LR
comp=Z,9μm,21.0s
453A Whigham 156.56 26 PKPdf **PKPdf 17 07 20.7 +0.8**
baz=330
355A Pearson 156.72 22 PKPdf **PKPdf 17 07 20.2 +0.1**
baz=334
552A Lynn Haven 156.73 29 PKPdf **PKPdf 17 07 20.5 +0.3**
baz=327
257A Skidaway Islan 156.77 18 PFAKE 17 07 30.0 +10
257A LR LR
comp=Z,9μm,19.0s
257A Skidaway Islan 156.77 18 PKPdf **PKPdf 17 07 20.3 +0.1**
baz=339
454A Quitman 156.97 25 PKPdf **PKPdf 17 07 20.8 +0.3**
baz=332
356A Blackshear 157.00 21 PKPdf **PKPdf 17 07 20.6 +0.1**
baz=336
357A Townsend 157.13 20 PKPdf **PKPdf 17 07 20.5 -0.2**
baz=337
455A Stateville 157.19 23 PKPdf **PKPdf 17 07 20.4 -0.4**
baz=333
CMIG Matias Romero 157.31 69 PKP **PKPdf 17 07 21.5 +0.2**
comp=Z,17nm,1.0s,baz=251,slow=2.8,SNR=14
CMIG PKPab **PKPab 17 07 53.6 +1.2**
comp=Z,16nm,0.8s,baz=57,slow=3.5,SNR=6.2
554A Perry 157.50 26 PKPdf **PKPdf 17 07 21.2 0.0**
baz=331
456A Hilliard 157.58 21 PFAKE 17 07 30.0 +8.7
456A LR LR
comp=Z,10μm,21.0s
456A Hilliard 157.58 21 PKPdf **PKPdf 17 07 21.3 0.0**
baz=336
555A McAlpin 157.76 24 *e*PKPdf **PKPdf 17 07 22.2 +0.7**
555A *e*PKPab **PKPab 17 07 54.8 +0.9**
555A LR LR
comp=Z,7μm,22.0s
555A McAlpin 157.76 24 PKPdf **PKPdf 17 07 22.0 +0.5**
baz=333
NNA Nana 157.82 169 PKP **PKPdf 17 07 21.8 -0.3**
comp=Z,5.7nm,0.4s,baz=242,slow=4.4,SNR=2.0
NNA PKPab **PKPab 17 07 54.3 -0.1**
comp=Z,12nm,0.5s,baz=186,slow=9.2,SNR=3.5
NNA PP **PP 17 11 35.1 +2.9**
comp=Z,6.0nm,0.5s,baz=206,slow=6.2,SNR=4.3
NNA Nana 157.82 169 *e*PKPdf **PKPdf 17 07 21.2 -0.9**
NNA *e*PKPab **PKPab 17 07 53.6 -0.8**
NNA LR LR
comp=Z,12μm,19.0s
NNA Nana 157.82 169 *e*PKIKP **PKPdf 17 07 21.2 -0.9**
NNA *e* 17 07 53.6
NNA MLR MLR
comp=Z,12μm,19.0s
457A Yulee 157.84 21 PKPdf **PKPdf 17 07 21.6 0.0**
baz=336
556A Lake Butler 158.09 23 PKPdf **PKPdf 17 07 22.4 +0.5**
baz=334
655A Horseshoe Beac 158.18 25 PKPdf **PKPdf 17 07 22.3 +0.3**
baz=331
557A Orange Park 158.33 22 PKPdf **PKPdf 17 07 22.7 +0.5**
baz=336
656A Willston 158.60 24 *e*PKPdf **PKPdf 17 07 22.4 -0.2**
656A *e*PKPab **PKPab 17 07 59.1 +1.6**
656A LR LR
comp=Z,9μm,21.0s
656A Willston 158.60 24 PKPdf **PKPdf 17 07 22.3 -0.2**
baz=333
657A Interlachen 158.67 22 PKPdf **PKPdf 17 07 22.7 0.0**
baz=335
658A Bunnell 159.04 21 PFAKE 17 07 30.0 +6.9
658A LR LR
comp=Z,8μm,20.0s
658A Bunnell 159.04 21 PKPdf **PKPdf 17 07 23.3 +0.3**
baz=336
757A Oxford 159.16 24 PKPdf **PKPdf 17 07 23.5 +0.3**
baz=333
758A Lake Helen 159.48 22 PKPdf **PKPdf 17 07 23.9 +0.3**
baz=336
MDP Montagnes des 159.55 258 PKP **PKPdf 17 07 24.6 +0.5**
comp=Z,10nm,0.9s,baz=70,slow=2.9,SNR=5.8
MDP PKPab **PKPab 17 08 02.2 -0.1**
comp=Z,18nm,0.9s,baz=160,slow=5.5,SNR=6.5
MDP PP PP 17 11 54.5 +11
comp=Z,15nm,1.1s,baz=82,slow=8.9,SNR=3.6
PAYG Puerto Ayora 159.56 120 PFAKE 17 07 30.0 +5.8
PAYG LR LR
comp=Z,10μm,20.0s
857A Zephyrhills 159.70 25 PKPdf **PKPdf 17 07 23.9 0.0**
baz=332
858A St. Cloud 160.09 23 PKPdf **PKPdf 17 07 23.9 -0.5**
baz=334
DWPF Disney Wildern 160.16 23 PKPdf **PKPdf 17 07 24.2 -0.2**
baz=334
957A Wimauma 160.22 26 PKPdf **PKPdf 17 07 24.7 +0.2**
baz=331
958A Wauchula 160.49 25 PKPdf **PKPdf 17 07 24.8 0.0**
baz=333
959A Okeechobee 160.89 23 PKPdf **PKPdf 17 07 24.5 -0.7**
baz=335
058A Arcadia 160.94 26 PKPdf **PKPdf 17 07 24.8 -0.5**
baz=332
059A Moore Haven 161.29 24 PKPdf **PKPdf 17 07 25.4 -0.2**
baz=333
060A Indiantown 161.53 22 PKPdf **PKPdf 17 07 26.1 +0.2**
baz=336
059Z Ave Maria 161.72 26 PKPdf **PKPdf 17 07 25.6 -0.5**
baz=332
TEIG Tepich 161.83 54 *e*PKPdf **PKPdf 17 07 24.5 -1.9**
TEIG *e*PKPab **PKPab 17 08 12.5 +0.5**
APG El Apazote 161.94 72 PKP **PKPdf 17 07 26.8 -0.1**
comp=Z,12nm,0.9s,baz=285,slow=3.6,SNR=17
APG PKPab **PKPab 17 08 13.8 +0.9**
comp=Z,25nm,0.7s,baz=297,slow=8.2,SNR=7.2
060Z West Palm Beac 162.02 23 PKPdf **PKPdf 17 07 26.7 +0.2**
baz=334
ATAH Atahualpa 162.10 161 PP PP 17 12 03.2 +7.2
comp=Z,24nm,1.1s,baz=221,slow=3.6,SNR=6.0
061Z Ochoppi 162.36 25 PKPdf **PKPdf 17 07 26.3 -0.5**
baz=333
062Z Marathon 163.29 27 PKPdf **PKPdf 17 07 27.5 -0.2**
baz=330
PTGA Pitinga 163.47 231 PKP **PKPdf 17 07 28.0 -0.2**
comp=Z,8.2nm,1.0s,baz=176,slow=1.4,SNR=15
PTGA PKPab **PKPab 17 08 19.2 -0.1**
comp=Z,32nm,0.7s,baz=134,slow=4.3,SNR=20
PTGA PP **PP 17 12 07.3 +3.3**
comp=Z,2.6nm,0.6s,baz=139,slow=5.6,SNR=5.3
PTGA Pitinga 163.47 231 *e*PKPdf **PKPdf 17 07 25.9 -2.4**
PTGA *e*PKPab **PKPab 17 08 19.1 -0.2**
PTGA Pitinga 163.47 231 *e*P **PKPdf 17 07 31.5 +3.3**
TGUH Tegucigalpa,Un 165.17 73 *e*P **PKPdf 17 07 29.4 -0.5**
ESTN Estel 166.24 76 *e*PKPdf **PKPdf 17 07 29.2 -1.5**
ESTN *e*PKPab **PKPab 17 08 32.4 +0.7**
BBGH Gun Hill 166.74 285 *e*P **PKPdf 17 07 24.1 -6.8**
ANWB Willy Bob 166.92 307 *e*P PKPdf 17 07 15.2 -16
DWS Wesley 167.57 298 *e*P **PKPdf 17 07 32.1 +0.7**
ACON Acoyapa 167.59 80 *e*PKPdf **PKPdf 17 07 30.8 -0.8**
ACON *e*PKPab **PKPab 17 08 38.3 +0.7**
SMRT St. Maarten 167.68 312 *e*PKPdf **PKPdf 17 07 30.3 -1.2**
SMRT St. Maarten 167.68 312 *e*P **PKPdf 17 07 30.1 -1.4**
MDPO Dominica; Chan 167.69 298 *e*P **PKPdf 17 07 31.8 +0.2**
MDN Morne-Daniel 167.75 297 *e*P **PKPdf 17 07 36.4 +4.7**
FDF Fort de France 167.76 294 *e*PKPdf **PKPdf 17 07 30.8 -0.9**
FDF Fort de France 167.76 294 *e*P **PKPdf 17 07 30.0 -1.7**
MLYT Lee's Yard 167.76 304 *e*P **PKPdf 17 07 26.4 -5.2**
SLBI Saint Lucia, B 167.84 291 *e*P **PKPdf 17 07 30.2 -1.5**
SKI Saint Kitts 167.86 308 *e*P **PKPdf 17 07 28.2 -3.5**
SKOC St. Kitts, UWI 167.88 308 *e*P PKPab 17 08 30.3 -8.3
MCLT Moule a Chique 167.90 289 *e*P **PKPdf 17 07 32.8 +1.1**
JTS Las Juntas de 167.93 87 *e*PKPdf **PKPdf 17 07 30.6 -1.3**
JTS *e*PKPab **PKPab 17 08 40.1 +1.0**
JTS Las Juntas de 167.93 87 *e*PKIKP **PKPdf 17 07 30.6 -1.3**
JTS *e* 17 08 40.2
SEUS St. Eustatius 167.95 310 *e*P **PKPdf 17 07 26.8 -4.9**
TOSP Speyside 167.97 277 *e*P **PKPdf 17 07 31.3 -0.6**
SVB Belmont 168.31 287 *e*P **PKPdf 17 07 29.5 -2.5**
SVB Belmont 168.31 287 *e*P **PKPdf 17 07 32.9 +0.8**
ESPN Las Esperanzas 168.40 78 *e*PKPdf **PKPdf 17 07 30.6 -1.5**
ESPN *e*PKPab **PKPab 17 08 41.6 +0.4**
OTAV Otavalo 168.78 149 *e*PKPdf **PKPdf 17 07 31.0 -2.1**
OTAV Otavalo 168.78 149 *e*PKIKP **PKPdf 17 07 31.0 -2.1**
OTAV Otavalo 168.78 149 *e*P **PKPdf 17 07 32.6 -0.5**
OTAV Otavalo 168.78 149 *e*P **PKPdf 17 07 34.5 +1.4**
TPP Pointe-a-Pierr 168.92 273 *e*P **PKPdf 17 07 39.8 +7.3**
GRGR Grenville 168.94 282 *e*P **PKPdf 17 07 30.0 -2.5**
MTP Monte Pirata 169.34 320 *e*PKPdf **PKPdf 17 07 31.3 -1.3**
HUMP Col San Antoni 169.49 322 *e*PKPdf **PKPdf 17 07 31.0 -1.7**
SJG San Juan 169.70 323 PP PP 17 12 35.0 -0.5
comp=Z,18nm,0.3s,baz=32,slow=5.9,SNR=6.0
SJG San Juan 169.70 323 *e*PKPdf **PKPdf 17 07 31.2 -1.6**
SJG San Juan 169.70 323 *e*PKIKP **PKPdf 17 07 31.3 -1.6**
SJG San Juan 169.70 323 *e*P **PKPdf 17 07 31.8 -1.1**
GTBY Guantanamo Bay 169.81 13 *e*P **PKPdf 17 07 35.0 +2.1**
TUMC Tumaco 169.94 143 *e*P **PKPdf 17 07 33.4 +0.2**
OBIP Obispado Ponce 170.02 324 *e*PKPdf **PKPdf 17 07 32.3 -0.8**
OBIP *e*PKPab **PKPab 17 08 48.6 +0.7**
PTLC Puerto Leguiza 170.06 168 *e*P **PKPdf 17 07 31.8 -1.5**
CPAS1 Pasto 170.16 152 *e*P **PKPdf 17 07 35.0 +1.1**
GCUF Volcan Galeras 170.18 152 *e*P **PKPdf 17 07 35.0 +1.0**
MTDJ Mount Denham 170.53 29 *e*P **PKPdf 17 07 33.4 -0.1**
PRVC Isla de Provid 170.86 67 *e*P **PKPdf 17 07 31.0 -2.6**
BBAC Balboa, Cauca 170.92 150 *e*P **PKPdf 17 07 33.4 -0.6**
SDDR Presa de Saban 170.92 352 *e*PKPdf **PKPdf 17 07 31.8 -1.8**
FLOC Florencia 171.18 160 *e*P **PKPdf 17 07 31.0 -2.9**
GRGC Isla de Gorgon 171.22 141 *e*P **PKPdf 17 07 32.6 -1.3**
SOTA Rioblanco 171.32 153 *e*P **PKPdf 17 07 33.4 -1.2**
PCON Cinco Dias 171.58 154 *e*P **PKPdf 17 07 33.4 -1.4**
POPC Popayan, Colom 171.64 152 *e*P **PKPdf 17 07 32.6 -1.8**
MACC Macarena, Meta 172.16 172 *e*P **PKPdf 17 07 31.8 -2.6**
AZU Azuero 172.21 105 *e*P **PKPdf 17 07 32.6 -1.7**
PNME Penonome 172.33 100 *e*P **PKPdf 17 07 32.6 -1.8**
BCIP Isla Barro Col 172.91 96 *e*PKPdf **PKPdf 17 07 31.2 -3.3**
BCIP Isla Barro Col 172.91 96 *e*PKIKP **PKPdf 17 07 31.3 -3.3**
BCIP Isla Barro Col 172.91 96 *e*P **PKPdf 17 07 33.4 -1.2**
YOTC Yotoco, Valle 173.05 148 *e*P **PKPdf 17 07 34.2 -0.7**
UPA Univ. de Panam 173.19 98 *e*P **PKPdf 17 07 32.6 -2.1**
PRAC Prado 173.43 161 *e*P **PKPdf 17 07 33.4 -1.5**
RREF El Recreo 174.34 152 *e*P **PKPdf 17 07 34.2 -1.8**
UPD2 Meteti 174.57 104 *e*P **PKPdf 17 07 34.1 -1.8**
GUY2C Guyana, Caldas 174.61 150 *e*P **PKPdf 17 07 35.8 -0.1**
CHIC Chingaza 174.61 169 *e*P **PKPdf 17 07 33.4 -2.4**
ROSC El Rosal 174.67 162 PKP **PKPdf 17 07 35.6 -0.2**
comp=Z,5.3nm,0.4s,baz=76,slow=2.4,SNR=18
ROSC PKPab **PKPab 17 09 09.3 +0.3**
comp=Z,30nm,0.9s,baz=306,slow=19,SNR=2.5
ROSC PP PP 17 13 08.9 +9.1
comp=Z,5.3nm,0.3s,baz=259,slow=11,SNR=5.6
ROSC El Rosal 174.67 162 *e*PKPdf **PKPdf 17 07 34.3 -1.4**
ROSC El Rosal 174.67 162 *e*P **PKPdf 17 07 34.2 -1.6**
NORC Norcasia 175.14 154 *e*P **PKPdf 17 07 33.4 -2.1**
HELC Santa Helena 175.33 143 *e*P **PKPdf 17 07 34.2 -1.7**
DBBC Dabeiba 175.47 130 *e*P **PKPdf 17 07 31.8 -3.8**
RUSC La Rusia 175.95 175 *e*P **PKPdf 17 07 31.8 -4.4**
PTBC PUERTO BERRIO 176.19 153 *e*P **PKPdf 17 07 32.6 -3.1**
BARC Barichara 176.63 172 *e*P **PKPdf 17 07 33.4 -2.7**
BRRC Barranca, Sant 177.00 160 *e*P **PKPdf 17 07 33.4 -2.4**
SOCV Socops 177.54 228 *e*P **PKPdf 17 07 33.4 -2.5**
SDV Santo Domingo 177.70 243 PKPab PKPab 17 09 23.4 +0.7
comp=Z,19nm,0.4s,baz=261,slow=2.8,SNR=4.6
SDV PP **PP 17 13 17.8 +2.0**
comp=Z,12nm,0.4s,baz=113,slow=2.0,SNR=4.0
DABV Dabajuro 177.75 296 *e*P **PKPdf 17 07 35.0 -0.9**
CAPV Capacho 177.89 190 *e*P **PKPdf 17 07 33.4 -2.9**
SMRC Santa Marta, M 178.07 51 *e*P **PKPdf 17 07 34.2 -1.7**
URIC Uribia, Colomb 178.13 338 *e*P **PKPdf 17 07 34.2 -1.7**
OCAC Ocana 178.19 160 *e*P **PKPdf 17 07 33.4 -2.8**
SMLC San Martn de 178.23 130 *e*P **PKPdf 17 07 34.2 -1.8**
CODC Agustn Codazz 179.26 91 *e*P **PKPdf 17 07 33.4 -2.7**
VIRV Villa del Rosa 179.38 332 *e*P **PKPdf 17 07 34.2 -1.9**

MOS ***13*** *16:59:12.5±1.0, 44.°25N×147.°56E, h116km, mb4.9/7, Error ellipse: s-maj=11.5km s-min=10.1km az=76.0*
ISCJB ***13*** *16:59:12.6±0.6, 44.°13N±0.°07×147.°54E±0.°08, h117km±4km, mb4.5/32, Error ellipse: s-maj=12.9km s-min=6.1km az=143.5*
JMA ***13*** *16:59:13.5±0.3, 43.°98N×147.°74E, h81km, M4.2*
SKHL ***13*** *16:59:14.1±0.8, 44.°23N×147.°50E, h112km±7km, mb4.5/5*
NEIC ***13*** *16:59:15.2±1.6, 44.°25N×147.°48E, h120km±11km, mb4.9/19, Error ellipse: s-maj=22.2km s-min=13.4km az=161.0*
IDC ***13*** *16:59:17.3±3.7, 45.°57N×147.°04E, h68km±57km, mb4.0/17, mb1 4.1/18, mb1mx3.8/76, mbtmp4.3/18, ML3.4/1, Error ellipse: s-maj=102.1km s-min=18.2km az=166.0*
ISC 13 16:59:12.5±0.9, **44.°13N**±0.°07×**147.°65E**±0.°07, **h104**km±7km, **n88**, σ1.9**37**/106, **mb4.7**/32, **2C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.11**	**8**	*d* iPN	**Pn**	**16 59 33.9**	**-0.5**
KUR				*i* S	**Sn**	**16 59 49.3**	**-1.7**
KUR				pmax	pmax		
	comp=N,198nm,0.2s						
KUR				pmax	pmax		
	comp=E,112nm,0.2s						
KUR				pmax	pmax		
	comp=Z,1μm,0.2s						
KUR				smax	smax		
	comp=E,2μm,0.5s						
KUR				smax	smax		
	comp=N,919nm,0.2s						
KUR	**Kuril'sk**	**1.11**	**8**	*i* P	**Pn**	**16 59 34.0**	**-0.5**
KUR				AMB	AMB	16 59 34.0	

comp=N,112nm,0.3s
KUR AMB AMB 16 59 34.0
comp=N,115nm,0.3s
KUR *i* S **Sn** **16 59 49.0 -2.0**
KUR A A 16 59 51.0
comp=N,453nm,0.3s
KUR A A 16 59 51.0
comp=N,171nm,0.3s
YUK Yuzh-Kuril'sk 1.29 266 *d i* PN **Pn** **16 59 37.0 +0.5**
YUK *i* S **Sn** **16 59 54.3 -0.3**
YUK pmax pmax
comp=Z,2μm,0.2s
YUK pmax pmax
comp=N,136nm,0.1s
YUK pmax pmax
comp=E,531nm,0.2s
YUK smax smax
comp=N,5μm,0.2s
YUK smax smax
comp=E,6μm,0.2s
YUK Yuzh-Kuril'sk 1.29 266 *i* P **Pn** **16 59 37.0 +0.5**
YUK AMB AMB 16 59 37.0
YUK *i* S **Sn** **16 59 54.3 -0.3**
YUK A A 16 59 57.0
comp=E,455nm,0.3s
YUK A A 16 59 57.0
comp=E,550nm,0.3s
LAGR Lagunnoye 1.34 267⇑ *i* PN **Pn** **16 59 37.9 +0.8**
LAGR *i* S **Sn** **16 59 55.7 0.0**
LAGR pmax pmax
comp=N,83nm,0.1s
LAGR pmax pmax
comp=E,101nm,0.1s
LAGR pmax pmax
comp=Z,695nm,0.1s
LAGR smax smax
comp=N,5μm,0.2s
LAGR smax smax
comp=E,5μm,0.2s
LAGR Lagunnoye 1.34 267 *i* P **Pn** **16 59 37.0 -0.1**
LAGR AMB AMB 16 59 38.0
comp=E,70nm,0.2s
LAGR *i* S **Sn** **16 59 55.0 -0.7**
LAGR A A 16 59 56.0
comp=E,505nm,0.3s
LAGR A A 16 59 56.0
comp=E,464nm,0.3s
GRPR Tuman 1.36 265⇓ *i* PN **Pn** **16 59 37.9 +0.6**
GRPR *i* S **Sn** **16 59 55.5 -0.5**
GRPR pmax pmax
comp=N,183nm,0.3s
GRPR pmax pmax
comp=Z,459nm,0.3s
GRPR pmax pmax
comp=E,204nm,0.1s
GRPR smax smax
comp=N,6μm,0.3s
GRPR smax smax
comp=E,2μm,0.1s
GRPR Tuman 1.36 265 *i* P **Pn** **16 59 37.9 +0.6**
GRPR AMB AMB 16 59 38.0
comp=E,46nm,0.3s
GRPR *i* S **Sn** **16 59 55.0 -1.0**
GRPR A A 16 59 56.0
comp=E,639nm,0.3s
GRPR A A 16 59 56.0
comp=E,176nm,0.3s
NEM2 Nemuro 2 1.58 242 P **Pn** **16 59 40.2 +0.3**
NEM2 *e*S **Sn** **17 00 00.4 -0.3**
GLVR Golovnino 1.59 256⇑ *i* PN **Pn** **16 59 41.2 +1.2**
GLVR *i* S **Sn** **17 00 01.5 +0.6**
GLVR pmax pmax
comp=N,55nm,0.1s
GLVR pmax pmax
comp=E,48nm,0.1s
GLVR pmax pmax
comp=Z,372nm,0.1s
GLVR smax smax
comp=N,3μm,0.3s
GLVR smax smax
comp=E,1μm,0.3s
GLVR Golovnino 1.59 256 *i* P **Pn** **16 59 41.0 +1.0**
GLVR AMB AMB 16 59 41.0
comp=E,37nm,0.2s
GLVR *i* S **Sn** **17 00 01.0 +0.1**
GLVR A A 17 00 03.0
comp=E,287nm,0.3s
GLVR A A 17 00 03.0
comp=E,140nm,0.3s
JRA Rausu 1.83 265 P **Pn** **16 59 44.3 +1.2**
JRA *e*S **Sn** **17 00 07.7 +1.4**
JKHN Kushirohamanak 2.09 241 P **Pn** **16 59 47.1 +0.7**
JKHN *e*S **Sn** **17 00 12.0 -0.2**
JNK Nakash 2.19 257 P **Pn** **16 59 48.7 +1.0**
JNK *e*S **Sn** **17 00 15.5 +1.0**
JAK Akkeshi 2.43 243 P **Pn** **16 59 51.3 +0.6**
JAK *e*S **Sn** **17 00 19.5 -0.6**
JTKR Abashiri--Toko 2.70 268 P **Pn** **16 59 55.7 +1.4**
JAR Ashorobuto 2.93 255 P **Pn** **16 59 59.5 +2.1**
JAR *e*S **Sn** **17 00 34.0 +1.9**
JCH Churui 3.47 246 P **Pn** **17 00 05.5 +0.9**
JCH *e*S **Sn** **17 00 44.8 -0.1**
JKA Kamikawa-asahi 3.63 272 *e*P **Pn** **17 00 08.8 +2.0**
ASAJ Asahikawa 3.64 272 P **Pn** **17 00 08.8 +2.0**
comp=E,2.4nm,0.3s,baz=62,slow=10,SNR=8.7
ASAJ S Sn 17 01 01.5 +13
comp=E,1.7nm,0.3s,baz=269,slow=22,SNR=1.3
ERM Erimo 3.91 239 *e*Pn **Pn** **17 00 12.7 +2.2**
ERM *e*Sn **Sn** **17 00 52.2 -3.2**
ERM Erimo 3.91 239 *e*PN **Pn** **17 00 12.7 +2.2**
ERM *e* 17 00 52.2
JNBK Urakawa-nobuka 4.03 244 P **Pn** **17 00 12.6 +0.5**
YSS Yuzh-Sakhalins 4.45 311 *e*Pn **Pn** **17 00 18.3 +0.6**
YSS Yuzh-Sakhalins 4.45 311 *e*PN **Pn** **17 00 18.3 +0.6**
YSS Yuzh-Sakhalins 4.45 311 *e*P **Pn** **17 00 19.3 +1.6**
JKB Kayabe 5.34 247 P **Pn** **17 00 30.6 +0.7**
JKB *e*S **Sn** **17 01 28.0 -2.1**
JOT Ohata 5.58 243 P **Pn** **17 00 33.1 0.0**
JOT *e*S **Sn** **17 01 32.1 -3.8**
SKR Severo-Kuril's 8.71 38 *e*P **Pn** **17 01 17.6 +2.1**
MAJO Matsushiro 10.45 227 *e*Pn **Pn** **17 01 37.7 -1.6**
MAJO Matsushiro 10.45 227 *i* PN **Pn** **17 01 39.4 +0.1**
MJB9 Matsu-Tunnel 10.45 227 *e*Pn **Pn** **17 01 37.8 -1.5**
YAK Yakutsk 20.79 336 *e*P **P** **17 03 42.0 -3.0**
comp=E,26nm,0.8s
YAK Yakutsk 20.79 336 *i* P Pn 17 03 48.0 -0.4
YAK pmax pmax
comp=Z,57nm,1.1s
YAK Yakutsk 20.79 336 *e*P Pn 17 03 48.0 -0.4
SPIA Saint Paul Isl 29.20 48 *e*P **P** **17 05 05.3 +1.5**
comp=Z,120nm,1.2s
SSLB Suanglung 29.82 236 *e*P **P** **17 05 10.5 +0.7**
comp=Z,40nm,1.4s
TTA Tatalina 36.91 39 *e*P **P** **17 06 11.1 +0.2**
comp=Z,19nm,1.3s
TTA Tatalina 36.91 39 *e*P **P** **17 06 11.1 +0.2**
TTA pmax pmax
comp=Z,19nm,1.3s
COLD Coldfoot 39.64 33 *e*P **P** **17 06 34.8 +1.2**
comp=Z,11nm,1.2s
TOLK Toolik Lake Re 39.98 30 *e*P **P** **17 06 37.8 +1.3**
comp=Z,39nm,1.4s
CCB Clear Creek Bu 40.58 37 *e*P **P** **17 06 41.6 +0.3**
comp=Z,24nm,1.6s
DHY Denali Highway 40.85 39 *e*P **P** **17 06 44.5 +0.7**
comp=Z,11nm,0.8s
ILAR Eielson Array 40.97 36 P **P** **17 06 45.0 +0.4**
comp=Z,3.8nm,1.1s,baz=277,slow=9.9,SNR=3.2
FYU Fort Yukon 41.59 34 *e*P **P** **17 06 51.4 +1.8**
comp=Z,68nm,1.5s
EGAK Eagle 43.41 36 *e*P **P** **17 07 05.3 +0.9**
comp=Z,18nm,1.1s
CTGM Chitina Glacie 43.95 42 *e*P **P** **17 07 10.2 +1.3**
comp=Z,27nm,1.2s
PCA Pinnacle 44.65 43 *e*P **P** **17 07 15.2 +0.7**
comp=Z,45nm,1.3s
MK31 Makanchi Array 44.73 297 *e*P **P** **17 07 15.6 +0.4**
comp=Z,34nm,1.6s
MK31 Makanchi Array 44.73 297 *e*P **P** **17 07 15.6 +0.4**
MK31 pmax pmax
comp=Z,34nm,1.6s
MK32 Makanchi Array 44.73 297 *e*P **P** **17 07 14.9 -0.2**
MKAR Makanchi Array 44.73 297 P **P** **17 07 14.9 -0.2**
comp=Z,2.3nm,0.7s,baz=74,slow=8.6,SNR=5.3
MKAR Makanchi Array 44.73 297 P **P** **17 07 15.0 -0.2**
MKAR Makanchi Array 44.73 297 *e*P **P** **17 07 15.0 -0.2**
MAKZ Makanchi 44.92 298 *e*P **P** **17 07 16.9 +0.1**
comp=Z,14nm,1.4s
MAKZ Makanchi 44.92 298 *e*P **P** **17 07 16.9 +0.1**
MAKZ pmax pmax
comp=Z,14nm,1.4s
KURK Kurchatov 45.62 304 *e*P **P** **17 07 21.8 -0.3**
KURK Kurchatov 45.62 304 *i* P **P** **17 07 26.6 +4.5**
KURK pmax pmax
comp=Z,2.0nm,0.9s
KURK Kurchatov 45.62 304 *e*P **P** **17 07 26.6 +4.5**
KURBB Kurchatov Arra 45.70 304 P **P** **17 07 21.6 -1.2**
comp=Z,1.3nm,0.5s,baz=74,slow=8.3,SNR=8.3
INK Inuvik 45.89 31 P **P** **17 07 24.6 +0.6**
comp=Z,3.8nm,0.4s,baz=290,slow=8.3,SNR=24
INK Inuvik 45.89 31 *e*P **P** **17 07 25.2 +1.3**
comp=Z,35nm,1.4s
INK Inuvik 45.89 31 *e*P **P** **17 07 25.3 +1.3**
INK pmax pmax
comp=Z,35nm,1.4s
BVAR Borovoye Array 49.54 309 P **P** **17 07 52.4 0.0**
comp=Z,0.7nm,0.4s,baz=57,slow=11,SNR=4.1
ARU Arti 54.31 317 P **P** **17 08 26.7 -1.0**
comp=Z,0.6nm,0.3s,baz=168,slow=19,SNR=2.0
ARU Arti 54.31 317 *e*P **P** **17 08 26.9 -0.9**
comp=Z,21nm,1.3s
ARU Arti 54.31 317 *e*P **P** **17 08 26.9 -0.9**
ARU pmax pmax
comp=Z,21nm,1.3s
ARU Arti 54.31 317 *e*P **P** **17 08 26.9 -0.9**
SPITS Spitsbergen Ar 54.48 349 P **P** **17 08 25.8 -2.8**
comp=Z,7.1nm,0.9s,baz=39,slow=9.3,SNR=3.0
RES Resolute Bay 54.50 17 P **P** **17 08 27.9 -0.9**
comp=Z,4.8nm,0.7s,baz=333,slow=2.8,SNR=6.4
RES Resolute Bay 54.50 17 *e*P **P** **17 08 28.2 -0.6**
comp=Z,24nm,1.4s
RES Resolute Bay 54.50 17 *e*P **P** **17 08 28.2 -0.6**
RES pmax pmax
comp=Z,24nm,1.4s
YKA Yellowknife Ar 55.28 34 P **P** **17 08 36.7 +2.0**
comp=Z,0.8nm,0.6s,baz=303,slow=7.3,SNR=2.3
YKB5 Yellowknife Ar 55.28 34 *e*P **P** **17 08 36.7 +2.0**
ABKAR Akbulak array 57.10 309 *e*P **P** **17 08 48.0 +0.2**
comp=Z,43nm,1.4s
AKTO Aktyubinsk 57.56 311 P **P** **17 08 51.2 +0.2**
comp=Z,8.6nm,1.0s,baz=95,slow=11,SNR=5.1
ARCES ARCESS Array B 59.01 340 P **P** **17 08 59.1 -1.7**
comp=Z,8.0nm,0.3s,baz=47,slow=9.0,SNR=4.1
FIA0 FINESS Array S 64.70 333 *e*P **P** **17 09 37.8 -1.2**
FIA0 FINESS Array S 64.70 333 *e*P **P** **17 09 37.8 -1.2**
FINES FINESS Array B 64.70 333 P **P** **17 09 37.8 -1.2**
comp=Z,2.7nm,0.7s,baz=28,slow=4.9,SNR=4.7
NB2 NORSAR Subarra 69.38 339 P **P** **17 10 07.9 -0.7**
comp=Z,0.2nm,0.3s,baz=30,slow=6.2
NB200 NORSAR Array S 69.38 339 *e*P **P** **17 10 08.3 -0.3**
NOA NORSAR Array B 69.38 339 P **P** **17 10 08.3 -0.3**
comp=Z,0.6nm,0.4s,baz=42,slow=7.9,SNR=12
HFS Hagfors 69.48 337 P **P** **17 10 08.1 -1.1**
comp=Z,2.1nm,0.3s,baz=31,slow=5.0,SNR=29
KBZ Khabaz 69.81 312 P **P** **17 10 12.6 +1.1**
comp=Z,3.4nm,0.9s,baz=23,slow=13,SNR=2.7
AKASG Malin Array Be 71.48 324 P **P** **17 10 21.0 -0.6**
comp=Z,1.3nm,0.4s,baz=38,slow=6.4,SNR=5.1
AKASG Malin Array Be 71.48 324 P **P** **17 10 21.0 -0.6**
GERES GERESS Array B 79.00 331 P **P** **17 11 05.3 +0.5**
comp=Z,0.3nm,0.4s,baz=54,slow=5.0,SNR=2.8

*IDC **13** 17:05:25.0±0.7, 10°.08S×107°.17E, h0km, mb4.0/11, mb1 4.1/12, mb1mx3.8/56, mbtmp4.0/12, ML4.3/1, Error ellipse: s-maj=27.8km s-min=15.9km az=56.0*
*ISCJB **13** 17:05:26.5±0.5, 10°.02S±0°.05×107°.28E±0°.05, h23km, mb4.1/14, Error ellipse: s-maj=6.8km s-min=6.3km az=151.2*
*NEIC **13** 17:05:26.2±2.0, 10°.07S×107°.20E, h10km±4km, mb4.6/3, Error ellipse: s-maj=17.5km s-min=9.2km az=120.0*
*DJA **13** 17:05:29.8±1.7, 10°S±16°×10°7E±°, h16km±27km, M5.0/6, MLv5.0/6*
ISC 13 17:05:28.6±0.7, 9°.99S±0°.08×107°.31E±0°.06, h23km, n33, σ1°.17/39, mb4.2/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.70**	**253**	*e*Pn	Pn	17 05 53.2	-3.7
CISI	**Cisompet, Garu**	**2.47**	**12**	*e*Pn	**Pn**	**17 06 06.6**	**-1.0**
CISI	**Cisompet, Garu**	**2.47**	**12**	P	**Pn**	**17 06 07.3**	**-0.3**
CISI				S	**Sn**	**17 06 37.0**	**-0.1**
LEM	**Lembang**	**3.16**	**6**	Pn	**Pn**	**17 06 17.6**	**+0.5**
	33nm,0.3s,baz=198,slow=0.3,SNR=37						
LEM				Sn	**Sn**	**17 06 56.5**	**+2.3**
	46nm,0.3s,baz=350,slow=19,SNR=17						
LEM	**Lembang**	**3.16**	**6**	P	**Pn**	**17 06 17.9**	**+0.8**
LEM				S	**Sn**	**17 06 54.5**	**+0.3**
CGJI	**Cibinong**	**3.72**	**334**	P	**Pn**	**17 06 24.9**	**+0.2**
CGJI				S	**Sn**	**17 07 05.0**	**-2.7**
UGM	**Wanagama**	**3.79**	**57**	*e*Pn	**Pn**	**17 06 25.7**	**0.0**
UGM	**Wanagama**	**3.79**	**57**	P	**Pn**	**17 06 25.8**	**+0.1**
UGM				S	**Sn**	**17 07 07.8**	**-1.8**
WOJI	**Wonogiri, Jawa**	**4.17**	**59**	P	**Pn**	**17 06 31.6**	**+0.8**
WOJI				S	**Sn**	**17 07 17.0**	**-1.8**
SMRI	**Semarang**	**4.26**	**47**	*e*Pn	**Pn**	**17 06 34.2**	**+2.1**
PWJI	**Pagerwojo**	**4.85**	**67**	P	**Pn**	**17 06 40.9**	**+0.6**
PWJI				S	**Sn**	**17 07 32.8**	**-3.0**
JAGI	**Jajag, Banyuwa**	**6.92**	**78**	*e*Pn	**Pn**	**17 07 09.7**	**+0.9**
WRA	**Warramunga Arr**	**27.89**	**114**	P	**P**	**17 11 16.7**	**-0.3**
	1.8nm,0.8s,baz=295,slow=12,SNR=2.7						
WR1	**Warramunga Arr**	**27.89**	**114**	*e*P	**P**	**17 11 16.7**	**-0.3**
ASAR	**Alice Springs**	**28.79**	**122**	P	**P**	**17 11 25.9**	**+0.7**
	0.7nm,0.7s,baz=295,slow=8.8,SNR=5.7						
CM31	**Chiang Mai Arr**	**29.45**	**344**	*e*P	**P**	**17 11 30.0**	**-0.8**
	11nm,1.4s						
CMAR	**Chiang Mai Arr**	**29.45**	**344**	P	**P**	**17 11 32.0**	**+1.2**
	0.6nm,0.9s,baz=189,slow=9.1,SNR=4.1						
STKA	**Stephens Creek**	**38.47**	**130**	P	**P**	**17 12 49.6**	**+0.6**
	2.5nm,0.6s,baz=298,slow=11,SNR=4.6						
SONA0	**Songino Array**	**57.57**	**359**	*e*P	**P**	**17 15 17.6**	**+1.0**
SONM	**Songino Array**	**57.57**	**359**	P	**P**	**17 15 17.7**	**+1.0**
	0.5nm,0.4s,baz=172,slow=12,SNR=3.0						
MK32	**Makanchi Array**	**60.79**	**341**	*e*P	**P**	**17 15 38.2**	**-0.6**
MKAR	**Makanchi Array**	**60.79**	**341**	P	**P**	**17 15 38.2**	**-0.6**
	0.6nm,0.6s,baz=138,slow=10,SNR=4.9						
KURBB	**Kurchatov Arra**	**65.35**	**340**	P	**P**	**17 16 08.8**	**-0.1**
	1.9nm,0.8s,baz=155,slow=5.2,SNR=11						
BVAR	**Borovoye Array**	**70.22**	**337**	P	**P**	**17 16 39.8**	**+0.2**
	2.9nm,0.7s,baz=146,slow=8.8,SNR=12						
ABKAR	**Akbulak array**	**72.12**	**330**	*e*P	**P**	**17 16 51.1**	**-0.1**
	5.3nm,0.9s						
MATP	**Matopo**	**76.17**	**251**	P	**P**	**17 17 15.3**	**-0.4**
	2.4nm,0.8s,baz=127,slow=5.2,SNR=4.8						
MMAI	**Mount Meron Ar**	**80.58**	**306**	P	**P**	**17 17 39.9**	**+0.2**
	0.7nm,0.5s,baz=56,slow=7.8,SNR=2.5						
TIXI	**Tiksi**	**82.72**	**7**	*e*P	**P**	**17 17 49.6**	**-0.4**
	7.7nm,0.7s						
BR101	**Keskin Array S**	**84.04**	**312**	*e*P	**P**	**17 17 56.6**	**-1.1**
BRTR	**Keskin Array B**	**84.04**	**312**	P	**P**	**17 17 56.6**	**-1.1**
	1.4nm,0.9s,baz=130,slow=4.5,SNR=4.6						
LTX	**Lajitas**	**145.23**	**52**	*e*PKPbc	**PKPbc**	**17 25 06.2**	**+1.2**
TXAR	**Lajitas Array**	**145.23**	**52**	PKPbc	**PKPbc**	**17 25 06.2**	**+1.2**
	1.7nm,0.9s,baz=252,slow=2.2,SNR=9.0						
SIV	**San Ignacio**	**151.74**	**204**	PKPbc	**PKPbc**	**17 25 21.7**	**-0.7**
	0.8nm,0.9s,baz=70,slow=14,SNR=4.9						

*IDC **13** 17:06:52.2±0.7, 10°.11S×107°.09E, h0km, mb4.2/15, mb1 4.2/16, mb1mx4.0/58, mbtmp4.2/16, ML4.4/1, Error ellipse: s-maj=29.5km s-min=15.8km az=50.0*
*NEIC **13** 17:06:53.8±1.0, 10°.03S×107°.20E, h9km±5km, mb4.7/3, Error ellipse: s-maj=18.8km s-min=6.1km az=153.0*
*ISCJB **13** 17:06:55.4±0.5, 10°.04S±0°.06×107°.22E±0°.07, h33km, mb4.2/17, Error ellipse: s-maj=10.3km s-min=8.4km az=4.6*
ISC 13 17:06:57.4±0.7, 10°.05S±0°.08×107°.18E±0°.08, h35km, n26, σ0°.98/27, mb4.3/17, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.57**	**254**	*e*Pn	**Pn**	**17 07 21.5**	**-1.3**
CISI	**Cisompet, Garu**	**2.55**	**14**	*e*Pn	**Pn**	**17 07 34.7**	**-1.6**
LEM	**Lembang**	**3.23**	**8**	Pn	**Pn**	**17 07 45.5**	**-0.2**
	42nm,0.3s,baz=259,slow=23,SNR=6.6						
LEM				Sn	**Sn**	**17 08 23.2**	**+0.2**
	120nm,0.3s,baz=349,slow=19,SNR=14						
UGM	**Wanagama**	**3.92**	**58**	*e*Pn	**Pn**	**17 07 53.4**	**-1.8**
WR1	**Warramunga Arr**	**27.97**	**114**	*e*P	**P**	**17 12 45.1**	**+0.1**
WRA	**Warramunga Arr**	**27.97**	**114**	P	**P**	**17 12 45.1**	**+0.1**
	1.7nm,1.0s,baz=259,slow=7.4,SNR=2.6						
ASAR	**Alice Springs**	**28.86**	**121**	P	**P**	**17 12 52.7**	**-0.2**
	0.2nm,0.5s,baz=305,slow=8.9,SNR=2.9						
CMAR	**Chiang Mai Arr**	**29.47**	**344**	P	**P**	**17 12 58.0**	**-0.1**
	1.5nm,0.8s,baz=179,slow=8.3,SNR=6.7						
STKA	**Stephens Creek**	**38.52**	**129**	P	**P**	**17 14 18.5**	**+1.9**
	2.1nm,0.6s,baz=293,slow=9.0,SNR=5.1						
SONA0	**Songino Array**	**57.63**	**359**	*e*P	**P**	**17 16 44.5**	**+0.4**
SONM	**Songino Array**	**57.63**	**359**	P	**P**	**17 16 44.5**	**+0.4**
	2.3nm,0.7s,baz=184,slow=7.4,SNR=8.9						
MK31	**Makanchi Array**	**60.80**	**341**	*e*P	**P**	**17 17 06.2**	**+0.3**
	7.2nm,1.5s						
MK32	**Makanchi Array**	**60.80**	**341**	*e*P	**P**	**17 17 05.9**	**0.0**
MKAR	**Makanchi Array**	**60.80**	**341**	P	**P**	**17 17 05.9**	**0.0**
	1.4nm,0.5s,baz=140,slow=9.0,SNR=10						
KURBB	**Kurchatov Arra**	**65.36**	**340**	P	**P**	**17 17 36.5**	**+0.5**
	1.6nm,0.6s,baz=158,slow=5.4,SNR=8.2						
GEYT	**Alibeck**	**66.16**	**319**	P	**P**	**17 17 41.6**	**+0.1**
	1.3nm,0.7s,baz=199,slow=7.6,SNR=3.5						
BVAR	**Borovoye Array**	**70.23**	**337**	P	**P**	**17 18 07.2**	**+0.6**
	3.8nm,0.6s,baz=142,slow=8.9,SNR=16						
ABKAR	**Akbulak array**	**72.11**	**330**	*e*P	**P**	**17 18 18.2**	**+0.1**
	5.3nm,0.9s						
ARU	**Arti**	**77.43**	**335**	P	**P**	**17 18 49.3**	**+0.5**
	1.3nm,0.6s,baz=123,slow=9.1,SNR=4.5						
ARU	**Arti**	**77.43**	**335**	*e*P	**P**	**17 18 49.1**	**+0.3**
	48nm,1.9s						
ASF	**Jabal al Asfar**	**79.05**	**306**	P	**P**	**17 19 00.3**	**+1.8**
	3.0nm,0.8s,baz=184,slow=2.6,SNR=4.3						
NRIK	**Noril'sk**	**80.38**	**353**	P	**P**	**17 19 03.9**	**-0.7**
	3.7nm,0.8s,baz=129,slow=7.8,SNR=3.8						
MMAI	**Mount Meron Ar**	**80.52**	**306**	P	**P**	**17 19 08.2**	**+1.8**
	0.6nm,0.4s,baz=101,slow=7.5,SNR=3.1						
SUR	**Sutherland**	**81.66**	**239**	P	**P**	**17 19 10.8**	**-1.9**
	11nm,1.0s,baz=114,slow=12,SNR=2.8						
BR101	**Keskin Array S**	**83.98**	**312**	*e*P	**P**	**17 19 24.4**	**0.0**
BRTR	**Keskin Array B**	**83.98**	**312**	P	**P**	**17 19 24.5**	**0.0**
	1.5nm,0.9s,baz=143,slow=6.9,SNR=3.0						

*IDC **13** 17:07:11.8±2.1, 10°.22S×107°.09E, h0km, mb4.1/5, mb1 4.3/6, mb1mx3.7/57, mbtmp4.1/6, ML4.7/1, Error ellipse: s-maj=76.5km s-min=26.6km az=49.0*
*ISCJB **13** 17:07:14.8±1.6, 10°.2S±0°.2×107°.1E±0°.3, h33km, mb4.0/5, Error ellipse: s-maj=43.6km s-min=21.5km az=148.4*
ISC 13 17:07:17.7±1.9, 10°.1S±0°.2×107°.3E±0°.3, h35km, n6, σ0°.35/6, mb4.1/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**3.25**	**6**	Pn	**Pn**	**17 08 06.5**	**+0.1**
	67nm,0.3s,baz=93,slow=22,SNR=4.7						
WRA	**Warramunga Arr**	**27.90**	**114**	P	**P**	**17 13 04.6**	**-0.1**
	5.7nm,1.2s,baz=262,slow=18,SNR=3.0						
CMAR	**Chiang Mai Arr**	**29.52**	**344**	P	**P**	**17 13 18.5**	**-0.5**
	0.9nm,0.9s,baz=187,slow=8.2,SNR=4.1						
MKAR	**Makanchi Array**	**60.85**	**341**	P	**P**	**17 17 26.8**	**+0.2**
	1.6nm,0.6s,baz=138,slow=7.1,SNR=5.4						
KURBB	**Kurchatov Arra**	**65.42**	**340**	P	**P**	**17 17 56.6**	**-0.1**
	0.8nm,0.5s,baz=148,slow=5.8,SNR=4.7						
BVAR	**Borovoye Array**	**70.29**	**337**	P	**P**	**17 18 27.6**	**+0.2**
	2.0nm,0.7s,baz=139,slow=9.2,SNR=5.8						

*IDC **13** 17:09:13.0±2.6, 27°.95N×61°.62E, h48km±26km, mb3.7/14, mb1 3.8/17, mb1mx3.5/73, mbtmp3.9/17, ML3.6/3, Error ellipse: s-maj=22.3km s-min=16.8km az=139.0*
*DSN **13** 17:09:19.2±3.0, 27°.52N×61°.28E, h11km, ML4.1/9, Error ellipse: s-maj=71.3km s-min=16.7km az=176.0*
ISC 13 17:09:04.2±0.8, 27°.34N±0°.08×61°.45E±0°.08, h10km, n31, σ1°.57/31, mb4.0/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**4.81**	**213**	P	**Pb**	**17 10 30.9**	**+2.3**
	1.7nm,0.3s,baz=54,slow=4.4,SNR=37						
WSAR				S	**Sb**	**17 11 23.1**	**-3.5**
	3.8nm,0.3s,baz=53,slow=7.9,SNR=5.5						
BANOM	**Banah**	**4.82**	**254**	*i* P	**Pb**	**17 10 30.2**	**+1.4**
	SNR=76						
SHME	**Shamm**	**4.92**	**256**	*i* P	**Pb**	**17 10 32.4**	**+2.0**
	SNR=12						
SHME				S	**Sb**	**17 11 28.7**	**-1.0**
MDH	**Madha**	**5.05**	**247**	*i* P	**Pb**	**17 10 33.2**	**+0.6**
	SNR=33						
MSFE	**Esma-Masafi**	**5.14**	**249**	*i* P	**Pb**	**17 10 34.3**	**+0.1**
	SNR=13						
UOSS	**Minazif**	**5.28**	**244**	P	**Pb**	**17 10 36.2**	**-0.4**
HATD	**Hatta, Dubai**	**5.39**	**244**	*i* P	**Pb**	**17 10 38.0**	**-0.6**
	SNR=11						
ASHO	**Ashiyiah**	**5.52**	**243**	*i* P	**Pb**	**17 10 40.3**	**-0.5**
	SNR=14						
NAZ	**Nazwa, Dubai**	**5.70**	**247**	*i* P	**Pb**	**17 10 43.9**	**+0.1**
	SNR=6.5						
FAQ	**Al Faqa, Dubai**	**5.86**	**245**	*i* P	**Pb**	**17 10 47.2**	**+0.6**
	SNR=19						
ALNE	**Al Ain**	**6.09**	**239**	*i* P	**Pb**	**17 10 50.1**	**-0.4**
	SNR=9.2						
ASUD	**Al Ashush, Dub**	**6.13**	**245**	*i* P	**Pb**	**17 10 50.9**	**-0.3**
	SNR=42						
THW	**Thamme Wali**	**10.45**	**56**	P	**Pn**	**17 11 35.8**	**+1.7**
GEYT	**Alibeck**	**10.93**	**346**	P	**Pn**	**17 11 39.4**	**-1.4**
	0.1nm,0.3s,baz=174,slow=5.1,SNR=2.3						
AAK	**Ala-Archa**	**18.60**	**31**	P	**P**	**17 13 19.8**	**-2.0**
	0.7nm,0.3s,baz=199,slow=8.7,SNR=5.9						
AKTO	**Aktyubinsk**	**23.22**	**354**	P	**P**	**17 14 09.1**	**-2.2**
	1.3nm,0.4s,baz=151,slow=8.1,SNR=9.8						
MKAR	**Makanchi Array**	**25.43**	**35**	P	**P**	**17 14 31.2**	**-0.8**
	1.0nm,0.3s,baz=216,slow=9.2,SNR=33						
BVAR	**Borovoye Array**	**26.51**	**12**	P	**P**	**17 14 40.6**	**-1.2**
	4.0nm,0.5s,baz=197,slow=10,SNR=30						
KURBB	**Kurchatov Arra**	**26.65**	**25**	P	**P**	**17 14 41.7**	**-1.3**
	1.3nm,0.6s,baz=219,slow=9.4,SNR=13						
ZALV	**Zalesovo Beam**	**31.67**	**27**	P	**P**	**17 15 25.1**	**-2.5**
	0.8nm,0.3s,baz=242,slow=9.6,SNR=5.4						
AKASG	**Malin Array Be**	**33.79**	**322**	P	**P**	**17 15 46.8**	**+0.7**
	0.6nm,0.4s,baz=125,slow=9.1,SNR=4.2						
FINES	**FINESS Array B**	**41.48**	**335**	P	**P**	**17 16 51.0**	**-0.1**
	1.0nm,0.3s,baz=134,slow=7.9,SNR=16						
GERES	**GERESS Array B**	**42.43**	**314**	P	**P**	**17 17 00.6**	**+1.4**
	0.7nm,0.8s,baz=111,slow=5.4,SNR=3.2						
KEST	**Kesra**	**44.75**	**294**	P	**P**	**17 17 22.1**	**+4.0**
	5.0nm,0.9s,baz=126,slow=7.8,SNR=4.1						
HFS	**Hagfors**	**45.99**	**329**	P	**P**	**17 17 27.2**	**-0.2**
	2.3nm,0.4s,baz=112,slow=11,SNR=12						
ARCES	**ARCESS Array B**	**47.09**	**344**	P	**P**	**17 17 35.1**	**-0.8**
	3.2nm,1.0s,baz=142,slow=8.6,SNR=8.0						
NB2	**NORSAR Subarra**	**47.47**	**329**	P	**P**	**17 17 39.4**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=111,slow=7.9						
NOA	**NORSAR Array B**	**47.47**	**329**	P	**P**	**17 17 38.5**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=111,slow=7.7,SNR=4.8						
TORD	**Torodi Ar. Bea**	**57.33**	**268**	P	P	17 18 57.4	+4.5
	comp=Z,1.5nm,0.6s,baz=62,slow=6.9,SNR=8.7						
ILAR	**Eielson Array**	**85.58**	**12**	P	**P**	**17 21 42.5**	**0.0**
	comp=Z,0.4nm,0.7s,baz=320,slow=3.6,SNR=3.6						
ASAR	**Alice Springs**	**86.36**	**119**	P	P	17 21 51.4	+4.3
	comp=Z,0.3nm,0.6s,baz=304,slow=4.9,SNR=4.9						

UCR 13 17:11:29.9±2.4, 9°.33N×82°.78W, h12km±13km, MD3.7, ML3.6, MW4.2(UPA), 1D, Panama-Costa Rica border region

| Code | Station Name | Δ° | AZ° | Phase

BCIP	**Isla Barro Col**	**2.90**	**93**	*i* P	Pn	17 12 14.0	-2.0
BCIP				*i* S	Sn	17 12 46.1	-4.8
AZU	**Azuero**	**2.91**	**122**	*e*P	Pn	17 12 16.3	+0.3
AZU				*i* S	Sn	17 12 50.5	-0.5
UPA	**Univ. de Panam**	**3.22**	**96**	*e*S	Sn	17 12 58.6	-0.1

IDC ***13*** *17:23:50.8±0.3, 9°.96S×107°.38E, h0km, mb5.0/35, mb1 5.1/40, mb1mx5.1/44, mbtmp5.0/40, ML4.9/5, MS4.9/2, Ms1 4.9/2, ms1mx4.4/36, Error ellipse: s-maj=13.2km s-min=9.8km az=58.0*

NEIC ***13*** *17:23:51.5±1.3, 10°.00S×107°.30E, h6km±3km, mb5.4/98, Error ellipse: s-maj=11.2km s-min=9.9km az=128.0*

MOS ***13*** *17:23:52.6±1.2, 9°.82S×107°.37E, h21km, mb5.6/70, Error ellipse: s-maj=8.4km s-min=4.6km az=110.5*

ISCJB ***13*** *17:23:52.5±1.1, 9°.94S±0°.03×107°.37E±0°.03, h22km±7km, mb5.3/184, Error ellipse: s-maj=5.3km s-min=3.3km az=43.9*

BJI ***13*** *17:23:52.2±0.0, 10°.00S×107°.30E, h17km, mb5.2/62, mB6.1/10, Ms5.7/21, Ms7 5.4/20*

DJA ***13*** *17:23:53.3±0.2, 10°.S±2°.×10°.7E±°, h10km, M5.7/43, mB5.7/3, mb5.3/43, MLv5.9/13, Mw(mB)5.3/3*

GCMT ***13*** *17:23:56.5±0.5, 10°.20S±0°.03×107°.24E±0°.04, h28km±1km, MW5.6/59, Moment Tensor Solution. s24,c32; s59,c95; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.65±.22; $M_{\theta\theta}$2.14±.13; $M_{\phi\phi}$0.50±.14; $M_{r\theta}$-1.16±.20; $M_{\theta\phi}$-1.13±.07; $M_{r\phi}$0.46±.26; Best double couple: $M_0$2.96000×10^{17} NP1:ϕ_s115.00000°, δ57.00000°, λ-93.00000°. NP2:ϕ_s300.00000°, δ33.00000°, λ-86.00000°. Principal axes: T 2.9920, Plg12.0000°, Azm207.0000°; N -0.0640, Plg2.0000°, Azm116.0000°; P -2.9280, Plg77.0000°, Azm16.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 17:23:54.0±0.6, 9°.98S±0°.04×107°.35E±0°.04, h20km±2km, h20km:pP-P, n1041, σ1s05/1056, mb5.4/185, 28C-21D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.74**	**253**	*e*Pn	**Pn**	**17 24 20.3**	**-2.9**
CISI	**Cisompet, Garu**	**2.45**	**11**	*e*Pn	**Pn**	**17 24 32.0**	**-1.0**
CISI	**Cisompet, Garu**	**2.45**	**11**	P	**Pn**	**17 24 32.5**	**-0.5**
LEM	**Lembang**	**3.15**	**5**	Pn	**Pn**	**17 24 43.1**	**+0.5**
	750nm,0.3s,baz=125,slow=8.5,SNR=155						
LEM				Sn	**Sn**	**17 25 21.2**	**+1.5**
	820nm,0.3s,baz=347,slow=20,SNR=12						
LEM				LR	LR	17 26 17.6	
	comp=Z,30μm,20.9s,baz=292,slow=47						
YOGI	**Yogyakarta**	**3.62**	**54**	P	**Pn**	**17 24 49.0**	**0.0**
CGJI	**Cibinong**	**3.73**	**334**	P	**Pn**	**17 24 50.0**	**-0.5**
UGM	**Wanagama**	**3.75**	**57**	*e*Pn	**Pn**	**17 24 50.7**	**-0.1**
SBJI	**Serang**	**4.02**	**342**	P	**Pn**	**17 24 55.1**	**+0.6**
WOJI	**Wonogiri, Jawa**	**4.12**	**59**	P	**Pn**	**17 24 55.9**	**0.0**
SMRI	**Semarang**	**4.22**	**47**	*e*Pn	**Pn**	**17 24 58.6**	**+1.3**
PWJI	**Pagerwojo**	**4.81**	**66**	P	**Pn**	**17 25 06.1**	**+0.7**
BLSI	**Bandar Lampung**	**5.04**	**335**	P	**Pn**	**17 25 08.2**	**-0.3**
KASI	**Kota Agung**	**5.25**	**327**	P	**Pn**	**17 25 10.4**	**-1.1**
MDSI	**Maura Dua**	**6.30**	**330**	P	**Pn**	**17 25 24.9**	**-1.0**
JAGI	**Jajag, Banyuwa**	**6.88**	**78**	*e*Pn	**Pn**	**17 25 33.8**	**-0.1**
MNAI	**Manna**	**7.08**	**322**	*e*Pn	**Pn**	**17 25 34.6**	**-2.0**
KMMI	**Kalianget**	**7.16**	**67**	P	**Pn**	**17 25 38.3**	**+0.6**
PBKI	**Pangkalan Bun**	**8.41**	**31**	P	**Pn**	**17 25 56.6**	**+1.8**
KRJI	**Kerinci**	**9.78**	**323**	P	Pn	17 26 26.0	+12
TPRI	**Tanjung Pinang**	**11.19**	**345**	P	**Pn**	**17 26 33.4**	**+0.5**
PDSI	**Padang**	**11.32**	**322**	P	Pn	17 26 52.5	+18
MTKI	**Muara Teweh, K**	**11.70**	**40**	P	Pn	17 26 47.0	+7.0
KSM	**Kuching**	**11.76**	**15**	*e*Pn	**Pn**	**17 26 40.5**	**-0.2**
KSM	**Kuching**	**11.76**	**15**	P	**Pn**	**17 26 43.0**	**+2.3**
WBSI	**Waikabubak, Su**	**11.87**	**89**	P	**Pn**	**17 26 43.3**	**+0.9**
BKNI	**Bangkinang**	**12.01**	**328**	*e*Pn	**Pn**	**17 26 42.5**	**-1.7**
BKNI	**Bangkinang**	**12.01**	**328**	P	Pn	17 26 54.0	+10
MYKOM	**Kota Tinggi**	**12.20**	**343**	*e*Pn	**Pn**	**17 26 46.2**	**-0.6**
KAPI	**Kappang**	**13.25**	**69**	Pn	**Pn**	**17 27 00.9**	**-0.2**
	5.7nm,0.3s,baz=248,slow=10,SNR=21						
KAPI				LR	LR	17 32 58.3	
	comp=Z,4μm,19.5s,baz=250,slow=41						
KAPI	**Kappang**	**13.25**	**69**	*e*Pn	**Pn**	**17 27 01.9**	**+0.8**
SBUM	**Sibu**	**13.27**	**22**	*e*Pn	**Pn**	**17 27 02.4**	**+1.0**
SBUM	**Sibu**	**13.27**	**22**	P	**Pn**	**17 27 04.0**	**+2.6**
BSSI	**Bau Bau, Buton**	**13.56**	**75**	P	**Pn**	**17 27 05.1**	**-0.3**
TTSI	**Tana Toraja**	**14.17**	**62**	P	**P**	**17 27 18.9**	**-2.2**
	241nm,1.2s						
GIRL	**Giralia**	**14.21**	**153**	*e*Pn	Pn	17 27 09.6	-4.6
GIRL	**Giralia**	**14.21**	**153**	P	**Pn**	**17 27 10.2**	**-4.1**
	baz=14,SNR=19						
MMRI	**Maumere**	**14.75**	**86**	*e*Pn	Pn	17 27 17.1	-4.7
GSI	**Gunungsitoli**	**14.85**	**319**	*e*Pn	Pn	17 27 16.9	-6.0
GSI	**Gunungsitoli**	**14.85**	**319**	P	**P**	**17 27 28.9**	**+0.3**
PSI	**Prapat**	**15.22**	**326**	Pn	**Pn**	**17 27 26.7**	**-1.4**
	0.9nm,0.3s,baz=160,slow=10,SNR=2.9						
PSI	**Prapat**	**15.22**	**326**	*e*Pn	**Pn**	**17 27 24.4**	**-3.7**
	62nm,1.0s						
IPM	**Ipoh**	**15.69**	**336**	*e*Pn	**Pn**	**17 27 32.8**	**-1.3**
	239nm,1.1s						
IPM	**Ipoh**	**15.69**	**336**	P	**P**	**17 27 42.0**	**+4.0**
TSI	**Tuntungan**	**16.00**	**326**	P	**P**	**17 27 42.8**	**+1.3**
BATI	**Baumata**	**16.06**	**92**	Pn	**Pn**	**17 27 37.4**	**-1.6**
	9.5nm,0.3s,baz=233,slow=1.0,SNR=20						
BATI				Sn	**Sn**	**17 30 32.2**	**-4.5**
	13nm,0.3s,baz=229,slow=22,SNR=4.9						
BATI	**Baumata**	**16.06**	**92**	*e*Pn	**Pn**	**17 27 37.4**	**-1.6**
BATI				*e*Pn	**Pn**	**17 27 37.4**	**-1.6**
BATI				*e*Sn	**Sn**	**17 30 32.2**	**-4.5**
BATI				*e*Sn	**Sn**	**17 30 32.2**	**-4.5**
BATI	**Baumata**	**16.06**	**92**	P	**P**	**17 27 42.1**	**-0.1**
	76nm,1.1s						
MPSI	**Mapaga**	**16.16**	**51**	P	**Pn**	**17 27 41.3**	**+1.2**
	61nm,1.1s						
KCSI	**Kotacane, Aceh**	**16.46**	**324**	P	**Pn**	**17 27 42.6**	**-1.4**
	80nm,1.5s						
SNSI	**Sinabang, Aceh**	**16.49**	**318**	P	**P**	**17 27 51.4**	**+4.5**
KULM	**Kulim**	**16.57**	**336**	*e*Pn	**Pn**	**17 27 42.2**	**-3.2**
	101nm,1.1s						
KULM	**Kulim**	**16.57**	**336**	P	**P**	**17 27 51.0**	**+3.2**
TPTI	**Tepo**	**16.60**	**322**	P	**Pn**	**17 27 43.9**	**-1.9**
	110nm,1.0s						
PSA00	**Pilbara Seismi**	**16.64**	**135**	*e*Pn	**Pn**	**17 27 42.9**	**-3.4**
	79nm,0.9s						
SOEI	**Soe**	**16.67**	**91**	*e*Pn	**Pn**	**17 27 43.8**	**-3.0**
	242nm,0.8s						
SOEI	**Soe**	**16.67**	**91**	P	**Pn**	**17 27 44.8**	**-2.0**
	369nm,1.1s						
APSI	**Ampana**	**16.84**	**59**	P	P	17 27 59.3	+8.6
MRSI	**Marisa**	**17.86**	**55**	P	**P**	**17 28 02.0**	**0.0**
	106nm,0.8s						
MLSI	**Meulaboh, Aceh**	**17.87**	**322**	P	**P**	**17 28 03.8**	**+1.6**
	609nm,1.1s						
KKM	**Kota Kinabalu**	**18.21**	**29**	*e*Pn	**Pn**	**17 28 04.9**	**-0.9**
	148nm,1.4s						
TRTT	**Trang**	**19.27**	**336**	P	**Pn**	**17 28 19.6**	**+0.9**
	99nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.48**	**116**	P	**P**	**17 28 19.6**	**-0.2**
	1.4nm,0.3s,baz=307,slow=8.4,SNR=45						
FITZ				S	S	17 31 42.6	-17
	2.8nm,0.3s,baz=158,slow=15,SNR=6.4						
FITZ	**Fitzroy Crossi**	**19.48**	**116**	P	**P**	**17 28 20.7**	**+0.9**
	baz=20,SNR=14						
KMSI	**Cibinong**	**19.59**	**59**	P	**P**	**17 28 20.9**	**-0.3**
	158nm,0.8s,2μm						
PKDT	**Phuket**	**19.90**	**333**	P	**Pn**	**17 28 31.4**	**+5.3**
SANI	**Sanana**	**20.13**	**68**	P	**P**	**17 28 26.6**	**-0.4**
	132nm,0.8s						
MORW	**Morawa**	**20.66**	**158**	*e*P	**P**	**17 28 32.5**	**-0.2**
	141nm,1.5s						
MORW	**Morawa**	**20.66**	**158**	P	**P**	**17 28 33.5**	**+0.8**
	baz=21,SNR=13						
KNRA	**Kununurra**	**21.62**	**107**	P	**P**	**17 28 43.6**	**+0.5**
	baz=22,SNR=51						
DLV	**T Lat**	**21.81**	**3**	*e*P	**P**	**17 28 44.4**	**-0.9**
	291nm,1.4s						
BLDU	**Ballidu**	**22.30**	**158**	P	**P**	**17 28 53.8**	**+3.4**
	baz=22						
MSAI	**Masohi**	**22.41**	**74**	P	P	17 29 02.4	+11
TNTI	**Ternate**	**22.61**	**63**	*e*P	**P**	**17 28 52.9**	**-0.9**
	343nm,1.4s						
TNTI	**Ternate**	**22.61**	**63**	P	**P**	**17 28 54.3**	**+0.6**
	87nm,1.0s						
CHBT	**CHBT**	**23.13**	**347**	P	P	17 29 07.4	+8.3
MTN	**Manton Dam**	**23.48**	**99**	*e*P	**P**	**17 29 02.2**	**-0.5**
	206nm,1.6s						
MTN	**Manton Dam**	**23.48**	**99**	P	**P**	**17 29 02.6**	**-0.1**
	baz=24,SNR=22						
KLBR	**Kellerberrin**	**23.57**	**157**	P	**P**	**17 29 04.4**	**+1.0**
	baz=24,SNR=7.6						
SRAK	**Srakaew**	**24.41**	**347**	P	**P**	**17 29 12.0**	**+0.6**
	509μm,1.0s						
NWAO	**Narrogin (SRO)**	**24.59**	**160**	P	**P**	**17 29 13.0**	**+0.1**
	13nm,0.6s,baz=355,slow=6.5,SNR=9.4						
NWAO				S	**S**	**17 33 39.8**	**+6.8**
	21nm,0.7s,baz=252,slow=12,SNR=6.6						
NWAO	**Narrogin (SRO)**	**24.59**	**160**	*e*P	**P**	**17 29 11.5**	**-1.4**
	26nm,0.8s						
NWAO				*e*P	**P**	**17 29 13.0**	**+0.1**
NWAO				*e*S	**S**	**17 33 39.8**	**+6.8**
NWAO	**Narrogin (SRO)**	**24.59**	**160**	P	**P**	**17 29 12.6**	**-0.3**
	baz=25,SNR=6.3						
NWAO	**Narrogin (SRO)**	**24.59**	**160**	*e*P	**P**	**17 29 11.5**	**-1.4**
NWAO				*e*		17 29 13.0	
NWAO				*e*S	**S**	**17 33 39.8**	**+6.8**
NWAO				pmax	pmax		
	comp=Z,26nm,0.8s						
KDU	**Kakadu**	**24.77**	**99**	P	**P**	**17 29 15.1**	**+0.3**
	baz=25,SNR=55						
DAV	**Davao City (W)**	**24.83**	**48**	P	**P**	**17 29 16.0**	**+0.7**
	comp=Z,90nm,0.4s,baz=163,slow=1.0,SNR=7.4						
WRKA	**Warakurna**	**24.91**	**130**	P	**P**	**17 29 15.9**	**0.0**
	baz=25,SNR=42						
KMBL	**Kambalda**	**25.20**	**150**	P	**P**	**17 29 18.2**	**-0.2**
	baz=25						
SIJI	**Sorong**	**25.45**	**71**	P	**P**	**17 29 19.0**	**-1.9**
	comp=Z,41nm,0.9s,baz=268,slow=6.9,SNR=26						
SRDT	**SRDT**	**25.51**	**341**	P	**P**	**17 29 24.2**	**+2.8**
	comp=Z,98nm,1.5s						
H01W3	**Cape Leeuwin H**	**25.55**	**167**	T	T	17 56 29.8	
	baz=341,slow=76,SNR=14						
H01W1	**Cape Leeuwin H**	**25.56**	**167**	T	T	17 56 29.4	
	baz=341,slow=76,SNR=15						
H01W2	**Cape Leeuwin H**	**25.57**	**167**	T	T	17 56 31.6	
	baz=341,slow=76,SNR=21						
FAKI	**Fak Fak**	**25.70**	**76**	*e*P	**P**	**17 29 21.1**	**-2.0**
	comp=Z,59nm,0.7s						
FAKI	**Fak Fak**	**25.70**	**76**	P	**P**	**17 29 23.0**	**-0.2**
	comp=Z,89nm,0.8s						
KHON	**Khomkaen**	**26.53**	**350**	P	**P**	**17 29 32.6**	**+2.0**
	comp=Z,144μm,1.2s						
SKNT	**Sakolnakorn**	**26.99**	**353**	P	**P**	**17 29 35.6**	**+0.9**
	comp=Z,117nm,1.3s						
PANO	**Nakornpanom**	**27.09**	**354**	P	**P**	**17 29 36.5**	**+0.9**
	comp=Z,3.7nm,1.2s						
PBKT	**Sadao Pong**	**27.13**	**346**	P	**P**	**17 29 37.2**	**+1.3**
	comp=Z,19nm,0.8s						
UMPA	**Umpang Tak**	**27.34**	**342**	P	**P**	**17 29 43.5**	**+5.6**
	comp=Z,65μm,0.7s,comp=Z,742μm						
WR1	**Warramunga Arr**	**27.85**	**114**	*e*P	**P**	**17 29 41.1**	**-1.5**
WRA	**Warramunga Arr**	**27.85**	**114**	P	**P**	**17 29 41.1**	**-1.5**
	comp=Z,32nm,0.7s,baz=286,slow=12,SNR=136						
WRAB	**Tennant Creek**	**27.86**	**114**	*e*P	**P**	**17 29 41.7**	**-0.9**
	comp=Z,39nm,0.7s						
WRAB	**Tennant Creek**	**27.86**	**114**	*ce*P	**P**	**17 29 42.6**	**0.0**
WRAB				pmax	pmax		
	comp=Z,37nm,0.7s						
WB2	**Warramunga Arr**	**27.86**	**114**	*e*P	**P**	**17 29 41.8**	**-0.8**
	comp=Z,36nm,0.7s						
FORT	**Forrest**	**28.27**	**140**	*e*P	**P**	**17 29 45.6**	**-0.6**
	comp=Z,48nm,0.7s						
FORT	**Forrest**	**28.27**	**140**	P	**P**	**17 29 46.3**	**+0.2**
	baz=28,SNR=6.9						
AS31	**Alice Springs**	**28.76**	**122**	*e*P	**P**	**17 29 50.1**	**-0.5**
	comp=Z,6.6nm,0.6s						
ASAR	**Alice Springs**	**28.76**	**122**	P	**P**	**17 29 50.1**	**-0.5**
	comp=Z,5.0nm,0.6s,baz=300,slow=8.4,SNR=85						
ASAR				PcP	**PcP**	**17 33 01.0**	**+0.3**
	comp=Z,9.5nm,0.6s,baz=294,slow=1.9,SNR=13						
LAMP	**Lampang**	**29.33**	**345**	P	**P**	**17 29 57.4**	**+1.8**
	comp=Z,112μm,0.9s,comp=Z,877μm						
CM31	**Chiang Mai Arr**	**29.45**	**344**	*e*P	**P**	**17 29 56.7**	**0.0**
	comp=Z,57nm,0.9s						
CMAR	**Chiang Mai Arr**	**29.45**	**344**	P	**P**	**17 29 56.4**	**-0.4**
	comp=Z,9.3nm,1.0s,baz=176,slow=8.6,SNR=41						
CMAR				PcP	**PcP**	**17 33 03.6**	**+1.2**
	comp=Z,4.7nm,0.7s,baz=198,slow=3.4,SNR=8.8						
CMAR	**Chiang Mai Arr**	**29.45**	**344**	*ce*P	**P**	**17 29 57.2**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CHTO	**Chiang Mai**	**29.79**	**344**	*e*P	**P**	**17 29 60.0**	**+0.3**
	comp=Z,56nm,1.1s						
CHTO	**Chiang Mai**	**29.79**	**344**	*e*P	**P**	**17 30 00.0**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,56nm,1.1s						
SRPI	**Serui, Papua**	**29.82**	**76**	P	**P**	**17 30 03.5**	**+3.4**
	comp=Z,86nm,0.6s						
SLVN	**Son La**	**31.30**	**354**	*e*P	**P**	**17 30 13.7**	**+0.6**
	comp=Z,72nm,1.2s						
QIS	**Mount Isa**	**32.78**	**113**	P	**P**	**17 30 26.6**	**+0.5**
	baz=33,SNR=5.7						
GENI	**Genyem**	**33.41**	**80**	P	**P**	**17 30 32.8**	**+1.1**
	comp=Z,31nm,1.0s						
H08S2	**Diego Garcia H**	**34.51**	**271**	T	T	18 08 27.6	
	baz=92,slow=74,SNR=5.1						
H08S3	**Diego Garcia H**	**34.52**	**271**	T	T	18 08 30.4	
	baz=213,slow=74,SNR=5.1						
H08S1	**Diego Carcia H**	**34.53**	**271**	T	T	18 08 27.6	
	SNR=5.6						
BBOO	**Buckleboo**	**34.87**	**135**	*e*P	**P**	**17 30 43.7**	**-0.5**
	comp=Z,30nm,1.2s						
BBOO	**Buckleboo**	**34.87**	**135**	P	**P**	**17 30 44.2**	**+0.1**
	baz=35,SNR=6.9						
KMI	**Kunming**	**35.18**	**353**	P	**P**	**17 30 49.3**	**+2.2**
KMI				pP	sP	17 30 51.9	-0.9
KMI				sP	pP	17 30 53.8	+2.7
KMI				pmax	pmax		
	comp=Z,23nm,1.3s						
KMI				LR	LR		
	comp=Z,6μm,13.6s						
KMI				LR	LR		
	comp=Z,2μm,15.5s						
KMI				LR	LR		
	comp=Z,6μm,12.6s						
COEN	**Coen**	**35.24**	**100**	*e*P	**P**	**17 30 47.8**	**+0.2**
	comp=Z,39nm,0.8s						
COEN	**Coen**	**35.24**	**100**	P	**P**	**17 30 48.2**	**+0.6**
	baz=35,SNR=25						
TPUB	**Ta-pu**	**35.54**	**21**	*e*P	**P**	**17 30 50.3**	**+0.4**
YULB	**Yu-li**	**35.87**	**22**	*e*P	**P**	**17 30 52.6**	**-0.2**
	comp=Z,33nm,0.8s						
SSLB	**Suanglung**	**36.10**	**21**	*e*P	**P**	**17 30 55.0**	**+0.2**
	comp=Z,58nm,0.8s						
GYA	**Guiyang**	**36.23**	**359**	⇓*i*P	**P**	**17 30 56.8**	**+0.9**
GYA				pP	sP	17 31 01.3	-0.3
GYA				PP	**PnPn**	**17 32 17.8**	**-0.1**
GYA				S	**S**	**17 36 33.4**	**-2.1**
GYA				pmax	pmax		
	comp=Z,70nm,1.1s						
GYA				LR	LR		
	comp=Z,1μm,16.9s						
GYA				LR	LR		
	comp=Z,950nm,17.3s						
YHNB	**Yeheng**	**37.06**	**21**	*e*P	**P**	**17 31 03.2**	**+0.1**
	comp=Z,228nm,1.9s						
HTT	**Hallett**	**37.23**	**134**	P	**P**	**17 31 04.5**	**+0.1**
	baz=37,SNR=4.3						
YOJ	**Yonaguni jima**	**37.49**	**24**	*e*P	**P**	**17 31 06.7**	**+0.1**
	comp=Z,520nm,1.7s						
YOJ	**Yonaguni jima**	**37.49**	**24**	*e*P	**P**	**17 31 06.7**	**+0.1**
YOJ				pmax	pmax		
	comp=Z,520nm,1.7s						
SHL	**Shillong**	**38.41**	**337**	*e*P	**P**	**17 31 14.6**	**0.0**
	comp=Z,294nm,1.4s						
SHL	**Shillong**	**38.41**	**337**	*e*P	**P**	**17 31 14.6**	**0.0**
SHL				pmax	pmax		
	comp=Z,294nm,1.4s						
SHL	**Shillong**	**38.41**	**337**	⇓*i*P	**P**	**17 31 15.0**	**+0.4**
SHL				*e*S	**S**	**17 37 07.0**	**-1.8**
STKA	**Stephens Creek**	**38.44**	**130**	P	**P**	**17 31 14.9**	**+0.3**
	comp=Z,68nm,0.7s,baz=303,slow=8.2,SNR=147						
STKA				PcP	**PcP**	**17 33 27.4**	**-0.4**
	comp=Z,13nm,0.6s,baz=7.4,slow=3.2,SNR=4.2						
STKA	**Stephens Creek**	**38.44**	**130**	*e*P	**P**	**17 31 14.7**	**+0.1**
	comp=Z,14nm,0.7s						
STKA	**Stephens Creek**	**38.44**	**130**	P	**P**	**17 31 14.9**	**+0.3**
	baz=39,SNR=87						
CTAO	**Charters Tower**	**38.80**	**110**	*e*P	**P**	**17 31 18.1**	**+0.3**
	comp=Z,14nm,0.8s						
CTAO	**Charters Tower**	**38.80**	**110**	*e*P	**P**	**17 31 18.2**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,13nm,0.8s						
PMG	**Port Moresby**	**39.23**	**93**	*e*P	**P**	**17 31 22.6**	**+1.2**
	comp=Z,68nm,1.1s						
PMG	**Port Moresby**	**39.23**	**93**	*ce*P	**P**	**17 31 22.5**	**+1.1**
PMG				pmax	pmax		
	comp=Z,258nm,1.7s						
ENH	**Enshi**	**40.07**	**3**	*e*P	**P**	**17 31 28.1**	**-0.1**
	comp=Z,34nm,0.9s						
MANU	**Manus Island**	**40.53**	**81**	*e*P	**P**	**17 31 32.9**	**+0.6**
	comp=Z,24nm,0.7s						
CD2	**Chengdu**	**40.80**	**355**	*e*P	**P**	**17 31 35.5**	**+1.2**
WHN	**Wuhan**	**40.85**	**9**	⇓P	**P**	**17 31 35.3**	**+0.7**
CMSA	**Cobar Meteorol**	**41.47**	**127**	P	**P**	**17 31 40.6**	**+0.8**
	baz=42,SNR=23						
RMQ	**Roma**	**42.39**	**118**	P	**P**	**17 31 48.5**	**+1.1**
	baz=42,SNR=11						
LSA	**Lhasa**	**42.43**	**339**	*e*P	**P**	**17 31 47.5**	**-0.6**
	comp=Z,105nm,1.0s						
LSA	**Lhasa**	**42.43**	**339**	P	**P**	**17 31 49.2**	**+1.1**
LSA	**Lhasa**	**42.43**	**339**	*e*P	**P**	**17 31 47.5**	**-0.6**
LSA				pmax	pmax		
	comp=Z,105nm,1.0s						
JIRN	**Jiri**	**42.67**	**332**	*e*P	**P**	**17 31 50.6**	**+0.6**
	comp=Z,475nm,1.0s						
PKI	**Pulchoki**	**42.96**	**331**	*e*P	**P**	**17 31 52.3**	**0.0**
	comp=Z,205nm,1.3s						
PKIN	**Phulchoki**	**42.97**	**331**	*e*P	**P**	**17 31 52.2**	**-0.1**
GUN	**Gumba**	**43.02**	**332**	*e*P	**P**	**17 31 53.3**	**+0.5**
	comp=Z,846nm,1.6s						
DMN	**Daman**	**43.14**	**331**	*e*P	**P**	**17 31 53.9**	**+0.2**
	comp=Z,185nm,1.2s						
KKN	**Kakani**	**43.21**	**331**	*e*P	**P**	**17 31 54.3**	**+0.1**
	comp=Z,182nm,1.1s						
NJ2	**Nanjing**	**43.22**	**14**	*e*P	**P**	**17 31 55.3**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
XAN	**Xi'an**	**43.80**	**2**	P	**P**	**17 31 58.4**	**-0.3**
XAN				pmax	pmax		
	comp=Z,20nm,1.2s						
XAN	**Xi'an**	**43.80**	**2**	*e*P	**P**	**17 31 58.4**	**-0.3**
	comp=Z,105nm,1.4s						
XAN	**Xi'an**	**43.80**	**2**	*e*P	**P**	**17 31 58.4**	**-0.3**
XAN				pmax	pmax		
	comp=Z,105nm,1.4s						
KOLN	**Koldanda**	**44.02**	**329**	*e*P	**P**	**17 32 01.0**	**+0.3**
	comp=Z,351nm,0.9s						
EIDS	**Eidsvold**	**44.17**	**116**	*e*P	**P**	**17 32 02.5**	**+0.7**
	comp=Z,33nm,1.4s						
EIDS	**Eidsvold**	**44.17**	**116**	P	**P**	**17 32 02.5**	**+0.7**
	baz=44,SNR=6.7						
DANN	**Dangsing**	**44.41**	**330**	*e*P	**P**	**17 32 04.1**	**+0.1**
	comp=Z,222nm,0.7s						
PYUN	**Piuthan**	**44.60**	**329**	*e*P	**P**	**17 32 05.5**	**+0.2**
	comp=Z,207nm,0.9s						
YNG	**Young**	**44.63**	**129**	P	**P**	**17 32 06.1**	**+0.7**
	baz=45,SNR=17						
CAN	**Canberra**	**45.49**	**130**	*e*P	**P**	**17 32 12.6**	**+0.4**
	comp=Z,24nm,0.7s						
CAN	**Canberra**	**45.49**	**130**	P	**P**	**17 32 13.5**	**+1.3**
	baz=46						
CAN	**Canberra**	**45.49**	**130**	*e*P	**P**	**17 32 12.6**	**+0.4**
CAN				pmax	pmax		
	comp=Z,24nm,0.7s						
ARMA	**Armidale**	**45.90**	**123**	*e*P	**P**	**17 32 16.6**	**+1.0**
	comp=Z,14nm,0.9s						
ARMA	**Armidale**	**45.90**	**123**	P	**P**	**17 32 17.3**	**+1.7**
	baz=46,SNR=7.7						
LZH	**Lanzhou**	**45.94**	**356**	*e*P	**P**	**17 32 17.3**	**+1.5**
LZH				pP	sP	17 32 21.0	-0.6
LZH				sP	pwP	17 32 24.8	-4.0
LZH				pmax	pmax		
	comp=Z,56nm,1.2s						
MGCD	**Mangrove Creek**	**46.34**	**127**	P	**P**	**17 32 20.7**	**+1.7**
	baz=46,SNR=5.3						
NDI	**New Delhi**	**48.22**	**324**	*e*P	**P**	**17 32 33.0**	**-0.5**
JNU	**Nakatsue**	**48.37**	**27**	*e*P	**P**	**17 32 32.9**	**-1.8**
	comp=Z,67nm,1.5s						
GTA	**Gaotai**	**49.64**	**352**	P	**P**	**17 32 45.5**	**+1.1**
GTA				pP	sP	17 32 49.6	-0.6
GTA				sP	pwP	17 32 52.8	-4.7
GTA				pmax	pmax		
	comp=Z,50nm,1.0s						
GTA				LR	LR		
	comp=Z,2μm,17.2s						
GTA				LR	LR		
	comp=Z,3μm,20.3s						
GTA				LR	LR		
	comp=Z,2μm,19.2s						
TJN	**Taejon**	**49.81**	**21**	*ce*P	**P**	**17 32 44.7**	**-0.9**
DL2	**Dalian**	**50.42**	**14**	P	**P**	**17 32 54.8**	**+4.6**
DL2				pmax	pmax		
	comp=Z,41nm,1.2s						
KSRS	**Korea Array**	**50.98

comp=Z,19nm,1.2s
MDJ pmax pmax
comp=Z,5μm,12.5s
MDJ Mudanjiang 57.95 19 *e*P **P 17 33 44.1 -0.8**
comp=Z,16nm,0.9s
USA0B Ussuriysk Arra 58.38 21 *e*P **P 17 33 47.2 -0.8**
comp=Z,80nm,1.4s
USRK Ussuriysk Ar. 58.38 21 P **P 17 33 47.2 -0.8**
comp=Z,8.4nm,0.5s,baz=220,slow=5.0,SNR=35
NRN Naryn 58.73 333 *e*P **P 17 33 49.9 -1.0**
comp=Z,40nm,1.3s
NRN Naryn 58.73 333 *e*P **P 17 33 49.9 -1.0**
NRN pmax pmax
comp=Z,40nm,1.3s
PDGK Podgornoye 58.82 337 P **P 17 33 50.7 -0.6**
PDGK pmax pmax
comp=Z,49nm,1.2s
UZB Uzynbulak 58.85 336 *e*P **P 17 33 49.1 -2.4**
UZB pmax pmax
comp=Z,17nm,1.5s
UZB Uzynbulak 58.85 336 *e*P **P 17 33 49.1 -2.4**
comp=Z,17nm,1.5s
KPKS Kokpek 59.25 336 *e*P **P 17 33 51.8 -2.4**
KPKS pmax pmax
comp=Z,23nm,1.4s
KPKS Kokpek 59.25 336 *e*P **P 17 33 51.9 -2.4**
comp=Z,23nm,1.4s
KZA Kyzart 59.59 333 P **P 17 33 57.3 +0.4**
SNR=24
BOOM Boomskoye usch 59.61 333 *e*P **P 17 33 56.0 -0.8**
comp=Z,72nm,1.7s
MDOK Medeo 59.67 335 *e*P **P 17 33 55.3 -1.9**
MDOK pmax pmax
comp=Z,187nm,1.7s
MDOK Medeo 59.67 335 *e*P **P 17 33 55.4 -1.9**
comp=Z,187nm,1.7s
GAR Garm 59.68 327 *e*P **P 17 33 55.6 -1.6**
GAR Garm 59.68 327 *e*P **P 17 33 55.7 -1.6**
UCH Uchtor 60.04 332 P **P 17 33 59.9 -0.2**
SNR=7.8
TKM2 Tokmak 2 60.10 334 P **P 17 34 00.0 -0.2**
SNR=20
TKM2 Tokmak 2 60.10 334 P **P 17 33 59.2 -1.0**
TKM2 pmax pmax
comp=Z,40nm,1.2s
KBK Karagaybulak 60.18 333 P **P 17 34 01.0 +0.2**
SNR=12
BTK Batken 60.19 328 *e*P **P 17 34 00.4 -0.3**
comp=Z,98nm,1.4s
BTK Batken 60.19 328 *e*P **P 17 34 00.4 -0.3**
BTK pmax pmax
comp=Z,98nm,1.4s
ZAK Zakamensk 60.21 357 *e*P **P 17 34 00.3 -0.4**
ZAK pmax pmax
comp=Z,21nm,1.3s
AAK Ala-Archa 60.37 333 P **P 17 34 00.9 -1.1**
comp=Z,4.8nm,0.8s,baz=132,slow=6.5,SNR=11
AAK PcP **PcP 17 34 47.7 +0.7**
comp=Z,12nm,0.8s,baz=17,slow=5.3,SNR=8.1
AAK Ala-Archa 60.37 333 *e*P **P 17 34 01.6 -0.4**
comp=Z,14nm,0.8s
AAK Ala-Archa 60.37 333 *i* P **P 17 34 01.7 -0.4**
AAK pmax pmax
comp=Z,19nm,1.3s
FRU1 Bishkek 60.45 333 *e*P **P 17 34 02.1 -0.3**
comp=Z,24nm,0.9s
FRU1 Bishkek 60.45 333 *e*P **P 17 34 02.1 -0.3**
FRU1 pmax pmax
comp=Z,24nm,0.9s
CHMS Chumysh 60.54 333 P **P 17 34 02.4 -0.6**
SNR=6.0
ZSN Zaisan 60.58 343 *e*P **P 17 34 01.4 -1.7**
ZSN pmax pmax
comp=Z,11nm,1.3s
ZSN Zaisan 60.58 343 *e*P **P 17 34 01.5 -1.7**
comp=Z,11nm,1.3s
ALNE Al Ain 60.69 305 P **P 17 34 04.3 -0.1**
EKS2 Erkin-Say 60.72 332 P **P 17 34 04.3 0.0**
SNR=12
ASHO Ashiyiah 60.73 306 *i* P **P 17 34 04.4 -0.3**
SNR=7.2
UOSS Minazif 60.74 306 *e*P **P 17 34 03.5 -1.2**
comp=Z,40nm,1.4s
UOSS Minazif 60.74 306 P **P 17 34 04.1 -0.7**
HATD Hatta, Dubai 60.74 306 *i* P **P 17 34 04.7 -0.1**
SNR=6.9
MK31 Makanchi Array 60.79 341 *e*P **P 17 34 04.1 -0.5**
comp=Z,22nm,1.0s
MK31 Makanchi Array 60.79 341 *e*P **P 17 34 04.1 -0.5**
MK31 pmax pmax
comp=Z,22nm,1.0s
MK32 Makanchi Array 60.79 341 *e*P **P 17 34 04.5 -0.1**
MK32 *e*S **S 17 42 27.6 +6.6**
MKAR Makanchi Array 60.79 341 P **P 17 34 04.5 -0.1**
comp=Z,14nm,0.7s,baz=141,slow=7.8,SNR=90
MKAR S **S 17 42 27.6 +6.6**
comp=Z,2.2nm,1.1s,baz=141,slow=18,SNR=6.0
TEY Ternei 60.80 23⇓ *e*P **P 17 34 03.3 -1.3**
TEY pmax pmax
comp=Z,30nm,0.9s
TEY pmax pmax
comp=N,10.0nm,1.1s
USP Ospenovka 60.87 333 P **P 17 34 04.8 -0.4**
SNR=7.8
MAKZ Makanchi 60.91 340 *e*P **P 17 34 04.9 -0.5**
comp=N,38nm,1.4s
MAKZ Makanchi 60.91 340 *e*P **P 17 34 04.9 -0.5**
MAKZ pmax pmax
comp=Z,38nm,1.4s
MSFE Esma-Masafi 60.97 306 P **P 17 34 06.4 +0.1**
FAQ Al Faqa, Dubai 61.14 305 *i* P **P 17 34 07.1 -0.3**
SNR=14
NAZ Nazwa, Dubai 61.20 306 *i* P **P 17 34 07.5 -0.3**
SNR=6.0
ASUD Al Ashush, Dub 61.29 305 P **P 17 34 08.5 0.0**
SHME Shamm 61.32 307 P **P 17 34 08.8 +0.1**
TLY Talaya 61.49 357 *i* P **P 17 34 09.3 0.0**
TLY pmax pmax
comp=Z,58nm,1.3s
MOY Mondy 61.64 356 *e*P **P 17 34 11.3 +0.9**
MOY pmax pmax
comp=Z,75nm,1.8s
DGZ Jazzator, Alta 61.94 345*d* *i*P **P 17 34 13.1 +0.6**
DGZ pmax pmax
comp=Z,66nm,1.3s
IRK Irkutsk 62.03 358 *e*P **P 17 34 12.6 -0.3**
IRK pmax pmax
comp=Z,62nm,2.8s
JBG Jabagly 62.08 330 *e*P **P 17 34 11.9 -1.7**
JBG pmax pmax
comp=Z,24nm,1.3s
IUG Iuzhnay 62.13 329 *e*P **P 17 34 11.2 -2.7**
IUG pmax pmax
comp=Z,12nm,1.3s
IUG Iuzhnay 62.13 329 *e*P **P 17 34 11.3 -2.7**
comp=Z,12nm,1.3s
MLZ Mavora Lakes 62.53 136 *e*P **P 17 34 16.4 -0.1**
comp=Z,71nm,1.4s
KK31 Karatay Array 62.60 330 *e*P **P 17 34 15.8 -1.1**
comp=Z,24nm,1.4s
KK31 Karatay Array 62.60 330 *e*P **P 17 34 15.9 -1.1**
KK31 pmax pmax
comp=Z,24nm,1.4s
KKAR Karatay Array 62.60 330 *e*P **P 17 34 15.8 -1.1**
comp=Z,24nm,1.4s
KKAR Karatay Array 62.60 330 *e*P **P 17 34 15.8 -1.1**
KKAR pmax pmax
comp=Z,24nm,1.4s
KLR Kul'dur 62.74 18⇑ *i*P **P 17 34 16.6 -1.1**
KLR pmax pmax
comp=Z,73nm,1.4s
MAW Mawson 64.63 197 P **P 17 34 31.0 +1.1**
comp=Z,13nm,0.5s,baz=63,slow=5.1,SNR=66
MAW Mawson 64.63 197 *e*P **P 17 34 30.9 +1.1**
comp=Z,3.2nm,0.6s
MAW Mawson 64.63 197 P **P 17 34 31.1 +1.1**
baz=65,SNR=42
MAW Mawson 64.63 197 P **P 17 34 31.0 +1.1**
OXZ Oxford 64.84 133 *e*P **P 17 34 31.4 -0.4**
comp=Z,101nm,1.7s
YSS Yuzh-Sakhalins 64.88 26 *e*P **P 17 34 31.0 -0.7**
comp=Z,88nm,1.3s
YSS Yuzh-Sakhalins 64.88 26⇓ *e*P **P 17 34 31.1 -0.7**
YSS pmax pmax
comp=Z,50nm,1.4s
THZ Tophouse 65.21 131 *e*P **P 17 34 34.7 +0.4**
comp=Z,182nm,1.8s

KURBB Kurchatov Arra 65.36 340 P **P 17 34 35.0 +0.2**
comp=Z,33nm,0.8s,baz=157,slow=5.2,SNR=190
KURK Kurchatov 65.41 340 *e*P **P 17 34 35.1 0.0**
comp=Z,80nm,1.0s
KURK Kurchatov 65.41 340 *i* P **P 17 34 35.2 0.0**
KURK pmax pmax
comp=Z,114nm,1.3s
GRNR Gornyy 65.56 20 *e*P **P 17 34 35.0 -1.2**
GRNR pmax pmax
comp=Z,16nm,1.0s
ZEA Zeya 65.69 13 *e*P **P 17 34 37.0 +0.1**
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=E,18nm,1.0s
ZEA pmax pmax
comp=Z,57nm,1.2s
GEYT Alibeck 66.22 319 P **P 17 34 40.6 -0.1**
comp=Z,8.2nm,0.8s,baz=145,slow=5.4,SNR=26
GYA0B ALIBECK ARRAY 66.22 319 *e*P **P 17 34 40.4 -0.3**
comp=Z,42nm,1.1s
ZAA0 Zalesovo Array 66.49 346 *e*P **P 17 34 41.2 -0.8**
comp=Z,43nm,1.3s
ZALV Zalesovo Beam 66.49 346 P **P 17 34 41.5 -0.6**
comp=Z,13nm,0.9s,baz=134,slow=4.3,SNR=46
ZAA1 Zalesovo Array 66.49 346 *e*P **P 17 34 41.5 -0.6**
BRZS Berezniki 66.95 336 *e*P **P 17 34 43.1 -2.0**
BRZS pmax pmax
comp=Z,36nm,1.1s
BRZS Berezniki 66.95 336 *e*P **P 17 34 43.2 -1.9**
comp=Z,36nm,1.1s
DAMY Dhamar 67.01 290 *e*P **P 17 34 47.8 +1.2**
comp=Z,76nm,1.3s
ATD Arta Tunnel 67.58 287 P **P 17 34 50.2 +0.3**
comp=Z,5.9nm,0.5s,baz=259,slow=23,SNR=3.7
BKZ Black Stump Fm 67.61 128 *e*P **P 17 34 49.8 +0.1**
comp=Z,45nm,0.6s
NVS Novosibirsk 67.69 345⇓ *i*P **P 17 34 49.5 -0.2**
NVS *e*S **S 17 43 46.7 +0.8**
NVS pmax pmax
comp=Z,53nm,1.9s
NVS pmax pmax
comp=N,35nm,1.8s
NVS pmax pmax
comp=E,27nm,1.8s
NVS smax smax
comp=E,13nm,2.0s
BOD Bodaibo 67.78 4 *e*P **P 17 34 50.1 -0.1**
BOD pmax pmax
comp=Z,43nm,1.8s
KMBO Kilima Mbogo 70.21 272 P **P 17 35 07.4 +0.9**
comp=Z,4.0nm,0.8s,baz=69,slow=5.1,SNR=10
KMBO Kilima Mbogo 70.21 272 *e*P **P 17 35 05.6 -0.9**
comp=Z,19nm,1.4s
KMBO Kilima Mbogo 70.21 272 P **P 17 35 07.4 +0.9**
KMBO Kilima Mbogo 70.21 272 *e*P **P 17 35 05.6 -0.9**
KMBO pmax pmax
comp=Z,19nm,1.4s
BVAR Borovoye Array 70.23 337 P **P 17 35 05.6 +0.1**
comp=Z,40nm,0.7s,baz=142,slow=8.5,SNR=317
BRVK Borovoye 70.30 337 *e*P **P 17 35 05.7 -0.2**
comp=Z,39nm,0.8s
BRVK Borovoye 70.30 337 P **P 17 35 05.0 -0.9**
BRVK pmax pmax
comp=Z,46nm,0.8s
AB31 Akbulak array 72.14 330 *i* P **P 17 35 16.4 -0.8**
AB31 pmax pmax
comp=Z,29nm,0.6s
ABKAR Akbulak array 72.14 330 *e*P **P 17 35 16.8 -0.4**
comp=Z,177nm,1.4s
SYO Syowa Base 72.84 200⇓ *e*P **P 17 35 20.0 -1.1**
VNDA Vanda 72.99 169 P **P 17 35 21.6 -0.2**
comp=Z,4.6nm,0.8s,baz=312,slow=6.4,SNR=33
VNDA Vanda 72.99 169 *e*P **P 17 35 21.6 -0.2**
comp=Z,6.1nm,0.8s
YAK Yakutsk 73.88 11 *e*P **P 17 35 26.2 -0.9**
comp=Z,126nm,1.2s
YAK Yakutsk 73.88 11 *e*P **P 17 35 26.4 -0.7**
YAK *e*PP **pwP 17 35 40.3 +0.2**
YAK *e*S **S 17 44 57.8 +0.2**
YAK *e*SS ScS 17 45 47.9 +12
SBA Scott Base 74.07 169 *e*P **P 17 35 29.2 +1.0**
comp=Z,17nm,1.3s
SBA Scott Base 74.07 169 *e*P **P 17 35 29.2 +1.0**
SBA pmax pmax
comp=Z,17nm,1.3s
AKT Akhty 74.89 318⇓ *i*P **P 17 35 33.4 -0.3**
AKT *e* 17 35 46.7
AKT *e* 17 38 18.8
AKT pmax pmax
comp=Z,27nm,0.8s
MAK Makhachkala 75.74 319 *e*P P 17 35 32.5 -5.9
MAK *e*S **S 17 45 11.6 -7.6**
MAK pmax pmax
comp=Z,188nm,1.3s
PEA0B Petropavlovsk- 76.02 29 *e*P **P 17 35 39.6 -0.2**
comp=Z,25nm,0.7s
PETK Petropavlovsk- 76.02 29 P **P 17 35 39.7 -0.1**
comp=Z,21nm,0.7s,baz=209,slow=2.7,SNR=48
PEA1 Petropavlovsk- 76.02 29 *e*P **P 17 35 39.7 -0.1**
GNI Garni 76.30 316 *e*P **P 17 35 41.2 -0.7**
comp=Z,33nm,1.3s
GNI Garni 76.30 316*ce*P **P 17 35 41.4 -0.5**
GNI pmax pmax
comp=Z,196nm,1.7s
PET Petropavlovsk 76.42 29 *e*P **P 17 35 41.5 -0.5**
PET pmax pmax
comp=Z,38nm,0.8s
MBAR Mbarara 76.71 272 *e*P **P 17 35 45.5 +0.7**
comp=Z,25nm,1.2s
MBAR Mbarara 76.71 272 *e*P **P 17 35 45.5 +0.7**
MBAR pmax pmax
comp=Z,25nm,1.2s
SVE Sverdlovsk 76.85 336*c i*P **P 17 35 45.0 +0.6**
SVE pmax pmax
comp=Z,128nm,1.5s
GROC Groznyy 76.96 319 *e*P **P 17 35 43.8 -1.5**
GROC *e* 17 35 54.0
GROC *e* 17 38 34.8
GROC pmax pmax
comp=Z,61nm,1.0s
TBLG Delisi 77.00 317 *e*P **P 17 35 45.6 0.0**
comp=Z,97nm,1.4s
TBLG Delisi 77.00 317 *e*P **P 17 35 45.6 0.0**
TBLG pmax pmax
comp=Z,97nm,1.4s
LSZ Lusaka 77.06 257 *e*P **P 17 35 46.0 -0.7**
comp=Z,63nm,1.6s
LSZ Lusaka 77.06 257 *e*P **P 17 35 46.0 -0.7**
LSZ pmax pmax
comp=Z,63nm,1.6s
ARU Arti 77.45 335 P **P 17 35 47.9 +0.1**
comp=Z,8.4nm,0.6s,baz=140,slow=3.4,SNR=47
ARU Arti 77.45 335 *e*P **P 17 35 47.7 0.0**
comp=Z,78nm,1.1s
ARU Arti 77.45 335*d i*P **P 17 35 47.8 +0.1**
ARU S **S 17 45 39.7 +2.4**
ARU pmax pmax
comp=Z,129nm,1.8s
MA2 Magadan 77.53 21*ce*P **P 17 35 48.4 +0.3**
MA2 pmax pmax
comp=Z,109nm,2.5s
AKH Akhalkalaki 77.70 316 *e*P **P 17 35 49.8 0.0**
comp=Z,53nm,1.6s
AKH Akhalkalaki 77.70 316⇓ *i*P **P 17 35 50.0 +0.2**
AKH Akhalkalaki 77.70 316 *e*P **P 17 35 49.8 0.0**
AKH pmax pmax
comp=Z,53nm,1.6s
ZEI Tsey 78.02 318 *e*P **P 17 35 50.6 -0.9**
ZEI pmax pmax
comp=Z,21nm,0.9s
BOSA Boshof 78.39 243 P **P 17 35 53.4 -0.5**
comp=Z,2.7nm,0.5s,baz=117,slow=2.7,SNR=12
LBTB Lobatse 78.43 246 *e*P **P 17 35 54.6 +0.5**
comp=Z,11nm,0.6s
LBTB Lobatse 78.43 246 *e*P **P 17 35 54.6 +0.5**
LBTB pmax pmax
comp=Z,11nm,0.6s
NCK Nalchik 78.53 318 *i* P **P 17 35 54.1 0.0**
NCK pmax pmax
comp=Z,22nm,0.5s
BCA Borcka 79.00 316⇓ *i*P **P 17 35 56.4 -0.3**
NEY Neytrino 79.00 318 *i* P **P 17 35 57.4 +0.5**
NEY pmax pmax
comp=Z,9.0nm,2.1s
KBZ Khabaz 79.09 318 P **P 17 35 57.2 +0.1**

comp=Z,14nm,0.8s,baz=117,slow=4.2,SNR=32
ASF Jabal al Asfar 79.15 306 P **P 17 35 58.8 +1.0**
comp=Z,39nm,1.4s
KIV Kislovodsk 79.32 318 *e*P **P 17 35 58.5 0.0**
comp=Z,13nm,0.8s
KIV Kislovodsk 79.32 318 P **P 17 35 59.5 +1.0**
KIV Kislovodsk 79.32 318 *e*P **P 17 35 58.5 0.0**
KIV pmax pmax
comp=Z,13nm,0.8s
JDRJ Daraweish 79.69 304 P **P 17 36 01.6 +0.7**
comp=Z,58nm,1.5s
HSUJ Al Zarqa 79.69 305 P **P 17 36 01.8 +1.0**
WALJ Wala 79.83 305 P **P 17 36 02.6 +1.2**
comp=Z,24nm,0.9s
AQBJ Aqaba 79.89 303 P **P 17 36 04.4 +2.6**
comp=Z,56nm,0.8s
EIL Elat 79.95 303 P **P 17 36 02.7 +0.5**
comp=Z,32nm,1.3s
HRFI Mount Harif 79.99 303 P **P 17 36 03.4 +1.0**
comp=Z,75nm,1.4s
LISJ El Lisan 80.00 304 P **P 17 36 03.8 +1.5**
comp=Z,56nm,1.1s
QSPA South Pole Qui 80.03 180 *e*P **P 17 36 01.8 -0.2**
comp=Z,25nm,1.2s
SHMJ Saham 80.23 306 P **P 17 36 03.8 +0.2**
NRIK Noril'sk 80.33 353 P **P 17 36 03.1 -0.2**
comp=Z,39nm,0.9s,baz=150,slow=4.9,SNR=55
NRIK PKKP **PKKPdf 17 54 42.5 +3.7**
comp=Z,5.1nm,0.5s,baz=122,slow=5.8,SNR=3.6
MMLI Mount Malkishu 80.42 305 P **P 17 36 05.9 +1.2**
comp=Z,27nm,1.8s
SEY Seymchan 80.48 19*ce*P **P 17 36 04.7 +0.5**
AMAZ Amatzia 80.55 304 P **P 17 36 07.2 +1.8**
comp=Z,81nm,1.4s
KZIT Kziot 80.78 304 P **P 17 36 07.6 +1.0**
SOC Sochi 81.14 317 *e*P **P 17 36 06.3 -1.9**
SOC pmax pmax
comp=Z,12nm,0.5s
KIRV Kirov 82.69 333 P **P 17 36 16.2 +0.2**
comp=Z,36nm,0.7s,baz=200,slow=0.1,SNR=19
TIXI Tiksi 82.71 7 *e*P **P 17 36 15.3 -0.5**
comp=Z,89nm,0.8s
TIXI Tiksi 82.71 7*ce*P **P 17 36 15.2 -0.6**
TIXI pmax pmax
comp=Z,83nm,0.7s
ANN Anapa 83.11 318 *e*P **P 17 36 18.1 -0.4**
ANN pmax pmax
comp=Z,33nm,1.4s
DIKM Dikmen 83.51 314⇑ *i*P **P 17 36 21.0 +0.3**
BR101 Keskin Array S 84.06 312 *e*P **P 17 36 23.2 -0.5**
BR131 Keskin Array S 84.06 312 *e*P **P 17 36 23.1 -0.6**
comp=Z,81nm,1.6s
BRTR Keskin Array B 84.06 312 P **P 17 36 23.2 -0.5**
comp=Z,8.8nm,0.7s,baz=140,slow=6.5,SNR=61
SMY Shemya 84.27 34 *e*P **P 17 36 24.3 0.0**
comp=Z,67nm,1.1s
SMY Shemya 84.27 34 *e*P **P 17 36 24.3 0.0**
SMY pmax pmax
comp=Z,67nm,1.1s
VORD Divnogorie 84.30 324 *e*P **P 17 36 23.3 -1.1**
VORD pmax pmax
comp=Z,30nm,1.0s
ILGA Ilgaz 84.42 313 *e*P **P 17 36 25.5 -0.1**
comp=Z,114nm,2.0s
VSR Storozhevoye 84.47 324 *e*P **P 17 36 24.2 -1.1**
VSR pmax pmax
comp=Z,50nm,0.7s
BZK Bozkurt 84.50 314⇑ *i*P **P 17 36 26.1 +0.4**
VORR Voronezh 84.63 325 P **P 17 36 26.0 -0.1**
VORR pmax pmax
comp=Z,250nm,1.4s
ANTO Ankara 84.73 312 *e*P **P 17 36 27.4 +0.4**
comp=Z,109nm,1.7s
ANTO Ankara 84.73 312⇑ *i*P **P 17 36 27.4 +0.4**
ANTO Ankara 84.73 312 *e*P **P 17 36 27.4 +0.4**
ANTO pmax pmax
comp=Z,109nm,1.7s
LPSR Galich'ya Gora 85.15 325 *e*P **P 17 36 28.5 -0.2**
LPSR pmax pmax
comp=Z,30nm,0.8s
SIM Simferopol' 85.38 317*d i*P **P 17 36 30.5 +0.4**
SIM pmax pmax
comp=Z,26nm,0.7s
SEVA Sevastopol 85.54 316⇑ *i*P **P 17 36 31.5 +0.7**
PRGR Permogore 85.90 335 *e*P **P 17 36 30.1 -2.1**
PRGR pmax pmax
comp=Z,37nm,0.9s
MDUB Mudurnu 86.07 312 *e*P **P 17 36 33.1 -0.7**
comp=Z,372nm,1.6s
SNAA Sanae 86.80 197 P **P 17 36 37.4 +0.6**
SNAA Sanae 86.80 197 *e*P **P 17 36 36.9 +0.2**
comp=Z,22nm,1.2s
SNAA Sanae 86.80 197 *e*P **P 17 36 36.9 +0.2**
SNAA pmax pmax
comp=Z,23nm,1.2s
MOS Moscow 87.08 328 *e*P **P 17 36 36.1 -2.0**
MOS *e* 17 36 49.6
MOS *e* 17 40 06.1
MOS pmax pmax
comp=Z,32nm,0.7s
OBN Obninsk 87.40 327 P **P 17 36 39.6 -0.1**
comp=Z,9.3nm,0.7s,baz=106,slow=2.5,SNR=18
OBN Obninsk 87.40 327 *e*P **P 17 36 39.6 -0.1**
comp=Z,270nm,1.8s
OBN Obninsk 87.40 327⇑ *i*P **P 17 36 40.0 +0.3**
OBN Obninsk 87.40 327*d i*P **P 17 36 39.4 -0.3**
OBN *i* 17 36 50.1
OBN *i* 17 40 01.5
OBN pmax pmax
comp=Z,45nm,0.9s
YLV Yalova 87.44 312⇓ *i*P **P 17 36 40.7 +0.3**
KARP Karpathos 87.87 306 *e*P **P 17 36 43.2 +0.7**
comp=Z,166nm,1.0s
KLMR Klimovskoe 88.18 333 *e*P **P 17 36 41.4 -1.9**
KLMR pmax pmax
comp=Z,86nm,1.5s
KLMR Klimovskoe 88.18 333 *e*P **P 17 36 41.4 -1.9**
KLMR AMP 17 36 45.0
comp=Z,86nm,1.6s
BILL Bilibino 88.18 19 *e*P **P 17 36 42.7 -0.5**
comp=Z,20nm,0.9s
BILL Bilibino 88.18 19*d i*P **P 17 36 43.0 -0.2**
BILL *i* 17 36 54.1
BILL pmax pmax
comp=Z,17nm,0.9s
BALB Balikesir 88.31 311 *e*P **P 17 36 45.0 +0.6**
comp=Z,441nm,1.9s
VNA2 Neumayer--Watz 88.45 197 P **P 17 36 45.4 +0.8**
baz=212,slow=19
VNA1 Neumayer--Stat 88.83 197 P **P 17 36 47.4 +1.1**
VNA3 Neumayer Olymp 88.96 197 P **P 17 36 47.5 +0.5**
PHSR Pinarhisar 89.06 312⇑ *i*P **P 17 36 48.5 +0.6**
TIRR Tirgusor 89.13 315⇑ *i*P **P 17 36 48.8 +0.6**
TLB Topalu 89.42 315⇑ *i*P **P 17 36 50.0 +0.5**
CFR Carcaliu 89.50 316⇑ *i*P **P 17 36 50.5 +0.6**
KIS Kishinev 89.51 318 *e*P **P 17 36 48.0 -1.9**
KIS Kishinev 89.51 318 *e*P **P 17 36 48.0 -1.9**
KIS *e* 17 36 54.0
IDI Anoyia 89.62 306 P **P 17 36 50.7 -0.1**
comp=Z,16nm,0.9s,baz=99,slow=7.6,SNR=11
AKASG Malin Array Be 90.23 322 P **P 17 36 52.1 -1.1**
comp=Z,1.6nm,0.7s,baz=78,slow=4.6,SNR=18
AKASG PP **PP 17 40 26.5 -0.7**
comp=Z,1.9nm,0.7s,baz=94,slow=6.3,SNR=4.7
AKBB Malin Array Si 90.23 322 *e*P **P 17 36 52.4 -0.8**
comp=Z,22nm,1.5s
AKBB Malin Array Si 90.23 322 *e*P **P 17 36 52.4 -0.8**
AKBB pmax pmax
comp=Z,22nm,1.5s
VRI Vrincioaia 90.63 316⇑ *i*P **P 17 36 56.2 +1.0**
TESR Tescani 90.84 317⇓ *i*P **P 17 36 56.7 +0.5**
MLR Muntele Rosu 91.08 316 P **P 17 36 57.5 0.0**
comp=Z,7.5nm,0.6s,baz=71,slow=3.2,SNR=20
MLR Muntele Rosu 91.08 316 *e*P **P 17 36 57.3 -0.2**
comp=Z,46nm,1.2s
MLR Muntele Rosu 91.08 316⇑ *i*P **P 17 36 58.2 +0.7**
VOIR 91.68 316⇓ *i*P **P 17 37 00.2 0.0**
ARR Arges 91.95 316⇓ *i*P **P 17 37 01.6 +0.2**
BURAR Bucovina Array 92.04 318⇑ *i*P **P 17 37 03.0 +1.2**
BUR08 Bucovina Ar. S 92.06 318 *e*P **P 17 37 01.5 -0.4**
comp=Z,18nm,1.4s
VTS Vitosha 92.39 313⇑ *i*P **P 17 37 03.8 +0.2**
LOT Lotru 92.57 316⇓ *i*P **P 17 37 04.4 +0.1**
LVZ Lovozero 92.78 339*ce*P **P 17 37 04.7 0.0**
LVZ pmax pmax

comp=Z,30nm,2.5s
IDID Didziasalis 92.83 326 eP P 17 37 04.8 -0.3
IDID IAmb IAmb 17 37 06.1
comp=Z,6.5nm,1.0s
IIGN Ignalina 93.13 326 eP P 17 37 06.2 -0.3
IIGN IAmb IAmb 17 37 07.5
comp=Z,5.9nm,0.8s
ISAL Salakas 93.23 326 eP P 17 37 06.6 -0.3
MDVR Moldovita 93.87 315⇑/P P 17 37 10.8 +0.5
BZS Buzias 94.08 315⇑/P P 17 37 11.1 -0.1
UZH Uzhgorod 94.16 318 eP P 17 37 13.1 +1.7
UZH e 17 37 18.8
SIRR Siria 94.17 316⇑/P P 17 37 11.9 +0.3
KOLS Kolonicke sedl 94.23 319 eP P 17 37 12.4 +0.6
KOLS pmax pmax
comp=Z,22nm,1.6s
KOLS Kolonicke sedl 94.23 319 eP P 17 37 12.4 +0.6
FIA0 FINESS Array S 94.54 332 eP P 17 37 12.4 -0.4
FIA0 FINESS Array S 94.54 332 eP P 17 37 12.5 -0.4
FINES FINESS Array B 94.54 332 P P 17 37 12.4 -0.4
comp=Z,2.1nm,0.8s,baz=90,slow=7.6,SNR=6.3
VYHS Vyhne 96.41 318 eP P 17 37 21.7 0.0
VYHS Vyhne 96.41 318 eP P 17 37 21.7 0.0
ARCES ARCESS Array B 96.43 339 P P 17 37 20.9 -0.5
comp=Z,3.8nm,0.8s,baz=104,slow=5.1,SNR=11
GERES GERESS Array B 99.83 318 P Pdif 17 37 37.0 -0.2
comp=Z,0.3nm,0.6s,baz=116,slow=3.1,SNR=4.7
GERES PP PP 17 41 43.3 +1.3
comp=Z,0.2nm,0.3s,baz=108,slow=8.4,SNR=3.2
CLL Collm 100.42 320 ePP PP 17 41 48.0 +1.7
NB2 NORSAR Subarra 101.64 330 P PP 17 41 54.5 -0.7
comp=Z,6.5nm,1.1s,baz=99,slow=7.9
NB200 NORSAR Array S 101.64 330 ePP PP 17 41 52.8 -2.5
NOA NORSAR Array B 101.64 330 PP PP 17 41 52.8 -2.5
comp=Z,2.6nm,1.1s,baz=97,slow=7.0,SNR=4.1
TOLK Toolik Lake Re 104.00 22 P Pdif 17 37 55.1 -0.1
baz=279
ILAR Eielson Array 105.68 25 PKiKP PKiKP 17 42 15.1 -0.6
comp=Z,0.2nm,0.5s,baz=244,slow=3.2,SNR=4.3
TORD Torodi Ar. Bea 107.33 281 PKiKP PKiKP 17 42 18.4 -1.8
comp=Z,0.6nm,0.6s,baz=101,slow=0.9,SNR=4.5
TOA1 Torodi Ar. Sit 107.33 281 ePKiKP PKiKP 17 42 18.4 -1.8
EPYK Eagle Plains 109.34 23 P PKiKP 17 42 22.8 +0.3
baz=290
YKA Yellowknife Ar 119.52 21 PKP PKPdf 17 42 41.5 -0.5
comp=Z,3.9nm,0.7s,baz=324,slow=1.7,SNR=46
YKA PKKPbc PKKPbc 17 52 55.7 +0.1
comp=Z,0.2nm,0.3s,baz=116,slow=4.3,SNR=4.6
YKB5 Yellowknife Ar 119.52 21 ePKPdf PKPdf 17 42 41.5 -0.5
YKB5 ePKKPbc PKKPbc 17 52 55.7 +0.1
A04D Lummi Island 123.22 37 P PKPdf 17 42 49.6 +0.1
baz=296
D03D Eldon 123.49 39 P PKPdf 17 42 50.1 0.0
baz=294
B05A Bryant 123.78 38 P PKiKP 17 42 50.9 0.0
baz=296
J01E Myrtle Point 124.63 44 P PKPdf 17 42 52.5 +0.1
baz=291
I03D Drain, OR 124.83 43 P PKPdf 17 42 52.9 +0.2
baz=292
H04D Lebanon 124.92 42 P PKiKP 17 42 53.2 0.0
baz=293
K02D Willamette Mer 124.98 44 P PKiKP 17 42 53.7 +0.2
baz=291
LTY Liberty 125.09 38 ePKPdf PKPdf 17 42 53.3 +0.1
B08A Colville Reser 125.38 37 ePKPdf PKiKP 17 42 54.2 +0.1
I04A Tendick Farm, 125.42 43 P PKPdf 17 42 53.9 0.0
baz=293
G05D Wamic, OR 125.56 41 P PKPdf 17 42 54.3 +0.1
baz=295
J04D Umpqua Nationa 125.83 43 P PKPdf 17 42 55.2 +0.2
baz=293
I05D Terrebonne, OR 125.91 42 P PKiKP 17 42 55.4 +0.1
baz=294
M02C Callahan 126.00 46 P PKiKP 17 42 55.7 0.0
baz=291
L04D Klamath Falls 126.09 44 P PKPdf 17 42 55.6 +0.1
baz=292
D08A Wollman Farm, 126.24 38 ePKPdf PKiKP 17 42 56.4 +0.5
N02D Trinity Center 126.25 46 P PKPdf 17 42 56.0 +0.3
baz=291
K04D Chiloquin, OR 126.31 44 P PKiKP 17 42 56.3 +0.1
baz=293
J05D Fort Rock, OR 126.41 43 P PKiKP 17 42 56.5 0.0
baz=294
O02D Mt. Diablo Mer 126.47 47 P PKiKP 17 42 56.6 0.0
baz=290
M04C Macdoel 126.57 45 P PKPdf 17 42 56.6 +0.2
baz=292
NEW Newport 126.71 36 ePKPdf PKiKP 17 42 57.6 +0.9
NEW Newport 126.71 36 ePKIKP PKiKP 17 42 57.7 +0.9
NEW Newport 126.71 36 P PKiKP 17 42 56.8 0.0
baz=301
K05A Summer Lake 126.86 43 ePKPdf PKiKP 17 42 58.3 +0.9
O03E Paynes Creek 127.14 47 P PKPdf 17 42 57.6 +0.2
baz=291
F10A Beach Ranch, E 127.79 38 ePKPdf PKiKP 17 42 59.2 +0.2
J08A Circle Bar Ran 128.21 42 ePKPdf PKiKP 17 43 00.1 +0.1
BEKR Beckworth 128.32 47 ePKPdf PKPdf 17 42 58.6 -1.2
WVOR Wild Horse Val 128.50 43 ePKPdf PKPdf 17 43 00.1 +0.1
FCC Fort Churchill 128.67 14 ePKPdf PKPdf 17 42 59.5 -0.1
FCC Fort Churchill 128.67 14 ePKIKP PKPdf 17 42 59.5 -0.1
MSO Missoula 129.30 36 ePKPdf PKPdf 17 43 01.5 +0.1
MSO Missoula 129.30 36 P PKPdf 17 43 01.8 +0.5
baz=303
PLCA Paso Flores 129.50 182 PKP PKPdf 17 43 02.5 +0.5
comp=Z,2.8nm,0.8s,baz=273,slow=1.6,SNR=8.9
NV01 Mina Array Sit 130.34 47 ePKPdf PKPdf 17 43 04.1 +0.4
NVAR Mina Array Bea 130.34 47 PKP PKPdf 17 43 04.1 +0.4
comp=Z,2.3nm,0.7s,baz=246,slow=1.7,SNR=16
PKM Mcpherson Peak 130.44 52 P PKiKP 17 43 05.0 +0.2
baz=288
HLID Hailey 130.72 40 ePKPdf PKiKP 17 43 05.3 +0.2
HLID Hailey 130.72 40 P PKiKP 17 43 05.5 +0.3
baz=300
SCZ2 Santa Cruz Isl 130.85 53 P PKiKP 17 43 05.8 +0.3
baz=288
DLMT Dillon 130.88 37 ePKPdf PKiKP 17 43 05.6 +0.2
EGMT Eagleton 130.92 32 ePKPdf PKPdf 17 43 04.9 +0.5
EGMT Eagleton 130.92 32 P PKiKP 17 43 05.8 +0.5
baz=308
MCMT McKenzie Canyo 131.03 38 ePKPdf PKPdf 17 43 04.8 -0.1
CWC Cottonwood Cre 131.25 50 P PKiKP 17 43 06.4 0.0
baz=291
BOZ Bozeman (W) 131.32 36 ePKPdf PKiKP 17 43 06.1 -0.1
BOZ Bozeman (W) 131.32 36 ePKIKP PKiKP 17 43 06.1 -0.1
BOZ Bozeman (W) 131.32 36 P PKiKP 17 43 06.6 +0.4
baz=305
ELK Elko 131.53 43 ePKPdf PKPdf 17 43 06.2 +0.2
ELK Elko 131.53 43 ePKIKP PKPdf 17 43 06.2 +0.2
MPMC Manual Prospec 131.83 50 P PKiKP 17 43 07.7 +0.1
baz=291
EDW2 Edwards Air Fo 131.85 52 P PKiKP 17 43 07.8 +0.3
baz=290
CIS Catalina Islan 132.01 54 P PKiKP 17 43 08.6 +0.7
baz=288
R11A Troy Canyon, C 132.33 46 ePKPdf PKiKP 17 43 08.6 +0.1
R11A Troy Canyon, C 132.33 46 P PKiKP 17 43 08.6 +0.1
baz=295
GSC Goldstone, Bar 132.62 51 P PKiKP 17 43 09.4 +0.2
baz=291
HVU Hansel Valley 132.66 41 ePKPdf PKPdf 17 43 08.4 +0.4
HVU Hansel Valley 132.66 41 ePKIKP PKPdf 17 43 08.4 +0.4
MURC Murrieta 132.91 53 P PKiKP 17 43 09.8 +0.1
baz=290
BGU Big Grassy Mou 132.92 42 ePKPdf PKiKP 17 43 09.7 0.0
RLMT Red Lodge 132.95 35 P PKiKP 17 43 10.0 +0.3
baz=307
REDW Red Top Meadow 133.03 38 ePKPdf PKPdf 17 43 08.7 0.0
DUG Dugway, Tooele 133.42 43 ePKPdf PKPdf 17 43 09.7 +0.3
DUG Dugway, Tooele 133.42 43 ePKIKP PKPdf 17 43 09.7 +0.3
DUG Dugway, Tooele 133.42 43 P PKiKP 17 43 10.4 -0.3
baz=299
PFO Pinyon Flats O 133.48 53 ePKPdf PKPdf 17 43 10.4 +0.7
PFO Pinyon Flats O 133.48 53 ePKIKP PKPdf 17 43 10.4 +0.7
GMRC Granite Mounta 133.68 51 P PKiKP 17 43 11.5 +0.2
baz=292,SNR=12
BELC Belle Mtn. Jos 133.71 52 P PKiKP 17 43 11.8 +0.4
baz=291
MONP2 Monument Peak 133.75 54 P PKiKP 17 43 12.0 +0.4
baz=290
IKP In-Ko-Pah, Jac 134.08 54 P PKiKP 17 43 12.4 +0.3
baz=290
PD31 Pinedale Array 134.15 38 ePKPdf PKPdf 17 43 10.6 -0.2
PDAR Pinedale Array 134.15 38 PKP PKPdf 17 43 10.8 -0.1
comp=Z,1.0nm,0.5s,baz=134,slow=0.9,SNR=13

BC3 Big Chuckawall 134.25 52 P PKiKP 17 43 12.9 +0.4
baz=291
IRM Iron Mountain 134.31 52 P PKiKP 17 43 12.9 +0.4
baz=292
SCHQ Schefferville 135.03 355 PKP PKPdf 17 43 12.7 +0.8
comp=Z,4.4nm,0.5s,baz=36,slow=4.2,SNR=3.9
SCHQ Schefferville 135.03 355 ePKPdf PKPdf 17 43 11.8 0.0
ULM Lac du Bonnet 135.49 21 PKP PKiKP 17 43 14.0 -0.3
comp=Z,4.6nm,0.7s,baz=188,slow=3.6,SNR=3.0
O20A White River Ci 136.44 40 P PKPdf 17 43 15.8 +0.6
baz=304
RSSD Black Hills 136.48 33 ePKPdf PKPdf 17 43 14.7 -0.4
RSSD Black Hills 136.48 33 ePKIKP PKPdf 17 43 14.7 -0.4
RSSD Black Hills 136.48 33 P PKPdf 17 43 15.7 +0.6
baz=312
214A Organ Pipe Nat 136.94 53 P PKPdf 17 43 16.1 0.0
baz=292
W18A Petrified Fore 137.97 48 P PKiKP 17 43 19.6 -0.6
baz=298
ISCO Idaho Springs 138.29 39 P PKPdf 17 43 19.8 +1.1
baz=306
TUC Tucson 138.39 52 P PKiKP 17 43 20.2 -0.7
baz=294
SUSD Miller 138.82 29 P PKiKP 17 43 20.8 -0.6
baz=319
EYMN Ely 138.96 19 ePKPdf PKPdf 17 43 19.6 +0.3
EYMN Ely 138.96 19 P PKiKP 17 43 21.0 -0.6
baz=331
SDCO Great Sand Dun 139.55 42 P PKPdf 17 43 21.8 +0.7
baz=305
C40A Isle Royale Na 139.71 17 P PKPdf 17 43 21.9 +1.3
baz=334
E38A The Farm, Brul 140.11 20 P PKPdf 17 43 22.6 +1.2
baz=330
MATQ Matagami 140.13 5 P PKPdf 17 43 21.8 +0.5
baz=352
CHGQ Chibougamau 140.17 2 P PKiKP 17 43 23.1 -0.8
baz=357
ECSD EROS Data Cent 140.46 28 ePKPpre PKPpre 17 43 15.1
121A Cookes Peak, D 140.59 50 P PKiKP 17 43 24.7 -0.9
baz=297
BNM Barren Site 140.68 47 ePKPpre PKPpre 17 43 14.4
LSQQ Lebel-sur-Quev 140.88 5 P PKiKP 17 43 24.5 -0.8
baz=353
F39A Loretta 140.93 20 P PKiKP 17 43 24.6 -1.0
baz=331
F40A Park Falls 141.19 20 P PKiKP 17 43 25.0 -1.2
baz=332
G39A Holcombe 141.38 21 P PKiKP 17 43 25.4 -1.1
baz=330
E43A Lone Tree Farm 141.72 16 P PKiKP 17 43 26.0 -1.2
baz=337
G40A Rib Lake 141.74 20 P PKiKP 17 43 26.2 -1.1
baz=332
D46A Sault St. Mari 141.96 13 P PKiKP 17 43 26.7 -1.0
baz=342
D47A Chapleau 142.00 12 P PKiKP 17 43 26.8 -1.0
baz=343
E46A Sault Ste Mari 142.40 13 ePKPdf PKPdf 17 43 23.7 -1.9
E46A Sault Ste Mari 142.40 13 P PKiKP 17 43 27.8 -0.8
baz=341
CBKS Cedar Bluff 142.43 36 P PKiKP 17 43 28.0 -0.9
baz=313
E47A Iron Bridge 142.54 12 P PKiKP 17 43 28.5 -0.3
baz=343
E48A Lockeyer 142.73 11 P PKiKP 17 43 29.0 -0.2
baz=344
D53A Lac Vacive, Po 142.78 6 ePKPdf PKPdf 17 43 23.3 -2.9
MNTX Cornudas Mount 142.79 50 ePKPdf PKPdf 17 43 24.6 -2.1
MNTX Cornudas Mount 142.79 50 P PKiKP 17 43 28.7 -1.1
baz=298
D52A ZEK Kipawa Sen 142.81 7 P PKiKP 17 43 28.6 -0.8
baz=351
E50A Wahnapitae 143.03 9 P PKiKP 17 43 29.6 -0.3
baz=347
E51A G1948 Merrick 143.11 8 P PKiKP 17 43 29.7 -0.3
baz=349
GDL2 Guadalupe Moun 143.30 48 ePKPdf PKPbc 17 43 26.1 +1.4
F49A Sandfield 143.45 11 P PKiKP 17 43 30.4 -0.3
baz=344
E52A Mattawa 143.46 7 P PKiKP 17 43 29.6 -1.1
baz=350
E54A Lac Daplat, Po 143.47 5 P PKiKP 17 43 30.0 -0.8
baz=353
MSTX Muleshoe 143.50 45 ePKPdf PKPdf 17 43 27.2 -0.8
G47A Hillman 143.63 13 P PKPbc 17 43 25.0 -0.1
baz=341
F51A Arnstein 143.64 9 P PKPab 17 43 24.5 +0.2
baz=348
AMTX Amarillo 143.72 42 ePKPdf PKPbc 17 43 26.9 +1.1
TRQ Mont Tremblant 143.85 2 ePKPdf PKPbc 17 43 26.2 +0.4
ALGO Algonquin Park 143.86 6 P PKPbc 17 43 26.0 +0.3
baz=351
F52A Sundridge 143.86 8 P PKPbc 17 43 26.1 +0.4
baz=349
I45A Fountain 144.08 17 P PKPbc 17 43 26.5 0.0
baz=337
L40A Anamosa 144.12 24 ePKPdf PKPab 17 43 26.1 -0.1
L40A Anamosa 144.12 24 P PKPab 17 43 26.3 0.0
baz=328
KLBO Killbear Provi 144.16 9 P PKPab 17 43 26.1 -0.1
baz=347
BUKO Buck Lake 144.19 8 P PKPab 17 43 26.3 -0.1
baz=349
K42A Prairie Point, 144.22 21 P PKPab 17 43 26.4 -0.2
baz=331
I46A Reed City 144.39 16 P PKPbc 17 43 27.6 +0.1
baz=338
I47A Gladwin 144.56 15 P PKPbc 17 43 28.0 0.0
baz=340
ORIO Orleans, Innes 144.57 3 P PKPab 17 43 27.4 -0.4
baz=355
HPIG 144.59 57 ePKPdf PKPbc 17 43 29.2 +0.3
J45A Montague 144.59 17 P PKPab 17 43 27.7 -0.3
baz=336
I48A Sherman Twp 144.60 14 P PKPbc 17 43 28.4 +0.2
baz=341
G53A Haliburton 144.61 7 P PKPab 17 43 28.0 0.0
baz=350,SNR=5.2
K43A Burlington 144.63 20 ePKPdf PKPab 17 43 27.9 -0.2
K43A Burlington 144.63 20 P PKPab 17 43 28.0 -0.1
baz=333
G55A Calabogie 144.68 5 P PKPab 17 43 28.1 -0.2
baz=353
PKME Peaks-Kenny Pk 144.73 356 ePKPdf PKPbc 17 43 28.8 +0.3
PKME Peaks-Kenny Pk 144.73 356 P PKPab 17 43 28.5 +0.1
baz=5.8
BMRO Meriville Lake 144.73 11 P PKPab 17 43 28.5 +0.1
baz=345
BDFB Brasilia 144.74 224 PKP PKPbc 17 43 30.0 +0.5
comp=Z,13nm,0.7s,baz=112,slow=2.6,SNR=16
BDFB Brasilia 144.74 224 ePKPdf PKPbc 17 43 29.8 +0.2
BDFB ePKPdf PKPab 17 43 30.0 +0.6
BDFB Brasilia 144.74 224 ePKIKP PKPbc 17 43 29.8 +0.3
L42A Oliver, Polo 144.77 22 ePKPdf PKPab 17 43 28.4 -0.2
L42A Oliver, Polo 144.77 22 P PKPab 17 43 28.5 -0.2
baz=330
BANO Bancroft 144.79 6 P PKPab 17 43 28.5 -0.2
baz=351,SNR=7.8
MOQ Mont Orford 144.79 360 ePKPdf PKPbc 17 43 28.9 +0.1
PLVO Plevna 144.86 5 ePKPdf PKPab 17 43 28.6 -0.3
PLVO Plevna 144.86 5 P PKPab 17 43 28.7 -0.2
baz=352,SNR=7.7
J46A Howard City 144.88 17 P PKPab 17 43 29.0 0.0
baz=338
SADO Sadowa 144.89 8 ePKPdf PKPab 17 43 28.9 -0.1
H52A Wyevale 144.90 9 P PKPab 17 43 28.8 -0.2
baz=348
GO02 Mina Guanaco 144.94 185 ePKPdf PKPab 17 43 29.7 -0.4
L43A Garden Prairie 144.95 21 P PKPab 17 43 29.1 -0.2
baz=332
N40A Mertquake, Sal 144.96 25 P PKPab 17 43 29.3 0.0
baz=326
M41A Milan 144.97 24 P PKPab 17 43 29.2 -0.2
baz=328
BRCO Bruce Peninsul 145.03 11 P PKPab 17 43 29.5 0.0
baz=345
I49A Point Hope 145.03 13 ePKPbc PKPdf 17 43 30.1 -0.2
I49A Point Hope 145.03 13 P PKPab 17 43 29.8 +0.3
baz=342
EMMW East Machias 145.11 354 ePKPbc PKPbc 17 43 29.8 +0.1
LTX Lajitas 145.19 52 ePKPbc PKPdf 17 43 31.7 +0.6
LTX Lajitas 145.19 52 ePKIKP PKPdf 17 43 31.7 +0.6
TX31 Lajitas Ar. Si 145.19 52 ePKPbc PKPbc 17 43 30.6 0.0
TXAR Lajitas Array 145.19 52 PKPbc PKPdf 17 43 31.7 +0.6
comp=Z,24nm,0.7s,baz=262,slow=1.9,SNR=223
BWLO Walkerton 145.20 11 P PKPab 17 43 30.4 +0.2
baz=345,SNR=16
BASO Ashfield 145.20 11 P PKPdf 17 43 30.6 +0.1
baz=344,SNR=11
J47A Sunmer 145.21 16 ePKPbc PKPdf 17 43 30.7 +0.1
J47A Sunmer 145.21 16 P PKPdf 17 43 30.7 +0.1
baz=339
L44A Lake County Fo 145.24 20 P PKPbc 17 43 30.1 -0.2
baz=333
FRNY Flat Rock 145.26 1 ePKPbc PKPbc 17 43 29.6 -0.7
DELO Deloro Mine 145.32 6 ePKPbc PKPbc 17 43 30.1 -0.4
DELO Deloro Mine 145.32 6 P PKPbc 17 43 30.1 -0.4
baz=352,SNR=14
H55A Tweed 145.34 6 P PKPbc 17 43 30.5 0.0
baz=352,SNR=18
H56A Elgin 145.38 5 P PKPbc 17 43 30.4 -0.2
baz=354,SNR=20
N41A Harden Midland 145.41 25 ePKPbc PKPbc 17 43 30.7 -0.2
N41A Harden Midland 145.41 25 P PKPbc 17 43 30.5 -0.4
baz=327
I52A Shelburne 145.42 10 P PKPbc 17 43 30.7 -0.1
baz=347
J48A Bridge Port 145.42 14 ePKPdf PKPbc 17 43 30.9 +0.1
J48A Bridge Port 145.42 14 P PKPab 17 43 31.1 +0.1
baz=341,SNR=10
WVL Waterville 145.45 356 ePKPdf PKPdf 17 43 31.0 +0.1
LONY Lake Ozonia 145.45 2 ePKPdf PKPbc 17 43 30.7 -0.2
LONY Lake Ozonia 145.45 2 P PKPbc 17 43 30.6 -0.2
baz=357
K46A Dorr 145.45 17 P PKPbc 17 43 31.0 0.0
baz=337
J49A Marlette 145.51 14 P PKPdf 17 43 31.1 +0.1
baz=342
M43A Waltham Townsh 145.53 22 P PKPdf 17 43 31.2 +0.1
baz=331
I51A Listowel 145.53 11 P PKPdf 17 43 31.2 +0.1
baz=345,SNR=19
I55A Frankford 145.62 6 P PKPdf 17 43 30.9 -0.3
baz=351,SNR=5.2
PKRO Pickering 145.69 8 P PKPbc 17 43 31.8 +0.1
baz=349
K47A Vermontville 145.69 16 P PKPab 17 43 32.0 0.0
baz=338
WMOK Wichita Mounta 145.69 40 P PKPbc 17 43 32.2 +0.2
baz=310,SNR=19
I53A Kortright Cn E 145.75 9 P PKPbc 17 43 32.1 +0.2
baz=348
VT1 Waterbury 145.78 0 ePKPdf PKPbc 17 43 32.0 +0.1
K48A Perry 145.80 15 P PKPdf 17 43 31.9 +0.3
baz=340
WLVO Wesleyville 145.82 7 P PKPbc 17 43 31.9 -0.1
baz=350,SNR=8.5
DRCO St. Marys Ceme 145.82 8 P PKPbc 17 43 32.3 +0.2
baz=350,SNR=6.4
DRWO Darlington Wes 145.83 8 P PKPab 17 43 32.4 0.0
baz=349,SNR=7.4
LBNH Lisbon 145.86 359 ePKPdf PKPbc 17 43 32.4 +0.2
LBNH Lisbon 145.86 359 ePKP2 PKPbc 17 43 32.4 +0.2
LBNH Lisbon 145.86 359 P PKPbc 17 43 32.5 +0.3
baz=1.4
N43A Stutzman Famil 145.88 23 P PKPdf 17 43 32.2 +0.4
baz=330
ACTO Acton 145.88 10 P PKPbc 17 43 32.5 +0.3
baz=347,SNR=8.7
M44A Midewin, Midew 145.90 21 ePKPdf PKPdf 17 43 31.8 0.0
M44A Midewin, Midew 145.90 21 P PKPbc 17 43 32.4 0.0
baz=332
L46A Eue Claire 145.91 18 ePKPdf PKPbc 17 43 32.2 -0.2
L46A Eue Claire 145.91 18 P PKPbc 17 43 32.5 +0.1
baz=336
PECO Prince Edward 145.97 6 ePKPdf PKPdf 17 43 31.9 +0.1
PECO Prince Edward 145.97 6 P PKPbc 17 43 32.4 0.0
baz=352,SNR=8.6
K49A Clarkson 145.99 14 P PKPbc 17 43 32.6 0.0
baz=341
NCB Newcomb 146.11 2 ePKPdf PKPdf 17 43 32.5 +0.4
HDIL Hopedale 146.16 23 ePKPdf PKPdf 17 43 31.8 -0.5
HDIL Hopedale 146.16 23 P PKPbc 17 43 32.9 -0.3
baz=330
J52A Paris 146.17 10 P PKPbc 17 43 33.4 +0.2
baz=346,SNR=6.2
K50A Casco 146.19 13 ePKPdf PKPbc 17 43 33.2 0.0
K50A Casco 146.19 13 P PKPbc 17 43 32.9 -0.3
baz=342
L47A Sherwood 146.28 17 P PKPbc 17 43 33.3 -0.2
baz=338
AAM Ann Arbor 146.39 15 ePKPdf PKPbc 17 43 33.9 +0.1
AAM Ann Arbor 146.39 15 ePKP2 PKPbc 17 43 33.9 +0.1
AAM Ann Arbor 146.39 15 P PKPbc 17 43 33.4 -0.4
baz=340
N44A Piper City 146.39 21 P PKPbc 17 43 33.9 0.0
baz=332
HNH Hanover 146.40 360 ePKPdf PKPbc 17 43 33.4 -0.4
STCO Saint Catharin 146.41 9 P PKPbc 17 43 33.7 -0.1
baz=348
TYNO Tyneside 146.42 10 P PKPbc 17 43 33.7 -0.2
baz=347,SNR=7.8
ABTX Abilene, Hawle 146.42 44 ePKPdf PKPdf 17 43 33.8 +0.8
ABTX Abilene, Hawle 146.42 44 P PKPab 17 43 35.0 -0.2
baz=306
J54A Appleton 146.43 8 ePKPdf PKPbc 17 43 34.0 +0.1
J54A Appleton 146.43 8 P PKPbc 17 43 33.7 -0.2
baz=349
M46A Old House Fiel 146.45 19 ePKPdf PKPbc 17 43 34.1 +0.1
M46A Old House Fiel 146.45 19 P PKPbc 17 43 34.1 +0.1
baz=335
K51A Iona Station 146.48 12 P PKPbc 17 43 34.1 0.0
baz=344
L48A N Adams 146.52 16 P PKPbc 17 43 34.0 -0.3
baz=339
J55A Hilton 146.54 7 ePKPdf PKPbc 17 43 33.8 -0.4
J55A Hilton 146.54 7 P PKPbc 17 43 34.0 -0.2
baz=351
L49A Milan 146.54 15 P PKPbc 17 43 34.1 -0.2
baz=340,SNR=11
MEDO Medina 146.56 8 ePKPdf PKPbc 17 43 34.2 -0.1
MEDO Medina 146.56 8 P PKPbc 17 43 34.0 -0.2
baz=350,SNR=11
N45A Kentland 146.56 21 P PKPbc 17 43 34.6 +0.2
baz=333
K52A Tillsonburg 146.57 11 P PKPbc 17 43 34.3 0.0
baz=346
TUL1 Leonard 146.71 36 ePKPdf PKPdf 17 43 34.2 +0.9
TUL1 Leonard 146.71 36 P PKPbc 17 43 35.1 +0.1
baz=315,SNR=6.2
ACCN Adirondack Com 146.71 1 ePKPdf PKPbc 17 43 34.1 -0.6
M47A Cromwell 146.72 18 P PKPbc 17 43 34.9 +0.1
baz=336
N46A Monticello 146.78 20 P PKPbc 17 43 35.0 0.0
baz=334
O44A Mansfield 146.83 22 P PKPbc 17 43 35.0 -0.1
baz=331
L50A Kingsville 146.84 14 P PKPbc 17 43 35.0 -0.2
baz=342
P43A Skaggs, Pawnee 146.86 24 P PKPbc 17 43 35.1 -0.2
baz=329
M48A Edgerton 146.87 17 P PKPbc 17 43 35.0 -0.2
baz=338
O45A Potomac 147.02 21 P PKPbc 17 43 36.0 +0.3
baz=332
K55A Perry 147.04 7 P PKPbc 17 43 35.7 0.0
baz=350,SNR=6.9
MMNY Mt. Morris Dam 147.05 7 ePKPdf PKPdf 17 43 34.5 +0.8
K54A Basiliko Farm, 147.07 8 P PKPbc 17 43 35.3 -0.5
baz=349,SNR=8.5
M49A Liberty Center 147.08 16 P PKPbc 17 43 35.5 -0.3
baz=339,SNR=5.1
SFIN Lafayette 147.12 21 ePKPbc PKPbc 17 43 35.3 -0.7
SFIN Lafayette 147.12 21 P PKPbc 17 43 36.1 +0.1
baz=333
N47A Urbana 147.13 18 P PKPbc 17 43 35.7 -0.3
baz=336,SNR=8.5
PLIO Pelee Island, 147.16 14 P PKPbc 17 43 35.5 -0.6
baz=342
L54A Sinclairville 147.34 9 P PKPbc 17 43 36.1 -0.5
baz=348,SNR=6.5
ERPA Erie 147.35 10 P PKPbc 17 43 36.2 -0.4
baz=347
N48A Decatur 147.35 18 P PKPbc 17 43 36.5 -0.1
baz=337,SNR=11
TRY Troy 147.37 1 ePKPbc PKPbc 17 43 37.0 +0.4
M50A Fremont 147.39 15 P PKPbc 17 43 36.2 -0.5
baz=341
LVC Limon Verde 147.40 186 ePKPdf PKPdf 17 43 36.5 +1.2
CCM Cathedral Cave 147.43 28 ePKPbc PKPbc 17 43 36.4 -0.5
CCM Cathedral Cave 147.43 28 P PKPbc 17 43 36.9 0.0
baz=324
L53A Girard 147.46 11 P PKPbc 17 43 36.4 -0.5

	baz=346						
HHAR	Hobbs	147.47	33	ePKPdf	PKPdf	17 43 35.8	+1.2
JCT	Junction City	147.52	47	ePKPdf	PKPdf	17 43 35.8	+0.9
JCT	Junction City	147.52	47	ePKP2	PKPdf	17 43 35.8	+0.9
JCT	Junction City	147.52	47	P	PKPbc	17 43 38.0	+0.5
	baz=303,SNR=12						
L55A	Hinsdale	147.53	8	P	PKPbc	17 43 36.8	-0.3
	baz=350,SNR=8.9						
N49A	Columbus Grove	147.54	16	ePKPbc	PKPbc	17 43 36.8	-0.3
N49A	Columbus Grove	147.54	16	P	PKPbc	17 43 37.1	-0.1
	baz=339,SNR=8.7						
O47A	Sheridan	147.56	19	P	PKPbc	17 43 37.0	-0.2
	baz=335,SNR=10						
HRV	Adam Dziewonsk	147.59	358	ePKPbc	PKPbc	17 43 36.6	-0.6
HRV	Adam Dziewonsk	147.59	358	ePKP2	PKPbc	17 43 36.6	-0.6
HRV	Adam Dziewonsk	147.59	358	P	PKPbc	17 43 37.3	0.0
	baz=2.1						
M52A	Chesterland	147.64	12	P	PKPbc	17 43 37.2	-0.2
	baz=344						
P45A	Graceland, Par	147.64	22	ePKPbc	PKPbc	17 43 37.3	-0.2
P45A	Graceland, Par	147.64	22	P	PKPbc	17 43 37.5	0.0
	baz=332						
P46A	Rosedale	147.76	21	P	PKPbc	17 43 37.8	0.0
	baz=332,SNR=5.5						
ALLY	Alegheny Colle	147.77	11	ePKPbc	PKPbc	17 43 37.5	-0.3
BINY	Binghamton	147.78	5	ePKPbc	PKPbc	17 43 37.7	-0.1
BINY	Binghamton	147.78	5	P	PKPbc	17 43 37.9	+0.1
	baz=354						
PB04	IPOC Station P	147.79	184	ePKPbc	PKPbc	17 43 38.4	-0.3
QUA2	Belchertown	147.83	360	ePKPbc	PKPbc	17 43 37.7	-0.2
FVM	French Village	147.86	27	ePKPbc	PKPbc	17 43 37.7	-0.5
FVM	French Village	147.86	27	ePKP2	PKPbc	17 43 37.7	-0.5
O48A	Farmland	147.87	18	P	PKPbc	17 43 38.0	-0.1
	baz=336,SNR=8.0						
M53A	WI Miller and	147.88	11	P	PKPbc	17 43 37.8	-0.2
	baz=345,SNR=7.6						
X37A	Clayton	147.88	37	ePKPbc	PKPbc	17 43 38.1	-0.2
N50A	Nevada	147.96	15	P	PKPbc	17 43 38.2	-0.1
	baz=340,SNR=12						
U40A	Yellville	147.98	32	P	PKPbc	17 43 38.5	-0.1
	baz=320,SNR=32						
M54A	Oil Creek Stat	148.00	10	ePKPdf	PKPdf	17 43 35.7	+0.3
M54A	Oil Creek Stat	148.00	10	P	PKPbc	17 43 38.6	+0.2
	baz=347,SNR=9.7						
N51A	Ashland	148.01	14	ePKPbc	PKPbc	17 43 37.8	-0.6
N51A	Ashland	148.01	14	P	PKPbc	17 43 38.3	-0.2
	baz=342						
Q45A	Warren Harvey,	148.04	23	P	PKPbc	17 43 38.9	+0.3
	baz=330,SNR=8.9						
O49A	Covington	148.18	17	ePKPbc	PKPbc	17 43 38.7	-0.2
O49A	Covington	148.18	17	P	PKPbc	17 43 38.8	-0.1
	baz=338,SNR=15						
M55A	Ridgway	148.18	9	P	PKPbc	17 43 38.8	-0.1
	baz=349,SNR=12						
OLIL	Olney	148.20	23	ePKPbc	PKPbc	17 43 38.2	-0.8
P47A	Martinsville	148.21	20	P	PKPbc	17 43 38.8	-0.2
	baz=334,SNR=11						
Q46A	CEJHS Indians,	148.23	22	P	PKPbc	17 43 38.9	-0.2
	baz=332						
M56A	Emporium	148.25	8	P	PKPbc	17 43 39.2	+0.2
	baz=350,SNR=17						
N52A	McGinn's Farm,	148.27	13	P	PKPbc	17 43 39.0	-0.1
	baz=343,SNR=6.7						
WHTX	Lake Whitney,	148.28	43	ePKPdf	PKPdf	17 43 37.3	+1.2
WHTX	Lake Whitney,	148.28	43	P	PKPbc	17 43 40.0	+0.5
	baz=308						
W39A	Magazine	148.35	34	ePKPbc	PKPbc	17 43 39.3	-0.2
W39A	Magazine	148.35	34	P	PKPbc	17 43 39.3	-0.2
	baz=318,SNR=11						
KSCT	Kent School, K	148.37	1	ePKPbc	PKPbc	17 43 39.0	-0.4
BLO	Bloomington	148.40	21	ePKPbc	PKPbc	17 43 38.9	-0.7
O50A	Cable	148.42	16	P	PKPbc	17 43 39.5	0.0
	baz=339,SNR=8.3						
KSPA	Keystone Colle	148.43	4	ePKPbc	PKPbc	17 43 39.5	0.0
N53A	Lisbon	148.46	12	ePKPbc	PKPbc	17 43 39.0	-0.6
N53A	Lisbon	148.46	12	P	PKPbc	17 43 39.5	-0.1
	baz=345,SNR=10						
N54A	Moraine State	148.47	11	ePKPbc	PKPbc	17 43 39.2	-0.5
N54A	Moraine State	148.47	11	P	PKPbc	17 43 39.7	0.0
	baz=346,SNR=6.1						
ACSO	Alum Creek Sta	148.51	15	ePKPbc	PKPbc	17 43 38.9	-0.8
ACSO	Alum Creek Sta	148.51	15	P	PKPbc	17 43 39.8	0.0
	baz=340,SNR=11						
P48A	Milroy	148.51	19	P	PKPbc	17 43 39.4	-0.4
	baz=336,SNR=9.6						
R45A	Skylar, Fairfi	148.51	24	P	PKPbc	17 43 40.0	+0.2
	baz=330,SNR=7.1						
S44A	Carbondale	148.62	26	P	PKPbc	17 43 39.9	-0.3
	baz=328,SNR=7.4						
Q47A	Bedord North L	148.64	21	P	PKPbc	17 43 40.1	0.0
	baz=333,SNR=6.2						
P49A	Miami Univ. Ec	148.66	18	P	PKPbc	17 43 39.8	-0.4
	baz=337,SNR=9.9						
O51A	Pataskala	148.68	15	P	PKPbc	17 43 40.1	-0.1
	baz=341,SNR=20						
ZAIG	Zacatecas	148.69	62	ePKPdf	PKPdf	17 43 35.1	-2.2
M61A	Granite Spring	148.78	2	P	PKPbc	17 43 40.1	-0.4
	baz=358						
N56A	West Decatur	148.79	8	P	PKPbc	17 43 40.6	+0.1
	baz=349						
N55A	Marion Center	148.82	9	ePKPbc	PKPbc	17 43 40.5	-0.1
N55A	Marion Center	148.82	9	P	PKPbc	17 43 40.4	-0.2
	baz=348,SNR=8.2						
PBMO	Poplar Bluff	148.84	28	ePKPbc	PKPbc	17 43 40.2	-0.5
P50A	Jamestown	148.87	17	P	PKPbc	17 43 40.3	-0.4
	baz=339,SNR=12						
R46A	Gibon Southern	148.88	23	P	PKPbc	17 43 40.8	0.0
	baz=331,SNR=6.0						
Q48A	North Vernon	148.89	20	P	PKPbc	17 43 40.8	+0.1
	baz=335,SNR=21						
O52A	Adamsville	148.90	14	ePKPbc	PKPbc	17 43 39.9	-0.9
O52A	Adamsville	148.90	14	P	PKPbc	17 43 40.8	+0.1
	baz=342,SNR=12						
O53A	New Philadelph	148.91	13	P	PKPbc	17 43 40.9	+0.1
	baz=344						
MIAR	Mount Ida	148.95	35	ePKPbc	PKPbc	17 43 41.2	+0.1
MIAR	Mount Ida	148.95	35	P	PKPbc	17 43 41.6	+0.5
	baz=317,SNR=24						
833A	Chaparral WMA,	148.96	50	ePKPdf	PKPdf	17 43 39.0	+1.7
833A	Chaparral WMA,	148.96	50	P	PKiKP	17 43 42.2	-0.4
	baz=301						
ODNJ	Ogdensburg	148.98	3	ePKPbc	PKPbc	17 43 40.8	-0.2
PB01	IPOC Station P	149.01	186	ePKPbc	PKPbc	17 43 41.5	-0.3
N57A	Milroy	149.04	7	P	PKPbc	17 43 41.3	+0.2
	baz=351,SNR=13						
N59A	State Game Lan	149.07	5	ePKPbc	PKPbc	17 43 41.5	+0.2
N59A	State Game Lan	149.07	5	P	PKPbc	17 43 41.6	+0.4
	baz=354						
PAL	Palisades	149.08	2	P	PKPbc	17 43 41.5	+0.3
	baz=358						
Q49A	Aurora	149.09	19	P	PKPbc	17 43 40.9	-0.4
	baz=336,SNR=6.8						
WHAR	Wooly Hollow	149.09	32	ePKPbc	PKPbc	17 43 40.9	-0.5
SSPA	Standing Stone	149.12	8	ePKPbc	PKPbc	17 43 40.5	-0.9
O54A	Avella	149.15	12	P	PKPbc	17 43 41.8	+0.3
	baz=345,SNR=13						
R47A	Wooly Knot Far	149.18	22	P	PKPbc	17 43 41.7	+0.1
	baz=333,SNR=16						
P51A	Williamsport	149.19	16	ePKPbc	PKPbc	17 43 40.9	-0.7
P51A	Williamsport	149.19	16	P	PKPbc	17 43 41.2	-0.3
	baz=340,SNR=12						
W41B	Gary Mavity, V	149.20	32	ePKPab	PKPab	17 43 46.4	+0.4
W41B	Gary Mavity, V	149.20	32	P	PKPbc	17 43 41.6	-0.1
	baz=320,SNR=12						
S46A	Don Dixon Farm	149.26	24	P	PKPbc	17 43 41.7	0.0
	baz=330						
P52A	Corning	149.28	14	P	PKPbc	17 43 41.6	-0.1
	baz=342,SNR=9.3						
R48A	Northridge Ran	149.32	21	P	PKPbc	17 43 42.2	+0.4
	baz=334,SNR=8.3						
WCI	Wyandotte Cave	149.32	21	ePKPbc	PKPbc	17 43 41.6	-0.3
WCI	Wyandotte Cave	149.32	21	P	PKPbc	17 43 42.1	+0.2
	baz=333						
O55A	Ligonier	149.32	10	P	PKPbc	17 43 41.6	-0.2
	baz=347,SNR=6.2						
O56A	Blue Knob Stat	149.38	9	ePKPbc	PKPbc	17 43 42.1	0.0
O56A	Blue Knob Stat	149.38	9	P	PKPbc	17 43 42.2	+0.2
	baz=349,SNR=12						
X40A	Basin Creek Fa	149.40	34	ePKPbc	PKPbc	17 43 42.0	-0.2
X40A	Basin Creek Fa	149.40	34	P	PKPbc	17 43 42.3	+0.1
	baz=318,SNR=9.6						
LUPA	Lehigh Univers	149.41	4	ePKPbc	PKPbc	17 43 41.6	-0.4
T45A	Paducah	149.44	26	P	PKPbc	17 43 42.3	+0.1
	baz=328						
UALR	University of	149.46	33	ePKPbc	PKPbc	17 43 42.3	0.0
Q50A	Georgetown	149.52	18	P	PKPbc	17 43 42.0	-0.3
	baz=338						
Q51A	Peebles	149.54	17	ePKPbc	PKPbc	17 43 42.2	-0.2
Q51A	Peebles	149.54	17	P	PKPbc	17 43 42.1	-0.4
	baz=339,SNR=8.4						
O57A	Amberson	149.57	8	P	PKPbc	17 43 42.3	-0.1
	baz=350						
P53A	Whipple	149.60	13	ePKPbc	PKPbc	17 43 42.4	-0.2
P53A	Whipple	149.60	13	P	PKPbc	17 43 42.6	0.0
	baz=343,SNR=10						
O59A	Robesonia	149.63	5	P	PKPbc	17 43 42.6	0.0
	baz=353						
R49A	Shelbyville	149.65	20	P	PKPbc	17 43 42.6	-0.1
	baz=335,SNR=13						
PAGS	Pennsylvania G	149.66	6	ePKPbc	PKPbc	17 43 42.0	-0.6
S47A	Hartford	149.66	23	P	PKPbc	17 43 42.5	-0.2
	baz=332						
P54A	Burton	149.69	12	P	PKPbc	17 43 43.0	+0.2
	baz=345						
O60A	Telford	149.69	4	P	PKPbc	17 43 42.9	+0.2
	baz=355						
T46A	Princeton	149.74	25	P	PKPbc	17 43 43.4	+0.5
	baz=329,SNR=18						
MCWV	Mont Chateau	149.76	11	ePKPbc	PKPbc	17 43 43.0	+0.1
MCWV	Mont Chateau	149.76	11	P	PKPbc	17 43 43.1	+0.1
	baz=346						
WLAR	White Oak Lake	149.84	35	ePKPbc	PKPbc	17 43 42.3	-1.0
Q52A	Bidwell	149.89	15	P	PKPbc	17 43 43.0	-0.2
	baz=341,SNR=12						
P55A	Reedsville	149.91	11	P	PKPbc	17 43 43.4	0.0
	baz=346,SNR=8.5						
S48A	Wiedeman Farm,	149.91	22	P	PKPbc	17 43 43.4	+0.1
	baz=333,SNR=19						
MVL	Millersville	149.93	6	ePKPbc	PKPbc	17 43 42.5	-0.7
R50A	Paris	149.93	19	P	PKPbc	17 43 43.0	-0.4
	baz=337,SNR=8.0						
O61A	Allentown	149.97	3	P	PKPbc	17 43 43.0	-0.3
	baz=356						
S49A	Springfield	150.07	20	P	PKPbc	17 43 43.2	-0.6
	baz=335,SNR=9.5						
PSUB	Penn St. - Bra	150.07	4	ePKPbc	PKPbc	17 43 43.5	-0.2
P56A	Dayton Farm, R	150.09	10	P	PKPbc	17 43 43.8	0.0
	baz=348,SNR=9.5						
T47A	Sharon Grove	150.10	24	ePKPdf	PKPdf	17 43 38.5	-0.3
T47A				ePKPbc	pPKPdf	17 43 43.3	-0.1
T47A	Sharon Grove	150.10	24	P	PKPbc	17 43 43.7	-0.2
	baz=331,SNR=9.0						
R51A	Hillsboro	150.14	17	P	PKPbc	17 43 43.4	-0.5
	baz=338,SNR=5.2						
Q53A	Leroy	150.17	14	P	PKPbc	17 43 43.7	-0.2
	baz=342,SNR=12						
P60A	Greenville	150.18	5	P	PKPbc	17 43 43.5	-0.4
	baz=354						
U46A	Springville	150.20	26	P	PKPbc	17 43 43.9	-0.2
	baz=328						
Q54A	Coxs Mills	150.21	13	ePKPbc	PKPbc	17 43 43.7	-0.4
Q54A	Coxs Mills	150.21	13	P	PKPbc	17 43 44.0	0.0
	baz=344,SNR=13						
P57A	Homestead Farm	150.24	8	P	PKPbc	17 43 44.0	-0.1
	baz=349						
NATX	Nacogdoches	150.25	40	P	PKPbc	17 43 44.8	+0.4
	baz=312						
T48A	Bowling Green	150.27	23	P	PKPbc	17 43 44.3	0.0
	baz=332,SNR=24						
PB11	IPOC Station P	150.30	186	ePKPbc	PKPbc	17 43 44.6	-0.4
P59A	Jarrettsville	150.30	6	P	PKPbc	17 43 44.0	-0.2
	baz=353						
GO01	Chusmiza	150.34	187	ePKPbc	PKPbc	17 43 45.6	+0.1
Q55A	Buckhannon	150.35	12	P	PKPbc	17 43 44.4	-0.1
	baz=345,SNR=16						
R52A	Catlettsburg	150.38	16	P	PKPbc	17 43 44.0	-0.5
	baz=340,SNR=8.4						
X43A	Marvell	150.42	32	P	PKPbc	17 43 44.7	0.0
	baz=322						
SDMD	Soldier's Deli	150.46	7	ePKPbc	PKPbc	17 43 44.3	-0.3
S50A	Richmond	150.46	19	P	PKPbc	17 43 44.0	-0.7
	baz=336,SNR=11						
Q56A	Snyder Ridge,	150.48	10	P	PKPbc	17 43 44.8	+0.1
	baz=347,SNR=8.2						
U47A	Clarksville	150.50	24	P	PKPbc	17 43 45.0	+0.2
	baz=330,SNR=20						
LNIG	Linares	150.51	56	ePKPdf	PKPdf	17 43 38.1	-1.7
LNIG				ePKPbc	PKPbc	17 43 45.2	0.0
WVT	Waverly	150.54	26	ePKPdf	PKPdf	17 43 38.7	-0.8
WVT				ePKPbc	PKPbc	17 43 45.2	+0.3
WVT	Waverly	150.54	26	ePKIKP	PKPdf	17 43 38.7	-0.8
WVT				e		17 43 45.2	
WVT	Waverly	150.54	26	P	PKPbc	17 43 45.3	+0.4
	baz=329						
R53A	Hurricane	150.56	15	ePKPbc	PKPbc	17 43 44.7	-0.2
R53A	Hurricane	150.56	15	P	PKPbc	17 43 45.0	0.0
	baz=341,SNR=14						
T49A	Edmonton	150.59	21	ePKPbc	PKPbc	17 43 44.8	-0.2
T49A	Edmonton	150.59	21	P	PKPbc	17 43 44.6	-0.5
	baz=334,SNR=9.7						
Q57A	Strasburg	150.61	9	P	PKPbc	17 43 45.0	0.0
	baz=348						
HKT	Hockley	150.63	44	ePKPbc	PKiKP	17 43 46.0	+0.1
V46A	Holladay	150.70	26	P	PKPbc	17 43 44.9	-0.4
	baz=328,SNR=16						
U48A	Cassie Pea, Po	150.74	23	P	PKPbc	17 43 45.3	-0.1
	baz=331,SNR=46						
S51A	Beattyville	150.75	18	ePKPbc	PKPbc	17 43 44.3	-1.1
S51A	Beattyville	150.75	18	P	PKPbc	17 43 45.0	-0.4
	baz=338,SNR=29						
S52A	Salyersville	150.87	17	P	PKPbc	17 43 45.6	-0.1
	baz=339						
T50A	Nancy	150.91	20	P	PKPbc	17 43 45.2	-0.6
	baz=335,SNR=23						
MNMC	Minye Minye	150.91	186	ePKPbc	PKPbc	17 43 46.4	-0.2
V47A	Nunnelly	150.93	25	P	PKPbc	17 43 45.9	0.0
	baz=329,SNR=16						
R54A	Victor	150.94	14	P	PKPbc	17 43 45.5	-0.3
	baz=343,SNR=9.3						
Q60A	Greensboro	150.96	5	P	PKPbc	17 43 46.0	+0.2
	baz=354						
U49A	Red Boiling Sp	151.03	22	P	PKPbc	17 43 45.9	-0.1
	baz=333,SNR=21						
S53A	Williamson	151.13	16	P	PKPbc	17 43 46.1	-0.2
	baz=340,SNR=6.4						
W46A	Michie	151.14	27	P	PKPbc	17 43 45.9	-0.5
	baz=327,SNR=7.5						
OXF	Oxford	151.17	30	ePKPbc	PKPbc	17 43 45.7	-0.7
CLTN	Cedars of Leba	151.19	23	ePKPdf	PKPdf	17 43 40.1	-0.5
CLTN				ePKPbc	sPKPdf	17 43 46.5	-0.2
S54A	Dingess, Beckl	151.22	14	P	PKPbc	17 43 46.0	-0.5
	baz=342,SNR=9.2						
T51A	Gray	151.26	19	P	PKPbc	17 43 46.4	-0.2
	baz=336,SNR=27						
V48A	Smith Brothers	151.30	25	ePKPbc	PKPbc	17 43 45.7	-1.1
V48A	Smith Brothers	151.30	25	P	PKPbc	17 43 46.3	-0.5
	baz=330,SNR=13						
R57A	Stanardsville	151.32	10	P	PKPbc	17 43 47.1	+0.4
	baz=348						
W47A	Westpoint	151.39	26	P	PKPbc	17 43 46.8	-0.2
	baz=328,SNR=23						
R58A	Rapidan	151.40	9	P	PKiKP	17 43 47.3	-0.1
	baz=349						
PLAL	Pickwick Lake	151.40	27	ePKPdf	PKPdf	17 43 40.3	-0.6
PLAL				ePKPbc	sPKPdf	17 43 46.5	-0.5
T52A	Hallie	151.42	17	ePKPbc	PKPbc	17 43 46.8	-0.2
T52A	Hallie	151.42	17	P	PKPbc	17 43 47.1	+0.1
	baz=338,SNR=11						
S55A	Lewisburg	151.44	13	P	PKPbc	17 43 46.4	-0.7
	baz=344,SNR=7.0						
U50A	Jamestown	151.46	21	P	PKPbc	17 43 47.2	+0.1
	baz=334,SNR=63						
X46A	Booneville	151.52	28	P	PKPbc	17 43 47.1	-0.2
	baz=326,SNR=5.9						
R59A	King George, V	151.62	7	P	PKPbc	17 43 47.4	+0.1
	baz=351						
V49A	McMinnville	151.64	23	P	PKPbc	17 43 47.3	-0.2
	baz=332,SNR=18						
T53A	Wise	151.67	17	P	PKPbc	17 43 47.4	-0.2
	baz=339,SNR=9.0						
R58B	Mineral	151.75	9	ePKPbc	PKPbc	17 43 47.5	-0.1
R58B	Mineral	151.75	9	P	PKPbc	17 43 47.8	+0.1
	baz=349						
S57A	Dark Hollow, R	151.76	11	ePKPdf	PKPdf	17 43 40.6	-0.8
S57A	Dark Hollow, R	151.76	11	P	PKPbc	17 43 47.8	+0.1
	baz=347						
W48A	Pulaski	151.77	25	P	PKPbc	17 43 47.4	-0.4
	baz=329,SNR=11						
TZTN	Tazewell	151.77	19	ePKPdf	PKPdf	17 43 41.1	-0.4
TZTN				ePKPbc	PKPbc	17 43 47.7	-0.1
TZTN	Tazewell	151.77	19	P	PKPbc	17 43 47.8	-0.1
	baz=337,SNR=17						
U51A	La Follette	151.77	20	P	PKPbc	17 43 47.6	-0.2
	baz=336,SNR=5.3						
T54A	Tazewell	151.86	15	P	PKPbc	17 43 47.8	-0.3
	baz=341,SNR=15						
X47A	Russelville	151.89	27	P	PKPbc	17 43 47.3	-0.8
	baz=327,SNR=6.6						
U52A	Thorn Hill	151.97	19	P	PKPbc	17 43 47.9	-0.4
	baz=337,SNR=6.4						
BLA	Blacksburg	152.00	13	ePKPdf	PKPdf	17 43 40.8	-1.0
BLA				ePKPbc	sPKPdf	17 43 47.9	0.0
BLA	Blacksburg	152.00	13	ePKIKP	PKPdf	17 43 40.8	-1.0
BLA				e		17 43 47.9	
BLA	Blacksburg	152.00	13	P	PKPbc	17 43 47.8	-0.5
	baz=344						
T55A	Pulaski	152.00	14	P	PKPbc	17 43 48.1	-0.3
	baz=343,SNR=13						
S59A	Mechanicsville	152.03	8	P	PKPbc	17 43 48.5	+0.2
	baz=350						
V50A	Pikevile	152.03	22	P	PKPbc	17 43 48.2	-0.2
	baz=333,SNR=9.5						
S58A	Poland Farm, P	152.06	9	ePKPdf	PKPdf	17 43 42.2	+0.4
S58A				ePKPbc	PKPbc	17 43 48.5	+0.1
S58A	Poland Farm, P	152.06	9	P	PKPbc	17 43 48.2	-0.1
	baz=349						
W49A	Belvidere	152.06	24	P	PKPbc	17 43 48.2	-0.3
	baz=330,SNR=16						
SWET	Sewanee	152.11	24	ePKPdf	PKPdf	17 43 41.2	-0.8
SWET				ePKPbc	sPKPdf	17 43 48.1	-0.1
V51A	Loudon	152.18	21	ePKPbc	PKPbc	17 43 48.7	-0.1
V51A	Loudon	152.18	21	P	PKPbc	17 43 48.8	+0.1
	baz=335,SNR=12						
U53A	Fall Branch	152.23	17	P	PKPbc	17 43 48.3	-0.6
	baz=339,SNR=5.2						
T56A	Rocky Mt	152.26	13	P	PKPbc	17 43 48.9	0.0
	baz=344						
S61A	Accomac	152.29	5	P	PKiKP	17 43 49.3	+0.1
	baz=354						
U54A	Nelsons Funny	152.30	16	ePKPbc	PKPbc	17 43 48.6	-0.5
U54A	Nelsons Funny	152.30	16	P	PKPbc	17 43 48.7	-0.4
	baz=340						
X48A	Hartselle	152.31	26	ePKPdf	PKPdf	17 43 41.3	-1.0
X48A				ePKPbc	sPKPdf	17 43 48.2	-0.2
X48A	Hartselle	152.31	26	P	PKPbc	17 43 48.5	-0.6
	baz=328,SNR=8.6						
W50A	Signal Mountai	152.37	23	ePKPbc	PKPbc	17 43 48.8	-0.5
W50A	Signal Mountai	152.37	23	P	PKPbc	17 43 49.0	-0.3
	baz=332,SNR=10						
V52A	Sevierville	152.40	19	ePKPbc	PKPbc	17 43 49.3	+0.1
V52A	Sevierville	152.40	19	P	PKPbc	17 43 49.4	+0.1
	baz=336,SNR=22						
CPCT	Cooper Cave	152.44	21	ePKPbc	PKPbc	17 43 49.2	-0.1
T57A	Hurt	152.45	11	ePKPbc	PKPbc	17 43 49.0	-0.3
T57A	Hurt	152.45	11	P	PKPbc	17 43 49.2	-0.1
	baz=346						
U55A	TA2, Sparta	152.52	15	P	PKPbc	17 43 49.4	-0.2
	baz=342						
X49A	Woodville	152.56	25	P	PKPbc	17 43 49.1	-0.5
	baz=330,SNR=7.4						
W51A	Cleveland	152.61	22	P	PKPbc	17 43 49.6	-0.2
	baz=334,SNR=7.4						
T58A	Grand View Acr	152.63	10	P	PKPbc	17 43 49.8	+0.1
	baz=348						
Y48A	Jasper	152.71	27	P	PKPbc	17 43 49.4	-0.6
	baz=328,SNR=6.6						
T60A	Surry	152.71	7	P	PKPbc	17 43 49.7	-0.1
	baz=351						
T59A	Double "B" Far	152.77	9	ePKPbc	PKPbc	17 43 50.0	+0.1
T59A	Double "B" Far	152.77	9	P	PKiKP	17 43 50.5	+0.3
	baz=350						
V53A	Saluda	152.81	18	ePKPbc	PKPbc	17 43 50.2	0.0
V53A	Saluda	152.81	18	P	PKPbc	17 43 50.2	0.0
	baz=338,SNR=15						
U56A	King	152.83	14	P	PKPbc	17 43 49.9	-0.3
	baz=343						
X50B	Fort Payne	152.88	24	P	PKPbc	17 43 49.7	-0.7
	baz=331						
V54A	Nebo	152.96	17	P	PKPbc	17 43 50.1	-0.4
	baz=340						
W52A	Murphy	152.97	21	ePKPbc	PKPbc	17 43 50.6	+0.1
W52A	Murphy	152.97	21	P	PKPbc	17 43 50.2	-0.4
	baz=335						
U57A	Blanch	152.98	12	P	PKPbc	17 43 50.4	-0.1
	baz=346						
Y49A	Blount Mountai	153.09	26	ePKPdf	PKPdf	17 43 42.5	-1.0
Y49A				ePKPbc	sPKPdf	17 43 50.0	+0.5
Y49A	Blount Mountai	153.09	26	P	PKPbc	17 43 50.4	-0.4
	baz=329,SNR=10						
V55A	Taylorsville	153.09	16	P	PKPbc	17 43 50.6	-0.2
	baz=341						
X51A	Calhoun	153.10	23	ePKPdf	PKPdf	17 43 43.3	-0.1
X51A				ePKPbc	PKPbc	17 43 50.7	-0.1
X51A	Calhoun	153.10	23	P	PKPbc	17 43 50.5	-0.3
	baz=333						
W53A	Cullowhee	153.16	19	P	PKiKP	17 43 51.4	+0.2
	baz=337,SNR=12						
U58A	Oxford	153.17	11	P	PKPbc	17 43 50.8	-0.1
	baz=347						
U

baz=345
X56A White Oak 154.43 16 P **PKPbc** 17 43 53.7 +0.1
baz=341
Z52A Williamson 154.49 23 P **PKiKP** 17 43 54.2 +0.4
baz=332
Y54A Tignall 154.51 20 P **PKPbc** 17 43 53.8 0.0
baz=337,SNR=5.8
W61A Ground Anchor 154.61 8 P **PKiKP** 17 43 54.4 +0.3
baz=350
GOGA Godfrey 154.65 22 *e*PKPab **PKPab** 17 44 09.1 +0.4
GOGA Godfrey 154.65 22 *e*PKP2 **PKPab** 17 44 09.1 +0.4
GOGA Godfrey 154.65 22 P **PKPbc** 17 43 54.1 0.0
baz=335
151A Opelika 154.69 26 P **PKPbc** 17 43 54.0 -0.3
baz=330
Y55A Saluda 154.70 18 P **PKPbc** 17 43 54.4 +0.1
baz=338,SNR=5.5
Z53A Monticello 154.73 22 P **PKiKP** 17 43 54.6 +0.2
baz=334,SNR=6.4
152A Waverly Hall 154.82 24 *e*PKPdf **PKPdf** 17 43 45.2 -0.8
152A Waverly Hall 154.82 24 P **PKPbc** 17 43 54.5 -0.1
baz=331
Z54A Sparta 155.03 21 P PKPdf 17 43 54.7 +8.5
baz=336
Y58A Scranton 155.33 14 P PKPdf 17 43 55.6 +9.0
baz=343
253A Americus 155.59 24 *e*PKPdf **PKPdf** 17 43 46.1 -0.9
253A Americus 155.59 24 P **PKPab** 17 44 12.5 -0.3
baz=332
155A Kite 155.71 20 P **PKPab** 17 44 13.5 +0.1
baz=336
NHSC New Hope 155.96 16 P **PKPab** 17 44 13.9 -0.4
baz=342
254A Abbeville 156.03 23 P **PKPab** 17 44 14.0 -0.6
baz=334
157A Early Branch 156.13 18 P **PKPab** 17 44 14.2 -0.9
baz=340
353A Camilla 156.18 25 P **PKPab** 17 44 15.3 -0.1
baz=331,SNR=5.8
452A Marianna 156.19 28 P **PKPab** 17 44 15.6 +0.2
baz=328
TIGA Tifton 156.36 24 P **PKPab** 17 44 16.6 +0.5
baz=332
453A Whigham 156.56 26 P **PKPab** 17 44 17.3 +0.3
baz=330
455A Stateville 157.20 24 P **PKPab** 17 44 19.9 +0.2
baz=333
554A Perry 157.50 26 P **PKPab** 17 44 21.2 +0.2
baz=331
456A Hilliard 157.59 22 P **PKPab** 17 44 21.8 +0.4
baz=335
555A McAlpin 157.77 24 *e*PKPab **PKPab** 17 44 23.5 +1.3
555A McAlpin 157.77 24 P **PKPab** 17 44 22.6 +0.4
baz=332
556A Lake Butler 158.10 23 P **PKPab** 17 44 24.5 +0.8
baz=334
656A Willston 158.61 24 *e*PKPab **PKPab** 17 44 27.4 +1.5
656A Willston 158.61 24 P **PKPab** 17 44 27.1 +1.3
baz=333
658A Bunnell 159.05 21 P **PKPab** 17 44 27.4 -0.3
baz=336
757A Oxford 159.17 24 P **PKPab** 17 44 29.2 +0.9
baz=333
857A Zephyrhills 159.70 25 P **PKPab** 17 44 31.7 +1.0
baz=332
PTGA Pitinga 163.49 231 *e*PKPab **PKPab** 17 44 47.5 -0.2

KRSC 13 17:27:25.9±1.1, 51°.99N×160°.81E, h16km±33km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.21**	**337**	*e*P	Pn	17 27 47.7	-0.4
RUS	**Russkaya**	**1.48**	**288**	*e*P	Pn	17 27 52.2	+0.4
NLC	**Nalytchevo**	**1.48**	**323**	*e*P	Pb	17 27 52.5	-0.5
DALK	**Dalny**	**1.63**	**310**	*e*P	Pn	17 27 54.1	+0.2
PET	**Petropavlovsk**	**1.68**	**309**	*e*P	Pn	17 27 55.1	+0.6
PET				*e*S	Sn	17 28 15.9	+0.3
MTVR	**Mutnovka**	**1.69**	**288**	*e*P	Pn	17 27 55.7	+0.9
MTVR				*e*S	Sn	17 28 16.9	+0.7
KDTR	**Khodutka, Kamc**	**1.70**	**265**	*e*P	Pn	17 27 55.7	+0.8
UGLR	**Uglovaya**	**1.72**	**316**	*e*P	Pb	17 27 56.8	-0.3
UGLR				*e*S	Sb	17 28 18.7	+0.2
SDLR	**Sedlovina**	**1.74**	**318**	*e*P	Pb	17 27 56.7	-0.8
SMAR	**Somma**	**1.77**	**317**	*e*P	Pb	17 27 57.0	-1.0
AVH	**Avacha**	**1.79**	**316**	*e*P	Pn	17 27 57.3	+1.1
KRER	**Koryakskii**	**1.82**	**317**	*e*P	Pb	17 27 58.4	-0.5
ASAK	**Asacha**	**1.83**	**284**	*e*P	Pb	17 27 58.3	-0.8
KRMR	**Karymshinskiy**	**1.84**	**298**	*e*P	Pn	17 27 57.5	+0.7
KOK	**Koryaka**	**1.86**	**315**	*e*P	Pb	17 27 59.2	-0.3
KRX	**Arik**	**1.90**	**317**	*e*P	Pb	17 27 59.3	-0.9
APC	**Apacha**	**2.42**	**294**	*e*P	Pn	17 28 06.5	+1.7
GNL	**Ganaly**	**2.44**	**316**	*e*P	Pn	17 28 07.1	+2.0
MKZ	**Mys Kozlova**	**2.63**	**12**	*e*P	Pn	17 28 09.2	+1.6

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*IDC **13** 17:49:44.4±0.6, 20°.09S×66°.33E, h0km, mb4.1/16, mb1 4.3/16, mb1mx4.1/36, mbtmp4.1/16, MS4.7/1, Ms1 4.7/1, ms1mx3.9/42, Error ellipse: s-maj=19.4km s-min=17.4km az=60.0*
*ISCJB **13** 17:49:45.0±0.5, 20°.10S±0°.09×66°.33E±0°.09, h16km, mb4.3/29, MS4.8/1, Error ellipse: s-maj=13.2km s-min=11.9km az=140.5*
*NEIC **13** 17:49:45.9±0.6, 20°.11S×66°.34E, h10km, mb4.7/14, Error ellipse: s-maj=23.2km s-min=10.1km az=215.0*
ISC 13 17:49:46.9±0.6, 20°.1S±0°.1×66°.3E±0°.1, h16km, n50, σ0s54/48, mb4.5/29, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**14.41**	**19**	T	T	18 07 54.2	
H08N1	**Diego Garcia H**	**14.42**	**19**	T	T	18 08 02.0	
H08N2	**Diego Garcia H**	**14.43**	**19**	T	T	18 08 06.2	
LBTB	**Lobatse**	**37.81**	**255**	P	**P**	**17 57 03.0**	**0.0**
MAW	**Mawson**	**47.55**	**182**	P	**P**	**17 58 21.6**	**+0.5**
MAW	**Mawson**	**47.55**	**182**	*e*P	**P**	**17 58 21.8**	**+0.6**
CM31	**Chiang Mai Arr**	**49.93**	**42**	*e*P	**P**	**17 58 40.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**49.93**	**42**	P	**P**	**17 58 40.2**	**0.0**
SHL	**Shillong**	**51.75**	**30**	*e*P	**P**	**17 58 53.7**	**-0.3**
KAPI	**Kappang**	**54.03**	**81**	LR	LR	18 21 44.8	
ASAR	**Alice Springs**	**62.30**	**107**	P	**P**	**18 00 08.6**	**-0.3**
AS31	**Alice Springs**	**62.31**	**107**	*e*P	**P**	**18 00 08.3**	**-0.5**
KK31	**Karatay Array**	**63.00**	**3**	*e*P	**P**	**18 00 12.7**	**-0.3**
GNI	**Garni**	**63.22**	**342**	*e*P	**P**	**18 00 14.7**	**+0.1**
WR1	**Warramunga Arr**	**63.48**	**103**	*e*P	**P**	**18 00 16.2**	**-0.5**
WRA	**Warramunga Arr**	**63.48**	**103**	P	**P**	**18 00 16.2**	**-0.5**
BRTR	**Keskin Array B**	**66.88**	**333**	P	**P**	**18 00 39.1**	**+0.7**
BR101	**Keskin Array S**	**66.88**	**333**	*e*P	**P**	**18 00 39.1**	**+0.7**
BR131	**Keskin Array S**	**66.88**	**333**	*e*P	**P**	**18 00 38.8**	**+0.4**
GTA	**Gaotai**	**66.98**	**28**	*e*P	**P**	**18 00 40.1**	**+1.1**
GTA				pP	pwP	18 00 45.8	-1.8
GTA				sP	sP	18 00 48.9	+4.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**67.05**	**342**	P	**P**	**18 00 39.5**	**+0.4**
	1.6nm,0.6s,baz=195,slow=7.8,SNR=4.4						
MK31	**Makanchi Array**	**68.12**	**12**	*e*P	**P**	**18 00 46.1**	**+0.1**
	5.0nm,1.2s						
MK32	**Makanchi Array**	**68.12**	**12**	*e*P	**P**	**18 00 45.8**	**-0.1**
MKAR	**Makanchi Array**	**68.12**	**12**	P	**P**	**18 00 45.8**	**-0.1**
	1.4nm,0.8s,baz=193,slow=5.0,SNR=13						
ABKAR	**Akbulak array**	**69.27**	**356**	*e*P	**P**	**18 00 53.1**	**+0.1**
	6.5nm,0.8s						
KURK	**Kurchatov**	**71.33**	**8**	*e*P	**P**	**18 01 05.9**	**+0.3**
	7.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**71.62**	**292**	P	**P**	**18 01 08.0**	**-0.1**
	1.1nm,1.0s,baz=120,slow=8.0,SNR=3.9						
TOA1	**Torodi Ar. Sit**	**71.62**	**292**	*e*P	**P**	**18 01 08.0**	**-0.1**
VNDA	**Vanda**	**71.72**	**167**	P	**P**	**18 01 08.3**	**+0.6**
	0.7nm,0.9s,baz=329,slow=6.8,SNR=3.6						
VNDA	**Vanda**	**71.72**	**167**	*e*P	**P**	**18 01 07.7**	**0.0**
BRVK	**Borovoye**	**72.93**	**3**	*e*P	**P**	**18 01 15.2**	**+0.1**
	6.3nm,1.0s						
ZAA0	**Zalesovo Array**	**75.45**	**11**	*e*P	**P**	**18 01 30.0**	**+0.3**
	12nm,1.3s						
ZALV	**Zalesovo Beam**	**75.45**	**11**	P	**P**	**18 01 29.9**	**+0.2**
	2.8nm,0.8s,baz=199,slow=5.5,SNR=12						
ZAA1	**Zalesovo Array**	**75.45**	**11**	*e*P	**P**	**18 01 29.9**	**+0.1**
SONA0	**Songino Array**	**76.58**	**26**	*e*P	**P**	**18 01 37.5**	**+0.9**
SONM	**Songino Array**	**76.58**	**26**	P	**P**	**18 01 37.5**	**+0.9**
	1.5nm,0.8s,baz=219,slow=5.3,SNR=9.3						
AKASG	**Malin Array Be**	**77.69**	**337**	P	**P**	**18 01 42.0**	**-0.6**
	1.2nm,0.6s,baz=140,slow=4.1,SNR=6.0						
AKBB	**Malin Array Si**	**77.69**	**337**	*e*P	**P**	**18 01 42.2**	**-0.3**
	5.4nm,0.9s						
KS15	**Wonju Array Si**	**81.42**	**45**	*e*P	**P**	**18 02 03.4**	**+0.2**
	10nm,0.8s						
KSRS	**Korea Array**	**81.45**	**45**	P	**P**	**18 02 03.6**	**+0.3**
	0.4nm,0.4s,baz=234,slow=5.3,SNR=5.6						
KLMR	**Klimovskoe**	**83.52**	**347**	*e*	**P**	**18 02 13.1**	**-0.5**
KLMR				AMP		18 02 20.6	
	comp=Z,14nm,1.1s						
MAJO	**Matsushiro**	**88.13**	**50**	*e*P	**P**	**18 02 36.9**	**-0.1**
MJAR	**Matsushiro Arr**	**88.13**	**50**	P	**P**	**18 02 36.9**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=232,slow=6.2,SNR=5.2						
ESDC	**Sonseca Array**	**88.42**	**313**	P	**P**	**18 02 38.5**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=90,slow=3.1,SNR=5.5						
TIXI	**Tiksi**	**100.77**	**17**	P	**Pdif**	**18 03 33.7**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=68,slow=3.4,SNR=3.2						
YKA	**Yellowknife Ar**	**137.63**	**1**	PKP	**PKPdf**	**18 09 08.6**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=0.0,slow=2.5,SNR=4.9						
YKB5	**Yellowknife Ar**	**137.63**	**1**	*e*PKPdf	**PKPdf**	**18 09 08.7**	**-1.0**
ULM	**Lac du Bonnet**	**146.75**	**339**	PKPbc	**PKPbc**	**18 09 26.7**	**-1.3**
	comp=Z,3.1nm,0.7s,baz=27,slow=7.1,SNR=2.6						
LTX	**Lajitas**	**167.06**	**317**	*e*PKPdf	**PKPdf**	**18 09 51.9**	**-0.8**
LTX				*e*PKPab	**PKPab**	**18 10 57.1**	**+0.6**
TXAR	**Lajitas Array**	**167.06**	**317**	PKP	**PKPdf**	**18 09 51.9**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=198,slow=3.7,SNR=3.5						
TXAR				PKPab	**PKPab**	**18 10 57.1**	**+0.6**

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*SJA **13** 17:49:59.9±0.6, 24°.44S×67°.98W, h134km±8km, ML2.7, MW2.9*
*ISCJB **13** 17:50:00.1±0.8, 24°.43S±0°.04×68°.03W±0°.04, h135km±13km, Error ellipse: s-maj=6.3km s-min=5.2km az=41.9*
*GUC **13** 17:50:02.3±0.8, 24°.41S×68°.17W, h142km±8km, ML3.5*
ISC 13 17:49:59.7±1.8, 24°.46S±0°.04×68°.03W±0°.04, h147km±20km, n27, σ0s89/43, 4C-6D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**1.58**	**243**	⇑*i*P	**Pn**	**17 50 30.9**	**+0.8**
GO02				*e*S	**Sn**	**17 50 53.0**	**-0.4**
GO02				IAML		17 50 57.0	
	comp=N,529nm,0.2s						
PB15	**IPOC Station P**	**1.81**	**313**	*e*P	**Pn**	**17 50 33.4**	**+0.7**
PB15				*e*S	**Sn**	**17 50 57.8**	**-0.1**
PB15	**IPOC Station P**	**1.81**	**313**	⇓*i*P	**Pn**	**17 50 33.4**	**+0.7**
PB15				*e*S	**Sn**	**17 50 57.2**	**-0.8**
LVC	**Limon Verde**	**2.01**	**336**	*e*P	**Pn**	**17 50 35.9**	**+0.7**
LVC				*e*S	**Sn**	**17 51 01.8**	**-0.5**
LVC				IAML		17 51 06.8	
	comp=Z,57nm,0.3s						
LVC	**Limon Verde**	**2.01**	**336**	⇑*i*P	**Pn**	**17 50 36.0**	**+0.8**
LVC				*e*S	**Sn**	**17 51 02.6**	**+0.3**
PB14	**IPOC Station P**	**2.17**	**265**	*e*P	**Pn**	**17 50 37.5**	**+0.6**
PB14				*e*S	**Sn**	**17 51 04.9**	**-0.6**
PB14				IAML		17 51 06.8	
	comp=E,422nm,0.3s						
PB06	**IPOC Station P**	**2.25**	**321**	*e*P	**Pn**	**17 50 38.4**	**+0.7**
PB06	**IPOC Station P**	**2.25**	**321**	⇑*i*P	**Pn**	**17 50 38.7**	**+1.0**
PB06				*e*S	**Sn**	**17 51 06.2**	**-0.7**
PB06				IAML		17 51 08.4	
	comp=N,303nm,0.3s						
SLA	**San Lorenzo**	**2.32**	**97**	*e*P	**Pn**	**17 50 38.7**	**+0.1**
SLA				IAML		17 50 40.9	
	comp=Z,7.1nm,0.3s						
FSA	**Cafayete**	**2.48**	**132**	*e*P	**Pn**	**17 50 41.1**	**+0.5**
FSA				IAML		17 50 42.3	
	comp=Z,17nm,0.4s						
PB10	**IPOC Station P**	**2.49**	**292**	⇑*i*P	**Pn**	**17 50 41.4**	**+0.9**
PB10				*e*S	**Sn**	**17 51 10.7**	**-1.3**
PB05	**IPOC Station P**	**2.55**	**308**	*e*P	**Pn**	**17 50 42.2**	**+0.8**
PB05	**IPOC Station P**	**2.55**	**308**	⇓*i*P	**Pn**	**17 50 42.2**	**+0.8**
PB05				*e*S	**Sn**	**17 51 12.2**	**-1.4**
AZAP	**Zapla**	**2.72**	**86**	*e*P	**Pn**	**17 50 43.9**	**+0.4**
AZAP				IAML		17 51 11.2	
	comp=Z,0.0nm,0.0s						
AZAP				*e*S	**Sn**	**17 51 16.4**	**-1.0**
PB04	**IPOC Station P**	**2.87**	**317**	*e*P	**Pn**	**17 50 46.1**	**+0.6**
PB04	**IPOC Station P**	**2.87**	**317**	⇓*i*P	**Pn**	**17 50 46.0**	**+0.6**
PB04				*e*S	**Sn**	**17 51 19.5**	**-1.4**
PB04				IAML		17 51 26.5	
	comp=E,154nm,0.2s						
PB03	**IPOC Station P**	**2.88**	**326**	*e*P	**Pn**	**17 50 46.3**	**+0.8**
PB03	**IPOC Station P**	**2.88**	**326**	⇓*i*P	**Pn**	**17 50 46.3**	**+0.8**
PB03				*e*S	**Sn**	**17 51 20.2**	**-0.7**
PB09	**IPOC Station P**	**2.88**	**337**	*e*P	**Pn**	**17 50 46.5**	**+0.9**
PB09	**IPOC Station P**	**2.88**	**337**	⇓*i*P	**Pn**	**17 50 47.1**	**+1.6**
PB09				*e*S	**Sn**	**17 51 21.1**	**+0.1**
PB09				IAML		17 51 30.4	
	comp=E,107nm,0.6s						
PB07	**IPOC Station P**	**3.21**	**328**	*e*P	**Pn**	**17 50 50.4**	**+0.5**
PB07	**IPOC Station P**	**3.21**	**328**	⇓*i*P	**Pn**	**17 50 50.3**	**+0.5**
PB07				*e*S	**Sn**	**17 51 26.8**	**-1.8**
YJA	**Yavi**	**3.25**	**46**	*e*P	**Pn**	**17 50 51.7**	**+1.2**
YJA				IAML		17 50 53.0	
	comp=Z,19nm,0.5s						
YJA				*e*S	**Sn**	**17 51 28.9**	**-0.8**
AHML	**Horco Molle**	**3.36**	**134**	*e*P	**Pn**	**17 50 52.1**	**+0.5**
AHML				IAML		17 50 53.3	
	comp=Z,17nm,0.4s						
PB01	**IPOC Station P**	**3.66**	**338**	*e*P	**Pn**	**17 50 55.9**	**+0.4**
PB01				*e*S	**Sn**	**17 51 37.5**	**-1.2**
GO03	**Copiap**	**3.70**	**212**	*e*P	**Pn**	**17 50 56.0**	**+0.1**
VCA	**Vinchina**	**4.26**	**182**	*e*P	**Pn**	**17 51 04.8**	**+1.3**
VCA				IAML		17 52 02.6	
	comp=Z,17nm,0.2s						

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*KRNET **13** 18:00:05.8±0.1, 41°.14N×72°.04E, h13km, mb2.0*
*SOME **13** 18:00:06.1, 41°.12N×72°.03E, h0km*
*NNC **13** 18:00:09.3±4.9, 41°.19N×72°.01E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=38.9km s-min=14.4km az=171.0*
ISC 13 18:00:06.4±1.5, 41°.13N±0°.06×72°.09E±0°.03, h9km±15km, n13, σ0s91/23, 13C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.67**	**352**	⇑*i*P	**Pg**	**18 00 18.3**	**-1.2**
	baz=56						
ARK				⇑*i*S	**Sg**	**18 00 27.3**	**-1.0**
	baz=56						
ARSB	**Arslanbob**	**0.70**	**74**	⇑*i*P	**Pg**	**18 00 19.8**	**-0.2**
	baz=75						
ARSB				⇑*i*S	**Sb**	**18 00 30.3**	**-0.5**
	baz=75						
BTK	**Batken**	**1.44**	**222**	⇑*i*P	**Pn**	**18 00 32.7**	**-0.1**
	baz=21						
BTK				⇑*i*S	**Sb**	**18 00 52.1**	**+0.1**
	baz=21						
MRKS	**Merke**	**1.82**	**27**	P	**Pg**	**18 00 41.6**	**+0.2**
	2.6nm,0.2s						
MRKS				S	**Sg**	**18 01 06.9**	**+1.9**
	5.8nm,0.2s						
MRKS	**Merke**	**1.82**	**27**	*e*P	**Pg**	**18 00 41.2**	**-0.2**
	2.6nm,0.2s						
MRKS				*e*S	**Sg**	**18 01 06.3**	**+1.3**
	5.8nm,0.2s						
ARLS	**Aral**	**1.83**	**66**	⇑*i*P	**Pb**	**18 00 40.5**	**+0.3**
	baz=66						
ARLS				⇑*i*S	**Sg**	**18 01 05.9**	**+0.6**
	baz=66						
IUG	**Iuzhnay**	**1.85**	**304**	Pg	**Pg**	**18 00 42.4**	**+0.5**
	2.9nm,0.2s						
IUG				Lg	Lg	18 01 08.4	
	16nm,0.2s						
IUG	**Iuzhnay**	**1.85**	**304**	*e*P	**Pg**	**18 00 41.8**	**0.0**
	2.9nm,0.2s						
IUG				*e*S	**Sg**	**18 01 07.4**	**+1.6**
	16nm,0.2s						
UCH	**Uchtor**	**2.12**	**58**	⇑*i*P	**Pb**	**18 00 45.8**	**+0.5**
	baz=59						
UCH				⇑*i*S	**Sg**	**18 01 14.9**	**+0.2**
	baz=59						
KK31	**Karatay Array**	**2.29**	**330**	Pg	**Pb**	**18 00 48.0**	**0.0**
	0.7nm,0.3s,baz=136,slow=12,SNR=12						
KK31				⇑Lg	Lg	18 01 18.6	
	1.0nm,0.3s,baz=142,slow=30,SNR=9.5						
BRLS	**Borolday**	**2.53**	**319**	Pg	**Pb**	**18 00 51.2**	**-0.9**
BRLS				Lg	Lg	18 01 23.2	
BRLS	**Borolday**	**2.53**	**319**	*e*P	**Pb**	**18 00 51.2**	**-0.9**
	0.9nm,0.2s						
BRLS				*e*S	**Sb**	**18 01 23.5**	**+0.2**
	2.1nm,0.5s						
KZA	**Kyzart**	**2.55**	**67**	⇑*i*P	**Pb**	**18 00 51.1**	**-1.5**
	baz=68						
KZA				⇑*i*S	**Sb**	**18 01 24.6**	**+0.3**
	baz=68						

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*IDC **13** 18:08:36.4±3.1, 2°.83S×77°.67W, h38km±30km, mb3.4/10, mb1 3.8/15, mb1mx3.7/33, mbtmp3.8/15, ML3.9/5, Error ellipse: s-maj=20.5km s-min=13.4km az=18.0*
*IGQ **13** 18:08:37.3±0.5, 3°.S±2°.×7°.8W±°., h35km, MLv4.8*
ISC 13 18:08:33.3±1.5, 2°.82S±0°.04×77°.79W±0°.04, h17km±9km, n64, σ1s08/89, mb3.7/10, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAT1	**Patacocha**	**1.46**	**334**	P	**Pn**	**18 09 00.1**	**+0.8**
BPAT	**Tungurahua Vol**	**1.46**	**334**	P	**Pn**	**18 09 00.1**	**+0.8**
ARRY	**Arrayan**	**1.47**	**333**	P	**Pn**	**18 08 59.9**	**+0.5**
BMAS	**Trigal station**	**1.48**	**332**	P	**Pn**	**18 09 00.3**	**+0.8**
BMAS				S	**Sg**	**18 09 21.8**	**+0.5**
COHC	**Cochancay**	**1.51**	**284**	P	**Pn**	**18 08 59.0**	**-0.5**
COHC				S	**Sn**	**18 09 17.6**	**-1.1**
BULB	**Ulba Tungurahu**	**1.51**	**336**	P	**Pn**	**18 09 01.0**	**+1.1**
BULB				S	**Sg**	**18 09 22.4**	**+0.2**
RETU	**Refugio**	**1.51**	**334**	P	**Pn**	**18 09 01.1**	**+1.0**
BRUN	**Tungurahua Vol**	**1.53**	**336**	P	**Pb**	**18 09 01.3**	**-0.1**
BRUN				S	**Sg**	**18 09 24.3**	**+1.6**
BBIL	**Ulba Tungurahu**	**1.53**	**333**	P	**Pb**	**18 09 01.6**	**+0.1**
BBIL				S	**Sg**	**18 09 22.6**	**-0.3**
BIL2	**Estacion Bilba**	**1.54**	**332**	P	**Pg**	**18 09 03.3**	**+0.4**
POND	**Pondoa**	**1.54**	**335**	P	**Pn**	**18 09 01.5**	**+1.1**
ATEN	**Tena**	**1.81**	**359**	P	**Pb**	**18 09 06.3**	**+0.4**
ATEN				S	**Sg**	**18 09 32.6**	**+1.1**
ARDO	**Archidona, Ten**	**1.82**	**360**	P	**Pb**	**18 09 06.5**	**+0.3**
ARDO				S	**Sg**	**18 09 32.2**	**+0.3**
MILO	**Milagro-Astudi**	**1.85**	**287**	P	**Pb**	**18 09 06.1**	**-0.5**
MILO				S	**Sb**	**18 09 30.1**	**+0.6**
PIS1	**Pisayambo**	**1.85**	**341**	P	**Pb**	**18 09 07.4**	**+0.4**
PIS1				S	**Sg**	**18 09 33.1**	**-0.1**
PISA	**Pisayambo**	**1.85**	**341**	P	**Pb**	**18 09 07.5**	**+0.5**
GONZ	**Gonzanam**	**2.13**	**229**	P	**Pn**	**18 09 08.7**	**+0.2**
BMOR	**Cotopaxi Volca**	**2.18**	**342**	P	**Pb**	**18 09 13.2**	**+0.5**
BMOR				S	**Sg**	**18 09 43.5**	**-0.3**
COV1	**Cotopaxi Volc**	**2.22**	**345**	P	**Pb**	**18 09 14.3**	**+1.0**
COV1				S	**Sg**	**18 09 43.8**	**-1.0**
BTAM	**Cotopaxi Volca**	**2.22**	**344**	P	**Pb**	**18 09 13.6**	**+0.3**
BTAM				S	**Sg**	**18 09 45.1**	**+0.2**
BREF	**Cotopaxi Volca**	**2.24**	**343**	P	**Pg**	**18 09 15.3**	**-1.0**
BREF				S	**Sg**	**18 09 45.6**	**+0.1**
BVC2	**Cotopaxi Volca**	**2.24**	**344**	P	**Pb**	**18 09 14.2**	**+0.5**
BVC2				S	**Sg**	**18 09 44.3**	**-1.3**
BNAS	**Cotopaxi Volca**	**2.25**	**342**	P	**Pb**	**18 09 14.2**	**+0.4**
BNAS				S	**Sg**	**18 09 45.0**	**-0.7**
VC1	**Cotopaxi 1**	**2.25**	**344**	P	**Pb**	**18 09 14.3**	**+0.5**
ILLI	**Illinizas Sur**	**2.30**	**336**	P	**Pb**	**18 09 15.0**	**+0.5**
ANTM	**Antisana-La Mi**	**2.31**	**349**	P	**Pb**	**18 09 14.8**	**-0.1**
ANTM				S	**Sb**	**18 09 45.0**	**+1.6**
ANTS	**Antisana-Sarah**	**2.34**	**351**	P	**Pb**	**18 09 14.7**	**-0.7**
ANTS				S	**Sg**	**18 09 47.4**	**-1.4**
ANTG	**Antisana-Guama**	**2.35**	**349**	P	**Pb**	**18 09 14.7**	**-0.9**
ANTG				S	**Sb**	**18 09 47.1**	**+2.6**
ANTI	**Antisana**	**2.39**	**351**	P	**Pb**	**18 09 15.0**	**-1.2**
ZUMB	**Zumba**	**2.44**	**214**	P	**Pn**	**18 09 12.9**	**+0.4**
ZUMB				S	**Sn**	**18 09 43.0**	**+1.0**
MORR	**Playas El Morr**	**2.55**	**274**	P	**Pn**	**18 09 16.4**	**+2.5**
MORR				S	**Sb**	**18 09 50.2**	**+0.3**
MCRA	**Macar, Loja**	**2.65**	**235**	P	**Pn**	**18 09 13.1**	**-2.2**
MCRA				S	**Sn**	**18 09 45.6**	**-1.6**
TERV	**Terraza Guagua**	**2.75**	**343**	P	**Pb**	**18 09 23.6**	**+1.1**
PINO	**Pino**	**2.77**	**343**	P	**Pb**	**18 09 24.2**	**+1.5**
YANA	**Yana**	**2.80**	**344**	P	**Pb**	**18 09 23.3**	**+0.1**
PULU	**Pululahua**	**2.92**	**346**	P	**Pb**	**18 09 25.8**	**+0.7**
PULU				S	**Sg**	**18 10 06.8**	**-0.3**
CUSW	**Cuicocha Oeste**	**3.14**	**350**	P	**Pb**	**18 09 30.7**	**+1.8**
CUIC	**Cuicocha-Domo**	**3.16**	**350**	P	**Pb**	**18 09 30.2**	**+1.0**
CUSE	**Cuicocha Este**	**3.17**	**349**	P	**Pb**	**18 09 29.1**	**-0.3**
YAHU	**Yahuarcocha**	**3.19**	**355**	P	**Pb**	**18 09 29.2**	**-0.5**
PAC1	**Pacto, Paraso**	**3.23**	**342**	P	**Pb**	**18 09 30.7**	**+0.4**
SALI	**Salinas**	**3.26**	**281**	P	**Pn**	**18 09 26.0**	**+2.4**
URCU	**Urcuqui**	**3.27**	**352**	P	**Pb**	**18 09 29.3**	**-1.9**
CABP	**Cabo Pasado**	**3.58**	**312**	P	**Pn**	**18 09 28.9**	**+0.8**
LITE1	**Lita**	**3.64**	**351**	P	**Pb**	**18 09 36.5**	**-0.8**
ATAH	**Atahualpa**	**4.33**	**188**	Pn	**Pn**	**18 09 40.4**	**+1.7**
	11nm,0.3s,baz=26,slow=5.0,SNR=73						
ATAH				Sn	**Sn**	**18 10 28.8**	**-0.2**
	2.7nm,0.3s,baz=5.3,slow=21,SNR=3.5						
NNA	**Nana**	**9.15**	**174**	Pn	**Pn**	**18 10 46.4**	**+1.7**
	1.6nm,0.3s,baz=337,slow=7.7,SNR=3.0						
NNA				Sn	**Sn**	**18 12 26.8**	**-0.6**
	1.6nm,0.3s,baz=295,slow=19,SNR=3.7						
JTS	**Las Juntas de**	**14.85**	**331**	Pn	**P**	**18 12 06.4**	**-2.1**
	0.6nm,0.3s,baz=114,slow=10.0,SNR=2.6						
LPAZ	**La Paz**	**16.41**	**145**	Pn	**Pn**	**18 12 24.4**	**+0.8**
	0.1nm,0.3s,baz=359,slow=12,SNR=

SONM	**Songino Array**	**56.04**	**329**	P	**P**	**18 18 27.0**	**0.0**
	0.9nm,0.8s,baz=143,slow=7.9,SNR=5.9						
MKAR	**Makanchi Array**	**69.91**	**319**	P	**P**	**18 19 58.4**	**-0.7**
	0.3nm,0.6s,baz=102,slow=7.1,SNR=4.3						
ILAR	**Eielson Array**	**77.56**	**24**	P	**P**	**18 20 44.6**	**+1.0**
	0.3nm,0.6s,baz=251,slow=5.6,SNR=3.5						

IGQ 13 18:13:44.8±0.5, 3°S±3°×7°8W±°, h10km, MLv3.9, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	**Cochancay**	**1.31**	**287**	P	Pn	18 14 07.7	-1.5
COHC				S	Sb	18 14 26.4	0.0
PAT1	**Patacocha**	**1.41**	**342**	P	Pn	18 14 09.5	-1.5
BPAT	**Tungurahua Vol**	**1.41**	**342**	P	Pn	18 14 09.2	-1.8
ARRY	**Arrayan**	**1.41**	**341**	P	Pn	18 14 08.9	-2.0
BMAS	**Trigal station**	**1.43**	**340**	P	Pn	18 14 09.0	-2.1
RETU	**Refugio**	**1.46**	**342**	P	Pn	18 14 10.4	-1.4
BULB	**Ulba Tungurahu**	**1.47**	**344**	P	Pn	18 14 09.8	-1.9
BBIL	**Ulba Tungurahu**	**1.48**	**341**	P	Pn	18 14 11.3	-0.5
BRUN	**Tungurahua Vol**	**1.48**	**344**	P	Pn	18 14 10.6	-1.3
POND	**Pondoa**	**1.49**	**342**	P	Pn	18 14 09.9	-2.1
MILO	**Milagro-Astudi**	**1.66**	**290**	P	Pb	18 14 15.2	-0.2
MILO				S	Sg	18 14 39.6	+1.5
PIS1	**Pisayambo**	**1.82**	**348**	P	Pn	18 14 14.4	-2.3
PISA	**Pisayambo**	**1.82**	**348**	P	Pn	18 14 16.1	-0.6
ARDO	**Archidona, Ten**	**1.86**	**6**	P	Pn	18 14 15.8	-1.0
ARDO				S	Sn	18 14 41.1	+0.8
BMOR	**Cotopaxi Volca**	**2.16**	**348**	P	Pn	18 14 20.5	-0.9
BTAM	**Cotopaxi Volca**	**2.20**	**350**	P	Pn	18 14 22.4	+0.5
COV1	**Cotopaxi Volc**	**2.21**	**351**	P	Pn	18 14 23.5	+1.5
BREF	**Cotopaxi Volca**	**2.21**	**349**	P	Pb	18 14 23.9	-1.5
BNAS	**Cotopaxi Volca**	**2.22**	**348**	P	Pn	18 14 23.1	+0.9
BVC2	**Cotopaxi Volca**	**2.22**	**349**	P	Pn	18 14 23.4	+1.2
BVC2				S	Sg	18 14 55.0	-1.3
VC1	**Cotopaxi 1**	**2.23**	**350**	P	Pn	18 14 23.1	+0.7
ZUMB	**Zumba**	**2.30**	**210**	P	Pn	18 14 21.7	-1.2
ZUMB				S	Sn	18 14 52.2	+0.8
PITA	**Cotopaxi Volc**	**2.32**	**349**	P	Pb	18 14 25.4	-1.6
MORR	**Playas El Morr**	**2.34**	**275**	P	Pn	18 14 25.1	+1.7
ANTS	**Antisana-Sarah**	**2.35**	**356**	P	Pn	18 14 24.0	0.0
ANTG	**Antisana-Guama**	**2.35**	**354**	P	Pn	18 14 24.1	+0.1
ANTI	**Antisana**	**2.40**	**356**	P	Pn	18 14 24.6	-0.1
MCRA	**Macar, Loja**	**2.46**	**232**	P	Pn	18 14 21.7	-3.4

*IDC **13** 18:17:03.3±1.2, 10°.21S×107°.27E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.8/42, mbtmp4.0/11, ML4.1/2, Error ellipse: s-maj=44.0km s-min=15.4km az=55.0*
*ISCJB **13** 18:17:04.9±0.5, 10°.12S±0°.05×107°.39E±0°.05, h23km, mb4.1/14, Error ellipse: s-maj=7.8km s-min=6.4km az=138.2*
*NEIC **13** 18:17:04.2±0.9, 10°.20S×107°.29E, h10km±4km, mb4.4/4, Error ellipse: s-maj=15.9km s-min=7.2km az=222.0*
*DJA **13** 18:17:08.8±0.9, 10°S±7°×10°7E±°, h10km, M4.5/12, mb4.5/1, MLv4.6/12*

ISC 13 18:17:06.5±0.6, 10°.18S±0°.06×107°.32E±0°.06, h23km, n38, σ1§62/44, mb4.2/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.67**	**259**	*e*Pn	**Pn**	**18 17 32.8**	**-1.6**
CISI	**Cisompet, Garu**	**2.65**	**11**	*e*Pn	**Pn**	**18 17 45.8**	**-2.1**
CISI	**Cisompet, Garu**	**2.65**	**11**	P	**Pn**	**18 17 46.0**	**-1.8**
CISI				S	**Sn**	**18 18 16.0**	**-3.3**
LEM	**Lembang**	**3.34**	**5**	Pn	**Pn**	**18 17 57.0**	**-0.4**
	53nm,0.3s,baz=84,slow=5.6,SNR=35						
LEM				Sn	**Sn**	**18 18 39.4**	**+2.9**
	36nm,0.3s,baz=334,slow=20,SNR=21						
LEM	**Lembang**	**3.34**	**5**	P	**Pn**	**18 17 57.1**	**-0.4**
LEM				S	**Sn**	**18 18 36.1**	**-0.4**
YOGI	**Yogyakarta**	**3.76**	**52**	P	**Pn**	**18 18 01.2**	**-1.9**
UGM	**Wanagama**	**3.88**	**55**	P	**Pn**	**18 18 03.0**	**-1.8**
CGJI	**Cibinong**	**3.89**	**335**	P	**Pn**	**18 18 04.7**	**-0.2**
CGJI				S	**Sn**	**18 18 46.8**	**-3.0**
WOJI	**Wonogiri, Jawa**	**4.25**	**57**	P	**Pn**	**18 18 08.4**	**-1.4**
SMRI	**Semarang**	**4.38**	**45**	*e*Pn	**Pn**	**18 18 10.8**	**-0.8**
SMRI	**Semarang**	**4.38**	**45**	P	**Pn**	**18 18 11.3**	**-0.3**
PWJI	**Pagerwojo**	**4.92**	**65**	P	**Pn**	**18 18 18.1**	**-0.9**
KASI	**Kota Agung**	**5.40**	**329**	P	**Pn**	**18 18 27.3**	**+1.6**
KASI				S	**Sn**	**18 19 22.0**	**-5.2**
JAGI	**Jajag, Banyuwa**	**6.95**	**76**	*e*Pn	**Pn**	**18 18 46.0**	**-1.0**
FITZ	**Fitzroy Crossi**	**19.42**	**116**	P	**Pn**	**18 21 32.2**	**-0.3**
	0.2nm,0.3s,baz=304,slow=9.9,SNR=8.2						
WRA	**Warramunga Arr**	**27.80**	**114**	P	**P**	**18 22 54.0**	**-0.1**
	1.5nm,0.8s,baz=289,slow=13,SNR=12						
WR1	**Warramunga Arr**	**27.80**	**114**	*e*P	**P**	**18 22 54.0**	**-0.1**
ASAR	**Alice Springs**	**28.68**	**121**	P	**P**	**18 23 03.0**	**+0.9**
	0.9nm,0.8s,baz=298,slow=8.4,SNR=8.7						
ASAR				PcP	**PcP**	**18 26 13.5**	**+1.0**
	0.3nm,0.6s,baz=280,slow=1.5,SNR=5.6						
AS31	**Alice Springs**	**28.68**	**121**	*e*PcP	**PcP**	**18 26 13.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**29.63**	**344**	P	**P**	**18 23 12.4**	**+2.1**
	0.5nm,0.6s,baz=175,slow=7.9,SNR=5.5						
STKA	**Stephens Creek**	**38.34**	**129**	P	**P**	**18 24 25.4**	**-0.3**
	5.4nm,1.0s,baz=314,slow=8.1,SNR=4.6						
GTA	**Gaotai**	**49.82**	**352**	*e*P	**P**	**18 26 00.3**	**+2.5**
GTA				pP	sP	18 26 04.4	-0.6
GTA				sP	pwP	18 26 07.4	-4.0
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONA0	**Songino Array**	**57.76**	**359**	*e*P	**P**	**18 26 55.6**	**-0.1**
SONM	**Songino Array**	**57.76**	**359**	P	**P**	**18 26 55.6**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=182,slow=7.5,SNR=4.3						
MK31	**Makanchi Array**	**60.97**	**341**	*e*P	**P**	**18 27 17.9**	**+0.1**
	comp=Z,4.4nm,1.5s						
MK32	**Makanchi Array**	**60.97**	**341**	*e*P	**P**	**18 27 18.6**	**+0.8**
MKAR	**Makanchi Array**	**60.97**	**341**	P	**P**	**18 27 18.6**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=138,slow=7.8,SNR=10						
KURK	**Kurchatov**	**65.58**	**340**	*e*P	**P**	**18 27 49.1**	**+0.9**
	comp=Z,2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**66.67**	**346**	P	**P**	**18 27 55.5**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=145,slow=3.5,SNR=3.0						
ZAA1	**Zalesovo Array**	**66.67**	**346**	*e*P	**P**	**18 27 55.5**	**+0.2**
ABKAR	**Akbulak array**	**72.29**	**330**	*e*P	**P**	**18 28 30.4**	**+0.3**
	comp=Z,4.1nm,1.1s						
PETK	**Petropavlovsk-**	**76.20**	**29**	P	**P**	**18 28 53.1**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=139,slow=0.3,SNR=4.4						
PEA1	**Petropavlovsk-**	**76.20**	**29**	*e*P	**P**	**18 28 53.1**	**+0.3**
TIXI	**Tiksi**	**82.90**	**7**	*e*P	**P**	**18 29 28.6**	**-0.2**
	comp=Z,3.3nm,0.8s						
BR101	**Keskin Array S**	**84.17**	**312**	*e*P	**P**	**18 29 35.9**	**-0.4**
BRTR	**Keskin Array B**	**84.17**	**312**	P	**P**	**18 29 35.9**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=146,slow=9.0,SNR=5.0						
LTX	**Lajitas**	**145.33**	**52**	*e*PKPbc	**PKiKP**	**18 36 44.8**	**-2.4**
TXAR	**Lajitas Array**	**145.33**	**52**	PKPbc	**PKiKP**	**18 36 44.8**	**-2.4**
	comp=Z,0.7nm,0.7s,baz=264,slow=2.7,SNR=7.9						

*ISCJB **13** 18:17:56.0±0.7, 39°.73N±0°.03×142°.27E±0°.08, h45km±5km, mb3.7/11, Error ellipse: s-maj=10.4km s-min=5.0km az=9.1*
*JMA **13** 18:17:56.6, 39°.71N×142°.23E, h40km±1km, M3.6*
JMA Felt I J1.
*IDC **13** 18:17:59.4±2.6, 39°.72N×142°.12E, h63km±23km, mb3.5/11, mb1 3.6/14, mb1mx3.4/46, mbtmp3.7/14, ML3.3/3, Error ellipse: s-maj=25.1km s-min=17.4km az=135.0*

ISC 13 18:17:57.0±0.8, 39°.72N±0°.04×142°.25E±0°.07, h38km±2km, n33, σ1§26/39, mb3.7/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.36**	**247**	P	**Pn**	**18 18 05.2**	**-0.6**
MIYJ				*e*S	**Sn**	**18 18 11.4**	**-1.0**
JTH	**Tanohata**	**0.37**	**306**	P	**Pn**	**18 18 05.6**	**-0.2**
JTH				S	**Sn**	**18 18 11.8**	**-0.7**
JKEN	**Kujiedanarisaw**	**0.64**	**320**	P	**Pn**	**18 18 09.0**	**-0.7**
JKEN				S	**Sn**	**18 18 17.9**	**-0.6**
JKZ	**Kuzumaki**	**0.75**	**291**	P	**Pn**	**18 18 10.8**	**-0.4**
JKZ				S	**Sn**	**18 18 20.7**	**-0.7**
JOM	**Ohasama**	**0.78**	**252**	P	**Pn**	**18 18 11.1**	**-0.4**
JOM				S	**Sn**	**18 18 21.4**	**-0.6**
OFUJ	**Ofunato**	**0.78**	**215**	P	**Pn**	**18 18 10.8**	**-0.8**
OFUJ				*e*S	**Sn**	**18 18 21.2**	**-0.9**
JANG	**Nango**	**0.86**	**319**	P	**Pn**	**18 18 12.0**	**-0.7**
JANG				S	**Sn**	**18 18 23.2**	**-0.9**
JMK	**Ichinoseki**	**1.11**	**226**	P	**Pn**	**18 18 15.5**	**-0.5**
JMK				*e*S	**Sn**	**18 18 29.6**	**-0.4**
JRG	**Rokugo**	**1.29**	**256**	P	**Pn**	**18 18 19.4**	**+0.9**
JAH	**Hinai**	**1.32**	**291**	P	**Pn**	**18 18 19.1**	**+0.1**
JAH				S	**Sn**	**18 18 36.4**	**+1.0**
JTM	**Tenmabayashi**	**1.40**	**320**	P	**Pn**	**18 18 20.1**	**+0.1**
JTM				S	**Sn**	**18 18 37.4**	**+0.3**
JIO	**Ouri**	**1.45**	**209**	P	**Pn**	**18 18 20.0**	**-0.7**
ASAJ	**Asahikawa**	**4.40**	**3**	P	**Pn**	**18 19 02.5**	**+1.2**
	2.5nm,0.3s,baz=210,slow=11,SNR=34						
ASAJ				S	**Sn**	**18 19 53.0**	**+1.8**
	2.5nm,0.3s,baz=93,slow=19,SNR=2.8						
MAT	**Matsushiro**	**4.50**	**226**	P	**Pn**	**18 19 05.4**	**+2.8**
MAT				*e*S	**Sn**	**18 19 58.0**	**+4.3**
MJAR	**Matsushiro Arr**	**4.50**	**226**	P	**Pn**	**18 19 04.6**	**+1.9**
	0.3nm,0.3s,baz=33,slow=13,SNR=37						
KSRS	**Korea Array**	**11.44**	**263**	P	**Pn**	**18 20 39.5**	**+1.7**
	0.3nm,0.3s,baz=73,slow=13,SNR=14						
SEY	**Seymchan**	**24.03**	**11**	P	**P**	**18 23 09.2**	**+1.1**
	2.8nm,0.8s,baz=214,slow=2.1,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**29.08**	**126**	T	T	18 54 26.6	
	baz=319,slow=75,SNR=75						
H11N1	**WAKE ISLAND Hy**	**29.09**	**126**	T	T	18 54 29.8	
	baz=319,slow=75,SNR=60						
H11N3	**WAKE ISLAND Hy**	**29.10**	**126**	T	T	18 54 23.4	
	baz=319,slow=75,SNR=54						
H11S1	**WAKE ISLAND Hy**	**29.88**	**128**	T	T	18 55 41.4	
	baz=320,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.88**	**128**	T	T	18 55 36.8	
	baz=320,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**29.90**	**128**	T	T	18 55 41.1	
	baz=320,slow=76,SNR=12						
ZALV	**Zalesovo Beam**	**40.64**	**310**	P	**P**	**18 25 31.4**	**-1.7**
	0.5nm,0.4s,baz=116,slow=13,SNR=3.6						
MKAR	**Makanchi Array**	**43.30**	**300**	P	**P**	**18 25 54.4**	**-0.5**
	0.8nm,0.7s,baz=86,slow=10,SNR=7.8						
ILAR	**Eielson Array**	**46.89**	**34**	P	**P**	**18 26 23.9**	**+0.8**
	0.7nm,0.7s,baz=263,slow=5.9,SNR=8.5						
INK	**Inuvik**	**51.70**	**28**	P	**P**	**18 27 00.6**	**+0.8**
	0.9nm,0.6s,baz=279,slow=4.0,SNR=5.7						
YKA	**Yellowknife Ar**	**61.16**	**31**	P	**P**	**18 28 07.0**	**-0.2**
	0.1nm,0.2s,baz=299,slow=6.3,SNR=3.7						
ASAR	**Alice Springs**	**63.54**	**189**	P	**P**	**18 28 22.7**	**-0.8**
	0.3nm,0.8s,baz=2.0,slow=7.5,SNR=4.2						
FINES	**FINESS Array B**	**66.75**	**332**	P	**P**	**18 28 42.6**	**-1.3**
	2.4nm,0.8s,baz=26,slow=13,SNR=4.2						
AKASG	**Malin Array Be**	**72.58**	**322**	P	**P**	**18 29 19.4**	**-0.6**
	0.8nm,0.4s,baz=45,slow=6.6,SNR=7.5						
PDAR	**Pinedale Array**	**75.33**	**46**	P	**P**	**18 29 36.1**	**-0.4**
	0.3nm,0.5s,baz=218,slow=1.0,SNR=3.4						
BRTR	**Keskin Array B**	**77.56**	**312**	P	**P**	**18 29 49.0**	**-0.1**
	0.6nm,0.6s,baz=133,slow=8.9,SNR=4.0						

*ISCJB **13** 18:34:31.2±0.7, 6°.5S±0°.1×154°.27E±0°.08, h39km, mb3.5/7, Error ellipse: s-maj=16.9km s-min=10.2km az=20.0*
*IDC **13** 18:34:37.4±5.8, 6°.85S×154°.40E, h97km±46km, mb3.3/7, mb1 3.4/8, mb1mx3.3/23, mbtmp3.6/8, Error ellipse: s-maj=56.8km s-min=23.6km az=115.0*

ISC 13 18:34:33.7±0.8, 6°.4S±0°.1×154°.3E±0°.1, h39km, n10, σ1§98/10, mb3.7/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.35**	**118**	S	**Sn**	**18 37 16.8**	**+0.7**
	4.9nm,0.3s,baz=180,slow=20,SNR=3.1						
PMG	**Port Moresby**	**7.64**	**247**	P	**Pn**	**18 36 24.6**	**+2.1**
	0.8nm,0.3s,baz=84,slow=9.2,SNR=4.7						
WRA	**Warramunga Arr**	**23.56**	**233**	P	**P**	**18 39 38.0**	**-2.8**
	0.6nm,0.5s,baz=70,slow=8.1,SNR=6.7						
ASAR	**Alice Springs**	**26.02**	**227**	P	**P**	**18 40 00.8**	**-2.5**
	0.3nm,0.6s,baz=60,slow=9.3,SNR=8.6						
KSRS	**Korea Array**	**50.12**	**333**	P	**P**	**18 43 26.6**	**+1.5**
	0.5nm,0.6s,baz=150,slow=7.5,SNR=6.0						
PETK	**Petropavlovsk-**	**59.39**	**2**	P	**P**	**18 44 31.2**	**-0.8**
	1.6nm,0.7s,baz=167,slow=7.4,SNR=4.6						
CMAR	**Chiang Mai Arr**	**59.91**	**296**	P	**P**	**18 44 36.2**	**0.0**
	0.5nm,0.8s,baz=95,slow=5.8,SNR=4.5						
MKAR	**Makanchi Array**	**82.52**	**319**	P	**P**	**18 46 51.0**	**-1.4**
	0.7nm,0.8s,baz=101,slow=6.3,SNR=5.1						
ILAR	**Eielson Array**	**83.12**	**22**	P	**P**	**18 46 55.1**	**-0.1**
	0.1nm,0.4s,baz=236,slow=5.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**152.19**	**286**	PKPbc	**PKPdf**	**18 54 21.4**	**+1.9**
	1.2nm,0.8s,baz=44,slow=2.6,SNR=5.6						

*ISCJB **13** 18:36:29.3±0.6, 36°.67N±0°.04×71°.25E±0°.07, h200km, mb2.6/1, Error ellipse: s-maj=7.8km s-min=5.4km az=153.8*
*NNC **13** 18:36:32.4±4.4, 36°.90N×71°.08E, h167km±59km, mb2.9, mpv4.0, Error ellipse: s-maj=38.6km s-min=23.0km az=22.0*
*IDC **13** 18:36:52.8±2.6, 41°.99N×68°.71E, h0km, mb3.3/1, mb1 3.3/4, mb1mx3.1/33, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=71.1km s-min=20.1km az=161.0*

ISC 13 18:36:30.1±0.9, 36°.74N±0°.08×71°.25E±0°.07, h200km, n27, σ1§28/32, 2C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.71**	**19**	P	**Pn**	**18 37 55.4**	**+1.4**
	SNR=20						
UCH	**Uchtor**	**6.04**	**24**	P	**Pn**	**18 37 59.2**	**+1.0**
	SNR=84						
KZA	**Kyzart**	**6.17**	**29**	P	**Pn**	**18 38 00.3**	**+0.5**
	SNR=13						
EKS2	**Erkin-Say**	**6.23**	**17**	P	**Pn**	**18 38 02.0**	**+1.6**
	SNR=8.4						
KK31	**Karatay Array**	**6.38**	**355**	P	**Pn**	**18 38 03.0**	**+0.8**
	3.5nm,0.5s,baz=189,slow=18,SNR=32						
KK31				⇑S	**Sn**	**18 39 12.6**	**-2.7**
	7.2nm,0.4s,baz=184,slow=20,SNR=14						
AAK	**Ala-Archa**	**6.40**	**22**	P	**Pn**	**18 38 04.4**	**+1.8**
	SNR=9.3						
AAK	**Ala-Archa**	**6.40**	**22**	⇓P	**Pn**	**18 38 03.8**	**+1.2**
	7.3nm,0.5s						
AAK				⇓S	**Sn**	**18 39 16.6**	**+0.7**
	15nm,0.6s						
KBK	**Karagaybulak**	**6.56**	**25**	P	**Pn**	**18 38 06.7**	**+2.0**
	SNR=18						
ULHL	**Ulahol**	**6.72**	**34**	P	**Pn**	**18 38 07.8**	**+1.0**
	SNR=5.4						
CHMS	**Chumysh**	**6.81**	**22**	P	**Pn**	**18 38 09.6**	**+1.8**
	SNR=9.0						
TKM2	**Tokmak 2**	**7.02**	**27**	P	**Pn**	**18 38 12.0**	**+1.2**
	SNR=28						
TKM2	**Tokmak 2**	**7.02**	**27**	⇓P	**Pn**	**18 38 10.3**	**-0.4**
	19nm,0.7s						
TKM2				⇓S	**Sn**	**18 39 29.0**	**-1.6**
	4.8nm,0.7s						
GEYT	**Alibeck**	**10.53**	**280**	Pn	**P**	**18 39 04.9**	**+1.6**
	0.3nm,0.3s,baz=74,slow=11,SNR=4.4						
GEYT				Sn	**Sn**	**18 40 52.1**	**-1.4**
	0.2nm,0.3s,baz=75,slow=34,SNR=2.6						
MK31	**Makanchi Array**	**12.98**	**36**	P	**P**	**18 39 31.6**	**+1.1**
	0.1nm,0.3s,baz=202,slow=10,SNR=6.1						
MKAR	**Makanchi Array**	**12.98**	**36**	Pn	**Pn**	**18 39 27.9**	**+0.7**
	0.1nm,0.3s,baz=242,slow=14,SNR=6.9						
PYUN	**Piuthan**	**13.12**	**128**	*e*P	**Pn**	**18 39 28.3**	**-1.1**
	4.9nm,0.3s						
DANN	**Dangsing**	**13.46**	**125**	*e*P	**Pn**	**18 39 32.0**	**-1.6**
	4.9nm,0.3s						
KOLN	**Koldanda**	**13.74**	**127**	*e*P	**Pn**	**18 39 36.4**	**-0.7**
	4.9nm,0.3s						
DMN	**Daman**	**14.84**	**124**	*e*P	**Pn**	**18 39 49.7**	**-0.9**
	5.8nm,0.3s						
AB31	**Akbulak array**	**14.98**	**330**	⇓P	**Pn**	**18 39 51.7**	**-0.1**
	0.6nm,0.6s,baz=144,slow=12,SNR=9.1						
AB31				S	**Sn**	**18 42 38.6**	**-0.7**
	2.2nm,0.8s,baz=156,slow=22,SNR=3.6						
PKIN	**Phulchoki**	**15.05**	**123**	*e*P	**Pn**	**18 39 53.2**	**0.0**
	5.7nm,0.4s						
PKI	**Pulchoki**	**15.06**	**123**	*e*P	**Pn**	**18 39 53.2**	**-0.2**
	6.0nm,0.4s						
GUN	**Gumba**	**15.17**	**121**	*e*P	**Pn**	**18 39 54.3**	**-0.4**
	9.9nm,0.4s						
JIRN	**Jiri**	**15.54**	**121**	*e*P	**P**	**18 39 59.1**	**-0.2**
	26nm,0.4s						
AKTO	**Aktyubinsk**	**16.68**	**329**	⇑P	**Pn**	**18 40 12.7**	**+0.4**
	1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**19.62**	**24**	Pn	**P**	**18 40 41.1**	**-2.0**
	0.1nm,0.3s,baz=230,slow=11,SNR=2.4						
NOA	**NORSAR Array B**	**44.31**	**323**	P	**P**	**18 44 20.1**	**+0.2**
	0.2nm,0.6s,baz=96,slow=7.7,SNR=3.3						

*NDI **13** 18:58:42.8±2.6, 33°.73N×69°.19E, h30km, ML4.0*

*IDC **13** 18:58:46.2±0.8, 34°.56N×70°.48E, h0km, mb3.8/13, mb1 3.9/19, mb1mx3.7/43, mbtmp3.8/19, ML3.6/6, Error ellipse: s-maj=17.5km s-min=16.6km az=92.0*
*ISCJB **13** 18:58:49.3±0.4, 34°.50N±0°.04×70°.48E±0°.05, h42km, mb3.9/14, Error ellipse: s-maj=6.9km s-min=3.6km az=143.6*
*NNC **13** 18:58:51.1±3.5, 34°.41N×70°.44E, h63km±40km, mb3.9, mpv4.2, Error ellipse: s-maj=30.5km s-min=26.4km az=101.0*

ISC 13 18:58:51.9±0.6, 34°.55N±0°.06×70°.43E±0°.06, h42km, n48, σ1§93/55, mb3.9/14, 5C-2D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**5.42**	**113**	*e*P	**Pn**	**19 00 11.6**	**+1.2**
DHRM				*e*S	**Sn**	**19 01 15.0**	**+3.4**
DHRM				IAML		19 01 16.4	
	comp=N,481nm,0.3s						
DHRM				IAML		19 01 16.4	
	comp=E,470nm,0.2s						
SMLA	**Simla**	**6.62**	**119**	*e*P	**Pn**	**19 00 27.3**	**+0.8**
SMLA				*e*S	**Sn**	**19 01 41.1**	**+0.4**
SMLA				IAML		19 01 43.3	
	comp=N,227nm,0.5s						
SMLA				IAML		19 01 43.9	
	comp=E,164nm,1.1s						
DDI	**Dehra Dun**	**7.70**	**121**	*e*S	**Sn**	**19 02 06.8**	**-0.7**
AML	**Almayashu**	**7.99**	**18**	P	**Pn**	**19 00 45.9**	**+0.2**
	SNR=11						
UCH	**Uchtor**	**8.31**	**21**	P	**Pn**	**19 00 51.5**	**+1.4**
	SNR=21						
KZA	**Kyzart**	**8.41**	**25**	P	**Pn**	**19 00 53.0**	**+1.4**
	SNR=6.7						
EKS2	**Erkin-Say**	**8.51**	**17**	P	**Pn**	**19 00 54.2**	**+1.5**
	SNR=14						
KK31	**Karatay Array**	**8.54**	**0**	P	**Pn**	**19 00 53.2**	**+0.3**
	comp=E,2.8nm,0.3s,baz=187,slow=14,SNR=47						
KK31				S	**Sn**	**19 02 32.2**	**+4.2**
	comp=E,13nm,0.8s,baz=184,slow=23,SNR=8.0						
JOSI	**Joshimath**	**8.67**	**115**	*e*S	**Sn**	**19 02 31.9**	**+0.3**
JOSI				IAML		19 03 34.6	
	comp=N,63nm,0.3s						
JOSI				IAML		19 03 36.2	
	comp=E,54nm,0.4s						
AAK	**Ala-Archa**	**8.68**	**20**	Pn	**Pn**	**19 00 55.0**	**0.0**
	comp=E,2.2nm,0.3s,baz=167,slow=6.7,SNR=9.5						
AAK				Sn	**Sn**	**19 02 33.8**	**+2.2**
	comp=E,0.3nm,0.3s,baz=323,slow=20,SNR=2.8						
AAK	**Ala-Archa**	**8.68**	**20**	⇑P	**Pn**	**19 00 56.1**	**+1.2**
	comp=E,6.1nm,0.5s						
AAK				⇑S	**Sn**	**19 02 33.2**	**+1.6**
	comp=E,9.2nm,0.8s						
CHMS	**Chumysh**	**9.08**	**20**	P	**Pn**	**19 01 01.9**	**+1.5**
	SNR=14						
TKM2	**Tokmak 2**	**9.28**	**24**	P	**Pn**	**19 01 04.7**	**+1.4**
	SNR=11						
TKM2	**Tokmak 2**	**9.28**	**24**	⇑P	**Pn**	**19 01 04.5**	**+1.2**
	comp=E,7.3nm,0.7s						
TKM2				⇓S	**Sn**	**19 02 46.4**	**+0.1**
	comp=E,3.5nm,0.6s						
GEYT	**Alibeck**	**10.50**	**292**	Pn	**Pn**	**19 01 19.2**	**-0.6**
	comp=E,0.3nm,0.3s,baz=125,slow=12,SNR=8.0						
PYUN	**Piuthan**	**12.51**	**118**	*e*P	**Pn**	**19 01 45.4**	**-2.1**
	comp=E,17nm,0.3s						
KOLN	**Koldanda**	**13.14**	**117**	*e*P	**Pn**	**19 01 54.2**	**-1.9**
	comp=E,9.5nm,0.3s						
GKN	**Gorkha**	**13.79**	**114**	*e*P	**Pn**	**19 02 02.4**	**-2.5**
	comp=E,19nm,0.2s						
DMN	**Daman**	**14.35**	**115**	*e*P	**Pn**	**19 02 09.4**	**-3.1**
	comp=E,10nm,0.3s						
KKN	**Kakani**	**14.38**	**114**	*e*P	**Pn**	**19 02 09.6**	**-3.4**
	comp=E,13nm,0.4s						
PKIN	**Phulchoki**	**14.58**	**114**	*e*P	**Pn**	**19 02 12.3**	**-3.4**
	comp=E,15nm,0.4s						
PKI	**Pulchoki**	**14.59**	**114**	*e*P	**Pn**	**19 02 12.2**	**-3.7**
	comp=E,9.2nm,0.3s						
GUN	**Gumba**	**14.77**	**112**	*e*P	**Pn**	**19 02 14.8**	**-3.6**
	comp=E,11nm,0.3s						
MAKZ	**Makanchi**	**15.03**	**32**	⇑P

ISHM	**Shahmirzad**	**1.36 119**	*e*Pg	**Pn**	**19 16 23.4**	**-0.4**
IVRN	**Varamin**	**1.49 183**	*e*Pg	**Pn**	**19 16 26.3**	**+1.0**
IKIA	**Kiasar**	**1.52 100**	*e*Pn	**Pn**	**19 16 27.0**	**+1.1**
IKIA			IAMB	IAmb	19 16 54.5	
	comp=Z,4μm,0.2s					
IQOM	**Qom**	**1.75 201**	*e*Pn	**Pb**	**19 16 30.8**	**-0.1**
IQOM			IAMB	IAmb	19 16 32.0	
	comp=Z,7μm,0.2s					
IRAZ	**Razeghan**	**1.88 236**	*e*Pn	**Pb**	**19 16 33.0**	**-0.1**
IRAZ			IAMB	IAmb	19 17 00.5	
	comp=Z,4μm,0.4s					
IANJ	**Anjilo**	**1.97 120**	*e*Pn	**Pn**	**19 16 34.3**	**+2.2**
IANJ			IAMB	IAmb	19 17 08.0	
	comp=Z,1μm,0.2s					
QABG	**Abgarm-Qazvin**	**1.98 248**	*e*Pn	**Pb**	**19 16 34.2**	**-0.6**
GHVR	**GHOM**	**2.05 192**	*e*Pn	**Pb**	**19 16 35.7**	**-0.2**
ISFB	**Sefidab**	**2.16 171**	*e*Pn	**Pn**	**19 16 36.1**	**+1.6**
ISFB			IAMB	IAmb	19 16 38.5	
	comp=Z,8μm,0.3s					
ASAO	**Ashtian**	**2.43 218**	*e*Pn	**Pb**	**19 16 40.7**	**-1.8**
KRSH	**Karshahi**	**2.52 174**	*e*Pn	**Pn**	**19 16 40.6**	**+1.0**
HAGD	**Aghdareh**	**2.75 234**	*e*Pn	**Pn**	**19 16 45.1**	**+2.3**
IKLH	**Kolahrood**	**3.17 184**	*e*Pn	**Pb**	**19 16 52.6**	**-2.5**
IKLH			IAMB	IAmb	19 17 38.3	
	comp=Z,1μm,0.3s					
ASTR	**Astara**	**3.18 312**	P	**Pn**	**19 16 49.0**	**+0.5**
ASTR			S	**Sn**	**19 17 24.8**	**-1.4**
LKRN	**Lenkeran, Azer**	**3.29 313**	P	**Pn**	**19 16 50.3**	**+0.4**
LKRN			S	**Sn**	**19 17 27.4**	**-1.5**
HSAM	**Samen**	**3.48 230**	*e*Pn	**Pn**	**19 16 55.7**	**+2.8**
LRK	**Lerik**	**3.51 309**	P	**Pn**	**19 16 53.7**	**+0.5**
LRK			S	**Sn**	**19 17 33.0**	**-1.7**
ISRB	**Sarab**	**3.58 293**	*e*Pn	**Pn**	**19 16 56.6**	**+2.4**
ISRB			IAMB	IAmb	19 16 57.9	
	comp=Z,454nm,0.2s					
IZEF	**Zefreh**	**3.60 173**	*e*Pn	**Pn**	**19 16 56.6**	**+2.0**
GLBA	**Ciliabad**	**3.87 316**	P	**Pn**	**19 16 58.6**	**+0.6**
GLBA			S	**Sn**	**19 17 42.6**	**-0.6**
ALIB	**Äli-Bayra**	**4.12 328**	S	**Sn**	**19 17 49.7**	**+0.3**
SAAT	**Saatly**	**4.31 323**	S	**Sn**	**19 17 56.5**	**+2.5**
GBS	**Qobustan**	**4.63 332**	P	**Pn**	**19 17 09.7**	**+1.2**
GBS			S	**Sn**	**19 18 02.8**	**+0.6**
KDMR	**Kurdemir**	**4.82 325**	S	**Sn**	**19 18 07.6**	**+0.8**
ATGJ	**Altiaghaj**	**4.92 334**	P	**Pn**	**19 17 14.3**	**+1.8**
ATGJ			S	**Sn**	**19 18 09.7**	**+0.4**
PQL	**Pirkuli**	**4.99 330**	P	**Pn**	**19 17 15.2**	**+1.7**
PQL			S	**Sn**	**19 18 11.4**	**+0.3**
ZRD	**Zardab**	**4.99 321**	P	**Pn**	**19 17 14.5**	**+1.1**
ZRD			S	**Sn**	**19 18 12.2**	**+1.3**
SIZA	**Siyzn**	**5.12 334**	P	**Pn**	**19 17 16.4**	**+1.1**
SIZA			S	**Sn**	**19 18 14.4**	**+0.1**
IML	**Ismayilli**	**5.16 328**	S	**Sn**	**19 18 13.1**	**-2.1**
QBL	**Gabala**	**5.44 326**	S	**Sn**	**19 18 20.0**	**-2.0**
QUBA	**Quba, Azerbaij**	**5.51 333**	P	**Pn**	**19 17 22.1**	**+1.5**
QUBA			S	**Sn**	**19 18 23.6**	**-0.3**
QSAR	**Qusar**	**5.74 332**	P	**Pn**	**19 17 25.3**	**+1.6**
QSAR			S	**Sn**	**19 18 28.0**	**-1.4**
SEKA	**Sheki**	**5.94 324**	P	**Pn**	**19 17 26.9**	**+0.4**
SEKA			S	**Sn**	**19 18 32.8**	**-1.6**
GANJ	**Ganja**	**5.99 316**	P	**Pn**	**19 17 27.7**	**+0.6**
GANJ			S	**Sn**	**19 18 34.3**	**-1.3**
GDB	**GEDABAY**	**6.36 313**	P	**Pn**	**19 17 33.3**	**+0.9**
GDB			S	**Sn**	**19 18 45.7**	**+0.7**
ZKTA	**Zakatala**	**6.55 323**	P	**Pn**	**19 17 35.9**	**+1.2**
ZKTA			S	**Sn**	**19 18 49.5**	**+0.2**
ITEG	**Tejag**	**6.73 120**	*e*Pn	**Pn**	**19 17 40.0**	**+2.5**

MEX 13 19:16:15.4±30.0, 20°.07N×96°.83W, h18km, MD3.5, Veracruz

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVIG	**Laguna Verde**	**0.52**	**132**	*e*P	Pg	19 16 24.5	-1.4
	baz=172,slow=9.3						
LVIG				*e*S	Sg	19 16 30.2	-2.7
TPIG	**Tehuac#an**	**1.72**	**197**	*e*P	Pn	19 16 41.5	-3.1
TPIG				*i* S	Sn	19 17 00.3	-5.9

IDC 13 19:40:55.0±2.2, 2°.04N×127°.12E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/23, mbtmp3.5/3, MS4.0/1, Ms1 4.0/1, ms1mx3.5/13, Error ellipse: s-maj=193.9km s-min=24.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.96**	**162**	P	P	19 46 01.9	+0.7
	0.3nm,0.4s,baz=342,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**26.39**	**166**	P	P	19 46 33.0	-0.3
	0.4nm,0.9s,baz=351,slow=7.4,SNR=7.0						
KSRS	**Korea Array**	**35.26**	**1**	LR	LR	20 05 29.5	
	comp=Z,230nm,19.2s,baz=344,slow=42						
MKAR	**Makanchi Array**	**59.16**	**326**	P	P	19 50 57.6	-0.2
	0.5nm,0.5s,baz=115,slow=8.6,SNR=12						

*JMA **13** 19:55:45.6±0.2, 24°.31N×121°.40E, h0km, M3.1*
*TAP **13** 19:55:46.1, 24°.33N×121°.44E, h6km, ML3.6, C*
ISC 13 19:55:46.6±0.8, 24°.33N±0°.01×121°.44E±0°.01, h7km±6km, n117, σ1§00/174, 25C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.11**	**332**	⇓P	**Pg**	**19 55 49.1**	**0.0**
	baz=332						
NNSB				S	**Sg**	**19 55 50.7**	**-0.1**
	baz=332						
NNS	**Nan Shan**	**0.12**	**331**	⇓*i*P	**Pg**	**19 55 49.4**	**+0.1**
	baz=334						
NNS				*i* S	**Sg**	**19 55 51.1**	**-0.1**
	baz=334						
ETLH	**Xiulin Townshi**	**0.13**	**162**	P	**Pg**	**19 55 50.0**	**+0.6**
	baz=164						
ETLH				S	**Sg**	**19 55 52.1**	**+0.8**
	baz=164						
NACB	**Ninganchiao**	**0.21**	**138**	⇑P	**Pg**	**19 55 51.4**	**+0.6**
	baz=138						
NACB				S	**Sg**	**19 55 54.4**	**+0.7**
	baz=138						
WHF	**Hehuan Shan**	**0.24**	**220**	⇑*i*P	**Pg**	**19 55 51.8**	**+0.2**
	baz=219						
WHF				*i* S	**Sg**	**19 55 55.3**	**+0.4**
	baz=219						
TWT	**Tachien**	**0.25**	**252**	⇑*i*P	**Pg**	**19 55 52.3**	**+0.6**
	baz=242						
TWT				S	**Sg**	**19 55 56.2**	**+1.2**
	baz=242						
TDCB	**Techi**	**0.27**	**253**	⇑P	**Pg**	**19 55 52.3**	**+0.4**
	baz=243						
TDCB				S	**Sg**	**19 55 55.7**	**+0.2**
	baz=243						
NDT	**Datong Townshi**	**0.28**	**14**	P	**Pg**	**19 55 52.4**	**+0.3**
	baz=14						
NDT				S	**Sg**	**19 55 56.2**	**+0.4**
	baz=14						
TWD	**Chiawan**	**0.29**	**150**	P	**Pb**	**19 55 52.8**	**-1.3**
	baz=149						
TWD				*i* S	**Sg**	**19 55 56.9**	**+0.8**
	baz=149						
ENA	**Nanau**	**0.29**	**71**	⇑*i*P	**Pg**	**19 55 52.4**	**0.0**
	baz=71						
ENA				S	**Sg**	**19 55 56.7**	**+0.5**
	baz=71						
NANB	**Nanao**	**0.30**	**71**	⇑P	**Pg**	**19 55 52.3**	**-0.1**
	baz=70						
NANB				S	**Sg**	**19 55 56.1**	**-0.4**
	baz=70						
YHNB	**Yeheng**	**0.34**	**350**	⇓P	**Pb**	**19 55 53.8**	**-1.2**
	baz=351						
YHNB				S	**Sg**	**19 55 57.4**	**-0.4**
	baz=351						
CHGB	**Renai**	**0.36**	**222**	⇑P	**Pb**	**19 55 53.9**	**-1.6**
	baz=221						
CHGB				S	**Sb**	**19 55 59.8**	**-1.7**
	baz=221						
HWA	**Hwalien**	**0.39**	**157**	⇓P	**Pb**	**19 55 55.1**	**-0.6**
	baz=157						
HWA				*e*S	**Sb**	**19 56 00.7**	**-1.1**
	baz=157						
SANB	**Taian**	**0.42**	**279**	⇑*i*P	**Pb**	**19 55 55.7**	**-0.7**
	baz=277						
SANB				*i* S	**Sb**	**19 56 01.0**	**-2.0**
	baz=277						
TWE	**Neicheng**	**0.44**	**28**	⇓*i*P	**Pg**	**19 55 55.5**	**+0.4**
	baz=42						
TWE				S	**Sg**	**19 56 01.7**	**+0.8**
	baz=42						
OWD	**Renai**	**0.45**	**213**	⇑*e*P	**Pg**	**19 55 55.1**	**-0.2**
	baz=214						
NWLT	**Wulai**	**0.45**	**7**	*e*P	**Pg**	**19 55 55.6**	**+0.3**
	baz=8.0						
NWLT				*e*S	**Sg**	**19 56 01.5**	**+0.4**
	baz=8.0						
ENLB	**Shoufeng**	**0.45**	**161**	P	**Pg**	**19 55 55.2**	**-0.2**
	baz=162						
ENLB				*e*S	**Sg**	**19 56 01.6**	**+0.3**
	baz=162						
WHP	**Taichung City**	**0.45**	**263**	⇑*i*P	**Pb**	**19 55 56.4**	**-0.6**
	baz=261						
WHP				S	**Sb**	**19 56 02.1**	**-1.8**
	baz=261						
TWC	**Suao**	**0.47**	**54**	⇑*i*P	**Pg**	**19 55 55.4**	**-0.2**
	baz=45						
TWC				*i* S	**Sg**	**19 56 02.1**	**+0.4**
	baz=45						
LIOB	**Emei**	**0.50**	**309**	⇑*i*P	**Pb**	**19 55 57.4**	**-0.3**
	baz=310						
LIOB				*i* S	**Sb**	**19 56 04.2**	**-0.9**
	baz=310						
NSTT	**Nanjuang**	**0.50**	**307**	⇑*i*P	**Pb**	**19 55 57.1**	**-0.6**
	baz=308						
NSTT				*i* S	**Sb**	**19 56 03.8**	**-1.3**
	baz=308						
ILA	**Ilan**	**0.52**	**33**	P	**Pg**	**19 55 56.7**	**+0.2**
	baz=44						
ILA				S	**Sb**	**19 56 04.7**	**-0.9**
	baz=44						
ESL	**Shilin**	**0.52**	**181**	⇓*i*P	**Pb**	**19 55 56.8**	**-1.2**
	baz=180						
ESL				*e*S	**Sg**	**19 56 02.8**	**-0.5**
	baz=180						
DPDB	**Guoxing**	**0.55**	**238**	⇑*i*P	**Pb**	**19 55 58.0**	**-0.6**
	baz=238						
TWQ1	**Liyutan**	**0.61**	**272**	⇑*i*P	**Pb**	**19 55 59.7**	**+0.2**
	baz=270						
SBCB	**Hsinchu**	**0.62**	**318**	*e*P	**Pb**	**19 56 00.1**	**+0.4**
	baz=317						
NSY	**Sanyi**	**0.62**	**278**	⇑*i*P	**Pn**	**19 56 00.4**	**-1.5**
	baz=276						
NMLH	**Miaoli**	**0.62**	**289**	⇑*i*P	**Pn**	**19 56 00.4**	**-1.4**
	baz=288						
NMLH				S	**Sb**	**19 56 08.8**	**-0.1**
	baz=288						
NTC	**Toucheng**	**0.63**	**34**	*e*P	**Pg**	**19 55 58.6**	**-0.2**
	baz=45						
HSN	**Hsinchu**	**0.63**	**318**	*e*P	**Pb**	**19 56 00.3**	**+0.4**
	baz=322						
HSN				S	**Sb**	**19 56 10.0**	**+1.0**
	baz=322						
NHDH	**Xindian Distri**	**0.63**	**7**	*e*P	**Pb**	**19 55 59.4**	**-0.6**
	baz=20						
NHDH				*e*S	**Sb**	**19 56 08.0**	**-1.0**
	baz=20						
VWDT	**VWDT**	**0.64**	**205**	⇑P	**Pb**	**19 55 58.7**	**-1.3**
	baz=210						
VWDT				S	**Sb**	**19 56 07.3**	**-1.8**
	baz=210						
TWA	**Mucha**	**0.66**	**12**	*e*P	**Pb**	**19 55 59.7**	**-0.7**
	baz=13						
TWA				S	**Sg**	**19 56 08.7**	**+0.9**
	baz=13						
EGFH	**Guangfu**	**0.66**	**181**	⇑*i*P	**Pb**	**19 55 59.6**	**-0.9**
	baz=181						
EGFH				S	**Sb**	**19 56 08.6**	**-1.2**
	baz=181						
EOS1	**EOS1**	**0.67**	**71**	P	**Pb**	**19 55 59.9**	**-0.6**
	baz=59						
EOS1				*e*S	**Sb**	**19 56 10.3**	**+0.4**
	baz=59						
SMLT	**Sun Moon Lake**	**0.67**	**228**	⇑*i*P	**Pb**	**19 55 59.6**	**-1.0**
	baz=228						
NCUH	**Zhongli**	**0.67**	**340**	*e*P	**Pn**	**19 56 01.6**	**-1.0**
	baz=340						
NCU	**National Centr**	**0.68**	**340**	*e*P	**Pn**	**19 56 01.8**	**-0.8**
	baz=340						
PTSB	**Yuanli**	**0.68**	**280**	⇑*i*P	**Pn**	**19 56 01.7**	**-0.9**
	baz=278						
PTSB				S	**Sb**	**19 56 11.3**	**+0.9**
	baz=278						
TYC	**Yuchr**	**0.68**	**231**	⇑*i*P	**Pb**	**19 56 00.0**	**-0.8**
	baz=240						
SSLB	**Suanglung**	**0.70**	**219**	⇑P	**Pb**	**19 55 59.8**	**-1.4**
	baz=218						
SSLB				*e*S	**Sb**	**19 56 09.8**	**-1.2**
	baz=218						
TCU	**Taichung**	**0.72**	**255**	⇑*e*P	**Pn**	**19 56 01.7**	**-1.5**
	baz=254						
TIPB	**Shuangxi**	**0.73**	**29**	⇓P	**Pg**	**19 56 00.5**	**-0.1**
	baz=17						
TIPB				S	**Sg**	**19 56 09.9**	**-0.2**
	baz=17						
WDJ	**Dajia District**	**0.73**	**271**	*e*P	**Pn**	**19 56 02.7**	**-0.6**
	baz=270						
TWS1	**Kuangyinshan**	**0.77**	**359**	*e*P	**Pb**	**19 56 02.6**	**+0.4**
	baz=358						
NWF	**Wu-fen Shan**	**0.80**	**23**	*e*P	**Pb**	**19 56 02.2**	**-0.7**
	baz=21						
WFSB	**Wu-fen Shan**	**0.80**	**23**	*e*P	**Pg**	**19 56 02.1**	**+0.1**
	baz=21						
YM01	**YM01**	**0.82**	**8**	P	**Pb**	**19 56 03.3**	**+0.1**
	baz=7.0						
WJS	**Zhushan**	**0.82**	**232**	*e*P	**Pb**	**19 56 02.9**	**-0.3**
	baz=232						
WNT	**Mingjian**	**0.82**	**237**	P	**Pn**	**19 56 03.7**	**-0.9**
	baz=227						
WNT				*e*S	**Sn**	**19 56 17.1**	**0.0**
	baz=227						
YM10	**YM10**	**0.83**	**8**	P	**Pb**	**19 56 03.5**	**+0.2**
	baz=6.0						
EHY	**Hungye**	**0.83**	**187**	*e*P	**Pb**	**19 56 02.4**	**-0.9**
	baz=180						
EHY				*e*S	**Sb**	**19 56 14.0**	**-0.7**
	baz=180						
NTST	**Danshui**	**0.83**	**1**	*e*P	**Pn**	**19 56 04.0**	**-0.7**
	baz=359						
WHYT	**Xinyi Township**	**0.83**	**220**	*e*P	**Pb**	**19 56 02.4**	**-1.0**
	baz=221						
HGSD	**Ruisui**	**0.84**	**181**	*e*P	**Pb**	**19 56 02.9**	**-0.5**
	baz=187						
HGSD				*e*S	**Sn**	**19 56 15.9**	**-1.5**
	baz=187						
TWB1	**Santiao Chiao**	**0.84**	**36**	P	**Pg**	**19 56 02.5**	**-0.2**
	baz=46						
TWB1				*e*S	**Sg**	**19 56 12.8**	**-0.8**
	baz=46						
YM11	**YM11**	**0.84**	**8**	*e*P	**Pb**	**19 56 03.4**	**-0.2**
	baz=7.0						
ANP	**Anpu**	**0.85**	**5**	*e*P	**Pb**	**19 56 03.9**	**+0.1**
	baz=18						
YM07	**YM07**	**0.86**	**11**	P	**Pb**	**19 56 03.9**	**0.0**
	baz=10.0						
YM08	**YM08**	**0.86**	**9**	*e*P	**Pb**	**19 56 03.6**	**-0.3**
	baz=8.0						
YULB	**Yu-li**	**0.94**	**188**	*e*P	**Pb**	**19 56 04.2**	**-1.1**
	baz=177						
YULB				S	**Sb**	**19 56 17.8**	**-0.2**
	baz=177						
YUS	**Yu-Shan**	**0.95**	**208**	*e*P	**Pg**	**19 56 04.0**	**-0.9**
	baz=196						
TWY	**Chenhua**	**0.95**	**9**	*e*P	**Pn**	**19 56 06.9**	**+0.6**
	baz=8.0						
TWF1	**Yuli**	**0.98**	**188**	*e*P	**Pb**	**19 56 05.6**	**-0.4**
	baz=182						
ALS	**Alishan**	**1.00**	**215**	P	**Pb**	**19 56 05.6**	**-0.9**
	baz=224						
CHN5	**Tsauling**	**1.01**	**224**	*e*P	**Pn**	**19 56 07.0**	**-0.3**
	baz=216						
CHN5				*e*S	**Sn**	**19 56 22.1**	**+0.3**
	baz=216						
WGK	**Gukeng**	**1.03**	**231**	*e*P	**Pn**	**19 56 07.5**	**+0.1**
	baz=231						
WDLH	**Douliu**	**1.04**	**232**	*e*P	**Pn**	**19 56 08.6**	**+1.0**
	baz=229						
WDLH				*e*S	**Sn**	**19 56 24.1**	**+1.6**
	baz=229						
RLNB	**Erlin**	**1.08**	**246**	*e*P	**Pn**	**19 56 09.0**	**+0.9**
	baz=246						
WTCT	**Ta-ch'eng**	**1.16**	**246**	*e*P	**Pn**	**19 56 09.9**	**+0.8**
	baz=246						
ELDTW	**Lidau**	**1.20**	**199**	*e*P	**Pb**	**19 56 08.8**	**-0.9**
	baz=189						
CHKT	**Chengkung**	**1.23**	**183**	*e*P	**Pg**	**19 56 08.4**	**-1.7**
	baz=168						
CHY	**Chiayi**	**1.25**	**228**	*e*P	**Pn**	**19 56 11.2**	**+0.8**
	baz=244						
TPUB	**Ta-pu**	**1.27**	**216**	⇑P	**Pn**	**19 56 11.0**	**+0.3**
	baz=213						
TPUB				*e*S	**Sn**	**19 56 29.5**	**+1.5**
	baz=213						
WSF	**Szhu**	**1.31**	**238**	*e*P	**Pn**	**19 56 11.9**	**+0.6**
	baz=235						
WSF				S	**Sn**	**19 56 30.1**	**+1.1**
	baz=235						
WTP	**Ta-pu**	**1.32**	**215**	*e*P	**Pb**	**19 56 11.7**	**0.0**
	baz=230						
STYT	**Tauyuan**	**1.32**	**208**	*e*P	**Pb**	**19 56 11.6**	**-0.1**
	baz=194						
STYT				S	**Sn**	**19 56 31.0**	**+1.6**
	baz=194						
WLGB	**Puzi**	**1.34**	**231**	P	**Pb**	**19 56 13.1**	**+0.9**
	baz=227						
WLGB				*e*S	**Sn**	**19 56 32.9**	**+3.0**
	baz=227						
TWK	**Hsinying**	**1.37**	**220**	*e*P	**Pb**	**19 56 13.2**	**+0.6**
	baz=215						
TWK				*e*S	**Sn**	**19 56 33.2**	**+2.6**
	baz=215						
JYNG	**Yonagunijimaku**	**1.38**	**85**	P	**Pg**	**19 56 12.7**	**-0.3**
JYNG				S	**Sn**	**19 56 31.5**	**+0.8**
SNST	**Tainan City**	**1.40**	**218**	*e*P	**Pg**	**19 56 14.2**	**+0.7**
	baz=218						
CHN1	**Nanshi**	**1.41**	**216**	⇓P	**Pg**	**19 56 14.2**	**+0.5**
	baz=213						
CHN1				*e*S	**Sn**	**19 56 34.5**	**+2.8**
	baz=213						
YOJ	**Yonaguni jima**	**1.44**	**85**	*e*P	**Pn**	**19 56 13.3**	**+0.2**
	baz=74						
YOJ	**Yonaguni jima**	**1.44**	**85**	P	**Pb**	**19 56 13.7**	**0.0**
YOJ				*e*S	**Sg**	**19 56 33.7**	**+0.8**
SGST	**Jiashian**	**1.47**	**212**	⇓P	**Pg**	**19 56 15.1**	**+0.3**
	baz=204						
SGST				S	**Sn**	**19 56 35.3**	**+2.3**
	baz=204						
CHN8	**Yiju**	**1.49**	**229**	*e*P	**Pg**	**19 56 15.2**	**0.0**
	baz=238						
CHN8				S	**Sg**	**19 56 36.3**	**+1.8**
	baz=238						
SLGT	**Liugui**	**1.52**	**209**	*e*P	**Pg**	**19 56 15.8**	**+0.1**
	baz=195						
SLGT				*e*S	**Sg**	**19 56 37.7**	**+2.3**
	baz=195						
TWG	**Pinlang**	**1.54**	**193**	*e*P	**Pg**	**19 56 15.3**	**-0.8**
	baz=173						
TWGBT	**Beinan**	**1.54**	**192**	*e*P	**Pg**	**19 56 15.0**	**-1.1**
	baz=173						
SCLT	**Jiali**	**1.62**	**225**	*e*P	**Pg**	**19 56 17.2**	**-0.5**
	baz=201						
SCLT				*e*S	**Sg**	**19 56 41.1**	**+2.4**
	baz=201						
SSD	**Sandimen**	**1.74**	**205**	*e*P	**Pg**	**19 56 19.4**	**-0.6**
	baz=205						
TWM1	**Shoushan**	**1.77**	**212**	*e*P	**Pg**	**19 56 20.5**	**0.0**
	baz=211						
ECL	**Taimali**	**1.78**	**195**	*e*P	**Pg**	**19 56 20.1**	**-0.7**
	baz=176						
SGLT	**Jiouru**	**1.82**	**209**	*e*P	**Pg**	**19 56 22.8**	**+1.3**
	baz=208						
MASBT	**Mashibuluo**	**1.87**	**204**	*e*P	**Pg**	**19 56 21.7**	**-0.6**
	baz=204						
PNG	**Penghu**	**1.88**	**247**	*e*P	**Pb**	**19 56 21.0**	**-0.3**
	baz=246						
PHUB	**P'eng-hu**	**1.89**	**245**	*e*P	**Pb**	**19 56 19.8**	**-1.7**
	baz=245						
PTTC	**Pingtan**	**1.91**	**308**	*e*P	**Pn**	**19 56 19.7**	**+0.1**
	baz=307						
WDGT	**Dungji**	**1.95**	**237**	*e*P	**Pb**	**19 56 21.1**	**-1.3**
	baz=237						
SSPT	**Xinbi**	**2.01**	**204**	*e*P	**Pg**	**19 56 24.4**	**-0.6**
	baz=202						
EAST	**Anshuo**	**2.02**	**196**	*e*P	**Pg**	**19 56 24.1**	**-1.1**
	baz=177						
TAW	**Tawu**	**2.03**	**194**	*e*P	**Pg**	**19 56 24.4**	**-1.0**
	baz=176						
IRIF	**Iriomote-Funau**	**2.09**	**89**	P	**Pn**	**19 56 23.0**	**+1.0**
IRIF				*e*S	**Sn**	**19 56 49.8**	**+1.5**
SCZT	**Fangliau**	**2.09**	**201**	*e*P	**Pg**	**19 56 25.1**	**-1.6**
	baz=219						
VCHM	**Qimei**	**2.15**	**239**	*e*P	**Pb**	**19 56 24.6**	**-1.3**
	baz=239						
HATJ	**Hateruma jima**	**2.18**	**97**	*e*S	**Sb**	**19 56 52.6**	**-0.9**
PTMZ	**Houxiangcun**	**2.22**	**289**	*e*P	**Pn**	**19 56 23.7**	**-0.2**
	baz=290						
MATB	**Ma-tsu**	**2.26**	**324**	*e*P	**Pn**	**19 56 24.1**	**-0.3**
	baz=322						
JKRS	**Kuro-shima**	**2.35**	**92**	P	**Pn**	**19 56 26.9**	**+1.3**
JKRS				*e*S	**Sn**	**19 56 56.8**	**+2.2**
JIJ	**Ishigaki jima**	**2.47**	**89**	P	**Pn**	**19 56 28.0**	**+0.8**
JIJ				*e*S	**Sn**	**19 56 58.3**	**+0.7**
JISG	**Ishigakijimahi**	**2.63**	**84**	P	**Pn**	**19 56 29.9**	**+0.5**
JISG				S	**Sb**	**19 57 04.6**	**-1.9**
LYJJ	**Jianjiangzhen**	**2.68**	**326**	*e*P	**Pb**	**19 56 32.5**	**-2.4**
	baz=324						
KNMB	**Chin-men Tao**	**2.78**	**273**	*e*P	**Pn**	**19 56 30.9**	**-0.7**
	baz=275						
XPSS	**Dashiqiu**	**2.82**	**337**	*e*P	**Pn**	**19 56 31.1**	**-1.0**
	baz=334						
AXDP	**Jialang**	**3.21**	**281**	*e*P	**Pn**	**19 56 37.0**	**-0.4**
	baz=282						

*TIR **13** 20:06:32.1, 40°.85N×21°.56E, h9km, Md3.2/7*
*ATH **13** 20:06:33.1, 40°.79N×21°.42E, h12km±1km, ML3.0/22, Error ellipse: s-maj=1.6km s-min=1.1km az=325.0*
*SKO **13** 20:06:33.1, 40°.80N×21°.39E, h15km, M2.4, ML3.2*
*THE **13** 20:06:33.5, 40°.79N×21°.35E, h6km±1km, ML3.1/7, Error ellipse: s-maj=1.0km s-min=0.8km az=120.0*
ISC 13 20:06:33.8±0.8, 40°.80N±0°.02×21°.41E±0°.02, h5km±5km, n113, σ1§36/141, 11C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.03**	**246**	P	**Pg**	**20 06 35.0**	**+0.1**
FNA				S	**Sg**	**20 06 35.8**	**+0.1**
FNA	**Florina**	**0.03**	**246**	P	**Pg**	**20 06 35.0**	**+0.1**
FNA				S	**Sg**	**20 06 36.0**	**+0.2**
FNA				AML	AML	20 06 36.1	
FNA				AML	AML	20 06 36.1	
KZN	**Kozani**	**0.56**	**151**	P	**Pg**	**20 06 44.1**	**-0.4**
KZN				S	**Sb**	**20 06 54.0**	**-0.4**
KZN	**Kozani**	**0.56**	**151**	P	**Pg**	**20 06 44.3**	**-0.3**
KZN				S	**Sg**	**20 06 51.6**	**-0.2**
KZN				AML	AML	20 06 54.3	
	comp=N,5838μm,0.4s						
KZN				AML	AML	20 06 55.9	
	comp=E,5962μm,0.5s						
OHR	**Ohrid**	**0.56**	**304**	⇑*i*Pg	**Pg**	**20 06 44.2**	**-0.3**
OHR				*i* Sg	**Sb**	**20 06 53.8**	**-0.7**
OHR				*e*Lg	Lg	20 06 54.1	
	comp=N,857nm,0.5s						
OHR				*e*Lg	Lg	20 06 54.2	
	comp=E,1μm,0.5s					

comp=N,403nm,0.6s
VAY eLg Lg 20 07 13.4
comp=E,763nm,0.9s
STIP Stip 1.07 33⇑ *i*Pg **Pn 20 06 57.4 +2.0**
STIP *i* Sg **Sn 20 07 15.8 +5.1**
STIP eLg Lg 20 07 19.0
comp=E,106nm,0.5s
STIP eLg Lg 20 07 19.8
comp=N,55nm,0.5s
LIT Litokhoron 1.08 130 P **Pg 20 06 53.9 -0.5**
LIT S **Sn 20 07 11.3 +0.5**
LIT Litokhoron 1.08 130 *i*Pg **Pg 20 06 54.0 -0.5**
LIT Litokhoron 1.08 130 P **Pg 20 06 53.8 -0.6**
LIT S **Sg 20 07 08.4 0.0**
LIT AML AML 20 07 14.8
comp=N,4018μm,0.6s
LIT AML AML 20 07 15.6
comp=E,3435μm,0.5s
PHP Peshkopia 1.15 321 P **Pg 20 06 53.9 -2.0**
PHP S **Sn 20 07 11.4 -1.3**
PHP Peshkopia 1.15 321 *i*PN **Pg 20 06 53.9 -2.0**
PHP *i*SN **Sn 20 07 13.4 +0.7**
SKO Skopje 1.18 1 *i*Pg **Pn 20 06 56.0 -0.9**
SKO *i*Sg **Sb 20 07 11.4 -0.7**
SKO eLg Lg 20 07 15.2
comp=N,23nm,0.4s
SKO eLg Lg 20 07 15.6
comp=E,20nm,0.5s
TPE Tepelena 1.18 245 *i*PN **Pn 20 06 58.6 +1.8**
TPE *i*SN **Sn 20 07 15.9 +2.6**
KNT Kendrikon 1.18 72 P **Pg 20 06 56.2 -0.2**
KNT S **Sn 20 07 13.5 0.0**
KNT Kendrikon 1.18 72 *i*Pg **Pb 20 06 56.4 -0.3**
KNT *i*Sg **Sn 20 07 13.4 -0.1**
KNT Kendrikon 1.18 72 P **Pg 20 06 56.3 -0.2**
KNT AML AML 20 07 17.9
comp=E,520μm,0.4s
KNT AML AML 20 07 18.7
comp=N,1246μm,0.4s
THE Thessaloniki 1.19 97 P **Pg 20 06 56.5 -0.1**
THE Thessaloniki 1.19 97 *i*Pg **Pg 20 06 56.6 -0.1**
THE *i*Sg **Sn 20 07 14.4 +0.8**
THE Thessaloniki 1.19 97 P **Pg 20 06 56.3 -0.3**
THE AML AML 20 07 17.6
comp=E,582μm,0.6s
THE AML AML 20 07 18.1
comp=N,830μm,0.6s
JAN Janina 1.22 201 P **Pg 20 06 55.6 -1.5**
JAN S **Sn 20 07 14.0 -0.3**
JAN Janina 1.22 201 P **Pg 20 06 56.4 -0.6**
JAN AML AML 20 07 19.4
comp=N,749μm,0.4s
JAN AML AML 20 07 22.5
comp=E,1114μm,0.5s
TIR Tirane 1.29 296 *i*Pg **Pn 20 06 57.5 -1.0**
TIR Tirane 1.29 296 *i*PN **Pg 20 06 57.9 -0.7**
TIR *i*SN **Sn 20 07 17.7 +1.5**
TIR Tirane 1.29 296 P **Pg 20 06 57.9 -0.7**
THL Klokotos Trika 1.31 159 P **Pn 20 06 57.1 -1.6**
THL Klokotos Trika 1.31 159 P **Pn 20 06 57.1 -1.6**
THL AML AML 20 07 22.4
comp=N,1436μm,0.6s
THL AML AML 20 07 22.4
comp=E,1500μm,0.7s
SRN Sarande 1.41 230 *i*PN **Pg 20 07 01.4 +0.6**
SRN *i*SN **Sg 20 07 23.1 +3.9**
SOH Sokhos 1.48 88 P **Pn 20 07 01.1 +0.1**
SOH Sokhos 1.48 88 *i*Pg **Pn 20 07 01.2 +0.1**
SOH *i*Sg **Sg 20 07 22.8 +1.6**
SOH Sokhos 1.48 88 P **Pn 20 07 01.2 +0.1**
SOH AML AML 20 07 25.4
comp=N,959μm,0.6s
SOH AML AML 20 07 27.2
comp=E,989μm,0.8s
VLO Vlora 1.49 258 *i*PN **Pg 20 07 04.4 +2.0**
VLO *i*SN **Sg 20 07 27.3 +5.6**
IGT Igoumenitsa 1.51 214 P **Pn 20 07 00.5 -0.9**
IGT Igoumenitsa 1.51 214 *i*Pg **Pg 20 07 02.4 -0.2**
IGT Igoumenitsa 1.51 214 P **Pb 20 07 01.9 -0.3**
IGT AML AML 20 07 29.3
comp=N,1078μm,0.7s
IGT AML AML 20 07 29.5
comp=E,642μm,0.4s
PLG Polygyros 1.61 105 P **Pn 20 07 02.8 0.0**
PLG Polygyros 1.61 105 P **Pn 20 07 02.8 0.0**
PLG AML AML 20 07 31.1
comp=E,355μm,0.6s
PLG AML AML 20 07 31.9
comp=N,451μm,0.5s
KEK Kerkira 1.64 229 P **Pb 20 07 04.2 -0.2**
KEK AML AML 20 07 33.8
comp=E,713μm,0.5s
KEK AML AML 20 07 36.9
comp=N,569μm,0.8s
KKB Krupnik 1.65 49⇓ *i*Pg **Pb 20 07 04.4 -0.3**
KKB *i*Sg **Sg 20 07 27.7 +0.8**
SRS Serrai 1.68 78 *i*Pn **Pn 20 07 03.7 -0.2**
SRS Serrai 1.68 78 P **Pn 20 07 03.6 -0.2**
FYTO Fytoko, Volos 1.81 139 P **Pb 20 07 07.2 -0.3**
FYTO AML AML 20 07 35.9
comp=N,569μm,0.7s
FYTO AML AML 20 07 41.1
comp=E,545μm,0.7s
BCI Bajram Curri 1.87 328 *i*PN **Pb 20 07 07.3 -1.0**
BCI *i*SN **Sg 20 07 35.1 +1.4**
EVR Evrytania 1.90 171 P **Pn 20 07 07.4 +0.5**
EVR AML AML 20 07 42.6
comp=E,425μm,0.5s
EVR AML AML 20 07 42.6
comp=N,719μm,0.5s
AGG Agios Georgios 1.91 158 P **Pn 20 07 06.7 -0.2**
AGG Agios Georgios 1.91 158 P **Pn 20 07 07.1 +0.1**
AGG AML AML 20 07 45.1
comp=E,442μm,0.6s
AGG AML AML 20 07 45.4
comp=N,486μm,0.5s
MMB Musomiste 1.92 65 *i*Pn **Pn 20 07 07.5 +0.4**
NVR Nevrokopi 1.93 73 P **Pn 20 07 07.6 +0.2**
NVR Nevrokopi 1.93 73 P **Pn 20 07 07.5 +0.2**
XOR Xorichti 1.98 136 P **Pn 20 07 07.5 -0.4**
XOR Xorichti 1.98 136 P **Pn 20 07 07.9 0.0**
XOR AML AML 20 07 41.5
comp=N,1095μm,0.6s
XOR AML AML 20 07 45.0
comp=E,496μm,0.9s
OUR Ouranopolis 2.01 102 P **Pn 20 07 08.6 +0.3**
OUR AML AML 20 07 42.0
comp=N,485μm,0.5s
OUR AML AML 20 07 43.5
comp=E,265μm,0.7s
NEO Neokhori 2.04 136 P **Pn 20 07 09.1 +0.4**
NEO AML AML 20 07 43.8
comp=N,600μm,0.8s
NEO AML AML 20 07 46.1
comp=E,643μm,0.5s
LKD2 Lefkada island 2.09 196 P **Pb 20 07 10.9 -1.2**
DRME Dracevica, Mon 2.17 310 *e*Pn **Pb 20 07 12.2 -1.4**
PVO Paravola 2.18 178 P **Pb 20 07 12.7 -0.9**
PDO Prodromos 2.20 185 P **Pb 20 07 12.7 -1.3**
ANX Ano Chora 2.23 170 P **Pn 20 07 12.5 +1.0**
EVGI Lefkada island 2.25 195 P **Pn 20 07 11.2 -0.4**
EVGI Lefkada island 2.25 195 P **Pn 20 07 12.9 +1.3**
VTS Vitosha 2.28 36⇑ *i*P **Pb 20 07 13.9 -1.5**
VTS Vitosha 2.28 36 S **Sg 20 07 47.2 +0.3**
VTS Vitosha 2.28 36 *i*Pn **Pn 20 07 13.0 +0.9**
PDG Podgorica 2.30 316⇑ *i*P **Pb 20 07 14.8 -0.9**
PDG Podgorica 2.30 316 S **Sg 20 07 47.0 -0.6**
PDG Podgorica 2.30 316 *e*Pn **Pb 20 07 14.1 -1.6**
SCTE Santa Cesarea 2.36 253 P **Pn 20 07 13.7 +0.6**
SMIA Simia 2.36 144 P **Pn 20 07 13.8 +0.6**
SMIA AML AML 20 08 00.4
comp=N,753μm,0.5s
SMIA AML AML 20 08 05.2
comp=E,652μm,0.7s
SERG Sergoula 2.43 168 P **Pn 20 07 14.6 +0.5**
SERG AML AML 20 07 50.1
comp=E,499μm,0.5s
SERG AML AML 20 07 52.2
comp=N,314μm,0.4s
KALE Kalithea 2.47 167 P **Pn 20 07 15.0 +0.4**
TRIZ Trizonia 2.48 168 P **Pn 20 07 15.2 +0.4**
THAS Thassos island 2.52 93 P **Pn 20 07 15.0 -0.4**
DSF Desfina 2.53 160 P **Pn 20 07 15.9 +0.4**
DSF AML AML 20 07 55.3
comp=E,156μm,0.5s
DSF AML AML 20 07 56.5
comp=N,143μm,0.7s
LAKA Lakka 2.59 170 P **Pn 20 07 18.2 +1.9**
MRKA Markates 2.68 141 P **Pn 20 07 17.8 +0.3**
VLS Valsamata 2.69 194 P **Pn 20 07 18.8 +1.1**
HCY Herceg Novi 2.74 308 *e*Pn **Pb 20 07 22.2 -1.0**
KLV Kalavryta, Ach 2.81 168 P **Pn 20 07 20.0 +0.7**
DRO Drossia 2.85 175 P **Pn 20 07 21.8 +1.9**
TREB Trebinje 2.99 311 *e*Pn **Pn 20 07 22.9 +1.1**
BRY Bratogost 3.00 315 *e*Pn **Pn 20 07 22.3 +0.2**
UPM Unac-Piva 3.05 323 *e*Pn **Pb 20 07 25.7 -2.8**
BBLS Lazići 3.41 335 *e*Pn **Pn 20 07 28.1 +0.5**
STON Ston 3.46 308 *e*Pn **Pn 20 07 29.4 +1.1**
STON Ston 3.46 308 *e*Pn **Pb 20 07 32.6 -2.9**
DIVS Divibare 3.46 343 *e*Pn **Pn 20 07 28.4 0.0**
ALN Alexandroupoli 3.52 87 P **Pn 20 07 29.1 +0.1**
MATE Matera 3.58 269⇓ *i*P **Pn 20 07 28.0 -1.9**
MATE Matera 3.58 269 S **Sn 20 08 10.8 -1.7**
HAPS Han Pijesak,BI 3.76 332 *e*Pn **Pn 20 07 33.2 +0.7**
MDVR Moldovita 3.99 3⇑ *i*P **Pn 20 07 39.2 +3.6**
HERR Herculane 4.15 10⇓ *i*P **Pn 20 07 38.6 +0.9**
FRGS Fruska Gora 4.51 345 *e*Pn **Pn 20 07 42.5 -0.3**
BZS Buzias 4.82 2⇓ *i*P **Pn 20 07 49.8 +2.8**
LOT Lotru 4.96 20⇑ *i*P **Pn 20 07 51.1 +2.1**
BLY Banja Luka 5.03 323⇑ *i*P **Pn 20 07 53.0 +3.2**
VOIR 5.35 29⇓ *i*P **Pn 20 07 56.0 +1.7**
UDBI Udbina 5.59 314 *e*Pn **Pn 20 07 59.4 +1.8**
MLR Muntele Rosu 5.75 34⇑ *i*P **Pn 20 08 02.1 +2.3**
MORH Mrgy, Hungar 5.78 341 *e*Pn **Pn 20 07 59.9 -0.2**
NVLJ Novalja 6.12 310 *e*Pn **Pn 20 08 03.9 -0.8**
VRI Vrincioaia 6.38 36⇑ *i*P **Pn 20 08 10.2 +1.8**
CRES Cresnjev 6.64 321 *e*Pn **Pn 20 08 09.3 -2.7**
CEY Cerknica 7.10 316 *e*Pn **Pn 20 08 17.3 -0.9**
PSZ Piszkesteto 7.20 352⇑ *i*P Pn 20 08 23.8 +4.1
VYHS Vyhne 7.91 347 *e*PN **Pn 20 08 31.2 +1.8**
VYHS *e*SN **Sn 20 09 58.5 -0.8**

ISCJB 13 20:28:05.4±1.0, 12°.96N±0°.05×89°.43W±0°.03, h18km±7km, Error ellipse: s-maj=8.9km s-min=4.1km az=26.7
SNET 13 20:28:06.6±1.3, 13°.05N×89°.40W, h22km±8km, ML3.6
UCR 13 20:28:06.9±1.2, 13°.06N×89°.40W, h24km±3km, MD3.6, ML3.4
GCG 13 20:28:07.2±0.5, 13°.01N×89°.42W, h34km±886km, MD3.9
ISC 13 20:28:07.4±1.6, 13°.08N±0°.07×89°.40W±0°.03, h27km±12km, n48, σ0°.63/81, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOMA	**San Marcos**	**0.61**	**21**	*e*P	**Pb**	**20 28 19.6**	**+0.1**
LOMA				*e*S	**Sn**	**20 28 29.1**	**-0.2**
LOMA	**San Marcos**	**0.61**	**21**	*e*P	**Pb**	**20 28 19.6**	**+0.1**
LOMA				*e*S	**Sn**	**20 28 29.1**	**-0.2**
SNET	**Serv Nac Est T**	**0.63**	**15**	*e*P	**Pb**	**20 28 19.5**	**-0.4**
SNET				*e*S	**Sb**	**20 28 29.3**	**+0.9**
SNET	**Serv Nac Est T**	**0.63**	**15**	*e*P	**Pb**	**20 28 19.5**	**-0.4**
SNET				*e*S	**Sb**	**20 28 29.3**	**+0.9**
LFRS	**El Faro**	**0.64**	**31⇓**	*i*P	**Pb**	**20 28 20.1**	**+0.1**
BOQS	**Boqueron**	**0.67**	**10**	*e*P	**Pb**	**20 28 20.5**	**-0.1**
BOQS				*e*S	**Sb**	**20 28 30.1**	**+0.5**
UEES	**San Salvador**	**0.67**	**13**	*e*P	**Pb**	**20 28 20.0**	**-0.5**
UEES				*e*S	**Sb**	**20 28 30.0**	**+0.6**
UEES	**San Salvador**	**0.67**	**13**	*e*P	**Pb**	**20 28 20.0**	**-0.5**
UEES				*e*S	**Sb**	**20 28 30.0**	**+0.6**
OPAM	**San Salvador**	**0.67**	**17**	*e*P	**Pb**	**20 28 20.1**	**-0.4**
OPAM				*e*S	**Sn**	**20 28 30.6**	**-0.1**
OPAM	**San Salvador**	**0.67**	**17**	*e*P	**Pb**	**20 28 20.1**	**-0.4**
OPAM				*e*S	**Sn**	**20 28 30.6**	**-0.1**
CUSC	**San Salvador**	**0.69**	**17**	*e*P	**Pb**	**20 28 20.5**	**-0.3**
CUSC				*e*S	**Sn**	**20 28 31.0**	**-0.2**
CUSC	**San Salvador**	**0.69**	**17**	*e*P	**Pb**	**20 28 20.5**	**-0.3**
CUSC				*e*S	**Sn**	**20 28 31.0**	**-0.2**
CEDA	**San Andres**	**0.72**	**0**	*e*P	**Pb**	**20 28 20.8**	**-0.6**
CEDA				*e*S	**Sb**	**20 28 31.8**	**+0.7**
CEDA	**San Andres**	**0.72**	**0**	*e*P	**Pb**	**20 28 20.8**	**-0.6**
CEDA				*e*S	**Sb**	**20 28 31.8**	**+0.7**
LFU	**La Fuente**	**0.72**	**23**	*e*P	**Pb**	**20 28 21.4**	**-0.1**
LFU				*e*S	**Sn**	**20 28 32.1**	**-0.1**
LFU	**La Fuente**	**0.72**	**23**	*e*P	**Pb**	**20 28 21.4**	**-0.1**
LFU				*e*S	**Sn**	**20 28 32.1**	**-0.1**
LBRS	**Las Brisas**	**0.74**	**28**	*e*P	**Pb**	**20 28 21.7**	**-0.2**
SNVI	**San Vicente**	**0.76**	**46**	*e*P	**Pb**	**20 28 21.6**	**-0.6**
SNVI	**San Vicente**	**0.76**	**46**	*e*P	**Pb**	**20 28 21.6**	**-0.6**
PAVA	**Las Pavas**	**0.78**	**35**	*e*P	**Pb**	**20 28 22.0**	**-0.4**
PAVA				*e*S	**Sb**	**20 28 33.3**	**+0.6**
PAVA	**Las Pavas**	**0.78**	**35**	*e*P	**Pb**	**20 28 22.0**	**-0.4**
PAVA				*e*S	**Sb**	**20 28 33.3**	**+0.6**
SBLS	**San Blas**	**0.79**	**344**	*e*P	**Pb**	**20 28 21.9**	**-0.7**
SBLS	**San Blas**	**0.79**	**344**	*e*P	**Pb**	**20 28 21.9**	**-0.7**
SNJE	**San Jose**	**0.81**	**346**	*e*P	**Pb**	**20 28 22.1**	**-0.9**
SNJE	**San Jose**	**0.81**	**346**	*e*P	**Pb**	**20 28 22.1**	**-0.9**
RTR	**El Retiro**	**0.85**	**344**	*e*P	**Pb**	**20 28 22.8**	**-0.9**
RTR				*e*S	**Sb**	**20 28 35.1**	**+0.3**
RTR	**El Retiro**	**0.85**	**344**	*e*P	**Pb**	**20 28 22.8**	**-0.9**
RTR				*e*S	**Sb**	**20 28 35.1**	**+0.3**
TECA	**Tecapa**	**0.97**	**64**	*e*P	**Pb**	**20 28 24.4**	**-1.2**
TECA	**Tecapa**	**0.97**	**64**	*e*P	**Pb**	**20 28 24.4**	**-1.2**
PACA	**Pacayal**	**1.12**	**69**	*e*P	**Pn**	**20 28 27.4**	**0.0**
PACA				*e*S	**Sn**	**20 28 42.8**	**+0.8**
PACA	**Pacayal**	**1.12**	**69**	*e*P	**Pn**	**20 28 27.4**	**0.0**
PACA				*e*S	**Sn**	**20 28 42.8**	**+0.8**
LCY	**Lacayo**	**1.13**	**72**	*e*P	**Pn**	**20 28 27.4**	**-0.1**
LCY				*e*S	**Sn**	**20 28 42.6**	**+0.4**
LCY	**Lacayo**	**1.13**	**72**	*e*P	**Pn**	**20 28 27.4**	**-0.1**
LCY				*e*S	**Sn**	**20 28 42.6**	**+0.4**
VICT	**Victoria**	**1.15**	**40**	*e*P	**Pn**	**20 28 27.0**	**-0.8**
VICT	**Victoria**	**1.15**	**40**	*e*P	**Pn**	**20 28 27.0**	**-0.8**
VSM	**San Miguel**	**1.15**	**72**	*e*P	**Pn**	**20 28 27.9**	**0.0**
VSM	**San Miguel**	**1.15**	**72**	*e*P	**Pn**	**20 28 27.9**	**0.0**
IXG	**Ixpaco**	**1.49**	**317**	*e*P	**Pn**	**20 28 32.3**	**-0.2**
IXG				*e*S	**Sb**	**20 28 52.6**	**-0.4**
IXG	**Ixpaco**	**1.49**	**317**	*e*P	**Pn**	**20 28 32.3**	**-0.2**
IXG				*e*S	**Sb**	**20 28 52.6**	**-0.4**
LCND	**La Caada**	**1.49**	**81**	*e*P	**Pn**	**20 28 32.2**	**-0.1**
LCND				*e*S	**Sn**	**20 28 51.6**	**+0.7**
LCND				IAML		20 28 54.0	
	comp=Z,2μm,0.3s						
LCND	**La Caada**	**1.49**	**81**	*e*P	**Pn**	**20 28 32.2**	**-0.1**
LCND				*e*S	**Sn**	**20 28 51.6**	**+0.7**
LCND				IAML		20 28 54.0	
	comp=Z,2μm,0.3s						
PCG	**Pacaya**	**1.76**	**318**	*e*P	**Pn**	**20 28 36.8**	**+0.5**
PCG				*e*S	**Sb**	**20 28 59.8**	**-1.1**
PCG	**Pacaya**	**1.76**	**318**	*e*P	**Pn**	**20 28 36.8**	**+0.5**
PCG				*e*S	**Sb**	**20 28 59.8**	**-1.1**
CSGN	**Cosiguina Volc**	**1.80**	**93**	*e*P	**Pn**	**20 28 37.5**	**+0.8**
CSGN				*e*S	**Sn**	**20 28 59.5**	**+0.9**
FUG	**Fuego 3**	**1.96**	**314**	*e*P	**Pn**	**20 28 39.3**	**+0.3**
FUG				*e*S	**Sn**	**20 29 04.1**	**+1.4**
FUG	**Fuego 3**	**1.96**	**314**	*e*P	**Pn**	**20 28 39.3**	**+0.3**
FUG				*e*S	**Sn**	**20 29 04.1**	**+1.4**
STG3	**Santiaguito 3,**	**2.66**	**308**	*e*P	**Pn**	**20 28 49.1**	**+0.4**
STG3				*e*S	**Sn**	**20 29 21.4**	**+1.2**
MATN	**Matagalpa**	**3.39**	**92**	*e*P	**Pn**	**20 28 57.7**	**-0.9**
MATN				IAML		20 29 40.3	
	comp=E,82nm,0.3s						

MAN 13 20:37:36.9, 17°.60N×122°.15E, h8km, mb3.7, ML2.4, MS1.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**0.33**	**288⇑**	*i*P	Pb	20 37 44.5	-0.4
CVP				*i* S	Sb	20 37 51.5	+1.1
PALP	**Palanan**	**0.60**	**154**	*e*P	Pg	20 37 48.4	-0.1
PALP				*e*S	Sb	20 37 58.1	-0.1
CAUP	**Cauayan**	**0.73**	**205**	*e*P	Pb	20 37 52.1	+0.4
CAUP				*e*S	Sn	20 38 05.8	+1.1
APYP	**Conner**	**0.90**	**287**	*e*P	Pg	20 37 54.4	+0.3
APYP				*e*S	Sn	20 38 08.3	-0.7
ABRA	**Dolores**	**1.37**	**272**	*e*P	Pn	20 38 02.5	+0.2
ABRA				*e*S	Sg	20 38 21.0	+0.1

ISK 13 20:39:59.8, 41°.18N×43°.90E, h5km, ML2.2/9
DDA 13 20:39:59.8, 41°.19N×43°.89E, h7km±2km, ML2.7
TIF 13 20:40:00.0, 41°.21N×43°.89E, h17km

NORS 13 20:40:01.8±0.0, 41°.42N×43°.93E, h1km, MPVA3.2
ISC 13 20:40:00.8±1.0, 41°.17N±0°.02×43°.89E±0°.02, h9km±9km, n38, σ0°.54/62, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.24**	**294**	P	**Pg**	**20 40 05.9**	**+0.2**
BGD				S	**Sg**	**20 40 10.1**	**+1.1**
AKH	**Akhalkalaki**	**0.38**	**309**	PG	**Pg**	**20 40 07.9**	**-0.5**
AKH				SG	**Sg**	**20 40 13.3**	**-0.2**
AKH	**Akhalkalaki**	**0.38**	**309**	P	**Pg**	**20 40 08.1**	**-0.3**
AKH				S	**Sg**	**20 40 13.3**	**-0.2**
KZRT	**Kazreti**	**0.44**	**60**	P	**Pg**	**20 40 09.3**	**-0.1**
KZRT				S	**Sg**	**20 40 15.3**	**0.0**
EAK	**Akyaka**	**0.53**	**204**	*i* P	**Pg**	**20 40 11.2**	**+0.2**
EAK				*i* S	**Sb**	**20 40 19.4**	**-0.6**
KARS	**Kars**	**0.82**	**229**	PG	**Pg**	**20 40 16.4**	**-0.1**
DIGO	**Kars**	**0.85**	**208**	*i* P	**Pb**	**20 40 17.6**	**-0.2**
DIGO				IAML_P			
	comp=Z,4μm,0.2s						
TBLG	**Delisi**	**0.85**	**48**	PG	**Pg**	**20 40 16.3**	**-0.9**
TBLG				SG	**Sg**	**20 40 28.2**	**-0.1**
TBLG	**Delisi**	**0.85**	**48**	P	**Pg**	**20 40 16.3**	**-0.9**
TBLG				S	**Sg**	**20 40 28.2**	**-0.1**
TBLG	**Delisi**	**0.85**	**48**	*i* P	**Pg**	**20 40 16.4**	**-0.9**
TBLG				*i* S	**Sg**	**20 40 28.2**	**-0.1**
TBLG				IAML_P			
	comp=Z,2μm,0.1s						
BTNK	**Botanikuri**	**0.86**	**53**	P	**Pg**	**20 40 16.4**	**-0.9**
BTNK				S	**Sg**	**20 40 28.2**	**-0.3**
BTNK	**Botanikuri**	**0.86**	**53**	*i* P	**Pg**	**20 40 16.6**	**-0.7**
BTNK				*i* S	**Sg**	**20 40 28.3**	**-0.1**
BTNK				IAML_P			
	comp=Z,5μm,0.1s						
SEAG	**Tbilisi Sea**	**0.91**	**49**	P	Pn	20 40 29.6	+10
EPOS	**Posof**	**0.94**	**291**	*i* P	**Pg**	**20 40 18.2**	**-0.6**
EPOS				*i* S	**Sb**	**20 40 31.8**	**-0.1**
GNI	**Garni**	**1.21**	**147**	PN	**Pg**	**20 40 23.5**	**-0.4**
GNI				SN	**Sn**	**20 40 40.6**	**0.0**
TASB	**TASBURUN-IGDIR**	**1.21**	**167**	PN	**Pg**	**20 40 23.4**	**-0.6**
IGDI	**IGDIR**	**1.30**	**174**	*i* P	**Pg**	**20 40 25.4**	**-0.4**
IGDI				IAML_P			
	comp=Z,110nm,0.2s						
SENK	**Senkaya-Erzuru**	**1.31**	**243**	PN	**Pb**	**20 40 25.6**	**-0.1**
TKB	**Tkibuli**	**1.36**	**331**	P	**Pn**	**20 40 25.5**	**-0.5**
TKB				S	**Sb**	**20 40 43.5**	**-0.4**
GUDG	**Gudauri**	**1.37**	**19**	P	**Pn**	**20 40 26.3**	**0.0**
GUDG				S	**Sn**	**20 40 45.4**	**+0.7**
ONI	**Oni**	**1.46**	**347**	PN	**Pn**	**20 40 27.3**	**-0.1**
ONI	**Oni**	**1.46**	**347**	P	**Pn**	**20 40 27.5**	**+0.1**
ONI				S	**Sn**	**20 40 46.7**	**-0.1**
DAGI	**Agillar**	**1.49**	**267**	*i* P	**Pb**	**20 40 28.5**	**-0.3**
DAGI				*i* S	**Sg**	**20 40 48.3**	**-0.4**
DAGI				IAML_P			
	comp=Z,234nm,0.2s						
ZEI	**Tsey**	**1.62**	**0**	*e*Pg	**Pn**	**20 40 30.2**	**+0.5**
ZEI				*e*Sg	**Sg**	**20 40 53.0**	**+0.1**
DBAD	**Bademkaya**	**1.66**	**266**	*i* P	**Pb**	**20 40 31.4**	**-0.3**
DBOC	**Borcka**	**1.68**	**277**	*i* P	**Pb**	**20 40 31.8**	**-0.2**
LACR	**Lac**	**1.69**	**10**	*e*Pg	**Pn**	**20 40 30.9**	**+0.3**
LACR				*e*Sg	**Sb**	**20 40 53.5**	**+0.1**
DDFL	**Dedoflistskaro**	**1.70**	**80**	P	**Pn**	**20 40 30.1**	**-0.6**
DDFL				S	**Sg**	**20 40 57.4**	**+1.9**
BATM	**Batumi**	**1.71**	**286**	PN	**Pn**	**20 40 31.3**	**+0.5**
BATM	**Batumi**	**1.71**	**286**	P	**Pb**	**20 40 31.6**	**-0.7**
BATM				S	**Sb**	**20 40 54.4**	**+0.4**
BCA	**Borcka**	**1.73**	**280**	PN	**Pn**	**20 40 31.6**	**+0.5**
AGRB	**Hanur-Agry**	**1.73**	**204**	PN	**Pb**	**20 40 32.4**	**-0.4**
DIGR	**Digorskoe uzhe**	**1.75**	**353**	*e*Pg	**Pb**	**20 40 33.3**	**+0.2**
DIGR				*e*Sg	**Sg**	**20 40 56.5**	**-0.5**
KOPR	**Koprukoy-ERZUR**	**1.94**	**234**	PN	**Pn**	**20 40 34.6**	**+0.4**
LSNR	**Lesken**	**2.11**	**359**	*e*Pg	**Pb**	**20 40 39.5**	**+0.3**
LSNR				*e*Sg	**Sg**	**20 41 08.1**	**-0.5**
NEY	**Neytrino**	**2.25**	**338**	*e*Pg	**Pb**	**20 40 42.1**	**+0.3**
NEY				*e*Sg	**Sb**	**20 41 10.5**	**+0.7**
BTLR	**Botlikh**	**2.30**	**49**	*e*Pg	**Pb**	**20 40 42.6**	**+0.2**
BTLR				*e*Sg	**Sb**	**20 41 12.3**	**+1.3**
AKT	**Akhty**	**2.91**	**83**	*e*Pn	**Pb**	**20 40 53.0**	**+0.1**
AKT				*e*Sn	**Sb**	**20 41 29.1**	**+0.4**

IGQ 13 20:40:09.0±0.4, 2°.S±3°.×7°.8W±°, h13km, MLv4.0
ISC 13 20:40:05.4±1.5, 2°.68S±0°.04×77°.55W±0°.06, h32km±13km, n57, σ0°.92/69, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APUY	**Puyo**	**1.29**	**340**	P	**Pb**	**20 40 30.2**	**+1.1**
APUY				S	**Sb**	**20 40 45.9**	**+0.5**
BPAT	**Tungurahua Vol**	**1.46**	**323**	P	**Pb**	**20 40 32.3**	**0.0**
PAT1	**Patacocha**	**1.46**	**322**	P	**Pb**	**20 40 32.4**	**0.0**
ARRY	**Arrayan**	**1.47**	**322**	P	**Pb**	**20 40 32.2**	**-0.3**
BMAS	**Trigal station**	**1.49**	**321**	P	**Pb**	**20 40 32.6**	**-0.2**
BMAS				S	**Sb**	**20 40 50.8**	**-0.7**
BULB	**Ulba Tungurahu**	**1.50**	**325**	P	**Pb**	**20 40 32.4**	**-0.5**
BULB				S	**Sb**	**20 40 50.8**	**-0.9**
RETU	**Refugio**	**1.51**	**324**	P	**Pb**	**20 40 32.8**	**-0.4**
BRUN	**Tungurahua Vol**	**1.52**	**325**	P	**Pb**	**20 40 32.6**	**-0.5**
BRUN				S	**Sb**	**20 40 52.1**	**0.0**
BBIL	**Ulba Tungurahu**	**1.54**	**322**	P	**Pb**	**20 40 33.1**	**-0.4**
POND	**Pondoa**	**1.54**	**324**	P	**Pb**	**20 40 32.9**	**-0.7**
ARDO	**Archidona, Ten**	**1.69**	**351**	P	**Pn**	**20 40 34.1**	**+1.3**
ARDO				S	**Sn**	**20 40 53.8**	**+0.4**
COHC	**Cochancay**	**1.72**	**277**	P	**Pb**	**20 40 36.2**	**-0.2**
COHC				S	**Sb**	**20 40 57.9**	**+0.3**
PIS1	**Pisayambo**	**1.81**	**332**	P	**Pn**	**20 40 33.6**	**-1.2**
PISA	**Pisayambo**	**1.81**	**332**	P	**Pn**	**20 40 36.4**	**+1.5**
MILO	**Milagro-Astudi**	**2.04**	**281**	P	**Pn**	**20 40 39.3**	**+1.6**
MILO				S	**Sn**	**20 41 02.9**	**+0.9**
BMOR	**Cotopaxi Volca**	**2.13**	**335**	P	**Pn**	**20 40 40.8**	**+1.4**
BMOR				S	**Sn**	**20 41 04.8**	**-0.3**
COV1	**Cotopaxi Volc**	**2.15**	**338**	P	**Pn**	**20 40 41.3**	**+1.6**
BTAM	**Cotopaxi Volca**	**2.16**	**337**	P	**Pn**	**20 40 41.1**	**+1.4**
BVC2	**Cotopaxi Volca**	**2.18**	**337**	P	**Pn**	**20 40 41.3**	**+1.2**
BREF	**Cotopaxi Volca**	**2.18**	**336**	P	**Pn**	**20 40 41.8**	**+1.7**
VC1	**Cotopaxi 1**	**2.19**	**337**	P	**Pn**	**20 40 41.4**	**+1.2**
BNAS	**Cotopaxi Volca**	**2.20**	**335**	P	**Pn**	**20 40 41.6**	**+1.4**
ANTM	**Antisana-La Mi**	**2.23**	**342**	P	**Pn**	**20 40 41.6**	**+0.9**
ANTM				S	**Sn**	**20 41 06.7**	**-0.7**
ANTS	**Antisana-Sarah**	**2.25**	**344**	P	**Pn**	**20 40 41.9**	**+0.9**
ANTS				S	**Sn**	**20 41 07.0**	**-1.1**
ANTG	**Antisana-Guama**	**2.27**	**342**	P	**Pn**	**20 40 42.2**	**+1.0**
ANTG				S	**Sn**	**20 41

Ms1 3.5/4, ms1mx3.1/28, Error ellipse: s-maj=26.8km s-min=16.9km az=99.0
ISCJB ***13*** *20:42:29.1±0.4, 12°.57S±0°.07×166°.07E±0°.07, h40km, mb4.5/23, MS3.6/3, Error ellipse: s-maj=10.7km s-min=9.0km az=148.6*
NEIC ***13*** *20:42:30.5±1.0, 12°.59S×166°.14E, h35km±3km, mb4.8/10, Error ellipse: s-maj=25.7km s-min=22.9km az=53.0*
ISC 13 20:42:30.5±0.6, 12°.55S±0°.09×166°.2E±0°.1, h40km, n42, σ0§90/41, mb4.7/23, MS3.6/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.86**	**296**	P	**Pn**	**20 44 09.0**	**+0.4**
HNR	**Honiara**	**6.86**	**296**	Pn	**Pn**	**20 44 08.5**	**-0.1**
10nm,0.3s,baz=138,slow=5.1,SNR=4.8							
HNR				Sn	**Sn**	**20 45 23.8**	**-1.6**
9.7nm,0.3s,baz=0.0,slow=20,SNR=2.8							
HNR				LR	LR	20 47 07.5	
comp=Z,166nm,20.1s,baz=146,slow=41							
HNR	**Honiara**	**6.86**	**296**	ePn	**Pn**	**20 44 08.8**	**+0.2**
DZM	**Mont Dzumac**	**9.47**	**179**	Pn	**Pn**	**20 44 44.0**	**-0.6**
0.7nm,0.3s,baz=318,slow=22,SNR=7.8							
CTA	**Charters Tower**	**20.53**	**246**	P	Pn	20 47 07.0	-1.0
3.9nm,0.8s,baz=60,slow=10,SNR=3.8							
URZ	**Urewera**	**27.40**	**161**	LR	LR	20 57 58.1	
comp=Z,184nm,19.1s,baz=15,slow=34							
STKA	**Stephens Creek**	**29.68**	**226**	P	**P**	**20 48 32.3**	**-0.4**
2.2nm,0.7s,baz=35,slow=10,SNR=6.3							
WR1	**Warramunga Arr**	**31.40**	**252**	eP	**P**	**20 48 47.3**	**-0.8**
WRA	**Warramunga Arr**	**31.40**	**252**	P	**P**	**20 48 47.3**	**-0.8**
0.9nm,0.9s,baz=82,slow=7.9,SNR=2.8							
ASAR	**Alice Springs**	**32.53**	**246**	P	**P**	**20 48 56.6**	**-1.4**
0.9nm,0.6s,baz=68,slow=9.3,SNR=11							
ASAR				PcP	**PcP**	**20 51 44.1**	**0.0**
0.7nm,0.8s,baz=116,slow=2.2,SNR=4.1							
MJAR	**Matsushiro Arr**	**55.49**	**333**	P	**P**	**20 52 01.6**	**+0.1**
6.2nm,1.0s,baz=147,slow=11,SNR=4.3							
MAJO	**Matsushiro**	**55.49**	**333**	eP	**P**	**20 52 01.6**	**+0.1**
MAT	**Matsushiro**	**55.49**	**333**	P	**P**	**20 52 00.8**	**-0.7**
KSRS	**Korea Array**	**61.35**	**326**	P	**P**	**20 52 43.2**	**+0.9**
1.4nm,0.7s,baz=138,slow=7.0,SNR=12							
USA0B	**Ussuriysk Arra**	**64.47**	**333**	eP	**P**	**20 53 03.7**	**+0.7**
12nm,0.9s							
USRK	**Ussuriysk Ar.**	**64.47**	**333**	P	**P**	**20 53 03.8**	**+0.8**
7.7nm,0.9s,baz=145,slow=4.7,SNR=16							
VNDA	**Vanda**	**65.01**	**181**	P	**P**	**20 53 07.0**	**+1.0**
0.6nm,0.7s,baz=354,slow=8.8,SNR=6.1							
CMAR	**Chiang Mai Arr**	**73.10**	**294**	P	**P**	**20 53 59.3**	**+2.0**
1.3nm,0.7s,baz=126,slow=4.8,SNR=8.7							
QSPA	**South Pole Qui**	**77.47**	**180**	eP	**P**	**20 54 22.2**	**+0.6**
12nm,1.2s							
ULN	**Ulaanbaatar**	**79.76**	**324**	eP	**P**	**20 54 35.3**	**+0.8**
5.4nm,0.8s							
SONA0	**Songino Array**	**80.12**	**324**	eP	**P**	**20 54 38.0**	**+1.5**
SONM	**Songino Array**	**80.12**	**324**	P	**P**	**20 54 38.0**	**+1.5**
0.8nm,0.3s,baz=130,slow=6.0,SNR=9.7							
SONM				LR	LR	21 28 06.9	
comp=Z,26nm,19.4s,baz=293,slow=34							
KNK	**Knik Glacier**	**81.91**	**20**	eP	**P**	**20 54 45.1**	**-0.5**
31nm,1.1s							
SML	**Sawmill**	**82.23**	**20**	eP	**P**	**20 54 48.1**	**+0.8**
22nm,1.0s							
SCM	**Sheep Creek Mo**	**82.59**	**20**	eP	**P**	**20 54 49.0**	**-0.2**
15nm,0.7s							
MAW	**Mawson**	**83.50**	**202**	P	**P**	**20 54 54.0**	**+0.2**
1.9nm,0.8s,baz=94,slow=12,SNR=4.5							
ILAR	**Eielson Array**	**84.80**	**18**	P	**P**	**20 54 58.6**	**-1.7**
0.6nm,0.7s,baz=236,slow=4.9,SNR=3.7							
PFO	**Pinyon Flats O**	**86.60**	**55**	eP	**P**	**20 55 08.0**	**-2.2**
4.4nm,0.8s							
TIXI	**Tiksi**	**87.64**	**349**	LR	LR	21 29 52.1	
comp=Z,23nm,20.8s,baz=264,slow=32							
MK31	**Makanchi Array**	**94.90**	**317**	eP	**P**	**20 55 49.1**	**+0.5**
4.4nm,1.3s							
MK32	**Makanchi Array**	**94.90**	**317**	eP	**P**	**20 55 49.2**	**+0.6**
MKAR	**Makanchi Array**	**94.90**	**317**	P	**P**	**20 55 49.2**	**+0.6**
3.2nm,1.0s,baz=96,slow=6.1,SNR=14							
ZAA0	**Zalesovo Array**	**95.01**	**324**	eP	**P**	**20 55 48.3**	**-0.5**
2.9nm,0.8s							
ZALV	**Zalesovo Beam**	**95.01**	**324**	P	**P**	**20 55 48.5**	**-0.4**
2.2nm,0.7s,baz=113,slow=4.5,SNR=10							
ZAA1	**Zalesovo Array**	**95.02**	**324**	eP	**P**	**20 55 48.5**	**-0.4**
MAKZ	**Makanchi**	**95.11**	**317**	eP	**P**	**20 55 49.8**	**+0.3**
3.7nm,1.2s							
ARCES	**ARCESS Array B**	**117.89**	**345**	PKP	**PKPdf**	**21 01 11.5**	**-0.7**
9.5nm,0.5s,baz=58,slow=2.4,SNR=4.2							
GNI	**Garni**	**121.94**	**310**	PKP	**PKiKP**	**21 01 22.1**	**+0.8**
5.6nm,1.0s,baz=272,slow=12,SNR=3.5							
BR101	**Keskin Array S**	**130.28**	**312**	ePKPdf	**PKiKP**	**21 01 37.9**	**+0.1**
BRTR	**Keskin Array B**	**130.28**	**312**	PKP	**PKiKP**	**21 01 37.9**	**+0.1**
0.4nm,0.7s,baz=141,slow=3.5,SNR=3.1							
KEST	**Kesra**	**148.86**	**322**	PKPbc	**PKiKP**	**21 02 15.3**	**-0.5**
6.0nm,0.7s,baz=186,slow=2.2,SNR=8.6							
ESDC	**Sonseca Array**	**151.61**	**344**	PKPbc	**PKiKP**	**21 02 21.5**	**+0.1**
0.6nm,0.6s,baz=16,slow=3.1,SNR=4.5							

ISCJB ***13*** *20:50:42.9±0.5, 10°.17S±0°.06×107°.30E±0°.09, h23km, mb4.0/12, Error ellipse: s-maj=12.7km s-min=8.3km az=156.2*
IDC ***13*** *20:50:42.1±1.3, 10°.09S×107°.36E, h0km, mb3.9/9, mb1 4.0/11, mb1mx3.7/45, mbtmp3.9/11, ML3.6/2, Error ellipse: s-maj=53.5km s-min=14.9km az=53.0*
NEIC ***13*** *20:50:42.5±1.3, 10°.19S×107°.32E, h10km±4km, mb4.6/3, Error ellipse: s-maj=18.1km s-min=14.3km az=156.0*
ISC 13 20:50:44.9±0.7, 10°.17S±0°.08×107°.3E±0°.1, h23km, n21, σ0§69/22, mb4.0/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.62**	**259**	ePn	**Pn**	**20 51 11.3**	**-0.9**
LEM	**Lembang**	**3.34**	**6**	Pn	**Pn**	**20 51 35.1**	**-0.8**
9.7nm,0.3s,baz=336,slow=14,SNR=13							
LEM				Sn	**Sn**	**20 52 14.9**	**-0.1**
19nm,0.3s,baz=339,slow=19,SNR=20							
FITZ	**Fitzroy Crossi**	**19.46**	**116**	P	**Pn**	**20 55 10.8**	**-0.7**
0.1nm,0.3s,baz=286,slow=12,SNR=7.2							
WR1	**Warramunga Arr**	**27.84**	**114**	eP	**P**	**20 56 32.3**	**-0.6**
WRA	**Warramunga Arr**	**27.84**	**114**	P	**P**	**20 56 32.3**	**-0.6**
0.9nm,0.7s,baz=292,slow=13,SNR=5.5							
ASAR	**Alice Springs**	**28.73**	**121**	P	**P**	**20 56 42.2**	**+1.5**
0.7nm,0.8s,baz=306,slow=7.8,SNR=3.3							
CMAR	**Chiang Mai Arr**	**29.61**	**344**	P	**P**	**20 56 49.5**	**+1.0**
0.3nm,0.5s,baz=172,slow=9.1,SNR=4.4							
STKA	**Stephens Creek**	**38.38**	**129**	P	**P**	**20 58 04.5**	**-0.1**
1.6nm,0.7s,baz=285,slow=9.5,SNR=3.9							
SONA0	**Songino Array**	**57.75**	**359**	eP	**P**	**21 00 33.4**	**-0.7**
SONM	**Songino Array**	**57.75**	**359**	P	**P**	**21 00 33.4**	**-0.7**
0.5nm,0.6s,baz=176,slow=9.2,SNR=4.3							
MK32	**Makanchi Array**	**60.95**	**341**	eP	**P**	**21 00 56.7**	**+0.6**
MKAR	**Makanchi Array**	**60.95**	**341**	P	**P**	**21 00 56.7**	**+0.6**
1.1nm,0.7s,baz=141,slow=7.8,SNR=12							
KURBB	**Kurchatov Arra**	**65.51**	**340**	P	**P**	**21 01 27.1**	**+0.9**
2.7nm,0.7s,baz=156,slow=5.2,SNR=26							
KURK	**Kurchatov**	**65.56**	**340**	eP	**P**	**21 01 26.4**	**-0.1**
4.3nm,0.8s							
ZALV	**Zalesovo Beam**	**66.65**	**346**	P	**P**	**21 01 33.4**	**-0.1**
0.5nm,0.6s,baz=112,slow=3.9,SNR=3.3							
ZAA1	**Zalesovo Array**	**66.66**	**346**	eP	**P**	**21 01 33.4**	**-0.2**
BVAR	**Borovoye Array**	**70.38**	**337**	P	**P**	**21 01 57.6**	**+0.7**
2.5nm,0.7s,baz=133,slow=8.3,SNR=18							
ABKAR	**Akbulak array**	**72.26**	**330**	eP	**P**	**21 02 08.7**	**+0.3**
5.0nm,1.1s							
TIXI	**Tiksi**	**82.90**	**7**	eP	**P**	**21 03 07.2**	**-0.1**
3.8nm,0.8s							
LTX	**Lajitas**	**145.37**	**52**	ePKPbc	**PKPdf**	**21 10 21.8**	**0.0**
TXAR	**Lajitas Array**	**145.37**	**52**	PKPbc	**PKPdf**	**21 10 21.8**	**+0.1**
0.5nm,0.7s,baz=318,slow=1.7,SNR=6.1							

AAE ***13*** *21:17:17.4±12.0, 17°.06N×40°.43E, h0km±695km*
ISCJB ***13*** *21:17:28.7±0.7, 15°.61N±0°.08×39°.6E±0°.1, h10km, mb3.6/8, MS3.7/1, Error ellipse: s-maj=18.9km s-min=11.5km az=164.8*
IDC ***13*** *21:17:28.9±1.4, 15°.59N×39°.58E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/47, mbtmp3.6/8, ML3.5/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/41, Error ellipse: s-maj=30.8km s-min=23.7km az=180.0*
ISC 13 21:17:30.7±0.7, 15°.68N±0°.07×39°.6E±0°.1, h10km, n13, σ0§97/12, mb3.6/8, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DESE	**Dese**	**4.53**	**180**	ePN	**Pn**	**21 18 38.9**	**-0.8**
DESE				eSN	**Sb**	**21 19 46.2**	**+0.8**
ATD	**Arta Tunnel**	**5.18**	**142**	Pn	**Pn**	**21 18 46.9**	**-1.4**
1.6nm,0.3s,baz=292,slow=17,SNR=6.2							
ATD				Lg	Lg	21 20 08.8	
4.2nm,0.3s,baz=255,slow=23,SNR=7.8							
ANKE	**Ethiopia-Afar**	**6.05**	**179**	eP	Pb	21 19 11.2	-5.3
ANKE				eS	**Sb**	**21 20 30.5**	**+1.4**
WSAR	**Wadi Sarin**	**19.42**	**64**	LR	LR	21 29 15.6	
comp=Z,80nm,18.8s,baz=322,slow=36							
BRTR	**Keskin Array B**	**24.52**	**349**	P	**P**	**21 22 51.6**	**+1.0**
0.6nm,0.9s,baz=158,slow=12,SNR=2.8							
AKASG	**Malin Array Be**	**35.93**	**349**	P	**P**	**21 24 31.1**	**-0.1**
0.2nm,0.3s,baz=174,slow=7.4,SNR=4.1							
TORD	**Torodi Ar. Bea**	**36.79**	**271**	P	**P**	**21 24 38.2**	**-0.8**
0.4nm,0.8s,baz=94,slow=7.0,SNR=3.8							
ESDC	**Sonseca Array**	**44.83**	**311**	P	**P**	**21 25 45.4**	**+0.3**
0.5nm,0.7s,baz=89,slow=5.3,SNR=3.2							
MKAR	**Makanchi Array**	**47.02**	**40**	P	**P**	**21 26 03.1**	**+0.8**
1.1nm,0.6s,baz=233,slow=8.8,SNR=11							
ZALV	**Zalesovo Beam**	**51.84**	**32**	P	**P**	**21 26 39.0**	**+0.1**
1.1nm,0.7s,baz=232,slow=7.3,SNR=5.3							
ARCES	**ARCESS Array B**	**54.55**	**354**	P	**P**	**21 26 58.1**	**-0.6**
0.7nm,0.8s,baz=150,slow=7.2,SNR=2.8							
SONM	**Songino Array**	**62.97**	**44**	P	**P**	**21 27 58.4**	**+0.6**
0.7nm,0.8s,baz=259,slow=6.8,SNR=3.5							
PTGA	**Pitinga**	**99.44**	**272**	LR	LR	22 17 40.8	
comp=Z,25nm,20.0s,baz=244,slow=36							

ISCJB ***13*** *21:22:30.9±0.9, 36°.51S±0°.06×177°.61E±0°.10, h261km±5km, mb3.8/3, Error ellipse: s-maj=13.5km s-min=9.4km az=155.5*
WEL ***13*** *21:22:33.7±1.2, 36°.5S±12°×17°.8E±1°0, h219km±9km, M3.8/34, MLv3.8/34, Error ellipse: s-maj=0.0km s-min=0.0km az=33.4*
IDC ***13*** *21:22:33.6±4.4, 36°.12S×177°.62E, h273km±34km, mb3.7/3, mb1 3.9/3, mb1mx3.2/38, mbtmp4.3/3, Error ellipse: s-maj=53.5km s-min=32.4km az=15.0*
ISC 13 21:22:30.9±1.0, 36°.5S±0°.1×177°.57E±0°.09, h256km±6km, n111, σ1§14/122, mb4.0/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.25**	**152**	P	**Pn**	**21 23 07.9**	**0.0**
MXZ				S	**S**	**21 23 35.5**	**-1.7**
HAZ	**Te Kaha**	**1.31**	**172**	P	**Pn**	**21 23 08.0**	**-0.2**
HAZ				S	**S**	**21 23 35.2**	**-2.7**
WHRZ	**Whale Island**	**1.48**	**198**	P	**Pn**	**21 23 10.4**	**+0.9**
PKGZ	**Pakihiroa**	**1.49**	**164**	P	**Pn**	**21 23 10.0**	**+0.4**
PKGZ				S	**S**	**21 23 38.5**	**-1.8**
RUGZ	**Raukumara Rang**	**1.51**	**177**	P	**Pn**	**21 23 09.2**	**-0.7**
RUGZ				S	**S**	**21 23 37.5**	**-3.3**
WMGZ	**Waiomatatini S**	**1.52**	**154**	P	**Pn**	**21 23 10.3**	**+0.5**
WMGZ				S	**S**	**21 23 39.4**	**-1.2**
OPRZ	**Ohinepanea**	**1.60**	**210**	P	**Pn**	**21 23 12.2**	**+1.7**
MARZ	**Manawahe**	**1.69**	**205**	P	**Pn**	**21 23 12.7**	**+1.6**
PUZ	**Puketiti**	**1.71**	**161**	P	**Pn**	**21 23 11.8**	**+0.5**
PUZ				S	**S**	**21 23 42.1**	**-1.1**
GRZ	**Great Barrier**	**1.71**	**276**	P	**Pn**	**21 23 10.3**	**-1.0**
TWGZ	**Tauwhareparae**	**1.75**	**169**	P	**Pn**	**21 23 12.8**	**+1.2**
TWGZ				S	**S**	**21 23 44.3**	**+0.4**
EDRZ	**Edgecumbe**	**1.77**	**202**	P	**Pn**	**21 23 13.9**	**+2.0**
URZ	**Urewera**	**1.84**	**191**	P	**Pn**	**21 23 12.6**	**+0.3**
MWZ	**Matawai**	**1.88**	**181**	P	**Pn**	**21 23 13.2**	**+0.5**
MWZ				S	**S**	**21 23 44.4**	**-1.4**
KARZ	**Kaharoa**	**1.89**	**214**	P	**Pn**	**21 23 14.5**	**+1.7**
KMRZ	**Kaimai**	**1.90**	**223**	P	**Pn**	**21 23 15.2**	**+2.3**
OMRZ	**Omania**	**1.90**	**210**	P	**Pn**	**21 23 15.7**	**+2.8**
TARZ	**Mount Tarawera**	**1.97**	**205**	P	**Pn**	**21 23 15.4**	**+1.8**
WIAZ	**Waiheke Island**	**1.98**	**259**	P	**Pn**	**21 23 13.5**	**-0.2**
TKGZ	**Te Karaka**	**1.99**	**174**	P	**Pn**	**21 23 14.6**	**+1.0**
MKAZ	**Moumakai**	**2.04**	**251**	P	**Pn**	**21 23 14.4**	**+0.4**
RAGZ	**Rawiri**	**2.04**	**183**	P	**Pn**	**21 23 15.5**	**+1.3**
CNGZ	**Carnagh Statio**	**2.09**	**166**	P	**Pn**	**21 23 15.9**	**+1.4**
MUGZ	**Murupara**	**2.12**	**197**	P	**Pn**	**21 23 15.5**	**+0.7**
ETAZ	**East Tamaki Re**	**2.18**	**256**	P	**Pn**	**21 23 15.9**	**+0.5**
RTZ	**Ruatahuna**	**2.21**	**192**	P	**Pn**	**21 23 16.1**	**+0.4**
RIGZ	**Rimuhau**	**2.25**	**176**	P	**Pn**	**21 23 17.1**	**+1.0**
ALRZ	**Allen Road**	**2.32**	**204**	P	**Pn**	**21 23 18.0**	**+1.3**
SNGZ	**Shannon Statio**	**2.33**	**184**	P	**Pn**	**21 23 17.7**	**+0.9**
MTHZ	**Maungataniwha**	**2.46**	**193**	P	**Pn**	**21 23 19.1**	**+1.0**
TLZ	**Tolley Road**	**2.47**	**220**	P	**Pn**	**21 23 20.5**	**+2.3**
PRGZ	**Paritu Road**	**2.48**	**174**	P	**Pn**	**21 23 19.6**	**+1.4**
RAHZ	**Arahi**	**2.49**	**189**	P	**Pn**	**21 23 19.4**	**+1.1**
MRHZ	**Matea Rd**	**2.54**	**201**	P	**Pn**	**21 23 19.9**	**+1.0**
KNZ	**Kokohu**	**2.56**	**178**	P	**Pn**	**21 23 19.9**	**+0.9**
WHHZ	**Waihua**	**2.63**	**186**	P	**Pn**	**21 23 20.8**	**+1.1**
NMHZ	**Naumai**	**2.71**	**193**	P	**Pn**	**21 23 22.0**	**+1.4**
MHZ	**Mania Peninsul**	**2.71**	**174**	P	**Pn**	**21 23 22.1**	**+1.5**
BKZ	**Black Stump Fm**	**2.84**	**197**	P	**Pn**	**21 23 22.3**	**+0.3**
ARHZ	**Aropaoanui**	**2.84**	**189**	P	**Pn**	**21 23 23.0**	**+1.1**
HIZ	**Hauiti**	**2.98**	**226**	P	**Pn**	**21 23 25.9**	**+2.5**
KRVZ	**Karewarewa**	**3.04**	**209**	P	**Pn**	**21 23 25.4**	**+1.1**
MCHZ	**McNeill Hill**	**3.06**	**193**	P	**Pn**	**21 23 25.3**	**+1.0**
WTVZ	**West Tongariro**	**3.08**	**210**	P	**Pn**	**21 23 25.5**	**+0.9**
KWHZ	**Kaweka Forest**	**3.10**	**197**	P	**Pn**	**21 23 25.3**	**+0.5**
TWVZ	**Taurewa**	**3.11**	**212**	P	**Pn**	**21 23 26.2**	**+1.3**
NGZ	**Ngauruhoe**	**3.13**	**209**	P	**Pn**	**21 23 26.1**	**+1.0**
TUVZ	**Tukino**	**3.19**	**208**	P	**Pn**	**21 23 26.5**	**+0.7**
FWVZ	**Far West T-bar**	**3.22**	**209**	P	**Pn**	**21 23 27.3**	**+1.0**
CKHZ	**Cape Kidnapper**	**3.22**	**187**	P	**Pn**	**21 23 26.7**	**+0.7**
WHVZ	**Whangaehu Hut**	**3.23**	**208**	P	**Pn**	**21 23 26.9**	**+0.6**
BHHZ	**Black Hill Sta**	**3.25**	**201**	P	**Pn**	**21 23 26.4**	**0.0**
TRVZ	**Turoa**	**3.26**	**209**	P	**Pn**	**21 23 27.3**	**+0.7**
MOVZ	**Moawhango**	**3.28**	**205**	P	**Pn**	**21 23 26.9**	**+0.2**
KRHZ	**Kereru**	**3.32**	**199**	P	**Pn**	**21 23 27.2**	**+0.1**
PKVZ	**Pokaka**	**3.33**	**211**	P	**Pn**	**21 23 28.0**	**+0.7**
MTVZ	**Mangateitei**	**3.36**	**209**	P	**Pn**	**21 23 28.0**	**+0.4**
KAHZ	**Kahuranaki**	**3.38**	**189**	P	**Pn**	**21 23 28.6**	**+0.8**
OUZ	**Omahuta**	**3.45**	**290**	P	**Pn**	**21 23 27.5**	**-1.1**
VRZ	**Vera Road**	**3.47**	**219**	P	**Pn**	**21 23 30.6**	**+1.9**
PXZ	**Pawanui**	**3.61**	**189**	P	**Pn**	**21 23 30.7**	**+0.4**
PNHZ	**Pukenui**	**3.62**	**197**	P	**Pn**	**21 23 30.4**	**-0.1**
WPHZ	**Waipukurau**	**3.71**	**193**	P	**Pn**	**21 23 31.4**	**-0.1**
TSZ	**Takapari Road**	**3.81**	**199**	P	**Pn**	**21 23 32.3**	**-0.4**
WAZ	**Wanganui**	**3.87**	**211**	P	**Pn**	**21 23 35.3**	**+1.9**
PRHZ	**Porangahau**	**3.88**	**191**	P	**Pn**	**21 23 33.8**	**+0.4**
DVHZ	**Dannevirke**	**3.99**	**196**	P	**Pn**	**21 23 34.5**	**-0.2**
ANWZ	**Angora Road**	**4.09**	**192**	P	**Pn**	**21 23 36.1**	**+0.3**
POWZ	**Post Office Ro**	**4.18**	**199**	P	**Pn**	**21 23 36.9**	**+0.1**
PRWZ	**Pori Road**	**4.28**	**196**	P	**Pn**	**21 23 38.4**	**+0.3**
BFZ	**Birch Farm**	**4.34**	**193**	P	**Pn**	**21 23 38.7**	**-0.2**
MRZ	**Mangatainoka R**	**4.48**	**203**	P	**Pn**	**21 23 39.6**	**-0.9**
TIWZ	**Tintock**	**4.51**	**196**	P	**Pn**	**21 23 40.6**	**-0.3**
CPWZ	**Castlepoint**	**4.57**	**193**	P	**Pn**	**21 23 44.0**	**+2.4**
HOWZ	**Holdsworth Sta**	**4.72**	**199**	P	**Pn**	**21 23 42.5**	**-0.8**
OGWZ	**Otaki Gorge**	**4.74**	**203**	P	**Pn**	**21 23 42.6**	**-1.0**
TMWZ	**Te Maipa**	**4.83**	**195**	P	**Pn**	**21 23 44.2**	**-0.4**
KIW	**Kapiti Island**	**4.87**	**204**	P	**Pn**	**21 23 44.2**	**-0.9**
MTW	**Mount Morrison**	**4.96**	**198**	P	**Pn**	**21 23 45.6**	**-0.7**
CAW	**Cannon Point**	**5.04**	**202**	P	**Pn**	**21 23 46.1**	**-1.1**
TRWZ	**Traveller**	**5.15**	**196**	P	**Pn**	**21 23 48.7**	**+0.2**
DUWZ	**D'Urville Isla**	**5.19**	**212**	P	**Pn**	**21 23 50.3**	**+1.2**
PAWZ	**Paruwai Farm**	**5.19**	**198**	P	**Pn**	**21 23 49.1**	**0.0**
MSWZ	**Moikau Station**	**5.27**	**199**	P	**Pn**	**21 23 49.8**	**-0.3**
BHW	**Baring Head**	**5.37**	**202**	P	**Pn**	**21 23 51.2**	**-0.1**
TCW	**Tory Channel**	**5.40**	**207**	P	**Pn**	**21 23 51.4**	**-0.1**
PLWZ	**Palliser**	**5.41**	**199**	P	**Pn**	**21 23 50.8**	**-1.0**
TUWZ	**Tuamarina**	**5.71**	**209**	P	**Pn**	**21 23 54.6**	**-0.9**
NNZ	**Nelson**	**5.77**	**213**	P	**Pn**	**21 23 57.9**	**+1.7**
QRZ	**Quartz Range**	**5.88**	**221**	P	**Pn**	**21 23 57.1**	**-0.4**
BSWZ	**Blackbirch Sta**	**5.99**	**208**	P	**Pn**	**21 23 59.5**	**+0.7**
THZ	**Tophouse**	**6.42**	**213**	P	**Pn**	**21 24 04.5**	**+0.2**
KHZ	**Kahutara**	**6.72**	**206**	P	**Pn**	**21 24 08.1**	**+0.2**
GVZ	**Greta Valley S**	**7.38**	**207**	P	**Pn**	**21 24 16.3**	**0.0**
LTZ	**Lake Taylor**	**7.52**	**211**	P	**Pn**	**21 24 18.0**	**-0.1**
OKCZ	**Okains Bay**	**8.04**	**204**	P	**Pn**	**21 24 26.0**	**+1.5**
MQZ	**McQueen's Vall**	**8.16**	**206**	P	**Pn**	**21 24 25.5**	**-0.6**
AKCZ	**Akaroa Harbour**	**8.22**	**204**	P	**Pn**	**21 24 27.9**	**+1.0**
WVZ	**Waitaha Valley**	**8.44**	**216**	P	**Pn**	**21 24 29.7**	**+0.1**
RPZ	**Rata Peaks**	**8.80**	**213**	P	**Pn**	**21 24 33.8**	**-0.4**
LBZ	**Lake Benmore**	**9.71**	**213**	P	**Pn**	**21 24 45.8**	**+0.1**
ODZ	**Otahua Downs**	**10.05**	**209**	P	**Pn**	**21 24 50.6**	**+0.7**
JCZ	**Jackson Bay**	**10.14**	**219**	P	**Pn**	**21 24 51.0**	**-0.1**
MSZ	**Milford Sound**	**11.00**	**219**	P	**Pn**	**21 25 02.3**	**+0.5**
ASAR	**Alice Springs**	**39.56**	**276**	P	**P**	**21 29 39.2**	**+1.6**
3.2nm,0.6s,baz=117,slow=8.0,SNR=47							
ASAR				PcP	**PcP**	**21 31 39.8**	**+0.3**
0.2nm,0.4s,baz=127,slow=4.2,SNR=2.8							
ASAR				ScP	**ScP**	**21 35 02.1**	**-1.5**
0.2nm,0.5s,baz=123,slow=3.4,SNR=3.2							
WRA	**Warramunga Arr**	**41.13**	**282**	P	**P**	**21 29 51.1**	**+0.6**
3.9nm,0.4s,baz=119,slow=8.0,SNR=49							
WRA				PcP	**PcP**	**21 31 45.5**	**+0.9**
1.1nm,0.9s,baz=121,slow=3.7,SNR=3.2							
FITZ	**Fitzroy Crossi**	**49.04**	**277**	P	**P**	**21 30 52.8**	**+0.4**
1.4nm,0.7s,baz=121,slow=5.9,SNR=4.5							
ARCES	**ARCESS Array B**	**143.54**	**344**	PKP	**PKPdf**	**21 41 31.7**	**-2.3**
1.6nm,0.9s,baz=93,slow=3.6,SNR=3.6							
FINES	**FINESS Array B**	**149.23**	**333**	PKPbc	**PKiKP**	**21 41 48.4**	**-0.9**
2.8nm,0.7s,baz=112,slow=2.1,SNR=11							
BRTR	**Keskin Array B**	**151.54**	**288**	PKPbc	**PKiKP**	**21 41 55.1**	**0.0**
0.3nm,0.7s,baz=124,slow=0.5,SNR=3.6							
TORD	**Torodi Ar. Bea**	**156.50**	**190**	PKPab	**PKPab**	**21 42 27.5**	**+1.9**
0.3nm,0.6s,baz=172,slow=2.2,SNR=3.6							

IDC ***13*** *21:23:47.8±2.1, 52°.09N×160°.56E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/51, mbtmp3.8/8, ML2.6/1, MS3.2/3, Ms1 3.3/3, ms1mx2.6/46, Error ellipse: s-maj=41.6km s-min=29.7km az=140.0*
KRSC ***13*** *21:23:48.4±1.4, 51°.96N×160°.80E, h59km±21km, ML4.2*
MOS ***13*** *21:23:51.1±1.0, 52°.01N×160°.64E, h47km, mb3.8/1, Error ellipse: s-maj=15.2km s-min=5.8km az=116.8*
ISC 13 21:23:50.1±2.5, 52°.06N±0°.06×160°.56E±0°.07, h15km±13km, n59, σ0§92/79, mb3.9/7, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.09**	**343**	eP	**Pb**	**21 24 09.9**	**-0.8**
SPN				eS	**Sn**	**21 24 26.1**	**+0.5**
SPN	**Mys Shipunski**	**1.09**	**343**	PN	**Pb**	**21 24 09.9**	**-0.8**
SPN				S	**Sn**	**21 24 26.1**	**+0.5**
RUS	**Russkaya**	**1.31**	**287**	eP	**Pn**	**21 24 14.2**	**+0.4**
RUS				eS	**Sg**	**21 24 32.4**	**0.0**
RUS	**Russkaya**	**1.31**	**287**	PN	**Pn**	**21 24 14.2**	**+0.4**
RUS				S	**Sg**	**21 24 32.4**	**0.0**
NLC	**Nalytchevo**	**1.34**	**327**	eP	**Pb**	**21 24 14.8**	**0.0**
NLC	**Nalytchevo**	**1.34**	**327**	PN	**Pb**	**21 24 14.

baz=260,slow=19
VNA2 S **Sn** **21 34 00.2 -5.7**
baz=291,slow=28
SNAA Sanae 18.48 156 P **P** **21 31 16.2 +1.7**
SNAA S **S** **21 34 37.1 -1.2**
SNAA Sanae 18.48 156 P **P** **21 31 15.9 +1.4**
21nm,0.3s,baz=295,slow=12,SNR=1733
SNAA S **S** **21 34 36.5 -1.8**
0.4nm,0.3s,baz=323,slow=18,SNR=5.0
SNAA Sanae 18.48 156 *e*P **P** **21 31 15.3 +0.8**
104nm,0.6s
SNAA *e*S **S** **21 34 36.5 -1.8**
PMSA Palmer Station 19.74 230 P **Pn** **21 31 33.7 +2.8**
3.9nm,0.3s,baz=82,slow=7.8,SNR=17
SYO Syowa Base 31.35 140‖ *e*P **P** **21 33 17.4 +0.8**
SYO Syowa Base 31.35 140‖ *e*pP pP 21 33 41.6 -2.1
PLCA Paso Flores 32.08 280 P **P** **21 33 22.3 -1.1**
1.2nm,0.6s,baz=208,slow=7.4,SNR=3.2
PLCA Paso Flores 32.08 280 *e*P **P** **21 33 22.3 -1.1**
9.9nm,1.3s
QSPA South Pole Qui 33.92 180 *e*P **P** **21 33 41.1 +1.8**
141nm,1.7s
CFA Coronel Fontan 37.70 293 P **P** **21 34 10.0 -1.6**
3.9nm,0.6s,baz=142,slow=12,SNR=7.5
CFA pP **pP** **21 34 38.1 -1.7**
7.0nm,0.8s,baz=143,slow=8.2,SNR=4.1
MAW Mawson 39.91 143 P **P** **21 34 31.1 +1.6**
27nm,0.6s,baz=232,slow=8.0,SNR=74
MAW LR LR 21 49 23.0
comp=Z,48nm,18.2s,baz=234,slow=33
MAW Mawson 39.91 143 *e*P **P** **21 34 31.3 +1.7**
5.8nm,0.7s
MAW *e* 21 49 23.0
LVC Limon Verde 45.47 300 P **P** **21 35 16.1 +0.7**
5.2nm,0.4s,baz=129,slow=4.9,SNR=11
LVC Limon Verde 45.47 300 *e*P **P** **21 35 16.2 +0.8**
7.4nm,0.6s
SBA Scott Base 45.81 184 *e*P **P** **21 35 19.6 +2.7**
16nm,0.9s
BOSA Boshof 46.01 75 P **P** **21 35 19.7 +0.5**
2.4nm,0.7s,baz=210,slow=11,SNR=7.2
VNDA Vanda 46.30 183 P **P** **21 35 22.9 +2.1**
21nm,0.6s,baz=186,slow=6.4,SNR=107
VNDA Vanda 46.30 183 *e*P **P** **21 35 22.7 +1.9**
22nm,0.7s
SIV San Ignacio 47.79 314 P **P** **21 35 32.7 -0.4**
0.7nm,0.5s,baz=127,slow=10,SNR=5.3
GO01 Chusmiza 48.12 302 *e*P **P** **21 35 37.2 +1.0**
GO01 *e*pP **pP** **21 36 05.1 -0.5**
H10S2 ASCENSION HYDR 48.26 17 T T 22 28 46.2
baz=189,slow=74,SNR=16
H10S3 ASCENSION HYDR 48.26 17 T T 22 28 42.4
baz=189,slow=74,SNR=11
H10S1 ASCENSION HYDR 48.27 17 T T 22 28 48.8
baz=189,slow=74,SNR=13
MNMC Minye Minye 48.77 302 *e*P **P** **21 35 41.6 +0.8**
92nm,1.9s
LBTB Lobatse 49.06 73 *e*P **P** **21 35 42.9 +0.1**
6.7nm,0.6s
H10N1 ASCENSION HYDR 49.37 17 T T 22 30 12.1
baz=189
H10N3 ASCENSION HYDR 49.37 17 T T 22 30 16.0
baz=189,slow=74
H10N2 ASCENSION HYDR 49.39 17 T T 22 30 15.7
baz=189,slow=74
TSUM Tsumeb 49.79 61 *e*P **P** **21 35 49.5 +1.1**
6.1nm,0.7s
LPAZ La Paz 50.56 305 P **P** **21 35 55.7 +0.8**
5.9nm,0.6s,baz=157,slow=6.5,SNR=24
LPAZ pP **pP** **21 36 23.3 -1.5**
8.5nm,0.8s,baz=169,slow=3.4,SNR=5.1
LPAZ La Paz 50.56 305 *e*P **P** **21 35 55.0 +0.2**
LPAZ *e* 21 35 55.2
CASY Casey 53.64 160 *e*P **P** **21 36 17.5 +1.2**
18nm,1.0s
CASY *e*pP **pP** **21 36 51.2 +4.8**
LSZ Lusaka 58.44 69 *e*P **P** **21 36 52.1 +0.9**
13nm,0.9s
DBIC Dimbokro 65.40 24 P **P** **21 37 37.6 +0.1**
5.0nm,0.6s,baz=176,slow=5.2,SNR=9.6
DBIC Dimbokro 65.40 24 *e*P **P** **21 37 38.2 +0.8**
54nm,1.6s
TOA0 Torodi Ar. Sit 73.28 29 *e*P **P** **21 38 26.7 +0.8**
12nm,0.7s
TORD Torodi Ar. Bea 73.28 29 P **P** **21 38 24.8 -1.1**
8.8nm,0.6s,baz=202,slow=4.8,SNR=73
TORD pP **pP** **21 38 56.7 -0.5**
4.7nm,0.8s,baz=199,slow=6.4,SNR=4.8
TOA1 Torodi Ar. Sit 73.28 29 *e*P **P** **21 38 24.8 -1.1**
TOA1 *e*pP **pP** **21 38 56.7 -0.5**
RPZ Rata Peaks 79.16 193 P **P** **21 38 59.4 +0.5**
baz=153,slow=9.0
NWAO Narrogin (SRO) 86.07 151 P **P** **21 39 34.4 -0.5**
19nm,1.1s,baz=288,slow=5.5,SNR=4.2
STKA Stephens Creek 91.62 170 P **P** **21 40 01.7 +0.6**
3.6nm,0.9s,baz=144,slow=4.4,SNR=7.8
STKA Stephens Creek 91.62 170 *e*P **P** **21 40 01.7 +0.6**
5.1nm,1.6s
ASAR Alice Springs 98.72 162 P **P** **21 40 33.5 0.0**
1.5nm,0.6s,baz=185,slow=4.1,SNR=20
ASAR PP **PP** **21 44 33.0 -2.3**
1.5nm,0.7s,baz=188,slow=7.0,SNR=11
Z50A Ashland 102.20 313 *e*Sdif Sdif 21 52 19.1 -0.9
WR1 Warramunga Arr 102.43 162 *e*Pdif **Pdif** **21 40 50.2 +0.1**
WRA Warramunga Arr 102.43 162 P **Pdif** **21 40 50.2 +0.1**
0.7nm,0.6s,baz=207,slow=5.4,SNR=4.7
FIA0 FINESS Array S 124.61 28 *e*PKPdf **PKPdf** **21 45 51.4 0.0**
FINES FINESS Array B 124.61 28 PKP **PKPdf** **21 45 51.4 0.0**
0.9nm,0.4s,baz=221,slow=2.0,SNR=8.8
CMAR Chiang Mai Arr 124.94 111 PKP **PKPdf** **21 45 52.0 -1.3**
0.5nm,0.4s,baz=260,slow=4.0,SNR=5.5
AAK Ala-Archa 130.04 71 SKPbc **SKPab** **21 49 12.7 -0.2**
1.0nm,0.3s,baz=183,slow=1.6,SNR=3.8
ARCES ARCESS Array B 131.19 22 PKP **PKPdf** **21 46 03.7 -0.1**
9.1nm,0.4s,baz=197,slow=2.5,SNR=4.6
ARCES SKPbc **SKPbc** **21 49 13.5 -2.7**
3.4nm,1.1s,baz=205,slow=5.4,SNR=4.3
YKA Yellowknife Ar 136.40 318 PKP **PKPdf** **21 46 13.8 +0.1**
0.7nm,0.6s,baz=130,slow=1.7,SNR=6.6
YKA *e*PKP **pPKPdf** **21 46 46.7 -1.5**
0.8nm,0.8s,baz=131,slow=2.2,SNR=2.9
YKA SKPbc **SKPbc** **21 49 31.6 -2.0**
2.3nm,0.9s,baz=121,slow=2.0,SNR=14
YKB5 Yellowknife Ar 136.40 318 *e*PKPdf **PKPdf** **21 46 13.8 +0.1**
YKB5 *e*pPKPdf **pPKPdf** **21 46 46.7 -1.5**
MKAR Makanchi Array 136.94 72 PKP **PKPdf** **21 46 14.5 -0.8**
0.4nm,0.8s,baz=232,slow=1.6,SNR=3.9
MKAR SKPbc **SKPbc** **21 49 33.6 -2.2**
1.4nm,0.9s,baz=270,slow=1.1,SNR=7.4
MK32 Makanchi Array 136.94 72 *e*PKPdf **PKPdf** **21 46 14.5 -0.8**
WMQ Urumqi 137.93 79 *e*PKP **PKiKP** **21 46 19.4 +0.1**
WMQ LR LR
comp=N,260nm,39.9s
WMQ LR LR
comp=E,640nm,36.3s
WMQ LR LR
comp=Z,120nm,21.9s
LZH Lanzhou 141.53 101 *e*PKP PKPdf 21 46 16.6 -7.5
LZH sPKP 21 47 17.3
LZH SKS SKSdf 21 53 04.1 -18
ZALV Zalesovo Beam 142.46 64 PKhKP PKPpre 21 46 21.3
0.4nm,0.3s,baz=268,slow=4.3,SNR=2.7
ZALV SKPbc **SKPbc** **21 49 48.3 -2.1**
0.5nm,0.5s,baz=300,slow=3.2,SNR=2.7
ZAA1 Zalesovo Array 142.46 64 *e*PKPpre PKPpre 21 46 21.3
INK Inuvik 146.03 320 *e*PKPdf **PKPbc** **21 46 32.2 +0.3**
NJ2 Nanjing 146.17 121 *e*PKPbc **PKPbc** **21 46 33.3 -0.1**
DOT Dot Lake 148.85 310 *e*PKPbc **PKPbc** **21 46 39.4 -0.3**
RIDG Independent Ri 149.21 310 *e*PKPbc **PKPbc** **21 46 41.1 +0.5**
ILAR Eielson Array 150.32 311 PKPbc **PKPbc** **21 46 43.2 0.0**
2.2nm,0.7s,baz=104,slow=1.0,SNR=19
ILAR pPKPbc **pPKPbc** **21 47 16.1 -1.6**
4.8nm,0.9s,baz=116,slow=1.3,SNR=6.6
ILAR SKPbc 21 50 06.9
0.6nm,0.9s,baz=90,slow=0.9,SNR=3.8
CCB Clear Creek Bu 150.68 311 *e*PKPbc **PKPbc** **21 46 44.0 0.0**
SONA0 Songino Array 150.71 87 *e*PKPbc **PKPbc** **21 46 45.0 +0.2**
SONM Songino Array 150.71 87 PKPbc **PKPbc** **21 46 45.0 +0.2**
3.4nm,0.8s,baz=228,slow=2.3,SNR=16
MCK McKinley 150.97 309 *e*PKPbc **PKiKP** **21 46 45.7 +0.3**
TLY Talaya 151.21 78 *e*PKPbc **PKiKP** **21 46 46.3 +0.1**
BPAW Bear Paw Mtn. 151.93 309 *e*PKPbc **PKiKP** **21 46 47.4 0.0**
JNU Nakatsue 152.26 138 PKPbc **PKPbc** **21 46 48.6 -0.2**
3.8nm,0.7s,baz=286,slow=1.4,SNR=5.8
KSRS Korea Array 154.80 128 PKPab **PKPab** **21 47 09.6 -0.2**
0.4nm,0.3s,baz=214,slow=5.7,SNR=5.7
USRK Ussuriysk Ar. 162.05 124 PKPab **PKPab** **21 47 41.0 0.0**

1.0nm,0.6s,baz=167,slow=3.3,SNR=4.8

*DJA **13** 21:37:11.1±0.4, 8°S±4°×10°7E±°, h10km, M4.5/17, mb4.8/4, mB5.3/2, MLv4.4/17, Mw(mB)4.8/2*
*ISCJB **13** 21:37:12.3±0.5, 7°.78S±0°.06×106°.99E±0°.04, h63km, mb3.8/7, Error ellipse: s-maj=8.9km s-min=4.3km az=29.1*
*IDC **13** 21:37:15.9±1.6, 7°.36S×107°.11E, h92km±14km, mb3.6/8, mb1 3.8/9, mb1mx3.5/39, mbtmp4.1/9, Error ellipse: s-maj=37.7km s-min=14.4km az=45.0*
ISC 13 21:37:13.1±0.7,**7°.74S**±0°.08×**107°.00E**±0°.05,**h63**km,**n33**, σ1§**91**/32,**mb3.9/7**,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.82**	**77**	P	**Pn**	**21 37 27.8**	**-1.3**
CISI				S	**Sn**	**21 37 38.9**	**-2.0**
LEM	**Lembang**	**1.09**	**34**	P	**Pn**	**21 37 31.9**	**-0.7**
437nm,0.3s,baz=162,slow=3.2,SNR=112							
LEM				S	**Sn**	**21 37 47.4**	**+0.3**
322nm,0.3s,baz=306,slow=19,SNR=21							
LEM				LR	LR	21 37 55.4	
comp=Z,155nm,18.1s,baz=188,slow=54							
LEM	**Lembang**	**1.09**	**34**	P	**Pn**	**21 37 32.7**	**+0.1**
CGJI	**Cibinong**	**1.72**	**311**	P	**Pn**	**21 37 39.6**	**-1.2**
SBJI	**Serang**	**1.83**	**332**	P	**Pn**	**21 37 42.2**	**-0.1**
SBJI				S	**Sn**	**21 38 06.2**	**+1.7**
BLSI	**Bandar Lampung**	**2.94**	**323**	P	**Pn**	**21 37 58.3**	**+0.9**
YOGI	**Yogyakarta**	**3.26**	**92**	P	**Pn**	**21 37 59.7**	**-2.1**
KASI	**Kota Agung**	**3.33**	**311**	P	**Pn**	**21 38 02.2**	**-0.5**
KASI				S	**Sn**	**21 38 42.4**	**+1.4**
SMRI	**Semarang**	**3.48**	**79**	P	**Pn**	**21 38 07.4**	**+2.6**
UGM	**Wanagama**	**3.49**	**93**	P	**Pn**	**21 38 05.2**	**+0.2**
WOJI	**Wonogiri, Jawa**	**3.88**	**92**	P	**Pn**	**21 38 11.4**	**+1.1**
LWLI	**Liwa**	**3.99**	**313**	P	**Pn**	**21 38 13.0**	**+1.2**
MDSI	**Maura Dua**	**4.29**	**319**	P	**Pn**	**21 38 16.8**	**+1.0**
NGJI	**Ngawi**	**4.43**	**85**	P	**Pn**	**21 38 21.2**	**+3.4**
PWJI	**Pagerwojo**	**4.76**	**94**	P	**Pn**	**21 38 24.0**	**+1.7**
TPI	**Tanjungpandan**	**5.00**	**7**	P	**Pn**	**21 38 27.8**	**+2.2**
16nm,0.7s							
LHSI	**Lahat**	**5.21**	**318**	P	**Pn**	**21 38 29.7**	**+1.2**
64nm,0.9s,2μm							
MNAI	**Manna**	**5.24**	**310**	P	**Pn**	**21 38 29.2**	**+0.2**
BATI	**Baumata**	**16.64**	**100**	P	**Pn**	**21 41 04.3**	**+2.0**
6.2nm,0.3s,baz=288,slow=3.2,SNR=6.8							
FITZ	**Fitzroy Crossi**	**20.86**	**121**	P	**P**	**21 41 51.5**	**+1.5**
2.9nm,0.8s,baz=264,slow=5.4,SNR=5.2							
FITZ				S	**S**	**21 45 34.8**	**-4.4**
1.8nm,0.9s,baz=3.2,slow=18,SNR=2.0							
CMAR	**Chiang Mai Arr**	**27.22**	**343**	P	**P**	**21 42 47.2**	**-4.0**
0.3nm,0.3s,baz=182,slow=8.9,SNR=4.1							
H01W3	**Cape Leeuwin H**	**27.80**	**167**	T	T	22 12 30.3	
baz=348,slow=76,SNR=19							
H01W1	**Cape Leeuwin H**	**27.81**	**167**	T	T	22 12 27.6	
baz=348,slow=76,SNR=16							
H01W2	**Cape Leeuwin H**	**27.81**	**167**	T	T	22 12 25.2	
baz=348,slow=76,SNR=26							
WRA	**Warramunga Arr**	**29.12**	**117**	P	**P**	**21 43 08.7**	**+0.4**
2.1nm,0.6s,baz=290,slow=11,SNR=13							
ASAR	**Alice Springs**	**30.26**	**125**	P	**P**	**21 43 19.3**	**+1.0**
0.5nm,0.6s,baz=294,slow=9.3,SNR=6.4							
H08S2	**Diego Garcia H**	**34.20**	**268**	T	T	22 19 25.7	
baz=91,slow=74							
H08S3	**Diego Garcia H**	**34.20**	**268**	T	T	22 19 22.1	
baz=91,slow=74							
H08S1	**Diego Garcia H**	**34.21**	**268**	T	T	22 19 20.8	
baz=91							
STKA	**Stephens Creek**	**40.15**	**131**	P	**P**	**21 44 44.7**	**+1.6**
2.6nm,0.4s,baz=304,slow=8.6,SNR=14							
MKAR	**Makanchi Array**	**58.58**	**340**	P	**P**	**21 47 00.9**	**-2.4**
0.3nm,0.5s,baz=155,slow=8.3,SNR=6.6							
GEYT	**Alibek**	**64.32**	**319**	P	**P**	**21 47 40.9**	**-1.4**
0.6nm,0.4s,baz=134,slow=6.2,SNR=3.3							
BOSA	**Boshof**	**79.12**	**242**	P	**P**	**21 49 13.2**	**+1.7**
1.1nm,0.5s,baz=131,slow=11,SNR=4.0							

*SJA **13** 22:01:13.1±0.6, 24°.69S×68°.75W, h5km±5km, ML3.1, MW4.3*
*ISCJB **13** 22:01:16.8±0.5, 24°.62S±0°.03×68°.82W±0°.06, h121km±7km, mb3.7/3, Error ellipse: s-maj=9.0km s-min=5.4km az=171.4*
*GUC **13** 22:01:16.8±0.8, 24°.62S×68°.81W, h120km±7km, ML4.4*
*IDC **13** 22:01:17.0±1.8, 24°.62S×68°.32W, h83km±18km, mb3.6/3, mb1 3.8/8, mb1mx3.5/31, mbtmp4.0/8, Error ellipse: s-maj=29.5km s-min=15.6km az=84.0*
ISC 13 22:01:16.9±0.8,**24°.61S**±0°.04×**68°.76W**±0°.05,**h108**km±9km, **n31**, σ1§**67**/45,**mb3.6**/3,**2C-1D**,**Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.93**	**234**‖	*i*P	**Pn**	**22 01 38.2**	**+0.6**
GO02				*i* S	**Sn**	**22 01 54.5**	**+1.4**
GO02				IAML		22 01 55.8	
comp=E,7μm,0.5s							
PB14	**IPOC Station P**	**1.50**	**269**	*e*P	**Pn**	**22 01 44.3**	**+0.4**
PB14				*i* S	**Sn**	**22 02 04.5**	**+0.2**
PB14				IAML		22 02 10.4	
comp=E,5μm,0.3s							
PB15	**IPOC Station P**	**1.54**	**335**	*i* P	**Pn**	**22 01 44.2**	**-0.1**
PB15				*i* S	**Sn**	**22 02 07.1**	**+1.9**
PB15	**IPOC Station P**	**1.54**	**335**	*e*P	**Pn**	**22 01 45.1**	**+0.8**
PB15				*i* S	**Sn**	**22 02 06.4**	**+1.3**
PB10	**IPOC Station P**	**1.97**	**303**	*i* P	**Pn**	**22 01 50.0**	**+0.5**
PB10				*i* S	**Sn**	**22 02 17.3**	**+3.0**
PB10	**IPOC Station P**	**1.97**	**303**	*e*P	**Pn**	**22 01 49.6**	**+0.1**
PB10				*i* S	**Sn**	**22 02 13.9**	**-0.4**
PB10				IAML		22 02 21.8	
comp=E,2μm,0.3s							
LVC	**Limon Verde**	**2.00**	**356**	P	**Pn**	**22 01 50.8**	**+0.7**
comp=E,74nm,0.3s,baz=177,slow=7.6,SNR=408							
LVC				S	**Sn**	**22 02 15.8**	**+0.3**
comp=E,269nm,0.3s,baz=81,slow=19,SNR=36							
LVC	**Limon Verde**	**2.00**	**356**‖	*i*P	**Pn**	**22 01 51.3**	**+1.1**
LVC				*e*S	**Sn**	**22 02 16.5**	**+1.1**
PB06	**IPOC Station P**	**2.04**	**338**	*i* P	**Pn**	**22 01 51.3**	**+0.8**
PB06	**IPOC Station P**	**2.04**	**338**	*e*P	**Pn**	**22 01 50.9**	**+0.4**
PB06				*i* S	**Sn**	**22 02 16.8**	**+0.7**
PB05	**IPOC Station P**	**2.19**	**323**	*i* P	**Pn**	**22 01 53.2**	**+0.8**
PB05	**IPOC Station P**	**2.19**	**323**	*e*P	**Pn**	**22 01 53.0**	**+0.5**
PB05				*i* S	**Sn**	**22 02 20.0**	**+0.4**
PB04	**IPOC Station P**	**2.60**	**330**	*e*P	**Pn**	**22 01 58.1**	**+0.3**
PB03	**IPOC Station P**	**2.71**	**340**	*e*P	**Pn**	**22 01 59.7**	**+0.5**
PB03				*i* S	**Sn**	**22 02 32.8**	**+1.1**
PB09	**IPOC Station P**	**2.84**	**351**	*e*P	**Pn**	**22 02 02.3**	**+1.4**
FSA	**Cafayete**	**2.92**	**121**	*i* P	**Pn**	**22 02 03.0**	**+1.0**
PB07	**IPOC Station P**	**3.05**	**340**‖	*i*P	**Pn**	**22 02 03.9**	**+0.1**
PB07				*i* S	**Sn**	**22 02 40.7**	**+0.9**
PB07				IAML		22 02 51.5	
comp=E,3μm,0.6s							
HJA	**Humahuaca**	**3.37**	**66**	*i* P	**Pn**	**22 02 10.7**	**+2.6**
HJA				IAML		22 02 12.4	
comp=Z,79nm,0.6s							
AZAP	**Zapla**	**3.39**	**84**	*i* P	**Pn**	**22 02 10.0**	**+1.8**
AZAP				IAML		22 02 10.9	
comp=Z,23nm,0.4s							
AHML	**Horco Molle**	**3.77**	**126**	*i* P	**Pn**	**22 02 14.6**	**+1.4**
YJA	**Yavi**	**3.84**	**52**	*i* P	**Pn**	**22 02 17.3**	**+2.8**
VCA	**Vinchina**	**4.14**	**173**	*i* P	**Pn**	**22 02 19.3**	**+1.1**
CFA	**Coronel Fontan**	**6.98**	**176**	P	**Pn**	**22 02 55.9**	**-0.7**
comp=Z,4.6nm,0.3s,baz=32,slow=20,SNR=50							
CFA				S	**Sn**	**22 04 10.7**	**-3.8**
comp=Z,3.2nm,0.3s,baz=282,slow=20,SNR=9.1							
LPAZ	**La Paz**	**8.30**	**4**	P	**Pn**	**22 03 15.8**	**+0.7**
comp=Z,0.9nm,0.3s,baz=173,slow=3.5,SNR=15							
SIV	**San Ignacio**	**11.20**	**41**	P	**Pn**	**22 03 50.2**	**-3.7**
comp=Z,2.5nm,0.3s,baz=251,slow=9.5,SNR=34							
SIV				S	**Sn**	**22 05 51.6**	**-5.5**
baz=285,slow=20,SNR=3.3							
PLCA	**Paso Flores**	**16.15**	**185**	P	**P**	**22 04 59.6**	**+0.8**
comp=Z,0.1nm,0.3s,baz=17,slow=18,SNR=3.1							
BDFB	**Brasilia**	**21.40**	**69**	P	**P**	**22 05 55.1**	**-1.1**
comp=Z,1.0nm,0.3s,baz=235,slow=12,SNR=3.8							
PTGA	**Pitinga**	**25.22**	**21**	P	**P**	**22 06 34.1**	**+1.3**
comp=Z,1.5nm,0.3s,baz=230,slow=13,SNR=4.0							
TORD	**Torodi Ar. Bea**	**78.28**	**70**	P	**P**	**22 13 05.9**	**+0.5**
comp=Z,0.6nm,0.6s,baz=260,slow=5.9,SNR=3.6							
ZALV	**Zalesovo Beam**	**144.67**	**27**	PKP	**PKPdf**	**22 20 41.9**	**+1.4**
comp=Z,0.7nm,0.6s,baz=338,slow=3.7,SNR=3.0							
MKAR	**Makanchi Array**	**148.01**	**39**	PKPbc	**PKPab**	**22 20 52.1**	**-0.5**
comp=Z,0.2nm,0.6s,baz=322,slow=2.3,SNR=2.9							

*NEIC **13** 22:19:31.9±1.6, 19°.91S×173°.72W, h7km±1km, mb5.0/93, Error ellipse: s-maj=16.4km s-min=14.2km az=213.0*
*BJI **13** 22:19:31.5±0.0, 20°.08S×173°.96W, h6km, mb5.1/24, mB5.5/20, Ms5.0/17, Ms7 4.7/18*
*IDC **13** 22:19:31.2±0.5, 19°.96S×173°.69W, h0km, mb4.6/27, mb1 4.7/28, mb1mx4.7/42, mbtmp4.6/28, ML4.4/1, MS4.5/23, Ms1 4.5/23, ms1mx4.4/32, Error ellipse: s-maj=16.9km s-min=13.6km az=141.0*
*ISCJB **13** 22:19:33.4±0.2, 19°.99S±0°.05×173°.66W±0°.04, h25km, mb4.9/99, MS4.7/48, Error ellipse: s-maj=7.7km s-min=5.1km az=154.6*
*GCMT **13** 22:19:35.9±0.3, 20°.01S±0°.03×173°.02W±0°.02, h18km, MW5.1/87, Moment Tensor Solution. s42,c55; s87,c130; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}5.93±.36; $M_{\theta\theta}$-1.03±.22; $M_{\phi\phi}$-4.90±.24; $M_{r\theta}$1.28±.53; $M_{\theta\phi}$-2.17±.12; $M_{\phi r}$1.06±.49; Best double couple: $M_0$6.13000×10^16 NP1:ϕ_s31.00000°, δ52.00000°, λ98.00000°. NP2: ϕ_s198.00000°, δ38.00000°, λ79.00000°. Principal axes: T 6.2000, Plg80.0000°, Azm338.0000°; N -0.1410, Plg6.0000°, Azm206.0000°; P -6.0590, Plg7.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **13** 22:19:38.5±3.4, 19°.95S×173°.88W, h36km, mb5.1/17, MS4.8/13 Error ellipse: s-maj=13.5km s-min=12.8km az=77.1*
ISC 13 22:19:34.6±0.3,**20°.15S**±0°.06×**173°.55W**±0°.06,**h25**km, **n299**, σ1§**45**/297,**mb5.0**/99,**MS4.7**/49,**33C-8D**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.58**	**73**	*e*P	Pn	22 20 20.0	-8.6
RAR	**Rarotonga**	**12.94**	**97**	Pn	Pn	22 22 29.8	-7.2
5.8nm,0.3s,baz=259,slow=9.3,SNR=19							
RAR				Sn	Sn	22 24 38.5	-22
1.9nm,0.3s,baz=342,slow=20,SNR=2.8							
RAR				LR	LR	22 27 11.7	
comp=Z,2μm,18.8s,baz=264,slow=35							
RAR	**Rarotonga**	**12.94**	**97**	*e*Pn	Pn	22 22 28.5	-8.6
RAR	**Rarotonga**	**12.94**	**97**	*e*P	Pn	22 22 28.5	-8.5
DZM	**Mont Dzumac**	**18.76**	**261**	P	**Pn**	**22 23 53.7**	**+1.0**
1.0nm,0.3s,baz=98,slow=20,SNR=12							
DZM	**Mont Dzumac**	**18.76**	**261**	*e*P	**P**	**22 23 48.3**	**-3.8**
143nm,1.1s							
DZM				*e*LQ	LQ	22 27 24.2	
2μm,28.4s							
DZM				*e*LR	LR	22 28 08.1	
comp=Z,3μm,25.9s							
DZM	**Mont Dzumac**	**18.76**	**261**	*e*P	**P**	**22 23 50.0**	**-2.1**
59nm,1.0s							
URZ	**Urewera**	**19.78**	**202**	P	**Pn**	**22 24 04.5**	**-0.1**
1.2nm,0.3s,baz=7.5,slow=7.3,SNR=4.3							
URZ				Sn	**S**	**22 27 36.9**	**-7.7**
0.6nm,0.3s,baz=63,slow=15,SNR=2.5							
URZ	**Urewera**	**19.78**	**202**	*e*P	**P**	**22 24 03.8**	**+0.8**
49nm,1.3s							
TBI	**Tubuai**	**22.60**	**102**	*e*S	**S**	**22 28 35.4**	**-4.4**
391nm,22.8s							
TBI				*e*LQ	LQ	22 28 48.9	
1μm,27.2s							
TBI				*e*LR	LR	22 29 33.2	
comp=Z,2μm,31.2s							
PPT2	**Papeete2**	**22.83**	**88**	*e*S	**S**	**22 28 39.0**	**-5.1**
488nm,24.0s							
PPT2				*e*LQ	LQ	22 28 49.0	
3μm,25.5s							
PPT2				*e*LR	LR	22 29 49.1	
comp=Z,2μm,27.8s							
PPT	**Papeete**	**22.83**	**88**	LR	LR	22 31 35.1	
comp=Z,2μm,19.0s,baz=260,slow=32							
LTZ	**Lake Taylor**	**25.53**	**205**	*e*P	**P**	**22 25 01.9**	**+0.6**
23nm,0.9s							
OXZ	**Oxford**	**26.08**	**204**	*e*P	**P**	**22 25 08.1**	**+1.8**
191nm,1.9s							
RPZ	**Rata Peaks**	**26.80**	**205**	P	**P**	**22 25 17.4**	**+4.7**
9.0nm,0.6s,baz=355,slow=2.8,SNR=5.6							
RPZ	**Rata Peaks**	**26.80**	**205**	*e*P	**P**	**22 25 16.9**	**+4.2**
49nm,1.2s							
HNR	**Honiara**	**27.70**	**289**	LR	LR	22 35 09.3	
comp=Z,524nm,18.0s,baz=132,slow=34							
TAOE	**Nuku Hiva Isla**	**34.16**	**76**	*e*LR	LR	22 35 12.9	
comp=Z,874nm,21.0s							
RKT	**Rikitea**	**35.92**	**102**	*e*LR	LR	22 35 37.5	
comp=Z,2μm,30.5s							
CTA	**Charters Tower**	**37.68**	**263**	P	**P**	**22 26 46.2**	**-2.0**
7.2nm,0.5s,baz=90,slow=12,SNR=8.9							
CTAO	**Charters Tower**	**37.68**	**263**	*e*P	**P**	**22 26 46.9**	**-1.3**
48nm,1.5s							
CTAO	**Charters Tower**	**37.68**	**263**	*e*P	**P**	**22 26 46.9**	**-1.3**
CTAO				pmax	pmax		
comp=Z,48nm,1.5s							
PMG	**Port Moresby**	**39.36**	**280**	P	**P**	**22 27 01.5**	**-0.9**
comp=Z,23nm,0.9s,baz=112,slow=6.9,SNR=4.6							
PMG	**Port Moresby**	**39.36**	**280**	*e*P	**P**	**22 27 00.5**	**-2.0**
comp=Z,32nm,0.9s							
PMG	**Port Moresby**	**39.36**	**280**	*i* P	**P**	**22 27 01.1**	**-1.3**
PMG				pmax	pmax		
comp=Z,101nm,1.1s							
STKA	**Stephens Creek**	**41.70**	**244**	P	**P**	**22 27 20.8**	**-0.8**
comp=Z,5.7nm,0.7s,baz=101,slow=9.8,SNR=6.9							
STKA				LR	LR	22 42 46.1	
comp=Z,827nm,19.6s,baz=68,slow=34							
STKA	**Stephens Creek**	**41.70**	**244**	*e*P	**P**	**22 27 19.4**	**-2.2**
comp=Z,5.0nm,1.1s							
STKA	**Stephens Creek**	**41.70**	**244**	*e*P	**P**	**22 27 19.4**	**-2.2**
STKA				pmax	pmax		
comp=Z,5.0nm,1.1s							
COEN	**Coen**	**41.74**	**271**	*e*P	**P**	**22 27 21.0**	**-1.0**
comp=Z,15nm,0.8s							
JAY	**Jayapura**	**47.93**	**285**	P	**P**	**22 28 11.2**	**-0.2**
comp=Z,22nm,0.7s,baz=118,slow=4.6,SNR=9.6							
JAY	**Jayapura**	**47.93**	**285**	P	**P**	**22 28 10.4**	**-1.1**
GENI	**Genyem**	**48.39**	**285**	P	**P**	**22 28 13.8**	**-1.1**
AS31	**Alice Springs**	**48.66**	**256**	*e*P	**P**	**22 28 16.1**	**-0.9**
comp=Z,5.4nm,1.9s							
ASAR	**Alice Springs**	**48.66**	**256

comp=Z,152nm,21.8s,baz=81,slow=32
CASY Casey 66.07 205 *e*P **P 22 30 21.1 +2.0**
comp=Z,14nm,1.1s
APSI Ampana 66.08 278 P **P 22 30 21.2 +1.1**
PLAI Plampang 67.05 269 P **P 22 30 27.4 +1.1**
MPSI Mapaga 68.17 279 P **P 22 30 34.9 +1.6**
SRBI Singaraja 69.69 269 P **P 22 30 44.0 +1.2**
QSPA South Pole Qui 69.92 180 *e*P **P 22 30 45.4 +1.9**
comp=Z,20nm,1.1s
MJAR Matsushiro Arr 72.48 321 P **P 22 30 57.9 -1.3**
comp=Z,2.3nm,0.6s,baz=155,slow=6.0,SNR=6.5
MJAR LR LR 22 58 05.1
comp=Z,214nm,21.4s,baz=65,slow=32
MAJO Matsushiro 72.48 321 *e*P **P 22 30 57.9 -1.3**
MAJO Matsushiro 72.48 321 *e*P **P 22 30 57.9 -1.3**
MAT Matsushiro 72.48 321 P **P 22 30 58.9 -0.4**
TGY Tagaytay City 72.84 292 LR LR 22 59 32.9
comp=Z,275nm,20.9s,baz=91,slow=33
YUK Yuzh-Kuril'sk 73.89 331 *e*P **P 22 31 04.5 -2.8**
YUK *e* 22 31 21.1
YUK *e*S **S 22 40 37.3 -0.2**
YUK *e* 22 41 11.0
YUK *e*SS **SS 22 45 17.2 -5.4**
YUK *e*SSS SSS 22 48 37.4
YUK pmax pmax
comp=Z,165nm,18.0s
YUK pmax pmax
comp=E,164nm,16.0s
YUK pmax pmax
comp=N,129nm,20.0s
KUR Kuril'sk 73.93 333 *e*P **P 22 31 09.5 +2.0**
KUR *e*S **S 22 40 40.2 +2.2**
KUR MLR MLR
comp=Z,377nm,15.0s
KUR MLR MLR
comp=N,429nm,13.0s
UGM Wanagama 74.15 267 P **P 22 31 12.5 +2.9**
JNU Nakatsue 74.95 314 P **P 22 31 13.7 -0.1**
comp=N,4.4nm,0.8s,baz=138,slow=11,SNR=4.5
ASAJ Asahikawa 75.49 329 P **P 22 31 17.5 +0.9**
comp=N,5.3nm,0.6s,baz=146,slow=3.6,SNR=4.6
PFO Pinyon Flats O 76.27 46 *i* P **P 22 31 23.8 +2.3**
PET Petropavlovsk 76.75 343 *e*P **P 22 31 23.5 0.0**
PET *e*S **S 22 41 11.3 +2.4**
PET pmax pmax
comp=Z,100nm,6.4s
PET MLR MLR
comp=Z,400nm,20.0s
PEA0B Petropavlovsk- 77.09 343 *e*P **P 22 31 23.0 -2.5**
comp=Z,83nm,1.5s
PETK Petropavlovsk- 77.09 343 P **P 22 31 24.2 -1.3**
comp=Z,7.2nm,0.9s,baz=122,slow=7.7,SNR=7.2
PETK LR LR 23 01 52.2
comp=Z,174nm,20.3s,baz=163,slow=33
PEA1 Petropavlovsk- 77.09 343 *e*P **P 22 31 24.2 -1.4**
LEM Lembang 77.22 267 P **P 22 31 28.0 +0.6**
comp=Z,43nm,0.9s,baz=47,slow=2.3,SNR=9.2
KSM Kuching 77.51 276 *e*P **P 22 31 29.0 +0.2**
comp=Z,82nm,1.7s
YSS Yuzh-Sakhalins 77.53 331 *e*P **P 22 31 28.0 -0.1**
YSS *e*S **S 22 41 19.7 +2.1**
YSS pmax pmax
comp=Z,200nm,5.4s
YSS pmax pmax
comp=Z,30nm,1.1s
YSS smax smax
comp=N,300nm,14.3s
YSS MLR MLR
comp=Z,100nm,16.0s
YSS MLR MLR
comp=N,200nm,15.0s
113A Mohawk Valley, 77.65 48 *e*P **P 22 31 29.3 +0.2**
comp=N,30nm,1.9s
NVAR Mina Array Bea 77.95 41 P **P 22 31 30.4 -0.6**
comp=N,3.2nm,0.9s,baz=221,slow=8.1,SNR=7.5
NVAR LR LR 22 59 56.5
comp=N,426nm,18.9s,baz=256,slow=31
TPNV Topopah Spring 78.36 43 *e*P **P 22 31 33.0 -0.2**
comp=N,5.4nm,0.9s
TPNV Topopah Spring 78.36 43 *e*P **P 22 31 33.0 -0.2**
TPNV pmax pmax
comp=Z,5.0nm,0.9s
SHPR Sheep Range 78.82 44 *e*P **P 22 31 34.6 -1.1**
comp=Z,14nm,1.3s
W13A Hualapai Mount 78.87 46 *e*P **P 22 31 35.1 -1.0**
comp=Z,12nm,1.5s
KSRS Korea Array 79.45 316 P **P 22 31 38.8 -0.2**
comp=Z,1.8nm,0.8s,baz=133,slow=5.6,SNR=17
KSRS LR LR 23 02 31.8
comp=Z,157nm,20.8s,baz=140,slow=33
TUC Tucson 79.52 50 *e*P **P 22 31 39.5 -0.1**
comp=Z,13nm,1.2s
TUC Tucson 79.52 50 *e*P **P 22 31 39.5 -0.1**
TUC pmax pmax
comp=Z,13nm,1.2s
R11A Troy Canyon, C 79.61 43 *e*P **P 22 31 38.7 -1.4**
comp=Z,7.2nm,1.2s
X16A Lo Mia Camp, P 80.17 48 *e*P **P 22 31 42.5 -0.7**
comp=Z,11nm,1.3s
CCUT Cedar City 80.59 44 *e*P **P 22 31 44.9 -0.6**
comp=Z,8.9nm,1.1s
U15A North Rim 80.68 46 *e*P **P 22 31 46.5 +0.5**
comp=Z,55nm,2.0s
USRK Ussuriysk Ar. 81.08 324 P **P 22 31 48.1 +0.6**
comp=Z,1.1nm,0.7s,baz=82,slow=2.7,SNR=6.9
USRK LR LR 23 03 22.7
comp=Z,575nm,20.1s,baz=128,slow=32
G08A Pilot Rock 81.85 36 *e*P **P 22 31 51.4 -0.4**
comp=Z,8.2nm,1.2s
MSU Marysvale 81.91 44 *e*P **P 22 31 53.4 +1.0**
MSU Marysvale 81.91 44 *e*P **P 22 31 53.4 +1.0**
NJ2 Nanjing 82.92 308 *e*P **P 22 31 57.8 +0.3**
NJ2 pmax pmax
comp=Z,13nm,0.5s
TMUT Trail Mountain 82.97 44 *e*P **P 22 31 58.9 +0.9**
comp=Z,14nm,1.1s
LENM Lemitar 83.21 50 *e*P **P 22 31 59.1 -0.1**
F10A Beach Ranch, E 83.22 36 *e*P **P 22 31 58.1 -0.8**
comp=Z,9.2nm,1.0s
MAW Mawson 83.28 199 P **P 22 32 00.2 +1.4**
comp=Z,5.3nm,1.1s,baz=93,slow=7.6,SNR=8.2
MAW LR LR 23 08 53.7
comp=Z,739nm,18.6s,baz=112,slow=36
MAW Mawson 83.28 199 *e*P **P 22 31 59.9 +1.1**
comp=Z,2.1nm,1.7s
MAW Mawson 83.28 199 *e*P **P 22 31 59.9 +1.1**
MAW pmax pmax
comp=Z,2.0nm,1.7s
P17A Butcher Ranch, 83.37 44 *e*P **P 22 32 00.4 +0.4**
comp=Z,19nm,1.4s
TXAR Lajitas Array 83.38 56 P **P 22 32 00.6 +0.4**
comp=Z,4.6nm,1.1s,baz=208,slow=7.1,SNR=6.9
BNM Barren Site 83.45 50 *e*P **P 22 32 00.7 +0.1**
B08A Colville Reser 83.61 33 *e*P **P 22 31 59.3 -1.4**
comp=Z,13nm,1.5s
TCUT Toone Canyon 83.83 42 *e*P **P 22 32 02.7 +0.3**
comp=Z,72nm,0.6s
PV09 Paradox Valley 83.91 45 *e*P **P 22 32 02.7 -0.2**
PV20 West Nyswonger 83.94 46 *e*P **P 22 32 02.9 -0.1**
comp=Z,17nm,1.1s
PV13 Radium Mtn., P 83.94 46 *e*P **P 22 32 03.4 +0.4**
comp=Z,28nm,1.3s
ANMO Albuquerque 83.96 50 *e*P **P 22 32 03.4 +0.3**
comp=Z,15nm,1.3s
ANMO Albuquerque 83.96 50 *ce*P **P 22 32 03.4 +0.3**
ANMO pmax pmax
comp=Z,14nm,1.3s
PV23 Carpenter Ridg 83.97 45 *e*P **P 22 32 03.1 -0.1**
comp=Z,20nm,1.0s
PV03 Paradox Valley 83.97 46 *e*P **P 22 32 03.0 -0.2**
comp=Z,15nm,1.0s
PV11 David Mesa, Pa 83.98 46 *e*P **P 22 32 03.1 0.0**
comp=Z,42nm,1.4s
PV02 Paradox Valley 84.03 46 *e*P **P 22 32 03.7 +0.3**
comp=Z,9.4nm,0.6s
PV22 Blue Mesa, Par 84.16 45 *e*P **P 22 32 04.3 +0.2**
comp=Z,15nm,1.2s
PV07 Paradox Valley 84.20 46 *e*P **P 22 32 04.2 0.0**
comp=Z,15nm,1.2s
DL2 Dalian 84.39 315 ⇑P **P 22 32 05.4 +0.5**
DL2 SKS **SKSac 22 42 26.9 -0.2**
DL2 S **SKKSac 22 42 32.3 -0.3**
DL2 pmax pmax
comp=Z,21nm,0.8s
DL2 pmax pmax
comp=Z,220nm,5.2s
DL2 LR LR
comp=Z,120nm,18.7s
DL2 LR LR
comp=Z,130nm,17.7s
DL2 LR LR
comp=Z,200nm,17.1s
KLR Kul'dur 84.41 327 P **P 22 32 04.9 +0.1**
comp=Z,0.8nm,0.6s,baz=191,slow=1.9,SNR=4.3
KLR Kul'dur 84.41 327 *i* P **P 22 32 03.3 -1.5**
KLR pmax pmax
comp=Z,8.0nm,2.3s
CN2 Changchun 84.62 321 *e*P **P 22 32 06.5 +0.5**
CN2 *e*S **S 22 42 30.8 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,200nm,19.0s
CTGM Chitina Glacie 84.90 15 *e*P **P 22 32 06.7 -0.5**
comp=Z,7.6nm,0.9s
MCMT McKenzie Canyo 85.03 39 *e*P **P 22 32 08.1 -0.2**
TRF Thorofare Moun 85.29 10 *e*P **P 22 32 07.1 -2.0**
comp=Z,13nm,2.0s
TPAW Teton Pass 85.42 40 *e*P **P 22 32 09.3 -1.1**
comp=Z,14nm,1.4s
FXWY Fox Creek 85.45 40 *e*P **P 22 32 10.2 -0.3**
comp=Z,12nm,1.5s
DLMT Dillon 85.48 38 *e*P **P 22 32 10.2 -0.2**
comp=Z,6.3nm,1.0s
IMW Indian Meadow 85.65 40 *e*P **P 22 32 12.0 +0.5**
comp=Z,7.4nm,1.3s
SMCO Snowmass 85.71 46 *e*P **P 22 32 12.4 +0.3**
comp=Z,20nm,1.7s
PDAR Pinedale Array 85.89 42 P **P 22 32 12.8 +0.2**
comp=Z,3.5nm,1.0s,baz=200,slow=3.9,SNR=14
PDAR LR LR 23 07 15.1
comp=Z,281nm,18.1s,baz=258,slow=33
BOZ Bozeman (W) 86.18 38 *e*P **P 22 32 13.5 -0.4**
comp=Z,9.3nm,1.3s
BOZ Bozeman (W) 86.18 38 *e*P **P 22 32 13.5 -0.4**
BOZ pmax pmax
comp=Z,9.0nm,1.3s
MSTX Muleshoe 86.18 52 *e*P **P 22 32 14.6 +0.5**
comp=Z,20nm,1.0s
PLCA Paso Flores 86.45 132 P **P 22 32 16.7 +1.2**
comp=Z,8.4nm,1.1s,baz=248,slow=7.3,SNR=7.7
PLCA LR LR 23 04 43.5
comp=Z,531nm,18.2s,baz=256,slow=31
PLCA Paso Flores 86.45 132 *e*P **P 22 32 15.5 0.0**
comp=Z,17nm,1.2s
PLCA Paso Flores 86.45 132 *e*P **P 22 32 15.5 0.0**
PLCA pmax pmax
comp=Z,17nm,1.2s
RIDG Independent Ri 86.56 12 *e*P **P 22 32 15.5 +0.2**
comp=Z,12nm,1.2s
DOT Dot Lake 86.64 13 *e*P **P 22 32 14.4 -1.2**
comp=Z,11nm,1.3s
HDA Harding Lake 86.76 11 *e*P **P 22 32 15.7 -0.4**
comp=Z,20nm,1.5s
COLA College 87.03 11 *i* P **P 22 32 16.7 -0.6**
COLA pmax pmax
comp=Z,10.0nm,0.9s
SEY Seymchan 87.04 345 P **P 22 32 16.7 -0.8**
comp=Z,4.1nm,0.7s,baz=161,slow=6.7,SNR=7.5
SEY Seymchan 87.04 345 *ce*P **P 22 32 17.1 -0.4**
ILAR Eielson Array 87.10 11 P **P 22 32 16.6 -1.1**
comp=Z,2.7nm,1.0s,baz=222,slow=4.3,SNR=15
ILAR LR LR 23 10 13.1
comp=Z,134nm,18.1s,baz=202,slow=35
ABTX Abilene, Hawle 87.93 54 *e*P **P 22 32 21.9 -0.7**
comp=Z,15nm,1.0s
SYO Syowa Base 87.94 191 ⇓*e*P **P 22 32 23.0 +1.0**
SYO Syowa Base 87.94 191 ⇑*e*PP PP 22 35 48.0 +0.4
PRP Porcupine Dome 88.03 11 *e*P **P 22 32 21.4 -1.0**
comp=Z,23nm,1.6s
VNA3 Neumayer Olymp 88.17 175 P **P 22 32 25.3 +2.2**
SNAA Sanae 88.20 177 P **P 22 32 24.4 +1.2**
SNAA Sanae 88.20 177 *e*P **P 22 32 23.0 -0.3**
comp=Z,7.4nm,1.0s
SNAA Sanae 88.20 177 *e*P **P 22 32 23.0 -0.3**
SNAA pmax pmax
comp=Z,7.0nm,1.0s
EGAK Eagle 88.25 13 *e*P **P 22 32 23.2 0.0**
comp=Z,11nm,1.2s
PANO Nakornpanom 88.44 289 P P 22 32 38.4 +13
VNA2 Neumayer--Watz 88.66 175 P **P 22 32 27.4 +2.0**
baz=216,slow=27
VNA1 Neumayer--Stat 88.86 175 P **P 22 32 28.3 +2.0**
SKNT Sakolnakorn 88.94 288 P P 22 32 41.0 +13
comp=Z,27nm,1.2s,comp=Z,0.2nm
BILL Bilibino 89.17 353 *i* P **P 22 32 27.0 -0.5**
BILL *i* 22 32 34.1
BILL *i* 22 36 05.5
BILL *i* S **SKSac 22 42 57.7 +2.4**
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,322nm,20.0s
ZEA Zeya 89.40 329 *e*P **P 22 32 29.1 +0.2**
ZEA *e*S **SKSac 22 43 02.0 +4.7**
ZEA pmax pmax
comp=Z,55nm,1.4s
ZEA pmax pmax
comp=Z,900nm,10.0s
ZEA smax smax
comp=E,200nm,7.0s
ZEA MLR MLR
comp=Z,300nm,18.0s
ZEA MLR MLR
comp=E,200nm,17.0s
ZEA MLR MLR
comp=N,200nm,20.0s
RSSD Black Hills 90.04 42 *e*P **P 22 32 31.0 -1.5**
comp=N,6.5nm,1.1s
RSSD Black Hills 90.04 42 *e*P **P 22 32 31.0 -1.5**
RSSD pmax pmax
comp=Z,7.0nm,1.1s
EPYK Eagle Plains 90.58 14 *e*P **P 22 32 33.9 -0.3**
comp=Z,23nm,1.8s
LCO Las Campanas 91.02 121 *e*P **P 22 32 38.3 +0.7**
comp=Z,40nm,1.3s
LCO Las Campanas 91.02 121 *e*P **P 22 32 38.3 +0.7**
LCO pmax pmax
comp=Z,40nm,1.3s
XAN Xi'an 91.27 306 P **P 22 32 39.3 +1.1**
XAN pmax pmax
comp=Z,9.0nm,1.0s
XAN pmax pmax
comp=Z,160nm,5.9s
XAN Xi'an 91.27 306 *e*P **P 22 32 39.0 +0.8**
comp=Z,44nm,1.6s
HHC Hu-ho-hao-te 92.13 313 *e*P **P 22 32 41.1 -1.0**
HHC *e*SKS **SKSac 22 43 16.5 +2.7**
HHC sS sS 22 43 53.9 -0.5
HHC pmax pmax
comp=Z,24nm,1.1s
HHC pmax pmax
comp=Z,140nm,5.4s
HHC LR LR
comp=Z,100nm,11.1s
HHC LR LR
comp=Z,100nm,11.1s
HHC LR LR
comp=Z,220nm,12.8s
JTS Las Juntas de 92.19 80 *e*P **P 22 32 43.8 +0.9**
comp=Z,19nm,1.1s
JTS Las Juntas de 92.19 80 *e*P **P 22 32 43.8 +0.9**
JTS pmax pmax
comp=Z,19nm,1.1s
UTTA Uttaradit 92.27 288 P P 22 32 57.6 +15
PHRA Phrae 92.82 289 P P 22 32 57.6 +12
comp=Z,1.0nm,1.0s,comp=Z,0.0nm
KMI Kunming 92.94 296 P **P 22 32 46.8 +0.5**
KMI pP PcP 22 32 49.3 +2.3
KMI sP pP 22 32 50.6 -2.4
KMI SKS **SKSac 22 43 22.3 +3.0**
KMI S **S 22 43 50.5 -0.8**
KMI pmax pmax
comp=Z,7.0nm,0.9s
KMI pmax pmax
comp=Z,54nm,3.1s
KMI LR LR
comp=Z,200nm,17.1s
KMI LR LR
comp=Z,280nm,18.0s
KMI LR LR
comp=Z,280nm,20.6s
BTO Baotou 93.10 312 *e*P **P 22 32 47.4 +0.8**
CMAR Chiang Mai Arr 93.95 288 P **P 22 32 52.2 +1.4**
comp=Z,1.6nm,0.3s,baz=122,slow=3.1,SNR=10
CMAR LR LR 23 15 54.2
comp=Z,71nm,19.0s,baz=125,slow=36
CMAR Chiang Mai Arr 93.95 288 *i* P **P 22 32 52.7 +1.8**
CMAR pmax pmax
comp=Z,3.0nm,0.9s
CD2 Chengdu 94.14 301 *e*P **P 22 32 50.0 -1.6**
YKA Yellowknife Ar 94.48 24 P **P 22 32 52.2 0.0**
comp=Z,0.8nm,0.8s,baz=240,slow=4.0,SNR=6.1
ECSD EROS Data Cent 94.70 45 *e*P **P 22 32 52.5 -1.3**
comp=Z,18nm,1.3s
LZH Lanzhou 95.90 306 *e*P **P 22 32 57.6 -2.0**
LZH pP PcP 22 33 00.8 +1.0
LZH sP pP 22 33 05.0 -1.3
LZH SKS **SKSac 22 43 36.6 +1.9**
LZH SS **SS 22 50 49.0 +1.3**
LZH pmax pmax
comp=Z,10.0nm,1.3s
LZH pmax pmax
comp=Z,160nm,6.6s
ULM Lac du Bonnet 97.69 39 LR LR 23 12 17.7
comp=Z,560nm,19.2s,baz=246,slow=32
SONM Songino Array 98.26 318 LR LR 23 13 30.2
comp=Z,134nm,21.6s,baz=98,slow=33
LPAZ La Paz 98.31 111 LR LR 23 08 52.5
comp=Z,271nm,19.5s,baz=263,slow=30
ZALV Zalesovo Beam 112.84 321 PKiKP **PKiKP 22 38 07.3 -1.7**
comp=Z,0.6nm,0.6s,baz=90,slow=2.9,SNR=2.4
MKAR Makanchi Array 113.99 313 PKiKP **PKiKP 22 38 10.3 -1.2**
comp=Z,0.8nm,0.7s,baz=108,slow=0.4,SNR=5.7
MKAR Makanchi Array 113.99 313 *c i* PKiKP **PKiKP 22 38 13.6 +2.1**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
KSH Kashi 118.11 305 *e*PKP **PKiKP 22 38 21.4 +1.6**
KSH PP PP 22 39 43.5 +8.3
KSH SKS **SKSdf 22 45 31.8 +1.3**
KSH AMB AMB
comp=Z,310nm,5.1s
KSH LR LR
comp=Z,650nm,13.4s
KSH LR LR
comp=Z,340nm,9.8s
KSH LR LR
comp=Z,170nm,18.7s
BRVK Borovoye 121.53 321 *c i* PKiKP **PKiKP 22 38 26.0 +0.1**
BRVK pmax pmax
comp=Z,3.0nm,1.3s
ARU Arti 127.24 327 *i* PKiKP **PKPdf 22 38 36.5 -0.1**
ARU 22 40 33.6
ARU 22 45 47.6
ARU MLR MLR
comp=Z,320nm,20.0s
ARCES ARCESS Array B 129.26 351 PKP **PKiKP 22 38 41.0 +0.2**
comp=Z,2.2nm,0.7s,baz=346,slow=2.5,SNR=6.6
GEYT Alibeck 132.09 303 PKP **PKiKP 22 38 47.7 +0.1**
comp=Z,0.6nm,0.6s,baz=137,slow=4.9,SNR=3.2
FIA0 FINESS Array S 136.51 346 *e*PKPdf **PKiKP 22 38 55.5 -0.1**
FIA0 FINESS Array S 136.51 346 *e*PKiKP **PKiKP 22 38 55.6 -0.1**
FINES FINESS Array B 136.51 346 *e*PKP **PKiKP 22 38 55.5 -0.1**
comp=Z,1.3nm,0.7s,baz=97,slow=2.7,SNR=4.0
AKH Akhalkalaki 142.16 312 ⇑*i* P **PKPdf 22 39 00.0 -5.1**
KMBO Kilima Mbogo 143.15 239 PKhKP PKPpre 22 39 04.8
comp=Z,0.6nm,0.3s,baz=46,slow=8.6,SNR=3.6
KMBO PKP **PKiKP 22 39 09.7 -1.4**
comp=Z,0.7nm,0.3s,baz=61,slow=6.2,SNR=4.0
KMBO Kilima Mbogo 143.15 239 *c i* PKiKP **PKiKP 22 39 13.3 +2.2**
KMBO pmax pmax
comp=Z,1.0nm,0.4s
ANN Anapa 144.48 321 *i* PKiKP PKiKP 22 39 21.3 +8.8
ANN pmax pmax
comp=Z,36nm,1.5s
AKASG Malin Array Be 144.60 335 PKP **PKPab 22 39 07.0 -0.5**
comp=Z,4.7nm,0.7s,baz=35,slow=4.1,SNR=21
SIM Simferopol' 146.30 324 *i* PKP2 **PKPab 22 39 14.5 +0.6**
SIM pmax pmax
comp=Z,58nm,1.8s
SEVA Sevastopol 146.80 323 ⇑*i* P **PKPab 22 39 16.0 +0.1**
LVV L'vov 147.24 339 *e*PKiKP **PKPbc 22 39 15.9 +0.2**
KIS Kishinev 147.60 331 *e*PKP **PKPdf 22 39 15.0 +0.9**
KIS *eL* L 23 48 30.0
KIS LRM MLR 23 55 14.0
comp=Z,400nm,22.0s
KIS Kishinev 147.60 331 *e*PKiKP **PKPdf 22 39 15.0 +0.9**
KIS *e* 22 39 28.0
KIS MLR MLR
comp=Z,400nm,22.0s
MILM Milestii Mici 147.66 331 ⇑*i* P **PKPbc 22 39 17.3 +0.4**
KWP Kalwaria Pacla 147.84 340 *e*PKP **PKPbc 22 39 17.9 +0.6**
KWP Kalwaria Pacla 147.84 340 *e*PKiKP **PKPbc 22 39 18.0 +0.6**
BZK Bozkurt 148.14 319 ⇑*i* P **PKPab 22 39 20.7 -0.6**
OJC Ojcow 148.17 344 *e*PKP **PKiKP 22 39 18.8 -1.1**
OJC Ojcow 148.17 344 *e*PKiKP **PKiKP 22 39 18.8 -1.1**
KSP Ksiaz 148.39 348 *e*PKP **PKiKP 22 39 19.4 -1.0**
KSP Ksiaz 148.39 348 *e*PKiKP **PKiKP 22 39 19.4 -1.0**
CLL Collm 148.48 352 *i* PKPdf **PKPbc 22 39 17.5 -1.5**
comp=Z,13nm,1.3s
CLL *i* PKPbc **PKiKP 22 39 19.9 -0.6**
comp=Z,37nm,1.6s
CLL *i* PKPab **PKPab 22 39 22.8 +0.5**
comp=Z,23nm,1.4s
CLL *e* 22 39 30.0
CLL *e* 22 39 46.0
CLL LmV 23 50 00.0
comp=Z,200nm,19.3s
CLL Collm 148.48 352 *i* PKiKP **PKPbc 22 39 17.5 -1.5**
CLL *i* 22 39 19.9
CLL *i* 22 39 22.8
CLL pmax pmax
comp=Z,13nm,1.3s
CLL pmax pmax
comp=Z,37nm,1.6s
CLL pmax pmax
comp=Z,23nm,1.4s
KOLS Kolonicke sedl 148.59 340 *e*PKiKP **PKPbc 22 39 19.3 -0.1**
KOLS Kolonicke sedl 148.59 340 *e*PKP **PKPbc 22 39 19.3 -0.1**
BUR08 Bucovina Ar. S 148.63 335 *e*PKPbc **PKPbc 22 39 19.6 0.0**
BURAR Bucovina Array 148.65 335 ⇓*i* P **PKiKP 22 39 21.4 +0.2**
GIRR Girov 148.65 333 ⇑*i* P **PKiKP 22 39 20.4 -0.7**
OSTC Ostas 148.68 348 *e*PKP **PKPbc 22 39 19.4 -0.2**
OSTC AMS AMS 23 54 20.0
comp=Z,200nm,19.1s
CHVC Chvalec 148.68 348 AMS AMS 23 53 40.0
comp=Z,200nm,17.6s
NIE Niedzica 148.76 342 *e*PKP **PKPdf 22 39 17.4 +1.4**
UPC Upice 148.77 348 AMS AMS 23 53 50.0
comp=Z,200nm,17.3s
BRG Berggiesshubel 148.77 351 *e*PKP **PKPbc 22 39 19.9 +0.2**
comp=Z,21nm,1.4s
BRG Berggiesshubel 148.77 351 *e*PKiKP **PKPbc 22 39 19.9 +0.2**
BRG pmax pmax
comp=Z,21nm,1.4s
ILGA Ilgaz 148.83 318 *e*PKPbc **PKiKP 22 39 21.4 -0.5**
BIZ Bicaz 148.83 334 ⇑*i* P **PKiKP 22 39 20.8 -0.6**
UZH Uzhgorod 148.85 340 *e*PKiKP **PKPbc 22 39 19.8 -0.2**
UZH *i* 22 39 25.7
UZH *i* 22 39 34.3
DPC Dobruska-Polom 148.86 348 *e*PKiKP **PKPbc 22 39 20.4 +0.3**
DPC MLR MLR
comp=Z,200nm,20.5s
DPC Dobruska-Polom 148.86 348 *e*PKP **PKPbc 22 39 20.4 +0.3**
DPC AMS AMS 23 47 50.0
comp=Z,200nm,20.5s
TESR Tescani 148.93 332 ⇓*i* P **PKiKP 22 39 21.7 0.0**
OKC Ostrava-Krasne 148.94 345 AMS AMS 23 53 20.0
comp=Z,200nm,20.6s
PVCC Panska Ves 149.01 350 *e*PKP2 **PKPab 22 39 22.8 -1.7**
PVCC MLR MLR
comp=Z,200nm,18.0s
PVCC Panska Ves 149.01 350 *e*PKP **PKPab 22 39 22.8 -1.7**
PVCC AMS AMS 23 56 30.0
comp=Z,200nm,18.0s
MORC Moravsky Berou 149.14 346 *e*PKPbc **PKPbc 22 39 20.3 -0.5**
MORC Moravsky Berou 149.14 346 ⇑*i* P **PKiKP 22 39 22.0 0.0**
MORC Moravsky Berou 149.14 346 ⇑PKP2 **PKiKP 22 39 22.0 0.0**
MORC Moravsky Berou 149.14 346 *e*PKP **PKPbc 22 39 20.2 -0.6**
TRPA Tarpa 149.20 339 ⇑*i* P **PKiKP 22 39 21.2 -0.9**
LANS Liptovska Anna 149.24 343 *e*PKiKP **PKiKP 22 39 22.2 -0.1**

LANS	**Liptovska Anna**	**149.24**	**343**	*e*PKP	**PKiKP**	**22 39 22.2**	**-0.1**
VRI	**Vrincioaia**	**149.40**	**332**	⇑*i*P	**PKiKP**	**22 39 22.1**	**-0.6**
VRI	**Vrincioaia**	**149.40**	**332**	⇑PKIKP	**PKiKP**	**22 39 22.1**	**-0.6**
ARCR	**ARCALIA**	**149.42**	**336**	⇑*i*P	**PKiKP**	**22 39 22.2**	**-0.4**
PLOR	**Plostina**	**149.44**	**332**	⇑*i*P	**PKiKP**	**22 39 22.3**	**-0.5**
PLOR	**Plostina**	**149.44**	**332**	⇑PKIKP	**PKiKP**	**22 39 22.3**	**-0.5**
PRU	**Pruhonice**	**149.53**	**350**	*e*PKP	**PKiKP**	**22 39 22.3**	**-0.5**
PRU				*ex*	x	22 39 33.8	
PRU				AMS	AMS	23 51 00.0	
	comp=Z,200nm,17.4s						
GOPC	**GO Pecny, Ondr**	**149.56**	**349**	*e*PKP2	**PKiKP**	**22 39 24.1**	**+1.2**
GOPC				MLR	MLR		
	comp=Z,200nm,19.2s						
GOPC	**GO Pecny, Ondr**	**149.56**	**349**	*e*PKP	**PKiKP**	**22 39 24.1**	**+1.2**
GOPC				AMS	AMS	23 50 50.0	
	comp=Z,200nm,19.2s						
BR101	**Keskin Array S**	**149.59**	**316**	*e*PKPbc	**PKPbc**	**22 39 22.6**	**+0.2**
BR131	**Keskin Array S**	**149.59**	**316**	*e*PKPbc	**PKPbc**	**22 39 22.6**	**+0.2**
BRTR	**Keskin Array B**	**149.59**	**316**	PKPbc	**PKPbc**	**22 39 22.6**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=99,slow=2.9,SNR=14						
MEM	**Membach**	**149.60**	**1**	PKiKP	**PKiKP**	**22 39 22.9**	**0.0**
NKC	**Novy Kostel**	**149.60**	**352**	*e*PKP	**PKiKP**	**22 39 22.9**	**0.0**
NKC				AMS	AMS	23 50 10.0	
	comp=Z,300nm,24.0s						
OZUR		**149.63**	**333**	⇑*i*P	**PKiKP**	**22 39 23.5**	**+0.3**
TLB	**Topalu**	**149.74**	**329**	⇓*i*P	**PKiKP**	**22 39 23.2**	**-0.1**
VRAC	**Vranov**	**149.79**	**347**	⇑*i*P	**PKiKP**	**22 39 23.5**	**+0.2**
VRAC	**Vranov**	**149.79**	**347**	*e*PKP	**PKiKP**	**22 39 22.9**	**-0.4**
BMRD	**Maredsous**	**149.88**	**2**	PKiKP	**PKiKP**	**22 39 23.4**	**0.0**
DOPR	**Dopca**	**149.90**	**333**	⇑*i*P	**PKiKP**	**22 39 23.7**	**0.0**
JAVC	**Velka Javorina**	**149.97**	**345**	*e*PKP	**PKiKP**	**22 39 24.5**	**+0.7**
VYHS	**Vyhne**	**150.00**	**343**	*e*PKP	**PKiKP**	**22 39 23.1**	**-0.7**
TREC	**Trest**	**150.03**	**348**	*e*PKP	**PKiKP**	**22 39 23.2**	**-0.7**
TREC				AMS	AMS	23 53 40.0	
	comp=Z,400nm,23.3s						
MLR	**Muntele Rosu**	**150.04**	**332**	⇑*i*P	**PKiKP**	**22 39 23.7**	**-0.4**
KRUC	**Moravsky**	**150.06**	**347**	*e*PKP	**PKiKP**	**22 39 23.4**	**-0.5**
ANTO	**Ankara**	**150.07**	**317**	⇑*i*P	**PKiKP**	**22 39 24.7**	**+0.4**
DOU	**Dourbes**	**150.08**	**2**	PKiKP	**PKiKP**	**22 39 24.7**	**+0.8**
LKLB	**Kalborn**	**150.11**	**0**	PKiKP	**PKiKP**	**22 39 24.2**	**+0.2**
PSZ	**Piszkesteto**	**150.23**	**342**	⇑*i*P	**PKPbc**	**22 39 23.6**	**0.0**
DRGR		**150.28**	**337**	⇓*i*P	**PKiKP**	**22 39 24.4**	**-0.1**
VOIR		**150.47**	**333**	⇑*i*P	**PKiKP**	**22 39 25.3**	**+0.3**
VOIR		**150.47**	**333**	⇑PKIKP	**PKiKP**	**22 39 25.3**	**+0.3**
MODS	**Modra-Piesok**	**150.51**	**345**	*e*PKIKP	**PKiKP**	**22 39 24.6**	**-0.3**
MODS	**Modra-Piesok**	**150.51**	**345**	*e*PKP	**PKiKP**	**22 39 24.6**	**-0.3**
KHC	**Kasperske Hory**	**150.52**	**350**	*e*PKIKP	**PKiKP**	**22 39 24.4**	**-0.5**
KHC				*e*		22 39 32.0	
KHC				MLR	MLR		
	comp=Z,300nm,23.4s						
KHC	**Kasperske Hory**	**150.52**	**350**	*e*PKP	**PKiKP**	**22 39 24.4**	**-0.5**
KHC				*ex*	x	22 39 32.0	
KHC				AMS	AMS	23 48 30.0	
	comp=Z,300nm,23.4s						
WLF	**Walferdange**	**150.54**	**0**	PKiKP	**PKiKP**	**22 39 25.0**	**+0.2**
ARR	**Arges**	**150.70**	**333**	⇑*i*P	**PKiKP**	**22 39 25.4**	**0.0**
GERES	**GERESS Array B**	**150.78**	**350**	PKPbc	**PKPbc**	**22 39 24.6**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=9.5,slow=4.1,SNR=17						
SIRR	**Siria**	**151.11**	**338**	⇑*i*P	**PKiKP**	**22 39 25.8**	**-0.4**
CONA	**Conrad Observa**	**151.25**	**347**	*i* PKiKP	**PKiKP**	**22 39 26.7**	**+0.2**
	comp=Z,6.8nm,0.8s						
BZS	**Buzias**	**151.68**	**337**	⇓*i*P	**PKiKP**	**22 39 27.0**	**-0.3**
BZS	**Buzias**	**151.68**	**337**	⇓PKIKP	**PKiKP**	**22 39 27.0**	**-0.3**
BFO	**Black Forest**	**151.84**	**357**	*e*PKPbc	**PKiKP**	**22 39 27.6**	**-0.1**
BFO	**Black Forest**	**151.84**	**357**	*e*PKIKP	**PKiKP**	**22 39 27.6**	**-0.1**
ARSA	**Arzberg**	**151.97**	**347**	P	**PKiKP**	**22 39 30.8**	**+2.8**
	comp=Z,4.0nm,0.9s						
HERR	**Herculane**	**152.00**	**335**	⇓*i*P	**PKiKP**	**22 39 28.0**	**0.0**
MDVR	**Moldovita**	**152.36**	**336**	⇑*i*P	**PKiKP**	**22 39 28.6**	**-0.2**
KBA	**Koelnbreinsper**	**152.55**	**350**	*i* P	**PKiKP**	**22 39 31.8**	**+2.5**
	comp=Z,2.8nm,0.7s						
WATA	**Walderalm**	**152.56**	**352**	*i* PKiKP	**PKiKP**	**22 39 29.6**	**+0.3**
	comp=Z,3.3nm,0.6s						
MOTA	**Moosalm**	**152.60**	**353**	*i* pPKPbc	**PKiKP**	**22 39 30.9**	**+1.5**
	comp=Z,4.6nm,0.8s						
SOKA	**Soboth**	**152.62**	**347**	*i* PKiKP	**PKiKP**	**22 39 29.3**	**0.0**
	comp=Z,4.9nm,1.0s						
WTTA	**Wattenberg**	**152.62**	**352**	*i* pPKiKP	**PKiKP**	**22 39 31.4**	**+1.9**
SQTA	**Sankt Quirin**	**152.71**	**353**	*i* pPKPbc	**PKiKP**	**22 39 30.9**	**+1.3**
	comp=Z,8.2nm,1.2s						
DAVA	**Damuels**	**152.78**	**355**	*i* pPKiKP	**PKiKP**	**22 39 31.7**	**+1.9**
FETA	**Feichten**	**152.96**	**354**	*i* pPKPbc	**PKiKP**	**22 39 30.6**	**+0.4**
	comp=Z,8.5nm,1.4s						
ABTA	**Abfaltersbach**	**153.00**	**351**	*i* pPKPbc	**PKiKP**	**22 39 31.4**	**+1.3**
	comp=Z,7.9nm,0.9s						
ESDC	**Sonseca Array**	**158.58**	**22**	PKPab	**PKPab**	**22 40 06.1**	**+0.9**
	comp=Z,1.4nm,1.1s,baz=319,slow=3.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**171.69**	**146**	PKP	**PKPdf**	**22 39 41.6**	**-0.4**
	comp=Z,1.8nm,1.1s,baz=146,slow=1.0,SNR=4.9						
TORD				PKPab	**PKPab**	**22 41 04.2**	**+0.8**
	comp=Z,2.2nm,1.0s,baz=228,slow=3.4,SNR=5.7						
TOA1	**Torodi Ar. Sit**	**171.69**	**146**	*e*PKPdf	**PKPdf**	**22 39 41.6**	**-0.4**
TOA1				*e*PKPab	**PKPab**	**22 41 04.2**	**+0.8**

CRAAG ***13*** *22:26:30.9, 36°.64N×5°.23E, Ml3.2*
ISCJB ***13*** *22:26:31.9±0.4, 37°.00N±0°.03×5°.28E±0°.03, h10km, Error ellipse: s-maj=4.8km s-min=3.3km az=28.8*
MDD ***13*** *22:26:35.1±0.2, 36°.88N×5°.41E, h0km, mb3.8/14, Error ellipse: s-maj=2.1km s-min=1.7km az=21.0, PRXIMO*
LDG ***13*** *22:26:36.0±0.3, 36°.92N×5°.37E, h10km, Ml3.1/14, Error ellipse: s-maj=6.4km s-min=3.2km az=146.0*
ISC 13 22:26:31.2±0.8**, 36°.88N**±0°.04×**5°.29E**±0°.04**, h10**km**, n63,** σ2**s83**/96**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	**0.58**	**125**	P	**Pg**	**22 26 43.5**	**+1.1**
DFRA	**Djebel Bou Aff**	**0.58**	**125**	P	**Pg**	**22 26 43.5**	**+1.1**
SET	**Setif**	**0.68**	**172**	P	**Pg**	**22 26 42.0**	**-2.4**
SET	**Setif**	**0.68**	**172**	P	**Pg**	**22 26 42.0**	**-2.4**
CKHR	**Kef el Ahmar**	**0.88**	**168**	P	**Pg**	**22 26 46.7**	**-1.4**
CKHR	**Kef el Ahmar**	**0.88**	**168**	P	**Pg**	**22 26 46.7**	**-1.4**
CASM	**Ain Smara**	**1.15**	**122**	P	**Pb**	**22 26 52.9**	**-0.2**
CASM	**Ain Smara**	**1.15**	**122**	P	**Pb**	**22 26 52.9**	**-0.2**
CTEI	**Djebel Teioual**	**1.21**	**132**	P	**Pn**	**22 26 55.2**	**+0.9**
CTEI	**Djebel Teioual**	**1.21**	**132**	P	**Pn**	**22 26 55.2**	**+0.9**
CKFL	**Kef-Lekhel**	**1.25**	**112**	P	**Pn**	**22 26 54.9**	**+0.1**
CKFL	**Kef-Lekhel**	**1.25**	**112**	P	**Pn**	**22 26 54.9**	**+0.1**
CAEH	**'Ain El Ouahch**	**1.26**	**94**	P	**Pg**	**22 26 56.1**	**+0.8**
CAEH	**'Ain El Ouahch**	**1.26**	**94**	P	**Pg**	**22 26 56.1**	**+0.8**
CMAH	**Djebel Manchou**	**1.73**	**98**	P	**Pn**	**22 27 02.3**	**+0.9**
CMAH	**Djebel Manchou**	**1.73**	**98**	P	**Pn**	**22 27 02.3**	**+0.9**
ETOS	**Mallorca**	**3.48**	**327**	P	**Pn**	**22 27 28.0**	**+2.6**
	1.9nm,0.2s,SNR=16						
ETOS				S	**Sn**	**22 28 07.6**	**+0.9**
	5.7nm,0.4s,SNR=4.9						
EIBI	**Ibiza**	**3.79**	**306**	P	**Pn**	**22 27 32.3**	**+2.8**
	1.2nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**22 28 15.0**	**+0.8**
	3.4nm,0.2s,SNR=7.9						
EBEN2	**Beniarda presa**	**4.70**	**294**	P	**Pn**	**22 27 46.0**	**+3.9**
	3.2nm,0.2s,SNR=7.9						
EBEN2				S	**Sn**	**22 28 37.3**	**+0.6**
	5.0nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**5.29**	**282**	P	**Pn**	**22 27 52.6**	**+2.3**
	1.7nm,0.3s,SNR=4.0						
CFON	**Fontmartina**	**5.36**	**337**	P	**Pn**	**22 27 53.5**	**+2.2**
	1.1nm,0.2s,SNR=4.0						
CFON				S	**Sn**	**22 28 51.4**	**-1.6**
	2.2nm,0.2s,SNR=4.0						
EPOB	**Poblet**	**5.54**	**325**	P	**Pn**	**22 27 55.9**	**+2.1**
	1.2nm,0.4s,SNR=7.9						
EPOB				S	**Sn**	**22 28 56.5**	**-1.1**
	1.6nm,0.3s,SNR=7.9						
ECHE	**Chera**	**5.62**	**301**	P	**Pn**	**22 27 57.8**	**+2.9**
	3.1nm,0.6s,SNR=7.9						
ECHE				S	**Sn**	**22 29 01.2**	**+1.7**
	0.8nm,0.3s,SNR=4.0						
ETOB	**Tobarra**	**5.70**	**290**	P	**Pn**	**22 27 59.4**	**+3.5**
	1.6nm,0.4s,SNR=10						
ETOB				S	**Sn**	**22 29 02.3**	**+0.9**
	1.4nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**5.70**	**309**	P	**Pn**	**22 27 59.0**	**+2.9**
	0.5nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	**22 29 01.1**	**-0.5**
	1.4nm,0.4s,SNR=7.9						
EMIR	**Miracle**	**5.81**	**331**	P	**Pn**	**22 28 01.0**	**+3.5**
	0.8nm,0.2s,SNR=7.9						
EMIR				S	**Sn**	**22 29 04.1**	**-0.2**
	4.1nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**5.87**	**342**	P	**Pn**	**22 27 60.0**	**+1.8**
	1.3nm,0.3s,SNR=7.9						
EJON				S	**Sn**	**22 29 04.3**	**-1.2**
	1.5nm,0.3s,SNR=7.9						
SJAF	**Saint Jean de**	**5.90**	**342**	P	**Pn**	**22 28 01.6**	**+3.0**
	1.2nm,0.3s,SNR=4.0						
SJAF				S	**Sn**	**22 29 07.8**	**+1.5**
	0.7nm,0.3s,SNR=7.9						
PGF	**Pioggiola**	**6.35**	**26**	*e*Pn	**Pn**	**22 28 06.9**	**+2.1**
PGF				*e*Sn	**Sn**	**22 29 15.7**	**-1.7**
	17nm,0.4s						
PGF	**Pioggiola**	**6.35**	**26**	P	**Pn**	**22 28 06.9**	**+2.1**
PGF				S	**Sn**	**22 29 15.7**	**-1.7**
	8.4nm,0.4s						
SESP	**Santiago Espad**	**6.35**	**284**	P	**Pn**	**22 28 07.7**	**+2.7**
	1.1nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**22 29 18.5**	**+0.9**
	2.5nm,0.3s,SNR=7.9						
CSOR	**Sort**	**6.36**	**331**	P	**Pn**	**22 28 09.1**	**+4.1**
	1.0nm,0.3s,SNR=7.9						
CSOR				S	**Sn**	**22 29 17.3**	**-0.4**
	2.8nm,0.3s,SNR=7.9						
LMR	**La Mourre**	**6.52**	**8**	*e*Pn	**Pn**	**22 28 09.5**	**+2.4**
LMR				*e*Sn	**Sn**	**22 29 19.1**	**-2.4**
	3.1nm,0.2s						
LMR	**La Mourre**	**6.52**	**8**	P	**Pn**	**22 28 09.5**	**+2.4**
LMR				S	**Sn**	**22 29 19.1**	**-2.4**
	1.6nm,0.2s						
EBER	**Berja**	**6.55**	**273**	P	**Pn**	**22 28 10.4**	**+2.6**
	0.6nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**22 29 20.2**	**-2.5**
	2.2nm,0.5s,SNR=7.9						
EQES	**Quesada**	**6.72**	**280**	P	**Pn**	**22 28 13.6**	**+3.5**
	1.7nm,0.3s,SNR=10.0						
EQES				S	**Sn**	**22 29 28.0**	**+1.2**
	3.0nm,0.4s,SNR=8.2						
FRF	**La Foret Royal**	**6.76**	**8**	*e*Pn	**Pn**	**22 28 12.9**	**+2.5**
FRF				*e*Sn	**Sn**	**22 29 24.7**	**-2.7**
	3.5nm,0.2s						
FRF	**La Foret Royal**	**6.76**	**8**	P	**Pn**	**22 28 12.9**	**+2.5**
FRF				S	**Sn**	**22 29 24.7**	**-2.7**
	1.8nm,0.2s						
MTLF	**Montolieu**	**6.87**	**341**	*e*Pn	**Pn**	**22 28 14.0**	**+2.0**
MTLF				*e*Sn	**Sn**	**22 29 26.9**	**-3.3**
	0.5nm,0.2s						
SMRF	**Simiane la Rot**	**7.10**	**2**	*e*Pn	**Pn**	**22 28 16.5**	**+1.4**
SMRF				*e*Sn	**Sn**	**22 29 30.8**	**-5.0**
	0.7nm,0.2s						
ELGU	**Los Guajares,**	**7.15**	**273**	P	**Pn**	**22 28 18.3**	**+2.5**
	0.6nm,0.3s,SNR=7.9						
ELGU				S	**Sn**	**22 29 34.0**	**-3.1**
	2.1nm,0.3s,SNR=7.9						
SBF	**Sospel**	**7.17**	**13**	*e*Pn	**Pn**	**22 28 17.9**	**+1.8**
SBF				*e*Sn	**Sn**	**22 29 34.6**	**-3.0**
	8.3nm,0.3s						
EPF	**Esparros**	**7.23**	**330**	*e*Pn	**Pn**	**22 28 19.7**	**+2.8**
EPF				*e*Sn	**Sn**	**22 29 35.3**	**-3.7**
	0.7nm,0.3s						
LASF	**Ste Croix**	**7.27**	**352**	*e*Pn	**Pn**	**22 28 18.6**	**+1.1**
LASF				*e*Sn	**Sn**	**22 29 35.9**	**-4.2**
	0.5nm,0.3s						
ETSF	**Etsaut**	**7.51**	**325**	*e*Pn	**Pn**	**22 28 23.2**	**+2.4**
ETSF	**Etsaut**	**7.51**	**325**	P	**Pn**	**22 28 23.2**	**+2.4**
ATE	**Arette**	**7.72**	**325**	P	**Pn**	**22 28 27.5**	**+3.9**
	0.8nm,0.3s,SNR=7.9						
MBDF	**Montbardon**	**7.92**	**8**	*e*Pn	**Pn**	**22 28 29.2**	**+2.7**
MBDF				*e*Sn	**Sn**	**22 29 51.7**	**-4.6**
	1.2nm,0.2s						
MBDF	**Montbardon**	**7.92**	**8**	P	**Pn**	**22 28 29.2**	**+2.7**
MBDF				S	**Sn**	**22 29 51.7**	**-4.6**
	0.6nm,0.2s						
SJPF	**Ste Jean**	**7.99**	**323**	*e*Pn	**Pn**	**22 28 29.5**	**+2.2**
SJPF	**Ste Jean**	**7.99**	**323**	P	**Pn**	**22 28 29.5**	**+2.2**
VIVF	**Saint-Julien-l**	**7.99**	**357**	*e*Pn	**Pn**	**22 28 28.9**	**+1.6**
VIVF				*e*Sn	**Sn**	**22 29 51.8**	**-5.9**
	0.8nm,0.3s						
VIVF	**Saint-Julien-l**	**7.99**	**357**	P	**Pn**	**22 28 28.9**	**+1.6**
VIVF				S	**Sn**	**22 29 51.8**	**-5.9**
	0.4nm,0.3s						
PAB	**San Pablo**	**8.04**	**292**	P	**Pn**	**22 28 31.4**	**+3.3**
	0.4nm,0.3s,SNR=7.9						
ORIF	**Oris-en-Rattie**	**8.05**	**3**	*e*Pn	**Pn**	**22 28 30.1**	**+1.9**
ORIF				*e*Sn	**Sn**	**22 29 54.0**	**-5.2**
	0.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.05**	**3**	P	**Pn**	**22 28 30.1**	**+1.9**
ORIF				S	**Sn**	**22 29 54.0**	**-5.2**
	0.3nm,0.3s						
EALK	**Alkurruntz**	**8.20**	**323**	P	**Pn**	**22 28 33.2**	**+2.9**
	1.6nm,0.5s,SNR=7.9						
LPG	**La Plagne**	**8.68**	**7**	*e*Pn	**Pn**	**22 28 39.5**	**+2.4**
LPG	**La Plagne**	**8.68**	**7**	P	**Pn**	**22 28 39.5**	**+2.4**
SFTF	**Sexfontaines**	**11.32**	**359**	*e*Sn	**Sn**	**22 31 11.8**	**-7.7**
	2.3nm,0.3s						
SFTF	**Sexfontaines**	**11.32**	**359**	S	**Sn**	**22 31 11.8**	**-7.7**
	2.3nm,0.3s						
GRR	**Gorron**	**12.36**	**341**	*e*Pn	**Pn**	**22 29 28.8**	**+1.7**
GRR	**Gorron**	**12.36**	**341**	P	**Pn**	**22 29 28.8**	**+1.7**

SNET ***13*** *22:33:02.2±1.6, 14°.50N×89°.15W, h1km±6km, ML3.2*
GCG ***13*** *22:33:04.2±0.5, 14°.64N×89°.14W, h14km±63km, MD3.3*
ISC 13 22:33:01.5±1.4**, 14°.57N**±0°.07×**89°.10W**±0°.04**, h15**km±10km**, n15,** σ0**s79**/24**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTO3	**Montecristo**	**0.30**	**235**	*e*P	**Pg**	**22 33 07.5**	**-0.6**
MTO3				*e*S	**Sg**	**22 33 11.6**	**-0.9**
MRL	**Marmol**	**0.76**	**312**	*e*P	**Pn**	**22 33 17.6**	**-0.4**
MRL				*e*S	**Sn**	**22 33 28.2**	**-1.1**
VICT	**Victoria**	**0.76**	**144**	*e*P	**Pb**	**22 33 16.4**	**-0.2**
LFU	**La Fuente**	**0.82**	**181**	*e*P	**Pb**	**22 33 17.3**	**-0.2**
SNJE	**San Jose**	**0.85**	**215**	*e*P	**Pb**	**22 33 17.8**	**-0.5**
PAVA	**Las Pavas**	**0.87**	**169**	*e*P	**Pg**	**22 33 18.4**	**-0.1**
PAVA				*e*S	**Sg**	**22 33 30.7**	**+0.8**
PAVA				IAML		22 33 37.1	
	comp=Z,848nm,0.3s						
SBLS	**San Blas**	**0.89**	**215**	*e*P	**Pg**	**22 33 18.4**	**-0.4**
LOMA	**San Marcos**	**0.92**	**184**	*e*P	**Pg**	**22 33 20.2**	**+0.9**
LOMA				*e*S	**Sn**	**22 33 33.0**	**+0.1**
NBG	**Las Nubes**	**1.21**	**271**	*e*P	**Pg**	**22 33 26.1**	**+1.2**
TECA	**Tecapa**	**1.22**	**151**	*e*P	**Pb**	**22 33 24.7**	**+0.2**
TECA				*e*S	**Sg**	**22 33 41.7**	**+0.6**
PACA	**Pacayal**	**1.33**	**145**	*e*P	**Pb**	**22 33 26.5**	**+0.1**
PACA				*e*S	**Sg**	**22 33 46.3**	**+1.7**
IXG	**Ixpaco**	**1.36**	**253**	*e*P	**Pg**	**22 33 28.3**	**+0.5**
IXG				*e*S	**Sg**	**22 33 45.9**	**+0.4**
LCY	**Lacayo**	**1.39**	**145**	*e*P	**Pg**	**22 33 28.0**	**-0.3**
LCY				*e*S	**Sg**	**22 33 46.3**	**0.0**
PCG	**Pacaya**	**1.47**	**263**	*e*S	**Sg**	**22 33 50.4**	**+1.4**
LCND	**La Caada**	**1.72**	**137**	*e*P	**Pb**	**22 33 33.2**	**+0.3**
LCND				*e*S	**Sg**	**22 33 56.2**	**-0.9**

SIGU ***13*** *22:38:02.8±0.2, 44°.58N×37°.16E, h11km±6km*
ISCJB ***13*** *22:38:03.2±1.1, 44°.57N±0°.08×37°.17E±0°.03, h15km±6km, Error ellipse: s-maj=13.7km s-min=4.1km az=2.9*
ISC 13 22:38:02.9±1.5**, 44°.53N**±0°.06×**37°.15E**±0°.02**, h12**km±12km**, n19,** σ1**s35**/38**, 2C-1D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANN	**Anapa**	**0.33**	**37**	*e*Pg	**Pb**	**22 38 09.6**	**-1.1**
	baz=20						
ANN				Pgm		22 38 10.2	
	baz=20						
ANN				*e*Sg	**Sb**	**22 38 14.2**	**-1.8**
	baz=20						
ANN				Sgm		22 38 14.5	
	baz=20						
ANN	**Anapa**	**0.33**	**37**	*e*Pg	**Pb**	**22 38 10.0**	**-0.7**
ANN				*e*Sg	**Sb**	**22 38 14.2**	**-1.8**
KERU	**Kerch**	**0.92**	**328**	⇓*i*Pg	**Pb**	**22 38 20.1**	**-0.6**
	baz=326						
KERU				Pgm		22 38 20.4	
	baz=326						
KERU				*e*Sg	**Sn**	**22 38 35.8**	**+1.1**
	baz=326						
KERU				Sgm		22 38 36.7	
	baz=326						
KERU				Sgm		22 38 37.0	
	baz=326						
KERU	**Kerch**	**0.92**	**328**	*i* Pg	**Pb**	**22 38 20.1**	**-0.6**
KERU				*e*Sg	**Sn**	**22 38 35.8**	**+1.1**
FEO	**Feodosiya**	**1.35**	**292**	⇑*i*Pn	**Pb**	**22 38 27.9**	**-0.1**
	baz=290						
FEO				Pnm		22 38 28.0	
	baz=290						
FEO				*e*Sn	**Sn**	**22 38 45.4**	**+0.2**
	baz=290						
FEO				Snm		22 38 46.1	
	baz=290						
FEO				Snm		22 38 47.8	
	baz=290						
FEO	**Feodosiya**	**1.35**	**292**	*i* Pg	**Pb**	**22 38 27.9**	**-0.1**
FEO				*e*Sg	**Sn**	**22 38 45.4**	**+0.2**
KGUR	**Krasnodar**	**1.42**	**69**	*e*Pg	**Pg**	**22 38 30.5**	**+0.3**
KGUR				*e*Sg	**Sg**	**22 38 49.8**	**+1.2**
SUDU	**Sudak**	**1.58**	**284**	⇑*i*Pn	**Pn**	**22 38 30.1**	**-0.5**
	baz=282						
SUDU				Pnm		22 38 30.2	
	baz=282						
SUDU				*e*Sn	**Sn**	**22 38 49.9**	**-1.0**
	baz=282						
SUDU				Snm		22 38 50.8	
	baz=282						
SUDU	**Sudak**	**1.58**	**284**	*i* Pg	**Pn**	**22 38 30.1**	**-0.5**
SUDU				*e*Sg	**Sn**	**22 38 50.2**	**-0.7**
ALU	**Alushta**	**1.97**	**275**	*e*Pn	**Pb**	**22 38 37.5**	**-1.1**
	baz=274						
ALU				Pnm		22 38 37.7	
	baz=274						
ALU				*e*Sn	**Sb**	**22 39 03.0**	**-0.1**
	baz=274						
ALU				Snm		22 39 04.7	
	baz=274						
ALU	**Alushta**	**1.97**	**275**	*e*Pg	**Pb**	**22 38 37.5**	**-1.1**
ALU				*e*Sg	**Sn**	**22 39 01.4**	**+0.8**
YAL	**Yalta**	**2.15**	**270**	*e*Pn	**Pn**	**22 38 39.3**	**+0.9**
	baz=269						
YAL				*e*Sn	**Sn**	**22 39 05.2**	**+0.3**
	baz=269						
YAL				Snm		22 39 07.5	
	baz=269						
YAL	**Yalta**	**2.15**	**270**	*e*Pg	**Pn**	**22 38 39.3**	**+0.9**
YAL				*e*Sg	**Sn**	**22 39 05.2**	**+0.3**
SIM	**Simferopol'**	**2.20**	**282**	*e*Pn	**Pn**	**22 38 40.3**	**+1.1**
	baz=281						
SIM				Pnm		22 38 41.0	
	baz=281						
SIM				*e*Sn	**Sn**	**22 39 06.7**	**+0.3**
	baz=281						
SIM				Snm		22 39 07.9	
	baz=281						
SIM	**Simferopol'**	**2.20**	**282**	*e*Pg	**Pn**	**22 38 40.3**	**+1.1**
SIM				*e*Sg	**Sn**	**22 39 06.7**	**+0.3**
SEV	**Sevastopol'**	**2.49**	**271**	*e*Pn	**Pn**	**22 38 43.7**	**+0.5**
	baz=271						
SEV				Pnm		22 38 44.8	
	baz=271						
SEV				*e*Sn	**Sn**	**22 39 13.6**	**+0.1**
	baz=271						
SEV				Snm		22 39 14.9	
	baz=271						
SEV				Snm		22 39 14.9	
	baz=271						
ERBR	**Yeremizino-Bor**	**2.64**	**62**	*e*Pn	**Pn**	**22 38 46.5**	**+1.3**
ERBR				*e*Sn	**Sn**	**22 39 16.2**	**-0.9**
KIV0	**Kislovodsk Arr**	**4.02**	**96**	*e*Pn	**Pn**	**22 39 06.1**	**+1.7**
KIV0				*e*Sn	**Sn**	**22 39 51.1**	**-0.4**
SHA1	**Shidzhatmaz**	**4.04**	**99**	*e*Pn	**Pb**	**22 39 10.7**	**-3.4**
SHA1				*e*Sn	**Sn**	**22 39 56.8**	**+4.7**

IDC ***13*** *22:46:42.1±0.6, 10°.74S×113°.97E, h0km, mb4.1/14, mb1 4.3/17, mb1mx4.1/51, mbtmp4.2/17, ML4.6/3, MS3.8/1, Ms1 3.8/1, ms1mx2.9/31, Error ellipse: s-maj=24.0km s-min=13.4km az=56.0*
NEIC ***13*** *22:46:43.5±1.3, 10°.80S×113°.92E, h10km±1km, mb4.5/8, Error ellipse: s-maj=10.6km s-min=6.9km az=212.0*
BJI ***13*** *22:46:43.7±0.0, 10°.96S×113°.49E, h10km, mb4.6/8, mB4.8/7, Ms4.6/3, Ms7 4.3

baz=96,slow=75,SNR=23
SHL Shillong 42.14 330 *e*P **P 22 54 34.9 -0.7**
7.4nm,0.7s
XAN Xi'an 44.94 354 P **P 22 54 54.8 -3.0**
XAN pmax pmax
comp=Z,4.0nm,1.1s
XAN pmax pmax
comp=Z,44nm,3.8s
KSRS Korea Array 49.85 15 P **P 22 55 36.2 +0.3**
comp=Z,1.6nm,0.7s,baz=194,slow=7.1,SNR=10
MAJO Matsushiro 52.42 25 *e*P **P 22 55 53.8 -1.5**
MJAR Matsushiro Arr 52.42 25 P **P 22 55 53.8 -1.5**
comp=Z,1.7nm,0.6s,baz=206,slow=8.4,SNR=5.4
USRK Ussuriysk Ar. 57.23 15 P **P 22 56 29.6 -0.3**
comp=Z,3.2nm,0.6s,baz=134,slow=6.9,SNR=7.7
SONA0 Songino Array 58.85 354 *e*P **P 22 56 41.5 +0.1**
SONM Songino Array 58.85 354 P **P 22 56 41.5 +0.1**
comp=Z,1.8nm,0.7s,baz=174,slow=8.1,SNR=9.7
MK31 Makanchi Array 64.03 336 *e*P **P 22 57 15.9 -0.4**
comp=Z,3.2nm,1.1s
MK32 Makanchi Array 64.03 336 *e*P **P 22 57 16.6 +0.3**
MKAR Makanchi Array 64.03 336 P **P 22 57 16.6 +0.3**
comp=Z,0.8nm,0.5s,baz=154,slow=7.9,SNR=8.8
KURBB Kurchatov Arra 68.59 337 P **P 22 57 45.9 +0.5**
comp=Z,0.6nm,0.4s,baz=151,slow=5.6,SNR=7.5
KURK Kurchatov 68.63 337 *e*P **P 22 57 46.3 +0.7**
comp=Z,2.5nm,0.9s
ZALV Zalesovo Beam 69.17 342 P **P 22 57 48.9 0.0**
comp=Z,1.4nm,0.6s,baz=152,slow=6.7,SNR=6.8
ZAA1 Zalesovo Array 69.17 342 *e*P **P 22 57 48.9 -0.1**
VNDA Vanda 70.94 170 P **P 22 58 01.4 +1.9**
comp=Z,0.9nm,0.8s,baz=297,slow=6.1,SNR=6.8
BVAR Borovoye Array 73.73 334 P **P 22 58 17.3 +0.9**
comp=Z,0.2nm,0.4s,baz=120,slow=8.5,SNR=3.2
ABKAR Akbulak array 76.33 327 *e*P **P 22 58 32.4 +0.8**
comp=Z,3.9nm,0.8s
BR101 Keskin Array S 89.55 311 *e*P **P 22 59 41.3 +0.9**
BRTR Keskin Array B 89.55 311 P **P 22 59 41.3 +0.9**
comp=Z,0.5nm,0.9s,baz=107,slow=7.7,SNR=3.6
TORD Torodi Ar. Bea 113.89 280 PKiKP **PKiKP 23 05 23.1 +0.7**
comp=Z,0.5nm,1.0s,baz=108,slow=2.6,SNR=3.3
TOA1 Torodi Ar. Sit 113.89 280 *e*PKiKP **PKiKP 23 05 23.1 +0.7**
LPAZ La Paz 152.91 176 PKPbc **PKiKP 23 06 43.6 +1.9**
comp=Z,0.9nm,0.6s,baz=259,slow=5.2,SNR=4.6
LPAZ PKPab **sPKPbc 23 06 54.5 +0.4**
comp=Z,2.7nm,0.8s,baz=188,slow=5.2,SNR=11
LPAZ La Paz 152.91 176 *e*PKPbc **PKiKP 23 06 43.9 +2.2**
LPAZ *e*PKPab **sPKPbc 23 06 54.1 +0.1**

*ISCJB **13** 23:14:27.1±0.5, 4°.33S±0°.08×80°.0W±0°.1, h33km, mb4.0/14, Error ellipse: s-maj=19.9km s-min=8.8km az=152.4*
*IDC **13** 23:14:33.2±0.6, 4°.39S×79°.97W, h77km±5km, mb3.7/15, mb1 4.0/18, mb1mx3.9/31, mbtmp4.1/18, MS3.4/2, Ms1 3.5/2, ms1mx3.0/23, Error ellipse: s-maj=23.6km s-min=10.5km az=60.0*
ISC 13 23:14:29.4±0.5, **4°.34S**±0°.09×**80°.0W**±0°.1, **h35**km, **n26, σ2§34/34, mb4.1/14, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.18**	**151**	P	Pn	23 15 22.7	+5.4
40nm,0.3s,baz=344,slow=7.3,SNR=147							
NNA	**Nana**	**8.20**	**158**	P	**Pn**	**23 16 28.5**	**+2.5**
11nm,0.3s,baz=320,slow=10.0,SNR=14							
NNA				S	**Sn**	**23 17 56.2**	**-1.3**
7.1nm,0.3s,baz=39,slow=20,SNR=6.2							
JTS	**Las Juntas de**	**15.36**	**341**	LR	LR	23 22 57.3	
comp=Z,182nm,18.8s,baz=187,slow=33							
LPAZ	**La Paz**	**16.61**	**136**	P	**P**	**23 18 21.7**	**-0.7**
0.2nm,0.3s,baz=327,slow=12.4,SNR=3.4							
LPAZ				LR	LR	23 25 48.3	
comp=Z,103nm,21.1s,baz=276,slow=41							
PTGA	**Pitinga**	**20.28**	**80**	P	**P**	**23 19 03.7**	**+1.4**
3.0nm,0.5s,baz=259,slow=14,SNR=9.4							
LVC	**Limon Verde**	**21.07**	**151**	P	**P**	**23 19 12.6**	**+1.5**
5.7nm,0.6s,baz=310,slow=8.0,SNR=8.7							
SIV	**San Ignacio**	**21.87**	**123**	P	**P**	**23 19 19.6**	**+0.3**
1.9nm,0.5s,baz=302,slow=8.8,SNR=16							
CFA	**Coronel Fontan**	**29.27**	**159**	P	**P**	**23 20 27.1**	**-1.3**
1.0nm,0.5s,baz=315,slow=11,SNR=2.8							
CFA				pP	**sP**	**23 20 46.3**	**+2.9**
2.6nm,0.6s,baz=316,slow=8.2,SNR=3.4							
PLCA	**Paso Flores**	**37.21**	**168**	P	**P**	**23 21 36.3**	**-1.2**
2.5nm,0.7s,baz=4.1,slow=9.9,SNR=8.9							
TXAR	**Lajitas Array**	**40.49**	**327**	P	**P**	**23 22 05.0**	**-0.1**
0.2nm,0.5s,baz=138,slow=11,SNR=2.4							
TXAR				PcP	**PcP**	**23 24 05.6**	**-1.8**
0.9nm,0.8s,baz=156,slow=4.6,SNR=5.2							
TXAR				pPcP		23 24 27.1	
1.0nm,0.8s,baz=134,slow=5.4,SNR=4.8							
PDAR	**Pinedale Array**	**54.01**	**333**	P	**P**	**23 23 50.1**	**-0.3**
0.7nm,0.7s,baz=131,slow=6.7,SNR=4.8							
PDAR				PcP	**PcP**	**23 24 53.6**	**-1.6**
0.9nm,0.6s,baz=134,slow=5.2,SNR=4.6							
NVAR	**Mina Array Bea**	**55.41**	**324**	P	**P**	**23 24 01.9**	**+1.3**
1.1nm,0.7s,baz=119,slow=9.4,SNR=4.9							
NVAR				pP	**sP**	**23 24 20.7**	**+4.9**
1.2nm,0.8s,baz=140,slow=7.2,SNR=3.0							
ULM	**Lac du Bonnet**	**56.08**	**348**	P	**P**	**23 24 04.5**	**-0.4**
5.7nm,0.6s,baz=171,slow=6.4,SNR=5.2							
YKA	**Yellowknife Ar**	**71.68**	**344**	P	**P**	**23 25 46.2**	**-1.2**
1.0nm,0.6s,baz=138,slow=5.4,SNR=13							
DBIC	**Dimbokro**	**75.75**	**82**	P	**P**	**23 26 11.8**	**-0.5**
6.6nm,0.7s,baz=250,slow=5.8,SNR=6.0							
ESDC	**Sonseca Array**	**82.04**	**49**	P	**P**	**23 26 46.3**	**0.0**
1.2nm,0.7s,baz=261,slow=4.7,SNR=12							
TORD	**Torodi Ar. Bea**	**82.87**	**76**	P	**P**	**23 26 49.5**	**-1.6**
1.2nm,0.7s,baz=291,slow=6.5,SNR=11							
ILAR	**Eielson Array**	**84.29**	**337**	P	**P**	**23 26 56.4**	**-0.9**
1.1nm,0.9s,baz=104,slow=3.8,SNR=6.8							
ILAR				pP	**sP**	**23 27 16.8**	**+3.9**
1.7nm,1.0s,baz=140,slow=4.8,SNR=7.2							
VNDA	**Vanda**	**91.67**	**191**	P	**P**	**23 27 31.6**	**-1.0**
1.2nm,1.1s,baz=117,slow=2.3,SNR=3.7							
ZALV	**Zalesovo Beam**	**129.00**	**12**	PKP	**PKPdf**	**23 33 31.9**	**-1.6**
2.4nm,0.8s,baz=270,slow=3.0,SNR=9.2							
ZALV				pPKP	**sPKPdf**	**23 33 53.1**	**+3.8**
4.2nm,0.7s,baz=298,slow=3.1,SNR=9.1							
GEYT	**Alibeck**	**129.24**	**43**	PKP	**PKPdf**	**23 33 32.9**	**-1.6**
0.8nm,0.8s,baz=318,slow=4.2,SNR=3.8							
MKAR	**Makanchi Array**	**135.00**	**17**	PKP	**PKPdf**	**23 33 42.1**	**-3.0**
0.7nm,0.8s,baz=336,slow=2.7,SNR=4.8							
MKAR				pPKP	**sPKPdf**	**23 34 04.8**	**+3.9**
1.3nm,0.7s,baz=355,slow=3.5,SNR=8.7							
SONM	**Songino Array**	**136.32**	**354**	PKP	**PKPdf**	**23 33 46.1**	**-1.6**
0.3nm,0.4s,baz=324,slow=2.0,SNR=3.0							
SONM				pPKP	**sPKPdf**	**23 34 07.6**	**+4.1**
0.9nm,0.8s,baz=0.0,slow=0.3,SNR=3.3							
ASAR	**Alice Springs**	**136.82**	**228**	PKP	**PKPdf**	**23 33 46.8**	**-2.4**
5.1nm,1.1s,baz=120,slow=2.1,SNR=6.7							
KSRS	**Korea Array**	**138.33**	**326**	PKP	**PKPdf**	**23 33 49.2**	**-2.2**
0.9nm,0.6s,baz=14,slow=2.3,SNR=7.3							
KSRS				pPKP	**sPKPdf**	**23 34 11.3**	**+4.0**
0.6nm,0.4s,baz=60,slow=1.0,SNR=2.5							
WRA	**Warramunga Arr**	**138.55**	**233**	PKP	**PKPdf**	**23 33 51.6**	**-0.9**
0.7nm,0.5s,baz=114,slow=2.0,SNR=4.4							

*ISCJB **13** 23:16:06.8±0.5, 50°.26N±0°.03×18°.88E±0°.03, h0km±4km, Error ellipse: s-maj=5.1km s-min=2.6km az=12.7*
*IDC **13** 23:16:12.6±2.5, 50°.47N×18°.48E, h0km, mb1 4.2/2, mb1mx3.4/25, mbtmp4.1/2, ML2.6/3, Error ellipse: s-maj=49.2km s-min=10.0km az=131.0*
ISC 13 23:16:09.2±0.8, **50°.26N**±0°.03×**18°.98E**±0°.02, **h12**km±6km, **n32, σ1§41/53, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.04**	**11**	*e*Pg	**Pg**	**23 16 11.3**	**0.0**
CHZP				*e*Sg	**Sg**	**23 16 13.0**	**0.0**
OJC	**Ojcow**	**0.53**	**94**	*e*Pg	**Pg**	**23 16 18.8**	**-0.6**
OJC				*e*Sg	**Sg**	**23 16 25.9**	**-0.5**
OKC	**Ostrava-Krasne**	**0.68**	**232**	*e*PG	**Pg**	**23 16 20.9**	**-1.5**
OKC				*e*SG	**Sg**	**23 16 29.4**	**-1.9**
comp=Z,39nm,0.6s							
MORC	**Moravsky Berou**	**1.04**	**243**	*e*PG	**Pg**	**23 16 28.2**	**-1.1**
MORC				*e*SG	**Sg**	**23 16 42.1**	**-0.8**
LANS	**Liptovska Anna**	**1.15**	**164**	*e*PG	**Pg**	**23 16 30.2**	**-1.1**
LANS				*e*SG	**Sg**	**23 16 45.1**	**-1.1**
NIE	**Niedzica**	**1.20**	**134**	*e*Pg	**Pg**	**23 16 31.0**	**-1.2**
NIE				*e*Sg	**Sb**	**23 16 47.0**	**-0.3**
JAVC	**Velka Javorina**	**1.64**	**212**	*e*PN	**Pg**	**23 16 40.1**	**-0.5**
STHS	**Stebnicka Huta**	**1.69**	**119**	*e*PN	**Pb**	**23 16 39.6**	**-0.6**
STHS				*e*SN	**Sg**	**23 17 02.9**	**-0.5**
STHS				*e*LG	Lg	23 17 12.1	
DPC	**Dobruska-Polom**	**1.71**	**274**	*e*PG	**Pn**	**23 16 39.3**	**+0.5**
DPC				*e*SG	**Sb**	**23 17 02.4**	**+0.4**
comp=Z,32nm,0.5s							
VYHS	**Vyhne**	**1.77**	**183**	*e*PN	**Pn**	**23 16 39.1**	**-0.5**
VYHS				*e*SN	**Sn**	**23 17 02.4**	**+0.4**
OSTC	**Ostas**	**1.79**	**281**	*e*PG	**Pn**	**23 16 40.8**	**+0.8**
OSTC				*e*SG	**Sb**	**23 17 05.3**	**+0.8**
comp=Z,25nm,0.6s							
KSP	**Ksiaz**	**1.81**	**290**	*e*Pg	**Pg**	**23 16 43.2**	**-0.7**
KSP				*e*Sg	**Sg**	**23 17 07.6**	**+0.2**
VRAC	**Vranov**	**1.81**	**239**	*e*PN	**Pn**	**23 16 41.2**	**+0.9**
VRAC				*e*SG	**Sn**	**23 17 04.7**	**+1.5**
CHVC	**Chvalec**	**1.90**	**281**	*e*PG	**Pn**	**23 16 42.3**	**+0.8**
CHVC				*e*SG	**Sb**	**23 17 08.3**	**+0.8**
comp=Z,24nm,0.4s							
UPC	**Upice**	**1.92**	**279**	*e*SG	**Sb**	**23 17 09.1**	**+1.1**
comp=Z,27nm,0.5s							
KRUC	**Moravsky**	**2.06**	**236**	*e*PN	**Pn**	**23 16 44.0**	**+0.4**
KRUC				*e*SG	**Sb**	**23 17 11.8**	**-0.3**
MODS	**Modra-Piesok**	**2.19**	**211**	*e*PN	**Pn**	**23 16 47.3**	**+1.9**
PSZ	**Piszkesteto**	**2.42**	**165**	EPn	**Pg**	**23 16 54.1**	**-1.4**
PSZ				Sn	**Sg**	**23 17 27.0**	**+0.3**
KOLS	**Kolonicke sedl**	**2.52**	**120**	*e*PN	**Pn**	**23 16 50.8**	**+0.9**
KOLS				*e*PG	**Pg**	**23 16 57.4**	**0.0**
KOLS				*e*SN	**Sn**	**23 17 20.3**	**-0.2**
GOPC	**GO Pecny, Ondr**	**2.72**	**264**	*e*SG	**Sb**	**23 17 34.0**	**+2.8**
comp=Z,13nm,0.7s							
PVCC	**Panska Ves**	**2.84**	**277**	*e*SG	**Sg**	**23 17 38.6**	**-1.6**
comp=Z,26nm,0.4s							
PRU	**Pruhonice**	**2.87**	**266**	*e*SG	**Sg**	**23 17 39.1**	**-2.2**
comp=Z,16nm,0.7s							
CONA	**Conrad Observa**	**3.10**	**223**	Pn	**Pn**	**23 17 01.4**	**+3.4**
1.4nm,0.3s							
CONA				*i* Sn	**Sn**	**23 17 34.2**	**-0.9**
3.0nm,0.4s							
BRG	**Berggiesshubel**	**3.27**	**283**	PG	**Pg**	**23 17 10.4**	**-1.4**
BRG				SG	**Sg**	**23 17 52.7**	**-1.5**
8.3nm,0.4s							
KHC	**Kasperske Hory**	**3.68**	**254**	*e*SN	**Sn**	**23 17 47.5**	**-1.8**
KHC				*e*SG	**Sg**	**23 18 04.5**	**-2.9**
comp=Z,13nm,0.5s							
GERES	**GERESS Array B**	**3.72**	**250**	Pn	**Pn**	**23 17 08.1**	**+1.7**
0.1nm,0.3s,baz=64,slow=13,SNR=2.8							
GERES				Pg	**Pb**	**23 17 16.8**	**+2.0**
0.5nm,0.3s,baz=61,slow=19,SNR=7.5							
GERES				Lg	Lg	23 18 01.6	
1.3nm,0.3s,baz=61,slow=28,SNR=9.8							
MOA	**Molln**	**3.93**	**234**	Pn	**Pb**	**23 17 20.4**	**+2.0**
1.0nm,0.4s							
CLL	**Collm**	**3.94**	**288**	*i* Sg	**Sg**	**23 18 13.1**	**-2.4**
comp=Z,9.0nm,0.5s							
NKC	**Novy Kostel**	**4.19**	**272**	*e*SG	**Sg**	**23 18 21.8**	**-1.9**
comp=Z,9.8nm,0.6s							
BSD	**Bornholm Skovb**	**5.46**	**335**	*i* P	**Pn**	**23 17 30.8**	**+0.6**
FINES	**FINESS Array B**	**11.89**	**17**	Pn	**Pn**	**23 18 56.3**	**-2.0**
comp=Z,0.2nm,0.3s,baz=198,slow=12,SNR=7.1							
FINES				Sn	Sn	23 21 01.9	-8.9
comp=Z,0.1nm,0.3s,baz=200,slow=25,SNR=3.1							
ARCES	**ARCESS Array B**	**19.59**	**7**	Pn	**P**	**23 20 37.4**	**+0.6**
comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=3.6							

*ISCJB **13** 23:38:11.1±0.5, 33°.08N±0°.08×136°.40E±0°.09, h450km, mb3.5/6, Error ellipse: s-maj=11.2km s-min=9.5km az=152.6*
*IDC **13** 23:38:12.3±1.1, 32°.93N×136°.18E, h433km±15km, mb2.9/5, mb1 3.2/9, mb1mx2.9/35, mbtmp3.8/9, Error ellipse: s-maj=20.9km s-min=14.9km az=78.0*
*JMA **13** 23:38:12.2±0.2, 32°.93N×136°.22E, h435km±2km, M3.3*
ISC 13 23:38:12.3±0.8, **33°.06N**±0°.10×**136°.37E**±0°.08, **h450**km, **n27, σ1§99/32, mb3.3/6, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**0.66**	**31**	P	**P**	**23 39 07.1**	**-0.1**
JMMH	**Miemihama**	**0.81**	**339**	P	**P**	**23 39 06.7**	**-1.2**
JMMH				S	**S**	**23 39 49.8**	**-3.4**
JTNC	**Tanabenakahech**	**0.99**	**320**	P	**P**	**23 39 07.2**	**-1.3**
JTNC				*e*S	**S**	**23 39 51.0**	**-3.1**
JKN2	**Miekihoku**	**1.18**	**356**	P	**P**	**23 39 08.2**	**-0.8**
JWY	**Kouya**	**1.33**	**331**	P	**P**	**23 39 09.0**	**-0.7**
JIE	**Ise**	**1.36**	**12**	P	**P**	**23 39 09.3**	**-0.4**
JIE				S	**S**	**23 39 53.4**	**-3.0**
TK02	**Tokai 2**	**1.46**	**52**	P	**P**	**23 39 09.9**	**+0.1**
JAI	**Aioi**	**1.77**	**295**	P	**P**	**23 39 10.4**	**-1.2**
JEG	**Eigenji**	**2.07**	**0**	P	**P**	**23 39 13.2**	**0.0**
JHMK	**Hamakita**	**2.10**	**33**	P	**P**	**23 39 13.1**	**0.0**
HMMJ	**Hamamatsu 2**	**2.11**	**32**	P	**P**	**23 39 13.3**	**-0.1**
JWT	**Wachi**	**2.36**	**340**	P	**P**	**23 39 14.3**	**-0.6**
JWT				*e*S	**S**	**23 40 02.5**	**-3.3**
JYTA	**Yamagatataniai**	**2.54**	**7**	P	**P**	**23 39 16.0**	**0.0**
JNY	**Yasuok**	**2.60**	**28**	P	**P**	**23 39 16.8**	**+0.3**
JHJ	**Hachijo jima 2**	**2.86**	**88**	P	**P**	**23 39 19.1**	**+0.8**
12nm,0.3s,baz=270,slow=20,SNR=5.3							
JHJ				S	**S**	**23 40 08.8**	**-3.2**
12nm,0.3s,baz=270,slow=20,SNR=3.0							
MAT	**Matsushiro**	**3.79**	**23**	P	**P**	**23 39 25.8**	**+0.2**
MJAR	**Matsushiro Arr**	**3.79**	**23**	P	**P**	**23 39 25.2**	**-0.4**
0.7nm,0.3s,baz=199,slow=9.3,SNR=18							
JAG	**Ashikaga**	**4.21**	**36**	eS	**S**	**23 40 27.3**	**-4.6**
JYT	**Yasato**	**4.46**	**44**	eS	**S**	**23 40 31.2**	**-4.8**
KSRS	**Korea Array**	**8.18**	**305**	P	**P**	**23 40 09.8**	**+0.3**
0.4nm,0.3s,baz=122,slow=11,SNR=20							
USRK	**Ussuriysk Ar.**	**11.64**	**344**	P	**P**	**23 40 48.0**	**+1.0**
0.5nm,0.3s,baz=143,slow=10,SNR=8.9							
CMAR	**Chiang Mai Arr**	**36.50**	**256**	P	**P**	**23 44 36.8**	**-1.4**
0.7nm,0.3s,baz=51,slow=7.1,SNR=2.8							
MKAR	**Makanchi Array**	**42.87**	**305**	P	**P**	**23 45 30.5**	**+1.2**
0.3nm,0.5s,baz=84,slow=8.5,SNR=3.3							
WRA	**Warramunga Arr**	**52.74**	**182**	P	**P**	**23 46 44.2**	**+0.3**
1.4nm,0.3s,baz=359,slow=6.9,SNR=12							
ILAR	**Eielson Array**	**55.03**	**31**	P	**P**	**23 47 02.1**	**+2.4**
0.2nm,0.5s,baz=254,slow=6.3,SNR=4.8							
ASAR	**Alice Springs**	**56.46**	**183**	P	**P**	**23 47 10.7**	**+0.5**
0.6nm,0.6s,baz=16,slow=12,SNR=7.1							
ARCES	**ARCESS Array B**	**66.23**	**339**	P	**P**	**23 48 15.7**	**+1.7**
5.8nm,0.3s,baz=54,slow=8.1,SNR=3.0							

*ISCJB **13** 23:57:37.8±0.8, 19°.3S±0°.1×169°.3E±0°.1, h150km, mb4.1/9, Error ellipse: s-maj=20.3km s-min=11.2km az=36.3*
*IDC **13** 23:57:39.4±3.1, 19°.27S×169°.29E, h151km±28km, mb3.9/10, mb1 4.1/10, mb1mx3.7/40, mbtmp4.3/10, Error ellipse: s-maj=29.2km s-min=21.5km az=172.0*
ISC 13 23:57:39.3±1.0, **19°.3S**±0°.1×**169°.3E**±0°.2, **h150**km, **n11, σ0§65/12, mb4.0/9, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.88**	**223**	P	**Pn**	**23 58 38.4**	**+0.3**
2.3nm,0.3s,baz=49,slow=18,SNR=17							
DZM				S	**Sn**	**23 59 23.4**	**-0.3**
5.4nm,0.3s,baz=29,slow=21,SNR=4.2							
URZ	**Urewera**	**20.12**	**162**	P	**P**	**00 02 01.5**	**+0.1**
5.0nm,0.5s,baz=332,slow=6.6,SNR=6.7							
CTA	**Charters Tower**	**21.73**	**264**	P	**P**	**00 02 19.6**	**+0.7**
3.1nm,0.5s,baz=90,slow=12,SNR=8.0							
STKA	**Stephens Creek**	**27.89**	**238**	P	**P**	**00 03 15.2**	**-0.1**
3.2nm,0.6s,baz=79,slow=12,SNR=12							
WRA	**Warramunga Arr**	**32.92**	**263**	P	**P**	**00 03 58.3**	**-1.3**
3.3nm,0.5s,baz=91,slow=8.4,SNR=14							
ASAR	**Alice Springs**	**33.19**	**256**	P	**P**	**00 04 01.1**	**-0.8**
16nm,0.5s,baz=83,slow=9.0,SNR=208							
FITZ	**Fitzroy Crossi**	**41.31**	**264**	P	**P**	**00 05 10.4**	**+0.1**
9.9nm,0.6s,baz=97,slow=6.6,SNR=38							
PETK	**Petropavlovsk-**	**72.76**	**353**	P	**P**	**00 08 50.6**	**-0.3**
1.3nm,0.7s,baz=160,slow=8.8,SNR=3.1							
CMAR	**Chiang Mai Arr**	**78.57**	**294**	P	**P**	**00 09 25.4**	**+0.7**
0.6nm,0.3s,baz=125,slow=5.6,SNR=3.2							
SONM	**Songino Array**	**87.27**	**323**	P	**P**	**00 10 08.9**	**-0.1**
0.4nm,0.5s,baz=140,slow=7.0,SNR=3.0							
NVAR	**Mina Array Bea**	**88.76**	**48**	P	**P**	**00 10 16.4**	**-0.1**
0.3nm,0.5s,baz=224,slow=6.2,SNR=3.5							

*ISCJB **13** 23:59:53.7±0.7, 38°.16N±0°.04×141°.75E±0°.08, h56km±4km, mb4.0/12, Error ellipse: s-maj=10.5km s-min=4.9km az=21.0*
*JMA **13** 23:59:55.0±0.1, 38°.19N×141°.68E, h51km±1km, M3.9*
JMA Felt I J1.
*IDC **13** 23:59:57.1±1.1, 38°.14N×141°.67E, h71km±8km, mb3.6/11, mb1 3.8/15, mb1mx3.6/51, mbtmp3.9/15, MS2.9/3, Ms1 2.9/3, ms1mx2.6/35, Error ellipse: s-maj=22.1km s-min=15.2km az=89.0*
ISC 13 23:59:54.2±0.8, **38°.15N**±0°.04×**141°.79E**±0°.08, **h46**km±5km, **n43, σ1§04/51, mb4.0/13, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.30**	**302**	P	**Pn**	**00 00 03.6**	**+0.6**
JIKH				S	**Sn**	**00 00 09.5**	**+0.3**
JIO	**Ouri**	**0.46**	**311**	P	**Pn**	**00 00 05.0**	**+0.3**
JIO				S	**Sn**	**00 00 11.8**	**-0.4**
JKMT	**Kesennumamotoy**	**0.70**	**339**	P	**Pn**	**00 00 08.0**	**+0.1**
JKMT				S	**Sn**	**00 00 17.0**	**-0.7**
JOFO	**Osakifurukawao**	**0.82**	**303**	P	**Pn**	**00 00 09.6**	**+0.1**
JOFO				S	**Sn**	**00 00 20.6**	**0.0**
JMM	**Marumori**	**0.84**	**251**	P	**Pn**	**00 00 09.3**	**-0.3**
JMM				S	**Sn**	**00 00 19.6**	**-1.2**
JOU	**Okura**	**0.91**	**284**	P	**Pn**	**00 00 10.6**	**-0.1**
JOU				S	**Sn**	**00 00 21.9**	**-0.8**
JMK	**Ichinoseki**	**0.92**	**331**	P	**Pn**	**00 00 10.9**	**+0.2**
JMK				S	**Sn**	**00 00 22.0**	**-0.8**
JFK	**Kawauchi**	**1.07**	**223**	P	**Pn**	**00 00 13.0**	**+0.2**
JFK				S	**Sn**	**00 00 26.0**	**-0.5**
JFT	**Otama**	**1.31**	**242**	P	**Pn**	**00 00 16.6**	**+0.5**
JFT				S	**Sn**	**00 00 32.5**	**0.0**
JYK	**Kaneyama**	**1.36**	**305**	P	**Pn**	**00 00 16.7**	**0.0**
JYS	**Shiratake**	**1.36**	**274**	P	**Pn**	**00 00 16.8**	**0.0**
JYS				S	**Sn**	**00 00 33.2**	**-0.4**
JOM	**Ohasama**	**1.38**	**344**	P	**Pn**	**00 00 17.4**	**+0.4**
JOM				*e*S	**Sn**	**00 00 34.0**	**0.0**
JRG	**Rokugo**	**1.54**	**324**	P	**Pn**	**00 00 19.7**	**+0.5**
JYA	**Atsumi**	**1.69**	**286**	P	**Pn**	**00 00 21.3**	**0.0**
MJAR	**Matsushiro Arr**	**3.27**	**242**	P	**Pn**	**00 00 44.5**	**+1.5**
1.0nm,0.3s,baz=55,slow=10,SNR=24							
MJAR				LR	LR	00 02 24.7	
comp=Z,85nm,18.3s,baz=75,slow=47							
MAT	**Matsushiro**	**3.27**	**242**	P	**Pn**	**00 00 44.9**	**+1.9**
MAT				*e*S	**Sn**	**00 01 19.3**	**-1.5**
JHJ	**Hachijo jima 2**	**5.28**	**199**	P	**Pn**	**00 01 12.7**	**+2.2**
13nm,0.3s,baz=302,slow=24,SNR=7.2							
JHJ				S	**Sn**	**00 02 08.8**	**-1.2**
38nm,0.3s,baz=41,slow=20,SNR=4.8							
ASAJ	**Asahikawa**	**5.99**	**6**	P	**Pn**	**00 01 20.7**	**+0.5**
1.4nm,0.3s,baz=202,slow=11,SNR=3.7							
ASAJ				S	**Sn**	**00 02 26.1**	**-1.4**
1.2nm,0.3s,baz=151,slow=19,SNR=2.9							
USRK	**Ussuriysk Ar.**	**9.54**	**312**	P	**Pn**	**00 02 12.4**	**+3.6**
0.5nm,0.3s,baz=127,slow=12,SNR=10							
JNU	**Nakatsue**	**10.20**	**244**	LR	LR	00 06 43.5	
comp=Z,170nm,21.8s,baz=168,slow=40							
KSRS	**Korea Array**	**11.00**	**271**	P	**Pn**	**00 02 32.2**	**+3.4**
0.3nm,0.3s,baz=78,slow=15,SNR=3.7							
KLR	**Kul'dur**	**13.23**	**330**	LR	LR	00 07 24.0	
comp=Z,59nm,20.2s,baz=198,slow=34							
SONM	**Songino Array**	**27.43**	**302**	P	**P**	**00 05 35.3**	**-0.3**
0.8nm,0.9s,baz=91,slow=8.2,SNR=3.1							
H11N2	**WAKE ISLAND Hy**	**28.48**	**123**	T	T	00 36 01.8	
baz=316,slow=75,SNR=678							
H11N1	**WAKE ISLAND Hy**	**28.49**	**123**	T	T	00 36 01.4	
baz=316,slow=75,SNR=542							
H11N3	**WAKE ISLAND Hy**	**28.50**	**123**	T	T	00 36 03.1	
baz=316,slow=75,SNR=517							
H11S1	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	00 36 54.4	
baz=317,slow=76,SNR=87							
H11S3	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	00 36 59.0	
baz=317,slow=76,SNR=153							
H11S2	**WAKE ISLAND Hy**	**29.25**	**125**	T	T	00 36 57.6	
baz=317,slow=76,SNR=77							
ZALV	**Zalesovo Beam**	**41.39**	**311**	P	**P**	**00 07 35.4**	**-0.3**
2.9nm,0.6s,baz=94,slow=7.9,SNR=8.6							
ZALV				pP	**sP**	**00 07 52.5**	**-1.1**

12nm,0.3s,baz=219,slow=15,SNR=138
ILAR LR LR 00 02 28.5
comp=Z,106nm,19.3s,baz=50,slow=31
ILAR Lg Lg 00 02 30.9
88nm,0.3s,baz=221,slow=28,SNR=47
ILB Eielson Array 1.59 36 *e*Pn **Pn 00 02 10.6 -1.2**
PAX Paxson 1.70 107 *e*Pn **Pn 00 02 12.3 -1.1**
MLY Manley 1.71 335 *e*Pn **Pn 00 02 13.1 -0.3**
SML Sawmill 1.73 169 *e*Pn **Pn 00 02 12.1 -1.6**
GHO Glory Hole Cre 1.73 178 *e*Pn **Pn 00 02 12.5 -1.3**
PS07 TAPS Pump Stn7 1.85 10 *e*Pn **Pn 00 02 15.0 -0.3**
SCM Sheep Creek Mo 1.85 154 *e*Pn **Pn 00 02 14.1 -1.3**
RIDG Independent Ri 1.89 81 *e*Pn **Pn 00 02 15.5 -0.5**
SKT Skwentna 1.91 218 *e*Pn **Pn 00 02 16.2 +0.1**
SKT *e*Sn **Sb 00 02 42.0 -0.3**
KNK Knik Glacier 2.11 172 *e*Pn **Pn 00 02 18.7 -0.2**
PS11 TAPS Pump St11 2.17 129 *e*Pn **Pn 00 02 19.3 -0.5**
SUA Susitna One 2.19 202 *e*Pn **Pn 00 02 20.3 +0.2**
DOT Dot Lake 2.23 84 *e*Pn **Pn 00 02 20.1 -0.5**
PS06 TAPS Pump Stn6 2.38 353 *e*Pn **Pn 00 02 22.7 +0.1**
RC01 Rabbit Creek A 2.44 188 *e*Pn **Pn 00 02 23.2 -0.2**
PRP Porcupine Dome 2.54 35 *e*Pn **Pn 00 02 24.5 -0.3**
GLI Glacier Island 2.78 160 *e*Pn **Pn 00 02 28.0 -0.1**
DIV Divide 2.83 146 *e*Pn **Pn 00 02 28.9 +0.1**
SLKM Skilak Lake 3.05 191 *e*Pn **Pn 00 02 32.8 +0.9**
IM3 Indian Mountai 3.21 323 *e*Pn **Pn 00 02 33.7 -0.3**
TT01 Tatalina 3.21 262 *e*Pn **Pn 00 02 33.2 -0.8**
TT01 *e*Pn **Pn 00 02 33.2 -0.8**
BCA3 Beaver Creek A 3.31 94 *e*Pn **Pn 00 02 34.5 -0.8**
EYAK Cordova Ski Ar 3.34 151 *e*Pn **Pn 00 02 36.6 +0.9**
PS05 TAPS Pump Stn5 3.40 349 *e*Pn **Pn 00 02 37.1 +0.6**
SEW Seward 3.41 183 *e*Pn **Pn 00 02 38.1 +1.4**
FYU Fort Yukon 3.48 26 *e*Pn **Pn 00 02 37.5 -0.1**
SGAM Sherman Glacie 3.51 147 *e*Pn **Pn 00 02 38.4 +0.3**
RDWB Redoubt West 3.51 212 *e*Pn **Pn 00 02 37.6 -0.7**
RSO Redoubt South 3.51 212 *e*Pn **Pn 00 02 40.9 +2.5**
EGAK Eagle 3.69 66 *e*Pn **Pn 00 02 40.2 -0.3**
COLD Coldfoot 3.77 353 *e*Pn **Pn 00 02 41.9 +0.1**
BRLK Bradley Lake 3.85 194 *e*Pn **Pn 00 02 46.5 +3.7**
HMT Hamilton 3.90 142 *e*Pn **Pn 00 02 47.9 +4.4**
BALM Baldy 3.99 125 *e*Pn **Pn 00 02 47.3 +2.5**
CNPM China Poot 4.12 196 *e*Pn **Pn 00 02 47.7 +1.1**
BM3 Burnt Mountain 4.35 23 *e*Pn **Pn 00 02 49.2 -0.5**
CTGM Chitina Glacie 4.41 122 *e*Pn **Pn 00 02 51.8 +1.1**
TOLK Toolik Lake Re 5.17 358 *e*Pn **Pn 00 03 02.0 +1.2**
YUK4 Talbot Arm 5.29 109 *e*Pn **Pn 00 03 03.0 +0.3**
PCA Pinnacle 5.39 125 *e*Pn **Pn 00 03 04.8 +0.8**
YUK6 Outpost Mounta 5.62 112 *e*Pn **Pn 00 03 07.5 +0.3**
BCPM Bancas Point 5.71 124 *e*Pn **Pn 00 03 09.2 +0.9**
EPYK Eagle Plains 5.98 56 *e*Pn **Pn 00 03 11.6 -0.4**
KDAK Kodiak Island 5.99 198 Pn **Pn 00 03 13.8 +1.6**
1.4nm,0.3s,baz=14,slow=12,SNR=8.6
KDAK Sn **Sn 00 04 19.8 -1.5**
0.6nm,0.3s,baz=322,slow=18,SNR=2.8
KDAK Kodiak Island 5.99 198 *e*Pn **Pn 00 03 12.6 +0.5**
KDAK *e* 00 03 12.7
HYT Haines Junctio 6.04 111 *e*Pn **Pn 00 03 15.8 +2.9**
WHY Whitehorse 7.23 107 *e*Pn **Pn 00 03 30.4 +1.1**
INK Inuvik 7.96 46 Pn **Pn 00 03 38.8 -0.3**
0.3nm,0.3s,baz=239,slow=12,SNR=3.6
INK Sn **Sn 00 05 05.0 -4.5**
0.2nm,0.3s,baz=312,slow=18,SNR=4.1
INK Lg Lg 00 05 51.2
0.1nm,0.3s,baz=154,slow=13,SNR=3.1
INK Inuvik 7.96 46 *e*Pn **Pn 00 03 41.8 +2.8**
DLBC Dease Lake 10.52 110 Lg Lg 00 07 18.6
0.1nm,0.3s,baz=183,slow=18,SNR=4.8
YKA Yellowknife Ar 15.56 78 Pn **Pn 00 05 22.0 -0.7**
baz=287,slow=13,SNR=2.9
YKB5 Yellowknife Ar 15.56 78 *e*Pn **Pn 00 05 22.0 -0.7**
PDAR Pinedale Array 30.73 114 P **P 00 08 03.6 +4.6**
0.6nm,0.7s,baz=316,slow=5.0,SNR=5.0

*IDC **14** 00:02:37.6±1.8, 10°.02S×106°.88E, h0km, mb4.0/5, mb1 4.1/7, mb1mx3.7/40, mbtmp4.0/7, ML4.1/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/26, Error ellipse: s-maj=57.3km s-min=19.6km az=62.0*
*ISCJB **14** 00:02:41.9±0.8, 9°.87S±0°.06×107°.25E±0°.06, h33km, mb3.9/5, MS3.2/2, Error ellipse: s-maj=10.3km s-min=7.1km az=141.4*
*DJA **14** 00:02:41.7±0.8, 10°S±5°×10°7E±°, h10km, M4.7/8, mb4.9/2, MLv4.6/8*
ISC 14 00:02:43.7±1.0,**9°.93S**±0°.08×**107°.24E**±0°.08,**h35**km,**n31**, σ1§**79**/31,**mb3.9**/5,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**2.43**	**14**	P	**Pn**	**00 03 19.2**	**-1.8**
CISI				S	**Sn**	**00 03 47.5**	**-2.1**
CISI	**Cisompet, Garu**	**2.43**	**14**	P	**Pn**	**00 03 19.7**	**-1.3**
CISI				S	**Sn**	**00 03 47.4**	**-2.1**
LEM	**Lembang**	**3.11**	**7**	Pn	**Pn**	**00 03 30.4**	**0.0**
65nm,0.3s,baz=36,slow=12,SNR=21
LEM Sn **Sn 00 04 09.6 +3.2**
96nm,0.3s,baz=352,slow=21,SNR=13
LEM LR LR 00 05 06.5
comp=Z,509nm,21.6s,baz=168,slow=46
LEM Lembang 3.11 7 P **Pn 00 03 30.5 +0.1**
LEM S **Sn 00 04 08.8 +2.4**
LEM Lembang 3.11 7 P **Pn 00 03 31.0 +0.6**
LEM S **Sn 00 04 11.3 +4.9**
CGJI Cibinong 3.64 335 P **Pn 00 03 35.2 -2.3**
CGJI Cibinong 3.64 335 P Pn 00 03 32.2 -5.3
CGJI S **Sn 00 04 17.0 -2.2**
YOGI Yogyakarta 3.68 55 P Pn 00 03 27.6 -11
UGM Wanagama 3.81 58 P **Pn 00 03 39.5 -0.5**
UGM S **Sn 00 04 21.7 -2.0**
UGM Wanagama 3.81 58 P **Pn 00 03 39.4 -0.5**
UGM S **Sn 00 04 24.5 +0.8**
WOJI Wonogiri, Jawa 4.19 61 P **Pn 00 03 44.7 -0.5**
WOJI Wonogiri, Jawa 4.19 61 P **Pn 00 03 44.4 -0.8**
PWJI Pagerwojo 4.89 68 P **Pn 00 03 54.1 -0.7**
PWJI Pagerwojo 4.89 68 P **Pn 00 03 54.3 -0.5**
GRJI Gresik 5.99 60 P **Pn 00 04 10.0 +0.2**
JAGI Jajag, Banyuwa 6.98 79 P **Pn 00 04 22.9 -0.6**
JAGI Jajag, Banyuwa 6.98 79 P **Pn 00 04 21.4 -2.1**
SRBI Singaraja 8.09 78 P **Pn 00 04 36.4 -2.3**
PSI Prapat 15.12 326 LR LR 00 12 51.9
comp=Z,196nm,18.3s,baz=196,slow=41
FITZ Fitzroy Crossi 19.60 116 P **Pn 00 07 11.2 +0.6**
0.2nm,0.3s,baz=285,slow=12,SNR=11
FITZ S S 00 10 29.5 -19
0.2nm,0.3s,baz=180,slow=20,SNR=4.3
NWAO Narrogin (SRO) 24.67 160 LR LR 00 17 31.3
comp=Z,90nm,18.6s,baz=346,slow=36
ASAR Alice Springs 28.88 122 P **P 00 08 40.4 +1.1**
0.7nm,0.9s,baz=291,slow=7.8,SNR=3.0
CMAR Chiang Mai Arr 29.38 344 LR LR 00 23 15.6
comp=Z,36nm,18.2s,baz=255,slow=42
H08S2 Diego Garcia H 34.41 271 T T 00 44 20.8
baz=98,slow=75
H08S3 Diego Garcia H 34.42 271 T T 00 44 20.7
baz=98,slow=75
H08S1 Diego Carcia H 34.42 271 T T 00 44 19.8
baz=98,slow=75
STKA Stephens Creek 38.55 130 P **P 00 10 04.8 +1.7**
1.8nm,0.8s,baz=288,slow=9.6,SNR=3.4
SONM Songino Array 57.52 359 P **P 00 12 30.5 +0.9**
0.4nm,0.4s,baz=183,slow=7.1,SNR=2.6
MKAR Makanchi Array 60.71 341 P **P 00 12 50.7 -0.9**
0.9nm,0.9s,baz=163,slow=6.8,SNR=4.4
TIXI Tiksi 82.67 7 P **P 00 15 02.5 -0.6**
1.8nm,0.3s,baz=287,slow=15,SNR=3.5
TXAR Lajitas Array 145.25 52 PKPbc **PKPbc 00 22 16.2 -2.0**
0.3nm,0.6s,baz=306,slow=3.1,SNR=2.1

*KRNET **14** 00:43:40.6±0.1, 40°.25N×70°.13E, h19km, mb2.6*
*ISCJB **14** 00:43:41.8±0.9, 40°.28N±0°.08×70°.16E±0°.08, h15km±14km, Error ellipse: s-maj=16.0km s-min=4.9km az=38.0*
*SOME **14** 00:43:43.6, 40°.60N×70°.63E, h5km*
*NNC **14** 00:43:45.4±6.2, 40°.61N×70°.37E, h0km, mb3.2, mpv3.1, Error ellipse: s-maj=42.4km s-min=24.2km az=17.0*
ISC 14 00:43:39.8±1.5,**40°.25N**±0°.07×**70.04E**±0°.07,**h11**km±11km, **n17**,σ1§**38**/32,**11C-7D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.63**	**107**	⇓*i*P	**Pg**	**00 43 51.4**	**-0.6**
baz=10.0
BTK ⇓*i*S **Sg 00 43 59.7 -0.5**
baz=10.0
TAS Tashkent 1.22 332 ⇓*i*P **Pb 00 44 03.4 +0.5**
baz=30
TAS ⇓*i*S **Sg 00 44 20.8 +1.6**
baz=30
DRK Karamyk 1.56 119 ⇓*i*P **Pn 00 44 08.1 +0.4**
baz=20
DRK ⇓*i*S **Sn 00 44 28.2 +0.1**
baz=20
IUG Iuzhnay 1.90 360 P **Pn 00 44 13.0 +0.8**
11nm,0.1s
IUG S **Sn 00 44 34.0 -2.2**
31nm,0.3s
IUG Iuzhnay 1.90 360 *e*P **Pn 00 44 13.0 +0.8**
11nm,0.1s
IUG *e*S **Sn 00 44 34.0 -2.2**
31nm,0.3s
CHM Chimkent 2.09 351 *e*P **Pb 00 44 18.0 +0.1**
122nm,0.2s
CHM *e*S **Sb 00 44 42.6 -1.2**
119nm,0.2s
ARK Arkit 2.12 43 ⇑*i*P **Pn 00 44 16.4 +1.0**
baz=42
ARK ⇑*i*S **Sn 00 44 42.6 +0.8**
baz=42
ARSB Arslanbob 2.48 63 ⇑*i*P **Pn 00 44 21.3 +1.0**
baz=63
ARSB ⇑*i*S **Sn 00 44 51.5 +0.9**
baz=63
BRLS Borolday 2.78 357 Pg **Pn 00 44 26.1 +1.7**
0.6nm,0.1s
BRLS Lg Lg 00 44 56.2
4.5nm,0.1s
BRLS Borolday 2.78 357 *e*P **Pn 00 44 26.1 +1.7**
0.6nm,0.3s
BRLS *e*S **Sn 00 44 56.2 -1.7**
4.5nm,0.1s
DZA Taraz 2.81 20 *e*P **Pn 00 44 26.8 +2.1**
45nm,0.1s
DZA *e*S **Sn 00 44 57.8 -0.9**
32nm,0.1s
KK31 Karatay Array 2.87 7 ⇑Pn **Pb 00 44 30.1 -1.0**
0.7nm,0.2s,baz=184,slow=17,SNR=5.7
KK31 ⇓Sn **Sb 00 45 04.7 -1.6**
3.6nm,0.6s,baz=181,slow=28,SNR=11
MRKS Merke 3.46 43 Pg **Pb 00 44 40.4 -0.7**
3.3nm,0.3s
MRKS Lg Lg 00 45 21.0
7.1nm,0.3s
MRKS Merke 3.46 43 *e*P **Pn 00 44 36.9 +3.2**
0.5nm,0.1s
MRKS *e*S **Sn 00 45 15.0 +0.3**
7.1nm,0.5s
ARLS Aral 3.62 62 ⇑*i*P **Pn 00 44 37.6 +1.7**
baz=62
ARLS ⇑*i*S **Sn 00 45 18.8 +0.1**
baz=62
UCH Uchtor 3.91 58 ⇑*i*P **Pn 00 44 41.3 +1.1**
baz=58
UCH ⇑*i*S **Sn 00 45 26.6 +0.3**
baz=58
KZA Kyzart 4.34 63 ⇑*i*P **Pn 00 44 47.2 +1.1**
baz=63
KZA ⇑*i*S **Sn 00 45 36.7 -0.1**
baz=63

*ISCJB **14** 00:56:54.6±0.4, 51°.54N±0°.02×16°.17E±0°.03, h0km, Error ellipse: s-maj=2.8km s-min=2.4km az=40.8*
*UPP **14** 00:56:58.2±3.3, 51°.67N×15°.86E, h0km, ML1.6, Suspected explosion*
*VIE **14** 00:57:00.5±0.6, 51°.34N×15°.92E, h0km, mb2.2/6, ml2.6/9, Error ellipse: s-maj=4.9km s-min=4.0km az=25.0, Suspected Mining induced.*
ISC 14 00:56:56.0±0.8,**51°.56N**±0°.03×**16°.14E**±0°.02,**h0**km,**n39**, σ1§**37**/76,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**172**	*e*Pg	**Pg**	**00 57 10.2**	**+0.3**
KSP *i* Sg **Sg 00 57 19.3 0.0**
CHVC Chvalec 0.98 183 *e*PG **Pg 00 57 15.2 +0.5**
CHVC *e*SG **Sg 00 57 27.5 +0.1**
comp=Z,56nm,0.5s
OSTC Ostas 1.01 177 *e*PG **Pg 00 57 15.8 +0.5**
OSTC *e*SG **Sg 00 57 27.8 -0.6**
comp=Z,75nm,0.4s
UPC Upice 1.06 184 *e*PG **Pg 00 57 16.4 +0.1**
UPC *e*SG **Sg 00 57 29.9 -0.1**
comp=Z,143nm,0.4s
DPC Dobruska-Polom 1.22 174 *e*PG **Pg 00 57 19.2 -0.2**
DPC *e*SG **Sg 00 57 34.2 -0.9**
comp=Z,61nm,0.7s
PVCC Panska Ves 1.43 224 *e*PG **Pb 00 57 23.9 +0.3**
PVCC *e*SG **Sn 00 57 42.9 +0.1**
comp=Z,116nm,0.4s
BRG Berggiesshubel 1.54 244 PN **Pn 00 57 24.3 -0.5**
BRG PG **Pg 00 57 26.4 +0.8**
BRG SG **Sg 00 57 46.4 +0.8**
78nm,0.4s
GOPC GO Pecny, Ondr 1.86 208 *e*PG **Pb 00 57 30.9 0.0**
GOPC *e*SG **Sb 00 57 54.9 +0.2**
comp=Z,23nm,0.5s
PRU Pruhonice 1.87 213 *e*PN **Pb 00 57 30.5 -0.6**
PRU *e*PG **Pg 00 57 32.7 +0.8**
PRU *e*SG **Sg 00 57 56.4 +0.2**
comp=Z,91nm,0.9s
RAC Raciborz 1.97 138 *e*Pg **Pb 00 57 32.9 +0.1**
RAC *e*Sg **Sg 00 57 59.5 +0.2**
CLL Collm 1.98 264 *e*Pn **Pn 00 57 29.0 -1.8**
CLL *e*Pg **Pb 00 57 32.0 -0.9**
CLL *i* 00 57 35.8
CLL *i* Sg **Sg 00 57 59.9 +0.3**
comp=Z,18nm,0.5s
MORC Moravsky Berou 2.00 153 *e*PN **Pn 00 57 31.0 -0.1**
MORC *e*SG **Sb 00 57 58.0 -0.7**
OKC Ostrava-Krasne 2.15 143 *e*PG **Pb 00 57 35.3 -0.5**
OKC *e*SG **Sb 00 58 03.7 +0.8**
comp=Z,39nm,0.5s
VRAC Vranov 2.28 172 *e*PN **Pn 00 57 35.2 +0.4**
VRAC *e*SG **Sb 00 58 06.7 +0.1**
TREC Trest 2.31 191 *e*PN **Pn 00 57 36.7 +1.4**
TREC *e*PG **Pb 00 57 38.9 +0.4**
TREC *e*SG **Sb 00 58 08.6 +1.0**
comp=Z,27nm,0.2s
KRUC Moravsky 2.51 176 *e*PN **Pn 00 57 38.3 +0.3**
KRUC *e*SG **Sb 00 58 14.9 +1.6**
OJC Ojcow 2.68 119 *e*Pn **Pn 00 57 39.5 -0.9**
OJC *e*Pg **Pg 00 57 48.0 +0.6**
OJC *e*Sn **Sn 00 58 10.9 -2.6**
OJC *e*Sg **Sg 00 58 22.7 +0.7**
NKC Novy Kostel 2.69 242 *e*PG **Pg 00 57 48.3 +0.8**
NKC *e*SG **Sg 00 58 25.1 +2.7**
comp=Z,43nm,0.4s
KHC Kasperske Hory 2.94 215 *e*PN **Pn 00 57 44.8 +0.9**
KHC *e*PG **Pg 00 57 50.9 -1.3**
KHC *e*SN **Sn 00 58 20.0 +0.1**
KHC *e*SG **Sg 00 58 29.8 -0.5**
comp=Z,15nm,0.5s
LANS Liptovska Anna 3.22 137 *e*SG **Sg 00 58 40.7 +1.3**
MODS Modra-Piesok 3.28 167 *e*SG **Sg 00 58 40.4 -0.8**
NIE Niedzica 3.42 127 *e*P **Pg 00 58 01.2 -0.3**
NIE *e*S **Sg 00 58 45.2 -0.4**
ZST Bratislava 3.43 169 *e*SG **Sg 00 58 43.6 -2.5**
VYHS Vyhne 3.53 149 *e*PN **Pn 00 57 52.2 +0.1**
VYHS *e*PG **Pg 00 58 04.5 +0.9**
VYHS *e*SG **Sg 00 58 48.7 -0.6**
BSD Bornholm Skovb 3.63 349 *i* P **Pn 00 57 53.5 +0.1**
BSD *i* S **Sn 00 58 36.3 -0.7**
CONA Conrad Observa 3.64 183 *e*Pn **Pn 00 57 55.7 +2.0**
comp=Z,1.0nm,0.3s
CONA Sg **Sg 00 58 50.6 -2.4**
comp=Z,13nm,0.5s
STHS Stebnicka Huta 3.90 121 *e*SG **Sg 00 59 04.9 +3.6**
MOA Molln 3.91 199 *e*Pn **Pn 00 57 58.4 +1.1**
comp=Z,0.6nm,0.2s
MOA Sg **Sg 00 59 01.3 -0.2**
comp=Z,8.4nm,0.4s
ARSA Arzberg 4.33 186 *e*Pn **Pn 00 58 06.5 +3.3**
comp=Z,0.9nm,0.3s
ARSA Sg **Sg 00 59 12.1 -3.1**
comp=Z,13nm,0.7s
LUNU Lund 4.38 340 P **Pn 00 58 03.4 -0.4**
LUNU S **Sn 00 58 54.3 -1.1**
BLEU Blekinge 4.75 358 P **Pn 00 58 05.6 -3.2**
KBA Koelnbreinsper 4.85 203 *i* Pn **Pn 00 58 12.1 +1.8**
comp=Z,1.1nm,0.3s
KBA Sg **Sg 00 59 29.6 -2.0**
comp=Z,6.2nm,0.5s
BJUU Bjuv 4.88 339 P **Pn 00 58 10.1 -0.5**
SOKA Soboth 4.94 189 Sg **Sg 00 59 34.0 -0.7**
comp=Z,3.2nm,0.5s
MOTA Moosalm 5.35 220 *e*Pn **Pn 00 58 18.4 +1.2**
comp=Z,0.5nm,0.3s
MOTA Sg **Sg 00 59 49.2 +1.5**
comp=Z,5.0nm,0.5s
ABTA Abfaltersbach 5.37 208 Sg **Sg 00 59 44.3 -4.3**
comp=Z,5.0nm,0.6s
RETA Reutte 5.38 223 Sg **Sg 00 59 49.2 +0.6**
comp=Z,6.3nm,0.6s
OSKU Oskarshamn 5.64 360 P **Pn 00 58 22.3 +1.3**
BYXU Byxelkrok 5.76 5 P **Pn 00 58 24.3 +1.6**

MEX 14 00:57:00.6±0.4,**15°.84N**×**93°.78W**,**h75**km±23km,**MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.12**	**34**	*i* P	Pn	00 57 19.7	-1.3
TGIG *e*S Sn 00 57 34.4 -1.9
CCIG Comitan 1.64 74 *e*P Pn 00 57 26.4 -1.4
CCIG *i* S Sn 00 57 46.6 -1.7

IDC 14 01:00:42.6±8.5,**7°.65S**×**128°.55E**,**h178**km±91km,**mb3.2**/1, **mb1 3.4**/5,**mb1mx3.1**/42,**mbtmp3.9**/5,**Error ellipse: s-maj=87.7km s-min=24.4km az=39.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.46**	**242**	P	Pn	01 02 03.0	+0.4
14nm,0.3s,baz=204,slow=2.3,SNR=4.8
BATI S Sn 01 03 06.2 +0.7
15nm,0.3s,baz=45,slow=20,SNR=8.1
FITZ Fitzroy Crossi 10.77 195 P Pn 01 03 10.8 -1.4
0.8nm,0.3s,baz=24,slow=13,SNR=29
FITZ S Sn 01 05 05.5 -6.5
0.8nm,0.3s,baz=120,slow=20,SNR=5.3
WRA Warramunga Arr 13.45 156 P Pn 01 03 46.0 -0.6
0.2nm,0.3s,baz=328,slow=14,SNR=4.0
WRA S Sn 01 06 07.1 -9.2
0.9nm,0.3s,baz=330,slow=24,SNR=7.6
ASAR Alice Springs 16.74 163 P Pn 01 04 28.2 +1.2
0.2nm,0.3s,baz=343,slow=9.5,SNR=7.2
ASAR S S 01 07 28.1 -3.6
0.3nm,0.3s,baz=336,slow=22,SNR=6.4
MKAR Makanchi Array 67.99 328 P P 01 11 22.4 -0.1
0.4nm,0.5s,baz=120,slow=7.2,SNR=4.6

*BJI **14** 01:04:53.4±0.0, 8°.61S×119°.84E, h180km, mb4.6/20, mB4.6/16*
*ISCJB **14** 01:04:54.6±0.2, 8°.27S±0°.02×119°.58E±0°.02, h175km±2km, mb4.5/41, Error ellipse: s-maj=4.4km s-min=3.4km az=140.1*
*DJA **14** 01:04:55.8±0.2, 8°S±2°×12°0E±°, h162km±3km, M4.7/21, mB5.1/10, mb4.9/17, MLv5.0/21, Mw(mB)4.5/10*
*IDC **14** 01:04:56.9±1.0, 8°.12S×119°.65E, h183km±9km, mb3.9/16, mb1 4.1/19, mb1mx3.9/45, mbtmp4.5/19, MS3.2/5, Ms1 3.1/5, ms1mx2.8/33, Error ellipse: s-maj=14.2km s-min=7.9km az=68.0*
*NEIC **14** 01:04:56.3±2.1, 8°.20S×119°.64E, h182km±5km, mb4.5/21, Error ellipse: s-maj=14.8km s-min=11.4km az=57.0*
*KLM **14** 01:04:57.0, 8°.73S×119°.50E, h178km, mb4.9*
ISC 14 01:04:55.7±0.6,**8°.31S**±0°.03×**119°.62E**±0°.04,**h175**km±5km, **n311**,σ1§**52**/314,**mb4.3**/41,**1D,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.34**	**190**	P	**Pn**	**01 05 25.1**	**-0.7**
WBSI S **Sn 01 05 47.4 -1.8**
WSI Waingapu 1.50 154 P **Pn 01 05 27.0 -0.3**
WSI S **Sn 01 05 50.6 -1.2**
PLAI Plampang 1.90 254 P **Pn 01 05 30.4 -0.9**
PLAI S **Sn 01 05 57.0 -1.9**
EDFI Ende, Flores 2.09 102 P **Pn 01 05 33.6 +0.1**
EDFI S **Sn 01 06 02.1 -0.7**
BASI Baing, Sumba 2.12 154 P **Pn 01 05 33.7 0.0**
BASI S **Sn 01 06 02.5 -0.8**
BSSI Bau Bau, Buton 2.32 22 P **Pn 01 05 35.0 -1.0**
BSSI S **Sn 01 06 06.1 -1.3**
MMRI Maumere 2.61 97 *e*Pn **Pn 01 05 39.5 +0.1**
MMRI Maumere 2.61 97 P **Pn 01 05 40.0 +0.6**
MMRI S **Sn 01 06 13.5 +0.2**
BKSI Bulukumba 3.01 9 P **Pn 01 05 44.1 -0.2**
BKSI S **Sn 01 06 22.0 -0.1**
KAPI Kappang 3.28 2 P **Pn 01 05 47.1 -0.4**
40nm,0.3s,baz=172,slow=7.0,SNR=160
KAPI S **Sn 01 06 26.5 -1.6**
14nm,0.3s,baz=112,slow=21,SNR=10
KAPI LR LR 01 07 16.1
comp=Z,156nm,18.7s,baz=179,slow=45
BBSI Bau Bau 4.05 46 P **Pn 01 05 58.8 +1.4**
SPSI Sidrap Palu 4.32 2 P **Pn 01 06 01.1 +0.3**
SRBI Singaraja 4.37 273 P **Pn 01 06 00.3 -1.1**
DNP Denpasar 4.38 265 P Pn 01 06 08.7 +7.2
BATI Baumata 4.41 116 P **Pn 01 06 03.2 +1.2**
854nm,0.3s,baz=325,slow=2.1,SNR=205
BATI S **Sn 01 06 53.2 -0.6**
421nm,0.3s,baz=294,slow=22,SNR=6.7
BATI LR LR 01 07 29.5
comp=Z,134nm,20.6s,baz=23,slow=34
BATI Baumata 4.41 116 *e*Pn **Pn 01 06 03.2 +1.2**
BATI *e*Pn **Pn 01 06 03.2 +1.2**
BATI *e*Sn **Sn 01 06 53.2 -0.6**
BATI Baumata 4.41 116 P **Pn 01 06 02.8 +0.8**
SOEI Soe 4.81 108 *e*Pn **Pn 01 06 08.3 +1.1**
SOEI Soe 4.81 108 P **Pn 01 06 08.1 +0.9**
TTSI Tana Toraja 5.24 2 P **Pn 01 06 15.3 +2.6**
159nm,1.1s,2μm0.7nm
JAGI Jajag, Banyuwa 5.42 268 *e*Pn **Pn 01 06 11.8 -3.3**
JAGI Jajag, Banyuwa 5.42 268 P **Pn 01 06 14.5 -0.5**
338nm,0.7s,12μm3.1nm
KMMI Kalianget 5.75 282 P **Pn 01 06 21.3 +2.0**
106nm,0.5s,2μm0.4nm
GRJI Gresik 7.22 281 P **Pn 01 06 39.7 +1.0**
266nm,0.7s,2μm0.8nm
APSI Ampana 7.62 15 P **Pn 01 06 45.0 +0.9**
60nm,1.0s,650nm0.2nm
PWJI Pagerwojo 7.75 272 P **Pn 01 06 44.0 -1.7**
104nm,0.6s,0.9nm
LUWI Luwuk 7.87 24 *e*Pn **Pn 01 06 47.6 +0.2**
LUWI Luwuk 7.87 24 P **Pn 01 06 48.0 +0.6**
124nm,1.2s,7μm0.5nm
NGJI Ngawi 8.14 276 P **Pn 01 06 51.1 +0.2**
WOJI Wonogiri, Jawa 8.63 273 P **Pn 01 06 55.9 -1.5**
59nm,0.6s
SANI Sanana 8.88 46 P **Pn 01 07 01.7 +1.0**
226nm,1.2s,2μm
UGM Wanagama 9.02 272 *e*Pn **Pn 01 07 01.6 -0.9**
UGM Wanagama 9.02 272 P Pn 01 07 13.0 +10
SMRI Semarang 9.19 277 *e*Pn **Pn 01 07 04.2 -0.6**
SMRI Semarang 9.19 277 P **Pn 01 07 05.6 +0.8**
195nm,0.8s
FITZ Fitzroy Crossi 11.35 150 P **Pn 01 07 34.4 +1.4**
25nm,0.3s,baz=333,slow=8.5,SNR=75
FITZ S **Sn 01 09 34.2 -4.9**
27nm,0.3s,baz=150,slow=12,SNR=8.7
FITZ LR LR 01 12 36.3
comp=Z,141nm,18.6s,baz=324,slow=40
FITZ Fitzroy Crossi 11.35 150 *e*Pn **Pn 01 07 33.8 +0.8**
FITZ *e*Sn **Sn 01 09 34.2 -4.9**
FITZ Fitzroy Crossi 11.35 150 P **Pn 01 07 33.8 +0.8**
baz=11,SNR=91
KNRA Kununurra 11.55 130 P **Pn 01 07 34.8 -0.7**
baz=12,SNR=170
CISI Cisompet, Garu 11.72 273 *e*Pn **Pn 01 07 35.1 -2.8**
CISI Cisompet, Garu 11.72 273 P **Pn 01 07 35.1 -2.8**
LEM Lembang 11.99 276 P **Pn 01 07 41.0 -0.4**
3.0nm,0.3s,baz=66,slow=19,SNR=2.9
MTN Manton Dam 12.18 113 *e*Pn **Pn 01 07 43.1 -0.5**
MTN Manton Dam 12.18 113 P **Pn 01 07 43.4 -0.2**
baz=12,SNR=314
CBJI Citeko 12.81 278 P **P 01 07 55.5 -0.5**
SBUM Sibu 12.99 325 *e*P **P 01 07 58.7 +0.7**
SBUM Sibu 12.99 325 P **Pn 01 07 55.0 +1.0**
PSA00 Pilbara Seismi 13.19 179 *e*Pn **Pn 01 07 56.6 +0.1**

KDU	Kakadu	13.36	110	P	Pn	01 07 58.3	-0.4
	baz=14,SNR=165						
KSM	Kuching	13.44	316	eP	P	01 08 03.3	+0.3
FAKI	Fak Fak	13.65	68	ePn	Pn	01 08 01.7	-0.8
FAKI				eSn	Sn	01 10 35.2	+0.8
FAKI	Fak Fak	13.65	68	P	Pn	01 08 01.5	-0.9
	106nm,0.5s,2μm						
SIJI	Sorong	13.75	58	P	Pn	01 08 03.7	0.0
	6.0nm,0.3s,baz=235,slow=5.7,SNR=24						
SIJI				S	Sn	01 10 36.4	-0.3
	0.8nm,0.3s,baz=252,slow=20,SNR=4.7						
CGJI	Cibinong	13.92	276	P	Pn	01 08 01.2	-4.5
WRA	Warramunga Arr	18.35	131	P	Pn	01 08 58.5	-0.8
	32nm,0.3s,baz=296,slow=11,SNR=193						
WRA				S	S	01 12 17.7	0.0
	8.6nm,0.3s,baz=297,slow=20,SNR=10						
WRAB	Tennant Creek	18.35	131	eP	Pn	01 08 58.4	-0.9
	102nm,0.6s						
WB2	Warramunga Arr	18.36	131	eP	P	01 08 57.9	+0.7
	96nm,0.6s						
WRKA	Warakurna	18.58	155	P	Pn	01 09 02.3	+0.3
	baz=19,SNR=143						
MYKOM	Kota Tinggi	18.66	302	eP	P	01 09 00.9	+0.4
	71nm,0.7s						
AS31	Alice Springs	20.50	140	eP	P	01 09 21.9	+1.5
ASAR	Alice Springs	20.50	140	P	P	01 09 21.9	+1.5
	98nm,0.4s,baz=320,slow=9.4,SNR=187						
ASAR				S	S	01 13 00.6	+0.3
	14nm,0.8s,baz=321,slow=23,SNR=6.4						
MORW	Morawa	20.92	189	P	P	01 09 26.1	+1.4
	baz=21,SNR=4.8						
BLDU	Ballidu	22.36	187	P	P	01 09 40.4	+1.0
	baz=22,SNR=8.7						
IPM	Ipoh	22.48	304	eP	P	01 09 40.1	-0.7
	24nm,0.5s						
IPM	Ipoh	22.48	304	P	P	01 09 40.0	-0.8
QIS	Mount Isa	22.83	124	P	P	01 09 45.5	+1.7
	baz=23,SNR=58						
KMBL	Kambalda	23.04	175	P	P	01 09 46.8	+1.2
	baz=23,SNR=8.0						
KLBR	Kellerberrin	23.23	184	P	P	01 09 48.9	+1.5
	baz=23,SNR=6.2						
KULM	Kulim	23.25	305	P	P	01 09 47.0	-0.7
FORT	Forrest	23.70	162	eP	P	01 09 52.8	+1.1
	195nm,0.7s						
FORT	Forrest	23.70	162	P	P	01 09 53.5	+1.9
	baz=24,SNR=79						
COEN	Coen	23.77	106	eP	P	01 09 53.4	+0.9
	40nm,0.6s						
COEN	Coen	23.77	106	P	P	01 09 53.3	+0.9
	baz=24,SNR=81						
CTA	Charters Tower	28.30	117	P	P	01 10 34.9	+1.8
	4.1nm,0.8s,baz=281,slow=13,SNR=5.4						
BBOO	Buckleboo	28.74	150	eP	P	01 10 38.3	+1.4
	112nm,0.6s						
BBOO	Buckleboo	28.74	150	P	P	01 10 38.7	+1.8
	baz=29,SNR=181						
SKNT	Sakolnakorn	29.50	328	P	P	01 10 45.0	+1.2
	25nm,1.2s						
CHAI	Chaiyaphum	29.73	324	P	P	01 10 47.5	+1.7
	25μm,0.7s						
HTT	Hallett	30.70	147	P	P	01 10 56.3	+2.1
	baz=31,SNR=30						
PBKT	Sadao Pong	30.85	323	P	P	01 10 57.1	+1.5
	6.6nm,0.9s						
STKA	Stephens Creek	31.10	142	P	P	01 10 60.0	+2.3
	49nm,0.5s,baz=315,slow=9.4,SNR=146						
STKA				LR	LR	01 24 02.2	
	comp=Z,71nm,18.7s,baz=240,slow=37						
STKA	Stephens Creek	31.10	142	eP	P	01 10 59.1	+1.4
	12nm,0.6s						
STKA	Stephens Creek	31.10	142	P	P	01 11 00.0	+2.3
	baz=31,SNR=52						
PHRA	Phrae	32.80	324	P	P	01 11 15.6	+2.9
	1.1nm,1.6s						
CMSA	Cobar Meteorol	33.51	137	P	P	01 11 21.5	+2.8
	baz=34,SNR=12						
CM31	Chiang Mai Arr	33.53	323	eP	P	01 11 19.9	+0.9
	5.9nm,0.8s						
CMAR	Chiang Mai Arr	33.53	323	P	P	01 11 19.9	+0.9
	1.0nm,0.3s,baz=161,slow=6.4,SNR=7.2						
ARPS	Mount Arapiles	34.79	148	P	P	01 11 32.2	+2.5
	baz=35,SNR=22						
KMI	Kunming	37.08	334	P	P	01 11 50.3	+0.8
KMI				pmax	pmax		
	comp=Z,19nm,0.5s						
WHN	Wuhan	38.96	353	P	P	01 12 07.5	+2.6
NJ2	Nanjing	40.14	359	eP	P	01 12 14.8	+0.2
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
XAN	Xi'an	43.32	347	P	P	01 12 44.5	+4.0
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,92nm,4.9s						
KS15	Wonju Array Si	46.16	9	eP	P	01 13 02.0	-0.8
	4.9nm,1.0s						
KS15				ePcP	PcP	01 14 35.9	+0.1
KSRS	Korea Array	46.18	9	P	P	01 13 02.0	-0.9
	0.9nm,0.5s,baz=182,slow=6.9,SNR=4.8						
KSRS				PcP	PcP	01 14 35.9	0.0
	2.0nm,0.7s,baz=187,slow=3.1,SNR=9.1						
LZH	Lanzhou	46.59	342	eP	P	01 13 11.0	+4.6
LZH				pP	pwP	01 13 49.8	+1.4
LZH				sP	sP	01 14 09.0	+5.8
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,97nm,5.5s						
MAJO	Matsushiro	47.91	20	eP	P	01 13 14.2	-2.2
MJAR	Matsushiro Arr	47.91	20	P	P	01 13 14.1	-2.3
	1.0nm,0.3s,baz=201,slow=8.9,SNR=3.8						
JIRN	Jiri	48.22	319	eP	P	01 13 17.8	-1.6
	25nm,0.6s						
GUN	Gumba	48.59	319	eP	P	01 13 20.1	-2.1
	19nm,0.6s						
PKI	Pulchoki	48.67	318	eP	P	01 13 21.6	-1.2
	13nm,0.5s						
PKIN	Phulchoki	48.69	318	eP	P	01 13 21.5	-1.3
	10nm,0.4s						
HHC	Hu-ho-hao-te	49.48	352	eP	P	01 13 30.3	+1.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,83nm,5.7s						
KOLN	Koldanda	50.01	317	eP	P	01 13 32.0	-0.8
	27nm,0.7s						
DANN	Dangsing	50.28	318	eP	P	01 13 33.8	-1.1
	44nm,0.5s						
PYUN	Piuthan	50.63	317	eP	P	01 13 36.4	-1.0
	22nm,0.5s						
GTA	Gaotai	50.91	340	eP	P	01 13 39.5	+0.3
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CN2	Changchun	52.13	5	eP	P	01 13 48.3	+0.3
USRK	Ussuriysk Ar.	53.45	11	P	P	01 13 56.5	-1.2
	1.4nm,0.5s,baz=198,slow=6.6,SNR=6.9						
RPZ	Rata Peaks	56.89	137	eP	P	01 14 23.7	+1.2
	103nm,1.8s						
SONA0	Songino Array	57.12	349	eP	P	01 14 23.9	-0.1
SONM	Songino Array	57.12	349	P	P	01 14 23.9	-0.1
	3.1nm,0.6s,baz=168,slow=8.1,SNR=18						
WMQ	Urumqi	59.41	334	eP	P	01 14 41.0	+1.1
WMQ				LR	LR		
	comp=N,410nm,38.8s						
WMQ				LR	LR		
	comp=E,670nm,39.2s						
WMQ				LR	LR		
	comp=Z,85nm,37.1s						
KSH	Kashi	62.43	323	P	P	01 15 03.3	+2.9
KSH				PP	PP	01 17 24.8	+4.7
KSH				S	S	01 23 12.4	-1.2
KSH				ScS	SKSac	01 24 30.6	-5.2
KSH				pmax	pmax		
	comp=Z,17nm,0.5s						
KSH				pmax	pmax		
	comp=Z,220nm,6.6s						
KSH				LR	LR		
	comp=N,310nm,9.5s						
KSH				LR	LR		
	comp=E,240nm,10.2s						
KSH				LR	LR		
	comp=Z,150nm,10.2s						
MK31	Makanchi Array	64.13	332	eP	P	01 15 10.7	-0.7
	2.8nm,0.6s						
MKAR	Makanchi Array	64.13	332	P	P	01 15 10.9	-0.5
	4.2nm,0.5s,baz=145,slow=7.3,SNR=38						
ARSB	Arslanbob	65.34	323	eP	P	01 15 18.8	-0.6
	6.3nm,0.8s						
GAR	Garm	65.62	320	eP	P	01 15 21.1	-0.2
	8.3nm,0.7s						
WSAR	Wadi Sarin	67.35	299	P	P	01 15 30.8	-1.7
	3.8nm,0.8s,baz=120,slow=6.0,SNR=5.4						
ZAA0	Zalesovo Array	68.62	339	eP	P	01 15 38.2	-1.4
	4.7nm,0.4s						
ZALV	Zalesovo Beam	68.62	339	P	P	01 15 38.0	-1.6
	4.5nm,0.3s,baz=142,slow=5.3,SNR=17						
KURK	Kurchatov	68.66	333	eP	P	01 15 39.2	-0.8
	2.0nm,0.8s						
PETK	Petropavlovsk-	69.20	23	P	P	01 15 42.6	-0.6
	3.3nm,0.6s,baz=202,slow=2.5,SNR=8.3						
PEA1	Petropavlovsk-	69.20	23	eP	P	01 15 42.6	-0.6
MAW	Mawson	70.09	200	P	P	01 15 50.0	+1.6
	1.7nm,0.7s,baz=74,slow=7.4,SNR=6.8						
OPO	Ambohidratompo	70.81	253	P	P	01 15 55.0	+1.0
	1.4nm,0.5s,baz=93,slow=3.8,SNR=4.3						
VNDA	Vanda	72.57	171	P	P	01 16 05.7	+2.5
	1.6nm,0.5s,baz=316,slow=6.7,SNR=35						
VNDA	Vanda	72.57	171	eP	P	01 16 03.8	+0.6
	5.0nm,1.3s						
ABKAR	Akbulak array	77.36	325	eP	P	01 16 30.2	-0.9
	1.8nm,0.7s						
SYO	Syowa Base	78.72	201	↓eP	P	01 16 42.6	+4.4
TIXI	Tiksi	80.03	3	eP	P	01 16 43.8	-1.4
	9.4nm,0.5s						
BOSA	Boshof	89.88	241	P	P	01 17 37.6	+2.2
	1.2nm,0.5s,baz=146,slow=3.6,SNR=3.9						
BRTR	Keskin Array B	92.18	310	LR	LR	02 03 29.0	
	comp=Z,14nm,19.9s,baz=76,slow=38						
ILAR	Eielson Array	98.95	26	P	P	01 18 13.9	-2.0
	0.2nm,0.5s,baz=238,slow=5.2,SNR=5.0						
ILB	Eielson Array	98.95	26	eP	P	01 18 13.8	-2.0
	6.9nm,1.6s						
YKA	Yellowknife Ar	113.31	24	PKiKP	PKiKP	01 23 11.3	-0.9
	0.4nm,0.5s,baz=292,slow=2.0,SNR=4.6						
TORD	Torodi Ar. Bea	118.95	280	PKP	PKPdf	01 23 23.2	-1.3
	0.7nm,0.6s,baz=31,slow=2.3,SNR=11						
TOA1	Torodi Ar. Sit	118.95	280	ePKPdf	PKPdf	01 23 23.2	-1.3
NV01	Mina Array Sit	120.11	50	ePKPdf	PKPdf	01 23 25.1	-1.3
NVAR	Mina Array Bea	120.11	50	PKP	PKPdf	01 23 25.1	-1.3
	0.7nm,0.7s,baz=329,slow=3.2,SNR=2.9						
MSO	Missoula	120.53	40	P	PKPdf	01 23 26.2	-0.6
	baz=293						
EDW2	Edwards Air Fo	121.16	54	P	PKPdf	01 23 28.4	+0.1
	baz=282						
HLID	Hailey	121.40	44	ePKPdf	PKPdf	01 23 28.4	-0.3
HLID	Hailey	121.40	44	P	PKiKP	01 23 28.8	-0.1
	baz=290						
BOZ	Bozeman (W)	122.49	40	P	PKPdf	01 23 30.4	-0.2
	baz=294						
EGMT	Eagleton	122.61	37	P	PKPdf	01 23 29.9	-0.8
	baz=297						
LAO	LASA Array	125.36	37	P	PKiKP	01 23 36.3	-0.1
	baz=300						
RSSD	Black Hills	127.97	39	ePKPdf	PKPdf	01 23 41.1	-0.2
RSSD	Black Hills	127.97	39	P	PKPdf	01 23 41.1	-0.2
	baz=300						
T25A	Trinidad	130.91	47	P	PKiKP	01 23 47.7	-0.3
	baz=295						
LTX	Lajitas	134.34	57	ePKPdf	PKPdf	01 23 53.5	-0.1
TXAR	Lajitas Array	134.34	57	PKP	PKPdf	01 23 53.5	-0.1
	0.4nm,0.7s,baz=191,slow=2.6,SNR=3.9						
D47A	Chapleau	136.79	23	P	PKPdf	01 23 58.0	+0.4
	baz=326						
U40A	Yellville	139.35	42	P	PKPdf	01 24 02.8	+0.2
	baz=306						
W39A	Magazine	139.38	44	P	PKPdf	01 24 03.2	+0.6
	baz=303						
I49A	Point Hope	139.47	25	P	PKiKP	01 24 04.1	-0.8
	baz=325						
J48A	Bridge Port	139.57	27	P	PKiKP	01 24 05.8	+0.7
	baz=323						
BWLO	Walkerton	140.01	23	P	PKiKP	01 24 05.8	-0.2
	baz=327						
L50A	Kingsville	141.00	27	P	PKiKP	01 24 07.0	-1.1
	baz=323						
T47A	Sharon Grove	142.54	36	P	PKPdf	01 24 03.4	-4.8
	baz=313						
S48A	Wiedeman Farm,	142.68	35	P	PKPdf	01 24 03.7	-4.8
	baz=315						
WVT	Waverly	142.68	38	P	PKPdf	01 24 03.7	-4.9
	baz=311						
V46A	Holladay	142.72	39	P	PKPdf	01 24 03.4	-5.2
	baz=311						
U47A	Clarksville	142.80	37	P	PKPdf	01 24 03.8	-4.9
	baz=312						
T48A	Bowling Green	142.87	36	P	PKPdf	01 24 04.4	-4.4
	baz=314						
Q50A	Georgetown	142.93	31	P	PKPdf	01 24 04.3	-4.6
	baz=319						
W46A	Michie	142.98	40	P	PKPdf	01 24 04.3	-4.8
	baz=310						
S49A	Springfield	143.01	34	P	PKPab	01 24 04.7	0.0
	baz=316						
V47A	Nunnelly	143.07	38	P	PKPab	01 24 04.6	-0.4
	baz=312						
Q51A	Peebles	143.11	30	P	PKPab	01 24 04.6	-0.4
	baz=320						
R50A	Paris	143.16	32	P	PKPab	01 24 04.9	-0.4
	baz=318						
U48A	Cassie Pea, Po	143.19	36	P	PKPab	01 24 05.2	-0.3
	baz=314						
X46A	Booneville	143.21	41	P	PKPab	01 24 05.3	-0.3
	baz=309						
T49A	Edmonton	143.36	35	P	PKPab	01 24 05.7	-0.4
	baz=315,SNR=5.5						
V48A	Smith Brothers	143.55	38	P	PKPab	01 24 06.0	-0.9
	baz=312						
S50A	Richmond	143.57	33	P	PKPab	01 24 06.2	-0.7
	baz=318						
U49A	Red Boiling Sp	143.63	36	P	PKPab	01 24 06.6	-0.6
	baz=314,SNR=19						
P53A	Whipple	143.69	28	P	PKPab	01 24 07.4	+0.1
	baz=323						
X47A	Russelville	143.70	40	P	PKPab	01 24 06.4	-1.1
	baz=310						
T50A	Nancy	143.81	34	P	PKPab	01 24 07.4	-0.5
	baz=316,SNR=16						
N56A	West Decatur	143.83	23	P	PKPab	01 24 07.3	-0.6
	baz=329						
W48A	Pulaski	143.88	38	P	PKPab	01 24 07.1	-1.1
	baz=312,SNR=7.2						
O55A	Ligonier	144.02	25	P	PKPab	01 24 08.2	-0.5
	baz=327						
S51A	Beattyville	144.03	32	P	PKPab	01 24 07.8	-0.9
	baz=319						
V49A	McMinnville	144.08	37	P	PKPab	01 24 07.8	-1.2
	baz=314						
Q53A	Leroy	144.13	29	P	PKPab	01 24 08.2	-0.8
	baz=323						
SSPA	Standing Stone	144.23	23	ePKPdf	PKPab	01 24 08.6	-0.8
SSPA	Standing Stone	144.23	23	P	PKPab	01 24 08.5	-0.8
	baz=330						
U50A	Jamestown	144.24	35	P	PKPab	01 24 08.8	-0.8
	baz=316,SNR=13						
MCWV	Mont Chateau	144.25	26	P	PKPab	01 24 08.9	-0.5
	baz=326						
N57A	Milroy	144.26	23	P	PKPab	01 24 08.7	-0.8
	baz=330						
X48A	Hartselle	144.26	39	P	PKPab	01 24 08.2	-1.5
	baz=311,SNR=10						
O56A	Blue Knob Stat	144.28	24	P	PKPab	01 24 08.9	-0.7
	baz=328						
W49A	Belvidere	144.30	38	P	PKPab	01 24 08.6	-1.3
	baz=312,SNR=8.7						
R53A	Hurricane	144.34	30	P	PKPab	01 24 08.9	-1.0
	baz=322						
T51A	Gray	144.34	33	P	PKPab	01 24 09.1	-0.8
	baz=317,SNR=8.3						
Q54A	Coxs Mills	144.35	28	P	PKPab	01 24 09.1	-0.8
	baz=324,SNR=5.0						
P55A	Reedsville	144.38	26	P	PKPab	01 24 09.3	-0.7
	baz=326						
Y48A	Jasper	144.53	40	P	PKPab	01 24 09.1	-1.6
	baz=310						
HRV	Adam Dziewonsk	144.54	14	P	PKPab	01 24 09.6	-0.9
	baz=341						
147A	Livingston	144.57	43	P	PKPab	01 24 09.8	-1.1
	baz=307						
V50A	Pikevile	144.62	36	P	PKPab	01 24 09.5	-1.5
	baz=315,SNR=7.8						
X49A	Woodville	144.67	39	P	PKPab	01 24 09.9	-1.3
	baz=312,SNR=8.5						
Q55A	Buckhannon	144.69	27	P	PKPab	01 24 10.1	-1.1
	baz=325						
O57A	Amberson	144.69	23	P	PKPab	01 24 10.0	-1.2
	baz=330						
U51A	La Follette	144.73	34	P	PKPab	01 24 10.8	-0.6
	baz=317,SNR=9.5						
T52A	Hallie	144.75	32	P	PKPab	01 24 10.4	-1.0
	baz=319						
S53A	Williamson	144.75	31	P	PKPab	01 24 10.9	-0.6
	baz=321						
N59A	State Game Lan	144.76	20	ePKPbc	PKPab	01 24 10.4	-0.9
N59A	State Game Lan	144.76	20	P	PKPab	01 24 10.5	-0.9
	baz=333,SNR=7.9						
P56A	Dayton Farm, R	144.81	25	P	PKPab	01 24 10.4	-1.2
	baz=327,SNR=6.5						
W50A	Signal Mountai	144.82	37	P	PKPab	01 24 10.4	-1.4
	baz=314,SNR=12						
TZTN	Tazewell	144.87	33	P	PKPbc	01 24 10.9	-1.0
	baz=318,SNR=8.5						
V51A	Loudon	144.95	35	P	PKPbc	01 24 11.1	-1.1
	baz=316,SNR=11						
Y49A	Blount Mountai	145.04	40	P	PKPbc	01 24 11.0	-1.5
	baz=311,SNR=18						
Q56A	Snyder Ridge,	145.04	26	P	PKPbc	01 24 11.2	-1.2
	baz=326,SNR=6.1						
M61A	Granite Spring	145.05	18	P	PKPbc	01 24 11.4	-0.9
	baz=336						
148A	Greensboro	145.06	42	P	PKPbc	01 24 11.5	-1.0
	baz=308						
S54A	Dingess, Beckl	145.07	30	P	PKPbc	01 24 11.5	-1.0
	baz=322						
U52A	Thorn Hill	145.07	33	P	PKPbc	01 24 11.3	-1.3
	baz=318,SNR=7.4						
T53A	Wise	145.08	32	P	PKPbc	01 24 11.5	-1.2
	baz=320						
X50B	Fort Payne	145.12	38	P	PKPbc	01 24 11.1	-1.6
	baz=313,SNR=12						
O59A	Robesonia	145.15	21	P	PKPbc	01 24 11.5	-1.1
	baz=332						
P57A	Homestead Farm	145.17	24	P	PKPbc	01 24 11.4	-1.3
	baz=328						
W51A	Cleveland	145.17	36	P	PKPbc	01 24 11.6	-1.2
	baz=314,SNR=6.5						
LRAL	Lakeview Retre	145.19	41	P	PKPbc	01 24 12.0	-1.0
	baz=309,SNR=12						
PAL	Palisades	145.29	18	P	PKPdf	01 24 12.3	-0.7
	baz=336						
V52A	Sevierville	145.35	34	P	PKPdf	01 24 12.6	-0.6
	baz=317,SNR=8.5						
Q57A	Strasburg	145.38	25	P	PKPdf	01 24 12.6	-0.6
	baz=328						
Z49A	Columbiana	145.40	41	P	PKPdf	01 24 12.6	-0.8
	baz=310,SNR=9.6						
O60A	Telford	145.42	20	P	PKPdf	01 24 12.4	-0.7
	baz=333						
Y50A	Piedmont	145.44	39	P	PKPdf	01 24 12.5	-1.0
	baz=312,SNR=9.4						
T54A	Tazewell	145.51	31	P	PKPdf	01 24 12.8	-0.8
	baz=321						
U53A	Fall Branch	145.52	33	P	PKPdf	01 24 12.7	-0.9
	baz=319						
X51A	Calhoun	145.53	37	P	PKPdf	01 24 12.8	-0.7
	baz=314						
GO02	Mina Guanaco	145.54	165	ePKPdf	PKPab	01 24 15.3	+0.3
149A	Jones	145.60	42	P	PKPdf	01 24 13.4	-0.3
	baz=309,SNR=14						
P59A	Jarrettsville	145.68	22	P	PKPdf	01 24 13.0	-0.6
	baz=331						
Z50A	Ashland	145.75	40	P	PKPdf	01 24 13.5	-0.5
	baz=311,SNR=9.8						
249A	Camden	145.77	43	P	PKPdf	01 24 14.2	+0.1
	baz=308,SNR=7.4						
P60A	Greenville	145.79	21	P	PKPdf	01 24 13.3	-0.5
	baz=332						
U54A	Nelsons Funny	145.80	32	P	PKPdf	01 24 14.0	-0.1
	baz=320						
Y51A	Rockmart	145.85	38	P	PKPdf	01 24 14.1	-0.1
	baz=313						
V53A	Saluda	145.91	34	P	PKPdf	01 24 14.3	+0.1
	baz=318,SNR=14						
R57A	Stanardsville	145.95	26	P	PKPdf	01 24 14.1	0.0
	baz=327						
X52A	Dahlonega	146.07	36	P	PKPdf	01 24 14.7	+0.1
	baz=315						
W53A	Cullowhee	146.08	35	P	PKPdf	01 24 15.1	+0.4
	baz=317,SNR=11						
349A	Repton	146.10	44	P	PKPbc	01 24 15.4	-0.4
	baz=307,SNR=5.3						
150A	Eclectic	146.10	41	P	PKPdf	01 24 14.6	0.0
	baz=310,SNR=7.6						
R58A	Rapidan	146.17	25	P	PKPdf	01 24 14.7	+0.2
	baz=328						
P61A	Hammonton	146.21	20	P	PKPdf	01 24 14.8	+0.3
	baz=334						
U55A	TA2, Sparta	146.21	31	P	PKPdf	01 24 14.8	0.0
	baz=321						
T56A	Rocky Mt	146.30	29	P	PKPdf	01 24 15.1	+0.3
	baz=323						
V54A	Nebo	146.30	33	P	PKPdf	01 24 15.2	+0.4
	baz=319						
BRAL	Brewton	146.30	44	P	PKPbc	01 24 16.2	-0.2
	baz=307,SNR=6.5						
250A	Grady	146.34	42	ePKPdf	PKPdf	01 24 15.7	+0.7
250A	Grady	146.34	42	P	PKPdf	01 24 15.7	+0.7
	baz=309,SNR=6.4						
X53A	Estanollee	146.48	36	P	PKPbc	01 24 16.2	-0.6
	baz=316,SNR=5.8						
Y52A	Lilburn	146.49	37	P	PKPbc	01 24 16.2	-0.7
	baz=314,SNR=7.8						
R58B	Mineral	146.51	26	P	PKPdf	01 24 15.7	+0.6
	baz=328						
151A	Opelika	146.60	40	P	PKPdf	01 24 16.1	+0.7
	baz=311,SNR=10						
V55A	Taylorsville	146.63	32	P	PKPdf	01 24 16.1	+0.7
	baz=320						
350A	Dozier	146.63	43	P	PKPbc	01 24 16.8	-0.5
	baz=308						
W54A	Cherokee Point	146.69	34	P	PKPbc	01 24 16.6	-0.8
	baz=318						
T57A	Hurt	146.69	28	P	PKPdf	01 24 16.2	+0.7
	baz=324						
Z52A	Williamson	146.73	39	P	PKPbc	01 24 17.0	-0.6
	baz=313						
Y53A	Monroe	146.78	37	P	PKPbc	01 24 17.1	-0.6
	baz=315,SNR=7.5						
251A	Midway	146.83	41	P	PKPbc	01 24 17.2	-0.7
	baz=310,SNR=11						
152A	Waverly Hall	146.89	40	P	PKPbc	01 24 17.2	-0.9
	baz=312,SNR=11						
X54A	Belton	146.98	35	P	PKPbc	01 24 17.6	-0.6
	baz=317,SNR=8.1						
V56A	Mocksville	147.03	31	P	PKPdf	01 24 17.2	+1.1
	baz=322						
T58A	Grand View Acr	147.07	27	P	PKPdf	01 24 17.1	+1.0
	baz=326						
KMSC	Kings Mountain	147.11	33	P	PKPbc	01 24 17.5	-1.1
	baz=320						
U57A	Blanch	147.11	29	P	PKPdf	01 24 17.3	+1.2
	baz=324						
GOGA	Sodfrey	147.16	37	P	PKPbc	01 24 17.9	-0.8
	baz=314,SNR=6.6						
Y54A	Tignall	147.30	36	P	PKPbc	01 24 18.5	-0.6
	baz=316						
252A	Lumpkin	147.32	40	P	PKPbc	01 24 18.5	-0.8
	baz=311,SNR=8.6						
V57

baz=316
353A Camilla 148.08 41 P PKPbc 01 24 20.7 -0.6
baz=311,SNR=5.3
254A Abbeville 148.27 39 P PKPbc 01 24 21.1 -0.6
baz=313
155A Kite 148.31 37 P PKPbc 01 24 21.2 -0.6
baz=315
453A Whigham 148.33 42 P PKPbc 01 24 21.7 -0.3
baz=310
TIGA Tifton 148.42 40 P PKPbc 01 24 21.5 -0.7
baz=312
Z56A Williston 148.44 35 P PKPbc 01 24 21.9 -0.2
baz=318
255A Hazlehurst 148.79 38 P PKPbc 01 24 22.6 -0.5
baz=314
Z57A Bowman 148.84 34 P PKPbc 01 24 22.7 -0.4
baz=319
156A Sylvania 148.86 36 P PKPbc 01 24 22.5 -0.7
baz=317
Y58A Scranton 148.94 32 P PKPbc 01 24 22.6 -0.7
baz=321
W60A Pink Hill 149.00 28 P PKPbc 01 24 22.5 -1.0
baz=325
256A Glennville 149.11 37 P PKPbc 01 24 23.0 -0.9
baz=315
455A Stateville 149.25 40 P PKPbc 01 24 23.7 -0.5
baz=312
356A Blackshear 149.42 39 P PKPbc 01 24 24.1 -0.5
baz=314
555A McAlpin 149.69 41 P PKPbc 01 24 25.0 -0.4
baz=311
456A Hilliard 149.90 39 P PKPbc 01 24 25.2 -0.6
baz=314
656A Willston 150.47 42 P PKPbc 01 24 26.0 -1.3
baz=311
657A Interlachen 150.76 41 P PKPbc 01 24 26.8 -1.1
baz=312
857A Zephyrhills 151.38 43 P PKPbc 01 24 28.5 -1.0
baz=310
758A Lake Helen 151.61 41 P PKPbc 01 24 28.3 -1.7
baz=312
058A Arcadia 152.44 45 P PKPbc 01 24 30.9 -1.0
baz=309
LPAZ La Paz 154.38 163 PKPab PKPab 01 24 51.8 0.0
0.7nm,0.5s,baz=90,slow=2.0,SNR=4.7

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*CRAAG **14** 01:08:40.3,35°.71N×5°.83E,MI3.2*
*ISCJB **14** 01:08:42.2±0.5,35°.70N±0°.05×5°.77E±0°.03,h12km, mb3.4/4,MS3.6/1,Error ellipse: s-maj=7.0km s-min=3.5km az=3.8*
*IDC **14** 01:08:42.1±1.4,35°.62N×5°.85E,h0km,mb3.3/4,mb1 3.4/7, mb1mx3.3/42,mbtmp3.4/7,ML3.4/3,MS2.9/2,Ms1 2.9/2, ms1mx2.2/29,Error ellipse: s-maj=32.5km s-min=20.0km az=158.0*
*MDD **14** 01:08:44.0±0.4,35°.62N×6°.04E,h0km,mb4.1/16,Error ellipse: s-maj=4.5km s-min=2.3km az=163.0,PRXIMO*
ISC 14 01:08:43.5±0.9,35°.71N±0°.07×5°.84E±0°.03,h12km,n47, σ1§46/56,mb3.4/4,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKHR	Kef el Ahmar	0.41	319	P	Pg	01 08 49.5	-2.1
CKHR	Kef el Ahmar	0.41	319	P	Pg	01 08 49.5	-2.1
CTEI	Djebel Teioual	0.58	52	P	Pg	01 08 52.9	-1.9
CTEI	Djebel Teioual	0.58	52	P	Pg	01 08 52.9	-1.9
SET	Setif	0.61	324	P	Pg	01 08 54.0	-1.3
SET	Setif	0.61	324	P	Pg	01 08 54.0	-1.3
CASM	Ain Smara	0.76	44	P	Pb	01 08 58.7	0.0
CASM	Ain Smara	0.76	44	P	Pb	01 08 58.7	0.0
DFRA	Djebel Bou Aff	0.83	2	P	Pg	01 08 59.4	-0.2
DFRA	Djebel Bou Aff	0.83	2	P	Pg	01 08 59.4	-0.2
CKFL	Kef-Lekhel	0.99	46	P	Pg	01 09 02.0	-0.6
CKFL	Kef-Lekhel	0.99	46	P	Pg	01 09 02.0	-0.6
CAEH	'Ain El Ouahch	1.34	37	P	Pn	01 09 06.0	-2.1
CAEH	'Ain El Ouahch	1.34	37	P	Pn	01 09 06.0	-2.1
ABSA	Djebel Ababsia	1.44	67	P	Pg	01 09 19.0	+7.9
CABS	Djebel Ababsia	1.44	67	P	Pg	01 09 19.0	+7.9
CMAH	Djebel Manchou	1.57	54	P	Pn	01 09 10.0	-1.2
CMAH	Djebel Manchou	1.57	54	P	Pn	01 09 10.0	-1.2
KEST	Kesra	2.85	89	Pn	Pn	01 09 28.6	-0.3
	1.2nm,0.3s,baz=207,slow=4.0,SNR=43						
KEST				Sn	Sn	01 10 03.4	+0.2
	2.8nm,0.3s,baz=326,slow=11,SNR=4.6						
KEST				LR	LR	01 10 08.1	
	comp=Z,41nm,19.3s,baz=280,slow=30						
OKGL	Djebel Kef Gue	4.24	276	P	Pn	01 09 48.5	+0.7
	2.0nm,0.1s,SNR=7.9						
ETOS	Mallorca	4.71	330	P	Pn	01 09 55.4	+1.0
	8.5nm,0.3s,SNR=20						
ETOS				S	Sn	01 10 49.0	+0.1
	2.6nm,0.4s,SNR=7.9						
EIBI	Ibiza	4.88	314	P	Pn	01 09 57.4	+0.7
	5.7nm,0.5s,SNR=15						
EIBI				S	Sn	01 10 52.3	-0.7
	4.2nm,0.3s						
EMUR	La Murta	6.07	293	P	Pn	01 10 13.6	+0.5
	1.3nm,0.3s,SNR=5.3						
EMUR				S	Sn	01 11 22.3	-0.2
	4.3nm,0.6s						
ETOB	Tobarra	6.59	299	P	Pn	01 10 21.5	+1.3
	1.6nm,0.3s,SNR=9.0						
ETOB				S	Sn	01 11 35.0	-0.2
	1.8nm,0.5s						
CFON	Fontmartina	6.60	337	P	Pn	01 10 21.0	+0.5
	0.7nm,0.2s,SNR=7.9						
ENIJ	Nijar	6.62	283	P	Pn	01 10 21.6	+1.0
	1.3nm,0.3s,SNR=7.9						
ENIJ				S	Sn	01 11 35.3	-0.6
	1.4nm,0.3s,SNR=7.9						
ECHE	Chera	6.65	308	P	Pn	01 10 22.3	+1.3
	1.4nm,0.4s,SNR=7.9						
ECHE				S	Sn	01 11 36.7	0.0
	1.1nm,0.4s,SNR=7.9						
EPOB	Poblet	6.76	328	P	Pn	01 10 23.6	+1.0
	0.9nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	6.81	315	P	Pn	01 10 24.4	+1.1
	0.8nm,0.4s,SNR=7.9						
EMOS				S	Sn	01 11 37.7	-3.3
	1.9nm,0.6s,SNR=7.9						
EMIR	Miracle	7.05	333	P	Pn	01 10 28.4	+1.9
	3.5nm,0.4s,SNR=9.0						
EMIR				S	Sn	01 11 44.0	-2.7
	4.3nm,0.5s						
SESP	Santiago Espad	7.14	292	P	Pn	01 10 28.8	+0.9
	3.2nm,0.5s,SNR=7.9						
SESP				S	Sn	01 11 48.9	-0.1
	5.0nm,0.8s,SNR=7.9						
EBER	Berja	7.15	282	P	Pn	01 10 28.1	+0.1
	1.8nm,0.4s,SNR=11						
EBER				S	Sn	01 11 48.3	-1.0
	1.1nm,0.3s						
EQES	Quesada	7.45	289	P	Pn	01 10 34.0	+1.9
	1.2nm,0.3s,SNR=14						
EQES				S	Sn	01 11 54.0	-2.7
	1.6nm,0.6s,SNR=7.9						
CSOR	Sort	7.60	333	P	Pn	01 10 36.5	+2.4
	1.4nm,0.3s,SNR=7.9						
EQUE	Quentar	7.63	284	P	Pn	01 10 36.4	+1.9
	2.7nm,0.4s,SNR=5.9						
ELGU	Los Guajares,	7.73	281	P	Pn	01 10 37.0	+1.0
	1.3nm,0.3s,SNR=7.9						
ESAC	San Caprasio	7.77	322	P	Pn	01 10 38.8	+2.4
	5.2nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	8.14	283	P	Pn	01 10 42.7	+1.0
	0.4nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	8.72	300	Pn	Pn	01 10 50.0	+0.6
	0.3nm,0.3s,baz=113,slow=14,SNR=7.4						
ATE	Arette	8.94	327	P	Pn	01 10 54.0	+1.6
	0.7nm,0.4s,SNR=7.9						
MDT	Midelt	9.12	255	Pn	Pn	01 10 54.9	-0.1
	0.2nm,0.3s,baz=81,slow=18,SNR=8.1						
EALK	Alkurruntz	9.40	325	P	Pn	01 11 02.1	+3.2
	1.7nm,0.5s,SNR=7.9						
BRTR	Keskin Array B	22.31	71	P	P	01 13 43.1	+2.1
	0.5nm,0.8s,baz=271,slow=11,SNR=3.5						
AKASG	Malin Array Be	22.56	41	P	P	01 13 43.7	+0.4
	0.5nm,0.4s,baz=241,slow=9.5,SNR=2.9						
TORD	Torodi Ar. Bea	22.77	190	P	P	01 13 45.2	-0.7
	1.3nm,0.7s,baz=360,slow=10,SNR=7.0						
NRIK	Noril'sk	54.20	26	LR	LR	01 42 08.5	
	comp=Z,54nm,19.6s,baz=137,slow=37						
MKAR	Makanchi Array	56.41	53	P	P	01 18 25.7	+0.9
	0.6nm,0.7s,baz=287,slow=5.2,SNR=3.2						

JMA 14 01:22:21.7±0.2,37°.94N×142°.41E,h44km±3km,M3.7,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.83	297	P	Pn	01 22 37.1	+0.1
JIKH				S	Sn	01 22 47.8	-0.3
JIO	Ouri	0.98	302	P	Pn	01 22 39.5	+0.5
JIO				S	Sn	01 22 51.8	0.0
JKMT	Kesennumamotoy	1.14	320	P	Pn	01 22 41.5	+0.3
JKMT				S	Sn	01 22 55.9	+0.3
JMM	Marumori	1.28	267	P	Pn	01 22 43.5	+0.4
JMM				S	Sn	01 22 59.2	+0.1
JFK	Kawauchi	1.35	245	P	Pn	01 22 44.0	-0.1
JFK				eS	Sn	01 23 00.7	-0.1
JMK	Ichinoseki	1.38	318	P	Pn	01 22 45.1	+0.7
JMK				eS	Sn	01 23 02.1	+0.7
JOU	Okura	1.44	288	P	Pn	01 22 46.4	+1.1
JFT	Otama	1.70	256	P	Pn	01 22 50.2	+1.3
JFT				eS	Sn	01 23 11.6	+2.2
JOM	Ohasama	1.76	331	P	Pn	01 22 50.5	+0.8
JYS	Shirataka	1.87	279	P	Pn	01 22 52.7	+1.5
JYK	Kaneyama	1.88	302	P	Pn	01 22 52.7	+1.3
JRG	Rokugo	2.01	317	P	Pn	01 22 54.6	+1.4
JRG				eS	Sn	01 23 20.0	+2.9
JANG	Nango	2.53	344	P	Pn	01 23 01.2	+1.0
JANG				eS	Sn	01 23 31.2	+1.4
JAW	Awa shima	2.54	283	P	Pn	01 23 02.2	+1.8

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*ISCJB **14** 01:25:17.1±0.6,22°.2S±0°.1×179°.3W±0°.1,h550km, mb3.7/14,Error ellipse: s-maj=17.7km s-min=12.9km az=38.0*
*IDC **14** 01:25:17.1±3.7,22°.17S×179°.25W,h539km±41km, mb3.3/14,mb1 3.5/15,mb1mx3.3/39,mbtmp4.2/15,Error ellipse: s-maj=20.0km s-min=17.2km az=62.0*
ISC 14 01:25:17.9±0.6,22°.2S±0°.1×179°.3W±0°.1,h550km,n38, σ0§90/42,mb3.8/14,8C-1D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	16.28	190	P	P	01 28 37.8	-2.0
	1.5nm,0.3s,baz=270,slow=5.1,SNR=8.9						
RPZ	Rata Peaks	22.88	198	P	P	01 29 39.8	+0.2
	9.0nm,0.6s,baz=358,slow=0.9,SNR=7.5						
CTA	Charters Tower	32.18	267	P	P	01 31 00.2	-1.0
	1.2nm,0.4s,baz=72,slow=6.4,SNR=3.5						
STKA	Stephens Creek	35.99	246	P	P	01 31 32.9	-0.1
	3.1nm,0.6s,baz=94,slow=10,SNR=8.1						
ASAR	Alice Springs	43.00	259	P	P	01 32 29.7	+0.3
	0.9nm,0.3s,baz=94,slow=8.5,SNR=9.4						
ASAR				PcP	pP	01 34 06.7	+0.2
	1.3nm,0.8s,baz=101,slow=4.8,SNR=5.0						
WRA	Warramunga Arr	43.22	264	P	P	01 32 30.8	-0.4
	1.0nm,0.3s,baz=104,slow=7.5,SNR=7.6						
FITZ	Fitzroy Crossi	51.65	264	P	P	01 33 35.1	+0.8
	1.1nm,0.3s,baz=127,slow=5.1,SNR=6.3						
VNDA	Vanda	56.10	185	P	P	01 34 06.1	+1.4
	0.4nm,0.5s,baz=18,slow=7.4,SNR=5.5						
PETK	Petropavlovsk-	77.64	346	P	P	01 36 17.4	-0.1
	3.0nm,0.6s,baz=120,slow=6.2,SNR=6.9						
MAW	Mawson	79.55	200	P	P	01 36 28.1	+0.6
	0.9nm,0.7s,baz=90,slow=4.0,SNR=4.9						
WHN	Wuhan	82.52	307	P	P	01 36 49.0	+5.5
NVAR	Mina Array Bea	83.08	44	P	P	01 36 46.8	+0.3
	1.1nm,0.7s,baz=226,slow=10,SNR=6.1						
TXAR	Lajitas Array	88.98	58	P	P	01 37 15.6	+1.0
	0.9nm,0.8s,baz=232,slow=6.1,SNR=6.6						
CMAR	Chiang Mai Arr	89.58	290	P	P	01 37 19.2	+1.6
	1.3nm,0.3s,baz=133,slow=2.5,SNR=5.5						
ILAR	Eielson Array	90.25	13	P	P	01 37 18.6	-1.0
	0.9nm,0.8s,baz=227,slow=4.2,SNR=6.8						
PDAR	Pinedale Array	91.02	44	P	P	01 37 23.3	-0.8
	0.3nm,0.4s,baz=172,slow=3.0,SNR=5.6						
ARCES	ARCESS Array B	130.39	349	PKP	PKPdf	01 43 24.5	-0.9
	5.8nm,0.3s,baz=48,slow=1.8,SNR=6.7						
FINES	FINESS Array B	137.07	342	PKP	PKPdf	01 43 36.1	-1.9
	1.7nm,0.9s,baz=111,slow=3.1,SNR=3.5						
NB2	NORSAR Subarra	140.53	352	PKP	PKPpre	01 43 37.6	
	comp=Z,0.4nm,0.5s,baz=10,slow=3.2						
NOA	NORSAR Array B	140.53	352	PKhKP	PKPpre	01 43 37.6	
	comp=Z,0.4nm,0.6s,baz=15,slow=4.6,SNR=4.1						
NOA				PKP	PKPdf	01 43 45.8	+1.4
	comp=Z,0.3nm,0.7s,baz=12,slow=3.9,SNR=2.6						
AKASG	Malin Array Be	143.91	329	PKP	PKPbc	01 43 49.0	-0.9
	comp=Z,1.5nm,0.5s,baz=40,slow=4.4,SNR=17						
BRTR	Keskin Array B	147.01	319	PKPbc	PKPbc	01 43 59.3	-0.4
	comp=Z,1.6nm,0.6s,baz=143,slow=4.5,SNR=13						
KOLS	Kolonicke sedl	148.33	333	ePKP	PKPbc	01 44 03.2	+0.8
OSTC	Ostas	149.23	341⇑	ePKP	PKPbc	01 44 05.2	+0.7
OSTC				ePKPAB	PKPab	01 44 12.8	+1.5
LANS	Liptovska Anna	149.29	336	ePKP	PKiKP	01 44 06.1	+0.5
UPC	Upice	149.34	341⇑	ePKP	PKPbc	01 44 05.1	+0.3
DPC	Dobruska-Polom	149.38	340⇑	ePKP	PKPbc	01 44 05.4	+0.5
CLL	Collm	149.44	345	i PKPbc	PKPbc	01 44 03.9	-1.1
	comp=Z,14nm,1.2s						
CLL				⇑iPKPab	PKPab	01 44 10.9	-1.2
	comp=Z,5.0nm,0.8s						
BRG	Bergjesshubel	149.60	343	i PKP	PKPbc	01 44 05.6	+0.2
	comp=Z,8.5nm,1.0s						
PVCC	Panska Ves	149.74	342⇑	ePKP	PKPbc	01 44 06.2	+0.5
VYHS	Vyhne	150.07	336	ePKP	PKPbc	01 44 06.9	+0.3
KOLL	Kolacno	150.17	336	ePKP	PKPbc	01 44 07.3	+0.5
GOPC	GO Pecny, Ondr	150.23	342⇑	ePKP	PKPbc	01 44 07.0	+0.1
PRU	Pruhonice	150.23	342⇑	ePKP	PKPbc	01 44 07.0	+0.1
PRU				ePKPAB	PKPab	01 44 15.9	+0.4
MODS	Modra-Piesok	150.75	337	ePKP	PKPbc	01 44 07.8	-0.4
KHC	Kasperske Hory	151.28	342⇑	ePKP	PKPbc	01 44 09.0	-0.4
KHC				ePKPAB	PKPab	01 44 20.4	+0.4
GERES	GERESS Array B	151.50	342	PKPbc	PKPbc	01 44 09.7	-0.3
	comp=Z,0.6nm,0.4s,baz=45,slow=2.1,SNR=6.3						
GERES				PKPab	PKPab	01 44 20.9	-0.1
	comp=Z,0.4nm,0.6s,baz=350,slow=5.2,SNR=2.9						
TORD	Torodi Ar. Bea	170.92	186	PKP	PKPdf	01 44 22.1	-1.9
	comp=Z,0.5nm,0.7s,baz=315,slow=0.6,SNR=3.2						
TORD				PKPab	PKPab	01 45 45.7	-0.7
	comp=Z,0.5nm,0.9s,baz=168,slow=4.0,SNR=3.3						

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*ISCJB **14** 01:32:15.4±0.3,1°.60N±0°.04×127°.79E±0°.05,h10km, mb4.3/25,MS3.2/4,Error ellipse: s-maj=7.8km s-min=5.5km az=154.3*
*IDC **14** 01:32:15.7±0.7,1°.58N×127°.74E,h0km,mb4.0/11, mb1 4.2/12,mb1mx3.9/40,mbtmp4.0/12,ML3.7/1,MS3.4/5, Ms1 3.4/5,ms1mx2.9/41,Error ellipse: s-maj=31.7km s-min=13.7km az=68.0*
*BJI **14** 01:32:15.4±0.0,1°.38N×128°.07E,h20km,mb4.5/5, mB4.9/4*
*NEIC **14** 01:32:16.4±1.1,1°.56N×127°.76E,h5km±5km,mb4.4/15, Error ellipse: s-maj=20.8km s-min=11.4km az=105.0*
*DJA **14** 01:32:22.5±1.0,0°.N±9°.×12°.7E±°,h18km±11km,M4.2/6, mb4.6/6,MLv4.0/6*
ISC 14 01:32:17.4±0.5,1°.53N±0°.06×127°.70E±0°.07,h10km,n55, σ1§15/43,mb4.3/25,MS3.3/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.82	203	ePg	Pg	01 32 33.0	-0.2
TNTI	Ternate	0.82	203	P	Pg	01 32 33.5	+0.2
SGSI	Sangihe	3.04	315	P	Pg	01 33 29.6	+14
KMSI	Cibinong	3.83	256	P	Pn	01 33 19.6	+3.1
SIJI	Sorong	4.29	124	Pn	Pn	01 33 23.5	+0.6
	3.9nm,0.3s,baz=313,slow=7.4,SNR=13						
SIJI				Sn	Sn	01 34 11.9	-1.1
	2.5nm,0.3s,baz=18,slow=20,SNR=2.9						
LUWI	Luwuk	5.55	243	ePn	Pn	01 33 41.7	+1.7
LUWI	Luwuk	5.55	243	P	Pn	01 33 31.8	-8.3
APSI	Ampana	6.51	248	P	Pn	01 33 49.7	-3.7
	37nm,0.9s,0.1nm						
WSI	Waingapu	13.35	213	P	Pn	01 35 14.0	-13
	506nm,0.5s						
JAY	Jayapura	13.61	107	LR	LR	01 41 27.3	
	comp=Z,140nm,18.4s,baz=227,slow=41						
SBUM	Sibu	15.49	274	ePn	Pn	01 35 57.6	+1.4
	5.7nm,0.9s						
NGJI	Ngawi	18.45	241	P	Pn	01 36 43.2	+10
PWJI	Pagerwojo	18.47	239	P	Pn	01 36 33.7	0.0
GUMO	Guam	20.79	54	LR	LR	01 44 22.4	
	comp=Z,46nm,19.6s,baz=159,slow=35						
LEM	Lembang	21.69	247	LR	LR	01 45 38.6	
	comp=Z,126nm,20.7s,baz=100,slow=37						
PMG	Port Moresby	22.23	120	LR	LR	01 46 04.8	
	comp=Z,103nm,20.8s,baz=134,slow=37						
WR1	Warramunga Arr	22.32	163	eP	P	01 37 14.6	-0.8
WRA	Warramunga Arr	22.32	163	P	P	01 37 14.6	-0.8
	11nm,1.0s,baz=342,slow=11,SNR=11						
WB2	Warramunga Arr	22.32	163	eP	P	01 37 14.8	-0.6
	16nm,0.9s						
AS31	Alice Springs	25.76	167	eP	P	01 37 49.7	+1.2
AS31				ePcP	PcP	01 41 18.8	+0.2
ASAR	Alice Springs	25.77	167	P	P	01 37 49.7	+1.2
	2.2nm,0.7s,baz=346,slow=12						
ASAR				PcP	PcP	01 41 18.8	+0.2
	0.6nm,0.7s,baz=352,slow=2.0,SNR=3.2						
PSI	Prapat	28.78	273	LR	LR	01 50 45.0	
	comp=Z,129nm,18.2s,baz=120,slow=38						
CM31	Chiang Mai Arr	32.84	303	eP	P	01 38 50.6	-0.9
	13nm,1.3s						
CMAR	Chiang Mai Arr	32.84	303	P	P	01 38 50.6	-0.9
	0.9nm,0.3s,baz=123,slow=6.7,SNR=4.8						
KS15	Wonju Array Si	35.73	0	eP	P	01 39 15.3	-1.0
	4.7nm,0.8s						
KSRS	Korea Array	35.75	0	P	P	01 39 15.4	-1.1
	0.5nm,0.4s,baz=179,slow=9.7,SNR=3.3						
STKA	Stephens Creek	35.75	160	P	P	01 39 15.7	-0.8
	4.6nm,0.8s,baz=336,slow=12,SNR=4.4						
STKA	Stephens Creek	35.75	160	eP	P	01 39 15.7	-0.8
	4.1nm,1.4s						
XAN	Xi'an	36.80	334	P	P	01 39 26.5	+0.9
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,66nm,4.1s						
H11S3	WAKE ISLAND Hy	41.78	64	T	T	02 24 16.0	
	baz=247,slow=78						
H11S2	WAKE ISLAND Hy	41.80	64	T	T	02 24 13.7	
	baz=247,slow=78						
H11S1	WAKE ISLAND Hy	41.80	64	T	T	02 24 14.0	
	baz=247,slow=78						
H11N1	WAKE ISLAND Hy	42.37	62	T	T	02 25 02.2	
	baz=249,slow=76,SNR=9.3						
H11N2	WAKE ISLAND Hy	42.38	62	T	T	02 25 04.2	
	baz=249,slow=76,SNR=6.4						
H11N3	WAKE ISLAND Hy	42.39	62	T	T	02 25 03.7	
	baz=249,slow=76,SNR=13						
USRK	Ussuriysk Ar.	42.66	5	P	P	01 40 13.6	-0.5
	1.5nm,0.7s,baz=196,slow=5.6,SNR=5.9						
SONA0	Songino Array	49.67	341	eP	P	01 41 09.2	-0.4
SONM	Songino Array	49.67	341	P	P	01 41 09.2	-0.4
	1.2nm,0.7s,baz=160,slow=8.8,SNR=5.8						
PETK	Petropavlovsk-	57.11	21	P	P	01 42 03.4	-0.6
	0.4nm,0.4s,baz=197,slow=4.5,SNR=2.7						
PEA1	Petropavlovsk-	57.11	21	eP	P	01 42 03.4	-0.6
MK31	Makanchi Array	59.90	326	eP	P	01 42 23.8	+0.2
	11nm,1.9s						
MK32	Makanchi Array	59.90	326	eP	P	01 42 23.5	-0.1
MKAR	Makanchi Array	59.90	326	P	P	01 42 23.5	-0.1
	1.8nm,0.5s,baz=117,slow=8.1,SNR=22						
NIL	Nilore	60.03	308	eP	P	01 42 24.9	+0.1
	8.0nm,1.0s						
MAKZ	Makanchi	60.09	325	eP	P	01 42 24.9	+0.1
	8.3nm,1.6s						
KSH	Kashi	60.27	316	eP	P	01 42 29.3	+2.9
KBL	Kabul	63.62	308	eP	P	01 42 48.8	-0.3
	5.8nm,1.0s						
KURK	Kurchatov	64.10	328	eP	P	01 42 52.3	+0.6
	4.3nm,0.7s						
GAR	Garm	64.11	313	eP	P	01 42 53.0	+0.7
	23nm,1.4s						
KK31	Karatay Array	65.49	317	eP	P	01 43 01.8	+0.9
	3.0nm,0.9s						
KKAR	Karatay Array	65.49	317	eP	P	01 43 01.2	+0.2
	3.0nm,0.9s						
TIXI	Tiksi	70.02	0	eP	P	01 43 28.4	-0.6
	2.0nm,0.8s						
GEYT	Alibeck	73.02	309	P	P	01 43 48.7	+0.9
	0.8nm,0.3s,baz=101,slow=7.6,SNR=3.8						
ABKAR	Akbulak array	74.45	321	eP	P	01 43 56.0	+0.1
	2.0nm,1.1s						
VNDA	Vanda	81.14	173	P	P	01 44 32.6	0.0
	1.0nm,0.9s,baz=300,slow=5.6,SNR=4.4						

WEL 14 01:42:15.4,41°.S±2°.×17°.5E±°,h63km±4km,M3.5/27, ML3.8/21,MLv3.5/27,Error ellipse: s-maj=0.0km s-min=0.0km az=87.3,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.35	125	P	Pn	01 42 26.4	+0.1
KIW				S	Sn	01 42 34.0	-0.1
DUWZ	D'Urville Isla	0.49	253	P	Pn	01 42 27.0	-0.6
DUWZ				S	Sn	01 42 35.0	-1.4
OGWZ	Otaki Gorge	0.51	108	P	Pn	01 42 28.2	+0.5
OGWZ				S	Sn	01 42 37.1	+0.4
TCW	Tory Channel	0.58	200	P	Pn	01 42 29.4	+0.9
TCW				S	Sn	01 42 38.2	+0.1
CAW	Cannon Point	0.60	138	P	Pn	01 42 29.4	+0.7
CAW				S	Sn	01 42 39.6	+1.2
OHWZ	Ohakea	0.75	53	P	Pn	01 42 31.2	+0.9
OHWZ				S	Sn	01 42 43.0	+1.7
HOWZ	Holdsworth Sta	0.78	108	P	Pn	01 42 31.1	+0.3
BHW	Baring Head	0.79	161	P	Pn	01 42 31.8	+0.9
MRZ	Mangatainoka R	0.79	90	P	Pn	01 42 31.2	+0.2
MTW	Mount Morrison	0.88	124	P	Pn	01 42 32.2	+0.1
TUWZ	Tuamarina	0.89	210	P	Pn	01 42 32.7	+0.6
MSWZ	Moikau Station	0.93	145	P	Pn	01 42 33.0	+0.4
POWZ	Post Office Ro	0.98	74	P	Pn	01 42 33.4	+0.2
PAWZ	Paruwai Farm	0.99	137	P	Pn	01 42 33.8	+0.4
TIWZ	Tintock	1.03	97	P	Pn	01 42 34.1	+0.1
NNZ	Nelson	1.04	237	P	Pn	01 42 34.3	+0.3
PLWZ	Palliser	1.06	149	P	Pn	01 42 34.5	+0.2
PRWZ	Pori Road	1.10	85	P	Pn	01 42 35.1	+0.3
TMWZ	Te Maipa	1.12	114	P	Pn	01 42 35.1	0.0
TRWZ	Traveller	1.14	131	P	Pn	01 42 37.1	+1.7
BSWZ	Blackbirch Sta	1.17	205	P	Pn	01 42 37.0	+1.3
LREZ	Lake Rotokare	1.20	355	P	Pn	01 42 36.8	+0.6
TSZ	Takapari Road	1.24	62	P	Pn	01 42 36.7	0.0
CPWZ	Castlepoint	1.29	102	P	Pn	01 42 37.9	+0.6

RUGZ	Raukumara Rang	3.63	43	P	Pn	01 43 06.9	-2.3
TWGZ	Tauwhareparae	3.64	48	P	Pn	01 43 07.8	-1.5
WVZ	Waitaha Valley	3.72	228	P	Pn	01 43 10.6	+0.3
WIAZ	Waiheke Island	3.89	7	P	Pn	01 43 13.7	+1.1
ODZ	Otahua Downs	5.23	212	P	Pn	01 43 29.3	-1.6
JCZ	Jackson Bay	5.46	229	P	Pn	01 43 33.3	-0.9

*AZER **14** 01:54:47.4±0.2, 38°.22N×48°.31E, h2km, ml3.3/24, Error ellipse: s-maj=2.3km s-min=1.5km az=4.0*
*TEH **14** 01:54:48.7, 38°.15N×48°.27E, h4km, ML3.3*

ISC 14 01:54:47.6±1.2, 38°22N±0°.02×48°28E±0°.03, h4km±11km, n42, σ2s00/66, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LRK	Lerik	0.43	6	P	Pb	01 54 58.2	+0.3
LRK	SNR=327			S	Sb	01 55 05.5	+0.7
ASTR	Astara	0.53	49	P	Pn	01 55 00.2	-1.7
ASTR	SNR=60			S	Sn	01 55 08.9	-2.4
ISRB	Sarab	0.62	231	ePg	Pg	01 54 59.7	+0.1
ISRB				eSg	Sg	01 55 08.6	+0.9
ISRB	comp=Z,21μm,0.2s			IAMB	IAmb	01 55 09.6	
LKRN	Lenkeran, Azer	0.63	38	P	Pn	01 55 02.0	-1.4
LKRN	SNR=85			S	Sn	01 55 12.3	-1.5
GRMI	Germi	0.67	333	ePg	Pn	01 55 02.4	-1.6
GLBA	Ciilabad	1.03	5	P	Pn	01 55 10.0	+1.1
GLBA	SNR=56			S	Sn	01 55 27.2	+3.4
IBST	Bostanabad	1.21	245	IAMB	IAmb	01 55 26.9	
IBST	comp=Z,7μm,0.2s			ePg	Pn	01 55 09.4	-2.2
ZNJK	Zanjan	1.58	168	ePg	Pg	01 55 17.9	+0.1
ITBZ	Tabriz	1.68	271	ePn	Pg	01 55 20.3	+0.5
ITBZ	comp=Z,2μm,0.2s			IAMB	IAmb	01 55 44.5	
ALIB	Äli-Bayra	1.83	18	P	Pg	01 55 22.7	0.0
ALIB	SNR=4.6			S	Sg	01 55 50.5	+4.1
IAZR	Azarshahr	1.90	254	ePn	Pb	01 55 23.1	+0.1
IAZR	comp=Z,6μm,0.2s			IAMB	IAmb	01 55 51.0	
ORD	Ordubad	1.93	292	P	Pg	01 55 24.0	-0.5
ORD	SNR=74			S	Sg	01 55 51.9	+2.3
IMRD	Marand	2.08	285	ePn	Pg	01 55 27.0	-0.6
IMRD	comp=Z,3μm,0.3s			IAMB	IAmb	01 55 31.6	
ISHB	Shabestar	2.10	273	ePn	Pg	01 55 27.2	-0.6
ISHB	comp=Z,2μm,0.5s			IAMB	IAmb	01 55 32.2	
ZRD	Zardab	2.11	347	P	Pb	01 55 26.5	+0.1
ZRD	SNR=5.0			S	Sg	01 55 57.5	+2.0
BRDA	Brd	2.22	338	P	Pb	01 55 28.5	+0.2
BRDA				S	Sg	01 56 01.2	+2.4
GBS	Qobustan	2.37	12	P	Pb	01 55 30.8	-0.1
GBS				S	Sg	01 56 04.5	+0.7
NAX	Nakhchivan	2.38	295	P	Pb	01 55 31.4	+0.3
NAX	SNR=5.3			S	Sg	01 56 05.1	+1.0
IGZV	Ghazvin	2.39	139	ePn	Pn	01 55 28.4	+0.6
SBZ	Shahbuz	2.44	300	P	Pb	01 55 31.9	-0.2
SBZ	SNR=72			S	Sg	01 56 06.7	+0.9
IML	Ismayilli	2.58	358	P	Pb	01 55 34.3	-0.1
IML	SNR=3.3			S	Sg	01 56 09.4	-1.0
PQL	Pirkuli	2.58	5	P	Pb	01 55 33.7	-0.8
PQL	SNR=12			S	Sg	01 56 08.2	-2.4
QALM	Alamut, Qazvin	2.59	133	ePn	Pb	01 55 32.2	-2.6
ATGJ	Altiaghaj	2.69	11	P	Pb	01 55 34.4	-1.9
ATGJ				S	Sb	01 56 11.0	+1.2
QABG	Abgarm-Qazvin	2.71	157	ePn	Pb	01 55 34.3	-2.5
QBL	Gabala	2.75	353	P	Pb	01 55 36.2	-1.2
QBL	SNR=4.4			S	Sb	01 56 12.2	+0.7
GANJ	Ganja	2.86	329	P	Pb	01 55 37.3	-1.9
GANJ	SNR=9.9			S	Sg	01 56 16.9	-2.6
SIZA	Siyzn	2.90	9	P	Pb	01 55 37.4	-2.5
SIZA	SNR=9.7			S	Sb	01 56 16.7	+1.0
HYR	Heyderabad	3.07	300	P	Pb	01 55 40.1	-2.6
HYR	SNR=8.0			S	Sb	01 56 21.9	+1.3
IRAZ	Razeghan	3.10	154	ePn	Pb	01 55 40.7	-2.8
IRAZ	comp=N,1μm,0.7s			IAMB	IAmb	01 56 36.4	
SEKA	Sheki	3.10	345	P	Pb	01 55 41.4	-2.0
SEKA	SNR=12			S	Sb	01 56 22.3	+0.7
QUBA	Quba, Azerbaij	3.14	3	P	Pb	01 55 42.1	-2.0
QUBA				S	Sb	01 56 24.3	+1.6
GDB	GEDABAY	3.18	323	P	Pb	01 55 42.8	-1.9
GDB	SNR=14			S	Sb	01 56 25.2	+1.4
CHTH	Charan	3.24	134	ePn	Pb	01 55 42.0	-3.8
QSAR	Qusar	3.30	360	P	Pb	01 55 44.9	-1.8
QSAR				S	Sb	01 56 29.2	+2.0
QZX	Qazax, Azerbai	3.62	323	P	Pb	01 55 48.4	-3.8
QZX	SNR=8.0			S	Sb	01 56 29.4	+2.0
ZKTA	Zakatala	3.65	340	P	Pb	01 55 48.7	-4.0
ZKTA	SNR=5.8			S	Sb	01 56 34.1	-3.2
IPRN	Peran	3.79	120	ePn	Pn	01 55 48.6	+1.7
IPRN	comp=Z,2μm,0.3s			IAMB	IAmb	01 56 38.9	
IDHR	Dehrash	3.83	204	ePn	Pn	01 55 48.9	+1.4
IDMV	Damavand	4.00	130	ePn	Pn	01 55 53.0	+3.1
IDMV	comp=Z,123nm,0.4s			IAMB	IAmb	01 56 10.0	
IFIR	Firoozkooh	4.41	124	ePn	Pn	01 55 59.1	+3.5
ISHM	Shahmirzad	4.67	119	ePn	Pn	01 56 02.7	+3.5
ISHM	comp=Z,333nm,0.3s			IAMB	IAmb	01 57 05.8	

JMA 14 02:01:30.4, 33°09N×131°08E, h11±1km, M0.5, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	Nakatsue	0.17	281	P	Pg	02 01 34.3	+0.1
JNU				eS	Sg	02 01 36.6	-0.3

JMA 14 02:03:00.9, 36°83N×138°69E, h6km±2km, M1.4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGK	Kuni	0.27	189	P	Pg	02 03 06.6	+0.4
JGK				S	Sg	02 03 10.5	+0.7
JKT	Katashina	0.45	98	S	Sg	02 03 15.9	+0.3
MAT	Matsushiro	0.48	234	P	Pg	02 03 10.1	-0.1
MAT				S	Sg	02 03 16.3	-0.2
MAT	Matsushiro	0.48	234	P	Pg	02 03 10.1	-0.1
MAT				S	Sg	02 03 16.3	-0.2
JHK	Hiroka	0.49	32	P	Pg	02 03 10.5	+0.1
JHK				S	Sg	02 03 17.1	+0.2
JNG	Nsakai	0.64	229	P	Pg	02 03 13.0	-0.1
JNG				S	Sg	02 03 21.2	-0.2
JAG	Ashikaga	0.73	123	S	Sg	02 03 24.6	0.0
JRY	Ryogami san	0.83	168	P	Pg	02 03 16.8	0.0
JRY				S	Sg	02 03 28.0	+0.4
JFY	Yanaizu	0.99	54	P	Pg	02 03 20.2	+0.2
JFY				eS	Sg	02 03 33.1	+0.2

DJA 14 02:07:10.0±1.8, 5°N±10°×9°6E±1°7, h128km±10km, M3.6/3, MLv3.6/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.61	173	P	Pn	02 07 31.3	+1.7
MLSI				S	Sn	02 07 46.2	+1.8
LHMI	Lhok Sumawe	0.71	61	P	Pn	02 07 30.4	+0.2
LHMI				S	Sn	02 07 47.9	+2.4
KCSI	Kotacane, Aceh	1.97	133	P	Pn	02 07 43.5	0.0
KCSI				S	Sn	02 08 30.2	+21
SNSI	Sinabang, Aceh	2.46	180	P	Pn	02 07 56.7	+7.1
JCJI	Jatiwangi	16.42	133	P	Pn	02 10 50.0	-3.1

DJA 14 02:14:36.6±0.9, 10°S±7°×10°7E±°, h10km, M4.6/10, mb4.6/2, mB4.9/1, MLv4.6/10, Mw(mB)4.2/1, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	2.27	11	P	Pn	02 15 13.5	-0.7
CISI				S	Sn	02 15 42.5	+0.2
LEM	Lembang	2.96	4	P	Pn	02 15 25.7	+1.8
CGJI	Cibinong	3.58	332	P	Pn	02 15 31.8	-0.5
CGJI				S	Sn	02 16 11.6	-3.1
UGM	Wanagama	3.62	59	P	Pn	02 15 31.9	-0.9
WOJI	Wonogiri, Jawa	4.00	61	P	Pn	02 15 38.1	+0.1
NGJI	Ngawi	4.70	59	P	Pn	02 15 48.6	+1.0
PWJI	Pagerwojo	4.71	68	P	Pn	02 15 47.3	-0.4
MDSI	Maura Dua	6.17	329	P	Pn	02 16 07.0	-0.8

MAN 14 03:19:25.8, 13°36N×120°76E, h22km, mb4.1, ML2.9, MS2.6, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.23	54	⇓iP	Pb	03 19 36.6	+4.8
PGP				i S	Sb	03 19 47.9	+12
LUBP	Lubang	0.62	306	eP	Pb	03 19 38.4	+0.4
LUBP				eS	Sn	03 19 49.8	+1.1
TGY	Tagaytay City	0.75	13	⇓eP	Pb	03 19 39.4	-0.9
TGY				eS	Sn	03 19 55.1	+3.1
SJMP	San Jose	0.96	159	eP	Pn	03 19 45.0	+1.0
BOAC	Boac	1.06	85	eP	Pn	03 19 43.9	-1.5
BOAC				eS	Sn	03 20 00.5	+1.0
BUSP	Coron	1.46	202	eP	Pn	03 19 50.0	-0.9
BUSP				eS	Sb	03 20 10.3	-0.1
OTRP	Odiongan	1.58	129	eP	Pn	03 19 51.7	-0.9
OTRP				eS	Sb	03 20 13.3	-0.6
POLP	Polilio Island	1.77	40	eP	Pn	03 19 51.7	-3.5
CUYO	Cuyo Island	2.51	174	eP	Pn	03 20 03.9	-1.4
ENPP	El Nido	2.51	211	eP	Pn	03 20 04.1	-1.2

*ISCJB **14** 03:20:40.6±0.2, 49°.80N±0°.02×18°.47E±0°.02, h0km, Error ellipse: s-maj=2.6km s-min=1.6km az=17.1*
*IPEC **14** 03:20:42.0±0.1, 49°.82N×18°.58E, h0km, ML2.9/5, Error ellipse: s-maj=1.4km s-min=0.9km az=7.0*

ISC 14 03:20:41.3±0.7, 49°83N±0°.02×18°53E±0°.02, h0km, n60, σ1s20/110, 7C-3D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.25	272	ePg	Pb	03 20 47.8	-0.9
OKC	baz=92			ePG	Pb	03 20 48.0	-0.7
OKC	Ostrava-Krasne	0.25	272	eSg	Sg	03 20 50.7	+1.4
OKC	comp=Z,392nm,0.4s						
RAC	Raciborz	0.34	319	ePg	Pb	03 20 50.0	-0.2
RAC				eSg	Sb	03 20 55.9	-0.1
CHZP	Chorzow	0.55	32	ePg	Pb	03 20 53.1	-0.7
CHZP				eSg	Sb	03 21 02.9	+0.7
MORC	Moravsky Berou	0.64	266	⇑iP	Pb	03 20 55.2	-0.3
MORC				S	Sg	03 21 03.7	+1.7
MORC	Moravsky Berou	0.64	266	ePG	Pg	03 20 54.7	+1.1
MORC				eSG	Sg	03 21 02.8	+0.8
MORC	Moravsky Berou	0.64	266	ePg	Pg	03 20 54.7	+1.1
MORC	baz=86			eSg	Sg	03 21 02.7	+0.8
ANAC	Anensky vrch	0.79	289	ePg	Pb	03 20 57.5	-0.4
ANAC	baz=108			eSg	Sg	03 21 07.4	+0.9
OJC	Ojcow	0.90	64	ePg	Pg	03 20 59.1	+0.5
OJC				eSg	Sg	03 21 11.2	+0.9
LANS	Liptovska Anna	0.91	138	ePG	Pg	03 20 59.2	+0.4
LANS				eSG	Sb	03 21 11.9	-0.8
LIPC	Lipinka	0.96	271	ePg	Pb	03 21 00.6	-0.2
LIPC	baz=91			eSg	Sg	03 21 13.0	+0.9
JAVC	Velka Javorina	1.12	210	ePG	Pb	03 21 03.8	+0.1
JAVC	Velka Javorina	1.12	210	ePg	Pb	03 21 03.7	+0.1
NIE	Niedzica	1.22	109	ePg	Pb	03 21 05.0	-0.2
NIE				eSg	Sn	03 21 23.4	+0.5
VYHS	Vyhne	1.35	171	ePG	Pg	03 21 07.1	-0.1
VYHS				eSG	Sb	03 21 25.3	0.0
VRAC	Vranov	1.37	248	⇓iP	Pg	03 21 07.3	-0.2
VRAC	Vranov	1.37	248	S	Sg	03 21 25.3	+0.1
VRAC	Vranov	1.37	248	ePG	Pb	03 21 08.0	+0.2
VRAC				eSG	Sg	03 21 25.4	+0.2
VRAC	Vranov	1.37	248	ePg	Pb	03 21 07.9	+0.2
VRAC	baz=68			eSg	Sg	03 21 25.3	+0.1
DPC	Dobruska-Polom	1.52	291	ePG	Pb	03 21 10.2	-0.1
DPC				eSG	Sn	03 21 30.9	+0.7
KRUC	Moravsky	1.59	242	ePG	Pb	03 21 11.3	-0.3
KRUC				eSG	Sg	03 21 32.7	+0.3
KRUC	Moravsky	1.59	242	ePg	Pb	03 21 11.2	-0.3
KRUC	baz=61			eSg	Sg	03 21 32.6	+0.2
OSTC	Ostas	1.66	297	ePG	Pg	03 21 13.3	+0.2
OSTC				eSG	Sg	03 21 35.1	+0.6
MODS	Modra-Piesok	1.68	210	ePN	Pn	03 21 10.9	-1.0
MODS				eSN	Sn	03 21 33.2	-0.9
MODS				eLG	Lg	03 21 44.5	
KSP	Ksiaz	1.76	306	ePb	Pn	03 21 13.3	+0.3
KSP				i Pg	Pg	03 21 15.5	+0.5
KSP				eSg	Sg	03 21 38.4	+0.7
UPC	Upice	1.76	294	ePG	Pb	03 21 14.7	+0.3
UPC				eSG	Sg	03 21 38.5	+0.8
CHVC	Chvalec	1.76	296	ePG	Pn	03 21 13.8	+0.7
CHVC				eSG	Sg	03 21 38.0	0.0
STHS	Stebnicka Huta	1.81	102	ePN	Pg	03 21 15.8	-0.2
STHS				eSN	Sg	03 21 40.3	+0.9
STHS				eLG	Lg	03 21 42.6	
KECS	Kecovo	1.86	136	ePN	Pn	03 21 14.1	-0.3
KECS				eSN	Sn	03 21 38.7	+0.1
KECS				eLG	Lg	03 21 42.3	
ZST	Bratislava	1.89	210	ePN	Pn	03 21 13.7	-1.1
ZST				eSN	Sn	03 21 38.1	-1.1
TREC	Trest	2.05	256	ePG	Pb	03 21 19.5	0.0
TREC				eSG	Sg	03 21 47.8	+0.5
PSZ	Piszkesteto	2.11	154	⇑iP	Pn	03 21 17.0	-1.0
PSZ	Piszkesteto	2.11	154	EPn	Pn	03 21 19.0	+1.1
PSZ				Sn	Sn	03 21 45.0	+0.1
GOPC	GO Pecny, Ondr	2.42	273	ePG	Pb	03 21 26.8	+1.0
GOPC				eSG	Sg	03 21 59.0	-0.2
CSKK	Cskako	2.48	184	EPn	Pn	03 21 23.0	+0.1
CSKK				ESg	Pg	03 21 29.0	+0.3
CSKK				Sn	Sn	03 21 52.1	-1.7
SOP	Sopron	2.51	212	EPn	Pn	03 21 23.1	-0.3
SOP				⇓Sn	Sn	03 21 55.1	+0.3
PRU	Pruhonice	2.58	275	eSG	Sg	03 22 04.0	-0.3
CONA	comp=Z,42nm,0.9s Conrad Observa	2.59	224	Pn	Pn	03 21 24.1	-0.4
CONA	4.2nm,0.3s			Pg	Pg	03 21 31.7	+0.7
CONA	5.0nm,0.2s			Sn	Sn	03 21 56.4	-0.5
KOLS	9.3nm,0.2s Kolonicke sedl	2.60	109	ePN	Pb	03 21 27.5	-1.3
KOLS				ePG	Pg	03 21 32.4	+1.2
KOLS				eSN	Sn	03 21 58.3	+1.4
KOLS				eSG	Sg	03 22 07.7	+2.8
KOLS				eLG	Lg	03 22 17.1	
PVCC	Panska Ves	2.64	287	ePG	Pb	03 21 30.2	+0.7
PVCC				eSG	Sg	03 22 06.7	+0.5
TIH	comp=Z,75nm,0.2s Tihany	2.96	189	EPn	Pn	03 21 28.0	-1.5
BRG	Berggiesshubel	3.12	291	PG	Pg	03 21 39.9	-1.1
BRG	17nm,0.6s			SG	Sg	03 22 20.1	-1.4
TRPA	Tarpa	3.14	121	⇓iP	Pn	03 21 31.2	-0.8
TRPA	Tarpa	3.14	121	EPn	Pn	03 21 31.1	-0.9
TRPA				Sn	Sn	03 22 10.1	0.0
ARSA	Arzberg	3.27	219	Pg	Pn	03 21 35.0	+1.3
ARSA	0.7nm,0.2s			eSn	Sn	03 22 15.2	+1.9
KHC	Kasperske Hory	3.31	260	ePN	Pn	03 21 34.5	+0.2
KHC				eSG	Sg	03 22 26.8	-0.7
MOA	comp=Z,41nm,0.7s Molln	3.44	237	i Pn	Pn	03 21 36.0	-0.2
MOA	0.9nm,0.1s			ePg	Pb	03 21 45.0	+1.8
MOA	1.8nm,0.2s			eSn	Sn	03 22 18.4	+0.6
MOA	3.7nm,0.2s			Sg	Sg	03 22 31.2	-0.7
MORH	14nm,0.5s Mrgy, Hungar	3.62	179	EPn	Pn	03 21 37.1	-1.4
MORH				Sn	Sn	03 22 19.1	-2.9
CLL	Collm	3.82	295	i Pn	Pn	03 21 41.7	+0.3
CLL				ePg	Pg	03 21 55.0	+0.5
CLL				eSg	Sg	03 22 41.0	-3.1
NKC	comp=Z,23nm,0.7s Novy Kostel	3.94	278	eSG	Sg	03 22 47.8	-0.1
DRGR	comp=Z,24nm,0.3s	4.12	136	⇑iP	Pn	03 21 45.5	-0.1
DRGR		4.12	136	S	Sn	03 22 31.4	-3.1
SIRR	Siria	4.13	148	⇑iP	Pn	03 21 45.8	+0.1
KBA	Koelnbreinsper	4.42	233	ePn	Pn	03 21 50.6	+0.9
KBA	comp=Z,1.0nm,0.3s			i Sn	Sn	03 22 41.9	+0.1
CJR	comp=Z,1.3nm,0.2s Cluj-Napoca	4.60	131	⇑iP	Pn	03 21 52.2	+0.1
BZS	Buzias	4.70	153	⇑iP	Pn	03 21 51.8	-1.6
BURAR	Bucovina Array	4.95	114	⇑iP	Pn	03 21 56.9	0.0
SQTA	Sankt Quirin	5.52	245	Sg	Sg	03 23 40.3	+1.7
BSD	comp=Z,5.3nm,0.3s Bornholm Skovb	5.74	339	i P	Pn	03 22 07.1	-0.5
BSD				eS	Sn	03 23 06.7	-7.4
FETA	Feichten	5.91	245	Sg	Sg	03 23 52.3	+1.4
FETA	comp=Z,3.3nm,0.5s						

DJA 14 03:54:01.3±1.6, 10°S±14°×10°7E±°, h10km, M4.4/12, mb4.3/3, mB5.9/1, MLv4.5/12, Mw(mB)5.5/1, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	2.44	10	P	Pn	03 54 40.4	-1.0
CISI				S	Sn	03 55 04.2	-7.2
LEM	Lembang	3.14	4	P	Pn	03 54 51.7	+0.7
UGM	Wanagama	3.71	57	P	Pn	03 54 57.5	-1.3
UGM				S	Sn	03 55 38.2	-4.5
CGJI	Cibinong	3.74	333	P	Pn	03 54 59.1	-0.1
CGJI				S	Sn	03 55 39.9	-3.4
SBJI	Serang	4.03	342	P	Pn	03 55 02.5	-0.7
WOJI	Wonogiri, Jawa	4.09	59	P	Pn	03 55 02.6	-1.3
WOJI				S	Sn	03 55 47.2	-4.7
PWJI	Pagerwojo	4.77	66	P	Pn	03 55 12.4	-1.0
PWJI				S	Sn	03 56 03.2	-5.6
GMJI	Gumukmas	6.21	75	P	Pn	03 55 33.9	+0.7
JAGI	22nm,1.5s,0.2nm Jajag, Banyuwa	6.84	78	P	Pn	03 55 40.3	-1.5

*IDC **14** 04:01:31.8±0.9, 58°.00N×32°.23W, h0km, mb3.5/10, mb1 3.7/11, mb1mx3.5/50, mbtmp3.5/11, ML3.2/1, MS3.1/11, Ms1 3.1/11, ms1mx2.8/37, Error ellipse: s-maj=25.0km s-min=16.7km az=14.0*
*ISCJB **14** 04:01:32.6±0.7, 58°.0N±0°.1×32°.2W±0°.2, h18km, mb3.4/11, MS3.0/8, Error ellipse: s-maj=17.2km s-min=13.1km az=7.8*

ISC 14 04:01:34.5±0.8, 58°0N±0°.1×32°3W±0°.1, h18km, n20, σ0s93/12, mb3.5/11, MS3.0/8, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	8.58	33	Pn	Pn	04 03 38.3	+0.8
SFJD	0.3nm,0.3s,baz=195,slow=12,SNR=2.6 Kangerlussuaq	12.35	325	LR	LR	04 08 27.4	
JMIC	comp=Z,184nm,18.5s,baz=102,slow=34 Jan Mayen	16.40	28	LR	LR	04 10 04.6	
FRB	comp=Z,24nm,18.2s,baz=127,slow=31 Frobisher Bay	18.39	303	LR	LR	04 11 56.6	
NOA	comp=Z,114nm,18.3s,baz=146,slow=34 NORSAR Array B	21.96	64	LR	LR	04 13 35.9	
ESDC	comp=Z,25nm,20.3s,baz=270,slow=33 Sonseca Array	25.81	123	P	P	04 07 04.3	-0.1
ARCES	0.1nm,0.4s,baz=333,slow=6.8,SNR=2.5 ARCESS Array B	26.86	41	P	P	04 07 12.7	-0.9
GERES	0.7nm,0.6s,baz=280,slow=16,SNR=2.8 GERESS Array B	28.36	89	LR	LR	04 18 22.6	
FINES	comp=Z,43nm,19.7s,baz=318,slow=36 FINESS Array B	28.77	58	LR	LR	04 18 29.6	
KEST	comp=Z,25nm,18.1s,baz=144,slow=35 Kesra	35.29	111	LR	LR	04 21 16.4	
AKASG	comp=Z,46nm,20.0s,baz=276,slow=34 Malin Array Be	35.43	75	P	P	04 08 27.7	-1.4
ULM	0.1nm,0.3s,baz=303,slow=8.3,SNR=4.1 Lac du Bonnet	36.80	286	LR	LR	04 22 25.0	
YKA	comp=Z,63nm,19.1s,baz=18,slow=34 Yellowknife Ar	38.52	312	P	P	04 08 54.3	-0.9
YKA	0.4nm,0.7s,baz=59,slow=9.1,SNR=5.1			LR	LR	04 24 09.1	
BRTR	comp=Z,7.9nm,19.2s,baz=58,slow=35 Keskin Array B	45.05	84	P	P	04 09 50.6	+1.5
BRTR	0.7nm,0.7s,baz=329,slow=4.7,SNR=5.2			LR	LR	04 28 41.7	
ILAR	comp=Z,14nm,20.3s,baz=273,slow=36 Eielson Array	47.98	328	P	P	04 10 12.2	+0.5
PDAR	0.4nm,0.8s,baz=41,slow=5.9,SNR=7.1 Pinedale Array	48.80	287	P	P	04 10 18.2	-0.2
PDAR	0.6nm,0.7s,baz=23,slow=5.9,SNR=5.1			LR	LR	04 29 42.5	
TORD	comp=Z,33nm,19.1s,baz=60,slow=35 Torodi Ar. Bea	51.55	136	P	P	04 10 39.2	-0.1
BVAR	0.4nm,0.6s,baz=342,slow=7.8,SNR=3.5 Borovoye Array	52.85	48	P	P	04 10 48.7	+0.2
TXAR	0.3nm,0.5s,baz=340,slow=8.1,SNR=4.5 Lajitas Array	55.89	272	P	P	04 11 11.8	+0.8
MKAR	0.3nm,0.6s,baz=66,slow=4.4,SNR=5.9 Makanchi Array	62.44	45	P	P	04 11 55.6	-0.4
	0.1nm,0.3s,baz=338,slow=6.2,SNR=3.2						

DJA 14 04:11:48.0±0.7, 9°S±5°×10°8E±°, h10km, M4.4/9, mb4.4/3, MLv4.4/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	1.81	9	P	Pn	04 12 19.8	+0.4
CISI				S	Sn	04 12 42.2	-0.3
LEM	Lembang	2.52	2	P	Pn	04 12 31.0	+1.8
LEM				S	Sg	04 13 12.7	+3.7
CGJI	Cibinong	3.28	326	P	Pn	04 12 37.3	-2.2
CGJI				S	Sn	04 13 18.8	+0.2
UGM	Wanagama	3.29	64	P	Pn	04 12 39.3	-0.4
WOJI	Wonogiri, Jawa	3.68	66	P	Pn	04 12 44.0	-1.0
WOJI				S	Sn	04 13 28.4	-0.1
PWJI	Pagerwojo	4.43	73	P	Pn	04 13 53.7	-1.6
PWJI				S	Sn	04 13 46.1	-0.9
KASI	Kota Agung	4.86	322	P	Pn	04 13 00.7	-0.5
GMJI	Gumukmas	5.94	80	P	Pn	04 13 18.4	+2.3
JAGI	Jajag, Banyuwa	6.60	83	P	Pn	04 13 24.0	-1.2

ISC 14 04:18:00.8±1.2, 50°12N±0°.06×19°25E±0°.04, h0km, n5, σ0s75/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.36	74	ePg	Pg	04 18 08.0	+0.2
OJC				eSg	Sg	04 18 12.8	+0.4
NIE	Niedzica	0.98	136	ePg	Pb	04 18 20.6	0.0
NIE				eSg	Sb	04 18 34.7	+0.6
LANS	Liptovska Anna	0.98	172	ePG	Pg	04 18 20.2	+0.6
LANS				eSG	Sg	04 18 32.8	+0.5
MORC	Moravsky Berou	1.16	253	ePG	Pg	04 18 23.6	+0.6
MORC				eSG	Sb	04 18 39.6	+0.3
VYHS	Vyhne	1.65	190	ePN	Pn	04 18 30.4	-0.7
VYHS				eSN	Sn	04 18 51.6	-1.4

*LDG **14** 05:03:22.1±0.2, 43°.63N×13°.93E, h10km, Ml2.7/18, Error ellipse: s-maj=4.9km s-min=2.7km az=109.0*
*ROM **14** 05:03:24.4±0.3, 43°.551N±0°.010×13°.79E±0°.02, h9km, ML2.8/44, Error ellipse: s-maj=1.6km s-min=0.7km az=238.0*
*VIE **14** 05:03:27.2±0.8, 43°.58N×13°.73E, h8km, mb2.2/5, ml2.6/6, Error ellipse: s-maj=12.6km s-min=3.6km az=104.0*
ISC 14 05:03:25.4±0.9, 43°.58N±0°.02×13°.58E±0°.02, h18km±3km, n90, σ2 26/111, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.03**	**153**	P	**Pg**	**05 03 27.9**	**-0.7**
AOI				S	**Sg**	**05 03 30.0**	**-0.8**
AOI				AML	AML		
	comp=E,15200μm,0.2s						
AOI				AML	AML		
	comp=N,18450μm,1.0s						
PCRO	**Pietralacroce**	**0.05**	**311**	P	**Pg**	**05 03 29.3**	**+0.6**
PCRO				S	**Sg**	**05 03 32.7**	**+1.8**
PCRO				AML	AML		
	comp=E,10430μm,0.4s						
PCRO				AML	AML		
	comp=N,7625μm,0.7s						
PCRO				AML	AML		
	comp=E,10430μm,0.4s						
PCRO				AML	AML		
	comp=N,7625μm,0.7s						
PCRO				AML	AML		
	comp=E,10440μm,0.4s						
PCRO				AML	AML		
	comp=N,7625μm,0.7s						
PCRO				AML	AML		
	comp=E,10440μm,0.4s						
PCRO				AML	AML		
	comp=N,7625μm,0.7s						
CIMA	**Civitanova Mar**	**0.28**	**167**	*i* P	**Pg**	**05 03 30.8**	**-0.7**
CIMA				S	**Sg**	**05 03 36.0**	**+0.3**
CIMA				AML	AML		
	comp=E,22700μm,0.2s						
CIMA				AML	AML		
	comp=N,9240μm,0.5s						
CIMA				AML	AML		
	comp=E,22700μm,0.2s						
CIMA				AML	AML		
	comp=N,9240μm,0.5s						
CIMA				AML	AML		
	comp=E,22700μm,0.2s						
CIMA				AML	AML		
	comp=N,9240μm,0.5s						
CIMA				AML	AML		
	comp=N,9240μm,0.5s						
CIMA				AML	AML		
	comp=E,22700μm,0.2s						
SENI	**Senigallia**	**0.29**	**297**	P	**Pn**	**05 03 34.4**	**-0.3**
SENI				S	**Sn**	**05 03 41.1**	**+0.6**
SENI				AML	AML		
	comp=E,872μm,0.9s						
SENI				AML	AML		
	comp=N,756μm,1.5s						
CING	**Cingoli**	**0.35**	**235**	P	**Pg**	**05 03 33.7**	**+0.9**
CING				S	**Sb**	**05 03 40.8**	**+2.5**
CING				AML	AML		
	comp=E,1410μm,0.5s						
CING				AML	AML		
	comp=N,1014μm,0.2s						
CING				AML	AML		
	comp=E,1410μm,0.5s						
CING				AML	AML		
	comp=N,1014μm,0.2s						
CING				AML	AML		
	comp=N,1014μm,0.2s						
CING				AML	AML		
	comp=E,1410μm,0.5s						
CADA	**Capodarco di F**	**0.40**	**161**	P	**Pg**	**05 03 32.6**	**-1.1**
COR1	**Corinaldo**	**0.43**	**278**	P	**Pn**	**05 03 36.7**	**+0.1**
COR1				AML	AML		
	comp=E,2030μm,1.3s						
COR1				AML	AML		
	comp=N,1865μm,0.7s						
COR1				AML	AML		
	comp=E,2025μm,1.3s						
COR1				AML	AML		
	comp=N,1865μm,0.7s						
COR1				AML	AML		
	comp=E,2025μm,1.3s						
COR1				AML	AML		
	comp=N,1870μm,0.8s						
COR1				AML	AML		
	comp=N,1870μm,0.8s						
COR1				AML	AML		
	comp=E,2025μm,1.3s						
EL6	**Elcito**	**0.43**	**235**	P	**Pg**	**05 03 35.1**	**+0.9**
EL6				AML	AML		
	comp=E,1575μm,0.2s						
EL6				AML	AML		
	comp=N,1390μm,0.2s						
EL6				AML	AML		
	comp=E,1575μm,0.2s						
EL6				AML	AML		
	comp=N,1390μm,0.2s						
EL6				AML	AML		
	comp=E,1569μm,0.2s						
EL6				AML	AML		
	comp=N,1390μm,0.2s						
EL6				AML	AML		
	comp=E,1569μm,0.2s						
EL6				AML	AML		
	comp=N,1390μm,0.2s						
MNTP	**Montappone**	**0.45**	**191**	P	**Pg**	**05 03 34.2**	**-0.3**
MMUR	**Monte Murano**	**0.45**	**253**	P	**Pb**	**05 03 35.9**	**+1.1**
ARVD	**Arcevia**	**0.47**	**261**	P	**Pb**	**05 03 36.3**	**+1.1**
ARVD				S	**Sn**	**05 03 45.8**	**+0.6**
SNTG	**Esanatoglia**	**0.57**	**236**	P	**Pg**	**05 03 37.4**	**+0.6**
SNTG				S	**Sn**	**05 03 47.8**	**+0.2**
SNTG				AML	AML		
	comp=E,376μm,1.0s						
SNTG				AML	AML		
	comp=N,521μm,0.2s						
SNTG				AML	AML		
	comp=E,376μm,1.0s						
SNTG				AML	AML		
	comp=N,521μm,0.2s						
SNTG				AML	AML		
	comp=E,376μm,1.0s						
SNTG				AML	AML		
	comp=N,520μm,0.2s						
SNTG				AML	AML		
	comp=E,376μm,1.0s						
SNTG				AML	AML		
	comp=N,520μm,0.2s						
GUMA	**Gualdo di Mace**	**0.57**	**153**	P	**Pg**	**05 03 36.2**	**-0.6**
GUMA				S	**Sb**	**05 03 45.8**	**+1.1**
GUMA				AML	AML		
	comp=E,2565μm,0.3s						
GUMA				AML	AML		
	comp=N,2420μm,1.0s						
GUMA				AML	AML		
	comp=E,3280μm,0.3s						
GUMA				AML	AML		
	comp=N,2190μm,0.5s						
GUMA				AML	AML		
	comp=E,2565μm,0.3s						
GUMA				AML	AML		
	comp=N,2420μm,1.0s						
GUMA				AML	AML		
	comp=E,3280μm,0.3s						
GUMA				AML	AML		
	comp=N,2190μm,0.5s						
GUMA				AML	AML		
	comp=E,3280μm,0.3s						
GUMA				AML	AML		
	comp=N,2190μm,0.5s						
GUMA				AML	AML		
	comp=N,2420μm,1.0s						
GUMA				AML	AML		
	comp=E,2565μm,0.3s						
FSSB	**Fossombrone**	**0.60**	**282**	P	**Pb**	**05 03 38.9**	**+1.6**
FSSB				AML	AML		
	comp=E,1085μm,0.6s						
FSSB				AML	AML		
	comp=N,1125μm,0.2s						
FSSB				AML	AML		
	comp=E,1085μm,0.6s						
FSSB				AML	AML		
	comp=N,1125μm,0.2s						
FSSB				AML	AML		
	comp=E,1085μm,0.6s						
FSSB				AML	AML		
	comp=N,1125μm,0.2s						
SSFR	**Montelago di S**	**0.60**	**257**	P	**Pb**	**05 03 38.4**	**+1.0**
SSFR				AML	AML		
	comp=E,933μm,0.2s						
SSFR				AML	AML		
	comp=N,1180μm,0.2s						
SSFR				AML	AML		
	comp=E,1086μm,0.2s						
SSFR				AML	AML		
	comp=N,1110μm,0.2s						
SSFR				AML	AML		
	comp=E,932μm,0.2s						
SSFR				AML	AML		
	comp=N,1180μm,0.2s						
SSFR				AML	AML		
	comp=E,1086μm,0.2s						
SSFR				AML	AML		
	comp=N,1110μm,0.2s						
SSFR				AML	AML		
	comp=N,1110μm,0.2s						
SSFR				AML	AML		
	comp=E,932μm,0.2s						
SSFR				AML	AML		
	comp=N,1180μm,0.2s						
SSFR				AML	AML		
	comp=E,1086μm,0.2s						
MPAG	**Monte Paganucc**	**0.60**	**275**	P	**Pb**	**05 03 38.7**	**+1.3**
MPAG				AML	AML		
	comp=E,456μm,0.5s						
MPAG				AML	AML		
	comp=N,519μm,0.9s						
MPAG				AML	AML		
	comp=E,456μm,0.5s						
MPAG				AML	AML		
	comp=N,518μm,0.9s						
MPAG				AML	AML		
	comp=E,456μm,0.5s						
MPAG				AML	AML		
	comp=N,519μm,0.9s						
MPAG				AML	AML		
	comp=N,519μm,0.9s						
MPAG				AML	AML		
	comp=E,456μm,0.5s						
FDMO	**Fiordimonte**	**0.65**	**214**	P	**Pg**	**05 03 38.1**	**-0.1**
FDMO				S	**Sb**	**05 03 49.3**	**+2.4**
FDMO				AML	AML		
	comp=E,1130μm,0.2s						
FDMO				AML	AML		
	comp=N,886μm,1.4s						
FDMO				AML	AML		
	comp=E,1130μm,0.2s						
FDMO				AML	AML		
	comp=N,886μm,1.4s						
FDMO				AML	AML		
	comp=N,886μm,1.4s						
FDMO				AML	AML		
	comp=E,1130μm,0.2s						
PESA	**Pesaro**	**0.65**	**304**	P	**Pn**	**05 03 41.0**	**+1.3**
FOSV	**Fossato di Vic**	**0.66**	**245**	P	**Pg**	**05 03 39.2**	**+0.7**
FOSV				S	**Sn**	**05 03 51.3**	**+1.4**
FOSV				AML	AML		
	comp=E,520μm,0.2s						
FOSV				AML	AML		
	comp=N,633μm,0.2s						
FOSV				AML	AML		
	comp=E,520μm,0.2s						
FOSV				AML	AML		
	comp=N,633μm,0.2s						
FOSV				AML	AML		
	comp=N,633μm,0.2s						
FOSV				AML	AML		
	comp=E,520μm,0.2s						
NARO	**Abbazia di Nar**	**0.73**	**273**	P	**Pn**	**05 03 41.1**	**+0.3**
NARO				AML	AML		
	comp=E,236μm,1.1s						
NARO				AML	AML		
	comp=N,242μm,0.3s						
NARO				AML	AML		
	comp=E,236μm,1.1s						
NARO				AML	AML		
	comp=N,242μm,0.3s						
NARO				AML	AML		
	comp=E,236μm,1.1s						
NARO				AML	AML		
	comp=N,242μm,0.3s						
CESI	**CESI - Serrava**	**0.76**	**221**	P	**Pb**	**05 03 40.2**	**+0.1**
CESI				AML	AML		
	comp=E,302μm,0.3s						
CESI				AML	AML		
	comp=N,554μm,0.3s						
CESI				AML	AML		
	comp=E,302μm,0.3s						
CESI				AML	AML		
	comp=N,554μm,0.3s						
CESI				AML	AML		
	comp=E,302μm,0.3s						
CESI				AML	AML		
	comp=N,554μm,0.3s						
PIEI	**Pieia**	**0.76**	**267**	P	**Pg**	**05 03 41.3**	**+1.0**
PIEI				AML	AML		
	comp=E,398μm,0.2s						
PIEI				AML	AML		
	comp=N,322μm,0.3s						
PIEI				AML	AML		
	comp=E,398μm,0.2s						
PIEI				AML	AML		
	comp=N,322μm,0.3s						
PIEI				AML	AML		
	comp=E,398μm,0.2s						
PIEI				AML	AML		
	comp=N,322μm,0.3s						
PE3	**Peglio**	**0.80**	**279**	P	**Pn**	**05 03 43.0**	**+1.2**
PE3				AML	AML		
	comp=E,895μm,0.5s						
PE3				AML	AML		
	comp=N,1520μm,0.4s						
PE3				AML	AML		
	comp=E,896μm,0.5s						
PE3				AML	AML		
	comp=N,1520μm,0.4s						
PE3				AML	AML		
	comp=N,1520μm,0.4s						
PE3				AML	AML		
	comp=E,896μm,0.5s						
NRCA	**Norcia**	**0.82**	**205**	P	**Pb**	**05 03 40.5**	**-0.6**
NRCA				AML	AML		
	comp=E,2325μm,0.2s						
NRCA				AML	AML		
	comp=N,1176μm,1.3s						
NRCA				AML	AML		
	comp=E,2450μm,0.2s						
NRCA				AML	AML		
	comp=N,1300μm,1.3s						
NRCA				AML	AML		
	comp=E,2450μm,0.2s						
NRCA				AML	AML		
	comp=N,1300μm,1.3s						
NRCA				AML	AML		
	comp=N,1300μm,1.3s						
NRCA				AML	AML		
	comp=E,2450μm,0.2s						
ASSB	**Assisi San Ben**	**0.86**	**232**	P	**Pb**	**05 03 42.5**	**+0.6**
ASSB				AML	AML		
	comp=E,764μm,0.4s						
ASSB				AML	AML		
	comp=N,716μm,1.1s						
ASSB				AML	AML		
	comp=E,764μm,0.4s						
ASSB				AML	AML		
	comp=N,716μm,1.1s						
ASSB				AML	AML		
	comp=E,764μm,0.4s						
ASSB				AML	AML		
	comp=N,716μm,1.1s						
ATPI	**Pietralunga -**	**0.87**	**262**	P	**Pn**	**05 03 43.6**	**+0.8**
ATPI				AML	AML		
	comp=E,262μm,0.5s						
ATPI				AML	AML		
	comp=N,375μm,0.4s						
ATPI				AML	AML		
	comp=E,262μm,0.5s						
ATPI				AML	AML		
	comp=N,375μm,0.4s						
ATPI				AML	AML		
	comp=N,375μm,0.4s						
ATPI				AML	AML		
	comp=E,262μm,0.5s						
ATVO	**AVT- Monte Val**	**0.88**	**258**	P	**Pg**	**05 03 43.5**	**+1.0**
ATVO				AML	AML		
	comp=E,336μm,0.3s						
ATVO				AML	AML		
	comp=N,264μm,0.5s						
ATVO				AML	AML		
	comp=E,336μm,0.3s						
ATVO				AML	AML		
	comp=N,265μm,0.5s						
ATVO				AML	AML		
	comp=N,265μm,0.5s						
ATVO				AML	AML		
	comp=E,336μm,0.3s						
CPGN	**Carpegna, Ital**	**0.94**	**284**	P	**Pn**	**05 03 46.6**	**+2.7**
SMA1	**SAN MARTINO**	**0.96**	**191**	P	**Pb**	**05 03 42.5**	**-1.1**
SMA1				AML	AML		
	comp=E,914μm,0.8s						
SMA1				AML	AML		
	comp=N,1405μm,1.1s						
SMA1				AML	AML		
	comp=E,916μm,0.8s						
SMA1				AML	AML		
	comp=N,1405μm,1.1s						
SMA1				AML	AML		
	comp=N,1405μm,1.1s						
SMA1				AML	AML		
	comp=E,916μm,0.8s						
PARC	**Parchiule**	**0.98**	**275**	P	**Pg**	**05 03 45.9**	**+1.5**
PARC				AML	AML		
	comp=E,225μm,0.5s						
PARC				AML	AML		
	comp=N,278μm,0.3s						
PARC				AML	AML		
	comp=E,225μm,0.5s						
PARC				AML	AML		
	comp=N,278μm,0.3s						
PARC				AML	AML		
	comp=N,278μm,0.3s						
PARC				AML	AML		
	comp=E,225μm,0.5s						
CAMP	**Campotosto**	**1.05**	**187**	P	**Pb**	**05 03 43.9**	**-1.1**
LNSS	**Leonessa**	**1.05**	**202**	P	**Pb**	**05 03 44.4**	**-0.7**
LNSS				AML	AML		
	comp=E,755μm,0.7s						
LNSS				AML	AML		
	comp=N,700μm,0.4s						
LNSS				AML	AML		
	comp=E,755μm,0.7s						
LNSS				AML	AML		
	comp=N,700μm,0.4s						
LNSS				AML	AML		
	comp=E,755μm,0.7s						
LNSS				AML	AML		
	comp=N,700μm,0.4s						
MOMA	**Monte Martano**	**1.07**	**224**	P	**Pb**	**05 03 45.7**	**+0.3**
MOMA				AML	AML		
	comp=E,472μm,0.2s						
MOMA				AML	AML		
	comp=N,564μm,0.3s						
MOMA				AML	AML		
	comp=E,416μm,0.6s						
MOMA				AML	AML		
	comp=N,1530μm,1.6s						
MOMA				AML	AML		
	comp=E,472μm,0.2s						
MOMA				AML	AML		
	comp=N,564μm,0.3s						
MOMA				AML	AML		
	comp=N,564μm,0.3s						
MOMA				AML	AML		
	comp=E,416μm,0.6s						
MOMA				AML	AML		
	comp=N,1530μm,1.6s						
MOMA				AML	AML		
	comp=E,472μm,0.2s						
ARRO	**Arrone**	**1.16**	**211**	P	**Pn**	**05 03 47.2**	**+0.4**
ARRO				AML	AML		
	comp=E,258μm,0.7s						
ARRO				AML	AML		
	comp=N,198μm,1.1s						
ARRO				AML	AML		
	comp=E,258μm,0.7s						
ARRO				AML	AML		
	comp=N,198μm,1.1s						
CAFI	**Castiglion Fio**	**1.20**	**259**	P	**Pg**	**05 03 50.4**	**+1.8**
CAFI				AML	AML		
	comp=E,118μm,1.1s						
CAFI				AML	AML		
	comp=N,152μm,0.7s						
CAFI				AML	AML		
	comp=E,118μm,1.1s						
CAFI				AML	AML		
	comp=N,152μm,0.7s						
CESX	**Cesi**	**1.21**	**218**	P	**Pn**	**05 03 48.0**	**+0.5**
CESX				AML	AML		
	comp=E,352μm,0.3s						
CESX				AML	AML		
	comp=N,442μm,0.5s						
CESX				AML	AML		
	comp=E,352μm,0.3s						
CESX				AML	AML		
	comp=N,442μm,0.5s						
CESX				AML	AML		
	comp=E,352μm,0.3s						
CESX				AML	AML		
	comp=N,442μm,0.5s						
MGAB	**Montegabbione**	**1.26**	**239**	P	**Pg**	**05 03 50.9**	**+1.1**
MGAB				AML	AML		
	comp=E,482μm,0.8s						
MGAB				AML	AML		
	comp=N,357μm,0.4s						
MGAB				AML	AML		
	comp=E,464μm,0.8s						
MGAB				AML	AML		
	comp=N,388μm,1.1s						
MGAB				AML	AML		
	comp=E,464μm,0.8s						
MGAB				AML	AML		
	comp=E,482μm,0.8s						
MGAB				AML	AML		
	comp=N,357μm,0.4s						
MGAB				AML	AML		
	comp=N,388μm,1.1s						
FAGN	**Fagnano**	**1.31**	**180**	P	**Pb**	**05 03 50.3**	**+0.8**
FAGN				AML	AML		
	comp=E,1160μm,0.5s						
FAGN				AML	AML		
	comp=N,542μm,0.7s						
FAGN				AML	AML		
	comp=E,1160μm,0.5s						
FAGN				AML	AML		
	comp=N,586μm,0.4s						
FAGN				AML	AML		
	comp=E,1160μm,0.5s						
FAGN				AML	AML		
	comp=N,586μm,0.4s						
NVLJ	**Novalja**	**1.35**	**43**	*e* Pn	**Pb**	**05 03 50.3**	**+0.1**
NVLJ				Sn	**Sg**	**05 04 08.3**	**-1.0**
INTR	**Introdacqua**	**1.58**	**171**	P	**Pn**	**05 03 53.4**	**+0.8**
INTR				AML	AML		
	comp=E,224μm,1.1s						
INTR				AML	AML		
	comp=N,389μm,0.8s						
INTR				AML	AML		
	comp=N,389μm,0.8s						
INTR				AML	AML		
	comp=E,224μm,1.1s						
LPEL	**Lama dei Pelig**	**1.59**	**164**	AML	AML		
	comp=N,108μm,1.6s						
LPEL				AML	AML		
	comp=E,146μm,0.7s						
LPEL				AML	AML		
	comp=N,108μm,1.6s						
LPEL				AML	AML		
	comp=E,146μm,0.7s						
UDBI	**Udbina**	**1.84**	**58**	*i* Pn	**Pb**	**05 03 58.0**	**-0.5**
UDBI				Sn	**Sb**	**05 04 22.2**	**+1.0**
SKDS	**Skadanscina**	**2.00**	**9**	*i* Pn	**Pb**	**05 04 00.2**	**-0.9**
SABO	**M.te Sabotino**	**2.40**	**0**	AML	AML		
	comp=E,97μm,0.8s						
SABO				AML	AML		
	comp=N,98μm,0.8s						
SABO				AML	AML		
	comp=E,97μm,0.8s						

SABO				AML	AML	
	comp=N,98μm,0.8s					
GBAS	**Gorenja Brezov**	**2.44**	**14**	*i* Pn	**Pb**	**05 04 07.2 -1.5**
OZLJ	**Ozalj**	**2.44**	**33**	*e*Pn	**Pn**	**05 04 06.7 +2.3**
POLC	**Polcenigo**	**2.57 343**		AML	AML	
	comp=N,128μm,0.6s					
POLC				AML	AML	
	comp=E,110μm,0.5s					
POLC				AML	AML	
	comp=E,110μm,0.5s					
POLC				AML	AML	
	comp=N,128μm,0.6s					
CGRP	**Cima Grappa**	**2.63 332**		AML	AML	
	comp=E,69μm,0.4s					
CGRP				AML	AML	
	comp=E,69μm,0.4s					
CGRP				AML	AML	
	comp=N,78μm,0.5s					
CGRP				AML	AML	
	comp=N,78μm,0.5s					
STAL	**STALIGIAL**	**2.75 347**		AML	AML	
	comp=N,62μm,0.8s					
STAL				AML	AML	
	comp=E,73μm,0.4s					
STAL				AML	AML	
	comp=N,62μm,0.8s					
STAL				AML	AML	
	comp=E,73μm,0.4s					
CTI	**Castel Tesino**	**2.83 332**		AML	AML	
	comp=N,68μm,1.1s					
CTI				AML	AML	
	comp=E,58μm,0.3s					
CTI				AML	AML	
	comp=E,58μm,0.3s					
CTI				AML	AML	
	comp=N,68μm,1.1s					
PTCC	**Patocco-Chiusa**	**2.83 357**		AML	AML	
	comp=E,23μm,0.9s					
PTCC				AML	AML	
	comp=N,23μm,0.6s					
PTCC				AML	AML	
	comp=E,23μm,0.9s					
PTCC				AML	AML	
	comp=N,23μm,0.6s					
ACOM	**Acomizza, Ital**	**2.97 359**		AML	AML	
	comp=E,56μm,0.5s					
ACOM				AML	AML	
	comp=N,52μm,0.6s					
ACOM				AML	AML	
	comp=E,56μm,0.5s					
ACOM				AML	AML	
	comp=N,52μm,0.6s					
MAGA	**Magasa**	**3.05 317**		AML	AML	
	comp=E,124μm,0.6s					
MAGA				AML	AML	
	comp=N,89μm,0.3s					
MAGA				AML	AML	
	comp=E,124μm,0.6s					
MAGA				AML	AML	
	comp=N,89μm,0.3s					
MYKA	**Terra Mystica**	**3.06**	**1**	*e*Pn	**Pn**	**05 04 16.1 +3.3**
	comp=N,1.0nm,0.1s					
MYKA				*i* Sn	**Sb**	**05 04 53.5 -2.8**
	comp=N,1.3nm,0.3s					
STON	**Ston**	**3.09 102**		*e*Pn	**Pn**	**05 04 13.4 +0.2**
STON				Sn	**Sn**	**05 04 49.0 -0.7**
ABTA	**Abfaltersbach**	**3.26 347**		*e*Pn	**Pn**	**05 04 19.4 +3.7**
	comp=N,0.4nm,0.1s					
ABTA				*e*Sn	**Sn**	**05 04 57.7 +3.6**
	comp=N,6.4nm,0.5s					
KOSI	**Kohlern**	**3.28 332**		AML	AML	
	comp=N,52μm,0.6s					
KOSI				AML	AML	
	comp=E,46μm,0.8s					
KOSI				AML	AML	
	comp=N,52μm,0.6s					
KOSI				AML	AML	
	comp=E,46μm,0.8s					
MABI	**Malga Bissina**	**3.30 320**		AML	AML	
	comp=E,17μm,0.3s					
MABI				AML	AML	
	comp=E,17μm,0.3s					
MABI				AML	AML	
	comp=N,21μm,0.3s					
MABI				AML	AML	
	comp=N,21μm,0.3s					
KBA	**Koelnbreinsper**	**3.51 357**		*e*Pn	**Pn**	**05 04 22.5 +3.3**
	comp=N,0.9nm,0.3s					
KBA				*e*Sn	**Sn**	**05 05 03.8 +3.5**
	comp=N,1.8nm,0.3s					
PGF	**Pioggiola**	**3.51 255**		*e*Pn	**Pn**	**05 04 18.2 -1.0**
PGF				*e*Sn	**Sn**	**05 05 01.1 +0.8**
	comp=N,1.0nm,0.3s					
ABSI	**Aberstueckl**	**3.54 334**		AML	AML	
	comp=N,69μm,0.8s					
ABSI				AML	AML	
	comp=E,76μm,0.4s					
ABSI				AML	AML	
	comp=N,69μm,0.8s					
ABSI				AML	AML	
	comp=E,76μm,0.4s					
ROSI	**Rosskopf**	**3.69 336**		AML	AML	
	comp=N,62μm,0.5s					
ROSI				AML	AML	
	comp=E,41μm,0.8s					
ROSI				AML	AML	
	comp=N,62μm,0.5s					
ROSI				AML	AML	
	comp=E,41μm,0.8s					
WTTA	**Wattenberg**	**3.94 340**		*e*Pn	**Pn**	**05 04 29.8 +4.8**
	comp=E,1.5nm,0.2s					
WTTA				*e*Sn	**Sn**	**05 05 15.5 +4.6**
	comp=E,2.4nm,0.3s					
WATA	**Walderalm**	**4.02 340**		*e*Pn	**Pb**	**05 04 31.4 -4.3**
	comp=E,3.1nm,0.2s					
WATA				*e*Sn	**Sb**	**05 05 20.4 -3.6**
	comp=E,4.4nm,0.4s					
SBF	**Sospel**	**4.47 276**		*e*Pn	**Pn**	**05 04 31.0 -1.3**
SBF				*e*Sn	**Sn**	**05 05 22.4 -1.4**
	comp=E,4.3nm,0.4s					
FRF	**La Foret Royal**	**5.04 272**		*e*Pn	**Pn**	**05 04 38.8 -1.3**
FRF	**La Foret Royal**	**5.04 272**		*e*P	**Pn**	**05 04 43.6 +3.5**
FRF				*e*Sn	**Sn**	**05 05 37.0 -0.9**
	comp=E,2.6nm,0.4s					
LMR	**La Mourre**	**5.16 270**		*e*Pn	**Pn**	**05 04 41.0 -0.7**
LMR				*e*Sn	**Sn**	**05 05 38.2 -2.5**
	comp=E,1.0nm,0.3s					
LMR				*e*Sg	**Sg**	**05 06 11.4 +0.5**
	comp=E,0.3nm,0.2s					
LPG	**La Plagne**	**5.25 294**		*e*Pn	**Pn**	**05 04 42.1 -1.1**
LPG	**La Plagne**	**5.25 294**		*e*P	**Pn**	**05 04 45.8 +2.6**
LPG				*e*Sn	**Sn**	**05 05 41.2 -2.2**
	comp=E,0.5nm,0.2s					
LPL	**La Plagne**	**5.27 294**		*e*Pn	**Pn**	**05 04 41.7 -1.7**
LPL	**La Plagne**	**5.27 294**		*e*P	**Pn**	**05 04 45.9 +2.5**
LPL				*e*Sn	**Sn**	**05 05 40.7 -3.0**
	comp=E,3.4nm,0.4s					
ORIF	**Oris-en-Rattie**	**5.70 286**		*e*Pn	**Pn**	**05 04 47.8 -1.4**
ORIF	**Oris-en-Rattie**	**5.70 286**		*e*P	**Pn**	**05 04 52.8 +3.6**
ORIF				*e*Sn	**Sn**	**05 05 51.5 -2.6**
	comp=E,2.2nm,0.3s					
CABF	**La Chapelle**	**6.11 302**		*e*Pn	**Pn**	**05 04 52.6 -2.3**
CABF	**La Chapelle**	**6.11 302**		*e*P	**Pn**	**05 04 57.3 +2.4**
CABF				*e*Sn	**Sn**	**05 06 01.4 -3.0**
	comp=E,0.5nm,0.3s					
HINF	**Hinteralfeld**	**6.34 314**		*e*Pn	**Pn**	**05 04 55.7 -2.3**
HINF	**Hinteralfeld**	**6.34 314**		*e*P	**Pn**	**05 05 00.6 +2.6**
HINF				*e*Sn	**Sn**	**05 06 05.6 -4.3**
	comp=E,1.7nm,0.3s					
CDF	**Champ du Feu**	**6.53 320**		*e*Pn	**Pn**	**05 04 58.1 -2.6**
CDF	**Champ du Feu**	**6.53 320**		*e*P	**Pn**	**05 05 03.2 +2.5**
CDF				*e*Sn	**Sn**	**05 06 10.3 -4.4**
	comp=E,1.4nm,0.2s					
HAU	**Haudompre**	**6.72 314**		*e*Pn	**Pn**	**05 05 00.9 -2.3**
HAU	**Haudompre**	**6.72 314**		*e*P	**Pn**	**05 05 06.1 +2.9**
HAU				*e*Sn	**Sn**	**05 06 14.8 -4.5**
	comp=E,5.6nm,0.3s					
SMF	**Signal de Mont**	**7.54 297**		*e*Pn	**Pn**	**05 05 12.5 -2.0**
SMF	**Signal de Mont**	**7.54 297**		*e*P	**Pn**	**05 05 17.3 +2.8**
SMF				*e*Sn	**Sn**	**05 06 35.1 -4.4**
	comp=E,0.8nm,0.2s					
LOR	**Lormes**	**7.77 302**		*e*Pn	**Pn**	**05 05 14.9 -2.7**
LOR	**Lormes**	**7.77 302**		*e*P	**Pn**	**05 05 20.3 +2.7**
LOR				*e*Sn	**Sn**	**05 06 39.5 -5.6**
	comp=E,1.4nm,0.3s					
AVF	**Avril sur Loir**	**7.91 298**		*e*Pn	**Pn**	**05 05 17.3 -2.1**
AVF	**Avril sur Loir**	**7.91 298**		*e*P	**Pn**	**05 05 22.5 +3.0**
AVF				*e*Sn	**Sn**	**05 06 44.7 -3.7**
	comp=E,0.4nm,0.2s					
SSF	**Saint Saulge**	**7.91 300**		*e*Pn	**Pn**	**05 05 18.0 -1.5**
SSF	**Saint Saulge**	**7.91 300**		*e*P	**Pn**	**05 05 22.8 +3.3**
SSF				*e*Sn	**Sn**	**05 06 44.1 -4.4**
	comp=E,1.2nm,0.3s					

SJA 14 05:03:52.6±0.7, 29°.52S×68°.80W, h128km±6km, ML3.1, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.94**	**34**	*i* P	Pn	05 04 15.7	+0.8
VCA				*i* S	Sn	05 04 32.5	+0.8
VCA				IAML		05 04 33.2	
	comp=Z,2μm,0.2s						
AMOG	**MOGNA**	**1.44**	**170**	*i* P	Pn	05 04 20.3	+0.4
AMOG				*i* S	Sn	05 04 41.8	+1.0
LCO	**Las Campanas**	**1.74**	**286**	*i* P	Pn	05 04 24.6	+1.0
RTLS	**Leoncito**	**2.31**	**191**	*i* P	Pn	05 04 31.9	+1.2
RTLS				IAML		05 04 33.1	
	comp=Z,39nm,0.2s						
RTLS				*i* S	Sn	05 05 00.7	+1.0
RTCV	**Cerro Valdivia**	**2.34**	**175**	*i* P	Pn	05 04 31.9	+1.1
RTCV				*i* S	Sn	05 05 01.1	+0.9
AUSP	**Uspallata**	**2.74**	**191**	*i* P	Pn	05 04 37.7	+1.6
CYA	**Choya**	**2.83**	**68**	*i* P	Pn	05 04 37.9	+0.8
ARCO	**CERRO ARCO**	**3.31**	**182**	*i* P	Pn	05 04 45.0	+1.6
ARCO				IAML		05 04 45.2	
	comp=Z,12nm,0.3s						

JMA 14 05:17:51.4, 38°.40N×141°.77E, h57km±1km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.26**	**250**	P	Pn	05 18 00.8	0.0
JIKH				*i* S	Sn	05 18 07.4	-0.2
JIO	**Ouri**	**0.34**	**279**	P	Pn	05 18 01.5	0.0
JIO				S	Sn	05 18 08.5	-0.2
JKMT	**Kesennumamotoy**	**0.47**	**331**	P	Pn	05 18 02.9	+0.1
JKMT				S	Sn	05 18 10.9	-0.2
OFUJ	**Ofunato**	**0.68**	**353**	P	Pn	05 18 05.3	0.0
OFUJ				S	Sn	05 18 15.2	-0.2
JMK	**Ichinoseki**	**0.70**	**322**	P	Pn	05 18 05.7	+0.2
JMK				S	Sn	05 18 15.9	+0.2
JOU	**Okura**	**0.87**	**268**	P	Pn	05 18 07.7	+0.1
JOU				S	Sn	05 18 19.8	+0.2
JMM	**Marumori**	**0.94**	**236**	P	Pn	05 18 08.1	-0.4
JMM				S	Sn	05 18 20.3	-0.8
JOM	**Ohasama**	**1.13**	**341**	P	Pn	05 18 11.4	+0.3
JOM				S	Sn	05 18 26.1	+0.3
JYK	**Kaneyama**	**1.22**	**296**	P	Pn	05 18 12.6	+0.4
JFK	**Kawauchi**	**1.25**	**215**	P	Pn	05 18 12.5	-0.2
JFK				S	Sn	05 18 28.2	-0.4
JRG	**Rokugo**	**1.33**	**319**	P	Pn	05 18 14.1	+0.3
JYS	**Shiratake**	**1.35**	**263**	P	Pn	05 18 14.4	+0.4
JYS				S	Sn	05 18 32.1	+1.1
JFT	**Otama**	**1.44**	**233**	P	Pn	05 18 15.6	+0.5
JFT				S	Sn	05 18 33.3	+0.3

DJA 14 05:19:54.3±1.7, 5°.N±13°.×12°.7E±1°.2, h14km±24km, M4.7/7, mb4.6/6, mB5.2/7, MLv4.8/7, Mw(mB)4.6/7
ISCJB 14 05:19:55.1±0.3, 4°.93N±0°.03×127°.66E±0°.05, h108km, mb4.3/27, Error ellipse: s-maj=6.8km s-min=4.6km az=159.5
MAN 14 05:19:55.1, 4°.84N×127°.70E, h60km, mb5.0, ML3.9, MS3.9
IDC 14 05:19:58.6±7.6, 4°.85N×127°.44E, h129km±72km, mb3.8/11, mb1 3.9/11, mb1mx3.5/44, mbtmp4.2/11, MS2.4/1, Ms1 2.4/1, ms1mx2.1/26, Error ellipse: s-maj=34.7km s-min=15.3km az=85.0
NEIC 14 05:20:00.9±1.8, 4°.94N×127°.61E, h146km±7km, mb4.5/22, Error ellipse: s-maj=21.8km s-min=12.0km az=71.0
ISC 14 05:19:56.9±0.5, 4°.94N±0°.05×127°.57E±0°.08, h108km, n54, σ1°.16/54, mb4.3/27, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.18**	**302**	*e*P	**Pn**	**05 20 32.2**	**0.0**
DDMP				*e*S	**Sn**	**05 21 00.4**	**+1.3**
MATI	**Mati**	**2.38**	**327**	*e*P	**Pn**	**05 20 34.9**	**+0.2**
MATI				*e*S	**Sn**	**05 21 04.8**	**+1.0**
SGSI	**Sangihe**	**2.38**	**239**	P	**Pn**	**05 20 34.1**	**-0.7**
SGSI				S	**Sn**	**05 21 03.1**	**-0.7**
DAV	**Davao City (W)**	**2.90**	**317**	LR	LR	05 21 38.6	
	comp=Z,55nm,18.7s,baz=184,slow=35						
DAV	**Davao City (W)**	**2.90**	**317**	*e*Pn	Pn	05 20 48.0	+6.5
SKMP	**Bagumbayan, Su**	**3.39**	**298**	*e*P	**Pn**	**05 20 48.9**	**+0.8**
BUKP	**Musuan**	**3.84**	**320**	*e*P	**Pn**	**05 20 56.8**	**+2.7**
BUKP				*e*S	**Sn**	**05 21 40.1**	**+1.7**
TNTI	**Ternate**	**4.15**	**183**	*e*Pn	Pn	05 21 04.4	+6.2
TNTI	**Ternate**	**4.15**	**183**	P	**Pn**	**05 21 00.9**	**+2.6**
MRSI	**Marisa**	**7.16**	**232**	P	**Pn**	**05 21 39.4**	**+0.4**
LUWI	**Luwuk**	**7.63**	**219**	P	**Pn**	**05 21 47.1**	**+1.6**
APSI	**Ampana**	**8.29**	**226**	P	**Pn**	**05 21 56.3**	**+1.9**
	34nm,0.7s,588nm						
MPSI	**Mapaga**	**8.92**	**239**	P	Pn	05 21 58.3	-4.7
EDFI	**Ende, Flores**	**14.81**	**203**	P	**P**	**05 23 25.5**	**+1.3**
	7.9nm,0.7s,2μm						
BATI	**Baumata**	**15.54**	**194**	P	**P**	**05 23 34.0**	**+1.8**
MTN	**Manton Dam**	**18.02**	**169**	*e*P	**Pn**	**05 24 00.1**	**-0.5**
	25nm,1.3s						
YULB	**Yu-li**	**19.32**	**342**	*e*P	**P**	**05 24 14.5**	**+0.8**
	25nm,1.5s						
NACB	**Ninganchiao**	**19.97**	**344**	*e*P	**P**	**05 24 22.0**	**+1.2**
	35nm,1.1s						
FITZ	**Fitzroy Crossi**	**22.97**	**185**	P	**P**	**05 24 51.4**	**-0.9**
	1.6nm,0.4s,baz=357,slow=11,SNR=2.4						
WRA	**Warramunga Arr**	**25.61**	**165**	P	**P**	**05 25 16.2**	**-0.2**
	2.2nm,0.5s,baz=342,slow=12,SNR=4.2						
WR1	**Warramunga Arr**	**25.61**	**165**	*e*P	**P**	**05 25 16.1**	**-0.2**
WB2	**Warramunga Arr**	**25.61**	**165**	*e*P	**P**	**05 25 17.5**	**+1.1**
	14nm,1.3s						
PSA00	**Pilbara Seismi**	**27.41**	**196**	*e*P	**P**	**05 25 34.1**	**+1.5**
	14nm,1.1s						
KSRS	**Korea Array**	**32.36**	**1**	P	**P**	**05 26 15.7**	**-0.5**
	1.0nm,0.3s,baz=177,slow=9.8,SNR=7.5						
XAN	**Xi'an**	**33.74**	**331**	*e*P	**P**	**05 26 28.6**	**+0.3**
	6.4nm,0.6s						
BBOO	**Buckleboo**	**38.40**	**168**	*e*P	**P**	**05 27 06.7**	**-1.2**
	12nm,1.1s						
STKA	**Stephens Creek**	**38.98**	**161**	P	**P**	**05 27 11.1**	**-1.6**
	1.2nm,0.4s,baz=305,slow=9.2,SNR=4.5						
STKA	**Stephens Creek**	**38.98**	**161**	*e*P	**P**	**05 27 11.3**	**-1.4**
	2.3nm,1.5s						
SHL	**Shillong**	**39.85**	**305**	*e*P	**P**	**05 27 19.5**	**-0.9**
	14nm,0.8s						
KLR	**Kul'dur**	**44.27**	**4**	P	**P**	**05 27 55.7**	**0.0**
	1.3nm,0.5s,baz=194,slow=3.8,SNR=6.4						
TOO	**Toolangi**	**45.47**	**160**	*e*P	**P**	**05 28 05.1**	**-0.3**
	22nm,1.3s						
DZM	**Mont Dzumac**	**46.57**	**127**	*e*P	**P**	**05 28 13.0**	**-1.4**
	24nm,1.4s						
PEA0B	**Petropavlovsk-**	**54.00**	**22**	*e*P	**P**	**05 29 11.1**	**+1.3**
	8.6nm,0.6s						
PETK	**Petropavlovsk-**	**54.00**	**22**	P	**P**	**05 29 11.0**	**+1.2**
	5.3nm,0.6s,baz=177,slow=4.5,SNR=17						
PEA1	**Petropavlovsk-**	**54.01**	**22**	*e*P	**P**	**05 29 11.0**	**+1.2**
MK31	**Makanchi Array**	**57.05**	**324**	*e*P	**P**	**05 29 32.5**	**+0.7**
	1.8nm,0.9s						
MK32	**Makanchi Array**	**57.05**	**324**	*e*P	**P**	**05 29 32.1**	**+0.4**
MKAR	**Makanchi Array**	**57.05**	**324**	P	**P**	**05 29 32.1**	**+0.4**
	1.1nm,0.3s,baz=117,slow=8.1,SNR=20						
ZALV	**Zalesovo Beam**	**59.90**	**332**	P	**P**	**05 29 50.1**	**-1.3**
	1.0nm,0.6s,baz=114,slow=6.6,SNR=3.9						
ZAA1	**Zalesovo Array**	**59.90**	**332**	*e*P	**P**	**05 29 50.1**	**-1.3**
KURK	**Kurchatov**	**61.18**	**327**	*e*P	**P**	**05 30 00.2**	**+0.1**
	3.7nm,0.6s						
GAR	**Garm**	**61.73**	**312**	*e*P	**P**	**05 30 04.3**	**+0.1**
	5.7nm,0.8s						
KK31	**Karatay Array**	**62.93**	**316**	*e*P	**P**	**05 30 12.1**	**+0.1**
	2.1nm,0.8s						
KKAR	**Karatay Array**	**62.93**	**316**	*e*P	**P**	**05 30 12.2**	**+0.2**
	2.1nm,0.8s						
TIXI	**Tiksi**	**66.63**	**0**	P	**P**	**05 30 35.4**	**0.0**
	4.5nm,0.4s,baz=161,slow=4.6,SNR=6.1						
TIXI	**Tiksi**	**66.63**	**0**	*e*P	**P**	**05 30 35.2**	**-0.3**
	5.0nm,0.4s						
ABKAR	**Akbulak array**	**71.75**	**320**	*e*P	**P**	**05 31 06.9**	**-0.6**
	1.2nm,0.6s						
AKTO	**Aktyubinsk**	**73.24**	**321**	P	**P**	**05 31 15.6**	**-0.8**
	0.6nm,0.3s,baz=97,slow=9.1,SNR=4.8						
MLY	**Manley**	**82.04**	**25**	*e*P	**P**	**05 32 06.4**	**+1.4**
	1.8nm,1.1s						
ILAR	**Eielson Array**	**83.66**	**25**	P	**P**	**05 32 13.2**	**-0.2**
	0.3nm,0.5s,baz=252,slow=5.0,SNR=5.6						
ARCES	**ARCESS Array B**	**89.61**	**340**	P	**P**	**05 32 40.3**	**-1.9**
	2.3nm,0.9s,baz=94,slow=6.3,SNR=6.4						
TORD	**Torodi Ar. Bea**	**123.32**	**289**	PKP	**PKPdf**	**05 38 40.9**	**-1.4**
	0.2nm,0.4s,baz=96,slow=2.0,SNR=4.0						
TOA1	**Torodi Ar. Sit**	**123.33**	**289**	*e*PKPdf	**PKPdf**	**05 38 40.9**	**-1.4**
TRQA	**Tornquist**	**145.91**	**166**	*e*PKPdf	**PKPdf**	**05 39 23.0**	**-0.6**

NIED 14 05:22:00, 37°.80N×141°.70E, h47km, Mw4.0 Best double couple: M0 1.21000×10^15 NP1:φ0=201.00000°, δ21.00000°, λ83.00000°. NP2:φ0=29.00000°, δ70.00000°, λ93.00000°.
ISCJB 14 05:22:28.4±0.7, 37°.76N±0°.04×141°.64E±0°.08, h51km±5km, mb4.0/14, MS3.0/5, Error ellipse: s-maj=11.6km s-min=4.5km az=21.2
JMA 14 05:22:29.1±0.1, 37°.77N×141°.62E, h47km±1km, M3.9
JMA Felt II J1.
IDC 14 05:22:32.2±2.3, 37°.65N×141°.49E, h75km±21km, mb3.7/13, mb1 3.8/19, mb1mx3.7/43, mbtmp4.0/19, MS2.9/9, Ms1 3.0/9, ms1mx2.8/27, Error ellipse: s-maj=22.4km s-min=17.6km az=77.0
ISC 14 05:22:28.8±1.5, 37°.77N±0°.05×141°.70E±0°.09, h41km±12km, n42, σ1°.73/48, mb3.9/14, MS3.2/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.57**	**341**	P	**Pn**	**05 22 41.0**	**+0.4**
JIKH				S	**Sn**	**05 22 48.9**	**-0.1**
JMM	**Marumori**	**0.72**	**278**	P	**Pn**	**05 22 42.3**	**-0.3**
JMM				S	**Sn**	**05 22 51.5**	**-1.1**
JIO	**Ouri**	**0.74**	**338**	P	**Pn**	**05 22 43.1**	**+0.3**
JIO				S	**Sn**	**05 22 52.5**	**-0.4**
JFK	**Kawauchi**	**0.77**	**239**	P	**Pn**	**05 22 42.8**	**-0.4**
JFK				S	**Sn**	**05 22 52.2**	**-1.5**
ONAJ	**Iwakimizuishiy**	**0.98**	**228**	P	**Pn**	**05 22 45.7**	**-0.4**
ONAJ				S	**Sn**	**05 22 57.1**	**-1.7**
JOU	**Okura**	**1.01**	**307**	P	**Pn**	**05 22 46.4**	**-0.2**
JOU				S	**Sn**	**05 22 58.8**	**-0.9**
JKMT	**Kesennumamotoy**	**1.06**	**350**	P	**Pn**	**05 22 47.5**	**+0.3**
JKMT				*e*S	**Sn**	**05 23 00.2**	**-0.5**
JFT	**Otama**	**1.11**	**258**	P	**Pn**	**05 22 48.1**	**+0.2**
JFT				S	**Sn**	**05 23 01.8**	**-0.2**
JMK	**Ichinoseki**	**1.24**	**342**	P	**Pn**	**05 22 50.2**	**+0.5**
JMK				S	**Sn**	**05 23 05.0**	**-0.2**
JYS	**Shiratake**	**1.37**	**290**	P	**Pn**	**05 22 51.3**	**-0.1**
JYK	**Kaneyama**	**1.56**	**318**	P	**Pn**	**05 22 54.3**	**+0.2**
JFY	**Yanaizu**	**1.62**	**258**	P	**Pn**	**05 22 55.1**	**+0.1**
MJAR	**Matsushiro Arr**	**3.04**	**247**	P	**Pn**	**05 23 15.2**	**+0.8**
	1.2nm,0.3s,baz=69,slow=11,SNR=30						
MJAR				S	**Sn**	**05 23 56.5**	**+6.8**
	2.0nm,0.3s,baz=74,slow=12,SNR=5.5						
MJAR				LR	LR	05 24 50.1	
	comp=Z,166nm,18.9s,baz=70,slow=49						
MAT	**Matsushiro**	**3.05**	**247**	P	**Pn**	**05 23 15.6**	**+1.1**
MAT				S	**Sn**	**05 23 55.5**	**+5.8**
JHJ	**Hachijo jima 2**	**4.89**	**199**	P	**Pn**	**05 23 40.4**	**+0.5**
	13nm,0.3s,baz=281,slow=21,SNR=12						
JHJ				S	**Sn**	**05 24 33.3**	**-2.0**
	38nm,0.3s,baz=96,slow=22,SNR=8.4						
ASAJ	**Asahikawa**	**6.38**	**6**	P	**Pn**	**05 24 02.3**	**+2.1**
	1.1nm,0.3s,baz=219,slow=12,SNR=3.6						
ASAJ				S	**Sn**	**05 25 13.2**	**+1.4**
	0.9nm,0.3s,baz=105,slow=20,SNR=3.3						
USRK	**Ussuriysk Ar.**	**9.75**	**314**	P	**Pn**	**05 24 47.6**	**+1.2**
	0.6nm,0.3s,baz=127,slow=12,SNR=14						
JNU	**Nakatsue**	**9.97**	**246**	P	**Pn**	**05 24 50.4**	**+0.9**
	0.2nm,0.3s,baz=13,slow=9.4,SNR=3.8						
JNU				LR	LR	05 29 03.3	
	comp=Z,75nm,21.2s,baz=14,slow=40						
KSRS	**Korea Array**	**10.94**	**273**	P	**Pn**	**05 25 05.1**	**+2.5**
	0.2nm,0.3s,baz=88,slow=13,SNR=8.4						
KSRS				LR	LR	05 28 55.8	
	comp=Z,48nm,19.7s,baz=78,slow=36						
KLR	**Kul'dur**	**13.53**	**331**	P	**P**	**05 25 42.6**	**-3.7**
	0.1nm,0.3s,baz=142,slow=15,SNR=3.6						
KLR				LR	LR	05 30 41.1	
	comp=Z,50nm,18.2s,baz=132,slow=36						
SEY	**Seymchan**	**26.03**	**11**	P	**P**	**05 27 59.5**	**+1.7**
	1.3nm,0.5s,baz=198,slow=17,SNR=4.5						
SONM	**Songino Array**	**27.57**	**303**	P	**P**	**05 28 11.5**	**-0.5**
	1.6nm,0.7s,baz=109,slow=7.5,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	**28.34**	**122**	T	T	05 58 32.9	
	baz=315,slow=75,SNR=200						
H11N1	**WAKE ISLAND Hy**	**28.34**	**122**	T	T	05 58 35.3	
	baz=315,slow=75,SNR=70						
H11N3	**WAKE ISLAND Hy**	**28.35**	**122**	T	T	05 58 40.7	
	baz=315,slow=75,SNR=57						
H11S1	**WAKE ISLAND Hy**	**29.07**	**124**	T	T	05 59 26.1	
	baz=317,slow=75,SNR=41						
H11S3	**WAKE ISLAND Hy**	**29.08**	**124**	T	T	05 59 39.0	
	baz=317,slow=75,SNR=60						
H11S2	**WAKE ISLAND Hy**	**29.09**	**124**	T	T	05 59 34.9	
	baz=317,slow=75,SNR=98						
ZALV	**Zalesovo Beam**	**41.59**	**312**	P	**P**	**05 30 12.1**	**-0.3**
	3.3nm,0.7s,baz=90,slow=7.0,SNR=11						
ZALV				LR	LR	05 47 48.2	
	comp=Z,33nm,18.6s,baz=70,slow=36						
CMAR	**Chiang Mai Arr**	**41.91**	**255**	LR	LR	05 49 20.1	
	comp=Z,11nm,19.4s,baz=165,slow=38						
MKAR	**Makanchi Array**	**43.93**	**302**	P	**P**	**05 30 31.2**	**-0.2**
	1.9nm,0.7s,baz=89,slow=9.8,SNR=8.9						
MKAR				LR	LR	05 50 02.4	
	comp=Z,11nm,18.2s,baz=141,slow=38						
INK	**Inuvik**	**53.63**	**27**	P	**P**	**05 31 46.7**	**+1.2**
	0.6nm,0.5s,baz=183,slow=2.2,SNR=5.1						
WRA	**Warramunga Arr**	**57.82**	**188**	P	**P**	**05 32 15.0**	**-1.1**
	1.4nm,0.7s,baz=0.6,slow=8.3,SNR=5.4						
ARCES	**ARCESS Array B**	**63.39**	**339**	P	**P**	**05 32 53.5**	**-0.1**
	1.8nm,0.8s,baz=38,slow=8.0,SNR=3.2						
ARCES				LR	LR	06 04 16.2	
	comp=Z,16nm,20.0s,baz=39,slow=40						
FINES

PVLZ				eS	Sn	05 27 57.0	+0.4
EBER	**Berja**	**1.77**	**4**	P	**Pb**	**05 27 53.8**	**-1.8**
	2.8nm,0.3s,SNR=14						
EBER				S	**Sn**	**05 28 14.5**	**-0.4**
	11nm,0.2s,SNR=12						
ELGU	**Los Guajares,**	**1.80**	**345**	⇓P	**Pn**	**05 27 53.2**	**-0.2**
	7.6nm,0.2s,SNR=18						
ELGU				S	**Sn**	**05 28 14.8**	**-0.7**
	32nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**1.95**	**20**	P	**Pn**	**05 27 54.7**	**-0.8**
	SNR=7.9						
ENIJ				S	**Sn**	**05 28 20.1**	**+0.8**
	22nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.98**	**326**	⇓eP	**Pn**	**05 27 55.9**	**0.0**
EMAL				eS	**Sb**	**05 28 22.7**	**-0.6**
EMIJ	**Mijas**	**2.01**	**316**	P	**Pn**	**05 27 56.2**	**0.0**
	0.0nm,0.3s,SNR=7.9						
EMIJ				S	**Sn**	**05 28 21.0**	**+0.4**
	52nm,0.6s,SNR=7.9						
CEU	**Ceuta**	**2.05**	**293**	P	**Pn**	**05 27 54.5**	**-2.3**
CEU				S	**Sn**	**05 28 19.2**	**-2.4**
CEU	**Ceuta**	**2.05**	**293**	eP	**Pn**	**05 27 54.5**	**-2.3**
CEU				eS	**Sn**	**05 28 19.2**	**-2.4**
EQUE	**Quentar**	**2.09**	**351**	P	**Pb**	**05 27 59.0**	**-2.2**
	2.0nm,0.2s,SNR=21						
EQUE				S	**Sn**	**05 28 24.7**	**+1.9**
	5.0nm,0.2s,SNR=5.2						
EGOR	**Sierra Gorda,**	**2.16**	**337**	P	**Pn**	**05 27 58.4**	**0.0**
	4.0nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**05 28 26.5**	**+2.1**
	3.7nm,0.2s,SNR=7.9						
GORA	**Gorafe**	**2.34**	**360**	P	**Pn**	**05 28 01.8**	**+0.9**
	2.2nm,0.2s,SNR=7.9						
GORA				S	**Sb**	**05 28 32.6**	**-1.3**
	5.8nm,0.2s,SNR=7.9						
IFR	**Ifrane**	**2.37**	**228**	eP	**Pb**	**05 28 05.1**	**-0.7**
IFR				eS	**Sb**	**05 28 35.2**	**+0.5**
LIJA	**Lijar**	**2.61**	**313**	eP	**Pb**	**05 28 07.0**	**-3.0**
LIJA				eS	**Sb**	**05 28 45.0**	**+3.4**
EQES	**Quesada**	**2.67**	**359**	P	**Pb**	**05 28 08.3**	**-2.6**
	4.8nm,0.3s,SNR=29						
EQES				S	**Sb**	**05 28 42.2**	**-1.1**
	8.8nm,0.2s,SNR=7.9						
ESPR	**Espera**	**2.87**	**308**	P	**Pn**	**05 28 09.6**	**+1.6**
	0.7nm,0.1s,SNR=6.5						
ESPR				S	**Sn**	**05 28 42.4**	**+0.7**
	1.8nm,0.2s,SNR=4.0						
SESP	**Santiago Espad**	**3.01**	**7**	P	**Pn**	**05 28 12.2**	**+2.1**
	7.0nm,0.3s,SNR=7.9						
SESP				S	**Sn**	**05 28 48.8**	**+3.4**
	2.1nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**3.07**	**28**	⇓P	**Pn**	**05 28 10.8**	**0.0**
	11nm,0.4s,SNR=18						
EMUR				S	**Sn**	**05 28 47.5**	**+0.7**
	1.9nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**3.27**	**338**	P	**Pn**	**05 28 15.4**	**+1.8**
	0.5nm,0.2s,SNR=20						
EADA				S	**Sn**	**05 28 53.1**	**+1.3**
	1.8nm,0.1s,SNR=5.0						
ETOB	**Tobarra**	**3.70**	**18**	P	**Pn**	**05 28 21.8**	**+2.2**
	1.8nm,0.2s,SNR=12						
ETOB				S	**Sn**	**05 29 03.1**	**+0.6**
	2.8nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.94**	**313**	P	**Pn**	**05 28 23.5**	**+0.7**
	0.2nm,0.2s,SNR=17						
EMIN				S	**Sn**	**05 29 07.9**	**-0.3**
	0.6nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.41**	**302**	ePn	**Pn**	**05 28 29.9**	**+0.7**
PVAQ				eSn	**Sn**	**05 29 20.6**	**+0.8**
PVAQ				A	A	05 29 27.9	
	3.8nm,1.0s						
PVAQ	**Vaqueiros**	**4.41**	**302**	P	**Pn**	**05 28 29.9**	**+0.7**
PVAQ				S	**Sn**	**05 29 20.6**	**+0.8**
	3.8nm,1.0s						
PBDV	**Barranco-do-Ve**	**4.48**	**299**	ePn	**Pn**	**05 28 31.0**	**+0.7**
PBDV				eSn	**Sn**	**05 29 22.8**	**+1.1**
PBDV				A	A	05 29 30.6	
	3.9nm,0.6s						
PBDV	**Barranco-do-Ve**	**4.48**	**299**	P	**Pn**	**05 28 31.0**	**+0.7**
PBDV				S	**Sn**	**05 29 22.8**	**+1.1**
	3.9nm,0.6s						
PAB	**San Pablo**	**4.53**	**347**	P	**Pn**	**05 28 33.6**	**+2.7**
	1.1nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**05 29 23.8**	**+1.0**
	0.6nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.59**	**351**	P	**Pn**	**05 28 34.3**	**+2.5**
	0.0nm,0.2s,baz=173,slow=12,SNR=562						
ESDC				S	**Sn**	**05 29 26.8**	**+2.4**
	baz=181,slow=23,SNR=7.9						
PCVE	**Castro Verde**	**4.74**	**303**	ePn	**Pn**	**05 28 34.5**	**+0.7**
PCVE				eSn	**Sn**	**05 29 30.6**	**+2.5**
PCVE				A	A	05 29 40.8	
	4.0nm,0.5s						
PCVE	**Castro Verde**	**4.74**	**303**	P	**Pn**	**05 28 34.5**	**+0.7**
PCVE				S	**Sn**	**05 29 30.6**	**+2.5**
	4.0nm,0.5s						
ECHE	**Chera**	**4.75**	**20**	P	**Pn**	**05 28 35.9**	**+2.0**
	1.4nm,0.3s,SNR=7.9						
PBEJ	**Beja**	**4.84**	**308**	ePn	**Pn**	**05 28 37.3**	**+2.1**
PBEJ				eSn	**Sn**	**05 29 33.1**	**+2.6**
PBEJ	**Beja**	**4.84**	**308**	P	**Pn**	**05 28 37.3**	**+2.1**
PBEJ				S	**Sn**	**05 29 33.1**	**+2.6**
MESJ	**Messejana**	**4.97**	**304**	eP	**Pn**	**05 28 38.2**	**+1.3**
MESJ	**Messejana**	**4.97**	**304**	P	**Pn**	**05 28 38.2**	**+1.3**
PTEO	**Sao Teotonio**	**5.18**	**299**	ePn	**Pn**	**05 28 40.7**	**+0.8**
PTEO	**Sao Teotonio**	**5.18**	**299**	P	**Pn**	**05 28 40.7**	**+0.8**
EIBI	**Ibiza**	**5.23**	**41**	P	**Pn**	**05 28 40.4**	**-0.1**
	0.9nm,0.3s,SNR=10						
EIBI				S	**Sn**	**05 29 39.3**	**-0.8**
	0.7nm,0.2s,SNR=7.9						
PNCL	**Nicolau / Gran**	**5.32**	**306**	ePn	**Pn**	**05 28 42.8**	**+1.0**
PNCL				eSn	**Sn**	**05 29 42.6**	**+0.3**
PNCL				A	A	05 29 56.5	
	3.0nm,0.9s						
PNCL	**Nicolau / Gran**	**5.32**	**306**	P	**Pn**	**05 28 42.8**	**+1.0**
PNCL				S	**Sn**	**05 29 42.6**	**+0.3**
	3.0nm,0.9s						
EPLA	**Plasencia**	**5.48**	**335**	P	**Pn**	**05 28 46.1**	**+2.1**
	0.2nm,0.4s,SNR=6.2						
EPLA				S	**Sn**	**05 29 47.3**	**+0.9**
	2.7nm,0.5s,SNR=7.9						
PMRV	**Marv??o**	**5.52**	**322**	ePn	**Pn**	**05 28 46.2**	**+1.7**
PMRV				eSn	**Sn**	**05 29 48.1**	**+1.0**
PMRV				A	A	05 30 03.0	
	3.6nm,0.6s						
PMRV	**Marv??o**	**5.52**	**322**	P	**Pn**	**05 28 46.2**	**+1.7**
PMRV				S	**Sn**	**05 29 48.1**	**+1.0**
	3.6nm,0.6s						
EMOS	**Mosqueruela**	**5.60**	**20**	P	**Pn**	**05 28 46.9**	**+1.2**
	0.8nm,0.3s,SNR=6.6						
PMTG	**Montargil**	**5.71**	**315**	ePn	**Pn**	**05 28 48.5**	**+1.4**
PMTG				eSn	**Sn**	**05 29 52.2**	**+0.3**
PMTG				A	A	05 29 56.5	
	3.6nm,0.6s						
PMTG	**Montargil**	**5.71**	**315**	P	**Pn**	**05 28 48.5**	**+1.4**
PMTG				S	**Sn**	**05 29 52.2**	**+0.3**
	3.6nm,0.6s						
ETOR	**Torete**	**5.73**	**7**	P	**Pn**	**05 28 49.9**	**+2.5**
	1.5nm,0.3s,SNR=12						
PCBR	**Castelo Branco**	**5.88**	**324**	ePn	**Pn**	**05 28 50.7**	**+1.3**
PCBR				eSn	**Sn**	**05 29 56.5**	**+0.5**
PCBR				A	A	05 29 57.9	
	4.6nm,0.6s						
PCBR	**Castelo Branco**	**5.88**	**324**	P	**Pn**	**05 28 50.7**	**+1.3**
PCBR				S	**Sn**	**05 29 56.5**	**+0.5**
	2.3nm,0.6s						
MTE	**Manteigas**	**6.35**	**327**	ePn	**Pn**	**05 28 57.8**	**+1.8**
MTE				eSn	**Sn**	**05 30 09.0**	**+1.2**
MTE				A	A	05 30 12.9	
	6.0nm,0.5s						
MTE	**Manteigas**	**6.35**	**327**	P	**Pn**	**05 28 57.8**	**+1.8**
MTE				S	**Sn**	**05 30 09.0**	**+1.2**
	3.0nm,0.5s						
PCAS	**Casmilo, Conde**	**6.55**	**320**	ePn	**Pn**	**05 29 00.4**	**+1.8**
PCAS	**Casmilo, Conde**	**6.55**	**320**	P	**Pn**	**05 29 00.4**	**+1.8**
ETOS	**Mallorca**	**6.56**	**43**	P	**Pn**	**05 28 58.9**	**+0.1**
	0.7nm,0.3s,SNR=6.0						
PVIS	**Viseu**	**6.77**	**327**	ePn	**Pn**	**05 29 03.1**	**+1.4**
PVIS	**Viseu**	**6.77**	**327**	P	**Pn**	**05 29 03.1**	**+1.4**
MVO	**Moncorvo**	**6.79**	**334**	ePn	**Pn**	**05 29 03.8**	**+1.8**
MVO				eSn	**Sn**	**05 30 17.7**	**-0.9**
MVO				A	A	05 30 19.4	
	5.5nm,0.6s						
MVO	**Moncorvo**	**6.79**	**334**	P	**Pn**	**05 29 03.8**	**+1.8**
	1.2nm,0.2s,SNR=7.5						
MVO				S	**Sn**	**05 30 17.0**	**-1.6**
	12nm,0.7s,SNR=7.9						
PVRL	**Vila Real**	**7.15**	**330**	ePn	**Pn**	**05 29 08.6**	**+1.7**
PVRL	**Vila Real**	**7.15**	**330**	P	**Pn**	**05 29 08.6**	**+1.7**
PBRG	**Braganca**	**7.27**	**338**	ePn	**Pn**	**05 29 08.7**	**+0.2**
PBRG				eSn	**Sn**	**05 30 28.6**	**-1.6**
PBRG				A	A	05 30 30.3	
	2.1nm,0.4s						
PBRG	**Braganca**	**7.27**	**338**	P	**Pn**	**05 29 08.7**	**+0.2**
PBRG				S	**Sn**	**05 30 28.6**	**-1.6**
	1.1nm,0.4s						
POLO	**Lamas de Olo**	**7.27**	**330**	ePn	**Pn**	**05 29 10.2**	**+1.6**
POLO				eSn	**Sn**	**05 30 28.4**	**-1.9**
POLO				A	A	05 30 41.3	
	1.5nm,0.6s						
POLO	**Lamas de Olo**	**7.27**	**330**	P	**Pn**	**05 29 10.2**	**+1.6**
POLO				S	**Sn**	**05 30 28.4**	**-1.9**
	1.5nm,0.6s						
ECAL	**Calabor**	**7.39**	**338**	P	**Pn**	**05 29 11.6**	**+1.3**
	0.4nm,0.2s,SNR=4.6						
ECAL				S	**Sn**	**05 30 31.9**	**-1.4**
	6.9nm,0.6s,SNR=7.9						
CSOR	**Sort**	**7.93**	**23**	P	Pn	05 29 20.7	+3.0
	1.1nm,0.3s,SNR=9.4						
PGAV	**Gavieira, Arco**	**7.96**	**331**	ePn	**Pn**	**05 29 19.6**	**+1.6**
PGAV	**Gavieira, Arco**	**7.96**	**331**	P	**Pn**	**05 29 19.6**	**+1.6**

*THE **14** 05:39:43.2, 34°.79N×24°.11E, h34km±1km, ML2.7/4, Error ellipse: s-maj=2.9km s-min=1.2km az=215.0*

ATH 14 05:39:44.1, 34°.86N×24°.12E, h29km±2km, ML2.5/5, Error ellipse: s-maj=3.0km s-min=2.1km az=205.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.04**	**231**	P	Pb	05 39 49.1	0.0
GVD				S	Sb	05 39 52.8	+0.3
	5μm,0.1s						
GVD	**Gavdhos**	**0.04**	**231**	P	Pb	05 39 49.2	+0.1
GVD				S	Sb	05 39 53.1	+0.6
GVD	**Gavdhos**	**0.04**	**231**	P	Pb	05 39 49.2	+0.1
GVD				S	Sb	05 39 53.1	+0.7
GVD				AML	AML	05 39 53.4	
	comp=E,14056μm,0.1s						
GVD				AML	AML	05 39 54.1	
	comp=N,7458μm,0.1s						
VAM	**Vamos**	**0.55**	**7**	P	Pb	05 39 54.8	-0.5
VAM				S	Sn	05 40 04.6	+0.4
	comp=N,832nm,0.3s						
VAM	**Vamos**	**0.55**	**7**	P	Pb	05 39 55.0	-0.3
VAM				S	Sn	05 40 03.9	-0.3
VAM	**Vamos**	**0.55**	**7**	P	Pb	05 39 54.9	-0.5
VAM				S	Sn	05 40 04.4	+0.2
VAM				AML	AML	05 40 05.9	
	comp=E,860μm,0.4s						
VAM				AML	AML	05 40 07.5	
	comp=N,864μm,0.4s						
SIVA	**Sivas**	**0.59**	**74**	P	Pb	05 39 54.8	-1.1
SIVA				S	Sb	05 40 04.2	+0.2
	comp=N,602nm,0.2s						
SIVA	**Sivas**	**0.59**	**74**	P	Pb	05 39 55.4	-0.6
SIVA				S	Sn	05 40 06.1	+1.1
SIVA				AML	AML	05 40 08.8	
	comp=E,917μm,0.3s						
SIVA				AML	AML	05 40 09.6	
	comp=N,880μm,0.2s						
PRNS	**Prines Rethymn**	**0.59**	**32**	P	Pb	05 39 55.1	-0.9
PRNS				S	Sb	05 40 04.0	-0.1
IMMV	**Iera Moni Meta**	**0.61**	**349**	P	Pb	05 39 55.9	-0.4
IMMV				S	Sn	05 40 05.4	-0.3
	comp=N,768nm,0.4s						
IMMV	**Iera Moni Meta**	**0.61**	**349**	P	Pb	05 39 56.0	-0.3
IMMV				S	Sn	05 40 05.4	-0.3
IMMV	**Iera Moni Meta**	**0.61**	**349**	P	Pb	05 39 56.0	-0.4
IMMV				S	Sn	05 40 05.8	+0.1
IMMV				AML	AML	05 40 06.2	
	comp=E,1778μm,0.4s						
IMMV				AML	AML	05 40 06.8	
	comp=N,1309μm,0.4s						
IDI	**Anoyia**	**0.76**	**56**	P	Pb	05 39 58.1	-0.8
IDI				S	Sn	05 40 10.4	+0.9
IDI				AML	AML	05 40 10.9	
	comp=N,382μm,0.3s						
IDI				AML	AML	05 40 11.6	
	comp=E,337μm,0.3s						
LAST	**Lasithi**	**1.15**	**75**	P	Pb	05 40 06.5	+1.0
LAST				S	Sb	05 40 21.6	+1.4
LAST	**Lasithi**	**1.15**	**75**	P	Pb	05 40 06.2	+0.7
ANKY	**Antikythira Is**	**1.21**	**327**	P	Pb	05 40 07.5	+1.1
ANKY	**Antikythira Is**	**1.21**	**327**	P	Pb	05 40 07.6	+1.2

JMA 14 05:46:29.4, 38°.40N×141°.78E, h57km±1km, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.26**	**250**	P	Pn	05 46 39.0	+0.1
JIKH				S	Sn	05 46 45.6	-0.1
JIO	**Ouri**	**0.34**	**279**	P	Pn	05 46 39.6	+0.1
JIO				S	Sn	05 46 46.8	-0.1
JKMT	**Kesennumamotoy**	**0.47**	**330**	P	Pn	05 46 40.9	0.0
JKMT				S	Sn	05 46 49.1	0.0
OFUJ	**Ofunato**	**0.69**	**353**	P	Pn	05 46 43.2	-0.1
OFUJ				S	Sn	05 46 53.2	-0.2
JMK	**Ichinoseki**	**0.70**	**322**	P	Pn	05 46 43.8	+0.3
JMK				S	Sn	05 46 54.0	+0.2
JOU	**Okura**	**0.88**	**268**	P	Pn	05 46 45.9	+0.2
JOU				S	Sn	05 46 58.2	+0.4
JMM	**Marumori**	**0.94**	**236**	P	Pn	05 46 46.3	-0.3
JMM				S	Sn	05 46 58.7	-0.5
JOM	**Ohasama**	**1.14**	**341**	P	Pn	05 46 49.4	+0.3
JOM				S	Sn	05 47 04.6	+0.8
JYK	**Kaneyama**	**1.23**	**295**	P	Pn	05 46 50.7	+0.4
JYK				eS	Sn	05 47 06.5	+0.5
JFK	**Kawauchi**	**1.26**	**215**	P	Pn	05 46 50.7	-0.1
JFK				S	Sn	05 47 06.6	-0.1
JRG	**Rokugo**	**1.34**	**318**	P	Pn	05 46 52.3	+0.5
JYS	**Shirataka**	**1.36**	**263**	P	Pn	05 46 52.6	+0.5
JYS				S	Sn	05 47 10.1	+0.9
JFT	**Otama**	**1.44**	**233**	P	Pn	05 46 53.8	+0.6
JFT				S	Sn	05 47 11.4	+0.3
MAT	**Matsushiro**	**3.39**	**238**	P	Pn	05 47 21.7	+1.8
MAT				S	Sn	05 48 05.5	+6.6

RSNC 14 05:54:59.7±1.0, 5°.29N×73°.77W, h146km±5km, ML3.3, Mw3.6, 4C-4D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIC	**Chingaza**	**0.66**	**177**	⇓iP	Pn	05 55 21.5	-0.6
CHIC				eS	Sn	05 55 38.4	-0.7
CHIC				i		05 55 41.6	
	comp=Z,271nm,0.4s						
ROSC	**El Rosal**	**0.71**	**231**	⇓iP	Pn	05 55 23.2	+0.8
ROSC				eS	Sn	05 55 41.2	+1.6
CVER	**Cruz Verde, Cu**	**0.83**	**202**	eP	Pn	05 55 23.6	+0.3
RUSC	**La Rusia**	**0.90**	**49**	⇓iP	Pn	05 55 23.8	-0.1
RUSC				i		05 55 24.8	
	comp=Z,263nm,0.1s						
RUSC				eS	Sn	05 55 42.1	-0.2
NORC	**Norcasia**	**1.13**	**284**	⇑eP	Pn	05 55 25.1	-0.2
NORC				eS	Sn	05 55 45.1	+0.2
NORC				i		05 55 46.4	
	comp=Z,356nm,0.1s						
VILC	**Villavicencio,**	**1.18**	**177**	eP	Pn	05 55 24.9	-1.1
VILC				eS	Sn	05 55 44.8	-1.1
VILC				i		05 55 47.3	
	comp=Z,556nm,0.5s						
YOPC	**Yopal, Colombi**	**1.34**	**87**	⇓iP	Pn	05 55 27.2	-0.3
YOPC				i		05 55 27.3	
	comp=Z,254nm,0.2s						
YOPC				eS	Sn	05 55 49.1	+0.5
BARC	**Barichara**	**1.41**	**24**	eP	Pn	05 55 27.6	-0.8
BARC				eS	Sn	05 55 49.2	-1.1
BARC				i		05 55 51.2	
	comp=Z,210nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.42**	**331**	⇑eP	Pn	05 55 27.1	-1.1
PTBC				eS	Sn	05 55 49.0	-0.9
PTBC				i		05 55 51.9	
	comp=Z,266nm,0.8s						
RREF	**El Recreo**	**1.62**	**256**	eP	Pn	05 55 31.2	+0.2
RREF				eS	Sn	05 55 55.4	+0.5
RREF				i		05 55 58.6	
	comp=Z,92nm,0.3s						
BRRC	**Barranca, Sant**	**1.80**	**2**	eP	Pn	05 55 32.1	-0.3
BRRC				eS	Sn	05 55 57.3	-0.1
BRRC				i		05 55 60.0	
	comp=Z,159nm,0.2s						
GIRC	**Giron, Santand**	**1.86**	**18**	eP	Pn	05 55 32.7	-0.5
GIRC				i		05 55 33.9	
	comp=Z,67nm,0.1s						
PRAC	**Prado**	**1.93**	**215**	⇑iP	Pn	05 55 33.3	-0.5
PRAC				eS	Sn	05 55 59.1	-0.9
PRAC				i		05 56 00.7	
	comp=Z,266nm,0.3s						
HELC	**Santa Helena**	**1.97**	**297**	⇑eP	Pn	05 55 34.4	-0.3
HELC				eS	Sn	05 56 01.3	-0.1
HELC				i		05 56 07.6	
	comp=Z,97nm,0.2s						
TAMC	**Tame, Arauca**	**2.27**	**60**	eP	Pn	05 55 37.3	-0.5
TAMC				i		05 55 38.1	
	comp=Z,171nm,0.1s						
TAMC				eS	Sn	05 56 05.9	-1.3
ZARC	**Zaragoza, Cauc**	**2.44**	**334**	eP	Pn	05 55 38.0	-1.9
ZARC				eS	Sn	05 56 09.8	-1.2
ZARC				i		05 56 16.5	
	comp=Z,193nm,0.2s						
OCAC	**Ocana**	**2.96**	**9**	eP	Pn	05 55 45.9	-0.7
OCAC				eS	Sn	05 56 22.1	-0.7
OCAC				i		05 56 30.6	
	comp=Z,104nm,0.2s						
DBBC	**Dabeiba**	**2.97**	**305**	eP	Pn	05 55 46.3	-0.3
DBBC				eS	Sn	05 56 21.6	-1.3
SMLC	**San Martn de**	**3.50**	**355**	eP	Pn	05 55 51.0	-2.3
SMLC				eS	Sn	05 56 34.5	-0.5
SMLC				i		05 56 36.7	
	comp=Z,157nm,0.1s						

*NEIC **14** 05:59:33.2±0.0, 15°.42N×94°.76W, h16km, mb4.3/2, MD4.0(MEX), After MEX.*

MEX 14 05:59:33.2±0.5, 15°.42N×94°.76W, h16km±11km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.51**	**79**	ePn	Pn	05 59 56.0	-3.6
PCIG				eSn	Sn	06 00 13.6	-5.4
PCIG		**1.51**	**79**	eP	Pn	05 59 56.0	-3.6
PCIG				eS	Sn	06 00 13.6	-5.4
CMIG	**Matias Romero**	**1.66**	**356**	ePn	Pn	05 59 58.1	-3.6
CMIG				eSn	Sn	06 00 17.5	-5.3
CMIG	**Matias Romero**	**1.66**	**356**	eP	Pn	05 59 58.1	-3.6
CMIG				i S	Sn	06 00 17.5	-5.3
TGIG		**2.07**	**49**	ePn	Pn	06 00 04.9	-2.6
TGIG				eSn	Sn	06 00 28.4	-4.6
TGIG		**2.07**	**49**	eP	Pn	06 00 04.9	-2.6
TGIG				eS	Sn	06 00 28.4	-4.6
VHO	**Vista Hermosa**	**2.50**	**311**	ePn	Pb	06 00 19.4	+1.4
VHO				eSn	Sn	06 00 42.6	-1.2
VHO	**Vista Hermosa**	**2.50**	**311**	i P	Pb	06 00 19.4	+1.4
VHO				i S	Sn	06 00 42.6	-1.2
CCIG	**Comitan**	**2.67**	**71**	ePn	Pn	06 00 14.5	-1.2
CCIG				eSn	Sn	06 00 46.9	-0.9
TLIG	**Tlapa**	**4.22**	**301**	ePn	Pn	06 00 37.6	+0.5
TLIG				eSn	Sn	06 01 21.4	-4.8
TEIG	**Tepich**	**7.81**	**51**	ePn	Pn	06 01 25.1	-1.1
435B	**Jarrell**	**15.51**	**351**	ePn	Pn	06 03 12.2	+0.9
	7.2nm,0.3s						
059A	**Moore Haven**	**17.10**	**46**	ePn	P	06 03 37.0	+3.6
	25nm,0.9s						

*SJA **14** 06:31:03.0±0.6, 31°.38S×72°.05W, h15km±8km, ML2.9, MW3.7*
*GUC **14** 06:31:06.5±0.6, 31°.43S×71°.60W, h27km±9km, ML2.9*

ISC 14 06:31:06.5±3.2, 31°.39S±0°.04×71°.8W±0°.1, h13km±19km, n11, σ0°.74/21, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**1.47**	**35**	i P	**Pn**	**06 31 32.8**	**-0.3**
GO04				i S	**Sg**	**06 31 55.7**	**+1.7**
GO04	**Tololo Observa**	**1.47**	**35**	⇓iP	**Pn**	**06 31 32.9**	**-0.1**
GO04				i S	**Sb**	**06 31 52.8**	**+0.1**
LSCH	**La Serena**	**1.54**	**17**	eP	**Pb**	**06 31 34.1**	**-0.9**
LSCH				i S	**Sb**	**06 31 54.8**	**+0.3**
ROCH	**El Roble**	**1.70**	**158**	⇑iP	**Pn**	**06 31 35.5**	**-0.8**
ROCH				eS	**Sn**	**06 31 58.5**	**+0.4**
ROCH				IAML		06 32 02.1	
	comp=N,156nm,0.5s						
ROC1	**El Roble**	**1.71**	**158**	i P	**Pn**	**06 31 36.2**	**-0.1**
ROC1				i S	**Sb**	**06 32 00.7**	**+1.2**
PEL	**Peldehue**	**1.98**	**153**	eP	**Pn**	**06 31 39.4**	**-0.4**
PEL				eS	**Sn**	**06 32 04.3**	**-0.2**
PEL				IAML		06 32 08.6	
	comp=E,118nm,0.3s						
RTLS	**Leoncito**	**2.15**	**102**	i P	**Pb**	**06 31 44.9**	**-0.6**
RTLS				i S	**Sg**	**06 32 15.3**	**-0.4**
RTLS				IAML		06 32 15.9	
	comp=Z,67nm,0.4s						
AUSP	**Uspallata**	**2.19**	**113**	i P	**Pb**	**06 31 45.1**	**-1.1**
CLCH	**Cerro Calan**	**2.26**	**153**	eP	**Pn**	**06 31 43.8**	**+0.1**
CLCH				i S	**Sn**	**06 32 11.6**	**+0.1**
CLCH				IAML		06 32 22.5	
	comp=E,155nm,0.6s						
FCH	**Farellones**	**2.30**	**147**	eP	**Pn**	**06 31 44.5**	**0.0**
FCH				i S	**Sn**	**06 32 13.9**	**+1.0**
FCH				IAML		06 32 20.8	
	comp=E,74nm,0.3s						
LMEL	**Las Melosas**	**2.79**	**152**	eP	**Pn**	**06 31 51.1**	**+0.1**
LMEL				eS	**Sn**	**06 32 24.9**	**+0.3**
LMEL				IAML		06 32 33.0	
	comp=N,76nm,0.2s						

ISC 14 06:58:08.8±1.2, 50°.25N±0°.06×18°.88E±0°.05, h0km, n6, σ0°.39/12, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.08**	**62**	ePg	**Pg**	**06 58 10.7**	**+0.4**
CHZP				eSg	**Sg**	**06 58 11.6**	**+0.2**
OJC	**Ojcow**	**0.59**	**93**	ePg	**Pg**	**06 58 19.6**	**-0.5**
OJC				eSg	**Sg**	**06 58

LCND				IAML		07 17 02.2	
	comp=Z,170nm,0.3s						
LCND	**La Caada**	**0.78**	**311**	⇑*i* P	**Pn**	**07 16 57.4**	**-0.7**
LCND				IAML		07 17 02.2	
	comp=Z,170nm,0.3s						
MOMN	**Momotombo**	**0.82**	**118**	*e*P	**Pn**	**07 16 58.4**	**0.0**
COPN	**Copaltepe**	**0.91**	**132**	*e*P	**Pn**	**07 16 58.4**	**-0.6**
COPN	**Copaltepe**	**0.91**	**132**	*e*P	**Pn**	**07 16 58.8**	**-0.2**
ESTN	**Estel**	**0.94**	**71**	*e*P	**Pn**	**07 16 59.2**	**-0.1**
ESTN				*e*S	**Sn**	**07 17 19.3**	**+0.2**
ESTN	**Estel**	**0.94**	**71**	⇓*i* P	**Pn**	**07 16 59.2**	**-0.1**
ESTN				*e*S	**Sn**	**07 17 19.3**	**+0.2**
MGAN	**Managua**	**1.20**	**122**	*e*P	**Pn**	**07 17 01.8**	**+0.5**
MGAN				*e*S	**Sn**	**07 17 22.8**	**+0.1**
MATN	**Matagalpa**	**1.33**	**84**	*e*P	**Pn**	**07 17 02.6**	**0.0**
MATN				*e*S	**Sn**	**07 17 24.6**	**-0.3**
SNVI	**San Vicente**	**1.72**	**298**	*e*P	**Pn**	**07 17 06.5**	**-0.2**
SNVI				*e*S	**Sn**	**07 17 33.6**	**+1.4**
LFRS	**El Faro**	**1.92**	**296**	*e*P	**Pn**	**07 17 08.2**	**-0.6**
LFRS				*e*S	**Sn**	**07 17 36.8**	**+0.8**
LBRS	**Las Brisas**	**1.96**	**299**	*e*P	**Pn**	**07 17 09.2**	**+0.1**
LFU	**La Fuente**	**2.02**	**298**	*e*P	**Pn**	**07 17 09.6**	**-0.2**
LFU	**La Fuente**	**2.02**	**298**	*e*P	**Pn**	**07 17 09.6**	**-0.2**
LOMA	**San Marcos**	**2.03**	**295**	*e*P	**Pn**	**07 17 09.6**	**-0.3**
LOMA	**San Marcos**	**2.03**	**295**	*e*P	**Pn**	**07 17 09.6**	**-0.3**
SNET	**Serv Nac Est T**	**2.10**	**295**	*e*P	**Pn**	**07 17 10.3**	**-0.4**
SNET				*e*S	**Sn**	**07 17 39.1**	**-0.3**
SNET				IAML		07 17 42.7	
	comp=Z,232nm,0.3s						
SNET	**Serv Nac Est T**	**2.10**	**295**	*e*P	**Pn**	**07 17 10.3**	**-0.4**
SNET				IAML		07 17 42.7	
	comp=Z,232nm,0.3s						
BOQS	**Boqueron**	**2.16**	**296**	*e*P	**Pn**	**07 17 10.9**	**-0.7**
ACON	**Acoyapa**	**2.22**	**112**	*e*P	**Pn**	**07 17 12.0**	**0.0**
SNJE	**San Jose**	**2.50**	**296**	*e*P	**Pn**	**07 17 15.3**	**-0.3**
SNJE	**San Jose**	**2.50**	**296**	*e*P	**Pn**	**07 17 15.3**	**-0.3**

*SJA **14** 07:47:51.0±0.4, 23°.22S×66°.78W, h223km±10km, ML2.3, MW3.5*
*ISCJB **14** 07:47:53.0±0.7, 23°.14S±0°.06×66°.90W±0°.05, h208km, Error ellipse: s-maj=8.2km s-min=6.4km az=21.1*
*GUC **14** 07:47:53.6±0.3, 23°.09S×67°.12W, h243km±7km, ML3.3*
ISC 14 07:47:52.6±1.4, 23°.16S±0°.07×66°.83W±0°.06, h208km, n15, σ0°82/26, 7C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.31**	**92**	*i* P	**Pn**	**07 48 26.0**	**+0.2**
HJA				IAML		07 48 26.8	
	comp=Z,21nm,0.5s						
YJA	**Yavi**	**1.56**	**51**	*i* P	**Pn**	**07 48 28.8**	**+0.7**
YJA				IAML		07 48 29.6	
	comp=Z,15nm,0.3s						
AZAP	**Zapla**	**1.94**	**124**	*i* P	**Pn**	**07 48 31.0**	**-0.3**
AZAP				IAML		07 48 31.7	
	comp=Z,10.0nm,0.6s						
LVC	**Limon Verde**	**1.99**	**285**	⇑*i* P	**Pn**	**07 48 32.9**	**+0.9**
PB15	**IPOC Station P**	**2.43**	**268**	*i* P	**Pn**	**07 48 36.7**	**+0.3**
PB15				*i* S	**S**	**07 49 10.7**	**+0.6**
PB15	**IPOC Station P**	**2.43**	**268**	⇑*i* P	**Pn**	**07 48 37.1**	**+0.7**
PB15				*i* S	**S**	**07 49 10.6**	**+0.5**
PB06	**IPOC Station P**	**2.57**	**280**	⇑*i* P	**Pn**	**07 48 38.5**	**+0.6**
PB06				*i* S	**S**	**07 49 12.4**	**-0.3**
PB06				IAML		07 49 14.9	
	comp=E,35nm,0.3s						
PB09	**IPOC Station P**	**2.61**	**301**	⇑*i* P	**Pn**	**07 48 39.4**	**+1.0**
PB09				*i* S	**S**	**07 49 14.0**	**+0.4**
PB09				IAML		07 49 16.8	
	comp=E,22nm,0.1s						
PB07	**IPOC Station P**	**3.17**	**296**	⇑*i* P	**Pn**	**07 48 44.9**	**+0.1**
PB07				*i* S	**S**	**07 49 23.6**	**-1.5**
PB07				IAML		07 49 24.5	
	comp=N,81nm,0.3s						
PB04	**IPOC Station P**	**3.17**	**284**	⇓*i* P	**Pn**	**07 48 45.1**	**+0.3**
PB04				*i* S	**S**	**07 49 23.7**	**-1.5**
PB04				IAML		07 49 28.5	
	comp=N,49nm,0.4s						
GO02	**Mina Guanaco**	**3.21**	**231**	⇑*i* P	**Pn**	**07 48 45.9**	**+0.4**
GO02				*e*S	**S**	**07 49 26.8**	**+0.4**
PB01	**IPOC Station P**	**3.24**	**310**	*e*P	**Pn**	**07 48 46.0**	**+0.4**
PB01				*i* S	**S**	**07 49 25.5**	**-1.0**
PB01				IAML		07 49 26.9	
	comp=E,62nm,0.2s						
PB02	**IPOC Station P**	**3.38**	**302**	*e*P	**Pn**	**07 48 47.0**	**-0.2**
PB02				*i* S	**S**	**07 49 27.8**	**-1.7**
PB02				IAML		07 49 32.2	
	comp=E,48nm,0.1s						
PB10	**IPOC Station P**	**3.44**	**263**	⇑*i* P	**Pn**	**07 48 48.0**	**+0.2**
PB10				*i* S	**S**	**07 49 29.5**	**-1.2**
PB08	**IPOC Station P**	**3.70**	**324**	*e*P	**Pn**	**07 48 52.3**	**+0.9**
PB08				*e*S	**S**	**07 49 37.2**	**+0.2**
PB08				IAML		07 49 39.7	
	comp=E,14nm,0.2s						

IDC 14 07:59:32.1±4.9, 21°.24S×69°.42E, h0km, mb3.9/6, mb1 3.9/6, mb1mx3.6/48, mbtmp3.9/6, MS3.4/5, Ms1 3.5/5, ms1mx3.0/30, Error ellipse: s-maj=142.6km s-min=42.4km az=158.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**40.54**	**250**	LR	LR	08 21 57.0	
	comp=Z,112nm,18.4s,baz=44,slow=33						
CMAR	**Chiang Mai Arr**	**48.91**	**38**	P	P	08 08 20.3	+0.2
	0.7nm,0.4s,baz=224,slow=6.3,SNR=4.5						
CMAR				LR	LR	08 26 03.4	
	comp=Z,43nm,21.5s,baz=202,slow=32						
MKAR	**Makanchi Array**	**68.71**	**9**	P	P	08 10 38.0	+0.7
	0.8nm,0.7s,baz=203,slow=6.9,SNR=5.6						
BRTR	**Keskin Array B**	**69.25**	**331**	P	P	08 10 42.0	+0.9
	0.8nm,0.8s,baz=123,slow=5.3,SNR=2.7						
BVAR	**Borovoye Array**	**73.96**	**1**	P	P	08 11 08.5	-0.5
	0.3nm,0.4s,baz=179,slow=8.6,SNR=1.6						
TORD	**Torodi Ar. Bea**	**74.75**	**291**	P	P	08 11 14.2	-0.3
	1.3nm,1.0s,baz=127,slow=5.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**76.05**	**9**	P	P	08 11 19.5	-1.5
	1.1nm,0.6s,baz=167,slow=6.8,SNR=2.4						
DBIC	**Dimbokro**	**77.91**	**282**	LR	LR	08 45 02.6	
	comp=Z,23nm,18.5s,baz=108,slow=35						
KSRS	**Korea Array**	**80.22**	**44**	LR	LR	08 47 13.6	
	comp=Z,17nm,19.0s,baz=210,slow=36						
MJAR	**Matsushiro Arr**	**86.66**	**49**	LR	LR	08 52 43.7	
	comp=Z,10nm,18.0s,baz=250,slow=37						
YKA	**Yellowknife Ar**	**138.68**	**3**	PKP	PKiKP	08 19 01.0	-0.7
	0.3nm,0.7s,baz=346,slow=3.0,SNR=4.5						

*ISCJB **14** 08:01:46.8±0.4, 59°.79N±0°.03×22°.35E±0°.04, h0km, Error ellipse: s-maj=4.2km s-min=3.0km az=9.8*
*NAO **14** 08:01:48.5±1.1, 59°.86N×22°.26E, ML2.1*
*HEL **14** 08:01:48.9±0.1, 59°.82N×22°.29E, h0km, ML2.2, ML2.6(UPP), Explosion*
*IDC **14** 08:01:49.4±1.9, 59°.88N×22°.39E, h0km, mb1 2.7/3, mb1mx2.6/43, mbtmp2.6/3, ML2.2/4, Error ellipse: s-maj=26.4km s-min=6.6km az=161.0*
*BER **14** 08:01:49.3±4.5, 59°.88N×22°.26E, h0km, ML2.1(NAO), Suspected explosion*
*UPP **14** 08:01:49.2±1.1, 59°.85N×22°.18E, h0km, ML2.6, Suspected explosion*
ISC 14 08:01:48.3±0.8, 59°.87N±0°.04×22°.29E±0°.02, h0km, n44, σ1°41/66, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.11**	**71**	*e*P	**Pg**	**08 02 08.9**	**-0.6**
MEF				*e*S	**Sg**	**08 02 23.6**	**-0.4**
RAF	**Rauma**	**1.19**	**347**	*e*P	**Pg**	**08 02 11.1**	**0.0**
RAF				*e*S	**Sg**	**08 02 27.3**	**+0.8**
AAL	**Aland**	**1.20**	**286**	P	**Pg**	**08 02 10.5**	**-0.7**
AAL				S	**Sg**	**08 02 26.0**	**-0.7**
AAL	**Aland**	**1.20**	**286**	*e*P	**Pg**	**08 02 10.5**	**-0.7**
AAL				*e*S	**Sg**	**08 02 26.0**	**-0.7**
MTSE	**Matsula**	**1.40**	**145**	*e*P	**Pn**	**08 02 13.2**	**-1.7**
MTSE				*e*S	**Sg**	**08 02 30.2**	**-2.8**
NRTU	**Norrtaelje**	**1.86**	**266**	P	**Pn**	**08 02 21.4**	**0.0**
NRTU				S	**Sn**	**08 02 46.3**	**+0.7**
NRTU	**Norrtaelje**	**1.86**	**266**	*e*P	**Pn**	**08 02 21.4**	**0.0**
NRTU				*e*S	**Sn**	**08 02 46.3**	**+0.7**
PVF	**Pernaja**	**1.91**	**68**	*e*P	**Pn**	**08 02 23.1**	**+1.1**
PVF				MSG		08 02 51.7	
	comp=Z,15nm,0.1s						
ARBE	**Arbavere**	**1.92**	**101**	*e*PG	**Pn**	**08 02 23.2**	**+1.0**
ARBE				*e*SG	**Sn**	**08 02 48.8**	**+1.7**
GRAU	**Graesoe**	**1.94**	**286**	P	**Pn**	**08 02 22.5**	**0.0**
GRAU				S	**Sn**	**08 02 48.5**	**+1.0**
GRAU	**Graesoe**	**1.94**	**286**	*e*P	**Pn**	**08 02 22.5**	**0.0**
GRAU				*e*S	**Sn**	**08 02 48.5**	**+1.0**
SLIT	**Slitere, Latvi**	**2.25**	**180**	*e*PG	**Pn**	**08 02 27.9**	**+1.2**
SLIT				*e*SG	**Sn**	**08 02 57.4**	**+2.4**
UPP	**Uppsala**	**2.35**	**272**	P	**Pn**	**08 02 28.8**	**+0.6**
UPP	**Uppsala**	**2.35**	**272**	*e*P	**Pn**	**08 02 28.8**	**+0.6**
NYNU	**Nynaeshamn**	**2.36**	**250**	P	**Pn**	**08 02 28.6**	**+0.4**
NYNU	**Nynaeshamn**	**2.36**	**250**	*e*P	**Pn**	**08 02 28.6**	**+0.4**
FIA0	**FINESS Array S**	**2.44**	**48**	Pn	**Pn**	**08 02 31.8**	**+2.4**
	baz=223,slow=14						
FIA0				Lg	Lg	08 03 04.5	
	baz=232,slow=22						
FIA0				Rg	Rg	08 03 18.9	
	baz=209,slow=37						
FIA0	**FINESS Array S**	**2.44**	**48**	Pn	**Pn**	**08 02 31.8**	**+2.4**
	baz=223,slow=14						
FIA0				Sg	**Sb**	**08 03 04.5**	**+0.8**
	baz=232,slow=22						
FIA0				Rg	Rg	08 03 18.9	
	baz=209,slow=37						
FIA0	**FINESS Array S**	**2.44**	**48**	*e*PB	**Pb**	**08 02 32.4**	**-0.7**
FIA0				*e*SG	**Sb**	**08 03 04.6**	**+0.9**
FIA0				MSG		08 03 07.7	
	comp=Z,8.4nm,0.1s						
FINES	**FINESS Array B**	**2.44**	**48**	Pn	**Pn**	**08 02 31.8**	**+2.4**
	comp=Z,1.2nm,0.3s,baz=229,slow=14,SNR=94						
FINES				Lg	Lg	08 03 04.0	
	comp=Z,4.5nm,0.3s,baz=235,slow=22,SNR=37						
FIBU	**Brunna**	**2.49**	**273**	P	**Pn**	**08 02 30.9**	**+0.8**
OSTU	**Oestervaala**	**2.61**	**280**	P	**Pn**	**08 02 32.3**	**+0.6**
OSTU	**Oestervaala**	**2.61**	**280**	*e*P	**Pn**	**08 02 32.3**	**+0.6**
BACU	**Backbrunna**	**2.62**	**272**	P	**Pn**	**08 02 32.5**	**+0.8**
BACU	**Backbrunna**	**2.62**	**272**	*e*P	**Pn**	**08 02 32.5**	**+0.8**
KEF	**Keuruu**	**2.63**	**27**	*e*SG	**Sb**	**08 03 10.2**	**+1.2**
IGGU	**Iggoen**	**2.67**	**294**	P	**Pn**	**08 02 33.3**	**+0.8**
IGGU	**Iggoen**	**2.67**	**294**	*e*P	**Pn**	**08 02 33.3**	**+0.8**
VSU	**Vasula**	**2.69**	**120**	Pn	**Pn**	**08 02 34.4**	**+1.7**
VSU				Lg	Lg	08 03 10.7	
VSU	**Vasula**	**2.69**	**120**	Pn	**Pn**	**08 02 34.4**	**+1.7**
VSU				Sg	**Sb**	**08 03 10.7**	**+0.1**
KAF	**Kangasniemi**	**2.98**	**39**	*e*SB	**Sb**	**08 03 18.8**	**-0.4**
KAF				MSG		08 03 22.9	
	comp=Z,8.6nm,0.1s						
HFS	**Hagfors**	**4.33**	**277**	Pn	**Pn**	**08 02 55.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=97,slow=13,SNR=12						
HFS				Sn	**Sn**	**08 03 46.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=97,slow=25,SNR=3.9						
HFS				Lg	Lg	08 03 59.1	
	comp=Z,0.4nm,0.3s,baz=80,slow=34,SNR=4.8						
HFS	**Hagfors**	**4.33**	**277**	Pn	**Pn**	**08 02 55.5**	**+0.2**
	baz=93,slow=14						
HFS				Sn	**Sn**	**08 03 43.4**	**-2.9**
	baz=94,slow=28						
HFS				Lg	Lg	08 04 00.2	
	baz=98,slow=37						
HFS	**Hagfors**	**4.33**	**277**	Pn	**Pn**	**08 02 55.5**	**+0.2**
	baz=93,slow=14						
HFS				Sn	**Sn**	**08 03 43.4**	**-2.9**
	baz=94,slow=28						
HFS				Sg	**Sb**	**08 04 00.2**	**+2.4**
	baz=98,slow=37						
NRA0	**NORESS Array S**	**5.42**	**284**	Pn	**Pn**	**08 03 10.4**	**+0.2**
	baz=92,slow=11						
NRA0				Sn	**Sn**	**08 04 11.4**	**-1.8**
	baz=80,slow=37						
NRA0				Lg	Lg	08 04 34.0	
	baz=89,slow=37						
NRA0	**NORESS Array S**	**5.42**	**284**	Pn	**Pn**	**08 03 10.4**	**+0.2**
	baz=92,slow=11						
NRA0				Sn	**Sn**	**08 04 11.4**	**-1.8**
	baz=80,slow=37						
NRA0				Sg	**Sb**	**08 04 34.0**	**+4.8**
	baz=89,slow=37						
NB2	**NORSAR Subarra**	**5.61**	**287**	Pn	**Pn**	**08 03 12.8**	**-0.1**
	baz=93,slow=14						
NB2	**NORSAR Subarra**	**5.61**	**287**	Pn	**Pn**	**08 03 12.8**	**-0.1**
	baz=93,slow=14						
NOA	**NORSAR Array B**	**5.61**	**287**	Pn	**Pn**	**08 03 12.4**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=95,slow=13,SNR=6.1						
NOA				Sn	**Sn**	**08 04 17.5**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=78,slow=12,SNR=2.4						
NOA				Lg	Lg	08 04 45.3	
	comp=Z,0.0nm,0.3s,baz=111,slow=19,SNR=3.0						
APA0	**Apatity Array**	**9.09**	**27**	Pn	**Pn**	**08 03 59.2**	**-1.2**
APA0	**Apatity Array**	**9.09**	**27**	Pn	**Pn**	**08 03 59.2**	**-1.2**
ARA0	**ARCESS Array S**	**9.80**	**7**	Pn	**Pn**	**08 04 08.6**	**-1.7**
	baz=191,slow=16						
ARA0	**ARCESS Array S**	**9.80**	**7**	Pn	**Pn**	**08 04 08.6**	**-1.7**
	baz=191,slow=16						
ARCES	**ARCESS Array B**	**9.80**	**7**	Pn	**Pn**	**08 04 08.9**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=187,slow=14,SNR=5.7						

PRU 14 08:02:05.2±0.0, 50°.30N×18°.87E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.08**	**97**	*e*Pg	Pg	08 02 07.7	+1.0
CHZP				*e*Sg	Sg	08 02 09.0	+1.3
OJC	**Ojcow**	**0.60**	**97**	*e*Pg	Pg	08 02 16.6	-0.1
OJC				*e*Sg	Sg	08 02 24.7	+0.2
OKC	**Ostrava-Krasne**	**0.66**	**225**	*e*SG	Sg	08 02 26.9	+0.6
	comp=Z,9.0nm,0.3s						
MORC	**Moravsky Berou**	**1.00**	**239**	*e*PG	Pg	08 02 23.9	-0.5
MORC				*e*SG	Sg	08 02 37.4	0.0
LANS	**Liptovska Anna**	**1.21**	**161**	*e*PG	Pg	08 02 27.6	-0.8
LANS				*e*SG	Sg	08 02 42.9	-1.3
NIE	**Niedzica**	**1.28**	**133**	*e*Pg	Pg	08 02 29.0	-0.7
NIE				*e*Sg	Sg	08 02 45.8	-0.5
DPC	**Dobruska-Polom**	**1.63**	**273**	*e*PG	Pn	08 02 35.2	0.0
DPC				*e*SG	Sb	08 02 57.5	+0.1
	comp=Z,3.2nm,0.5s						
KHC	**Kasperske Hory**	**3.63**	**253**	*e*SG	Sg	08 04 00.7	-1.0
	comp=Z,2.1nm,0.6s						

*ISCJB **14** 08:05:24.1±0.3, 8°.30S±0°.05×118°.19E±0°.02, h143km, mb4.0/10, Error ellipse: s-maj=7.5km s-min=3.1km az=12.7*
*NEIC **14** 08:05:24.6±1.7, 8°.32S×118°.13E, h156km±8km, mb4.3/7, Error ellipse: s-maj=27.0km s-min=14.5km az=191.0*
*DJA **14** 08:05:25.6±0.3, 9°.S±4°.×11°.8E±°., h150km±4km, M4.3/13, mb4.4/5, mB4.8/2, MLv4.3/13, Mw(mB)4.1/2*
*IDC **14** 08:05:27.4±5.0, 8°.57S×117°.99E, h187km±51km, mb3.4/5, mb1 3.6/6, mb1mx3.3/33, mbtmp4.0/6, Error ellipse: s-maj=56.8km s-min=11.4km az=51.0*
ISC 14 08:05:24.3±0.5, 8°.42S±0°.06×118°.17E±0°.04, h143km, n58, σ2°03/68, mb4.1/10, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.56**	**223**	P	**Pn**	**08 05 48.5**	**+3.3**
PLAI				S	**Sn**	**08 06 05.1**	**+4.0**
PLAI	**Plampang**	**0.56**	**223**	P	**Pn**	**08 05 48.2**	**+3.0**
PLAI				S	**Sn**	**08 06 04.6**	**+3.5**
WBSI	**Waikabubak, Su**	**1.72**	**135**	P	**Pn**	**08 05 57.9**	**+2.1**
WBSI	**Waikabubak, Su**	**1.72**	**135**	P	**Pn**	**08 05 57.6**	**+1.8**
WBSI				S	**Sn**	**08 06 21.6**	**+1.7**
WSI	**Waingapu**	**2.44**	**121**	P	**Sn**	**08 06 37.4**	**+2.1**
WSI	**Waingapu**	**2.44**	**121**	P	Pn	08 06 10.9	+6.5
SRBI	**Singaraja**	**2.94**	**276**	P	**Pn**	**08 06 13.3**	**+2.7**
BASI	**Baing, Sumba**	**2.98**	**127**	P	**Pn**	**08 06 13.4**	**+2.3**
BASI				S	**Sn**	**08 06 48.8**	**+1.5**
BSSI	**Bau Bau, Buton**	**3.23**	**46**	P	**Pn**	**08 06 17.6**	**+3.3**
BSSI	**Bau Bau, Buton**	**3.23**	**46**	P	**Pn**	**08 06 16.5**	**+2.2**
EDFI	**Ende, Flores**	**3.50**	**96**	P	**Pn**	**08 06 19.6**	**+1.7**
EDFI	**Ende, Flores**	**3.50**	**96**	P	**Pn**	**08 06 19.1**	**+1.2**
EDFI				S	**Sn**	**08 07 00.7**	**+1.2**
BKSI	**Bulukumba**	**3.63**	**32**	P	**Pn**	**08 06 22.9**	**+3.3**
BKSI	**Bulukumba**	**3.63**	**32**	P	**Pn**	**08 06 22.3**	**+2.7**
JAGI	**Jajag, Banyuwa**	**3.97**	**269**	*e*Pn	**Pn**	**08 06 23.4**	**-0.6**
JAGI				*e*Sn	**Sn**	**08 07 10.6**	**+0.2**
JAGI	**Jajag, Banyuwa**	**3.97**	**269**	P	**Pn**	**08 06 26.5**	**+2.5**
MMRI	**Maumere**	**4.03**	**93**	*e*Pn	**Pn**	**08 06 25.8**	**+1.0**
MMRI				*e*Sn	**Sn**	**08 07 13.9**	**+2.1**
MMRI	**Maumere**	**4.03**	**93**	P	**Pn**	**08 06 23.7**	**-1.1**
KMMI	**Kalianget**	**4.38**	**288**	P	**Pn**	**08 06 30.9**	**+1.5**
BNSI	**Bone**	**4.43**	**26**	P	**Pn**	**08 06 34.0**	**+4.0**
BNSI	**Bone**	**4.43**	**26**	P	**Pn**	**08 06 34.0**	**+4.0**
GMJI	**Gumukmas**	**4.68**	**271**	P	**Pn**	**08 06 35.8**	**+2.5**
TTSI	**Tana Toraja**	**5.58**	**17**	P	Pn	08 06 51.0	+5.6
	44nm,0.7s,0.1nm						
BATI	**Baumata**	**5.71**	**109**	P	**Pn**	**08 06 47.3**	**+0.2**
GRJI	**Gresik**	**5.83**	**284**	P	**Pn**	**08 06 52.7**	**+4.0**
	136nm,0.9s,1μm0.5nm						
SOEI	**Soe**	**6.17**	**103**	*e*Pn	**Pn**	**08 06 54.9**	**+1.6**
SOEI				*e*Sn	**Sn**	**08 08 03.5**	**+0.6**
SOEI	**Soe**	**6.17**	**103**	P	**Pn**	**08 06 55.9**	**+2.6**
SOEI	**Soe**	**6.17**	**103**	P	**Pn**	**08 06 54.4**	**+1.1**
PWJI	**Pagerwojo**	**6.31**	**273**	P	**Pn**	**08 06 56.5**	**+1.4**
PWJI	**Pagerwojo**	**6.31**	**273**	P	**Pn**	**08 06 55.0**	**-0.1**
NGJI	**Ngawi**	**6.72**	**278**	P	**Pn**	**08 07 02.9**	**+2.2**
WOJI	**Wonogiri, Jawa**	**7.20**	**274**	P	**Pn**	**08 07 08.0**	**+1.0**
UGM	**Wanagama**	**7.58**	**273**	*e*Pn	**Pn**	**08 07 12.8**	**+0.6**
UGM				*e*Sn	**Sn**	**08 08 37.2**	**+0.3**
SMRI	**Semarang**	**7.78**	**280**	*e*Pn	**Pn**	**08 07 16.4**	**+1.7**
CISI	**Cisompet, Garu**	**10.29**	**274**	*e*Pn	**Pn**	**08 07 48.1**	**-0.3**
CISI				*e*Sn	**Sn**	**08 09 41.7**	**-0.5**
PSA00	**Pilbara Seismi**	**13.18**	**173**	*e*Pn	**Pn**	**08 08 27.0**	**+0.9**
MTN	**Manton Dam**	**13.48**	**110**	*e*Pn	**Pn**	**08 08 29.0**	**-1.0**
GIRL	**Giralia**	**14.64**	**195**	*e*P	**P**	**08 08 47.5**	**+0.4**
FAKI	**Fak Fak**	**15.03**	**70**	*e*Pn	**Pn**	**08 08 48.5**	**-1.1**
	11nm,0.8s						
WRA	**Warramunga Arr**	**19.40**	**128**	P	**P**	**08 09 39.6**	**+0.2**
	0.9nm,0.3s,baz=297,slow=12,SNR=46						
WRA				S	**S**	**08 13 10.6**	**-0.7**
	0.3nm,0.3s,baz=304,slow=21,SNR=4.1						
WB2	**Warramunga Arr**	**19.41**	**128**	*e*P	**P**	**08 09 39.7**	**+0.2**
	5.2nm,0.8s						
ASAR	**Alice Springs**	**21.38**	**137**	P	**P**	**08 10 00.8**	**+0.1**
COEN	**Coen**	**25.13**	**105**	*e*P	**P**	**08 10 36.6**	**+0.3**
	16nm,1.3s						
WHN	**Wuhan**	**38.91**	**355**	P	P	08 12 41.5	+5.5
KSRS	**Korea Array**	**46.53**	**11**	P	**P**	**08 13 37.5**	**+0.1**
	0.8nm,0.5s,baz=195,slow=7.6,SNR=5.6						
USA0B	**Ussuriysk Arra**	**53.84**	**12**	*e*P	**P**	**08 14 31.6**	**-0.8**
	4.2nm,1.3s						
USRK	**Ussuriysk Ar.**	**53.84**	**12**	P	**P**	**08 14 31.2**	**-1.2**
	1.5nm,0.5s,baz=198,slow=4.8,SNR=4.7						
SONM	**Songino Array**	**56.97**	**351**	P	**P**	**08 14 55.6**	**+0.8**
	0.4nm,0.5s,baz=184,slow=4.3,SNR=2.6						
KSH	**Kashi**	**61.65**	**324**	P	**P**	**08 15 30.1**	**+2.9**
KSH				PP	**PP**	**08 17 47.6**	**+2.8**
KSH				S	**S**	**08 23 35.8**	**-2.7**
KSH				pmax	pmax		
	comp=Z,230nm,4.3s						
KSH				LR	LR		
	comp=N,640nm,9.6s						
KSH				LR	LR		
	comp=E,430nm,12.1s						
KSH				LR	LR		
	comp=Z,190nm,17.5s						
MKAR	**Makanchi Array**	**63.57**	**333**	P	**P**	**08 15 38.5**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=154,slow=8.0,SNR=2.1						
GAR	**Garm**	**64.77**	**320**	*e*P	**P**	**08 15 45.9**	**-1.9**
	comp=Z,11nm,0.7s						
CHGR	**Chuyangaron**	**65.31**	**319**	*e*P	**P**	**08 15 47.9**	**-3.4**
	comp=Z,49nm,0.6s						
ZALV	**Zalesovo Beam**	**68.21**	**340**	P	**P**	**08 16 06.6**	**-2.5**
	comp=Z,1.6nm,0.6s,baz=157,slow=5.3,SNR=4.7						
ABKAR	**Akbulak array**	**76.61**	**325**	*e*P	**P**	**08 16 57.3**	**-1.7**
	comp=Z,0.4nm,1.0s						
Q54A	**Coxs Mills**	**145.10**	**26**	*e*PKPbc	**PKPbc**	**08 24 44.8**	**-0.1**
N59A	**State Game Lan**	**145.34**	**19**	*e*PKPdf	**PKPdf**	**08 24 44.6**	**-0.9**
Y49A	**Blount Mountai**	**146.03**	**38**	*e*PKPdf	**PKPdf**	**08 24 46.1**	**-0.8**
LVC	**Limon Verde**	**148.40**	**167**	*e*PKPbc	**PKPdf**	**08 24 52.4**	**+0.8**

*ISK **14** 08:07:24.5, 38°.46N×34°.27E, h5km, ML2.0/5*
*DDA **14** 08:07:25.2, 38°.45N×34°.27E, h7km±2km, ML2.5*
ISC 14 08:07:25.4±1.4, 38°.45N±0°.03×34°.29E±0°.03, h3km±12km, n13, σ1°44/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSY	**AKSARAY - Alti**	**0.46**	**296**	*i* P	**Pg**	**08 07 34.0**	**-0.3**
AKSY				*i* S	**Sb**	**08 07 41.5**	**-2.1**
AKSY				IAML_P			
	comp=Z,888nm,0.1s						
AVNS	**Nevsehir-Avano**	**0.57**	**

0.1nm,0.3s,baz=26,slow=14,SNR=9.0
MKAR Lg Lg 08 47 48.4
0.1nm,0.3s,baz=21,slow=37,SNR=2.7

*ISCJB **14** 08:46:38.0±0.6, 15°.29S±0°.05×71°.88W±0°.07, h133km, mb3.3/5, Error ellipse: s-maj=11.1km s-min=5.0km az=147.9*
*IDC **14** 08:46:42.6±2.6, 15°.11S×71°.51W, h155km±26km, mb3.2/5, mb1 3.4/9, mb1mx3.3/35, mbtmp3.7/9, Error ellipse: s-maj=37.8km s-min=24.5km az=29.0*

ISC 14 08:46:38.8±0.7, 15°.29S±0°.06×71°.88W±0°.08, h133km, n18, σ1.8/87/28, mb3.5/5, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**3.62**	**156**	*eP*	**Pn**	**08 47 34.3**	**+0.5**
PB12				*eS*	**Sn**	**08 48 16.0**	**-0.4**
PB12				IAML		08 48 18.7	
	comp=N,256nm,0.4s						
LPAZ	**La Paz**	**3.74**	**106**	P	**Pn**	**08 47 36.9**	**+1.0**
	comp=N,2.4nm,0.3s,baz=336,slow=8.6,SNR=61						
LPAZ				S	**Sn**	**08 48 19.4**	**-0.5**
	comp=N,0.7nm,0.3s,baz=203,slow=21,SNR=9.7						
PB16	**IPOC Station P**	**3.79**	**144**	*eP*	**Pn**	**08 47 38.2**	**+1.8**
PB16				*eS*	**Sn**	**08 48 23.5**	**+2.6**
MNMC	**Minye Minye**	**4.40**	**151**	*eP*	**Pn**	**08 47 44.8**	**+0.5**
MNMC				*eS*	**Sn**	**08 48 34.9**	**-0.1**
MNMC				IAML		08 48 39.9	
	comp=E,333nm,0.2s						
PSGC	**Pisagua**	**4.60**	**159**	*eP*	**Pn**	**08 47 46.4**	**-0.3**
PSGC				*eS*	**Sn**	**08 48 37.5**	**-2.1**
PSGC				IAML		08 48 41.1	
	comp=E,113nm,0.4s						
PB11	**IPOC Station P**	**4.93**	**155**	*eP*	**Pn**	**08 47 51.1**	**-0.1**
PB11				*e*		08 47 51.1	
PB11				*eS*	**Sn**	**08 48 46.0**	**-1.5**
PB11				IAML		08 48 47.8	
	comp=E,204nm,0.2s						
GO01	**Chusmiza**	**5.05**	**150**	*eP*	**Pn**	**08 47 54.1**	**+1.0**
GO01				*eS*	**Sn**	**08 48 51.1**	**+0.2**
GO01				IAML		08 48 56.4	
	comp=E,264nm,0.2s						
PB08	**IPOC Station P**	**5.48**	**152**	*eP*	**Pn**	**08 47 59.2**	**+0.4**
PB08				*eS*	**Sn**	**08 48 59.8**	**-1.2**
PB08				IAML		08 49 03.3	
	comp=E,131nm,0.2s						
NNA	**Nana**	**5.84**	**304**	P	**Pn**	**08 48 02.9**	**-0.4**
	comp=E,1.9nm,0.3s,baz=134,slow=7.8,SNR=2.9						
NNA				S	**Sn**	**08 49 06.1**	**-3.0**
	comp=E,6.9nm,0.3s,baz=309,slow=5.0,SNR=16						
LVC	**Limon Verde**	**7.81**	**159**	P	**Pn**	**08 48 30.2**	**+0.2**
	comp=E,2.8nm,0.3s,baz=18,slow=10.0,SNR=35						
LVC				S	**Sn**	**08 49 52.4**	**-4.7**
	comp=E,0.9nm,0.3s,baz=229,slow=20,SNR=5.2						
SIV	**San Ignacio**	**10.43**	**95**	P	**Pn**	**08 49 02.1**	**-2.9**
	comp=E,0.3nm,0.3s,baz=278,slow=12,SNR=14						
CFA	**Coronel Fontan**	**16.58**	**169**	P	**P**	**08 50 26.4**	**+2.6**
	comp=E,0.2nm,0.3s,baz=356,slow=9.6,SNR=3.9						
PTGA	**Pitinga**	**18.64**	**40**	P	**P**	**08 50 44.4**	**-2.0**
	comp=E,0.4nm,0.3s,baz=282,slow=23,SNR=4.9						
BDFB	**Brasilia**	**23.00**	**94**	P	**P**	**08 51 29.7**	**-2.8**
	comp=E,1.8nm,0.5s,baz=280,slow=11,SNR=3.1						
TXAR	**Lajitas Array**	**53.95**	**325**	P	**P**	**08 55 50.9**	**+1.8**
	comp=E,0.3nm,0.6s,baz=146,slow=9.5,SNR=6.3						
PDAR	**Pinedale Array**	**67.34**	**331**	P	**P**	**08 57 21.2**	**+1.4**
	comp=E,0.1nm,0.5s,baz=130,slow=8.4,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.07**	**73**	P	**P**	**08 58 23.6**	**+0.1**
	comp=E,0.5nm,0.6s,baz=256,slow=7.1,SNR=5.0						
YKA	**Yellowknife Ar**	**84.43**	**342**	P	**P**	**08 58 57.4**	**+1.4**
	comp=E,0.5nm,0.6s,baz=137,slow=5.1,SNR=8.2						

KRSC 14 08:47:52.5±0.6, 54°.39N×161°.46E, h62km±7km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.23**	**43**	*i P*	Pn	08 48 04.3	+2.0
MKZ				*eS*	Sn	08 48 11.6	+2.1
KZV	**Kizimen**	**0.99**	**318**	*eP*	Pn	08 48 11.7	+1.1
KZV				*eS*	Sn	08 48 24.2	+0.1
TUMD	**Tumrok D**	**1.02**	**324**	*eP*	Pn	08 48 11.8	+0.9
TUMD				*eS*	Sn	08 48 24.5	-0.1
TUMR	**Tumrok**	**1.18**	**320**	*eP*	Pn	08 48 14.6	+1.6
TUMR				*eS*	Sn	08 48 29.3	+1.0
SPN	**Mys Shipunski**	**1.55**	**214**	*eP*	Pn	08 48 19.5	+1.7
SPN				*eS*	Sn	08 48 37.9	+1.0
BZWR	**Bezymyannyi-We**	**1.67**	**341**	*eP*	Pn	08 48 22.1	+2.4
NLC	**Nalytchevo**	**1.75**	**227**	*eP*	Pn	08 48 22.5	+2.0
NLC				*eS*	Sn	08 48 43.2	+1.4
LGNR	**Loginova**	**1.75**	**346**	*eP*	Pn	08 48 23.6	+2.7
CIRR	**Tsirk**	**1.78**	**347**	*eP*	Pn	08 48 23.4	+2.3
SDLR	**Sedlovina**	**1.89**	**235**	*eP*	Pn	08 48 25.0	+2.5
KOZ	**Kozyrevsk**	**1.90**	**332**	*eP*	Pn	08 48 24.8	+2.1
SMAR	**Somma**	**1.94**	**235**	*eP*	Pn	08 48 25.8	+2.5
SMAR				*eS*	Sn	08 48 48.8	+2.1
KRER	**Koryakskii**	**1.94**	**237**	*eP*	Pn	08 48 26.0	+2.7
KRX	**Arik**	**1.96**	**239**	*eP*	Pn	08 48 26.0	+2.5
UGLR	**Uglovaya**	**1.96**	**234**	*eP*	Pn	08 48 26.2	+2.7
AVH	**Avacha**	**1.97**	**236**	*eP*	Pn	08 48 26.4	+2.8
AVH				*eS*	Sn	08 48 49.8	+2.6
KBTR	**Krutoberegovo**	**1.98**	**23**	*eP*	Pn	08 48 26.2	+2.5
KBTR				*eS*	Sn	08 48 49.9	+2.5
KLY	**Klyuchi**	**1.98**	**347**	*eP*	Pn	08 48 25.5	+1.8
KLY				*eS*	Sn	08 48 48.7	+1.3
KOK	**Koryaka**	**2.00**	**238**	*eP*	Pn	08 48 26.6	+2.6
DALK	**Dalny**	**2.11**	**231**	*eP*	Pn	08 48 28.0	+2.7
DALK				*eS*	Sn	08 48 53.0	+2.6
SRDR	**Sredinnyy**	**2.17**	**333**	*eP*	Pn	08 48 28.0	+1.6
GNL	**Ganaly**	**2.19**	**253**	*eP*	Pn	08 48 29.2	+2.6
BDR	**Baidarnaya**	**2.19**	**356**	*eP*	Pn	08 48 29.1	+2.5
SMKR	**Semkarok**	**2.20**	**0**	*eP*	Pn	08 48 29.1	+2.4
ESO	**Esso**	**2.21**	**315**	*eP*	Pn	08 48 29.7	+2.9
SRKR	**Sorokina**	**2.28**	**356**	*eP*	Pn	08 48 30.2	+2.4
KRMR	**Karymshinskiy**	**2.52**	**233**	*eP*	Pn	08 48 33.6	+2.6
KRMR				*eS*	Sn	08 49 02.8	+2.2
RUS	**Russkaya**	**2.63**	**223**	*eP*	Pn	08 48 34.7	+2.1
MTVR	**Mutnovka**	**2.73**	**227**	*eP*	Pn	08 48 36.9	+2.8
MTVR				*eS*	Sn	08 49 08.0	+2.0
BKI	**Bering**	**2.74**	**71**	*eP*	Pn	08 48 36.5	+2.6
BKI				*eS*	Sn	08 49 06.0	+0.2
ASAK	**Asacha**	**2.93**	**228**	*eP*	Pn	08 48 40.0	+3.3
KDTR	**Khodutka, Kamc**	**3.29**	**220**	*eP*	Pn	08 48 43.4	+1.9

*ISCJB **14** 09:14:27.4±0.8, 22°.80S±0°.04×69°.10W±0°.06, h96km±7km, Error ellipse: s-maj=8.8km s-min=6.5km az=174.5*
*GUC **14** 09:14:27.2±0.8, 22°.81S×69°.05W, h97km±3km, ML3.6*
*SJA **14** 09:14:27.0±0.6, 22°.81S×69°.09W, h91km±3km, ML2.7, MW3.4*

ISC 14 09:14:28.5±1.5, 22°.79S±0°.04×69°.11W±0°.05, h87km±8km, n19, σ0.9/57/31, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.26**	**46**	*i P*	**Pn**	**09 14 41.0**	**-0.8**
LVC				*i S*	**Sn**	**09 14 52.2**	**+0.5**
LVC	**Limon Verde**	**0.26**	**46**	*eP*	**Pn**	**09 14 41.3**	**-0.6**
LVC				*eS*	**Sn**	**09 14 51.1**	**-0.7**
PB06	**IPOC Station P**	**0.43**	**281**	*i P*	**Pn**	**09 14 42.4**	**-0.2**
PB06				*i S*	**Sn**	**09 14 53.9**	**+0.7**
PB06	**IPOC Station P**	**0.43**	**281**	*eP*	**Pn**	**09 14 42.4**	**-0.2**
PB06				*eS*	**Sn**	**09 14 53.8**	**+0.6**
PB06				IAML		09 14 54.2	
	comp=N,4μm,0.4s						
PB15	**IPOC Station P**	**0.54**	**218**	*i P*	**Pn**	**09 14 43.4**	**-0.2**
PB15	**IPOC Station P**	**0.54**	**218**	*eP*	**Pn**	**09 14 43.4**	**-0.2**
PB15				*eS*	**Sn**	**09 14 54.9**	**+0.2**
PB09	**IPOC Station P**	**0.99**	**353**	*i P*	**Pn**	**09 14 48.2**	**+0.1**
PB09				*i S*	**Sn**	**09 15 03.8**	**+1.0**
PB09	**IPOC Station P**	**0.99**	**353**	*eP*	**Pn**	**09 14 47.9**	**-0.2**
PB09				*eS*	**Sn**	**09 15 03.0**	**+0.2**
PB09				IAML		09 15 04.8	
	comp=N,1μm,0.4s						
PB04	**IPOC Station P**	**1.06**	**295**	*i P*	**Pn**	**09 14 48.7**	**-0.2**
PB04	**IPOC Station P**	**1.06**	**295**	*eP*	**Pn**	**09 14 48.8**	**-0.2**
PB04				*eS*	**Sn**	**09 15 04.6**	**+0.3**
PB04				IAML		09 15 06.9	
	comp=N,2μm,0.2s						
PB07	**IPOC Station P**	**1.28**	**326**	*eP*	**Pn**	**09 14 51.5**	**-0.1**
PB07				*eS*	**Sn**	**09 15 09.3**	**+0.5**
PB07				IAML		09 15 10.4	
	comp=E,1μm,0.2s						
PB10	**IPOC Station P**	**1.51**	**241**	*eP*	**Pn**	**09 14 54.0**	**-0.3**
PB10				*eS*	**Sn**	**09 15 14.4**	**+0.6**
PB02	**IPOC Station P**	**1.63**	**333**	*eP*	**Pn**	**09 14 55.6**	**-0.3**
PB02				*eS*	**Sn**	**09 15 17.3**	**+0.6**
PB02				IAML		09 15 21.4	
	comp=E,1μm,0.2s						
PB01	**IPOC Station P**	**1.77**	**348**	⇑*i P*	**Pn**	**09 14 57.4**	**-0.4**
PB01				*i S*	**Sn**	**09 15 20.3**	**+0.4**
GO02	**Mina Guanaco**	**2.41**	**190**	*eP*	**Pn**	**09 15 05.3**	**-1.0**
PB08	**IPOC Station P**	**2.63**	**359**	⇑*i P*	**Pn**	**09 15 09.0**	**-0.4**
HJA	**Humahuaca**	**3.43**	**98**	*i P*	**Pn**	**09 15 20.7**	**+0.5**
HJA				IAML		09 15 22.3	
	comp=Z,20nm,0.6s						
MNMC	**Minye Minye**	**3.67**	**353**	*eP*	**Pn**	**09 15 21.9**	**-1.4**
AZAP	**Zapla**	**3.98**	**112**	*i P*	**Pn**	**09 15 27.5**	**+0.1**
AZAP				IAML		09 15 29.6	
	comp=Z,7.0nm,0.5s						

DJA 14 09:19:59.8±1.3, 3°N±5°×12°6E±°, h35km±25km, M4.5/8, mb4.6/6, mB4.9/4, MLv4.5/8, Mw(mB)4.2/4, Mwp5.9/1, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.99**	**296**	P	Pn	09 20 17.8	+0.5
SGSI				S	Sn	09 20 31.1	+1.0
TNTI	**Ternate**	**2.63**	**159**	P	Pn	09 20 40.4	+0.6
TNTI				S	Sn	09 21 11.6	+1.1
KMSI	**Cibinong**	**3.60**	**223**	P	Pn	09 20 55.3	+2.2
MRSI	**Marisa**	**5.25**	**239**	P	Pn	09 21 15.8	-0.1
	78nm,0.6s,707nm						
SANI	**Sanana**	**5.27**	**185**	P	Pn	09 21 15.8	-0.3
	28nm,0.8s						
SANI				S	Sn	09 22 07.3	-8.4
	28nm,0.8s						
LUWI	**Luwuk**	**5.60**	**221**	P	Pn	09 21 21.2	+0.5
APSI	**Ampana**	**6.30**	**229**	P	Pn	09 21 28.8	-1.5
BNDI	**Bandanaira**	**8.46**	**156**	P	Pn	09 21 58.4	-1.6
TTSI	**Tana Toraja**	**9.08**	**227**	P	Pn	09 22 09.6	+1.1
SPSI	**Sidrap Palu**	**9.77**	**223**	P	Pn	09 22 19.9	+2.0

*BJI **14** 09:21:41.8±0.0, 12°.71N×144°.45E, h139km, mb4.7/18, mB4.7/14*
*ISCJB **14** 09:21:47.3±0.2, 13°.22N±0°.04×143°.86E±0°.04, h138km, mb4.2/67, Error ellipse: s-maj=6.2km s-min=5.7km az=40.9*
*IDC **14** 09:21:48.8±0.7, 13°.22N×144°.02E, h139km±6km, mb3.9/14, mb1 4.0/14, mb1mx3.8/45, mbtmp4.2/14, MS3.2/4, Ms1 3.2/4, ms1mx2.7/32, Error ellipse: s-maj=16.7km s-min=14.0km az=81.0*
*NEIC **14** 09:21:48.6±1.1, 13°.24N×143°.88E, h139km±2km, mb4.4/57, Error ellipse: s-maj=15.4km s-min=14.5km az=74.0*

ISC 14 09:21:48.5±0.4, 13°.22N±0°.07×143°.96E±0°.07, h138km, n95, σ0.9/91/94, mb4.3/67, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.96**	**67**	P	**Pn**	**09 22 12.5**	**+0.6**
	87nm,0.3s,baz=194,slow=3.8,SNR=88						
GUMO				S	**Sn**	**09 22 29.7**	**+0.1**
	602nm,0.3s,baz=184,slow=24,SNR=147						
GUMO				LR	LR	09 22 35.4	
	comp=Z,124nm,19.1s,baz=88,slow=52						
GUMO	**Guam**	**0.96**	**67**	*e*Pn	**Pn**	**09 22 12.5**	**+0.6**
GUMO				*e*Sn	**Sn**	**09 22 29.1**	**-0.4**
PATS	**Pohnpei**	**15.49**	**113**	*e*Pn	**P**	**09 25 21.4**	**+0.4**
	36nm,0.9s						
MANU	**Manus Island**	**15.53**	**167**	*e*Pn	**Pn**	**09 25 20.7**	**+0.5**
	19nm,0.7s						
RABL	**Rabaul**	**19.12**	**154**	*e*P	**Pn**	**09 26 03.4**	**+0.1**
	54nm,0.7s						
FAKI	**Fak Fak**	**19.80**	**217**	*e*P	**P**	**09 26 09.9**	**+1.6**
	20nm,1.1s						
JOW	**Kunigami**	**19.99**	**315**	P	Pn	09 26 12.6	-0.8
	3.7nm,0.7s,baz=147,slow=13,SNR=9.5						
JOW	**Kunigami**	**19.99**	**315**	*e*P	**P**	**09 26 12.1**	**+1.8**
	15nm,0.7s						
JHJ2	**Mitsune**	**20.16**	**350**	*e*P	**P**	**09 26 10.9**	**-1.2**
	361nm,1.3s						
JNU	**Nakatsue**	**23.14**	**331**	P	**P**	**09 26 43.5**	**+0.8**
	19nm,0.8s,baz=143,slow=2.5,SNR=18						
JNU	**Nakatsue**	**23.14**	**331**	*e*P	**P**	**09 26 43.4**	**+0.7**
	24nm,0.9s						
YULB	**Yu-li**	**23.74**	**298**	*e*P	**P**	**09 26 44.7**	**-3.6**
	4.9nm,0.8s						
MJAR	**Matsushiro Arr**	**23.80**	**348**	P	**P**	**09 26 47.8**	**-0.9**
	7.9nm,0.7s,baz=173,slow=9.1,SNR=22						
MAJO	**Matsushiro**	**23.80**	**348**	*e*P	**P**	**09 26 48.3**	**-0.3**
	14nm,0.8s						
MJB9	**Matsu-Tunnel**	**23.80**	**348**	*e*P	**P**	**09 26 48.0**	**-0.7**
	14nm,0.8s						
SSLB	**Suanglung**	**24.18**	**299**	*e*P	**P**	**09 26 52.0**	**-0.3**
	19nm,0.7s						
TATO	**Taipei**	**24.20**	**302**	*e*P	**P**	**09 26 50.8**	**-1.6**
	166nm,1.4s						
TPUB	**Ta-pu**	**24.28**	**298**	*e*P	**P**	**09 26 52.7**	**-0.6**
	85nm,1.5s						
KSRS	**Korea Array**	**28.07**	**332**	P	**P**	**09 27 27.6**	**+0.5**
	5.1nm,0.6s,baz=139,slow=9.7,SNR=27						
KS15	**Wonju Array Si**	**28.07**	**332**	*e*P	**P**	**09 27 28.7**	**+1.6**
	5.2nm,0.6s						
WHN	**Wuhan**	**32.29**	**307**	P	**P**	**09 28 06.9**	**+2.5**
USA0B	**Ussurisk Arra**	**32.54**	**344**	*e*P	**P**	**09 28 05.1**	**-1.2**
	3.0nm,0.8s						
USRK	**Ussurisk Ar.**	**32.54**	**344**	P	**P**	**09 28 07.1**	**+0.7**
	1.8nm,0.6s,baz=146,slow=11,SNR=8.2						
WRAB	**Tennant Creek**	**34.27**	**196**	*e*P	**P**	**09 28 20.0**	**-1.7**
	8.2nm,1.0s						
WB2	**Warramunga Arr**	**34.28**	**196**	*e*P	**P**	**09 28 21.4**	**-0.3**
	7.2nm,0.9s						
WR1	**Warramunga Arr**	**34.28**	**196**	*e*P	**P**	**09 28 21.4**	**-0.3**
WRA	**Warramunga Arr**	**34.28**	**196**	P	**P**	**09 28 21.4**	**-0.3**
	4.9nm,0.8s,baz=16,slow=8.0,SNR=14						
CN2	**Changchun**	**34.38**	**336**	*e*P	**P**	**09 28 23.6**	**+1.3**
FITZ	**Fitzroy Crossi**	**35.98**	**211**	P	**P**	**09 28 36.5**	**+0.2**
	1.2nm,0.7s,baz=41,slow=6.7,SNR=5.1						
JAGI	**Jajag, Banyuwa**	**36.61**	**236**	*e*P	**P**	**09 28 40.7**	**-1.1**
	30nm,0.8s						
XAN	**Xi'an**	**37.94**	**309**	P	**P**	**09 28 52.3**	**-0.5**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,35nm,3.6s						
HHC	**Hu-ho-hao-te**	**39.48**	**320**	*e*P	**P**	**09 29 05.5**	**-0.2**
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
KMI	**Kunming**	**40.54**	**293**	P	**P**	**09 29 15.0**	**+0.2**
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
LZH	**Lanzhou**	**42.57**	**310**	*e*P	**P**	**09 29 30.3**	**-0.8**
LZH				pP	pP	09 30 01.6	+0.8
LZH				sP	sP	09 30 18.3	+2.4
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
CM31	**Chiang Mai Arr**	**43.53**	**283**	*e*P	**P**	**09 29 38.7**	**-0.2**
	7.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.53**	**283**	P	**P**	**09 29 38.7**	**-0.2**
	0.7nm,0.4s,baz=82,slow=6.5,SNR=4.0						
CMAR				PcP	**PcP**	**09 31 25.6**	**+1.2**
	0.5nm,0.3s,baz=108,slow=2.0,SNR=4.7						
FORT	**Forrest**	**46.34**	**199**	*e*P	**P**	**09 30 01.0**	**+0.3**
	26nm,1.1s						
BBOO	**Buckleboo**	**46.38**	**189**	*e*P	**P**	**09 30 00.9**	**-0.2**
	27nm,1.4s						
SONA0	**Songino Array**	**46.53**	**326**	*e*P	**P**	**09 30 03.2**	**+0.9**
SONM	**Songino Array**	**46.53**	**326**	P	**P**	**09 30 03.2**	**+0.9**
	1.6nm,0.5s,baz=142,slow=8.8,SNR=6.5						
SONM				LR	LR	09 52 10.6	
	comp=Z,22nm,18.2s,baz=204,slow=39						
GTA	**Gaotai**	**46.76**	**312**	*e*P	**P**	**09 30 04.6**	**+0.4**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WMQ	**Urumqi**	**56.76**	**314**	*e*P	**P**	**09 31 20.0**	**+1.8**
WMQ				pP	pwP	09 31 53.0	-1.2
WMQ				LR	LR		
	comp=N,2μm,39.2s						
WMQ				LR	LR		
	comp=E,2μm,38.9s						
WMQ				LR	LR		
	comp=Z,210nm,24.1s						
MK31	**Makanchi Array**	**61.15**	**316**	*e*P	**P**	**09 31 47.5**	**-0.9**
	1.5nm,0.8s						
MK32	**Makanchi Array**	**61.15**	**316**	*e*P	**P**	**09 31 48.8**	**+0.4**
MKAR	**Makanchi Array**	**61.15**	**316**	P	**P**	**09 31 48.8**	**+0.4**
	2.5nm,0.9s,baz=94,slow=8.8,SNR=9.5						
MAKZ	**Makanchi**	**61.36**	**316**	*e*P	**P**	**09 31 49.6**	**-0.3**
	3.3nm,0.8s						
KURK	**Kurchatov**	**64.30**	**320**	*e*P	**P**	**09 32 09.3**	**+0.1**
	5.8nm,0.8s						
EYAK	**Cordova Ski Ar**	**68.91**	**30**	*e*P	**P**	**09 32 37.6**	**-0.6**
	4.6nm,1.0s						
KK31	**Karatay Array**	**69.03**	**311**	*e*P	**P**	**09 32 38.1**	**-1.3**
	1.7nm,0.8s						
KKAR	**Karatay Array**	**69.03**	**311**	*e*P	**P**	**09 32 38.3**	**-1.1**
	1.7nm,0.8s						
TOLK	**Toolik Lake Re**	**69.28**	**21**	*e*P	**P**	**09 32 40.5**	**0.0**
	3.3nm,1.2s						
ILAR	**Eielson Array**	**69.28**	**25**	P	**P**	**09 32 37.7**	**-2.8**
	1.0nm,0.9s,baz=260,slow=4.5,SNR=8.0						
BVAR	**Borovoye Array**	**69.67**	**322**	P	**P**	**09 32 42.7**	**-0.5**
	3.4nm,0.7s,baz=100,slow=8.1,SNR=15						
BRVK	**Borovoye**	**69.74**	**322**	*e*P	**P**	**09 32 43.5**	**0.0**
	4.0nm,0.8s						
PRP	**Porcupine Dome**	**70.01**	**25**	*e*P	**P**	**09 32 44.9**	**-0.3**
	1.2nm,0.9s						
CRQM	**Cirque**	**70.22**	**30**	*e*P	**P**	**09 32 46.9**	**+0.4**
	3.0nm,0.8s						
DOT	**Dot Lake**	**70.26**	**27**	*e*P	**P**	**09 32 46.2**	**-0.3**
	2.1nm,0.8s						
KBL	**Kabul**	**70.28**	**302**	*e*P	**P**	**09 32 46.1**	**-1.4**
	2.7nm,0.8s						
JIS	**Juneau Island**	**74.48**	**33**	*e*P	**P**	**09 33 10.9**	**-0.7**
	8.4nm,1.4s						
INK	**Inuvik**	**75.05**	**22**	P	**P**	**09 33 13.7**	**-1.0**
	1.5nm,0.9s,baz=267,slow=5.9,SNR=6.5						
INK	**Inuvik**	**75.05**	**22**	*e*P	**P**	**09 33 13.9**	**-0.7**
	2.7nm,1.1s						
ABKAR	**Akbulak array**	**76.22**	**318**	*e*P	**P**	**09 33 21.4**	**-0.4**
	1.9nm,0.6s						
AKTO	**Aktyubinsk**	**77.37**	**319**	LR	LR	10 08 57.3	
	comp=Z,16nm,20.1s,baz=117,slow=36						
YKA	**Yellowknife Ar**	**83.60**	**27**	P	**P**	**09 34 00.9**	**-0.3**
	0.4nm,0.4s,baz=286,slow=5.0,SNR=12						
YKB5	**Yellowknife Ar**	**83.60**	**27**	*e*P	**P**	**09 34 00.9**	**-0.2**
PINE	**Pine Mountain**	**84.61**	**46**	*e*P	**P**	**09 34 07.0**	**+0.1**
	9.3nm,1.0s						
K05A	**Summer Lake**	**84.89**	**47**	*e*P	**P**	**09 34 08.8**	**+0.5**
	5.7nm,1.0s						
BEKR	**Beckworth**	**85.94**	**50**	*e*P	**P**	**09 34 13.6**	**-0.1**
	3.8nm,0.9s						
NEW	**Newport**	**86.09**	**41**	*e*P	**P**	**09 34 13.7**	**-0.4**
	4.7nm,1.1s						
J08A	**Circle Bar Ran**	**86.45**	**46**	*e*P	**P**	**09 34 16.3**	**+0.3**
	3.9nm,0.9s						
F10A	**Beach Ranch, E**	**86.63**	**44**	*e*P	**P**	**09 34 16.6**	**-0.2**
	5.2nm,1.2s						
BMO	**Blue Mountains**	**86.88**	**45**	*e*P	**P**	**09 34 17.7**	**-0.3**
	7.6nm,1.1s						
KVN	**Kaiserville**	**87.84**	**51**	*e*P	**P**	**09 34 23.3**	**+0.5**
	8.3nm,1.2s						
NV01	**Mina Array Sit**	**87.84**	**51**	*e*P	**P**	**09 34 23.4**	**+0.4**
NVAR	**Mina Array Bea**	**87.84**	**51**	P	**P**	**09 34 23.4**	**+0.4**
	5.5nm,0.8s,baz=272,slow=5.4,SNR=34						
NV11	**Mina Array Sit**	**87.96**	**51**	*e*P	**P**	**09 34 23.5**	**+0.1**
	0.4nm,1.0s						
HLID	**Hailey**	**89.24**	**45**	*e*P	**P**	**09 34 29.8**	**+0.5**
	3.8nm,1.0s						
ELK	**Elko**	**89.48**	**48**	*e*P	**P**	**09 34 31.0**	**+0.4**
	4.5nm,0.9s						
TPNV	**Topopah Spring**	**89.81**	**52**	*e*P	**P**	**09 34 32.7**	**+0.5**
	6.0nm,0.8s						
R11A	**Troy Canyon, C**	**89.92**	**51**	*e*P	**P**	**09 34 33.0**	**+0.3**
	3.6nm,1.3s						
PFO	**Pinyon Flats O**	**90.58**	**55**	*e*P	**P**	**09 34 35.5**	**-0.2**
	8.2nm,1.2s						
SHPR	**Sheep Range**	**90.78**	**52**	*e*P	**P**	**09 34 37.7**	**+1.0**
	2.6nm,0.9s						
FINES	**FINESS Array B**	**91.12**	**335**	LR	LR	10 18 04.4	
	comp=Z,12nm,18.4s,baz=120,slow=37						
CCUT	**Cedar City**	**91.84**	**51**	*e*P	**P**	**09 34 42.1**	**+0.5**
	1.6nm,1.0s						
GLA	**Glamis**	**92.05**	**56**	*e*P	**P**	**09 34 43.5**	**+1.1**
	8.2nm,0.7s						
W13A	**Hualapai Mount**	**92.19**	**53**	*e*P	**P**	**09 34 43.9**	**+0.6**
	3.3nm,0.9s						
PD31	**Pinedale Array**	**92.86**	**45**	*e*P	**P**	**09 34 45.6**	**-0.5**
	1.0nm,0.8s						
PDAR	**Pinedale Array**	**92.86**	**45**	P	**P**	**09 34 45.7**	**-0.5**
	0.2nm,0.4s,baz=242,slow=1.9,SNR=3.3						
Y14A	**Wickenburg**	**93.23**	**54**	*e*P	**P**	**09 34 48.8**	**+0.9**
	4.1nm,0.8s					

ULHL	**Ulahol**	**1.10**	**23**	P		**Pg**	**09 27 20.9**	**-0.1**
	6.0nm,0.3s,SNR=12							
ULHL	**Ulahol**	**1.10**	**23**	⇑*iP*		**Pg**	**09 27 20.9**	**-0.1**
	baz=25							
ULHL				⇑*iS*		**Sb**	**09 27 35.9**	**+0.1**
	baz=25							
ARLS	**Aral**	**1.19**	**303**	⇑*iP*		**Pg**	**09 27 22.2**	**-0.5**
	baz=1.0							
ARLS				⇑*iS*		**Sb**	**09 27 37.7**	**-0.4**
	baz=1.0							
BOOM	**Boomskoye usch**	**1.28**	**9**	⇓*iP*		**Pg**	**09 27 24.1**	**-0.3**
	baz=11							
BOOM				⇓*iS*		**Sn**	**09 27 40.6**	**-0.7**
	baz=11							
UCH	**Uchtor**	**1.32**	**320**	⇑P		**Pn**	**09 27 25.4**	**+0.7**
	3.8nm,0.2s,SNR=16							
UCH				⇑S		**Sn**	**09 27 43.1**	**+0.4**
	11nm,0.2s							
UCH	**Uchtor**	**1.32**	**320**	⇓*eP*		**Pn**	**09 27 25.0**	**+0.2**
	baz=19							
UCH				⇓*iS*		**Sn**	**09 27 42.6**	**-0.1**
	baz=19							
KBK	**Karagaybulak**	**1.53**	**340**	⇑P		**Pg**	**09 27 29.2**	**+0.2**
	5.3nm,0.1s,SNR=7.1							
KBK				⇓S		**Sg**	**09 27 49.5**	**+0.7**
	55nm,0.2s							
KBK	**Karagaybulak**	**1.53**	**340**	⇓*iP*		**Pg**	**09 27 28.5**	**-0.6**
	baz=40							
KBK				⇓*iS*		**Sg**	**09 27 48.6**	**-0.3**
	baz=40							
AAK	**Ala-Archa**	**1.66**	**329**	⇑P		**Pg**	**09 27 31.9**	**+0.3**
	4.0nm,0.2s							
AAK				⇑S		**Sg**	**09 27 53.4**	**+0.3**
	10nm,0.2s							
AAK	**Ala-Archa**	**1.66**	**329**	⇑P		**Pg**	**09 27 31.0**	**-0.6**
	1.6nm,0.3s							
AAK				⇓S		**Sg**	**09 27 52.4**	**-0.7**
	4.0nm,0.3s							
AAK	**Ala-Archa**	**1.66**	**329**	⇑*iP*		**Pg**	**09 27 31.1**	**-0.5**
	baz=28							
AAK				⇑*iS*		**Sg**	**09 27 52.7**	**-0.4**
	baz=28							
TKM2	**Tokmak 2**	**1.69**	**358**	⇑P		**Pg**	**09 27 31.8**	**-0.4**
	1.1nm,0.2s							
TKM2				⇑S		**Sg**	**09 27 54.0**	**-0.2**
	6.8nm,0.3s							
TKM2	**Tokmak 2**	**1.69**	**358**	⇓*iP*		**Pg**	**09 27 31.6**	**-0.7**
	baz=59							
TKM2				⇓*iS*		**Sg**	**09 27 53.6**	**-0.7**
	baz=59							
AML	**Almayashu**	**1.73**	**302**	⇓P		**Pg**	**09 27 33.5**	**+0.5**
	8.5nm,0.2s,SNR=15							
AML				⇓S		**Sg**	**09 27 56.1**	**+0.6**
	7.2nm,0.3s							
AML	**Almayashu**	**1.73**	**302**	⇓*iP*		**Pb**	**09 27 32.3**	**+0.4**
	baz=1.0							
AML				⇓*iS*		**Sg**	**09 27 55.9**	**+0.4**
	baz=1.0							
KST	**Kastek**	**1.83**	**7**	P		**Pg**	**09 27 34.6**	**-0.3**
	4.8nm,0.3s							
KST				S		**Sg**	**09 27 60.0**	**+1.4**
	11nm,0.3s							
KST	**Kastek**	**1.83**	**7**	*eP*		**Pg**	**09 27 34.6**	**-0.3**
	4.8nm,0.3s							
KST				*eS*		**Sg**	**09 27 60.0**	**+1.4**
	11nm,0.3s							
KST	**Kastek**	**1.83**	**7**	*eP*		**Pg**	**09 27 34.6**	**-0.3**
	4.8nm,0.3s							
KST				*eS*		**Sg**	**09 27 60.0**	**+1.4**
	11nm,0.3s							
CHMS	**Chumysh**	**1.90**	**339**	⇓*iP*		**Pg**	**09 27 35.6**	**-0.6**
	baz=39							
CHMS				⇓*iS*		**Sg**	**09 27 59.8**	**-1.0**
	baz=39							
DGS	**Degeres**	**2.02**	**2**	Pg		**Pg**	**09 27 39.1**	**+0.7**
	5.4nm,0.2s							
DGS				Lg		Lg	09 28 07.9	
	14nm,0.3s							
DGS	**Degeres**	**2.02**	**2**	*eP*		**Pg**	**09 27 39.1**	**+0.7**
	5.4nm,0.2s							
DGS				*eS*		**Sg**	**09 28 07.9**	**+3.3**
	14nm,0.3s							
DGS	**Degeres**	**2.02**	**2**	*eP*		**Pg**	**09 27 37.8**	**-0.7**
	5.4nm,0.2s							
DGS				*eS*		**Sg**	**09 28 05.0**	**+0.5**
	14nm,0.3s							
TNSS	**Tian-Shan**	**2.04**	**27**	Pg		**Pg**	**09 27 38.6**	**-0.4**
	6.1nm,0.5s							
TNSS				Lg		Lg	09 28 06.8	
	4.9nm,0.3s							
TNSS	**Tian-Shan**	**2.04**	**27**	*eP*		**Pg**	**09 27 38.6**	**-0.4**
	6.1nm,0.5s							
TNSS				*eS*		**Sg**	**09 28 06.8**	**+1.2**
	4.9nm,0.3s							
TNSS	**Tian-Shan**	**2.04**	**27**	*eP*		**Pg**	**09 27 38.6**	**-0.4**
	6.1nm,0.5s							
TNSS				*eS*		**Sg**	**09 28 06.8**	**+1.2**
	4.9nm,0.3s							
MDOK	**Medeo**	**2.19**	**28**	Pg		**Pg**	**09 27 41.0**	**-0.8**
	4.2nm,0.4s							
MDOK				Lg		Lg	09 28 11.0	
	4.2nm,0.4s							
MDOK	**Medeo**	**2.19**	**28**	*eP*		**Pg**	**09 27 41.0**	**-0.8**
	4.2nm,0.4s							
MDOK				*eS*		**Sg**	**09 28 11.0**	**+0.8**
	4.2nm,0.4s							
MDOK	**Medeo**	**2.19**	**28**	*eP*		**Pg**	**09 27 41.0**	**-0.8**
	4.2nm,0.4s							
MDOK				*eS*		**Sg**	**09 28 11.0**	**+0.8**
	4.2nm,0.4s							
MRKS	**Merke**	**2.37**	**311**	Pg		**Pb**	**09 27 43.3**	**+0.6**
	2.6nm,0.2s							
MRKS				Lg		Lg	09 28 14.6	
	8.8nm,0.3s							
MRKS	**Merke**	**2.37**	**311**	*eP*		**Pb**	**09 27 43.2**	**+0.6**
	2.6nm,0.2s							
MRKS				*eS*		**Sg**	**09 28 14.6**	**-1.2**
	8.8nm,0.3s							
MRKS	**Merke**	**2.37**	**311**	*eP*		**Pb**	**09 27 43.2**	**+0.6**
	2.6nm,0.2s							
MRKS				*eS*		**Sg**	**09 28 14.6**	**-1.2**
	8.8nm,0.3s							
KTBS	**Karatobe**	**2.59**	**17**	Pg		**Pg**	**09 27 48.0**	**-1.5**
	3.7nm,0.3s							
KTBS				Lg		Lg	09 28 22.8	
	15nm,0.3s							
KTBS	**Karatobe**	**2.59**	**17**	*eP*		**Pg**	**09 27 48.0**	**-1.5**
	3.7nm,0.3s							
KTBS				*eS*		**Sg**	**09 28 22.8**	**-0.3**
	15nm,0.3s							
KTBS	**Karatobe**	**2.59**	**17**	*eP*		**Pg**	**09 27 48.0**	**-1.5**
	3.7nm,0.3s							
KTBS				*eS*		**Sg**	**09 28 22.8**	**-0.3**
	15nm,0.3s							
SATY	**Saty**	**2.74**	**47**	Pg		**Pb**	**09 27 50.1**	**+1.2**
	4.1nm,0.3s							
SATY				Lg		Lg	09 28 27.3	
	12nm,0.2s							
SATY	**Saty**	**2.74**	**47**	*eP*		**Pb**	**09 27 50.1**	**+1.2**
	4.1nm,0.3s							
SATY				*eS*		**Sg**	**09 28 27.3**	**-0.5**
	12nm,0.2s							
SATY	**Saty**	**2.74**	**47**	*eP*		**Pb**	**09 27 50.4**	**+1.4**
	4.1nm,0.3s							
SATY				*eS*		**Sg**	**09 28 27.3**	**-0.5**
	12nm,0.2s							
KPKS	**Kokpek**	**3.16**	**44**	*eP*		**Pb**	**09 27 57.6**	**+1.5**
	3.0nm,0.3s							
KPKS				*eS*		**Sg**	**09 28 39.3**	**-2.1**
	12nm,0.5s							
KPKS	**Kokpek**	**3.16**	**44**	*eP*		**Pb**	**09 27 57.6**	**+1.5**
	3.0nm,0.3s							
KPKS				*eS*		**Sg**	**09 28 39.3**	**-2.1**
	12nm,0.5s							
ARXS	**Arharly**	**3.38**	**27**	Pg		**Pg**	**09 28 02.5**	**-2.1**
	4.8nm,0.7s							
ARXS				Lg		Lg	09 28 47.3	
	5.6nm,0.4s							
ARXS	**Arharly**	**3.38**	**27**	*eP*		**Pg**	**09 28 02.5**	**-2.1**
	4.8nm,0.7s							
ARXS				*eS*		**Sg**	**09 28 47.3**	**-1.1**
	5.6nm,0.4s							
PDGK	**Podgornoye**	**3.53**	**52**	⇓Pg		**Pb**	**09 28 03.9**	**+1.4**
	0.6nm,0.5s							
PDGK				⇓Lg		Lg	09 28 49.7	
	6.8nm,0.7s							
KK31	**Karatay Array**	**4.26**	**298**	⇓Pg		**Pg**	**09 28 20.9**	**-0.5**
	0.3nm,0.4s,baz=112,slow=17							
KK31				⇑Lg		Lg	09 29 15.3	
	0.5nm,0.4s,baz=112,slow=28,SNR=4.6							

JMA 14 09:31:04.1±0.1, 28°.00N×130°.97E, h83km±2km, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.94**	**290**	P	Pn	09 31 22.7	+0.1
JZK				*eS*	Sn	09 31 36.9	+0.5
JAM	**Amami Oshima**	**1.27**	**289**	P	Pn	09 31 27.1	+0.5
JAM				S	Sn	09 31 43.2	-0.4
JAMN	**Amaminishikomi**	**1.60**	**279**	P	Pn	09 31 31.3	+0.5
JAMN				*eS*	Sn	09 31 50.7	-0.4
JTK	**Tokunoshima**	**1.80**	**264**	P	Pn	09 31 34.3	+0.9
JTK				*eS*	Sn	09 31 55.1	-0.6
JTAJ	**Takarajima**	**1.93**	**307**	P	Pn	09 31 35.7	+0.5
JTAJ				S	Sn	09 31 58.6	-0.2
JNN	**Nakanoshima**	**2.07**	**333**	P	Pn	09 31 37.6	+0.6
JNN				*eS*	Sn	09 32 01.9	-0.2
JMZ	**Minamidaito 2**	**2.18**	**174**	P	Pn	09 31 38.3	-0.2
JMZ				S	Sn	09 32 02.9	-1.9
JOKE	**Okinoerabujima**	**2.22**	**254**	P	Pn	09 31 39.8	+0.8
JOKE				*eS*	Sn	09 32 05.3	-0.4
JYAK	**Yakushimahirau**	**2.27**	**350**	P	Pn	09 31 40.2	+0.6
JYAK				S	Sn	09 32 05.8	-1.0
JMTN	**Minamitane**	**2.39**	**359**	P	Pn	09 31 41.9	+0.6
JMTN				S	Sn	09 32 10.1	+0.4
JYRO	**Yoronjima**	**2.44**	**247**	P	Pn	09 31 42.5	+0.6
JYRO				S	Sn	09 32 10.5	-0.4
JKC	**Kuchinoerabu**	**2.54**	**345**	P	Pn	09 31 44.2	+0.9
JKC				*eS*	Sn	09 32 12.9	-0.5
JTN	**Tanegashima 3**	**2.65**	**0**	P	Pn	09 31 45.3	+0.6
JTN				*eS*	Sn	09 32 14.5	-1.4
JOW	**Kunigami**	**2.66**	**245**	P	Pn	09 31 45.5	+0.5
JOW				*eS*	Sn	09 32 16.1	-0.3
JIH	**Iheya**	**2.83**	**251**	P	Pn	09 31 48.1	+0.9
JIH				S	Sn	09 32 20.0	-0.5
JNTH	**Nagotoyohara**	**3.01**	**241**	P	Pn	09 31 50.4	+0.8
JNTH				*eS*	Sn	09 32 24.5	-0.2
JTSR	**Tashiro 2**	**3.16**	**359**	P	Pn	09 31 53.3	+1.7
JJT3	**Tamagusuku3**	**3.39**	**238**	*eS*	Sn	09 32 34.3	+0.4
JNAR	**Kushima--Naru**	**3.52**	**4**	P	Pn	09 31 58.1	+1.5
JKE	**Kume jima 2**	**4.08**	**247**	P	Pn	09 32 05.1	+0.9

*ISCJB **14** 09:42:38.9±0.4, 42°.68N±0°.02×75°.68E±0°.03, h0km, Error ellipse: s-maj=3.4km s-min=3.0km az=140.1*
*SOME **14** 09:42:38.5, 42°.68N×75°.68E*
*NNC **14** 09:42:39.3±0.8, 42°.69N×75°.69E, h0km, mb3.1, mpv2.5, Error ellipse: s-maj=6.5km s-min=3.3km az=148.0, Suspected Mining explosion.*
*KRNET **14** 09:42:39.1±0.1, 42°.69N×75°.67E, h11km, mb2.1*

ISC 14 09:42:39.2±1.0, 42°.69N±0°.02×75°.68E±0°.02, h0km, n15, σ0§60/28, 14C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**0.24**	**346**	⇓P	**Pg**	**09 42 43.6**	**-0.2**
	1.7nm,0.2s						
TKM2				⇓S	**Sg**	**09 42 47.6**	**+0.6**
	31nm,0.3s						
TKM2	**Tokmak 2**	**0.24**	**346**	⇓*iP*	**Pg**	**09 42 43.5**	**-0.4**
	baz=47						
TKM2				⇓*iS*	**Sg**	**09 42 47.5**	**+0.5**
	baz=47						
BOOM	**Boomskoye usch**	**0.28**	**135**	⇑*iP*	**Pg**	**09 42 44.7**	**+0.2**
	baz=35						
BOOM				⇑*iS*	**Sg**	**09 42 48.9**	**+0.8**
	baz=35						
KST	**Kastek**	**0.41**	**31**	P	**Pg**	**09 42 47.0**	**-0.2**
	6.9nm,0.2s						
KST				S	**Sg**	**09 42 53.3**	**+0.7**
	26nm,0.3s						
KBK	**Karagaybulak**	**0.54**	**267**	⇑*iP*	**Pg**	**09 42 49.3**	**-0.2**
	baz=67						
KBK				⇑*iS*	**Sg**	**09 42 56.8**	**+0.3**
	baz=67						
DGS	**Degeres**	**0.56**	**7**	P	**Pg**	**09 42 49.9**	**-0.1**
	1.4nm,0.3s						
DGS				S	**Sg**	**09 42 58.6**	**+1.4**
	8.0nm,0.3s						
ULHL	**Ulahol**	**0.61**	**136**	⇑*iP*	**Pg**	**09 42 50.8**	**-0.1**
	baz=36						
ULHL				⇑*iS*	**Sg**	**09 42 59.3**	**+0.6**
	baz=36						
KZA	**Kyzart**	**0.69**	**208**	⇑*iP*	**Pg**	**09 42 51.8**	**-0.6**
	baz=7.0						
KZA				⇑*iS*	**Sg**	**09 43 02.0**	**+0.8**
	baz=7.0						
AAK	**Ala-Archa**	**0.87**	**267**	⇑P	**Pg**	**09 42 56.1**	**+0.2**
	0.6nm,0.3s						
AAK				⇑S	**Sg**	**09 43 07.7**	**+0.4**
	0.9nm,0.3s						
UCH	**Uchtor**	**0.97**	**242**	⇑*eP*	**Pg**	**09 42 57.3**	**-0.6**
	baz=42						
UCH				⇑*iS*	**Sg**	**09 43 11.2**	**+0.7**
	baz=42						
KTBS	**Karatobe**	**1.26**	**35**	P	**Pg**	**09 43 02.4**	**-1.0**
	1.3nm,0.2s						
KTBS				S	**Sg**	**09 43 19.9**	**+0.1**
	7.9nm,0.3s						
EKS2	**Erkin-Say**	**1.40**	**270**	⇑*eP*	**Pg**	**09 43 05.4**	**-0.7**
	baz=69						
EKS2				⇑*iS*	**Sg**	**09 43 24.3**	**+0.1**
	baz=69						
MRKS	**Merke**	**1.81**	**273**	P	**Pb**	**09 43 13.0**	**-0.2**
	7.3nm,0.3s						
MRKS				S	**Sg**	**09 43 37.9**	**+0.7**
	5.7nm,0.2s						
SATY	**Saty**	**2.04**	**79**	Pg	**Pb**	**09 43 16.5**	**-0.8**
	4.9nm,0.3s						
SATY				Lg	Lg	09 43 45.4	
	5.8nm,0.3s						
BTLS	**Baital**	**2.63**	**334**	Pg	**Pb**	**09 43 27.7**	**+0.5**
	1.5nm,0.3s						
BTLS				Lg	Lg	09 44 02.9	
	2.3nm,0.3s						

UPP 14 09:51:58.3±0.4, 57°.83N×18°.73E, h0km, ML1.5, Explosion, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOTU	**Gotland**	**0.17**	**210**	P	Pg	09 52 01.8	+0.2
GOTU				S	Sg	09 52 04.5	+0.7
BYXU	**Byxelkrok**	**1.08**	**240**	P	Pg	09 52 18.0	-0.9
BYXU				S	Sg	09 52 33.2	+0.3
VSTU	**Vaestervik**	**1.19**	**262**	P	Pg	09 52 20.7	-0.4
VSTU				S	Sg	09 52 36.9	+0.4
ASPU	**Aespoe**	**1.22**	**251**	P	Pg	09 52 20.9	-0.7
ASPU				S	Sb	09 52 38.9	+0.4
VIKU	**Vikbolandet**	**1.27**	**303**	P	Pg	09 52 22.1	-0.4
VIKU				S	Sg	09 52 39.1	+0.1
OSKU	**Oskarshamn**	**1.56**	**247**	P	Pn	09 52 27.1	-0.1

BER 14 09:52:21.8±2.0, 60°.23N×9°.86E, h0km, ML0.8, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONO	**Kongsberg**	**0.60**	**193**	*eP*	Pg	09 52 33.1	-0.1
KONO				IAML		09 52 46.6	
	comp=Z,13nm,0.7s						
NAO01	**NORSAR Array S**	**0.80**	**39**	*eP*	Pg	09 52 37.1	+0.1
NAO01				IAML		09 52 50.8	
	comp=Z,4.1nm,0.1s						
SKAR	**Skarslia**	**0.89**	**301**	*eP*	Pg	09 52 38.0	-0.8
SKAR				*eS*	Sg	09 52 49.7	-0.7
SKAR				IAML		09 52 51.7	
	comp=Z,2.7nm,0.3s						
NBO00	**NORSAR Array S**	**0.92**	**29**	*eP*	Pg	09 52 36.6	-2.8
NBO00				IAML		09 52 50.8	
	comp=Z,2.3nm,0.3s						
NC602	**NORSAR Array S**	**0.97**	**58**	*eP*	Pg	09 52 38.6	-1.8
NC602				*eS*	Sg	09 52 52.3	-0.8
NB201	**NORSAR Array S**	**1.08**	**40**	*eP*	Pg	09 52 39.9	-2.6
NB201				*eS*	Sg	09 52 56.9	+0.3
NC204	**NORSAR Array S**	**1.14**	**23**	*eP*	Pg	09 52 41.7	-1.9
NC204				*eS*	Sg	09 52 58.5	+0.2
NC303	**NORSAR Array S**	**1.24**	**36**	*eP*	Pg	09 52 43.1	-2.5
NC303				*eS*	Sg	09 53 00.8	-0.9
STRU	**Stroemstad**	**1.38**	**150**	*eP*	Pg	09 52 46.5	-1.7
STRU				*eS*	Sg	09 53 04.6	-1.4

*NEIC **14** 09:59:26.5±1.7, 4°.53S×80°.68W, h26km±5km, mb4.3/91, ML3.9(ARE), Error ellipse: s-maj=12.5km s-min=6.1km az=71.0*
NEIC Felt [II] at Mancora, Peru.
*ISCJB **14** 09:59:27.1±0.5, 4°.24S±0°.06×80°.81W±0°.05, h26km, mb4.3/83, MS3.4/5, Error ellipse: s-maj=9.1km s-min=6.2km az=155.9*
*IDC **14** 09:59:34.9±2.1, 4°.12S×80°.70W, h78km±22km, mb3.6/9, mb1 3.9/14, mb1mx3.7/33, mbtmp4.0/14, MS3.4/9, Ms1 3.4/9, ms1mx3.3/16, Error ellipse: s-maj=20.7km s-min=11.3km az=31.0*

ISC 14 09:59:26.8±0.4, 4°.47S±0°.05×80°.80W±0°.06, h26km, n177, σ1§40/213, mb4.3/83, MS3.2/5, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.57**	**138**	P	**Pb**	**10 00 31.7**	**+2.1**
	3.4nm,0.3s,baz=318,slow=9.1,SNR=24						
ATAH				S	**Sb**	**10 01 16.0**	**+3.3**
	13nm,0.3s,baz=163,slow=17,SNR=7.9						
OTAV	**Otavalo**	**5.23**	**27**	*e*Pn	**Pn**	**10 00 43.4**	**-0.4**
OTAV				*e*Sn	**Sn**	**10 01 41.9**	**-1.7**
OTAV	**Otavalo**	**5.23**	**27**	*eP*	**Pn**	**10 00 44.1**	**+0.2**
OTAV				*eS*	**Sn**	**10 01 40.5**	**-3.1**
GCUF	**Volcan Galeras**	**6.63**	**32**	*eP*	**Pn**	**10 01 04.2**	**+1.1**
GCUF				*eS*	Sb	10 02 51.9	+11
BBAC	**Balboa, Cauca**	**7.36**	**29**	*eP*	**Pn**	**10 01 13.8**	**+0.9**
BBAC				*eS*	**Sn**	**10 02 32.4**	**-3.4**
SOTA	**Rioblanco**	**7.78**	**33**	*eP*	Pn	10 01 26.4	+7.4
NNA	**Nana**	**8.44**	**153**	P	Pb	10 01 38.2	-14
	0.8nm,0.3s,baz=304,slow=11,SNR=2.0						
NNA				S	Sb	10 03 15.2	-17
	1.9nm,0.3s,baz=260,slow=17,SNR=3.0						
NNA				LR	LR	10 05 12.1	
	comp=Z,133nm,21.3s,baz=306,slow=39						
NNA	**Nana**	**8.44**	**153**	*e*Pn	**Pn**	**10 01 25.1**	**-2.5**
NNA				*e*Sn	**Sn**	**10 02 55.2**	**-6.8**
PAYG	**Puerto Ayora**	**10.19**	**291**	*e*Pn	**Pn**	**10 01 54.6**	**+3.0**
PAYG				*e*Sn	**Sn**	**10 03 39.9**	**-5.3**
ROSC	**El Rosal**	**11.29**	**35**	LR	LR	10 06 57.9	
	comp=Z,572nm,21.2s,baz=236,slow=40						
ROSC	**El Rosal**	**11.29**	**35**	*e*Pn	**Pn**	**10 02 07.6**	**+0.7**
HDC	**Heredia**	**14.75**	**347**	*e*Pn	**Pn**	**10 02 57.6**	**+3.6**
JTS	**Las Juntas de**	**15.23**	**344**	P	**Pn**	**10 03 01.9**	**+1.6**
	0.0nm,0.3s,baz=210,slow=9.2,SNR=6.6						
JTS				LR	LR	10 07 50.0	
	comp=Z,74nm,20.9s,baz=232,slow=33						
JTS	**Las Juntas de**	**15.23**	**344**	*e*Pn	**Pn**	**10 03 02.4**	**+2.1**
	11nm,1.0s						
SDV	**Santo Domingo**	**16.70**	**37**	P	**P**	**10 03 20.9**	**-0.6**
	0.9nm,0.3s,baz=202,slow=9.4,SNR=10						
SDV	**Santo Domingo**	**16.70**	**37**	*eP*	**P**	**10 03 21.2**	**-0.3**
	17nm,0.8s						
ACON	**Acoyapa**	**16.90**	**345**	*eP*	**Pn**	**10 03 23.2**	**+1.5**
	13nm,1.0s						
ESPN	**Las Esperanzas**	**16.91**	**348**	*e*Pn	**Pn**	**10 03 22.3**	**+0.4**
	9.4nm,0.7s						
LPAZ	**La Paz**	**17.11**	**134**	P	**P**	**10 03 31.4**	**+4.8**
	baz=5.3,slow=14,SNR=1.5						
LPAZ				LR	LR	10 11 35.9	
	comp=Z,250nm,18.0s,baz=286,slow=42						
LPAZ	**La Paz**	**17.11**	**134**	*e*Pn	**Pn**	**10 03 23.5**	**-1.5**
	0.4nm,0.6s						
TGUH	**Tegucigalpa,Un**	**19.49**	**341**	*eP*	**P**	**10 03 53.3**	**+1.0**
	13nm,0.9s						
PTGA	**Pitinga**	**21.14**	**80**	P	**P**	**10 04 11.9**	**+1.8**
	1.5nm,0.3s,baz=211,slow=7.0,SNR=4.0						
PTGA				S	**S**	**10 08 03.0**	**-1.3**
	1.0nm,0.4s,baz=114,slow=20,SNR=1.9						
PTGA	**Pitinga**	**21.14**	**80**	*eP*	**P**	**10 04 08.9**	**-1.2**
	3.7nm,0.8s						
LVC	**Limon Verde**	**21.40**	**149**	P	**P**	**10 04 17.6**	**+4.4**
	1.3nm,0.5s,baz=261,slow=20,SNR=6.4						
LVC	**Limon Verde**	**21.40**	**149**	*eP*	**P**	**10 04 12.0**	**-1.1**
	1.2nm,0.8s						
SIV	**San Ignacio**	**22.51**	**122**	P	**P**	**10 04 28.2**	**+3.3**
	1.2nm,0.9s,baz=274,slow=14,SNR=3.3						
LNIG	**Linares**	**34.37**	**329**	*eP*	**P**	**10 06 12.5**	**+0.6**
	3.8nm,0.8s						
HKT	**Hockley**	**37.13**	**338**	*eP*	**P**	**10 06 36.1**	**+0.7**
	2.0nm,0.6s						
JCT	**Junction City**	**39.22**	**334**	*eP*	**P**	**10 06 52.9**	**-0.2**
	8.2nm,0.8s						
JCT	**Junction City**	**39.22**	**334**	P	**P**	**10 06 53.6**	**+0.4**
	baz=149,SNR=6.3						
HPIG		**39.40**	**324**	*eP*	**P**	**10 06 56.1**	**+1.2**
	3.4nm,0.9s						
W53A	**Cullowhee**	**39.49**	**357**	P	**P**	**10 06 56.0**	**+0.6**
	baz=176						
WHTX	**Lake Whitney,**	**39.57**	**338**	*eP*	**P**	**10 06 56.8**	**+0.7**
	3.3nm,0.6s						
WHTX	**Lake Whitney,**	**39.57**	**338**	P	**P**	**10 06 56.5**	**+0.5**
	baz=153						
WLAR	**White Oak Lake**	**39.69**	**344**	*eP*	**P**	**10 06 58.3**	**+1.3**
	17nm,1.0s						
V50A	**Pikevile**	**40.13**	**355**	P	**P**	**10 07 00.5**	**-0.2**
	baz=173						
TXAR	**Lajitas Array**	**40.14**	**328**	P	**P**	**10 07 01.5**	**+0.6**
	1.0nm,0.8s,baz=147,slow=10,SNR=14						
TXAR				PcP	**PcP**	**10 09 06.6**	**+1.4**
	1.0nm,0.9s,baz=159,slow=5.4,SNR=4.9						
TXAR				LR	LR	10 21 57.9	
	comp=Z,30nm,18.6s,baz=0.0,slow=34						
TX31	**Lajitas Ar. Si**	**40.14**	**328**	*eP*	**P**	**10 07 01.7**	**+0.7**
	1.8nm,0.9s						
V52A	**Sevierville**	**40.18**	**356**	P	**P**	**10 07 00.8**	**-0.3**
	baz=176						
MIAR	**Mount Ida**	**40.63**	**344**	*eP*	**P**	**10 07 04.5**	**-0.3**
	6.0nm,1.0s						
MIAR	**Mount Ida**	**40.63**	**344**	P	**P**	**10 07 05.0**	**+0.2**
	baz=160						
W41B	**Gary Mavity, V**	**40.87**	**346**	*eP*	**P**	**10 07 07.1**	**+0.4**
	2.1nm,0.7s						
ABTX	**Abilene, Hawle**	**41.00**	**335**	*eP*	**P**	**10 07 08.1**	**+0.2**
	6.9nm,0.9s						
ABTX	**Abilene, Hawle**	**41.00**	**335**	P	**P**	**10 07 08.4**	**+0.5**
	baz=151						
X37A	**Clayton**	**41.20**	**342**	*eP*	**P**	**10 07 10.6**	**+1

319A	Douglas	44.81	325	eP	P	10 07 40.7 +1.8
	11nm,0.8s					
121A	Cookes Peak, D	44.84	327	P	P	10 07 39.9 +0.7
	baz=140					
SSPA	Standing Stone	44.96	3	P	P	10 07 40.0 +0.2
	baz=184					
BNM	Barren Site	45.49	330	eP	P	10 07 45.7 +1.3
LENM	Lemitar	45.68	329	eP	P	10 07 46.8 +0.9
LAZ	Ladron	45.95	329	eP	P	10 07 47.7 -0.4
ANMO	Albuquerque	46.04	330	eP	P	10 07 50.0 +1.3
	8.7nm,0.9s					
ANMO	Albuquerque	46.04	330	P	P	10 07 49.5 +0.8
	baz=143					
TASM	ASL Pad, Albuq	46.04	330	P	P	10 07 49.6 +0.8
	baz=143,SNR=16					
TASM	ASL Pad, Albuq	46.04	330	P	P	10 07 49.6 +0.8
	baz=143,SNR=10					
TUC	Tucson	46.36	324	eP	P	10 07 51.5 +0.3
	2.7nm,0.8s					
TUC	Tucson	46.36	324	P	P	10 07 52.1 +0.9
	baz=137					
CBKS	Cedar Bluff	46.49	340	eP	P	10 07 52.0 0.0
	8.7nm,0.9s					
CBKS				epP	pP	10 07 57.6 -2.4
CBKS				esP	sP	10 08 02.0 -1.2
T25A	Trinidad	46.88	334	eP	P	10 07 56.5 +1.2
	3.9nm,1.0s					
T25A	Trinidad	46.88	334	P	P	10 07 56.3 +1.0
	baz=147					
214A	Organ Pipe Nat	47.32	322	P	P	10 07 59.5 +0.9
	baz=134					
X18A	Snowflake	47.53	327	eP	P	10 08 02.2 +1.8
	6.0nm,0.8s					
KSCO	Kaye Shedlock'	47.73	337	eP	P	10 08 02.8 +0.9
	4.4nm,0.6s					
KSCO				epP	pP	10 08 08.6 -1.3
KSCO				esP	sP	10 08 12.1 -0.9
W18A	Petrified Fore	47.85	328	eP	P	10 08 04.5 +1.6
	8.0nm,0.9s					
W18A				epP	pP	10 08 10.2 -0.7
W18A				esP	sP	10 08 13.3 -0.7
W18A	Petrified Fore	47.85	328	P	P	10 08 03.9 +1.0
	baz=140					
SDCO	Great Sand Dun	47.86	333	eP	P	10 08 04.0 +1.0
	4.9nm,0.9s					
SDCO				epP	pP	10 08 11.0 -0.1
SDCO				esP	sP	10 08 13.6 -0.6
SDCO	Great Sand Dun	47.86	333	P	P	10 08 03.8 +0.8
	baz=146,SNR=10					
X16A	Lo Mia Camp, P	48.27	326	eP	P	10 08 07.3 +1.1
	3.9nm,0.9s					
Y14A	Wickenburg	48.82	324	eP	P	10 08 11.0 +0.7
	2.6nm,0.8s					
MVCO	Mesa Verde	48.84	330	eP	P	10 08 11.4 +0.9
	3.7nm,0.9s					
MVCO	Mesa Verde	48.84	330	P	P	10 08 11.3 +0.8
	baz=142					
WUAZ	Wupatki	49.04	327	eP	P	10 08 13.6 +1.6
	7.6nm,1.0s					
WUAZ	Wupatki	49.04	327	P	P	10 08 13.0 +1.0
	baz=138,SNR=5.5					
Y12C	Blythe	49.60	323	eP	P	10 08 15.9 -0.2
	4.7nm,0.9s					
PV01	Paradox Valley	49.60	331	eP	P	10 08 17.5 +1.1
	3.5nm,1.0s					
ISCO	Idaho Springs	49.62	335	eP	P	10 08 16.4 -0.2
	3.1nm,0.9s					
ISCO	Idaho Springs	49.62	335	P	P	10 08 17.2 +0.6
	baz=147					
PV02	Paradox Valley	49.74	331	eP	P	10 08 18.4 +1.0
	8.1nm,0.9s					
PV13	Radium Mtn., P	49.74	331	eP	P	10 08 18.6 +1.1
	7.8nm,0.9s					
PV03	Paradox Valley	49.83	331	eP	P	10 08 19.2 +1.2
	4.9nm,0.9s					
PV12	Saucer Basin,	49.86	331	eP	P	10 08 19.6 +1.3
	9.2nm,0.9s					
PV11	David Mesa, Pa	49.88	331	eP	P	10 08 18.9 +0.5
	6.2nm,1.0s					
PV11				epP	pP	10 08 24.8 -1.6
PV07	Paradox Valley	49.88	331	eP	P	10 08 19.5 +1.0
	5.3nm,0.9s					
PV07				epP	pP	10 08 24.9 -1.5
PV07				esP	sP	10 08 29.6 0.0
PV16	Nyswonger Mesa	49.91	331	eP	P	10 08 18.4 -0.2
	5.0nm,1.0s					
PV16				epP	pP	10 08 25.1 -1.6
PV16				esP	sP	10 08 29.8 0.0
W13A	Hualapai Mount	50.16	324	eP	P	10 08 21.1 +0.5
	3.4nm,1.0s					
U15A	North Rim	50.21	327	eP	P	10 08 23.1 +2.0
	2.3nm,1.0s					
IRM	Iron Mountain	50.25	323	P	P	10 08 22.8 +1.7
	baz=133,SNR=5.5					
N23A	Red Feather La	50.67	335	P	P	10 08 24.7 +0.2
	baz=147					
KNB	Kanab	50.93	327	eP	P	10 08 28.3 +1.9
	3.3nm,1.0s					
PKCU	Pink Cliffs	50.97	328	eP	P	10 08 28.8 +1.9
	4.4nm,1.0s					
O20A	White River Ci	51.05	333	eP	P	10 08 28.1 +0.9
	2.1nm,0.8s					
O20A				epP	pP	10 08 35.0 -0.3
O20A				esP	sP	10 08 38.6 +0.3
O20A	White River Ci	51.05	333	P	P	10 08 28.5 +1.3
	baz=144					
LCMT	Little Creek M	51.16	327	eP	P	10 08 28.3 +0.2
SRU	San Rafael Swe	51.32	330	eP	P	10 08 29.2 0.0
	2.6nm,0.9s					
HEC	Hector,Ludlow	51.43	322	P	P	10 08 31.6 +1.6
	baz=132					
Q16A	Castle Valley	51.49	330	eP	P	10 08 32.2 +1.6
	2.6nm,0.9s					
Q16A				epP	pP	10 08 37.1 -1.5
Q16A				esP	sP	10 08 42.3 +0.5
SZCU	Shurtz Canyon	51.50	327	eP	P	10 08 32.3 +1.7
	3.5nm,1.0s					
CCUT	Cedar City	51.62	327	eP	P	10 08 33.0 +1.4
	4.4nm,1.0s					
CCUT				epP	pP	10 08 39.7 +0.1
CCUT				esP	sP	10 08 42.7 -0.1
SCI2	San Clemente I	51.63	319	P	P	10 08 32.7 +1.2
	baz=129					
MSU	Marysvale	51.70	329	eP	P	10 08 33.0 +0.9
MSU				epP	pP	10 08 39.6 -0.6
P17A	Butcher Ranch,	51.70	331	eP	P	10 08 32.8 +0.7
	2.3nm,0.7s					
D41A	Chassel	51.76	353	eP	P	10 08 31.6 -0.6
	7.7nm,0.8s					
RWWY	Rawlins	51.86	335	eP	P	10 08 33.2 -0.1
	4.1nm,0.8s					
SHPR	Sheep Range	51.88	325	eP	P	10 08 34.5 +1.0
	0.5nm,0.8s					
TCRU	Three Creeks R	51.91	329	eP	P	10 08 34.6 +0.9
	3.0nm,0.8s					
GSC	Goldstone, Bar	52.03	322	P	P	10 08 35.8 +1.2
	baz=132					
SHOC	Shoshone, Teco	52.12	323	P	P	10 08 36.6 +1.6
	baz=133					
PSUT	Pine Spring	52.60	327	eP	P	10 08 40.6 +1.8
	3.8nm,1.0s					
C40A	Isle Royale Na	52.67	353	P	P	10 08 38.7 -0.2
	baz=169					
RSSD	Black Hills	52.69	339	eP	P	10 08 40.5 +1.1
	4.9nm,1.0s					
RSSD	Black Hills	52.69	339	P	P	10 08 40.2 +0.8
	baz=150					
TPNV	Topopah Spring	52.82	324	P	P	10 08 41.7 +1.3
	baz=134					
FURC	Furnace Creek,	52.85	323	P	P	10 08 42.4 +2.0
	baz=133					
JLU	Jordanelle	52.92	331	eP	P	10 08 42.2 +1.0
	3.5nm,0.9s					
EYMN	Ely	53.03	351	P	P	10 08 40.9 -0.7
	baz=166					
DUG	Dugway, Tooele	53.28	330	P	P	10 08 44.9 +1.1
	baz=139					
R11A	Troy Canyon, C	53.41	326	eP	P	10 08 46.4 +1.6
	0.9nm,0.9s					
R11A	Troy Canyon, C	53.41	326	P	P	10 08 45.8 +1.0
	baz=135					
BW06	Boulder Array	53.75	334	P	P	10 08 47.4 +0.1
	baz=144					
HWUT	Hardware Ranch	53.75	332	eP	P	10 08 46.8 -0.5
	5.3nm,0.8s					
PD31	Pinedale Array	53.75	334	eP	P	10 08 46.4 -0.9
	1.5nm,0.8s					
PDAR	Pinedale Array	53.75	334	P	P	10 08 47.0 -0.2
	1.8nm,0.8s,baz=130,slow=8.0,SNR=14					
PDAR				LR	LR	10 32 27.7
	comp=Z,20nm,19.8s,baz=172,slow=37					
ELK	Elko	54.94	328	eP	P	10 08 56.4 +0.4
	2.5nm,1.0s					
ELK				epP	pP	10 09 03.7 -0.3
ELK				esP	sP	10 09 06.9 -0.3
NVAR	Mina Array Bea	55.02	324	P	P	10 08 57.4 +0.8
	1.8nm,0.9s,baz=146,slow=5.4,SNR=8.2					
NVAR				PcP	PcP	10 10 00.0 +1.9
	0.6nm,0.6s,baz=162,slow=3.5,SNR=2.9					
ULM	Lac du Bonnet	56.03	348	P	P	10 09 02.7 -0.7
	5.2nm,0.8s,baz=158,slow=4.2,SNR=4.1					
ULM	Lac du Bonnet	56.03	348	eP	P	10 09 02.9 -0.5
	6.0nm,0.8s					
ULM				epP	pP	10 09 11.2 -0.4
HLID	Hailey	56.60	331	eP	P	10 09 08.7 +0.9
	2.9nm,0.9s					
HLID	Hailey	56.60	331	P	P	10 09 09.1 +1.3
	baz=139,SNR=5.7					
MCMT	McKenzie Canyo	56.84	333	eP	P	10 09 10.4 +0.8
BOZ	Bozeman (W)	56.91	335	eP	P	10 09 11.0 +1.1
	3.3nm,1.0s					
BOZ	Bozeman (W)	56.91	335	P	P	10 09 10.8 +0.9
	baz=142					
DLMT	Dillon	57.14	334	eP	P	10 09 12.2 +0.7
	1.3nm,0.9s					
BEKR	Beckworth	57.16	324	eP	P	10 09 13.6 +1.8
	2.9nm,1.0s					
HRY	Holter Researc	57.88	335	eP	P	10 09 15.3 -1.3
WVOR	Wild Horse Val	57.93	328	eP	P	10 09 17.6 +0.4
	2.2nm,0.9s					
MOD	Modoc Plateau	58.48	326	eP	P	10 09 21.5 +0.5
	3.1nm,1.0s					
MOD				epP	pP	10 09 30.4 +1.2
MSO	Missoula	58.87	334	eP	P	10 09 23.9 +0.3
	1.8nm,0.9s					
MSO	Missoula	58.87	334	P	P	10 09 24.9 +1.3
	baz=140					
M04C	Macdoel	59.26	325	P	P	10 09 27.4 +0.9
	baz=130					
F10A	Beach Ranch, E	59.73	331	eP	P	10 09 30.6 +1.1
	2.5nm,0.8s					
J05D	Fort Rock, OR	59.91	327	P	P	10 09 32.0 +1.1
	baz=132					
PINE	Pine Mountain	60.09	327	eP	P	10 09 31.6 -0.6
	2.6nm,0.9s					
G08A	Pilot Rock	60.09	330	eP	P	10 09 33.0 +0.9
	3.0nm,0.9s					
G08A				epP	pP	10 09 38.6 -1.6
G08A				esP	sP	10 09 42.6 -0.7
I05D	Terrebonne, OR	60.67	328	P	P	10 09 37.2 +1.2
	baz=132					
YKA	Yellowknife Ar	71.57	344	P	P	10 10 44.9 -0.5
	0.9nm,0.9s,baz=133,slow=6.0,SNR=12					
YKA				PcP	PcP	10 11 04.9 +0.2
	0.5nm,0.8s,baz=135,slow=4.8,SNR=5.3					
DBIC	Dimbokro	76.61	82	LR	LR	10 41 45.8
	comp=Z,29nm,21.9s,baz=216,slow=33					
EGAK	Eagle	81.87	338	eP	P	10 11 42.9 -0.7
	1.8nm,0.9s					
TORD	Torodi Ar. Bea	83.72	76	LR	LR	10 47 45.2
	comp=Z,54nm,21.6s,baz=315,slow=35					
ILAR	Eielson Array	84.07	337	P	P	10 11 55.6 +0.6
	1.0nm,1.0s,baz=146,slow=3.6,SNR=7.3					
NOA	NORSAR Array B	94.86	29	LR	LR	10 57 49.6
	comp=Z,5.7nm,18.0s,baz=250,slow=37					
ZALV	Zalesovo Beam	129.29	11	PKP	PKiKP	10 18 33.7 0.0
	0.9nm,0.5s,baz=306,slow=5.0,SNR=5.1					
ASAR	Alice Springs	136.10	229	PKP	PKiKP	10 18 48.4 0.0
	12nm,0.3s,baz=148,slow=2.6,SNR=9.6					
WRA	Warramunga Arr	137.79	234	PKP	PKiKP	10 18 52.6 +0.7
	1.8nm,0.7s,baz=103,slow=2.4,SNR=11					
KSH	Kashi	139.27	28	ePKP	PKPdf	10 18 51.1 -1.2
WMQ	Urumqi	139.51	13	ePKP	PKPdf	10 18 51.9 -0.6
HHC	Hu-ho-hao-te	142.11	345	ePKP	PKPdf	10 18 54.8 -2.5
NJ2	Nanjing	146.94	328	ePKPbc	PKPdf	10 19 05.3 -0.5
LZH	Lanzhou	148.24	353	ePKPbc	PKPbc	10 19 11.5 +0.1
LZH				SS	SS	10 41 45.3 +1.9
WHN	Wuhan	150.38	333	PKPbc	PKPdf	10 19 07.5 -3.9

IDC 14 10:23:32.9±2.2, 6°22S×129°15E, h0km, mb3.9/1, mb1 4.4/3, mb1mx3.7/26, mbtmp4.2/3, ML3.6/2, Error ellipse: s-maj=141.1km s-min=31.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.55	160	Pn	Pn	10 26 58.3	-1.9
	0.2nm,0.3s,baz=342,slow=13,SNR=13						
WRA				Sn	Sn	10 29 28.7	-14
	1.2nm,0.3s,baz=341,slow=23,SNR=9.8						
ASAR	Alice Springs	17.94	166	P	P	10 27 44.9	+0.2
	0.4nm,0.3s,baz=349,slow=10,SNR=30						
ASAR				S	Sn	10 30 52.5	-12
	0.2nm,0.3s,baz=352,slow=26,SNR=5.4						
MKAR	Makanchi Array	67.11	327	P	P	10 34 28.4	0.0
	0.6nm,0.4s,baz=123,slow=7.8,SNR=5.3						

*ISCJB **14** 10:37:31.9±0.7, 9°13S±0°06×127°53E±0°05, h33km, mb3.5/3, Error ellipse: s-maj=8.5km s-min=6.5km az=18.1*
*IDC **14** 10:37:35.5±2.2, 9°10S×127°35E, h77km±25km, mb3.4/3, mb1 3.9/8, mb1mx3.5/37, mbtmp4.0/8, MS2.7/1, Ms1 2.7/1, ms1mx2.2/18, Error ellipse: s-maj=21.2km s-min=16.1km az=25.0*
*DJA **14** 10:37:36.0±0.8, 9°S±7°×12°7E±°, h10km, M4.2/6, mb4.5/2, mB5.3/1, MLv4.1/6, Mw(mB)4.8/1*
ISC 14 10:37:32.7±0.8, 9°15S±0°07×127°52E±0°07, h35km, n13, σ2°73/18, mb3.7/3, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	3.26	259	P	Pn	10 38 23.7	+2.2
SOEI				S	Sn	10 39 00.5	+1.3
BATI	Baumata	3.94	254	P	Pn	10 38 32.9	+2.1
	8.7nm,0.3s,baz=82,slow=7.1,SNR=7.0						
BATI				S	Sn	10 39 15.2	-0.6
	15nm,0.3s,baz=135,slow=4.3,SNR=3.4						
BATI	Baumata	3.94	254	P	Pn	10 38 33.6	+2.8
BATI				S	Sn	10 39 17.7	+1.9
MMRI	Maumere	5.24	275	P	Pn	10 38 48.3	-0.3
AAI	Ambon	5.47	7	P	Pn	10 38 53.2	+1.4
EDFI	Ende, Flores	5.77	274	P	Pn	10 38 56.8	+0.8
SIJI	Sorong	9.04	25	P	Pn	10 39 42.8	+2.1
	1.0nm,0.3s,baz=229,slow=19,SNR=3.2						
FITZ	Fitzroy Crossi	9.08	191	P	Pn	10 39 45.0	+3.7
	1.2nm,0.3s,baz=9.7,slow=11,SNR=64						
FITZ				S	Sn	10 41 21.3	-1.0
	1.4nm,0.3s,baz=48,slow=12,SNR=3.0						
FITZ				LR	LR	10 44 03.8	
	comp=Z,48nm,21.5s,baz=11,slow=43						
WRA	Warramunga Arr	12.59	149	P	Pn	10 40 33.1	+3.6
	0.9nm,0.3s,baz=320,slow=14,SNR=45						
WRA				S	Sn	10 42 50.4	+1.8
	1.9nm,0.3s,baz=335,slow=23,SNR=12						
ASAR	Alice Springs	15.67	158	P	P	10 41 13.2	-1.6
	0.4nm,0.3s,baz=330,slow=9.9,SNR=27						
ASAR				S	Sn	10 43 57.2	-6.5
	0.1nm,0.3s,baz=319,slow=20,SNR=3.0						
STKA	Stephens Creek	26.12	152	P	P	10 43 03.1	-0.3
	0.6nm,0.7s,baz=349,slow=5.2,SNR=2.0						
CMAR	Chiang Mai Arr	39.34	314	P	P	10 44 56.2	-2.7
	0.9nm,0.5s,baz=141,slow=6.9,SNR=5.2						
MKAR	Makanchi Array	68.71	328	P	P	10 48 30.4	-2.5
	0.4nm,0.6s,baz=119,slow=7.9,SNR=5.5						

*IDC **14** 10:38:54.3±5.3, 37°33N×72°13E, h191km±31km, mb3.1/3, mb1 3.2/6, mb1mx2.9/47, mbtmp3.7/6, Error ellipse: s-maj=71.9km s-min=21.1km az=142.0*
*NNC **14** 10:39:02.0±9.1, 37°88N×72°17E, h215km±126km, mb2.1, mpv3.2, Error ellipse: s-maj=99.7km s-min=55.8km az=176.0*
ISC 14 10:38:57.2±1.8, 37°5N±0°2×72°3E±0°1, h200km, n12, σ1°67/14, mb3.3/4, 7C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.38	17	P	Pn	10 40 16.8	+0.3
	1.2nm,0.3s,baz=203,slow=11,SNR=4.9						
AAK				S	Sn	10 41 20.6	+1.4
	2.2nm,0.3s,baz=323,slow=21,SNR=17						
AAK	Ala-Archa	5.38	17	⇑P	Pn	10 40 18.2	+1.6
	1.4nm,0.3s						
AAK				⇑S	Sn	10 41 20.1	+0.8
	12nm,0.6s						
KK31	Karatay Array	5.74	347	⇑P	Pn	10 40 22.6	+1.5
	0.6nm,0.3s,baz=162,slow=15,SNR=4.1						
KK31				⇑S	Sn	10 41 24.7	-2.7
	2.4nm,0.3s,baz=170,slow=23,SNR=6.2						
TKM2	Tokmak 2	5.95	24	⇑P	Pn	10 40 25.0	+1.1
	2.1nm,0.5s						
TKM2				⇑S	Sn	10 41 29.6	-3.1
	2.0nm,0.6s						
GEYT	Alibeck	11.25	276	P	Pn	10 41 29.0	-3.5
	0.4nm,0.3s,baz=87,slow=13,SNR=4.2						
AB31	Akbulak array	14.75	327	⇑P	Pn	10 42 17.3	+1.1
	0.1nm,0.3s,baz=149,slow=11,SNR=7.7						
AKTO	Aktyubinsk	16.47	326	⇓P	P	10 42 36.2	+0.2
	0.5nm,0.5s						
ZALV	Zalesovo Beam	18.56	24	P	P	10 42 59.6	+0.8
	0.1nm,0.3s,baz=212,slow=8.6,SNR=3.6						
ARCES	ARCESS Array B	40.61	337	P	P	10 46 16.2	-0.8
	6.2nm,0.3s,baz=112,slow=9.8,SNR=5.3						
TORD	Torodi Ar. Bea	66.78	269	P	P	10 49 23.8	-3.7
	0.2nm,0.4s,baz=44,slow=5.1,SNR=4.4						
INK	Inuvik	72.73	10	P	P	10 50 01.3	-1.6
	0.3nm,0.4s,baz=330,slow=4.4,SNR=3.6						
YKA	Yellowknife Ar	80.17	3	P	P	10 50 44.6	-0.1
	0.4nm,0.6s,baz=353,slow=5.8,SNR=4.5						

NNC 14 10:42:55.0±10.0, 37°54N×70°59E, h0km, mb3.7, mpv3.3, 5C-1D, Error ellipse: s-maj=100.6km s-min=54.6km az=159.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.56	359	⇑P	Pn	10 44 22.6	+3.7
	0.6nm,0.3s,baz=182,slow=13,SNR=15						
KK31				⇑S	Sn	10 45 28.6	+5.1
	1.3nm,0.4s,baz=186,slow=25,SNR=4.3						
AAK	Ala-Archa	5.91	29	⇓P	Pn	10 44 23.3	-0.6
	4.8nm,0.6s						
AAK				⇑S	Sn	10 45 32.3	-0.1
	4.0nm,0.5s						
TKM2	Tokmak 2	6.60	34	⇑P	Pn	10 44 31.6	-1.9
	0.9nm,0.3s						
TKM2				⇑S	Sn	10 45 49.3	-0.1
	1.2nm,0.5s						
AB31	Akbulak array	14.02	330	P	Pn	10 46 15.2	+0.4
	0.3nm,0.3s,baz=147,slow=13,SNR=11						

*ISCJB **14** 10:49:23.4±0.2, 6°82N±0°02×73°09W±0°02, h158km±1km, mb4.3/130, Error ellipse: s-maj=4.1km s-min=3.0km az=14.8*
*IDC **14** 10:49:23.8±0.7, 6°74N×72°92W, h162km±7km, mb3.7/7, mb1 4.0/10, mb1mx3.6/30, mbtmp4.2/10, Error ellipse: s-maj=18.8km s-min=8.1km az=133.0*
*NEIC **14** 10:49:24.7±1.7, 6°69N×72°99W, h169km±10km, mb4.4/133, Error ellipse: s-maj=17.9km s-min=13.3km az=113.0*
*RSNC **14** 10:49:25.2±1.2, 6°83N×73°12W, h150km±5km, ML4.4, Mw4.1*
ISC 14 10:49:23.7±0.6, 6°80N±0°03×73°05W±0°03, h156km±5km, n369, σ1°38/403, mb4.3/130, 5C-6D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.24	211	⇑iP	Pn	10 49 45.7	+0.6
BARC				eS	Sn	10 50 00.8	-0.7
BARC				i		10 50 03.4	
	comp=Z,3μm,0.3s						
GIRC	Giron, Santand	0.31	333	eP	Pn	10 49 45.8	+0.7
BRRC	Barranca, Sant	0.72	295	⇑eP	Pn	10 49 47.6	+0.7
BRRC				eS	Sn	10 50 04.2	-0.6
BRRC				i		10 50 05.4	
	comp=N,5μm,0.3s						
RUSC	La Rusia	0.90	182	eP	Pn	10 49 49.5	+0.7
RUSC				eS	Sn	10 50 08.1	0.0
RUSC				i		10 50 08.9	
	comp=N,2μm,0.4s						
TAMC	Tame, Arauca	1.31	106	⇓iP	Pn	10 49 53.9	+2.0
TAMC				i		10 50 14.6	
	comp=Z,1μm,0.4s						
TAMC				eS	Sn	10 50 15.1	+1.7
PTBC	PUERTO BERRIO,	1.42	259	eP	Pn	10 49 52.4	-0.5
PTBC				eS	Sn	10 50 13.2	-2.0
PTBC				i		10 50 21.3	
	comp=Z,2μm,0.4s						
OCAC	Ocana	1.45	350	⇑iP	Pn	10 49 53.7	+0.3
OCAC				eS	Sn	10 50 15.8	-0.5
OCAC				i		10 50 19.8	
	comp=N,6μm,0.2s						
YOPC	Yopal, Colombi	1.57	156	⇓iP	Pn	10 49 56.2	+1.6
YOPC				eS	Sn	10 50 19.1	+0.7
ZARC	Zaragoza, Cauc	1.92	291	eP	Pn	10 49 58.3	0.0
ZARC				eS	Sn	10 50 23.8	-1.1
ZARC				i		10 50 25.9	
	comp=N,3μm,0.1s						
AGZ	La Independenc	1.94	162	⇓iP	Pn	10 49 59.7	+1.1
NORC	Norcasia	2.18	236	⇑eP	Pn	10 50 01.5	+0.1
NORC				eS	Sn	10 50 29.6	-0.9
NORC				i		10 50 36.1	
	comp=N,3μm,0.3s						
SMLC	San Martn de	2.23	333	eP	Pn	10 50 01.7	-0.2
SMLC				eS	Sn	10 50 30.5	-0.8
SMLC				i		10 50 32.7	
	comp=N,3μm,0.3s						
CHIC	Chingaza	2.26	197	⇓eP	Pn	10 50 03.4	+0.7
CHIC				eS	Sn	10 50 33.0	+0.3
CHIC				i		10 50 36.9	
	comp=N,2μm,0.3s						
ROSC	El Rosal	2.32	213	P	Pn	10 50 05.3	+2.0
	comp=N,253nm,0.3s,baz=301,slow=7.5,SNR=208						
ROSC				S	Sn	10 50 35.0	+1.1
	comp=N,275nm,0.3s,baz=99,slow=19,SNR=8.8						
ROSC	El Rosal	2.32	213	ePn	Pn	10 50 05.0	+1.6
ROSC				eSn	Sn	10 50 30.7	-3.2
ROSC	El Rosal	2.32	213	⇓iP	Pn	10 50 05.2	+1.9
ROSC				eS	Sn	10 50 36.3	+2.3
HELC	Santa Helena	2.53	256	eP	Pn	10 50 05.4	-0.5
HELC				eS	Sn	10 50 38.4	+0.1
HELC				i		10 50 46.6	
	comp=N,965nm,0.4s						
VILC	Villavicencio,	2.75	193	eP	Pn	10 50 08.6	+0.3
VILC				eS	Sn	10 50 43.1	+0.2
VILC				i		10 50 54.4	
	comp=Z,838nm,0.3s						
GUY2C	Guyana, Caldas	2.78	236	eP	Pn	10 50 09.8	+0.8
GUY2C				eS	Sn	10 50 47.8	+3.7
GUY2C				i		10 50 55.1	
	comp=N,2μm,0.7s						
RREF	El Recreo	2.96	230	eP	Pn	10 50 12.7	+1.3
RREF				eS	Sn	10 50 48.6	+0.3
CODC	Agustn Codazz	3.14	353	eP	Pn	10 50 13.0	-0.1
CODC				eS	Sn	10 50 50.4	-1.0
CODC				i		10 50 56.7	
	comp=N,841nm,0.5s						
DBBC	Dabeiba	3.14	274	⇑eP	Pn	10 50 13.2	0.0
DBBC				eS	Sn	10 50 50.5	-1.0
DBBC				i		10 50 52.4	
	comp=Z,825nm,0.5s						
SDV	Santo Domingo	3.17	49	P	Pn	10 50 14.9	+1.2
	comp=Z,266nm,0.3s,baz=246,slow=5.2,SNR=628						
SDV				S	Sn	10 50 51.6	-0.7
	comp=Z,79nm,0.3s,baz=48,slow=18,SNR=7.3						
SDV	Santo Domingo	3.17	49	eP

comp=Z,325nm,0.4s
GUVC San Jose del G 4.25 174 *e*P **Pn 10 50 27.0 -0.4**
GUVC *e*S **Sn 10 51 17.5 +0.4**
GUVC *i* 10 51 22.9
comp=N,1µm,0.3s
SMRC Santa Marta, M 4.49 345 *e*P **Pn 10 50 30.9 +0.4**
SMRC *e*S **Sn 10 51 17.9 -4.7**
SMRC *i* 10 51 25.2
comp=Z,323nm,0.4s
MACC Macarena, Meta 4.69 190 *e*P **Pn 10 50 32.2 -1.0**
MACC *e*S **Sn 10 51 23.8 -3.7**
MACC *i* 10 51 43.7
comp=N,376nm,0.2s
MARP Paez Belalcaza 4.88 216 *e*P **Pn 10 50 35.6 -0.3**
MARP *e*S **Sn 10 51 30.7 -1.6**
MALC Bahia Malaga 5.08 237 *e*P **Pn 10 50 39.7 +1.3**
BBAC Balboa, Cauca 6.33 222 *e*P **Pn 10 50 55.4 +0.4**
BBAC *e*S **Sn 10 52 04.8 -1.8**
BCIP Isla Barro Col 7.12 290 *e*Pn **Pn 10 51 03.8 -1.5**
OTAV Otavalo 8.46 220 *e*Pn **Pn 10 51 22.1 -1.5**
MTDJ Mount Denham 12.17 339 *e*Pn **Pn 10 52 13.0 +0.9**
SDDR Presa de Saban 12.23 8 *e*Pn **Pn 10 52 12.4 -0.5**
JTS Las Juntas de 12.27 287 P **Pn 10 52 16.0 +2.7**
comp=N,0.4nm,0.3s,baz=3.5,slow=18,SNR=3.0
JTS Las Juntas de 12.27 287 *e*Pn **Pn 10 52 11.5 -1.9**
SJG San Juan 13.10 30 *e*Pn **Pn 10 52 21.0 -3.0**
GTBY Guantanamo Bay 13.20 351 *e*Pn **Pn 10 52 26.8 +1.5**
CBYP Canovanas 13.39 31 *e*Pn **Pn 10 52 26.6 -1.1**
MTP Monte Pirata 13.40 32 *e*Pn **Pn 10 52 26.8 -1.0**
CDVI St. Croix 13.56 36 *e*Pn **Pn 10 52 29.7 -0.2**
CUPR Culebra, Puert 13.72 33 *e*Pn **Pn 10 52 32.6 +0.8**
PTGA Pitinga 15.05 119 P **P 10 52 51.8 +1.6**
comp=N,0.6nm,0.3s,baz=302,slow=20,SNR=3.4
PTGA S **Sn 10 55 32.4 -3.8**
comp=N,0.7nm,0.3s,baz=288,slow=20,SNR=4.2
PTGA Pitinga 15.05 119 *e*Pn **Pn 10 52 45.6 -3.0**
PTGA *e*Sn **Sn 10 55 31.2 -5.0**
TEIG Tepich 19.90 314 *e*P **P 10 53 44.0 +0.8**
comp=N,21nm,0.5s
857A Zephyrhills 23.05 339 P **P 10 54 17.5 +2.2**
baz=156
758A Lake Helen 23.35 342 P **P 10 54 20.4 +2.3**
baz=159
LPAZ La Paz 23.45 168 *e*P **P 10 54 15.8 -4.1**
comp=N,4.7nm,1.5s
453A Whigham 26.16 338 P **P 10 54 45.7 +2.2**
baz=154
TIGA Tifton 26.42 339 P **P 10 54 48.1 +2.2**
baz=156
GO01 Chusmiza 26.58 172 *e*P **P 10 54 47.6 -0.4**
comp=N,15nm,0.3s
PB11 IPOC Station P 26.61 173 *e*P **P 10 54 45.5 -2.3**
comp=N,6.0nm,1.0s
251A Midway 27.68 337 P **P 10 54 58.8 +1.7**
baz=153
349A Repton 27.77 333 P **P 10 54 59.8 +1.8**
baz=149
250A Grady 27.92 335 P **P 10 55 01.2 +1.9**
baz=151
152A Waverly Hall 27.93 339 *e*P **P 10 55 01.2 +1.9**
comp=N,8.6nm,0.8s
152A Waverly Hall 27.93 339 P **P 10 55 01.3 +1.9**
baz=155
151A Opelika 28.03 338 P **P 10 55 02.4 +2.1**
baz=153
Z53A Monticello 28.10 341 P **P 10 55 02.8 +1.9**
baz=157
GOGA Godfrey 28.18 341 *e*P **P 10 55 03.9 +2.3**
comp=N,32nm,1.6s
GOGA Godfrey 28.18 341 P **P 10 55 03.4 +1.8**
baz=158
Y55A Saluda 28.20 344 P **P 10 55 03.8 +2.0**
baz=161
249A Camden 28.28 334 P **P 10 55 04.6 +2.1**
baz=150
Z52A Williamson 28.30 340 P **P 10 55 04.7 +2.1**
baz=156
150A Eclectic 28.37 337 P **P 10 55 05.1 +1.9**
baz=152
149A Jones 28.68 335 P **P 10 55 07.6 +1.6**
baz=151
Y52A Lilburn 28.79 341 P **P 10 55 08.8 +1.7**
baz=157
Z50A Ashland 28.91 337 *e*P **P 10 55 10.2 +2.2**
comp=N,8.6nm,0.6s
Z50A Ashland 28.91 337 P **P 10 55 09.9 +1.9**
baz=153
Z49A Columbiana 29.09 336 P **P 10 55 11.8 +2.2**
baz=152
LRAL Lakeview Retre 29.14 335 *e*P **P 10 55 11.8 +1.7**
comp=N,9.1nm,1.1s
LRAL Lakeview Retre 29.14 335 P **P 10 55 12.1 +2.0**
baz=151
Y51A Rockmart 29.17 339 P **P 10 55 12.0 +1.6**
baz=155
Y50A Piedmont 29.40 338 P **P 10 55 14.1 +1.6**
baz=154
X52A Dahlonega 29.42 342 P **P 10 55 14.6 +2.0**
baz=158
Y49A Blount Mountai 29.63 337 *e*P **P 10 55 15.6 +1.1**
comp=N,34nm,1.6s
Y49A Blount Mountai 29.63 337 P **P 10 55 16.1 +1.7**
baz=152
U58A Oxford 29.88 351 P **P 10 55 18.2 +1.6**
baz=169
W52A Murphy 29.88 342 P **P 10 55 18.4 +1.8**
baz=158
Y48A Jasper 29.98 336 P **P 10 55 18.9 +1.5**
baz=151
VBMS Vicksburg 30.07 329 *e*P **P 10 55 20.7 +2.4**
comp=N,28nm,1.1s
V53A Saluda 30.09 344 *e*P **P 10 55 20.8 +2.2**
comp=N,21nm,1.6s
X49A Woodville 30.18 338 P **P 10 55 20.8 +1.5**
baz=153
T59A Double "B" Far 30.31 353 *e*P **P 10 55 21.2 +0.9**
comp=N,17nm,1.5s
T59A Double "B" Far 30.31 353 P **P 10 55 21.7 +1.4**
baz=171
T60A Surry 30.38 354 P **P 10 55 22.1 +1.2**
baz=173
X48A Hartselle 30.40 337 *e*P **P 10 55 22.8 +1.6**
comp=N,6.8nm,0.8s
X48A Hartselle 30.40 337 P **P 10 55 22.8 +1.6**
baz=152
W50A Signal Mountai 30.43 340 *e*P **P 10 55 21.7 +0.2**
comp=N,15nm,1.3s
W50A Signal Mountai 30.43 340 P **P 10 55 23.5 +2.0**
baz=155
U54A Nelsons Funny 30.65 346 P **P 10 55 25.2 +1.7**
baz=163
V51A Loudon 30.67 342 *e*P **P 10 55 25.8 +2.3**
comp=N,7.4nm,0.6s
V51A Loudon 30.67 342 P **P 10 55 25.5 +1.9**
baz=158
U53A Fall Branch 30.69 345 P **P 10 55 25.4 +1.6**
baz=161
X47A Russelville 30.78 336 P **P 10 55 25.9 +1.4**
baz=150
U52A Thorn Hill 30.93 344 P **P 10 55 27.6 +1.8**
baz=160
W48A Pulaski 30.96 338 P **P 10 55 27.6 +1.5**
baz=152
T54A Tazewell 31.11 347 P **P 10 55 29.2 +1.7**
baz=163
X46A Booneville 31.12 335 P **P 10 55 29.5 +2.0**
baz=149
TZTN Tazewell 31.12 344 *e*P **P 10 55 28.8 +1.3**
comp=N,28nm,1.5s
V49A McMinnville 31.15 340 P **P 10 55 29.3 +1.5**
baz=155
T53A Wise 31.26 345 P **P 10 55 30.3 +1.5**
baz=162
S57A Dark Hollow, R 31.28 351 P **P 10 55 30.3 +1.4**
baz=169
U50A Jamestown 31.39 342 P **P 10 55 32.4 +2.5**
baz=157
HKT Hockley 31.45 320 *e*P **P 10 55 31.7 +1.2**
comp=N,4.9nm,1.4s
V48A Smith Brothers 31.45 338 *e*P **P 10 55 31.4 +0.9**
comp=N,15nm,0.4s
V48A Smith Brothers 31.45 338 P **P 10 55 32.4 +1.9**
baz=153,SNR=7.8
T52A Hallie 31.50 345 *e*P **P 10 55 30.6 -0.2**
comp=N,17nm,1.3s
T52A Hallie 31.50 345 P **P 10 55 32.9 +2.1**
baz=161
W46A Michie 31.53 336 P **P 10 55 32.2 +1.2**
baz=150
CLTN Cedars of Leba 31.59 339 *e*P **P 10 55 32.0 +0.4**
comp=N,8.0nm,1.4s
T51A Gray 31.63 343 P **P 10 55 34.1 +2.1**
baz=159
U49A Red Boiling Sp 31.78 340 P **P 10 55 34.7 +1.4**
baz=156
V47A Nunnelly 31.79 337 P **P 10 55 34.8 +1.4**
baz=152,SNR=9.6
T50A Nancy 31.94 342 P **P 10 55 37.0 +2.2**
baz=158
GO02 Mina Guanaco 31.95 174 *e*P **P 10 55 32.7 -2.5**
comp=N,12nm,1.5s
U48A Cassie Pea, Po 32.04 339 P **P 10 55 37.3 +1.8**
baz=154
CCAR Cane Creek 32.06 330 *e*P **P 10 55 37.6 +1.8**
comp=N,15nm,0.6s
WVT Waverly 32.17 337 *e*P **P 10 55 37.7 +1.0**
comp=N,7.4nm,0.6s
WVT Waverly 32.17 337 P **P 10 55 37.8 +1.0**
baz=152
T49A Edmonton 32.24 341 *e*P **P 10 55 38.0 +0.7**
comp=N,5.2nm,0.7s
T49A Edmonton 32.24 341 P **P 10 55 38.9 +1.6**
baz=156
U47A Clarksville 32.25 338 P **P 10 55 38.8 +1.5**
baz=153
T48A Bowling Green 32.53 340 P **P 10 55 41.4 +1.5**
baz=155
T47A Sharon Grove 32.67 339 *e*P **P 10 55 42.6 +1.6**
comp=N,11nm,0.8s
T47A Sharon Grove 32.67 339 P **P 10 55 42.6 +1.6**
baz=154
S49A Springfield 32.78 342 P **P 10 55 43.7 +1.7**
baz=157
S48A Wiedeman Farm, 32.91 341 P **P 10 55 45.0 +1.9**
baz=156
R50A Paris 32.96 344 P **P 10 55 45.6 +2.0**
baz=159
T46A Princeton 33.00 338 P **P 10 55 45.2 +1.3**
baz=152
X40A Basin Creek Fa 33.05 329 *e*P **P 10 55 45.3 +0.9**
comp=N,6.1nm,0.9s
X40A Basin Creek Fa 33.05 329 P **P 10 55 45.5 +1.1**
baz=142
S47A Hartford 33.13 340 P **P 10 55 46.2 +1.2**
baz=154,SNR=5.3
W41B Gary Mavity, V 33.30 331 *e*P **P 10 55 47.9 +1.3**
comp=N,12nm,1.6s
W41B Gary Mavity, V 33.30 331 P **P 10 55 47.9 +1.3**
baz=144
Q50A Georgetown 33.39 344 P **P 10 55 49.2 +1.9**
baz=160
P53A Whipple 33.40 348 P **P 10 55 49.1 +1.7**
baz=165
Q51A Peebles 33.40 345 P **P 10 55 49.3 +1.9**
baz=161
WHAR Wooly Hollow 33.42 331 *e*P **P 10 55 47.8 +0.3**
comp=N,8.1nm,0.9s
S46A Don Dixon Farm 33.51 339 P **P 10 55 49.3 +1.0**
baz=153
WCI Wyandotte Cave 33.51 341 *e*P **P 10 55 50.1 +1.7**
comp=N,8.3nm,0.6s
WCI Wyandotte Cave 33.51 341 P **P 10 55 49.7 +1.4**
baz=156
R47A Wooly Knot Far 33.65 341 P **P 10 55 50.9 +1.4**
baz=155
P52A Corning 33.69 347 P **P 10 55 51.7 +1.7**
baz=164
PBMO Poplar Bluff 33.79 334 *e*P **P 10 55 52.5 +1.8**
comp=N,11nm,0.7s
P50A Jamestown 34.06 345 P **P 10 55 54.7 +1.5**
baz=161
W39A Magazine 34.09 329 *e*P **P 10 55 54.9 +1.5**
comp=N,7.7nm,0.7s
W39A Magazine 34.09 329 P **P 10 55 54.3 +0.9**
baz=141
O52A Adamsville 34.09 348 P **P 10 55 55.0 +1.7**
baz=164
S44A Carbondale 34.09 337 P **P 10 55 54.2 +0.8**
baz=150
SIUC Southern Illin 34.10 337 *e*P **P 10 55 54.8 +1.3**
comp=N,14nm,0.6s
Q47A Bedord North L 34.20 341 P **P 10 55 55.6 +1.3**
baz=156
N56A West Decatur 34.29 353 P **P 10 55 56.5 +1.4**
baz=171
O50A Cable 34.53 346 P **P 10 55 58.6 +1.5**
baz=161
U40A Yellville 34.54 331 P **P 10 55 58.1 +0.8**
baz=144,SNR=15
OLIL Olney 34.58 339 *e*P **P 10 55 58.7 +1.1**
comp=N,13nm,0.7s
Q46A CEJHS Indians, 34.58 340 P **P 10 55 58.9 +1.4**
baz=154
P47A Martinsville 34.65 342 P **P 10 55 59.5 +1.3**
baz=156
KSPA Keystone Colle 34.69 356 *e*P **P 10 56 00.5 +2.0**
N52A McGinn's Farm, 34.73 348 P **P 10 56 00.6 +1.8**
baz=165
Q45A Warren Harvey, 34.74 339 P **P 10 56 00.1 +1.1**
baz=153
KSCT Kent School, K 34.78 359 *e*P **P 10 55 59.2 0.0**
comp=N,46nm,1.4s
FVM French Village 34.81 336 *e*P **P 10 56 00.8 +1.2**
comp=N,12nm,0.6s
M56A Emporium 34.84 353 P **P 10 56 01.5 +1.7**
baz=171
N50A Nevada 35.01 347 P **P 10 56 02.7 +1.5**
baz=162
HHAR Hobbs 35.02 330 *e*P **P 10 56 01.9 +0.5**
comp=N,4.7nm,0.8s
M54A Oil Creek Stat 35.06 351 *e*P **P 10 56 03.7 +2.0**
comp=N,11nm,1.1s
M54A Oil Creek Stat 35.06 351 P **P 10 56 03.3 +1.6**
baz=168
P46A Rosedale 35.07 341 P **P 10 56 02.7 +1.0**
baz=155
P45A Graceland, Par 35.16 340 *e*P **P 10 56 03.7 +1.1**
comp=N,11nm,0.7s
P45A Graceland, Par 35.16 340 P **P 10 56 03.3 +0.7**
baz=154
CCM Cathedral Cave 35.22 335 *e*P **P 10 56 04.0 +1.0**
comp=N,18nm,0.6s
CCM Cathedral Cave 35.22 335 P **P 10 56 03.8 +0.7**
baz=148
O47A Sheridan 35.31 343 P **P 10 56 04.6 +0.8**
baz=157
ABTX Abilene, Hawle 35.66 320 *e*P **P 10 56 07.3 +0.4**
comp=N,6.3nm,0.9s
ABTX Abilene, Hawle 35.66 320 P **P 10 56 07.3 +0.4**
baz=130
TUL1 Leonard 35.69 327 *e*P **P 10 56 07.4 +0.3**
comp=N,18nm,1.4s
TUL1 Leonard 35.69 327 P **P 10 56 07.2 +0.1**
baz=139
SFIN Lafayette 35.72 341 *e*P **P 10 56 08.5 +1.2**
comp=N,20nm,0.4s
SFIN Lafayette 35.72 341 P **P 10 56 08.4 +1.1**
baz=156,SNR=5.5
N47A Urbana 35.76 344 P **P 10 56 09.4 +1.7**
baz=158
O45A Potomac 35.81 341 P **P 10 56 08.6 +0.5**
baz=155
P43A Skaggs, Pawnee 35.89 338 P **P 10 56 09.2 +0.4**
baz=151
O44A Mansfield 35.97 340 P **P 10 56 10.2 +0.8**
baz=153
N46A Monticello 36.08 342 P **P 10 56 11.4 +1.0**
baz=156
TXAR Lajitas Array 36.52 312 P **P 10 56 15.2 +0.8**
comp=N,1.0nm,0.4s,baz=129,slow=9.1,SNR=28
TXAR PcP **PcP 10 58 35.6 +0.8**
comp=N,0.3nm,0.6s,baz=136,slow=6.8,SNR=4.2
TX31 Lajitas Ar. Si 36.52 312 *e*P **P 10 56 15.1 +0.6**
comp=N,1.9nm,0.8s
WMOK Wichita Mounta 36.53 323 *e*P **P 10 56 14.4 0.0**
comp=N,3.7nm,0.7s
WMOK Wichita Mounta 36.53 323 P **P 10 56 14.1 -0.3**
baz=134
HDIL Hopedale 36.62 339 *e*P **P 10 56 15.0 +0.1**
comp=N,10nm,0.6s
HDIL Hopedale 36.62 339 P **P 10 56 15.3 +0.3**
baz=152
L47A Sherwood 36.65 345 P **P 10 56 16.4 +1.2**
baz=160
K50A Casco 36.81 348 P **P 10 56 18.4 +1.9**
baz=164
K48A Perry 37.16 346 P **P 10 56 21.3 +1.7**
baz=162
WLVO Wesleyville 37.27 354 P **P 10 56 21.8 +1.4**
baz=171
J47A Sunmer 37.74 346 P **P 10 56 25.6 +1.3**
baz=161
H56A Elgin 37.75 356 P **P 10 56 25.9 +1.5**
baz=175
N40A Mertquake, Sal 37.76 337 P **P 10 56 25.6 +1.1**
baz=149
H55A Tweed 37.77 355 P **P 10 56 26.0 +1.4**
baz=173
DELO Deloro Mine 37.78 355 *e*P **P 10 56 25.8 +1.1**
comp=N,9.4nm,1.2s
DELO Deloro Mine 37.78 355 P **P 10 56 25.7 +1.1**
baz=172
U32A Winter Ranch, 37.81 325 *e*P **P 10 56 25.7 +0.6**
comp=N,9.4nm,0.7s
I49A Point Hope 37.97 349 P **P 10 56 28.6 +2.3**
baz=164
EMMW East Machias 38.08 6 *e*P **P 10 56 27.5 +0.4**
comp=N,48nm,1.7s
K43A Burlington 38.22 342 *e*P **P 10 56 28.9 +0.6**
comp=N,73nm,1.5s
PLVO Plevna 38.25 355 *e*P **P 10 56 29.6 +1.0**
comp=N,22nm,1.4s
AMTX Amarillo 38.41 321 *e*P **P 10 56 30.2 0.0**
comp=N,8.6nm,1.0s
AMTX Amarillo 38.41 321 P **P 10 56 30.8 +0.5**
baz=130
G55A Calabogie 38.44 356 P **P 10 56 31.5 +1.4**
baz=174
MSTX Muleshoe 38.54 319 P **P 10 56 31.5 +0.2**
baz=128
L40A Anamosa 38.63 338 *e*P **P 10 56 32.2 +0.4**
comp=N,6.7nm,0.8s
BUKO Buck Lake 38.88 353 P **P 10 56 34.9 +1.0**
baz=170
MNTX Cornudas Mount 39.03 314 *e*P **P 10 56 36.5 +1.2**
comp=N,14nm,1.4s
MNTX Cornudas Mount 39.03 314 P **P 10 56 36.2 +0.9**
baz=123,SNR=12
JFWS Jewell Farm 39.03 340 *e*P **P 10 56 35.3 +0.1**
comp=N,16nm,0.6s
JFWS Jewell Farm 39.03 340 P **P 10 56 35.3 +0.1**
baz=152
ALGO Algonquin Park 39.24 354 P **P 10 56 38.1 +1.3**
baz=172
H45A Beulah 39.34 345 P **P 10 56 39.2 +1.5**
baz=159
I42A Draeger Farm, 39.47 342 P **P 10 56 39.2 +0.4**
baz=155
LMN Caledonia Moun 39.55 9 *e*P **P 10 56 40.4 +0.9**
comp=N,30nm,1.4s
F49A Sandfield 39.59 350 P **P 10 56 40.4 +0.7**
baz=166
I41A Arkdale 39.93 341 P **P 10 56 43.2 +0.6**
baz=153
F45A CMU Biological 40.21 346 P **P 10 56 46.0 +1.2**
baz=161
E48A Lockeyer 40.30 350 P **P 10 56 47.3 +1.7**
baz=166
D54A Lac Fusel, La 40.32 356 P **P 10 56 46.6 +0.9**
baz=174
D53A Lac Vacive, Po 40.33 355 *e*P **P 10 56 47.3 +1.5**
comp=N,6.0nm,0.9s
D53A Lac Vacive, Po 40.33 355 P **P 10 56 47.5 +1.7**
baz=173
LATQ La Tuque 40.44 0 P **P 10 56 48.3 +1.6**
baz=180
E47A Iron Bridge 40.48 349 P **P 10 56 48.2 +1.2**
baz=164
E46A Sault Ste Mari 40.59 348 *e*P **P 10 56 49.0 +1.0**
comp=N,9.1nm,0.6s
E46A Sault Ste Mari 40.59 348 P **P 10 56 49.5 +1.5**
baz=163
BATG Bathurst New B 40.77 7 *e*P **P 10 56 50.6 +1.1**
D49A Beulah Townshi 40.95 351 P **P 10 56 52.1 +1.2**
baz=167
BGNE Belgrade 41.06 331 P **P 10 56 52.3 +0.3**
baz=140
G40A Rib Lake 41.11 342 *e*P **P 10 56 52.9 +0.7**
comp=N,8.8nm,1.3s
G40A Rib Lake 41.11 342 P **P 10 56 53.0 +0.7**
baz=154
121A Cookes Peak, D 41.20 313 P **P 10 56 53.6 +0.1**
baz=121
E43A Lone Tree Farm 41.22 345 *e*P **P 10 56 53.9 +0.8**
comp=N,4.4nm,0.8s
E43A Lone Tree Farm 41.22 345 P **P 10 56 53.7 +0.6**
baz=159
G39A Holcombe 41.44 341 P **P 10 56 55.5 +0.5**
baz=152
LENM Lemitar 41.49 316 *e*P **P 10 56 55.1 -0.6**
COWI Conover 41.55 343 *e*P **P 10 56 56.7 +0.9**
comp=N,5.8nm,0.9s
T25A Trinidad 41.55 321 P **P 10 56 56.6 +0.3**
baz=129
ANMO Albuquerque 41.57 317 P **P 10 56 57.6 +1.2**
baz=125
TASM ASL Pad, Albuq 41.57 317 P **P 10 56 57.5 +1.0**
baz=125
TASM ASL Pad, Albuq 41.57 317 P **P 10 56 57.4 +1.0**
baz=125
F40A Park Falls 41.67 342 P **P 10 56 57.5 +0.6**
baz=154
LAZ Ladron 41.74 316 *e*P **P 10 56 58.4 +0.6**
F39A Loretta 41.92 341 P **P 10 56 59.3 +0.5**
baz=153
ECSD EROS Data Cent 42.19 334 *e*P **P 10 57 00.6 -0.5**
comp=N,2.8nm,1.0s
ECSD EROS Data Cent 42.19 334 P **P 10 57 01.0 -0.1**
baz=144
F38A Pierce - Schro 42.27 340 P **P 10 57 02.2 +0.5**
baz=152
SDCO Great Sand Dun 42.60 321 *e*P **P 10 57 05.5 +0.6**
comp=N,5.5nm,1.1s
SDCO Great Sand Dun 42.60 321 P **P 10 57 06.3 +1.4**
baz=128,SNR=7.8
E38A The Farm, Brul 42.73 341 P **P 10 57 05.9 +0.5**
baz=152
MATQ Matagami 42.99 356 P **P 10 57 08.5 +1.1**
baz=173
C40A Isle Royale Na 43.21 344 *e*P **P 10 57 09.5 +0.4**
comp=N,11nm,1.1s
C40A Isle Royale Na 43.21 344 P **P 10 57 09.7 +0.6**
baz=156
TUC Tucson 43.31 311 P **P 10 57 11.4 +1.0**
baz=118
S22A 4UR Ranch, Cre 43.44 320 *e*P **P 10 57 12.6 +1.0**
comp=N,8.1nm,1.4s
S22A 4UR Ranch, Cre 43.44 320 P **P 10 57 13.0 +1.4**
baz=127,SNR=5.5
X18A Snowflake 43.77 314 *e*P **P 10 57 12.2 -2.0**
comp=N,5.2nm,1.2s
SUSD Miller 43.78 333 P **P 10 57 14.1 +0.2**
baz=141
EYMN Ely 43.91 342 *e*P **P 10 57 15.1 +0.3**
comp=N,11nm,0.6s
EYMN Ely 43.91 342 P **P 10 57 14.9 +0.1**
baz=153,SNR=13
ISCO Idaho Springs 43.96 323 *e*P **P 10 57 15.7 0.0**
comp=N,3.8nm,0.9s
ISCO Idaho Springs 43.96 323 P **P 10 57 17.0 +1.3**
baz=130
MVCO Mesa Verde 44.21 318 *e*P **P 10 57 15.0 -2.7**
comp=N,3.2nm,0.8s
MVCO Mesa Verde 44.21 318 P **P 10 57 18.6 +0.9**
baz=124
214A Organ Pipe Nat 44.69 309 P **P 10 57 22.1 +0.8**
baz=116
PV01 Paradox Valley 44.78 319 *e*P **P 10 57 23.9 +1.6**
comp=N,3.3nm,0.8s
N23A Red Feather La 44.86 324 *e*P **P 10 57 23.0 +0.2**
comp=N,3.6nm,0.8s
N23A Red Feather La 44.86 324 P **P 10 57 23.7 +0.9**
baz=130
PV02 Paradox Valley 44.93 319 *e*P P 10 57 14.8 -8.6
comp=N,6.2nm,0.7s
PV13 Radium Mtn., P 44.96 319 *e*P **P 10 57 25.1 +1.5**
comp=N,7.0nm,0.8s
PV07 Paradox Valley 45.01 320 *e*P **P 10 57 25.3 +1.4**
comp=N,7.4nm,1.3s
PV03 Paradox Valley 45.03 319 *e*P **P 10 57 25.7 +1.6**
comp=N,3.6nm,0.8s
PV12 Saucer Basin, 45.04 319 *e*P **P 10 57 26.0 +1.8**
comp=N,4.5nm,0.7s

PV11	David Mesa, Pa	45.07 319	*e*P	P	10 57 26.1 +1.7
	comp=N,3.7nm,0.8s				
PV17	East Wray Mesa	45.12 319	*e*P	P	10 57 24.8 -0.1
	comp=N,15nm,1.6s				
PV04	Paradox Valley	45.15 320	*e*P	P	10 57 26.3 +1.2
	comp=N,2.2nm,0.7s				
PV22	Blue Mesa, Par	45.16 320	*e*P	P	10 57 26.5 +1.4
	comp=N,3.6nm,0.7s				
WUAZ	Wupatki	45.28 315	*e*P	P	10 57 27.5 +1.4
	comp=N,7.6nm,1.0s				
WUAZ	Wupatki	45.28 315	P	P	10 57 26.5 +0.4
	baz=120,SNR=7.1				
PV21	Cone Mtn., Par	45.29 320	*e*P	P	10 57 26.7 +0.4
	comp=N,6.5nm,1.4s				
AGMN	Agassiz Nation	45.67 339	*e*P	P	10 57 28.9 +0.3
	comp=N,4.9nm,0.6s				
AGMN	Agassiz Nation	45.67 339	P	P	10 57 29.0 +0.3
	baz=148				
O20A	White River Ci	45.75 322	P	P	10 57 31.1 +1.4
	baz=127				
RSSD	Black Hills	45.99 329	*e*P	P	10 57 32.6 +1.1
	comp=N,5.6nm,1.1s				
RSSD	Black Hills	45.99 329	P	P	10 57 32.8 +1.2
	baz=135				
U15A	North Rim	46.38 315	*e*P	P	10 57 36.7 +1.9
	comp=N,6.3nm,1.1s				
SRU	San Rafael Swe	46.60 319	*e*P	P	10 57 37.6 +1.2
	comp=N,2.7nm,0.7s				
MDND	Maddock	46.74 336	*e*P	P	10 57 38.0 +0.9
	comp=N,26nm,1.0s				
MDND	Maddock	46.74 336	P	P	10 57 38.2 +1.1
	baz=142				
P17A	Butcher Ranch,	46.94 320	*e*P	P	10 57 40.0 +1.0
	comp=N,4.3nm,1.0s				
KNB	Kanab	47.04 316	*e*P	P	10 57 41.5 +1.6
	comp=N,5.8nm,0.9s				
MTPU	Mount Pierson	47.12 317	*e*P	P	10 57 42.4 +1.7
	comp=N,3.5nm,1.6s				
ULM	Lac du Bonnet	47.33 340	P	P	10 57 41.2 -0.3
	comp=N,6.2nm,0.4s,baz=141,slow=7.8,SNR=7.1				
MSU	Marysvale	47.36 318	*e*P	P	10 57 44.0 +1.7
SZCU	Shurtz Canyon	47.51 316	*e*P	P	10 57 44.7 +1.2
	comp=N,2.5nm,0.6s				
TCRU	Three Creeks R	47.59 318	*e*P	P	10 57 46.0 +1.8
	comp=N,6.8nm,0.8s				
MPU	Maple Canyon	47.81 320	*e*P	P	10 57 44.9 -0.9
	comp=N,4.6nm,1.0s				
BW06	Boulder Array	48.13 324	*e*P	P	10 57 47.3 -1.0
	comp=N,4.8nm,1.3s				
BW06	Boulder Array	48.13 324	P	P	10 57 48.9 +0.7
	baz=128				
PD31	Pinedale Array	48.13 324	*e*P	P	10 57 48.7 +0.5
	comp=N,5.1nm,1.3s				
PDAR	Pinedale Array	48.13 324	P	P	10 57 48.5 +0.3
	comp=N,1.1nm,0.5s,baz=125,slow=9.0,SNR=13				
TCUT	Toone Canyon	48.28 321	*e*P	P	10 57 50.3 +0.8
	comp=N,13nm,0.6s				
PSUT	Pine Spring	48.51 317	*e*P	P	10 57 52.7 +1.6
	comp=N,1.8nm,0.6s				
DUG	Dugway, Tooele	48.67 319	P	P	10 57 52.7 +0.4
	baz=122				
GSC	Goldstone, Bar	49.12 312	P	P	10 57 56.9 +1.1
	baz=115				
DGMT	Dagmar	49.20 333	*e*P	P	10 57 56.3 +0.3
	comp=N,20nm,0.6s				
DGMT	Dagmar	49.20 333	P	P	10 57 57.4 +1.3
	baz=137				
REDW	Red Top Meadow	49.25 324	*e*P	P	10 57 57.1 +0.3
	comp=N,5.4nm,0.6s				
SNOW	Snow King Moun	49.25 324	*e*P	P	10 57 57.4 +0.6
	comp=N,4.7nm,1.0s				
LOHW	Long Hollow	49.25 324	*e*P	P	10 57 57.6 +0.9
	comp=N,2.2nm,0.6s				
TPAW	Teton Pass	49.38 324	*e*P	P	10 57 58.6 +0.8
	comp=N,4.3nm,1.0s				
MOOW	Moose Ponds	49.42 324	*e*P	P	10 57 58.5 +0.5
	comp=N,2.2nm,0.9s				
TPNV	Topopah Spring	49.43 314	P	P	10 57 59.5 +1.3
	baz=117				
RLMT	Red Lodge	49.43 327	P	P	10 57 59.2 +1.1
	baz=130				
R11A	Troy Canyon, C	49.60 316	*e*P	P	10 58 01.0 +1.5
	comp=N,1.5nm,0.9s				
R11A	Troy Canyon, C	49.60 316	P	P	10 58 00.6 +1.1
	baz=118				
FURC	Furnace Creek,	49.66 313	P	P	10 58 01.2 +1.5
	baz=116				
BOZ	Bozeman (W)	51.03 326	*e*P	P	10 58 10.9 +0.9
	comp=N,1.9nm,0.7s				
BOZ	Bozeman (W)	51.03 326	P	P	10 58 11.0 +0.9
	baz=127				
MCMT	McKenzie Canyo	51.27 324	*e*P	P	10 58 12.9 +1.0
DLMT	Dillon	51.44 325	*e*P	P	10 58 14.1 +1.0
	comp=N,1.5nm,0.8s				
HLID	Hailey	51.49 322	*e*P	P	10 58 14.5 +0.9
	comp=N,2.2nm,0.8s				
HLID	Hailey	51.49 322	P	P	10 58 14.3 +0.7
	baz=123,SNR=5.6				
NVAR	Mina Array Bea	51.54 315	P	P	10 58 14.3 +0.2
	comp=N,0.7nm,0.5s,baz=122,slow=6.2,SNR=6.0				
EGMT	Eagleton	51.56 329	*e*P	P	10 58 14.9 +1.1
	comp=N,14nm,1.5s				
EGMT	Eagleton	51.56 329	P	P	10 58 14.9 +1.1
	baz=131				
MLAC	Mammoth, Mammo	51.58 313	P	P	10 58 14.5 +0.1
	baz=115				
KVN	Kaiserville	51.67 315	*e*P	P	10 58 15.5 +0.5
	comp=N,2.1nm,0.9s				
HRY	Holter Researc	51.82 327	*e*P	P	10 58 17.1 +1.3
YERR	Yerington	52.44 315	*e*P	P	10 58 19.9 -0.8
	comp=N,3.2nm,0.8s				
FFC	Flin Flon	53.13 339	*e*P	P	10 58 25.0 -0.2
	comp=N,101nm,1.6s				
WVOR	Wild Horse Val	53.59 319	*e*P	P	10 58 29.0 +0.1
	comp=N,3.4nm,0.9s				
BEKR	Beckworth	53.60 315	*e*P	P	10 58 30.2 +1.1
	comp=N,3.4nm,1.2s				
FCC	Fort Churchill	54.30 347	*e*P	P	10 58 33.8 +0.2
MOD	Modoc Plateau	54.44 318	*e*P	P	10 58 35.8 +0.6
	comp=N,3.8nm,1.4s				
F10A	Beach Ranch, E	54.48 323	*e*P	P	10 58 35.3 +0.1
	comp=N,3.0nm,0.6s				
I07A	Izee	54.92 320	*e*P	P	10 58 39.2 +0.6
	comp=N,1.8nm,0.7s				
G08A	Pilot Rock	55.17 322	*e*P	P	10 58 41.2 +0.9
	comp=N,4.4nm,0.7s				
M04C	Macdoel	55.43 317	P	P	10 58 42.9 +0.7
	baz=115				
J05D	Fort Rock, OR	55.67 319	P	P	10 58 44.8 +0.8
	baz=116				
PINE	Pine Mountain	55.71 319	*e*P	P	10 58 44.9 +0.6
	comp=N,7.1nm,0.8s				
J04D	Umpqua Nationa	56.23 318	P	P	10 58 48.5 +0.6
	baz=116				
H04A	Detroit Lake	56.91 320	*e*P	P	10 58 53.4 +0.9
	comp=N,6.3nm,0.9s				
YKA	Yellowknife Ar	63.30 340	P	P	10 59 35.7 +0.1
	comp=N,4.2nm,0.6s,baz=133,slow=6.6,SNR=86				
YKW3	Yellowknife Ar	63.35 340	*e*P	P	10 59 35.9 0.0
	comp=N,3.9nm,0.6s				
SUMG	Summit	69.00 11	*e*P	P	11 00 12.4 +0.2
	comp=N,4.6nm,0.7s				
SUMG	Summit	69.00 11	*i* P	P	11 00 12.8 +0.5
	comp=N,12nm,0.8s				
EPYK	Eagle Plains	73.43 338	P	P	11 00 39.1 +0.5
	baz=112				
TORD	Torodi Ar. Bea	73.68 78	P	P	11 00 39.4 -1.6
	comp=N,0.3nm,0.4s,baz=285,slow=7.5,SNR=3.5				
DOT	Dot Lake	75.55 334	*e*P	P	11 00 52.3 +1.4
	comp=N,3.3nm,0.6s				
RIDG	Independent Ri	75.91 334	*e*P	P	11 00 51.4 -1.6
	comp=N,7.1nm,1.2s				
HDA	Harding Lake	76.96 335	P	P	11 00 59.2 +0.5
	baz=102				
ILAR	Eielson Array	77.01 335	P	P	11 00 59.0 0.0
	comp=N,0.4nm,0.5s,baz=113,slow=4.6,SNR=6.9				
RND	Reindeer	77.60 333	*e*P	P	11 01 04.0 +1.5
	comp=N,4.0nm,0.7s				
BPAW	Bear Paw Mtn.	78.65 334	*e*P	P	11 01 05.9 -2.3
	comp=N,7.7nm,1.5s				
CAST	Castle Rocks	79.04 333	*e*P	P	11 01 10.5 +0.2
	comp=N,2.6nm,0.8s				
LZH	Lanzhou	137.24 4	*e*PKP	PKPdf	11 08 27.3 -2.0
LZH			sPKP		11 09 26.3
ASAR	Alice Springs	149.15 234	PKPbc	PKPbc	11 08 53.9 -0.7
	comp=N,0.4nm,0.4s,baz=117,slow=3.1,SNR=15				
WRA	Warramunga Arr	150.38 241	PKPbc	PKPbc	11 08 57.1 -0.5
	comp=N,0.9nm,0.4s,baz=100,slow=4.1,SNR=22				

KOLA 14 11:13:05.7, 68°.08N×33°.25E, M1.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEF	Hetta	3.59	280	*e*P	Pn	11 14 00.7	-1.8
KTK1	Kautokeino	3.80	289	*e*P	Pn	11 14 03.3	-2.0

HEL 14 11:13:54.8±1.5, 69°.41N×30°.90E, h0km, ML1.8, Explosion, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE0	ARCESS Array S	1.91	276	*e*P	Pn	11 14 28.2	-0.3
SGF	Sodankyl	2.55	221	*e*S	Sn	11 15 08.8	-0.3
SGF				*e*SB	Sb	11 15 11.1	-2.1
HEF	Hetta	2.80	252	*e*S	Sn	11 15 14.7	-0.6
HEF				MSG		11 15 20.5	
	comp=Z,2.6nm,0.2s						

ISCJB ***14*** *11:21:23.5±0.6, 31°.47S±0°.05×138°.60E±0°.06, h10km, Error ellipse: s-maj=7.4km s-min=6.2km az=44.7*
AUST ***14*** *11:21:26.9±0.0, 31°.63S×138°.67E, h16km, Error ellipse: s-maj=0.6km s-min=0.2km az=325.0*
IDC ***14*** *11:21:27.8±4.2, 31°.09S×138°.92E, h0km, mb1 4.3/2, mb1mx3.5/40, mbtmp4.1/2, ML3.0/3, Error ellipse: s-maj=80.3km s-min=15.4km az=36.0*

ISC 14 11:21:23.5±0.8, 31°.65S±0°.05×138°.45E±0°.05, h10km, n9, σ2.9°71/17, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	Hallett	1.82	167	P	Pb	11 21 58.4	+1.4
	baz=1.8,SNR=24						
HTT				S	Sb	11 22 20.4	+0.5
	baz=1.8,SNR=4.8						
BBOO	Buckleboo	2.33	240	P	Pg	11 22 07.8	-0.4
	baz=2.5,SNR=7.5						
BBOO				S	Sg	11 22 37.7	-0.8
	baz=2.5						
STKA	Stephens Creek	2.69	96	Pn	Pn	11 22 08.8	+2.0
	0.6nm,0.3s,baz=291,slow=13,SNR=27						
STKA				Sn	Sn	11 22 38.4	-1.1
	11nm,0.3s,baz=37,slow=14,SNR=7.0						
STKA				Lg	Lg	11 22 44.5	
	12nm,0.3s,baz=336,slow=20,SNR=11						
STKA	Stephens Creek	2.69	96	P	Pn	11 22 08.5	+1.7
	baz=2.5,SNR=13						
STKA				S	Sn	11 22 39.3	-0.2
	baz=2.5						
ARPS	Mount Arapiles	5.83	152	P	Pn	11 22 51.8	+1.8
	baz=5.8,SNR=27						
ARPS				S	Sn	11 23 51.3	-5.7
	baz=5.8						
CMSA	Cobar Meteorol	6.18	91	P	Pn	11 22 56.0	+1.2
	baz=6.0						
CMSA				S	Sn	11 24 00.2	-5.4
	baz=6.0						
TOO	Toolangi	8.28	137	P	Pn	11 23 25.4	+1.7
	baz=8.2,SNR=7.4						
ASAR	Alice Springs	8.91	332	Pn	Pn	11 23 33.6	+1.3
	0.1nm,0.3s,baz=148,slow=13,SNR=3.8						
ASAR				Sn	Sn	11 25 12.3	-0.6
	0.6nm,0.3s,baz=148,slow=23,SNR=9.2						
WRA	Warramunga Arr	12.22	341	Pn	Pn	11 24 19.7	+2.0
	0.4nm,0.3s,baz=157,slow=14,SNR=29						
WRA				Sn	Sn	11 26 30.0	-4.1
	0.1nm,0.3s,baz=165,slow=25,SNR=3.4						

NEIC ***14*** *11:26:45.8±1.7, 9°.22S×110°.44E, h10km, mb4.4/19, Error ellipse: s-maj=9.2km s-min=7.3km az=150.0*
ISCJB ***14*** *11:26:48.7±0.3, 9°.18S±0°.03×110°.45E±0°.03, h51km, mb4.4/31, MS3.4/12, Error ellipse: s-maj=5.4km s-min=3.8km az=135.8*
DJA ***14*** *11:26:51.1±0.6, 9°.S±4°×11°.1E±°, h16km±4km, M4.7/16, mb4.6/6, mB5.1/1, MLv4.7/16, Mw(mB)4.4/1*
IDC ***14*** *11:26:52.4±2.7, 8°.88S×110°.57E, h63km±24km, mb3.8/15, mb1 4.0/17, mb1mx3.7/50, mbtmp4.1/17, ML4.1/1, MS3.3/15, Ms1 3.3/15, ms1mx3.2/30, Error ellipse: s-maj=23.1km s-min=12.6km az=59.0*

ISC 14 11:26:50.4±0.4, 9°.21S±0°.05×110°.44E±0°.05, h51km, n82, σ1.9°77/77, mb4.4/31, MS3.4/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	Wanagama	1.29	4	*e*Pn	Pn	11 27 10.3	-1.8
UGM				*e*Sn	Sn	11 27 25.9	-2.5
UGM	Wanagama	1.29	4	P	Pn	11 27 11.5	-0.6
UGM				S	Sn	11 27 25.2	-3.2
YOGI	Yogyakarta	1.39	354	P	Pn	11 27 12.7	-0.8
WOJI	Wonogiri, Jawa	1.45	19	P	Pn	11 27 13.5	-0.7
WOJI				S	Sn	11 27 28.6	-3.4
PWJI	Pagerwojo	1.79	49	P	Pn	11 27 18.3	-0.6
NGJI	Ngawi	2.09	29	P	Pn	11 27 24.9	+1.9
SMRI	Semarang	2.15	0	*e*Pn	Pn	11 27 20.9	-2.9
SMRI				*e*Sn	Sn	11 27 49.2	-0.1
SMRI	Semarang	2.15	0	P	Pn	11 27 25.5	+1.7
GRJI	Gresik	3.05	42	P	Pn	11 27 36.4	+0.3
CISI	Cisompet, Garu	3.07	302	*e*Pn	Pn	11 27 35.6	-0.9
CISI				*e*Sn	Sn	11 28 11.8	-0.3
CISI	Cisompet, Garu	3.07	302	P	Pn	11 27 37.3	+0.8
LEM	Lembang	3.66	310	P	Pn	11 27 46.5	+1.9
	17nm,0.3s,baz=131,slow=10,SNR=8.3						
LEM				S	Sn	11 28 24.4	-2.3
	16nm,0.3s,baz=141,slow=16,SNR=4.7						
LEM				LR	LR	11 29 23.6	
	comp=Z,338nm,19.7s,baz=124,slow=42						
LEM	Lembang	3.66	310	P	Pn	11 27 46.7	+2.0
JAGI	Jajag, Banyuwa	3.74	79	*e*Pn	Pn	11 27 45.0	-0.7
JAGI	Jajag, Banyuwa	3.74	79	P	Pn	11 27 47.3	+1.6
SRBI	Singaraja	4.85	77	P	Pn	11 28 00.8	-0.1
XMIS	Christmas Isla	4.88	255	*e*Pn	Pn	11 27 60.0	-1.3
XMIS				*e*Sn	Sn	11 28 52.5	-4.1
CGJI	Cibinong	5.36	298	P	Pn	11 28 08.5	+0.6
TPI	Tanjungpandan	6.98	336	P	Pn	11 28 17.7	-12
PLAI	Plampang	7.26	88	P	Pn	11 28 34.5	+0.6
MDSI	Maura Dua	7.79	307	P	Pn	11 28 44.9	+3.8
LHSI	Lahat	8.70	307	P	Pn	11 28 53.6	-0.1
MNAI	Manna	8.85	302	*e*Pn	Pn	11 28 54.3	-1.5
MNAI	Manna	8.85	302	P	Pn	11 28 59.0	+3.2
	254nm,1.0s						
KAPI	Kappang	10.14	66	P	Pn	11 29 12.7	-0.7
	baz=238,slow=14,SNR=2.0						
KAPI				LR	LR	11 33 31.2	
	comp=Z,108nm,20.0s,baz=264,slow=40						
SOEI	Soe	13.65	93	*e*Pn	Pn	11 30 00.1	-1.4
GIRL	Giralia	13.85	165	*e*Pn	Pn	11 30 01.7	-2.2
MRSI	Marisa	14.96	51	pP	P	11 30 34.1	+11
PSAA3	Pilbara Seismi	15.28	145	*e*Pn	Pn	11 30 21.6	-1.3
	36nm,1.4s						
PSI	Prapat	16.55	316	LR	LR	11 37 39.4	
	comp=Z,251nm,19.9s,baz=204,slow=40						
FITZ	Fitzroy Crossi	17.20	122	P	Pn	11 30 46.1	-1.1
	0.1nm,0.3s,baz=306,slow=12,SNR=3.9						
FITZ				S	Sn	11 33 40.9	-17
	0.2nm,0.3s,baz=180,slow=20,SNR=3.5						
FITZ				LR	LR	11 36 20.2	
	comp=Z,59nm,21.9s,baz=316,slow=33						
FITZ	Fitzroy Crossi	17.20	122	*e*P	Pn	11 30 46.3	-0.9
	21nm,1.4s						
MTN	Manton Dam	20.63	102	*e*P	P	11 31 26.3	+0.5
	13nm,0.8s						
DAV	Davao City (W)	22.12	44	LR	LR	11 41 09.5	
	comp=Z,38nm,21.3s,baz=320,slow=39						
FAKI	Fak Fak	22.56	75	*e*P	P	11 31 46.7	+0.1
	12nm,0.8s						
NWAO	Narrogin (SRO)	24.42	166	LR	LR	11 40 29.9	
	comp=Z,100nm,20.8s,baz=318,slow=33						
WRA	Warramunga Arr	25.44	117	P	P	11 32 14.5	+0.8
	8.8nm,0.8s,baz=284,slow=12,SNR=18						
WRA				PcP	PcP	11 35 45.8	+1.0
	1.3nm,0.7s,baz=341,slow=1.8,SNR=5.0						
WR1	Warramunga Arr	25.44	117	*e*P	P	11 32 14.5	+0.8
WRAB	Tennant Creek	25.44	117	*e*P	P	11 32 14.2	+0.5
	11nm,0.8s						
WB2	Warramunga Arr	25.45	117	*e*P	P	11 32 14.2	+0.4
	9.5nm,0.9s						
AS31	Alice Springs	26.64	125	*e*P	P	11 32 24.9	+0.3
	2.4nm,0.8s						
ASAR	Alice Springs	26.64	125	P	P	11 32 25.5	+0.9
	17nm,0.5s,baz=302,slow=9.1,SNR=24						
ASAR				PcP	PcP	11 35 49.4	+1.7
	1.5nm,0.7s,baz=308,slow=1.8,SNR=10						
ASAR				LR	LR	11 44 14.0	
	comp=Z,42nm,18.2s,baz=286,slow=39						
FORT	Forrest	27.03	145	*e*P	P	11 32 28.9	+1.0
	24nm,0.8s						
CMAR	Chiang Mai Arr	29.74	338	P	P	11 32 50.5	-1.6
	0.4nm,0.4s,baz=165,slow=7.5,SNR=2.7						
CMAR				LR	LR	11 45 31.5	
	comp=Z,81nm,18.2s,baz=174,slow=38						
BBOO	Buckleboo	33.34	139	*e*P	P	11 33 23.8	0.0
	26nm,1.4s						
KMI	Kunming	34.94	348	P	P	11 33 42.3	+4.5
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
STKA	Stephens Creek	36.65	132	P	P	11 33 53.8	+1.6
	comp=Z,4.5nm,0.8s,baz=306,slow=9.3,SNR=6.3						
STKA	Stephens Creek	36.65	132	*e*P	P	11 33 52.6	+0.4
	comp=Z,1.2nm,0.9s						
H08S2	Diego Garcia H	37.55	269	T	T	12 14 00.9	
	baz=91,slow=74						
H08S3	Diego Garcia H	37.57	269	T	T	12 14 04.2	
	baz=91,slow=74						
H08S1	Diego Carcia H	37.57	269	T	T	12 13 58.0	
	baz=91						
WHN	Wuhan	39.70	5	P	P	11 34 21.1	+3.3
LZH	Lanzhou	45.48	353	*e*P	P	11 35 08.8	+4.0
LZH				pP	pP	11 35 18.0	+0.1
LZH				sP	pwP	11 35 20.9	+0.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
KSRS	Korea Array	49.23	18	P	P	11 35 33.1	-0.6
	comp=Z,0.8nm,0.7s,baz=194,slow=10.0,SNR=4.1						
KSRS				LR	LR	11 57 46.9	
	comp=Z,19nm,18.9s,baz=232,slow=38						
HHC	Hu-ho-hao-te	49.82	1	*e*P	P	11 35 42.9	+4.5
HHC				pmax	pmax		
	comp=Z,60nm,5.7s						
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
MAJO	Matsushiro	52.47	28	*e*P	P	11 35 57.7	-0.5
	comp=Z,2.6nm,0.6s						
MJAR	Matsushiro Arr	52.47	28	P	P	11 35 55.7	-2.4
	comp=Z,1.1nm,0.6s,baz=207,slow=8.9,SNR=5.0						
MJAR				LR	LR	11 58 10.2	
	comp=Z,20nm,21.0s,baz=210,slow=36						
USA0B	Ussuriysk Arra	56.63	18	*e*P	P	11 36 27.4	-0.8
	comp=Z,3.2nm,0.8s						
USRK	Ussuriysk Ar.	56.63	18	P	P	11 36 26.1	-2.1
	comp=Z,2.3nm,0.8s,baz=230,slow=11,SNR=5.7						
WMQ	Urumqi	56.68	340	*e*P	P	11 36 32.6	+3.9
WMQ				sP	sP	11 36 46.3	-1.5
WMQ				LR	LR		
	comp=N,670nm,35.7s						
WMQ				LR	LR		
	comp=E,1μm,35.7s						
WMQ				LR	LR		
	comp=Z,160nm,31.5s						
SONM	Songino Array	56.91	357	P	P	11 36 27.0	-3.3
	comp=Z,0.5nm,0.4s,baz=174,slow=5.8,SNR=2.8						
KSH	Kashi	58.07	329	*e*P	P	11 36 40.6	+2.0
KLR	Kul'dur	61.13	16	P	P	11 36 56.8	-2.5
	comp=Z,1.3nm,0.5s,baz=182,slow=8.5,SNR=6.0						
KLR				LR	LR	12 06 28.5	
	comp=Z,32nm,18.2s,baz=228,slow=39						
MK32	Makanchi Array	61.15	338	*e*P	P	11 36 58.0	-1.5
MKAR	Makanchi Array	61.15	338	P	P	11 36 58.0	-1.5
	comp=Z,0.7nm,0.5s,baz=152,slow=7.3,SNR=3.9						
MAW	Mawson	66.29	198	LR	LR	11 59 37.3	
	comp=Z,67nm,21.8s,baz=70,slow=30						
ZALV	Zalesovo Beam	66.55	344	LR	LR	12 08 21.1	
	comp=Z,20nm,18.3s,baz=70,slow=38						
GEYT	Alibeck	67.67	317	P	P	11 37 41.7	-0.7
	comp=Z,2.5nm,0.6s,baz=112,slow=11,SNR=4.7						
ABKAR	Akbulak array	73.06	328	*e*P	P	11 38 15.1	+0.1
	comp=Z,5.2nm,0.7s						
VNDA	Vanda	73.19	170	P	P	11 38 17.6	+2.2
	comp=Z,3.0nm,0.8s,baz=298,slow=6.8,SNR=16						
VNDA	Vanda	73.19	170	*e*P	P	11 38 16.7	+1.3
	comp=Z,5.6nm,1.0s						
KMBO	Kilima Mbogo	73.22	272	LR	LR	12 05 06.9	
	comp=Z,42nm,19.0s,baz=92,slow=31						
PEA0B	Petropavlovsk-	73.91	27	*e*P	P	11 38 20.9	+0.9
	comp=Z,29nm,1.5s						
PETK	Petropavlovsk-	73.91	27	P	P	11 38 19.6	-0.3
	comp=Z,1.9nm,0.6s,baz=207,slow=1.1,SNR=6.2						
SEY	Seymchan	78.78	18	P	P	11 38 47.0	-0.3
	comp=Z,1.6nm,0.5s,baz=186,slow=3.9,SNR=7.1						
QSPA	South Pole Qui	80.79	180	*e*P	P	11 38 59.9	+1.4
	comp=Z,6.5nm,1.3s						
BOSA	Boshof	81.45	242	LR	LR	12 08 55.0	
	comp=Z,28nm,18.5s,baz=34,slow=31						
TIXI	Tiksi	81.61	6	P	P	11 39 00.8	-1.6
	comp=Z,1.7nm,0.3s,baz=164,slow=2.4,SNR=6.2						
TIXI	Tiksi	81.61	6	*e*P	P	11 39 01.6	-0.8
	comp=Z,2.7nm,0.8s						
BR101	Keskin Array S	85.83	311	*e*P	P	11 39 25.6	+0.7
BRTR	Keskin Array B	85.83	311	P	P	11 39 25.6	+0.7
	comp=Z,1.2nm,0.8s,baz=123,slow=9.0,SNR=5.5						
SNAA	Sanae	88.43	197	*e*P	P	11 39 38.1	+1.3
	comp=Z,2.6nm,1.2s						

MAN 14 11:50:41.1, 7°.47N×124°.83E, h19km, mb5.0, ML3.9, MS3.9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.46	30	*e*P	Pb	11 50 51.4	+0.7
BUKP				*e*S	Sn	11 51 01.6	+1.0
SKMP	Bagumbayan, Su	0.99	197	*e*P	Pb	11 50 55.1	-4.5
SKMP				*e*S	Sb	11 51 06.2	-6.2
PAGZ	Pagadian	1.48	285	*e*P	Pn	11 51 05.9	-0.9
PAGZ				*e*S	Sn	11 51 26.0	+0.4
DDMP	Don Marcelino,	1.62	147	*e*P	Pn	11 51 07.0	-1.7
DDMP				*e*S	Sb	11 51 31.0	+0.5
BUTP	Butuan	1.68	28	*e*P	Pn	11 51 09.6	+0.1
BUTP				*e*S	Sg	11 51 33.8	-1.6
IPIL	Ipil	2.26	278	*e*P	Pn	11 51 18.1	+0.7
IPIL				*e*S	Sb	11 51 47.4	-1.5

ISCJB ***14*** *11:52:59.8±0.2, 60°.89N±0°.02×149°.92W±0°.03, h54km±3km, mb3.8/15, MS3.0/2, Error ellipse: s-maj=3.3km s-min=2.5km az=143.1*
IDC ***14*** *11:53:00.5±1.8, 60°.97N×150°.34W, h46km±16km, mb3.5/12, mb1 3.8/17, mb1mx3.5/60, mbtmp3.7/17, ML3.3/5, MS2.8/6, Ms1 2.7/6, ms1mx2.5/35, Error ellipse: s-maj=15.8km s-min=13.1

SPCP	Crater Peak Br	1.12	291	ePn	Pn	11 53 20.1	0.0
SPCP				eSn	Sn	11 53 35.2	+0.7
BRLK	Bradley Lake	1.21	202	ePn	Pn	11 53 21.9	+0.7
BRLK				eSn	Sn	11 53 37.4	+1.0
SML	Sawmill	1.22	40	ePn	Pn	11 53 21.2	0.0
SPWE	Spurr West	1.31	288	ePn	Pn	11 53 22.9	+0.3
GLI	Glacier Island	1.41	89	ePn	Pn	11 53 23.3	-0.5
GLI				eSn	Sn	11 53 41.5	+0.3
RDJH	Redoubt Jeurge	1.42	259	ePn	Pn	11 53 24.1	0.0
RDSO	Redoubt South	1.43	254	ePn	Pn	11 53 24.3	+0.1
RDSO				eSn	Sn	11 53 43.0	+1.1
RSO	Redoubt South	1.43	254	ePn	Pn	11 53 24.1	-0.2
RDWB	Redoubt West	1.46	255	ePn	Pn	11 53 24.7	0.0
RDWB				eSn	Sn	11 53 44.3	+1.5
HOM	Homer	1.48	215	ePn	Pn	11 53 24.9	0.0
CNPM	China Poot	1.50	205	ePn	Pn	11 53 25.5	+0.4
CNPM				eSn	Sn	11 53 44.5	+1.0
SCM	Sheep Creek Mo	1.59	52	ePn	Pn	11 53 26.9	+0.5
SCM				eSn	Sn	11 53 46.5	+0.8
JPK	Jack Peak	1.66	83	ePn	Pn	11 53 27.4	+0.2
IVE	Iliamna Volcan	1.74	241	ePn	Pn	11 53 29.3	+0.9
VMT	TAPS Tl Valdez	1.77	82	ePn	Pn	11 53 29.2	+0.5
VMT				eSn	Sn	11 53 50.3	+0.3
ILS	Iliamna Low So	1.79	240	ePn	Pn	11 53 30.2	+1.1
DIV	Divide	2.06	81	ePn	Pn	11 53 32.8	0.0
EYAK	Cordova Ski Ar	2.10	97	ePn	Pn	11 53 32.7	-0.6
HUR	Hurricane	2.11	4	ePn	Pn	11 53 33.9	+0.6
AUE	Augustine Isla	2.29	229	ePn	Pn	11 53 37.1	+1.3
AUJK	Augustine Jueg	2.31	230	ePn	Pn	11 53 37.5	+1.4
AUH	Augustine H	2.31	230	ePn	Pn	11 53 37.5	+1.4
AUW	Augustine West	2.32	231	ePn	Pn	11 53 37.4	+1.2
AUI	Augustine Isla	2.32	230	ePn	Pn	11 53 37.7	+1.4
MID	Middleton Isla	2.33	127	ePn	Pn	11 53 35.9	-0.5
SGAM	Sherman Glacie	2.38	97	ePn	Pn	11 53 36.2	-0.9
PS11	TAPS Pump St11	2.47	59	ePn	Pn	11 53 38.6	+0.3
DHY	Denali Highway	2.52	28	ePn	Pn	11 53 40.3	+1.2
TRF	Thorofare Moun	2.58	357	ePn	Pn	11 53 40.8	+0.8
RND	Reindeer	2.58	11	ePn	Pn	11 53 42.0	+2.1
KTH	Kantishna Hill	2.71	351	ePn	Pn	11 53 42.9	+1.1
CAST	Castle Rocks	2.73	340	ePn	Pn	11 53 43.2	+1.3
SVW2	Sparrevohn	2.74	277	ePn	Pn	11 53 42.3	+0.3
FONW	Fourpeaked Sta	2.86	226	ePn	Pn	11 53 45.0	+1.3
HMT	Hamilton	2.87	99	ePn	Pn	11 53 43.0	-0.9
MCK	McKinley	2.90	9	ePn	Pn	11 53 45.4	+1.1
PAX	Paxson	2.99	44	ePn	Pn	11 53 46.5	+1.0
NICHA	Nichawak Mount	3.04	100	ePn	Pn	11 53 44.7	-1.4
CHUM	Lake Minchumin	3.20	341	ePn	Pn	11 53 49.9	+1.6
BPAW	Bear Paw Mtn.	3.26	352	ePn	Pn	11 53 50.0	+0.8
CRQM	Cirque	3.35	89	ePn	Pn	11 53 50.2	-0.3
KDAK	Kodiak Island	3.39	204	P	Pn	11 53 50.6	-0.3
	7.3nm,0.3s,baz=57,slow=12,SNR=129						
KDAK				S	Sn	11 54 27.2	-2.5
	20nm,0.3s,baz=200,slow=20,SNR=17						
KDAK				LR	LR	11 55 23.9	
	comp=Z,116nm,18.9s,baz=35,slow=42						
KARR	Katmai Rainbow	3.39	227	ePn	Pn	11 53 52.2	+1.3
KAHC	Katmai Hardscr	3.39	231	ePn	Pn	11 53 51.6	+0.6
TT01	Tatalina	3.51	308	ePn	Pn	11 53 52.9	+0.4
TT01				ePn	Pn	11 53 52.9	+0.4
TTA	Tatalina	3.52	308	ePn	Pn	11 53 53.0	+0.3
SNH	Sunshine Point	3.60	98	ePn	Pn	11 53 52.5	-1.3
MENT	Mentasta	3.61	52	ePn	Pn	11 53 56.5	+1.3
WRH	Wood River Hil	3.70	13	ePn	Pn	11 53 56.5	+1.3
BALM	Baldy	3.73	84	ePn	Pn	11 53 55.5	-0.2
HDA	Harding Lake	3.80	20	ePn	Pn	11 53 58.0	+1.4
CCB	Clear Creek Bu	3.91	14	ePn	Pn	11 53 59.0	+1.0
DOT	Dot Lake	3.92	42	ePn	Pn	11 53 59.2	+1.0
OHAK	Old Harbor	4.05	206	ePn	Pn	11 53 59.4	-0.6
COLA	College	4.12	13	ePn	Pn	11 54 02.0	+1.1
ILAR	Eielson Array	4.15	19	P	Pn	11 54 01.8	+0.5
	1.6nm,0.3s,baz=206,slow=13,SNR=40						
ILAR				S	Sn	11 54 47.9	-0.7
	4.7nm,0.3s,baz=202,slow=23,SNR=5.3						
ILB	Eielson Array	4.15	19	ePn	Pn	11 54 02.3	+1.0
MDM	Murphy Dome	4.17	10	ePn	Pn	11 54 02.9	+1.3
MLY	Manley	4.18	356	ePn	Pn	11 54 03.3	+1.5
CTGM	Chitina Glacie	4.22	85	ePn	Pn	11 54 02.6	+0.2
BCA3	Beaver Creek A	4.44	57	ePn	Pn	11 54 06.5	+1.1
SII	Sitkinak Islan	4.86	209	ePn	Pn	11 54 10.6	-0.5
PCA	Pinnacle	4.87	95	ePn	Pn	11 54 10.6	-0.7
IM3	Indian Mountai	5.39	343	ePn	Pn	11 54 18.2	-0.1
PNL	Peninsula	5.41	98	ePn	Pn	11 54 17.8	-0.7
EGAK	Eagle	5.62	42	ePn	Pn	11 54 22.0	+0.6
YUK7	Dusty Glacier	5.82	88	ePn	Pn	11 54 25.3	+0.8
FYU	Fort Yukon	6.08	18	ePn	Pn	11 54 29.0	+1.3
HYT	Haines Junctio	6.10	85	ePn	Pn	11 54 28.7	+0.5
BM3	Burnt Mountain	6.96	17	ePn	Pn	11 54 40.7	+0.8
WHY	Whitehorse	7.40	85	ePn	Pn	11 54 45.6	-0.3
SKAG	Skagway	7.45	95	ePn	Pn	11 54 47.2	+0.8
TOLK	Toolik Lake Re	7.79	1	ePn	Pn	11 54 53.2	+2.0
ANM	Nome	7.97	304	ePn	Pn	11 54 54.9	+1.2
JIS	Juneau Island	8.33	101	ePn	Pn	11 54 58.9	+0.3
INK	Inuvik	10.23	36	P	Pn	11 55 25.6	+1.1
	0.1nm,0.3s,baz=231,slow=13,SNR=7.0						
INK				S	Sn	11 57 20.5	+2.9
	0.1nm,0.3s,baz=195,slow=16,SNR=1.8						
DLBC	Dease Lake	10.38	95	P	Pn	11 55 27.8	+1.1
	0.1nm,0.3s,baz=282,slow=14,SNR=2.0						
DLBC				LR	LR	11 59 57.7	
	comp=Z,88nm,21.0s,baz=262,slow=40						
DLBC	Dease Lake	10.38	95	ePn	Pn	11 55 27.6	+0.9
DIB	Dawson Inlet,	12.22	121	ePn	Pn	11 55 51.9	+0.2
BBB	Bella Bella	14.81	116	LR	LR	12 01 35.6	
	comp=Z,24nm,18.1s,baz=22,slow=34						
YKA	Yellowknife Ar	16.73	69	P	P	11 56 53.3	+0.4
	0.2nm,0.3s,baz=277,slow=10,SNR=20						
YKA				PcP	PcP	12 01 37.4	+0.1
	0.1nm,0.3s,baz=259,slow=0.9,SNR=6.2						
YKA				LR	LR	12 03 06.2	
	comp=Z,4.3nm,18.5s,baz=240,slow=36						
YKB5	Yellowknife Ar	16.73	69	ePn	P	11 56 53.3	+0.4
NEW	Newport	22.56	109	LR	LR	12 06 04.9	
	comp=Z,48nm,18.1s,baz=327,slow=34						
RES	Resolute Bay	23.75	33	P	P	11 58 08.6	+0.5
	3.6nm,1.0s,baz=251,slow=9.6,SNR=5.6						
RES	Resolute Bay	23.75	33	eP	P	11 58 08.2	+0.2
	11nm,1.4s						
FCC	Fort Churchill	27.46	69	eP	P	11 58 42.0	+0.3
	2.7nm,0.8s						
YHH	Holmes Hill	28.05	107	eP	P	11 58 47.4	-0.1
	2.9nm,1.0s						
NV01	Mina Array Sit	29.91	124	eP	P	11 59 05.9	+1.9
NVAR	Mina Array Bea	29.91	124	P	P	11 59 05.9	+1.9
	0.4nm,0.5s,baz=320,slow=8.3,SNR=4.2						
PD31	Pinedale Array	30.20	108	eP	P	11 59 08.0	+1.5
	1.0nm,0.8s						
PDAR	Pinedale Array	30.20	108	P	P	11 59 08.1	+1.5
	0.4nm,0.6s,baz=322,slow=3.9,SNR=5.8						
PDAR				PcP	PcP	12 02 06.0	-0.3
	0.4nm,0.7s,baz=90,slow=0.9,SNR=3.1						
KLR	Kul'dur	43.63	292	P	P	12 00 58.7	-1.2
	0.8nm,0.5s,baz=36,slow=8.9,SNR=4.8						
KLR				LR	LR	12 19 54.3	
	comp=Z,24nm,19.5s,baz=196,slow=37						
LTX	Lajitas	43.94	114	eP	P	12 01 04.0	+1.2
TXAR	Lajitas Array	43.94	114	P	P	12 01 04.0	+1.2
	0.2nm,0.7s,baz=317,slow=6.3,SNR=2.6						
TXAR				PcP	PcP	12 02 48.0	0.0
	0.1nm,0.5s,baz=101,slow=2.1,SNR=3.9						
ARCES	ARCESS Array B	49.83	2	P	P	12 01 47.0	-1.2
	7.1nm,0.3s,baz=355,slow=6.6,SNR=9.7						
KSRS	Korea Array	54.43	284	P	P	12 02 21.6	-1.0
	0.5nm,0.6s,baz=32,slow=7.2,SNR=3.6						
FIA0	FINESS Array S	57.96	2	eP	P	12 02 47.0	-0.5
FINES	FINESS Array B	57.96	2	P	P	12 02 47.0	-0.5
	1.4nm,0.6s,baz=14,slow=8.5,SNR=8.0						
MKAR	Makanchi Array	64.65	323	P	P	12 03 30.9	-2.1
	0.6nm,0.5s,baz=44,slow=6.8,SNR=6.1						
AKASG	Malin Array Be	68.77	1	P	P	12 03 58.1	-0.9
	0.5nm,0.4s,baz=8.9,slow=6.6,SNR=4.3						
GERES	GERESS Array B	69.83	11	P	P	12 04 05.7	-0.2
	0.5nm,0.4s,baz=305,slow=5.9,SNR=3.6						
ESDC	Sonseca Array	76.02	26	P	P	12 04 42.7	+0.2
	0.5nm,0.5s,baz=346,slow=4.1,SNR=3.5						
CMAR	Chiang Mai Arr	83.83	297	P	P	12 05 23.9	-1.0
	0.6nm,0.4s,baz=19,slow=5.7,SNR=3.0						
BOSA	Boshof	147.57	8	PKPbc	PKPbc	12 12 38.9	-0.3
	1.4nm,0.5s,baz=24,slow=2.7,SNR=3.0						

MEX 14 11:58:00.2±0.4, 18°.19N×103°.54W, h4km, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.21	62	*i* P	Pg	11 58 03.8	-0.5
MMIG				*i* S	Sg	11 58 07.3	+0.2
CJM	Chamela	1.93	313	*e*P	Pn	11 58 30.8	-3.1
CJM				*e*S	Sn	11 58 54.3	-4.3
ARIG	Puente Sto Nin	3.04	88	*i* P	Pn	11 58 46.5	-2.6
ARIG				*e*S	Sn	11 59 22.7	-3.2

NIED ***14*** *12:04:00,33°.60N×141°.10E, h32km, Mw3.5 Best double couple: M₀2.20000×10¹⁴ NP1:φ₀s187.00000°, δ84.00000°, λ-3.00000°. NP2:φ₀s277.00000°, δ87.00000°, λ-174.00000°.*
IDC ***14*** *12:04:00.9±1.6, 33°.51N×141°.40E, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.4/38, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=36.9km s-min=23.0km az=72.0*
ISCJB ***14*** *12:04:05.7±0.9, 33°.56N±0°.04×141°.15E±0°.09, h48km, Error ellipse: s-maj=10.9km s-min=6.2km az=0.3*
JMA ***14*** *12:04:05.9±0.2, 33°.62N×141°.14E, h62km, M3.7*
ISC 14 12:04:06.4±1.3, 33°.57N±0°.05×141°.2E±0°.1, h48km, n19, σ1°44/24, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	1.10	350	P	Pn	12 04 24.8	-0.1
JHJ2	Mitsune	1.26	249	P	Pn	12 04 27.2	-0.3
JHJ	Hachijo jima 2	1.28	250	Pn	Pn	12 04 27.3	-0.5
	287nm,0.3s,baz=347,slow=20,SNR=485						
JHJ				Sn	Sn	12 04 40.9	-2.9
	171nm,0.3s,baz=50,slow=19,SNR=12						
JHCJ	Hachijojimakas	1.29	248	P	Pn	12 04 27.4	-0.5
BSO3	Boso 3	1.36	335	P	Pn	12 04 28.5	-0.2
JMKN	Mikurajimanish	1.39	284	P	Pn	12 04 28.8	-0.5
BSO4	Boso 4	1.59	333	P	Pn	12 04 31.9	-0.1
JAOM	Aogashimamukai	1.64	228	P	Pn	12 04 32.7	-0.1
JIM2	Oshima 3	1.87	308	P	Pn	12 04 35.2	-0.7
JOD2	Odawara 2	2.44	314	P	Pn	12 04 43.2	-0.5
JOD2				eS	Sn	12 05 11.8	-0.5
JYN	Shimob	2.93	312	P	Pn	12 04 50.8	+0.4
JRY	Ryogami san	3.10	323	P	Pn	12 04 52.5	-0.2
JAG	Ashikaga	3.19	334	P	Pn	12 04 53.8	-0.3
MJAR	Matsushiro Arr	3.86	321	Pn	Pn	12 05 03.5	+0.3
	1.0nm,0.3s,baz=151,slow=11,SNR=124						
MJAR				Sn	Sn	12 05 46.9	-0.3
	0.4nm,0.3s,baz=192,slow=19,SNR=5.1						
MAT	Matsushiro	3.86	321	P	Pn	12 05 04.6	+1.4
MAT				S	Sn	12 05 48.3	+1.0
ASAJ	Asahikawa	10.59	5	Pn	Pn	12 06 33.1	-2.3
	0.4nm,0.3s,baz=276,slow=14,SNR=4.8						
ASAJ				Sn	Sn	12 08 28.7	-3.7
	0.1nm,0.3s,baz=120,slow=20,SNR=3.2						
MKAR	Makanchi Array	45.89	305	P	P	12 12 27.0	+2.9
	0.3nm,0.6s,baz=89,slow=9.1,SNR=3.8						
WRA	Warramunga Arr	53.61	188	P	P	12 13 22.7	-0.2
	0.8nm,0.4s,baz=359,slow=6.8,SNR=15						
ASAR	Alice Springs	57.34	188	P	P	12 13 51.0	+1.4
	12nm,0.4s,baz=360,slow=6.6,SNR=15						

DJA 14 12:30:29.2±0.5, 10°S±4°×11°4E±°, h10km, M4.2/10, mb5.4/2, mB6.4/1, MLv3.7/10, Mw(mB)6.2/1, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.09	7	P	Pb	12 30 49.5	-0.7
JAGI				S	Sb	12 31 05.0	+0.5
GMJI	Gumukmas	1.40	336	P	Pn	12 30 52.9	-1.9
DNP	Denpasar	1.47	53	P	Pn	12 30 55.7	0.0
SRBI	Singaraja	1.88	39	P	Pn	12 31 01.8	+0.4
SRBI				S	Sn	12 31 26.0	+0.8
KMMI	Kalianget	2.49	359	P	Pn	12 31 11.4	+1.5
PWJI	Pagerwojo	2.67	305	P	Pn	12 31 10.7	-1.6
PWJI				S	Sn	12 31 43.5	-1.2
WOJI	Wonogiri, Jawa	3.51	299	P	Pn	12 31 22.5	-1.3
PLAI	Plampang	3.78	79	P	Pn	12 31 27.4	-0.2
UGM	Wanagama	3.83	295	P	Pn	12 31 29.0	+0.8
WBSI	Waikabubak, Su	5.30	91	P	Pn	12 31 48.1	-0.4

DJA 14 12:33:58.4±0.3, 1°S±2°×12°2E±°, h10km, M3.0/7, MLv3.0/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	Ampana	0.42	195	P	Pg	12 34 06.3	-0.4
APSI				S	Sg	12 34 12.9	+0.6
APSI	Ampana	0.42	195	P	Pg	12 34 06.4	-0.3
MRSI	Marisa	0.99	11	P	Pg	12 34 16.8	-0.6
MRSI				S	Sg	12 34 30.3	0.0
MRSI	Marisa	0.99	11	P	Pn	12 34 18.2	-0.1
LUWI	Luwuk	1.15	118	P	Pn	12 34 20.5	0.0
LUWI				S	Sg	12 34 35.6	+0.2
LUWI	Luwuk	1.15	118	P	Pn	12 34 21.6	+1.1
MPSI	Mapaga	2.04	294	P	Pn	12 34 33.4	+0.6
TTSI	Tana Toraja	3.19	217	P	Pn	12 34 49.0	+0.4
SPSI	Sidrap Palu	3.98	210	P	Pn	12 35 00.2	+0.7
BNSI	Bone	4.21	203	P	Pn	12 35 03.1	+0.4

DJA 14 12:40:30.9±0.8, 2°S±8°×14°0E±°, h10km, M4.3/3, mb4.8/1, mB5.2/1, MLv4.0/3, Mw(mB)4.6/1, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	0.57	142	P	Pb	12 40 42.5	-0.5
GENI				S	Sb	12 40 51.3	+0.2
JAY	Jayapura	0.96	113	P	Pn	12 40 51.2	+0.7
JAY				S	Sg	12 41 01.1	-0.8
FAKI	Fak Fak	7.60	264	P	Pn	12 42 21.0	-0.9

ISCJB ***14*** *12:42:36.3±1.6, 22°.7N±0°.1×11°.4W±0°.2, h10km, mb3.9/3, Error ellipse: s-maj=29.6km s-min=10.8km az=157.0*
IDC ***14*** *12:42:37.6±2.3, 22°.73N×11°.25W, h0km, mb3.9/3, mb1 3.9/6, mb1mx3.5/40, mbtmp3.8/6, ML3.3/3, Error ellipse: s-maj=63.3km s-min=25.7km az=90.0*
ISC 14 12:42:38.2±1.8, 22°.7N±0°.1×11°.4W±0°.2, h10km, n9, σ0°78/8, mb4.0/3, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	Midelt	11.75	29	Pn	Pn	12 45 25.8	-0.2
	0.1nm,0.3s,baz=164,slow=11,SNR=9.5						
MDT				Lg	Lg	12 48 47.2	
	0.3nm,0.3s,baz=318,slow=19,SNR=3.7						
I11CV	MAIO ISLAND IN	13.38	239	*i*		14 00 00.0	
	baz=51,slow=311,SNR=3.2						
TORD	Torodi Ar. Bea	15.62	125	Pn	Pn	12 46 19.2	+0.6
	0.1nm,0.3s,baz=310,slow=13,SNR=3.2						
TORD				Sn	Sn	12 49 11.6	-0.2
	0.1nm,0.3s,baz=308,slow=22,SNR=2.4						
DBIC	Dimbokro	17.10	157	P	Pn	12 46 36.5	-0.9
	0.3nm,0.3s,baz=343,slow=11,SNR=2.9						
I42PT	GRACIOSA ISLAN	21.63	323	*i*		14 50 00.0	
	baz=140,slow=321,SNR=5.2						
GERES	GERESS Array B	32.83	31	P	P	12 49 11.8	-0.1
	1.0nm,0.8s,baz=221,slow=10,SNR=6.1						
FINES	FINESS Array B	46.50	24	P	P	12 51 04.7	-0.7
	2.1nm,0.8s,baz=170,slow=3.5,SNR=4.7						
MKAR	Makanchi Array	76.24	45	P	P	12 54 27.9	+0.8
	0.6nm,0.5s,baz=300,slow=3.2,SNR=3.1						
ASAR	Alice Springs	148.11	99	PKPbc	PKPbc	13 02 25.7	+0.8
	0.9nm,0.7s,baz=299,slow=1.8,SNR=12						

DJA 14 12:44:33.6±0.2, 3°S±2°×10°2E±°, h10km, M4.0/12, MLv4.0/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	1.16	154	P	Pb	12 44 54.6	-1.1
LHSI	Lahat	1.19	115	P	Pb	12 44 55.6	-0.7
LHSI				S	Sn	12 45 12.5	-0.1
KRJI	Kerinci	1.56	321	P	Pb	12 45 02.4	-0.3
JMBI	JAMBI	2.06	36	P	Pn	12 45 09.4	+1.1
MDSI	Maura Dua	2.09	124	P	Pn	12 45 09.1	+0.5
LWLI	Liwa	2.33	136	P	Pn	12 45 12.1	-0.1
PMBI	Palembang	2.36	81	P	Pg	12 45 20.8	+1.9
PMBI				Pg	Pb	12 45 17.4	+1.1
SDSI	Sungai Dareh	2.58	337	P	Pn	12 45 16.6	+1.2

KASI	Kota Agung	3.00	137	P	Pn	12 45 21.9	+0.7
PDSI	Padang	3.10	320	P	Pn	12 45 22.8	+0.1
DSRI	Dabo	3.54	37	P	Pn	12 45 28.8	+0.1
PPBI	Pangkal Pinang	3.87	73	P	Pn	12 45 33.2	0.0
CGJI	Cibinong	4.61	135	P	Pn	12 45 43.5	+0.2

ISCJB ***14*** *12:57:31.1±0.9, 17°.18N±0°.04×122°.38E±0°.06, h24km±6km, mb3.5/4, MS2.5/1, Error ellipse: s-maj=9.1km s-min=6.4km az=165.1*
MAN ***14*** *12:57:31.2, 17°.10N×122°.29E, h19km, mb4.8, ML3.7, MS3.6*
IDC ***14*** *12:57:37.2±3.8, 17°.06N×122°.37E, h62km±40km, mb3.2/4, mb1 3.5/4, mb1mx3.2/34, mbtmp3.5/4, ML4.1/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/37, Error ellipse: s-maj=37.0km s-min=16.7km az=82.0*
ISC 14 12:57:32.3±1.2, 17.03N±0°.04×122°24E±0°.08, h19km±5km, n20, σ1°98/21, mb3.5/4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.18	81	*e*P	Pg	12 57 36.1	-1.0
CAUP	Cauayan	0.41	257	*e*P	Pn	12 57 42.1	-0.9
CAUP				*e*S	Sn	12 57 51.5	+1.3
CVP	Callao Caves	0.78	329	||*i*P	Pb	12 57 44.9	-2.2
CVP				*i* S	Sn	12 58 05.2	+6.0
APYP	Conner	1.26	311	*e*P	Pn	12 57 53.8	-1.0
APYP				*e*S	Sn	12 58 11.0	-0.1
BALP	Baler	1.44	206	*e*P	Pn	12 57 56.1	-1.1
BALP				*e*S	Sg	12 58 19.7	+1.0
ABRA	Dolores	1.58	293	*e*P	Pn	12 57 58.6	-0.6
ABRA				*e*S	Sn	12 58 19.2	0.0
SMPP	San Manuel, Pa	1.73	240	*e*P	Pn	12 58 02.2	+0.8
SMPP				*e*S	Sn	12 58 23.1	+0.2
POLP	Polilio Island	2.31	187	*e*P	Pn	12 58 09.9	+0.6
POLP				*e*S	Sb	12 58 42.5	+1.0
TGY	Tagaytay City	3.17	203	P	Pb	12 58 27.1	-1.0
	22nm,0.3s,baz=22,slow=19,SNR=2.6						
TGY				S	Sb	12 59 03.6	-2.8
	30nm,0.3s,baz=322,slow=18,SNR=2.9						
KSRS	Korea Array	20.95	13	P	Pn	13 02 14.2	-2.4
	0.9nm,0.7s,baz=197,slow=12,SNR=3.2						
KSRS				LR	LR	13 10 52.3	
	comp=Z,19nm,18.5s,baz=200,slow=38						
CMAR	Chiang Mai Arr	22.23	277	P	P	13 02 30.7	+2.7
	0.5nm,0.3s,baz=94,slow=9.1,SNR=4.2						
SONM	Songino Array	33.36	340	P	P	13 04 09.2	-0.1
	0.6nm,0.6s,baz=155,slow=7.5,SNR=3.1						
WRA	Warramunga Arr	38.62	162	P	P	13 04 54.1	-0.3
	0.7nm,0.7s,baz=345,slow=11,SNR=4.9						
ASAR	Alice Springs	42.03	164	P	P	13 05 23.1	+0.4
	0.6nm,0.8s,baz=344,slow=6.7,SNR=7.0						
H11S3	WAKE ISLAND Hy	42.28	81	T	T	13 50 13.8	
	baz=276,slow=75,SNR=148						
H11S1	WAKE ISLAND Hy	42.29	81	T	T	13 50 15.2	
	baz=276,slow=75,SNR=46						
H11S2	WAKE ISLAND Hy	42.29	81	T	T	13 50 15.2	
	baz=276,slow=75,SNR=53						
H11N1	WAKE ISLAND Hy	42.37	79	T	T	13 50 22.2	
	baz=274,slow=74,SNR=69						
H11N2	WAKE ISLAND Hy	42.38	79	T	T	13 50 22.1	
	baz=274,slow=74,SNR=49						
H11N3	WAKE ISLAND Hy	42.39	79	T	T	13 50 23.1	
	baz=274,slow=74,SNR=35						

GCG 14 13:32:25.9±0.4, 14°.42N×90°.70W, h7km±4km, MD2.9, 2C, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	Pacaya	0.09	105	*e*P	Pg	13 32 29.3	+1.1
PCG	Pacaya	0.09	105	*e*P	Pg	13 32 29.3	+1.1
FUG	Fuego 3	0.14	283	||*i*P	Pg	13 32 30.0	+1.0
FUG	Fuego 3	0.14	283	||*i*P	Pg	13 32 30.0	+1.0
IXG	Ixpaco	0.35	134	*e*P	Pb	13 32 34.0	-0.6
IXG	Ixpaco	0.35	134	*e*P	Pb	13 32 34.0	-0.6
IXG				*e*S	Sb	13 32 39.9	-0.4
STG3	Santiaguito 3,	0.89	289	*e*P	Pg	13 32 43.2	+0.1

UCR ***14*** *13:32:30.0±3.3, 9°.51N×84°.26W, h14km±9km, MD3.2, mb4.3(NEIC)*
NEIC ***14*** *13:32:31.4±2.4, 9°.68N×84°.15W, h37km±13km, mb4.3/3, MD4.0(UCR), Error ellipse: s-maj=15.1km s-min=5.7km az=207.0*
NEIC Felt in the Valle Central.
ISC 14 13:32:29.4±1.0, 9°.53N±0°.04×84°.25W±0°.04, h32km±8km, n35, σ1°22/50, 5C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.32	49	||*i*P	Pb	13 32 37.4	-0.2
LCR2				*e*S

KSP			*e*Sg	**Sg**	**13 43 49.3**	**-0.2**
CHVC	**Chvalec**	**1.02 179**	*e*PG	**Pg**	**13 43 44.1**	**+0.3**
CHVC			*e*SG	**Sg**	**13 43 56.7**	**-0.3**
comp=Z,66nm,0.5s						
OSTC	**Ostas**	**1.06 173**	*e*PG	**Pg**	**13 43 45.0**	**+0.4**
OSTC			*e*SG	**Sg**	**13 43 57.6**	**-0.7**
comp=Z,80nm,0.4s						
UPC	**Upice**	**1.10 180**	*e*PG	**Pg**	**13 43 45.3**	**-0.1**
UPC			*e*SG	**Sg**	**13 43 59.5**	**-0.1**
comp=Z,105nm,0.4s						
DPC	**Dobruska-Polom**	**1.27 171**	*e*PG	**Pg**	**13 43 48.3**	**-0.4**
DPC			*e*SG	**Sg**	**13 44 04.2**	**-1.0**
comp=Z,80nm,0.5s						
PVCC	**Panska Ves**	**1.42 221**	*e*PG	**Pg**	**13 43 51.3**	**-0.1**
PVCC			*e*SG	**Sn**	**13 44 10.8**	**+0.2**
comp=Z,158nm,0.7s						
BRG	**Berggiesshubel**	**1.50 241**	PN	**Pn**	**13 43 51.5**	**-0.8**
BRG			PG	**Pb**	**13 43 53.4**	**+0.5**
BRG			SG	**Sn**	**13 44 13.4**	**+0.8**
106nm,0.5s						
GOPC	**GO Pecny, Ondr**	**1.87 205**	*e*PG	**Pb**	**13 43 58.8**	**-0.4**
GOPC			*e*SG	**Sg**	**13 44 23.9**	**-0.3**
comp=Z,36nm,0.6s						
PRU	**Pruhonice**	**1.87 211**	*e*PN	**Pn**	**13 43 57.3**	**-0.2**
PRU			*e*PG	**Pb**	**13 43 59.1**	**-0.2**
PRU			*e*SG	**Sg**	**13 44 23.6**	**-0.8**
comp=Z,46nm,0.6s						
CLL	**Collm**	**1.91 262**	*e*Pn	**Pn**	**13 43 57.0**	**-1.0**
CLL			*e*Pg	**Pb**	**13 44 00.0**	**+0.1**
CLL			*i*		13 44 03.7	
CLL			*e*Sg	**Sg**	**13 44 26.0**	**+0.5**
comp=Z,30nm,0.7s						
MORC	**Moravsky Berou**	**2.08 151**	*e*PN	**Pn**	**13 44 00.1**	**-0.3**
MORC			*e*SG	**Sb**	**13 44 28.3**	**-0.8**
OKC	**Ostrava-Krasne**	**2.23 142**	*e*PG	**Pb**	**13 44 05.8**	**+0.4**
OKC			*e*SG	**Sg**	**13 44 35.4**	**-0.5**
comp=Z,56nm,0.7s						
VRAC	**Vranov**	**2.33 171**	Pn	**Pn**	**13 44 03.7**	**-0.2**
comp=Z,0.7nm,0.3s,baz=347,slow=17,SNR=5.7						
VRAC			Pg	**Pg**	**13 44 09.0**	**+0.1**
comp=Z,1.9nm,0.3s,baz=350,slow=12,SNR=9.4						
VRAC			Lg	Lg	13 44 37.3	
comp=Z,6.4nm,0.3s,baz=255,slow=20,SNR=10						
VRAC	**Vranov**	**2.33 171**	*e*PN	**Pn**	**13 44 04.9**	**+1.0**
VRAC			*e*SG	**Sg**	**13 44 38.2**	**-0.9**
TREC	**Trest**	**2.34 188**	*e*PN	**Pn**	**13 44 04.8**	**+0.8**
TREC			*e*PG	**Pb**	**13 44 08.1**	**+0.8**
TREC			*e*SG	**Sb**	**13 44 37.2**	**+0.4**
comp=Z,35nm,0.5s						
KRUC	**Moravsky**	**2.56 174**	*e*PN	**Pn**	**13 44 06.1**	**-0.9**
KRUC			*e*SG	**Sb**	**13 44 44.2**	**+1.1**
NKC	**Novy Kostel**	**2.64 240**	*e*PN	**Pn**	**13 44 09.2**	**+1.0**
NKC			*e*PG	**Pg**	**13 44 15.6**	**+0.7**
NKC			*e*SG	**Sg**	**13 44 51.3**	**+2.1**
comp=Z,70nm,0.4s						
OJC	**Ojcow**	**2.77 119**	*e*Pn	**Pn**	**13 44 10.5**	**+0.6**
OJC			*e*Pg	**Pg**	**13 44 17.5**	**+0.2**
OJC			*e*Sn	**Sn**	**13 44 41.6**	**-2.3**
OJC			*e*Sg	**Sg**	**13 44 53.2**	**+0.1**
KHC	**Kasperske Hory**	**2.93 213**	*e*PN	**Pn**	**13 44 12.8**	**+0.7**
KHC			*e*PG	**Pg**	**13 44 19.7**	**-0.7**
KHC			*e*SN	**Sn**	**13 44 46.5**	**-1.5**
KHC			*e*SG	**Sg**	**13 44 57.6**	**-0.7**
comp=Z,18nm,0.5s						
JAVC	**Velka Javorina**	**2.95 158**	*e*PN	**Pn**	**13 44 13.0**	**+0.6**
GERES	**GERESS Array B**	**3.14 209**	Pn	**Pn**	**13 44 15.4**	**+0.3**
comp=Z,1.2nm,0.3s,baz=34,slow=13,SNR=20						
GERES			Pg	**Pb**	**13 44 22.4**	**+1.5**
comp=Z,2.7nm,0.3s,baz=27,slow=21,SNR=28						
GERES			Sn	**Sn**	**13 44 50.5**	**-2.8**
comp=Z,1.1nm,0.3s,baz=27,slow=27,SNR=6.0						
GERES			Lg	Lg	13 45 03.9	
comp=Z,3.1nm,0.3s,baz=28,slow=27,SNR=8.1						
LANS	**Liptovska Anna**	**3.31 137**	*e*PG	**Pg**	**13 44 28.4**	**+0.8**
LANS			*e*SG	**Sg**	**13 45 10.3**	**-0.2**
MODS	**Modra-Piesok**	**3.34 165**	*e*PG	**Pb**	**13 44 26.3**	**+2.0**
MODS			*e*SG	**Sg**	**13 45 12.5**	**+1.0**
BSD	**Bornholm Skovb**	**3.57 350**	*i* P	Pn	13 44 16.5	-4.4
BSD			*i* S	**Sn**	**13 45 01.1**	**-2.7**
VYHS	**Vyhne**	**3.61 149**	*e*PN	**Pn**	**13 44 22.3**	**+0.9**
VYHS			*e*SG	**Sb**	**13 45 14.1**	**+0.9**
CONA	**Conrad Observa**	**3.69 182**	*i* Pn	**Pn**	**13 44 23.3**	**+0.7**
comp=Z,0.7nm,0.2s						
CONA			*e*Sg	**Sg**	**13 45 20.0**	**-2.6**
comp=Z,24nm,0.5s						
MOA	**Molln**	**3.93 197**	*i* Pn	**Pn**	**13 44 26.3**	**+0.4**
comp=Z,2.2nm,0.3s						
MOA			Sg	**Sg**	**13 45 28.9**	**-1.5**
comp=Z,9.6nm,0.3s						
ARSA	**Arzberg**	**4.37 184**	Sg	**Sg**	**13 45 43.8**	**-0.9**
comp=Z,7.0nm,0.4s						
KBA	**Koelnbreinsper**	**4.86 202**	*e*Pn	**Pn**	**13 44 39.3**	**+0.5**
comp=Z,1.2nm,0.2s						
KBA			Sg	**Sg**	**13 46 00.1**	**-0.2**
comp=Z,5.5nm,0.5s						
AKASG	**Malin Array Be**	**8.36 91**	Pn	**Pn**	**13 45 27.8**	**+1.2**
comp=Z,1.0nm,0.3s,baz=282,slow=14,SNR=3.0						
HFS	**Hagfors**	**8.64 352**	Pn	**Pn**	**13 45 30.8**	**+0.3**
comp=Z,0.1nm,0.3s,baz=177,slow=38,SNR=3.5						
FINES	**FINESS Array B**	**11.30 25**	Pn	**Pn**	**13 46 06.3**	**-0.5**
comp=Z,0.1nm,0.3s,baz=210,slow=13,SNR=3.5						

*TIR **14** 13:52:27.9, 41°.13N×20°.19E, h1km, Md2.8/4*
*BEO **14** 13:52:30.1±0.6, 41°.18N×20°.36E, h0km, ML2.4/6*
*SKO **14** 13:52:30.3, 41°.21N×20°.19E, h8km*

ISC 14 13:52:29.9±1.2, 41°.17N±0°.03×20°.15E±0°.02, h1km±11km, n31, σ1s58/48, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.28**	**310**	*e*Pg	**Pb**	**13 52 37.1**	**-0.7**
TIR				*e*Sg	**Sb**	**13 52 41.7**	**-1.4**
TIR	**Tirane**	**0.28**	**310**	P	**Pg**	**13 52 35.2**	**-0.1**
TIR				S	**Sg**	**13 52 40.4**	**+1.5**
TIR	**Tirane**	**0.28**	**310**	*i* Pg	**Pg**	**13 52 35.4**	**+0.1**
TIR	**Tirane**	**0.28**	**310**	*i* PG	**Pg**	**13 52 35.4**	**+0.1**
TIR				*i* PG	**Pn**	**13 52 40.0**	**-1.2**
OHR	**Ohrid**	**0.49**	**96**	*i* Pg	**Pg**	**13 52 38.9**	**-0.5**
OHR				*i* Sg	**Sg**	**13 52 46.5**	**+0.7**
PHP	**Peshkopia**	**0.56**	**23**	P	**Pg**	**13 52 40.0**	**-0.6**
PHP				S	**Sb**	**13 52 49.1**	**-2.1**
PHP	**Peshkopia**	**0.56**	**23**	*i* PG	**Pg**	**13 52 40.1**	**-0.6**
PHP				*i* PG	**Pn**	**13 52 49.2**	**+4.0**
KRUS	**Krusevo**	**0.85**	**76**	*i* Pg	**Pg**	**13 52 44.7**	**-1.5**
KRUS				*i* Sg	**Sg**	**13 52 57.1**	**-0.2**
FNA	**Florina**	**1.00**	**112**	P	**Pg**	**13 52 47.5**	**-1.7**
FNA				S	**Sg**	**13 53 01.9**	**-0.3**
FNA	**Florina**	**1.00**	**112**	*i* PG	**Pg**	**13 52 47.5**	**-1.7**
FNA				*i* PG	Pn	13 53 02.1	+11
ULC	**Ulcinj**	**1.05**	**320**	*i* Pg	**Pg**	**13 52 48.3**	**-1.7**
BCI	**Bajram Curri**	**1.20**	**357**	*i* PN	**Pg**	**13 52 52.7**	**-0.3**
BCI				*i* PN	Pn	13 53 11.3	+17
SKO	**Skopje**	**1.26**	**50**	*i* Pg	**Pg**	**13 52 52.7**	**-1.4**
SKO				*i* Sg	**Sn**	**13 53 11.3**	**-0.9**
PDG	**Podgorica**	**1.43**	**332**	*e*Pn	**Pb**	**13 52 58.2**	**+0.8**
PDG				*e*Sg	**Sn**	**13 53 18.4**	**+2.0**
STIP	**Stip**	**1.62**	**70**	*i* Pn	**Pg**	**13 53 02.4**	**+1.5**
STIP				*i* Sg	**Sg**	**13 53 28.6**	**+6.6**
IGT	**Igoumenitsa**	**1.64**	**175**	*i* Pn	**Pg**	**13 53 01.9**	**+0.5**
VAY	**Valandovo**	**1.83**	**84**	*i* Pn	**Pb**	**13 53 04.1**	**-0.1**
VAY				*i* Sg	**Sg**	**13 53 30.4**	**+1.7**
TREB	**Trebinje**	**2.05**	**320**	*e*Pn	**Pn**	**13 53 06.2**	**+0.6**
BARS	**Barje**	**2.06**	**36**	*e*Pg	**Pn**	**13 53 04.8**	**-1.0**
BARS				*e*Sg	**Sb**	**13 53 32.9**	**-1.5**
KNT	**Kendrikon**	**2.07**	**89**	*i* Pn	**Pb**	**13 53 07.5**	**-0.9**
LIT	**Litokhoron**	**2.08**	**120**	*i* Pn	**Pb**	**13 53 08.0**	**-0.4**
SJES	**Sjenica**	**2.10**	**356**	*e*Pn	**Pn**	**13 53 06.7**	**+0.4**
SJES				*e*Sg	**Sg**	**13 53 36.6**	**-0.7**
SELS	**Selova**	**2.17**	**19**	*e*Pn	**Pn**	**13 53 06.5**	**-0.8**
THE	**Thessaloniki**	**2.20**	**103**	*i* Pn	**Pn**	**13 53 08.7**	**+1.1**
IVAS	**Ivanjica**	**2.41**	**0**	*e*Pn	**Pn**	**13 53 11.8**	**+1.2**
IVAS				*e*Sg	**Sg**	**13 53 46.4**	**-0.9**
VTS	**Vitosha**	**2.72**	**57**	*e*Pg	**Pn**	**13 53 15.1**	**+0.2**
BOVS	**Bovan**	**2.72**	**25**	*e*Pn	**Pn**	**13 53 14.7**	**-0.1**
BOVS				*e*Sg	**Sb**	**13 53 53.5**	**+0.2**
GRUS	**Gruza**	**2.75**	**9**	*e*Pn	**Pn**	**13 53 15.6**	**+0.4**
BBLS	**Lazići**	**2.75**	**349**	*e*Pn	**Pn**	**13 53 16.8**	**+1.5**
ZAPS	**Zavoj**	**2.80**	**40**	*e*Pn	**Pn**	**13 53 14.9**	**-1.0**
ZAPS				*e*Sg	**Sb**	**13 53 54.6**	**-0.9**
DIVS	**Divibare**	**2.93**	**358**	*e*Pn	**Pn**	**13 53 17.7**	**-0.1**

TIR 14 13:53:15.5, 41°.13N×20°.22E, h7km, Md2.6/3, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**309**	*i* PG	Pg	13 53 22.2	-0.1
TIR				*i* PG	Pn	13 53 28.6	+1.6
PHP	**Peshkopia**	**0.58**	**17**	*i* PG	Pg	13 53 27.1	+0.4
PHP				*i* PG	Pn	13 53 35.9	+5.7
FNA	**Florina**	**0.94**	**111**	*i* PG	Pn	13 53 34.7	-0.5
FNA				*i* PG	Pb	13 53 47.9	+14

*ISCJB **14** 14:07:51.9±0.5, 52°.46S±0°.07×25°.4E±0°.2, h10km, mb3.9/9, MS3.3/6, Error ellipse: s-maj=15.0km s-min=10.2km az=167.2*
*NEIC **14** 14:07:53.6±2.4, 52°.49S×25°.26E, h10km, mb4.2/8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*IDC **14** 14:07:55.5±1.4, 52°.87S×25°.59E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/29, mbtmp3.8/4, MS3.4/6, Ms1 3.3/6, ms1mx3.1/26, Error ellipse: s-maj=45.7km s-min=29.0km az=76.0*

ISC 14 14:07:53.5±0.7, 52°.52S±0°.10×25°.5E±0°.1, h10km, n28, σ1s75/17, mb4.0/9, MS3.3/6, South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRZF	**Crozet Islands**	**18.14**	**81**	*e*Pn	**Pn**	**14 12 04.8**	**-0.5**
64nm,0.8s							
SUR	**Sutherland**	**20.41**	**349**	LR	LR	14 18 16.9	
comp=Z,139nm,20.1s,baz=155,slow=30							
SUR	**Sutherland**	**20.41**	**349**	*e*P	**P**	**14 12 31.0**	**+0.3**
SNAA	**Sanae**	**22.91**	**203**	P	**P**	**14 12 57.6**	**+0.5**
6.7nm,1.0s,baz=40,slow=6.9,SNR=15							
SNAA				S	S	14 16 54.7	-12
0.9nm,0.8s,baz=18,slow=19,SNR=3.8							
SNAA	**Sanae**	**22.91**	**203**	*e*P	**P**	**14 12 57.8**	**+0.7**
8.9nm,0.9s							
MAW	**Mawson**	**23.48**	**144**	P	**P**	**14 13 04.1**	**+1.3**
2.4nm,0.9s,baz=270,slow=8.1,SNR=5.1							
MAW				S	**S**	**14 17 11.0**	**-5.1**
3.4nm,0.8s,baz=213,slow=17,SNR=8.8							
MAW				LR	LR	14 20 04.7	
comp=Z,82nm,20.4s,baz=275,slow=32							
MAW	**Mawson**	**23.48**	**144**	*e*P	**P**	**14 13 04.1**	**+1.3**
1.1nm,1.1s							
BOSA	**Boshof**	**23.88**	**360**	LR	LR	14 20 53.2	
comp=Z,97nm,21.9s,baz=198,slow=32							
BOSA	**Boshof**	**23.88**	**360**	*e*P	**P**	**14 13 06.3**	**-0.9**
4.9nm,1.1s							
LBTB	**Lobatse**	**27.47**	**0**	LR	LR	14 22 58.8	
comp=Z,106nm,19.3s,baz=180,slow=32							
TSUM	**Tsumeb**	**33.82**	**347**	*e*P	**P**	**14 14 35.6**	**-0.2**
0.6nm,0.5s							
QSPA	**South Pole Qui**	**37.70**	**180**	*e*P	**P**	**14 15 08.1**	**-0.6**
5.8nm,1.1s							
PMSA	**Palmer Station**	**44.16**	**218**	*e*P	**P**	**14 16 00.2**	**-1.5**
VNDA	**Vanda**	**47.44**	**168**	P	**P**	**14 16 27.8**	**+0.4**
1.7nm,0.8s,baz=232,slow=7.2,SNR=13							
VNDA	**Vanda**	**47.44**	**168**	*e*P	**P**	**14 16 28.1**	**+0.6**
2.5nm,0.8s							
SBA	**Scott Base**	**47.73**	**170**	*e*P	**P**	**14 16 31.5**	**+1.8**
5.2nm,0.8s							
H10S2	**ASCENSION HYDR**	**54.26**	**308**	T	T	15 16 38.1	
baz=152,slow=75,SNR=114							
H10S3	**ASCENSION HYDR**	**54.27**	**308**	T	T	15 16 40.1	
baz=152,slow=75,SNR=64							
H10S1	**ASCENSION HYDR**	**54.28**	**308**	T	T	15 16 39.4	
baz=152,slow=75,SNR=126							
ASCN	**Ascension**	**55.02**	**309**	*e*P	**P**	**14 17 24.3**	**-0.8**
TRQA	**Tornquist**	**59.51**	**246**	*e*P	**P**	**14 17 57.3**	**+0.6**
H01W2	**Cape Leeuwin H**	**62.45**	**112**	T	T	15 26 45.2	
baz=222,slow=75,SNR=6.1							
H01W3	**Cape Leeuwin H**	**62.46**	**112**	T	T	15 26 48.5	
baz=222,slow=75,SNR=4.9							
H01W1	**Cape Leeuwin H**	**62.46**	**112**	T	T	15 26 46.9	
baz=222,slow=75,SNR=4.6							
DBIC	**Dimbokro**	**64.37**	**326**	LR	LR	14 41 35.7	
comp=Z,24nm,18.1s,baz=128,slow=31							
TORD	**Torodi Ar. Bea**	**68.55**	**335**	P	P	14 19 02.3	+6.2
0.5nm,0.9s,baz=160,slow=4.6,SNR=2.8							
TORD				LR	LR	14 44 15.5	
comp=Z,15nm,22.0s,baz=250,slow=32							
TOA1	**Torodi Ar. Sit**	**68.55**	**335**	*e*P	P	14 19 02.3	+6.1
ASAR	**Alice Springs**	**82.02**	**119**	P	**P**	**14 20 15.9**	**+2.1**
0.6nm,0.8s,baz=208,slow=5.2,SNR=5.1							

*NIED **14** 14:19:00, 32°.50N×135°.70E, h5km, Mw3.9 Best double couple: M0 7.55000×10^14 NP1:φs 67.00000°, δ 29.00000°, λ -148.00000°. NP2:φs 308.00000°, δ 75.00000°, λ -65.00000°.*

JMA 14 14:19:30.5±0.1, 32°.55N×135°.73E, h39km±4km, M4.0, 10C-1D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWKM	**Wakayamakushim**	**0.90**	**1**	P	Pn	14 19 47.0	+0.4
JWKM				S	Sn	14 19 58.5	+0.1
JTNC	**Tanabenakahech**	**1.27**	**356**	P	Pn	14 19 52.6	+0.9
JTNC				S	Sn	14 20 07.7	+0.1
JMMH	**Miemihama**	**1.29**	**11**	P	Pn	14 19 52.5	+0.5
JMMH				S	Sn	14 20 08.0	0.0
JWM	**Minabe**	**1.33**	**346**	⇑P	Pn	14 19 53.8	+1.2
JWM				S	Sn	14 20 09.7	+0.6
TTO1	**TONANKAI O.B.S**	**1.39**	**39**	⇑P	Pn	14 19 53.6	+0.5
TTO1				X		14 20 10.8	
TTO2	**TONANKAI O.B.S**	**1.61**	**42**	⇑P	Pn	14 19 56.8	+0.7
TTO2				X		14 20 17.4	
JAI	**Aioi**	**1.64**	**319**	⇑P	Pn	14 19 58.2	+1.4
JAI				S	Sn	14 20 16.9	+0.3
JWY	**Kouya**	**1.67**	**356**	⇑P	Pn	14 19 58.6	+1.3
JWY				S	Sn	14 20 18.2	+0.7
JKN2	**Miekihoku**	**1.75**	**15**	⇑P	Pn	14 19 59.2	+1.0
JKN2				S	Sn	14 20 19.6	+0.4
JMN	**Monobe**	**1.95**	**308**	P	Pn	14 20 02.5	+1.4
JMN				S	Sn	14 20 25.1	+0.8
JAJ2	**Tsuna**	**1.99**	**339**	⇑P	Pn	14 20 03.9	+2.2
JAJ2				S	Sn	14 20 28.0	+2.6
JIE	**Ise**	**2.01**	**24**	⇑P	Pn	14 20 02.9	+1.0
JIE				S	Sn	14 20 25.6	-0.2
JHE	**Heguri**	**2.10**	**359**	⇑P	Pn	14 20 05.0	+1.9
JHE				S	Sn	14 20 30.5	+2.5
TSUJ	**Tsu 2**	**2.23**	**15**	⇑P	Pn	14 20 06.3	+1.4
TSUJ				S	Sn	14 20 32.1	+0.9
JJS	**Sakaide**	**2.36**	**321**	P	Pn	14 20 08.6	+1.9
JJS				S	Sn	14 20 34.6	+0.2
JKU	**Kubokawa**	**2.37**	**289**	⇓P	Pn	14 20 07.9	+1.1
JKU				S	Sn	14 20 33.9	-0.7
MAT	**Matsushiro**	**4.48**	**26**	P	Pn	14 20 38.1	+2.3
MAT				S	Sn	14 21 29.6	+3.0

*ISCJB **14** 15:00:47.0±0.3, 4°.62N±0°.03×126°.16E±0°.05, h100km, mb3.8/13, Error ellipse: s-maj=7.3km s-min=3.8km az=168.3*
*MAN **14** 15:00:47.7, 4°.57N×126°.02E, h30km, mb4.8, ML3.7, MS3.7*
*DJA **14** 15:00:47.0±1.7, 5°N±5°×12°6E±°, h34km±35km, M4.3/12, mB4.8/3, mb4.2/7, MLv4.4/12, Mw(mB)4.0/3*
*IDC **14** 15:00:48.0±2.2, 4°.65N×126°.04E, h92km±20km, mb3.5/12, mb1 3.6/14, mb1mx3.5/49, mbtmp3.9/14, MS2.9/1, Ms1 2.9/1, ms1mx2.3/32, Error ellipse: s-maj=38.0km s-min=11.1km az=81.0*

ISC 14 15:00:48.6±0.6, 4°.62N±0°.05×126°.11E±0°.08, h100km, n31, σ1s20/36, mb3.8/13, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.09**	**212**	P	**Pn**	**15 01 08.0**	**-2.1**
SGSI				S	**Sn**	**15 01 25.2**	**-1.1**
DDMP	**Don Marcelino,**	**1.52**	**345**	*e*P	**Pn**	**15 01 13.6**	**-1.6**
DDMP				*e*S	**Sn**	**15 01 32.4**	**-2.9**
SKMP	**Bagumbayan, Su**	**2.44**	**321**	*e*P	**Pn**	**15 01 26.7**	**-0.3**
SKMP				*e*S	**Sn**	**15 01 55.3**	**-1.1**
DAV	**Davao City (W)**	**2.49**	**348**	P	**Pn**	**15 01 27.6**	**+0.1**
baz=209,slow=13,SNR=2.2							
DAV				S	**Sn**	**15 02 00.1**	**+2.6**
70nm,0.3s,baz=202,slow=19,SNR=2.9							
BUKP	**Musuan**	**3.40**	**342**	*e*P	**Pn**	**15 01 40.6**	**+0.9**
BUKP				*e*S	**Sn**	**15 02 20.8**	**+1.6**
TNTI	**Ternate**	**4.03**	**162**	P	**Pn**	**15 01 47.4**	**-0.8**
PAGZ	**Pagadian**	**4.19**	**320**	*e*P	**Pn**	**15 01 50.7**	**+0.3**
BUTP	**Butuan**	**4.34**	**354**	*e*P	**Pn**	**15 01 51.7**	**-0.8**
KMSI	**Cibinong**	**4.55**	**208**	P	**Pn**	**15 01 55.3**	**+0.1**
MRSI	**Marisa**	**5.85**	**225**	P	**Pn**	**15 02 13.6**	**+0.7**
LUWI	**Luwuk**	**6.54**	**211**	P	**Pn**	**15 02 22.9**	**+0.6**
SANI	**Sanana**	**6.63**	**181**	P	**Pn**	**15 02 23.3**	**-0.2**
APSI	**Ampana**	**7.07**	**219**	P	**Pn**	**15 02 30.4**	**+0.9**
SWI	**Sorong**	**7.50**	**136**	P	**Pn**	**15 02 33.7**	**-1.6**
SIJI	**Sorong**	**7.51**	**136**	P	**Pn**	**15 02 34.9**	**-0.6**
2.1nm,0.3s,baz=308,slow=19,SNR=12							
SIJI				S	**Sn**	**15 03 57.8**	**-1.2**
1.0nm,0.3s,baz=315,slow=20,SNR=4.0							
MPSI	**Mapaga**	**7.52**	**236**	P	**Pn**	**15 02 36.2**	**+0.6**
TTSI	**Tana Toraja**	**9.87**	**220**	P	**Pn**	**15 03 07.7**	**+0.1**
KAPI	**Kappang**	**11.48**	**214**	LR	LR	15 07 59.3	
comp=Z,58nm,18.4s,baz=24,slow=38							
JOW	**Kunigami**	**22.18**	**5**	P	**P**	**15 05 34.8**	**-1.9**
0.7nm,0.3s,baz=171,slow=12,SNR=5.7							
FITZ	**Fitzroy Crossi**	**22.58**	**181**	P	**P**	**15 05 40.0**	**-0.8**
5.5nm,0.7s,baz=358,slow=8.9,SNR=14							
WRA	**Warramunga Arr**	**25.72**	**162**	P	**P**	**15 06 11.6**	**+1.8**
2.1nm,0.4s,baz=336,slow=12,SNR=48							
ASAR	**Alice Springs**	**29.13**	**165**	P	**P**	**15 06 40.2**	**-0.1**
0.4nm,0.6s,baz=341,slow=7.1,SNR=12							
KSRS	**Korea Array**	**32.72**	**3**	P	**P**	**15 07 11.4**	**-0.2**
0.7nm,0.5s,baz=178,slow=9.7,SNR=5.6							
MJAR	**Matsushiro Arr**	**33.66**	**18**	P	**P**	**15 07 19.8**	**-0.1**
1.0nm,0.6s,baz=196,slow=8.5,SNR=3.7							
STKA	**Stephens Creek**	**39.18**	**159**	P	**P**	**15 08 07.9**	**+1.0**
1.0nm,0.6s,baz=348,slow=14,SNR=3.6							
PETK	**Petropavlovsk-**	**54.85**	**23**	P	**P**	**15 10 09.7**	**+1.2**
1.1nm,0.7s,baz=190,slow=2.4,SNR=4.1							
MKAR	**Makanchi Array**	**56.47**	**325**	P	**P**	**15 10 19.9**	**-0.3**
0.4nm,0.5s,baz=125,slow=7.9,SNR=5.1							
VNDA	**Vanda**	**84.39**	**173**	P	**P**	**15 13 10.2**	**+1.0**
0.3nm,0.6s,baz=323,slow=5.3,SNR=3.9							
ILAR	**Eielson Array**	**84.57**	**25**	P	**P**	**15 13 10.4**	**-0.1**
0.1nm,0.4s,baz=242,slow=5.2,SNR=5.5							
SPITS	**Spitsbergen Ar**	**89.49**	**349**	P	**P**	**15 13 33.8**	**-0.3**
17nm,1.1s,baz=77,slow=6.2,SNR=4.5							
FINES	**FINESS Array B**	**90.76**	**332**	P	**P**	**15 13 40.7**	**+0.5**
3.2nm,1.0s,baz=82,slow=4.7,SNR=3.3							

*ISCJB **14** 15:03:11.9±0.9, 34°.17N±0°.04×25°.09E±0°.05, h23km±6km, mb3.9/7, Error ellipse: s-maj=8.4km s-min=4.9km az=42.5*
*GII **14** 15:03:11.7±0.0, 34°.39N×25°.07E, h6km*
*ATH **14** 15:03:13.4, 34°.30N×25°.06E, h28km±1km, ML3.1/7, Error ellipse: s-maj=3.7km s-min=1.4km az=1.0*
*IDC **14** 15:03:14.2±2.8, 34°.34N×25°.05E, h28km±17km, mb3.9/7, mb1 3.8/13, mb1mx3.5/48, mbtmp3.8/13, ML3.9/5, Error ellipse: s-maj=23.1km s-min=20.4km az=2.0*
*THE **14** 15:03:15.2, 34°.39N×25°.07E, h6km±1km, ML2.9/5, Error ellipse: s-maj=1.3km s-min=0.6km az=344.0*

ISC 14 15:03:11.7±1.7, 34°.22N±0°.06×25°.12E±0°.04, h12km±10km, n37, σ1s63/51, mb4.0/7, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.84**	**342**	P	**Pb**	**15 03 28.0**	**-0.2**
SIVA				S	**Sg**	**15 03 37.8**	**-1.1**
SIVA	**Sivas**	**0.84**	**342**	P	**Pb**	**15 03 28.1**	**-0.2**
SIVA				S	**Sb**	**15 03 39.3**	**-0.1**
SIVA				AML	AML	15 03 43.8	
comp=E,10853μm,0.5s							
SIVA				AML	AML	15 03 46.1	
comp=N,5741μm,0.7s							
TMBK	**Timbaki Herakl**	**0.90**	**341**	P	**Pb**	**15 03 29.4**	**+0.1**
TMBK				S	**Sg**	**15 03 40.0**	**-0.9**
LAST	**Lasithi**	**0.99**	**17**	P	**Pb**	**15 03 31.2**	**+0.4**
LAST				S	**Sb**	**15 03 43.7**	**-0.1**
LAST	**Lasithi**	**0.99**	**17**	P	**Pb**	**15 03 31.2**	**+0.4**
LAST				AML	AML	15 03 53.3	
comp=N,1311μm,0.7s							
LAST				AML	AML	15 04 01.9	
comp=E,1009μm,0.8s							
GVD	**Gavdhos**	**1.05**	**306**	P	**Pb**	**15 03 32.2**	**+0.3**
GVD				S	**Sb**	**15 03 46.3**	**+0.7**
GVD	**Gavdhos**	**1.05**	**306**	P	**Pb**	**15 03 32.1**	**+0.3**
GVD				S	**Sb**	**15 03

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.31**	**273**	⇑*iP*	**Pn**	**15 05 53.8**	**-0.5**
PB01				*eS*	**Sn**	**15 06 06.3**	**-0.5**
PB01				IAML		15 06 07.1	
	comp=N,7μm,0.2s						
PB02	**IPOC Station P**	**0.74**	**249**	*eP*	**Pn**	**15 05 57.4**	**+0.3**
PB02				*eS*	**Sn**	**15 06 12.2**	**+0.6**
PB02	**IPOC Station P**	**0.74**	**249**	⇑*iP*	**Pn**	**15 05 57.4**	**+0.3**
PB02				*eS*	**Sn**	**15 06 12.0**	**+0.4**
PB02				IAML		15 06 12.8	
	comp=N,5μm,0.6s						
PB09	**IPOC Station P**	**0.74**	**186**	*eP*	**Pn**	**15 05 57.1**	**0.0**
PB09				*eS*	**Sn**	**15 06 11.6**	**-0.2**
PB09	**IPOC Station P**	**0.74**	**186**	⇓*iP*	**Pn**	**15 05 57.0**	**-0.2**
PB09				*eS*	**Sn**	**15 06 11.7**	**-0.2**
PB08	**IPOC Station P**	**0.91**	**0**	*eP*	**Pn**	**15 05 59.0**	**0.0**
PB08	**IPOC Station P**	**0.91**	**0**	⇑*iP*	**Pn**	**15 05 58.9**	**0.0**
PB08				*i S*	**Sn**	**15 06 15.1**	**+0.1**
PB08				IAML		15 06 15.8	
	comp=E,2μm,0.2s						
PB07	**IPOC Station P**	**0.95**	**225**	*eP*	**Pn**	**15 05 59.2**	**+0.1**
PB07	**IPOC Station P**	**0.95**	**225**	⇑*iP*	**Pn**	**15 05 59.1**	**+0.1**
PB07				*eS*	**Sn**	**15 06 15.2**	**0.0**
PB07				IAML		15 06 15.5	
	comp=N,1μm,0.3s						
PB11	**IPOC Station P**	**1.37**	**340**	*eP*	**Pn**	**15 06 03.5**	**0.0**
PB11	**IPOC Station P**	**1.37**	**340**	⇑*iP*	**Pn**	**15 06 03.5**	**0.0**
PB11				*eS*	**Sn**	**15 06 23.4**	**+0.2**
PB11				IAML		15 06 24.7	
	comp=E,2μm,0.5s						
GO01	**Chusmiza**	**1.38**	**359**	⇑*iP*	**Pn**	**15 06 04.2**	**+0.2**
GO01				*eS*	**Sn**	**15 06 24.7**	**+0.8**
GO01				IAML		15 06 26.3	
	comp=N,1μm,0.2s						
LVC	**Limon Verde**	**1.56**	**172**	*eP*	**Pn**	**15 06 06.0**	**0.0**
LVC				IAML		15 06 28.6	
	comp=Z,76nm,0.1s						
LVC	**Limon Verde**	**1.56**	**172**	*eP*	**Pn**	**15 06 06.1**	**+0.1**
LVC				*eS*	**Sn**	**15 06 27.5**	**+0.1**
PB04	**IPOC Station P**	**1.57**	**216**	*eP*	**Pn**	**15 06 05.9**	**+0.1**
PB04	**IPOC Station P**	**1.57**	**216**	⇑*iP*	**Pn**	**15 06 06.0**	**+0.1**
PB04				*i S*	**Sn**	**15 06 27.2**	**-0.1**
PB06	**IPOC Station P**	**1.69**	**193**	*eP*	**Pn**	**15 06 07.5**	**+0.3**
PB06	**IPOC Station P**	**1.69**	**193**	⇑*iP*	**Pn**	**15 06 07.2**	**-0.1**
PB06				*i S*	**Sn**	**15 06 29.4**	**-0.4**
PSGC	**Pisagua**	**1.71**	**328**	⇑*iP*	**Pn**	**15 06 07.0**	**-0.5**
PSGC				*i S*	**Sn**	**15 06 29.9**	**-0.3**
PSGCX	**Pisagua**	**1.71**	**328**	*eP*	**Pn**	**15 06 07.1**	**-0.4**
MNMC	**Minye Minye**	**1.96**	**348**	*eP*	**Pn**	**15 06 10.9**	**0.2**
MNMC				*eS*	**Sn**	**15 06 36.6**	**+0.7**
MNMC				IAML		15 06 38.9	
	comp=N,719nm,0.3s						
MNMCX	**Minye Minye**	**1.96**	**348**	*eP*	**Pn**	**15 06 11.0**	**+0.3**
PB15	**IPOC Station P**	**2.16**	**188**	*eP*	**Pn**	**15 06 13.3**	**+0.1**
PB15	**IPOC Station P**	**2.16**	**188**	*eP*	**Pn**	**15 06 13.2**	**+0.1**
PB15				*eS*	**Sn**	**15 06 40.9**	**+0.6**
PB12	**IPOC Station P**	**2.67**	**335**	*eP*	**Pn**	**15 06 18.8**	**-0.9**
YJA	**Yavi**	**3.57**	**109**	*eP*	**Pn**	**15 06 31.8**	**+0.1**
YJA				IAML		15 06 35.3	
	comp=Z,4.9nm,0.7s						
HJA	**Humahuaca**	**4.08**	**122**	*eP*	**Pn**	**15 06 38.7**	**+0.1**
HJA				IAML		15 06 40.7	
	comp=Z,9.4nm,0.4s						
AZAP	**Zapla**	**4.92**	**131**	*eP*	**Pn**	**15 06 49.0**	**-0.6**

*IDC **14** 15:08:21.7±0.9, 35.°19N×23.°30E, h0km, mb4.0/12, mb1 3.9/17, mb1mx3.8/44, mbtmp3.9/17, ML3.7/5, MS2.5/1, Ms1 2.6/1, ms1mx2.0/40, Error ellipse: s-maj=18.0km s-min=17.0km az=163.0*
*GII **14** 15:08:26.7±0.6, 35.°14N×23.°38E, h56km, MD3.0/3*
*ISCJB **14** 15:08:27.7±0.7, 35.°03N±0.°06×23.°46E±0.°07, h78km±4km, mb3.7/13, Error ellipse: s-maj=12.6km s-min=5.3km az=136.2*
*ATH **14** 15:08:27.7, 35.°06N×23.°22E, h38km±2km, ML3.5/12, Error ellipse: s-maj=4.1km s-min=1.5km az=47.0*
*THE **14** 15:08:30.6, 35.°15N×23.°36E, h24km±1km, ML3.4/6, Error ellipse: s-maj=1.3km s-min=0.4km az=46.0*

ISC 14 15:08:28.1±1.0, 35.°11N±0.°06×23.°27E±0.°06, h56km±9km, n60, σ2°§00/73, mb3.8/13, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMMV	**Iera Moni Meta**	**0.68**	**59**	P	**Pn**	**15 08 42.1**	**+0.3**
IMMV				S	**Sn**	**15 08 51.1**	**-0.7**
IMMV	**Iera Moni Meta**	**0.68**	**59**	P	**Pn**	**15 08 42.3**	**+0.5**
IMMV				S	**Sn**	**15 08 53.8**	**+2.0**
IMMV				AML	AML	15 08 54.9	
	comp=N,19275μm,0.5s						
IMMV				AML	AML	15 08 55.9	
	comp=E,16242μm,0.4s						
GVD	**Gavdhos**	**0.72**	**112**	P	**Pn**	**15 08 43.0**	**+0.7**
GVD				S	**Sn**	**15 08 53.5**	**+0.7**
GVD	**Gavdhos**	**0.72**	**112**	P	**Pn**	**15 08 43.1**	**+0.7**
GVD				S	**Sn**	**15 08 53.3**	**+0.5**
GVD				AML	AML	15 08 57.0	
	comp=E,13956μm,0.5s						
GVD				AML	AML	15 09 01.6	
	comp=N,11210μm,0.3s						
CHAN	**Chania**	**0.75**	**57**	P	**Pn**	**15 08 43.4**	**+0.7**
ANKY	**Antikythira Is**	**0.75**	**2**	P	**Pn**	**15 08 43.9**	**+1.2**
ANKY				S	**Sn**	**15 08 54.8**	**+1.3**
ANKY	**Antikythira Is**	**0.75**	**2**	P	**Pn**	**15 08 43.9**	**+1.2**
ANKY				S	**Sn**	**15 08 55.7**	**+2.2**
ANKY				AML	AML	15 08 57.6	
	comp=N,6258μm,0.7s						
ANKY				AML	AML	15 08 58.6	
	comp=E,6366μm,1.0s						
VAM	**Vamos**	**0.81**	**69**	P	**Pn**	**15 08 44.2**	**+0.7**
VAM				S	**Sn**	**15 08 54.7**	**-0.1**
VAM	**Vamos**	**0.81**	**69**	P	**Pn**	**15 08 44.4**	**+0.9**
VAM				AML	AML	15 09 00.0	
	comp=E,13849μm,0.9s						
VAM				AML	AML	15 09 02.6	
	comp=N,9889μm,0.5s						
PRNS	**Prines Rethymn**	**1.04**	**76**	P	**Pn**	**15 08 47.0**	**+0.6**
KYTH	**Kithira**	**1.16**	**351**	P	**Pn**	**15 08 50.2**	**+2.1**
KYTH	**Kithira**	**1.16**	**351**	P	**Pn**	**15 08 50.2**	**+2.1**
KYTH				AML	AML	15 09 14.4	
	comp=N,2077μm,0.4s						
KYTH				AML	AML	15 09 14.5	
	comp=E,2127μm,0.6s						
KTHR	**Kythira**	**1.17**	**349**	P	**Pn**	**15 08 49.9**	**+1.7**
SIVA	**Sívas**	**1.27**	**94**	P	**Pn**	**15 08 50.9**	**+1.4**
SIVA	**Sívas**	**1.27**	**94**	P	**Pn**	**15 08 50.9**	**+1.4**
SIVA				AML	AML	15 09 22.4	
	comp=N,3631μm,0.6s						
SIVA				AML	AML	15 09 40.0	
	comp=E,3350μm,0.7s						
IDI	**Anoyia**	**1.34**	**82**	Pn	**Pn**	**15 08 51.4**	**+0.9**
	comp=E,32nm,0.3s,baz=238,slow=9.9,SNR=127						
IDI				Sn	**Sn**	**15 09 09.7**	**+2.4**
	comp=E,32nm,0.3s,baz=351,slow=22,SNR=13						
VLI	**Veliai**	**1.62**	**350**	P	**Pn**	**15 08 56.6**	**+2.3**
VLI	**Veliai**	**1.62**	**350**	P	**Pn**	**15 08 56.1**	**+1.7**
VLI				AML	AML	15 09 27.2	
	comp=N,1145μm,0.6s						
VLI				AML	AML	15 09 30.3	
	comp=E,1052μm,0.9s						
LAST	**Lasithi**	**1.81**	**88**	P	**Pn**	**15 08 58.9**	**+2.0**
LAST				S	**Sn**	**15 09 20.3**	**+1.5**
LAST	**Lasithi**	**1.81**	**88**	P	**Pn**	**15 08 58.8**	**+1.8**
LAST				S	**Sn**	**15 09 22.1**	**+3.3**
LAST				AML	AML	15 09 35.9	
	comp=N,645μm,0.6s						
LAST				AML	AML	15 09 39.0	
	comp=E,760μm,0.7s						
MHLO	**Agia Marina, M**	**1.82**	**30**	P	**Pn**	**15 08 58.8**	**+1.8**
MHLO	**Agia Marina, M**	**1.82**	**30**	P	**Pn**	**15 08 58.8**	**+1.8**
MHLO				AML	AML	15 09 37.1	
	comp=N,4026μm,0.7s						
MHLO				AML	AML	15 09 41.2	
	comp=E,3351μm,0.7s						
MHLA	**Plaka, Milos I**	**1.88**	**29**	P	**Pn**	**15 08 59.6**	**+1.9**
MHLA				AML	AML	15 09 39.7	
	comp=E,2481μm,1.0s						
MHLA				AML	AML	15 09 44.9	
	comp=N,2330μm,0.9s						
NPS	**Neapolis**	**1.92**	**85**	P	**Pn**	**15 09 00.7**	**+2.3**
NPS				AML	AML	15 09 41.1	
	comp=N,784μm,0.7s						
NPS				AML	AML	15 09 44.3	
	comp=E,758μm,0.4s						
KRND	**KRANIDI**	**2.27**	**358**	P	**Pn**	**15 09 05.7**	**+2.6**
DID	**Didima**	**2.39**	**359**	P	**Pn**	**15 09 06.8**	**+2.0**
ZKR	**Zakros**	**2.41**	**89**	P	**Pn**	**15 09 07.4**	**+2.3**
ZKR				S	**Sn**	**15 09 35.3**	**+1.8**
ZKR	**Zakros**	**2.41**	**89**	P	**Pn**	**15 09 07.5**	**+2.3**
ZKR				AML	AML	15 09 38.0	
	comp=N,154μm,0.4s						
ZKR				AML	AML	15 09 58.4	
	comp=E,484μm,0.7s						
SG1	**Sgolgore (BA)**	**7.73**	**320**	*e*Pn	**Pn**	**15 10 15.9**	**-2.0**
SG1				Sn	**Sn**	**15 11 38.7**	**-5.3**
BRTR	**Keskin Array B**	**9.44**	**58**	Pn	**Pn**	**15 10 41.7**	**+0.3**
	comp=E,0.1nm,0.3s,baz=236,slow=13,SNR=5.1						
BRTR				Sn	**Sn**	**15 12 19.8**	**-6.4**
	comp=E,0.3nm,0.3s,baz=108,slow=28,SNR=5.9						
HNTI	**Hanita**	**10.07**	**98**	Pn	**Pn**	**15 10 49.3**	**-0.7**
SLTI	**Sal'it**	**10.21**	**103**	Pn	**Pn**	**15 10 50.0**	**-1.9**
MMAI	**Mount Meron Ar**	**10.28**	**98**	Pn	**Pn**	**15 10 51.0**	**-1.9**
	comp=E,1.9nm,0.3s,baz=285,slow=11,SNR=10						
MMAI				Sn	Sn	15 12 38.4	-8.3
	comp=E,1.6nm,0.3s,baz=251,slow=12,SNR=5.3						
AMAZ	**Amatzia**	**10.37**	**107**	Pn	**Pn**	**15 10 52.1**	**-2.0**
MMLI	**Mount Malkishu**	**10.46**	**101**	Pn	**Pn**	**15 10 53.6**	**-1.7**
YTIR	**Yattir**	**10.60**	**107**	Pn	**Pn**	**15 10 55.1**	**-2.2**
HMDT	**Nahal Hemdat**	**10.60**	**102**	Pn	**Pn**	**15 10 55.6**	**-1.6**
DSI	**Dead Sea**	**10.72**	**106**	Pn	**Pn**	**15 10 57.0**	**-1.9**
MZDA	**Masada**	**10.81**	**107**	Pn	**Pn**	**15 10 57.7**	**-2.4**
KRMI	**Paran Flat**	**10.86**	**114**	Pn	**Pn**	**15 10 57.8**	**-3.0**
PRNI	**Paran**	**10.96**	**112**	Pn	**Pn**	**15 10 59.4**	**-2.7**
HRFI	**Mount Harif**	**11.14**	**114**	Pn	**Pn**	**15 11 01.8**	**-2.8**
MBRI	**Mt Berech**	**11.17**	**115**	Pn	**Pn**	**15 11 02.1**	**-3.0**
EIL	**Elat**	**11.26**	**116**	Pn	**Pn**	**15 11 04.0**	**-2.3**
	comp=E,0.7nm,0.3s,baz=330,slow=3.4,SNR=17						
EIL				Sn	Sn	15 13 01.2	-9.3
	comp=E,0.7nm,0.3s,baz=331,slow=10,SNR=4.5						
EIL	**Elat**	**11.26**	**116**	Pn	**Pn**	**15 11 03.4**	**-2.9**
GERES	**GERESS Array B**	**15.44**	**336**	Pn	**Pn**	**15 12 00.7**	**-1.6**
	comp=E,0.2nm,0.3s,baz=154,slow=12,SNR=2.3						
AKASG	**Malin Array Be**	**16.17**	**14**	Pn	**Pn**	**15 12 09.4**	**-2.0**
	comp=E,0.5nm,0.3s,baz=202,slow=11,SNR=2.2						
HFS	**Hagfors**	**25.80**	**349**	P	**P**	**15 13 53.8**	**+0.2**
	comp=E,2.3nm,0.5s,baz=141,slow=9.6,SNR=21						
FINES	**FINESS Array B**	**26.41**	**3**	P	**P**	**15 13 58.6**	**-0.4**
	comp=E,1.5nm,0.5s,baz=169,slow=11,SNR=7.0						
NOA	**NORSAR Array B**	**27.07**	**347**	P	**P**	**15 14 05.0**	**-0.1**
	comp=E,0.2nm,0.4s,baz=150,slow=8.9,SNR=4.4						
NOA				LR	LR	15 27 17.9	
	comp=E,9.5nm,18.1s,baz=110,slow=42						
EKA	**Eskdalemuir Ar**	**27.20**	**326**	P	**P**	**15 14 06.2**	**-0.1**
	comp=E,0.5nm,0.6s,baz=134,slow=7.9,SNR=3.4						
GEYT	**Alibeck**	**28.05**	**74**	P	**P**	**15 14 15.1**	**+1.0**
	comp=E,0.5nm,0.3s,baz=256,slow=7.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**29.30**	**227**	P	**P**	**15 14 27.0**	**+1.7**
	comp=E,0.5nm,0.4s,baz=28,slow=9.4,SNR=7.6						
ARCES	**ARCESS Array B**	**34.50**	**1**	P	**P**	**15 15 09.9**	**-0.4**
	comp=E,0.7nm,0.5s,baz=171,slow=9.7,SNR=5.0						
DBIC	**Dimbokro**	**38.35**	**229**	P	**P**	**15 15 45.2**	**+1.4**
	comp=E,3.9nm,0.6s,baz=11,slow=8.7,SNR=4.3						
SPITS	**Spitsbergen Ar**	**43.27**	**358**	P	**P**	**15 16 24.2**	**+0.7**
	comp=E,5.4nm,0.9s,baz=151,slow=12,SNR=9.2						
MKAR	**Makanchi Array**	**45.09**	**56**	P	**P**	**15 16 38.7**	**+0.1**
	comp=E,0.7nm,0.3s,baz=272,slow=8.0,SNR=25						
ZALV	**Zalesovo Beam**	**46.15**	**46**	P	**P**	**15 16 46.7**	**-0.1**
	comp=E,1.6nm,0.3s,baz=265,slow=7.8,SNR=8.6						
USRK	**Ussuriysk Ar.**	**77.96**	**44**	P	**P**	**15 20 21.2**	**+1.0**
	comp=E,1.0nm,0.5s,baz=272,slow=9.3,SNR=6.1						
KSRS	**Korea Array**	**79.53**	**52**	P	**P**	**15 20 28.9**	**0.0**
	comp=E,0.4nm,0.5s,baz=289,slow=3.7,SNR=3.2						

NNC 14 15:25:55.3±9.2, 38.°55N×71.°22E, h0km, mb3.7, mpv3.3, 4C-1D, Error ellipse: s-maj=70.5km s-min=47.2km az=1.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.58**	**354**	Pn	Pn	15 27 07.1	+1.2
	2.5nm,0.5s,baz=171,slow=13,SNR=17						
KK31				⇓Sn	Sn	15 28 01.6	+1.7
	1.9nm,0.4s,baz=180,slow=24						
AAK	**Ala-Archa**	**4.79**	**30**	⇑Pn	Pn	15 27 07.8	-1.1
	2.8nm,0.5s						
AAK				⇑Sn	Sn	15 28 05.6	+0.5
	11nm,0.8s						
TKM2	**Tokmak 2**	**5.49**	**36**	⇑Pg	Pg	15 27 36.6	-4.0
	2.3nm,0.6s						
TKM2				⇑Lg	Lg	15 28 45.0	
	2.6nm,0.8s						

*IDC **14** 15:38:44.7±1.4, 9.°28S×106.°63E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/32, mbtmp3.9/10, ML4.1/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/25, Error ellipse: s-maj=50.2km s-min=16.5km az=52.0*
*NEIC **14** 15:38:45.5±2.2, 9.°35S×106.°56E, h10km, mb4.3/15, Error ellipse: s-maj=4.5km s-min=4.1km az=173.0*
*ISCJB **14** 15:38:47.0±0.3, 9.°34S±0.°03×106.°53E±0.°04, h33km, mb4.2/19, MS3.3/3, Error ellipse: s-maj=5.3km s-min=4.3km az=164.4*
*DJA **14** 15:38:48.7±1.4, 9.°S±5.°×10.°6E±.°, h28km±17km, M4.4/11, mb4.7/8, mB5.3/2, MLv4.2/11, Mw(mB)4.7/2*

ISC 14 15:38:49.0±0.5, 9.°35S±0.°04×106.°54E±0.°05, h35km, n51, σ1§43/54, mb4.2/19, MS3.4/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XMIS	**Christmas Isla**	**1.43**	**218**	*e*Pn	**Pn**	**15 39 13.5**	**+1.1**
XMIS				*e*Sn	**Sn**	**15 39 29.5**	**-0.4**
CISI	**Cisompet, Garu**	**2.18**	**35**	*e*Pn	**Pn**	**15 39 23.1**	**+0.2**
CISI				*e*Sn	**Sn**	**15 39 47.4**	**-1.3**
CISI	**Cisompet, Garu**	**2.18**	**35**	P	**Pn**	**15 39 22.8**	**-0.1**
LEM	**Lembang**	**2.72**	**23**	Pn	**Pn**	**15 39 30.1**	**-0.3**
	36nm,0.3s,baz=265,slow=18,SNR=28						
LEM				Sn	**Sn**	**15 40 08.5**	**+6.3**
	46nm,0.3s,baz=354,slow=21,SNR=8.3						
LEM				LR	LR	15 40 32.2	
	comp=Z,147nm,21.1s,baz=224,slow=41						
LEM	**Lembang**	**2.72**	**23**	P	**Pn**	**15 39 31.8**	**+1.4**
CGJI	**Cibinong**	**2.84**	**343**	P	**Pn**	**15 39 32.5**	**+0.6**
CGJI				S	**Sn**	**15 40 05.5**	**+0.6**
SBJI	**Serang**	**3.23**	**353**	P	**Pn**	**15 39 37.1**	**-0.1**
JCJI	**Jatiwangi**	**3.32**	**31**	P	**Pn**	**15 39 36.5**	**-1.9**
JCJI				S	**Sn**	**15 40 14.2**	**-2.4**
UGM	**Wanagama**	**4.19**	**70**	*e*Pn	**Pn**	**15 39 51.1**	**+0.7**
UGM	**Wanagama**	**4.19**	**70**	P	**Pn**	**15 39 51.5**	**+1.0**
KASI	**Kota Agung**	**4.30**	**332**	P	**Pn**	**15 39 51.9**	**-0.1**
WOJI	**Wonogiri, Jawa**	**4.59**	**71**	P	**Pn**	**15 39 57.4**	**+1.5**
LWLI	**Liwa**	**4.96**	**330**	P	**Pn**	**15 40 01.3**	**+0.2**
MDSI	**Maura Dua**	**5.37**	**334**	P	**Pn**	**15 40 06.4**	**-0.2**
PWJI	**Pagerwojo**	**5.37**	**76**	P	**Pn**	**15 40 07.7**	**+1.0**
MNAI	**Manna**	**6.10**	**324**	*e*Pn	**Pn**	**15 40 17.0**	**+0.3**
MNAI	**Manna**	**6.10**	**324**	P	**Pn**	**15 40 16.3**	**-0.4**
JAGI	**Jajag, Banyuwa**	**7.57**	**84**	P	**Pn**	**15 40 38.8**	**+1.8**
RGRI	**Rengat**	**9.87**	**335**	P	**Pn**	**15 41 08.3**	**-0.2**
GIRL	**Giralia**	**15.14**	**152**	*e*Pn	**Pn**	**15 42 19.6**	**-0.7**
	127nm,1.1s						
KULM	**Kulim**	**15.68**	**338**	*e*Pn	**Pn**	**15 42 23.8**	**-3.6**
	4.1nm,0.9s						
PSA00	**Pilbara Seismi**	**17.65**	**135**	*e*P	**Pn**	**15 42 52.8**	**+0.5**
	4.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.48**	**117**	P	**P**	**15 43 25.5**	**+1.6**
	1.4nm,0.7s,baz=318,slow=12,SNR=3.3						
FITZ				S	S	15 46 57.8	-14
	2.8nm,1.1s,baz=306,slow=18,SNR=2.3						
MORW	**Morawa**	**21.55**	**157**	*e*P	**P**	**15 43 35.5**	**+0.1**
	12nm,1.1s						
CM31	**Chiang Mai Arr**	**28.63**	**345**	*e*P	**P**	**15 44 42.1**	**-0.2**
	5.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**28.63**	**345**	P	**P**	**15 44 42.1**	**-0.2**
	0.7nm,0.7s,baz=182,slow=8.9,SNR=7.7						
CMAR				LR	LR	15 57 05.8	
	comp=Z,44nm,18.8s,baz=145,slow=38						
WRA	**Warramunga Arr**	**28.84**	**115**	P	**P**	**15 44 43.0**	**-1.4**
	1.2nm,0.9s,baz=293,slow=12,SNR=4.2						
WR1	**Warramunga Arr**	**28.84**	**115**	*e*P	**P**	**15 44 43.0**	**-1.4**
WRAB	**Tennant Creek**	**28.85**	**115**	*e*P	**P**	**15 44 44.3**	**0.0**
	12nm,0.6s						
WB2	**Warramunga Arr**	**28.85**	**115**	*e*P	**P**	**15 44 43.7**	**-0.7**
	3.0nm,1.1s						
ASAR	**Alice Springs**	**29.77**	**122**	P	**P**	**15 44 52.9**	**+0.3**
	0.8nm,0.6s,baz=306,slow=8.8,SNR=8.7						
DGAR	**Diego Garcia**	**33.77**	**271**	*e*P	**P**	**15 45 27.7**	**-0.1**
	138nm,1.1s						
STKA	**Stephens Creek**	**39.46**	**130**	P	**P**	**15 46 16.9**	**+0.9**
	2.2nm,0.8s,baz=311,slow=9.0,SNR=4.0						
STKA	**Stephens Creek**	**39.46**	**130**	*e*P	**P**	**15 46 16.9**	**+0.9**
	0.5nm,1.0s						
EIDS	**Eidsvold**	**45.16**	**117**	*e*P	**P**	**15 47 00.6**	**-2.1**
	3.6nm,1.0s						
CAN	**Canberra**	**46.51**	**130**	*e*P	**P**	**15 47 12.8**	**-0.4**
	8.6nm,1.0s						
JHJ2	**Mitsune**	**52.79**	**35**	*e*P	**P**	**15 48 00.1**	**-0.8**
	129nm,1.1s						
SONA0	**Songino Array**	**56.93**	**360**	*e*P	**P**	**15 48 30.5**	**-0.3**
SONM	**Songino Array**	**56.93**	**360**	P	**P**	**15 48 30.5**	**-0.3**
	1.2nm,0.7s,baz=170,slow=8.5,SNR=5.2						
ULN	**Ulaanbaatar**	**56.96**	**0**	*e*P	**P**	**15 48 32.4**	**+1.4**
	1.9nm,0.6s						
AAK	**Ala-Archa**	**59.44**	**333**	*e*P	**P**	**15 48 46.9**	**-1.5**
	2.1nm,0.8s						
MK32	**Makanchi Array**	**59.93**	**341**	*e*P	**P**	**15 48 52.2**	**+0.6**
MKAR	**Makanchi Array**	**59.93**	**341**	P	**P**	**15 48 52.2**	**+0.6**
	0.8nm,0.5s,baz=155,slow=8.4,SNR=12						
KLR	**Kul'dur**	**62.39**	**18**	LR	LR	16 16 58.0	
	comp=Z,31nm,18.1s,baz=166,slow=37						
GEYT	**Alibeck**	**65.22**	**319**	P	**P**	**15 49 29.8**	**+2.7**
	0.4nm,0.3s,baz=134,slow=8.4,SNR=2.3						
ZALV	**Zalesovo Beam**	**65.68**	**346**	P	**P**	**15 49 29.9**	**+0.2**
	0.8nm,0.3s,baz=140,slow=7.0,SNR=2.8						
ZAA1	**Zalesovo Array**	**65.69**	**346**	*e*P	**P**	**15 49 29.9**	**+0.2**
ABKAR	**Akbulak array**	**71.19**	**330**	*e*P	**P**	**15 50 05.0**	**+0.7**
	3.2nm,1.1s						
FINES	**FINESS Array B**	**93.61**	**332**	LR	LR	16 39 56.5	
	comp=Z,12nm,18.4s,baz=58,slow=39						
LTX	**Lajitas**	**145.43**	**51**	*e*PKPbc	**PKPab**	**15 58 24.6**	**+0.3**
TXAR	**Lajitas Array**	**145.43**	**51**	PKPbc	**PKPab**	**15 58 24.6**	**+0.3**
	0.6nm,0.8s,baz=215,slow=1.5,SNR=7.5						

*ISCJB **14** 15:56:02.8±0.4, 50.°83N±0.°03×130.°42W±0.°06, h12km, mb3.0/1, MS3.0/3, Error ellipse: s-maj=6.9km s-min=2.4km az=139.9*
*PGC **14** 15:56:04.3±0.6, 50.°76N×130.°52W, h10km, MLSn3.5/31, Mw4.2, 218km west of Pt. Hardy, Bc Vancouver Island, Canada Region*
*NEIC **14** 15:56:04.3±0.0, 50.°76N×130.°52W, h10km, mb3.8/9, MW4.1(OTT), After OTT.*
*IDC **14** 15:56:06.7±1.6, 50.°87N×130.°03W, h0km, mb3.2/1, mb1 3.8/6, mb1mx3.5/42, mbtmp3.4/6, ML3.6/5, MS3.1/9, Ms1 3.1/9, ms1mx2.9/15, Error ellipse: s-maj=23.3km s-min=13.8km az=80.0*

ISC 14 15:56:04.3±0.8, 50.°81N±0.°05×130.°44W±0.°06, h12km, n114, σ1§45/115, MS2.9/3, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.48**	**96**	P	**Pn**	**15 56 29.6**	**-1.1**
HOLB				S	**Sn**	**15 56 47.5**	**-2.5**
HG4B	**Hotspring**	**1.56**	**343**	P	**Pn**	**15 56 30.3**	**-1.5**
HG4B				Sn	**Sn**	**15 56 49.0**	**-2.9**
BPBC	**Brooks Peninsu**	**1.83**	**110**	*e*Pn	**Pn**	**15 56 33.8**	**-1.8**
BPBC				*e*Sn	**Sn**	**15 56 55.5**	**-3.2**
BPBC	**Brooks Peninsu**	**1.83**	**110**	Pn	**Pn**	**15 56 33.8**	**-1.8**
BPBC				Sn	**Sn**	**15 56 55.5**	**-3.2**
HG3B	**Hotspring**	**1.88**	**341**	Pn	**Pn**	**15 56 35.0**	**-1.2**
HG3B				Sn	**Sn**	**15 56 57.0**	**-2.7**
PHC	**Port Hardy**	**1.92**	**92**	Pn	**Pn**	**15 56 35.9**	**-0.8**
PHC				Sn	**Sn**	**15 56 58.1**	**-2.6**
BNB	**Barry Inlet**	**1.95**	**336**	Pn	**Pn**	**15 56 35.8**	**-1.5**
BNB				Sn	**Sn**	**15 56 59.2**	**-2.4**
BBB	**Bella Bella**	**2.00**	**46**	Pn	**Pn**	**15 56 38.0**	**+0.1**
	49nm,0.3s,baz=240,slow=15,SNR=645						
BBB				Sn	**Sn**	**15 56 59.1**	**-3.8**
	77nm,0.3s,baz=139,slow=20,SNR=11						
BBB	**Bella Bella**	**2.00**	**46**	Pn	**Pn**	**15 56 38.1**	**+0.1**
BBB				Sn	**Sn**	**15 57 01.1**	**-1.8**
MAYB	**Maynard**	**2.12**	**100**	*e*Pn	**Pn**	**15 56 38.8**	**-0.9**
MAYB	**Maynard**	**2.12**	**100**

comp=Z,59nm,19.9s,baz=328,slow=36
KDAK Kodiak Island 14.64 307 LR LR 16 03 37.9
comp=Z,98nm,21.3s,baz=119,slow=30
FXWY Fox Creek 14.99 111 *e*Pn **Pn 15 59 34.7 -1.4**
2.5nm,0.9s
NVAR Mina Array Bea 15.07 141 Pn **P 15 59 41.6 -0.9**
0.1nm,0.3s,baz=317,slow=10,SNR=2.8
TPAW Teton Pass 15.12 111 *e*Pn **Pn 15 59 38.5 +0.7**
7.7nm,0.9s
BW06 Boulder Array 16.37 111 *e*Pn **P 15 59 56.2 -0.7**
6.4nm,1.1s
PDAR Pinedale Array 16.37 111 Pn **P 15 59 56.5 -0.4**
0.1nm,0.3s,baz=317,slow=11,SNR=23
PDAR LR LR 16 06 17.4
comp=Z,76nm,19.6s,baz=302,slow=38
ILAR Eielson Array 16.43 335 Pn **P 15 59 59.1 +2.0**
0.0nm,0.3s,baz=151,slow=9.5,SNR=3.0
PRP Porcupine Dome 16.68 338 *e*Pn **P 15 59 59.0 -1.1**
3.9nm,1.1s
BWN Browne 16.74 330 *e*Pn **Pn 15 59 57.4 -1.0**
20nm,0.9s
KTH Kantishna Hill 16.81 327 *e*Pn **Pn 15 59 59.1 -0.2**
7.3nm,1.0s
MDM Murphy Dome 16.95 334 *e*Pn **Pn 15 59 59.7 -1.3**
6.3nm,0.7s
DAC Darwin (Calif) 17.22 143 *e*Pn **Pn 16 00 04.0 -0.7**
1.4nm,0.6s
FFC Flin Flon 17.61 66 *e*Pn **P 16 00 13.0 +2.7**
52nm,1.0s
INK Inuvik 17.62 356 LR LR 16 07 36.6
comp=Z,50nm,19.6s,baz=109,slow=39
ULM Lac du Bonnet 21.87 78 LR LR 16 09 22.7
comp=Z,42nm,19.8s,baz=317,slow=37
EPLO Experimental L 23.36 78 P **P 16 01 13.2 +0.7**
SOLO Sioux Lookout 24.28 77 P **P 16 01 22.2 +1.0**
PKLO Pickle Lake 24.94 73 P **P 16 01 28.4 +1.3**
LTX Lajitas 29.39 127 *e*P **P 16 02 09.9 +2.5**
TXAR Lajitas Array 29.39 127 P **P 16 02 09.9 +2.5**
0.2nm,0.6s,baz=312,slow=6.7,SNR=3.3
TXAR LR LR 16 14 08.4
comp=Z,27nm,18.7s,baz=0.0,slow=37
MA2 Magadan 43.27 313 LR LR 16 20 35.2
comp=Z,30nm,19.7s,baz=88,slow=34
H11N2 WAKE ISLAND Hy 57.73 262 T T 17 08 18.7
baz=42,slow=75,SNR=726
H11N3 WAKE ISLAND Hy 57.73 262 T T 17 08 18.9
baz=42,slow=75,SNR=1206
H11N1 WAKE ISLAND Hy 57.75 262 T T 17 08 22.1
baz=42,slow=75,SNR=850
H11S1 WAKE ISLAND Hy 58.76 261 T T 17 09 45.5
baz=48,slow=75,SNR=24
H11S2 WAKE ISLAND Hy 58.77 261 T T 17 09 39.4
baz=48,slow=75,SNR=27
H11S3 WAKE ISLAND Hy 58.78 261 T T 17 09 32.7
baz=48,slow=75,SNR=25

IDC 14 15:57:30.7±59.0, 19°.96S×177°.81E, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.7/30, mbtmp4.3/3, Error ellipse: s-maj=1043.0km s-min=147.5km az=80.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.51**	**243**	P	P	16 04 19.3	-1.5
	1.4nm,0.4s,baz=90,slow=12,SNR=6.1						
WRA	**Warramunga Arr**	**40.78**	**262**	P	P	16 05 14.7	+0.7
	1.4nm,0.3s,baz=88,slow=9.3,SNR=28						
ASAR	**Alice Springs**	**40.81**	**257**	P	P	16 05 14.6	+0.2
	4.7nm,0.5s,baz=95,slow=8.1,SNR=138						

*ISCJB **14** 16:03:50.2±0.5, 35°.93N±0°.03×140°.21E±0°.05, h72km±4km, mb3.7/4, Error ellipse: s-maj=6.9km s-min=5.8km az=175.3*
*IDC **14** 16:03:50.9±1.9, 35°.92N×140°.28E, h61km±18km, mb3.3/4, mb1 3.6/8, mb1mx3.3/35, mbtmp3.7/8, MS2.3/1, Ms1 2.3/1, ms1mx2.1/16, Error ellipse: s-maj=20.8km s-min=8.3km az=65.0*
*JMA **14** 16:03:51.4±0.1, 35°.98N×140°.14E, h61km±1km, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s=332.00000°, δ=85.00000°, λ=83.00000°. NP2: ϕ_s=209.00000°, δ=8.00000°, λ=147.00000°. Principal axes: T Plg49.0000°, Azm234.0000°; N Plg7.0000°, Azm332.0000°; P Plg40.0000°, Azm68.0000°;*
JMA Felt I J1.

ISC 14 16:03:51.3±0.9, 35°.98N±0°.05×140°.20E±0°.05, h64km±7km, n27, σ1°.17/32, mb3.7/4, 2C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.25**	**359**	⇑P	**Pn**	**16 04 01.4**	**-0.1**
JYT				S	**Sn**	**16 04 08.6**	**-0.2**
JIHU	**Itakohorinouch**	**0.27**	**93**	P	**Pn**	**16 04 02.2**	**+0.6**
JIHU				S	**Sn**	**16 04 10.9**	**+1.9**
JAG	**Ashikaga**	**0.75**	**307**	⇓P	**Pn**	**16 04 06.2**	**-0.2**
JRY	**Ryogami san**	**1.05**	**272**	⇓P	**Pn**	**16 04 10.1**	**-0.1**
JKT	**Katashina**	**1.10**	**316**	⇓P	**Pn**	**16 04 10.7**	**-0.2**
JKT				S	**Sn**	**16 04 25.3**	**-0.1**
JOD2	**Odawara 2**	**1.15**	**232**	⇓P	**Pn**	**16 04 11.0**	**-0.5**
JOD2				S	**Sn**	**16 04 24.9**	**-1.7**
BSO3	**Boso 3**	**1.20**	**168**	P	**Pn**	**16 04 11.8**	**-0.1**
JIM2	**Oshima 3**	**1.41**	**207**	P	**Pn**	**16 04 13.4**	**-1.5**
JYN	**Shimob**	**1.43**	**251**	⇓P	**Pn**	**16 04 15.2**	**0.0**
JYN				S	**Sn**	**16 04 33.0**	**-0.2**
JFNN	**Fujinakano**	**1.46**	**238**	P	**Pn**	**16 04 15.3**	**-0.3**
JFNN				S	**Sn**	**16 04 33.5**	**-0.3**
JFY	**Yanaizu**	**1.48**	**345**	⇑P	**Pn**	**16 04 16.4**	**+0.6**
JFY				S	**Sn**	**16 04 35.2**	**+0.9**
MJAR	**Matsushiro Arr**	**1.70**	**290**	P	**Pn**	**16 04 19.0**	**+0.1**
	8.8nm,0.3s,baz=92,slow=9.4,SNR=518						
MJAR				S	**Sn**	**16 04 40.5**	**+0.8**
	3.3nm,0.3s,baz=133,slow=12,SNR=9.5						
MJAR				LR	LR	16 05 08.9	
	comp=Z,79nm,18.3s,baz=135,slow=45						
MAT	**Matsushiro**	**1.71**	**290**	P	**Pn**	**16 04 19.5**	**+0.6**
MAT				S	**Sn**	**16 04 40.3**	**+0.6**
JHJ	**Hachijo jima 2**	**2.88**	**187**	P	**Pn**	**16 04 34.1**	**-0.6**
	36nm,0.3s,baz=328,slow=19,SNR=37						
JHJ				S	**Sn**	**16 05 07.0**	**-1.2**
	55nm,0.3s,baz=146,slow=23,SNR=8.4						
JNU	**Nakatsue**	**8.20**	**252**	P	**Pn**	**16 05 48.5**	**+0.9**
	0.3nm,0.3s,baz=46,slow=12,SNR=3.8						
ASAJ	**Asahikawa**	**8.33**	**12**	P	**Pn**	**16 05 47.8**	**-1.6**
	1.0nm,0.3s,baz=248,slow=7.8,SNR=14						
ASAJ				S	**Sn**	**16 07 18.5**	**-3.4**
	0.2nm,0.3s,baz=92,slow=5.8,SNR=2.9						
KSRS	**Korea Array**	**9.97**	**282**	P	**Pn**	**16 06 14.4**	**+2.7**
	0.3nm,0.3s,baz=97,slow=14,SNR=7.9						
KSRS				LR	LR	16 09 55.4	
	comp=Z,17nm,19.3s,baz=220,slow=36						
H11N2	**WAKE ISLAND Hy**	**28.49**	**117**	T	T	16 39 39.7	
	baz=308						
H11N1	**WAKE ISLAND Hy**	**28.50**	**118**	T	T	16 39 40.8	
	baz=308						
H11N3	**WAKE ISLAND Hy**	**28.51**	**117**	T	T	16 39 40.9	
	baz=308						
H11S3	**WAKE ISLAND Hy**	**29.15**	**120**	T	T	16 40 46.6	
	baz=314,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.15**	**120**	T	T	16 40 42.6	
	baz=314,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.17**	**120**	T	T	16 40 45.1	
	baz=314						
MKAR	**Makanchi Array**	**43.86**	**303**	P	**P**	**16 11 51.3**	**+0.1**
	0.3nm,0.5s,baz=83,slow=9.9,SNR=3.7						
ILAR	**Eielson Array**	**50.91**	**32**	P	**P**	**16 12 46.2**	**+0.6**
	0.6nm,0.6s,baz=271,slow=6.5,SNR=8.3						
WRA	**Warramunga Arr**	**55.89**	**187**	P	**P**	**16 13 21.5**	**-1.2**
	0.8nm,0.5s,baz=350,slow=8.0,SNR=6.7						
ASAR	**Alice Springs**	**59.62**	**187**	P	**P**	**16 13 48.2**	**-0.6**
	0.3nm,0.6s,baz=15,slow=11,SNR=7.4						

TAP 14 16:22:52.3, 21°.34N×122°.09E, h165km±1km, ML3.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.86**	**324**	P	Pn	16 23 17.1	-0.4
	baz=324						
TSEB	**Hengchuen, Pin**	**1.24**	**297**	*e*P	Pn	16 23 21.0	+0.5
	baz=295						
TSEB				*e*S	Sn	16 23 42.1	-0.1
	baz=295						
TWKBT	**Hengchun**	**1.33**	**297**	P	Pn	16 23 21.2	-0.1
	baz=296						
TWKBT				S	Sn	16 23 42.5	-1.2
	baz=296						
TWK1	**Hengchun**	**1.34**	**297**	P	Pn	16 23 21.0	-0.5
	baz=296						
TWK1				S	Sn	16 23 42.2	-1.6
	baz=296						
HEN	**Hengchun**	**1.43**	**298**	P	Pn	16 23 21.9	-0.3
	baz=297						
HEN				S	Sn	16 23 43.7	-1.6
	baz=297						
TAW	**Tawu**	**1.50**	**313**	*e*P	Pn	16 23 22.4	-0.6
	baz=312						
TAW				S	Sn	16 23 44.8	-1.9
	baz=312						
EAST	**Anshuo**	**1.56**	**312**	*e*P	Pn	16 23 23.0	-0.5
	baz=312						
EAST				S	Sn	16 23 45.9	-1.9
	baz=312						
ECL	**Taimali**	**1.64**	**320**	*e*P	Pn	16 23 23.4	-1.0
	baz=320						
ECL				*e*S	Sn	16 23 46.5	-2.7
	baz=320						
SCZT	**Fangliau**	**1.71**	**307**	*e*P	Pn	16 23 24.7	-0.4
	baz=307						
SCZT				S	Sn	16 23 48.6	-2.0
	baz=307						
TWGBT	**Beinan**	**1.75**	**328**	P	Pn	16 23 25.2	-0.3
	baz=327						
TWGBT				S	Sn	16 23 49.4	-1.9
	baz=327						
SSPT	**Xinbi**	**1.82**	**309**	P	Pn	16 23 26.2	0.0
	baz=308						
SSPT				*e*S	Sn	16 23 50.1	-2.4
	baz=308						
MASBT	**Mashibuluo**	**1.86**	**313**	P	Pn	16 23 26.5	-0.2
	baz=313						
MASBT				*e*S	Sn	16 23 51.0	-2.3
	baz=313						
WLCH	**Liuqiu**	**1.89**	**303**	*e*P	Pn	16 23 27.9	+0.9
	baz=302						
SSD	**Sandimen**	**1.95**	**316**	*e*P	Pn	16 23 27.2	-0.6
	baz=316						
SSD				*e*S	Sn	16 23 52.6	-2.6
	baz=316						
ELDTW	**Lidau**	**2.09**	**332**	*e*P	Pn	16 23 29.6	+0.1
	baz=331						
ELDTW				*e*S	Sn	16 23 55.2	-3.2
	baz=331						
SLGT	**Liugui**	**2.12**	**321**	P	Pn	16 23 29.7	0.0
	baz=320						
SLGT				*e*S	Sn	16 23 57.2	-1.5
	baz=320						
TWF1	**Yuli**	**2.14**	**340**	*e*P	Pn	16 23 30.2	+0.4
	baz=340						
TWF1				S	Sn	16 23 57.0	-2.0
	baz=340						
TWM1	**Shoushan**	**2.14**	**314**	*e*P	Pn	16 23 30.6	+0.7
	baz=313						
SNJT	**Kaohsiung City**	**2.15**	**311**	*e*P	Pn	16 23 30.2	+0.2
	baz=310						
SNJT				*e*S	Sn	16 23 58.1	-1.2
	baz=310						
YULB	**Yu-li**	**2.17**	**340**	P	Pn	16 23 30.2	-0.1
	baz=340						
YULB				*e*S	Sn	16 23 58.4	-1.4
	baz=340						
STYT	**Tauyuan**	**2.20**	**326**	P	Pn	16 23 30.4	-0.3
	baz=325						
STYT				*e*S	Sn	16 23 57.9	-2.5
	baz=325						
SGST	**Jiashian**	**2.23**	**321**	P	Pn	16 23 30.9	0.0
	baz=321						
SGST				S	Sn	16 23 59.3	-1.7
	baz=321						
EHY	**Hungye**	**2.27**	**342**	*e*P	Pn	16 23 31.4	0.0
	baz=341						
EHY				*e*S	Sn	16 24 00.1	-1.8
	baz=341						
CHN1	**Nanshi**	**2.34**	**322**	*e*P	Pn	16 23 32.4	+0.2
	baz=321						
CHN1				*e*S	Sn	16 24 01.7	-1.6
	baz=321						
WTP	**Ta-pu**	**2.34**	**324**	P	Pn	16 23 32.2	-0.1
	baz=324						
WTP				*e*S	Sn	16 24 01.1	-2.3
	baz=324						
TPUB	**Ta-pu**	**2.38**	**326**	P	Pn	16 23 32.7	0.0
	baz=325						
TPUB				*e*S	Sn	16 24 02.8	-1.2
	baz=325						
SNST	**Tainan City**	**2.39**	**322**	*e*P	Pn	16 23 32.8	+0.1
	baz=321						
SNST				*e*S	Sn	16 24 02.5	-1.7
	baz=321						
EGFH	**Guangfu**	**2.40**	**345**	*e*S	Sn	16 24 02.1	-2.4
	baz=345						
TWK	**Hsinying**	**2.43**	**323**	*e*P	Pn	16 23 33.0	-0.4
	baz=322						
TWK				*e*S	Sn	16 24 02.9	-2.3
	baz=322						
SCLT	**Jiali**	**2.54**	**316**	*e*S	Sn	16 24 05.7	-1.6
	baz=316						
VWDT	**VWDT**	**2.56**	**340**	*e*P	Pn	16 23 35.5	+0.7
	baz=339						
VWDT				*e*S	Sn	16 24 06.1	-1.8
	baz=339						
WHYT	**Xinyi Township**	**2.61**	**334**	*e*P	Pn	16 23 35.5	0.0
	baz=333						
WHYT				*e*S	Sn	16 24 08.9	-0.2
	baz=333						
CHN8	**Yiju**	**2.65**	**319**	*e*P	Pn	16 23 35.5	-0.4
	baz=319						
CHN8				*e*S	Sn	16 24 07.9	-1.9
	baz=319						
SSLB	**Suanglung**	**2.66**	**337**	*e*P	Pn	16 23 35.9	-0.1
	baz=336						
SSLB				*e*S	Sn	16 24 07.7	-2.4
	baz=336						
WLGB	**Puzi**	**2.70**	**322**	*e*S	Sn	16 24 08.7	-2.2
	baz=322						
OWD	**Renai**	**2.74**	**342**	*e*P	Pn	16 23 38.4	+1.2
	baz=341						
OWD				*e*S	Sn	16 24 10.2	-1.8
	baz=341						
WDLH	**Douliu**	**2.75**	**329**	*e*P	Pn	16 23 36.7	-0.4
	baz=328						
WDLH				*e*S	Sn	16 24 10.2	-1.7
	baz=328						
SMLT	**Sun Moon Lake**	**2.76**	**337**	*e*P	Pn	16 23 37.4	-0.1
	baz=336						
SMLT				*e*S	Sn	16 24 10.1	-2.4
	baz=336						
WJS	**Zhushan**	**2.77**	**333**	*e*P	Pn	16 23 37.4	-0.1
	baz=332						
WJS				*e*S	Sn	16 24 10.2	-2.4
	baz=332						
CHGB	**Renai**	**2.84**	**343**	*e*P	Pn	16 23 39.0	+0.6
	baz=342						
WNT	**Mingjian**	**2.84**	**333**	*e*P	Pn	16 23 38.4	+0.1
	baz=332						
WNT				*e*S	Sn	16 24 12.3	-1.8
	baz=332						
NACB	**Ninganchiao**	**2.86**	**351**	*e*P	Pn	16 23 39.8	+1.3
	baz=350						
WCHH	**Zhanghua**	**3.08**	**333**	*e*P	Pn	16 23 41.0	-0.2
	baz=332						
WCHH				*e*S	Sn	16 24 16.8	-2.4
	baz=332						
VCHM	**Qimei**	**3.09**	**308**	*e*P	Pn	16 23 39.4	-1.9
	baz=307						
VCHM				*e*S	Sn	16 24 17.0	-2.5
	baz=307						
NNSB	**Datong**	**3.15**	**348**	*e*P	Pn	16 23 42.4	+0.2
	baz=347						
PHUB	**P'eng-hu**	**3.18**	**313**	*e*P	Pn	16 23 40.8	-1.6
	baz=312						
PHUB				*e*S	Sn	16 24 18.1	-3.4
	baz=312						
SANB	**Taian**	**3.21**	**342**	*e*P	Pn	16 23 43.5	+0.5
	baz=341						
SANB				*e*S	Sn	16 24 19.3	-3.3
	baz=341						
PNG	**Penghu**	**3.23**	**314**	*e*P	Pn	16 23 42.2	-0.9
	baz=313						
PNG				*e*S	Sn	16 24 20.0	-2.6
	baz=313						
ENTT	**Nioudou**	**3.32**	**352**	*e*P	Pn	16 23 43.4	-0.9
	baz=351						

MEX 14 16:29:25.7±0.4, 17°.16N×100°.31W, h40km±5km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.12**	**162**	*i* P	Pn	16 29 31.1	-1.4
CAIG				*e*S	Sn	16 29 35.4	-1.8
ACP2	**Acapulco**	**0.49**	**125**	*e*P	Pn	16 29 34.5	-1.9
ACP2				*e*S	Sn	16 29 42.0	-1.9
MEIG	**Mezcala**	**1.00**	**41**	*e*P	Pn	16 29 41.7	-1.7
MEIG				*e*S	Sn	16 29 53.9	-2.5
ARIG	**Puente Sto Nin**	**1.11**	**358**	*i* P	Pn	16 29 43.5	-1.4
ARIG				*e*S	Sn	16 29 56.4	-2.7
ZIIG	**Zihuatanejo**	**1.19**	**292**	*e*P	Pn	16 29 44.2	-1.7
ZIIG				*e*S	Sn	16 29 59.8	-1.1
PLIG	**Platanillo**	**1.44**	**32**	*e*P	Pn	16 29 47.9	-1.6
PLIG				*e*S	Sn	16 30 05.1	-2.2
TLIG	**Tlapa**	**1.71**	**76**	*e*P	Pn	16 29 55.1	+1.9
TLIG				*e*S	Sn	16 30 11.9	-1.9

*NSSC **14** 16:32:15.2±0.3, 33°.75N×35°.77E, h6km±5km, ML1.2*
*GRAL **14** 16:32:15.0±0.3, 33°.79N×35°.77E, h0km±60km, MD2.5*

ISC 14 16:32:14.3±1.6, 33°.79N±0°.04×35°.74E±0°.08, h12km±18km, n7, σ0°.34/11, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.14**	**326**	*e*P	**Pg**	**16 32 17.7**	**0.0**
DQRL	**Deir Qamar**	**0.17**	**239**	*e*P	**Pg**	**16 32 18.4**	**+0.3**
DQRL				*e*S	**Sg**	**16 32 21.0**	**0.0**
RCY	**Rachaya**	**0.30**	**165**	*e*P	**Pg**	**16 32 20.3**	**-0.2**
RCY				*e*S	**Sg**	**16 32 24.3**	**-0.4**
BRBR	**Barbar**	**0.42**	**156**	*e*P	**Pg**	**16 32 22.4**	**-0.2**
BRBR				*e*S	**Sg**	**16 32 28.0**	**-0.2**
BRBR				AML	AML	16 32 33.1	
	comp=E,44nm,0.6s						
BRBR				AML	AML	16 32 33.2	
	comp=N,41nm,0.6s						
HWQ	**Hawqa**	**0.51**	**19**	*e*P	**Pg**	**16 32 24.2**	**-0.2**
QASN	**Qassioun**	**0.51**	**120**	*e*P	**Pg**	**16 32 24.9**	**+0.6**
TOTH	**TOTAH**	**0.71**	**127**	*e*P	**Pb**	**16 32 28.8**	**+0.1**
TOTH				*e*S	**Sg**	**16 32 37.5**	**-0.1**
TOTH				AML	AML	16 32 50.6	
	comp=E,9.0nm,0.5s						
TOTH				AML	AML	16 32 54.4	
	comp=N,7.7nm,0.6s						

WEL 14 16:41:29.6±1.1, 36°.S±14°×17°.9E±1°1, h131km±19km, M3.7/33, ML4.2/4, MLv3.7/33, Error ellipse: s-maj=0.0km s-min=0.0km az=3.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.43**	**201**	P	Pn	16 41 56.2	-0.7
MXZ				S	Sn	16 42 17.7	-0.1
WMGZ	**Waiomatatini S**	**1.65**	**195**	P	Pn	16 42 00.7	+1.4
HAZ	**Te Kaha**	**1.79**	**211**	P	Pn	16 41 59.7	-1.3
HAZ				S	Sn	16 42 26.2	+1.2
PUZ	**Puketiti**	**1.92**	**196**	P	Pn	16 42 03.1	+0.4
PUZ				S	Sn	16 42 28.6	+0.5
RUGZ	**Raukumara Rang**	**2.01**	**210**	P	Pn	16 42 03.5	-0.3
RUGZ				S	Sn	16 42 29.3	-0.8
TWGZ	**Tauwhareparae**	**2.10**	**201**	P	Pn	16 42 05.6	+0.8
TWGZ				S	Sn	16 42 33.9	+2.0
WHRZ	**Whale Island**	**2.26**	**223**	P	Pn	16 42 08.3	+1.5
WHRZ				S	Sn	16 42 36.2	+0.7
CNGZ	**Carnagh Statio**	**2.33**	**194**	P	Pn	16 42 08.5	+0.8
TKGZ	**Te Karaka**	**2.38**	**201**	P	Pn	16 42 08.4	+0.2
TKGZ				S	Sn	16 42 38.6	+0.6
MWZ	**Matawai**	**2.39**	**208**	P	Pn	16 42 08.4	0.0
MWZ				S	Sn	16 42 37.9	-0.4
URZ	**Urewera**	**2.50**	**215**	P	Pn	16 42 09.0	-0.8
MARZ	**Manawahe**	**2.52**	**225**	P	Pn	16 42 10.2	+0.1
EDRZ	**Edgecumbe**	**2.57**	**222**	P	Pn	16 42 10.7	-0.1
RAGZ	**Rawiri**	**2.57**	**208**	P	Pn	16 42 10.9	+0.1
RIGZ	**Rimuhau**	**2.65**	**200**	P	Pn	16 42 11.7	0.0
MKRZ	**Makatiti**	**2.75**	**225**	P	Pn	16 42 13.6	+0.6
OMRZ	**Omania**	**2.78**	**227**	P	Pn	16 42 12.9	-0.5
TARZ	**Mount Tarawera**	**2.79**	**223**	P	Pn	16 42 14.9	+1.3
PRGZ	**Paritu Road**	**2.82**	**197**	P	Pn	16 42 13.8	-0.1
MUGZ	**Murupara**	**2.84**	**217**	P	Pn	16 42 14.1	0.0
SNGZ	**Shannon Statio**	**2.85**	**206**	P	Pn	16 42 14.2	-0.1
RRRZ	**Republican Roa**	**2.86**	**222**	P	Pn	16 42 15.5	+1.0
NGRZ	**Ngongotaha**	**2.89**	**229**	P	Pn	16 42 14.1	-0.8
HLRZ	**Highlands Stat**	**2.89**	**225**	P	Pn	16 42 15.0	+0.2
KNZ	**Kokohu**	**2.97**	**199**	P	Pn	16 42 15.2	-0.6
HSRZ	**Hossack Road**	**2.99**	**225**	P	Pn	16 42 16.5	+0.3
HRRZ	**Handcock Road**	**3.03**	**224**	P	Pn	16 42 17.0	+0.4
MHGZ	**Mahia Peninsul**	**3.04**	**195**	P	Pn	16 42 16.1	-0.6
PRRZ	**Plateau Road**	**3.04**	**221**	P	Pn	16 42 15.5	-1.3
RAHZ	**Arahi**	**3.06**	**208**	P	Pn	16 42 16.5	-0.5
GRRZ	**Galatos Road**	**3.10**	**226**	P	Pn	16 42 17.1	-0.4
MTHZ	**Maungataniwha**	**3.11**	**212**	P	Pn	16 42 17.3	-0.4
ALRZ	**Allen Road**	**3.12**	**221**	P	Pn	16 42 17.1	-0.7
WPRZ	**Whakapapatarin**	**3.18**	**223**	P	Pn	16 42 18.9	+0.3
MRHZ	**Matea Rd**	**3.29**	**217**	P	Pn	16 42 18.4	-1.6
NMHZ	**Naumai**	**3.33**	**210**	P	Pn	16 42 19.7	-0.8
KUTZ	**Kaahu Road**	**3.36**	**227**	P	Pn	16 42 20.0	-0.9
WHTZ	**Whakaora**	**3.40**	**223**	P	Pn	16 42 20.6	-0.9
ARHZ	**Aropaoanui**	**3.40**	**206**	P	Pn	16 42 20.5	-0.9
BKZ	**Black Stump Fm**	**3.52**	**213**	P	Pn	16 42 21.5	-1.5
RATZ	**Rangitukua**	**3.65**	**223**	P	Pn	16 42 24.4	-0.3
MCHZ	**McNeill Hill**	**3.67**	**208**	P	Pn	16 42 23.2	-1.8
RITZ	**Rihia Road**	**3.68**	**221**	P	Pn	16 42 24.1	-1.0
KATZ	**Kakaramea**	**3.77**	**222**	P	Pn	16 42 26.5	+0.2
KWHZ	**Kaweka Forest**	**3.77**	**211**	P	Pn	16 42 24.7	-1.6
KAHZ	**Kahuranaki**	**3.92**	**204**	P	Pn	16 42 26.8	-1.5
WTVZ	**West Tongariro**	**3.92**	**222**	P	Pn	16 42 28.0	-0.4
NGZ	**Ngauruhoe**	**3.96**	**221**	P	Pn	16 42 29.4	+0.5
KRHZ	**Kereru**	**3.97**	**210**	P	Pn	16 42 26.9	-2.1
TWVZ	**Taurewa**	**3.97**	**223**	P	Pn	16 42 28.2	-0.8
BHHZ	**Black Hill Sta**	**3.98**	**214**	P	Pn	16 42 27.6	-1.4
TUVZ	**Tukino**	**4.00**	**220**	P	Pn	16 42 29.1	-0.4
FWVZ	**Far West T-bar**	**4.04**	**221**	P	Pn	16 42 30.6	+0.4
PXZ	**Pawanui**	**4.14**	**203**	P	Pn	16 42 28.6	-2.6
PKVZ	**Pokaka**	**4.18**	**222**	P	Pn	16 42 33.5	+1.7
MTVZ	**Mangateitei**	**4.18**	**220**	P	Pn	16 42 31.6	-0.2
PNHZ	**Pukenui**	**4.27**	**210**	P	Pn	16 42 30.6	-2.4
VRZ	**Vera Road**	**4.40**	**228**	P	Pn	16 42 36.1	+1.4
PRHZ	**Porangahau**	**4.42**	**203**	P	Pn	16 42 32.9	-2.1
DVHZ	**Dannevirke**	**4.62**	**207**	P	Pn	16 42 36.4	-1.1
ANWZ	**Angora Road**	**4.65**	**204**	P	Pn	16 42 36.8	-1.1
WAZ	**Wanganui**	**4.71**	**220**	P	Pn	16 42 40.2	+1.5
POWZ	**Post Office Ro**	**4.85**	**210**	P	Pn	16 42 40.8	+0.2
PRWZ	**Pori Road**	**4.91**	**207**	P	Pn	16 42 41.6	+0.1
DUWZ	**D'Urville Isla**	**6.03**	**219**	P	Pn	16 42 55.8	-0.7

*IDC **14** 16:51:39.6±0.8, 10°.57S×150°.12E, h0km, mb4.1/13, mb1 4.2/16, mb1mx4.1/32, mbtmp4.1/16, ML4.0/2, MS3.3/2, Ms1 3.3/2, ms1mx2.7/23, Error ellipse: s-maj=25.0km s-min=15.3km az=101.0*
*NEIC **14** 16

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
	12nm,0.6s							
WB2	**Warramunga Arr**	**17.64**	**237**	*e*Pn		**Pn**	**16 55 48.7**	**+0.5**
	7.0nm,0.7s							
WR1	**Warramunga Arr**	**17.65**	**237**	*e*Pn		**Pn**	**16 55 48.7**	**+0.4**
WR1				*e*Sn		Sn	16 58 55.1	-8.8
WRA	**Warramunga Arr**	**17.65**	**237**	P		**Pn**	**16 55 48.7**	**+0.4**
	0.5nm,0.3s,baz=61,slow=13,SNR=21							
WRA				S		Sn	16 58 55.1	-8.9
	0.2nm,0.3s,baz=56,slow=22,SNR=3.7							
AS31	**Alice Springs**	**20.02**	**228**	*e*P		Pn	16 56 17.6	+0.6
	1.5nm,0.7s							
ASAR	**Alice Springs**	**20.02**	**228**	P		**P**	**16 56 16.7**	**+1.6**
	6.5nm,0.4s,baz=69,slow=11,SNR=62							
ASAR				S		**S**	**16 59 58.1**	**-0.3**
	0.6nm,0.9s,baz=48,slow=24,SNR=7.4							
ASAR				LR		LR	17 04 00.7	
	comp=Z,124nm,18.3s,baz=70,slow=37							
STKA	**Stephens Creek**	**22.44**	**199**	P		**P**	**16 56 42.1**	**+1.1**
	1.3nm,0.5s,baz=10,slow=11,SNR=6.1							
CAN	**Canberra**	**24.51**	**182**	*e*P		**P**	**16 57 01.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**24.68**	**250**	P		**P**	**16 57 04.1**	**+1.2**
	2.1nm,0.8s,baz=80,slow=8.1,SNR=4.5							
FITZ				LR		LR	17 06 32.3	
	comp=Z,42nm,19.2s,baz=92,slow=36							
FITZ	**Fitzroy Crossi**	**24.68**	**250**	*e*P		**P**	**16 57 04.1**	**+1.2**
	3.7nm,0.8s							
JNU	**Nakatsue**	**47.25**	**338**	P		**P**	**17 00 14.2**	**-0.7**
	2.7nm,0.8s,baz=236,slow=3.3,SNR=3.8							
JNU	**Nakatsue**	**47.25**	**338**	*e*P		**P**	**17 00 14.2**	**-0.7**
	4.5nm,1.0s							
MJAR	**Matsushiro Arr**	**48.30**	**347**	P		**P**	**17 00 21.7**	**-1.3**
	1.7nm,0.8s,baz=174,slow=8.8,SNR=4.6							
MAJO	**Matsushiro**	**48.30**	**347**	*e*P		**P**	**17 00 21.8**	**-1.2**
	3.8nm,0.7s							
MJB9	**Matsu-Tunnel**	**48.30**	**347**	*e*P		**P**	**17 00 21.8**	**-1.3**
	3.8nm,0.7s							
KULM	**Kulim**	**51.63**	**286**	*e*P		**P**	**17 00 49.2**	**+0.5**
	6.6nm,0.9s							
KSRS	**Korea Array**	**52.20**	**338**	P		**P**	**17 00 51.6**	**-0.9**
	1.8nm,0.7s,baz=153,slow=8.4,SNR=17							
KS15	**Wonju Array Si**	**52.20**	**338**	*e*P		**P**	**17 00 51.6**	**-0.9**
	5.4nm,1.0s							
CM31	**Chiang Mai Arr**	**58.11**	**300**	*e*P		**P**	**17 01 35.8**	**+0.3**
	4.2nm,1.1s							
CMAR	**Chiang Mai Arr**	**58.11**	**300**	P		**P**	**17 01 35.8**	**+0.3**
	1.2nm,0.5s,baz=119,slow=5.2,SNR=9.1							
PETK	**Petropavlovsk-**	**63.91**	**5**	P		**P**	**17 02 13.8**	**-0.4**
	1.3nm,0.7s,baz=176,slow=4.3,SNR=3.1							
PEA1	**Petropavlovsk-**	**63.92**	**5**	*e*P		**P**	**17 02 13.8**	**-0.4**
VNDA	**Vanda**	**67.07**	**177**	P		**P**	**17 02 35.7**	**+1.3**
	1.0nm,0.7s,baz=303,slow=7.2,SNR=7.7							
VNDA	**Vanda**	**67.07**	**177**	*e*P		**P**	**17 02 34.9**	**+0.5**
	1.6nm,1.1s							
SONA0	**Songino Array**	**69.94**	**330**	*e*P		**P**	**17 02 52.7**	**-0.2**
SONM	**Songino Array**	**69.94**	**330**	P		**P**	**17 02 52.7**	**-0.2**
	0.8nm,0.7s,baz=134,slow=4.3,SNR=4.8							
QSPA	**South Pole Qui**	**79.28**	**180**	*e*P		**P**	**17 03 48.4**	**+1.6**
	6.9nm,0.8s							
MK32	**Makanchi Array**	**82.99**	**320**	*e*P		**P**	**17 04 06.7**	**0.0**
MKAR	**Makanchi Array**	**82.99**	**320**	P		**P**	**17 04 06.7**	**0.0**
	1.4nm,0.7s,baz=103,slow=6.8,SNR=15							
ZALV	**Zalesovo Beam**	**84.56**	**327**	P		**P**	**17 04 13.6**	**-0.8**
	4.2nm,0.6s,baz=117,slow=4.7,SNR=17							
ZAA1	**Zalesovo Array**	**84.56**	**327**	*e*P		**P**	**17 04 13.6**	**-0.9**
RDOG	**Red Dog Mine**	**85.40**	**16**	*e*P		**P**	**17 04 15.4**	**-3.0**
	6.3nm,0.6s							
ILAR	**Eielson Array**	**88.66**	**22**	P		**P**	**17 04 32.9**	**-1.4**
	1.5nm,0.8s,baz=247,slow=5.1,SNR=15							
ILB	**Eielson Array**	**88.66**	**22**	*e*P		**P**	**17 04 32.9**	**-1.4**
	2.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**148.90**	**278**	PKPbc		**PKPbc**	**17 11 29.9**	**-0.3**
	3.0nm,0.7s,baz=68,slow=2.8,SNR=14							
TOA1	**Torodi Ar. Sit**	**148.90**	**278**	*e*PKPbc		**PKPbc**	**17 11 29.9**	**-0.3**

BJI ***14*** *17:00:19.5±0.0, 17°.23N×120°.88E, h53km, mb4.5/42, mB4.7/37, ML4.3/1, Ms4.0/28, Ms7 3.7/29*

MOS ***14*** *17:00:21.3±0.9, 17°.63N×120°.73E, h40km, mb4.9/54, Error ellipse: s-maj=9.0km s-min=5.4km az=110.5*

MAN ***14*** *17:00:24.3, 17°.83N×120°.47E, h33km, mb5.5, ML4.5, MS4.8*

MAN INTENSITY II - LAOAG CITY SARRAT ILOCOS NORTE; SANTA ILOCOS SUR; BAGUIO CITY.

NEIC ***14*** *17:00:24.5±1.8, 17°.67N×120°.71E, h52km±6km, mb4.8/148, Error ellipse: s-maj=12.4km s-min=11.2km az=98.0*

NEIC Felt [II PIVS] at Baguio City, Laoag, Santa and Sarrat. Also felt at Batac, Candon, Santa Maria and Vigan.

ISCJB ***14*** *17:00:25.1±0.2, 17°.72N±0°.02×120°.71E±0°.02, h70km±2km, mb4.7/184, Error ellipse: s-maj=3.6km s-min=2.8km az=10.8*

IDC ***14*** *17:00:28.1±1.7, 17°.65N×120°.79E, h88km±16km, mb4.1/26, mb1 4.2/28, mb1mx4.2/38, mbtmp4.4/28, MS3.5/15, Ms1 3.6/15, ms1mx3.5/26, Error ellipse: s-maj=16.0km s-min=8.9km az=82.0*

ISC 14 17:00:24.9±0.5, 17°.74N±0°.03×120°.61E±0°.03, h52km±4km, n370, σ1ϑ77/395, mb4.8/188, MS3.7/25, 8C-8D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
ABRA	**Dolores**	**0.14**	**133**	*e*P		**Pn**	**17 00 33.1**	**0.0**
ABRA				*e*S		**Sn**	**17 00 39.9**	**+1.0**
APYP	**Conner**	**0.62**	**79**	*e*P		**Pn**	**17 00 38.2**	**+0.5**
APYP				*e*S		**Sn**	**17 00 48.7**	**+1.7**
CVP	**Callao Caves**	**1.16**	**92**	⇓*i*P		**Pn**	**17 00 46.3**	**+1.5**
CVP				*i* S		**Sn**	**17 01 00.2**	**+0.7**
CAUP	**Cauayan**	**1.41**	**124**	*e*P		**Pn**	**17 00 51.7**	**+3.5**
CAUP				*e*S		**Sn**	**17 01 13.0**	**+7.4**
SGCP	**Mt. Cagua**	**1.46**	**70**	*e*P		**Pn**	**17 00 49.7**	**+0.9**
SGCP				*e*S		**Sn**	**17 01 09.7**	**+2.9**
BOLP	**Bolinao**	**1.51**	**206**	*e*P		**Pn**	**17 00 50.0**	**+0.5**
BOLP				*e*S		**Sn**	**17 01 12.0**	**+3.9**
SMPP	**San Manuel, Pa**	**1.58**	**178**	*e*P		**Pn**	**17 00 51.0**	**+0.3**
SMPP				*e*S		**Sn**	**17 01 09.5**	**-0.5**
PALP	**Palanan**	**1.86**	**111**	*e*P		**Pn**	**17 00 57.4**	**+3.0**
PALP				*e*S		**Sn**	**17 01 24.4**	**+7.7**
SCZP	**Santa Cruz**	**2.07**	**199**	*e*P		**Pn**	**17 00 58.3**	**+1.2**
SCZP				*e*S		**Sn**	**17 01 22.6**	**+0.8**
BALP	**Baler**	**2.20**	**155**	*e*P		**Pn**	**17 01 01.6**	**+2.7**
BALP				*e*S		**Sn**	**17 01 29.1**	**+4.1**
BBP	**Basco**	**2.98**	**25**	*e*P		**Pn**	**17 01 10.4**	**+0.8**
BBP	**Basco**	**2.98**	**25**	⇓*i*P		**Pn**	**17 01 11.0**	**+1.4**
BBP				*i* S		**Sn**	**17 01 44.1**	**0.0**
POLP	**Polilio Island**	**3.26**	**157**	*e*P		**Pn**	**17 01 16.0**	**+2.5**
TGY	**Tagaytay City**	**3.63**	**175**	P		**Pn**	**17 01 22.0**	**+3.3**
	181nm,0.3s,baz=317,slow=2.8,SNR=38							
TGY				S		**Sn**	**17 02 02.5**	**+2.1**
	256nm,0.3s,baz=294,slow=12,SNR=3.6							
TGY	**Tagaytay City**	**3.63**	**175**	⇓*e*P		**Pn**	**17 01 21.9**	**+3.2**
TGY				*e*S		**Sn**	**17 02 07.6**	**+7.2**
LUBP	**Lubang**	**4.00**	**185**	*e*P		**Pn**	**17 01 24.3**	**+0.6**
PGP	**Puerto Galera**	**4.23**	**175**	⇓*e*P		**Pn**	**17 01 29.2**	**+2.3**
PGP				*i* S		**Sn**	**17 02 19.0**	**+4.0**
BOAC	**Boac**	**4.42**	**164**	*e*P		**Pn**	**17 01 31.4**	**+2.0**
AUQP	**San Andres**	**4.82**	**155**	*e*P		**Pn**	**17 01 38.7**	**+3.7**
TWG	**Pinlang**	**5.07**	**5**	*e*Pn		**Pn**	**17 01 38.2**	**-0.1**
SJMP	**San Jose**	**5.27**	**175**	*e*P		**Pn**	**17 01 44.5**	**+3.3**
PVCP	**Virac**	**5.35**	**140**	*e*P		**Pn**	**17 01 43.8**	**+1.5**
OTRP	**Odiongan**	**5.52**	**165**	*e*P		**Pn**	**17 01 48.1**	**+3.6**
YULB	**Yu-li**	**5.66**	**6**	*e*Pn		**Pn**	**17 01 47.5**	**+1.0**
BUSP	**Coron**	**5.72**	**184**	*e*P		**Pn**	**17 01 48.9**	**+1.6**
SSLB	**Suanglung**	**6.02**	**3**	*e*Pn		**Pn**	**17 01 52.6**	**+1.1**
NACB	**Ninganchiao**	**6.46**	**8**	*e*Pn		**Pn**	**17 01 56.2**	**-1.3**
CNP	**Cataman**	**6.51**	**142**	*e*P		**Pn**	**17 01 54.5**	**-3.6**
ENPP	**El Nido**	**6.60**	**190**	*e*P		**Pn**	**17 02 00.4**	**+1.1**
CUYO	**Cuyo Island**	**6.86**	**177**	*e*P		**Pn**	**17 02 04.3**	**+1.3**
YHNB	**Yeheng**	**6.93**	**6**	*e*Pn		**Pn**	**17 02 05.8**	**+1.8**
KNMB	**Chin-men Tao**	**7.00**	**343**	*e*Pn		**Pn**	**17 02 06.2**	**+1.3**
KNMB				*e*Sn		**Sn**	**17 03 18.6**	**-4.5**
YOJ	**Yonaguni jima**	**7.05**	**18**	*e*Pn		**Pn**	**17 02 06.5**	**+1.0**
YOJ	**Yonaguni jima**	**7.05**	**18**	*e*P		**Pn**	**17 02 06.5**	**+1.0**
TATO	**Taipei**	**7.24**	**6**	*e*Pn		**Pn**	**17 02 07.4**	**-0.8**
HKPS	**Hong Kong Po S**	**7.57**	**308**	*e*Pn		**Pn**	**17 02 11.4**	**-1.2**
HKPS				*e*Sn		**Sn**	**17 03 30.1**	**-7.0**
MSLP	**Maasin**	**8.62**	**151**	*e*P		**Pn**	**17 02 31.4**	**+4.3**
QIZ	**Qiongzhong**	**10.30**	**279**	P		**Pn**	**17 02 49.9**	**-0.2**
QIZ				S		**Sn**	**17 04 43.1**	**-1.0**
QIZ				LR		LR		
	comp=N,340nm,15.7s							
QIZ				LR		LR		
	comp=E,370nm,21.6s							
QIZ				LR		LR		
	comp=Z,510nm,24.0s							
QIZ	**Qiongzhong**	**10.30**	**279**	*e*Pn		**Pn**	**17 02 47.5**	**-2.6**
QIZ				*e*Sn		Sn	17 04 34.5	-10
JOW	**Kunigami**	**11.49**	**37**	P		**Pn**	**17 03 08.6**	**+2.3**
	0.2nm,0.3s,baz=200,slow=16,SNR=5.9							
JOW	**Kunigami**	**11.49**	**37**	*e*Pn		**Pn**	**17 03 04.9**	**-1.4**
KKM	**Kota Kinabalu**	**12.39**	**201**	*e*Pn		**Pn**	**17 03 18.2**	**-0.6**
DLV	**T Lat**	**13.06**	**245**	*e*Pn		**Pn**	**17 03 28.5**	**+0.6**
WHN	**Wuhan**	**13.96**	**337**	P		**P**	**17 03 47.3**	**+0.8**
NJ2	**Nanjing**	**14.34**	**354**	*e*P		**Pn**	**17 03 46.9**	**+1.9**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
PANO	**Nakornpanom**	**15.28**	**270**	P		**P**	**17 04 00.7**	**-0.6**
	0.6nm,1.4s							
GYA	**Guiyang**	**15.55**	**306**	*e*P		**Pn**	**17 04 01.6**	**+0.6**
GYA				pP		pP	17 04 15.9	+0.1
GYA				PP		**sP**	**17 04 20.4**	**-1.9**
GYA				S		**Sn**	**17 06 52.6**	**+0.2**
GYA				pmax		pmax		
	comp=Z,20nm,0.8s							
GYA				pmax		pmax		
	comp=Z,110nm,4.6s							
GYA				LR		LR		
	comp=N,1μm,11.9s							
GYA				LR		LR		
	comp=E,1μm,11.3s							
GYA				LR		LR		
	comp=Z,1μm,11.0s							
SKNT	**Sakolnakorn**	**15.89**	**270**	P		**P**	**17 04 08.3**	**+0.2**
	21nm,1.2s							
ENH	**Enshi**	**16.07**	**323**	*e*Pn		**Pn**	**17 04 08.8**	**+1.3**
	22nm,1.2s							
SLVN	**Son La**	**16.14**	**285**	*e*Pn		**Pn**	**17 04 08.0**	**-0.5**
	17nm,0.9s							
NONG	**Nongkai**	**16.62**	**274**	P		**P**	**17 04 17.9**	**+1.7**
	0.5nm,1.5s							
KHON	**Khomkaen**	**17.07**	**268**	P		**P**	**17 04 24.2**	**+3.1**
	23μm,0.7s							
SBUM	**Sibu**	**17.28**	**209**	*e*Pn		**P**	**17 04 24.0**	**+0.5**
	5.4nm,0.8s							
MPSI	**Mapaga**	**17.31**	**182**	P		**Pn**	**17 04 22.0**	**-1.0**
KMSI	**Cibinong**	**17.38**	**169**	P		**P**	**17 04 26.7**	**+2.1**
JNU	**Nakatsue**	**17.89**	**29**	P		**P**	**17 04 30.4**	**+0.3**
	0.2nm,0.3s,baz=162,slow=5.5,SNR=6.8							
JNU	**Nakatsue**	**17.89**	**29**	*e*P		**P**	**17 04 30.1**	**0.0**
	22nm,0.8s							
CHAI	**Chaiyaphum**	**17.92**	**267**	P		**P**	**17 04 33.8**	**+3.2**
	20μm,0.8s							
TNTI	**Ternate**	**18.13**	**158**	*e*P		**P**	**17 04 31.5**	**-1.4**
	76nm,1.3s							
TNTI	**Ternate**	**18.13**	**158**	P		**P**	**17 04 31.9**	**-0.9**
KMI	**Kunming**	**18.17**	**297**	P		**Pn**	**17 04 35.0**	**+1.2**
KMI				pmax		pmax		
	comp=Z,19nm,0.5s							
APSI	**Ampana**	**18.56**	**177**	P		**P**	**17 04 37.1**	**-0.5**
LUWI	**Luwuk**	**18.79**	**173**	*e*P		**P**	**17 04 38.5**	**-1.6**
	58nm,0.8s							
LUWI	**Luwuk**	**18.79**	**173**	P		**Pn**	**17 04 41.9**	**+0.9**
	74nm,0.9s,852nm							
PBKT	**Sadao Pong**	**18.80**	**269**	P		**Pn**	**17 04 44.0**	**+2.8**
	16nm,1.1s							
KSM	**Kuching**	**19.07**	**213**	*e*P		**P**	**17 04 43.2**	**0.0**
	20nm,1.0s							
UTTA	**Uttaradit**	**19.10**	**273**	P		**Pn**	**17 04 47.7**	**+2.9**
	18μm,0.8s,202μm							
XAN	**Xi'an**	**19.31**	**329**	P		Pn	17 04 56.3	+9.1
XAN				pP		sP	17 05 10.8	+6.8
XAN				pmax		pmax		
	comp=Z,8.0nm,0.9s							
XAN				pmax		pmax		
	comp=Z,88nm,6.0s							
PHRA	**Phrae**	**19.39**	**275**	P		**Pn**	**17 04 50.5**	**+2.3**
	comp=Z,12nm,1.1s,comp=Z,585nm							
TJN	**Taejon**	**19.50**	**17**	*c*eP		**P**	**17 04 47.8**	**+0.1**
LAMP	**Lampang**	**19.95**	**275**	P		Pn	17 05 10.6	+16
CD2	**Chengdu**	**20.15**	**314**	P		Pn	17 04 56.4	-0.8
CD2				S		Sn	17 08 41.6	-1.8
CD2				pmax		pmax		
	comp=Z,40nm,0.5s							
CD2				pmax		pmax		
	comp=Z,160nm,4.7s							
CD2				LR		LR		
	comp=Z,420nm,19.1s							
CD2				LR		LR		
	comp=Z,280nm,11.3s							
CD2				LR		LR		
	comp=Z,310nm,18.6s							
SANI	**Sanana**	**20.37**	**164**	P		**P**	**17 04 55.3**	**-2.0**
	comp=Z,62nm,0.8s							
CHTO	**Chiang Mai**	**20.60**	**276**	*e*P		Pn	17 05 01.5	-1.1
	comp=Z,21nm,1.1s							
CHTO	**Chiang Mai**	**20.60**	**276**	*e*P		Pn	17 05 01.5	-1.1
CHTO				pmax		pmax		
	comp=Z,21nm,1.1s							
CM31	**Chiang Mai Arr**	**20.61**	**275**	*e*P		Pn	17 05 01.7	-1.0
	comp=Z,20nm,1.0s							
CM31				*e*PcP		**PcP**	**17 09 10.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**20.61**	**275**	P		Pn	17 05 02.4	-0.3
	comp=Z,12nm,0.9s,baz=90,slow=8.8,SNR=59							
CMAR				PcP		**PcP**	**17 09 09.9**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=354,slow=0.1,SNR=15							
CMAR				LR		LR	17 12 55.6	
	comp=Z,158nm,18.7s,baz=80,slow=36							
KS15	**Wonju Array Si**	**20.64**	**17**	*e*P		**P**	**17 05 00.4**	**+0.3**
	comp=Z,10nm,0.9s							
KSRS	**Korea Array**	**20.66**	**17**	P		**P**	**17 05 00.5**	**+0.2**
	comp=Z,8.5nm,0.8s,baz=197,slow=11,SNR=56							
KSRS				LR		LR	17 13 28.2	
	comp=Z,69nm,18.7s,baz=194,slow=38							
TTSI	**Tana Toraja**	**20.67**	**182**	P		Pn	17 05 21.2	+18
PHET	**Kaeng Krachan**	**20.79**	**260**	P		Pn	17 05 05.3	+0.5
	comp=Z,57μm,0.8s,comp=Z,472μm							
UMPA	**Umpang Tak**	**20.86**	**269**	P		Pn	17 05 06.8	+1.2
	comp=Z,58μm,1.1s,comp=Z,540μm							
SIJI	**Sorong**	**21.27**	**149**	P		**P**	**17 05 06.8**	**-0.2**
	comp=Z,12nm,1.0s,baz=354,slow=15,SNR=3.3							
SPSI	**Sidrap Palu**	**21.59**	**182**	P		**P**	**17 05 14.9**	**+4.5**
BJT	**Baijiatuau**	**22.53**	**351**	*e*P		**P**	**17 05 20.6**	**+0.2**
	comp=Z,22nm,1.2s							
BJT	**Baijiatuau**	**22.53**	**351**	*e*P		**P**	**17 05 20.6**	**+0.2**
BJT				pmax		pmax		
	comp=Z,22nm,1.2s							
KAPI	**Kappang**	**22.63**	**182**	P		**P**	**17 05 20.9**	**-0.7**
	comp=Z,4.0nm,0.5s,baz=312,slow=15,SNR=3.1							
INU	**Inuyama**	**22.81**	**37**	*e*P		**P**	**17 05 23.2**	**-0.1**
	comp=Z,35nm,1.1s							
MYKOM	**Kota Tinggi**	**22.85**	**228**	*e*P		**P**	**17 05 24.6**	**+0.6**
	comp=Z,12nm,1.0s							
JHJ2	**Mitsune**	**23.07**	**45**	*e*P		**P**	**17 05 25.1**	**-1.0**
	comp=Z,768nm,1.7s							
KULM	**Kulim**	**23.11**	**240**	*e*P		**P**	**17 05 26.2**	**-0.3**
	comp=Z,49nm,1.6s							
IPM	**Ipoh**	**23.26**	**238**	*e*P		**P**	**17 05 27.7**	**-0.4**
	comp=Z,11nm,1.0s							
FAKI	**Fak Fak**	**23.52**	**150**	*e*P		**P**	**17 05 28.9**	**-1.6**
	comp=Z,40nm,1.1s							
LZH	**Lanzhou**	**23.54**	**324**	*e*P		**P**	**17 05 34.0**	**+3.3**
LZH				pP		sP	17 05 47.0	-2.6
LZH				sP		pP	17 05 55.3	+12
LZH				*e*S		**S**	**17 09 45.8**	**+4.6**
LZH				sS		Sn	17 10 08.0	+3.4
LZH				pmax		pmax		
	comp=Z,21nm,1.2s							
LZH				pmax		pmax		
	comp=Z,110nm,4.7s							
LZH				LR		LR		
	comp=Z,1μm,15.4s							
LZH				LR		LR		
	comp=Z,1μm,14.3s							
LZH				LR		LR		
	comp=Z,1μm,17.1s							
GUMO	**Guam**	**23.71**	**97**	*e*P		**P**	**17 05 28.8**	**-3.5**
	comp=Z,122nm,1.0s							
GUMO	**Guam**	**23.71**	**97**	*e*P		**P**	**17 05 28.8**	**-3.5**
GUMO				pmax		pmax		
	comp=Z,122nm,1.0s							
SARN	**Sarigan**	**24.06**	**89**	*e*P		**P**	**17 05 32.9**	**-2.7**
	comp=Z,44nm,1.2s							
HHC	**Hu-ho-hao-te**	**24.31**	**343**	*e*P		**P**	**17 05 38.8**	**+1.1**
HHC				pmax		pmax		
	comp=Z,21nm,0.8s							
HHC				pmax		pmax		
	comp=Z,230nm,6.6s							
HHC				LR		LR		
	comp=Z,190nm,13.3s							
HHC				LR		LR		
	comp=Z,520nm,14.2s							
HHC				LR		LR		
	comp=Z,290nm,15.2s							
MAJO	**Matsushiro**	**24.34**	**36**	*e*P		**P**	**17 05 35.8**	**-2.1**
	comp=Z,11nm,1.3s							
MAJO	**Matsushiro**	**24.34**	**36**	*i* P		**P**	**17 05 36.4**	**-1.5**
MAJO				pmax		pmax		
	comp=Z,5.0nm,1.0s							
MJAR	**Matsushiro Arr**	**24.34**	**36**	P		**P**	**17 05 37.3**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=229,slow=9.5,SNR=5.8							
MJAR				LR		LR	17 14 13.4	
	comp=Z,64nm,21.8s,baz=225,slow=34							
MJB9	**Matsu-Tunnel**	**24.34**	**36**	*e*P		**P**	**17 05 36.0**	**-1.9**
	comp=Z,12nm,1.3s							
BTO	**Baotou**	**24.55**	**340**	*e*P		**P**	**17 05 40.9**	**+1.1**
SRPI	**Serui, Papua**	**24.84**	**140**	P		**P**	**17 05 43.8**	**+1.2**
	comp=Z,50nm,1.0s,comp=Z,2μm							
CN2	**Changchun**	**26.30**	**8**	*e*P		**P**	**17 05 56.8**	**+1.3**
CN2				*e*S		**S**	**17 10 23.8**	**-0.8**
CN2				LR		LR		
	comp=Z,110nm,20.0s							
CN2				LR		LR		
	comp=Z,140nm,20.0s							
CN2				LR		LR		
	comp=Z,140nm,20.0s							
EDFI	**Ende, Flores**	**26.34**	**178**	P		**P**	**17 06 00.9**	**+4.6**
	comp=Z,12nm,0.7s							
SDSI	**Sungai Dareh**	**26.48**	**227**	P		P	17 06 12.9	+15
MNSI	**Mandailing Nat**	**26.66**	**233**	P		**P**	**17 05 53.7**	**-5.4**
SOEI	**Soe**	**27.56**	**172**	*e*P		**P**	**17 06 07.0**	**-0.2**
	comp=Z,19nm,0.9s							
SHL	**Shillong**	**27.77**	**291**	*e*P		**P**	**17 06 09.5**	**+0.3**
	comp=Z,9.5nm,0.7s							
SHL	**Shillong**	**27.77**	**291**	*e*P		**P**	**17 06 09.5**	**+0.3**
SHL				pmax		pmax		
	comp=Z,10.0nm,0.7s							
GSI	**Gunungsitoli**	**27.91**	**237**	*e*P		**P**	**17 06 12.5**	**+2.1**
	comp=Z,37nm,1.2s							
BATI	**Baumata**	**27.93**	**174**	P		**P**	**17 06 08.8**	**-1.7**
	comp=Z,14nm,0.5s,baz=342,slow=1.1,SNR=6.1							
LSA	**Lhasa**	**29.39**	**299**	*e*P		**P**	**17 06 26.3**	**+2.4**
	comp=Z,7.7nm,0.8s							
LSA	**Lhasa**	**29.39**	**299**	*e*P		**P**	**17 06 26.3**	**+2.4**
LSA				pmax		pmax		
	comp=Z,8.0nm,0.8s							
ULN	**Ulaanbaatar**	**32.03**	**343**	*c*eP		**P**	**17 06 46.6**	**0.0**
ULN				pmax		pmax		
	comp=Z,6.0nm,1.7s							
MTN	**Manton Dam**	**32.12**	**160**	*e*P		**P**	**17 06 43.6**	**-3.9**
	comp=Z,45nm,1.4s							
SONM	**Songino Array**	**32.19**	**342**	P		**P**	**17 06 48.9**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=163,slow=9.9,SNR=8.5							
SONM				LR		LR	17 20 18.5	
	comp=Z,118nm,21.8s,baz=142,slow=37							
KLR	**Kul'dur**	**32.68**	**14**	*c i* P		**P**	**17 06 52.7**	**+0.6**
KLR				pmax		pmax		
	comp=Z,17nm,1.0s							
JIRN	**Jiri**	**33.15**	**294**	*e*P		**P**	**17 06 58.1**	**+1.1**
	comp=Z,21nm,0.7s							
GUN	**Gumba**	**33.47**	**294**	*e*P		**P**	**17 07 01.1**	**+1.4**
	comp=Z,29nm,0.7s							
PKI	**Pulchoki**	**33.82**	**293**	*e*P		**P**	**17 07 03.6**	**+0.9**
	comp=Z,12nm,0.7s							
KKN	**Kakani**	**33.97**	**294**	*e*P		**P**	**17 07 04.8**	**+0.9**
	comp=Z,11nm,0.6s							
DMN	**Daman**	**34.09**	**293**	*e*P		**P**	**17 07 06.0**	**+1.0**
	comp=Z,12nm,0.8s							
YSS	**Yuzh-Sakhalins**	**34.38**	**27**	*e*P		**P**	**17 07 07.2**	**+0.3**
YSS				*e*			17 07 19.4	
YSS				pmax		pmax		
	comp=Z,10.0nm,1.0s							
YSS				MLR		MLR		
	comp=Z,100nm,18.5s							
DANN	**Dangsing**	**35.39**	**294**	*e*P		**P**	**17 07 17.1**	**+0.9**
ZAK	**Zakamensk**	**35.40**	**341**	*e*P		**P**	**17 07 19.8**	**+4.0**
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.1s							
FITZ	**Fitzroy Crossi**	**35.96**	**172**	P		**P**	**17 07 18.4**	**-2.4**
	comp=Z,6.9nm,0.8s,baz=355,slow=7.9,SNR=8.9							
FITZ	**Fitzroy Crossi**	**35.96**	**172**	*e*P

NRN	Naryn	44.78	311	eP		P	17 08 35.4 +1.5
	comp=Z,8.9nm,0.9s						
NIL	Nilore	45.12	300	eP		P	17 08 37.4 +1.0
	comp=Z,12nm,0.7s						
NIL	Nilore	45.12	300	eP		P	17 08 37.4 +1.0
NIL					pmax	pmax	
	comp=Z,12nm,0.7s						
BOOM	Boomskoye usch	45.16	313	eP		P	17 08 38.0 +1.3
	comp=Z,58nm,1.4s						
BOOM	Boomskoye usch	45.16	313	eP		P	17 08 38.0 +1.3
BOOM					pmax	pmax	
	comp=Z,58nm,1.4s						
CTAO	Charters Tower	45.24	145	eP		P	17 08 34.2 -3.2
	comp=Z,23nm,1.4s						
CTAO	Charters Tower	45.24	145	eP		P	17 08 34.2 -3.2
CTAO					pmax	pmax	
	comp=Z,23nm,1.4s						
ZAA0	Zalesovo Array	45.47	331	eP		P	17 08 39.4 +0.6
	comp=Z,5.4nm,0.8s						
ZALV	Zalesovo Beam	45.47	331	P		P	17 08 39.5 +0.8
	comp=Z,1.1nm,0.7s,baz=119,slow=5.2,SNR=4.3						
ZALV				PcP		PcP	17 10 16.2 -0.8
	comp=Z,0.8nm,0.6s,baz=116,slow=3.4,SNR=2.6						
ZALV				LR		LR	17 28 43.5
	comp=Z,44nm,19.5s,baz=70,slow=37						
PEA0B	Petropavlovsk-	45.58	31	eP		P	17 08 39.7 +0.1
	comp=Z,20nm,0.9s						
PEA0B	Petropavlovsk-	45.58	31	eP		P	17 08 39.7 +0.1
PEA0B					pmax	pmax	
	comp=Z,20nm,0.9s						
PETK	Petropavlovsk-	45.58	31	P		P	17 08 39.6 0.0
	comp=Z,13nm,0.8s,baz=199,slow=4.4,SNR=25						
PETK				LR		LR	17 26 26.7
	comp=Z,57nm,21.9s,baz=249,slow=34						
PET	Petropavlovsk	45.99	31	eP		P	17 08 43.2 +0.3
	comp=Z,10nm,0.7s						
PET	Petropavlovsk	45.99	31	eP		P	17 08 42.9 0.0
PET					pmax	pmax	
	comp=Z,16nm,0.8s						
AAK	Ala-Archa	46.22	313	i P		P	17 08 43.4 -1.7
AAK					pmax	pmax	
	comp=Z,1.0nm,0.9s						
MORW	Morawa	46.74	185	eP		P	17 08 46.8 -2.3
	comp=Z,54nm,1.8s						
NVS	Novosibirsk	46.75	331	eP		P	17 08 48.8 0.0
KURK	Kurchatov	46.83	324	eP		P	17 08 50.4 +0.9
	comp=Z,16nm,0.9s						
KURK	Kurchatov	46.83	324	ceP		P	17 08 50.9 +1.4
KURK					pmax	pmax	
	comp=Z,11nm,0.8s						
MA2	Magadan	47.15	20	eP		P	17 08 51.8 -0.1
	comp=Z,44nm,2.0s						
MA2	Magadan	47.15	20	i P		P	17 08 51.3 -0.6
MA2					pmax	pmax	
	comp=Z,7.0nm,1.0s						
BTK	Batken	48.21	308	eP		P	17 09 01.2 +0.7
	comp=Z,11nm,1.4s						
BTK	Batken	48.21	308	eP		P	17 09 01.2 +0.7
BTK					pmax	pmax	
	comp=Z,11nm,1.4s						
GAR	Garm	48.37	307	eP		P	17 09 02.0 +0.2
	comp=Z,12nm,0.9s						
GAR	Garm	48.37	307	eP		P	17 09 02.1 +0.2
GAR					pmax	pmax	
	comp=Z,13nm,0.9s						
KBL	Kabul	48.70	301	eP		P	17 09 04.4 -0.1
	comp=Z,5.7nm,0.6s						
KBL	Kabul	48.70	301	eP		P	17 09 04.4 -0.1
KBL					pmax	pmax	
	comp=Z,6.0nm,0.6s						
FORT	Forrest	48.77	171	eP		P	17 09 03.0 -1.6
	comp=Z,35nm,1.0s						
KK31	Karatay Array	49.16	312	eP		P	17 09 08.4 +0.8
	comp=Z,3.8nm,0.7s						
KK31				ePcP		PcP	17 10 30.5 +0.1
KK31	Karatay Array	49.16	312	eP		P	17 09 08.4 +0.8
KK31				e			17 10 30.5
KK31					pmax	pmax	
	comp=Z,4.0nm,0.7s						
KKAR	Karatay Array	49.16	312	eP		P	17 09 08.4 +0.8
	comp=Z,3.8nm,0.7s						
KKAR				ePcP		PcP	17 10 30.9 +0.5
KKAR	Karatay Array	49.16	312	eP		P	17 09 08.4 +0.8
KKAR				e			17 10 31.0
KKAR					pmax	pmax	
	comp=Z,4.0nm,0.7s						
CHGR	Chuyangaron	49.20	306	eP		P	17 09 09.1 +0.9
	comp=Z,12nm,0.7s						
SEY	Seymchan	50.21	18	ceP		P	17 09 15.8 +0.5
NWAO	Narrogin (SRO)	50.49	184	eP		P	17 09 17.0 -0.7
	comp=Z,90nm,1.8s						
NWAO	Narrogin (SRO)	50.49	184	eP		P	17 09 17.0 -0.7
NWAO					pmax	pmax	
	comp=Z,90nm,1.8s						
BBOO	Buckleboo	52.40	164	eP		P	17 09 29.7 -2.3
	comp=Z,16nm,0.6s						
BRVK	Borovoye	52.50	324	eP		P	17 09 33.5 +0.9
	comp=Z,5.1nm,0.8s						
BRVK	Borovoye	52.50	324	i P		P	17 09 33.7 +1.1
BRVK					pmax	pmax	
	comp=Z,5.0nm,1.3s						
STKA	Stephens Creek	53.28	158	P		P	17 09 36.9 -1.7
	comp=Z,2.9nm,0.5s,baz=334,slow=7.3,SNR=10						
STKA				LR		LR	17 36 36.2
	comp=Z,47nm,19.4s,baz=20,slow=41						
STKA	Stephens Creek	53.28	158	eP		P	17 09 36.8 -1.8
	comp=Z,1.2nm,0.8s						
STKA	Stephens Creek	53.28	158	eP		P	17 09 36.8 -1.8
STKA					pmax	pmax	
	comp=Z,1.0nm,0.8s						
TIXI	Tiksi	54.12	3	eP		P	17 09 43.1 -1.2
	comp=Z,4.9nm,0.8s						
TIXI	Tiksi	54.12	3	ceP		P	17 09 43.0 -1.2
TIXI					pmax	pmax	
	comp=Z,8.0nm,1.3s						
NRIK	Noril'sk	55.48	346	P		P	17 09 54.5 +0.4
	comp=Z,8.2nm,0.7s,baz=133,slow=6.3,SNR=9.2						
ABKAR	Akbulak array	57.67	317	eP		P	17 10 10.2 +0.2
	comp=Z,3.4nm,0.7s						
GEYT	Alibeck	57.76	304	P		P	17 10 11.7 +0.8
	comp=Z,2.3nm,0.6s,baz=177,slow=5.9,SNR=8.6						
GEYT				LR		LR	17 37 44.3
	comp=Z,92nm,21.8s,baz=60,slow=39						
GYA0B	ALIBECK ARRAY	57.76	304	eP		P	17 10 11.2 +0.4
	comp=Z,4.1nm,0.8s						
BILL	Bilibino	57.91	19	eP		P	17 10 10.8 -0.5
	comp=Z,4.9nm,0.8s						
BILL	Bilibino	57.91	19	d iP		P	17 10 10.4 -1.0
BILL				e			17 11 03.9
BILL				eS		S	17 18 12.2 +4.9
BILL					pmax	pmax	
	comp=Z,4.0nm,0.8s						
BILL				MLR		MLR	
	comp=Z,52nm,19.0s						
SVE	Sverdlovsk	58.99	326	⇓eP		P	17 10 19.8 +0.8
SVE					pmax	pmax	
	comp=Z,16nm,1.2s						
ADK	Adak	59.43	40	eP		P	17 10 21.9 -0.3
	comp=Z,147nm,1.8s						
ADK	Adak	59.43	40	eP		P	17 10 21.9 -0.3
ADK					pmax	pmax	
	comp=Z,147nm,1.8s						
TOO	Toolangi	59.80	157	eP		P	17 10 24.7 -0.1
	comp=Z,91nm,1.9s						
TOO	Toolangi	59.80	157	eP		P	17 10 24.7 -0.1
TOO					pmax	pmax	
	comp=Z,91nm,1.9s						
DZM	Mont Dzumac	59.82	130	eP		P	17 10 23.6 -1.8
	comp=Z,34nm,1.4s						
GSTR	Great Sitkin T	59.85	40	eP		P	17 10 24.5 -0.6
UOSS	Minazif	59.95	289	eP		P	17 10 25.6 -0.6
	comp=Z,32nm,1.8s						
ARU	Arti	60.00	325	eP		P	17 10 25.3 -0.7
	comp=Z,6.9nm,0.6s						
ARU	Arti	60.00	325	d iP		P	17 10 25.7 -0.3
ARU				*PP		pP	17 10 40.7 +0.4
ARU				S		S	17 18 37.3 +2.7
ARU				SS		SS	17 22 29.0 -2.6
ARU					pmax	pmax	
	comp=Z,7.0nm,0.7s						
ATKA	Atka Island	61.00	40	eP		P	17 10 33.0 +0.1
	comp=Z,81nm,1.3s						
UNV	Unalaska Valle	65.79	38	eP		P	17 11 03.4 -1.1
	comp=Z,36nm,0.9s						
PRGR	Permogore	67.42	330	eP		P	17 11 06.4 -8.3
PRGR					pmax	pmax	
	comp=Z,5.0nm,0.5s						
GNI	Garni	68.11	307	eP		P	17 11 20.6 +0.8
	comp=Z,9.0nm,0.9s						
GNI	Garni	68.11	307	i P		P	17 11 20.9 +1.2
GNI					pmax	pmax	
	comp=Z,29nm,1.4s						
ZEI	Tsey	68.51	310	eP		P	17 11 22.0 -0.3
ZEI					pmax	pmax	
	comp=Z,6.0nm,0.6s						
RDOG	Red Dog Mine	68.63	23	eP		P	17 11 23.2 +0.9
	comp=Z,7.4nm,0.6s						
AKH	Akhalkalaki	68.93	308	eP		P	17 11 26.4 +1.5
	comp=Z,5.7nm,0.6s						
AKH	Akhalkalaki	68.93	308	eP		P	17 11 26.4 +1.5
AKH					pmax	pmax	
	comp=Z,6.0nm,0.6s						
KBZ	Khabaz	69.16	311	P		P	17 11 26.6 +0.6
	comp=Z,3.4nm,0.8s,baz=120,slow=2.0,SNR=8.2						
KBZ				LR		LR	17 45 23.1
	comp=Z,38nm,18.8s,baz=55,slow=39						
KIV	Kislovodsk	69.30	311	eP		P	17 11 27.4 +0.4
	comp=Z,10nm,0.6s						
KIV	Kislovodsk	69.30	311	eP		P	17 11 27.9 +0.9
KIV					pmax	pmax	
	comp=Z,36nm,0.9s						
KIV				MLR		MLR	
	comp=Z,91nm,17.0s						
NEY	Neytrino	69.33	310	i P		P	17 11 27.6 +0.3
NEY					pmax	pmax	
	comp=Z,1.0nm,0.8s						
CHGN	Chignik	70.44	36	eP		P	17 11 32.9 -0.7
	comp=Z,37nm,1.7s						
VORD	Divnogorie	71.00	319	eP		P	17 11 36.3 -0.8
VORD					pmax	pmax	
	comp=Z,6.0nm,0.8s						
VSR	Storozhevoye	71.05	319	c iP		P	17 11 37.1 -0.3
VSR					pmax	pmax	
	comp=Z,8.0nm,0.8s						
LPSR	Galich'ya Gora	71.09	320	eP		P	17 11 36.4 -1.2
LPSR					pmax	pmax	
	comp=Z,10.0nm,0.7s						
TTA	Tatalina	71.36	29	eP		P	17 11 40.1 +0.9
	comp=Z,12nm,1.1s						
TTA	Tatalina	71.36	29	eP		P	17 11 40.1 +0.9
TTA					pmax	pmax	
	comp=Z,12nm,1.1s						
SVW2	Sparrevohn	71.66	31	eP		P	17 11 42.0 +1.1
	comp=Z,13nm,1.2s						
OBN	Obninsk	72.26	323	⇓eP		P	17 11 44.0 -0.6
OBN				e			17 12 05.0
OBN				e			17 14 24.5
OBN				eS		S	17 21 06.6 +3.1
OBN					pmax	pmax	
	comp=Z,23nm,1.7s						
ANN	Anapa	72.94	312	eP		P	17 11 44.5 -4.4
ANN				e*PP		pP	17 12 02.9 -0.7
ANN				e			17 14 29.9
ANN				eS		S	17 21 06.3 -5.4
ANN					pmax	pmax	
	comp=Z,36nm,1.1s						
CAST	Castle Rocks	73.10	28	eP		P	17 11 50.4 +0.9
	comp=Z,18nm,0.8s						
OHAK	Old Harbor	73.18	35	eP		P	17 11 51.1 +1.1
	comp=Z,14nm,1.1s						
COLD	Coldfoot	73.49	24	eP		P	17 11 53.0 +1.3
	comp=Z,3.7nm,0.9s						
KDAK	Kodiak Island	73.49	34	eP		P	17 11 52.2 +0.3
	comp=Z,24nm,1.3s						
KDAK	Kodiak Island	73.49	34	eP		P	17 11 52.2 +0.3
KDAK					pmax	pmax	
	comp=Z,23nm,1.3s						
BPAW	Bear Paw Mtn.	73.52	27	eP		P	17 11 52.4 +0.5
	comp=Z,18nm,1.0s						
MLY	Manley	73.52	26	eP		P	17 11 52.9 +0.9
	comp=Z,12nm,0.8s						
TOLK	Toolik Lake Re	73.56	22	eP		P	17 11 52.4 +0.2
	comp=Z,9.4nm,0.8s						
KTH	Kantishna Hill	73.61	28	eP		P	17 11 51.3 -1.2
	comp=Z,6.1nm,0.8s						
TRF	Thorofare Moun	73.90	28	eP		P	17 11 54.1 -0.3
	comp=Z,12nm,2.0s						
SUA	Susitna One	73.95	30	eP		P	17 11 54.0 -0.7
	comp=Z,17nm,1.0s						
CNPM	China Poot	73.97	32	eP		P	17 11 54.4 -0.2
	comp=Z,63nm,1.8s						
BRLK	Bradley Lake	74.11	32	eP		P	17 11 55.1 -0.4
	comp=Z,32nm,1.6s						
BWN	Browne	74.17	27	eP		P	17 11 55.3 -0.4
	comp=Z,31nm,0.9s						
MCK	McKinley	74.46	28	eP		P	17 11 58.0 +0.5
	comp=Z,15nm,0.9s						
RC01	Rabbit Creek A	74.48	30	eP		P	17 11 57.2 -0.4
	comp=Z,5.8nm,0.8s						
RND	Reindeer	74.55	28	eP		P	17 11 57.6 -0.4
	comp=Z,14nm,0.8s						
RND	Reindeer	74.55	28	eP		P	17 11 57.6 -0.4
RND					pmax	pmax	
	comp=Z,14nm,0.8s						
MDM	Murphy Dome	74.58	26	eP		P	17 11 59.4 +1.2
	comp=Z,8.8nm,0.9s						
PMR	Palmer	74.70	30	eP		P	17 11 58.5 -0.3
	comp=Z,11nm,1.1s						
PMR	Palmer	74.70	30	eP		P	17 11 58.5 -0.3
PMR					pmax	pmax	
	comp=Z,11nm,1.1s						
WRH	Wood River Hil	74.72	27	eP		P	17 11 59.5 +0.5
	comp=Z,6.9nm,0.8s						
COLA	College	74.75	26	eP		P	17 11 59.6 +0.6
	comp=Z,105nm,0.3s						
COLA	College	74.75	26	i P		P	17 11 58.4 -0.7
COLA					pmax	pmax	
	comp=Z,4.0nm,0.9s						
GHO	Glory Hole Cre	74.77	30	eP		P	17 11 58.9 -0.5
	comp=Z,7.2nm,0.8s						
SEW	Seward	74.77	31	eP		P	17 11 59.4 +0.1
	comp=Z,33nm,1.6s						
CCB	Clear Creek Bu	74.81	26	eP		P	17 11 58.8 -0.7
	comp=Z,5.4nm,1.0s						
SML	Sawmill	75.04	29	eP		P	17 12 01.3 +0.4
	comp=Z,14nm,1.0s						
SML	Sawmill	75.04	29	eP		P	17 12 01.3 +0.4
SML					pmax	pmax	
	comp=Z,14nm,1.0s						
KNK	Knik Glacier	75.04	30	eP		P	17 12 01.1 +0.3
	comp=Z,17nm,1.1s						
ILAR	Eielson Array	75.18	26	P		P	17 12 00.7 -0.8
	comp=Z,1.9nm,0.8s,baz=266,slow=4.0,SNR=20						
ILAR				LR		LR	17 46 36.1
	comp=Z,21nm,19.7s,baz=234,slow=37						
ILB	Eielson Array	75.18	26	eP		P	17 12 00.8 -0.8
	comp=Z,4.1nm,0.9s						
HDA	Harding Lake	75.22	27	eP		P	17 12 00.7 -1.1
	comp=Z,5.1nm,0.7s						
DHY	Denali Highway	75.26	28	eP		P	17 12 02.1 -0.1
	comp=Z,4.6nm,0.8s						
ARCES	ARCESS Array B	75.30	339	P		P	17 12 02.2 0.0
	comp=Z,3.8nm,0.9s,baz=81,slow=7.5,SNR=5.5						
SCM	Sheep Creek Mo	75.50	29	eP		P	17 12 03.9 +0.3
	comp=Z,18nm,0.9s						
SCM	Sheep Creek Mo	75.50	29	eP		P	17 12 03.9 +0.3
SCM					pmax	pmax	
	comp=Z,18nm,0.9s						
FYU	Fort Yukon	75.53	24	eP		P	17 12 04.8 +1.3
	comp=Z,5.5nm,0.8s						
PRP	Porcupine Dome	75.61	25	eP		P	17 12 04.2 0.0
	comp=Z,5.8nm,1.0s						
SPA0	Spitsbergen Ar	75.64	348	eP		P	17 12 04.7 +0.6
	comp=Z,23nm,1.1s						
GLI	Glacier Island	75.79	30	eP		P	17 12 05.1 0.0
	comp=Z,9.9nm,0.8s						
PAX	Paxson	76.13	28	eP		P	17 12 07.5 +0.4
	comp=Z,7.1nm,1.0s						
KBS	Kingsbay	76.22	349	eP		P	17 12 07.3 0.0
	comp=Z,22nm,1.1s						
KBS	Kingsbay	76.22	349	eP		P	17 12 07.3 0.0
KBS					pmax	pmax	
	comp=Z,22nm,1.1s						
RIDG	Independent Ri	76.25	27	eP		P	17 12 07.4 -0.4
	comp=Z,14nm,1.0s						
ILGA	Ilgaz	76.28	309	eP		P	17 12 08.3 -0.3
	comp=Z,26nm,1.4s						
DIV	Divide	76.37	30	eP		P	17 12 08.6 +0.1
	comp=Z,11nm,1.1s						
LBZ	Lake Benmore	76.59	146	eP		P	17 12 07.5 -2.3
	comp=Z,104nm,1.7s						
BR131	Keskin Array S	76.61	308	eP		P	17 12 09.6 -0.8
	comp=Z,7.8nm,0.5s						
BR131	Keskin Array S	76.61	308	eP		P	17 12 09.6 -0.8
BR131					pmax	pmax	
	comp=Z,8.0nm,0.5s						
BRTR	Keskin Array B	76.61	308	P		P	17 12 10.4 +0.1
	comp=Z,1.2nm,0.8s,baz=129,slow=4.5,SNR=5.5						
BRTR				LR		LR	17 51 18.3
	comp=Z,26nm,19.5s,baz=98,slow=40						
DOT	Dot Lake	76.61	27	eP		P	17 12 09.7 -0.1
	comp=Z,7.6nm,1.0s						
FIA1	FINESS Array S	76.73	331	eP		P	17 12 09.1 -1.3
	comp=Z,26nm,1.3s						
FINES	FINESS Array B	76.73	331	P		P	17 12 10.4 -0.1
	comp=Z,3.4nm,0.6s,baz=46,slow=5.5,SNR=10						
FINES				LR		LR	17 49 09.1
	comp=Z,38nm,19.3s,baz=103,slow=38						
FINES	FINESS Array B	76.73	331	i P		P	17 12 10.6 +0.1
FINES					pmax	pmax	
	comp=Z,3.0nm,0.6s						
MENT	Mentasta	76.92	28	eP		P	17 12 12.3 +0.7
	comp=Z,5.8nm,0.7s						
VSU	Vasula	77.07	327	i P		P	17 12 11.4 -1.0
VSU					pmax	pmax	
	comp=Z,47nm,1.1s						
AKASG	Malin Array Be	77.34	319	P		P	17 12 13.5 -0.6
	comp=Z,2.7nm,0.6s,baz=58,slow=5.0,SNR=11						
AKBB	Malin Array Si	77.34	319	eP		P	17 12 13.0 -1.1
	comp=Z,4.1nm,0.7s						
AKBB	Malin Array Si	77.34	319	eP		P	17 12 13.0 -1.1
AKBB					pmax	pmax	
	comp=Z,4.0nm,0.7s						
EGAK	Eagle	77.57	26	eP		P	17 12 14.2 -0.9
BALM	Baldy	78.01	30	eP		P	17 12 17.4 -0.4
	comp=Z,5.2nm,1.0s						
BALM	Baldy	78.01	30	eP		P	17 12 17.4 -0.4
BALM					pmax	pmax	
	comp=Z,5.0nm,1.0s						
CTGM	Chitina Glacie	78.51	30	eP		P	17 12 21.6 +1.0
	comp=Z,12nm,0.8s						
EPYK	Eagle Plains	78.88	24	eP		P	17 12 21.8 -0.5
	comp=Z,14nm,1.3s						
PUH	Pauahi	78.98	73	eP		P	17 12 21.7 -2.2
	comp=Z,208nm,1.4s						
PCA	Pinnacle	79.26	30	eS		S	17 22 22.9 +2.0
INK	Inuvik	79.38	21	eP		P	17 12 25.0 0.0
	comp=Z,4.7nm,0.8s						
INK	Inuvik	79.38	21	eP		P	17 12 25.0 0.0
INK					pmax	pmax	
	comp=Z,5.0nm,0.8s						
SUW	Suwalki	80.11	324	eP		P	17 12 28.5 -0.7
	comp=Z,35nm,0.4s						
SUW	Suwalki	80.11	324	eP		P	17 12 28.5 -0.7
SUW					pmax	pmax	
	comp=Z,35nm,0.4s						
HYT	Haines Junctio	80.34	29	eP		P	17 12 30.9 +0.3
	comp=Z,4.9nm,1.0s						
BUR08	Bucovina Ar. S	80.65	317	eP		P	17 12 32.5 +0.1
	comp=Z,3.6nm,0.7s						
MLR	Muntele Rosu	80.75	315	eP		P	17 12 32.1 -0.9
	comp=Z,37nm,1.9s						
MLR	Muntele Rosu	80.75	315	eP		P	17 12 32.1 -0.9
MLR					pmax	pmax	
	comp=Z,37nm,1.9s						
BALB	Balikesir	80.94	309	eP		P	17 12 33.8 -0.2
	comp=Z,113nm,0.5s						
WHY	Whitehorse	81.61	29	eP		P	17 12 37.2 -0.1
	comp=Z,25nm,1.9s						
KWP	Kalwaria Pacla	81.67	319	eP		P	17 12 37.9 +0.2
	comp=Z,581nm,0.4s						
KWP	Kalwaria Pacla	81.67	319	eP		P	17 12 37.9 +0.2
KWP					pmax	pmax	
	comp=Z,581nm,0.4s						
SKAG	Skagway	81.83	30	eP		P	17 12 39.3 +1.0
	comp=Z,5.7nm,1.0s						
KOLS	Kolonicke sedl	82.15	319	eP		P	17 12 40.9 +0.7
KOLS	Kolonicke sedl	82.15	319	eP		P	17 12 40.9 +0.7
DAG	Danmarks Havn	82.62	351	i P		P	17 12 41.7 -0.4
DAG					pmax	pmax	
	comp=Z,12nm,0.9s						
DAG	Danmarks Havn	82.62	351	i P		P	17 12 41.7 -0.4
	comp=Z,15nm,0.9s						
OJC	Ojcow	83.26	321	eP		P	17 12 45.5 -0.5
	comp=Z,13nm,1.4s						
OJC	Ojcow	83.26	321	eP		P	17 12 45.5 -0.5
OJC					pmax	pmax	
	comp=Z,13nm,1.4s						
NC405	NORSAR Array S	83.40	332	eP		P	17 12 45.7 -0.8
	comp=Z,136nm,1.9s						
VTS	Vitosha	83.45	313	eP		P	17 12 45.5 -1.8
	comp=Z,7.5nm,1.0s						
VTS	Vitosha	83.45	313	eP		P	17 12 45.5 -1.8
VTS					pmax	pmax	
	comp=Z,8.0nm,1.0s						
NC303	NORSAR Array S	83.50	333	eP		P	17 12 45.7 -1.3
	comp=Z,210nm,2.0s						
NB201	NORSAR Array S	83.61	332	eP		P	17 12 47.4 -0.2
	comp=Z,201nm,1.8s						
NB2	NORSAR Subarra	83.65	332	P		P	17 12 47.0 -0.8
	comp=Z,2.8nm,0.6s,baz=64,slow=5.1						
NOA	NORSAR Array B	83.65	332	P		P	17 12 47.2 -0.6
	comp=Z,2.0nm,0.6s,baz=64,slow=4.9,SNR=13						
NOA				LR		LR	17 53 05.5
	comp=Z,51nm,19.6s,baz=65,slow=38						
NC204	NORSAR Array S	83.75	333	eP		P	17 12 48.0 -0.3
	comp=Z,136nm,1.9s						
NAO01	NORSAR Array S	83.88	332	eP		P	17 12 48.9 -0.1
	comp=Z,126nm,1.7s						
CASY	Casey	84.11	184	eP		P	17 12 50.3 +0.6
	comp=Z,23nm,1.4s						
VYHS	Vyhne	84.44	319	eP		P	17 12 53.3 +1.3
VYHS					pmax	pmax	
	comp=Z,3.0nm,1.1s						
VYHS	Vyhne	84.44	319	eP		P	17 12 53.3 +1.3
MORC	Moravsky Berou	84.78	321	eP		P	17 12 54.2 +0.4
JAVC	Velka Javorina	85.04	320	eP		P	17 12 56.6 +1.5
RES	Resolute Bay	85.08	9	eP		P	17 12 54.9 +0.2
RES	Resolute Bay	85.08	9	eP		P	17 12 54.9 +0.2
DPC	Dobruska-Polom	85.30	321	eP		P	17 12 57.0 +0.6
DPC	Dobruska-Polom	85.30	321	eP		P	17 12 57.0 +0.6
VRAC	Vranov	85.53	320	eP		P	17 12 58.2 +0.7
KRUC	Moravsky	85.74	320	eP		P	17 12 59.0 +0.5
ITM	Ithomi	86.14	308	eP		P	17 12 59.7 -1.1
	comp=Z,12nm,0.8s						
TREC	Trest	86.20	321	eP		P	17 13 01.6 +0.8
TREC	Trest	86.20	321	eP		P	17 13 01.6 +0.8
BRG	Berggiesshubel	86.49	323	eP		P	17 13 02.2 0.0
	comp=Z,15nm,1.8s						
BRG	Berggiesshubel	86.49	323	eP		P	17 13 02.2 0.0
BRG					pmax	pmax	
	comp=Z,15nm,1.8s						
CONA	Conrad Observa	86.50	319	ePcP		P	17 13 02.8 +0.3
	comp=Z,6.4nm,1.7s						
CLL	Collm	86.86	323	i P		P	17 13 05.6 +1.7
CLL				e(SSS)			17 32 36.0
CLL				e			17 37 30.0
CLL	Collm	86.86	323	i P		P	17 13 05.6 +1.7
GERES	GERESS Array B	87.46	321	P		P	17 13 06.8 -0.3
	comp=Z,0.7nm,0.7s,baz=62,slow=3.2,SNR=6.1						
GERES				LR		LR	17 55 49.8
	comp=Z,34nm,18.7s,baz=70,slow=38						
SOKA	Soboth	87.51	318	eP		P	17 13 07.0 -0.4
	comp=Z,1.5nm,0.6s						
MOA	Molln	87.52	320	ePcP		P	17 13 08.6 +1.3
	comp=Z,5.9nm,1.2s						
KBA	Koelnbreinsper	88.41	319	eP

JSN 14 17:12:32.1±1.6, 19°.15N×76°.54W, h15km±19km, MD3.8, 4D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJ	**Castle Mountai**	**1.02**	**171**	⇓*i*P	Pb	17 12 49.2	-2.4
GWJ	**Greenwich**	**1.09**	**189**	*i* P	Pb	17 12 51.6	-1.2
STH	**Stony Hill**	**1.10**	**193**	*i* PA	Pb	17 12 52.1	-0.8
STH				*i* S	Sb	17 13 05.3	-1.8
HOJ	**Hope**	**1.16**	**190**	⇓*i*P	Pn	17 12 53.2	-0.6
HOJ				*i* S	Sb	17 13 08.1	-0.7
YHJ	**Yallahs**	**1.26**	**178**	*i* P	Pn	17 12 53.6	-1.6
CVJ	**Coleyville**	**1.32**	**226**	⇓*e*P	Pn	17 12 54.1	-2.0
PCJ	**Portland Cotta**	**1.52**	**203**	*e*P	Pn	17 12 57.1	-1.7
MCJ	**Malvern**	**1.64**	**222**	⇓*e*P	Pn	17 12 59.2	-1.2

*DDA **14** 17:13:38.8, 39°.82N×30°.52E, h4km±1km, ML3.5*
*ISK **14** 17:13:39.0, 39°.85N×30°.55E, h5km, ML3.1/33*

ISC 14 17:13:39.6±0.9, 39°.84N±0°.02×30°.53E±0°.02, h7km±6km, n55, σ0°56/72, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.08**	**306**	*i* P	**Pg**	**17 13 41.8**	**+0.2**
BORA				*i* S	**Sg**	**17 13 42.3**	**-0.9**
SRCK	**Saricakaya, Es**	**0.22**	**19**	PG	**Pg**	**17 13 43.9**	**-0.1**
SRCK				SG	**Sg**	**17 13 47.5**	**+0.6**
SRCK	**Saricakaya, Es**	**0.22**	**19**	*i* P	**Pg**	**17 13 44.7**	**+0.8**
SRCK				*i* S	**Sg**	**17 13 47.3**	**+0.4**
ESKT	**Eskisehir**	**0.40**	**142**	PG	**Pg**	**17 13 47.3**	**-0.1**
AUKIR	**Kırka- Seyitga**	**0.56**	**180**	*i* P	**Pg**	**17 13 50.3**	**0.0**
AUKIR				*i* S	**Sg**	**17 13 57.8**	**+0.1**
GULT	**Gulveren**	**0.60**	**359**	PG	**Pg**	**17 13 51.6**	**+0.5**
CIFT	**Cifteler, Eski**	**0.62**	**139**	PG	**Pb**	**17 13 52.1**	**-0.8**
CIFT	**Cifteler, Eski**	**0.62**	**139**	*i* P	**Pb**	**17 13 52.7**	**-0.1**
CIFT				IAML_P			
	comp=Z,5μm,0.1s						
GEYV	**SAKARYA_Geyve**	**0.67**	**344**	*i* P	**Pg**	**17 13 52.3**	**-0.2**
GEYV				*i* S	**Sb**	**17 14 03.7**	**+0.5**
GEYV				IAML_P			
	comp=Z,10μm,0.2s						
AUMIH	**MIHALICIK**	**0.73**	**87**	*i* P	**Pg**	**17 13 53.7**	**+0.1**
AUMIH				*i* S	**Sb**	**17 14 04.7**	**-0.3**
MDUB	**Mudurnu**	**0.81**	**38**	PG	**Pb**	**17 13 55.9**	**-0.2**
BTAS	**Taskesti**	**0.82**	**26**	*i* P	**Pb**	**17 13 55.6**	**-0.5**
ADVT	**Abdulvahap**	**0.85**	**315**	PG	**Pb**	**17 13 56.4**	**-0.3**
SVRH	**Sivrihisar-ESK**	**0.86**	**117**	PG	**Pg**	**17 13 55.9**	**-0.1**
SVRH				SG	**Sb**	**17 14 09.3**	**+0.8**
SPNC	**Sapanca-Adapaz**	**0.87**	**349**	PG	**Pb**	**17 13 56.5**	**-0.4**
SPNC				SG	**Sn**	**17 14 09.7**	**-1.4**
AUSIV	**SIVRIHISAR**	**0.87**	**117**	*i* P	**Pg**	**17 13 56.4**	**0.0**
AUSIV				*i* S	**Sn**	**17 14 09.9**	**-1.4**
SAUV	**Serdivan-Sakar**	**0.92**	**350**	PG	**Pb**	**17 13 57.9**	**+0.1**
IZI	**Iznik**	**0.96**	**302**	PG	**Pn**	**17 13 59.0**	**-0.5**
SAHE	**Sakarya_HENDEK**	**1.04**	**13**	*i* P	**Pg**	**17 13 59.2**	**-0.4**
SAHE				*i* S	**Sn**	**17 14 16.0**	**+0.5**
AFYO	**Afyonkarahisar**	**1.06**	**190**	*i* P	**Pg**	**17 13 59.4**	**-0.6**
GDZ	**Gediz**	**1.10**	**228**	*i* P	**Pg**	**17 14 00.2**	**-0.6**
GDZ				*i* S	**Sg**	**17 14 15.2**	**0.0**
GDZ				IAML_P			
	comp=Z,9μm,0.2s						
ULDT	**Uludag**	**1.12**	**286**	*i* P	**Pg**	**17 14 00.8**	**-0.3**
ULDT				*i* S	**Sb**	**17 14 16.0**	**-0.1**
ULDT				IAML_P			
	comp=Z,4μm,0.2s						
YLV	**Yalova**	**1.15**	**310**	PN	**Pn**	**17 14 02.1**	**0.0**
YLV				SN	**Sn**	**17 14 18.8**	**+0.6**
BOLV	**Bolvadin**	**1.16**	**164**	*i* P	**Pn**	**17 14 02.4**	**0.0**
BOLV				*i* S	**Sg**	**17 14 16.8**	**-0.1**
BOLV				IAML_P			
	comp=Z,6μm,0.1s						
KIBS	**BOLU**	**1.17**	**60**	*i* P	**Pn**	**17 14 02.1**	**-0.3**
KIBS				IAML_P			
	comp=Z,4μm,0.2s						
GEDZ	**Gediz**	**1.18**	**228**	PN	**Pn**	**17 14 03.3**	**+0.8**
HRT	**Hereke**	**1.19**	**326**	PN	**Pb**	**17 14 01.8**	**-0.6**
GEMT	**Gemlik**	**1.19**	**301**	PN	**Pn**	**17 14 03.0**	**+0.4**
SHUT	**Suhut-Afyon**	**1.28**	**179**	PN	**Pg**	**17 14 05.1**	**+0.9**
KAND	**Kocaeli-Kandir**	**1.28**	**348**	*i* P	**Pg**	**17 14 04.7**	**+0.5**
KAND				IAML_P			
	comp=Z,1μm,0.2s						
SHAP	**Saphane-Kutahy**	**1.30**	**232**	PN	**Pg**	**17 14 04.9**	**+0.4**
YIGI	**Dzce**	**1.32**	**32**	*i* P	**Pb**	**17 14 04.6**	**-0.2**
YIGI				IAML_P			
	comp=Z,3μm,0.2s						
MDNY	**Mudanya-Bursa**	**1.37**	**293**	PN	**Pg**	**17 14 05.9**	**0.0**
KIZT	**Kizilcal**	**1.41**	**132**	PN	**Pg**	**17 14 07.4**	**+0.7**
ARMT	**Armutlu**	**1.47**	**300**	PN	**Pg**	**17 14 07.9**	**0.0**
SILT	**Sile**	**1.48**	**333**	PN	**Pg**	**17 14 07.4**	**0.0**
BUY	**Buyukada**	**1.48**	**314**	PN	**Pg**	**17 14 07.8**	**-0.3**
BUY	**Buyukada**	**1.48**	**314**	*i* P	**Pg**	**17 14 07.7**	**-0.3**
BUY				*i* S	**Sb**	**17 14 26.2**	**-0.3**
BCAM	**Yenicaga**	**1.53**	**50**	*i* P	**Pb**	**17 14 08.2**	**-0.1**
DURS	**Dursunbey**	**1.61**	**262**	*i* P	**Pn**	**17 14 08.6**	**+0.2**
DURS				*i* S	**Sg**	**17 14 32.2**	**+1.0**
USAK	**Uak-Merkez**	**1.62**	**227**	*e*P	**Pb**	**17 14 10.0**	**+0.1**
USAK				*i* S	**Sg**	**17 14 31.6**	**-0.2**
USAK				IAML_P			
	comp=Z,3μm,0.3s						
CMDR	**Camlidere-ANKA**	**1.63**	**66**	*i* P	**Pg**	**17 14 10.6**	**-0.2**
KAVV	**Kandilli-Istan**	**1.67**	**318**	PN	**Pb**	**17 14 10.4**	**-0.1**
ISK	**Istanbul-Kandi**	**1.67**	**318**	PN	**Pb**	**17 14 10.7**	**+0.1**
KHAL	**Karahalli**	**1.67**	**209**	*i* P	**Pb**	**17 14 10.2**	**-0.5**
LOD	**Lodumlu**	**1.72**	**88**	PN	**Pg**	**17 14 11.9**	**-0.6**
KCTX	**Karacabey (Bur**	**1.73**	**285**	PN	**Pb**	**17 14 11.8**	**+0.2**
KDHN	**Kadinhani**	**1.80**	**136**	*i* P	**Pn**	**17 14 11.7**	**+0.6**
KLYT	**Kilyos**	**1.82**	**322**	PN	**Pb**	**17 14 13.1**	**0.0**
KULA	**Kula-Manisa**	**1.96**	**228**	PN	**Pb**	**17 14 15.6**	**-0.1**
BALB	**Balikesir**	**2.06**	**265**	PN	**Pb**	**17 14 16.9**	**-0.3**
CTKS	**Kestanelik-??a**	**2.08**	**313**	PN	**Pb**	**17 14 16.6**	**-1.1**
LADK	**Ladik-KONYA**	**2.17**	**138**	PN	**Pb**	**17 14 18.1**	**-1.1**
KONT	**Konya--Tatoy**	**2.37**	**142**	PN	**Pn**	**17 14 20.4**	**+1.6**
YAYX	**Yaylak**	**2.69**	**108**	PN	**Pn**	**17 14 24.3**	**+0.9**

IDC 14 17:25:20.3±13.0, 4°.30S×105°.15W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.8/27, mbtmp3.7/5, MS3.2/6, Ms1 3.2/6, ms1mx3.0/20, Error ellipse: s-maj=480.9km s-min=115.6km az=118.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**23.55**	**25**	LR	LR	17 36 26.2	
	comp=Z,23nm,18.7s,baz=184,slow=28						
JTS	**Las Juntas de**	**24.79**	**54**	LR	LR	17 37 52.9	
	comp=Z,52nm,19.3s,baz=312,slow=30						
LPIG	**La Paz**	**28.67**	**350**	LR	LR	17 40 04.5	
	comp=Z,34nm,19.6s,baz=184,slow=31						
TXAR	**Lajitas Array**	**33.47**	**2**	P	P	17 32 02.3	+0.8
	0.3nm,0.8s,baz=169,slow=9.9,SNR=2.8						
TXAR				LR	LR	17 43 51.0	
	comp=Z,31nm,18.1s,baz=0.0,slow=33						
LPAZ	**La Paz**	**38.24**	**111**	LR	LR	17 46 04.0	
	comp=Z,38nm,20.1s,baz=314,slow=32						
PDAR	**Pinedale Array**	**47.02**	**356**	P	P	17 33 53.0	-0.8
	0.6nm,0.8s,baz=165,slow=7.9,SNR=5.1						
PLCA	**Paso Flores**	**47.76**	**144**	LR	LR	17 48 41.3	
	comp=Z,65nm,20.8s,baz=306,slow=29						
YKA	**Yellowknife Ar**	**67.00**	**355**	P	P	17 36 14.5	-0.2
	0.2nm,0.5s,baz=164,slow=6.8,SNR=3.5						
INK	**Inuvik**	**75.10**	**349**	P	P	17 37 04.5	+0.6
	1.3nm,0.8s,baz=156,slow=6.3,SNR=4.0						
ILAR	**Eielson Array**	**75.42**	**343**	P	P	17 37 05.6	-0.2
	1.5nm,1.0s,baz=157,slow=4.8,SNR=9.5						

GCG 14 17:41:30.7±0.5, 15°.02N×89°.86W, h13km±130km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.96**	**229**	*e*P	Pg	17 41 48.2	-1.0
PCG				*e*S	Sb	17 42 02.5	+0.5
IXG	**Ixpaco**	**1.01**	**214**	*e*P	Pb	17 41 47.9	-2.4
IXG				*e*S	Sb	17 42 03.5	-0.1
FUG	**Fuego 3**	**1.11**	**239**	*e*P	Pb	17 41 50.6	-1.2
FUG				*e*S	Sb	17 42 05.6	-0.7

MEX 14 17:53:25.1±0.6, 17°.80N×101°.24W, h52km±7km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.29**	**229**	*e*P	Pn	17 53 33.1	-1.3
ZIIG				*e*S	Sn	17 53 39.4	-1.6
ARIG	**Puente Sto Nin**	**0.97**	**60**	*i* P	Pn	17 53 40.6	-1.9
ARIG				*e*S	Sn	17 53 52.9	-2.5
CAIG	**El Cayaco**	**1.19**	**129**	*e*P	Pn	17 53 43.4	-2.0
CAIG				*e*S	Sn	17 53 58.7	-1.8
PLIG	**Platanillo**	**1.75**	**70**	*e*P	Pn	17 53 51.9	-1.3
PLIG				*e*S	Sn	17 54 12.7	-1.7
MMIG	**Aquila**	**2.06**	**284**	*e*P	Pn	17 53 56.1	-1.3
TLIG	**Tlapa**	**2.56**	**95**	*i* P	Pn	17 54 08.7	+4.5
TLIG				*i* S	Sn	17 54 32.9	-1.3

*IDC **14** 17:56:43.3±0.5, 5°.21N×82°.67W, h0km, mb4.6/21, mb1 4.8/26, mb1mx4.8/33, mbtmp4.7/26, ML4.1/5, MS4.1/28, Ms1 4.1/28, ms1mx4.1/34, Error ellipse: s-maj=21.1km s-min=10.3km az=59.0*
*MOS **14** 17:56:43.9±1.1, 5°.38N×82°.65W, h10km, mb5.3/63, Error ellipse: s-maj=9.2km s-min=4.5km az=109.4*
*ISCJB **14** 17:56:44.2±0.1, 5°.33N±0°.02×82°.51W±0°.02, h15km, mb5.1/501, MS4.2/40, Error ellipse: s-maj=2.6km s-min=1.7km az=136.9*
*UCR **14** 17:56:45.4±2.8, 5°.26N×82°.60W, h35km±45km, MD4.8, ML4.7, mb5.2(NEIC)*
*BJI **14** 17:56:45.0±0.0, 5°.30N×82°.50W, h10km, mB5.3/7, Ms5.3/5, Ms7 5.1/1*
*NEIC **14** 17:56:45.3±1.9, 5°.30N×82°.62W, h10km±1km, mb5.2/538, Error ellipse: s-maj=12.5km s-min=10.5km az=64.0*
*GCMT **14** 17:56:48.3±0.2, 5°.22N±0°.01×82°.64W±0°.01, h19km±1km, MW5.1/109, Moment Tensor Solution. s54,c72; s109,c176; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.57±.14; Mθθ0.83±.12; Mφφ-0.26±.15; Mrθ1.06±.25; Mrφ5.51±.11; Mθφ0.57±.28; Best double couple: M0=5.65000×10^16 NP1:φ=93.00000°, δ86.00000°, λ10.00000°. NP2:φ=2.00000°, δ80.00000°, λ175.00000°. Principal axes: T 6.0310, Plg10.0000°, Azm318.0000°; N -0.7630, Plg79.0000°, Azm118.0000°; P -5.2680, Plg4.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 17:56:45.5±0.3, 5°.25N±0°.04×82°.57W±0°.04, h15km, n1349, σ1°20/1346, mb5.2/501, MS4.3/41, 16C-5D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**3.17**	**2**	⇓*e*P	**Pn**	**17 57 33.0**	**-1.9**
DVD				*e*S	**Sn**	**17 58 10.8**	**-1.5**
PTJ1	**Puerto Jimnez**	**3.34**	**348**	*e*P	**Pn**	**17 57 34.7**	**-2.5**
PTJ1				*e*S	**Sn**	**17 58 16.0**	**-0.7**
AZU	**Azuero**	**3.40**	**42**	⇓*i*P	**Pn**	**17 57 37.0**	**-1.1**
AZU				*e*S	**Sn**	**17 58 13.4**	**-4.8**
AZU	**Azuero**	**3.40**	**42**	⇑*i*P	**Pn**	**17 57 36.9**	**-1.2**
AZU				*e*S	**Sn**	**17 58 15.8**	**-2.4**
TBS2		**3.52**	**359**	⇓*i*P	**Pn**	**17 57 38.8**	**-1.1**
TBS2				*i* S	**Sn**	**17 58 21.4**	**0.0**
BRU2	**Volcan**	**3.52**	**358**	*e*P	**Pn**	**17 57 37.4**	**-2.4**
BRU2				*e*S	**Sn**	**17 58 18.6**	**-2.7**
EDPN	**Palmar Norte**	**3.79**	**347**	⇑*i*P	**Pn**	**17 57 41.2**	**-2.2**
PNME	**Penonome**	**3.91**	**35**	*e*P	**Pn**	**17 57 42.6**	**-2.5**
PNME				*e*S	**Sn**	**17 58 32.8**	**+2.0**
EDBA	**Buenos Aires**	**3.95**	**350**	*e*P	**Pn**	**17 57 44.0**	**-1.6**
DRK0	**Durika**	**4.04**	**351**	*e*P	**Pn**	**17 57 44.9**	**-2.1**
DRK0				*e*S	**Sn**	**17 58 33.5**	**-0.7**
EDLM	**Las Mercedes**	**4.13**	**346**	*e*P	**Pn**	**17 57 45.9**	**-2.2**
EDDO	**Dominical**	**4.18**	**342**	⇑*i*P	**Pn**	**17 57 46.1**	**-2.6**
EDDO				*e*S	**Sn**	**17 58 33.6**	**-3.7**
ZANG	**Zanguenga, Cho**	**4.55**	**36**	*e*P	**Pn**	**17 57 54.5**	**+0.5**
LCR2	**La Lucha 2**	**4.68**	**342**	⇑*i*P	**Pn**	**17 57 53.8**	**-2.1**
LCR2				*e*S	**Sn**	**17 58 47.0**	**-3.1**
BCIP	**Isla Barro Col**	**4.74**	**35**	*e*Pn	**Pn**	**17 57 56.5**	**0.0**
BCIP				*e*Sn	**Sn**	**17 58 53.7**	**+2.4**
BCIP	**Isla Barro Col**	**4.74**	**35**	*e*P	**Pn**	**17 57 56.5**	**0.0**
BCIP				*e*		17 58 53.7	
BCIP	**Isla Barro Col**	**4.74**	**35**	*e*P	**Pn**	**17 57 56.8**	**+0.3**
BCIP				*e*S	**Sn**	**17 58 48.8**	**-2.5**
BCIP	**Isla Barro Col**	**4.74**	**35**	⇓*i*P	**Pn**	**17 57 56.3**	**-0.2**
BCIP				*e*S	**Sn**	**17 58 50.6**	**-0.7**
FRIJ	**El Hiral**	**4.85**	**35**	*e*P	**Pn**	**17 57 58.3**	**+0.3**
SJS	**Escuela Geolog**	**4.88**	**343**	*e*P	**Pn**	**17 57 58.9**	**+0.3**
GRGC	**Isla de Gorgon**	**4.93**	**117**	*e*P	**Pn**	**17 57 56.8**	**-2.3**
GRGC				*e*S	**Sn**	**17 58 51.0**	**-4.9**
GRGC				*i*		17 59 00.8	
	comp=Z,48nm,0.4s						
HDC	**Heredia**	**4.96**	**342**	*e*Pn	**Pn**	**17 57 58.0**	**-1.7**
HDC				*e*Sn	**Sn**	**17 58 54.9**	**-1.9**
HDC	**Heredia**	**4.96**	**342**	*e*P	**Pn**	**17 57 57.6**	**-2.1**
HDC				*e*S	**Sn**	**17 58 54.9**	**-1.9**
SRA1	**San Ramn**	**5.16**	**339**	*e*P	**Pn**	**17 58 00.1**	**-2.3**
SOLC	**Bahia Solano**	**5.23**	**79**	*e*P	**Pn**	**17 58 01.5**	**-1.8**
SOLC				*e*S	**Sn**	**17 58 59.7**	**-3.6**
MALC	**Bahia Malaga**	**5.36**	**103**	*e*P	**Pn**	**17 58 04.7**	**-0.4**
MALC				*e*S	**Sn**	**17 59 05.3**	**-1.3**
MALC				*i*		17 59 10.0	
	comp=Z,192nm,0.4s						
JTS	**Las Juntas de**	**5.53**	**335**	Pn	**Pn**	**17 58 05.4**	**-2.0**
	comp=Z,326nm,0.3s,baz=218,slow=3.9,SNR=258						
JTS				Sn	**Sn**	**17 59 09.0**	**-1.9**
	comp=Z,187nm,0.3s,baz=349,slow=22,SNR=20						
JTS	**Las Juntas de**	**5.53**	**335**	*e*Pn	**Pn**	**17 58 04.8**	**-2.6**
JTS				*e*Sn	**Sn**	**17 59 08.3**	**-2.6**
JTS	**Las Juntas de**	**5.53**	**335**	*c*P	**Pn**	**17 58 04.8**	**-2.6**
JTS	**Las Juntas de**	**5.53**	**335**	⇑*i*P	**Pn**	**17 58 04.9**	**-2.6**
JTS				*e*S	**Sn**	**17 59 08.0**	**-2.9**
ARE1	**Arenal 1**	**5.59**	**338**	⇑*i*P	**Pn**	**17 58 06.9**	**-1.4**
ACAL	**Aguas Claras**	**5.88**	**336**	*i* P	**Pn**	**17 58 10.9**	**-1.3**
CUI	**Cuipilapa**	**5.95**	**335**	*i* P	**Pn**	**17 58 11.5**	**-1.7**
COLC	**Colonia**	**5.98**	**334**	⇓*i*P	**Pn**	**17 58 11.9**	**-1.6**
COLC				*i* S	**Sn**	**17 59 19.2**	**-2.6**
MESS	**Mesas**	**6.04**	**335**	*e*P	**Pn**	**17 58 13.0**	**-1.4**
BUEV	**Buena Vista**	**6.18**	**333**	*e*P	**Pn**	**17 58 14.6**	**-1.9**
GB1A	**Borinquen Arri**	**6.20**	**333**	*e*P	**Pn**	**17 58 14.8**	**-1.8**
BBAC	**Balboa, Cauca**	**6.21**	**121**	*e*P	**Pn**	**17 58 14.3**	**-2.6**
BBAC				*e*S	**Sn**	**17 59 24.3**	**-3.5**
PLMC	**San Jos del P**	**6.28**	**93**	*e*P	**Pn**	**17 58 17.5**	**-0.2**
PLMC				*e*S	**Sn**	**17 59 25.8**	**-3.4**
YOTC	**Yotoco, Valle**	**6.33**	**101**	⇑*i*P	**Pn**	**17 58 18.0**	**-0.5**
YOTC				*e*S	**Sn**	**17 59 27.3**	**-3.5**
YOTC				*i*		17 59 32.5	
	comp=N,244nm,0.5s						
OTAV	**Otavalo**	**6.46**	**140**	*e*Pn	**Pn**	**17 58 19.0**	**-1.6**
OTAV	**Otavalo**	**6.46**	**140**	*e*P	**Pn**	**17 58 19.0**	**-1.6**
OTAV	**Otavalo**	**6.46**	**140**	*e*P	**Pn**	**17 58 19.4**	**-1.2**
OTAV	**Otavalo**	**6.46**	**140**	*e*P	**Pn**	**17 58 18.5**	**-2.1**
POPC	**Popayan, Colom**	**6.47**	**114**	*e*P	**Pn**	**17 58 19.2**	**-1.3**
POPC				*e*S	**Sn**	**17 59 31.1**	**-3.1**
POPC				*i*		17 59 40.6	
	comp=N,109nm,0.6s						
DBBC	**Dabeiba**	**6.57**	**74**	*e*P	**Pn**	**17 58 22.9**	**+1.2**
GCUF	**Volcan Galeras**	**6.58**	**127**	*e*P	**Pn**	**17 58 23.1**	**+0.9**
CRUC	**La Cruz**	**6.70**	**123**	*e*P	**Pn**	**17 58 23.9**	**+0.2**
SOTA	**Rioblanco**	**6.71**	**117**	*e*P	**Pn**	**17 58 23.6**	**-0.4**
SOTA				*e*S	**Sn**	**17 59 35.9**	**-4.6**
PCON	**Cinco Dias**	**6.81**	**115**	*e*P	**Pn**	**17 58 25.3**	**-0.2**
MARP	**Paez Belalcaza**	**7.02**	**110**	*e*P	**Pn**	**17 58 29.3**	**+1.1**
HELC	**Santa Helena**	**7.07**	**82**	*e*P	**Pn**	**17 58 30.9**	**+2.0**
ESPN	**Las Esperanzas**	**7.11**	**346**	*e*Pn	**Pn**	**17 58 27.3**	**-1.7**
ESPN	**Las Esperanzas**	**7.11**	**346**	⇑*i*P	**Pn**	**17 58 27.1**	**-1.9**
ACON	**Acoyapa**	**7.15**	**339**	*e*Pn	**Pn**	**17 58 28.4**	**-1.3**
ACON				*e*Sn	**Sn**	**17 59 50.6**	**-0.1**
ACON	**Acoyapa**	**7.15**	**339**	⇑*e*P	**Pn**	**17 58 27.8**	**-1.8**
ACON				*e*S	**Sn**	**17 59 48.6**	**-2.1**
ACON				IAML		17 59 50.1	
	comp=N,185nm,0.7s						
RREF	**El Recreo**	**7.21**	**92**	*e*P	**Pn**	**17 58 30.9**	**-0.1**
FLOC	**Florencia**	**7.81**	**118**	*e*P	**Pn**	**17 58 40.4**	**+1.7**
MOMN	**Momotombo**	**8.12**	**331**	*e*P	**Pn**	**17 58 43.7**	**+0.7**
PTBC	**PUERTO BERRIO,**	**8.18**	**81**	*e*P	**Pn**	**17 58 46.8**	**+3.1**
ROSC	**El Rosal**	**8.23**	**92**	Pn	**Pn**	**17 58 48.4**	**+3.6**
	comp=N,6.8nm,0.3s,baz=232,slow=22,SNR=12						
ROSC				LR	LR	18 01 56.2	
	comp=N,327nm,18.3s,baz=70,slow=38						
ROSC	**El Rosal**	**8.23**	**92**	*e*Pn	**Pn**	**17 58 47.2**	**+2.4**
ROSC	**El Rosal**	**8.23**	**92**	*e*P	**Pn**	**17 58 49.2**	**+4.4**
CNGN	**Cerro Negro**	**8.27**	**331**	*e*P	**Pn**	**17 58 43.5**	**-1.6**
MATN	**Matagalpa**	**8.31**	**337**	*e*P	**Pn**	**17 58 43.4**	**-2.3**
ESTN	**Estel**	**8.65**	**335**	*e*Pn	**Pn**	**17 58 50.4**	**0.0**
ESTN	**Estel**	**8.65**	**335**	*e*P	**Pn**	**17 58 50.7**	**+0.4**
CHIC	**Chingaza**	**8.83**	**94**	*e*P	**Pn**	**17 58 54.8**	**+1.7**
VILC	**Villavicencio,**	**8.92**	**97**	*e*P	**Pn**	**17 58 57.2**	**+3.1**
CSGN	**Cosiguina Volc**	**9.12**	**328**	*e*Pn	**Pn**	**17 58 56.2**	**-0.5**
CSGN	**Cosiguina Volc**	**9.12**	**328**	*e*P	**Pn**	**17 58 56.7**	**0.0**
CSGN				IAML		18 00 52.0	
	comp=N,1μm,0.7s						
ARGC	**Ariguani, Magd**	**9.44**	**61**	*e*P	Pn	17 59 06.0	+4.9
CNCH	**Conchagua**	**9.51**	**327**	*e*P	**Pn**	**17 59 04.7**	**+2.5**
CNCH				*e*S		17 59 09.3	
CNCH				IAML		17 59 11.2	
	comp=Z,2μm,0.5s						
LCND	**La Caada**	**9.57**	**327**	*e*P	**Pn**	**17 59 04.4**	**+1.6**
LCND				IAML		17 59 08.8	
	comp=Z,324nm,0.4s						
PAYG	**Puerto Ayora**	**9.70**	**233**	*e*Pn	**Pn**	**17 59 04.1**	**-0.5**
TGUH	**Tegucigalpa,Un**	**9.90**	**332**	*e*Pn	**Pn**	**17 59 06.6**	**-0.9**
TGUH	**Tegucigalpa,Un**	**9.90**	**332**	*e*P	**Pn**	**17 59 08.3**	**+0.8**
PACA	**Pacayal**	**9.94**	**326**	*e*P	**Pn**	**17 59 10.2**	**+2.2**
VICT	**Victoria**	**10.52**	**326**	*e*P	**Pn**	**17 59 18.3**	**+2.4**
SBLS	**San Blas**	**11.00**	**321**	*e*P	**Pn**	**17 59 25.6**	**+2.9**
SBLS	**San Blas**	**11.00**	**321**	*e*P	**Pn**	**17 59 25.9**	**+3.2**
SDV	**Santo Domingo**	**12.39**	**72**	Pn	**Pn**	**17 59 43.7**	**+2.1**
	comp=Z,6.3nm,0.3s,baz=241,slow=9,SNR=20						
SDV				Sn	**Sn**	**18 01 59.2**	**-0.3**
	comp=Z,6.6nm,0.3s,baz=90,slow=18,SNR=1.8						
SDV	**Santo Domingo**	**12.39**	**72**	*e*Pn	**Pn**	**17 59 43.5**	**+1.9**
SDV	**Santo Domingo**	**12.39**	**72**	*e*P	**Pn**	**17 59 44.0**	**+2.4**
APG	**El Apazote**	**12.41**	**322**	Pn	**Pn**	**17 59 42.8**	**+0.8**
	comp=Z,3.6nm,0.3s,baz=171,slow=1.0,SNR=28						
APG				LR	LR	18 03 55.4	
	comp=Z,2μm,20.9s,baz=137,slow=35						
ATAH	**Atahualpa**	**12.99**	**161**	Pn	**Pn**	**17 59 50.6**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=24,slow=6.1,SNR=9.7						
ATAH				LR	LR	18 04 25.0	
	comp=Z,4μm,19.9s,baz=339,slow=36						
MTDJ	**Mount Denham**	**13.80**	**20**	*e*Pn	**Pn**	**18 00 01.9**	**+1.0**
CCIG	**Comitan**	**14.43**	**320**	*e*Pn	**Pn**	**18 00 09.2**	**-0.4**
TEIG	**Tepich**	**15.88**	**340**	*e*Pn	**Pn**	**18 00 29.3**	**+0.6**
	comp=Z,72nm,1.4s						
GTBY	**Guantanamo Bay**	**16.29**	**26**	*e*Pn	**P**	**18 00 36.0**	**-0.9**
	comp=Z,79nm,1.1s						
LGNH	**Logne**	**16.38**	**36**	*e*Pn	**P**	**18 00 36.6**	**-1.3**
	comp=Z,248nm,1.1s						
CMIG	**Matias Romero**	**16.85**	**315**	Pn	**Pn**	**18 00 40.3**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=98,slow=7.7,SNR=14						
CMIG				LR	LR	18 06 00.8	
	comp=Z,2μm,21.9s,baz=124,slow=33						
MYIG	**Mrida**	**17.09**	**337**	*e*Pn	**Pn**	**18 00 44.1**	**+0.1**
	comp=Z,209nm,0.9s						
SDDR	**Presa de Saban**	**17.53**	**38**	*e*Pn	**P**	**18 00 51.0**	**+0.3**
	comp=Z,63nm,0.8s						
BANI	**BANI**	**17.69**	**41**	*e*Pn	**Pn**	**18 00 47.8**	**-3.8**
SDD	**Santo Domingo**	**18.03**	**42**	*e*Pn	**P**	**18 00 56.1**	**0.0**
	comp=Z,1μm,1.5s						
NNA	**Nana**	**18.05**	**162**	P	**Pn**	**18 00 55.8**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=345,slow=9.6,SNR=12						
NNA				LR	LR	18

658A	Bunnell	24.07	3	P	P	18 02 01.2	+0.9
	baz=183						
655A	Horseshoe Beac	24.14	359	P	P	18 02 01.8	+0.8
	baz=178						
657A	Interlachen	24.21	2	P	P	18 02 02.4	+0.7
	baz=182,SNR=12						
556A	Lake Butler	24.62	0	P	P	18 02 06.1	+0.7
	baz=180,SNR=6.4						
557A	Orange Park	24.64	2	P	P	18 02 06.6	+1.0
	baz=182						
554A	Perry	24.72	358	P	P	18 02 07.2	+0.9
	baz=178						
555A	McAlpin	24.74	359	eP	P	18 02 07.3	+0.8
	comp=Z,102nm,0.8s						
555A	McAlpin	24.74	359	P	P	18 02 07.2	+0.7
	baz=179						
456A	Hilliard	25.34	1	eP	P	18 02 12.8	+0.9
	comp=Z,460nm,1.7s						
454A	Quitman	25.35	358	P	P	18 02 12.9	+0.9
	baz=178,SNR=11						
455A	Stateville	25.36	359	P	P	18 02 12.7	+0.6
	baz=179,SNR=5.1						
LNIG	Linares	25.39	322	eP	P	18 02 13.0	+0.5
	comp=Z,66nm,1.0s						
453A	Whigham	25.52	357	eP	P	18 02 14.7	+1.1
	comp=Z,126nm,1.3s						
453A	Whigham	25.52	357	P	P	18 02 14.6	+1.0
	baz=176						
452A	Marianna	25.58	355	P	P	18 02 15.2	+1.2
	baz=174						
450A	Crestview	25.70	352	P	P	18 02 16.3	+1.1
	baz=171						
LPAZ	La Paz	25.73	147	P	P	18 02 17.4	+1.1
	comp=Z,5.8nm,0.8s,baz=330,slow=6.8,SNR=17						
LPAZ				LR	LR	18 13 33.3	
	comp=Z,2µm,20.2s,baz=306,slow=39						
LPAZ	La Paz	25.73	147	eP	P	18 02 16.8	+0.4
	comp=Z,57nm,1.6s						
LPAZ	La Paz	25.73	147	eP	P	18 02 16.8	+0.4
LPAZ				pmax	pmax		
	comp=Z,57nm,1.6s						
LPAZ	La Paz	25.73	147	eP	P	18 02 14.9	-1.4
449A	Pace	25.75	351	P	P	18 02 16.8	+1.2
	baz=169						
356A	Blackshear	25.94	1	P	P	18 02 19.0	+1.6
	baz=181						
355A	Pearson	25.96	359	P	P	18 02 19.6	+2.1
	baz=180						
ZAIG	Zacatecas	26.00	314	eP	P	18 02 19.7	+1.3
	comp=Z,34nm,1.1s						
353A	Camilla	26.00	357	P	P	18 02 18.6	+0.6
	baz=176,SNR=7.3						
357A	Townsend	26.06	2	P	P	18 02 19.2	+0.8
	baz=183						
TIGA	Tifton	26.07	358	eP	P	18 02 19.0	+0.5
	comp=Z,277nm,1.9s						
TIGA	Tifton	26.07	358	P	P	18 02 19.0	+0.5
	baz=178						
BRAL	Brewton	26.12	351	eP	P	18 02 20.0	+1.0
	comp=Z,270nm,0.6s						
BRAL	Brewton	26.12	351	P	P	18 02 19.6	+0.6
	baz=170						
352A	Blakely	26.18	355	eP	P	18 02 19.9	+0.4
	comp=Z,94nm,1.0s						
352A	Blakely	26.18	355	P	P	18 02 20.0	+0.4
	baz=175						
350A	Dozier	26.27	353	P	P	18 02 21.6	+1.2
	baz=172						
349A	Repton	26.32	351	P	P	18 02 22.0	+1.2
	baz=170,SNR=14						
KVTX	Kingsville	26.54	328	eP	P	18 02 27.2	+4.3
	comp=Z,46nm,0.7s						
254A	Abbeville	26.56	359	P	P	18 02 23.5	+0.5
	baz=178						
256A	Glennville	26.60	1	P	P	18 02 24.1	+0.8
	baz=182						
252A	Lumpkin	26.68	356	P	P	18 02 24.5	+0.4
	baz=175,SNR=9.2						
250A	Grady	26.81	353	eP	P	18 02 25.0	-0.2
	comp=Z,240nm,1.4s						
251A	Midway	26.83	355	P	P	18 02 25.9	+0.4
	baz=174,SNR=9.9						
249A	Camden	26.93	351	P	P	18 02 27.4	+1.1
	baz=170,SNR=8.5						
154A	Montrose	27.23	359	eP	P	18 02 29.2	+0.3
	comp=Z,90nm,0.8s						
154A	Montrose	27.23	359	P	P	18 02 29.6	+0.6
	baz=179						
155A	Kite	27.23	0	P	P	18 02 29.8	+0.8
	baz=180						
151A	Opelika	27.26	355	P	P	18 02 29.6	+0.4
	baz=174,SNR=6.1						
153A	Fort Valley	27.28	358	P	P	18 02 30.1	+0.6
	baz=177						
152A	Waverly Hall	27.35	356	eP	P	18 02 30.2	+0.1
	comp=Z,42nm,1.0s						
152A	Waverly Hall	27.35	356	P	P	18 02 30.4	+0.3
	baz=175,SNR=9.3						
MNMC	Minye Minye	27.39	153	eP	P	18 02 31.2	+0.3
	comp=Z,47nm,1.3s						
150A	Eclectic	27.41	354	P	P	18 02 31.0	+0.4
	baz=173,SNR=18						
149A	Jones	27.49	352	P	P	18 02 31.8	+0.5
	baz=171,SNR=7.2						
HKT	Hockley	27.57	335	eP	P	18 02 32.1	+0.1
	comp=Z,28nm,1.4s						
HKT	Hockley	27.57	335	eP	P	18 02 32.1	+0.1
HKT				pmax	pmax		
	comp=Z,28nm,1.4s						
RGRS	Roger Stewart	27.60	4	eP	P	18 02 32.7	+0.3
	comp=Z,582nm,0.5s						
148A	Greensboro	27.65	351	P	P	18 02 33.2	+0.4
	baz=169						
147A	Livingston	27.80	350	eP	P	18 02 34.4	+0.3
	comp=Z,118nm,0.7s						
147A	Livingston	27.80	350	P	P	18 02 34.4	+0.3
	baz=168,SNR=11						
Z55A	Blythe	27.83	1	P	P	18 02 35.1	+0.7
	baz=181						
VBMS	Vicksburg	27.84	345	eP	P	18 02 33.2	-1.2
	comp=Z,171nm,1.5s						
Z52A	Williamson	27.85	357	P	P	18 02 34.8	+0.2
	baz=176,SNR=7.3						
Z53A	Monticello	27.90	358	P	P	18 02 35.2	+0.2
	baz=178,SNR=6.6						
PB11	IPOC Station P	27.92	153	eP	P	18 02 35.9	+0.4
	comp=Z,35nm,1.0s						
LRAL	Lakeview Retre	27.95	352	eP	P	18 02 35.8	+0.3
	comp=Z,82nm,0.7s						
LRAL	Lakeview Retre	27.95	352	P	P	18 02 36.0	+0.5
	baz=171,SNR=45						
Z56A	Williston	27.95	2	eP	P	18 02 35.4	-0.1
	comp=Z,48nm,0.7s						
Z56A	Williston	27.95	2	P	P	18 02 36.3	+0.9
	baz=183						
833A	Chaparral WMA,	27.96	327	eP	P	18 02 35.8	+0.2
	comp=Z,134nm,1.1s						
833A	Chaparral WMA,	27.96	327	P	P	18 02 35.8	+0.2
	baz=142						
Z57A	Bowman	27.96	3	P	P	18 02 37.0	+1.5
	baz=184						
Z59A	Georgetown, SC	28.02	6	P	P	18 02 37.0	+1.0
	baz=187						
Z51A	Franklin	28.03	355	P	P	18 02 36.6	+0.4
	baz=175,SNR=6.7						
GOGA	Godfrey	28.03	358	eP	P	18 02 36.5	+0.4
	comp=Z,28nm,1.0s						
GOGA	Godfrey	28.03	358	eP	P	18 02 36.5	+0.4
GOGA				pmax	pmax		
	comp=Z,28nm,1.0s						
GOGA	Godfrey	28.03	358	P	P	18 02 36.6	+0.4
	baz=178,SNR=5.7						
Z50A	Ashland	28.04	354	eP	P	18 02 36.0	-0.2
	comp=Z,64nm,0.9s						
Z50A	Ashland	28.04	354	P	P	18 02 36.5	+0.3
	baz=173,SNR=24						
Z49A	Columbiana	28.04	353	P	P	18 02 36.6	+0.3
	baz=172,SNR=27						
Z58A	St. Stephen	28.06	5	P	P	18 02 37.6	+1.2
	baz=186						
Y54A	Tignall	28.47	360	P	P	18 02 40.2	+0.2
	baz=180,SNR=6.7						
Y53A	Monroe	28.48	358	P	P	18 02 40.6	+0.4
	baz=178						
Y52A	Lilburn	28.50	357	eP	P	18 02 40.2	-0.2
	comp=Z,25nm,1.0s						
Y52A	Lilburn	28.50	357	P	P	18 02 40.5	+0.1
	baz=177,SNR=6.0						
Y55A	Saluda	28.55	1	P	P	18 02 41.4	+0.6
	baz=182,SNR=7.4						
Y51A	Rockmart	28.60	356	P	P	18 02 41.4	+0.2
	baz=175,SNR=12						
Y58A	Scranton	28.64	5	eP	P	18 02 42.2	+0.6
	comp=Z,196nm,1.6s						
Y58A	Scranton	28.64	5	P	P	18 02 42.1	+0.6
	baz=186						
Y50A	Piedmont	28.65	355	P	P	18 02 41.8	+0.1
	baz=174,SNR=17						
Y49A	Blount Mountai	28.68	353	eP	P	18 02 41.8	-0.2
	comp=Z,42nm,0.7s						
Y49A	Blount Mountai	28.68	353	P	P	18 02 41.9	-0.1
	baz=172,SNR=15						
NATX	Nacogdoches	28.70	338	eP	P	18 02 41.0	-1.2
	comp=Z,53nm,0.9s						
NATX	Nacogdoches	28.70	338	P	P	18 02 42.2	0.0
	baz=154						
Y48A	Jasper	28.84	352	P	P	18 02 43.1	-0.3
	baz=171,SNR=18						
HODGE	Hodges	28.84	1	eP	P	18 02 43.9	+0.6
	comp=Z,41nm,0.8s						
Y60A	Bolivia	28.89	8	P	P	18 02 44.7	+0.9
	baz=189						
JSC	Jenkinsville	28.91	2	eP	P	18 02 44.4	+0.4
	comp=Z,28nm,0.7s						
JSC	Jenkinsville	28.91	2	eP	P	18 02 44.4	+0.4
JSC				pmax	pmax		
	comp=Z,28nm,0.7s						
435B	Jarrell	29.06	333	eP	P	18 02 45.7	+0.3
	comp=Z,33nm,0.9s						
X55A	Gracelyn & Ava	29.09	2	P	P	18 02 46.0	+0.5
	baz=182,SNR=9.8						
PB01	IPOC Station P	29.12	154	eP	P	18 02 46.9	+0.8
	comp=Z,14nm,0.8s						
X54A	Belton	29.15	0	P	P	18 02 46.6	+0.4
	baz=180						
X50B	Fort Payne	29.20	355	P	P	18 02 46.5	-0.2
	baz=174,SNR=7.1						
X52A	Dahlonega	29.23	358	P	P	18 02 47.0	+0.2
	baz=177						
X51A	Calhoun	29.25	356	eP	P	18 02 47.1	+0.1
	comp=Z,33nm,1.0s						
X51A	Calhoun	29.25	356	P	P	18 02 47.1	+0.1
	baz=175						
BIRD	Birdtown, Kers	29.31	4	eP	P	18 02 48.1	+0.6
	comp=Z,28nm,0.7s						
X49A	Woodville	29.32	354	P	P	18 02 47.7	+0.1
	baz=172,SNR=21						
X48A	Hartselle	29.35	352	eP	P	18 02 47.4	-0.4
	comp=Z,43nm,0.8s						
X48A	Hartselle	29.35	352	P	P	18 02 47.5	-0.4
	baz=171,SNR=12						
PAULI	Pauline	29.43	1	eP	P	18 02 48.6	0.0
	comp=Z,24nm,0.9s						
Z41A	Richland Creek	29.45	342	eP	P	18 02 48.6	-0.1
	comp=Z,44nm,0.8s						
Z41A	Richland Creek	29.45	342	P	P	18 02 48.5	-0.3
	baz=159						
X47A	Russelville	29.53	351	P	P	18 02 49.1	-0.4
	baz=169,SNR=29						
X46A	Booneville	29.69	350	P	P	18 02 50.6	-0.3
	baz=168,SNR=10						
W54A	Cherokee Point	29.69	1	P	P	18 02 51.4	+0.4
	baz=181						
W52A	Murphy	29.72	358	eP	P	18 02 51.6	+0.3
	comp=Z,28nm,1.0s						
W52A	Murphy	29.72	358	P	P	18 02 51.5	+0.3
	baz=177						
KMSC	Kings Mountain	29.77	2	eP	P	18 02 52.4	+0.8
	comp=Z,30nm,0.8s						
KMSC	Kings Mountain	29.77	2	P	P	18 02 52.1	+0.5
	baz=183,SNR=6.8						
CCAR	Cane Creek	29.77	344	eP	P	18 02 50.9	-0.8
	comp=Z,43nm,0.6s						
W53A	Cullowhee	29.78	359	P	P	18 02 52.5	+0.7
	baz=179,SNR=7.8						
W58A	Raeford	29.78	6	P	P	18 02 51.9	+0.2
	baz=187						
W56A	Indian Trail	29.79	3	P	P	18 02 52.1	+0.2
	baz=184,SNR=6.3						
OXF	Oxford	29.80	349	eP	P	18 02 50.5	-1.3
	comp=Z,136nm,1.1s						
OXF	Oxford	29.80	349	eP	P	18 02 50.5	-1.3
OXF				pmax	pmax		
	comp=Z,136nm,1.1s						
W51A	Cleveland	29.83	356	P	P	18 02 52.6	+0.4
	baz=176,SNR=5.6						
W57A	Gilead	29.85	4	eP	P	18 02 51.8	-0.5
	comp=Z,41nm,0.9s						
W57A	Gilead	29.85	4	P	P	18 02 52.6	+0.3
	baz=185,SNR=6.6						
JCT	Junction City	29.88	329	eP	P	18 02 52.5	-0.2
	comp=Z,23nm,1.2s						
JCT	Junction City	29.88	329	eP	P	18 02 52.5	-0.2
JCT				pmax	pmax		
	comp=Z,23nm,1.2s						
JCT	Junction City	29.88	329	P	P	18 02 53.2	+0.4
	baz=144						
W50A	Signal Mountai	29.91	355	eP	P	18 02 52.5	-0.4
	comp=Z,34nm,1.0s						
W50A	Signal Mountai	29.91	355	P	P	18 02 52.9	0.0
	baz=175,SNR=9.7						
W49A	Belvidere	29.92	354	P	P	18 02 52.7	-0.2
	baz=173,SNR=8.4						
WLAR	White Oak Lake	29.94	342	eP	P	18 02 52.9	-0.3
	comp=Z,33nm,0.8s						
SWET	Sewanee	29.98	354	eP	P	18 02 53.4	-0.1
	comp=Z,50nm,0.9s						
W48A	Pulaski	30.01	353	P	P	18 02 53.8	0.0
	baz=171,SNR=29						
PLAL	Pickwick Lake	30.02	351	eP	P	18 02 53.1	-0.8
	comp=Z,41nm,0.9s						
WHTX	Lake Whitney,	30.03	334	eP	P	18 02 53.6	-0.4
	comp=Z,76nm,1.4s						
WHTX	Lake Whitney,	30.03	334	P	P	18 02 53.9	-0.1
	baz=149,SNR=9.0						
CPCT	Cooper Cave	30.10	357	eP	P	18 02 55.1	+0.5
	comp=Z,32nm,1.0s						
X43A	Marvell	30.12	346	P	P	18 02 54.1	-0.6
	baz=164						
W47A	Westpoint	30.21	352	P	P	18 02 55.2	-0.3
	baz=170,SNR=20						
W46A	Michie	30.21	351	P	P	18 02 54.6	-0.9
	baz=169,SNR=5.2						
V53A	Saluda	30.27	360	eP	P	18 02 56.0	-0.1
	comp=Z,14nm,0.8s						
V53A	Saluda	30.27	360	P	P	18 02 56.5	+0.4
	baz=180						
V50A	Pikevile	30.36	356	P	P	18 02 57.1	+0.2
	baz=175,SNR=8.5						
V54A	Nebo	30.38	1	P	P	18 02 57.6	+0.6
	baz=181,SNR=8.4						
V51A	Loudon	30.45	357	eP	P	18 02 58.0	+0.4
	comp=Z,44nm,1.0s						
V51A	Loudon	30.45	357	P	P	18 02 58.0	+0.4
	baz=177,SNR=9.1						
V52A	Sevierville	30.46	358	eP	P	18 02 58.0	+0.2
	comp=Z,22nm,0.8s						
V52A	Sevierville	30.46	358	P	P	18 02 58.1	+0.4
	baz=178,SNR=6.1						
V56A	Mocksville	30.47	3	eP	P	18 02 58.5	+0.7
	comp=Z,20nm,0.7s						
V56A	Mocksville	30.47	3	P	P	18 02 58.4	+0.6
	baz=184,SNR=6.1						
V55A	Taylorsville	30.48	2	P	P	18 02 57.7	-0.2
	baz=183						
V49A	McMinnville	30.52	355	P	P	18 02 58.0	-0.3
	baz=174,SNR=15						
V58A	Windy Hill, Pi	30.56	6	P	P	18 02 59.0	+0.4
	baz=187,SNR=10.0						
V48A	Smith Brothers	30.59	353	eP	P	18 02 58.6	-0.3
	comp=Z,116nm,0.7s						
V48A	Smith Brothers	30.59	353	P	P	18 02 58.7	-0.2
	baz=172,SNR=47						
V57A	Coltrane Farms	30.60	4	P	P	18 02 59.2	+0.3
	baz=186,SNR=6.8						
X40A	Basin Creek Fa	30.61	343	eP	P	18 02 57.8	-1.2
	comp=Z,7.4nm,0.9s						
X40A	Basin Creek Fa	30.61	343	P	P	18 02 58.5	-0.5
	baz=160						
V59A	Middlesex	30.63	7	P	P	18 02 59.6	+0.5
	baz=189						
UALR	University of	30.74	344	eP	P	18 02 59.6	-0.5
	comp=Z,37nm,0.8s						
LVC	Limon Verde	30.75	155	P	P	18 03 01.5	+0.7
	comp=Z,3.0nm,0.7s,baz=326,slow=9.7,SNR=5.4						
LVC	Limon Verde	30.75	155	eP	P	18 03 01.8	+1.0
	comp=Z,32nm,1.3s						
V60A	Jim Taylor Roa	30.76	8	eP	P	18 03 00.6	+0.2
	comp=Z,46nm,0.7s						
V60A	Jim Taylor Roa	30.76	8	P	P	18 03 00.9	+0.6
	baz=190						
V47A	Nunnelly	30.77	352	P	P	18 02 59.7	-0.7
	baz=170,SNR=44						
HPIG		30.82	317	eP	P	18 03 01.6	+0.3
	comp=Z,17nm,0.9s						
V46A	Holladay	30.83	351	P	P	18 02 59.7	-1.2
	baz=169,SNR=35						
MIAR	Mount Ida	30.88	342	eP	P	18 03 00.8	-0.6
	comp=Z,26nm,1.0s						
MIAR	Mount Ida	30.88	342	eP	P	18 03 00.8	-0.6
MIAR				pmax	pmax		
	comp=Z,26nm,1.0s						
MIAR	Mount Ida	30.88	342	P	P	18 03 00.9	-0.6
	baz=158,SNR=12						
CLTN	Cedars of Leba	30.89	354	eP	P	18 03 01.2	-0.3
	comp=Z,27nm,0.8s						
V61A	Roper	30.89	10	P	P	18 03 01.6	+0.1
	baz=192						
U53A	Fall Branch	30.96	360	P	P	18 03 02.5	+0.3
	baz=180,SNR=9.1						
U52A	Thorn Hill	31.00	359	P	P	18 03 02.8	+0.2
	baz=179,SNR=5.1						
U51A	La Follette	31.01	358	P	P	18 03 02.7	+0.1
	baz=177						
U56A	King	31.01	3	P	P	18 03 03.6	+1.0
	baz=184,SNR=5.9						
HBAR	Harrisburg	31.06	347	eP	P	18 03 03.1	+0.1
	comp=Z,134nm,0.5s						
U50A	Jamestown	31.09	356	P	P	18 03 03.3	0.0
	baz=176,SNR=10						
W41B	Gary Mavity, V	31.09	345	eP	P	18 03 02.5	-0.8
	comp=Z,37nm,0.8s						
W41B	Gary Mavity, V	31.09	345	P	P	18 03 02.6	-0.7
	baz=161,SNR=22						
CLDB	Colider	31.10	121	eP	P	18 03 02.4	-1.2
WVT	Waverly	31.11	352	eP	P	18 03 02.1	-1.2
	comp=Z,80nm,0.8s						
WVT	Waverly	31.11	352	eP	P	18 03 02.2	-1.2
WVT				pmax	pmax		
	comp=Z,80nm,0.8s						
WVT	Waverly	31.11	352	P	P	18 03 02.5	-1.0
	baz=170						
U54A	Nelsons Funny	31.13	1	eP	P	18 03 04.6	+0.9
	comp=Z,47nm,1.2s						
U54A	Nelsons Funny	31.13	1	P	P	18 03 04.2	+0.5
	baz=182,SNR=5.9						
U55A	TA2, Sparta	31.13	2	P	P	18 03 04.2	+0.5
	baz=183,SNR=8.6						
HALT	Halls	31.14	349	eP	P	18 03 03.8	+0.1
	comp=Z,388nm,1.2s						
TZTN	Tazewell	31.16	358	eP	P	18 03 04.2	+0.4
	comp=Z,91nm,0.6s						
TZTN	Tazewell	31.16	358	P	P	18 03 04.1	+0.2
	baz=178,SNR=5.7						
TXAR	Lajitas Array	31.17	323	P	P	18 03 04.6	+0.4
	comp=Z,2.6nm,0.8s,baz=144,slow=8.9,SNR=22						
TXAR				LR	LR	18 15 41.0	
	comp=Z,234nm,20.5s,baz=0.0,slow=36						
TX31	Lajitas Ar. Si	31.17	323	eP	P	18 03 04.9	+0.6
	comp=Z,10nm,1.3s						
U57A	Blanch	31.17	5	P	P	18 03 04.3	+0.3
	baz=186,SNR=8.5						
WHAR	Wooly Hollow	31.21	345	eP	P	18 03 03.4	-1.0
	comp=Z,62nm,0.8s						
U58A	Oxford	31.21	6	P	P	18 03 04.7	+0.3
	baz=188						
U49A	Red Boiling Sp	31.25	355	P	P	18 03 04.6	-0.1
	baz=174,SNR=20						
U59A	Littleton	31.26	7	eP	P	18 03 05.1	+0.4
	comp=Z,58nm,1.3s						
U59A	Littleton	31.26	7	P	P	18 03 05.4	+0.6
	baz=189						
U48A	Cassie Pea, Po	31.32	354	P	P	18 03 05.1	-0.2
	baz=172,SNR=17						
GNAR	Gosnell	31.32	348	eP	P	18 03 04.4	-0.9
	comp=Z,160nm,1.0s						
U47A	Clarksville	31.34	353	P	P	18 03 04.6	-0.8
	baz=171,SNR=15						
U46A	Springville	31.38	351	P	P	18 03 05.1	-0.7
	baz=169,SNR=11						
UTMT	University of	31.48	350	eP	P	18 03 06.0	-0.7
	comp=Z,283nm,1.0s						
GLAT	Glass	31.48	350	eP	P	18 03 05.3	-1.4
	comp=Z,125nm,0.7s						
X37A	Clayton	31.51	340	eP	P	18 03 06.5	-0.4
	comp=Z,12nm,0.9s						
W39A	Magazine	31.55	342	eP	P	18 03 06.9	-0.4
	comp=Z,35nm,0.8s						
W39A	Magazine	31.55	342	P	P	18 03 07.2	-0.1
	baz=158,SNR=18						
ABTX	Abilene, Hawle	31.55	332	eP	P	18 03 07.0	-0.4
	comp=Z,16nm,1.1s						
ABTX	Abilene, Hawle	31.55	332	P	P	18 03 07.3	-0.1
	baz=146						
T53A	Wise	31.58	0	P	P	18 03 07.9	+0.3
	baz=180						
T51A	Gray	31.59	358	P	P	18 03 07.9	+0.3
	baz=178						
T54A	Tazewell	31.67	2	P	P	18 03 08.9	+0.4
	baz=182,SNR=9.0						
T50A	Nancy	31.69	357	P	P	18 03 08.4	-0.1
	baz=176,SNR=11						
PVMO	Portageville	31.70	349	eP	P	18 03 08.3	-0.3
	comp=Z,214nm,0.6s						
T52A	Hallie	31.71	359	eP	P	18 03 08.9	+0.1
	comp=Z,411nm,1.0s						
T52A	Hallie	31.71	359	P	P	18 03 09.0	+0.3
	baz=179,SNR=5.5						
T56A	Rocky Mt	31.71	4	P	P	18 03 09.5	+0.7
	baz=185,SNR=6.1						
BBSR	BB Station	31.74	30	eP	P	18 03 09.3	+0.3
	comp=Z,57nm,1.2s						
T57A	Hurt	31.74	5	eP	P	18 03 09.2	+0.2
	comp=Z,32nm,0.8s						
T57A	Hurt	31.74	5	P	P	18 03 09.6	+0.6
	baz=186,SNR=7.4						
T55A	Pulaski	31.76	3	P	P	18 03 10.1	+0.9
	baz=184,SNR=7.8						
T58A	Grand View Acr	31.76	6	P	P	18 03 09.5	+0.3
	baz=188						
T49A	Edmonton	31.82	356	eP	P	18 03 09.2	-0.4
	comp=Z,77nm,1.4s						
T49A	Edmonton	31.82	356	P	P	18 03 09.5	-0.2
	baz=174,SNR=14						
T47A	Sharon Grove	31.86	353	eP	P	18 03 09.3	-0.7
	comp=Z,65nm,0.9s						
T47A	Sharon Grove	31.86	353	P	P	18 03 09.3	-0.7
	baz=172,SNR=18						
BLA	Blacksburg	31.87	3	eP	P	18 03 10.3	+0.1
	comp=Z,31nm,0.8s						
BLA	Blacksburg	31.87	3	eP	P	18 03 10.3	+0.1
BLA				pmax	pmax		
	comp=Z,31nm,0.8s						
BLA	Blacksburg	31.87	3	P	P	18 03 10.9	+0.7
	baz=184,SNR=7.4						
T48A	Bowling Green	31.90	354	P	P	18 03 09.9	-0.4
	baz=173,SNR=16						
T59A	Double "B" Far	31.90	8	eP	P	18 03 10.9	+0.5
	comp=Z,114nm,1.6s						
T59A	Double "B" Far	31.90	8	P	P	18 03 11.1	+0.7
	baz=190						
PARMO	Parma	31.95	349	eP	P	18 03 10.3	-0.5
	comp=Z,172nm,0.7s						
T46A	Princeton	32.01	352	P	P	18 03 11.0	-0.4
	baz=170,SNR=59						
T45A	Paducah	32.10	351	eP	P	18 03 11.6	-0.6
	comp=Z,189nm,0.8s						
T45A	Paducah	32.10	351	P	P	18 03 11.4	-0.7
	baz=169,SNR=5.0						
PBMO	Poplar Bluff	32.19	348	eP	P	18 03 12.3	-0.6
	comp=Z,23nm,0.6s						
S51A	Beattyville	32.25	358	eP	P	18 03 13.2	-0.3
	comp=Z,113nm,0.8s						
S51A	Beattyville	32.25	358	P	P	18 03 13.5	0.0
	baz=178,SNR=10						
S52A	Salyersville	32.28	359	P	P	18 03 14.0	+0.2
	baz=179

baz=186
S48A Wiedeman Farm, 32.41 355 P P 18 03 13.9 -0.9
baz=174,SNR=13
S55A Lewisburg 32.42 3 P P 18 03 15.8 +0.7
baz=184,SNR=6.1
S47A Hartford 32.43 354 P P 18 03 14.1 -0.9
baz=172,SNR=18
S58A Poland Farm, P 32.47 7 eP P 18 03 15.1 -0.3
comp=Z,23nm,0.8s
S58A Poland Farm, P 32.47 7 P P 18 03 15.2 -0.3
baz=188
S49A Springfield 32.48 356 P P 18 03 15.1 -0.3
baz=175,SNR=18
S57A Dark Hollow, R 32.52 5 eP P 18 03 16.0 +0.1
comp=Z,72nm,1.6s
S57A Dark Hollow, R 32.52 5 P P 18 03 15.7 -0.2
baz=187
HHAR Hobbs 32.60 343 eP P 18 03 15.8 -0.8
comp=Z,19nm,0.8s
S46A Don Dixon Farm 32.62 352 P P 18 03 15.8 -0.9
baz=171,SNR=9.2
GO02 Mina Guanaco 32.76 158 eP P 18 03 19.0 +0.5
comp=Z,17nm,0.9s
R54A Victor 32.81 2 P P 18 03 18.6 +0.2
baz=183
R58B Mineral 32.84 7 eP P 18 03 19.4 +0.8
comp=Z,20nm,0.8s
R58B Mineral 32.84 7 P P 18 03 19.6 +1.0
baz=189
TUL1 Leonard 32.85 340 eP P 18 03 17.5 -1.3
comp=Z,20nm,0.6s
TUL1 Leonard 32.85 340 P P 18 03 18.0 -0.7
baz=155
S44A Carbondale 32.86 350 P P 18 03 18.2 -0.6
baz=168,SNR=24
SIUC Southern Illin 32.88 350 eP P 18 03 18.2 -0.7
comp=Z,107nm,0.9s
USIN University of 32.89 353 eP P 18 03 18.5 -0.6
comp=Z,161nm,0.8s
R51A Hillsboro 32.91 359 P P 18 03 19.3 +0.1
baz=178,SNR=12
R50A Paris 32.92 357 P P 18 03 19.3 0.0
baz=177,SNR=6.7
R53A Hurricane 32.93 1 eP P 18 03 19.6 +0.2
comp=Z,37nm,0.9s
R53A Hurricane 32.93 1 P P 18 03 19.4 0.0
baz=181,SNR=5.2
WMOK Wichita Mounta 32.95 335 eP P 18 03 18.9 -0.8
comp=Z,22nm,0.9s
WMOK Wichita Mounta 32.95 335 eP P 18 03 18.9 -0.8
WMOK pmax pmax
comp=Z,22nm,0.9s
WMOK Wichita Mounta 32.95 335 P P 18 03 19.1 -0.6
baz=149,SNR=23
R49A Shelbyville 32.97 356 P P 18 03 19.4 -0.4
baz=175,SNR=13
WCI Wyandotte Cave 33.00 355 eP P 18 03 19.4 -0.5
comp=Z,85nm,1.0s
WCI Wyandotte Cave 33.00 355 eP P 18 03 19.5 -0.5
WCI pmax pmax
comp=Z,85nm,1.0s
WCI Wyandotte Cave 33.00 355 P P 18 03 19.3 -0.8
baz=173
R47A Wooly Knot Far 33.09 354 P P 18 03 19.8 -1.0
baz=173,SNR=15
R57A Stanardsville 33.10 6 P P 18 03 21.2 +0.3
baz=188
R46A Gibon Southern 33.12 353 P P 18 03 20.4 -0.6
baz=171,SNR=11
R48A Northridge Ran 33.13 355 P P 18 03 20.7 -0.5
baz=174
R58A Rapidan 33.16 7 P P 18 03 22.1 +0.7
baz=188,SNR=8.6
R45A Skylar, Fairfi 33.30 352 P P 18 03 22.2 -0.4
baz=170,SNR=25
FVM French Village 33.36 349 eP P 18 03 22.0 -1.2
FVM French Village 33.36 349 eP P 18 03 22.0 -1.2
FVM pmax pmax
comp=Z,56nm,1.0s
CLNB Carlsbad 33.45 326 eP P 18 03 24.3 +0.1
Q50A Georgetown 33.46 358 P P 18 03 23.8 -0.3
baz=178
Q53A Leroy 33.47 1 P P 18 03 24.5 +0.4
baz=182,SNR=8.8
Q52A Bidwell 33.56 0 P P 18 03 24.9 0.0
baz=181,SNR=8.8
CCM Cathedral Cave 33.59 348 eP P 18 03 24.2 -1.0
comp=Z,98nm,0.8s
CCM Cathedral Cave 33.59 348 eP P 18 03 24.2 -1.0
CCM pmax pmax
comp=Z,98nm,0.8s
CCM Cathedral Cave 33.59 348 P P 18 03 24.3 -0.9
baz=164
Q54A Coxs Mills 33.62 2 eP P 18 03 25.9 +0.5
comp=Z,29nm,1.0s
Q54A Coxs Mills 33.62 2 P P 18 03 25.5 +0.1
baz=183
Q51A Peebles 33.63 359 eP P 18 03 25.3 -0.3
comp=Z,62nm,1.0s
Q51A Peebles 33.63 359 P P 18 03 25.5 0.0
baz=179,SNR=9.1
Q48A North Vernon 33.65 356 P P 18 03 24.9 -0.7
baz=174,SNR=10
Q49A Aurora 33.66 357 P P 18 03 25.3 -0.5
baz=176,SNR=7.9
Q55A Buckhannon 33.67 4 P P 18 03 27.0 +1.1
baz=185,SNR=15
GDL2 Guadalupe Moun 33.68 325 eP P 18 03 27.1 +0.9
OLIL Olney 33.70 352 eP P 18 03 25.5 -0.7
comp=Z,174nm,0.8s
Q47A Bedord North L 33.71 355 P P 18 03 25.5 -0.7
baz=173,SNR=13
Q57A Strasburg 33.84 6 P P 18 03 28.0 +0.7
baz=188
Q45A Warren Harvey, 33.87 352 P P 18 03 27.1 -0.5
baz=170,SNR=25
Q59A Harwood 33.89 8 P P 18 03 27.3 -0.4
baz=191
Q46A CEJHS Indians, 33.90 353 P P 18 03 26.8 -1.0
baz=172
MNTX Cornudas Mount 33.90 324 eP P 18 03 28.2 +0.2
comp=Z,33nm,1.3s
MNTX Cornudas Mount 33.90 324 P P 18 03 28.5 +0.5
baz=136,SNR=28
SLM Saint Louis 33.95 349 eP P 18 03 27.6 -0.7
comp=Z,131nm,0.7s
SLM Saint Louis 33.95 349 eP P 18 03 27.6 -0.7
SLM pmax pmax
comp=Z,131nm,0.7s
BLO Bloomington 33.95 354 eP P 18 03 27.5 -0.8
comp=Z,68nm,0.7s
BLO Bloomington 33.95 354 eP P 18 03 27.5 -0.8
BLO pmax pmax
comp=Z,68nm,0.7s
P51A Williamsport 34.08 359 eP P 18 03 28.8 -0.6
comp=Z,21nm,0.8s
P51A Williamsport 34.08 359 P P 18 03 28.9 -0.5
baz=179
P53A Whipple 34.10 2 eP P 18 03 29.5 -0.1
comp=Z,43nm,1.1s
P53A Whipple 34.10 2 P P 18 03 29.8 +0.2
baz=182,SNR=6.4
Q61A Milford 34.11 10 P P 18 03 29.0 -0.7
baz=193
P48A Milroy 34.15 356 P P 18 03 29.0 -1.0
baz=175,SNR=14
MSTX Muleshoe 34.18 329 eP P 18 03 30.5 0.0
comp=Z,14nm,0.8s
MSTX ePP PnPn 18 04 42.1 -2.4
P49A Miami Univ. Ec 34.18 357 P P 18 03 29.4 -1.0
baz=176,SNR=6.4
P55A Reedsville 34.19 4 P P 18 03 30.9 +0.4
baz=185
P50A Jamestown 34.22 358 P P 18 03 30.0 -0.7
baz=178,SNR=5.5
P52A Corning 34.23 1 P P 18 03 30.5 -0.3
baz=181
P47A Martinsville 34.24 355 P P 18 03 29.9 -0.9
baz=174,SNR=8.8
P56A Dayton Farm, R 34.27 5 P P 18 03 32.1 +1.1
baz=187,SNR=11
P57A Homestead Farm 34.33 6 P P 18 03 32.8 +1.3
baz=188
MCWV Mont Chateau 34.34 4 eP P 18 03 32.7 +1.0
comp=Z,11nm,0.8s
AMTX Amarillo 34.37 332 eP P 18 03 32.2 +0.1
comp=Z,20nm,0.8s
AMTX Amarillo 34.37 332 P P 18 03 32.0 -0.1
baz=145
SDMD Soldier's Deli 34.40 8 eP P 18 03 32.4 +0.3
comp=Z,15nm,0.9s
P45A Graceland, Par 34.44 353 eP P 18 03 31.4 -1.1
comp=Z,86nm,0.8s
P45A Graceland, Par 34.44 353 P P 18 03 31.6 -1.0
baz=171,SNR=14
U32A Winter Ranch, 34.46 336 eP P 18 03 32.3 -0.5
comp=Z,104nm,1.0s
P46A Rosedale 34.47 354 P P 18 03 31.7 -1.1
baz=172,SNR=10
P59A Jarrettsville 34.65 8 P P 18 03 35.4 +1.1
baz=191
O52A Adamsville 34.72 1 eP P 18 03 34.2 -0.7
comp=Z,23nm,1.0s
O52A Adamsville 34.72 1 P P 18 03 34.4 -0.5
baz=181
O51A Pataskala 34.74 360 P P 18 03 34.8 -0.3
baz=180,SNR=8.1
O50A Cable 34.75 359 P P 18 03 34.7 -0.5
baz=178,SNR=5.5
GO03 Copiap 34.76 161 eP P 18 03 35.5 0.0
comp=Z,8.6nm,0.8s
P43A Skaggs, Pawnee 34.81 351 P P 18 03 35.1 -0.6
baz=168,SNR=19
O49A Covington 34.82 358 eP P 18 03 34.6 -1.2
comp=Z,27nm,0.8s
O49A Covington 34.82 358 P P 18 03 34.9 -0.9
baz=177,SNR=6.0
ACSO Alum Creek Sta 34.83 359 eP P 18 03 35.3 -0.6
comp=Z,28nm,0.8s
ACSO Alum Creek Sta 34.83 359 P P 18 03 35.6 -0.3
baz=179,SNR=5.5
O54A Avella 34.83 3 P P 18 03 35.8 -0.2
baz=184
O53A New Philadelph 34.86 2 P P 18 03 36.2 0.0
baz=182
O55A Ligonier 34.92 4 P P 18 03 36.6 -0.1
baz=186
O48A Farmland 34.93 357 P P 18 03 35.7 -1.0
baz=176,SNR=18
O47A Sheridan 34.98 355 P P 18 03 35.9 -1.4
baz=174,SNR=5.8
MVL Millersville 35.05 8 eP P 18 03 38.7 +0.9
comp=Z,55nm,1.3s
O56A Blue Knob Stat 35.05 5 eP P 18 03 38.7 +0.8
comp=Z,25nm,0.9s
O56A Blue Knob Stat 35.05 5 P P 18 03 38.7 +0.8
baz=187,SNR=6.0
O57A Amberson 35.09 7 P P 18 03 38.9 +0.8
baz=189
PSUB Penn St. - Bra 35.11 10 eP P 18 03 37.5 -0.8
comp=Z,111nm,1.5s
O44A Mansfield 35.15 352 P P 18 03 37.6 -1.1
baz=170
O45A Potomac 35.15 353 P P 18 03 37.3 -1.4
baz=171,SNR=5.1
SFIN Lafayette 35.21 354 eP P 18 03 37.2 -1.9
comp=Z,52nm,0.8s
SFIN Lafayette 35.21 354 P P 18 03 37.7 -1.4
baz=172,SNR=6.7
PAGS Pennsylvania G 35.22 8 eP P 18 03 39.9 +0.7
comp=Z,43nm,0.9s
N50A Nevada 35.37 359 P P 18 03 39.8 -0.8
baz=179
N53A Lisbon 35.43 2 eP P 18 03 40.7 -0.4
comp=Z,72nm,1.8s
N53A Lisbon 35.43 2 P P 18 03 40.6 -0.5
baz=183
SSPA Standing Stone 35.48 6 eP P 18 03 41.8 +0.3
comp=Z,29nm,0.9s
SSPA Standing Stone 35.48 6 P P 18 03 42.0 +0.4
baz=188
O60A Telford 35.50 9 P P 18 03 42.4 +0.7
baz=192
N51A Ashland 35.51 0 eP P 18 03 40.4 -1.3
comp=Z,21nm,0.8s
N51A Ashland 35.51 0 P P 18 03 41.2 -0.6
baz=180
N55A Marion Center 35.52 5 eP P 18 03 41.9 0.0
comp=Z,22nm,0.9s
N55A Marion Center 35.52 5 P P 18 03 42.0 0.0
baz=186
N48A Decatur 35.52 357 P P 18 03 40.7 -1.1
baz=176,SNR=8.5
N49A Columbus Grove 35.54 358 eP P 18 03 41.0 -1.1
comp=Z,33nm,1.1s
N49A Columbus Grove 35.54 358 P P 18 03 41.1 -0.9
baz=177
N47A Urbana 35.58 356 P P 18 03 41.1 -1.3
baz=175,SNR=5.6
N54A Moraine State 35.63 3 eP P 18 03 42.3 -0.5
comp=Z,68nm,1.7s
N54A Moraine State 35.63 3 P P 18 03 42.6 -0.2
baz=184
N57A Milroy 35.63 7 P P 18 03 42.8 -0.1
baz=189
HDIL Hopedale 35.66 351 eP P 18 03 41.9 -1.2
comp=Z,144nm,0.7s
HDIL Hopedale 35.66 351 P P 18 03 41.9 -1.2
baz=169,SNR=12
N46A Monticello 35.68 355 P P 18 03 42.2 -1.1
baz=173
N45A Kentland 35.72 354 P P 18 03 41.8 -1.7
baz=172,SNR=12
N56A West Decatur 35.72 6 P P 18 03 43.5 -0.1
baz=187
N44A Piper City 35.74 353 P P 18 03 41.9 -1.9
baz=171,SNR=13
SRIG Santa Rosalia 35.77 311 eP P 18 03 44.4 +0.2
comp=Z,32nm,0.9s
HSIG 35.78 315 eP P 18 03 44.4 +0.1
comp=Z,9.5nm,0.6s
LUPA Lehigh Univers 35.78 9 eP P 18 03 45.7 +1.6
comp=Z,10nm,1.9s
121A Cookes Peak, D 35.93 322 P P 18 03 48.0 +2.3
baz=134,SNR=26
LCO Las Campanas 35.93 162 eP P 18 03 43.8 -2.0
M50A Fremont 36.00 359 eP P 18 03 44.7 -1.2
comp=Z,21nm,0.7s
KSU1 Kansas State U 36.02 341 P P 18 03 45.3 -0.9
baz=156
N43A Stutzman Famil 36.02 351 P P 18 03 44.7 -1.4
baz=169,SNR=9.8
N59A State Game Lan 36.03 9 eP P 18 03 47.3 +1.0
comp=Z,125nm,1.9s
N59A State Game Lan 36.03 9 P P 18 03 45.4 -0.9
baz=192
M47A Cromwell 36.05 356 P P 18 03 45.4 -1.1
baz=175
M53A WI Miller and 36.07 2 P P 18 03 46.1 -0.5
baz=183
N41A Harden Midland 36.08 349 eP P 18 03 45.5 -1.2
comp=Z,166nm,0.8s
N41A Harden Midland 36.08 349 P P 18 03 45.1 -1.5
baz=166,SNR=6.0
M49A Liberty Center 36.09 358 P P 18 03 46.0 -0.7
baz=178
319A Douglas 36.10 319 eP P 18 03 47.8 +0.7
comp=Z,56nm,1.3s
M48A Edgerton 36.13 357 eP P 18 03 45.6 -1.5
comp=Z,39nm,0.3s
M52A Chesterland 36.15 2 eP P 18 03 46.2 -1.1
comp=Z,30nm,1.0s
M46A Old House Fiel 36.16 355 eP P 18 03 45.7 -1.6
comp=Z,42nm,1.0s
M46A Old House Fiel 36.16 355 P P 18 03 45.8 -1.6
baz=174
M54A Oil Creek Stat 36.19 4 eP P 18 03 46.6 -1.1
comp=Z,60nm,1.6s
M54A Oil Creek Stat 36.19 4 P P 18 03 47.2 -0.4
baz=185
CPNY Central Park 36.22 11 eP P 18 03 47.2 -0.7
comp=Z,106nm,1.6s
M55A Ridgway 36.22 5 P P 18 03 47.8 -0.1
baz=186
M45A Boilermakers S 36.22 354 P P 18 03 46.3 -1.6
baz=172
M56A Emporium 36.29 6 P P 18 03 48.6 +0.2
baz=187,SNR=8.4
ALLY Alegheny Colle 36.31 3 eP P 18 03 47.3 -1.3
comp=Z,135nm,2.0s
M44A Midewin, Midew 36.31 353 eP P 18 03 46.4 -2.2
comp=Z,94nm,1.4s
M44A Midewin, Midew 36.31 353 P P 18 03 46.9 -1.7
baz=171
PLIO Pelee Island, 36.34 360 P P 18 03 48.0 -0.8
baz=180
ODNJ Ogdensburg 36.38 10 eP P 18 03 50.5 +1.2
comp=Z,138nm,1.8s
N40A Mertquake, Sal 36.39 348 P P 18 03 47.7 -1.6
baz=165,SNR=6.5
BNM Barren Site 36.39 325 eP P 18 03 51.0 +1.3
M43A Waltham Townsh 36.48 352 P P 18 03 48.4 -1.7
baz=169,SNR=14
L48A N Adams 36.57 358 P P 18 03 49.5 -1.3
baz=177
LENM Lemitar 36.60 325 eP P 18 03 52.8 +1.3
L53A Girard 36.60 3 P P 18 03 50.3 -0.8
baz=184
L47A Sherwood 36.64 357 P P 18 03 50.1 -1.3
baz=176,SNR=8.4
KSPA Keystone Colle 36.66 9 eP P 18 03 52.2 +0.7
comp=Z,48nm,0.9s
M41A Milan 36.67 350 P P 18 03 50.1 -1.5
baz=167
AQDB Aquidauana 36.75 135 eP P 18 03 51.6 -1.0
L46A Eue Claire 36.75 355 eP P 18 03 51.2 -1.2
comp=Z,56nm,0.9s
L46A Eue Claire 36.75 355 P P 18 03 50.3 -2.1
baz=174
ERPA Erie 36.78 3 eP P 18 03 51.5 -1.2
comp=Z,158nm,2.0s
CBKS Cedar Bluff 36.86 337 eP P 18 03 53.4 0.0
comp=Z,70nm,0.9s
CBKS Cedar Bluff 36.86 337 eP P 18 03 53.4 0.0
CBKS pmax pmax
comp=Z,71nm,0.9s
CBKS Cedar Bluff 36.86 337 P P 18 03 53.5 0.0
baz=151
LAZ Ladron 36.87 325 eP P 18 03 55.2 +1.5
ANMO Albuquerque 36.88 326 eP P 18 03 54.6 +0.8
comp=Z,28nm,1.0s
ANMO Albuquerque 36.88 326 eP P 18 03 52.2 -1.6
ANMO pmax pmax
comp=Z,32nm,1.0s
ANMO Albuquerque 36.88 326 P P 18 03 55.4 +1.6
baz=138
TASM ASL Pad, Albuq 36.88 326 P P 18 03 55.3 +1.5
baz=138,SNR=23
TASM ASL Pad, Albuq 36.88 326 P P 18 03 55.4 +1.5
baz=138,SNR=17
L54A Sinclairville 36.94 4 P P 18 03 53.7 -0.3
baz=186
L55A Hinsdale 36.96 5 P P 18 03 54.3 +0.1
baz=187,SNR=5.7
GO04 Tololo Observa 36.99 163 eP P 18 03 56.1 +1.3
comp=Z,30nm,1.1s
L42A Oliver, Polo 37.14 351 eP P 18 03 53.9 -1.8
comp=Z,79nm,0.9s
L42A Oliver, Polo 37.14 351 P P 18 03 54.1 -1.5
baz=168,SNR=18
KSCT Kent School, K 37.21 11 eP P 18 03 56.7 +0.4
comp=Z,180nm,1.8s
BINY Binghamton 37.26 8 eP P 18 03 57.4 +0.7
comp=Z,40nm,0.9s
BINY Binghamton 37.26 8 P P 18 03 57.5 +0.7
baz=191,SNR=5.0
K47A Vermontville 37.32 357 P P 18 03 55.5 -1.8
baz=176,SNR=8.8
K54A Basiliko Farm, 37.36 5 P P 18 03 57.5 -0.1
baz=186
K50A Casco 37.37 360 eP P 18 03 56.8 -0.8
comp=Z,20nm,0.8s
K46A Dorr 37.39 356 P P 18 03 55.7 -2.0
baz=175
K48A Perry 37.42 358 P P 18 03 56.9 -1.2
baz=178,SNR=5.9
L40A Anamosa 37.46 349 eP P 18 03 56.8 -1.6
comp=Z,80nm,0.9s
L40A Anamosa 37.46 349 P P 18 03 57.2 -1.2
baz=166,SNR=19
T25A Trinidad 37.50 331 P P 18 04 00.7 +1.6
baz=143,SNR=26
K55A Perry 37.53 5 P P 18 03 58.8 -0.3
baz=187,SNR=9.5
MMNY Mt. Morris Dam 37.55 6 eP P 18 03 59.1 0.0
comp=Z,34nm,0.8s
SMTB Santa Maria do 37.59 112 eP P 18 03 60.0 0.0
K43A Burlington 37.64 353 eP P 18 03 57.8 -2.2
comp=Z,60nm,1.1s
K43A Burlington 37.64 353 P P 18 03 58.0 -1.9
baz=171
TUC Tucson 37.68 319 eP P 18 04 01.2 +0.7
comp=Z,20nm,0.9s
TUC Tucson 37.68 319 eP P 18 04 01.2 +0.7
TUC pmax pmax
comp=Z,20nm,0.9s
TUC Tucson 37.68 319 P P 18 04 01.7 +1.2
baz=130
SCIA State Center 37.71 347 eP P 18 03 59.4 -1.2
comp=Z,59nm,0.8s
SCIA State Center 37.71 347 P P 18 03 59.7 -0.9
baz=163
C2SB Chapadao do Su 37.79 130 eP P 18 04 01.6 +0.1
K42A Prairie Point, 37.85 352 P P 18 03 59.9 -1.8
baz=169,SNR=7.3
J52A Paris 37.88 2 P P 18 04 00.9 -1.1
baz=184
J47A Sunmer 37.88 357 eP P 18 04 01.0 -0.9
comp=Z,67nm,1.5s
J47A Sunmer 37.88 357 P P 18 04 00.6 -1.3
baz=176
J48A Bridge Port 37.90 359 eP P 18 04 00.2 -2.0
comp=Z,96nm,1.7s
MEDO Medina 37.93 5 eP P 18 04 01.9 -0.4
comp=Z,26nm,0.9s
MEDO Medina 37.93 5 P P 18 04 02.6 +0.2
baz=187
QUA2 Belchertown 37.98 12 eP P 18 04 03.3 +0.6
comp=Z,83nm,1.5s
J54A Appleton 38.02 5 P P 18 04 03.1 -0.1
baz=186
J55A Hilton 38.09 6 eP P 18 04 02.2 -1.5
comp=Z,18nm,0.8s
J55A Hilton 38.09 6 P P 18 04 03.3 -0.4
baz=188
JFWS Jewell Farm 38.12 351 eP P 18 04 02.4 -1.6
comp=Z,29nm,0.8s
JFWS Jewell Farm 38.12 351 eP P 18 04 02.4 -1.6
JFWS pmax pmax
comp=Z,29nm,0.8s
JFWS Jewell Farm 38.12 351 P P 18 04 02.4 -1.6
baz=168,SNR=5.7
PEXB Peixe 38.19 117 eP P 18 04 04.5 -0.5
KSCO Kaye Shedlock' 38.20 334 eP P 18 04 05.5 +0.6
comp=Z,62nm,0.9s
KSCO Kaye Shedlock' 38.20 334 P P 18 04 05.9 +1.0
baz=147
ACTO Acton 38.26 3 P P 18 04 04.5 -0.7
baz=184
I51A Listowel 38.42 2 P P 18 04 05.5 -1.0
baz=183
SDCO Great Sand Dun 38.51 330 eP P 18 04 09.0 +1.3
comp=Z,48nm,1.0s
SDCO Great Sand Dun 38.51 330 P P 18 04 09.4 +1.7
baz=142,SNR=53
I49A Point Hope 38.53 360 eP P 18 04 06.7 -0.7
comp=Z,51nm,1.1s
BGNE Belgrade 38.60 341 eP P 18 04 07.2 -0.9
comp=Z,38nm,0.6s
X18A Snowflake 38.61 323 eP P 18 04 09.5 +1.1
DRWO Darlington Wes 38.61 4 P P 18 04 07.5 -0.5
baz=186
BASO Ashfield 38.61 1 P P 18 04 07.6 -0.5
baz=182
I46A Reed City 38.62 357 P P 18 04 07.3 -0.9
baz=176
I47A Gladwin 38.65 358 eP P 18 04 06.9 -1.4
comp=Z,169nm,1.9s
I47A Gladwin 38.65 358 P P 18 04 07.0 -1.4
baz=177
BWLO Walkerton 38.73 2 P P 18 04 08.5 -0.6
baz=182
ACCN Adirondack Com 38.78 10 eP P 18 04 10.5 +1.0
comp=Z,221nm,1.9s
214A Organ Pipe Nat 38.81 317 P P 18 04 11.6 +1.6
baz=127,SNR=22
PECO Prince Edward 38.84 6 eP P 18 04 09.8 -0.1
comp=Z,31nm,0.8s
PECO Prince Edward 38.84 6 P P 18 04 09.5 -0.4
baz=189
W18A Petrified Fore 38.88 323 eP P 18 04 12.5 +1.7
comp=Z,71nm,1.0s
W18A Petrified Fore 38.88 323 P P 18 04 12.7 +1.9

baz=134,SNR=8.9
I42A Draeger Farm, 38.88 353 eP P 18 04 08.3 -2.1
comp=Z,65nm,1.0s
I42A Draeger Farm, 38.88 353 P P 18 04 09.1 -1.3
baz=170,SNR=10
I55A Frankford 39.04 6 P P 18 04 10.9 -0.7
baz=188
CFA Coronel Fontan 39.12 160 P P 18 04 12.8 +0.3
comp=Z,7.5nm,0.9s,baz=343,slow=9.3,SNR=9.6
S22A 4UR Ranch, Cre 39.18 329 eP P 18 04 14.6 +1.3
comp=Z,20nm,0.8s
S22A 4UR Ranch, Cre 39.18 329 P P 18 04 14.7 +1.3
baz=140,SNR=23
I41A Arkdale 39.18 352 eP P 18 04 11.3 -1.5
comp=Z,37nm,0.8s
I41A Arkdale 39.18 352 P P 18 04 11.3 -1.5
baz=169,SNR=5.2
H46A Fife Lake 39.20 357 P P 18 04 11.6 -1.4
baz=176
NCB Newcomb 39.26 10 eP P 18 04 13.8 +0.3
comp=Z,80nm,2.0s
Q24A Divide 39.30 332 eP P 18 04 14.7 +0.3
comp=Z,28nm,1.1s
Q24A Divide 39.30 332 P P 18 04 15.6 +1.3
baz=143,SNR=8.7
H43A Windswept, Lux 39.33 354 eP P 18 04 12.2 -1.9
comp=Z,114nm,1.1s
H43A Windswept, Lux 39.33 354 P P 18 04 12.6 -1.5
baz=172,SNR=15
DELO Deloro Mine 39.35 6 eP P 18 04 14.0 -0.3
comp=Z,67nm,1.6s
DELO Deloro Mine 39.35 6 P P 18 04 13.4 -0.8
baz=188
HNH Hanover 39.36 12 eP P 18 04 14.8 +0.5
comp=Z,126nm,1.8s
H55A Tweed 39.43 6 P P 18 04 14.4 -0.4
baz=188,SNR=6.9
X16A Lo Mia Camp, P 39.45 321 eP P 18 04 17.0 +1.5
comp=Z,19nm,0.9s
SADO Sadowa 39.47 4 eP P 18 04 13.8 -1.5
comp=Z,50nm,1.7s
ROC1 El Roble 39.57 165 eP P 18 04 16.0 -0.5
H56A Elgin 39.57 7 P P 18 04 16.2 +0.1
baz=190,SNR=11
OGNE Ogallala 39.59 337 eP P 18 04 17.4 +0.9
comp=Z,125nm,0.8s
OGNE Ogallala 39.59 337 P P 18 04 17.2 +0.7
baz=149,SNR=5.9
MVCO Mesa Verde 39.66 327 eP P 18 04 18.6 +1.3
comp=Z,52nm,0.9s
MVCO Mesa Verde 39.66 327 P P 18 04 18.8 +1.5
baz=137,SNR=22
G45A Suttons Bay 39.72 357 eP P 18 04 15.2 -2.1
comp=Z,39nm,0.9s
G45A Suttons Bay 39.72 357 P P 18 04 16.8 -0.6
baz=175
CPUP Villa Florida 39.80 143 P P 18 04 16.8 -1.5
comp=Z,1.7nm,0.8s,baz=299,slow=6.5,SNR=3.4
CPUP LR LR 18 21 50.6
comp=Z,453nm,20.0s,baz=326,slow=38
PEL Peldehue 39.82 164 eP P 18 04 19.5 +1.1
comp=Z,58nm,1.6s
TOBO Tobermory, Bru 39.83 1 P P 18 04 17.2 -1.0
baz=182
LONY Lake Ozonia 39.83 9 eP P 18 04 18.3 0.0
comp=Z,28nm,1.0s
LONY Lake Ozonia 39.83 9 P P 18 04 17.8 -0.5
baz=192
G53A Haliburton 39.86 4 P P 18 04 18.0 -0.6
baz=186
VT1 Waterbury 39.87 11 eP P 18 04 19.2 +0.6
comp=Z,74nm,1.2s
PLVO Plevna 39.92 6 eP P 18 04 18.5 -0.5
comp=Z,32nm,0.8s
PLVO Plevna 39.92 6 P P 18 04 18.9 -0.1
baz=189
113A Mohawk Valley, 39.94 317 eP P 18 04 20.5 +1.1
comp=Z,44nm,1.1s
LBNH Lisbon 39.94 12 eP P 18 04 19.7 +0.4
comp=Z,174nm,2.0s
LBNH Lisbon 39.94 12 P P 18 04 20.4 +1.1
baz=197
BDFB Brasilia 40.02 122 P P 18 04 19.7 -0.7
comp=Z,4.0nm,0.7s,baz=292,slow=12,SNR=4.5
BDFB LR LR 18 21 22.0
comp=Z,408nm,18.4s,baz=272,slow=37
BDFB Brasilia 40.02 122 eP P 18 04 19.0 -1.4
comp=Z,16nm,1.4s
BDFB Brasilia 40.02 122 eP P 18 04 19.0 -1.4
BDFB pmax pmax
comp=Z,16nm,1.4s
BUKO Buck Lake 40.13 3 P P 18 04 19.8 -0.9
baz=185
WUAZ Wupatki 40.14 322 eP P 18 04 22.7 +1.5
comp=Z,36nm,0.9s
WUAZ Wupatki 40.14 322 P P 18 04 23.0 +1.8
baz=132,SNR=16
Y14A Wickenburg 40.15 319 eP P 18 04 22.2 +1.0
comp=Z,22nm,1.0s
G55A Calabogie 40.17 6 P P 18 04 20.9 -0.2
baz=189,SNR=8.4
ISCO Idaho Springs 40.18 332 eP P 18 04 22.3 +0.6
comp=Z,18nm,0.8s
ISCO Idaho Springs 40.18 332 eP P 18 04 22.3 +0.6
ISCO pmax pmax
comp=Z,18nm,0.8s
ISCO Idaho Springs 40.18 332 P P 18 04 23.0 +1.3
baz=143,SNR=20
FRNY Flat Rock 40.20 10 eP P 18 04 21.8 +0.5
comp=Z,67nm,1.7s
ITRB Iturama 40.24 129 eP P 18 04 21.2 -0.8
ECSD EROS Data Cent 40.27 344 eP P 18 04 20.5 -1.4
comp=Z,41nm,1.4s
ECSD EROS Data Cent 40.27 344 P P 18 04 20.6 -1.4
baz=158,SNR=7.9
SMCO Snowmass 40.35 330 eP P 18 04 24.1 +0.9
comp=Z,35nm,0.8s
F45A CMU Biological 40.35 357 P P 18 04 20.9 -1.7
baz=176
PV01 Paradox Valley 40.38 328 eP P 18 04 24.2 +0.9
comp=Z,24nm,1.1s
G40A Rib Lake 40.41 352 eP P 18 04 21.7 -1.4
comp=Z,36nm,1.1s
G40A Rib Lake 40.41 352 P P 18 04 21.6 -1.5
baz=168,SNR=11
F52A Sundridge 40.48 4 P P 18 04 22.8 -0.9
baz=185
ORIO Orleans, Innes 40.51 8 P P 18 04 23.4 -0.5
baz=191
PV02 Paradox Valley 40.52 328 eP P 18 04 26.0 +1.6
comp=Z,46nm,0.8s
PV13 Radium Mtn., P 40.53 328 eP P 18 04 25.3 +0.8
comp=Z,55nm,0.8s
PEMO Pembroke 40.53 6 P P 18 04 23.4 -0.6
baz=188
G39A Holcombe 40.58 351 P P 18 04 23.0 -1.4
baz=167,SNR=19
F51A Arnstein 40.59 3 P P 18 04 22.8 -1.7
baz=184
PV03 Paradox Valley 40.62 328 eP P 18 04 26.3 +1.1
comp=Z,44nm,0.8s
PV05 Paradox Valley 40.62 327 eP P 18 04 25.3 +0.1
comp=Z,34nm,0.8s
PV12 Saucer Basin, 40.64 328 eP P 18 04 26.3 +0.9
comp=Z,64nm,0.8s
PV18 Skein Mesa, Pa 40.64 328 eP P 18 04 26.2 +0.8
comp=Z,49nm,0.9s
PV07 Paradox Valley 40.65 328 eP P 18 04 26.5 +1.1
comp=Z,36nm,0.9s
PV11 David Mesa, Pa 40.66 328 eP P 18 04 26.9 +1.4
comp=Z,56nm,0.9s
PV16 Nyswonger Mesa 40.69 328 eP P 18 04 26.8 +1.0
comp=Z,55nm,1.2s
PV17 East Wray Mesa 40.69 328 eP P 18 04 26.5 +0.7
comp=Z,54nm,0.9s
PV19 Morning Glory 40.73 328 eP P 18 04 26.9 +0.8
comp=Z,25nm,0.8s
ALGO Algonquin Park 40.73 5 P P 18 04 24.9 -0.8
baz=187,SNR=6.0
PV20 West Nyswonger 40.74 328 eP P 18 04 27.1 +0.8
comp=Z,25nm,0.9s
PV04 Paradox Valley 40.75 328 eP P 18 04 26.9 +0.7
comp=Z,31nm,0.9s
F55A Otter Lake 40.78 7 P P 18 04 25.6 -0.6
baz=190,SNR=5.3
PV22 Blue Mesa, Par 40.79 328 eP P 18 04 27.2 +0.6
comp=Z,15nm,0.8s
PV14 Lion Creek, Pa 40.80 328 eP P 18 04 27.4 +0.7
comp=Z,34nm,1.0s
SPMN Marine on St. 40.81 349 eP P 18 04 24.4 -2.0
comp=Z,50nm,0.8s
SPMN Marine on St. 40.81 349 P P 18 04 24.7 -1.6
baz=164,SNR=8.4
PV10 Paradox Valley 40.81 328 eP P 18 04 26.9 +0.1
comp=Z,31nm,0.9s
GLA Glamis 40.83 317 eP P 18 04 27.8 +1.0
comp=Z,42nm,1.0s
GLA Glamis 40.83 317 eP P 18 04 27.8 +1.0
GLA pmax pmax
comp=Z,42nm,1.0s
GLA Glamis 40.83 317 P P 18 04 28.2 +1.4
baz=126,SNR=18
PV23 Carpenter Ridg 40.85 328 eP P 18 04 28.0 +0.8
comp=Z,24nm,0.9s
MOQ Mont Orford 40.91 11 eP P 18 04 27.1 -0.1
PV21 Cone Mtn., Par 40.91 328 eP P 18 04 28.2 +0.6
comp=Z,8.5nm,0.8s
PV09 Paradox Valley 40.95 328 eP P 18 04 28.7 +0.7
E46A Sault Ste Mari 40.98 358 eP P 18 04 28.6 +0.8
comp=Z,54nm,1.8s
E52A Mattawa 41.02 4 P P 18 04 26.2 -1.9
baz=186
Y12C Blythe 41.03 318 eP P 18 04 29.1 +0.6
comp=Z,19nm,0.9s
Y12C Blythe 41.03 318 P P 18 04 29.6 +1.2
baz=127,SNR=5.3
F40A Park Falls 41.04 352 P P 18 04 26.7 -1.6
baz=169,SNR=6.9
E50A Wahnapitae 41.04 2 P P 18 04 26.9 -1.4
baz=183
E47A Iron Bridge 41.05 359 P P 18 04 27.4 -0.9
baz=179,SNR=7.0
E48A Lockeyer 41.07 0 P P 18 04 27.5 -1.0
baz=181,SNR=8.9
COWI Conover 41.09 353 eP P 18 04 27.1 -1.6
comp=Z,17nm,1.0s
PDMCI Parker Dam,Lak 41.11 319 P P 18 04 30.2 +1.2
baz=128
E43A Lone Tree Farm 41.15 355 eP P 18 04 28.0 -1.1
comp=Z,48nm,1.3s
E43A Lone Tree Farm 41.15 355 P P 18 04 27.8 -1.3
baz=173,SNR=12
F39A Loretta 41.15 351 P P 18 04 27.5 -1.7
baz=167,SNR=5.2
E53A Dumoine, Ponti 41.19 5 P P 18 04 28.3 -1.2
baz=188
N23A Red Feather La 41.21 333 eP P 18 04 30.6 +0.5
comp=Z,28nm,1.1s
N23A Red Feather La 41.21 333 P P 18 04 31.2 +1.2
baz=143,SNR=14
E51A G1948 Merrick 41.21 3 P P 18 04 28.8 -0.9
baz=185,SNR=8.1
F37A Hinrichs Farm, 41.25 349 P P 18 04 28.4 -1.7
baz=165
GO05 Huala 41.28 167 eP P 18 04 29.9 -0.5
comp=Z,21nm,0.9s
E54A Lac Daplat, Po 41.29 6 P P 18 04 29.4 -0.9
baz=188,SNR=5.1
U15A North Rim 41.30 323 eP P 18 04 32.2 +1.3
comp=Z,27nm,1.1s
E44A Grand Marais A 41.31 357 eP P 18 04 29.1 -1.4
comp=Z,105nm,1.4s
E44A Grand Marais A 41.31 357 P P 18 04 29.8 -0.7
baz=175
PHWY Pilot Hill 41.32 334 eP P 18 04 31.1 0.0
comp=Z,58nm,1.9s
F38A Pierce - Schro 41.35 350 P P 18 04 29.2 -1.6
baz=166,SNR=9.0
TRQ Mont Tremblant 41.40 8 eP P 18 04 31.0 -0.3
SWSC Sam W. Stewart 41.44 316 P P 18 04 33.0 +1.2
baz=125,SNR=5.1
W13A Hualapai Mount 41.44 320 eP P 18 04 33.1 +1.1
comp=Z,34nm,0.9s
IKP In-Ko-Pah, Jac 41.49 315 P P 18 04 33.7 +1.4
baz=124,SNR=6.2
D46A Sault St. Mari 41.50 358 P P 18 04 30.7 -1.4
baz=178
PKME Peaks-Kenny Pk 41.51 14 eP P 18 04 32.6 +0.6
comp=Z,159nm,1.9s
SUSD Miller 41.60 342 P P 18 04 31.7 -1.2
baz=155
D47A Chapleau 41.65 359 P P 18 04 32.0 -1.3
baz=179,SNR=6.1
IRM Iron Mountain 41.69 318 P P 18 04 35.0 +1.2
baz=126,SNR=17
O20A White River Ci 41.71 330 eP P 18 04 35.6 +1.5
comp=Z,30nm,0.8s
O20A White River Ci 41.71 330 P P 18 04 35.5 +1.3
baz=140,SNR=12
D52A ZEK Kipawa Sen 41.72 4 P P 18 04 33.3 -0.6
baz=186
MONP2 Monument Peak 41.84 315 P P 18 04 36.6 +1.2
baz=124,SNR=7.4
D49A Beulah Townshi 41.88 1 P P 18 04 34.0 -1.1
baz=182,SNR=8.3
D53A Lac Vacive, Po 41.88 5 eP P 18 04 34.3 -0.9
comp=Z,15nm,0.8s
D53A Lac Vacive, Po 41.88 5 P P 18 04 34.6 -0.5
baz=187
BAR Barrett 41.90 315 eP P 18 04 36.6 +1.0
comp=Z,17nm,1.2s
E38A The Farm, Brul 41.92 351 eP P 18 04 33.8 -1.7
comp=Z,20nm,0.9s
E38A The Farm, Brul 41.92 351 P P 18 04 34.1 -1.4
baz=167
D41A Chassel 41.97 354 eP P 18 04 34.8 -1.1
comp=Z,35nm,0.8s
D41A Chassel 41.97 354 P P 18 04 34.8 -1.1
baz=171,SNR=7.2
PKCU Pink Cliffs 41.99 324 eP P 18 04 38.3 +1.7
KNB Kanab 42.01 323 eP P 18 04 37.3 +0.7
comp=Z,26nm,0.9s
KNB Kanab 42.01 323 eP P 18 04 37.3 +0.7
KNB pmax pmax
comp=Z,26nm,0.9s
GGN Saint George 42.02 17 eP P 18 04 37.9 +1.6
comp=Z,41nm,1.4s
D54A Lac Fusel, La 42.05 6 P P 18 04 35.7 -0.8
baz=189,SNR=10
PTGB Pitanga 42.06 136 eP P 18 04 34.8 -2.2
SRU San Rafael Swe 42.14 327 eP P 18 04 38.4 +0.8
comp=Z,39nm,0.8s
SRU San Rafael Swe 42.14 327 eP P 18 04 38.4 +0.8
SRU pmax pmax
comp=Z,39nm,0.8s
LDFC Landfair 42.22 319 eP P 18 04 40.6 +2.4
comp=Z,65nm,1.1s
LCMT Little Creek M 42.26 323 eP P 18 04 39.2 +0.7
comp=Z,8.0nm,0.9s
PFO Pinyon Flats O 42.27 316 eP P 18 04 39.5 +0.8
comp=Z,24nm,1.0s
PFO Pinyon Flats O 42.27 316 eP P 18 04 39.5 +0.8
PFO pmax pmax
comp=Z,24nm,1.0s
PFO Pinyon Flats O 42.27 316 P P 18 04 40.2 +1.5
baz=285,SNR=12
PFO Pinyon Flats O 42.27 316 P P 18 04 40.2 +1.5
baz=124,SNR=12
109C Camp Elliot, M 42.32 315 P P 18 04 39.8 +0.9
baz=331
109C Camp Elliot, M 42.32 315 P P 18 04 39.8 +0.9
baz=123
CPE Camp Elliot 42.32 315 eP P 18 04 39.6 +0.6
comp=Z,29nm,0.9s
MTPU Mount Pierson 42.32 325 eP P 18 04 40.6 +1.2
comp=Z,6.3nm,0.8s
Q16A Castle Valley 42.35 326 eP P 18 04 40.2 +0.8
GMRC Granite Mounta 42.40 318 P P 18 04 41.2 +1.4
baz=244,SNR=13
GMRC Granite Mounta 42.40 318 P P 18 04 41.2 +1.4
baz=126,SNR=13
RWWY Rawlins 42.42 332 eP P 18 04 41.0 +1.0
comp=Z,44nm,0.9s
BB19B Bebedouro 42.42 129 eP P 18 04 38.6 -1.4
P17A Butcher Ranch, 42.52 327 eP P 18 04 41.5 +0.8
comp=Z,26nm,0.8s
SZCU Shurtz Canyon 42.55 323 eP P 18 04 42.4 +1.4
comp=Z,21nm,0.8s
MSU Marysvale 42.64 325 eP P 18 04 43.2 +1.4
MSU Marysvale 42.64 325 eP P 18 04 43.2 +1.4
TMUT Trail Mountain 42.64 327 eP P 18 04 42.7 +0.8
comp=Z,9.1nm,1.0s
CCUT Cedar City 42.68 323 eP P 18 04 43.6 +1.5
comp=Z,13nm,0.9s
PMNB Patos De Minas 42.75 124 eP P 18 04 41.3 -1.5
MURC Murrieta 42.77 316 P P 18 04 43.8 +1.1
baz=302,SNR=5.4
MURC Murrieta 42.77 316 P P 18 04 43.8 +1.1
baz=124,SNR=5.4
LATQ La Tuque 42.81 10 P P 18 04 43.2 +0.5
baz=194
TCRU Three Creeks R 42.86 325 eP P 18 04 45.0 +1.4
comp=Z,27nm,0.9s
K22A Casper 42.88 334 eP P 18 04 44.0 +0.5
comp=Z,56nm,1.4s
K22A ePP PP 18 06 24.8 +1.6
K22A Casper 42.88 334 P P 18 04 44.4 +0.9
baz=229,SNR=11
K22A Casper 42.88 334 P P 18 04 44.4 +0.9
baz=144,SNR=11
C40A Isle Royale Na 42.88 353 eP P 18 04 41.9 -1.4
comp=Z,49nm,0.9s
C40A Isle Royale Na 42.88 353 P P 18 04 42.4 -0.9
baz=170,SNR=16
HEC Hector,Ludlow 42.88 318 P P 18 04 45.1 +1.5
baz=233,SNR=23
HEC Hector,Ludlow 42.88 318 P P 18 04 45.1 +1.5
baz=126,SNR=23
VLDQ Val d'Or 42.93 5 eP P 18 04 43.1 -0.6
comp=Z,32nm,1.4s
TUQ Turquoise Moun 42.96 319 P P 18 04 45.5 +1.2
baz=226,SNR=23
TUQ Turquoise Moun 42.96 319 P P 18 04 45.5 +1.2
baz=127,SNR=23
FRTB Fartura 42.97 133 eP P 18 04 43.9 -0.5
RSSD Black Hills 43.07 337 eP P 18 04 46.0 +0.9
comp=Z,38nm,0.8s
RSSD Black Hills 43.07 337 eP P 18 04 46.0 +0.9
RSSD pmax pmax
comp=Z,38nm,0.8s
RSSD Black Hills 43.07 337 P P 18 04 46.4 +1.3
baz=231
RSSD Black Hills 43.07 337 P P 18 04 46.4 +1.3
baz=148
SHPR Sheep Range 43.12 321 eP P 18 04 46.8 +1.1
comp=Z,33nm,1.0s
EYMN Ely 43.22 351 eP P 18 04 44.0 -2.1
comp=Z,21nm,0.9s
EYMN Ely 43.22 351 P P 18 04 44.1 -1.9
baz=167,SNR=8.5
LMN Caledonia Moun 43.29 18 eP P 18 04 47.5 +0.8
comp=Z,18nm,0.9s
RRX Edison Barstow 43.35 317 P P 18 04 48.7 +1.3
baz=214
RRX Edison Barstow 43.35 317 P P 18 04 48.7 +1.3
baz=125
MPU Maple Canyon 43.38 327 eP P 18 04 48.4 +0.6
comp=Z,18nm,0.8s
SCI2 San Clemente I 43.39 314 P P 18 04 48.9 +1.2
baz=34
SCI2 San Clemente I 43.39 314 P P 18 04 48.9 +1.2
baz=122
BFSC Mount Baldy Ra 43.45 316 P P 18 04 49.2 +0.9
baz=198,SNR=6.5
BFSC Mount Baldy Ra 43.45 316 P P 18 04 49.2 +0.9
baz=124,SNR=6.5
GSC Goldstone, Bar 43.47 318 eP P 18 04 49.9 +1.5
comp=Z,54nm,1.4s
GSC Goldstone, Bar 43.47 318 eP P 18 04 49.9 +1.5
GSC pmax pmax
comp=Z,54nm,1.4s
GSC Goldstone, Bar 43.47 318 P P 18 04 49.8 +1.5
baz=210
GSC Goldstone, Bar 43.47 318 P P 18 04 49.8 +1.5
baz=126
SHOC Shoshone, Teco 43.47 319 P P 18 04 49.9 +1.6
baz=212
SHOC Shoshone, Teco 43.47 319 P P 18 04 49.9 +1.6
baz=127
CIS Catalina Islan 43.52 315 P P 18 04 50.1 +1.3
baz=46
CIS Catalina Islan 43.52 315 P P 18 04 50.1 +1.3
baz=122
NLU North Lily Min 43.58 327 eP P 18 04 49.5 +0.1
comp=Z,7.4nm,1.0s
FMP Fort Macarthur 43.60 315 P P 18 04 50.8 +1.4
baz=66
FMP Fort Macarthur 43.60 315 P P 18 04 50.8 +1.4
baz=123
PSUT The Spring 43.62 324 eP P 18 04 50.7 +1.0
comp=Z,13nm,0.8s
ITAB Concordia 43.69 139 eP P 18 04 48.8 -1.3
JLU Jordanelle 43.70 328 eP P 18 04 51.5 +1.1
comp=Z,11nm,0.8s
MWC Mount Wilson 43.71 316 eP P 18 04 51.6 +1.1
comp=Z,27nm,1.1s
MWC Mount Wilson 43.71 316 eP P 18 04 51.6 +1.1
MWC pmax pmax
comp=Z,27nm,1.1s
PASC Pasadena Art C 43.77 316 eP P 18 04 51.6 +0.9
comp=Z,101nm,1.7s
LSQQ Lebel-sur-Quev 43.91 5 P P 18 04 50.8 -0.8
baz=259
LSQQ Lebel-sur-Quev 43.91 5 P P 18 04 50.8 -0.8
baz=188
DECC Green Verdugo 43.92 316 P P 18 04 53.2 +1.3
baz=128
DECC Green Verdugo 43.92 316 P P 18 04 53.2 +1.3
baz=123
CTU Camp Tracy 43.93 328 eP P 18 04 52.5 +0.4
comp=Z,17nm,0.9s
RCLB Rio Claro- Sao 43.95 130 eP P 18 04 51.4 -1.0
MCI8 Montes Claros 43.98 120 eP P 18 04 51.5 -1.2
MCI9 Montes Claros 44.02 120 eP P 18 04 52.7 -0.3
EDW2 Edwards Air Fo 44.03 317 P P 18 04 53.7 +0.8
baz=170,SNR=14
EDW2 Edwards Air Fo 44.03 317 P P 18 04 53.7 +0.8
baz=124,SNR=14
TCUT Toone Canyon 44.05 328 eP P 18 04 53.8 +0.6
comp=Z,36nm,0.8s
MCI6 Montes Claros 44.07 121 eP P 18 04 53.4 0.0
TPNV Topopah Spring 44.08 320 eP P 18 04 54.5 +1.2
TPNV Topopah Spring 44.08 320 eP P 18 04 54.6 +1.2
TPNV Topopah Spring 44.08 320 P P 18 04 55.0 +1.6
baz=203,SNR=23
TPNV Topopah Spring 44.08 320 P P 18 04 55.0 +1.6
baz=128,SNR=23
DUG Dugway, Tooele 44.15 326 eP P 18 04 54.7 +0.8
comp=Z,11nm,1.0s
DUG Dugway, Tooele 44.15 326 eP P 18 04 54.7 +0.8
DUG pmax pmax
comp=Z,11nm,1.0s
DUG Dugway, Tooele 44.15 326 P P 18 04 55.2 +1.3
baz=214,SNR=8.8
DUG Dugway, Tooele 44.15 326 P P 18 04 55.2 +1.3
baz=134,SNR=8.8
LRMC Laurel Mtn Rad 44.16 318 P P 18 04 54.9 +0.9
baz=183,SNR=7.8
LRMC Laurel Mtn Rad 44.16 318 P P 18 04 54.9 +0.9
baz=125,SNR=7.8
FURC Furnace Creek, 44.19 319 P P 18 04 55.5 +1.5
baz=197,SNR=25
FURC Furnace Creek, 44.19 319 P P 18 04 55.5 +1.5
baz=126,SNR=25
SNCC San Nicolas Is 44.23 314 eP P 18 04 55.2 +0.7
comp=Z,165nm,1.4s
SNCC San Nicolas Is 44.23 314 P P 18 04 56.0 +1.6
baz=65
SNCC San Nicolas Is 44.23 314 P P 18 04 56.0 +1.6
baz=121
BLG Laguna Peak, P 44.35 315 P P 18 04 56.6 +1.2
baz=101
BLG Laguna Peak, P 44.35 315 P P 18 04 56.6 +1.2
baz=122
BW06 Boulder Array 44.35 331 eP P 18 04 56.0 +0.4
comp=Z,11nm,0.9s
BW06 Boulder Array 44.35 331 P P 18 04 55.8 +0.2
baz=219,SNR=6.2
BW06 Boulder Array 44.35 331 P P 18 04 55.8 +0.2
baz=140,SNR=6.2
PD31 Pinedale Array 44.35 331 eP P 18 04 55.4 -0.1
comp=Z,9.4nm,0.9s
PDAR Pinedale Array 44.35 331 P P 18 04 55.9 +0.3
comp=Z,6.6nm,0.8s,baz=133,slow=10,SNR=53
PDAR LR LR 18 25 38.6
comp=Z,357nm,18.5s,baz=150,slow=39
MPMC Manual Prospec 44.36 318 P P 18 04 56.6 +0.9
baz=187,SNR=12
MPMC Manual Prospec 44.36 318 P P 18 04 56.6 +0.9
baz=126,SNR=12
AGMN Agassiz Nation 44.37 347 eP P 18 04 53.6 -1.7
comp=Z,21nm,0.9s
AGMN Agassiz Nation 44.37 347 P P 18 04 53.9 -1.3
baz=237,SNR=5.5

AGMN **Agassiz Nation** 44.37 347 P P 18 04 53.9 -1.3
baz=161,SNR=5.5
OSI **Osito Audit: C** 44.39 316 eP P 18 04 56.1 +0.4
comp=Z,27nm,0.3s
HWUT **Hardware Ranch** 44.49 329 eP P 18 04 56.0 -0.5
comp=Z,26nm,0.7s
R11A **Troy Canyon, C** 44.54 322 eP P 18 04 57.9 +0.9
comp=Z,12nm,0.9s
R11A **Troy Canyon, C** 44.54 322 P P 18 04 58.4 +1.4
baz=202,SNR=27
R11A **Troy Canyon, C** 44.54 322 P P 18 04 58.4 +1.4
baz=129,SNR=27
MATQ **Matagami** 44.55 5 P P 18 04 55.6 -1.1
baz=257
MATQ **Matagami** 44.55 5 P P 18 04 55.6 -1.1
baz=187
DAC **Darwin (Calif)** 44.55 319 eP P 18 04 58.6 +1.4
comp=Z,11nm,1.0s
DAC **Darwin (Calif)** 44.55 319 eP P 18 04 58.6 +1.4
DAC pmax pmax
comp=Z,11nm,1.0s
TIJ01 **Guaruva-PR** 44.58 135 eP P 18 04 56.1 -1.3
SPB **Sao Paulo** 44.69 131 eP P 18 04 58.7 +0.5
SPUT **South Promonto** 44.74 328 eP P 18 04 59.0 +0.4
comp=Z,26nm,1.1s
ARVC **Arvin** 44.74 316 P P 18 04 59.7 +1.3
baz=145
ARVC **Arvin** 44.74 316 P P 18 04 59.7 +1.3
baz=123
BGU **Big Grassy Mou** 44.78 327 eP P 18 04 59.6 +0.7
comp=Z,22nm,0.9s
ISA **Isabella, Lake** 44.79 317 eP P 18 04 59.7 +0.7
comp=Z,28nm,1.3s
ISA **Isabella, Lake** 44.79 317 eP P 18 04 59.7 +0.7
ISA pmax pmax
comp=Z,28nm,1.3s
ISA **Isabella, Lake** 44.79 317 P P 18 05 00.2 +1.2
baz=162,SNR=12
ISA **Isabella, Lake** 44.79 317 P P 18 05 00.2 +1.2
baz=124,SNR=12
GRAC **Grapevine Rang** 44.83 320 P P 18 05 00.9 +1.7
baz=186,SNR=10.0
GRAC **Grapevine Rang** 44.83 320 P P 18 05 00.9 +1.7
baz=126,SNR=10.0
MDND **Maddock** 44.88 344 eP P 18 04 58.6 -0.8
comp=Z,96nm,1.1s
MDND **Maddock** 44.88 344 P P 18 04 59.3 -0.1
baz=231
MDND **Maddock** 44.88 344 P P 18 04 59.3 -0.1
baz=156
CWC **Cottonwood Cre** 44.97 318 P P 18 05 01.7 +1.2
baz=174
CWC **Cottonwood Cre** 44.97 318 P P 18 05 01.7 +1.2
baz=125
CHGQ **Chibougamau** 45.04 7 P P 18 04 59.6 -1.0
baz=260
CHGQ **Chibougamau** 45.04 7 P P 18 04 59.6 -1.0
baz=192
AHID **Auburn Hatcher** 45.10 330 eP P 18 05 00.7 -0.8
comp=Z,16nm,0.8s
HVU **Hansel Valley** 45.24 328 eP P 18 05 02.5 -0.1
comp=Z,12nm,0.7s
HVU **Hansel Valley** 45.24 328 eP P 18 05 02.5 -0.1
HVU pmax pmax
comp=Z,12nm,0.7s
PKM **Mcpherson Peak** 45.29 316 P P 18 05 04.1 +1.0
baz=120,SNR=8.7
PKM **Mcpherson Peak** 45.29 316 P P 18 05 04.1 +1.0
baz=122,SNR=8.7
VES **Vestal, Richgr** 45.30 317 P P 18 05 04.0 +1.1
baz=151,SNR=12
VES **Vestal, Richgr** 45.30 317 P P 18 05 04.0 +1.1
baz=124,SNR=12
BSCB **Bom Sucesso** 45.34 126 eP P 18 05 02.8 -0.8
TIN **Tinemaha, Big** 45.42 319 P P 18 05 05.2 +1.2
baz=173
TIN **Tinemaha, Big** 45.42 319 P P 18 05 05.2 +1.2
baz=126
REDW **Red Top Meadow** 45.43 331 eP P 18 05 04.8 +0.7
comp=Z,49nm,1.2s
SNOW **Snow King Moun** 45.45 331 eP P 18 05 04.4 +0.1
comp=Z,26nm,0.9s
LOHW **Long Hollow** 45.49 331 eP P 18 05 05.0 +0.4
comp=Z,8.9nm,0.8s
TPAW **Teton Pass** 45.57 331 eP P 18 05 05.8 +0.5
comp=Z,17nm,0.8s
SMMC **Simmler** 45.64 316 P P 18 05 06.9 +1.2
baz=127,SNR=8.6
SMMC **Simmler** 45.64 316 P P 18 05 06.9 +1.2
baz=122,SNR=8.6
MOOW **Moose Ponds** 45.66 331 eP P 18 05 06.4 +0.4
comp=Z,14nm,0.9s
FXWY **Fox Creek** 45.72 331 eP P 18 05 06.2 -0.1
comp=Z,12nm,0.8s
IMW **Indian Meadow** 45.87 331 eP P 18 05 07.6 -0.1
comp=Z,12nm,0.7s
ELK **Elko** 45.89 325 eP P 18 05 08.4 +0.6
comp=Z,16nm,0.8s
FLWY **Flagg Ranch** 45.90 332 eP P 18 05 08.2 +0.4
comp=Z,63nm,1.4s
PARB **Paraibuna** 45.92 130 eP P 18 05 07.1 -0.9
PAGB **Antelope Grade** 46.04 316 eP P 18 05 10.1 +1.3
comp=Z,39nm,1.1s
RLMT **Red Lodge** 46.04 334 eP P 18 05 08.6 -0.4
comp=Z,15nm,0.7s
RLMT **Red Lodge** 46.04 334 P P 18 05 09.2 +0.3
baz=213,SNR=11
RLMT **Red Lodge** 46.04 334 P P 18 05 09.2 +0.3
baz=142,SNR=11
LAO **LASA Array** 46.06 337 eP P 18 05 08.6 -0.2
comp=Z,47nm,0.8s
LAO **LASA Array** 46.06 337 P P 18 05 09.1 +0.3
baz=218
LAO **LASA Array** 46.06 337 P P 18 05 09.1 +0.3
baz=146
YPP **Pitchstone Pla** 46.09 332 eP P 18 05 10.1 +0.8
comp=Z,20nm,1.1s
MLAC **Mammoth, Mammo** 46.15 319 P P 18 05 10.9 +1.0
baz=167
MLAC **Mammoth, Mammo** 46.15 319 P P 18 05 10.9 +1.0
baz=125
NV11 **Mina Array Sit** 46.18 321 eP P 18 05 11.0 +0.9
comp=Z,2.3nm,0.9s
ULM **Lac du Bonnet** 46.22 348 P P 18 05 08.3 -1.6
comp=Z,19nm,0.8s,baz=157,slow=8.2,SNR=13
ULM **Lac du Bonnet** 46.22 348 eP P 18 05 08.2 -1.8
comp=Z,24nm,0.8s
ULM **Lac du Bonnet** 46.22 348 eP P 18 05 08.2 -1.8
ULM pmax pmax
comp=Z,24nm,0.8s
YFT **Old Faithful** 46.24 332 eP P 18 05 12.4 +1.9
comp=Z,32nm,1.1s
OMMB **Old Mammoth Mi** 46.24 319 eP P 18 05 11.6 +0.8
comp=Z,45nm,1.1s
NVAR **Mina Array Bea** 46.27 321 P P 18 05 12.1 +1.2
comp=Z,33nm,0.9s,baz=130,slow=7.3,SNR=154
NVAR LR LR 18 24 48.6
comp=Z,531nm,18.5s,baz=152,slow=36
MDPB **Devils Postpil** 46.31 319 eP P 18 05 12.2 +1.0
comp=Z,56nm,1.0s
YMR **Madison River** 46.46 332 eP P 18 05 13.1 +0.9
comp=Z,34nm,1.0s
YHH **Holmes Hill** 46.50 332 eP P 18 05 12.7 +0.1
comp=Z,20nm,1.0s
KVN **Kaiserville** 46.52 321 eP P 18 05 13.5 +0.8
comp=Z,17nm,0.9s
KVN **Kaiserville** 46.52 321 eP P 18 05 13.5 +0.8
KVN pmax pmax
comp=Z,17nm,0.9s
RYN **Ryan** 46.53 321 eP P 18 05 13.6 +0.8
comp=Z,21nm,0.9s
YHB **Horse Butte** 46.63 332 eP P 18 05 13.7 +0.2
comp=Z,29nm,1.2s
ESAR **Angra dos Reis** 46.66 129 eP P 18 05 14.1 +0.3
NBPA **Parau_RN** 46.69 103 eP P 18 05 13.6 -0.6
QLMT **Earthquake Lak** 46.80 332 eP P 18 05 16.2 +1.3
BMN **Battle Mountai** 46.84 323 eP P 18 05 15.6 +0.4
comp=Z,34nm,1.0s
BMN **Battle Mountai** 46.84 323 eP P 18 05 15.6 +0.4
BMN pmax pmax
comp=Z,34nm,1.0s
DGMT **Dagmar** 46.84 340 eP P 18 05 15.7 +0.8
comp=Z,73nm,0.8s
DGMT **Dagmar** 46.84 340 P P 18 05 15.6 +0.7
baz=220,SNR=8.2
DGMT **Dagmar** 46.84 340 P P 18 05 15.6 +0.7
baz=150,SNR=8.2
WAKR **Walker** 47.04 320 eP P 18 05 17.8 +1.0
comp=Z,32nm,0.9s
PLCA **Paso Flores** 47.07 168 P P 18 05 16.2 -0.7
comp=Z,11nm,1.0s,baz=8.1,slow=9.4,SNR=11
PLCA **Paso Flores** 47.07 168 eP P 18 05 16.7 -0.1
comp=Z,22nm,1.1s
PLCA **Paso Flores** 47.07 168 eP P 18 05 16.7 -0.1
PLCA pmax pmax
comp=Z,22nm,1.1s
PLCA **Paso Flores** 47.07 168 eP P 18 05 14.4 -2.4
TRQA **Tornquist** 47.15 158 eP P 18 05 15.1 -2.3
YERR **Yerington** 47.19 321 eP P 18 05 18.5 +0.5
comp=Z,25nm,0.8s
SJMB **Sao Joao De Ma** 47.22 121 eP P 18 05 16.7 -1.5
HLID **Hailey** 47.36 329 eP P 18 05 19.6 +0.5
comp=Z,14nm,0.7s
HLID **Hailey** 47.36 329 P P 18 05 19.9 +0.7
baz=196,SNR=31
HLID **Hailey** 47.36 329 P P 18 05 19.9 +0.7
baz=134,SNR=31
CMB **Columbia Colle** 47.39 319 eP P 18 05 19.9 +0.5
comp=Z,6.6nm,1.0s
SAO **San Andreas Ge** 47.41 317 eP P 18 05 18.9 -0.6
comp=Z,17nm,0.9s
SAO **San Andreas Ge** 47.41 317 eP P 18 05 18.9 -0.6
SAO pmax pmax
comp=Z,17nm,0.9s
BOZ **Bozeman (W)** 47.47 332 eP P 18 05 20.9 +0.9
comp=Z,18nm,0.8s
BOZ **Bozeman (W)** 47.47 332 eP P 18 05 20.9 +0.9
BOZ pmax pmax
comp=Z,18nm,0.8s
BOZ **Bozeman (W)** 47.47 332 P P 18 05 21.0 +1.0
baz=204,SNR=28
BOZ **Bozeman (W)** 47.47 332 P P 18 05 21.0 +1.0
baz=139,SNR=28
MCMT **McKenzie Canyo** 47.48 331 eP P 18 05 20.9 +0.7
PNTR **Pine Nut** 47.48 321 eP P 18 05 21.1 +0.8
comp=Z,21nm,0.9s
BSFB **Barra de Sao F** 47.56 121 eP P 18 05 20.4 -0.6
VCNR **Virginia City** 47.63 321 eP P 18 05 21.9 +0.5
comp=Z,20nm,1.2s
PAHR **Pah Rah Range** 47.71 321 eP P 18 05 22.5 +0.6
comp=Z,40nm,1.7s
DLMT **Dillon** 47.75 332 eP P 18 05 22.9 +0.7
comp=Z,13nm,1.2s
LRM **Limekiln Ridge** 48.02 332 eP P 18 05 25.0 +0.6
RIB01 **Linhares ES** 48.16 122 eP P 18 05 27.0 +1.4
AFDM **Forest Hills D** 48.28 320 eP P 18 05 26.1 -0.2
comp=Z,6.7nm,0.9s
HRY **Holter Researc** 48.41 333 eP P 18 05 28.1 +0.9
BEKR **Beckworth** 48.41 321 eP P 18 05 27.5 +0.1
comp=Z,14nm,1.1s
EGMT **Eagleton** 48.54 336 eP P 18 05 28.5 +0.3
comp=Z,75nm,1.5s
EGMT **Eagleton** 48.54 336 P P 18 05 28.8 +0.7
baz=206,SNR=7.1
EGMT **Eagleton** 48.54 336 P P 18 05 28.8 +0.7
baz=143,SNR=7.1
DRLN **Deer Lake** 48.72 22 eP P 18 05 30.6 +1.2
comp=Z,79nm,1.5s
GO07 **Milladeo Hill,** 48.81 171 eP P 18 05 30.4 +0.3
comp=Z,111nm,1.1s
WVOR **Wild Horse Val** 48.92 325 eP P 18 05 31.3 +0.1
comp=Z,50nm,1.1s
WVOR **Wild Horse Val** 48.92 325 eP P 18 05 31.3 +0.1
WVOR pmax pmax
comp=Z,50nm,1.1s
ORV **Oroville** 48.96 320 eP P 18 05 32.4 +1.0
comp=Z,31nm,1.0s
ORV **Oroville** 48.96 320 eP P 18 05 32.4 +1.0
ORV pmax pmax
comp=Z,31nm,1.0s
PLID **Pearl Lake** 49.23 329 eP P 18 05 33.2 -0.5
comp=Z,11nm,0.8s
J08A **Circle Bar Ran** 49.41 326 eP P 18 05 34.7 -0.3
comp=Z,10nm,0.9s
MSO **Missoula** 49.46 332 eP P 18 05 35.1 -0.2
comp=Z,24nm,1.3s
MSO **Missoula** 49.46 332 P P 18 05 35.7 +0.4
baz=194,SNR=7.3
MSO **Missoula** 49.46 332 P P 18 05 35.7 +0.4
baz=137,SNR=7.3
O03E **Paynes Creek** 49.56 321 P P 18 05 35.7 -0.5
baz=152,SNR=5.3
O03E **Paynes Creek** 49.56 321 P P 18 05 35.7 -0.5
baz=124,SNR=5.3
MOD **Modoc Plateau** 49.57 323 eP P 18 05 36.0 -0.2
comp=Z,8.6nm,0.9s
HOPS **Hopland Field** 49.68 318 eP P 18 05 36.4 -0.5
comp=Z,68nm,1.3s
BMO **Blue Mountains** 49.76 328 eP P 18 05 37.0 -0.6
comp=Z,4.4nm,0.9s
BMO **Blue Mountains** 49.76 328 eP P 18 05 37.0 -0.6
BMO pmax pmax
comp=Z,4.0nm,0.9s
O02D **Mt. Diablo Mer** 50.13 320 P P 18 05 39.7 -0.8
baz=146
O02D **Mt. Diablo Mer** 50.13 320 P P 18 05 39.7 -0.8
baz=123
WDC **Whiskeytown Da** 50.19 320 eP P 18 05 39.4 -1.4
comp=Z,6.6nm,0.9s
WDC **Whiskeytown Da** 50.19 320 eP P 18 05 39.4 -1.4
WDC pmax pmax
comp=Z,7.0nm,0.9s
K05A **Summer Lake** 50.42 324 eP P 18 05 43.4 +0.7
comp=Z,12nm,1.1s
M04C **Macdoel** 50.43 322 P P 18 05 43.0 +0.2
baz=125
I07A **Izee** 50.45 326 eP P 18 05 42.5 -0.4
comp=Z,10nm,0.9s
F10A **Beach Ranch, E** 50.47 329 eP P 18 05 42.9 -0.1
comp=Z,10nm,0.9s
N02D **Trinity Center** 50.51 321 P P 18 05 42.1 -1.2
baz=124
KMRM **Mail Ridge** 50.74 319 eP P 18 05 45.8 +0.7
comp=Z,64nm,1.1s
M02C **Callahan** 50.84 321 P P 18 05 45.3 -0.5
baz=124
K04D **Chiloquin, OR** 50.87 323 P P 18 05 46.4 +0.3
baz=126
G08A **Pilot Rock** 50.93 327 eP P 18 05 46.9 +0.4
YBH **Yreka Blue Hor** 50.94 322 eP P 18 05 44.8 -1.8
comp=Z,6.5nm,0.8s
YBH **Yreka Blue Hor** 50.94 322 eP P 18 05 44.8 -1.8
YBH pmax pmax
comp=Z,7.0nm,0.8s
J05D **Fort Rock, OR** 50.95 324 P P 18 05 47.0 +0.3
baz=127
L04D **Klamath Falls** 50.97 322 P P 18 05 46.8 0.0
baz=125,SNR=8.3
SCHQ **Schefferville** 51.04 12 P P 18 05 46.5 -0.4
comp=Z,19nm,0.9s,baz=166,slow=7.8,SNR=6.6
SCHQ LR LR 18 26 44.6
comp=Z,97nm,21.5s,baz=202,slow=35
SCHQ **Schefferville** 51.04 12 eP P 18 05 46.3 -0.7
comp=Z,29nm,1.0s
PINE **Pine Mountain** 51.09 325 eP P 18 05 47.4 -0.4
comp=Z,12nm,1.0s
WALA **Waterton Lakes** 51.10 334 eP P 18 05 47.4 -0.3
comp=Z,14nm,0.9s
KHMM **Horse Mountain** 51.11 320 eP P 18 05 48.5 +0.6
comp=Z,62nm,1.0s
E09A **Wood Farm, Sta** 51.31 329 eP P 18 05 48.6 -0.5
comp=Z,20nm,0.8s
J04D **Umpqua Nationa** 51.44 323 P P 18 05 50.8 +0.3
baz=126,SNR=5.5
KRMB **Red Mountain** 51.57 321 eP P 18 05 51.8 +0.5
comp=Z,76nm,1.2s
HUMO **Hull Mountain** 51.58 322 eP P 18 05 50.8 -0.5
comp=Z,10nm,1.3s
I05D **Terrebonne, OR** 51.65 325 P P 18 05 52.3 +0.5
baz=127
L02E **Cave Junction** 51.73 322 P P 18 05 52.2 -0.2
baz=124
FFC **Flin Flon** 51.76 346 eP P 18 05 52.1 -0.2
comp=Z,167nm,1.1s
FFC **Flin Flon** 51.76 346 *i* P P 18 05 53.1 +0.7
E08A **Dider Farm, El** 51.76 328 eP P 18 05 52.3 -0.2
comp=Z,6.9nm,0.8s
G06A **Carlson Farm,** 51.80 326 eP P 18 05 53.9 +0.9
comp=Z,74nm,1.8s
F07A **Phinny Hill Vi** 51.84 327 eP P 18 05 53.8 +0.8
comp=Z,19nm,1.1s
HAWA **Hanford** 51.95 328 eP P 18 05 53.7 -0.2
comp=Z,8.6nm,0.9s
NEW **Newport** 52.00 331 eP P 18 05 53.8 -0.5
comp=Z,5.1nm,0.8s
NEW **Newport** 52.00 331 eP P 18 05 53.8 -0.5
NEW pmax pmax
comp=Z,5.0nm,0.8s
NEW **Newport** 52.00 331 P P 18 05 54.2 -0.1
baz=134
D08A **Wollman Farm,** 52.06 329 eP P 18 05 54.6 -0.2
comp=Z,7.1nm,0.8s
K02D **Willamette Mer** 52.07 322 P P 18 05 55.2 +0.2
baz=124
G05D **Wamic, OR** 52.19 326 P P 18 05 57.0 +1.3
baz=128
C09A **Chrisman Ranch** 52.24 330 eP P 18 05 56.4 +0.3
comp=Z,7.4nm,0.8s
H04A **Detroit Lake** 52.34 325 eP P 18 05 56.7 -0.2
comp=Z,18nm,0.8s
I03D **Drain, OR** 52.44 323 P P 18 05 58.5 +0.9
baz=125,SNR=14
J01E **Myrtle Point** 52.49 322 P P 18 05 58.8 +0.8
baz=124,SNR=9.4
H04D **Lebanon** 52.56 324 P P 18 05 57.9 -0.6
baz=126
KEBM **Edson Butte** 52.57 322 eP P 18 05 58.7 0.0
comp=Z,70nm,1.2s
F05D **White Salmon** 52.66 327 P P 18 06 00.3 +1.0
baz=128
COR **Corvallis** 52.92 324 eP P 18 06 01.8 +0.6
comp=Z,60nm,1.3s
COR **Corvallis** 52.92 324 eP P 18 06 01.8 +0.6
COR pmax pmax
comp=Z,60nm,1.3s
I02D **Swisshome** 52.97 323 P P 18 06 02.4 +0.9
baz=125,SNR=8.2
LTY **Liberty** 53.10 328 eP P 18 06 02.8 +0.2
comp=Z,12nm,0.9s
LON **Longmire** 53.39 327 eP P 18 06 04.9 +0.2
comp=Z,9.1nm,0.8s
LON **Longmire** 53.39 327 eP P 18 06 04.9 +0.2
LON pmax pmax
comp=Z,9.0nm,0.8s
E04D **Cinebar** 53.68 327 P P 18 06 06.9 +0.2
baz=128
D05A **Enumclaw** 53.76 328 eP P 18 06 07.6 +0.3
comp=Z,37nm,0.8s
F03A **Seaside** 53.86 325 eP P 18 06 09.6 +1.5
comp=Z,50nm,1.0s
FCC **Fort Churchill** 54.12 353 eP P 18 06 08.7 -0.9
comp=Z,39nm,1.4s
FCC **Fort Churchill** 54.12 353 eP P 18 06 08.7 -0.9
FCC pmax pmax
comp=Z,39nm,1.4s
D04E **Lakebay** 54.17 327 P P 18 06 10.6 +0.4
baz=128
B06A **Marblemount** 54.33 329 eP P 18 06 11.1 -0.3
comp=Z,17nm,1.0s
B05A **Bryant** 54.48 329 P P 18 06 12.2 -0.4
baz=129
D03D **Eldon** 54.56 327 P P 18 06 13.4 +0.3
baz=128,SNR=9.0
NLWA **Neilton Lookou** 54.90 327 eP P 18 06 16.1 +0.5
comp=Z,24nm,1.2s
A04D **Lummi Island** 55.09 329 P P 18 06 17.2 +0.3
baz=129
PGC **Sidney** 55.43 328 eP P 18 06 20.1 +0.8
comp=Z,19nm,0.9s
LLLB **Lillooet** 55.87 331 eP P 18 06 23.2 +0.6
comp=Z,15nm,0.9s
GO09 **Cerro Castillo** 56.98 172 eP P 18 06 32.8 +2.4
comp=Z,93nm,1.6s
TAOE **Nuku Hiva Isla** 59.08 256 eLR LR 18 24 10.6
comp=Z,324nm,25.8s
FRB **Frobisher Bay** 59.26 7 LR LR 18 34 21.3
comp=Z,145nm,18.5s,baz=200,slow=38
BBB **Bella Bella** 59.93 329 LR LR 18 34 30.6
comp=Z,142nm,19.3s,baz=162,slow=38
IVI **Ivigtut** 61.48 18 eP P 18 07 01.0 -0.4
comp=Z,15nm,1.0s
YKA **Yellowknife Ar** 61.80 344 P P 18 07 03.5 0.0
comp=Z,14nm,0.9s,baz=138,slow=6.8,SNR=71
YKA PcP PcP 18 07 44.6 +0.1
comp=Z,2.7nm,0.8s,baz=144,slow=4.8,SNR=3.9
YKA LR LR 18 35 06.7
comp=Z,9.4nm,21.1s,baz=140,slow=37
YKB5 **Yellowknife Ar** 61.80 344 ePcP PcP 18 07 44.6 +0.1
YKW3 **Yellowknife Ar** 61.86 344 eP P 18 07 03.5 -0.4
comp=Z,31nm,1.2s
NRS **Narsarsuaq** 62.33 19 eP P 18 07 06.6 -0.5
comp=Z,30nm,0.8s
NRS **Narsarsuaq** 62.33 19 eP P 18 07 06.6 -0.5
NRS pmax pmax
comp=Z,30nm,0.8s
DIB **Dawson Inlet,** 62.71 329 eP P 18 07 10.8 +1.0
comp=Z,16nm,0.9s
CRAG **Craig** 64.21 331 eP P 18 07 20.6 +0.9
comp=Z,19nm,0.9s
WRAK **Wrangell Islan** 64.34 332 eP P 18 07 20.9 +0.4
comp=Z,9.1nm,1.0s
DLBC **Dease Lake** 64.44 335 LR LR 18 38 29.4
comp=Z,333nm,18.9s,baz=114,slow=39
DLBC **Dease Lake** 64.44 335 eP P 18 07 22.0 +0.8
comp=Z,29nm,0.8s
SIT **Sitka** 66.08 332 eP P 18 07 32.0 +0.3
SIT **Sitka** 66.08 332 eP P 18 07 32.0 +0.3
JIS **Juneau Island** 66.26 333 eP P 18 07 33.6 +0.7
comp=Z,14nm,0.8s
BESE **Bessie Mountai** 66.63 333 eP P 18 07 36.1 +0.7
comp=Z,66nm,1.8s
ILULI **Ilulissat** 67.16 12 eP P 18 07 38.1 -0.4
comp=Z,19nm,1.0s
ILULI **Ilulissat** 67.16 12 eP P 18 07 38.1 -0.4
ILULI pmax pmax
comp=Z,19nm,1.0s
ILULI **Ilulissat** 67.16 12 *i* P P 18 07 38.0 -0.4
SKAG **Skagway** 67.30 334 eP P 18 07 40.5 +1.0
comp=Z,10nm,0.9s
WHY **Whitehorse** 67.73 335 eP P 18 07 42.6 +0.3
comp=Z,4.2nm,0.9s
ANGG **Ammassalik, Gr** 67.95 18 eP P 18 07 42.9 -0.5
comp=Z,11nm,0.7s
BCPM **Bancas Point** 69.45 333 eP P 18 07 54.0 +1.0
comp=Z,352nm,1.6s
RES **Resolute Bay** 69.74 357 eP P 18 07 53.6 -0.9
comp=Z,15nm,1.0s
RES **Resolute Bay** 69.74 357 eP P 18 07 53.6 -0.9
RES pmax pmax
comp=Z,15nm,1.0s
PCA **Pinnacle** 69.79 333 eP P 18 07 56.5 +1.3
comp=Z,26nm,0.8s
PPT **Papeete** 69.89 249 LR LR 18 29 54.3
comp=Z,95nm,20.1s,baz=57,slow=28
PPT **Papeete** 69.89 249 eP P 18 07 58.6 +2.2
PPT **Papeete** 69.89 249 eP P 18 07 58.7 +2.2
PPT2 **Papeete2** 69.89 249 eLR LR 18 29 03.5
comp=Z,254nm,24.2s,baz=70
CTGM **Chitina Glacie** 70.65 334 eP P 18 08 01.5 +0.9
comp=Z,9.2nm,0.8s
HOPE **Hope Point** 70.65 153 eP P 18 08 01.4 +1.0
comp=Z,284nm,1.9s
BALM **Baldy** 71.13 334 eP P 18 08 04.1 +0.7
comp=Z,14nm,1.0s
BALM **Baldy** 71.13 334 eP P 18 08 04.1 +0.7
BALM pmax pmax
comp=Z,14nm,1.0s
TBI **Tubuai** 71.13 243 eLR LR 18 29 48.9
comp=Z,632nm,29.0s,baz=76
CRQM **Cirque** 71.37 333 eP P 18 08 05.6 +0.7
comp=Z,21nm,1.0s
EPYK **Eagle Plains** 71.44 340 eP P 18 08 05.3 +0.2
comp=Z,11nm,0.9s
EPYK **Eagle Plains** 71.44 340 P P 18 08 05.9 +0.8
baz=122,SNR=10.0
INK **Inuvik** 71.48 342 LR LR 18 42 11.7
comp=Z,187nm,19.2s,baz=121,slow=38
INK **Inuvik** 71.48 342 eP P 18 08 05.8 +0.6
comp=Z,19nm,0.9s
INK **Inuvik** 71.48 342 eP P 18 08 05.8 +0.6
INK pmax pmax
comp=Z,19nm,0.9s
TULEG **Thule** 71.64 3 eP P 18 08 05.5 -0.5
comp=Z,27nm,1.1s
HMT **Hamilton** 71.71 333 eP P 18 08 08.3 +1.5
comp=Z,26nm,0.8s
PUH **Pauahi** 71.91 289 eP P 18 08 08.4 -0.5
comp=Z,206nm,1.4s
EGAK **Eagle** 72.27 337 eP P 18 08 10.1 +0.1
comp=Z,16nm,0.8s
SUMG **Summit** 72.42 13 eP P 18 08 10.4 -0.8
comp=Z,36nm,0.9s
SUMG **Summit** 72.42 13 ⇑ *i* P P 18 08 10.8 -0.5

SUMG pmax pmax
comp=Z,92nm,0.9s
SUMG Summit 72.42 13⇑ *i*P P 18 08 10.8 -0.5
comp=Z,92nm,0.9s
EYAK Cordova Ski Ar 72.47 332 *e*P P 18 08 12.1 +0.7
comp=Z,24nm,1.1s
MENT Mentasta 72.50 335 *e*P P 18 08 11.4 -0.1
comp=Z,12nm,0.8s
DIV Divide 72.70 333 *e*P P 18 08 12.7 0.0
comp=Z,16nm,1.0s
DOT Dot Lake 72.93 336 *e*P P 18 08 14.5 +0.5
comp=Z,21nm,0.8s
GLI Glacier Island 73.21 333 *e*P P 18 08 15.2 -0.5
comp=Z,9.4nm,0.8s
PAX Paxson 73.25 335 *e*P P 18 08 16.1 +0.1
comp=Z,13nm,1.0s
BORG Borgarnes 73.28 23 *e*P P 18 08 15.6 -0.4
comp=Z,102nm,1.9s
BORG Borgarnes 73.28 23 *e*P P 18 08 15.6 -0.4
BORG pmax pmax
comp=Z,103nm,1.9s
RIDG Independent Ri 73.29 336 *e*P P 18 08 16.8 +0.6
comp=Z,22nm,0.9s
SCM Sheep Creek Mo 73.65 333 *e*P P 18 08 18.4 +0.1
comp=Z,29nm,0.9s
SCM Sheep Creek Mo 73.65 333 *e*P P 18 08 18.5 +0.1
SCM pmax pmax
comp=Z,29nm,0.9s
KNK Knik Glacier 74.01 333 *e*P P 18 08 21.1 +0.7
comp=Z,39nm,0.9s
PTEO Sao Teotonio 74.02 53 *e*P P 18 08 24.7 +3.8
comp=Z,60nm,0.9s
MORF Marmelete 74.05 53 *e*P P 18 08 23.6 +2.4
MORF AMb AMB 18 08 25.0
comp=Z,43nm,0.8s
MORF Marmelete 74.05 53 *e*P P 18 08 24.3 +3.1
MORF Marmelete 74.05 53 *e*P P 18 08 23.6 +2.4
SEW Seward 74.06 331 *e*P P 18 08 20.5 -0.2
comp=Z,16nm,0.8s
SML Sawmill 74.09 333 *e*P P 18 08 21.0 +0.1
comp=Z,26nm,0.9s
SML Sawmill 74.09 333 *e*P P 18 08 21.0 +0.1
SML pmax pmax
comp=Z,26nm,0.9s
DHY Denali Highway 74.10 335 *e*P P 18 08 21.1 0.0
comp=Z,7.1nm,1.1s
PNCL Nicolau / Gran 74.23 52 *e*P P 18 08 26.1 +4.0
PRP Porcupine Dome 74.25 337 *e*P P 18 08 21.9 -0.1
comp=Z,9.8nm,0.8s
GHO Glory Hole Cre 74.34 333 *e*P P 18 08 22.1 -0.3
comp=Z,27nm,0.8s
PMR Palmer 74.38 333 *e*P P 18 08 22.6 +0.1
comp=Z,6.5nm,0.8s
PMR Palmer 74.38 333 *e*P P 18 08 22.6 +0.1
PMR pmax pmax
comp=Z,7.0nm,0.8s
HDA Harding Lake 74.40 336 *e*P P 18 08 22.4 -0.2
comp=Z,25nm,0.9s
MESJ Messejana 74.44 52 *e*P P 18 08 25.6 +2.1
MESJ AMb AMB 18 08 27.3
comp=Z,22nm,0.7s
MESJ Messejana 74.44 52 *e*P P 18 08 25.5 +2.1
PCAS Casmilo, Conde 74.45 50 *e*P P 18 08 26.4 +2.9
comp=Z,58nm,0.9s
PTOM Tomar 74.47 50 *e*P P 18 08 27.0 +3.4
RC01 Rabbit Creek A 74.50 332 *e*P P 18 08 23.2 -0.1
comp=Z,16nm,0.8s
ILAR Eielson Array 74.50 336 P **P 18 08 23.5 +0.2**
comp=Z,9.1nm,0.8s,baz=118,slow=4.2,SNR=74
ILAR PP **PP 18 11 08.8 -0.9**
comp=Z,1.0nm,0.9s,baz=104,slow=6.4,SNR=4.3
ILAR LR LR 18 44 11.3
comp=Z,162nm,19.8s,baz=125,slow=38
ILB Eielson Array 74.50 336 *e*P P 18 08 23.2 0.0
comp=Z,14nm,0.8s
ILB *e*PP **PP 18 11 08.6 -1.1**
COI Coimbra 74.54 50 *e*P P 18 08 27.1 +3.2
comp=Z,78nm,0.9s
COI Coimbra 74.54 50 *e*P P 18 08 24.4 +0.5
comp=Z,59nm,0.9s
COI Coimbra 74.54 50 *e*P P 18 08 24.4 +0.5
COI pmax pmax
comp=Z,59nm,0.9s
HON Honolulu 74.55 291 *e*P P 18 08 25.2 +0.9
comp=Z,280nm,1.2s
OPA Opana 74.56 291 *e*P P 18 08 23.6 -0.7
comp=Z,115nm,1.0s
OPA Opana 74.56 291 *e*P P 18 08 23.7 -0.7
OPA pmax pmax
comp=Z,115nm,1.0s
FYU Fort Yukon 74.56 338 *e*P P 18 08 23.8 +0.3
comp=Z,30nm,1.0s
PMTG Montargil 74.56 51 *e*P P 18 08 27.0 +2.9
comp=Z,36nm,0.9s
PCVE Castro Verde 74.57 53 *e*P P 18 08 26.8 +2.7
comp=Z,37nm,1.5s
PBDV Barranco-do-Ve 74.62 53 *e*P P 18 08 28.1 +3.6
BRLK Bradley Lake 74.65 331 *e*P P 18 08 24.4 +0.1
comp=Z,21nm,0.8s
PBEJ Beja 74.74 52 *e*P P 18 08 29.1 +4.0
comp=Z,32nm,1.4s
CNPM China Poot 74.76 331 *e*P P 18 08 24.7 -0.2
comp=Z,17nm,1.0s
PVAQ Vaqueiros 74.80 53 *e*P P 18 08 28.8 +3.3
PVAQ Vaqueiros 74.80 53 *e*P P 18 08 24.3 -1.2
comp=Z,17nm,1.1s
CCB Clear Creek Bu 74.83 336 *e*P P 18 08 24.7 -0.4
comp=Z,2.9nm,0.8s
RND Reindeer 74.84 335 *e*P P 18 08 25.7 +0.4
comp=Z,39nm,0.8s
POKR Poker Plat Res 74.85 337 P **P 18 08 25.4 +0.2**
baz=111
WRH Wood River Hil 74.88 336 *e*P P 18 08 25.1 -0.3
comp=Z,6.1nm,0.9s
COLA College 74.93 336 *e*P P 18 08 25.7 0.0
comp=Z,20nm,0.3s
COLA College 74.93 336*c* *i*P P 18 08 25.1 -0.5
COLA pmax pmax
comp=Z,5.0nm,0.9s
KDAK Kodiak Island 74.98 329 *e*P P 18 08 26.5 +0.4
comp=Z,15nm,1.3s
KDAK Kodiak Island 74.98 329 *e*P P 18 08 26.5 +0.4
KDAK pmax pmax
comp=Z,15nm,1.3s
MCK McKinley 74.98 335 *e*P P 18 08 26.0 -0.1
comp=Z,42nm,1.2s
MCK McKinley 74.98 335 *e*P P 18 08 26.0 -0.1
MCK pmax pmax
comp=Z,42nm,1.2s
PVIS Viseu 74.98 49 *e*P P 18 08 29.2 +2.6
comp=Z,43nm,1.2s
SUA Susitna One 75.07 333 *e*P P 18 08 27.2 +0.5
comp=Z,20nm,0.7s
MDM Murphy Dome 75.11 336 *e*P P 18 08 27.2 +0.5
comp=Z,22nm,1.4s
POLO Lamas de Olo 75.13 49 *e*P P 18 08 30.3 +2.8
comp=Z,17nm,1.2s
PVRL Vila Real 75.18 49 *e*P P 18 08 30.5 +2.8
PCBR Castelo Branco 75.21 50 *e*P P 18 08 30.8 +3.0
comp=Z,20nm,1.2s
OHAK Old Harbor 75.21 328 *e*P P 18 08 27.9 +0.4
comp=Z,14nm,0.8s
MTE Manteigas 75.22 50 *e*P P 18 08 30.6 +2.7
comp=Z,23nm,1.1s
MTE Manteigas 75.22 50 *e*P P 18 08 28.9 +0.9
comp=Z,12nm,0.9s
PMRV Marv??o 75.24 51 *e*P P 18 08 30.2 +2.2
comp=Z,28nm,1.1s
BWN Browne 75.35 335 *e*P P 18 08 28.2 +0.1
comp=Z,37nm,0.7s
TRF Thorofare Moun 75.47 335 *e*P P 18 08 29.2 +0.1
comp=Z,19nm,0.8s
SCO Scoresbysund 75.53 18 *e*P P 18 08 30.9 +1.9
comp=Z,5.0nm,0.7s
SCO Scoresbysund 75.53 18 *e*P P 18 08 30.9 +1.9
SCO pmax pmax
comp=Z,5.0nm,0.7s
SII Sitkinak Islan 75.54 327 *e*P P 18 08 30.4 +1.0
comp=Z,34nm,1.1s
MVO Moncorvo 75.68 49 *e*P P 18 08 33.5 +2.9
comp=Z,24nm,0.8s
RSO Redoubt South 75.74 331 *e*P P 18 08 31.2 +0.5
KTH Kantishna Hill 75.77 335 *e*P P 18 08 30.8 +0.1
comp=Z,21nm,0.9s
PBRG Braganca 75.96 48 *e*P P 18 08 32.7 +0.6
BPAW Bear Paw Mtn. 75.96 335 *e*P P 18 08 31.7 +0.1
comp=Z,24nm,0.8s

MLY Manley 76.14 336 *e*P P 18 08 33.0 +0.3
comp=Z,12nm,0.9s
CAST Castle Rocks 76.23 334 *e*P P 18 08 33.3 +0.1
comp=Z,18nm,0.8s
COLD Coldfoot 76.62 338 *e*P P 18 08 36.9 +1.5
comp=Z,11nm,0.9s
TOLK Toolik Lake Re 76.87 340 *e*P P 18 08 36.9 +0.1
comp=Z,9.4nm,1.0s
TOLK Toolik Lake Re 76.87 340 P **P 18 08 36.9 +0.1**
baz=110
TIC Toumodi 77.08 84 *e*PKP1 P 18 08 39.0 0.0
LIC Lamto 77.10 85 *e*PKP1 P 18 08 40.0 +1.0
comp=Z,148nm,2.1s
DBIC Dimbokro 77.24 84 P **P 18 08 42.3 +2.4**
comp=Z,5.7nm,0.9s,baz=252,slow=7.3,SNR=3.3
DBIC Dimbokro 77.24 84 *e*P P 18 08 42.2 +2.4
comp=Z,37nm,1.5s
SVW2 Sparrevohn 77.24 332 *e*P P 18 08 38.4 -0.5
comp=Z,13nm,0.9s
KIC Kosan Boka 77.37 85 *e*PKP1 P 18 08 40.1 -0.5
comp=Z,76nm,1.4s
PAB San Pablo 77.60 51 *e*P P 18 08 43.9 +2.4
comp=Z,15nm,1.0s
CHGN Chignik 77.80 326 *e*P P 18 08 42.0 -0.1
comp=Z,19nm,0.9s
TTA Tatalina 77.83 333 *e*P P 18 08 42.0 -0.3
comp=Z,20nm,1.2s
TTA Tatalina 77.83 333 *e*P P 18 08 42.0 -0.3
TTA pmax pmax
comp=Z,20nm,1.2s
ESDC Sonseca Array 77.90 51 P **P 18 08 45.0 +1.8**
comp=Z,7.3nm,0.7s,baz=272,slow=5.4,SNR=33
ESDC LR LR 18 37 21.9
comp=Z,47nm,21.8s,baz=100,slow=31
ESLA Sonseca Array 77.90 51 *e*P P 18 08 45.2 +2.0
comp=Z,14nm,0.9s
SDPT Sand Point 78.82 325 *e*P P 18 08 48.1 +0.3
comp=Z,29nm,1.1s
DAG Danmarks Havn 79.09 12 *i*P P 18 08 47.5 -1.4
DAG pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 79.09 12 *i*P P 18 08 47.5 -1.4
comp=Z,5.6nm,0.9s
ESK Eskdalemuir 79.65 35 *e*P P 18 08 54.5 +2.1
comp=Z,44nm,1.4s
ESK Eskdalemuir 79.65 35 *e*P P 18 08 54.5 +2.1
ESK pmax pmax
comp=Z,44nm,1.4s
RDOG Red Dog Mine 81.54 338 *e*P P 18 09 02.5 +0.3
comp=Z,11nm,0.7s
ANM Nome 82.19 334 *e*P P 18 09 05.7 0.0
comp=Z,8.4nm,0.9s
ANM Nome 82.19 334 *e*P P 18 09 05.7 0.0
ANM pmax pmax
comp=Z,8.0nm,0.9s
CLF Chambon-Foret 82.67 42 *e*P P 18 09 08.8 +0.2
comp=Z,10nm,1.6s
TOA0 Torodi Ar. Sit 83.25 77 *e*P P 18 09 13.0 +0.8
comp=Z,12nm,1.3s
TORD Torodi Ar. Bea 83.25 77 P **P 18 09 12.2 -0.1**
comp=Z,4.1nm,0.9s,baz=288,slow=5.5,SNR=14
KBS Kingsbay 85.75 11 *e*P P 18 09 23.6 -0.1
comp=Z,29nm,1.0s
KBS Kingsbay 85.75 11 *e*P P 18 09 23.6 -0.1
KBS pmax pmax
comp=Z,29nm,1.0s
BNI Bardonecchia 85.79 45 *e*P P 18 09 26.4 +1.7
comp=Z,7.2nm,1.0s
ECH Echery 85.94 42 *e*P P 18 09 26.1 +0.8
comp=Z,20nm,1.4s
ECH Echery 85.94 42 *e*P P 18 09 26.1 +0.8
ECH pmax pmax
comp=Z,20nm,1.4s
SENIN Lac Senin/Sane 86.15 44 *e*P P 18 09 28.8 +2.2
comp=Z,28nm,1.9s
TAM Tamanrasset 86.24 68 *e*P P 18 09 29.2 +1.8
comp=Z,3.9nm,0.9s
TAM Tamanrasset 86.24 68 *e*P P 18 09 29.2 +1.8
TAM pmax pmax
comp=Z,4.0nm,0.9s
BFO Black Forest 86.72 42 *e*P P 18 09 30.0 +1.0
comp=Z,4.3nm,0.8s
BFO Black Forest 86.72 42 *i*P P 18 09 31.2 +2.1
SPA0 Spitsbergen Ar 86.73 12 *e*P P 18 09 29.4 +0.9
comp=Z,42nm,1.3s
NB2 NORSAR Subarra 87.28 29 P **P 18 09 32.0 +0.5**
comp=Z,22nm,2.0s,baz=273,slow=4.8
NB2 NORSAR Subarra 87.28 29 P **P 18 09 32.0 +0.5**
baz=273,slow=4.8
NOA NORSAR Array B 87.28 29 P **P 18 09 31.7 +0.1**
comp=Z,2.6nm,0.9s,baz=280,slow=4.8,SNR=4.3
NOA LR LR 18 43 38.4
comp=Z,42nm,21.8s,baz=265,slow=32
ADK Adak 88.45 322 *e*P P 18 09 36.5 -0.7
comp=Z,179nm,1.9s
ADK Adak 88.45 322 *e*P P 18 09 36.5 -0.7
ADK pmax pmax
comp=Z,179nm,1.9s
KEST Kesra 88.53 54 P **P 18 09 39.4 +1.3**
comp=Z,2.3nm,0.8s,baz=345,slow=3.2,SNR=3.7
KEST LR LR 18 46 18.9
comp=Z,41nm,18.0s,baz=251,slow=34
KEST Kesra 88.53 54 *e*P P 18 09 39.1 +1.0
comp=Z,6.2nm,1.1s
HFS Hagfors 88.61 30 LR LR 18 44 47.5
comp=Z,59nm,21.7s,baz=271,slow=32
NKC Novy Kostel 89.21 40 AMS AMS 18 41 40.0
comp=Z,300nm,26.0s
CLL Collm 89.42 39 *i*P P 18 09 44.3 +2.5
CLL LmV 18 44 00.0
comp=Z,100nm,21.3s
CLL Collm 89.42 39 *i*P P 18 09 44.3 +2.5
VNA3 Neumayer Olymp 89.50 162 P **P 18 09 42.9 +1.1**
KHC Kasperske Hory 90.09 41 *e*P P 18 09 47.2 +2.1
KHC *e* 18 09 52.8
KHC MLR MLR
comp=Z,200nm,23.3s
KHC Kasperske Hory 90.09 41 *e*P P 18 09 47.2 +2.1
KHC *ex* x 18 09 52.8
KHC AMS AMS 18 42 10.0
comp=Z,200nm,23.3s
VNA2 Neumayer--Watz 90.12 161 P **P 18 09 47.3 +2.6**
baz=280,slow=4.7
GERES GERESS Array B 90.21 41 P **P 18 09 47.2 +1.5**
comp=Z,1.5nm,0.8s,baz=302,slow=2.5,SNR=13
GERES LR LR 18 44 01.0
comp=Z,64nm,21.9s,baz=282,slow=31
PVCC Panska Ves 90.52 39 AMS AMS 18 42 30.0
comp=Z,200nm,25.9s
PRU Pruhonice 90.58 40 AMS AMS 18 42 30.0
comp=Z,300nm,25.2s
GOPC GO Pecny, Ondr 90.75 40 AMS AMS 18 42 40.0
comp=Z,300nm,26.5s
TREC Trest 91.30 40 AMS AMS 18 43 00.0
comp=Z,200nm,24.9s
ARCES ARCESS Array B 91.35 20 LR LR 18 44 57.2
comp=Z,43nm,21.7s,baz=272,slow=32
UPC Upice 91.43 39 AMS AMS 18 43 30.0
comp=Z,200nm,23.8s
CHVC Chvalec 91.44 39 AMS AMS 18 43 40.0
comp=Z,200nm,21.0s
OSTC Ostas 91.55 39 AMS AMS 18 43 10.0
comp=Z,200nm,21.1s
DPC Dobruska-Polom 91.65 39 *e*P P 18 09 53.9 +1.6
DPC *e* 18 10 00.6
DPC MLR MLR
comp=Z,200nm,20.1s
DPC MLR MLR
comp=Z,300nm,16.6s
DPC Dobruska-Polom 91.65 39 *e*P P 18 09 53.9 +1.6
DPC *ex* x 18 10 00.6
DPC AMS AMS 18 43 30.0
comp=Z,200nm,20.1s
SNAA Sanae 91.73 162 P **P 18 09 52.8 +0.6**
SNAA Sanae 91.73 162 *e*P P 18 09 52.6 +0.4
comp=Z,4.0nm,1.0s
SNAA Sanae 91.73 162 *i*P P 18 09 52.6 +0.4
ZST Bratislava 92.55 41 *e*P P 18 09 57.2 +0.8
ZST Bratislava 92.55 41 *e*P P 18 09 57.2 +0.8
OKC Ostrava-Krasne 92.90 40 AMS AMS 18 45 30.0
comp=Z,200nm,20.3s
BILL Bilibino 92.92 339 *e*P P 18 09 57.6 -0.1
comp=Z,12nm,1.2s
BILL Bilibino 92.92 339*c* *i*P P 18 09 57.9 +0.2
BILL *i* 18 13 37.0
BILL pmax pmax
comp=Z,8.0nm,1.1s

BILL MLR MLR
comp=Z,195nm,23.0s
VYHS Vyhne 93.62 41 *e*P P 18 10 04.3 +2.9
VYHS Vyhne 93.62 41 *e*P P 18 10 04.3 +2.9
FINES FINESS Array B 94.20 27 LR LR 18 49 16.6
comp=Z,40nm,21.8s,baz=258,slow=33
QSPA South Pole Qui 95.27 180 *e*P P 18 10 09.6 +0.9
comp=Z,15nm,1.0s
AKASG Malin Array Be 99.50 37 LR LR 18 51 03.2
comp=Z,58nm,21.6s,baz=285,slow=33
TIXI Tiksi 100.54 350 *e*Pdif Pdif 18 10 31.3 -0.8
TIXI Tiksi 100.54 350 *e*P Pdif 18 10 31.3 -0.8
H11N3 WAKE ISLAND Hy 107.36 292 T T 20 11 01.2
baz=78,slow=75,SNR=13
H11N2 WAKE ISLAND Hy 107.37 292 T T 20 11 04.5
baz=78,slow=75,SNR=16
H11N1 WAKE ISLAND Hy 107.38 292 T T 20 10 60.0
baz=78,slow=75,SNR=14
KIV Kislovodsk 110.63 39 *i* PKIKP PKiKP 18 15 17.8 -0.3
KIV pmax pmax
comp=Z,6.0nm,1.0s
DZM Mont Dzumac 111.39 248 *e*LR LR 18 48 27.5
comp=Z,230nm,34.9s
KLR Kul'dur 118.06 335 *i* PKIKP PKPdf 18 15 31.9 -0.1
ZALV Zalesovo Beam 120.07 9 PKhKP PKPpre 18 15 30.4
comp=Z,0.9nm,0.6s,baz=316,slow=6.0,SNR=2.7
KURK Kurchatov 121.94 14 *e*PKPdf PKPdf 18 15 39.0 -0.4
KURK Kurchatov 121.94 14*c* *i*PKIKP PKPdf 18 15 39.1 -0.3
KURK pmax pmax
comp=Z,6.0nm,2.5s
DGZ Jazzator, Alta 124.59 8 *i* PKIKP PKiKP 18 15 44.8 -0.3
CN2 Changchun 125.02 335 *e*PKP PKPdf 18 15 42.4 -3.1
MAKZ Makanchi 126.39 13 *e*PKPdf PKPdf 18 15 46.8 -1.3
MAKZ Makanchi 126.39 13 *e*PKIKP PKPdf 18 15 46.8 -1.3
ULN Ulaanbaatar 126.43 352 *i* PKIKP PKPdf 18 15 46.3 -2.1
MKAR Makanchi Array 126.47 13 PKP **PKPdf 18 15 47.5 -0.8**
comp=Z,1.4nm,0.9s,baz=355,slow=2.9,SNR=7.8
SONM Songino Array 126.55 352 PKP **PKPdf 18 15 47.6 -0.9**
comp=Z,0.9nm,0.6s,baz=18,slow=1.0,SNR=5.7
SONM PP **PP 18 17 35.8 -7.5**
comp=Z,0.9nm,0.9s,baz=17,slow=6.3,SNR=3.2
AAK Ala-Archa 127.88 21 *i* PKIKP PKiKP 18 15 51.8 -0.3
KSRS Korea Array 128.89 329 PKP **PKPdf 18 15 53.0 -0.1**
comp=Z,1.4nm,0.8s,baz=353,slow=1.3,SNR=9.7
WMQ Urumqi 130.37 9 *e*PKP PKiKP 18 15 57.0 +0.3
WMQ LR LR
comp=Z,370nm,33.1s
KSH Kashi 131.25 22 *e*PKP PKiKP 18 15 59.4 +0.7
HHC Hu-ho-hao-te 132.32 345 *e*PKP PKiKP 18 16 01.0 +0.2
NJ2 Nanjing 137.66 333 *e*PKP PKiKP 18 16 10.8 -0.9
LZH Lanzhou 138.44 352 *e*PKP PKPdf 18 16 05.1 -6.2
LZH sPKP 18 16 19.8
ASAR Alice Springs 140.40 239 PKhKP PKPpre 18 16 06.7
comp=Z,1.0nm,0.9s,baz=114,slow=3.8,SNR=7.6
WHN Wuhan 140.89 337 PKPbc PKiKP 18 16 28.3 +10
WRA Warramunga Arr 141.25 245 PKhKP PKPpre 18 16 11.1
comp=Z,1.9nm,0.9s,baz=146,slow=1.6,SNR=4.7
ENH Enshi 142.84 343 *e*PKPpre PKPpre 18 16 14.4
CD2 Chengdu 143.54 351 PKP **PKPdf 18 16 19.0 -1.5**
PYUN Piuthan 144.04 22 *e*P PKPbc 18 16 19.3 -0.2
DANN Dangsing 144.09 21 *e*P PKPbc 18 16 20.2 +0.5
comp=Z,38nm,0.8s
KOLN Koldanda 144.56 21 *e*P PKPab 18 16 20.0 -0.9
GKN Gorkha 144.71 20 *e*P PKPab 18 16 20.8 -0.6
LSA Lhasa 144.73 9 *e*PKPdf PKPab 18 16 21.3 -0.5
LSA Lhasa 144.73 9 *e*PKIKP PKPab 18 16 21.3 -0.5
KKN Kakani 145.12 19 *e*P PKPbc 18 16 22.3 -0.7
comp=Z,33nm,0.7s
GUN Gumba 145.20 18 *e*P PKPbc 18 16 23.0 -0.4
comp=Z,98nm,0.9s
DMN Daman 145.23 19 *e*P PKPbc 18 16 22.9 -0.5
comp=Z,59nm,0.8s
PKI Pulchoki 145.37 19 *e*P PKPbc 18 16 22.9 -1.0
comp=Z,37nm,1.0s
JIRN Jiri 145.53 18 *e*P PKPdf 18 16 23.8 -0.7
comp=Z,57nm,0.9s
GYA Guiyang 147.23 345 *e*PKPbc PKPdf 18 16 27.0 -0.1
GYA PP **PP 18 19 57.4 +4.6**
GYA AMB AMB
comp=Z,120nm,8.0s
SLVN Son La 152.83 347 *e*PKPdf PKPdf 18 16 34.9 -1.0
SLVN *e*PKPab **PKPab 18 16 53.6 -0.2**
CMAR Chiang Mai Arr 156.39 356 PKP **PKPdf 18 16 40.6 -0.2**
comp=Z,1.6nm,1.0s,baz=307,slow=1.7,SNR=6.7
CMAR PKPab **PKPab 18 17 08.6 -0.3**
comp=Z,5.6nm,1.0s,baz=342,slow=4.3,SNR=9.4

DJA 14 18:22:20.3±0.6, 3°N±3°×9°6E±°, h10km, M3.5/4, MLv3.5/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.74**	**179**	P	Pg	18 22 34.8	+0.3
TPTI		**0.87**	**83**	P	Pg	18 22 36.6	-0.4
TPTI				S	Sb	18 22 48.7	-0.4
MLSI	**Meulaboh, Aceh**	**1.11**	**4**	P	Pb	18 22 41.1	-0.6
MLSI				S	Sg	18 22 56.2	0.0
KCSI	**Kotacane, Aceh**	**1.50**	**76**	P	Pn	18 22 47.5	+0.3
KCSI				S	Sb	18 23 07.1	-0.2

STR ***14*** *18:22:20.1±1.1, 44°N±14°×1°2E±2°3, h11km±22km, M3.8/6, MLv3.8/6*
BGR ***14*** *18:22:20.8±0.6, 44°.04N×11°.08E, h10km, ML3.6/13, Error ellipse: s-maj=13.3km s-min=11.1km az=177.0*
GEN ***14*** *18:22:21.8, 44°.27N×11°.17E, h20km±2km, Ml3.3*
PRU ***14*** *18:22:21.2±0.0, 44°.34N×11°.28E, h0km*
IDC ***14*** *18:22:21.7±1.5, 44°.41N×11°.18E, h0km, mb3.6/3, mb1 3.6/9, mb1mx3.4/52, mbtmp3.5/9, ML2.7/6, MS3.0/6, Ms1 3.0/6, ms1mx2.6/45, Error ellipse: s-maj=28.3km s-min=16.9km az=97.0*
LDG ***14*** *18:22:22.6±0.2, 44°.29N×11°.26E, h10km, Md3.2/2, Ml3.4/34, Error ellipse: s-maj=4.8km s-min=2.8km az=109.0*
ROM ***14*** *18:22:22.7±0.1, 44°.281N±0°.006×11°.054E±0°.007, h20km±1km, ML3.5/89, Mw3.7, Error ellipse: s-maj=0.7km s-min=0.2km az=356.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}4.16; $M_{\theta\theta}$-3.48; $M_{\phi\phi}$-0.69; $M_{r\theta}$2.32; $M_{\theta\phi}$-0.99; $M_{r\phi}$0.08; Fault plane solution: $M_0$4.60137×10^{14} NP1:ϕ_s246.00000°, δ31.00000°, λ78.00000°. NP2:ϕ_s80.00000°, δ60.00000°, λ97.00000°.*
ISCJB ***14*** *18:22:22.3±0.2, 44°.34N±0°.01×11°.03E±0°.01, h28km±2km, mb3.7/3, MS3.6/2 Error ellipse: s-maj=2.3km s-min=1.7km az=175.3*

ISC 14 18:22:22.4±0.7, 44°.32N±0°.01×11°.07E±0°.02, h17km±4km, n249, σ1§74/310, mb3.7/3, 5C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZCCA	**Zocca**	**0.07**	**292**	P	**Pg**	**18 22 26.1**	**+0.3**
ZCCA				S	**Sg**	**18 22 29.9**	**+1.9**
ZCCA				AML	AML		
	comp=E,35050μm,0.6s						
ZCCA				AML	AML		
	comp=N,43050μm,0.7s						
ZCCA				AML	AML		
	comp=E,35750μm,0.5s						
ZCCA				AML	AML		
	comp=N,48250μm,0.7s						
ZCCA				AML	AML		
	comp=E,35050μm,0.5s						
ZCCA				AML	AML		
	comp=N,43050μm,0.7s						
ZCCA				AML	AML		
	comp=E,35750μm,0.5s						
ZCCA				AML	AML		
	comp=N,48250μm,0.7s						
ZCCA				AML	AML		
	comp=E,35100μm,0.6s						
ZCCA				AML	AML		
	comp=N,43050μm,0.7s						
ZCCA				AML	AML		
	comp=E,35750μm,0.5s						
ZCCA				AML	AML		
	comp=N,48250μm,0.7s						
ZCCA				AML	AML		
	comp=E,35100μm,0.6s						
ZCCA				AML	AML		
	comp=E,35750μm,0.5s						
ZCCA				AML	AML		
	comp=N,43050μm,0.7s						

ZCCA			AML	AML		
	comp=N,48250µm,0.7s					
FNVD	**Fontana Vidola**	**0.16 166**	P	**Pg**	**18 22 26.4**	**-0.4**
FNVD			S	**Sg**	**18 22 29.5**	**-0.2**
MTRZ	**Monterenzio**	**0.29 80**	P	**Pb**	**18 22 29.2**	**0.0**
MTRZ			S	**Sb**	**18 22 35.4**	**+1.6**
MTRZ			AML	AML		
	comp=E,80500µm,0.5s					
MTRZ			AML	AML		
	comp=N,57500µm,0.6s					
MTRZ			AML	AML		
	comp=E,83300µm,0.5s					
MTRZ			AML	AML		
	comp=N,58750µm,0.6s					
MTRZ			AML	AML		
	comp=E,80500µm,0.5s					
MTRZ			AML	AML		
	comp=N,57500µm,0.6s					
MTRZ			AML	AML		
	comp=E,83300µm,0.5s					
MTRZ			AML	AML		
	comp=N,58750µm,0.6s					
MTRZ			AML	AML		
	comp=E,80500µm,0.5s					
MTRZ			AML	AML		
	comp=N,57500µm,0.6s					
MTRZ			AML	AML		
	comp=E,83300µm,0.5s					
MTRZ			AML	AML		
	comp=N,58750µm,0.6s					
MTRZ			AML	AML		
	comp=N,58750µm,0.6s					
MTRZ			AML	AML		
	comp=E,80500µm,0.5s					
MTRZ			AML	AML		
	comp=E,83300µm,0.5s					
MTRZ			AML	AML		
	comp=N,57500µm,0.6s					
MTCR	**Monte La Croce**	**0.30 190**	P	**Pg**	**18 22 28.5**	**-0.5**
MTCR			S	**Sg**	**18 22 33.7**	**+0.3**
MTCR			AML	AML		
	comp=E,20300µm,0.9s					
MTCR			AML	AML		
	comp=N,21300µm,0.6s					
MTCR			AML	AML		
	comp=E,20300µm,0.9s					
MTCR			AML	AML		
	comp=N,21300µm,0.6s					
MTCR			AML	AML		
	comp=E,20250µm,0.9s					
MTCR			AML	AML		
	comp=N,21250µm,0.6s					
MTCR			AML	AML		
	comp=N,21250µm,0.6s					
MTCR			AML	AML		
	comp=E,20250µm,0.9s					
MODE	**Modena**	**0.32 344**	P	**Pb**	**18 22 30.6**	**+1.0**
MODE			AML	AML		
	comp=E,27500µm,0.7s					
MODE			AML	AML		
	comp=N,17600µm,0.8s					
MODE			AML	AML		
	comp=E,27550µm,0.7s					
MODE			AML	AML		
	comp=N,17550µm,0.8s					
MODE			AML	AML		
	comp=E,27500µm,0.7s					
MODE			AML	AML		
	comp=N,17550µm,0.8s					
MODE			AML	AML		
	comp=N,17550µm,0.8s					
MODE			AML	AML		
	comp=E,27500µm,0.7s					
SEI	**Scarperia**	**0.34 142**	P	**Pg**	**18 22 29.0**	**-0.6**
SEI			S	**Sg**	**18 22 34.5**	**0.0**
SEI			AML	AML		
	comp=E,63750µm,1.4s					
SEI			AML	AML		
	comp=N,97200µm,0.6s					
SEI			AML	AML		
	comp=E,63750µm,1.4s					
SEI			AML	AML		
	comp=N,97200µm,0.6s					
SEI			AML	AML		
	comp=E,63750µm,1.4s					
SEI			AML	AML		
	comp=N,97200µm,0.6s					
SEI			AML	AML		
	comp=N,97200µm,0.6s					
SEI			AML	AML		
	comp=E,63750µm,1.4s					
POPM	**Popiglio**	**0.36 219**	P	**Pg**	**18 22 29.6**	**-0.3**
POPM			S	**Sg**	**18 22 35.0**	**+0.1**
POPM	**Popiglio**	**0.36 219**	P	**Pg**	**18 22 29.4**	**-0.5**
POPM			S	**Sg**	**18 22 35.1**	**+0.1**
POPM			AML	AML		
	comp=E,22100µm,0.2s					
POPM			AML	AML		
	comp=N,21750µm,0.2s					
POPM			AML	AML		
	comp=E,22100µm,0.2s					
POPM			AML	AML		
	comp=N,21750µm,0.2s					
POPM			AML	AML		
	comp=E,22100µm,0.2s					
POPM			AML	AML		
	comp=N,21750µm,0.2s					
POPM			AML	AML		
	comp=E,22100µm,0.2s					
POPM			AML	AML		
	comp=N,21750µm,0.2s					
BRIS	**BRISIGHELLA**	**0.36 119**	P	**Pn**	**18 22 32.7**	**-0.2**
BRIS			S	**Sn**	**18 22 42.0**	**+2.4**
BRIS			AML	AML		
	comp=E,16650µm,1.6s					
BRIS			AML	AML		
	comp=N,21950µm,0.7s					
BRIS			AML	AML		
	comp=E,398µm,0.7s					
BRIS			AML	AML		
	comp=N,300µm,1.3s					
BRIS			AML	AML		
	comp=E,16650µm,1.6s					
BRIS			AML	AML		
	comp=N,21950µm,0.7s					
BRIS			AML	AML		
	comp=N,300µm,1.3s					
BRIS			AML	AML		
	comp=E,398µm,0.7s					
BRIS			AML	AML		
	comp=E,16650µm,1.6s					
BRIS			AML	AML		
	comp=N,21950µm,0.7s					
PTF	**Prato**	**0.36 180**	P	**Pg**	**18 22 29.3**	**-0.7**
BDI	**Bagni Di Lucca**	**0.43 233**	P	**Pg**	**18 22 30.6**	**-0.5**
BDI			S	**Sb**	**18 22 37.6**	**-0.2**
BDI			AML	AML		
	comp=E,6660µm,1.2s					
BDI			AML	AML		
	comp=N,9720µm,0.7s					
BDI			AML	AML		
	comp=E,6690µm,0.6s					
BDI			AML	AML		
	comp=N,10330µm,1.4s					
BDI			AML	AML		
	comp=E,6655µm,1.2s					
BDI			AML	AML		
	comp=N,9735µm,0.7s					
BDI			AML	AML		
	comp=E,6690µm,0.6s					
BDI			AML	AML		
	comp=N,10330µm,1.4s					
BDI			AML	AML		
	comp=E,6655µm,1.2s					
BDI			AML	AML		
	comp=N,9735µm,0.7s					
BDI			AML	AML		
	comp=N,10330µm,1.4s					
BDI			AML	AML		
	comp=E,6690µm,0.6s					
RAVA	**Ravarino**	**0.43 5**	↑*e*Pg	**Pn**	**18 22 33.4**	**-0.5**
RAVA			*e*Sg	**Sn**	**18 22 42.6**	**+1.2**
RAVA	**Ravarino**	**0.43 5**	P	**Pn**	**18 22 33.1**	**-0.8**
RAVA			AML	AML		
	comp=E,9255µm,0.8s					
RAVA			AML	AML		
	comp=N,9955µm,1.2s					
RAVA			AML	AML		
	comp=E,9255µm,0.8s					
RAVA			AML	AML		
	comp=N,9980µm,1.2s					
RAVA			AML	AML		
	comp=E,9255µm,0.8s					
RAVA			AML	AML		
	comp=N,9980µm,1.2s					
FIU	**Minerbio Fiu**	**0.44 44**	P	**Pb**	**18 22 31.8**	**+0.1**
FIU			AML	AML		
	comp=E,20700µm,1.2s					
FIU			AML	AML		
	comp=N,24700µm,0.8s					
FIU			AML	AML		
	comp=E,20700µm,1.2s					
FIU			AML	AML		
	comp=N,24700µm,0.8s					
FIU			AML	AML		
	comp=E,20650µm,1.2s					
FIU			AML	AML		
	comp=N,24700µm,0.8s					
FIU			AML	AML		
	comp=E,20650µm,1.2s					
FIU			AML	AML		
	comp=N,24700µm,0.8s					
ERBM	**Eremo**	**0.48 282**	P	**Pb**	**18 22 32.7**	**+0.2**
ERBM			AML	AML		
	comp=E,2265µm,0.6s					
ERBM			AML	AML		
	comp=N,2770µm,1.3s					
ERBM			AML	AML		
	comp=E,2265µm,0.6s					
ERBM			AML	AML		
	comp=N,2770µm,1.3s					
ERBM			AML	AML		
	comp=E,2265µm,0.6s					
ERBM			AML	AML		
	comp=N,2770µm,1.3s					
IMOL	**Imola, Italy**	**0.48 86**	P	**Pn**	**18 22 34.2**	**-0.3**
IMOL			AML	AML		
	comp=E,13350µm,0.5s					
IMOL			AML	AML		
	comp=N,11850µm,0.5s					
IMOL			AML	AML		
	comp=E,13350µm,0.5s					
IMOL			AML	AML		
	comp=N,11850µm,0.5s					
IMOL			AML	AML		
	comp=N,11850µm,0.5s					
IMOL			AML	AML		
	comp=E,13350µm,0.5s					
SARO	**Sassorosso**	**0.50 254**	P	**Pg**	**18 22 32.1**	**-0.3**
SARO			S	**Sb**	**18 22 40.1**	**+0.2**
SARO	**Sassorosso**	**0.50 254**	P	**Pg**	**18 22 32.2**	**-0.3**
SARO			S	**Sb**	**18 22 40.1**	**+0.2**
SARO			AML	AML		
	comp=E,3245µm,0.7s					
SARO			AML	AML		
	comp=N,5530µm,0.6s					
SARO			AML	AML		
	comp=E,3245µm,0.7s					
SARO			AML	AML		
	comp=N,5530µm,0.6s					
SARO			AML	AML		
	comp=E,3245µm,0.7s					
SARO			AML	AML		
	comp=N,5530µm,0.6s					
SARO			AML	AML		
	comp=E,3245µm,0.7s					
SARO			AML	AML		
	comp=N,5530µm,0.6s					
CARD	**Cardoso**	**0.52 235**	P	**Pg**	**18 22 32.3**	**-0.5**
CARD			S	**Sb**	**18 22 40.0**	**-0.3**
CARD	**Cardoso**	**0.52 235**	P	**Pg**	**18 22 31.8**	**-0.9**
CARD			S	**Sb**	**18 22 40.4**	**+0.1**
CARD			AML	AML		
	comp=E,4855µm,0.1s					
CARD			AML	AML		
	comp=N,4905µm,0.9s					
CARD			AML	AML		
	comp=E,4855µm,0.1s					
CARD			AML	AML		
	comp=N,4905µm,0.9s					
CARD			AML	AML		
	comp=E,4855µm,0.1s					
CARD			AML	AML		
	comp=N,4905µm,0.9s					
VLC	**Villacollemand**	**0.52 252**	↑*e*Pg	**Pg**	**18 22 32.4**	**-0.4**
VLC			*e*Sg	**Sb**	**18 22 41.0**	**+0.7**
VLC	**Villacollemand**	**0.52 252**	P	**Pg**	**18 22 32.4**	**-0.4**
VLC			S	**Sb**	**18 22 40.7**	**+0.4**
VLC			AML	AML		
	comp=E,4315µm,0.5s					
VLC			AML	AML		
	comp=N,4885µm,1.5s					
VLC			AML	AML		
	comp=E,4370µm,0.5s					
VLC			AML	AML		
	comp=N,4730µm,1.5s					
VLC			AML	AML		
	comp=E,4315µm,0.5s					
VLC			AML	AML		
	comp=N,4890µm,1.5s					
VLC			AML	AML		
	comp=E,4370µm,0.5s					
VLC			AML	AML		
	comp=N,4730µm,1.5s					
VLC			AML	AML		
	comp=N,4730µm,1.5s					
VLC			AML	AML		
	comp=N,4890µm,1.5s					
VLC			AML	AML		
	comp=E,4370µm,0.5s					
VLC			AML	AML		
	comp=E,4315µm,0.5s					
NOVE	**Novellara**	**0.54 332**	P	**Pn**	**18 22 34.6**	**-0.7**
NOVE			AML	AML		
	comp=E,9260µm,1.3s					
NOVE			AML	AML		
	comp=N,8915µm,0.8s					
NOVE			AML	AML		
	comp=E,9260µm,1.3s					
NOVE			AML	AML		
	comp=N,8910µm,1.6s					
NOVE			AML	AML		
	comp=N,8910µm,1.6s					
NOVE			AML	AML		
	comp=E,9260µm,1.3s					
CRMI	**Carmignano**	**0.54 188**	P	**Pg**	**18 22 32.2**	**-0.9**
CRMI			S	**Sb**	**18 22 41.1**	**+0.2**
CRMI			AML	AML		
	comp=E,9740µm,0.5s					
CRMI			AML	AML		
	comp=N,4915µm,1.4s					
CRMI			AML	AML		
	comp=E,4075µm,0.5s					
CRMI			AML	AML		
	comp=N,2060µm,1.4s					
CRMI			AML	AML		
	comp=E,9720µm,0.5s					
CRMI			AML	AML		
	comp=N,4915µm,1.4s					
CRMI			AML	AML		
	comp=E,4075µm,0.5s					
CRMI			AML	AML		
	comp=N,2060µm,1.4s					
CRMI			AML	AML		
	comp=N,2060µm,1.4s					
CRMI			AML	AML		
	comp=N,4915µm,1.4s					
CRMI			AML	AML		
	comp=E,9720µm,0.5s					
CRMI			AML	AML		
	comp=E,4075µm,0.5s					
CAVE	**Cavezzo**	**0.54 355**	P	**Pn**	**18 22 34.9**	**-0.5**
CAVE			AML	AML		
	comp=E,6595µm,1.0s					
CAVE			AML	AML		
	comp=N,10315µm,1.3s					
CAVE			AML	AML		
	comp=E,6595µm,1.0s					
CAVE			AML	AML		
	comp=N,10315µm,1.3s					
CAVE			AML	AML		
	comp=E,6595µm,1.0s					
CAVE			AML	AML		
	comp=N,10315µm,1.3s					
FIR	**Firenze**	**0.57 166**	P	**Pg**	**18 22 33.6**	**0.0**
RUFI	**Rufina**	**0.58 147**	P	**Pg**	**18 22 33.5**	**-0.4**
RUFI			AML	AML		
	comp=E,6140µm,0.3s					
RUFI			AML	AML		
	comp=N,12600µm,0.5s					
RUFI			AML	AML		
	comp=E,6145µm,0.3s					
RUFI			AML	AML		
	comp=N,12600µm,0.5s					
RUFI			AML	AML		
	comp=E,6145µm,0.3s					
RUFI			AML	AML		
	comp=N,12600µm,0.5s					
MAIM	**Mastiano**	**0.58 226**	P	**Pg**	**18 22 33.2**	**-0.7**
MAIM			S	**Sg**	**18 22 41.4**	**-0.4**
MAIM	**Mastiano**	**0.58 226**	P	**Pg**	**18 22 33.1**	**-0.9**
MAIM			S	**Sb**	**18 22 42.2**	**0.0**
MAIM			AML	AML		
	comp=E,3995µm,0.6s					
MAIM			AML	AML		
	comp=N,3900µm,0.5s					
MAIM			AML	AML		
	comp=E,3995µm,0.6s					
MAIM			AML	AML		
	comp=N,3900µm,0.5s					
MAIM			AML	AML		
	comp=E,3995µm,0.6s					
MAIM			AML	AML		
	comp=N,3900µm,0.5s					
CMPO	**Campotto Po**	**0.59 64**	P	**Pn**	**18 22 36.0**	**0.0**
CMPO			AML	AML		
	comp=E,33300µm,1.0s					
CMPO			AML	AML		
	comp=N,21600µm,0.9s					
CMPO			AML	AML		
	comp=E,33300µm,1.0s					
CMPO			AML	AML		
	comp=N,21600µm,0.9s					
CMPO			AML	AML		
	comp=N,21600µm,0.9s					
CMPO			AML	AML		
	comp=E,33300µm,1.0s					
SFI	**Santa Sofia**	**0.70 127**	P	**Pg**	**18 22 35.6**	**-0.6**
SFI			S	**Sg**	**18 22 45.5**	**0.0**
SFI			AML	AML		
	comp=E,4130µm,1.0s					
SFI			AML	AML		
	comp=N,5065µm,0.5s					
SFI			AML	AML		
	comp=E,4825µm,0.4s					
SFI			AML	AML		
	comp=N,4305µm,0.4s					
SFI			AML	AML		
	comp=E,4130µm,1.0s					
SFI			AML	AML		
	comp=N,5065µm,0.5s					
SFI			AML	AML		
	comp=E,4820µm,0.4s					
SFI			AML	AML		
	comp=N,4300µm,0.4s					
SFI			AML	AML		
	comp=N,4300µm,0.4s					
SFI			AML	AML		
	comp=E,4130µm,1.0s					
SFI			AML	AML		
	comp=N,5065µm,0.5s					
SFI			AML	AML		
	comp=E,4820µm,0.4s					
SERM	**Sermide**	**0.70 13**	P	**Pg**	**18 22 36.8**	**+0.6**
SERM			AML	AML		
	comp=E,1600µm,0.8s					
SERM			AML	AML		
	comp=N,2260µm,1.0s					
SERM			AML	AML		
	comp=E,2162µm,0.8s					
SERM			AML	AML		
	comp=N,3605µm,0.8s					
SERM			AML	AML		
	comp=E,1600µm,0.7s					
SERM			AML	AML		
	comp=N,2255µm,1.0s					
SERM			AML	AML		
	comp=E,1600µm,0.7s					
SERM			AML	AML		
	comp=N,2255µm,1.0s					
GRAM	**Graiana**	**0.74 283**	P	**Pn**	**18 22 37.7**	**-0.5**
GRAM	**Graiana**	**0.74 283**	P	**Pg**	**18 22 37.5**	**+0.6**
GRAM			AML	AML		
	comp=E,3035µm,0.8s					
GRAM			AML	AML		
	comp=N,2745µm,0.5s					
GRAM			AML	AML		
	comp=E,3035µm,0.8s					
GRAM			AML	AML		
	comp=N,2745µm,0.5s					
GRAM			AML	AML		
	comp=E,3035µm,0.8s					
GRAM			AML	AML		
	comp=N,2745µm,0.5s					
ASQU	**Asqua**	**0.74 135**	P	**Pb**	**18 22 36.4**	**-0.5**
ASQU			AML	AML		
	comp=E,4170µm,0.2s					
ASQU			AML	AML		
	comp=N,4900µm,0.3s					
ASQU			AML	AML		
	comp=E,4170µm,0.2s					
ASQU			AML	AML		
	comp=N,4900µm,0.3s					
ASQU			AML	AML		
	comp=E,4170µm,0.2s					
ASQU			AML	AML		
	comp=N,4900µm,0.3s					
GAZZ	**Gazzo Veronese**	**0.79 1**	*e*Pg	**Pn**	**18 22 38.9**	**+0.1**
GAZZ			*e*Sg	**Sn**	**18 22 54.4**	**+4.2**
MNTV	**Mantova**	**0.85 347**	AML	AML		
	comp=E,3390µm,1.3s					
MNTV			AML	AML		
	comp=N,4780µm,0.8s					
MNTV			AML	AML		
	comp=E,3390µm,1.3s					
MNTV			AML	AML		
	comp=N,4780µm,0.8s					
MNTV			AML	AML		
	comp=N,4780µm,0.8s					
MNTV			AML	AML		
	comp=E,3390µm,1.3s					
CSNT	**Castellina Chi**	**0.87 169**	P	**Pb**	**18 22 38.8**	**-0.2**
CSNT			AML	AML		
	comp=E,5130µm,0.7s					
CSNT			AML	AML		
	comp=N,4575µm,0.6s					
CSNT			AML	AML		
	comp=E,5130µm,0.7s					
CSNT			AML	AML		
	comp=N,4575µm,0.6s					
CSNT			AML	AML		
	comp=E,5130µm,0.7s					
CSNT			AML	AML		
	comp=N,4575µm,0.6s					
SSP9	**Sansepolcro**	**1.07 134**	P	**Pg**	**18 22 43.0**	**-0.2**
SSP9			AML	AML		
	comp=E,3545µm,1.5s					
SSP9			AML	AML		
	comp=N,2820µm,0.6s					
SSP9			AML	AML		
	comp=E,3510µm,1.5s					
SSP9			AML	AML		
	comp=N,2810µm,0.6s					
SSP9			AML	AML		
	comp=N,2810µm,0.6s					
SSP9			AML	AML		
	comp=E,3510µm,1.5s					
PARC	**Parchiule**	**1.08 128**	P	**Pb**	**18 22 42.5**	**-0.1**
PARC			AML	AML		
	comp=E,2555µm,0.9s					
PARC			AML	AML		
	comp=N,3200µm,0.7s					
PARC			AML	AML		
	comp=E,2555µm,0.9s					
PARC			AML	AML		
	comp=N,3200µm,0.7s					
MSSA	**Maissana**	**1.11 270**	P	**Pg**	**18 22 43.8**	**-0.2**
MSSA			AML	AML		
	comp=E,950µm,0.4s					
MSSA			AML	AML		
	comp=N,1220µm,1.4s					

MSSA				AML	AML		
	comp=E,950µm,0.4s						
MSSA				AML	AML		
	comp=N,1220µm,1.4s						
FROS	**Frosini**	**1.12**	**177**	P	**Pb**	**18 22 42.4**	**-0.9**
FROS				AML	AML		
	comp=E,2555µm,1.5s						
FROS				AML	AML		
	comp=N,3110µm,0.5s						
FROS				AML	AML		
	comp=N,3110µm,0.5s						
FROS				AML	AML		
	comp=E,2555µm,1.5s						
TEOL	**Teolo**	**1.12**	**22⇑**	*e*Pg	**Pn**	**18 22 43.4**	**0.0**
TEOL				*e*Sg	**Sg**	**18 23 00.9**	**+2.1**
TEOL	**Teolo**	**1.12**	**22**	P	**Pn**	**18 22 43.2**	**-0.2**
TEOL				AML	AML		
	comp=E,3850µm,0.8s						
TEOL				AML	AML		
	comp=N,2465µm,0.7s						
TEOL				AML	AML		
	comp=E,3845µm,0.8s						
TEOL				AML	AML		
	comp=N,2465µm,0.7s						
TEOL				AML	AML		
	comp=N,2465µm,0.7s						
TEOL				AML	AML		
	comp=E,3845µm,0.8s						
ZOVE	**Zovencedo**	**1.17**	**15**	P	**Pn**	**18 22 43.9**	**-0.2**
CAFI	**Castiglion Fio**	**1.19**	**147**	P	**Pn**	**18 22 44.0**	**-0.3**
CAFI				AML	AML		
	comp=E,2050µm,0.5s						
CAFI				AML	AML		
	comp=N,1180µm,0.9s						
CAFI				AML	AML		
	comp=E,2050µm,0.5s						
CAFI				AML	AML		
	comp=N,1180µm,0.9s						
CDCA	**Citt' di Caste**	**1.21**	**135**	P	**Pb**	**18 22 44.9**	**+0.1**
CDCA				AML	AML		
	comp=E,3880µm,0.8s						
CDCA				AML	AML		
	comp=N,7995µm,0.8s						
CDCA				AML	AML		
	comp=E,2530µm,0.9s						
CDCA				AML	AML		
	comp=N,2245µm,1.2s						
CDCA				AML	AML		
	comp=N,2245µm,1.2s						
CDCA				AML	AML		
	comp=N,7995µm,0.8s						
CDCA				AML	AML		
	comp=E,2530µm,0.9s						
CDCA				AML	AML		
	comp=E,3880µm,0.8s						
TRIF	**Trifonti**	**1.22**	**186**	P	**Pn**	**18 22 44.1**	**-0.6**
TRIF				AML	AML		
	comp=E,1075µm,0.6s						
TRIF				AML	AML		
	comp=N,1295µm,0.6s						
TRIF				AML	AML		
	comp=E,1075µm,0.6s						
TRIF				AML	AML		
	comp=N,1295µm,0.6s						
BOB	**Bobbio (Coli)**	**1.24**	**291**	P	**Pg**	**18 22 47.4**	**+1.0**
BOB				AML	AML		
	comp=E,1550µm,1.4s						
BOB				AML	AML		
	comp=N,1505µm,1.0s						
BOB				AML	AML		
	comp=E,1780µm,1.4s						
BOB				AML	AML		
	comp=N,1620µm,1.0s						
BOB				AML	AML		
	comp=E,1550µm,1.4s						
BOB				AML	AML		
	comp=N,1620µm,1.0s						
BOB				AML	AML		
	comp=N,1505µm,1.0s						
BOB				AML	AML		
	comp=E,1780µm,1.4s						
ATPI	**Pietralunga -**	**1.30**	**132**	AML	AML		
	comp=E,2245µm,0.8s						
ATPI				AML	AML		
	comp=N,1840µm,0.6s						
ATPI				AML	AML		
	comp=E,2245µm,0.8s						
ATPI				AML	AML		
	comp=N,1840µm,0.6s						
GORR	**Gorreto**	**1.30**	**283**	P	**Pg**	**18 22 48.3**	**+0.7**
GORR				AML	AML		
	comp=E,1430µm,0.6s						
GORR				AML	AML		
	comp=N,1205µm,0.6s						
GORR				AML	AML		
	comp=N,1205µm,0.6s						
GORR				AML	AML		
	comp=E,1430µm,0.6s						
NARO	**Abbazia di Nar**	**1.30**	**123**	P	**Pb**	**18 22 46.4**	**-0.1**
NARO				AML	AML		
	comp=E,1072µm,0.7s						
NARO				AML	AML		
	comp=N,1272µm,1.0s						
NARO				AML	AML		
	comp=E,1072µm,0.7s						
NARO				AML	AML		
	comp=N,1272µm,1.0s						
ATMI	**Monte Miggiano**	**1.32**	**138**	P	**Pn**	**18 22 46.0**	**-0.1**
ATMI				AML	AML		
	comp=E,2970µm,0.6s						
ATMI				AML	AML		
	comp=N,4395µm,0.9s						
ATMI				AML	AML		
	comp=N,4395µm,0.9s						
ATMI				AML	AML		
	comp=E,2970µm,0.6s						
MARN	**Marana (Italy)**	**1.32**	**4**	*e*Pg	**Pb**	**18 22 46.8**	**0.0**
MARN				*e*Sg	**Sg**	**18 23 05.8**	**+0.8**
PIEI	**Pieia**	**1.32**	**126**	P	**Pb**	**18 22 46.7**	**-0.1**
PIEI				AML	AML		
	comp=E,1438µm,0.8s						
PIEI				AML	AML		
	comp=N,1057µm,1.5s						
PIEI				AML	AML		
	comp=N,1057µm,1.5s						
PIEI				AML	AML		
	comp=E,1438µm,0.8s						
CTL8	**Castelleone**	**1.33**	**316**	AML	AML		
	comp=E,2020µm,0.6s						
CTL8				AML	AML		
	comp=E,2020µm,0.6s						
CTL8				AML	AML		
	comp=N,2215µm,1.5s						
CTL8				AML	AML		
	comp=E,840µm,0.7s						
CTL8				AML	AML		
	comp=N,406µm,0.5s						
CTL8				AML	AML		
	comp=E,840µm,0.7s						
CTL8				AML	AML		
	comp=N,406µm,0.5s						
CTL8				AML	AML		
	comp=N,2215µm,1.5s						
BOTT	**Botticino**	**1.34**	**337**	P	**Pb**	**18 22 47.5**	**+0.4**
ATVO	**AVT- Monte Val**	**1.35**	**134**	P	**Pn**	**18 22 46.3**	**-0.2**
ATVO				AML	AML		
	comp=E,2420µm,0.7s						
ATVO				AML	AML		
	comp=N,2065µm,1.1s						
ATVO				AML	AML		
	comp=N,2065µm,1.1s						
ATVO				AML	AML		
	comp=E,2420µm,0.7s						
BALD	**Monte Baldo**	**1.37**	**353**	*e*Pg	**Pn**	**18 22 47.4**	**+0.4**
BALD				*e*Sg	**Sg**	**18 23 07.7**	**+0.9**
FSSB	**Fossombrone**	**1.39**	**117**	P	**Pb**	**18 22 48.4**	**+0.5**
FSSB				AML	AML		
	comp=E,1880µm,0.8s						
FSSB				AML	AML		
	comp=N,4575µm,0.6s						
FSSB				AML	AML		
	comp=E,1880µm,0.8s						
FSSB				AML	AML		
	comp=N,4575µm,0.6s						
MPAG	**Monte Paganucc**	**1.40**	**119**	P	**Pb**	**18 22 48.4**	**+0.2**
MPAG				AML	AML		
	comp=E,1740µm,1.1s						
MPAG				AML	AML		
	comp=N,1790µm,1.0s						
MPAG				AML	AML		
	comp=E,1740µm,1.1s						
MPAG				AML	AML		
	comp=N,1790µm,1.0s						
FRON	**Frontone**	**1.44**	**123**	P	**Pb**	**18 22 49.2**	**+0.4**
FRON				AML	AML		
	comp=E,2050µm,0.9s						
FRON				AML	AML		
	comp=N,2510µm,1.4s						
FRON				AML	AML		
	comp=N,2510µm,1.4s						
FRON				AML	AML		
	comp=E,2050µm,0.9s						
MAGA	**Magasa**	**1.48**	**348**	*e*Pg	**Pn**	**18 22 48.7**	**+0.3**
MAGA				*e*Sg	**Sg**	**18 23 11.8**	**+1.4**
MAGA	**Magasa**	**1.48**	**348**	P	**Pn**	**18 22 48.5**	**+0.1**
MAGA				AML	AML		
	comp=E,2920µm,0.7s						
MAGA				AML	AML		
	comp=N,1955µm,0.6s						
MAGA				AML	AML		
	comp=N,1955µm,0.6s						
MAGA				AML	AML		
	comp=E,2920µm,0.7s						
ARCI	**Arcidosso**	**1.50**	**169**	P	**Pn**	**18 22 47.9**	**-0.8**
ARCI				AML	AML		
	comp=E,517µm,0.6s						
ARCI				AML	AML		
	comp=N,465µm,0.7s						
ARCI				AML	AML		
	comp=N,465µm,0.7s						
ARCI				AML	AML		
	comp=E,517µm,0.6s						
CASP	**Castiglione de**	**1.54**	**186**	P	**Pn**	**18 22 48.5**	**-0.7**
CASP				AML	AML		
	comp=E,748µm,0.7s						
CASP				AML	AML		
	comp=N,682µm,1.4s						
CASP				AML	AML		
	comp=N,682µm,1.4s						
CASP				AML	AML		
	comp=E,748µm,0.7s						
DOSS	**Dosso del Somm**	**1.56**	**3⇑**	*e*Pg	**Pn**	**18 22 49.2**	**-0.3**
DOSS				*e*Sg	**Sg**	**18 23 13.7**	**+0.9**
ARVD	**Arcevia**	**1.59**	**121**	AML	AML		
	comp=N,1510µm,0.9s						
ARVD				AML	AML		
	comp=E,1192µm,1.2s						
ARVD				AML	AML		
	comp=N,1510µm,0.9s						
ARVD				AML	AML		
	comp=E,1192µm,1.2s						
CGRP	**Cima Grappa**	**1.64**	**18⇑**	*e*Pn	**Pn**	**18 22 50.1**	**-0.5**
CGRP				*e*Sn	**Sn**	**18 23 11.7**	**+0.2**
CGRP	**Cima Grappa**	**1.64**	**18**	P	**Pn**	**18 22 50.0**	**-0.7**
CGRP				AML	AML		
	comp=E,590µm,0.7s						
CGRP				AML	AML		
	comp=N,940µm,0.9s						
CGRP				AML	AML		
	comp=E,590µm,0.7s						
CGRP				AML	AML		
	comp=N,940µm,0.9s						
MTLO	**Montello**	**1.66**	**26**	*e*Pn	**Pn**	**18 22 50.5**	**-0.2**
CELB	**S.Piero in Cam**	**1.70**	**202**	AML	AML		
	comp=N,507µm,0.3s						
CELB				AML	AML		
	comp=E,429µm,0.9s						
CELB				AML	AML		
	comp=N,507µm,0.3s						
CELB				AML	AML		
	comp=E,429µm,0.9s						
SNTG	**Esanatoglia**	**1.73**	**128**	AML	AML		
	comp=N,1490µm,0.8s						
SNTG				AML	AML		
	comp=E,1180µm,1.2s						
SNTG				AML	AML		
	comp=N,1490µm,0.8s						
SNTG				AML	AML		
	comp=E,1180µm,1.2s						
CTI	**Castel Tesino**	**1.77**	**13**	P	**Pn**	**18 22 52.0**	**-0.5**
CTI				AML	AML		
	comp=E,982µm,0.2s						
CTI				AML	AML		
	comp=N,1026µm,1.3s						
CTI				AML	AML		
	comp=N,1026µm,1.3s						
CTI				AML	AML		
	comp=E,982µm,0.2s						
MABI	**Malga Bissina**	**1.77**	**347**	AML	AML		
	comp=E,242µm,0.3s						
MABI				AML	AML		
	comp=N,225µm,1.0s						
MABI				AML	AML		
	comp=N,225µm,1.0s						
MABI				AML	AML		
	comp=E,242µm,0.3s						
CING	**Cingoli**	**1.81**	**121**	P	**Pb**	**18 22 55.1**	**0.0**
CING				AML	AML		
	comp=E,1004µm,0.7s						
CING				AML	AML		
	comp=N,1325µm,0.7s						
CING				AML	AML		
	comp=E,1004µm,0.7s						
CING				AML	AML		
	comp=N,1325µm,0.7s						
CESI	**CESI - Serrava**	**1.88**	**134**	AML	AML		
	comp=E,176µm,0.6s						
CESI				AML	AML		
	comp=N,400µm,0.7s						
CESI				AML	AML		
	comp=N,400µm,0.7s						
CESI				AML	AML		
	comp=E,176µm,0.6s						
FDMO	**Fiordimonte**	**1.95**	**131**	P	**Pn**	**18 22 55.6**	**+0.9**
FDMO				AML	AML		
	comp=E,632µm,1.1s						
FDMO				AML	AML		
	comp=N,798µm,1.1s						
FDMO				AML	AML		
	comp=E,632µm,1.1s						
FDMO				AML	AML		
	comp=N,798µm,1.1s						
QLNO	**Quiliano**	**1.95**	**271**	AML	AML		
	comp=E,218µm,0.7s						
QLNO				AML	AML		
	comp=N,363µm,0.8s						
QLNO				AML	AML		
	comp=E,218µm,0.7s						
QLNO				AML	AML		
	comp=N,363µm,0.8s						
POLC	**Polcenigo**	**1.98**	**30**	AML	AML		
	comp=E,563µm,0.8s						
POLC				AML	AML		
	comp=N,812µm,0.6s						
POLC				AML	AML		
	comp=E,563µm,0.8s						
POLC				AML	AML		
	comp=N,812µm,0.6s						
CESX	**Cesi**	**2.04**	**147**	AML	AML		
	comp=N,924µm,1.1s						
CESX				AML	AML		
	comp=E,771µm,1.4s						
CESX				AML	AML		
	comp=N,924µm,1.1s						
CESX				AML	AML		
	comp=E,771µm,1.4s						
AGOR	**Agordo**	**2.08**	**19**	AML	AML		
	comp=E,308µm,0.3s						
AGOR				AML	AML		
	comp=E,308µm,0.3s						
AGOR				AML	AML		
	comp=N,284µm,1.5s						
AGOR				AML	AML		
	comp=N,284µm,1.5s						
NRCA	**Norcia**	**2.10**	**134**	AML	AML		
	comp=N,576µm,0.6s						
NRCA				AML	AML		
	comp=E,496µm,0.7s						
NRCA				AML	AML		
	comp=E,496µm,0.7s						
NRCA				AML	AML		
	comp=N,576µm,0.6s						
MUGIO	**Muggio**	**2.15**	**319**	AML	AML		
	comp=E,234µm,1.6s						
MUGIO				AML	AML		
	comp=N,210µm,0.7s						
MUGIO				AML	AML		
	comp=N,210µm,0.7s						
MUGIO				AML	AML		
	comp=E,234µm,1.6s						
KOSI	**Kohlern**	**2.15**	**6**	AML	AML		
	comp=N,414µm,1.3s						
KOSI				AML	AML		
	comp=E,538µm,1.3s						
KOSI				AML	AML		
	comp=N,414µm,1.3s						
KOSI				AML	AML		
	comp=E,538µm,1.3s						
APPI	**Appiano**	**2.16**	**3**	AML	AML		
	comp=N,409µm,1.4s						
APPI				AML	AML		
	comp=E,417µm,0.2s						
APPI				AML	AML		
	comp=N,409µm,1.4s						
APPI				AML	AML		
	comp=E,417µm,0.2s						
RORO	**Rocca Rossa**	**2.17**	**265**	AML	AML		
	comp=E,132µm,1.2s						
RORO				AML	AML		
	comp=E,132µm,1.2s						
RORO				AML	AML		
	comp=N,131µm,1.2s						
RORO				AML	AML		
	comp=N,131µm,1.2s						
LNSS	**Leonessa**	**2.24**	**139**	AML	AML		
	comp=N,1610µm,0.6s						
LNSS				AML	AML		
	comp=E,1070µm,1.3s						
LNSS				AML	AML		
	comp=E,1070µm,1.3s						
LNSS				AML	AML		
	comp=N,1610µm,0.6s						
STAL	**STALIGIAL**	**2.26**	**30**	AML	AML		
	comp=N,444µm,0.3s						
STAL				AML	AML		
	comp=E,430µm,1.4s						
STAL				AML	AML		
	comp=N,444µm,0.3s						
STAL				AML	AML		
	comp=E,522µm,1.1s						
STAL				AML	AML		
	comp=N,386µm,1.5s						
STAL				AML	AML		
	comp=E,522µm,1.1s						
STAL				AML	AML		
	comp=N,386µm,1.5s						
STAL				AML	AML		
	comp=E,430µm,1.4s						
PGF	**Pioggiola**	**2.33**	**221**	*e*Pn	**Pn**	**18 23 00.5**	**+0.4**
PGF	**Pioggiola**	**2.33**	**221**	*e*Pg	**Pg**	**18 23 06.9**	**-0.2**
PGF				*e*Sn	**Sn**	**18 23 29.6**	**+1.3**
	comp=E,75nm,0.4s						
PGF	**Pioggiola**	**2.33**	**221**	AML	AML		
	comp=N,215µm,0.6s						
PGF				AML	AML		
	comp=E,317µm,0.7s						
PGF				AML	AML		
	comp=N,215µm,0.6s						
PGF				AML	AML		
	comp=E,317µm,0.7s						
MGRO	**Montegrosso**	**2.36**	**264**	AML	AML		
	comp=E,400µm,0.6s						
MGRO				AML	AML		
	comp=E,400µm,0.6s						
MGRO				AML	AML		
	comp=N,354µm,0.9s						
MGRO				AML	AML		
	comp=N,354µm,0.9s						
SMA1	**SAN MARTINO**	**2.36**	**135**	AML	AML		
	comp=N,337µm,0.5s						
SMA1				AML	AML		
	comp=E,373µm,0.4s						
SMA1				AML	AML		
	comp=E,373µm,0.4s						
SMA1				AML	AML		
	comp=N,337µm,0.5s						
ABSI	**Aberstueckl**	**2.41**	**4**	AML	AML		
	comp=N,586µm,0.8s						
ABSI				AML	AML		
	comp=E,464µm,0.7s						
ABSI				AML	AML		
	comp=N,586µm,0.8s						
ABSI				AML	AML		
	comp=E,464µm,0.7s						
SKDS	**Skadanscina**	**2.42**	**59**	*i* Pn	**Pn**	**18 23 00.2**	**-1.0**
GEPF	**Gemona**	**2.44**	**36**	AML	AML		
	comp=E,203µm,0.7s						
GEPF				AML	AML		
	comp=N,214µm,0.7s						
GEPF				AML	AML		
	comp=E,203µm,0.7s						
GEPF				AML	AML		
	comp=N,214µm,0.7s						
TUE	**Stuetta**	**2.47**	**331**	AML	AML		
	comp=E,193µm,1.5s						
TUE				AML	AML		
	comp=E,146µm,1.5s						
TUE				AML	AML		
	comp=N,157µm,0.9s						
TUE				AML	AML		
	comp=E,193µm,1.5s						
TUE				AML	AML		
	comp=N,196µm,0.7s						
TUE				AML	AML		
	comp=E,146µm,1.5s						
TUE				AML	AML		
	comp=N,196µm,0.7s						
TUE				AML	AML		
	comp=N,157µm,0.9s						
TERO	**Teramo**	**2.51**	**132**	AML	AML		
	comp=E,250µm,0.6s						
TERO				AML	AML		
	comp=N,354µm,0.6s						
TERO				AML	AML		
	comp=E,250µm,0.6s						
TERO				AML	AML		
	comp=N,354µm,0.6s						
SAOF	**Saorge**	**2.55**	**264**	AML	AML		
	comp=N,584µm,1.0s						
SAOF				AML	AML		
	comp=E,407µm,0.6s						
SAOF				AML	AML		
	comp=N,584µm,1.0s						
SAOF				AML	AML		
	comp=E,407µm,0.6s						
ROBS	**Robic**	**2.58**	**41**	*i* Pn	**Pn**	**18 23 02.8**	**-0.6**
DAVOX	**Davos/Dischmat**	**2.59**	**342**	Pn	**Pn**	**18 23 05.5**	**+1.7**
	comp=E,0.9nm,0.3s,baz=160,slow=18,SNR=28						
DAVOX				Sn	**Sn**	**18 23 36.8**	**+1.8**
	comp=E,5.0nm,0.3s,baz=162,slow=20,SNR=3.9						
DAVOX				LR	LR	18 24 09.3	
	comp=E,69nm,22.0s,baz=81,slow=42						
AQU	**L'Aquila**	**2.60**	**138**	*e*Pn	**Pn**	**18 23 05.3**	**+1.5**
ROSI	**Rosskopf**	**2.62**	**5**	AML	AML		
	comp=E,358µm,0.8s						
ROSI				AML	AML		
	comp=E,358µm,0.8s						
ROSI				AML	AML		
	comp=N,540µm,1.1s						
ROSI				AML	AML		
	comp=N,540µm,1.1s						
VOJS	**Vojsko**	**2.62**	**48**	*i* Pn	**Pn**	**18 23 03.5**	**-0.6**
ABTA	**Abfaltersbach**	**2.63**	**22**	*e*Pn	**Pn**	**18 23 05.2**	**+1.0**
	comp=N,3.3nm,0.1s,SNR=9.2						
RIY	**Rijeka**	**2.63**	**66**	*e*Pn	**Pn**	**18 23 03.1**	**-0.9**
PTCC	**Patocco-Chiusa**	**2.63**	**37**	AML	AML		
	comp=E,154µm,0.8s						
PTCC				AML	AML		
	comp=N,126µm,0.8s						
PTCC				AML	AML		
	comp=E,154µm,0.8s						
PTCC				AML	AML		
	comp=N,126µm,0.8s						
SBF	**Sospel**	**2.66**	**261**	*e*Pn	**Pn**	**18 23 05.4**	**+0.8**
SBF	**Sospel**	**2.66**	**261**	*e*Pg	**Pg**	**18 23 13.6**	**+0.2**
SBF				*e*Sn	**Sn**	**18 23 38.3**	**+1.9**
	comp=N,65nm,0.4s						
FETA	**Feichten**	**2.71**	**355**	*e*Pn	**Pn**	**18 23 07.9**	**+2.6**
	comp=N,16nm,0.6s,SNR=10						
RISI	**Rein**	**2.72**	**15**	AML	AML		
	comp=N,550µm,0.3s						
RISI				AML	AML		
	comp=E,408µm,0.5s						

RISI				AML	AML		
	comp=N,550μm,0.3s						
RISI				AML	AML		
	comp=E,408μm,0.5s						
FUSIO	**Fusio**	**2.72**	**322**	AML	AML		
	comp=N,152μm,1.1s						
FUSIO				AML	AML		
	comp=E,264μm,0.6s						
FUSIO				AML	AML		
	comp=N,152μm,1.1s						
FUSIO				AML	AML		
	comp=E,264μm,0.6s						
NVLJ	**Novalja**	**2.73**	**84**	*i* Pn	**Pn**	**18 23 06.0**	**+0.5**
FAGN	**Fagnano**	**2.76**	**137**	AML	AML		
	comp=E,1545μm,0.6s						
FAGN				AML	AML		
	comp=E,1545μm,0.6s						
FAGN				AML	AML		
	comp=N,947μm,0.6s						
FAGN				AML	AML		
	comp=N,947μm,0.6s						
CEY	**Cerknica**	**2.77**	**58**	*e*Pn	**Pn**	**18 23 04.9**	**-1.1**
ACOM	**Acomizza, Ital**	**2.81**	**37**	AML	AML		
	comp=E,284μm,1.0s						
ACOM				AML	AML		
	comp=N,326μm,0.9s						
ACOM				AML	AML		
	comp=E,284μm,1.0s						
ACOM				AML	AML		
	comp=N,326μm,0.9s						
SQTA	**Sankt Quirin**	**2.90**	**2**	*e*Pn	**Pn**	**18 23 10.1**	**+2.2**
	comp=N,24nm,0.2s,SNR=9.3						
SQTA				*e*Sn	**Sb**	**18 23 47.1**	**-1.8**
	comp=N,31nm,0.2s						
MYKA	**Terra Mystica**	**2.93**	**37**	*i* Pn	**Pn**	**18 23 08.7**	**+0.4**
	comp=N,5.7nm,0.2s,SNR=8.1						
MYKA				*e*Sn	**Sn**	**18 23 44.6**	**+1.4**
	comp=N,10nm,0.2s						
WTTA	**Wattenberg**	**2.97**	**7**	*i* Pn	**Pn**	**18 23 10.9**	**+2.0**
	comp=N,7.5nm,0.2s,SNR=9.8						
WTTA				*i* Sn	**Sb**	**18 23 47.9**	**-3.1**
	comp=N,37nm,0.3s						
WTTA	**Wattenberg**	**2.97**	**7**	*e*Pn	**Pn**	**18 23 10.7**	**+1.8**
WTTA				*e*Sn	**Sn**	**18 23 47.6**	**+3.5**
WTTA	**Wattenberg**	**2.97**	**7**	AML	AML		
	comp=N,190μm,1.0s						
WTTA				AML	AML		
	comp=E,247μm,1.6s						
WTTA				AML	AML		
	comp=N,190μm,1.0s						
WTTA				AML	AML		
	comp=E,247μm,1.6s						
PLONS	**Plons/SG**	**2.97**	**337**	*e*Pn	**Pn**	**18 23 11.5**	**+2.7**
PLONS				*e*Sn	**Sb**	**18 23 48.1**	**-2.9**
PLONS	**Plons/SG**	**2.97**	**337**	AML	AML		
	comp=E,102μm,0.8s						
PLONS				AML	AML		
	comp=E,102μm,0.8s						
PLONS				AML	AML		
	comp=N,97μm,0.8s						
PLONS				AML	AML		
	comp=N,97μm,0.8s						
LJU	**Ljubljana**	**2.99**	**54**	*e*Pn	**Pn**	**18 23 08.9**	**-0.1**
MOTA	**Moosalm**	**3.02**	**0**	*i* Pn	**Pn**	**18 23 11.7**	**+2.1**
	comp=N,4.3nm,0.2s,SNR=12						
MOTA				*i* Sn	**Sb**	**18 23 51.3**	**-1.2**
	comp=N,9.6nm,0.2s						
WATA	**Walderalm**	**3.03**	**7**	*i* Pn	**Pn**	**18 23 11.6**	**+1.8**
	comp=N,6.8nm,0.1s,SNR=15						
WATA				*i* Sn	**Sb**	**18 23 51.6**	**-1.3**
	comp=N,25nm,0.2s						
SURF	**Saint Ours**	**3.05**	**274**	P	**Pb**	**18 23 14.6**	**-1.8**
SURF				S	**Sb**	**18 23 51.7**	**-1.8**
DAVA	**Damuels**	**3.08**	**345**	*i* Pn	**Pn**	**18 23 12.8**	**+2.5**
	comp=N,4.4nm,0.2s,SNR=8.2						
DAVA				*e*Sn	**Sb**	**18 23 50.9**	**-3.3**
	comp=N,30nm,0.3s						
DAVA	**Damuels**	**3.08**	**345**	*e*Pn	**Pn**	**18 23 12.9**	**+2.5**
DAVA				*e*Sn	**Sb**	**18 23 51.0**	**-3.1**
MBDF	**Montbardon**	**3.10**	**279**	*e*Pn	**Pn**	**18 23 12.1**	**+1.4**
MBDF				*e*Sn	**Sn**	**18 23 48.9**	**+1.5**
	comp=N,45nm,0.6s						
INTR	**Introdacqua**	**3.11**	**137**	AML	AML		
	comp=E,405μm,1.0s						
INTR				AML	AML		
	comp=E,405μm,1.0s						
INTR				AML	AML		
	comp=N,426μm,1.4s						
INTR				AML	AML		
	comp=N,426μm,1.4s						
BNALP	**Bannalp**	**3.15**	**325**	AML	AML		
	comp=E,86μm,1.4s						
BNALP				AML	AML		
	comp=N,140μm,0.8s						
BNALP				AML	AML		
	comp=E,86μm,1.4s						
BNALP				AML	AML		
	comp=N,140μm,0.8s						
RETA	**Reutte**	**3.17**	**356**	*i* Pn	**Pn**	**18 23 14.0**	**+2.4**
	comp=N,8.1nm,0.2s,SNR=13						
RETA				*e*Sn	**Sn**	**18 23 52.1**	**+3.0**
	comp=N,6.9nm,0.2s						
KBA	**Koelnbreinsper**	**3.18**	**29**	*e*Pn	**Pn**	**18 23 13.5**	**+1.6**
	comp=N,1.9nm,0.1s						
KBA				*e*Sn	**Sn**	**18 23 52.7**	**+3.2**
	comp=N,7.0nm,0.2s						
KBA	**Koelnbreinsper**	**3.18**	**29**	*e*Pn	**Pn**	**18 23 13.5**	**+1.6**
OBKA	**Obir**	**3.28**	**47**	*i* Pn	**Pn**	**18 23 13.3**	**+0.2**
	comp=N,3.6nm,0.2s						
OBKA				*i* Sn	**Sb**	**18 23 56.9**	**-3.1**
	comp=N,13nm,0.3s						
OBKA	**Obir**	**3.28**	**47**	*e*Pn	**Pn**	**18 23 13.4**	**+0.2**
FRF	**La Foret Royal**	**3.28**	**258**	*e*Pn	**Pn**	**18 23 13.9**	**+0.8**
FRF				*e*Sn	**Sn**	**18 23 53.2**	**+1.5**
	comp=N,20nm,0.3s						
LPG	**La Plagne**	**3.28**	**292**	*e*Pn	**Pn**	**18 23 14.0**	**+0.6**
LPG				*e*Sn	**Sn**	**18 23 52.7**	**+0.5**
	comp=N,51nm,0.6s						
LPL	**La Plagne**	**3.30**	**293**	*e*Pn	**Pn**	**18 23 14.5**	**+0.9**
LPL				*e*Sn	**Sn**	**18 23 54.4**	**+1.9**
	comp=N,30nm,0.5s						
UDBI	**Udbina**	**3.37**	**85**	*i* Pn	**Pn**	**18 23 16.2**	**+1.9**
UDBI				Sn	**Sn**	**18 23 56.7**	**+2.7**
OZLJ	**Ozalj**	**3.38**	**66**	*e*Pn	**Pn**	**18 23 14.9**	**+0.5**
OZLJ				Sn	**Sn**	**18 23 51.8**	**-2.2**
UBR	**Ueberruh**	**3.42**	**349**	*e*Pn	**Pn**	**18 23 17.0**	**+1.9**
RSL	**Roselend**	**3.43**	**295**	P	**Pn**	**18 23 18.7**	**+3.4**
LMR	**La Mourre**	**3.44**	**255**	*e*Pn	**Pn**	**18 23 15.7**	**+0.4**
LMR				*e*Sn	**Sn**	**18 23 57.1**	**+1.4**
	comp=N,18nm,0.3s						
CRES	**Cresnjev**	**3.45**	**63**	*e*Pn	**Pn**	**18 23 15.1**	**-0.3**
RJOB	**Jochberg**	**3.62**	**19**	*e*Pn	**Pn**	**18 23 19.7**	**+1.9**
RJOB				*e*Sn	**Sn**	**18 24 04.1**	**+4.0**
BLAF	**les Blancs**	**3.64**	**266**	P	**Pn**	**18 23 21.7**	**+3.8**
SOKA	**Soboth**	**3.65**	**48**	*e*Pn	**Pn**	**18 23 18.4**	**+0.3**
	comp=N,3.6nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.75**	**281**	*e*P	**Pn**	**18 23 23.6**	**+4.0**
ORIF				*e*Sn	**Sn**	**18 24 04.7**	**+1.3**
	comp=N,61nm,0.8s						
BALST	**Balsthal**	**3.83**	**323**	*e*Pn	**Pn**	**18 23 21.8**	**+1.2**
SLE	**Schleitheim**	**3.88**	**333**	*e*Pn	**Pn**	**18 23 22.1**	**+0.8**
SMRF	**Simiane la Rot**	**3.97**	**267**	*e*Pn	**Pn**	**18 23 23.5**	**+1.0**
SMRF				*e*Sn	**Sn**	**18 24 09.9**	**+1.2**
	comp=N,15nm,0.4s						
RUSF	**Rustrel**	**4.04**	**266**	P	**Pn**	**18 23 27.3**	**+3.8**
RUSF				S	**Sn**	**18 24 16.0**	**+5.6**
MOA	**Molln**	**4.17**	**31**	*i* Pn	**Pn**	**18 23 26.1**	**+0.8**
	comp=N,8.2nm,0.1s,SNR=6.1						
MOA				*e*Sn	**Sn**	**18 24 15.5**	**+1.9**
	comp=N,6.7nm,0.3s						
MOA	**Molln**	**4.17**	**31**	*e*Pn	**Pn**	**18 23 26.1**	**+0.8**
MOA				*e*Sn	**Sn**	**18 24 15.5**	**+1.9**
CABF	**La Chapelle**	**4.18**	**305**	*e*Pn	**Pn**	**18 23 26.2**	**+0.7**
CABF				*e*Sn	**Sn**	**18 24 13.9**	**-0.2**
	comp=N,14nm,0.5s						
LOMF	**Lomont**	**4.24**	**317**	P	**Pn**	**18 23 27.5**	**+1.2**
KIZ	**Kirchzarten**	**4.24**	**330**	P	**Pn**	**18 23 27.1**	**+0.8**
CHMF	**Charmoille**	**4.25**	**315**	P	**Pn**	**18 23 28.0**	**+1.5**
ARSA	**Arzberg**	**4.27**	**45**	*i* Pn	**Pn**	**18 23 26.5**	**-0.1**
	comp=N,6.5nm,0.2s						
ARSA				*e*Sn	**Sn**	**18 24 16.1**	**-0.1**
	comp=N,3.9nm,0.5s						
ARSA	**Arzberg**	**4.27**	**45**	*e*Pn	**Pn**	**18 23 26.6**	**-0.1**
SGRT	**San Giovanni R**	**4.28**	**125**	AML	AML		
	comp=E,99μm,0.9s						
SGRT				AML	AML		
	comp=N,126μm,1.0s						
SGRT				AML	AML		
	comp=E,99μm,0.9s						
SGRT				AML	AML		
	comp=N,126μm,1.0s						
BLY	**Banja Luka**	**4.39**	**82**	*e*Pn	**Pn**	**18 23 30.9**	**+2.6**
BFO	**Black Forest**	**4.43**	**336**	*e*Pn	**Pn**	**18 23 29.6**	**+0.7**
BFO				*e*Sn	**Sn**	**18 24 17.3**	**-2.8**
MOF	**Molkenrain**	**4.46**	**324**	P	**Pn**	**18 23 30.5**	**+1.1**
HINF	**Hinteralfeld**	**4.56**	**321**	*e*Pn	**Pn**	**18 23 31.0**	**+0.3**
HINF				*e*Sn	**Sn**	**18 24 21.9**	**-1.4**
	comp=N,14nm,0.3s						
VIVF	**Saint-Julien-l**	**4.60**	**279**	*e*Pn	**Pn**	**18 23 32.6**	**+1.4**
VIVF				*e*Sn	**Sn**	**18 24 24.3**	**+0.1**
ECH	**Echery**	**4.74**	**327**	P	**Pn**	**18 23 33.5**	**+0.4**
WLS	**Welschbruch**	**4.83**	**329**	P	**Pn**	**18 23 35.5**	**+1.1**
CDF	**Champ du Feu**	**4.86**	**329**	*e*Pn	**Pn**	**18 23 35.2**	**+0.4**
CDF				*e*Sn	**Sn**	**18 24 29.0**	**-1.7**
	comp=N,6.7nm,0.3s						
GEC2	**GERESS Array S**	**4.87**	**21**	*e*Pn	**Pn**	**18 23 35.1**	**+0.1**
GEC2				*e*Sn	**Sn**	**18 24 29.9**	**-1.1**
GERES	**GERESS Array B**	**4.87**	**21**	Pn	**Pn**	**18 23 34.6**	**-0.4**
	comp=N,0.7nm,0.3s,baz=200,slow=13,SNR=18						
GERES				Sn	**Sn**	**18 24 30.9**	**-0.1**
	comp=N,1.6nm,0.3s,baz=206,slow=25,SNR=7.3						
GERES				LR	LR	18 25 52.9	
	comp=N,134nm,20.5s,baz=213,slow=44						
CONA	**Conrad Observa**	**4.91**	**41**	*i* Pn	**Pn**	**18 23 35.4**	**-0.1**
	comp=N,2.6nm,0.2s,SNR=7.3						
CONA				*e*Sn	**Sn**	**18 24 32.7**	**+0.8**
	comp=N,17nm,0.9s						
HAU	**Haudompre**	**4.93**	**320**	*e*Pn	**Pn**	**18 23 36.5**	**+0.8**
HAU				*e*Sn	**Sn**	**18 24 31.2**	**-1.2**
	comp=N,28nm,0.3s						
WET	**Wettzell**	**4.98**	**14**	*e*Pn	**Pn**	**18 23 36.3**	**-0.1**
WET				*e*Sn	**Sn**	**18 24 32.4**	**-1.1**
STON	**Ston**	**5.03**	**104**	*e*Pn	**Pn**	**18 23 37.8**	**+0.7**
STON	**Ston**	**5.03**	**104**	*e*Pn	**Pn**	**18 23 36.7**	**-0.3**
KHC	**Kasperske Hory**	**5.11**	**19**	*e*PN	**Pn**	**18 23 38.4**	**+0.2**
KHC				*e*PG	**Pg**	**18 24 00.0**	**-0.2**
KHC				*e*SN	**Sn**	**18 24 34.9**	**-1.9**
KHC				*e*SG	**Sg**	**18 25 14.0**	**+7.7**
KHC				AMS	AMS	18 25 50.0	
	comp=N,500nm,14.5s						
LASF	**Ste Croix**	**5.19**	**270**	*e*Pn	**Pn**	**18 23 41.2**	**+1.9**
LASF				*e*Sn	**Sn**	**18 24 39.0**	**+0.2**
	comp=N,5.5nm,0.5s						
ROTZ	**Rotzenmuhle**	**5.50**	**8**	*e*Pn	**Pn**	**18 23 43.0**	**-0.6**
ROTZ				*e*Sn	**Sn**	**18 24 42.6**	**-3.8**
TREB	**Trebinje**	**5.53**	**104**	*e*Pn	**Pn**	**18 23 44.6**	**+0.6**
SMF	**Signal de Mont**	**5.59**	**297**	*e*Pn	**Pn**	**18 23 45.1**	**+0.4**
SMF				*e*Sn	**Sn**	**18 24 48.0**	**-0.5**
	comp=N,9.5nm,0.3s						
BRY	**Bratogost**	**5.61**	**102**	*e*Pn	**Pn**	**18 23 46.7**	**+1.6**
PAGF	**Fort de Pagny**	**5.62**	**321**	*e*Pn	**Pn**	**18 23 46.0**	**+0.9**
	baz=142						
PAGF				*e*Sn	**Sn**	**18 24 47.1**	**-2.1**
	comp=N,34nm,0.7s						
MORH	**Mrgy, Hungar**	**5.67**	**68**	*e*Pn	**Pn**	**18 23 44.1**	**-1.7**
HAPS	**Han Pijesak,Bl**	**5.67**	**90**	*e*Pn	**Pn**	**18 23 45.0**	**-1.0**
ZST	**Bratislava**	**5.70**	**45**	*e*PN	**Pn**	**18 23 45.2**	**-1.1**
SFTF	**Sexfontaines**	**5.70**	**315**	*e*Pn	**Pn**	**18 23 47.2**	**+0.9**
	baz=130						
SFTF				*e*Sn	**Sn**	**18 24 50.0**	**-1.4**
	comp=N,4.2nm,0.3s						
MANZ	**Manzenberg**	**5.71**	**7**	*e*Sn	**Sn**	**18 24 47.5**	**-4.0**
UPM	**Unac-Piva**	**5.79**	**98**	*e*Pn	**Pn**	**18 23 49.6**	**+2.0**
TREC	**Trest**	**5.82**	**30**	*e*PN	**Pn**	**18 23 47.2**	**-0.8**
TREC				*e*SN	**Sn**	**18 24 51.9**	**-2.4**
TREC				AMS	AMS	18 26 20.0	
	comp=N,300nm,12.1s						
LOR	**Lormes**	**5.84**	**303**	*e*Pn	**Pn**	**18 23 49.3**	**+1.1**
LOR				*e*Sn	**Sn**	**18 24 53.5**	**-1.2**
	comp=N,14nm,0.4s						
MEZF	**Maizieres J`vi**	**5.89**	**317**	*e*Pn	**Pn**	**18 23 49.8**	**+0.9**
	baz=133						
MEZF				*e*Sn	**Sn**	**18 24 54.4**	**-1.7**
	comp=N,16nm,0.6s						
MODS	**Modra-Piesok**	**5.90**	**45**	*e*PN	**Pn**	**18 23 48.1**	**-1.0**
MODS				*e*SN	**Sn**	**18 24 51.5**	**-4.8**
MODS				eLG	Lg	18 25 01.7	
AVF	**Avril sur Loir**	**5.95**	**297**	*e*Pn	**Pn**	**18 23 50.3**	**+0.6**
AVF				*e*Sn	**Sn**	**18 24 56.9**	**-0.6**
	comp=N,10nm,0.7s						
SSF	**Saint Saulge**	**5.96**	**300**	*e*Pn	**Pn**	**18 23 50.8**	**+0.9**
SSF				*e*Sn	**Sn**	**18 24 56.5**	**-1.2**
	comp=N,5.9nm,0.3s						
NKC	**Novy Kostel**	**5.99**	**9**	*e*PN	**Pn**	**18 23 49.7**	**-0.5**
NKC				*e*SN	**Sn**	**18 24 55.4**	**-2.9**
NKC				AMS	AMS	18 26 30.0	
	comp=N,300nm,14.3s						
KRUC	**Moravsky**	**5.99**	**36**	*e*PN	**Pn**	**18 23 50.2**	**0.0**
BBLS	**Lazići**	**6.02**	**91**	*e*Pn	**Pn**	**18 23 51.0**	**+0.2**
GOPC	**GO Pecny, Ondr**	**6.14**	**23**	*e*PN	**Pn**	**18 23 52.2**	**-0.1**
GOPC				*e*SN	**Sn**	**18 24 59.6**	**-2.5**
GOPC				AMS	AMS	18 26 20.0	
	comp=N,400nm,13.9s						
PRU	**Pruhonice**	**6.14**	**21**	*e*PN	**Pn**	**18 23 52.2**	**-0.1**
PRU				*e*SN	**Sn**	**18 24 58.3**	**-3.8**
PRU				AMS	AMS	18 26 20.0	
	comp=N,400nm,12.4s						
TNS	**Taunus Mts**	**6.16**	**344**	*e*Pn	**Pn**	**18 23 53.4**	**+0.7**
BGF	**Bois d'Agland**	**6.20**	**294**	*e*Pn	**Pn**	**18 23 53.4**	**+0.2**
BGF				*e*Sn	**Sn**	**18 25 01.7**	**-1.9**
	comp=N,3.7nm,0.3s						
VRAC	**Vranov**	**6.26**	**35**	*e*PN	**Pn**	**18 23 50.9**	**-3.1**
DRME	**Dracevica, Mon**	**6.30**	**107**	*e*Pn	**Pn**	**18 23 55.3**	**+0.8**
MOX	**Moxa**	**6.33**	**3**	*e*Pn	**Pn**	**18 23 54.8**	**-0.2**
MOX				*e*Sn	**Sn**	**18 25 03.8**	**-3.1**
DIVS	**Divibare**	**6.42**	**89**	*e*Pn	**Pn**	**18 23 55.7**	**-0.5**
JAVC	**Velka Javorina**	**6.42**	**43**	*e*PN	**Pn**	**18 23 56.4**	**+0.2**
CAF	**Calviac**	**6.46**	**278**	*e*Pn	**Pn**	**18 23 58.1**	**+1.4**
CAF				*e*Sn	**Sn**	**18 25 09.4**	**-0.5**
MTLF	**Montolieu**	**6.48**	**264**	*e*Pn	**Pn**	**18 23 58.3**	**+1.3**
MTLF				*e*Sn	**Sn**	**18 25 09.5**	**-1.0**
	comp=N,3.2nm,0.4s						
TCF	**Toulx Ste Croi**	**6.55**	**291**	*e*Pn	**Pn**	**18 23 58.9**	**+0.9**
TCF				*e*Sn	**Sn**	**18 25 10.7**	**-1.5**
	comp=N,2.0nm,0.3s						
HYF	**Humbligny**	**6.59**	**300**	*e*Pn	**Pn**	**18 23 58.7**	**+0.2**
HYF				*e*Sn	**Sn**	**18 25 11.3**	**-1.8**
	comp=N,13nm,0.2s						
PVCC	**Panska Ves**	**6.64**	**20**	AMS	AMS	18 26 50.0	
	comp=N,400nm,12.1s						
VYHS	**Vyhne**	**6.80**	**49**	*e*PN	**Pn**	**18 24 00.0**	**-1.3**
VYHS				*e*SN	**Sn**	**18 25 13.7**	**-4.6**
BRG	**Berggiesshubel**	**6.83**	**15**	PN	**Pn**	**18 24 02.2**	**+0.4**
BRG	**Berggiesshubel**	**6.83**	**15**	SG	**Sg**	**18 26 09.9**	**+8.3**
	comp=N,16nm,1.1s						
RJF	**Les Rejaudoux**	**6.87**	**282**	*e*Pn	**Pn**	**18 24 02.8**	**+0.5**
RJF				*e*Sn	**Sn**	**18 25 18.5**	**-1.5**
DPC	**Dobruska-Polom**	**7.00**	**29**	*e*SN	**Sn**	**18 25 19.4**	**-4.0**
DPC				AMS	AMS	18 27 00.0	
	comp=N,300nm,16.6s						
UPC	**Upice**	**7.04**	**27**	AMS	AMS	18 27 00.0	
	comp=N,300nm,13.9s						
CLL	**Collm**	**7.11**	**10**	*e*Pn	**Pn**	**18 24 05.0**	**-0.6**
CLL				*e*Sg	**Sg**	**18 26 07.0**	**-3.3**
	comp=Z,49nm,2.0s						
CHVC	**Chvalec**	**7.12**	**27**	*e*PN	**Pn**	**18 24 04.2**	**-1.6**
CHVC				AMS	AMS	18 27 00.0	
	comp=Z,300nm,14.8s						
OSTC	**Ostas**	**7.14**	**27**	AMS	AMS	18 27 00.0	
	comp=Z,300nm,14.4s						
GIVF	**Givet**	**7.17**	**326**	*e*Pn	**Pn**	**18 24 06.1**	**-0.4**
GIVF				*e*Sn	**Sn**	**18 25 25.0**	**-2.5**
	comp=Z,2.6nm,0.2s						
VAE	**Valguarnera**	**7.29**	**159**	Sn	**Sn**	**18 25 32.5**	**+1.9**
	comp=Z,1.9nm,0.3s,baz=44,slow=9.9,SNR=2.7						
OKC	**Ostrava-Krasne**	**7.33**	**39**	AMS	AMS	18 27 50.0	
	comp=Z,200nm,12.7s						
LFF	**La Frestale**	**7.39**	**278**	*e*Pn	**Pn**	**18 24 11.1**	**+1.6**
LFF				*e*Sn	**Sn**	**18 25 31.8**	**-1.2**
	comp=Z,1.9nm,0.2s						
BAIF	**Baives**	**7.40**	**323**	*e*Pn	**Pn**	**18 24 09.2**	**-0.3**
BAIF				*e*Sn	**Sn**	**18 25 29.8**	**-3.2**
	comp=Z,1.1nm,0.3s						
EPF	**Esparros**	**7.88**	**264**	*e*Pn	**Pn**	**18 24 17.3**	**+1.0**
EPF				*e*Sn	**Sn**	**18 25 43.2**	**-2.0**
	comp=Z,2.9nm,0.4s						
MFF	**Saint Martin d**	**8.21**	**290**	*e*Pn	**Pn**	**18 24 21.4**	**+0.7**
MFF				*e*Sn	**Sn**	**18 25 50.5**	**-2.4**
ETSF	**Etsaut**	**8.56**	**264**	*e*Pn	**Pn**	**18 24 25.8**	**+0.2**
ETSF				*e*Sn	**Sn**	**18 25 59.1**	**-2.6**
	comp=Z,2.0nm,0.2s						
KEST	**Kesra**	**8.68**	**189**	Pn	**Pn**	**18 24 30.6**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=330,slow=7.6,SNR=2.2						
KEST				LR	LR	18 27 53.9	
	comp=Z,75nm,18.3s,baz=240,slow=38						
LDF	**La Druitiere**	**8.82**	**303**	*e*Pn	**Pn**	**18 24 29.0**	**-0.1**
LDF				*e*Sn	**Sn**	**18 26 05.0**	**-3.1**
SJPF	**Ste Jean**	**8.99**	**267**	*e*Pn	**Pn**	**18 24 31.9**	**+0.5**
SJPF				*e*Sn	**Sn**	**18 26 09.7**	**-2.5**
FLN	**La Foliniere**	**9.11**	**303**	*e*Pn	**Pn**	**18 24 32.9**	**-0.2**
	baz=125						
FLN				*e*Sn	**Sn**	**18 26 11.8**	**-3.4**
GRR	**Gorron**	**9.19**	**300**	*e*Pn	**Pn**	**18 24 34.2**	**0.0**
GRR				*e*Sn	**Sn**	**18 26 13.7**	**-3.5**
SGMF	**Saint Gilles**	**10.22**	**297**	*e*Pn	**Pn**	**18 24 48.0**	**-0.2**
SGMF				*e*Sn	**Sn**	**18 26 38.2**	**-4.0**
QUIF	**Quistinic**	**10.51**	**295**	*e*Pn	**Pn**	**18 24 52.2**	**0.0**
QUIF				*e*Sn	**Sn**	**18 26 45.4**	**-4.1**
MLR	**Muntele Rosu**	**10.62**	**78**	LR	LR	18 29 47.0	
	comp=Z,56nm,20.5s,baz=276,slow=42						
ROSF	**Rostrenen**	**10.70**	**297**	*e*Pn	**Pn**	**18 24 54.6**	**-0.2**
ROSF				*e*Sn	**Sn**	**18 26 49.7**	**-4.4**
HFS	**Hagfors**	**15.91**	**5**	Pn	**Pn**	**18 26 03.7**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=2.2						
NOA	**NORSAR Array B**	**16.75**	**0**	Pn	**Pn**	**18 26 14.1**	**-1.9**
	comp=Z,0.0nm,0.3s,baz=187,slow=14,SNR=2.8						
FINES	**FINESS Array B**	**19.30**	**22**	P	**P**	**18 26 46.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=209,slow=14,SNR=2.8						
JMIC	**Jan Mayen**	**28.42**	**347**	LR	LR	18 41 39.9	
	comp=Z,78nm,18.7s,baz=256,slow=41						
GEYT	**Alibeck**	**35.61**	**84**	P	**P**	**18 29 20.6**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=270,slow=10,SNR=3.4						
MKAR	**Makanchi Array**	**48.34**	**61**	P	**P**	**18 31 03.8**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=283,slow=7.1,SNR=5.0						
KSRS	**Korea Array**	**80.58**	**46**	LR	LR	19 14 01.9	
	comp=Z,55nm,19.6s,baz=18,slow=38						
TXAR	**Lajitas Array**	**85.58**	**307**	P	**P**	**18 35 01.4**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=72,slow=5.8,SNR=3.4						

*CERI **14** 18:38:01.7, 35°.49N×92°.39W, h0km, MD2.5*
*ANF **14** 18:38:01.5±0.3, 35°.49N×92°.43W, h4km±2km, ML3.6/25,*
Error ellipse: s-maj=2.1km s-min=1.4km az=104.0
*NEIC **14** 18:38:01.7±0.0, 35°.49N×92°.39W, h0km, MD2.5(CERI),*
After CERI.
NEIC Felt at Clinton.

ISC 14 18:38:01.5±1.2, 35°.48N±0°.02×92°.45W±0°.02, h2km±10km, n61, σ1§46/75, Arkansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHAR	**Wooly Hollow**	**0.23**	**146**	*e*Pg	**Pg**	**18 38 06.0**	**+0.2**
W41B	**Gary Mavity, V**	**0.35**	**152**	*e*Pg	**Pg**	**18 38 08.1**	**0.0**
W41B	**Gary Mavity, V**	**0.35**	**152**	P	**Pg**	**18 38 08.1**	**0.0**
	baz=340,SNR=97						
W41B				S	**Sg**	**18 38 13.2**	**+0.6**
	baz=340						
UALR	**University of**	**0.71**	**173**	*e*Pg	**Pb**	**18 38 16.0**	**-0.6**
U40A	**Yellville**	**0.93**	**339**	P	**Pg**	**18 38 19.5**	**+0.1**
	baz=156,SNR=108						
U40A				S	**Sb**	**18 38 32.0**	**-1.3**
	baz=156						
X40A	**Basin Creek Fa**	**1.04**	**198**	*e*Pg	**Pb**	**18 38 21.9**	**-0.3**
X40A	**Basin Creek Fa**	**1.04**	**198**	P	**Pb**	**18 38 21.9**	**-0.3**
	baz=20,SNR=70						
X40A				S	**Sb**	**18 38 36.4**	**0.0**
	baz=20						
W39A	**Magazine**	**1.13**	**256**	*e*Pg	**Pn**	**18 38 23.9**	**-0.5**
W39A	**Magazine**	**1.13**	**256**	P	**Pn**	**18 38 23.8**	**-0.5**
	baz=75,SNR=22						
W39A				S	**Sn**	**18 38 39.6**	**-0.9**
	baz=75						
MIAR	**Mount Ida**	**1.32**	**225**	*e*Pg	**Pb**	**18 38 26.8**	**-0.2**
MIAR				*e*Sg	**Sg**	**18 38 45.2**	**+1.5**
MIAR	**Mount Ida**	**1.32**	**225**	P	**Pb**	**18 38 26.8**	**-0.2**
	baz=45,SNR=43						
MIAR				S	**Sg**	**18 38 45.3**	**+1.5**
	baz=45						
HHAR	**Hobbs**	**1.45**	**304**	*e*Pn	**Pb**	**18 38 28.9**	**-0.4**
HBAR	**Harrisburg**	**1.46**	**87**	*e*Pn	**Pn**	**18 38 27.6**	**-1.3**
X43A	**Marvell**	**1.60**	**126**	*e*Pn	**Pb**	**18 38 30.7**	**-1.1**
X43A	**Marvell**	**1.60**	**126**	P	**Pb**	**18 38 30.7**	**-1.1**
	baz=309,SNR=6.3						
X43A				S	**Sg**	**18

East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.86**	**2**	*eP*	Pn	18 52 44.3	+1.4
KDTR				*eS*	Sn	18 52 55.4	+0.8
PAU	**Pauzhetka**	**0.92**	**305**	*eP*	Pn	18 52 45.3	+1.7
PAU				*eS*	Sn	18 52 57.2	+1.2
SKR	**Severo-Kuril's**	**1.24**	**258**	*eP*	Pn	18 52 49.2	+1.3
SKR				*eS*	Sn	18 53 04.4	+0.9
ASAK	**Asacha**	**1.44**	**357**	*eP*	Pn	18 52 52.6	+1.9
RUS	**Russkaya**	**1.52**	**11**	*eP*	Pn	18 52 53.1	+1.4
RUS				*eS*	Sn	18 53 11.4	+1.1
MTVR	**Mutnovka**	**1.54**	**4**	*eP*	Pn	18 52 54.2	+2.1
MTVR				*eS*	Sn	18 53 13.2	+2.1
KRMR	**Karymshinskiy**	**1.89**	**2**	*eP*	Pn	18 52 59.7	+3.0
KRMR				*eS*	Sn	18 53 22.3	+3.0
APC	**Apacha**	**2.05**	**345**	*eP*	Pn	18 53 00.9	+2.0
APC				*eS*	Sn	18 53 25.2	+1.9
DALK	**Dalny**	**2.13**	**12**	*eP*	Pn	18 53 02.4	+2.4
DALK				*eS*	Sn	18 53 27.3	+2.0
UGLR	**Uglovaya**	**2.32**	**12**	*eP*	Pn	18 53 05.5	+2.8
AVH	**Avacha**	**2.36**	**10**	*eP*	Pn	18 53 06.3	+3.0
AVH				*eS*	Sn	18 53 34.1	+3.0
SMAR	**Somma**	**2.37**	**11**	*eP*	Pn	18 53 06.4	+2.9
NLC	**Nalytchevo**	**2.37**	**20**	*eS*	Sn	18 53 35.5	+4.4
KOK	**Koryaka**	**2.38**	**9**	*eP*	Pn	18 53 07.1	+3.6
SDLR	**Sedlovina**	**2.39**	**12**	*eP*	Pn	18 53 06.1	+2.4
KRER	**Koryakskii**	**2.40**	**10**	*eP*	Pn	18 53 07.2	+3.3
KRX	**Arik**	**2.44**	**9**	*eP*	Pn	18 53 07.9	+3.4
SPN	**Mys Shipunski**	**2.48**	**29**	*eP*	Pn	18 53 07.6	+2.8
SPN				*eS*	Sn	18 53 37.4	+3.5
GNL	**Ganaly**	**2.75**	**359**	*eP*	Pn	18 53 11.7	+3.1
MKZ	**Mys Kozlova**	**4.26**	**30**	*eP*	Pn	18 53 31.2	+2.1
BKI	**Bering**	**6.41**	**45**	*eP*	Pn	18 54 01.8	+3.2

WEL 14 19:01:13.9, 38.7S±0.8°×177.4E±0.9, h33km±1km, M3.5/17, ML3.9/13, MLv3.5/17, Error ellipse: s-maj=0.0km s-min=0.0km az=83.6, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNGZ	**Shannon Statio**	**0.06**	**220**	P	Pb	19 01 19.3	-0.2
SNGZ				S	Sb	19 01 24.0	+0.7
RAGZ	**Rawiri**	**0.24**	**6**	P	Pb	19 01 20.9	-0.2
RAGZ				S	Sb	19 01 26.8	+1.0
RAHZ	**Arahi**	**0.29**	**233**	P	Pb	19 01 21.6	0.0
RAHZ				S	Sn	19 01 28.1	+1.2
RIGZ	**Rimuhau**	**0.30**	**84**	P	Pn	19 01 22.0	+0.1
RIGZ				S	Sn	19 01 29.0	+2.0
RTZ	**Ruatahuna**	**0.34**	**291**	P	Pb	19 01 22.0	-0.2
RTZ				S	Sn	19 01 28.9	+0.6
WHHZ	**Waihua**	**0.36**	**199**	P	Pn	19 01 22.7	-0.1
WHHZ				S	Sn	19 01 30.9	+2.3
KNZ	**Kokohu**	**0.36**	**142**	P	Pb	19 01 22.4	0.0
KNZ				S	Sn	19 01 29.3	+0.6
MWZ	**Matawai**	**0.42**	**15**	P	Pb	19 01 23.1	-0.1
MWZ				S	Sn	19 01 30.6	+0.3
PRGZ	**Paritu Road**	**0.43**	**115**	P	Pb	19 01 23.5	+0.1
MTHZ	**Maungataniwha**	**0.44**	**255**	P	Pb	19 01 23.5	-0.1
MTHZ				S	Sn	19 01 31.2	+0.3
TKGZ	**Te Karaka**	**0.47**	**51**	P	Pn	19 01 24.7	+0.3
TKGZ				S	Sn	19 01 33.6	+2.1
URZ	**Urewera**	**0.53**	**336**	P	Pb	19 01 24.6	-0.2
URZ				S	Sn	19 01 33.3	+0.5
MUGZ	**Murupara**	**0.55**	**298**	P	Pb	19 01 25.0	-0.2
MUGZ				S	Sn	19 01 34.1	+0.7
NMHZ	**Naumai**	**0.58**	**231**	P	Pn	19 01 26.1	+0.3
MHGZ	**Mahia Peninsul**	**0.58**	**136**	P	Pb	19 01 25.6	-0.2
ARHZ	**Aropaoanui**	**0.60**	**210**	P	Pn	19 01 26.7	+0.5
CNGZ	**Carnagh Statio**	**0.69**	**69**	P	Pb	19 01 28.7	+1.1
TWGZ	**Tauwhareparae**	**0.73**	**40**	P	Pb	19 01 29.0	+0.8
MRHZ	**Matea Rd**	**0.76**	**263**	P	Pb	19 01 28.7	-0.1
RRRZ	**Republican Roa**	**0.79**	**300**	P	Pn	19 01 28.8	+0.1
RUGZ	**Raukumara Rang**	**0.81**	**17**	P	Pn	19 01 29.1	+0.1
EDRZ	**Edgecumbe**	**0.81**	**321**	P	Pb	19 01 29.6	0.0
PRRZ	**Plateau Road**	**0.81**	**287**	P	Pb	19 01 29.4	-0.2
BKZ	**Black Stump Fm**	**0.82**	**238**	P	Pb	19 01 29.6	-0.2
ALRZ	**Allen Road**	**0.83**	**282**	P	Pn	19 01 29.6	+0.2
TARZ	**Mount Tarawera**	**0.85**	**306**	P	Pn	19 01 29.9	+0.2
MCHZ	**McNeill Hill**	**0.89**	**217**	P	Pb	19 01 30.6	-0.2
HRRZ	**Handcock Road**	**0.93**	**292**	P	Pn	19 01 30.8	+0.1
MARZ	**Manawahe**	**0.94**	**323**	P	Pn	19 01 31.2	+0.4
MKRZ	**Makatiti**	**0.94**	**309**	P	Pb	19 01 32.1	+0.4
WHRZ	**Whale Island**	**0.94**	**340**	P	Pn	19 01 31.0	+0.2
HLRZ	**Highlands Stat**	**0.94**	**301**	P	Pn	19 01 31.2	+0.3
CKHZ	**Cape Kidnapper**	**0.95**	**195**	P	Pn	19 01 31.0	+0.1
PUZ	**Puketiti**	**0.95**	**46**	P	Pb	19 01 31.8	-0.2
WPRZ	**Whakapapatarin**	**0.98**	**282**	P	Pn	19 01 31.7	+0.3
HSRZ	**Hossack Road**	**0.99**	**295**	P	Pn	19 01 31.8	+0.3
PKGZ	**Pakihiroa**	**1.01**	**33**	P	Pb	19 01 33.0	+0.1
KWHZ	**Kaweka Forest**	**1.01**	**227**	P	Pn	19 01 32.1	+0.2
OMRZ	**Omania**	**1.02**	**308**	P	Pn	19 01 31.7	-0.1
HATZ	**Hinemaiaia**	**1.02**	**261**	P	Pn	19 01 32.2	+0.2
HAZ	**Te Kaha**	**1.03**	**18**	P	Pn	19 01 32.5	+0.6
GRRZ	**Galatos Road**	**1.07**	**291**	P	Pn	19 01 33.0	+0.4
LIRZ	**Lichensteins R**	**1.08**	**313**	P	Pb	19 01 33.5	-0.5
UTU	**Utuhina**	**1.09**	**33**	P	Pn	19 01 33.5	+0.7
OPRZ	**Ohinepanea**	**1.11**	**324**	P	Pn	19 01 32.5	-0.6
WHTZ	**Whakaora**	**1.12**	**273**	P	Pn	19 01 34.0	+0.6
KAHZ	**Kahuranaki**	**1.13**	**200**	P	Pn	19 01 33.1	-0.3
NGRZ	**Ngongotaha**	**1.14**	**304**	P	Pn	19 01 33.9	+0.4
KARZ	**Kaharoa**	**1.15**	**308**	P	Pn	19 01 33.4	-0.3
KRHZ	**Kereru**	**1.20**	**221**	P	Pn	19 01 34.1	-0.3
RITZ	**Rihia Road**	**1.22**	**258**	P	Pb	19 01 36.3	0.0
WIZ	**White Island**	**1.22**	**353**	P	Pn	19 01 34.6	0.0
KUTZ	**Kaahu Road**	**1.25**	**281**	P	Pn	19 01 35.2	+0.2
RATZ	**Rangitukua**	**1.27**	**264**	P	Pb	19 01 36.3	-1.0
BHHZ	**Black Hill Sta**	**1.27**	**234**	P	Pn	19 01 35.6	+0.2
WATZ	**Wairara**	**1.29**	**271**	P	Pn	19 01 36.0	+0.3
KATZ	**Kakaramea**	**1.34**	**259**	P	Pn	19 01 37.1	+0.7
PXZ	**Pawanui**	**1.35**	**197**	P	Pn	19 01 35.2	-1.2
MXZ	**Matakaoa Point**	**1.38**	**32**	P	Pb	19 01 38.4	-0.7
KRVZ	**Karewarewa**	**1.41**	**255**	P	Pn	19 01 37.7	+0.3
MOWZ	**Moawhango**	**1.44**	**242**	P	Pn	19 01 38.0	+0.3
KMRZ	**Kaimai**	**1.44**	**308**	P	Pn	19 01 37.5	-0.2
TUVZ	**Tukino**	**1.45**	**248**	P	Pn	19 01 38.8	+0.8
WTVZ	**West Tongariro**	**1.45**	**254**	P	Pn	19 01 38.6	+0.7
NGZ	**Ngauruhoe**	**1.46**	**252**	P	Pn	19 01 38.4	+0.4
PNHZ	**Pukenui**	**1.49**	**218**	P	Pn	19 01 37.6	-0.8
WHVZ	**Whangaehu Hut**	**1.50**	**248**	P	Pn	19 01 39.6	+0.9
TLZ	**Tolley Road**	**1.51**	**285**	P	Pn	19 01 38.4	-0.2
WPHZ	**Waipukurau**	**1.51**	**209**	P	Pn	19 01 38.4	-0.3
FWVZ	**Far West T-bar**	**1.52**	**250**	P	Pn	19 01 39.7	+0.7
TRVZ	**Turoa**	**1.54**	**248**	P	Pb	19 01 41.1	-0.8
MTVZ	**Mangateitei**	**1.62**	**246**	P	Pn	19 01 40.5	+0.3
PRHZ	**Porangahau**	**1.63**	**201**	P	Pn	19 01 38.9	-1.4
TOZ	**Tahuroa Road**	**1.79**	**304**	P	Pn	19 01 43.3	+0.8
DVHZ	**Dannevirke**	**1.82**	**211**	P	Pn	19 01 41.3	-1.6
HIZ	**Hauiti**	**1.99**	**276**	P	Pn	19 01 46.1	+0.8
POWZ	**Post Office Ro**	**2.07**	**217**	P	Pn	19 01 44.9	-1.5
VRZ	**Vera Road**	**2.08**	**259**	P	Pn	19 01 47.7	+1.2
PRWZ	**Pori Road**	**2.12**	**211**	P	Pn	19 01 45.6	-1.4
BFZ	**Birch Farm**	**2.13**	**204**	P	Pn	19 01 45.0	-2.1
TIWZ	**Tintock**	**2.34**	**209**	P	Pn	19 01 48.4	-1.7
MRZ	**Mangatainoka R**	**2.37**	**215**	P	Pn	19 01 48.2	-2.3
KUZ	**Kuaotunu**	**2.39**	**326**	P	Pn	19 01 51.1	+0.5
MKAZ	**Moumakai**	**2.40**	**312**	P	Pn	19 01 51.3	+0.5
HOWZ	**Holdsworth Sta**	**2.59**	**213**	P	Pn	19 01 50.9	-2.6
TMWZ	**Te Maipa**	**2.63**	**205**	P	Pn	19 01 52.3	-1.8
WIAZ	**Waiheke Island**	**2.64**	**317**	P	Pn	19 01 55.4	+1.3
OGWZ	**Otaki Gorge**	**2.69**	**219**	P	Pn	19 01 52.4	-2.4
AWAZ	**Awhitu Peninsu**	**2.74**	**307**	P	Pn	19 01 57.3	+1.8
MTW	**Mount Morrison**	**2.82**	**210**	P	Pn	19 01 53.6	-3.0
KIW	**Kapiti Island**	**2.85**	**221**	P	Pn	19 01 54.8	-2.3
TRWZ	**Traveller**	**2.96**	**206**	P	Pn	19 01 55.8	-2.8
CAW	**Cannon Point**	**2.96**	**216**	P	Pn	19 01 55.6	-3.0
PAWZ	**Paruwai Farm**	**3.04**	**209**	P	Pn	19 01 57.8	-1.8
PLWZ	**Palliser**	**3.27**	**209**	P	Pn	19 01 59.4	-3.4
DUWZ	**D'Urville Isla**	**3.37**	**231**	P	Pn	19 02 03.6	-0.6
TCW	**Tory Channel**	**3.44**	**223**	P	Pn	19 02 03.9	-1.2
WCZ	**Waipu Caves**	**3.70**	**318**	P	Pn	19 02 09.2	+0.5
TUWZ	**Tuamarina**	**3.77**	**223**	P	Pn	19 02 07.4	-2.3
NNZ	**Nelson**	**3.95**	**230**	P	Pn	19 02 10.1	-2.0
QRZ	**Quartz Range**	**4.28**	**239**	P	Pn	19 02 16.3	-0.5
THZ	**Tophouse**	**4.57**	**227**	P	Pn	19 02 17.9	-2.8
OUZ	**Omahuta**	**4.64**	**318**	P	Pn	19 02 22.0	+0.4
MQZ	**McQueen's Vall**	**6.11**	**214**	P	Pn	19 02 39.2	-2.6

*IDC **14** 19:21:00.9±70.0, 15.97S×177.70W, h0km, mb4.5/3, mb1 4.7/3, mb1mx3.8/18, mbtmp4.5/3, Error ellipse: s-maj=1293.0km s-min=157.2km az=77.0*

*ISCJB **14** 19:21:06.4±0.9, 16.6S±0.1°×174.8W±0.1, h250km, mb4.3/18, Error ellipse: s-maj=20.8km s-min=13.6km az=13.0*

*NEIC **14** 19:21:09.1±1.4, 16.60S×174.59W, h270km±11km, mb4.4/16, Error ellipse: s-maj=27.4km s-min=22.8km az=139.0*

ISC 14 19:21:08.1±1.0, 16.6S±0.2°×174.7W±0.1, h250km, n21, σ1°31/21, mb4.4/18, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.16**	**119**	*e*Pn	**Pn**	**19 22 27.4**	**+1.5**
URZ	**Urewera**	**22.74**	**197**	*eP*	**P**	**19 25 47.8**	**-0.8**
29nm,1.4s							
BKZ	**Black Stump Fm**	**23.76**	**197**	*eP*	**P**	**19 25 58.0**	**0.0**
22nm,1.3s							
WHZ	**Wether Hill Ro**	**32.60**	**203**	*eP*	**P**	**19 27 15.7**	**-0.6**
13nm,1.0s							
ARMA	**Armidale**	**33.66**	**240**	*eP*	**P**	**19 27 25.5**	**-0.3**
18nm,1.3s							
STKA	**Stephens Creek**	**42.36**	**241**	P	**P**	**19 28 37.3**	**-0.8**
3.4nm,0.8s,baz=67,slow=7.7,SNR=5.1							
STKA	**Stephens Creek**	**42.36**	**241**	*eP*	**P**	**19 28 37.1**	**-1.0**
2.2nm,1.1s							
BBOO	**Buckleboo**	**47.13**	**241**	*eP*	**P**	**19 29 14.7**	**-0.9**
32nm,1.6s							
WC3	**Warramunga Arr**	**48.33**	**258**	*eP*	**P**	**19 29 24.1**	**-0.9**
13nm,1.5s							
WB2	**Warramunga Arr**	**48.35**	**258**	*eP*	**P**	**19 29 25.2**	**+0.1**
9.9nm,1.4s							
WR1	**Warramunga Arr**	**48.36**	**258**	*eP*	**P**	**19 29 24.8**	**-0.4**
WRA	**Warramunga Arr**	**48.37**	**258**	P	**P**	**19 29 24.8**	**-0.4**
1.7nm,0.6s,baz=87,slow=8.8,SNR=19							
AS31	**Alice Springs**	**48.56**	**253**	*eP*	**P**	**19 29 26.7**	**0.0**
5.6nm,0.6s							
ASAR	**Alice Springs**	**48.56**	**253**	P	**P**	**19 29 26.6**	**-0.1**
19nm,0.6s,baz=88,slow=8.6,SNR=327							
FITZ	**Fitzroy Crossi**	**56.75**	**259**	*eP*	**P**	**19 30 28.6**	**+2.1**
14nm,1.4s							
SOEI	**Soe**	**59.64**	**268**	*eP*	**P**	**19 30 50.6**	**+3.9**
19nm,1.2s							
PSAA2	**Pilbara Seismi**	**61.67**	**254**	*eP*	**P**	**19 30 59.5**	**-0.7**
9.9nm,1.2s							
PSAD1	**Pilbara Seismi**	**61.70**	**254**	*eP*	**P**	**19 31 00.7**	**+0.3**
31nm,1.5s							
PSAD3	**Pilbara Seismi**	**61.72**	**254**	*eP*	**P**	**19 31 00.9**	**+0.3**
9.4nm,1.0s							
QSPA	**South Pole Qui**	**73.44**	**180**	*eP*	**P**	**19 32 12.2**	**-0.8**
6.8nm,1.5s							
KMRM	**Mail Ridge**	**73.78**	**38**	*eP*	**P**	**19 32 13.4**	**-1.8**
37nm,1.4s							

SJA 14 19:22:55.2±0.9, 25.72S×71.18W, h20km±5km, ML3.2, MW3.5, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**1.30**	**33**	*eP*	Pb	19 23 20.5	+1.4
PB14				*eS*	Sb	19 23 38.1	+2.6
GO03	**Copiap**	**2.05**	**156**	*eP*	Pb	19 23 31.5	-0.3
GO03				*eS*	Sb	19 23 57.0	+0.1
PB10	**IPOC Station P**	**2.27**	**15**	*eP*	Pb	19 23 33.9	-1.6
PB15	**IPOC Station P**	**2.95**	**32**	*eP*	Pn	19 23 43.9	+2.8
PB06	**IPOC Station P**	**3.34**	**26**	*eP*	Pn	19 23 49.4	+2.9
PB04	**IPOC Station P**	**3.50**	**16**	*eP*	Pn	19 23 50.7	+2.0
LVC	**Limon Verde**	**3.73**	**34**	*eP*	Pn	19 23 55.5	+3.5
LVC				*eS*	Sn	19 24 40.2	+4.7
LVC				IAML		19 24 52.6	
comp=Z,37nm,0.8s							
PB07	**IPOC Station P**	**4.15**	**17**	*eP*	Pn	19 24 00.9	+3.3
PB09	**IPOC Station P**	**4.29**	**25**	*eP*	Pn	19 24 02.9	+3.3
PB02	**IPOC Station P**	**4.54**	**15**	*eP*	Pn	19 24 04.8	+1.9

*NEIC **14** 19:25:17.7±0.0, 17.44N×94.99W, h145km, MD4.0(MEX), After MEX.*

MEX 14 19:25:17.6±0.6, 17.44N×94.98W, h145km±7km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.36**	**165**	*e*Pn	Pn	19 25 36.5	-1.3
CMIG				*e*Sn	Sn	19 25 50.7	-2.4
CMIG	**Matias Romero**	**0.36**	**165**	*i* P	Pn	19 25 36.5	-1.3
CMIG				*e*S	Sn	19 25 50.7	-2.4
VHO	**Vista Hermosa**	**1.71**	**258**	*e*Pn	Pn	19 25 48.5	-0.8
VHO				*e*Sn	Sn	19 26 11.6	-1.9
VHO	**Vista Hermosa**	**1.71**	**258**	*eP*	Pn	19 25 48.5	-0.8
VHO				*eS*	Sn	19 26 11.6	-1.9
TGIG		**1.90**	**110**	*e*Pn	Pn	19 25 50.2	-1.1
TGIG				*e*Sn	Sn	19 26 14.5	-2.5
TGIG		**1.90**	**110**	*eP*	Pn	19 25 50.2	-1.1
TGIG				*i* S	Sn	19 26 14.8	-2.3
HUIG	**Huatulco**	**1.98**	**213**	*e*Pn	Pn	19 25 50.9	-1.3
HUIG				*e*Sn	Sn	19 26 17.3	-1.5
HUIG	**Huatulco**	**1.98**	**213**	*eP*	Pn	19 25 50.9	-1.3
HUIG				*eS*	Sn	19 26 17.3	-1.5
LVIG	**Laguna Verde**	**2.65**	**329**	*e*Pn	Pn	19 25 56.1	-4.3
CCIG	**Comitan**	**2.96**	**112**	*e*Pn	Pn	19 26 04.0	-0.5
CCIG				*e*Sn	Sn	19 26 35.0	-5.5
TLIG	**Tlapa**	**3.42**	**273**	*e*Pn	Pn	19 26 09.1	-1.2

KRSC 14 19:54:57.6±1.3, 51.88N×160.26E, h60km±21km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.21**	**298**	*eP*	Pn	19 55 19.1	+0.7
RUS				*eS*	Sn	19 55 35.0	+1.1
SPN	**Mys Shipunski**	**1.23**	**353**	*eP*	Pn	19 55 19.9	+1.3
SPN				*eS*	Sn	19 55 36.4	+2.0
KDTR	**Khodutka, Kamc**	**1.36**	**268**	*eP*	Pn	19 55 20.6	+0.3
KDTR				*eS*	Sn	19 55 37.5	+0.2
NLC	**Nalytchevo**	**1.41**	**337**	*eP*	Pn	19 55 22.9	+1.9
MTVR	**Mutnovka**	**1.42**	**296**	*eP*	Pn	19 55 22.5	+1.3
MTVR				*eS*	Sn	19 55 40.7	+1.7
DALK	**Dalny**	**1.48**	**322**	*eP*	Pn	19 55 23.9	+2.0
DALK				*eS*	Sn	19 55 43.4	+3.1
PET	**Petropavlovsk**	**1.51**	**320**	*i* P	Pn	19 55 24.4	+2.0
ASAK	**Asacha**	**1.54**	**290**	*i* P	Pn	19 55 24.7	+1.8
ASAK				*eS*	Sn	19 55 44.8	+2.9
UGLR	**Uglovaya**	**1.60**	**327**	*eP*	Pn	19 55 25.7	+2.0
KRMR	**Karymshinskiy**	**1.62**	**307**	*eP*	Pn	19 55 25.6	+1.8
KRMR				*eS*	Sn	19 55 46.2	+2.6
SDLR	**Sedlovina**	**1.64**	**330**	*eP*	Pn	19 55 26.0	+1.8
SMAR	**Somma**	**1.65**	**328**	*eP*	Pn	19 55 26.4	+1.9
AVH	**Avacha**	**1.67**	**327**	*i* P	Pn	19 55 27.2	+2.6
KRER	**Koryakskii**	**1.70**	**328**	*eP*	Pn	19 55 27.1	+2.0
KOK	**Koryaka**	**1.73**	**326**	*eP*	Pn	19 55 28.6	+3.2
KRX	**Arik**	**1.78**	**327**	*eP*	Pn	19 55 27.9	+1.7
APC	**Apacha**	**2.17**	**300**	*eP*	Pn	19 55 33.3	+2.0
PAU	**Pauzhetka**	**2.19**	**261**	*eP*	Pn	19 55 35.1	+3.6
GNL	**Ganaly**	**2.30**	**323**	*eP*	Pn	19 55 36.3	+3.1
MKZ	**Mys Kozlova**	**2.83**	**18**	*eP*	Pn	19 55 42.0	+1.8
MKZ				*eS*	Sn	19 56 15.0	+2.0
TUMD	**Tumrok D**	**3.33**	**1**	*eP*	Pn	19 55 50.2	+3.0
TUMD				*eS*	Sn	19 56 28.0	+2.4
TUMR	**Tumrok**	**3.41**	**359**	*eP*	Pn	19 55 52.1	+3.7

*ISCJB **14** 20:28:37.1±0.2, 51.76N±0.04×155.37E±0.06, h278km±2km, mb3.8/51, Error ellipse: s-maj=8.3km s-min=4.1km az=140.0*

*MOS **14** 20:28:37.2±0.8, 51.78N×155.29E, h280km, mb4.1/9, Error ellipse: s-maj=10.4km s-min=4.9km az=65.4*

*KRSC **14** 20:28:37.2±1.1, 51.55N×155.87E, h283km±9km, ML4.3*

*NEIC **14** 20:28:38.2±0.8, 51.80N×155.26E, h272km±10km, mb4.1/34, Error ellipse: s-maj=20.8km s-min=12.0km az=140.0*

*IDC **14** 20:28:39.0±0.7, 51.88N×155.23E, h278km±6km, mb3.4/19, mb1 3.6/23, mb1mx3.5/36, mbtmp4.1/23, Error ellipse: s-maj=13.6km s-min=8.9km az=140.0*

ISC 14 20:28:37.7±0.5, 51.71N±0.05×155.46E±0.05, h276km±5km, n166, σ1°39/209, mb3.8/51, 5C-1D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**0.84**	**176**	*eP*	**Pn**	**20 29 15.9**	**+0.9**
ALID	**Alaid**	**0.84**	**176**	PN	**Pn**	**20 29 15.9**	**+0.9**
PAU	**Pauzhetka**	**0.88**	**105**	*eP*	**Pn**	**20 29 14.6**	**-0.2**
PAU				*eS*	**S**	**20 29 42.1**	**-2.1**
PAU	**Pauzhetka**	**0.88**	**105**	PN	**Pn**	**20 29 14.6**	**-0.2**
PAU				S	**S**	**20 29 42.1**	**-2.1**
SKR	**Severo-Kuril's**	**1.11**	**158**	*eP*	**Pn**	**20 29 15.9**	**-0.1**
SKR				*eS*	**S**	**20 29 44.5**	**-1.9**
SKR	**Severo-Kuril's**	**1.11**	**158**	*i* PN	**Pn**	**20 29 16.1**	**+0.1**
SKR				*eS*	**S**	**20 29 44.9**	**-1.5**
SKR				pmax	pmax		
comp=Z,199nm,0.7s							
SKR				smax	smax		
comp=E,149nm,0.5s							
SKR				smax	smax		
comp=N,137nm,0.5s							
APC	**Apacha**	**1.60**	**40**	*eP*	**Pn**	**20 29 19.9**	**+0.8**
APC				*eS*	**S**	**20 29 51.9**	**0.0**
APC	**Apacha**	**1.60**	**40**	PN	**Pn**	**20 29 19.9**	**+0.8**
APC				S	**S**	**20 29 51.9**	**0.0**
KDTR	**Khodutka, Kamc**	**1.63**	**85**	*i* P	**Pn**	**20 29 19.2**	**-0.1**
KDTR				*eS*	**S**	**20 29 49.6**	**-2.7**
KDTR	**Khodutka, Kamc**	**1.63**	**85**	PN	**Pn**	**20 29 19.2**	**-0.1**
KDTR				S	**S**	**20 29 49.6**	**-2.7**
ASAK	**Asacha**	**1.65**	**65**	*eP*	**Pn**	**20 29 20.6**	**+1.0**
ASAK	**Asacha**	**1.65**	**65**	PN	**Pn**	**20 29 20.6**	**+1.0**
MTVR	**Mutnovka**	**1.85**	**64**	*eP*	**Pn**	**20 29 21.4**	**+0.2**
MTVR				*eS*	**S**	**20 29 53.9**	**-1.8**
MTVR	**Mutnovka**	**1.85**	**64**	PN	**Pn**	**20 29 21.4**	**+0.2**
MTVR				S	**S**	**20 29 53.9**	**-1.8**
PEA0B	**Petropavlovsk-**	**1.96**	**44**	*e*Pn	**Pn**	**20 29 22.5**	**+0.6**
PEA0B				*eS*	**S**	**20 29 59.3**	**+2.3**
PEA0B	**Petropavlovsk-**	**1.96**	**44**	PN	**Pn**	**20 29 22.5**	**+0.6**
PEA0B				S	**S**	**20 29 59.3**	**+2.3**
PETK	**Petropavlovsk-**	**1.96**	**44**	P	**Pn**	**20 29 22.9**	**+1.1**
comp=N,5.1nm,0.3s,baz=188,slow=3.7,SNR=58							
PETK				S	**S**	**20 29 58.8**	**+1.7**
baz=296,slow=21,SNR=9.7							
KRMR	**Karymshinskiy**	**1.99**	**55**	*eP*	**Pn**	**20 29 22.2**	**+0.1**
KRMR				*eS*	**S**	**20 29 55.4**	**-2.0**
KRMR	**Karymshinskiy**	**1.99**	**55**	PN	**Pn**	**20 29 22.2**	**+0.1**
KRMR				S	**S**	**20 29 55.4**	**-2.0**
RUS	**Russkaya**	**2.02**	**68**	*eP*	**Pn**	**20 29 22.6**	**+0.2**
RUS				*eS*	**S**	**20 29 56.5**	**-1.4**
RUS	**Russkaya**	**2.02**	**68**	PN	**Pn**	**20 29 22.6**	**+0.2**
RUS				S	**S**	**20 29 56.5**	**-1.4**
PET	**Petropavlovsk**	**2.36**	**55**	*e*Pn	**Pn**	**20 29 25.5**	**+0.1**
PET				*eS*	**S**	**20 30 03.5**	**+0.2**
PET	**Petropavlovsk**	**2.36**	**55**	*e*PN	**Pn**	**20 29 26.0**	**+0.6**
PET				*eS*	**S**	**20 30 02.3**	**-1.0**
PET				pmax	pmax		
comp=Z,92nm,0.9s							
PET				smax	smax		
comp=N,233nm,0.8s							
PET				smax	smax		
comp=E,130nm,0.8s							
DALK	**Dalny**	**2.42**	**55**	*eP*	**Pn**	**20 29 26.1**	**+0.2**
DALK				*eS*	**S**	**20 30 03.3**	**-0.9**
DALK	**Dalny**	**2.42**	**55**	PN	**Pn**	**20 29 26.1**	**+0.2**
DALK				S	**S**	**20 30 03.3**	**-0.9**
GNL	**Ganaly**	**2.50**	**36**	*eP*	**Pn**	**20 29 27.1**	**+0.3**
GNL	**Ganaly**	**2.50**	**36**	PN	**Pn**	**20 29 27.1**	**+0.3**
KOK	**Koryaka**	**2.51**	**50**	*eP*	**Pn**	**20 29 28.2**	**+1.3**
KOK	**Koryaka**	**2.51**	**50**	PN	**Pn**	**20 29 28.2**	**+1.3**
AVH	**Avacha**	**

MAJO	Matsushiro	19.50	226	eP	P	20 32 45.2	+0.5
	comp=Z,16nm,0.7s						
MAJO	Matsushiro	19.50	226	eP	P	20 32 45.2	+0.5
MAJO				pmax	pmax		
	comp=Z,16nm,0.7s						
MAT	Matsushiro	19.50	226	P	P	20 32 45.3	+0.6
MJAR	Matsushiro Arr	19.50	226	P	P	20 32 45.9	+1.2
	comp=Z,0.1nm,0.3s,baz=17,slow=11,SNR=19						
INU	Inuyama	21.03	226	eP	P	20 33 00.9	+0.5
	comp=Z,11nm,1.0s						
TIXI	Tiksi	23.25	339	P	P	20 33 20.2	-0.2
	comp=Z,21nm,0.7s,baz=131,slow=9.9,SNR=117						
TIXI	Tiksi	23.25	339	eP	P	20 33 20.1	-0.2
	comp=Z,19nm,0.7s						
TIXI	Tiksi	23.25	339	c iP	P	20 33 20.6	+0.2
TIXI				pmax	pmax		
	comp=Z,16nm,0.8s						
KSRS	Korea Array	24.06	244	P	P	20 33 29.6	+1.5
	comp=Z,1.1nm,0.8s,baz=48,slow=10,SNR=5.1						
JNU	Nakatsue	25.77	233	P	P	20 33 45.0	+1.4
	comp=Z,3.8nm,0.9s,baz=106,slow=9.0,SNR=3.8						
JNU	Nakatsue	25.77	233	eP	P	20 33 44.0	+0.5
	comp=Z,7.1nm,1.0s						
TTA	Tatalina	27.79	47	eP	P	20 34 02.0	+0.7
	comp=Z,1.4nm,0.7s						
TTA	Tatalina	27.79	47	eP	P	20 34 02.0	+0.7
TTA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BPAW	Bear Paw Mtn.	30.04	45	eP	P	20 34 22.3	+1.3
	comp=Z,7.3nm,1.7s						
MLY	Manley	30.14	43	eP	P	20 34 23.1	+1.2
	comp=Z,1.6nm,1.2s						
SUA	Susitna One	30.33	50	eP	P	20 34 24.4	+0.7
	comp=Z,7.6nm,1.2s						
CNPM	China Poot	30.34	54	eP	P	20 34 23.5	-0.2
	comp=Z,29nm,1.6s						
TRF	Thorofare Moun	30.38	46	eP	P	20 34 25.4	+1.3
	comp=Z,17nm,1.9s						
RND	Reindeer	31.03	46	eP	P	20 34 30.5	+0.8
	comp=Z,2.4nm,1.1s						
RND	Reindeer	31.03	46	eP	P	20 34 30.5	+0.8
RND				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WRH	Wood River Hil	31.29	44	eP	P	20 34 32.6	+0.8
	comp=Z,2.3nm,0.8s						
CCB	Clear Creek Bu	31.41	44	eP	P	20 34 34.2	+1.4
	comp=Z,1.0nm,0.6s						
TLY	Talaya	31.56	291	i P	P	20 34 32.4	-2.0
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DHY	Denali Highway	31.72	47	eP	P	20 34 36.8	+0.9
	comp=Z,1.8nm,1.1s						
HHC	Hu-ho-hao-te	31.77	268	eP	P	20 34 35.4	-1.0
HHC				pmax	pmax		
	comp=Z,87nm,5.7s						
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HDA	Harding Lake	31.79	44	eP	P	20 34 36.9	+0.6
	comp=Z,15nm,1.9s						
ILAR	Eielson Array	31.79	43	P	P	20 34 37.1	+0.9
	comp=Z,1.0nm,0.6s,baz=262,slow=6.3,SNR=18						
ILB	Eielson Array	31.79	43	eP	P	20 34 36.9	+0.7
	comp=Z,2.0nm,0.6s						
SCM	Sheep Creek Mo	31.90	49	eP	P	20 34 39.0	+1.7
	comp=Z,8.9nm,1.5s						
SCM	Sheep Creek Mo	31.90	49	eP	P	20 34 39.0	+1.7
SCM				pmax	pmax		
	comp=Z,9.0nm,1.5s						
PRP	Porcupine Dome	32.32	42	eP	P	20 34 40.9	-0.1
	comp=Z,3.0nm,0.7s						
RIDG	Independent Ri	32.78	45	eP	P	20 34 45.7	+0.9
	comp=Z,9.8nm,1.9s						
INK	Inuvik	36.68	36	P	P	20 35 18.9	+1.0
	comp=Z,1.4nm,0.5s,baz=288,slow=7.3,SNR=6.1						
LZH	Lanzhou	39.46	267	eP	P	20 35 42.0	+0.3
LZH				pP	pP	20 36 38.9	+1.8
LZH				sP	sP	20 37 04.8	-3.6
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
ZALV	Zalesovo Beam	41.12	302	P	P	20 35 54.4	-0.3
	comp=Z,1.7nm,0.6s,baz=75,slow=7.8,SNR=5.7						
ZALV	Zalesovo Beam	41.12	302	i P	P	20 35 54.5	-0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NVS	Novosibirsk	41.54	304	eP	P	20 35 57.9	-0.2
DGZ	Jazzator, Alta	41.71	295	i P	P	20 35 58.8	-1.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	Urumqi	44.72	288	eP	P	20 36 25.1	+1.4
RES	Resolute Bay	45.64	20	eP	P	20 36 31.1	+0.8
	comp=Z,26nm,1.9s						
RES	Resolute Bay	45.64	20	eP	P	20 36 31.1	+0.8
RES				pmax	pmax		
	comp=Z,26nm,1.9s						
KURK	Kurchatov	46.02	301	eP	P	20 36 33.3	-0.3
	comp=Z,14nm,1.3s						
KURK	Kurchatov	46.02	301	eP	P	20 36 33.3	-0.3
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
YKA	Yellowknife Ar	46.08	40	P	P	20 36 34.6	+0.8
	comp=Z,1.3nm,0.7s,baz=299,slow=7.5,SNR=5.4						
MK31	Makanchi Array	46.16	294	eP	P	20 36 34.5	-0.3
	comp=Z,2.1nm,1.2s						
MK31	Makanchi Array	46.16	294	eP	P	20 36 34.5	-0.3
MK31				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MKAR	Makanchi Array	46.16	294	P	P	20 36 34.8	-0.1
	comp=Z,0.4nm,0.4s,baz=55,slow=6.8,SNR=5.3						
MKAR	Makanchi Array	46.16	294	i P	P	20 36 34.9	+0.1
KMI	Kunming	47.76	257	P	P	20 36 48.3	+0.7
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
ARU	Arti	52.45	316	eP	P	20 37 21.7	-0.2
	comp=Z,12nm,1.6s						
ARU	Arti	52.45	316	c iP	P	20 37 20.4	-1.5
ARU				*PP	pP	20 38 18.7	-2.2
ARU						20 39 18.5	
ARU				S	S	20 44 24.9	-1.0
ARU				SS	SS	20 48 05.9	-1.3
ARU				pmax	pmax		
	comp=Z,9.0nm,1.8s						
AAK	Ala-Archa	53.10	294	i P	P	20 37 25.5	-1.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SUMG	Summit	55.63	5	eP	P	20 37 45.3	+0.3
	comp=Z,9.0nm,0.9s						
SUMG	Summit	55.63	5⇑	i P	P	20 37 45.9	+0.9
SUMG				pmax	pmax		
	comp=Z,23nm,0.9s						
SUMG	Summit	55.63	5⇑	i P	P	20 37 45.9	+0.9
	comp=Z,23nm,0.9s						
PLID	Pearl Lake	55.68	59	eP	P	20 37 47.5	+1.8
	comp=Z,3.0nm,0.8s						
FCC	Fort Churchill	56.30	36	eP	P	20 37 50.3	+0.9
	comp=Z,4.6nm,0.8s						
FCC	Fort Churchill	56.30	36	eP	P	20 37 50.3	+0.9
FCC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ABKAR	Akbulak array	56.48	309	eP	P	20 37 50.0	-0.9
	comp=Z,2.9nm,1.1s						
NVAR	Mina Array Bea	58.89	66	P	P	20 38 10.0	+1.9
	comp=Z,0.5nm,0.6s,baz=297,slow=4.8,SNR=4.7						
FINES	FINESS Array B	60.21	335	P	P	20 38 16.0	-0.3
	comp=Z,3.0nm,1.0s,baz=264,slow=5.7,SNR=4.7						
FINES	FINESS Array B	60.21	335	P	P	20 38 16.0	-0.3
PDAR	Pinedale Array	60.67	57	P	P	20 38 21.4	+1.4
	comp=Z,0.9nm,0.7s,baz=22,slow=1.6,SNR=5.4						
NB2	NORSAR Subarra	64.02	342	P	P	20 38 40.8	-0.8
	comp=Z,0.5nm,0.6s,baz=22,slow=6.9						
NOA	NORSAR Array B	64.02	342	P	P	20 38 41.1	-0.5
	comp=Z,1.1nm,0.7s,baz=22,slow=6.7,SNR=4.2						
AKASG	Malin Array Be	68.27	326	P	P	20 39 07.4	-1.2
	comp=Z,0.6nm,0.4s,baz=33,slow=6.3,SNR=4.7						
KBZ	Khabaz	68.52	314	P	P	20 39 10.3	+0.1
	comp=Z,2.1nm,0.7s,baz=52,slow=5.8,SNR=4.8						
MNTX	Cornudas Mount	71.04	63	eP	P	20 39 28.3	+2.5
	comp=Z,2.2nm,1.4s						
BUR08	Bucovina Ar. S	72.25	327	eP	P	20 39 31.9	-0.9
	comp=Z,6.1nm,1.5s						
TX31	Lajitas Ar. Si	73.80	63	eP	P	20 39 43.6	+1.5
	comp=Z,12nm,1.9s						
TXAR	Lajitas Array	73.80	63	P	P	20 39 43.8	+1.6
	comp=Z,1.0nm,0.6s,baz=304,slow=4.5,SNR=8.5						
BRTR	Keskin Array B	75.80	317	P	P	20 39 52.6	-0.8
	comp=Z,1.0nm,0.8s,baz=61,slow=5.8,SNR=4.6						
ASAR	Alice Springs	77.40	200	P	P	20 40 04.0	+1.8
	comp=Z,0.8nm,0.5s,baz=14,slow=5.2,SNR=17						
ESDC	Sonseca Array	87.24	344	P	P	20 40 52.0	-0.9
	comp=Z,0.6nm,0.5s,baz=10,slow=3.8,SNR=7.6						
KEST	Kesra	88.00	333	P	P	20 40 56.6	0.0
	comp=Z,1.7nm,0.8s,baz=101,slow=5.2,SNR=3.1						
CPUP	Villa Florida	144.57	57	PKP	PKPdf	20 47 41.1	+0.2
	comp=Z,0.7nm,0.4s,baz=329,slow=3.1,SNR=4.4						
PLCA	Paso Flores	146.85	89	PKPbc	PKPbc	20 47 48.0	+1.1
	comp=Z,1.4nm,0.6s,baz=303,slow=1.4,SNR=3.2						

IDC 14 20:53:51.3±2.0, 1°.18N×126°.04E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/22, mbtmp3.6/3, Error ellipse: s-maj=178.4km s-min=25.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.52	159	P	P	20 58 52.9	0.0
	2.9nm,0.5s,baz=338,slow=12,SNR=36						
ASAR	Alice Springs	25.86	163	P	P	20 59 24.8	0.0
	0.3nm,0.3s,baz=342,slow=8.2,SNR=5.6						
MKAR	Makanchi Array	59.26	326	P	P	21 03 54.7	-0.1
	0.2nm,0.4s,baz=126,slow=7.8,SNR=4.6						

MAN 14 20:55:39.4, 7°.40N×125°.02E, h23km, mb4.2, ML3.0, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.47	5	eP	Pb	20 55 49.9	+0.7
BUKP				eS	Sn	20 55 59.9	+1.3
SKMP	Bagumbayan, Su	1.00	208	eP	Pn	20 55 51.8	-6.2
DDMP	Don Marcelino,	1.46	152	eP	Pn	20 56 04.2	-0.3
DDMP				eS	Sb	20 56 28.0	+3.9
PAGZ	Pagadian	1.68	285	eP	Pn	20 56 07.0	-0.4
IPIL	Ipil	2.46	279	eP	Pn	20 56 19.5	+1.4
IPIL				eS	Sn	20 56 45.4	-2.0

MEX 14 21:35:57.4±0.6, 18°.04N×103°.39W, h10km±4km, MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.26	9	i P	Pg	21 36 02.5	-0.1
MMIG				eS	Sg	21 36 05.5	-0.6
ZIIG	Zihuatanejo	1.88	103	eP	Pn	21 36 26.3	-3.3
ZIIG				eS	Sn	21 36 48.7	-4.7
CJM	Chamela	2.14	313	eP	Pn	21 36 34.6	+1.4
ARIG	Puente Sto Nin	2.90	85	eP	Pn	21 36 40.6	-3.1
ARIG				eS	Sn	21 37 14.7	-4.0

*ISCJB **14** 21:52:27.2±0.7, 27°.77N±0°.04×52°.04E±0°.08, h26km, Error ellipse: s-maj=11.4km s-min=3.6km az=152.6*
*TEH **14** 21:52:27.6, 27°.85N×52°.15E, h19km, ML3.3*
*DSN **14** 21:52:29.3±1.8, 28°.12N×52°.53E, h11km, ML3.6/9, Error ellipse: s-maj=37.8km s-min=15.5km az=54.0*
*OMAN **14** 21:52:31.1±1.1, 27°.75N×52°.11E, h116km, ml3.5/10, Error ellipse: s-maj=25.0km s-min=17.4km az=350.0*

ISC 14 21:52:29.2±1.6, 27°.85N±0°.06×52°.1E±0°.1, h26km, n51, σ1§18/57, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.86	60	ePg	Pb	21 52 43.2	-2.4
LMD1	Lamerd	1.04	119	ePg	Pn	21 52 47.6	-0.6
JHRM	Jahrom	1.43	63	ePn	Pn	21 52 54.6	+1.1
SHI	Shiraz	1.81	10	ePn	Pn	21 52 59.6	+0.7
SHI				IAMB	IAmb	21 53 40.1	
	comp=Z,4μm,0.8s						
IKAZ	Kazeroun	1.94	352	ePn	Pn	21 53 01.4	+0.7
IKAZ				IAMB	IAmb	21 53 47.6	
	comp=Z,3μm,0.6s						
IPAR	Pars	2.13	22	ePn	Pn	21 53 04.9	+1.5
IPAR				IAMB	IAmb	21 53 46.2	
	comp=Z,2μm,0.9s						
IRAM	Ramesheh	3.95	3	ePn	Pn	21 53 28.7	+0.4
IRAM				IAMB	IAmb	21 54 47.2	
	comp=Z,470nm,1.0s						
SHME	Shamm	4.00	116	P	Pn	21 53 29.1	+0.3
SHME	Shamm	4.00	116	ePn	Pn	21 53 28.8	0.0
IMEH	Mehriz	4.13	31	ePn	Pn	21 53 33.1	+2.3
IMEH				IAMB	IAmb	21 53 36.1	
	comp=Z,658nm,0.4s						
NIAN	Nian	4.17	93	ePn	Pn	21 53 32.1	+0.9
BANOM	Banah	4.18	116	i P	Pn	21 53 31.3	0.0
	SNR=22						
BANOM	Banah	4.18	116	P	Pn	21 53 31.5	+0.1
	SNR=6.2						
BANOM				S	Sn	21 54 21.0	+1.5
NAZ	Nazwa, Dubai	4.26	131	i P	Pn	21 53 33.3	+1.0
	SNR=7.1						
NAZ	Nazwa, Dubai	4.26	131	P	Pn	21 53 33.5	+1.2
	SNR=7.2						
NAZ	Nazwa, Dubai	4.26	131	ePn	Pn	21 53 33.6	+1.2
ISAD	Sadrabad	4.26	18	ePn	Pn	21 53 34.4	+1.7
ISAD				IAMB	IAmb	21 54 54.8	
	comp=Z,182nm,0.5s						
ASUD	Al Ashush, Dub	4.31	138	i P	Pn	21 53 34.4	+1.4
	SNR=11						
ASUD	Al Ashush, Dub	4.31	138	P	Pn	21 53 34.4	+1.4
	SNR=11						
MSFE	Esma-Masafi	4.37	124	P	Pn	21 53 34.1	+0.1
MSFE	Esma-Masafi	4.37	124	ePn	Pn	21 53 33.8	-0.2
NGRK	Negar Kerman	4.41	65	ePn	Pn	21 53 35.1	+0.4
MDH	Madha	4.51	123	P	Pn	21 53 34.9	-0.9
MDH	Madha	4.51	123	P	Pn	21 53 36.2	+0.3
MDH				S	Sn	21 54 26.0	-1.5
MDH	Madha	4.51	123	ePn	Pn	21 53 35.6	-0.2
KHGB	Koh Gabri	4.55	55	ePn	Pn	21 53 37.8	+1.2
UOSS	Minazif	4.66	128	i P	Pn	21 53 37.2	-0.6
	SNR=7.3						
UOSS	Minazif	4.66	128	P	Pn	21 53 37.6	-0.2
UOSS	Minazif	4.66	128	ePn	Pn	21 53 37.4	-0.4
HATD	Hatta, Dubai	4.68	129	P	Pn	21 53 38.1	-0.1
HATD	Hatta, Dubai	4.68	129	P	Pn	21 53 38.7	+0.5
HATD				S	Sn	21 54 31.7	0.0
HATD	Hatta, Dubai	4.68	129	ePn	Pn	21 53 37.7	-0.5
ASHO	Ashiyiah	4.73	131	i P	Pn	21 53 39.7	+0.9
	SNR=12						
ASHO				S	Sn	21 54 34.9	+2.1
ASHO	Ashiyiah	4.73	131	P	Pn	21 53 39.7	+0.9
	SNR=12						
ASHO				S	Sn	21 54 35.0	+2.2
ASHO	Ashiyiah	4.73	131	ePn	Pn	21 53 39.3	+0.5
IBAF	Bafgh	4.77	38	ePn	Pn	21 53 41.1	+1.6
IPIR	Pirpir	4.93	348	ePn	Pn	21 53 41.6	-0.3
IPIR				IAMB	IAmb	21 54 47.5	
	comp=Z,130nm,0.4s						
ALNE	Al Ain	4.99	139	i P	Pn	21 53 46.3	+3.9
	SNR=5.6						
ALNE	Al Ain	4.99	139	ePn	Pn	21 53 43.2	+0.8
YZKH	Yazd	5.00	25	ePn	Pn	21 53 44.1	+1.5
IZEF	Zefreh	5.03	2	ePn	Pn	21 53 43.8	+0.6
IZEF				IAMB	IAmb	21 54 17.1	
	comp=Z,78nm,0.5s						
CHMN	Cheshme madani	5.14	66	ePn	Pn	21 53 45.4	+0.6
SOHO	SOHO	5.42	132	P	Pn	21 53 48.1	-0.2
SOHO				S	Sn	21 54 51.1	+1.3
IKLH	Kolahrood	5.47	355	ePn	Pn	21 53 49.8	+0.6
IKLH				IAMB	IAmb	21 54 17.4	
	comp=Z,112nm,0.4s						
KRSH	Karshahi	6.10	360	ePn	Pn	21 53 57.9	+0.2
HOQ	Hoqain	6.31	131	P	Pn	21 54 00.3	-0.3
BSY	Bisya	6.84	137	P	Pn	21 54 08.6	+0.7
SMDO	Samad	7.16	130	P	Pn	21 54 14.0	+1.6
IKOM	Komasi	7.45	329	ePn	Pn	21 54 16.5	+0.2
WSAR	Wadi Sarin	7.45	127	P	Pn	21 54 17.1	+0.9
MHTO	MHTO	8.66	141	P	Pn	21 54 33.0	+0.2
	SNR=9.8						

*IDC **14** 22:26:16.1±1.9, 4°.93N×124°.48E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/30, mbtmp3.8/4, Error ellipse: s-maj=211.9km s-min=23.6km az=63.0*
*ISCJB **14** 22:26:23.3±0.9, 5°.50N±0°.07×126°.58E±0°.09, h66km, Error ellipse: s-maj=15.4km s-min=7.2km az=146.4*
*MAN **14** 22:26:23.9, 5°.55N×126°.58E, h57km, mb4.4, ML3.2, MS3.0*

ISC 14 22:26:24.7±1.1, 5°.50N±0°.09×126°.5E±0°.1, h66km, n8, σ1§23/11, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.99	307	eP	Pn	22 26 43.1	+0.1
DDMP				eS	Sn	22 26 57.3	+0.7
MATI	Mati	1.46	350	eP	Pn	22 26 49.0	0.0
MATI				eS	Sn	22 27 06.3	-0.9
SKMP	Bagumbayan, Su	2.20	297	eP	Pn	22 26 57.3	-1.8
SKMP				eS	Sn	22 27 26.5	+1.2
BUKP	Musuan	2.77	329	eP	Pn	22 27 06.3	-0.4
BUKP				eS	Sn	22 27 39.9	+0.8
WRA	Warramunga Arr	26.43	163	P	P	22 31 56.6	+1.1
	0.5nm,0.3s,baz=338,slow=11,SNR=5.9						
ASAR	Alice Springs	29.88	166	P	P	22 32 24.6	-1.7
	0.2nm,0.4s,baz=343,slow=7.5,SNR=4.4						
STKA	Stephens Creek	39.86	160	P	P	22 33 53.2	+1.2
	0.9nm,0.2s,baz=352,slow=9.2,SNR=2.9						
MKAR	Makanchi Array	55.99	325	P	P	22 35 51.5	-5.1
	0.6nm,0.5s,baz=117,slow=7.6,SNR=12						

IDC 14 22:44:24.3±6.2, 23°.35S×13°.19W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/24, mbtmp3.7/4, MS3.4/12, Ms1 3.4/12, ms1mx3.3/23, Error ellipse: s-maj=147.8km s-min=130.0km az=73.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	14.38	354	T	T	23 02 02.7	
	baz=176,slow=74,SNR=33						
H10S3	ASCENSION HYDR	14.39	354	T	T	23 02 03.2	
	baz=176,slow=74,SNR=24						
H10S1	ASCENSION HYDR	14.40	354	T	T	23 02 04.0	
	baz=176,slow=74,SNR=34						
H10N1	ASCENSION HYDR	15.47	355	T	T	23 03 26.3	
	baz=152,slow=75,SNR=7.7						
H10N3	ASCENSION HYDR	15.48	355	T	T	23 03 26.6	
	baz=152,slow=75,SNR=25						
H10N2	ASCENSION HYDR	15.49	355	T	T	23 03 26.4	
	baz=152,slow=75,SNR=7.4						
DBIC	Dimbokro	30.93	16	LR	LR	22 59 45.3	
	comp=Z,98nm,21.6s,baz=168,slow=30						
BOSA	Boshof	34.85	107	LR	LR	23 03 24.7	
	comp=Z,109nm,18.8s,baz=265,slow=33						
TORD	Torodi Ar. Bea	39.09	23	P	P	22 51 53.5	0.0
	3.1nm,0.8s,baz=200,slow=7.8,SNR=16						
TORD				LR	LR	23 04 33.4	
	comp=Z,104nm,21.3s,baz=290,slow=31						
CPUP	Villa Florida	40.02	256	LR	LR	23 05 42.5	
	comp=Z,46nm,20.4s,baz=106,slow=32						
LPAZ	La Paz	51.91	267	LR	LR	23 15 03.8	
	comp=Z,46nm,18.3s,baz=123,slow=35						
ESDC	Sonseca Array	63.29	8	P	P	22 54 54.7	-0.3
	0.5nm,0.7s,baz=192,slow=6.8,SNR=3.7						
MAW	Mawson	63.33	155	LR	LR	23 16 03.8	
	comp=Z,29nm,21.6s,baz=268,slow=30						
ROSC	El Rosal	65.85	287	LR	LR	23 22 48.8	
	comp=Z,63nm,19.0s,baz=108,slow=35						
GERES	GERESS Array B	75.79	18	P	P	22 56 12.4	+0.4
	0.3nm,0.6s,baz=200,slow=5.2,SNR=2.5						
GERES				LR	LR	23 28 56.8	
	comp=Z,20nm,18.2s,baz=248,slow=35						
BRTR	Keskin Array B	76.47	35	P	P	22 56 16.1	-0.1
	0.4nm,0.7s,baz=207,slow=7.5,SNR=3.2						
BRTR				LR	LR	23 28 45.3	
	comp=Z,10nm,20.1s,baz=272,slow=35						
VNDA	Vanda	79.31	179	LR	LR	23 27 10.8	
	comp=Z,27nm,21.0s,baz=202,slow=32						
NOA	NORSAR Array B	86.39	12	LR	LR	23 34 39.1	
	comp=Z,8.7nm,19.9s,baz=195,slow=35						
ARCES	ARCESS Array B	96.71	13	LR	LR	23 40 16.2	
	comp=Z,12nm,19.8s,baz=198,slow=35						

MEX 14 22:51:00.9±0.6, 16°.90N×100°.31W, h5km±5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.16	15	i P	Pg	22 51 03.6	-0.5
CAIG				eS	Sg	22 51 06.2	0.0
ACP2	Acapulco	0.41	93	eP	Pg	22 51 06.9	-1.9
ACP2				i S	Sg	22 51 12.8	-1.3
MEIG	Mezcala	1.22	33	eP	Pg	22 51 20.6	-3.8
MEIG				eS	Sg	22 51 36.0	-4.2
ZIIG	Zihuatanejo	1.31	303	eP	Pn	22 51 22.4	-3.5
ZIIG				eS	Sg	22 51 38.2	-4.9
ARIG	Puente Sto Nin	1.38	359	eP	Pn	22 51 23.3	-3.5
ARIG				eS	Sb	22 51 40.0	-5.1
PLIG	Platanillo	1.68	27	eP	Pn	22 51 27.8	-3.2
PLIG				eS	Sn	22 51 48.6	-4.3
TLIG	Tlapa	1.79	68	eP	Pn	22 51 29.9	-2.7
TLIG				eS	Sn	22 51 51.4	-4.5

NNC 14 23:18:01.8±5.6, 38°.39N×75°.38E, h0km, mb3.5, mpv3.1, 3C-2D, Error ellipse: s-maj=49.6km s-min=41.8km az=142.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	4.53	2	⇑P	Pn	23 19 13.3	+1.5
	0.8nm,0.3s						
TKM2				⇓S	Sn	23 20 06.8	+1.5
	2.8nm,0.6s						
PDGK	Podgornoye	5.83	31	⇑P	Pn	23 19 28.2	-1.5
	2.3nm,0.5s						
KK31	Karatay Array	5.99	323	P	Pn	23 19 32.4	+0.7
	0.4nm,0.2s,baz=149,slow=13,SNR=14						
KK31				⇓S	Sn	23 20 39.2	-1.8
	0.5nm,0.3s,baz=138,slow=22,SNR=4.5						
AB31	Akbulak array	15.53	319	⇑P	Pn	23 21 37.2	-4.7
	0.3nm,0.3s,baz=129,slow=14,SNR=5.5						

TIR 14 23:24:37.0, 41°.12N×20°.18E, h7km, Md2.3/3, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.33	314	i PG	Pg	23 24 43.9	+0.5
TIR				i PG	Pn	23 24 49.0	+0.8
PHP	Peshkopia	0.60	19	i PG	Pg	23 24 48.0	-0.5
PHP				i PG	Pn	23 24 58.4	+6.5
FNA	Florina	0.97	110	i PG	Pn	23 24 59.7	+2.7
FNA				i PG	Pb	23 25 10.0	+14

ATH 14 23:25:25.1, 37°.53N×23°.50E, h14km±5km, ML1.0/1, Error ellipse: s-maj=5.3km s-min=1.3km az=219.0, Southern Greece

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

s-min=4.0km az=143.8
*NEIC **14** 23:29:24.7±1.2, 10°.98S×113°.89E, h40km±9km, mb4.3/14, Error ellipse: s-maj=11.4km s-min=3.0km az=57.0*
ISC 14 23:29:24.8±0.5, 10°.90S±0°.07×113°.99E±0°.06, h35km, n53, σ1§44/54, mb4.0/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**2.42**	**4**	*e*Pn	**Pn**	**23 30 04.0**	**+2.1**
UGM	**Wanagama**	**4.53**	**311**	*e*Pn	**Pn**	**23 30 32.4**	**+1.5**
SMRI	**Semarang**	**5.19**	**317**	*e*Pn	**Pn**	**23 30 39.4**	**-0.6**
CISI	**Cisompet, Garu**	**6.94**	**298**	*e*Pn	**Pn**	**23 31 03.4**	**-0.8**
LEM	**Lembang**	**7.49**	**302**	LR	LR	23 34 44.9	
	comp=Z,72nm,21.5s,baz=112,slow=44						
KAPI	**Kappang**	**8.17**	**45**	Sn	**Sn**	**23 32 48.7**	**-3.5**
	4.2nm,0.3s,baz=243,slow=14,SNR=5.0						
KAPI				LR	LR	23 34 54.6	
	comp=Z,70nm,20.3s,baz=178,slow=42						
XMIS	**Christmas Isla**	**8.21**	**272**	*e*Pn	**Pn**	**23 31 20.2**	**-1.2**
BATI	**Baumata**	**9.54**	**87**	Pn	**Pn**	**23 31 40.8**	**+1.1**
	9.7nm,0.3s,baz=341,slow=17,SNR=5.8						
BATI				Sn	**Sn**	**23 33 22.5**	**-3.3**
	6.5nm,0.3s,baz=188,slow=19,SNR=4.9						
BATI	**Baumata**	**9.54**	**87**	*e*Pn	**Pn**	**23 31 40.8**	**+1.1**
BATI				*e*Pn	**Pn**	**23 31 40.8**	**+1.1**
BATI				*e*Sn	**Sn**	**23 33 22.5**	**-3.3**
SOEI	**Soe**	**10.18**	**85**	*e*Pn	**Pn**	**23 31 50.5**	**+1.9**
GIRL	**Giralia**	**11.68**	**179**	*e*Pn	**Pn**	**23 32 09.3**	**+0.3**
PSAD1	**Pilbara Seismi**	**11.89**	**153**	*e*Pn	**Pn**	**23 32 11.5**	**-0.5**
PSAC1	**Pilbara Seismi**	**11.95**	**153**	*e*Pn	**Pn**	**23 32 12.0**	**-0.8**
PSAB1	**Pilbara Seismi**	**11.99**	**153**	*e*Pn	**Pn**	**23 32 12.3**	**-1.0**
PSAA2	**Pilbara Seismi**	**12.00**	**153**	*e*Pn	**Pn**	**23 32 13.1**	**-0.3**
PSAB2	**Pilbara Seismi**	**12.00**	**153**	*e*Pn	**Pn**	**23 32 13.0**	**-0.4**
PSA00	**Pilbara Seismi**	**12.00**	**153**	*e*Pn	**Pn**	**23 32 12.9**	**-0.6**
PSAA1	**Pilbara Seismi**	**12.00**	**153**	*e*Pn	**Pn**	**23 32 13.1**	**-0.4**
PSAA3	**Pilbara Seismi**	**12.01**	**153**	*e*Pn	**Pn**	**23 32 13.1**	**-0.5**
PSAC2	**Pilbara Seismi**	**12.02**	**153**	*e*Pn	**Pn**	**23 32 13.1**	**-0.6**
PSAB3	**Pilbara Seismi**	**12.03**	**153**	*e*Pn	**Pn**	**23 32 13.1**	**-0.7**
PSAD3	**Pilbara Seismi**	**12.04**	**153**	*e*Pn	**Pn**	**23 32 13.0**	**-0.9**
PSAC3	**Pilbara Seismi**	**12.04**	**153**	*e*Pn	**Pn**	**23 32 12.4**	**-1.6**
PSAD2	**Pilbara Seismi**	**12.10**	**152**	*e*Pn	**Pn**	**23 32 13.9**	**-0.8**
MNAI	**Manna**	**12.72**	**300**	*e*Pn	**Pn**	**23 32 23.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**13.35**	**124**	Pn	**Pn**	**23 32 32.4**	**+0.4**
	0.4nm,0.3s,baz=316,slow=9.6,SNR=14						
FITZ				Sn	Sn	23 34 49.7	-10
	0.2nm,0.3s,baz=262,slow=16,SNR=5.1						
FITZ	**Fitzroy Crossi**	**13.35**	**124**	*e*Pn	**Pn**	**23 32 32.9**	**+1.0**
FITZ				*e*Sn	Sn	23 34 49.7	-10
MYKOM	**Kota Tinggi**	**16.15**	**321**	*e*Pn	**Pn**	**23 33 09.0**	**-0.2**
	19nm,1.3s						
MTN	**Manton Dam**	**16.89**	**98**	*e*P	**P**	**23 33 20.4**	**0.0**
	25nm,1.3s						
MORW	**Morawa**	**18.18**	**174**	*e*P	**P**	**23 33 34.9**	**+0.4**
	4.2nm,0.8s						
FAKI	**Fak Fak**	**19.77**	**68**	*e*P	**P**	**23 33 52.3**	**+0.2**
	63nm,1.2s						
IPM	**Ipoh**	**20.00**	**319**	*e*P	**P**	**23 33 54.7**	**+0.1**
	15nm,1.4s						
PSI	**Prapat**	**20.25**	**311**	*e*P	**P**	**23 33 55.8**	**-1.7**
	11nm,1.1s						
GSI	**Gunungsitoli**	**20.34**	**306**	*e*P	**P**	**23 33 58.0**	**-0.2**
	36nm,1.2s						
KULM	**Kulim**	**20.86**	**320**	*e*P	**P**	**23 34 01.5**	**-2.4**
	18nm,1.4s						
WR1	**Warramunga Arr**	**21.56**	**117**	*e*P	**P**	**23 34 14.4**	**+3.0**
WRA	**Warramunga Arr**	**21.56**	**117**	P	**P**	**23 34 14.5**	**+3.0**
	4.0nm,0.6s,baz=289,slow=12,SNR=10						
ASAR	**Alice Springs**	**22.82**	**126**	P	**P**	**23 34 28.6**	**+3.6**
	2.3nm,0.5s,baz=303,slow=9.3,SNR=28						
FORT	**Forrest**	**23.70**	**149**	*e*P	**P**	**23 34 32.8**	**-0.7**
	32nm,0.8s						
COEN	**Coen**	**28.65**	**99**	*e*P	**P**	**23 35 18.9**	**+0.4**
	22nm,1.4s						
CMAR	**Chiang Mai Arr**	**32.73**	**333**	P	**P**	**23 35 56.1**	**+1.7**
	0.6nm,0.3s,baz=168,slow=9.2,SNR=4.4						
MAJO	**Matsushiro**	**52.41**	**25**	*e*P	**P**	**23 38 33.5**	**-0.3**
MJAR	**Matsushiro Arr**	**52.41**	**25**	P	**P**	**23 38 33.5**	**-0.3**
	1.1nm,0.3s,baz=192,slow=8.4,SNR=4.3						
SONA0	**Songino Array**	**58.86**	**354**	*e*P	**P**	**23 39 20.0**	**-0.1**
SONM	**Songino Array**	**58.86**	**354**	P	**P**	**23 39 20.0**	**-0.1**
	0.3nm,0.3s,baz=161,slow=9.4,SNR=3.7						
BKZ	**Black Stump Fm**	**61.92**	**129**	*e*P	**P**	**23 39 41.1**	**-0.1**
	26nm,1.5s						
MK32	**Makanchi Array**	**64.05**	**336**	*e*P	**P**	**23 39 55.0**	**0.0**
MKAR	**Makanchi Array**	**64.05**	**336**	P	**P**	**23 39 55.0**	**0.0**
	0.3nm,0.6s,baz=149,slow=6.7,SNR=3.8						
ZALV	**Zalesovo Beam**	**69.18**	**342**	P	**P**	**23 40 28.3**	**+0.7**
	0.5nm,0.4s,baz=147,slow=5.9,SNR=3.2						
ZAA1	**Zalesovo Array**	**69.19**	**342**	*e*P	**P**	**23 40 28.3**	**+0.6**
ABKAR	**Akbulak array**	**76.36**	**327**	*e*P	**P**	**23 41 09.6**	**-0.7**
	1.4nm,0.9s						
SNAA	**Sanae**	**87.82**	**196**	LR	LR	00 16 08.5	
	comp=Z,21nm,20.7s,baz=144,slow=32						
SNAA	**Sanae**	**87.82**	**196**	*e*P	**P**	**23 42 09.2**	**-1.0**
	4.9nm,1.4s						

MAN 14 23:41:34.8, 7°.80N×125°.18E, h74km, mb3.9, ML2.7, MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.14**	**302**	*e*P	Pn	23 41 46.0	+0.3
SKMP	**Bagumbayan, Su**	**1.42**	**207**	*e*P	Pn	23 41 51.0	-7.9
PAGZ	**Pagadian**	**1.79**	**272**	*e*P	Pn	23 42 04.0	+0.4

*NNC **14** 23:59:49.1±1.3, 46°.19N×75°.08E, h30km±11km, mb3.6, mpv3.0, Error ellipse: s-maj=7.6km s-min=5.3km az=138.0*
*SOME **14** 23:59:51.8, 46°.15N×75°.25E, h15km*
ISC 14 23:59:49.0±0.8, 46°.23N±0°.04×75°.17E±0°.03, h10km, n36, σ2§63/63, 20C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLS	**Baital**	**1.43**	**214**	*e*P	**Pb**	**00 00 16.0**	**+0.3**
	11nm,0.1s						
BTLS				*e*S	**Sn**	**00 00 33.4**	**-0.3**
	152nm,0.2s						
KUU	**Kurty**	**2.48**	**160**	*e*P	**Pg**	**00 00 36.0**	**-0.5**
	39nm,0.2s						
KUU				*e*S	**Sg**	**00 01 08.4**	**-0.1**
	132nm,0.3s						
CHKK	**Chushkaly**	**2.70**	**151**	*e*P	**Pb**	**00 00 39.7**	**+2.3**
	22nm,0.3s						
CHKK				*e*S	**Sg**	**00 01 14.9**	**-0.8**
	338nm,0.4s						
KTBS	**Karatobe**	**2.74**	**156**	*e*P	**Pb**	**00 00 39.8**	**+1.8**
	42nm,0.2s						
KTBS				*e*S	**Sb**	**00 01 15.0**	**+3.4**
	195nm,0.3s						
ARXS	**Arharly**	**2.75**	**136**	*e*P	**Pb**	**00 00 40.9**	**+2.6**
	7.3nm,0.1s						
ARXS				*e*S	**Sg**	**00 01 16.8**	**-0.6**
	252nm,0.4s						
USP	**Ospenovka**	**3.00**	**189**	P	**Pn**	**00 00 35.1**	**-1.5**
	3.2nm,0.1s,SNR=5.7						
DGS	**Degeres**	**3.02**	**172**	*e*P	**Pb**	**00 00 45.0**	**+2.2**
	59nm,0.4s						
DGS				*e*S	**Sg**	**00 01 23.7**	**-2.1**
	88nm,0.4s						
KAPS	**Kapalarasan**	**3.08**	**106**	*e*P	**Pb**	**00 00 46.3**	**+2.5**
	12nm,0.2s						
KAPS				*e*S	**Sg**	**00 01 26.6**	**-1.3**
	48nm,0.3s						
MNBS	**Baschi**	**3.14**	**132**	*e*P	**Pb**	**00 00 48.0**	**+3.1**
	8.3nm,0.2s						
MNBS				*e*S	**Sg**	**00 01 27.9**	**-1.9**
	193nm,0.2s						
KST	**Kastek**	**3.23**	**170**	*e*P	**Pb**	**00 00 48.7**	**+2.1**
	26nm,0.2s						
KST				*e*S	**Sg**	**00 01 30.4**	**-2.5**
	56nm,0.3s						
CHMS	**Chumysh**	**3.24**	**185**	⇑P	**Pn**	**00 00 38.7**	**-1.2**
	6.3nm,0.1s,SNR=21						
KNDC	**Almaty**	**3.27**	**156**	⇑Lg	Lg	00 01 32.4	
KOTS	**Kotyrbulak**	**3.30**	**154**	*e*P	**Pb**	**00 00 48.2**	**+0.5**
	17nm,0.3s						
KOTS				*e*S	**Sb**	**00 01 28.8**	**+0.9**
	56nm,0.2s						
TKM2	**Tokmak 2**	**3.32**	**175**	⇓P	**Pn**	**00 00 39.3**	**-1.9**
	2.1nm,0.1s,SNR=7.5						
TKM2	**Tokmak 2**	**3.32**	**175**	⇑Pn	**Pn**	**00 00 39.5**	**-1.6**
	0.2nm,0.1s						
TKM2				⇑Pg	**Pb**	**00 00 49.3**	**+1.2**
	5.0nm,0.3s						
TKM2				⇑Lg	Lg	00 01 33.9	
	23nm,0.5s						
MDOK	**Medeo**	**3.34**	**156**	*e*P	**Pb**	**00 00 48.8**	**+0.4**
	7.6nm,0.3s						
MDOK				*e*S	**Sb**	**00 01 30.9**	**+1.7**
	37nm,0.3s						
TNSS	**Tian-Shan**	**3.43**	**158**	*e*P	**Pb**	**00 00 52.3**	**+2.2**
	5.3nm,0.3s						
TNSS				*e*S	**Sb**	**00 01 35.2**	**+3.1**
	41nm,0.4s						
KURS	**Kuram**	**3.47**	**141**	*e*P	**Pb**	**00 00 51.7**	**+1.2**
	6.9nm,0.3s						
KURS				*e*S	**Sb**	**00 01 34.6**	**+1.8**
	37nm,0.3s						
KBK	**Karagaybulak**	**3.58**	**183**	P	**Pn**	**00 00 43.4**	**-1.2**
	SNR=5.2						
AAK	**Ala-Archa**	**3.62**	**188**	⇑Pn	**Pn**	**00 00 44.0**	**-1.2**
	1.9nm,0.4s						
AAK				⇑Pg	**Pb**	**00 00 53.9**	**+0.7**
	3.3nm,0.4s						
AAK				⇑Sn	**Sn**	**00 01 23.7**	**-4.5**
	5.4nm,0.5s						
AAK				⇓Lg	Lg	00 01 42.5	
	21nm,0.5s						
KPKS	**Kokpek**	**3.73**	**137**	*e*P	**Pb**	**00 00 57.3**	**+2.4**
	7.6nm,0.1s						
KPKS				*e*S	**Sb**	**00 01 44.5**	**+4.4**
	66nm,0.4s						
MRKS	**Merke**	**3.75**	**202**	*e*P	**Pb**	**00 00 57.9**	**+2.6**
	3.1nm,0.2s						
MRKS				*e*S	**Sb**	**00 01 45.0**	**+4.2**
	30nm,0.3s						
DJR	**Jarkent**	**3.77**	**119**	*e*P	**Pb**	**00 00 57.3**	**+1.6**
	3.3nm,0.1s						
DJR				*e*S	**Sb**	**00 01 44.1**	**+2.7**
	17nm,0.3s						
SATY	**Saty**	**3.92**	**143**	*e*P	**Pb**	**00 01 00.5**	**+2.2**
	12nm,0.1s						
SATY				*e*S	**Sb**	**00 01 48.8**	**+3.0**
	72nm,0.2s						
ULHL	**Ulahol**	**4.06**	**169**	⇓P	**Pn**	**00 00 50.7**	**-0.5**
	1.7nm,0.1s,SNR=5.8						
BRZS	**Berezniki**	**4.11**	**337**	*e*P	**Pn**	**00 00 55.0**	**+3.2**
	4.9nm,0.1s						
BRZS				*e*S	**Sn**	**00 01 39.9**	**-0.1**
	28nm,0.1s						
UZB	**Uzynbulak**	**4.13**	**137**	*e*P	**Pb**	**00 01 05.8**	**+4.0**
	2.1nm,0.2s						
UZB				*e*S	**Sb**	**00 01 57.1**	**+5.3**
	16nm,0.3s						
KZA	**Kyzart**	**4.15**	**179**	⇑P	**Pn**	**00 00 52.1**	**-0.6**
	1.5nm,0.1s,SNR=11						
PDGK	**Podgornoye**	**4.23**	**132**	⇓Pn	**Pn**	**00 00 51.9**	**-1.7**
	1.1nm,0.4s						
PDGK				⇓Pg	**Pb**	**00 01 05.3**	**+1.8**
	2.8nm,0.5s						
PDGK				⇑Lg	Lg	00 02 02.2	
	41nm,0.9s						
KK31	**Karatay Array**	**4.56**	**228**	⇑Pn	**Pn**	**00 00 56.3**	**-1.7**
	0.4nm,0.2s,baz=43,slow=12,SNR=44						
KK31				⇑Sn	**Sn**	**00 01 45.8**	**-5.3**
	4.3nm,0.6s,baz=41,slow=22,SNR=4.9						
KK31				⇓Lg	Lg	00 02 09.9	
	8.2nm,0.4s,baz=49,slow=27,SNR=5.6						
MAKZ	**Makanchi**	**4.74**	**81**	⇑Pn	**Pn**	**00 00 59.3**	**-1.1**
	0.4nm,0.3s						
MAKZ				⇑Sn	**Sn**	**00 01 53.7**	**-1.6**
	3.1nm,0.5s						
MAKZ				⇑Lg	Lg	00 02 18.3	
	6.9nm,0.5s						
MK31	**Makanchi Array**	**4.95**	**81**	Pn	**Pn**	**00 01 02.5**	**-0.9**
	0.7nm,0.3s,baz=259,slow=12,SNR=37						
MK31				⇓Sn	**Sn**	**00 02 00.7**	**0.0**
	1.7nm,0.3s						
MK31				⇓Lg	Lg	00 02 25.8	
	5.0nm,0.5s,baz=254,slow=28,SNR=7.0						
BRLS	**Borolday**	**4.97**	**232**	*e*P	**Pg**	**00 01 26.9**	**+2.7**
	0.9nm,0.2s						
BRLS				*e*S	**Sg**	**00 02 34.6**	**+6.1**
	8.0nm,0.5s						
KURK	**Kurchatov**	**5.04**	**26**	⇑Lg	Lg	00 02 30.3	
	13nm,0.6s						
BRVK	**Borovoye**	**7.54**	**337**	⇑Pn	**Pn**	**00 01 40.3**	**+1.5**
	1.6nm,0.3s						
BRVK				⇑Sn	**Sn**	**00 02 57.4**	**-6.8**
	0.7nm,0.3s						
BRVK				⇓Lg	Lg	00 03 52.1	
	7.4nm,0.8s						
AB31	**Akbulak array**	**10.69**	**292**	⇓Pn	**Pn**	**00 02 18.8**	**-3.3**
	0.3nm,0.5s,baz=102,slow=7.8,SNR=7.1						
AB31				⇑Sn	**Sn**	**00 04 18.2**	**-3.6**
	0.1nm,0.5s,baz=103,slow=24,SNR=2.6						

*ISCJB **15** 00:07:29.0±0.8, 3°.18S±0°.06×101°.05E±0°.08, h35km, mb3.9/6, Error ellipse: s-maj=12.2km s-min=6.9km az=154.1*
*DJA **15** 00:07:30.7±0.9, 3°S±3°×10°1E±°, h21km±9km, M4.1/12, mb4.1/1, MLv4.1/12*
*IDC **15** 00:07:38.8±4.7, 3°.45S×100°.74E, h141km±32km, mb3.5/6, mb1 3.6/7, mb1mx3.2/52, mbtmp3.9/7, MS2.9/2, Ms1 2.9/2, ms1mx2.5/26, Error ellipse: s-maj=124.0km s-min=14.9km az=57.0*
ISC 15 00:07:30.3±0.8, 3°.08S±0°.06×101°.16E±0°.05, h35km, n20, σ2§12/20, mb4.0/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.03**	**17**	P	**Pn**	**00 07 49.8**	**+1.4**
KRJI				S	**Sn**	**00 08 03.8**	**+2.2**
PPSI	**Pulau Pagai**	**1.19**	**285**	P	**Pn**	**00 07 52.6**	**+2.2**
PPSI				S	**Sn**	**00 08 10.2**	**+4.8**
SDSI	**Sungai Dareh**	**2.15**	**7**	P	**Pn**	**00 08 05.8**	**+2.1**
MNAI	**Manna**	**2.20**	**125**	P	**Pn**	**00 08 05.1**	**+0.8**
PDSI	**Padang**	**2.27**	**342**	P	**Pn**	**00 08 05.4**	**+0.1**
LHSI	**Lahat**	**2.48**	**107**	P	**Pn**	**00 08 11.3**	**+3.2**
SISI	**Saibi**	**2.70**	**310**	P	**Pn**	**00 08 10.9**	**-0.4**
RGRI	**Rengat**	**2.96**	**23**	P	**Pn**	**00 08 16.4**	**+1.6**
MDSI	**Maura Dua**	**3.32**	**115**	P	**Pn**	**00 08 21.8**	**+2.0**
KASI	**Kota Agung**	**4.12**	**126**	P	**Pn**	**00 08 32.4**	**+1.6**
DSRI	**Dabo**	**4.29**	**53**	P	**Pn**	**00 08 34.6**	**+1.5**
PSI	**Prapat**	**6.26**	**339**	P	Pn	00 09 11.7	+11
	0.8nm,0.3s,baz=121,slow=12,SNR=2.3						
PSI				LR	LR	00 11 41.4	
	comp=Z,127nm,21.7s,baz=50,slow=38						
LEM	**Lembang**	**7.43**	**120**	LR	LR	00 12 23.8	
	comp=Z,86nm,19.9s,baz=262,slow=37						
WRA	**Warramunga Arr**	**36.45**	**120**	P	**P**	**00 14 30.6**	**-1.6**
	1.1nm,0.3s,baz=292,slow=10.0,SNR=8.4						
ASAR	**Alice Springs**	**37.69**	**126**	P	**P**	**00 14 41.5**	**-1.1**
	1.1nm,0.6s,baz=295,slow=8.0,SNR=12						
STKA	**Stephens Creek**	**47.57**	**132**	P	**P**	**00 16 01.8**	**-1.0**
	1.5nm,0.5s,baz=301,slow=6.3,SNR=6.3						
SONM	**Songino Array**	**50.91**	**5**	P	**P**	**00 16 28.9**	**+0.7**
	0.3nm,0.5s,baz=196,slow=9.9,SNR=2.2						
MKAR	**Makanchi Array**	**52.38**	**344**	P	**P**	**00 16 37.4**	**-1.7**
	0.5nm,0.5s,baz=146,slow=7.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**58.44**	**349**	P	**P**	**00 17 20.3**	**-2.2**
	1.1nm,0.5s,baz=182,slow=6.6,SNR=6.1						
TXAR	**Lajitas Array**	**144.82**	**40**	PKPbc	**PKPab**	**00 27 02.0**	**-1.4**
	0.7nm,0.6s,baz=264,slow=1.1,SNR=12						

NDI 15 00:10:32.2±2.7, 24°.54N×93°.55E, h7km±9km, ML3.5, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SILR	**SILCHAR**	**0.72**	**290**	*e*P	Pn	00 10 48.6	-0.2
SILR				*e*S	Sn	00 10 59.5	-0.6
SILR				IAML		00 11 02.4	
	comp=N,1μm,0.3s						
SILR				IAML		00 11 03.2	
	comp=E,2μm,0.2s						
KOHI	**KOHIMA**	**1.28**	**23**	*e*P	Pg	00 10 59.0	+2.2
KOHI				*ex*	Sn	00 11 16.6	+2.4
KOHI				IAML		00 11 20.3	
	comp=N,956nm,0.3s						
KOHI				IAML		00 11 20.7	
	comp=E,813nm,0.2s						
SHL	**Shillong**	**1.83**	**305**	*e*P	Pn	00 11 04.8	+0.6
SHL				*e*S	Sn	00 11 27.5	-0.2
SHL				IAML		00 11 28.2	
	comp=E,467nm,0.3s						
MOKO	**MOKOCHONG**	**1.98**	**26**	*e*P	Pn	00 11 06.3	0.0
MOKO				*e*S	Sb	00 11 33.1	-0.6
MOKO				IAML		00 11 40.4	
	comp=E,288nm,0.4s						
MOKO				IAML		00 11 40.7	
	comp=N,413nm,0.2s						
TEZP	**TEZPUR**	**2.18**	**342**	*e*P	Pn	00 11 09.7	+0.8
TEZP				*e*S	Sn	00 11 36.8	+0.7
TEZP				IAML		00 11 42.7	
	comp=N,377nm,0.1s						
TEZP				IAML		00 11 43.0	
	comp=E,415nm,0.1s						
JORH	**JORHAT**	**2.29**	**16**	*e*P	Pn	00 11 10.5	+0.1
JORH				*e*S	Sn	00 11 39.7	+1.0
BELO	**BELONIA**	**2.31**	**237**	*e*P	Pn	00 11 12.2	+1.5
BELO				*e*S	Sn	00 11 38.9	-0.5
GUWA	**GUWAHATI**	**2.36**	**315**	*e*P	Pn	00 11 11.3	0.0
GUWA				*e*S	Sb	00 11 42.9	-1.4
ZIRO	**ZIRO**	**2.99**	**5**	*e*P	Pn	00 11 19.5	-0.7
ZIRO				*e*S	Sn	00 11 54.9	-1.5
TAWA	**Tawang**	**3.40**	**334**	*e*P	Pn	00 11 26.2	+0.1
TAWA				*e*S	Sn	00 12 03.1	-3.6

*IDC **15** 00:11:52.6±1.1, 11°.07S×165°.22E, h0km, mb4.0/6, mb1 4.1/8, mb1mx3.8/43, mbtmp4.1/8, ML4.5/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/22, Error ellipse: s-maj=30.8km s-min=24.0km az=72.0*
*ISCJB **15** 00:11:55.9±0.9, 11°.2S±0°.1×165°.0E±0°.1, h31km, mb3.9/6, Error ellipse: s-maj=23.4km s-min=11.2km az=27.1*
ISC 15 00:11:57.3±1.0, 11°.2S±0°.1×165°.1E±0°.1, h31km, n13, σ1§45/10, mb3.9/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.33**	**289**	Pn	**Pn**	**00 13 13.7**	**-1.1**
	43nm,0.3s,baz=124,slow=7.0,SNR=5.2						
HNR				Sn	**Sn**	**00 14 13.8**	**-1.4**
	27nm,0.3s,baz=138,slow=8.4,SNR=1.6						
HNR				LR	LR	00 15 05.9	
	comp=Z,125nm,21.4s,baz=182,slow=36						
DZM	**Mont Dzumac**	**10.91**	**173**	Pn	**Pn**	**00 14 29.5**	**-2.0**
	1.2nm,0.3s,baz=358,slow=9.5,SNR=14						
DZM				LR	LR	00 18 03.7	
	comp=Z,97nm,18.2s,baz=288,slow=34						
PMG	**Port Moresby**	**17.71**	**274**	LR	LR	00 21 26.6	
	comp=Z,144nm,19.2s,baz=120,slow=32						
URZ	**Urewera**	**29.04**	**160**	P	**P**	**00 17 55.2**	**+0.5**
	5.1nm,1.0s,baz=291,slow=17,SNR=1.8						
H11S2	**WAKE ISLAND Hy**	**29.53**	**3**	T	T	00 49 13.3	
	baz=182						
H11S3	**WAKE ISLAND Hy**	**29.53**	**3**	T	T	00 49 12.9	
	baz=182,slow=74,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**29.54**	**3**	T	T	00 49 11.8	
	baz=182,slow=74,SNR=2.7						
ASAR	**Alice Springs**	**32.14**	**243**	P	**P**	**00 18 23.9**	**+1.6**
	0.5nm,0.6s,baz=64,slow=10.0,SNR=4.4						
FITZ	**Fitzroy Crossi**	**38.70**	**255**	P	**P**	**00 19 20.8**	**+2.1**
	1.9nm,0.6s,baz=89,slow=7.7,SNR=6.9						
SONM	**Songino Array**	**78.38**	**324**	P	**P**	**00 23 55.3**	**+0.3**
	0.5nm,0.6s,baz=150,slow=3.2,SNR=2.8						
ILAR	**Eielson Array**	**83.85**	**19**	P	**P**	**00 24 23.2**	**-0.3**
	0.4nm,0.7s,baz=231,slow=6.2,SNR=5.1						
MKAR	**Makanchi Array**	**93.16**	**317**	P	**P**	**00 25 07.9**	**-0.6**
	0.8nm,0.7s,baz=98,slow=6.0,SNR=7.6						
KEST	**Kesra**	**147.11**	**322**	PKPbc	**PKPbc**	**00 31 38.1**	**+0.3**
	1.1nm,0.7s,baz=40,slow=3.8,SNR=4.9						

TIR 15 00:43:00.7, 41°.09N×20°.22E, h7km, Md2.5/3, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.37**	**314**	*i* PG	Pg	00 43 08.8	+0.8
TIR				*i* PG	Sg	00 43 13.9	+1.0
PHP	**Peshkopia**	**0.62**	**16**	*i* PG	Pb	00 43 13.3	-0.6
PHP				*i* PG	Sb	00 43 22.4	-0.4
FNA	**Florina**	**0.93**	**109**	*i* PG	Sb	00 43 32.8	+1.2
FNA				*i* PG	Pn	00 43 20.8	+0.6

ROM 15 00:44:45.9±0.1, 39°.836N±0°.004×16°.041E±0°.008, h11km, ML0.8/4, Error ellipse: s-maj=0.7km s-min=0.4km az=282.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMN	**Mormanno**	**0.07**	**324**	P	Pg	00 44 48.7	+0.6
MMN				S	Sg	00 44 49.9	+0.1
MMN				AML	AML		
	comp=E,51μm,0.1s						
MMN				AML	AML		
	comp=N,108μm,0.6s						
MMN				AML	AML		
	comp=N,108μm,0.6s						
MMN				AML	AML		
	comp=E,51μm,0.1s						
T0721	**Laino Castello**	**0.11**	**334**	P	Pg	00 44 49.2	+0.5
T0721				S	Sg	00 44 51.5	+0.7
T0721				AML	AML		
	comp=E,96μm,1.6s						
T0721				AML	AML		
	comp=N,108μm,1.6s						
T0721				AML	AML		
	comp=E,96μm,1.6s						
T0721				AML	AML		
	comp=N,108μm,1.6s						
T0702	**Acquaformosa (**	**0.12**	**164**	P	Pg	00 44 49.3	+0.5
T0702				S	Sg	00 44 51.7	+0.7
T0702				AML	AML		
	comp=E,54μm,1.6s						
T0702				AML	AML		

DBC				*e*Sg	**Sb**	**00 47 20.3**	**-0.4**
	comp=Z,392nm,0.3s						
UNCR	**Uncukul**	**0.72**	**129**	*e*PG	**Pg**	**00 47 13.0**	**-0.8**
UNCR				*e*S	**Sg**	**00 47 23.0**	**-0.3**
UNCR				pmax	pmax		
	comp=Z,86nm,0.2s						
UNCR	**Uncukul**	**0.72**	**129**	*e*Pg	**Pg**	**00 47 13.0**	**-0.8**
	comp=Z,86nm,0.2s						
UNCR				*e*Sg	**Sg**	**00 47 23.0**	**-0.3**
	comp=Z,348nm,0.4s						
KRNR	**Karanay**	**0.72**	**118**	*e*PG	**Pg**	**00 47 13.0**	**-1.0**
KRNR				*e*S	**Sg**	**00 47 24.0**	**+0.5**
KRNR				pmax	pmax		
	comp=Z,46nm,0.1s						
KRNR	**Karanay**	**0.72**	**118**	*e*Pg	**Pg**	**00 47 13.0**	**-1.0**
	comp=Z,46nm,0.1s						
KRNR				*e*Sg	**Sg**	**00 47 24.0**	**+0.5**
	comp=Z,236nm,0.2s						
XNZR	**Khunzakh**	**0.80**	**141**	*e*PG	**Pg**	**00 47 14.3**	**-1.0**
XNZR				*e*S	**Sg**	**00 47 25.8**	**+0.1**
XNZR	**Khunzakh**	**0.80**	**141**	*e*Pg	**Pg**	**00 47 14.6**	**-0.7**
XNZR				*e*Sg	**Sg**	**00 47 25.9**	**+0.1**
BUJR	**Buynaksk**	**0.86**	**113**	*e*PG	**Pb**	**00 47 17.1**	**+0.5**
BUJR				*e*S	**Sn**	**00 47 30.3**	**+0.2**
BUJR	**Buynaksk**	**0.86**	**113**	*e*Pg	**Pb**	**00 47 17.1**	**+0.5**
BUJR				*e*Sg	**Sn**	**00 47 30.3**	**+0.2**
KMGR	**Komgaron**	**0.86**	**263**	*e*PG	**Pb**	**00 47 16.7**	**0.0**
KMGR				*e*S	**Sb**	**00 47 28.9**	**+0.7**
KMGR	**Komgaron**	**0.86**	**263**	*e*Pg	**Pb**	**00 47 16.7**	**0.0**
KMGR				*e*Sg	**Sn**	**00 47 29.5**	**-0.7**
ARKR	**Arakani**	**0.90**	**128**	*e*PG	**Pb**	**00 47 17.0**	**-0.4**
ARKR				*e*S	**Sg**	**00 47 29.7**	**+0.6**
ARKR				pmax	pmax		
	comp=Z,58nm,0.1s						
ARKR	**Arakani**	**0.90**	**128**	*e*Pg	**Pb**	**00 47 17.0**	**-0.4**
	comp=Z,58nm,0.1s						
ARKR				*e*Sg	**Sg**	**00 47 29.7**	**+0.6**
	comp=Z,156nm,0.2s						
VLKR	**Vladikavkaz**	**1.00**	**264**	*e*PG	**Pn**	**00 47 19.5**	**-0.1**
VLKR				*e*S	**Sn**	**00 47 35.0**	**+1.3**
VLKR	**Vladikavkaz**	**1.00**	**264**	*e*Pg	**Pn**	**00 47 19.5**	**-0.1**
VLKR				*e*Sg	**Sn**	**00 47 34.9**	**+1.3**
GNBR	**Gunib**	**1.04**	**138**⇓	*e*PG	**Pb**	**00 47 19.8**	**+0.1**
GNBR				*e*		00 47 35.2	
GNBR				pmax	pmax		
	comp=Z,144nm,0.4s						
GNBR				smax	smax		
	comp=N,938nm,0.2s						
GNBR	**Gunib**	**1.04**	**138**	*i* Pg	**Pb**	**00 47 19.9**	**+0.2**
	comp=N,144nm,0.4s						
GNBR				⇓*e*Sg	**Sn**	**00 47 35.6**	**+1.1**
	comp=N,1μm,0.2s						
MAK	**Makhachkala**	**1.10**	**100**	*e*PG	**Pg**	**00 47 21.2**	**+0.2**
MAK				*e*		00 47 37.2	
MAK				pmax	pmax		
	comp=Z,141nm,0.2s						
MAK				smax	smax		
	comp=N,613nm,0.4s						
MAK				smax	smax		
	comp=N,711nm,0.5s						
MAK	**Makhachkala**	**1.10**	**100**	*e*Pg	**Pg**	**00 47 21.6**	**+0.6**
MAK				*e*Sg	**Sn**	**00 47 37.6**	**+1.7**
TRKR	**Terskaya**	**1.10**	**301**	*e*PG	**Pb**	**00 47 20.6**	**-0.1**
TRKR				*e*S	**Sn**	**00 47 36.6**	**+0.6**
TRKR	**Terskaya**	**1.10**	**301**	*e*Pg	**Pn**	**00 47 20.7**	**-0.2**
TRKR				*e*Sg	**Sn**	**00 47 36.6**	**+0.6**
BTKR	**Batakoyurt**	**1.11**	**281**	*e*PG	**Pg**	**00 47 21.5**	**+0.3**
BTKR				*e*S	**Sn**	**00 47 38.5**	**+2.2**
BTKR	**Batakoyurt**	**1.11**	**281**	*e*Pg	**Pg**	**00 47 21.3**	**+0.1**
BTKR				*e*Sg	**Sn**	**00 47 37.8**	**+1.5**
ARNR	**Ardon**	**1.28**	**271**	*e*PG	**Pg**	**00 47 24.7**	**+0.2**
ARNR				*e*S	**Sg**	**00 47 42.7**	**+1.6**
ARNR	**Ardon**	**1.28**	**271**	*e*Pg	**Pg**	**00 47 24.6**	**+0.1**
ARNR				*e*Sg	**Sg**	**00 47 42.8**	**+1.6**
KMKR	**Kumukh**	**1.30**	**142**	*e*PG	**Pn**	**00 47 24.0**	**+0.1**
KMKR				*e*S	**Sg**	**00 47 42.0**	**+0.2**
KMKR				pmax	pmax		
	comp=Z,88nm,0.2s						
KMKR	**Kumukh**	**1.30**	**142**	*e*Pg	**Pn**	**00 47 24.0**	**+0.1**
	comp=Z,88nm,0.2s						
KMKR				*e*Sg	**Sg**	**00 47 42.0**	**+0.2**
	comp=Z,655nm,0.3s						
LACR	**Lac**	**1.32**	**256**	*e*PG	**Pn**	**00 47 22.7**	**-1.4**
LACR				*e*S	**Sb**	**00 47 40.9**	**-0.5**
LACR	**Lac**	**1.32**	**256**	*e*Pg	**Pn**	**00 47 22.8**	**-1.4**
LACR				*e*Sg	**Sb**	**00 47 40.3**	**-1.1**
GUDG	**Gudauri**	**1.34**	**239**	P	**Pn**	**00 47 24.2**	**-0.4**
GUDG				S	**Sb**	**00 47 41.4**	**-0.8**
PRTR	**Priterechnaya**	**1.40**	**295**	*e*PG	**Pb**	**00 47 25.7**	**-0.2**
PRTR				*e*S	**Sg**	**00 47 45.7**	**+0.6**
PRTR	**Priterechnaya**	**1.40**	**295**	*e*Pg	**Pb**	**00 47 25.7**	**-0.2**
PRTR				*e*Sg	**Sg**	**00 47 45.6**	**+0.6**
KORR	**Kora**	**1.44**	**267**	*e*PG	**Pn**	**00 47 25.9**	**+0.2**
KORR				*e*S	**Sg**	**00 47 46.1**	**-0.2**
KORR	**Kora**	**1.44**	**267**	*e*Pg	**Pn**	**00 47 26.0**	**+0.2**
KORR				*e*Sg	**Sg**	**00 47 46.4**	**+0.1**
STDR	**Stavd-Durt**	**1.45**	**279**	*e*PG	**Pb**	**00 47 27.0**	**+0.2**
STDR				*e*S	**Sg**	**00 47 48.5**	**+1.9**
STDR	**Stavd-Durt**	**1.45**	**279**	*e*Pg	**Pb**	**00 47 27.1**	**+0.2**
STDR				*e*Sg	**Sg**	**00 47 46.2**	**-0.4**
URKR	**Urkarakh**	**1.55**	**130**⇓	*e*PG	**Pg**	**00 47 29.2**	**-0.4**
URKR				*e*		00 47 51.3	
URKR	**Urkarakh**	**1.55**	**130**	*e*Pg	**Pb**	**00 47 29.1**	**+0.6**
URKR				*e*Sg	**Sg**	**00 47 50.3**	**+0.7**
ZEI	**Tsey**	**1.61**	**257**	*e*PN	**Pn**	**00 47 28.6**	**+0.4**
ZEI				*e*S	**Sb**	**00 47 49.7**	**-0.2**
ZEI	**Tsey**	**1.61**	**257**	*e*Pg	**Pn**	**00 47 28.6**	**+0.4**
ZEI				*e*Sg	**Sn**	**00 47 49.0**	**+0.1**
LSNR	**Lesken**	**1.62**	**275**⇓	*i* PN	**Pb**	**00 47 29.2**	**-0.4**
LSNR				*e*S	**Sg**	**00 47 51.8**	**-0.1**
LSNR	**Lesken**	**1.62**	**275**	*e*Pg	**Pb**	**00 47 29.1**	**-0.4**
LSNR				*e*Sg	**Sg**	**00 47 52.4**	**+0.5**
SEAG	**Tbilisi Sea**	**1.67**	**213**	P	**Sg**	**00 47 53.7**	**+0.1**
DDFL	**Dedoflistskaro**	**1.72**	**178**	P	**Pn**	**00 47 29.2**	**-0.4**
DDFL				S	**Sg**	**00 47 57.4**	**+2.1**
TBLG	**Delisi**	**1.73**	**214**	P	**Pb**	**00 47 30.9**	**-0.5**
TBLG				S	**Sb**	**00 47 54.3**	**+1.3**
TBLG	**Delisi**	**1.73**	**214**	*e*PN	**Pb**	**00 47 30.9**	**-0.5**
TBLG				*e*S	**Sb**	**00 47 54.3**	**+1.3**
BTNK	**Botanikuri**	**1.74**	**212**	P	**Pb**	**00 47 31.1**	**-0.6**
BTNK				S	**Sb**	**00 47 54.9**	**+1.4**
NCK	**Nalchik**	**1.81**	**281**	*e*PN	**Pb**	**00 47 32.9**	**0.0**
NCK				*e*S	**Sg**	**00 47 58.8**	**+0.8**
NCK	**Nalchik**	**1.81**	**281**	*e*Pg	**Pb**	**00 47 32.9**	**0.0**
NCK				*e*Sg	**Sg**	**00 47 58.8**	**+0.8**
DIGR	**Digorskoe uzhe**	**1.82**	**262**	*e*PN	**Pn**	**00 47 31.7**	**+0.6**
DIGR	**Digorskoe uzhe**	**1.82**	**262**	*e*Pg	**Pb**	**00 47 32.0**	**-1.1**
DIGR				*e*Sg	**Sb**	**00 47 55.9**	**0.0**
ONI	**Oni**	**1.98**	**254**	P	**Pb**	**00 47 34.8**	**-1.0**
ONI				S	**Sb**	**00 48 01.1**	**+0.7**
ONI	**Oni**	**1.98**	**254**	*e*PN	**Pb**	**00 47 34.8**	**-1.0**
KBTC	**Kuba-Taba**	**2.02**	**290**	*e*PN	**Pn**	**00 47 33.4**	**-0.3**
KBTC	**Kuba-Taba**	**2.02**	**290**	*e*Pg	**Pn**	**00 47 33.2**	**-0.5**
KBTC				*e*Sg	**Sb**	**00 48 02.4**	**+0.9**
DRN	**Derbent**	**2.04**	**123**⇓	*e*PN	**Pb**	**00 47 36.5**	**-0.3**
DRN				*e*		00 48 04.3	
DRN				pmax	pmax		
	comp=Z,69nm,0.4s						
DRN				smax	smax		
	comp=N,94nm,1.0s						
DRN	**Derbent**	**2.04**	**123**	*e*Pg	**Pb**	**00 47 36.7**	**0.0**
	comp=N,69nm,0.4s						
DRN				⇓*e*Sg	**Sg**	**00 48 04.1**	**-1.3**
	comp=N,112nm,0.6s						
AKT	**Akhty**	**2.10**	**143**	*e*PN	**Pb**	**00 47 37.2**	**-0.7**
AKT				*e*		00 47 40.5	
AKT				*e*		00 47 40.8	
AKT				*e*S	**Sb**	**00 48 05.8**	**+1.8**
AKT				*e*		00 48 10.0	
AKT				pmax	pmax		
	comp=Z,54nm,0.3s						
AKT				smax	smax		
	comp=E,210nm,0.3s						
AKT				smax	smax		
	comp=E,188nm,0.3s						
AKT				smax	smax		
	comp=N,142nm,0.3s						
AKT	**Akhty**	**2.10**	**143**	*e*Pg	**Pb**	**00 47 37.3**	**-0.7**
	comp=N,54nm,0.5s						
AKT				⇑*e*Sg	**Sg**	**00 48 06.8**	**-0.7**
	comp=N,154nm,0.5s						
SEKA	**Sheki**	**2.14**	**156**	PN	**Pn**	**00 47 36.8**	**+1.5**
KZRT	**Kazreti**	**2.15**	**215**	P	**Pb**	**00 47 37.6**	**-1.2**
KZRT				S	**Sb**	**00 48 06.0**	**+0.6**
PYA1	**Pyatigorsk**	**2.31**	**294**	*e*Pn	**Pn**	**00 47 37.4**	**-0.3**
PYA1				*e*Sn	**Sn**	**00 48 04.1**	**-2.0**
TKB	**Tkibuli**	**2.38**	**251**	P	**Pb**	**00 47 42.7**	**0.0**
TKB				S	**Sg**	**00 48 15.7**	**-0.7**
NEY	**Neytrino**	**2.42**	**273**	*e*PN	**Pn**	**00 47 40.1**	**+0.8**
NEY				*e*S	**Sb**	**00 48 11.8**	**-1.5**
NEY	**Neytrino**	**2.42**	**273**	*e*Pn	**Pn**	**00 47 40.1**	**+0.8**
NEY				*e*Sn	**Sb**	**00 48 11.7**	**-1.5**
SHA1	**Shidzhatmaz**	**2.52**	**284**	*i* PN	**Pn**	**00 47 39.5**	**-1.3**
SHA1	**Shidzhatmaz**	**2.52**	**284**	*e*Pn	**Pn**	**00 47 39.7**	**-1.1**
SHA1				*e*Sn	**Sn**	**00 48 12.5**	**+1.0**
GANJ	**Ganja**	**2.53**	**175**	PN	**Pn**	**00 47 41.6**	**+0.9**
KIV0	**Kislovodsk Arr**	**2.55**	**289**	*e*Pn	**Pn**	**00 47 40.1**	**-0.9**
KIV0				*e*Sn	**Sn**	**00 48 11.0**	**-1.1**
KIV	**Kislovodsk**	**2.56**	**289**	*i* PN	**Pn**	**00 47 40.2**	**-0.9**
AKH	**Akhalkalaki**	**2.58**	**228**	P	**Sb**	**00 48 17.9**	**+0.3**
BGD	**Bogdanovka**	**2.62**	**224**	P	**Pb**	**00 47 45.9**	**-1.0**
BGD				S	**Sb**	**00 48 19.3**	**+0.3**
ALER	**Alexandrovskoy**	**2.76**	**306**	*e*Pn	**Pn**	**00 47 44.5**	**+0.6**
ALER				*e*Sn	**Sn**	**00 48 17.4**	**+0.3**
GOF	**Gofitskoye**	**2.87**	**312**⇑	*e*PN	**Pn**	**00 47 44.9**	**-0.4**
GOF				*e*S	**Sg**	**00 48 29.5**	**-2.4**
GOF				pmax	pmax		
	comp=Z,12nm,0.7s						
GOF				smax	smax		
	comp=E,49nm,0.5s						
GOF	**Gofitskoye**	**2.87**	**312**	*e*Pn	**Pn**	**00 47 46.0**	**+0.7**
GOF				*e*Sn	**Sn**	**00 48 20.6**	**+1.0**
GNI	**Garni**	**3.17**	**198**	*i* PN	**Pn**	**00 47 51.3**	**+1.7**
GNI	**Garni**	**3.17**	**198**	*i* Pn	**Pb**	**00 47 54.6**	**-1.4**
AKTO	**Aktyubinsk**	**10.96**	**44**	⇑Pn	**Pn**	**00 49 39.1**	**+2.8**
AKTO				⇑Sn	Sn	00 51 28.9	-10
	comp=E,1.5nm,0.6s						
AB31	**Akbulak array**	**11.39**	**53**	⇑Pn	**Pn**	**00 49 42.0**	**-0.2**
	comp=E,0.1nm,0.3s,baz=244,slow=11,SNR=12						
AB31				⇓Sn	**Sn**	**00 51 42.4**	**-6.9**
	comp=E,0.4nm,0.5s,baz=249,slow=24,SNR=3.6						
OBN	**Obninsk**	**13.45**	**336**	*e*P	**Pn**	**00 50 11.9**	**+1.7**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ARU	**Arti**	**15.51**	**27**	*i* P	**Pn**	**00 50 39.3**	**+1.2**
ARU				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRVK	**Borovoye**	**18.89**	**50**	*i* P	**P**	**00 51 19.0**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	**Ala-Archa**	**20.82**	**82**	*i* P	**P**	**00 51 40.7**	**-0.5**
KURK	**Kurchatov**	**23.35**	**60**	*i* P	**P**	**00 52 09.6**	**+1.8**

*IDC **15** 01:08:09.3±1.2, 4°.21N×82°.57W, h0km, mb3.9/9, mb1 4.2/11, mb1mx4.0/30, mbtmp4.0/11, ML3.8/2, MS3.1/9, Ms1 3.1/9, ms1mx2.9/30, Error ellipse: s-maj=35.4km s-min=17.7km az=40.0*
*ISCJB **15** 01:08:10.3±0.4, 4°.26N±0°.04×82°.54W±0°.03, h14km, mb4.2/26, MS2.9/5, Error ellipse: s-maj=5.7km s-min=4.3km az=32.1*
*NEIC **15** 01:08:11.5±1.1, 4°.20N×82°.63W, h10km, mb4.4/20, Error ellipse: s-maj=31.8km s-min=7.7km az=236.0*
*UCR **15** 01:08:12.4±2.8, 4°.26N×82°.57W, h20km±11km, mb4.4(NEIC)*

ISC 15 01:08:10.9±0.7, 4°.13N±0°.07×82°.61W±0°.07, h14km, n65, σ1°33/67, mb4.3/26, MS2.9/5, 1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AZU	**Azuero**	**4.32**	**32**	⇓*i* P		**Pn**	**01 09 16.1**	**-0.1**
AZU				*e*S		**Sn**	**01 10 04.8**	**-1.6**
GRGC	**Isla de Gorgon**	**4.57**	**104**	*e*P		**Pn**	**01 09 17.2**	**-2.4**
MALC	**Bahia Malaga**	**5.26**	**91**	*e*P		**Pn**	**01 09 29.3**	**+0.2**
ZANG	**Zanguenga, Cho**	**5.52**	**29**	*e*P		**Pn**	**01 09 33.5**	**+0.8**
ZANG				*e*S		**Sn**	**01 10 32.4**	**-3.6**
OTAV	**Otavalo**	**5.67**	**133**	*e*Pn		**Pn**	**01 09 32.4**	**-2.8**
UPA	**Univ. de Panam**	**5.71**	**32**	*e*P		**Pn**	**01 09 35.2**	**-0.1**
UPA				*e*S		**Sn**	**01 10 39.4**	**-1.3**
BCIP	**Isla Barro Col**	**5.71**	**29**	*e*Pn		**Pn**	**01 09 36.1**	**+0.7**
BCIP	**Isla Barro Col**	**5.71**	**29**	*e*P		**Pn**	**01 09 35.5**	**+0.1**
BCIP	**Isla Barro Col**	**5.71**	**29**	*e*P		**Pn**	**01 09 34.8**	**-0.6**
BCIP				*e*S		**Sn**	**01 10 38.2**	**-2.6**
BBAC	**Balboa, Cauca**	**5.74**	**111**	*e*P		**Pn**	**01 09 34.3**	**-1.7**
GCUF	**Volcan Galeras**	**5.99**	**119**	*e*P		**Pn**	**01 09 39.0**	**-0.7**
HDC	**Heredia**	**6.03**	**346**	*e*P		**Pn**	**01 09 39.3**	**-0.5**
HDC				*e*S		**Sn**	**01 10 47.2**	**-1.6**
POPC	**Popayan, Colom**	**6.12**	**105**	*e*P		**Pn**	**01 09 39.9**	**-1.4**
YOTC	**Yotoco, Valle**	**6.25**	**91**	*e*P		**Pn**	**01 09 42.1**	**-0.7**
SOTA	**Rioblanco**	**6.31**	**108**	*e*P		**Pn**	**01 09 44.0**	**0.0**
UPD2	**Meteti**	**6.33**	**46**	*e*P		**Pn**	**01 09 44.9**	**+1.0**
PLMC	**San Jos del P**	**6.35**	**83**	*e*P		**Pn**	**01 09 44.4**	**+0.1**
PCON	**Cinco Dias**	**6.45**	**106**	*e*P		**Pn**	**01 09 47.6**	**+1.6**
JTS	**Las Juntas de**	**6.55**	**339**	Pn		**Pn**	**01 09 44.4**	**-2.6**
	7.4nm,0.3s,baz=148,slow=19,SNR=33							
JTS				Sn		**Sn**	**01 10 59.0**	**-2.6**
	2.0nm,0.3s,baz=339,slow=20,SNR=2.1							
JTS	**Las Juntas de**	**6.55**	**339**	*e*Pn		**Pn**	**01 09 45.4**	**-1.6**
RREF	**El Recreo**	**7.28**	**84**	*e*P		**Pn**	**01 09 59.3**	**+1.8**
GUY2C	**Guyana, Caldas**	**7.30**	**81**	*e*P		**Pn**	**01 09 59.7**	**+2.1**
HELC	**Santa Helena**	**7.34**	**73**	*e*P		**Pn**	**01 09 59.3**	**+1.2**
NORC	**Norcasia**	**7.84**	**79**	*e*P		**Pn**	**01 10 07.5**	**+2.8**
ROSC	**El Rosal**	**8.29**	**85**	Pn		**Pn**	**01 10 13.8**	**+2.6**
	3.6nm,0.3s,baz=16,slow=15,SNR=7.9							
ROSC				LR		LR	01 13 13.8	
	comp=Z,145nm,20.0s,baz=246,slow=37							
ROSC	**El Rosal**	**8.29**	**85**	*e*Pn		**Pn**	**01 10 13.0**	**+1.9**
ATAH	**Atahualpa**	**11.95**	**159**	LR		LR	01 15 20.2	
	comp=Z,156nm,18.6s,baz=348,slow=36							
SDV	**Santo Domingo**	**12.80**	**68**	Pn		**Pn**	**01 11 13.8**	**+1.1**
	1.3nm,0.3s,baz=250,slow=11,SNR=4.5							
NNA	**Nana**	**17.00**	**160**	LR		LR	01 18 11.8	
	comp=Z,34nm,18.9s,baz=296,slow=35							
CMIG	**Matias Romero**	**17.64**	**318**	LR		LR	01 17 38.7	
	comp=Z,55nm,21.6s,baz=156,slow=32							
SJG	**San Juan**	**21.27**	**48**	P		**P**	**01 12 56.5**	**-0.6**
	6.6nm,0.2s,baz=297,slow=18,SNR=2.3							
SJG				LR		LR	01 20 50.0	
	comp=Z,40nm,21.4s,baz=266,slow=36							
PTGA	**Pitinga**	**23.13**	**102**	P		**P**	**01 13 16.5**	**-0.4**
	1.4nm,0.3s,baz=306,slow=17,SNR=4.6							
PTGA				LR		LR	01 21 50.1	
	comp=Z,46nm,20.4s,baz=139,slow=36							
LPAZ	**La Paz**	**24.82**	**145**	P		**P**	**01 13 34.6**	**+1.0**
	4.8nm,0.9s,baz=345,slow=8.2,SNR=13							
LPAZ				LR		LR	01 24 26.4	
	comp=Z,28nm,18.3s,baz=298,slow=39							
LPAZ	**La Paz**	**24.82**	**145**	*e*P		**P**	**01 13 34.9**	**+1.3**
	27nm,1.6s							
SIV	**San Ignacio**	**29.21**	**134**	LR		LR	01 26 22.1	
	comp=Z,56nm,18.9s,baz=306,slow=37							
LTX	**Lajitas**	**32.05**	**324**	*e*P		**P**	**01 14 38.1**	**+0.7**
TXAR	**Lajitas Array**	**32.05**	**324**	P		**P**	**01 14 38.1**	**+0.7**
	0.4nm,0.8s,baz=140,slow=8.2,SNR=5.0							
TXAR				LR		LR	01 27 29.0	
	comp=Z,32nm,19.1s,baz=0.0,slow=36							
ANMO	**Albuquerque**	**37.80**	**327**	*e*P		**P**	**01 15 28.4**	**+1.2**
	4.3nm,1.0s							
T25A	**Trinidad**	**38.46**	**331**	*e*P		**P**	**01 15 33.7**	**+0.9**
	9.6nm,1.1s							
SDCO	**Great Sand Dun**	**39.47**	**331**	*e*P		**P**	**01 15 42.4**	**+1.1**
	8.7nm,1.3s							
PV13	**Radium Mtn., P**	**41.46**	**328**	*e*P		**P**	**01 15 58.6**	**+0.9**
	7.1nm,1.0s							
PV03	**Paradox Valley**	**41.55**	**328**	*e*P		**P**	**01 15 59.3**	**+0.9**
	4.4nm,0.9s							
PV12	**Sauer Basin,**	**41.57**	**328**	*e*P		**P**	**01 15 59.4**	**+0.8**
	6.0nm,0.8s							
PV14	**Lion Creek, Pa**	**41.73**	**328**	*e*P		**P**	**01 15 59.8**	**-0.2**
	18nm,1.0s							
SRU	**San Rafael Swe**	**43.06**	**328**	*e*P		**P**	**01 16 11.4**	**+0.7**
	4.7nm,0.8s							
MTPU	**Mount Pierson**	**43.22**	**325**	*e*P		**P**	**01 16 13.3**	**+1.1**
	4.1nm,1.4s							
PD31	**Pinedale Array**	**45.33**	**332**	*e*P		**P**	**01 16 29.2**	**+0.3**
	6.3nm,1.8s							
PDAR	**Pinedale Array**	**45.33**	**332**	P		**P**	**01 16 29.2**	**+0.3**
	0.2nm,0.3s,baz=142,slow=10,SNR=3.2							
SPUT	**South Promonto**	**45.67**	**328**	*e*P		**P**	**01 16 31.4**	**-0.1**
	3.3nm,0.9s							
BGU	**Big Grassy Mou**	**45.70**	**328**	*e*P		**P**	**01 16 32.8**	**+1.0**
	3.2nm,0.9s							
ELK	**Elko**	**46.79**	**326**	*e*P		**P**	**01 16 40.8**	**+0.3**
	1.7nm,0.8s							
NV01	**Mina Array Sit**	**47.12**	**321**	*e*P		**P**	**01 16 44.0**	**+1.0**
NVAR	**Mina Array Bea**	**47.12**	**321**	P		**P**	**01 16 44.0**	**+1.0**
	1.6nm,0.6s,baz=138,slow=6.9,SNR=6.1							
WVOR	**Wild Horse Val**	**49.82**	**325**	*e*P		**P**	**01 17 04.2**	**+0.5**
	7.0nm,1.1s							
YKA	**Yellowknife Ar**	**62.87**	**344**	P		**P**	**01 18 35.8**	**-0.4**
	0.6nm,0.6s,baz=130,slow=7.4,SNR=6.8							
YKB5	**Yellowknife Ar**	**62.87**	**344**	*e*P		**P**	**01 18 35.8**	**-0.4**
INK	**Inuvik**	**72.53**	**342**	*e*P		**P**	**01 19 37.9**	**+0.8**
	9.5nm,1.7s							
SUMG	**Summit**	**73.52**	**13**	*e*P		**P**	**01 19 43.2**	**-0.1**
	5.1nm,1.1s							
DOT	**Dot Lake**	**73.94**	**336**	*e*P		**P**	**01 19 46.5**	**+0.9**
	16nm,1.8s							
ILAR	**Eielson Array**	**75.52**	**336**	P		**P**	**01 19 54.4**	**-0.3**
	0.5nm,0.7s,baz=138,slow=4.4,SNR=7.3							
ILB	**Eielson Array**	**75.52**	**336**	*e*P		**P**	**01 19 54.4**	**-0.3**
	5.2nm,1.5s							
RND	**Reindeer**	**75.84**	**335**	*e*P		**P**	**01 19 57.2**	**+0.6**
	4.1nm,0.8s							
ESDC	**Sonseca Array**	**78.64**	**51**	P		**P**	**01 20 13.5**	**+0.7**
	0.5nm,0.8s,baz=268,slow=9.0,SNR=3.3							
KSH	**Kashi**	**132.30**	**22**	*e*PKP		**PKPdf**	**01 27 24.8**	**-0.5**
LZH	**Lanzhou**	**139.54**	**352**	*e*PKP		**PKPdf**	**01 27 39.3**	**+0.4**
LZH				pPKP		pPKPdf	01 27 42.5	-0.2
LZH				sPKP			01 27 43.8	

MAN 15 01:43:30.3, 7°.27N×124°.77E, h1km, mb4.3, ML3.2, MS2.9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.76**	**104**⇑	*e*P		Pn	01 43 52.3	+4.1
DMPH				*e*S		Sn	01 43 59.1	-1.2
CGP	**Cagayan de Oro**	**1.18**	**357**⇑	*e*P		Pg	01 43 53.2	+0.2
CGP				*e*S		Sg	01 44 08.1	-0.3
OCLP	**Ormoc**	**3.76**	**358**	*e*P		Pg	01 44 41.2	-1.3
BESP	**Borongan**	**4.36**	**9**	*e*P		Pn	01 44 41.0	+3.3
CUYO	**Cuyo Island**	**5.13**	**314**	*e*P		Pb	01 45 00.7	-0.3
OTRP	**Odiongan**	**5.74**	**332**	*e*P		Pn	01 44 58.4	+1.7
SJMP	**San Jose**	**6.29**	**325**	*e*P		Pn	01 45 03.3	-0.9
AUQP	**San Andres**	**6.36**	**341**	*e*P		Pn	01 45 01.8	-3.4
BUSP	**Coron**	**6.51**	**317**	*e*P		Pn	01 45 08.3	+1.0
ENPP	**El Nido**	**6.56**	**307**	*e*P		Pn	01 45 09.9	+1.9
BOAC	**Boac**	**6.79**	**335**	*e*P		Pn	01 45 04.9	-6.2
BATP	**Bataraza**	**7.06**	**283**	*e*P		Pn	01 45 12.2	-2.7

*DDA **15** 01:44:58.6, 38°.71N×43°.23E, h7km±2km, ML2.7*
*ISK **15** 01:44:58.3, 38°.74N×43°.28E, h6km, ML1.9/6*
*ISCJB **15** 01:44:59.3±0.6, 38°.72N±0°.03×43°.25E±0°.04, h18km±10km, Error ellipse: s-maj=5.8km s-min=4.7km az=27.6*

ISC 15 01:44:58.1±1.0, 38°.69N±0°.03×43°.25E±0°.04, h27km±7km, n13, σ0°67/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.14**	**130**	PG		**Pb**	**01 45 03.6**	**+0.1**
VANB				SG		**Sb**	**01 45 07.7**	**+0.6**
TVAN	**Van**	**0.20**	**142**	*i* P		**Pb**	**01 45 04.3**	**+0.1**
TVAN				*i* S		**Sb**	**01 45 07.7**	**-0.6**
VMUR	**Van-Muradiye**	**0.39**	**40**	*i* P		**Pb**	**01 45 07.2**	**+0.4**
VMUR				*i* S		**Sb**	**01 45 13.5**	**+0.8**
VMUR				IAML_P				
	comp=Z,1μm,0.1s							
**G

	baz=325						
SNST	Tainan City	1.66	320	eP	Pb	02 32 29.6	+0.2
	baz=324						
YUS	Yu-Shan	1.66	337	eP	Pb	02 32 29.3	-0.5
	baz=341						
EGFH	Guangfu	1.72	353	eP	Pb	02 32 29.9	-0.7
	baz=5.0						
VWDT	VWDT	1.85	345	eP	Pn	02 32 31.2	+0.8
	baz=358						
ESL	Shilin	1.86	354	eP	Pn	02 32 30.1	-0.5
	baz=4.0						
CHN5	Tsauling	1.87	331	eP	Pb	02 32 33.2	+0.1
	baz=336						
CHN5				eS	Sg	02 32 58.7	-0.8
	baz=336						
WHYT	Xinyi Township	1.89	337	eP	Pb	02 32 33.7	+0.3
	baz=341						
SSLB	Suanglung	1.94	340	eP	Pb	02 32 33.6	-0.7
	baz=344						
SSLB				eS	Sb	02 32 59.1	+0.9
	baz=344						
OWD	Renai	2.04	347	eP	Pn	02 32 33.6	+0.5
	baz=351						
SMLT	Sun Moon Lake	2.04	340	eP	Pb	02 32 35.7	-0.4
	baz=353						
SMLT				eS	Sb	02 33 03.0	+1.7
	baz=353						
WJS	Zhushan	2.05	335	eP	Pb	02 32 35.5	-0.7
	baz=323						
TYC	Yuchr	2.08	339	eP	Pb	02 32 36.2	-0.4
	baz=344						
TYC				eS	Sb	02 33 03.3	+1.1
	baz=344						
WNT	Mingjian	2.12	335	eP	Pb	02 32 37.4	+0.2
	baz=323						
WNT				eS	Sb	02 33 04.5	+1.2
	baz=323						
CHGB	Renai	2.14	348	eP	Pn	02 32 35.1	+0.5
	baz=1.0						
DPDB	Guoxing	2.18	342	eP	Pb	02 32 38.1	-0.3
	baz=356						
NACB	Ninganchiao	2.21	358	eP	Pn	02 32 35.1	-0.2
	baz=10.0						
WHF	Hehuan Shan	2.21	351	eP	Pn	02 32 36.9	+1.2
	baz=354						
ETLH	Xiulin Townshi	2.25	356	eP	Pn	02 32 35.6	-0.3
	baz=8.0						
WDGT	Dungji	2.26	305	eP	Pn	02 32 36.8	+0.9
	baz=310						
TDCB	Techi	2.33	349	eP	Pb	02 32 40.6	-0.5
	baz=352						
WHP	Taichung City	2.40	344	eP	Pb	02 32 41.1	-1.2
	baz=357						
VCHM	Qimei	2.41	302	eP	Pn	02 32 38.8	+0.7
	baz=305						
NNSB	Datong	2.48	354	eP	Pn	02 32 40.0	+1.0
	baz=6.0						
PHUB	P'eng-hu	2.48	309	eP	Pn	02 32 39.7	+0.8
	baz=313						
SANB	Taian	2.51	346	eP	Pb	02 32 43.6	-0.5
	baz=358						
SANB				eS	Sb	02 33 15.2	+0.4
	baz=358						
PNG	Penghu	2.52	310	eP	Pn	02 32 40.3	+0.8
	baz=314						
NSY	Sanyi	2.59	342	eP	Pb	02 32 44.0	-1.3
	baz=329						
EOS1	EOS1	2.62	9	eP	Pn	02 32 42.0	+1.1
	baz=10.0						
NDT	Datong Townshi	2.64	357	eP	Pb	02 32 44.4	-1.8
	baz=359						
YHNB	Yeheng	2.71	355	eP	Pn	02 32 44.0	+1.7
	baz=5.0						
NSK	Sanguang	2.72	354	eP	Pb	02 32 45.3	-2.4
	baz=5.0						
JYNG	Yonagunijimaku	2.75	25	P	Pn	02 32 44.0	+1.3
JYNG				eS	Sn	02 33 16.0	+0.4
YOJ	Yonaguni jima	2.79	26	eP	Pn	02 32 43.9	+0.7
	baz=26						
HATJ	Hateruma jima	2.88	43	eS	Sn	02 33 18.1	-0.6
TIPB	Shuangxi	3.01	3	eP	Pn	02 32 47.6	+1.3
	baz=13						
IRIF	Iriomote-Funau	3.04	38	P	Pn	02 32 47.6	+0.9
IRIF				eS	Sn	02 33 22.9	+0.2
JKRS	Kuro-shima	3.14	43	P	Pn	02 32 49.4	+1.4
JKRS				eS	Sn	02 33 25.0	-0.1
JIJ	Ishigaki jima	3.31	43	P	Pn	02 32 50.9	+0.5
JIJ				S	Sn	02 33 28.4	-1.0
JISG	Ishigakijimahi	3.58	42	P	Pn	02 32 54.9	+0.8
JISG				eS	Sn	02 33 35.3	-0.7
PTMZ	Houxiangcun	3.86	323	eP	Pn	02 32 57.0	-1.0
	baz=327						
JTJ	Tarama	3.87	46	P	Pn	02 32 59.0	+0.9
JTJ				S	Sn	02 33 42.5	-0.7

RSNC 15 02:40:50.5±1.1, 3°.79N×71°.31W, h10km±15km, ML3.4, Mw3.5, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUVC	San Jose del G	1.81	227	eP	Pn	02 41 19.9	-1.9
GUVC				eS	Sn	02 41 44.1	-0.7
GUVC				i		02 41 48.1	
	comp=N,888nm,0.2s						
YOPC	Yopal, Colombi	1.91	325	eP	Pn	02 41 22.7	-0.5
YOPC				eS	Sn	02 41 47.1	-0.2
YOPC				i		02 41 57.0	
	comp=N,371nm,0.4s						
VILC	Villavicencio,	2.40	278	eP	Pn	02 41 29.5	-0.6
VILC				eS	Sn	02 41 59.6	+0.1
CHIC	Chingaza	2.56	289	eP	Pn	02 41 30.9	-1.4
CHIC				eS	Sn	02 42 02.2	-1.6
CHIC				i		02 42 21.4	
	comp=N,381nm,0.5s						
TAMC	Tame, Arauca	2.67	350	eP	Pn	02 41 32.0	-1.6
TAMC				eS	Sn	02 42 05.4	-0.7
RUSC	La Rusia	2.73	320	eP	Pn	02 41 33.8	-1.2
RUSC				eS	Sn	02 42 07.2	-1.1
RUSC				i		02 42 22.7	
	comp=Z,30nm,0.3s						
MACC	Macarena, Meta	3.02	237	eP	Pn	02 41 38.5	+0.1
MACC				eS	Sb	02 42 19.8	-1.5
MACC				i		02 42 23.4	
	comp=N,265nm,0.2s						
ROSC	El Rosal	3.18	289	eP	Pb	02 41 49.2	+1.9
ROSC				eS	Sg	02 42 30.6	-2.2
BARC	Barichara	3.35	326	eP	Pb	02 41 48.6	-1.6
BRRC	Barranca, Sant	4.07	324	eP	Pb	02 42 00.3	-2.1
BRRC				i		02 42 43.0	
	comp=Z,12nm,0.5s						
PTBC	PUERTO BERRIO,	4.16	311	eP	Pn	02 41 51.0	-3.1
FLOC	Florencia	4.86	243	eP	Pb	02 42 11.1	-4.7
FLOC				ePg	Pg	02 42 14.3	-9.4
FLOC				eS	Sb	02 43 12.7	-1.8
FLOC				i		02 43 22.8	
	comp=Z,57nm,0.5s						
PCON	Cinco Dias	5.29	254	eP	Pb	02 42 22.6	-0.8
PCON				eS	Sb	02 43 30.2	+3.1
POPC	Popayan, Colom	5.50	257	eS	Sb	02 43 35.7	+2.6

EAF 15 02:50:23.5±0.4, 6°.20S×37°.71E, h43km±61km, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIBA	Kibaya	1.43	308	i P	Pn	02 50 46.9	-0.3
KIBA				i S	Sn	02 51 03.9	-1.1
KOND	Kondoa	2.30	304	i S	Sn	02 51 24.7	-1.5

IDC 15 02:51:09.7±3.6, 1°.73N×89°.57E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/45, mbtmp3.6/4, MS2.9/2, Ms1 3.1/2, ms1mx2.5/30, Error ellipse: s-maj=89.3km s-min=71.0km az=111.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	10.41	302	LR	LR	02 57 04.1	
	comp=Z,83nm,20.9s,baz=116,slow=34						
CMAR	Chiang Mai Arr	19.00	28	P	Pn	02 55 34.1	+0.3
	baz=226,slow=14,SNR=3.0						
CMAR				LR	LR	03 01 59.6	
	comp=Z,37nm,19.6s,baz=210,slow=34						
H08S2	Diego Garcia H	19.41	241	T	T	03 16 36.4	
	baz=60,slow=75,SNR=12						
H08S3	Diego Garcia H	19.41	241	T	T	03 16 34.9	
	baz=60,slow=75,SNR=19						
H08S1	Diego Carcia H	19.43	241	T	T	03 16 36.4	
	baz=60,slow=75,SNR=15						
H01W3	Cape Leeuwin H	43.09	150	T	T	03 45 32.9	
	baz=326,slow=75,SNR=3.4						
H01W2	Cape Leeuwin H	43.10	150	T	T	03 45 34.4	
	baz=326,slow=75,SNR=3.0						
H01W1	Cape Leeuwin H	43.10	150	T	T	03 45 36.7	
	baz=326,slow=75,SNR=3.3						
MKAR	Makanchi Array	45.34	353	P	P	02 59 28.6	-1.0
	0.2nm,0.5s,baz=176,slow=9.7,SNR=2.9						
SONM	Songino Array	48.19	15	P	P	02 59 50.7	-1.4
	0.5nm,0.5s,baz=188,slow=8.7,SNR=3.0						
ZALV	Zalesovo Beam	52.20	356	P	P	03 00 23.9	+1.7
	0.5nm,0.3s,baz=193,slow=5.9,SNR=2.2						
GERES	GERESS Array B	79.42	319	P	P	03 03 26.4	+8.3
	0.2nm,0.2s,baz=64,slow=9.1,SNR=3.6						
TXAR	Lajitas Array	146.62	21	PKPbc	PKPdf	03 10 53.2	+0.5
	0.1nm,0.3s,baz=326,slow=2.7,SNR=2.6						

*IDC **15** 03:01:37.9±1.2, 15°.27S×151°.66W, h0km, mb3.5/4, mb1 4.0/6, mb1mx3.7/23, mbtmp3.7/6, ML3.6/2, MS2.4/1, Ms1 2.4/1, ms1mx2.3/16, Error ellipse: s-maj=38.1km s-min=27.7km az=127.0*
*PPT **15** 03:01:43.8±0.4, 14°.84S×151°.10W, h10km, Ml3.2/16, Error ellipse: s-maj=7.7km s-min=4.6km az=127.0*
ISC 15 03:01:41.2±1.3, 15°.23S±0°.06×151°.1W±0°.1, h10km, n19, σ2°.21/23, mb3.7/4, Society Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	2.72	149	Pn	Pn	03 02 27.6	+2.6
	29nm,0.3s,baz=318,slow=6.5,SNR=50						
PPT				Sn	Sn	03 02 59.0	+1.0
	203nm,0.3s,baz=197,slow=20,SNR=15						
PPT				LR	LR	03 03 23.7	
	comp=Z,57nm,20.0s,baz=310,slow=35						
PPT2	Papeete2	2.74	149	ePn	Pn	03 02 27.8	+2.5
	10nm,0.1s						
PPT2				eSn	Sn	03 02 59.0	+0.5
	79nm,0.1s						
PPT2	Papeete2	2.74	149	eLR	LR	03 03 02.2	
	comp=Z,142nm,25.0s						
PAE	Paea	2.80	150	ePn	Pn	03 02 28.4	+2.4
	12nm,0.1s						
PAE				eSn	Sn	03 02 59.7	-0.2
	108nm,0.1s						
TIAR	Tiarei	2.83	145	ePn	Pn	03 02 29.0	+2.4
	23nm,0.1s						
TIAR				eSn	Sn	03 03 01.4	+0.6
	72nm,0.1s						
I24FR	TAHITI-TARAVAO	3.02	146	Pn	Pb	03 02 32.8	-2.3
	baz=259,slow=420						
I24FR				Sn	Sn	03 03 06.4	+1.1
	baz=92,slow=412						
PMOR	Pomariorio Ree	3.06	86	ePn	Pn	03 02 30.6	+0.9
	201nm,0.1s						
PMOR				eSn	Sn	03 03 06.3	-0.1
	38nm,0.1s						
TVO	Taravao	3.07	146	ePn	Pn	03 02 32.4	+2.6
	15nm,0.1s						
TVO				eSn	Sn	03 03 07.2	+0.5
	60nm,0.1s						
VAH	Vaihoa	3.31	90	ePn	Pn	03 02 33.9	+0.8
	38nm,0.1s						
VAH				eSn	Sn	03 03 12.7	+0.2
	27nm,0.1s						
MEH	Mehetia	3.89	133	ePn	Pn	03 02 43.3	+2.2
	46nm,0.2s						
MEH				eSn	Sn	03 03 24.5	-2.3
	41nm,0.2s						
TBI	Tubuai	8.21	170	ePn	Pn	03 03 43.0	+2.6
	21nm,0.1s						
TBI				eSn	Sn	03 05 07.6	-5.7
	12nm,0.1s						
RAR	Rarotonga	10.19	233	Pn	Pn	03 03 58.8	-8.8
	1.5nm,0.3s,baz=55,slow=22,SNR=2.2						
RAR				Sn	Sn	03 05 39.9	-22
	1.9nm,0.3s,baz=105,slow=4.9,SNR=1.4						
H11S2	WAKE ISLAND Hy	53.42	307	T	T	04 07 44.1	
	baz=130						
H11S1	WAKE ISLAND Hy	53.44	307	T	T	04 07 43.8	
	baz=130						
H11S3	WAKE ISLAND Hy	53.44	307	T	T	04 07 46.2	
	baz=130						
NVAR	Mina Array Bea	61.58	29	P	P	03 12 01.3	+2.2
	0.1nm,0.5s,baz=253,slow=8.2,SNR=3.6						
PDAR	Pinedale Array	69.16	31	P	P	03 12 46.8	-1.3
	0.2nm,0.5s,baz=140,slow=2.9,SNR=2.2						
ASAR	Alice Springs	70.57	250	P	P	03 12 52.2	-4.9
	0.8nm,1.0s,baz=97,slow=5.9,SNR=3.4						
YKA	Yellowknife Ar	82.58	16	P	P	03 14 03.3	-0.7
	0.7nm,0.7s,baz=237,slow=4.3,SNR=3.6						

*TIR **15** 03:18:48.8, 41°.11N×20°.21E, h6km, Md2.7/5*
*SKO **15** 03:18:50.4, 41°.13N×20°.18E, h9km*
ISC 15 03:18:49.8±1.7, 41°.11N±0°.06×20°.20E±0°.05, h5km±12km, n8, σ0°.70/15, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.34	313	i Pg	Pg	03 18 56.4	0.0
TIR	Tirane	0.34	313	i PG	Pg	03 18 56.1	-0.2
TIR				i PG	Pn	03 19 01.2	-0.2
OHR	Ohrid	0.46	90	i Pg	Pg	03 18 59.0	+0.4
OHR				i Sg	Sb	03 19 06.7	-0.7
PHP	Peshkopia	0.60	18	i PG	Pg	03 19 00.5	-0.8
PHP				i PG	Sg	03 19 09.7	+0.6
KRUS	Krusevo	0.83	72	i Pg	Pg	03 19 05.6	-0.2
KRUS				i Sg	Sb	03 19 17.6	-0.7
FNA	Florina	0.95	110	i PG	Pg	03 19 08.2	+0.2
FNA				i PG	Sb	03 19 21.2	-0.6
PUK	Puka	0.96	346	i PN	Pg	03 19 07.6	-0.5
PUK				i PN	Sb	03 19 21.4	-0.5
BCI	Bajram Curri	1.26	356	i PN	Pg	03 19 14.7	+0.8
BCI				i PN	Sn	03 19 32.6	+1.2

IDC 15 03:19:12.8±3.0, 32°.75S×178°.19W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.6/25, mbtmp3.7/3, ML3.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/25, Error ellipse: s-maj=71.3km s-min=36.2km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.70	214	Pn	Pn	03 20 52.2	-0.4
	0.3nm,0.3s,baz=61,slow=10,SNR=2.3						
URZ				Sn	Sn	03 22 08.9	-0.7
	0.5nm,0.3s,baz=125,slow=16,SNR=1.4						
DZM	Mont Dzumac	17.27	304	LR	LR	03 28 09.8	
	comp=Z,67nm,18.8s,baz=248,slow=31						
ASAR	Alice Springs	42.87	270	P	P	03 27 13.3	+0.2
	0.6nm,0.6s,baz=109,slow=7.6,SNR=9.4						
WRA	Warramunga Arr	44.07	275	P	P	03 27 22.7	-0.1
	0.7nm,0.4s,baz=107,slow=8.4,SNR=9.1						
FINES	FINESS Array B	147.27	339	PKPbc	PKPbc	03 38 56.6	-0.9
	2.1nm,0.6s,baz=29,slow=3.2,SNR=8.7						

*ISCJB **15** 03:32:38.8±0.5, 35°.57N±0°.04×139°.72E±0°.07, h73km±5km, mb3.6/5, Error ellipse: s-maj=9.7km s-min=5.6km az=162.1*
*IDC **15** 03:32:39.4±1.6, 35°.54N×139°.74E, h61km±14km, mb3.3/5, mb1 3.5/7, mb1mx3.3/33, mbtmp3.6/7, Error ellipse: s-maj=26.3km s-min=5.7km az=66.0*
*JMA **15** 03:32:40.2±0.1, 35°.61N×139°.69E, h64km±1km, M3.1 Broadband fault plane solution: P waves. NP1: φ=66.00000°, δ83.00000°, λ91.00000°. NP2:φ=238.00000°, δ7.00000°, λ82.00000°. Principal axes: T Plg52.0000°, Azm337.0000°; N Plg1.0000°, Azm246.0000°; P Plg38.0000°, Azm155.0000°;*
JMA Felt I J1.
ISC 15 03:32:39.8±0.9, 35°.57N±0°.05×139°.72E±0°.06, h66km±8km, n20, σ0°.46/30, mb3.7/5, 5C-3D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHU	Hanno	0.45	308	⇓P	Pn	03 32 52.0	+0.2
JHU				S	Sn	03 33 00.4	-0.1
JOD2	Odawara 2	0.60	239	⇑P	Pn	03 32 53.2	-0.1
JOD2				S	Sn	03 33 02.8	-0.4
JRY	Ryogami san	0.80	304	⇓P	Pn	03 32 55.7	+0.1
JAG	Ashikaga	0.88	346	P	Pn	03 32 56.4	-0.1
JIM2	Oshima 3	0.89	196	⇑P	Pn	03 32 56.6	-0.1
JIM2				S	Sn	03 33 08.9	-0.2
JFNN	Fujinakano	0.93	246	P	Pn	03 32 57.4	+0.3
JFNN				S	Sn	03 33 10.0	0.0
JYN	Shimob	0.96	266	⇓P	Pn	03 32 57.5	-0.1
JYN				S	Sn	03 33 10.6	-0.3
BSO3	Boso 3	1.01	140	⇑P	Pn	03 32 58.4	+0.5
JIZS	Izushimoda	1.10	219	⇑P	Pn	03 32 59.7	+0.4
JIZS				S	Sn	03 33 14.5	+0.7
BSO1	Boso 1	1.38	131	⇑P	Pn	03 33 02.6	+0.1
MJAR	Matsushiro Arr	1.56	309	P	Pn	03 33 05.3	-0.1
	1.0nm,0.3s,baz=138,slow=15,SNR=34						
MJAR				S	Sn	03 33 24.1	-0.6
	3.3nm,0.3s,baz=153,slow=21,SNR=42						
MAT	Matsushiro	1.56	309	P	Pn	03 33 05.8	+0.4
MAT				S	Sn	03 33 25.1	+0.3
MAT	Matsushiro	1.56	309	P	Pn	03 33 06.0	+0.6
MAT				S	Sn	03 33 25.2	+0.4
JHJ	Hachijo jima 2	2.45	179	P	Pn	03 33 17.4	0.0
	47nm,0.3s,baz=11,slow=14,SNR=36						
JHJ				S	Sn	03 33 45.4	-0.8
	104nm,0.3s,baz=233,slow=23,SNR=20						
ASAJ	Asahikawa	8.81	14	P	Pn	03 34 44.7	+0.4
	0.5nm,0.3s,baz=211,slow=12,SNR=9.1						
MKAR	Makanchi Array	43.75	303	P	P	03 40 38.4	-0.1
	0.3nm,0.5s,baz=85,slow=9.0,SNR=3.8						
ILAR	Eielson Array	51.45	32	P	P	03 41 37.9	0.0
	0.2nm,0.6s,baz=281,slow=5.4,SNR=1.8						
WRA	Warramunga Arr	55.45	186	P	P	03 42 07.5	-0.1
	0.8nm,0.4s,baz=358,slow=6.6,SNR=12						
ASAR	Alice Springs	59.17	186	P	P	03 42 35.0	+1.2
	0.3nm,0.5s,baz=18,slow=12,SNR=6.4						
NOA	NORSAR Array B	74.99	337	P	P	03 44 12.9	-0.8
	1.2nm,0.9s,baz=38,slow=5.7,SNR=3.4						

JMA 15 03:32:46.8, 36°.70N×139°.41E, h5km±1km, M0.3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	Katashina	0.15	297	P	Pg	03 32 49.9	+0.1
JKT				S	Sg	03 32 52.0	+0.2

*ISCJB **15** 03:36:10.9±0.6, 24°.13S±0°.05×67°.05W±0°.04, h196km±7km, mb3.0/1, Error ellipse: s-maj=8.5km s-min=5.8km az=3.4*
*SJA **15** 03:36:10.9±0.5, 24°.12S×67°.00W, h192km±8km, ML2.1, MW2.7*
*GUC **15** 03:36:12.6±0.6, 24°.10S×67°.30W, h219km±9km, ML3.7*
*IDC **15** 03:36:46.3±35.0, 20°.20S×65°.90W, h405km±165km, mb2.8/1, mb1 2.9/3, mb1mx2.7/19, mbtmp3.6/3, Error ellipse: s-maj=848.2km s-min=44.4km az=14.0*
ISC 15 03:36:11.1±1.0, 24°.13S±0°.06×67°.03W±0°.04, h193km±10km, n19, σ0°.90/30, 1C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.51	113	eP	Pn	03 36 44.7	+0.3
AZAP	Zapla	1.80	93	eP	Pn	03 36 47.4	0.0
AZAP				IAML		03 36 47.6	
	comp=Z,18nm,0.5s						
AZAP				eS	Sn	03 37 14.7	-0.6
LVC	Limon Verde	2.29	311	eP	Pn	03 36 53.8	+1.1
LVC				eS	Sn	03 37 24.8	-0.1
YJA	Yavi	2.40	36	eP	Pn	03 36 54.4	+0.5
YJA				IAML		03 36 55.2	
	comp=Z,2.9nm,0.4s						
YJA				eS	Sn	03 37 27.0	-0.1
PB15	IPOC Station P	2.42	292	eP	Pn	03 36 54.7	+0.9
PB15				eS	Sn	03 37 26.1	-1.0
GO02	Mina Guanaco	2.54	246	⇑iP	Pn	03 36 56.3	+1.0
GO02				i S	Sn	03 37 30.4	+0.6
GO02				IAML		03 37 32.5	
	comp=N,134nm,0.2s						
PB06	IPOC Station P	2.73	301	eP	Pn	03 36 58.1	+0.7
PB06				eS	Sn	03 37 32.8	-0.6
PB06				IAML		03 37 34.8	
	comp=E,215nm,0.3s						
PB09	IPOC Station P	3.09	318	eP	Pn	03 37 02.9	+1.2
PB09				eS	Sn	03 37 41.0	-0.1
PB09				IAML		03 37 44.6	
	comp=E,65nm,0.4s						
PB14	IPOC Station P	3.11	260	eP	Pn	03 37 02.6	+0.6
PB14				i S	Sn	03 37 40.5	-1.3
PB10	IPOC Station P	3.28	280	eP	Pn	03 37 04.4	+0.6
PB10				eS	Sn	03 37 43.2	-1.7
PB10				IAML		03 37 48.3	
	comp=E,101nm,0.3s						
PB04	IPOC Station P	3.38	301	eP	Pn	03 37 06.1	+1.0
PB04				eS	Sn	03 37 46.3	-1.0
PB04	IPOC Station P	3.38	301	eP	Pn	03 37 05.7	+0.5
PB04				i S	Sn	03 37 45.2	-2.1
PB07	IPOC Station P	3.56	312	eP	Pn	03 37 07.5	+0.2
PB02	IPOC Station P	3.85	316	eP	Pn	03 37 10.9	0.0
PB08	IPOC Station P	4.43	333	eP	Pn	03 37 19.6	+1.1
PB08				IAML		03 38 14.5	
	comp=E,31nm,0.5s						
AMOG	MOGNA	6.91	190	eP	Pn	03 37 50.8	+0.7
LPAZ	La Paz	7.87	352	P	Pn	03 38 03.6	+0.3
	comp=E,0.3nm,0.3s,baz=152,slow=9.6,SNR=10						
BDFB	Brasilia	19.76	68	P	P	03 40 26.7	0.0
	comp=E,0.4nm,0.3s,baz=238,slow=9.6,SNR=9.1						
TORD	Torodi Ar. Bea	76.64	69	P	P	03 47 41.0	-0.1
	comp=E,0.2nm,0.5s,baz=258,slow=5.6,SNR=5.7						

IDC 15 03:45:20.3±2.4, 8°.43S×128°.96E, h0km, mb3.5/1, mb1 3.8/4, mb1mx3.5/26, mbtmp3.6/4, ML3.7/3, Error ellipse: s-maj=93.7km s-min=30.6km az=75.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.14	198	Pn	Pn	03 47 47.1	-0.1
	0.9nm,0.3s,baz=25,slow=14,SNR=7.4						
FITZ				Sn	Sn	03 49 36.7	-5.1
	0.9nm,0.3s,baz=334,slow=13,SNR=2.1						
WRA	Warramunga Arr	12.57	156	Pn	Pn	03 48 19.7	-0.9
	0.4nm,0.3s,baz=334,slow=13,SNR=4.4						
ASAR	Alice Springs	15.87	163	Pn	Pn	03 49 06.7	+1.4
	0.1nm,0.3s,baz=343,slow=9.2,SNR=2.9						
MKAR	Makanchi Array	68.86	328	P	P	03 56 26.8	0.0
	0.3nm,0.6s,baz=137,slow=7.1,SNR=2.6						

*MDD **15** 03:49:17.0±0.4, 36°.03N×3°.78W, h0km, mbLg2.7/14, Error ellipse: s-maj=4.2km s-min=3.2km az=10.0, PRXIMO*
*INMG **15** 03:49:17.1±2.4, 36°.02N×3°.77W, h11km±5km, ML2.5, Error ellipse: s-maj=4.0km s-min=3.1km az=47.0*
*SFS **15** 03:49:17.0, 36°.00N×3°.70W, ML2.7, ALBORAN NORTE*
ISC 15 03:49:16.4±1.1, 36°.02N±0°.03×3°.79W±0°.02, h16km±9km, n78, σ1°.63/141, 1C-5D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAL	Malaga-Limoner	0.90	325	⇓iP	Pg	03 49 34.1	+0.2
EMAL				eS	Sg	03 49 45.5	-0.3
PVLZ	Peæn de	0.94	206	eP	Pb	03 49 35.2	+0.8
PVLZ				eS	Sg	03 49 47.0	-0.1
EMIJ	Mijas	0.96	305	Pg	Pg	03 49 34.3	-0.7
	3.4nm,0.1s,SNR=7.9						
EMIJ				Lg	Lg	03 49 47.4	
	60nm,0.1s,SNR=7.9						
EMEL	Melilla	0.99	136	Pg	Pb	03 49 35.7	+0.5
	42nm,0.1s,SNR=7.9						
EMEL				Lg	Lg	03 49 48.3	
	165nm,0.2s,SNR=7.9						
MELI	Melilla	1.01	136	Pg	Pb	03 49 36.1	+0.6
	10nm,0.1s,SNR=4.0						
MELI				Lg	Lg	03 49 48.

9.3nm,0.3s,SNR=65
EQUE Lg Lg 03 49 53.2
40nm,0.2s,SNR=13
CEU Ceuta 1.29 265 ⇓Pg **Pn 03 49 39.2 -0.5**
CEU Lg Lg 03 49 53.4
CEU Ceuta 1.29 265 ⇓*i*P **Pn 03 49 39.2 -0.5**
CEU *e*S **Sb 03 49 53.4 -3.2**
CEU Coda 03 50 52.7
EJIF Jimena Fronter 1.42 288 Pg **Pn 03 49 42.2 +0.7**
1.7nm,0.2s,SNR=7.9
EJIF Lg Lg 03 50 02.8
12nm,0.2s,SNR=7.9
LIJA Lijar 1.57 305 *e*P **Pb 03 49 46.5 +1.4**
GORA Gorafe 1.57 22 Pg **Pb 03 49 45.7 +0.5**
5.0nm,0.2s,SNR=7.9
GORA Lg Lg 03 50 06.0
72nm,0.2s,SNR=7.9
ALJ Aljibe 1.58 289 *e*P **Pg 03 49 48.0 +1.1**
ENIJ Nijar 1.59 53 Pn **Pn 03 49 43.1 -0.9**
5.0nm,0.1s,SNR=7.9
ENIJ Pg **Pg 03 49 47.4 +0.3**
8.9nm,0.2s,SNR=7.9
ENIJ Sn **Sn 03 50 03.6 -0.6**
26nm,0.2s,SNR=7.9
ESPR Espera 1.87 298 Pg **Pb 03 49 50.5 +0.4**
2.8nm,0.2s,SNR=7.9
EQES Quesada 1.87 18 ⇓Pg **Pn 03 49 50.1 +2.2**
SNR=18
EQES Sn **Sn 03 50 13.7 +2.5**
64nm,0.2s,SNR=7.9
EADA Adamuz 2.23 344 Pn **Pn 03 49 54.0 +1.3**
2.2nm,0.1s,SNR=7.9
EADA Pg **Pb 03 49 57.7 +1.3**
7.7nm,0.1s,SNR=7.9
EADA Lg Lg 03 50 25.3
41nm,0.4s,SNR=7.9
SESP Santiago Espad 2.32 25 Pn **Pn 03 49 55.5 +1.5**
2.6nm,0.2s,SNR=7.9
SESP Sn **Sn 03 50 23.4 +1.0**
27nm,0.2s,SNR=7.9
IFR Ifrane 2.73 204 *e*P **Pn 03 50 01.6 +1.8**
IFR *e*S **Sn 03 50 33.2 +0.7**
EMUR La Murta 2.73 48 Pn **Pn 03 50 00.1 +0.5**
4.3nm,0.3s,SNR=7.9
EMUR Sn **Sn 03 50 32.2 -0.2**
11nm,0.4s,SNR=7.9
EMIN Mina Concepcio 2.89 308 Pn **Pn 03 50 02.7 +0.9**
4.3nm,0.1s,SNR=7.9
EMIN Sn **Sn 03 50 36.4 +0.1**
3.5nm,0.2s,SNR=7.9
ETOB Tobarra 3.17 34 Pn **Pn 03 50 07.7 +2.0**
2.5nm,0.2s,SNR=26
ETOB Sn **Sn 03 50 45.1 +1.9**
4.4nm,0.3s,SNR=7.9
PVAQ Vaqueiros 3.44 295 *e*Pn **Pn 03 50 10.4 +1.1**
PVAQ *e*Sn **Sn 03 50 48.5 -1.3**
PVAQ A A 03 50 51.0
5.7nm,0.3s
PVAQ Vaqueiros 3.44 295 Pn **Pn 03 50 10.4 +1.1**
PVAQ Sn **Sn 03 50 48.5 -1.3**
5.7nm,0.3s
PAB San Pablo 3.54 353 Pn **Pn 03 50 12.7 +1.8**
0.5nm,0.1s,SNR=7.9
PAB Sn **Sn 03 50 52.4 -0.1**
2.4nm,0.3s,SNR=7.9
PAB Lg Lg 03 51 06.8
3.8nm,0.2s,SNR=7.9
PBDV Barranco-do-Ve 3.54 291 *e*Pn **Pn 03 50 12.0 +1.2**
PBDV *e*Sn **Sn 03 50 51.1 -1.3**
PBDV A A 03 50 57.8
9.5nm,0.6s
PBDV Barranco-do-Ve 3.54 291 Pn **Pn 03 50 12.0 +1.2**
PBDV Sn **Sn 03 50 51.1 -1.3**
9.5nm,0.6s
OKGL Djebel Kef Gue 3.59 88 Sn **Sn 03 50 53.8 +0.2**
55nm,0.6s,SNR=7.9
ESDC Sonseca Array 3.65 358 Pn **Pn 03 50 14.2 +2.0**
0.7nm,0.1s,baz=177,slow=12,SNR=7.9
ESDC Sn **Sn 03 50 53.2 -1.8**
1.8nm,0.2s,baz=180,slow=24,SNR=7.9
ESDC Lg Lg 03 51 10.5
4.2nm,0.2s,baz=178,slow=28,SNR=7.9
PCVE Castro Verde 3.77 297 *e*Pn **Pn 03 50 14.8 +1.0**
PCVE *e*Sn **Sn 03 50 56.4 -1.4**
PCVE A A 03 51 04.8
5.3nm,0.5s
PCVE Castro Verde 3.77 297 Pn **Pn 03 50 14.8 +1.0**
PCVE Sn **Sn 03 50 56.4 -1.4**
5.3nm,0.5s
PBEJ Beja 3.83 303 *e*Pn **Pn 03 50 16.9 +2.3**
PBEJ *e*Sn **Sn 03 51 01.2 +2.0**
PBEJ A A 03 51 02.8
3.5nm,0.5s
PBEJ Beja 3.83 303 Pn **Pn 03 50 16.9 +2.3**
PBEJ Sn **Sn 03 51 01.2 +2.0**
1.8nm,0.5s
EVO Evora 4.20 308 *e*Pn **Pn 03 50 21.4 +1.7**
EVO *e*Sn **Sn 03 51 06.7 -1.7**
EVO A A 03 51 10.5
6.0nm,0.4s
EVO Evora 4.20 308 Pn **Pn 03 50 21.4 +1.7**
EVO Sn **Sn 03 51 06.7 -1.7**
6.0nm,0.4s
EVO Evora 4.20 308 *e*P **Pn 03 50 21.2 +1.4**
EVO *e*S **Sn 03 51 07.4 -1.0**
ECHE Chera 4.21 31 Pn **Pn 03 50 21.4 +1.5**
0.8nm,0.3s,SNR=7.9
ECHE Sn **Sn 03 51 08.9 +0.2**
0.4nm,0.2s,SNR=7.9
PTEO Sao Teotonio 4.24 292 *e*Pn **Pn 03 50 22.1 +1.8**
PTEO *e*Sn **Sn 03 51 09.5 0.0**
PTEO A A 03 51 22.3
8.0nm,0.7s
PTEO Sao Teotonio 4.24 292 Pn **Pn 03 50 22.1 +1.8**
PTEO Sn **Sn 03 51 09.5 0.0**
4.0nm,0.7s
UCM Universidad Co 4.30 6 *e*P **Pn 03 50 23.1 +1.9**
UCM *e*S **Sn 03 51 08.0 -3.0**
PNCL Nicolau / Gran 4.32 300 *e*Pn **Pn 03 50 22.9 +1.4**
PNCL *e*Sn **Sn 03 51 10.7 -0.8**
PNCL A A 03 51 16.9
3.3nm,0.3s
PNCL Nicolau / Gran 4.32 300 Pn **Pn 03 50 22.9 +1.4**
PNCL Sn **Sn 03 51 10.7 -0.8**
3.3nm,0.3s
EPLA Plasencia 4.42 337 Pn **Pn 03 50 24.8 +2.0**
2.9nm,0.2s,SNR=16
EPLA Sn **Sn 03 51 13.9 -0.1**
2.4nm,0.3s,SNR=7.9
EPLA Lg Lg 03 51 37.5
3.2nm,0.3s,SNR=7.9
PMRV Marv??o 4.44 321 *e*Pn **Pn 03 50 25.1 +2.0**
PMRV *e*Sn **Sn 03 51 13.6 -0.8**
PMRV A A 03 51 52.6
4.1nm,0.5s
PMRV Marv??o 4.44 321 Pn **Pn 03 50 25.1 +2.0**
PMRV Sn **Sn 03 51 13.6 -0.8**
4.1nm,0.5s
GUD Guadarrama 4.62 357 Pn **Pn 03 50 27.6 +1.9**
2.3nm,0.4s,SNR=7.9
GUD Sn **Sn 03 51 18.2 -0.9**
0.7nm,0.3s,SNR=7.9
GUD Lg Lg 03 51 38.0
2.4nm,0.6s,SNR=7.9
PMTG Montargil 4.65 312 *e*Pn **Pn 03 50 28.2 +2.2**
PMTG *e*Sn **Sn 03 51 18.9 -0.8**
PMTG A A 03 52 00.9
3.8nm,0.5s
PMTG Montargil 4.65 312 Pn **Pn 03 50 28.2 +2.2**
PMTG Sn **Sn 03 51 18.9 -0.8**
3.8nm,0.5s
PCBR Castelo Branco 4.80 324 *e*Pn **Pn 03 50 29.9 +1.9**
PCBR *e*Sn **Sn 03 51 21.6 -1.6**
PCBR A A 03 51 24.6
5.0nm,0.4s
PCBR Castelo Branco 4.80 324 Pn **Pn 03 50 29.9 +1.9**
PCBR Sn **Sn 03 51 21.6 -1.6**
2.5nm,0.4s
ETOR Torete 4.98 15 Pn **Pn 03 50 32.2 +1.6**
0.4nm,0.1s,SNR=7.9
ETOR Sn **Sn 03 51 25.0 -2.8**
0.6nm,0.3s,SNR=7.9
ETOR Lg Lg 03 51 50.9
3.6nm,0.4s,SNR=7.9
PTOM Tomar 5.12 316 *e*Pn **Pn 03 50 34.7 +2.2**
PTOM *e*Sn **Sn 03 51 29.9 -1.3**
PTOM A A 03 52 04.4
6.4nm,0.6s
PTOM Tomar 5.12 316 Pn **Pn 03 50 34.7 +2.2**
PTOM Sn **Sn 03 51 29.9 -1.3**
3.2nm,0.6s
PMAFR Mafra 5.26 305 Pn **Pn 03 50 35.6 +1.3**
4.2nm,0.3s,SNR=7.9
PMAFR Sn **Sn 03 51 33.7 -0.8**
12nm,0.4s,SNR=7.9
MTE Manteigas 5.28 327 *e*Pn **Pn 03 50 36.6 +2.0**
MTE *e*Sn **Sn 03 51 34.1 -1.0**
MTE A A 03 52 08.5
7.4nm,0.7s
MTE Manteigas 5.28 327 Pn **Pn 03 50 36.6 +2.0**
MTE Sn **Sn 03 51 34.1 -1.0**
3.7nm,0.7s
PCAS Casmilo, Conde 5.47 319 *e*Pn **Pn 03 50 39.4 +2.1**
PCAS *e*Sn **Sn 03 51 40.4 +0.5**
PCAS A A 03 52 16.1
4.2nm,0.6s
PCAS Casmilo, Conde 5.47 319 Pn **Pn 03 50 39.4 +2.1**
PCAS Sn **Sn 03 51 40.4 +0.5**
4.2nm,0.6s
COI Coimbra 5.54 320 *e*Pn **Pn 03 50 40.2 +2.0**
COI Coimbra 5.54 320 Pn **Pn 03 50 40.2 +2.0**
PVIS Viseu 5.69 327 *e*Pn **Pn 03 50 42.3 +2.0**
PVIS *e*Sn **Sn 03 51 43.6 -1.6**
PVIS A A 03 51 48.0
3.7nm,0.6s
PVIS Viseu 5.69 327 Pn **Pn 03 50 42.3 +2.0**
PVIS Sn **Sn 03 51 43.6 -1.6**
1.9nm,0.6s
MVO Moncorvo 5.73 335 *e*Pn **Pn 03 50 42.9 +2.1**
MVO *e*Sn **Sn 03 51 45.0 -1.2**
MVO A A 03 52 30.1
4.5nm,0.6s
MVO Moncorvo 5.73 335 ⇑Pn **Pn 03 50 42.9 +2.1**
2.5nm,0.2s,SNR=18
MVO Sn **Sn 03 51 43.6 -2.5**
5.4nm,0.4s,SNR=7.9
MVO Lg Lg 03 52 18.1
9.7nm,0.7s,SNR=7.9
PVRL Vila Real 6.08 331 *e*Pn **Pn 03 50 47.8 +2.2**
PVRL *e*Sn **Sn 03 51 54.5 -0.3**
PVRL Vila Real 6.08 331 Pn **Pn 03 50 47.8 +2.2**
PVRL Sn **Sn 03 51 54.5 -0.3**
POLO Lamas de Olo 6.19 331 *e*Pn **Pn 03 50 49.4 +2.2**
POLO *e*Sn **Sn 03 51 57.0 -0.7**
POLO A A 03 51 58.9
1.4nm,0.5s
POLO Lamas de Olo 6.19 331 Pn **Pn 03 50 49.4 +2.2**
POLO Sn **Sn 03 51 57.0 -0.7**
1.4nm,0.5s
PBRG Braganca 6.21 339 *e*Pn **Pn 03 50 49.5 +2.0**
PBRG *e*Sn **Sn 03 51 56.9 -1.3**
PBRG Braganca 6.21 339 Pn **Pn 03 50 49.5 +2.0**
PBRG Sn **Sn 03 51 56.9 -1.3**
ECAL Calabor 6.34 340 Pn **Pn 03 50 51.1 +1.9**
3.5nm,0.4s,SNR=7.9
ECAL Sn **Sn 03 51 58.3 -3.0**
3.9nm,0.5s,SNR=7.9
PTO Porto 6.35 325 *e*Pn **Pn 03 50 51.3 +2.1**
PTO Porto 6.35 325 Pn **Pn 03 50 51.3 +2.1**
ELOB Lobios 6.72 332 Pn **Pn 03 50 55.4 +1.0**
0.4nm,0.2s,SNR=7.9
ELOB Sn **Sn 03 52 07.2 -3.5**
0.7nm,0.2s,SNR=7.9
PGAV Gavieira, Arco 6.88 331 *e*Pn **Pn 03 50 59.0 +2.3**
PGAV *e*Sn **Sn 03 52 12.9 -1.8**
PGAV Gavieira, Arco 6.88 331 Pn **Pn 03 50 59.0 +2.3**
PGAV Sn **Sn 03 52 12.9 -1.8**
EALK Alkurruntz 7.40 13 Pn **Pn 03 51 05.7 +1.9**
1.6nm,0.5s,SNR=7.9
EALK Sn **Sn 03 52 24.4 -3.0**
3.2nm,0.4s,SNR=7.9

MAN 15 03:50:54.9, 7°.24N×124°.80E, h1km, mb4.4, ML3.2, MS3.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.72**	**103**⇑	*e*P	Pb	03 51 11.2	+0.9
DMPH				*i* S	Sb	03 51 20.5	-0.2
CGP	**Cagayan de Oro**	**1.21**	**355**⇑	*e*P	Pg	03 51 17.6	-0.5
CGP				*i* S	Sg	03 51 33.4	-0.4

*ISCJB **15** 04:08:18.0±1.0, 35°.01N±0°.08×33°.86E±0°.06, h30km±5km, Error ellipse: s-maj=14.6km s-min=5.6km az=154.6*
*NIC **15** 04:08:18.3±0.2, 35°.09N×33°.94E, h30km, ML2.8*
*ISK **15** 04:08:19.4, 35°.21N×33°.73E, h10km, ML2.4/8*
ISC 15 04:08:18.5±1.3, 35°.07N±0°.07×33°.81E±0°.05, h28km±11km, n12, σ0°78/18, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.19**	**109**	P	**Pb**	**04 08 23.9**	**-0.5**
	baz=318						
PHNC				S	**Sb**	**04 08 28.2**	**-0.2**
AKIN	**Akıncılar- Kıb**	**0.29**	**259**	PG	**Pb**	**04 08 25.4**	**-0.2**
AKIN				SG	**Sb**	**04 08 30.9**	**+0.5**
CSS	**Mathiatis**	**0.41**	**255**	P	**Pb**	**04 08 26.9**	**-0.5**
	baz=75						
CSS				S	**Sb**	**04 08 34.3**	**+0.9**
EREN	**Erenkoy**	**0.55**	**33**	PG	**Pb**	**04 08 29.5**	**-0.1**
EREN				SG	**Sb**	**04 08 36.5**	**-0.7**
LEF	**Lefka**	**0.76**	**274**	PG	**Pn**	**04 08 34.0**	**+0.6**
LEF				SG	**Sn**	**04 08 44.4**	**+0.5**
SZAC	**Souni**	**0.82**	**248**	P	**Pb**	**04 08 33.3**	**-1.0**
	baz=68						
SZAC				S	**Sb**	**04 08 45.1**	**+0.1**
ALFC	**Alefka**	**1.00**	**275**	P	**Pb**	**04 08 35.3**	**-1.9**
	baz=93						
IKL	**Isikli**	**1.17**	**355**	PG	**Pb**	**04 08 39.5**	**-0.6**
TEKE	**Tekeli-Mersin**	**1.21**	**332**	PG	**Pb**	**04 08 40.3**	**-0.5**
BERE	**Bereket-Mersin**	**1.36**	**340**	PN	**Pb**	**04 08 43.1**	**-0.4**
KEBE	**Keben-Mersin**	**1.38**	**357**	PN	**Pb**	**04 08 43.4**	**-0.3**
TEVE	**Tevekalti-Mers**	**1.40**	**348**	PN	**Pb**	**04 08 43.4**	**-0.6**

*IDC **15** 04:21:35.8±1.6, 11°.37S×165°.32E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/38, mbtmp4.0/6, ML4.0/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/24, Error ellipse: s-maj=49.5km s-min=27.4km az=120.0*
*ISCJB **15** 04:21:37.4±1.2, 11°.60S±0°.09×165°.4E±0°.2, h24km, mb3.8/5, MS3.2/3, Error ellipse: s-maj=28.2km s-min=11.6km az=167.9*
ISC 15 04:21:39.1±1.3, 11°.55±0°.1×165°.4E±0°.2, h24km, n10, σ1°49/7, mb3.9/5, MS3.4/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.76**	**290**	LR	LR	04 25 17.2	
	comp=Z,145nm,20.4s,baz=126,slow=39						
DZM	**Mont Dzumac**	**10.57**	**175**	Pn	**Pn**	**04 24 09.5**	**+0.2**
	1.2nm,0.3s,baz=343,slow=12,SNR=14						
DZM				Sn	**Sn**	**04 26 06.2**	**-0.8**
	0.3nm,0.3s,baz=180,slow=18,SNR=3.0						
PMG	**Port Moresby**	**18.08**	**275**	LR	LR	04 32 19.8	
	comp=Z,164nm,20.3s,baz=114,slow=36						
JAY	**Jayapura**	**26.08**	**288**	LR	LR	04 38 52.5	
	comp=Z,30nm,18.3s,baz=176,slow=40						
STKA	**Stephens Creek**	**29.90**	**224**	P	**P**	**04 27 46.5**	**+1.3**
	2.5nm,0.7s,baz=25,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**31.03**	**250**	P	**P**	**04 27 56.0**	**+0.7**
	2.4nm,0.7s,baz=83,slow=8.9,SNR=7.4						
ASAR	**Alice Springs**	**32.31**	**244**	P	**P**	**04 28 05.7**	**-0.8**
	0.5nm,0.8s,baz=69,slow=9.5,SNR=6.2						
ASAR				LR	LR	04 40 44.0	
	comp=Z,71nm,18.6s,baz=82,slow=36						
ILAR	**Eielson Array**	**84.03**	**19**	P	**P**	**04 34 08.4**	**+1.1**
	0.5nm,0.7s,baz=231,slow=5.1,SNR=6.2						
MKAR	**Makanchi Array**	**93.62**	**317**	P	**P**	**04 34 51.5**	**-2.0**
	0.2nm,0.5s,baz=100,slow=4.4,SNR=2.7						
PDAR	**Pinedale Array**	**94.08**	**47**	LR	LR	05 10 37.3	
	comp=Z,15nm,19.1s,baz=246,slow=31						

*UCR **15** 04:21:42.0±0.4, 15°.35N×92°.22W, h199km±85km, MD3.9, mb4.6(NEIC)*
*BJI **15** 04:21:47.4±0.0, 15°.10N×91°.80W, h140km*
*ISCJB **15** 04:21:48.0±0.3, 15°.05N±0°.03×91°.86W±0°.03, h173km±2km, mb4.2/22, Error ellipse: s-maj=5.9km s-min=3.8km az=141.6*
*NEIC **15** 04:21:49.1±2.4, 15°.09N×91°.79W, h141km±5km, mb4.6/92, MD4.3(MEX), Error ellipse: s-maj=15.8km s-min=13.1km az=64.0*
*IDC **15** 04:21:50.4±0.7, 15°.29N×91°.52W, h170km±3km, mb3.7/14, mb1 3.9/17, mb1mx3.6/47, mbtmp4.2/17, Error ellipse: s-maj=20.8km s-min=8.0km az=45.0*
*MEX **15** 04:21:50.8±0.5, 15°.05N×91°.99W, h154km±5km, MD4.3*
*GCG **15** 04:21:51.7±0.6, 15°.30N×91°.74W, h127km±9km, MD4.2*
ISC 15 04:21:48.5±0.5, 15°.04N±0°.05×91°.86W±0°.04, h159km±4km, n445, σ1°07/464, mb4.3/22, 2C, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.41**	**252**	*e*Pn	**Pn**	**04 22 10.8**	**+0.2**
THIG				*e*Sn	**Sn**	**04 22 25.3**	**-2.0**
THIG		**0.41**	**252**	*e*P	**Pn**	**04 22 10.8**	**+0.2**
THIG				*e*S	**Sn**	**04 22 25.3**	**-2.0**
STG3	**Santiaguito 3,**	**0.43**	**139**⇑	*i* P	**Pn**	**04 22 11.6**	**+0.7**
ERG	**Entre ros, C**	**0.66**	**155**	*e*P	**Pn**	**04 22 13.4**	**+1.6**
ERG				*e*S	**Sn**	**04 22 30.0**	**+0.4**
FUG	**Fuego 3**	**1.14**	**121**	*e*P	**Pn**	**04 22 17.3**	**+1.7**
FUG	**Fuego 3**	**1.14**	**121**	*e*P	**Pn**	**04 22 17.3**	**+1.7**
CCIG	**Comitan**	**1.27**	**348**	*e*Pn	**Pn**	**04 22 16.5**	**-0.3**
CCIG				*e*Pn	Pn	04 22 17.0	+0.2
CCIG				*e*Sn	**Sn**	**04 22 37.2**	**-1.3**
CCIG	**Comitan**	**1.27**	**348**	*i* P	**Pn**	**04 22 17.0**	**+0.2**
CCIG				*e*S	**Sn**	**04 22 37.2**	**-1.3**
APG	**El Apazote**	**1.35**	**91**	P	**Pn**	**04 22 17.5**	**0.0**
	179nm,0.3s,baz=220,slow=10,SNR=890						
APG				LR	LR	04 22 33.9	
	comp=Z,292nm,18.5s,baz=176,slow=41						
APG				S	**Sn**	**04 22 39.4**	**-0.4**
	133nm,0.3s,baz=357,slow=17,SNR=19						
PCG	**Pacaya**	**1.37**	**118**	*e*P	**Pn**	**04 22 19.7**	**+1.8**
PCG	**Pacaya**	**1.37**	**118**	*e*P	**Pn**	**04 22 19.7**	**+1.8**
NBG	**Las Nubes**	**1.53**	**107**	*e*P	**Pn**	**04 22 21.4**	**+2.0**
NBG	**Las Nubes**	**1.53**	**107**⇑	*e*P	**Pn**	**04 22 21.4**	**+2.0**
IXG	**Ixpaco**	**1.62**	**122**	*e*P	**Pn**	**04 22 22.2**	**+2.0**
IXG	**Ixpaco**	**1.62**	**122**	*e*P	**Pn**	**04 22 22.2**	**+2.0**
MRL	**Marmol**	**2.10**	**88**	*e*P	**Pn**	**04 22 26.4**	**+0.8**
MRL	**Marmol**	**2.10**	**88**	*e*P	**Pn**	**04 22 26.4**	**+0.8**
MRL				*e*S	**Sn**	**04 22 53.7**	**-0.5**
TGIG		**2.12**	**325**	*e*Pn	**Pn**	**04 22 25.1**	**-0.6**
TGIG				*e*Sn	**Sn**	**04 22 49.2**	**-5.1**
TGIG		**2.12**	**325**	*e*P	**Pn**	**04 22 25.1**	**-0.6**
TGIG				*i* S	**Sn**	**04 22 52.6**	**-1.7**
CMIG	**Matias Romero**	**3.56**	**305**	P	**Pn**	**04 22 43.7**	**+0.4**
	31nm,0.3s,baz=142,slow=11,SNR=285						
CMIG				S	**Sn**	**04 23 20.8**	**-5.1**
	51nm,0.3s,baz=155,slow=20,SNR=24						
CMIG	**Matias Romero**	**3.56**	**305**	*e*Pn	**Pn**	**04 22 43.3**	**0.0**
CMIG	**Matias Romero**	**3.56**	**305**	*e*P	**Pn**	**04 22 43.3**	**0.0**
HUIG	**Huatulco**	**4.16**	**281**	*e*Pn	**Pn**	**04 22 50.0**	**-1.2**
HUIG	**Huatulco**	**4.16**	**281**	*e*P	**Pn**	**04 22 50.0**	**-1.2**
TGUH	**Tegucigalpa,Un**	**4.54**	**102**	*e*Pn	**Pn**	**04 22 56.0**	**-0.2**
TEIG	**Tepich**	**6.19**	**33**	*e*Pn	**Pn**	**04 23 16.4**	**-1.5**
MYIG	**Mrida**	**6.22**	**19**	*e*Pn	**Pn**	**04 23 17.1**	**-1.2**
TLIG	**Tlapa**	**6.91**	**292**	*e*Pn	**Pn**	**04 23 29.0**	**+1.4**
ACON	**Acoyapa**	**7.18**	**114**	*e*Pn	**Pn**	**04 23 32.4**	**+1.3**
ESPN	**Las Esperanzas**	**7.87**	**110**	*e*Pn	**Pn**	**04 23 41.1**	**+0.9**
JTS	**Las Juntas de**	**8.22**	**124**	P	**Pn**	**04 23 45.6**	**+0.6**
	6.7nm,0.3s,baz=28,slow=9.3,SNR=35						
JTS				S	**Sn**	**04 25 08.8**	**-7.9**
	0.3nm,0.3s,baz=12,slow=20,SNR=1.7						
JTS	**Las Juntas de**	**8.22**	**124**	*e*Pn	**Pn**	**04 23 45.8**	**+0.8**
062Z	**Marathon**	**14.00**	**45**	P	**Pn**	**04 25 00.4**	**+0.3**
	baz=228						
059Z	**Ave Maria**	**14.87**	**39**	P	**Pn**	**04 25 11.5**	**+0.6**
	baz=223						
061Z	**Ochoppi**	**14.87**	**42**	P	**Pn**	**04 25 10.8**	**-0.1**
	baz=226						
833A	**Chaparral WMA,**	**14.96**	**333**	P	**P**	**04 25 14.0**	**+0.4**
	baz=150,SNR=7.8						
058A	**Arcadia**	**15.19**	**36**	P	**Pn**	**04 25 15.4**	**+0.5**
	baz=220						
957A	**Wimauma**	**15.43**	**34**	*e*Pn	**Pn**	**04 25 18.2**	**+0.4**
	84nm,0.8s						
957A	**Wimauma**	**15.43**	**34**	P	**P**	**04 25 18.5**	**-0.3**
	baz=217						
060Z	**West Palm Beac**	**15.47**	**41**	P	**Pn**	**04 25 18.1**	**-0.2**
	baz=225						
059A	**Moore Haven**	**15.51**	**38**	P	**Pn**	**04 25 19.0**	**+0.2**
	baz=222						
958A	**Wauchula**	**15.62**	**35**	P	**Pn**	**04 25 20.0**	**-0.2**
	baz=219,SNR=5.2						
857A	**Zephyrhills**	**15.91**	**33**	P	**P**	**04 25 24.0**	**-0.1**
	baz=216						
060A	**Indiantown**	**16.04**	**40**	P	**Pn**	**04 25 24.8**	**-0.5**
	baz=224						
959A	**Okeechobee**	**16.08**	**38**	P	**Pn**	**04 25 25.3**	**-0.6**
	baz=221						
DWPF	**Disney Wildern**	**16.21**	**35**	P	**Pn**	**04 25 27.4**	**0.0**
	baz=219						
449A	**Pace**	**16.22**	**14**	P	**P**	**04 25 28.7**	**+1.1**
	baz=196						
858A	**St. Cloud**	**16.33**	**35**	P	**P**	**04 25 28.6**	**-0.2**
	baz=218						
450A	**Crestview**	**16.42**	**16**	P	**Pn**	**04 25 31.2**	**+1.3**
	baz=198						
655A	**Horseshoe Beac**	**16.45**	**27**	P	**Pn**	**04 25 30.9**	**+0.7**
	baz=210						
435B	**Jarrell**	**16.53**	**342**	P	**Pn**	**04 25 32.8**	**+1.5**
	baz=160						
757A	**Oxford**	**16.54**	**32**	P	**Pn**	**04 25 31.9**	**+0.6**
	baz=215						
BRAL	**Brewton**	**16.65**	**15**	P	**Pn**	**04 25 33.7**	**+1.0**
	baz=196						
656A	**Willston**	**16.66**	**30**	*e*Pn	**Pn**	**04 25 33.5**	**+0.7**
	45nm,1.0s						
656A	**Willston**	**16.66**	**30**	P	**Pn**	**04 25 33.6**	**+0.8**
	baz=213						
GTBY	**Guantanamo Bay**	**16.70**	**71**	*e*P	**Pn**	**04 25 33.2**	**-0.1**
	43nm,0.8s						
554A	**Perry**	**16.76**	**25**	P	**Pn**	**04 25 34.5**	**+0.4**
	baz=208						
349A	**Repton**	**16.79**	**14**	P	**Pn**	**04 25 35.3**	**+0.9**
	baz=196						
NATX	**Nacogdoches**	**16.84**	**352**	P	**Pn**	**04 25 36.0**	**+1.0**
	baz=170						
452A	**Marianna**	**16.89**	**20**	P	**Pn**	**04 25 36.3**	**+0.8**
	baz=202						
758A	**Lake Helen**	**17.00**	**34**	P	**Pn**	**04 25 37.3**	**+0.3**
	baz=217						
JCT	**Junction City**	**17.02**	**336**	P	**Pn**	**04 25 37.5**	**+0.4**
	baz=153						
VBMS	**Vicksburg**	**17.15**	**4**	P	**Pn**	**04 25 39.3**	**+0.7**
	baz=184						
657A	**Interlachen**	**17.16**	**31**	P	**Pn**	**04 25 38.9**	**0.0**
	baz=214						
453A	**Whigham**	**17.20**	**22**	P	**Pn**	**04 25 39.4**	**+0.2**
	baz=205						
556A	**Lake Butler**	**17.25**	**29**	P	**Pn**	**04 25 40.0**	**+0.1**
	baz=212						
454A	**Quitman**	**17.34**	**24**	P	**Pn**	**04 25 40.9**	**0.0**
	baz=207						
658A	**Bunnell**	**17.34**	**33**	P	**Pn**	**04 25 40.8**	**-0.2**
	baz=216						
249A	**Camden**	**17.41**	**14**	P	**Pn**	**04 25 42.1**	**+0.3**
	baz=195						
352A	**Blakely**	**17.55**	**20**	P	**Pn**	**04 25 43.7**	**+0.2**
	baz=202						
557A	**Orange Park**	**17.58**	**30**	P	**Pn**	**04 25 43.5**	**-0.3**
	baz=214						
455A	**Stateville**	**17.61**	**26**	P	**Pn**	**04 25 44.6**	**+0.4**
	baz=209						
250A	**Grady**	**17.62**	**16**	*e*P	**Pn**	**04 25 45.0**	**+0.7**
	18nm,0.6s						
250A	**Grady**	**17.62**	**16**	P	**Pn**	**04 25 45.3**	**+1.0**
	baz=198						
WHTX	**Lake Whitney,**	**17.64**	**344**	P	**Pn**	**04 25 44.5**	**0.0**
	baz=162						
353A	**Camilla**	**17.68**	**22**	P	**Pn**	**04 25 45.3**	**+0.4**
	baz=205						
147A	**Livingston**	**17.86**	**10**	P	**Pn**	**04 25 47.3**	**+0.1**
	baz=191						
TXAR	**Lajitas Array**	**17.93**	**325**	P	**Pn**	**04 25 49.2**	**+1.2**
	0.1nm,0.3s,baz=154,slow=12,SNR=21						
TXAR				ScP	**ScP**	**04 33 36.1**	**+0.7**
	0.0nm,0.3s,baz=145,slow=4.6,SNR=6.7						
TX31	**Lajitas Ar. Si**	**17.93**	**325**	*e*P	**Pn**	**04 25 49.1**	**+1.0**
	14nm,1.8s						
148A	**Greensboro**	**17.96**	**12**	P	**Pn**	**04 25 47.9**	**-0.4**

	baz=193							
251A	Midway	17.97	18	P	Pn	04 25 47.9	-0.5	
	baz=200							
TIGA	Tifton	18.00	23	P	Pn	04 25 48.1	-0.6	
	baz=206							
456A	Hilliard	18.04	28	P	Pn	04 25 48.5	-0.7	
	baz=212							
149A	Jones	18.08	14	P	Pn	04 25 49.4	-0.4	
	baz=196							
252A	Lumpkin	18.09	20	P	Pn	04 25 49.6	-0.3	
	baz=202							
Z41A	Richland Creek	18.16	357	eP	Pn	04 25 50.5	-0.2	
	28nm,0.8s							
Z41A	Richland Creek	18.16	357	P	Pn	04 25 49.9	-0.8	
	baz=177							
150A	Eclectic	18.28	16	P	Pn	04 25 51.4	-0.7	
	baz=198,SNR=6.7							
253A	Americus	18.36	21	P	Pn	04 25 52.1	-0.9	
	baz=204							
151A	Opelika	18.40	18	P	P	04 25 52.4	+0.9	
	baz=200,SNR=16							
LRAL	Lakeview Retre	18.45	13	P	Pn	04 25 53.4	-0.8	
	baz=195							
SMLC	San Martn de	18.47	108	eP	P	04 25 51.8	-0.6	
356A	Blackshear	18.50	27	P	Pn	04 25 53.7	-0.9	
	baz=211							
254A	Abbeville	18.56	23	P	P	04 25 53.8	+0.6	
	baz=207,SNR=5.5							
Z49A	Columbiana	18.71	14	P	Pn	04 25 56.4	-0.8	
	baz=196							
152A	Waverly Hall	18.72	19	P	P	04 25 56.0	+1.0	
	baz=202,SNR=9.9							
YOTC	Yotoco, Valle	18.81	124	eP	P	04 25 56.5	+0.1	
255A	Hazlehurst	18.87	25	P	P	04 25 57.4	+0.8	
	baz=209							
357A	Townsend	18.87	28	P	P	04 25 57.3	+0.7	
	baz=212							
ABTX	Abilene, Hawle	18.89	339	P	P	04 25 58.0	+1.2	
	baz=156,SNR=8.0							
Z50A	Ashland	18.92	15	P	P	04 25 58.0	+0.9	
	baz=198							
GUY2C	Guyana, Caldas	18.92	119	eP	P	04 25 57.7	-0.1	
153A	Fort Valley	19.00	21	P	P	04 25 58.6	+0.7	
	baz=204							
PTBC	PUERTO BERRIO,	19.05	114	eP	P	04 25 55.7	-3.0	
256A	Glennville	19.16	27	P	P	04 26 00.7	+0.9	
	baz=210							
NORC	Norcasia	19.17	118	eP	P	04 25 59.1	-1.0	
154A	Montrose	19.23	23	P	P	04 26 01.0	+0.5	
	baz=206,SNR=6.1							
Y48A	Jasper	19.27	12	P	P	04 26 01.9	+1.0	
	baz=194							
Z52A	Williamson	19.29	19	P	P	04 26 01.4	+0.2	
	baz=202,SNR=6.5							
BBAC	Balboa, Cauca	19.37	131	eP	Pn	04 26 04.8	-0.4	
Y49A	Blount Mountai	19.38	14	P	P	04 26 02.7	+0.6	
	baz=196							
X40A	Basin Creek Fa	19.39	358	P	P	04 26 02.9	+0.8	
	baz=177							
X43A	Marvell	19.42	2	P	P	04 26 03.2	+0.7	
	baz=183							
POPC	Popayan, Colom	19.45	128	eP	Pn	04 26 05.7	-0.5	
155A	Kite	19.48	24	P	P	04 26 03.8	+0.6	
	baz=208,SNR=5.6							
MIAR	Mount Ida	19.49	356	P	P	04 26 04.2	+0.9	
	baz=175							
OXF	Oxford	19.52	6	P	P	04 26 04.3	+0.7	
	baz=187							
257A	Skidaway Islan	19.55	29	P	P	04 26 04.2	+0.3	
	baz=213							
Y50A	Piedmont	19.57	15	P	P	04 26 04.8	+0.6	
	baz=198							
Z53A	Monticello	19.66	21	P	P	04 26 05.8	+0.7	
	baz=204,SNR=11							
UALR	University of	19.66	359	eP	P	04 26 06.4	+1.3	
	13nm,0.8s							
X46A	Booneville	19.66	8	P	P	04 26 05.6	+0.4	
	baz=189,SNR=8.9							
X47A	Russelville	19.73	10	P	P	04 26 06.4	+0.5	
	baz=191							
Y51A	Rockmart	19.76	17	P	P	04 26 07.0	+0.8	
	baz=200,SNR=8.0							
SOTA	Rioblanco	19.77	129	eP	Pn	04 26 09.1	-1.2	
OTAV	Otavalo	19.79	137	eP	Pn	04 26 09.1	-1.4	
PCON	Cinco Dias	19.80	128	eP	Pn	04 26 10.4	-0.3	
GOGA	Godfrey	19.81	21	eP	P	04 26 07.8	+1.0	
	18nm,0.6s							
GOGA	Godfrey	19.81	21	P	P	04 26 07.4	+0.6	
	baz=204,SNR=10							
X48A	Hartselle	19.81	12	P	P	04 26 06.8	0.0	
	baz=194							
Z54A	Sparta	19.88	23	P	P	04 26 07.6	+0.1	
	baz=206							
156A	Sylvania	19.91	26	P	P	04 26 08.2	+0.3	
	baz=210,SNR=5.9							
ROSC	El Rosal	20.01	119	P	P	04 26 09.9	+0.5	
	0.7nm,0.3s,baz=307,slow=20,SNR=3.5							
X49A	Woodville	20.02	13	P	P	04 26 09.7	+0.7	
	baz=196							
Y52A	Lilburn	20.03	19	eP	P	04 26 10.3	+1.2	
	22nm,0.9s							
Y52A	Lilburn	20.03	19	P	P	04 26 09.1	0.0	
	baz=202,SNR=8.1							
SDDR	Presa de Saban	20.05	76	eP	P	04 26 10.8	+1.2	
	29nm,0.8s							
W41B	Gary Mavity, V	20.06	359	P	P	04 26 10.4	+1.0	
	baz=179							
X50B	Fort Payne	20.14	15	P	P	04 26 10.9	+0.6	
	baz=197							
Z55A	Blythe	20.14	24	P	P	04 26 11.2	+0.9	
	baz=208							
W39A	Magazine	20.15	355	P	P	04 26 11.7	+1.3	
	baz=174							
157A	Early Branch	20.15	27	P	P	04 26 11.2	+0.8	
	baz=212							
PRAC	Prado	20.15	122	eP	P	04 26 11.7	+1.1	
Y53A	Monroe	20.18	20	P	P	04 26 11.1	+0.4	
	baz=204,SNR=8.9							
W46A	Michie	20.25	8	P	P	04 26 11.7	+0.2	
	baz=190,SNR=5.5							
X51A	Calhoun	20.45	17	P	P	04 26 14.0	+0.5	
	baz=200							
W47A	Westpoint	20.49	10	P	P	04 26 14.5	+0.4	
	baz=192							
Y54A	Tignall	20.50	22	P	P	04 26 14.4	+0.3	
	baz=206							
W48A	Pulaski	20.50	12	P	P	04 26 14.3	+0.2	
	baz=194							
Z56A	Williston	20.54	26	P	P	04 26 14.6	0.0	
	baz=210							
RUSC	La Rusia	20.56	114	eP	P	04 26 15.7	+0.2	
WMOK	Wichita Mounta	20.59	344	P	P	04 26 15.8	+0.8	
	baz=160							
CHIC	Chingaza	20.62	118	eP	P	04 26 15.7	-0.3	
W49A	Belvidere	20.62	13	P	P	04 26 16.0	+0.6	
	baz=195							
MNTX	Cornudas Mount	20.68	326	eP	P	04 26 17.8	+1.6	
	3.4nm,0.7s							
MNTX	Cornudas Mount	20.68	326	P	P	04 26 17.3	+1.1	
	baz=140,SNR=8.2							
X52A	Dahlonega	20.76	19	P	P	04 26 17.3	+0.3	
	baz=202,SNR=5.6							
SWET	Sewanee	20.79	14	eP	P	04 26 18.0	+0.7	
	10nm,0.8s							
Z57A	Bowman	20.80	27	P	P	04 26 18.0	+0.6	
	baz=212							
X53A	Estanollee	20.86	20	P	P	04 26 18.9	+0.9	
	baz=204							
Y55A	Saluda	20.88	24	P	P	04 26 17.8	-0.3	
	baz=208							
W50A	Signal Mountai	20.92	15	P	P	04 26 18.9	+0.2	
	baz=198							
V46A	Holladay	20.95	9	P	P	04 26 17.7	-1.1	
	baz=190,SNR=15							
Y56A	Pelion	20.97	25	P	P	04 26 18.8	-0.4	
	baz=209							
W51A	Cleveland	21.03	16	P	P	04 26 19.3	-0.5	
	baz=199							
V47A	Nunnelly	21.07	10	P	P	04 26 19.7	-0.5	
	baz=192,SNR=6.4							
TUL1	Leonard	21.08	351	P	P	04 26 19.9	-0.4	
	baz=169							
V48A	Smith Brothers	21.11	11	P	P	04 26 19.8	-0.7	
	baz=193,SNR=8.8							
W52A	Murphy	21.21	18	P	P	04 26 21.4	-0.4	
	baz=201							
X54A	Belton	21.23	22	P	P	04 26 22.0	+0.2	
	baz=206							
Z58A	St. Stephen	21.24	29	P	P	04 26 21.5	-0.6	
	baz=214							
U40A	Yellville	21.25	358	P	P	04 26 22.2	0.0	
	baz=177							
MSTX	Muleshoe	21.28	334	P	P	04 26 23.2	+0.6	
	baz=150							
WVT	Waverly	21.31	9	eP	P	04 26 22.9	+0.1	
	13nm,0.6s							
WVT	Waverly	21.31	9	P	P	04 26 23.2	+0.4	
	baz=191							
V49A	McMinnville	21.32	13	P	P	04 26 23.3	+0.4	
	baz=196,SNR=9.8							
Z59A	Georgetown, SC	21.42	30	P	P	04 26 24.0	+0.1	
	baz=215							
V50A	Pikevile	21.42	15	P	P	04 26 24.1	+0.1	
	baz=198							
X55A	Gracelyn & Ava	21.43	24	P	P	04 26 23.9	-0.2	
	baz=206							
U46A	Springville	21.49	8	P	P	04 26 23.7	-0.9	
	baz=190,SNR=13							
W53A	Cullowhee	21.52	20	P	P	04 26 25.4	+0.3	
	baz=203							
Y57A	Sumter	21.55	27	P	P	04 26 25.2	-0.2	
	baz=211							
SDV	Santo Domingo	21.64	104	P	P	04 26 24.9	-1.8	
	19nm,0.5s,baz=326,slow=6.2,SNR=5.3							
AMTX	Amarillo	21.65	338	eP	P	04 26 26.9	+0.4	
	12nm,0.6s							
AMTX	Amarillo	21.65	338	P	P	04 26 26.6	+0.1	
	baz=153							
X56A	White Oak	21.69	25	P	P	04 26 26.3	-0.6	
	baz=209,SNR=6.9							
U47A	Clarksville	21.70	10	P	P	04 26 26.2	-0.8	
	baz=192							
V51A	Loudon	21.75	17	P	P	04 26 27.6	+0.2	
	baz=200							
W54A	Cherokee Point	21.78	22	P	P	04 26 28.5	+0.7	
	baz=206,SNR=5.4							
MACC	Macarena, Meta	21.91	124	eP	P	04 26 29.0	-0.3	
U48A	Cassie Pea, Po	21.91	12	P	P	04 26 28.0	-1.0	
	baz=194							
V52A	Sevierville	22.00	18	P	P	04 26 30.4	+0.4	
	baz=202,SNR=5.3							
X57A	Johnson Farm,	22.06	27	P	P	04 26 30.1	-0.5	
	baz=211							
U49A	Red Boiling Sp	22.07	13	P	P	04 26 30.1	-0.5	
	baz=196,SNR=11							
V53A	Saluda	22.09	20	P	P	04 26 30.9	0.0	
	baz=204,SNR=5.3							
KMSC	Kings Mountain	22.14	23	P	P	04 26 31.4	0.0	
	baz=208,SNR=6.9							
U50A	Jamestown	22.19	15	P	P	04 26 31.5	-0.4	
	baz=198,SNR=5.2							
T46A	Princeton	22.20	8	P	P	04 26 31.5	-0.4	
	baz=190,SNR=11							
T47A	Sharon Grove	22.27	10	P	P	04 26 32.1	-0.5	
	baz=192,SNR=21							
U51A	La Follette	22.38	17	P	P	04 26 32.6	-1.1	
	baz=200,SNR=8.3							
W56A	Indian Trail	22.43	25	P	P	04 26 33.7	-0.5	
	baz=210							
X58A	Rowland	22.47	28	P	P	04 26 34.0	-0.5	
	baz=213							
V54A	Nebo	22.48	21	P	P	04 26 34.6	-0.1	
	baz=206							
T48A	Bowling Green	22.52	11	P	P	04 26 35.0	+0.1	
	baz=194							
U52A	Thorn Hill	22.58	18	P	P	04 26 35.6	0.0	
	baz=202							
121A	Cookes Peak, D	22.66	323	P	P	04 26 36.0	-0.5	
	baz=136							
TZTN	Tazewell	22.67	18	P	P	04 26 36.5	+0.1	
	baz=201							
S44A	Carbondale	22.68	5	P	P	04 26 35.7	-0.8	
	baz=186,SNR=23							
T49A	Edmonton	22.69	13	P	P	04 26 35.6	-1.0	
	baz=196,SNR=7.0							
W57A	Gilead	22.69	26	P	P	04 26 36.6	0.0	
	baz=211							
T50A	Nancy	22.77	15	P	P	04 26 36.6	-0.7	
	baz=198,SNR=7.5							
U53A	Fall Branch	22.80	20	P	P	04 26 36.7	-0.9	
	baz=204,SNR=8.3							
V55A	Taylorsville	22.82	23	P	P	04 26 37.9	+0.1	
	baz=207,SNR=6.2							
X59A	McDuffie Farm,	22.83	29	P	P	04 26 37.4	-0.5	
	baz=215							
S46A	Don Dixon Farm	22.86	8	P	P	04 26 37.6	-0.5	
	baz=190							
S47A	Hartford	22.90	10	P	P	04 26 37.9	-0.6	
	baz=192							
W58A	Raeford	22.91	27	P	P	04 26 37.5	-1.1	
	baz=213							
CCM	Cathedral Cave	22.93	1	eP	P	04 26 38.4	-0.4	
	30nm,1.1s							
CCM	Cathedral Cave	22.93	1	P	P	04 26 38.1	-0.7	
	baz=181							
T51A	Gray	22.95	16	P	P	04 26 39.0	0.0	
	baz=200,SNR=6.3							
V56A	Mocksville	23.05	24	P	P	04 26 39.7	-0.3	
	baz=209							
S48A	Wiedeman Farm,	23.11	12	P	P	04 26 40.1	-0.3	
	baz=194							
X60A	Albert Glenn T	23.13	30	P	P	04 26 40.2	-0.4	
	baz=216							
U54A	Nelsons Funny	23.20	21	P	P	04 26 41.4	+0.1	
	baz=205,SNR=9.4							
T52A	Hallie	23.36	18	P	P	04 26 42.6	-0.1	
	baz=202							
R45A	Skylar, Fairfi	23.38	7	P	P	04 26 42.6	-0.3	
	baz=189,SNR=7.3							
T53A	Wise	23.38	19	P	P	04 26 42.8	-0.2	
	baz=203							
S49A	Springfield	23.39	13	P	P	04 26 42.3	-0.7	
	baz=196,SNR=5.9							
R46A	Gibon Southern	23.40	9	P	P	04 26 43.4	+0.3	
	baz=190							
V57A	Coltrane Farms	23.41	25	P	P	04 26 43.3	+0.1	
	baz=210,SNR=9.1							
U55A	TA2, Sparta	23.45	22	P	P	04 26 43.9	+0.3	
	baz=207,SNR=9.8							
S50A	Richmond	23.50	15	P	P	04 26 43.8	-0.2	
	baz=198,SNR=5.8							
U56A	King	23.57	24	P	P	04 26 45.0	+0.4	
	baz=208,SNR=7.6							
V58A	Windy Hill, Pi	23.61	27	P	P	04 26 45.1	+0.1	
	baz=212,SNR=9.1							
WCI	Wyandotte Cave	23.62	11	eP	P	04 26 45.1	0.0	
	24nm,0.8s							
WCI	Wyandotte Cave	23.62	11	P	P	04 26 44.9	-0.2	
	baz=193							
R47A	Wooly Knot Far	23.64	11	P	P	04 26 44.5	-0.8	
	baz=193,SNR=7.1							
W60A	Pink Hill	23.64	30	P	P	04 26 45.1	-0.1	
	baz=216							
S51A	Beattyville	23.68	17	P	P	04 26 45.2	-0.4	
	baz=200,SNR=6.5							
T54A	Tazewell	23.77	21	P	P	04 26 46.1	-0.4	
	baz=205							
R48A	Northridge Ran	23.87	12	P	P	04 26 47.5	+0.2	
	baz=194							
R49A	Shelbyville	23.91	13	P	P	04 26 46.8	-0.9	
	baz=196,SNR=5.7							
V59A	Middlesex	23.98	28	P	P	04 26 47.6	-0.8	
	baz=214							
Q45A	Warren Harvey,	23.99	7	P	P	04 26 48.0	-0.4	
	baz=189,SNR=12							
U57A	Blanch	24.06	25	P	P	04 26 49.0	-0.1	
	baz=211,SNR=14							
R50A	Paris	24.09	15	P	P	04 26 49.1	-0.3	
	baz=198,SNR=7.5							
T55A	Pulaski	24.10	22	P	P	04 26 49.3	-0.1	
	baz=207							
R51A	Hillsboro	24.30	16	P	P	04 26 50.5	-0.7	
	baz=200,SNR=5.9							
T56A	Rocky Mt	24.30	23	P	P	04 26 51.4	+0.1	
	baz=209							
BLA	Blacksburg	24.31	23	P	P	04 26 51.3	-0.1	
	baz=208							
Q48A	North Vernon	24.41	12	P	P	04 26 51.6	-0.6	
	baz=194,SNR=6.8							
S54A	Dingess, Beckl	24.52	20	P	P	04 26 52.8	-0.5	
	baz=205							
T57A	Hurt	24.58	25	P	P	04 26 53.7	-0.1	
	baz=210							
R52A	Catlettsburg	24.60	18	P	P	04 26 53.5	-0.4	
	baz=202							
P43A	Skaggs, Pawnee	24.60	4	P	P	04 26 53.3	-0.6	
	baz=185							
Q49A	Aurora	24.65	13	P	P	04 26 53.9	-0.5	
	baz=196							
P45A	Graceland, Par	24.66	8	P	P	04 26 53.6	-1.0	
	baz=189,SNR=9.5							
U59A	Littleton	24.67	28	P	P	04 26 56.3	+1.8	
	baz=214							
Q50A	Georgetown	24.71	15	P	P	04 26 54.2	-0.8	
	baz=198							
S55A	Lewisburg	24.78	22	P	P	04 26 55.2	-0.4	
	baz=207							
R53A	Hurricane	24.80	19	P	P	04 26 55.1	-0.7	
	baz=203							
SJG	San Juan	24.82	79	P	P	04 26 53.5	-2.6	
	6.2nm,0.2s,baz=12,slow=21,SNR=6.5							
P46A	Rosedale	24.83	9	P	P	04 26 55.8	-0.2	
	baz=191,SNR=14							
T58A	Grand View Acr	24.84	26	P	P	04 26 55.3	-0.8	
	baz=212							
P47A	Martinsville	24.85	10	P	P	04 26 55.7	-0.5	
	baz=193							
P48A	Milroy	24.98	12	P	P	04 26 56.7	-0.7	
	baz=195,SNR=8.0							
Q51A	Peebles	25.05	16	P	P	04 26 57.8	-0.2	
	baz=200,SNR=10							
S56A	Natural Bridge	25.05	24	P	P	04 26 57.7	-0.3	
	baz=209							
U60A	Pendleton	25.05	29	P	P	04 26 57.7	-0.4	
	baz=215							
P49A	Miami Univ. Ec	25.20	13	P	P	04 26 58.5	-0.9	
	baz=196							
O44A	Mansfield	25.20	6	P	P	04 26 58.6	-0.7	
	baz=188							
U61A	Possum Corner	25.28	30	P	P	04 26 58.4	-1.7	
	baz=217							
T59A	Double "B" Far	25.29	28	P	P	04 26 58.9	-1.3	
	baz=214							
Q52A	Bidwell	25.29	18	P	P	04 27 00.1	-0.1	
	baz=202,SNR=6.6							
S57A	Dark Hollow, R	25.36	24	P	P	04 26 59.7	-1.1	
	baz=210							
O45A	Potomac	25.38	7	P	P	04 27 00.2	-0.7	
	baz=189,SNR=17							
Q53A	Leroy	25.42	19	P	P	04 27 00.9	-0.4	
	baz=204							
214A	Organ Pipe Nat	25.47	315	P	P	04 27 01.8	-0.2	
	baz=126							
P50A	Jamestown	25.48	15	P	P	04 27 01.1	-0.8	
	baz=198							
HDIL	Hopedale	25.52	5	P	P	04 27 01.9	-0.4	
	baz=186							
P51A	Williamsport	25.55	16	P	P	04 27 01.8	-0.7	
	baz=200							
SFIN	Lafayette	25.59	8	eP	P	04 27 02.2	-0.7	
	22nm,0.8s							
SFIN	Lafayette	25.59	8	P	P	04 27 01.8	-1.1	
	baz=190,SNR=7.3							
O47A	Sheridan	25.59	10	P	P	04 27 01.7	-1.2	
	baz=193,SNR=6.5							
S58A	Poland Farm, P	25.60	26	P	P	04 27 03.0	0.0	
	baz=212							
Q54A	Coxs Mills	25.75	20	P	P	04 27 03.6	-0.8	
	baz=205							
O48A	Farmland	25.80	12	P	P	04 27 03.8	-1.0	
	baz=195,SNR=5.9							
N44A	Piper City	25.87	6	P	P	04 27 04.1	-1.3	
	baz=188,SNR=6.7							
O49A	Covington	25.91	13	P	P	04 27 05.1	-0.6	
	baz=197							
N43A	Stutzman Famil	25.91	5	P	P	04 27 04.9	-0.9	
	baz=186,SNR=10							
P52A	Corning	25.95	17	P	P	04 27 05.5	-0.6	
	baz=202							
R58B	Mineral	25.97	26	P	P	04 27 05.8	-0.6	
	baz=212							
R57A	Stanardsville	25.99	24	P	P	04 27 06.0	-0.5	
	baz=210							
N45A	Kentland	25.99	8	P	P	04 27 06.0	-0.5	
	baz=189							
Q55A	Buckhannon	26.02	21	P	P	04 27 06.1	-0.7	
	baz=206							
O50A	Cable	26.03	14	P	P	04 27 05.9	-1.0	
	baz=198							
P53A	Whipple	26.03	19	P	P	04 27 06.7	-0.2	
	baz=203							
N46A	Monticello	26.15	9	P	P	04 27 07.2	-0.7	
	baz=191							
M41A	Milan	26.27	2	P	P	04 27 08.3	-0.7	
	baz=183							
ACSO	Alum Creek Sta	26.27	15	P	P	04 27 08.2	-0.9	
	baz=200							
O51A	Pataskala	26.29	16	P	P	04 27 08.4	-0.8	
	baz=200,SNR=6.7							
N47A	Urbana	26.30	11	P	P	04 27 07.7	-1.6	
	baz=193							
Q56A	Snyder Ridge,	26.38	23	P	P	04 27 09.7	-0.4	
	baz=208							
N48A	Decatur	26.41	12	P	P	04 27 08.8	-1.5	
	baz=195,SNR=7.6							
M43A	Waltham Townsh	26.43	5	P	P	04 27 10.2	-0.2	
	baz=186,SNR=5.8							
M44A	Midewin, Midew	26.46	6	P	P	04 27 10.0	-0.8	
	baz=188							
O52A	Adamsville	26.48	17	P	P	04 27 10.3	-0.6	
	baz=202,SNR=5.3							
R59A	King George, V	26.50	27	P	P	04 27 10.8	-0.2	
	baz=213							
M45A	Boilermakers S	26.56	8	P	P	04 27 10.8	-0.8	
	baz=190							
Q57A	Strasburg	26.67	24	P	P	04 27 12.4	-0.3	
	baz=210							
M47A	Cromwell	26.78	10	P	P	04 27 12.3	-1.3	
	baz=193							
O53A	New Philadelph	26.79	18	P	P	04 27 12.5	-1.2	
	baz=203							
P56A	Dayton Farm, R	26.92	23	P	P	04 27 14.9	+0.1	
	baz=209							
L40A	Anamosa	26.94	1	P	P	04 27 15.0	0.0	
	baz=181							
L42A	Oliver, Polo	26.94	4	P	P	04 27 14.8	-0.2	
	baz=184							
O54A	Avella	26.99	20	P	P	04 27 15.0	-0.5	
	baz=205,SNR=5.5							
N51A	Ashland	27.08	16	P	P	04 27 15.2	-1.0	
	baz=200							
N52A	McGinn's Farm,	27.17	17	P	P	04 27 16.3	-0.7	
	baz=202,SNR=5.1							
M49A	Liberty Center	27.22	13	P	P	04 27 17.6	+0.1	
	baz=197							
P57A	Homestead Farm	27.22	24	P	P	04 27 17.8	+0.3	
	baz=210,SNR=6.3							
Q59A	Harwood	27.25	27	P	P	04 27 17.4	-0.4	
	baz=213							
L44A	Lake County Fo	27.26	6	P	P	04 27 18.0	+0.1	
	baz=188							
M50A	Fremont	27.36	15	P	P	04 27 17.9	-0.8	
	baz=199							
O55A	Ligonier	27.37	21	P	P	04 27 18.7	-0.2	
	baz=207							
N53A	Lisbon	27.41	18	P	P	04 27 18.7	-0.5	
	baz=204							
L47A	Sherwood	27.45	11	P	P	04 27 18.5	-1.1	
	baz=194							
M51A	Elyria	27.51	16	P	P	04 27 19.3	-0.9	
	baz=200							
L48A	N Adams	27.57	12	P	P	04 27 19.8	-0.8	
	baz=196							
O56A	Blue Knob Stat	27.69	22	P	P	04 27 21.4	-0.4	
	baz=208							
PLIO	Pelee Island,	27.79	15	P	P	04 27 21.8	-0.8	
	baz=199							
JFWS	Jewell Farm	27.82	3	P	P	04 27 23.5	+0.7	
	baz=183							
N54A	Moraine State	27.82	19	P	P	04 27 22.8	-0.1	
	baz=205							
L49A	Milan	27.87	13	P	P	04 27 23.3	0.0	
	baz=197							
M52A	Chesterland	27.93	17	P	P	04 27 22.9	-1.0	
	baz=202							
P59A	Jarrettsville	27.97	26	P	P	04 27 23.9	-0.3	
	baz=213							
O57A	Amberson	27.99	24	P	P	04 27 23.9	-0.5	
	baz=210							
N55A	Marion Center	27.99	21	P	P	04 27 24.1	-0.3	
	baz=207			

K47A	Vermontville	28.16	11	P		P	04 27 24.5	-1.4
	baz=194							
SSPA	Standing Stone	28.26	23	eP		P	04 27 25.9	-0.8
	8.7nm,0.7s							
SSPA	Standing Stone	28.26	23	P		P	04 27 26.0	-0.8
	baz=209							
N56A	West Decatur	28.36	22	P		P	04 27 27.5	-0.1
	baz=208							
M54A	Oil Creek Stat	28.41	19	P		P	04 27 27.9	-0.3
	baz=205							
K48A	Perry	28.46	12	P		P	04 27 26.8	-1.7
	baz=196							
P60A	Greenville	28.48	27	P		P	04 27 28.1	-0.5
	baz=214							
N57A	Milroy	28.49	23	P		P	04 27 27.5	-1.4
	baz=210							
K49A	Clarkson	28.58	13	P		P	04 27 28.2	-1.3
	baz=197							
M55A	Ridgway	28.68	21	P		P	04 27 29.3	-1.2
	baz=207							
P61A	Hammonton	28.74	28	P		P	04 27 28.7	-2.2
	baz=216							
J47A	Sunmer	28.75	11	P		P	04 27 29.9	-1.2
	baz=194							
K50A	Casco	28.76	14	P		P	04 27 29.9	-1.2
	baz=199							
I42A	Draeger Farm,	28.87	4	P		P	04 27 31.3	-0.8
	baz=186							
LDFC	Landfair	28.89	318	eP		P	04 27 36.5	+3.9
	5.0nm,0.8s							
M56A	Emporium	28.90	22	P		P	04 27 31.2	-1.2
	baz=208							
I41A	Arkdale	28.98	3	P		P	04 27 32.7	-0.3
	baz=184							
GMRC	Granite Mounta	29.07	317	P		P	04 27 35.5	+1.4
	baz=127							
L54A	Sinclairville	29.18	19	P		P	04 27 34.5	-0.5
	baz=205							
J49A	Marlette	29.20	13	P		P	04 27 33.8	-1.2
	baz=197							
K52A	Tillsonburg	29.26	17	P		P	04 27 34.9	-0.7
	baz=202							
I45A	Fountain	29.30	8	P		P	04 27 35.2	-0.7
	baz=191							
I46A	Reed City	29.32	9	P		P	04 27 35.4	-0.7
	baz=193							
N59A	State Game Lan	29.34	25	P		P	04 27 35.7	-0.7
	baz=213							
L55A	Hinsdale	29.43	21	P		P	04 27 36.1	-1.0
	baz=207							
K54A	Basiliko Farm,	29.72	20	P		P	04 27 39.1	-0.6
	baz=206							
J52A	Paris	29.75	17	P		P	04 27 38.9	-1.0
	baz=202,SNR=6.0							
TYNO	Tyneside	29.79	18	P		P	04 27 39.1	-1.2
	baz=204							
H45A	Beulah	29.90	8	P		P	04 27 40.1	-1.1
	baz=191							
H46A	Fife Lake	29.95	10	P		P	04 27 40.7	-0.9
	baz=193							
I51A	Listowel	30.13	16	P		P	04 27 42.1	-1.1
	baz=201,SNR=5.4							
BASO	Ashfield	30.16	15	P		P	04 27 42.5	-1.0
	baz=200							
G39A	Holcombe	30.16	1	P		P	04 27 42.4	-1.1
	baz=181							
BINY	Binghamton	30.33	24	P		P	04 27 44.7	-0.4
	baz=211							
G45A	Suttons Bay	30.36	9	P		P	04 27 44.6	-0.7
	baz=192							
BWLO	Walkerton	30.39	15	P		P	04 27 44.8	-0.7
	baz=201							
BRCO	Bruce Peninsul	30.43	15	P		P	04 27 45.0	-0.9
	baz=200							
H48A	Harrisville	30.44	12	P		P	04 27 44.7	-1.3
	baz=196							
M61A	Granite Spring	30.52	27	P		P	04 27 46.1	-0.7
	baz=216							
I52A	Shelburne	30.60	17	P		P	04 27 46.4	-1.0
	baz=202,SNR=5.1							
BMRO	Meriville Lake	30.82	15	P		P	04 27 48.3	-1.0
	baz=200							
DRWO	Darlington Wes	30.85	19	P		P	04 27 48.1	-1.4
	baz=205							
WLVO	Wesleyville	31.00	19	P		P	04 27 50.3	-0.5
	baz=206							
F45A	CMU Biological	31.02	9	P		P	04 27 50.8	-0.2
	baz=192							
TOBO	Tobermory, Bru	31.34	14	P		P	04 27 52.7	-1.1
	baz=199							
PECO	Prince Edward	31.47	21	P		P	04 27 54.1	-0.9
	baz=208							
I55A	Frankford	31.49	20	P		P	04 27 54.4	-0.8
	baz=207							
E43A	Lone Tree Farm	31.51	6	P		P	04 27 53.9	-1.4
	baz=189							
SADO	Sadowa	31.54	17	P		P	04 27 54.0	-1.7
	7.5nm,0.6s,baz=256,slow=8.7,SNR=8.9							
PDAR	Pinedale Array	31.54	335	P		P	04 27 55.3	-0.7
	0.2nm,0.4s,baz=116,slow=13,SNR=3.9							
PDAR				PcP		PcP	04 30 44.9	0.0
	0.4nm,0.5s,baz=126,slow=4.7,SNR=4.3							
F48A	Evansville	31.66	12	P		P	04 27 54.8	-1.9
	baz=197							
F49A	Sandfield	31.73	13	P		P	04 27 55.6	-1.7
	baz=198							
DELO	Deloro Mine	31.78	20	P		P	04 27 56.8	-0.9
	baz=207							
KLBO	Killbear Provi	31.78	16	P		P	04 27 56.7	-1.0
	baz=202							
E46A	Sault Ste Mari	31.87	10	P		P	04 27 57.8	-0.7
	baz=194							
H55A	Tweed	31.95	20	P		P	04 27 58.1	-1.1
	baz=207							
G53A	Haliburton	32.01	18	P		P	04 27 58.7	-1.1
	baz=204,SNR=6.5							
BUKO	Buck Lake	32.08	17	P		P	04 27 59.6	-0.8
	baz=203,SNR=5.3							
BANO	Bancroft	32.13	19	P		P	04 27 60.0	-0.8
	baz=206							
E47A	Iron Bridge	32.14	11	P		P	04 27 59.9	-0.9
	baz=196							
H56A	Elgin	32.30	21	P		P	04 28 00.9	-1.4
	baz=209							
E48A	Lockeyer	32.38	13	P		P	04 28 02.2	-0.8
	baz=198							
F51A	Arnstein	32.39	16	P		P	04 28 02.5	-0.6
	baz=202							
PLVO	Plevna	32.42	20	P		P	04 28 02.7	-0.6
	baz=207							
D46A	Sault St. Mari	32.42	10	P		P	04 28 02.5	-0.9
	baz=194,SNR=5.5							
F52A	Sundridge	32.43	16	P		P	04 28 02.1	-1.3
	baz=203							
E50A	Wahnapitae	32.65	14	P		P	04 28 03.6	-1.7
	baz=200							
D47A	Chapleau	32.75	11	P		P	04 28 05.0	-1.2
	baz=196							
LONY	Lake Ozonia	32.93	23	P		P	04 28 06.7	-1.0
	baz=212							
PEMO	Pembroke	32.93	19	P		P	04 28 07.0	-0.8
	baz=206							
ALGO	Algonquin Park	32.94	18	P		P	04 28 06.5	-1.3
	baz=205							
NVAR	Mina Array Bea	32.96	320	P		P	04 28 10.7	+2.3
	2.4nm,0.6s,baz=130,slow=8.5,SNR=23							
NVAR				pP		pP	04 28 46.7	+4.3
	4.8nm,0.8s,baz=136,slow=8.8,SNR=14							
NVAR				PcP		PcP	04 30 48.3	-0.5
	0.6nm,0.7s,baz=135,slow=4.0,SNR=3.6							
NVAR				ScP		ScP	04 34 19.2	+1.1
	0.8nm,0.7s,baz=145,slow=2.5,SNR=5.5							
E52A	Mattawa	33.06	17	P		P	04 28 07.8	-1.1
	baz=204							
E51A	G1948 Merrick	33.06	16	P		P	04 28 07.7	-1.2
	baz=202,SNR=6.8							
D48A	Paudash Townsh	33.12	13	P		P	04 28 07.6	-1.8
	baz=198							
D49A	Beulah Townshi	33.31	13	P		P	04 28 09.2	-1.8
	baz=199							
E53A	Dumoine, Ponti	33.43	18	P		P	04 28 10.5	-1.6
	baz=205							
E54A	Lac Daplat, Po	33.63	18	P		P	04 28 12.8	-1.0
	baz=206,SNR=5.6							
D52A	ZEK Kipawa Sen	33.76	17	P		P	04 28 14.0	-0.9
	baz=204,SNR=5.5							
D53A	Lac Vacive, Po	34.06	17	P		P	04 28 16.6	-0.9
	baz=205							
D54A	Lac Fusel, La	34.43	18	P		P	04 28 19.8	-1.0
	baz=206,SNR=6.3							
LATQ	La Tuque	35.94	22	P		P	04 28 32.4	-1.2
	baz=212							
LSQQ	Lebel-sur-Quev	36.06	17	P		P	04 28 33.2	-1.4
	baz=205							
MATQ	Matagami	36.52	16	P		P	04 28 37.3	-1.2
	baz=203,SNR=5.6							
LPAZ	La Paz	38.96	142	P		P	04 29 01.1	+1.1
	4.1nm,0.6s,baz=337,slow=5.3,SNR=19							
LPAZ				PcP		PcP	04 31 08.9	+1.4
	1.0nm,0.5s,baz=23,slow=5.0,SNR=6.0							
LPAZ	La Paz	38.96	142	eP		P	04 29 01.4	+1.4
	4.4nm,0.7s							
MNMC	Minye Minye	40.41	146	eP		P	04 29 14.6	+2.9
	30nm,1.6s							
YKA	Yellowknife Ar	50.06	346	P		P	04 30 26.4	-0.3
	2.8nm,0.6s,baz=146,slow=7.5,SNR=12							
YKA				pP		pP	04 31 03.2	+0.2
	2.4nm,0.7s,baz=142,slow=7.9,SNR=7.8							
BDFB	Brasilia	52.97	123	P		P	04 30 47.7	-1.5
	2.8nm,0.7s,baz=290,slow=8.9,SNR=5.1							
CPUP	Villa Florida	53.09	140	P		P	04 30 49.0	-0.7
	3.3nm,0.8s,baz=158,slow=16,SNR=6.3							
INK	Inuvik	59.49	343	P		P	04 31 34.2	-0.2
	1.0nm,0.6s,baz=126,slow=8.9,SNR=8.0							
INK				pP		pP	04 32 12.1	+0.2
	0.9nm,0.7s,baz=131,slow=11,SNR=3.0							
ILAR	Eielson Array	61.95	337	P		P	04 31 49.9	-1.3
	0.3nm,0.6s,baz=158,slow=4.5,SNR=4.6							
ILAR				pP		PcP	04 32 29.6	-0.6
	0.9nm,0.9s,baz=110,slow=5.3,SNR=6.3							
EKA	Eskdalemuir Ar	77.05	36	P		P	04 33 22.0	-1.9
	3.1nm,0.6s,baz=275,slow=5.2,SNR=11							
ESDC	Sonseca Array	78.97	52	P		P	04 33 32.5	-2.4
	0.3nm,0.4s,baz=292,slow=4.1,SNR=5.4							
NOA	NORSAR Array B	83.17	29	P		P	04 33 55.8	-0.9
	0.4nm,0.6s,baz=289,slow=5.2,SNR=2.8							
MEM	Membach	83.43	39	P		P	04 33 60.0	+1.9
VYHS	Vyhne	91.98	39	eP		P	04 34 40.1	+0.8
HHC	Hu-ho-hao-te	120.30	340	ePKP		PKPdf	04 40 20.5	-0.8
WMQ	Urumqi	121.43	0	ePKP		PKiKP	04 40 28.3	+4.9
KSH	Kashi	124.56	11	ePKP		PKiKP	04 40 30.3	+0.5
NJ2	Nanjing	124.70	328	ePKP		PKiKP	04 40 31.1	+1.0
MAW	Mawson	124.95	168	PKP		PKiKP	04 40 29.5	+0.1
	1.2nm,0.7s,baz=290,slow=5.7,SNR=4.6							
WHN	Wuhan	128.13	331	ePKPbc		PKPdf	04 40 27.5	-8.9
WRA	Warramunga Arr	135.77	257	PKP		PKiKP	04 40 52.2	-0.5
	0.8nm,0.6s,baz=78,slow=2.1,SNR=3.4							
ASAR	Alice Springs	136.13	251	PKP		PKPdf	04 40 51.2	-0.5
	0.4nm,0.6s,baz=94,slow=2.0,SNR=4.3							
CMAR	Chiang Mai Arr	145.06	342	PKP		PKPbc	04 41 07.0	-0.6
	0.8nm,0.3s,baz=341,slow=3.5,SNR=8.2							

*ISCJB **15** 04:27:39.9±1.9, 34°.07N±0°.05×25°.34E±0°.05, h12km±13km, mb3.3/3, Error ellipse: s-maj=8.6km s-min=6.0km az=31.9*
*IDC **15** 04:27:39.1±1.9, 34°.08N×25°.26E, h0km, mb3.4/3, mb1 3.5/7, mb1mx3.4/43, mbtmp3.3/7, ML3.3/4, Error ellipse: s-maj=37.3km s-min=19.3km az=21.0*
*ATH **15** 04:27:40.8, 34°.15N×25°.32E, h13km±6km, ML2.7/4, Error ellipse: s-maj=6.5km s-min=1.5km az=350.0*
*THE **15** 04:27:43.9, 34°.36N×25°.30E, h1km±5km, ML2.9/1, Error ellipse: s-maj=6.4km s-min=1.6km az=161.0*
ISC 15 04:27:39.9±2.4, 34°.12N±0°.09×25°.30E±0°.04, h0km±15km, n22, σ0°81/30, mb3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.99	336	P	Pg	04 27 59.0	+0.2
SIVA				S	Sg	04 28 10.3	-1.3
SIVA	Sivas	0.99	336	P	Pg	04 27 59.1	+0.4
SIVA				S	Sg	04 28 12.2	+0.7
SIVA				AML	AML	04 28 16.5	
	comp=N,1945μm,0.4s						
SIVA				AML	AML	04 28 18.3	
	comp=E,2247μm,0.5s						
LAST	Lasithi	1.05	8	P	Pg	04 27 59.9	-0.1
LAST	Lasithi	1.05	8	P	Pg	04 27 59.9	-0.1
LAST				S	Sg	04 28 14.3	+0.5
LAST				AML	AML	04 28 29.1	
	comp=N,305μm,0.8s						
LAST				AML	AML	04 28 29.6	
	comp=E,493μm,0.9s						
NPS	Neapolis	1.17	13	P	Pg	04 28 02.4	+0.1
NPS				S	Sg	04 28 17.7	+0.1
IDI	Anoyia	1.22	344	Pn	Pg	04 28 03.4	+0.2
	comp=E,4.1nm,0.3s,baz=161,slow=15,SNR=29						
IDI				Sn	Sg	04 28 18.7	-0.2
	comp=E,11nm,0.3s,baz=270,slow=20,SNR=10						
IDI	Anoyia	1.22	344	P	Pg	04 28 02.1	-1.1
IDI	Anoyia	1.22	344	P	Pg	04 28 03.5	+0.3
GVD	Gavdhos	1.23	306	P	Pg	04 28 04.3	+0.8
GVD	Gavdhos	1.23	306	P	Pg	04 28 04.2	+0.8
GVD				S	Sb	04 28 20.7	+0.2
GVD				AML	AML	04 28 27.9	
	comp=N,798μm,0.6s						
GVD				AML	AML	04 28 30.4	
	comp=E,808μm,0.4s						
ZKR	Zakros	1.25	37	P	Pg	04 28 03.8	0.0
ZKR	Zakros	1.25	37	P	Pg	04 28 03.4	-0.4
ZKR				S	Sg	04 28 20.4	+0.4
ZKR				AML	AML	04 28 32.5	
	comp=E,626μm,0.8s						
ZKR				AML	AML	04 28 33.2	
	comp=N,134μm,0.6s						
VAM	Vamos	1.57	325	P	Pn	04 28 09.3	+0.2
VAM	Vamos	1.57	325	P	Pn	04 28 09.7	+0.6
IMMV	Iera Moni Meta	1.73	321	P	Pb	04 28 12.5	0.0
MMAI	Mount Meron Ar	8.50	95	Pn	Pn	04 29 43.9	-0.4
	comp=N,0.6nm,0.3s,baz=277,slow=11,SNR=5.2						
MMAI				Sn	Sn	04 31 23.2	+2.2
	baz=280,slow=26,SNR=2.0						
BRTR	Keskin Array B	8.71	48	Pn	Pn	04 29 48.9	+1.7
	comp=N,0.0nm,0.3s,baz=226,slow=14,SNR=4.0						
EIL	Elat	9.32	116	Pn	Pn	04 29 54.8	-0.8
	comp=N,0.2nm,0.3s,baz=35,slow=18,SNR=4.3						
GERES	GERESS Array B	17.06	333	P	P	04 31 41.1	-0.5
	comp=N,0.1nm,0.3s,baz=140,slow=10,SNR=7.9						
ESDC	Sonseca Array	23.99	292	P	P	04 32 54.6	-1.6
	comp=N,0.5nm,0.6s,baz=86,slow=9.6,SNR=6.2						
MKAR	Makanchi Array	44.26	56	P	P	04 35 50.8	-0.2
	comp=N,0.5nm,0.5s,baz=268,slow=7.3,SNR=5.3						
ILAR	Eielson Array	81.25	357	P	P	04 39 57.4	0.0
	comp=N,0.3nm,0.8s,baz=354,slow=4.7,SNR=4.1						

*IDC **15** 04:33:05.8±1.4, 54°.85N×153°.27E, h615km±18km, mb2.7/8, mb1 2.9/10, mb1mx2.6/42, mbtmp3.8/10, Error ellipse: s-maj=35.0km s-min=17.3km az=3.0*
ISC 15 04:33:05.0±1.3, 54°.8N±0°.2×153°.1E±0°.2, h600km, n11, σ1°12/11, mb3.5/9, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	3.18	120	P	P	04 34 25.9	+0.8
	3.7nm,0.3s,baz=312,slow=4.9,SNR=55						
SEY	Seymchan	8.16	358	P	P	04 35 07.8	+2.3
	0.8nm,0.3s,baz=179,slow=10,SNR=14						
ILAR	Eielson Array	30.59	47	P	P	04 38 30.8	-0.4
	0.2nm,0.6s,baz=279,slow=9.7,SNR=4.6						
ZALV	Zalesovo Beam	38.37	298	P	P	04 39 35.8	-0.1
	0.9nm,0.6s,baz=72,slow=9.3,SNR=2.5						
MKAR	Makanchi Array	43.70	290	P	P	04 40 19.1	+0.9
	0.8nm,0.4s,baz=57,slow=7.3,SNR=12						
ARCES	ARCESS Array B	50.29	339	P	P	04 41 06.4	-0.6
	7.9nm,0.3s,baz=41,slow=7.4,SNR=7.0						
FINES	FINESS Array B	56.81	333	P	P	04 41 52.5	-0.4
	4.5nm,1.0s,baz=27,slow=4.7,SNR=7.5						
NOA	NORSAR Array B	60.63	340	P	P	04 42 18.1	-0.5
	0.3nm,0.4s,baz=28,slow=6.0,SNR=4.2						
HFS	Hagfors	60.94	338	P	P	04 42 19.4	-1.1
	2.2nm,0.8s,baz=20,slow=4.9,SNR=7.1						
EKA	Eskdalemuir Ar	68.52	346	P	P	04 43 07.0	-1.1
	0.2nm,0.3s,baz=24,slow=5.2,SNR=3.4						
TXAR	Lajitas Array	73.62	62	P	P	04 43 38.0	-0.5
	0.2nm,0.5s,baz=309,slow=5.7,SNR=2.9						

*KRSC **15** 04:53:39.0±0.9, 53°.64N×160°.87E, h44km±16km, ML4.3*
*ISCJB **15** 04:53:40.7±0.5, 53°.65N±0°.04×160°.85E±0°.08, h47km±7km, mb3.5/9, MS2.4/1, Error ellipse: s-maj=9.6km s-min=2.9km az=37.7*
*MOS **15** 04:53:40.5±0.6, 53°.63N×160°.87E, h48km, mb4.0/1, Error ellipse: s-maj=9.0km s-min=4.4km az=73.1*
*IDC **15** 04:53:45.0±1.8, 53°.93N×160°.30E, h81km±20km, mb3.3/9, mb1 3.6/9, mb1mx3.3/40, mbtmp3.6/9, MS2.6/2, Ms1 2.6/2, ms1mx2.3/26, Error ellipse: s-maj=36.5km s-min=15.1km az=145.0*
ISC 15 04:53:41.4±0.9, 53°.69N±0°.04×160°.80E±0°.04, h39km±11km, n100, σ1°30/117, mb3.5/9, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.75	219	i P	Pn	04 53 54.8	-0.6
SPN				eS	Sn	04 54 04.7	-0.9
SPN	Mys Shipunski	0.75	219	PN	Pn	04 53 54.8	-0.6
SPN				S	Sn	04 54 04.7	-0.9
NLC	Nalytchevo	1.01	240	i P	Pn	04 53 58.3	-0.7
NLC				eS	Sn	04 54 11.3	-0.7
NLC	Nalytchevo	1.01	240	PN	Pn	04 53 58.3	-0.7
NLC				S	Sn	04 54 11.3	-0.7
MKZ	Mys Kozlova	1.03	32	eP	Pn	04 53 59.0	-0.3
MKZ				eS	Sn	04 54 12.0	-0.4
MKZ	Mys Kozlova	1.03	32	PN	Pn	04 53 59.0	-0.3
MKZ				S	Sn	04 54 12.0	-0.4
SDLR	Sedlovina	1.22	251	eP	Pn	04 54 01.8	-0.1
SDLR	Sedlovina	1.22	251	PN	Pn	04 54 01.8	-0.1
SMAR	Somma	1.27	251	eP	Pn	04 54 02.3	-0.4
SMAR	Somma	1.27	251	PN	Pn	04 54 02.3	-0.4
UGLR	Uglovaya	1.27	249	eP	Pn	04 54 02.7	0.0
UGLR				eS	Sn	04 54 19.1	+0.4
UGLR	Uglovaya	1.27	249	PN	Pn	04 54 02.7	0.0
UGLR				S	Sn	04 54 19.1	+0.4
KRER	Koryakskii	1.28	254	eP	Pn	04 54 02.7	-0.2
KRER	Koryakskii	1.28	254	PN	Pn	04 54 02.7	-0.2
AVH	Avacha	1.30	252	eP	Pn	04 54 03.3	+0.2
AVH	Avacha	1.30	252	PN	Pn	04 54 03.3	+0.2
KRX	Arik	1.32	257	eP	Pn	04 54 03.3	-0.2
KRX	Arik	1.32	257	PN	Pn	04 54 03.3	-0.2
KOK	Koryaka	1.35	254	eP	Pn	04 54 03.4	-0.4
KOK	Koryaka	1.35	254	PN	Pn	04 54 03.4	-0.4
DALK	Dalny	1.39	243	eP	Pn	04 54 03.9	-0.3
DALK				eS	Sn	04 54 20.4	-0.9
DALK	Dalny	1.39	243	PN	Pn	04 54 03.9	-0.3
DALK				S	Sn	04 54 20.4	-0.9
PET	Petropavlovsk	1.45	244	eP	Pn	04 54 04.6	-0.4
PET	Petropavlovsk	1.45	244	↓i PN	Pn	04 54 04.7	-0.3
PET				eS	Sn	04 54 22.3	-0.4
PET				pmax	pmax		
	comp=Z,313nm,0.5s						
PET				smax	smax		
	comp=E,641nm,0.6s						
PET				smax	smax		
	comp=N,624nm,0.5s						
KZV	Kizimen	1.46	349	eP	Pn	04 54 05.5	+0.1
KZV	Kizimen	1.46	349	PN	Pn	04 54 05.5	+0.1
TUMD	Tumrok D	1.54	351	eP	Pn	04 54 06.2	-0.1
TUMD				eS	Sn	04 54 24.4	-0.7
TUMR	Tumrok	1.65	347	eP	Pn	04 54 08.6	+0.7
TUMR	Tumrok	1.65	347	PN	Pn	04 54 06.2	-1.7
TUMR				S	Sn	04 54 24.4	-3.4
GNL	Ganaly	1.70	271	eP	Pn	04 54 08.8	+0.2
GNL	Ganaly	1.70	271	PN	Pn	04 54 08.8	+0.2
KRMR	Karymshinskiy	1.82	243	eP	Pn	04 54 10.3	+0.2
KRMR				eS	Sn	04 54 31.3	-0.6
KRMR	Karymshinskiy	1.82	243	PN	Pn	04 54 10.3	+0.2
KRMR				S	Sn	04 54 31.3	-0.6
RUS	Russkaya	1.86	229	P	Pn	04 54 11.9	+1.2
RUS				eS	Sn	04 54 34.6	+1.6
RUS	Russkaya	1.86	229	PN	Pn	04 54 11.9	+1.2
RUS				S	Sn	04 54 34.6	+1.6
PETK	Petropavlovsk-	1.94	254	P	Pn	04 54 12.5	+0.7
	comp=N,61nm,0.3s,baz=85,slow=20,SNR=467						
PETK				S	Sn	04 54 36.0	+0.9
	comp=N,33nm,0.3s,baz=94,slow=39,SNR=13						
PETK				LR	LR	04 55 07.1	
	comp=N,130nm,21.5s,baz=100,slow=47						
MTVR	Mutnovka	1.98	234	eP	Pn	04 54 12.4	-0.1
MTVR				eS	Sn	04 54 35.5	-0.7
MTVR	Mutnovka	1.98	234	PN	Pn	04 54 12.4	-0.1
MTVR				S	Sn	04 54 35.5	-0.7
GRL	Gorelyy	2.00	236	eP	Pn	04 54 13.5	+0.8
GRL	Gorelyy	2.00	236	PN	Pn	04 54 13.5	+0.8
ASAK	Asacha	2.18	234	eP	Pn	04 54 15.6	+0.4
ASAK	Asacha	2.18	234	PN	Pn	04 54 15.6	+0.4
BZGR	Bezymyannyi-Gr	2.26	359	eP	Pn	04 54 16.8	+0.5
BZGR	Bezymyannyi-Gr	2.26	359	PN	Pn	04 54 16.8	+0.5
BZWR	Bezymyannyi-We	2.29	356	eP	Pn	04 54 19.5	+2.8
BZWR	Bezymyannyi-We	2.29	356	PN	Pn	04 54 19.5	+2.8
KPT	Kopyto	2.31	352	eP	Pn	04 54 19.7	+2.8
KPT	Kopyto	2.31	352	PN	Pn	04 54 19.7	+2.8
APC	Apacha	2.31	252	eP	Pn	04 54 18.2	+1.3
APC	Apacha	2.31	252	PN	Pn	04 54 18.2	+1.3
LGNR	Loginova	2.40	359	eP	Pn	04 54 20.7	+2.3
LGNR	Loginova	2.40	359	PN	Pn	04 54 20.7	+2.3
CIRR	Tsirk	2.44	359	eP	Pn	04 54 18.9	+0.2
CIRR	Tsirk	2.44	359	PN	Pn	04 54 18.9	+0.2
KOZ	Kozyrevsk	2.44	348	eP	Pn	04 54 20.0	+1.4
KOZ	Kozyrevsk	2.44	348	PN	Pn	04 54 20.0	+1.4
KDTR	Khodutka, Kamc	2.50	222	eP	Pn	04 54 19.9	+0.4
KDTR				eS	Sn	04 54 49.8	+1.1
KDTR	Khodutka, Kamc	2.50	222	PN	Pn	04 54 19.9	+0.4
KDTR				S	Sn	04 54 49.8	+1.1
KRSR	Krestovskiy	2.54	357	eP	Pn	04 54 22.1	+2.0
KRSR	Krestovskiy	2.54	357	PN	Pn	04 54 22.1	+2.0
ESO	Esso	2.55	332	eP	Pn	04 54 21.0	+0.8
ESO	Esso	2.55	332	PN	Pn	04 54 21.0	+0.8
SRDR	Sredinnyy	2.71	347	eP	Pn	04 54 23.0	+0.6
SRDR	Sredinnyy	2.71	347	PN	Pn	04 54 23.0	+0.6
KBTR	Krutoberegovo	2.78	24	eP	Pn	04 54 24.4	+1.1
KBTR	Krutoberegovo	2.78	24	PN	Pn	04 54 24.4	+1.1
KBG	Krutoberegovo	2.80	22	eP	Pn	04 54 24.4	+0.9
KBG				eS	Sn	04 54 58.7	+2.7
KBG	Krutoberegovo	2.80	22

PDAR	Pinedale Array	56.87	62	P		P		05 03 22.6	+0.5
	comp=E,0.3nm,0.6s,baz=242,slow=3.2,SNR=4.5								
TXAR	Lajitas Array	70.02	68	P		P		05 04 49.3	+0.3
	comp=E,0.5nm,0.5s,baz=297,slow=4.7,SNR=8.8								
ASAR	Alice Springs	80.47	205	P		P		05 05 48.5	-0.3
	comp=E,0.4nm,0.7s,baz=15,slow=4.8,SNR=3.0								
MAW	Mawson	140.71	217	PKP		PKPdf		05 13 02.8	-2.2
	comp=E,0.9nm,0.6s,baz=302,slow=9.1,SNR=3.9								

IDC 15 04:55:34.4±27.0, 13°78S×166°37E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.7/33, mbtmp3.9/4, ML3.1/1, Error ellipse: s-maj=473.2km s-min=49.0km az=54.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.24	180	Pn	Pn	04 57 35.7	+0.3
	0.2nm,0.3s,baz=53,slow=19,SNR=4.6						
DZM				Sn	Sn	04 59 00.8	-8.5
	0.2nm,0.3s,baz=342,slow=20,SNR=2.5						
STKA	Stephens Creek	28.96	227	P	P	05 01 35.2	-0.5
	1.6nm,0.4s,baz=53,slow=9.1,SNR=7.0						
WRA	Warramunga Arr	31.23	254	P	P	05 01 56.0	+0.1
	1.0nm,0.7s,baz=85,slow=8.7,SNR=4.0						
ASAR	Alice Springs	32.21	247	P	P	05 02 04.8	+0.2
	0.4nm,0.3s,baz=79,slow=9.3,SNR=9.1						

TEH 15 05:04:36.8, 34°19N×48°25E, h4km, ML3.6, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSAM	Samen	0.29	86	ePg	Pg	05 04 43.5	+0.9
IDOB	Doab	0.41	189	ePg	Pb	05 04 46.2	-0.4
IBZA	Bozab	0.43	311	ePg	Pb	05 04 46.7	-0.3
IBZA				eSg	Sb	05 04 53.6	-0.3
IKOM	Komasi	0.61	269	ePg	Pb	05 04 50.1	-0.1
IKOM				IAMB	IAmb	05 05 08.8	
	comp=Z,0.0nm,0.5s						
IKMR	Kamar-syah	0.68	171	ePg	Pb	05 04 50.7	-0.5
IKMR				IAMB	IAmb	05 05 03.6	
	comp=Z,0.0nm,0.4s						
IKFM	Kafar-mosalman	0.74	207	ePg	Pb	05 04 52.4	+0.1
KCHF	Cheshme Sefid,	1.01	275	ePg	Pn	05 04 57.4	-0.4
SNGE	Sanandaj	1.17	321	ePn	Pb	05 04 59.7	0.0
IVIS	Veis	1.21	287	ePg	Pn	05 05 00.9	+0.4
IVIS				IAMB	IAmb	05 05 19.6	
	comp=Z,6μm,0.2s						
ILIN	Lien	1.29	305	ePn	Pn	05 05 02.2	+0.4
ILIN				IAMB	IAmb	05 05 31.5	
	comp=Z,7μm,0.6s						
IGHG	Ghaleghazi	1.40	276	IAMB	IAmb	05 05 07.8	
	comp=Z,14μm,0.2s						
IGHG				ePg	Pg	05 05 05.3	+1.6
ASAO	Ashtian	1.51	76	ePn	Pn	05 05 04.8	0.0
IDHR	Dehrash	1.62	289	IAMB	IAmb	05 05 09.8	
	comp=Z,0.0nm,0.6s						
IDHR				ePg	Pg	05 05 07.8	-0.1
IRAZ	Razeghan	1.84	48	IAMB	IAmb	05 05 40.5	
	comp=Z,12μm,0.6s						
QABG	Abgarm-Qazvin	1.87	35	ePn	Pb	05 05 11.6	0.0
SHGR	Shooshtar-Gavs	2.13	167	ePn	Pb	05 05 16.2	+0.3
IMHD	Mahdasht	2.48	52	ePn	Pb	05 05 21.5	-0.5
IMHD				IAMB	IAmb	05 06 00.2	
	comp=Z,3μm,0.8s						
IPIR	Pirpir	2.67	123	ePn	Pb	05 05 24.1	-1.2
IGZV	Ghazvin	2.72	36	ePn	Pn	05 05 23.3	+1.9
JHBN	Jahan bin	2.81	133	ePn	Pb	05 05 25.8	-2.0
IKLH	Kolahrood	2.91	106	ePn	Pb	05 05 28.0	-1.3
CHTH	Charan	2.92	53	ePn	Pn	05 05 24.2	0.0
ROKH	ROKH	2.97	127	ePn	Pn	05 05 27.5	+2.6
IVRN	Varamin	2.98	73	ePn	Pb	05 05 28.9	-1.5
KRSH	Karshahi	3.23	93	ePn	Pb	05 05 31.8	-3.0
ISFB	Sefidab	3.31	86	ePn	Pn	05 05 32.6	+3.2
IDMV	Damavand	3.40	65	ePn	Pn	05 05 33.8	+2.9
IDMV				IAMB	IAmb	05 06 19.2	
	comp=Z,1μm,0.4s						
IGAR	Gharneh	3.64	118	ePn	Pn	05 05 36.7	+2.6
IZEF	Zefreh	3.64	110	ePn	Pn	05 05 36.9	+2.7
IZEF				IAMB	IAmb	05 06 43.7	
	comp=Z,906nm,0.7s						
IPRN	Peran	3.92	57	ePn	Pb	05 05 42.8	-3.8
NASN	Na'in	4.05	109	ePn	Pn	05 05 42.2	+2.3
IRAM	Ramesheh	4.21	123	ePn	Pn	05 05 44.8	+2.9
ISHM	Shahmirzad	4.44	67	ePn	Pn	05 05 49.1	+3.9
IKIA	Kiasar	4.88	64	ePn	Pn	05 05 54.6	+3.4
TKDS	Koohdasht(Taba	7.40	92	ePn	Pn	05 06 29.6	+4.0

*NEIC **15** 05:12:31.6±1.4, 6°07S×148°55E, h32km±7km, mb4.2/6, Error ellipse: s-maj=28.3km s-min=14.2km az=123.0*
*ISCJB **15** 05:12:32.8±0.6, 6°34S±0°10×148°8E±0°1, h65km, mb4.0/7, Error ellipse: s-maj=23.0km s-min=7.8km az=32.7*
*IDC **15** 05:12:35.6±4.0, 6°48S×148°89E, h74km±36km, mb3.5/4, mb1 3.8/6, mb1mx3.4/31, mbtmp3.9/6, ML4.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/26, Error ellipse: s-maj=82.8km s-min=25.5km az=115.0*

ISC 15 05:12:34.1±0.7, 6°2S±0°1×148°7E±0°1, h65km, n21, σ1°50/22, mb4.0/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.50	206	P	Pn	05 13 25.5	-0.6
	4.7nm,0.3s,baz=22,slow=8.1,SNR=27						
PMG				S	Sn	05 14 05.4	-0.8
	11nm,0.3s,baz=30,slow=5.8,SNR=10						
PMG	Port Moresby	3.50	206	ePn	Pn	05 13 25.4	-0.6
PMG				eSn	Sn	05 14 07.7	+1.4
RABL	Rabaul	4.01	60	ePn	Pn	05 13 31.5	-1.7
CTAO	Charters Tower	13.97	190	ePn	Pn	05 15 48.4	-0.7
WC3	Warramunga Arr	19.48	224	eP	P	05 16 56.2	+0.3
	13nm,1.1s						
WB2	Warramunga Arr	19.49	224	eP	P	05 16 56.6	+0.7
	7.6nm,1.2s						
WR1	Warramunga Arr	19.49	224	eP	P	05 16 56.0	0.0
WRA	Warramunga Arr	19.49	224	P	P	05 16 56.0	-0.1
	0.6nm,0.3s,baz=59,slow=12,SNR=27						
AS31	Alice Springs	22.42	218	eP	P	05 17 27.8	+0.1
ASAR	Alice Springs	22.42	218	P	P	05 17 27.8	+0.1
	2.6nm,0.8s,baz=47,slow=10.0,SNR=22						
FITZ	Fitzroy Crossi	25.39	240	LR	LR	05 29 34.9	
	comp=Z,54nm,18.3s,baz=64,slow=40						
FITZ	Fitzroy Crossi	25.39	240	eP	P	05 17 56.2	+0.7
	6.9nm,0.8s						
STKA	Stephens Creek	26.36	194	P	P	05 18 04.0	-0.2
	1.1nm,0.6s,baz=342,slow=4.5,SNR=3.2						
KULM	Kulim	49.30	282	eP	P	05 21 13.5	-3.5
	44nm,0.9s						
PETK	Petropavlovsk-	59.61	6	P	P	05 22 34.3	+3.2
	1.0nm,0.5s,baz=175,slow=5.3,SNR=5.6						
PEA1	Petropavlovsk-	59.61	6	eP	P	05 22 34.3	+3.2
VNDA	Vanda	71.59	177	eP	P	05 23 48.9	+1.0
	2.7nm,1.2s						
ILAR	Eielson Array	85.04	23	P	P	05 25 01.9	-0.4
	0.5nm,0.9s,baz=255,slow=5.0,SNR=4.3						
TOA0	Torodi Ar. Sit	146.78	284	ePKPdf	PKPdf	05 32 09.2	+1.1
TORD	Torodi Ar. Bea	146.78	284	PKPbc	PKPbc	05 32 09.9	0.0
	0.7nm,0.5s,baz=50,slow=3.9,SNR=13						
TOA1	Torodi Ar. Sit	146.78	284	ePKPdf	PKPbc	05 32 09.9	0.0

*ISCJB **15** 05:37:07.9±0.6, 18°90S±0°03×69°47W±0°08, h130km±4km, mb3.4/1, Error ellipse: s-maj=12.1km s-min=5.6km az=3.8*
*SJA **15** 05:37:08.9±0.5, 18°90S×69°42W, h114km±2km, ML2.9, MW3.3*
*GUC **15** 05:37:09.0±0.6, 18°89S×69°37W, h118km±2km, ML3.8*
*IDC **15** 05:37:10.0±1.5, 18°97S×69°12W, h128km±10km, mb3.7/3, mb1 3.6/6, mb1mx3.3/33, mbtmp4.0/6, Error ellipse: s-maj=35.2km s-min=8.9km az=99.0*

ISC 15 05:37:08.6±0.9, 18°89S±0°04×69°37W±0°07, h115km±8km, n29, σ1°50/44, 7C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNMC	Minye Minye	0.32	222	⇑iP	Pn	05 37 25.8	+0.5
MNMC				i S	Sn	05 37 38.4	+0.5
MNMC				IAML		05 37 39.8	
	comp=E,10μm,0.3s						
MNMCX	Minye Minye	0.32	222	eP	Pn	05 37 26.0	+0.7
MNMCX				eS	Sn	05 37 38.5	+0.6
PB16	IPOC Station P	0.57	347	eP	Pn	05 37 28.2	+1.1
PB16				eS	Sn	05 37 42.2	+1.2
PB16	IPOC Station P	0.57	347	⇓iP	Pn	05 37 28.0	+0.9
PB16				i S	Sn	05 37 42.0	+1.0
PB16				IAML		05 37 44.1	
	comp=N,3μm,0.3s						
GO01	Chusmiza	0.79	168	⇓iP	Pn	05 37 29.8	+1.0
GO01				i S	Sn	05 37 45.4	+1.4
GO01				IAML		05 37 46.8	
	comp=E,6μm,0.1s						
PB11	IPOC Station P	0.91	197	eP	Pn	05 37 30.1	+0.7
PB11				eS	Sn	05 37 46.0	+0.8
PB11	IPOC Station P	0.91	197	⇑iP	Pn	05 37 30.1	+0.7
PB11				i S	Sn	05 37 45.7	+0.5
PB11				IAML		05 37 46.8	
	comp=E,5μm,0.2s						
PB12	IPOC Station P	0.95	287	eP	Pn	05 37 29.9	+0.2
PB12				eS	Sn	05 37 46.4	+0.7
PB12	IPOC Station P	0.95	287	⇑iP	Pn	05 37 29.9	+0.2
PB12				i S	Sn	05 37 45.9	+0.2
PB12				IAML		05 37 49.1	
	comp=E,2μm,0.3s						
PSGC	Pisagua	1.00	225	⇑iP	Pn	05 37 30.6	+0.3
PSGC				i S	Sn	05 37 46.7	+0.1
PSGC				IAML		05 37 47.5	
	comp=E,2μm,0.2s						
PB08	IPOC Station P	1.26	171	eP	Pn	05 37 34.7	+1.4
PB08	IPOC Station P	1.26	171	⇓iP	Pn	05 37 34.6	+1.2
PB08				i S	Sn	05 37 53.5	+1.4
PB08				IAML		05 37 56.5	
	comp=E,1μm,0.2s						
PB01	IPOC Station P	2.14	183	⇑iP	Pn	05 37 44.3	+0.7
PB01				eS	Sn	05 38 10.9	+0.3
PB01				IAML		05 38 18.8	
	comp=N,400nm,0.1s						
PB02	IPOC Station P	2.46	191	eP	Pn	05 37 49.2	+1.4
PB02	IPOC Station P	2.46	191	eP	Pn	05 37 48.4	+0.6
PB02				IAML		05 38 25.4	
	comp=E,656nm,0.3s						
LPAZ	La Paz	2.85	25	P	Pn	05 37 55.9	+2.5
	comp=E,2.0nm,0.3s,baz=172,slow=6.6,SNR=64						
LPAZ				S	Sn	05 38 29.9	+2.3
	comp=E,2.0nm,0.3s,baz=241,slow=17,SNR=4.9						
LPAZ	La Paz	2.85	25	eP	Pn	05 37 55.4	+2.1
LPAZ	La Paz	2.85	25	⇓iP	Pn	05 37 55.2	+1.9
PB07	IPOC Station P	2.86	190	eP	Pn	05 37 53.9	+0.8
PB04	IPOC Station P	3.50	192	⇑iP	Pn	05 38 02.2	+0.7
LVC	Limon Verde	3.72	173	P	Pn	05 38 06.5	+1.9
	comp=E,2.7nm,0.3s,baz=349,slow=10,SNR=16						
LVC				S	Sn	05 38 47.5	-0.5
	comp=E,9.6nm,0.3s,baz=92,slow=7.3,SNR=10						
LVC	Limon Verde	3.72	173	eP	Pn	05 38 06.2	+1.5
LVC				IAML		05 38 49.8	
	comp=Z,17nm,0.3s						
PB15	IPOC Station P	4.29	181	⇑iP	Pn	05 38 12.7	+0.6
YJA	Yavi	4.87	133	eP	Pn	05 38 22.5	+2.4
YJA				IAML		05 38 28.6	
	comp=Z,7.1nm,0.8s						
SIV	San Ignacio	8.43	71	P	Pn	05 39 06.2	-1.7
	comp=Z,2.1nm,0.3s,baz=269,slow=9.6,SNR=46						
SIV				S	Sn	05 40 36.1	-5.4
	baz=274,slow=15,SNR=3.0						
PTGA	Pitinga	20.27	28	P	P	05 41 33.9	-1.3
	comp=Z,4.1nm,0.3s,baz=214,slow=19,SNR=8.8						
BDFB	Brasilia	20.65	84	P	P	05 41 39.0	-0.3
	comp=Z,5.0nm,0.4s,baz=253,slow=9.3,SNR=19						
TORD	Torodi Ar. Bea	76.91	71	P	P	05 48 46.8	-1.9
	comp=Z,0.4nm,0.4s,baz=253,slow=5.3,SNR=7.9						
SONM	Songino Array	150.93	6	PKPbc	PKPbc	05 56 48.4	+0.5
	comp=Z,0.4nm,0.5s,baz=325,slow=1.8,SNR=2.9						

GCG 15 05:57:35.4±0.7, 13°83N×92°04W, h20km±41km, MD3.7, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG3	Santiaguito 3,	0.99	27	eP	Pb	05 57 53.8	-0.3
FUG	Fuego 3	1.32	62	eP	Pb	05 57 59.5	-0.1
PCG	Pacaya	1.50	68	eS	Sb	05 58 22.6	+1.1
IXG	Ixpaco	1.59	77	eP	Pn	05 58 02.7	+0.1
IXG				eS	Sn	05 58 23.0	+0.3

KRSC 15 06:02:19.5±0.8, 52°40N×159°26E, h93km±8km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	0.46	275	eP	Pn	06 02 35.6	+1.4
RUS				eS	Sn	06 02 46.2	+1.0
MTVR	Mutnovka	0.66	278	i P	Pn	06 02 37.6	+1.5
MTVR				eS	Sn	06 02 49.7	+1.2
DALK	Dalny	0.70	334	eP	Pn	06 02 37.7	+1.4
DALK				eS	Sn	06 02 49.3	+0.4
PET	Petropavlovsk	0.73	330	i P	Pn	06 02 38.4	+1.9
NLC	Nalytchevo	0.78	4	eP	Pn	06 02 38.5	+1.5
NLC				eS	Sn	06 02 51.3	+1.2
KRMR	Karymshinskiy	0.81	303	eP	Pn	06 02 38.4	+1.0
KRMR				eS	Sn	06 02 51.4	+0.6
ASAK	Asacha	0.83	270	eP	Pn	06 02 39.4	+1.7
ASAK				eS	Sn	06 02 52.8	+1.5
SPN	Mys Shipunski	0.84	33	i P	Pn	06 02 39.4	+1.7
SPN				eS	Sn	06 02 52.6	+1.3
UGLR	Uglovaya	0.85	342	eP	Pn	06 02 39.8	+1.8
UGLR				eS	Sn	06 02 53.4	+1.6
SDLR	Sedlovina	0.91	346	eP	Pn	06 02 40.1	+1.5
SDLR				eS	Sn	06 02 53.7	+0.9
SMAR	Somma	0.91	342	eP	Pn	06 02 40.1	+1.4
AVH	Avacha	0.93	340	eP	Pn	06 02 40.5	+1.8
AVH				eS	Sn	06 02 54.4	+1.4
KDTR	Khodutka, Kamc	0.94	232	eP	Pn	06 02 40.1	+1.4
KDTR				eS	Sn	06 02 53.8	+0.7
KRER	Koryakskii	0.96	341	eP	Pn	06 02 41.0	+1.8
KOK	Koryaka	0.97	337	eP	Pn	06 02 41.0	+1.8
KRX	Arik	1.03	339	eP	Pn	06 02 41.4	+1.5
APC	Apacha	1.39	293	eP	Pn	06 02 45.8	+1.9
APC				eS	Sn	06 03 03.7	+1.3
GNL	Ganaly	1.52	329	eP	Pn	06 02 46.7	+0.9
GNL				eS	Sn	06 03 06.3	+0.6
PAU	Pauzhetka	1.78	239	eP	Pn	06 02 51.1	+2.2
PAU				eS	Sn	06 03 12.8	+1.5
SKR	Severo-Kuril's	2.61	230	eP	Pn	06 03 01.4	+1.6
SKR				eS	Sn	06 03 31.6	+0.9
MKZ	Mys Kozlova	2.62	33	eP	Pn	06 03 01.3	+1.4
MKZ				eS	Sn	06 03 30.9	-0.1
ALID	Alaid	2.77	238	eP	Pn	06 03 04.1	+1.9
ALID				eS	Sn	06 03 36.8	+1.9
KZV	Kizimen	2.79	12	eP	Pn	06 03 05.6	+3.2
KZV				eS	Sn	06 03 36.9	+1.6
TUMD	Tumrok D	2.89	13	eP	Pn	06 03 06.5	+2.9
TUMD				eS	Sn	06 03 39.3	+1.7
TUMR	Tumrok	2.94	10	eP	Pn	06 03 07.4	+3.1
KBTR	Krutoberegovo	4.35	27	eP	Pn	06 03 25.4	+2.2
BKI	Bering	4.87	52	eP	Pn	06 03 32.1	+1.8

IDC 15 06:32:38.6±1.5, 2°54S×101°39E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/34, mbtmp3.7/5, Error ellipse: s-maj=74.0km s-min=21.5km az=48.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	36.52	121	P	P	06 39 45.0	-1.2
	0.3nm,0.2s						
ASAR	Alice Springs	37.81	127	P	P	06 39 58.1	+0.9
	0.2nm,0.4s,baz=300,slow=7.2,SNR=7.8						
SONM	Songino Array	50.36	4	P	P	06 41 37.4	-0.1
	0.8nm,0.6s,baz=191,slow=5.4,SNR=4.3						
MKAR	Makanchi Array	51.93	343	P	P	06 41 49.5	+0.2
	0.5nm,0.6s,baz=158,slow=8.5,SNR=6.8						
BRTR	Keskin Array B	74.71	312	P	P	06 44 20.6	-0.1
	0.4nm,0.5s,baz=119,slow=7.2,SNR=2.7						

*IDC **15** 07:12:22.2±1.1, 6°73S×148°64E, h0km, mb4.0/6, mb1 4.2/8, mb1mx3.9/36, mbtmp4.0/8, ML4.0/1, MS3.8/21, Ms1 3.8/21, ms1mx3.7/42, Error ellipse: s-maj=41.5km s-min=18.7km az=110.0*
*ISCJB **15** 07:12:27.4±0.5, 6°74S±0°06×148°51E±0°08, h46km, mb4.0/8, MS3.8/19, Error ellipse: s-maj=13.4km s-min=6.2km az=35.0*
*NEIC **15** 07:12:30.6±1.8, 6°73S×148°52E, h64km±6km, mb4.2/7, Error ellipse: s-maj=16.1km s-min=9.5km az=62.0*

ISC 15 07:12:29.3±0.6, 6°68S±0°08×148°4E±0°1, h46km, n45, σ2°06/33, mb4.0/8, MS3.8/19, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.98	205	Pn	Pn	07 13 12.9	-1.2
	12nm,0.3s,baz=349,slow=4.8,SNR=22						
PMG				Sn	Sn	07 13 52.4	+3.7
	75nm,0.3s,baz=174,slow=23,SNR=11						
PMG				LR	LR	07 14 37.6	
	comp=Z,3μm,19.4s,baz=216,slow=44						
PMG	Port Moresby	2.98	205	ePn	Pn	07 13 14.4	+0.2
PMG				eSn	Sn	07 13 54.7	+6.0
RABL	Rabaul	4.46	56	ePn	Pn	07 13 34.9	+0.4
COEN	Coen	8.89	215	ePn	Pn	07 14 36.3	+1.1
COEN				eSn	Sn	07 16 16.0	+2.0
HNR	Honiara	11.72	104	LR	LR	07 18 43.3	
	comp=Z,337nm,20.6s,baz=276,slow=33						
FAKI	Fak Fak	16.56	282	ePn	Pn	07 16 17.9	-0.4
	28nm,1.2s						
EIDS	Eidsvold	18.75	173	eP	Pn	07 16 44.5	-0.8
	7.7nm,0.8s						
WB2	Warramunga Arr	18.99	225	eP	P	07 16 47.2	0.0
	6.9nm,0.6s						
WR1	Warramunga Arr	19.00	225	eP	P	07 16 47.0	-0.3
WR1				eS	Sn	07 20 16.2	-4.1
WRA	Warramunga Arr	19.00	225	P	P	07 16 47.0	-0.3
	0.5nm,0.3s,baz=40,slow=9.3,SNR=24						
WRA				S	Sn	07 20 16.2	-4.2
	0.1nm,0.3s,baz=45,slow=17,SNR=3.0						
GUMO	Guam	20.45	350	LR	LR	07 25 20.6	
	comp=Z,256nm,18.8s,baz=163,slow=38						
AS31	Alice Springs	21.91	218	eP	P	07 17 18.1	-0.7
ASAR	Alice Springs	21.91	218	P	P	07 17 18.1	-0.7
	6.1nm,0.6s,baz=53,slow=9.3,SNR=68						
ASAR				LR	LR	07 25 55.4	
	comp=Z,272nm,20.3s,baz=52,slow=37						
ARMA	Armidale	23.80	173	eP	P	07 17 35.7	-2.3
	14nm,1.2s						
FITZ	Fitzroy Crossi	24.95	241	P	P	07 17 48.6	0.0
	17nm,0.8s,baz=55,slow=8.4,SNR=21						
FITZ	Fitzroy Crossi	24.95	241	eP	P	07 17 48.7	+0.2
STKA	Stephens Creek	25.87	193	P	P	07 17 55.8	-0.9
	4.3nm,0.8s,baz=16,slow=12,SNR=4.1						
STKA				LR	LR	07 29 19.5	
	comp=Z,411nm,18.1s,baz=7.2,slow=39						
STKA	Stephens Creek	25.87	193	eP	P	07 17 56.1	-0.6
	1.6nm,0.8s						
MORW	Morawa	37.80	230	eP	P	07 19 44.2	+2.8
	15nm,1.3s						
NWAO	Narrogin (SRO)	39.00	224	LR	LR	07 36 59.8	
	comp=Z,298nm,18.0s,baz=58,slow=38						
LEM	Lembang	40.53	267	LR	LR	07 41 02.7	
	comp=Z,129nm,18.0s,baz=62,slow=42						
JNU	Nakatsue	42.96	338	LR	LR	07 34 21.6	
	comp=Z,85nm,21.9s,baz=168,slow=31						
MJAR	Matsushiro Arr	44.05	348	LR	LR	07 38 42.5	
	comp=Z,103nm,18.4s,baz=130,slow=36						
KSRS	Korea Array	47.91	338	P	P	07 21 05.1	+2.1
	0.5nm,0.5s,baz=149,slow=7.3,SNR=4.0						
KSRS				LR	LR	07 40 42.9	
	comp=Z,124nm,18.6s,baz=142,slow=35						
CMAR	Chiang Mai Arr	54.83	298	LR	LR	07 44 04.1	
	comp=Z,67nm,21.8s,baz=125,slow=35						
PETK	Petropavlovsk-	60.08	6	LR	LR	07 45 00.3	
	comp=Z,68nm,21.2s,baz=180,slow=33						
BRDH	Bariadhala	62.73	300	LR	LR	07 52 28.7	
	comp=Z,52nm,18.0s,baz=168,slow=38						
SONM	Songino Array	65.70	330	LR	LR	07 53 15.8	
	comp=Z,123nm,18.4s,baz=82,slow=37						
MA2	Magadan	66.07	1	LR	LR	07 48 31.9	
	comp=Z,38nm,21.8s,baz=111,slow=33						
VNDA	Vanda	71.15	177	LR	LR	07 52 35.9	
	comp=Z,91nm,18.7s,baz=354,slow=34						
MK32	Makanchi Array	78.93	320	eP	P	07 24 28.1	0.0
MKAR	Makanchi Array	78.93	320	P	P	07 24 28.1	0.0
	0.2nm,0.6s,baz=102,slow=7.0,SNR=2.6						
ZALV	Zalesovo Beam	80.35	328	LR	LR	07 59 25.2	
	comp=Z,89nm,21.9s,baz=68,slow=35						
RSO	Redoubt South	81.11	25	eP	P	07 24 39.4	-0.4
ILAR	Eielson Array	85.55	23	P	P	07 25 01.8	-0.4
	0.3nm,0.5s,baz=241,slow=5.1,SNR=3.1						
NRIK	Noril'sk	86.36	342	LR	LR	08 04 29.7	
	comp=Z,31nm,19.0s,baz=143,slow=36						
GEYT	Alibeck	94.31	308	LR	LR	08 11 45.3	
	comp=Z,20nm,21.1s,baz=175,slow=38						
AKTO	Aktyubinsk	95.37	320	LR	LR	08 10 14.4	
	comp=Z,29nm,20.9s,baz=77,slow=36						
NVAR	Mina Array Bea	96.66	52	LR	LR	08 05 22.0	
	comp=Z,70nm,18.7s,baz=248,slow=33						
GERES	GERESS Array B	123.27	326	PKP	PKPdf	07 31 19.8	-1.6
	0.4nm,0.6s,baz=48,slow=4.0,SNR=4.1						
GGN	Saint George	130.98	33	ePKPdf	PKPdf	07 31 32.6	-3.4
TORD	Torodi Ar. Bea	146.64	284	PKPbc	PKPbc	07 32 06.8	-0.2
	2.2nm,0.7s,baz=61,slow=2.9,SNR=12						
TOA1	Torodi Ar. Sit	146.64	284	ePKPbc	PKPbc	07 32 06.8	-0.2
SMRT	St. Maarten	147.28	67	ePKPbc	PKPbc	07 32 08.3	-0.5
BDFB	Brasilia	152.48	144	PKPbc	PKiKP	07 32 21.7	-0.2
	3.7nm,1.0s,baz=5.8,slow=1.4,SNR=5.3						

*NEIC **15** 07:23:53.2±0.0, 20°99N×105°24W, h13km, MD4.2(MEX), After MEX.*
NEIC Felt [IV] at Bucerias and Puerto Vallarta. Also felt at Valle de Banderas.

MEX 15 07:23:52.9±0.6, 21°01N×105°29W, h16km±15km, MD4.2, Near coast of central Mexico

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

JSK				eS	Sn	07 33 39.8	-0.1
JNBK	Urakawa-nobuka	1.46	78	P	Pn	07 33 20.5	-0.3
JANG	Nango	1.71	162	P	Pn	07 33 23.3	-0.4
JANG				eS	Sn	07 33 46.1	-0.6
ERM	Erimo	1.74	89	ePn	Pn	07 33 24.2	+0.2
ERM				eSn	Sn	07 33 46.5	-0.8
JCH	Churui	1.98	71	P	Pn	07 33 26.7	-0.2
JCH				eS	Sn	07 33 51.2	-1.4
MAJO	Matsushiro	5.81	201	ePn	Pn	07 34 15.7	-1.8
WAKE	Wake Island 97nm,1.0s	31.51	128	eP	P	07 39 05.7	+2.2
ATKA	Atka Island 35nm,1.4s	31.80	56	eP	P	07 39 04.0	-1.8
ZAA1	Zalesovo Array	38.37	308	eP	P	07 40 01.9	0.0
ZALV	Zalesovo Beam 1.0nm,0.4s,baz=99,slow=8.9,SNR=3.6	38.37	308	P	P	07 40 01.9	0.0
MK31	Makanchi Array 3.3nm,1.5s	41.26	297	eP	P	07 40 26.8	+0.8
MK32	Makanchi Array	41.26	297	eP	P	07 40 25.8	-0.3
MKAR	Makanchi Array 0.6nm,0.5s,baz=85,slow=9.9,SNR=8.7	41.26	297	P	P	07 40 25.8	-0.3
KURK	Kurchatov 3.5nm,1.3s	42.64	304	eP	P	07 40 37.0	-0.2
CAST	Castle Rocks 2.3nm,1.3s	43.46	37	eP	P	07 40 45.2	+1.6
SPU	Mount Spurr	43.65	40	eP	P	07 40 45.7	+0.5
BPAW	Bear Paw Mtn. 2.8nm,1.3s	43.90	36	eP	P	07 40 47.5	+0.4
SUA	Susitna One 7.0nm,1.2s	44.25	40	eP	P	07 40 50.3	+0.2
GHO	Glory Hole Cre 4.4nm,1.1s	45.07	39	eP	P	07 40 57.4	+0.9
DHY	Denali Highway 2.5nm,0.6s	45.61	37	eP	P	07 41 01.6	+0.7
ILAR	Eielson Array 0.4nm,0.8s,baz=281,slow=6.8,SNR=6.5	45.62	35	P	P	07 41 01.0	+0.3
SCRK	Sand Creek 2.2nm,0.6s	46.98	36	eP	P	07 41 11.8	+0.3
BVAR	Borovoye Array 0.5nm,0.4s,baz=91,slow=7.4,SNR=4.3	46.99	309	P	P	07 41 11.7	+0.1
DOT	Dot Lake 3.3nm,1.2s	47.00	36	eP	P	07 41 11.8	+0.3
EGAK	Eagle 3.2nm,1.4s	48.04	34	eP	P	07 41 20.0	+0.5
EPYK	Eagle Plains 2.5nm,1.2s	49.50	32	eP	P	07 41 31.9	+1.2
INK	Inuvik 1.7nm,0.3s,baz=283,slow=6.2,SNR=24	50.22	29	P	P	07 41 36.7	+0.7
SKAG	Skagway 1.8nm,0.6s	52.12	40	eP	P	07 41 51.6	+1.2
ABKAR	Akbulak array 1.8nm,1.4s	54.48	307	eP	P	07 42 08.0	+0.2
FIA0	FINESS Array S	64.23	331	eP	P	07 43 14.2	-0.4
FINES	FINESS Array B 2.8nm,0.9s,baz=46,slow=8.0,SNR=4.3	64.23	331	P	P	07 43 14.2	-0.4
VCNR	Virginia City 2.5nm,0.9s	71.05	54	eP	P	07 43 56.0	-2.0
DLMT	Dillon 2.2nm,1.3s	71.17	46	eP	P	07 43 59.9	+1.4

*IDC **15** 07:33:18.2±2.5, 7°.46S×128°.47E, h105km±24km, mb3.9/15, mb1 4.1/19, mb1mx3.8/46, mbtmp4.3/19, MS3.1/1, Ms1 3.1/1, ms1mx2.5/37, Error ellipse: s-maj=24.1km s-min=10.6km az=86.0*
*ISCJB **15** 07:33:20.9±0.3, 7°.57S±0°.03×128°.62E±0°.04, h151km, mb4.2/28, Error ellipse: s-maj=5.7km s-min=4.1km az=172.2*
*DJA **15** 07:33:20.9±0.4, 8°.3S±3°×12°.9E±°, h171km±11km, M4.4/10, mB4.8/4, mb4.3/7, MLv4.5/10, Mw(mB)4.1/4*
*NEIC **15** 07:33:21.4±2.9, 7°.45S×128°.56E, h136km±6km, mb4.5/23, Error ellipse: s-maj=13.5km s-min=12.4km az=187.0*
ISC 15 07:33:22.4±0.4, 7°.55S±0°.04×128°.58E±0°.05, h151km, n69, σ2§29/78, mb4.1/28, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.73	99	ePn	Pn	07 34 07.0	+0.5
SAUI				eSn	Sn	07 34 34.6	-5.7
SAUI	Saumlaki	2.73	99	P	Pn	07 34 04.7	-1.7
SAUI				S	Sn	07 34 40.3	0.0
BNDI	Bandanaira	3.29	24	P	Pn	07 34 13.0	-0.5
BNDI				S	Sn	07 34 53.0	-0.1
MSAI	Masohi	4.19	5	P	Pn	07 34 25.4	+0.1
SOEI	Soe	4.80	243	ePn	Pn	07 34 32.5	-0.8
SOEI				eSn	Sn	07 35 23.3	-5.3
SOEI	Soe	4.80	243	P	Pn	07 34 32.9	-0.4
BATI	Baumata 30nm,0.3s,baz=297,slow=3.2,SNR=12	5.53	241	P	Pn	07 34 42.7	-0.3
BATI				S	Sn	07 35 41.1	-4.8
BATI	Baumata 49nm,0.3s,baz=258,slow=21,SNR=9.9	5.53	241	P	Pn	07 34 42.2	-0.8
MTN	Manton Dam 68nm,0.5s,1μm0.4nm	5.83	155	ePn	Pn	07 34 46.1	-0.7
MTN				eSn	Sn	07 35 49.8	-3.2
FAKI	Fak Fak	5.87	39	ePn	Pn	07 34 44.6	-2.9
FAKI				eSn	Sn	07 35 47.4	-6.7
FAKI	Fak Fak	5.87	39	P	Pn	07 34 47.0	-0.5
SANI	Sanana	6.05	335	P	Pn	07 34 50.8	+0.9
SIJI	Sorong 3.3nm,0.3s,baz=234,slow=19,SNR=4.4	7.16	22	P	Pn	07 35 01.5	-3.2
SIJI				S	Sn	07 36 20.5	-4.4
WBSI	Waikabubak, Su 44nm,0.8s	9.32	256	P	Pn	07 35 32.4	-1.2
PLAI	Plampang	10.77	263	P	Pn	07 35 51.3	-1.4
FITZ	Fitzroy Crossi 5.0nm,0.3s,baz=18,slow=12,SNR=84	10.87	195	P	Pn	07 35 49.9	-4.0
FITZ				S	Sn	07 37 46.3	-7.8
FITZ	Fitzroy Crossi 6.5nm,0.3s,baz=52,slow=11,SNR=7.0	10.87	195	ePn	Pn	07 35 50.8	-3.1
WRAB	Tennant Creek	13.52	156	ePn	Pn	07 36 25.6	-2.7
WRA	Warramunga Arr 7.4nm,0.3s,baz=328,slow=14,SNR=131	13.52	156	P	Pn	07 36 25.7	-2.7
WRA				S	Sn	07 38 45.9	-12
WR1	Warramunga Arr 2.7nm,0.3s,baz=334,slow=22,SNR=7.4	13.52	156	ePn	Pn	07 36 25.7	-2.7
WR1				eSn	Sn	07 38 45.9	-12
WB2	Warramunga Arr	13.53	156	ePn	Pn	07 36 25.5	-2.9
COEN	Coen 17nm,1.4s	15.68	115	ePn	P	07 36 58.3	+2.0
PSA00	Pilbara Seismi 11nm,0.8s	16.29	210	ePn	Pn	07 37 02.3	-0.5
AS31	Alice Springs	16.82	163	eP	P	07 37 08.0	-0.8
ASAR	Alice Springs 2.1nm,0.3s,baz=333,slow=9.5,SNR=82	16.82	163	P	P	07 37 08.0	-0.8
UGM	Wanagama 270nm,1.5s	17.90	268	eP	P	07 37 20.8	+0.1
SBUM	Sibu 3.9nm,0.6s	19.11	301	eP	Pn	07 37 36.6	+0.2
KSM	Kuching 9.5nm,0.7s	20.32	295	eP	Pn	07 37 49.5	-1.1
GIRL	Giralia 156nm,1.3s	20.39	221	eP	P	07 37 49.3	+1.7
FORT	Forrest 13nm,0.8s	23.11	181	eP	P	07 38 16.6	+1.4
MORW	Morawa 19nm,0.6s	24.45	207	eP	P	07 38 29.3	+1.9
BBOO	Buckleboo 9.0nm,0.6s	26.07	166	eP	P	07 38 43.3	+1.3
STKA	Stephens Creek 2.1nm,0.4s,baz=321,slow=9.2,SNR=12	27.07	155	P	P	07 38 52.4	+1.4
STKA	Stephens Creek 0.8nm,0.6s	27.07	155	eP	P	07 38 52.5	+1.6
NWAO	Narrogin (SRO) 6.2nm,0.4s,baz=24,slow=7.4,SNR=11	27.36	201	P	P	07 38 54.2	+0.7
NWAO	Narrogin (SRO) 32nm,1.4s	27.36	201	eP	P	07 38 54.2	+0.7
NWAO				eP	P	07 38 54.2	+0.7
KULM	Kulim 15nm,1.3s	30.65	294	eP	P	07 39 23.7	+0.8
CAN	Canberra 21nm,1.3s	33.39	149	eP	P	07 39 49.9	+3.3
TOO	Toolangi 21nm,1.4s	33.59	155	eP	P	07 39 51.7	+3.3
CMAR	Chiang Mai Arr 1.2nm,0.4s,baz=142,slow=6.6,SNR=4.3	39.03	312	P	P	07 40 35.4	+0.7
MJAR	Matsushiro Arr 0.8nm,0.5s,baz=186,slow=8.6,SNR=4.0	44.78	11	P	P	07 41 19.7	-1.4
MAJO	Matsushiro	44.78	11	eP	P	07 41 19.7	-1.4
WHZ	Wether Hill Ro	51.04	145	eP	P	07 42 11.1	+2.0
LBZ	Lake Benmore 60nm,1.4s	51.49	143	eP	P	07 42 14.8	+2.2
USRK	Ussuriysk Ar.	51.60	3	P	P	07 42 13.0	-0.3
USRK				LR	LR	08 02 58.7	
RPZ	comp=Z,20nm,21.9s,baz=110,slow=35 Rata Peaks 3.2nm,0.4s,baz=220,slow=3.2,SNR=6.0	51.67	141	P	P	07 42 16.3	+2.5
RPZ	Rata Peaks 52nm,1.5s	51.67	141	eP	P	07 42 16.4	+2.5
THZ	Tophouse 13nm,0.9s	51.88	138	eP	P	07 42 15.0	-0.5
SONA0	Songino Array	58.53	343	eP	P	07 43 03.9	+0.8
SONM	Songino Array 0.5nm,0.4s,baz=155,slow=8.3,SNR=3.8	58.53	343	P	P	07 43 03.9	+0.8
PEA0B	Petropavlovsk- 7.6nm,0.8s	65.29	19	eP	P	07 43 48.6	+0.7
PETK	Petropavlovsk- 3.7nm,0.6s,baz=186,slow=4.7,SNR=11	65.29	19	P	P	07 43 48.3	+0.3
PEA1	Petropavlovsk-	65.30	19	eP	P	07 43 48.3	+0.3
MK32	Makanchi Array	67.93	328	eP	P	07 44 04.6	-0.3
MKAR	Makanchi Array 0.7nm,0.4s,baz=117,slow=8.1,SNR=17	67.93	328	P	P	07 44 04.6	-0.3
MAKZ	Makanchi 2.2nm,1.2s	68.10	327	eP	P	07 44 07.4	+1.4
VNDA	Vanda 0.7nm,0.6s,baz=322,slow=8.1,SNR=12	72.08	173	P	P	07 44 30.9	+1.3
VNDA	Vanda	72.08	173	eP	P	07 44 30.8	+1.1
KURK	Kurchatov 5.8nm,1.0s	72.26	329	eP	P	07 44 31.2	+0.1
SEY	Seymchan 2.6nm,0.6s,baz=333,slow=20,SNR=7.0	72.61	11	P	P	07 44 33.1	+0.1
MAW	Mawson 0.7nm,0.4s,baz=95,slow=8.1,SNR=4.8	73.93	201	P	P	07 44 42.4	+1.7
MAW	Mawson 1.8nm,1.5s	73.93	201	eP	P	07 44 42.5	+1.9
BVAR	Borovoye Array 0.9nm,0.6s,baz=116,slow=5.1,SNR=8.9	77.79	328	P	P	07 45 01.3	-1.5
ABKAR	Akbulak array 1.9nm,1.1s	82.07	322	eP	P	07 45 25.2	-0.7
QSPA	South Pole Qui 2.3nm,0.6s	82.43	180	eP	P	07 45 28.3	+0.6
AKTO	Aktyubinsk 1.3nm,0.7s,baz=104,slow=5.0,SNR=3.6	83.65	323	P	P	07 45 34.0	-0.1
ILAR	Eielson Array 0.2nm,0.4s,baz=255,slow=4.1,SNR=5.5	94.44	25	P	P	07 46 26.3	+1.3
CPUP	Villa Florida 2.9nm,1.1s,baz=135,slow=2.9,SNR=4.5	145.83	171	PKPbc	PKPab	07 52 45.8	+0.5
CPUP	Villa Florida	145.83	171	ePKPdf	PKPbc	07 52 45.0	+0.3

*TIR **15** 07:47:34.0, 39°.88N×20°.88E, h12km, Md2.5/6*
*ATH **15** 07:47:34.4, 39°.84N×20°.82E, h14km±2km, ML2.0/6, Error ellipse: s-maj=2.4km s-min=0.8km az=158.0*
*THE **15** 07:47:34.3, 39°.83N×20°.85E, h16km±7km, ML2.1/3, Error ellipse: s-maj=7.9km s-min=0.9km az=115.0*
ISC 15 07:47:34.3±0.9, 39°.84N±0°.02×20°.84E±0°.02, h14km±7km, n30, σ0§73/44, Greece-Albanian border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.18	178	P	Pg	07 47 38.2	-0.3
JAN	Janina	0.18	178	P	Pg	07 47 38.3	-0.3
JAN				S	Sg	07 47 41.7	+0.3
JAN				AML	AML	07 47 42.0	
JAN	comp=E,4530μm,0.2s			AML	AML	07 47 42.1	
MEV	comp=N,5556μm,0.2s Metsovon	0.30	100	P	Pg	07 47 40.8	+0.2
MEV	Metsovon	0.30	100	P	Pb	07 47 41.1	-0.5
KPRO	Kipourio	0.42	73	P	Pg	07 47 42.5	-0.1
KPRO				S	Sb	07 47 49.6	-0.1
KPRO	Kipourio	0.42	73	P	Pg	07 47 42.5	-0.1
KPRO				S	Sb	07 47 49.2	-0.5
KPRO				AML	AML	07 47 53.0	
KPRO	comp=E,421μm,0.2s			AML	AML	07 47 53.2	
PENT	comp=N,1200μm,0.8s Pentalofos	0.42	32	P	Pg	07 47 42.4	-0.4
PENT				S	Sg	07 47 49.0	+0.4
PENT	Pentalofos	0.42	32	P	Pg	07 47 42.5	-0.4
PENT				S	Sb	07 47 49.3	-0.7
PENT				AML	AML	07 47 49.9	
PENT	comp=E,725μm,0.3s			AML	AML	07 47 52.0	
IGT	comp=N,650μm,0.4s Igoumenitsa	0.50	233	P	Pg	07 47 43.7	-0.4
IGT	Igoumenitsa	0.50	233	*i* PG	Pg	07 47 41.2	-2.9
IGT				*i* SG	Sb	07 47 52.9	+0.9
IGT	Igoumenitsa	0.50	233	P	Pg	07 47 43.8	-0.3
IGT				S	Sg	07 47 51.4	+0.7
IGT				AML	AML	07 47 55.2	
IGT	comp=E,288μm,0.3s			AML	AML	07 47 55.5	
SRN	comp=N,409μm,0.5s Sarande	0.65	274	P	Pg	07 47 47.1	+0.1
SRN				S	Sb	07 47 57.5	+1.1
SRN	Sarande	0.65	274	*i* PG	Pg	07 47 46.6	-0.4
SRN				*i* SG	Sb	07 47 56.8	+0.4
TPE	Tepelena	0.79	306	*i* PG	Pg	07 47 48.9	-0.7
TPE				*i* SG	Sb	07 48 00.5	+0.2
KEK	Kerkira	0.81	262	P	Pg	07 47 49.8	-0.2
KEK				S	Sg	07 48 00.9	+0.2
KZN	Kozani	0.85	56	P	Pb	07 47 51.3	+0.4
THL	Klokotos Trika	0.94	106	P	Pn	07 47 53.0	-0.1
THL				S	Sn	07 48 06.3	-0.1
THL				AML	AML	07 48 10.7	
THL	comp=N,69μm,0.6s			AML	AML	07 48 12.2	
TSLK	comp=E,62μm,0.3s Tsoukalades, L	1.02	188	P	Pb	07 47 53.9	+0.1
FNA	Florina	1.03	23	*i* PG	Pb	07 47 52.2	-1.8
FNA				*i* SG	Sb	07 48 06.5	-0.9
FNA	Florina	1.03	23	P	Pg	07 47 54.3	+0.1
LKD2	Lefkada island	1.05	188	P	Pn	07 47 54.8	+0.1
VLO	Vlora	1.21	302	*i* PG	Pn	07 47 56.7	-0.1
VLO				*i* SG	Sg	07 48 14.1	+0.7
EVGI	Lefkada island	1.22	187	P	Pg	07 47 57.7	-0.1
OHR	Ohrid	1.27	358	*i* Pn	Pg	07 47 60.0	+1.2
LIT	Litokhoron	1.29	78	P	Pg	07 47 59.3	+0.1
LIT				AML	AML	07 48 24.7	
LIT	comp=E,79μm,0.6s			AML	AML	07 48 26.3	
KRUS	comp=N,84μm,0.4s Krusevo	1.56	11	*i* Pn	Pg	07 48 03.9	-0.5
VLS	Valsamata	1.67	187	P	Pb	07 48 04.7	-0.1
PHP	Peshkopia	1.87	351	*i* PG	Pb	07 48 08.2	-0.1
XOR	Xorichti	1.87	104	P	Pb	07 48 08.4	+0.1
STIP	Stip	2.12	28	*i* Pn	Pb	07 48 13.4	+0.9

*ISCJB **15** 07:56:05.5±0.8, 28°.36N±0°.03×51°.72E±0°.08, h15km, Error ellipse: s-maj=10.2km s-min=3.5km az=158.2*
*TEH **15** 07:56:05.0, 28°.41N×51°.55E, h14km, ML3.6*
*DSN **15** 07:56:10.1±1.1, 28°.45N×52°.11E, h10km, ML3.9/8, Error ellipse: s-maj=21.6km s-min=6.2km az=17.0*
*OMAN **15** 07:56:11.8±4.4, 28°.46N×52°.11E, h20km, ml3.9/7, Error ellipse: s-maj=68.2km s-min=31.3km az=18.0*
ISC 15 07:56:06.1±1.7, 28°.39N±0°.06×51°.7E±0°.1, h15km, n39, σ1§26/47, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.16	95	ePg	Pn	07 56 29.7	+1.8
IKAZ	Kazeroun	1.39	6	ePg	Pn	07 56 31.2	-0.1
IKAZ				IAMB	IAmb	07 56 53.9	
SHI	comp=Z,13μm,0.4s Shiraz	1.45	30	ePg	Pb	07 56 33.3	+0.5
SHI				eSg	Sg	07 56 53.7	+0.9
SHI				IAMB	IAmb	07 56 55.3	
JHRM	comp=Z,8μm,0.5s Jahom	1.68	86	ePn	Pg	07 56 37.0	-1.4
LMD1	Lamerd	1.69	128	ePn	Pg	07 56 37.6	-0.9
IPAR	Pars	1.88	39	ePn	Pb	07 56 39.6	-0.7
IPAR				IAMB	IAmb	07 57 10.8	
IRAM	comp=Z,5μm,0.8s Ramesheh	3.46	10	ePn	Pn	07 57 00.0	+0.4
IRAM				IAMB	IAmb	07 57 13.2	
ISAD	comp=Z,1μm,0.5s Sadrabad	3.92	26	ePn	Pn	07 57 08.2	+2.2
JHBN	Jahan bin	3.92	347	ePn	Pn	07 57 06.6	+0.5
IMEH	Mehriz	3.93	40	IAMB	IAmb	07 57 15.2	
IMEH	comp=Z,1μm,0.4s			ePn	Pn	07 57 08.1	+2.0
IZEF	Zefreh	4.52	7	ePn	Pn	07 57 14.7	+0.4
IZEF				IAMB	IAmb	07 57 17.0	
SHME	comp=Z,407nm,0.2s Shamm SNR=6.7	4.61	119	*i* P	Pn	07 57 15.9	+0.6
SHME				S	Sn	07 58 07.2	-1.4
SHME	Shamm	4.61	119	ePn	Pn	07 57 16.3	+1.0
IBAF	Bafgh	4.64	46	ePn	Pn	07 57 18.0	+2.1
YZKH	Yazd	4.71	32	ePn	Pn	07 57 18.4	+1.6
BANOM	Banah SNR=18	4.80	120	*i* P	Pn	07 57 18.6	+0.7
BANOM	Banah SNR=18	4.80	120	P	Pn	07 57 18.9	+1.0
BANOM				P	Pn	07 57 18.9	+1.0
BANOM				S	Sn	07 58 12.1	-1.2
IKLH	Kolahrood	4.91	359	ePn	Pn	07 57 20.1	+0.5
IKLH				IAMB	IAmb	07 57 45.8	
NAZ	comp=Z,293nm,0.4s Nazwa, Dubai	4.92	133	P	Pn	07 57 21.2	+1.7
NAZ	Nazwa, Dubai	4.92	133	ePn	Pn	07 57 21.1	+1.6
ASUD	Al Ashush, Dub SNR=12	4.98	138	*i* P	Pn	07 57 22.6	+2.3
ASUD	Al Ashush, Dub SNR=12	4.98	138	P	Pn	07 57 23.0	+2.7
MSFE	Esma-Masafi SNR=8.5	5.02	126	*i* P	Pn	07 57 21.9	+1.0
MSFE	Esma-Masafi	5.02	126	ePn	Pn	07 57 21.5	+0.6
FAQ	Al Faqa, Dubai	5.05	135	P	Pn	07 57 22.9	+1.5
MDH	Madha SNR=8.7	5.16	126	P	Pn	07 57 24.1	+1.3
MDH				S	Sn	07 58 20.8	-1.1
MDH	Madha	5.16	126	ePn	Pn	07 57 23.0	+0.3
UOSS	Minazif SNR=9.4	5.31	129	*i* P	Pn	07 57 25.3	+0.4
UOSS	Minazif	5.31	129	P	Pn	07 57 25.7	+0.8
UOSS	Minazif	5.31	129	ePn	Pn	07 57 25.0	+0.1
HATD	Hatta, Dubai	5.34	131	P	Pn	07 57 26.5	+1.1
HATD	Hatta, Dubai	5.34	131	P	Pn	07 57 25.9	+0.6
HATD				S	Sn	07 58 27.3	+0.6
HATD	Hatta, Dubai	5.34	131	ePn	Pn	07 57 25.5	+0.2
ASHO	Ashiyiah SNR=19	5.39	132	*i* P	Pn	07 57 27.7	+1.7
ASHO	Ashiyiah SNR=19	5.39	132	P	Pn	07 57 27.7	+1.7
ASHO				S	Sn	07 58 26.5	-1.4
ASHO	Ashiyiah	5.39	132	ePn	Pn	07 57 27.6	+1.6
KHMZ	Khomeyn	5.53	345	ePn	Pn	07 57 28.4	+0.3
KRSH	Karshahi	5.57	4	ePn	Pn	07 57 29.2	+0.6
SOHO	SOHO SNR=6.0	6.08	133	P	Pn	07 57 36.2	+0.7
SOHO				S	Sn	07 58 44.4	-0.5

*IDC **15** 08:00:38.6±4.8, 17°.11S×174°.73W, h203km±41km, mb3.4/6, mb1 3.6/6, mb1mx3.2/33, mbtmp4.0/6, Error ellipse: s-maj=36.1km s-min=21.0km az=101.0*
ISC 15 08:00:35.0±1.5, 17°.1S±0°.2×174°.7W±0°.3, h172km, n6, σ0§71/9, mb3.7/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera 4.5nm,0.5s,baz=10,0,slow=18,SNR=8.4	22.26	197	P	P	08 05 19.1	+1.2
URZ				S	S	08 09 09.3	-0.8
STKA	Stephens Creek 1.3nm,0.6s,baz=92,slow=20,SNR=1.5	42.13	241	P	P	08 08 10.6	+0.1
WRA	Warramunga Arr 0.8nm,0.7s,baz=92,slow=7.9,SNR=8.5	48.28	258	P	P	08 08 58.8	-0.3
WRA				PcP	PcP	08 10 23.9	+0.5
ASAR	1.6nm,1.0s,baz=106,slow=4.4,SNR=3.1 Alice Springs 4.7nm,0.5s,baz=88,slow=8.5,SNR=100	48.43	253	P	P	08 09 00.5	+0.2
ASAR				PcP	PcP	08 10 23.4	-0.5
ILAR	0.4nm,0.8s,baz=111,slow=5.1,SNR=3.0 Eielson Array 0.2nm,0.8s,baz=221,slow=7.3,SNR=4.7	84.36	12	P	P	08 12 47.4	+0.1
MAW	Mawson 0.7nm,0.6s,baz=124,slow=6.3,SNR=3.6	85.78	199	P	P	08 12 53.9	-0.6

*IDC **15** 08:05:35.6±1.4, 13°.74N×92°.15E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.7/41, mbtmp3.9/7, ML4.2/1, Error ellipse: s-maj=52.7km s-min=18.8km az=64.0*
*ISCJB **15** 08:05:38.7±1.2, 13°.8N±0°.1×92°.3E±0°.2, h33km, mb4.0/6, Error ellipse: s-maj=28.2km s-min=18.0km az=151.0*
ISC 15 08:05:41.4±1.4, 13°.8N±0°.2×92°.3E±0°.2, h35km, n7, σ1§34/8, mb4.1/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr 0.9nm,0.3s,baz=241,slow=14,SNR=3.0	7.87	53	Pn	Pn	08 07 33.2	-0.2
MKAR	Makanchi Array 1.8nm,0.7s,baz=164,slow=7.9,SNR=12	33.94	348	P	P	08 12 22.3	+1.1
SONM	Songino Array 0.9nm,0.7s,baz=188,slow=8.7,SNR=4.0	35.89	16	P	P	08 12 39.3	+1.0
ZALV	Zalesovo Beam 2.6nm,0.6s,baz=170,slow=9.0,SNR=7.6	40.48	353	P	P	08 13 15.0	-1.5
BVAR	Borovoye Array 0.8nm,0.7s,baz=127,slow=9.2,SNR=4.5	42.83	341	P	P	08 13 34.0	-1.8
WRA	Warramunga Arr 1.6nm,0.6s,baz=297,slow=9.1,SNR=13	53.24	128	P	P	08 14 56.5	-0.4
WRA				PcP	PcP	08 16 05.3	+0.9
ASAR	Alice Springs 2.3nm,1.1s,baz=286,slow=4.0,SNR=3.5	55.15	132	P	P	08 15 10.5	-0.2
	1.1nm,0.5s,baz=309,slow=7.0,SNR=28						

ATH 15 08:20:22.0, 38°.24N×22°.13E, h12km±1km, ML1.4/8, Error ellipse: s-maj=1.6km s-min=0.7km az=277.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG3	Aigion	0.02	319	P	Pg	08 20 24.1	0.0
AIG3				S	Sg	08 20 25.8	+0.3
AIG3	Aigion	0.02	319	P	Pg	08 20 24.0	-0.1
AIG3				S	Sg	08 20 25.7	+0.2
AIG1	Aigion	0.03	156	P	Pg	08 20 24.1	0.0
AIG1	Aigion	0.03	156	P	Pg	08 20 23.8	-0.3
AIG1				S	Sg	08 20 25.0	-0.5
AIG2	Aigio	0.04	276	P	Pg	08 20 23.9	-0.2
AIG2	Aigio	0.04	276	P	Pg	08 20 24.0	-0.2
AIG2				S	Sg	08 20 25.2	-0.6
AIG4	Aigion	0.04	293	P	Pg	08 20 24.1	0.0
AIG4				S	Sg	08 20 25.7	0.0
AIG4	Aigion	0.04	293	P	Pg	08 20 24.1	0.0
AIG4				S	Sg	08 20 25.8	+0.1
LAKA	Lakka	0.12	271	P	Pb	08 20 26.0	-0.2
LAKA				S	Sg	08 20 27.6	+0.4
LAKA				AML	AML	08 20 28.1	
LAKA	comp=E,341μm,0.3s			AML	AML	08 20 28.5	
TRIZ	comp=N,196μm,0.2s Trizonia	0.13	342	P	Pg	08 20 25.3	+0.1
TRIZ				S	Sg	08 20 27.2	-0.4
TRIZ	Trizonia	0.13	342	P	Pg	08 20 25.3	+0.1
TRIZ				S	Sg	08 20 27.6	+0.1
KALE	Kalithea	0.15	4	P	Pg	08 20 25.8	+0.2
KALE				S	Sg	08 20 28.5	+0.3
KALE				AML	AML	08 20 28.8	
KALE	comp=N,852μm,0.3s			AML	AML	08 20 29.8	
KALE	comp=E,461μm,0.2s Kalithea	0.15	4	P	Pg	08 20 25.8	+0.2
KALE				S	Sg	08 20 28.6	+0.4
KALE				AML	AML	08 20 28.8	
KALE	comp=N,852μm,0.3s			AML	AML	08 20 29.8	
SERG	comp=E,461μm,0.2s S

KLV AML AML 08 20 30.6
comp=N,155μm,0.2s
KLV Kalavryta, Ach 0.20 174 P Pg 08 20 26.1 -0.2
KLV S Sg 08 20 29.2 0.0
KLV AML AML 08 20 30.0
comp=E,184μm,0.3s
KLV AML AML 08 20 30.6
comp=N,155μm,0.2s
EFP Efpalio 0.26 318 P Pg 08 20 27.3 0.0
EFP S Sg 08 20 30.8 -0.1
EFP AML AML 08 20 32.1
comp=N,108μm,0.2s
EFP AML AML 08 20 34.1
comp=E,89μm,0.1s
EFP Efpalio 0.26 318 P Pg 08 20 27.4 +0.1
EFP S Sb 08 20 31.9 -1.1
EFP AML AML 08 20 32.1
comp=N,108μm,0.2s
EFP AML AML 08 20 34.1
comp=E,89μm,0.1s
GUR Goura 0.35 150 P Pg 08 20 28.9 -0.1
GUR S Sg 08 20 34.0 +0.3
GUR AML AML 08 20 35.0
comp=N,164μm,0.2s
GUR AML AML 08 20 35.2
comp=E,89μm,0.1s
GUR Goura 0.35 150 P Pg 08 20 28.8 -0.2
GUR S Sg 08 20 34.1 +0.5
GUR AML AML 08 20 35.0
comp=N,164μm,0.2s
GUR AML AML 08 20 35.2
comp=E,89μm,0.1s
DSF Desfina 0.36 61 P Pg 08 20 29.2 0.0
DSF S Sg 08 20 34.3 +0.3
DSF AML AML 08 20 35.6
comp=E,252μm,0.2s
DSF AML AML 08 20 36.3
comp=N,203μm,0.1s
DSF Desfina 0.36 61 P Pg 08 20 29.2 0.0
DSF S Sg 08 20 34.2 +0.1
DSF AML AML 08 20 35.6
comp=E,252μm,0.2s
DSF AML AML 08 20 36.3
comp=N,203μm,0.1s
ANX Ano Chora 0.39 336 P Pg 08 20 29.7 -0.1
ANX S Sg 08 20 35.1 +0.1
ANX AML AML 08 20 36.3
comp=N,116μm,0.3s
ANX AML AML 08 20 38.6
comp=E,121μm,0.1s
ANX Ano Chora 0.39 336 P Pg 08 20 29.8 0.0
ANX S Sg 08 20 35.5 +0.5
ANX AML AML 08 20 36.3
comp=N,116μm,0.3s
ANX AML AML 08 20 38.6
comp=E,121μm,0.1s
DRO Drossia 0.43 229 P Pg 08 20 30.4 -0.1
DRO S Sg 08 20 37.1 +0.8
DRO AML AML 08 20 38.1
comp=E,316μm,0.2s
DRO AML AML 08 20 39.2
comp=N,334μm,0.2s
DRO Drossia 0.43 229 P Pb 08 20 31.4 -0.3
DRO S Sb 08 20 37.6 -0.6
DRO AML AML 08 20 38.1
comp=E,316μm,0.2s
DRO AML AML 08 20 39.2
comp=N,334μm,0.2s
RLS Riolos of Patr 0.55 251 P Pg 08 20 32.8 +0.1
RLS Riolos of Patr 0.55 251 P Pb 08 20 33.3 -0.3

IDC 15 08:21:13.2±4.7, 16°.02S×176°.15W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/34, mbtmp4.2/3, Error ellipse: s-maj=181.9km s-min=94.9km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.44**	**240**	P	P	08 29 01.9	+0.1
	1.6nm,0.8s,baz=101,slow=10,SNR=3.2						
WRA	**Warramunga Arr**	**47.13**	**258**	P	P	08 29 47.3	-0.3
	0.5nm,0.2s,baz=93,slow=7.7,SNR=22						
ASAR	**Alice Springs**	**47.40**	**252**	P	P	08 29 49.5	-0.1
	4.5nm,0.4s,baz=90,slow=7.6,SNR=92						
ASAR				PcP	PcP	08 31 20.2	-0.3
	0.2nm,0.5s,baz=106,slow=4.7,SNR=3.7						

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*ISCJB **15** 08:26:49.2±0.4, 17°.72S±0°.09×13°.47W±0°.08, h10km, mb4.2/20, MS3.7/21, Error ellipse: s-maj=14.2km s-min=9.6km az=142.2*
*IDC **15** 08:26:49.1±0.6, 17°.71S×13°.58W, h0km, mb4.1/13, mb1 4.2/13, mb1mx4.0/47, mbtmp4.1/13, MS3.7/21, Ms1 3.6/21, ms1mx3.6/31, Error ellipse: s-maj=22.6km s-min=16.9km az=119.0*
*NEIC **15** 08:26:50.7±1.4, 17°.74S×13°.52W, h10km±4km, mb4.6/9, Error ellipse: s-maj=17.6km s-min=8.0km az=193.0*
ISC 15 08:26:51.1±0.5, 17°.8S±0°.1×13°.48W±0°.09, h10km, n52, σ1§03/31, mb4.2/20, MS3.7/21, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**7.62**	**78**	*e*Pn	**Pn**	**08 28 43.1**	**+0.8**
H10S2	**ASCENSION HYDR**	**8.82**	**352**	T	T	08 37 45.4	
	baz=173,slow=74,SNR=556						
H10S3	**ASCENSION HYDR**	**8.83**	**352**	T	T	08 38 11.1	
	baz=173,slow=74,SNR=264						
H10S1	**ASCENSION HYDR**	**8.84**	**352**	T	T	08 38 11.7	
	baz=173,slow=74,SNR=465						
H10N1	**ASCENSION HYDR**	**9.90**	**354**	T	T	08 39 41.9	
	baz=176,slow=74						
H10N3	**ASCENSION HYDR**	**9.90**	**354**	T	T	08 39 41.9	
	baz=176,slow=74						
H10N2	**ASCENSION HYDR**	**9.92**	**354**	T	T	08 39 34.8	
	baz=176,slow=74						
DBIC	**Dimbokro**	**25.72**	**20**	LR	LR	08 40 01.3	
	comp=Z,193nm,20.7s,baz=160,slow=31						
TSUM	**Tsumeb**	**29.48**	**98**	LR	LR	08 42 23.0	
	comp=Z,129nm,21.2s,baz=340,slow=32						
BDFB	**Brasilia**	**33.12**	**268**	P	**P**	**08 33 30.2**	**+2.4**
	1.6nm,0.6s,baz=109,slow=8.3,SNR=2.5						
TOA0	**Torodi Ar. Sit**	**34.16**	**27**	*e*P	**P**	**08 33 37.0**	**+0.4**
	8.9nm,1.3s						
TORD	**Torodi Ar. Bea**	**34.16**	**27**	P	**P**	**08 33 35.9**	**-0.7**
	2.0nm,0.9s,baz=218,slow=6.2,SNR=6.3						
TORD				LR	LR	08 44 55.5	
	comp=Z,275nm,20.9s,baz=285,slow=32						
TOA1	**Torodi Ar. Sit**	**34.17**	**27**	*e*P	**P**	**08 33 35.9**	**-0.8**
BOSA	**Boshof**	**37.06**	**114**	LR	LR	08 46 21.5	
	comp=Z,116nm,20.5s,baz=246,slow=32						
MATP	**Matopo**	**39.68**	**101**	P	**P**	**08 34 23.8**	**-0.1**
	3.6nm,0.7s,baz=266,slow=10,SNR=7.3						
LSZ	**Lusaka**	**39.97**	**93**	P	**P**	**08 34 26.8**	**+0.5**
	3.1nm,0.6s,baz=243,slow=6.5,SNR=7.2						
LSZ	**Lusaka**	**39.97**	**93**	*e*P	**P**	**08 34 28.7**	**+2.5**
	5.0nm,1.0s						
CPUP	**Villa Florida**	**41.37**	**250**	P	**P**	**08 34 36.2**	**-1.4**
	3.3nm,0.7s,baz=90,slow=8.8,SNR=9.5						
CPUP				LR	LR	08 49 26.0	
	comp=Z,45nm,19.2s,baz=103,slow=33						
SIV	**San Ignacio**	**45.49**	**265**	P	**P**	**08 35 10.0**	**-1.0**
	0.5nm,0.7s,baz=98,slow=12,SNR=3.5						
TRQA	**Tornquist**	**46.80**	**234**	*e*P	**P**	**08 35 20.4**	**-0.7**
	6.1nm,1.0s						
LPAZ	**La Paz**	**52.12**	**263**	LR	LR	08 57 06.2	
	comp=Z,59nm,18.0s,baz=104,slow=35						
GO04	**Tololo Observa**	**53.33**	**245**	*e*P	**P**	**08 36 12.8**	**+1.7**
	32nm,1.5s						
PLCA	**Paso Flores**	**53.80**	**232**	LR	LR	08 57 18.7	
	comp=Z,113nm,18.1s,baz=118,slow=34						
SNAA	**Sanae**	**54.28**	**176**	P	**P**	**08 36 16.6**	**-0.5**
	1.3nm,0.8s,baz=315,slow=6.1,SNR=14						
SNAA	**Sanae**	**54.28**	**176**	*e*P	**P**	**08 36 16.9**	**-0.2**
	5.6nm,1.2s						
KEST	**Kesra**	**57.42**	**22**	LR	LR	08 59 37.9	
	comp=Z,109nm,20.8s,baz=240,slow=34						
KEST	**Kesra**	**57.42**	**22**	*e*P	P	08 36 44.5	+4.4
	8.7nm,1.3s						
CRZF	**Crozet Islands**	**60.40**	**134**	*e*P	**P**	**08 36 59.0**	**-1.6**
	82nm,1.0s						
MAW	**Mawson**	**68.52**	**156**	P	**P**	**08 37 54.2**	**+0.8**
	1.0nm,0.6s,baz=279,slow=10,SNR=4.5						
MAW				LR	LR	09 02 38.1	
	comp=Z,63nm,19.6s,baz=253,slow=31						
MAW	**Mawson**	**68.52**	**156**	*e*P	**P**	**08 37 54.3**	**+0.9**
	0.5nm,0.8s						
MMAI	**Mount Meron Ar**	**68.77**	**43**	LR	LR	09 07 16.7	
	comp=Z,37nm,19.1s,baz=290,slow=35						
GERES	**GERESS Array B**	**70.58**	**19**	P	**P**	**08 38 07.1**	**+0.7**
	0.2nm,0.4s,baz=198,slow=6.2,SNR=2.9						
BRTR	**Keskin Array B**	**72.11**	**36**	P	**P**	**08 38 15.5**	**-0.4**
	1.2nm,0.7s,baz=221,slow=4.7,SNR=6.3						
BRTR				LR	LR	09 11 27.3	
	comp=Z,15nm,18.2s,baz=268,slow=37						
BR101	**Keskin Array S**	**72.11**	**36**	*e*P	**P**	**08 38 15.5**	**-0.4**
MLR	**Muntele Rosu**	**72.40**	**28**	P	**P**	**08 38 17.3**	**-0.2**
	2.8nm,0.6s,baz=170,slow=5.8,SNR=4.2						
QSPA	**South Pole Qui**	**72.42**	**180**	*e*P	**P**	**08 38 18.2**	**+0.7**
	6.5nm,1.1s						
AKASG	**Malin Array Be**	**77.80**	**26**	P	**P**	**08 38 47.1**	**-1.2**
	0.9nm,0.6s,baz=227,slow=5.5,SNR=3.4						
AKASG				LR	LR	09 13 39.8	
	comp=Z,12nm,21.7s,baz=25,slow=36						
GNI	**Garni**	**79.05**	**42**	LR	LR	09 12 38.8	
	comp=Z,23nm,19.8s,baz=234,slow=35						
KBZ	**Khabaz**	**79.99**	**38**	LR	LR	09 15 36.2	
	comp=Z,17nm,19.2s,baz=199,slow=37						
NOA	**NORSAR Array B**	**80.99**	**12**	LR	LR	09 15 37.6	
	comp=Z,30nm,18.7s,baz=215,slow=36						
WSAR	**Wadi Sarin**	**81.35**	**62**	LR	LR	09 14 22.4	
	comp=Z,79nm,18.3s,baz=246,slow=35						
VNDA	**Vanda**	**84.88**	**179**	P	**P**	**08 39 25.6**	**-0.1**
	1.3nm,0.8s,baz=202,slow=7.2,SNR=7.3						
VNDA				LR	LR	09 12 12.4	
	comp=Z,52nm,21.1s,baz=186,slow=32						
VNDA	**Vanda**	**84.88**	**179**	*e*P	**P**	**08 39 25.0**	**-0.7**
FIA0	**FINESS Array S**	**85.00**	**18**	*e*P	**P**	**08 39 25.9**	**-0.4**
FINES	**FINESS Array B**	**85.00**	**18**	P	**P**	**08 39 25.9**	**-0.4**
	4.0nm,1.0s,baz=224,slow=7.8,SNR=2.5						
FINES				LR	LR	09 17 00.9	
	comp=Z,55nm,19.8s,baz=128,slow=35						
GEYT	**Alibeck**	**87.00**	**49**	LR	LR	09 16 38.2	
	comp=Z,40nm,20.2s,baz=150,slow=34						
ARCES	**ARCESS Array B**	**91.33**	**13**	LR	LR	09 20 02.0	
	comp=Z,49nm,21.1s,baz=291,slow=35						
ULM	**Lac du Bonnet**	**98.71**	**320**	LR	LR	09 16 48.4	
	comp=Z,32nm,21.8s,baz=142,slow=30						
ASAR	**Alice Springs**	**127.95**	**141**	PKP	**PKPdf**	**08 45 57.5**	**-0.5**
	0.3nm,0.8s,baz=180,slow=0.9,SNR=2.8						
AS31	**Alice Springs**	**127.95**	**141**	*e*PKPdf	**PKPdf**	**08 45 57.5**	**-0.5**
MAJO	**Matsushiro**	**148.79**	**47**	*e*PKPbc	**PKPbc**	**08 46 38.8**	**-0.4**
MJAR	**Matsushiro Arr**	**148.80**	**47**	PKPbc	**PKPbc**	**08 46 38.8**	**-0.5**
	0.6nm,0.6s,baz=307,slow=1.3,SNR=3.4						

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*ISK **15** 08:40:54.5, 39°.78N×27°.88E, h5km, ML2.1/10*
*ISCJB **15** 08:40:55.2±0.5, 39°.80N±0°.02×27°.88E±0°.04, h2km±6km, Error ellipse: s-maj=4.7km s-min=3.6km az=173.2*
*DDA **15** 08:40:55.3, 39°.79N×27°.91E, h7km±3km, ML2.6*
ISC 15 08:40:55.1±1.0, 39°.78N±0°.02×27°.89E±0°.03, h8km±8km, n19, σ0§54/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.14**	**182**	PG	**Pg**	**08 40 57.6**	**-0.5**
BALB				SG	**Sg**	**08 40 59.9**	**-0.2**
GONE	**Gonen-Balikesi**	**0.31**	**330**	PG	**Pg**	**08 41 01.2**	**+0.1**
GONE				SG	**Sg**	**08 41 05.9**	**+0.7**
STEP	**BALIKESIR_Sava**	**0.42**	**198**	*i* P	**Pb**	**08 41 05.3**	**+0.5**
STEP				*i* S	**Sb**	**08 41 10.3**	**-1.1**
STEP				IAML_P			
	comp=Z,912nm,0.1s						
DURS	**Dursunbey**	**0.49**	**111**	*i* P	**Pg**	**08 41 04.5**	**0.0**
DURS				*i* S	**Sb**	**08 41 12.6**	**-0.8**
EDC	**Edincik**	**0.56**	**358**	PG	**Pg**	**08 41 06.1**	**+0.1**
EDC				SG	**Sg**	**08 41 14.2**	**+0.8**
KCTX	**Karacabey (Bur**	**0.60**	**37**	PG	**Pg**	**08 41 06.6**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.96**	**52**	PG	**Pb**	**08 41 13.7**	**-0.4**
ULDT	**Uludag**	**1.03**	**69**	*i* P	**Pn**	**08 41 16.7**	**+0.7**
ULDT				*i* S	**Sn**	**08 41 29.8**	**-0.9**
ULDT				IAML_P			
	comp=Z,401nm,0.1s						
ZEDA	**zmir-Bergama**	**1.03**	**218**	*i* P	**Pn**	**08 41 16.1**	**+0.3**
ZEDA				*i* S	**Sn**	**08 41 30.0**	**-0.4**
ZEDA				IAML_P			
	comp=Z,843nm,0.2s						
BAYC	**CANAKKALE_Bayr**	**1.03**	**268**	*i* P	**Pg**	**08 41 15.0**	**+0.1**
BAYC				IAML_P			
	comp=Z,367nm,0.1s						
LPK	**Lapseki**	**1.05**	**305**	PG	**Pg**	**08 41 14.5**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.05**	**329**	PG	**Pb**	**08 41 15.8**	**+0.2**
SART	**Tekirdag**	**1.05**	**329**	*i* P	**Pn**	**08 41 16.7**	**+0.4**
SART				IAML_P			
	comp=Z,870nm,0.1s						
ARMT	**Armutlu**	**1.08**	**43**	PN	**Pg**	**08 41 15.6**	**-0.3**
USAK	**Uak-Merkez**	**1.38**	**140**	*i* P	**Pg**	**08 41 21.8**	**+0.3**
USAK				*i* S	**Sn**	**08 41 39.6**	**+0.3**
USAK				IAML_P			
	comp=Z,272nm,0.2s						
YLV	**Yalova**	**1.38**	**55**	PN	**Pb**	**08 41 21.1**	**-0.2**
MANT	**Manisa**	**1.39**	**158**	*i* P	**Pg**	**08 41 22.8**	**+1.0**
MANT				*i* S	**Sn**	**08 41 40.0**	**+0.3**
MANT				IAML_P			
	comp=Z,245nm,0.1s						
KULA	**Kula-Manisa**	**1.40**	**154**	PN	**Pg**	**08 41 21.6**	**-0.4**
BOZC	**Bozcaada**	**1.41**	**273**	PN	**Pn**	**08 41 21.1**	**0.0**

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*ISCJB **15** 08:59:31.8±0.4, 36°.88N±0°.03×71°.36E±0°.06, h106km, mb3.9/9, Error ellipse: s-maj=7.6km s-min=4.0km az=155.4*
*IDC **15** 08:59:31.4±3.2, 36°.81N×71°.36E, h82km±27km, mb3.7/9, mb1 3.8/14, mb1mx3.5/53, mbtmp4.1/14, Error ellipse: s-maj=25.0km s-min=19.6km az=22.0*
*NNC **15** 08:59:40.6±4.2, 37°.99N×70°.46E, h0km, mb4.7, mpv4.4, Error ellipse: s-maj=46.6km s-min=16.9km az=156.0*
ISC 15 08:59:33.4±0.5, 36°.96N±0°.05×71°.32E±0°.06, h106km, n50, σ2§40/56, mb3.7/9, 5C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.16**	**171**	P	**Pn**	**09 00 24.8**	**+3.1**
CEP				S	**Sn**	**09 01 03.0**	**+4.2**
CHCP	**Chirah Chowk**	**3.66**	**154**	P	**Pn**	**09 00 31.9**	**+3.8**
THW	**Thamme Wali**	**4.17**	**175**	P	**Pn**	**09 00 37.4**	**+2.4**
AML	**Almayashu**	**5.48**	**19**	P	Pn	09 01 29.1	+36
	SNR=7.0						
UCH	**Uchtor**	**5.81**	**24**	P	**Pn**	**09 00 58.1**	**+0.6**
	SNR=32						
KZA	**Kyzart**	**5.95**	**29**	P	**Pn**	**09 00 59.8**	**+0.4**
	SNR=43						
EKS2	**Erkin-Say**	**6.00**	**18**	P	**Pn**	**09 01 00.6**	**+0.7**
	SNR=27						
KK31	**Karatay Array**	**6.17**	**354**	⇓P	**Pn**	**09 00 59.6**	**-2.4**
	11nm,0.2s,baz=177,slow=12,SNR=677						
KK31				⇑S	Sn	09 02 01.8	-9.4
	5.1nm,0.3s,baz=186,slow=24,SNR=4.5						
AAK	**Ala-Archa**	**6.17**	**22**	P	**Pn**	**09 01 03.1**	**+0.9**
	18nm,0.3s,baz=151,slow=6.0,SNR=57						
AAK				S	**Sn**	**09 02 09.3**	**-2.2**
	1.3nm,0.3s,baz=73,slow=4.9,SNR=1.2						
AAK	**Ala-Archa**	**6.17**	**22**	P	**Pn**	**09 01 03.4**	**+1.1**
	SNR=29						
AAK	**Ala-Archa**	**6.17**	**22**	⇓P	**Pn**	**09 01 03.3**	**+1.1**
	15nm,0.3s						
AAK				⇑S	**Sn**	**09 02 12.3**	**+0.8**
	14nm,0.6s						
DHRM	**DHARAMSHALA**	**6.24**	**137**	*e*P	**Pn**	**09 01 04.9**	**+1.7**
DHRM				*e*S	**Sn**	**09 02 11.1**	**-2.1**
DHRM				IAML		09 02 14.6	
	comp=E,486nm,0.9s						
DHRM				IAML		09 02 15.5	
	comp=N,354nm,0.3s						
KBK	**Karagaybulak**	**6.34**	**25**	P	**Pn**	**09 01 05.8**	**+1.4**
	SNR=11						
ULHL	**Ulahol**	**6.50**	**34**	P	**Pn**	**09 01 08.6**	**+1.8**
	SNR=7.1						
CHMS	**Chumysh**	**6.58**	**23**	P	**Pn**	**09 01 08.4**	**+0.8**
	SNR=24						
USP	**Ospenovka**	**6.75**	**20**	P	**Pn**	**09 01 10.4**	**+0.4**
	SNR=20						
TKM2	**Tokmak 2**	**6.80**	**28**	P	**Pn**	**09 01 11.5**	**+0.8**
	SNR=29						
TKM2	**Tokmak 2**	**6.80**	**28**	⇓P	**Pn**	**09 01 11.4**	**+0.6**
	comp=N,26nm,0.8s						
TKM2				⇑S	**Sn**	**09 02 28.1**	**+1.4**
	comp=N,5.5nm,0.6s						
SMLA	**Simla**	**7.57**	**138**	*e*P	**Pn**	**09 01 22.7**	**+1.6**
SMLA				*e*S	**Sn**	**09 02 39.6**	**-5.6**
SMLA				IAML		09 02 45.2	
	comp=E,174nm,0.1s						
SMLA				IAML		09 02 46.0	
	comp=N,114nm,0.2s						
DDI	**Dehra Dun**	**8.68**	**138**	*e*S	**Sn**	**09 03 07.8**	**-4.5**
JOSI	**Joshimath**	**9.37**	**131**	*e*P	**Pn**	**09 01 48.4**	**+2.8**
JOSI				*e*S	**Sn**	**09 03 27.1**	**-2.1**
JOSI				IAML		09 03 29.8	
	comp=E,203nm,0.6s						
KUDL	**Kundal**	**9.81**	**152**	*e*P	Pn	09 01 41.6	-10
KUDL				*e*S	Sn	09 03 19.4	-20
KUDL				IAML		09 03 26.9	
	comp=E,30nm,0.8s						
KUDL				IAML		09 03 27.9	
	comp=N,10.0nm,0.1s						
GEYT	**Alibeck**	**10.55**	**279**	P	**Pn**	**09 02 00.6**	**-0.9**
	comp=N,0.7nm,0.3s,baz=99,slow=9.9,SNR=5.2						
GEYT				S	**Sn**	**09 03 50.1**	**-7.5**
	comp=N,0.8nm,0.3s,baz=82,slow=20,SNR=5.0						
GYA0B	**ALIBECK ARRAY**	**10.55**	**279**	⇓P	**Pn**	**09 02 05.2**	**+3.7**
GYA0B				⇑S	**Sn**	**09 03 52.9**	**-4.7**
MKAR	**Makanchi Array**	**12.77**	**36**	P	**Pn**	**09 02 30.4**	**-0.5**
	comp=N,0.1nm,0.3s,baz=222,slow=12,SNR=12						
PYUN	**Piuthan**	**13.21**	**129**	*e*P	**Pn**	**09 02 35.1**	**-2.0**
	comp=N,28nm,0.3s						
DANN	**Dangsing**	**13.53**	**126**	*e*P	**Pn**	**09 02 39.3**	**-2.1**
	comp=N,9.0nm,0.2s						
KOLN	**Koldanda**	**13.83**	**128**	*e*P	**Pn**	**09 02 43.3**	**-1.8**
	comp=N,19nm,0.3s						
GKN	**Gorkha**	**14.34**	**125**	*e*P	**Pn**	**09 02 49.5**	**-2.1**
	comp=N,55nm,0.3s						
BHPL	**Bhopal**	**14.65**	**157**	*e*P	Pn	09 02 45.8	-10
BHPL				*e*S	Sn	09 05 21.7	-15
AB31	**Akbulak array**	**14.81**	**330**	P	**Pn**	**09 02 55.1**	**-2.3**
	comp=N,2.7nm,0.5s,baz=149,slow=12,SNR=56						
AB31				⇑S	Sn	09 05 26.5	-14
	comp=N,2.6nm,0.7s,baz=148,slow=24,SNR=4.7						
KKN	**Kakani**	**14.91**	**124**	*e*P	**Pn**	**09 02 56.6**	**-2.3**
	comp=N,8.1nm,0.3s						
PKI	**Pulchoki**	**15.14**	**124**	*e*P	**Pn**	**09 02 59.6**	**-2.3**
	comp=N,14nm,0.3s						
GUN	**Gumba**	**15.23**	**122**	*e*P	**Pn**	**09 03 01.3**	**-1.8**
JIRN	**Jiri**	**15.60**	**122**	*e*P	**Pn**	**09 03 05.6**	**-2.2**
	comp=N,67nm,0.5s						
BVAR	**Borovoye Array**	**16.08**	**358**	P	**Pn**	**09 03 10.2**	**-2.9**
	comp=N,0.6nm,0.3s,baz=165,slow=12,SNR=9.8						
RAMN	**Ramite**	**16.34**	**123**	*e*P	**Pn**	**09 03 15.3**	**-1.6**
	comp=N,42nm,0.5s						
AKTO	**Aktyubinsk**	**16.52**	**329**	P	**Pn**	**09 03 17.7**	**-0.9**
	comp=N,0.7nm,0.3s,baz=132,slow=9.8,SNR=12						
AKTO	**Aktyubinsk**	**16.52**	**329**	⇓P	**Pn**	**09 03 17.6**	**-0.9**
	comp=N,15nm,1.0s						
AKTO				⇓S	Sn	09 06 05.3	-16
	comp=N,4.3nm,1.1s						
ZALV	**Zalesovo Beam**	**19.39**	**25**	P	**P**	**09 03 51.0**	**+0.2**
	comp=N,0.6nm,0.3s,baz=225,slow=12,SNR=7.5						
ARU	**Arti**	**21.29**	**340**	P	**P**	**09 04 12.2**	**+1.0**
	comp=N,0.5nm,0.3s,baz=180,slow=15,SNR=3.2						
FINES	**FINESS Array B**	**37.25**	**326**	P	**P**	**09 06 36.3**	**+1.9**
	comp=N,3.8nm,1.0s,baz=117,slow=11,SNR=3.4						
ARCES	**ARCESS Array B**	**40.82**	**337**	P	**P**	**09 07 05.4**	**+1.3**
	comp=N,9.2nm,0.4s,baz=110,slow=7.8,SNR=2.9						
NB2	**NORSAR Subarra**	**44.17**	**323**	P	pP	09 07 57.3	+0.4
	comp=Z,0.8nm,0.6s,baz=96,slow=8.6						
NOA	**NORSAR Array B**	**44.17**	**323**	P	**P**	**09 07 33.4**	**+2.0**
	comp=Z,0.2nm,0.4s,baz=91,slow=8.3,SNR=2.4						
NOA				pP	**pP**	**09 07 57.0**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=96,slow=8.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**09 10 09.1**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=58,slow=5.7,SNR=6.7						
INK	**Inuvik**	**73.41**	**9**	P	**P**	**09 10 55.2**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=6.5,slow=8.2,SNR=5.4						
WRA	**Warramunga Arr**	**82.01**	**122**	P	**P**	**09 11 42.1**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=310,slow=5.2,SNR=8.2						
ASAR	**Alice Springs**	**84.30**	**125**	P	**P**	**09 11 53.9**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=301,slow=4.3,SNR=7.1						
ULM	**Lac du Bonnet**	**92.43**	**352**	P	**P**	**09 12 32.9**	**+0.8**
	comp=Z,2.8nm,0.5s,baz=45,slow=2.9,SNR=3.1						

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*ISK **15** 09:37:34.0, 38°.55N×28°.31E, h5km, ML2.5/8*
*DDA **15** 09:37:35.4, 38°.57N×28°.40E, h6km±2km, ML2.7*
ISC 15 09:37:35.0±1.0, 38°.56N±0°.03×28°.33E±0°.02, h10km±9km, n20, σ0§50/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANT	**Manisa**	**0.19**	**111**	*i* P	**Pg**	**09 37 39.2**	**+0.1**
MANT				*i* S	**Sg**	**09 37 41.9**	**-0.1**
MANT				IAML_P			
	comp=Z,10μm,0.1s						
KULA	**Kula-Manisa**	**0.26**	**100**	PG	**Pg**	**09 37 40.7**	**+0.4**
KULA				SG	**Sg**	**09 37 44.3**	**+0.4**
GOMA	**Golmarmara-Man**	**0.36**	**294**	PG	**Pg**	**09 37 41.4**	**-0.7**
GOMA				SG	**Sg**	**09 37 46.3**	**-0.5**
AKHS	**Akhisar**	**0.52**	**308**	*i* P	**Pg**	**09 37 45.2**	**+0.1**
AKHS				IAML_P			
	comp=Z,7μm,0.2s						
AKS	**Akhisar**	**0.52**	**308**	PG	**Pg**	**09 37 44.4**	**-0.7**
USAK	**Uak-Merkez**	**0.56**	**74**	*i* P	**Pg**	**09 37 45.9**	**+0.1**
USAK				*i* S	**Sg**	**09 37 53.4**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**0.70**	**210**	PG	**Pg**	**09 37 47.8**	**-0.8**
AYDB				SG	**Sg**	**09 37 57.6**	**-0.2**
SHAP	**Saphane-Kutahy**	**0.83**	**56**	PG	**Pg**	**09 37 50.6**	**-0.5**
KHAL	**Karahalli**	**0.93**	**101**	*i* P	**Pn**	**09 37 53.9**	**-0.2**
KHAL				*i* S	**Sb**	**09 38 05.2**	**-0.5**
KHAL				IAML_P			
	comp=Z,697nm,0.2s						
STEP	**BALIKESIR_Sava**	**0.95**	**330**	*i* P	**Pn**	**09 37 55.1**	**+0.7**
AYDN	**Tasoluk**	**0.97**	**202**	*i* P	**Pn**	**09 37 55.0**	**+0.3**
AYDN				IAML_P			
	comp=Z,996nm,0.2s						
GEDZ	**Gediz**	**0.97**	**60**	PG	**Pg**	**09 37 53.4**	**-0.2**
GDZ	**Gediz**	**1.04**	**59**	*i* P	**Pg**	**09 37 54.4**	**-0.6**
GDZ				*i* S	**Sb**	**09 38 08.5**	**-0.4**
GDZ				IAML_P			
	comp=Z,1μm,0.3s						
DURS	**Dursunbey**	**1.04**	**6**	*i* P	**Pb**	**09 37 55.3**	**+0.1**
DURS				*i* S	**Sg**	**09 38 08.0**	**-0.7**
DURS				IAML_P			
	comp=Z,890nm,0.1s						
ZEDA	**zmir-Bergama**	**1.06**	**293**	*i* P	**Pn**	**09 37 56.6**	**+0.7**
ZEDA				*i* S

MAT	**Matsushiro**	**3.89**	**28**	P	**P**	**09 44 55.7**	**+0.4**
MAT				S	**S**	**09 45 53.6**	**-1.2**
MJAR	**Matsushiro Arr**	**3.89**	**28**	P	**P**	**09 44 55.9**	**+0.7**
	0.6nm,0.3s,baz=194,slow=7.2,SNR=45						
MJAR				S	**S**	**09 45 53.2**	**-1.6**
	baz=207,slow=5.1,SNR=1.1						
JNU	**Nakatsue**	**4.27**	**272**	P	**P**	**09 44 58.8**	**-0.1**
	1.0nm,0.3s,baz=111,slow=1.5,SNR=13						
JNU				S	**S**	**09 46 00.6**	**-0.7**
	0.1nm,0.3s,baz=165,slow=23,SNR=1.8						
KSRS	**Korea Array**	**7.88**	**306**	P	**P**	**09 45 36.6**	**+0.5**
	0.4nm,0.3s,baz=121,slow=11,SNR=13						
USRK	**Ussuriysk Ar.**	**11.51**	**345**	P	**P**	**09 46 16.3**	**+0.7**
	0.2nm,0.3s,baz=186,slow=13,SNR=6.1						
MKAR	**Makanchi Array**	**42.56**	**305**	P	**P**	**09 50 58.3**	**+0.3**
	0.3nm,0.4s,baz=93,slow=8.9,SNR=4.8						
WRA	**Warramunga Arr**	**52.77**	**182**	P	**P**	**09 52 15.1**	**-0.2**
	0.7nm,0.7s,baz=0.7,slow=7.9,SNR=2.1						
ASAR	**Alice Springs**	**56.49**	**182**	P	**P**	**09 52 41.3**	**-0.3**
	0.2nm,0.6s,baz=18,slow=9.2,SNR=1.2						
FINES	**FINESS Array B**	**70.16**	**331**	P	**P**	**09 54 09.3**	**0.0**
	1.2nm,0.9s,baz=357,slow=34,SNR=1.1						

*ISCJB **15** 09:51:45.8±1.2,29°.31N±0°.03×34°.21E±0°.07,h9km±5km, Error ellipse: s-maj=10.5km s-min=4.6km az=176.0*
*GII **15** 09:51:47.8±0.0,29°.34N×34°.29E,h12km,MD2.9/3*
*SGS **15** 09:51:47,29°.28N×34°.20E,h13km,Ml3.3*
*JSO **15** 09:51:57.9±2.3,30°.N±14°.×3°.5E±1°.4,h6km±5km,M3.4/10, Mjma3.2/10,ML3.5/2,MLv3.5/10*

ISC 15 09:51:46.3±1.9,29°.28N±0°.03×34°.24E±0°.09,h11km±12km, n29,σ0°83/39,Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAQS	**Haql**	**0.64**	**111**	P	**Pg**	**09 51 59.5**	**+0.8**
HAQS				S	**Sb**	**09 52 09.0**	**+0.6**
HQLS		**0.72**	**88**	P	**Pg**	**09 52 00.9**	**+0.6**
EIL	**Elat**	**0.73**	**58**	Pg	**Pg**	**09 52 00.8**	**+0.3**
EIL				Sg	**Sb**	**09 52 10.6**	**-0.6**
EIL	**Elat**	**0.73**	**58**	P	**Pg**	**09 51 59.6**	**-0.9**
MBRI	**Mt Berech**	**0.78**	**49**	Pg	**Pg**	**09 52 01.6**	**+0.2**
MBRI				Sg	**Sb**	**09 52 12.4**	**-0.2**
AQBJ	**Aqaba**	**0.84**	**57**	P	**Pg**	**09 52 02.7**	**+0.2**
KRMI	**Paran Flat**	**0.94**	**27**	Pg	**Pg**	**09 52 04.1**	**-0.3**
HRFI	**Mount Harif**	**1.03**	**42**	Pg	**Pg**	**09 52 05.8**	**-0.3**
HRFI				Sg	**Sb**	**09 52 19.5**	**-0.1**
HRFI	**Mount Harif**	**1.03**	**42**	P	**Pg**	**09 52 05.7**	**-0.3**
RSHS		**1.09**	**153**	P	**Pb**	**09 52 06.7**	**-0.5**
RSHS				S	**Sb**	**09 52 21.8**	**+0.4**
BDAS	**Al Bad`**	**1.13**	**138**	P	**Pb**	**09 52 07.3**	**-0.7**
PRNI	**Paran**	**1.26**	**32**	Pg	**Pn**	**09 52 09.7**	**-0.2**
KRABS	**KRABS**	**1.47**	**143**	P	**Pn**	**09 52 11.9**	**-0.9**
ZFRI	**Zfri**	**1.51**	**32**	Pn	**Pn**	**09 52 13.0**	**-0.3**
ZFRI				Sn	**Sb**	**09 52 32.7**	**-0.8**
HSNJ	**Maan**	**1.59**	**52**	P	**Pn**	**09 52 15.1**	**+0.5**
JDRJ	**Daraweish**	**1.90**	**40**	P	**Pb**	**09 52 21.1**	**0.0**
YTIR	**Yattir**	**2.21**	**20**	Pn	**Pn**	**09 52 23.2**	**+0.1**
LISJ	**El Lisan**	**2.23**	**28**	P	**Pg**	**09 52 28.3**	**-0.8**
MZDA	**Masada**	**2.25**	**25**	Pn	**Pn**	**09 52 23.5**	**+0.1**
MZDA				Sn	**Sn**	**09 52 51.1**	**0.0**
AMAZ	**Amatzia**	**2.32**	**14**	Pn	**Pn**	**09 52 24.6**	**+0.1**
AMAZ				Sn	**Sn**	**09 52 52.8**	**-0.3**
AMAZ	**Amatzia**	**2.32**	**14**	P	**Pb**	**09 52 29.5**	**+1.3**
DSI	**Dead Sea**	**2.49**	**23**	Pn	**Pn**	**09 52 27.6**	**+0.8**
WALJ	**Wala**	**2.65**	**30**	P	**Pb**	**09 52 32.4**	**-1.4**
SLTI	**Sal'it**	**3.03**	**13**	Pn	**Pn**	**09 52 34.7**	**+0.4**
SLTI				Sn	**Sn**	**09 53 10.6**	**0.0**
HMDT	**Nahal Hemdat**	**3.17**	**20**	Pn	**Pn**	**09 52 36.9**	**+0.8**
MMLI	**Mount Malkishu**	**3.31**	**18**	Pn	**Pn**	**09 52 38.9**	**+0.8**
MMLI				Sn	**Sn**	**09 53 18.1**	**+0.6**
MMLI	**Mount Malkishu**	**3.31**	**18**	P	**Pb**	**09 52 44.5**	**-0.6**
OFRI	**`Ofer**	**3.39**	**11**	Pn	**Pn**	**09 52 39.7**	**+0.4**
SHMJ	**Saham**	**3.68**	**20**	P	**Pn**	**09 52 46.5**	**+3.3**

DJA 15 10:06:35.2±0.9,10°.S±15°.×10°.8E±°.,h88km±59km,M4.1/10, mb4.0/3,MLv4.2/10,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**2.03**	**7**	P	Pn	10 07 07.5	-0.3
CISI				S	Sn	10 07 34.4	+1.8
LEM	**Lembang**	**2.74**	**1**	P	Pn	10 07 17.0	-0.3
UGM	**Wanagama**	**3.37**	**61**	P	Pn	10 07 25.5	-0.3
UGM				S	Sn	10 08 06.0	+1.1
CGJI	**Cibinong**	**3.47**	**328**	P	Pn	10 07 26.0	-1.1
CGJI				S	Sn	10 08 07.7	+0.5
WOJI	**Wonogiri, Jawa**	**3.76**	**63**	P	Pn	10 07 30.8	-0.2
WOJI				S	Sn	10 08 14.0	-0.1
PWJI	**Pagerwojo**	**4.48**	**70**	P	Pn	10 07 40.0	-0.8
PWJI				S	Sn	10 08 29.0	-2.7
GMJI	**Gumukmas**	**5.97**	**78**	P	Pn	10 08 01.2	+0.2
	31nm,1.4s,0.2nm						
MDSI	**Maura Dua**	**6.07**	**326**	P	Pn	10 08 02.7	+0.3
	4.3nm,1.7s,0.1nm						
JAGI	**Jajag, Banyuwa**	**6.61**	**81**	P	Pn	10 08 09.7	-0.2

*ISCJB **15** 10:16:53.1±0.7,7°.38S±0°.06×129°.33E±0°.08,h150km, mb3.7/4,Error ellipse: s-maj=11.1km s-min=8.7km az=2.8*
*IDC **15** 10:16:55.0±2.4,7°.16S×129°.29E,h138km±24km,mb3.5/4, mb1 3.8/7,mb1mx3.3/44,mbtmp4.1/7,Error ellipse: s-maj=29.5km s-min=18.8km az=75.0*

ISC 15 10:16:53.7±0.8,7°.35S±0°.06×129°.44E±0°.10,h150km,n9, σ3°73/12,mb3.7/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.38**	**243**	P	**Pn**	**10 18 26.1**	**+0.7**
	12nm,0.3s,baz=68,slow=18,SNR=5.6						
BATI				S	**Sn**	**10 19 34.1**	**-3.3**
	24nm,0.3s,baz=42,slow=21,SNR=12						
SIJI	**Sorong**	**6.69**	**16**	P	**Pn**	**10 18 29.3**	**-0.4**
	2.4nm,0.3s,baz=196,slow=18,SNR=11						
SIJI				S	**Sn**	**10 19 39.4**	**-5.5**
	2.8nm,0.3s,baz=255,slow=24,SNR=8.4						
FITZ	**Fitzroy Crossi**	**11.31**	**199**	P	**Pn**	**10 19 29.6**	**-1.3**
	2.6nm,0.3s,baz=17,slow=8.3,SNR=70						
FITZ				S	Sn	10 21 27.1	-8.9
	1.9nm,0.3s,baz=113,slow=23,SNR=5.9						
WRA	**Warramunga Arr**	**13.39**	**160**	P	**Pn**	**10 19 57.5**	**-0.4**
	1.5nm,0.3s,baz=335,slow=13,SNR=58						
WRA				S	Sn	10 22 18.3	-7.9
	2.9nm,0.3s,baz=328,slow=22,SNR=13						
ASAR	**Alice Springs**	**16.78**	**166**	P	**Pn**	**10 20 43.0**	**+3.0**
	1.1nm,0.3s,baz=344,slow=9.6,SNR=71						
ASAR				S	**S**	**10 23 40.2**	**-6.5**
	0.2nm,0.3s,baz=327,slow=14,SNR=4.4						
STKA	**Stephens Creek**	**26.91**	**157**	P	**P**	**10 22 25.9**	**+5.1**
	1.1nm,0.4s,baz=333,slow=9.9,SNR=6.7						
CMAR	**Chiang Mai Arr**	**39.53**	**311**	P	**P**	**10 24 10.7**	**+0.4**
	1.1nm,0.4s,baz=141,slow=7.0,SNR=5.2						
MKAR	**Makanchi Array**	**68.22**	**327**	P	**P**	**10 27 39.5**	**+1.4**
	0.5nm,0.5s,baz=125,slow=5.9,SNR=7.4						
ILAR	**Eielson Array**	**93.90**	**25**	P	**P**	**10 29 55.8**	**+1.9**
	0.3nm,0.8s,baz=274,slow=1.4,SNR=2.7						

*KOLA **15** 10:25:45.6,67°.60N×30°.46E,h0km*
*UPP **15** 10:25:56.4±2.0,67°.41N×28°.17E,h0km,ML1.5,Suspected explosion*

HEL 15 10:25:42.0±0.7,67°.68N×30°.94E,h0km,ML1.9, Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.79**	**94**	P		10 26 02.9	+2.6
APA0				S	Sn	10 26 15.6	+2.8
APA	**Apatity**	**0.95**	**95**	P	Pn	10 26 05.6	+3.0
APA				S	Sn	10 26 20.3	+3.5
MSF	**Maaselka**	**1.93**	**204**	PG	Pn	10 26 16.7	+0.7
	baz=24						
MSF				SB	Sn	10 26 39.5	-1.5
RNF	**Rovaniemi**	**2.20**	**243**	PB	Pn	10 26 20.3	+0.6
RNF				SN	Sn	10 26 46.8	-0.9
ARE0	**ARCESS Array S**	**2.73**	**316**	PG	Pb	10 26 30.2	-1.4
	baz=129						
ARE0				SN	Sn	10 26 58.7	-2.0
HEF	**Hetta**	**2.83**	**288**	PG	Pb	10 26 32.6	-0.7
HEF				SN	Sn	10 27 03.5	+0.2
HEF				MSG		10 27 05.4	
	comp=Z,4.5nm,0.2s						

TOF	**Tornio**	**3.06**	**242**	PN	Pn	10 26 31.2	-0.4
TOF				MSG		10 27 11.9	
	comp=Z,2.1nm,0.2s						
PAJU	**Pajala**	**3.10**	**261**	P	Pn	10 26 32.3	+0.1
LANU	**Lannavaara**	**3.41**	**280**	P	Pn	10 26 37.0	+0.6
LANU				S	Sn	10 27 08.2	-9.3
LANU	**Lannavaara**	**3.41**	**280**	PN	Pn	10 26 37.0	+0.6
KALU	**Kalix**	**3.52**	**242**	P	Pn	10 26 37.8	0.0
ERTU	**Ertsjaerv**	**3.60**	**256**	P	Pn	10 26 39.6	+0.6
ERTU				S	Sn	10 27 08.9	-13
ERTU	**Ertsjaerv**	**3.60**	**256**	PN	Pn	10 26 39.7	+0.7
KIF	**Kilpisjarvi**	**3.99**	**294**	PN	Pn	10 26 46.7	+2.5
DUNU	**Dundret**	**4.04**	**267**	P	Pn	10 26 44.8	-0.2
DUNU				S	Sn	10 27 15.0	-18
SJUU	**Sjulsmark**	**4.31**	**244**	P	Pn	10 26 47.2	-1.5
NIKU	**Nikkaluokta**	**4.53**	**278**	P	Pn	10 26 52.3	+0.6

KRSC 15 10:38:31.0±1.0,51°.96N×160°.05E,h7km±17km,ML3.5,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.06**	**297**	*eP*	Pg	10 38 51.0	-0.3
RUS				*eS*	Sb	10 39 05.5	-0.2
SPN	**Mys Shipunski**	**1.15**	**359**	*eP*	Pg	10 38 52.1	-0.9
SPN				*eS*	Sg	10 39 07.9	+0.1
KDTR	**Khodutka, Kamc**	**1.23**	**264**	*eP*	Pb	10 38 54.3	-0.3
KDTR				*eS*	Sn	10 39 11.1	-0.3
MTVR	**Mutnovka**	**1.26**	**295**	*eP*	Pn	10 38 54.6	-0.6
MTVR				*eS*	Sb	10 39 11.9	+0.2
NLC	**Nalytchevo**	**1.29**	**341**	*eP*	Pn	10 38 55.4	0.0
NLC				*eS*	Sn	10 39 13.2	+0.2
DALK	**Dalny**	**1.34**	**324**	*eP*	Pn	10 38 55.9	-0.2
DALK				*eS*	Sn	10 39 14.2	+0.1
ASAK	**Asacha**	**1.39**	**289**	*eP*	Pb	10 38 57.2	-0.2
ASAK				*eS*	Sg	10 39 16.3	+0.6
UGLR	**Uglovaya**	**1.46**	**330**	*eP*	Pn	10 38 57.9	0.0
UGLR				*eS*	Sb	10 39 17.4	0.0
KRMR	**Karymshinskiy**	**1.47**	**307**	*eP*	Pn	10 38 57.6	-0.2
KRMR				*eS*	Sn	10 39 16.4	-0.9
SDLR	**Sedlovina**	**1.50**	**332**	*eP*	Pn	10 38 58.4	-0.1
SMAR	**Somma**	**1.52**	**330**	*eP*	Pn	10 38 58.5	-0.2
AVH	**Avacha**	**1.54**	**329**	*eP*	Pn	10 38 59.1	+0.2
AVH				*eS*	Sn	10 39 19.2	0.0
KRER	**Koryakskii**	**1.57**	**330**	*eP*	Pn	10 38 59.9	+0.5
KOK	**Koryaka**	**1.59**	**328**	*eP*	Pn	10 38 59.9	+0.2
KRX	**Arik**	**1.65**	**329**	*eP*	Pn	10 39 00.5	0.0
APC	**Apacha**	**2.02**	**300**	*eP*	Pn	10 39 06.4	+1.0
APC				*eS*	Sb	10 39 32.6	-0.7
GNL	**Ganaly**	**2.16**	**325**	*eP*	Pn	10 39 08.7	+1.2
GNL				*eS*	Sb	10 39 36.4	-1.1
MKZ	**Mys Kozlova**	**2.79**	**21**	*eP*	Pn	10 39 18.1	+2.0
MKZ				*eS*	Sn	10 39 52.6	+2.6
KZV	**Kizimen**	**3.17**	**3**	*eP*	Pb	10 39 24.9	-2.8
TUMD	**Tumrok D**	**3.26**	**4**	*eP*	Pb	10 39 26.1	-3.1
TUMR	**Tumrok**	**3.33**	**1**	*eP*	Pb	10 39 27.1	-3.4

SJA 15 10:39:14.1±0.4,21°.17S×67°.91W,h80km±29km,ML2.4, MW4.1,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**1.48**	**275**	*i P*	Pn	10 39 41.2	+2.0
PB02	**IPOC Station P**	**1.86**	**265**	*i P*	Pn	10 39 45.5	+1.3
PB02				*i S*	Sn	10 40 09.1	+2.0
PB07	**IPOC Station P**	**1.92**	**253**	*i P*	Pn	10 39 46.8	+1.7
PB06	**IPOC Station P**	**2.17**	**225**	*i P*	Pn	10 39 50.1	+1.7
HJA	**Humahuaca**	**3.08**	**132**	*i P*	Pn	10 40 03.1	+2.2
HJA				IAML		10 40 07.6	
	comp=Z,9.4nm,0.1s						

IDC 15 10:42:27.6±7.7,16°.48S×176°.54W,h0km,mb4.5/2, mb1 4.8/2,mb1mx3.7/19,mbtmp4.5/2,Error ellipse: s-maj=312.4km s-min=68.7km az=140.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.66**	**258**	P	P	10 50 59.2	+0.9
	2.2nm,0.3s,baz=91,slow=7.6,SNR=5.8						
ASAR	**Alice Springs**	**46.91**	**253**	P	P	10 50 59.5	-0.8
	5.2nm,0.6s,baz=84,slow=8.6,SNR=100						
BRTR	**Keskin Array B**	**145.00**	**317**	PKPbc	PKPab	11 02 05.8	-0.8
	0.5nm,0.6s,baz=64,slow=3.4,SNR=2.5						

*ISCJB **15** 10:55:11.9±0.5,37°.93N±0°.04×27°.06E±0°.05,h8km±7km, Error ellipse: s-maj=8.3km s-min=3.8km az=138.3*
*ISK **15** 10:55:11.4,37°.92N×27°.05E,h12km,ML2.3/9*
*DDA **15** 10:55:11.3,37°.93N×27°.07E,h7km±1km,ML2.9*

ISC 15 10:55:11.7±0.9,37°.95N±0°.04×27°.07E±0°.04,h12km±8km, n15,σ0°48/24,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	**zmir**	**0.18**	**306**	*i P*	**Pg**	**10 55 16.3**	**+0.5**
DGB				*i S*	**Sg**	**10 55 18.2**	**-0.4**
DGB				IAML_P			
	comp=Z,11μm,0.1s						
GCAM	**G?zelcaml?**	**0.28**	**152**	PG	**Pg**	**10 55 17.1**	**-0.4**
GCAM				SG	**Sg**	**10 55 21.2**	**-0.1**
GCAM	**G?zelcaml?**	**0.28**	**152**	*i P*	**Pg**	**10 55 17.4**	**-0.1**
GCAM				*i S*	**Sg**	**10 55 21.2**	**-0.1**
GCAM				IAML_P			
	comp=Z,12μm,0.1s						
BLCB	**Balcova**	**0.44**	**357**	PG	**Pg**	**10 55 20.9**	**+0.5**
BLCB				SG	**Sb**	**10 55 27.9**	**-0.1**
ZEY	**zmir**	**0.53**	**303**	*i P*	**Pg**	**10 55 22.1**	**-0.1**
ZEY				*i S*	**Sb**	**10 55 30.8**	**+0.1**
ZEY				IAML_P			
	comp=Z,3μm,0.1s						
URLA	**Izmir**	**0.56**	**318**	PG	**Pg**	**10 55 22.7**	**+0.1**
URLA				SG	**Sb**	**10 55 31.1**	**-0.3**
URLA	**Izmir**	**0.56**	**318**	*i P*	**Pb**	**10 55 23.4**	**-0.1**
URLA				*i S*	**Sb**	**10 55 31.1**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**0.65**	**90**	PG	**Pb**	**10 55 24.9**	**-0.2**
AYDN	**Tasoluk**	**0.70**	**114**	*i P*	**Pb**	**10 55 26.5**	**+0.5**
AYDN				*i S*	**Sb**	**10 55 35.2**	**-0.4**
AYDN				IAML_P			
	comp=Z,1μm,0.1s						
BODT	**Bodrum**	**0.90**	**168**	PG	**Pg**	**10 55 29.0**	**-0.2**
CHOS	**Chios island**	**0.91**	**299**	PG	**Pn**	**10 55 30.2**	**-0.3**
BDRM	**Kayabasi**	**0.93**	**161**	*i P*	**Pn**	**10 55 32.3**	**+1.7**
BDRM				*i S*	**Sg**	**10 55 41.5**	**-0.3**
YER	**Yerkesik**	**1.26**	**130**	PN	**Pn**	**10 55 35.0**	**-0.3**
DAT	**Datca**	**1.28**	**161**	PN	**Pb**	**10 55 35.7**	**-0.2**
KULA	**Kula-Manisa**	**1.38**	**65**	PN	**Pb**	**10 55 37.3**	**-0.2**

SJA 15 11:14:17.0±0.6,31°.41S×67°.76W,h17km±2km,ML2.5, MW3.8,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.62**	**277**	*i P*	Pb	11 14 29.6	+0.2
RTLL				IAML		11 14 40.3	
	comp=Z,87nm,0.1s						
AMOG	**MOGNA**	**0.79**	**306**	*i P*	Pb	11 14 32.3	+0.1
AMOG				*i S*	Sn	11 14 44.0	-0.7
RTCV	**Cerro Valdivia**	**0.81**	**236**	*i P*	Pg	11 14 33.1	+0.3
RTCV				*i S*	Sn	11 14 44.6	-0.6
ACAN	**Cantantal**	**0.99**	**151**	*i P*	Pg	11 14 36.3	+0.1
ACAN				*i S*	Sn	11 14 50.0	+0.3
RTLS	**Leoncito**	**1.37**	**253**	*i P*	Pg	11 14 43.0	-0.5
RTLS				IAML		11 15 02.3	
	comp=Z,69nm,0.2s						
RTLS				*i S*	Sg	11 15 02.8	+1.4
ASAL	**Salagasta**	**1.49**	**218**	*i P*	Pg	11 14 45.3	-0.5
ASAL				*i S*	Sg	11 15 06.0	+0.7
AUSP	**Uspallata**	**1.61**	**239**	*i P*	Pg	11 14 47.3	-0.7
AUSP				*i S*	Sg	11 15 10.1	+1.0
ARCO	**CERRO ARCO**	**1.74**	**215**	*i P*	Pb	11 14 48.9	+0.3
ARCO				*i S*	Sg	11 15 12.1	-1.1
ARCO				IAML		11 15 16.1	
	comp=Z,44nm,0.4s						
MRA	**San Martin**	**2.00**	**121**	*i P*	Pb	11 14 52.2	-0.8
MRA				IAML		11 15 21.6	
	comp=Z,24nm,0.4s						

*NSSC **15** 11:18:19.6±1.4,33°.01N×36°.40E,h30km±60km,ML1.6*
*GRAL **15** 11:18:23.8±0.3,33°.78N×35°.79E,h0km±58km,MD2.7*

ISC 15 11:18:13.2±3.2,33°.3N±0°.1×35°.4E±0°.1,h12km,n7, σ3°95/10,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.44**	**60**	*eP*	**Pn**	**11 18 28.9**	**+3.3**
DQRL	**Deir Qamar**	**0.46**	**21**	*eP*	**Pn**	**11 18 27.3**	**+1.6**
DQRL				*eS*	**Sg**	**11 18 30.0**	**+1.6**
BRBR	**Barbar**	**0.50**	**74**	*eP*	Pn	11 18 31.3	+4.9
BRBR				*eS*	**Sb**	**11 18 38.3**	**+6.9**
BRBR				AML	AML	11 18 40.4	
	comp=E,77nm,0.4s						
BRBR				AML	AML	11 18 40.8	
	comp=N,55nm,0.6s						
BHL	**Bhannes**	**0.67**	**20**	*eP*	**Pg**	**11 18 26.7**	**+0.4**
BHL				*eS*	**Sg**	**11 18 28.9**	**-6.2**
QASN	**Qassioun**	**0.80**	**71**	*eP*	**Pn**	**11 18 30.0**	**-0.4**
QASN				*eS*	**Sb**	**11 18 38.6**	**-1.2**
QASN				AML	AML	11 18 45.1	
	comp=N,106nm,0.4s						
QASN				AML	AML	11 18 49.1	
	comp=E,57nm,0.3s						
TOTH	**TOTAH**	**0.89**	**84**	*eP*	**Pg**	**11 18 28.2**	**-2.2**
TOTH				AML	AML	11 18 44.7	
	comp=N,12nm,0.9s						
TOTH				AML	AML	11 18 54.2	
	comp=E,13nm,0.4s						
HWQ	**Hawqa**	**1.11**	**25**	*eP*	**Pb**	**11 18 33.0**	**-1.4**

*BJI **15** 11:20:32.4±0.0,33°.90S×179°.50E,h182km,mb5.3/53, mB5.7/62*
*NEIC **15** 11:20:34.0±0.0,33°.79S×179°.46E,h190km,Moment Tensor Solution. s75 Moment tensor: Scale 10^{18}Nm; M_{rr}0.87; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-0.67; $M_{r\theta}$-0.12; $M_{\theta\phi}$-0.46; $M_{\phi r}$1.02; Best double couple: $M_0$1.40000×10^{18} NP1:ϕ_s5.00000°, δ70.00000°,λ71.00000°. NP2:ϕ_s232.00000°,δ27.00000°, λ133.00000°. Principal axes: T 1.4500, Plg60.0000°, Azm247.0000°; N -0.1400, Plg18.0000°, Azm12.0000°; P -1.3000, Plg22.0000°, Azm110.0000°;*
*ISCJB **15** 11:20:35.6±0.4,33°.90S±0°.03×179°.39E±0°.02,h196km±4km, mb5.4/297 Error ellipse: s-maj=4.8km s-min=3.0km az=171.4*
*NEIC **15** 11:20:36.0±1.6,33°.85S×179°.40E,h195km,mb5.5/212, MW6.0,MW6.0,MW6.0,Error ellipse: s-maj=12.7km s-min=10.4km az=193.0,Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M_{rr}0.87; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-1.09; $M_{r\theta}$-0.12; $M_{\theta\phi}$-0.12; $M_{\phi r}$1.02; Best double couple: $M_0$1.40000×10^{18} NP1:ϕ_s198.00000°,δ23.00000°, λ111.00000°. NP2:ϕ_s355.00000°,δ68.00000°,λ81.00000°. Principal axes: T 1.3200, Plg66.0000°, Azm250.0000°; N 0.2100, Plg8.0000°, Azm359.0000°; P -1.5300, Plg23.0000°, Azm92.0000°;*
NEIC Broadband depth 195 km.
*WEL **15** 11:20:38.4±1.3,34°.S±20°.×18°.0E±1°.4,h245km±39km, M5.6/27,mB5.3/2,ML6.2/1,MLv5.6/27,Mw(mB)4.7/2 Error ellipse: s-maj=0.0km s-min=0.0km az=27.5*
*IDC **15** 11:20:39.0±0.7,33°.82S×179°.40E,h217km±5km,mb5.2/39, mb1 5.2/39,mb1mx5.2/40,mbtmp5.7/39,Error ellipse: s-maj=9.0km s-min=7.4km az=5.0*
*MOS **15** 11:20:39.1±0.8,33°.75S×179°.34E,h228km,mb5.6/41, Error ellipse: s-maj=8.6km s-min=7.5km az=94.5*
*GCMT **15** 11:20:40.0±0.1,33°.82S×179°.63E,h200km,MW6.0/138, Moment Tensor Solution. s138,c310; s137,c493; Duration: 2≥5 Moment tensor: Scale 10^{18}Nm; M_{rr}0.76±.01; $M_{\theta\theta}$0.05±.01; $M_{\phi\phi}$-0.80±.01; $M_{r\theta}$-0.10±.01; $M_{\theta\phi}$-0.39±.01; $M_{\phi r}$0.99±.01; Best double couple: $M_0$1.32600×10^{18} NP1:ϕ_s1.00000°,δ71.00000°, λ73.00000°. NP2:ϕ_s224.00000°,δ26.00000°,λ131.00000°. Principal axes: T 1.2950, Plg60.0000°, Azm245.0000°; N 0.0620, Plg16.0000°, Azm6.0000°; P -1.3570, Plg24.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **15** 11:20:57.2±0.0,33°.50S×179°.93E,h201km Best double couple: NP1:ϕ_s226.00000°,δ29.00000°,λ128.00000°. NP2:ϕ_s4.00000°,δ68.00000°,λ71.00000°. Principal axes: T 1.2200, Plg62.0000°, Azm245.0000°; N 0.0300, Plg17.0000°, Azm11.0000°; P -1.2600, Plg21.0000°, Azm108.0000°;*

ISC 15 11:20:37.7±0.3,33°.90S±0°.03×179°.49E±0°.03,h210km±2km, h210km:pP-P,n1892,σ1°50/2119,mb5.5/290,93C-34D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.78**	**194**	*e*Pn	**Pn**	**11 21 34.3**	**-2.6**
MXZ				*e*Sn	**S**	**11 22 21.3**	**-2.0**
MXZ	**Matakaoa Point**	**3.78**	**194**	P	**Pn**	**11 21 34.4**	**-2.6**
MXZ				S	**S**	**11 22 19.8**	**-3.5**
WMGZ	**Waiomatatini S**	**4.00**	**192**	P	**Pn**	**11 21 38.8**	**-1.0**
WMGZ				S	**S**	**11 22 25.8**	**-2.6**
GRZ	**Great Barrier**	**4.05**	**234**	P	**Pn**	**11 21 41.5**	**+1.2**
WSRZ	**White Island S**	**4.07**	**207**	P	**Pn**	**11 21 41.0**	**+0.5**
WSRZ				S	**S**	**11 22 30.0**	**+0.2**
WIZ	**White Island**	**4.07**	**207**	P	**Pn**	**11 21 40.4**	**-0.1**
WIZ				S	**S**	**11 22 28.2**	**-1.6**
HAZ	**Te Kaha**	**4.09**	**199**	P	**Pn**	**11 21 40.0**	**-0.7**
HAZ				S	**S**	**11 22 28.6**	**-1.6**
PKGZ	**Pakihi

MTW S S 11 23 47.2 -12
CAW Cannon Point 8.00 205 P Pn 11 22 23.9 -6.9
CAW S S 11 23 52.2 -9.0
TRWZ Traveller 8.06 201 P Pn 11 22 25.2 -6.4
PAWZ Paruwai Farm 8.13 202 P Pn 11 22 25.4 -7.1
PAWZ S S 11 23 53.8 -10
DUWZ D'Urville Isla 8.19 211 P Pn 11 22 27.1 -6.1
SNZO South Karori 8.31 206 *e*Pn Pn 11 22 28.2 -6.6
SNZO *e*Sn **S** **11 24 00.6 -7.8**
BHW Baring Head 8.34 205 P Pn 11 22 28.0 -7.1
PLWZ Palliser 8.35 202 P Pn 11 22 28.1 -7.3
TCW Tory Channel 8.38 208 P Pn 11 22 28.8 -6.9
TUWZ Tuamarina 8.70 209 P Pn 11 22 32.8 -7.1
NNZ Nelson 8.76 212 P Pn 11 22 34.3 -6.4
QRZ Quartz Range 8.85 217 P Pn 11 22 36.2 -5.7
CMWZ Cape Campbell 8.87 206 P Pn 11 22 37.1 -5.0
BSWZ Blackbirch Sta 8.97 208 P Pn 11 22 36.6 -6.8
THZ Tophouse 9.41 212 *e*Pn Pn 11 22 43.9 -5.2
THZ *e*Sn **S** **11 24 28.9 -5.9**
THZ Tophouse 9.41 212 P Pn 11 22 42.7 -6.4
KHZ Kahutara 9.70 207 P Pn 11 22 45.3 -7.4
DSZ Denniston Nort 9.90 216 P Pn 11 22 48.9 -6.5
GVZ Greta Valley S 10.37 207 P Pn 11 22 54.0 -7.3
LTZ Lake Taylor 10.52 210 P Pn 11 22 56.2 -7.0
AMCZ Amberley 10.69 208 P Pn 11 22 59.1 -6.4
NFK Norfolk Island 10.98 293 P **P** **11 23 12.6 -2.8**
baz=11,SNR=11
OKCZ Okains Bay 11.01 205 P Pn 11 23 02.9 -6.6
OXZ Oxford 11.06 210 P Pn 11 23 02.5 -7.8
MOZ McQueen's Vall 11.14 207 P Pn 11 23 03.1 -8.1
AKCZ Akaroa Harbour 11.19 205 P Pn 11 23 05.2 -6.7
RPZ Rata Peaks 11.79 211 P Pn 11 23 13.7 -5.9
12nm,0.3s,baz=226,slow=2.7,SNR=59
RPZ S S 11 25 16.5 -14
41nm,0.3s,baz=147,slow=23,SNR=12
RPZ ScP **ScP** **11 32 00.1 -1.4**
2.3nm,0.3s,baz=263,slow=3.0,SNR=5.7
RPZ ScS **ScS** **11 35 33.7 -3.5**
0.1nm,0.3s,baz=336,slow=8.0,SNR=5.3
ODZ Otahua Downs 13.04 209 *e*Pn **Pn** **11 23 30.7 -4.5**
PYZ Puysegur Point 15.66 215 *e*Pn **P** **11 24 05.1 -1.9**
194nm,1.1s
OUENC Ouen Island, N 15.96 313 *e*P **Pn** **11 24 11.4 +0.3**
624nm,1.1s
MARNC Mare, Loyalty 15.98 318 *e*P **Pn** **11 24 11.5 +0.1**
533nm,1.2s
ONTNC Ouen Toro 16.28 312 *e*P **Pn** **11 24 15.0 +0.1**
330nm,0.9s
DZM Mont Dzumac 16.46 312 P **Pn** **11 24 18.7 +1.5**
15nm,0.3s,baz=155,slow=10,SNR=110
DZM S **S** **11 27 22.5 +4.6**
1.5nm,0.3s,baz=117,slow=16,SNR=1.6
DZM ScP **ScP** **11 32 09.6 -0.3**
1.4nm,0.3s,baz=160,slow=9.6,SNR=11
DZM Mont Dzumac 16.46 312 *e*P **Pn** **11 24 18.6 +1.4**
544nm,1.2s
DZM Mont Dzumac 16.46 312 *e*P **Pn** **11 24 17.5 +0.3**
494nm,1.2s
LHI Lord Howe Isla 17.35 272 *e*P **Pn** **11 24 27.3 -0.2**
250nm,0.8s
LHI Lord Howe Isla 17.35 272 P **Pn** **11 24 28.7 +1.2**
baz=17,SNR=12
NIUE Niue 17.53 35 *e*P **P** **11 24 28.2 +0.5**
484nm,0.8s
NIUE Niue 17.53 35 P **P** **11 24 28.6 +0.9**
baz=17,SNR=6.0
RAR Rarotonga 22.26 61 P **P** **11 25 18.0 +0.5**
367nm,1.1s,baz=228,slow=7.5,SNR=21
RAR S S 11 29 24.7 +18
608nm,1.2s,baz=62,slow=18,SNR=10
RAR Rarotonga 22.26 61 *e*P **P** **11 25 17.7 +0.2**
681nm,1.2s
RAR Rarotonga 22.26 61 *e*P **P** **11 25 17.7 +0.2**
RAR pmax pmax
comp=Z,681nm,1.2s
RIV Riverview 23.50 262 P **P** **11 25 29.5 +1.0**
baz=24,SNR=5.0
MGCD Mangrove Creek 23.63 264 P **P** **11 25 32.7 +2.9**
baz=24,SNR=110
ARMA Armidale 23.81 271 *e*P **P** **11 25 32.8 +1.2**
comp=Z,124nm,0.8s
ARMA Armidale 23.81 271 P **P** **11 25 34.8 +3.2**
baz=24,SNR=62
CNB Canberra Magne 24.79 258 P **P** **11 25 43.1 +2.7**
baz=25,SNR=39
MILA Mila 24.85 254 P **P** **11 25 43.7 +2.8**
baz=25,SNR=7.0
CAN Canberra 25.09 258 *e*P **P** **11 25 44.2 +1.1**
comp=Z,159nm,1.1s
CAN Canberra 25.09 258 *e*P **P** **11 25 44.2 +1.1**
CAN pmax pmax
comp=Z,159nm,1.1s
YNG Young 25.70 260 P **P** **11 25 50.9 +2.3**
baz=26,SNR=34
EIDS Eidsvold 26.05 281 *e*P **P** **11 25 52.9 +1.1**
comp=Z,207nm,0.8s
EIDS Eidsvold 26.05 281 P **P** **11 25 53.2 +1.5**
baz=26,SNR=102
TAU Tasmania Unive 26.63 241 *e*P **P** **11 25 58.2 +1.4**
comp=Z,273nm,0.8s
TAU Tasmania Unive 26.63 241 *e*P **P** **11 25 58.2 +1.4**
TAU pmax pmax
comp=Z,273nm,0.8s
MOO Moorlands 26.66 242 P **P** **11 25 60.0 +3.0**
baz=27,SNR=76
RMQ Roma 27.50 277 P **P** **11 26 07.1 +2.4**
baz=28,SNR=357
TOO Toolangi 27.75 253 *e*P **P** **11 26 07.7 +0.9**
comp=Z,126nm,1.1s
TOO Toolangi 27.75 253 P **P** **11 26 10.6 +3.8**
baz=28,SNR=38
TOO Toolangi 27.75 253 *e*P **P** **11 26 07.7 +0.9**
TOO pmax pmax
comp=Z,126nm,1.1s
CMSA Cobar Meteorol 28.46 265 P **P** **11 26 14.7 +1.5**
baz=28,SNR=193
TBI Tubuai 29.11 77 *e*P **P** **11 26 20.5 +1.5**
comp=Z,410nm,1.0s
TBI *e*S **S** **11 30 55.9 +0.7**
comp=Z,3μm,30.5s
TBI Tubuai 29.11 77 *e*T T 11 55 04.7
comp=Z,230nm,0.4s
HNR Honiara 30.26 319 *e*P **P** **11 26 29.0 -0.2**
HNR Honiara 30.26 319 P **P** **11 26 29.0 -0.2**
comp=Z,646nm,0.9s,baz=211,slow=3.5,SNR=22
HNR S **S** **11 31 12.3 -0.9**
comp=Z,30nm,0.3s,baz=281,slow=8.4,SNR=3.5
HNR Honiara 30.26 319 *e*P **P** **11 26 29.2 0.0**
comp=Z,634nm,0.9s
HNR Honiara 30.26 319 P **P** **11 26 29.0 -0.2**
ARPS Mount Arapiles 30.72 254 P **P** **11 26 35.0 +2.0**
baz=31,SNR=95
STKA Stephens Creek 31.77 263 P **P** **11 26 43.3 +1.0**
comp=Z,45nm,0.8s,baz=104,slow=9.6,SNR=62
STKA PcP **PcP** **11 29 28.3 +0.1**
comp=Z,54nm,0.7s,baz=90,slow=1.4,SNR=6.1
STKA ScP **ScP** **11 32 49.8 -1.7**
comp=Z,11nm,0.8s,baz=92,slow=5.8,SNR=2.9
STKA ScS **ScS** **11 36 47.3 -3.0**
comp=Z,1.9nm,0.8s,baz=138,slow=18,SNR=7.6
STKA PKiKP **PKiKP** **11 36 56.4 -0.2**
comp=Z,4.3nm,0.7s,baz=129,slow=0.6,SNR=5.1
STKA Stephens Creek 31.77 263 *e*P **P** **11 26 42.7 +0.5**
comp=Z,15nm,0.9s
STKA *e*PcP **PcP** **11 29 27.9 -0.4**
STKA *e*ScP **ScP** **11 32 52.2 +0.7**
STKA Stephens Creek 31.77 263 P **P** **11 26 43.2 +1.0**
baz=32,SNR=75
STKA Stephens Creek 31.77 263 *e*P **P** **11 26 42.7 +0.5**
STKA *e* 11 29 27.9
STKA pmax pmax
comp=Z,15nm,0.9s
PAE Paea 32.05 67 *e*P **P** **11 26 45.3 +0.5**
comp=Z,16nm,1.2s
PAE Paea 32.05 67 *e*T T 11 57 43.4
comp=Z,61nm,0.3s
PPT2 Papeete2 32.09 67 *e*P **P** **11 26 46.2 +0.9**
comp=Z,134nm,1.4s
PPT2 *e*S **S** **11 31 37.9 -4.0**
comp=Z,3μm,27.8s
PPT2 Papeete2 32.09 67 *e*T T 11 57 52.0
comp=Z,61nm,0.3s
PPTF Pamatai, Papee 32.10 67 *e*P **P** **11 26 45.7 +0.3**
comp=Z,412nm,1.6s
PPT Papeete 32.10 67 P **P** **11 26 46.6 +1.3**
comp=Z,46nm,0.6s,baz=84,slow=4.1,SNR=13

PPT ScP **ScP** **11 32 54.1 +1.2**
comp=Z,45nm,1.1s,baz=58,slow=10,SNR=4.6
TVO Taravao 32.23 68 *e*P **P** **11 26 47.5 +1.1**
comp=Z,87nm,1.5s
TVO Taravao 32.23 68 *e*T T 11 58 01.7
comp=Z,14nm,0.4s
TIAR Tiarei 32.29 68 *e*P **P** **11 26 47.9 +1.0**
comp=Z,29nm,0.8s
CTA Charters Tower 32.49 286 P **P** **11 26 50.2 +1.5**
comp=Z,334nm,0.5s,baz=108,slow=11,SNR=289
CTA S **S** **11 31 50.9 +2.9**
comp=Z,6.1nm,0.7s,baz=15,slow=23,SNR=5.7
CTA ScP **ScP** **11 32 53.3 -0.9**
comp=Z,13nm,0.7s,baz=81,slow=3.8,SNR=5.1
CTAO Charters Tower 32.49 286 *e*P **P** **11 26 49.9 +1.2**
comp=Z,394nm,0.6s
CTAO Charters Tower 32.49 286 *e*P **P** **11 26 49.9 +1.2**
CTAO pmax pmax
comp=Z,394nm,0.6s
MEH Mehetia 33.09 69 *e*P **P** **11 26 55.1 +1.2**
comp=Z,133nm,1.3s
HTT Hallett 33.61 259 P **P** **11 26 58.9 +0.6**
baz=34,SNR=143
PMOR Pomariorio Ree 34.94 65 *e*P **P** **11 27 10.6 +0.9**
comp=Z,366nm,1.2s
PMOR Pomariorio Ree 34.94 65 *e*T T 12 01 18.5
comp=Z,28nm,0.3s
VAH Vaihoa 35.00 66 *e*P **P** **11 27 10.9 +0.7**
comp=Z,374nm,1.2s
VAH Vaihoa 35.00 66 *e*T T 12 01 20.5
comp=Z,178nm,0.2s
TARA Tarawa 35.61 349 *e*P **P** **11 27 16.1 +0.7**
comp=Z,749nm,1.6s
BBOO Buckleboo 36.09 259 *e*P **P** **11 27 19.0 -0.5**
comp=Z,127nm,0.9s
BBOO Buckleboo 36.09 259 P **P** **11 27 18.8 -0.6**
baz=36,SNR=33
QIS Mount Isa 37.64 280 P **P** **11 27 33.1 +0.5**
baz=38,SNR=112
COEN Coen 38.40 292 *e*P **P** **11 27 37.9 -1.1**
comp=Z,185nm,0.8s
COEN Coen 38.40 292 P **P** **11 27 40.1 +1.2**
baz=38,SNR=24
PMG Port Moresby 38.41 302 P **P** **11 27 39.9 +0.9**
comp=Z,166nm,0.9s,baz=75,slow=4.8,SNR=33
PMG PcP **PcP** **11 29 48.2 +0.2**
comp=Z,76nm,0.8s,baz=25,slow=9.0,SNR=5.3
PMG S **S** **11 33 14.4 -3.8**
comp=Z,25nm,0.8s,baz=22,slow=9.3,SNR=5.1
PMG Port Moresby 38.41 302 *e*P **P** **11 27 38.5 -0.5**
comp=Z,104nm,0.7s
PMG *e*PcP **PcP** **11 29 48.2 +0.2**
RABL Rabaul 38.99 313 *e*P **P** **11 27 44.3 +0.4**
comp=Z,678nm,0.5s
AS31 Alice Springs 40.95 272 *e*P **P** **11 27 59.9 0.0**
AS31 *e*PcP **PcP** **11 29 56.0 -0.1**
AS31 *e*ScP **ScP** **11 33 24.2 -1.5**
AS31 *e*S **S** **11 33 54.8 -1.2**
ASAR Alice Springs 40.95 272 P **P** **11 27 59.9 0.0**
comp=Z,228nm,0.7s,baz=105,slow=7.6,SNR=630
ASAR PcP **PcP** **11 29 56.0 -0.1**
comp=Z,29nm,0.7s,baz=122,slow=3.3,SNR=5.1
ASAR ScP **ScP** **11 33 24.2 -1.5**
comp=Z,5.2nm,0.6s,baz=115,slow=4.4,SNR=3.7
ASAR S **S** **11 33 54.8 -1.2**
comp=Z,6.9nm,0.8s,baz=112,slow=15,SNR=5.9
ASAR PKiKP **PKiKP** **11 37 03.5 -0.5**
comp=Z,2.7nm,0.6s,baz=94,slow=0.7,SNR=5.9
ASAR ScS **ScS** **11 37 37.9 -3.9**
comp=Z,1.3nm,0.7s,baz=117,slow=3.2,SNR=3.4
ASAR PKPPKP **P'P'df** **12 00 07.9 -4.7**
comp=Z,1.1nm,0.8s,baz=264,slow=0.9,SNR=2.9
RKT Rikitea 41.14 87 *e*P **P** **11 28 03.8 +2.3**
comp=Z,342nm,1.2s
RKT *e*S **S** **11 33 59.2 +0.4**
comp=Z,3μm,26.0s
WC3 Warramunga Arr 42.23 277 *e*P **P** **11 28 10.1 -0.3**
comp=Z,222nm,0.5s
WB2 Warramunga Arr 42.25 277 *e*P **P** **11 28 10.1 -0.5**
comp=Z,236nm,0.4s
WRAB Tennant Creek 42.26 277 *e*P **P** **11 28 10.3 -0.3**
comp=Z,221nm,0.9s
WRAB Tennant Creek 42.26 277 *c i*P **P** **11 28 10.2 -0.3**
WRAB pmax pmax
comp=Z,284nm,1.0s
WR1 Warramunga Arr 42.26 277 *e*P **P** **11 28 10.3 -0.3**
WR1 *e*PcP **PcP** **11 30 01.2 +0.7**
WR1 *e*S **S** **11 34 13.6 -1.7**
WRA Warramunga Arr 42.26 277 P **P** **11 28 10.3 -0.3**
comp=Z,144nm,0.5s,baz=110,slow=8.2,SNR=373
WRA PcP **PcP** **11 30 01.2 +0.7**
WRA ScP **ScP** **11 33 28.7 -2.2**
comp=Z,12nm,0.8s,baz=121,slow=4.0,SNR=3.4
WRA S **S** **11 34 13.6 -1.7**
comp=Z,12nm,0.8s,baz=107,slow=14,SNR=4.1
WRA ScS **ScS** **11 37 46.8 -3.1**
comp=Z,4.6nm,1.2s,baz=90,slow=9.5,SNR=2.5
FORT Forrest 43.20 259 *e*P **P** **11 28 17.7 -0.3**
comp=Z,213nm,0.4s
FORT Forrest 43.20 259 P **P** **11 28 18.1 +0.1**
baz=43,SNR=108
MANU Manus Island 43.65 310 *e*P **P** **11 28 22.2 +0.5**
comp=Z,255nm,1.2s
SBA Scott Base 44.40 184 *e*P **P** **11 28 29.0 +2.1**
comp=Z,231nm,1.0s
SBA Scott Base 44.40 184 *e*P **P** **11 28 29.0 +2.1**
SBA pmax pmax
comp=Z,231nm,1.0s
VNDA Vanda 44.41 185 P **P** **11 28 29.1 +2.1**
comp=Z,30nm,0.6s,baz=360,slow=8.4,SNR=83
VNDA PcP **PcP** **11 30 08.6 +1.9**
comp=Z,17nm,0.6s,baz=302,slow=3.5,SNR=7.4
VNDA ScP **ScP** **11 33 38.3 -0.4**
comp=Z,11nm,0.9s,baz=338,slow=4.8,SNR=3.3
VNDA S **S** **11 34 51.3 +6.2**
comp=Z,3.1nm,0.9s,baz=60,slow=8.0,SNR=1.7
VNDA Vanda 44.41 185 *e*P **P** **11 28 28.2 +1.2**
comp=Z,90nm,1.3s
VNDA *e*PcP **PcP** **11 30 08.9 +2.2**
VNDA *e*ScP **ScP** **11 33 39.1 +0.5**
VNDA Vanda 44.41 185 *e*P **P** **11 28 28.2 +1.2**
VNDA *e* 11 30 08.9
VNDA pmax pmax
comp=Z,91nm,1.3s
TAOE Nuku Hiva Isla 44.67 66 *e*S **S** **11 34 47.9 -2.6**
comp=Z,3μm,24.5s
WRKA Warakurna 45.05 267 P **P** **11 28 31.7 -1.1**
baz=45,SNR=159
KDU Kakadu 47.58 285 P **P** **11 28 52.0 -0.5**
baz=48,SNR=52
JAY Jayapura 47.78 302 P **P** **11 28 54.4 +0.2**
comp=Z,156nm,0.9s,baz=258,slow=0.8,SNR=22
JAY S **S** **11 35 35.5 +0.8**
comp=Z,17nm,1.1s,baz=228,slow=20,SNR=2.6
JAY Jayapura 47.78 302 P **P** **11 28 55.2 +1.1**
comp=Z,2μm,1.2s,comp=Z,34μm
KMBL Kambalda 48.03 256 P **P** **11 28 55.5 -0.3**
baz=48,SNR=52
GENI Genyem 48.11 302 P **P** **11 28 57.5 +1.0**
comp=Z,361nm,0.8s,comp=Z,7μm
MTN Manton Dam 48.57 284 *e*P **P** **11 28 59.8 -0.3**
comp=Z,95nm,0.5s
MTN Manton Dam 48.57 284 P **P** **11 29 00.4 +0.3**
baz=49,SNR=37
KNRA Kununurra 48.98 279 P **P** **11 29 02.9 -0.3**
baz=49,SNR=38
FITZ Fitzroy Crossi 50.35 274 P **P** **11 29 13.0 -0.5**
comp=Z,89nm,0.5s,baz=127,slow=6.4,SNR=89
FITZ S **S** **11 36 09.4 -0.9**
comp=Z,5.5nm,0.9s,baz=131,slow=12,SNR=1.8
FITZ Fitzroy Crossi 50.35 274 *e*P **P** **11 29 13.4 0.0**
FITZ Fitzroy Crossi 50.35 274 P **P** **11 29 13.3 -0.2**
baz=50,SNR=102
CASY Casey 51.05 209 *e*P **P** **11 29 17.8 -0.3**
comp=Z,262nm,0.9s
CASY *e*PcP **PcP** **11 30 32.0 +1.2**
NWAO Narrogin (SRO) 51.24 253 P **P** **11 29 19.3 -0.7**
comp=Z,67nm,0.6s,baz=117,slow=7.7,SNR=49
NWAO PcP **PcP** **11 30 32.3 +0.2**
comp=Z,14nm,0.6s,baz=93,slow=1.1,SNR=3.6
NWAO Narrogin (SRO) 51.24 253 *e*P **P** **11 29 19.5 -0.5**
comp=Z,249nm,1.4s
NWAO *e*PcP **PcP** **11 30 31.8 -0.3**
NWAO Narrogin (SRO) 51.24 253 P **P** **11 29 20.0 0.0**
baz=51,SNR=76
NWAO Narrogin (SRO) 51.24 253 *e*P **P** **11 29 19.5 -0.5**
NWAO *e* 11 30 31.8

NWAO pmax pmax
comp=Z,249nm,1.4s
NWAO Narrogin (SRO) 51.24 253 P **P** **11 29 19.5 -0.5**
NWAO P **P** **11 29 21.8 +1.8**
SNR=8.2
SRPI Serui, Papua 51.43 299 P **P** **11 29 24.0 +2.4**
comp=Z,328nm,0.6s
BAKI Biak 51.99 299 P **P** **11 29 27.2 +1.5**
comp=Z,438nm,0.9s,comp=Z,8μm
MUN Mundaring 52.38 253 P **P** **11 29 27.6 -0.8**
baz=52,SNR=46
BLDU Ballidu 52.46 255 P **P** **11 29 28.7 -0.3**
baz=52,SNR=16
H01W1 Cape Leeuwin H 53.02 249 P **P** **11 29 35.8 +3.0**
baz=119,slow=8.6,SNR=10.0
H01W2 Cape Leeuwin H 53.04 249 P **P** **11 29 35.1 +2.2**
baz=119,slow=8.6,SNR=7.7
H01W3 Cape Leeuwin H 53.04 249 P **P** **11 29 35.5 +2.6**
baz=119,slow=8.6,SNR=14
PSA00 Pilbara Seismi 53.54 267 *e*P **P** **11 29 36.3 -0.7**
comp=Z,58nm,0.9s
PSA00 *e*PcP **PcP** **11 30 40.5 -0.5**
MORW Morawa 53.57 257 *e*P **P** **11 29 36.9 -0.3**
comp=Z,96nm,0.7s
MORW Morawa 53.57 257 P **P** **11 29 35.6 -1.6**
baz=54,SNR=55
FAKI Fak Fak 53.70 295 *e*P **P** **11 29 38.1 -0.1**
comp=Z,155nm,0.7s
FAKI Fak Fak 53.70 295 P **P** **11 29 38.1 -0.1**
comp=Z,257nm,1.2s,comp=Z,4μmcomp=Z,7μm
BNDI Bandanaira 54.47 291 P **P** **11 29 45.0 +1.2**
comp=Z,899nm,0.7s
SIJI Sorong 55.77 296 P **P** **11 29 53.0 -0.1**
comp=Z,157nm,0.6s,baz=111,slow=5.8,SNR=45
SWI Sorong 55.78 296 P **P** **11 29 54.9 +1.8**
comp=Z,319nm,0.6s,comp=Z,6μm
SOEI Soe 55.87 282 *e*P **P** **11 29 53.8 -0.1**
comp=Z,306nm,1.0s
SOEI Soe 55.87 282 P **P** **11 29 57.1 +3.2**
comp=Z,291nm,1.3s,comp=Z,6μm
MSAI Masohi 55.97 292 P **P** **11 29 56.4 +1.9**
comp=Z,81nm,0.8s,comp=Z,730nm
BATI Baumata 56.10 281 P **P** **11 29 56.4 +0.9**
comp=Z,137nm,0.7s,baz=216,slow=1.9,SNR=14
BATI Baumata 56.10 281 P **P** **11 29 58.6 +3.1**
comp=Z,80nm,0.8s,comp=Z,2μm
QSPA South Pole Qui 56.22 180 *e*P **P** **11 29 56.9 +1.2**
comp=Z,715nm,0.9s
GUMO Guam 57.59 319 P **P** **11 30 05.2 -0.6**
comp=Z,234nm,1.1s,baz=169,slow=15,SNR=7.4
GUMO Guam 57.59 319 *e*P **P** **11 30 05.6 -0.2**
comp=Z,462nm,1.1s
GIRL Giralia 57.71 263 *e*P **P** **11 30 06.6 0.0**
comp=Z,254nm,0.8s
GIRL Giralia 57.71 263 P **P** **11 30 07.0 +0.3**
baz=58,SNR=43
KHLU Kahalu`u 58.14 28 *e*P **P** **11 30 10.2 +0.5**
comp=Z,228nm,0.8s
MMRI Maumere 58.15 282 *e*P **P** **11 30 10.1 +0.4**
comp=Z,293nm,0.7s
MMRI Maumere 58.15 282 P **P** **11 30 11.0 +1.2**
comp=Z,486nm,1.0s,comp=Z,6μmcomp=Z,10μm
RIM Rim 58.21 28 *e*P **P** **11 30 10.1 0.0**
comp=Z,446nm,1.0s
PUH Pauahi 58.21 28 *e*P **P** **11 30 10.9 +0.8**
comp=Z,286nm,0.9s
KKO Keanakako`i 58.21 28 *e*P **P** **11 30 10.8 +0.7**
comp=Z,387nm,1.0s
HUH Hualalai 58.25 28 *e*P **P** **11 30 10.7 +0.1**
comp=Z,316nm,1.3s
MLH Mauna Loa 58.25 28 *e*P **P** **11 30 11.3 +0.8**
comp=Z,222nm,0.8s
MLH Mauna Loa 58.25 28 *e*P **P** **11 30 11.3 +0.8**
MLH pmax pmax
comp=Z,222nm,0.8s
HMH Humu'ula Sheep 58.31 28 *e*P **P** **11 30 12.0 +0.9**
comp=Z,569nm,1.0s
POHA Pohakuloa 58.43 28 *e*P **P** **11 30 12.5 +0.7**
comp=Z,144nm,0.8s
EDFI Ende, Flores 58.53 281 P **P** **11 30 13.2 +0.7**
comp=Z,63nm,0.6s,comp=Z,2μm
HPAH Hawaii Prepara 58.62 28 *e*P **P** **11 30 12.8 -0.1**
comp=Z,373nm,1.1s
BASI Baing, Sumba 58.62 279 P **P** **11 30 17.5 +4.4**
comp=Z,522nm,0.8s,comp=Z,6μm
MHA Mahukona 58.68 27 *e*P **P** **11 30 13.9 +0.7**
MHA Mahukona 58.68 27 *e*P **P** **11 30 13.9 +0.7**
KEKH Kekaha 59.00 23 *e*P **P** **11 30 15.8 +0.5**
comp=Z,378nm,1.2s
KIP Kipapa 59.05 25 *c e*P **P** **11 30 16.8 +1.1**
KIP pmax pmax
comp=Z,366nm,1.5s
SANI Sanana 59.06 291 P **P** **11 30 16.1 +0.1**
comp=Z,553nm,0.8s,comp=Z,7μm
PALU Palau 59.15 305 P **P** **11 30 17.5 +0.9**
baz=59,SNR=14
WSI Waingapu 59.16 279 P **P** **11 30 20.3 +3.6**
comp=Z,516nm,0.9s,comp=Z,38μm
OPA Opana 59.29 24 *e*P **P** **11 30 17.2 -0.1**
comp=Z,343nm,1.3s
OPA Opana 59.29 24 *e*P **P** **11 30 17.3 -0.1**
OPA pmax pmax
comp=Z,343nm,1.3s
ANA2 Anatahan 59.43 322 *e*P **P** **11 30 18.3 -0.2**
comp=Z,205nm,0.7s
SARN Sarigan 59.70 322 *e*P **P** **11 30 19.7 -0.6**
comp=Z,188nm,1.5s
TNTI Ternate 59.79 294 *e*P **P** **11 30 20.1 -0.9**
comp=Z,152nm,1.4s
WBSI Waikabubak, Su 59.92 279 P **P** **11 30 25.3 +3.3**
comp=Z,113nm,0.6s,comp=Z,3μm
KDI Kendari 60.55 286 P **P** **11 30 27.5 +1.3**
comp=Z,148nm,1.0s,comp=Z,2μm
PLAI Plampang 61.69 279 P **P** **11 30 35.6 +1.7**
comp=Z,117nm,0.7s,comp=Z,3μm
BKSI Bulukumba 61.76 283 P **P** **11 30 36.0 +1.7**
comp=Z,38nm,0.7s,comp=Z,1μmcomp=Z,4μm
MIDW Midway 61.85 3 *e*P **P** **11 30 34.3 -0.2**
comp=Z,128nm,1.1s
LUWI Luwuk 62.20 289 *e*P **P** **11 30 36.8 -0.4**
comp=Z,451nm,0.8s
LUWI Luwuk 62.20 289 P **P** **11 30 38.8 +1.6**
comp=Z,634nm,0.8s,comp=Z,6μmcomp=Z,9μm
KAPI Kappang 62.24 283 P **P** **11 30 37.5 0.0**
comp=Z,49nm,0.7s,baz=152,slow=3.6,SNR=27
KMSI Cibinong 62.26 291 P **P** **11 30 38.7 +1.1**
comp=Z,295nm,0.8s,comp=Z,4μm
BNSI Bone 62.31 284 P **P** **11 30 39.4 +1.4**
comp=Z,79nm,0.7s,comp=Z,4μm
SPSI Sidrap Palu 62.84 284 P **P** **11 30 41.1 -0.3**
comp=Z,94nm,0.9s,comp=Z,1μm
APSI Ampana 63.16 288 P **P** **11 30 45.2 +1.6**
comp=Z,115nm,0.6s,comp=Z,3μm
TTSI Tana Toraja 63.34 285 P **P** **11 30 45.5 +0.8**
comp=Z,108nm,0.7s,comp=Z,2μm
SRBI Singaraja 64.21 278 P **P** **11 30 52.3 +1.9**
comp=Z,144nm,1.1s,comp=Z,3μm
JAGI Jajag, Banyuwa 64.87 277 *e*P **P** **11 30 55.2 +0.4**
comp=Z,160nm,1.0s
JAGI Jajag, Banyuwa 64.87 277 P **P** **11 30 57.6 +2.8**
comp=Z,81nm,0.5s,comp=Z,3μm
DAV Davao City (W) 65.27 298 P **P** **11 30 56.9 -0.2**
comp=Z,202nm,0.6s,baz=59,slow=4.6,SNR=12
DAV Davao City (W) 65.27 298 *e*P **P** **11 30 57.0 -0.2**
comp=Z,257nm,0.8s
DAV Davao City (W) 65.27 298 *i*P **P** **11 30 56.1 -1.1**
DAV Davao City (W) 65.27 298 P **P** **11 30 59.4 +2.2**
SNR=6.9
MPSI Mapaga 65.31 288 P **P** **11 30 57.0 -0.5**
comp=Z,87nm,0.8s,comp=Z,1μm
GMJI Gumukmas 65.57 277 P **P** **11 31 00.9 +1.7**
comp=Z,282nm,1.2s
SKMP Bagumbayan, Su 65.67 297 *e*P **P** **11 30 58.4 -1.3**
KMMI Kalianget 65.81 278 P **P** **11 31 04.5 +3.8**
comp=Z,90nm,0.7s
BUKP Musuan 66.19 298 *e*P **P** **11 31 03.1 0.0**
BKB Balikpapan 66.74 285 P **P** **11 31 11.9 +5.3**
comp=Z,165nm,1.2s,comp=Z,4μmcomp=Z,10μm
PWJI Pagerwojo 67.06 276 P **P** **11 31 10.4 +1.7**
comp=Z,143nm,1.2s,comp=Z,3μm
GRJI Gresik 67.11 277 P **P** **11 31 11.6 +2.6**
comp=Z,150nm,0.9s,comp=Z,1μm
PAGZ Pagadian 67.40 297 *e*P **P** **11 31 10.8 +0.1**
NGJI Ngawi 67.70 276 P **P** **11 31 21.2 +8.5**
comp=Z,161nm,0.9s
WOJI Wonogiri, Jawa 67.89 275 P **P** **11 31 16.0 +2.1**
comp=Z,168nm,2.1s,comp=Z,3μm
MAW Mawson 68.28 202 P **P** **11 31 15.7 +0.3**

comp=Z,697nm,0.9s,baz=124,slow=7.7,SNR=169
MAW PKP2bc 11 59 31.5
comp=Z,3.8nm,1.0s,baz=24,slow=3.0,SNR=6.0
MAW Mawson 68.28 202 *eP* **P 11 31 15.9 +0.5**
comp=Z,147nm,0.8s
MAW Mawson 68.28 202 P **P 11 31 15.8 +0.3**
baz=68,SNR=839
BESP Borongan 68.44 301 *eP* **P 11 31 17.9 +0.7**
MTKI Muara Teweh, K 68.54 284 P **P 11 31 20.4 +2.5**
comp=Z,145nm,0.9s
LLP Lapu-Lapu 68.62 299⇑ *eP* **P 11 31 17.2 -1.1**
SMRI Semarang 68.72 276 *eP* **P 11 31 18.9 -0.2**
comp=Z,76nm,0.9s
PMSA Palmer Station 69.95 156 *eP* **P 11 31 28.6 +2.9**
CISI Cisompet, Garu 70.62 274 *eP* **P 11 31 30.2 -0.5**
comp=Z,320nm,1.0s
CISI Cisompet, Garu 70.62 274 P **P 11 31 31.7 +1.0**
comp=Z,285nm,0.9s,comp=Z,5μm
PVCP Virac 70.71 302 *eP* **P 11 31 29.6 -1.4**
JCJI Jatiwangi 70.83 275 P **P 11 31 33.2 +1.4**
comp=Z,400nm,1.1s
XMIS Christmas Isla 70.85 270 *eP* **P 11 31 31.9 -0.1**
comp=Z,74nm,0.6s
CUYO Cuyo Island 71.13 298 *eP* **P 11 31 33.2 -0.4**
LEM Lembang 71.18 274 P **P 11 31 34.8 +0.6**
comp=Z,221nm,0.7s,baz=318,slow=20,SNR=28
KKM Kota Kinabalu 71.70 291 *eP* **P 11 31 37.0 -0.2**
comp=Z,173nm,0.6s
KKM Kota Kinabalu 71.70 291 P **P 11 31 38.0 +0.8**
SJMP San Jose 72.12 299 *eP* **P 11 31 39.4 -0.1**
BATP Bataraza 72.21 294 *eP* **P 11 31 40.5 +0.5**
BOAC Boac 72.26 300 *eP* **P 11 31 41.6 +1.3**
SBUM Sibu 72.69 285 *eP* **P 11 31 43.0 +0.1**
comp=Z,47nm,0.9s
SBUM Sibu 72.69 285 P **P 11 31 44.0 +1.1**
CGJI Cibinong 72.89 274 P **P 11 31 45.0 +0.8**
comp=Z,185nm,1.2s,comp=Z,2μm
SYO Syowa Base 73.22 194⇓ *iP* **P 11 31 43.0 -2.1**
KSM Kuching 73.66 283 *eP* **P 11 31 48.3 -0.3**
comp=Z,170nm,0.6s
KSM Kuching 73.66 283 P **P 11 31 49.0 +0.4**
BLSI Bandar Lampung 73.95 274 P **P 11 31 52.0 +1.7**
comp=Z,276nm,0.7s
GO10 Punta Arenas 73.96 144 *eP* **P 11 31 51.9 +2.1**
comp=Z,152nm,1.0s
GO09 Cerro Castillo 74.40 142 *eP* **P 11 31 53.8 +1.5**
comp=Z,53nm,1.1s
KASI Kota Agung 74.48 274 P **P 11 31 53.9 +0.5**
comp=Z,147nm,0.9s
KLI Kotabumi 74.55 275 P **P 11 31 54.8 +1.0**
comp=Z,174nm,0.4s
CAUP Cauayan 74.63 303 *eP* **P 11 31 54.3 +0.3**
SNAA Sanae 74.71 179 P **P 11 31 54.5 +0.7**
SNAA S **S 11 41 15.1 +3.0**
SNAA Sanae 74.71 179 P **P 11 31 54.4 +0.6**
comp=Z,128nm,0.6s,baz=343,slow=4.5,SNR=465
SNAA Sanae 74.71 179 *eP* **P 11 31 53.9 +0.1**
comp=Z,267nm,1.0s
SNAA Sanae 74.71 179*c iP* **P 11 31 53.8 0.0**
SMPP San Manuel, Pa 74.90 302 *eP* **P 11 31 54.0 -1.6**
VNA3 Neumayer Olymp 74.95 177 P **P 11 31 56.0 +0.8**
VNA3 S **S 11 41 16.3 +1.6**
PPBI Pangkal Pinang 74.99 278 P **P 11 31 57.6 +1.3**
comp=Z,70nm,1.5s,comp=Z,6μm
LWLI Liwa 75.12 274 P **P 11 31 58.7 +1.5**
comp=Z,72nm,0.8s
MDSI Maura Dua 75.32 274 P **P 11 31 57.5 -0.7**
comp=Z,138nm,0.7s,comp=Z,2μm
VNA2 Neumayer--Watz 75.35 178 P **P 11 31 58.5 +1.1**
baz=168,slow=5.7
VNA2 S **S 11 41 21.4 +2.3**
baz=186,slow=5.8
VNA1 Neumayer--Stat 75.60 177 P **P 11 31 60.0 +1.2**
VNA1 S **S 11 41 26.0 +4.3**
APYP Conner 75.66 303 *eP* **P 11 31 59.8 -0.2**
LHSI Lahat 76.23 275 P **P 11 32 03.9 +0.6**
comp=Z,153nm,0.9s,comp=Z,3μm
MNAI Manna 76.40 274 *eP* **P 11 32 04.5 +0.1**
comp=Z,281nm,1.2s
DSRI Dabo 77.22 278 P **P 11 32 10.1 +1.2**
comp=Z,205nm,1.5s,comp=Z,6μm
JOW Kunigami 77.51 314 *eP* **P 11 32 09.8 -0.3**
comp=Z,27nm,0.7s
TPRI Tanjung Pinang 78.06 279 P **P 11 32 15.1 +1.6**
KRJI Kerinci 78.90 275 P **P 11 32 18.5 +0.3**
comp=Z,425nm,0.9s,comp=Z,5μm
MYKOM Kota Tinggi 79.11 280 *eP* **P 11 32 19.2 0.0**
comp=Z,76nm,1.0s
TWG Pinlang 79.17 307 *eP* **P 11 32 18.2 -1.1**
comp=Z,232nm,0.7s
YULB Yu-li 79.42 307 *eP* **P 11 32 19.5 -1.1**
comp=Z,36nm,0.7s
INU Inuyama 79.53 326 *eP* **P 11 32 20.4 -0.5**
comp=Z,103nm,1.3s
SDSI Sungai Dareh 79.57 276 P **P 11 32 20.7 -1.0**
comp=Z,36nm,0.9s,comp=Z,2μm
NACB Ninganchiao 79.77 308 *eP* **P 11 32 21.7 -0.8**
comp=Z,57nm,1.0s
SSLB Suanglung 79.92 307 *eP* **P 11 32 22.2 -1.2**
comp=Z,99nm,0.7s
MJAR Matsushiro Arr 79.97 327 P **P 11 32 21.6 -1.7**
comp=Z,44nm,1.1s,baz=168,slow=5.7,SNR=54
MJAR PKKPbc **PKKPbc 11 51 08.9 +0.8**
comp=Z,0.9nm,0.5s,baz=312,slow=0.9,SNR=5.0
MJAR PKPPKP **P'P'df 11 59 11.1 +2.1**
comp=Z,2.3nm,1.1s,baz=336,slow=2.7,SNR=3.2
MAJO Matsushiro 79.97 327 *eP* **P 11 32 22.4 -0.9**
comp=Z,105nm,1.4s
MAJO Matsushiro 79.97 327*c iP* **P 11 32 21.2 -2.1**
MAJO pmax pmax
comp=Z,87nm,1.4s
MAT Matsushiro 79.97 327 P **P 11 32 21.8 -1.5**
MAT S **S 11 42 06.2 -3.1**
YHNB Yeheng 80.25 308 *eP* **P 11 32 25.1 -0.1**
comp=Z,70nm,1.5s
PDSI Padang 80.38 275 P **P 11 32 25.8 -0.3**
comp=Z,97nm,0.8s,comp=Z,1μm
BKNI Bangkinang 80.59 277 *eP* **P 11 32 27.1 -0.1**
comp=Z,228nm,1.1s
BKNI Bangkinang 80.59 277 P **P 11 32 27.7 +0.5**
comp=Z,191nm,0.9s,comp=Z,3μm
JNU Nakatsue 80.82 320 P **P 11 32 26.7 -1.3**
comp=Z,46nm,0.9s,baz=102,slow=3.4,SNR=14
JNU Nakatsue 80.82 320 *eP* **P 11 32 27.5 -0.4**
comp=Z,50nm,0.9s
EFI East Falkland 80.99 148 *eP* **P 11 32 28.9 +0.2**
comp=Z,128nm,0.9s
EFI East Falkland 80.99 148⇑ *iP* **P 11 32 30.2 +1.5**
EFI pmax pmax
comp=Z,141nm,0.9s
SISI Saibi 81.29 274 P **P 11 32 35.6 +4.7**
comp=Z,39nm,1.3s
DLV T Lat 81.32 291 *eP* **P 11 32 31.3 +0.1**
comp=Z,103nm,0.8s
PLCA Paso Flores 81.66 134 P **P 11 32 32.8 +0.2**
comp=Z,34nm,0.7s,baz=251,slow=5.5,SNR=84
PLCA PKiKP **PKiKP 11 37 55.7 +1.0**
comp=Z,2.2nm,0.8s,baz=346,slow=1.4,SNR=3.4
PLCA PKKPbc **PKKPbc 11 51 00.6 -1.9**
comp=Z,4.3nm,0.9s,baz=344,slow=3.3,SNR=3.6
PLCA Paso Flores 81.66 134 *eP* **P 11 32 33.0 +0.5**
PLCA Paso Flores 81.66 134 *eP* **P 11 32 33.0 +0.5**
PLCA Paso Flores 81.66 134 *eP* **P 11 32 35.0 +2.5**
QZH Quanzhou 82.28 307⇑ *iP* **P 11 32 35.3 -0.4**
QZH S **S 11 42 32.9 -0.6**
QZH pmax pmax
comp=Z,46nm,0.8s
QZH pmax pmax
comp=Z,1μm,3.4s
ERM Erimo 82.58 334 *eP* **P 11 32 37.2 +0.3**
comp=Z,63nm,0.9s
ERM Erimo 82.58 334*c iP* **P 11 32 36.9 +0.1**
ERM pmax pmax
comp=Z,148nm,1.6s
IPM Ipoh 82.95 280 *eP* **P 11 32 38.8 -0.8**
comp=Z,82nm,0.8s
YUK Yuzh-Kuril'sk 83.40 336 *eP* P 11 32 27.7 -13
YUK *e*S S 11 42 32.6 -11
YUK *i* *SS pS 11 43 56.6 +11
YUK SS **SS 11 48 16.7 +1.3**
YUK pmax pmax
comp=Z,175nm,1.1s
YUK pmax pmax
comp=N,64nm,1.2s
YUK pmax pmax
comp=E,83nm,1.2s

KULM Kulim 83.71 281 *eP* **P 11 32 42.9 -0.5**
comp=E,71nm,0.8s
PSI Prapat 83.73 278 P **P 11 32 41.9 -1.7**
comp=E,70nm,1.0s,baz=157,slow=5.7,SNR=17
PSI Prapat 83.73 278 *eP* **P 11 32 42.0 -1.6**
comp=E,70nm,0.9s
KUR Kuril'sk 83.82 338*c iP* **P 11 32 42.7 -0.4**
KUR *i* *PP **pP 11 33 32.8 -0.4**
KUR *i* S **S 11 42 52.6 +4.4**
KUR pmax pmax
comp=Z,250nm,1.5s
KUR pmax pmax
comp=Z,837nm,5.4s
KUR pmax pmax
comp=Z,447nm,19.0s
KUR pmax pmax
comp=N,386nm,15.0s
GSI Gunungsitoli 84.00 276 *eP* **P 11 32 44.9 0.0**
comp=N,388nm,0.9s
GSI Gunungsitoli 84.00 276 P **P 11 32 46.1 +1.2**
comp=N,494nm,1.0s,comp=N,4μm
GO05 Huala 84.29 129 *eP* **P 11 32 46.3 +0.3**
comp=N,116nm,1.4s
TSI Tuntungan 84.42 278 P **P 11 32 47.9 +1.0**
comp=N,128nm,0.8s,comp=N,21μm
ASAJ Asahikawa 84.61 334 P **P 11 32 47.3 +0.2**
comp=N,35nm,0.9s,baz=218,slow=9.3,SNR=42
ASAJ PKKPbc **PKKPbc 11 50 59.1 +1.4**
comp=N,3.1nm,0.6s,baz=287,slow=26,SNR=3.7
QIZ Qiongzhong 84.62 297 *eP* **P 11 32 47.9 +0.1**
comp=N,41nm,0.9s
SKLT Songkhla 84.81 282 P **P 11 32 50.1 +1.3**
SSE Sheshan 84.86 313 P **P 11 32 48.1 -0.6**
SSE S **S 11 42 51.8 -7.3**
SSE pmax pmax
comp=N,32nm,0.7s
SSE pmax pmax
comp=N,480nm,8.5s
SSE LR LR
comp=N,230nm,16.5s
SSE LR LR
comp=N,360nm,15.5s
KCSI Kotacane, Aceh 85.08 278 P **P 11 32 49.9 -0.4**
comp=N,55nm,0.9s,comp=N,1μm
TJN Taejon 85.17 320*c iP* **P 11 32 49.3 -0.8**
TPTI 85.42 277 P **P 11 32 52.2 +0.3**
comp=N,87nm,0.8s,comp=N,1μm
ADK Adak 85.49 2 *eP* **P 11 32 51.0 -0.3**
comp=N,774nm,1.4s
ADK Adak 85.49 2 *eP* **P 11 32 51.0 -0.3**
ADK pmax pmax
comp=Z,774nm,1.4s
KSRS Korea Array 85.68 321 P **P 11 32 52.6 0.0**
comp=Z,29nm,0.6s,baz=137,slow=5.5,SNR=137
KSRS PP **PP 11 36 13.4 -1.8**
comp=Z,9.6nm,1.1s,baz=148,slow=9.1,SNR=5.8
KS15 Wonju Array Si 85.69 321 *eP* **P 11 32 53.3 +0.7**
comp=Z,31nm,0.8s
GSTR Great Sitkin T 85.72 3 *eP* **P 11 32 52.2 -0.3**
ATKA Atka Island 85.92 4 *eP* **P 11 32 53.0 -0.4**
comp=Z,643nm,1.5s
TRTT Trang 85.94 282 P **P 11 32 55.7 +1.2**
ROC1 El Roble 86.14 127 *eP* **P 11 32 55.2 -0.3**
PEL Peldehue 86.25 128 *eP* **P 11 32 56.3 +0.4**
comp=Z,65nm,0.9s
PEL Peldehue 86.25 128 *eP* **P 11 32 56.3 +0.4**
PEL pmax pmax
comp=Z,65nm,0.9s
SMY Shemya 86.40 357 *eP* **P 11 32 55.6 -0.1**
comp=Z,410nm,1.2s
SMY Shemya 86.40 357 *eP* **P 11 32 55.6 -0.1**
SMY pmax pmax
comp=Z,410nm,1.2s
MLSI Meulaboh, Aceh 86.62 277 P **P 11 32 58.4 +0.6**
comp=Z,226nm,1.2s
CHBT CHBT 86.64 288 P **P 11 33 00.7 +2.9**
SKR Severo-Kuril's 86.71 345 *eP* **P 11 32 55.9 -1.4**
SKR *e*S **S 11 43 12.8 -3.4**
SKR pmax pmax
comp=Z,1μm,2.8s
SKR pmax pmax
comp=Z,152nm,1.6s
SKR pmax pmax
comp=Z,400nm,12.4s
SKR MLR MLR
comp=Z,400nm,18.0s
SKR MLR MLR
comp=Z,500nm,15.0s
HOPE Hope Point 86.84 160 *eP* **P 11 32 57.8 -0.4**
comp=Z,137nm,0.9s
NJ2 Nanjing 86.95 312⇑ *iP* **P 11 32 58.6 -0.3**
NJ2 sP **pwP 11 34 00.8 +7.2**
NJ2 S **S 11 43 21.8 +2.4**
NJ2 sS sS 11 44 37.0 -10
NJ2 pmax pmax
comp=Z,42nm,1.0s
NJ2 pmax pmax
comp=Z,800nm,10.3s
YSS Yuzh-Sakhalins 87.01 336 *eP* **P 11 32 59.6 +0.8**
comp=Z,236nm,1.3s
YSS Yuzh-Sakhalins 87.01 336*α iP* **P 11 32 59.4 +0.6**
YSS *e* 11 36 30.0
YSS *e*S **S 11 43 20.0 +0.8**
YSS *e**SS **sS 11 44 45.6 -1.7**
YSS pmax pmax
comp=Z,1μm,3.1s
YSS pmax pmax
comp=N,300nm,3.3s
YSS pmax pmax
comp=E,200nm,3.1s
YSS pmax pmax
comp=Z,100nm,1.4s
YSS smax smax
comp=E,600nm,14.0s
YSS MLR MLR
comp=N,200nm,14.0s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS MLR MLR
comp=E,400nm,15.0s
NIKH Nikolski High 87.11 7 *eP* **P 11 32 59.3 +0.2**
comp=E,307nm,0.7s
PANO Nakornpanom 87.43 292 P **P 11 33 02.4 +0.9**
TEY Ternei 87.67 331⇑ *eP* **P 11 33 01.8 -0.2**
TEY pmax pmax
comp=Z,10.0nm,2.8s
SKNT Sakolnakorn 87.81 292 P **P 11 33 03.4 0.0**
SNCC San Nicolas Is 87.99 47 *eP* **P 11 33 04.0 +0.1**
comp=Z,60nm,1.0s
SNCC San Nicolas Is 87.99 47 P **P 11 33 05.9 +2.0**
baz=227
GO04 Tololo Observa 88.01 125 *eP* **P 11 33 04.4 -0.2**
comp=Z,23nm,1.0s
MSHR Mys Shultsa 88.04 326*c iP* **P 11 33 03.3 -0.5**
VLA Vladivostok 88.14 327*c iP* **P 11 33 03.8 -0.4**
VLA pmax pmax
comp=Z,52nm,1.5s
LPIG La Paz 88.17 59 P **P 11 33 05.4 +0.5**
comp=Z,14nm,0.4s,baz=95,slow=3.3,SNR=3.6
UNV Unalaska Valle 88.23 8 *eP* **P 11 33 04.6 +0.2**
comp=Z,516nm,1.5s
KHON Khomkaen 88.34 291 P **P 11 33 07.2 +1.4**
SCI2 San Clemente I 88.41 48 P **P 11 33 07.6 +1.8**
baz=227
SCZ2 Santa Cruz Isl 88.44 47 P **P 11 33 08.0 +2.0**
baz=227
TRQA Tornquist 88.44 136 *eP* **P 11 33 06.2 0.0**
comp=Z,32nm,1.3s
TRQA Tornquist 88.44 136 *eP* **P 11 33 06.2 0.0**
TRQA pmax pmax
comp=Z,32nm,1.3s
PET Petropavlovsk 88.45 348 *eP* **P 11 33 05.2 -0.2**
comp=Z,566nm,1.6s
PET Petropavlovsk 88.45 348*α iP* **P 11 33 04.7 -0.7**
PET *i* S **S 11 43 30.3 -2.2**
PET pmax pmax
comp=Z,219nm,0.7s
PET pmax pmax
comp=Z,600nm,16.3s
PET MLR MLR
comp=Z,500nm,21.0s
PET MLR MLR
comp=Z,500nm,14.0s
SBC Santa Barbara 88.69 46 P **P 11 33 09.2 +2.1**
baz=226
PEA0B Petropavlovsk- 88.70 347 *eP* **P 11 33 07.0 +0.3**
comp=Z,2μm,1.4s

PETK Petropavlovsk- 88.70 347 P **P 11 33 06.7 0.0**
comp=Z,260nm,0.8s,baz=113,slow=5.1,SNR=310
PETK PP **PKiKP 11 38 10.4 +5.0**
comp=Z,1.5nm,0.4s,baz=109,slow=3.8,SNR=4.5
PETK PKKPbc **PKKPbc 11 50 48.7 +0.5**
comp=Z,1.6nm,0.4s,baz=53,slow=2.6,SNR=9.3
PETK PKPPKP **P'P'df 11 58 58.6 +6.5**
comp=Z,1.9nm,0.8s,baz=338,slow=1.6,SNR=4.6
CHAI Chaiyaphum 88.74 290 P **P 11 33 08.6 +0.9**
CIS Catalina Islan 88.78 48 P **P 11 33 09.4 +1.8**
baz=227
CIS S **S 11 43 44.9 +8.2**
baz=227
WHN Wuhan 88.80 308 ⇓P **P 11 33 08.3 +0.6**
WHN PP **PP 11 36 40.3 0.0**
WHN SKS **SKSac 11 43 14.3 -2.6**
WHN S **S 11 43 35.5 -1.4**
WHN pmax pmax
comp=Z,220nm,1.5s
WHN pmax pmax
comp=Z,2μm,3.7s
WHN LR LR
comp=Z,1μm,22.6s
LCO Las Campanas 88.80 124 *eP* **P 11 33 08.2 -0.1**
comp=Z,34nm,0.9s
LCO Las Campanas 88.80 124 *eP* **P 11 33 08.2 -0.1**
LCO pmax pmax
comp=Z,34nm,0.9s
LCO Las Campanas 88.80 124 *eP* **P 11 33 09.9 +1.6**
SRIG Santa Rosalia 88.83 56 *eP* **P 11 33 08.2 +0.3**
comp=Z,64nm,1.2s
BLG Laguna Peak, P 88.86 47 P **P 11 33 09.7 +1.8**
baz=227
PHET Kaeng Krachan 88.88 286 P **P 11 33 10.7 +2.3**
PKM Mcpherson Peak 88.94 46 P **P 11 33 10.3 +1.8**
baz=226
USA0B Ussuriysk Arra 88.94 328 *eP* **P 11 33 07.9 -0.1**
comp=Z,216nm,1.5s
USRK Ussuriysk Ar. 88.94 328 P **P 11 33 08.1 +0.1**
comp=Z,32nm,0.8s,baz=132,slow=2.8,SNR=72
USRK PKKPbc **PKKPbc 11 50 47.3 +0.3**
comp=Z,2.0nm,0.6s,baz=320,slow=5.0,SNR=4.7
FMP Fort Macarthur 89.06 48 P **P 11 33 10.5 +1.7**
baz=227
NONG Nongkai 89.10 292 P **P 11 33 09.7 +0.3**
SMMC Simmler 89.13 45 P **P 11 33 10.8 +1.6**
baz=226,SNR=6.5
109C Camp Elliot, M 89.24 49 P **P 11 33 11.2 +1.4**
baz=228,SNR=9.7
CPE Camp Elliot 89.24 49 *eP* **P 11 33 10.8 +1.1**
comp=Z,53nm,1.1s
PAGB Antelope Grade 89.26 45 *eP* **P 11 33 11.4 +1.6**
comp=Z,108nm,1.3s
BAR Barrett 89.38 49 *eP* **P 11 33 12.1 +1.7**
comp=Z,68nm,1.4s
DECC Green Verdugo 89.40 47 P **P 11 33 11.9 +1.4**
baz=227
OSI Osito Audit: C 89.41 47 *eP* **P 11 33 12.5 +2.0**
comp=Z,33nm,0.8s
OSI Osito Audit: C 89.41 47 P **P 11 33 12.1 +1.5**
baz=227
PASC Pasadena Art C 89.44 47 *eP* **P 11 33 11.6 +0.9**
comp=Z,56nm,1.4s
MWC Mount Wilson 89.55 47 *eP* **P 11 33 12.6 +1.2**
comp=Z,92nm,1.5s
MWC Mount Wilson 89.55 47 *eP* **P 11 33 12.6 +1.2**
MWC pmax pmax
comp=Z,92nm,1.5s
MURC Murrieta 89.66 48 P **P 11 33 13.5 +1.7**
baz=228,SNR=24
MONP2 Monument Peak 89.67 49 P **P 11 33 13.7 +1.7**
baz=228,SNR=40
ARVC Arvin 89.69 46 P **P 11 33 13.5 +1.8**
baz=227,SNR=6.5
IKP In-Ko-Pah, Jac 89.71 50 P **P 11 33 14.3 +2.2**
baz=229,SNR=26
BFSC Mount Baldy Ra 89.80 47 P **P 11 33 14.4 +1.9**
baz=228,SNR=48
PBKT Sadao Pong 89.92 290 P **P 11 33 14.3 +1.1**
GO03 Copiap 90.00 124 *eP* **P 11 33 14.4 +0.7**
comp=Z,36nm,1.1s
VES Vestal, Richgr 90.03 46 P **P 11 33 14.7 +1.4**
baz=227,SNR=19
EDW2 Edwards Air Fo 90.03 47 P **P 11 33 15.4 +2.0**
baz=228,SNR=40
SWSC Sam W. Stewart 90.10 49 P **P 11 33 16.2 +2.5**
baz=229,SNR=11
SRDT SRDT 90.10 287 P **P 11 33 15.8 +1.7**
DL2 Dalian 90.12 319⇑ *iP* **P 11 33 12.8 -0.8**
DL2 pP **pP 11 33 59.3 -4.9**
DL2 sP **pwP 11 34 14.8 +6.4**
DL2 PP **PP 11 36 46.1 -4.5**
DL2 SKS **SKSac 11 43 19.9 -4.3**
DL2 S **S 11 43 50.1 +1.4**
DL2 pmax pmax
comp=Z,83nm,0.7s
DL2 pmax pmax
comp=Z,800nm,3.7s
PFO Pinyon Flats O 90.13 49 P **P 11 33 15.2 +1.2**
comp=Z,22nm,1.0s,baz=265,slow=4.7,SNR=24
PFO Pinyon Flats O 90.13 49 *eP* **P 11 33 15.3 +1.2**
comp=Z,38nm,1.1s
PFO Pinyon Flats O 90.13 49 P **P 11 33 16.1 +2.1**
baz=228,SNR=26
VOG Valley Oaks Go 90.18 45 P **P 11 33 15.4 +1.4**
baz=227
ISA Isabella, Lake 90.27 46 *eP* **P 11 33 15.9 +1.4**
comp=Z,35nm,1.0s
ISA Isabella, Lake 90.27 46 *eP* **P 11 33 15.9 +1.4**
ISA pmax pmax
comp=Z,35nm,1.0s
ISA Isabella, Lake 90.27 46 P **P 11 33 16.5 +1.9**
baz=227,SNR=35
BBRC Big Bear Solar 90.27 48 P **P 11 33 16.8 +2.0**
baz=228,SNR=8.4
MDJ Mudanjiang 90.34 327 P **P 11 33 14.9 +0.4**
MDJ pP pP 11 33 57.8 -7.4
MDJ sP pwP 11 34 16.3 +7.3
MDJ S **S 11 43 55.9 +5.4**
MDJ sS sS 11 45 10.4 -9.0
MDJ SS **SS 11 50 03.1 +6.4**
MDJ pmax pmax
comp=Z,56nm,1.3s
MDJ pmax pmax
comp=Z,810nm,8.3s
MDJ Mudanjiang 90.34 327 *eP* **P 11 33 14.3 -0.3**
comp=Z,56nm,0.8s
SLVN Son La 90.44 295 *eP* **P 11 33 15.2 -0.4**
comp=Z,9.3nm,0.9s
SDPT Sand Point 90.54 11 *eP* **P 11 33 15.5 +0.3**
comp=Z,406nm,1.5s
LRMC Laurel Mtn Rad 90.62 47 P **P 11 33 17.6 +1.3**
baz=228
RRX Edison Barstow 90.64 47 P **P 11 33 17.7 +1.5**
baz=228
BELC Belle Mtn. Jos 90.67 49 P **P 11 33 18.9 +2.4**
baz=229,SNR=52
CMB Columbia Colle 90.78 43 *eP* **P 11 33 17.1 +0.3**
comp=Z,44nm,1.3s
CMB Columbia Colle 90.78 43 *eP* **P 11 33 17.1 +0.3**
CMB pmax pmax
comp=Z,44nm,1.3s
HSIG 90.78 55 *eP* **P 11 33 17.9 +0.9**
comp=Z,54nm,1.2s
BC3 Big Chuckawall 90.79 49 P **P 11 33 19.6 +2.5**
baz=229,SNR=18
GLA Glamis 90.79 50 *eP* **P 11 33 18.9 +1.9**
comp=Z,133nm,1.4s
GLA Glamis 90.79 50 P **P 11 33 19.9 +2.9**
baz=229,SNR=23
TIA Tai'an 90.83 314 P **P 11 33 17.3 +0.2**
TIA pP **pP 11 34 07.8 +0.3**
TIA pmax pmax
comp=Z,780nm,3.7s
TIA LR LR
comp=Z,1μm,12.0s
TIA LR LR
comp=Z,820nm,16.2s
UTTA Uttaradit 90.92 291 P **P 11 33 18.7 +0.9**
O02D Mt. Diablo Mer 90.94 40 P **P 11 33 19.2 +1.6**
baz=225
HEC Hector,Ludlow 91.01 48 P **P 11 33 20.1 +2.0**
baz=228,SNR=32
CWC Cottonwood Cre 91.03 46 P **P 11 33 19.4 +1.2**
baz=228
GSC Goldstone, Bar 91.04 47 *eP* **P 11 33 18.9 +0.7**
comp=Z,26nm,0.9s

GSC Goldstone, Bar 91.04 47 *e*P **P 11 33 18.9 +0.7**
GSC pmax pmax
comp=Z,26nm,0.9s
GSC Goldstone, Bar 91.04 47 P **P 11 33 20.2 +2.1**
baz=228,SNR=32
AFDM Forest Hills D 91.08 42 *e*P **P 11 33 18.6 +0.4**
comp=Z,19nm,0.8s
MPMC Manual Prospec 91.13 46 P **P 11 33 20.4 +1.7**
baz=228,SNR=20
SNY Shenyang 91.17 322 ⇑P **P 11 33 17.8 -0.6**
SNY S **S 11 43 52.6 -5.5**
SNY pmax pmax
comp=Z,40nm,1.4s
SNY pmax pmax
comp=Z,590nm,7.7s
SNY LR LR
comp=Z,380nm,16.7s
SNY LR LR
comp=Z,490nm,22.1s
SNY LR LR
comp=Z,790nm,20.8s
ORV Oroville 91.21 42 *e*P **P 11 33 19.2 +0.5**
comp=Z,22nm,1.1s
ORV Oroville 91.21 42 *e*P **P 11 33 19.2 +0.5**
ORV pmax pmax
comp=Z,22nm,1.1s
MDPB Devils Postpil 91.25 44 *e*P **P 11 33 20.2 +0.9**
comp=Z,18nm,1.2s
113A Mohawk Valley, 91.28 51 *e*P **P 11 33 20.7 +1.5**
comp=Z,40nm,1.1s
IRM Iron Mountain 91.31 49 P **P 11 33 22.0 +2.6**
baz=229,SNR=39
TIN Tinemaha, Big 91.36 45 P **P 11 33 21.4 +1.8**
baz=227
WDC Whiskeytown Da 91.36 40 *e*P **P 11 33 20.6 +1.3**
comp=Z,24nm,0.9s
WDC Whiskeytown Da 91.36 40 *e*P **P 11 33 20.7 +1.3**
WDC pmax pmax
comp=Z,24nm,0.9s
UMPA Umpang Tak 91.37 289 P **P 11 33 21.1 +1.1**
214A Organ Pipe Nat 91.39 52 P **P 11 33 22.0 +2.2**
baz=230
MLAC Mammoth, Mammo 91.39 44 P **P 11 33 21.6 +1.7**
baz=227
GMRC Granite Mounta 91.40 48 P **P 11 33 22.1 +2.2**
baz=229,SNR=23
Y12C Blythe 91.44 50 P **P 11 33 22.3 +2.4**
baz=229,SNR=7.6
GYA Guiyang 91.48 301⇑*i*P **P 11 33 20.3 -0.1**
GYA pP pP 11 34 03.8 -7.1
GYA sP sP 11 34 26.8 -5.6
GYA PP **PP 11 37 02.1 +0.3**
GYA SKS **SKSac 11 43 29.5 -3.4**
GYA S **S 11 44 02.0 +0.1**
GYA sS sS 11 45 19.9 -11
GYA pmax pmax
comp=Z,50nm,0.8s
GYA pmax pmax
comp=Z,450nm,8.8s
GYA LR LR
comp=Z,460nm,19.6s
GYA LR LR
comp=Z,590nm,16.2s
GYA LR LR
comp=Z,460nm,21.1s
N02D Trinity Center 91.56 40 P **P 11 33 22.5 +2.1**
baz=225,SNR=14
O03E Paynes Creek 91.56 41 P **P 11 33 21.3 +0.9**
baz=225
RUBR Rubicon Trail 91.61 43 *e*P **P 11 33 21.5 +0.6**
comp=Z,46nm,0.8s
WAKR Walker 91.64 43 *e*P **P 11 33 21.7 +0.7**
comp=Z,24nm,0.8s
TUQ Turquoise Moun 91.66 48 P **P 11 33 23.3 +2.2**
baz=229,SNR=14
CN2 Changchun 91.68 324 *e*P **P 11 33 19.6 -1.2**
CN2 *e*pP pP 11 34 10.5 -0.9
CN2 *e*PP **PP 11 37 00.5 -2.4**
CN2 *e*S **S 11 44 01.8 -0.8**
CN2 pmax pmax
comp=Z,40nm,1.7s
CN2 pmax pmax
comp=Z,400nm,3.0s
CN2 LR LR
comp=Z,2μm,10.0s
CN2 LR LR
comp=Z,600nm,10.0s
CN2 LR LR
comp=Z,800nm,17.0s
SHOC Shoshone, Teco 91.75 47 P **P 11 33 23.1 +1.7**
baz=228,SNR=22
M02C Callahan 91.77 39 P **P 11 33 22.6 +1.2**
baz=225,SNR=14
FURC Furnace Creek, 91.78 46 P **P 11 33 22.9 +1.6**
baz=228,SNR=15
CHGN Chignik 91.80 12 *e*P **P 11 33 21.2 +0.3**
comp=Z,148nm,0.6s
GRAC Grapevine Rang 91.83 46 P **P 11 33 23.5 +1.8**
baz=228
ENH Enshi 91.86 306 *e*P **P 11 33 22.4 +0.4**
comp=Z,84nm,1.1s
L02E Cave Junction 91.93 39 P **P 11 33 24.1 +2.1**
baz=224
PNTR Pine Nut 91.95 43 *e*P **P 11 33 23.0 +0.6**
comp=Z,51nm,0.8s
GO02 Mina Guanaco 91.97 122 *e*P **P 11 33 24.1 +0.9**
comp=Z,72nm,0.7s
PDMCI Parker Dam,Lak 92.03 49 P **P 11 33 24.4 +1.8**
baz=230,SNR=17
NEE2 Needles Airpor 92.04 49 P **P 11 33 24.5 +1.9**
baz=229
BEKR Beckworth 92.06 42 *e*P **P 11 33 23.1 +0.2**
comp=Z,21nm,0.8s
VCNR Virginia City 92.06 43 *e*P **P 11 33 23.6 +0.7**
comp=Z,30nm,1.3s
LAMP Lampang 92.08 291 P **P 11 33 25.0 +1.8**
YERR Yerington 92.08 43 *e*P **P 11 33 23.6 +0.6**
comp=Z,30nm,0.7s
YBH Yreka Blue Hor 92.09 39 *e*P **P 11 33 23.7 +0.8**
comp=Z,17nm,0.6s
YBH Yreka Blue Hor 92.09 39 *e*P **P 11 33 23.7 +0.8**
YBH pmax pmax
comp=Z,17nm,0.6s
NV01 Mina Array Sit 92.24 44 *e*P **P 11 33 25.2 +1.4**
NVAR Mina Array Bea 92.24 44 P **P 11 33 25.2 +1.4**
comp=Z,26nm,0.8s,baz=220,slow=7.1,SNR=60
NVAR PP PKiKP 11 38 21.2 +9.1
comp=Z,1.0nm,0.6s,baz=236,slow=4.7,SNR=5.4
NVAR PKKPbc **PKKPbc 11 50 38.3 -0.3**
comp=Z,1.9nm,0.6s,baz=84,slow=4.4,SNR=9.0
NVAR PKPPKP **P'P'df 11 58 45.4 -1.9**
comp=Z,1.4nm,0.8s,baz=69,slow=5.3,SNR=10
RYN Ryan 92.25 44 *e*P **P 11 33 24.4 +0.7**
comp=Z,55nm,1.6s
K02D Willamette Mer 92.28 38 P **P 11 33 25.6 +1.9**
baz=224
NV11 Mina Array Sit 92.33 44 *e*P **P 11 33 24.7 +0.6**
comp=Z,1.8nm,1.0s
PAYA Payao 92.37 292 P **P 11 33 27.5 +2.9**
comp=Z,22μm,0.7s
TPNV Topopah Spring 92.46 46 *e*P **P 11 33 25.7 +0.9**
comp=Z,21nm,0.6s
TPNV Topopah Spring 92.46 46 *e*P **P 11 33 25.7 +0.9**
TPNV pmax pmax
comp=Z,21nm,0.6s
TPNV Topopah Spring 92.46 46 P **P 11 33 26.3 +1.5**
baz=228,SNR=40
GRNR Gornyy 92.47 334 *e*P **P 11 33 23.4 -0.8**
GRNR pmax pmax
comp=Z,52nm,1.0s
J01E Myrtle Point 92.48 38 P **P 11 33 26.0 +1.6**
baz=224
PAHR Pah Rah Range 92.49 43 *e*P **P 11 33 25.7 +0.8**
comp=Z,31nm,1.0s
Y14A Wickenburg 92.52 50 *e*P **P 11 33 27.0 +2.0**
comp=Z,32nm,1.4s
CM31 Chiang Mai Arr 92.58 290 *e*P **P 11 33 26.9 +1.3**
comp=Z,32nm,0.9s
CM31 Chiang Mai Arr 92.58 290 P **P 11 33 27.8 +2.3**
SNR=8.1
CMAR Chiang Mai Arr 92.58 290 P **P 11 33 26.0 +0.4**
comp=Z,20nm,0.8s,baz=143,slow=3.6,SNR=74
CMAR PP **PP 11 37 10.7 +0.3**
comp=Z,9.9nm,0.8s,baz=142,slow=6.8,SNR=13
CMAR PKKPbc **PKKPbc 11 50 37.2 +0.8**
comp=Z,2.7nm,0.8s,baz=290,slow=4.3,SNR=9.6
CMAR PKPPKP **P'P'df 11 58 47.8 -0.3**
comp=Z,3.1nm,1.1s,baz=298,slow=4.2,SNR=6.0
CMAR Chiang Mai Arr 92.58 290 P **P 11 33 26.0 +0.4**
HUMO Hull Mountain 92.58 39 *e*P **P 11 33 26.6 +1.6**
comp=Z,66nm,1.5s
M04C Macdoel 92.59 40 P **P 11 33 26.7 +1.5**
baz=225,SNR=16
L04D Klamath Falls 92.65 39 P **P 11 33 26.8 +1.4**
baz=225,SNR=12
W13A Hualapai Mount 92.71 49 *e*P **P 11 33 27.9 +1.8**
comp=Z,8.1nm,0.7s
CMMT Chiang Mai 92.78 291 P **P 11 33 28.4 +1.9**
KVN Kaiserville 92.78 44 *e*P **P 11 33 26.7 +0.4**
comp=Z,17nm,0.7s
CHTO Chiang Mai 92.78 291 *e*P **P 11 33 26.9 +0.4**
comp=Z,23nm,1.1s
SHPR Sheep Range 92.83 47 *e*P **P 11 33 27.6 +1.1**
comp=Z,14nm,1.0s
SII Sitkinak Islan 92.84 14 *e*P **P 11 33 26.9 +1.1**
comp=Z,152nm,1.6s
TUC Tucson 92.94 53 *e*P **P 11 33 28.8 +1.8**
comp=Z,26nm,0.9s
TUC Tucson 92.94 53 *e*P **P 11 33 28.8 +1.8**
TUC pmax pmax
comp=Z,26nm,0.9s
TUC Tucson 92.94 53 P **P 11 33 29.3 +2.3**
baz=231
KLR Kul'dur 93.01 331 P **P 11 33 26.4 -0.4**
comp=Z,6.7nm,0.6s,baz=137,slow=4.4,SNR=18
KLR PKKPbc **PKKPbc 11 50 36.5 -0.3**
comp=Z,1.6nm,0.5s,baz=350,slow=2.3,SNR=4.9
KLR PKPPKP **P'P'df 11 58 45.1 +0.4**
comp=Z,0.7nm,0.6s,baz=234,slow=5.6,SNR=3.5
KLR Kul'dur 93.01 331*c i*P **P 11 33 26.0 -0.8**
KLR pmax pmax
comp=Z,12nm,1.3s
NKL Nikolayevsk 93.03 338 *e*P **P 11 33 25.8 -0.9**
NKL pmax pmax
comp=Z,94nm,1.3s
I03D Drain, OR 93.16 38 P **P 11 33 29.2 +1.6**
baz=224
I02D Swisshome 93.20 37 P **P 11 33 29.5 +1.8**
baz=224
HPIG 93.22 60 *e*P **P 11 33 30.1 +1.5**
comp=Z,8.8nm,1.0s
K04D Chiloquin, OR 93.22 39 P **P 11 33 29.7 +1.6**
baz=225
J04D Umpqua Nationa 93.47 39 P **P 11 33 30.8 +1.5**
baz=225,SNR=19
MOD Modoc Plateau 93.50 40 *e*P **P 11 33 30.5 +1.1**
comp=Z,32nm,0.7s
KMI Kunming 93.53 298 P **P 11 33 30.4 +0.3**
KMI pP pP 11 34 15.8 -5.0
KMI sP sP 11 34 36.3 -6.0
KMI PP **PP 11 37 17.6 -0.4**
KMI S **S 11 44 23.3 +3.0**
KMI sS pS 11 45 36.8 +11
KMI SS **SS 11 50 44.3 +0.9**
KMI pmax pmax
comp=Z,330nm,8.9s
KMI LR LR
comp=Z,300nm,19.3s
KMI LR LR
comp=Z,280nm,27.2s
KMI LR LR
comp=Z,440nm,24.7s
OHAK Old Harbor 93.65 14 *e*P **P 11 33 30.0 +0.6**
comp=Z,111nm,1.6s
I04A Tendick Farm, 93.71 38 P **P 11 33 31.2 +1.0**
baz=225,SNR=16
K05A Summer Lake 93.75 40 *e*P **P 11 33 31.5 +0.9**
R11A Troy Canyon, C 93.78 46 *e*P **P 11 33 31.7 +0.8**
comp=Z,2.9nm,0.8s
R11A Troy Canyon, C 93.78 46 P **P 11 33 32.2 +1.4**
baz=229
X16A Lo Mia Camp, P 93.83 51 *e*P **P 11 33 33.3 +2.1**
comp=Z,12nm,1.0s
J05D Fort Rock, OR 93.96 39 P **P 11 33 32.8 +1.3**
baz=226,SNR=9.1
H04D Lebanon 94.06 37 P **P 11 33 33.1 +1.4**
baz=225,SNR=6.3
LVC Limon Verde 94.06 121 *e*P **P 11 33 33.2 +0.4**
comp=Z,21nm,1.0s
LVC Limon Verde 94.06 121 *e*P **P 11 33 34.5 +1.7**
BMN Battle Mountai 94.20 43 *e*P **P 11 33 33.6 +0.9**
comp=Z,18nm,0.8s
G03D McMinnville, O 94.28 37 P **P 11 33 34.5 +1.8**
baz=224
KDAK Kodiak Island 94.31 15 P **P 11 33 33.0 +0.5**
comp=Z,8.1nm,0.6s,baz=185,slow=5.2,SNR=13
KDAK PKiKP **PKiKP 11 38 15.2 +0.4**
comp=Z,2.5nm,0.6s,baz=74,slow=0.7,SNR=3.7
KDAK Kodiak Island 94.31 15 *e*P **P 11 33 32.8 +0.3**
comp=Z,11nm,0.8s
H04A Detroit Lake 94.45 38 *e*P **P 11 33 33.8 +0.3**
comp=Z,17nm,0.6s
PINE Pine Mountain 94.47 39 *e*P **P 11 33 35.0 +1.2**
comp=Z,36nm,0.8s
U15A North Rim 94.55 49 *e*P **P 11 33 36.2 +1.7**
comp=Z,17nm,0.8s
WUAZ Wupatki 94.56 50 *e*P **P 11 33 36.2 +1.7**
comp=Z,17nm,0.9s
WUAZ Wupatki 94.56 50 P **P 11 33 36.5 +2.0**
baz=231,SNR=18
XAN Xi'an 94.56 308 P **P 11 33 34.5 +0.1**
XAN pP pP 11 34 21.9 -3.0
XAN sP sP 11 34 41.9 -4.5
XAN PP **PP 11 37 23.3 -2.4**
XAN SKS **SKSac 11 43 50.3 +1.0**
XAN S **S 11 44 25.5 -3.0**
XAN sS sS 11 45 51.0 -7.1
XAN SS **SS 11 50 53.0 -4.5**
XAN pmax pmax
comp=Z,24nm,1.5s
XAN pmax pmax
comp=Z,570nm,7.3s
XAN LR LR
comp=Z,420nm,20.6s
XAN LR LR
comp=Z,240nm,20.6s
XAN LR LR
comp=Z,500nm,21.1s
KNB Kanab 94.60 48 *e*P **P 11 33 35.0 +0.4**
comp=Z,23nm,1.1s
KNB Kanab 94.60 48 *e*P **P 11 33 35.0 +0.4**
KNB pmax pmax
comp=Z,23nm,1.1s
I05D Terrebonne, OR 94.64 38 P **P 11 33 35.8 +1.3**
baz=226
TIY Taiyuan 94.65 313 *e*P **P 11 33 35.8 +1.1**
TIY pP **pP 11 34 19.5 -5.7**
TIY sP sP 11 34 38.9 -7.8
TIY S **S 11 44 33.0 +3.8**
TIY sS sS 11 45 47.3 -11
TIY pmax pmax
comp=Z,310nm,6.5s
TIY LR LR
comp=Z,180nm,12.6s
TIY LR LR
comp=Z,230nm,14.7s
TIY LR LR
comp=Z,470nm,22.3s
WVOR Wild Horse Val 94.76 41 *e*P **P 11 33 35.7 +0.6**
comp=Z,44nm,1.6s
WVOR Wild Horse Val 94.76 41 *e*P **P 11 33 35.7 +0.6**
WVOR pmax pmax
comp=Z,44nm,1.6s
SZCU Shurtz Canyon 94.80 47 *e*P **P 11 33 37.0 +1.4**
comp=Z,16nm,1.3s
X18A Snowflake 94.86 51 *e*P **P 11 33 37.0 +1.1**
comp=Z,24nm,1.5s
F04D Rainier, OR 95.03 36 P **P 11 33 37.9 +1.8**
baz=225
121A Cookes Peak, D 95.08 54 P **P 11 33 38.2 +1.3**
baz=233
PKCU Pink Cliffs 95.18 48 *e*P **P 11 33 38.3 +0.8**
comp=Z,17nm,1.0s
G05D Wamic, OR 95.28 38 P **P 11 33 38.7 +1.3**
baz=226
PB11 IPOC Station P 95.30 118 *e*P **P 11 33 38.9 +0.6**
comp=Z,28nm,1.1s
W18A Petrified Fore 95.36 51 P **P 11 33 38.3 +0.1**
baz=232
J08A Circle Bar Ran 95.47 40 *e*P **P 11 33 39.3 +0.9**
comp=Z,18nm,1.1s
ELK Elko 95.55 44 PKPPKP **P'P'df 11 58 41.9 +0.8**
comp=Z,0.4nm,0.5s,baz=62,slow=2.8,SNR=4.6
ELK Elko 95.55 44 *e*P **P 11 33 39.8 +0.9**
comp=Z,15nm,1.3s
ELK Elko 95.55 44 *e*P **P 11 33 39.8 +0.9**
ELK pmax pmax
comp=Z,15nm,1.3s
NLWA Neilton Lookou 95.55 35 *e*P **P 11 33 38.8 +0.3**
comp=Z,9.2nm,1.1s
E04D Cinebar 95.58 36 P **P 11 33 40.1 +1.5**
baz=225
MTPU Mount Pierson 95.64 48 *e*P **P 11 33 40.3 +0.7**
comp=Z,8.0nm,0.6s
F05D White Salmon 95.66 37 P **P 11 33 40.3 +1.3**
baz=226
MNMC Minye Minye 95.73 117 *e*P **P 11 33 40.9 +0.4**
comp=Z,15nm,0.7s
D04E Lakebay 95.92 35 P **P 11 33 42.4 +2.3**
baz=225
MSU Marysvale 95.94 47 *e*P **P 11 33 41.2 +0.4**
MSU Marysvale 95.94 47 *e*P **P 11 33 41.2 +0.4**
D03D Eldon 96.02 35 P **P 11 33 42.2 +1.6**
baz=225
TXAR Lajitas Array 96.05 59 P **P 11 33 42.5 +1.2**
comp=Z,0.5nm,0.5s,baz=201,slow=6.7,SNR=14
TXAR PKiKP **PKiKP 11 38 20.9 +2.0**
comp=Z,0.4nm,0.7s,baz=343,slow=2.8,SNR=3.3
TXAR PKKPbc **PKKPdf 11 50 29.1 +0.1**
comp=Z,4.3nm,0.7s,baz=81,slow=3.5,SNR=17
TXAR PKPPKP 11 58 41.8
comp=Z,0.6nm,0.9s,baz=111,slow=4.0,SNR=3.4
MA2 Magadan 96.12 346 P **P 11 33 39.7 -1.0**
comp=Z,4.4nm,0.8s,baz=50,slow=7.5,SNR=3.9
MA2 Magadan 96.12 346*de*P **P 11 33 39.5 -1.3**
MA2 pmax pmax
comp=Z,10.0nm,1.0s
CD2 Chengdu 96.17 303 P **P 11 33 40.1 -1.7**
CD2 pP pP 11 34 28.4 -4.0
CD2 sP pwP 11 34 41.3 +4.3
CD2 PP **PP 11 37 38.1 -0.1**
CD2 SKS **SKSac 11 43 56.6 -1.4**
CD2 S **S 11 44 42.6 0.0**
CD2 sS sS 11 46 02.9 -9.3
CD2 SS **SS 11 51 16.0 -4.5**
CD2 pmax pmax
comp=Z,560nm,13.5s
CNPM China Poot 96.19 15 *e*P **P 11 33 41.4 +0.3**
comp=Z,18nm,1.0s
MNTX Cornudas Mount 96.22 56 *e*P **P 11 33 41.7 -0.3**
comp=Z,17nm,1.6s
MNTX Cornudas Mount 96.22 56 P **P 11 33 43.8 +1.8**
baz=234
G08A Pilot Rock 96.52 39 *e*P **P 11 33 43.7 +0.6**
comp=Z,11nm,0.8s
Y22D IRIS PASSCAL I 96.58 53 P **P 11 33 44.6 +1.0**
baz=233
LNIG Linares 96.60 65 *e*P **P 11 33 44.0 +0.2**
comp=Z,21nm,1.4s
DUG Dugway, Tooele 96.61 46 P **P 11 33 45.1 +1.4**
baz=231
Q16A Castle Valley 96.80 47 *e*P **P 11 33 45.8 +1.1**
comp=Z,4.0nm,0.9s
BNM Barren Site 96.82 53 *e*P **P 11 33 44.9 0.0**
SVW2 Sparrevohn 96.83 12 *e*P **P 11 33 44.6 +0.6**
comp=Z,15nm,1.4s
HAWA Hanford 96.98 38 *e*P **P 11 33 45.6 +0.7**
comp=Z,7.6nm,0.8s
LTY Liberty 97.00 36 *e*P **P 11 33 45.0 -0.1**
comp=Z,5.0nm,0.6s
B05A Bryant 97.01 35 P Pdif 11 33 46.0 +0.9
baz=226
TMUT Trail Mountain 97.02 47 *e*P Pdif 11 33 46.7 +0.9
comp=Z,9.7nm,0.6s
A04D Lummi Island 97.04 34 P Pdif 11 33 46.7 +1.5
baz=225
BMO Blue Mountains 97.10 40 *e*P **P 11 33 45.1 -0.6**
comp=Z,5.9nm,1.1s
BMO Blue Mountains 97.10 40 *e*P **P 11 33 45.1 -0.6**
BMO pmax pmax
comp=Z,6.0nm,1.1s
HHC Hu-ho-hao-te 97.16 315 *e*P Pdif 11 33 48.6 +2.5
HHC PP **PP 11 37 50.6 +5.0**
HHC SKS **SKSac 11 44 07.8 +5.0**
HHC S **ScS 11 44 53.8 +2.9**
HHC sS sS 11 46 11.4 -10
HHC pmax pmax
comp=Z,15nm,1.0s
HHC pmax pmax
comp=Z,170nm,5.4s
BBB Bella Bella 97.18 29 P Pdif 11 33 46.5 +0.8
comp=Z,3.1nm,0.5s,baz=185,slow=1.3,SNR=4.1
TASM ASL Pad, Albuq 97.40 53 P Pdif 11 33 48.9 +1.5
baz=234
TASM ASL Pad, Albuq 97.40 53 P Pdif 11 33 48.8 +1.4
baz=234
ANMO Albuquerque 97.41 53 *e*P **P 11 33 46.7 -0.7**
comp=Z,5.8nm,1.1s
ANMO Albuquerque 97.41 53‖*e*P Pdif 11 33 48.4 +0.9
ANMO pmax pmax
comp=Z,6.0nm,1.2s
ANMO Albuquerque 97.41 53 P Pdif 11 33 48.9 +1.5
baz=234
MVCO Mesa Verde 97.43 50 *e*P **P 11 33 46.6 -0.9**
comp=Z,9.5nm,1.4s
MVCO Mesa Verde 97.43 50 P Pdif 11 33 48.8 +1.3
baz=233
SPU Mount Spurr 97.55 13 *e*P **P 11 33 46.5 -0.7**
HVU Hansel Valley 97.64 44 *e*P Pdif 11 33 48.5 +0.2
comp=Z,29nm,1.4s
HVU Hansel Valley 97.64 44 *e*P Pdif 11 33 48.5 +0.2
HVU pmax pmax
comp=Z,29nm,1.4s
D08A Wollman Farm, 97.74 37 *e*P Pdif 11 33 48.5 +0.1
comp=Z,13nm,0.8s
HLID Hailey 97.83 42 *e*P **P 11 33 49.1 -0.1**
comp=Z,4.2nm,0.8s
HLID Hailey 97.83 42 Pdiff Pdif 11 33 50.2 +1.0
baz=230
F10A Beach Ranch, E 97.88 39 *e*P **P 11 33 48.6 -0.5**
comp=Z,12nm,0.7s
RC01 Rabbit Creek A 97.93 15 *e*P **P 11 33 48.3 -0.6**
comp=Z,19nm,0.8s
PV01 Paradox Valley 97.94 49 *e*P **P 11 33 49.7 -0.1**
comp=Z,7.7nm,1.4s
PLID Pearl Lake 97.95 40 *e*P **P 11 33 49.4 -0.3**
comp=Z,6.3nm,0.9s
TCUT Toone Canyon 98.02 45 *e*P **P 11 33 49.8 -0.4**
comp=Z,11nm,0.7s
SUA Susitna One 98.07 14 *e*P **P 11 33 48.9 -0.8**
comp=Z,20nm,0.7s
ZEA Zeya 98.28 332 *e*P P 11 33 37.0 -14
ZEA *e*S **SKSac 11 44 06.0 -1.6**
ZEA *e* 11 47 36.0
ZEA pmax pmax
comp=Z,40nm,1.8s
ZEA pmax pmax
comp=Z,200nm,8.0s
ZEA pmax pmax
comp=Z,200nm,7.0s
ZEA smax smax
comp=E,300nm,4.0s
ZEA smax smax
comp=N,300nm,6.0s
GLI Glacier Island 98.32 16 *e*P **P 11 33 50.5 -0.1**
comp=N,22nm,0.7s
EYAK Cordova Ski Ar 98.34 17 *e*P **P 11 33 50.3 -0.4**
comp=N,27nm,1.4s
TTA Tatalina 98.48 11 *e*P **P 11 33 50.5 -0.8**
comp=N,14nm,1.1s
TTA Tatalina 98.48 11 *e*P **P 11 33 50.6 -0.8**
TTA pmax pmax
comp=Z,14nm,1.1s
KNK Knik Glacier 98.50 15 *e*P **P 11 33 51.1 -0.3**
comp=Z,16nm,0.8s
PMR Palmer 98.51 15 *e*P **P 11 33 51.0 -0.4**
comp=Z,9.4nm,0.9s
PMR Palmer 98.51 15 *e*P **P 11 33 51.0 -0.4**
PMR pmax pmax
comp=Z,9.0nm,0.9s
833A Chaparral WMA, 98.56 62 Pdiff Pdif 11 33 52.6 +0.1
baz=236
C09A Chrisman Ranch 98.56 37 *e*P **P 11 33 51.8 -0.2**
comp=Z,27nm,1.6s
LPAZ La Paz 98.59 116 P Pdif 11 33 54.7 +0.9
comp=Z,3.6nm,0.8s,baz=239,slow=2.5,SNR=15
LPAZ PP **PP 11 37 59.1 +2.3**
comp=Z,4.0nm,1.0s,baz=232,slow=6.5,SNR=4.4
LPAZ PKiKP **PKiKP 11 38 26.8 +2.3**
comp=Z,1.4nm,0.7s,baz=270,slow=1.0,SNR=3.6
LPAZ PKKPbc **PKKPbc 11 50 20.4 -0.3**

comp=Z,1.2nm,0.6s,baz=72,slow=1.8,SNR=4.7
LPAZ La Paz 98.59 116 *e*P **P 11 33 52.5 -1.3**
comp=Z,4.7nm,0.8s
LPAZ La Paz 98.59 116 *e*P **P 11 33 52.5 -1.3**
LPAZ pmax pmax
comp=Z,5.0nm,0.8s
LPAZ La Paz 98.59 116 *e*P Pdif 11 33 54.1 +0.4
GHO Glory Hole Cre 98.72 15 *e*P Pdif 11 33 52.0 -0.4
comp=Z,15nm,0.6s
S22A 4UR Ranch, Cre 98.81 50 *e*P Pdif 11 33 53.3 -0.5
comp=Z,5.5nm,1.1s
S22A 4UR Ranch, Cre 98.81 50 Pdiff **P 11 33 54.3 +0.5**
baz=234
SEY Seymchan 98.92 348 P **P 11 33 53.7 +0.5**
SEY PKKPbc **PKKPbc 11 50 21.2 0.0**
comp=Z,12nm,0.5s,baz=357,slow=1.7,SNR=23
SEY Seymchan 98.92 348 *e*P Pdif 11 33 52.1 -1.1
LZH Lanzhou 99.12 307 ↑P **Pdif 11 33 55.8 +0.8**
LZH pP pP 11 34 41.3 -4.5
LZH sP pwP 11 34 58.0 +7.8
LZH PP **PP 11 38 01.3 +0.6**
LZH SKS **SKSac 11 44 16.9 +3.9**
LZH S **S 11 45 08.6 +0.9**
LZH SS **SS 11 52 05.8 +3.9**
LZH pmax pmax
comp=Z,29nm,1.4s
LZH pmax pmax
comp=Z,340nm,6.5s
LZH LR LR
comp=Z,630nm,17.0s
LZH LR LR
comp=Z,660nm,17.2s
LZH LR LR
comp=Z,1μm,19.5s
MSTX Muleshoe 99.33 55 Pdiff **Pdif 11 33 56.6 +0.7**
baz=235
O20A White River Ci 99.34 48 Pdiff **Pdif 11 33 57.2 +1.3**
baz=233
CPUP Villa Florida 99.42 130 P **Pdif 11 33 57.4 +0.9**
comp=Z,2.2nm,0.7s,baz=207,slow=7.2,SNR=4.5
CPUP PKKPbc **PKKPbc 11 50 17.6 -0.3**
comp=Z,5.8nm,0.7s,baz=52,slow=3.2,SNR=14
CPUP PKPPKP 11 58 33.2
comp=Z,1.5nm,0.8s,baz=342,slow=0.7,SNR=3.4
NEW Newport 99.45 37 P **Pdif 11 33 56.2 +0.1**
comp=Z,1.0nm,0.5s,baz=222,slow=2.1,SNR=3.4
NEW PP **PP 11 38 02.2 -0.6**
comp=Z,4.1nm,0.9s,baz=239,slow=6.2,SNR=5.4
NEW PKiKP **PKiKP 11 38 25.6 +1.4**
comp=Z,2.5nm,0.6s,baz=270,slow=1.0,SNR=5.4
NEW Newport 99.45 37 Pdiff **Pdif 11 33 57.4 +1.4**
baz=229
JCT Junction City 99.46 60 Pdiff **Pdif 11 33 57.3 +0.8**
baz=236
SDCO Great Sand Dun 99.67 51 Pdiff **Pdif 11 33 58.6 +1.0**
baz=235
BW06 Boulder Array 100.12 45 Pdiff **Pdif 11 34 01.1 +1.7**
baz=233
PDAR Pinedale Array 100.12 45 P **Pdif 11 34 00.4 +0.9**
comp=Z,2.3nm,0.7s,baz=194,slow=3.8,SNR=16
PDAR PP **PP 11 38 07.9 -0.4**
comp=Z,2.8nm,1.0s,baz=235,slow=5.2,SNR=6.7
PDAR PKiKP **PKiKP 11 38 26.0 +0.1**
comp=Z,0.6nm,0.7s,baz=255,slow=1.8,SNR=3.2
PDAR PKKPbc **PKKPbc 11 50 15.7 -1.6**
comp=Z,2.1nm,0.6s,baz=90,slow=4.1,SNR=9.2
PDAR SKKPbc SKKPbc 11 53 35.4 -4.8
comp=Z,0.8nm,0.6s,baz=82,slow=4.7,SNR=4.5
PDAR PKPPKP **P'P'df 11 58 31.1 -1.4**
comp=Z,0.4nm,0.7s,baz=130,slow=6.0,SNR=3.6
BOZ Bozeman (W) 100.66 42 Pdiff **Pdif 11 34 03.0 +1.3**
baz=232
ABTX Abilene, Hawle 100.75 58 Pdiff **Pdif 11 34 03.1 +0.9**
baz=237
DLBC Dease Lake 101.18 24 P **Pdif 11 34 04.6 +1.1**
comp=Z,1.8nm,0.8s,baz=179,slow=9.8,SNR=2.9
DLBC PP **PP 11 38 16.8 +1.2**
comp=Z,0.8nm,0.4s,baz=200,slow=4.3,SNR=4.0
DLBC PKiKP **PKiKP 11 38 27.1 0.0**
comp=Z,3.1nm,0.8s,baz=279,slow=4.8,SNR=4.1
DLBC PKPPKP 11 58 30.7
comp=Z,1.4nm,0.8s,baz=163,slow=3.0,SNR=5.6
PALK Pallekele 101.29 271 PKKPbc PKKPbc 11 50 09.8 -2.6
comp=Z,20nm,1.1s,baz=115,slow=5.2,SNR=2.4
TCOL CIGO, UAF Yank 101.72 14 Pdiff **Pdif 11 34 05.3 -0.3**
baz=207
COLA College 101.72 14↓*e*P **Pdif 11 34 05.3 -0.3**
ILAR Eielson Array 101.82 14 P **Pdif 11 34 06.0 -0.1**
comp=Z,3.9nm,0.8s,baz=229,slow=6.1,SNR=18
ILAR PP **PP 11 38 13.1 -7.2**
comp=Z,3.2nm,1.0s,baz=228,slow=7.2,SNR=5.1
ILAR PKiKP **PKiKP 11 38 28.1 +0.1**
comp=Z,7.2nm,0.7s,baz=285,slow=2.7,SNR=44
ILAR PPP PPP 11 40 29.6
comp=Z,1.2nm,0.7s,baz=225,slow=4.3,SNR=4.6
ILAR PKKPbc **PKKPbc 11 50 11.6 -1.4**
comp=Z,2.7nm,0.5s,baz=6.1,slow=3.2,SNR=13
ILAR PKPPKP **P'P'df 11 58 29.4 +2.0**
comp=Z,1.1nm,1.1s,baz=298,slow=2.2,SNR=5.6
K22A Casper 101.86 46 Pdiff **Pdif 11 34 06.5 -0.6**
baz=235
POKR Poker Plat Res 102.02 14 Pdiff **Pdif 11 34 07.7 +0.7**
baz=208
BILL Bilibino 102.11 355 *e*P **Pdif 11 34 06.5 -0.8**
BILL *e* 11 38 20.7
BILL pmax pmax
comp=Z,12nm,1.5s
RSSD Black Hills 104.19 46 Pdiff **Pdif 11 34 17.4 -0.1**
baz=236
SONA0 Songino Array 104.32 318 *e*Pdif **Pdif 11 34 17.5 -0.3**
SONM Songino Array 104.32 318 Pdiff **Pdif 11 34 17.5 -0.3**
comp=Z,1.3nm,0.5s,baz=135,slow=5.4,SNR=6.1
SONM PP **PP 11 38 38.0 -1.4**
comp=Z,2.6nm,0.8s,baz=132,slow=5.3,SNR=5.6
SONM PKKPbc **PKKPbc 11 50 04.8 -0.2**
comp=Z,2.7nm,0.7s,baz=297,slow=4.2,SNR=8.5
SONM PKPPKP **P'P'df 11 58 24.6 +0.4**
comp=Z,0.5nm,0.4s,baz=233,slow=0.7,SNR=3.9
TOLK Toolik Lake Re 104.79 11 PKiKP **PKiKP 11 38 32.9 -0.4**
baz=206
TUL1 Leonard 105.19 57 PKiKP **PKiKP 11 38 33.3 -1.7**
baz=239
EPYK Eagle Plains 105.43 17 PKiKP **PKiKP 11 38 34.0 -0.6**
baz=217
MIAR Mount Ida 106.06 59 PKiKP **PKiKP 11 38 34.6 -2.1**
baz=240
W39A Magazine 106.24 58 PKiKP **PKiKP 11 38 35.7 -1.3**
baz=240
KSU1 Kansas State U 106.26 54 PKiKP **PKiKP 11 38 36.3 -0.6**
baz=240
BGNE Belgrade 106.42 51 PKiKP **PKiKP 11 38 38.2 +1.1**
baz=239
W41B Gary Mavity, V 107.32 59 PKiKP **PKiKP 11 38 40.1 +1.1**
baz=240
JIRN Jiri 107.39 292 *e*P **PKiKP 11 38 39.3 -0.5**
comp=Z,23nm,0.4s
U40A Yellville 107.47 58 PKiKP **PKiKP 11 38 39.6 +0.3**
baz=241
INK Inuvik 107.73 17 Pdiff **Pdif 11 34 33.4 +1.1**
comp=Z,2.0nm,1.0s,baz=246,slow=1.9,SNR=7.5
INK PKiKP **PKiKP 11 38 38.5 -0.1**
comp=Z,8.5nm,0.7s,baz=162,slow=1.8,SNR=40
INK PKPab **PKKPab 11 50 05.6 +0.7**
comp=Z,22nm,0.9s,baz=49,slow=8.2,SNR=18
INK PKPPKP **P'P'df 11 58 17.8 +1.6**
comp=Z,2.6nm,1.1s,baz=262,slow=5.2,SNR=3.6
INK Inuvik 107.73 17 *e*PKiKP **PKiKP 11 38 37.4 -1.3**
PKI Pulchoki 107.94 291 *e*P **PKiKP 11 38 40.0 -0.8**
comp=Z,13nm,0.6s
X43A Marvell 107.99 60 PKiKP **PKiKP 11 38 39.5 -0.7**
baz=241
ECSD EROS Data Cent 108.57 49 PKiKP **PKiKP 11 38 40.5 -0.5**
baz=241
147A Livingston 109.01 63 PKiKP **PKiKP 11 38 41.6 -0.6**
baz=242
OXF Oxford 109.05 61 PKiKP **PKiKP 11 38 41.8 -0.4**
baz=242
349A Repton 109.19 65 PKiKP **PKiKP 11 38 42.6 +0.1**
baz=242
CCM Cathedral Cave 109.42 57 PKiKP **PKiKP 11 38 43.0 +0.2**
baz=242
148A Greensboro 109.52 63 PKiKP **PKiKP 11 38 44.6 +1.5**
baz=242
YKA Yellowknife Ar 109.52 27 Pdiff **Pdif 11 34 42.0 +1.6**
comp=Z,0.4nm,0.6s,baz=161,slow=41,SNR=2.9
YKA PKiKP **PKiKP 11 38 42.0 -0.1**
comp=Z,7.3nm,0.6s,baz=261,slow=1.6,SNR=46
YKA PP **PP 11 39 18.5 +1.7**
comp=Z,2.8nm,1.0s,baz=248,slow=7.1,SNR=3.6
YKA PKKPbc **PKKPbc 11 49 47.1 -1.9**
comp=Z,13nm,0.7s,baz=39,slow=3.3,SNR=25
YKA PKKPab **PKKPab 11 50 00.2 +2.9**
comp=Z,9.5nm,0.8s,baz=45,slow=4.8,SNR=12
YKB5 Yellowknife Ar 109.52 27 *e*Pdif **Pdif 11 34 42.0 +1.6**
YKB5 *e*PKiKP **PKiKP 11 38 42.0 -0.1**
249A Camden 109.54 64 PKiKP **PKiKP 11 38 44.7 +1.5**
baz=242
DANN Dansing 109.60 291 *e*P **PKiKP 11 38 42.5 -1.3**
comp=Z,33nm,0.8s
SCIA State Center 109.89 52 PKiKP **PKiKP 11 38 44.6 +1.0**
baz=242
149A Jones 110.08 64 PKiKP **PKiKP 11 38 45.2 +1.0**
baz=242
PYUN Piuthan 110.08 291 *e*P **PKiKP 11 38 43.3 -1.3**
comp=Z,41nm,0.9s
W46A Michie 110.09 61 PKiKP **PKiKP 11 38 44.6 +0.4**
baz=242
LRAL Lakeview Retre 110.13 63 PKiKP **PKiKP 11 38 45.8 +1.5**
baz=242
250A Grady 110.18 65 PKiKP **PKiKP 11 38 44.8 +0.4**
baz=242
X47A Russelville 110.18 61 PKiKP **PKiKP 11 38 45.6 +1.2**
baz=242
Y48A Jasper 110.41 62 PKiKP **PKiKP 11 38 45.5 +0.7**
baz=242
N40A Mertquake, Sal 110.50 54 PKiKP **PKiKP 11 38 46.1 +1.3**
baz=243
Z49A Columbiana 110.55 63 PKiKP **PKiKP 11 38 46.4 +1.4**
baz=242
V46A Holladay 110.59 60 PKiKP **PKiKP 11 38 45.5 +0.5**
baz=243
S44A Carbondale 110.64 58 PKiKP **PKiKP 11 38 45.5 +0.4**
baz=243
150A Eclectic 110.66 64 PKiKP **PKiKP 11 38 45.5 +0.2**
baz=242
W47A Westpoint 110.71 61 PKiKP **PKiKP 11 38 45.9 +0.6**
baz=243
X48A Hartselle 110.75 62 PKiKP **PKiKP 11 38 45.7 +0.2**
baz=243
U46A Springville 110.80 60 PKiKP **PKiKP 11 38 46.6 +1.1**
baz=243
OPO Ambohidratompo 110.81 229 PKiKP **PKiKP 11 38 46.8 +0.5**
comp=Z,21nm,0.7s,baz=174,slow=1.7,SNR=28
OPO SKP 11 42 00.6
comp=Z,2.5nm,0.6s,baz=288,slow=3.3,SNR=4.2
OPO PKKPbc **PKKPbc 11 49 44.8 +1.0**
comp=Z,3.4nm,0.3s,baz=71,slow=0.4,SNR=4.8
251A Midway 110.88 65 PKiKP **PKiKP 11 38 46.8 +1.1**
baz=242
N41A Harden Midland 110.91 54 PKiKP **PKiKP 11 38 46.5 +1.0**
baz=243
Y49A Blount Mountai 110.94 63 PKiKP **PKiKP 11 38 47.0 +1.2**
baz=243
WVT Waverly 110.94 60 PKiKP **PKiKP 11 38 46.0 +0.3**
baz=243
BSCB Bom Sucesso 111.03 136 *e*P **PKiKP 11 38 46.4 -0.2**
BSCB *i* 11 38 49.0
BSCB *i* 11 38 59.2
BSCB *i* 11 39 20.0
Z50A Ashland 111.03 63 PKiKP **PKiKP 11 38 46.8 +0.8**
baz=243
V47A Nunnelly 111.03 60 PKiKP **PKiKP 11 38 46.4 +0.4**
baz=243
SUR Sutherland 111.08 199 Pdiff **Pdif 11 34 50.0 +1.4**
comp=Z,11nm,0.7s,baz=171,slow=1.6,SNR=8.6
SUR PKiKP **PKiKP 11 38 47.3 +0.8**
comp=Z,40nm,0.8s,baz=231,slow=1.6,SNR=36
SUR PP **PP 11 39 29.1 +1.7**
comp=Z,58nm,1.0s,baz=173,slow=5.8,SNR=8.5
SUR SKP 11 42 01.0
comp=Z,10nm,0.8s,baz=189,slow=23,SNR=5.3
SUR PKKPbc **PKKPbc 11 49 43.7 +0.2**
comp=Z,13nm,0.7s,baz=19,slow=0.3,SNR=8.3
SUR PKKPab **PKKPab 11 49 55.3 -2.2**
comp=Z,8.7nm,0.7s,baz=356,slow=3.1,SNR=5.2
SUR Sutherland 111.08 199 *e*PKiKP **PKiKP 11 38 47.4 +0.8**
SUR *e*SKPdf **SKiKP 11 42 01.9 0.0**
151A Opelika 111.14 64 PKiKP **PKiKP 11 38 47.4 +1.2**
baz=243
W48A Pulaski 111.14 61 PKiKP **PKiKP 11 38 46.9 +0.7**
baz=243
AGMN Agassiz Nation 111.19 45 PKiKP **PKiKP 11 38 46.2 +0.3**
baz=243
L40A Anamosa 111.28 53 PKiKP **PKiKP 11 38 47.2 +1.0**
baz=243
X49A Woodville 111.30 62 PKiKP **PKiKP 11 38 47.2 +0.7**
baz=243
T46A Princeton 111.31 59 PKiKP **PKiKP 11 38 47.2 +0.8**
baz=243
252A Lumpkin 111.34 65 PKiKP **PKiKP 11 38 47.4 +0.7**
baz=243
P43A Skaggs, Pawnee 111.34 56 PKiKP **PKiKP 11 38 47.0 +0.6**
baz=243
M41A Milan 111.42 54 PKiKP **PKiKP 11 38 46.7 +0.2**
baz=243
353A Camilla 111.44 66 PKiKP **PKiKP 11 38 47.4 +0.6**
baz=243
Y50A Piedmont 111.46 63 PKiKP **PKiKP 11 38 47.3 +0.5**
baz=243
061Z Ochoppi 111.47 73 PKiKP **PKiKP 11 38 47.3 +0.3**
baz=242
U47A Clarksville 111.47 60 PKiKP **PKiKP 11 38 47.7 +1.0**
baz=243
V48A Smith Brothers 111.50 61 PKiKP **PKiKP 11 38 47.2 +0.4**
baz=243
R45A Skylar, Fairfi 111.60 58 PKiKP **PKiKP 11 38 47.6 +0.7**
baz=243
958A Wauchula 111.60 71 PKiKP **PKiKP 11 38 47.6 +0.4**
baz=242
Z51A Franklin 111.61 64 PKiKP **PKiKP 11 38 47.1 0.0**
baz=243
W49A Belvidere 111.62 62 PKiKP **PKiKP 11 38 48.0 +0.9**
baz=243
152A Waverly Hall 111.66 65 PKiKP **PKiKP 11 38 47.7 +0.5**
baz=243
SPMN Marine on St. 111.67 49 PKiKP **PKiKP 11 38 47.5 +0.6**
baz=243
S46A Don Dixon Farm 111.73 59 PKiKP **PKiKP 11 38 47.7 +0.5**
baz=243
X50B Fort Payne 111.78 62 PKiKP **PKiKP 11 38 47.8 +0.3**
baz=243
253A Americus 111.83 65 PKiKP **PKiKP 11 38 48.1 +0.5**
baz=243
T47A Sharon Grove 111.85 59 PKiKP **PKiKP 11 38 47.8 +0.4**
baz=243
HDIL Hopedale 111.91 55 PKiKP **PKiKP 11 38 48.4 +1.0**
baz=244
PMNB Patos De Minas 111.93 133 *e*P **PKiKP 11 38 45.3 -3.0**
PMNB *i* 11 38 50.4
PMNB *i* 11 38 55.2
PMNB *i* 11 39 13.7
PMNB *i* 11 39 13.7
Q45A Warren Harvey, 111.95 57 PKiKP **PKiKP 11 38 48.1 +0.6**
baz=244
Y51A Rockmart 111.96 63 PKiKP **PKiKP 11 38 48.2 +0.4**
baz=243
F37A Hinrichs Farm, 112.01 49 PKiKP **PKiKP 11 38 48.6 +1.1**
baz=244
U48A Cassie Pea, Po 112.05 60 PKiKP **PKiKP 11 38 48.3 +0.4**
baz=244
455A Stateville 112.07 67 PKiKP **PKiKP 11 38 48.6 +0.6**
baz=243
ULM Lac du Bonnet 112.07 44 PKiKP **PKiKP 11 38 47.8 +0.4**
comp=Z,8.6nm,0.5s,baz=243,slow=2.1,SNR=6.9
ULM SKP 11 42 02.0
comp=Z,10nm,1.1s,baz=273,slow=5.0,SNR=3.3
ULM PKKPab **PKKPab 11 49 48.7 +2.0**
comp=Z,14nm,0.8s,baz=70,slow=4.0,SNR=9.4
DWPF Disney Wildern 112.10 70 PKiKP **PKiKP 11 38 48.7 +0.5**
baz=242
Z52A Williamson 112.12 64 PKiKP **PKiKP 11 38 48.9 +0.8**
baz=243
N43A Stutzman Famil 112.16 55 PKiKP **PKiKP 11 38 48.9 +1.0**
baz=244
V49A McMinnville 112.18 61 PKiKP **PKiKP 11 38 48.2 +0.1**
baz=244
959A Okeechobee 112.26 71 PKiKP **PKiKP 11 38 49.9 +1.5**
baz=242
S47A Hartford 112.28 59 PKiKP **PKiKP 11 38 48.9 +0.7**
baz=244
L42A Oliver, Polo 112.29 54 PKiKP **PKiKP 11 38 49.1 +1.0**
baz=244
O44A Mansfield 112.30 56 PKiKP **PKiKP 11 38 48.8 +0.6**
baz=244
JFWS Jewell Farm 112.30 53 PKiKP **PKiKP 11 38 48.8 +0.7**
baz=244
153A Fort Valley 112.32 65 PKiKP **PKiKP 11 38 49.1 +0.7**
baz=243
W50A Signal Mountai 112.36 62 PKiKP **PKiKP 11 38 49.2 +0.7**
baz=244
X51A Calhoun 112.41 63 PKiKP **PKiKP 11 38 49.6 +1.0**
baz=244
T48A Bowling Green 112.42 60 PKiKP **PKiKP 11 38 49.0 +0.5**
baz=244
M43A Waltham Townsh 112.52 54 PKiKP **PKiKP 11 38 49.1 +0.5**
baz=244
P45A Graceland, Par 112.52 57 PKiKP **PKiKP 11 38 49.4 +0.8**
baz=244
Q46A CEJHS Indians, 112.57 57 PKiKP **PKiKP 11 38 49.8 +1.1**
baz=244
F38A Pierce - Schro 112.58 49 PKiKP **PKiKP 11 38 49.5 +0.9**
baz=244
U49A Red Boiling Sp 112.59 60 PKiKP **PKiKP 11 38 49.6 +0.7**
baz=244
Y52A Lilburn 112.69 64 PKiKP **PKiKP 11 38 50.1 +0.9**
baz=244
V50A Pikevile 112.72 61 PKiKP **PKiKP 11 38 49.9 +0.7**
baz=244
G39A Holcombe 112.74 50 PKiKP **PKiKP 11 38 49.5 +0.7**
baz=244
W51A Cleveland 112.74 62 PKiKP **PKiKP 11 38 50.1 +0.8**
baz=244
Z53A Monticello 112.80 64 PKiKP **PKiKP 11 38 50.0 +0.7**
baz=244
N44A Piper City 112.80 55 PKiKP **PKiKP 11 38 50.0 +0.8**
baz=244
R47A Wooly Knot Far 112.84 58 PKiKP **PKiKP 11 38 49.8 +0.5**
baz=244
O45A Potomac 112.85 56 PKiKP **PKiKP 11 38 49.8 +0.6**
baz=244
S48A Wiedeman Farm, 112.90 59 PKiKP **PKiKP 11 38 50.1 +0.7**
baz=244
GOGA Godfrey 112.93 64 PKiKP **PKiKP 11 38 50.2 +0.6**
baz=244
P46A Rosedale 112.94 57 PKiKP **PKiKP 11 38 50.5 +1.1**
baz=244
WCI Wyandotte Cave 112.98 59 PKiKP **PKiKP 11 38 50.0 +0.4**
baz=244
T49A Edmonton 113.03 60 PKiKP **PKiKP 11 38 50.2 +0.5**
baz=244
Y53A Monroe 113.04 64 PKiKP **PKiKP 11 38 50.7 +0.8**
baz=244
I41A Arkdale 113.05 52 PKiKP **PKiKP 11 38 49.9 +0.4**
baz=245
E38A The Farm, Brul 113.06 49 PKiKP **PKiKP 11 38 50.1 +0.7**
baz=245
BDFB Brasilia 113.12 129 PKiKP **PKiKP 11 38 51.9 +1.2**
comp=Z,14nm,0.5s,baz=222,slow=2.1,SNR=18
BDFB SKP 11 42 06.7
comp=Z,3.0nm,0.6s,baz=193,slow=0.4,SNR=3.1
BDFB PKKPbc **PKKPbc 11 49 37.0 +0.8**
comp=Z,6.3nm,0.7s,baz=46,slow=5.9,SNR=10
BDFB PKKPab **PKKPab 11 49 45.9 -1.3**
comp=Z,3.7nm,0.7s,baz=10,slow=7.8,SNR=3.7
M44A Midewin, Midew 113.12 55 PKiKP **PKiKP 11 38 50.4 +0.7**
baz=245
X52A Dahlonega 113.14 63 PKiKP **PKiKP 11 38 50.4 +0.3**
baz=244
F39A Loretta 113.17 49 PKiKP **PKiKP 11 38 50.2 +0.5**
baz=245
Q47A Bedord North L 113.19 58 PKiKP **PKiKP 11 38 50.6 +0.7**
baz=244
BOSA Boshof 113.20 205 Pdiff **Pdif 11 35 00.2 +2.2**
comp=Z,3.1nm,0.5s,baz=169,slow=3.6,SNR=10
BOSA PKiKP **PKiKP 11 38 51.2 +0.6**
comp=Z,20nm,0.8s,baz=159,slow=2.1,SNR=26
BOSA PP **PP 11 39 41.2 -1.3**
comp=Z,14nm,1.0s,baz=164,slow=10,SNR=3.8
BOSA SKP 11 42 05.7
comp=Z,4.3nm,0.7s,baz=172,slow=5.4,SNR=4.4
BOSA PKKPbc **PKKPbc 11 49 37.7 +1.4**
comp=Z,2.3nm,0.4s,baz=355,slow=3.2,SNR=6.8
BOSA PKKPab **PKKPab 11 49 45.9 -1.9**
comp=Z,8.3nm,0.6s,baz=328,slow=4.4,SNR=14
U50A Jamestown 113.23 61 PKiKP **PKiKP 11 38 51.0 +0.9**
baz=244
N45A Kentland 113.25 56 PKiKP **PKiKP 11 38 50.7 +0.7**
baz=245
Z54A Sparta 113.32 65 PKiKP **PKiKP 11 38 51.5 +1.1**
baz=244
V51A Loudon 113.33 62 PKiKP **PKiKP 11 38 50.7 +0.4**
baz=244
W52A Murphy 113.33 63 PKiKP **PKiKP 11 38 51.5 +1.2**
baz=244
155A Kite 113.34 66 PKiKP **PKiKP 11 38 51.5 +1.1**
baz=244
SFIN Lafayette 113.34 56 PKiKP **PKiKP 11 38 51.6 +1.4**
baz=245
G40A Rib Lake 113.35 50 PKiKP **PKiKP 11 38 50.8 +0.8**
baz=245
R48A Northridge Ran 113.35 59 PKiKP **PKiKP 11 38 51.2 +1.0**
baz=244
K43A Burlington 113.49 53 PKiKP **PKiKP 11 38 50.9 +0.5**
baz=245
256A Glennville 113.49 66 PKiKP **PKiKP 11 38 51.7 +1.0**
baz=244
T50A Nancy 113.50 60 PKiKP **PKiKP 11 38 51.1 +0.5**
baz=244
S49A Springfield 113.50 59 PKiKP **PKiKP 11 38 50.8 +0.3**
baz=245
P47A Martinsville 113.53 57 PKiKP **PKiKP 11 38 51.6 +1.0**
baz=245
X53A Estanollee 113.53 63 PKiKP **PKiKP 11 38 52.3 +1.5**
baz=244
L44A Lake County Fo 113.55 54 PKiKP **PKiKP 11 38 51.2 +0.7**
baz=245
I42A Draeger Farm, 113.60 52 PKiKP **PKiKP 11 38 51.1 +0.5**
baz=245
EYMN Ely 113.67 47 PKiKP **PKiKP 11 38 51.0 +0.4**
baz=245
F40A Park Falls 113.67 50 PKiKP **PKiKP 11 38 51.3 +0.7**
baz=245
Q48A North Vernon 113.67 58 PKiKP **PKiKP 11 38 51.7 +0.9**
baz=245
WMQ Urumqi 113.70 308 PKP **PKiKP 11 38 51.0 +0.1**
WMQ PP **PP 11 39 45.9 -1.4**
WMQ SKKS 11 46 22.6
WMQ SS **SS 11 55 14.5 -4.5**
WMQ AMB AMB
comp=Z,470nm,11.9s
WMQ LR LR
comp=Z,1μm,26.7s
WMQ LR LR
comp=Z,2μm,28.5s
WMQ LR LR
comp=Z,2μm,33.9s
Y54A Tignall 113.71 64 PKiKP **PKiKP 11 38 52.3 +1.2**
baz=244
R49A Shelbyville 113.80 59 PKiKP **PKiKP 11 38 51.9 +0.7**
baz=245
N46A Monticello 113.81 56 PKiKP **PKiKP 11 38 51.7 +0.6**
baz=245
U51A La Follette 113.82 61 PKiKP **PKiKP 11 38 52.5 +1.2**
baz=245
Z55A Blythe 113.85 65 PKiKP **PKiKP 11 38 52.7 +1.4**
baz=244
V52A Sevierville 113.89 62 PKiKP **PKiKP 11 38 53.0 +1.6**
baz=245
O47A Sheridan 113.92 57 PKiKP **PKiKP 11 38 52.1 +0.8**
baz=245
W53A Cullowhee 113.92 63 PKiKP **PKiKP 11 38 51.9 +0.2**
baz=244
S50A Richmond 114.09 60 PKiKP **PKiKP 11 38 52.4 +0.7**
baz=245
P48A Milroy 114.11 58 PKiKP **PKiKP 11 38 52.4 +0.7**
baz=245
T51A Gray 114.12 61 PKiKP **PKiKP 11 38 52.8 +1.0**
baz=245
TZTN Tazewell 114.23 61 PKiKP **PKiKP 11 38 53.1 +1.1**
baz=245
X54A Belton 114.24 64 PKiKP **PKiKP 11 38 53.1 +1.0**
baz=244
M46A Old House Fiel 114.28 55 PKiKP **PKiKP 11 38 53.1 +1.2**
baz=246
Q49A Aurora 114.30 58 PKiKP **PKiKP 11 38 53.1 +1.0**
baz=245
U52A Thorn Hill 114.30 61 PKiKP **PKiKP 11 38 53.5 +1.3**
baz=245
Y55A Saluda 114.37 64 PKiKP **PKiKP 11 38 53.6 +1.3**
baz=244
V53A Saluda 114.40 62 PKiKP **PKiKP 11 38 53.6 +1.1**
baz=245
R50A Paris 114.40 59 PKiKP **PKiKP 11 38 52.9 +0.6**
baz=245

Z56A	Williston	114.47	65	PKiKP	PKiKP	11 38 53.7 +1.2
	baz=244					
157A	Early Branch	114.48	66	PKiKP	PKiKP	11 38 53.0 +0.4
	baz=244					
N47A	Urbana	114.52	56	PKiKP	PKiKP	11 38 53.0 +0.6
	baz=246					
L46A	Eue Claire	114.57	55	PKiKP	PKiKP	11 38 53.3 +0.8
	baz=246					
H43A	Windswept, Lux	114.59	52	PKiKP	PKPdf	11 38 52.4 -0.1
	baz=246					
W54A	Cherokee Point	114.61	63	PKiKP	PKiKP	11 38 53.4 +0.6
	baz=245					
O48A	Farmland	114.63	57	PKiKP	PKiKP	11 38 53.3 +0.6
	baz=246					
P49A	Miami Univ. Ec	114.64	58	PKiKP	PKPdf	11 38 52.7 0.0
	baz=246					
S51A	Beattyville	114.66	60	PKiKP	PKiKP	11 38 53.3 +0.5
	baz=245					
Y56A	Pelion	114.72	65	PKiKP	PKPdf	11 38 52.9 -0.1
	baz=245					
M47A	Cromwell	114.76	56	PKiKP	PKiKP	11 38 53.8 +1.0
	baz=246					
X55A	Gracelyn & Ava	114.76	64	PKiKP	PKiKP	11 38 53.6 +0.5
	baz=245					
U53A	Fall Branch	114.86	62	PKiKP	PKiKP	11 38 54.0 +0.7
	baz=245					
F42A	Maple Grove Fa	114.87	50	PKiKP	PKiKP	11 38 53.6 +0.7
	baz=246					
T52A	Hallie	114.88	61	PKiKP	PKiKP	11 38 54.2 +0.9
	baz=245					
Q50A	Georgetown	114.88	59	PKiKP	PKiKP	11 38 54.0 +0.9
	baz=246					
R51A	Hillsboro	114.94	59	PKiKP	PKiKP	11 38 54.0 +0.7
	baz=246					
Z57A	Bowman	114.96	66	PKiKP	PKiKP	11 38 54.8 +1.3
	baz=245					
N48A	Decatur	114.97	56	PKiKP	PKiKP	11 38 54.2 +0.9
	baz=246					
S52A	Salyersville	115.05	60	PKiKP	PKiKP	11 38 54.2 +0.7
	baz=246					
V54A	Nebo	115.08	63	PKiKP	PKiKP	11 38 54.9 +1.2
	baz=245					
C40A	Isle Royale Na	115.09	48	ePKPdf	PKPdf	11 38 52.5 -0.8
C40A	Isle Royale Na	115.09	48	PKiKP	PKiKP	11 38 53.4 +0.1
	baz=247					
158A	Hollywood	115.11	66	PKiKP	PKiKP	11 38 54.9 +1.1
	baz=245					
D41A	Chassel	115.12	49	ePKPdf	PKPdf	11 38 52.9 -0.5
D41A	Chassel	115.12	49	PKiKP	PKiKP	11 38 54.1 +0.7
	baz=247					
T53A	Wise	115.15	61	PKiKP	PKiKP	11 38 55.1 +1.3
	baz=246					
O49A	Covington	115.18	57	ePKPdf	PKiKP	11 38 53.9 +0.1
O49A	Covington	115.18	57	PKiKP	PKiKP	11 38 54.5 +0.7
	baz=246					
RGRS	Roger Stewart	115.19	66	ePKPdf	PKPdf	11 38 53.8 -0.1
K46A	Dorr	115.19	54	PKiKP	PKiKP	11 38 55.0 +1.4
	baz=246					
X56A	White Oak	115.22	64	PKiKP	PKiKP	11 38 55.3 +1.4
	baz=245					
KMSC	Kings Mountain	115.27	63	PKiKP	PKiKP	11 38 55.3 +1.2
	baz=245					
NHSC	New Hope	115.28	66	PKiKP	PKiKP	11 38 55.1 +1.0
	baz=245					
L47A	Sherwood	115.30	55	PKiKP	PKiKP	11 38 54.9 +1.0
	baz=246					
P50A	Jamestown	115.32	58	PKiKP	PKiKP	11 38 54.7 +0.6
	baz=246					
Q51A	Peebles	115.41	59	ePKPdf	PKPdf	11 38 54.1 -0.1
Q51A	Peebles	115.41	59	PKiKP	PKiKP	11 38 54.9 +0.7
	baz=246					
I45A	Fountain	115.43	53	ePKPdf	PKPdf	11 38 54.0 0.0
I45A	Fountain	115.43	53	PKiKP	PKiKP	11 38 54.8 +0.7
	baz=247					
M48A	Edgerton	115.44	56	ePKPdf	PKPdf	11 38 53.4 -0.7
M48A	Edgerton	115.44	56	PKiKP	PKiKP	11 38 55.0 +0.8
	baz=246					
U54A	Nelsons Funny	115.48	62	PKiKP	PKiKP	11 38 55.8 +1.3
	baz=246					
Y57A	Sumter	115.50	65	ePKPdf	PKPdf	11 38 54.5 0.0
Y57A	Sumter	115.50	65	PKiKP	PKiKP	11 38 55.4 +0.9
	baz=245					
J46A	Howard City	115.55	54	PKiKP	PKiKP	11 38 55.5 +1.2
	baz=247					
N49A	Columbus Grove	115.58	57	ePKPdf	PKPdf	11 38 54.5 0.0
N49A	Columbus Grove	115.58	57	PKiKP	PKiKP	11 38 55.2 +0.8
	baz=246					
R52A	Catlettsburg	115.63	60	PKiKP	PKiKP	11 38 55.4 +0.7
	baz=246					
V55A	Taylorsville	115.65	63	PKiKP	PKiKP	11 38 55.7 +0.9
	baz=246					
Z58A	St. Stephen	115.66	66	PKiKP	PKiKP	11 38 56.0 +1.2
	baz=245					
O50A	Cable	115.66	58	PKiKP	PKiKP	11 38 55.0 +0.3
	baz=246					
K47A	Vermontville	115.71	55	PKiKP	PKiKP	11 38 55.8 +1.1
	baz=247					
S53A	Williamson	115.73	61	PKiKP	PKiKP	11 38 56.0 +1.1
	baz=246					
H45A	Beulah	115.78	52	PKiKP	PKiKP	11 38 55.6 +0.9
	baz=247					
P51A	Williamsport	115.79	58	ePKPdf	PKPdf	11 38 54.7 -0.2
P51A	Williamsport	115.79	58	PKiKP	PKiKP	11 38 55.8 +0.9
	baz=246					
L48A	N Adams	115.81	55	PKiKP	PKiKP	11 38 55.8 +0.9
	baz=247					
W56A	Indian Trail	115.83	64	PKiKP	PKiKP	11 38 55.7 +0.6
	baz=246					
E43A	Lone Tree Farm	115.85	50	ePKPdf	PKPdf	11 38 54.5 -0.3
E43A	Lone Tree Farm	115.85	50	PKiKP	PKiKP	11 38 55.2 +0.4
	baz=247					
T54A	Tazewell	115.88	61	PKiKP	PKiKP	11 38 56.2 +0.9
	baz=246					
I46A	Reed City	115.91	53	PKiKP	PKiKP	11 38 55.8 +0.8
	baz=247					
X57A	Johnson Farm,	115.92	65	PKiKP	PKiKP	11 38 56.6 +1.3
	baz=245					
M49A	Liberty Center	115.94	56	PKiKP	PKiKP	11 38 56.1 +1.0
	baz=247					
Y58A	Scranton	116.00	65	ePKPdf	PKiKP	11 38 55.7 +0.3
Y58A	Scranton	116.00	65	PKiKP	PKiKP	11 38 56.6 +1.2
	baz=245					
SDDR	Presa de Saban	116.02	84	ePKPdf	PKiKP	11 38 56.5 +0.5
U55A	TA2, Sparta	116.04	62	PKiKP	PKiKP	11 38 56.9 +1.3
	baz=246					
J47A	Sunmer	116.06	54	ePKPdf	PKiKP	11 38 55.7 +0.4
J47A	Sunmer	116.06	54	PKiKP	PKiKP	11 38 56.5 +1.2
	baz=247					
R53A	Hurricane	116.12	60	PKiKP	PKiKP	11 38 56.4 +0.8
	baz=246					
ACSO	Alum Creek Sta	116.15	58	ePKPdf	PKiKP	11 38 55.8 +0.2
ACSO	Alum Creek Sta	116.15	58	PKiKP	PKiKP	11 38 56.3 +0.7
	baz=247					
Q52A	Bidwell	116.15	59	PKiKP	PKiKP	11 38 56.5 +0.8
	baz=246					
V56A	Mocksville	116.17	63	ePKPdf	PKiKP	11 38 56.6 +0.8
V56A	Mocksville	116.17	63	PKiKP	PKiKP	11 38 56.7 +0.9
	baz=246					
G45A	Suttons Bay	116.20	52	ePKPdf	PKiKP	11 38 56.2 +0.7
G45A	Suttons Bay	116.20	52	PKiKP	PKiKP	11 38 56.2 +0.7
	baz=248					
N50A	Nevada	116.24	57	PKiKP	PKiKP	11 38 56.5 +0.8
	baz=247					
W57A	Gilead	116.28	64	ePKPdf	PKiKP	11 38 56.4 +0.5
W57A	Gilead	116.28	64	PKiKP	PKiKP	11 38 56.8 +0.9
	baz=246					
H46A	Fife Lake	116.30	53	PKiKP	PKiKP	11 38 56.3 +0.6
	baz=248					
L49A	Milan	116.33	56	PKiKP	PKiKP	11 38 57.3 +1.4
	baz=247					
K48A	Perry	116.36	55	PKiKP	PKiKP	11 38 56.6 +0.7
	baz=247					
LBTB	Lobatse	116.37	206	PKP	PKPdf	11 38 56.5 -0.2
	comp=Z,17nm,0.8s,baz=170,slow=3.0,SNR=19					
LBTB				PP	PP	11 40 05.2 +0.5
	comp=Z,15nm,0.8s,baz=138,slow=7.0,SNR=4.8					
LBTB				SKP		11 42 11.2
	comp=Z,3.5nm,0.6s,baz=262,slow=6.3,SNR=3.7					
LBTB				PKKPbc	PKKPbc	11 49 24.9 -0.5
	comp=Z,5.5nm,0.9s,baz=4.6,slow=4.7,SNR=4.6					
S54A	Dingess, Beckl	116.37	61	PKiKP	PKiKP	11 38 57.0 +0.8
	baz=246					
O51A	Pataskala	116.38	58	PKiKP	PKiKP	11 38 56.6 +0.5
	baz=247					
U56A	King	116.47	63	PKiKP	PKiKP	11 38 57.6 +1.2
	baz=246					
AAM	Ann Arbor	116.48	55	ePKPdf	PKiKP	11 38 57.1 +1.0
AAM	Ann Arbor	116.48	55	PKiKP	PKiKP	11 38 57.0 +0.8
	baz=247					
T55A	Pulaski	116.48	62	PKiKP	PKiKP	11 38 57.3 +0.9
	baz=246					
P52A	Corning	116.51	59	PKiKP	PKiKP	11 38 56.7 +0.4
	baz=247					
F45A	CMU Biological	116.53	51	PKiKP	PKiKP	11 38 56.9 +0.8
	baz=248					
FCC	Fort Churchill	116.54	36	ePKPdf	PKPdf	11 38 55.2 -0.4
FCC	Fort Churchill	116.54	36	ePKIKP	PKPdf	11 38 55.3 -0.4
M50A	Fremont	116.56	57	PKiKP	PKiKP	11 38 56.9 +0.6
	baz=247					
I47A	Gladwin	116.57	53	ePKPdf	PKiKP	11 38 57.1 +0.8
I47A	Gladwin	116.57	53	PKiKP	PKiKP	11 38 57.1 +0.8
	baz=248					
E44A	Grand Marais A	116.62	50	ePKPdf	PKiKP	11 38 57.0 +0.7
E44A	Grand Marais A	116.62	50	PKiKP	PKiKP	11 38 57.1 +0.7
	baz=248					
Q53A	Leroy	116.64	60	PKiKP	PKiKP	11 38 57.9 +1.3
	baz=247					
V57A	Coltrane Farms	116.73	63	PKiKP	PKiKP	11 38 57.7 +0.9
	baz=246					
R54A	Victor	116.76	61	PKiKP	PKiKP	11 38 57.7 +0.9
	baz=247					
J48A	Bridge Port	116.78	54	ePKPdf	PKiKP	11 38 57.4 +0.7
J48A	Bridge Port	116.78	54	PKiKP	PKiKP	11 38 58.0 +1.3
	baz=248					
BLA	Blacksburg	116.79	62	ePKPdf	PKiKP	11 38 57.4 +0.4
BLA	Blacksburg	116.79	62	ePKIKP	PKiKP	11 38 57.4 +0.4
BLA	Blacksburg	116.79	62	PKiKP	PKiKP	11 38 58.0 +1.0
	baz=246					
W58A	Raeford	116.79	64	PKiKP	PKiKP	11 38 57.8 +0.9
	baz=246					
GLMI	Grayling	116.80	52	ePKPdf	PKiKP	11 38 57.5 +0.8
GLMI	Grayling	116.80	52	PKiKP	PKiKP	11 38 57.6 +0.8
	baz=248					
K49A	Clarkson	116.81	55	PKiKP	PKiKP	11 38 57.4 +0.6
	baz=248					
G46A	Petoskey	116.82	52	PKiKP	PKiKP	11 38 57.4 +0.7
	baz=248					
N51A	Ashland	116.84	57	ePKPdf	PKiKP	11 38 57.3 +0.4
N51A	Ashland	116.84	57	PKiKP	PKiKP	11 38 57.5 +0.5
	baz=247					
O52A	Adamsville	116.91	58	ePKPdf	PKiKP	11 38 57.2 +0.1
O52A	Adamsville	116.91	58	PKiKP	PKiKP	11 38 57.6 +0.5
	baz=247					
S55A	Lewisburg	116.95	61	PKiKP	PKiKP	11 38 57.8 +0.5
	baz=247					
L50A	Kingsville	116.97	56	PKiKP	PKiKP	11 38 58.0 +0.9
	baz=248					
PLIO	Pelee Island,	116.98	56	PKiKP	PKiKP	11 38 58.2 +1.1
	baz=248					
P53A	Whipple	116.98	59	ePKPdf	PKiKP	11 38 57.5 +0.3
P53A	Whipple	116.98	59	PKiKP	PKiKP	11 38 58.1 +0.8
	baz=247					
H47A	Mio	116.99	53	PKiKP	PKiKP	11 38 58.1 +1.0
	baz=248					
T56A	Rocky Mt	117.00	62	PKiKP	PKiKP	11 38 58.7 +1.4
	baz=247					
X59A	McDuffie Farm,	117.08	65	PKiKP	PKiKP	11 38 58.2 +0.7
	baz=246					
M51A	Elyria	117.13	57	PKiKP	PKiKP	11 38 58.4 +0.9
	baz=248					
I48A	Sherman Twp	117.17	53	PKiKP	PKiKP	11 38 58.2 +0.8
	baz=248					
Q54A	Coxs Mills	117.18	60	ePKPdf	PKiKP	11 38 58.0 +0.4
Q54A	Coxs Mills	117.18	60	PKiKP	PKiKP	11 38 58.8 +1.2
	baz=247					
V58A	Windy Hill, Pi	117.19	64	PKiKP	PKiKP	11 38 58.4 +0.7
	baz=246					
J49A	Marlette	117.24	54	PKiKP	PKiKP	11 38 58.2 +0.7
	baz=248					
U57A	Blanch	117.28	63	PKiKP	PKiKP	11 38 58.5 +0.6
	baz=247					
N52A	McGinn's Farm,	117.28	58	PKiKP	PKiKP	11 38 58.4 +0.6
	baz=248					
K50A	Casco	117.37	55	ePKPdf	PKiKP	11 38 58.3 +0.4
K50A	Casco	117.37	55	PKiKP	PKiKP	11 38 58.2 +0.4
	baz=248					
O53A	New Philadelph	117.40	58	PKiKP	PKiKP	11 38 58.5 +0.5
	baz=248					
G47A	Hillman	117.43	52	PKiKP	PKiKP	11 38 58.8 +0.9
	baz=249					
W59A	Clinton	117.44	65	PKiKP	PKiKP	11 38 59.1 +0.8
	baz=246					
X60A	Albert Glenn T	117.56	65	PKiKP	PKiKP	11 38 59.2 +0.8
	baz=246					
T57A	Hurt	117.56	62	ePKPdf	PKiKP	11 38 58.5 +0.1
T57A	Hurt	117.56	62	PKiKP	PKiKP	11 38 59.5 +1.0
	baz=247					
E46A	Sault Ste Mari	117.57	51	ePKPdf	PKPdf	11 38 58.0 -0.1
E46A	Sault Ste Mari	117.57	51	PKiKP	PKiKP	11 38 58.9 +0.8
	baz=249					
S56A	Natural Bridge	117.60	62	PKiKP	PKiKP	11 38 58.9 +0.4
	baz=247					
H48A	Harrisville	117.61	53	PKiKP	PKiKP	11 38 59.0 +0.7
	baz=249					
I49A	Point Hope	117.67	54	PKiKP	PKiKP	11 38 59.2 +0.8
	baz=249					
Q55A	Buckhannon	117.73	60	PKiKP	PKiKP	11 38 59.6 +0.9
	baz=248					
M52A	Chesterland	117.78	57	ePKPdf	PKiKP	11 38 59.3 +0.6
M52A	Chesterland	117.78	57	PKiKP	PKiKP	11 38 59.6 +0.9
	baz=248					
V59A	Middlesex	117.83	64	PKiKP	PKiKP	11 38 60.0 +1.0
	baz=247					
U58A	Oxford	117.85	63	PKiKP	PKiKP	11 38 59.8 +0.8
	baz=247					
N53A	Lisbon	117.88	58	ePKPdf	PKiKP	11 38 59.6 +0.6
N53A	Lisbon	117.88	58	PKiKP	PKiKP	11 38 60.0 +1.1
	baz=248					
CNNC	Cliffs of the	117.89	65	PKiKP	PKiKP	11 39 00.4 +1.3
	baz=247					
D46A	Sault St. Mari	117.93	50	PKiKP	PKiKP	11 38 59.3 +0.5
	baz=249					
W60A	Pink Hill	117.94	65	PKiKP	PKiKP	11 38 59.9 +0.7
	baz=247					
O54A	Avella	117.97	59	PKiKP	PKiKP	11 39 00.1 +0.9
	baz=248					
T58A	Grand View Acr	118.07	63	PKiKP	PKiKP	11 39 00.6 +1.2
	baz=247					
S57A	Dark Hollow, R	118.08	62	ePKPdf	PKiKP	11 38 59.6 +0.2
S57A	Dark Hollow, R	118.08	62	PKiKP	PKiKP	11 39 00.1 +0.7
	baz=247					
P55A	Reedsville	118.11	60	PKiKP	PKiKP	11 39 00.2 +0.7
	baz=248					
K51A	Iona Station	118.11	56	PKiKP	PKiKP	11 38 59.9 +0.6
	baz=249					
MCWV	Mont Chateau	118.15	59	ePKPdf	PKiKP	11 38 59.7 +0.2
MCWV	Mont Chateau	118.15	59	PKiKP	PKiKP	11 39 00.4 +0.9
	baz=248					
M53A	WI Miller and	118.22	57	PKiKP	PKiKP	11 39 00.4 +0.9
	baz=248					
E47A	Iron Bridge	118.27	51	PKiKP	PKiKP	11 39 00.3 +0.8
	baz=250					
MK31	Makanchi Array	118.36	309	ePKPdf	PKPdf	11 38 58.4 -1.3
MK31	Makanchi Array	118.36	309	ePKIKP	PKPdf	11 38 58.4 -1.3
MK32	Makanchi Array	118.36	309	ePKPdf	PKPdf	11 38 58.5 -1.2
MK32				eSKPdf	SKPdf	11 42 13.2 -1.8
MKAR	Makanchi Array	118.36	309	PKP	PKPdf	11 38 58.5 -1.2
	comp=Z,33nm,0.9s,baz=120,slow=0.6,SNR=77					
MKAR				SKP		11 42 13.2
	comp=Z,12nm,1.0s,baz=90,slow=2.4,SNR=6.6					
MKAR				PKKPbc	PKKPab	11 49 19.0 -0.4
	comp=Z,3.6nm,0.6s,baz=295,slow=3.5,SNR=17					
MKAR				PKKP	PKKPdf	11 49 50.4 +2.7
	comp=Z,1.7nm,0.6s,baz=271,slow=1.8,SNR=4.2					
MKAR				SKKPbc	SKKPbc	11 52 47.9 +1.0
	comp=Z,4.5nm,0.7s,baz=289,slow=3.7,SNR=10					
Q56A	Snyder Ridge,	118.39	60	PKiKP	PKiKP	11 39 00.9 +0.9
	baz=248					
U59A	Littleton	118.39	64	PKiKP	PKiKP	11 39 00.5 +0.5
	baz=247					
BASO	Ashfield	118.47	54	PKiKP	PKiKP	11 39 00.6 +0.6
	baz=249					
F48A	Evansville	118.48	52	PKiKP	PKiKP	11 39 00.4 +0.5
	baz=250					
N54A	Moraine State	118.53	58	ePKPdf	PKiKP	11 39 00.3 +0.1
N54A	Moraine State	118.53	58	PKiKP	PKiKP	11 39 00.7 +0.5
	baz=249					
W61A	Ground Anchor	118.54	65	PKiKP	PKiKP	11 39 01.0 +0.7
	baz=247					
V60A	Jim Taylor Roa	118.56	64	PKiKP	PKiKP	11 39 01.4 +1.0
	baz=247					
MAKZ	Makanchi	118.56	309	ePKPdf	PKPdf	11 38 58.6 -1.4
MAKZ	Makanchi	118.56	309	ePKIKP	PKPdf	11 38 58.6 -1.4
D47A	Chapleau	118.59	51	PKiKP	PKiKP	11 39 00.9 +0.8
	baz=250					
R57A	Stanardsville	118.59	61	PKiKP	PKiKP	11 39 01.3 +0.9
	baz=248					
K52A	Tillsonburg	118.68	56	PKiKP	PKiKP	11 39 01.0 +0.6
	baz=249					
S58A	Poland Farm, P	118.68	62	ePKPdf	PKiKP	11 39 01.0 +0.5
S58A	Poland Farm, P	118.68	62	PKiKP	PKiKP	11 39 01.3 +0.7
	baz=248					
L53A	Girard	118.70	57	PKiKP	PKiKP	11 39 01.2 +0.7
	baz=249					
BRCO	Bruce Peninsul	118.70	54	PKiKP	PKiKP	11 39 01.1 +0.7
	baz=250					
O55A	Ligonier	118.74	59	PKiKP	PKiKP	11 39 01.5 +0.9
	baz=248					
T59A	Double "B" Far	118.81	63	PKiKP	PKiKP	11 39 01.6 +0.8
	baz=248					
P56A	Dayton Farm, R	118.81	60	PKiKP	PKiKP	11 39 01.2 +0.4
	baz=248					
F49A	Sandfield	118.83	52	PKiKP	PKiKP	11 39 00.9 +0.3
	baz=250					
I51A	Listowel	118.83	55	PKiKP	PKiKP	11 39 01.4 +0.7
	baz=250					
BWLO	Walkerton	118.86	54	PKiKP	PKiKP	11 39 01.2 +0.5
	baz=250					
U60A	Pendleton	118.91	64	PKiKP	PKiKP	11 39 01.5 +0.5
	baz=248					
R58B	Mineral	118.94	62	ePKPdf	PKiKP	11 39 01.5 +0.4
R58B	Mineral	118.94	62	PKiKP	PKiKP	11 39 01.8 +0.7
	baz=248					
ERPA	Erie	118.95	57	ePKPdf	PKiKP	11 39 01.5 +0.6
ERPA	Erie	118.95	57	PKiKP	PKiKP	11 39 01.6 +0.6
	baz=249					
Q57A	Strasburg	118.95	60	PKiKP	PKiKP	11 39 01.7 +0.6
	baz=248					
M54A	Oil Creek Stat	118.96	57	ePKPdf	PKiKP	11 39 01.3 +0.2
M54A	Oil Creek Stat	118.96	57	PKiKP	PKiKP	11 39 01.7 +0.7
	baz=249					
R58A	Rapidan	118.97	61	PKiKP	PKiKP	11 39 01.7 +0.6
	baz=248					
BMRO	Meriville Lake	118.98	54	PKiKP	PKiKP	11 39 01.4 +0.5
	baz=250					
TOBO	Tobermory, Bru	118.99	53	PKiKP	PKiKP	11 39 01.5 +0.5
	baz=250					
E48A	Lockeyer	119.00	51	PKiKP	PKiKP	11 39 01.7 +0.8
	baz=250					
J52A	Paris	119.01	55	PKiKP	PKiKP	11 39 01.8 +0.8
	baz=250					
PDGK	Podgornoye	119.01	305	PKIKP	PKPdf	11 38 59.3 -1.9
PDGK				pmax	pmax	
	comp=Z,47nm,0.8s					
V61A	Roper	119.09	65	PKiKP	PKiKP	11 39 02.2 +0.8
	baz=248					
N55A	Marion Center	119.17	58	ePKPdf	PKiKP	11 39 01.6 +0.1
N55A	Marion Center	119.17	58	PKiKP	PKiKP	11 39 02.4 +0.9
	baz=249					
ZAA0	Zalesovo Array	119.20	318	ePKPdf	PKPdf	11 38 59.6 -1.4
ZALV	Zalesovo Beam	119.20	318	PKP	PKPdf	11 38 59.6 -1.4
	comp=Z,15nm,0.4s,baz=142,slow=2.0,SNR=42					
ZALV				PKKP	PKKPdf	11 49 48.9 +2.6
	comp=Z,2.0nm,0.4s,baz=254,slow=2.3,SNR=5.5					
O56A	Blue Knob Stat	119.29	59	ePKPdf	PKiKP	11 39 02.3 +0.5
O56A	Blue Knob Stat	119.29	59	PKiKP	PKiKP	11 39 02.8 +1.0
	baz=249					
S59A	Mechanicsville	119.30	62	PKiKP	PKiKP	11 39 02.6 +0.8
	baz=248					
MATP	Matopo	119.31	211	PKP	PKPdf	11 39 01.8 -0.8
	comp=Z,68nm,0.8s					
MATP				SKP		11 42 16.7
	comp=Z,9.3nm,0.7s,baz=3.9,slow=0.9,SNR=5.2					
MATP				PKKPbc	PKKPbc	11 49 16.6 +1.7
	comp=Z,1.8nm,0.6s,baz=345,slow=1.4,SNR=4.2					
TYNO	Tyneside	119.37	56	PKiKP	PKiKP	11 39 02.4 +0.7
	baz=250					
U61A	Possum Corner	119.39	64	PKiKP	PKiKP	11 39 02.6 +0.7
	baz=248					
CBN	Corbin Frederi	119.40	62	ePKPdf	PKiKP	11 39 02.7 +0.7
CBN	Corbin Frederi	119.40	62	PKiKP	PKiKP	11 39 02.7 +0.7
	baz=248					
P57A	Homestead Farm	119.40	60	PKiKP	PKiKP	11 39 02.7 +0.7
	baz=249					
ACTO	Acton	119.42	55	PKiKP	PKiKP	11 39 02.7 +0.9
	baz=250					
L54A	Sinclairville	119.46	57	PKiKP	PKiKP	11 39 02.6 +0.6
	baz=250					
D48A	Paudash Townsh	119.46	51	PKiKP	PKiKP	11 39 02.2 +0.4
	baz=251					
V62A	Hyde County Ai	119.47	65	PKiKP	PKiKP	11 39 02.9 +0.8
	baz=248					
T60A	Surry	119.48	63	PKiKP	PKiKP	11 39 03.0 +0.9
	baz=248					
I52A	Shelburne	119.50	55	PKiKP	PKiKP	11 39 02.8 +0.8
	baz=250					
M55A	Ridgway	119.57	58	PKiKP	PKiKP	11 39 02.8 +0.5
	baz=249					
R59A	King George, V	119.59	62	PKiKP	PKiKP	11 39 03.0 +0.7
	baz=248					
N56A	West Decatur	119.71	59	PKiKP	PKiKP	11 39 02.6 0.0
	baz=249					
S60A	Water View	119.75	62	PKiKP	PKiKP	11 39 03.3 +0.6
	baz=248					
D49A	Beulah Townshi	119.78	51	PKiKP	PKiKP	11 39 02.8 +0.3
	baz=251					
I53A	Kortright Cn E	119.81	55	PKiKP	PKiKP	11 39 03.1 +0.6
	baz=250					
SJG	San Juan	119.86	87	ePKPdf	PKiKP	11 39 03.4 0.0
H52A	Wyevale	119.89	54	PKiKP	PKiKP	11 39 03.0 +0.3
	baz=251					
STCO	Saint Catharin	119.89	56	PKiKP	PKiKP	11 39 03.5 +0.8
	baz=250					
SSPA	Standing Stone	119.90	59	ePKPdf	PKiKP	11 39 03.3 +0.4
SSPA	Standing Stone	119.90	59	PKiKP	PKiKP	11 39 03.6 +0.8
	baz=249					
KLBO	Killbear Provi	119.91	53	PKiKP	PKiKP	11 39 03.0 +0.3
	baz=251					
E50A	Wahnapitae	119.91	52	PKiKP	PKiKP	11 39 03.3 +0.6
	baz=251					
O57A	Amberson	119.93	59	PKiKP	PKiKP	11 39 03.7 +0.7
	baz=249					
M56A	Emporium	119.99	58	PKiKP	PKiKP	11 39 03.8 +0.7
	baz=250					
R60A	Leonardtown, M	120.00	62	PKiKP	PKiKP	11 39 03.6 +0.5
	baz=249					
NIL	Nilore	120.01	292	ePKPdf	PKPdf	11 39 02.7 -0.6
NIL	Nilore	120.01	292	ePKIKP	PKPdf	11 39 02.7 -0.6
K54A

BUKO **Buck Lake** 120.48 53 PKiKP **PKiKP** 11 39 04.1 +0.2
baz=251
K55A **Perry** 120.49 57 PKiKP **PKiKP** 11 39 04.4 +0.4
baz=250
P59A **Jarrettsville** 120.59 61 PKiKP **PKiKP** 11 39 04.4 +0.1
baz=250
PAGS **Pennsylvania G** 120.59 60 *e*PKPdf **PKiKP** 11 39 04.5 +0.2
MMNY **Mt. Morris Dam** 120.61 57 *e*PKPdf **PKPdf** 11 39 03.6 -0.5
F52A **Sundridge** 120.64 53 PKiKP **PKiKP** 11 39 04.6 +0.4
baz=252
WLVO **Wesleyville** 120.66 55 PKiKP **PKiKP** 11 39 04.8 +0.5
baz=251
E51A **G1948 Merrick** 120.76 52 PKiKP **PKiKP** 11 39 05.0 +0.6
baz=252
Q60A **Greensboro** 120.81 61 PKiKP **PKiKP** 11 39 05.5 +0.8
baz=250
J55A **Hilton** 120.84 56 *e*PKPdf **PKiKP** 11 39 05.1 +0.5
J55A **Hilton** 120.84 56 PKiKP **PKiKP** 11 39 05.2 +0.6
baz=251
ULHL **Ulahol** 120.89 303 P **PKPdf** 11 39 04.0 -1.0
SNR=22
G53A **Haliburton** 120.89 54 PKiKP **PKiKP** 11 39 05.1 +0.4
baz=252
R61A **Willards** 120.94 62 PKiKP **PKiKP** 11 39 05.4 +0.5
baz=249
BOOM **Boomskoye usch** 121.18 303 *e*PKPdf **PKPdf** 11 39 04.9 -0.5
RES **Resolute Bay** 121.22 18 PKP **PKPdf** 11 39 03.4 -0.9
comp=E,43nm,0.8s,baz=253,slow=3.3,SNR=77
RES PKKPbc **PKKPbc** 11 49 08.3 -0.2
comp=E,17nm,1.0s,baz=65,slow=4.3,SNR=22
E52A **Mattawa** 121.23 53 PKiKP **PKiKP** 11 39 05.7 +0.4
baz=252
P60A **Greenville** 121.24 61 PKiKP **PKiKP** 11 39 05.7 +0.2
baz=250
I55A **Frankford** 121.24 55 PKiKP **PKiKP** 11 39 05.7 +0.4
baz=252
BANO **Bancroft** 121.33 54 PKiKP **PKiKP** 11 39 06.3 +0.7
baz=252
DELO **Deloro Mine** 121.38 55 PKiKP **PKiKP** 11 39 05.9 +0.3
baz=252
PSUB **Penn St. - Bra** 121.41 60 *e*PKPdf **PKiKP** 11 39 06.1 +0.3
N59A **State Game Lan** 121.51 59 PKiKP **PKiKP** 11 39 06.7 +0.6
baz=251
KZA **Kyzart** 121.53 302 P **PKPdf** 11 39 06.3 -0.2
SNR=7.4
ALGO **Algonquin Park** 121.53 53 PKiKP **PKiKP** 11 39 06.0 +0.1
baz=252
TKM2 **Tokmak 2** 121.56 303 P **PKPdf** 11 39 05.0 -1.2
SNR=46
TKM2 **Tokmak 2** 121.56 303 PKIKP **PKPdf** 11 39 04.2 -2.0
TKM2 pmax pmax
comp=Z,29nm,0.6s
O60A **Telford** 121.57 60 PKiKP **PKiKP** 11 39 06.7 +0.6
baz=250
D52A **ZEK Kipawa Sen** 121.60 52 PKiKP **PKiKP** 11 39 06.3 +0.3
baz=253
PECO **Prince Edward** 121.62 56 PKiKP **PKiKP** 11 39 06.4 +0.2
baz=252
H55A **Tweed** 121.69 55 PKiKP **PKiKP** 11 39 06.5 +0.2
baz=252
KSPA **Keystone Colle** 121.72 59 *e*PKPdf **PKiKP** 11 39 06.5 +0.1
BINY **Binghamton** 121.78 58 PKiKP **PKiKP** 11 39 07.2 +0.7
baz=251
KURK **Kurchatov** 121.89 313 *e*PKPdf **PKPdf** 11 39 05.0 -1.3
KURK **Kurchatov** 121.89 313*c* *i*PKIKP **PKPdf** 11 39 04.5 -1.8
KURK pmax pmax
comp=Z,132nm,1.3s
KURK **Kurchatov** 121.89 313 P **PKPdf** 11 39 04.9 -1.3
SNR=39
PLVO **Plevna** 121.91 54 PKiKP **PKiKP** 11 39 07.0 +0.3
baz=252
E53A **Dumoine, Ponti** 121.92 53 PKiKP **PKiKP** 11 39 07.0 +0.4
baz=253
KBK **Karagaybulak** 121.93 303 P **PKPdf** 11 39 06.5 -0.4
SNR=17
NRIK **Noril'sk** 121.94 335 PKP **PKPdf** 11 39 05.2 -0.6
comp=Z,25nm,0.7s,baz=115,slow=1.5,SNR=33
PEMO **Pembroke** 121.99 54 PKiKP **PKiKP** 11 39 06.9 +0.1
baz=253
UCH **Uchtor** 122.10 302 P **PKPdf** 11 39 06.5 -1.0
SNR=63
D53A **Lac Vacive, Po** 122.10 52 *e*PKPdf **PKPdf** 11 39 06.2 -0.6
D53A **Lac Vacive, Po** 122.10 52 PKiKP **PKiKP** 11 39 07.3 +0.3
baz=253
O61A **Allentown** 122.11 61 PKiKP **PKPdf** 11 39 07.0 0.0
baz=251
CHMS **Chumysh** 122.17 303 P **PKPdf** 11 39 06.1 -1.0
SNR=35
FRU1 **Bishkek** 122.20 303 *e*PKPdf **PKPdf** 11 39 07.1 -0.1
G55A **Calabogie** 122.22 54 PKiKP **PKiKP** 11 39 07.6 +0.3
baz=253
AAK **Ala-Archa** 122.24 303 PKP **PKPdf** 11 39 06.7 -0.7
comp=Z,29nm,0.9s,baz=128,slow=4.2,SNR=33
AAK PKKPbc **PKKPbc** 11 49 06.8 +2.6
comp=Z,1.6nm,0.3s,baz=340,slow=2.5,SNR=3.8
AAK PKKP **PKKPdf** 11 49 41.9 +1.7
comp=Z,2.3nm,0.4s,baz=90,slow=2.5,SNR=4.3
AAK **Ala-Archa** 122.24 303 P **PKPdf** 11 39 07.4 0.0
SNR=15
AAK **Ala-Archa** 122.24 303 *e*PKPdf **PKPdf** 11 39 06.2 -1.2
AAK **Ala-Archa** 122.24 303 *i* PKPdf **PKPdf** 11 39 06.1 -1.4
SNR=19
AAK **Ala-Archa** 122.24 303*c* *i*PKIKP **PKPdf** 11 39 06.3 -1.2
AAK **Ala-Archa** 122.24 303 P **PKPdf** 11 39 06.5 -0.9
SNR=16
E54A **Lac Daplat, Po** 122.25 53 PKiKP **PKiKP** 11 39 07.3 0.0
baz=253
BRNJ **Basking Ridge** 122.30 60 *e*PKPdf **PKiKP** 11 39 08.6 +1.0
H56A **Elgin** 122.33 55 PKiKP **PKiKP** 11 39 08.3 +0.8
baz=253
ODNJ **Ogdensburg** 122.40 59 *e*PKPdf **PKiKP** 11 39 07.7 0.0
USP **Ospenovka** 122.43 303 P **PKPdf** 11 39 06.6 -1.0
SNR=32
VLDQ **Val d'Or** 122.55 51 *e*PKPdf **PKPdf** 11 39 06.8 -0.8
F55A **Otter Lake** 122.63 54 PKiKP **PKPdf** 11 39 07.9 0.0
baz=253
AML **Almayashu** 122.64 302 P **PKiKP** 11 39 08.8 0.0
SNR=12
EKS2 **Erkin-Say** 122.75 302 P **PKPdf** 11 39 07.8 -0.6
SNR=31
CPNY **Central Park** 122.77 60 *e*PKPdf **PKiKP** 11 39 08.8 +0.3
D54A **Lac Fusel, La** 122.80 52 PKiKP **PKPdf** 11 39 08.3 +0.1
baz=254
PAL **Palisades** 122.87 60 *e*PKPdf **PKiKP** 11 39 09.0 +0.3
PAL **Palisades** 122.87 60 *e*PKIKP **PKiKP** 11 39 09.0 +0.3
PAL **Palisades** 122.87 60 PKiKP **PKiKP** 11 39 09.4 +0.7
baz=252
MATQ **Matagami** 122.88 49 PKiKP **PKPdf** 11 39 08.3 +0.1
baz=255
ARSB **Arslanbob** 122.90 301 *e*PKPdf **PKPdf** 11 39 07.6 -1.1
M61A **Granite Spring** 123.07 59 PKiKP **PKiKP** 11 39 09.6 +0.5
baz=252
ORIO **Orleans, Innes** 123.09 54 PKiKP **PKiKP** 11 39 09.1 +0.2
baz=254
LSQQ **Lebel-sur-Quev** 123.11 50 PKiKP **PKiKP** 11 39 09.2 +0.3
baz=255
LONY **Lake Ozonia** 123.48 55 *e*PKPdf **PKiKP** 11 39 09.7 -0.1
LONY **Lake Ozonia** 123.48 55 PKiKP **PKiKP** 11 39 10.6 +0.7
baz=254
NCB **Newcomb** 123.54 56 *e*PKPdf **PKiKP** 11 39 10.0 0.0
TRY **Troy** 123.57 58 *e*PKPdf **PKiKP** 11 39 10.1 +0.1
KBL **Kabul** 123.58 292 *e*PKPdf **PKPdf** 11 39 09.6 -0.7
KBL **Kabul** 123.58 292 *e*PKIKP **PKPdf** 11 39 09.6 -0.7
ACCN **Adirondack Com** 123.76 57 *e*PKPdf **PKPdf** 11 39 10.1 0.0
TRQ **Mont Tremblant** 123.94 54 *e*PKPdf **PKPdf** 11 39 10.4 -0.1
LSZ **Lusaka** 123.97 214 PKP **PKPdf** 11 39 11.5 -0.1
comp=Z,116nm,0.8s,baz=148,slow=1.7,SNR=86
LSZ PKKPbc **PKKPbc** 11 48 58.6 +1.2
comp=Z,4.8nm,0.6s,baz=349,slow=1.3,SNR=7.0
LSZ **Lusaka** 123.97 214 *e*PKPdf **PKPdf** 11 39 11.2 -0.3
GAR **Garm** 124.11 297 *e*PKPdf **PKPdf** 11 39 10.3 -0.8
GAR **Garm** 124.11 297 *e*PKIKP **PKPdf** 11 39 10.3 -0.8
TSUM **Tsumeb** 124.44 201 PKP **PKPdf** 11 39 12.4 0.0
comp=Z,56nm,0.8s,baz=153,slow=2.6,SNR=47
TSUM PP **PP** 11 40 59.5 -0.3
comp=Z,59nm,1.0s,baz=172,slow=6.7,SNR=12
TSUM **Tsumeb** 124.44 201 *e*PKPdf **PKPdf** 11 39 11.9 -0.6
HNH **Hanover** 124.82 57 *e*PKPdf **PKiKP** 11 39 12.5 0.0
CHGR **Chuyangaron** 124.86 297 *e*PKPdf **PKiKP** 11 39 13.3 +0.4
CHGQ **Chibougamau** 124.96 49 PKiKP **PKPdf** 11 39 12.3 0.0
baz=257
HRV **Adam Dziewonsk** 125.00 59 PKiKP **PKiKP** 11 39 13.8 +1.0
baz=254
WES **Weston** 125.13 59 *e*PKPdf **PKiKP** 11 39 13.8 +0.7
KK31 **Karatay Array** 125.17 302 *e*PKPdf **PKPdf** 11 39 11.8 -1.1
KK31 **Karatay Array** 125.17 302 *i* PKIKP **PKPdf** 11 39 11.9 -1.0
KK31 pmax pmax
comp=Z,35nm,0.7s
LBNH **Lisbon** 125.21 56 *e*PKPdf **PKiKP** 11 39 13.4 +0.2
LBNH **Lisbon** 125.21 56 *e*PKIKP **PKiKP** 11 39 13.4 +0.2
LBNH **Lisbon** 125.21 56 PKiKP **PKiKP** 11 39 14.0 +0.7
baz=255
BCX **Boston College** 125.23 59 *e*PKPdf **PKiKP** 11 39 13.3 0.0
MOQ **Mont Orford** 125.26 55 *e*PKPdf **PKPdf** 11 39 13.0 0.0
M65A **Busby, Falmout** 125.39 60 PKiKP **PKiKP** 11 39 14.3 +0.7
baz=254
LATQ **La Tuque** 125.41 53 PKiKP **PKiKP** 11 39 13.7 +0.2
baz=256
WVL **Waterville** 126.86 57 *e*PKPdf **PKPdf** 11 39 16.2 +0.2
MHTO **MHTO** 127.16 272 P **PKPdf** 11 39 17.0 -0.2
SNR=5.2
PKME **Peaks-Kenny Pk** 127.28 56 *e*PKPdf **PKiKP** 11 39 17.0 -0.3
PKME **Peaks-Kenny Pk** 127.28 56 PKiKP **PKiKP** 11 39 17.9 +0.6
baz=257
BVAR **Borovoye Array** 127.36 314 PKhKP PKPpre 11 39 01.3
comp=Z,1.2nm,0.5s,baz=75,slow=1.7,SNR=4.1
BVAR PKP **PKPdf** 11 39 16.4 -0.3
comp=Z,23nm,0.5s,baz=117,slow=1.9,SNR=24
BVAR SKPbc SKPbc 11 42 08.9
comp=Z,3.1nm,0.6s,baz=98,slow=2.7,SNR=2.7
BVAR PKKP **PKKPdf** 11 49 32.1 +1.6
comp=Z,1.2nm,0.7s,baz=255,slow=2.9,SNR=5.1
BRVK **Borovoye** 127.43 314 *e*PKPdf **PKPdf** 11 39 16.0 -0.8
BRVK **Borovoye** 127.43 314 *de*PKIKP **PKPdf** 11 39 16.1 -0.8
BRVK **Borovoye** 127.43 314 P **PKPdf** 11 39 16.4 -0.4
SNR=40
TULEG **Thule** 127.72 16 *e*PKPdf **PKPdf** 11 39 16.3 -0.4
BIDO **Bidbid** 128.14 275 P **PKPdf** 11 39 19.0 -0.1
SNR=5.5
RCBR **Riachuelo** 128.22 133 *e*PKPdf **PKiKP** 11 39 20.1 -0.2
RCBR **Riachuelo** 128.22 133 *e*PKIKP **PKiKP** 11 39 20.1 -0.2
EMMW **East Machias** 128.43 57 *e*PKPdf **PKPdf** 11 39 19.1 +0.1
PQI **Presque Isle** 128.44 54 *e*PKPdf **PKPdf** 11 39 19.0 0.0
GGN **Saint George** 128.94 56 *e*PKPdf **PKPdf** 11 39 20.2 +0.3
FRB **Frobisher Bay** 129.47 32 SKPbc SKPab 11 42 21.4 -0.5
comp=Z,76nm,0.7s,baz=273,slow=6.0,SNR=34
SOHO **SOHO** 129.72 275 P **PKPdf** 11 39 22.0 -0.1
SNR=13
BATG **Bathurst New B** 129.87 54 *e*PKPdf **PKiKP** 11 39 22.3 -0.2
SCHQ **Schefferville** 130.25 44 PKP **PKPdf** 11 39 21.5 -0.6
comp=Z,18nm,0.7s,baz=263,slow=2.9,SNR=15
SCHQ SKPbc **SKPbc** 11 42 24.8 -0.6
comp=Z,79nm,1.0s,baz=284,slow=3.6,SNR=18
SCHQ **Schefferville** 130.25 44 *e*PKPdf **PKPdf** 11 39 22.1 0.0
KMBO **Kilima Mbogo** 130.28 233 PKP **PKPdf** 11 39 23.8 0.0
comp=Z,25nm,0.8s,baz=63,slow=4.2,SNR=29
KMBO SKPbc **SKPbc** 11 42 25.9 -1.3
comp=Z,26nm,0.8s,baz=88,slow=4.1,SNR=23
KMBO **Kilima Mbogo** 130.28 233 *e*PKPdf **PKPdf** 11 39 23.4 -0.5
KMBO **Kilima Mbogo** 130.28 233 *i* PKiKP **PKPdf** 11 39 23.9 0.0
SNR=8.4
KMBO **Kilima Mbogo** 130.28 233 P **PKiKP** 11 39 24.8 +0.1
SNR=14
UOSS **Minazif** 130.33 275 *e*PKPdf **PKPdf** 11 39 21.8 -1.4
UOSS **Minazif** 130.33 275 *i* PKPdf **PKPdf** 11 39 21.3 -2.0
SNR=8.0
UOSS **Minazif** 130.33 275 P **PKPdf** 11 39 21.8 -1.4
SNR=5.5
ALNE **Al Ain** 130.34 274 *i* PKPdf **PKPdf** 11 39 22.6 -0.7
SNR=6.0
HATD **Hatta, Dubai** 130.34 275 *i* PKPdf **PKPdf** 11 39 22.7 -0.6
SNR=12
HATD **Hatta, Dubai** 130.34 275 P **PKiKP** 11 39 24.0 -0.2
SNR=7.7
ASHO **Ashiyiah** 130.34 275 *i* PKPdf **PKPdf** 11 39 22.5 -0.8
SNR=12
ASHO **Ashiyiah** 130.34 275 P **PKPdf** 11 39 22.7 -0.6
SNR=7.9
MDH **Madha** 130.40 276 PKPdf **PKPdf** 11 39 22.1 -1.3
NAI **Nairobi** 130.47 233 *e*PKPdf **PKPdf** 11 39 24.5 +0.4
NAI **Nairobi** 130.47 233 *e*PKIKP **PKPdf** 11 39 24.5 +0.4
LMN **Caledonia Moun** 130.48 56 *e*PKPdf **PKPdf** 11 39 23.0 +0.1
FAQ **Al Faqa, Dubai** 130.75 275 *i* PKPdf **PKPdf** 11 39 23.5 -0.6
SNR=8.9
SHME **Shamm** 130.82 277 *i* PKPdf **PKPdf** 11 39 23.6 -0.6
SNR=7.7
ASUD **Al Ashush, Dub** 130.92 275 *i* PKPdf **PKiKP** 11 39 25.0 -0.2
SNR=6.4
KULLO **Kullorsuaq** 131.08 17 *i* PKIKP **PKPdf** 11 39 21.9 -1.2
KULLO **Kullorsuaq** 131.08 17 *i* P **PKPdf** 11 39 21.9 -1.2
MZR **Muzera** 131.78 272 P **PKiKP** 11 39 28.3 +1.2
SNR=6.5
GBN **Guysborough** 132.70 57 *e*PKPdf **PKPdf** 11 39 27.4 +0.4
GEYT **Alibeck** 133.02 293 PKhKP PKPpre 11 39 13.6
comp=Z,6.5nm,0.7s,baz=183,slow=2.7,SNR=6.5
GEYT PKP **PKPdf** 11 39 27.3 -0.7
comp=Z,29nm,0.9s,baz=268,slow=4.5,SNR=4.2
GEYT SKPbc **SKPbc** 11 42 33.0 -2.9
comp=Z,43nm,0.7s,baz=176,slow=2.2,SNR=17
GYA0B **ALIBECK ARRAY** 133.02 293 *e*PKPdf **PKPdf** 11 39 27.8 -0.2
SVE **Sverdlovsk** 133.19 319 *e*PKIKP **PKiKP** 11 39 29.7 +0.9
SVE pmax pmax
comp=Z,39nm,0.9s
AB31 **Akbulak array** 133.48 308 *i* PKHKP PKPpre 11 39 17.9
AB31 pmax pmax
comp=Z,9.0nm,0.7s
ABKAR **Akbulak array** 133.48 308 *e*PKPdf **PKPdf** 11 39 28.5 +0.1
ARU **Arti** 134.35 318 PKhKP PKPpre 11 39 17.4
comp=Z,1.5nm,0.4s,baz=188,slow=20,SNR=2.2
ARU PKP **PKPdf** 11 39 30.4 +0.6
comp=Z,9.1nm,0.4s,baz=93,slow=0.8,SNR=17
ARU SKPbc **SKPbc** 11 42 37.7 -1.9
comp=Z,3.7nm,0.4s,baz=74,slow=2.8,SNR=5.3
ARU **Arti** 134.35 318 *e*PKPdf **PKPdf** 11 39 29.6 -0.3
ARU **Arti** 134.35 318 *i* PKIKP **PKPdf** 11 39 29.1 -0.7
KBS **Kingsbay** 134.57 357 *e*PKPdf **PKPdf** 11 39 29.8 +0.1
KBS **Kingsbay** 134.57 357‖ *e*PKIKP **PKiKP** 11 39 31.2 +0.1
KBS **Kingsbay** 134.57 357 *e*PKPdf **PKiKP** 11 39 30.5 -0.6
ATD **Arta Tunnel** 134.66 251 SKPbc **SKPbc** 11 42 40.7 -1.4
comp=Z,13nm,0.8s,baz=278,slow=18,SNR=2.7
AKTO **Aktyubinsk** 134.79 310 SKPbc **SKPbc** 11 42 39.2 -2.0
comp=Z,9.6nm,0.7s,baz=74,slow=8.2,SNR=4.8
AKTO SKPab **SKPab** 11 42 42.4 -2.8
comp=Z,11nm,0.7s,baz=72,slow=7.2,SNR=5.3
AKTO **Aktyubinsk** 134.79 310 PKHKP PKPpre 11 39 19.1
AKTO pmax pmax
comp=Z,29nm,0.7s
MBAR **Mbarara** 134.84 227 PKhKP PKPpre 11 39 22.2
comp=Z,2.7nm,0.3s,baz=2.6,slow=3.5,SNR=6.2
MBAR PKP **PKPdf** 11 39 33.0 +0.7
comp=Z,18nm,0.7s,baz=324,slow=5.0,SNR=18
MBAR SKPbc **SKPbc** 11 42 41.8 -1.0
comp=Z,19nm,0.7s,baz=131,slow=4.6,SNR=10
MBAR **Mbarara** 134.84 227 *e*PKPdf **PKPdf** 11 39 31.5 -0.8
MBAR **Mbarara** 134.84 227‖ *e*PKIKP **PKPdf** 11 39 32.7 +0.4
ILULI **Ilulissat** 135.00 23 *e*PKPdf **PKPdf** 11 39 30.0 -0.6
ILULI **Ilulissat** 135.00 23 *i* PKIKP **PKPdf** 11 39 28.6 -2.0
ILULI **Ilulissat** 135.00 23 *i* P **PKPdf** 11 39 28.6 -2.0
ILULI *i* 11 42 38.1
SPA0 **Spitsbergen Ar** 135.02 355 *e*PKPdf **PKPdf** 11 39 30.1 -0.4
SPA0 **Spitsbergen Ar** 135.02 355 *e* PKPpre 11 39 18.5
SPITS **Spitsbergen Ar** 135.02 355 PKhKP PKPpre 11 39 17.8
comp=Z,1.2nm,0.4s,baz=60,slow=5.0,SNR=8.3
SPITS PKP **PKPdf** 11 39 29.7 -0.8
comp=Z,57nm,0.8s,baz=69,slow=4.6,SNR=22
SPITS SKPbc **SKPbc** 11 42 40.1 -1.1
comp=Z,19nm,0.6s,baz=64,slow=5.7,SNR=11
DAMY **Dhamar** 135.17 256 *e*PKPdf **PKPdf** 11 39 32.2 -0.7
SFJD **Kangerlussuaq** 136.07 26 SKPbc **SKPbc** 11 42 44.6 0.0
comp=Z,37nm,0.9s,baz=0.0,slow=1.0,SNR=7.4
SFJD SKPab **SKPab** 11 42 49.5 -0.7
comp=Z,42nm,1.0s,baz=273,slow=2.4,SNR=10
HSPB **Hornsund (broa** 136.20 355 *e*PKPdf **PKPdf** 11 39 31.9 -0.8
HSPB **Hornsund (broa** 136.20 355 *e*PKIKP **PKPdf** 11 39 31.9 -0.8
DAG **Danmarks Havn** 136.24 6‖ *i*PKIKP **PKPdf** 11 39 30.9 -1.9
DAG **Danmarks Havn** 136.24 6‖ *i* P **PKPdf** 11 39 30.9 -1.9
SUMG **Summit** 136.64 16 *e*PKPdf **PKPdf** 11 39 33.3 -0.8
SUMG **Summit** 136.64 16 *e*PKIKP **PKPdf** 11 39 33.3 -0.8
SUMG **Summit** 136.64 16 *i* P **PKPdf** 11 39 32.3 -1.9
KIRV **Kirov** 138.88 322 PKhKP PKPpre 11 39 29.8
KIRV PKP **PKPdf** 11 39 37.4 -0.7
comp=Z,29nm,0.5s,baz=93,slow=2.3,SNR=6.3
KIRV SKPbc **SKPbc** 11 42 52.2 -0.8
comp=Z,28nm,0.6s,baz=308,slow=0.5,SNR=6.1
IVI **Ivigtut** 139.20 33 *e*PKPdf **PKPdf** 11 39 37.2 -1.4
PRGR **Permogore** 139.73 328 *e*PKHKP PKPpre 11 39 32.0
PRGR pmax pmax
comp=Z,56nm,1.1s
NRS **Narsarsuaq** 140.46 33 *i* P **PKPdf** 11 39 34.8 -6.1
LVZ **Lovozero** 140.46 340‖ *e*PKIKP **PKPdf** 11 39 41.4 +0.6
HAMF **Hammerfest** 140.93 347 *e*PKPdf **PKPdf** 11 39 36.6 -4.9
APA **Apatity** 141.04 340‖ *i*PKIKP **PKPdf** 11 39 37.3 -4.5
APA pmax pmax
comp=Z,12nm,0.8s
ARA0 **ARCESS Array S** 141.50 346 *e*SKPbc **SKiKP** 11 43 00.8 -0.7
ARCES **ARCESS Array B** 141.50 346 PKhKP PKPpre 11 39 36.8
comp=Z,13nm,0.6s,baz=33,slow=2.7,SNR=66
ARCES PKP **PKPdf** 11 39 42.4 -0.2
comp=Z,13nm,0.4s,baz=53,slow=2.0,SNR=38
ARCES SKPbc **SKiKP** 11 43 00.8 -0.7
comp=Z,7.5nm,0.7s,baz=38,slow=4.6,SNR=4.8
ARCES PKKP **PKKPdf** 11 49 02.6 -0.7
comp=Z,1.7nm,0.6s,baz=201,slow=2.2,SNR=7.3
ARE0 **ARCESS Array S** 141.50 346 *e*PKPdf **PKPdf** 11 39 42.1 -0.5
ARE0 **ARCESS Array S** 141.50 346 *e* **PKPdf** 11 39 37.1 -5.5
SCO **Scoresbysund** 141.54 11 *i* P **PKPdf** 11 39 37.8 -4.8
MAK **Makhachkala** 141.76 298 *e*P **Pdif** 11 37 04.1 -0.1
MAK *e* 11 42 47.5
MAK pmax pmax
comp=Z,91nm,0.5s
KTK1 **Kautokeino** 142.39 346 *e*PKPdf **PKPdf** 11 39 40.2 -4.0
TRO **Tromso** 142.62 349 *e*PKPdf **PKPdf** 11 39 39.4 -5.1
KLMR **Klimovskoe** 142.74 329 *e*PKPdf **PKPdf** 11 39 40.4 -4.6
KLMR AMP 11 39 49.7
comp=Z,96nm,0.9s
KLMR *e*PP PP 11 42 46.6 -10
GROC **Groznyy** 143.02 298 *e*PKHKP PKPpre 11 39 40.4
GROC pmax pmax
comp=Z,47nm,0.6s
GNI **Garni** 143.64 293 P PKPab 11 39 43.1 -1.6
GNI **Garni** 143.64 293 PKP **PKPdf** 11 39 46.6 -0.9
GNI **Garni** 143.64 293 *i* PKPdf PKPbc 11 39 45.3 -0.4
SNR=16
GNI **Garni** 143.64 293*c* *e*PKIKP PKPbc 11 39 45.2 -0.4
GNI **Garni** 143.64 293 P PKPbc 11 39 45.4 -0.2
SNR=10
TBLG **Delisi** 143.75 296 P PKPab 11 39 43.6 -1.3
TASB **TASBURUN-IGDIR** 144.01 293 P **PKPab** 11 39 44.8 -1.3
IGDI **IGDIR** 144.13 293 *i* P PKPbc 11 39 47.5 +0.6
IGDI IAML_P
comp=Z,4μm,0.7s
HAKT **HAKKARI** 144.16 289 *i* P PKPbc 11 39 47.9 +0.5
HAKT IAML_P
comp=Z,8μm,0.6s
CLDR **Caldiran** 144.19 292 P **PKPab** 11 39 46.3 -0.7
CLDR **Caldiran** 144.19 292 *i* P **PKPdf** 11 39 48.5 -0.1
CLDR IAML_P
comp=Z,19μm,0.6s
CUKT **Cukurca** 144.20 288 P **PKPab** 11 39 45.3 -1.6
CUKT **Cukurca** 144.20 288 *i* P PKPbc 11 39 47.2 -0.1
CUKT IAML_P
comp=Z,24μm,0.6s
DYDN **Diyadin** 144.40 292 *i* P **PKPdf** 11 39 49.2 +0.3
DYDN IAML_P
comp=Z,48μm,0.6s
ZEI **Tsey** 144.40 298 *i* PKHKP PKPpre 11 39 43.7
ZEI pmax pmax
comp=Z,174nm,0.6s
VMUR **Van-Muradiye** 144.44 291 *i* P **PKPdf** 11 39 49.1 +0.1
VMUR IAML_P
comp=Z,3μm,0.6s
VANB **Van** 144.54 291 P **PKPab** 11 39 47.3 -0.9
BGD **Bogdanovka** 144.58 295 P **PKPab** 11 39 47.4 -1.0
NCK **Nalchik** 144.62 299 *de*PKIKP **PKPab** 11 39 48.1 -0.1
AKH **Akhalkalaki** 144.67 295 P **PKPab** 11 39 47.7 -1.0
AKH **Akhalkalaki** 144.67 295 *e*PKPbc **PKPab** 11 39 48.5 -0.2
AKH **Akhalkalaki** 144.67 295‖ *i* P **PKPdf** 11 39 49.4 +0.1
AKH **Akhalkalaki** 144.67 295 *e*PKIKP **PKPab** 11 39 48.5 -0.2
ONI **Oni** 144.73 297 P PKPbc 11 39 47.7 -1.0
STEI **Steigen** 144.74 350 *e*PKPbc PKPbc 11 39 47.2 -0.5
GEVA **Gevas** 144.76 290 *i* P **PKPab** 11 39 49.3 +0.2
GEVA IAML_P
comp=Z,12μm,0.7s
LOF **Lofoten** 144.79 351 *e*PKPab PKPbc 11 39 47.0 -0.9
AKDM **Akdamar-Van** 144.83 290 P PKPbc 11 39 47.9 -1.4
AGRB **Hanur-Agry** 144.94 292 P PKPbc 11 39 48.4 -1.2
GOF **Gofitskoye** 144.97 302‖ *i*PKIKP PKPbc 11 39 48.9 -0.3
GOF pmax pmax
comp=Z,605nm,0.8s
TUTA **Tutak** 145.06 292 *i* P **PKPab** 11 39 50.8 +0.5
TUTA IAML_P
comp=Z,17μm,0.5s
ADCV **BITLIS_Adilcev** 145.08 291 *i* P **PKPab** 11 39 50.9 +0.6
ADCV IAML_P
comp=Z,4μm,0.8s
KBZ **Khabaz** 145.13 299 PKPbc **PKPdf** 11 39 49.2 -0.5
comp=Z,129nm,0.7s,baz=119,slow=1.2,SNR=122
SIRN **Sırnak** 145.18 288 *i* P **PKPab** 11 39 50.8 +0.2
SIRN IAML_P
comp=Z,9μm,0.6s
MLAZ **Malazgirt-MUS** 145.24 291 P **PKPdf** 11 39 48.5 -1.8
NEY **Neytrino** 145.26 299 *d* PKP2 **PKPdf** 11 39 50.1 -0.1
KIV **Kislovodsk** 145.27 300 P **PKPab** 11 39 48.5 -1.6
KIV **Kislovodsk** 145.27 300 *e*PKPdf **PKPdf** 11 39 49.4 -0.8
KIV **Kislovodsk** 145.27 300‖ *i*P **PKPdf** 11 39 50.2 +0.1
KIV **Kislovodsk** 145.27 300 *i* PKPbc **PKPdf** 11 39 49.0 -1.1
SNR=41
KIV **Kislovodsk** 145.27 300 *e*PKIKP **PKPdf** 11 39 48.7 -1.4
KIV *e* 11 43 07.9
KIV *e* 12 01 43.4
KIV pmax pmax
comp=Z,281nm,1.1s
KIV **Kislovodsk** 145.27 300 P **PKPdf** 11 39 48.7 -1.4
SNR=37
EATA **Eleskirt** 145.34 293 *i* P **PKPab** 11 39 52.0 +0.5
EATA IAML_P
comp=Z,8μm,0.6s
SENK **Senkaya-Erzuru** 145.49 294 P **PKPdf** 11 39 49.9 -0.9
BLIS **Bitlis-Merkez** 145.51 290 *i* P **PKPab** 11 39 52.3 +0.4
BLIS IAML_P
comp=Z,30μm,0.6s
SRTM **Siirt_Merkez** 145.62 289 *i* P **PKPbc** 11 39 51.9 +0.3
SRTM IAML_P
comp=Z,21μm,0.5s
HOMI **Horasan** 145.81 293 *i* P **PKPab** 11 39 53.1 0.0
HOMI IAML_P
comp=Z,30nm,0.4s
KOPR **Koprukoy-ERZUR** 145.84 293 P **PKPdf** 11 39 50.9 -0.4
MOS **Moscow** 145.88 321 *i* PKHKP PKPpre 11 39 47.6
MOS *e* 11 43 09.7
MOS pmax pmax
comp=Z,572nm,1.4s
MUSM **Mu-Merkez** 146.01 290 *i* P **PKPab** 11 39 53.4 -0.4
MUSM IAML_P
comp=Z,4μm,0.8s
BATM **Batumi** 146.03 296 P **PKPdf** 11 39 51.5 +0.2
BATM **Batumi** 146.03 296‖ *i*P **PKPbc** 11 39 52.3 -0.3
BCA **Borcka** 146.07 295 P **PKPdf** 11 39 49.8 -1.7
BCA **Borcka** 146.07 295‖ *i*P **PKPbc** 11 39 52.9 +0.1
BTMN **Batman** 146.12 289 *i* P **PKPab** 11 39 53.8 -0.4
BTMN IAML_P
comp=Z,4μm,0.7s
SVAN **Silvan-Diyarba** 146.21 289 P **PKPbc** 11 39 52.8 -0.5
SVAN **Silvan-Diyarba** 146.21 289 *i* P **PKPab** 11 39 54.9 +0.4
SVAN IAML_P
comp=Z,4μm,0.5s
LPSR **Galich'ya Gora** 146.28 316 *e*PKIKP **PKPdf** 11 39 51.2 -0.2
LPSR pmax pmax
comp=Z,200nm,0.9s
BNGL **BINGOL** 146.31 291 *i* P **PKPab** 11 39 54.5 -0.5
KONS **Konsvik** 146.38 350 *e*PKPbc **PKPbc** 11 39 52.9 +0.1
VORR **Voronezh** 146.38 314 *e*PKIKP **PKPdf** 11 39 50.0 -1.6
VORR pmax pmax
comp=Z,1μm,1.6s
KARO **Karliova-Bingo** 146.42 291 P **PKPbc** 11 39 53.6 -0.5
MOR8 **Moi Rana** 146.49 349 *e*PKPdf **PKPdf** 11 39 51.4 0.0
VORD **Divnogorie** 146.53 313 *e*PKIKP **PKPdf** 11 39 51.4 -0.4
VORD pmax pmax
comp=Z,190nm,0.8s
VSR **Storozhevoye** 146.53 313 *e*PKP2 **PKPdf** 11 39 52.5 +0.6
VSR pmax pmax
comp=Z,430nm,1.0s
STOK **Stokkvaagen** 146.55 350 *e*PKPbc **PKPbc** 11 39 53.0 -0.3
BORG **Borgarnes** 146.62 16 PKPbc **PKPbc** 11 39 53.9 +0.4
comp=Z,170nm,1.1s,baz=310,slow=2.9,SNR=37
BORG SKPbc **SKiKP** 11 43 12.6 +0.5
comp=Z,16nm,1.1s,baz=319,slow=3.3,SNR=3.9
BORG **Borgarnes** 146.62 16 *e*PKPdf **PKPdf** 11 39 52.3 +0.7
OBN **Obninsk** 146.68 321 PKPbc **PKPbc** 11 39 53.8 -0.2
comp=Z,43nm,0.7s,baz=52,slow=1.1,SNR=34
OBN **Obninsk** 146.68 321 *e*PKPdf **PKPdf** 11 39 51.4 -0.6
OBN **Obninsk** 146.68 321 *de*PKIKP **PKPdf** 11 39 51.7 -0.2
OBN pmax pmax
comp=Z,513nm,1.7s
BNGB **Bingl** 146.68 291 P **PKPdf** 11 39 51.6 -1.1

BGOL	**Bingol**	146.69 291	*i* P	PKPab	11 39 55.6	-0.8
BGOL			IAML_P			
	comp=Z,2μm,0.6s					
MAZI	**Mazidag**	146.72 288	P	PKPdf	11 39 51.9	-0.9
YEDI	**Yedisu-Bingol**	146.82 292	P	PKPdf	11 39 52.6	-0.4
DYBB	**Diyarbakir**	147.02 289	P	PKPdf	11 39 52.2	-1.0
PUL	**Pulkovo**	147.16 331	⇓*e*PKP2	PKPbc	11 39 54.7	-0.5
PUL	**Pulkovo**	147.16 331	*e*P	PKPbc	11 39 54.0	-1.2
PUL			IAmb	IAmb	11 39 57.3	
	comp=Z,437nm,0.6s					
BAYT	**Aydintepe-Bayb**	147.17 293	P	PKPbc	11 39 56.2	+0.1
SOC	**Sochi**	147.44 299	*c i*PKIKP	PKPdf	11 39 54.5	+0.9
SOC			*i*		11 39 57.5	
SOC			*e*		11 43 23.8	
SOC			*e*PPP	PPP	11 46 31.9	
SOC			*e*SSS	SSS	12 07 40.0	
SOC			pmax	pmax		
	comp=Z,52nm,0.8s					
SOC			pmax	pmax		
	comp=Z,129nm,0.6s					
KTUT	**Trabzon**	147.47 294	P	PKPdf	11 39 55.0	+1.2
KTUT	**Trabzon**	147.47 294	⇑*i*P	PKPbc	11 39 56.5	-0.1
FIA1	**FINESS Array S**	147.59 336	*e*PKPdf	PKPdf	11 39 52.9	-0.4
FIA1			*e*PKPbc	PKPbc	11 39 56.1	-0.2
FINES	**FINESS Array B**	147.59 336	PKPbc	PKPbc	11 39 55.8	-0.5
	comp=Z,203nm,0.7s,baz=103,slow=2.5,SNR=500					
SVRC	**Sivrice-ELAZID**	147.71 290	P	PKPdf	11 39 53.2	-1.3
URFA	**Urfa**	148.01 288	P	PKPdf	11 39 54.0	-0.9
NSS	**Namsos**	148.40 350	*e*PKPdf	PKPdf	11 39 54.7	+0.2
ASF	**Jabal al Asfar**	148.70 277	PKP	PKPdf	11 39 56.9	+0.7
	comp=Z,36nm,0.7s,baz=108,slow=0.7,SNR=15					
ASF			PKPbc	PKPbc	11 39 59.8	-0.4
	comp=Z,99nm,0.8s,baz=91,slow=3.5,SNR=84					
ANN	**Anapa**	148.96 302	*e*PKIKP	PKPdf	11 39 53.3	-2.8
ANN			*e*		11 40 03.3	
ANN			*e*		11 43 29.7	
ANN			*e*PPP	PPP	11 46 57.2	
ANN			pmax	pmax		
	comp=Z,384nm,1.1s					
DARE	**Darende-Malaty**	149.15 290	P	PKPdf	11 39 55.6	-1.1
HSNJ	**Maan**	149.21 273	P	PKPbc	11 40 01.9	+0.3
GAZ	**Gaziantep**	149.26 287	P	PKPbc	11 40 00.5	-1.0
HSUJ	**Al Zarqa**	149.26 277	P	PKiKP	11 40 02.3	-0.4
TOTH	**TOTAH**	149.34 279	*e*P	PKPbc	11 40 01.1	-0.7
VSU	**Vasula**	149.43 332	*e*P	PKPbc	11 39 60.0	-1.0
VSU			IAmb	IAmb	11 40 03.5	
	comp=Z,834nm,0.7s					
WALJ	**Wala**	149.45 276	P	PKiKP	11 40 02.8	-0.2
QASN	**Qassioun**	149.50 280	*e*P	PKPbc	11 40 02.0	-0.2
SVSK	**Karacayir**	149.57 292	P	PKPbc	11 40 01.1	-0.9
AQBJ	**Aqaba**	149.59 272	P	PKPbc	11 40 02.6	+0.2
LISJ	**El Lisan**	149.64 275	P	PKiKP	11 40 03.5	+0.2
EIL	**Elat**	149.65 272	P	PKPdf	11 39 55.4	-2.3
EIL	**Elat**	149.65 272	PKP	PKPdf	11 39 58.1	+0.4
	comp=Z,18nm,0.8s,baz=255,slow=1.2,SNR=8.8					
EIL			PKPbc	PKPbc	11 40 02.9	+0.4
	comp=Z,256nm,0.9s,baz=335,slow=3.2,SNR=78					
EIL	**Elat**	149.65 272	P	PKPdf	11 39 55.0	-2.7
HRFI	**Mount Harif**	149.69 273	P	PKPdf	11 39 56.5	-1.2
HRFI	**Mount Harif**	149.69 273	P	PKPdf	11 39 56.6	-1.2
BRBR	**Barbar**	149.74 279	*e*P	PKPdf	11 39 57.5	-0.5
SHMJ	**Saham**	149.76 278	P	PKiKP	11 40 03.9	+0.3
TBLU	**Trondheim**	149.86 350	*e*PKPdf	PKPdf	11 39 56.6	-0.3
SHBL	**Chebaa**	149.90 279	*e*P	PKPdf	11 39 56.5	-1.7
TOKT	**Tokat**	149.92 293	P	PKPbc	11 40 00.5	-2.4
MMLI	**Mount Malkishu**	149.98 277	P	PKPdf	11 39 57.2	-1.0
MMLI	**Mount Malkishu**	149.98 277	P	PKPdf	11 39 57.6	-0.6
TAHT	**Tahtakopru-Hat**	150.00 285	P	PKPbc	11 40 02.3	-0.9
BHL	**Bhannes**	150.08 280	*e*P	PKPdf	11 39 57.2	-1.2
MMAI	**Mount Meron Ar**	150.11 278	PKP	PKPdf	11 39 59.6	+1.1
	comp=Z,105nm,0.5s,baz=50,slow=7.8,SNR=24					
MMAI			PKPbc	PKPbc	11 40 03.7	0.0
	comp=Z,364nm,0.8s,baz=87,slow=6.8,SNR=196					
AMAZ	**Amatzia**	150.19 275	P	PKPdf	11 39 57.7	-0.8
KVT	**Kavak**	150.28 295	P	PKPbc	11 40 03.5	-0.3
KOZT	**Kozan**	150.39 287	P	PKPdf	11 39 56.6	-2.0
CEYT	**Ceyhan**	150.41 286	P	PKPbc	11 40 02.7	-1.4
YURE	**YUREGIR**	150.49 286	P	PKiKP	11 40 05.0	0.0
DIKM	**Dikmen**	150.85 296	P	PKPbc	11 40 03.9	-1.1
DIKM	**Dikmen**	150.85 296	⇓*i*P	PKPbc	11 40 02.1	-2.9
MOL	**Molde**	150.86 352	*e*PKPbc	PKPbc	11 40 03.8	-0.6
YOZ	**Yozgat**	150.86 292	P	PKPbc	11 40 04.2	-1.1
KARA	**Karaisali**	150.98 287	P	PKPdf	11 39 57.8	-1.7
DOMB	**Dombas**	151.19 351	*e*PKPbc	PKPbc	11 40 04.6	-0.6
SIM	**Simferopol'**	151.27 303	*e*PKIKP	PKiKP	11 40 06.4	+0.1
SIM			pmax	pmax		
	comp=Z,130nm,0.8s					
AKN	**Aaknes**	151.30 353	*e*PKPbc	PKiKP	11 40 05.7	-0.2
MICGM	**Minsk**	151.37 325	⇓*i*P	PKiKP	11 40 06.0	-0.2
MICGM			PM		11 40 07.0	
	comp=Z,1.5nm,1.0s					
MICGM			PM		11 40 07.0	
	comp=N,0.2nm,1.0s					
MICGM			PM		11 40 07.0	
	comp=E,0.5nm,1.0s					
MNK	**Minsk**	151.37 325	⇓*i*PKIKP	PKiKP	11 40 06.0	-0.2
MNK			pmax	pmax		
	comp=N,160nm,1.0s					
MNK			pmax	pmax		
	comp=E,470nm,1.0s					
MNK			pmax	pmax		
	comp=Z,1μm,1.0s					
MERS	**Mersin**	151.38 286	P	PKPbc	11 40 04.2	-2.3
IZAR	**Zarasai**	151.38 328	*e*P	PKPbc	11 40 05.7	0.0
IZAR			IAmb	IAmb	11 40 08.3	
	comp=Z,157nm,1.1s					
CORM	**Corum**	151.39 293	P	PKPdf	11 39 57.3	-2.9
IDID	**Didziasalis**	151.43 327	*e*P	PKPbc	11 40 05.8	-0.1
IDID			IAmb	IAmb	11 40 08.4	
	comp=Z,147nm,0.9s					
EREN	**Erenkoy**	151.53 283	P	PKPbc	11 40 05.7	-1.1
PHNC	**Paralimni**	151.57 282	P	PKPbc	11 40 06.6	-0.3
NC303	**NORSAR Array S**	151.60 348	*e*PKPdf	PKPdf	11 39 58.8	-0.9
NC303			*e*PKPbc	PKPbc	11 40 06.0	-0.2
IIGN	**Ignalina**	151.64 327	*e*P	PKPbc	11 40 06.4	0.0
IIGN			IAmb	IAmb	11 40 09.0	
	comp=Z,153nm,0.8s					
KIZK	**Mersin**	151.65 285	P	PKPbc	11 40 05.3	-1.7
NC405	**NORSAR Array S**	151.65 347	*e*PKPdf	PKPdf	11 39 59.6	-0.2
NC405			*e*PKPbc	PKPbc	11 40 05.8	-0.5
SEVA	**Sevastopol**	151.65 302	⇑*i*P	PKPdf	11 40 03.0	+2.7
NACGM	**Naroch**	151.65 326	*e*P	PKPbc	11 40 05.0	-1.4
NACGM			*e*LR	LR	12 21 20.0	
NC204	**NORSAR Array S**	151.66 349	*e*PKPdf	PKPdf	11 39 59.3	-0.5
NC204			*e*PKPbc	PKPbc	11 40 05.9	-0.4
NC204			*e*PKPab	PKPab	11 40 15.7	-0.2
SLIT	**Slitere, Latvi**	151.70 334	*e*P	PKPbc	11 40 03.9	-2.5
SLIT			IAmb	IAmb	11 40 07.8	
	comp=Z,419nm,0.6s					
BZK	**Bozkurt**	151.76 297	⇑*i*P	PKPdf	11 40 03.2	+2.7
NB201	**NORSAR Array S**	151.78 348	*e*PKPdf	PKPdf	11 39 59.8	-0.2
NB201			*e*PKPbc	PKiKP	11 40 06.8	-0.1
NB2	**NORSAR Subarra**	151.81 348	PKP	PKPbc	11 40 06.1	-0.5
	comp=Z,41nm,0.6s,baz=15,slow=2.5					
NB2	**NORSAR Subarra**	151.81 348	PKPab	PKPbc	11 40 06.1	-0.5
	baz=15,slow=2.5					
NB200	**NORSAR Array S**	151.81 348	*e*PKPdf	PKPdf	11 39 59.1	-0.9
NB200			*e*PKPbc	PKPbc	11 40 06.1	-0.5
NOA	**NORSAR Array B**	151.81 348	PKP	PKPdf	11 39 59.1	-0.9
	comp=Z,23nm,1.1s,baz=29,slow=1.8,SNR=22					
NOA			PKPbc	PKPbc	11 40 06.1	-0.5
	comp=Z,29nm,0.7s,baz=23,slow=4.6,SNR=81					
SILI	**Silifke-Mersin**	151.81 285	P	PKPbc	11 40 05.9	-1.5
NBO00	**NORSAR Array S**	151.89 348	*e*PKPdf	PKPdf	11 39 59.9	-0.3
NBO00			*e*PKPbc	PKPbc	11 40 06.9	+0.1
KEBE	**Keben-Mersin**	151.99 285	P	PKPbc	11 40 06.7	-1.2
IKL	**Isikli**	152.00 285	P	PKPbc	11 40 05.8	-2.0
ILGA	**Ilgaz**	152.04 295	*e*PKPdf	PKPdf	11 40 00.7	-0.6
ILGA			*e*PKPbc	PKPbc	11 40 08.0	-0.1
NAO01	**NORSAR Array S**	152.04 348	*e*PKPdf	PKPdf	11 40 00.2	-0.1
NAO01			*e*PKPbc	PKPbc	11 40 07.2	+0.1
NAO01			*e*PKPab	PKPab	11 40 16.8	-0.7
NAO01	**NORSAR Array S**	152.04 348	*e*PKPdf	PKPdf	11 40 00.5	+0.1
LIC	**Lamto**	152.14 170	*e*PKP1	PKPdf	11 40 01.2	-0.8
	comp=Z,2μm,0.6s					
HFS	**Hagfors**	152.15 345	PKP	PKPdf	11 40 00.1	-0.5
	comp=Z,12nm,1.0s,baz=112,slow=1.6,SNR=9.8					
HFS			PKPbc	PKPbc	11 40 06.8	-0.6
	comp=Z,98nm,0.8s,baz=82,slow=3.1,SNR=72					
BR131	**Keskin Array S**	152.16 292	*e*PKPdf	PKPdf	11 39 60.0	-1.4
BR131			*e*PKPbc	PKPbc	11 40 07.6	-0.7
BR131	**Keskin Array S**	152.16 292	P	PKPdf	11 39 59.5	-2.0
	SNR=52					
BRTR	**Keskin Array B**	152.16 292	PKP	PKPdf	11 39 59.7	-1.7
	comp=Z,9.2nm,1.1s,baz=124,slow=1.8,SNR=28					
BRTR			PKPbc	PKPbc	11 40 07.7	-0.6
	comp=Z,91nm,0.8s,baz=150,slow=4.0,SNR=111					
SERE	**Sereflikochisa**	152.22 290	P	PKPbc	11 40 05.9	-2.5
MAMC	**Mammari**	152.26 282	P	PKPbc	11 40 07.4	-1.0
KIC	**Kosan Boka**	152.31 171	*e*PKP1	PKPdf	11 40 01.3	-0.9
	comp=Z,475nm,0.5s					
BERE	**Bereket-Mersin**	152.38 285	P	PKPdf	11 39 59.9	-1.9
HYA	**Hoyanger**	152.38 353	*e*PKPbc	PKiKP	11 40 09.0	+0.9
TEKE	**Tekeli-Mersin**	152.45 284	P	PKPbc	11 40 08.3	-0.5
SZAC	**Souni**	152.48 281	P	PKPbc	11 40 08.5	-0.5
LEF	**Lefka**	152.52 282	P	PKPbc	11 40 07.6	-1.4
LEF	**Lefka**	152.52 282	⇑*i*P	PKPdf	11 40 04.7	+2.8
PABE	**Paberze**	152.53 329	*e*P	PKPbc	11 40 07.3	-1.0
PABE			IAmb	IAmb	11 40 10.7	
	comp=Z,359nm,0.9s					
TIC	**Toumodi**	152.56 170	*e*PKP1	PKPdf	11 40 02.3	-0.3
AKASG	**Malin Array Be**	152.59 317	PKP	PKPdf	11 39 59.7	-1.7
	comp=Z,14nm,0.9s,baz=57,slow=2.1,SNR=26					
AKASG			PKPbc	PKPbc	11 40 08.1	-0.5
	comp=Z,35nm,0.5s,baz=62,slow=2.3,SNR=60					
AKBB	**Malin Array Si**	152.59 317	*e*PKPdf	PKPdf	11 40 00.4	-1.1
AKBB			*e*PKPbc	PKPbc	11 40 08.2	-0.4
AKBB			*e*PKPab	PKPab	11 40 19.8	-0.2
AKBB	**Malin Array Si**	152.59 317	*e*PKIKP	PKPdf	11 40 00.4	-1.1
AKBB			*e*		11 40 19.8	
SKAR	**Skarslia**	152.60 351	*e*PKPbc	PKiKP	11 40 08.9	+0.3
DBIC	**Dimbokro**	152.60 171	PKP	PKPdf	11 40 03.3	+0.6
	comp=Z,81nm,0.7s,baz=160,slow=1.5,SNR=58					
DBIC			PKPbc	PKiKP	11 40 10.8	+0.8
	comp=Z,187nm,0.5s,baz=146,slow=1.5,SNR=109					
DBIC	**Dimbokro**	152.60 171	*e*PKPdf	PKPdf	11 40 02.8	+0.1
DBIC			*e*PKPbc	PKiKP	11 40 10.5	+0.5
SUE	**Sulen**	152.62 354	*e*PKPbc	PKPbc	11 40 07.8	-0.6
CHBY	**Chanbeyli**	152.75 290	P	PKPbc	11 40 07.7	-1.9
ALFC	**Alefka**	152.76 282	P	PKPbc	11 40 08.6	-1.0
ANTO	**Ankara**	152.81 292	P	PKPdf	11 40 00.3	-2.0
ANTO	**Ankara**	152.81 292	*e*PKPdf	PKPdf	11 40 01.5	-0.8
ANTO			*e*PKPbc	PKPbc	11 40 09.4	-0.2
ANTO	**Ankara**	152.81 292	⇑*i*P	PKPdf	11 40 01.7	-0.6
ANTO	**Ankara**	152.81 292	⇑PKIKP	PKPdf	11 40 01.7	-0.6
ANTO	**Ankara**	152.81 292	P	PKPdf	11 40 01.7	-0.6
	SNR=27					
BR231	**Keskin MP Arra**	152.82 292	*e*PKPdf	PKPdf	11 40 01.8	-0.6
BR231			*e*PKPbc	PKPbc	11 40 09.7	0.0
LOD	**Lodumlu**	152.83 292	P	PKPdf	11 40 00.5	-1.8
PPCY	**Paphos**	152.93 281	P	PKPbc	11 40 08.5	-1.4
PBUR	**Paburg**	153.00 332	*e*P	PKPbc	11 40 07.9	-1.4
ASK	**Askoy**	153.15 354	*e*PKPbc	PKiKP	11 40 10.3	+0.7
LADK	**Ladik-KONYA**	153.16 289	P	PKPdf	11 40 00.1	-2.8
BER	**Bergen**	153.23 354	*e*PKPbc	PKPbc	11 40 09.2	-0.5
KONO	**Kongsberg**	153.39 349	*e*PKPdf	PKPdf	11 40 01.8	-0.5
KONO			*e*PKPbc	PKPbc	11 40 10.0	-0.1
KONO			*e*PKPab	PKPab	11 40 23.1	0.0
KONO	**Kongsberg**	153.39 349	*e*PKIKP	PKPdf	11 40 01.8	-0.5
KONO			*e*		11 40 23.1	
KONO	**Kongsberg**	153.39 349	*e*PKPdf	PKPdf	11 40 02.3	0.0
KONO			*e*PKPbc	PKPbc	11 40 10.0	-0.1
KIZT	**Kizilcal**	153.54 290	P	PKPbc	11 40 08.7	-2.6
ODD1	**Odda**	153.56 352	*e*PKPbc	PKiKP	11 40 10.7	+0.1
SVRH	**Sivrihisar-ESK**	153.80 292	P	PKPdf	11 40 00.9	-2.8
SUW	**Suwalki**	153.85 327	*e*PKPdf	PKPdf	11 40 01.6	-1.5
SUW			*e*PKPbc	PKPbc	11 40 10.5	-0.8
SUW			*e*PKPab	PKPab	11 40 23.9	-1.4
SUW	**Suwalki**	153.85 327	*e*PKPdf	PKPdf	11 40 02.6	-0.6
SUW			*e*PKPbc	PKPbc	11 40 11.1	-0.1
SUW			*e*PKPab	PKPab	11 40 25.1	-0.2
SUW	**Suwalki**	153.85 327	*e*PKIKP	PKPdf	11 40 01.6	-1.5
SUW			*e*		11 40 23.9	
MDUB	**Mudurnu**	153.99 294	P	PKPdf	11 40 01.3	-2.7
MDUB	**Mudurnu**	153.99 294	*e*PKPdf	PKPdf	11 40 03.0	-1.0
MDUB			*e*PKPbc	PKPbc	11 40 11.7	-0.5
CIFT	**Cifteler, Eski**	154.16 291	P	PKPdf	11 40 02.1	-2.1
KIS	**Kishinev**	154.30 309	⇓*i*PKP	PKPbc	11 40 11.0	-1.5
	comp=Z,210nm,2.0s					
KIS	**Kishinev**	154.30 309	⇓*i*PKIKP	PKPbc	11 40 11.0	-1.5
KIS			*i*		11 40 25.0	
KIS			*e*		11 44 00.0	
KIS			pmax	pmax		
	comp=Z,210nm,2.0s					
GULT	**Gulveren**	154.51 294	P	PKPdf	11 40 02.2	-2.5
SHUT	**Suhut-Afyon**	154.58 290	P	PKPdf	11 40 03.7	-1.2
KORT	**Korkueli**	154.72 286	P	PKPdf	11 40 03.0	-2.1
HOMB	**Hommorsund**	154.88 349	*e*PKPdf	PKPdf	11 40 04.5	+0.1
ELL	**Elmali**	155.07 285	P	PKPdf	11 40 02.7	-2.9
SILT	**Sile**	155.10 296	P	PKPdf	11 40 03.4	-1.9
ADVT	**Abdulvahap**	155.10 294	P	PKPdf	11 40 02.8	-2.6
HRT	**Hereke**	155.12 295	P	PKPdf	11 40 03.2	-2.2
BIGH	**Upper Bighouse**	155.30 4	*e*P	PKPab	11 40 31.1	-0.2
CFR	**Carcaliu**	155.33 306	⇑*i*P	PKPdf	11 40 04.6	-0.9
CFR	**Carcaliu**	155.33 306	⇑PKIKP	PKPdf	11 40 04.6	-0.9
TIRR	**Tirgusor**	155.34 304	⇓*i*P	PKPdf	11 40 05.5	0.0
TIRR	**Tirgusor**	155.34 304	⇓PKIKP	PKPdf	11 40 05.5	0.0
RSC	**Scourie**	155.35 6	*e*P	PKPab	11 40 30.5	-1.0
YLV	**Yalova**	155.37 294	P	PKPdf	11 40 02.9	-2.9
YLV	**Yalova**	155.37 294	⇑*i*P	PKPdf	11 40 10.8	+5.0
YLV	**Yalova**	155.37 294	⇑PKIKP	PKPdf	11 40 10.8	+5.0
MANR	**Mangalia**	155.38 302	⇑*i*P	PKPdf	11 40 07.4	+1.8
RRH	**Rhenigidale**	155.62 8	*e*P	PKPab	11 40 31.4	-1.3
FETY	**Fethiye**	155.72 285	P	PKPdf	11 40 04.7	-1.7
ARMT	**Armutlu**	155.75 294	P	PKPdf	11 40 03.5	-2.8
RRR	**Rubha Reidh**	155.77 7	*e*P	PKPab	11 40 33.1	-0.3
TESR	**Tescani**	155.87 310	⇑*i*P	PKPdf	11 40 05.3	-0.9
LVV	**L'vov**	155.93 319	*i* PKIKP	PKPdf	11 40 03.0	-3.2
LVV			*e*		11 40 34.0	
LVV			*e*SS	SS	12 03 39.0	-3.9
VRI	**Vrincioaia**	156.05 308	⇑*i*P	PKPdf	11 40 05.9	-0.6
VRI	**Vrincioaia**	156.05 308	⇑PKIKP	PKPdf	11 40 05.9	-0.6
BIZ	**Bicaz**	156.05 311	⇑*i*P	PKPdf	11 40 07.5	+1.1
CTYL	**Yalikoy Yolu**	156.06 297	⇑*i*P	PKPdf	11 40 11.7	+5.1
PLOR	**Plostina**	156.10 308	⇑*i*P	PKPdf	11 40 10.5	+3.9
PLOR	**Plostina**	156.10 308	⇑PKIKP	PKPdf	11 40 10.5	+3.9
TURN	**Turunc**	156.12 285	P	PKPdf	11 40 05.6	-1.2
KCTX	**Karacabey (Bur**	156.17 294	P	PKPdf	11 40 04.5	-2.3
KAC	**Achnashellach**	156.18 6	*e*P	PKPab	11 40 34.1	-1.0
BSD	**Bornholm Skovb**	156.21 338	⇑*i*PKIKP	PKPdf	11 40 05.2	-1.1
BSD			*i*		11 40 33.0	
BSD			pmax	pmax		
	comp=Z,94nm,1.5s					
BSD	**Bornholm Skovb**	156.21 338	⇑*i*P	PKPdf	11 40 05.2	-1.1
	comp=Z,94nm,1.5s					
BSD			*i*		11 40 33.0	
KPL	**Plockton**	156.30 7	*e*P	PKPab	11 40 35.7	+0.1
BUR08	**Bucovina Ar. S**	156.31 313	*e*PKPdf	PKPdf	11 40 06.5	-0.4
BUR08			*e*PKPab	PKPab	11 40 36.5	+0.2
BURAR	**Bucovina Array**	156.31 313	⇑*i*P	PKPdf	11 40 08.2	+1.3
BEL	**Belsk**	156.38 326	*e*PKPdf	PKPdf	11 40 06.6	-0.1
BEL	**Belsk**	156.38 326	*e*PKIKP	PKPdf	11 40 06.6	-0.1
YER	**Yerkesik**	156.38 286	P	PKPdf	11 40 05.2	-2.1
YER	**Yerkesik**	156.38 286	P	PKPdf	11 40 05.1	-2.2
COP	**Copenhagen**	156.44 341	*i* PKIKP	PKPdf	11 40 06.1	-0.5
COP	**Copenhagen**	156.44 341	*i* P	PKPdf	11 40 06.1	-0.5
ARG	**Arkhangelos**	156.48 284	P	PKPdf	11 40 01.7	-5.6
MUD	**Monsted U'grnd**	156.48 346	*i* PKIKP	PKPdf	11 40 05.5	-1.1
MUD	**Monsted U'grnd**	156.48 346	*i* P	PKPdf	11 40 05.5	-1.1
MUD			*i*		11 40 35.7	
OZUR		156.57 309	⇓*i*P	PKPdf	11 40 08.9	+1.7
PHSR	**Pinarhisar**	156.60 297	P	PKPdf	11 40 05.0	-2.3
MLR	**Muntele Rosu**	156.69 308	PKP	PKPdf	11 40 06.4	-1.1
	comp=Z,10nm,1.0s,baz=345,slow=3.4,SNR=13					
MLR			PKPab	PKPab	11 40 37.7	-0.3
	comp=Z,8.8nm,0.5s,baz=37,slow=5.8,SNR=4.3					
MLR	**Muntele Rosu**	156.69 308	*e*PKPdf	PKPdf	11 40 06.1	-1.4
MLR			*e*PKPab	PKPab	11 40 38.3	+0.3
MLR	**Muntele Rosu**	156.69 308	⇑*i*P	PKPdf	11 40 06.5	-1.0
MLR	**Muntele Rosu**	156.69 308	⇑PKIKP	PKPdf	11 40 06.5	-1.0
KWP	**Kalwaria Pacla**	156.75 319	*e*PKPdf	PKPdf	11 40 06.6	-0.7
KWP			*e*PKPab	PKPab	11 40 37.9	0.0
KWP			*e*SKS		11 45 52.8	
KWP	**Kalwaria Pacla**	156.75 319	*e*PKPdf	PKPdf	11 40 06.3	-0.9
KWP			*e*PKPab	PKPab	11 40 38.1	+0.2
KWP	**Kalwaria Pacla**	156.75 319	*e*PKIKP	PKPdf	11 40 06.6	-0.7
PCED	**Cedros**	156.83 70	*e*PKP	PKPdf	11 40 07.4	-0.3
GKP	**Gorka Klasztor**	156.88 332	*e*PKPdf	PKPdf	11 40 07.1	-0.2
GKP			*e*PKPab	PKPab	11 40 37.1	-1.2
GKP	**Gorka Klasztor**	156.88 332	*e*PKIKP	PKPdf	11 40 07.1	-0.2
DOPR	**Dopca**	156.88 309	⇑*i*P	PKPdf	11 40 07.3	-0.3
PCAN	**Candelaria**	157.01 71	*e*PKP	PKPdf	11 40 08.6	+0.6
RGN	**Rugen**	157.18 339	*e*P	PKPab	11 40 35.7	-3.8
ROSA	**Rosais**	157.19 70	*e*PKP	PKPdf	11 40 08.3	+0.1
EDU	**Dundee**	157.29 4	*e*P	PKPab	11 40 39.7	-0.3
VOIR		157.30 308	⇑*i*P	PKPdf	11 40 10.3	+2.1
VOIR		157.30 308	⇑PKIKP	PKPdf	11 40 10.3	+2.1
PMAN	**Manadas**	157.31 70	*e*P	PKPdf	11 40 05.8	-2.5
KOLS	**Kolonicke sedl**	157.37 318	*e*PKIKP	PKPdf	11 40 07.0	-1.1
KOLS	**Kolonicke sedl**	157.37 318	*e*PKP	PKPdf	11 40 07.0	-1.1
KOLS			*e*		11 40 42.4	
LAWE	**Loch Awe, Argy**	157.39 7	*e*P	PKPab	11 40 39.6	-0.7
UZH	**Uzhgorod**	157.53 318	*e*PKIKP	PKPdf	11 40 05.0	-3.2
UZH			*i*		11 40 35.7	
UZH			*e*		11 41 02.1	
EAB	**Aberfoyle**	157.56 6	*e*P	PKPab	11 40 40.2	-0.9
TRPA	**Tarpa**	157.65 316	⇑*i*P	PKPdf	11 40 10.1	+1.7
TRPA	**Tarpa**	157.65 316	EP	PKPdf	11 40 06.1	-2.3
STHS	**Stebnicka Huta**	157.66 320	*e*PKP2	PKPab	11 40 42.2	+0.3
STHS	**Stebnicka Huta**	157.66 320	*e*PKP	PKPab	11 40 42.2	+0.3
CJR	**Cluj-Napoca**	157.70 312	⇓*i*P	PKPdf	11 40 12.0	+3.4
CJR	**Cluj-Napoca**	157.70 312	⇓PKIKP	PKPdf	11 40 12.0	+3.4
EZN	**Ezine**	157.77 293	P	PKPdf	11 40 06.4	-2.4
EZN	**Ezine**	157.77 293	⇓*i*P	PKPdf	11 40 11.9	+3.1
EZN	**Ezine**	157.77 293	⇓PKIKP	PKPdf	11 40 11.9	+3.1
ALN	**Alexandroupoli**	157.83 296	*e*PKPdf	PKPdf	11 40 07.1	-1.7
ALN			*e*PKPab	PKPab	11 40 41.8	-1.1
ALN	**Alexandroupoli**	157.83 296	*e*PKIKP	PKPdf	11 40 07.1	-1.7
ALN			*e*		11 40 41.8	
PRK	**Paraskevi**	157.88 292	P	PKPdf	11 40 07.1	-1.9
OJC	**Ojcow**	157.90 324	*e*PKPdf	PKPdf	11 40 06.9	-1.8
OJC			*e*PKPab	PKPab	11 40 42.0	-0.8
OJC	**Ojcow**	157.90 324	*e*PKPdf	PKPdf	11 40 07.5	-1.2
OJC			*e*PKPab	PKPab	11 40 42.6	-0.2
OJC	**Ojcow**	157.90 324	*e*PKIKP	PKPdf	11 40 06.9	-1.8
OJC			*e*		11 40 42.0	
ADH	**Angra Heroismo**	157.98 70	*e*PKP	PKPdf	11 40 10.1	+1.0
GADA	**Gvkgeada**	158.05 294	P	PKPdf	11 40 06.5	-2.7
GADA	**Gvkgeada**	158.05 294	P	PKPdf	11 40 06.5	-2.7
EBL	**Broad Law**	158.06 4	*e*P	PKPab	11 40 42.2	-1.1
PSCM	**Serra do Cume**	158.06 70	*e*PKP	PKPdf	11 40 07.7	-1.6
CHOS	**Chios island**	158.11 289	P	PKPdf	11 40 07.0	-2.4
LOT	**Lotru**	158.13 309	⇑*i*P	PKPdf	11 40 10.6	+1.3
NIE	**

CLL			*e*PPS	PPS	11 57 48.0	
CLL			*e*		12 01 54.0	
CLL			*e*		12 03 06.0	
CLL			*e*SS	SS	12 04 18.0	-7.4
CLL			*e*SS		12 05 42.0	
CLL			*e*SSS	SSS	12 10 54.0	
CLL			*e*SSS		12 12 12.0	
CLL			*e*SSSS		12 15 18.0	
CLL	**Collm**	**160.02 335**	⇓*i*PKIKP	**PKPdf**	**11 40 08.5**	**-2.6**
CLL			*i*		11 40 49.8	
CLL			pmax	pmax		
comp=Z,73nm,1.7s						
CLL			pmax	pmax		
comp=Z,81nm,1.3s						
BRG	**Berggiesshubel**	**160.02 332**	⇓*i*PKP	**PKPdf**	**11 40 10.0**	**-1.1**
comp=Z,90nm,1.5s						
BRG	**Berggiesshubel**	**160.02 332**	*i* PKP	**PKPab**	**11 40 51.2**	**-0.8**
comp=Z,42nm,1.0s						
BRG			*e*PP	**PP**	**11 44 32.9**	**-1.5**
comp=Z,15nm,1.3s						
VRAC	**Vranov**	**160.06 326**	PKP	**PKPdf**	**11 40 10.5**	**-0.7**
comp=Z,8.0nm,0.8s,baz=195,slow=0.1,SNR=19						
VRAC			PKPab	**PKPab**	**11 40 51.7**	**-0.6**
comp=Z,34nm,0.7s,baz=52,slow=3.9,SNR=26						
VRAC	**Vranov**	**160.06 326**	*e*PKP	**PKPdf**	**11 40 09.7**	**-1.5**
VRAC			*e*		11 40 51.7	
VAY	**Valandovo**	**160.30 299**	*i* PKP	**PKPdf**	**11 40 09.0**	**-2.7**
KRUC	**Moravsky**	**160.32 325**	*e*PKP	**PKPdf**	**11 40 09.5**	**-2.0**
KRUC			*e*		11 40 52.6	
MODS	**Modra-Piesok**	**160.36 323**	*e*PKIKP	**PKPdf**	**11 40 09.9**	**-1.7**
MODS			*e*		11 40 53.1	
MODS	**Modra-Piesok**	**160.36 323**	*e*PKP	**PKPdf**	**11 40 09.9**	**-1.7**
MODS			*e*		11 40 53.1	
ANKY	**Antikythira Is**	**160.37 282**	P	**PKPdf**	**11 40 10.6**	**-1.4**
GOPC	**GO Pecny, Ondr**	**160.43 329**	*e*PKPDF	**PKPdf**	**11 40 11.2**	**-0.4**
GOPC			*e*PKPAB	**PKPab**	**11 40 53.0**	**-0.9**
PRU	**Pruhonice**	**160.47 330**	*e*PKIKP	**PKPdf**	**11 40 11.0**	**-0.6**
PRU			*e*		11 40 53.6	
PRU	**Pruhonice**	**160.47 330**	*e*PKPDF	**PKPdf**	**11 40 11.0**	**-0.6**
PRU			*e*PKPAB	**PKPab**	**11 40 53.6**	**-0.4**
CSKK	**Cskako**	**160.48 319**	⇓EP	**PKPdf**	**11 40 10.0**	**-1.7**
STIP	**Stip**	**160.48 300**	*i* PKP	**PKPdf**	**11 40 08.9**	**-3.1**
LBWR	**Ladybower, Pea**	**160.49 2**	*e*P	**PKPab**	**11 40 52.6**	**-1.3**
ZST	**Bratislava**	**160.56 323**	*e*PKIKP	**PKPdf**	**11 40 09.6**	**-2.2**
ZST			*e*		11 40 53.7	
ZST	**Bratislava**	**160.56 323**	*e*PKP	**PKPdf**	**11 40 09.6**	**-2.2**
ZST			*e*		11 40 53.7	
TREC	**Trest**	**160.58 327**	*e*PKIKP	**PKPdf**	**11 40 10.6**	**-1.2**
TREC			*e*		11 40 53.8	
TREC	**Trest**	**160.58 327**	*e*PKPDF	**PKPdf**	**11 40 10.6**	**-1.2**
TREC			*e*PKPAB	**PKPab**	**11 40 53.8**	**-0.7**
KYTH	**Kithira**	**160.58 284**	P	**PKPdf**	**11 40 10.3**	**-2.0**
KTHR	**Kythira**	**160.62 284**	P	**PKPdf**	**11 40 10.5**	**-1.8**
LIT	**Litokhoron**	**160.64 295**	*e*PKPdf	**PKPdf**	**11 40 10.6**	**-1.6**
LIT			*e*PKPab	**PKPab**	**11 40 53.5**	**-1.7**
LIT	**Litokhoron**	**160.64 295**	*e*PKIKP	**PKPdf**	**11 40 10.6**	**-1.6**
LIT			*e*		11 40 53.5	
FRGS	**Fruska Gora**	**160.77 312**	⇑*i*P	**PKPdf**	**11 40 10.1**	**-2.1**
MORH	**Mrgy, Hungar**	**160.92 316**	⇑*i*P	**PKPdf**	**11 40 09.9**	**-2.3**
MORH	**Mrgy, Hungar**	**160.92 316**	⇑IP	**PKPdf**	**11 40 10.0**	**-2.2**
LLW	**Llanuwchllyn**	**160.93 6**	*e*P	**PKPab**	**11 40 54.5**	**-1.3**
SKO	**Skopje**	**160.94 301**	*i* PKP	**PKPdf**	**11 40 10.7**	**-1.8**
AGG	**Agios Georgios**	**160.94 292**	*e*PKPdf	**PKPdf**	**11 40 11.2**	**-1.4**
AGG	**Agios Georgios**	**160.94 292**	*e*PKIKP	**PKPdf**	**11 40 11.2**	**-1.4**
TIH	**Tihany**	**160.95 318**	⇑IP	**PKPdf**	**11 40 09.1**	**-3.2**
NKC	**Novy Kostel**	**161.10 334**	*e*PKIKP	**PKPdf**	**11 40 11.8**	**-0.6**
NKC			*e*		11 40 56.4	
NKC	**Novy Kostel**	**161.10 334**	*e*PKPDF	**PKPdf**	**11 40 11.8**	**-0.6**
NKC			*e*PKPAB	**PKPab**	**11 40 56.4**	**-0.4**
KZN	**Kozani**	**161.13 296**	P	**PKPdf**	**11 40 09.9**	**-2.9**
DIVS	**Divibare**	**161.13 309**	⇑*i*P	**PKPdf**	**11 40 09.6**	**-3.1**
CWF	**Charnwood Fore**	**161.16 1**	*e*P	**PKPab**	**11 40 55.0**	**-1.8**
WACR	**West Acre**	**161.17 358**	*e*P	**PKPab**	**11 40 55.7**	**-1.2**
SOP	**Sopron**	**161.17 322**	⇑IP	**PKPdf**	**11 40 10.0**	**-2.4**
TEKS	**Tekeris**	**161.23 310**	⇑*i*P	**PKPdf**	**11 40 11.5**	**-1.2**
KRUS	**Krusevo**	**161.25 300**	*i* PKP	**PKPdf**	**11 40 10.4**	**-2.5**
FNA	**Florina**	**161.31 298**	P	**PKPdf**	**11 40 10.0**	**-2.9**
CONA	**Conrad Observa**	**161.36 324**	*i* PKPdf	**PKPdf**	**11 40 11.0**	**-1.8**
comp=Z,30nm,1.6s,SNR=15						
CONA			*i* PKPab	**PKPab**	**11 40 58.5**	**+0.4**
comp=Z,18nm,0.7s,SNR=8.9						
ITM	**Ithomi**	**161.45 287**	P	**PKPdf**	**11 40 10.5**	**-2.6**
ITM	**Ithomi**	**161.45 287**	*e*PKPdf	**PKPdf**	**11 40 11.7**	**-1.5**
ITM			*e*PKPab	**PKPab**	**11 40 58.0**	**-0.9**
ITM	**Ithomi**	**161.45 287**	P	**PKPdf**	**11 40 10.6**	**-2.6**
KPRO	**Kipourio**	**161.51 295**	P	**PKPdf**	**11 40 10.5**	**-2.7**
KHC	**Kasperske Hory**	**161.53 330**	*e*PKPdf	**PKPdf**	**11 40 11.5**	**-1.4**
KHC			*e*PKPab	**PKPab**	**11 40 57.9**	**-0.9**
KHC	**Kasperske Hory**	**161.53 330**	*e*PKIKP	**PKPdf**	**11 40 11.5**	**-1.4**
KHC			*e*		11 40 58.2	
KHC	**Kasperske Hory**	**161.53 330**	*e*PKPDF	**PKPdf**	**11 40 11.5**	**-1.4**
KHC			*e*x	x	11 40 27.3	
KHC			*e*PKPAB	**PKPab**	**11 40 58.2**	**-0.5**
KHC			*e*x	x	11 41 18.0	
KHC			*e*x	x	11 42 23.0	
DRO	**Drossia**	**161.56 289**	P	**PKPdf**	**11 40 11.9**	**-1.3**
AMT	**Artemida-Makis**	**161.60 288**	P	**PKPdf**	**11 40 10.7**	**-2.6**
BBLS	**Lazići**	**161.62 309**	⇑*i*P	**PKPdf**	**11 40 11.5**	**-1.7**
PYL	**PYLOS**	**161.62 286**	P	**PKPdf**	**11 40 10.8**	**-2.5**
PVO	**Paravola**	**161.63 291**	P	**PKPdf**	**11 40 11.9**	**-1.3**
PENT	**Pentalofos**	**161.63 296**	P	**PKPdf**	**11 40 11.1**	**-2.2**
OHR	**Ohrid**	**161.65 299**	*i* PKP	**PKPdf**	**11 40 11.5**	**-1.8**
GEC2	**GERESS Array S**	**161.70 329**	*e*PKPdf	**PKPdf**	**11 40 11.5**	**-1.6**
GEC2			*e*PKPab	**PKPab**	**11 40 58.5**	**-1.0**
GEC2	**GERESS Array S**	**161.70 329**	*e*PKIKP	**PKPdf**	**11 40 11.5**	**-1.6**
GEC2			*e*		11 40 58.5	
GERES	**GERESS Array B**	**161.70 329**	PKP	**PKPdf**	**11 40 11.2**	**-1.9**
comp=Z,7.0nm,0.8s,baz=17,slow=1.4,SNR=30						
GERES			PKPab	**PKPab**	**11 40 58.4**	**-1.1**
comp=Z,12nm,0.7s,baz=39,slow=4.9,SNR=17						
PHP	**Peshkopia**	**161.74 301**	P	**PKPdf**	**11 40 10.9**	**-2.4**
RLS	**Riolos of Patr**	**161.74 289**	P	**PKPdf**	**11 40 11.9**	**-1.5**
HAPS	**Han Pijesak,BI**	**161.81 310**	*e*P	**PKPdf**	**11 40 12.4**	**-1.0**
BEHE	**Becsehely**	**161.83 319**	⇑*i*P	**PKPdf**	**11 40 11.1**	**-2.1**
BEHE	**Becsehely**	**161.83 319**	⇑IP	**PKPdf**	**11 40 11.1**	**-2.1**
PDO	**Prodromos**	**161.89 291**	P	**PKPdf**	**11 40 11.8**	**-1.7**
JAN	**Janina**	**161.96 295**	P	**PKPdf**	**11 40 11.9**	**-1.7**
ARSA	**Arzberg**	**161.99 323**	*i* PKPdf	**PKPdf**	**11 40 11.4**	**-2.0**
comp=Z,26nm,1.4s,SNR=12						
ARSA			*i* PKPab	**PKPab**	**11 40 59.6**	**-1.2**
comp=Z,37nm,1.8s,SNR=5.3						
GRA1	**Grafenberg Arr**	**162.00 335**	*e*PKPdf	**PKPdf**	**11 40 12.2**	**-1.1**
GRA1			*e*PKPab	**PKPab**	**11 41 00.3**	**-0.4**
GRFO	**Grafenberg**	**162.00 335**	*e*PKPdf	**PKPdf**	**11 40 12.3**	**-0.9**
GRFO			*e*PKPab	**PKPab**	**11 41 00.5**	**-0.1**
MOA	**Molln**	**162.18 326**	*i* PKPdf	**PKPdf**	**11 40 11.4**	**-2.1**
comp=Z,21nm,1.6s,SNR=7.0						
MOA			*i* PKPab	**PKPab**	**11 41 00.3**	**-1.3**
comp=Z,19nm,0.8s,SNR=8.4						
UPM	**Unac-Piva**	**162.23 307**	*e*P	**PKPdf**	**11 40 11.9**	**-2.1**
TIR	**Tirane**	**162.25 301**	P	**PKPdf**	**11 40 11.9**	**-1.9**
KFL	**Anninata**	**162.27 290**	P	**PKPdf**	**11 40 12.2**	**-1.7**
LKD2	**Lefkada island**	**162.27 292**	P	**PKPdf**	**11 40 12.2**	**-1.7**
PDG	**Podgorica**	**162.31 305**	⇑*i*P	**PKPdf**	**11 40 13.0**	**-0.8**
PDG	**Podgorica**	**162.31 305**	⇑*i*P	**PKPdf**	**11 40 11.7**	**-2.1**
TTG	**Podgorica**	**162.31 305**	*e*PKPdf	**PKPdf**	**11 40 12.0**	**-1.8**
TTG	**Podgorica**	**162.31 305**	*e*PKIKP	**PKPdf**	**11 40 12.0**	**-1.8**
IGT	**Igoumenitsa**	**162.38 295**	P	**PKPdf**	**11 40 11.6**	**-2.4**
FSK	**Fiskardo**	**162.40 291**	P	**PKPdf**	**11 40 11.9**	**-2.1**
VLS	**Valsamata**	**162.41 290**	P	**PKPdf**	**11 40 12.1**	**-2.0**
TPE	**Tepelena**	**162.44 297**	P	**PKPdf**	**11 40 12.2**	**-1.8**
DRME	**Dracevica, Mon**	**162.44 304**	*e*P	**PKPdf**	**11 40 11.8**	**-2.2**
BEBN	**Eben Emael**	**162.52 347**	PKPab	**PKPab**	**11 41 01.9**	**-1.0**
SRN	**Sarande**	**162.55 296**	P	**PKPdf**	**11 40 11.4**	**-2.7**
BLY	**Banja Luka**	**162.58 314**	*e*PKPdf	**PKPdf**	**11 40 12.4**	**-1.6**
BLY			*e*PKPab	**PKPab**	**11 41 03.9**	**+0.4**
BLY	**Banja Luka**	**162.58 314**	⇑*i*P	**PKPdf**	**11 40 11.9**	**-2.1**
BRY	**Bratogost**	**162.60 307**	*e*P	**PKPdf**	**11 40 12.5**	**-1.8**
PERS	**Pernice**	**162.60 322**	*i* PKPdf	**PKPdf**	**11 40 12.2**	**-1.9**
PERS			*i* PKPab	**PKPab**	**11 41 01.9**	**-1.6**
PERS			*i* PP	**PP**	**11 44 47.4**	**-1.3**
SOKA	**Soboth**	**162.62 322**	*i* PKPdf	**PKPdf**	**11 40 12.2**	**-1.9**
comp=Z,46nm,1.6s,SNR=13						
SOKA			*e*PKPab	**PKPab**	**11 41 03.2**	**-0.5**
comp=Z,18nm,1.0s						
MEM	**Membach**	**162.63 346**	PKPdf	**PKPdf**	**11 40 12.3**	**-1.5**
MEM	**Membach**	**162.63 346**	PKPab	**PKPab**	**11 41 02.4**	**-1.0**
UCC	**Uccle**	**162.74 350**	PKPdf	**PKPdf**	**11 40 13.8**	**-0.2**
UCC			PKPab	**PKPab**	**11 41 02.5**	**-1.3**
KEK	**Kerkira**	**162.74 295**	P	**PKPdf**	**11 40 12.3**	**-2.0**
HCY	**Herceg Novi**	**162.82 305**	*e*P	**PKPdf**	**11 40 13.5**	**-0.8**
BHOU	**Houvegnez**	**162.88 346**	PKPdf	**PKPdf**	**11 40 13.4**	**-0.7**
BHOU			PKPab	**PKPab**	**11 41 03.8**	**-0.7**
CRES	**Cresnjev**	**162.95 319**	⇑*i*P	**PKPdf**	**11 40 12.0**	**-2.3**
BCLA	**Clavier**	**162.95 347**	PKPab	**PKPab**	**11 41 03.6**	**-1.2**
OBKA	**Obir**	**162.98 322**	*i* PKPdf	**PKPdf**	**11 40 12.4**	**-2.0**
comp=Z,19nm,1.4s,SNR=6.4						
OBKA			*e*PKPab	**PKPab**	**11 41 04.4**	**-0.9**
comp=Z,6.7nm,0.7s						
SNF	**Seneffe**	**163.03 349**	PKPdf	**PKPdf**	**11 40 13.9**	**-0.3**
SNF			PKPab	**PKPab**	**11 41 04.2**	**-0.9**
BMRD	**Maredsous**	**163.16 348**	PKPdf	**PKPdf**	**11 40 13.9**	**-0.5**
BMRD			PKPab	**PKPab**	**11 41 04.6**	**-1.1**
STON	**Ston**	**163.17 307**	⇑*i*P	**PKPdf**	**11 40 12.0**	**-2.6**
KBA	**Koelnbreinsper**	**163.17 326**	*i* PKPdf	**PKPdf**	**11 40 12.2**	**-2.6**
comp=Z,36nm,1.1s,SNR=22						
KBA			*e*PKPab	**PKPab**	**11 41 05.4**	**-0.8**
comp=Z,9.2nm,0.6s						
BBOU	**Bougnies**	**163.20 350**	PKPdf	**PKPdf**	**11 40 13.0**	**-1.4**
BBOU			PKPab	**PKPab**	**11 41 05.3**	**-0.6**
BOJS	**Bojanci**	**163.26 318**	*i* PKPdf	**PKPdf**	**11 40 13.3**	**-1.3**
BOJS			*i* PKPab	**PKPab**	**11 41 04.7**	**-1.7**
LJU	**Ljubljana**	**163.30 321**	*i* PKPdf	**PKPdf**	**11 40 13.3**	**-1.3**
LJU			*i* PKPab	**PKPab**	**11 41 03.9**	**-2.7**
LJU			*e*PP	**PP**	**11 44 50.3**	**-1.9**
LJU	**Ljubljana**	**163.30 321**	⇑*i*P	**PKPdf**	**11 40 13.0**	**-1.7**
MYKA	**Terra Mystica**	**163.35 324**	*i* PKPdf	**PKPdf**	**11 40 12.3**	**-2.5**
comp=Z,26nm,1.6s,SNR=11						
MYKA			*i* pPKPdf	**PKPab**	**11 41 05.6**	**-1.2**
comp=Z,25nm,0.8s,SNR=7.1						
DOU	**Dourbes**	**163.39 348**	PKPdf	**PKPdf**	**11 40 14.0**	**-0.6**
DOU			PKPab	**PKPab**	**11 41 06.1**	**-0.6**
STU	**Stuttgart**	**163.47 337**	*e*PKPdf	**PKPdf**	**11 40 13.6**	**-1.1**
STU			*e*PKPab	**PKPab**	**11 41 06.7**	**-0.5**
STU	**Stuttgart**	**163.47 337**	*e*PKIKP	**PKPdf**	**11 40 13.6**	**-1.1**
STU			*e*		11 41 06.7	
WLF	**Walferdange**	**163.50 345**	*e*PKPdf	**PKPdf**	**11 40 14.2**	**-0.5**
WLF			*e*PKPab	**PKPab**	**11 41 06.7**	**-0.5**
WLF	**Walferdange**	**163.50 345**	*e*	**PKPdf**	**11 40 13.9**	**-0.8**
WLF			PKPab	**PKPab**	**11 41 05.8**	**-1.5**
UDBI	**Udbina**	**163.55 315**	P	**PKPdf**	**11 41 07.6**	**-0.2**
CEY	**Cerknica**	**163.56 320**	⇑*i*P	**PKPdf**	**11 40 13.1**	**-1.9**
WATA	**Walderalm**	**163.77 329**	*e*PKPdf	**PKPdf**	**11 40 12.8**	**-2.5**
comp=Z,13nm,0.8s						
RIY	**Rijeka**	**163.79 319**	⇑*i*P	**PKPdf**	**11 40 13.1**	**-2.0**
WTTA	**Wattenberg**	**163.80 329**	*i* PKPdf	**PKPdf**	**11 40 13.5**	**-1.8**
comp=Z,49nm,1.5s,SNR=18						
WTTA			*e*PKPab	**PKPab**	**11 41 08.5**	**-0.4**
comp=Z,21nm,0.7s						
ABTA	**Abfaltersbach**	**163.80 326**	*i* PKPdf	**PKPdf**	**11 40 12.9**	**-2.3**
comp=Z,34nm,1.5s,SNR=15						
ABTA			*e*PKPab	**PKPab**	**11 41 07.4**	**-1.4**
comp=Z,22nm,0.8s						
MOTA	**Moosalm**	**163.96 330**	*i* PKPdf	**PKPdf**	**11 40 13.2**	**-2.2**
comp=Z,49nm,1.1s,SNR=17						
MOTA			*e*PKPab	**pPKPdf**	**11 41 08.8**	**-0.4**
comp=Z,9.3nm,0.6s						
RETA	**Reutte**	**163.99 331**	*i* PKPdf	**PKPdf**	**11 40 13.5**	**-1.9**
comp=Z,24nm,1.6s,SNR=6.2						
RETA			*e*PKPab	**pPKPdf**	**11 41 09.3**	**+0.2**
comp=Z,46nm,1.1s,SNR=8.6						
SQTA	**Sankt Quirin**	**164.02 330**	*i* PKPdf	**PKPdf**	**11 40 13.9**	**-1.6**
comp=Z,36nm,1.0s,SNR=15						
SQTA			*e*PKPab	**pPKPdf**	**11 41 09.5**	**+0.3**
comp=Z,19nm,0.8s						
BFO	**Black Forest**	**164.14 338**	*e*PKPdf	**PKPdf**	**11 40 13.9**	**-1.5**
BFO			*e*PKPab	**PKPab**	**11 41 09.5**	**-0.7**
BFO	**Black Forest**	**164.14 338**	*e*PKIKP	**PKPdf**	**11 40 13.9**	**-1.5**
BFO			*e*		11 41 09.5	
FETA	**Feichten**	**164.37 330**	*i* PKPdf	**PKPdf**	**11 40 14.4**	**-1.4**
comp=Z,41nm,1.6s,SNR=13						
FETA			*i* PKPab	**PKPab**	**11 41 11.1**	**-0.3**
comp=Z,22nm,0.7s,SNR=5.5						
DAVA	**Damuels**	**164.49 333**	*i* PKPdf	**PKPdf**	**11 40 14.1**	**-1.8**
comp=Z,33nm,1.6s,SNR=8.2						
DAVA			*i* PKPab	**PKPab**	**11 41 11.7**	**-0.2**
comp=Z,30nm,0.8s,SNR=10						
ECH	**Echery**	**164.59 340**	*e*PKPdf	**PKPdf**	**11 40 14.8**	**-1.0**
ECH			*e*PKPab	**PKPab**	**11 41 11.3**	**-0.8**
ECH	**Echery**	**164.59 340**	*e*PKIKP	**PKPdf**	**11 40 14.8**	**-1.0**
ECH			*e*		11 41 11.3	
MATE	**Matera**	**164.74 301**	⇑*i*P	**PKPdf**	**11 40 15.6**	**-0.5**
FUORN	**Ofenpass-Fuorn**	**164.89 330**	*e*PKPdf	**PKPdf**	**11 40 14.8**	**-1.6**
FUORN			*e*PKPab	**PKPab**	**11 41 13.9**	**0.0**
DAVOX	**Davos/Dischmat**	**164.91 332**	PKP	**PKPdf**	**11 40 15.5**	**-0.8**
comp=Z,16nm,0.9s,baz=54,slow=5.9,SNR=18						
DAVOX			PKPab	**PKPab**	**11 41 13.0**	**-0.9**
comp=Z,17nm,0.7s,baz=105,slow=2.6,SNR=8.0						
TIP	**Timpagrande**	**165.16 296**	*e*PKPdf	**PKPdf**	**11 40 15.4**	**-1.2**
TIP			*e*PKPab	**PKPab**	**11 41 14.9**	**-0.2**
TIP	**Timpagrande**	**165.16 296**	P	**PKPdf**	**11 40 15.1**	**-1.5**
TIP	**Timpagrande**	**165.16 296**	⇑*i*P	**PKPdf**	**11 40 16.3**	**-0.3**
TUE	**Stuetta**	**165.37 332**	*e*PKPdf	**PKPdf**	**11 40 15.3**	**-1.5**
TUE			*e*PKPab	**PKPab**	**11 41 15.3**	**-0.6**
CLF	**Chambon-Foret**	**165.74 352**	*e*PKPdf	**PKPdf**	**11 40 16.2**	**-0.5**
CLF			*e*PKPab	**PKPab**	**11 41 16.5**	**-0.6**
PMOZ	**Porto Moniz, M**	**166.01 90**	*e*PKPdf	**PKPdf**	**11 40 19.5**	**+1.9**
PMOZ	**Porto Moniz, M**	**166.01 90**	*e*PKPdf	**PKPdf**	**11 40 16.8**	**-0.8**
AQU	**L'Aquila**	**166.19 312**	*e*PKPdf	**PKPdf**	**11 40 16.9**	**-0.5**
AQU			*e*PKPab	**PKPab**	**11 41 19.4**	**-0.1**
AQU	**L'Aquila**	**166.19 312**	*e*PKIKP	**PKPdf**	**11 40 16.9**	**-0.5**
AQU			*e*		11 41 19.4	
AQU	**L'Aquila**	**166.19 312**	⇑*i*P	**PKPdf**	**11 40 15.7**	**-1.6**
SENIN	**Lac Senin/Sane**	**166.20 337**	*e*PKPdf	**PKPdf**	**11 40 17.0**	**-0.4**
SENIN			*e*PKPab	**PKPab**	**11 41 18.9**	**-0.6**
PMAR	**Madeira**	**166.23 90**	*e*PKPdf	**PKPdf**	**11 40 20.3**	**+2.4**
FUL	**Funchal**	**166.24 91**	*e*PKPdf	**PKPdf**	**11 40 20.9**	**+3.3**
PMPST	**Porto Santo, M**	**166.77 89**	*e*PKPdf	**PKPdf**	**11 40 19.6**	**+1.6**
VAE	**Valguarnera**	**167.35 291**	PKP	**PKPdf**	**11 40 18.2**	**-0.2**
comp=Z,9.6nm,0.4s,baz=52,slow=5.6,SNR=8.0						
BNI	**Bardonecchia**	**167.56 336**	*e*PKPdf	**PKPdf**	**11 40 18.1**	**-0.3**
BNI			*e*PKPab	**PKPab**	**11 41 25.1**	**-0.4**
TAM	**Tamanrasset**	**167.72 207**	*e*PKPdf	**PKPdf**	**11 40 18.9**	**-0.3**
SSB	**Saint Sauveur**	**167.99 343**	*e*PKPdf	**PKPdf**	**11 40 17.4**	**-1.2**
SSB			*e*PKPab	**PKPab**	**11 41 27.0**	**-0.3**
SSB	**Saint Sauveur**	**167.99 343**	*e*PKIKP	**PKPdf**	**11 40 17.4**	**-1.2**
SSB			*e*		11 41 27.0	
CLTB	**Caltabellotta**	**168.26 292**	*e*PKPdf	**PKPdf**	**11 40 18.1**	**-0.9**
PGAV	**Gavieira, Arco**	**169.89 35**	*e*PKPdf	**PKPdf**	**11 40 21.0**	**+1.1**
PGAV	**Gavieira, Arco**	**169.89 35**	*e*PKPab	**PKPab**	**11 41 38.2**	**+2.3**
PGAV	**Gavieira, Arco**	**169.89 35**	*e*PP	PP	11 45 25.0	-1.0
PGAV	**Gavieira, Arco**	**169.89 35**	*e*SS	SS	12 06 14.7	+8.1
PCAB	**Cabril**	**170.20 35**	*e*PKPdf	**PKPdf**	**11 40 20.8**	**+0.8**
PCAB	**Cabril**	**170.20 35**	*e*PKPab	**PKPab**	**11 41 37.6**	**+0.4**
PTO	**Porto**	**170.34 39**	*e*PKPdf	**PKPdf**	**11 40 23.1**	**+3.0**
POLO	**Lamas de Olo**	**170.57 36**	*e*PKPdf	**PKPdf**	**11 40 20.9**	**+0.6**
POLO	**Lamas de Olo**	**170.57 36**	*e*PKPab	**PKPab**	**11 41 40.0**	**+1.1**
POLO	**Lamas de Olo**	**170.57 36**	*e*PP	PP	11 45 31.2	+1.8
POLO	**Lamas de Olo**	**170.57 36**	*e*SS	SS	12 06 28.4	+15
PVRL	**Vila Real**	**170.69 36**	*e*PKPdf	**PKPdf**	**11 40 21.8**	**+1.5**
PVRL	**Vila Real**	**170.69 36**	*e*PKPab	**PKPab**	**11 41 41.0**	**+1.6**
PBRG	**Braganca**	**170.70 30**	*e*PKPdf	**PKPdf**	**11 40 20.6**	**+0.3**
PBRG	**Braganca**	**170.70 30**	*e*PKPab	**PKPab**	**11 41 40.3**	**+0.9**
PVIS	**Viseu**	**171.01 39**	*e*PKPdf	**PKPdf**	**11 40 21.7**	**+1.2**
PVIS	**Viseu**	**171.01 39**	*e*PKPab	**PKPab**	**11 41 41.8**	**+0.9**
COI	**Coimbra**	**171.09 43**	*e*PKPdf	**PKPdf**	**11 40 21.1**	**+0.6**
MVO	**Moncorvo**	**171.10 34**	*e*PKPdf	**PKPdf**	**11 40 21.1**	**+0.5**
MVO	**Moncorvo**	**171.10 34**	*e*PKPab	**PKPab**	**11 41 42.4**	**+1.2**
MVO	**Moncorvo**	**171.10 34**	*e*PP	PP	11 45 35.2	+3.2
MVO	**Moncorvo**	**171.10 34**	*e*SS	SS	12 06 25.9	+7.5
PCAS	**Casmilo, Conde**	**171.14 44**	*e*PKPdf	**PKPdf**	**11 40 21.2**	**+0.6**
PCAS	**Casmilo, Conde**	**171.14 44**	*e*PKPab	**PKPab**	**11 41 43.3**	**+1.9**
PCAS	**Casmilo, Conde**	**171.14 44**	*e*SS	SS	12 06 29.5	+10
PMAFR	**Mafra**	**171.32 52**	*e*PKPdf	**PKPdf**	**11 40 21.7**	**+1.0**
PMAFR	**Mafra**	**171.32 52**	*e*SS	SS	12 06 29.5	+8.0
MTE	**Manteigas**	**171.43 39**	*e*PKPdf	**PKPdf**	**11 40 21.3**	**+0.5**
MTE	**Manteigas**	**171.43 39**	*e*SS	SS	12 06 33.5	+12
MTE	**Manteigas**	**171.43 39**	*e*PKPdf	**PKPdf**	**11 40 20.6**	**-0.2**
PTOM	**Tomar**	**171.48 46**	*e*PKPdf	**PKPdf**	**11 40 21.3**	**+0.6**
PTOM	**Tomar**	**171.48 46**	*e*PKPab	**PKPab**	**11 41 45.2**	**+2.3**
LIS	**Lisbon**	**171.54 53**	*e*PKPdf	**PKPdf**	**11 40 21.9**	**+1.1**
TAMR	**Tamra**	**171.55 295**	*e*PKPdf	**PKPdf**	**11 40 21.2**	**+0.4**
KEST	**Kesra**	**171.69 285**	PKP	**PKPdf**	**11 40 21.4**	**+0.3**
comp=Z,20nm,1.0s,baz=178,slow=1.3,SNR=26						
KEST			PKPab	**PKPab**	**11 41 44.6**	**+0.4**
comp=Z,13nm,0.8s,baz=58,slow=4.1,SNR=4.7						
KEST	**Kesra**	**171.69 285**	*e*PKPdf	**PKPdf**	**11 40 21.1**	**+0.1**
PCBR	**Castelo Branco**	**171.86 41**	*e*PKPdf	**PKPdf**	**11 40 21.7**	**+0.8**
PMTG	**Montargil**	**171.93 48**	*e*PKPdf	**PKPdf**	**11 40 21.5**	**+0.5**
PMTG	**Montargil**	**171.93 48**	*e*PKPab	**PKPab**	**11 41 46.4**	**+1.4**
PMTG	**Montargil**	**171.93 48**	*e*SS	SS	12 06 40.3	+13
PMRV	**Marv??o**	**172.19 43**	*e*PKPdf	**PKPdf**	**11 40 21.7**	**+0.6**
PMRV	**Marv??o**	**172.19 43**	*e*SS	SS	12 06 37.3	+7.8
PNCL	**Nicolau / Gran**	**172.27 55**	*e*PKPdf	**PKPdf**	**11 40 22.3**	**+1.2**
PNCL	**Nicolau / Gran**	**172.27 55**	*e*PKPab	**PKPab**	**11 41 46.8**	**+0.3**
PNCL	**Nicolau / Gran**	**172.27 55**	*e*SS	SS	12 06 44.6	+14
EVO	**Evora**	**172.38 51**	*e*PKPdf	**PKPdf**	**11 40 22.4**	**+1.2**
EVO	**Evora**	**172.38 51**	*e*PKPab	**PKPab**	**11 41 48.5**	**+1.5**
EVO	**Evora**	**172.38 51**	PKP1	**PKPdf**	**11 40 22.7**	**+1.5**
PTEO	**Sao Teotonio**	**172.40 59**	*e*PKPdf	**PKPdf**	**11 40 22.9**	**+1.7**
PFVI	**Vila Bisbo**	**172.50 62**	*e*PKPdf	**PKPdf**	**11 40 22.5**	**+1.2**
PFVI	**Vila Bisbo**	**172.50 62**	*e*PKPab	**PKPab**	**11 41 49.0**	**+1.4**
PFVI	**Vila Bisbo**	**172.50 62**	*e*SS	SS	12 06 41.6	+8.1
PFVI	**Vila Bisbo**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSRA	**Psara**	**0.35**	**172**	P	Pb	11 39 39.9	+0.6
PSRA				S	Sb	11 39 44.8	+0.3
PSRA				AML	AML	11 39 44.9	
	comp=N,1921μm,0.1s						
PSRA				AML	AML	11 39 46.1	
	comp=E,1258μm,0.1s						
SIGR	**SIGRI**	**0.42**	**40**	P	Pb	11 39 40.6	+0.2
SIGR				S	Sb	11 39 47.0	+0.5
SIGR				AML	AML	11 39 47.5	
	comp=N,274μm,0.3s						
SIGR				AML	AML	11 39 51.2	
	comp=E,144μm,0.1s						
CHOS	**Chios island**	**0.66**	**139**	P	Pb	11 39 44.8	+0.3
CHOS	**Chios island**	**0.66**	**139**	P	Pb	11 39 44.8	+0.2
CHOS				S	Sb	11 39 53.6	+0.2
CHOS				AML	AML	11 39 55.9	
	comp=N,229μm,0.2s						
CHOS				AML	AML	11 39 58.2	
	comp=E,340μm,0.3s						
PRK	**Paraskevi**	**0.70**	**59**	P	Pb	11 39 45.3	+0.3
PRK				S	Sn	11 39 55.4	-0.4
PRK				AML	AML	11 39 59.1	
	comp=N,182μm,0.3s						
PRK				AML	AML	11 39 59.4	
	comp=E,137μm,0.2s						
LIA	**Limnos Island**	**1.04**	**346**	P	Pb	11 39 50.8	-0.1
LIA				S	Sn	11 40 06.0	+1.7
LIA				AML	AML	11 40 07.8	
	comp=N,65μm,0.4s						
SMG	**Samos**	**1.58**	**138**	P	Pb	11 40 06.4	+6.4
SMTH	**Samothraki Isl**	**1.58**	**1**	P	Pb	11 40 06.4	+6.3
ATHU	**Athens Univers**	**1.64**	**236**	P	Pb	11 40 08.2	+7.2
GELI	**Tayfur-Gelibol**	**1.68**	**26**	P	Pb	11 40 06.2	+4.4
VLY	**Voula,Athens**	**1.70**	**233**	P	Pb	11 40 07.8	+5.7
LPK	**Lapseki**	**1.77**	**33**	P	Pb	11 40 05.2	+1.9
SMIA	**Simia**	**1.79**	**270**	P	Pb	11 40 09.2	+5.5
THAS	**Thassos island**	**1.82**	**341**	P	Pb	11 40 07.2	+3.1
XOR	**Xorichti**	**1.86**	**286**	P	Pb	11 40 08.7	+3.8
OUR	**Ouranopolis**	**1.86**	**321**	P	Pb	11 40 07.8	+3.0
VILL	**Villia**	**1.86**	**248**	P	Pb	11 40 08.6	+3.6
SERI	**Serifos**	**1.90**	**205**	P	Pb	11 40 07.7	+2.1
ENEZ	**Enez**	**1.91**	**15**	P	Pb	11 40 05.1	-0.6
ERIK	**Erikli-Kesan**	**1.94**	**23**	P	Pb	11 40 04.9	-1.3
ATAL	**Atalanti**	**1.95**	**265**	P	Pb	11 40 08.7	+2.3
LKR	**Lokris**	**1.97**	**264**	P	Pb	11 40 08.9	+2.2
BALB	**Balikesir**	**1.99**	**67**	P	Pn	11 40 05.1	+1.5
KRBG	**Karabiga-Canak**	**2.04**	**42**	P	Pn	11 40 04.6	+0.3
ALN	**Alexandroupoli**	**2.05**	**12**	P	Pn	11 40 05.3	+0.9
ALN	**Alexandroupoli**	**2.05**	**12**	P	Pn	11 40 05.5	+1.1
FYTO	**Fytoko, Volos**	**2.06**	**285**	P	Pn	11 40 09.4	+1.2
AYDB	**Zeytinkoy-Aydi**	**2.10**	**116**	P	Pn	11 40 05.9	+0.7
PROD	**Prodromos**	**2.14**	**254**	P	Pb	11 40 08.3	-1.2
IOSP	**Ios island**	**2.17**	**185**	P	Pn	11 40 07.3	+1.2
LTK	**Loutraki**	**2.17**	**247**	P	Pb	11 40 09.1	-1.1
PLG	**Polygyros**	**2.17**	**314**	P	Pn	11 40 07.8	+1.6
LOUT	**Loutraki**	**2.18**	**246**	P	Pb	11 40 08.9	-1.4
KAVA	**Kavala**	**2.24**	**340**	P	Pn	11 40 07.3	+0.3
RDO	**Rodhopi**	**2.25**	**1**	P	Pn	11 40 06.6	-0.7
RDO	**Rodhopi**	**2.25**	**1**	P	Pn	11 40 06.6	-0.7
DID	**Didima**	**2.26**	**233**	P	Pn	11 40 08.9	+1.5
BODT	**Bodrum**	**2.32**	**141**	P	Pn	11 40 05.3	-2.9
MHLO	**Agia Marina, M**	**2.36**	**202**	P	Pn	11 40 08.4	-0.4
DSF	**Desfina**	**2.38**	**259**	P	Pn	11 40 09.9	+0.9
THAL	**Thalero**	**2.39**	**250**	P	Pn	11 40 09.7	+0.6
KRND	**KRANIDI**	**2.39**	**232**	P	Pn	11 40 09.1	0.0
AGG	**Agios Georgios**	**2.48**	**274**	P	Pn	11 40 10.3	-0.1
AGG	**Agios Georgios**	**2.48**	**274**	P	Pn	11 40 10.1	-0.3
KULA	**Kula-Manisa**	**2.50**	**98**	P	Pn	11 40 05.0	-5.7
KULA	**Kula-Manisa**	**2.50**	**98**	P	Pn	11 40 05.2	-5.5
SOH	**Sokhos**	**2.54**	**320**	P	Pn	11 40 07.9	-3.4
THE	**Thessaloniki**	**2.62**	**312**	P	Pn	11 40 08.5	-3.8
LIT	**Litokhoron**	**2.63**	**298**	P	Pn	11 40 09.5	-2.9
GUR	**Goura**	**2.66**	**250**	P	Pn	11 40 10.3	-2.7
SRS	**Serrai**	**2.67**	**327**	P	Pn	11 40 07.6	-5.3
KALE	**Kalithea**	**2.68**	**260**	P	Pn	11 40 10.8	-2.4
TRIZ	**Trizonia**	**2.74**	**260**	P	Pn	11 40 11.3	-2.6
SERG	**Sergoula**	**2.74**	**261**	P	Pn	11 40 10.7	-3.3
NVR	**Nevrokopi**	**2.76**	**333**	P	Pn	11 40 07.7	-6.6
KLV	**Kalavryta, Ach**	**2.77**	**253**	P	Pn	11 40 10.4	-4.0
THL	**Klokotos Trika**	**2.79**	**285**	P	Pn	11 40 09.7	-5.0
ANX	**Ano Chora**	**2.82**	**265**	P	Pn	11 40 11.4	-3.7
LAKA	**Lakka**	**2.84**	**258**	P	Pn	11 40 12.4	-2.9
EFP	**Efpalio**	**2.85**	**262**	P	Pn	11 40 11.6	-3.9
EVR	**Evrytania**	**2.88**	**272**	P	Pn	11 40 11.4	-4.6
TRIP	**Tripoli**	**2.89**	**243**	P	Pn	11 40 11.4	-4.6
VLX	**Vlachokerasia**	**2.89**	**239**	P	Pn	11 40 11.1	-5.1

ISCJB ***15*** *11:48:14.9±0.1,20°.17S±0°.02×177°.91W±0°.04,h450km, mb4.5/141,Error ellipse: s-maj=4.7km s-min=2.9km az=17.1*
MOS ***15*** *11:48:15.8±2.1,19°.48S×178°.14W,h426km,mb4.7/26, Error ellipse: s-maj=10.4km s-min=9.5km az=121.0*
BJI ***15*** *11:48:16.2±0.0,20°.41S×177°.72W,h480km,mb4.7/23, mB4.9/12*
NEIC ***15*** *11:48:18.1±1.0,20°.33S×177°.90W,h482km±6km, mb4.5/108,Error ellipse: s-maj=15.4km s-min=12.6km az=147.0*
IDC ***15*** *11:48:19.5±1.5,20°.31S×177°.87W,h494km±17km, mb4.0/34,mb1 4.1/35,mb1mx4.0/45,mbtmp4.8/35,Error ellipse: s-maj=10.0km s-min=8.0km az=134.0*

ISC 15 11:48:16.0±0.3,20°.22S±0°.05×177°.95W±0°.05,h450km, n413,σ2s34/457,mb4.6/141,55C-22D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.65**	**83**	*e*P	**P**	**11 50 09.6**	**+2.0**
NIUE				*e*S	**S**	**11 51 41.9**	**+2.8**
RIZ	**Raoul Island**	**8.99**	**180**	S	**S**	**11 52 03.4**	**-2.2**
RAO	**Raoul Island**	**8.99**	**180**	*e*P	**P**	**11 50 22.5**	**+0.4**
RAO				*e*S	**S**	**11 52 03.7**	**-2.0**
RAO	**Raoul Island**	**8.99**	**180**	*e*P	**P**	**11 50 22.5**	**+0.4**
GLKZ	**Green Lake**	**9.01**	**180**	P	**P**	**11 50 22.6**	**+0.4**
GLKZ				S	**S**	**11 52 04.4**	**-1.6**
MARNC	**Mare, Loyalty**	**13.17**	**262**	*e*P	**P**	**11 51 09.2**	**+1.7**
PINNC	**Pines Island,**	**13.81**	**257**	*e*P	**P**	**11 51 16.7**	**+2.3**
OUENC	**Ouen Island, N**	**14.34**	**259**	*e*P	**P**	**11 51 26.6**	**+2.5**
OUENC				*e*S	**S**	**11 53 49.5**	**-2.7**
DZM	**Mont Dzumac**	**14.68**	**260**	P	**P**	**11 51 28.1**	**+4.3**
	1.3nm,0.3s,baz=74,slow=19,SNR=7.4						
DZM	**Mont Dzumac**	**14.68**	**260**	*e*P	**P**	**11 51 26.3**	**+2.4**
OUZ	**Omahuta**	**16.70**	**205**	*e*P	**P**	**11 51 45.5**	**+0.6**
	69nm,1.7s						
OUZ	**Omahuta**	**16.70**	**205**	P	**P**	**11 51 46.7**	**+1.7**
KUZ	**Kuaotunu**	**17.37**	**197**	P	**P**	**11 51 54.2**	**+2.1**
MXZ	**Matakaoa Point**	**17.59**	**190**	P	**P**	**11 51 54.4**	**+0.1**
MXZ				S	**S**	**11 54 46.8**	**-7.2**
WMGZ	**Waiomatatini S**	**17.82**	**189**	P	**P**	**11 51 57.5**	**+0.8**
WMGZ				S	**S**	**11 55 01.8**	**+3.6**
HAZ	**Te Kaha**	**17.87**	**191**	P	**P**	**11 51 57.6**	**+0.4**
HAZ				S	**S**	**11 54 59.5**	**+0.6**
MKAZ	**Moumakai**	**17.87**	**198**	P	**P**	**11 51 58.3**	**+1.1**
RUGZ	**Raukumara Rang**	**18.09**	**191**	P	**P**	**11 52 01.4**	**+1.8**
RUGZ				S	**S**	**11 55 00.2**	**-2.7**
PUZ	**Puketiti**	**18.09**	**190**	P	**P**	**11 51 59.8**	**+0.3**
TWGZ	**Tauwhareparae**	**18.24**	**190**	P	**P**	**11 52 02.1**	**+1.1**
TWGZ				S	**S**	**11 55 05.6**	**+0.2**
TOZ	**Tahuroa Road**	**18.36**	**197**	P	**P**	**11 52 03.8**	**+1.8**
MWZ	**Matawai**	**18.48**	**191**	P	**P**	**11 52 02.1**	**-1.2**
MWZ				S	**S**	**11 55 08.3**	**-0.9**
URZ	**Urewera**	**18.48**	**192**	P	**P**	**11 52 00.3**	**-2.9**
	4.0nm,0.3s,baz=266,slow=2.7,SNR=26						
URZ				S	**S**	**11 55 10.3**	**+1.2**
	0.7nm,0.3s,baz=240,slow=20,SNR=4.5						
URZ	**Urewera**	**18.48**	**192**	P	**P**	**11 52 01.4**	**-1.8**
URZ				S	**S**	**11 55 11.3**	**+2.2**
CNGZ	**Carnagh Statio**	**18.50**	**190**	P	**P**	**11 52 05.2**	**+1.7**
TKGZ	**Te Karaka**	**18.52**	**190**	P	**P**	**11 52 05.6**	**+2.1**
TKGZ				S	**S**	**11 55 12.1**	**+2.3**
MUGZ	**Murupara**	**18.76**	**193**	P	P	11 52 13.3	+7.4
HRRZ	**Handcock Road**	**18.79**	**194**	P	**P**	**11 52 06.2**	**0.0**
RIGZ	**Rimuhau**	**18.80**	**190**	P	**P**	**11 52 05.9**	**-0.4**
RIGZ				S	**S**	**11 55 17.1**	**+2.8**
TLZ	**Tolley Road**	**18.91**	**196**	P	**P**	**11 52 09.0**	**+1.7**
SNGZ	**Shannon Statio**	**18.94**	**191**	P	**P**	**11 52 06.7**	**-0.9**
SNGZ				S	**S**	**11 55 23.6**	**+6.9**
RAHZ	**Arahi**	**19.12**	**192**	P	**P**	**11 52 08.7**	**-0.5**
RAHZ				S	**S**	**11 55 29.0**	**+9.4**
MRHZ	**Matea Rd**	**19.18**	**193**	P	**P**	**11 52 08.7**	**-1.1**
HIZ	**Hauiti**	**19.27**	**197**	*e*P	**P**	**11 52 10.3**	**-0.3**
	100nm,1.2s						
HIZ	**Hauiti**	**19.27**	**197**	P	**P**	**11 52 14.9**	**+4.3**
BKZ	**Black Stump Fm**	**19.48**	**193**	P	**P**	**11 52 10.3**	**-2.2**
BKZ				S	**S**	**11 55 28.6**	**+3.1**
MCHZ	**McNeill Hill**	**19.71**	**192**	P	**P**	**11 52 14.6**	**+0.1**
MCHZ				S	S	11 55 40.5	+11
KWHZ	**Kaweka Forest**	**19.75**	**193**	P	**P**	**11 52 14.0**	**-1.0**
BHHZ	**Black Hill Sta**	**19.89**	**194**	P	**P**	**11 52 14.1**	**-2.2**
KRHZ	**Kereru**	**19.97**	**193**	P	**P**	**11 52 17.6**	**+0.7**
THZ	**Tophouse**	**22.84**	**198**	*e*P	**P**	**11 52 41.8**	**-1.2**
	106nm,1.6s						
RPZ	**Rata Peaks**	**25.17**	**199**	P	**P**	**11 53 04.4**	**+0.6**
	10nm,0.7s,baz=86,slow=2.1,SNR=4.9						
RPZ				S	**S**	**11 56 55.3**	**-0.5**
	15nm,1.1s,baz=176,slow=12,SNR=1.9						
PPT	**Papeete**	**26.96**	**89**	P	**P**	**11 53 19.2**	**-0.7**
	15nm,0.6s,baz=78,slow=10,SNR=2.9						
WHZ	**Wether Hill Ro**	**28.11**	**201**	*e*P	**P**	**11 53 29.2**	**-0.5**
	37nm,1.3s						
EIDS	**Eidsvold**	**28.97**	**254**	*e*P	**P**	**11 53 38.1**	**+0.6**
	8.0nm,0.6s						
ARMA	**Armidale**	**29.23**	**244**	*e*P	**P**	**11 53 40.1**	**+0.2**
	54nm,1.5s						
RABL	**Rabaul**	**33.17**	**295**	*e*P	**P**	**11 54 13.3**	**-0.7**
	87nm,0.6s						
CTA	**Charters Tower**	**33.56**	**264**	P	**P**	**11 54 18.6**	**+1.3**
	38nm,0.5s,baz=90,slow=11,SNR=100						
CTAO	**Charters Tower**	**33.56**	**264**	*e*P	**P**	**11 54 17.8**	**+0.6**
	32nm,0.6s						
CTAO	**Charters Tower**	**33.56**	**264**	*e*P	**P**	**11 54 17.8**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,32nm,0.6s						
PMG	**Port Moresby**	**35.33**	**283**	P	**P**	**11 54 33.5**	**+1.4**
	comp=Z,54nm,0.8s,baz=82,slow=4.4,SNR=16						
PMG	**Port Moresby**	**35.33**	**283**	*e*P	**P**	**11 54 32.8**	**+0.7**
	comp=Z,53nm,0.8s						
PMG	**Port Moresby**	**35.33**	**283**	*d i*P	**P**	**11 54 33.2**	**+1.1**
PMG				pmax	pmax		
	comp=Z,243nm,0.9s						
TOO	**Toolangi**	**36.10**	**233**	*e*P	**P**	**11 54 38.4**	**0.0**
	comp=Z,16nm,0.8s						
TOO	**Toolangi**	**36.10**	**233**	*e*P	**P**	**11 54 38.4**	**0.0**
TOO				pmax	pmax		
	comp=Z,16nm,0.8s						
COEN	**Coen**	**37.61**	**273**	*e*P	**P**	**11 54 52.1**	**+1.0**
	comp=Z,28nm,0.9s						
STKA	**Stephens Creek**	**37.95**	**244**	P	**P**	**11 54 54.6**	**+0.9**
	comp=Z,5.4nm,0.6s,baz=80,slow=12,SNR=15						
STKA				PcP	**PcP**	**11 56 58.1**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=102,slow=7.9,SNR=2.7						
STKA	**Stephens Creek**	**37.95**	**244**	*e*P	**P**	**11 54 54.1**	**+0.4**
	comp=Z,1.5nm,0.7s						
STKA	**Stephens Creek**	**37.95**	**244**	*e*P	**P**	**11 54 54.1**	**+0.4**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BBOO	**Buckleboo**	**42.71**	**243**	*e*P	**P**	**11 55 32.1**	**0.0**
	comp=Z,35nm,1.4s						
JAY	**Jayapura**	**44.00**	**288**	P	**P**	**11 55 43.9**	**+1.5**
	comp=Z,75nm,0.6s,baz=131,slow=4.2,SNR=55						
AS31	**Alice Springs**	**44.63**	**256**	*e*P	**P**	**11 55 47.5**	**+0.2**
ASAR	**Alice Springs**	**44.63**	**256**	P	**P**	**11 55 47.5**	**+0.2**
	comp=Z,32nm,0.8s,baz=96,slow=8.0,SNR=313						
ASAR				PcP	**pwP**	**11 57 19.6**	**+2.7**
	comp=Z,6.5nm,0.6s,baz=106,slow=4.0,SNR=12						
ASAR				ScP	**ScP**	**12 00 26.7**	**-2.9**
	comp=Z,1.9nm,1.0s,baz=104,slow=3.9,SNR=3.3						
ASAR				S	**S**	**12 01 46.2**	**-3.5**
	comp=Z,1.1nm,0.8s,baz=92,slow=16,SNR=7.0						
WB2	**Warramunga Arr**	**44.67**	**262**	*e*P	**P**	**11 55 47.3**	**-0.2**
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**44.68**	**262**	*e*P	**P**	**11 55 47.6**	**0.0**
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**44.68**	**262**	*d i*P	**P**	**11 55 47.0**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,36nm,1.4s						
WR1	**Warramunga Arr**	**44.69**	**262**	*e*P	**P**	**11 55 47.6**	**0.0**
WRA	**Warramunga Arr**	**44.69**	**262**	P	**P**	**11 55 47.6**	**0.0**
	comp=Z,12nm,0.5s						
WRA				PcP	**pwP**	**11 57 20.4**	**+3.2**
WRA				S	**S**	**12 01 45.1**	**-5.4**
MTN	**Manton Dam**	**49.21**	**270**	*e*P	**P**	**11 56 21.7**	**-0.3**
	comp=Z,30nm,1.0s						
FORT	**Forrest**	**49.45**	**246**	*e*P	**P**	**11 56 23.3**	**-0.4**
	comp=Z,40nm,0.8s						
GUMO	**Guam**	**49.66**	**310**	P	**P**	**11 56 26.1**	**+0.8**
	comp=Z,52nm,0.7s,baz=194,slow=15,SNR=4.5						
FAKI	**Fak Fak**	**51.48**	**283**	*e*P	**P**	**11 56 38.5**	**-0.3**
	comp=Z,34nm,1.3s						
SIJI	**Sorong**	**53.21**	**285**	P	**P**	**11 56 52.1**	**+0.8**
	comp=Z,53nm,0.8s,baz=91,slow=5.0,SNR=33						
SOEI	**Soe**	**56.54**	**272**	*e*P	**P**	**11 57 15.6**	**+0.7**
	comp=Z,84nm,0.8s						
PSA00	**Pilbara Seismi**	**57.78**	**257**	*e*P	**P**	**11 57 22.5**	**-0.7**
	comp=Z,36nm,0.8s						
SBA	**Scott Base**	**58.16**	**184**	*e*P	**P**	**11 57 25.0**	**+0.2**
	comp=Z,14nm,1.1s						
VNDA	**Vanda**	**58.19**	**185**	P	**P**	**11 57 24.4**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=344,slow=6.1,SNR=19						
VNDA	**Vanda**	**58.19**	**185**	*e*P	**P**	**11 57 24.9**	**-0.2**
	comp=Z,10nm,1.5s						
NWAO	**Narrogin (SRO)**	**58.54**	**243**	*e*P	**P**	**11 57 27.9**	**-0.3**
	comp=Z,19nm,0.9s						
NWAO	**Narrogin (SRO)**	**58.54**	**243**	*e*P	**P**	**11 57 27.9**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,19nm,0.9s						
MORW	**Morawa**	**59.98**	**247**	*e*P	**P**	**11 57 37.5**	**-0.5**
	comp=Z,13nm,0.8s						
GIRL	**Giralia**	**62.67**	**254**	*e*P	**P**	**11 57 56.0**	**+0.2**
	comp=Z,432nm,1.6s						
CASY	**Casey**	**64.24**	**205**	*e*P	**P**	**11 58 03.9**	**-1.2**
	comp=Z,5.5nm,0.8s						
QSPA	**South Pole Qui**	**69.85**	**180**	*e*P	**P**	**11 58 39.0**	**-1.1**
	comp=Z,12nm,0.7s						
MJAR	**Matsushiro Arr**	**70.01**	**324**	P	**P**	**11 58 41.3**	**+0.1**
	comp=Z,7.0nm,0.7s,baz=162,slow=6.1,SNR=31						
MAJO	**Matsushiro**	**70.01**	**324**	*e*P	**P**	**11 58 41.2**	**-0.1**
	comp=Z,9.4nm,0.7s						
MAJO	**Matsushiro**	**70.01**	**324**	*d i*P	**P**	**11 58 41.0**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MAT	**Matsushiro**	**70.01**	**324**	P	**P**	**11 58 41.3**	**0.0**
UGM	**Wanagama**	**70.02**	**269**	*e*P	**P**	**11 58 41.4**	**-0.4**
	comp=Z,186nm,1.4s						
MJB9	**Matsu-Tunnel**	**70.02**	**324**	*e*P	**P**	**11 58 41.1**	**-0.2**
	comp=Z,9.7nm,0.7s						
JOW	**Kunigami**	**70.02**	**310**	P	**P**	**11 58 42.2**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=132,slow=10.0,SNR=4.8						
ADK	**Adak**	**71.80**	**1**	*e*P	**P**	**11 58 50.7**	**-0.8**
	comp=Z,24nm,0.7s						
ADK	**Adak**	**71.80**	**1**	*e*P	**P**	**11 58 50.7**	**-0.8**
ADK				pmax	pmax		
	comp=Z,24nm,0.7s						
GSTR	**Great Sitkin T**	**72.02**	**1**	*e*P	**P**	**11 58 52.1**	**-0.7**
JNU	**Nakatsue**	**72.10**	**317**	P	**P**	**11 58 54.0**	**+0.2**
	comp=Z,7.2nm,0.9s,baz=116,slow=4.1,SNR=7.0						
JNU	**Nakatsue**	**72.10**	**317**	*e*P	**P**	**11 58 53.8**	**+0.1**
	comp=Z,12nm,1.0s						
ATKA	**Atka Island**	**72.18**	**2**	*e*P	**P**	**11 58 53.0**	**-0.7**
	comp=Z,47nm,1.2s						
ASAJ	**Asahikawa**	**73.50**	**331**	P	**P**	**11 59 02.5**	**+1.0**
	comp=Z,20nm,0.8s,baz=223,slow=8.5,SNR=26						
UNV	**Unalaska Valle**	**74.42**	**7**	*e*P	**P**	**11 59 05.3**	**-1.2**
	comp=Z,84nm,1.4s						
YSS	**Yuzh-Sakhalins**	**75.66**	**333**	⇑*e*P	**P**	**11 59 14.1**	**+0.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
PEA0B	**Petropavlovsk-**	**76.01**	**345**	*e*P	**P**	**11 59 15.1**	**-0.4**
	comp=Z,25nm,1.0s						
PEA0B	**Petropavlovsk-**	**76.01**	**345**	*e*P	**P**	**11 59 15.1**	**-0.4**
PEA0B				pmax	pmax		
	comp=Z,25nm,1.0s						
PETK	**Petropavlovsk-**	**76.01**	**345**	P	**P**	**11 59 15.4**	**-0.1**
	comp=Z,15nm,0.8s,baz=130,slow=8.0,SNR=28						
PEA1	**Petropavlovsk-**	**76.02**	**345**	*e*P	**P**	**11 59 15.4**	**-0.1**
KSRS	**Korea Array**	**76.71**	**319**	P	**P**	**11 59 20.5**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=139,slow=6.7,SNR=11						
MSHR	**Mys Shultsa**	**78.11**	**324**	*d i*P	**P**	**11 59 27.9**	**+0.6**
USA0B	**Ussuriysk Arra**	**78.76**	**326**	*e*P	**P**	**11 59 30.9**	**+0.2**
	comp=Z,12nm,0.8s						
USA0B	**Ussuriysk Arra**	**78.76**	**326**	*e*P	**P**	**11 59 30.9**	**+0.2**
USA0B				pmax	pmax		
	comp=Z,12nm,0.8s						
USRK	**Ussuriysk Ar.**	**78.76**	**326**	P	**P**	**11 59 32.2**	**+1.5**
	comp=Z,9.4nm,0.8s,baz=99,slow=6.0,SNR=14						
SII	**Sitkinak Islan**	**79.06**	**13**	*e*P	**P**	**11 59 31.8**	**-0.2**
	comp=Z,31nm,0.7s						
AFDM	**Forest Hills D**	**79.40**	**42**	*e*P	**P**	**11 59 34.0**	**-0.3**
	comp=Z,3.3nm,0.9s						
MYKOM	**Kota Tinggi**	**79.55**	**276**	*e*P	**P**	**11 59 35.5**	**-0.2**
	comp=Z,20nm,1.0s						
NJ2	**Nanjing**	**79.73**	**310**	*e*P	**P**	**11 59 36.3**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
YBH	**Yreka Blue Hor**	**80.04**	**39**	*e*P	**P**	**11 59 37.4**	**-0.3**
	comp=Z,8.5nm,0.9s						
YBH	**Yreka Blue Hor**	**80.04**	**39**	*e*P	**P**	**11 59 37.4**	**-0.3**
YBH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WAKR	**Walker**	**80.11**	**43**	*e*P	**P**	**11 59 38.4**	**+0.2**
	comp=Z,7.8nm,1.1s						
MDJ	**Mudanjiang**	**80.31**	**325**	*e*P	**P**	**11 59 39.6**	**+0.7**
	comp=Z,14nm,0.8s						
BEKR	**Beckworth**	**80.33**	**41**	*e*P	**P**	**11 59 39.2**	**-0.2**
	comp=Z,12nm,1.5s						
PNTR	**Pine Nut**	**80.34**	**42**	*e*P	**P**	**11 59 39.5**	**-0.1**
	comp=Z,9.3nm,0.8s						
VCNR	**Virginia City**	**80.43**	**42**	*e*P	**P**	**11 59 39.7**	**-0.3**
	comp=Z,6.6nm,1.2s						
YERR	**Yerington**	**80.51**	**42**	*e*P	**P**	**11 59 40.1**	**-0.2**
	comp=Z,13nm,1.3s						
KDAK	**Kodiak Island**	**80.53**	**13**	P	**P**	**11 59 40.0**	**+0.2**
	comp=Z,5.9nm,0.6s,baz=197,slow=6.4,SNR=7.9						
KDAK	**Kodiak Island**	**80.53**	**13**	*e*P	**P**	**11 59 39.7**	**-0.1**
	comp=Z,11nm,0.8s						
KDAK	**Kodiak Island**	**80.53**	**13**	*i* P	**P**	**11 59 40.3**	**+0.6**
NV01	**Mina Array Sit**	**80.79**	**43**	*e*P	**P**	**11 59 41.9**	**0.0**
NVAR	**Mina Array Bea**	**80.79**	**43**	P	**P**	**11 59 41.9**	**0.0**
	comp=Z,3.3nm,0.8s,baz=224,slow=9.5,SNR=13						
NV11	**Mina Array Sit**	**80.89**	**43**	*e*P	**P**	**11 59 41.8**	**-0.5**
	comp=Z,0.3nm,0.9s						
LDFC	**Landfair**	**81.08**	**48**	*e*P	**P**	**11 59 43.5**	**+0.2**
	comp=Z,12nm,0.5s						
KVN	**Kaiserville**	**81.27**	**43**	*e*P	**P**	**11 59 43.7**	**-0.6**
	comp=Z,4.1nm,0.8s						
KVN	**Kaiserville**	**81.27**	**43**	*e*P	**P**	**11 59 43.7**	**-0.6**
KVN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MOD	**Modoc Plateau**	**81.57**	**40**	*e*P	**P**	**11 59 45.4**	**-0.3**
	comp=Z,6.5nm,0.9s						
K05A	**Summer Lake**	**81.72**	**39**	*e*P	**P**	**11 59 46.8**	**+0.3**
	comp=Z,10nm,0.6s						
MAW	**Mawson**	**81.84**	**200**	P	**P**	**11 59 45.5**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=152,slow=5.3,SNR=3.8						
Y14A	**Wickenburg**	**81.97**	**50**	*e*P	**P**	**11 59 47.5**	**-0.4**
	comp=Z,4.6nm,0.8s						
CN2	**Changchun**	**82.11**	**322**	*e*P	**P**	**11 59 48.8**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H04A	**Detroit Lake**	**82.17**	**37**	*e*P	**P**	**11 59 48.3**	**-0.4**
	comp=Z,18nm,1.4s						
KLR	**Kul'dur**	**82.31**	**329**	P	**P**	**11 59 49.8**	**+0.7**
	comp=Z,4.1nm,0.9s,baz=73,slow=3.8,SNR=6.9						
KLR	**Kul'dur**	**82.31**	**329**	*d i*P	**P**	**11 59 49.5**	**+0.3**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PINE	**Pine Mountain**	**82.33**	**38**	*e*P	**P**	**11 59 49.4**	**-0.3**
	comp=Z,14nm,0.9s						
CNPM	**China Poot**	**82.42**	**13**	*e*P	**P**	**11 59 48.8**	**-0.6**
	comp=Z,9.8nm,0.7s						
BMN	**Battle Mountai**	**82.61**	**42**	*e*P	**P**	**11 59 50.6**

MENT	Mentasta	87.16	15	eP	P		12 00 12.3	-0.4
	comp=Z,7.3nm,1.1s							
ANMO	Albuquerque	87.19	51	P	P		12 00 13.5	-0.2
	comp=Z,1.2nm,0.6s,baz=197,slow=4.3,SNR=6.1							
ANMO	Albuquerque	87.19	51	eP	P		12 00 12.7	-1.0
	comp=Z,1.6nm,0.8s							
ZEA	Zeya	87.41	331	eP	P		12 00 13.9	-0.1
ZEA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
WRH	Wood River Hil	87.52	12	eP	P		12 00 13.0	-1.3
	comp=Z,18nm,0.8s							
PBKT	Sadao Pong	87.58	289	P	P		12 00 17.8	+2.2
	comp=Z,6.0nm,1.3s,comp=Z,532nm							
DOT	Dot Lake	87.68	14	eP	P		12 00 13.9	-1.2
	comp=Z,7.4nm,1.0s							
HDA	Harding Lake	87.70	13	eP	P		12 00 13.9	-1.2
	comp=Z,14nm,0.6s							
CCB	Clear Creek Bu	87.73	12	eP	P		12 00 13.8	-1.5
	comp=Z,18nm,0.6s							
DLBC	Dease Lake	87.77	23	P	P		12 00 16.0	+0.2
	comp=Z,2.9nm,0.8s,baz=234,slow=5.3,SNR=5.8							
COLA	College	87.92	12	eP	P		12 00 14.4	-1.7
	comp=Z,24nm,0.6s							
COLA	College	87.92	12	d iP	P		12 00 14.6	-1.5
COLA				pmax	pmax			
	comp=Z,22nm,0.8s							
XAN	Xi'an	88.00	307	P	P		12 00 17.8	+0.5
XAN				pmax	pmax			
	comp=Z,17nm,0.8s							
XAN				pmax	pmax			
	comp=Z,290nm,7.9s							
XAN	Xi'an	88.00	307	eP	P		12 00 17.4	+0.1
	comp=Z,15nm,0.9s							
XAN	Xi'an	88.00	307	eP	P		12 00 17.4	+0.1
XAN				pmax	pmax			
	comp=Z,15nm,0.9s							
ILAR	Eielson Array	88.03	13	P	P		12 00 15.2	-1.5
	comp=Z,4.9nm,0.7s,baz=218,slow=5.9,SNR=49							
ILB	Eielson Array	88.03	13	eP	P		12 00 15.1	-1.5
	comp=Z,14nm,1.3s							
SNAA	Sanae	88.29	178	P	P		12 00 15.2	-2.9
IMW	Indian Meadow	88.41	42	eP	P		12 00 18.8	-0.5
	comp=Z,3.7nm,0.9s							
VNA3	Neumayer Olymp	88.42	176	P	P		12 00 16.4	-2.2
HIA	Hailar	88.49	325⇑	eP	P		12 00 18.9	-0.3
NANT	Nan	88.64	290	P	P		12 00 22.9	+2.3
	comp=Z,16μm,1.1s,comp=Z,697μm							
PD31	Pinedale Array	88.73	43	eP	P		12 00 19.9	-0.8
	comp=Z,1.9nm,0.8s							
PDAR	Pinedale Array	88.73	43	P	P		12 00 20.0	-0.8
	comp=Z,1.5nm,0.6s,baz=211,slow=2.8,SNR=14							
BILL	Bilibino	88.76	354	eP	P		12 00 19.2	-0.8
	comp=Z,4.7nm,0.7s							
BILL	Biiibino	88.76	354⇑	eP	P		12 00 19.1	-0.9
BILL				e*PP	pP		12 02 01.7	+0.3
BILL				e			12 03 57.0	
BILL				pmax	pmax			
	comp=Z,5.0nm,0.7s							
BOZ	Bozeman (W)	88.84	40	eP	P		12 00 20.7	-0.4
	comp=Z,4.3nm,0.9s							
BOZ	Bozeman (W)	88.84	40	eP	P		12 00 20.7	-0.4
BOZ				pmax	pmax			
	comp=Z,4.0nm,0.9s							
VNA2	Neumayer--Watz	88.86	177	P	P		12 00 18.7	-2.0
	baz=197,slow=3.6							
VNA1	Neumayer--Stat	89.09	177	P	P		12 00 19.8	-1.9
DAWY	Dawson	89.18	16	eP	P		12 00 21.5	-0.6
	comp=Z,10nm,0.8s							
HHC	Hu-ho-hao-te	89.19	314	eP	P		12 00 23.3	+0.5
HHC				pmax	pmax			
	comp=Z,19nm,1.1s							
HHC				pmax	pmax			
	comp=Z,150nm,5.4s							
KMI	Kunming	89.26	297	P	P		12 00 23.1	-0.6
KMI				pmax	pmax			
	comp=Z,20nm,0.5s							
EGAK	Eagle	89.32	15	eP	P		12 00 21.9	-0.8
	comp=Z,12nm,0.8s							
LAMP	Lampang	89.48	290	P	P		12 00 26.0	+1.5
	comp=Z,29μm,0.8s,comp=Z,337μm							
PAYA	Payao	89.57	291	P	P		12 00 26.6	+1.6
	comp=Z,25μm,0.8s							
CM31	Chiang Mai Arr	90.06	290	eP	P		12 00 26.8	-0.4
	comp=Z,13nm,1.1s							
CMAR	Chiang Mai Arr	90.06	290	P	P		12 00 28.4	+1.1
	comp=Z,7.2nm,0.9s,baz=120,slow=3.0,SNR=26							
CMMT	Chiang Mai	90.19	290	P	P		12 00 28.8	+1.0
CHTO	Chiang Mai	90.19	290	eP	P		12 00 27.1	-0.7
	comp=Z,10.0nm,0.8s							
CHTO	Chiang Mai	90.19	290	eP	P		12 00 27.1	-0.7
CHTO				pmax	pmax			
	comp=Z,10.0nm,0.8s							
EPYK	Eagle Plains	91.70	15	eP	P		12 00 32.8	-1.0
	comp=Z,6.6nm,0.8s							
LZH	Lanzhou	92.63	307	⇑P	P		12 00 38.8	-0.1
LZH				pP	pwP		12 02 28.1	+5.0
LZH				sP	sP		12 03 16.3	+10
LZH				PP	PP		12 04 31.8	+3.4
LZH				pmax	pmax			
	comp=Z,17nm,1.4s							
LZH				pmax	pmax			
	comp=Z,63nm,9.2s							
INK	Inuvik	93.99	15	P	P		12 00 42.8	-1.3
	comp=Z,3.5nm,0.9s,baz=220,slow=4.1,SNR=13							
INK	Inuvik	93.99	15	eP	P		12 00 42.6	-1.5
	comp=Z,3.3nm,0.8s							
ULN	Ulaanbaatar	95.18	319⇑	eP	P		12 00 51.2	+1.0
ULN				pmax	pmax			
	comp=Z,3.0nm,1.3s							
SONA0	Songino Array	95.57	319	eP	P		12 00 52.2	+0.2
SONM	Songino Array	95.57	319	P	P		12 00 52.2	+0.2
	comp=Z,0.6nm,0.5s,baz=112,slow=1.6,SNR=3.2							
ZALV	Zalesovo Beam	110.30	321	PKiKP	PKiKP		12 05 53.2	-2.4
	comp=Z,2.8nm,0.6s,baz=168,slow=1.9,SNR=10							
MKAR	Makanchi Array	111.04	313	PKiKP	PKiKP		12 05 54.7	-2.6
	comp=Z,2.7nm,0.6s,baz=93,slow=0.5,SNR=26							
KURK	Kurchatov	113.82	317	c iPKIKP	PKiKP		12 06 00.0	-2.4
KURK				pmax	pmax			
	comp=Z,1.0nm,0.6s							
KSH	Kashi	114.76	305	ePKP	PKPdf		12 06 04.0	-0.8
BRVK	Borovoye	118.95	320	ePKPdf	PKPdf		12 06 10.0	-2.3
BRVK	Borovoye	118.95	320	d iPKIKP	PKPdf		12 06 09.9	-2.3
KK31	Karatay Array	119.11	309	ePKPdf	PKPdf		12 06 10.6	-2.3
KK31	Karatay Array	119.11	309	ePKIKP	PKPdf		12 06 10.6	-2.3
KKAR	Karatay Array	119.11	309	ePKPdf	PKPdf		12 06 10.8	-2.1
KKAR	Karatay Array	119.11	309	ePKIKP	PKPdf		12 06 10.8	-2.1
KBL	Kabul	119.79	299	ePKPdf	PKPdf		12 06 13.1	-1.6
KBL	Kabul	119.79	299	ePKIKP	PKPdf		12 06 13.1	-1.6
DAG	Danmarks Havn	122.45	6	i PKIKP	PKPdf		12 06 15.2	-3.1
DAG				pmax	pmax			
	comp=Z,1.0nm,0.6s							
ARU	Arti	125.00	326	ePKPdf	PKPdf		12 06 21.4	-2.3
ARU	Arti	125.00	326	i PKIKP	PKPdf		12 06 22.2	-1.5
ARU							12 08 20.9	
ARU							12 12 47.1	
ABKAR	Akbulak array	125.91	317	ePKPdf	PKPdf		12 06 24.0	-1.7
ARA0	ARCESS Array S	128.65	350	ePKPdf	PKPdf		12 06 29.0	-1.4
ARCES	ARCESS Array B	128.65	350	PKP	PKPdf		12 06 29.0	-1.4
	comp=Z,3.5nm,0.7s,baz=341,slow=2.6,SNR=9.0							
ARCES	ARCESS Array B	128.65	350	PKIKP	PKPdf		12 06 29.0	-1.4
GEYT	Alibeck	128.67	303	PKP	PKPdf		12 06 30.2	-1.2
	comp=Z,3.0nm,0.6s,baz=264,slow=1.3,SNR=6.9							
FIA0	FINESS Array S	135.51	344	ePKPdf	PKPdf		12 06 42.4	-1.1
FIA0	FINESS Array S	135.51	344	ePKIKP	PKPdf		12 06 42.4	-1.1
FINES	FINESS Array B	135.51	344	PKhKP	PKPpre		12 06 29.1	
	comp=Z,2.3nm,0.8s,baz=33,slow=4.5,SNR=5.4							
FINES				PKP	PKPdf		12 06 42.3	-1.1
	comp=Z,3.1nm,0.6s,baz=88,slow=3.2,SNR=11							
OBN	Obninsk	136.53	332	ePKIKP	PKPdf		12 06 42.8	-2.7
OBN				pmax	pmax			
	comp=Z,4.0nm,0.8s							
NB2	NORSAR Subarra	138.71	353	PKP	PKPdf		12 06 38.0	-11
	comp=Z,0.9nm,0.6s,baz=15,slow=4.0							
NB200	NORSAR Array S	138.71	353	ePKPdf	PKPdf		12 06 49.5	0.0
NOA	NORSAR Array B	138.71	353	PKhKP	PKPdf		12 06 38.6	-11
	comp=Z,1.1nm,0.6s,baz=18,slow=2.4,SNR=6.2							
NOA				PKP	PKPdf		12 06 49.5	0.0
	comp=Z,0.8nm,0.7s,baz=13,slow=4.0,SNR=3.9							
SUW	Suwalki	142.59	339	ePKP	PKPdf		12 06 52.9	-3.7
AKASG	Malin Array Be	142.79	331	PKhKP	PKPpre		12 06 52.2	
	comp=Z,22nm,0.6s,baz=40,slow=4.6,SNR=93							
AKASG				SKPbc	SKPbc		12 09 47.9	-4.2
	comp=Z,1.0nm,0.5s,baz=37,slow=3.4,SNR=4.7							
MUD	Monsted U'grnd	143.43	353	i PKHKP	PKPpre		12 06 54.8	
MUD				pmax	pmax			
	comp=Z,33nm,0.8s							
COP	Copenhagen	143.73	350	i PKHKP	PKPpre		12 06 55.5	
COP				pmax	pmax			
	comp=Z,34nm,0.7s							
SIM	Simferopol'	143.81	320	c iPKHKP	PKPpre		12 06 57.7	
SIM				pmax	pmax			
	comp=Z,43nm,1.0s							
BSD	Bornholm Skovb	143.82	347	⇓iPKHKP	PKPpre		12 06 55.8	
BSD				pmax	pmax			
	comp=Z,42nm,0.7s							
SEVA	Sevastopol	144.29	320	⇑iP	PKPbc		12 06 59.1	-0.2
GKP	Gorka Klasztor	144.99	344	ePKP	PKPdf		12 07 00.4	-0.3
GKP	Gorka Klasztor	144.99	344	ePKIKP	PKPdf		12 07 00.4	-0.3
MBAR	Mbarara	145.11	237	ePKPdf	PKPdf		12 07 00.6	-1.8
BEL	Belsk	145.21	340	ePKP	PKPdf		12 07 01.6	+0.4
BEL	Belsk	145.21	340	ePKIKP	PKPdf		12 07 01.6	+0.4
KIS	Kishinev	145.53	327	ePKP	PKPdf		12 07 00.0	-1.9
MILM	Milestii Mici	145.58	327	⇑iP	PKPdf		12 07 02.0	0.0
LVV	L'vov	145.67	335	ePKIKP	PKPdf		12 07 02.0	0.0
ILGA	Ilgaz	146.02	315	ePKPdf	PKPdf		12 07 02.7	-0.5
KWP	Kalwaria Pacla	146.34	336	ePKP	PKPdf		12 07 04.7	+1.4
KWP	Kalwaria Pacla	146.34	336	ePKPdf	PKPdf		12 07 03.5	+0.3
KWP	Kalwaria Pacla	146.34	336	ePKIKP	PKPdf		12 07 03.5	+0.3
BR131	Keskin Array S	146.68	313	ePKPdf	PKPdf		12 07 03.9	-0.3
BRTR	Keskin Array B	146.68	313	PKPbc	PKPdf		12 07 04.9	+0.7
	comp=Z,10nm,0.7s,baz=144,slow=3.7,SNR=54							
TLCR		146.71	325	⇓iP	PKPdf		12 07 05.9	+2.0
TLCR		146.71	325	⇓PKIKP	PKPdf		12 07 05.9	+2.0
BUR08	Bucovina Ar. S	146.82	331	ePKPbc	PKPdf		12 07 06.2	+2.0
BURAR	Bucovina Array	146.84	331	⇓iP	PKPdf		12 07 07.8	+3.6
BURAR	Bucovina Array	146.84	331	⇓PKP2	PKPdf		12 07 07.8	+3.6
BIZ	Bicaz	146.91	329	⇑iP	PKPdf		12 07 06.8	+2.6
OJC	Ojcow	146.91	339	ePKP	PKPdf		12 07 05.7	+1.6
OJC	Ojcow	146.91	339	ePKPbc	PKPdf		12 07 05.7	+1.6
OJC	Ojcow	146.91	339	ePKIKP	PKPdf		12 07 05.7	+1.6
TESR	Tescani	146.95	328	⇑iP	PKPdf		12 07 06.1	+1.8
KOLS	Kolonicke sedl	147.07	335	ePKP	PKPdf		12 07 06.9	+2.4
CFR	Carcaliu	147.08	325	⇑iP	PKPdf		12 07 06.6	+2.1
CFR	Carcaliu	147.08	325	⇑PKIKP	PKPdf		12 07 06.6	+2.1
ANTO	Ankara	147.20	313	ePKPbc	PKPdf		12 07 07.1	+2.1
ANTO	Ankara	147.20	313	⇑iP	PKPdf		12 07 07.3	+2.3
ANTO	Ankara	147.20	313	⇑PKIKP	PKPdf		12 07 07.3	+2.3
UZH	Uzhgorod	147.31	335	⇑iPKIKP	PKPdf		12 07 07.1	+2.3
UZH				e			12 07 12.2	
UZH				e			12 08 52.5	
VRI	Vrincioaia	147.36	327	⇑iP	PKPdf		12 07 07.2	+2.2
VRI	Vrincioaia	147.36	327	⇑PKIKP	PKPdf		12 07 07.2	+2.2
TIRR	Tirgusor	147.39	324	⇓iP	PKPdf		12 07 06.8	+1.7
TIRR	Tirgusor	147.39	324	⇓PKIKP	PKPdf		12 07 06.8	+1.7
PLOR	Plostina	147.41	327	⇑iP	PKPdf		12 07 07.2	+2.1
PLOR	Plostina	147.41	327	⇑PKIKP	PKPdf		12 07 07.2	+2.1
NIE	Niedzica	147.42	338	ePKP	PKPdf		12 07 07.8	+2.8
NIE	Niedzica	147.42	338	ePKIKP	PKPdf		12 07 07.8	+2.8
KSP	Ksiaz	147.43	343	ePKP	PKPdf		12 07 07.7	+2.7
KSP	Ksiaz	147.43	343	ePKIKP	PKPdf		12 07 07.7	+2.7
HARR	Harsova	147.51	325	⇑iP	PKPdf		12 07 07.9	+2.6
HARR	Harsova	147.51	325	⇑PKIKP	PKPdf		12 07 07.9	+2.6
TLB	Topalu	147.51	324	⇑iP	PKPdf		12 07 07.9	+2.6
TLB	Topalu	147.51	324	⇑PKIKP	PKPdf		12 07 07.9	+2.6
TRPA	Tarpa	147.61	334	⇑iP	PKPdf		12 07 08.0	+2.7
MANR	Mangalia	147.69	323	⇑iP	PKPdf		12 07 08.5	+2.9
CHVC	Chvalec	147.73	343	⇑ePKP	PKPdf		12 07 08.5	+3.0
OKC	Ostrava-Krasne	147.78	340	ePKIKP	PKPdf		12 07 08.5	+2.9
OKC	Ostrava-Krasne	147.78	340	⇑ePKP	PKPdf		12 07 08.5	+2.9
CLL	Collm	147.80	347	ePKPdf	PKPdf		12 07 04.6	-1.0
CLL				ePKPbc	PKPbc		12 07 07.3	-1.8
CLL	Collm	147.80	347	⇓iPKPbc	PKPdf		12 07 07.1	+1.6
	comp=Z,49nm,0.8s							
CLL				⇑iPKPab	PKPbc		12 07 11.1	+2.0
	comp=Z,14nm,0.9s							
CLL	Collm	147.80	347	⇓iPKIKP	PKPdf		12 07 07.1	+1.6
CLL				i			12 07 11.1	
CLL				pmax	pmax			
	comp=Z,49nm,0.8s							
CLL				pmax	pmax			
	comp=Z,14nm,0.9s							
UPC	Upice	147.81	343	ePKIKP	PKPdf		12 07 08.6	+3.0
UPC				e			12 07 13.2	
UPC	Upice	147.81	343	⇑ePKP	PKPdf		12 07 08.6	+3.0
UPC				ePKPAB	PKiKP		12 07 13.2	+2.5
DPC	Dobruska-Polom	147.87	343	ePKIKP	PKPdf		12 07 08.8	+3.0
DPC				e			12 07 13.6	
DPC	Dobruska-Polom	147.87	343	⇑ePKP	PKPdf		12 07 08.8	+3.0
DPC				ePKPAB	PKiKP		12 07 13.6	+2.7
LANS	Liptovska Anna	147.94	338	ePKIKP	PKPdf		12 07 09.7	+3.8
LANS				e			12 07 14.4	
LANS	Liptovska Anna	147.94	338	ePKP	PKPdf		12 07 09.7	+3.8
LANS				e			12 07 14.4	
DOPR	Dopca	147.95	329	⇑iP	PKPdf		12 07 09.6	+3.6
MDUB	Mudurnu	147.98	316	ePKPbc	PKPdf		12 07 08.9	+2.5
BRG	Berggiesshubel	148.00	346	ePKP	PKPdf		12 07 05.0	-0.9
	comp=Z,5.4nm,1.2s							
BRG	Berggiesshubel	148.00	346	i PKP	PKPdf		12 07 08.9	+3.0
	comp=Z,22nm,0.9s							
BRG				i			12 07 13.2	
	comp=Z,14nm,0.7s							
BRG				ePKP	pPKPbc		12 08 58.4	+1.9
	comp=Z,4.8nm,1.1s							
	comp=N,287nm,22.4s							
	comp=E,246nm,19.4s							
	comp=Z,411nm,20.9s							
MLR	Muntele Rosu	148.01	327	ePKPbc	PKPdf		12 07 08.8	+2.5
MLR	Muntele Rosu	148.01	327	⇑iP	PKPdf		12 07 08.8	+2.5
MLR	Muntele Rosu	148.01	327	⇑PKIKP	PKPdf		12 07 08.8	+2.5
MORC	Moravsky Berou	148.03	341	ePKPbc	PKPdf		12 07 08.8	+2.8
MORC	Moravsky Berou	148.03	341	⇑iP	PKPdf		12 07 09.3	+3.3
MORC	Moravsky Berou	148.03	341	⇑PKIKP	PKPdf		12 07 09.3	+3.3
MORC	Moravsky Berou	148.03	341	ePKP	PKPdf		12 07 08.9	+2.9
CJR	Cluj-Napoca	148.25	331	⇓iP	PKPdf		12 07 10.3	+3.8
CJR	Cluj-Napoca	148.25	331	⇓PKIKP	PKPdf		12 07 10.3	+3.8
SECR		148.26	327	⇑iP	PKPdf		12 07 09.7	+3.2
VOIR		148.50	328	⇑iP	PKPdf		12 07 10.2	+3.2
VOIR		148.50	328	⇑PKIKP	PKPdf		12 07 10.2	+3.2
PRU	Pruhonice	148.67	344	ePKIKP	PKPdf		12 07 10.3	+3.3
PRU				e			12 07 16.4	
PRU	Pruhonice	148.67	344	⇑ePKP	PKPdf		12 07 10.3	+3.3
PRU				ePKPAB	PKiKP		12 07 16.4	+3.9
GOPC	GO Pecny, Ondr	148.68	344	⇑ePKP	PKPdf		12 07 10.4	+3.3
GOPC				ePKPAB	PKiKP		12 07 16.4	+3.9
VYHS	Vyhne	148.72	338	ePKIKP	PKPdf		12 07 10.9	+3.7
VYHS				e			12 07 16.9	
VYHS	Vyhne	148.72	338	ePKP	PKPdf		12 07 10.9	+3.7
VYHS				e			12 07 16.9	
VRAC	Vranov	148.73	342	⇑iP	PKPdf		12 07 11.0	+3.9
VRAC	Vranov	148.73	342	ePKP	PKPdf		12 07 10.7	+3.6
VRAC				e			12 07 17.0	
ARR	Arges	148.75	329	⇓iP	PKPbc		12 07 12.2	+0.4
JAVC	Velka Javorina	148.79	340	ePKP	PKPdf		12 07 11.8	+4.5
JAVC				e			12 07 18.2	
PSZ	Piszkesteto	148.82	337	ePKPbc	PKPdf		12 07 10.9	+3.5
PSZ	Piszkesteto	148.82	337	⇓iP	PKPdf		12 07 11.6	+4.2
NKC	Novy Kostel	148.93	347	⇑ePKP	PKPdf		12 07 11.3	+3.8
NKC				ePKPAB	PKiKP		12 07 17.3	+4.2
KRUC	Moravsky	149.01	342	ePKP	PKPdf		12 07 11.2	+3.6
KRUC				e			12 07 17.9	
TREC	Trest	149.06	343	⇑ePKP	PKPdf		12 07 11.5	+3.8
TREC				ePKPAB	PKiKP		12 07 17.9	+4.6
MODS	Modra-Piesok	149.34	340	ePKP	PKPdf		12 07 11.9	+3.7
SIRR	Siria	149.44	333	⇑iP	PKPdf		12 07 12.7	+4.3
MEM	Membach	149.51	355	PKiKP	PKPdf		12 07 12.0	+3.7
MEM				x	x		12 07 19.3	
GRA1	Grafenberg Arr	149.69	348	ePKPbc	PKPdf		12 07 13.0	+4.3
KHC	Kasperske Hory	149.71	345	ePKPbc	PKPdf		12 07 13.1	+4.4
KHC				ePKPab	PKPab		12 07 21.2	+0.2
KHC	Kasperske Hory	149.71	345	⇑ePKP	PKPdf		12 07 12.9	+4.2
KHC				ePKPAB	PKPab		12 07 20.8	-0.2
KHC				eSKKP			12 18 49.1	
SNF	Seneffe	149.72	357	PKiKP	PKPdf		12 07 13.0	+4.4
BMRD	Maredsous	149.90	357	PKPdf	PKPdf		12 07 05.7	-3.2
BMRD				PKiKP	PKPbc		12 07 13.4	-0.9
GEC2	GERESS Array S	149.94	345	ePKPbc	PKPdf		12 07 13.7	+4.4
GEC2				ePKPab	PKiKP		12 07 20.9	+5.6
GERES	GERESS Array B	149.94	345	PKPbc	PKPdf		12 07 13.6	+4.4
	comp=Z,8.4nm,0.8s,baz=42,slow=2.2,SNR=48							
GERES				PKPab	PKPab		12 07 21.3	-0.8
	comp=Z,0.9nm,0.4s,baz=20,slow=4.7,SNR=6.6							
BZS	Buzias	149.97	332	⇑iP	PKPdf		12 07 13.4	+4.2
LKLB	Kalborn	150.01	355	PKiKP	PKPdf		12 07 13.8	+4.7
DOU	Dourbes	150.12	357	PKPdf	PKPdf		12 07 07.2	-2.1
DOU				PKiKP	PKPbc		12 07 13.9	-0.9
DOU				PKPab	PKPab		12 07 21.6	-1.0
HERR	Herculane	150.17	330	⇑iP	PKPdf		12 07 13.9	+4.4
CONA	Conrad Observa	150.18	341	i PKPbc	PKPdf		12 07 14.2	+4.6
	comp=Z,14nm,0.6s,SNR=9.1							
WLF	Walferdange	150.44	355	ePKPbc	PKPdf		12 07 15.0	+5.2
WLF				ePKPab	PKPab		12 07 23.8	-0.1
WLF	Walferdange	150.44	355	PKiKP	PKPdf		12 07 14.9	+5.2
MDVR	Moldovita	150.57	331	⇑iP	PKPdf		12 07 14.8	+4.6
MOA	Molln	150.71	343	i PKPbc	PKPdf		12 07 15.0	+4.7
	comp=Z,4.6nm,0.6s							
MOA				i PKPab	PKPab		12 07 25.2	0.0
	comp=Z,6.8nm,0.8s							
MANT	Manisa	150.74	314	ePKPbc	PKPdf		12 07 15.9	+5.0
ARSA	Arzberg	150.89	341	i PKPbc	PKPdf		12 07 15.4	+4.8
	comp=Z,3.2nm,0.8s							
ALN	Alexandroupoli	150.98	321	ePKPbc	PKPdf		12 07 15.1	+4.2
ALN	Alexandroupoli	150.98	321	ePKIKP	PKPdf		12 07 15.1	+4.2
VTS	Vitosha	151.42	326	ePKPbc	PKPdf		12 07 16.9	+5.2
VTS				ePKPab	PKPab		12 07 28.9	+0.4
VTS	Vitosha	151.42	326	⇑iP	PKPdf		12 07 17.2	+5.5
VTS	Vitosha	151.42	326	⇑PKIKP	PKPdf		12 07 17.2	+5.5
EZN	Ezine	151.45	319	⇑iP	PKPdf		12 07 17.0	+5.4
EZN	Ezine	151.45	319	⇑PKIKP	PKPdf		12 07 17.0	+5.4
BFO	Black Forest	151.50	351	ePKPbc	PKPdf		12 07 16.8	+5.3
BFO	Black Forest	151.50	351	ePKIKP	PKPdf		12 07 16.8	+5.3
SOKA	Soboth	151.55	341	i PKPbc	PKPdf		12 07 16.8	+5.1
	comp=Z,6.0nm,0.7s							
SOKA				i PKPab	PKPab		12 07 28.2	-0.7
	comp=Z,7.6nm,1.0s							
GROS	Grobnik	151.60	340	i PKPbc	PKPdf		12 07 16.4	+4.6
KBA	Koelnbreinsper	151.67	344	i PKPbc	PKPdf		12 07 16.8	+4.8
	comp=Z,4.6nm,0.6s							
KBA				ePKPab	PKPab		12 07 29.0	-0.4
	comp=Z,6.0nm,0.7s							
OBKA	Obir	151.85	342	i PKPbc	PKPdf		12 07 17.2	+5.1
	comp=Z,5.0nm,0.9s							
WATA	Walderalm	151.86	346	i PKPbc	PKPdf		12 07 17.3	+5.0
	comp=Z,4.0nm,0.5s							
WATA				i PKPab	PKPab		12 07 29.3	-0.9
	comp=Z,4.1nm,0.7s							
WTTA	Wattenberg	151.91	346	i PKiKP	PKPdf		12 07 18.1	+5.7
	comp=Z,13nm,0.9s							
WTTA				i PKPab	PKPab		12 07 30.1	-0.3
	comp=Z,8.0nm,0.7s							
MOTA	Moosalm	151.95	347	ePKPbc	PKPdf		12 07 17.7	+5.3
	comp=Z,8.5nm,1.0s							
MOTA				i PKPab	PKPab		12 07 30.0	-0.6
	comp=Z,7.2nm,0.8s							
MYKA	Terra Mystica	152.00	343	ePKPbc	PKPdf		12 07 17.4	+5.0
	comp=Z,6.0nm,0.6s							
MYKA				i PKPab	PKPab		12 07 29.7	-1.0
	comp=Z,5.7nm,0.5s							
SQTA	Sankt Quirin	152.05	347	i PKPbc	PKPdf		12 07 18.2	+5.7
	comp=Z,7.0nm,0.7s							
CRES	Cresnjev	152.18	340	i PKPbc	PKPdf		12 07 18.1	+5.6

1.1nm,0.5s,baz=160,slow=12,SNR=3.7
PPT Papeete 53.58 106 LR LR 12 29 42.9
comp=Z,163nm,20.9s,baz=306,slow=30
PPT2 Papeete2 53.58 106 eLR LR 12 27 33.6
comp=Z,358nm,24.5s
TBI Tubuai 54.19 113 eLQ LQ 12 25 35.0
651nm,31.5s
TBI eLR LR 12 27 47.8
comp=Z,257nm,28.8s
USRK Ussuriysk Ar. 56.38 339 P **P 12 12 16.7 +0.6**
1.7nm,0.8s,baz=123,slow=9.4,SNR=5.5
MDJ Mudanjiang 57.61 338 eP **P 12 12 24.6 -0.2**
17nm,1.4s
PETK Petropavlovsk- 60.88 1 P **P 12 12 48.4 +1.1**
0.6nm,0.4s,baz=194,slow=5.3,SNR=4.0
PETK LR LR 12 36 14.6
comp=Z,223nm,20.8s,baz=174,slow=33
PEA1 Petropavlovsk- 60.88 1 eP **P 12 12 48.4 +1.0**
CMAR Chiang Mai Arr 62.29 296 P **P 12 12 57.1 -0.4**
0.6nm,0.4s,baz=104,slow=6.0,SNR=4.9
HIA Hailar 65.33 335 eP **P 12 13 16.8 -0.2**
5.2nm,0.5s
VNDA Vanda 69.56 179 LR LR 12 37 08.8
comp=Z,143nm,21.3s,baz=324,slow=30
ULN Ulaanbaatar 70.48 327 eP **P 12 13 50.3 +0.6**
3.9nm,0.9s
SONA0 Songino Array 70.82 327 eP **P 12 13 52.4 +0.7**
SONM Songino Array 70.82 327 P **P 12 13 52.4 +0.7**
1.7nm,0.7s,baz=116,slow=4.5,SNR=7.2
YAK Yakutsk 72.78 347 eP **P 12 14 03.0 +0.1**
8.7nm,0.8s
TLY Talaya 74.53 329 eP **P 12 14 13.4 -0.1**
6.2nm,0.7s
BILL Bilibino 76.19 4 eP **P 12 14 22.9 +0.2**
10.0nm,1.0s
QSPA South Pole Qui 81.99 180 eP **P 12 14 53.7 -1.0**
4.4nm,0.9s
ILAR Eielson Array 83.87 21 P **P 12 15 03.8 -0.5**
0.8nm,0.9s,baz=234,slow=5.5,SNR=4.6
ILB Eielson Array 83.87 21 eP **P 12 15 04.4 +0.2**
1.0nm,0.8s
MK31 Makanchi Array 84.94 318 eP **P 12 15 10.7 +0.6**
2.0nm,0.9s
MK32 Makanchi Array 84.94 318 eP **P 12 15 09.1 -1.0**
MKAR Makanchi Array 84.94 318 P **P 12 15 09.1 -1.0**
1.3nm,0.6s,baz=78,slow=12,SNR=14
MAKZ Makanchi 85.15 318 eP **P 12 15 11.2 +0.1**
3.6nm,0.9s
ZALV Zalesovo Beam 85.67 326 P **P 12 15 12.3 -1.2**
0.6nm,0.4s,baz=131,slow=4.0,SNR=2.0
ZAA1 Zalesovo Array 85.67 326 eP **P 12 15 12.3 -1.2**
EPYK Eagle Plains 88.34 22 eP **P 12 15 26.4 0.0**
5.8nm,1.1s
NRIK Noril'sk 90.07 341 LR LR 12 55 20.9
comp=Z,94nm,21.9s,baz=174,slow=35

*SJA **15** 12:08:21.4±0.4,22°.15S×67°.50W,h180km±4km,ML2.2, MW2.7*
*ISCJB **15** 12:08:22.3±0.9,22°.17S±0°.04×67°.59W±0°.04, h174km±10km, Error ellipse: s-maj=6.2km s-min=5.4km az=135.8*
*GUC **15** 12:08:23.0±0.6,22°.13S×67°.71W,h192km±6km,ML3.5*
ISC 15 12:08:21.4±1.9,22°.16S±0°.04×67°.56W±0°.04, h185km±16km,n25,σ0s87/43,3C-4D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.33**	**250**	eP	**Pn**	**12 08 53.2**	**+0.6**
LVC				IAML		12 08 53.7	
	comp=Z,20nm,0.1s						
LVC				eS	**Sn**	**12 09 16.7**	**0.0**
LVC	**Limon Verde**	**1.33**	**250**	⇑iP	**Pn**	**12 08 53.5**	**+0.8**
LVC				i S	**Sn**	**12 09 16.1**	**-0.6**
YJA	**Yavi**	**1.90**	**91**	eP	**Pn**	**12 08 58.6**	**+0.4**
YJA				eS	**Sn**	**12 09 25.8**	**-0.9**
YJA				IAML		12 09 28.4	
	comp=Z,23nm,0.9s						
PB06	**IPOC Station P**	**1.94**	**253**	eP	**Pn**	**12 08 59.1**	**+0.8**
PB06	**IPOC Station P**	**1.94**	**253**	eP	**Pn**	**12 08 58.9**	**+0.6**
PB06				eS	**Sn**	**12 09 26.6**	**-0.4**
PB06				IAML		12 09 28.7	
	comp=E,126nm,0.2s						
PB15	**IPOC Station P**	**2.05**	**239**	eP	**Pn**	**12 09 00.6**	**+1.0**
PB15				eS	**Sn**	**12 09 29.2**	**0.0**
PB15	**IPOC Station P**	**2.05**	**239**	eP	**Pn**	**12 09 00.4**	**+0.9**
PB15				i S	**Sn**	**12 09 29.2**	**0.0**
PB01	**IPOC Station P**	**2.11**	**301**	eP	**Pn**	**12 09 00.8**	**+0.7**
PB01				i S	**Sn**	**12 09 29.2**	**-1.0**
PB01				IAML		12 09 31.2	
	comp=E,236nm,0.2s						
PB07	**IPOC Station P**	**2.20**	**281**	eP	**Pn**	**12 09 02.0**	**+0.8**
PB07	**IPOC Station P**	**2.20**	**281**	⇓eP	**Pn**	**12 09 01.8**	**+0.6**
PB07				i S	**Sn**	**12 09 30.7**	**-1.4**
PB07				IAML		12 09 32.3	
	comp=N,226nm,0.3s						
HJA	**Humahuaca**	**2.24**	**118**	eP	**Pn**	**12 09 02.5**	**+0.6**
HJA				IAML		12 09 03.3	
	comp=Z,5.4nm,0.5s						
HJA				eS	**Sn**	**12 09 32.2**	**-1.0**
PB02	**IPOC Station P**	**2.33**	**291**	eP	**Pn**	**12 09 03.2**	**+0.6**
PB02	**IPOC Station P**	**2.33**	**291**	⇓eP	**Pn**	**12 09 02.9**	**+0.4**
PB02				i S	**Sn**	**12 09 32.9**	**-1.6**
PB02				IAML		12 09 34.5	
	comp=N,296nm,0.2s						
PB04	**IPOC Station P**	**2.41**	**265**	eP	**Pn**	**12 09 04.2**	**+0.7**
PB04	**IPOC Station P**	**2.41**	**265**	⇓eP	**Pn**	**12 09 04.0**	**+0.5**
PB04				i P	**Pn**	**12 09 04.0**	**+0.5**
PB04				eS	**Sn**	**12 09 34.8**	**-1.4**
PB04				IAML		12 09 37.5	
	comp=N,168nm,0.3s						
PB08	**IPOC Station P**	**2.50**	**323**	eP	**Pn**	**12 09 05.5**	**+0.7**
PB08	**IPOC Station P**	**2.50**	**323**	⇑eP	**Pn**	**12 09 06.3**	**+1.4**
PB08				i S	**Sn**	**12 09 39.2**	**+0.6**
PB08				IAML		12 09 40.7	
	comp=E,58nm,0.4s						
GO01	**Chusmiza**	**2.92**	**328**	eP	**Pn**	**12 09 10.8**	**+1.1**
GO01				i S	**Sn**	**12 09 47.0**	**-0.4**
PB10	**IPOC Station P**	**3.07**	**243**	eP	**Pn**	**12 09 11.8**	**+0.6**
PB11	**IPOC Station P**	**3.09**	**320**	eP	**Pn**	**12 09 11.8**	**+0.2**
PB11	**IPOC Station P**	**3.09**	**320**	eP	**Pn**	**12 09 11.6**	**0.0**
PB11				eS	**Sn**	**12 09 49.5**	**-1.2**
PB11				IAML		12 09 51.2	
	comp=E,111nm,0.4s						
GO02	**Mina Guanaco**	**3.52**	**212**	⇓iP	**Pn**	**12 09 17.7**	**+0.8**
GO02				i S	**Sn**	**12 09 59.7**	**-0.7**
MNMC	**Minye Minye**	**3.57**	**327**	⇑iP	**Pn**	**12 09 18.1**	**+0.5**
MNMC				i S	**Sn**	**12 10 00.9**	**-0.6**
PB14	**IPOC Station P**	**3.58**	**226**	eP	**Pn**	**12 09 18.8**	**+1.1**
PB14	**IPOC Station P**	**3.58**	**226**	eP	**Pn**	**12 09 18.2**	**+0.5**
PB14				eS	**Sn**	**12 10 00.0**	**-1.7**

MEX 15 12:08:43.6±0.6,15°.68N×93°.08W,h108km±12km,MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.09**	**56**	eP	Pn	12 09 04.6	-1.1
CCIG				eS	Sn	12 09 20.8	-1.7
THIG		**1.09**	**134**	eP	Pn	12 09 04.4	-1.2
THIG				eS	Sn	12 09 21.0	-1.2
TGIG		**1.10**	**358**	eP	Pn	12 09 04.7	-1.1
TGIG				eS	Sn	12 09 20.4	-2.1
CMIG	**Matias Romero**	**2.23**	**309**	eP	Pn	12 09 18.6	-0.9
CMIG				eS	Sn	12 09 45.0	-2.0
HUIG	**Huatulco**	**2.92**	**272**	eP	Pn	12 09 25.7	-2.8
HUIG				eS	Sn	12 09 56.2	-6.9

*NEIC **15** 12:12:39.6±0.0,16°.76N×93°.97W,h159km,MD4.0(MEX), After MEX.*
MEX 15 12:12:40.6±0.8,16°.70N×94°.02W,h150km±15km,MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.86**	**84**	ePn	Pn	12 13 03.0	-1.4
TGIG				eSn	Sn	12 13 19.6	-2.8
TGIG		**0.86**	**84**	i P	Pn	12 13 03.0	-1.4
TGIG				eS	Sn	12 13 19.6	-2.8
CMIG	**Matias Romero**	**0.92**	**295**	ePn	Pn	12 13 04.0	-0.7
CMIG				eSn	Sn	12 13 21.4	-1.8
CMIG	**Matias Romero**	**0.92**	**295**	i P	Pn	12 13 04.0	-0.7
CMIG				eS	Sn	12 13 21.4	-1.8
CCIG	**Comitan**	**1.85**	**103**	ePn	Pn	12 13 12.8	-1.4
CCIG				eSn	Sn	12 13 37.4	-2.6
CCIG	**Comitan**	**1.85**	**103**	eP	Pn	12 13 11.2	-3.0
CCIG				eS	Sn	12 13 35.4	-4.5
HUIG	**Huatulco**	**2.21**	**246**	ePn	Pn	12 13 16.3	-2.0
HUIG				eSn	Sn	12 13 45.8	-1.4
HUIG	**Huatulco**	**2.21**	**246**	eP	Pn	12 13 16.3	-2.0
HUIG				eS	Sn	12 13 45.8	-1.4
THIG		**2.45**	**136**	eSn	Sn	12 13 51.1	-1.3
THIG		**2.45**	**136**	eS	Sn	12 13 51.1	-1.3
LVIG	**Laguna Verde**	**3.78**	**323**	ePn	Pn	12 13 35.7	-2.3
TLIG	**Tlapa**	**4.43**	**282**	ePn	Pn	12 13 46.5	-0.2
TEIG	**Tepich**	**6.48**	**56**	ePn	Pn	12 14 09.3	-4.4

*KRNET **15** 12:22:38.0±0.1,41°.93N×72°.37E,h9km,mb2.7*
*SOME **15** 12:22:39.3,41°.93N×72°.32E,h20km*
*NNC **15** 12:22:41.8±1.4,42°.14N×72°.28E,h0km,mb3.1,mpv2.9, Error ellipse: s-maj=16.7km s-min=4.1km az=4.0*
ISC 15 12:22:37.5±1.1,41°.94N±0°.04×72°.37E±0°.03,h5km±11km, n30,σ1s43/54,12C-20D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.34**	**245**	⇓iP	**Pg**	**12 22 43.9**	**-0.2**
	baz=43						
ARK				⇓iS	**Sg**	**12 22 48.6**	**0.0**
	baz=43						
ARSB	**Arslanbob**	**0.77**	**143**	⇓eP	**Pg**	**12 22 52.7**	**+0.5**
	baz=43						
ARSB				⇓iS	**Sb**	**12 23 03.3**	**-0.9**
	baz=43						
AML	**Almayashu**	**1.00**	**79**	⇓eP	**Pb**	**12 22 57.7**	**+0.1**
	baz=78						
AML				⇓eS	**Sg**	**12 23 10.5**	**+0.7**
	baz=78						
MRKS	**Merke**	**1.02**	**38**	P	**Pn**	**12 22 58.8**	**+0.2**
	5.6nm,0.2s						
MRKS				S	**Sn**	**12 23 13.3**	**-0.1**
	38nm,0.3s						
MRKS	**Merke**	**1.02**	**38**	eP	**Pn**	**12 22 58.8**	**+0.2**
	5.6nm,0.2s						
MRKS				eS	**Sn**	**12 23 13.3**	**-0.1**
	38nm,0.3s						
EKS2	**Erkin-Say**	**1.27**	**55**	⇓eP	**Pb**	**12 23 02.3**	**+0.4**
	baz=55						
EKS2				⇓eS	**Sg**	**12 23 19.0**	**+0.8**
	baz=55						
UCH	**Uchtor**	**1.62**	**79**	⇓eP	**Pb**	**12 23 08.8**	**+0.7**
	baz=79						
UCH				⇓iS	**Sg**	**12 23 30.1**	**+0.5**
	baz=79						
AAK	**Ala-Archa**	**1.72**	**65**	⇓P	**Pg**	**12 23 13.0**	**+2.5**
	2.6nm,0.3s						
AAK				⇑S	**Sg**	**12 23 37.0**	**+4.2**
	2.4nm,0.3s						
AAK	**Ala-Archa**	**1.72**	**65**	⇓eP	**Pb**	**12 23 10.6**	**+0.9**
	baz=65						
AAK				⇓iS	**Sg**	**12 23 33.2**	**+0.4**
	baz=65						
KK31	**Karatay Array**	**1.80**	**311**	⇑Pn	**Pb**	**12 23 10.9**	**-0.1**
	1.6nm,0.4s,baz=132,slow=16,SNR=38						
KK31				⇑Sn	**Sb**	**12 23 34.5**	**+0.6**
	8.2nm,0.3s,baz=127,slow=29,SNR=11						
CHMS	**Chumysh**	**2.05**	**58**	⇑iP	**Pg**	**12 23 16.7**	**-0.2**
	baz=58						
CHMS				⇑iS	**Sg**	**12 23 42.9**	**-0.6**
	baz=58						
USP	**Ospenovka**	**2.06**	**49**	⇑eP	**Pg**	**12 23 16.8**	**-0.1**
	baz=49						
USP				⇑iS	**Sg**	**12 23 43.4**	**-0.1**
	baz=49						
KZA	**Kyzart**	**2.15**	**85**	⇑iP	**Pb**	**12 23 18.3**	**+1.2**
	baz=85						
KZA				⇑eS	**Sg**	**12 23 45.8**	**-0.8**
	baz=85						
BTK	**Batken**	**2.22**	**213**	⇑iP	**Pb**	**12 23 18.1**	**0.0**
	baz=13						
BTK				⇑iS	**Sb**	**12 23 46.7**	**+0.8**
	baz=13						
TKM2	**Tokmak 2**	**2.58**	**67**	⇑Pn	**Pg**	**12 23 26.8**	**-0.2**
	2.6nm,0.5s						
TKM2				⇓Lg	Lg	12 24 02.8	
	8.1nm,0.6s						
TKM2	**Tokmak 2**	**2.58**	**67**	⇓iP	**Pb**	**12 23 24.1**	**-0.3**
	baz=66						
TKM2				⇓iS	**Sb**	**12 23 55.9**	**-0.5**
	baz=66						
BOOM	**Boomskoye usch**	**2.71**	**77**	⇓iP	**Pb**	**12 23 25.0**	**-1.5**
	baz=77						
BOOM				⇓iS	**Sb**	**12 23 58.9**	**-1.1**
	baz=77						
DGS	**Degeres**	**2.83**	**61**	Pg	**Pb**	**12 23 30.5**	**+2.0**
	3.6nm,0.6s						
DGS				Lg	Lg	12 24 07.1	
	7.7nm,0.8s						
DGS	**Degeres**	**2.83**	**61**	eP	**Pg**	**12 23 31.5**	**-0.2**
	3.6nm,0.6s						
DGS				eS	**Sg**	**12 24 08.8**	**+0.5**
	16nm,0.6s						
KST	**Kastek**	**2.88**	**66**	Pg	**Pg**	**12 23 32.8**	**+0.3**
	4.1nm,0.5s						
KST				Lg	Lg	12 24 11.5	
	12nm,0.7s						
KST	**Kastek**	**2.88**	**66**	eP	**Pg**	**12 23 32.0**	**-0.6**
	4.1nm,0.5s						
KST				eS	**Sg**	**12 24 09.6**	**-0.2**
	12nm,0.7s						
ULHL	**Ulahol**	**2.90**	**83**	⇓eP	**Pb**	**12 23 28.1**	**-1.6**
	baz=82						
ULHL				⇓eS	**Sb**	**12 24 03.4**	**-2.1**
	baz=82						
KUU	**Kurty**	**3.51**	**55**	Pg	**Pg**	**12 23 43.6**	**-1.0**
	1.6nm,0.1s						
KUU				Lg	Lg	12 24 29.9	
	9.8nm,0.4s						
KUU	**Kurty**	**3.51**	**55**	eP	**Pg**	**12 23 43.6**	**-1.0**
	1.6nm,0.1s						
KUU				eS	**Sg**	**12 24 29.9**	**-0.2**
	9.8nm,0.4s						
TNSS	**Tian-Shan**	**3.56**	**71**	eP	**Pb**	**12 23 42.7**	**+1.6**
	1.2nm,0.4s						
TNSS				eS	**Sb**	**12 24 28.5**	**+3.8**
	5.3nm,0.6s						
KTBS	**Karatobe**	**3.63**	**59**	Pg	**Pg**	**12 23 45.5**	**-1.6**
	0.9nm,0.7s						
KTBS				Lg	Lg	12 24 32.7	
	10nm,0.5s						
KTBS	**Karatobe**	**3.63**	**59**	eP	**Pg**	**12 23 45.5**	**-1.6**
	0.9nm,0.7s						
KTBS				eS	**Sg**	**12 24 32.7**	**-1.4**
	10nm,0.5s						
MDOK	**Medeo**	**3.66**	**69**	eP	**Pb**	**12 23 45.2**	**+2.4**
	0.6nm,0.2s						
MDOK				eS	**Sg**	**12 24 32.7**	**-2.5**
	3.3nm,0.3s						
ARXS	**Arharly**	**4.59**	**59**	Pg	**Pg**	**12 24 03.0**	**-2.5**
	2.5nm,0.9s						
ARXS				Lg	Lg	12 25 03.0	
	3.1nm,0.5s						
ARXS	**Arharly**	**4.59**	**59**	eP	**Pg**	**12 24 03.0**	**-2.5**
	2.5nm,0.9s						
ARXS				eS	**Sg**	**12 25 03.0**	**-2.1**
	3.1nm,0.5s						

DJA 15 12:24:20.4±0.4,3°.S±4°.×13°.0E±°,h10km,M3.5/7,MLv3.5/7, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.15**	**236**	P	Pb	12 24 41.1	-1.2
MSAI				S	Sg	12 24 57.8	+0.4
BNDI	**Bandanaira**	**1.81**	**179**	P	Pn	12 24 51.4	-0.3
BNDI				S	Sb	12 25 16.4	0.0
SWI	**Sorong**	**2.29**	**37**	P	Pn	12 24 59.2	+1.0
FAKI	**Fak Fak**	**2.38**	**95**	P	Pn	12 24 58.9	-0.6
FAKI				S	Sn	12 25 29.3	+0.6

*NNC **15** 12:52:57.9±3.0,41°.97N×81°.92E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=22.8km s-min=11.7km az=157.0*
*SOME **15** 12:52:59.1,42°.35N×81°.75E,h10km*
ISC 15 12:52:56.9±3.5,42°.4N±0°.1×81°.87E±0°.10,h1km±22km,n9, σ2s49/18,5C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**2.00**	**300**	⇑Pn	**Pg**	**12 53 35.9**	**+0.6**
	3.4nm,0.4s						
PDGK				⇓Sn	**Sg**	**12 54 06.3**	**+5.0**
	22nm,0.5s						
UZB	**Uzynbulak**	**2.24**	**292**	eP	**Pb**	**12 53 38.5**	**+0.2**
	2.8nm,0.3s						
UZB				eS	**Sg**	**12 54 07.0**	**-1.9**
	6.5nm,0.7s						
DJR	**Jarkent**	**2.49**	**323**	eP	**Pg**	**12 53 44.7**	**0.0**
	6.1nm,0.6s						
DJR				eS	**Sg**	**12 54 17.7**	**+0.7**
	14nm,0.5s						
KPKS	**Kokpek**	**2.59**	**297**	eP	**Pb**	**12 53 44.9**	**+0.7**
	9.2nm,0.2s						
KPKS				eS	**Sg**	**12 54 18.1**	**-2.0**
	35nm,0.5s						
KURS	**Kuram**	**2.94**	**294**	eP	**Pg**	**12 53 52.6**	**-0.7**
	1.7nm,0.7s						
KURS				eS	**Sg**	**12 54 30.9**	**-0.6**
	6.6nm,0.6s						
KAPS	**Kapalarasan**	**3.45**	**329**	eP	**Pb**	**12 54 01.0**	**+2.1**
	1.2nm,0.3s						
KAPS				eS	**Sg**	**12 54 45.5**	**-2.3**
	6.2nm,0.5s						
KTBS	**Karatobe**	**4.04**	**291**	eP	**Pb**	**12 54 10.7**	**+1.8**
	0.6nm,0.5s						
KTBS				eS	**Sg**	**12 55 01.8**	**-4.7**
	8.1nm,0.5s						
MK31	**Makanchi Array**	**4.45**	**4**	⇑Pn	**Pb**	**12 54 13.5**	**-2.5**
	0.3nm,0.5s,baz=182,slow=15,SNR=7.4						
MK31				⇑Pg	**Pg**	**12 54 24.2**	**+1.9**
	0.3nm,0.4s,baz=187,slow=16,SNR=3.9						
MK31				⇓Sn	**Sb**	**12 55 11.6**	**+1.5**
	0.3nm,0.4s,baz=186,slow=25,SNR=2.5						
MK31				⇑Lg	Lg	12 55 29.4	
	1.3nm,0.6s,baz=189,slow=29,SNR=5.9						
MAKZ	**Makanchi**	**4.46**	**1**	⇑Pn	Pn	12 54 11.8	+6.1
	0.8nm,0.7s						
MAKZ				⇓Sn	**Sb**	**12 55 08.2**	**-2.1**
	0.9nm,0.8s						
MAKZ				⇓Lg	Lg	12 55 28.8	
	1.1nm,0.8s						

*GCG **15** 13:08:40.2±0.5,12°.81N×88°.83W,h9km,MD4.5*
*SNET **15** 13:08:42.2±0.8,12°.87N×88°.90W,h38km±84km,ML4.5*
*NEIC **15** 13:08:42.0±0.0,12°.87N×88°.90W,h38km,mb4.5/71, MD4.5(SNET),After SNET.*
NEIC Felt [II] at San Salvador.
*IDC **15** 13:08:42.4±0.6,13°.10N×88°.52W,h51km±4km,mb4.0/16, mb1 4.2/19,mb1mx4.0/36,mbtmp4.3/19,MS3.6/11, Ms1 3.6/11,ms1mx3.4/25,Error ellipse: s-maj=21.0km s-min=8.9km az=49.0*
*ISCJB **15** 13:08:42.6±0.3,12°.97N±0°.03×88°.80W±0°.02,h74km±1km, mb4.4/45,Error ellipse: s-maj=5.3km s-min=2.6km az=34.7*
*UCR **15** 13:08:43.2±2.4,12°.93N×88°.86W,h35km±16km,MD4.2, ML4.4,mb4.5(NEIC)*
ISC 15 13:08:41.6±0.5,12°.84N±0°.05×88°.89W±0°.04,h53km±4km, n407,σ1s41/443,mb4.5/46,MS3.6/10,1C-30D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UESV	**Ojushtada**	**0.55**	**10**	⇓eP	**Pn**	**13 08 57.0**	**+3.3**
UESV				eS	**Sn**	**13 09 08.1**	**+5.7**
UESV	**Ojushtada**	**0.55**	**10**	⇓eP	**Pn**	**13 08 57.0**	**+3.3**
UESV				eS	**Sn**	**13 09 08.1**	**+5.7**
TECA	**Tecapa**	**0.75**	**30**	⇓iP	**Pn**	**13 08 56.6**	**+0.2**
TECA	**Tecapa**	**0.75**	**30**	⇓iP	**Pn**	**13 08 56.6**	**+0.2**
SNVI	**San Vicente**	**0.77**	**4**	eP	**Pn**	**13 08 56.5**	**-0.1**
SNVI	**San Vicente**	**0.77**	**4**	eP	**Pn**	**13 08 56.5**	**-0.1**
LFRS	**El Faro**	**0.80**	**348**	eP	**Pn**	**13 08 56.5**	**-0.4**
LCY	**Lacayo**	**0.82**	**45**	⇓eP	**Pn**	**13 08 57.5**	**+0.4**
LCY	**Lacayo**	**0.82**	**45**	⇓eP	**Pn**	**13 08 57.5**	**+0.4**
LOMA	**San Marcos**	**0.85**	**341**	eP	**Pn**	**13 08 57.3**	**-0.2**
LOMA	**San Marcos**	**0.85**	**341**	eP	**Pn**	**13 08 57.3**	**-0.2**
PAVA	**Las Pavas**	**0.87**	**357**	i P	**Pn**	**13 08 58.0**	**+0.2**
PAVA	**Las Pavas**	**0.87**	**357**	i P	**Pn**	**13 08 58.0**	**+0.2**
LBRS	**Las Brisas**	**0.90**	**350**	⇓eP	**Pn**	**13 08 58.5**	**+0.2**
SNET	**Serv Nac Est T**	**0.90**	**338**	⇓iP	**Pn**	**13 08 58.2**	**-0.1**
SNET				eS	**Sn**	**13 09 10.0**	**-0.5**
SNET				IAML		13 09 11.5	
	comp=Z,13μm,0.2s						
SNET	**Serv Nac Est T**	**0.90**	**338**	⇓iP	**Pn**	**13 08 58.2**	**-0.1**
SNET				eS	**Sn**	**13 09 10.0**	**-0.5**
SNET				IAML		13 09 11.5	
	comp=Z,13μm,0.2s						
UDBS	**Soyapango**	**0.92**	**343**	eP	**Pn**	**13 08 58.6**	**+0.2**
UDBS				IAML		13 09 15.1	
	comp=Z,10μm,0.5s						
UDBS	**Soyapango**	**0.92**	**343**	eP	**Pn**	**13 08 58.6**	**+0.2**
UDBS				IAML		13 09 15.1	
	comp=Z,10μm,0.5s						
OPAM	**San Salvador**	**0.92**	**341**	eP	**Pn**	**13 08 58.4**	**-0.1**
OPAM	**San Salvador**	**0.92**	**341**	eP	**Pn**	**13 08 58.4**	**-0.1**
LFU	**La Fuente**	**0.93**	**346**	⇓eP	**Pn**	**13 08 58.7**	**+0.1**
LFU	**La Fuente**	**0.93**	**346**	⇓eP	**Pn**	**13 08 58.7**	**+0.1**
UEES	**San Salvador**	**0.95**	**339**	⇓eP	**Pn**	**13 08 58.6**	**-0.2**
UEES	**San Salvador**	**0.95**	**339**	⇓eP	**Pn**	**13 08 58.6**	**-0.2**
BOQS	**Boqueron**	**0.97**	**337**	eP	**Pn**	**13 08 59.4**	**+0.2**
BOQS				eS	**Sn**	**13 09 18.1**	**+5.9**
CEDA	**San Andres**	**1.07**	**333**	⇓eP	**Pn**	**13 09 00.6**	**+0.1**
CEDA				eS	**Sn**	**13 09 14.8**	**+0.4**
CEDA				IAML		13 09 25.1	
	comp=Z,12μm,0.3s						
CEDA	**San Andres**	**1.07**	**333**	⇓eP	**Pn**	**13 09 00.6**	**+0.1**
CEDA				eS	**Sn**	**13 09 14.8**	**+0.4**
CEDA				IAML		13 09 25.1	
	comp=Z,12μm,0.3s						
LCND	**La Caada**	**1.08**	**64**	⇓eP	**Pn**	**13 09 01.1**	**+0.6**
LCND				eS	**Sn**	**13 09 15.3**	**+0.8**
LCND	**La Caada**	**1.08**	**64**	⇓eP	**Pn**	**13 09 01.1**	**+0.6**
LCND				eS	**Sn**	**13 09 15.3**	**+0.8**
CNCH	**Conchagua**	**1.11**	**67**	eP	**Pn**	**13 09 01.6**	**+0.5**
CNCH				eS	**Sn**	**13 09 16.9**	**+1.3**
CNCH	**Conchagua**	**1.11**	**67**	⇓iP	**Pn**	**13 09 01.4**	**+0.3**
CNCH				eS	**Sn**	**13 09 16.9**	**+1.3**
VICT	**Victoria**	**1.14**	**12**	⇓eP	**Pn**	**13 09 01.9**	**+0.5**
VICT	**Victoria**	**1.14**	**12**	⇓eP	**Pn**	**13 09 01.9**	**+0.5**
SBLS	**San Blas**	**1.22**	**324**	⇓eP	**Pn**	**13 09 03.0**	**+0.4**
SBLS	**San Blas**	**1.22**	**324**	⇓eP	**Pn**	**13 09 03.0**	**+0.4**
RTR	**El Retiro**	**1.28**	**325**	⇓eP	**Pn**	**13 09 04.1**	**+0.6**
RTR	**El Retiro**	**1.28**	**325**	⇓eP	**Pn**	**13 09 04.1**	**+0.6**
CSGN	**Cosiguina Volc**	**1.30**	**84**	ePn	**Pn**	**13 09 04.7**	**+1.1**
CSGN				eSn	**Sn**	**13 09 20.9**	**+0.8**
CSGN	**Cosiguina Volc**	**1.30**	**84**	⇓eP	**Pn**	**13 09 04.6**	**+1.1**
CSGN				eS	**Sn**	**13 09 23.9**	**+3.8**
CSGN				IAML		13 09 30.6	
	comp=N,84μm,0.6s						
CSGN	**Cosiguina Volc**	**1.30**	**84**	⇓eP	**Pn**	**13 09 04.6**	**+1.1**
UNIC	**Santa Ana**	**1.32**	**330**	eP	**Pn**	**13 09 04.1**	**+0.3**
UNIC	**Santa Ana**	**1.32**	**330**	eP	**Pn**	**13 09 04.1**	**+0.3**
LLGN	**La Laguna**	**1.32**

ESTN	Estel	2.47	84	eP		Pn	13 09 20.6 +1.1
BRAN	Las Pilas	2.48	93	eP		Pn	13 09 23.1 +3.5
FUG	Fuego 3	2.48	310	eP		Pn	13 09 22.0 +2.2
FUG	Fuego 3	2.48	310	eP		Pn	13 09 22.0 +2.2
APYN	Apoyeque	2.55	103	eP		Pn	13 09 21.4 +0.8
APYN				eS		Sn	13 09 51.4 +0.9
APG	El Apazote	2.64	325	P		Pn	13 09 23.2 +1.2
comp=E,3.8nm,0.3s,baz=149,slow=4.5,SNR=31							
MGAN	Managua	2.67	105	eP		Pn	13 09 23.0 +0.8
MGAN				IAML			13 09 55.7
comp=N,528nm,0.3s							
MATN	Matagalpa	2.89	88	eP		Pn	13 09 25.8 +0.5
STG3	Santiaguito 3,	3.20	306	eP		Pn	13 09 32.2 +2.5
ACON	Acoyapa	3.73	103	ePn		Pn	13 09 37.0 +0.3
ACON				eSn		Sn	13 10 12.1 -7.4
ACON	Acoyapa	3.73	103	eP		Pn	13 09 36.8 0.0
GB1A	Borinquen Arri	3.96	120	eP		Pn	13 09 43.2 +3.2
BUEV	Buena Vista	3.97	120	eP		Pn	13 09 42.9 +2.8
MESS	Mesas	4.18	120	eP		Pn	13 09 45.1 +2.2
ESPN	Las Esperanzas	4.53	98	ePn		Pn	13 09 48.9 +1.2
ESPN	Las Esperanzas	4.53	98	eP		Pn	13 09 45.9 -1.8
JTS	Las Juntas de	4.62	123	P		Pn	13 09 51.2 +2.3
comp=N,11nm,0.3s,baz=5.8,slow=21,SNR=26							
JTS				S		Sn	13 10 42.1 +0.8
comp=N,49nm,0.3s,baz=15,slow=16,SNR=5.2							
JTS	Las Juntas de	4.62	123	eP		Pn	13 09 51.6 +2.7
CCIG	Comitan	4.65	318	ePn		Pn	13 09 51.9 +2.4
CCIG				eSn		Sn	13 10 37.5 -4.8
ARE1	Arenal 1	4.72	120	eP		Pn	13 09 53.2 +2.8
LCR2	La Lucha 2	5.70	122	eP		Pn	13 10 07.9 +4.0
DRK0	Durika	6.58	122	eP		Pn	13 10 19.3 +3.2
CMIG	Matias Romero	7.17	307	P		Pn	13 10 27.2 +3.3
comp=N,0.5nm,0.3s,baz=109,slow=11,SNR=12							
CMIG				S		Sn	13 11 48.1 +4.0
comp=N,0.7nm,0.3s,baz=77,slow=23,SNR=2.7							
TEIG	Tepich	7.37	4	ePn		Pn	13 10 28.1 +1.5
ICCO	Coco Island	7.47	166	l/P		Pn	13 10 32.6 +4.5
MYIG	Mrida	8.11	354	ePn		Pn	13 10 38.3 +1.4
BCIP	Isla Barro Col	9.61	111	ePn		Pn	13 11 00.6 +3.3
FSCY	Frank Sound, G	9.81	48	ePn		Pn	13 11 04.2 +4.1
TLIG	Tlapa	10.45	298	ePn		Pn	13 11 12.4 +3.4
PAYG	Puerto Ayora	13.50	186	ePn		P	13 11 55.5 -2.7
LNIG	Linares	15.61	322	ePn		P	13 12 20.5 -1.1
comp=N,23nm,1.2s							
ROSC	El Rosal	16.43	118	LR		LR	13 20 41.0
comp=N,128nm,18.2s,baz=278,slow=44							
HKT	Hockley	18.20	340	eP		Pn	13 12 52.3 +1.8
comp=N,16nm,1.4s							
833A	Chaparral WMA,	18.26	329	eP		P	13 12 50.4 -0.5
comp=N,24nm,1.0s							
SDV	Santo Domingo	18.35	101	P		P	13 12 50.2 -2.0
comp=N,3.7nm,0.3s,baz=273,slow=6.4,SNR=4.8							
SDV	Santo Domingo	18.35	101	eP		P	13 12 52.5 +0.3
comp=N,19nm,0.8s							
453A	Whigham	18.42	13	P		Pn	13 12 53.7 +0.6
baz=194							
454A	Quitman	18.44	14	P		Pn	13 12 53.9 +0.4
baz=196							
349A	Repton	18.49	5	P		P	13 12 54.3 +0.9
baz=185							
351A	Pinckard	18.59	9	P		P	13 12 54.5 -0.1
baz=190							
353A	Camilla	18.91	12	P		P	13 12 56.9 -1.2
baz=194							
249A	Camden	19.11	5	P		P	13 13 00.9 +0.7
baz=185							
355A	Pearson	19.24	16	P		P	13 13 01.3 -0.3
baz=198							
251A	Midway	19.43	9	P		P	13 13 02.4 -1.2
baz=190							
252A	Lumpkin	19.44	11	P		P	13 13 03.9 +0.1
baz=192,SNR=9.1							
435B	Jarrell	19.58	337	P		P	13 13 06.6 +1.3
baz=154							
254A	Abbeville	19.70	14	P		P	13 13 05.8 -0.8
baz=196							
357A	Townsend	19.71	19	P		P	13 13 05.7 -1.0
baz=202							
147A	Livingston	19.75	2	P		P	13 13 08.6 +1.4
baz=182							
148A	Greensboro	19.75	3	P		P	13 13 08.6 +1.5
baz=184							
149A	Jones	19.76	5	P		P	13 13 08.2 +0.9
baz=186,SNR=6.4							
150A	Eclectic	19.85	7	P		P	13 13 08.9 +0.7
baz=188,SNR=14							
151A	Opelika	19.86	9	P		Pn	13 13 10.2 -0.2
baz=190,SNR=10							
152A	Waverly Hall	20.10	10	P		P	13 13 12.5 +1.4
baz=192,SNR=5.6							
LRAL	Lakeview Retre	20.18	5	P		P	13 13 12.7 +0.9
baz=185,SNR=5.9							
JCT	Junction City	20.25	332	eP		P	13 13 13.0 +0.3
comp=N,11nm,0.8s							
JCT	Junction City	20.25	332	P		P	13 13 13.8 +1.1
baz=148,SNR=5.6							
Z49A	Columbiana	20.37	6	P		P	13 13 15.1 +1.1
baz=187							
154A	Montrose	20.38	14	eP		P	13 13 11.8 -2.3
comp=N,41nm,0.9s							
154A	Montrose	20.38	14	P		P	13 13 14.4 +0.4
baz=196							
Z50A	Ashland	20.50	7	eP		Pn	13 13 18.1 +0.2
comp=N,16nm,1.1s							
Z50A	Ashland	20.50	7	P		P	13 13 15.3 0.0
baz=188							
155A	Kite	20.55	16	P		P	13 13 14.9 -1.0
baz=198,SNR=6.3							
WHTX	Lake Whitney,	20.62	339	eP		P	13 13 17.7 +1.1
comp=N,32nm,0.9s							
WHTX	Lake Whitney,	20.62	339	P		P	13 13 17.9 +1.2
baz=156							
Z52A	Williamson	20.66	11	P		P	13 13 17.4 +0.3
baz=192							
156A	Sylvania	20.85	18	P		P	13 13 18.9 -0.2
baz=201							
Z53A	Monticello	20.92	13	P		P	13 13 19.3 -0.5
baz=195,SNR=7.8							
157A	Early Branch	21.03	19	P		P	13 13 20.5 -0.4
baz=202							
Y48A	Jasper	21.04	4	P		P	13 13 21.5 +0.4
baz=185							
Z54A	Sparta	21.04	14	P		P	13 13 21.0 -0.1
baz=197							
Y49A	Blount Mountai	21.04	6	eP		P	13 13 20.6 -0.6
comp=N,8.8nm,0.9s							
Y49A	Blount Mountai	21.04	6	P		P	13 13 20.7 -0.5
baz=187							
GOGA	Godfrey	21.07	13	P		P	13 13 21.5 +0.1
baz=195,SNR=12							
HPIG		21.07	314	eP		P	13 13 23.3 +1.5
comp=N,7.6nm,1.0s							
Y50A	Piedmont	21.15	7	P		P	13 13 22.9 +0.6
baz=189							
Y51A	Rockmart	21.25	9	P		P	13 13 23.9 +0.5
baz=190,SNR=7.1							
Y52A	Lilburn	21.38	11	eP		P	13 13 26.7 +1.9
comp=N,22nm,0.8s							
Y52A	Lilburn	21.38	11	P		P	13 13 25.3 +0.5
baz=193							
TXAR	Lajitas Array	21.40	322	P		P	13 13 26.8 +1.7
comp=N,2.5nm,0.6s,baz=146,slow=11,SNR=31							
TXAR				pP		sP	13 13 39.5 -4.3
comp=N,6.4nm,0.9s,baz=147,slow=10,SNR=12							
TXAR				S		S	13 17 23.9 +4.0
TXAR				PcP		PcP	13 17 28.8 +1.4
comp=N,0.8nm,0.7s,baz=164,slow=4.8,SNR=6.0							
TXAR				pPcP			13 17 44.1
comp=N,1.5nm,0.9s,baz=243,slow=1.1,SNR=6.2							
TXAR				LR		LR	13 22 54.3
comp=N,92nm,19.9s,baz=0.0,slow=40							
Y53A	Monroe	21.47	12	P		P	13 13 25.6 -0.1
baz=194							
Z56A	Williston	21.52	17	P		P	13 13 26.0 -0.2
baz=200							
X48A	Hartselle	21.58	4	P		P	13 13 27.3 +0.4
baz=185							
X47A	Russelville	21.60	2	P		P	13 13 27.8 +0.7
baz=183,SNR=6.7							
X46A	Booneville	21.62	1	P		P	13 13 27.8 +0.4
baz=181							
Y54A	Tignall	21.68	14	P		P	13 13 28.6 +0.7
baz=197							
Z57A	Bowman	21.69	19	P		P	13 13 27.4 -0.7
baz=202							
X49A	Woodville	21.70	6	P		P	13 13 28.4 +0.2
baz=187							
X50B	Fort Payne	21.72	7	P		P	13 13 29.0 +0.5
baz=189							
X40A	Basin Creek Fa	21.85	351	P		P	13 13 30.7 +1.0
baz=170							
Y55A	Saluda	21.95	16	P		P	13 13 30.6 -0.3
baz=199							
ABTX	Abilene, Hawle	22.02	335	P		P	13 13 32.2 +0.5
baz=151							
Z58A	St. Stephen	22.02	21	P		P	13 13 30.7 -0.9
baz=204							
MIAR	Mount Ida	22.02	350	eP		P	13 13 34.6 +2.9
comp=N,20nm,0.8s							
MIAR	Mount Ida	22.02	350	P		P	13 13 32.2 +0.5
baz=168,SNR=12							
OBIP	Obispado Ponce	22.08	74	eP		P	13 13 33.1 +0.7
comp=N,66nm,1.5s							
ICMP	Isla Caja de M	22.13	74	eP		P	13 13 33.7 +0.8
comp=N,61nm,1.0s							
X52A	Dahlonega	22.13	11	P		P	13 13 32.2 -0.7
baz=193							
X53A	Estanollee	22.15	12	P		P	13 13 32.6 -0.5
baz=195							
W48A	Pulaski	22.27	4	P		P	13 13 33.7 -0.6
baz=185							
W49A	Belvidere	22.31	6	P		P	13 13 34.7 0.0
baz=187							
X54A	Belton	22.40	14	P		P	13 13 35.4 -0.4
baz=197							
W41B	Gary Mavity, V	22.44	353	P		P	13 13 36.6 +0.5
baz=171							
JSC	Jenkinsville	22.44	17	eP		P	13 13 34.1 -2.1
comp=N,12nm,0.9s							
Y57A	Sumter	22.45	19	P		P	13 13 36.5 +0.2
baz=202							
W50A	Signal Mountai	22.50	8	P		P	13 13 36.4 -0.4
baz=189							
X55A	Gracelyn & Ava	22.52	16	P		P	13 13 35.9 -1.1
baz=199							
SJG	San Juan	22.52	74	P		P	13 13 35.1 -2.1
comp=N,7.4nm,0.5s,baz=177,slow=11,SNR=2.1							
W51A	Cleveland	22.53	9	P		P	13 13 37.0 -0.2
baz=191							
WHAR	Wooly Hollow	22.56	353	eP		P	13 13 36.6 -0.8
comp=N,12nm,0.9s							
Y58A	Scranton	22.59	20	P		P	13 13 36.8 -0.9
baz=204							
W39A	Magazine	22.69	350	P		P	13 13 40.2 +1.4
baz=168							
X56A	White Oak	22.70	17	P		P	13 13 39.1 +0.1
baz=200							
CBYP	Canovanas	22.82	73	eP		P	13 13 41.5 +1.1
comp=N,40nm,1.2s							
W53A	Cullowhee	22.83	12	P		P	13 13 40.1 -0.2
baz=194							
V46A	Holladay	22.87	2	P		P	13 13 40.3 -0.4
baz=182							
V48A	Smith Brothers	22.88	4	P		P	13 13 40.1 -0.6
baz=185							
V47A	Nunnelly	22.92	3	P		P	13 13 41.5 +0.3
baz=183							
W54A	Cherokee Point	22.96	14	P		P	13 13 40.9 -0.7
baz=197							
V49A	McMinnville	22.98	6	P		P	13 13 41.2 -0.7
baz=188							
V50A	Pikevile	22.99	8	P		P	13 13 40.9 -1.0
baz=190							
BIRD	Birdtown, Kers	23.01	18	eP		P	13 13 43.0 +0.8
comp=N,17nm,0.8s							
WVT	Waverly	23.21	2	P		P	13 13 43.3 -0.8
baz=183							
V51A	Loudon	23.23	9	P		P	13 13 43.6 -0.6
baz=191							
KMSC	Kings Mountain	23.23	16	eP		P	13 13 45.0 +0.7
comp=N,21nm,1.1s							
KMSC	Kings Mountain	23.23	16	P		P	13 13 43.7 -0.6
baz=199,SNR=5.6							
X58A	Rowland	23.29	20	P		P	13 13 43.9 -0.9
baz=204							
V53A	Saluda	23.38	13	eP		P	13 13 46.5 +0.7
comp=N,10.0nm,0.8s							
V53A	Saluda	23.38	13	P		P	13 13 45.0 -0.8
baz=195							
V52A	Sevierville	23.39	11	P		P	13 13 45.1 -0.8
baz=193							
U46A	Springville	23.43	1	P		P	13 13 45.6 -0.5
baz=182							
W56A	Indian Trail	23.43	17	P		P	13 13 45.2 -1.1
baz=201							
U47A	Clarksville	23.54	3	P		P	13 13 46.4 -0.8
baz=184							
WMOK	Wichita Mounta	23.57	339	P		P	13 13 47.8 +0.2
baz=155,SNR=8.6							
W57A	Gilead	23.63	18	P		P	13 13 45.9 -2.2
baz=202							
U48A	Cassie Pea, Po	23.66	5	P		P	13 13 47.5 -0.8
baz=186							
V54A	Nebo	23.68	14	P		P	13 13 47.7 -0.9
baz=197							
U40A	Yerville	23.68	352	P		P	13 13 48.7 +0.1
baz=170,SNR=7.0							
U49A	Red Boiling Sp	23.74	6	P		P	13 13 48.2 -0.9
baz=188							
W58A	Raeford	23.75	20	P		P	13 13 48.6 -0.5
baz=204,SNR=6.9							
U50A	Jamestown	23.75	8	P		P	13 13 48.7 -0.5
baz=190							
TUL1	Leonard	23.80	346	P		P	13 13 50.3 +0.7
baz=163							
X60A	Albert Glenn T	23.80	23	P		P	13 13 47.7 -1.9
baz=207							
TZTN	Tazewell	24.09	11	P		P	13 13 51.8 -0.4
baz=193							
V56A	Mocksville	24.09	17	eP		P	13 13 52.4 +0.2
comp=N,19nm,0.9s							
V56A	Mocksville	24.09	17	P		P	13 13 51.9 -0.4
baz=200,SNR=5.2							
T47A	Sharon Grove	24.10	3	P		P	13 13 51.2 -1.1
baz=184,SNR=6.5							
U53A	Fall Branch	24.10	13	P		P	13 13 52.3 -0.2
baz=195							
T46A	Princeton	24.11	2	P		P	13 13 51.7 -0.8
baz=182							
MNTX	Cornudas Mount	24.13	324	eP		P	13 13 53.3 +0.6
comp=N,2.6nm,0.8s							
MNTX	Cornudas Mount	24.13	324	P		P	13 13 53.0 +0.2
baz=138,SNR=8.2							
W60A	Pink Hill	24.32	23	P		P	13 13 52.6 -1.8
baz=207							
T49A	Edmonton	24.35	7	P		P	13 13 53.4 -1.2
baz=188							
T50A	Nancy	24.35	8	P		P	13 13 54.1 -0.5
baz=190							
U54A	Nelsons Funny	24.42	14	P		P	13 13 53.9 -1.5
baz=197							
T51A	Gray	24.43	10	P		P	13 13 54.9 -0.4
baz=192							
V58A	Windy Hill, Pi	24.50	19	P		P	13 13 55.3 -0.6
baz=204							
MSTX	Muleshoe	24.54	331	P		P	13 13 56.6 +0.1
baz=146,SNR=8.7							
U55A	TA2, Sparta	24.59	15	P		P	13 13 56.0 -0.9
baz=199							
U56A	King	24.62	17	P		P	13 13 56.9 -0.3
baz=200							
T53A	Wise	24.70	12	P		P	13 13 56.3 -1.7
baz=195							
V59A	Middlesex	24.76	21	P		P	13 13 56.5 -1.9
baz=205							
AMTX	Amarillo	24.82	334	P		P	13 13 59.7 +0.7
baz=149							
S48A	Wiedeman Farm,	24.84	5	P		P	13 13 57.8 -1.3
baz=187							
T54A	Tazewell	24.99	14	P		P	13 13 59.0 -1.6
baz=197							
U57A	Blanch	25.01	18	P		P	13 13 59.3 -1.4
baz=202							
S51A	Beattyville	25.14	10	P		P	13 14 01.1 -0.8
baz=192							
CCM	Cathedral Cave	25.20	356	eP		P	13 14 02.0 -0.3
comp=N,16nm,0.8s							
CCM	Cathedral Cave	25.20	356	P		P	13 14 02.1 -0.2
baz=175							
U58A	Oxford	25.23	20	P		P	13 14 00.8 -1.8
baz=204							
T55A	Pulaski	25.24	15	P		P	13 14 01.9 -0.8
baz=199							
WCI	Wyandotte Cave	25.39	5	eP		P	13 14 03.5 -0.5
comp=N,11nm,0.7s							
WCI	Wyandotte Cave	25.39	5	P		P	13 14 03.6 -0.4
baz=186							
V61A	Roper	25.41	24	P		P	13 14 02.1 -2.1
baz=209							
BLA	Blacksburg	25.43	16	P		P	13 14 03.7 -0.7
baz=200							
T57A	Hurt	25.56	18	P		P	13 14 05.3 -0.3
baz=202							
R49A	Shelbyville	25.56	7	P		P	13 14 05.3 -0.3
baz=188							
T58A	Grand View Acr	25.74	19	P		P	13 14 05.0 -2.2
baz=204							
R51A	Hillsboro	25.79	10	P		P	13 14 07.3 -0.4
baz=192							
Q47A	Bedord North L	26.08	4	P		P	13 14 10.0 -0.3
baz=186							
T59A	Double "B" Far	26.09	21	P		P	13 14 10.3 -0.1
baz=206							
121A	Cookes Peak, D	26.15	322	P		P	13 14 12.5 +1.2
baz=134							
S57A	Dark Hollow, R	26.35	18	P		P	13 14 12.1 -0.7
baz=202							
S58A	Poland Farm, P	26.50	20	P		P	13 14 13.2 -0.9
baz=204							
Q51A	Peebles	26.54	10	P		P	13 14 14.3 -0.2
baz=192							
Q52A	Bidwell	26.67	12	P		P	13 14 15.6 0.0
baz=194							
LENM	Lemitar	26.85	325	eP		P	13 14 19.4 +1.8
R58B	Mineral	26.88	20	P		P	13 14 17.1 -0.4
baz=204							
R57A	Stanardsville	26.98	18	P		P	13 14 18.0 -0.4
baz=203							
Q54A	Coxs Mills	27.00	14	P		P	13 14 17.4 -1.2
baz=198							
P51A	Williamsport	27.03	10	P		P	13 14 18.5 -0.4
baz=193							
KSU1	Kansas State U	27.04	347	P		P	13 14 19.7 +0.8
baz=163							
R58A	Rapidan	27.14	19	P		P	13 14 19.5 -0.4
baz=204							
ANMO	Albuquerque	27.16	327	P		P	13 14 21.2 +0.9
comp=N,0.8nm,0.8s,baz=261,slow=6.5,SNR=3.4							
ANMO				PcP		PcP	13 17 41.2 +1.4
comp=N,1.9nm,1.1s,baz=165,slow=4.7,SNR=5.0							
ANMO				pPcP			13 17 56.3
comp=N,2.0nm,0.8s,baz=184,slow=3.3,SNR=5.6							
ANMO	Albuquerque	27.16	327	eP		P	13 14 21.2 +0.9
comp=N,3.4nm,1.5s							
ANMO				ePcP		PcP	13 17 41.2 +1.4
ANMO	Albuquerque	27.16	327	P		P	13 14 21.1 +0.9
baz=140							
TASM	ASL Pad, Albuq	27.16	327	P		P	13 14 21.2 +0.8
baz=140							
TASM	ASL Pad, Albuq	27.16	327	P		P	13 14 21.2 +0.8
baz=140							
R59A	King George, V	27.34	20	P		P	13 14 20.8 -0.9
baz=206							
P52A	Corning	27.35	11	P		P	13 14 21.2 -0.5
baz=194							
P53A	Whipple	27.36	13	P		P	13 14 21.1 -0.7
baz=196							
Q56A	Snyder Ridge,	27.48	17	P		P	13 14 21.9 -1.0
baz=201							
O50A	Cable	27.59	9	P		P	13 14 22.5 -1.4
baz=191							
CBKS	Cedar Bluff	27.60	341	P		P	13 14 24.2 +0.1
baz=157							
Q57A	Strasburg	27.69	18	P		P	13 14 23.9 -0.9
baz=202							
O51A	Pataskala	27.76	10	P		P	13 14 24.4 -1.0
baz=193							
ACSO	Alum Creek Sta	27.77	10	P		P	13 14 24.7 -0.9
baz=192							
O52A	Adamsville	27.87	12	P		P	13 14 26.0 -0.4
baz=195							
T25A	Trinidad	27.91	333	P		P	13 14 27.3 +0.3
baz=146,SNR=12							
P56A	Dayton Farm, R	28.00	17	P		P	13 14 26.8 -0.8
baz=201							
N48A	Decatur	28.11	6	P		P	13 14 27.8 -0.7
baz=188							
O53A	New Philadelph	28.12	13	P		P	13 14 28.0 -0.7
baz=196							
P57A	Homestead Farm	28.23	18	P		P	13 14 29.4 -0.2
baz=203							
O54A	Avella	28.25	14	P		P	13 14 29.2 -0.6
baz=198							
N52A	McGinn's Farm,	28.57	11	P		P	13 14 32.3 -0.4
baz=195							
SDCO	Great Sand Dun	28.90	332	P		P	13 14 37.0 +1.0
baz=145							
M50A	Fremont	28.91	9	P		P	13 14 34.7 -0.9
baz=192							
N54A	Moraine State	29.08	14	P		P	13 14 36.4 -0.7
baz=198							
L40A	Anamosa	29.18	356	P		P	13 14 37.7 -0.3
baz=175							
P60A	Greenville	29.30	21	P		P	13 14 38.2 -0.9
baz=207							
SSPA	Standing Stone	29.32	17	P		P	13 14 38.8 -0.5
baz=202							
M53A	WI Miller and	29.38	13	P		P	13 14 38.9 -0.9
baz=196							
S22A	4UR Ranch, Cre	29.52	330	P		P	13 14 42.8 +1.3
baz=142,SNR=12							
M54A	Oil Creek Stat	29.67	14	P		P	13 14 42.0 -0.4
baz=198							
K47A	Vermontville	29.91	6	P		P	13 14 42.7 -1.8
baz=188							
M56A	Emporium	30.03	16	P		P	13 14 44.7 -0.8
baz=201							
K48A	Perry	30.14	7	P		P	13 14 45.5 -1.0
baz=189							
N59A	State Game Lan	30.24	20	P		P	13 14 47.2 -0.2
baz=206							
L55A	Hinsdale	30.61	15	P		P	13 14 49.5 -1.3
baz=200							
ISCO	Idaho Springs	30.64	334	P		P	13 14 51.6 +0.3
baz=147,SNR=5.7							
SMCO	Snowmass	30.73	332	eP		P	13 14 53.0 +0.8
comp=N,4.6nm,0.8s							
J49A	Marlette	30.81	8	P		P	13 14 51.0 -1.5
baz=191							
M61A	Granite Spring	31.29	22	P		P	13 14 55.6 -1.1
baz=209							
N23A	Red Feather La	31.69	335	P		P	13 15 01.0 +0.4
baz=147							
I52A	Shelburne	32.01	12	P		P	13 15 02.1 -0.9
baz=196							
O20A	White River Ci	32.08	331	eP		P	13 15 04.3 +0.4
comp=N,14nm,0.8s							
O20A	White River Ci	32.08	331	P		P	13 15 04.7 +0.8
baz=143,SNR=12							
G45A	Suttons Bay	32.21	4	P		P	13 15 03.4 -1.3
baz=186							
WLVO	Wesleyville	32.26	14	P		P	13 15 04.0 -1.2
baz=195							
G40A	Rib Lake	32.34	358	P		P	13 15 04.8 -1.0
baz=178							
G39A	Holcombe	32.39	357	P		P	13 15 05.3 -1.1
baz=176							
SPMN	Marine on St.	32.45	355	P		P	13 15 05.3 -1.4
baz=173,SNR=6.3							
G47A	Hillman	32.51	7	P		P	13 15 06.0 -1.3
baz=189							
I55A	Frankford	32.71	15	P		P	13 15 08.0 -1.1
baz=200							
F45A	CMU Biological	32.86	4	P		P	13 15 08.6 -1.8
baz=186							
TOBO	Tobermory, Bru	32.88	10	P		P	13 15 09.0 -1.5
baz=193							
SADO	Sadowa	32.89	13	P		P	13 15 09.6 -1.1
comp=N,7.5nm,0.6s,baz=247,slow=6.5,SNR=13							
F40A	Park Falls	32.98	358	P		P	13 15 10.2 -1.3
baz=178							
DELO	Deloro Mine	33.01	15	P		P	13 15 10.9 -0.8
baz=200							
F39A	Loretta	33.01	357	P		P	13 15 10.3 -1.5
baz=176							
F38A	Pierce - Schro	33.10	356	P		P	13 15 10.9 -1.6
baz=175,SNR=6.5							
KLBO	Killbear Provi	33.24	11	P		P	13 15 11.4 -2.3
baz=196							
F48A	Evansville	33.30	8	P		P	13 15 12.3 -1.9
baz=191							
G53A	Haliburton	33.34	13	P		P	13 15 13.0 -1.6
baz=198							

K22A Casper 33.40 336 P **P 13 15 15.3 -0.1**
baz=148,SNR=5.3
H56A Elgin 33.44 16 P **P 13 15 13.9 -1.5**
baz=203
E43A Lone Tree Farm 33.46 2 P **P 13 15 13.9 -1.7**
baz=183
BUKO Buck Lake 33.48 12 P **P 13 15 14.2 -1.6**
baz=197
PLVO Plevna 33.63 15 P **P 13 15 15.8 -1.4**
baz=201
E38A The Farm, Brul 33.73 357 P **P 13 15 17.6 -0.4**
baz=175
E44A Grand Marais A 33.76 4 P **P 13 15 16.7 -1.6**
baz=185
RSSD Black Hills 33.77 340 *e*P **P 13 15 19.6 +1.0**
comp=N,5.5nm,0.6s
RSSD Black Hills 33.77 340 P **P 13 15 19.3 +0.6**
baz=153
F52A Sundridge 33.83 12 P **P 13 15 16.9 -1.9**
baz=197
E47A Iron Bridge 33.84 7 P **P 13 15 17.8 -1.1**
baz=190
F51A Arnstein 33.84 11 P **P 13 15 17.3 -1.7**
baz=196
G55A Calabogie 33.93 15 P **P 13 15 18.3 -1.4**
baz=202
LONY Lake Ozonia 33.95 18 P **P 13 15 18.8 -1.1**
baz=206
E52A Mattawa 34.44 13 P **P 13 15 22.7 -1.4**
baz=198
D47A Chapleau 34.45 7 P **P 13 15 22.7 -1.5**
baz=190
E51A G1948 Merrick 34.51 11 P **P 13 15 23.0 -1.7**
baz=196,SNR=5.1
D48A Paudash Townsh 34.74 8 P **P 13 15 25.1 -1.6**
baz=192
BW06 Boulder Array 34.78 333 P **P 13 15 26.9 -0.4**
baz=143
PD31 Pinedale Array 34.78 333 *e*P **P 13 15 28.2 +0.8**
comp=N,5.0nm,1.4s
PDAR Pinedale Array 34.78 333 P **P 13 15 27.6 +0.3**
comp=N,1.1nm,0.6s,baz=134,slow=10,SNR=10
PDAR pP **pP 13 15 40.1 -0.8**
comp=N,1.2nm,0.8s,baz=120,slow=9.0,SNR=3.1
PDAR PcP **PcP 13 18 00.1 +0.1**
comp=N,1.2nm,0.6s,baz=147,slow=4.7,SNR=7.6
PDAR pPcP 13 18 15.5
comp=N,0.9nm,0.6s,baz=134,slow=5.3,SNR=5.6
D49A Beulah Townshi 34.90 9 P **P 13 15 26.8 -1.3**
baz=193
E54A Lac Daplat, Po 34.91 14 P **P 13 15 26.7 -1.5**
baz=200
C40A Isle Royale Na 34.97 360 P **P 13 15 27.5 -1.1**
baz=180
EYMN Ely 35.06 357 P **P 13 15 28.7 -0.8**
baz=176
D52A ZEK Kipawa Sen 35.15 12 P **P 13 15 29.2 -1.1**
baz=198
D53A Lac Vacive, Po 35.40 13 P **P 13 15 31.4 -1.0**
baz=199
LPAZ La Paz 35.48 144 P **P 13 15 36.0 +1.9**
comp=N,2.1nm,0.6s,baz=316,slow=6.9,SNR=10
LPAZ PcP **PcP 13 18 03.8 +0.9**
comp=N,0.5nm,0.5s,baz=0.0,slow=3.0,SNR=2.3
LPAZ LR LR 13 30 59.5
comp=N,90nm,19.5s,baz=352,slow=38
LPAZ La Paz 35.48 144 *e*P **P 13 15 35.8 +1.7**
comp=N,2.5nm,0.8s
LPAZ *e*PcP **PcP 13 18 03.8 +0.9**
D54A Lac Fusel, La 35.71 14 P **P 13 15 33.9 -1.2**
baz=201
AGMN Agassiz Nation 35.82 352 P **P 13 15 35.5 -0.5**
baz=168
SNOW Snow King Moun 35.86 332 *e*P **P 13 15 37.0 +0.3**
comp=N,22nm,1.0s
LOHW Long Hollow 35.91 333 *e*P **P 13 15 36.7 -0.4**
comp=N,4.6nm,0.8s
PKME Peaks-Kenny Pk 36.37 24 P **P 13 15 40.0 -0.6**
baz=213
NV01 Mina Array Sit 36.49 320 *e*P **P 13 15 43.4 +1.3**
NV01 *e*PcP **PcP 13 18 06.8 +1.7**
NVAR Mina Array Bea 36.49 320 P **P 13 15 43.4 +1.3**
comp=N,1.6nm,0.8s,baz=134,slow=6.8,SNR=13
NVAR pP **pP 13 15 56.9 +1.1**
comp=N,1.3nm,0.7s,baz=143,slow=8.6,SNR=6.0
NVAR PcP **PcP 13 18 06.8 +1.7**
comp=N,3.5nm,0.7s,baz=135,slow=4.4,SNR=20
NVAR pPcP 13 18 21.7
comp=N,3.7nm,0.7s,baz=131,slow=3.9,SNR=14
NVAR LR LR 13 32 06.0
comp=N,115nm,19.0s,baz=117,slow=38
H17A Grant Village 36.52 334 P **P 13 15 42.5 +0.2**
baz=143
RLMT Red Lodge 36.56 336 P **P 13 15 41.8 -0.8**
baz=145,SNR=7.5
LAO LASA Array 36.77 340 P **P 13 15 44.0 -0.2**
baz=151
LSQQ Lebel-sur-Quev 37.43 13 P **P 13 15 48.3 -1.3**
baz=199
HLID Hailey 37.68 329 P **P 13 15 52.4 +0.3**
baz=157
DGMT Dagmar 37.73 343 P **P 13 15 52.4 +0.1**
baz=155
ULM Lac du Bonnet 37.74 353 P **P 13 15 50.9 -1.4**
comp=N,5.1nm,0.8s,baz=165,slow=7.1,SNR=3.8
ULM LR LR 13 33 27.5
comp=N,173nm,21.9s,baz=128,slow=40
BOZ Bozeman (W) 37.93 334 P **P 13 15 54.9 +0.8**
baz=142
MATQ Matagami 37.96 12 P **P 13 15 52.5 -1.6**
baz=198
EGMT Eagleton 39.15 338 *e*P **P 13 16 03.4 -0.9**
comp=N,19nm,0.7s
EGMT Eagleton 39.15 338 P **P 13 16 03.6 -0.7**
baz=147,SNR=11
LVC Limon Verde 40.31 151 P **P 13 16 16.2 +1.8**
comp=N,2.8nm,0.7s,baz=285,slow=13,SNR=3.1
I04A Tendick Farm, 42.18 323 P **P 13 16 27.9 -1.3**
baz=127
FFC Flin Flon 43.03 349 *e*P **P 13 16 35.2 -0.7**
comp=N,50nm,0.6s
D04E Lakebay 44.45 327 P **P 13 16 46.5 -1.0**
baz=129
B05A Bryant 44.80 329 P **P 13 16 49.5 -0.7**
baz=131
D03D Eldon 44.85 327 P **P 13 16 50.0 -0.6**
baz=129
SCHQ Schefferville 45.32 18 P **P 13 16 52.7 -1.6**
comp=N,4.7nm,0.6s,baz=208,slow=6.1,SNR=5.9
SCHQ LR LR 13 35 37.1
comp=N,96nm,18.0s,baz=262,slow=36
FCC Fort Churchill 46.00 356 *e*P **P 13 16 58.3 -1.2**
comp=N,5.5nm,0.8s
BDFB Brasilia 49.36 124 P **P 13 17 26.2 -0.1**
comp=N,6.3nm,0.6s,baz=303,slow=9.0,SNR=10
BDFB Brasilia 49.36 124 *e*P **P 13 17 25.5 -0.8**
comp=N,6.8nm,0.7s
BDFB *e*P **P 13 17 26.2 -0.1**
CPUP Villa Florida 49.58 142 P **P 13 17 27.3 -0.4**
comp=N,2.4nm,0.9s,baz=321,slow=9.6,SNR=5.0
CPUP pP **pP 13 17 41.8 0.0**
comp=N,3.3nm,0.7s,baz=335,slow=10.0,SNR=4.4
FRB Frobisher Bay 52.81 11 P **P 13 17 49.0 -2.3**
comp=N,6.0nm,0.6s,baz=211,slow=8.0,SNR=12
FRB pP **pP 13 18 03.5 -2.1**
comp=N,3.7nm,0.8s,baz=224,slow=10,SNR=2.6
YKA Yellowknife Ar 52.87 345 P **P 13 17 50.7 -1.2**
comp=N,7.4nm,0.6s,baz=140,slow=7.6,SNR=30
YKA pP **pP 13 18 05.9 -0.2**
comp=N,3.2nm,0.7s,baz=152,slow=6.3,SNR=7.5
YKA PcP **PcP 13 19 00.0 -0.4**
comp=N,0.9nm,0.6s,baz=145,slow=3.9,SNR=3.0
YKA LR LR 13 42 56.7
comp=N,12nm,20.0s,baz=118,slow=39
YKB5 Yellowknife Ar 52.87 345 *e*PcP **PcP 13 19 00.0 -0.3**
YKW3 Yellowknife Ar 52.93 345 *e*P **P 13 17 51.3 -1.0**
comp=N,16nm,0.9s
EPYK Eagle Plains 62.22 340 P **P 13 18 57.1 -0.5**
baz=125
INK Inuvik 62.42 343 *e*P **P 13 18 58.1 -0.7**
comp=N,7.7nm,0.8s
ILAR Eielson Array 65.10 336 P **P 13 19 15.8 -0.8**
comp=N,1.7nm,0.8s,baz=129,slow=3.9,SNR=16
ILAR pP **pP 13 19 31.2 0.0**
comp=N,2.5nm,1.0s,baz=121,slow=4.3,SNR=7.2
ILB Eielson Array 65.10 336 *e*P **P 13 19 15.6 -1.0**
comp=N,4.9nm,1.1s
SUA Susitna One 65.50 332 *e*P **P 13 19 17.2 -2.1**
comp=N,2.9nm,0.8s
TRF Thorofare Moun 65.98 334 *e*P **P 13 19 21.8 -0.7**
comp=N,0.8nm,0.8s
KTH Kantishna Hill 66.28 334 *e*P **P 13 19 24.0 -0.3**
comp=N,6.0nm,1.4s
BPAW Bear Paw Mtn. 66.49 335 *e*P **P 13 19 24.8 -0.8**
comp=N,8.9nm,1.4s
TOLK Toolik Lake Re 67.64 340 P **P 13 19 32.5 -0.3**
baz=113
ESDC Sonseca Array 78.05 52 P **P 13 20 33.2 -1.9**
comp=N,0.2nm,0.4s,baz=289,slow=6.7,SNR=2.9
NOA NORSAR Array B 83.70 29 LR LR 13 54 06.6
comp=N,29nm,21.9s,baz=210,slow=33
GERES GERESS Array B 88.55 40 LR LR 13 55 36.0
comp=N,50nm,20.9s,baz=285,slow=32
AKASG Malin Array Be 97.00 34 LR LR 14 03 06.1
comp=N,22nm,20.9s,baz=95,slow=34
NRIK Noril'sk 97.99 1 LR LR 14 07 59.5
comp=N,56nm,21.9s,baz=30,slow=36
VNA3 Neumayer Olymp 98.62 161 P Pdif 13 22 15.6 +1.1
VNA2 Neumayer--Watz 99.27 161 P **Pdif 13 22 18.6 +1.3**
baz=296,slow=2.6
SNAA Sanae 100.85 161 P **Pdif 13 22 24.4 -0.1**
SONA0 Songino Array 118.08 348 *e*PKPdf **PKPdf 13 27 22.8 -0.2**
SONM Songino Array 118.08 348 PKP **PKPdf 13 27 22.8 -0.2**
comp=N,0.8nm,0.6s,baz=27,slow=1.7,SNR=4.5
SONM pPKP **pPKPdf 13 27 38.5 -0.3**
comp=N,0.8nm,0.6s,baz=60,slow=1.1,SNR=4.0
KSRS Korea Array 119.19 327 PKP **PKPdf 13 27 25.9 +0.7**
comp=N,0.8nm,0.7s,baz=8.7,slow=2.0,SNR=6.8
KSRS pPKP **pPKPdf 13 27 41.2 +0.1**
comp=N,1.5nm,0.8s,baz=12,slow=1.8,SNR=5.7
KS15 Wonju Array Si 119.22 327 *e*PKPdf **PKPdf 13 27 25.9 +0.6**
MK32 Makanchi Array 120.11 7 *e*PKPdf **PKPdf 13 27 25.9 -0.9**
MKAR Makanchi Array 120.11 7 PKP **PKPdf 13 27 25.9 -0.9**
comp=N,0.4nm,0.8s,baz=340,slow=1.4,SNR=4.3
MKAR pPKP **pPKPdf 13 27 41.9 -0.8**
comp=N,0.1nm,0.4s,baz=5.9,slow=3.6,SNR=2.2
KSH Kashi 126.04 14 PKP **PKPdf 13 27 35.3 -3.3**
KSH sPKP 13 28 13.4
KSH PP **PP 13 29 34.1 +2.9**
KSH SKS SKSdf 13 34 34.9 -11
WR1 Warramunga Arr 138.03 254 *e*PKPdf **PKPdf 13 28 03.0 +1.6**
WRA Warramunga Arr 138.03 254 PKP **PKPdf 13 28 03.0 +1.6**
AS31 Alice Springs 138.10 249 *e*PKPpre PKPpre 13 27 54.2
AS31 *e*PKPdf **PKPdf 13 28 03.1 +1.5**
ASAR Alice Springs 138.10 249 PKhKP PKPpre 13 27 54.2
comp=N,0.3nm,0.6s,baz=108,slow=4.0,SNR=3.6
ASAR PKP **PKPdf 13 28 03.1 +1.5**
comp=N,1.2nm,1.0s,baz=104,slow=3.2,SNR=6.0
ASAR pPKP pPKPdf 13 28 18.2 +0.8
comp=N,1.2nm,1.0s,baz=101,slow=1.7,SNR=4.1
CM31 Chiang Mai Arr 147.96 346 *e*PKPdf **PKPdf 13 28 20.5 +1.5**
CMAR Chiang Mai Arr 147.96 346 PKPbc **PKPdf 13 28 20.5 +1.5**
comp=N,2.3nm,0.7s,baz=341,slow=3.6,SNR=10
CMAR pPKPbc **pPKPbc 13 28 37.1 -0.7**
comp=N,1.8nm,0.6s,baz=344,slow=3.0,SNR=3.1

*ISK **15** 13:36:34.8, 39°.80N×35°.16E, h6km, ML1.8/4, Suspected Mining explosion.*
*DDA **15** 13:36:34.9, 39°.78N×35°.17E, h7km±1km, ML2.7*
*ISCJB **15** 13:36:35.2±0.6, 39°.81N±0°.04×35°.17E±0°.04, h0km, Error ellipse: s-maj=5.8km s-min=4.8km az=22.7*
ISC 15 13:36:35.2±1.0, 39°.82N±0°.05×35°.19E±0°.04, h0km, n8, σ0°67/13, Turkey

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.21**	**150**	PG	**Pg**	**13 36 39.2**	**0.0**
YOZ				SG	**Sg**	**13 36 43.0**	**+1.1**
COAL	**Corum-Alaca**	**0.46**	**341**	*i* P	**Pb**	**13 36 45.6**	**-0.7**
COAL				IAML_P			
comp=Z,764nm,0.1s							
SIRC	**Yozgat**	**0.49**	**183**	*i* P	**Pg**	**13 36 44.7**	**+0.2**
SIRC				*i* S	**Sg**	**13 36 51.3**	**+0.4**
SIRC				IAML_P			
comp=Z,2μm,0.1s							
CORM	**Corum**	**0.56**	**310**	PG	**Pg**	**13 36 46.1**	**+0.2**
CDAG	**Cicekdag**	**0.66**	**253**	*i* P	**Pg**	**13 36 47.8**	**-0.1**
CDAG				*i* S	**Sg**	**13 36 57.6**	**+1.2**
CDAG				IAML_P			
comp=Z,1μm,0.1s							
DELI	**KIRIKKALE**	**0.99**	**281**	*i* P	**Pg**	**13 36 54.7**	**+0.5**
DELI				IAML_P			
comp=Z,412nm,0.1s							
YAYX	**Yaylak**	**1.38**	**231**	PN	**Pg**	**13 37 00.9**	**-0.8**
YAYX				SN	**Sg**	**13 37 19.8**	**+0.1**
SVSK	**Karacayir**	**1.40**	**86**	PN	**Pn**	**13 37 01.7**	**-0.3**
SVSK				SN	**Sn**	**13 37 21.4**	**+0.3**

*ISCJB **15** 13:49:25.7±0.6, 38°.39N±0°.04×142°.00E±0°.08, h67km±5km, mb3.7/14, Error ellipse: s-maj=10.6km s-min=5.3km az=20.4*
*IDC **15** 13:49:27.7±0.8, 38°.28N×142°.00E, h75km±7km, mb3.5/14, mb1 3.7/18, mb1mx3.6/41, mbtmp3.9/18, MS2.7/2, Ms1 2.7/2, ms1mx2.4/35, Error ellipse: s-maj=16.6km s-min=12.7km az=111.0*
*JMA **15** 13:49:27.0±0.1, 38°.42N×141°.94E, h63km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs=88.00000°, δ82.00000°, λ103.00000°. NP2: φs=208.00000°, δ15.00000°, λ31.00000°. Principal axes: T Plg51.0000°, Azm13.0000°; N Plg13.0000°, Azm267.0000°; P Plg36.0000°, Azm167.0000°;*
JMA Felt II J1.
ISC 15 13:49:26.6±0.7, 38°.40N±0°.04×141°.97E±0°.07, h59km±5km, n42, σ1°56/54, mb3.8/14, 5C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.41**	**257**	P	**Pn**	**13 49 38.1**	**+0.6**
JIKH				S	**Sn**	**13 49 46.0**	**+0.6**
JIO	**Ouri**	**0.49**	**276**	⇑P	**Pn**	**13 49 39.0**	**+0.6**
JIO				S	**Sn**	**13 49 47.2**	**+0.3**
JKMT	**Kesennumamotoy**	**0.56**	**317**	P	**Pn**	**13 49 39.7**	**+0.5**
JKMT				S	**Sn**	**13 49 48.7**	**+0.4**
OFUJ	**Ofunato**	**0.72**	**341**	⇓P	**Pn**	**13 49 41.5**	**+0.5**
OFUJ				S	**Sn**	**13 49 51.8**	**+0.2**
JMK	**Ichinoseki**	**0.81**	**313**	⇓P	**Pn**	**13 49 42.7**	**+0.6**
JMK				S	**Sn**	**13 49 53.9**	**+0.5**
JOU	**Okura**	**1.03**	**268**	P	**Pn**	**13 49 45.4**	**+0.4**
JOU				S	**Sn**	**13 49 58.9**	**+0.3**
JMM	**Marumori**	**1.07**	**240**	⇑P	**Pn**	**13 49 45.6**	**+0.1**
JMM				S	**Sn**	**13 49 59.1**	**-0.4**
JOM	**Ohasama**	**1.20**	**334**	⇓P	**Pn**	**13 49 47.6**	**+0.4**
JOM				S	**Sn**	**13 50 03.0**	**+0.5**
JFK	**Kawauchi**	**1.35**	**220**	⇑P	**Pn**	**13 49 49.4**	**+0.1**
JFK				S	**Sn**	**13 50 06.2**	**0.0**
JYK	**Kaneyama**	**1.36**	**293**	⇓P	**Pn**	**13 49 49.8**	**+0.4**
JYK				S	**Sn**	**13 50 07.0**	**+0.5**
JRG	**Rokugo**	**1.44**	**314**	⇓P	**Pn**	**13 49 50.8**	**+0.3**
JYS	**Shirataka**	**1.51**	**264**	⇑P	**Pn**	**13 49 52.1**	**+0.7**
JYS				S	**Sn**	**13 50 10.6**	**+0.5**
JFT	**Otama**	**1.56**	**236**	⇑P	**Pn**	**13 49 52.9**	**+0.8**
JFT				S	**Sn**	**13 50 11.9**	**+0.5**
MJAR	**Matsushiro Arr**	**3.52**	**239**	P	**Pn**	**13 50 20.7**	**+1.8**
1.1nm,0.3s,baz=32,slow=13,SNR=123							
MJAR				S	Sn	13 51 08.6	+9.3
0.9nm,0.3s,baz=187,slow=28,SNR=4.7							
MJAR				LR	LR	13 52 05.7	
comp=Z,50nm,19.8s,baz=50,slow=46							
MAT	**Matsushiro**	**3.52**	**239**	P	**Pn**	**13 50 21.0**	**+2.1**
MAT				S	**Sn**	**13 51 05.1**	**+5.8**
JHJ	**Hachijo jima 2**	**5.56**	**199**	P	**Pn**	**13 50 45.8**	**-1.0**
9.6nm,0.3s,baz=330,slow=22,SNR=15							
JHJ				S	**Sn**	**13 51 44.5**	**-4.8**
43nm,0.3s,baz=63,slow=23,SNR=18							
ASAJ	**Asahikawa**	**5.73**	**5**	P	**Pn**	**13 50 48.5**	**-0.5**
2.6nm,0.3s,baz=208,slow=12,SNR=38							
ASAJ				S	**Sn**	**13 51 49.4**	**-4.0**
5.6nm,0.3s,baz=98,slow=27,SNR=8.6							
USRK	**Ussuriysk Ar.**	**9.48**	**311**	P	**Pn**	**13 51 41.5**	**+1.1**
0.7nm,0.3s,baz=119,slow=13,SNR=13							
JNU	**Nakatsue**	**10.44**	**243**	LR	LR	13 56 08.2	
comp=Z,98nm,18.9s,baz=346,slow=38							
KLR	**Kul'dur**	**13.09**	**329**	P	**Pn**	**13 52 27.3**	**-2.3**
0.1nm,0.3s,baz=116,slow=16,SNR=3.6							
PETK	**Petropavlovsk-**	**18.29**	**31**	P	**Pn**	**13 53 36.2**	**+0.2**
0.1nm,0.3s,baz=213,slow=7.9,SNR=4.3							
MA2	**Magadan**	**21.93**	**12**	P	**P**	**13 54 16.2**	**+1.4**
4.4nm,0.6s,baz=174,slow=10,SNR=5.9							
SEY	**Seymchan**	**25.37**	**11**	P	**P**	**13 54 48.4**	**+0.5**
2.3nm,0.8s,baz=206,slow=11,SNR=5.3							
SONM	**Songino Array**	**27.42**	**302**	P	**P**	**13 55 07.0**	**+0.3**
0.9nm,0.7s,baz=106,slow=9.5,SNR=4.1							
H11N2	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	14 25 37.1	
baz=317,slow=76,SNR=159							
H11N1	**WAKE ISLAND Hy**	**28.51**	**124**	T	T	14 25 37.1	
baz=317,slow=76,SNR=195							
H11N3	**WAKE ISLAND Hy**	**28.52**	**124**	T	T	14 25 37.1	
baz=317,slow=76,SNR=159							
H11S1	**WAKE ISLAND Hy**	**29.26**	**126**	T	T	14 26 36.5	
baz=318,slow=76,SNR=42							
H11S3	**WAKE ISLAND Hy**	**29.27**	**126**	T	T	14 26 33.1	
baz=318,slow=76,SNR=61							
H11S2	**WAKE ISLAND Hy**	**29.28**	**126**	T	T	14 26 40.6	
baz=318,slow=76,SNR=48							
ZALV	**Zalesovo Beam**	**41.33**	**311**	P	**P**	**13 57 06.9**	**+0.6**
2.2nm,0.5s,baz=76,slow=8.1,SNR=8.2							
MKAR	**Makanchi Array**	**43.78**	**301**	P	**P**	**13 57 27.0**	**+0.6**
1.4nm,0.7s,baz=86,slow=8.5,SNR=14							
ILAR	**Eielson Array**	**48.11**	**33**	P	**P**	**13 58 00.3**	**+0.2**
1.0nm,0.7s,baz=266,slow=6.5,SNR=20							
ILAR				pP	**pP**	**13 58 18.7**	**+3.5**
0.4nm,0.8s,baz=259,slow=4.6,SNR=2.4							
INK	**Inuvik**	**52.97**	**28**	P	**P**	**13 58 37.2**	**+0.6**
1.1nm,0.7s,baz=274,slow=6.5,SNR=4.8							
WRA	**Warramunga Arr**	**58.47**	**188**	P	**P**	**13 59 14.8**	**-1.8**
WRA				pP	**pP**	**13 59 32.4**	**+0.2**
ASAR	**Alice Springs**	**62.20**	**188**	P	**P**	**13 59 41.2**	**-0.8**
0.3nm,0.9s,baz=16,slow=34,SNR=3.4							
ASAR				pP	**pP**	**13 59 58.6**	**+0.9**
0.4nm,0.6s,baz=15,slow=12,SNR=3.2							
FINES	**FINESS Array B**	**67.81**	**332**	P	**P**	**14 00 16.6**	**-1.4**
1.9nm,0.7s,baz=46,slow=14,SNR=5.5							
FINES				pP	**sP**	**14 00 38.6**	**-1.9**
0.6nm,0.4s,baz=91,slow=7.6,SNR=1.6							
NOA	**NORSAR Array B**	**73.10**	**337**	P	**P**	**14 00 50.0**	**-0.3**
0.6nm,0.7s,baz=36,slow=6.1,SNR=2.7							
AKASG	**Malin Array Be**	**73.49**	**322**	P	**P**	**14 00 52.4**	**-0.3**
0.5nm,0.4s,baz=41,slow=6.5,SNR=3.9							
NVAR	**Mina Array Bea**	**73.82**	**54**	P	**P**	**14 00 54.5**	**-0.7**
0.1nm,0.5s,baz=302,slow=7.1,SNR=3.0							
PDAR	**Pinedale Array**	**76.40**	**46**	P	**P**	**14 01 10.2**	**+0.3**
0.7nm,0.5s,baz=287,slow=0.8,SNR=8.5							
TXAR	**Lajitas Array**	**88.94**	**53**	P	**P**	**14 02 14.5**	**-0.6**
0.3nm,0.6s,baz=291,slow=2.5,SNR=5.4							

*MEX **15** 13:58:44.8±0.4, 14°.13N×92°.15W, h136km±47km, MD3.7*
*SNET **15** 13:58:46.8±1.1, 13°.90N×92°.26W, h35km±999km, ML4.0*
*ISCJB **15** 13:58:46.4±0.5, 13°.84N±0°.05×92°.22W±0°.04, h54km, mb4.2/22, Error ellipse: s-maj=8.6km s-min=3.7km az=26.1*
*UCR **15** 13:58:47.0±1.2, 13°.75N×92°.07W, h5km±16km, MD3.4, ML3.7, mb4.2(NEIC)*
*NEIC **15** 13:58:47.5±2.8, 13°.80N×92°.16W, h42km±18km, mb4.3/15, Error ellipse: s-maj=26.1km s-min=14.2km az=67.0*
*IDC **15** 13:58:53.6±2.7, 14°.17N×91°.84W, h88km±21km, mb3.7/10, mb1 3.9/12, mb1mx3.7/40, mbtmp4.0/12, Error ellipse: s-maj=36.6km s-min=14.1km az=51.0*
*GCG **15** 13:58:56.9±0.3, 14°.46N×91°.64W, h54km±41km, MD3.8*
ISC 15 13:58:47.5±0.6, 13°.81N±0°.06×92°.34W±0°.06, h54km, n180, σ1°47/181, mb4.3/22, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.97**	**50**	*e*P	**Pn**	**13 59 05.0**	**+0.1**
STG3	**Santiaguito 3,**	**1.16**	**40**	*e*P	**Pn**	**13 59 06.6**	**-1.0**
FUG	**Fuego 3**	**1.58**	**66**	*e*P	**Pn**	**13 59 12.2**	**-1.1**
FUG	**Fuego 3**	**1.58**	**66**	*e*P	**Pn**	**13 59 12.2**	**-1.1**
PCG	**Pacaya**	**1.77**	**71**	*e*P	**Pn**	**13 59 15.6**	**-0.5**
PCG	**Pacaya**	**1.77**	**71**	*e*P	**Pn**	**13 59 15.6**	**-0.5**
IXG	**Ixpaco**	**1.88**	**79**	*e*P	**Pn**	**13 59 15.8**	**-1.5**
IXG	**Ixpaco**	**1.88**	**79**	*e*P	**Pn**	**13 59 15.8**	**-1.5**
NBG	**Las Nubes**	**2.08**	**68**	*e*P	**Pn**	**13 59 21.0**	**+0.8**
NBG	**Las Nubes**	**2.08**	**68**	*e*P	**Pn**	**13 59 21.0**	**+0.8**
APG	**El Apazote**	**2.17**	**57**	P	**Pn**	**13 59 21.1**	**-0.3**
12nm,0.3s,baz=239,slow=11,SNR=194							
APG				S	**Sn**	**13 59 51.5**	**+4.3**
29nm,0.3s,baz=324,slow=21,SNR=4.6							
CCIG	**Comitan**	**2.46**	**4**	*e*Pn	**Pn**	**13 59 26.5**	**+1.1**
CCIG	**Comitan**	**2.46**	**4**	*e*P	**Pn**	**13 59 26.4**	**+1.0**
RTR	**El Retiro**	**2.62**	**88**	*e*P	**Pn**	**13 59 26.6**	**-0.8**
RTR	**El Retiro**	**2.62**	**88**	*e*P	**Pn**	**13 59 26.6**	**-0.8**
SBLS	**San Blas**	**2.64**	**89**	*e*P	**Pn**	**13 59 26.4**	**-1.4**
SBLS	**San Blas**	**2.64**	**89**	*e*P	**Pn**	**13 59 26.4**	**-1.4**
SNJE	**San Jose**	**2.65**	**88**	*e*P	**Pn**	**13 59 26.3**	**-1.7**
SNJE	**San Jose**	**2.65**	**88**	*e*P	**Pn**	**13 59 26.3**	**-1.7**
CEDA	**San Andres**	**2.86**	**90**	*e*P	**Pn**	**13 59 30.3**	**-0.4**
CEDA				IAML		14 00 08.1	
comp=Z,611nm,0.3s							
CEDA	**San Andres**	**2.86**	**90**	*e*P	**Pn**	**13 59 30.3**	**-0.4**
CEDA				IAML		14 00 08.1	
comp=Z,611nm,0.3s							
TGIG		**3.04**	**346**	*e*P	**Pn**	**13 59 29.6**	**-3.7**
LFRS	**El Faro**	**3.19**	**93**	*e*P	**Pn**	**13 59 34.4**	**-0.8**
LFRS				*e*S	**Sn**	**14 00 11.1**	**-1.0**
TECA	**Tecapa**	**3.74**	**94**	*e*P	**Pn**	**13 59 41.8**	**-1.1**
TECA	**Tecapa**	**3.74**	**94**	*e*P	**Pn**	**13 59 41.8**	**-1.1**
CMIG	**Matias Romero**	**4.08**	**323**	P	**Pn**	**13 59 45.5**	**-1.9**
comp=Z,1.4nm,0.3s,baz=150,slow=11,SNR=15							
CMIG				S	Sn	14 00 53.7	+20
comp=Z,10.0nm,0.3s,baz=52,slow=20,SNR=6.0							
CMIG	**Matias Romero**	**4.08**	**323**	*e*P	Pn	13 59 42.9	-4.5
CNCH	**Conchagua**	**4.41**	**96**	*e*P	**Pn**	**13 59 51.3**	**-0.7**
CNCH	**Conchagua**	**4.41**	**96**	*e*P	**Pn**	**13 59 51.3**	**-0.7**
CSGN	**Cosiguina Volc**	**4.72**	**100**	*e*Pn	**Pn**	**13 59 54.4**	**-1.9**
ESTN	**Estel**	**5.85**	**96**	*e*Sn	Sn	14 01 26.4	+8.9
TLIG	**Tlapa**	**7.06**	**303**	*e*Sn	**Sn**	**14 01 44.6**	**-2.8**
ACON	**Acoyapa**	**7.22**	**104**	*e*Sn	**Sn**	**14 01 50.2**	**-1.0**
TEIG	**Tepich**	**7.47**	**31**	*e*Pn	**Pn**	**14 00 33.9**	**+0.1**
TEIG				*e*Sn	**Sn**	**14 01 50.6**	**-6.5**
JTS	**Las Juntas de**	**8.03**	**115**	P	**Pn**	**14 00 41.9**	**+0.4**
comp=Z,0.7nm,0.3s,baz=354,slow=22,SNR=2.7							
JTS				S	**Sn**	**14 02 05.5**	**-5.5**
comp=Z,1.8nm,0.3s,baz=12,slow=15,SNR=3.6							
062Z	**Marathon**	**15.20**	**43**	P	**Pn**	**14 02 17.4**	**-1.4**
baz=226							
BRAL	**Brewton**	**17.95**	**15**	P	**P**	**14 02 54.6**	**+1.4**
baz=196							
H06E1	**SOCORRO T-PHAS**	**18.51**	**288**	T	T	14 23 17.2	
SNR=15							
TX31	**Lajitas Ar. Si**	**18.68**	**328**	*e*P	**Pn**	**14 03 04.3**	**+2.1**
comp=Z,5.4nm,1.1s							
TXAR	**Lajitas Array**	**18.68**	**328**	P	**Pn**	**14 03 04.4**	**+2.2**
comp=Z,0.0nm,0.3s,baz=154,slow=12,SNR=18							
557A	**Orange Park**	**18.87**	**30**	P	**P**	**14 03 03.3**	**0.0**
baz=213							
251A	**Midway**	**19.27**	**18**	P	**Pn**	**14 03 08.9**	**-0.3**
baz=200							
150A	**Eclectic**	**19.58**	**16**	P	**P**	**14 03 11.7**	**+0.7**
baz=198							
151A	**Opelika**	**19.70**	**18**	P	**P**	**14 03 13.0**	**+0.6**
baz=200							
LRAL	**Lakeview Retre**	**19.75**	**13**	P	**P**	**14 03 13.9**	**+1.1**
baz=195							
254A	**Abbeville**	**19.86**	**23**	P	**P**	**14 03 14.7**	**+0.6**
baz=206							
ABTX	**Abilene, Hawle**	**19.88**	**342**	P	**Pn**	**14 03 16.4**	**0.0**
baz=158							
Z49A	**Columbiana**	**20.01**	**14**	P	**P**	**14 03 16.7**	**+1.0

	baz=200						
X48A	Hartselle	21.10	12	P		P	14 03 27.6 +0.1
	baz=194						
GOGA	Godfrey	21.11	21	P		P	14 03 27.7 0.0
	baz=204						
Z54A	Sparta	21.18	22	P		P	14 03 27.9 -0.5
	baz=206						
X49A	Woodville	21.32	14	P		P	14 03 30.3 +0.5
	baz=196						
W39A	Magazine	21.33	357	P		P	14 03 31.2 +1.2
	baz=176						
X50B	Fort Payne	21.43	15	P		P	14 03 31.3 +0.2
	baz=198						
MNTX	Cornudas Mount	21.45	328	eP		P	14 03 32.9 +1.6
	comp=Z,6.2nm,0.9s						
MNTX	Cornudas Mount	21.45	328	P		P	14 03 32.6 +1.3
	baz=143,SNR=11						
Y53A	Monroe	21.48	20	P		P	14 03 31.6 0.0
	baz=203						
WMOK	Wichita Mounta	21.63	345	eP		P	14 03 33.1 -0.2
	comp=Z,5.6nm,1.0s						
WMOK	Wichita Mounta	21.63	345	P		P	14 03 34.1 +0.8
	baz=162,SNR=5.8						
X51A	Calhoun	21.74	17	P		P	14 03 34.6 +0.1
	baz=199						
W48A	Pulaski	21.79	12	P		P	14 03 35.0 +0.1
	baz=194						
Y54A	Tignall	21.80	22	P		P	14 03 34.8 -0.2
	baz=206						
SDV	Santo Domingo	21.83	101	P		P	14 03 32.3 -3.5
	comp=Z,9.5nm,0.4s,baz=21,slow=4.1,SNR=2.5						
W49A	Belvidere	21.91	13	P		P	14 03 36.2 0.0
	baz=196						
X53A	Estanollee	22.16	20	P		P	14 03 38.3 -0.6
	baz=203						
Y55A	Saluda	22.18	24	P		P	14 03 38.5 -0.6
	baz=207						
MSTX	Muleshoe	22.19	337	eP		P	14 03 40.0 +0.7
	comp=Z,11nm,0.8s						
MSTX	Muleshoe	22.19	337	P		P	14 03 39.9 +0.5
	baz=152,SNR=7.2						
W50A	Signal Mountai	22.22	15	P		P	14 03 38.8 -0.8
	baz=198						
V46A	Holladay	22.22	9	P		P	14 03 38.9 -0.7
	baz=190						
W51A	Cleveland	22.33	17	P		P	14 03 39.8 -0.9
	baz=199						
V48A	Smith Brothers	22.39	12	P		P	14 03 40.5 -0.8
	baz=194						
U40A	Yellville	22.45	359	P		P	14 03 41.7 -0.3
	baz=178						
WVT	Waverly	22.59	10	P		P	14 03 42.6 -0.8
	baz=191						
V49A	McMinnville	22.61	14	P		P	14 03 43.0 -0.7
	baz=196						
AMTX	Amarillo	22.61	340	eP		P	14 03 44.6 +0.7
	comp=Z,28nm,0.9s						
AMTX	Amarillo	22.61	340	P		P	14 03 44.3 +0.4
	baz=156						
CPCT	Cooper Cave	22.67	17	eP		P	14 03 44.5 +0.2
	comp=Z,4.4nm,0.8s						
X55A	Gracelyn & Ava	22.74	23	P		P	14 03 44.2 -0.8
	baz=207						
V51A	Loudon	23.05	17	P		P	14 03 47.8 -0.4
	baz=200						
W54A	Cherokee Point	23.08	22	P		P	14 03 47.9 -0.6
	baz=205						
V52A	Sevierville	23.30	18	eP		P	14 03 51.1 +0.4
	comp=Z,15nm,1.0s						
V52A	Sevierville	23.30	18	P		P	14 03 50.6 -0.1
	baz=201						
T45A	Paducah	23.35	7	P		P	14 03 51.0 -0.1
	baz=189						
U49A	Red Boiling Sp	23.36	13	P		P	14 03 50.4 -0.8
	baz=196,SNR=6.8						
121A	Cookes Peak, D	23.37	325	P		P	14 03 53.7 +2.1
	baz=139						
V53A	Saluda	23.39	20	P		P	14 03 51.4 -0.2
	baz=203						
KMSC	Kings Mountain	23.44	23	P		P	14 03 51.3 -0.8
	baz=207						
T46A	Princeton	23.47	9	P		P	14 03 51.4 -0.9
	baz=190						
U50A	Jamestown	23.49	15	P		P	14 03 52.1 -0.4
	baz=198,SNR=6.1						
T47A	Sharon Grove	23.55	11	P		P	14 03 52.4 -0.6
	baz=192						
U51A	La Follette	23.68	17	P		P	14 03 54.6 +0.3
	baz=200,SNR=5.5						
W56A	Indian Trail	23.73	25	P		P	14 03 54.3 -0.4
	baz=209						
U52A	Thorn Hill	23.88	18	P		P	14 03 56.6 +0.5
	baz=202						
S44A	Carbondale	23.94	6	P		P	14 03 56.8 +0.2
	baz=187						
TZTN	Tazewell	23.97	18	P		P	14 03 57.3 +0.4
	baz=201						
T49A	Edmonton	23.98	13	P		P	14 03 56.3 -0.7
	baz=196						
T50A	Nancy	24.06	15	P		P	14 03 57.3 -0.5
	baz=198						
V55A	Taylorsville	24.12	23	P		P	14 03 57.1 -1.2
	baz=207						
CCM	Cathedral Cave	24.16	2	P		P	14 03 58.4 -0.2
	baz=182						
T51A	Gray	24.25	17	P		P	14 03 59.4 0.0
	baz=200						
U54A	Nelsons Funny	24.50	21	P		P	14 04 01.1 -0.7
	baz=205						
ANMO	Albuquerque	24.60	331	P		P	14 04 03.4 +0.5
	comp=Z,1.3nm,0.8s,baz=138,slow=12,SNR=5.2						
ANMO	Albuquerque	24.60	331	P		P	14 04 04.4 +1.5
	baz=145						
TASM	ASL Pad, Albuq	24.61	331	P		P	14 04 04.8 +1.8
	baz=145						
TASM	ASL Pad, Albuq	24.61	331	P		P	14 04 04.8 +1.8
	baz=145						
T52A	Hallie	24.66	18	P		P	14 04 02.7 -0.5
	baz=202						
R46A	Gibon Southern	24.68	9	P		P	14 04 02.9 -0.4
	baz=191						
S49A	Springfield	24.69	13	P		P	14 04 02.7 -0.7
	baz=196						
V57A	Coltrane Farms	24.71	25	P		P	14 04 03.0 -0.7
	baz=210						
U55A	TA2, Sparta	24.76	22	P		P	14 04 03.7 -0.4
	baz=206						
S50A	Richmond	24.80	15	P		P	14 04 04.5 +0.1
	baz=198						
U56A	King	24.87	23	P		P	14 04 05.0 -0.1
	baz=208						
WCI	Wyandotte Cave	24.90	11	P		P	14 04 04.8 -0.5
	baz=194						
V58A	Windy Hill, Pi	24.91	26	P		P	14 04 05.3 -0.2
	baz=211						
R47A	Wooly Knot Far	24.93	11	P		P	14 04 05.3 -0.3
	baz=193						
T25A	Trinidad	25.61	337	eP		P	14 04 14.5 +2.4
	comp=Z,8.9nm,0.8s						
T25A	Trinidad	25.61	337	P		P	14 04 14.9 +2.8
	baz=152,SNR=13						
SDCO	Great Sand Dun	26.56	336	P		P	14 04 23.1 +2.4
	baz=150,SNR=6.1						
T59A	Double "B" Far	26.58	27	P		P	14 04 20.3 -0.3
	baz=213						
Q52A	Bidwell	26.59	18	P		P	14 04 21.0 +0.4
	baz=202						
Q54A	Coxs Mills	27.06	20	P		P	14 04 24.6 -0.2
	baz=205						
S22A	4UR Ranch, Cre	27.10	334	eP		P	14 04 28.8 +3.1
	comp=Z,6.3nm,1.0s						
S22A	4UR Ranch, Cre	27.10	334	P		P	14 04 28.5 +2.9
	baz=148,SNR=7.8						
MVCO	Mesa Verde	27.40	331	P		P	14 04 31.2 +2.9
	baz=144						
P56A	Dayton Farm, R	28.22	22	P		P	14 04 36.1 +0.8
	baz=208						
PDMCI	Parker Dam,Lak	28.39	320	P		P	14 04 38.8 +2.0
	baz=130						
P57A	Homestead Farm	28.52	24	P		P	14 04 37.0 -0.9
	baz=210						
Q59A	Harwood	28.55	26	P		P	14 04 37.1 -1.0
	baz=213						
PV04	Paradox Valley	28.55	332	eP		P	14 04 39.7 +1.3
	comp=Z,10nm,1.1s						
IKP	In-Ko-Pah, Jac	28.67	315	P		P	14 04 41.1 +1.6
	baz=125						
O55A	Ligonier	28.67	21	P		P	14 04 39.5 +0.2
	baz=207						
BC3	Big Chuckawall	28.82	317	P		P	14 04 42.1 +1.3
	baz=128						
Q60A	Greensboro	29.02	27	P		P	14 04 42.8 +0.5
	baz=214						
PLIO	Pelee Island,	29.09	15	P		P	14 04 43.6 +0.7
	baz=199						
EDW2	Edwards Air Fo	31.24	317	P		P	14 05 03.2 +1.1
	baz=126						
MPMC	Manual Prospec	31.62	319	P		P	14 05 06.4 +0.8
	baz=128						
R11A	Troy Canyon, C	31.96	324	P		P	14 05 09.5 +0.9
	baz=134						
PDAR	Pinedale Array	32.46	336	P		P	14 05 13.2 +0.3
	comp=Z,0.7nm,0.8s,baz=152,slow=9.8,SNR=4.8						
SADO	Sadowa	32.84	17	P		P	14 05 14.6 -1.4
	comp=Z,6.6nm,1.0s,baz=249,slow=4.7,SNR=3.5						
DELO	Deloro Mine	33.08	19	P		P	14 05 16.7 -1.3
	baz=206						
G53A	Haliburton	33.31	18	P		P	14 05 18.6 -1.5
	baz=204						
BUKO	Buck Lake	33.38	17	P		P	14 05 19.0 -1.7
	baz=203						
E47A	Iron Bridge	33.42	11	P		P	14 05 19.9 -1.1
	baz=196						
REDW	Red Top Meadow	33.47	335	eP		P	14 05 24.4 +2.6
	comp=Z,15nm,1.0s						
SNOW	Snow King Moun	33.52	335	eP		P	14 05 23.6 +1.4
	comp=Z,16nm,0.8s						
NVAR	Mina Array Bea	33.61	322	P		P	14 05 26.6 +3.6
	comp=Z,2.7nm,0.8s,baz=139,slow=8.9,SNR=20						
D46A	Sault St. Mari	33.70	10	P		P	14 05 22.4 -1.1
	baz=194						
ALGO	Algonquin Park	34.24	18	P		P	14 05 26.6 -1.5
	baz=205						
E51A	G1948 Merrick	34.36	16	P		P	14 05 27.7 -1.4
	baz=202						
E53A	Dumoine, Ponti	34.73	18	P		P	14 05 31.2 -1.2
	baz=205						
E54A	Lac Daplat, Po	34.93	18	P		P	14 05 32.1 -2.0
	baz=206						
D52A	ZEK Kipawa Sen	35.06	17	P		P	14 05 33.7 -1.5
	baz=204						
D53A	Lac Vacive, Po	35.36	17	P		P	14 05 36.5 -1.3
	baz=205						
BOZ	Bozeman (W)	35.64	337	P		P	14 05 41.2 +0.8
	baz=146						
D54A	Lac Fusel, La	35.73	18	P		P	14 05 39.8 -1.2
	baz=206						
EGMT	Eagleton	37.05	341	P		P	14 05 52.4 +0.1
	baz=151						
LSQQ	Lebel-sur-Quev	37.35	17	P		P	14 05 53.3 -1.5
	baz=205						
MATQ	Matagami	37.82	16	P		P	14 05 56.5 -2.1
	baz=203						
SIV	San Ignacio	42.80	133	P		P	14 06 40.8 +0.5
	comp=Z,0.7nm,0.6s,baz=321,slow=11,SNR=5.7						
LVC	Limon Verde	42.86	147	P		P	14 06 45.7 +4.6
	comp=Z,5.2nm,0.8s,baz=249,slow=5.4,SNR=3.9						
YKA	Yellowknife Ar	51.13	347	P		P	14 07 45.6 +1.0
	comp=Z,5.1nm,0.7s,baz=147,slow=7.5,SNR=16						
ILAR	Eielson Array	62.88	337	P		P	14 09 09.9 +2.2
	comp=Z,2.2nm,0.9s,baz=123,slow=5.2,SNR=16						
TOLK	Toolik Lake Re	65.58	340	P		P	14 09 26.7 +1.3
	baz=116						
ESDC	Sonseca Array	80.09	52	P		P	14 10 51.1 -0.8
	comp=Z,0.1nm,0.4s,baz=290,slow=5.2,SNR=5.2						
TORD	Torodi Ar. Bea	90.74	76	P		P	14 11 43.9 -1.5
	comp=Z,0.5nm,0.8s,baz=290,slow=6.0,SNR=2.5						
KSH	Kashi	125.84	11	ePKP		PKiKP	14 17 47.4 +3.1
LZH	Lanzhou	128.07	343	ePKP		PKPdf	14 17 47.8 -0.5
LZH				pPKP		pPKPdf	14 18 03.3 -0.7
LZH				sPKP			14 18 09.3
CMAR	Chiang Mai Arr	146.06	341	PKPbc		PKPab	14 18 23.9 +0.9
	comp=Z,4.8nm,0.8s,baz=340,slow=3.6,SNR=16						

UCR ***15*** *14:00:01.1±1.0, 13°.65N×92°.15W, h1km±18km, MD4.1, ML3.6, mb4.6(NEIC)*
MEX ***15*** *14:00:01.2±0.4, 13°.76N×91°.94W, h62km±27km, MD4.5*
NEIC ***15*** *14:00:01.2±0.0, 13°.76N×91°.94W, h62km, mb4.6/70, MD4.5(MEX), After MEX.*
SNET ***15*** *14:00:01.1±0.5, 13°.66N×92°.37W, h35km±999km, ML3.9*
ISCJB ***15*** *14:00:02.3±0.3, 13°.91N±0°.04×92°.19W±0°.03, h54km, mb4.5/53, MS3.6/6, Error ellipse: s-maj=5.8km s-min=3.7km az=22.5*
GCG ***15*** *14:00:04.3±0.6, 13°.66N×92°.08W, h29km±168km, MD4.4*
IDC ***15*** *14:00:09.0±2.4, 14°.05N×91°.87W, h88km±19km, mb4.1/16, mb1 4.2/19, mb1mx4.0/43, mbtmp4.4/19, MS3.4/8, Ms1 3.4/8, ms1mx3.3/24, Error ellipse: s-maj=27.8km s-min=12.8km az=52.0*

ISC 15 14:00:04.0±0.5, 13°.89N±0°.06×92°.26W±0°.06, h54km, n399, σ1 9 09/395, mb4.6/54, MS3.5/6, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.86	50	eP	Pn	14 00 21.2	+1.1
ERG				eS	Sn	14 00 34.3	+2.4
THIG		1.02	359	ePn	Pn	14 00 20.4	-1.7
THIG		1.02	359	eP	Pn	14 00 20.4	-1.7
STG3	Santiaguito 3,	1.06	39	eP	Pn	14 00 23.2	+0.3
FUG	Fuego 3	1.48	68	eP	Pn	14 00 28.5	-0.1
FUG	Fuego 3	1.48	68	eP	Pn	14 00 28.5	-0.1
PCG	Pacaya	1.68	72	eP	Pn	14 00 31.9	+0.6
PCG	Pacaya	1.68	72	eP	Pn	14 00 31.9	+0.6
IXG	Ixpaco	1.78	81	eP	Pn	14 00 32.1	-0.6
IXG	Ixpaco	1.78	81	eP	Pn	14 00 32.1	-0.6
NBG	Las Nubes	1.98	69	eP	Pn	14 00 37.0	+1.7
NBG	Las Nubes	1.98	69	eP	Pn	14 00 37.0	+1.7
APG	El Apazote	2.06	57	P	Pn	14 00 38.0	+1.6
	53nm,0.3s,baz=207,slow=15,SNR=7.7						
APG				LR	LR	14 01 36.7	
	comp=Z,2μm,21.9s,baz=203,slow=53						
CCIG	Comitan	2.39	3	ePn	Pn	14 00 41.9	+1.0
CCIG				eSn	Sn	14 01 07.8	-1.2
CCIG	Comitan	2.39	3	eP	Pn	14 00 41.9	+1.0
CCIG				eS	Sn	14 01 07.8	-1.2
RTR	El Retiro	2.54	89	eP	Pn	14 00 42.0	-0.9
RTR	El Retiro	2.54	89	eP	Pn	14 00 42.0	-0.9
SBLS	San Blas	2.56	91	eP	Pn	14 00 42.8	-0.5
SBLS	San Blas	2.56	91	eP	Pn	14 00 42.8	-0.5
TGIG		3.00	344	ePn	Pn	14 00 45.8	-3.3
TGIG				eSn	Sn	14 01 24.8	+0.9
TGIG		3.00	344	eP	Pn	14 00 45.8	-3.3
TGIG				eS	Sn	14 01 24.8	+0.9
LFU	La Fuente	3.06	92	eP	Pn	14 00 49.0	-0.9
LFU	La Fuente	3.06	92	eP	Pn	14 00 49.0	-0.9
LFRS	El Faro	3.11	94	eP	Pn	14 00 49.8	-1.0
LBRS	Las Brisas	3.12	92	eP	Pn	14 00 49.9	-1.0
LBRS				eS	Sn	14 01 28.0	+1.0
PAVA	Las Pavas	3.23	93	eP	Pn	14 00 51.8	-0.5
PAVA				IAML		14 01 49.9	
	comp=Z,274nm,0.5s						
PAVA	Las Pavas	3.23	93	eP	Pn	14 00 51.8	-0.5
PAVA				IAML		14 01 49.9	
	comp=Z,274nm,0.5s						
CMIG	Matias Romero	4.07	322	LR	LR	14 02 55.2	
	comp=Z,570nm,21.7s,baz=140,slow=40						
HUIG	Huatulco	4.17	297	ePn	Pn	14 00 59.8	-5.4
HUIG	Huatulco	4.17	297	i P	Pn	14 01 06.3	+1.2
JTS	Las Juntas de	7.99	116	P	Pn	14 01 58.2	+0.6
	comp=Z,1.6nm,0.3s,baz=20,slow=18,SNR=3.4						
JTS				S	Sn	14 03 19.5	-7.0
	comp=Z,0.7nm,0.3s,baz=234,slow=19,SNR=1.3						
JTS				LR	LR	14 03 47.9	
	comp=Z,192nm,21.0s,baz=14,slow=28						
JTS	Las Juntas de	7.99	116	ePn	Pn	14 01 49.6	-8.0
LNIG	Linares	12.89	329	ePn	Pn	14 03 03.8	-0.8
833A	Chaparral WMA,	15.83	336	ePn	Pn	14 03 43.5	0.0
	comp=Z,29nm,0.8s						
833A	Chaparral WMA,	15.83	336	P	Pn	14 03 43.4	0.0
	baz=153						
757A	Oxford	17.71	31	P	P	14 04 07.3	+0.1
	baz=213						
JCT	Junction City	17.92	338	ePn	P	14 04 10.7	+1.2
	comp=Z,12nm,0.8s						
555A	McAlpin	18.29	26	P	Pn	14 04 14.3	+0.3
	baz=205						
556A	Lake Butler	18.44	28	P	Pn	14 04 15.4	-0.3
	baz=210						
WHTX	Lake Whitney,	18.64	346	P	Pn	14 04 18.7	+0.5
	baz=163						
TXAR	Lajitas Array	18.66	327	P	Pn	14 04 20.4	+1.9
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=16						
TX31	Lajitas Ar. Si	18.66	327	eP	Pn	14 04 20.5	+2.0
	comp=Z,14nm,1.1s						
147A	Livingston	19.05	10	P	Pn	14 04 22.2	-0.9
	baz=191						
251A	Midway	19.18	18	P	Pn	14 04 24.5	-0.1
	baz=200,SNR=5.6						
149A	Jones	19.29	14	P	Pn	14 04 25.6	-0.2
	baz=195						
Z41A	Richland Creek	19.29	359	P	Pn	14 04 25.5	-0.4
	baz=178						
252A	Lumpkin	19.30	20	P	Pn	14 04 25.4	-0.6
	baz=202						
150A	Eclectic	19.49	16	P	Pn	14 04 28.3	0.0
	baz=197,SNR=6.4						
151A	Opelika	19.61	18	P	Pn	14 04 28.2	-1.5
	baz=199,SNR=9.0						
LRAL	Lakeview Retre	19.66	13	eP	Pn	14 04 28.6	-1.7
	comp=Z,14nm,0.9s						
LRAL	Lakeview Retre	19.66	13	P	Pn	14 04 29.9	-0.3
	baz=194						
356A	Blackshear	19.69	27	P	Pn	14 04 29.9	-0.8
	baz=209						
254A	Abbeville	19.76	23	P	Pn	14 04 30.9	-0.6
	baz=206						
ROSC	El Rosal	19.83	115	P	P	14 04 29.9	-1.0
	comp=Z,0.6nm,0.3s,baz=49,slow=19,SNR=2.0						
ROSC				LR	LR	14 12 18.6	
	comp=Z,97nm,20.2s,baz=250,slow=37						
ABTX	Abilene, Hawle	19.84	341	eP	Pn	14 04 32.7	+0.2
	comp=Z,15nm,0.7s						
ABTX	Abilene, Hawle	19.84	341	P	Pn	14 04 31.7	-0.7
	baz=158,SNR=8.0						
Z49A	Columbiana	19.92	14	P	Pn	14 04 32.5	-0.8
	baz=196						
152A	Waverly Hall	19.92	19	P	Pn	14 04 32.8	-0.6
	baz=201,SNR=6.7						
Z50A	Ashland	20.13	16	eP	P	14 04 33.7	+0.1
	comp=Z,34nm,1.4s						
Z50A	Ashland	20.13	16	P	Pn	14 04 34.5	-1.4
	baz=197,SNR=5.8						
256A	Glennville	20.36	26	P	Pn	14 04 37.0	-1.6
	baz=209						
Z51A	Franklin	20.39	17	P	Pn	14 04 37.7	-1.3
	baz=199						
154A	Montrose	20.43	23	P	Pn	14 04 37.5	-1.9
	baz=205						
Y48A	Jasper	20.47	12	P	Pn	14 04 38.0	-1.9
	baz=193						
Z52A	Williamson	20.50	19	P	Pn	14 04 38.0	-2.2
	baz=201,SNR=5.0						
X40A	Basin Creek Fa	20.52	359	P	P	14 04 38.2	+0.4
	baz=178						
Y49A	Blount Mountai	20.58	14	P	Pn	14 04 39.3	-1.9
	baz=195						
MIAR	Mount Ida	20.61	357	eP	P	14 04 38.8	0.0
	comp=Z,26nm,1.0s						
MIAR	Mount Ida	20.61	357	P	P	14 04 38.9	+0.2
	baz=176						
155A	Kite	20.68	24	P	Pn	14 04 40.2	-2.2
	baz=207						
OXF	Oxford	20.70	7	P	P	14 04 39.8	+0.1
	baz=187						
Y50A	Piedmont	20.78	15	P	P	14 04 40.9	+0.2
	baz=197						
X37A	Clayton	20.81	353	eP	Pn	14 04 42.1	-1.7
	comp=Z,18nm,0.9s						
X46A	Booneville	20.85	9	P	P	14 04 41.2	-0.2
	baz=189						
Z53A	Monticello	20.86	21	P	P	14 04 42.0	+0.4
	baz=203						
X47A	Russelville	20.93	10	P	P	14 04 42.2	0.0
	baz=191						
Y51A	Rockmart	20.97	17	P	P	14 04 43.1	+0.4
	baz=199,SNR=6.6						
X48A	Hartselle	21.01	12	eP	P	14 04 43.5	+0.4
	comp=Z,15nm,0.9s						
X48A	Hartselle	21.01	12	P	P	14 04 43.5	+0.4
	baz=193						
GOGA	Godfrey	21.02	21	P	P	14 04 42.8	-0.4
	baz=203,SNR=5.4						
Z54A	Sparta	21.09	22	P	P	14 04 44.4	+0.5
	baz=205						
156A	Sylvania	21.11	26	P	P	14 04 44.9	+0.7
	baz=209						
W41B	Gary Mavity, V	21.20	0	P	P	14 04 46.2	+1.1
	baz=179						
X49A	Woodville	21.23	14	P	P	14 04 45.9	+0.5
	baz=195,SNR=5.6						
Y52A	Lilburn	21.24	19	P	P	14 04 46.2	+0.6
	baz=201						
W39A	Magazine	21.26	357	P	P	14 04 46.9	+1.1
	baz=175						
X50B	Fort Payne	21.34	15	P	P	14 04 47.4	+0.7
	baz=197,SNR=6.6						
PLAL	Pickwick Lake	21.34	9	eP	P	14 04 45.9	-0.8
	comp=Z,5.4nm,0.6s						
Y53A	Monroe	21.38	20	P	P	14 04 47.9	+0.8
	baz=203,SNR=8.2						
MNTX	Cornudas Mount	21.43	328	eP	P	14 04 48.8	+1.1
	comp=Z,14nm,0.9s						
MNTX	Cornudas Mount	21.43	328	P	P	14 04 48.6	+1.0
	baz=142,SNR=16						
W46A	Michie	21.44	9	P	P	14 04 48.7	+1.0
	baz=189						
WMOK	Wichita Mounta	21.58	345	eP	P	14 04 50.2	+0.9
	comp=Z,15nm,1.0s						
WMOK	Wichita Mounta	21.58	345	P	P	14 04 49.4	+0.1
	baz=162,SNR=10						
X51A	Calhoun	21.65	17	P	P	14 04 50.5	+0.5
	baz=199						
W48A	Pulaski	21.70	12	P	P	14 04 51.2	+0.7
	baz=193						
Y54A	Tignall	21.70	22	P	P	14 04 50.5	0.0
	baz=205						
W49A	Belvidere	21.82	13	P	P	14 04 52.2	+0.4
	baz=195,SNR=8.2						
X52A	Dahlonega	21.97	19	P	P	14 04 53.3	-0.2
	baz=201						
SWET	Sewanee	21.99	14	eP	P	14 04 51.3	-2.4
	comp=Z,26nm,1.0s						
X53A	Estanollee	22.07	20	P	P	14 04 54.6	+0.1
	baz=203,SNR=5.6						
Y55A	Saluda	22.08	24	P	P	14 04 54.4	-0.2
	baz=207						
W50A	Signal Mountai	22.13	15	P	P	14 04 54.8	-0.4
	baz=197						
V46A	Holladay	22.14	9	P	P	14 04 53.7	-1.5
	baz=190,SNR=6.0						
MSTX	Muleshoe	22.16	336	eP	P	14 04 56.9	+1.3
	comp=Z,31nm,0.8s						
MSTX	Muleshoe	22.16	336	P	P	14 04 54.8	-0.7
	baz=152,SNR=18						
TUL1	Leonard	22.16	352	eP	P	14 04 55.0	-0.4
	comp=Z,16nm,0.7s						
TUL1	Leonard	22.16	352	P	P	14 04 55.0	-0.4
	baz=170						
W51A	Cleveland	22.24	16	P	P	14 04 56.5	+0.2
	baz=199						
V47A	Nunnelly	22.26	10	P	P	14 04 56.2	-0.3
	baz=191						
V48A	Smith Brothers	22.30	12	eP	P	14 04 54.1	-2.9
	comp=Z,19nm,0.8s						
V48A	Smith Brothers	22.30	12	P	P	14 04 56.1	-0.9
	baz=193,SNR=8.8						
U40A	Yellville	22.38	359	P	P	14 04 58.0	+0.1
	baz=178						
X54A	Belton	22.43	22	P	P	14 04 57.8	-0.6
	baz=205						
WVT	Waverly	22.50	9	eP	P	14 04 56.0	-3.1
	comp=Z,4.9nm,0.6s						
WVT	Waverly	22.50	9	P	P	14 04 58.1	-1.0
	baz=190						
V49A	McMinnville	22.52	14	P	P	14 04 59.0	-0.4
	baz=195,SNR=5.8	

W54A	Cherokee Point baz=205	22.98	22	P	P	14 05 03.9	-0.3
U48A	Cassie Pea, Po baz=193	23.11	12	P	P	14 05 04.8	-0.6
V52A	Sevierville comp=Z,24nm,0.9s	23.21	18	eP	P	14 05 06.6	+0.2
V52A	Sevierville baz=201,SNR=8.3	23.21	18	P	P	14 05 06.2	-0.1
U49A	Red Boiling Sp baz=195,SNR=13	23.27	13	P	P	14 05 06.2	-0.7
V53A	Saluda comp=Z,14nm,0.8s	23.30	20	eP	P	14 05 07.0	-0.3
V53A	Saluda baz=203,SNR=6.9	23.30	20	P	P	14 05 06.7	-0.6
KMSC	Kings Mountain baz=207	23.35	23	P	P	14 05 07.8	+0.1
121A	Cookes Peak, D baz=139,SNR=10	23.36	325	P	P	14 05 07.8	-0.2
T46A	Princeton baz=190,SNR=5.9	23.39	9	P	P	14 05 07.1	-0.9
U50A	Jamestown baz=198,SNR=14	23.40	15	P	P	14 05 07.0	-1.2
T47A	Sharon Grove comp=Z,34nm,1.1s	23.46	10	eP	P	14 05 07.0	-1.8
T47A	Sharon Grove baz=192,SNR=9.3	23.46	10	P	P	14 05 07.6	-1.2
U51A	La Follette baz=199,SNR=14	23.59	17	P	P	14 05 09.2	-0.7
W56A	Indian Trail baz=208	23.63	24	P	P	14 05 09.0	-1.3
V54A	Nebo baz=205	23.69	21	P	P	14 05 10.5	-0.4
T48A	Bowling Green baz=193	23.71	12	P	P	14 05 10.4	-0.6
U52A	Thorn Hill baz=201,SNR=5.6	23.79	18	P	P	14 05 11.2	-0.6
S44A	Carbondale baz=186	23.86	6	P	P	14 05 12.3	-0.2
TZTN	Tazewell comp=Z,24nm,0.9s	23.87	18	eP	P	14 05 10.4	-2.2
TZTN	Tazewell baz=200,SNR=5.7	23.87	18	P	P	14 05 12.6	0.0
T49A	Edmonton comp=Z,20nm,1.0s	23.89	13	eP	P	14 05 09.6	-3.1
T49A	Edmonton baz=195,SNR=7.5	23.89	13	P	P	14 05 12.4	-0.3
W57A	Gilead baz=210	23.89	25	P	P	14 05 11.5	-1.2
T50A	Nancy baz=197,SNR=7.6	23.97	15	P	P	14 05 12.9	-0.6
U53A	Fall Branch baz=203	24.01	19	P	P	14 05 13.6	-0.2
V55A	Taylorsville baz=206,SNR=5.8	24.02	22	P	P	14 05 12.9	-1.0
S46A	Don Dixon Farm baz=190	24.05	9	P	P	14 05 13.6	-0.5
CCM	Cathedral Cave comp=Z,11nm,0.8s	24.09	2	eP	P	14 05 12.8	-1.8
CCM	Cathedral Cave baz=182	24.09	2	P	P	14 05 13.3	-1.2
S47A	Hartford baz=192	24.09	11	P	P	14 05 13.6	-1.0
W58A	Raeford baz=212	24.10	27	P	P	14 05 13.6	-1.0
T51A	Gray baz=199,SNR=8.4	24.16	16	P	P	14 05 14.6	-0.6
V56A	Mocksville comp=Z,17nm,0.9s	24.26	24	eP	P	14 05 14.3	-1.8
V56A	Mocksville baz=208	24.26	24	P	P	14 05 15.3	-0.8
S48A	Wiedeman Farm, baz=194	24.31	12	P	P	14 05 16.7	+0.2
X60A	Albert Glenn T baz=215	24.32	30	P	P	14 05 16.8	+0.2
T52A	Hallie comp=Z,30nm,1.3s	24.56	18	eP	P	14 05 17.9	-0.9
T52A	Hallie baz=201	24.56	18	P	P	14 05 19.1	+0.2
R45A	Skylar, Fairfi baz=188	24.57	8	P	P	14 05 19.0	+0.2
ANMO	Albuquerque comp=Z,4.3nm,0.9s,baz=156,slow=12,SNR=7.8	24.58	331	P	P	14 05 20.7	+1.4
ANMO	comp=Z,101nm,19.2s,baz=142,slow=43			LR	LR	14 17 41.5	
ANMO	Albuquerque comp=Z,6.0nm,0.9s	24.58	331	eP	P	14 05 19.1	-0.2
ANMO	Albuquerque baz=145	24.58	331	P	P	14 05 19.4	+0.1
TASM	ASL Pad, Albuq baz=145	24.58	331	P	P	14 05 19.5	+0.2
TASM	ASL Pad, Albuq baz=145	24.58	331	P	P	14 05 19.4	+0.1
T53A	Wise baz=202	24.59	19	P	P	14 05 18.9	-0.2
R46A	Gibon Southern baz=190	24.59	9	P	P	14 05 18.9	-0.2
S49A	Springfield baz=196,SNR=8.0	24.60	13	P	P	14 05 18.4	-0.8
V57A	Coltrane Farms baz=209,SNR=5.4	24.61	25	P	P	14 05 19.1	-0.2
U55A	TA2, Sparta baz=206,SNR=5.7	24.66	22	P	P	14 05 18.9	-1.0
S50A	Richmond baz=198,SNR=8.1	24.71	15	P	P	14 05 19.4	-0.8
U56A	King baz=208	24.77	23	P	P	14 05 20.0	-0.8
V58A	Windy Hill, Pi baz=211,SNR=6.0	24.81	26	P	P	14 05 21.0	-0.1
WCI	Wyandotte Cave comp=Z,41nm,0.8s	24.82	11	eP	P	14 05 20.8	-0.4
WCI	Wyandotte Cave baz=193	24.82	11	P	P	14 05 21.0	-0.2
R47A	Wooly Knot Far baz=192,SNR=5.9	24.84	11	P	P	14 05 21.1	-0.3
S51A	Beattyville baz=200	24.88	17	P	P	14 05 21.5	-0.2
TUC	Tucson baz=133	24.96	320	P	P	14 05 23.3	+0.6
T54A	Tazewell baz=204	24.97	21	P	P	14 05 22.3	-0.4
R48A	Northridge Ran baz=194	25.07	12	P	P	14 05 22.9	-0.5
R49A	Shelbyville baz=196	25.11	13	P	P	14 05 22.8	-1.0
V59A	Middlesex baz=213	25.17	28	P	P	14 05 23.7	-0.7
Q45A	Warren Harvey, baz=189	25.17	8	P	P	14 05 23.9	-0.5
U57A	Blanch baz=210	25.26	25	P	P	14 05 25.5	+0.3
R50A	Paris baz=197	25.30	15	P	P	14 05 24.7	-0.8
S53A	Williamson baz=203	25.36	19	P	P	14 05 25.4	-0.7
SJG	San Juan comp=Z,311nm,18.8s,baz=272,slow=39	25.43	77	LR	LR	14 16 27.4	
T56A	Rocky Mt baz=208	25.50	23	P	P	14 05 27.3	-0.1
R51A	Hillsboro baz=199	25.51	16	P	P	14 05 27.2	-0.2
U58A	Oxford baz=211	25.56	26	P	P	14 05 28.4	+0.5
T25A	Trinidad comp=Z,25nm,0.8s	25.57	337	eP	P	14 05 29.1	+0.8
T25A	Trinidad baz=151,SNR=15	25.57	337	P	P	14 05 28.5	+0.2
Q48A	North Vernon baz=194	25.60	12	P	P	14 05 27.4	-0.8
S54A	Dingess, Beckl baz=204	25.73	20	P	P	14 05 29.1	-0.4
R52A	Catlettsburg baz=201	25.80	18	P	P	14 05 29.9	-0.2
Q49A	Aurora baz=196	25.85	13	P	P	14 05 29.3	-1.2
U59A	Littleton baz=213	25.86	28	P	P	14 05 29.9	-0.7
R53A	Hurricane baz=202	26.01	19	P	P	14 05 30.7	-1.3
P46A	Rosedale baz=190	26.02	9	P	P	14 05 31.9	-0.1
T58A	Grand View Acr baz=211	26.03	26	P	P	14 05 31.8	-0.4
P47A	Martinsville baz=192	26.04	11	P	P	14 05 31.6	-0.6
P48A	Milroy baz=194	26.18	12	P	P	14 05 32.1	-1.4
Q51A	Peebles baz=199	26.25	16	P	P	14 05 33.7	-0.4
T59A	Double "B" Far baz=213	26.48	27	P	P	14 05 35.4	-0.8
Q52A	Bidwell baz=201,SNR=6.3	26.49	18	P	P	14 05 35.9	-0.4
SDCO	Great Sand Dun comp=Z,13nm,1.2s	26.53	336	eP	P	14 05 37.2	+0.2
SDCO	Great Sand Dun baz=150,SNR=11	26.53	336	P	P	14 05 38.1	+1.1
O45A	Potomac baz=189	26.56	8	P	P	14 05 36.2	-0.7
Q53A	Leroy baz=203	26.62	19	P	P	14 05 36.3	-1.3
P50A	Jamestown baz=198	26.68	15	P	P	14 05 37.2	-0.9
HDIL	Hopedale baz=186	26.70	5	P	P	14 05 37.7	-0.5
N41A	Harden Midland baz=182	26.75	2	P	P	14 05 37.7	-0.9
P51A	Williamsport baz=199	26.75	16	P	P	14 05 38.0	-0.6
SFIN	Lafayette comp=Z,10nm,0.6s	26.78	9	eP	P	14 05 37.1	-1.7
SFIN	Lafayette baz=190	26.78	9	P	P	14 05 38.0	-0.9
O47A	Sheridan baz=192	26.79	10	P	P	14 05 37.6	-1.4
S58A	Poland Farm, P baz=211	26.80	26	P	P	14 05 37.9	-1.2
Q54A	Coxs Mills baz=204	26.96	20	P	P	14 05 40.2	-0.4
O48A	Farmland baz=195	27.00	12	P	P	14 05 40.0	-0.8
N44A	Piper City baz=188	27.05	7	P	P	14 05 40.1	-1.2
S22A	4UR Ranch, Cre comp=Z,16nm,1.0s	27.07	334	eP	P	14 05 42.3	+0.4
S22A	4UR Ranch, Cre baz=147,SNR=15	27.07	334	P	P	14 05 42.8	+0.9
N43A	Stutzman Famil baz=186	27.09	5	P	P	14 05 40.9	-0.8
O49A	Covington baz=196	27.11	13	P	P	14 05 41.7	-0.2
P52A	Corning baz=201	27.15	17	P	P	14 05 40.7	-1.6
R58B	Mineral baz=211	27.17	25	P	P	14 05 42.2	-0.2
R57A	Stanardsville baz=210	27.20	24	P	P	14 05 42.0	-0.6
Q55A	Buckhannon baz=206	27.23	21	P	P	14 05 42.4	-0.5
P53A	Whipple baz=203	27.24	19	P	P	14 05 42.7	-0.3
N46A	Monticello baz=191	27.34	9	P	P	14 05 43.2	-0.7
MVCO	Mesa Verde baz=144,SNR=12	27.38	331	P	P	14 05 46.2	+1.6
R58A	Rapidan baz=210	27.41	25	P	P	14 05 44.2	-0.3
ACSO	Alum Creek Sta baz=199	27.48	16	P	P	14 05 44.6	-0.5
N47A	Urbana baz=193	27.50	11	P	P	14 05 44.6	-0.7
O51A	Pataskala baz=200	27.50	16	P	P	14 05 44.8	-0.5
Q56A	Snyder Ridge, baz=208	27.59	22	P	P	14 05 46.2	0.0
M43A	Waltham Townsh baz=186	27.60	5	P	P	14 05 46.0	-0.2
N48A	Decatur baz=194	27.61	12	P	P	14 05 46.0	-0.3
M44A	Midewin, Midew baz=188	27.65	7	P	P	14 05 46.4	-0.2
O52A	Adamsville baz=201	27.69	17	P	P	14 05 46.0	-1.0
Q57A	Strasburg baz=209	27.88	23	P	P	14 05 48.8	0.0
M47A	Cromwell baz=193	27.98	11	P	P	14 05 48.9	-0.7
O53A	New Philadelph baz=203	27.99	18	P	P	14 05 49.3	-0.4
L40A	Anamosa baz=182	28.09	2	P	P	14 05 50.5	-0.1
L42A	Oliver, Polo baz=185	28.11	4	P	P	14 05 50.0	-0.8
P56A	Dayton Farm, R baz=208	28.12	22	P	P	14 05 50.0	-0.9
O54A	Avella baz=204	28.19	19	P	P	14 05 50.9	-0.7
N51A	Ashland baz=200	28.28	16	P	P	14 05 51.8	-0.5
ISCO	Idaho Springs baz=151	28.36	338	P	P	14 05 53.3	-0.1
N52A	McGinn's Farm, baz=201	28.37	17	P	P	14 05 52.3	-0.9
PV03	Paradox Valley comp=Z,26nm,1.3s	28.39	332	eP	P	14 05 54.2	+0.6
P57A	Homestead Farm baz=209	28.42	24	P	P	14 05 52.8	-0.7
N53A	Lisbon baz=203	28.62	18	P	P	14 05 55.0	-0.3
IKP	In-Ko-Pah, Jac baz=125	28.68	315	P	P	14 05 56.9	+0.8
U15A	North Rim comp=Z,3.3nm,0.8s	28.74	325	eP	P	14 05 57.8	+0.9
BC3	Big Chuckawall baz=127,SNR=6.0	28.83	317	P	P	14 05 58.5	+1.1
O56A	Blue Knob Stat baz=208	28.89	22	P	P	14 05 57.9	0.0
IRM	Iron Mountain baz=128	28.93	318	P	P	14 05 59.8	+1.5
JFWS	Jewell Farm baz=183	28.98	3	P	P	14 05 58.5	0.0
N54A	Moraine State baz=204	29.02	19	P	P	14 05 58.2	-0.8
MONP2	Monument Peak baz=125	29.03	315	P	P	14 05 59.1	-0.2
M52A	Chesterland baz=201	29.14	17	P	P	14 05 59.7	-0.3
O57A	Amberson baz=209	29.19	23	P	P	14 06 00.2	-0.3
M53A	WI Miller and baz=203	29.25	18	P	P	14 06 00.4	-0.5
BELC	Belle Mtn. Jos baz=127	29.40	317	P	P	14 06 03.7	+1.2
SSPA	Standing Stone baz=209	29.47	23	P	P	14 06 02.7	-0.1
PFO	Pinyon Flats O comp=Z,120nm,20.5s,baz=130,slow=37	29.47	316	LR	LR	14 18 12.2	
K48A	Perry baz=195	29.66	12	P	P	14 06 02.9	-1.6
M55A	Ridgway baz=206	29.89	21	P	P	14 06 05.3	-1.3
ECSD	EROS Data Cent baz=171	29.98	354	P	P	14 06 06.2	-1.1
ERPA	Erie baz=204	30.07	18	P	P	14 06 07.4	-0.8
M56A	Emporium baz=207	30.10	21	P	P	14 06 08.1	-0.4
L54A	Sinclairville baz=205	30.39	19	P	P	14 06 10.2	-0.8
N59A	State Game Lan baz=212	30.54	25	P	P	14 06 11.7	-0.7
L55A	Hinsdale baz=206	30.63	20	P	P	14 06 12.4	-0.8
CIS	Catalina Islan baz=123	30.70	314	P	P	14 06 12.6	-1.3
J52A	Paris baz=202,SNR=5.7	30.96	17	P	P	14 06 14.9	-1.1
TYNO	Tyneside baz=203	31.00	18	P	P	14 06 14.4	-2.0
I48A	Sherman Twp baz=196	31.07	12	P	P	14 06 16.8	-0.2
H46A	Fife Lake baz=193	31.14	10	P	P	14 06 16.6	-1.0
K22A	Casper baz=152	31.20	339	P	P	14 06 18.6	+0.2
K55A	Perry baz=207	31.24	20	P	P	14 06 17.8	-0.7
EDW2	Edwards Air Fo baz=126	31.25	317	P	P	14 06 19.3	+0.5
G39A	Holcombe baz=181	31.31	1	P	P	14 06 18.7	-0.4
I51A	Listowel baz=201	31.33	16	P	P	14 06 17.5	-1.8
BASO	Ashfield baz=199	31.36	15	P	P	14 06 18.1	-1.5
ACTO	Acton baz=202	31.42	17	P	P	14 06 18.7	-1.3
MEDO	Medina baz=206	31.50	20	P	P	14 06 19.6	-1.2
BINY	Binghamton baz=211	31.54	23	P	P	14 06 20.9	-0.2
BWLO	Walkerton baz=200	31.60	15	P	P	14 06 20.3	-1.3
MPMC	Manual Prospec baz=128,SNR=5.8	31.62	319	P	P	14 06 23.8	+1.7
R11A	Troy Canyon, C baz=133,SNR=5.0	31.95	324	P	P	14 06 26.3	+1.2
F38A	Pierce - Schro baz=180	31.97	0	P	P	14 06 24.9	0.0
DRWO	Darlington Wes baz=205	32.05	19	P	P	14 06 25.2	-0.4
WLVO	Wesleyville baz=205	32.20	19	P	P	14 06 25.6	-1.3
H52A	Wyevale baz=202	32.42	17	P	P	14 06 28.2	-0.6
PDAR	Pinedale Array comp=Z,2.7nm,0.9s,baz=134,slow=8.5,SNR=11	32.42	336	P	P	14 06 30.1	+0.9
TOBO	Tobermory, Bru baz=199	32.54	14	P	P	14 06 29.0	-0.8
PECO	Prince Edward baz=208	32.67	21	P	P	14 06 29.3	-1.7
E43A	Lone Tree Farm baz=189	32.69	7	P	P	14 06 30.0	-1.1
I55A	Frankford baz=206	32.70	20	P	P	14 06 30.1	-1.1
SADO	Sadowa comp=Z,11nm,0.9s,baz=255,slow=5.9,SNR=8.6	32.74	17	P	P	14 06 30.5	-1.2
F48A	Evansville baz=197	32.87	12	P	P	14 06 31.2	-1.5
F49A	Sandfield baz=198	32.93	13	P	P	14 06 31.4	-1.9
DELO	Deloro Mine baz=206,SNR=6.7	32.98	19	P	P	14 06 33.0	-0.8
KLBO	Killbear Provi baz=201	32.99	16	P	P	14 06 32.0	-1.8
H55A	Tweed baz=207	33.16	20	P	P	14 06 34.0	-1.3
D41A	Chassel baz=186	33.22	5	P	P	14 06 34.7	-1.0
G53A	Haliburton baz=204	33.22	18	P	P	14 06 34.6	-1.3
BUKO	Buck Lake baz=202,SNR=5.8	33.29	17	P	P	14 06 35.1	-1.4
E47A	Iron Bridge baz=195	33.34	11	P	P	14 06 36.0	-0.8
BANO	Bancroft baz=205	33.34	19	P	P	14 06 35.3	-1.5
H56A	Elgin baz=208	33.51	21	P	P	14 06 37.5	-0.8
E48A	Lockeyer baz=197	33.58	13	P	P	14 06 38.3	-0.6
F51A	Arnstein baz=201	33.60	16	P	P	14 06 37.4	-1.7
NV01	Mina Array Sit	33.60	321	eP	cP	PcP	14 09 20.6 +1.7
NVAR	Mina Array Bea comp=Z,7.1nm,0.8s,baz=136,slow=8.7,SNR=32	33.60	321	P	P	P	14 06 42.8 +3.2
NVAR	comp=Z,1.3nm,0.8s,baz=152,slow=4.6,SNR=4.7			P	cP	PcP	14 09 20.6 +1.7
D46A	Sault St. Mari baz=194,SNR=8.1	33.62	10	P	P	14 06 38.1	-1.2
PLVO	Plevna baz=207	33.62	20	P	P	14 06 37.8	-1.5
F52A	Sundridge baz=202	33.63	16	P	P	14 06 37.8	-1.6
FXWY	Fox Creek comp=Z,7.7nm,1.0s	33.74	335	eP	P	14 06 39.3	-1.4
E50A	Wahnapitae baz=200	33.85	14	P	P	14 06 39.5	-1.8
G55A	Calabogie baz=207	33.93	20	P	P	14 06 40.5	-1.5
D47A	Chapleau baz=195	33.95	11	P	P	14 06 40.6	-1.6
PEMO	Pembroke baz=206	34.14	19	P	P	14 06 42.4	-1.4
ALGO	Algonquin Park baz=204,SNR=5.1	34.14	18	P	P	14 06 42.1	-1.7
E51A	G1948 Merrick baz=202,SNR=6.8	34.27	16	P	P	14 06 43.5	-1.5
E52A	Mattawa baz=203	34.27	17	P	P	14 06 43.0	-1.9
D48A	Paudash Townsh baz=198	34.32	13	P	P	14 06 43.9	-1.5
AGMN	Agassiz Nation baz=173	34.44	356	P	P	14 06 46.4	0.0
D49A	Beulah Townshi baz=198	34.51	13	P	P	14 06 45.2	-1.8
F55A	Otter Lake baz=207	34.56	20	P	P	14 06 46.3	-1.2
E53A	Dumoine, Ponti baz=205	34.64	18	P	P	14 06 46.7	-1.4
E54A	Lac Daplat, Po baz=206,SNR=6.5	34.84	18	P	P	14 06 48.4	-1.4
D52A	ZEK Kipawa Sen baz=203,SNR=5.8	34.97	17	P	P	14 06 49.9	-1.0
PTGA	Pitinga comp=Z,15nm,1.0s	35.13	112	eP	P	14 06 53.7	+1.0
HLID	Hailey baz=140,SNR=19	35.16	332	P	P	14 06 54.9	+2.0
D53A	Lac Vacive, Po baz=204,SNR=6.0	35.27	17	P	P	14 06 52.6	-0.9
BOZ	Bozeman (W) comp=Z,3.4nm,0.9s	35.61	336	eP	P	14 06 55.8	-0.9
BOZ	Bozeman (W) baz=146,SNR=5.1	35.61	336	P	P	14 06 56.5	-0.1
D54A	Lac Fusel, La baz=206,SNR=5.7	35.64	18	P	P	14 06 55.9	-0.9
DLMT	Dillon comp=Z,19nm,1.0s	35.80	335	eP	P	14 06 58.7	+0.4
ULM	Lac du Bonnet comp=Z,78nm,19.1s,baz=219,slow=42	36.38	356	LR	LR	14 25 35.3	
EGMT	Eagleton comp=Z,9.7nm,0.7s	37.01	340	eP	P	14 07 08.7	+0.1
EGMT	Eagleton baz=151,SNR=6.0	37.01	340	P	P	14 07 07.4	-1.1
LSQQ	Lebel-sur-Quev baz=204	37.26	17	P	P	14 07 09.2	-1.3
MSO	Missoula baz=144	37.53	335	P	P	14 07 12.1	-0.9
MATQ	Matagami baz=203,SNR=8.0	37.73	16	P	P	14 07 13.3	-1.2
J04D	Umpqua Nationa baz=130	38.90	325	P	P	14 07 23.7	-0.9
I04A	Tendick Farm, baz=130	39.42	325	P	P	14 07 27.9	-0.9
I03D	Drain, OR baz=128	39.88	324	P	P	14 07 32.6	0.0
NEW	Newport comp=Z,1.7nm,0.6s,baz=194,slow=8.4,SNR=3.9	39.99	334	P	P	14 07 35.0	+1.5
NEW	Newport baz=140	39.99	334	P	P	14 07 34.6	+1.1
H04D	Lebanon baz=130	40.07	326	P	P	14 07 34.4	+0.3
I02D	Swisshome baz=128	40.42	324	P	P	14 07 37.1	+0.1
LON	Longmire comp=Z,6.7nm,0.8s	41.06	329	eP	P	14 07 43.7	+1.3
D03D	Eldon baz=132	42.23	329	P	P	14 07 52.6	+0.7
B05A	Bryant baz=134	42.24	330	P	P	14 07 52.6	+0.7
SIV	San Ignacio comp=Z,3.8nm,1.0s,baz=307,slow=10,SNR=8.3	42.79	133	P	P	14 07 56.6	-0.2
A04D	Lummi Island baz=133	42.85	330	P	P	14 07 57.7	+0.9
SCHQ	Schefferville comp=Z,3.3nm,0.5s,baz=251,slow=18,SNR=3.0	45.41	20	P	P	14 08 14.7	-2.6
CFA	Coronel Fontan comp=Z,2.0nm,0.4s,baz=323,slow=15,SNR=4.4	50.76	153	P	P	14 08 59.5	+0.6
YKA	Yellowknife Ar comp=Z,17nm,0.7s,baz=150,slow=7.4,SNR=34	51.08	347	P	P	14 09 01.7	+0.9
YKA	comp=Z,2.6nm,0.8s,baz=148,slow=4.0,SNR=5.2			PcP	PcP	14 10 16.6	+0.7
YKA	comp=Z,11nm,18.6s,baz=186,slow=42			LR	LR	14 35 54.3	
YKB5	Yellowknife Ar	51.08	347	eP	P	14 09 01.7	+0.9
YKB5				ePcP	PcP	14 10 16.6	+0.7
DLBC	Dease Lake comp=Z,16nm,0.8s	52.66	336	eP	P	14 09 16.0	+3.2
EPYK	Eagle Plains baz=128	60.16	341	P	P	14 10 07.7	+1.8
INK	Inuvik comp=Z,19nm,1.0s	60.48	344	eP	P	14 10 09.6	+1.6
EGAK	Eagle comp=Z,4.5nm,0.8s	60.73	338	eP	P	14 10 09.3	-0.4
RES	Resolute Bay	60.81	359	P	P	14 10 09.9	-0.3

comp=Z,2.4nm,0.6s,baz=204,slow=4.3,SNR=9.1
RES Resolute Bay 60.81 359 *e*P **P 14 10 08.6 -1.5**
comp=Z,12nm,1.4s
PAX Paxson 61.46 335 *e*P **P 14 10 14.2 -0.6**
comp=Z,7.2nm,0.8s
RIDG Independent Ri 61.57 336 *e*P **P 14 10 13.7 -1.9**
comp=Z,8.5nm,0.9s
RC01 Rabbit Creek A 62.48 332 *e*P **P 14 10 19.9 -1.7**
comp=Z,12nm,0.9s
ILAR Eielson Array 62.85 337 P **P 14 10 25.2 +1.2**
comp=Z,5.3nm,0.8s,baz=135,slow=4.6,SNR=24
POKR Poker Flat Res 63.21 337 P **P 14 10 27.7 +1.3**
baz=116
TCOL CIGO, UAF Yank 63.27 337 P **P 14 10 28.2 +1.4**
baz=116
TOLK Toolik Lake Re 65.54 340 P **P 14 10 42.8 +1.1**
baz=116
TTA Tatalina 65.89 333 *e*P **P 14 10 45.0 +0.9**
comp=Z,5.5nm,0.9s
ESDC Sonseca Array 79.98 52 P **P 14 12 06.4 -1.5**
comp=Z,1.3nm,0.7s,baz=289,slow=5.5,SNR=14
NB200 NORSAR Array S 84.36 28 *e*P **P 14 12 30.5 +0.1**
NOA NORSAR Array B 84.36 28 P **P 14 12 30.5 +0.1**
comp=Z,0.8nm,0.8s,baz=290,slow=5.1,SNR=3.6
ARA0 ARCESS Array S 86.32 18 *e*P **P 14 12 39.8 -0.1**
ARCES ARCESS Array B 86.32 18 P **P 14 12 39.8 -0.1**
comp=Z,0.5nm,0.4s,baz=267,slow=4.5,SNR=6.2
GERES GERESS Array B 89.85 39 P **P 14 12 57.1 -0.2**
comp=Z,0.2nm,0.3s,baz=321,slow=1.9,SNR=3.4
FIA0 FINESS Array S 90.71 25 *e*P **P 14 13 01.4 +0.6**
FINES FINESS Array B 90.71 25 P **P 14 13 01.4 +0.6**
comp=Z,5.0nm,1.0s,baz=233,slow=6.8,SNR=4.2
MK32 Makanchi Array 119.40 4 *e*PKPdf **PKPdf 14 18 47.4 -0.3**
MKAR Makanchi Array 119.40 4 PKP **PKPdf 14 18 47.4 -0.3**
comp=Z,0.6nm,0.8s,baz=52,slow=2.4,SNR=4.2
HHC Hu-ho-hao-te 121.24 339 *e*PKP **PKiKP 14 18 54.3 +2.7**
WMQ Urumqi 122.58 0 *e*PKP **PKiKP 14 18 54.8 +0.7**
LZH Lanzhou 128.02 343 *e*PKP **PKiKP 14 19 06.0 +0.7**
LZH sPKP 14 19 27.6
LZH LR LR
comp=Z,79nm,17.9s
LZH LR LR
comp=Z,83nm,18.1s
LZH LR LR
comp=Z,110nm,20.0s
AS31 Alice Springs 135.39 250 *e*PKPdf **PKPdf 14 19 18.6 -0.1**
ASAR Alice Springs 135.39 250 PKP **PKPdf 14 19 18.7 -0.1**
comp=Z,0.5nm,1.0s,baz=277,slow=34,SNR=3.3
CMAR Chiang Mai Arr 146.02 341 PKPbc **PKPab 14 19 40.0 +0.7**
comp=Z,13nm,0.8s,baz=341,slow=4.0,SNR=22

*IDC **15** 14:00:49.0±2.4, 18°.94S×177°.75W, h478km±26km, mb3.4/12, mb1 3.6/14, mb1mx3.4/30, mbtmp4.2/14, Error ellipse: s-maj=16.6km s-min=12.2km az=140.0*
*ISCJB **15** 14:00:52.6±0.5, 19°.0S±0°.1×177°.9W±0°.1, h532km, mb3.6/12, Error ellipse: s-maj=16.1km s-min=13.0km az=40.1*

ISC 15 14:00:53.5±0.6, 19°.0S±0°.1×177°.8W±0°.1, h532km, n28, σ1°35/29, mb3.6/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.07**	**256**	P	**P**	**14 04 00.2**	**-3.8**
	0.4nm,0.3s,baz=96,slow=16,SNR=4.6						
URZ	**Urewera**	**19.67**	**192**	P	**P**	**14 04 44.6**	**-2.6**
	0.8nm,0.3s,baz=258,slow=3.3,SNR=5.9						
STKA	**Stephens Creek**	**38.62**	**243**	P	**P**	**14 07 31.4**	**+0.2**
	2.5nm,0.5s,baz=80,slow=8.9,SNR=13						
WRA	**Warramunga Arr**	**45.01**	**261**	P	**P**	**14 08 21.0**	**-0.8**
ASAR	**Alice Springs**	**45.06**	**255**	P	**P**	**14 08 21.9**	**-0.2**
	18nm,0.5s,baz=91,slow=8.5,SNR=258						
ASAR				PcP	**PcP**	**14 09 52.5**	**+0.7**
	1.1nm,0.7s,baz=102,slow=4.0,SNR=5.3						
ASAR				S	**S**	**14 14 24.9**	**+2.4**
	1.3nm,0.7s,baz=90,slow=15,SNR=8.9						
VNDA	**Vanda**	**59.39**	**185**	P	**P**	**14 10 05.4**	**+1.4**
	1.2nm,0.6s,baz=357,slow=8.1,SNR=20						
MJAR	**Matsushiro Arr**	**69.14**	**323**	P	**P**	**14 11 06.2**	**-0.4**
	2.4nm,0.6s,baz=162,slow=5.8,SNR=11						
PETK	**Petropavlovsk-**	**74.90**	**345**	P	**P**	**14 11 39.5**	**-0.1**
	1.3nm,0.6s,baz=141,slow=3.8,SNR=4.1						
KSRS	**Korea Array**	**75.92**	**318**	P	**P**	**14 11 46.8**	**+1.3**
	0.5nm,0.6s,baz=123,slow=6.6,SNR=4.0						
NVAR	**Mina Array Bea**	**79.83**	**43**	P	**P**	**14 12 07.0**	**+0.1**
	0.8nm,0.6s,baz=220,slow=8.9,SNR=9.4						
MAW	**Mawson**	**83.01**	**200**	P	**P**	**14 12 23.3**	**+0.8**
	1.3nm,0.6s,baz=180,slow=7.6,SNR=6.4						
TXAR	**Lajitas Array**	**86.10**	**57**	P	**P**	**14 12 39.3**	**+0.9**
	1.4nm,0.7s,baz=218,slow=5.8,SNR=19						
ILAR	**Eielson Array**	**86.84**	**13**	P	**P**	**14 12 39.0**	**-1.9**
	0.3nm,0.4s,baz=212,slow=5.1,SNR=8.1						
PDAR	**Pinedale Array**	**87.76**	**43**	P	**P**	**14 12 44.7**	**-1.4**
	0.3nm,0.6s,baz=237,slow=4.8,SNR=3.3						
SNAA	**Sanae**	**89.47**	**178**	Pdiff	**P**	**14 12 53.1**	**-0.3**
VNA3	**Neumayer Olymp**	**89.59**	**176**	Pdiff	**P**	**14 12 54.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**89.80**	**290**	P	**P**	**14 12 58.1**	**+2.2**
	0.8nm,0.7s,baz=112,slow=3.3,SNR=4.7						
VNA2	**Neumayer--Watz**	**90.04**	**177**	Pdiff	**P**	**14 12 56.3**	**+0.3**
VNA1	**Neumayer--Stat**	**90.26**	**177**	Pdiff	**P**	**14 12 57.5**	**+0.5**
ARCES	**ARCESS Array B**	**127.51**	**350**	PKP	**PKPdf**	**14 18 56.2**	**-1.1**
	1.0nm,0.5s,baz=5.7,slow=1.2,SNR=8.3						
FINES	**FINESS Array B**	**134.41**	**344**	PKP	**PKPdf**	**14 19 11.2**	**+0.6**
	1.2nm,0.8s,baz=97,slow=4.8,SNR=6.2						
AKASG	**Malin Array Be**	**141.81**	**332**	PKhKP	PKPpre	14 19 19.4	
	1.0nm,0.5s,baz=44,slow=4.6,SNR=8.1						
BRTR	**Keskin Array B**	**145.97**	**314**	PKPbc	**PKPbc**	**14 19 34.3**	**+0.2**
	1.9nm,0.7s,baz=138,slow=4.8,SNR=9.8						
ASF	**Jabal al Asfar**	**146.24**	**300**	PKPbc	**PKPbc**	**14 19 35.6**	**+0.6**
	1.1nm,0.3s,baz=52,slow=3.0,SNR=3.1						
MMAI	**Mount Meron Ar**	**147.23**	**302**	PKPbc	**PKiKP**	**14 19 38.8**	**-0.5**
	2.1nm,0.4s,baz=67,slow=4.9,SNR=7.3						
EIL	**Elat**	**148.44**	**296**	PKPbc	**PKiKP**	**14 19 41.4**	**-0.5**
	3.8nm,0.7s,baz=51,slow=5.8,SNR=4.3						
GERES	**GERESS Array B**	**148.83**	**345**	PKPbc	**PKPbc**	**14 19 41.5**	**+0.3**
	0.2nm,0.3s,baz=325,slow=2.1,SNR=4.9						
DAVOX	**Davos/Dischmat**	**151.61**	**349**	PKPbc	**PKiKP**	**14 19 48.4**	**+0.3**
	2.7nm,0.6s,baz=295,slow=4.5,SNR=9.9						

*IDC **15** 14:17:36.5±4.5, 37°.09N×21°.98E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.3/43, mbtmp3.7/6, ML2.4/1, Error ellipse: s-maj=96.4km s-min=25.0km az=45.0*
*ISCJB **15** 14:17:37.7±0.9, 36°.59N±0°.04×21°.49E±0°.05, h29km±5km, mb3.7/7, Error ellipse: s-maj=8.5km s-min=4.2km az=40.3*
*ATH **15** 14:17:39.4, 36°.69N×21°.68E, h37km±2km, ML3.0/9, Error ellipse: s-maj=3.6km s-min=1.5km az=45.0*
*THE **15** 14:17:40.4, 36°.68N×21°.64E, h20km±1km, ML3.1/3, Error ellipse: s-maj=3.2km s-min=1.2km az=41.0*

ISC 15 14:17:38.3±1.2, 36°.65N±0°.05×21°.53E±0°.05, h33km±7km, n128, σ1°73/133, mb3.6/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.30**	**34**	P	**Pb**	**14 17 45.9**	**-0.2**
PYL				S	**Sb**	**14 17 51.0**	**-0.4**
PYL	**PYLOS**	**0.30**	**34**	P	**Pb**	**14 17 45.9**	**-0.2**
MES3	**Kyparissia**	**0.61**	**10**	P	**Pb**	**14 17 50.7**	**0.0**
MES3				S	**Sb**	**14 18 00.4**	**+1.2**
ITM	**Ithomi**	**0.62**	**30**	P	**Pb**	**14 17 50.6**	**-0.3**
ITM				S	**Sb**	**14 17 58.4**	**-1.1**
ITM	**Ithomi**	**0.62**	**30**	P	**Pb**	**14 17 50.6**	**-0.3**
ITM				AML	AML	14 18 01.3	
	comp=N,5486μm,0.3s						
ITM				AML	AML	14 18 02.4	
	comp=E,4159μm,0.3s						
AMT	**Artemida-Makis**	**0.90**	**9**	P	**Pb**	**14 17 55.7**	**+0.2**
AMT				S	**Sn**	**14 18 08.7**	**+2.2**
AMT	**Artemida-Makis**	**0.90**	**9**	P	**Pb**	**14 17 55.8**	**+0.3**
AMT				S	**Sb**	**14 18 07.7**	**+0.6**
AMT				AML	AML	14 18 14.8	
	comp=E,3537μm,0.4s						
AMT				AML	AML	14 18 15.3	
	comp=N,3614μm,0.3s						
VLX	**Vlachokerasia**	**0.99**	**43**	P	**Pb**	**14 17 56.6**	**-0.5**
VLX	**Vlachokerasia**	**0.99**	**43**	P	**Pb**	**14 17 56.8**	**-0.3**
VLX				AML	AML	14 18 14.8	
	comp=E,2264μm,0.3s						
VLX				AML	AML	14 18 15.6	
	comp=N,3271μm,0.4s						
TRIP	**Tripoli**	**1.06**	**34**	P	**Pb**	**14 17 57.8**	**-0.4**
TRIP	**Tripoli**	**1.06**	**34**	P	**Pb**	**14 17 58.1**	**-0.2**
TRIP				AML	AML	14 18 21.6	
	comp=N,1104μm,0.4s						
TRIP				AML	AML	14 18 25.9	
	comp=E,1380μm,0.5s						
VLI	**Veliai**	**1.13**	**86**	P	**Pb**	**14 17 59.3**	**-0.1**
VLI				S	**Sn**	**14 18 15.1**	**+2.9**
VLI	**Veliai**	**1.13**	**86**	P	**Pb**	**14 17 59.5**	**+0.2**
VLI				AML	AML	14 18 17.1	
	comp=E,1227μm,0.4s						
VLI				AML	AML	14 18 23.3	
	comp=N,1488μm,0.8s						
MNVA	**Monemvasia**	**1.21**	**88**	P	**Pn**	**14 18 00.9**	**+2.0**
KTHR	**Kythira**	**1.25**	**107**	P	**Pn**	**14 18 01.3**	**+1.9**
KYTH	**Kithira**	**1.28**	**107**	P	**Pn**	**14 18 01.9**	**+2.0**
KYTH	**Kithira**	**1.28**	**107**	P	**Pn**	**14 18 02.0**	**+2.2**
KYTH				AML	AML	14 18 25.5	
	comp=N,1500μm,0.5s						
KYTH				AML	AML	14 18 30.7	
	comp=E,1497μm,0.5s						
VTN	**Vitineika**	**1.30**	**348**	P	**Pn**	**14 18 02.2**	**+2.1**
DRO	**Drossia**	**1.31**	**6**	P	**Pn**	**14 18 02.1**	**+1.7**
DRO	**Drossia**	**1.31**	**6**	P	**Pn**	**14 18 02.6**	**+2.2**
RLS	**Riolos of Patr**	**1.41**	**358**	P	**Pn**	**14 18 04.0**	**+2.3**
RLS	**Riolos of Patr**	**1.41**	**358**	P	**Pn**	**14 18 03.9**	**+2.2**
RLS				AML	AML	14 18 36.9	
	comp=N,786μm,0.4s						
RLS				AML	AML	14 18 39.1	
	comp=E,336μm,0.3s						
GUR	**Goura**	**1.44**	**26**	P	**Pn**	**14 18 03.6**	**+1.4**
GUR	**Goura**	**1.44**	**26**	P	**Pn**	**14 18 04.1**	**+1.9**
KLV	**Kalavryta, Ach**	**1.48**	**19**	P	**Pn**	**14 18 04.4**	**+1.7**
KLV	**Kalavryta, Ach**	**1.48**	**19**	P	**Pn**	**14 18 04.8**	**+2.0**
KRND	**KRANIDI**	**1.49**	**60**	P	**Pn**	**14 18 03.7**	**+0.9**
KRND	**KRANIDI**	**1.49**	**60**	P	**Pn**	**14 18 04.0**	**+1.2**
KFL	**Anninata**	**1.58**	**338**	P	**Pn**	**14 18 05.2**	**+1.2**
KFL	**Anninata**	**1.58**	**338**	P	**Pn**	**14 18 05.5**	**+1.5**
EPID	**Epidavros**	**1.59**	**52**	P	**Pn**	**14 18 05.6**	**+1.3**
DID	**Didima**	**1.61**	**57**	P	**Pn**	**14 18 05.3**	**+0.9**
DID	**Didima**	**1.61**	**57**	P	**Pn**	**14 18 05.4**	**+0.9**
ANKY	**Antikythira Is**	**1.63**	**118**	P	**Pn**	**14 18 06.5**	**+1.9**
ANKY	**Antikythira Is**	**1.63**	**118**	P	**Pn**	**14 18 06.9**	**+2.3**
ANKY				AML	AML	14 18 45.6	
	comp=N,650μm,0.8s						
ANKY				AML	AML	14 18 47.0	
	comp=E,680μm,0.7s						
LAKA	**Lakka**	**1.63**	**12**	P	**Pb**	**14 18 08.3**	**+0.5**
AIG1	**Aigion**	**1.64**	**17**	P	**Pn**	**14 18 06.9**	**+2.2**
ACOR	**Acrocorinthos**	**1.64**	**40**	P	**Pn**	**14 18 05.9**	**+1.0**
AIG2	**Aigio**	**1.65**	**15**	P	**Pn**	**14 18 07.4**	**+2.4**
THAL	**Thalero**	**1.66**	**33**	P	**Pn**	**14 18 06.5**	**+1.4**
THAL	**Thalero**	**1.66**	**33**	P	**Pn**	**14 18 06.6**	**+1.6**
AIG4	**Aigion**	**1.66**	**15**	P	**Pn**	**14 18 07.7**	**+2.5**
YDRA	**Hydra**	**1.70**	**65**	P	**Pn**	**14 18 06.5**	**+0.8**
VLS	**Valsamata**	**1.70**	**334**	P	**Pn**	**14 18 07.4**	**+1.6**
VLS	**Valsamata**	**1.70**	**334**	P	**Pn**	**14 18 07.4**	**+1.6**
LOUT	**Loutraki**	**1.77**	**40**	P	**Pn**	**14 18 07.5**	**+0.9**
LOUT	**Loutraki**	**1.77**	**40**	P	**Pn**	**14 18 07.7**	**+1.1**
TRIZ	**Trizonia**	**1.77**	**14**	P	**Pn**	**14 18 09.8**	**+3.2**
TRIZ	**Trizonia**	**1.77**	**14**	P	**Pn**	**14 18 09.2**	**+2.6**
LTK	**Loutraki**	**1.79**	**39**	P	**Pn**	**14 18 07.8**	**+0.9**
LTK	**Loutraki**	**1.79**	**39**	P	**Pn**	**14 18 07.9**	**+1.0**
EFP	**Efpalio**	**1.80**	**9**	P	**Pn**	**14 18 09.8**	**+2.7**
EFP	**Efpalio**	**1.80**	**9**	P	**Pn**	**14 18 10.0**	**+2.9**
KALE	**Kalithea**	**1.81**	**15**	P	**Pn**	**14 18 10.0**	**+2.7**
KALE	**Kalithea**	**1.81**	**15**	P	**Pn**	**14 18 09.9**	**+2.7**
SERG	**Sergoula**	**1.81**	**13**	P	**Pn**	**14 18 10.3**	**+3.0**
SERG	**Sergoula**	**1.81**	**13**	P	**Pn**	**14 18 10.2**	**+2.9**
DSF	**Desfina**	**1.93**	**24**	P	**Pn**	**14 18 10.4**	**+1.5**
DSF	**Desfina**	**1.93**	**24**	P	**Pn**	**14 18 10.7**	**+1.8**
PROD	**Prodromos**	**1.94**	**34**	P	**Pn**	**14 18 09.8**	**+0.8**
PROD	**Prodromos**	**1.94**	**34**	P	**Pn**	**14 18 10.0**	**+0.9**
ANX	**Ano Chora**	**1.97**	**9**	P	**Pn**	**14 18 12.8**	**+3.3**
ANX	**Ano Chora**	**1.97**	**9**	P	**Pn**	**14 18 12.5**	**+3.0**
FSK	**Fiskardo**	**1.97**	**337**	P	**Pn**	**14 18 12.7**	**+3.4**
PVO	**Paravola**	**1.97**	**360**	P	**Pn**	**14 18 12.5**	**+3.1**
PVO	**Paravola**	**1.97**	**360**	P	**Pn**	**14 18 12.8**	**+3.4**
PDO	**Prodromos**	**1.97**	**352**	P	**Pn**	**14 18 12.6**	**+3.2**
PDO	**Prodromos**	**1.97**	**352**	P	**Pn**	**14 18 12.7**	**+3.3**
VILL	**Villia**	**2.08**	**43**	P	**Pn**	**14 18 11.2**	**+0.3**
VIL2	**Platees**	**2.09**	**41**	P	**Pn**	**14 18 11.2**	**+0.2**
EVGI	**Lefkada island**	**2.09**	**341**	P	**Pn**	**14 18 13.4**	**+2.3**
VLY	**Voula,Athens**	**2.17**	**56**	P	**Pn**	**14 18 12.2**	**+0.1**
VLY	**Voula,Athens**	**2.17**	**56**	P	**Pn**	**14 18 12.4**	**+0.3**
ATH	**Athens Observa**	**2.19**	**52**	P	**Pn**	**14 18 12.8**	**+0.4**
ATHU	**Athens Univers**	**2.23**	**53**	P	**Pn**	**14 18 13.2**	**+0.3**
ATHU	**Athens Univers**	**2.23**	**53**	P	**Pn**	**14 18 13.3**	**+0.4**
LKD2	**Lefkada island**	**2.25**	**342**	P	**Pn**	**14 18 16.2**	**+3.0**
EVR	**Evrytania**	**2.28**	**5**	P	**Pn**	**14 18 18.1**	**+4.4**
TSLK	**Tsoukalades, L**	**2.29**	**343**	P	**Pn**	**14 18 16.4**	**+2.6**
MHLO	**Agia Marina, M**	**2.31**	**88**	P	**Pn**	**14 18 14.3**	**+0.3**
MHLO	**Agia Marina, M**	**2.31**	**88**	P	**Pn**	**14 18 14.5**	**+0.5**
IMMV	**Iera Moni Meta**	**2.31**	**120**	P	**Pn**	**14 18 15.7**	**+1.6**
IMMV				AML	AML	14 19 03.1	
	comp=N,368μm,0.8s						
IMMV				AML	AML	14 19 07.2	
	comp=E,391μm,0.9s						
LKR	**Lokris**	**2.32**	**30**	P	**Pn**	**14 18 14.8**	**+0.6**
LKR	**Lokris**	**2.32**	**30**	P	**Pn**	**14 18 14.8**	**+0.6**
MHLA	**Plaka, Milos I**	**2.32**	**87**	P	**Pn**	**14 18 14.7**	**+0.4**
PTL	**Penteli**	**2.33**	**52**	P	**Pn**	**14 18 14.6**	**+0.3**
PTL	**Penteli**	**2.33**	**52**	P	**Pn**	**14 18 14.8**	**+0.4**
ATAL	**Atalanti**	**2.36**	**30**	P	**Pn**	**14 18 15.3**	**+0.5**
ATAL	**Atalanti**	**2.36**	**30**	P	**Pn**	**14 18 15.6**	**+0.8**
SERI	**Serifos**	**2.42**	**77**	P	**Pn**	**14 18 15.4**	**-0.2**
SERI	**Serifos**	**2.42**	**77**	P	**Pn**	**14 18 15.6**	**-0.1**
AGG	**Agios Georgios**	**2.46**	**15**	P	**Pn**	**14 18 18.2**	**+2.1**
AGG	**Agios Georgios**	**2.46**	**15**	P	**Pn**	**14 18 18.3**	**+2.1**
VAM	**Vamos**	**2.49**	**119**	P	**Pn**	**14 18 17.8**	**+1.3**
EREA	**Eretria**	**2.60**	**46**	P	**Pn**	**14 18 18.4**	**+0.3**
EREA	**Eretria**	**2.60**	**46**	P	**Pn**	**14 18 18.4**	**+0.3**
MRKA	**Markates**	**2.62**	**38**	P	**Pn**	**14 18 18.9**	**+0.5**
MRKA	**Markates**	**2.62**	**38**	P	**Pn**	**14 18 18.9**	**+0.5**
THL	**Klokotos Trika**	**2.94**	**7**	P	**Pn**	**14 18 24.7**	**+2.0**
THL	**Klokotos Trika**	**2.94**	**7**	P	**Pn**	**14 18 24.8**	**+2.0**
NEO	**Neokhori**	**2.97**	**26**	P	**Pn**	**14 18 24.4**	**+1.1**
XOR	**Xorichti**	**3.02**	**25**	P	**Pn**	**14 18 24.7**	**+0.9**
XOR	**Xorichti**	**3.02**	**25**	P	**Pn**	**14 18 24.7**	**+0.9**
IOSP	**Ios island**	**3.02**	**87**	P	**Pn**	**14 18 24.0**	**+0.2**
IGT	**Igoumenitsa**	**3.04**	**342**	P	**Pn**	**14 18 25.3**	**+1.3**
IDI	**Anoyia**	**3.04**	**115**	Pn	**Pn**	**14 18 24.8**	**+0.7**
	comp=E,0.5nm,0.3s,baz=204,slow=5.5,SNR=1.2						
IDI				Sn	Sn	14 18 49.8	-10
	comp=E,2.6nm,0.3s,baz=298,slow=19,SNR=8.7						
APE	**Apeiranthos**	**3.23**	**81**	P	**Pn**	**14 18 26.8**	**-0.1**
KPRO	**Kipourio**	**3.31**	**358**	P	**Pn**	**14 18 30.7**	**+2.9**
ANAF	**Anafi Island**	**3.43**	**94**	P	**Pn**	**14 18 30.1**	**+0.7**
LAST	**Lasithi**	**3.53**	**114**	P	**Pn**	**14 18 32.9**	**+2.0**
LIT	**Litokhoron**	**3.53**	**12**	P	**Pn**	**14 18 32.1**	**+1.2**
KRUS	**Krusevo**	**4.72**	**357**	*i* Pn	**Pn**	**14 18 48.2**	**+0.9**
VAY	**Valandovo**	**4.74**	**10**	*i* Pn	**Pn**	**14 18 48.5**	**+1.1**
SRS	**Serrai**	**4.75**	**19**	P	**Pn**	**14 18 48.3**	**+0.7**
STIP	**Stip**	**5.07**	**6**	*e*Pn	**Pn**	**14 18 52.0**	**+0.1**
TAR1	**Taranto**	**5.11**	**321**	*e*(Pn)	**Pn**	**14 18 53.5**	**+1.0**
TAR1				Sn	**Sn**	**14 19 46.8**	**-3.5**
MASS	**Massafra**	**5.26**	**321**	*e*Pn	**Pn**	**14 18 55.5**	**+0.9**
FASA	**Fasano**	**5.29**	**323**	*e*Pn	**Pn**	**14 18 55.6**	**+0.6**
FASA				Sn	Sn	14 19 50.0	-4.9
SG1	**Sgolgore (BA)**	**5.65**	**319**	*e*Pn	**Pn**	**14 19 00.7**	**+0.7**
SG1				Sn	Sn	14 19 59.0	-4.7
BAI	**Bari**	**5.75**	**322**	*e*Pn	**Pn**	**14 19 02.1**	**+0.8**
BAI				Sn	**Sn**	**14 20 02.2**	**-3.8**
STON	**Ston**	**6.88**	**336**	*e*Pn	Pn	14 19 15.2	-1.6
STON				Sn	Sn	14 20 27.7	-6.3
HFS	**Hagfors**	**24.04**	**350**	P	**P**	**14 22 48.8**	**-1.3**
	comp=E,0.8nm,0.4s,baz=155,slow=11,SNR=2.5						
FINES	**FINESS Array B**	**24.99**	**5**	P	**P**	**14 22 57.8**	**-0.9**
	comp=E,1.2nm,0.4s,baz=163,slow=10,SNR=9.8						
NOA	**NORSAR Array B**	**25.28**	**348**	P	**P**	**14 23 00.8**	**-0.6**
	comp=E,0.4nm,0.5s,baz=157,slow=9.0,SNR=3.3						
GEYT	**Alibeck**	**29.02**	**76**	P	**P**	**14 23 34.9**	**-0.4**
	comp=E,0.4nm,0.3s,baz=270,slow=8.1,SNR=2.2						
ARCES	**ARCESS Array B**	**33.02**	**3**	P	**P**	**14 24 09.8**	**-0.2**
	comp=E,1.3nm,0.8s,baz=167,slow=8.3,SNR=1.4						
MKAR	**Makanchi Array**	**45.43**	**57**	P	P	14 25 52.1	-1.9
	comp=E,0.2nm,0.3s,baz=279,slow=7.3,SNR=7.3						
ZALV	**Zalesovo Beam**	**46.13**	**47**	P	P	14 25 57.3	-1.9
	comp=E,1.3nm,0.3s,baz=268,slow=8.5,SNR=5.6						

*ISCJB **15** 14:22:24.6±0.4, 32°.21N±0°.02×115°.23W±0°.03, h22km±4km, Error ellipse: s-maj=4.5km s-min=3.6km az=175.0*
*PAS **15** 14:22:24.4±0.0, 32°.17N×115°.19W, h15km*
*SCEDC **15** 14:22:24.5, 32°.17N×115°.19W, h15km*
*ANF **15** 14:22:24.9±1.6, 32°.30N×115°.25W, h15km±5km, ML2.5/10, Error ellipse: s-maj=13.2km s-min=5.6km az=161.0*
*MEX **15** 14:22:26.6±0.3, 32°.25N×115°.13W, h15km, MD3.9*
*ECX **15** 14:22:26.0±0.5, 32°.16N×115°.27W, h6km, MD2.9, ML3.1*
*NEIC **15** 14:22:26.0±0.0, 32°.17N×115°.28W, h6km, ML3.1(ECX), ML3.1(PAS), After ECX.*

ISC 15 14:22:24.5±0.9, 32°.18N±0°.02×115°.25W±0°.03, h15km±7km, n43, σ1°25/61, 1C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	**Mexicali**	**0.23**	**11**	*e*Pg	**Pg**	**14 22 30.2**	**+0.5**
MBIG				*e*Sg	**Sb**	**14 22 35.0**	**+0.4**
MBIG	**Mexicali**	**0.23**	**11**	*e*P	**Pg**	**14 22 30.2**	**+0.5**
MBIG				*e*S	**Sg**	**14 22 33.1**	**0.1**
MBIG	**Mexicali**	**0.23**	**11**	*i* Pg	**Pg**	**14 22 30.6**	**+0.9**
CPBX	**Cerro Prieto**	**0.24**	**349**	*i* Pg	**Pg**	**14 22 30.5**	**+0.6**
CPBX				*e*S	**Sg**	**14 22 34.9**	**+1.4**
CPBX				IAML		14 22 36.7	
	comp=E,9μm,0.2s						
CPBX				*e*		14 22 36.7	
CPBX				⇓*e*		14 22 37.4	
CPBX				IAML		14 22 37.4	
	comp=N,6μm,0.1s						
WESC	**Westside Schoo**	**0.71**	**325**	*e*P	**Pg**	**14 22 38.5**	**+0.2**
ECBX	**El Chinero**	**0.72**	**166**	*e*P	**Pg**	**14 22 39.0**	**+0.4**
ECBX				*e*S	**Sg**	**14 22 48.9**	**+0.7**
RMX	**La Rumorosa**	**0.82**	**301**	*e*P	**Pb**	**14 22 39.4**	**-1.2**
RMX				*e*S	**Sg**	**14 22 49.3**	**-2.0**
RMX				IAML		14 22 50.1	
	comp=E,772nm,0.2s						
RMX				*e*		14 22 50.1	
IKP	**In-Ko-Pah, Jac**	**0.87**	**303**	P	**Pb**	**14 22 40.8**	**-0.6**
	baz=121						
IKP				S	**Sb**	**14 22 52.0**	**-0.9**
	baz=121						
IKP	**In-Ko-Pah, Jac**	**0.87**	**303**	*e*P	**Pb**	**14 22 41.0**	**-0.4**
SWSC	**Sam W. Stewart**	**0.90**	**329**	P	**Pb**	**14 22 40.4**	**-1.4**
	baz=146						
SWSC				S	**Sb**	**14 22 51.1**	**-2.5**
	baz=146						
GLA	**Glamis**	**0.94**	**22**	*e*Pg	**Pb**	**14 22 41.0**	**-1.7**
GLA	**Glamis**	**0.94**	**22**	P	**Pb**	**14 22 40.8**	**-1.8**
	baz=199						
GLA				S	**Sg**	**14 22 52.6**	**-2.6**
	baz=199						
ZAX	**El Zacaton**	**1.09**	**233**	*e*P	**Pn**	**14 22 44.8**	**-0.7**
ZAX				*e*S	**Sb**	**14 22 59.2**	**-0.2**
SPIG	**San Pedro Mart**	**1.14**	**189**	*e*Pn	**Pn**	**14 22 45.7**	**-0.6**
SPIG				*e*Sg	**Sb**	**14 23 01.0**	**0.0**
SPIG	**San Pedro Mart**	**1.14**	**189**	*i* P	**Pn**	**14 22 45.7**	**-0.6**
SPIG				*e*S	**Sb**	**14 23 01.0**	**0.0**
SPIG	**San Pedro Mart**	**1.14**	**189**	*e*P	**Pn**	**14 22 45.7**	**-0.6**
SPX	**San Pedro Mart**	**1.14**	**189**	*e*P	**Pn**	**14 22 45.6**	**-0.7**
SPX				*i* S	**Sb**	**14 23 00.7**	**-0.3**
SPX	**San Pedro Mart**	**1.14**	**189**	*e*P	**Pn**	**14 22 45.8**	**-0.6**
SPX				⇓*e*		14 23 03.1	
SPX				IAML		14 23 03.1	
	comp=E,218nm,0.3s						
CBX	**Cerro Bola**	**1.21**	**277**	*e*Pn	**Pn**	**14 22 46.5**	**-0.5**
CBX				*e*Sg	**Sb**	**14 23 02.0**	**-0.6**
CBX	**Cerro Bola**	**1.21**	**277**	*e*P	**Pn**	**14 22 46.5**	**-0.5**
CBX				*e*S	**Sb**	**14 23 02.

CAIG				*e*S	Sb	14 46 59.1	-4.7
ARIG	**Puente Sto Nin**	**1.29**	**49**	*e*P	Pn	14 46 48.3	-3.5
ARIG				*e*S	Sb	14 47 03.7	-5.2

ISCJB ***15*** *15:01:36.9±0.7, 51°.51N±0°.03×16°.15E±0°.04, h0km, Error ellipse: s-maj=4.9km s-min=3.1km az=22.3*
PRU ***15*** *15:01:38.8±0.0, 51°.53N×16°.15E, h0km*
VIE ***15*** *15:01:40.0±1.1, 51°.40N×16°.20E, h0km, mb1.9/2, ml2.5/3, Error ellipse: s-maj=13.1km s-min=9.1km az=78.0, Suspected Mining induced.*

ISC 15 15:01:37.6±1.3, 51°.57N±0°.05×16°.17E±0°.03, h0km, n20, σ0s66/41, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**174**	*e*Pg	**Pg**	**15 01 52.0**	**+0.4**
KSP				*e*Sg	**Sg**	**15 02 01.3**	**+0.2**
CHVC	**Chvalec**	**0.98**	**184**	*e*PG	**Pg**	**15 01 57.0**	**+0.5**
CHVC				*e*SG	**Sg**	**15 02 09.2**	**0.0**
	comp=Z,26nm,0.6s						
OSTC	**Ostas**	**1.01**	**178**	*e*PG	**Pg**	**15 01 57.6**	**+0.6**
OSTC				*e*SG	**Sg**	**15 02 09.9**	**-0.2**
	comp=Z,17nm,0.3s						
UPC	**Upice**	**1.07**	**185**	*e*PG	**Pg**	**15 01 58.1**	**+0.1**
UPC				*e*SG	**Sg**	**15 02 11.8**	**0.0**
	comp=Z,29nm,0.4s						
DPC	**Dobruska-Polom**	**1.22**	**175**	*e*PG	**Pg**	**15 02 00.9**	**-0.1**
DPC				*e*SG	**Sg**	**15 02 16.4**	**-0.5**
	comp=Z,24nm,0.7s						
BRG	**Berggiesshubel**	**1.56**	**244**	PG	**Pb**	**15 02 07.8**	**+0.5**
BRG				SG	**Sg**	**15 02 28.6**	**+0.8**
	32nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.87**	**208**	*e*PG	**Pb**	**15 02 12.2**	**-0.5**
GOPC				*e*SG	**Sb**	**15 02 37.4**	**+0.7**
	comp=Z,8.4nm,0.7s						
PRU	**Pruhonice**	**1.89**	**214**	*e*PG	**Pb**	**15 02 12.6**	**-0.3**
PRU				*e*SG	**Sg**	**15 02 37.9**	**-0.3**
	comp=Z,16nm,0.6s						
MORC	**Moravsky Berou**	**2.00**	**153**	*e*PN	**Pn**	**15 02 12.2**	**-0.4**
MORC				*e*SG	**Sb**	**15 02 40.4**	**+0.2**
CLL	**Collm**	**2.00**	**264**	*e*Pn	**Pn**	**15 02 12.0**	**-0.6**
CLL				*e*Pg	**Pg**	**15 02 16.0**	**+0.1**
CLL				*i* Sg	**Sg**	**15 02 42.1**	**+0.4**
	comp=Z,13nm,0.6s						
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*PG	**Pb**	**15 02 16.9**	**-0.4**
OKC				*e*SG	**Sg**	**15 02 45.5**	**-0.9**
	comp=Z,13nm,0.7s						
VRAC	**Vranov**	**2.28**	**173**	*e*PN	**Pn**	**15 02 16.9**	**+0.4**
VRAC				*e*SG	**Sb**	**15 02 48.8**	**+0.5**
TREC	**Trest**	**2.32**	**191**	*e*PG	**Pb**	**15 02 20.8**	**+0.5**
TREC				*e*SG	**Sg**	**15 02 51.0**	**-1.0**
	comp=Z,7.2nm,0.4s						
KRUC	**Moravsky**	**2.51**	**177**	*e*PN	**Pn**	**15 02 19.9**	**+0.2**
KRUC				*e*SG	**Sg**	**15 02 57.8**	**-0.5**
OJC	**Ojcow**	**2.67**	**119**	*e*Pg	**Pg**	**15 02 28.6**	**-0.1**
OJC				*e*Sg	**Sg**	**15 03 03.7**	**+0.4**
NKC	**Novy Kostel**	**2.71**	**242**	*e*PG	**Pg**	**15 02 28.9**	**-0.6**
NKC				*e*SG	**Sg**	**15 03 05.0**	**+0.5**
	comp=Z,19nm,0.3s						
JAVC	**Velka Javorina**	**2.88**	**160**	*e*PN	**Pn**	**15 02 25.7**	**+0.9**
KHC	**Kasperske Hory**	**2.95**	**215**	*e*PN	**Pn**	**15 02 25.6**	**-0.1**
KHC				*e*PG	**Pb**	**15 02 31.9**	**+0.8**
KHC				*e*SN	**Sn**	**15 03 00.0**	**-1.9**
KHC				*e*SG	**Sg**	**15 03 11.5**	**-0.8**
	comp=Z,5.2nm,0.6s						
MODS	**Modra-Piesok**	**3.28**	**167**	*e*SG	**Sg**	**15 03 23.5**	**+0.6**
CONA	**Conrad Observa**	**3.65**	**183**	*e*Pn	**Pn**	**15 02 37.1**	**+1.7**
	comp=Z,0.4nm,0.2s						
CONA				Sg	**Sg**	**15 03 34.2**	**-0.6**
	comp=Z,1.4nm,0.2s						

SJA ***15*** *15:11:55.7±0.3, 30°.64S×71°.45W, h73km±21km, ML3.1, MW3.6*
GUC ***15*** *15:11:58.7±0.7, 30°.40S×71°.11W, h90km±3km, ML3.1*
ISCJB ***15*** *15:11:59.0±1.3, 30°.38S±0°.04×71°.5W±0°.1, h85km±10km, Error ellipse: s-maj=17.2km s-min=6.3km az=10.2*

ISC 15 15:12:00.1±1.9, 30°.38S±0°.04×71°.4W±0°.1, h80km±12km, n10, σ1s28/18, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.49**	**17**	*e*S	**Sn**	**15 12 25.4**	**+1.5**
GO04	**Tololo Observa**	**0.57**	**69**	*e*P	**Pn**	**15 12 14.3**	**-0.4**
GO04				*i* S	**Sn**	**15 12 25.0**	**-0.6**
GO04				IAML		15 12 26.4	
	comp=E,4μm,0.4s						
CO02	**Combarbal**	**0.90**	**157**	*e*P	**Pn**	**15 12 17.8**	**-0.3**
CO02				*e*S	**Sn**	**15 12 31.2**	**-0.3**
LCO	**Las Campanas**	**1.50**	**25**	*i* P	**Pn**	**15 12 25.9**	**+0.2**
LCO				*i* S	**Sn**	**15 12 45.5**	**+0.6**
LCO	**Las Campanas**	**1.50**	**25**	*e*P	**Pn**	**15 12 25.2**	**-0.5**
LCO				*e*S	**Sn**	**15 12 44.8**	**-0.1**
LCO				IAML		15 12 46.4	
	comp=N,210nm,0.2s						
ROCH	**El Roble**	**2.61**	**173**	*e*P	**Pn**	**15 12 40.2**	**-0.1**
ROCH				*i* S	**Sn**	**15 13 11.8**	**+0.5**
ROCH				IAML		15 13 12.6	
	comp=N,59nm,0.3s						
PEL	**Peldehue**	**2.83**	**168**	*e*P	**Pn**	**15 12 42.6**	**-0.6**
PEL				*e*S	**Sn**	**15 13 15.4**	**-0.8**
PEL				IAML		15 13 16.9	
	comp=N,66nm,0.3s						
ASAL	**Salagasta**	**3.12**	**136**	*e*P	**Pn**	**15 12 48.2**	**+1.1**
ASAL				*i* S	**Sn**	**15 13 26.3**	**+3.0**
VCA	**Vinchina**	**3.24**	**60**	*i* P	**Pn**	**15 12 48.6**	**-0.3**
VCA				*i* S	**Sn**	**15 13 27.8**	**+1.3**
VCA				IAML		15 13 30.5	
	comp=Z,40nm,0.4s						
TCA	**Tanti**	**5.94**	**101**	*i* P	**Pn**	**15 13 23.0**	**-2.6**

IDC 15 15:13:57.3±3.9, 7°.07S×150°.68E, h0km, mb3.2/1, mb1 3.5/2, mb1mx3.1/33, mbtmp3.5/2, ML2.0/1, Error ellipse: s-maj=174.7km s-min=46.9km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.18**	**236**	Pn	Pn	15 15 02.6	+0.2
	6.1nm,0.3s,baz=6.9,slow=7.9,SNR=24						
PMG				Sn	Sn	15 15 40.7	-11
	2.7nm,0.3s,baz=350,slow=20,SNR=7.2						
WRA	**Warramunga Arr**	**20.37**	**229**	P	P	15 18 33.9	-1.8
ASAR	**Alice Springs**	**23.06**	**223**	P	P	15 19 05.2	+0.6
	0.5nm,0.6s,baz=56,slow=9.1,SNR=10						
TORD	**Torodi Ar. Bea**	**148.90**	**284**	PKPbc	PKPbc	15 33 48.2	0.0
	0.1nm,0.4s,baz=86,slow=3.1,SNR=1.8						

ISCJB ***15*** *15:22:12.9±0.4, 24°.50N±0°.05×122°.48E±0°.02, h16km±10km, Error ellipse: s-maj=7.7km s-min=2.8km az=8.1*
TAP ***15*** *15:22:12.2, 24°.49N×122°.45E, h16km±1km, ML2.9, C*
JMA ***15*** *15:22:13.0, 24°.45N×122°.48E, h21km±1km, M2.4*

ISC 15 15:22:12.6±1.0, 24°.48N±0°.05×122°.45E±0°.02, h18km±7km, n26, σ0s33/47, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.30**	**282**	P	**Pg**	**15 22 19.2**	**+0.1**
	baz=282						
EOS1				*e*S	**Sb**	**15 22 24.4**	**+0.3**
	baz=282						
JYNG	**Yonagunijimaku**	**0.45**	**94**	P	**Pg**	**15 22 21.7**	**0.0**
JYNG				*e*S	**Sg**	**15 22 27.7**	**-0.2**
YOJ	**Yonaguni jima**	**0.51**	**92**	P	**Pb**	**15 22 22.9**	**-0.1**
	baz=91						
YOJ	**Yonaguni jima**	**0.51**	**92**	P	**Pg**	**15 22 22.7**	**-0.1**
TWC	**Suao**	**0.56**	**283**	P	**Pg**	**15 22 22.9**	**-0.9**
	baz=282						
TWC				*e*S	**Sb**	**15 22 32.1**	**+0.5**
	baz=282						
NANB	**Nanao**	**0.64**	**265**	P	**Pb**	**15 22 25.0**	**-0.3**
	baz=264						
NANB				*e*S	**Sb**	**15 22 33.9**	**-0.1**
	baz=264						
ENA	**Nanau**	**0.65**	**265**	P	**Pb**	**15 22 25.0**	**-0.4**
	baz=264						
ENA				*e*S	**Sb**	**15 22 33.9**	**-0.3**
	baz=264						
NTC	**Toucheng**	**0.68**	**303**	*e*P	**Pb**	**15 22 25.7**	**-0.2**
	baz=303						
NTC				*e*S	**Sb**	**15 22 34.6**	**-0.3**
	baz=303						
TIPB	**Shuangxi**	**0.75**	**311**	P	**Pb**	**15 22 27.2**	**+0.1**
	baz=310						
TIPB				*e*S	**Sg**	**15 22 37.7**	**+0.5**
	baz=310						
SLBB	**Yuanshan**	**0.79**	**290**	P	**Pb**	**15 22 27.7**	**-0.2**
	baz=289						
SLBB				*e*S	**Sb**	**15 22 38.5**	**+0.3**
	baz=289						
ENTT	**Nioudou**	**0.82**	**281**	P	**Pb**	**15 22 28.2**	**-0.1**
	baz=280						
ENTT				*e*S	**Sg**	**15 22 39.7**	**+0.2**
	baz=280						
NACB	**Ninganchiao**	**0.84**	**249**	P	**Pb**	**15 22 28.7**	**+0.1**
	baz=248						
NACB				*e*S	**Sn**	**15 22 41.2**	**-0.3**
	baz=248						
NDT	**Datong Townshi**	**0.86**	**278**	P	**Pb**	**15 22 28.8**	**-0.2**
	baz=277						
NDT				*e*S	**Sg**	**15 22 41.5**	**+0.7**
	baz=277						
NWLT	**Wulai**	**0.91**	**289**	*e*P	**Pb**	**15 22 29.8**	**-0.2**
	baz=288						
NWLT				*e*S	**Sb**	**15 22 42.2**	**+0.4**
	baz=288						
ETLH	**Xiulin Townshi**	**0.93**	**253**	*e*P	**Pb**	**15 22 30.5**	**+0.3**
	baz=252						
ETLH				*e*S	**Sg**	**15 22 43.2**	**+0.4**
	baz=252						
NNSB	**Datong**	**0.98**	**267**	P	**Pb**	**15 22 30.9**	**-0.1**
	baz=266						
NNSB				*e*S	**Sn**	**15 22 44.9**	**-0.1**
	baz=266						
YHNB	**Yeheng**	**1.00**	**281**	*e*P	**Pb**	**15 22 31.5**	**+0.1**
	baz=280						
YHNB				*e*S	**Sg**	**15 22 44.9**	**-0.2**
	baz=280						
NSK	**Sanguang**	**1.01**	**281**	P	**Pn**	**15 22 32.1**	**+0.1**
	baz=280						
NSK				*e*S	**Sg**	**15 22 45.7**	**0.0**
	baz=280						
YM07	**YM07**	**1.02**	**312**	P	**Pn**	**15 22 32.1**	**0.0**
	baz=312						
YM07				*e*S	**Sb**	**15 22 45.2**	**+0.2**
	baz=312						
YM01	**YM01**	**1.04**	**310**	*e*S	**Sb**	**15 22 45.5**	**+0.1**
	baz=309						
IRIF	**Iriomote-Funau**	**1.17**	**97**	P	**Pn**	**15 22 33.9**	**-0.2**
IRIF				*e*S	**Sn**	**15 22 49.8**	**+0.1**
SANB	**Taian**	**1.34**	**267**	*e*P	**Pb**	**15 22 37.9**	**+0.6**
	baz=266						
JKRS	**Kuro-shima**	**1.44**	**100**	P	**Pn**	**15 22 38.2**	**+0.4**
JKRS				S	**Sb**	**15 22 56.9**	**0.0**
JIJ	**Ishigaki jima**	**1.54**	**94**	P	**Pn**	**15 22 38.9**	**-0.3**
JIJ				S	**Sn**	**15 22 58.8**	**-0.1**
JISG	**Ishigakijimahi**	**1.69**	**86**	P	**Pn**	**15 22 41.0**	**-0.3**
JISG				*e*S	**Sb**	**15 23 04.2**	**0.0**
JTJ	**Tarama**	**2.05**	**85**	P	**Pn**	**15 22 46.9**	**+0.7**

IDC 15 15:23:29.2±13.0, 0°.85N×123°.90E, h230km±140km, mb3.1/3, mb1 3.3/5, mb1mx2.9/34, mbtmp3.9/5, Error ellipse: s-maj=188.5km s-min=19.8km az=58.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**10.99**	**181**	P	Pn	15 26 01.5	+0.8
	2.6nm,0.3s,baz=41,slow=2.6,SNR=4.7						
FITZ	**Fitzroy Crossi**	**18.91**	**175**	P	P	15 27 31.8	-1.2
	0.2nm,0.3s,baz=355,slow=5.1,SNR=7.3						
WRA	**Warramunga Arr**	**23.06**	**154**	P	P	15 28 14.0	-0.7
ASAR	**Alice Springs**	**26.24**	**159**	P	P	15 28 44.4	+1.0
	0.3nm,0.4s,baz=346,slow=14,SNR=10						
STKA	**Stephens Creek**	**36.61**	**154**	P	P	15 30 13.7	0.0
	2.4nm,1.1s,baz=319,slow=6.5,SNR=5.0						
MKAR	**Makanchi Array**	**58.37**	**328**	P	P	15 33 00.5	-0.1
	0.6nm,0.5s,baz=128,slow=8.3,SNR=8.9						

GCG ***15*** *15:28:59.5±0.5, 12°.82N×91°.39W, h26km±131km, MD4.0*
SNET ***15*** *15:29:04.5±1.5, 13°.31N×91°.23W, h99km±31km, ML3.6*
UCR ***15*** *15:29:04.9±1.7, 13°.24N×91°.22W, h91km±38km, MD3.6, ML3.3*
IDC ***15*** *15:29:05.1±3.3, 13°.28N×91°.26W, h0km, mb3.9/1, mb1 4.0/3, mb1mx3.5/37, mbtmp3.6/3, ML3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/35, Error ellipse: s-maj=55.3km s-min=33.1km az=143.0*

ISC 15 15:29:02.7±2.4, 13°.15N±0°.09×91°.20W±0°.05, h9km±12km, n35, σ1s54/45, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.26**	**36**	*e*P	**Pg**	**15 29 27.0**	**0.0**
IXG	**Ixpaco**	**1.26**	**36**	*e*P	**Pg**	**15 29 27.0**	**0.0**
FUG	**Fuego 3**	**1.34**	**15**	*e*P	**Pg**	**15 29 28.3**	**-0.2**
FUG	**Fuego 3**	**1.34**	**15**	*e*P	**Pg**	**15 29 28.3**	**-0.2**
FUG				*e*S	**Sg**	**15 29 50.0**	**+4.1**
PCG	**Pacaya**	**1.37**	**25**	*e*P	**Pg**	**15 29 28.9**	**-0.1**
PCG	**Pacaya**	**1.37**	**25**	*e*P	**Pg**	**15 29 28.9**	**-0.1**
STG3	**Santiaguito 3,**	**1.60**	**347**	*e*P	**Pn**	**15 29 30.7**	**-0.7**
NBG	**Las Nubes**	**1.66**	**30**	*e*P	**Pg**	**15 29 34.1**	**-0.5**
NBG	**Las Nubes**	**1.66**	**30**	*e*P	**Pg**	**15 29 34.1**	**-0.5**
SBLS	**San Blas**	**1.69**	**66**	*e*P	**Pb**	**15 29 32.9**	**-1.1**
SBLS	**San Blas**	**1.69**	**66**	*e*P	**Pb**	**15 29 32.9**	**-1.1**
RTR	**El Retiro**	**1.69**	**64**	*e*P	**Pb**	**15 29 32.9**	**-1.3**
RTR	**El Retiro**	**1.69**	**64**	*e*P	**Pb**	**15 29 32.9**	**-1.3**
SNJE	**San Jose**	**1.71**	**65**	*e*P	**Pn**	**15 29 33.0**	**+0.1**
SNJE	**San Jose**	**1.71**	**65**	*e*P	**Pn**	**15 29 33.0**	**+0.1**
BOQS	**Boqueron**	**1.96**	**72**	*e*P	**Pb**	**15 29 37.8**	**-1.0**
APG	**El Apazote**	**1.98**	**21**	Pn	**Pb**	**15 29 38.0**	**-1.1**
	48nm,0.3s,baz=124,slow=10,SNR=102						
APG				Sn	**Sg**	**15 30 05.7**	**-0.9**
	26nm,0.3s,baz=303,slow=24,SNR=8.9						
LOMA	**San Marcos**	**2.04**	**75**	*e*P	**Pb**	**15 29 38.5**	**-1.5**
LOMA				*e*S	**Sb**	**15 30 05.0**	**-0.4**
LOMA	**San Marcos**	**2.04**	**75**	*e*P	**Pb**	**15 29 38.5**	**-1.5**
LOMA				*e*S	**Sb**	**15 30 05.0**	**-0.4**
LFU	**La Fuente**	**2.12**	**73**	*e*P	**Pb**	**15 29 39.5**	**-1.9**
LFU	**La Fuente**	**2.12**	**73**	*e*P	**Pb**	**15 29 39.5**	**-1.9**
LFRS	**El Faro**	**2.14**	**77**	*e*P	**Pb**	**15 29 39.7**	**-2.0**
LFRS				*e*S	**Sb**	**15 30 07.2**	**-1.2**
MTO3	**Montecristo**	**2.18**	**55**	*e*P	**Pb**	**15 29 40.3**	**-2.2**
MTO3				*e*S	**Sn**	**15 30 06.6**	**-0.1**
MTO3	**Montecristo**	**2.18**	**55**	*e*P	**Pb**	**15 29 40.3**	**-2.2**
MTO3				*e*S	**Sn**	**15 30 06.6**	**-0.1**
LBRS	**Las Brisas**	**2.18**	**74**	*e*P	**Pb**	**15 29 40.4**	**-2.1**
PAVA	**Las Pavas**	**2.28**	**75**	*e*P	**Pb**	**15 29 42.0**	**-2.1**
PAVA				*e*S	**Sn**	**15 30 09.5**	**+0.6**
PAVA				IAML		15 30 20.5	
	comp=Z,211nm,0.4s						
PAVA	**Las Pavas**	**2.28**	**75**	*e*P	**Pb**	**15 29 42.0**	**-2.1**
PAVA				*e*S	**Sn**	**15 30 09.5**	**+0.6**
PAVA				IAML		15 30 20.5	
	comp=Z,211nm,0.4s						
LCND	**La Caada**	**3.23**	**87**	*e*P	**Pn**	**15 29 53.7**	**+0.1**
LCND				*e*S	**Sn**	**15 30 32.1**	**-0.3**
LCND				IAML		15 30 38.5	
	comp=Z,163nm,0.3s						
LCND	**La Caada**	**3.23**	**87**	*e*P	**Pn**	**15 29 53.7**	**+0.1**
LCND				*e*S	**Sn**	**15 30 32.1**	**-0.3**
LCND				IAML		15 30 38.5	
	comp=Z,163nm,0.3s						
CMIG	**Matias Romero**	**5.29**	**318**	Pn	**Pn**	**15 30 22.9**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=119,slow=7.6,SNR=6.3						
CMIG				Sn	**Sn**	**15 31 18.8**	**-4.4**
	comp=Z,1.4nm,0.3s,baz=122,slow=15,SNR=3.1						
H06E1	**SOCORRO T-PHASE**	**9.77**	**289**	T	T	15 53 51.6	
	SNR=20						
TXAR	**Lajitas Array**	**19.83**	**326**	P	**Pn**	**15 33 36.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=154,slow=13,SNR=10						
SADO	**Sadowa**	**33.16**	**16**	LR	LR	15 50 04.4	
	comp=Z,56nm,18.1s,baz=193,slow=38						
NVAR	**Mina Array Bea**	**34.82**	**321**	P	**P**	**15 35 57.1**	**+2.8**
	comp=Z,1.2nm,0.7s,baz=128,slow=8.5,SNR=11						
CMAR	**Chiang Mai Arr**	**147.04**	**342**	PKPbc	**PKiKP**	**15 48 49.6**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=358,slow=4.7,SNR=4.6						

KRNET 15 15:32:51.5±0.1, 39°.84N×75°.55E, mb2.6, 8C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**2.22**	**336**	⇓*i*P	Pb	15 33 31.9	-0.7
	baz=36						
ARLS				⇓*i*S	Sb	15 34 01.4	+0.7
	baz=36						
KZA	**Kyzart**	**2.24**	**354**	⇑*i*P	Pb	15 33 32.0	-1.2
	baz=54						
KZA				⇑*i*S	Sb	15 34 01.8	+0.1
	baz=54						
ULHL	**Ulahol**	**2.46**	**12**	⇓*i*P	Pb	15 33 35.4	-1.3
	baz=12						
ULHL				⇓*i*S	Sb	15 34 07.0	-0.7
	baz=12						
UCH	**Uchtor**	**2.51**	**342**	⇓*i*P	Pb	15 33 36.0	-1.7
	baz=42						
UCH				⇓*i*S	Sb	15 34 08.6	-0.7
	baz=42						
BOOM	**Boomskoye usch**	**2.66**	**6**	⇑*i*P	Pn	15 33 37.9	+2.0
	baz=6.0						
BOOM				⇑*i*S	Sb	15 34 12.2	-1.3
	baz=6.0						
AML	**Almayashu**	**2.68**	**329**	⇑*i*P	Pn	15 33 38.4	+2.1
	baz=29						
AML				⇑*i*S	Sb	15 34 13.1	-1.2
	baz=29						
KBK	**Karagaybulak**	**2.85**	**351**	⇑*i*P	Pn	15 33 40.5	+2.1
	baz=51						
KBK				⇑*i*S	Sb	15 34 16.2	-2.6
	baz=51						

SOME 15 15:33:26.4, 41°.00N×75°.65E, h20km, 1D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KST	**Kastek**	**2.06**	**6**	⇓*i*P	Pb	15 34 04.4	+1.3
	1.7nm,0.3s						
KST				*e*S	Sb	15 34 31.8	+3.5
	8.0nm,0.6s						
TNSS	**Tian-Shan**	**2.25**	**25**	*e*P	Pb	15 34 07.6	+1.0
	1.0nm,0.5s						
TNSS				*e*S	Sb	15 34 37.3	+3.0
	2.8nm,0.4s						
MRKS	**Merke**	**2.51**	**315**	*e*P	Pb	15 34 12.0	+1.1
	1.4nm,0.2s						
MRKS				*e*S	Sb	15 34 45.0	+3.5
	4.3nm,0.9s						
CHKK	**Chushkaly**	**3.02**	**19**	*e*P	Pb	15 34 21.4	+1.9
	0.5nm,0.1s						
CHKK				*e*S	Sb	15 35 00.9	+5.0
	4.0nm,0.6s						

ISCJB ***15*** *15:39:24.3±0.6, 27°.71N±0°.05×111°.65W±0°.05, h10km, mb3.0/1, MS3.1/2, Error ellipse: s-maj=8.4km s-min=4.6km az=147.3*
NEIC ***15*** *15:39:26.7±0.0, 27°.64N×111°.61W, h15km, mb4.2/1, MD4.0(MEX), After MEX.*
MEX ***15*** *15:39:26.7±0.5, 27°.64N×111°.61W, h15km, MD4.0*
IDC ***15*** *15:39:34.1±3.7, 28°.01N×111°.07W, h0km, mb3.1/1, mb1 3.5/4, mb1mx3.4/38, mbtmp3.0/4, ML3.6/3, MS2.8/6, Ms1 2.8/6, ms1mx2.6/16, Error ellipse: s-maj=58.5km s-min=16.5km az=19.0*

ISC 15 15:39:24.5±0.9, 27°.70N±0°.07×111°.63W±0°.05, h10km, n27, σ2s80/20, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.66**	**235**	*e*Pg	**Pb**	**15 39 37.9**	**-0.2**
SRIG	**Santa Rosalia**	**0.66**	**235**	*e*P	**Pb**	**15 39 37.5**	**-0.6**
SRIG				*e*S	**Sg**	**15 39 45.3**	**-0.6**
GUYB	**Guaymas**	**0.70**	**73**	*e*P	**Pb**	**15 39 38.1**	**-0.7**
GUYB				*e*S	**Sg**	**15 39 46.8**	**-0.4**
HSIG		**1.45**	**24**	*e*Pn	**Pb**	**15 39 51.4**	**-0.2**
HSIG		**1.45**	**24**	*e*P	**Pn**	**15 39 49.9**	**-0.8**
HSIG				*e*S	**Sn**	**15 40 07.3**	**-2.5**
LPIG	**La Paz**	**3.77**	**161**	LR	LR	15 41 45.6	
	comp=Z,125nm,19.2s,baz=276,slow=33						
319A	**Douglas**	**4.20**	**29**	*e*Pn	**Pn**	**15 40 29.7**	**+1.0**
TUC	**Tucson**	**4.65**	**9**	*e*Pn	**Pn**	**15 40 36.5**	**+1.6**
113A	**Mohawk Valley,**	**5.38**	**340**	*e*Pn	**Pn**	**15 40 45.1**	**+0.3**
GLA	**Glamis**	**6.01**	**333**	*e*Pn	**Pn**	**15 40 54.8**	**+1.3**
Y14A	**Wickenburg**	**6.33**	**350**	*e*Pn	**Pn**	**15 41 00.3**	**+2.3**
X16A	**Lo Mia Camp, P**	**6.70**	**1**	*e*Pn	Pn	15 41 08.0	+4.8
MNTX	**Cornudas Mount**	**6.74**	**52**	*e*Pn	Pn	15 41 07.7	+4.2
TX31	**Lajitas Ar. Si**	**7.19**	**75**	*e*Pn	**Pn**	**15 41 13.2**	**+3.4**
TX31				*e*Pg	Pg	15 41 47.4	+5.1
TXAR	**Lajitas Array**	**7.19**	**75**	Pn	**Pn**	**15 41 13.3**	**+3.4**
	0.2nm,0.3s,baz=253,slow=13,SNR=14						
TXAR				LR	LR	15 43 05.2	
	comp=Z,11nm,20.4s,baz=0.0,slow=32						
TXAR				Lg	Lg	15 43 05.2	
	0.2nm,0.3s,baz=256,slow=23,SNR=2.0						
PFO	**Pinyon Flats O**	**7.21**	**326**	LR	LR	15 43 49.0	
	comp=Z,83nm,18.4s,baz=76,slow=35						
ANMO	**Albuquerque**	**8.47**	**30**	Lg	Lg	15 43 50.5	
	0.2nm,0.3s,baz=352,slow=19,SNR=3.1						
ZAIG	**Zacatecas**	**9.56**	**119**	*e*Pn	**Pn**	**15 41 41.8**	**-0.7**
PV14	**Lion Creek, Pa**	**10.87**	**11**	*e*Pn	**Pn**	**15 41 56.3**	**-4.0**
NV01	**Mina Array Sit**	**12.07**	**334**	*e*Pn	Pn	15 42 28.1	+11
NVAR	**Mina Array Bea**	**12.07**	**334**	Pn	Pn	15 42 28.1	+11
	0.1nm,0.3s,baz=157,slow=5.9,SNR=2.0						
NVAR				LR	LR	15 46 39.1	
	comp=Z,49nm,19.0s,baz=239,slow=36						
PD31	**Pinedale Array**	**15.13**	**6**	*e*Pn	**Pn**	**15 42 60.0**	**+1.5**
PDAR	**Pinedale Array**	**15.13**	**6**	Pn	**P**	**15 43 08.9**	**+5.2**
	0.1nm,0.3s,baz=144,slow=7.8,SNR=2.1						
K22A	**Casper**	**15.49**	**14**	*e*Pn	**Pn**	**15 42 56.4**	**-6.7**
	12nm,0.8s						
NEW	**Newport**	**20.97**	**350**	LR	LR	15 52 45.4	
	comp=Z,69nm,19.2s,baz=168,slow=38						
JTS	**Las Juntas de**	**30.48**	**119**	LR	LR	15 57 16.8	
	comp=Z,36nm,18.1s,baz=284,

10nm,1.0s
WB2 Warramunga Arr 24.24 236 *e*P **P 15 45 57.0 +0.6**
7.4nm,0.8s
WR1 Warramunga Arr 24.25 236 *e*P **P 15 45 56.9 +0.4**
WR1 *e*PcP **PcP 15 49 34.9 -0.4**
WRA Warramunga Arr 24.25 236 P **P 15 45 56.9 +0.4**
WRA PcP **PcP 15 49 34.9 -0.4**
SIJI Sorong 24.86 283 P **P 15 46 02.4 +0.3**
3.5nm,0.6s,baz=46,slow=10,SNR=4.0
AS31 Alice Springs 26.58 229 *e*P **P 15 46 16.6 -1.0**
AS31 *e*PcP **PcP 15 49 40.1 -0.4**
ASAR Alice Springs 26.58 229 P **P 15 46 16.6 -1.0**
0.9nm,0.5s,baz=60,slow=9.3,SNR=47
ASAR PcP **PcP 15 49 40.1 -0.4**
0.5nm,0.6s,baz=82,slow=2.1,SNR=4.4
H11S3 WAKE ISLAND Hy 27.56 24 T T 16 14 50.9
baz=204,slow=76,SNR=78
H11S2 WAKE ISLAND Hy 27.56 24 T T 16 14 48.9
baz=204,slow=76,SNR=113
H11S1 WAKE ISLAND Hy 27.58 24 T T 16 14 38.7
baz=204,slow=76,SNR=60
STKA Stephens Creek 28.02 206 P **P 15 46 29.6 -0.7**
1.0nm,0.5s,baz=39,slow=14,SNR=5.8
H11N1 WAKE ISLAND Hy 28.75 23 T T 16 16 19.4
baz=202,slow=76,SNR=12
H11N3 WAKE ISLAND Hy 28.76 23 T T 16 16 27.6
baz=202,slow=76,SNR=15
H11N2 WAKE ISLAND Hy 28.76 23 T T 16 16 36.6
baz=202,slow=76,SNR=12
BKZ Black Stump Fm 37.30 153 *e*P **P 15 47 50.8 -0.4**
12nm,1.2s
SNZO South Karori 38.31 156 *e*P **P 15 47 58.2 -1.4**
60nm,1.1s
KHZ Kahutara 38.81 158 *e*P **P 15 48 03.0 -0.9**
36nm,1.2s
CRLZ Canterbury Las 39.51 160 *e*P **P 15 48 08.4 -1.3**
45nm,1.1s
MJAR Matsushiro Arr 46.15 341 P **P 15 49 03.2 -0.2**
1.3nm,0.6s,baz=167,slow=8.1,SNR=5.8
MJAR PcP **PcP 15 50 38.7 +0.3**
1.9nm,0.7s,baz=164,slow=3.6,SNR=6.0
MAJO Matsushiro 46.15 341 *e*P **P 15 49 02.4 -1.1**
MAJO *e* 15 49 03.2
MAJO *e*PcP **PcP 15 50 38.7 +0.3**
MJB9 Matsu-Tunnel 46.15 341 *e*P **P 15 49 02.3 -1.2**
2.7nm,0.9s
KSRS Korea Array 51.08 332 P **P 15 49 41.3 +0.1**
0.6nm,0.4s,baz=150,slow=8.1,SNR=5.6
KSRS PcP **PcP 15 50 56.5 +0.4**
0.5nm,0.5s,baz=138,slow=3.0,SNR=4.3
KS15 Wonju Array Si 51.09 332 *e*P **P 15 49 41.3 0.0**
2.2nm,1.0s
KS15 *e*PcP **PcP 15 50 56.5 +0.4**
ASAJ Asahikawa 52.10 348 P **P 15 49 50.0 +1.4**
3.8nm,0.7s,baz=125,slow=2.6,SNR=8.1
USRK Ussuriysk Ar. 55.11 340 P **P 15 50 11.2 +0.5**
1.5nm,0.7s,baz=188,slow=4.1,SNR=4.3
PANO Nakornpanom 55.64 296 P **P 15 50 17.4 +2.3**
0.2nm,0.9s
SKNT Sakolnakorn 56.15 296 P **P 15 50 20.3 +1.6**
14nm,2.2s
NONG Nongkai 57.28 297 P **P 15 50 27.7 +1.0**
0.4nm,1.5s
UTTA Uttaradit 59.48 295 P **P 15 50 43.6 +1.6**
20μm,0.8s,202μm
PETK Petropavlovsk- 59.81 2 P **P 15 50 45.0 +1.4**
1.2nm,0.4s,baz=146,slow=6.5,SNR=10
PEA1 Petropavlovsk- 59.82 2 *e*P **P 15 50 45.0 +1.4**
LAMP Lampang 60.57 296 P **P 15 50 51.3 +1.8**
31μm,0.7s,292μm
CM31 Chiang Mai Arr 61.16 295 *e*P **P 15 50 55.5 +2.0**
9.5nm,0.8s
CMAR Chiang Mai Arr 61.16 295 P **P 15 50 54.0 +0.4**
5.6nm,0.7s,baz=123,slow=5.3,SNR=42
CMMT Chiang Mai 61.27 296 P **P 15 50 56.2 +1.9**
4.1nm,1.2s
CHTO Chiang Mai 61.28 296 *e*P **P 15 50 55.6 +1.3**
8.9nm,1.1s
SONA0 Songino Array 69.51 327 *e*P **P 15 51 47.7 +0.6**
SONM Songino Array 69.51 327 P **P 15 51 47.7 +0.6**
1.4nm,0.5s,baz=145,slow=7.0,SNR=8.0
VNDA Vanda 70.66 179 P **P 15 51 53.6 +0.1**
0.8nm,0.8s,baz=302,slow=5.3,SNR=5.4
ILAR Eielson Array 83.12 21 P **P 15 53 02.9 -0.8**
0.5nm,0.4s,baz=239,slow=6.0,SNR=14
MK32 Makanchi Array 83.64 319 *e*P **P 15 53 07.0 +0.3**
MKAR Makanchi Array 83.64 319 P **P 15 53 07.0 +0.3**
1.2nm,0.7s,baz=105,slow=5.7,SNR=14
ZALV Zalesovo Beam 84.36 326 P **P 15 53 09.6 -0.7**
1.1nm,0.5s,baz=102,slow=4.9,SNR=4.3
ZAA1 Zalesovo Array 84.36 326 *e*P **P 15 53 09.6 -0.7**
MAW Mawson 84.66 203 P **P 15 53 11.3 -0.2**
2.2nm,0.9s,baz=111,slow=6.9,SNR=6.3
MAW Mawson 84.66 203 *e*P **P 15 53 11.3 -0.2**
1.0nm,1.1s
NRIK Noril'sk 88.80 341 P **P 15 53 30.9 -0.6**
1.5nm,0.5s,baz=86,slow=1.0,SNR=4.9
NV01 Mina Array Sit 91.30 52 *e*P **P 15 53 45.2 +1.0**
NVAR Mina Array Bea 91.30 52 P **P 15 53 45.2 +1.0**
0.2nm,0.5s,baz=316,slow=2.5,SNR=2.5
YKA Yellowknife Ar 96.04 28 P **P 15 54 05.0 -0.1**
0.5nm,0.5s,baz=264,slow=4.2,SNR=5.0
YKB5 Yellowknife Ar 96.04 28 *e*P **P 15 54 05.0 -0.1**
PD31 Pinedale Array 98.30 48 *e*P **P 15 54 15.9 -0.2**
0.4nm,0.9s
PDAR Pinedale Array 98.30 48 P **P 15 54 15.9 -0.2**
0.2nm,0.3s,baz=306,slow=6.2,SNR=3.2
ARCES ARCESS Array B 109.64 343 PKiKP **PKiKP 15 59 08.6 +0.6**
1.3nm,0.7s,baz=82,slow=2.6,SNR=5.5
FIA0 FINESS Array S 114.04 336 *e*PKiKP PKPdf 15 59 16.5 -0.1
FINES FINESS Array B 114.04 336 PKP PKPdf 15 59 16.5 -0.1
0.9nm,0.7s,baz=90,slow=4.2,SNR=4.5
PLCA Paso Flores 116.51 142 PKP **PKPdf 15 59 21.3 -0.9**
1.9nm,1.0s,baz=315,slow=2.9,SNR=4.8
GERES GERESS Array B 127.21 329 PKP **PKiKP 15 59 43.5 +0.6**
0.7nm,0.7s,baz=62,slow=3.2,SNR=5.0
BDFB Brasilia 147.71 134 PKPbc **PKPbc 16 00 23.2 -0.4**
5.4nm,0.5s,baz=303,slow=2.2,SNR=9.7
TORD Torodi Ar. Bea 153.45 286 PKPbc **PKPbc 16 00 36.9 -0.4**
0.4nm,0.3s,baz=92,slow=2.5,SNR=7.9
TORD PKPab **PKPab 16 00 48.8 -0.9**
0.9nm,0.6s,baz=96,slow=4.8,SNR=8.8
TOA1 Torodi Ar. Sit 153.45 286 *e*PKPbc **PKPbc 16 00 36.9 -0.4**
TOA1 *e*PKPab **PKPab 16 00 48.8 -0.9**

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*IDC **15** 15:54:59.5±1.2, 36°.82N×70°.05E, h0km, mb3.7/4, mb1 3.8/9, mb1mx3.5/40, mbtmp3.7/9, ML3.5/5, MS3.1/1, Ms1 3.1/1, ms1mx2.3/60, Error ellipse: s-maj=24.3km s-min=17.4km az=110.0*
*NNC **15** 15:55:00.5±2.7, 36°.97N×69°.49E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=26.3km s-min=11.7km az=152.0*
*ISCJB **15** 15:55:02.4±0.8, 36°.91N±0°.06×69°.67E±0°.05, h36km, mb3.6/3, Error ellipse: s-maj=9.2km s-min=5.8km az=164.5*
ISC 15 15:55:04.6±1.1, 36°.87N±0°.09×69°.74E±0°.07, h36km, n24, σ2°16/29, mb3.7/3, 8C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.08**	**29**	P	**Pn**	**15 56 33.1**	**+0.8**
SNR=26							
KK31	**Karatay Array**	**6.26**	**5**	⇑Pn	**Pn**	**15 56 34.4**	**0.0**
1.9nm,0.5s,baz=193,slow=13,SNR=24							
KK31				⇑Sn	**Sn**	**15 57 45.8**	**+1.2**
4.3nm,0.6s							
KK31				⇑Lg	Lg	15 58 14.5	
8.7nm,0.7s,baz=183,slow=27,SNR=4.3							
UCH	**Uchtor**	**6.50**	**33**	P	**Pn**	**15 56 39.4**	**+1.3**
SNR=10							
AAK	**Ala-Archa**	**6.83**	**31**	Pn	**Pn**	**15 56 43.0**	**+0.7**
3.5nm,0.3s,baz=196,slow=5.8,SNR=15							
AAK				Sn	**Sn**	**15 57 57.7**	**-1.1**
baz=319,slow=20,SNR=2.7							
AAK				Lg	Lg	15 58 35.1	
0.4nm,0.3s,baz=315,slow=7.9,SNR=5.3							
AAK	**Ala-Archa**	**6.83**	**31**	P	**Pn**	**15 56 43.4**	**+1.1**
SNR=12							
AAK	**Ala-Archa**	**6.83**	**31**	⇑Pn	**Pn**	**15 56 42.9**	**+0.5**
12nm,0.5s							
AAK				⇑Sn	**Sn**	**15 57 58.6**	**-0.3**
6.2nm,0.7s							
AAK				⇑Lg	Lg	15 58 37.9	
15nm,1.4s							
CHMS	**Chumysh**	**7.24**	**31**	P	**Pn**	**15 56 48.7**	**+0.9**
SNR=27.1							
USP	**Ospenovka**	**7.36**	**28**	P	**Pn**	**15 56 49.6**	**+0.1**
SNR=8.3							
TKM2	**Tokmak 2**	**7.54**	**35**	P	**Pn**	**15 56 53.0**	**+0.9**
SNR=8.8							
TKM2	**Tokmak 2**	**7.54**	**35**	⇑Pn	**Pn**	**15 56 52.4**	**+0.3**
6.0nm,0.6s							
TKM2				⇓Sn	**Sn**	**15 58 22.6**	**+6.2**
3.5nm,0.9s							
TKM2				⇓Lg	Lg	15 59 01.2	
3.1nm,0.8s							
GEYT	**Alibeck**	**9.31**	**280**	Pn	**Pn**	**15 57 17.6**	**+1.4**
0.7nm,0.3s,baz=105,slow=10,SNR=7.1							
GEYT				Sn	**Sn**	**15 59 00.3**	**+0.7**
0.6nm,0.3s,baz=88,slow=16,SNR=4.7							
GYA0B	**ALIBECK ARRAY**	**9.31**	**280**	⇑P	Pn	15 57 11.0	-5.2
GYA0B				⇓S	**Sn**	**15 58 59.0**	**-0.6**
MKAR	**Makanchi Array**	**13.62**	**39**	Pn	**Pn**	**15 58 13.7**	**-1.5**
0.1nm,0.3s,baz=227,slow=14,SNR=8.8							
AB31	**Akbulak array**	**14.29**	**333**	⇓P	Pn	15 58 20.4	-3.7
1.1nm,0.5s,baz=151,slow=12,SNR=25							
AB31				S	**Sn**	**16 01 02.9**	**+1.6**
0.4nm,0.5s,baz=151,slow=23,SNR=2.5							
AKTO	**Aktyubinsk**	**15.97**	**332**	Pn	**P**	**15 58 50.6**	**+1.1**
0.6nm,0.3s,baz=143,slow=9.5,SNR=14							
AKTO	**Aktyubinsk**	**15.97**	**332**	⇓P	**Pn**	**15 58 43.0**	**-3.4**
7.4nm,0.7s							
AKTO				S	**Sn**	**16 01 37.6**	**-4.5**
1.8nm,0.8s							
BVAR	**Borovoye Array**	**16.17**	**1**	Pn	**Pn**	**15 58 44.3**	**-4.5**
0.2nm,0.3s,baz=167,slow=10,SNR=3.4							
WSAR	**Wadi Sarin**	**16.62**	**218**	LR	LR	16 06 46.7	
comp=Z,63nm,18.1s,baz=192,slow=42							
ZALV	**Zalesovo Beam**	**20.02**	**27**	P	**P**	**15 59 32.2**	**-1.9**
0.3nm,0.3s,baz=209,slow=11,SNR=6.4							
ARU	**Arti**	**20.97**	**342**	P	**P**	**15 59 46.3**	**+2.0**
0.6nm,0.3s,baz=154,slow=8.4,SNR=6.4							
NB2	**NORSAR Subarra**	**43.48**	**323**	P	**P**	**16 03 05.3**	**+1.3**
comp=Z,0.5nm,0.4s,baz=97,slow=8.6							
NOA	**NORSAR Array B**	**43.48**	**323**	P	**P**	**16 03 05.3**	**+1.3**
comp=Z,0.1nm,0.3s,baz=98,slow=7.9,SNR=5.6							
WRA	**Warramunga Arr**	**83.05**	**121**	P	**P**	**16 07 26.4**	**0.0**
comp=Z,1.2nm,1.0s,baz=316,slow=5.9,SNR=3.2							
ASAR	**Alice Springs**	**85.30**	**124**	P	**P**	**16 07 36.4**	**-1.4**
comp=Z,0.4nm,0.8s,baz=317,slow=4.8,SNR=4.8							

IDC 15 16:03:19.8±1.9, 2°.12N×126°.03E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/39, mbtmp3.5/4, Error ellipse: s-maj=178.3km s-min=25.5km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.39**	**160**	P	P	16 08 31.5	+1.0
0.9nm,0.6s,baz=338,slow=12,SNR=2.4							
ASAR	**Alice Springs**	**26.75**	**164**	P	P	16 09 02.5	+1.1
0.3nm,0.8s,baz=352,slow=7.5,SNR=2.1							
STKA	**Stephens Creek**	**36.90**	**158**	P	P	16 10 29.2	-1.2
0.7nm,0.6s,baz=340,slow=12,SNR=5.0							
MKAR	**Makanchi Array**	**58.48**	**326**	P	P	16 13 17.3	-0.5
0.3nm,0.5s,baz=126,slow=9.5,SNR=5.0							

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*IDC **15** 16:07:54.8±1.6, 34°.32N×25°.05E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.3/46, mbtmp3.5/4, ML3.9/2, Error ellipse: s-maj=29.1km s-min=20.3km az=84.0*
*ISCJB **15** 16:07:55.7±1.3, 34°.18N±0°.07×25°.04E±0°.06, h16km±10km, mb3.1/2, Error ellipse: s-maj=11.1km s-min=7.9km az=12.5*
*ATH **15** 16:07:57.0, 34°.32N×25°.04E, h25km±2km, ML2.9/3, Error ellipse: s-maj=5.3km s-min=1.7km az=351.0*
*THE **15** 16:07:57.4, 34°.31N×24°.98E, h7km±9km, ML3.1/1, Error ellipse: s-maj=9.5km s-min=2.3km az=315.0*
ISC 15 16:07:56.6±1.6, 34°.29N±0°.07×25°.04E±0°.04, h10km±10km, n19, σ0°43/24, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.75**	**346**	P	**Pg**	**16 08 11.4**	**+0.3**
SIVA				S	**Sb**	**16 08 22.1**	**+0.1**
SIVA	**Sivas**	**0.75**	**346**	P	**Pb**	**16 08 11.6**	**-0.1**
SIVA				S	**Sb**	**16 08 22.0**	**-0.1**
SIVA				AML	AML	16 08 31.9	
comp=N,2856μm,0.7s							
SIVA				AML	AML	16 08 33.9	
comp=E,4039μm,0.5s							
TMBK	**Timbaki Herakl**	**0.81**	**344**	P	**Pb**	**16 08 13.1**	**+0.3**
LAST	**Lasithi**	**0.94**	**23**	P	**Pg**	**16 08 14.7**	**-0.1**
LAST	**Lasithi**	**0.94**	**23**	P	**Pg**	**16 08 14.7**	**-0.1**
GVD	**Gavdhos**	**0.96**	**305**	P	**Pg**	**16 08 14.5**	**-0.5**
GVD	**Gavdhos**	**0.96**	**305**	P	**Pg**	**16 08 14.9**	**-0.1**
GVD				S	**Sg**	**16 08 27.9**	**+0.4**
GVD				AML	AML	16 08 41.6	
comp=N,1644μm,0.5s							
GVD				AML	AML	16 08 43.0	
comp=E,1692μm,0.5s							
IDI	**Anoyia**	**1.00**	**353**	Pn	**Pg**	**16 08 15.7**	**-0.2**
comp=E,6.9nm,0.3s,baz=168,slow=20,SNR=60							
IDI				Sn	**Sn**	**16 08 31.1**	**+0.1**
comp=E,15nm,0.3s,baz=32,slow=22,SNR=6.3							
IDI	**Anoyia**	**1.00**	**353**	P	**Pg**	**16 08 14.8**	**-1.1**
NPS	**Neapolis**	**1.08**	**26**	P	**Pg**	**16 08 17.2**	**-0.2**
NPS	**Neapolis**	**1.08**	**26**	P	**Pg**	**16 08 17.1**	**-0.3**
ZKR	**Zakros**	**1.27**	**49**	P	**Pg**	**16 08 21.1**	**0.0**
ZKR	**Zakros**	**1.27**	**49**	P	**Pg**	**16 08 21.1**	**0.0**
ZKR				S	**Sg**	**16 08 37.4**	**-0.3**
ZKR				AML	AML	16 08 47.2	
comp=N,217μm,0.6s							
ZKR				AML	AML	16 08 53.3	
comp=E,477μm,0.8s							
VAM	**Vamos**	**1.31**	**329**	P	**Pn**	**16 08 21.3**	**+0.4**
IMMV	**Iera Moni Meta**	**1.46**	**324**	P	**Pn**	**16 08 23.8**	**+0.8**
EIL	**Elat**	**9.60**	**116**	Pn	**Pn**	**16 10 15.1**	**+0.3**
comp=E,0.5nm,0.3s,baz=244,slow=8.5,SNR=5.1							
GERES	**GERESS Array B**	**16.81**	**333**	Pn	**P**	**16 11 53.9**	**-0.2**
comp=E,0.2nm,0.3s,baz=142,slow=12,SNR=8.3							
TORD	**Torodi Ar. Bea**	**29.86**	**231**	P	**P**	**16 14 03.9**	**-0.3**
comp=E,0.3nm,0.5s,baz=36,slow=7.8,SNR=4.9							
MKAR	**Makanchi Array**	**44.34**	**56**	P	**P**	**16 16 06.3**	**-0.5**
comp=E,0.1nm,0.4s,baz=275,slow=6.7,SNR=2.7							

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*DDA **15** 16:10:56.8, 34°.05N×24°.82E, h6km±4km, MW6.2*
*BJI **15** 16:10:56.3±0.0, 34°.45N×24°.99E, h5km, mb5.8/70, mB6.0/67, Ms6.1/96, Ms7 6.1/88*
*HLW **15** 16:10:57.1, 34°.57N×25°.08E, h18km±10km, Ml6.1*
*IDC **15** 16:10:58.1±0.4, 34°.41N×25°.07E, h0km, mb5.5/43, mb1 5.6/56, mb1mx5.5/58, mbtmp5.5/56, ML5.1/11, MS5.9/46, Ms1 5.9/46, ms1mx5.7/60, Error ellipse: s-maj=9.1km s-min=8.0km az=51.0*
*NIC **15** 16:10:59.9±0.4, 33°.98N×25°.22E, h12km, mb5.6, ML5.4*
*MOS **15** 16:10:59.2±1.1, 34°.40N×25°.00E, h17km, mb6.1/65, MS5.9/59, Error ellipse: s-maj=4.6km s-min=2.6km az=86.1*
*ISK **15** 16:10:59.8, 34°.29N×25°.08E, h9km, ML6.0/23*
*MED_RC **15** 16:10:59.0±0.9, 34°.31N×25°.06E, h10km, MW6.3/16, Moment Tensor Solution. Mantle waves: s16,c37; Duration: 2s7 Moment tensor: Scale 10^18 Nm; Mrr=0.13±.06; Mθθ=0.62±.04; Mφφ=0.75±.05; Mrθ=3.65±.18; Mrφ=-0.38±.04; Mθφ=-0.88±.18; Best double couple: M0=3.81000×10^18 NP1:φs=105.00000°, δ89.00000°, λ100.00000°. NP2:φs=199.00000°, δ10.00000°, λ4.00000°. Principal axes: T 3.5700, Plg45.0000°, Azm25.0000°; N 0.4800, Plg10.0000°, Azm285.0000°; P -4.0500, Plg43.0000°, Azm185.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=40s.*
*ISCJB **15** 16:11:00.0±0.3, 34°.31N±0°.01×25°.029E±0°.010, h23km±2km, mb5.9/203, MS6.0/741 Error ellipse: s-maj=2.0km s-min=1.3km az=14.3*
*NEIC **15** 16:11:00.0±0.0, 34°.25N×24°.92E, h23km, Moment Tensor Solution. s220 Moment tensor: Scale 10^18 Nm; Mrr=1.06; Mθθ=-1.04; Mφφ=-0.02; Mrθ=2.03; Mrφ=-0.17; Mθφ=-0.24; Best double couple: M0=2.30000×10^18 NP1:φs=95.00000°, δ77.00000°, λ97.00000°. NP2:φs=248.00000°, δ15.00000°, λ64.00000°. Principal axes: T 2.3300, Plg57.0000°, Azm13.0000°; N -0.0600, Plg6.0000°, Azm273.0000°; P -2.2800, Plg31.0000°, Azm179.0000°;*
*ATH **15** 16:11:01.2, 34°.34N×25°.06E, h32km±1km, ML5.8/9 Error ellipse: s-maj=3.4km s-min=1.0km az=354.0*
*NEIC **15** 16:11:02.5±0.0, 34°.40N×25°.02E, h10km, mb6.0/242, MS6.0/726, MW6.1, MW6.2, ML5.6(THE), ML5.5(THE), ML5.8(ATH), Moment Tensor Solution. s118 Moment tensor: Scale 10^18 Nm; Mrr=0.28; Mθθ=-0.46; Mφφ=0.18; Mrθ=1.47; Mrφ=-0.31; Mθφ=-0.20; Best double couple: M0=1.60000×10^18 NP1:φs=97.00000°, δ84.00000°, λ104.00000°. NP2:φs=210.00000°, δ15.00000°, λ24.00000°. Principal axes: T 1.5100, Plg49.0000°, Azm23.0000°; N 0.1000, Plg14.0000°, Azm276.0000°; P -1.6100, Plg37.0000°, Azm175.0000°; After ATH.*
NEIC Felt at Irakleio. Felt [II] at Cairo, Egypt.
*THE **15** 16:11:03.1, 34°.46N×25°.01E, h0km±1km, ML5.6/20 Error ellipse: s-maj=3.6km s-min=1.0km az=176.0*
*GCMT **15** 16:11:05.5±0.1, 34°.20N±0°.01×25°.06E±0°.01, h12km, MW6.3/136, Moment Tensor Solution. s136,c309; s126,c334; Duration: 3s6 Moment tensor: Scale 10^18 Nm; Mrr=0.48±.01; Mθθ=-0.83±.01; Mφφ=0.35±.01; Mrθ=3.66±.03; Mθφ=-0.12±.01; Mφr=-0.64±.03; Best double couple: M0=3.77800×10^18 NP1:φs=100.00000°, δ85.00000°, λ95.00000°. NP2:φs=235.00000°, δ7.00000°, λ45.00000°. Principal axes: T 3.6390, Plg49.0000°, Azm15.0000°; N 0.2770, Plg5.0000°, Azm280.0000°; P -3.9170, Plg40.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 15 16:11:02.1±0.3, 34°.45N±0°.02×25°.04E±0°.02, h22km±2km, h22km; pP-P, n2475, σ1°81/2096, mb5.9/239, MS6.0/773, 91C-37D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.60**	**341**	P	**Pn**	**16 11 15.3**	**0.0**
SIVA	**Sivas**	**0.60**	**341**	P	**Pn**	**16 11 15.4**	**0.0**
SIVA				S	**Sn**	**16 11 26.8**	**+2.4**
TMBK	**Timbaki Herakl**	**0.66**	**340**	P	**Pn**	**16 11 16.8**	**+0.6**
LAST	**Lasithi**	**0.79**	**27**	P	**Pn**	**16 11 18.6**	**+0.5**
LAST				S	**Sn**	**16 11 30.2**	**+0.9**
LAST	**Lasithi**	**0.79**	**27**	P	**Pn**	**16 11 18.5**	**+0.5**
LAST				AML	AML	16 11 48.5	
LAST				AML	AML	16 11 52.7	
IDI	**Anoyia**	**0.84**	**351**	Pn	**Pn**	**16 11 19.4**	**+0.6**
839nm,0.3s,baz=168,slow=12,SNR=295							
IDI				Sn	**Sn**	**16 11 33.9**	**+3.3**
6μm,0.3s,baz=172,slow=20,SNR=11							
IDI	**Anoyia**	**0.84**	**351**	*e*Pg	**Pn**	**16 11 18.9**	**+0.1**
IDI				*e*Sn	**Sn**	**16 11 33.9**	**+3.3**
IDI	**Anoyia**	**0.84**	**351**	P	**Pn**	**16 11 18.9**	**+0.1**
KSTL	**Kastelli Herak**	**0.85**	**1**	P	**Pn**	**16 11 18.9**	**+0.1**
IACM	**Heraklion**	**0.85**	**1**	P	**Pn**	**16 11 20.1**	**+1.3**
IACM	**Heraklion**	**0.85**	**1**	P	**Pn**	**16 11 20.4**	**+1.6**
GVD	**Gavdhos**	**0.88**	**296**	PG	**Pn**	**16 11 19.5**	**+0.3**
GVD				SG	**Sn**	**16 11 33.5**	**+2.2**
GVD	**Gavdhos**	**0.88**	**296**	*e*Pg	**Pn**	**16 11 19.4**	**+0.3**
GVD	**Gavdhos**	**0.88**	**296**	P	**Pn**	**16 11 19.4**	**+0.3**
GVD				S	**Sn**	**16 11 34.8**	**+3.5**
GVD	**Gavdhos**	**0.88**	**296**	P	**Pn**	**16 11 19.5**	**+0.3**
GVD				AML	AML	16 11 46.9	
GVD				AML	AML	16 11 47.2	
NPS	**Neapolis**	**0.94**	**30**	P	**Pn**	**16 11 20.8**	**+0.8**
NPS				S	**Sn**	**16 11 35.4**	**+2.7**
NPS	**Neapolis**	**0.94**	**30**	P	**Pn**	**16 11 20.8**	**+0.8**
NPS				AML	AML	16 11 52.3	
NPS				AML	AML	16 11 58.6	
PRNS	**Prines Rethymn**	**1.01**	**334**	P	**Pn**	**16 11 22.4**	**+1.4**
STIA	**Sitia Lasithi**	**1.14**	**49**	P	**Pb**	**16 11 24.7**	**+1.6**
ZKR	**Zakros**	**1.17**	**55**	PN	**Pb**	**16 11 24.2**	**+0.6**
ZKR				SN	**Sn**	**16 11 42.3**	**+3.8**
ZKR	**Zakros**	**1.17**	**55**	*e*Pn	**Pb**	**16 11 24.7**	**+1.1**
ZKR				*e*Pn	**Pb**	**16 11 24.7**	**+1.1**
ZKR	**Zakros**	**1.17**	**55**	P	**Pb**	**16 11 24.7**	**+1.1**
ZKR				S	**Sn**	**16 11 45.9**	**+7.4**
ZKR	**Zakros**	**1.17**	**55**	P	**Pb**	**16 11 24.2**	**+0.6**
ZKR				AML	AML	16 11 52.8	
ZKR				AML	AML	16 11 58.2	
VAM	**Vamos**	**1.18**	**324**	P	**Pb**	**16 11 24.7**	**+0.9**
VAM				S	**Sn**	**16 11 40.5**	**+1.8**
VAM	**Vamos**	**1.18**	**324**	P	**Pb**	**16 11 25.0**	**+1.2**
VAM				AML	AML	16 11 56.6	
VAM				AML	AML	16 11 59.5	
IMMV	**Iera Moni Meta**	**1.33**	**319**	PN	**Pb**	**16 11 27.7**	**+1.3**
IMMV	**Iera Moni Meta**	**1.33**	**319**	P	**Pb**	**16 11 26.9**	**+0.5**
IMMV	**Iera Moni Meta**	**1.33**	**319**	P	**Pb**	**16 11 27.4**	**+1.0**
IMMV				AML	AML	16 12 17.4	
IMMV				AML	AML	16 12 18.4	
CHAN	**Chania**	**1.35**	**323**	P	**Pb**	**16 11 27.6**	**+1.0**
THR9	**Santorini-Faro**	**1.92**	**8**	P	**Pb**	**16 11 36.1**	**-0.3**
THR6	**Thira Island,**	**1.92**	**9**	*e*Pn	**Pb**	**16 11 34.9**	**-1.5**
THR6	**Thira Island,**	**1.92**	**9**	P	**Pb**	**16 11 34.9**	**-1.5**
SAP1	**Santorini-Akro**	**1.93**	**8**	P	**Pb**	**16 11 35.1**	**-1.4**
SANT	**Santorini**	**1.95**	**10**	PN	**Pb**	**16 11 35.9**	**-1.0**
SANT				SN	**Sb**	**16 12 02.9**	**+2.2**
SANT	**Santorini**	**1.95**	**10**	*e*Pn	**Pb**	**16 11 36.0**	**-0.9**
SANT	**Santorini**	**1.95**	**10**	P	**Pb**	**16 11 35.5**	**-1.4**
SANT	**Santorini**	**1.95**	**10**	⇑*i*P	**Pb**	**16 11 36.9**	**0.0**
SANT	**Santorini**	**1.95**	**10**	P	**Pb**	**16 11 35.6**	**-1.2**
THT1	**Athinios (Pele**	**1.96**	**9**	P	**Pb**	**16 11 35.7**	**-1.3**
THT1				S	**Sb**	**16 12 02.8**	**+1.9**
THR3	**Thira Island,**	**1.98**	**8**	*e*Pn	**Pb**	**16 11 36.2**	**-1.1**
THR3	**Thira Island,**	**1.98**	**8**	P	**Pb**	**16 11 36.2**	**-1.1**
THR5	**Thira Island,**	**1.98**	**7**	P	**Pb**	**16 11 36.6**	**-0.8**
SAP2K	**Karterados**	**1.98**	**9**	P	**Pb**	**16 11 36.2**	**-1.3**
SFIR	**Foira Santorin**	**1.99**	**9**	P	**Pb**	**16 11 37.6**	**0.0**
THR7	**Fira-Santorini**	**1.99**	**9**	P	**Pb**	**16 11 36.7**	**-0.9**
ANAF	**Anafi Island**	**1.99**	**17**	P	**Pb**	**16 11 36.2**	**-1.4**
ANAF	**Anafi Island**	**1.99**	**17**	P	**Pb**	**16 11 36.7**	**-1.0**
ANAF				AML	AML	16 12 27.1	
ANAF				AML	AML	16 12 27.4	
SAP3	**Santorini-Thir**	**2.00**	**7**	P	**Pb**	**16 11 36.7**	**-1.0**
THT2	**Imerovigli**	**2.00**	**9**	P	**Pb**	**16 11 37.0**	**-0.8**
ANKY	**Antikythira Is**	**2.01**	**315**	*e*Pn	**Pb**	**16 11 37.2**	**-0.7**
ANKY	**Antikythira Is**	**2.01**	**315**	P	**Pb**	**16 11 37.2**	**-0.7**
ANKY	**Antikythira Is**	**2.01**	**315**	P	**Pb**	**16 11 37.3**	**-0.6**
THR2	**Thira island,**	**2.02**	**9**	*e*Pn	**Pb**	**16 11 37.0**	**-1.1**
THR2	**Thira island,**	**2.02**	**9**	P	**Pb**	**16 11 37.0**	**-1.1**
SAP4	**Santorini-Oia**	**2.04**	**7**	P	**Pb**	**16 11

DAT *i* S **Sb** **16 12 31.9 -1.2**
DAT IVMs_BB IVMs_BB 16 13 20.0
comp=Z,203μm,11.3s
ARG Arkhangelos 3.07 54 PN **Pn** **16 11 51.3 +2.0**
ARG Arkhangelos 3.07 54 *e*Pn **Pn** **16 11 51.4 +2.0**
ARG Arkhangelos 3.07 54 P **Pn** **16 11 51.4 +2.0**
ARG Arkhangelos 3.07 54 *e*P **Pn** **16 11 51.4 +2.0**
ARG Arkhangelos 3.07 54 P **Pn** **16 11 51.4 +2.0**
DATC Datca-Mugla 3.14 42 PN **Pn** **16 11 52.3 +2.1**
BODT Bodrum 3.19 35 PN **Pn** **16 11 53.3 +2.3**
BODT Bodrum 3.19 35 *e*Pn **Pn** **16 11 52.6 +1.6**
BODT Bodrum 3.19 35 P **Pn** **16 11 52.6 +1.6**
BDRM Kayabasi 3.26 36 *i* P **Pn** **16 11 54.4 +2.5**
BDRM IVMs_BB IVMs_BB 16 13 33.0
comp=Z,480μm,12.3s
KRND KRANIDI 3.31 333 P **Pn** **16 11 53.8 +1.3**
KRND KRANIDI 3.31 333 P **Pn** **16 11 54.1 +1.5**
BBRN Bozburun-Marma 3.31 47 PN **Pn** **16 11 54.4 +1.7**
DID Didima 3.38 335 *e*Pn **Pn** **16 11 54.7 +1.0**
DID Didima 3.38 335 P **Pn** **16 11 54.7 +1.0**
DID Didima 3.38 335 P **Pn** **16 11 54.7 +1.0**
MRSB Marmaris-Mugla 3.42 48 PN **Pn** **16 11 56.4 +2.2**
EPID Epidavros 3.52 334 P **Pn** **16 11 57.0 +1.4**
VLY Voula,Athens 3.54 344 *e*Pn **Pn** **16 11 56.8 +1.0**
VLY Voula,Athens 3.54 344 P **Pn** **16 11 56.8 +1.0**
VLY Voula,Athens 3.54 344 P **Pn** **16 11 57.7 +1.9**
SMG Samos 3.56 24 P **Pn** **16 11 57.9 +1.8**
SMG Samos 3.56 24 P **Pn** **16 11 57.8 +1.8**
MATC Matruh 3.60 149 P **Pn** **16 11 53.4 -3.2**
baz=150
MATC AMP 16 12 00.0
baz=150
MATC S **Sn** **16 12 34.9 -3.6**
baz=150
VLX Vlachokerasia 3.63 324 *e*Pn **Pn** **16 11 58.3 +1.2**
VLX Vlachokerasia 3.63 324 P **Pn** **16 11 58.3 +1.2**
VLX Vlachokerasia 3.63 324 P **Pn** **16 11 58.9 +1.9**
PYL PYLOS 3.63 313 *e*Pn **Pn** **16 11 58.2 +1.2**
PYL PYLOS 3.63 313 P **Pn** **16 11 58.2 +1.2**
PYL PYLOS 3.63 313 P **Pn** **16 11 56.8 -0.2**
ATHU Athens Univers 3.65 344 *e*Pn **Pn** **16 11 58.6 +1.3**
ATHU Athens Univers 3.65 344 P **Pn** **16 11 58.6 +1.3**
ATHU Athens Univers 3.65 344 P **Pn** **16 11 58.7 +1.4**
ATH Athens Observa 3.67 343 P **Pn** **16 11 59.1 +1.5**
ATH Athens Observa 3.67 343 P **Pn** **16 11 59.5 +1.9**
GCAM G?zelcaml? 3.70 28 PN **Pn** **16 12 00.8 +2.9**
GCAM G?zelcaml? 3.70 28 *i* P **Pn** **16 12 01.2 +3.3**
GCAM IVMs_BB IVMs_BB 16 13 49.0
comp=Z,545μm,8.0s
PTL Penteli 3.71 345 *e*Pn **Pn** **16 12 00.0 +1.8**
PTL Penteli 3.71 345 P **Pn** **16 12 00.0 +1.8**
PTL Penteli 3.71 345 P **Pn** **16 11 59.9 +1.6**
ITM Ithomi 3.72 318 PN **Pn** **16 12 00.7 +2.4**
ITM Ithomi 3.72 318 *e*Pn **Pn** **16 11 59.8 +1.6**
ITM Ithomi 3.72 318 P **Pn** **16 11 59.5 +1.2**
ITM Ithomi 3.72 318 P **Pn** **16 11 59.4 +1.2**
YER Yerkesik 3.75 44 PN **Pn** **16 12 01.0 +2.2**
YER Yerkesik 3.75 44 *e*Pn **Pn** **16 12 01.3 +2.5**
YER Yerkesik 3.75 44 P **Pn** **16 12 01.3 +2.5**
YER Yerkesik 3.75 44 *e*P **Pn** **16 12 01.3 +2.5**
DALY Dalyan (Mula) 3.77 50 PN **Pn** **16 12 01.2 +2.3**
DALY Dalyan (Mula) 3.77 50 *i* P **Pn** **16 12 02.6 +3.7**
DALY *i* S **Sn** **16 12 47.7 +5.1**
DALY IVMs_BB IVMs_BB 16 13 52.0
comp=Z,361μm,10.0s
TURN Turunc 3.77 49 PN **Pn** **16 11 57.2 -1.8**
TURN Turunc 3.77 49 *i* P **Pn** **16 11 57.3 -1.6**
TURN *i* S **Sn** **16 12 39.8 -2.9**
TURN IVMs_BB IVMs_BB 16 13 42.0
comp=Z,467μm,11.0s
TRIP Tripoli 3.81 325 P **Pn** **16 12 01.2 +1.7**
TRIP Tripoli 3.81 325 P **Pn** **16 12 01.6 +2.1**
ACOR Acrocorinthos 3.86 333 P **Pn** **16 12 01.4 +1.3**
DGB zmir 3.89 22 *i* P **Pn** **16 12 03.1 +2.5**
DGB IVMs_BB IVMs_BB 16 13 59.0
comp=Z,376μm,10.6s
LOUT Loutraki 3.91 335 P **Pn** **16 12 01.8 +1.0**
GMLD Gumuldur 3.92 22 PN **Pn** **16 12 03.4 +2.4**
LTK Loutraki 3.94 335 *e*Pn **Pn** **16 12 02.4 +1.1**
LTK Loutraki 3.94 335 P **Pn** **16 12 02.4 +1.1**
LTK Loutraki 3.94 335 P **Pn** **16 12 02.5 +1.2**
AYDN Tasoluk 3.94 35 *i* P **Pn** **16 12 04.5 +3.2**
AYDN *i* S **Sb** **16 12 54.8 -3.4**
AYDN IVMs_BB IVMs_BB 16 13 58.0
comp=Z,371μm,9.6s
FETY Fethiye 3.95 55 PN **Pn** **16 12 03.2 +1.8**
FETY Fethiye 3.95 55 *e*Pn **Pn** **16 12 02.3 +0.9**
FETY Fethiye 3.95 55 P **Pn** **16 12 02.3 +0.9**
FETY Fethiye 3.95 55 *i* P **Pn** **16 12 03.9 +2.5**
FETY *i* S **Sn** **16 12 48.5 +1.4**
FETY IVMs_BB IVMs_BB 16 13 58.0
comp=Z,120μm,8.6s
ZEY zmir 3.96 17 *i* P **Pn** **16 12 04.1 +2.6**
ZEY IVMs_BB IVMs_BB 16 13 55.0
comp=Z,345μm,13.6s
VILL Villia 3.96 340 P **Pn** **16 12 02.9 +1.3**
CESE eme 4.00 14 PN **Pn** **16 12 04.4 +2.3**
CHOS Chios island 4.01 11 PN **Pn** **16 12 04.5 +2.2**
CHOS Chios island 4.01 11 P **Pn** **16 12 04.0 +1.7**
VIL2 Platees 4.02 340 P **Pn** **16 12 03.0 +0.6**
EREA Eretria 4.06 348 P **Pn** **16 12 04.9 +1.9**
EREA Eretria 4.06 348 P **Pn** **16 12 04.9 +1.9**
THAL Thalero 4.06 332 P **Pn** **16 12 05.6 +2.7**
THAL Thalero 4.06 332 P **Pn** **16 12 05.7 +2.7**
KSL Kastellorizon 4.08 64 P **Pn** **16 12 03.6 +0.4**
KSL Kastellorizon 4.08 64 P **Pn** **16 12 03.5 +0.4**
URLA Izmir 4.10 17 PN **Pn** **16 12 06.1 +2.6**
URLA Izmir 4.10 17 *i* P **Pn** **16 12 06.4 +2.9**
URLA IVMs_BB IVMs_BB 16 13 59.0
comp=Z,169μm,11.2s
GUR Goura 4.11 329 *e*Pn **Pn** **16 12 04.3 +0.6**
GUR Goura 4.11 329 P **Pn** **16 12 04.3 +0.6**
GUR Goura 4.11 329 P **Pn** **16 12 05.0 +1.3**
AKAS Kas 4.13 63 PN **Pn** **16 12 05.5 +1.5**
AKAS Kas 4.13 63 *i* P **Pn** **16 12 05.9 +1.9**
AKAS *i* S **Sn** **16 12 54.4 +2.6**
AKAS IVMs_BB IVMs_BB 16 14 15.0
comp=Z,132μm,10.5s
PROD Prodromos 4.18 336 P **Pn** **16 12 05.1 +0.6**
PROD Prodromos 4.18 336 P **Pn** **16 12 05.6 +1.0**
AYDB Zeytinkoy-Aydi 4.18 33 PN **Pn** **16 12 07.3 +2.6**
BLCB Balcova 4.24 22 PN **Pn** **16 12 07.9 +2.5**
KLV Kalavryta, Ach 4.28 328 P **Pn** **16 12 06.5 +0.5**
KLV Kalavryta, Ach 4.28 328 P **Pn** **16 12 07.1 +1.1**
KRBN Karaburun 4.31 16 PN **Pn** **16 12 08.8 +2.5**
MRKA Markates 4.41 345 P **Pn** **16 12 09.4 +1.7**
MRKA Markates 4.41 345 P **Pn** **16 12 09.3 +1.6**
DRO Drossia 4.41 323 P **Pn** **16 12 10.6 +2.8**
DRO Drossia 4.41 323 P **Pn** **16 12 10.0 +2.2**
SKY Skiros Island 4.44 355 *e*Pn **Pn** **16 12 09.8 +1.7**
SKY Skiros Island 4.44 355 P **Pn** **16 12 09.8 +1.7**
SKY Skiros Island 4.44 355 P **Pn** **16 12 10.2 +2.1**
DSF Desfina 4.44 334 P **Pn** **16 12 08.6 +0.4**
DSF Desfina 4.44 334 P **Pn** **16 12 09.5 +1.3**
FOCM Foa 4.46 17 PN **Pn** **16 12 11.4 +2.9**
LKR Lokris 4.50 339 P **Pn** **16 12 10.2 +1.2**
LAKA Lakka 4.52 328 *e*Pn **Pn** **16 12 11.1 +1.8**
LAKA Lakka 4.52 328 P **Pn** **16 12 11.1 +1.8**
LAKA Lakka 4.52 328 P **Pn** **16 12 11.8 +2.6**
ATAL Atalanti 4.54 340 *e*Pn **Pn** **16 12 10.6 +1.1**
ATAL Atalanti 4.54 340 P **Pn** **16 12 10.6 +1.1**
ATAL Atalanti 4.54 340 P **Pn** **16 12 11.3 +1.8**
KALE Kalithea 4.58 330 *e*Pn **Pn** **16 12 12.0 +1.9**
KALE Kalithea 4.58 330 P **Pn** **16 12 12.0 +1.9**
KALE Kalithea 4.58 330 P **Pn** **16 12 12.3 +2.2**
ELL Elmali 4.58 59 PN **Pn** **16 12 12.4 +2.2**
TRIZ Trizonia 4.58 329 P **Pn** **16 12 10.6 +0.5**
DENT Denizli 4.62 43 PN **Pn** **16 12 13.3 +2.7**
RLS Riolos of Patr 4.62 322 P **Pn** **16 12 13.3 +2.7**
SERG Sergoula 4.63 330 P **Pn** **16 12 11.3 +0.5**
SERG Sergoula 4.63 330 P **Pn** **16 12 13.0 +2.2**
SMIA Simia 4.66 342 P **Pn** **16 12 12.8 +1.6**
SMIA Simia 4.66 342 P **Pn** **16 12 13.2 +2.0**
EFP Efpalio 4.71 328 P **Pn** **16 12 13.8 +2.0**
EFP Efpalio 4.71 328 P **Pn** **16 12 14.4 +2.6**
AKUM Antalya-Kumluc 4.71 65 *i* P **Pn** **16 12 13.9 +2.0**
AKUM *i* S **Sn** **16 13 05.1 -0.8**
AKUM IVMs_BB IVMs_BB 16 14 55.0
comp=Z,106μm,6.1s
AKUM IAML_P
comp=Z,43μm,0.3s

ZEDA zmir-Bergama 4.79 19 *i* P **Pn** **16 12 16.6 +3.6**
ZEDA IVMs_BB IVMs_BB 16 14 29.0
comp=Z,157μm,4.8s
SIGR SIGRI 4.80 8 P **Pn** **16 12 13.8 +0.8**
GOMA Golmarmara-Man 4.84 28 PN **Pn** **16 12 16.9 +3.3**
ANX Ano Chora 4.84 330 P **Pn** **16 12 15.6 +1.9**
PRK Paraskevi 4.89 11 P **Pn** **16 12 16.9 +2.6**
PRK Paraskevi 4.89 11 P **Pn** **16 12 17.1 +2.8**
MANT Manisa 4.93 34 *e*Pn **Pn** **16 12 17.7 +2.6**
MANT Manisa 4.93 34 *i* P **Pn** **16 12 19.0 +3.9**
MANT IVMs_BB IVMs_BB 16 14 38.0
comp=Z,277μm,12.6s
AKHS Akhisar 4.95 26 *i* P **Pn** **16 12 18.1 +2.9**
AKHS IVMs_BB IVMs_BB 16 14 38.0
comp=Z,244μm,9.6s
AKS Akhisar 4.95 26 PN **Pn** **16 12 18.4 +3.3**
KEMT Kemer-ANTALYA 4.98 63 PN **Pn** **16 12 18.0 +2.4**
KULA Kula-Manisa 4.99 35 PN **Pn** **16 12 18.7 +2.9**
KULA Kula-Manisa 4.99 35 P **Pn** **16 12 18.7 +2.9**
KORT Korkueli 5.01 58 PN **Pn** **16 12 18.6 +2.5**
KORT Korkueli 5.01 58 *i* P **Pn** **16 12 19.1 +2.9**
KORT *i* S **Sn** **16 13 19.7 +6.3**
KORT IVMs_BB IVMs_BB 16 14 43.0
comp=Z,192μm,13.3s
KFL Anninata 5.01 318 P **Pn** **16 12 16.3 +0.3**
AYVA Ayvalik 5.03 15 *i* P Pn 16 12 21.5 +5.4
AYVA IVMs_BB IVMs_BB 16 14 45.0
comp=Z,363μm,12.3s
PVO Paravola 5.03 327 P **Pn** **16 12 18.1 +1.8**
PVO Paravola 5.03 327 P **Pn** **16 12 19.8 +3.6**
AGG Agios Georgios 5.06 335 *e*Pn **Pn** **16 12 18.3 +1.6**
AGG Agios Georgios 5.06 335 P **Pn** **16 12 17.8 +1.2**
AGG Agios Georgios 5.06 335 *e*P **Pn** **16 12 18.3 +1.6**
NEO Neokhori 5.06 344 P **Pn** **16 12 18.3 +1.6**
NEO Neokhori 5.06 344 P **Pn** **16 12 18.5 +1.8**
GPNR Gulpinar-Canak 5.07 10 PN **Pn** **16 12 20.1 +3.3**
XOR Xorichti 5.12 344 P **Pn** **16 12 19.1 +1.5**
EVR Evrytania 5.16 331 P **Pn** **16 12 18.6 +0.5**
VLS Valsamata 5.17 317 P **Pn** **16 12 19.0 +0.8**
PDO Prodromos 5.18 324 P **Pn** **16 12 19.3 +1.0**
ANTB Antalya 5.18 60 PN **Pn** **16 12 20.8 +2.5**
BRDR BURDUR-Merkez 5.20 50 *i* P **Pn** **16 12 21.2 +2.6**
BRDR IVMs_BB IVMs_BB 16 14 53.0
comp=Z,295μm,10.3s
SWA2 5.20 176 P **Pn** **16 12 16.0 -2.6**
baz=176
FYTO Fytoko, Volos 5.23 342 *e*Pn **Pn** **16 12 20.4 +1.4**
FYTO Fytoko, Volos 5.23 342 P **Pn** **16 12 20.4 +1.4**
FYTO Fytoko, Volos 5.23 342 P **Pn** **16 12 20.8 +1.9**
KHL Karahalli 5.29 42 PN **Pn** **16 12 22.9 +3.0**
KHAL Karahalli 5.31 41 *i* P **Pn** **16 12 21.6 +1.5**
KHAL IVMs_BB IVMs_BB 16 14 53.0
comp=Z,237μm,13.9s
USAK Uak-Merkez 5.32 36 *i* P **Pn** **16 12 22.9 +2.6**
USAK IVMs_BB IVMs_BB 16 14 53.0
comp=Z,342μm,9.9s
STEP BALIKESIR_Sava 5.36 23 *i* P **Pn** **16 12 22.7 +1.8**
STEP IVMs_BB IVMs_BB 16 14 58.0
comp=Z,226μm,14.6s
FSK Fiskardo 5.39 319 P **Pn** **16 12 22.2 +1.0**
BCK Bucak 5.41 55 PN **Pn** **16 12 24.3 +2.8**
BAYC CANAKKALE_Bayr 5.42 12 *i* P **Pn** **16 12 22.6 +1.1**
BAYC IVMs_BB IVMs_BB 16 14 57.0
comp=Z,267μm,10.3s
LIA Limnos Island 5.44 1 P **Pn** **16 12 23.2 +1.4**
BOZC Bozcaada 5.44 8 *i* P **Pn** **16 12 24.0 +2.1**
BOZC IVMs_BB IVMs_BB 16 14 57.0
comp=Z,239μm,10.7s
EVGI Lefkada island 5.46 321 P **Pn** **16 12 25.6 +3.5**
EZN Ezine 5.46 10 *e*Pn **Pn** **16 12 23.4 +1.2**
EZN Ezine 5.46 10 P **Pn** **16 12 23.4 +1.2**
EZN Ezine 5.46 10 ⇑*i* P **Pn** **16 12 24.5 +2.3**
EZN Ezine 5.46 10 *e*P **Pn** **16 12 23.4 +1.2**
LKD2 Lefkada island 5.58 322 P **Pn** **16 12 23.9 0.0**
TSLK Tsoukalades, L 5.61 322 P **Pn** **16 12 25.7 +1.4**
THL Klokotos Trika 5.65 335 P **Pn** **16 12 24.8 0.0**
BALB Balikesir 5.65 23 *e*Pn **Pn** **16 12 27.4 +2.6**
BALY Balya 5.67 21 *i* P **Pn** **16 12 27.0 +2.0**
BALY IVMs_BB IVMs_BB 16 15 07.0
comp=Z,231μm,11.4s
GADA Gvkgeada 5.77 7 *e*Pn **Pn** **16 12 27.7 +1.3**
GADA Gvkgeada 5.77 7 P **Pn** **16 12 27.7 +1.3**
DURS Dursunbey 5.83 27 *i* P **Pn** **16 12 29.8 +2.5**
DURS IVMs_BB IVMs_BB 16 15 15.0
comp=Z,364μm,9.5s
BAGO Egridir - ISPA 5.83 51 *i* P **Pn** **16 12 29.8 +2.4**
BAGO IVMs_BB IVMs_BB 16 15 18.0
comp=Z,125μm,10.8s
GDZ Gediz 5.84 36 *i* P **Pn** **16 12 29.8 +2.3**
GDZ IVMs_BB IVMs_BB 16 15 12.0
comp=Z,161μm,9.6s
KEPZ Antalya-Kepez 5.87 64 *i* P **Pn** **16 12 28.1 +0.2**
KEPZ IVMs_BB IVMs_BB 16 15 45.0
comp=Z,66μm,5.0s
OUR Ouranopolis 5.93 352 *e*Pn **Pn** **16 12 29.9 +1.3**
OUR Ouranopolis 5.93 352 P **Pn** **16 12 29.9 +1.3**
OUR Ouranopolis 5.93 352 *e*P **Pn** **16 12 29.9 +1.3**
LIT Litokhoron 6.00 341 *e*Pn **Pn** **16 12 30.6 +1.0**
LIT Litokhoron 6.00 341 P **Pn** **16 12 30.3 +0.8**
LIT Litokhoron 6.00 341 *e*P **Pn** **16 12 30.6 +1.0**
SMTH Samothraki Isl 6.02 4 *e*Pn **Pn** **16 12 30.6 +0.7**
SMTH Samothraki Isl 6.02 4 P **Pn** **16 12 30.6 +0.7**
PPCY Paphos 6.03 84 P **Pn** **16 12 28.4 -1.6**
baz=263
AFYO Afyonkarahisar 6.05 43 *i* P **Pn** **16 12 32.1 +1.8**
AFYO IVMs_BB IVMs_BB 16 15 21.0
comp=Z,158μm,14.0s
PLG Polygyros 6.05 348 P **Pn** **16 12 31.3 +1.0**
MEV Metsovon 6.13 331 *e*Pn **Pn** **16 12 35.5 +3.9**
MEV Metsovon 6.13 331 P **Pn** **16 12 35.5 +3.9**
KNL Balıkesir 6.14 18 *i* P **Pn** **16 12 33.9 +2.5**
KNL IVMs_BB IVMs_BB 16 15 30.0
comp=Z,325μm,8.9s
THAS Thassos island 6.15 358 P **Pn** **16 12 32.6 +1.0**
JAN Janina 6.18 328 *e*Pn **Pn** **16 12 32.8 +0.7**
JAN Janina 6.18 328 P **Pn** **16 12 32.8 +0.7**
JAN Janina 6.18 328 *e*P **Pn** **16 12 32.8 +0.7**
KPRO Kipourio 6.23 333 P **Pn** **16 12 32.5 -0.3**
ALFC Alefka 6.25 81 P **Pn** **16 12 31.9 -1.2**
baz=261
ALFC S **Sn** **16 13 43.8 -0.2**
IGT Igoumenitsa 6.32 325 *e*Pn **Pn** **16 12 32.9 -1.1**
IGT Igoumenitsa 6.32 325 P **Pn** **16 12 32.9 -1.1**
IGT Igoumenitsa 6.32 325 *e*P **Pn** **16 12 32.9 -1.1**
KTI Kastanea 6.37 339 P **Pn** **16 12 37.8 +3.0**
BOLV Bolvadin 6.38 46 *i* P **Pn** **16 12 35.9 +1.0**
BOLV IVMs_BB IVMs_BB 16 15 41.0
comp=Z,299μm,10.9s
THE Thessaloniki 6.39 346 P **Pn** **16 12 35.5 +0.6**
KZN Kozani 6.40 337 P **Pn** **16 12 35.7 +0.6**
SART Tekirdag 6.45 15 *i* P **Pn** **16 12 38.3 +2.4**
SART IVMs_BB IVMs_BB 16 15 40.0
comp=Z,110μm,9.9s
SZAC Souni 6.47 85 P **Pn** **16 12 34.1 -2.0**
baz=265
DOGA KONYA_Doganhis 6.47 54 *i* P **Pn** **16 12 38.4 +2.2**
DOGA IVMs_BB IVMs_BB 16 15 44.0
comp=Z,153μm,10.5s
ALN Alexandroupoli 6.48 7 *e*Pn **Pn** **16 12 37.9 +1.7**
ALN Alexandroupoli 6.48 7 P **Pn** **16 12 37.3 +1.1**
ALN Alexandroupoli 6.48 7 *e*P **Pn** **16 12 37.9 +1.7**
SOH Sokhos 6.50 349 P **Pn** **16 12 38.0 +1.5**
AUKIR Kırka- Seyitga 6.52 41 *e*P **Pn** **16 12 40.0 +3.2**
AUKIR IVMs_BB IVMs_BB 16 15 41.0
comp=Z,183μm,10.6s
PENT Pentalofos 6.52 333 P **Pn** **16 12 40.3 +3.4**
KAVA Kavala 6.55 356 *e*Pn **Pn** **16 12 38.1 +1.0**
KAVA Kavala 6.55 356 P **Pn** **16 12 38.1 +1.0**
ULDT Uludag 6.55 29 *i* P **Pn** **16 12 39.7 +2.4**
ULDT IVMs_BB IVMs_BB 16 15 39.0
comp=Z,275μm,10.8s
RDO Rodhopi 6.70 3 *e*Pn **Pn** **16 12 39.7 +0.6**
RDO Rodhopi 6.70 3 P **Pn** **16 12 39.7 +0.6**
KEK Kerkira 6.72 323 *e*Pn **Pn** **16 12 39.4 -0.1**
KEK *e*Pn **Pn** **16 12 39.4 -0.1**
KEK Kerkira 6.72 323 P **Pn** **16 12 39.4 -0.1**
HMYD Mayadein 6.74 132 P **Pn** **16 12 36.9 -2.8**
baz=132
HNAT Natroun 6.74 134 P **Pn** **16 12 37.1 -2.7**
baz=134
SRN Sarande 6.75 325 P **Pn** **16 12 39.8 -0.1**
SRS Serrai 6.75 351 P **Pn** **16 12 39.5 -0.4**

MAMC Mammari 6.76 82 P **Pn** **16 12 38.6 -1.5**
baz=262
ERMK Ermenek 6.78 69 *i* P **Pn** **16 12 40.9 +0.5**
KMER Konya-Meram 6.79 59 *i* P **Pn** **16 12 43.9 +3.4**
KMER IVMs_BB IVMs_BB 16 15 57.0
comp=Z,110μm,13.0s
CSS Mathiatis 6.84 83 P **Pn** **16 12 40.8 -0.4**
baz=263
CSS S **Sn** **16 13 58.1 -0.4**
KONT Konya--Tatoy 6.87 57 *i* P **Pn** **16 12 43.9 +2.4**
KONT IVMs_BB IVMs_BB 16 15 59.0
comp=Z,112μm,9.1s
CIFT Cifteler, Eski 6.87 43 *i* P **Pn** **16 12 44.4 +2.8**
CIFT IVMs_BB IVMs_BB 16 15 57.0
comp=Z,157μm,14.1s
KNT Kendrikon 6.91 346 P **Pn** **16 12 42.6 +0.5**
BORA Eskisehir 6.93 37 *i* P **Pn** **16 12 45.8 +3.4**
BORA IVMs_BB IVMs_BB 16 15 56.0
comp=Z,125μm,10.8s
NVR Nevrokopi 6.95 353 P **Pn** **16 12 44.0 +1.3**
FNA Florina 6.96 336 *e*Pn **Pn** **16 12 42.4 -0.4**
FNA Florina 6.96 336 P **Pn** **16 12 42.4 -0.4**
FNA Florina 6.96 336 *e*P **Pn** **16 12 42.4 -0.4**
KDHN Kadinhani 7.00 52 *i* P **Pn** **16 12 45.0 +1.7**
KDHN IVMs_BB IVMs_BB 16 16 08.0
comp=Z,167μm,9.9s
YLV Yalova 7.01 28 ⇑*i* P **Pn** **16 12 45.7 +2.2**
TPE Tepelena 7.08 327 P **Pn** **16 12 43.1 -1.2**
VAY Valandovo 7.13 345 *i* Pn **Pn** **16 12 48.1 +3.0**
SRCK Saricakaya, Es 7.14 37 *i* P **Pn** **16 12 49.0 +3.8**
SRCK IVMs_BB IVMs_BB 16 16 03.0
comp=Z,265μm,10.5s
BUY Buyukada 7.16 26 *i* P **Pn** **16 12 48.9 +3.4**
BUY IVMs_BB IVMs_BB 16 16 11.0
comp=Z,225μm,9.6s
GULN MERSIN_Gulnar 7.16 74 *i* P **Pn** **16 12 45.6 +0.1**
GULN IVMs_BB IVMs_BB 16 16 40.0
comp=Z,58μm,14.5s
KDZ Kurdzhali 7.19 2 *e*P Pn 16 12 53.3 +7.3
AUSIV SIVRIHISAR 7.20 44 *i* P **Pn** **16 12 49.0 +2.8**
AUSIV IVMs_BB IVMs_BB 16 16 07.0
comp=Z,171μm,13.3s
ELBA Catalca 7.20 21 *i* P **Pn** **16 12 47.9 +1.8**
ELBA IVMs_BB IVMs_BB 16 16 15.0
comp=Z,119μm,12.1s
MMB Musomiste 7.20 352 *e*P **Pn** **16 12 49.5 +3.4**
RZN Rozhen 7.23 358 *e*P **Pn** **16 12 48.9 +2.3**
KOT Kottamia 7.31 126 P **Pn** **16 12 44.6 -3.0**
baz=127
GEYV SAKARYA_Geyve 7.33 33 *i* P **Pn** **16 12 50.5 +2.7**
GEYV IVMs_BB IVMs_BB 16 16 15.0
comp=Z,251μm,8.8s
ISK Istanbul-Kandi 7.33 25 P **Pn** **16 12 49.4 +1.6**
HSAF As Saff 7.33 129 P **Pn** **16 12 45.4 -2.5**
baz=130
PHSR Pinarhisar 7.43 15 ⇑*i* P **Pn** **16 12 51.4 +2.2**
OHR Ohrid 7.45 334 *i* Pn **Pn** **16 12 51.7 +2.2**
VLO Vlora 7.45 325 P **Pn** **16 12 48.6 -0.9**
GLL Jalalah 7.46 129 P **Pn** **16 12 46.7 -3.0**
baz=129
AUMIH MIHALICIK 7.46 42 *i* P **Pn** **16 12 52.0 +2.3**
AUMIH IVMs_BB IVMs_BB 16 16 16.0
comp=Z,123μm,16.3s
CTYL Yalikoy Yolu 7.46 19 ⇓*i* P **Pn** **16 12 52.5 +2.8**
HHAG Hagoal 7.47 125 P **Pn** **16 12 47.0 -2.8**
baz=125
KIRK Kırklareli 7.50 12 *i* P **Pn** **16 12 52.0 +1.9**
KIRK IVMs_BB IVMs_BB 16 16 22.0
comp=Z,149μm,10.1s
EDRB Edirne 7.50 10 P **Pn** **16 12 52.1 +1.9**
KRUS Krusevo 7.53 338 *i* Pn **Pn** **16 12 52.5 +1.9**
KKB Krupnik 7.56 349 *e*P **Pn** **16 12 54.1 +3.1**
EREN Erenkoy 7.57 79 *i* P **Pn** **16 12 51.1 +0.1**
EREN IVMs_BB IVMs_BB 16 17 23.0
comp=Z,90μm,10.9s
STIP Stip 7.57 344 *i* Pn **Pn** **16 12 54.2 +3.0**
DIM Dimitrovgrad 7.60 3 *e*P **Pn** **16 12 54.2 +2.7**
PLD Plovdiv 7.65 358 *e*P **Pn** **16 12 56.5 +4.3**
KIZK Mersin 7.70 72 *i* P **Pn** **16 12 52.8 -0.1**
KIZK IVMs_BB IVMs_BB 16 16 49.0
comp=Z,52μm,16.0s
BTAS Taskesti 7.73 36 *i* P **Pn** **16 12 56.2 +2.8**
BTAS IVMs_BB IVMs_BB 16 16 30.0
comp=Z,346μm,8.2s
MDUB Mudurnu 7.75 37 *e*Pn **Pn** **16 12 56.9 +3.2**
KAND Kocaeli-Kandir 7.78 30 *i* P **Pn** **16 12 56.5 +2.5**
KAND IVMs_BB IVMs_BB 16 16 29.0
comp=Z,192μm,11.7s
SAHE Sakarya_HENDEK 7.88 34 *i* P **Pn** **16 12 57.9 +2.5**
SAHE IVMs_BB IVMs_BB 16 16 35.0
comp=Z,273μm,9.8s
KKUL Konya-Kulu 7.88 51 *i* P **Pn** **16 12 57.0 +1.5**
KKUL IVMs_BB IVMs_BB 16 16 39.0
comp=Z,286μm,9.8s
NBNS Bani Suef 7.89 136 P **Pn** **16 12 53.0 -2.5**
baz=136
KERG Konya-Eregli 7.94 66 *i* P **Pn** **16 12 57.4 +1.1**
KERG IVMs_BB IVMs_BB 16 16 55.0
comp=Z,77μm,14.3s
TIR Tirane 8.01 331 *e*Pn **Pn** **16 12 57.6 +0.5**
TIR Tirane 8.01 331 P **Pn** **16 12 56.5 -0.6**
TIR Tirane 8.01 331 ⇑*i* P **Pn** **16 12 57.8 +0.7**
TIR Tirane 8.01 331 *e*P **Pn** **16 12 57.6 +0.5**
SKO Skopje 8.03 340 *i* Pn **Pn** **16 12 59.0 +1.6**
KIBS BOLU 8.05 40 *i* P **Pn** **16 12 59.8 +2.0**
KIBS IVMs_BB IVMs_BB 16 16 37.0
comp=Z,161μm,9.8s
PHP Peshkopia 8.08 335 P **Pn** **16 12 58.1 -0.1**
JMB Yambol 8.09 8 *e*P **Pn** **16 12 56.3 -2.0**
PGB Panagyurishte 8.12 355 *e*P **Pn** **16 13 00.8 +2.1**
TIP Timpagrande 8.15 308 *e*Pn **Pn** **16 12 58.4 -0.7**
TIP Timpagrande 8.15 308 P **Pn** **16 12 57.8 -1.3**
TIP Timpagrande 8.15 308 ⇑*i* P **Pn** **16 12 58.8 -0.3**
AKSY AKSARAY - Alti 8.17 57 *i* P **Pn** **16 13 01.0 +1.6**
AKSY IVMs_BB IVMs_BB 16 16 52.0
comp=Z,84μm,12.6s
BR231 Keskin MP Arra 8.19 47 *e*Pn **Pn** **16 13 02.1 +2.4**
ANTO Ankara 8.21 47 *e*Pn **Pn** **16 13 02.0 +1.9**
ANTO Ankara 8.21 47 ⇓*i* P **Pn** **16 13 01.3 +1.3**
BBAL Bala 8.22 49 *i* P **Pn** **16 13 03.0 +2.8**
BBAL IVMs_BB IVMs_BB 16 16 57.0
comp=Z,217μm,10.0s
YIGI Dzce 8.24 36 *i* P **Pn** **16 13 03.0 +2.6**
YIGI IVMs_BB IVMs_BB 16 16 49.0
comp=Z,274μm,9.9s
VTS Vitosha 8.28 351 *e*Pn **Pn** **16 13 00.8 -0.2**
VTS *e*Pn **Pn** **16 13 02.9 +1.9**
VTS Vitosha 8.28 351 P **Pn** **16 13 00.8 -0.2**
VTS Vitosha 8.28 351 ⇑*i* P **Pn** **16 13 02.0 +1.0**
VTS Vitosha 8.28 351 *e*P **Pn** **16 13 00.8 -0.2**
VTS Vitosha 8.28 351 *e*P **Pn** **16 13 03.8 +2.8**
DED Mersin 8.32 70 *i* P **Pn** **16 13 02.6 +1.1**
DED IVMs_BB IVMs_BB 16 17 20.0
comp=Z,60μm,16.4s
GULE Gulek 8.39 68 *i* P **Pn** **16 13 04.4 +1.8**
GULE IVMs_BB IVMs_BB 16 17 11.0
comp=Z,56μm,14.4s
CMDR Camlidere-ANKA 8.44 42 *i* P **Pn** **16 13 05.8 +2.6**
CMDR IVMs_BB IVMs_BB 16 16 51.0
comp=Z,131μm,15.7s
BCAM Yenicaga 8.45 39 *i* P **Pn** **16 13 05.3 +2.1**
BCAM IVMs_BB IVMs_BB 16 16 58.0
comp=Z,162μm,11.2s
OFRI `Ofer 8.50 100 Pn **Pn** **16 13 01.4 -2.5**
KIRS Kırehir-Merke 8.51 54 *i* P **Pn** **16 13 05.8 +1.7**
KIRS IVMs_BB IVMs_BB 16 17 09.0
comp=Z,153μm,10.1s
HNTI Hanita 8.54 96 Pn **Pn** **16 13 02.3 -2.2**
HNTI Hanita 8.54 96 Pn **Pn** **16 13 02.6 -1.9**
CGL1 Ceglie Messapi 8.63 318 *e*Pn **Pn** **16 13 05.8 +0.2**
SLTI Sal'it 8.65 102 Pn **Pn** **16 13 02.5 -3.5**
BR131 Keskin Array S 8.65 50 *e*Pn **Pn** **16 13 07.0 +0.9**
BRTR Keskin Array B 8.65 50 Pn **Pn** **16 13 07.0 +0.9**
comp=Z,2.3nm,0.3s,baz=224,slow=13,SNR=103
BRTR Sn **Sn** **16 14 47.0 +4.0**
comp=Z,1.8nm,0.3s,baz=214,slow=17,SNR=2.5
BRTR LR LR 16 17 33.5
comp=Z,118μm,19.8s,baz=230,slow=46
BRTR Keskin Array B 8.65 50 *i* P **Pn** **16 13 07.0 +0.9**
BRTR pmax pmax
comp=Z,67nm,1

MMAI Mount Meron Ar 8.75 97 Pn **Pn 16 13 04.6 -2.7**
comp=Z,50nm,0.3s,baz=278,slow=12,SNR=81
MMAI Sn **Sn 16 14 40.2 -5.2**
comp=Z,310nm,0.3s,baz=300,slow=22,SNR=12
PVL Pavlikeni 8.76 1 *e*P **Pn 16 13 07.5 +0.1**
DQRL Deir Qamar 8.76 92 *e*P **Pn 16 13 06.4 -1.2**
AMAZ Amatzia 8.79 107 Pn **Pn 16 13 05.4 -2.5**
AMAZ Amatzia 8.79 107 P **Pn 16 13 06.3 -1.6**
comp=Z,4μm,1.0s,comp=Z,64nm
MASS Massafra 8.80 317 *e*Pn **Pn 16 13 08.6 +0.6**
FASA Fasano 8.80 318 *e*Pn **Pn 16 13 06.6 -1.5**
FASA Sn **Sn 16 14 42.4 -4.2**
BHL Bhannes 8.81 91 *e*P **Pn 16 13 06.9 -1.3**
QRWL Qaraoun 8.88 93 *e*P **Pn 16 13 06.3 -2.9**
MMLI Mount Malkishu 8.90 100 Pn **Pn 16 13 07.1 -2.4**
MMLI Mount Malkishu 8.90 100 P **Pn 16 13 09.7 +0.2**
comp=Z,316nm,0.6s,comp=Z,8.9nm
GEM Giv'at Ha'Em 8.92 95 Pn **Pn 16 13 07.0 -2.7**
KSDI Kefar Szold 8.92 95 Pn **Pn 16 13 06.7 -3.0**
PRD Provadia 8.93 11 *e*P **Pn 16 13 10.8 +1.1**
MPEP Malo Peshtene 8.95 354 P **Pn 16 13 13.6 +3.5**
SHBL Chebaa 8.96 94 *e*P **Pn 16 13 07.4 -3.0**
NATI Neve Ativ 8.97 95 Pn **Pn 16 13 07.8 -2.6**
DELI KIRIKKALE 8.98 49 *i* P **Pn 16 13 11.8 +1.1**
DELI IVMs_BB IVMs_BB 16 17 23.0
comp=Z,225μm,10.4s
DRME Dracevica, Mon 8.99 331 *e*Pn **Pn 16 13 08.6 -2.0**
AVNS Nevsehir-Avano 9.00 58 *i* P **Pn 16 13 13.7 +2.9**
AVNS IVMs_BB IVMs_BB 16 17 28.0
comp=Z,57μm,10.7s
YTIR Yattir 9.01 107 Pn **Pn 16 13 08.5 -2.5**
RCY Rachaya 9.01 93 *e*P **Pn 16 13 08.3 -2.8**
HWQ Hawqa 9.02 88 *e*P **Pn 16 13 10.6 -0.5**
HMDT Nahal Hemdat 9.04 101 Pn **Pn 16 13 08.9 -2.4**
CDAG Cicekdag 9.07 53 *i* P **Pn 16 13 13.0 +1.2**
CDAG IVMs_BB IVMs_BB 16 17 27.0
comp=Z,174μm,9.8s
KSHT Keshet 9.09 96 Pn **Pn 16 13 10.2 -1.8**
YAHY KAYSERI_Yahyal 9.09 63 *i* P **Pn 16 13 14.0 +1.9**
YAHY IVMs_BB IVMs_BB 16 17 35.0
comp=Z,69μm,18.8s
SHMJ Saham 9.11 98 P **Pn 16 13 11.7 -0.6**
comp=Z,3μm,0.8s
VAE Valguarnera 9.13 292 Pn **Pn 16 13 13.9 +1.3**
comp=Z,9.9nm,0.3s,baz=46,slow=3.8,SNR=23
VAE Sn **Sn 16 14 55.9 +1.1**
comp=Z,45nm,0.3s,baz=175,slow=12,SNR=4.3
DSI Dead Sea 9.14 105 Pn **Pn 16 13 10.4 -2.3**
BTIN Bartın 9.15 36 *i* P **Pn 16 13 15.1 +2.3**
BTIN IVMs_BB IVMs_BB 16 17 19.0
comp=Z,183μm,10.0s
PDG Podgorica 9.17 332 ⇑*i*Pn **Pn 16 13 11.5 -1.5**
TTG Podgorica 9.17 332 *e*Pn **Pn 16 13 12.1 -0.9**
TTG Podgorica 9.17 332 *e*P **Pn 16 13 12.1 -0.9**
SG1 Sgolgore (BA) 9.20 316 *e*Pn **Pn 16 13 12.1 -1.4**
SG1 Sn **Sn 16 14 52.9 -3.4**
MZDA Masada 9.22 107 Pn **Pn 16 13 10.8 -3.0**
KRMI Paran Flat 9.26 115 Pn **Pn 16 13 11.2 -3.2**
BAI Bari 9.27 318 *e*Pn **Pn 16 13 14.8 +0.5**
BAI Sn **Sn 16 14 56.7 -1.2**
LISJ El Lisan 9.35 107 P **Pn 16 13 13.3 -2.1**
comp=Z,796nm,0.6s
PRNI Paran 9.36 113 Pn **Pn 16 13 12.9 -2.8**
ZFRI Zfri 9.40 112 Pn **Pn 16 13 13.3 -2.9**
SIRC Yozgat 9.45 56 *i* P **Pn 16 13 17.3 +0.3**
WALJ Wala 9.49 105 P **Pn 16 13 15.7 -1.8**
comp=Z,3μm,0.9s
HCY Herceg Novi 9.49 329 *e*Pn **Pn 16 13 15.0 -2.5**
ILGA Ilgaz 9.51 44 *e*Pn **Pn 16 13 21.2 +3.2**
ILGA Ilgaz 9.51 44 *i* P **Pn 16 13 21.0 +3.0**
ILGA IVMs_BB IVMs_BB 16 17 37.0
comp=Z,107μm,12.1s
HRFI Mount Harif 9.54 115 Pn **Pn 16 13 15.4 -2.8**
HRFI Mount Harif 9.54 115 P **Pn 16 13 16.5 -1.7**
comp=Z,2μm,0.7s
VLAD Vladila 9.55 357 ⇑*i*P **Pn 16 13 21.4 +3.2**
MBRI Mt Berech 9.57 116 Pn **Pn 16 13 15.9 -2.8**
SAIM ADANA 9.59 65 *i* P **Pn 16 13 20.3 +1.4**
SAIM IVMs_BB IVMs_BB 16 18 00.0
comp=Z,41μm,10.8s
GUNE Kayseri 9.59 59 *i* P **Pn 16 13 22.5 +3.6**
GUNE IVMs_BB IVMs_BB 16 18 02.0
comp=Z,76μm,19.3s
HSUJ Al Zarqa 9.62 101 P **Pn 16 13 19.4 0.0**
comp=Z,1μm,1.0s
EIL Elat 9.66 117 Pn **Pn 16 13 17.5 -2.4**
comp=Z,84nm,0.3s,baz=356,slow=1.7,SNR=166
EIL Sn Sn 16 14 56.8 -11
comp=Z,69nm,0.3s,baz=270,slow=14,SNR=2.6
EIL Elat 9.66 117 Pn **Pn 16 13 17.2 -2.7**
EIL Elat 9.66 117 P **Pn 16 13 16.6 -3.3**
comp=Z,1μm,0.8s
ANDN Andirin 9.67 68 *i* P **Pn 16 13 20.5 +0.5**
ANDN IVMs_BB IVMs_BB 16 17 58.0
comp=Z,32μm,9.8s
JDRJ Daraweish 9.70 110 P **Pn 16 13 20.0 -0.5**
comp=Z,2μm,0.9s
AQBJ Aqaba 9.70 116 P **Pn 16 13 19.0 -1.4**
comp=Z,3μm,0.6s
MANR Mangalia 9.75 15 ⇓*i*P **Pn 16 13 24.3 +3.3**
TREB Trebinje 9.77 330 *e*Pn **Pn 16 13 19.6 -1.7**
COAL Corum-Alaca 9.80 51 *i* P **Pn 16 13 23.8 +2.0**
COAL IVMs_BB IVMs_BB 16 17 59.0
comp=Z,204μm,10.1s
KAMA Osmaniye 9.83 71 *i* P **Pn 16 13 21.8 -0.4**
BRY Bratogost 9.85 331 *e*Pn **Pn 16 13 21.5 -1.0**
RASA Rasa 9.88 9 ⇑*i*P **Pn 16 13 25.3 +2.5**
HSNJ Maan 9.92 112 P **Pn 16 13 22.7 -0.9**
comp=Z,4μm,0.8s
UPM Unac-Piva 9.96 333 *e*Pn **Pn 16 13 22.2 -1.9**
EFOR EFORIE 10.01 15 ⇑*i*P **Pn 16 13 27.6 +3.1**
KAGI orum-Kargı 10.01 45 *i* P **Pn 16 13 27.1 +2.5**
KAGI IVMs_BB IVMs_BB 16 18 01.0
comp=Z,86μm,11.8s
HUMR Humele 10.06 360 ⇑*i*P **Pn 16 13 27.7 +2.4**
LEHL Lehliu 10.10 7 ⇓*i*P **Pn 16 13 29.7 +3.9**
ASF Jabal al Asfar 10.18 100 Pn **Pn 16 13 25.9 -1.1**
comp=Z,12nm,0.3s,baz=230,slow=7.1,SNR=36
ASF Sn **Sn 16 15 12.9 -7.5**
comp=Z,19nm,0.3s,baz=322,slow=19,SNR=3.1
ASF Jabal al Asfar 10.18 100 P **Pn 16 13 25.7 -1.3**
comp=Z,332nm,1.2s
STON Ston 10.18 328 *i* P **Pn 16 13 24.6 -2.2**
STON Sn **Sn 16 15 15.0 -5.2**
STON Ston 10.18 328 *e*Pn **Pn 16 13 24.6 -2.2**
CUSAR Sarkisla-SIVAS 10.24 58 *i* P **Pn 16 13 30.5 +2.6**
CUSAR IVMs_BB IVMs_BB 16 18 17.0
comp=Z,66μm,11.1s
SULR 10.26 5 ⇓*i*P **Pn 16 13 30.5 +2.6**
BZK Bozkurt 10.29 41 ⇑*i*P **Pn 16 13 32.0 +3.7**
SRE Strehaia 10.30 353 ⇑*i*P **Pn 16 13 31.6 +3.1**
AMRR Amara 10.30 9 ⇑*i*P **Pn 16 13 31.2 +2.7**
TIRR Tirgusor 10.33 14 *e*Pn **Pn 16 13 31.4 +2.5**
TIRR Tirgusor 10.33 14 ⇑*i*P **Pn 16 13 31.9 +3.0**
TIRR Tirgusor 10.33 14 *e*P **Pn 16 13 31.4 +2.5**
BBLS Lazići 10.37 337 ⇑*i*Pn **Pn 16 13 27.1 -2.4**
GOLR 10.38 360 ⇑*i*P **Pn 16 13 34.2 +4.6**
TLB Topalu 10.38 12 ⇓*i*P **Pn 16 13 31.7 +2.1**
DIVS Divibare 10.40 339 *e*Pn **Pn 16 13 30.3 +0.4**
HARR Harsova 10.46 11 ⇓*i*P **Pn 16 13 34.3 +3.5**
ELBS KAHRAMANMARAS 10.48 65 *i* P **Pn 16 13 31.2 +0.1**
CUALT Altinyayla-SIV 10.54 59 *i* P **Pn 16 13 35.6 +3.6**
CUALT IVMs_BB IVMs_BB 16 18 40.0
comp=Z,74μm,13.0s
SECR 10.60 4 ⇑*i*P **Pn 16 13 35.4 +2.7**
HERR Herculane 10.61 350 ⇓*i*P **Pn 16 13 35.1 +2.3**
MDVR Moldovita 10.63 347 ⇓*i*P **Pn 16 13 33.8 +0.7**
CUGUR Gurin_SVAS 10.71 63 *i* P **Pn 16 13 37.2 +2.8**
CUGUR IVMs_BB IVMs_BB 16 18 58.0
comp=Z,65μm,18.1s
HAPS Han Pijesak,BI 10.71 336 *e*Pn Pn 16 13 28.8 -5.5
HAVZ Havza 10.72 49 *i* P **Pn 16 13 36.7 +2.3**
HAVZ IVMs_BB IVMs_BB 16 18 36.0
comp=Z,128μm,11.9s
TOKA Tokat 10.82 54 *i* P **Pn 16 13 37.7 +2.0**
TOKA IVMs_BB IVMs_BB 16 18 35.0
comp=Z,122μm,11.4s
TEKS Tekeris 10.94 339 *e*Pn **Pn 16 13 33.6 -3.8**
CFR Carcaliu 10.97 12 ⇓*i*P **Pn 16 13 40.0 +2.3**
VOIR 10.97 0 ⇑*i*P **Pn 16 13 39.3 +1.5**
SINO SINOP_Merkez 10.99 44 *i* P **Pn 16 13 39.8 +1.8**
SINO IVMs_BB IVMs_BB 16 18 43.0
comp=Z,156μm,12.6s

MLR Muntele Rosu 11.05 3 Pn **Pn 16 13 39.6 +0.7**
comp=Z,0.4nm,0.3s,baz=178,slow=8.7,SNR=23
MLR LR LR 16 18 34.4
comp=Z,88μm,22.0s,baz=186,slow=41
MLR Muntele Rosu 11.05 3 *e*Pn **Pn 16 13 40.2 +1.3**
MLR Muntele Rosu 11.05 3 *e*P **Pn 16 13 40.2 +1.3**
SCER sogukcermik 11.05 57 *i* P **Pn 16 13 42.5 +3.5**
SCER IVMs_BB IVMs_BB 16 18 45.0
comp=Z,76μm,13.6s
CUKAN kangal_SIVAS 11.07 60 *i* P **Pn 16 13 42.2 +3.0**
CUKAN IVMs_BB IVMs_BB 16 18 59.0
comp=Z,78μm,18.6s
ATAB Bozova 11.15 71 *i* P **Pn 16 13 42.0 +1.7**
ATAB IVMs_BB IVMs_BB 16 19 11.0
comp=Z,14μm,14.9s
BISRR Bisoca 11.16 6 ⇓*i*P **Pn 16 13 44.1 +3.8**
ERBA Erbaa 11.18 53 *i* P **Pn 16 13 40.9 +0.3**
SAMS Samsun-Alacam 11.18 49 *i* P **Pn 16 13 43.3 +2.8**
SAMS IVMs_BB IVMs_BB 16 18 52.0
comp=Z,93μm,10.0s
HEKM Malatya_Hekimh 11.27 63 *i* P **Pn 16 13 44.1 +2.0**
HEKM IVMs_BB IVMs_BB 16 19 09.0
comp=Z,70μm,18.4s
SURC SANLIURFA_SURC 11.30 74 *i* P **Pn 16 13 43.1 +0.8**
SURC IVMs_BB IVMs_BB 16 19 35.0
comp=Z,32μm,16.2s
FRGS Fruska Gora 11.42 341 ⇑*i*Pn **Pn 16 13 42.1 -1.8**
PLOR Plostina 11.45 6 ⇑*i*P **Pn 16 13 47.2 +2.9**
VRI Vrincioaia 11.47 6 ⇑*i*P **Pn 16 13 47.0 +2.4**
DOPR Dopca 11.51 1 ⇓*i*P **Pn 16 13 46.2 +1.1**
CUZAR Zara_SIVAS 11.51 58 *i* P **Pn 16 13 48.8 +3.6**
CUZAR IVMs_BB IVMs_BB 16 19 01.0
comp=Z,59μm,9.6s
DEV Deva 11.54 353 ⇑*i*P **Pn 16 13 49.1 +3.7**
DOB Doboj 11.58 335 *e*Pn **Pn 16 13 43.8 -2.2**
OZUR 11.65 3 ⇑*i*P **Pn 16 13 49.5 +2.5**
MDB Medias 11.69 358 ⇓*i*P **Pn 16 13 50.7 +3.2**
MGRS Mrkonjic Grad 11.69 331 *e*Pn **Pn 16 13 47.7 +0.1**
KEMA Kemaliye 11.79 62 *i* P **Pn 16 13 50.5 +1.4**
KEMA IVMs_BB IVMs_BB 16 19 27.0
comp=Z,69μm,17.2s
ELZG Elazig 11.93 66 *i* P **Pn 16 13 51.2 +0.2**
BLY Banja Luka 11.93 332 *e*Pn **Pn 16 13 49.4 -1.5**
BLY Banja Luka 11.93 332 ⇑*i*P **Pn 16 13 49.3 -1.5**
BLY Banja Luka 11.93 332 ⇑*i*Pn **Pn 16 13 49.2 -1.6**
SUSE Susehri 11.94 57 *i* P **Pn 16 13 54.5 +3.3**
SUSE IVMs_BB IVMs_BB 16 19 16.0
comp=Z,57μm,12.3s
REFA Refahiye_ERZN 12.04 62 *i* P Pn 16 13 58.0 +5.5
REFA IVMs_BB IVMs_BB 16 19 50.0
comp=Z,49μm,25.8s
ORDU Ordu-Boztepe 12.06 53 *i* P **Pn 16 13 55.0 +2.4**
ORDU IVMs_BB IVMs_BB 16 19 18.0
comp=Z,122μm,12.4s
AQU L'Aquila 12.06 314 *e*Pn **Pn 16 13 51.9 -0.8**
AQU L'Aquila 12.06 314 *e*P **Pn 16 13 51.9 -0.8**
AQU L'Aquila 12.06 314 *e*Pn **Pn 16 13 54.5 +1.8**
SIRR Siria 12.08 349 ⇑*i*P **Pn 16 13 55.0 +2.1**
TESR Tescani 12.11 5 ⇓*i*P **Pn 16 13 56.3 +3.0**
CJR Cluj-Napoca 12.30 355 ⇑*i*P **Pn 16 13 58.9 +3.0**
UDBI Udbina 12.35 327 *i* Pn **Pn 16 13 55.8 -0.8**
UDBI Sn **Sn 16 16 05.0 -8.5**
DRGR 12.45 353 ⇑*i*P **Pn 16 13 59.7 +1.6**
SIM Simferopol' 12.59 31 *de*P **Pn 16 14 03.3 +3.5**
ARCR ARCALIA 12.63 358 ⇑*i*P **Pn 16 14 03.7 +3.3**
KELT Kelkit 12.66 59 *i* P **Pn 16 14 03.0 +2.0**
KELT IVMs_BB IVMs_BB 16 20 02.0
comp=Z,38μm,23.0s
MORH Mrgy, Hungar 12.72 339 *e*Pn **Pn 16 14 00.0 -1.6**
MORH Mrgy, Hungar 12.72 339 EPn **Pn 16 14 06.0 +4.5**
NVLJ Novalja 12.78 325 *i* Pn **Pn 16 14 00.9 -1.6**
EUZM Uzumlu 12.82 62 *i* P **Pn 16 14 06.4 +3.2**
EUZM IVMs_BB IVMs_BB 16 20 07.0
comp=Z,41μm,12.9s
KIS Kishinev 12.85 12 *e*P **Pn 16 14 04.0 +0.6**
comp=Z,760nm,2.0s
KIS Kishinev 12.85 12 *i* PP **P 16 14 17.0 +2.9**
comp=Z,1μm,2.0s
KIS *i* S Sn 16 16 38.0 +12
KIS *i* Li 16 17 40.0
KIS *i* LQ LQ 16 18 08.0
KIS *i* LR LR 16 18 40.0
comp=Z,111μm,14.0s
KIS Kishinev 12.85 12 *e*P **Pn 16 14 04.0 +0.6**
KIS *i* S Sn 16 16 38.0 +12
KIS pmax pmax
comp=Z,760nm,2.0s
KIS MLR MLR
comp=Z,111μm,14.0s
KIS MLR MLR
comp=N,76μm,15.0s
KEST Kesra 12.92 280 Pn **Pn 16 14 05.8 +1.3**
comp=N,0.4nm,0.3s,baz=152,slow=3.7,SNR=17
KEST Sn **Sn 16 16 22.4 -5.3**
comp=N,1.0nm,0.3s,baz=84,slow=18,SNR=3.7
KEST Kesra 12.92 280 *e*Pn **Pn 16 14 05.3 +0.8**
I48TN KESRA INFRASON 12.94 280 *i* 17 32 40.0
baz=89,slow=307,SNR=0.5
HANI Diyarbakir_Han 12.98 68 *i* P **Pn 16 14 06.4 +1.1**
MARD Mardin 13.08 73 *i* P **Pn 16 14 06.4 -0.2**
BURAR Bucovina Array 13.15 1 ⇑*i*P **Pn 16 14 10.4 +2.8**
BUR08 Bucovina Ar. S 13.18 0 *e*Pn **Pn 16 14 10.0 +2.0**
BMR Baia Mare 13.26 355 ⇑*i*P **Pn 16 14 11.8 +2.8**
BGOL Bingol 13.33 66 *i* P **Pn 16 14 11.5 +1.5**
MACK Trabzon 13.33 57 *i* P **Pn 16 14 12.8 +2.7**
MACK IVMs_BB IVMs_BB 16 20 08.0
comp=Z,32μm,10.9s
OZLJ Ozalj 13.34 330 *e*Pn **Pn 16 14 07.8 -2.2**
BOJS Bojanci 13.34 329 *i* Pn **Pn 16 14 10.5 +0.4**
BOJS *i* Sn **Sn 16 16 35.1 -2.5**
KOPT Kop Dagi 13.50 61 *i* P **Pn 16 14 13.0 +0.4**
CRES Cresnjev 13.51 330 *e*Pn **Pn 16 14 09.8 -2.6**
RIY Rijeka 13.54 326 *e*Pn **Pn 16 14 11.3 -1.5**
SVAN Silvan-Diyarba 13.54 70 *i* P **Pn 16 14 13.5 +0.6**
BEHE Becsehely 13.54 335 *e*Pn **Pn 16 14 08.3 -4.6**
BEHE Becsehely 13.54 335 EPn **Pn 16 14 14.0 +1.2**
BTMN Batman 13.55 71 *i* P **Pn 16 14 12.9 -0.2**
TIH Tihany 13.56 339 EPn **Pn 16 14 14.1 +1.0**
BNGL BINGÖL 13.68 66 *i* P **Pn 16 14 15.1 +0.1**
ECAT Cat-ERZURUM 13.72 63 *i* P **Pn 16 14 15.8 +0.3**
VISS Visnje 13.75 329 *i* Pn **Pn 16 14 14.8 -1.0**
TRPA Tarpa 13.79 353 ⇑*i*P **Pn 16 14 18.5 +2.2**
TRPA Tarpa 13.79 353 EPn **Pn 16 14 19.0 +2.8**
CSKK Cskako 13.87 340 EPn **Pn 16 14 20.0 +2.7**
CSKK Sn S 16 17 02.0 -10
CEY Cerknica 13.88 327 ⇑*i*Pn **Pn 16 14 15.0 -2.5**
MUSM Mu-Merkez 13.90 67 *i* P **Pn 16 14 18.1 +0.2**
KRIK Erzurum-spir 13.92 60 *i* P **Pn 16 14 19.6 +1.3**
VRTB Varto-Mus 13.96 66 *i* P **Pn 16 14 20.9 +2.2**
PSZ Piszkesteto 14.00 346 ⇑*i*P **Pn 16 14 22.2 +3.1**
PSZ Piszkesteto 14.00 346 EPn **Pn 16 14 21.1 +2.0**
PSZ Sn **Sn 16 17 01.0 +7.3**
ANN Anapa 14.05 39 *e*P **Pn 16 14 19.9 +0.1**
ANN *e*S **Sn 16 16 57.6 +2.6**
ANN pmax pmax
comp=E,121nm,1.5s
ANN pmax pmax
comp=Z,220nm,1.5s
ANN pmax pmax
comp=N,208nm,1.5s
LJU Ljubljana 14.07 328 *e*Pn **Pn 16 14 19.6 -0.5**
SRTM Siirt_Merkez 14.08 71 *i* P **Pn 16 14 20.1 -0.2**
AKDA Akdag 14.16 62 *i* P **Pn 16 14 22.2 +0.7**
JAVS Javornik 14.16 327 *e*Pn **Pn 16 14 20.4 -1.0**
SRO2 Moca 14.20 341 *e*P **Pn 16 14 24.2 +2.4**
SRO2 Moca 14.20 341 *e*PN **Pn 16 14 24.2 +2.4**
SRO Srobarova 14.27 341 *e*P **Pn 16 14 25.1 +2.3**
SRO Srobarova 14.27 341 *e*PN **Pn 16 14 25.0 +2.3**
BLIS Bitlis-Merkez 14.30 69 *i* P **Pn 16 14 23.4 0.0**
PERS Pernice 14.31 331 *i* Pn **Pn 16 14 21.6 -1.7**
PERS *i* Sn **Sn 16 16 56.9 -4.4**
UZH Uzhgorod 14.32 353 *e*P **Pn 16 14 24.4 +1.0**
UZH *e*S **Sn 16 17 04.8 +3.4**
UZH MLR MLR
comp=N,16μm,14.0s
UZH MLR MLR
comp=E,11μm,14.0s
UZH MLR MLR
comp=Z,23μm,14.0s
SOKA Soboth 14.37 331 *i* Pn **Pn 16 14 21.1 -3.2**
comp=Z,416nm,1.2s,SNR=73
SOKA *e*ScP **ScP 16 23 14.0 +1.7**
comp=Z,24nm,1.3s

SIRN Sırnak 14.39 73 *i* P **Pn 16 14 24.7 +0.1**
KECS Kecovo 14.43 348 *e*P **Pn 16 14 28.1 +3.2**
KECS Kecovo 14.43 348 *e*PN **Pn 16 14 28.1 +3.2**
OBKA Obir 14.43 330 *i* Pn **Pn 16 14 23.8 -1.4**
comp=Z,252nm,1.0s,SNR=46
OBKA Sn **Sn 16 17 03.9 -0.5**
comp=Z,118nm,0.7s
ABSA Djebel Ababsia 14.45 282 P **P 16 14 35.8 +3.7**
CMAH Djebel Manchou 14.52 284 P **P 16 14 35.2 +2.5**
HOMI Horasan 14.54 63 *i* P **Pn 16 14 27.8 +1.1**
SOC Sochi 14.59 47 *i* P **Pn 16 14 27.4 +0.3**
SOC *e* 16 17 11.6
SOC pmax pmax
comp=Z,133nm,0.8s
SOC MLR MLR
comp=Z,53μm,16.0s
KOLS Kolonicke sedl 14.62 353 *e*P **Pn 16 14 28.4 +0.9**
KOLS MLR MLR
comp=Z,52μm,10.9s
KOLS Kolonicke sedl 14.62 353 *e*PN **Pn 16 14 28.4 +0.9**
KOLS Kolonicke sedl 14.62 353 *e*P **P 16 14 35.0 +1.3**
KOLS *e*L L 16 20 47.3
ARSA Arzberg 14.66 334 *e*Pn **Pn 16 14 25.9 -2.3**
comp=Z,279nm,1.0s,SNR=50
SOP Sopron 14.67 337 EPn Pn 16 14 33.1 +4.8
DBAD Bademkaya 14.71 59 *i* P **Pn 16 14 30.5 +1.6**
VYHS Vyhne 14.77 344 *e*P **Pn 16 14 31.4 +1.7**
VYHS MLR MLR
comp=Z,25μm,10.0s
VYHS Vyhne 14.77 344 *e*PN **Pn 16 14 31.4 +1.7**
VYHS Vyhne 14.77 344 *e*P **P 16 14 38.0 +2.5**
VYHS *e*L L 16 21 13.7
DBOC Borcka 14.81 57 *i* P **Pn 16 14 30.3 +0.1**
BCA Borcka 14.81 57 ⇑*i*P **Pn 16 14 31.7 +1.4**
ADCV BITLIS_Adilcev 14.85 68 *i* P **Pn 16 14 32.3 +1.5**
DAGI Agillar 14.88 59 *i* P **Pn 16 14 32.4 +1.2**
MYKA Terra Mystica 14.92 328 *i* Pn **Pn 16 14 31.1 -0.6**
comp=Z,85nm,0.7s,SNR=18
MYKA *e*ScP **ScP 16 23 14.8 +1.6**
comp=Z,34nm,1.3s
EATA Eleskirt 14.92 64 *i* P **Pn 16 14 33.3 +1.4**
BATM Batumi 14.93 57 ⇑*i*P **Pn 16 14 32.8 +1.1**
BATM Batumi 14.93 57 *i* P **Pn 16 14 31.8 +0.1**
ZST Bratislava 14.96 339 *e*P **Pn 16 14 31.2 -0.9**
ZST Bratislava 14.96 339 *e*PN **Pn 16 14 31.2 -0.9**
ZST Bratislava 14.96 339 *e*P **P 16 14 37.9 +0.4**
CAEH 'Ain El Ouahch 14.98 284 P **P 16 14 36.6 -1.3**
GEVA Gevas 15.01 70 *i* P **Pn 16 14 33.0 -0.1**
TUTA Tutak 15.04 66 *i* P **P 16 14 36.6 -2.2**
CKFL Kef-Lekhel 15.07 283 P **P 16 14 37.0 -1.9**
MODS Modra-Piesok 15.07 340 *e*P **Pn 16 14 33.4 -0.2**
MODS MLR MLR
comp=Z,76μm,12.2s
MODS Modra-Piesok 15.07 340 *e*PN **Pn 16 14 33.3 -0.3**
MODS Modra-Piesok 15.07 340 *e*P **P 16 14 39.1 +0.3**
MODS *e*L L 16 21 21.9
CONA Conrad Observa 15.12 336 *e*Pn **Pn 16 14 34.3 0.0**
comp=Z,86nm,0.8s,SNR=32
STHS Stebnicka Huta 15.22 351 *e*P **P 16 14 44.0 +3.6**
STHS Stebnicka Huta 15.22 351 *e*P **P 16 14 44.0 +3.6**
CASM Ain Smara 15.25 282 P **P 16 14 39.1 -1.8**
LANS Liptovska Anna 15.26 346 *e*P **P 16 14 40.5 -0.4**
LANS Liptovska Anna 15.26 346 *e*P **P 16 14 40.5 -0.4**
KWP Kalwaria Pacla 15.27 354 *e*P **Pn 16 14 38.0 +1.8**
KWP Kalwaria Pacla 15.27 354 *e*Pn **Pn 16 14 38.0 +1.8**
CUKT Cukurca 15.31 74 *i* P **Pn 16 14 38.0 +0.9**
CTEI Djebel Teioual 15.31 281 P **P 16 14 42.0 +0.3**
TVAN Van 15.32 69 *i* P **Pn 16 14 38.8 +1.6**
NIE Niedzica 15.36 348 *e*P **Pn 16 14 39.1 +1.6**
NIE Niedzica 15.36 348 *e*Pn **Pn 16 14 39.1 +1.6**
LVV L'vov 15.38 358 *e*P **P 16 14 43.7 +1.6**
LVV *e*S **Sn 16 17 34.2 +7.0**
LVV MLR MLR
comp=E,23μm,12.0s
LVV MLR MLR
comp=N,91μm,12.0s
LVV MLR MLR
comp=Z,108μm,12.0s
KBA Koelnbreinsper 15.39 329 *i* Pn **Pn 16 14 38.0 -0.1**
comp=Z,549nm,0.8s,SNR=31
JAVC Velka Javorina 15.40 341 *e*PN **Pn 16 14 36.2 -1.9**
JAVC Velka Javorina 15.40 341 *e*S **S 16 17 39.8 -4.0**
HAKT HAKKARI 15.42 73 *i* P **Pn 16 14 39.7 +1.2**
ABTA Abfaltersbach 15.51 326 *i* Pn **Pn 16 14 37.0 -2.5**
comp=Z,514nm,0.7s,SNR=69
VMUR Van-Muradiye 15.53 68 *i* P **Pn 16 14 41.5 +1.7**
EPOS Posof 15.61 58 *i* P **Pn 16 14 42.7 +1.9**
MOA Molln 15.63 332 *i* Pn **Pn 16 14 40.3 -0.7**
comp=Z,143nm,0.6s,SNR=55
BASK Baskale_VAN 15.71 71 *i* P **P 16 14 46.2 0.0**
DIGO Kars 15.72 62 *i* P **P 16 14 45.5 -0.8**
DYDN Diyadin 15.73 66 *i* P **P 16 14 45.0 -1.4**
DFRA Djebel Bou Aff 15.75 283 P **P 16 14 45.3 -1.2**
CLDR Caldiran 15.82 67 *i* P **Pn 16 14 45.1 +1.4**
KRUC Moravsky 15.94 339 *e*PN **Pn 16 14 42.8 -2.2**
KRUC Moravsky 15.94 339 *e*P **P 16 14 49.7 +1.2**
KRUC *e*S **S 16 17 53.6 -1.2**
EAK Akyaka 15.97 62 *i* P **Pn 16 14 46.8 +1.3**
CKHR Kef el Ahmar 16.04 281 P **P 16 14 48.8 -0.9**
IGDI IGDIR 16.10 65 *i* P **Pn 16 14 48.0 +0.8**
VRAC Vranov 16.11 340 Pn **Pn 16 14 47.3 +0.2**
comp=Z,11nm,0.3s,baz=157,slow=30,SNR=30
VRAC LR LR 16 22 47.2
comp=Z,75μm,19.4s,baz=168,slow=44
VRAC Vranov 16.11 340 ⇓*i*P **P 16 14 49.5 -0.8**
VRAC Vranov 16.11 340 *e*PN **Pn 16 14 44.8 -2.3**
VRAC Vranov 16.11 340 *e*P **P 16 14 51.7 +1.4**
VRAC *e*S **S 16 17 56.8 -1.3**
AKH Akhalkalaki 16.11 59 *e*Pn **P 16 14 49.2 -1.4**
comp=Z,3μm,1.7s
AKH Akhalkalaki 16.11 59 ⇑*i*P **P 16 14 49.4 -1.2**
AKH Akhalkalaki 16.11 59 *e*P **P 16 14 49.2 -1.4**
AKH pmax pmax
comp=Z,3μm,1.7s
SET Setif 16.13 282 P **P 16 14 53.0 +2.3**
OKC Ostrava-Krasne 16.19 344 *e*P **Pn 16 14 48.1 0.0**
OKC *e*S **S 16 17 56.3 -3.5**
OKC MLR MLR
comp=Z,48μm,14.4s
OKC Ostrava-Krasne 16.19 344 *e*P **Pn 16 14 48.1 0.0**
OKC *e*pP **pP 16 14 56.1 -0.6**
OKC *e*S **S 16 17 56.3 -3.5**
OKC AMS AMS 16 22 20.0
comp=Z,48μm,14.4s
OJC Ojcow 16.22 348 *e*P **Pn 16 14 48.4 -0.1**
OJC Ojcow 16.22 348 *e*P **Pn 16 14 48.4 -0.1**
MORC Moravsky Berou 16.28 342 *e*PN **Pn 16 14 47.2 -2.1**
MORC Moravsky Berou 16.28 342 *e*P **P 16 14 53.1 +0.9**
MORC *e*S **S 16 18 01.4 -0.3**
WTTA Wattenberg 16.30 326 *i* Pn **Pn 16 14 49.6 -0.1**
comp=Z,759nm,1.2s,SNR=78
WTTA *e*ScP **ScP 16 23 17.5 +1.6**
comp=Z,43nm,1.5s
WATA Walderalm 16.38 326 *i* Pn **Pn 16 14 49.5 -1.3**
comp=Z,906nm,1.2s,SNR=50
RAC Raciborz 16.41 344 *e*P **Pn 16 14 50.4 -0.5**
RAC MLR MLR
comp=Z,46μm,22.3s
TREC Trest 16.43 337 *e*P **Pn 16 14 51.1 -0.1**
TREC MLR MLR
comp=Z,58μm,12.4s
TREC Trest 16.43 337 *e*P **Pn 16 14 51.1 -0.1**
TREC *e*x x 16 14 58.3
TREC *e*S S 16 18 17.0 +12
TREC AMS AMS 16 22 20.0
comp=Z,58μm,12.4s
SQTA Sankt Quirin 16.47 325 *i* Pn **Pn 16 14 50.9 -0.9**
comp=Z,326nm,0.8s,SNR=70
SHA1 Shidzhatmaz 16.49 51 *i* P **Pn 16 14 53.5 +1.2**
AKASG Malin Array Be 16.52 9 Pn **Pn 16 14 51.6 -0.7**
comp=Z,62nm,0.3s,baz=199,slow=10,SNR=184
AKASG Sn **Sn 16 18 00.6 +5.5**
baz=200,slow=22,SNR=3.4
FETA Feichten 16.56 324 *i* Pn **Pn 16 14 54.0 +1.0**
comp=Z,515nm,0.9s,SNR=102
FETA *e*Sn **Sn 16 17 57.1 +0.8**
comp=Z,158nm,1.2s
FETA *e*ScP **ScP 16 23 15.9 -0.6**
comp=Z,33nm,1.5s
MOTA Moosalm 16.61 325 *i* Pn **Pn 16 14 53.9 +0.3**
comp=Z,314nm,1.3s,SNR=52
KIV Kislovodsk 16.62 50 *e*Pn **P 16 14 55.8 -0.3**
comp=Z,2μm,1.0s

KIV	**Kislovodsk**	**16.62**	**50**	*i* P	**P**	**16 14 55.1**	**-0.9**
	SNR=440						
KIV	**Kislovodsk**	**16.62**	**50**	*e*P	**Pn**	**16 14 53.9**	**+0.2**
KIV				*e*		16 18 00.3	
KIV				pmax	pmax		
	comp=Z,3μm,1.0s						
KIV				MLR	MLR		
	comp=Z,78μm,13.0s						
KVAR	**Kislovodsk Arr**	**16.62**	**50**	Pn	**P**	**16 14 57.6**	**+1.4**
	baz=237,slow=20,SNR=56						
KVAR				LR	LR	16 22 53.6	
	comp=Z,34μm,21.8s,baz=188,slow=43						
KBZ	**Khabaz**	**16.64**	**51**	Pn	**P**	**16 14 55.6**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=249,slow=6.7,SNR=80						
KBZ				Sn	**Sn**	**16 18 03.0**	**+4.9**
	comp=Z,2.0nm,0.3s,baz=245,slow=19,SNR=1.6						
KBZ				LR	LR	16 23 11.2	
	comp=Z,44μm,20.9s,baz=257,slow=44						
GNI	**Garni**	**16.66**	**64**	Pn	**P**	**16 14 56.9**	**+0.3**
	comp=Z,8.4nm,0.3s,baz=242,slow=3.0,SNR=34						
GNI				LR	LR	16 22 47.5	
	comp=Z,136μm,18.3s,baz=270,slow=43						
GNI	**Garni**	**16.66**	**64**	*e*P	**P**	**16 14 56.9**	**+0.3**
	comp=Z,972nm,1.1s						
GNI	**Garni**	**16.66**	**64**	*i* P	**P**	**16 14 56.6**	**-0.1**
	SNR=17						
GNI	**Garni**	**16.66**	**64**	*c i*P	**P**	**16 14 56.6**	**-0.1**
GNI	**Garni**	**16.66**	**64**	P	**P**	**16 14 58.0**	**+1.4**
	SNR=86						
GERES	**GERESS Array B**	**16.67**	**333**	Pn	**Pn**	**16 14 53.4**	**-0.9**
	comp=Z,17nm,0.3s,baz=147,slow=11,SNR=93						
GERES				Sn	**S**	**16 18 13.3**	**+3.7**
	comp=Z,0.9nm,0.3s,baz=157,slow=18,SNR=2.7						
GERES				PcP	**PcP**	**16 19 43.3**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=116,slow=2.3,SNR=5.5						
GERES				ScP	**ScP**	**16 23 14.4**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=167,slow=4.6,SNR=5.2						
GERES				LR	LR	16 23 19.3	
	comp=Z,71μm,18.3s,baz=148,slow=44						
KZRT	**Kazreti**	**16.75**	**60**	*i* P	**Pn**	**16 14 55.7**	**+0.3**
DAVOX	**Davos/Dischmat**	**16.82**	**322**	Pn	**Pn**	**16 14 56.4**	**0.0**
	comp=Z,2.1nm,0.3s,baz=133,slow=9.8,SNR=33						
DAVOX				Sn	**Sn**	**16 17 57.9**	**-4.8**
	comp=Z,2.8nm,0.3s,baz=17,slow=11,SNR=2.8						
DAVOX				LR	LR	16 23 37.4	
	comp=Z,40μm,19.6s,baz=124,slow=45						
RETA	**Reutte**	**16.87**	**325**	*i* Pn	**Pn**	**16 14 56.6**	**-0.3**
	comp=Z,90nm,0.5s,SNR=47						
RETA				*e*Sn	**Sn**	**16 18 06.0**	**+2.3**
	comp=Z,172nm,1.2s						
ZEI	**Tsey**	**16.90**	**55**	*e*P	**Pn**	**16 14 56.7**	**-0.7**
ZEI				*e*S	**S**	**16 18 13.3**	**-1.4**
ZEI				pmax	pmax		
	comp=Z,1μm,1.1s						
ZEI				MLR	MLR		
	comp=Z,21μm,12.0s						
PYA1	**Pyatigorsk**	**16.93**	**50⇓**	*e*P	**P**	**16 14 59.5**	**+0.1**
KHC	**Kasperske Hory**	**16.95**	**333**	*e*P	**P**	**16 14 59.1**	**-0.5**
KHC				MLR	MLR		
	comp=Z,138μm,14.1s						
KHC	**Kasperske Hory**	**16.95**	**333**	*e*P	**P**	**16 14 59.1**	**-0.5**
KHC				*e*pP	**pP**	**16 15 05.1**	**+0.1**
KHC				*e*S	**S**	**16 18 16.6**	**+1.3**
KHC				AMS	AMS	16 22 30.0	
	comp=Z,138μm,14.1s						
NCK	**Nalchik**	**16.99**	**52⇓**	*e*P	**P**	**16 15 00.1**	**0.0**
TBLG	**Delisi**	**17.10**	**59**	*i* P	**Pn**	**16 15 00.0**	**+0.3**
DPC	**Dobruska-Polom**	**17.12**	**341**	*e*P	**Pn**	**16 15 00.4**	**+0.4**
DPC				MLR	MLR		
	comp=Z,72μm,13.9s						
DPC	**Dobruska-Polom**	**17.12**	**341**	*e*P	**Pn**	**16 15 00.4**	**+0.4**
DPC				*e*pP	**pP**	**16 15 05.0**	**-2.1**
DPC				*e*S	**S**	**16 18 18.9**	**0.0**
DPC				AMS	AMS	16 22 50.0	
	comp=Z,72μm,13.9s						
DAVA	**Damuels**	**17.16**	**323**	*i* Pn	**Pn**	**16 15 01.0**	**+0.4**
	comp=Z,251nm,0.6s,SNR=102						
GOPC	**GO Pecny, Ondr**	**17.19**	**337**	*e*P	**Pn**	**16 15 00.2**	**-0.6**
GOPC				*e*x	x	16 15 04.0	
GOPC				AMS	AMS	16 22 40.0	
	comp=Z,40μm,12.7s						
PRU	**Pruhonice**	**17.34**	**337**	*e*P	**Pn**	**16 15 02.3**	**-0.3**
PRU				MLR	MLR		
	comp=Z,40μm,12.8s						
PRU	**Pruhonice**	**17.34**	**337**	*e*P	**Pn**	**16 15 02.3**	**-0.3**
PRU				*e*pP	**pP**	**16 15 08.5**	**-0.7**
PRU				AMS	AMS	16 22 50.0	
	comp=Z,40μm,12.8s						
OSTC	**Ostas**	**17.34**	**341**	*e*P	**Pn**	**16 15 01.7**	**-1.0**
OSTC				*e*x	x	16 15 05.3	
OSTC				*e*S	**S**	**16 18 23.9**	**+0.6**
OSTC				AMS	AMS	16 23 00.0	
	comp=Z,65μm,13.8s						
UPC	**Upice**	**17.35**	**340**	*e*P	**Pn**	**16 15 02.2**	**-0.6**
UPC				MLR	MLR		
	comp=Z,86μm,13.5s						
UPC	**Upice**	**17.35**	**340**	*e*P	**Pn**	**16 15 02.2**	**-0.6**
UPC				*e*pP	**pP**	**16 15 07.3**	**-2.3**
UPC				*e*S	**S**	**16 18 24.4**	**+0.9**
UPC				AMS	AMS	16 22 50.0	
	comp=Z,86μm,13.5s						
GOF	**Gofitskoye**	**17.39**	**47⇑**	*i*P	**Pn**	**16 15 03.8**	**+0.5**
GOF				pmax	pmax		
	comp=Z,943nm,1.0s						
CHVC	**Chvalec**	**17.41**	**341**	*e*P	**Pn**	**16 15 03.1**	**-0.5**
CHVC				*e*x	x	16 15 06.6	
CHVC				*e*S	**S**	**16 18 27.6**	**+2.8**
CHVC				AMS	AMS	16 22 50.0	
	comp=Z,73μm,13.4s						
KSP	**Ksiaz**	**17.58**	**341**	*e*P	**Pn**	**16 15 06.0**	**+0.4**
KSP				*e*S	**S**	**16 18 30.1**	**+2.0**
KSP	**Ksiaz**	**17.58**	**341**	*e*P	**Pn**	**16 15 06.0**	**+0.4**
BEL	**Belsk**	**17.65**	**351**	*e*P	**P**	**16 15 07.0**	**-0.2**
BEL	**Belsk**	**17.65**	**351**	*e*P	**P**	**16 15 07.0**	**-0.2**
SENIN	**Lac Senin/Sane**	**17.96**	**317**	*e*P	**P**	**16 15 11.6**	**+0.6**
	comp=Z,292nm,0.8s						
DDFL	**Dedoflistskaro**	**18.00**	**61**	*i* P	**Pn**	**16 15 08.8**	**-2.2**
NKC	**Novy Kostel**	**18.27**	**333**	*e*P	**Pn**	**16 15 13.7**	**-0.5**
NKC				*e*S	**Sn**	**16 18 35.4**	**-2.1**
NKC				MLR	MLR		
	comp=Z,132μm,15.9s						
NKC	**Novy Kostel**	**18.27**	**333**	*e*P	**Pn**	**16 15 13.7**	**-0.5**
NKC				*e*pP	**pP**	**16 15 17.0**	**-2.6**
NKC				*e*S	**Sn**	**16 18 35.4**	**-2.1**
NKC				AMS	AMS	16 23 20.0	
	comp=Z,132μm,15.9s						
BRG	**Berggiesshubel**	**18.30**	**337**	*i* P	**Pn**	**16 15 14.1**	**-0.3**
	comp=Z,28nm,0.8s						
BRG				*i*		16 15 19.8	
	comp=Z,310nm,0.9s						
BRG				*i* PP	**PnPn**	**16 15 24.9**	**-0.9**
	comp=Z,299nm,1.1s						
	comp=N,32μm,10.5s						
	comp=E,53μm,22.8s						
	comp=Z,50μm,11.6s						
GRFO	**Grafenberg**	**18.32**	**330**	*e*P	**P**	**16 15 15.2**	**+0.5**
	comp=Z,8μm,2.0s						
GRFO	**Grafenberg**	**18.32**	**330**	*e*P	**P**	**16 15 15.2**	**+0.5**
GRFO				pmax	pmax		
	comp=Z,8μm,2.0s						
GROC	**Groznyy**	**18.34**	**55**	*e*P	**P**	**16 15 12.2**	**-2.8**
GROC				*e*S	**Sn**	**16 18 41.3**	**+2.0**
GROC				pmax	pmax		
	comp=Z,1μm,1.9s						
BTLR	**Botlikh**	**18.45**	**57⇓**	*e*P	**Pn**	**16 15 17.2**	**+0.8**
DVE	**Vedeno**	**18.48**	**56⇑**	*e*P	**Pn**	**16 15 19.2**	**+2.4**
BFO	**Black Forest**	**18.64**	**323**	*e*P	**P**	**16 15 18.2**	**0.0**
	comp=Z,364nm,1.0s						
BFO	**Black Forest**	**18.64**	**323**	*i* P	**Pn**	**16 15 18.8**	**+0.2**
GNBR	**Gunib**	**18.88**	**59⇑**	*i*P	**Pn**	**16 15 21.8**	**+0.1**
CLL	**Collm**	**18.98**	**336**	*e*P	**P**	**16 15 22.0**	**+0.1**
CLL				*i* pP	**pP**	**16 15 26.0**	**-1.3**
	comp=Z,559nm,1.2s						
CLL				*e*Plp		16 15 29.0	
	comp=Z,11μm,21.5s						
CLL				*i* (PP)		16 15 34.4	
CLL				*i*		16 15 52.3	
CLL				*e*		16 16 51.0	
CLL				*e*S	**S**	**16 18 59.0**	**+3.0**
CLL				*i* sSS		16 19 20.5	
CLL				*e*PcP	**PcP**	**16 19 51.0**	**+4.2**
CLL				LmV		16 23 00.0	
	comp=Z,36μm,20.4s						
CLL				Lmax		16 23 00.0	
CLL				*e*		16 50 04.0	
CLL	**Collm**	**18.98**	**336**	*e*P	**P**	**16 15 22.0**	**+0.1**
CLL				*e*S	**S**	**16 18 59.0**	**+3.0**
CLL				pmax	pmax		
	comp=Z,559nm,1.2s						
CLL				MLR	MLR		
	comp=Z,36μm,20.4s						
AKT	**Akhty**	**19.18**	**62**	*e*P	**Pn**	**16 15 25.3**	**-0.1**
AKT				*e*S	**S**	**16 19 04.3**	**+3.7**
AKT				pmax	pmax		
	comp=Z,88nm,0.5s						
EBNR	**Beni Rached**	**19.26**	**282**	P	**Pn**	**16 15 30.0**	**+3.8**
ECHA	**Ech Chlef**	**19.39**	**282**	P	**Pn**	**16 15 33.1**	**+5.3**
MAK	**Makhachkala**	**19.44**	**57**	*e*P	**P**	**16 15 25.8**	**-1.2**
MAK				*e*S	**Sn**	**16 19 06.2**	**+0.5**
MAK				pmax	pmax		
	comp=Z,2μm,0.8s						
ETRT	**Tiaret**	**19.49**	**280**	P	Pn	16 15 37.6	+8.5
VORD	**Divnogorie**	**19.49**	**28**	*e*P	**P**	**16 15 27.8**	**+0.3**
VORD				*e*S	**Sn**	**16 19 07.0**	**+0.3**
VORD				pmax	pmax		
	comp=Z,480nm,1.1s						
VORD				smax	smax		
	comp=N,4μm,6.8s						
VORD				MLR	MLR		
	comp=Z,28μm,13.0s						
SUW	**Suwalki**	**19.60**	**357**	*e*P	**P**	**16 15 26.5**	**-2.2**
SUW				*e*S	**S**	**16 19 06.4**	**-2.3**
SUW	**Suwalki**	**19.60**	**357**	*e*P	**P**	**16 15 26.5**	**-2.2**
SUW				*e*S	**S**	**16 19 06.4**	**-2.3**
GKP	**Gorka Klasztor**	**19.61**	**346**	*e*P	**P**	**16 15 29.1**	**+0.2**
GKP				*e*S	**Sn**	**16 19 12.8**	**+3.1**
GKP	**Gorka Klasztor**	**19.61**	**346**	*e*P	**P**	**16 15 29.1**	**+0.2**
GKP				*e*S	**Sn**	**16 19 12.8**	**+3.1**
EANR	**'Ain N'Sour**	**19.62**	**281**	P	**Pn**	**16 15 35.2**	**+4.7**
VSR	**Storozhevoye**	**19.64**	**27**	*e*P	**P**	**16 15 28.5**	**-0.6**
VSR				*e*S	**S**	**16 19 08.9**	**-0.6**
VSR				pmax	pmax		
	comp=Z,1μm,2.0s						
VSR				smax	smax		
	comp=N,10μm,9.3s						
VSR				MLR	MLR		
	comp=Z,51μm,14.0s						
RUE	**Ruedersdorf**	**19.75**	**339**	*e*P	**P**	**16 15 29.4**	**-0.8**
RUE				IAmb	IAmb	16 15 36.2	
	comp=Z,879nm,1.2s						
OJGS	**Djebel Guires**	**19.93**	**280**	P	**Pn**	**16 15 35.0**	**+0.7**
VORR	**Voronezh**	**20.02**	**26**	*e*P	**P**	**16 15 31.0**	**-2.3**
VORR				pmax	pmax		
	comp=Z,2μm,2.0s						
MICGM	**Minsk**	**20.15**	**5⇑**	*i*P	**P**	**16 15 31.0**	**-3.6**
MICGM				⇑ *i*P	**P**	**16 15 31.0**	**-3.6**
MICGM				⇑ *i*P	Pn	16 15 32.0	-4.6
MICGM				PM		16 15 34.0	
	comp=Z,11nm,4.0s						
MICGM				PM		16 15 34.0	
	comp=Z,10nm,4.0s						
MICGM				PM		16 15 36.0	
	comp=Z,1.0nm,1.0s						
MICGM				PM		16 15 36.0	
	comp=N,7.4nm,4.0s						
MICGM				PM		16 15 36.0	
	comp=N,3.9nm,4.0s						
MICGM				PM		16 15 37.0	
	comp=N,0.2nm,1.0s						
MICGM				PM		16 15 38.0	
	comp=E,0.6nm,1.0s						
MICGM				*e*PP	**pwP**	**16 15 42.0**	**-0.3**
MICGM				*e*PPP	PPP	16 15 56.0	
MICGM				*e*S	**S**	**16 19 11.0**	**-8.7**
MICGM				*e*SS	**SnSn**	**16 19 34.0**	**-3.2**
MICGM				*e*SSS	SSS	16 19 56.0	
MICGM				*e*LQ	LQ	16 21 02.0	
MICGM				*e*LR	LR	16 21 38.0	
MICGM				LRM	MLR	16 24 24.0	
	comp=Z,87nm,12.0s						
MICGM				LRM	MLR	16 24 24.0	
	comp=Z,112nm,12.0s						
MICGM				LRM	MLR	16 24 28.0	
	comp=E,35nm,12.0s						
MICGM				LRM	MLR	16 24 28.0	
	comp=E,40nm,12.0s						
MICGM				LRM	MLR	16 24 32.0	
	comp=N,68nm,12.0s						
MICGM				LRM	MLR	16 24 32.0	
	comp=N,57nm,12.0s						
MNK	**Minsk**	**20.15**	**5⇑**	*i*P	**P**	**16 15 31.0**	**-3.6**
MNK				*e*		16 15 42.0	
MNK				*e*		16 15 56.0	
MNK				*e*S	**S**	**16 19 11.0**	**-8.7**
MNK				*e*		16 19 56.0	
MNK				pmax	pmax		
	comp=Z,11μm,4.0s						
MNK				pmax	pmax		
	comp=Z,10μm,4.0s						
MNK				pmax	pmax		
	comp=Z,1μm,1.0s						
MNK				pmax	pmax		
	comp=N,7μm,4.0s						
MNK				pmax	pmax		
	comp=N,4μm,4.0s						
MNK				pmax	pmax		
	comp=N,160nm,1.0s						
MNK				pmax	pmax		
	comp=E,560nm,1.0s						
MNK				MLR	MLR		
	comp=Z,87μm,12.0s						
MNK				MLR	MLR		
	comp=Z,113μm,12.0s						
MNK				MLR	MLR		
	comp=E,35μm,12.0s						
MNK				MLR	MLR		
	comp=E,40μm,12.0s						
MNK				MLR	MLR		
	comp=N,68μm,12.0s						
MNK				MLR	MLR		
	comp=N,57μm,12.0s						
OJBR	**Djebel Berber**	**20.25**	**280**	P	Pn	16 15 43.0	+4.9
KLNR	**Kaliningrad**	**20.43**	**352⇓**	*e*P	**P**	**16 15 37.5**	**-0.2**
KLNR				pmax	pmax		
	comp=Z,783nm,1.1s						
NACGM	**Naroch**	**20.49**	**3**	*e*P	**P**	**16 15 35.0**	**-3.3**
NACGM				*e*P	**P**	**16 15 35.0**	**-3.3**
NACGM				*e*PP	PnPn	16 16 29.0	+33
NACGM				*e*S	**S**	**16 19 20.0**	**-6.5**
NACGM				*e*SS	Sn	16 20 04.0	+33
NACGM				*e*SSS	SSS	16 20 40.0	
NACGM				*e*LQ	LQ	16 21 44.0	
NACGM				LRM	MLR	16 24 25.0	
	comp=Z,107nm,12.0s						
WLF	**Walferdange**	**20.60**	**323**	PFAKE		16 15 50.0	+8.1
WLF				LR	LR		
	comp=Z,140μm,22.0s						
WLF	**Walferdange**	**20.60**	**323**	P	**P**	**16 15 40.1**	**+0.5**
	comp=Z,733nm,1.3s						
WLF	**Walferdange**	**20.60**	**323**	sP	Pn	16 15 47.6	+5.7
WLF	**Walferdange**	**20.60**	**323**	PnPn	Pn	16 15 56.6	+15
TAM	**Tamanrasset**	**20.66**	**241**	*e*P	**P**	**16 15 41.2**	**+0.5**
	comp=Z,301nm,1.0s						
TAM				LR	LR		
	comp=Z,17μm,21.0s						
TAM	**Tamanrasset**	**20.66**	**241**	*e*P	**P**	**16 15 41.2**	**+0.5**
TAM				pmax	pmax		
	comp=Z,301nm,1.0s						
TAM				MLR	MLR		
	comp=Z,17μm,21.0s						
ODJA	**Bouhanifia**	**20.67**	**280**	P	Pn	16 15 42.0	-1.0
LPSR	**Galich'ya Gora**	**20.68**	**24**	*e*P	**P**	**16 15 38.8**	**-1.7**
LPSR				*e*S	**S**	**16 19 31.8**	**+1.4**
LPSR				pmax	pmax		
	comp=Z,610nm,1.6s						
LPSR				smax	smax		
	comp=E,9μm,11.4s						
LPSR				MLR	MLR		
	comp=Z,28μm,15.0s						
IDID	**Didziasalis**	**20.90**	**3**	*e*P	**P**	**16 15 41.7**	**-1.0**
IDID				IAmb	IAmb	16 15 57.7	
	comp=Z,245nm,0.9s						
RAYN	**Ar Rayn**	**20.91**	**116**	PFAKE		16 16 00.0	+14
RAYN				LR	LR		
	comp=Z,9μm,20.0s						
IIGN	**Ignalina**	**20.91**	**2**	*e*P	**P**	**16 15 42.1**	**-0.9**
IIGN				IAmb	IAmb	16 15 58.1	
	comp=Z,402nm,1.0s						
USTO	**Oran**	**20.97**	**281**	P	Pn	16 15 52.0	+5.7
PABE	**Paberze**	**21.07**	**358**	*e*P	**P**	**16 15 42.1**	**-2.5**
PABE				IAmb	IAmb	16 15 52.9	
	comp=Z,1μm,0.9s						
BHOU	**Houvegnez**	**21.12**	**325**	S	Sn	16 19 45.0	-1.2
MEM	**Membach**	**21.29**	**325**	P	**P**	**16 15 47.8**	**+0.7**
	comp=Z,877nm,0.9s						
MEM	**Membach**	**21.29**	**325**	P	**P**	**16 15 47.9**	**+0.8**
MEM				pP	**pP**	**16 15 52.5**	**-0.1**
MEM				S	Sn	16 19 48.4	-1.8
IZAR	**Zarasai**	**21.32**	**2**	*e*P	**P**	**16 15 45.0**	**-2.3**
IZAR				IAmb	IAmb	16 16 00.4	
	comp=Z,192nm,0.9s						
HGN	**Heimansgroeve**	**21.43**	**325**	*e*P	**P**	**16 15 49.5**	**+1.0**
BCLA	**Clavier**	**21.50**	**324**	P	**P**	**16 15 49.5**	**+0.2**
	comp=Z,376nm,1.2s						
BCLA				pP	**pP**	**16 15 54.6**	**-0.2**
BCLA				x	x	16 16 05.2	
BCLA				PnPn	pwP	16 16 09.0	+11
BCLA				x	x	16 16 27.3	
BEBN	**Eben Emael**	**21.57**	**325**	P	**P**	**16 15 50.7**	**+0.7**
BEBN				x	x	16 16 04.2	
BEBN				PnPn	**PnPn**	**16 16 09.5**	**-1.2**
BEBN				sP	**PcP**	**16 19 54.3**	**+2.7**
DOU	**Dourbes**	**21.65**	**322**	P	**P**	**16 15 50.7**	**-0.2**
	comp=Z,451nm,1.0s						
DOU				sP	**pP**	**16 15 54.1**	**-2.3**
DOU				PnPn	**PnPn**	**16 16 11.5**	**-0.3**
PBUR	**Paburg**	**21.68**	**355**	*e*P	**P**	**16 15 48.9**	**-2.3**
PBUR				IAmb	IAmb	16 15 55.2	
	comp=Z,2μm,1.0s						
BMRD	**Maredsous**	**21.69**	**323**	P	**P**	**16 15 51.2**	**-0.1**
BMRD				pP	**pP**	**16 15 55.9**	**-1.0**
BMRD				sP	**sP**	**16 15 58.1**	**-1.2**
BMRD				PnPn	pwP	16 16 12.3	+13
RGN	**Rugen**	**21.71**	**341**	PFAKE		16 16 10.0	+19
RGN				LR	LR		
	comp=Z,50μm,22.0s						
RGN	**Rugen**	**21.71**	**341**	*e*P	**P**	**16 15 49.6**	**-1.8**
RGN				IAmb	IAmb	16 15 58.1	
	comp=Z,1μm,1.0s						
CLF	**Chambon-Foret**	**21.75**	**315**	PFAKE		16 16 10.0	+18
CLF				LR	LR		
	comp=Z,27μm,21.0s						
BSD	**Bornholm Skovb**	**21.83**	**344⇑**	*i*P	**P**	**16 15 51.1**	**-1.7**
BSD				pmax	pmax		
	comp=Z,220nm,0.8s						
BSD	**Bornholm Skovb**	**21.83**	**344⇑**	*i*P	**P**	**16 15 51.1**	**-1.7**
	comp=Z,215nm,0.8s						
WTSB	**Winterswijk**	**21.88**	**329**	*e*P	**P**	**16 15 53.0**	**-0.3**
SNF	**Seneffe**	**22.06**	**323**	P	**P**	**16 15 56.5**	**+1.2**
SNF				sP	**pP**	**16 16 01.0**	**+0.1**
OBN	**Obninsk**	**22.16**	**18**	P	**P**	**16 15 54.3**	**-2.1**
	comp=Z,16nm,0.5s,baz=147,slow=7.1,SNR=13						
OBN				S	**S**	**16 19 56.5**	**-2.7**
	comp=Z,9.8nm,0.5s,baz=163,slow=19,SNR=1.9						
OBN				LR	LR	16 25 20.2	
	comp=Z,12μm,20.8s,baz=206,slow=39						
OBN	**Obninsk**	**22.16**	**18**	*e*P	**P**	**16 15 55.5**	**-0.9**
	comp=Z,890nm,1.0s						
OBN				LR	LR		
	comp=Z,44μm,21.0s						
OBN	**Obninsk**	**22.16**	**18⇓**	*e*P	**P**	**16 15 54.0**	**-2.3**
OBN				*e*PPP	PPP	16 16 24.0	
OBN				*e*		16 19 55.2	
OBN				*i* S	**S**	**16 19 59.5**	**+0.2**
OBN				*e*SS	**SnSn**	**16 20 29.8**	**+3.3**
OBN				pmax	pmax		
	comp=Z,1μm,1.1s						
OBN				MLR	MLR		
	comp=Z,47μm,15.0s						
UCC	**Uccle**	**22.21**	**324**	PFAKE		16 16 10.0	+13
UCC				LR	LR		
	comp=Z,28μm,22.0s						
UCC	**Uccle**	**22.21**	**324**	P	**P**	**16 15 57.8**	**+1.0**
UCC				sP	**pP**	**16 16 02.4**	**0.0**
UCC				S	**S**	**16 20 01.3**	**+1.0**
MELI	**Melilla**	**22.95**	**280⇑**	*i*P	**P**	**16 16 07.4**	**+2.6**
MELI				*i* S	**S**	**16 20 14.0**	**+0.2**
COP	**Copenhagen**	**22.95**	**342**	*i* P	**P**	**16 16 04.7**	**0.0**
COP				pmax	pmax		
	comp=Z,660nm,1.2s						
COP	**Copenhagen**	**22.95**	**342**	*i* P	**P**	**16 16 04.7**	**0.0**
	comp=Z,656nm,1.2s						
MOS	**Moscow**	**22.99**	**18**	*e*P	**P**	**16 16 02.0**	**-3.1**
MOS				*e*PPP	PPP	16 16 36.2	
MOS				*e*		16 19 51.6	
MOS				*e*S	**S**	**16 20 11.1**	**-3.1**
MOS				*e*SSS	SSS	16 21 02.6	
MOS				pmax	pmax		
	comp=Z,514nm,1.0s						
MOS				MLR	MLR		
	comp=Z,63μm,14.0s						
MOS				MLR	MLR		
	comp=N,41μm,13.0s						
MOS				MLR	MLR		
	comp=E,35μm,14.0s						
UCM	**Universidad Co**	**23.17**	**293⇑**	*i*P	**P**	**16 16 08.0**	**+0.8**
UCM				*i* S	**S**	**16 20 17.6**	**-0.1**
SLIT	**Slitere, Latvi**	**23.26**	**356**	*e*P	**P**	**16 16 05.0**	**-2.8**
SLIT				IAmb	IAmb	16 16 21.6	
	comp=Z,2μm,1.2s						
ESDC	**Sonseca Array**	**23.67**	**291**	P	**P**	**16 16 11.5**	**-0.7**
	comp=Z,43nm,0.6s,baz=83,slow=9.8,SNR=124						
ESDC				PcP	**PcP**	**16 19 57.0**	**+0.8**
	comp=Z,4.3nm,0.8s,baz=33,slow=2.3,SNR=2.5						
ESDC				LR	LR	16 26 50.5	
	comp=Z,8μm,19.6s,baz=90,slow=40						
ESLA	**Sonseca Array**	**23.67**	**291**	*e*P	**P**	**16 16 11.6**	**-0.5**
	comp=Z,366nm,1.1s						
PAB	**San Pablo**	**23.96**	**291**	*e*P	**P**	**16 16 14.9**	**0.0**
	comp=Z,340nm,1.1s						
PAB	**San Pablo**	**23.96**	**291**	*e*P	**P**	**16 16 14.9**	**0.0**
PAB				pmax	pmax		
	comp=Z,340nm,1.1s						
EMAL	**Malaga-Limoner**	**24.03**	**284⇑**	*i*P	**P**	**16 16 18.0**	**+2.5**
EMAL				*i* S	**S**	**16 20 35.8**	**+4.3**
VSU	**Vasula**	**24.05**	**2**	*c e*P	**P**	**16 16 14.8**	**-0.6**
VSU				pmax	pmax		
	comp=Z,2μm,2.5s						
VSU				MLR	MLR		
	comp=Z,92μm,17.0s						
VSU	**Vasula**	**24.05**	**2**	*e*P	**P**	**16 16 14.7**	**-0.6**
VSU				IAmb	IAmb	16 16 32.2	
	comp=Z,619nm,0.8s						
ELSH	**Elham, Standar**	**24.05**	**321**	*e*P	**P**	**16 16 15.7**	**+0.2**
ELSH				IAmb	IAmb	16 16 21.3	
	comp=Z,3μm,1.5s						
ELSH				IAMs_20	IAMs_20	16 27 32.6	
	comp=Z,79μm,13.6s						
PVLZ	**Peæn de**	**24.07**	**280⇑**	*i*P	**P**	**16 16 19.9**	**+4.1**
PVLZ				*i* S	**S**	**16 20 40.9**	**+8.8**
MUD	**Monsted U'grnd**	**24.54**	**339**	*i* P	**P**	**16 16 19.8**	**-0.1**
MUD				pmax	pmax		
	comp=Z,940nm,1.0s						
MUD	**Monsted U'grnd**	**24.54**	**339**	*i* P	**P**	**16 16 19.8**	**-0.1**
	comp=Z,945nm,1.0s						
MDT	**Midelt**	**24.70**	**275**	P	**P**	**16 16 22.1**	**+0.3**
	comp=Z,40nm,0.6s,baz=86,slow=11,SNR=49						
LIJA	**Lijar**	**24.80**	**284**	*i*

SFS *i* S S 16 21 07.0 +12
PUL Pulkovo 25.57 6⇓ *e*P **P 16 16 28.2 -1.0**
PUL pmax pmax
comp=Z,698nm,0.8s
PUL MLR MLR
comp=Z,28μm,15.0s
PUL Pulkovo 25.57 6 *e*P **P 16 16 27.3 -1.9**
PUL IAmb IAmb 16 16 35.2
comp=Z,1μm,1.1s
SWN1 Swindon 25.79 320 *e*P **P 16 16 31.3 0.0**
SWN1 IAmb IAmb 16 16 37.3
comp=Z,963nm,0.9s
SWN1 IAMs_20 IAMs_20 16 29 07.0
comp=Z,71μm,14.3s
PBRG Braganca 25.95 296 *e*P **P 16 16 32.9 -0.1**
comp=Z,484nm,1.0s
PBRG *e*S **S 16 21 10.8 +8.5**
MVO Moncorvo 26.11 294 *e*P **P 16 16 34.1 -0.4**
comp=Z,702nm,1.3s
MVO *e*S **S 16 21 11.2 +6.4**
STRD Stroud 26.12 320 *e*P **P 16 16 34.2 -0.1**
STRD IAmb IAmb 16 16 40.0
comp=Z,668nm,1.0s
STRD IAMs_20 IAMs_20 16 28 50.9
comp=Z,54μm,13.8s
LMK Market Rasen 26.12 324 *e*P **P 16 16 36.3 +2.0**
LMK IAmb IAmb 16 16 43.6
comp=Z,263nm,0.8s
CWF Charnwood Fore 26.19 322 *e*P **P 16 16 35.2 +0.2**
CWF IAmb IAmb 16 16 45.7
comp=Z,192nm,1.0s
CWF IAMs_20 IAMs_20 16 29 06.2
comp=Z,42μm,15.4s
HOMB Homborsund 26.27 340 *e*P **P 16 16 36.6 +1.0**
PMRV Marv??o 26.31 290 *e*P **P 16 16 35.2 -1.0**
comp=Z,495nm,1.2s
PMRV *e*S **S 16 21 12.0 +4.1**
PCBR Castelo Branco 26.39 291 *e*P **P 16 16 37.1 +0.2**
comp=Z,283nm,1.6s
DAMY Dhamar 26.40 134 PFAKE 16 16 50.0 +13
DAMY LR LR
comp=Z,10μm,21.0s
MTE Manteigas 26.46 293 *e*P **P 16 16 37.2 -0.4**
comp=Z,383nm,1.3s
MTE *e*S **S 16 21 13.8 +3.5**
MONM Monmouth 26.50 319 *e*P **P 16 16 36.7 -1.0**
MONM IAmb IAmb 16 16 43.2
comp=Z,309nm,1.2s
MONM IAMs_20 IAMs_20 16 29 11.2
comp=Z,48μm,16.0s
PVAQ Vaqueiros 26.62 286 *e*P **P 16 16 38.8 -0.2**
comp=Z,694nm,1.2s
PVAQ *e*S **S 16 21 10.4 -2.3**
PVAQ Vaqueiros 26.62 286 *e*P **P 16 16 38.1 -0.9**
comp=Z,746nm,1.2s
PVAQ LR LR
comp=Z,8μm,19.0s
PVRL Vila Real 26.64 295 *e*P **P 16 16 39.0 -0.2**
comp=Z,275nm,1.3s
MCH1 Michaelchurch 26.68 320 *e*P **P 16 16 39.2 -0.2**
MCH1 IAmb IAmb 16 16 46.0
comp=Z,237nm,1.1s
MCH1 IAMs_20 IAMs_20 16 29 15.8
comp=Z,50μm,14.5s
POLO Lamas de Olo 26.70 295 *e*P **P 16 16 39.7 -0.1**
comp=Z,253nm,1.3s
POLO *e*S **S 16 21 14.3 +0.1**
PBEJ Beja 26.70 287 *e*P **P 16 16 40.2 +0.4**
comp=Z,521nm,1.3s
PVIS Viseu 26.74 293 *e*P **P 16 16 40.2 +0.1**
comp=Z,332nm,1.0s
HFS Hagfors 26.74 347 P **P 16 16 38.5 -1.4**
comp=Z,119nm,0.9s,baz=163,slow=11,SNR=82
HFS S **S 16 21 13.9 -0.4**
comp=Z,26nm,0.9s,baz=144,slow=6.2,SNR=2.8
HFS LR LR 16 28 52.4
comp=Z,24μm,20.1s,baz=158,slow=40
DESE Dese 26.77 147 *i* P **P 16 16 39.6 -1.2**
DESE *i* S **S 16 21 21.6 +5.6**
DESE Dese 26.77 147 *e*P P 16 16 27.7 -13
DESE *e*S **S 16 21 23.7 +7.7**
LBWR Ladybower, Pea 26.77 323 *e*P **P 16 16 41.3 +1.1**
LBWR IAmb IAmb 16 16 53.4
comp=Z,302nm,1.0s
LBWR IAMs_20 IAMs_20 16 29 16.0
comp=Z,35μm,16.0s
PBDV Barranco-do-Ve 26.80 286 *e*P **P 16 16 40.5 -0.2**
comp=Z,840nm,1.2s
PBDV *e*S **S 16 21 14.8 -0.9**
EVO Evora 26.80 288 *e*P **P 16 16 40.5 -0.2**
comp=Z,431nm,1.3s
EVO Evora 26.80 288⇑ *i*P **P 16 16 42.0 +1.4**
EVO *i* S **S 16 21 14.9 -0.7**
GEYT Alibeck 26.84 73 P **P 16 16 40.2 -0.8**
comp=Z,14nm,0.4s,baz=308,slow=7.3,SNR=32
GEYT S S 16 21 31.1 +15
comp=Z,100nm,1.4s,baz=279,slow=23,SNR=4.0
STNC Stoke 26.84 322 *e*P **P 16 16 40.7 -0.1**
STNC IAmb IAmb 16 16 46.0
comp=Z,1μm,1.5s
STNC IAMs_20 IAMs_20 16 29 34.2
comp=Z,39μm,15.2s
PCVE Castro Verde 26.86 286 *e*P **P 16 16 41.0 -0.2**
comp=Z,607nm,1.3s
PCVE *e*S **S 16 21 16.5 -0.1**
PCAB Cabril 26.90 295 *e*P **P 16 16 41.6 0.0**
comp=Z,531nm,1.3s
GDLE Glaisdale, N Y 26.93 326 *e*P **P 16 16 40.7 -0.9**
GDLE IAmb IAmb 16 16 50.5
comp=Z,154nm,0.7s
GDLE IAMs_20 IAMs_20 16 29 56.9
comp=Z,78μm,14.5s
PMTG Montargil 26.96 290 *e*P **P 16 16 41.7 -0.3**
comp=Z,314nm,1.5s
PMTG *e*S **S 16 21 17.5 -0.6**
MESJ Messejana 26.99 287 *e*P **P 16 16 41.4 -1.0**
MESJ AMb AMB 16 16 59.8
comp=Z,404nm,0.8s
MESJ *e*S **S 16 21 19.6 +1.0**
MESJ Messejana 26.99 287 *e*P **P 16 16 41.4 -1.0**
MESJ *e*S **S 16 21 19.6 +1.0**
FIA0 FINESS Array S 27.02 1 *e*PcP **PcP 16 20 04.0 +0.8**
FINES FINESS Array B 27.02 1 P **P 16 16 40.4 -2.0**
comp=Z,175nm,0.9s,baz=168,slow=10,SNR=111
FINES PcP **PcP 16 20 04.0 +0.8**
comp=Z,17nm,0.6s,baz=114,slow=1.7,SNR=3.9
FINES S **S 16 21 23.3 +4.8**
comp=Z,13nm,0.8s,baz=224,slow=9.7,SNR=1.9
FINES LR LR 16 28 18.1
comp=Z,34μm,21.1s,baz=186,slow=38
HPK Haverah Park 27.04 324 *e*P **P 16 16 43.2 +0.5**
HPK IAMs_20 IAMs_20 16 29 52.8
comp=Z,36μm,14.7s
PTOM Tomar 27.10 291 *e*P **P 16 16 43.5 +0.2**
comp=Z,314nm,1.3s
PGAV Gavieira, Arco 27.11 296 *e*P **P 16 16 44.5 +1.0**
comp=Z,204nm,1.3s
PGAV *e*S **S 16 21 21.6 +1.1**
COI Coimbra 27.11 292 *e*P **P 16 16 43.6 +0.2**
comp=Z,372nm,2.0s
COI *e*S **S 16 21 21.8 +1.3**
COI Coimbra 27.11 292 PFAKE 16 17 00.0 +17
COI LR LR
comp=Z,14μm,22.0s
OSL Oslo 27.17 344 *e*P **P 16 16 43.5 -0.1**
PCAS Casmilo, Conde 27.18 292 *e*P **P 16 16 44.9 +0.9**
comp=Z,230nm,1.6s
PCAS *e*S **S 16 21 21.1 -0.4**
KONO Kongsberg 27.18 343 *e*P **P 16 16 42.6 -1.1**
comp=Z,590nm,1.3s
KONO Kongsberg 27.18 343 *ce*P **P 16 16 41.7 -2.1**
KONO pmax pmax
comp=Z,495nm,1.6s
KONO MLR MLR
comp=Z,26μm,21.0s
KONO Kongsberg 27.18 343 *e*P **P 16 16 42.4 -1.3**
PNCL Nicolau / Gran 27.22 288 *e*P **P 16 16 44.9 +0.5**
comp=Z,372nm,1.8s
PNCL *e*S **S 16 21 21.6 -0.6**
FOEL Foel Wylfa 27.24 321 *e*P **P 16 16 44.0 -0.5**
FOEL IAmb IAmb 16 16 49.8
comp=Z,284nm,0.9s
FOEL IAMs_20 IAMs_20 16 29 56.0
comp=Z,40μm,17.8s
PTO Porto 27.30 294 *e*P **P 16 16 47.2 +2.2**
comp=Z,418nm,1.3s

MZR Muzera 27.33 107 *i* P **P 16 16 46.1 +0.5**
SNR=17
MZR Muzera 27.33 107 P **P 16 16 47.8 +2.3**
SNR=23
MORF Marmelete 27.37 286 *e*P **P 16 16 44.7 -1.1**
MORF AMb AMB 16 17 03.5
comp=Z,147nm,1.7s
MORF *e*S **S 16 21 25.4 +0.7**
MORF Marmelete 27.37 286 *e*P **P 16 16 45.5 -0.3**
comp=Z,176nm,1.4s
MORF *e*S **S 16 21 23.5 -1.2**
MORF Marmelete 27.37 286 *e*P **P 16 16 44.7 -1.1**
MORF *e*S **S 16 21 25.4 +0.7**
PTEO Sao Teotonio 27.41 286 *e*P **P 16 16 45.9 -0.2**
comp=Z,430nm,1.4s
PFVI Vila Bisbo 27.52 285 *e*P **P 16 16 47.4 +0.3**
PFVI *e*S **S 16 21 24.8 -2.2**
PFVI Vila Bisbo 27.52 285 PFAKE 16 17 00.0 +13
PFVI LR LR
comp=Z,8μm,21.0s
STAV Stavanger 27.65 338 *e*P **P 16 16 47.8 -0.2**
LIS Lisbon 27.69 289 *e*P **P 16 16 47.3 -1.3**
LIS AMb AMB 16 16 58.2
comp=Z,396nm,1.6s
LIS *e*S **S 16 21 30.9 +1.4**
LIS Lisbon 27.69 289 *e*P **P 16 16 47.3 -1.3**
LIS *e*S **S 16 21 30.9 +1.4**
EDMD Edmundbyers 27.71 326 *e*P **P 16 16 47.7 -0.9**
EDMD IAmb IAmb 16 16 54.2
comp=Z,209nm,1.2s
EDMD IAMs_20 IAMs_20 16 30 21.9
comp=Z,60μm,14.4s
AJN Ajban 27.77 103 *i* P **P 16 16 49.1 -0.4**
SNR=16
AJN Ajban 27.77 103 P **P 16 16 50.1 +0.7**
SNR=20
PMAFR Mafra 27.79 289 *e*P **P 16 16 49.7 +0.2**
comp=Z,510nm,1.4s
PMAFR *e*S **S 16 21 32.5 +1.4**
UMQ Umm Al-Quwin 27.89 100 *i* P **P 16 16 51.1 +0.6**
SNR=7.3
UMQ Umm Al-Quwin 27.89 100 P **P 16 16 53.2 +2.8**
SNR=13
ATD Arta Tunnel 28.00 140 P **P 16 16 54.0 +2.4**
comp=Z,28nm,0.9s,baz=294,slow=18,SNR=4.4
ATD S **S 16 21 42.1 +7.3**
comp=Z,6.8nm,0.7s,baz=127,slow=20,SNR=2.1
ATD LR LR 16 28 00.0
comp=Z,8μm,18.5s,baz=332,slow=37
ATD Arta Tunnel 28.00 140 P **P 16 16 54.6 +3.0**
SNR=5.8
KMY Karmoy 28.01 338 *e*P **P 16 16 52.5 +1.3**
ASUD Al Ashush, Dub 28.02 102 *i* P **P 16 16 51.9 +0.3**
SNR=31
ASUD Al Ashush, Dub 28.02 102 P **P 16 16 52.5 +0.8**
SNR=19
KLMR Klimovskoe 28.03 15 *e*P **P 16 16 48.8 -2.5**
KLMR pmax pmax
comp=Z,793nm,1.4s
KLMR Klimovskoe 28.03 15 *e*P **P 16 16 48.9 -2.4**
KLMR AMP 16 17 04.0
comp=Z,793nm,1.4s
SHME Shamm 28.05 99 *i* P **P 16 16 52.6 +0.5**
SNR=7.7
NB2 NORSAR Subarra 28.06 346 P **P 16 16 50.6 -1.1**
comp=Z,650nm,1.7s,baz=156,slow=9.3
NB2 NORSAR Subarra 28.06 346 P **P 16 16 50.6 -1.1**
baz=156,slow=9.3
NB2 P **P 16 16 50.6 -1.1**
baz=156,slow=9.3
NOA NORSAR Array B 28.06 346 P **P 16 16 50.9 -0.8**
comp=Z,43nm,0.8s,baz=150,slow=7.5,SNR=98
NOA S **S 16 21 39.1 +4.1**
comp=Z,7.7nm,0.9s,baz=159,slow=14,SNR=2.4
NOA LR LR 16 30 01.1
comp=Z,30μm,20.7s,baz=150,slow=41
WLF1 Llynfaes 28.07 321 *e*P **P 16 16 50.9 -0.9**
WLF1 IAmb IAmb 16 17 04.9
comp=Z,368nm,1.3s
WLF1 IAMs_20 IAMs_20 16 30 30.3
comp=Z,79μm,15.9s
KESW Keswick, Cumbr 28.12 324 *e*P **P 16 16 53.4 +1.2**
KESW IAmb IAmb 16 17 03.7
comp=Z,233nm,0.8s
KESW IAMs_20 IAMs_20 16 30 34.3
comp=Z,34μm,15.8s
NAZ Nazwa, Dubai 28.12 101 *i* P **P 16 16 53.0 +0.4**
SNR=49
NAZ Nazwa, Dubai 28.12 101 P **P 16 16 53.2 +0.6**
SNR=60
ANKE Ethiopia-Afar 28.17 148 *i* P **P 16 16 53.5 0.0**
ANKE *e*S **S 16 21 45.5 +7.4**
ANKE Ethiopia-Afar 28.17 148 *i* P **P 16 16 55.5 +2.0**
ANKE *e*S S 16 21 47.7 +10
ANKE Ethiopia-Afar 28.17 148 *e*P **P 16 16 53.5 0.0**
ANKE *e*S **S 16 21 46.5 +8.4**
FAQ Al Faqa, Dubai 28.18 102 *i* P **P 16 16 53.0 -0.1**
SNR=50
FAQ Al Faqa, Dubai 28.18 102 P **P 16 16 53.2 +0.1**
SNR=24
ODD1 Odda 28.18 340 *e*P **P 16 16 55.5 +2.7**
BANOM Banah 28.24 99 *i* P **P 16 16 52.8 -0.8**
SNR=72
BANOM Banah 28.24 99 P **P 16 16 53.9 +0.2**
SNR=40
AAE Adis Abeba 28.26 150 *e*P **P 16 16 56.5 +2.2**
AAE *e*S **S 16 21 48.0 +8.5**
FURI Furi 28.35 151 PFAKE 16 17 10.0 +15
FURI LR LR
comp=Z,35μm,20.0s
FURI Furi 28.35 151 *e*P **P 16 16 57.2 +2.2**
FURI *e*S **S 16 21 49.1 +8.2**
MSFE Esma-Masafi 28.36 100 *i* P **P 16 16 54.5 -0.3**
SNR=61
NC204 NORSAR Array S 28.37 345 *e*P **P 16 16 53.9 -0.6**
comp=Z,3μm,2.0s
SKAR Skarslia 28.40 343 *e*P **P 16 16 55.1 +0.3**
BHH Howats Hill 28.46 325 *e*P **P 16 16 54.6 -0.7**
MDH Madha 28.50 100 *i* P **P 16 16 56.0 0.0**
SNR=46
MDH Madha 28.50 100 P **P 16 16 55.6 -0.3**
SNR=48
EKA Eskdalemuir Ar 28.57 326 P **P 16 16 55.6 -0.6**
comp=Z,66nm,0.7s,baz=129,slow=7.7,SNR=57
EKA ScP **ScP 16 23 47.1 +0.1**
comp=Z,5.7nm,0.6s,baz=124,slow=5.3,SNR=8.8
EKA LR LR 16 30 56.5
comp=Z,28μm,18.8s,baz=135,slow=42
HATD Hatta, Dubai 28.58 101 *i* P **P 16 16 56.4 -0.3**
SNR=59
HATD Hatta, Dubai 28.58 101 P **P 16 16 56.6 0.0**
SNR=85
ESK Eskdalemuir 28.58 326 *e*P **P 16 16 56.4 0.0**
comp=Z,395nm,1.0s
ESK Eskdalemuir 28.58 326 *e*P **P 16 16 56.0 -0.3**
ESK IAmb IAmb 16 17 06.3
comp=Z,218nm,0.8s
ESK IAMs_20 IAMs_20 16 30 57.6
comp=Z,230μm,15.0s
ESK Eskdalemuir 28.58 326 *i* P **P 16 16 57.1 +0.8**
ASHO Ashiyiah 28.58 102 *i* P **P 16 16 56.7 -0.1**
SNR=20
ASHO Ashiyiah 28.58 102 P **P 16 16 56.4 -0.4**
SNR=59
UOSS Minazif 28.58 101 *e*P **P 16 16 55.9 -0.8**
comp=Z,444nm,0.9s
UOSS LR LR
comp=Z,4μm,20.0s
UOSS Minazif 28.58 101 *i* P **P 16 16 56.1 -0.6**
SNR=53
UOSS Minazif 28.58 101 P **P 16 16 56.5 -0.2**
SNR=81
ALNE Al Ain 28.62 103 *i* P **P 16 16 57.2 +0.1**
SNR=52
IOMK Kirk Michael 28.65 323 *e*P **P 16 16 56.0 -1.0**
IOMK IAmb IAmb 16 17 02.2
comp=Z,217nm,0.9s
IOMK IAMs_20 IAMs_20 16 31 11.6
comp=Z,64μm,14.3s
ESY Stoneypath 28.66 327 *e*P **P 16 16 58.8 +1.7**
EBL Broad Law 28.77 326 *e*P **P 16 16 59.7 +1.6**
AKTO Aktyubinsk 28.80 46 P **P 16 16 57.7 -0.7**
comp=Z,43nm,0.5s,baz=248,slow=8.5,SNR=76
AKTO S **S 16 21 46.2 -0.7**
comp=Z,17nm,0.9s,baz=202,slow=19,SNR=1.8
AKTO LR LR 16 32 22.8

comp=Z,28μm,19.9s,baz=248,slow=45
EDI Edinburgh 28.92 327 *e*P **P 16 16 59.5 +0.1**
EDI IAMs_20 IAMs_20 16 31 33.6
comp=Z,62μm,14.6s
BER Bergen 28.94 340 *e*P **P 16 17 00.6 +1.2**
GAL1 Galloway 29.05 324 *e*P **P 16 17 00.2 -0.3**
GAL1 IAmb IAmb 16 17 06.2
comp=Z,70nm,0.9s
GAL1 IAMs_20 IAMs_20 16 30 44.9
comp=Z,18μm,16.8s
ASK Askoy 29.06 340 *e*P **P 16 17 02.0 +1.5**
KIRV Kirov 29.08 26 P **P 16 16 59.6 -1.0**
comp=Z,169nm,0.6s,baz=215,slow=1.0,SNR=36
KIRV S **S 16 21 48.0 -3.0**
comp=Z,75nm,0.7s,baz=104,slow=23,SNR=6.9
KIRV LR LR 16 30 38.1
comp=Z,12μm,18.3s,baz=230,slow=41
DSB Dublin 29.09 320 *e*P **P 16 17 01.1 +0.3**
comp=Z,322nm,1.2s
SOHO SOHO 29.22 102 P **P 16 17 02.3 -0.1**
SNR=142
EDU Dundee 29.22 328 *e*P **P 16 17 01.4 -0.6**
HYA Hoyanger 29.35 341 *e*P **P 16 17 03.5 +0.3**
DOMB Dombas 29.42 345 *e*P **P 16 17 04.1 +0.3**
PGBU Glenifferbraes 29.46 326 *e*P **P 16 17 04.2 +0.1**
PGBU IAmb IAmb 16 17 09.5
comp=Z,195nm,1.1s
PGBU IAMs_20 IAMs_20 16 31 25.9
comp=Z,42μm,14.9s
ARQ Araqi 29.59 104 P **P 16 17 07.3 +1.6**
SNR=50
AB31 Akbulak array 29.60 49 *i* P **P 16 17 04.9 -0.6**
AB31 pmax pmax
comp=Z,31nm,0.6s
EAB Aberfoyle 29.61 326 *e*P **P 16 17 04.7 -0.7**
INVG Invergeldie, C 29.61 327 *e*P **P 16 17 05.3 -0.2**
INVG IAmb IAmb 16 17 10.7
comp=Z,122nm,0.9s
INVG IAMs_20 IAMs_20 16 32 11.0
comp=Z,63μm,15.3s
SUE Sulen 29.65 340 *e*P **P 16 17 06.3 +0.5**
CLGH Cloghs, Cushen 29.85 323 *e*P **P 16 17 08.8 +1.1**
CLGH IAmb IAmb 16 17 13.1
comp=Z,184nm,1.0s
CLGH IAMs_20 IAMs_20 16 31 17.9
comp=Z,34μm,15.7s
TOC2 Torodi Ar. Sit 29.94 231 PFAKE 16 17 20.0 +11
TOC2 LR LR
comp=Z,38μm,22.0s
TOC1 Torodi Ar. Sit 29.94 231 PFAKE 16 17 20.0 +11
TOC1 LR LR
comp=Z,42μm,22.0s
TOB2 Torodi Ar. Sit 29.95 231 PFAKE 16 17 20.0 +11
TOB2 LR LR
comp=Z,36μm,21.0s
TOC3 Torodi Ar. Sit 29.95 231 PFAKE 16 17 20.0 +11
TOC3 LR LR
comp=Z,37μm,22.0s
MCD Coleburn Disti 29.96 329 *e*P **P 16 17 09.1 +0.5**
TOA2 Torodi Ar. Sit 29.96 231 PFAKE 16 17 20.0 +11
TOA2 LR LR
comp=Z,36μm,22.0s
TOA1 Torodi Ar. Sit 29.96 231 *e*P **P 16 17 07.6 -1.4**
TOA1 LR LR
comp=Z,36μm,22.0s
TOC7 Torodi Ar. Sit 29.96 231 PFAKE 16 17 20.0 +11
TOC7 LR LR
comp=Z,36μm,22.0s
TOA0 Torodi Ar. Sit 29.96 231 *e*P **P 16 17 08.1 -0.9**
TOA0 LR LR
comp=Z,36μm,22.0s
TOA0 Torodi Ar. Sit 29.96 231 P **P 16 17 08.6 -0.4**
SNR=62
TORD Torodi Ar. Bea 29.96 231 P **P 16 17 07.6 -1.4**
comp=Z,125nm,0.5s,baz=29,slow=7.5,SNR=221
TORD LR LR 16 32 19.5
comp=Z,41μm,19.5s,baz=0.0,slow=43
TOB3 Torodi Ar. Sit 29.96 231 PFAKE 16 17 20.0 +11
TOB3 LR LR
comp=Z,36μm,22.0s
TOA3 Torodi Ar. Sit 29.97 231 PFAKE 16 17 20.0 +11
TOA3 LR LR
comp=Z,36μm,22.0s
TOB5 Torodi Ar. Sit 29.97 231 PFAKE 16 17 20.0 +11
TOB5 LR LR
comp=Z,38μm,22.0s
TOB4 Torodi Ar. Sit 29.98 231 PFAKE 16 17 20.0 +11
TOB4 LR LR
comp=Z,36μm,22.0s
TOC4 Torodi Ar. Sit 29.98 231 PFAKE 16 17 20.0 +11
TOC4 LR LR
comp=Z,37μm,22.0s
TOC5 Torodi Ar. Sit 29.99 231 PFAKE 16 17 20.0 +11
TOC5 LR LR
comp=Z,42μm,22.0s
HOQ Hoqain 30.11 102 P **P 16 17 11.1 +0.8**
SNR=41
LAWE Loch Awe, Argy 30.14 326 *e*P **P 16 17 09.8 -0.3**
LAWE IAMs_20 IAMs_20 16 31 55.1
comp=Z,46μm,14.7s
PRGR Permogore 30.21 19⇓ *i*P **P 16 17 09.5 -1.2**
PRGR *e*S **S 16 22 08.1 -0.5**
PRGR pmax pmax
comp=Z,864nm,1.4s
MOL Molde 30.22 344 *e*P **P 16 17 10.7 -0.1**
TBLU Trondheim 30.26 347 *e*P **P 16 17 12.5 +1.3**
MDO Dochfour 30.35 328 *e*P **P 16 17 12.2 +0.2**
BSY Bisya 30.42 104 P **P 16 17 13.5 +0.5**
SNR=51
KAC Achnashellach 30.79 328 *e*P **P 16 17 16.6 +0.7**
BIDO Bidbid 30.79 102 P **P 16 17 16.9 +0.7**
SNR=18
LRW Lerwick 30.85 334 *e*P **P 16 17 16.4 +0.1**
LRW IAMs_20 IAMs_20 16 33 58.6
comp=Z,22μm,17.1s
KPL Plockton 30.86 327 *e*P **P 16 17 16.1 -0.4**
KPL IAmb IAmb 16 17 30.0
comp=Z,306nm,1.2s
KPL IAMs_20 IAMs_20 16 32 51.9
comp=Z,68μm,13.5s
SMDO Samad 30.95 103 P **P 16 17 20.0 +2.2**
SNR=49
RBK Rabkut 31.02 116 P **P 16 17 20.3 +1.9**
SNR=5.7
NSS Namsos 31.15 349 *e*P **P 16 17 18.8 -0.2**
RRR Rubha Reidh 31.22 328⇑ *e*P **P 16 17 19.9 +0.2**
RSC Scourie 31.24 329 *e*P **P 16 17 21.0 +1.2**
JMDO Jabal Madar 31.33 104 P **P 16 17 20.8 -0.3**
SNR=36
WSAR Wadi Sarin 31.33 102 ScP **ScP 16 23 55.7 -0.9**
comp=Z,19nm,0.9s,baz=323,slow=5.1,SNR=4.1
WSAR Wadi Sarin 31.33 102 P **P 16 17 19.6 -1.5**
SNR=18
DMTO DMTO 31.45 114 P **P 16 17 22.6 +0.5**
SNR=5.2
RRH Rhenigidale 31.65 328⇑ *e*P **P 16 17 24.5 +1.1**
ARU Arti 31.68 36 LR LR 16 32 43.6
comp=Z,11μm,19.3s,baz=256,slow=41
ARU Arti 31.68 36 *e*P **P 16 17 22.6 -1.1**
comp=Z,300nm,0.9s
ARU LR LR
comp=Z,18μm,18.0s
ARU Arti 31.68 36*c* *i*P **P 16 17 22.5 -1.3**
ARU 16 18 23.0
ARU PPP PPP 16 18 38.1
ARU 16 20 13.8
ARU S **S 16 22 33.1 +1.2**
ARU SS **SnSn 16 24 20.4 +1.7**
ARU pmax pmax
comp=Z,335nm,1.5s
ARU MLR MLR
comp=Z,18μm,15.0s
WBK Wadi Bani Khal 31.91 103 P **P 16 17 27.8 +1.6**
SNR=24
MHTO MHTO 31.93 106 P **P 16 17 27.0 +0.7**
SNR=40
DQM DQM 32.16 108 P **P 16 17 28.3 -0.1**
SNR=16
MOR8 Moi Rana 32.38 352 *e*P **P 16 17 31.6 +1.8**
JLN Jalan Bani Buh 32.49 103 P **P 16 17 32.4 +1.2**
SNR=13
STOK Stokkvaagen 32.70 351 *e*P **P 16 17 33.2 +0.6**
KONS Konsvik 32.85 351 *e*P **P 16 17 34.3 +0.4**
SVE Sverdlovsk 32.88 36*c* *i*P **P 16 17 34.3 0.0**
SVE *e* 16 18 54.0

SVE eS S 16 22 50.5 0.0
SVE pmax pmax
comp=Z,640nm,0.8s
SVE MLR MLR
comp=N,10μm,16.0s
SVE MLR MLR
comp=Z,22μm,14.0s
SVE MLR MLR
comp=E,16μm,14.0s
APA Apatity 33.51 6⇓ iP P 16 17 37.8 -1.9
APA i 16 18 53.0
APA i S S 16 22 54.0 -6.1
APA i SS SnSn 16 25 01.0 -1.9
APA pmax pmax
comp=Z,100nm,0.8s
LVZ Lovozero 33.95 6 eP P 16 17 42.1 -1.4
comp=Z,259nm,1.0s
LVZ LR LR
comp=Z,30μm,21.0s
LVZ Lovozero 33.95 6c eP P 16 17 43.0 -0.5
LVZ pmax pmax
comp=Z,168nm,0.8s
LVZ MLR MLR
comp=Z,27μm,16.0s
STEI Steigen 33.99 353 eP P 16 17 43.1 -0.7
PMPST Porto Santo, M 34.26 280 eP P 16 17 47.6 +1.0
comp=Z,835nm,1.1s
LOF Lofoten 34.36 352 eP P 16 17 48.2 +1.2
KTK1 Kautokeino 34.63 359 eP P 16 17 48.6 -0.7
PMAR Madeira 34.82 279 eP P 16 17 53.2 +1.6
comp=Z,734nm,1.4s
PMOZ Porto Moniz, M 35.02 280 eP P 16 17 54.9 +1.6
comp=Z,528nm,1.4s
PMOZ eS S 16 23 28.7 +4.3
ARCES ARCESS Array B 35.14 0 P P 16 17 52.1 -1.6
comp=Z,56nm,0.7s,baz=167,slow=7.6,SNR=70
ARCES LR LR 16 33 09.5
comp=Z,39μm,19.1s,baz=184,slow=38
ARE0 ARCESS Array S 35.14 0 PFAKE 16 18 10.0 +16
ARE0 LR LR
comp=Z,2μm,18.0s
MBAR Mbarara 35.28 170 S S 16 23 30.4 +1.9
comp=Z,3.5nm,0.3s,baz=24,slow=20,SNR=2.4
MBAR ScP ScP 16 24 09.7 -0.8
comp=Z,8.8nm,0.3s,baz=38,slow=7.9,SNR=5.3
MBAR LR LR 16 34 52.7
comp=Z,15μm,18.4s,baz=360,slow=41
MBAR Mbarara 35.28 170 eP P 16 17 55.9 +0.3
comp=Z,140nm,1.4s
MBAR LR LR
comp=Z,22μm,18.0s
MBAR Mbarara 35.28 170d iP P 16 17 55.7 +0.1
MBAR pmax pmax
comp=Z,73nm,1.1s
MBAR MLR MLR
comp=Z,25μm,15.0s
MBAR Mbarara 35.28 170⇓ eP P 16 17 57.6 +2.0
TRO Tromso 35.40 356 eP P 16 17 58.3 +2.4
CHGR Chuyangaron 35.43 70 PFAKE 16 18 10.0 +13
CHGR LR LR
comp=Z,41μm,22.0s
BRLS Borolday 35.62 63 eS S 16 23 31.9 -1.3
IUG Iuzhnay 35.79 64 eP P 16 17 59.4 -0.4
IUG eS S 16 23 36.5 +0.4
IUG pmax pmax
comp=Z,110nm,2.0s
IUG Iuzhnay 35.79 64 eP P 16 17 59.4 -0.4
comp=Z,110nm,2.0s
IUG eS S 16 23 36.5 +0.4
KBL Kabul 36.05 77 PFAKE 16 18 20.0 +18
KBL LR LR
comp=Z,4μm,21.0s
KK31 Karatay Array 36.11 62 i P P 16 18 02.5 0.0
KK31 pmax pmax
comp=Z,99nm,0.8s
JBG Jabagly 36.16 64 eP P 16 18 01.5 -1.5
JBG eS S 16 23 41.2 -0.6
JBG pmax pmax
comp=Z,270nm,2.9s
JBG smax smax
comp=N,560nm,6.3s
HAMF Hammerfest 36.26 359 eP P 16 18 04.1 +0.9
GAR Garm 36.28 69 PFAKE 16 18 20.0 +16
GAR LR LR
comp=Z,22μm,22.0s
BRVK Borovoye 36.85 46 eP P 16 18 08.5 -0.1
comp=Z,880nm,1.9s
BRVK LR LR
comp=Z,19μm,20.0s
BRVK Borovoye 36.85 46c iP P 16 18 08.1 -0.5
BRVK pmax pmax
comp=Z,209nm,1.2s
BRVK MLR MLR
comp=Z,14μm,17.0s
KMBO Kilima Mbogo 37.20 160 P P 16 18 12.1 -0.1
comp=Z,5.5nm,0.7s,baz=348,slow=9.8,SNR=13
KMBO PcP PcP 16 20 32.0 0.0
comp=Z,12nm,0.7s,baz=13,slow=7.6,SNR=4.2
KMBO ScP ScP 16 24 18.2 +0.5
comp=Z,1.8nm,0.7s,baz=280,slow=4.2,SNR=3.5
KMBO LR LR 16 33 09.3
comp=Z,20μm,21.6s,baz=352,slow=36
KMBO Kilima Mbogo 37.20 160 eP P 16 18 13.3 +1.2
comp=Z,56nm,1.3s
KMBO LR LR
comp=Z,20μm,21.0s
KMBO Kilima Mbogo 37.20 160 i P P 16 18 13.4 +1.2
SNR=17
KMBO Kilima Mbogo 37.20 160 eP P 16 18 12.9 +0.8
KMBO eS S 16 24 02.0 +3.9
NAI Nairobi 37.21 160 PFAKE 16 18 30.0 +18
NAI LR LR
comp=Z,29μm,21.0s
BRZS Berezniki 37.86 51 eP P 16 18 16.7 -0.5
BRZS e 16 19 47.2
BRZS eS S 16 24 07.0 -0.1
BRZS pmax pmax
comp=Z,366nm,2.1s
BRZS smax smax
comp=N,460nm,6.4s
BRZS MLR MLR
comp=Z,3μm,13.0s
BRZS Berezniki 37.86 51 eP P 16 18 16.7 -0.5
comp=Z,366nm,2.1s
BRZS ePP PnPn 16 19 47.2 +2.3
BRZS eS S 16 24 07.1 -0.1
comp=Z,460nm,6.5s
BRZS eLR LR 16 36 16.4
comp=Z,3μm,13.1s
EKS2 Erkin-Say 38.53 63 P P 16 18 23.3 +0.2
SNR=105
BTLS Baital 38.60 59 eP P 16 18 23.1 -0.4
BTLS e 16 19 54.8
BTLS eS S 16 24 19.3 +0.8
BTLS pmax pmax
comp=Z,206nm,2.0s
BTLS smax smax
comp=E,278nm,4.4s
BTLS MLR MLR
comp=Z,3μm,15.0s
BTLS Baital 38.60 59 eP P 16 18 23.2 -0.4
comp=Z,206nm,2.0s
BTLS ePP PnPn 16 19 54.8 +0.8
BTLS eS S 16 24 19.4 +0.8
comp=Z,278nm,4.4s
BTLS eLR LR 16 37 20.6
comp=Z,3μm,15.1s
USP Ospenovka 39.02 62 P P 16 18 26.8 -0.3
SNR=20
DBIC Dimbokro 39.05 232 P P 16 18 26.3 -1.2
comp=Z,32nm,0.3s,baz=18,slow=9.7,SNR=44
DBIC S S 16 24 20.0 -5.8
comp=Z,15nm,0.9s,baz=261,slow=19,SNR=3.6
DBIC LR LR 16 37 46.2
comp=Z,24μm,20.1s,baz=19,slow=41
DBIC Dimbokro 39.05 232 eP P 16 18 26.1 -1.4
comp=Z,126nm,0.8s
DBIC Dimbokro 39.05 232 eP P 16 18 26.1 -1.4
DBIC pmax pmax
comp=Z,126nm,0.8s
AAK Ala-Archa 39.06 63 S S 16 24 25.2 -0.6
comp=Z,7.1nm,0.9s,baz=168,slow=19,SNR=2.2
AAK LR LR 16 38 21.9
comp=Z,13μm,18.1s,baz=278,slow=42
AAK Ala-Archa 39.06 63 P P 16 18 27.7 +0.1
SNR=51
AAK Ala-Archa 39.06 63 eP P 16 18 28.1 +0.5
comp=Z,300nm,1.3s
AAK LR LR
comp=Z,5μm,20.0s
AAK Ala-Archa 39.06 63 i P P 16 18 28.3 +0.7
SNR=47
AAK Ala-Archa 39.06 63c iP P 16 18 28.0 +0.4
AAK pmax pmax
comp=Z,192nm,1.0s
AAK MLR MLR
comp=Z,13μm,18.0s
UCH Uchtor 39.11 63 P P 16 18 28.6 +0.2
SNR=38
FRU1 Bishkek 39.15 63 PFAKE 16 18 40.0 +12
FRU1 LR LR
comp=Z,4μm,19.0s
TIC Toumodi 39.18 232 eP P 16 18 27.7 -0.9
KIC Kosan Boka 39.21 231 eP P 16 18 27.2 -1.7
comp=Z,457nm,0.8s
CHMS Chumysh 39.22 62 P P 16 18 29.0 +0.3
SNR=58
KBK Karagaybulak 39.39 63 P P 16 18 31.1 +0.7
SNR=52
LIC Lamto 39.50 232 eP P 16 18 29.2 -2.1
comp=Z,657nm,0.8s
NIL Nilore 39.65 77 eP P 16 18 32.7 +0.2
comp=Z,218nm,0.9s
NIL LR LR
comp=Z,3μm,20.0s
NIL Nilore 39.65 77 eP P 16 18 32.7 +0.2
NIL pmax pmax
comp=Z,218nm,0.9s
NIL MLR MLR
comp=Z,3μm,20.0s
KZA Kyzart 39.67 64 P P 16 18 33.6 +0.7
SNR=62
TKM2 Tokmak 2 39.84 62 P P 16 18 34.3 +0.1
SNR=68
TKM2 Tokmak 2 39.84 62 P P 16 18 33.4 -0.8
TKM2 pmax pmax
comp=Z,155nm,0.9s
BJO Bjornoya 40.24 358 eP P 16 18 35.1 -1.6
KUU Kurty 40.30 61 eP P 16 18 37.8 +0.1
KUU e 16 20 13.5
KUU eS S 16 24 45.0 +0.9
KUU pmax pmax
comp=Z,857nm,2.2s
KUU smax smax
comp=N,2μm,6.4s
KUU MLR MLR
comp=Z,6μm,17.0s
KUU Kurty 40.30 61 eP P 16 18 37.9 +0.1
comp=Z,857nm,2.2s
KUU ePP PnPn 16 20 13.6 -0.7
KUU eS S 16 24 45.1 +0.9
comp=Z,2μm,6.5s
KUU eLR LR 16 38 22.2
comp=Z,6μm,17.0s
BART Pico Bartolome 40.31 290 eP P 16 18 40.4 +2.5
comp=Z,190nm,1.4s
BHJ Bhuj 40.35 94 eP P 16 18 41.0 +2.7
BHJ IAmb IAmb 16 18 44.9
comp=Z,335nm,1.4s
PSMN Pico do Norte, 40.38 289 eP P 16 18 42.5 +4.0
comp=Z,124nm,1.5s
ULHL Ulahol 40.39 63 P P 16 18 39.5 +0.8
SNR=111
PSMA Santa Maria 40.43 289 eP P 16 18 43.0 +4.1
comp=Z,203nm,1.4s
KSH Kashi 40.56 67 P P 16 18 38.5 -1.5
KSH pP pP 16 18 43.9 -2.2
KSH PP PP 16 20 15.1 +1.7
KSH S S 16 24 44.6 -3.6
KSH SS SS 16 27 38.8 -9.3
KSH pmax pmax
comp=Z,500nm,1.5s
KSH pmax pmax
comp=Z,3μm,5.9s
KSH LR LR
comp=Z,13μm,17.3s
KSH LR LR
comp=Z,8μm,13.7s
KSH LR LR
comp=Z,15μm,16.1s
CMLA Cha da Macela 40.59 290 PFAKE 16 18 50.0 +10
CMLA LR LR
comp=Z,15μm,22.0s
PDA Ponta Delgada 40.70 290 eP P 16 18 46.7 +5.7
comp=Z,412nm,1.4s
PSET Sete Cidades 40.73 290 eP P 16 18 43.7 +2.3
comp=Z,211nm,1.2s
JMIC Jan Mayen 40.73 344 P P 16 18 41.8 +0.9
comp=Z,252nm,0.8s,baz=279,slow=2.5,SNR=18
JMIC S S 16 24 49.0 -0.9
comp=Z,14nm,0.5s,baz=272,slow=17,SNR=1.9
JMIC LR LR 16 37 49.1
comp=Z,8μm,18.5s,baz=130,slow=40
JMIC Jan Mayen 40.73 344 eP P 16 18 41.4 +0.5
AAA Alma-Ata 40.78 62 eP P 16 18 44.1 +2.3
AAA eS S 16 24 53.4 +2.0
AAA pmax pmax
comp=Z,900nm,3.2s
AAA smax smax
comp=N,3μm,9.6s
AAA MLR MLR
comp=Z,4μm,16.0s
AAA Alma-Ata 40.78 62 eP P 16 18 43.5 +1.7
AAA eLR LR 16 34 17.6
comp=Z,4μm,31.0s
MDOK Medeo 40.88 62 eP P 16 18 42.3 -0.4
MDOK i S S 16 24 53.8 +0.8
MDOK pmax pmax
comp=Z,3μm,2.4s
MDOK Medeo 40.88 62 eP P 16 18 42.4 -0.4
comp=Z,3μm,2.4s
MDOK i S S 16 24 53.8 +0.8
comp=Z,3μm,8.8s
MDOK eLR LR 16 34 09.0
comp=Z,3μm,34.2s
BORG Borgarnes 41.13 332 P P 16 18 44.7 +0.5
comp=Z,28nm,0.7s,baz=130,slow=5.8,SNR=17
BORG LR LR 16 37 08.6
comp=Z,13μm,20.7s,baz=120,slow=38
BORG Borgarnes 41.13 332 PFAKE 16 19 00.0 +16
BORG LR LR
comp=Z,13μm,21.0s
TDK Taldyqorghan 41.69 59 eP P 16 18 50.2 +1.1
TDK e 16 20 31.7
TDK i S S 16 25 05.4 +0.7
TDK pmax pmax
comp=Z,847nm,2.4s
TDK smax smax
comp=E,1μm,6.5s
TDK Taldyqorghan 41.69 59 eP P 16 18 50.3 +1.1
comp=E,847nm,2.4s
TDK ePP PnPn 16 20 31.7 +1.2
TDK i S S 16 25 05.5 +0.7
comp=E,1μm,6.5s
TDK eLR LR 16 34 56.1
comp=E,15μm,33.2s
KURK Kurchatov 41.70 50 eP P 16 18 48.9 -0.3
comp=E,546nm,1.4s
KURK LR LR
comp=Z,9μm,20.0s
KURK Kurchatov 41.70 50c iP P 16 18 48.7 -0.4
KURK pmax pmax
comp=Z,351nm,1.3s
KURK MLR MLR
comp=Z,23μm,19.0s
SATY Saty 41.88 62 eP P 16 18 51.3 +0.4
SATY eS S 16 25 09.9 +2.1
SATY pmax pmax
comp=Z,603nm,2.0s
SATY smax smax
comp=N,647nm,5.4s
SATY Saty 41.88 62 eP P 16 18 51.3 +0.4
comp=N,603nm,1.9s
SATY eS S 16 25 09.9 +2.1
comp=N,647nm,5.5s
KPKS Kokpek 42.04 61 eP P 16 18 51.8 -0.3
KPKS e 16 20 30.0
KPKS i S S 16 25 11.3 +1.2
KPKS pmax pmax
comp=Z,309nm,2.2s
KPKS smax smax
comp=N,515nm,5.7s
KPKS Kokpek 42.04 61 eP P 16 18 51.8 -0.3
comp=N,309nm,2.1s
KPKS ePP PP 16 20 30.1 +0.7
KPKS i S S 16 25 11.3 +1.2
comp=N,515nm,5.7s
UZB Uzynbulak 42.32 62 eP P 16 18 53.9 -0.6
UZB i S S 16 25 15.8 +1.5
UZB pmax pmax
comp=Z,145nm,2.1s
UZB smax smax
comp=N,380nm,5.6s
UZB Uzynbulak 42.32 62 eP P 16 18 53.1 -1.4
comp=N,145nm,2.1s
UZB i S S 16 25 15.9 +1.5
comp=N,380nm,5.6s
DHRM DHARAMSHALA 42.50 78 eP P 16 18 56.5 +0.3
ROSA Rosais 42.50 292 PFAKE 16 19 10.0 +14
ROSA LR LR
comp=Z,5μm,22.0s
PDGK Podgornoye 42.64 61 P P 16 18 55.7 -1.3
HSPB Hornsund (broa 42.86 357 eP P 16 18 59.3 +1.1
HSPB eS S 16 25 19.8 -1.4
HSPB eSS SS 16 28 24.0 -8.4
HSPB LMZ LR 16 36 26.8
comp=Z,271μm,26.4s
HSPB Hornsund (broa 42.86 357 eP P 16 18 59.3 +1.1
HSPB eS S 16 25 19.8 -1.4
HSPB eSS SS 16 28 24.0 -8.4
SMLA Simla 43.55 79 eP P 16 19 04.6 +0.2
SCO Scoresbysund 43.96 339 PFAKE 16 19 20.0 +13
SCO LR LR
comp=Z,11μm,20.0s
SCO Scoresbysund 43.96 339 i P P 16 19 08.2 +1.1
SCO pmax pmax
comp=Z,120nm,0.9s
SCO Scoresbysund 43.96 339 i P P 16 19 08.2 +1.1
comp=Z,123nm,0.9s
SPITS Spitsbergen Ar 43.99 357 P P 16 19 06.8 -0.5
comp=Z,16nm,0.3s,baz=146,slow=12,SNR=80
SPITS LR LR 16 39 33.1
comp=Z,34μm,20.4s,baz=180,slow=39
MAKZ Makanchi 44.03 56 eP P 16 19 07.8 -0.3
comp=Z,126nm,0.8s
MAKZ LR LR
comp=Z,8μm,20.0s
MAKZ Makanchi 44.03 56 eP P 16 19 07.8 -0.3
MAKZ pmax pmax
comp=Z,126nm,0.8s
MAKZ MLR MLR
comp=Z,8μm,20.0s
MK31 Makanchi Array 44.25 56 eP P 16 19 09.9 0.0
comp=Z,153nm,0.7s
MK31 Makanchi Array 44.25 56 eP P 16 19 09.9 0.0
MK31 pmax pmax
comp=Z,153nm,0.7s
MKAR Makanchi Array 44.25 56 P P 16 19 09.8 -0.1
comp=Z,165nm,0.8s,baz=282,slow=6.1,SNR=238
MKAR LR LR 16 41 35.2
comp=Z,8μm,18.2s,baz=270,slow=42
NDI New Delhi 44.42 83 eP P 16 19 14.0 +2.6
DDI Dehra Dun 44.54 80 eP P 16 19 14.0 +1.6
DDI IAmb IAmb 16 19 18.9
comp=Z,5μm,3.2s
NVS Novosibirsk 44.66 44⇓ iP P 16 19 13.5 +0.6
NVS e 16 20 59.1
NVS eS S 16 25 47.5 -0.4
NVS eSS SS 16 29 08.5 +0.4
NVS pmax pmax
comp=Z,252nm,0.6s
NVS pmax pmax
comp=N,46nm,0.8s
NVS pmax pmax
comp=E,145nm,0.8s
NVS pmax pmax
comp=Z,845nm,2.3s
NVS pmax pmax
comp=N,115nm,1.7s
NVS pmax pmax
comp=E,613nm,2.5s
NVS smax smax
comp=N,194nm,3.0s
NVS smax smax
comp=E,328nm,2.6s
KBS Kingsbay 44.92 356 eP P 16 19 14.5 -0.3
comp=E,434nm,1.1s
KBS LR LR
comp=Z,32μm,20.0s
KBS Kingsbay 44.92 356d iP P 16 19 14.6 -0.1
KBS pmax pmax
comp=Z,854nm,0.8s
KBS MLR MLR
comp=Z,185μm,23.0s
ZAA0 Zalesovo Array 45.56 46 PFAKE 16 19 30.0 +10
ZAA0 LR LR
comp=Z,10μm,21.0s
ZALV Zalesovo Beam 45.56 46 P P 16 19 19.4 -0.8
comp=Z,169nm,0.4s,baz=267,slow=9.0,SNR=153
ZALV S S 16 26 02.7 +1.7
comp=Z,18nm,1.0s,baz=266,slow=12,SNR=3.5
ZALV LR LR 16 42 50.9
comp=Z,10μm,18.1s,baz=286,slow=42
ZSN Zaisan 45.93 55 eP P 16 19 23.0 -0.2
ZSN eS S 16 26 08.7 +2.1
ZSN pmax pmax
comp=Z,155nm,2.5s
ZSN smax smax
comp=N,488nm,6.3s
ZSN Zaisan 45.93 55 eP P 16 19 23.1 -0.2
comp=N,156nm,2.5s
ZSN eS S 16 26 08.7 +2.1
comp=N,488nm,6.3s
POO Poona 46.03 97 eP P 16 19 25.8 +1.5
POO IAmb IAmb 16 19 30.9
comp=Z,660nm,2.2s
DAG Danmarks Havn 46.72 347⇑ iP P 16 19 28.6 -0.3
DAG pmax pmax
comp=Z,230nm,1.0s
DAG Danmarks Havn 46.72 347⇑ iP P 16 19 28.6 -0.3
comp=Z,230nm,1.0s
BHPL Bhopal 46.77 89 eP P 16 19 29.7 -0.4
BHPL IAMs_20 IAMs_20 16 43 54.9
comp=Z,19μm,24.0s
DGZ Jazzator, Alta 47.39 51c iP P 16 19 34.7 -0.1
GOA Goa 47.59 101 eP P 16 19 36.9 +0.5
SACV Santiago Islan 47.76 259 PFAKE 16 19 50.0 +12
SACV LR LR
comp=Z,8μm,18.0s
ANGG Ammassalik, Gr 47.95 330 PFAKE 16 19 50.0 +11
ANGG LR LR
comp=Z,9μm,22.0s
MSEY Mahe Island 48.35 137 PFAKE 16 20 00.0 +18
MSEY LR LR
comp=Z,6μm,21.0s
WMQ Urumqi 48.45 59 P P 16 19 42.3 -0.6
WMQ S S 16 26 45.8 +3.2
WMQ sS sS 16 26 52.6 -0.7
WMQ pmax pmax
comp=Z,320nm,0.9s
WMQ pmax pmax
comp=Z,3μm,3.8s
WMQ LR LR
comp=Z,21μm,25.7s
WMQ LR LR
comp=Z,39μm,31.1s
WMQ LR LR
comp=Z,36μm,31.1s
WMQ Urumqi 48.45 59 PFAKE 16 20 00.0 +17
WMQ LR LR
comp=Z,12μm,19.0s
NRIK Noril'sk 48.56 25 P P 16 19 43.5 +0.1
comp=Z,134nm,0.9s,baz=242,slow=5.5,SNR=83
NRIK LR LR 16 42 49.2
comp=Z,13μm,19.3s,baz=257,slow=39
JBP Jabalpur 48.92 88 eP P 16 19 46.5 -0.2
JBP AMB AMB 16 20 11.3
comp=Z,186nm,1.2s
JBP ex x 16 26 46.0
NGP Nagpur 49.05 91 i P P 16 19 47.8 0.0
NGP IAmb IAmb 16 19 59.1
comp=Z,216nm,1.2s
NGP ex x 16 26 47.9
LSZ Lusaka 49.54 176 i P P 16 19 51.9 +0.4
LSZ Lusaka 49.54 176 S S 16 27 00.7 +2.3
comp=Z,1.3nm,0.5s,baz=300,slow=20,SNR=1.9
LSZ Lusaka 49.54 176 eP P 16 19 51.3 -0.2
comp=Z,37nm,0.9s

LSZ LR LR
comp=Z,14μm,20.0s
LSZ Lusaka 49.54 176 *e*P **P 16 19 51.3 -0.2**
LSZ pmax pmax
comp=Z,37nm,0.9s
LSZ MLR MLR
comp=Z,14μm,20.0s
SUMG Summit 49.61 339 *e*P **P 16 19 52.3 +0.5**
comp=Z,220nm,1.0s
SUMG LR LR
comp=Z,16μm,18.0s
SUMG Summit 49.61 339 *e*P **P 16 19 52.3 +0.5**
SUMG pmax pmax
comp=Z,220nm,1.0s
SUMG MLR MLR
comp=Z,16μm,18.0s
SUMG Summit 49.61 339 *i*P **P 16 19 52.3 +0.5**
ITZ Itezhi-Tezhi 49.93 179 *i*P **P 16 19 50.8 -3.6**
ITZ *i*S **S 16 27 00.1 -3.6**
HYB Hyderabad 50.45 95 *i*P **P 16 19 59.5 +1.0**
HYB *e*S **S 16 27 12.0 +0.8**
HYB *e*SKS 16 27 50.0
NRS Narsarsuaq 51.21 324 PFAKE 16 20 20.0 +16
NRS LR LR
comp=Z,13μm,18.0s
NRS Narsarsuaq 51.21 324 *i*P **P 16 20 04.0 +0.5**
NRS Narsarsuaq 51.21 324 *i*P **P 16 20 04.0 +0.5**
IVI Ivigtut 52.54 324 PFAKE 16 20 30.0 +17
IVI LR LR
comp=Z,12μm,18.0s
SFJD Kangerlussuaq 53.26 332 P **P 16 20 18.9 +0.3**
comp=Z,37nm,0.7s,baz=92,slow=7.6,SNR=17
SFJD Kangerlussuaq 53.26 332 *e*P **P 16 20 18.6 0.0**
comp=Z,531nm,1.8s
SFJD LR LR
comp=Z,12μm,21.0s
SFJD Kangerlussuaq 53.26 332 *i*P **P 16 20 18.4 -0.3**
ILULI Ilulissat 53.37 334 PFAKE 16 20 30.0 +11
ILULI LR LR
comp=Z,12μm,18.0s
ILULI Ilulissat 53.37 334 *e*P **P 16 20 20.5 +1.0**
ILULI Ilulissat 53.37 334 *i*P **P 16 20 20.5 +1.0**
BOK Bokaro 53.51 84 *e*P **P 16 20 19.6 -1.5**
BOK IAmb IAmb 16 20 24.6
comp=Z,121nm,0.4s
TSUM Tsumeb 53.83 189 *e*P **P 16 20 23.0 -0.5**
comp=Z,60nm,0.8s
TSUM LR LR
comp=Z,79μm,18.0s
TRD Trivandrum 54.06 106 *e*P **P 16 20 25.5 +0.2**
MDRS Chennai 54.12 99 *e*P **P 16 20 26.5 +0.7**
GTK Tadong 54.23 79 *e*P **P 16 20 25.8 -0.9**
GTK IAmb IAmb 16 20 30.6
comp=Z,129nm,1.1s
MATP Matopo 54.67 176 *i*P **P 16 20 29.9 +0.3**
MATP Matopo 54.67 176 *i*P **P 16 20 29.2 -0.4**
MATP Matopo 54.67 176 *i*P **P 16 20 29.9 +0.3**
BWNR Bhubaneshwar 55.04 88 *ex* P 16 20 24.6 -7.7
KULLO Kullorsuaq 55.09 341 *i*P **P 16 20 31.6 -0.3**
KULLO Kullorsuaq 55.09 341 *i*P **P 16 20 31.6 -0.3**
LSA Lhasa 55.33 75 P **P 16 20 34.8 -0.2**
LSA pP **pP 16 20 39.1 -2.1**
LSA LR LR
comp=Z,20μm,34.6s
LSA LR LR
comp=Z,21μm,22.8s
LSA LR LR
comp=Z,10μm,19.4s
LSA Lhasa 55.33 75 PFAKE 16 20 50.0 +15
LSA LR LR
comp=Z,2μm,19.0s
LSA Lhasa 55.33 75 P **P 16 20 34.8 -0.2**
MOY Mondy 55.56 47 *e*P **P 16 20 36.7 +0.9**
MOY pmax pmax
comp=Z,411nm,2.2s
H10N2 ASCENSION HYDR 56.27 229 P **P 16 20 40.2 -0.6**
ASCN Ascension 56.27 229 PFAKE 16 21 00.0 +19
ASCN LR LR
comp=Z,14μm,20.0s
H10N1 ASCENSION HYDR 56.28 229 P **P 16 20 40.2 -0.6**
H10N3 ASCENSION HYDR 56.29 229 P **P 16 20 41.6 +0.7**
MSNA Messina 56.68 174 *i*P **P 16 20 44.5 +0.5**
MSNA Messina 56.68 174 *i*P **P 16 20 44.6 +0.6**
MSNA Messina 56.68 174 *i*P **P 16 20 44.5 +0.5**
TAWA Tawang 56.76 77 *e*P **P 16 20 45.1 0.0**
TLY Talaya 57.16 47 *e*P **P 16 20 47.7 +0.6**
comp=Z,162nm,1.0s
TLY LR LR
comp=Z,9μm,18.0s
TLY Talaya 57.16 47 *c i*P **P 16 20 47.4 +0.3**
TLY *e* 16 22 59.1
TLY *e*PPP PPP 16 24 12.9
TLY *e*S **S 16 28 45.6 +4.5**
TLY *e* 16 30 36.1
TLY *e*SS **SS 16 32 33.6 +3.9**
TLY pmax pmax
comp=Z,781nm,1.7s
ABPO Ambohimpanom 57.21 155 *e*P **P 16 20 48.4 +0.5**
comp=Z,33nm,0.8s
ABPO LR LR
comp=Z,11μm,21.0s
GUWA GUWAHATI 57.21 79 *e*P **P 16 20 46.9 -1.0**
H10S1 ASCENSION HYDR 57.23 229 P **P 16 20 48.3 +0.6**
baz=24,slow=8.3,SNR=6.8
H10S2 ASCENSION HYDR 57.24 229 P **P 16 20 51.7 +4.0**
baz=24,slow=8.3,SNR=8.8
H10S3 ASCENSION HYDR 57.24 229 P **P 16 20 48.3 +0.5**
baz=24,slow=8.3,SNR=5.6
ZAK Zakamensk 57.29 48 *e*P **P 16 20 48.5 +0.4**
ZAK pmax pmax
comp=Z,182nm,1.0s
IRK Irkutsk 57.38 46 *e*P **P 16 20 47.8 -0.9**
IRK *e*S **S 16 28 39.6 -4.4**
IRK pmax pmax
comp=Z,648nm,2.2s
SHL Shillong 57.64 79 PFAKE 16 21 10.0 +19
SHL LR LR
comp=Z,7μm,21.0s
SHL Shillong 57.64 79 *e*P **P 16 20 49.2 -1.9**
SHL IAmb IAmb 16 20 54.1
comp=Z,67nm,1.0s
SHL *ex* x 16 28 44.0
TULEG Thule 57.70 344 PFAKE 16 21 10.0 +20
TULEG LR LR
comp=Z,6μm,18.0s
PALK Pallekele 57.77 104 P **P 16 20 52.3 +0.4**
comp=Z,18nm,1.0s,baz=295,slow=4.4,SNR=3.7
PALK Pallekele 57.77 104 PFAKE 16 21 10.0 +18
PALK LR LR
comp=Z,11μm,21.0s
TEZP TEZPUR 57.93 78 *e*P **P 16 20 51.6 -1.2**
SHEL Horse Pasture 58.06 215 PFAKE 16 21 10.0 +16
SHEL LR LR
comp=Z,8μm,22.0s
BELO BELONIA 58.31 82 *e*P **P 16 20 55.5 -0.1**
BELO IAmb IAmb 16 20 59.2
comp=Z,4μm,4.0s
GTA Gaotai 58.38 61 ⇑P **P 16 20 55.8 -0.3**
GTA pP pP 16 21 00.3 -2.1
GTA sP pwP 16 21 03.1 -1.5
GTA S **S 16 28 56.3 -1.5**
GTA pmax pmax
comp=Z,1μm,7.2s
GTA LR LR
comp=Z,6μm,24.8s
GTA LR LR
comp=Z,5μm,24.7s
GTA LR LR
comp=Z,7μm,24.5s
ZIRO ZIRO 58.39 76 *e*P **P 16 20 55.7 -0.6**
ZIRO IAmb IAmb 16 21 00.6
comp=Z,163nm,0.6s
BRDH Bariadhala 58.73 83 P **P 16 21 00.2 +1.6**
comp=Z,95nm,0.4s,baz=260,slow=11,SNR=9.5
BRDH LR LR 16 52 01.0
comp=Z,4μm,19.6s,baz=304,slow=42
JORH JORHAT 59.05 77 *e*P **P 16 20 59.7 -1.0**
LBTB Lobatse 59.14 179 *e*P **P 16 21 01.8 +0.6**
comp=Z,147nm,1.3s
LBTB Lobatse 59.14 179 *e*P **P 16 21 01.8 +0.6**
LBTB pmax pmax
comp=Z,147nm,1.3s
DIBR DIBRUGARH 59.26 76 *e*P **P 16 21 01.9 -0.3**
H08N2 Diego Garcia H 59.37 124 P **P 16 21 01.9 -0.7**
KOHI KOHIMA 59.38 78 *ex* **P 16 21 02.5 -0.7**
KOHI IAmb IAmb 16 21 07.3
comp=Z,112nm,0.5s
H08N3 Diego Garcia H 59.38 124 P **P 16 21 02.0 -0.7**
H08N1 Diego Garcia H 59.40 124 P **P 16 21 02.9 +0.2**
MOKO MOKOCHONG 59.44 77 *e*P **P 16 21 03.1 -0.5**
SONM Songino Array 60.01 50 P **P 16 21 07.2 0.0**
comp=Z,75nm,0.8s,baz=284,slow=9.1,SNR=99
SONM PKP2bc 16 50 49.2
comp=Z,0.4nm,0.4s,baz=126,slow=3.7,SNR=3.2
SONM LR LR 16 51 16.4
comp=Z,12μm,21.2s,baz=294,slow=40
LKP Lekhapani 60.07 76 *e*P **P 16 21 07.4 -0.4**
DRLN Deer Lake 60.29 312 PFAKE 16 21 20.0 +11
DRLN LR LR
comp=Z,9μm,20.0s
ULN Ulaanbaatar 60.42 50 *e*P **P 16 21 10.1 +0.1**
comp=Z,152nm,0.8s
ULN LR LR
comp=Z,14μm,21.0s
ULN Ulaanbaatar 60.42 50 *c i*P **P 16 21 09.9 -0.1**
ULN pmax pmax
comp=Z,317nm,1.4s
ULN MLR MLR
comp=Z,12μm,19.0s
DGAR Diego Garcia 61.15 124 PFAKE 16 21 30.0 +15
DGAR LR LR
comp=Z,6μm,21.0s
FRB Frobisher Bay 61.23 330 P **P 16 21 14.9 -0.1**
comp=Z,83nm,0.9s,baz=77,slow=7.2,SNR=32
RER Riviere de l'E 62.54 148 PFAKE 16 21 40.0 +16
RER LR LR
comp=Z,4μm,20.0s
MRIV Mauritius Mete 62.59 145 PFAKE 16 21 40.0 +15
MRIV LR LR
comp=Z,2μm,20.0s
LZH Lanzhou 62.60 64 ⇑P **P 16 21 25.0 +0.1**
LZH pP pP 16 21 28.3 -3.0
LZH sP pwP 16 21 30.0 -3.5
LZH PP **PP 16 23 41.0 -1.5**
LZH S **S 16 29 49.6 -2.3**
LZH sS sS 16 30 01.8 -1.0
LZH SS **SS 16 33 55.4 -0.5**
LZH pmax pmax
comp=Z,180nm,1.3s
LZH pmax pmax
comp=Z,2μm,8.7s
LZH LR LR
comp=Z,10μm,14.6s
LZH LR LR
comp=Z,11μm,16.3s
LZH LR LR
comp=Z,14μm,17.3s
BOSA Boshof 62.72 180 *i*P **P 16 21 25.4 -0.2**
BOSA Boshof 62.72 180 *i*P **P 16 21 25.8 +0.2**
BOSA Boshof 62.72 180 P **P 16 21 24.8 -0.8**
comp=Z,39nm,0.5s,baz=6.8,slow=6.6,SNR=69
BOSA LR LR 16 52 04.0
comp=Z,18μm,18.3s,baz=356,slow=39
BOSA Boshof 62.72 180 *e*P **P 16 21 25.1 -0.4**
comp=Z,98nm,0.8s
BOSA Boshof 62.72 180 *e*P **P 16 21 25.2 -0.4**
BOSA pmax pmax
comp=Z,98nm,0.8s
BOSA Boshof 62.72 180 *i*P **P 16 21 25.4 -0.2**
CIT Chita 62.87 44 *e*P **P 16 21 26.0 -0.3**
CIT *e* 16 21 35.3
CIT *e* 16 22 08.9
CIT *e* 16 23 41.2
CIT pmax pmax
comp=Z,198nm,2.3s
SCHQ Schefferville 63.66 320 P **P 16 21 31.1 -0.3**
comp=Z,50nm,0.4s,baz=70,slow=5.3,SNR=51
SCHQ LR LR 16 50 30.2
comp=Z,6μm,18.5s,baz=68,slow=37
SCHQ Schefferville 63.66 320 PFAKE 16 21 50.0 +19
SCHQ LR LR
comp=Z,8μm,19.0s
GBN Guysborough 64.24 309 PFAKE 16 21 50.0 +15
GBN LR LR
comp=Z,11μm,20.0s
RES Resolute Bay 64.33 345 P **P 16 21 35.6 +0.1**
comp=Z,20nm,0.7s,baz=33,slow=12,SNR=22
RES Resolute Bay 64.33 345 PFAKE 16 21 50.0 +15
RES LR LR
comp=Z,7μm,19.0s
CD2 Chengdu 64.73 69 ⇓*i*P **P 16 21 38.8 -0.2**
CD2 sP pP 16 21 42.4 -2.9
CD2 PcP **PcP 16 22 10.6 -1.9**
CD2 PP **PP 16 24 01.5 +0.3**
CD2 S **S 16 30 18.8 +0.4**
CD2 SKS **SKSac 16 31 28.3 -4.2**
CD2 SS **SS 16 34 31.3 +2.1**
CD2 pmax pmax
comp=Z,280nm,0.8s
CD2 pmax pmax
comp=Z,2μm,9.6s
CD2 LR LR
comp=Z,3μm,18.4s
CD2 LR LR
comp=Z,3μm,15.9s
CD2 LR LR
comp=Z,3μm,20.8s
PBA Port Blair 65.15 93 PFAKE 16 22 00.0 +18
PBA LR LR
comp=Z,10μm,21.0s
PBA Port Blair 65.15 93 *e*P P 16 21 42.3 +0.5
BTO Baotou 65.16 57 *e*P **P 16 21 40.5 -1.1**
BTO S **S 16 30 18.3 -5.1**
HHC Hu-ho-hao-te 66.11 56 ⇓*i*P **P 16 21 48.6 +0.8**
HHC pP pP 16 21 53.3 -0.9
HHC S **S 16 30 35.1 0.0**
HHC SS **SS 16 34 50.1 -0.2**
HHC pmax pmax
comp=Z,58nm,1.2s
HHC pmax pmax
comp=Z,2μm,5.8s
HHC LR LR
comp=Z,7μm,24.1s
HHC LR LR
comp=Z,8μm,24.1s
HHC LR LR
comp=Z,7μm,23.3s
LMN Caledonia Moun 66.16 310 PFAKE 16 22 00.0 +12
LMN LR LR
comp=Z,11μm,19.0s
BATG Bathurst New B 66.32 312 PFAKE 16 22 00.0 +11
BATG LR LR
comp=Z,9μm,20.0s
YAK Yakutsk 66.54 30 *e*P **P 16 21 48.6 -1.4**
comp=Z,158nm,0.8s
YAK Yakutsk 66.54 30 *e*P **P 16 21 48.4 -1.6**
YAK *e**PP **sP 16 21 58.8 0.0**
YAK *e* 16 22 20.3
YAK *e* 16 24 14.8
YAK *e*S S 16 30 30.1 -9.2
CHTO Chiang Mai 66.57 83 *e*P **P 16 21 49.9 -1.1**
comp=Z,90nm,1.0s
CHTO Chiang Mai 66.57 83 *e*P **P 16 21 49.9 -1.1**
CHTO pmax pmax
comp=Z,90nm,1.0s
CMMT Chiang Mai 66.58 83 P **P 16 21 50.1 -0.9**
comp=Z,37nm,0.9s,comp=Z,819nm
KMI Kunming 66.58 75 P **P 16 21 51.8 +0.6**
KMI pP pP 16 21 54.3 -3.3
KMI sP pwP 16 21 55.3 -4.5
KMI PP **PP 16 24 14.8 -3.0**
KMI S **S 16 30 37.8 -3.7**
KMI SKS **SKSac 16 31 43.5 -3.6**
KMI pmax pmax
comp=Z,44nm,0.8s
KMI pmax pmax
comp=Z,920nm,4.8s
KMI LR LR
comp=Z,3μm,20.9s
KMI LR LR
comp=Z,3μm,20.9s
KMI LR LR
comp=Z,7μm,28.3s
KMI Kunming 66.58 75 PFAKE 16 22 10.0 +19
KMI LR LR
comp=Z,2μm,22.0s
SUR Sutherland 66.60 184 *e*P **P 16 21 51.4 +0.6**
comp=Z,124nm,1.3s
SUR LR LR
comp=Z,21μm,20.0s
CMAR Chiang Mai Arr 66.75 83 P **P 16 21 50.8 -1.3**
comp=Z,6.4nm,0.7s,baz=296,slow=8.2,SNR=44
CMAR S **S 16 30 47.1 +3.9**
comp=Z,1.7nm,1.1s,baz=302,slow=14,SNR=4.9
CMAR PKP2bc 16 50 26.0
comp=Z,0.6nm,0.9s,baz=337,slow=2.6,SNR=4.3
CMAR LR LR 16 57 17.1
comp=Z,3μm,22.0s,baz=293,slow=42
XAN Xi'an 67.23 64 P **P 16 21 54.4 -0.6**
XAN PP **PP 16 24 25.1 +2.1**
XAN S **S 16 30 48.3 -0.5**
XAN ScS **SKSac 16 31 45.8 -5.6**
XAN SS **SS 16 35 14.4 +6.4**
XAN pmax pmax
comp=Z,1μm,5.4s
XAN LR LR
comp=Z,8μm,19.5s
XAN LR LR
comp=Z,5μm,16.3s
XAN LR LR
comp=Z,6μm,17.6s
XAN Xi'an 67.23 64 PFAKE 16 22 10.0 +15
XAN LR LR
comp=Z,6μm,21.0s
LAMP Lampang 67.28 83 P **P 16 21 54.8 -0.6**
comp=Z,208μm,1.0s
HIA Hailar 67.60 45 PFAKE 16 22 10.0 +13
HIA LR LR
comp=Z,8μm,18.0s
HIA Hailar 67.60 45 *c i*P **P 16 21 57.0 0.0**
HIA pmax pmax
comp=Z,309nm,0.9s
HIA MLR MLR
comp=Z,35μm,22.0s
GGN Saint George 67.77 310 PFAKE 16 22 10.0 +12
GGN LR LR
comp=Z,8μm,19.0s
PQI Presque Isle 67.79 312 PFAKE 16 22 10.0 +12
PQI LR LR
comp=Z,8μm,20.0s
UMPA Umpang Tak 67.82 85 P **P 16 22 02.3 +3.4**
comp=Z,139μm,0.8s
NANT Nan 68.02 82 P **P 16 21 59.4 -0.7**
comp=Z,106μm,1.0s
TIY Taiyuan 68.11 59 *e*P **P 16 22 00.5 0.0**
TIY S **S 16 31 01.0 +1.8**
TIY ScS **ScS 16 31 58.4 -0.2**
TIY SS **SS 16 35 25.8 +4.5**
TIY pmax pmax
comp=Z,86nm,1.1s
TIY pmax pmax
comp=Z,950nm,6.2s
TIY LR LR
comp=Z,3μm,14.9s
TIY LR LR
comp=Z,4μm,16.2s
TIY LR LR
comp=Z,10μm,21.5s
EMMW East Machias 68.34 310 PFAKE 16 22 20.0 +18
EMMW LR LR
comp=Z,7μm,19.0s
UTTA Uttaradit 68.43 83 P **P 16 22 01.9 -0.8**
comp=Z,79μm,0.8s,comp=Z,967μm
SRDT SRDT 69.00 87 P **P 16 22 08.9 +2.7**
comp=Z,44nm,1.6s,comp=Z,820nm
GYA Guiyang 69.05 72 ⇑*i*P **P 16 22 05.8 -0.8**
GYA S **S 16 31 05.8 -5.0**
GYA SKS **SKSac 16 32 03.1 -2.5**
GYA SS **SS 16 35 37.5 +1.0**
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,650nm,4.3s
GYA LR LR
comp=Z,4μm,29.8s
GYA LR LR
comp=Z,4μm,33.9s
GYA LR LR
comp=Z,4μm,33.0s
PKME Peaks-Kenny Pk 69.23 311 PFAKE 16 22 20.0 +13
PKME LR LR
comp=Z,9μm,22.0s
PKME Peaks-Kenny Pk 69.23 311 P **P 16 22 06.1 -1.2**
baz=62
PBKT Sadao Pong 69.37 84 P **P 16 22 08.0 -0.5**
comp=Z,40nm,1.0s,comp=Z,703nm
ZEA Zeya 69.56 38 *e*P **P 16 22 09.2 +0.1**
ZEA *e* 16 24 47.0
ZEA *e*PPP PPP 16 26 26.0
ZEA *e*S **S 16 31 18.5 +2.8**
ZEA *e*SSS SSS 16 38 52.0
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=E,130nm,1.8s
ZEA pmax pmax
comp=Z,300nm,1.8s
ZEA pmax pmax
comp=E,500nm,10.0s
ZEA pmax pmax
comp=Z,2μm,10.0s
ZEA pmax pmax
comp=Z,1μm,12.0s
ZEA smax smax
comp=E,900nm,15.0s
ZEA smax smax
comp=N,2μm,16.0s
BJI Beijing 69.62 55 P **P 16 22 09.0 -0.7**
BJI PP **PP 16 24 46.6 +3.2**
BJI S **S 16 31 19.6 +2.8**
BJI pmax pmax
comp=N,610nm,6.7s
BJI LR LR
comp=N,4μm,19.2s
BJI LR LR
comp=N,6μm,18.6s
BJI LR LR
comp=N,6μm,20.1s
BJT Baijiatuau 69.62 55 PFAKE 16 22 20.0 +10
BJT LR LR
comp=Z,18μm,19.0s
WVL Waterville 69.80 311 PFAKE 16 22 30.0 +19
WVL LR LR
comp=Z,7μm,19.0s
RCBR Riachuelo 69.97 248 PFAKE 16 22 30.0 +18
RCBR LR LR
comp=Z,22μm,21.0s
RCBR Riachuelo 69.97 248 *e*P **P 16 22 13.3 +1.1**
CHGQ Chibougamau 69.99 317 P **P 16 22 11.7 -0.2**
baz=60,SNR=27
PHET Kaeng Krachan 70.17 88 P **P 16 22 13.6 +0.1**
comp=Z,169μm,0.9s
LATQ La Tuque 70.33 314 P **P 16 22 12.8 -1.2**
baz=60,SNR=7.7
NONG Nongkai 70.39 81 P **P 16 22 13.4 -1.4**
CHAI Chaiyaphum 70.55 84 P **P 16 22 14.7 -1.1**
comp=Z,240μm,0.8s
NBPA Parau_RN 70.85 249 *e*P **P 16 22 17.5 -0.1**
KHON Khomkaen 71.01 83 P **P 16 22 17.8 -0.8**
comp=Z,315μm,0.8s
LBNH Lisbon 71.37 311 PFAKE 16 22 30.0 +10
LBNH LR LR
comp=Z,8μm,21.0s
LBNH Lisbon 71.37 311 P **P 16 22 21.1 +0.7**
baz=60,SNR=13
FFD Franklin Falls 71.59 310 PFAKE 16 22 40.0 +18
FFD LR LR
comp=Z,10μm,19.0s
NBMO Morrinhos-CE 71.62 253 *e*P **P 16 22 23.0 +0.7**
SKNT Sakolnakorn 71.63 82 P **P 16 22 21.4 -0.9**
comp=Z,112nm,0.9s
NBLI Livramento-PB 71.75 247 *e*P **P 16 22 23.9 +0.8**
PKDT Phuket 71.81 93 P P 16 22 30.8 +7.4
VT1 Waterbury 71.84 312 PFAKE 16 22 40.0 +17
VT1 LR LR
comp=Z,7μm,19.0s
BCX Boston College 71.85 309 PFAKE 16 22 40.0 +17
BCX LR LR
comp=Z,8μm,19.0s
HNH Hanover 71.86 311 PFAKE 16 22 40.0 +17
HNH LR LR
comp=Z,8μm,18.0s
MATQ Matagami 71.88 318 P **P 16 22 23.4 +0.1**
baz=58,SNR=29
LSQQ Lebel-sur-Quev 71.89 317 P **P 16 22 22.8 -0.6**
baz=58

WES	**Weston**	**71.92**	**309**	PFAKE		16 22 40.0 +16
WES				LR	LR	
	comp=Z,9μm,20.0s					
HRV	**Adam Dziewonsk**	**72.01**	**309**	PFAKE		16 22 40.0 +16
HRV				LR	LR	
	comp=Z,10μm,20.0s					
HRV	**Adam Dziewonsk**	**72.01**	**309**	P	**P**	**16 22 23.5 -0.7**
	baz=60					
PANO	**Nakornpanom**	**72.06**	**81**	P	**P**	**16 22 24.1 -0.8**
	comp=Z,2.1nm,1.1s					
FRNY	**Flat Rock**	**72.09**	**312**	PFAKE		16 22 40.0 +15
FRNY				LR	LR	
	comp=Z,9μm,21.0s					
LHMI	**Lhok Sumawe**	**72.14**	**96**	PFAKE		16 22 40.0 +15
LHMI				LR	LR	
	comp=Z,7μm,22.0s					
BRYW	**Bryant College**	**72.30**	**309**	PFAKE		16 22 40.0 +14
BRYW				LR	LR	
	comp=Z,8μm,19.0s					
BBSR	**BB Station**	**72.35**	**297**	PFAKE		16 22 40.0 +14
BBSR				LR	LR	
	comp=Z,3μm,22.0s					
CHBT	**CHBT**	**72.48**	**86**	P	P	16 22 34.3 +6.8
QUA2	**Belchertown**	**72.63**	**310**	PFAKE		16 22 40.0 +12
QUA2				LR	LR	
	comp=Z,9μm,20.0s					
VLDQ	**Val d'Or**	**72.66**	**317**	PFAKE		16 22 40.0 +12
VLDQ				LR	LR	
	comp=Z,13μm,18.0s					
D54A	**Lac Fusel, La**	**72.71**	**316**	P	**P**	**16 22 28.4 0.0**
	baz=58,SNR=27					
LONY	**Lake Ozonia**	**72.81**	**313**	PFAKE		16 22 40.0 +11
LONY				LR	LR	
	comp=Z,8μm,20.0s					
LONY	**Lake Ozonia**	**72.81**	**313**	P	**P**	**16 22 28.7 -0.3**
	baz=58,SNR=20					
ACCN	**Adirondack Com**	**72.89**	**311**	PFAKE		16 22 40.0 +10
ACCN				LR	LR	
	comp=Z,6μm,20.0s					
NCB	**Newcomb**	**72.93**	**312**	PFAKE		16 22 40.0 +10
NCB				LR	LR	
	comp=Z,6μm,20.0s					
ORIO	**Orleans, Innes**	**72.94**	**314**	P	**P**	**16 22 29.8 +0.1**
	baz=58,SNR=13					
WHN	**Wuhan**	**72.94**	**64⇑**	*i*P	**P**	**16 22 31.3 +1.3**
WHN				S	**S**	**16 31 54.1 -1.5**
WHN				pmax	pmax	
	comp=Z,2μm,2.4s					
WHN				LR	LR	
	comp=Z,5μm,16.9s					
WHN				LR	LR	
	comp=Z,8μm,16.6s					
WHN				LR	LR	
	comp=Z,12μm,17.4s					
ORHO	**Orleans, Herit**	**72.95**	**314**	P	**P**	**16 22 30.5 +0.8**
	baz=58					
TRTT	**Trang**	**72.96**	**92**	P	**P**	**16 22 33.7 +3.4**
	comp=Z,114nm,1.0s,comp=Z,2μm					
TRY	**Troy**	**73.23**	**310**	PFAKE		16 22 50.0 +19
TRY				LR	LR	
	comp=Z,10μm,19.0s					
F55A	**Otter Lake**	**73.23**	**314**	P	**P**	**16 22 31.1 -0.4**
	baz=58					
D53A	**Lac Vacive, Po**	**73.35**	**316**	PFAKE		16 22 50.0 +18
D53A				LR	LR	
	comp=Z,16μm,19.0s					
D53A	**Lac Vacive, Po**	**73.35**	**316**	P	**P**	**16 22 31.6 -0.5**
	baz=57,SNR=43					
E54A	**Lac Daplat, Po**	**73.40**	**315**	P	**P**	**16 22 31.7 -0.7**
	baz=57,SNR=29					
YLE	**Yale**	**73.50**	**309**	PFAKE		16 22 50.0 +17
YLE				LR	LR	
	comp=Z,10μm,19.0s					
SNY	**Shenyang**	**73.59**	**50⇓**	*i*P	**P**	**16 22 33.1 -0.5**
SNY				PP	**PP**	**16 25 16.5 -0.9**
SNY				S	**SKiKP**	**16 32 00.0 -2.5**
SNY				pmax	pmax	
	comp=Z,120nm,1.1s					
SNY				LR	LR	
	comp=Z,7μm,20.6s					
SNY				LR	LR	
	comp=Z,8μm,16.3s					
SNY				LR	LR	
	comp=Z,7μm,28.6s					
KSCT	**Kent School, K**	**73.64**	**310**	PFAKE		16 22 50.0 +16
KSCT				LR	LR	
	comp=Z,7μm,20.0s					
E53A	**Dumoine, Ponti**	**73.71**	**315**	P	**P**	**16 22 34.4 +0.2**
	baz=57,SNR=36					
CN2	**Changchun**	**73.72**	**48**	*e*P	**P**	**16 22 33.4 -1.0**
CN2				*e*pP	pP	16 22 38.1 -2.7
CN2				*e*PP	**PP**	**16 25 20.3 +1.9**
CN2				*e*S	**SKiKP**	**16 32 00.0 -2.6**
CN2				SS	**SS**	**16 36 52.5 +5.6**
CN2				pmax	pmax	
	comp=Z,200nm,3.0s					
CN2				LR	LR	
	comp=Z,6μm,17.0s					
CN2				LR	LR	
	comp=Z,6μm,17.0s					
CN2				LR	LR	
	comp=Z,3μm,17.0s					
G55A	**Calabogie**	**73.76**	**314**	P	**P**	**16 22 34.1 -0.5**
	baz=57					
BILL	**Bilibino**	**73.77**	**14**	PFAKE		16 22 50.0 +16
BILL				LR	LR	
	comp=Z,10μm,19.0s					
BILL	**Bilibino**	**73.77**	**14***c*	*i*P	**P**	**16 22 33.2 -1.0**
BILL				*e*		16 22 49.1
BILL				*e*		16 25 17.7
BILL				*e*PPP	PPP	16 27 02.9
BILL				*i* S	**SKiKP**	**16 32 01.3 -0.8**
BILL				pmax	pmax	
	comp=Z,98nm,1.6s					
BILL				MLR	MLR	
	comp=Z,13μm,22.0s					
D52A	**ZEK Kipawa Sen**	**73.82**	**316**	P	**P**	**16 22 34.8 -0.1**
	baz=57,SNR=29					
DL2	**Dalian**	**73.84**	**54⇑**	*i*P	**P**	**16 22 32.8 -2.3**
DL2				sP	**PcP**	**16 22 48.0 -2.6**
DL2				PP	**PP**	**16 25 22.8 +3.2**
DL2				S	**SKiKP**	**16 32 02.9 0.0**
DL2				SS	**SS**	**16 36 50.1 +1.1**
DL2				pmax	pmax	
	comp=Z,120nm,1.0s					
DL2				pmax	pmax	
	comp=Z,1μm,10.9s					
DL2				LR	LR	
	comp=Z,6μm,17.6s					
DL2				LR	LR	
	comp=Z,4μm,16.9s					
DL2				LR	LR	
	comp=Z,7μm,22.1s					
H56A	**Elgin**	**73.84**	**313**	P	**P**	**16 22 34.4 -0.6**
	baz=58					
PEMO	**Pembroke**	**73.85**	**315**	P	**P**	**16 22 35.0 0.0**
	baz=57,SNR=28					
M61A	**Granite Spring**	**74.04**	**309**	P	**P**	**16 22 35.3 -0.9**
	baz=58					
PLVO	**Plevna**	**74.09**	**314**	PFAKE		16 22 50.0 +13
PLVO				LR	LR	
	comp=Z,8μm,21.0s					
PLVO	**Plevna**	**74.09**	**314**	P	**P**	**16 22 36.9 +0.4**
	baz=57,SNR=26					
SKLT	**Songkhla**	**74.09**	**92**	P	**P**	**16 22 37.2 +0.2**
	comp=Z,54nm,1.0s,comp=Z,698nm					
ALGO	**Algonquin Park**	**74.17**	**315**	P	**P**	**16 22 36.8 -0.2**
	baz=57,SNR=27					
SEY	**Seymchan**	**74.25**	**22***c*	*i*P	**P**	**16 22 36.9 -0.2**
FCC	**Fort Churchill**	**74.28**	**332**	PFAKE		16 22 50.0 +13
FCC				LR	LR	
	comp=Z,15μm,20.0s					
PAL	**Palisades**	**74.29**	**309**	PFAKE		16 22 50.0 +12
PAL				LR	LR	
	comp=Z,7μm,19.0s					
PAL	**Palisades**	**74.29**	**309**	P	**P**	**16 22 37.1 -0.6**
	baz=58					
E52A	**Mattawa**	**74.34**	**316**	P	**P**	**16 22 37.5 -0.4**
	baz=56,SNR=28					
KLR	**Kul'dur**	**74.36**	**41**	S	**S**	**16 32 07.4 -3.7**
	comp=Z,0.3nm,0.3s,baz=328,slow=19,SNR=2.1					
KLR	**Kul'dur**	**74.36**	**41***c*	*i*P	**P**	**16 22 37.6 -0.4**
KLR				pmax	pmax	
	comp=Z,144nm,0.9s					
H55A	**Tweed**	**74.42**	**313**	P	**P**	**16 22 38.7 +0.3**
	baz=57,SNR=22					
CPNY	**Central Park**	**74.44**	**309**	PFAKE		16 22 50.0 +11
CPNY				LR	LR	
	comp=Z,9μm,19.0s					
BANO	**Bancroft**	**74.61**	**314**	P	**P**	**16 22 39.7 +0.2**
	baz=57,SNR=10					
PECO	**Prince Edward**	**74.64**	**313**	PFAKE		16 22 50.0 +10
PECO				LR	LR	
	comp=Z,7μm,20.0s					
PECO	**Prince Edward**	**74.64**	**313**	P	**P**	**16 22 40.1 +0.4**
	baz=57,SNR=10					
E51A	**G1948 Merrick**	**74.68**	**316**	P	**P**	**16 22 40.0 0.0**
	baz=56,SNR=32					
ODNJ	**Ogdensburg**	**74.70**	**309**	PFAKE		16 22 50.0 +10
ODNJ				LR	LR	
	comp=Z,4μm,19.0s					
DELO	**Deloro Mine**	**74.70**	**314**	PFAKE		16 22 50.0 +10
DELO				LR	LR	
	comp=Z,8μm,20.0s					
DELO	**Deloro Mine**	**74.70**	**314**	P	**P**	**16 22 39.8 -0.3**
	baz=57,SNR=22					
BRNJ	**Basking Ridge**	**74.89**	**309**	PFAKE		16 23 00.0 +19
BRNJ				LR	LR	
	comp=Z,8μm,20.0s					
GSI	**Gunungsitoli**	**74.89**	**99**	*e*P	**P**	**16 22 41.0 -0.6**
	comp=Z,150nm,1.1s					
GSI				LR	LR	
	comp=Z,8μm,18.0s					
I55A	**Frankford**	**74.90**	**313**	P	**P**	**16 22 41.3 +0.1**
	baz=57,SNR=14					
G53A	**Haliburton**	**74.96**	**315**	P	**P**	**16 22 41.6 0.0**
	baz=56,SNR=13					
BINY	**Binghamton**	**74.97**	**311**	PFAKE		16 23 00.0 +18
BINY				LR	LR	
	comp=Z,6μm,20.0s					
BINY	**Binghamton**	**74.97**	**311**	P	**P**	**16 22 41.5 -0.2**
	baz=57					
F52A	**Sundridge**	**75.00**	**315**	P	**P**	**16 22 41.9 +0.2**
	baz=56,SNR=37					
PSI	**Prapat**	**75.14**	**97**	P	**P**	**16 22 42.2 -0.9**
	comp=Z,35nm,0.5s,baz=346,slow=8.9,SNR=15					
PSI				S	**S**	**16 32 17.3 -3.7**
	comp=Z,5.8nm,0.8s,baz=227,slow=20,SNR=5.8					
PSI	**Prapat**	**75.14**	**97**	PFAKE		16 23 00.0 +17
PSI				LR	LR	
	comp=Z,6μm,22.0s					
KULM	**Kulim**	**75.16**	**94**	PFAKE		16 23 00.0 +17
KULM				LR	LR	
	comp=Z,5μm,20.0s					
KULM	**Kulim**	**75.16**	**94**	P	**P**	**16 22 46.0 +2.8**
KSPA	**Keystone Colle**	**75.18**	**310**	PFAKE		16 23 00.0 +17
KSPA				LR	LR	
	comp=Z,9μm,20.0s					
O61A	**Allentown**	**75.19**	**309**	P	**P**	**16 22 42.3 -0.7**
	baz=57					
BUKO	**Buck Lake**	**75.24**	**315**	P	**P**	**16 22 42.6 -0.5**
	baz=56,SNR=12					
F51A	**Arnstein**	**75.26**	**316**	P	**P**	**16 22 43.1 -0.2**
	baz=56,SNR=37					
D49A	**Beulah Townshi**	**75.32**	**318**	P	**P**	**16 22 43.3 -0.3**
	baz=55,SNR=13					
QIZ	**Qiongzhong**	**75.32**	**77**	P	**P**	**16 22 47.4 +3.3**
QIZ				S	**S**	**16 32 21.3 -1.4**
QIZ				pmax	pmax	
	comp=Z,54nm,1.7s					
QIZ				pmax	pmax	
	comp=Z,800nm,3.9s					
QIZ				LR	LR	
	comp=Z,3μm,22.6s					
QIZ				LR	LR	
	comp=Z,2μm,21.0s					
QIZ				LR	LR	
	comp=Z,4μm,19.4s					
LUPA	**Lehigh Univers**	**75.45**	**309**	PFAKE		16 23 00.0 +16
LUPA				LR	LR	
	comp=Z,500nm,19.0s					
E50A	**Wahnapitae**	**75.45**	**317**	P	**P**	**16 22 44.5 +0.2**
	baz=55,SNR=30					
SADO	**Sadowa**	**75.47**	**314**	P	**P**	**16 22 44.8 +0.3**
	comp=Z,32nm,0.8s,baz=77,slow=3.0,SNR=23					
SADO	**Sadowa**	**75.47**	**314**	PFAKE		16 23 00.0 +16
SADO				LR	LR	
	comp=Z,9μm,21.0s					
NJ2	**Nanjing**	**75.48**	**61⇓**	*i*P	**P**	**16 22 47.6 +2.9**
NJ2				sP	**PcP**	**16 22 56.3 -1.5**
NJ2				PP	**PP**	**16 25 35.8 +2.2**
NJ2				S	**S**	**16 32 22.0 -2.0**
NJ2				sS	**sS**	**16 32 33.8 -1.3**
NJ2				SS	**SS**	**16 37 21.0 +6.8**
NJ2				pmax	pmax	
	comp=Z,55nm,0.8s					
NJ2				pmax	pmax	
	comp=Z,1μm,3.8s					
NJ2				LR	LR	
	comp=Z,4μm,20.6s					
NJ2				LR	LR	
	comp=Z,3μm,21.7s					
NJ2				LR	LR	
	comp=Z,6μm,20.9s					
WLVO	**Wesleyville**	**75.50**	**313**	P	**P**	**16 22 44.4 -0.3**
	baz=56,SNR=20					
J55A	**Hilton**	**75.51**	**313**	PFAKE		16 23 00.0 +15
J55A				LR	LR	
	comp=Z,10μm,20.0s					
J55A	**Hilton**	**75.51**	**313**	P	**P**	**16 22 44.5 -0.3**
	baz=56,SNR=5.8					
N59A	**State Game Lan**	**75.53**	**310**	PFAKE		16 23 00.0 +15
N59A				LR	LR	
	comp=Z,8μm,18.0s					
N59A	**State Game Lan**	**75.53**	**310**	P	**P**	**16 22 44.6 -0.3**
	baz=57,SNR=9.9					
P61A	**Hammonton**	**75.58**	**308**	P	**P**	**16 22 44.1 -1.0**
	baz=57					
O60A	**Telford**	**75.62**	**309**	P	**P**	**16 22 45.4 0.0**
	baz=57,SNR=12					
D48A	**Paudash Townsh**	**75.62**	**318**	P	**P**	**16 22 45.2 -0.2**
	baz=55,SNR=9.2					
DRCO	**St. Marys Ceme**	**75.70**	**314**	P	**P**	**16 22 45.2 -0.6**
	baz=56					
DRWO	**Darlington Wes**	**75.72**	**314**	P	**P**	**16 22 45.3 -0.6**
	baz=57					
KLBO	**Killbear Provi**	**75.76**	**315**	P	**P**	**16 22 46.3 +0.2**
	baz=55,SNR=11					
MDJ	**Mudanjiang**	**75.76**	**45**	P	**P**	**16 22 47.4 +1.2**
MDJ				pP	pP	16 22 50.5 -2.2
MDJ				sP	pwP	16 22 52.0 -2.9
MDJ				S	**S**	**16 32 23.3 -3.5**
MDJ				ScS	**ScS**	**16 32 59.9 +0.9**
MDJ				pmax	pmax	
	comp=Z,1μm,11.1s					
MDJ				LR	LR	
	comp=Z,2μm,21.7s					
MDJ				LR	LR	
	comp=Z,3μm,19.6s					
MDJ				LR	LR	
	comp=Z,2μm,21.0s					
MDJ	**Mudanjiang**	**75.76**	**45**	PFAKE		16 23 00.0 +14
MDJ				LR	LR	
	comp=Z,8μm,18.0s					
MMNY	**Mt. Morris Dam**	**75.86**	**312**	PFAKE		16 23 00.0 +13
MMNY				LR	LR	
	comp=Z,11μm,20.0s					
PSUB	**Penn St. - Bra**	**75.86**	**309**	PFAKE		16 23 00.0 +13
PSUB				LR	LR	
	comp=Z,8μm,20.0s					
PKRO	**Pickering**	**75.88**	**314**	P	**P**	**16 22 46.1 -0.7**
	baz=56					
GRNR	**Gornyy**	**75.89**	**38**	*e*P	**P**	**16 22 46.2 -0.6**
GRNR				*e*		16 25 37.8
GRNR				pmax	pmax	
	comp=Z,26nm,1.0s					
IPM	**Ipoh**	**75.92**	**94**	P	**P**	**16 22 50.0 +2.4**
MEDO	**Medina**	**75.95**	**313**	PFAKE		16 23 00.0 +13
MEDO				LR	LR	
	comp=Z,8μm,21.0s					
MEDO	**Medina**	**75.95**	**313**	P	**P**	**16 22 46.8 -0.5**
	baz=56					
K55A	**Perry**	**75.96**	**312**	P	**P**	**16 22 47.2 -0.2**
	baz=56,SNR=19					
H52A	**Wyevale**	**75.98**	**315**	P	**P**	**16 22 46.4 -1.0**
	baz=55					
GZH	**Guangzhou**	**75.99**	**72**	P	**P**	**16 22 48.5 +0.7**
GZH				S	**S**	**16 32 30.9 +1.0**
GZH				pmax	pmax	
	comp=Z,2μm,3.1s					
GZH				LR	LR	
	comp=Z,3μm,34.1s					
GZH				LR	LR	
	comp=Z,3μm,35.3s					
J54A	**Appleton**	**76.00**	**313**	PFAKE		16 23 00.0 +12
J54A				LR	LR	
	comp=Z,7μm,21.0s					
J54A	**Appleton**	**76.00**	**313**	P	**P**	**16 22 46.7 -0.8**
	baz=56					
P60A	**Greenville**	**76.05**	**309**	P	**P**	**16 22 47.3 -0.6**
	baz=57					
MA2	**Magadan**	**76.16**	**25**	*e*P	**P**	**16 22 48.2 0.0**
	comp=Z,196nm,0.8s					
MA2				LR	LR	
	comp=Z,12μm,18.0s					
MA2	**Magadan**	**76.16**	**25***c*	*i*P	**P**	**16 22 47.9 -0.3**
MA2				pmax	pmax	
	comp=Z,52nm,0.6s					
MA2				MLR	MLR	
	comp=Z,13μm,16.0s					
E48A	**Lockeyer**	**76.23**	**317**	P	**P**	**16 22 49.4 +0.6**
	baz=54,SNR=18					
TORO	**Toronto--Lesli**	**76.24**	**314**	P	**P**	**16 22 48.3 -0.6**
	baz=56					
I53A	**Kortright Cn E**	**76.27**	**314**	P	**P**	**16 22 48.9 -0.2**
	baz=55					
INK	**Inuvik**	**76.30**	**352**	P	**P**	**16 22 48.0 -0.8**
	comp=Z,34nm,0.8s,baz=18,slow=8.6,SNR=15					
INK				S	**S**	**16 32 32.4 +0.5**
	comp=Z,4.5nm,0.9s,baz=154,slow=31,SNR=15					
INK				PKPPKP		16 50 04.0
	comp=Z,0.6nm,0.3s,baz=235,slow=4.3,SNR=3.5					
INK				LR	LR	16 59 20.1
	comp=Z,6μm,21.8s,baz=19,slow=38					
INK	**Inuvik**	**76.30**	**352**	PFAKE		16 23 00.0 +11
INK				LR	LR	
	comp=Z,8μm,21.0s					
Q61A	**Milford**	**76.35**	**308**	P	**P**	**16 22 49.1 -0.6**
	baz=57					
STCO	**Saint Catharin**	**76.36**	**313**	P	**P**	**16 22 49.4 -0.1**
	baz=56					
K54A	**Basiliko Farm,**	**76.41**	**312**	P	**P**	**16 22 49.6 -0.3**
	baz=56					
D47A	**Chapleau**	**76.41**	**318**	P	**P**	**16 22 49.9 0.0**
	baz=54,SNR=42					
NKL	**Nikolayevsk**	**76.46**	**34**	*e*P	**P**	**16 22 49.5 -0.4**
NKL				*e*S	**S**	**16 32 32.0 -2.1**
NKL				pmax	pmax	
	comp=Z,53nm,0.9s					
NKL				pmax	pmax	
	comp=N,700nm,12.0s					
NKL				pmax	pmax	
	comp=E,700nm,12.0s					
NKL				smax	smax	
	comp=N,2μm,16.0s					
NKL				MLR	MLR	
	comp=E,10μm,17.0s					
I52A	**Shelburne**	**76.47**	**314**	P	**P**	**16 22 50.4 +0.1**
	baz=55,SNR=19					
L55A	**Hinsdale**	**76.49**	**312**	P	**P**	**16 22 50.6 +0.1**
	baz=56,SNR=21					
F49A	**Sandfield**	**76.58**	**317**	P	**P**	**16 22 50.5 -0.3**
	baz=54,SNR=20					
TOBO	**Tobermory, Bru**	**76.59**	**316**	P	**P**	**16 22 50.4 -0.5**
	baz=54					
Q60A	**Greensboro**	**76.62**	**308**	P	**P**	**16 22 50.4 -0.8**
	baz=56					
R61A	**Willards**	**76.66**	**307**	P	**P**	**16 22 50.6 -0.8**
	baz=57					
ACTO	**Acton**	**76.67**	**314**	P	**P**	**16 22 51.5 +0.1**
	baz=55,SNR=11					
P59A	**Jarrettsville**	**76.67**	**309**	P	**P**	**16 22 50.9 -0.5**
	baz=56					
M56A	**Emporium**	**76.73**	**311**	P	**P**	**16 22 52.0 +0.2**
	baz=56,SNR=31					
N57A	**Milroy**	**76.74**	**310**	P	**P**	**16 22 52.1 +0.3**
	baz=56,SNR=18					
BMRO	**Meriville Lake**	**76.78**	**315**	P	**P**	**16 22 52.2 +0.3**
	baz=54,SNR=10					
TYNO	**Tyneside**	**76.85**	**313**	P	**P**	**16 22 52.0 -0.4**
	baz=55					
E47A	**Iron Bridge**	**76.86**	**318**	P	**P**	**16 22 52.8 +0.4**
	baz=54,SNR=18					
F48A	**Evansville**	**76.86**	**317**	P	**P**	**16 22 52.7 +0.3**
	baz=54,SNR=13					
L54A	**Sinclairville**	**77.00**	**312**	P	**P**	**16 22 53.4 +0.1**
	baz=55,SNR=15					
BWLO	**Walkerton**	**77.01**	**315**	P	**P**	**16 22 53.5 +0.3**
	baz=54,SNR=34					
SSPA	**Standing Stone**	**77.02**	**310**	*e*P	**P**	**16 22 53.8 +0.4**
	comp=E,91nm,0.9s					
SSPA				LR	LR	
	comp=Z,7μm,19.0s					
SSPA	**Standing Stone**	**77.02**	**310**	P	**P**	**16 22 53.5 +0.1**
	baz=56					
D46A	**Sault St. Mari**	**77.02**	**318**	P	**P**	**16 22 53.3 0.0**
	baz=53,SNR=33					
HKPS	**Hong Kong Po S**	**77.04**	**72**	PFAKE		16 23 10.0 +16
HKPS				LR	LR	
	comp=Z,5μm,20.0s					
SDMD	**Soldier's Deli**	**77.04**	**309**	PFAKE		16 23 10.0 +16
SDMD				LR	LR	
	comp=Z,4μm,20.0s					
M55A	**Ridgway**	**77.10**	**312**	P	**P**	**16 22 53.8 -0.1**
	baz=55,SNR=24					
O57A	**Amberson**	**77.10**	**310**	P	**P**	**16 22 53.9 0.0**
	baz=56					
BRCO	**Bruce Peninsul**	**77.12**	**315**	P	**P**	**16 22 53.6 -0.3**
	baz=54					
N56A	**West Decatur**	**77.12**	**311**	P	**P**	**16 22 54.0 0.0**
	baz=56					
I51A	**Listowel**	**77.12**	**314**	P	**P**	**16 22 54.1 +0.1**
	baz=54,SNR=26					
J52A	**Paris**	**77.13**	**314**	P	**P**	**16 22 53.9 -0.1**
	baz=55,SNR=18					
TOLK	**Toolik Lake Re**	**77.14**	**358**	PFAKE		16 23 10.0 +16
TOLK				LR	LR	
	comp=Z,9μm,21.0s					
TOLK	**Toolik Lake Re**	**77.14**	**358**	P	**P**	**16 22 53.3 -0.3**
	baz=4.6					
Q59A	**Harwood**	**77.23**	**308**	P	**P**	**16 22 54.4 -0.1**
	baz=56					
S61A	**Accomac**	**77.24**	**307**	PFAKE		16 23 10.0 +15
S61A				LR	LR	
	comp=Z,8μm,20.0s					
S61A	**Accomac**	**77.24**	**307**	P	**P**	**16 22 54.4 -0.2**
	baz=56					
BASO	**Ashfield**	**77.38**	**315**	P	**P**	**16 22 56.0 +0.6**
	baz=54,SNR=11					
USA0B	**Ussuriysk Arra**	**77.41**	**45**	PFAKE		16 23 10.0 +15
USA0B				LR	LR	
	comp=Z,6μm,18.0s					
USRK	**Ussuriysk Ar.**	**77.41**	**45**	P	**P**	**16 22 54.7 -0.8**
	comp=Z,168nm,0.8s,baz=287,slow=5.3,SNR=60					
USRK				LR	LR	17 01 42.2
	comp=Z,4μm,19.6s,baz=309,slow=39					
ERPA	**Erie**	**77.48**	**313**	PFAKE		16 23 10.0 +14
ERPA				LR	LR	
	comp=Z,9μm,20.0s					
ERPA	**Erie**	**77.48**	**313**	P	**P**	**16 22 55.5 -0.4**
	baz=55					
E46A	**Sault Ste Mari**	**77.49**	**318**	PFAKE		16 23 10.0 +14
E46A				LR	LR	
	comp=Z,10μm,18.0s					
E46A	**Sault Ste Mari**	**77.49**	**318**	P	**P**	**16 22 55.9 0.0**
	baz=53,SNR=34					
R60A	**Leonardtown, M**	**77.51**	**308**	P	**P**	**16 22 55.7 -0.4**
	baz=56					
K52A	**Tillsonburg**	**77.53**	**313**	P	**P**	**16 22 56.1 -0.2**
	baz=54					
N55A	**Marion Center**	**77.63**	**311**	PFAKE		16 23 10.0 +13
N55A				LR	LR	
	comp=Z,9μm,21.0s					
N55A	**Marion Center**	**77.63**	**311**	P	**P**	**16 22 57.2 +0.3**
	baz=55,SNR=26					
M54A	**Oil Creek Stat**	**77.63**	**312**	PFAKE		16 23 10.0 +13
M54A				LR	LR	
	comp=Z,7μm,20.0s					
M54A	**Oil Creek Stat**	**77.63**	**312**	P	**P**	**16 22 56.9 0.0**
	baz=55,SNR=20					
RDOG	**Red Dog Mine**	**77.63**	**3**	PFAKE		16 23 10.0 +14
RDOG				LR	LR	
	comp=Z,8μm,21.0s					
O56A	**Blue Knob Stat**	**77.66**	**310**	PFAKE		16 23 10.0 +13
O56A				LR	LR	
	comp=Z,8μm,18.0s					
O56A	**Blue Knob Stat**	**77.66**	**310**	P	**P**	**16 22 57.3 +0.2**
	baz=55,SNR=19					
SSE	**Sheshan**	**77.67**	**61**	P	**P**	**16 22 54.1 -3.1**

SSE S S 16 32 45.4 -2.6
SSE pmax pmax
comp=Z,36nm,1.1s
SSE pmax pmax
comp=Z,470nm,10.6s
SSE LR LR
comp=Z,1μm,21.6s
SSE LR LR
comp=Z,2μm,21.6s
SSE Sheshan 77.67 61 PFAKE 16 23 10.0 +13
SSE LR LR
comp=Z,4μm,18.0s
ANWB Willy Bob 77.68 283 PFAKE 16 23 10.0 +13
ANWB LR LR
comp=Z,3μm,22.0s
L53A Girard 77.74 313 P **P 16 22 57.2 -0.2**
baz=55,SNR=9.0
P57A Homestead Farm 77.75 310 P **P 16 22 57.6 +0.1**
baz=55,SNR=20
ALLY Alegheny Colle 77.84 312 PFAKE 16 23 10.0 +12
ALLY LR LR
comp=Z,10μm,20.0s
MSHR Mys Shultsa 77.86 47⇓ *e*P **P 16 22 58.9 +0.9**
S60A Water View 77.87 307 P **P 16 22 58.5 +0.3**
baz=56
R59A King George, V 77.90 308 P **P 16 22 58.0 -0.3**
baz=56
H48A Harrisville 77.93 316 PFAKE 16 23 10.0 +12
H48A LR LR
comp=Z,11μm,18.0s
H48A Harrisville 77.93 316 P **P 16 22 58.4 -0.1**
baz=53,SNR=8.6
G47A Hillman 77.95 317 P **P 16 22 59.1 +0.6**
baz=53,SNR=25
VLA Vladivostok 77.98 46*d i*P **P 16 22 57.8 -0.9**
VLA pmax pmax
comp=Z,105nm,0.9s
YKW3 Yellowknife Ar 78.04 342 PFAKE 16 23 10.0 +11
YKW3 LR LR
comp=Z,7μm,19.0s
K51A Iona Station 78.04 314 P **P 16 22 58.8 -0.3**
baz=54
CBN Corbin Frederi 78.06 308 PFAKE 16 23 10.0 +11
CBN LR LR
comp=Z,8μm,19.0s
CBN Corbin Frederi 78.06 308 P **P 16 22 58.3 -0.9**
baz=56
YKA Yellowknife Ar 78.09 342 P **P 16 22 58.1 -0.8**
comp=Z,9.9nm,0.8s,baz=34,slow=5.7,SNR=22
YKA LR LR 16 59 31.1
comp=Z,453nm,20.1s,baz=34,slow=37
I49A Point Hope 78.10 315 PFAKE 16 23 10.0 +11
I49A LR LR
comp=Z,12μm,18.0s
I49A Point Hope 78.10 315 P **P 16 22 58.6 -0.7**
baz=54
N54A Moraine State 78.15 312 PFAKE 16 23 10.0 +10
N54A LR LR
comp=Z,8μm,21.0s
N54A Moraine State 78.15 312 P **P 16 22 59.8 +0.1**
baz=55,SNR=22
O55A Ligonier 78.16 311 P **P 16 22 59.8 0.0**
baz=55,SNR=28
E44A Grand Marais A 78.22 319 PFAKE 16 23 10.0 +10
E44A LR LR
comp=Z,9μm,19.0s
E44A Grand Marais A 78.22 319 P **P 16 22 59.8 -0.2**
baz=52,SNR=15
T60A Surry 78.25 307 PFAKE 16 23 10.0 +10
T60A LR LR
comp=Z,7μm,20.0s
T60A Surry 78.25 307 P **P 16 22 59.8 -0.5**
baz=56
Q57A Strasburg 78.26 309 P **P 16 23 00.2 -0.2**
baz=55
S59A Mechanicsville 78.26 308 P **P 16 23 00.4 +0.1**
baz=56
P56A Dayton Farm, R 78.27 310 P **P 16 23 00.1 -0.3**
baz=55,SNR=13
BKNI Bangkinang 78.28 98 PFAKE 16 23 10.0 +9.2
BKNI LR LR
comp=Z,7μm,20.0s
BBGH Gun Hill 78.29 278 PFAKE 16 23 10.0 +9.1
BBGH LR LR
comp=Z,5μm,22.0s
M53A Wl Miller and 78.29 312 P **P 16 23 00.2 -0.3**
baz=54
R58A Rapidan 78.42 309 P **P 16 23 00.8 -0.4**
baz=55
G46A Petoskey 78.43 317 P **P 16 23 00.6 -0.5**
baz=52
I48A Sherman Twp 78.46 316 P **P 16 23 00.9 -0.4**
baz=53,SNR=7.4
H47A Mio 78.50 317 P **P 16 23 01.2 -0.3**
baz=53
U61A Possum Corner 78.51 306 PFAKE 16 23 20.0 +18
U61A LR LR
comp=Z,9μm,18.0s
U61A Possum Corner 78.51 306 P **P 16 23 00.7 -1.0**
baz=56
SMRT St. Maarten 78.51 284 PFAKE 16 23 20.0 +18
SMRT LR LR
comp=Z,4μm,22.0s
EPYK Eagle Plains 78.52 353 PFAKE 16 23 20.0 +19
EPYK LR LR
comp=Z,5μm,21.0s
EPYK Eagle Plains 78.52 353 P **P 16 23 00.8 -0.6**
baz=15
R58B Mineral 78.53 308 PFAKE 16 23 20.0 +18
R58B LR LR
comp=Z,10μm,19.0s
R58B Mineral 78.53 308 P **P 16 23 01.5 -0.4**
baz=55,SNR=21
F45A CMU Biological 78.57 318 P **P 16 23 01.6 -0.3**
baz=52,SNR=14
COLD Coldfoot 78.57 358 PFAKE 16 23 20.0 +18
COLD LR LR
comp=Z,6μm,22.0s
GLMI Grayling 78.59 317 PFAKE 16 23 20.0 +18
GLMI LR LR
comp=Z,7μm,18.0s
GLMI Grayling 78.59 317 P **P 16 23 01.3 -0.8**
baz=52
V62A Hyde County Ai 78.61 305 PFAKE 16 23 20.0 +18
V62A LR LR
comp=Z,5μm,19.0s
V62A Hyde County Ai 78.61 305 P **P 16 23 00.7 -1.6**
baz=56
SKI Saint Kitts 78.62 283 PFAKE 16 23 20.0 +17
SKI LR LR
comp=Z,4μm,22.0s
J49A Marlette 78.63 315 P **P 16 23 02.1 -0.2**
baz=53,SNR=11
M52A Chesterland 78.65 313 PFAKE 16 23 20.0 +18
M52A LR LR
comp=Z,7μm,22.0s
M52A Chesterland 78.65 313 P **P 16 23 01.8 -0.7**
baz=54
K50A Casco 78.67 314 PFAKE 16 23 20.0 +17
K50A LR LR
comp=Z,11μm,20.0s
K50A Casco 78.67 314 P **P 16 23 02.1 -0.4**
baz=53
SEUS St. Eustatius 78.73 283 PFAKE 16 23 20.0 +17
SEUS LR LR
comp=Z,4μm,22.0s
FDF Fort de France 78.73 280 PFAKE 16 23 20.0 +17
FDF LR LR
comp=Z,2μm,20.0s
Q56A Snyder Ridge, 78.75 310 P **P 16 23 03.0 -0.1**
baz=55,SNR=28
R57A Stanardsville 78.75 309 P **P 16 23 02.9 -0.2**
baz=55,SNR=13
N53A Lisbon 78.76 312 PFAKE 16 23 20.0 +17
N53A LR LR
comp=Z,6μm,20.0s
N53A Lisbon 78.76 312 P **P 16 23 02.2 -0.9**
baz=54
KSRS Korea Array 78.79 52 P **P 16 23 02.9 -0.4**
comp=Z,75nm,0.7s,baz=303,slow=4.7,SNR=84
KSRS LR LR 17 03 17.7
comp=Z,11μm,18.1s,baz=315,slow=40
MCWV Mont Chateau 78.81 310 PFAKE 16 23 20.0 +17
MCWV LR LR
comp=Z,4μm,18.0s
MCWV Mont Chateau 78.81 310 P **P 16 23 03.2 -0.2**
baz=54

O54A Avella 78.84 311 P **P 16 23 02.9 -0.6**
baz=54
S58A Poland Farm, P 78.84 308 PFAKE 16 23 20.0 +16
S58A LR LR
comp=Z,8μm,19.0s
S58A Poland Farm, P 78.84 308 P **P 16 23 03.2 -0.4**
baz=55,SNR=13
T59A Double "B" Far 78.88 307 PFAKE 16 23 20.0 +16
T59A LR LR
comp=Z,8μm,20.0s
T59A Double "B" Far 78.88 307 P **P 16 23 03.0 -0.8**
baz=55
P55A Reedsville 78.89 310 P **P 16 23 03.5 -0.3**
baz=54
V61A Roper 78.90 306 PFAKE 16 23 20.0 +16
V61A LR LR
comp=Z,8μm,19.0s
E43A Lone Tree Farm 78.95 319 PFAKE 16 23 20.0 +16
E43A LR LR
comp=Z,8μm,18.0s
E43A Lone Tree Farm 78.95 319 P **P 16 23 03.8 -0.2**
baz=51,SNR=39
I47A Gladwin 79.02 316 PFAKE 16 23 20.0 +16
I47A LR LR
comp=Z,12μm,19.0s
I47A Gladwin 79.02 316 P **P 16 23 03.9 -0.5**
baz=52
FYU Fort Yukon 79.03 356 PFAKE 16 23 20.0 +16
FYU LR LR
comp=Z,9μm,22.0s
TJN Taejon 79.03 53*d i*P **P 16 23 03.7 -0.9**
J48A Bridge Port 79.04 315 PFAKE 16 23 20.0 +15
J48A LR LR
comp=Z,10μm,19.0s
J48A Bridge Port 79.04 315 P **P 16 23 00.6 -4.0**
baz=53
G45A Suttons Bay 79.05 318 PFAKE 16 23 20.0 +15
G45A LR LR
comp=Z,9μm,19.0s
G45A Suttons Bay 79.05 318 P **P 16 23 04.0 -0.5**
baz=52,SNR=9.9
QZH Quanzhou 79.06 67⇑ *i*P **P 16 23 06.4 +1.4**
QZH S **S 16 33 00.9 -2.3**
QZH pmax pmax
comp=Z,880nm,10.4s
QZH LR LR
comp=Z,4μm,19.0s
QZH LR LR
comp=Z,2μm,17.3s
QZH LR LR
comp=Z,4μm,17.2s
H46A Fife Lake 79.10 317 P **P 16 23 04.8 -0.1**
baz=52,SNR=9.0
C40A Isle Royale Na 79.12 321 PFAKE 16 23 20.0 +15
C40A LR LR
comp=Z,6μm,19.0s
C40A Isle Royale Na 79.12 321 P **P 16 23 04.4 -0.4**
baz=50
K49A Clarkson 79.16 315 P **P 16 23 04.7 -0.5**
baz=53
KNMB Chin-men Tao 79.17 68 PFAKE 16 23 20.0 +14
KNMB LR LR
comp=Z,2μm,20.0s
L50A Kingsville 79.22 314 P **P 16 23 05.4 -0.2**
baz=53
M51A Elyria 79.27 313 P **P 16 23 05.7 -0.2**
baz=53
N52A McGinn's Farm, 79.28 312 P **P 16 23 05.5 -0.4**
baz=54
PLIO Pelee Island, 79.29 313 P **P 16 23 05.5 -0.4**
baz=53
O53A New Philadelph 79.32 312 P **P 16 23 06.0 -0.2**
baz=54
S57A Dark Hollow, R 79.34 309 PFAKE 16 23 20.0 +14
S57A LR LR
comp=Z,6μm,19.0s
S57A Dark Hollow, R 79.34 309 P **P 16 23 06.0 -0.3**
baz=55
Q55A Buckhannon 79.35 310 P **P 16 23 06.4 0.0**
baz=54,SNR=13
D41A Chassel 79.36 320 PFAKE 16 23 20.0 +14
D41A LR LR
comp=Z,5μm,20.0s
D41A Chassel 79.36 320 P **P 16 23 06.0 -0.2**
baz=50,SNR=27
V60A Jim Taylor Roa 79.37 306 PFAKE 16 23 20.0 +14
V60A LR LR
comp=Z,8μm,18.0s
V60A Jim Taylor Roa 79.37 306 P **P 16 23 05.9 -0.6**
baz=55
U59A Littleton 79.39 307 PFAKE 16 23 20.0 +13
U59A LR LR
comp=Z,7μm,20.0s
U59A Littleton 79.39 307 P **P 16 23 06.7 +0.1**
baz=55,SNR=16
H45A Beulah 79.52 317 P **P 16 23 06.4 -0.8**
baz=52
W61A Ground Anchor 79.53 305 P **P 16 23 06.6 -0.7**
baz=55
TEY Ternei 79.53 42⇓ *e*P **P 16 23 09.7 +2.6**
TEY *e*S **S 16 33 09.3 +1.9**
TEY pmax pmax
comp=Z,40nm,2.1s
TEY pmax pmax
comp=N,10.0nm,0.9s
K48A Perry 79.54 315 P **P 16 23 06.5 -0.8**
baz=52
T58A Grand View Acr 79.54 308 P **P 16 23 07.5 +0.1**
baz=55,SNR=18
AAM Ann Arbor 79.57 314 PFAKE 16 23 20.0 +13
AAM LR LR
comp=Z,12μm,20.0s
AAM Ann Arbor 79.57 314 P **P 16 23 07.2 -0.3**
baz=53
I46A Reed City 79.61 317 P **P 16 23 07.5 -0.1**
baz=52,SNR=11
N51A Ashland 79.63 313 PFAKE 16 23 20.0 +12
N51A LR LR
comp=Z,7μm,21.0s
N51A Ashland 79.63 313 P **P 16 23 07.4 -0.4**
baz=53
J47A Sunmer 79.68 316 PFAKE 16 23 20.0 +12
J47A LR LR
comp=Z,12μm,19.0s
J47A Sunmer 79.68 316 P **P 16 23 07.8 -0.2**
baz=52
M50A Fremont 79.75 313 PFAKE 16 23 20.0 +12
M50A LR LR
comp=Z,7μm,20.0s
M50A Fremont 79.75 313 P **P 16 23 07.7 -0.7**
baz=53
L49A Milan 79.75 314 P **P 16 23 07.9 -0.5**
baz=53
MYKOM Kota Tinggi 79.76 95 PFAKE 16 23 20.0 +11
MYKOM LR LR
comp=Z,4μm,22.0s
MYKOM Kota Tinggi 79.76 95 P **P 16 23 13.0 +4.1**
O52A Adamsville 79.78 312 PFAKE 16 23 20.0 +11
O52A LR LR
comp=Z,8μm,18.0s
O52A Adamsville 79.78 312 P **P 16 23 08.5 -0.2**
baz=53,SNR=12
S56A Natural Bridge 79.78 309 P **P 16 23 08.3 -0.4**
baz=54
Q54A Coxs Mills 79.83 310 PFAKE 16 23 20.0 +11
Q54A LR LR
comp=Z,7μm,19.0s
Q54A Coxs Mills 79.83 310 P **P 16 23 08.9 -0.1**
baz=54,SNR=11
U58A Oxford, 79.87 307 P **P 16 23 09.0 -0.1**
baz=55,SNR=13
P53A Whipple 79.88 311 PFAKE 16 23 20.0 +11
P53A LR LR
comp=Z,11μm,21.0s
P53A Whipple 79.88 311 P **P 16 23 09.1 -0.1**
baz=54,SNR=12
F42A Maple Grove Fa 79.96 319 P **P 16 23 08.8 -0.7**
baz=50
T57A Hurt 79.98 308 PFAKE 16 23 20.0 +10
T57A LR LR
comp=Z,7μm,19.0s
T57A Hurt 79.98 308 P **P 16 23 09.4 -0.4**
baz=54,SNR=11
I45A Fountain 79.99 317 PFAKE 16 23 20.0 +10
I45A LR LR
comp=Z,7μm,19.0s
I45A Fountain 79.99 317 P **P 16 23 09.6 -0.1**

baz=51
V59A Middlesex 80.02 307 P **P 16 23 09.6 -0.5**
baz=55,SNR=8.9
W60A Pink Hill 80.08 306 P **P 16 23 09.8 -0.6**
baz=55
PRP Porcupine Dome 80.08 356 PFAKE 16 23 20.0 +10
PRP LR LR
comp=Z,11μm,22.0s
J46A Howard City 80.09 316 P **P 16 23 09.6 -0.7**
baz=52
CNNC Cliffs of the 80.09 306 PFAKE 16 23 20.0 +10
CNNC LR LR
comp=Z,8μm,18.0s
CNNC Cliffs of the 80.09 306 P **P 16 23 09.4 -1.0**
baz=55
K47A Vermontville 80.13 315 P **P 16 23 10.1 -0.4**
baz=52,SNR=12
N50A Nevada 80.19 313 P **P 16 23 10.1 -0.8**
baz=53
FFC Flin Flon 80.21 332 *e*P **P 16 23 10.3 -0.4**
comp=Z,2μm,1.4s
FFC LR LR
comp=Z,16μm,21.0s
FFC Flin Flon 80.21 332 *i*P **P 16 23 10.6 -0.1**
O51A Pataskala 80.24 312 P **P 16 23 10.7 -0.4**
baz=53,SNR=12
L48A N Adams 80.25 314 P **P 16 23 10.7 -0.4**
baz=52
P52A Corning 80.25 312 P **P 16 23 10.6 -0.6**
baz=53
M49A Liberty Center 80.26 314 P **P 16 23 10.6 -0.6**
baz=52
COWI Conover 80.28 320 PFAKE 16 23 30.0 +19
COWI LR LR
comp=Z,4μm,19.0s
EYMN Ely 80.29 322 PFAKE 16 23 30.0 +19
EYMN LR LR
comp=Z,5μm,21.0s
EYMN Ely 80.29 322 P **P 16 23 10.4 -0.9**
baz=49
S55A Lewisburg 80.33 309 P **P 16 23 11.9 +0.2**
baz=54,SNR=8.4
Q53A Leroy 80.34 311 P **P 16 23 11.5 -0.2**
baz=53,SNR=14
U57A Blanch 80.36 308 P **P 16 23 11.6 -0.3**
baz=54,SNR=9.0
R54A Victor 80.40 310 P **P 16 23 11.2 -0.9**
baz=54
ACSO Alum Creek Sta 80.42 312 PFAKE 16 23 30.0 +18
ACSO LR LR
comp=Z,6μm,22.0s
ACSO Alum Creek Sta 80.42 312 P **P 16 23 11.5 -0.5**
baz=53,SNR=9.5
J45A Montague 80.45 317 PFAKE 16 23 30.0 +18
J45A LR LR
comp=Z,10μm,19.0s
J45A Montague 80.45 317 P **P 16 23 11.9 -0.3**
baz=51
T56A Rocky Mt 80.46 308 P **P 16 23 12.5 0.0**
baz=54,SNR=16
W59A Clinton 80.50 306 P **P 16 23 11.8 -0.8**
baz=54
EGAK Eagle 80.51 354 PFAKE 16 23 30.0 +18
EGAK LR LR
comp=Z,4μm,22.0s
X60A Albert Glenn T 80.53 305 P **P 16 23 11.4 -1.4**
baz=55
GRGR Grenville 80.55 278 PFAKE 16 23 30.0 +17
GRGR LR LR
comp=Z,1μm,20.0s
K46A Dorr 80.58 316 P **P 16 23 12.1 -0.8**
baz=52
H43A Windswept, Lux 80.58 318 PFAKE 16 23 30.0 +17
H43A LR LR
comp=Z,10μm,18.0s
H43A Windswept, Lux 80.58 318 P **P 16 23 12.9 0.0**
baz=50,SNR=15
POKR Poker Plat Res 80.58 357 P **P 16 23 12.3 -0.2**
baz=6.3
V58A Windy Hill, Pi 80.59 307 P **P 16 23 12.7 -0.4**
baz=54,SNR=9.4
BLA Blacksburg 80.61 309 PFAKE 16 23 30.0 +17
BLA LR LR
comp=Z,7μm,20.0s
BLA Blacksburg 80.61 309 P **P 16 23 12.3 -0.9**
baz=54
L47A Sherwood 80.68 315 P **P 16 23 12.7 -0.8**
baz=52,SNR=6.8
M48A Edgerton 80.69 314 PFAKE 16 23 30.0 +16
M48A LR LR
comp=Z,13μm,19.0s
M48A Edgerton 80.69 314 P **P 16 23 12.2 -1.3**
baz=52
N49A Columbus Grove 80.72 314 PFAKE 16 23 30.0 +16
N49A LR LR
comp=Z,8μm,20.0s
N49A Columbus Grove 80.72 314 P **P 16 23 13.1 -0.6**
baz=52,SNR=10
Q52A Bidwell 80.74 311 P **P 16 23 13.3 -0.5**
baz=53,SNR=14
MLY Manley 80.79 358 PFAKE 16 23 30.0 +16
MLY LR LR
comp=Z,7μm,22.0s
S54A Dingess, Beckl 80.83 310 P **P 16 23 13.7 -0.7**
baz=53
ULM Lac du Bonnet 80.84 326 P **P 16 23 13.9 -0.3**
comp=Z,12nm,0.8s,baz=21,slow=4.7,SNR=8.8
ULM LR LR 16 59 30.8
comp=Z,15μm,21.1s,baz=44,slow=36
ULM Lac du Bonnet 80.84 326 PFAKE 16 23 30.0 +16
ULM LR LR
comp=Z,15μm,21.0s
COLA College 80.85 357 *e*P **P 16 23 14.5 +0.6**
comp=Z,136nm,1.2s
COLA LR LR
comp=Z,7μm,21.0s
COLA College 80.85 357*c i*P **P 16 23 13.7 -0.2**
COLA pmax pmax
comp=Z,121nm,1.2s
COLA MLR MLR
comp=Z,7μm,21.0s
TCOL CIGO, UAF Yank 80.85 357 P **P 16 23 13.3 -0.6**
baz=6.0
O50A Cable 80.86 313 P **P 16 23 13.6 -0.9**
baz=52
T55A Pulaski 80.90 309 P **P 16 23 14.4 -0.4**
baz=54,SNR=9.9
ILAR Eielson Array 80.90 357 P **P 16 23 14.3 +0.1**
comp=Z,22nm,0.8s,baz=358,slow=3.9,SNR=41
ILAR S S 16 33 32.0 +11
comp=Z,0.7nm,1.1s,baz=320,slow=3.9,SNR=4.2
ILAR PKKPbc **PKKPbc 16 41 51.9 -0.5**
comp=Z,5.0nm,0.8s,baz=223,slow=3.0,SNR=5.8
ILAR PKPPKP P'P'df 16 49 53.3 -9.1
comp=Z,0.5nm,0.9s,baz=277,slow=1.2,SNR=4.7
ILAR LR LR 16 58 46.1
comp=Z,5μm,21.9s,baz=25,slow=35
F40A Park Falls 80.92 320 P **P 16 23 13.9 -0.8**
baz=49,SNR=33
P51A Williamsport 80.92 312 PFAKE 16 23 30.0 +15
P51A LR LR
comp=Z,8μm,18.0s
P51A Williamsport 80.92 312 P **P 16 23 13.8 -1.0**
baz=53
R53A Hurricane 80.92 310 PFAKE 16 23 30.0 +15
R53A LR LR
comp=Z,9μm,18.0s
R53A Hurricane 80.92 310 P **P 16 23 14.7 -0.1**
baz=53,SNR=15
SJG San Juan 80.93 286 PFAKE 16 23 30.0 +15
SJG LR LR
comp=Z,2μm,20.0s
SMTB Santa Maria do 80.93 253 *e*P **P 16 23 15.7 +0.5**
X59A McDuffie Farm, 80.96 306 P **P 16 23 14.2 -0.8**
baz=54
V57A Coltrane Farms 80.97 307 P **P 16 23 14.8 -0.3**
baz=54,SNR=11
ANM Nome 80.97 5 PFAKE 16 23 30.0 +15
ANM LR LR
comp=Z,10μm,22.0s
Y60A Bolivia 81.03 305 PFAKE 16 23 30.0 +15
Y60A LR LR
comp=Z,6μm,19.0s
Y60A Bolivia 81.03 305 P **P 16 23 15.3 -0.1**
baz=54
DAWY Dawson 81.04 353 PFAKE 16 23 30.0 +15
DAWY LR LR

comp=Z,4μm,20.0s
CCB Clear Creek Bu 81.07 357 PFAKE 16 23 30.0 +15
CCB LR LR
comp=Z,7μm,22.0s
U56A King 81.09 308 P **P 16 23 15.8 0.0**
baz=54,SNR=7.0
W58A Raeford 81.12 306 P **P 16 23 15.8 -0.1**
baz=54,SNR=8.1
E38A The Farm, Brul 81.21 321 PFAKE 16 23 30.0 +14
E38A LR LR
comp=Z,5μm,18.0s
E38A The Farm, Brul 81.21 321 P **P 16 23 15.4 -0.8**
baz=48,SNR=12
TATO Taipei 81.24 66 PFAKE 16 23 30.0 +13
TATO LR LR
comp=Z,4μm,21.0s
WRH Wood River Hil 81.26 357 PFAKE 16 23 30.0 +14
WRH LR LR
comp=Z,7μm,21.0s
O49A Covington 81.26 313 PFAKE 16 23 30.0 +13
O49A LR LR
comp=Z,7μm,20.0s
O49A Covington 81.26 313 P **P 16 23 15.5 -1.1**
baz=52,SNR=21
N48A Decatur 81.27 314 P **P 16 23 15.8 -0.8**
baz=52,SNR=19
HDA Harding Lake 81.27 356 PFAKE 16 23 30.0 +14
HDA LR LR
comp=Z,7μm,22.0s
P50A Jamestown 81.29 312 P **P 16 23 16.0 -0.8**
baz=52
L46A Eue Claire 81.29 315 PFAKE 16 23 30.0 +13
L46A LR LR
comp=Z,9μm,18.0s
L46A Eue Claire 81.29 315 P **P 16 23 16.2 -0.5**
baz=51
M47A Cromwell 81.31 315 P **P 16 23 16.0 -0.8**
baz=51
YHNB Yeheng 81.33 66 PFAKE 16 23 30.0 +13
YHNB LR LR
comp=Z,4μm,21.0s
OBIP Obispado Ponce 81.33 286 PFAKE 16 23 30.0 +13
OBIP LR LR
comp=Z,600nm,18.0s
F39A Loretta 81.34 321 P **P 16 23 15.8 -1.2**
baz=49,SNR=28
R52A Catlettsburg 81.35 311 P **P 16 23 16.2 -0.9**
baz=53
ICMP Isla Caja de M 81.35 286 PFAKE 16 23 30.0 +13
ICMP LR LR
comp=Z,3μm,22.0s
Q51A Peebles 81.37 312 PFAKE 16 23 30.0 +13
Q51A LR LR
comp=Z,6μm,20.0s
Q51A Peebles 81.37 312 P **P 16 23 16.8 -0.4**
baz=52,SNR=12
G40A Rib Lake 81.38 320 PFAKE 16 23 30.0 +13
G40A LR LR
comp=Z,4μm,20.0s
G40A Rib Lake 81.38 320 P **P 16 23 16.4 -0.8**
baz=49,SNR=46
S53A Williamson 81.42 310 P **P 16 23 16.5 -1.0**
baz=53
U55A TA2, Sparta 81.43 308 P **P 16 23 17.5 -0.2**
baz=53,SNR=24
T54A Tazewell 81.44 309 P **P 16 23 16.7 -1.0**
baz=53
X58A Rowland 81.46 306 PFAKE 16 23 30.0 +12
X58A LR LR
comp=Z,7μm,18.0s
X58A Rowland 81.46 306 P **P 16 23 17.0 -0.7**
baz=54
V56A Mocksville 81.48 308 PFAKE 16 23 30.0 +12
V56A LR LR
comp=Z,5μm,18.0s
V56A Mocksville 81.48 308 P **P 16 23 17.7 -0.2**
baz=54,SNR=13
W57A Gilead 81.54 307 PFAKE 16 23 30.0 +12
W57A LR LR
comp=Z,5μm,18.0s
W57A Gilead 81.54 307 P **P 16 23 17.8 -0.4**
baz=54,SNR=11
YSS Yuzh-Sakhalins 81.55 38 *e*P **P 16 23 18.1 +0.2**
comp=Z,232nm,1.1s
YSS LR LR
comp=Z,6μm,18.0s
YSS Yuzh-Sakhalins 81.55 38 ⇑ *i*P **P 16 23 18.0 +0.1**
YSS *e* 16 23 28.4
YSS *e* 16 26 28.0
YSS *e*S **S 16 33 27.6 -0.9**
YSS *e* 16 33 31.7
YSS *e*SSS SSS 16 42 15.9
YSS pmax pmax
comp=Z,140nm,0.9s
YSS pmax pmax
comp=Z,600nm,17.3s
YSS pmax pmax
comp=E,300nm,14.3s
YSS MLR MLR
comp=Z,5μm,17.0s
YSS MLR MLR
comp=N,4μm,16.0s
YSS MLR MLR
comp=E,8μm,16.5s
I42A Draeger Farm, 81.58 318 PFAKE 16 23 30.0 +12
I42A LR LR
comp=Z,8μm,19.0s
I42A Draeger Farm, 81.58 318 P **P 16 23 17.7 -0.6**
baz=50,SNR=21
BWN Browne 81.61 358 PFAKE 16 23 30.0 +12
BWN LR LR
comp=Z,6μm,22.0s
N47A Urbana 81.65 314 P **P 16 23 17.3 -1.3**
baz=51
M46A Old House Fiel 81.70 315 PFAKE 16 23 30.0 +11
M46A LR LR
comp=Z,8μm,22.0s
M46A Old House Fiel 81.70 315 P **P 16 23 18.0 -0.9**
baz=51
O48A Farmland 81.72 313 P **P 16 23 18.6 -0.4**
baz=52,SNR=12
BPAW Bear Paw Mtn. 81.73 358 PFAKE 16 23 30.0 +11
BPAW LR LR
comp=Z,6μm,22.0s
NACB Ninganchiao 81.77 66 PFAKE 16 23 30.0 +10
NACB LR LR
comp=Z,3μm,21.0s
F38A Pierce - Schro 81.81 321 P **P 16 23 19.5 +0.1**
baz=48,SNR=24
RIDG Independent Ri 81.81 355 PFAKE 16 23 30.0 +11
RIDG LR LR
comp=Z,6μm,22.0s
DOT Dot Lake 81.85 355 PFAKE 16 23 30.0 +11
DOT LR LR
comp=Z,6μm,22.0s
Q50A Georgetown 81.87 312 P **P 16 23 18.5 -1.3**
baz=52
G39A Holcombe 81.89 320 P **P 16 23 19.1 -0.7**
baz=48,SNR=41
P49A Miami Univ. Ec 81.90 313 P **P 16 23 19.2 -0.8**
baz=52
U54A Nelsons Funny 81.92 309 PFAKE 16 23 30.0 +10
U54A LR LR
comp=Z,7μm,20.0s
U54A Nelsons Funny 81.92 309 P **P 16 23 19.6 -0.6**
baz=53,SNR=9.5
V55A Taylorsville 81.93 308 P **P 16 23 20.0 -0.2**
baz=53,SNR=5.5
W56A Indian Trail 81.94 307 P **P 16 23 19.8 -0.5**
baz=53
R51A Hillsboro 81.96 311 P **P 16 23 19.4 -0.9**
baz=52,SNR=15
YULB Yu-li 81.97 67 PFAKE 16 23 30.0 +9.3
YULB LR LR
comp=Z,4μm,19.0s
RIB01 Linhares ES 81.99 240 *e*P **P 16 23 21.5 +0.8**
I41A Arkdale 82.00 319 PFAKE 16 23 30.0 +10
I41A LR LR
comp=Z,8μm,19.0s
I41A Arkdale 82.00 319 P **P 16 23 19.5 -0.9**
baz=49
BSFB Barra de Sao F 82.01 241 *e*P **P 16 23 21.2 +0.5**
X57A Johnson Farm, 82.02 306 P **P 16 23 20.1 -0.6**
baz=54
K43A Burlington 82.02 317 PFAKE 16 23 30.0 +9.4
K43A LR LR
comp=Z,10μm,19.0s
K43A Burlington 82.02 317 P **P 16 23 19.8 -0.8**
baz=50
S52A Salyersville 82.02 310 P **P 16 23 20.0 -0.7**
baz=52
MCK McKinley 82.03 357 PFAKE 16 23 30.0 +10
MCK LR LR
comp=Z,7μm,22.0s
Y58A Scranton 82.06 306 PFAKE 16 23 30.0 +9.1
Y58A LR LR
comp=Z,8μm,19.0s
Y58A Scranton 82.06 306 P **P 16 23 20.2 -0.7**
baz=54
T53A Wise 82.10 310 P **P 16 23 20.2 -1.0**
baz=53
L44A Lake County Fo 82.12 316 P **P 16 23 20.2 -0.9**
baz=50
TWG Pinlang 82.12 68 PFAKE 16 23 40.0 +19
TWG LR LR
comp=Z,7μm,21.0s
BIRD Birdtown, Kers 82.15 307 PFAKE 16 23 40.0 +19
BIRD LR LR
comp=Z,6μm,20.0s
SJMB Sao Joao De Ma 82.17 241 *e*P **P 16 23 21.8 +0.2**
JANB Januaria 82.18 246 *e*P **P 16 23 21.8 0.0**
Z59A Georgetown, SC 82.19 305 P **P 16 23 21.0 -0.6**
baz=54
AGMN Agassiz Nation 82.20 325 PFAKE 16 23 40.0 +19
AGMN LR LR
comp=Z,8μm,18.0s
AGMN Agassiz Nation 82.20 325 P **P 16 23 20.6 -0.8**
baz=46
M45A Boilermakers S 82.24 315 P **P 16 23 21.0 -0.8**
baz=50
N46A Monticello 82.25 315 P **P 16 23 20.9 -0.9**
baz=51,SNR=15
KTH Kantishna Hill 82.28 358 PFAKE 16 23 40.0 +18
KTH LR LR
comp=Z,4μm,20.0s
T52A Hallie 82.31 310 PFAKE 16 23 40.0 +18
T52A LR LR
comp=Z,8μm,19.0s
T52A Hallie 82.31 310 P **P 16 23 20.5 -1.7**
baz=52
Q49A Aurora 82.33 312 P **P 16 23 21.7 -0.5**
baz=52,SNR=7.7
O47A Sheridan 82.34 314 P **P 16 23 21.4 -0.9**
baz=51,SNR=14
F37A Hinrichs Farm, 82.36 321 P **P 16 23 20.9 -1.4**
baz=48
RND Reindeer 82.36 357 PFAKE 16 23 40.0 +18
RND LR LR
comp=Z,8μm,22.0s
TRF Thorofare Moun 82.36 358 PFAKE 16 23 40.0 +18
TRF LR LR
comp=Z,2μm,22.0s
S51A Beattyville 82.37 311 PFAKE 16 23 40.0 +18
S51A LR LR
comp=Z,10μm,21.0s
S51A Beattyville 82.37 311 P **P 16 23 21.8 -0.7**
baz=52
P48A Milroy 82.37 313 PFAKE 16 23 40.0 +18
P48A LR LR
comp=Z,8μm,20.0s
P48A Milroy 82.37 313 P **P 16 23 21.7 -0.8**
baz=51
KMSC Kings Mountain 82.43 308 PFAKE 16 23 40.0 +17
KMSC LR LR
comp=Z,5μm,18.0s
KMSC Kings Mountain 82.43 308 P **P 16 23 22.3 -0.5**
baz=53,SNR=8.9
R50A Paris 82.43 311 PFAKE 16 23 40.0 +17
R50A LR LR
comp=Z,8μm,18.0s
R50A Paris 82.43 311 P **P 16 23 22.7 -0.1**
baz=52,SNR=7.8
CAST Castle Rocks 82.44 359 PFAKE 16 23 40.0 +18
CAST LR LR
comp=Z,6μm,22.0s
V54A Nebo 82.45 308 P **P 16 23 22.5 -0.4**
baz=53,SNR=14
Y57A Sumter 82.48 306 PFAKE 16 23 40.0 +17
Y57A LR LR
comp=Z,8μm,19.0s
Y57A Sumter 82.48 306 P **P 16 23 21.9 -1.2**
baz=53
Z58A St. Stephen 82.50 305 P **P 16 23 22.4 -0.8**
baz=54
U53A Fall Branch 82.50 309 P **P 16 23 22.6 -0.7**
baz=52
MENT Mentasta 82.53 355 PFAKE 16 23 40.0 +17
MENT LR LR
comp=Z,8μm,22.0s
MNAI Manna 82.53 100 PFAKE 16 23 40.0 +16
MNAI LR LR
comp=Z,5μm,21.0s
PAX Paxson 82.62 356 PFAKE 16 23 40.0 +17
PAX LR LR
comp=Z,7μm,22.0s
DHY Denali Highway 82.62 357 PFAKE 16 23 40.0 +16
DHY LR LR
comp=Z,6μm,21.0s
X56A White Oak 82.62 307 P **P 16 23 23.8 0.0**
baz=53,SNR=12
YOJ Yonaguni jima 82.67 65 PFAKE 16 23 40.0 +16
YOJ LR LR
comp=Z,4μm,21.0s
M44A Midewin, Midew 82.70 316 PFAKE 16 23 40.0 +16
M44A LR LR
comp=Z,10μm,19.0s
M44A Midewin, Midew 82.70 316 P **P 16 23 23.3 -0.8**
baz=50
N45A Kentland 82.74 315 P **P 16 23 23.3 -1.0**
baz=50
SPMN Marine on St. 82.78 321 PFAKE 16 23 40.0 +15
SPMN LR LR
comp=Z,5μm,19.0s
SPMN Marine on St. 82.78 321 P **P 16 23 23.6 -0.9**
baz=47
SFIN Lafayette 82.79 315 PFAKE 16 23 40.0 +15
SFIN LR LR
comp=Z,12μm,19.0s
SFIN Lafayette 82.79 315 P **P 16 23 23.7 -0.9**
baz=50
S50A Richmond 82.85 311 P **P 16 23 24.8 -0.2**
baz=52,SNR=12
P47A Martinsville 82.86 313 P **P 16 23 23.8 -1.2**
baz=51
NHSC New Hope 82.88 305 PFAKE 16 23 40.0 +15
NHSC LR LR
comp=Z,9μm,18.0s
NHSC New Hope 82.88 305 P **P 16 23 24.9 -0.2**
baz=53
MCI8 Montes Claros 82.88 244 *e*P **P 16 23 25.7 +0.3**
MCI9 Montes Claros 82.89 244 *e*P **P 16 23 26.3 +0.9**
Q48A North Vernon 82.89 313 P **P 16 23 24.6 -0.5**
baz=51,SNR=13
JSC Jenkinsville 82.90 307 PFAKE 16 23 40.0 +15
JSC LR LR
comp=Z,5μm,19.0s
PAULI Pauline 82.94 307 PFAKE 16 23 40.0 +15
PAULI LR LR
comp=Z,4μm,18.0s
R49A Shelbyville 82.95 312 PFAKE 16 23 40.0 +15
R49A LR LR
comp=Z,8μm,18.0s
R49A Shelbyville 82.95 312 P **P 16 23 24.9 -0.5**
baz=51,SNR=18
TTA Tatalina 82.95 0 PFAKE 16 23 40.0 +15
TTA LR LR
comp=Z,3μm,19.0s
JFWS Jewell Farm 82.95 318 PFAKE 16 23 40.0 +15
JFWS LR LR
comp=Z,7μm,20.0s
JFWS Jewell Farm 82.95 318 P **P 16 23 24.6 -0.8**
baz=49,SNR=19
MCI6 Montes Claros 82.95 244 *e*P **P 16 23 26.5 +0.7**
GRTK Grand Turk 82.96 291 PFAKE 16 23 40.0 +14
GRTK LR LR
comp=Z,4μm,20.0s
U52A Thorn Hill 82.99 310 P **P 16 23 25.3 -0.5**
baz=52
T51A Gray 83.00 310 P **P 16 23 25.6 -0.2**
baz=52
TZTN Tazewell 83.01 310 PFAKE 16 23 40.0 +14
TZTN LR LR
comp=Z,10μm,19.0s
TZTN Tazewell 83.01 310 P **P 16 23 25.9 0.0**
baz=52
W54A Cherokee Point 83.02 308 P **P 16 23 26.3 +0.4**
baz=53
X55A Gracelyn & Ava 83.03 307 P **P 16 23 25.5 -0.5**
baz=53,SNR=7.7
ALF01 Guarapari-ES 83.07 239 *e*P **P 16 23 27.7 +1.5**
V53A Saluda 83.08 309 PFAKE 16 23 40.0 +14
V53A LR LR
comp=Z,6μm,19.0s
V53A Saluda 83.08 309 P **P 16 23 24.8 -1.5**
baz=52
158A Hollywood 83.11 305 P **P 16 23 25.7 -0.7**
baz=53
Z57A Bowman 83.12 306 P **P 16 23 26.1 -0.4**
baz=53,SNR=10
N44A Piper City 83.13 315 P **P 16 23 25.7 -0.7**
baz=50
M43A Waltham Townsh 83.19 316 P **P 16 23 25.9 -0.8**
baz=49,SNR=8.6
BLO Bloomington 83.22 313 PFAKE 16 23 40.0 +13
BLO LR LR
comp=Z,10μm,20.0s
Y56A Pelion 83.22 306 P **P 16 23 26.4 -0.6**
baz=53
L42A Oliver, Polo 83.23 317 PFAKE 16 23 40.0 +13
L42A LR LR
comp=Z,10μm,20.0s
L42A Oliver, Polo 83.23 317 P **P 16 23 26.2 -0.7**
baz=49,SNR=9.2
O45A Potomac 83.25 315 P **P 16 23 26.4 -0.6**
baz=50
JNU Nakatsue 83.28 54 P **P 16 23 27.1 -0.2**
comp=Z,25nm,0.7s,baz=203,slow=3.0,SNR=34
Q47A Bedord North L 83.31 313 P **P 16 23 26.7 -0.7**
baz=51
R48A Northridge Ran 83.31 312 P **P 16 23 26.9 -0.4**
baz=51
S49A Springfield 83.33 312 P **P 16 23 26.8 -0.7**
baz=51,SNR=17
P46A Rosedale 83.34 314 P **P 16 23 26.9 -0.6**
baz=50
U51A La Follette 83.41 310 P **P 16 23 27.8 -0.1**
baz=52,SNR=26
PEXB Peixe 83.44 251 *e*P **P 16 23 28.6 +0.3**
X54A Belton 83.47 308 P **P 16 23 27.6 -0.6**
baz=52
V52A Sevierville 83.47 309 PFAKE 16 23 40.0 +12
V52A LR LR
comp=Z,8μm,20.0s
V52A Sevierville 83.47 309 P **P 16 23 27.8 -0.4**
baz=52
Y55A Saluda 83.50 307 P **P 16 23 28.4 0.0**
baz=53,SNR=9.0
T50A Nancy 83.53 311 P **P 16 23 27.9 -0.7**
baz=51,SNR=22
Z56A Williston 83.55 306 PFAKE 16 23 40.0 +11
Z56A LR LR
comp=Z,7μm,20.0s
Z56A Williston 83.55 306 P **P 16 23 28.2 -0.5**
baz=53
PEA0B Petropavlovsk- 83.59 26 PFAKE 16 23 40.0 +12
PEA0B LR LR
comp=Z,10μm,18.0s
PETK Petropavlovsk- 83.59 26 P **P 16 23 26.7 -1.8**
comp=Z,17nm,0.9s,baz=10,slow=2.4,SNR=16
PETK LR LR 17 05 27.8
comp=Z,6μm,20.2s,baz=308,slow=39
HODGE Hodges 83.59 307 PFAKE 16 23 40.0 +11
HODGE LR LR
comp=Z,5μm,18.0s
W53A Cullowhee 83.61 308 P **P 16 23 28.6 -0.5**
baz=52
N43A Stutzman Famil 83.64 316 P **P 16 23 28.2 -0.8**
baz=49
WCI Wyandotte Cave 83.67 312 *e*P **P 16 23 29.2 0.0**
comp=Z,174nm,1.0s
WCI LR LR
comp=Z,8μm,20.0s
WCI Wyandotte Cave 83.67 312 *e*P **P 16 23 29.2 0.0**
WCI pmax pmax
comp=Z,174nm,1.0s
WCI MLR MLR
comp=Z,8μm,20.0s
WCI Wyandotte Cave 83.67 312 P **P 16 23 28.3 -0.9**
baz=51
157A Early Branch 83.68 305 P **P 16 23 29.2 -0.1**
baz=53
SDD Santo Domingo 83.72 288 PFAKE 16 23 40.0 +10
SDD LR LR
comp=Z,6μm,20.0s
P45A Graceland, Par 83.72 314 PFAKE 16 23 40.0 +11
P45A LR LR
comp=Z,10μm,22.0s
P45A Graceland, Par 83.72 314 P **P 16 23 28.6 -0.8**
baz=50,SNR=13
O44A Mansfield 83.74 315 P **P 16 23 29.0 -0.6**
baz=50
R47A Wooly Knot Far 83.77 313 P **P 16 23 29.2 -0.5**
baz=51,SNR=24
WHY Whitehorse 83.81 350 PFAKE 16 23 40.0 +10
WHY LR LR
comp=Z,8μm,19.0s
Q46A CEJHS Indians, 83.81 314 P **P 16 23 29.4 -0.5**
baz=50
SCM Sheep Creek Mo 83.86 356 PFAKE 16 23 40.0 +10
SCM LR LR
comp=Z,6μm,22.0s
S48A Wiedeman Farm, 83.89 312 P **P 16 23 29.7 -0.7**
baz=51,SNR=24
U50A Jamestown 83.91 310 P **P 16 23 30.4 -0.1**
baz=51,SNR=17
T49A Edmonton 83.91 311 PFAKE 16 23 40.0 +10
T49A LR LR
comp=Z,9μm,19.0s
T49A Edmonton 83.91 311 P **P 16 23 29.9 -0.6**
baz=51,SNR=19
SML Sawmill 83.93 357 PFAKE 16 23 40.0 +10
SML LR LR
comp=Z,5μm,22.0s
HDIL Hopedale 83.96 316 PFAKE 16 23 40.0 +9.4
HDIL LR LR
comp=Z,9μm,18.0s
HDIL Hopedale 83.96 316 P **P 16 23 29.7 -0.9**
baz=49,SNR=9.9
V51A Loudon 83.98 310 PFAKE 16 23 40.0 +9.2
V51A LR LR
comp=Z,10μm,19.0s
V51A Loudon 83.98 310 P **P 16 23 30.8 -0.1**
baz=52,SNR=6.6
GHO Glory Hole Cre 83.99 357 PFAKE 16 23 40.0 +9.5
GHO LR LR
comp=Z,6μm,22.0s
HYT Haines Junctio 84.00 352 PFAKE 16 23 40.0 +9.4
HYT LR LR
comp=Z,8μm,21.0s
PET Petropavlovsk 84.00 26 PFAKE 16 23 40.0 +9.4
PET LR LR
comp=Z,7μm,22.0s
PET Petropavlovsk 84.00 26 *c*P **P 16 23 29.0 -1.6**
PET *e* 16 26 46.0
PET *e*PPP PPP 16 28 36.6
PET *e*S **S 16 33 49.3 -4.0**
PET pmax pmax
comp=Z,1μm,13.4s
PET pmax pmax
comp=Z,55nm,1.5s
PET pmax pmax
comp=Z,1μm,16.5s
PET pmax pmax
comp=Z,800nm,13.1s
PET pmax pmax
comp=Z,800nm,19.9s
PET MLR MLR
comp=Z,7μm,21.0s
PET MLR MLR
comp=Z,5μm,18.0s
156A Sylvania 84.03 306 P **P 16 23 30.8 -0.4**
baz=53
L40A Anamosa 84.06 318 *e*P **P 16 23 30.7 -0.4**
comp=Z,207nm,0.8s
L40A LR LR
comp=Z,6μm,18.0s
L40A Anamosa 84.06 318 P **P 16 23 30.4 -0.7**
baz=48,SNR=28
Y54A Tignall 84.09 307 P **P 16 23 31.3 -0.2**
baz=52,SNR=22

X53A	Estanollee	84.10 308	P	P	16 23 31.3	-0.2
	baz=52,SNR=7.8					
Z55A	Blythe	84.12 306	P	P	16 23 31.0	-0.6
	baz=52					
257A	Skidaway Islan	84.13 305	PFAKE		16 23 50.0	+18
257A			LR	LR		
	comp=Z,6μm,18.0s					
257A	Skidaway Islan	84.13 305	P	P	16 23 31.4	-0.2
	baz=53					
M41A	Milan	84.13 317	P	P	16 23 30.7	-0.8
	baz=48					
W52A	Murphy	84.15 309	PFAKE		16 23 50.0	+18
W52A			LR	LR		
	comp=Z,6μm,19.0s					
W52A	Murphy	84.15 309	P	P	16 23 31.4	-0.4
	baz=52					
PMR	Palmer	84.18 357	PFAKE		16 23 50.0	+19
PMR			LR	LR		
	comp=Z,5μm,22.0s					
CTGM	Chitina Glacie	84.27 353	PFAKE		16 23 50.0	+18
CTGM			LR	LR		
	comp=Z,4μm,22.0s					
MDND	Maddock	84.28 326	PFAKE		16 23 50.0	+18
MDND			LR	LR		
	comp=Z,13μm,22.0s					
MDND	Maddock	84.28 326	P	P	16 23 31.4	-0.8
	baz=43					
BALM	Baldy	84.30 354	PFAKE		16 23 50.0	+18
BALM			LR	LR		
	comp=Z,6μm,22.0s					
CPCT	Cooper Cave	84.31 309	PFAKE		16 23 50.0	+17
CPCT			LR	LR		
	comp=Z,6μm,20.0s					
KNK	Knik Glacier	84.33 357	eP	P	16 23 32.3	+0.1
	comp=Z,159nm,1.0s					
KNK			LR	LR		
	comp=Z,7μm,22.0s					
SUA	Susitna One	84.36 358	eP	P	16 23 32.4	0.0
	comp=Z,265nm,1.3s					
SUA			LR	LR		
	comp=Z,7μm,22.0s					
Q45A	Warren Harvey,	84.37 314	P	P	16 23 32.2	-0.6
	baz=50					
R46A	Gibon Southern	84.42 313	P	P	16 23 32.3	-0.8
	baz=50					
X52A	Dahlonega	84.43 308	P	P	16 23 33.2	0.0
	baz=52,SNR=14					
S47A	Hartford	84.43 312	P	P	16 23 32.4	-0.7
	baz=50,SNR=15					
U49A	Red Boiling Sp	84.44 311	P	P	16 23 32.8	-0.3
	baz=51,SNR=28					
OLIL	Olney	84.44 314	PFAKE		16 23 50.0	+17
OLIL			LR	LR		
	comp=Z,9μm,21.0s					
T48A	Bowling Green	84.44 312	P	P	16 23 33.0	-0.2
	baz=50,SNR=32					
DIV	Divide	84.47 356	PFAKE		16 23 50.0	+17
DIV			LR	LR		
	comp=Z,5μm,22.0s					
SDDR	Presa de Saban	84.50 289	PFAKE		16 23 50.0	+16
SDDR			LR	LR		
	comp=Z,4μm,21.0s					
CAM01	Campos-RJ	84.52 239	eP	P	16 23 33.9	+0.3
V50A	Pikevile	84.54 310	P	P	16 23 33.4	-0.3
	baz=51,SNR=28					
Z54A	Sparta	84.58 307	P	P	16 23 33.8	-0.2
	baz=52					
W51A	Cleveland	84.64 309	P	P	16 23 34.0	-0.2
	baz=51					
CRQM	Cirque	84.64 354	PFAKE		16 23 50.0	+16
CRQM			LR	LR		
	comp=Z,8μm,22.0s					
USIN	University of	84.67 313	PFAKE		16 23 50.0	+16
USIN			LR	LR		
	comp=Z,7μm,20.0s					
Y53A	Monroe	84.69 308	P	P	16 23 34.2	-0.3
	baz=52,SNR=12					
P43A	Skaggs, Pawnee	84.69 315	P	P	16 23 33.8	-0.6
	baz=49					
155A	Kite	84.70 306	P	P	16 23 33.9	-0.6
	baz=52					
256A	Glennville	84.71 305	P	P	16 23 34.2	-0.4
	baz=52					
RC01	Rabbit Creek A	84.71 357	PFAKE		16 23 50.0	+16
RC01			LR	LR		
	comp=Z,3μm,21.0s					
N41A	Harden Midland	84.75 317	PFAKE		16 23 50.0	+15
N41A			LR	LR		
	comp=Z,12μm,20.0s					
N41A	Harden Midland	84.75 317	P	P	16 23 34.0	-0.7
	baz=48					
SVW2	Sparrevohn	84.79 0	PFAKE		16 23 50.0	+16
SVW2			LR	LR		
	comp=Z,4μm,22.0s					
GLI	Glacier Island	84.80 356	PFAKE		16 23 50.0	+16
GLI			LR	LR		
	comp=Z,6μm,22.0s					
R45A	Skylar, Fairfi	84.83 313	P	P	16 23 34.3	-0.8
	baz=50,SNR=12					
GOGA	Godfrey	84.88 307	PFAKE		16 23 50.0	+15
GOGA			LR	LR		
	comp=Z,4μm,22.0s					
GOGA	Godfrey	84.88 307	P	P	16 23 34.1	-1.3
	baz=52,SNR=7.0					
S46A	Don Dixon Farm	84.89 313	P	P	16 23 34.3	-1.1
	baz=50,SNR=6.8					
SKR	Severo-Kuril's	84.89 29	eP	P	16 23 26.4	-8.7
SKR			ePPP	PPP	16 28 53.0	
SKR			eS	SKSac	16 33 48.7	-9.5
SKR			pmax	pmax		
	comp=Z,700nm,5.6s					
SKR			MLR	MLR		
	comp=Z,6μm,21.0s					
U48A	Cassie Pea, Po	84.91 311	P	P	16 23 35.0	-0.6
	baz=50,SNR=20					
T47A	Sharon Grove	84.96 312	PFAKE		16 23 50.0	+14
T47A			LR	LR		
	comp=Z,5μm,21.0s					
T47A	Sharon Grove	84.96 312	P	P	16 23 35.4	-0.3
	baz=50,SNR=27					
W50A	Signal Mountai	84.97 310	PFAKE		16 23 50.0	+14
W50A			LR	LR		
	comp=Z,13μm,18.0s					
W50A	Signal Mountai	84.97 310	P	P	16 23 35.3	-0.6
	baz=51,SNR=15					
V49A	McMinnville	84.99 310	P	P	16 23 35.4	-0.6
	baz=51,SNR=16					
Y52A	Lilburn	85.00 308	PFAKE		16 23 50.0	+14
Y52A			LR	LR		
	comp=Z,5μm,19.0s					
Y52A	Lilburn	85.00 308	P	P	16 23 35.6	-0.4
	baz=52,SNR=10					
PCA	Pinnacle	85.02 353	PFAKE		16 23 50.0	+14
PCA			LR	LR		
	comp=Z,4μm,20.0s					
SKAG	Skagway	85.03 350	PFAKE		16 23 50.0	+14
SKAG			LR	LR		
	comp=Z,7μm,19.0s					
Z53A	Monticello	85.03 307	P	P	16 23 35.6	-0.6
	baz=52					
EYAK	Cordova Ski Ar	85.04 355	PFAKE		16 23 50.0	+14
EYAK			LR	LR		
	comp=Z,7μm,22.0s					
N40A	Mertquake, Sal	85.05 317	P	P	16 23 35.4	-0.7
	baz=48					
CLTN	Cedars of Leba	85.05 311	PFAKE		16 23 50.0	+14
CLTN			LR	LR		
	comp=Z,6μm,22.0s					
X51A	Calhoun	85.07 309	PFAKE		16 23 50.0	+14
X51A			LR	LR		
	comp=Z,6μm,19.0s					
X51A	Calhoun	85.07 309	P	P	16 23 36.1	-0.3
	baz=51					
BCPM	Bancas Point	85.09 352	PFAKE		16 23 50.0	+14
BCPM			LR	LR		
	comp=Z,3μm,19.0s					
ERM	Erimo	85.11 41	eP	P	16 23 37.4	+1.0
	comp=Z,200nm,1.0s					
ERM			LR	LR		
	comp=Z,5μm,20.0s					
ERM	Erimo	85.11 41	eP	P	16 23 37.4	+1.0
ERM			pmax	pmax		
	comp=Z,200nm,1.0s					
ERM			MLR	MLR		
	comp=Z,5μm,20.0s					
255A	Hazlehurst	85.13 306	PFAKE		16 23 50.0	+13
255A			LR	LR		
	comp=Z,6μm,19.0s					
255A	Hazlehurst	85.13 306	P	P	16 23 36.1	-0.6
	baz=52					
154A	Montrose	85.14 306	PFAKE		16 23 50.0	+13
154A			LR	LR		
	comp=Z,6μm,18.0s					
154A	Montrose	85.14 306	P	P	16 23 36.5	-0.3
	baz=52					
DLBC	Dease Lake	85.14 347	P	P	16 23 37.2	+0.8
	comp=Z,8.3nm,0.8s,baz=1.5,slow=5.8,SNR=5.2					
DLBC	Dease Lake	85.14 347	PFAKE		16 23 50.0	+14
DLBC			LR	LR		
	comp=Z,10μm,20.0s					
YUK	Yuzh-Kuril'sk	85.14 38c	iP	P	16 23 35.8	-0.7
YUK			e		16 26 50.4	
YUK			ePPP	PPP	16 28 44.5	
YUK			i S	SKSac	16 34 00.1	+0.1
YUK			eSSS	SSS	16 43 06.7	
YUK			pmax	pmax		
	comp=Z,613nm,1.2s					
YUK			pmax	pmax		
	comp=N,351nm,1.0s					
YUK			pmax	pmax		
	comp=E,278nm,1.0s					
HMT	Hamilton	85.15 355	PFAKE		16 23 50.0	+14
HMT			LR	LR		
	comp=Z,6μm,22.0s					
DUB01	Friburgo-RJ	85.19 239	eP	P	16 23 37.7	+0.6
SCIA	State Center	85.26 319	PFAKE		16 23 50.0	+13
SCIA			LR	LR		
	comp=Z,8μm,20.0s					
SCIA	State Center	85.26 319	P	P	16 23 36.1	-1.1
	baz=47					
KSM	Kuching	85.26 91	PFAKE		16 23 50.0	+12
KSM			LR	LR		
	comp=Z,4μm,21.0s					
KSM	Kuching	85.26 91	P	P	16 23 41.0	+3.4
356A	Blackshear	85.27 305	P	P	16 23 37.0	-0.4
	baz=52					
KUR	Kuril'sk	85.30 37	eP	P	16 23 37.7	+0.4
KUR			i		16 26 56.3	
KUR			i S	SKSac	16 33 59.7	-1.3
KUR			pmax	pmax		
	comp=Z,296nm,1.5s					
KUR			pmax	pmax		
	comp=N,5μm,15.0s					
KUR			pmax	pmax		
	comp=E,2μm,15.0s					
BDFB	Brasilia	85.35 248	P	P	16 23 38.1	+0.1
	comp=E,9.9nm,0.6s,baz=64,slow=6.7,SNR=14					
BDFB			LR	LR	17 02 01.2	
	comp=E,16μm,21.3s,baz=52,slow=36					
BDFB	Brasilia	85.35 248	eP	P	16 23 38.1	+0.1
BDFB			eP	PcP	16 23 38.8	-2.3
BDFB			LR	LR		
	comp=Z,18μm,21.0s					
SWET	Sewanee	85.35 310	PFAKE		16 23 50.0	+12
SWET			LR	LR		
	comp=Z,11μm,20.0s					
T46A	Princeton	85.41 312	P	P	16 23 37.1	-0.9
	baz=50,SNR=19					
U47A	Clarksville	85.42 312	P	P	16 23 37.3	-0.8
	baz=50,SNR=32					
YKU2	Yakutat	85.53 352	PFAKE		16 23 50.0	+12
YKU2			LR	LR		
	comp=Z,4μm,18.0s					
456A	Hilliard	85.56 304	PFAKE		16 23 50.0	+11
456A			LR	LR		
	comp=Z,5μm,20.0s					
456A	Hilliard	85.56 304	P	P	16 23 38.0	-0.8
	baz=52					
V48A	Smith Brothers	85.58 311	PFAKE		16 23 50.0	+11
V48A			LR	LR		
	comp=Z,11μm,22.0s					
V48A	Smith Brothers	85.58 311	P	P	16 23 38.0	-0.9
	baz=50,SNR=12					
153A	Fort Valley	85.59 307	P	P	16 23 38.7	-0.3
	baz=52					
W49A	Belvidere	85.62 310	P	P	16 23 38.6	-0.6
	baz=50,SNR=28					
Y51A	Rockmart	85.62 308	P	P	16 23 39.0	-0.2
	baz=51,SNR=14					
Z52A	Williamson	85.65 308	P	P	16 23 39.3	0.0
	baz=51					
X50B	Fort Payne	85.65 309	P	P	16 23 38.7	-0.6
	baz=51,SNR=13					
254A	Abbeville	85.67 306	P	P	16 23 39.1	-0.3
	baz=52					
SEW	Seward	85.68 357	PFAKE		16 23 50.0	+11
SEW			LR	LR		
	comp=Z,5μm,22.0s					
355A	Pearson	85.74 305	P	P	16 23 39.7	0.0
	baz=52					
SLM	Saint Louis	85.77 315	PFAKE		16 23 50.0	+10
SLM			LR	LR		
	comp=Z,10μm,18.0s					
SIUC	Southern Illin	85.77 314	PFAKE		16 23 50.0	+10
SIUC			LR	LR		
	comp=Z,9μm,19.0s					
ECSD	EROS Data Cent	85.78 322	PFAKE		16 23 50.0	+10
ECSD			LR	LR		
	comp=Z,6μm,19.0s					
ECSD	EROS Data Cent	85.78 322	P	P	16 23 39.3	-0.5
	baz=45,SNR=60					
557A	Orange Park	85.79 304	P	P	16 23 40.0	0.0
	baz=52					
BESE	Bessie Mountai	85.81 350	PFAKE		16 23 50.0	+10
BESE			LR	LR		
	comp=Z,4μm,20.0s					
S44A	Carbondale	85.81 314	P	P	16 23 39.2	-0.8
	baz=49,SNR=11					
658A	Bunnell	85.82 303	PFAKE		16 23 50.0	+10
658A			LR	LR		
	comp=Z,4μm,18.0s					
DGMT	Dagmar	85.85 329	PFAKE		16 23 50.0	+10
DGMT			LR	LR		
	comp=Z,11μm,20.0s					
DGMT	Dagmar	85.85 329	P	P	16 23 39.9	-0.1
	baz=40					
MJB9	Matsu-Tunnel	85.86 48	PFAKE		16 23 50.0	+10
MJB9			LR	LR		
	comp=Z,8μm,18.0s					
MAJO	Matsushiro	85.87 48	eP	P	16 23 40.0	-0.3
	comp=Z,155nm,1.1s					
MAJO			LR	LR		
	comp=Z,8μm,18.0s					
MAJO	Matsushiro	85.87 48	ceP	P	16 23 39.7	-0.6
MAJO			pmax	pmax		
	comp=Z,57nm,0.9s					
MAT	Matsushiro	85.87 48	P	P	16 23 39.5	-0.8
MAT			S	SKSac	16 34 02.2	-2.8
MJAR	Matsushiro Arr	85.87 48	P	P	16 23 40.3	-0.1
	comp=Z,74nm,0.8s,baz=301,slow=6.7,SNR=56					
MJAR			LR	LR	17 07 33.8	
	comp=Z,6μm,18.4s,baz=0.0,slow=40					
T45A	Paducah	85.88 313	PFAKE		16 23 50.0	+10
T45A			LR	LR		
	comp=Z,10μm,21.0s					
T45A	Paducah	85.88 313	P	P	16 23 40.2	-0.1
	baz=49					
INU	Inuyama	85.90 49	PFAKE		16 23 50.0	+10
INU			LR	LR		
	comp=Z,5μm,19.0s					
PMNB	Patos De Minas	85.92 244	eP	P	16 23 28.3	-13
PMNB			i		16 23 46.1	
PMNB			i		16 24 03.9	
PMNB			i		16 24 28.5	
PMNB			i		16 26 44.3	
PMNB			i		16 34 01.4	
PMNB			i		16 34 54.6	
PMNB	Patos De Minas	85.92 244	eP	P	16 23 41.0	+0.1
WVT	Waverly	85.96 312	eP	P	16 23 40.1	-0.6
	comp=Z,86nm,0.9s					
WVT			LR	LR		
	comp=Z,8μm,18.0s					
WVT	Waverly	85.96 312	eP	P	16 23 40.1	-0.6
WVT			pmax	pmax		
	comp=Z,86nm,0.9s					
WVT			MLR	MLR		
	comp=Z,8μm,18.0s					
WVT	Waverly	85.96 312	P	P	16 23 38.9	-1.8
	baz=50					
V47A	Nunnelly	85.96 311	P	P	16 23 39.5	-1.2
	baz=50,SNR=41					
U46A	Springville	86.02 312	P	P	16 23 39.6	-1.5
	baz=50					
JIS	Juneau Island	86.03 349	PFAKE		16 23 50.0	+9.4
JIS			LR	LR		
	comp=Z,6μm,20.0s					
W48A	Pulaski	86.03 310	P	P	16 23 40.4	-0.8
	baz=50,SNR=48					
X49A	Woodville	86.05 310	P	P	16 23 40.8	-0.4
	baz=50,SNR=21					
758A	Lake Helen	86.06 303	P	P	16 23 40.5	-0.9
	baz=53					
Z51A	Franklin	86.06 308	P	P	16 23 40.8	-0.5
	baz=51					
Y50A	Piedmont	86.06 309	P	P	16 23 41.0	-0.3
	baz=51,SNR=13					
BRLK	Bradley Lake	86.07 358	PFAKE		16 23 50.0	+9.1
BRLK			LR	LR		
	comp=Z,6μm,22.0s					
657A	Interlachen	86.14 303	P	P	16 23 41.0	-0.8
	baz=52					
253A	Americus	86.16 307	PFAKE		16 24 00.0	+18
253A			LR	LR		
	comp=Z,4μm,18.0s					
253A	Americus	86.16 307	P	P	16 23 40.6	-1.2
	baz=51					
152A	Waverly Hall	86.17 307	PFAKE		16 24 00.0	+18
152A			LR	LR		
	comp=Z,4μm,21.0s					
152A	Waverly Hall	86.17 307	P	P	16 23 41.2	-0.6
	baz=51					
TIGA	Tifton	86.18 306	PFAKE		16 24 00.0	+18
TIGA			LR	LR		
	comp=Z,6μm,19.0s					
TIGA	Tifton	86.18 306	P	P	16 23 41.2	-0.7
	baz=52					
MID	Middleton Isla	86.20 356	PFAKE		16 24 00.0	+19
MID			LR	LR		
	comp=Z,4μm,21.0s					
HOM	Homer	86.20 358	PFAKE		16 24 00.0	+19
HOM			LR	LR		
	comp=Z,5μm,22.0s					
BSCB	Bom Sucesso	86.23 242	eP	P	16 23 32.6	-10
BSCB			i		16 24 04.8	
BSCB			i		16 24 29.3	
BSCB			i		16 26 39.9	
BSCB			i		16 29 10.1	
BSCB	Bom Sucesso	86.23 242	eP	P	16 23 42.5	+0.3
455A	Stateville	86.23 305	P	P	16 23 41.8	-0.4
	baz=52					
556A	Lake Butler	86.26 304	P	P	16 23 41.4	-0.9
	baz=52					
PTGA	Pitinga	86.29 267	PFAKE		16 24 00.0	+17
PTGA			LR	LR		
	comp=Z,3μm,21.0s					
PTGA	Pitinga	86.29 267	eP	P	16 23 43.1	+0.4
SBUM	Sibu	86.30 90	PFAKE		16 24 00.0	+17
SBUM			LR	LR		
	comp=Z,2μm,19.0s					
SBUM	Sibu	86.30 90	P	P	16 23 44.0	+1.2
FVM	French Village	86.31 314	PFAKE		16 24 00.0	+17
FVM			LR	LR		
	comp=Z,8μm,18.0s					
CNPM	China Poot	86.32 358	PFAKE		16 24 00.0	+18
CNPM			LR	LR		
	comp=Z,7μm,22.0s					
V46A	Holladay	86.35 312	P	P	16 23 41.6	-1.1
	baz=50,SNR=30					
W47A	Westpoint	86.38 311	P	P	16 23 41.6	-1.3
	baz=50					
SUSD	Miller	86.45 323	P	P	16 23 42.0	-1.1
	baz=43					
Y49A	Blount Mountai	86.52 309	PFAKE		16 24 00.0	+16
Y49A			LR	LR		
	comp=Z,8μm,18.0s					
Y49A	Blount Mountai	86.52 309	P	P	16 23 43.4	-0.2
	baz=50,SNR=16					
X48A	Hartselle	86.54 310	PFAKE		16 24 00.0	+16
X48A			LR	LR		
	comp=Z,12μm,20.0s					
X48A	Hartselle	86.54 310	P	P	16 23 43.0	-0.7
	baz=50,SNR=32					
555A	McAlpin	86.57 304	PFAKE		16 24 00.0	+16
555A			LR	LR		
	comp=Z,4μm,20.0s					
555A	McAlpin	86.57 304	P	P	16 23 41.7	-2.2
	baz=52					
Z50A	Ashland	86.58 308	PFAKE		16 24 00.0	+16
Z50A			LR	LR		
	comp=Z,7μm,20.0s					
Z50A	Ashland	86.58 308	P	P	16 23 43.5	-0.5
	baz=50,SNR=11					
252A	Lumpkin	86.60 307	P	P	16 23 42.7	-1.3
	baz=51					
858A	St. Cloud	86.63 302	P	P	16 23 43.5	-0.7
	baz=52					
060A	Indiantown	86.63 301	PFAKE		16 24 00.0	+16
060A			LR	LR		
	comp=Z,5μm,20.0s					
060A	Indiantown	86.63 301	P	P	16 23 43.3	-0.9
	baz=53					
151A	Opelika	86.66 308	P	P	16 23 43.7	-0.5
	baz=51					
454A	Quitman	86.66 305	P	P	16 23 42.3	-2.0
	baz=52					
353A	Camilla	86.66 306	P	P	16 23 43.7	-0.6
	baz=51					
757A	Oxford	86.68 303	P	P	16 23 43.8	-0.6
	baz=52					
959A	Okeechobee	86.70 301	P	P	16 23 43.8	-0.8
	baz=53					
656A	Willston	86.74 304	PFAKE		16 24 00.0	+15
656A			LR	LR		
	comp=Z,6μm,18.0s					
656A	Willston	86.74 304	P	P	16 23 44.4	-0.4
	baz=52					
DWPF	Disney Wildern	86.74 302	PFAKE		16 24 00.0	+15
DWPF			LR	LR		
	comp=Z,3μm,20.0s					
DWPF	Disney Wildern	86.74 302	P	P	16 23 43.9	-0.8
	baz=52					
CCM	Cathedral Cave	86.75 315	eP	P	16 23 44.5	-0.1
	comp=Z,151nm,0.9s					
CCM			LR	LR		
	comp=Z,10μm,19.0s					
CCM	Cathedral Cave	86.75 315	eP	P	16 23 44.5	-0.1
CCM			pmax	pmax		
	comp=Z,151nm,0.9s					
CCM			MLR	MLR		
	comp=Z,10μm,19.0s					
CCM	Cathedral Cave	86.75 315	P	P	16 23 44.0	-0.6
	baz=48					
GLAT	Glass	86.76 312	PFAKE		16 24 00.0	+15
GLAT			LR	LR		
	comp=Z,8μm,22.0s					
PARMO	Parma	86.78 313	PFAKE		16 24 00.0	+15
PARMO			LR	LR		
	comp=Z,9μm,22.0s					
PLAL	Pickwick Lake	86.85 311	PFAKE		16 24 00.0	+15
PLAL			LR	LR		
	comp=Z,8μm,22.0s					
TGY	Tagaytay City	86.90 75	P	P	16 23 45.9	+0.1
	comp=Z,73nm,0.3s,baz=344,slow=7.4,SNR=2.5					
PVMO	Portageville	86.92 313	PFAKE		16 24 00.0	+15
PVMO			LR	LR		
	comp=Z,10μm,21.0s					
GTBY	Guantanamo Bay	86.92 292	PFAKE		16 24 00.0	+14
GTBY			LR	LR		
	comp=Z,4μm,22.0s					
W46A	Michie	86.94 311	P	P	16 23 44.9	-0.7
	baz=49					
Y48A	Jasper	86.97 310	P	P	16 23 44.9	-0.9
	baz=50,SNR=8.3					
251A	Midway	86.98 307	P	P	16 23 45.5	-0.4
	baz=51					
X47A	Russelville	87.01 310	P	P	16 23 44.7	-1.2
	baz=50,SNR=8.4					
Z49A	Columbiana	87.02 309	P	P	16 23 45.4	-0.6
	baz=50,SNR=23					
HALT	Halls	87.03 312	PFAKE		16 24 00.0	+14
HALT			LR	LR		
	comp=Z,7μm,20.0s					
453A	Whigham	87.03 306	PFAKE		16 24 00.0	+14
453A			LR	LR		
	comp=Z,7μm,20.0s					
352A	Blakely	87.05 306	PFAKE		16 24 00.0	+14
352A			LR	LR		
	comp=Z,5μm,19.0s					
150A	Eclectic	87.06 308	P	P	16 23 46.2	-0.1

	baz=50,SNR=20					
554A	Perry	87.08 305	P	P	16 23 45.8	-0.6
	baz=52					
PBMO	Poplar Bluff	87.11 313	PFAKE		16 24 00.0	+14
PBMO			LR	LR		
	comp=Z,8μm,19.0s					
857A	Zephyrhills	87.20 303	P	P	16 23 46.6	-0.3
	baz=52					
059A	Moore Haven	87.23 301	PFAKE		16 24 00.0	+13
059A			LR	LR		
	comp=Z,4μm,19.0s					
059A	Moore Haven	87.23 301	P	P	16 23 46.9	-0.2
	baz=52					
ESAR	Angra dos Reis	87.26 240	eP	P	16 23 48.6	+1.5
GNAR	Gosnell	87.41 313	PFAKE		16 24 00.0	+12
GNAR			LR	LR		
	comp=Z,8μm,21.0s					
LRAL	Lakeview Retre	87.42 309	PFAKE		16 24 00.0	+12
LRAL			LR	LR		
	comp=Z,6μm,19.0s					
LRAL	Lakeview Retre	87.42 309	P	P	16 23 47.5	-0.4
	baz=50,SNR=51					
X46A	Booneville	87.44 311	P	P	16 23 46.8	-1.2
	baz=49,SNR=8.5					
WRAK	Wrangell Islan	87.46 348	PFAKE		16 24 00.0	+12
WRAK			LR	LR		
	comp=Z,7μm,18.0s					
149A	Jones	87.56 308	P	P	16 23 48.1	-0.5
	baz=50,SNR=25					
957A	Wimauma	87.57 302	PFAKE		16 24 00.0	+11
957A			LR	LR		
	comp=Z,3μm,19.0s					
957A	Wimauma	87.57 302	P	P	16 23 47.9	-0.9
	baz=52					
KKM	Kota Kinabalu	87.59 84	PFAKE		16 24 00.0	+11
KKM			LR	LR		
	comp=Z,2μm,22.0s					
KKM	Kota Kinabalu	87.59 84	P	P	16 23 53.0	+3.8
250A	Grady	87.62 308	PFAKE		16 24 00.0	+11
250A			LR	LR		
	comp=Z,5μm,19.0s					
250A	Grady	87.62 308	P	P	16 23 48.8	-0.2
	baz=50,SNR=8.8					
058A	Arcadia	87.64 301	P	P	16 23 48.7	-0.4
	baz=52					
061Z	Ochoppi	87.72 300	PFAKE		16 24 00.0	+10
061Z			LR	LR		
	comp=Z,4μm,20.0s					
061Z	Ochoppi	87.72 300	P	P	16 23 48.9	-0.6
	baz=53					
SPIA	Saint Paul Isl	87.81 8	PFAKE		16 24 00.0	+11
SPIA			LR	LR		
	comp=Z,8μm,21.0s					
059Z	Ave Maria	87.82 301	P	P	16 23 50.0	0.0
	baz=52					
MET	Memphis--Engin	87.91 312	PFAKE		16 24 00.0	+10
MET			LR	LR		
	comp=Z,8μm,18.0s					
OXF	Oxford	87.99 311	PFAKE		16 24 00.0	+9.3
OXF			LR	LR		
	comp=Z,7μm,21.0s					
OXF	Oxford	87.99 311	P	P	16 23 49.2	-1.5
	baz=49					
350A	Dozier	88.02 307	P	P	16 23 50.7	-0.2
	baz=50					
148A	Greensboro	88.04 309	P	P	16 23 50.4	-0.5
	baz=50,SNR=7.8					
HBAR	Harrisburg	88.06 313	PFAKE		16 24 00.0	+9.0
HBAR			LR	LR		
	comp=Z,8μm,21.0s					
LAO	LASA Array	88.10 329	PFAKE		16 24 00.0	+8.9
LAO			LR	LR		
	comp=Z,11μm,19.0s					
LAO	LASA Array	88.10 329	P	P	16 23 50.9	-0.2
	baz=38,SNR=13					
KDAK	Kodiak Island	88.10 359	eP	P	16 23 51.4	+0.7
	comp=Z,124nm,0.9s					
KDAK			LR	LR		
	comp=Z,4μm,20.0s					
KDAK	Kodiak Island	88.10 359	eP	P	16 23 51.4	+0.7
KDAK			pmax	pmax		
	comp=Z,124nm,0.9s					
KDAK			MLR	MLR		
	comp=Z,4μm,20.0s					
552A	Lynn Haven	88.14 306	P	P	16 23 50.8	-0.6
	baz=51					
249A	Camden	88.18 308	P	P	16 23 51.1	-0.5
	baz=50,SNR=31					
XMIS	Christmas Isla	88.23 104	PFAKE		16 24 10.0	+18
XMIS			LR	LR		
	comp=Z,5μm,22.0s					
BGNE	Belgrade	88.24 321	PFAKE		16 24 10.0	+18
BGNE			LR	LR		
	comp=Z,7μm,19.0s					
BGNE	Belgrade	88.24 321	P	P	16 23 51.4	-0.3
	baz=44					
CISI	Cisompet, Garu	88.31 100	PFAKE		16 24 10.0	+18
CISI			LR	LR		
	comp=Z,3μm,21.0s					
EGMT	Eagleton	88.48 332	PFAKE		16 24 10.0	+17
EGMT			LR	LR		
	comp=Z,8μm,20.0s					
EGMT	Eagleton	88.48 332	P	P	16 23 52.5	-0.3
	baz=36					
CRAG	Craig	88.51 348	PFAKE		16 24 10.0	+17
CRAG			LR	LR		
	comp=Z,5μm,21.0s					
349A	Repton	88.63 308	P	P	16 23 53.5	-0.2
	baz=50,SNR=7.6					
CLDB	Colider	88.64 256	eP	P	16 23 54.3	+0.3
BRAL	Brewton	88.65 307	PFAKE		16 24 10.0	+16
BRAL			LR	LR		
	comp=Z,5μm,19.0s					
BRAL	Brewton	88.65 307	P	P	16 23 53.2	-0.6
	baz=50					
OHAK	Old Harbor	88.67 359	PFAKE		16 24 10.0	+17
OHAK			LR	LR		
	comp=Z,6μm,20.0s					
FCAR	Ozark Folk Cen	88.72 314	PFAKE		16 24 10.0	+16
FCAR			LR	LR		
	comp=Z,9μm,18.0s					
U40A	Yellville	88.84 314	P	P	16 23 53.4	-1.3
	baz=47					
X43A	Marvell	88.89 312	PFAKE		16 24 10.0	+15
X43A			LR	LR		
	comp=Z,6μm,20.0s					
X43A	Marvell	88.89 312	P	P	16 23 54.0	-0.9
	baz=48					
449A	Pace	89.02 307	P	P	16 23 54.3	-1.3
	baz=50					
BB19B	Bebedouro	89.02 244	eP	P	16 23 56.7	+1.1
KSU1	Kansas State U	89.07 319	PFAKE		16 24 10.0	+14
KSU1			LR	LR		
	comp=Z,8μm,19.0s					
KSU1	Kansas State U	89.07 319	P	P	16 23 54.5	-1.2
	baz=45					
SMY	Shemya	89.08 18	PFAKE		16 24 10.0	+15
SMY			LR	LR		
	comp=Z,8μm,22.0s					
JHJ2	Mitsune	89.11 50	PFAKE		16 24 10.0	+14
JHJ2			LR	LR		
	comp=Z,4μm,20.0s					
RSSD	Black Hills	89.11 326	eP	P	16 23 56.2	+0.1
	comp=Z,113nm,1.3s					
RSSD			LR	LR		
	comp=Z,14μm,22.0s					
RSSD	Black Hills	89.11 326	eP	P	16 23 56.2	+0.1
RSSD			pmax	pmax		
	comp=Z,113nm,1.3s					
RSSD			MLR	MLR		
	comp=Z,14μm,22.0s					
RSSD	Black Hills	89.11 326	P	P	16 23 55.1	-1.0
	baz=40					
RCLB	Rio Claro- Sao	89.11 242	eP	P	16 23 57.3	+1.2
URIC	Uribia, Colomb	89.18 284	eP	P	16 23 58.6	+2.0
WHAR	Wooly Hollow	89.23 313	PFAKE		16 24 10.0	+13
WHAR			LR	LR		
	comp=Z,9μm,21.0s					
W41B	Gary Mavity, V	89.28 313	PFAKE		16 24 10.0	+13
W41B			LR	LR		
	comp=Z,9μm,21.0s					
W41B	Gary Mavity, V	89.28 313	P	P	16 23 56.1	-0.7
	baz=47					
SII	Sitkinak Islan	89.34 360	PFAKE		16 24 10.0	+13
SII			LR	LR		
	comp=Z,5μm,22.0s					
HHAR	Hobbs	89.53 315	PFAKE		16 24 10.0	+12
HHAR			LR	LR		
	comp=Z,8μm,19.0s					
CHGN	Chignik	89.56 2	PFAKE		16 24 10.0	+12
CHGN			LR	LR		
	comp=Z,5μm,22.0s					
ITRB	Iturama	89.57 246	eP	P	16 23 59.6	+1.4
UALR	University of	89.61 313	PFAKE		16 24 10.0	+12
UALR			LR	LR		
	comp=Z,8μm,21.0s					
SDV	Santo Domingo	89.68 280	PFAKE		16 24 10.0	+11
SDV			LR	LR		
	comp=Z,2μm,21.0s					
SDV	Santo Domingo	89.68 280	eP	P	16 23 59.9	+0.7
SPB	Sao Paulo	89.76 241	PFAKE		16 24 10.0	+11
SPB			LR	LR		
	comp=Z,8μm,20.0s					
SPB	Sao Paulo	89.76 241	eP	P	16 24 00.0	+1.0
MTDJ	Mount Denham	89.77 292	PFAKE		16 24 10.0	+11
MTDJ			LR	LR		
	comp=Z,2μm,21.0s					
CCAR	Cane Creek	89.84 312	PFAKE		16 24 10.0	+11
CCAR			LR	LR		
	comp=Z,6μm,20.0s					
X40A	Basin Creek Fa	90.10 313	PFAKE		16 24 10.0	+9.4
X40A			LR	LR		
	comp=Z,9μm,22.0s					
X40A	Basin Creek Fa	90.10 313	P	P	16 24 00.1	-0.5
	baz=47					
SMRI	Semarang	90.16 98	PFAKE		16 24 10.0	+8.9
SMRI			LR	LR		
	comp=Z,3μm,22.0s					
W39A	Magazine	90.19 314	PFAKE		16 24 10.0	+9.0
W39A			LR	LR		
	comp=Z,9μm,19.0s					
W39A	Magazine	90.19 314	P	P	16 24 00.5	-0.5
	baz=46					
VBMS	Vicksburg	90.20 310	PFAKE		16 24 10.0	+8.9
VBMS			LR	LR		
	comp=Z,9μm,20.0s					
VBMS	Vicksburg	90.20 310	P	P	16 24 01.0	-0.1
	baz=48					
LLLB	Lillooet	90.41 340	PFAKE		16 24 20.0	+18
LLLB			LR	LR		
	comp=Z,7μm,18.0s					
SDPT	Sand Point	90.43 3	PFAKE		16 24 20.0	+18
SDPT			LR	LR		
	comp=Z,4μm,22.0s					
MIAR	Mount Ida	90.51 314	PFAKE		16 24 20.0	+17
MIAR			LR	LR		
	comp=Z,12μm,22.0s					
MIAR	Mount Ida	90.51 314	P	P	16 24 01.8	-0.7
	baz=46,SNR=11					
DIB	Dawson Inlet,	90.55 347	PFAKE		16 24 20.0	+18
DIB			LR	LR		
	comp=Z,7μm,21.0s					
H02S1	DAWSON INLET T	90.55 347	P	P	16 24 03.8	+1.5
OGNE	Ogallala	90.56 323	PFAKE		16 24 20.0	+17
OGNE			LR	LR		
	comp=Z,7μm,19.0s					
OGNE	Ogallala	90.56 323	P	P	16 24 01.6	-1.1
	baz=41					
BBB	Bella Bella	90.59 344	PFAKE		16 24 20.0	+18
BBB			LR	LR		
	comp=Z,6μm,19.0s					
RLMT	Red Lodge	90.63 330	PFAKE		16 24 20.0	+17
RLMT			LR	LR		
	comp=Z,15μm,19.0s					
RLMT	Red Lodge	90.63 330	P	P	16 24 02.5	-0.7
	baz=36					
UGM	Wanagama	90.72 99	PFAKE		16 24 20.0	+16
UGM			LR	LR		
	comp=Z,4μm,22.0s					
WLAR	White Oak Lake	90.82 313	PFAKE		16 24 20.0	+16
WLAR			LR	LR		
	comp=Z,8μm,18.0s					
TUL1	Leonard	90.86 316	PFAKE		16 24 20.0	+16
TUL1			LR	LR		
	comp=Z,8μm,19.0s					
TUL1	Leonard	90.86 316	P	P	16 24 03.5	-0.6
	baz=45					
Z41A	Richland Creek	90.92 312	PFAKE		16 24 20.0	+16
Z41A			LR	LR		
	comp=Z,7μm,18.0s					
Z41A	Richland Creek	90.92 312	P	P	16 24 02.8	-1.6
	baz=47					
CBKS	Cedar Bluff	90.96 320	PFAKE		16 24 20.0	+15
CBKS			LR	LR		
	comp=Z,4μm,18.0s					
CBKS	Cedar Bluff	90.96 320	P	P	16 24 04.0	-0.6
	baz=43					
NEW	Newport	90.98 336	P	P	16 24 04.5	0.0
	comp=Z,26nm,1.0s,baz=37,slow=6.4,SNR=18					
NEW	Newport	90.98 336	PFAKE		16 24 20.0	+15
NEW			LR	LR		
	comp=Z,8μm,19.0s					
NEW	Newport	90.98 336	P	P	16 24 03.7	-0.8
	baz=30					
MSO	Missoula	91.07 333	PFAKE		16 24 20.0	+15
MSO			LR	LR		
	comp=Z,11μm,18.0s					
MSO	Missoula	91.07 333	P	P	16 24 04.1	-1.0
	baz=33					
FRTB	Fartura	91.16 242	eP	P	16 24 06.1	+0.5
BOZ	Bozeman (W)	91.21 331	PFAKE		16 24 20.0	+14
BOZ			LR	LR		
	comp=Z,9μm,19.0s					
BOZ	Bozeman (W)	91.21 331	P	P	16 24 04.8	-1.0
	baz=34					
AKUT	Akutan	91.28 6	PFAKE		16 24 20.0	+14
AKUT			LR	LR		
	comp=Z,7μm,22.0s					
K22A	Casper	91.40 326	PFAKE		16 24 20.0	+13
K22A			LR	LR		
	comp=Z,15μm,21.0s					
K22A	Casper	91.40 326	P	P	16 24 05.4	-1.3
	baz=38					
UNV	Unalaska Valle	91.50 7	PFAKE		16 24 20.0	+13
UNV			LR	LR		
	comp=Z,7μm,21.0s					
X37A	Clayton	91.54 315	PFAKE		16 24 20.0	+13
X37A			LR	LR		
	comp=Z,10μm,18.0s					
LKWY	Lake	91.55 330	PFAKE		16 24 20.0	+12
LKWY			LR	LR		
	comp=Z,17μm,20.0s					
H17A	Grant Village	91.77 330	PFAKE		16 24 20.0	+12
H17A			LR	LR		
	comp=Z,15μm,18.0s					
H17A	Grant Village	91.77 330	P	P	16 24 08.1	-0.4
	baz=35					
C09A	Chrisman Ranch	91.77 336	PFAKE		16 24 20.0	+12
C09A			LR	LR		
	comp=Z,11μm,19.0s					
DLMT	Dillon	91.78 332	PFAKE		16 24 20.0	+12
DLMT			LR	LR		
	comp=Z,12μm,18.0s					
ADK	Adak	91.94 13	PFAKE		16 24 20.0	+11
ADK			LR	LR		
	comp=Z,3μm,19.0s					
PHWY	Pilot Hill	91.95 325	PFAKE		16 24 20.0	+11
PHWY			LR	LR		
	comp=Z,7μm,22.0s					
FLWY	Flagg Ranch	92.07 330	PFAKE		16 24 20.0	+10
FLWY			LR	LR		
	comp=Z,11μm,20.0s					
ATKA	Atka Island	92.08 12	PFAKE		16 24 20.0	+11
ATKA			LR	LR		
	comp=Z,7μm,21.0s					
NIKH	Nikolski High	92.10 8	PFAKE		16 24 20.0	+10
NIKH			LR	LR		
	comp=Z,4μm,18.0s					
B06A	Marblemount	92.16 338	PFAKE		16 24 20.0	+10
B06A			LR	LR		
	comp=Z,8μm,20.0s					
KSCO	Kaye Shedlock'	92.32 322	PFAKE		16 24 20.0	+9.0
KSCO			LR	LR		
	comp=Z,12μm,18.0s					
KSCO	Kaye Shedlock'	92.32 322	P	P	16 24 10.1	-0.9
	baz=41					
IMW	Indian Meadow	92.32 330	PFAKE		16 24 20.0	+8.9
IMW			LR	LR		
	comp=Z,12μm,20.0s					
U32A	Winter Ranch,	92.34 318	PFAKE		16 24 20.0	+9.0
U32A			LR	LR		
	comp=Z,7μm,18.0s					
A04D	Lummi Island	92.34 339	P	P	16 24 10.3	-0.4
	baz=26					
MOOW	Moose Ponds	92.36 330	PFAKE		16 24 20.0	+8.8
MOOW			LR	LR		
	comp=Z,10μm,20.0s					
LOHW	Long Hollow	92.42 329	PFAKE		16 24 30.0	+19
LOHW			LR	LR		
	comp=Z,10μm,19.0s					
RWWY	Rawlins	92.47 326	PFAKE		16 24 30.0	+18
RWWY			LR	LR		
	comp=Z,14μm,22.0s					
N23A	Red Feather La	92.50 325	PFAKE		16 24 30.0	+18
N23A			LR	LR		
	comp=Z,7μm,20.0s					
N23A	Red Feather La	92.50 325	P	P	16 24 10.8	-1.2
	baz=39					
C06D	Leavenworth	92.51 338	P	P	16 24 11.0	-0.6
	baz=28					
SMLC	San Martn de	92.51 282	eP	P	16 24 10.6	-1.5
B05A	Bryant	92.57 339	P	P	16 24 10.2	-1.5
	baz=27					
SNOW	Snow King Moun	92.60 329	PFAKE		16 24 30.0	+18
SNOW			LR	LR		
	comp=Z,10μm,19.0s					
D08A	Wollman Farm,	92.64 336	PFAKE		16 24 30.0	+18
D08A			LR	LR		
	comp=Z,8μm,18.0s					
BW06	Boulder Array	92.66 328	PFAKE		16 24 30.0	+17
BW06			LR	LR		
	comp=Z,14μm,21.0s					
BW06	Boulder Array	92.66 328	P	P	16 24 11.4	-1.2
	baz=36					
PDAR	Pinedale Array	92.66 328	P	P	16 24 11.9	-0.7
	comp=Z,8.5nm,0.8s,baz=60,slow=2.9,SNR=23					
PDAR			PP	PP	16 27 55.6	+2.1
	comp=Z,4.6nm,0.9s,baz=53,slow=10,SNR=4.1					
PDAR			LR	LR	17 07 24.8	
	comp=Z,12μm,21.1s,baz=38,slow=36					
TPAW	Teton Pass	92.66 330	PFAKE		16 24 30.0	+17
TPAW			LR	LR		
	comp=Z,9μm,21.0s					
E09A	Wood Farm, Sta	92.85 336	PFAKE		16 24 30.0	+17
E09A			LR	LR		
	comp=Z,9μm,20.0s					
F10A	Beach Ranch, E	93.00 335	PFAKE		16 24 30.0	+16
F10A			LR	LR		
	comp=Z,7μm,19.0s					
NATX	Nacogdoches	93.09 312	PFAKE		16 24 30.0	+16
NATX			LR	LR		
	comp=Z,6μm,20.0s					
NATX	Nacogdoches	93.09 312	P	P	16 24 14.0	-0.5
	baz=46					
E08A	Dider Farm, El	93.18 336	PFAKE		16 24 30.0	+15
E08A			LR	LR		
	comp=Z,8μm,20.0s					
ISCO	Idaho Springs	93.20 324	PFAKE		16 24 30.0	+15
ISCO			LR	LR		
	comp=Z,9μm,19.0s					
ISCO	Idaho Springs	93.20 324	P	P	16 24 14.5	-0.8
	baz=39					
AHID	Auburn Hatcher	93.32 329	PFAKE		16 24 30.0	+14
AHID			LR	LR		
	comp=Z,11μm,19.0s					
WMOK	Wichita Mounta	93.41 317	PFAKE		16 24 30.0	+14
WMOK			LR	LR		
	comp=Z,8μm,19.0s					
WMOK	Wichita Mounta	93.41 317	P	P	16 24 15.3	-0.6
	baz=43					
HAWA	Hanford	93.42 336	PFAKE		16 24 30.0	+14
HAWA			LR	LR		
	comp=Z,6μm,19.0s					
D05A	Enumclaw	93.50 338	PFAKE		16 24 30.0	+14
D05A			LR	LR		
	comp=Z,6μm,19.0s					
D03D	Eldon	93.52 339	P	P	16 24 15.7	-0.4
	baz=26					
Q24A	Divide	93.62 323	PFAKE		16 24 30.0	+13
Q24A			LR	LR		
	comp=Z,7μm,20.0s					
Q24A	Divide	93.62 323	P	P	16 24 16.3	-0.9
	baz=39					
PTGB	Pitanga	93.81 243	eP	P	16 24 19.6	+1.8
LON	Longmire	93.84 338	PFAKE		16 24 30.0	+12
LON			LR	LR		
	comp=Z,8μm,18.0s					
NLWA	Neilton Lookou	93.88 339	PFAKE		16 24 30.0	+12
NLWA			LR	LR		
	comp=Z,9μm,19.0s					
F07A	Phinny Hill Vi	93.99 336	PFAKE		16 24 30.0	+12
F07A			LR	LR		
	comp=Z,8μm,20.0s					
BMO	Blue Mountains	93.99 334	PFAKE		16 24 30.0	+11
BMO			LR	LR		
	comp=Z,8μm,18.0s					
JAGI	Jajag, Banyuwa	94.00 97	PFAKE		16 24 30.0	+11
JAGI			LR	LR		
	comp=Z,4μm,22.0s					
HLID	Hailey	94.00 332	eP	P	16 24 20.5	+1.8
	comp=Z,26nm,1.5s					
HLID			LR	LR		
	comp=Z,15μm,19.0s					
HLID	Hailey	94.00 332	P	P	16 24 18.0	-0.7
	baz=32					
AQDB	Aquidauana	94.08 248	eP	P	16 24 18.9	-0.2
PTBC	PUERTO BERRIO,	94.12 281	eP	P	16 24 17.9	-1.6
O20A	White River Ci	94.18 326	eP	P	16 24 20.7	+1.1
	comp=Z,184nm,1.9s					
O20A			LR	LR		
	comp=Z,8μm,22.0s					
G08A	Pilot Rock	94.19 335	PFAKE		16 24 30.0	+11
G08A			LR	LR		
	comp=Z,10μm,18.0s					
E04D	Cinebar	94.24 338	P	P	16 24 18.7	-0.8
	baz=26					
SMCO	Snowmass	94.34 325	eP	P	16 24 19.6	-1.1
	comp=Z,15nm,0.8s					
SMCO			LR	LR		
	comp=Z,8μm,19.0s					
HWUT	Hardware Ranch	94.46 329	PFAKE		16 24 30.0	+9.1
HWUT			LR	LR		
	comp=Z,12μm,21.0s					
F05D	White Salmon	94.50 337	P	P	16 24 19.9	-0.9
	baz=27					
WHTX	Lake Whitney,	94.61 314	PFAKE		16 24 40.0	+19
WHTX			LR	LR		
	comp=Z,11μm,19.0s					
WHTX	Lake Whitney,	94.61 314	P	P	16 24 20.8	-0.7
	baz=44					
T25A	Trinidad	94.65 322	PFAKE		16 24 40.0	+18
T25A			LR	LR		
	comp=Z,8μm,19.0s					
T25A	Trinidad	94.65 322	P	P	16 24 20.9	-0.9
	baz=40					
SDCO	Great Sand Dun	94.74 323	PFAKE		16 24 40.0	+18
SDCO			LR	LR		
	comp=Z,7μm,19.0s					
SDCO	Great Sand Dun	94.74 323	P	P	16 24 21.4	-0.9
	baz=39					
F04D	Rainier, OR	94.80 338	P	P	16 24 21.7	-0.4
	baz=26					
G06A	Carlson Farm,	94.80 336	PFAKE		16 24 40.0	+18
G06A			LR	LR		
	comp=Z,7μm,18.0s					
AMTX	Amarillo	94.91 319	PFAKE		16 24 40.0	+17
AMTX			LR	LR		
	comp=Z,6μm,19.0s					
AMTX	Amarillo	94.91 319	P	P	16 24 22.4	-0.5
	baz=42					
ROSC	El Rosal	94.98 279	PFAKE		16 24 40.0	+16
ROSC			LR	LR		
	comp=Z,2μm,18.0s					
HKT	Hockley	95.07 312	PFAKE		16 24 40.0	+16
HKT			LR	LR		
	comp=Z,8μm,20.0s					
F03A	Seaside	95.11 339	PFAKE		16 24 40.0	+17
F03A			LR	LR		
	comp=Z,6μm,21.0s					
ITAB	Concordia	95.34 241	eP	P	16 24 26.6	+1.9
S22A	4UR Ranch, Cre	95.39 324	PFAKE		16 24 40.0	+15
S22A			LR	LR		
	comp=Z,6μm,20.0s					
S22A	4UR Ranch, Cre	95.39 324	P	P	16 24 24.2	-1.2
	baz=38					
ABTX	Abilene, Hawle	95.44 316	PFAKE		16 24 40.0	+15
ABTX			LR	LR		
	comp=Z,10μm,19.0s					

ABTX	Abilene, Hawle	95.44 316	P	P	16 24 24.9	-0.4
	baz=43					
I07A	Izee	95.44 335	PFAKE		16 24 40.0	+15
I07A			LR	LR		
	comp=Z,12μm,18.0s					
435B	Jarrell	95.55 313	PFAKE		16 24 40.0	+14
435B			LR	LR		
	comp=Z,8μm,19.0s					
GUY2C	Guyana, Caldas	95.61 280	eP	P	16 24 27.9	+1.0
G03D	McMinnville, O	95.67 338	P	P	16 24 25.3	-0.7
	baz=26					
J08A	Circle Bar Ran	95.70 334	PFAKE		16 24 40.0	+14
J08A			LR	LR		
	comp=Z,7μm,22.0s					
PV22	Blue Mesa, Par	95.71 325	PFAKE		16 24 40.0	+13
PV22			LR	LR		
	comp=Z,8μm,21.0s					
PV07	Paradox Valley	95.72 325	PFAKE		16 24 40.0	+13
PV07			LR	LR		
	comp=Z,9μm,20.0s					
PV21	Cone Mtn., Par	95.78 325	PFAKE		16 24 40.0	+13
PV21			LR	LR		
	comp=Z,6μm,19.0s					
H04A	Detroit Lake	95.80 337	PFAKE		16 24 40.0	+13
H04A			LR	LR		
	comp=Z,6μm,20.0s					
I05D	Terrebonne, OR	95.83 336	P	P	16 24 25.2	-1.8
	baz=27					
PV04	Paradox Valley	95.88 325	PFAKE		16 24 40.0	+13
PV04			LR	LR		
	comp=Z,10μm,20.0s					
PV23	Carpenter Ridg	95.88 325	PFAKE		16 24 40.0	+12
PV23			LR	LR		
	comp=Z,8μm,19.0s					
PV12	Saucer Basin,	95.89 325	PFAKE		16 24 40.0	+12
PV12			LR	LR		
	comp=Z,12μm,20.0s					
PV01	Paradox Valley	95.92 325	PFAKE		16 24 40.0	+12
PV01			LR	LR		
	comp=Z,10μm,19.0s					
PV11	David Mesa, Pa	95.94 325	PFAKE		16 24 40.0	+12
PV11			LR	LR		
	comp=Z,10μm,19.0s					
PV02	Paradox Valley	95.95 325	PFAKE		16 24 40.0	+12
PV02			LR	LR		
	comp=Z,10μm,21.0s					
PV16	Nyswonger Mesa	95.95 325	PFAKE		16 24 40.0	+12
PV16			LR	LR		
	comp=Z,8μm,19.0s					
PV20	West Nyswonger	95.95 325	PFAKE		16 24 40.0	+12
PV20			LR	LR		
	comp=Z,7μm,19.0s					
PV14	Lion Creek, Pa	95.95 325	PFAKE		16 24 40.0	+12
PV14			LR	LR		
	comp=Z,8μm,19.0s					
PV10	Paradox Valley	95.95 325	PFAKE		16 24 40.0	+12
PV10			LR	LR		
	comp=Z,8μm,19.0s					
PV03	Paradox Valley	95.96 325	PFAKE		16 24 40.0	+12
PV03			LR	LR		
	comp=Z,8μm,20.0s					
PV19	Morning Glory	95.98 325	PFAKE		16 24 40.0	+12
PV19			LR	LR		
	comp=Z,7μm,19.0s					
PV17	East Wray Mesa	95.99 325	PFAKE		16 24 40.0	+12
PV17			LR	LR		
	comp=Z,10μm,20.0s					
PV18	Skein Mesa, Pa	96.00 325	PFAKE		16 24 40.0	+12
PV18			LR	LR		
	comp=Z,8μm,20.0s					
PV13	Radium Mtn., P	96.02 325	PFAKE		16 24 40.0	+12
PV13			LR	LR		
	comp=Z,9μm,19.0s					
H04D	Lebanon	96.12 337	P	P	16 24 27.0	-1.1
	baz=26					
DUG	Dugway, Tooele	96.16 329	PFAKE		16 24 40.0	+11
DUG			LR	LR		
	comp=Z,12μm,21.0s					
DUG	Dugway, Tooele	96.16 329	P	P	16 24 27.3	-1.3
	baz=34					
PINE	Pine Mountain	96.18 336	PFAKE		16 24 40.0	+11
PINE			LR	LR		
	comp=Z,8μm,20.0s					
MSTX	Muleshoe	96.19 319	PFAKE		16 24 40.0	+11
MSTX			LR	LR		
	comp=Z,7μm,18.0s					
MSTX	Muleshoe	96.19 319	P	P	16 24 27.7	-1.2
	baz=41					
PV05	Paradox Valley	96.22 325	PFAKE		16 24 40.0	+11
PV05			LR	LR		
	comp=Z,8μm,20.0s					
COR	Corvallis	96.24 338	PFAKE		16 24 40.0	+11
COR			LR	LR		
	comp=Z,8μm,19.0s					
TEIG	Tepich	96.53 300	PFAKE		16 24 40.0	+10
TEIG			LR	LR		
	comp=Z,3μm,20.0s					
WVOR	Wild Horse Val	96.57 334	PFAKE		16 24 40.0	+10
WVOR			LR	LR		
	comp=Z,6μm,20.0s					
MVCO	Mesa Verde	96.63 324	PFAKE		16 24 40.0	+9.1
MVCO			LR	LR		
	comp=Z,9μm,18.0s					
MVCO	Mesa Verde	96.63 324	P	P	16 24 29.7	-1.2
	baz=37					
I04A	Tendick Farm,	96.67 337	P	P	16 24 29.5	-1.2
	baz=27					
KAPI	Kappang	96.69 91	P	P	16 24 32.8	+1.6
	comp=Z,6.8nm,0.3s,baz=297,slow=18,SNR=3.1					
ELK	Elko	96.71 331	PFAKE		16 24 40.0	+8.8
ELK			LR	LR		
	comp=Z,10μm,18.0s					
J05D	Fort Rock, OR	96.73 336	P	P	16 24 30.3	-0.9
	baz=28					
LUWI	Luwuk	96.97 86	PFAKE		16 24 50.0	+18
LUWI			LR	LR		
	comp=Z,2μm,22.0s					
J04D	Umpqua Nationa	97.06 336	P	P	16 24 31.5	-1.2
	baz=27					
JCT	Junction City	97.09 314	PFAKE		16 24 50.0	+17
JCT			LR	LR		
	comp=Z,8μm,20.0s					
JCT	Junction City	97.09 314	P	P	16 24 31.8	-1.1
	baz=43					
MYIG	Mrida	97.10 301	PFAKE		16 24 50.0	+17
MYIG			LR	LR		
	comp=Z,6μm,20.0s					
K05A	Summer Lake	97.11 335	PFAKE		16 24 50.0	+17
K05A			LR	LR		
	comp=Z,9μm,20.0s					
ANMO	Albuquerque	97.40 322	PFAKE		16 24 50.0	+16
ANMO			LR	LR		
	comp=Z,8μm,20.0s					
ANMO	Albuquerque	97.40 322⇓	eP	P	16 24 33.8	-0.6
ANMO			pmax	pmax		
	comp=Z,5.0nm,1.2s					
ANMO			MLR	MLR		
	comp=Z,7μm,19.0s					
ANMO	Albuquerque	97.40 322	P	P	16 24 33.5	-0.9
	baz=38					
TASM	ASL Pad, Albuq	97.40 322	P	P	16 24 33.5	-0.9
	baz=38					
TASM	ASL Pad, Albuq	97.40 322	P	P	16 24 33.9	-0.5
	baz=38					
K04D	Chiloquin, OR	97.49 336	P	P	16 24 33.6	-1.0
	baz=27					
MOD	Modoc Plateau	97.63 335	PFAKE		16 24 50.0	+15
MOD			LR	LR		
	comp=Z,8μm,20.0s					
J01E	Myrtle Point	97.72 338	P	P	16 24 33.7	-1.7
	baz=25					
BMN	Battle Mountai	97.76 332	PFAKE		16 24 50.0	+14
BMN			LR	LR		
	comp=Z,8μm,19.0s					
HUMO	Hull Mountain	97.91 337	PFAKE		16 24 50.0	+14
HUMO			LR	LR		
	comp=Z,4μm,19.0s					
L04D	Klamath Falls	98.04 336	P	P	16 24 35.6	-1.5
	baz=27					
KVTX	Kingsville	98.04 311	PFAKE		16 24 50.0	+13
KVTX			LR	LR		
	comp=Z,3μm,20.0s					
KEBM	Edson Butte	98.11 338	PFAKE		16 24 50.0	+13
KEBM			LR	LR		
	comp=Z,7μm,19.0s					
Y22D	IRIS PASSCAL I	98.32 321	PFAKE		16 24 50.0	+12
Y22D			LR	LR		
	comp=Z,6μm,20.0s					
833A	Chaparral WMA,	98.41 313	PFAKE		16 24 50.0	+11
833A			LR	LR		
	comp=Z,6μm,18.0s					
833A	Chaparral WMA,	98.41 313	P	P	16 24 38.0	-0.8
	baz=44					
ESPN	Las Esperanzas	98.59 291	PFAKE		16 24 50.0	+10
ESPN			LR	LR		
	comp=Z,3μm,22.0s					
YBH	Yreka Blue Hor	98.61 336	PFAKE		16 24 50.0	+10
YBH			LR	LR		
	comp=Z,8μm,20.0s					
CPUP	Villa Florida	98.63 244	P	Pdif	16 24 42.2	+2.6
	comp=Z,6.6nm,1.0s,baz=63,slow=1.9,SNR=5.8					
CPUP			PP	PP	16 28 34.8	-6.2
	comp=Z,2.5nm,0.7s,baz=344,slow=6.9,SNR=3.4					
CPUP			LR	LR	17 11 27.5	
	comp=Z,7μm,19.6s,baz=60,slow=37					
R11A	Troy Canyon, C	98.88 330	PFAKE		16 24 50.0	+9.0
R11A			LR	LR		
	comp=Z,8μm,20.0s					
W18A	Petrified Fore	98.90 324	PFAKE		16 24 50.0	+8.9
W18A			LR	LR		
	comp=Z,9μm,18.0s					
U15A	North Rim	99.04 326	PFAKE		16 25 00.0	+18
U15A			LR	LR		
	comp=Z,8μm,19.0s					
KRMB	Red Mountain	99.19 337	PFAKE		16 25 00.0	+18
KRMB			LR	LR		
	comp=Z,6μm,19.0s					
PAHR	Pah Rah Range	99.22 333	PFAKE		16 25 00.0	+18
PAHR			LR	LR		
	comp=Z,6μm,18.0s					
KVN	Kaiserville	99.30 332	PFAKE		16 25 00.0	+17
KVN			LR	LR		
	comp=Z,11μm,20.0s					
MNTX	Cornudas Mount	99.34 319	PFAKE		16 25 00.0	+17
MNTX			LR	LR		
	comp=Z,6μm,22.0s					
WUAZ	Wupatki	99.36 325	PFAKE		16 25 00.0	+17
WUAZ			LR	LR		
	comp=Z,4μm,18.0s					
BEKR	Beckworth	99.44 334	PFAKE		16 25 00.0	+17
BEKR			LR	LR		
	comp=Z,6μm,19.0s					
X18A	Snowflake	99.48 324	PFAKE		16 25 00.0	+16
X18A			LR	LR		
	comp=Z,9μm,19.0s					
WDC	Whiskeytown Da	99.58 336	PFAKE		16 25 00.0	+16
WDC			LR	LR		
	comp=Z,7μm,21.0s					
VCNR	Virginia City	99.68 333	PFAKE		16 25 00.0	+15
VCNR			LR	LR		
	comp=Z,7μm,18.0s					
TGUH	Tegucigalpa,Un	99.71 294	PFAKE		16 25 00.0	+15
TGUH			LR	LR		
	comp=Z,3μm,20.0s					
KHMM	Horse Mountain	99.72 336	PFAKE		16 25 00.0	+15
KHMM			LR	LR		
	comp=Z,7μm,22.0s					
TNTI	Ternate	99.72 82	PFAKE		16 25 00.0	+15
TNTI			LR	LR		
	comp=Z,400nm,21.0s					
HDC	Heredia	99.79 289	PFAKE		16 25 00.0	+15
HDC			LR	LR		
	comp=Z,4μm,22.0s					
YERR	Yerington	99.79 333	PFAKE		16 25 00.0	+15
YERR			LR	LR		
	comp=Z,7μm,19.0s					
RYN	Ryan	99.83 332	PFAKE		16 25 00.0	+15
RYN			LR	LR		
	comp=Z,10μm,19.0s					
PNTR	Pine Nut	99.84 333	PFAKE		16 25 00.0	+15
PNTR			LR	LR		
	comp=Z,8μm,18.0s					
NV11	Mina Array Sit	99.85 331	PFAKE		16 25 00.0	+15
NV11			LR	LR		
	comp=Z,1μm,20.0s					
JCC	Jacoby Creek,	99.87 337	PFAKE		16 25 00.0	+15
JCC			LR	LR		
	comp=Z,4μm,19.0s					
EPT	El Paso	99.89 320	PFAKE		16 25 00.0	+14
EPT			LR	LR		
	comp=Z,8μm,18.0s					
NV01	Mina Array Sit	99.91 332	ePdif	Pdif	16 24 45.0	-0.6
NVAR	Mina Array Bea	99.91 332	P	Pdif	16 24 45.0	-0.6
	comp=Z,1.7nm,0.8s,baz=46,slow=4.4,SNR=8.0					
NVAR			PP	PP	16 28 44.5	-5.1
	comp=Z,1.3nm,0.9s,baz=17,slow=3.6,SNR=3.5					
NVAR			PKKPbc	PKKPbc	16 41 04.2	-0.5
	comp=Z,2.4nm,0.7s,baz=199,slow=5.2,SNR=13					
NVAR			LR	LR	17 13 12.8	
	comp=Z,12μm,20.0s,baz=22,slow=37					
RUBR	Rubicon Trail	100.08 333	PFAKE		16 25 00.0	+14
RUBR			LR	LR		
	comp=Z,7μm,18.0s					
ORV	Oroville	100.13 334	PFAKE		16 25 00.0	+14
ORV			LR	LR		
	comp=Z,8μm,19.0s					
TXAR	Lajitas Array	100.18 316	P	Pdif	16 24 45.3	-1.5
	comp=Z,0.7nm,0.7s,baz=77,slow=5.1,SNR=11					
TXAR			PP	PP	16 28 52.1	+0.3
	comp=Z,4.9nm,1.2s,baz=79,slow=6.6,SNR=3.5					
TXAR			PKKPbc	PKKPdf	16 41 06.8	-0.4
	comp=Z,1.4nm,0.9s,baz=196,slow=5.3,SNR=7.2					
SHPR	Sheep Range	100.25 328	PFAKE		16 25 00.0	+13
SHPR			LR	LR		
	comp=Z,10μm,20.0s					
JTS	Las Juntas de	100.26 290	PFAKE		16 25 00.0	+13
JTS			LR	LR		
	comp=Z,3μm,22.0s					
WAKR	Walker	100.29 332	PFAKE		16 25 00.0	+13
WAKR			LR	LR		
	comp=Z,6μm,19.0s					
X16A	Lo Mia Camp, P	100.29 325	PFAKE		16 25 00.0	+13
X16A			LR	LR		
	comp=Z,6μm,19.0s					
KMRM	Mail Ridge	100.30 336	PFAKE		16 25 00.0	+13
KMRM			LR	LR		
	comp=Z,9μm,20.0s					
TPNV	Topopah Spring	100.34 329	PFAKE		16 25 00.0	+13
TPNV			LR	LR		
	comp=Z,7μm,22.0s					
AFDM	Forest Hills D	100.47 334	PFAKE		16 25 00.0	+12
AFDM			LR	LR		
	comp=Z,6μm,19.0s					
CSGN	Cosiguina Volc	100.60 294	PFAKE		16 25 00.0	+11
CSGN			LR	LR		
	comp=Z,2μm,21.0s					
KCPM	Cahto Peak	100.74 336	PFAKE		16 25 00.0	+11
KCPM			LR	LR		
	comp=Z,7μm,18.0s					
MMRI	Maumere	100.74 93	PFAKE		16 25 00.0	+11
MMRI			LR	LR		
	comp=Z,4μm,21.0s					
W13A	Hualapai Mount	100.87 327	PFAKE		16 25 00.0	+10
W13A			LR	LR		
	comp=Z,6μm,21.0s					
OMMB	Old Mammoth Mi	100.89 332	PFAKE		16 25 00.0	+10
OMMB			LR	LR		
	comp=Z,16μm,19.0s					
MDPB	Devils Postpil	100.91 332	PFAKE		16 25 00.0	+10
MDPB			LR	LR		
	comp=Z,12μm,19.0s					
LNIG	Linares	100.92 310	PFAKE		16 25 00.0	+10
LNIG			LR	LR		
	comp=Z,3μm,19.0s					
OTAV	Otavalo	100.98 278	PFAKE		16 25 00.0	+9.0
OTAV			LR	LR		
	comp=Z,2μm,21.0s					
CMB	Columbia Colle	101.06 333	PFAKE		16 25 00.0	+10
CMB			LR	LR		
	comp=Z,7μm,19.0s					
HOPS	Hopland Field	101.18 335	PFAKE		16 25 00.0	+9.1
HOPS			LR	LR		
	comp=Z,5μm,19.0s					
GDXM	Geysers	101.25 335	PFAKE		16 25 10.0	+19
GDXM			LR	LR		
	comp=Z,8μm,18.0s					
Y14A	Wickenburg	101.42 325	PFAKE		16 25 10.0	+18
Y14A			LR	LR		
	comp=Z,5μm,18.0s					
LDFC	Landfair	101.43 328	PFAKE		16 25 10.0	+18
LDFC			LR	LR		
	comp=Z,16μm,22.0s					
DAC	Darwin (Calif)	101.48 330	PFAKE		16 25 10.0	+17
DAC			LR	LR		
	comp=Z,8μm,19.0s					
APG	El Apazote	101.48 297	P	Pdif	16 24 54.6	+1.6
	comp=Z,1.5nm,0.3s,baz=36,slow=19,SNR=2.8					
APG			PP	PP	16 29 02.2	-0.2
	comp=Z,3.0nm,0.8s,baz=323,slow=10,SNR=2.4					
LPAZ	La Paz	101.59 258	P	Pdif	16 24 53.8	0.0
	comp=Z,0.4nm,0.5s,baz=79,slow=5.2,SNR=2.7					
LPAZ			PP	PP	16 29 05.8	+1.5
	comp=Z,2.7nm,0.9s,baz=354,slow=10,SNR=2.3					
LPAZ			PKKPbc	PKKPbc	16 41 00.8	+0.7
	comp=Z,0.3nm,0.3s,baz=201,slow=14,SNR=1.7					
319A	Douglas	101.66 321	PFAKE		16 25 10.0	+17
319A			LR	LR		
	comp=Z,9μm,18.0s					
TUC	Tucson	101.68 323	PFAKE		16 25 10.0	+17
TUC			LR	LR		
	comp=Z,10μm,18.0s					
CCIG	Comitan	101.87 299	PFAKE		16 25 10.0	+15
CCIG			LR	LR		
	comp=Z,4μm,22.0s					
MCCM	Marconi Confer	101.87 335	PFAKE		16 25 10.0	+16
MCCM			LR	LR		
	comp=Z,5μm,22.0s					
GSC	Goldstone, Bar	101.98 329	PFAKE		16 25 10.0	+15
GSC			LR	LR		
	comp=Z,8μm,21.0s					
Y12C	Blythe	102.28 326	PFAKE		16 25 10.0	+14
Y12C			LR	LR		
	comp=Z,7μm,19.0s					
ISA	Isabella, Lake	102.37 330	PFAKE		16 25 10.0	+14
ISA			LR	LR		
	comp=Z,6μm,19.0s					
LVIG	Laguna Verde	102.56 305	PFAKE		16 25 10.0	+13
LVIG			LR	LR		
	comp=Z,1μm,22.0s					
SAO	San Andreas Ge	102.58 333	PFAKE		16 25 10.0	+13
SAO			LR	LR		
	comp=Z,8μm,18.0s					
113A	Mohawk Valley,	102.75 325	PFAKE		16 25 10.0	+12
113A			LR	LR		
	comp=Z,4μm,20.0s					
GLA	Glamis	103.00 326	PFAKE		16 25 10.0	+11
GLA			LR	LR		
	comp=Z,6μm,20.0s					
HOPE	Hope Point	103.01 212	PFAKE		16 25 10.0	+12
HOPE			LR	LR		
	comp=Z,6μm,21.0s					
PAGB	Antelope Grade	103.02 332	PFAKE		16 25 10.0	+11
PAGB			LR	LR		
	comp=Z,9μm,20.0s					
SOEI	Soe	103.02 93	PFAKE		16 25 10.0	+10
SOEI			LR	LR		
	comp=Z,4μm,21.0s					
HPIG		103.15 316	PFAKE		16 25 10.0	+10
HPIG			LR	LR		
	comp=Z,6μm,19.0s					
PFO	Pinyon Flats O	103.27 328	PFAKE		16 25 10.0	+10
PFO			LR	LR		
	comp=Z,10μm,21.0s					
OSI	Osito Audit: C	103.38 330	PFAKE		16 25 10.0	+9.1
OSI			LR	LR		
	comp=Z,8μm,18.0s					
MWC	Mount Wilson	103.43 329	PFAKE		16 25 10.0	+8.7
MWC			LR	LR		
	comp=Z,10μm,18.0s					
PASC	Pasadena Art C	103.53 329	PFAKE		16 25 20.0	+18
PASC			LR	LR		
	comp=Z,10μm,19.0s					
SYO	Syowa Base	103.71 175⇑	eP	Pdif	16 25 06.0	+4.8
SIJI	Sorong	103.85 81	Pdiff	Pdif	16 25 03.4	+0.2
	comp=Z,3.0nm,0.5s,baz=270,slow=20,SNR=3.1					
BAR	Barrett	104.15 327	PFAKE		16 25 20.0	+16
BAR			LR	LR		
	comp=Z,10μm,22.0s					
CPE	Camp Elliot	104.16 328	PFAKE		16 25 20.0	+16
CPE			LR	LR		
	comp=Z,9μm,21.0s					
GO01	Chusmiza	104.24 256	PFAKE		16 25 20.0	+15
GO01			LR	LR		
	comp=Z,5μm,22.0s					
MNMC	Minye Minye	104.28 257	PFAKE		16 25 20.0	+15
MNMC			LR	LR		
	comp=Z,4μm,21.0s					
HSIG		104.41 321	PFAKE		16 25 20.0	+15
HSIG			LR	LR		
	comp=Z,6μm,18.0s					
ZAIG	Zacatecas	104.41 311	PFAKE		16 25 20.0	+14
ZAIG			LR	LR		
	comp=Z,4μm,19.0s					
PB11	IPOC Station P	104.66 256	PFAKE		16 25 20.0	+13
PB11			LR	LR		
	comp=Z,3μm,21.0s					
SNCC	San Nicolas Is	104.89 330	PFAKE		16 25 20.0	+12
SNCC			LR	LR		
	comp=Z,8μm,22.0s					
PB01	IPOC Station P	105.19 255	PFAKE		16 29 40.0	+17
PB01			LR	LR		
	comp=Z,5μm,20.0s					
MBWA	Marble Bar	105.37 105	PFAKE		16 29 40.0	+16
MBWA			LR	LR		
	comp=Z,4μm,19.0s					
TLIG	Tlapa	105.52 304	PFAKE		16 29 40.0	+16
TLIG			LR	LR		
	comp=Z,2μm,19.0s					
LVC	Limon Verde	105.54 253	PFAKE		16 29 40.0	+16
LVC			LR	LR		
	comp=Z,3μm,19.0s					
GUMO	Guam	105.56 61	PFAKE		16 29 40.0	+16
GUMO			LR	LR		
	comp=Z,3μm,21.0s					
PSAD1	Pilbara Seismi	105.61 105	PFAKE		16 29 40.0	+16
PSAD1			LR	LR		
	comp=Z,4μm,21.0s					
PSAC1	Pilbara Seismi	105.63 106	PFAKE		16 29 40.0	+16
PSAC1			LR	LR		
	comp=Z,3μm,20.0s					
PSAB1	Pilbara Seismi	105.66 106	PFAKE		16 29 40.0	+16
PSAB1			LR	LR		
	comp=Z,4μm,19.0s					
PSAD3	Pilbara Seismi	105.66 106	PFAKE		16 29 40.0	+16
PSAD3			LR	LR		
	comp=Z,4μm,20.0s					
MAW	Mawson	105.66 166	PP	PP	16 29 33.8	+0.8
	comp=Z,3.1nm,0.8s,baz=295,slow=4.2,SNR=4.3					
PSAA1	Pilbara Seismi	105.67 106	PFAKE		16 29 40.0	+16
PSAA1			LR	LR		
	comp=Z,3μm,20.0s					
PSAA2	Pilbara Seismi	105.67 106	PFAKE		16 29 40.0	+16
PSAA2			LR	LR		
	comp=Z,3μm,19.0s					
PSA00	Pilbara Seismi	105.68 106	PFAKE		16 29 40.0	+16
PSA00			LR	LR		
	comp=Z,3μm,20.0s					
PSAB2	Pilbara Seismi	105.68 106	PFAKE		16 29 40.0	+16
PSAB2			LR	LR		
	comp=Z,3μm,19.0s					
PSAA3	Pilbara Seismi	105.69 106	PFAKE		16 29 40.0	+16
PSAA3			LR	LR		
	comp=Z,3μm,20.0s					
PSAC3	Pilbara Seismi	105.69 106	PFAKE		16 29 40.0	+16
PSAC3			LR	LR		
	comp=Z,3μm,19.0s					
PSAB3	Pilbara Seismi	105.70 106	PFAKE		16 29 40.0	+16
PSAB3			LR	LR		
	comp=Z,3μm,19.0s					
PSAC2	Pilbara Seismi	105.72 106	PFAKE		16 29 40.0	+16
PSAC2			LR	LR		
	comp=Z,3μm,20.0s					
PB04	IPOC Station P	106.38 254	PFAKE		16 29 40.0	+14
PB04			LR	LR		
	comp=Z,4μm,20.0s					
NNA	Nana	106.42 267	PFAKE		16 29 40.0	+14
NNA			LR	LR		
	comp=Z,4μm,20.0s					
SRIG	Santa Rosalia	106.45 321	PFAKE		16 29 40.0	+14
SRIG			LR	LR		
	comp=Z,5μm,19.0s					
MORW	Morawa	106.55 114	PFAKE		16 29 40.0	+14
MORW			LR	LR		
	comp=Z,4μm,22.0s					
PB10	IPOC Station P	107.30 253	PFAKE		16 29 40.0	+13
PB10			LR	LR		
	comp=Z,4μm,21.0s					

GO02	**Mina Guanaco**	**107.38**	**251**	PFAKE		16 29 40.0	+12
GO02				LR	LR		
comp=Z,5μm,22.0s							
VNA2	**Neumayer--Watz**	**107.61**	**191**	PKiKP	**PKiKP**	**16 29 32.0**	**+5.8**
baz=13,slow=5.2							
SNAA	**Sanae**	**107.64**	**189**	PKiKP	PKiKP	16 29 36.1	+10
SNAA	**Sanae**	**107.64**	**189**	PFAKE		16 29 40.0	+14
SNAA				LR	LR		
comp=Z,12μm,20.0s							
GO03	**Copiap**	**109.08**	**249**	PFAKE		16 29 40.0	+10
GO03				LR	LR		
comp=Z,6μm,21.0s							
NWAO	**Narrogin (SRO)**	**109.34**	**117**	PFAKE		16 29 40.0	+9.3
NWAO				LR	LR		
comp=Z,3μm,21.0s							
LCO	**Las Campanas**	**110.13**	**248**	PFAKE		16 29 50.0	+17
LCO				LR	LR		
comp=Z,5μm,19.0s							
GO04	**Tololo Observa**	**110.76**	**247**	PFAKE		16 29 50.0	+16
GO04				LR	LR		
comp=Z,8μm,22.0s							
PEL	**Peldehue**	**112.06**	**244**	PFAKE		16 29 50.0	+14
PEL				LR	LR		
comp=Z,8μm,21.0s							
EFI	**East Falkland**	**112.26**	**222**	PFAKE		16 29 50.0	+14
EFI				LR	LR		
comp=Z,5μm,21.0s							
GO05	**Huala**	**113.83**	**243**	PFAKE		16 29 50.0	+11
GO05				LR	LR		
comp=Z,9μm,21.0s							
MIDW	**Midway**	**114.16**	**22**	PFAKE		16 29 50.0	+10
MIDW				LR	LR		
comp=Z,3μm,20.0s							
WAKE	**Wake Island**	**115.28**	**40**	PFAKE		16 30 00.0	+18
WAKE				LR	LR		
comp=Z,4μm,20.0s							
PLCA	**Paso Flores**	**115.29**	**237**	PKP	**PKiKP**	**16 29 42.2**	**+0.4**
comp=Z,1.9nm,0.8s,baz=11,slow=10,SNR=2.1							
FORT	**Forrest**	**116.55**	**110**	PFAKE		16 30 00.0	+16
FORT				LR	LR		
comp=Z,3μm,21.0s							
WRA	**Warramunga Arr**	**116.60**	**97**	PKP	**PKPdf**	**16 29 43.3**	**-1.6**
comp=Z,11nm,0.6s,baz=266,slow=2.2,SNR=28							
WRA				PP	**PP**	**16 30 53.5**	**+0.8**
comp=Z,4.1nm,0.8s,baz=291,slow=9.4,SNR=4.4							
WRA				PKKPbc	**PKKPbc**	**16 40 13.2**	**+1.8**
comp=Z,0.7nm,0.8s,baz=119,slow=4.0,SNR=2.7							
WRAB	**Tennant Creek**	**116.61**	**97**	*e*PKPdf	**PKiKP**	**16 29 46.8**	**+1.9**
WRAB				LR	LR		
comp=Z,2μm,21.0s							
WRAB	**Tennant Creek**	**116.61**	**97**	*e*PKIKP	**PKiKP**	**16 29 46.8**	**+1.9**
WRAB				MLR	MLR		
comp=Z,2μm,21.0s							
WB2	**Warramunga Arr**	**116.61**	**97**	PFAKE		16 30 00.0	+15
WB2				LR	LR		
comp=Z,2μm,21.0s							
ASAR	**Alice Springs**	**118.02**	**101**	PKP	**PKPdf**	**16 29 45.9**	**-1.7**
comp=Z,5.9nm,0.6s,baz=317,slow=1.3,SNR=41							
ASAR				PP	**PP**	**16 31 00.9**	**-1.7**
comp=Z,3.9nm,0.9s,baz=319,slow=2.7,SNR=2.4							
ASAR				PKKPbc	**PKKPbc**	**16 40 07.0**	**+0.6**
comp=Z,0.9nm,0.6s,baz=118,slow=3.9,SNR=14							
CASY	**Casey**	**119.25**	**152**	PFAKE		16 30 00.0	+11
CASY				LR	LR		
comp=Z,6μm,22.0s							
GO09	**Cerro Castillo**	**120.32**	**226**	PFAKE		16 30 00.0	+8.8
GO09				LR	LR		
comp=Z,8μm,20.0s							
COEN	**Coen**	**120.88**	**86**	PFAKE		16 30 10.0	+17
COEN				LR	LR		
comp=Z,1μm,20.0s							
PMG	**Port Moresby**	**121.66**	**79**	PFAKE		16 30 10.0	+15
PMG				LR	LR		
comp=Z,800nm,18.0s							
RABL	**Rabaul**	**122.57**	**71**	PFAKE		16 30 10.0	+13
RABL				LR	LR		
comp=Z,900nm,21.0s							
BBOO	**Buckleboo**	**123.59**	**109**	PFAKE		16 30 10.0	+12
BBOO				LR	LR		
comp=Z,3μm,21.0s							
KEKH	**Kekaha**	**123.70**	**5**	PFAKE		16 30 10.0	+11
KEKH				LR	LR		
comp=Z,4μm,20.0s							
QSPA	**South Pole Qui**	**124.31**	**180**	*e*PKPdf	**PKPdf**	**16 29 57.1**	**-1.3**
QSPA				LR	LR		
comp=Z,11μm,19.0s							
HPAH	**Hawaii Prepara**	**125.82**	**1**	PFAKE		16 30 20.0	+17
HPAH				LR	LR		
comp=Z,2μm,20.0s							
POHA	**Pohakuloa**	**126.09**	**1**	PFAKE		16 30 20.0	+16
POHA				LR	LR		
comp=Z,3μm,20.0s							
KHLU	**Kahalu`u**	**126.25**	**1**	PFAKE		16 30 20.0	+16
KHLU				LR	LR		
comp=Z,4μm,19.0s							
KHU	**Kahuku**	**126.60**	**1**	PFAKE		16 30 20.0	+15
KHU				LR	LR		
comp=Z,3μm,21.0s							
JOHN	**Johnston Islan**	**127.25**	**18**	PFAKE		16 30 20.0	+14
JOHN				LR	LR		
comp=Z,4μm,21.0s							
STKA	**Stephens Creek**	**127.60**	**106**	PKP	**PKPdf**	**16 30 05.0**	**-0.6**
comp=Z,6.6nm,0.6s,baz=347,slow=2.6,SNR=16							
STKA	**Stephens Creek**	**127.60**	**106**	PFAKE		16 30 20.0	+14
STKA				LR	LR		
comp=Z,800nm,22.0s							
HNR	**Honiara**	**131.85**	**70**	PFAKE		16 30 30.0	+15
HNR				LR	LR		
comp=Z,2μm,21.0s							
TOO	**Toolangi**	**132.43**	**112**	PFAKE		16 30 30.0	+14
TOO				LR	LR		
comp=Z,3μm,22.0s							
EIDS	**Eidsvold**	**132.83**	**94**	PFAKE		16 30 30.0	+13
EIDS				LR	LR		
comp=Z,2μm,22.0s							
VNDA	**Vanda**	**132.90**	**168**	PKP	**PKPdf**	**16 30 11.4**	**-3.0**
comp=Z,0.5nm,0.7s,baz=181,slow=5.8,SNR=3.5							
VNDA				PP	**PP**	**16 32 41.7**	**+1.4**
comp=Z,5.0nm,1.1s,baz=332,slow=1.9,SNR=1.8							
VNDA				SKPbc	**SKPbc**	**16 33 39.0**	**-1.6**
comp=Z,21nm,1.0s,baz=249,slow=4.3,SNR=12							
TARA	**Tarawa**	**133.35**	**47**	PFAKE		16 30 30.0	+12
TARA				LR	LR		
comp=Z,4μm,22.0s							
SBA	**Scott Base**	**133.45**	**170**	PFAKE		16 30 30.0	+13
SBA				LR	LR		
comp=Z,10μm,21.0s							
CAN	**Canberra**	**134.55**	**108**	PFAKE		16 30 30.0	+10
CAN				LR	LR		
comp=Z,3μm,22.0s							
ARMA	**Armidale**	**135.17**	**100**	PFAKE		16 30 30.0	+8.3
ARMA				LR	LR		
comp=Z,5μm,22.0s							
LHI	**Lord Howe Isla**	**141.57**	**99**	PFAKE		16 30 50.0	+15
LHI				LR	LR		
comp=Z,3μm,21.0s							
DZM	**Mont Dzumac**	**144.04**	**80**	*e*PKiKP	**PKiKP**	**16 30 39.3**	**-0.7**
comp=Z,252nm,1.4s							
DZM	**Mont Dzumac**	**144.04**	**80**	*e*PP	PP	16 33 48.7	-2.2
comp=Z,1μm,27.6s							
DZM	**Mont Dzumac**	**144.04**	**80**	*e*SS	SS	16 52 37.5	+2.7
comp=Z,8μm,28.8s							
DZM	**Mont Dzumac**	**144.04**	**80**	*e*LR	LR	17 17 51.2	
comp=Z,6μm,23.6s							
DZM	**Mont Dzumac**	**144.04**	**80**	PFAKE		16 30 50.0	+10
DZM				LR	LR		
comp=Z,2μm,21.0s							
ONTNC	**Ouen Toro**	**144.16**	**81**	PFAKE		16 30 50.0	+10
ONTNC				LR	LR		
comp=Z,2μm,20.0s							
OUENC	**Ouen Island, N**	**144.53**	**80**	PFAKE		16 30 50.0	+9.1
OUENC				LR	LR		
comp=Z,3μm,21.0s							
MARNC	**Mare, Loyalty**	**145.04**	**78**	PFAKE		16 30 50.0	+8.0
MARNC				LR	LR		
comp=Z,3μm,22.0s							
PINNC	**Pines Island,**	**145.12**	**80**	PFAKE		16 30 50.0	+7.9
PINNC				LR	LR		
comp=Z,3μm,20.0s							
PYZ	**Puysegur Point**	**148.78**	**124**	*e*PKPdf	**PKPdf**	**16 30 45.5**	**+1.8**
DCZ	**Deep Cove**	**149.21**	**122**	*e*PKPdf	**PKPdf**	**16 30 45.7**	**+1.3**
MLZ	**Mavora Lakes**	**149.89**	**122**	*e*PKPdf	**PKPdf**	**16 30 48.0**	**+2.5**
TAOE	**Nuku Hiva Isla**	**151.12**	**328**	PFAKE		16 31 00.0	-1.9
TAOE				LR	LR		
comp=Z,12μm,21.0s							
LBZ	**Lake Benmore**	**151.49**	**121**	PFAKE		16 31 00.0	-2.6
LBZ				LR	LR		
comp=Z,8μm,20.0s							
RPZ	**Rata Peaks**	**152.20**	**120**	PFAKE		16 31 00.0	+3.9
RPZ				LR	LR		
comp=Z,6μm,21.0s							
LTZ	**Lake Taylor**	**153.21**	**118**	PFAKE		16 31 00.0	+1.8
LTZ				LR	LR		
comp=Z,5μm,19.0s							
THZ	**Tophouse**	**153.79**	**116**	PFAKE		16 31 00.0	+0.5
THZ				LR	LR		
comp=Z,6μm,22.0s							
KHZ	**Kahutara**	**154.18**	**117**	PFAKE		16 31 10.0	-4.0
KHZ				LR	LR		
comp=Z,8μm,19.0s							
OUZ	**Omahuta**	**154.23**	**101**	PFAKE		16 31 10.0	-4.4
OUZ				LR	LR		
comp=Z,6μm,20.0s							
SNZO	**South Karori**	**155.18**	**115**	PFAKE		16 31 10.0	-8.3
SNZO				LR	LR		
comp=Z,6μm,20.0s							
HIZ	**Hauiti**	**155.45**	**108**	PFAKE		16 31 10.0	-10
HIZ				LR	LR		
comp=Z,5μm,22.0s							
BFZ	**Birch Farm**	**156.40**	**114**	PFAKE		16 31 10.0	-14
BFZ				LR	LR		
comp=Z,5μm,20.0s							
PTCN	**Pitcairn Islan**	**156.53**	**287**	PFAKE		16 31 10.0	+14
PTCN				LR	LR		
comp=Z,8μm,21.0s							
BKZ	**Black Stump Fm**	**156.71**	**110**	PFAKE		16 31 10.0	+14
BKZ				LR	LR		
comp=Z,5μm,20.0s							
URZ	**Urewera**	**157.22**	**108**	PFAKE		16 31 10.0	+14
URZ				LR	LR		
comp=Z,6μm,19.0s							
MXZ	**Matakaoa Point**	**158.17**	**106**	PFAKE		16 31 10.0	+13
MXZ				LR	LR		
comp=Z,6μm,22.0s							
RKT	**Rikitea**	**159.20**	**298**	*e*SS	SS	16 55 24.8	+3.4
comp=Z,4μm,35.5s							
RKT	**Rikitea**	**159.20**	**298**	*e*LR	LR	17 24 49.8	
comp=Z,6μm,26.5s							
RAO	**Raoul Island**	**159.83**	**81**	PFAKE		16 31 10.0	+10
RAO				LR	LR		
comp=Z,3μm,21.0s							
PPT2	**Papeete2**	**162.53**	**343**	*e*PP	PP	16 35 30.5	-3.4
comp=Z,2μm,27.2s							
PPT2	**Papeete2**	**162.53**	**343**	*e*SS	SS	16 55 52.7	-1.5
comp=Z,2μm,27.8s							
PPT2	**Papeete2**	**162.53**	**343**	*e*LR	LR	17 26 25.5	
comp=Z,7μm,23.2s							
TBI	**Tubuai**	**167.94**	**335**	*e*PP	PP	16 35 58.2	-3.9
comp=Z,1μm,29.0s							
TBI	**Tubuai**	**167.94**	**335**	*e*SS	SS	16 56 56.0	+6.5
comp=Z,5μm,30.5s							
TBI	**Tubuai**	**167.94**	**335**	*e*LR	LR	17 28 55.5	
comp=Z,8μm,26.8s							

ATH ***15*** *16:11:19.7, 40°.76N×21°.38E, h7km±3km, ML2.1/6, Error ellipse: s-maj=3.9km s-min=1.2km az=336.0*
SKO ***15*** *16:11:19.3, 40°.80N×21°.36E, h24km, M1.7, ML2.1*
THE 15 16:11:18.1, 40°.87N×21°.32E, h8km±1km, ML2.1/3, 3C, Error ellipse: s-maj=3.2km s-min=1.7km az=135.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.10**	**153**	P	Pg	16 11 21.1	+0.7
FNA				S	Sg	16 11 22.0	0.0
FNA	**Florina**	**0.10**	**153**	P	Pg	16 11 21.1	+0.7
FNA				S	Sg	16 11 22.0	0.0
FNA				AML	AML	16 11 22.1	
comp=N,25514μm,0.1s							
FNA				AML	AML	16 11 22.2	
comp=E,34173μm,0.2s							
OHR	**Ohrid**	**0.46**	**302**	↑*i*Pg	Pn	16 11 30.4	-0.7
OHR				*i* Sg	Sb	16 11 38.7	+3.0
OHR				*e*Lg	Lg	16 11 39.2	
comp=N,90nm,0.4s							
OHR				*e*Lg	Lg	16 11 39.2	
comp=E,132nm,0.7s							
KRUS	**Krusevo**	**0.50**	**354**	↑*i*Pg	Pn	16 11 31.2	-0.6
KRUS				*i* Sg	Sn	16 11 40.3	-0.4
KRUS				*e*Lg	Lg	16 11 40.5	
comp=N,40nm,0.3s							
KRUS				*e*Lg	Lg	16 11 40.5	
comp=E,52nm,0.3s							
KZN	**Kozani**	**0.66**	**148**	P	Pg	16 11 30.3	-0.5
KZN				S	Sg	16 11 39.7	+0.3
comp=E,172nm,0.4s							
KZN	**Kozani**	**0.66**	**148**	P	Pg	16 11 30.3	-0.4
KZN				S	Sg	16 11 38.6	-0.8
KZN				AML	AML	16 11 40.4	
comp=N,480μm,0.3s							
KZN				AML	AML	16 11 41.2	
comp=E,461μm,0.3s							
PENT	**Pentalofos**	**0.69**	**192**	P	Pg	16 11 31.0	-0.3
PENT				S	Sg	16 11 40.8	+0.5
PENT	**Pentalofos**	**0.69**	**192**	P	Pg	16 11 31.1	-0.3
PENT				S	Sg	16 11 39.1	-1.2
PENT				AML	AML	16 11 43.8	
comp=E,240μm,0.3s							
PENT				AML	AML	16 11 44.5	
comp=N,217μm,0.2s							
KTI	**Kastanea**	**0.77**	**128**	P	Pg	16 11 32.9	0.0
KPRO	**Kipourio**	**0.91**	**178**	P	Pg	16 11 34.6	-1.0
KPRO				S	Sb	16 11 49.3	+0.7
comp=N,108nm,0.6s							
KPRO	**Kipourio**	**0.91**	**178**	P	Pg	16 11 34.4	-1.3
KPRO				AML	AML	16 11 52.2	
comp=E,229μm,0.4s							
KPRO				AML	AML	16 11 56.0	
comp=N,235μm,0.7s							
VAY	**Valandovo**	**1.05**	**64**	↑*i*Pg	Pn	16 11 39.8	+0.7
VAY				*i* Sg	Sn	16 11 54.5	+0.6
VAY				*e*Lg	Lg	16 11 57.6	
comp=N,29nm,0.7s							
VAY				*e*Lg	Lg	16 11 57.7	
comp=E,40nm,0.7s							
STIP	**Stip**	**1.05**	**38**	*i* Pg	Pn	16 11 43.5	+4.3
STIP				*i* Sg	Sn	16 12 01.0	+7.0
STIP				*e*Lg	Lg	16 12 04.2	
comp=N,5.7nm,0.4s							
STIP				*e*Lg	Lg	16 12 04.4	
comp=E,6.2nm,0.4s							
LIT	**Litokhoron**	**1.18**	**130**	P	Pg	16 11 40.1	-0.6
LIT				S	Sn	16 11 56.7	-0.4
comp=E,118nm,0.5s							
LIT	**Litokhoron**	**1.18**	**130**	*i* Pg	Pn	16 11 40.8	-0.1
LIT				*i* Sg	Sb	16 11 56.4	+0.3
LIT	**Litokhoron**	**1.18**	**130**	P	Pg	16 11 39.9	-0.8
LIT				S	Sg	16 11 54.6	-1.3
LIT				AML	AML	16 12 01.6	
comp=E,209μm,0.5s							
LIT				AML	AML	16 12 02.0	
comp=N,261μm,0.6s							
KNT	**Kendrikon**	**1.23**	**76**	*i* Pg	Pg	16 11 42.6	+0.9
KNT	**Kendrikon**	**1.23**	**76**	P	Pg	16 11 42.5	+0.8
KNT				AML	AML	16 12 04.4	
comp=E,55μm,0.3s							
KNT				AML	AML	16 12 04.7	
comp=N,87μm,0.6s							
IGT	**Igoumenitsa**	**1.53**	**210**	P	Pg	16 11 48.3	+0.8

IDC ***15*** *16:17:54.9±1.0, 34°.19N×25°.24E, h0km, mb4.6/10, mb1 4.6/12, mb1mx4.2/62, mbtmp4.5/12, ML4.7/2, Error ellipse: s-maj=23.5km s-min=21.2km az=151.0*
ISCJB ***15*** *16:17:57.8±0.7, 34°.22N±0°.08×25°.29E±0°.09, h30km, mb4.3/11, Error ellipse: s-maj=14.4km s-min=5.6km az=40.6*
GII ***15*** *16:18:01.0±0.0, 34°.38N×25°.50E, h18km*
ISC 15 16:17:59.4±0.8, 34°.25N±0°.10×25°.23E±0°.09, h30km, n29, σ1§23/29, mb4.4/11, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.07**	**345**	Pn	**Pn**	**16 18 17.9**	**-0.5**
144nm,0.3s,baz=163,slow=20,SNR=3.7							
IDI				Sn	**Sn**	**16 18 31.4**	**-1.0**
197nm,0.3s,baz=70,slow=22,SNR=5.1							
HNTI	**Hanita**	**8.37**	**95**	Pn	**Pn**	**16 19 58.2**	**-0.5**
SLTI	**Sal'it**	**8.46**	**101**	Pn	**Pn**	**16 20 00.3**	**+0.4**
MMA0B	**Mount Meron ar**	**8.57**	**95**	Pn	**Pn**	**16 20 01.8**	**+0.3**
MMAI	**Mount Meron Ar**	**8.57**	**95**	Pn	**Pn**	**16 20 04.7**	**+3.2**
6.1nm,0.3s,baz=270,slow=17,SNR=4.5							
MMAI				Sn	Sn	16 21 27.9	-9.3
13nm,0.3s,baz=255,slow=27,SNR=4.6							
AMAZ	**Amatzia**	**8.58**	**106**	Pn	**Pn**	**16 20 03.0**	**+1.4**
BRTR	**Keskin Array B**	**8.66**	**48**	Pn	Pn	16 20 09.3	+6.5
0.2nm,0.3s,baz=228,slow=14,SNR=2.9							
MMLI	**Mount Malkishu**	**8.71**	**99**	Pn	**Pn**	**16 20 03.1**	**-0.3**
GEM	**Giv'at Ha'Em**	**8.75**	**94**	Pn	**Pn**	**16 20 04.0**	**+0.1**
YTIR	**Yattir**	**8.80**	**106**	Pn	**Pn**	**16 20 05.5**	**+0.8**
YTIR	**Yattir**	**8.80**	**106**	Pn	**Pn**	**16 20 05.9**	**+1.2**
HMDT	**Nahal Hemdat**	**8.85**	**100**	Pn	**Pn**	**16 20 06.6**	**+1.4**
DSI	**Dead Sea**	**8.94**	**105**	Pn	**Pn**	**16 20 07.6**	**+1.1**
ZFRI	**Zfri**	**9.18**	**111**	Pn	**Pn**	**16 20 10.3**	**+0.5**
EIL	**Elat**	**9.43**	**116**	Sn	**Sn**	**16 21 55.2**	**-3.1**
2.6nm,0.3s,baz=30,slow=20,SNR=3.8							
AKASG	**Malin Array Be**	**16.70**	**9**	Pn	**Pn**	**16 21 51.0**	**+0.1**
2.7nm,0.3s,baz=200,slow=11,SNR=4.2							
GERES	**GERESS Array B**	**16.91**	**333**	Pn	**P**	**16 21 54.6**	**-0.9**
1.0nm,0.3s,baz=144,slow=11,SNR=7.1							
ESDC	**Sonseca Array**	**23.89**	**292**	P	**P**	**16 23 12.3**	**+1.9**
0.7nm,0.6s,baz=82,slow=8.5,SNR=3.8							
HFS	**Hagfors**	**26.97**	**347**	P	**P**	**16 23 38.8**	**+0.7**
14nm,0.9s,baz=131,slow=18,SNR=2.5							
TORD	**Torodi Ar. Bea**	**29.96**	**231**	P	**P**	**16 24 04.2**	**-0.9**
3.7nm,0.5s,baz=28,slow=9.0,SNR=7.9							
ARCES	**ARCESS Array B**	**35.34**	**0**	P	**P**	**16 24 52.0**	**+0.3**
12nm,1.0s,baz=179,slow=10,SNR=2.9							
SPITS	**Spitsbergen Ar**	**44.19**	**357**	P	**P**	**16 26 03.8**	**-1.4**
5.9nm,0.8s,baz=185,slow=12,SNR=2.9							
MKAR	**Makanchi Array**	**44.23**	**56**	P	**P**	**16 26 06.8**	**+0.9**
4.9nm,0.7s,baz=269,slow=8.7,SNR=5.3							
ZALV	**Zalesovo Beam**	**45.59**	**46**	P	**P**	**16 26 16.6**	**0.0**
10nm,0.4s,baz=265,slow=9.1,SNR=8.2							
SONM	**Songino Array**	**60.02**	**50**	P	**P**	**16 28 04.5**	**+1.2**
3.3nm,0.9s,baz=302,slow=7.5,SNR=3.9							
USRK	**Ussuriysk Ar.**	**77.44**	**45**	P	**P**	**16 29 51.9**	**+0.2**
2.4nm,0.6s,baz=290,slow=3.1,SNR=5.7							
KSRS	**Korea Array**	**78.79**	**52**	P	**P**	**16 30 00.0**	**+0.7**
1.9nm,0.8s,baz=309,slow=4.6,SNR=4.4							
MJAR	**Matsushiro Arr**	**85.89**	**48**	P	**P**	**16 30 36.4**	**-0.1**
2.0nm,0.9s,baz=306,slow=5.1,SNR=3.8							
ASAR	**Alice Springs**	**117.83**	**101**	PKP	**PKPdf**	**16 36 43.1**	**-0.1**
0.6nm,0.8s,baz=337,slow=2.1,SNR=3.2							

IDC ***15*** *16:20:29.7±1.4, 34°.28N×25°.13E, h0km, mb4.3/4, mb1 4.3/8, mb1mx3.8/62, mbtmp4.2/8, ML4.3/3, Error ellipse: s-maj=26.1km s-min=19.6km az=71.0*
ISCJB ***15*** *16:20:31.6±0.9, 34°.20N±0°.08×25°.3E±0°.1, h25km, mb4.0/5, Error ellipse: s-maj=16.8km s-min=8.8km az=144.5*
ISC 15 16:20:33.9±1.0, 34°.3N±0°.1×25°.2E±0°.1, h25km, n11, σ1§55/11, mb4.1/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.03**	**345**	Pn	**Pn**	**16 20 51.6**	**-1.3**
194nm,0.3s,baz=167,slow=19,SNR=4.2							
IDI				Sn	**Sn**	**16 21 06.9**	**+0.4**
234nm,0.3s,baz=299,slow=9.7,SNR=4.3							
MMAI	**Mount Meron Ar**	**8.58**	**96**	Pn	**Pn**	**16 22 36.8**	**+0.1**
baz=261,slow=13,SNR=1.1							
BRTR	**Keskin Array B**	**8.64**	**49**	Pn	Pn	16 22 44.0	+6.5
0.1nm,0.3s,baz=246,slow=10,SNR=2.4							
EIL	**Elat**	**9.46**	**117**	Pn	**Pn**	**16 22 49.7**	**+1.1**
2.2nm,0.3s,baz=355,slow=16,SNR=1.8							
AKASG	**Malin Array Be**	**16.66**	**9**	Pn	**Pn**	**16 24 25.9**	**+0.4**
1.3nm,0.3s,baz=201,slow=11,SNR=3.9							
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**P**	**16 24 30.0**	**-0.4**
0.5nm,0.3s,baz=144,slow=12,SNR=2.1							
FINES	**FINESS Array B**	**27.17**	**1**	P	**P**	**16 26 13.7**	**-1.4**
3.8nm,0.7s,baz=180,slow=9.7,SNR=1.3							
EKA	**Eskdalemuir Ar**	**28.78**	**326**	P	**P**	**16 26 32.9**	**+3.3**
1.6nm,0.8s,baz=120,slow=11,SNR=3.7							
TORD	**Torodi Ar. Bea**	**29.98**	**231**	P	**P**	**16 26 39.3**	**-1.2**
2.6nm,0.5s,baz=32,slow=8.3,SNR=4.9							
MKAR	**Makanchi Array**	**44.21**	**56**	P	**P**	**16 28 39.9**	**-1.1**
2.4nm,0.8s,baz=271,slow=6.8,SNR=2.5							
ZALV	**Zalesovo Beam**	**45.57**	**46**	P	**P**	**16 28 51.4**	**-0.2**
2.0nm,0.6s,baz=268,slow=9.5,SNR=2.6							

IDC ***15*** *16:23:13.2±0.5, 34°.39N×25°.16E, h0km, mb4.3/31, mb1 4.3/40, mb1mx4.2/64, mbtmp4.3/40, ML4.4/8, Error ellipse: s-maj=10.9km s-min=10.4km az=62.0*
ISK ***15*** *16:23:15.7, 34°.37N×25°.05E, h10km, ML4.4/21*
HLW ***15*** *16:23:17.0, 34°.24N×25°.32E, h11km±23km, MI4.3*
MOS ***15*** *16:23:16.4±1.3, 34°.31N×24°.98E, h33km, mb4.6/12, Error ellipse: s-maj=8.8km s-min=5.1km az=89.5*
ISCJB ***15*** *16:23:17.1±0.3, 34°.27N±0°.02×25°.15E±0°.02, h39km±3km, mb4.3/51, MS5.5/1, Error ellipse: s-maj=3.8km s-min=2.8km az=29.9*
NEIC ***15*** *16:23:17.4±0.0, 34°.41N×25°.08E, h27km, mb4.5/29, ML4.3(ATH), ML4.3(THE), After ATH.*
ATH ***15*** *16:23:17.4, 34°.41N×25°.08E, h27km±1km, ML4.3/6, Error ellipse: s-maj=3.7km s-min=1.5km az=354.0*
THE ***15*** *16:23:17.6, 34°.40N×25°.07E, h0km±2km, ML4.3/4, Error ellipse: s-maj=3.7km s-min=1.3km az=177.0*
GII ***15*** *16:23:19.8±0.6, 34°.38N×25°.50E, h106km, mb4.5/1, MD4.4/1*
DDA ***15*** *16:23:23.0, 34°.17N×25°.02E, h21km, ML4.5*
ISC 15 16:23:17.8±0.8, 34°.29N±0°.04×25°.12E±0°.03, h32km±5km, n282, σ2§24/318, mb4.4/51, 12C-5D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.77**	**341**	P	**Pn**	**16 23 30.5**	**-1.9**
SIVA				S	**Sb**	**16 23 41.5**	**-1.5**
SIVA	**Sivas**	**0.77**	**341**	P	**Pn**	**16 23 30.4**	**-1.9**
SIVA				S	**Sb**	**16 23 40.3**	**-2.6**
SIVA				AML	AML	16 23 49.7	
SIVA				AML	AML	16 23 52.8	
TMBK	**Timbaki Herakl**	**0.83**	**340**	P	**Pn**	**16 23 31.9**	**-1.3**
TMBK				S	**Sb**	**16 23 42.7**	**-2.1**
LAST	**Lasithi**	**0.92**	**19**	P	**Pn**	**16 23 33.6**	**-1.0**
LAST				S	**Sb**	**16 23 46.9**	**-0.4**
LAST	**Lasithi**	**0.92**	**19**	P	**Pn**	**16 23 33.6**	**-1.0**
LAST				S	**Sn**	**16 23 44.9**	**-1.9**
LAST				AML	AML	16 23 47.5	
comp=E,19605μm,0.6s							
LAST				AML

comp=N,12912µm,0.8s
ZKR AML AML 16 24 08.5
comp=E,19326µm,1.0s
VAM Vamos 1.35 326 P **Pn 16 23 40.2 -0.2**
VAM Vamos 1.35 326 P **Pn 16 23 40.1 -0.2**
IMMV Iera Moni Meta 1.50 322 P **Pb 16 23 43.7 -1.2**
IMMV S **Sn 16 24 01.8 +1.1**
IMMV AML AML 16 24 14.5
comp=N,16828µm,0.7s
IMMV AML AML 16 24 16.5
comp=E,22362µm,0.8s
SAP1 Santorini-Akro 2.08 6 P **Pn 16 23 51.1 +0.8**
SANT Santorini 2.10 8 PN **Pn 16 23 50.8 +0.1**
SANT Santorini 2.10 8⇑ *i*P **Pb 16 23 54.2 -1.0**
SANT Santorini 2.10 8 P **Pn 16 23 52.0 +1.3**
KARP Karpathos 2.10 53 PN **Pn 16 23 52.7 +2.0**
KARP Karpathos 2.10 53 *e*Pn **Pb 16 23 54.4 -0.8**
KARP Karpathos 2.10 53 P **Pb 16 23 53.8 -1.4**
KARP Karpathos 2.10 53 P **Pb 16 23 53.1 -2.1**
THR3 Thira Island, 2.13 6 *e*Pn **Pn 16 23 52.5 +1.4**
THR3 Thira Island, 2.13 6 P **Pn 16 23 52.5 +1.4**
ANAF Anafi Island 2.13 14 P **Pn 16 23 51.9 +0.7**
SAP2K Karterados 2.14 7 P **Pn 16 23 51.4 +0.2**
SAP3 Santorini-Thir 2.15 5 P **Pn 16 23 52.8 +1.4**
ANKY Antikythira Is 2.17 317 P **Pn 16 23 52.5 +0.9**
IOSP Ios island 2.44 3 P **Pn 16 23 55.6 +0.3**
IOSP Ios island 2.44 3 P **Pn 16 23 55.6 +0.3**
MHLO Agia Marina, M 2.47 347 P **Pn 16 23 56.2 +0.5**
MHLA Plaka, Milos I 2.52 347 P **Pn 16 23 57.3 +0.9**
KYTH Kithira 2.60 320 P **Pn 16 23 57.8 +0.2**
SLUM Salum 2.79 178 P **Pn 16 24 01.1 +1.0**
baz=182
SLUM AMP 16 24 00.0
baz=182
SLUM S **Sn 16 24 33.1 +0.4**
baz=182
APE Apeiranthos 2.80 7 PN **Pn 16 24 00.6 +0.3**
APE SN **Sn 16 24 33.6 +0.7**
APE Apeiranthos 2.80 7|| *i*P **Pn 16 24 01.4 +1.1**
APE Apeiranthos 2.80 7⇑ *e*P **Pb 16 24 06.3 -0.8**
APE Apeiranthos 2.80 7 P **Pn 16 24 00.6 +0.3**
VLI Veliai 3.01 324 P **Pn 16 24 04.9 +1.8**
VLI S **Sn 16 24 38.9 +0.9**
ARG Arkhangelos 3.13 51 PN **Pn 16 24 06.4 +1.6**
ARG Arkhangelos 3.13 51 P **Pn 16 24 06.4 +1.6**
DAT Datca 3.16 39 PN **Pn 16 24 06.5 +1.2**
DAT Datca 3.16 39 *i* P **Pn 16 24 07.9 +2.6**
DAT IAML_P
comp=Z,1µm,0.2s
DATC Datca-Mugla 3.22 39 PN **Pn 16 24 07.4 +1.3**
BODT Bodrum 3.29 32 PN **Pn 16 24 08.3 +1.2**
BDRM Kayabasi 3.36 34 *i* P **Pn 16 24 10.1 +2.1**
BDRM IAML_P
comp=Z,1µm,0.4s
BBRN Bozburun-Marma 3.39 44 PN **Pn 16 24 09.7 +1.4**
MATC Matruh 3.43 148 P **Pn 16 24 09.6 +0.6**
baz=150
MATC AMP 16 24 00.0
baz=150
KRND KRANIDI 3.48 333 P **Pn 16 24 10.0 +0.4**
GCAM G?zelcaml? 3.81 26 PN **Pn 16 24 15.7 +1.5**
DALY Dalyan (Mula) 3.83 48 PN **Pn 16 24 16.4 +1.9**
DALY Dalyan (Mula) 3.83 48 *i* P **Pn 16 24 16.2 +1.8**
DALY *i* S **Sn 16 24 57.9 -0.5**
DALY IAML_P
comp=Z,3µm,0.2s
YER Yerkesik 3.84 41 PN **Pn 16 24 16.2 +1.6**
TURN Turunc 3.84 47 PN **Pn 16 24 12.4 -2.1**
TURN Turunc 3.84 47 *i* P **Pn 16 24 12.5 -2.1**
TURN *i* S **Sn 16 24 50.0 -8.6**
TURN IAML_P
comp=Z,4µm,0.2s
ITM Ithomi 3.88 319 *e*Pn **Pn 16 24 14.5 -0.7**
PTL Penteli 3.89 345 P **Pn 16 24 15.2 -0.1**
FETY Fethiye 4.00 53 PN **Pn 16 24 18.3 +1.5**
FETY Fethiye 4.00 53 *i* P **Pn 16 24 18.1 +1.3**
FETY *i* S **Sn 16 24 59.1 -3.4**
FETY IAML_P
comp=Z,3µm,0.4s
AYDN Tasoluk 4.04 33 *i* P **Pn 16 24 20.4 +3.0**
AYDN IAML_P
comp=Z,4µm,0.3s
ZEY zmir 4.10 15 *i* P **Pn 16 24 19.6 +1.5**
ZEY IAML_P
comp=Z,1µm,0.2s
AKAS Kas 4.16 61 PN **Pn 16 24 21.3 +2.3**
AKAS Kas 4.16 61 *i* P **Pn 16 24 20.4 +1.3**
AKAS *i* S **Sn 16 25 05.1 -1.5**
AKAS IAML_P
comp=Z,6µm,0.3s
CHOS Chios island 4.16 10 PN **Pn 16 24 20.0 +0.9**
URLA Izmir 4.24 16 PN **Pn 16 24 21.3 +1.2**
AYDB Zeytinkoy-Aydi 4.29 31 PN **Pn 16 24 22.3 +1.4**
BLCB Balcova 4.38 20 PN **Pn 16 24 23.3 +1.4**
ELL Elmali 4.62 57 PN **Pn 16 24 27.7 +2.3**
AKUM Antalya-Kumluc 4.73 63 *i* P **Pn 16 24 28.1 +1.2**
AKUM *i* S **Sn 16 25 19.0 -1.6**
AKUM IAML_P
comp=Z,6µm,0.2s
SIGR SIGRI 4.95 7 PN **Pn 16 24 31.2 +1.4**
SWA2 5.04 177 P **Pn 16 24 31.7 +0.7**
baz=178
KORT Korkueli 5.05 56 PN **Pn 16 24 33.8 +2.5**
KORT Korkueli 5.05 56 *i* P **Pn 16 24 34.9 +3.6**
KORT *i* S **Sn 16 25 30.0 +1.4**
KORT IAML_P
comp=Z,3µm,0.2s
KULA Kula-Manisa 5.10 33 PN **Pn 16 24 33.9 +2.0**
ANTB Antalya 5.21 58 PN **Pn 16 24 36.2 +2.8**
AGG Agios Georgios 5.23 335 *e*Pn **Pn 16 24 36.8 +3.1**
AGG Agios Georgios 5.23 335 *e*P **Pn 16 24 36.8 +3.1**
KHAL Karahalli 5.39 40 *i* P **Pn 16 24 38.3 +2.3**
KHAL IAML_P
comp=Z,705nm,0.3s
BCK Bucak 5.46 53 PN **Pn 16 24 39.6 +2.7**
EZN Ezine 5.61 10⇑ *i*P **Pn 16 24 39.4 +0.5**
ISP Isparta 5.62 50 *e*Pn **Pn 16 24 42.6 +3.4**
ISP Isparta 5.62 50|| *i*P **Pn 16 24 42.4 +3.2**
ISP Isparta 5.62 50 *e*P **Pn 16 24 42.6 +3.4**
BALB Balikesir 5.78 22 *e*Pn **Pn 16 24 44.4 +3.2**
LIT Litokhoron 6.17 341 *e*Pn **Pn 16 24 48.9 +2.3**
LIT Litokhoron 6.17 341 *e*P **Pn 16 24 48.9 +2.3**
ALFC Alefka 6.22 80 S **Sn 16 25 50.2 -7.2**
baz=268
SZAC Souni 6.43 84 P **Pn 16 24 51.4 +1.2**
baz=272
SZAC S **Sn 16 25 55.9 -6.6**
LEF Lefka 6.46 80⇑ *i*P **Pn 16 24 52.3 +1.8**
HMYD Mayadein 6.58 131 P **Pn 16 24 52.6 +0.3**
baz=132
HNAT Natroun 6.59 133 P **Pn 16 24 52.5 +0.2**
baz=134
SOH Sokhos 6.67 348 P **Pn 16 24 55.5 +2.0**
SOH pmax pmax
comp=Z,17nm,0.6s
MAMC Mammari 6.73 80 P **Pn 16 24 54.8 +0.5**
baz=268
CSS Mathiatis 6.81 82 P **Pn 16 24 56.5 +1.1**
baz=270
CSS S **Sn 16 26 06.9 -4.8**
VAY Valandovo 7.30 345 *i* Pn Pb 16 25 12.9 -11
GLL Jalalah 7.31 128 P **Pn 16 25 01.7 -0.6**
baz=128
PHNC Paralimni 7.38 82 P **Pn 16 25 03.5 +0.2**
baz=270
PHNC S **Sn 16 26 20.4 -5.5**
KRUS Krusevo 7.70 338 *i* Pn **Pn 16 25 05.9 -1.8**
STIP Stip 7.75 344 *i* Pn **Pn 16 25 06.4 -1.8**
BR231 Keskin MP Arra 8.26 46 *e*Pn **Pn 16 25 19.5 +4.1**
ANTO Ankara 8.29 46 *e*Pn **Pn 16 25 18.5 +2.8**
ANTO Ankara 8.29 46 *e*P **Pn 16 25 18.5 +2.8**
TIP Timpagrande 8.29 308 *e*Pn **Pn 16 25 17.9 +2.1**
TIP Timpagrande 8.29 308⇑ *i*P **Pn 16 25 19.3 +3.5**
OFRI `Ofer 8.41 99 Pn **Pn 16 25 15.3 -2.1**
VTS Vitosha 8.45 351⇑ *i*P **Pn 16 25 15.3 -2.7**
HNTI Hanita 8.47 95 Sn **Sn 16 26 46.4 -6.2**
SLTI Sal'it 8.56 101 Pn **Pn 16 25 17.0 -2.4**
SLTI Sn **Sn 16 26 48.1 -6.7**
MMA0B Mount Meron ar 8.67 96 Pn **Pn 16 25 19.2 -1.8**
MMAI Mount Meron Ar 8.67 96 Pn **Pn 16 25 18.9 -2.1**
comp=Z,2.2nm,0.3s,baz=282,slow=15,SNR=4.0
MMAI Sn **Sn 16 26 52.2 -5.4**
comp=Z,30nm,0.3s,baz=270,slow=24,SNR=12

AMAZ Amatzia 8.69 106 Pn **Pn 16 25 19.4 -1.8**
BR101 Keskin Array S 8.71 49 *e*Pn **Pn 16 25 20.3 -1.3**
BR131 Keskin Array S 8.71 49 *e*Pn **Pn 16 25 24.6 +3.0**
BRTR Keskin Array B 8.71 49 Pn **Pn 16 25 20.3 -1.3**
comp=Z,0.1nm,0.3s,baz=220,slow=16,SNR=3.8
BRTR Sn **Sn 16 26 56.5 -2.2**
comp=Z,0.4nm,0.3s,baz=227,slow=25,SNR=4.1
MMLI Mount Malkishu 8.82 99 Pn **Pn 16 25 20.0 -3.0**
GEM Giv'at Ha'Em 8.85 94 Pn **Pn 16 25 21.1 -2.3**
GEM Sn **Sn 16 26 55.7 -6.3**
KSDI Kefar Szold 8.85 94 Pn **Pn 16 25 20.9 -2.5**
NATI Neve Ativ 8.90 94 Pn **Pn 16 25 21.5 -2.6**
NATI Sn **Sn 16 26 57.4 -5.8**
YTIR Yattir 8.91 106 Pn **Pn 16 25 21.7 -2.6**
HMDT Nahal Hemdat 8.95 100 Pn **Pn 16 25 22.3 -2.5**
HMDT Sn **Sn 16 26 58.9 -5.5**
KSHT Keshet 9.01 95 Pn **Pn 16 25 23.0 -2.7**
DSI Dead Sea 9.04 105 Sn **Sn 16 27 00.6 -6.1**
MZDA Masada 9.12 106 Pn **Pn 16 25 24.2 -2.9**
MZDA Sn **Sn 16 27 02.7 -5.9**
KRMI Paran Flat 9.14 114 Pn **Pn 16 25 26.1 -1.3**
VAE Valguarnera 9.25 293 Pn **Pn 16 25 31.5 +2.6**
comp=Z,3.6nm,0.3s,baz=350,slow=16,SNR=3.0
VAE Sn **Sn 16 27 05.7 -6.2**
comp=Z,1.6nm,0.3s,baz=353,slow=16,SNR=1.5
ZFRI Zfri 9.28 111 Pn **Pn 16 25 27.2 -2.1**
TTG Podgorica 9.34 332 *e*Pn **Pn 16 25 30.0 -0.1**
TTG Podgorica 9.34 332 *e*P **Pn 16 25 30.0 -0.1**
HRFI Mount Harif 9.42 114 Pn **Pn 16 25 29.8 -1.4**
MBRI Mt Berech 9.44 116 Sn **Sn 16 27 11.8 -4.9**
EIL Elat 9.54 116 Pn **Pn 16 25 32.5 -0.4**
comp=Z,7.1nm,0.3s,baz=333,slow=6.3,SNR=9.9
EIL Sn **Sn 16 27 12.7 -6.2**
comp=Z,3.9nm,0.3s,baz=295,slow=19,SNR=4.9
EIL Elat 9.54 116 Pn **Pn 16 25 31.1 -1.7**
EIL Sn **Sn 16 27 14.0 -4.9**
ASF Jabal al Asfar 10.09 99 Pn **Pn 16 25 39.8 -0.7**
comp=Z,0.7nm,0.3s,baz=258,slow=9.3,SNR=2.3
ASF Sn **Sn 16 27 26.8 -5.8**
comp=Z,2.8nm,0.3s,baz=14,slow=12,SNR=4.3
SRE Strehaia 10.47 352⇑ *i*P Pn 16 25 36.0 -9.5
MLR Muntele Rosu 11.21 3⇑ *i*P **Pn 16 25 58.7 +2.9**
KEST Kesra 13.01 281 Sn **Sn 16 28 37.2 -6.8**
comp=Z,0.1nm,0.3s,baz=38,slow=18,SNR=2.5
VISS Visnje 13.92 329 *i* Pn **Pn 16 26 35.7 +3.0**
CEY Cerknica 14.05 328 *i* Pn **Pn 16 26 33.0 -1.5**
JAVS Javornik 14.33 327 *i* Pn **Pn 16 26 36.4 -2.0**
VYHS Vyhne 14.95 344 *e*P **P 16 26 52.7 +0.9**
VYHS Vyhne 14.95 344 *e*P **P 16 26 52.7 +0.9**
MODS Modra-Piesok 15.24 340 *e*P **P 16 26 56.9 +1.8**
MODS Modra-Piesok 15.24 340 *e*P **P 16 26 56.9 +1.8**
KWP Kalwaria Pacla 15.44 354 *e*Pn **Pn 16 26 53.5 +0.6**
comp=Z,151nm,0.7s
KWP Kalwaria Pacla 15.44 354 *e*P **Pn 16 26 53.6 +0.6**
KWP pmax pmax
comp=Z,151nm,0.7s
KBA Koelnbreinsper 15.56 329 P **P 16 26 59.7 +0.9**
VRAC Vranov 16.28 340 Pn **Pn 16 27 00.9 -3.0**
comp=Z,0.2nm,0.3s,baz=280,slow=19,SNR=2.8
NEY Neytrino 16.36 52|| *e*P **P 16 27 08.6 +0.8**
SHA1 Shidzhatmaz 16.55 50⇑ *e*P **P 16 27 13.2 +3.3**
AKASG Malin Array Be 16.68 9 Pn **Pn 16 27 08.2 -0.6**
comp=Z,7.0nm,0.3s,baz=199,slow=11,SNR=17
AKBB Malin Array Si 16.68 9 *e*Pn **Pn 16 27 09.7 +0.8**
comp=Z,16nm,0.7s
KIV Kislovodsk 16.68 49 *e*Pn **Pn 16 27 09.0 -0.1**
comp=Z,17nm,1.1s
KIV Kislovodsk 16.68 49 *e*P **P 16 27 13.2 +2.1**
KIV pmax pmax
comp=Z,70nm,1.1s
FUORN Ofenpass-Fuorn 16.68 322 *e*Pn **P 16 27 12.1 +0.7**
comp=Z,29nm,1.1s
KVAR Kislovodsk Arr 16.68 49 Pn **Pn 16 27 09.4 +0.3**
baz=180,slow=8.1,SNR=4.2
KBZ Khabaz 16.70 50 Pn **P 16 27 10.4 -0.8**
comp=Z,1.1nm,0.3s,baz=239,slow=11,SNR=9.4
GEC2 GERESS Array S 16.84 333 *e*Pn **Pn 16 27 09.9 -1.1**
comp=Z,10nm,0.6s
GEC2 GERESS Array S 16.84 333 *e*P **Pn 16 27 09.9 -1.1**
GEC2 pmax pmax
comp=Z,11nm,0.6s
GERES GERESS Array B 16.84 333 Pn **Pn 16 27 11.8 +0.8**
comp=Z,1.8nm,0.3s,baz=142,slow=12,SNR=19
ZEI Tsey 16.95 54 *e*P **P 16 27 17.6 +3.4**
ZEI pmax pmax
comp=Z,17nm,0.6s
DAVOX Davos/Dischmat 16.99 322 Pn **Pn 16 27 10.9 -2.1**
comp=Z,0.5nm,0.3s,baz=33,slow=17,SNR=2.9
PYA1 Pyatigorsk 16.99 50|| *e*P **P 16 27 19.4 +4.9**
NCK Nalchik 17.04 52|| *e*P **P 16 27 20.5 +5.4**
KHC Kasperske Hory 17.12 333 *e*Pn **Pn 16 27 12.8 -1.6**
comp=Z,1.8nm,0.7s
KHC Kasperske Hory 17.12 333 *e*P **Pn 16 27 12.8 -1.6**
KHC pmax pmax
comp=Z,2.0nm,0.7s
KHC Kasperske Hory 17.12 333 *e*P **P 16 27 16.0 +0.1**
KHC *es*P **sP 16 27 28.0 +0.3**
GROC Groznyy 18.39 55 *e*P **Pn 16 27 33.6 +3.5**
GROC pmax pmax
comp=Z,67nm,1.1s
GRFO Grafenberg 18.49 331 *e*P **P 16 27 28.4 -2.5**
comp=Z,9.8nm,0.6s
GRFO Grafenberg 18.49 331 *e*P **P 16 27 28.4 -2.5**
GRFO pmax pmax
comp=Z,10.0nm,0.6s
CLL Collm 19.15 336 *e*(P) **Pn 16 27 40.0 +0.8**
CLL Collm 19.15 336 *e*P **Pn 16 27 40.0 +0.8**
SSF Saint Saulge 20.69 315 P Pn 16 27 56.7 -0.7
SSF pmax pmax
comp=Z,12nm,1.2s
RAYN Ar Rayn 20.79 116 *e*P Pn 16 27 57.9 -0.9
comp=Z,16nm,0.9s
RAYN Ar Rayn 20.79 116 *e*P Pn 16 27 57.9 -0.9
RAYN pmax pmax
comp=Z,16nm,0.9s
OBN Obninsk 22.30 17 *e*P P 16 28 19.9 +7.7
OBN pmax pmax
comp=Z,15nm,1.1s
ESDC Sonseca Array 23.79 292 P **P 16 28 27.1 -0.5**
comp=Z,2.4nm,0.7s,baz=83,slow=9.6,SNR=11
ESLA Sonseca Array 23.79 292 *e*P **P 16 28 27.0 -0.5**
comp=Z,5.3nm,1.1s
MDT Midelt 24.78 275 P **P 16 28 38.0 +1.3**
comp=Z,4.8nm,0.9s,baz=113,slow=4.3,SNR=5.7
PBRG Braganca 26.08 296 *e*P **P 16 28 48.2 -0.2**
MVO Moncorvo 26.23 295 *e*P **P 16 28 52.1 +2.3**
PMRV Marv??o 26.42 291 *e*P **P 16 28 51.8 +0.3**
MTE Manteigas 26.57 293 *e*P **P 16 28 53.8 +0.9**
PVAQ Vaqueiros 26.72 286 *e*P **P 16 28 57.4 +3.2**
GEYT Alibeck 26.83 73 P **P 16 28 55.7 +0.5**
comp=Z,1.1nm,0.5s,baz=241,slow=14,SNR=3.5
HFS Hagfors 26.92 347 P **P 16 28 55.0 -0.7**
comp=Z,1.7nm,0.4s,baz=156,slow=10,SNR=9.4
HFS Hagfors 26.92 347 P **P 16 28 55.0 -0.7**
FIA0 FINESS Array S 27.18 1 *e*P **P 16 28 56.5 -1.5**
FIA0 *e*PcP **PcP 16 32 17.5 -0.1**
FIA0 FINESS Array S 27.18 1 *e*P **P 16 28 56.5 -1.5**
FIA0 *e* 16 32 17.5
FINES FINESS Array B 27.18 1 P **P 16 28 56.5 -1.5**
comp=Z,1.6nm,0.4s,baz=163,slow=11,SNR=8.5
FINES PcP **PcP 16 32 17.5 -0.1**
comp=Z,1.8nm,0.7s,baz=180,slow=0.8,SNR=4.2
FIA1 FINESS Array S 27.18 1 *e*P **P 16 28 56.5 -1.5**
comp=Z,1.9nm,1.1s
NB2 NORSAR Subarra 28.23 346 P **P 16 29 06.9 -0.6**
comp=Z,0.8nm,0.6s,baz=156,slow=9.3
NB2 NORSAR Subarra 28.23 346 P **P 16 29 06.9 -0.6**
NB200 NORSAR Array S 28.23 346 *e*P **P 16 29 06.8 -0.6**
NOA NORSAR Array B 28.23 346 P **P 16 29 06.8 -0.6**
comp=Z,0.4nm,0.4s,baz=272,slow=4.1,SNR=4.9
UOSS Minazif 28.49 101 *e*P **P 16 29 11.4 +1.2**
comp=Z,6.9nm,0.6s
EKA Eskdalemuir Ar 28.73 326 P **P 16 29 11.6 -0.3**
comp=Z,1.0nm,0.3s,baz=122,slow=8.7,SNR=5.5
AKTO Aktyubinsk 28.88 46 P **P 16 29 11.3 -2.0**
comp=Z,2.2nm,0.4s,baz=255,slow=7.4,SNR=7.8
TOA1 Torodi Ar. Sit 29.90 231 *e*P **P 16 29 23.7 +1.0**
TOA0 Torodi Ar. Sit 29.91 231 *e*P **P 16 29 23.8 +1.1**
comp=Z,10nm,0.5s
TORD Torodi Ar. Bea 29.91 231 P **P 16 29 23.7 +0.9**
comp=Z,7.7nm,0.5s,baz=31,slow=8.5,SNR=32
WSAR Wadi Sarin 31.24 102 P **P 16 29 34.0 -0.5**
comp=Z,8.9nm,1.0s,baz=270,slow=3.0,SNR=3.7
ARU Arti 31.78 36 P **P 16 29 38.1 -0.8**
comp=Z,2.7nm,0.5s,baz=283,slow=7.4,SNR=6.8

ARU Arti 31.78 36 *e*P **P 16 29 38.1 -0.8**
comp=Z,7.4nm,0.7s
MBAR Mbarara 35.10 170|| *e*P P 16 30 18.8 +10
MBAR pmax pmax
comp=Z,24nm,1.3s
ARA0 ARCESS Array S 35.30 0 *e*P **P 16 30 07.0 -2.3**
ARCES ARCESS Array B 35.30 0 P **P 16 30 07.0 -2.3**
comp=Z,1.1nm,0.5s,baz=172,slow=7.3,SNR=7.4
KK31 Karatay Array 36.13 62 *e*P **P 16 30 16.6 -0.3**
comp=Z,7.7nm,1.0s
KK31 Karatay Array 36.13 62 *e*P **P 16 30 16.6 -0.3**
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 36.13 62 *e*P **P 16 30 16.1 -0.8**
comp=Z,7.7nm,1.0s
KKAR Karatay Array 36.13 62 *e*P **P 16 30 16.1 -0.8**
KKAR pmax pmax
comp=Z,8.0nm,1.0s
BVAR Borovoye Array 36.98 46 P **P 16 30 23.9 -0.1**
comp=Z,1.2nm,0.6s,baz=230,slow=8.5,SNR=4.7
ARSB Arslanbob 38.07 65 *e*P **P 16 30 35.1 +1.6**
comp=Z,8.1nm,0.8s
DBIC Dimbokro 39.00 232 P **P 16 30 41.2 -0.1**
comp=Z,3.6nm,0.7s,baz=327,slow=15,SNR=4.7
DBIC Dimbokro 39.00 232 *e*P **P 16 30 41.2 -0.1**
comp=Z,8.6nm,1.1s
AAK Ala-Archa 39.08 63⇑ *e*P P 16 30 50.9 +8.9
AAK pmax pmax
comp=Z,6.0nm,1.2s
NIL Nilore 39.63 77 *e*P **P 16 30 48.0 +1.5**
comp=Z,8.9nm,0.6s
NIL Nilore 39.63 77 *e*P **P 16 30 48.0 +1.5**
NIL pmax pmax
comp=Z,9.0nm,0.6s
KSH Kashi 40.56 67 P **P 16 30 55.8 +1.5**
KSH PP **PP 16 32 29.9 +2.0**
KSH S **S 16 37 02.6 +1.0**
KSH SS **SS 16 39 53.1 -8.8**
KSH pmax pmax
comp=Z,25nm,1.4s
KSH pmax pmax
comp=Z,2µm,7.6s
KSH LR LR
comp=N,2µm,11.7s
KSH LR LR
comp=E,2µm,11.2s
KSH LR LR
comp=Z,7µm,15.7s
KURK Kurchatov 41.76 50 *e*P **P 16 31 04.6 +0.8**
comp=Z,6.7nm,0.8s
KURK Kurchatov 41.76 50⇑ *e*P P 16 31 13.3 +10
KURK pmax pmax
comp=Z,9.0nm,1.0s
SPA0 Spitsbergen Ar 44.16 357 *e*P **P 16 31 22.0 -0.9**
comp=Z,21nm,1.1s
SPITS Spitsbergen Ar 44.16 357 P **P 16 31 22.0 -0.9**
comp=Z,2.4nm,0.6s,baz=147,slow=11,SNR=12
SPITS Spitsbergen Ar 44.16 357 P **P 16 31 22.0 -0.9**
MK31 Makanchi Array 44.29 56 *e*P **P 16 31 25.3 +0.9**
comp=Z,4.0nm,0.6s
MK31 Makanchi Array 44.29 56 *e*P **P 16 31 25.3 +0.9**
MK31 pmax pmax
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 44.29 56 P **P 16 31 24.5 +0.1**
comp=Z,5.5nm,0.6s,baz=270,slow=6.9,SNR=20
NVS Novosibirsk 44.73 44 *e*P **P 16 31 29.2 +1.5**
ZAA0 Zalesovo Array 45.64 46 *e*P **P 16 31 34.9 0.0**
comp=Z,12nm,0.4s
ZAA1 Zalesovo Array 45.64 46 *e*P **P 16 31 34.6 -0.3**
ZALV Zalesovo Beam 45.64 46 P **P 16 31 34.6 -0.3**
comp=Z,12nm,0.4s,baz=266,slow=8.7,SNR=23
NRIK Noril'sk 48.68 25 P **P 16 31 58.6 +0.2**
comp=Z,3.6nm,0.6s,baz=237,slow=6.7,SNR=3.9
PYUN Piuthan 49.33 81 *e*P **P 16 32 05.2 +1.0**
comp=Z,24nm,0.6s
LSZ Lusaka 49.37 176 P **P 16 32 06.1 +1.6**
comp=Z,1.2nm,0.4s,baz=37,slow=5.1,SNR=3.1
LSZ Lusaka 49.37 176 *e*P **P 16 32 06.1 +1.6**
comp=Z,2.2nm,1.1s
DANN Dangsing 49.86 80 *e*P **P 16 32 09.2 +0.8**
comp=Z,52nm,0.6s
KOLN Koldanda 49.95 81 *e*P **P 16 32 10.5 +1.5**
comp=Z,48nm,0.3s
DMN Daman 51.25 80 *e*P **P 16 32 19.2 +0.4**
comp=Z,28nm,0.8s
KKN Kakani 51.32 80 *e*P **P 16 32 19.7 +0.4**
comp=Z,24nm,0.7s
PKI Pulchoki 51.51 80 *e*P **P 16 32 21.0 +0.1**
comp=Z,24nm,0.9s
GUN Gumba 51.76 79 *e*P **P 16 32 23.0 +0.2**
comp=Z,26nm,0.6s
JIRN Jiri 52.11 80 *e*P **P 16 32 25.4 0.0**
comp=Z,33nm,0.7s
LSA Lhasa 55.32 75 *e*P **P 16 32 50.6 +1.6**
comp=Z,4.9nm,0.8s
LSA Lhasa 55.32 75 *e*P **P 16 32 50.6 +1.6**
LSA pmax pmax
comp=Z,5.0nm,0.8s
LBTB Lobatse 58.98 179 *e*P **P 16 33 16.1 +1.9**
comp=Z,2.7nm,0.9s
LBTB Lobatse 58.98 179 *e*P **P 16 33 16.1 +1.9**
LBTB pmax pmax
comp=Z,3.0nm,0.9s
SONA0 Songino Array 60.07 50 *e*P **P 16 33 21.9 +0.2**
SONM Songino Array 60.07 50 P **P 16 33 21.9 +0.2**
comp=Z,2.3nm,0.6s,baz=286,slow=7.2,SNR=8.4
DRLN Deer Lake 60.44 312 *e*P **P 16 33 24.0 0.0**
BOSA Boshof 62.56 180 P **P 16 33 40.1 +1.5**
comp=Z,1.9nm,0.4s,baz=355,slow=8.2,SNR=8.8
BOSA Boshof 62.56 180 *e*P **P 16 33 40.4 +1.8**
comp=Z,4.0nm,0.6s
GBN Guysborough 64.39 309 *e*P **P 16 33 51.2 +0.8**
comp=Z,15nm,1.1s
RES Resolute Bay 64.50 345 P **P 16 33 50.0 -0.7**
comp=Z,1.6nm,0.9s,baz=217,slow=20,SNR=3.1
RES Resolute Bay 64.50 345 *e*P **P 16 33 51.6 +0.9**
comp=Z,3.0nm,0.9s
CM31 Chiang Mai Arr 66.71 83 *e*P **P 16 34 06.3 +0.4**
comp=Z,2.4nm,0.8s
CMAR Chiang Mai Arr 66.71 83 P **P 16 34 06.3 +0.4**
comp=Z,0.8nm,0.5s,baz=297,slow=8.0,SNR=7.6
WHN Wuhan 72.96 64 P P 16 34 38.6 -5.6
BILL Bilibino 73.92 14 *e*P P 16 34 59.4 +10
BILL pmax pmax
comp=Z,1.0nm,1.0s
KLR Kul'dur 74.45 41 P **P 16 34 51.9 -0.7**
comp=Z,1.0nm,0.6s,baz=282,slow=4.4,SNR=4.3
PSI Prapat 75.06 97 P **P 16 34 57.8 +0.9**
comp=Z,6.3nm,0.7s,baz=0.0,slow=4.0,SNR=3.1
USRK Ussuriysk Ar. 77.48 45 P **P 16 35 09.9 -0.1**
comp=Z,3.8nm,0.6s,baz=290,slow=3.8,SNR=11
YKA Yellowknife Ar 78.27 342 *e*P **P 16 35 14.3 +0.3**
comp=Z,0.4nm,0.5s,baz=74,slow=19,SNR=2.6
YKB5 Yellowknife Ar 78.27 342 *e*P **P 16 35 14.3 +0.3**
KSRS Korea Array 78.84 52 P **P 16 35 17.8 +0.1**
comp=Z,1.4nm,0.7s,baz=310,slow=4.8,SNR=7.6
ILAR Eielson Array 81.07 357 P **P 16 35 30.2 +1.0**
comp=Z,0.7nm,0.9s,baz=342,slow=3.2,SNR=3.8
MAJO Matsushiro 85.93 48 *e*P **P 16 35 55.4 +0.7**
MAJO Matsushiro 85.93 48 *e*P **P 16 35 55.4 +0.7**
MJAR Matsushiro Arr 85.94 48 P **P 16 35 55.4 +0.6**
comp=Z,1.8nm,0.7s,baz=308,slow=3.9,SNR=4.7
PDAR Pinedale Array 92.83 328 P **P 16 36 28.5 +1.1**
comp=Z,0.1nm,0.3s,baz=83,slow=7.4,SNR=2.2
WR1 Warramunga Arr 116.53 97 *e*PKPdf **PKPdf 16 41 58.5 -0.3**
WRA Warramunga Arr 116.53 97 PKP **PKPdf 16 41 58.5 -0.3**
comp=Z,0.6nm,0.6s,baz=356,slow=1.4,SNR=5.3
AS31 Alice Springs 117.93 101 *e*PKPdf **PKPdf 16 42 01.3 -0.1**
ASAR Alice Springs 117.93 101 PKP **PKPdf 16 42 01.3 -0.1**
comp=Z,0.6nm,0.7s,baz=324,slow=1.7,SNR=3.3

*IDC **15** 16:27:05.2±4.9, 34°.33N±25°.17E, h0km, mb4.0/2, mb1 4.0/5, mb1mx3.4/59, mbtmp3.9/5, ML3.9/3, Error ellipse: s-maj=93.3km s-min=22.7km az=51.0*
*ISCJB **15** 16:27:06.5±2.5, 34°.2N±0°.2×25°.3E±0°.3, h25km, mb3.9/2, Error ellipse: s-maj=49.7km s-min=10.7km az=143.0*
ISC 15 16:27:07.2±2.8, 34°.2N±0°.2×25°.1E±0°.3, h25km, n6, σ0.96/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.07**	**352**	Pn	**Pn**	**16 27 25.8**	**-0.9**
	16nm,0.3s,baz=93,slow=17,SNR=1.5						
IDI				Sn	**Sn**	**16 27 40.6**	**-0.2**
	16nm,0.3s,baz=347,slow=23,SNR=1.6						

EIL Elat 9.55 116 Pn Pn 16 29 22.5 -0.6
0.5nm,0.3s,baz=29,slow=17,SNR=0.9
AKASG Malin Array Be 16.75 9 Pn Pn 16 31 00.5 +0.5
0.7nm,0.3s,baz=199,slow=10,SNR=4.8
GERES GERESS Array B 16.87 333 Pn P 16 31 04.1 +0.5
0.2nm,0.3s,baz=144,slow=11,SNR=4.7
MKAR Makanchi Array 44.36 56 P P 16 35 16.8 +1.4
1.2nm,0.8s,baz=273,slow=5.4,SNR=4.0
ZALV Zalesovo Beam 45.71 46 P P 16 35 25.9 -0.1
1.2nm,0.4s,baz=262,slow=9.2,SNR=3.5

IDC ***15*** *16:28:45.5±1.2, 34°.25N×25°.03E, h0km, mb4.2/4, mb1 4.1/8, mb1mx3.9/55, mbtmp4.1/8, ML4.3/4, Error ellipse: s-maj=23.0km s-min=21.2km az=86.0*
ISCJB ***15*** *16:28:47.1±0.9, 34°.2N±0°.1×25°.1E±0°.1, h25km, mb4.0/4, Error ellipse: s-maj=18.6km s-min=12.3km az=143.5*
ISC 15 16:28:49.1±1.1,34°.3N±0°.1×25°.1E±0°.1,h25km,n11, σ0§53/11,mb4.1/4,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	1.02	351	Pn	Pn	16 29 07.6	-0.3
43nm,0.3s,baz=162,slow=19,SNR=7.1							
IDI	Anoyia	1.02	351	ePn	Pn	16 29 07.6	-0.3
KARP	Karpathos	2.13	53	ePn	Pb	16 29 26.7	-0.3
EIL	Elat	9.56	116	Pn	Pn	16 31 05.2	0.0
2.1nm,0.3s,baz=9.4,slow=5.7,SNR=6.7							
AKASG	Malin Array Be	16.70	9	Pn	Pn	16 32 41.2	+0.1
1.6nm,0.3s,baz=200,slow=10,SNR=6.8							
GERES	GERESS Array B	16.84	333	Pn	P	16 32 45.6	+0.6
0.6nm,0.3s,baz=144,slow=12,SNR=12							
KHC	Kasperske Hory	17.12	334	eP	P	16 32 48.8	+0.8
HFS	Hagfors	26.92	347	P	P	16 34 27.7	-0.3
1.5nm,0.7s,baz=127,slow=9.3,SNR=4.5							
TORD	Torodi Ar. Bea	29.87	231	P	P	16 34 54.4	-0.3
1.8nm,0.4s,baz=32,slow=8.9,SNR=17							
MKAR	Makanchi Array	44.33	56	P	P	16 36 57.8	+0.9
1.4nm,0.7s,baz=275,slow=7.0,SNR=7.1							
ZALV	Zalesovo Beam	45.67	46	P	P	16 37 07.3	-0.2
2.4nm,0.4s,baz=266,slow=8.8,SNR=8.3							

GII ***15*** *16:28:44.4±0.3, 34°.40N×25°.12E, h69km, mb4.8/1, MD4.8/1*
BJI ***15*** *16:28:52.5±0.0, 34°.23N×24°.76E, h19km, mb5.1/53, mB5.4/15, Ms5.4/12, Ms7 5.3/12*
IDC ***15*** *16:28:53.2±0.4, 34°.32N×25°.00E, h0km, mb4.8/42, mb1 4.8/55, mb1mx4.8/63, mbtmp4.8/55, ML4.6/10, Error ellipse: s-maj=9.9km s-min=9.2km az=169.0*
HLW ***15*** *16:28:54.8, 34°.36N×25°.11E, h11km±16km, Ml4.6*
MOS ***15*** *16:28:54.8±1.0, 34°.35N×24°.97E, h20km, mb5.2/36, Error ellipse: s-maj=6.2km s-min=3.4km az=80.2*
ISCJB ***15*** *16:28:55.6±0.5, 34°.29N±0°.02×25°.02E±0°.02, h27km±3km, mb4.9/130, Error ellipse: s-maj=3.2km s-min=2.2km az=19.7*
NEIC ***15*** *16:28:55.3±0.0, 34°.27N×25°.09E, h26km, mb4.9/80, ML4.6(ATH), After ATH.*
ISK ***15*** *16:28:55.5, 34°.30N×25°.17E, h6km, ML4.7/17*
ATH ***15*** *16:28:55.3, 34°.27N×25°.09E, h26km±1km, ML4.6/5, Error ellipse: s-maj=5.0km s-min=1.9km az=348.0*
THE ***15*** *16:28:57.3, 34°.34N×24°.95E, h14km±3km, ML4.8/2, Error ellipse: s-maj=4.6km s-min=1.1km az=167.0*
NIC ***15*** *16:28:58.0±0.3, 34°.16N×25°.34E, h50km, mb4.9, ML4.5*
DDA ***15*** *16:29:31.9, 33°.56N×25°.73E, h20km, ML4.5*
ISC 15 16:28:56.3±0.4,34°.30N±0°.04×25°.05E±0°.03,h20km±3km, h21km:pP-P,n856,σ1§37/862,mb4.9/137,43C-17D,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.74	345	P	Pb	16 29 10.8	+0.2
SIVA				S	Sn	16 29 21.5	-0.8
SIVA	Sivas	0.74	345	P	Pb	16 29 10.7	+0.2
SIVA				S	Sn	16 29 21.9	-0.3
SIVA				AML	AML	16 29 29.9	
SIVA				AML	AML	16 29 31.2	
TMBK	Timbaki Herakl	0.80	343	P	Pn	16 29 12.4	-0.1
TMBK				S	Sn	16 29 23.9	+0.1
LAST	Lasithi	0.93	22	P	Pn	16 29 14.2	-0.1
LAST	Lasithi	0.93	22	P	Pb	16 29 14.0	+0.2
LAST				AML	AML	16 29 40.1	
comp=E,26444μm,0.8s							
LAST				AML	AML	16 29 46.1	
comp=N,31616μm,0.9s							
GVD	Gavdhos	0.96	304	ePn	Pb	16 29 14.4	+0.2
GVD	Gavdhos	0.96	304	P	Pb	16 29 14.4	+0.2
GVD				S	Sn	16 29 27.1	-0.5
GVD	Gavdhos	0.96	304	P	Pb	16 29 14.4	+0.2
GVD				S	Sn	16 29 29.5	+1.9
GVD				AML	AML	16 29 35.3	
comp=N,72010μm,0.6s							
GVD				AML	AML	16 29 36.1	
comp=E,95610μm,0.5s							
IDI	Anoyia	0.99	353	Pn	Pn	16 29 15.2	+0.1
comp=E,335nm,0.3s,baz=185,slow=17,SNR=20							
IDI	Anoyia	0.99	353	eSg	Pn	16 29 15.2	+0.1
IACM	Heraklion	1.00	1	P	Pn	16 29 15.8	+0.6
NPS	Neapolis	1.06	26	P	Pb	16 29 17.1	+1.0
NPS	Neapolis	1.06	26	P	Pn	16 29 15.9	-0.2
NPS				S	Sn	16 29 31.0	+0.7
NPS				AML	AML	16 29 42.4	
comp=N,23529μm,1.0s							
NPS				AML	AML	16 29 47.9	
comp=E,34195μm,0.8s							
PRNS	Prines Rethymn	1.15	337	P	Pb	16 29 17.9	+0.4
STIA	Sitia Lasithi	1.24	43	P	Pb	16 29 22.1	+3.0
ZKR	Zakros	1.26	50	PN	Pn	16 29 18.4	-0.3
ZKR				SN	Sb	16 29 35.5	+0.4
VAM	Vamos	1.30	328	P	Pb	16 29 20.2	+0.1
VAM	Vamos	1.30	328	P	Pb	16 29 20.3	+0.1
VAM				S	Sb	16 29 38.8	+2.3
IMMV	Iera Moni Meta	1.45	323	P	Pb	16 29 23.5	+0.8
IMMV				AML	AML	16 29 58.1	
comp=E,40846μm,1.1s							
IMMV				AML	AML	16 30 06.0	
comp=N,38647μm,1.0s							
SANT	Santorini	2.09	9	PN	Pb	16 29 32.0	-1.6
SANT	Santorini	2.09	9	ePn	Pn	16 29 27.9	-2.4
SANT	Santorini	2.09	9	⇑iP	Pn	16 29 30.7	+0.5
SANT	Santorini	2.09	9	S	Sb	16 29 59.1	0.0
THR5	Thira Island,	2.12	7	P	Pn	16 29 32.4	+1.8
ANAF	Anafi Island	2.13	16	P	Pn	16 29 32.5	+1.7
KARP	Karpathos	2.13	54	PN	Pn	16 29 32.1	+1.3
KARP	Karpathos	2.13	54	P	Pb	16 29 34.2	-0.1
IOSP	Ios island	2.42	5	P	Pn	16 29 36.0	+1.3
IOSP	Ios island	2.42	5	P	Pn	16 29 36.1	+1.3
MHLO	Agia Marina, M	2.44	348	P	Pn	16 29 35.9	+0.9
AMGA	Amorgos Island	2.62	15	P	Pn	16 29 38.7	+1.3
APE	Apeiranthos	2.79	8	PN	Pn	16 29 41.5	+1.7
APE	Apeiranthos	2.79	8	ePn	Pn	16 29 40.8	+1.0
APE	Apeiranthos	2.79	8	P	Pn	16 29 40.8	+1.0
APE	Apeiranthos	2.79	8	⇑iP	Pn	16 29 41.0	+1.2
APE	Apeiranthos	2.79	8	deP	Pn	16 29 38.9	-0.9
APE	Apeiranthos	2.79	8	P	Pn	16 29 41.1	+1.2
SLUM	Salum	2.81	177	P	Pn	16 29 40.7	+0.7
baz=178							
SLUM				AMP		16 30 00.0	
baz=178							
SLUM				S	Sn	16 30 13.9	+0.6
baz=178							
VLI	Veliai	2.96	325	ePn	Pn	16 29 42.6	+0.4
VLI	Veliai	2.96	325	P	Pn	16 29 42.6	+0.4
ARG	Arkhangelos	3.16	52	PN	Pn	16 29 46.2	+1.3
DAT	Datca	3.18	40	PN	Pn	16 29 46.9	+1.6
DAT	Datca	3.18	40	iP	Pn	16 29 43.8	-1.5
DATC	Datca-Mugla	3.25	40	PN	Pn	16 29 47.9	+1.8
BODT	Bodrum	3.31	33	PN	Pn	16 29 49.4	+2.4
BDRM	Kayabasi	3.38	35	iP	Pn	16 29 47.1	-0.8
BBRN	Bozburun-Marma	3.42	45	PN	Pn	16 29 49.9	+1.5
MATC	Matruh	3.47	147	P	Pn	16 29 49.7	+0.5
baz=148							
MATC				AMP		16 30 00.0	
baz=148							
MATC				S	Sn	16 30 29.2	-0.5
baz=148							
MRSB	Marmaris-Mugla	3.52	46	PN	Pn	16 29 51.5	+1.6
VLY	Voula,Athens	3.69	344	P	Pn	16 29 54.0	+1.8
GCAM	G?zelcaml?	3.83	27	PN	Pn	16 29 56.3	+2.3
GCAM	G?zelcaml?	3.83	27	iP	Pn	16 29 54.7	+0.7
ITM	Ithomi	3.83	319	ePn	Pn	16 29 56.6	+2.5
YER	Yerkesik	3.86	42	PN	Pn	16 29 56.4	+1.8
YER	Yerkesik	3.86	42	ePn	Pn	16 29 57.3	+2.7
YER	Yerkesik	3.86	42	P	Pn	16 29 57.3	+2.7
YER	Yerkesik	3.86	42	eP	Pn	16 29 57.3	+2.7
DALY	Dalyan (Mula)	3.87	48	PN	Pn	16 29 56.3	+1.8
DALY	Dalyan (Mula)	3.87	48	iP	Pn	16 29 49.6	-4.9
TURN	Turunc	3.87	47	PN	Pn	16 29 52.3	-2.3
TURN	Turunc	3.87	47	iP	Pn	16 29 48.3	-6.3
TURN				iS	Sn	16 30 32.1	-7.3
TURN				IAML_P			
comp=Z,1μm,0.1s							
DGB	zmir	4.03	21	iP	Pn	16 29 59.1	+2.3
FETY	Fethiye	4.03	54	PN	Pn	16 29 58.6	+1.7
FETY	Fethiye	4.03	54	iP	Pn	16 29 50.9	-6.0
FETY				iS	Sn	16 30 42.7	-0.9
CHOS	Chios island	4.16	11	PN	Pn	16 30 01.4	+2.7
AKAS	Kas	4.20	61	PN	Pn	16 30 00.7	+1.4
AKAS	Kas	4.20	61	iP	Pn	16 29 53.5	-5.8
URLA	Izmir	4.24	17	PN	Pn	16 30 01.8	+2.0
URLA	Izmir	4.24	17	iP	Pn	16 30 01.7	+2.0
URLA				IAML_P			
comp=Z,4μm,0.3s							
AYDB	Zeytinkoy-Aydi	4.30	31	PN	Pn	16 30 03.0	+2.3
BLCB	Balcova	4.38	21	PN	Pn	16 30 03.5	+1.8
ELL	Elmali	4.66	57	PN	Pn	16 30 07.1	+1.6
SIGR	SIGRI	4.94	7	PN	Pn	16 30 12.7	+3.3
MANT	Manisa	5.05	33	ePn	Pn	16 30 10.5	-0.5
MANT	Manisa	5.05	33	iP	Pn	16 30 09.1	-1.9
MANT				IAML_P			
comp=Z,226nm,0.2s							
SWA2		5.05	176	P	Pn	16 30 11.6	+0.7
baz=176							
KORT	Korkueli	5.09	57	PN	Pn	16 30 13.3	+1.8
ANTB	Antalya	5.25	59	PN	Pn	16 30 15.5	+1.9
BCK	Bucak	5.49	53	PN	Pn	16 30 19.3	+2.3
HBRG	Burj al `Arab	5.50	131	P	Pn	16 30 17.5	+0.5
baz=132							
ISP	Isparta	5.66	50	ePn	Pn	16 30 18.8	-0.5
ISP	Isparta	5.66	50	⇓iP	Pn	16 30 22.1	+2.8
ISP	Isparta	5.66	50	eP	Pn	16 30 18.8	-0.5
BALB	Balikesir	5.79	22	ePn	Pn	16 30 19.9	-1.1
PPCY	Paphos	6.05	82	P	Pn	16 30 23.2	-1.3
baz=264							
LIT	Litokhoron	6.14	341	ePn	Pn	16 30 26.9	+1.1
LIT	Litokhoron	6.14	341	eP	Pn	16 30 26.9	+1.1
ALFC	Alefka	6.28	80	P	Pn	16 30 26.5	-1.2
baz=262							
ALFC				S	Sn	16 31 35.5	-3.4
SZAC	Souni	6.48	84	P	Pn	16 30 28.8	-1.8
baz=266							
ALN	Alexandroupoli	6.63	7	ePn	Pn	16 30 34.7	+2.2
ALN	Alexandroupoli	6.63	7	eP	Pn	16 30 34.7	+2.2
HMYD	Mayadein	6.63	131	P	Pn	16 30 33.0	+0.4
baz=131							
HNAT	Natroun	6.64	133	P	Pn	16 30 32.6	-0.1
baz=133							
MAMC	Mammari	6.78	80	P	Pn	16 30 34.1	-0.6
baz=263							
CSS	Mathiatis	6.86	82	P	Pn	16 30 34.6	-1.1
baz=265							
CSS				S	Sn	16 31 50.5	-2.7
FNA	Florina	7.10	337	ePn	Pn	16 30 40.5	+1.5
FNA	Florina	7.10	337	eP	Pn	16 30 40.5	+1.5
VAY	Valandovo	7.28	345	iPn	Pn	16 30 48.8	+7.4
MMB	Musomiste	7.35	352	eP	Pn	16 30 45.1	+2.6
RZN	Rozhen	7.38	358	eP	Pn	16 30 44.2	+1.2
OHR	Ohrid	7.58	335	iPn	Pn	16 30 46.0	+0.2
CTYL	Yalikoy Yolu	7.61	19	⇓iP	Pn	16 30 48.4	+2.5
KRUS	Krusevo	7.67	338	iPn	Pn	16 30 46.1	-0.8
KKB	Krupnik	7.71	349	ePn	Pn	16 30 56.2	+8.8
STIP	Stip	7.72	344	iPn	Pn	16 30 47.0	-0.5
DIM	Dimitrovgrad	7.75	3	eP	Pn	16 30 49.1	+1.3
PLD	Plovdiv	7.79	358	eP	Pn	16 30 49.7	+1.2
TIP	Timpagrande	8.24	309	ePn	Pn	16 30 53.5	-1.2
TIP	Timpagrande	8.24	309	⇑iP	Pn	16 30 49.5	-5.3
ANTO	Ankara	8.31	46	ePn	Pn	16 30 54.4	-1.4
ANTO	Ankara	8.31	46	eP	Pn	16 30 54.4	-1.4
VTS	Vitosha	8.42	351	ePn	Pn	16 30 56.7	-0.6
VTS	Vitosha	8.42	351	⇑iP	Pn	16 30 57.4	+0.1
VTS	Vitosha	8.42	351	eP	Pn	16 30 56.7	-0.6
VTS	Vitosha	8.42	351	eP	Pn	16 31 03.5	+6.2
HNTI	Hanita	8.53	95	Pn	Pn	16 30 44.5	-14
SLTI	Sal'it	8.62	101	Sn	Sn	16 32 21.3	-15
MMAI	Mount Meron Ar	8.73	96	Pn	Pn	16 30 54.4	-7.0
comp=Z,2.4nm,0.3s,baz=264,slow=11,SNR=6.8							
MMAI	Mount Meron Ar	8.73	96	Pn	Pn	16 31 00.8	-0.6
comp=Z,20nm,0.3s,baz=280,slow=9.7,SNR=23							
MMAI				Sn	Sn	16 32 33.9	-5.4
comp=Z,32nm,0.3s,baz=281,slow=23,SNR=9.8							
AMAZ	Amatzia	8.74	106	Pn	Pn	16 30 47.3	-14
AMAZ				Sn	Sn	16 32 25.2	-14
BR131	Keskin Array S	8.74	49	ePn	Pn	16 31 00.7	-1.0
BR131	Keskin Array S	8.74	49	Pn	Pn	16 31 09.5	+7.8
SNR=12							
BR131	Keskin Array S	8.74	49	P	Pn	16 31 09.5	+7.8
SNR=12							
BRTR	Keskin Array B	8.74	49	Pn	Pn	16 31 04.0	+2.3
comp=Z,0.4nm,0.3s,baz=220,slow=11,SNR=12							
BRTR				Sn	Sn	16 32 36.9	-2.9
baz=216,slow=25,SNR=2.6							
BRTR	Keskin Array B	8.74	49	P	Pn	16 31 04.0	+2.3
TAR1	Taranto	8.76	317	ePn	Pn	16 31 06.3	+4.6
WDD	Wied Dalam	8.76	289	ePn	Pn	16 31 01.1	-0.7
MMLI	Mount Malkishu	8.87	99	Pn	Pn	16 30 48.5	-15
MMLI	Mount Malkishu	8.87	99	P	Sn	16 32 37.9	-4.9
GEM	Giv'at Ha'Em	8.91	94	Pn	Pn	16 30 49.5	-14
GEM				Sn	Sn	16 32 28.7	-15
KSDI	Kefar Szold	8.91	94	Pn	Pn	16 30 49.7	-14
KSDI				Sn	Sn	16 32 29.1	-14
FASA	Fasano	8.92	319	ePn	Pn	16 31 02.2	-1.7
NATI	Neve Ativ	8.96	94	Pn	Pn	16 30 50.5	-14
NATI				Sn	Sn	16 32 29.0	-16
YTIR	Yattir	8.96	106	Pn	Pn	16 30 51.1	-14
YTIR				Sn	Sn	16 32 31.0	-14
HMDT	Nahal Hemdat	9.01	100	Pn	Pn	16 30 51.4	-14
HMDT				Sn	Sn	16 32 30.8	-15
SHMJ	Saham	9.09	97	P	Pn	16 31 05.8	-0.5
comp=Z,143nm,0.5s							
SHMJ	Saham	9.09	97	P	Sn	16 32 46.2	-1.8
MPEP	Malo Peshtene	9.10	354	P	Pn	16 31 08.9	+2.5
DSI	Dead Sea	9.10	105	Pn	Pn	16 30 53.3	-13
DSI				Sn	Sn	16 32 34.0	-14
DRME	Dracevica, Mon	9.12	331	ePn	Pn	16 31 05.7	-1.0
MZDA	Masada	9.18	106	Pn	Pn	16 30 53.8	-14
MZDA				Sn	Sn	16 32 36.0	-14
VAE	Valguarnera	9.19	293	Pn	Pn	16 31 08.6	+0.8
comp=Z,4.2nm,0.3s,baz=315,slow=24,SNR=5.1							
VAE				Sn	Sn	16 32 45.5	-5.2
comp=Z,4.1nm,0.3s,baz=146,slow=11,SNR=2.9							
KRMI	Paran Flat	9.20	114	Pn	Pn	16 30 54.8	-13
PRNI	Paran	9.30	112	Pn	Pn	16 30 55.5	-14
LISJ	El Lisan	9.30	106	P	Pn	16 31 09.5	+0.4
LISJ	El Lisan	9.30	106	P	Sn	16 32 47.3	-5.8
PDG	Podgorica	9.30	332	⇓iP	Pn	16 31 08.0	-1.2
PDG	Podgorica	9.30	332	ePn	Pn	16 31 06.7	-2.5
SG1	Sgolgore (BA)	9.31	317	ePn	Pn	16 31 08.1	-1.2
SG1				Sn	Sn	16 32 45.6	-7.8
ZFRI	Zfri	9.34	111	Pn	Pn	16 30 55.7	-14
ZFRI				Sn	Sn	16 32 39.6	-15
WALJ	Wala	9.45	104	P	Pn	16 31 11.1	-0.1
WALJ	Wala	9.45	104	P	Sn	16 32 48.9	-8.0
HRFI	Mount Harif	9.47	114	Pn	Pn	16 30 58.1	-14
HRFI				Sn	Sn	16 32 43.1	-14
MBRI	Mt Berech	9.50	116	Pn	Pn	16 30 58.2	-14
MBRI				Sn	Sn	16 32 43.9	-14
EIL	Elat	9.59	116	Pn	Pn	16 31 13.4	+0.2
comp=Z,12nm,0.3s,baz=265,slow=6.0,SNR=22							
EIL				Sn	Sn	16 32 53.6	-6.8
comp=Z,14nm,0.3s,baz=291,slow=22,SNR=5.7							
EIL	Elat	9.59	116	Pn	Pn	16 30 59.4	-14
EIL	Elat	9.59	116	Pn	Pn	16 30 59.8	-13
EIL				Sn	Sn	16 32 45.6	-15
EIL				Sn	Sn	16 32 46.1	-14
EIL	Elat	9.59	116	P	Pn	16 31 20.7	+7.5
HCY	Herceg Novi	9.62	330	ePn	Pn	16 31 06.0	-7.6
AQBJ	Aqaba	9.64	116	P	Pn	16 31 14.5	+0.7
comp=Z,205nm,0.5s							
JDRJ	Daraweish	9.65	109	P	Pn	16 31 14.4	+0.3
comp=Z,94nm,0.5s							
JDRJ	Daraweish	9.65	109	P	Sn	16 32 54.7	-7.3
HSNJ	Maan	9.87	111	P	Pn	16 31 18.1	+1.0
comp=Z,233nm,0.6s							
HSNJ	Maan	9.87	111	P	Sn	16 32 58.3	-9.0
TREB	Trebinje	9.90	330	ePn	Pn	16 31 14.9	-2.5
BRY	Bratogost	9.98	331	ePn	Pn	16 31 15.8	-2.8
UPM	Unac-Piva	10.10	333	ePn	Pn	16 31 19.0	-1.3
ASF	Jabal al Asfar	10.15	99	Pn	Pn	16 31 19.7	-1.2
comp=Z,2.0nm,0.3s,baz=255,slow=7.5,SNR=6.9							
ASF				Sn	Sn	16 33 08.0	-6.2
comp=Z,3.2nm,0.3s,baz=12,slow=19,SNR=4.5							
ASF	Jabal al Asfar	10.15	99	P	Pn	16 31 20.1	-0.8
comp=Z,18nm,1.0s							
STON	Ston	10.30	328	ePn	Pn	16 31 21.0	-1.9
BBLS	Lazići	10.51	337	ePn	Pn	16 31 22.1	-3.7
DIVS	Divibare	10.54	340	ePn	Pn	16 31 24.0	-2.2
HAPS	Han Pijesak,Bl	10.85	336	ePn	Pn	16 31 26.3	-4.2
CFR	Carcaliu	11.12	11	⇑iP	Pn	16 31 37.2	+3.2
VOIR		11.12	0	⇓iP	Pn	16 31 35.9	+1.7
MLR	Muntele Rosu	11.20	3	Pn	Pn	16 31 36.1	+0.9
comp=Z,0.1nm,0.3s,baz=89,slow=0.5,SNR=5.3							
MLR	Muntele Rosu	11.20	3	⇑iP	Pn	16 31 36.3	+1.0
MLR	Muntele Rosu	11.20	3	eP	Pn	16 31 36.0	+0.7
BZS	Buzias	11.60	348	⇑iP	Pn	16 31 39.5	-1.2
VRI	Vrincioaia	11.62	6	⇑iP	Pn	16 31 42.5	+1.5
MGRS	Mrkonjic Grad	11.83	331	ePn	Pn	16 31 40.2	-3.6
BLY	Banja Luka	12.06	332	ePn	Pn	16 31 50.7	+3.7
BLY	Banja Luka	12.06	332	ePn	Pn	16 31 44.6	-2.4
DRGR		12.60	353	⇑iP	Pn	16 31 55.0	+0.6
BIZ	Bicaz	12.65	3	⇑iP	Pn	16 31 56.1	+1.1
MORH	Mrgy, Hungar	12.86	340	ePn	Pn	16 31 49.2	-8.6
MORH	Mrgy, Hungar	12.86	340	EPn	Pn	16 31 55.0	-2.8
MORH				Sn	Sn	16 34 23.0	+2.8
KEST	Kesra	12.95	281	Pn	Pn	16 31 58.9	-0.4
comp=Z,0.1nm,0.3s,baz=225,slow=11,SNR=2.9							
KEST				Sn	Sn	16 34 13.7	-9.2
baz=207,slow=18,SNR=2.5							
KIS	Kishinev	13.00	12	eP	P	16 32 27.0	+17
BURAR	Bucovina Array	13.30	0	⇑iP	Pn	16 32 05.3	+1.3
CRES	Cresnjev	13.64	330	ePn	Pn	16 32 05.4	-3.1
VISS	Visnje	13.88	329	iPn	Pn	16 32 10.4	-1.4
CEY	Cerknica	14.01	328	ePn	Pn	16 32 13.3	-0.3
CEY	Cerknica	14.01	328	ePn	Pn	16 32 09.0	-4.6
PSZ	Piszkesteto	14.14	346	⇑iP	Pn	16 32 16.0	+0.6
PSZ	Piszkesteto	14.14	346	EPn	Pn	16 32 16.0	+0.6
ANN	Anapa	14.17	39	eP	P	16 32 20.6	-2.5
ANN				pmax	pmax		
comp=Z,115nm,1.5s							
JAVS	Javornik	14.29	327	iPn	Pn	16 32 15.2	-2.3
UZH	Uzhgorod	14.46	353	eP	Pn	16 32 20.2	+0.5
SOKA	Soboth	14.51	331	ePn	Pn	16 32 17.5	-2.9
comp=Z,44nm,0.9s,SNR=7.7							
OBKA	Obir	14.56	330	Pn	Pn	16 32 21.7	+0.4
comp=Z,35nm,1.5s,SNR=7.3							
KOLS	Kolonicke sedl	14.76	353	eP	Pn	16 32 24.4	+0.5
KOLS	Kolonicke sedl	14.76	353	ePN	Pn	16 32 24.4	+0.5
KOLS	Kolonicke sedl	14.76	353	eP	P	16 32 31.6	+1.9
ARSA	Arzberg	14.79	334	ePn	Pn	16 32 23.0	-1.3
comp=Z,20nm,0.7s,SNR=5.5							
SOP	Sopron	14.81	337	EPn	Pn	16 32 27.1	+2.6
BCA	Borcka	14.89	57	⇑iP	Pn	16 32 27.7	+2.0
VYHS	Vyhne	14.92	344	eP	Pn	16 32 25.2	-0.7
VYHS	Vyhne	14.92	344	ePN	Pn	16 32 25.2	-0.7
VYHS	Vyhne	14.92	344	eP	P	16 32 31.3	-0.1
MYKA	Terra Mystica	15.04	328	ePn	Pn	16 32 25.1	-2.6
comp=Z,17nm,1.0s							
ZST	Bratislava	15.10	339	eP	P	16 32 32.8	-0.6
ZST	Bratislava	15.10	339	eP	P	16 32 32.8	-0.6
MODS	Modra-Piesok	15.21	340	eP	P	16 32 33.0	-1.7
MODS	Modra-Piesok	15.21	340	eP	P	16 32 33.0	-1.7
CONA	Conrad Observa	15.26	336	ePn	Pn	16 32 29.4	-1.1
comp=Z,23nm,1.5s							
KBA	Koelnbreinsper	15.52	329	ePn	Pn	16 32 33.1	-0.9
comp=Z,74nm,1.2s,SNR=15							
LVV	L'vov	15.52	358	eP	P	16 32 40.0	+1.9
JAVC	Velka Javorina	15.54	342	ePN	P	16 32 37.5	-0.9
ABTA	Abfaltersbach	15.64	326	ePn	Pn	16 32 33.0	-2.5
comp=Z,56nm,0.7s,SNR=16							
DOMR	Dombai	15.71	50	eP	Pn	16 32 37.3	+0.7
MOA	Molln	15.77	332	ePn	Pn	16 32 34.1	-3.0
comp=Z,7.4nm,1.0s,SNR=14							
KRUC	Moravsky	16.08	339	eP	P	16 32 43.8	-0.6
VRAC	Vranov	16.25	340	Pn	Pn	16 32 44.1	+0.9
comp=Z,2.4nm,0.3s,baz=144,slow=10,SNR=38							
VRAC	Vranov	16.25	340

KHC ex x 16 33 04.7
DPC Dobruska-Polom 17.27 341 eP **Pn 16 32 56.2 +0.1**
DPC Dobruska-Polom 17.27 341 eP **Pn 16 32 56.2 +0.1**
DPC ex x 16 33 06.6
DAVA Damuels 17.28 323 eP **Pn 16 32 56.1 -0.3**
comp=Z,39nm,0.8s,SNR=13
GOPC GO Pecny, Ondr 17.33 337 eP **Pn 16 32 55.1 -1.8**
GOPC ex x 16 32 58.2
PRU Pruhonice 17.48 337 eP **Pn 16 32 57.3 -1.4**
PRU Pruhonice 17.48 337 eP **Pn 16 32 57.3 -1.4**
PRU ex x 16 32 59.8
PRU ex x 16 33 08.0
OSTC Ostas 17.48 341 eP **Pn 16 32 58.6 -0.2**
GOF Gofitskoye 17.49 47⇑ eP **P 16 33 00.1 +0.2**
GOF pmax pmax
comp=Z,75nm,0.8s
UPC Upice 17.49 341 eP **Pn 16 32 58.9 0.0**
UPC Upice 17.49 341 eP **Pn 16 32 58.9 0.0**
CHVC Chvalec 17.55 341 eP **Pn 16 32 59.7 0.0**
SENIN Lac Senin/Sane 18.07 317 eP **Pn 16 33 05.6 -0.6**
comp=Z,12nm,0.7s
NKC Novy Kostel 18.41 334 eP **Pn 16 33 10.3 +0.2**
NKC Novy Kostel 18.41 334 eP **Pn 16 33 10.3 +0.2**
GROC Groznyy 18.43 55 eP **P 16 33 08.8 -1.5**
GROC pmax pmax
comp=Z,48nm,1.1s
BRG Berggiesshubel 18.43 337 eP **P 16 33 10.0 -0.3**
comp=Z,31nm,1.2s
BRG e 16 33 18.9
comp=Z,30nm,1.1s
GRFO Grafenberg 18.45 331 eP **P 16 33 10.2 -0.3**
comp=Z,68nm,0.9s
GRFO Grafenberg 18.45 331 eP **P 16 33 10.2 -0.3**
GRFO pmax pmax
comp=Z,69nm,0.9s
BFO Black Forest 18.76 323 eP **Pn 16 33 14.2 -0.2**
comp=Z,15nm,0.8s
BFO Black Forest 18.76 323 ceP **Pn 16 33 14.6 +0.1**
GNBR Gunib 18.96 58⇑ eP **Pn 16 33 18.7 +1.8**
CLL Collm 19.11 336 i P **P 16 33 17.7 0.0**
comp=Z,66nm,1.5s
CLL i pP **pP 16 33 21.1 -1.8**
CLL ePP **PnPn 16 33 30.0 -1.4**
CLL Collm 19.11 336 i P **P 16 33 17.7 0.0**
CLL pmax pmax
comp=Z,66nm,1.5s
AKT Akhty 19.25 61 eP **Pn 16 33 21.0 +0.5**
AKT eS **S 16 36 59.7 +3.0**
AKT pmax pmax
comp=Z,36nm,1.4s
VORD Divnogorie 19.62 28 eP **P 16 33 22.3 -0.9**
VORD pmax pmax
comp=Z,20nm,0.6s
VSR Storozhevoye 19.77 27 eP **P 16 33 23.1 -1.8**
VSR pmax pmax
comp=Z,30nm,1.1s
VORR Voronezh 20.15 26 P **P 16 33 30.0 +0.9**
VORR pmax pmax
comp=Z,250nm,1.2s
MICGM Minsk 20.30 5 e **P 16 33 27.0 -3.6**
MNK Minsk 20.30 5 eP **P 16 33 27.0 -3.6**
NACGM Naroch 20.64 3 e **P 16 33 32.0 -2.3**
WLF Walferdange 20.72 324 eP **P 16 33 35.7 +0.5**
comp=Z,268nm,1.0s
WLF Walferdange 20.72 324 eP **P 16 33 35.7 +0.5**
WLF pmax pmax
comp=Z,268nm,1.0s
WLF Walferdange 20.72 324 P **P 16 33 35.4 +0.1**
comp=Z,49nm,1.2s
WLF x x 16 33 36.8
WLF pP **pP 16 33 39.3 -1.0**
LPSR Galich'ya Gora 20.82 24 eP **P 16 33 34.0 -2.3**
LPSR pmax pmax
comp=Z,50nm,1.1s
IDID Didziasalis 21.04 3 eP **P 16 33 35.5 -3.2**
IDID IAmb IAmb 16 33 41.6
comp=Z,17nm,1.1s
IIGN Ignalina 21.06 2 eP **P 16 33 36.9 -2.0**
IIGN IAmb IAmb 16 33 44.8
comp=Z,21nm,0.7s
PABE Paberze 21.22 358 eP **P 16 33 38.0 -2.5**
PABE IAmb IAmb 16 33 43.4
comp=Z,79nm,0.6s
MEM Membach 21.42 325 P **P 16 33 43.1 +0.4**
comp=Z,62nm,1.0s
MEM x x 16 33 45.6
MEM pP **sP 16 33 50.6 +0.3**
MEM PnPn **PnPn 16 34 01.4 -1.5**
HGN Heimansgroeve 21.55 326 eP **P 16 33 45.3 +1.1**
BCLA Clavier 21.63 324 P **P 16 33 45.7 +0.7**
comp=Z,18nm,1.2s
BCLA sP **pwP 16 33 55.7 +2.2**
BCLA PnPn **PnPn 16 34 04.4 -1.5**
BCLA x x 16 34 06.2
BEBN Eben Emael 21.70 325 P **P 16 33 46.0 +0.2**
HKB Herkenbosch 21.74 327 P **P 16 33 45.6 -0.6**
DOU Dourbes 21.77 323 P **P 16 33 45.8 -0.7**
comp=Z,28nm,1.1s
DOU pP **pP 16 33 51.2 -0.4**
BMRD Maredsous 21.81 323 x pP 16 33 53.7 +1.6
PBUR Paburg 21.83 355 eP **P 16 33 44.6 -2.5**
PBUR IAmb IAmb 16 33 46.0
comp=Z,133nm,0.7s
WTSB Winterswijk 22.01 329 eP **P 16 33 49.1 0.0**
SNF Seneffe 22.18 323 P **P 16 33 50.6 -0.4**
SNF x x 16 34 02.9
OBN Obninsk 22.30 18 P **P 16 33 53.1 +0.9**
comp=Z,8.2nm,0.4s,baz=33,slow=3.4,SNR=13
OBN Obninsk 22.30 18 eP **P 16 33 51.0 -1.2**
comp=Z,81nm,0.9s
OBN Obninsk 22.30 18⇑ eP **P 16 33 52.7 +0.5**
OBN ePPP PPP 16 34 21.3
OBN e 16 37 46.2
OBN pmax pmax
comp=Z,105nm,1.0s
MOS Moscow 23.13 18 eP **P 16 33 58.1 -2.8**
MOS e 16 38 14.4
MOS pmax pmax
comp=Z,42nm,0.7s
ESDC Sonseca Array 23.73 292 P **P 16 34 06.8 -0.3**
comp=Z,23nm,0.8s,baz=82,slow=9.4,SNR=80
ESDC PcP **PcP 16 37 51.7 +1.0**
comp=Z,0.5nm,0.7s,baz=24,slow=1.5,SNR=4.3
ESLA Sonseca Array 23.73 292 eP **P 16 34 06.8 -0.3**
comp=Z,23nm,0.8s
PAB San Pablo 24.02 291 eP **P 16 34 09.7 -0.2**
comp=Z,12nm,1.1s
PAB San Pablo 24.02 291 eP **P 16 34 09.7 -0.2**
PAB pmax pmax
comp=Z,12nm,1.1s
VSU Vasula 24.19 2⇓ eP **P 16 34 10.0 -1.1**
VSU pmax pmax
comp=Z,35nm,0.7s
VSU Vasula 24.19 2 eP **P 16 34 08.6 -2.5**
VSU IAmb IAmb 16 34 20.2
comp=Z,90nm,0.9s
MDT Midelt 24.72 275 P **P 16 34 16.4 0.0**
comp=Z,7.6nm,0.8s,baz=91,slow=11,SNR=12
PUL Pulkovo 25.72 6 deP **P 16 34 24.0 -0.9**
PUL pmax pmax
comp=Z,131nm,0.8s
PBRG Braganca 26.02 296 eP **P 16 34 28.1 +0.1**
comp=Z,46nm,1.2s
MVO Moncorvo 26.18 295 eP **P 16 34 29.6 +0.2**
comp=Z,66nm,0.8s
PMRV Marv??o 26.37 291 eP **P 16 34 31.0 -0.1**
comp=Z,49nm,1.2s
HOMB Homborsund 26.41 340 eP **P 16 34 31.6 +0.3**
PCBR Castelo Branco 26.44 292 eP **P 16 34 31.6 -0.2**
comp=Z,35nm,1.4s
MTE Manteigas 26.52 293 eP **P 16 34 32.8 +0.3**
comp=Z,29nm,1.3s
MTE Manteigas 26.52 293 eP **P 16 34 32.2 -0.3**
comp=Z,12nm,0.9s
PVAQ Vaqueiros 26.66 286 eP **P 16 34 34.0 +0.2**
PVRL Vila Real 26.70 295 eP **P 16 34 34.4 +0.2**
comp=Z,31nm,1.6s
PBEJ Beja 26.75 288 eP **P 16 34 38.2 +3.6**
comp=Z,20nm,1.9s
POLO Lamas de Olo 26.77 295 eP **P 16 34 35.0 +0.2**
comp=Z,14nm,1.6s
PVIS Viseu 26.80 294 eP **P 16 34 35.2 +0.1**
comp=Z,32nm,1.9s
PBDV Barranco-do-Ve 26.84 286 eP **P 16 34 35.5 0.0**
comp=Z,50nm,2.0s

EVO Evora 26.85 289 eP **P 16 34 35.2 -0.3**
comp=Z,31nm,1.2s
GEYT Alibeck 26.88 73 P **P 16 34 36.3 +0.5**
comp=Z,2.1nm,0.5s,baz=280,slow=8.5,SNR=5.9
GYA0B ALIBECK ARRAY 26.88 73 eP **P 16 34 34.9 -0.8**
comp=Z,7.4nm,0.8s
HFS Hagfors 26.89 347 P **P 16 34 34.2 -1.4**
comp=Z,8.7nm,0.6s,baz=154,slow=11,SNR=22
PCVE Castro Verde 26.91 287 eP **P 16 34 35.8 -0.2**
comp=Z,45nm,1.7s
PCAB Cabril 26.97 296 eP **P 16 34 37.0 +0.4**
PMTG Montargil 27.01 290 eP **P 16 34 37.3 +0.4**
comp=Z,23nm,2.0s
MESJ Messejana 27.04 287 eP **P 16 34 36.2 -1.0**
MESJ AMb AMB 16 34 57.4
comp=Z,33nm,1.3s
MESJ Messejana 27.04 287 eP **P 16 34 36.2 -1.0**
FIA0 FINESS Array S 27.17 1 ePcP **PcP 16 37 58.1 +0.2**
FINES FINESS Array B 27.17 1 P **P 16 34 36.6 -1.4**
comp=Z,13nm,0.7s,baz=162,slow=10,SNR=43
FINES PcP **PcP 16 37 58.1 +0.2**
comp=Z,2.6nm,0.4s,baz=122,slow=3.4,SNR=9.5
FINES FINESS Array B 27.17 1 ceP **P 16 34 36.5 -1.5**
FINES pmax pmax
comp=Z,13nm,0.7s
FIA1 FINESS Array S 27.17 1 eP **P 16 34 37.0 -1.1**
comp=Z,39nm,1.0s
COI Coimbra 27.17 292 eP **P 16 34 38.6 +0.3**
PCAS Casmilo, Conde 27.23 292 eP **P 16 34 41.3 +2.4**
PNCL Nicolau / Gran 27.27 288 eP **P 16 34 40.6 +1.4**
comp=Z,43nm,1.6s
OSL Oslo 27.31 344 eP **P 16 34 38.2 -1.1**
KONO Kongsberg 27.32 343⇑ eP **P 16 34 36.6 -2.8**
KONO pmax pmax
comp=Z,30nm,1.7s
KONO Kongsberg 27.32 343 eP **P 16 34 37.4 -2.0**
NC602 NORSAR Array S 27.86 346 eP **P 16 34 43.8 -0.5**
ASUD Al Ashush, Dub 27.98 102 P **P 16 34 47.8 +2.1**
SHME Shamm 28.03 99 P **P 16 34 47.4 +1.2**
NAZ Nazwa, Dubai 28.09 101 P **P 16 34 48.1 +1.4**
NAZ Nazwa, Dubai 28.09 101 P **P 16 34 46.6 -0.1**
NAO01 NORSAR Array S 28.09 345 eP **P 16 34 45.5 -0.9**
comp=Z,88nm,0.8s
FAQ Al Faqa, Dubai 28.14 102 P **P 16 34 48.4 +1.2**
FAQ Al Faqa, Dubai 28.14 102 P **P 16 34 48.5 +1.2**
KLMR Klimovskoe 28.17 15 eP **P 16 34 42.6 -4.4**
KLMR pmax pmax
comp=Z,45nm,0.9s
KLMR Klimovskoe 28.17 15 eP **P 16 34 42.7 -4.3**
KLMR AMP 16 34 46.8
comp=Z,45nm,0.9s
NB2 NORSAR Subarra 28.20 346 P **P 16 34 46.1 -1.3**
comp=Z,14nm,0.7s,baz=156,slow=9.3
NOA NORSAR Array B 28.20 346 P **P 16 34 46.7 -0.7**
comp=Z,9.5nm,0.7s,baz=159,slow=9.8,SNR=29
BANOM Banah 28.21 99 P **P 16 34 49.1 +1.3**
BANOM Banah 28.21 99 P **P 16 34 48.5 +0.7**
ODD1 Odda 28.32 340 eP **P 16 34 50.0 +1.6**
MSFE Esma-Masafi 28.33 100 P **P 16 34 50.3 +1.4**
MDH Madha 28.47 100 P **P 16 34 51.2 +1.1**
MDH Madha 28.47 100 P **P 16 34 50.7 +0.6**
NC204 NORSAR Array S 28.51 346 eP **P 16 34 49.7 -0.5**
SKAR Skarslia 28.54 343 eP **P 16 34 50.0 -0.4**
HATD Hatta, Dubai 28.55 101 i P **P 16 34 52.1 +1.3**
SNR=8.8
HATD Hatta, Dubai 28.55 101 P **P 16 34 52.2 +1.4**
ASHO Ashiyiah 28.55 101 i P **P 16 34 51.9 +1.1**
SNR=6.4
ASHO Ashiyiah 28.55 101 P **P 16 34 51.9 +1.1**
UOSS Minazif 28.55 101 eP **P 16 34 51.4 +0.6**
comp=Z,15nm,0.8s
UOSS Minazif 28.55 101 i P **P 16 34 52.0 +1.1**
SNR=9.0
UOSS Minazif 28.55 101 P **P 16 34 52.1 +1.3**
ALNE Al Ain 28.59 103 P **P 16 34 52.8 +1.6**
EKA Eskdalemuir Ar 28.69 326 P **P 16 34 51.2 -0.5**
comp=Z,19nm,0.8s,baz=123,slow=9.1,SNR=30
ESK Eskdalemuir 28.70 326 ceP **P 16 34 52.4 +0.6**
AKTO Aktyubinsk 28.91 46 P **P 16 34 53.8 +0.1**
comp=Z,8.8nm,0.7s,baz=256,slow=9.1,SNR=14
AKTO Aktyubinsk 28.91 46 P **P 16 34 53.4 -0.3**
AKTO pmax pmax
comp=Z,12nm,0.8s
SOHO SOHO 29.18 102 P **P 16 34 59.0 +2.6**
SNR=7.5
SOHO SOHO 29.18 102 P **P 16 34 57.7 +1.3**
SOHO P **P 16 34 59.0 +2.6**
SNR=7.5
KIRV Kirov 29.21 26 P **P 16 34 55.6 -0.6**
comp=Z,35nm,0.6s,baz=229,slow=2.1,SNR=12
HYA Hoyanger 29.49 341 eP **P 16 34 58.4 -0.3**
DOMB Dombas 29.56 345 eP **P 16 34 59.2 -0.3**
AB31 Akbulak array 29.70 49 i P **P 16 35 00.6 -0.1**
AB31 pmax pmax
comp=Z,2.0nm,0.6s
ABKAR Akbulak array 29.70 49 eP **P 16 35 00.2 -0.5**
comp=Z,2.6nm,1.0s
SUE Sulen 29.79 340 eP **P 16 35 00.5 -0.9**
TOA1 Torodi Ar. Sit 29.87 231 eP **P 16 35 01.9 -0.6**
TOA0 Torodi Ar. Sit 29.87 231 eP **P 16 35 03.1 +0.5**
comp=Z,26nm,0.6s
TORD Torodi Ar. Bea 29.87 231 P **P 16 35 01.9 -0.6**
comp=Z,14nm,0.6s,baz=32,slow=8.1,SNR=41
AKN Aaknes 30.15 343 eP **P 16 35 03.9 -0.7**
PRGR Permogore 30.35 19 eP **P 16 35 03.5 -2.8**
PRGR e 16 35 59.8
PRGR pmax pmax
comp=Z,34nm,0.7s
MOL Molde 30.36 344 eP **P 16 35 06.1 -0.3**
TBLU Trondheim 30.41 347 eP **P 16 35 07.2 +0.4**
NSS Namsos 31.30 349 eP **P 16 35 13.7 -1.0**
WSAR Wadi Sarin 31.30 102 P **P 16 35 16.6 +1.4**
comp=Z,7.0nm,0.8s,baz=282,slow=11,SNR=7.4
ARU Arti 31.80 36 P **P 16 35 18.9 -0.3**
comp=Z,7.2nm,0.6s,baz=215,slow=8.1,SNR=23
ARU Arti 31.80 36 eP **P 16 35 18.6 -0.5**
comp=Z,30nm,0.8s
ARU Arti 31.80 36 c i P **P 16 35 18.8 -0.3**
ARU 16 36 18.8
ARU S **S 16 40 29.4 +1.2**
ARU pmax pmax
comp=Z,31nm,0.7s
MOR8 Moi Rana 32.52 352 eP **P 16 35 25.0 -0.5**
KONS Konsvik 33.00 351 eP **P 16 35 28.9 -0.6**
SVE Sverdlovsk 33.00 36⇑ eP **P 16 35 30.0 +0.3**
SVE pmax pmax
comp=Z,68nm,0.6s
APA Apatity 33.66 6⇓ i P **P 16 35 33.5 -1.8**
APA pmax pmax
comp=Z,13nm,0.7s
APA MLR MLR
comp=Z,2μm,14.0s
STEI Steigen 34.14 353 eP **P 16 35 38.7 -0.8**
KTK1 Kautokeino 34.77 359 eP **P 16 35 43.9 -1.1**
MBAR Mbarara 35.13 170 P **P 16 35 49.1 +0.4**
comp=Z,3.1nm,0.3s,baz=66,slow=20,SNR=2.9
MBAR Mbarara 35.13 170 eP **P 16 35 49.1 +0.4**
comp=Z,6.6nm,0.8s
ARA0 ARCESS Array S 35.29 0 ePcP **PcP 16 38 19.6 +0.1**
ARCES ARCESS Array B 35.29 0 P **P 16 35 48.0 -1.4**
comp=Z,9.7nm,0.6s,baz=176,slow=8.9,SNR=47
ARCES PcP **PcP 16 38 19.6 +0.1**
comp=Z,1.3nm,0.5s,baz=151,slow=2.8,SNR=4.2
ARE0 ARCESS Array S 35.29 0 eP **P 16 35 48.2 -1.2**
TRO Tromso 35.55 356 eP **P 16 35 50.0 -1.6**
KK31 Karatay Array 36.18 62 i P **P 16 35 58.0 +0.6**
KK31 pmax pmax
comp=Z,7.0nm,0.6s
BRVK Borovoye 36.95 45 eP **P 16 36 03.7 -0.1**
comp=Z,10nm,0.8s
BRVK Borovoye 36.95 45⇓ eP **P 16 36 04.7 +0.9**
BRVK pmax pmax
comp=Z,15nm,1.0s
BVAR Borovoye Array 37.01 46 P **P 16 36 05.0 +0.7**
comp=Z,8.8nm,0.9s,baz=256,slow=6.0,SNR=25
EKS2 Erkin-Say 38.60 63 P **P 16 36 19.7 +1.6**
SNR=14
DBIC Dimbokro 38.96 232 P **P 16 36 21.1 0.0**
comp=Z,9.3nm,0.8s,baz=18,slow=7.9,SNR=7.0
DBIC Dimbokro 38.96 232 eP **P 16 36 21.1 0.0**
comp=Z,14nm,1.1s
TIC Toumodi 39.09 232 eP **P 16 36 25.7 +3.4**
KIC Kosan Boka 39.12 232 eP **P 16 36 22.5 0.0**
comp=Z,25nm,0.7s
AAK Ala-Archa 39.13 63 P **P 16 36 24.2 +1.7**
comp=Z,16nm,0.9s,baz=232,slow=6.1,SNR=26
AAK Ala-Archa 39.13 63 P **P 16 36 24.5 +2.0**
SNR=10
AAK Ala-Archa 39.13 63 eP **P 16 36 24.0 +1.4**
comp=Z,22nm,1.0s
AAK Ala-Archa 39.13 63 i P **P 16 36 24.0 +1.4**
SNR=12
AAK Ala-Archa 39.13 63⇑ eP **P 16 36 23.9 +1.4**
AAK pmax pmax
comp=Z,40nm,1.7s
AAK Ala-Archa 39.13 63 P **P 16 36 24.7 +2.2**
SNR=5.3
AAK Ala-Archa 39.13 63 P **P 16 36 24.7 +2.2**
SNR=5.3
UCH Uchtor 39.17 63 P **P 16 36 24.6 +1.3**
SNR=6.8
CHMS Chumysh 39.29 62 P **P 16 36 25.3 +1.6**
SNR=11
LIC Lamto 39.41 232 eP **P 16 36 24.8 -0.1**
comp=Z,149nm,1.9s
KBK Karagaybulak 39.46 63 P **P 16 36 27.1 +1.8**
SNR=8.4
NIL Nilore 39.68 77 eP **P 16 36 27.6 +0.5**
comp=Z,17nm,0.6s
NIL Nilore 39.68 77 eP **P 16 36 27.6 +0.5**
NIL pmax pmax
comp=Z,17nm,0.6s
KZA Kyzart 39.73 63 P **P 16 36 29.8 +1.9**
SNR=11
TKM2 Tokmak 2 39.91 62 P **P 16 36 30.6 +1.5**
SNR=11
TKM2 Tokmak 2 39.91 62 P **P 16 36 29.5 +0.4**
TKM2 pmax pmax
comp=Z,10.0nm,0.7s
BOOM Boomskoye usch 40.20 63 eP **P 16 36 33.5 +2.0**
comp=Z,6.8nm,0.9s
BOOM Boomskoye usch 40.20 63 eP **P 16 36 33.5 +2.0**
BOOM pmax pmax
comp=Z,7.0nm,0.9s
ULHL Ulahol 40.45 63 P **P 16 36 35.4 +1.8**
SNR=20
KSH Kashi 40.61 67 P **P 16 36 33.8 -1.0**
KSH pmax pmax
comp=Z,24nm,0.8s
KSH LR LR
comp=Z,4μm,13.0s
KSH LR LR
comp=Z,4μm,11.9s
KSH LR LR
comp=Z,5μm,19.8s
JMIC Jan Mayen 40.88 344 P **P 16 36 36.6 +0.1**
comp=Z,41nm,0.8s,baz=110,slow=6.9,SNR=3.2
BORG Borgarnes 41.26 332 P **P 16 36 40.7 +1.1**
comp=Z,8.8nm,0.8s,baz=133,slow=8.3,SNR=5.7
KURK Kurchatov 41.80 50 eP **P 16 36 44.6 +0.3**
comp=Z,34nm,0.8s
KURK Kurchatov 41.80 50 ceP **P 16 36 44.8 +0.5**
KURK pmax pmax
comp=Z,57nm,1.3s
KURK Kurchatov 41.80 50 P **P 16 36 45.3 +1.1**
SNR=7.2
KURK Kurchatov 41.80 50 P **P 16 36 45.3 +1.1**
SNR=7.2
DHRM DHARAMSHALA 42.53 78 eP **P 16 36 50.8 0.0**
PDGK Podgornoye 42.70 61 P **P 16 36 52.1 +0.1**
PDGK pmax pmax
comp=Z,15nm,0.7s
SMLA Simla 43.58 79 eP **P 16 36 58.8 -0.1**
SCO Scoresbysund 44.10 339 i P **P 16 37 03.8 +1.1**
SCO pmax pmax
comp=Z,13nm,0.9s
SCO Scoresbysund 44.10 339 i P **P 16 37 03.8 +1.1**
comp=Z,13nm,0.9s
SPA0 Spitsbergen Ar 44.14 357 eP **P 16 37 02.5 -0.4**
comp=Z,20nm,0.8s
SPITS Spitsbergen Ar 44.14 357 P **P 16 37 02.5 -0.4**
comp=Z,5.3nm,0.4s,baz=148,slow=12,SNR=17
MK31 Makanchi Array 44.33 56 eP **P 16 37 05.9 +1.1**
comp=Z,24nm,0.9s
MK31 Makanchi Array 44.33 56 i P **P 16 37 04.7 -0.2**
MK31 pmax pmax
comp=Z,12nm,0.5s
MK32 Makanchi Array 44.33 56 ePP PP 16 38 48.2 0.0
MKAR Makanchi Array 44.33 56 P **P 16 37 06.3 +1.4**
comp=Z,17nm,0.5s,baz=275,slow=6.9,SNR=107
MKAR PcP **PP 16 38 48.2 0.0**
comp=Z,2.8nm,0.7s,baz=265,slow=6.6,SNR=2.8
DDI Dehra Dun 44.56 80 eP **P 16 37 07.5 +0.5**
NVS Novosibirsk 44.76 44⇑ i P **P 16 37 08.9 +0.8**
NVS e 16 37 17.7
NVS e 16 38 53.9
NVS pmax pmax
comp=Z,53nm,0.8s
NVS pmax pmax
comp=N,14nm,0.9s
NVS pmax pmax
comp=E,20nm,0.7s
KBS Kingsbay 45.07 356 eP **P 16 37 10.2 -0.1**
comp=E,35nm,0.6s
KBS Kingsbay 45.07 356 eP **P 16 37 10.2 -0.1**
KBS pmax pmax
comp=Z,35nm,0.6s
KBS Kingsbay 45.07 356 eP **P 16 37 10.0 -0.3**
ZAA0 Zalesovo Array 45.67 46 eP **P 16 37 15.2 -0.2**
comp=Z,34nm,0.6s
ZALV Zalesovo Beam 45.67 46 P **P 16 37 15.6 +0.2**
comp=Z,38nm,0.4s,baz=268,slow=8.9,SNR=76
BHPL Bhopal 46.77 89 eP **P 16 37 25.6 +1.2**
DAG Danmarks Havn 46.87 347 i P **P 16 37 24.5 0.0**
DAG Danmarks Havn 46.87 347 i P **P 16 37 24.5 0.0**
DGZ Jazzator, Alta 47.48 51 c i P **P 16 37 30.7 +0.8**
DGZ pmax pmax
comp=Z,10.0nm,0.8s
WMQ Urumqi 48.52 59 eP **P 16 37 39.8 +1.9**
WMQ sP sP 16 37 48.3 +2.4
WMQ pmax pmax
comp=Z,42nm,0.9s
NRIK Noril'sk 48.69 25 P **P 16 37 38.3 -0.4**
comp=Z,11nm,0.7s,baz=247,slow=4.7,SNR=22
PYUN Piuhan 49.38 81 eP **P 16 37 45.7 +0.8**
comp=Z,106nm,0.8s
SUMG Summit 49.75 339 eP **P 16 37 47.6 +0.4**
comp=Z,16nm,0.8s
SUMG Summit 49.75 339 eP **P 16 37 47.6 +0.4**
SUMG pmax pmax
comp=Z,16nm,0.8s
SUMG Summit 49.75 339⇑ i P **P 16 37 47.6 +0.4**
comp=Z,41nm,0.8s
DANN Dangsing 49.91 80 eP **P 16 37 50.1 +1.1**
comp=Z,192nm,0.7s
DMN Daman 51.30 80 eP **P 16 37 59.8 +0.4**
comp=Z,90nm,0.8s
KKN Kakani 51.37 80 eP **P 16 38 00.3 +0.4**
comp=Z,59nm,0.7s
PKI Pulchoki 51.56 80 eP **P 16 38 01.5 0.0**
comp=Z,72nm,0.8s
GUN Gumba 51.81 79 eP **P 16 38 03.8 +0.4**
comp=Z,61nm,0.6s
JIRN Jiri 52.16 80 eP **P 16 38 06.5 +0.5**
comp=Z,102nm,0.8s
SFJD Kangerlussuaq 53.39 332 eP **P 16 38 13.1 -0.9**
comp=Z,11nm,0.9s
SFJD Kangerlussuaq 53.39 332 i P **P 16 38 13.4 -0.6**
SFJD pmax pmax
comp=Z,9.0nm,0.9s
SFJD Kangerlussuaq 53.39 332 i P **P 16 38 13.4 -0.6**
comp=Z,9.1nm,0.9s
GTK Tadong 54.26 79 eP **P 16 38 21.0 -0.2**
GTK IAmb IAmb 16 38 22.9
comp=Z,12nm,0.5s
LSA Lhasa 55.37 75 P **P 16 38 30.5 +0.9**
MOY Mondy 55.66 47 eP **P 16 38 32.5 +1.6**
MOY pmax pmax
comp=Z,27nm,1.2s
TAWA Tawang 56.79 77 eP **P 16 38 40.0 +0.4**
TLY Talaya 57.26 47⇓ i P **P 16 38 43.9 +1.7**
ZAK Zakamensk 57.38 48 eP **P 16 38 44.1 +0.9**
ZAK e 16 38 52.6
ZAK pmax pmax
comp=Z,23nm,1.0s
ZAK pmax pmax
comp=Z,22nm,1.1s
SHL Shillong 57.66 79 eP **P 16 38 44.1 -1.6**
SHL IAmb IAmb 16 38 46.1
comp=Z,8.4nm,0.8s
TEZP TEZPUR 57.95 78 eP **P 16 38 46.6 -0.8**

ZIRO	ZIRO	58.42	76	eP	P	16 38 50.7	-0.2
GTA	Gaotai	58.45	61	eP	P	16 38 51.4	+0.5
GTA				pP	pP	16 38 57.6	+0.7
GTA				sP	sP	16 39 00.6	+1.6
GTA				pmax	pmax		
	comp=Z,16nm,0.8s						
KOHI	KOHIMA	59.40	78	eP	P	16 38 57.2	-0.5
KOHI				IAmb	IAmb	16 38 58.5	
	comp=Z,11nm,0.7s						
MOKO	MOKOCHONG	59.47	77	eP	P	16 38 58.5	+0.3
SONM	Songino Array	60.10	50	P	P	16 39 03.4	+1.2
	comp=Z,14nm,0.7s,baz=283,slow=9.2,SNR=49						
LKP	Lekhapani	60.10	76	eP	P	16 39 03.1	+0.8
ULN	Ulaanbaatar	60.51	50	eP	P	16 39 06.0	+1.0
	comp=Z,18nm,0.7s						
ULN	Ulaanbaatar	60.51	50	ceP	P	16 39 05.7	+0.7
ULN				pmax	pmax		
	comp=Z,48nm,1.7s						
ULN	Ulaanbaatar	60.51	50	P	P	16 39 06.3	+1.3
	SNR=7.6						
ULN	Ulaanbaatar	60.51	50	P	P	16 39 06.3	+1.3
	SNR=7.6						
BOSA	Boshof	62.58	180	P	P	16 39 20.0	+1.1
	comp=Z,4.8nm,0.6s,baz=350,slow=7.4,SNR=12						
LZH	Lanzhou	62.66	63	eP	P	16 39 19.5	-0.2
LZH				pP	pP	16 39 26.1	+0.6
LZH				sP	sP	16 39 29.3	+1.4
LZH				ePP	PP	16 41 39.3	+1.9
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,86nm,7.2s						
LZH				LR	LR		
	comp=Z,380nm,16.2s						
LZH				LR	LR		
	comp=Z,390nm,16.5s						
LZH				LR	LR		
	comp=Z,480nm,17.3s						
SCHQ	Schefferville	63.78	320	P	P	16 39 25.9	-0.8
	comp=Z,28nm,0.7s,baz=62,slow=12,SNR=15						
CD2	Chengdu	64.78	69	P	P	16 39 34.8	+1.1
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
HHC	Hu-ho-hao-te	66.19	56	eP	P	16 39 43.3	+0.6
HHC				pmax	pmax		
	comp=Z,33nm,1.2s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
CHTO	Chiang Mai	66.59	83	eP	P	16 39 45.7	+0.3
	comp=Z,2.2nm,0.7s						
CMMT	Chiang Mai	66.59	83	P	P	16 39 46.2	+0.7
KMI	Kunming	66.62	75	P	P	16 39 46.6	+0.8
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
YAK	Yakutsk	66.66	30	eP	P	16 39 44.4	-0.8
	comp=Z,12nm,0.8s						
YAK	Yakutsk	66.66	30	eP	P	16 39 43.4	-1.8
CM31	Chiang Mai Arr	66.77	83	eP	P	16 39 45.8	-0.8
	comp=Z,7.5nm,1.0s						
CMAR	Chiang Mai Arr	66.77	83	P	P	16 39 46.2	-0.4
	comp=Z,3.2nm,0.9s,baz=298,slow=8.3,SNR=18						
CMAR	Chiang Mai Arr	66.77	83	ceP	P	16 39 46.9	+0.3
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
XAN	Xi'an	67.30	64	P	P	16 39 50.3	+0.4
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN	Xi'an	67.30	64	eP	P	16 39 50.2	+0.4
	comp=Z,7.7nm,0.8s						
XAN	Xi'an	67.30	64	eP	P	16 39 50.2	+0.4
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HIA	Hailar	67.70	45	c iP	P	16 39 52.9	+0.9
HIA				pmax	pmax		
	comp=Z,135nm,1.0s						
UTTA	Uttaradit	68.45	83	P	P	16 39 58.4	+1.3
	comp=Z,9μm,1.0s						
PBKT	Sadao Pong	69.38	84	P	P	16 40 04.6	+1.6
	comp=Z,3.2nm,2.0s						
ZEA	Zeya	69.68	38	eP	P	16 40 05.0	+0.8
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
CHGQ	Chibougamau	70.10	317	P	P	16 40 06.0	-0.9
	baz=60						
CHAI	Chaiyaphum	70.56	84	P	P	16 40 11.1	+0.8
	comp=Z,25μm,0.9s						
KHON	Khomkaen	71.03	83	P	P	16 40 14.0	+0.9
	comp=Z,25μm,0.6s						
LBNH	Lisbon	71.47	311	P	P	16 40 14.3	-1.0
	baz=60						
SKNT	Sakolnakorn	71.65	82	P	P	16 40 17.3	+0.5
MATQ	Matagami	72.00	318	P	P	16 40 17.8	-0.6
	baz=58						
LSQQ	Lebel-sur-Quev	72.00	317	P	P	16 40 18.4	0.0
	baz=58						
PANO	Nakornpanom	72.08	81	P	P	16 40 20.4	+1.0
	comp=Z,0.3nm,1.8s						
D54A	Lac Fusel, La	72.82	316	P	P	16 40 22.9	-0.5
	baz=58						
LONY	Lake Ozonia	72.92	313	P	P	16 40 23.5	-0.5
	baz=58						
WHN	Wuhan	73.00	64	⇑P	P	16 40 26.4	+1.7
D53A	Lac Vacive, Po	73.46	316	P	P	16 40 27.5	+0.3
	baz=57,SNR=8.9						
E54A	Lac Daplat, Po	73.51	315	P	P	16 40 27.3	-0.1
	baz=58						
CN2	Changchun	73.82	48	eP	P	16 40 29.9	+0.6
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
E53A	Dumoine, Ponti	73.82	315	P	P	16 40 28.8	-0.5
	baz=57,SNR=8.1						
G55A	Calabogie	73.87	314	P	P	16 40 30.0	+0.4
	baz=57						
BILL	Bilibino	73.92	14	eP	P	16 40 29.3	-0.2
	comp=Z,5.8nm,1.1s						
BILL	Bilibino	73.92	14	eP	P	16 40 29.3	-0.2
BILL				e		16 40 36.2	
BILL				e		16 40 44.4	
BILL				ePPP	PPP	16 44 58.9	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
D52A	ZEK Kipawa Sen	73.93	316	P	P	16 40 29.8	-0.2
	baz=57						
H56A	Elgin	73.95	313	P	P	16 40 30.8	+0.8
	baz=58						
PEMO	Pembroke	73.95	315	P	P	16 40 30.1	0.0
	baz=57						
PLVO	Plevna	74.20	314	P	P	16 40 31.4	-0.1
	baz=57						
ALGO	Algonquin Park	74.28	315	P	P	16 40 31.7	-0.3
	baz=57						
SEY	Seymchan	74.39	22	P	P	16 40 33.0	+0.7
	comp=Z,5.7nm,0.7s,baz=284,slow=6.2,SNR=16						
SEY	Seymchan	74.39	22‖	eP	P	16 40 33.1	+0.8
E52A	Mattawa	74.45	316	P	P	16 40 32.7	-0.3
	baz=56,SNR=8.3						
KLR	Kul'dur	74.47	41	c iP	P	16 40 33.5	+0.4
KLR				pmax	pmax		
	comp=Z,13nm,1.0s						
H55A	Tweed	74.53	314	P	P	16 40 33.2	-0.2
	baz=57						
BANO	Bancroft	74.71	314	P	P	16 40 33.9	-0.6
	baz=57						
PECO	Prince Edward	74.75	313	P	P	16 40 34.4	-0.3
	baz=57						
E51A	G1948 Merrick	74.79	316	P	P	16 40 34.6	-0.4
	baz=56,SNR=5.4						
DELO	Deloro Mine	74.81	314	P	P	16 40 34.2	-0.8
	baz=57						
I55A	Frankford	75.01	313	P	P	16 40 35.9	-0.3
	baz=57						
BINY	Binghamton	75.07	311	P	P	16 40 36.8	+0.1
	baz=57						
G53A	Haliburton	75.07	315	P	P	16 40 36.6	0.0
	baz=56						
F52A	Sundridge	75.10	315	P	P	16 40 36.7	0.0
	baz=56						
PSI	Prapat	75.12	97	P	P	16 40 36.7	-0.8
	comp=Z,8.3nm,0.6s,baz=146,slow=23,SNR=6.3						
PSI	Prapat	75.12	97	eP	P	16 40 36.7	-0.8
	comp=Z,14nm,1.1s						
BUKO	Buck Lake	75.35	315	P	P	16 40 37.6	-0.6
	baz=56						
F51A	Arnstein	75.37	316	P	P	16 40 38.0	-0.3
	baz=56						
D49A	Beulah Townshi	75.43	318	P	P	16 40 38.9	+0.3
	baz=55						
NJ2	Nanjing	75.55	61	eP	P	16 40 38.1	-1.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
E50A	Wahnapitae	75.56	317	P	P	16 40 39.7	+0.3
	baz=55						
WLVO	Wesleyville	75.60	313	P	P	16 40 39.7	+0.1
	baz=56						
N59A	State Game Lan	75.63	310	P	P	16 40 40.2	+0.3
	baz=57						
O60A	Telford	75.72	309	P	P	16 40 40.9	+0.5
	baz=57						
D48A	Paudash Townsh	75.74	318	P	P	16 40 40.4	0.0
	baz=55						
KLBO	Killbear Provi	75.87	315	P	P	16 40 41.5	+0.3
	baz=55						
MEDO	Medina	76.06	313	P	P	16 40 42.6	+0.3
	baz=56						
K55A	Perry	76.07	312	P	P	16 40 42.0	-0.4
	baz=56						
J54A	Appleton	76.11	313	P	P	16 40 42.9	+0.4
	baz=56						
MA2	Magadan	76.30	25	P	P	16 40 43.9	+0.5
	comp=Z,15nm,0.7s,baz=308,slow=5.4,SNR=16						
MA2	Magadan	76.30	25	eP	P	16 40 43.9	+0.5
	comp=Z,18nm,0.8s						
MA2	Magadan	76.30	25	c iP	P	16 40 43.8	+0.5
MA2				pmax	pmax		
	comp=Z,36nm,1.7s						
E48A	Lockeyer	76.34	317	P	P	16 40 44.1	+0.3
	baz=54						
Q61A	Milford	76.45	308	P	P	16 40 43.5	-1.1
	baz=57						
INK	Inuvik	76.45	352	P	P	16 40 43.4	-0.6
	comp=Z,5.0nm,0.9s,baz=22,slow=9.1,SNR=9.7						
INK	Inuvik	76.45	352	eP	P	16 40 43.7	-0.3
	comp=Z,6.9nm,1.0s						
INK	Inuvik	76.45	352	eP	P	16 40 43.7	-0.3
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
D47A	Chapleau	76.53	318	P	P	16 40 43.8	-1.1
	baz=54,SNR=7.0						
I52A	Shelburne	76.58	314	P	P	16 40 44.7	-0.5
	baz=55						
L55A	Hinsdale	76.60	312	P	P	16 40 45.2	-0.2
	baz=56						
F49A	Sandfield	76.69	317	P	P	16 40 44.8	-0.9
	baz=54						
TOBO	Tobermory, Bru	76.70	316	P	P	16 40 44.9	-0.9
	baz=54						
ACTO	Acton	76.77	314	P	P	16 40 46.0	-0.4
	baz=55						
M56A	Emporium	76.83	311	P	P	16 40 46.0	-0.7
	baz=56						
N57A	Milroy	76.84	310	P	P	16 40 46.7	-0.1
	baz=56						
BMRO	Meriville Lake	76.89	315	P	P	16 40 46.7	-0.3
	baz=55						
TYNO	Tyneside	76.95	313	P	P	16 40 46.8	-0.6
	baz=55						
F48A	Evansville	76.97	317	P	P	16 40 47.4	0.0
	baz=54						
E47A	Iron Bridge	76.98	318	P	P	16 40 47.3	-0.2
	baz=54						
L54A	Sinclairville	77.11	312	P	P	16 40 48.0	-0.3
	baz=55						
BWLO	Walkerton	77.12	315	P	P	16 40 48.3	+0.1
	baz=54						
SSPA	Standing Stone	77.12	310	P	P	16 40 48.3	0.0
	baz=56						
D46A	Sault St. Mari	77.14	318	P	P	16 40 48.3	-0.1
	baz=53,SNR=6.7						
O57A	Amberson	77.20	310	P	P	16 40 48.6	-0.3
	baz=56						
M55A	Ridgway	77.20	312	P	P	16 40 49.0	+0.2
	baz=55						
N56A	West Decatur	77.22	311	P	P	16 40 48.2	-0.7
	baz=56						
I51A	Listowel	77.23	314	P	P	16 40 48.4	-0.5
	baz=55						
J52A	Paris	77.23	314	P	P	16 40 48.5	-0.4
	baz=55						
TOLK	Toolik Lake Re	77.29	358	P	P	16 40 48.8	0.0
	baz=4.5						
S61A	Accomac	77.33	307	P	P	16 40 49.7	+0.2
	baz=56						
BASO	Ashfield	77.49	315	P	P	16 40 50.7	+0.3
	baz=54						
USRK	Ussuriysk Ar.	77.51	45	P	P	16 40 50.8	+0.4
	comp=Z,19nm,0.6s,baz=293,slow=4.9,SNR=46						
ERPA	Erie	77.58	313	P	P	16 40 51.0	+0.1
	baz=55						
E46A	Sault Ste Mari	77.60	318	P	P	16 40 50.8	-0.2
	baz=53,SNR=6.0						
N55A	Marion Center	77.73	311	P	P	16 40 52.0	+0.2
	baz=55						
M54A	Oil Creek Stat	77.73	312	P	P	16 40 52.2	+0.4
	baz=55						
O56A	Blue Knob Stat	77.76	310	P	P	16 40 51.4	-0.5
	baz=55						
L53A	Girard	77.84	313	P	P	16 40 52.7	+0.3
	baz=55						
P57A	Homestead Farm	77.85	310	P	P	16 40 52.8	+0.4
	baz=56						
H48A	Harrisville	78.04	316	P	P	16 40 53.5	+0.1
	baz=53						
G47A	Hillman	78.06	317	P	P	16 40 53.5	-0.1
	baz=53						
VLA	Vladivostok	78.08	46	c iP	P	16 40 53.3	-0.3
VLA				pmax	pmax		
	comp=Z,13nm,0.9s						
YKA	Yellowknife Ar	78.23	342	P	P	16 40 53.1	-1.0
	comp=Z,1.4nm,0.6s,baz=32,slow=5.9,SNR=5.3						
N54A	Moraine State	78.25	312	P	P	16 40 55.2	+0.5
	baz=55						
O55A	Ligonier	78.25	311	P	P	16 40 54.6	-0.1
	baz=55						
E44A	Grand Marais A	78.33	319	P	P	16 40 54.8	-0.2
	baz=52						
S59A	Mechanicsville	78.36	308	P	P	16 40 56.2	+0.9
	baz=56						
P56A	Dayton Farm, R	78.36	310	P	P	16 40 54.4	-0.9
	baz=55						
R58B	Mineral	78.62	308	P	P	16 40 56.2	-0.5
	baz=55						
EPYK	Eagle Plains	78.67	353	P	P	16 40 56.5	-0.1
	baz=15						
F45A	CMU Biological	78.68	318	P	P	16 40 56.4	-0.5
	baz=52						
COLD	Coldfoot	78.72	358	eP	P	16 40 57.1	+0.4
	comp=Z,8.4nm,1.1s						
Q56A	Snyder Ridge,	78.85	310	P	P	16 40 58.0	0.0
	baz=55						
R57A	Stanardsville	78.85	309	P	P	16 40 57.8	-0.2
	baz=55						
KS15	Wonju Array Si	78.86	52	eP	P	16 40 58.8	+0.8
	comp=Z,16nm,0.8s						
KSRS	Korea Array	78.88	52	P	P	16 40 58.8	+0.7
	comp=Z,13nm,0.8s,baz=303,slow=4.7,SNR=52						
MCWV	Mont Chateau	78.91	311	eP	P	16 40 59.0	+0.7
	comp=Z,10nm,0.8s						
MCWV	Mont Chateau	78.91	311	P	P	16 40 58.1	-0.3
	baz=54						
S58A	Poland Farm, P	78.93	308	P	P	16 40 58.5	0.0
	baz=55						
T59A	Double "B" Far	78.97	307	P	P	16 40 58.4	-0.3
	baz=55						
P55A	Reedsville	78.99	310	P	P	16 40 58.4	-0.3
	baz=54						
E43A	Lone Tree Farm	79.07	319	eP	P	16 40 59.3	+0.3
	comp=Z,12nm,0.8s						
E43A	Lone Tree Farm	79.07	319	P	P	16 40 58.6	-0.4
	baz=51,SNR=6.5						
TJN	Taejon	79.12	53	ceP	P	16 40 59.2	-0.3
G45A	Suttons Bay	79.16	318	P	P	16 40 59.5	-0.1
	baz=52						
H46A	Fife Lake	79.21	317	P	P	16 41 00.1	+0.3
	baz=52						
N52A	McGinn's Farm,	79.38	312	P	P	16 41 00.8	-0.1
	baz=54						
O53A	New Philadelph	79.42	312	P	P	16 41 00.7	-0.4
	baz=54						
S57A	Dark Hollow, R	79.44	309	P	P	16 41 00.8	-0.5
	baz=55						
Q55A	Buckhannon	79.44	310	P	P	16 41 01.4	+0.1
	baz=54						
D41A	Chassel	79.47	320	P	P	16 41 00.7	-0.5
	baz=50						
U59A	Littleton	79.48	307	P	P	16 41 01.4	-0.1
	baz=55						
T58A	Grand View Acr	79.63	308	P	P	16 41 02.2	-0.1
	baz=55						
K48A	Perry	79.64	315	P	P	16 41 02.6	+0.3
	baz=52						
I46A	Reed City	79.72	317	P	P	16 41 02.7	+0.1
	baz=52						
M50A	Fremont	79.85	313	P	P	16 41 03.4	0.0
	baz=53						
S56A	Natural Bridge	79.88	309	P	P	16 41 03.8	+0.1
	baz=54						
O52A	Adamsville	79.88	312	P	P	16 41 03.8	+0.2
	baz=54						
Q54A	Coxs Mills	79.93	310	P	P	16 41 03.5	-0.4
	baz=54						
U58A	Oxford	79.96	307	P	P	16 41 04.2	+0.2
	baz=55						
P53A	Whipple	79.98	311	P	P	16 41 04.5	+0.3
	baz=54						
T57A	Hurt	80.07	308	P	P	16 41 04.6	-0.1
	baz=54						
V59A	Middlesex	80.11	307	P	P	16 41 04.7	-0.2
	baz=55						
K47A	Vermontville	80.24	315	P	P	16 41 05.1	-0.3
	baz=52						
O51A	Pataskala	80.34	312	P	P	16 41 05.4	-0.6
	baz=53						
FFC	Flin Flon	80.34	332	eP	P	16 41 06.3	+0.5
	comp=Z,4.9nm,0.9s						
FFC	Flin Flon	80.34	332	ceP	P	16 41 06.6	+0.8
P52A	Corning	80.35	312	P	P	16 41 05.9	-0.3
	baz=53						
EYMN	Ely	80.41	322	P	P	16 41 05.5	-0.8
	baz=49						
S55A	Lewisburg	80.43	309	P	P	16 41 05.7	-1.0
	baz=54						
Q53A	Leroy	80.44	311	P	P	16 41 06.2	-0.4
	baz=54						
U57A	Blanch	80.45	308	P	P	16 41 06.5	-0.2
	baz=54						
ACSO	Alum Creek Sta	80.52	312	P	P	16 41 06.6	-0.4
	baz=53						
T56A	Rocky Mt	80.56	308	P	P	16 41 07.0	-0.4
	baz=54						
V58A	Windy Hill, Pi	80.68	307	P	P	16 41 07.7	-0.2
	baz=54						
H43A	Windswept, Lux	80.69	318	P	P	16 41 07.1	-0.8
	baz=50						
POKR	Poker Plat Res	80.73	357	P	P	16 41 07.7	-0.1
	baz=6.3						
L47A	Sherwood	80.78	315	P	P	16 41 07.7	-0.8
	baz=52						
N49A	Columbus Grove	80.83	314	P	P	16 41 08.1	-0.5
	baz=52						
Q52A	Bidwell	80.84	311	P	P	16 41 08.0	-0.7
	baz=53						
O50A	Cable	80.96	313	P	P	16 41 09.1	-0.4
	baz=52						
COLA	College	80.99	357	deP	P	16 41 10.2	+1.1
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
T55A	Pulaski	80.99	309	P	P	16 41 08.7	-1.0
	baz=54						
P51A	Williamsport	81.02	312	P	P	16 41 08.9	-0.8
	baz=53						
R53A	Hurricane	81.02	310	P	P	16 41 09.4	-0.4
	baz=53						
F40A	Park Falls	81.03	320	P	P	16 41 08.9	-0.8
	baz=49,SNR=8.0						
ILAR	Eielson Array	81.05	357	P	P	16 41 09.9	+0.6
	comp=Z,2.9nm,0.8s,baz=354,slow=4.0,SNR=22						
ILAR	Eielson Array	81.05	357	P	P	16 41 10.0	+0.6
V57A	Coltrane Farms	81.06	307	P	P	16 41 09.4	-0.6
	baz=54						
U56A	King	81.19	308	P	P	16 41 10.3	-0.4
	baz=54						
W58A	Raeford	81.21	306	P	P	16 41 10.4	-0.4
	baz=54						
E38A	The Farm, Brul	81.33	321	P	P	16 41 10.4	-0.8
	baz=48						
O49A	Covington	81.37	313	P	P	16 41 11.4	-0.1
	baz=52						
N48A	Decatur	81.37	314	P	P	16 41 10.9	-0.6
	baz=52						
F39A	Loretta	81.45	321	P	P	16 41 12.0	0.0
	baz=49,SNR=6.1						
Q51A	Peebles	81.47	312	P	P	16 41 11.8	-0.3
	baz=52						
G40A	Rib Lake	81.50	320	P	P	16 41 11.5	-0.7
	baz=49,SNR=7.3						
U55A	TA2, Sparta	81.53	308	P	P	16 41 12.5	-0.1
	baz=53						
T54A	Tazewell	81.54	309	P	P	16 41 12.4	-0.2
	baz=53						
V56A	Mocksville	81.58	308	P	P	16 41 12.3	-0.5
	baz=54						
W57A	Gilead	81.63	307	P	P	16 41 12.5	-0.5
	baz=54						
YSS	Yuzh-Sakhalins	81.66	38	⇑ i P	P	16 41 13.8	+0.8
YSS				e		16 41 22.4	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
I42A	Draeger Farm,	81.69	318	P	P	16 41 12.8	-0.4
	baz=50						
N47A	Urbana	81.75	314	P	P	16 41 12.7	-0.9
	baz=51						
M46A	Old House Fiel	81.81	315	P	P	16 41 13.2	-0.6
	baz=51						
O48A	Farmland	81.82	313	P	P	16 41 13.2	-0.8
	baz=52						
F38A	Pierce - Schro	81.93	321	P	P	16 41 14.5	+0.1
	baz=48						
P49A	Miami Univ. Ec	82.00	313	P	P	16 41 14.4	-0.6
	baz=52						
G39A	Holcombe	82.00	320	P	P	16 41 14.8	0.0
	baz=48,SNR=10						
U54A	Nelsons Funny	82.02	309	P	P	16 41 14.5	-0.6
	baz=53						
V55A	Taylorsville	82.02	308	P	P	16 41 14.6	-0.5
	baz=53						
W56A	Indian Trail	82.03	307	P	P	16 41 15.1	-0.1
	baz=54						
R51A	Hillsboro	82.06	311	P	P	16 41 14.9	-0.4
	baz=52						
N46A	Monticello	82.36	315	P	P	16 41 16.3	-0.4
	baz=51						
Q49A	Aurora	82.44	312	P	P	16 41 16.9	-0.3
	baz=52						
O47A	Sheridan	82.44	314	P	P	16 41 16.9	-0.4
	baz=51						
P48A	Milroy	82.48	313	P	P	16 41 17.0	-0.4
	baz=51						
KMSC	Kings Mountain	82.52	308	P	P	16 41 17.4	-0.3
	baz=53						
V54A	Nebo	82.55	308	P	P	16 41 17.6	-0.3
	baz=53						
Y57A	Sumter	82.57	306	P	P	16 41 17.7	-0.3
	baz=54						
Z58A	St. Stephen	82.58	305	P	P	16 41 18.2	+0.2
	baz=54						
U53A	Fall Branch	82.60	309	P	P	16 41 17.8	-0.4
	baz=53						
X56A	White Oak	82.71	307	P	P	16 41 18.4	-0.3
	baz=53						
M44A	Midewin, Midew	82.81	316	P	P	16 41 18.7	-0.4
	baz=50						
N45A	Kentland	82.84	315	P	P	16 41 18.9	-0.4
	baz=50						
SFIN	Lafayette	82.90	315	P	P	16 41 18.8	-0.8
	baz=50						
S50A	Richmond	82.95	311	P	P	16 41 19.3	-0.6
	baz=52						
P47A	Martinsville	82.97	313	P	P	16 41 19.4	-0.6
	baz=51						
Q48A	North Vernon	82.99	313	P	P	16 41 19.1	-1.0
	baz=51						
R49A	Shelbyville	83.05	312	P	P	16 41 19.8	-0.6
	baz=51						
JFWS	Jewell Farm	83.07	318	P	P	16 41 19.6	-0.8
	baz=49						
U52A	Thorn Hill	83.09	310	P	P	16 41 20.4	-0.3
	baz=52						
T51A	Gray	83.10	310	P	P	16 41 21.0	+0.3
	baz=52						
TZTN	Tazewell	83.11	310	P	P	16 41 20.4	-0.4
	baz=52						
W54A	Cherokee Point	83.12	308	P	P	16 41 20.5	-0.3
	baz=53						

X55A	Gracelyn & Ava	83.12	307	P	P	16 41 20.8	-0.1
	baz=53						
V53A	Saluda	83.17	309	P	P	16 41 21.2	0.0
	baz=52						
Z57A	Bowman	83.21	306	P	P	16 41 21.2	-0.1
	baz=53						
M43A	Waltham Townsh	83.30	316	P	P	16 41 21.2	-0.4
	baz=50						
L42A	Oliver, Polo	83.34	317	P	P	16 41 21.3	-0.6
	baz=49						
JNU	Nakatsue	83.36	54	*e*P	P	16 41 22.3	+0.2
	comp=Z,15nm,1.1s						
Q47A	Bedord North L	83.41	313	P	P	16 41 22.3	+0.1
	baz=51						
R48A	Northridge Ran	83.41	312	P	P	16 41 22.0	-0.3
	baz=51						
S49A	Springfield	83.44	312	P	P	16 41 22.3	-0.1
	baz=51						
P46A	Rosedale	83.45	314	P	P	16 41 22.5	+0.1
	baz=50						
ASAJ	Asahikawa	83.49	40	P	P	16 41 21.8	-0.8
	comp=Z,4.6nm,0.6s,baz=318,slow=6.4,SNR=18						
U51A	La Follette	83.51	310	P	P	16 41 23.2	+0.4
	baz=52,SNR=5.6						
X54A	Belton	83.56	308	P	P	16 41 23.3	+0.2
	baz=52						
Y55A	Saluda	83.59	307	P	P	16 41 23.9	+0.6
	baz=53						
T50A	Nancy	83.63	311	P	P	16 41 23.1	-0.3
	baz=52,SNR=5.4						
PETK	Petropavlovsk-	83.72	26	P	P	16 41 21.9	-1.7
	comp=Z,3.1nm,0.8s,baz=326,slow=4.5,SNR=5.9						
N43A	Stutzman Famil	83.75	316	P	P	16 41 23.6	-0.4
	baz=49						
157A	Early Branch	83.77	305	P	P	16 41 24.6	+0.4
	baz=53						
WCI	Wyandotte Cave	83.78	312	P	P	16 41 24.0	-0.2
	baz=51						
P45A	Graceland, Par	83.82	314	P	P	16 41 23.7	-0.7
	baz=50						
R47A	Wooly Knot Far	83.88	313	P	P	16 41 23.6	-1.1
	baz=51						
S48A	Wiedeman Farm,	83.99	312	P	P	16 41 24.8	-0.4
	baz=51						
U50A	Jamestown	84.01	310	P	P	16 41 25.5	+0.1
	baz=51						
T49A	Edmonton	84.01	311	P	P	16 41 25.3	-0.1
	baz=51						
HDIL	Hopedale	84.07	316	P	P	16 41 25.4	-0.2
	baz=49						
V51A	Loudon	84.08	310	P	P	16 41 26.1	+0.4
	baz=52						
L40A	Anamosa	84.17	318	P	P	16 41 25.6	-0.5
	baz=48,SNR=5.7						
Y54A	Tignall	84.19	307	P	P	16 41 26.2	-0.1
	baz=52						
X52A	Dahlonega	84.52	308	P	P	16 41 28.2	+0.1
	baz=52						
S47A	Hartford	84.53	312	P	P	16 41 27.7	-0.3
	baz=50						
U49A	Red Boiling Sp	84.54	311	P	P	16 41 27.9	-0.2
	baz=51,SNR=6.7						
T48A	Bowling Green	84.54	312	P	P	16 41 28.1	0.0
	baz=51,SNR=6.5						
V50A	Pikevile	84.64	310	P	P	16 41 28.2	-0.4
	baz=51,SNR=5.7						
Z54A	Sparta	84.67	307	P	P	16 41 28.4	-0.3
	baz=52						
W51A	Cleveland	84.74	309	P	P	16 41 29.2	+0.1
	baz=51						
Y53A	Monroe	84.78	308	P	P	16 41 29.0	-0.4
	baz=52						
155A	Kite	84.79	306	P	P	16 41 29.0	-0.5
	baz=52						
R45A	Skylar, Fairfi	84.94	314	P	P	16 41 30.1	+0.1
	baz=50						
GOGA	Godfrey	84.98	307	P	P	16 41 30.0	-0.3
	baz=52						
U48A	Cassie Pea, Po	85.01	311	P	P	16 41 30.0	-0.4
	baz=50						
T47A	Sharon Grove	85.06	312	P	P	16 41 30.4	-0.3
	baz=50						
W50A	Signal Mountai	85.06	310	P	P	16 41 30.6	-0.2
	baz=51						
V49A	McMinnville	85.08	310	P	P	16 41 30.7	-0.1
	baz=51						
Y52A	Lilburn	85.09	308	P	P	16 41 30.8	-0.1
	baz=52						
Z53A	Monticello	85.13	307	P	P	16 41 30.6	-0.5
	baz=52						
N40A	Mertquake, Sal	85.16	317	P	P	16 41 30.7	-0.3
	baz=48						
X51A	Calhoun	85.17	309	P	P	16 41 30.8	-0.5
	baz=51						
ERM	Erimo	85.22	41	*e*P	P	16 41 32.3	+1.0
ERM				pmax	pmax		
	comp=Z,33nm,1.7s						
BDFB	Brasilia	85.29	248	P	P	16 41 33.0	+0.8
	comp=Z,4.7nm,0.8s,baz=100,slow=6.3,SNR=7.7						
KUR	Kuril'sk	85.42	37	*e*P	P	16 41 31.9	-0.4
T46A	Princeton	85.51	312	P	P	16 41 32.8	-0.1
	baz=50						
U47A	Clarksville	85.52	312	P	P	16 41 32.4	-0.6
	baz=50,SNR=8.2						
V48A	Smith Brothers	85.68	311	P	P	16 41 33.4	-0.4
	baz=50						
Y51A	Rockmart	85.72	308	P	P	16 41 33.6	-0.4
	baz=51						
W49A	Belvidere	85.72	310	P	P	16 41 34.3	+0.3
	baz=50						
Z52A	Williamson	85.74	308	P	P	16 41 34.0	-0.1
	baz=51						
254A	Abbeville	85.76	306	P	P	16 41 34.2	-0.1
	baz=52						
ECSD	EROS Data Cent	85.90	322	P	P	16 41 34.4	-0.4
	baz=45						
S44A	Carbondale	85.91	314	P	P	16 41 34.9	0.0
	baz=49,SNR=5.1						
MAJO	Matsushiro	85.96	48	*e*P	P	16 41 35.8	+0.5
	comp=Z,13nm,0.9s						
MAJO	Matsushiro	85.96	48	*ce*P	P	16 41 35.2	0.0
MAJO				pmax	pmax		
	comp=Z,14nm,1.0s						
MAT	Matsushiro	85.96	48	P	P	16 41 35.0	-0.2
MJAR	Matsushiro Arr	85.97	48	P	P	16 41 35.7	+0.4
	comp=Z,14nm,0.9s,baz=299,slow=5.6,SNR=36						
WVT	Waverly	86.06	312	P	P	16 41 34.9	-0.8
	baz=50						
V47A	Nunnelly	86.06	311	P	P	16 41 35.0	-0.7
	baz=50						
W48A	Pulaski	86.13	310	P	P	16 41 35.5	-0.5
	baz=50,SNR=7.2						
X49A	Woodville	86.14	310	P	P	16 41 35.8	-0.3
	baz=50						
Y50A	Piedmont	86.16	309	P	P	16 41 35.8	-0.4
	baz=51						
PTGA	Pitinga	86.28	267	P	P	16 41 37.7	+0.6
	comp=Z,2.7nm,0.5s,baz=14,slow=12,SNR=4.9						
V46A	Holladay	86.45	312	P	P	16 41 37.1	-0.5
	baz=50,SNR=8.4						
Y49A	Blount Mountai	86.61	309	P	P	16 41 38.3	-0.2
	baz=50						
X48A	Hartselle	86.64	310	P	P	16 41 38.4	-0.1
	baz=50,SNR=6.3						
Z50A	Ashland	86.68	308	P	P	16 41 38.6	-0.2
	baz=51						
DWPF	Disney Wildern	86.82	302	P	P	16 41 39.0	-0.5
	baz=52						
CCM	Cathedral Cave	86.85	315	*e*P	P	16 41 39.5	0.0
	comp=Z,15nm,0.8s						
CCM	Cathedral Cave	86.85	315	*e*P	P	16 41 39.5	0.0
CCM				pmax	pmax		
	comp=Z,15nm,0.8s						
CCM	Cathedral Cave	86.85	315	P	P	16 41 39.1	-0.4
	baz=48						
Y48A	Jasper	87.06	310	P	P	16 41 40.5	-0.1
	baz=50						
251A	Midway	87.08	307	P	P	16 41 40.5	-0.3
	baz=51						
X47A	Russelville	87.11	310	P	P	16 41 40.1	-0.8
	baz=50						
Z49A	Columbiana	87.11	309	P	P	16 41 40.7	-0.2
	baz=50						
150A	Eclectic	87.15	308	P	P	16 41 41.8	+0.8
	baz=50						
857A	Zephyrhills	87.28	303	P	P	16 41 42.2	+0.4
	baz=52						
059A	Moore Haven	87.31	301	P	P	16 41 41.9	0.0
	baz=53						
LRAL	Lakeview Retre	87.52	309	P	P	16 41 43.1	+0.3
	baz=50,SNR=12						
X46A	Booneville	87.54	311	P	P	16 41 42.8	-0.2
	baz=49						
149A	Jones	87.66	308	P	P	16 41 43.6	+0.1
	baz=50,SNR=8.0						
250A	Grady	87.71	308	P	P	16 41 44.1	+0.3
	baz=50						
148A	Greensboro	88.13	309	P	P	16 41 45.5	-0.3
	baz=50						
KDAK	Kodiak Island	88.25	359	*ce*P	P	16 41 46.8	+1.0
249A	Camden	88.27	308	P	P	16 41 46.1	-0.4
	baz=50						
349A	Repton	88.72	308	P	P	16 41 48.9	+0.3
	baz=50						
RSSD	Black Hills	89.24	326	P	P	16 41 50.8	-0.3
	baz=40						
W41B	Gary Mavity, V	89.39	313	P	P	16 41 51.0	-0.6
	baz=47						
TUL1	Leonard	90.97	316	P	P	16 41 58.4	-0.7
	baz=45						
NEW	Newport	91.12	336	P	P	16 41 59.4	-0.2
	baz=33,slow=2.4						
NEW	Newport	91.12	336	P	P	16 41 59.5	0.0
	baz=30						
BOZ	Bozeman (W)	91.34	331	P	P	16 42 00.2	-0.6
	baz=34						
K22A	Casper	91.52	326	P	P	16 42 01.1	-0.6
	baz=38						
H17A	Grant Village	91.90	330	P	P	16 42 03.2	-0.3
	baz=35						
N23A	Red Feather La	92.63	325	P	P	16 42 06.5	-0.5
	baz=39						
PDAR	Pinedale Array	92.78	328	P	P	16 42 06.7	-0.9
	comp=Z,0.9nm,0.7s,baz=96,slow=3.4,SNR=5.0						
ISCO	Idaho Springs	93.32	324	P	P	16 42 10.1	-0.1
	baz=39						
WMOK	Wichita Mounta	93.52	317	P	P	16 42 10.6	-0.3
	baz=43						
HLID	Hailey	94.14	332	P	P	16 42 12.9	-0.8
	baz=32						
T25A	Trinidad	94.77	322	P	P	16 42 15.9	-0.9
	baz=40						
SDCO	Great Sand Dun	94.86	323	P	P	16 42 16.7	-0.6
	baz=39						
MATI	Mati	95.30	78	*e*P	P	16 42 18.1	-1.2
S22A	4UR Ranch, Cre	95.52	324	P	P	16 42 19.9	-0.4
	baz=38						
NV01	Mina Array Sit	100.05	332	*e*Pdif	Pdif	16 42 40.8	+0.2
NVAR	Mina Array Bea	100.05	332	P	Pdif	16 42 40.8	+0.2
	comp=Z,0.9nm,0.9s,baz=75,slow=6.9,SNR=1.6						
TXAR	Lajitas Array	100.29	316	P	Pdif	16 42 42.3	+0.5
	comp=Z,1.1nm,1.1s,baz=0.0,slow=0.9,SNR=2.0						
SCI2	San Clemente I	104.84	329	P	Pdif	16 43 00.1	-1.6
	baz=30						
WR1	Warramunga Arr	116.58	97	*e*PKPdif	PKiKP	16 47 39.4	+0.1
WRA	Warramunga Arr	116.58	97	PKP	PKiKP	16 47 39.4	+0.1
	comp=Z,1.6nm,0.6s,baz=250,slow=2.5,SNR=8.6						
AS31	Alice Springs	117.98	101	*e*PKPdif	PKPdf	16 47 41.7	-0.2
ASAR	Alice Springs	117.98	101	PKP	PKPdf	16 47 41.7	-0.2
	comp=Z,1.2nm,0.7s,baz=318,slow=1.1,SNR=11						
STKA	Stephens Creek	127.56	106	PKP	PKPdf	16 47 58.5	-1.5
	comp=Z,1.7nm,0.7s,baz=350,slow=12,SNR=3.1						

IDC 15 16:33:53.3±1.8, 34°.49N×24°.57E, h0km, mb3.5/2, mb1 3.4/3, mb1mx3.1/49, mbtmp3.4/3, ML3.9/1, Error ellipse: s-maj=66.1km s-min=19.8km az=118.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	0.84	18	Pn	Pn	16 34 12.1	-0.4
	8.4nm,0.3s,baz=31,slow=20,SNR=1.7						
IDI				Sn	Sn	16 34 26.0	+0.4
	53nm,0.3s,baz=66,slow=11,SNR=5.4						
AKASG	Malin Array Be	16.55	10	Pn	Pn	16 37 47.5	+0.8
	0.5nm,0.3s,baz=201,slow=11,SNR=3.3						
TORD	Torodi Ar. Bea	29.69	230	P	P	16 40 00.9	-0.1
	0.6nm,0.7s,baz=32,slow=8.7,SNR=4.8						
MKAR	Makanchi Array	44.55	56	P	P	16 42 06.8	-0.1
	0.3nm,0.7s,baz=270,slow=5.2,SNR=1.5						

*IDC **15** 16:39:08.3±0.9, 34°.32N×24°.97E, h0km, mb3.9/15, mb1 4.0/20, mb1mx3.9/46, mbtmp4.0/20, ML4.0/5, Error ellipse: s-maj=17.4km s-min=15.5km az=31.0*
*ISCJB **15** 16:39:09.5±1.1, 34°.11N±0°.05×25°.11E±0°.04, h18km±6km, mb3.9/17, Error ellipse: s-maj=9.0km s-min=5.5km az=16.5*
*ATH **15** 16:39:09.7, 34°.19N×25°.08E, h17km±2km, ML3.4/11, Error ellipse: s-maj=4.3km s-min=1.7km az=3.0*
*THE **15** 16:39:12.5, 34°.34N×25°.07E, h0km±1km, ML3.5/5, Error ellipse: s-maj=2.3km s-min=0.9km az=178.0*

ISC 15 16:39:12.5±1.5, 34°.27N±0°.07×25°.10E±0°.03, h29km±10km, n73, σ1§63/86, mb4.0/17, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.79	342	P	Pb	16 39 26.4	-1.3
SIVA				S	Sn	16 39 38.0	-0.5
	9μm,0.8s						
SIVA	Sivas	0.79	342	P	Pb	16 39 26.3	-1.5
SIVA				S	Sb	16 39 36.9	-1.1
SIVA				AML	AML	16 39 44.4	
	comp=N,14973μm,0.7s						
SIVA				AML	AML	16 39 48.5	
	comp=E,19031μm,0.8s						
TMBK	Timbaki Herakl	0.85	341	P	Pb	16 39 27.9	-0.9
TMBK				S	Sb	16 39 39.4	-0.4
LAST	Lasithi	0.95	19	P	Pb	16 39 29.4	-1.0
LAST				S	Sn	16 39 43.1	+0.5
	comp=E,2μm,0.9s						
LAST	Lasithi	0.95	19	P	Pb	16 39 29.1	-1.3
LAST				S	Sn	16 39 42.6	+0.1
LAST				AML	AML	16 39 53.9	
	comp=N,2417μm,1.0s						
LAST				AML	AML	16 39 54.7	
	comp=E,2212μm,0.8s						
GVD	Gavdhos	1.01	305	P	Pb	16 39 30.5	-1.0
GVD				S	Sn	16 39 45.7	+1.6
	comp=E,3μm,0.5s						
GVD	Gavdhos	1.01	305	P	Pb	16 39 29.9	-1.6
GVD				S	Sn	16 39 44.3	+0.2
GVD				AML	AML	16 39 48.5	
	comp=N,4928μm,0.3s						
GVD				AML	AML	16 40 01.9	
	comp=E,8204μm,0.5s						
IDI	Anoyia	1.03	351	Pn	Pb	16 39 30.3	-1.6
	comp=E,58nm,0.3s,baz=170,slow=11,SNR=11						
IDI				Sn	Sb	16 39 43.7	-1.5
	comp=E,85nm,0.3s,baz=298,slow=20,SNR=7.1						
IDI	Anoyia	1.03	351	P	Pb	16 39 29.8	-2.2
IDI				AML	AML	16 39 53.8	
	comp=N,1381μm,0.4s						
IDI				AML	AML	16 39 55.5	
	comp=E,2146μm,0.6s						
KSTL	Kastelli Herak	1.04	359	P	Pb	16 39 30.2	-1.7
NPS	Neapolis	1.08	23	P	Pb	16 39 31.9	-0.8
NPS	Neapolis	1.08	23	P	Pn	16 39 31.3	-0.5
NPS				AML	AML	16 39 58.9	
	comp=N,2519μm,1.2s						
NPS				AML	AML	16 39 59.6	
	comp=E,2472μm,0.6s						
PRNS	Prines Rethymn	1.20	336	P	Pb	16 39 33.8	-0.9
ZKR	Zakros	1.25	47	P	Pb	16 39 35.4	-0.1
ZKR				S	Sb	16 39 52.7	+1.4
	comp=E,808nm,1.1s						
ZKR	Zakros	1.25	47	P	Pb	16 39 34.8	-0.8
ZKR				S	Sb	16 39 54.1	+2.8
ZKR				AML	AML	16 40 01.8	
	comp=N,1031μm,0.4s						
ZKR				AML	AML	16 40 08.2	
	comp=E,2231μm,1.2s						
VAM	Vamos	1.36	327	P	Pb	16 39 36.3	-1.0
VAM	Vamos	1.36	327	P	Pb	16 39 36.4	-0.9
VAM				S	Sb	16 39 56.9	+2.6
VAM				AML	AML	16 40 06.5	
	comp=N,2484μm,0.5s						
VAM				AML	AML	16 40 06.5	
	comp=E,3772μm,0.8s						
IMMV	Iera Moni Meta	1.50	323	P	Pb	16 39 39.1	-0.7
IMMV				S	Sb	16 39 59.5	+1.0
	comp=E,1μm,0.9s						
IMMV	Iera Moni Meta	1.50	323	P	Pb	16 39 38.2	-1.6
IMMV				S	Sb	16 40 02.0	+3.5
IMMV				AML	AML	16 40 15.2	
	comp=N,2675μm,0.6s						
IMMV				AML	AML	16 40 17.0	
	comp=E,2429μm,1.2s						
THR6	Thira Island,	2.10	7	P	Pb	16 39 48.8	-1.2
KARP	Karpathos	2.12	52	P	Pb	16 39 49.4	-1.0
KARP	Karpathos	2.12	52	P	Pb	16 39 49.4	-1.0
KARP				AML	AML	16 40 47.4	
	comp=N,597μm,0.7s						
KARP				AML	AML	16 40 48.1	
	comp=E,834μm,0.9s						
THR3	Thira Island,	2.15	7	P	Pn	16 39 47.7	+1.2
THR5	Thira Island,	2.16	5	P	Pn	16 39 47.8	+1.2
ANAF	Anafi Island	2.16	15	P	Pn	16 39 48.0	+1.4
THR8	Santorini-Mono	2.16	8	P	Pb	16 39 48.9	-2.0
ANKY	Antikythira Is	2.17	318	P	Pn	16 39 47.4	+0.7
THR2	Thira island,	2.19	7	P	Pn	16 39 47.9	+0.8
IOSP	Ios island	2.46	4	P	Pn	16 39 51.3	+0.7
MHLO	Agia Marina, M	2.48	347	P	Pn	16 39 51.8	+0.7
MHLO	Agia Marina, M	2.48	347	P	Pn	16 39 51.8	+0.7
MHLO				AML	AML	16 40 46.6	
	comp=N,1669μm,0.7s						
MHLO				AML	AML	16 40 59.4	
	comp=E,1562μm,0.9s						
KYTH	Kithira	2.61	321	P	Pb	16 39 55.4	-3.2
KYTH				AML	AML	16 40 54.0	
	comp=N,514μm,1.5s						
KYTH				AML	AML	16 41 03.5	
	comp=E,354μm,1.0s						
AMGA	Amorgos Island	2.64	14	P	Pn	16 39 55.0	+1.8
APE	Apeiranthos	2.82	7	P	Pn	16 39 56.5	+0.8
SERI	Serifos	2.93	350	P	Pn	16 39 57.9	+0.7
VLI	Veliai	3.02	325	P	Pn	16 40 00.9	+2.5
ARG	Arkhangelos	3.15	51	P	Pn	16 40 03.0	+2.8
DID	Didima	3.57	335	P	Pn	16 40 06.6	+0.6
EPID	Epidavros	3.71	335	P	Pn	16 40 09.0	+1.1
SMG	Samos	3.71	22	P	Pn	16 40 09.0	+1.1
VLY	Voula,Athens	3.73	344	P	Pn	16 40 09.4	+1.2
ITM	Ithomi	3.89	319	P	Pn	16 40 12.8	+2.4
PTL	Penteli	3.91	346	P	Pn	16 40 11.2	+0.6
TRIP	Tripoli	3.98	326	P	Pn	16 40 14.5	+2.8
LTK	Loutraki	4.13	336	P	Pn	16 40 14.8	+1.2
VIL2	Platees	4.21	340	P	Pn	16 40 14.7	0.0
GUR	Goura	4.29	329	P	Pn	16 40 17.6	+1.6
KLV	Kalavryta, Ach	4.46	329	P	Pn	16 40 21.2	+2.9
MMAI	Mount Meron Ar	8.68	95	Pn	Pn	16 41 16.1	-0.2
	comp=E,0.6nm,0.3s,baz=267,slow=13,SNR=2.9						
BRTR	Keskin Array B	8.74	49	Pn	Pn	16 41 18.9	+1.8
	comp=E,0.1nm,0.3s,baz=240,slow=12,SNR=2.3						
EIL	Elat	9.54	116	Pn	Pn	16 41 27.7	-0.2
	comp=E,1.3nm,0.3s,baz=208,slow=1.6,SNR=11						
EIL				Sn	Sn	16 43 07.5	-6.6
	comp=E,1.1nm,0.3s,baz=318,slow=14,SNR=3.6						
ASF	Jabal al Asfar	10.10	99	Sn	Sn	16 43 21.3	-6.8
	comp=E,0.3nm,0.3s,baz=9.5,slow=18,SNR=2.9						
VRAC	Vranov	16.30	340	Pn	Pn	16 42 58.6	-0.6
	comp=E,0.3nm,0.3s,baz=149,slow=5.9,SNR=3.1						
AKASG	Malin Array Be	16.70	9	Pn	Pn	16 43 04.5	+0.2
	comp=E,0.8nm,0.3s,baz=200,slow=10,SNR=8.3						
KBZ	Khabaz	16.73	50	Pn	P	16 43 07.1	+0.4
	comp=E,0.2nm,0.3s,baz=226,slow=9.2,SNR=9.1						
GERES	GERESS Array B	16.85	333	Pn	P	16 43 08.7	+0.5
	comp=E,0.3nm,0.3s,baz=145,slow=12,SNR=17						
OBN	Obninsk	22.33	18	P	P	16 44 10.3	+2.7
	comp=E,3.2nm,0.4s,baz=330,slow=16,SNR=5.3						
ESDC	Sonseca Array	23.78	292	P	P	16 44 22.5	-0.2
	comp=E,0.2nm,0.4s,baz=84,slow=9.0,SNR=4.8						
GEYT	Alibeck	26.85	73	P	P	16 44 53.3	+2.7
	comp=E,0.9nm,0.7s,baz=287,slow=8.3,SNR=2.2						
HFS	Hagfors	26.93	347	P	P	16 44 50.0	-1.0
	comp=E,0.6nm,0.5s,baz=150,slow=12,SNR=5.0						
FINES	FINESS Array B	27.20	1	P	P	16 44 52.1	-1.4
	comp=E,3.2nm,0.9s,baz=187,slow=22,SNR=2.7						
NOA	NORSAR Array B	28.25	346	P	P	16 45 01.6	-1.3
	comp=E,0.3nm,0.6s,baz=157,slow=10,SNR=2.7						
EKA	Eskdalemuir Ar	28.75	326	P	P	16 45 05.9	-1.4
	comp=E,0.7nm,0.5s,baz=124,slow=8.6,SNR=2.8						
TORD	Torodi Ar. Bea	29.88	231	P	P	16 45 17.4	-0.3
	comp=E,1.5nm,0.6s,baz=38,slow=8.7,SNR=15						
ARCES	ARCESS Array B	35.32	0	P	P	16 46 03.0	-1.7
	comp=E,10nm,0.3s,baz=194,slow=4.5,SNR=4.0						
BVAR	Borovoye Array	37.00	45	P	P	16 46 19.5	+0.1
	comp=E,0.7nm,0.8s,baz=273,slow=5.8,SNR=4.8						
SPITS	Spitsbergen Ar	44.18	357	P	P	16 47 18.1	-0.2
	comp=E,1.3nm,0.6s,baz=152,slow=6.5,SNR=3.1						
MKAR	Makanchi Array	44.31	56	P	P	16 47 20.6	+0.8
	comp=E,2.5nm,0.8s,baz=279,slow=6.6,SNR=18						
ZALV	Zalesovo Beam	45.66	46	P	P	16 47 30.1	-0.3
	comp=E,2.6nm,0.4s,baz=265,slow=9.1,SNR=7.9						
SONM	Songino Array	60.09	50	P	P	16 49 18.3	+1.2
	comp=E,1.3nm,0.7s,baz=283,slow=9.1,SNR=6.3						
USRK	Ussuriysk Ar.	77.51	45	P	P	16 51 04.9	-0.5
	comp=E,1.9nm,0.6s,baz=250,slow=8.6,SNR=4.8						
KSRS	Korea Array	78.87	52	P	P	16 51 13.8	+0.7
	comp=E,1.4nm,0.9s,baz=293,slow=3.1,SNR=5.8						
MJAR	Matsushiro Arr	85.96	48	P	P	16 51 51.1	+1.0
	comp=E,0.7nm,0.8s,baz=312,slow=4.6,SNR=4.2						

*IDC **15** 16:41:02.9±1.3, 34°.28N×24°.99E, h0km, mb4.2/6, mb1 4.1/10, mb1mx3.7/46, mbtmp4.0/10, ML4.1/4, Error ellipse: s-maj=25.7km s-min=19.0km az=75.0*
*ISCJB **15** 16:41:04.5±0.9, 34°.16N±0°.08×25°.19E±0°.09, h25km, mb3.9/6, Error ellipse: s-maj=14.3km s-min=7.7km az=43.2*

ISC 15 16:41:06.4±1.0, 34°.25N±0°.10×25°.09E±0°.10, h25km, n11, σ1§38/13, mb4.0/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	1.05	351	Pn	Pn	16 41 24.9	-0.8
	30nm,0.3s,baz=176,slow=19,SNR=7.6						
IDI				Sn	Sn	16 41 41.5	+1.9
	42nm,0.3s,baz=33,slow=22,SNR=6.1						
MMAI	Mount Meron Ar	8.69	95	Pn	Pn	16 43 12.2	+1.6
	1.1nm,0.3s,baz=263,slow=13,SNR=2.3						
MMAI				Sn	Sn	16 44 45.9	-1.9
	3.0nm,0.3s,baz=290,slow=26,SNR=5.0						
EIL	Elat	9.54	116	Pn	Pn	16 43 22.9	+0.7
	1.6nm,0.3s,baz=36,slow=16,SNR=5.0						
AKASG	Malin Array Be	16.72	9	Pn	Pn	16 44 59.5	+0.6
	1.0nm,0.3s,baz=199,slow=10,SNR=4.1						
GERES	GERESS Array B	16.86	333	Pn	P	16 45 02.7	0.0
	0.3nm,0.3s,baz=146,slow=11,SNR=6.3						
FINES	FINESS Array B	27.22	1	P	P	16 46 46.6	-1.4
	0.7nm,0.3s,baz=169,slow=13,SNR=6.0						
TORD	Torodi Ar. Bea	29.86	231	P	P	16 47 12.4	+0.4
	0.5nm,0.6s,baz=31,slow=8.8,SNR=4.6						
ARCES	ARCESS Array B	35.34	0	P	P	16 47 57.5	-1.9
	4.0nm,1.1s,baz=172,slow=9.3,SNR=5.2						
SPITS	Spitsbergen

LAST	**Lasithi**	**0.97**	**21**	P	**Pn**	**16 46 06.0**	**-0.5**
LAST	**Lasithi**	**0.97**	**21**	P	**Pn**	**16 46 06.2**	**-0.3**
LAST				AML	AML	16 46 34.8	
	comp=E,5064μm,0.9s						
LAST				AML	AML	16 46 35.5	
	comp=N,5212μm,0.8s						
GVD	**Gavdhos**	**0.98**	**307**	PG	**Pb**	**16 46 07.3**	**-0.5**
GVD				SG	**Sb**	**16 46 20.4**	**-0.1**
GVD	**Gavdhos**	**0.98**	**307**	P	**Pn**	**16 46 07.0**	**+0.5**
GVD				S	**Sb**	**16 46 21.4**	**+0.9**
GVD	**Gavdhos**	**0.98**	**307**	P	**Pn**	**16 46 06.6**	**+0.1**
GVD				S	**Sb**	**16 46 20.2**	**-0.3**
GVD				AML	AML	16 46 27.7	
	comp=E,10685μm,0.5s						
GVD				AML	AML	16 46 34.3	
	comp=N,10536μm,0.5s						
IDI	**Anoyia**	**1.04**	**353**	Pn	**Pn**	**16 46 07.7**	**+0.3**
	comp=N,15nm,0.3s,baz=168,slow=19,SNR=5.5						
IDI				Sn	**Sn**	**16 46 20.0**	**-0.7**
	comp=N,132nm,0.3s,baz=193,slow=14,SNR=7.8						
IDI	**Anoyia**	**1.04**	**353**	P	**Pn**	**16 46 07.4**	**+0.1**
KSTL	**Kastelli Herak**	**1.04**	**1**	P	**Pn**	**16 46 07.8**	**+0.4**
IACM	**Heraklion**	**1.05**	**1**	P	**Pb**	**16 46 09.3**	**+0.4**
IACM	**Heraklion**	**1.05**	**1**	P	**Pb**	**16 46 09.1**	**+0.2**
NPS	**Neapolis**	**1.11**	**25**	P	**Pb**	**16 46 09.8**	**-0.1**
NPS	**Neapolis**	**1.11**	**25**	P	**Pb**	**16 46 09.9**	**-0.1**
NPS				AML	AML	16 46 36.9	
	comp=N,3489μm,0.7s						
NPS				AML	AML	16 46 39.3	
	comp=E,4370μm,1.3s						
PRNS	**Prines Rethymn**	**1.19**	**338**	P	**Pb**	**16 46 11.0**	**-0.3**
PRNS				S	**Sb**	**16 46 27.8**	**+1.3**
STIA	**Sitia Lasithi**	**1.28**	**42**	P	**Pb**	**16 46 13.4**	**+0.6**
ZKR	**Zakros**	**1.29**	**48**	PN	**Pn**	**16 46 11.3**	**+0.5**
ZKR	**Zakros**	**1.29**	**48**	P	**Pb**	**16 46 13.0**	**0.0**
ZKR				S	**Sb**	**16 46 30.9**	**+1.6**
ZKR	**Zakros**	**1.29**	**48**	P	**Pb**	**16 46 12.2**	**-0.8**
ZKR				AML	AML	16 46 40.1	
	comp=E,3291μm,0.8s						
ZKR				AML	AML	16 46 47.5	
	comp=N,1817μm,0.9s						
VAM	**Vamos**	**1.34**	**329**	P	**Pb**	**16 46 12.9**	**-0.9**
VAM				AML	AML	16 46 36.5	
	comp=N,5133μm,0.4s						
VAM				AML	AML	16 46 40.8	
	comp=E,7654μm,1.1s						
IMMV	**Iera Moni Meta**	**1.49**	**324**	PN	**Pb**	**16 46 14.9**	**-1.4**
IMMV	**Iera Moni Meta**	**1.49**	**324**	P	**Pb**	**16 46 15.2**	**-1.0**
IMMV				AML	AML	16 46 48.1	
	comp=N,3458μm,0.9s						
IMMV				AML	AML	16 46 55.5	
	comp=E,4471μm,0.8s						
THR9	**Santorini-Faro**	**2.11**	**7**	P	**Pn**	**16 46 24.2**	**+2.1**
THR6	**Thira Island,**	**2.12**	**8**	P	**Pn**	**16 46 23.4**	**+1.3**
SANT	**Santorini**	**2.14**	**9**	PN	**Pn**	**16 46 23.2**	**+0.7**
SANT	**Santorini**	**2.14**	**9**	P	**Pn**	**16 46 23.8**	**+1.3**
SANT				AML	AML	16 47 06.8	
	comp=N,349μm,0.3s						
SANT				AML	AML	16 47 08.5	
	comp=E,1544μm,0.5s						
ANKY	**Antikythira Is**	**2.15**	**319**	P	**Pn**	**16 46 24.1**	**+1.5**
ANKY				AML	AML	16 47 18.8	
	comp=N,1004μm,1.0s						
ANKY				AML	AML	16 47 28.8	
	comp=E,1179μm,0.9s						
KARP	**Karpathos**	**2.16**	**53**	PN	**Pn**	**16 46 24.1**	**+1.3**
KARP	**Karpathos**	**2.16**	**53**	*e*Pn	**Pb**	**16 46 25.7**	**-2.1**
KARP	**Karpathos**	**2.16**	**53**	P	**Pb**	**16 46 26.0**	**-1.8**
KARP	**Karpathos**	**2.16**	**53**	P	**Pb**	**16 46 25.7**	**-2.1**
KARP				AML	AML	16 47 15.7	
	comp=N,1208μm,0.9s						
KARP				AML	AML	16 47 31.9	
	comp=E,1180μm,1.1s						
THR3	**Thira Island,**	**2.17**	**8**	P	**Pn**	**16 46 23.6**	**+0.8**
THR5	**Thira Island,**	**2.17**	**6**	P	**Pn**	**16 46 24.1**	**+1.2**
THR5	**Thira Island,**	**2.17**	**6**	P	**Pn**	**16 46 23.7**	**+0.9**
ANAF	**Anafi Island**	**2.18**	**16**	P	**Pn**	**16 46 24.1**	**+1.1**
ANAF				AML	AML	16 47 09.8	
	comp=E,2470μm,0.9s						
ANAF				AML	AML	16 47 15.2	
	comp=N,2267μm,0.6s						
THT2	**Imerovigli**	**2.20**	**8**	P	**Pn**	**16 46 24.4**	**+1.2**
THR2	**Thira island,**	**2.21**	**8**	P	**Pn**	**16 46 24.4**	**+1.0**
IOSP	**Ios island**	**2.47**	**5**	P	**Pn**	**16 46 27.7**	**+0.7**
MHLO	**Agia Marina, M**	**2.48**	**348**	P	**Pn**	**16 46 27.7**	**+0.5**
MHLO				AML	AML	16 47 16.8	
	comp=N,3534μm,0.6s						
MHLO				AML	AML	16 47 27.8	
	comp=E,2943μm,0.6s						
MHLA	**Plaka, Milos I**	**2.54**	**349**	P	**Pn**	**16 46 29.0**	**+1.1**
KYTH	**Kithira**	**2.59**	**321**	P	**Pn**	**16 46 30.4**	**+1.8**
KYTH				AML	AML	16 47 34.3	
	comp=E,805μm,1.3s						
KYTH				AML	AML	16 47 39.2	
	comp=N,758μm,1.1s						
AMGA	**Amorgos Island**	**2.66**	**15**	P	**Pn**	**16 46 30.0**	**+0.4**
APE	**Apeiranthos**	**2.83**	**8**	PN	**Pn**	**16 46 32.4**	**+0.4**
APE	**Apeiranthos**	**2.83**	**8**	P	**Pn**	**16 46 32.7**	**+0.6**
SERI	**Serifos**	**2.93**	**351**	P	**Pn**	**16 46 34.2**	**+0.8**
VLI	**Veliai**	**3.00**	**326**	P	**Pn**	**16 46 34.2**	**-0.1**
ARG	**Arkhangelos**	**3.19**	**51**	PN	**Pn**	**16 46 38.3**	**+1.4**
ARG	**Arkhangelos**	**3.19**	**51**	P	**Pn**	**16 46 38.9**	**+2.0**
ARG	**Arkhangelos**	**3.19**	**51**	P	**Pn**	**16 46 38.8**	**+2.0**
DAT	**Datca**	**3.22**	**39**	PN	**Pn**	**16 46 38.5**	**+1.1**
DAT	**Datca**	**3.22**	**39**	*i* P	**Pn**	**16 46 39.4**	**+2.0**
DAT				IAML_P			
	comp=Z,415nm,0.2s						
DAT	**Datca**	**3.22**	**39**	*i* P	**Pn**	**16 46 37.5**	**+0.1**
BBRN	**Bozburun-Marma**	**3.45**	**45**	PN	**Pn**	**16 46 41.9**	**+1.5**
DID	**Didima**	**3.56**	**336**	P	**Pn**	**16 46 42.2**	**+0.2**
VLY	**Voula,Athens**	**3.73**	**345**	P	**Pn**	**16 46 45.0**	**+0.7**
SMG	**Samos**	**3.74**	**22**	P	**Pn**	**16 46 45.4**	**+1.0**
PYL	**PYLOS**	**3.77**	**315**	P	**Pn**	**16 46 47.3**	**+2.5**
ITM	**Ithomi**	**3.87**	**320**	*e*Pn	**Pn**	**16 46 47.9**	**+1.7**
ITM	**Ithomi**	**3.87**	**320**	P	**Pn**	**16 46 46.9**	**+0.7**
DALY	**Dalyan (Mula)**	**3.90**	**48**	PN	**Pn**	**16 46 48.5**	**+1.9**
DALY	**Dalyan (Mula)**	**3.90**	**48**	*i* P	**Pn**	**16 46 49.1**	**+2.5**
DALY				IAML_P			
	comp=Z,2μm,0.2s						
DALY	**Dalyan (Mula)**	**3.90**	**48**	*i* P	**Pn**	**16 46 49.3**	**+2.7**
DALY				*i* S	**Sn**	**16 47 30.5**	**-0.6**
YER	**Yerkesik**	**3.90**	**42**	PN	**Pn**	**16 46 48.4**	**+1.7**
YER	**Yerkesik**	**3.90**	**42**	P	**Pn**	**16 46 48.6**	**+1.9**
TURN	**Turunc**	**3.90**	**47**	PN	**Pn**	**16 46 44.1**	**-2.6**
TURN	**Turunc**	**3.90**	**47**	*i* P	**Pn**	**16 46 44.4**	**-2.3**
TURN				IAML_P			
	comp=Z,2μm,0.2s						
TURN	**Turunc**	**3.90**	**47**	*i* P	**Pn**	**16 46 43.0**	**-3.6**
TURN				*i* S	Sn	16 47 20.6	-11
PTL	**Penteli**	**3.90**	**346**	P	**Pn**	**16 46 47.3**	**+0.6**
TRIP	**Tripoli**	**3.97**	**326**	P	**Pn**	**16 46 49.4**	**+1.8**
FETY	**Fethiye**	**4.06**	**53**	PN	**Pn**	**16 46 49.9**	**+1.0**
FETY	**Fethiye**	**4.06**	**53**	*i* P	**Pn**	**16 46 50.4**	**+1.5**
FETY				IAML_P			
	comp=Z,1μm,0.2s						
FETY	**Fethiye**	**4.06**	**53**	*i* P	**Pn**	**16 46 50.1**	**+1.2**
FETY				*i* S	**Sn**	**16 47 28.3**	**-7.0**
AYDN	**Tasoluk**	**4.10**	**33**	*i* P	**Pn**	**16 46 52.5**	**+3.0**
LTK	**Loutraki**	**4.12**	**337**	P	**Pn**	**16 46 50.1**	**+0.5**
VIL2	**Platees**	**4.20**	**341**	P	**Pn**	**16 46 50.5**	**-0.3**
CHOS	**Chios island**	**4.20**	**11**	PN	**Pn**	**16 46 51.7**	**+0.8**
AKAS	**Kas**	**4.22**	**61**	PN	**Pn**	**16 46 52.3**	**+1.1**
AKAS	**Kas**	**4.22**	**61**	*i* P	**Pn**	**16 46 52.1**	**+0.9**
AKAS				IAML_P			
	comp=Z,4μm,0.2s						
AKAS	**Kas**	**4.22**	**61**	*i* P	**Pn**	**16 46 52.5**	**+1.3**
AKAS				*i* S	**Sn**	**16 47 36.2**	**-3.1**
AKAS				IAML_P			
	comp=Z,4μm,0.2s						
EREA	**Eretria**	**4.25**	**348**	P	**Pn**	**16 46 52.4**	**+0.9**
GUR	**Goura**	**4.27**	**330**	P	**Pn**	**16 46 53.0**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**4.34**	**31**	PN	**Pn**	**16 46 54.4**	**+1.5**
KLV	**Kalavryta, Ach**	**4.45**	**329**	P	**Pn**	**16 46 55.6**	**+1.4**
ELL	**Elmali**	**4.68**	**57**	PN	**Pn**	**16 46 59.1**	**+1.6**
AKUM	**Antalya-Kumluc**	**4.80**	**63**	*i* P	**Pn**	**16 47 00.6**	**+1.6**
AKUM				IAML_P			
	comp=Z,2μm,0.2s						
AKUM	**Antalya-Kumluc**	**4.80**	**63**	*i* P	**Pn**	**16 47 00.7**	**+1.7**
AKUM				*i* S	**Sn**	**16 47 50.9**	**-2.4**
AKUM				IAML_P			
	comp=Z,2μm,0.2s						
KORT	**Korkueli**	**5.12**	**56**	PN	**Pn**	**16 47 05.9**	**+2.4**
KORT	**Korkueli**	**5.12**	**56**	*i* P	**Pn**	**16 47 06.9**	**+3.5**
KORT				*i* S	**Sn**	**16 48 04.1**	**+2.7**
KORT				IAML_P			
	comp=Z,705nm,0.3s						
KORT	**Korkueli**	**5.12**	**56**	*i* P	**Pn**	**16 47 06.9**	**+3.4**
KORT				*i* S	**Sn**	**16 48 03.8**	**+2.4**
KORT				IAML_P			
	comp=Z,875nm,0.2s						
AGG	**Agios Georgios**	**5.23**	**336**	*e*Pn	**Pn**	**16 47 05.4**	**+0.4**
KEPZ	**Antalya-Kepez**	**5.96**	**62**	*i* P	**Pn**	**16 47 16.1**	**+1.1**
KEPZ				IAML_P			
	comp=Z,459nm,0.2s						
KEPZ	**Antalya-Kepez**	**5.96**	**62**	*i* P	**Pn**	**16 47 16.8**	**+1.8**
KEPZ				*i* S	**Sn**	**16 48 19.5**	**-2.6**
LIT	**Litokhoron**	**6.18**	**341**	*e*Pn	**Pn**	**16 47 17.2**	**-0.8**
FNA	**Florina**	**7.14**	**337**	*e*Pn	**Pn**	**16 47 31.3**	**+0.1**
TIP	**Timpagrande**	**8.27**	**309**	*e*Pn	**Pn**	**16 47 47.9**	**+1.2**
MMAI	**Mount Meron Ar**	**8.73**	**95**	Pn	**Pn**	**16 47 52.4**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=285,slow=12,SNR=5.0						
MMAI				Sn	**Sn**	**16 49 25.1**	**-5.1**
	comp=Z,3.8nm,0.3s,baz=277,slow=22,SNR=6.4						
BR101	**Keskin Array S**	**8.78**	**49**	*e*Pn	**Pn**	**16 47 54.4**	**+0.7**
BR101				*e*Sn	**Sn**	**16 49 28.4**	**-3.0**
BR131	**Keskin Array S**	**8.78**	**49**	*e*Pn	**Pn**	**16 47 52.9**	**-0.8**
BRTR	**Keskin Array B**	**8.78**	**49**	Pn	**Pn**	**16 47 54.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=226,slow=14,SNR=4.9						
BRTR				Sn	**Sn**	**16 49 28.4**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=209,slow=20,SNR=2.4						
EIL	**Elat**	**9.57**	**116**	Pn	**Pn**	**16 48 04.0**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=340,slow=3.3,SNR=8.0						
TIRR	**Tirgusor**	**10.52**	**13**	*e*Pn	**Pn**	**16 48 15.8**	**-1.5**
MLR	**Muntele Rosu**	**11.24**	**3**	*e*Pn	**Pn**	**16 48 29.2**	**+1.7**
SKDS	**Skadanscina**	**14.08**	**326**	*e*Pn	**Pn**	**16 49 02.5**	**-3.7**
PSZ	**Piszkesteto**	**14.19**	**346**	*e*Pn	**Pn**	**16 49 07.8**	**+0.3**
VNDS	**Vrh nad Dolski**	**14.21**	**329**	*i* Pn	**Pn**	**16 49 05.2**	**-2.7**
JAVS	**Javornik**	**14.33**	**327**	*i* Pn	**Pn**	**16 49 07.1**	**-2.5**
SOKA	**Soboth**	**14.54**	**332**	*e*Pn	**P**	**16 49 19.9**	**+1.3**
	comp=Z,7.4nm,0.9s						
ARSA	**Arzberg**	**14.83**	**334**	*e*Pn	**P**	**16 49 22.4**	**+0.6**
	comp=Z,3.0nm,0.5s						
VYHS	**Vyhne**	**14.96**	**344**	*e*PN	**Pn**	**16 49 14.0**	**-4.0**
KBA	**Koelnbreinsper**	**15.56**	**329**	*e*Pn	**P**	**16 49 31.4**	**+1.4**
	comp=Z,7.0nm,0.7s						
ABTA	**Abfaltersbach**	**15.68**	**326**	*e*Pn	**P**	**16 49 32.6**	**+1.5**
	comp=Z,8.0nm,0.6s,SNR=7.7						
MOA	**Molln**	**15.80**	**332**	*e*P	**P**	**16 49 33.4**	**+0.9**
	comp=Z,6.5nm,0.7s						
VRAC	**Vranov**	**16.29**	**340**	Pn	**P**	**16 49 37.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=149,slow=8.4,SNR=7.8						
WTTA	**Wattenberg**	**16.46**	**326**	*e*Pn	**P**	**16 49 41.9**	**+1.9**
	comp=Z,14nm,1.3s						
SQTA	**Sankt Quirin**	**16.63**	**325**	*e*Pn	**P**	**16 49 44.0**	**+2.3**
	comp=Z,4.0nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**16.67**	**322**	*e*P	**Pn**	**16 49 40.9**	**+0.6**
	comp=Z,6.3nm,0.8s						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**16 49 39.3**	**-1.3**
	comp=Z,3.1nm,0.3s,baz=200,slow=10,SNR=16						
AKBB	**Malin Array Si**	**16.72**	**9**	*e*Pn	**Pn**	**16 49 38.6**	**-1.9**
	comp=Z,16nm,0.8s						
FETA	**Feichten**	**16.72**	**324**	*e*Pn	**P**	**16 49 45.2**	**+2.4**
	comp=Z,9.1nm,1.0s						
KBZ	**Khabaz**	**16.77**	**50**	Pn	**P**	**16 49 44.0**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=234,slow=12,SNR=9.2						
GEC2	**GERESS Array S**	**16.84**	**333**	*e*P	**P**	**16 49 44.0**	**-0.1**
	comp=Z,12nm,0.6s						
GERES	**GERESS Array B**	**16.84**	**333**	Pn	**P**	**16 49 44.1**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=144,slow=12,SNR=53						
DAVOX	**Davos/Dischmat**	**16.98**	**322**	Pn	**P**	**16 49 47.4**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=127,slow=15,SNR=4.0						
KHC	**Kasperske Hory**	**17.12**	**334**	*e*P	**P**	**16 49 48.3**	**+1.2**
	comp=Z,2.6nm,0.9s						
KHC	**Kasperske Hory**	**17.12**	**334**	*e*P	**P**	**16 49 48.1**	**+1.0**
DPC	**Dobruska-Polom**	**17.31**	**341**	*e*P	**P**	**16 49 50.2**	**+1.0**
DAVA	**Damuels**	**17.32**	**323**	*e*Pn	**P**	**16 49 50.6**	**+1.2**
	comp=Z,5.3nm,0.7s						
BRG	**Berggiesshubel**	**18.47**	**337**	*e*P	**P**	**16 50 01.9**	**0.0**
	comp=Z,2.6nm,0.8s						
BRG				*e*		16 50 07.4	
	comp=Z,3.8nm,0.9s						
GRA1	**Grafenberg Arr**	**18.48**	**331**	*e*P	**P**	**16 50 01.3**	**-0.9**
	comp=Z,9.1nm,0.8s						
CLL	**Collm**	**19.15**	**336**	*e*P	**P**	**16 50 09.0**	**-0.4**
	comp=Z,3.3nm,0.8s						
CLL	**Collm**	**19.15**	**336**	*e*P	**Pn**	**16 50 10.0**	**-0.5**
CLL				*e*pP	**pP**	**16 50 16.0**	**-1.9**
ESDC	**Sonseca Array**	**23.74**	**292**	P	**P**	**16 50 58.9**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=81,slow=9.1,SNR=9.6						
HFS	**Hagfors**	**26.93**	**347**	P	**P**	**16 51 25.6**	**-1.4**
	comp=Z,2.1nm,0.7s,baz=128,slow=9.3,SNR=5.6						
FIA0	**FINESS Array S**	**27.21**	**1**	*e*P	**P**	**16 51 27.8**	**-1.6**
FINES	**FINESS Array B**	**27.21**	**1**	P	**P**	**16 51 27.8**	**-1.6**
	comp=Z,2.1nm,0.8s,baz=151,slow=12,SNR=3.6						
NAO01	**NORSAR Array S**	**28.14**	**345**	*e*P	**P**	**16 51 36.5**	**-1.3**
NB2	**NORSAR Subarra**	**28.25**	**346**	P	**P**	**16 51 38.0**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=158,slow=11						
NB200	**NORSAR Array S**	**28.25**	**346**	*e*P	**P**	**16 51 38.0**	**-0.8**
NOA	**NORSAR Array B**	**28.25**	**346**	P	**P**	**16 51 38.0**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=147,slow=8.5,SNR=6.2						
EKA	**Eskdalemuir Ar**	**28.73**	**326**	P	**P**	**16 51 43.8**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=118,slow=10,SNR=4.2						
AKTO	**Aktyubinsk**	**28.94**	**46**	P	**P**	**16 51 44.9**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=225,slow=16,SNR=2.6						
TOA1	**Torodi Ar. Sit**	**29.84**	**231**	*e*P	**P**	**16 51 53.2**	**-0.1**
TOA0	**Torodi Ar. Sit**	**29.84**	**231**	*e*P	**P**	**16 51 55.0**	**+1.6**
	comp=Z,2.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**29.84**	**231**	P	**P**	**16 51 53.2**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=36,slow=8.0,SNR=14						
ARA0	**ARCESS Array S**	**35.33**	**0**	*e*P	**P**	**16 52 39.5**	**-1.3**
ARCES	**ARCESS Array B**	**35.33**	**0**	P	**P**	**16 52 39.5**	**-1.3**
	comp=Z,7.3nm,0.4s,baz=165,slow=10.0,SNR=6.6						
KK31	**Karatay Array**	**36.20**	**62**	*e*P	**P**	**16 52 50.1**	**+1.5**
	comp=Z,1.1nm,0.9s						
KKAR	**Karatay Array**	**36.20**	**62**	*e*P	**P**	**16 52 50.1**	**+1.5**
	comp=Z,2.5nm,1.1s						
KURK	**Kurchatov**	**41.83**	**50**	*e*P	**P**	**16 53 36.4**	**+1.0**
	comp=Z,4.6nm,1.1s						
SPA0	**Spitsbergen Ar**	**44.18**	**357**	*e*P	**P**	**16 53 53.4**	**-0.8**
	comp=Z,8.7nm,1.0s						
SPITS	**Spitsbergen Ar**	**44.18**	**357**	P	**P**	**16 53 53.6**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=152,slow=4.1,SNR=5.0						
MK31	**Makanchi Array**	**44.36**	**56**	*e*P	**P**	**16 53 57.2**	**+1.1**
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**44.36**	**56**	P	**P**	**16 53 57.2**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=277,slow=6.3,SNR=21						
ZAA0	**Zalesovo Array**	**45.70**	**46**	*e*P	**P**	**16 54 04.3**	**-2.3**
	comp=Z,3.7nm,0.5s						
ZAA1	**Zalesovo Array**	**45.70**	**46**	*e*P	**P**	**16 54 06.5**	**0.0**
ZALV	**Zalesovo Beam**	**45.70**	**46**	P	**P**	**16 54 06.5**	**0.0**
	comp=Z,3.8nm,0.4s,baz=264,slow=8.7,SNR=13						
ANGG	**Ammassalik, Gr**	**48.12**	**330**	*e*P	**P**	**16 54 24.7**	**-0.6**
	comp=Z,4.3nm,0.7s						
SONA0	**Songino Array**	**60.13**	**50**	*e*P	**P**	**16 55 54.7**	**+1.4**
SONM	**Songino Array**	**60.13**	**50**	P	**P**	**16 55 54.7**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=288,slow=8.9,SNR=5.4						
BOSA	**Boshof**	**62.53**	**180**	*e*P	**P**	**16 56 09.0**	**-0.5**
	comp=Z,2.6nm,1.1s						
KSRS	**Korea Array**	**78.91**	**52**	P	**P**	**16 57 50.4**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=296,slow=4.0,SNR=3.2						
MAJO	**Matsushiro**	**86.00**	**48**	*e*P	**P**	**16 58 27.9**	**+1.7**
MJAR	**Matsushiro Arr**	**86.00**	**48**	P	**P**	**16 58 27.9**	**+1.7**
	comp=Z,0.7nm,0.9s,baz=335,slow=5.4,SNR=4.0						

GII ***15*** *16:47:22.4±0.4, 34°.31N×25°.09E, h47km, mb4.3/1, MD4.1/1*
IDC ***15*** *16:47:26.6±1.1, 34°.14N×25°.09E, h0km, mb3.8/10, mb1 3.9/16, mb1mx3.8/48, mbtmp3.9/16, ML4.1/5, Error ellipse: s-maj=20.8km s-min=17.8km az=173.0*
NEIC ***15*** *16:47:30.1±0.0, 34°.31N×25°.09E, h26km, mb4.1/8, ML3.4(ATH), After ATH.*
ATH ***15*** *16:47:30.2, 34°.31N×25°.09E, h26km±2km, ML3.4/4, Error ellipse: s-maj=3.7km s-min=1.5km az=351.0*
THE ***15*** *16:47:31.9, 34°.38N×25°.10E, h0km±4km, ML3.5/3, Error ellipse: s-maj=8.2km s-min=2.1km az=183.0*
ISC 15 16:47:28.2±1.2, 34°.12N±0°.05×25°.19E±0°.04, h17km±7km, n71, σ2s67/82, mb3.9/17, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.94**	**341**	P	**Pb**	**16 47 44.8**	**-1.3**
SIVA				S	**Sg**	**16 47 55.8**	**-3.2**
	10μm,0.5s						
SIVA	**Sivas**	**0.94**	**341**	P	**Pb**	**16 47 44.6**	**-1.5**
SIVA				S	**Sg**	**16 47 55.6**	**-3.4**
SIVA				AML	AML	16 47 58.0	
	comp=E,18447μm,0.7s						
SIVA				AML	AML	16 48 03.2	
	comp=N,10616μm,0.4s						
LAST	**Lasithi**	**1.06**	**13**	P	**Pb**	**16 47 47.8**	**-0.4**
LAST				S	**Sb**	**16 48 01.7**	**-0.1**
	comp=N,2μm,0.8s						
LAST	**Lasithi**	**1.06**	**13**	P	**Pb**	**16 47 47.3**	**-0.8**
LAST				S	**Sb**	**16 48 01.3**	**-0.6**
LAST				AML	AML	16 48 07.0	
	comp=N,3462μm,0.6s						
LAST				AML	AML	16 48 08.9	
	comp=E,2667μm,0.7s						
GVD	**Gavdhos**	**1.16**	**308**	P	**Pg**	**16 47 51.5**	**+1.0**
GVD	**Gavdhos**	**1.16**	**308**	P	**Pn**	**16 47 49.4**	**-0.2**
GVD				S	**Sb**	**16 48 02.0**	**-2.4**
GVD				AML	AML	16 48 13.4	
	comp=N,6337μm,0.4s						
GVD				AML	AML	16 48 13.7	
	comp=E,5680μm,0.8s						
IDI	**Anoyia**	**1.19**	**348**	Pn	**Pn**	**16 47 48.8**	**-1.3**
	comp=E,69nm,0.3s,baz=170,slow=16,SNR=2.6						
IDI				Sn	**Sb**	**16 48 03.2**	**-2.2**
	comp=E,108nm,0.3s,baz=265,slow=21,SNR=3.7						
NPS	**Neapolis**	**1.19**	**17**	P	**Pn**	**16 47 50.6**	**+0.6**
NPS				S	**Sb**	**16 48 06.0**	**+0.6**
	comp=E,2μm,0.7s						
NPS	**Neapolis**	**1.19**	**17**	P	**Pn**	**16 47 50.3**	**+0.2**
NPS				S	**Sb**	**16 48 04.5**	**-0.9**
NPS				AML	AML	16 48 09.5	
	comp=N,2295μm,0.4s						
NPS				AML	AML	16 48 16.0	
	comp=E,2860μm,0.6s						
ZKR	**Zakros**	**1.30**	**40**	P	**Pb**	**16 47 53.2**	**+1.0**
ZKR				S	**Sn**	**16 48 10.3**	**+1.6**
VAM	**Vamos**	**1.52**	**328**	P	**Pn**	**16 47 55.6**	**+1.1**
VAM	**Vamos**	**1.52**	**328**	P	**Pn**	**16 47 55.0**	**+0.5**
VAM				S	**Sn**	**16 48 12.5**	**-1.4**
IMMV	**Iera Moni Meta**	**1.66**	**324**	P	**Pn**	**16 47 57.3**	**+0.8**
KARP	**Karpathos**	**2.16**	**48**	*e*P	**Pn**	**16 48 03.9**	**+0.5**
KARP	**Karpathos**	**2.16**	**48**	P	**Pb**	**16 48 07.8**	**+1.0**
BALB	**Balikesir**	**5.91**	**21**	*e*Pn	**Pn**	**16 48 55.7**	**+0.8**
OFRI	**`Ofer**	**8.33**	**98**	Sn	**Sn**	**16 50 56.4**	**-5.5**
ANTO	**Ankara**	**8.36**	**44**	*e*Pn	**Pn**	**16 49 28.1**	**-0.5**
HNTI	**Hanita**	**8.39**	**94**	Pn	Pn	16 49 23.2	-5.9
AMAZ	**Amatzia**	**8.58**	**105**	Pn	Pn	16 49 25.8	-5.9
AMAZ				Sn	**Sn**	**16 51 03.3**	**-4.8**
MMA0B	**Mount Meron ar**	**8.60**	**95**	Pn	Pn	16 49 25.9	-6.0
MMAI	**Mount Meron Ar**	**8.60**	**95**	Pn	**Pn**	**16 49 32.8**	**+0.9**
	comp=E,4.9nm,0.3s,baz=292,slow=9.2,SNR=5.8						
MMAI	**Mount Meron Ar**	**8.60**	**95**	Pn	**Sn**	**16 51 06.2**	**-2.2**
	comp=E,5.8nm,0.3s,baz=293,slow=15,SNR=3.2						
MMLI	**Mount Malkishu**	**8.73**	**98**	Pn	Pn	16 49 28.9	-4.8
MMLI				Sn	**Sn**	**16 51 06.1**	**-5.7**
BR101	**Keskin Array S**	**8.78**	**48**	*e*Pn	**Pn**	**16 49 38.0**	**+3.6**
BRTR	**Keskin Array B**	**8.78**	**48**	Pn	**Pn**	**16 49 38.0**	**+3.6**
	comp=E,0.1nm,0.3s

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST				S	Sn	16 49 46.6	+2.5
LAST	**Lasithi**	**0.80**	**25**	P	Pn	16 49 31.9	-1.2
LAST				S	Sn	16 49 42.7	-1.4
IDI	**Anoyia**	**0.86**	**351**	Pn	Pn	16 49 34.3	+0.4
	comp=E,21nm,0.3s,baz=183,slow=17,SNR=1.2						
IDI				Sn	Sn	16 49 47.6	+2.0
	comp=E,36nm,0.3s,baz=95,slow=22,SNR=4.4						
GVD	**Gavdhos**	**0.90**	**297**	P	Pn	16 49 34.7	+0.4
GVD	**Gavdhos**	**0.90**	**297**	P	Pn	16 49 34.7	+0.4
GVD				S	Sn	16 49 47.6	+1.3
GVD				AML	AML	16 49 53.4	
	comp=E,2597µm,0.6s						
GVD				AML	AML	16 49 54.2	
	comp=N,2572µm,0.4s						
NPS	**Neapolis**	**0.94**	**29**	P	Pn	16 49 35.0	+0.1
NPS				S	Sn	16 49 50.6	+3.2
	comp=N,878nm,0.8s						
NPS	**Neapolis**	**0.94**	**29**	P	Pn	16 49 34.5	-0.4
ZKR	**Zakros**	**1.17**	**54**	P	Pn	16 49 39.3	+1.3
ZKR	**Zakros**	**1.17**	**54**	P	Pn	16 49 39.1	+1.1
VAM	**Vamos**	**1.20**	**324**	P	Pn	16 49 39.7	+1.3
VAM	**Vamos**	**1.20**	**324**	P	Pn	16 49 39.3	+0.9
VAM				S	Sn	16 49 56.2	+2.6
VAM				AML	AML	16 50 03.6	
	comp=E,1370µm,0.6s						
VAM				AML	AML	16 50 08.2	
	comp=N,1142µm,0.4s						
GERES	**GERESS Array B**	**16.69**	**333**	Pn	**P**	**16 53 10.6**	**+0.5**
	comp=N,0.1nm,0.3s,baz=146,slow=12,SNR=4.1						
HFS	**Hagfors**	**26.76**	**347**	P	**P**	**16 54 52.7**	**-0.2**
	comp=N,2.2nm,0.9s,baz=153,slow=9.7,SNR=1.9						
FINES	**FINESS Array B**	**27.04**	**1**	P	**P**	**16 54 53.5**	**-1.8**
	comp=N,3.5nm,0.9s,baz=174,slow=14,SNR=2.5						
NOA	**NORSAR Array B**	**28.08**	**346**	P	**P**	**16 55 04.2**	**-0.4**
	comp=N,0.2nm,0.6s,baz=171,slow=9.9,SNR=1.5						
TORD	**Torodi Ar. Bea**	**29.96**	**231**	P	**P**	**16 55 21.4**	**-0.4**
	comp=N,0.5nm,0.6s,baz=44,slow=6.7,SNR=2.4						
ARCES	**ARCESS Array B**	**35.16**	**0**	P	**P**	**16 56 05.1**	**-1.5**
	comp=N,2.1nm,0.9s,baz=174,slow=8.8,SNR=1.8						
SPITS	**Spitsbergen Ar**	**44.01**	**357**	P	**P**	**16 57 20.1**	**-0.1**
	comp=N,0.7nm,0.4s,baz=153,slow=13,SNR=5.2						
MKAR	**Makanchi Array**	**44.24**	**56**	P	P	16 57 16.9	-5.6
	comp=N,0.1nm,0.3s,baz=279,slow=7.1,SNR=1.0						
ZALV	**Zalesovo Beam**	**45.57**	**46**	P	P	16 57 27.1	-5.7
	comp=N,0.5nm,0.4s,baz=334,slow=40,SNR=1.9						

IDC 15 16:50:57.4±3.2, 34°.10N×25°.38E, h0^{km}, mb3.8/1, mb1 3.9/3, mb1mx3.3/47, mbtmp3.7/3, ML4.2/2, Error ellipse: s-maj=61.4km s-min=26.5km az=109.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.25**	**341**	Pn	Pb	16 51 22.0	0.0
	17nm,0.3s,baz=162,slow=17,SNR=4.9						
AKASG	**Malin Array Be**	**16.83**	**8**	Pn	Pn	16 54 54.4	+0.2
	0.5nm,0.3s,baz=202,slow=10,SNR=4.3						
GERES	**GERESS Array B**	**17.11**	**333**	P	Pn	16 54 58.0	+0.2
	0.4nm,0.3s,baz=146,slow=12,SNR=13						
TORD	**Torodi Ar. Bea**	**29.96**	**232**	P	P	16 57 07.5	0.0
	0.5nm,0.4s,baz=30,slow=9.0,SNR=4.5						

*HLW **15** 16:51:10.2, 34°.40N×25°.08E, h11^{km}±28^{km}, Ml4.5*
*IDC **15** 16:51:10.2±0.5, 34°.29N×25°.06E, h0^{km}, mb4.4/31, mb1 4.5/43, mb1mx4.4/57, mbtmp4.5/43, ML4.4/10, Error ellipse: s-maj=10.8km s-min=10.4km az=137.0*
*BJI **15** 16:51:10.5±0.0, 34°.51N×24°.77E, h19^{km}, mb4.7/35, mB5.0/4, Ms5.1/8, Ms7 4.9/6*
*ISCJB **15** 16:51:13.4±0.3, 34°.20N±0°.02×25°.14E±0°.02, h35^{km}±2^{km}, mb4.5/70, Error ellipse: s-maj=3.4km s-min=2.2km az=32.3*
*ATH **15** 16:51:14.1, 34°.27N×25°.10E, h39^{km}±3^{km}, ML4.2/7, Error ellipse: s-maj=5.3km s-min=2.0km az=340.0*
*ISK **15** 16:51:14.3, 34°.39N×25°.12E, h16^{km}, ML4.4/26*
*NEIC **15** 16:51:14.0±0.0, 34°.27N×25°.09E, h39^{km}, mb4.5/41, ML4.2(ATH), ML4.2(THE), After ATH.*
*THE **15** 16:51:16.6, 34°.38N×25°.01E, h16^{km}±4^{km}, ML4.2/2, Error ellipse: s-maj=4.7km s-min=1.6km az=192.0*
*MOS **15** 16:51:20.8±1.2, 34°.82N×25°.18E, h37^{km}, mb4.8/19, Error ellipse: s-maj=9.6km s-min=5.2km az=87.5*
*NIC **15** 16:51:21.5±0.3, 34°.61N×25°.75E, h50^{km}, mb4.9, ML4.5*
*GII **15** 16:51:22.9±1.1, 33°.89N×25°.82E, h60^{km}*
*DDA **15** 16:51:32.0, 34°.71N×25°.79E, h32^{km}±1^{km}, ML4.4*

ISC 15 16:51:13.3±0.7, 34°.21N±0°.03×25°.08E±0°.03, h21^{km}±2^{km}, n474, σ1°78/510, mb4.5/74, 17C-9D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.84**	**345**	P	Pb	16 51 28.6	-0.6
SIVA				S	Sb	16 51 40.1	0.0
SIVA	**Sivas**	**0.84**	**345**	P	Pb	16 51 29.2	-0.1
SIVA				S	Sn	16 51 41.1	-0.6
SIVA				AML	AML	16 51 47.7	
	comp=N,63928µm,0.7s						
SIVA				AML	AML	16 51 51.1	
	comp=E,98994µm,0.6s						
TMBK	**Timbaki Herakl**	**0.90**	**343**	P	Pb	16 51 29.9	-0.4
TMBK				S	Sb	16 51 41.2	-0.6
LAST	**Lasithi**	**1.01**	**19**	P	Pb	16 51 31.6	-0.5
LAST	**Lasithi**	**1.01**	**19**	P	Pb	16 51 31.7	-0.5
LAST				S	Sn	16 51 45.6	-0.3
LAST				AML	AML	16 51 55.5	
	comp=E,21183µm,0.7s						
LAST				AML	AML	16 51 57.6	
	comp=N,21221µm,0.7s						
GVD	**Gavdhos**	**1.04**	**308**	PG	Pn	16 51 33.1	+0.4
GVD				SG	Sn	16 51 47.6	+1.1
GVD	**Gavdhos**	**1.04**	**308**	*e*Pn	Pn	16 51 33.3	+0.6
GVD	**Gavdhos**	**1.04**	**308**	P	Pn	16 51 33.3	+0.6
GVD	**Gavdhos**	**1.04**	**308**	P	Pn	16 51 33.3	+0.6
IDI	**Anoyia**	**1.09**	**352**	Pn	Pn	16 51 33.0	-0.5
	comp=N,261nm,0.3s,baz=168,slow=18,SNR=25						
IDI				Sn	Sn	16 51 47.9	-0.1
	comp=N,526nm,0.3s,baz=288,slow=20,SNR=21						
KSTL	**Kastelli Herak**	**1.09**	**359**	P	Pn	16 51 32.3	-1.2
IACM	**Heraklion**	**1.10**	**360**	P	Pb	16 51 33.7	+0.1
IACM	**Heraklion**	**1.10**	**360**	P	Pb	16 51 34.7	+1.1
NPS	**Neapolis**	**1.14**	**22**	P	Pn	16 51 33.8	-0.3
NPS	**Neapolis**	**1.14**	**22**	P	Pn	16 51 33.9	-0.3
NPS				AML	AML	16 52 01.2	
	comp=N,13736µm,0.9s						
NPS				AML	AML	16 52 03.5	
	comp=E,19893µm,1.1s						
PRNS	**Prines Rethymn**	**1.25**	**338**	P	Pb	16 51 36.2	0.0
PRNS				S	Sn	16 51 49.0	-2.8
ZKR	**Zakros**	**1.30**	**46**	PN	Pn	16 51 36.7	+0.4
ZKR	**Zakros**	**1.30**	**46**	*e*Pn	Pb	16 51 37.0	-0.1
ZKR				*e*Pn	Pb	16 51 37.0	-0.1
ZKR				*e*Sn	Sb	16 51 55.6	+2.2
ZKR	**Zakros**	**1.30**	**46**	P	Pb	16 51 37.0	-0.1
ZKR				S	Sb	16 51 55.6	+2.2
ZKR	**Zakros**	**1.30**	**46**	P	Pb	16 51 37.0	-0.1
ZKR				AML	AML	16 52 06.4	
	comp=N,9977µm,0.5s						
ZKR				AML	AML	16 52 08.0	
	comp=E,18591µm,0.5s						
VAM	**Vamos**	**1.40**	**329**	P	Pb	16 51 38.5	-0.3
VAM				AML	AML	16 52 07.1	
	comp=E,18009µm,0.5s						
VAM				AML	AML	16 52 08.3	
	comp=N,18683µm,0.8s						
IMMV	**Iera Moni Meta**	**1.54**	**324**	PN	Pn	16 51 39.9	+0.2
IMMV	**Iera Moni Meta**	**1.54**	**324**	P	Pn	16 51 40.3	+0.6
IMMV				AML	AML	16 52 14.8	
	comp=N,13828µm,0.5s						
IMMV				AML	AML	16 52 21.4	
	comp=E,15044µm,0.8s						
CHAN	**Chania**	**1.56**	**327**	P	Pb	16 51 41.5	-0.1
CHAN				S	Sn	16 51 58.2	-1.4
KARP	**Karpathos**	**2.17**	**51**	PN	Pn	16 51 49.3	+1.0
KARP	**Karpathos**	**2.17**	**51**	*e*Pn	Pb	16 51 50.7	-1.2
KARP	**Karpathos**	**2.17**	**51**	P	Pb	16 51 50.7	-1.2
SANT	**Santorini**	**2.18**	**8**	PN	Pn	16 51 48.7	+0.2
SANT	**Santorini**	**2.18**	**8**	*e*Pn	Pn	16 51 49.0	+0.5
SANT	**Santorini**	**2.18**	**8**	P	Pn	16 51 48.5	0.0
ANKY	**Antikythira Is**	**2.21**	**319**	P	Pn	16 51 49.8	+1.0
THR3	**Thira Island,**	**2.21**	**7**	*e*Pn	Pn	16 51 49.3	+0.5
THR3	**Thira Island,**	**2.21**	**7**	P	Pn	16 51 49.3	+0.5
THR5	**Thira Island,**	**2.22**	**6**	P	Pn	16 51 49.5	+0.6
ANAF	**Anafi Island**	**2.22**	**15**	P	Pn	16 51 49.5	+0.5
ANAF	**Anafi Island**	**2.22**	**15**	P	Pn	16 51 49.8	+0.9
CMBO	**Columbo, Santo**	**2.27**	**7**	P	Pn	16 51 50.7	+1.0
IOSP	**Ios island**	**2.52**	**4**	P	Pn	16 51 53.3	+0.3
IOSP	**Ios island**	**2.52**	**4**	P	Pn	16 51 53.3	+0.3
MHLO	**Agia Marina, M**	**2.54**	**348**	P	Pn	16 51 53.4	+0.1
MHLA	**Plaka, Milos I**	**2.59**	**348**	P	Pn	16 51 54.6	+0.6
AMGA	**Amorgos Island**	**2.70**	**14**	P	Pn	16 51 55.5	-0.1
AMGA	**Amorgos Island**	**2.70**	**14**	P	Pn	16 51 55.9	+0.3
SLUM	**Salum**	**2.71**	**178**	P	Pn	16 51 57.2	+1.5
	baz=177						
SLUM				AMP		16 52 00.0	
	baz=177						
SLUM				S	Sn	16 52 29.6	+1.7
	baz=177						
APE	**Apeiranthos**	**2.88**	**7**	PN	Pn	16 51 58.3	+0.2
APE	**Apeiranthos**	**2.88**	**7**	*e*Pn	Pn	16 51 58.1	0.0
APE	**Apeiranthos**	**2.88**	**7**	P	Pn	16 51 58.1	0.0
APE	**Apeiranthos**	**2.88**	**7**	*de*P	Pn	16 51 58.3	+0.2
APE	**Apeiranthos**	**2.88**	**7**	P	Pn	16 51 58.1	0.0
VLI	**Veliai**	**3.06**	**326**	*e*Pn	Pn	16 52 00.9	+0.4
VLI	**Veliai**	**3.06**	**326**	P	Pn	16 52 00.9	+0.4
VLI	**Veliai**	**3.06**	**326**	P	Pn	16 52 00.6	+0.2
VLI				AML	AML	16 52 42.4	
	comp=N,1632µm,0.9s						
VLI				AML	AML	16 53 10.0	
	comp=E,1660µm,0.8s						
ARG	**Arkhangelos**	**3.20**	**50**	PN	Pn	16 52 03.6	+1.2
ARG	**Arkhangelos**	**3.20**	**50**	*e*Pn	Pn	16 52 04.2	+1.8
ARG	**Arkhangelos**	**3.20**	**50**	P	Pn	16 52 04.2	+1.8
ARG	**Arkhangelos**	**3.20**	**50**	*e*P	Pn	16 52 04.2	+1.8
ARG	**Arkhangelos**	**3.20**	**50**	P	Pn	16 52 04.4	+2.0
DAT	**Datca**	**3.24**	**38**	PN	Pn	16 52 03.9	+0.8
DAT	**Datca**	**3.24**	**38**	*i* P	Pn	16 52 04.7	+1.6
DAT				IAML_P			
	comp=Z,2µm,0.2s						
DATC	**Datca-Mugla**	**3.30**	**39**	PN	Pn	16 52 04.9	+1.1
BODT	**Bodrum**	**3.38**	**32**	PN	Pn	16 52 05.7	+0.8
MATC	**Matruh**	**3.38**	**147**	P	Pn	16 52 06.0	+1.1
	baz=148						
MATC				AMP		16 52 00.0	
	baz=148						
MATC				S	Sn	16 52 46.5	+2.1
	baz=148						
BDRM	**Kayabasi**	**3.44**	**33**	*i* P	Pn	16 52 07.3	+1.5
BDRM	**Kayabasi**	**3.44**	**33**	*i* P	Pn	16 52 07.2	+1.5
BDRM				IAML_P			
	comp=Z,2µm,0.2s						
BBRN	**Bozburun-Marma**	**3.46**	**44**	PN	Pn	16 52 07.3	+1.3
KRND	**KRANIDI**	**3.54**	**334**	P	Pn	16 52 07.9	+0.8
DID	**Didima**	**3.62**	**336**	*e*Pn	Pn	16 52 07.9	-0.3
DID	**Didima**	**3.62**	**336**	P	Pn	16 52 07.9	-0.3
VLY	**Voula,Athens**	**3.79**	**344**	P	Pn	16 52 10.5	+0.1
GCAM	**G?zelcaml?**	**3.90**	**26**	PN	Pn	16 52 12.9	+0.9
DALY	**Dalyan (Mula)**	**3.91**	**47**	PN	Pn	16 52 13.8	+1.7
DALY	**Dalyan (Mula)**	**3.91**	**47**	*i* P	Pn	16 52 14.0	+1.9
DALY				*i* S	Sn	16 52 54.8	-2.5
DALY				IAML_P			
	comp=Z,6µm,0.2s						
DALY	**Dalyan (Mula)**	**3.91**	**47**	*i* P	Pn	16 52 14.7	+2.6
DALY				IAML_P			
	comp=Z,5µm,0.2s						
TURN	**Turunc**	**3.91**	**46**	PN	Pn	16 52 09.4	-2.8
TURN	**Turunc**	**3.91**	**46**	*i* P	Pn	16 52 09.5	-2.8
TURN				*i* S	Sn	16 52 49.4	-8.1
TURN				IAML_P			
	comp=Z,8µm,0.3s						
TURN	**Turunc**	**3.91**	**46**	*i* P	Pn	16 52 09.6	-2.7
TURN				IAML_P			
	comp=Z,8µm,0.3s						
YER	**Yerkesik**	**3.91**	**41**	PN	Pn	16 52 13.4	+1.1
YER	**Yerkesik**	**3.91**	**41**	*e*Pn	Pn	16 52 13.9	+1.6
YER	**Yerkesik**	**3.91**	**41**	P	Pn	16 52 13.9	+1.6
YER	**Yerkesik**	**3.91**	**41**	*e*P	Pn	16 52 13.9	+1.6
ITM	**Ithomi**	**3.92**	**320**	PN	Pn	16 52 13.7	+1.3
ITM	**Ithomi**	**3.92**	**320**	*e*Pn	Pn	16 52 12.4	0.0
ITM	**Ithomi**	**3.92**	**320**	P	Pn	16 52 12.4	0.0
PTL	**Penteli**	**3.96**	**346**	*e*Pn	Pn	16 52 12.9	0.0
PTL	**Penteli**	**3.96**	**346**	P	Pn	16 52 12.9	0.0
FETY	**Fethiye**	**4.07**	**52**	PN	Pn	16 52 15.2	+0.8
FETY	**Fethiye**	**4.07**	**52**	*e*Pn	Pn	16 52 15.0	+0.6
FETY	**Fethiye**	**4.07**	**52**	P	Pn	16 52 15.0	+0.6
FETY	**Fethiye**	**4.07**	**52**	*i* P	Pn	16 52 15.4	+1.1
FETY				*i* S	Sn	16 52 59.1	-2.3
FETY				IAML_P			
	comp=Z,6µm,0.2s						
FETY	**Fethiye**	**4.07**	**52**	*i* P	Pn	16 52 16.0	+1.6
FETY				IAML_P			
	comp=Z,4µm,0.2s						
DGB	**zmir**	**4.10**	**20**	*i* P	Pn	16 52 15.9	+1.1
AYDN	**Tasoluk**	**4.13**	**33**	*i* P	Pn	16 52 17.0	+1.8
AYDN				*i* S	Sn	16 52 59.4	-3.5
AYDN				IAML_P			
	comp=Z,3µm,0.2s						
AYDN	**Tasoluk**	**4.13**	**33**	*i* P	Pn	16 52 17.5	+2.3
AYDN				IAML_P			
	comp=Z,4µm,0.3s						
LTK	**Loutraki**	**4.17**	**336**	*e*Pn	Pn	16 52 15.7	-0.2
LTK	**Loutraki**	**4.17**	**336**	P	Pn	16 52 15.7	-0.2
ZEY	**zmir**	**4.18**	**16**	*i* P	Pn	16 52 17.1	+1.1
VILL	**Villia**	**4.20**	**341**	P	Pn	16 52 16.4	+0.2
AKAS	**Kas**	**4.22**	**60**	PN	Pn	16 52 17.5	+0.9
AKAS	**Kas**	**4.22**	**60**	*i* P	Pn	16 52 17.6	+0.9
AKAS				*i* S	Sn	16 53 03.4	-1.8
AKAS				IAML_P			
	comp=Z,10µm,0.2s						
AKAS	**Kas**	**4.22**	**60**	*i* P	Pn	16 52 17.4	+0.9
AKAS				IAML_P			
	comp=Z,10µm,0.2s						
CHOS	**Chios island**	**4.25**	**10**	PN	Pn	16 52 16.8	-0.1
EREA	**Eretria**	**4.31**	**348**	P	Pn	16 52 17.9	+0.2
URLA	**Izmir**	**4.32**	**16**	PN	Pn	16 52 18.5	+0.6
GUR	**Goura**	**4.33**	**330**	*e*Pn	Pn	16 52 18.4	+0.3
GUR	**Goura**	**4.33**	**330**	P	Pn	16 52 18.4	+0.3
AYDB	**Zeytinkoy-Aydi**	**4.37**	**31**	PN	Pn	16 52 19.7	+1.1
BLCB	**Balcova**	**4.46**	**20**	PN	Pn	16 52 20.1	+0.4
MRKA	**Markates**	**4.65**	**345**	P	Pn	16 52 22.4	0.0
ELL	**Elmali**	**4.68**	**56**	PN	Pn	16 52 24.5	+1.6
AKUM	**Antalya-Kumluc**	**4.79**	**62**	*i* P	Pn	16 52 25.3	+0.9
AKUM				*i* S	Sn	16 53 16.3	-2.9
AKUM	**Antalya-Kumluc**	**4.79**	**62**	*i* P	Pn	16 52 25.2	+0.9
AKUM				*i* S	Sn	16 53 18.4	-0.8
AKUM				IAML_P			
	comp=Z,7µm,0.2s						
SMIA	**Simia**	**4.90**	**343**	P	Pn	16 52 25.9	+0.1
SIGR	**SIGRI**	**5.03**	**7**	PN	Pn	16 52 27.7	+0.1
MANT	**Manisa**	**5.11**	**32**	*e*Pn	Pn	16 52 31.0	+2.1
MANT	**Manisa**	**5.11**	**32**	*i* P	Pn	16 52 30.8	+1.9
MANT				IAML_P			
	comp=Z,2µm,0.5s						
MANT	**Manisa**	**5.11**	**32**	*i* P	Pn	16 52 30.6	+1.6
MANT				IAML_P			
	comp=Z,2µm,0.5s						
KORT	**Korkueli**	**5.12**	**55**	PN	Pn	16 52 30.9	+2.0
KORT	**Korkueli**	**5.12**	**55**	*i* P	Pn	16 52 31.7	+2.8
KORT				*i* S	Sn	16 53 28.7	+1.2
KORT	**Korkueli**	**5.12**	**55**	*i* P	Pn	16 52 31.8	+2.9
KORT				*i* S	Sn	16 53 29.4	+2.0
KORT				IAML_P			
	comp=Z,2µm,0.2s						
AKHS	**Akhisar**	**5.16**	**24**	*i* P	Pn	16 52 31.6	+2.3
KULA	**Kula-Manisa**	**5.18**	**33**	PN	Pn	16 52 30.9	+1.2
KULA	**Kula-Manisa**	**5.18**	**33**	P	Pn	16 52 31.4	+1.7
ANTB	**Antalya**	**5.28**	**58**	PN	Pn	16 52 33.5	+2.5
AGG	**Agios Georgios**	**5.29**	**336**	*e*Pn	Pn	16 52 31.8	+0.6
AGG	**Agios Georgios**	**5.29**	**336**	*e*P	Pn	16 52 31.8	+0.6
BRDR	**BURDUR-Merkez**	**5.33**	**48**	*i* P	Pn	16 52 33.3	+1.5
BRDR				IAML_P			
	comp=Z,2µm,0.2s						
BRDR	**BURDUR-Merkez**	**5.33**	**48**	*i* P	Pn	16 52 33.0	+1.2
BRDR				IAML_P			
	comp=Z,1µm,0.2s						
HBRG	**Burj al `Arab**	**5.41**	**131**	P	Pn	16 52 33.5	+0.6
	baz=132						
KHAL	**Karahalli**	**5.47**	**39**	*i* P	Pn	16 52 35.4	+1.6
KHAL				*i* S	Sn	16 53 34.8	-1.3
KHAL	**Karahalli**	**5.47**	**39**	*i* P	Pn	16 52 34.7	+0.9
KHAL				*i* S	Sn	16 53 34.3	-1.8
KHAL				IAML_P			
	comp=Z,2µm,0.2s						
USAK	**Uak-Merkez**	**5.50**	**34**	*i* P	Pn	16 52 36.3	+2.1
USAK				IAML_P			
	comp=Z,5µm,0.3s						
BCK	**Bucak**	**5.53**	**52**	PN	Pn	16 52 36.9	+2.4
ISP	**Isparta**	**5.70**	**49**	PN	Pn	16 52 37.7	+0.9
ISP	**Isparta**	**5.70**	**49**	*e*Pn	Pn	16 52 37.4	+0.6
ISP	**Isparta**	**5.70**	**49**	*e*P	Pn	16 52 37.4	+0.6
KEPZ	**Antalya-Kepez**	**5.96**	**61**	*i* P	Pn	16 52 41.7	+1.4
KEPZ				*i* S	Sn	16 53 45.7	-2.3
KEPZ	**Antalya-Kepez**	**5.96**	**61**	*i* P	Pn	16 52 41.4	+1.0
KEPZ				*i* S	Sn	16 53 45.6	-2.4
KEPZ				IAML_P			
	comp=Z,2µm,0.2s						
BAGO	**Egridir - ISPA**	**5.96**	**49**	*i* P	Pn	16 52 41.6	+1.1
BAGO				*i* S	Sn	16 53 43.1	-5.1
BAGO				IAML_P			
	comp=Z,1µm,0.2s						
BAGO	**Egridir - ISPA**	**5.96**	**49**	*i* P	Pn	16 52 42.8	+2.3
BAGO				IAML_P			
	comp=Z,930nm,0.4s						
GDZ	**Gediz**	**6.02**	**35**	*i* P	Pn	16 52 43.1	+1.8
PPCY	**Paphos**	**6.03**	**82**	P	Pn	16 52 40.7	-0.6
	baz=269						
LIT	**Litokhoron**	**6.24**	**341**	*e*Pn	Pn	16 52 43.8	-0.4
LIT	**Litokhoron**	**6.24**	**341**	*e*P	Pn	16 52 43.8	-0.4
ALFC	**Alefka**	**6.26**	**79**	P	Pn	16 52 44.0	-0.6
	baz=266						
ALFC				S	Sn	16 53 49.0	-6.6
SZAC	**Souni**	**6.46**	**83**	P	Pn	16 52 47.4	+0.1
	baz=270						
SZAC				S	Sn	16 53 54.9	-5.6
LEF	**Lefka**	**6.50**	**80**	*i* P	Pn	16 52 47.9	+0.1
LEF				*i* S	Sn	16 53 55.1	-6.2
BOLV	**Bolvadin**	**6.53**	**45**	*i* P	Pn	16 52 49.5	+1.2
ALN	**Alexandroupoli**	**6.72**	**6**	*e*Pn	Pn	16 52 50.4	-0.4
ALN	**Alexandroupoli**	**6.72**	**6**	*e*P	Pn	16 52 50.4	-0.4
SOH	**Sokhos**	**6.74**	**349**	P	Pn	16 52 55.2	+4.0
SOH				pmax	pmax		
	comp=Z,22nm,0.8s						
MAMC	**Mammari**	**6.77**	**80**	P	Pn	16 52 51.9	+0.4
	baz=266						
ERMK	**Ermenek**	**6.84**	**67**	*i* P	Pn	16 52 54.0	+1.4
ERMK				*i* S	Sn	16 54 08.4	-1.5
ERMK				IAML_P			
	comp=Z,3µm,0.5s						
CSS	**Mathiatis**	**6.84**	**81**	P	Pn	16 52 52.6	+0.1
	baz=268						
CSS				S	Sn	16 54 03.7	-6.1
KMER	**Konya-Meram**	**6.89**	**57**	*i* P	Pn	16 52 55.9	+2.6
KMER				*i* S	Sn	16 54 08.6	-2.6
KMER				IAML_P			
	comp=Z,381nm,0.2s						
KMER	**Konya-Meram**	**6.89**	**57**	*i* P	Pn	16 52 56.0	+2.7
KMER				*i* S	Sn	16 54 11.6	+0.4
KMER				IAML_P			
	comp=Z,381nm,0.2s						
KONT	**Konya--Tatoy**	**6.97**	**56**	*i* P	Pn	16 52 57.1	+2.8
KDHN	**Kadinhani**	**7.12**	**51**	*i* P	Pn	16 52 57.8	+1.3
KOT	**Kottamia**	**7.14**	**125**	P	Pn	16 52 56.4	-0.2
	baz=126						
FNA	**Florina**	**7.20**	**337**	*e*Pn	Pn	16 52 56.7	-0.6
FNA	**Florina**	**7.20**	**337**	*e*P	Pn	16 52 56.7	-0.6
GULN	**MERSIN_Gulnar**	**7.20**	**72**	*i* P	Pn	16 52 57.7	+0.2
GULN				*i* S	Sn	16 54 13.6	-4.9
GLL	**Jalalah**	**7.28**	**128**	P	Pn	16 52 58.9	+0.3
	baz=128						
HHAG	**Hagoal**	**7.31**	**124**	P	Pn	16 52 59.4	+0.4
	baz=124						
VAY	**Valandovo**	**7.38**	**345**	*i* Pn	Pn	16 53 09.1	+9.4
MMB	**Musomiste**	**7.45**	**352**	*e*P	Pn	16 53 03.4	+2.6
RZN	**Rozhen**	**7.47**	**358**	*e*P	Pn	16 53 01.6	+0.3
KRUS	**Krusevo**	**7.77**	**338**	*i* Pn	Pn	16 53 05.9	+0.6
KKB	**Krupnik**	**7.81**	**349**	*e*P	Pn	16 53 13.8	+8.1
STIP	**Stip**	**7.82**	**344**	*i* Pn	Pn	16 53 05.9	+0.1
MDUB	**Mudurnu**	**7.92**	**36**	*e*Pn	Pn	16 53 08.1	+0.7
SKO	**Skopje**	**8.27**	**341**	*e*Pn	Pn	16 53 11.3	-0.7
TIP	**Timpagrande**	**8.32**	**309**	*e*Pn	Pn	16 53 11.7	-1.2
TIP	**Timpagrande**	**8.32**	**309**	⇑*i*P	Pn	16 53 11.7	-1.2
BR231	**Keskin MP Arra**	**8.33**	**45**	*e*Pn	Pn	16 53 11.6	-1.4
ANTO	**Ankara**	**8.36**	**45**	*e*Pn	Pn	16 53 10.4	-3.0
ANTO	**Ankara**	**8.36**	**45**	⇑*i*P	Pn	16 53 14.8	+1.4
ANTO	**Ankara**	**8.36**	**45**	*e*P	Pn	16 53 10.4	-3.0
OFRI	**`Ofer**	**8.43**	**98**	Pn	Pn	16 53 13.5	-0.8
HNTI	**

comp=Z,0.2nm,0.3s,baz=317,slow=18,SNR=2.7
GBRS Gornja Briga 13.77 328 *i* Pn **Pn 16 54 23.7 -3.7**
KNDS Knezji Dol 13.96 327 *i* Pn **Pn 16 54 27.3 -2.7**
TRPA Tarpa 14.04 353 ⇓EPn **P 16 54 38.0 -0.6**
CEY Cerknica 14.10 328 *i* Pn **Pn 16 54 29.0 -2.9**
CSKK Cskako 14.11 341 EPn **Pn 16 54 32.1 +0.1**
PERS Pernice 14.53 332 *i* Pn **Pn 16 54 33.7 -4.1**
UZH Uzhgorod 14.56 353 *e*P **Pn 16 54 38.3 +0.2**
SOKA Soboth 14.60 332 *e*Pn **Pn 16 54 35.9 -2.9**
comp=Z,22nm,1.1s,SNR=7.2
OBKA Obir 14.66 330 *e*Pn **Pn 16 54 38.7 -0.8**
comp=Z,5.6nm,0.7s
KOLS Kolonicke sedl 14.86 353 *e*P **Pn 16 54 42.9 +0.7**
KOLS Kolonicke sedl 14.86 353 *e*PN **Pn 16 54 42.8 +0.6**
KOLS Kolonicke sedl 14.86 353 *e*P **P 16 54 48.8 +1.0**
ARSA Arzberg 14.89 334 *e*P **Pn 16 54 44.3 +1.7**
comp=Z,17nm,1.1s
SOP Sopron 14.91 337 P **P 16 54 48.9 +0.6**
SOP pmax pmax
comp=Z,19nm,1.1s
BCA Borcka 14.92 56⇑ *i*P **Pn 16 54 42.2 -0.8**
VYHS Vyhne 15.02 344 *e*P **P 16 54 50.4 +0.9**
VYHS Vyhne 15.02 344 *e*P **P 16 54 50.4 +0.9**
MODS Modra-Piesok 15.31 340 *e*P **P 16 54 52.0 -0.8**
MODS Modra-Piesok 15.31 340 *e*P **P 16 54 52.0 -0.8**
KWP Kalwaria Pacla 15.51 354 *e*Pn Pn 16 54 43.2 -7.5
KWP Kalwaria Pacla 15.51 354 *e*P Pn 16 54 43.2 -7.5
KBA Koelnbreinsper 15.62 329 P **Pn 16 54 53.1 +0.8**
comp=Z,18nm,0.7s,SNR=8.6
KBA Koelnbreinsper 15.62 329 P **P 16 54 58.1 +1.7**
KBA pmax pmax
comp=Z,26nm,1.1s
JAVC Velka Javorina 15.64 342 *e*PN **P 16 54 54.9 -1.6**
ABTA Abfaltersbach 15.73 327 *e*P **P 16 54 56.5 -1.1**
comp=Z,14nm,0.6s,SNR=9.4
MOA Molln 15.86 332 *e*P **P 16 54 58.8 -0.1**
comp=Z,26nm,0.9s,SNR=8.6
KRUC Moravsky 16.18 339 *e*P **P 16 55 01.2 -1.3**
VRAC Vranov 16.35 340 Pn **Pn 16 55 01.8 +0.3**
comp=Z,0.5nm,0.3s,baz=142,slow=11,SNR=13
VRAC Vranov 16.35 340⇑ *i*P **P 16 55 03.6 -0.7**
VRAC Vranov 16.35 340 *e*P **P 16 55 03.1 -1.2**
NEY Neytrino 16.44 51⇑ *e*P **P 16 55 04.7 -0.8**
WTTA Wattenberg 16.52 326 *e*P **P 16 55 07.2 +0.8**
comp=Z,51nm,1.6s,SNR=9.7
MORC Moravsky Berou 16.52 343 *e*P **Pn 16 55 05.0 +1.2**
WATA Walderalm 16.60 326 *e*Pn **Pn 16 55 04.6 -0.2**
comp=Z,26nm,1.0s
TREC Trest 16.67 338 *e*P **P 16 55 07.3 -0.5**
TREC Trest 16.67 338 *e*P **P 16 55 07.3 -0.5**
SQTA Sankt Quirin 16.69 325 *e*P **Pn 16 55 06.7 +0.7**
comp=Z,9.9nm,0.7s
FUORN Ofenpass-Fuorn 16.73 322 *e*Pn **P 16 55 10.8 +2.0**
comp=Z,21nm,0.9s
GNI Garni 16.74 64 Pn **P 16 55 10.0 +1.1**
comp=Z,0.7nm,0.3s,baz=217,slow=12,SNR=3.7
KIV Kislovodsk 16.75 49 *e*Pn **P 16 55 10.1 +1.2**
comp=Z,28nm,0.8s
KIV Kislovodsk 16.75 49 *e*P **P 16 55 09.8 +0.9**
KIV pmax pmax
comp=Z,162nm,1.1s
KVAR Kislovodsk Arr 16.76 49 Pn **P 16 55 09.3 +0.3**
baz=259,slow=22,SNR=12
AKASG Malin Array Be 16.76 9 Pn **Pn 16 55 04.6 -2.1**
comp=Z,7.3nm,0.3s,baz=200,slow=10,SNR=49
AKBB Malin Array Si 16.76 9 *e*Pn **Pn 16 55 07.2 +0.5**
comp=Z,64nm,0.8s
AKBB Malin Array Si 16.76 9 *e*P **Pn 16 55 07.2 +0.5**
AKBB pmax pmax
comp=Z,64nm,0.8s
KBZ Khabaz 16.77 50 Pn **P 16 55 08.8 -0.2**
comp=Z,1.1nm,0.3s,baz=252,slow=9.5,SNR=28
FETA Feichten 16.77 324 *e*P **Pn 16 55 07.9 +0.8**
comp=Z,23nm,1.2s,SNR=6.4
MOTA Moosalm 16.83 325 *e*Pn **Pn 16 55 06.1 -1.6**
comp=Z,5.0nm,0.5s
GEC2 GERESS Array S 16.90 333 *e*Pn **P 16 55 10.7 +0.2**
comp=Z,31nm,0.7s
GEC2 GERESS Array S 16.90 333 *e*P **P 16 55 10.7 +0.2**
GEC2 pmax pmax
comp=Z,31nm,0.7s
GERES GERESS Array B 16.90 333 Pn **P 16 55 10.5 0.0**
comp=Z,3.2nm,0.3s,baz=145,slow=12,SNR=86
ZEI Tsey 17.02 54 *e*P **Pn 16 55 10.4 +0.2**
ZEI pmax pmax
comp=Z,26nm,0.7s
DAVOX Davos/Dischmat 17.03 322 Pn **P 16 55 12.0 -0.1**
comp=Z,0.4nm,0.3s,baz=108,slow=8.0,SNR=7.5
RETA Reutte 17.09 325 *e*Pn **Pn 16 55 09.8 -1.2**
comp=Z,7.0nm,0.6s
NCK Nalchik 17.11 52⇑ *e*P **P 16 55 14.5 +1.7**
KHC Kasperske Hory 17.18 334 *e*P **Pn 16 55 12.1 +0.1**
KHC Kasperske Hory 17.18 334 *e*P **Pn 16 55 12.1 +0.1**
KHC *e*x x 16 55 13.7
KHC *e*x x 16 56 01.5
DPC Dobruska-Polom 17.36 341 *e*P **Pn 16 55 12.8 -1.5**
DPC Dobruska-Polom 17.36 341 *e*P **Pn 16 55 12.8 -1.5**
DAVA Damuels 17.38 323 *e*P **Pn 16 55 14.0 -0.6**
comp=Z,14nm,1.2s
GOPC GO Pecny, Ondr 17.43 337 *e*P **Pn 16 55 15.0 -0.1**
GOF Gofitskoye 17.53 47⇑ *e*P **Pn 16 55 16.9 +0.5**
GOF pmax pmax
comp=Z,69nm,1.3s
PRU Pruhonice 17.57 337 *e*P **Pn 16 55 17.0 +0.1**
PRU Pruhonice 17.57 337 *e*P **Pn 16 55 17.0 +0.1**
OSTC Ostas 17.58 341 *e*P **Pn 16 55 17.3 +0.3**
UPC Upice 17.59 341 *e*P **Pn 16 55 16.6 -0.5**
UPC Upice 17.59 341 *e*P **Pn 16 55 16.6 -0.5**
CHVC Chvalec 17.65 341 *e*P **Pn 16 55 17.5 -0.4**
LPL La Plagne 18.01 314 P **P 16 55 25.7 +2.8**
LPL pmax pmax
comp=Z,2.0nm,0.4s
SENIN Lac Senin/Sane 18.16 317 *e*Pn **Pn 16 55 23.2 -1.1**
comp=Z,5.6nm,1.0s
GROC Groznyy 18.46 55 *e*P **P 16 55 26.3 -1.3**
GROC pmax pmax
comp=Z,3.0nm,0.2s
NKC Novy Kostel 18.50 334 *e*P **P 16 55 27.8 -0.3**
NKC Novy Kostel 18.50 334 *e*P **P 16 55 27.8 -0.3**
BRG Berggiesshubel 18.53 337 *e*P **P 16 55 27.6 -0.8**
comp=Z,13nm,1.1s
BFO Black Forest 18.85 323 *e*P **P 16 55 30.5 -1.5**
comp=Z,5.1nm,0.8s
BFO Black Forest 18.85 323 *e*P **P 16 55 30.5 -1.5**
BFO pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 19.21 336 *e*P **P 16 55 35.9 +0.1**
comp=Z,8.9nm,0.9s
CLL Collm 19.21 336 *e*P **P 16 55 35.0 -0.8**
comp=Z,12nm,1.0s
CLL *e*pP **pP 16 55 41.0 +0.2**
CLL Collm 19.21 336 *e*P **P 16 55 35.0 -0.8**
CLL pmax pmax
comp=Z,12nm,1.0s
ECH Echery 19.37 322 *e*P **P 16 55 37.6 0.0**
comp=Z,8.8nm,1.1s
ECH Echery 19.37 322 *e*P **P 16 55 37.6 0.0**
ECH pmax pmax
comp=Z,9.0nm,1.1s
VSR Storozhevoye 19.84 27 *e*P **P 16 55 40.6 -2.1**
VSR pmax pmax
comp=Z,10.0nm,0.5s
VORR Voronezh 20.23 26 P Pn 16 55 49.0 +0.1
VORR pmax pmax
comp=Z,250nm,1.2s
NACGM Naroch 20.73 3 *e* **P 16 55 49.0 -3.3**
RAYN Ar Rayn 20.77 115 *e*P Pn 16 55 56.0 +0.4
RAYN Ar Rayn 20.77 115 *e*P Pn 16 55 56.0 +0.4
WLF Walferdange 20.81 324 P **P 16 55 52.3 -0.9**
WLF x x 16 55 57.5
LPSR Galich'ya Gora 20.89 24 *e*P **P 16 55 51.5 -2.6**
LPSR pmax pmax
comp=Z,60nm,1.4s
IDID Didziasalis 21.14 3 *e*P **P 16 55 54.0 -2.7**
IDID IAmb IAmb 16 56 10.2
comp=Z,12nm,1.0s
IIGN Ignalina 21.16 2 *e*P **P 16 55 54.2 -2.7**
IIGN IAmb IAmb 16 56 14.1
comp=Z,16nm,1.0s
PABE Paberze 21.31 358 *e*P **P 16 55 56.3 -2.2**
PABE IAmb IAmb 16 56 10.7
comp=Z,22nm,0.6s
MEM Membach 21.51 325 P **P 16 55 59.2 -1.6**
MEM x x 16 56 01.4
MEM pP **pP 16 56 05.3 -0.4**
MEM x x 16 56 17.3
DOU Dourbes 21.86 323 P **P 16 56 02.4 -2.2**
DOU PnPn **PnPn 16 56 23.8 -2.2**
BMRD Maredsous 21.91 323 pP **pP 16 56 09.2 -0.8**
BMRD PnPn **PnPn 16 56 23.9 -2.8**
OBN Obninsk 22.39 17 P **P 16 56 10.0 -0.1**
comp=Z,5.8nm,0.5s,baz=199,slow=23,SNR=12
OBN Obninsk 22.39 17 *e*P **P 16 56 10.0 -0.1**
comp=Z,61nm,1.0s
OBN Obninsk 22.39 17⇑ *e*P **P 16 56 11.0 +0.9**
OBN *e* 16 56 32.4
OBN *e*PPP PPP 16 56 43.1
OBN *e* 17 00 04.5
OBN pmax pmax
comp=Z,87nm,1.3s
OBN MLR MLR
comp=Z,986nm,18.0s
MOS Moscow 23.21 18 *e*P **P 16 56 15.1 -3.6**
MOS *e* 17 00 21.9
ESDC Sonseca Array 23.79 292 P **P 16 56 24.4 -0.3**
comp=Z,5.4nm,0.8s,baz=84,slow=9.5,SNR=29
ESLA Sonseca Array 23.79 292 *e*P **P 16 56 23.8 -0.9**
VSU Vasula 24.29 2 *e*P **P 16 56 27.4 -1.5**
VSU IAmb IAmb 16 56 30.6
comp=Z,35nm,1.0s
MDT Midelt 24.76 275 P **P 16 56 34.1 +0.5**
comp=Z,5.6nm,0.9s,baz=97,slow=9.9,SNR=7.1
PBRG Braganca 26.09 296 *e*P **P 16 56 45.8 +0.2**
comp=Z,20nm,1.4s
MVO Moncorvo 26.24 295 *e*P **P 16 56 47.5 +0.5**
comp=Z,21nm,2.1s
PMRV Marv??o 26.43 291 *e*P **P 16 56 50.8 +2.1**
comp=Z,26nm,1.6s
PVAQ Vaqueiros 26.72 286 *e*P **P 16 56 50.9 -0.4**
PVAQ Vaqueiros 26.72 286 *e*P **P 16 56 49.8 -1.4**
PBEJ Beja 26.81 288 *e*P **P 16 56 55.9 +3.8**
PVIS Viseu 26.86 294 *e*P **P 16 56 55.3 +2.7**
GEYT Alibeck 26.88 72 P **P 16 56 52.8 0.0**
comp=Z,1.4nm,0.6s,baz=282,slow=8.7,SNR=2.9
PBDV Barranco-do-Ve 26.90 286 *e*P **P 16 56 49.7 -3.2**
HFS Hagfors 26.99 347 P **P 16 56 51.2 -2.2**
comp=Z,5.0nm,0.6s,baz=156,slow=10,SNR=15
FINES FINESS Array B 27.26 1 P **P 16 56 53.4 -2.5**
comp=Z,4.3nm,0.6s,baz=170,slow=9.9,SNR=17
FIA1 FINESS Array S 27.26 1 *e*P **P 16 56 54.7 -1.2**
NC602 NORSAR Array S 27.96 346 *e*P **P 16 57 01.1 -1.0**
NAO01 NORSAR Array S 28.19 345 *e*P **P 16 57 03.4 -0.8**
KLMR Klimovskoe 28.25 15 *e*P **P 16 57 01.9 -2.8**
KLMR pmax pmax
comp=Z,12nm,0.9s
KLMR Klimovskoe 28.25 15 *e*P **P 16 57 02.0 -2.8**
KLMR AMP 16 57 04.2
comp=Z,12nm,0.8s
NC405 NORSAR Array S 28.27 346 *e*P **P 16 57 03.9 -1.1**
NB201 NORSAR Array S 28.30 346 *e*P **P 16 57 04.5 -0.7**
NB2 NORSAR Subarra 28.30 346 P **P 16 57 03.7 -1.6**
comp=Z,0.9nm,0.3s,baz=156,slow=10
NB200 NORSAR Array S 28.30 346 *e*P **P 16 57 04.3 -0.9**
NOA NORSAR Array B 28.30 346 P **P 16 57 04.3 -0.9**
comp=Z,0.2nm,0.3s,baz=49,slow=12,SNR=8.6
NBO00 NORSAR Array S 28.39 345 *e*P **P 16 57 05.0 -1.0**
NC303 NORSAR Array S 28.44 346 *e*P **P 16 57 05.4 -1.0**
NC204 NORSAR Array S 28.61 346 *e*P **P 16 57 07.2 -0.8**
EKA Eskdalemuir Ar 28.79 326 P **P 16 57 08.1 -1.4**
comp=Z,4.0nm,0.8s,baz=114,slow=9.3,SNR=6.2
AKTO Aktyubinsk 28.95 46 P **P 16 57 10.7 -0.4**
comp=Z,1.8nm,0.5s,baz=258,slow=5.9,SNR=5.1
KIRV Kirov 29.28 26 P **P 16 57 12.3 -1.6**
comp=Z,13nm,0.5s,baz=265,slow=4.2,SNR=4.3
ABKAR Akbulak array 29.74 49 *e*P **P 16 57 19.0 +1.0**
TOA1 Torodi Ar. Sit 29.83 231 *e*P **P 16 57 18.6 -0.6**
TOA0 Torodi Ar. Sit 29.84 231 *e*P **P 16 57 20.4 +1.1**
comp=Z,27nm,0.6s
TORD Torodi Ar. Bea 29.84 231 P **P 16 57 18.6 -0.7**
comp=Z,19nm,0.6s,baz=37,slow=8.2,SNR=76
PRGR Permogore 30.43 19 *e*P **P 16 57 21.2 -2.8**
PRGR pmax pmax
comp=Z,20nm,0.9s
ARU Arti 31.86 35 *e*P **P 16 57 35.7 -1.0**
comp=Z,12nm,0.8s
ARU Arti 31.86 35*d* *i*P **P 16 57 35.2 -1.5**
ARU S **S 17 02 46.9 +0.8**
ARU SS **SnSn 17 04 32.6 -1.8**
ARU pmax pmax
comp=Z,29nm,1.8s
SVE Sverdlovsk 33.06 36⇓ *e*P **P 16 57 47.3 +0.1**
SVE pmax pmax
comp=Z,21nm,0.6s
APA Apatity 33.75 6⇑ *i*P P 16 57 47.0 -6.1
APA pmax pmax
comp=Z,6.0nm,1.0s
APA MLR MLR
comp=Z,700nm,14.0s
LVZ Lovozero 34.18 6 *e*P **P 16 57 55.7 -1.2**
LVZ Lovozero 34.18 6 *e*P **P 16 57 55.7 -1.2**
MBAR Mbarara 35.03 170 P **P 16 58 06.1 +1.2**
comp=Z,2.6nm,0.2s,baz=32,slow=15,SNR=3.7
ARA0 ARCESS Array S 35.38 0 *e*P **P 16 58 05.0 -2.2**
ARCES ARCESS Array B 35.38 0 P **P 16 58 05.0 -2.2**
comp=Z,1.0nm,0.4s,baz=182,slow=9.8,SNR=12
ARCES ARCESS Array B 35.38 0 P **P 16 58 05.0 -2.2**
KK31 Karatay Array 36.20 62 *e*P **P 16 58 14.6 0.0**
comp=Z,6.1nm,0.8s
KK31 Karatay Array 36.20 62 *e*P **P 16 58 14.6 0.0**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 36.20 62 *e*P **P 16 58 15.1 +0.6**
comp=Z,6.1nm,0.8s
KKAR Karatay Array 36.20 62 *e*P **P 16 58 15.1 +0.6**
KKAR pmax pmax
comp=Z,6.0nm,0.8s
KMBO Kilima Mbogo 36.96 159 *e*P **P 16 58 19.2 -2.2**
KMBO Kilima Mbogo 36.96 159 *e*P **P 16 58 19.3 -2.2**
NAI Nairobi 36.97 160 *e*P **P 16 58 21.2 -0.4**
NAI Nairobi 36.97 160 *e*P **P 16 58 21.2 -0.4**
BRVK Borovoye 37.00 45 *e*P **P 16 58 21.4 +0.2**
comp=Z,4.7nm,1.0s
BRVK Borovoye 37.00 45⇓ *i*P **P 16 58 21.4 +0.2**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
BVAR Borovoye Array 37.05 45 P **P 16 58 22.1 +0.4**
comp=Z,2.9nm,0.8s,baz=261,slow=5.9,SNR=14
DBIC Dimbokro 38.93 232 P **P 16 58 38.3 +0.4**
comp=Z,8.0nm,0.7s,baz=33,slow=8.0,SNR=8.7
DBIC Dimbokro 38.93 232 *e*P **P 16 58 38.3 +0.4**
comp=Z,9.5nm,0.9s
TIC Toumodi 39.05 232 *e*P **P 16 58 39.3 +0.3**
KIC Kosan Boka 39.08 232 *e*P **P 16 58 39.6 +0.4**
comp=Z,58nm,1.0s
AAK Ala-Archa 39.14 63 P **P 16 58 39.4 -0.2**
comp=Z,3.1nm,0.5s,baz=248,slow=5.4,SNR=6.6
AAK Ala-Archa 39.14 63 *e*P **P 16 58 37.3 -2.4**
AAK Ala-Archa 39.14 63⇓ *e*P **P 16 58 40.8 +1.1**
AAK pmax pmax
comp=Z,13nm,1.7s
LIC Lamto 39.37 232 *e*P **P 16 58 42.0 +0.4**
comp=Z,57nm,0.8s
KSH Kashi 40.62 67 P **P 16 58 50.0 -1.9**
KURK Kurchatov 41.83 50 *e*P **P 16 59 01.8 +0.2**
comp=Z,8.6nm,0.8s
KURK Kurchatov 41.83 50 *e*P **P 16 59 01.8 +0.2**
KURK pmax pmax
comp=Z,9.0nm,0.8s
MAKZ Makanchi 44.14 56 *e*P **P 16 59 21.0 +0.6**
comp=Z,4.2nm,0.8s
MAKZ Makanchi 44.14 56 *e*P **P 16 59 21.0 +0.6**
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
SCO Scoresbysund 44.20 339 *e*P **P 16 59 21.6 +1.2**
comp=Z,5.8nm,1.0s
SCO Scoresbysund 44.20 339 *e*P **P 16 59 21.6 +1.2**
SCO pmax pmax
comp=Z,6.0nm,1.0s
SCO Scoresbysund 44.20 339 *i* P **P 16 59 21.6 +1.2**
comp=Z,6.0nm,0.8s
SPA0 Spitsbergen Ar 44.23 357 *e*P **P 16 59 19.9 -0.7**
comp=Z,16nm,1.1s
SPITS Spitsbergen Ar 44.23 357 P **P 16 59 19.9 -0.7**
comp=Z,4.8nm,0.7s,baz=152,slow=9.4,SNR=15
SPITS Spitsbergen Ar 44.23 357 P **P 16 59 20.0 -0.7**
MKAR Makanchi Array 44.36 56 P **P 16 59 22.6 +0.5**
comp=Z,7.9nm,0.7s,baz=280,slow=6.4,SNR=47
NVS Novosibirsk 44.81 44⇓ *i*P **P 16 59 26.2 +0.7**
NVS pmax pmax
comp=Z,18nm,0.7s
NVS pmax pmax
comp=N,4.0nm,0.6s
NVS pmax pmax
comp=E,5.0nm,0.6s
KBS Kingsbay 45.16 356 *e*P **P 16 59 27.8 -0.2**
KBS Kingsbay 45.16 356 *e*P **P 16 59 27.8 -0.2**
ZAA0 Zalesovo Array 45.71 45 *e*P **P 16 59 32.1 -0.6**
comp=E,12nm,0.5s
ZALV Zalesovo Beam 45.71 45 P **P 16 59 32.1 -0.6**
comp=E,12nm,0.5s,baz=268,slow=8.9,SNR=31
DAG Danmarks Havn 46.96 347 *i* P **P 16 59 41.3 -0.9**
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 46.96 347 *i* P **P 16 59 41.3 -0.9**
comp=Z,6.7nm,0.9s
DGZ Jazzator, Alta 47.52 51*d* *i*P **P 16 59 47.6 +0.4**
DGZ pmax pmax
comp=Z,3.0nm,0.8s
SACV Santiago Islan 47.75 259 *e*P **P 16 59 48.7 -0.4**
WMQ Urumqi 48.54 59 *e*P **P 16 59 57.8 +2.8**
WMQ sP pwP 17 00 09.1 +4.7
WMQ LR LR
comp=Z,960nm,20.5s
WMQ LR LR
comp=Z,2μm,21.9s
WMQ LR LR
comp=Z,1μm,20.5s
NRIK Noril'sk 48.77 25 P **P 16 59 56.0 -0.2**
comp=Z,6.5nm,0.8s,baz=250,slow=5.2,SNR=6.5
PYUN Piuthan 49.37 80 *e*P **P 17 00 02.7 +0.9**
comp=Z,28nm,0.8s
SUMG Summit 49.84 339 *i* P **P 17 00 05.8 +0.8**
SUMG Summit 49.84 339 *i* P **P 17 00 05.8 +0.8**
DANN Dangsing 49.90 80 *e*P **P 17 00 06.8 +0.9**
comp=Z,45nm,0.6s
DMN Daman 51.29 80 *e*P **P 17 00 17.1 +0.8**
comp=Z,21nm,0.7s
KKN Kakani 51.36 80 *e*P **P 17 00 18.0 +1.2**
comp=Z,17nm,0.7s
PKI Pulchoki 51.55 80 *e*P **P 17 00 19.7 +1.3**
comp=Z,17nm,0.7s
GUN Gumba 51.80 79 *e*P **P 17 00 21.4 +1.1**
comp=Z,19nm,0.6s
JIRN Jiri 52.15 80 *e*P **P 17 00 24.2 +1.3**
comp=Z,32nm,0.8s
TLY Talaya 57.30 46 *e*P **P 17 01 01.2 +1.7**
TLY pmax pmax
comp=Z,19nm,1.3s
ZAK Zakamensk 57.42 48 *e*P **P 17 01 00.8 +0.3**
ZAK pmax pmax
comp=Z,8.0nm,1.3s
LBTB Lobatse 58.90 179 *e*P **P 17 01 12.3 +1.4**
LBTB Lobatse 58.90 179 *e*P **P 17 01 12.3 +1.4**
SONA0 Songino Array 60.14 50 *e*P **P 17 01 20.3 +0.8**
SONM Songino Array 60.14 50 P **P 17 01 20.3 +0.8**
comp=Z,3.8nm,0.8s,baz=280,slow=8.8,SNR=18
DRLN Deer Lake 60.47 312 *e*P **P 17 01 22.4 +0.9**
ULN Ulaanbaatar 60.55 50 *e*P **P 17 01 23.0 +0.7**
comp=Z,9.5nm,1.1s
ULN Ulaanbaatar 60.55 50 *e*P **P 17 01 23.0 +0.7**
ULN pmax pmax
comp=Z,10.0nm,1.1s
BOSA Boshof 62.48 180 P **P 17 01 36.2 +0.9**
comp=Z,6.4nm,0.7s,baz=350,slow=6.5,SNR=13
BOSA Boshof 62.48 180 *e*P **P 17 01 36.8 +1.5**
BOSA Boshof 62.48 180 *e*P **P 17 01 36.8 +1.5**
LZH Lanzhou 62.68 63 *e*P **P 17 01 36.6 -0.2**
LZH pP sP 17 01 44.3 -0.4
LZH sP pwP 17 01 48.3 +2.0
LZH *e*PP **PP 17 03 56.0 +1.4**
LZH pmax pmax
comp=Z,20nm,1.2s
LZH pmax pmax
comp=Z,65nm,7.4s
LZH LR LR
comp=Z,330nm,16.1s
LZH LR LR
comp=Z,330nm,16.0s
LZH LR LR
comp=Z,400nm,17.4s
SCHQ Schefferville 63.87 320 P **P 17 01 44.6 +0.4**
comp=Z,2.4nm,0.5s,baz=194,slow=4.2,SNR=2.1
SCHQ Schefferville 63.87 320 *e*P **P 17 01 44.6 +0.4**
comp=Z,4.9nm,0.9s
CD2 Chengdu 64.79 69 P **P 17 01 49.8 -0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 66.22 56 *e*P **P 17 02 00.5 +0.6**
HHC pmax pmax
comp=Z,19nm,1.1s
SUR Sutherland 66.36 184 *e*P **P 17 02 01.9 +1.2**
KMI Kunming 66.62 75 P **P 17 02 04.8 +2.0**
KMI pmax pmax
comp=Z,9.0nm,0.5s
CM31 Chiang Mai Arr 66.75 83 *e*P **P 17 02 04.0 +0.6**
comp=Z,3.0nm,0.9s
CMAR Chiang Mai Arr 66.75 83 P **P 17 02 04.0 +0.6**
comp=Z,0.7nm,0.6s,baz=290,slow=7.1,SNR=5.9
XAN Xi'an 67.31 63 P **P 17 02 07.4 +0.5**
XAN pP pwP 17 02 17.3 +0.9
XAN pmax pmax
comp=Z,5.0nm,0.8s
HIA Hailar 67.75 45⇑ *e*P **P 17 02 10.7 +1.4**
HIA pmax pmax
comp=Z,43nm,0.9s
BILL Bilibino 74.00 14 *e*P **P 17 02 46.1 -0.9**
BILL *e* 17 03 02.6
BILL *e* 17 05 31.5
BILL *e*PPP PPP 17 07 15.6
BILL pmax pmax
comp=Z,2.0nm,1.2s
KLR Kul'dur 74.53 41⇑ *e*P **P 17 02 51.1 +0.7**
KLR pmax pmax
comp=Z,4.0nm,1.0s
NJ2 Nanjing 75.57 61 *e*P **P 17 02 57.3 +0.7**
NJ2 pmax pmax
comp=Z,12nm,0.5s
INK Inuvik 76.55 352 P **P 17 03 01.6 0.0**
comp=Z,1.9nm,0.8s,baz=19,slow=11,SNR=5.5
USRK Ussuriysk Ar. 77.56 45 P **P 17 03 08.0 +0.3**
comp=Z,5.7nm,0.7s,baz=302,slow=5.0,SNR=15
USRK Ussuriysk Ar. 77.56 45 P **P 17 03 08.0 +0.3**
YKA Yellowknife Ar 78.33 342 P **P 17 03 11.8 +0.2**
comp=Z,0.9nm,0.8s,baz=37,slow=5.0,SNR=3.2
KSRS Korea Array 78.91 52 P **P 17 03 16.0 +0.7**
comp=Z,2.2nm,0.8s,baz=300,slow=5.1,SNR=14
ILAR Eielson Array 81.15 357 P **P 17 03 27.2 +0.3**
comp=Z,1.0nm,0.8s,baz=345,slow=2.6,SNR=9.9
BPAW Bear Paw Mtn. 81.97 358 *e*P **P 17 03 31.8 +0.5**
comp=Z,3.0nm,0.8s
DOT Dot Lake 82.09 355 *e*P **P 17 03 31.9 -0.1**
comp=Z,3.4nm,0.8s
RND Reindeer 82.60 357 *e*P **P 17 03 33.9 -0.8**
comp=Z,4.4nm,1.1s
RND Reindeer 82.60 357 *e*P **P 17 03 33.9 -0.8**
RND pmax pmax
comp=Z,4.0nm,1.1s
TRF Thorofare Moun 82.61 358 *e*P **P 17 03 35.5 +0.7**
comp=Z,4.1nm,1.0s
CAST Castle Rocks 82.68 359 *e*P **P 17 03 35.8 +0.7**
comp=Z,4.2nm,1.0s
DHY Denali Highway 82.86 357 *e*P **P 17 03 37.2 +1.1**
comp=Z,4.8nm,0.8s
MAJO Matsushiro 86.01 48 *e*P **P 17 03 51.2 -1.2**
MAJO Matsushiro 86.01 48 *e*P **P 17 03 51.2 -1.2**
MJAR Matsushiro Arr 86.01 48 P **P 17 03 51.2 -1.3**
comp=Z,2.1nm,0.8s,baz=329,slow=3.1,SNR=8.1
PDAR Pinedale Array 92.88 328 P **P 17 04 25.2 +0.1**
comp=Z,0.1nm,0.5s,baz=86,slow=5.8,SNR=4.1
WRA Warramunga Arr 116.54 97 PKP **PKPdf 17 09 55.7 -0.5**
comp=Z,0.7nm,0.6s,baz=278,slow=2.4,SNR=6.3
WR1 Warramunga Arr 116.54 97 *e*PKPdf **PKPdf 17 09 55.7 -0.5**
ASAR Alice Springs 117.94 101 PKP **PKPdf 17 09 58.5 -0.3**
comp=Z,0.5nm,0.7s,baz=330,slow=1.1,SNR=6.8
AS31 Alice Springs 117.94 101 *e*PKPdf **PKPdf 17 09 58.5 -0.3**

ATH ***15*** *16:54:07.8, 33°.99N±25°.05E, h23km±1km, ML3.6/2, Error ellipse: s-maj=5.0km s-min=2.5km az=353.0*
IDC ***15*** *16:54:08.9±0.8, 34°.22N±24°.96E, h0km, mb4.2/16, mb1 4.3/24, mb1mx4.0/58, mbtmp4.2/24, ML4.3/6, Error ellipse: s-maj=16.4km s-min=14.7km az=74.0*
ISCJB ***15*** *16:54:11.7±0.5, 34°.12N±0°.03×25°.15E±0°.03, h36km±5km, mb4.1/24, Error ellipse: s-maj=6.1km s-min=3.2km*

az=33.9
ISK ***15*** *16:54:12.9, 34.°35N×25.°09E, h8km, ML4.0/14*
NEIC ***15*** *16:54:13.6±0.0, 34.°27N×25.°09E, h29km, mb4.1/21, ML4.0(ATH), After ATH.*
THE ***15*** *16:54:14.3, 34.°39N×25.°01E, h0km±2km, ML3.9/8, Error ellipse: s-maj=4.0km s-min=1.3km az=175.0*
GII ***15*** *16:54:16.8±0.5, 33.°80N×25.°32E, h80km, mb4.3/4, MD4.2/4*
DDA ***15*** *16:54:35.0, 34.°72N×25.°90E, h31km, ML4.1*
ISC 15 16:54:12.6±1.1, 34.°18N±0.°05×25.°04E±0.°03, h30km±7km, n161, σ2°13/203, mb4.0/24, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**347**	P	**Pn**	**16 54 27.4**	**-1.3**
SIVA				S	**Sb**	**16 54 37.5**	**-2.7**
	30μm,0.7s						
SIVA	**Sivas**	**0.86**	**347**	P	**Pn**	**16 54 27.2**	**-1.5**
SIVA				S	**Sn**	**16 54 41.7**	**+1.5**
SIVA	**Sivas**	**0.86**	**347**	P	**Pn**	**16 54 27.2**	**-1.5**
SIVA				S	**Sb**	**16 54 38.7**	**-1.4**
SIVA				AML	AML	16 54 43.7	
	comp=E,55218μm,0.6s						
SIVA				AML	AML	16 54 48.2	
	comp=N,32491μm,0.6s						
GVD	**Gavdhos**	**1.03**	**310**	PG	**Pb**	**16 54 31.6**	**-0.3**
GVD				SG	**Sb**	**16 54 45.6**	**+0.6**
GVD	**Gavdhos**	**1.03**	**310**	P	**Pn**	**16 54 31.0**	**0.0**
GVD				S	**Sb**	**16 54 45.7**	**+0.7**
	comp=N,11μm,0.5s						
GVD	**Gavdhos**	**1.03**	**310**	P	**Pn**	**16 54 31.1**	**0.0**
GVD	**Gavdhos**	**1.03**	**310**	P	**Pn**	**16 54 31.0**	**0.0**
GVD				S	**Sb**	**16 54 45.6**	**+0.7**
GVD				AML	AML	16 54 58.6	
	comp=E,19982μm,0.5s						
GVD				AML	AML	16 55 00.6	
	comp=N,24194μm,0.5s						
LAST	**Lasithi**	**1.04**	**20**	P	**Pn**	**16 54 30.8**	**-0.5**
LAST				S	**Sn**	**16 54 44.1**	**-0.8**
	comp=N,4μm,0.7s						
LAST	**Lasithi**	**1.04**	**20**	P	**Pn**	**16 54 30.6**	**-0.7**
LAST				S	**Sb**	**16 54 48.3**	**+2.8**
LAST				AML	AML	16 55 01.1	
	comp=N,5855μm,0.7s						
LAST				AML	AML	16 55 03.6	
	comp=E,5235μm,0.9s						
LAST	**Lasithi**	**1.04**	**20**	P	**Pn**	**16 54 30.6**	**-0.7**
IDI	**Anoyia**	**1.11**	**353**	Pn	**Pn**	**16 54 31.5**	**-0.7**
	comp=E,111nm,0.3s,baz=158,slow=22,SNR=6.5						
IDI				Sn	**Sn**	**16 54 45.3**	**-1.3**
	comp=E,128nm,0.3s,baz=25,slow=5.5,SNR=3.9						
IDI	**Anoyia**	**1.11**	**353**	*e*Pn	**Pn**	**16 54 31.5**	**-0.7**
IDI				*e*Sn	**Sn**	**16 54 45.3**	**-1.3**
IACM	**Heraklion**	**1.12**	**1**	P	**Pb**	**16 54 33.0**	**-0.5**
IACM				S	**Sn**	**16 54 47.0**	**+0.3**
	comp=E,21μm,0.9s						
IACM	**Heraklion**	**1.12**	**1**	P	**Pn**	**16 54 32.7**	**+0.4**
IACM				S	**Sb**	**16 54 51.5**	**+3.8**
IACM	**Heraklion**	**1.12**	**1**	P	**Pn**	**16 54 32.6**	**+0.3**
NPS	**Neapolis**	**1.18**	**23**	P	**Pn**	**16 54 33.6**	**+0.5**
NPS				S	**Sn**	**16 54 47.5**	**-0.6**
	comp=E,4μm,0.8s						
NPS	**Neapolis**	**1.18**	**23**	P	**Pn**	**16 54 33.3**	**+0.2**
NPS	**Neapolis**	**1.18**	**23**	P	**Pn**	**16 54 33.3**	**+0.2**
ZKR	**Zakros**	**1.34**	**46**	PN	**Pb**	**16 54 36.4**	**-0.8**
ZKR	**Zakros**	**1.34**	**46**	P	**Pb**	**16 54 37.9**	**+0.7**
ZKR				S	**Sb**	**16 54 55.1**	**+1.1**
	comp=E,2μm,0.9s						
ZKR	**Zakros**	**1.34**	**46**	P	**Pn**	**16 54 34.6**	**-0.8**
ZKR				S	**Sb**	**16 54 56.3**	**+2.2**
ZKR				AML	AML	16 55 03.4	
	comp=N,1687μm,0.5s						
ZKR				AML	AML	16 55 08.2	
	comp=E,4484μm,1.0s						
ZKR	**Zakros**	**1.34**	**46**	P	**Pb**	**16 54 37.4**	**+0.2**
VAM	**Vamos**	**1.41**	**331**	P	**Pn**	**16 54 36.3**	**+0.1**
VAM				S	**Sb**	**16 54 54.9**	**-0.9**
	comp=E,7μm,0.6s						
VAM	**Vamos**	**1.41**	**331**	P	**Pn**	**16 54 37.2**	**+1.0**
VAM	**Vamos**	**1.41**	**331**	P	**Pb**	**16 54 37.4**	**-0.9**
IMMV	**Iera Moni Meta**	**1.55**	**326**	PN	**Pb**	**16 54 40.1**	**-0.6**
IMMV	**Iera Moni Meta**	**1.55**	**326**	P	**Pn**	**16 54 38.3**	**+0.1**
IMMV				S	**Sb**	**16 54 59.6**	**-0.3**
	comp=E,3μm,1.0s						
IMMV	**Iera Moni Meta**	**1.55**	**326**	P	**Pn**	**16 54 37.5**	**-0.7**
IMMV				S	**Sb**	**16 55 00.8**	**+0.9**
IMMV	**Iera Moni Meta**	**1.55**	**326**	P	**Pb**	**16 54 40.2**	**-0.5**
ANKY	**Antikythira Is**	**2.21**	**320**	P	**Pn**	**16 54 47.2**	**-0.1**
KARP	**Karpathos**	**2.21**	**51**	PN	**Pn**	**16 54 49.3**	**+2.0**
KARP	**Karpathos**	**2.21**	**51**	*e*Pn	**Pb**	**16 54 49.6**	**-2.4**
KARP	**Karpathos**	**2.21**	**51**	P	**Pb**	**16 54 50.8**	**-1.2**
KARP	**Karpathos**	**2.21**	**51**	P	**Pn**	**16 54 47.5**	**+0.2**
KARP	**Karpathos**	**2.21**	**51**	P	**Pb**	**16 54 50.0**	**-2.0**
SANT	**Santorini**	**2.21**	**9**	PN	**Pn**	**16 54 48.8**	**+1.5**
SANT	**Santorini**	**2.21**	**9**	*e*Pn	**Pn**	**16 54 48.3**	**+1.0**
SANT	**Santorini**	**2.21**	**9**	P	**Pn**	**16 54 48.3**	**+1.0**
SANT				S	**Sn**	**16 55 13.8**	**+0.1**
SANT				AML	AML	16 55 34.9	
	comp=N,379μm,0.4s						
SANT				AML	AML	16 55 35.4	
	comp=E,1825μm,0.5s						
ANAF	**Anafi Island**	**2.25**	**15**	P	**Pn**	**16 54 49.2**	**+1.3**
ANAF	**Anafi Island**	**2.25**	**15**	P	**Pn**	**16 54 49.1**	**+1.2**
IOSP	**Ios island**	**2.54**	**4**	P	**Pn**	**16 54 51.9**	**0.0**
IOSP	**Ios island**	**2.54**	**4**	P	**Pn**	**16 54 52.0**	**+0.2**
MHLO	**Agia Marina, M**	**2.56**	**348**	P	**Pn**	**16 54 52.4**	**+0.3**
MHLA	**Plaka, Milos I**	**2.61**	**349**	P	**Pn**	**16 54 52.8**	**+0.1**
APE	**Apeiranthos**	**2.91**	**8**	PN	**Pn**	**16 54 57.8**	**+0.9**
APE	**Apeiranthos**	**2.91**	**8**	P	**Pn**	**16 54 58.2**	**+1.3**
APE	**Apeiranthos**	**2.91**	**8**	P	**Pn**	**16 54 58.0**	**+1.0**
ARG	**Arkhangelos**	**3.24**	**50**	PN	**Pn**	**16 55 03.6**	**+2.2**
DAT	**Datca**	**3.28**	**38**	PN	**Pn**	**16 55 03.8**	**+1.7**
DAT	**Datca**	**3.28**	**38**	*i* P	**Pn**	**16 55 04.0**	**+1.9**
DAT				IAML_P			
	comp=Z,411nm,0.2s						
BBRN	**Bozburun-Marma**	**3.50**	**44**	PN	**Pn**	**16 55 07.4**	**+2.4**
ITM	**Ithomi**	**3.92**	**321**	PN	**Pn**	**16 55 13.9**	**+3.1**
DALY	**Dalyan (Mula)**	**3.95**	**47**	PN	**Pn**	**16 55 13.5**	**+2.4**
DALY	**Dalyan (Mula)**	**3.95**	**47**	*i* P	**Pn**	**16 55 13.1**	**+2.0**
DALY				*i* S	**Sn**	**16 55 51.0**	**-5.5**
DALY				IAML_P			
	comp=Z,1μm,0.2s						
DALY	**Dalyan (Mula)**	**3.95**	**47**	*i* P	**Pn**	**16 55 13.5**	**+2.4**
DALY				IAML_P			
	comp=Z,767nm,0.2s						
TURN	**Turunc**	**3.95**	**46**	PN	**Pn**	**16 55 09.6**	**-1.6**
TURN	**Turunc**	**3.95**	**46**	*i* P	**Pn**	**16 55 09.0**	**-2.2**
TURN				*i* S	**Sn**	**16 55 48.9**	**-7.7**
TURN				IAML_P			
	comp=Z,2μm,0.1s						
TURN	**Turunc**	**3.95**	**46**	*i* P	**Pn**	**16 55 09.3**	**-1.9**
TURN				*i* S	**Sn**	**16 55 48.6**	**-8.0**
TURN				IAML_P			
	comp=Z,1μm,0.1s						
YER	**Yerkesik**	**3.95**	**41**	PN	**Pn**	**16 55 12.6**	**+1.3**
FETY	**Fethiye**	**4.11**	**52**	PN	**Pn**	**16 55 16.1**	**+2.7**
FETY	**Fethiye**	**4.11**	**52**	*i* P	**Pn**	**16 55 15.0**	**+1.6**
FETY				*i* S	**Sn**	**16 55 56.8**	**-3.7**
FETY	**Fethiye**	**4.11**	**52**	*i* P	**Pn**	**16 55 15.8**	**+2.5**
FETY				IAML_P			
	comp=Z,861nm,0.2s						
AYDN	**Tasoluk**	**4.17**	**33**	*i* P	**Pn**	**16 55 17.5**	**+3.3**
LTK	**Loutraki**	**4.19**	**337**	P	**Pn**	**16 55 15.2**	**+0.7**
AKAS	**Kas**	**4.26**	**60**	PN	**Pn**	**16 55 17.4**	**+1.8**
AKAS	**Kas**	**4.26**	**60**	*i* P	**Pn**	**16 55 16.6**	**+1.1**
AKAS				*i* S	**Sn**	**16 56 03.5**	**-0.8**
AKAS				IAML_P			
	comp=Z,3μm,0.2s						
AKAS	**Kas**	**4.26**	**60**	*i* P	**Pn**	**16 55 17.6**	**+2.1**
AKAS				*i* S	**Sn**	**16 56 03.8**	**-0.5**
AKAS				IAML_P			
	comp=Z,1μm,0.1s						
GUR	**Goura**	**4.34**	**330**	P	**Pn**	**16 55 16.7**	**0.0**
AKUM	**Antalya-Kumluc**	**4.83**	**62**	*i* P	**Pn**	**16 55 25.9**	**+2.6**
AKUM				*i* S	**Sn**	**16 56 15.3**	**-2.9**
AKUM	**Antalya-Kumluc**	**4.83**	**62**	*i* P	**Pn**	**16 55 25.3**	**+1.9**
AKUM				*i* S	**Sn**	**16 56 16.1**	**-2.2**
AKUM				IAML_P			
	comp=Z,2μm,0.2s						
KORT	**Korkueli**	**5.16**	**55**	PN	**Pn**	**16 55 31.0**	**+3.1**
KHAL	**Karahalli**	**5.51**	**39**	*i* P	**Pn**	**16 55 34.9**	**+2.1**
KHAL				*i* S	**Sn**	**16 56 31.1**	**-4.0**
KHAL				IAML_P			
	comp=Z,520nm,0.2s						
USAK	**Uak-Merkez**	**5.54**	**34**	*i* P	**Pn**	**16 55 35.1**	**+2.0**
OFRI	**`Ofer**	**8.46**	**98**	Pn	**Pn**	**16 56 13.0**	**-0.1**
SLTI	**Sal'it**	**8.60**	**100**	Pn	**Pn**	**16 56 15.3**	**+0.3**
AMAZ	**Amatzia**	**8.71**	**105**	Pn	**Pn**	**16 56 16.7**	**+0.1**
AMAZ				Sn	**Sn**	**16 57 49.4**	**-4.5**
MMA0B	**Mount Meron ar**	**8.72**	**95**	Pn	**Pn**	**16 56 17.6**	**+0.8**
MMA0B				Sn	**Sn**	**16 57 50.6**	**-3.5**
MMAI	**Mount Meron Ar**	**8.72**	**95**	Pn	**Pn**	**16 56 17.8**	**+1.0**
	baz=264,slow=13,SNR=3.6						
MMAI				Sn	**Sn**	**16 57 48.4**	**-5.7**
	comp=Z,3.9nm,0.3s,baz=303,slow=22,SNR=5.9						
BR101	**Keskin Array S**	**8.83**	**49**	*e*Pn	**Pn**	**16 56 22.3**	**+4.0**
BR101				*e*Sn	**Sn**	**16 57 53.5**	**-3.2**
BRTR	**Keskin Array B**	**8.83**	**49**	Pn	**Pn**	**16 56 22.3**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=207,slow=9.2,SNR=2.2						
BRTR				Sn	**Sn**	**16 57 53.5**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=229,slow=29,SNR=3.2						
MMLI	**Mount Malkishu**	**8.86**	**98**	Pn	**Pn**	**16 56 18.8**	**+0.2**
MMLI				Sn	**Sn**	**16 57 53.9**	**-3.5**
KSDI	**Kefar Szold**	**8.90**	**93**	Pn	**Pn**	**16 56 18.8**	**-0.4**
GEM	**Giv'at Ha'Em**	**8.90**	**93**	Pn	**Pn**	**16 56 19.1**	**-0.1**
GEM				Sn	**Sn**	**16 57 55.1**	**-3.4**
YTIR	**Yattir**	**8.93**	**106**	Pn	**Pn**	**16 56 19.2**	**-0.5**
YTIR				Sn	**Sn**	**16 57 54.3**	**-5.1**
HMDT	**Nahal Hemdat**	**8.99**	**99**	Sn	**Sn**	**16 57 56.8**	**-3.8**
KSHT	**Keshet**	**9.06**	**95**	Pn	**Pn**	**16 56 21.9**	**+0.4**
DSI	**Dead Sea**	**9.07**	**104**	Pn	**Pn**	**16 56 21.6**	**0.0**
DSI				Sn	**Sn**	**16 57 58.1**	**-4.6**
MZDA	**Masada**	**9.15**	**105**	Pn	**Pn**	**16 56 22.7**	**+0.1**
MZDA				Sn	**Sn**	**16 58 00.1**	**-4.4**
KRMI	**Paran Flat**	**9.15**	**114**	Pn	**Pn**	**16 56 22.0**	**-0.7**
KRMI				Sn	**Sn**	**16 57 58.7**	**-6.0**
VAE	**Valguarnera**	**9.24**	**294**	Sn	**Sn**	**16 58 03.9**	**-2.9**
	comp=Z,2.3nm,0.3s,baz=90,slow=20,SNR=2.8						
VAE	**Valguarnera**	**9.24**	**294**	*e*Sn	**Sn**	**16 58 03.9**	**-2.9**
ZFRI	**Zfri**	**9.30**	**110**	Pn	**Pn**	**16 56 22.8**	**-1.9**
HRFI	**Mount Harif**	**9.43**	**113**	Pn	**Pn**	**16 56 24.9**	**-1.5**
HRFI				Sn	**Sn**	**16 58 05.8**	**-5.6**
MBRI	**Mt Berech**	**9.45**	**115**	Pn	**Pn**	**16 56 25.6**	**-1.2**
MBRI				Sn	**Sn**	**16 58 06.0**	**-6.1**
EIL	**Elat**	**9.54**	**115**	Pn	**Pn**	**16 56 28.4**	**+0.4**
	comp=Z,2.5nm,0.3s,baz=103,slow=19,SNR=3.0						
EIL				Sn	**Sn**	**16 58 11.5**	**-2.7**
	comp=Z,0.9nm,0.3s,baz=292,slow=19,SNR=4.1						
ASF	**Jabal al Asfar**	**10.13**	**98**	Sn	**Sn**	**16 58 23.9**	**-5.0**
	comp=Z,0.4nm,0.3s,baz=3.4,slow=19,SNR=1.9						
ASF	**Jabal al Asfar**	**10.13**	**98**	*e*Sn	**Sn**	**16 58 23.9**	**-5.0**
MLR	**Muntele Rosu**	**11.32**	**3**	Pn	**Pn**	**16 56 54.1**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=3.2						
KOLS	**Kolonicke sedl**	**14.88**	**353**	*e*P	**P**	**16 57 47.6**	**+1.3**
VRAC	**Vranov**	**16.36**	**340**	Pn	**P**	**16 58 02.5**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=151,slow=10,SNR=5.7						
FUORN	**Ofenpass-Fuorn**	**16.73**	**322**	*e*Pn	**P**	**16 58 07.9**	**+0.9**
	comp=Z,8.6nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**16.73**	**322**	*e*Sn	**P**	**16 58 07.9**	**+0.9**
AKASG	**Malin Array Be**	**16.79**	**9**	Pn	**Pn**	**16 58 05.8**	**+0.5**
	comp=Z,2.2nm,0.3s,baz=202,slow=10,SNR=6.1						
AKBB	**Malin Array Si**	**16.79**	**9**	*e*Pn	**Pn**	**16 58 05.2**	**-0.2**
	comp=Z,17nm,1.0s						
KBZ	**Khabaz**	**16.81**	**50**	Pn	**P**	**16 58 08.8**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=257,slow=14,SNR=3.0						
KBZ	**Khabaz**	**16.81**	**50**	*e*Pn	**P**	**16 58 08.8**	**+1.2**
GEC2	**GERESS Array S**	**16.91**	**333**	*e*P	**P**	**16 58 09.2**	**+0.5**
	comp=Z,11nm,0.6s						
GERES	**GERESS Array B**	**16.91**	**333**	Pn	**P**	**16 58 09.2**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=144,slow=12,SNR=19						
DAVOX	**Davos/Dischmat**	**17.03**	**322**	Pn	**P**	**16 58 10.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=103,slow=7.0,SNR=3.8						
DAVOX	**Davos/Dischmat**	**17.03**	**322**	*e*Pn	**P**	**16 58 10.0**	**-0.3**
TUE	**Stuetta**	**17.11**	**321**	*e*Pn	**P**	**16 58 13.8**	**+2.7**
	comp=Z,8.6nm,1.1s						
KHC	**Kasperske Hory**	**17.19**	**334**	*e*P	**P**	**16 58 12.8**	**+0.9**
	comp=Z,2.1nm,0.8s						
KHC	**Kasperske Hory**	**17.19**	**334**	*e*P	**P**	**16 58 12.3**	**+0.5**
KHC				*ex*	x	16 58 24.5	
KHC				*ex*	x	16 58 46.3	
DPC	**Dobruska-Polom**	**17.38**	**341**	*e*P	**P**	**16 58 13.5**	**-0.4**
BNI	**Bardonecchia**	**17.79**	**313**	*e*Pn	**P**	**16 58 18.5**	**-0.2**
	comp=Z,3.8nm,1.1s						
GRA1	**Grafenberg Arr**	**18.55**	**331**	*e*P	**P**	**16 58 25.3**	**-1.5**
	comp=Z,11nm,1.0s						
CLL	**Collm**	**19.22**	**337**	*e*P	**P**	**16 58 31.2**	**-3.0**
	comp=Z,6.3nm,1.0s						
CLL	**Collm**	**19.22**	**337**	*e*P	**P**	**16 58 34.0**	**-0.1**
	comp=Z,14nm,1.4s						
CLL				*e*(pP)	**pwP**	**16 58 44.0**	**-0.5**
SUW	**Suwalki**	**19.87**	**357**	*e*P	**P**	**16 58 41.0**	**-0.2**
	comp=Z,46nm,1.0s						
RAYN	**Ar Rayn**	**20.79**	**115**	*e*P	**P**	**16 58 52.3**	**+0.8**
	comp=Z,8.8nm,1.0s						
ESDC	**Sonseca Array**	**23.77**	**292**	P	**P**	**16 59 23.3**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=81,slow=9.4,SNR=9.4						
ESDC	**Sonseca Array**	**23.77**	**292**	*e*P	**P**	**16 59 23.3**	**+0.7**
HFS	**Hagfors**	**27.01**	**347**	P	**P**	**16 59 51.1**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=151,slow=9.7,SNR=7.2						
FIA0	**FINESS Array S**	**27.29**	**1**	*e*P	**P**	**16 59 52.9**	**-1.3**
FINES	**FINESS Array B**	**27.29**	**1**	P	**P**	**16 59 52.9**	**-1.3**
	comp=Z,2.2nm,0.7s,baz=172,slow=11,SNR=3.9						
NAO01	**NORSAR Array S**	**28.21**	**345**	*e*P	**P**	**17 00 02.0**	**-0.5**
NC405	**NORSAR Array S**	**28.29**	**346**	*e*P	**P**	**17 00 03.0**	**-0.2**
NB201	**NORSAR Array S**	**28.31**	**346**	*e*P	**P**	**17 00 02.5**	**-0.9**
NB200	**NORSAR Array S**	**28.32**	**346**	*e*P	**P**	**17 00 02.5**	**-0.9**
NOA	**NORSAR Array B**	**28.32**	**346**	P	**P**	**17 00 02.5**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=147,slow=8.9,SNR=5.0						
EKA	**Eskdalemuir Ar**	**28.79**	**326**	P	**P**	**17 00 07.2**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=123,slow=8.8,SNR=5.8						
EKA	**Eskdalemuir Ar**	**28.79**	**326**	*e*P	**P**	**17 00 07.2**	**-0.4**
TOA1	**Torodi Ar. Sit**	**29.79**	**231**	*e*P	**P**	**17 00 17.9**	**+1.0**
TOA0	**Torodi Ar. Sit**	**29.79**	**231**	*e*P	**P**	**17 00 19.6**	**+2.6**
	comp=Z,4.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**29.79**	**231**	P	**P**	**17 00 17.9**	**+1.0**
	comp=Z,3.7nm,0.5s,baz=28,slow=8.2,SNR=14						
MBAR	**Mbarara**	**35.01**	**170**	P	**P**	**17 01 03.5**	**+0.7**
	comp=Z,3.3nm,0.2s,baz=252,slow=18,SNR=5.6						
MBAR	**Mbarara**	**35.01**	**170**	*e*P	**P**	**17 01 04.4**	**+1.6**
	comp=Z,3.6nm,0.8s						
ARA0	**ARCESS Array S**	**35.41**	**0**	*e*P	**P**	**17 01 04.2**	**-1.3**
ARCES	**ARCESS Array B**	**35.41**	**0**	P	**P**	**17 01 04.2**	**-1.3**
	comp=Z,7.4nm,0.4s,baz=178,slow=6.3,SNR=5.3						
GAR	**Garm**	**36.38**	**69**	*e*P	P	17 01 07.8	-6.5
	comp=Z,36nm,0.7s						
BVAR	**Bovoye Array**	**37.09**	**45**	P	**P**	**17 01 21.8**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=240,slow=8.1,SNR=2.4						
BORG	**Borgarnes**	**41.36**	**332**	*e*P	**P**	**17 01 54.0**	**-1.6**
	comp=Z,3.1nm,0.9s						
KURK	**Kurchatov**	**41.88**	**50**	*e*P	**P**	**17 02 01.4**	**+1.5**
	comp=Z,2.3nm,0.8s						
MAKZ	**Makanchi**	**44.18**	**56**	*e*P	**P**	**17 02 20.4**	**+1.7**
	comp=Z,1.5nm,1.0s						
SPA0	**Spitsbergen Ar**	**44.26**	**357**	*e*P	**P**	**17 02 18.4**	**-0.5**
	comp=Z,14nm,1.0s						
SPITS	**Spitsbergen Ar**	**44.26**	**357**	P	**P**	**17 02 18.4**	**-0.5**
	comp=Z,5.8nm,0.8s,baz=149,slow=12,SNR=5.6						
MK31	**Makanchi Array**	**44.40**	**56**	*e*P	**P**	**17 02 22.4**	**+2.0**
	comp=Z,2.7nm,1.1s						
MK32	**Makanchi Array**	**44.40**	**56**	*e*P	**P**	**17 02 22.0**	**+1.6**
MKAR	**Makanchi Array**	**44.40**	**56**	P	**P**	**17 02 22.0**	**+1.6**
	comp=Z,1.8nm,0.7s,baz=268,slow=8.3,SNR=6.7						
ZAA0	**Zalesovo Array**	**45.75**	**45**	*e*P	**P**	**17 02 31.3**	**+0.2**
	comp=Z,2.9nm,0.6s						
ZAA1	**Zalesovo Array**	**45.75**	**45**	*e*P	**P**	**17 02 31.3**	**+0.3**
ZALV	**Zalesovo Beam**	**45.75**	**45**	P	**P**	**17 02 31.3**	**+0.3**
	comp=Z,2.7nm,0.4s,baz=264,slow=8.9,SNR=6.2						
SONA0	**Songino Array**	**60.18**	**50**	*e*P	**P**	**17 04 19.4**	**+1.7**
SONM	**Songino Array**	**60.18**	**50**	P	**P**	**17 04 19.4**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=282,slow=7.3,SNR=4.1						
USRK	**Ussuriysk Ar.**	**77.60**	**45**	P	**P**	**17 06 06.5**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=278,slow=4.1,SNR=4.9						
KS15	**Wonju Array Si**	**78.94**	**52**	*e*P	**P**	**17 06 14.5**	**+1.1**
	comp=Z,4.1nm,1.1s						
KSRS	**Korea Array**	**78.95**	**52**	P	**P**	**17 06 14.5**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=307,slow=4.2,SNR=4.6						
ILAR	**Eielson Array**	**81.17**	**357**	P	**P**	**17 06 25.8**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=186,slow=19,SNR=4.3						
ILB	**Eielson Array**	**81.17**	**357**	*e*P	**P**	**17 06 25.8**	**+0.8**
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**117.96**	**101**	PKP	**PKiKP**	**17 12 57.6**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=320,slow=1.9,SNR=3.0						
AS31	**Alice Springs**	**117.97**	**101**	*e*PKPdf	**PKiKP**	**17 12 57.6**	**+0.8**

IDC 15 16:57:40.8±7.0, 29.°45N×22.°23E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.2/60, mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=125.9km s-min=55.0km az=27.0, Libya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**13.89**	**39**	Pn	Pn	17 01 01.9	+2.8
	0.6nm,0.3s,baz=288,slow=14,SNR=7.7						
GERES	**GERESS Array B**	**20.44**	**344**	P	P	17 02 19.9	+0.1
	0.4nm,0.5s,baz=142,slow=13,SNR=4.5						
MKAR	**Makanchi Array**	**49.12**	**52**	P	P	17 06 31.6	+1.4
	0.3nm,0.5s,baz=284,slow=3.5,SNR=4.1						
ZALV	**Zalesovo Beam**	**50.81**	**43**	P	P	17 06 40.9	-1.9
	1.1nm,0.5s,baz=264,slow=9.2,SNR=4.9						

BJI ***15*** *16:59:28.2±0.0, 33.°94N×24.°50E, h25km, mb4.9/45, mB5.3/10, Ms5.2/10, Ms7 4.9/8*
IDC ***15*** *16:59:30.2±0.5, 34.°27N×25.°04E, h0km, mb4.6/39, mb1 4.6/52, mb1mx4.6/64, mbtmp4.6/52, ML4.4/10, MS4.5/1, Ms1 4.5/1, ms1mx3.4/66, Error ellipse: s-maj=10.2km s-min=9.8km az=163.0*
GII ***15*** *16:59:30.8±0.3, 34.°23N×25.°11E, h40km, mb4.4/2, MD4.3/2*
HLW ***15*** *16:59:31.1, 34.°32N×25.°33E, h10km±19km, Ml4.7*
MOS ***15*** *16:59:32.8±1.2, 34.°26N×24.°98E, h26km, mb5.0/28, Error ellipse: s-maj=5.9km s-min=3.2km az=83.2*
ISCJB ***15*** *16:59:33.2±0.6, 34.°21N±0.°02×25.°03E±0.°02, h31km±4km, mb4.8/111, Error ellipse: s-maj=3.3km s-min=2.4km az=20.2*
ISK ***15*** *16:59:33.1, 34.°32N×25.°14E, h11km, ML4.5/24*
NIC ***15*** *16:59:34.7±0.5, 34.°00N×25.°33E, h32km, mb4.8, ML4.4*
THE ***15*** *16:59:35.5, 34.°38N×25.°07E, h1km±3km, ML4.5/2, Error ellipse: s-maj=4.1km s-min=1.3km az=194.0*
ATH ***15*** *16:59:36.3, 34.°45N×25.°05E, h33km±2km, ML4.4/5, Error ellipse: s-maj=4.2km s-min=1.8km az=2.0*
NEIC ***15*** *16:59:36.3±0.0, 34.°45N×25.°05E, h33km, mb4.7/77, ML4.4(ATH), ML4.5(THE), After ATH.*
DDA ***15*** *17:00:11.6, 34.°73N×25.°90E, h37km, ML4.5*
ISC 15 16:59:34.2±0.7, 34.°22N±0.°03×25.°07E±0.°03, h27km±4km, n583, σ1°68/628, mb4.8/116, 23C-18D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.82**	**345**	P	**Pb**	**16 59 48.9**	**-1.0**
SIVA				S	**Sb**	**17 00 00.6**	**0.0**
SIVA	**Sivas**	**0.82**	**345**	P	**Pb**	**16 59 49.1**	**-0.9**
SIVA				S	**Sb**	**16 59 57.7**	**-2.9**
SIVA				AML	AML	17 00 02.1	
SIVA				AML	AML	17 00 09.2	
TMBK	**Timbaki Herakl**	**0.88**	**344**	P	**Pn**	**16 59 50.5**	**-0.4**
TMBK				S	**Sb**	**17 00 00.0**	**-2.4**
LAST	**Lasithi**	**0.99**	**20**	P	**Pn**	**16 59 51.9**	**-0.6**
LAST	**Lasithi**	**0.99**	**20**	P	**Pn**	**16 59 52.0**	**-0.6**
GVD	**Gavdhos**	**1.02**	**307**	*e*Pn	**Pn**	**16 59 52.5**	**-0.2**
GVD	**Gavdhos**	**1.02**	**307**	P	**Pn

BODT Bodrum 3.37 32 PN **Pn 17 00 25.9 +0.8**
BDRM Kayabasi 3.43 34 *i* P **Pn 17 00 27.1 +1.2**
BDRM Kayabasi 3.43 34 *i* P **Pn 17 00 28.3 +2.4**
BDRM IAML_P
comp=Z,2µm,0.3s
KRND KRANIDI 3.52 334 P **Pn 17 00 27.2 +0.1**
DID Didima 3.60 336 *e*Pn **Pn 17 00 28.0 -0.2**
DID Didima 3.60 336 P **Pn 17 00 28.0 -0.2**
SMG Samos 3.76 22 P **Pn 17 00 31.2 +0.7**
VLY Voula,Athens 3.77 344 P **Pn 17 00 30.9 +0.3**
VLX Vlachokerasia 3.83 326 *e*Pn **Pn 17 00 32.4 +1.0**
VLX Vlachokerasia 3.83 326 P **Pn 17 00 32.4 +1.0**
ITM Ithomi 3.90 320 PN **Pn 17 00 33.5 +1.1**
ITM Ithomi 3.90 320 *e*Pn **Pn 17 00 32.9 +0.5**
ITM Ithomi 3.90 320 P **Pn 17 00 32.7 +0.3**
DALY Dalyan (Mula) 3.91 47 PN **Pn 17 00 33.8 +1.4**
DALY Dalyan (Mula) 3.91 47 *i* P **Pn 17 00 34.4 +2.0**
DALY *i* S **Sn 17 01 15.5 -1.8**
DALY IAML_P
comp=Z,9µm,0.4s
DALY Dalyan (Mula) 3.91 47 *i* P **Pn 17 00 34.8 +2.4**
DALY IAML_P
comp=Z,5µm,0.3s
YER Yerkesik 3.91 41 PN **Pn 17 00 33.8 +1.2**
YER Yerkesik 3.91 41 *e*Pn **Pn 17 00 34.3 +1.7**
YER Yerkesik 3.91 41 P **Pn 17 00 34.3 +1.7**
YER Yerkesik 3.91 41 *e*P **Pn 17 00 34.3 +1.7**
TURN Turunc 3.91 46 PN **Pn 17 00 29.5 -3.0**
TURN Turunc 3.91 46 *i* P **Pn 17 00 30.7 -1.8**
TURN *i* S **Sn 17 01 09.0 -8.5**
TURN IAML_P
comp=Z,8µm,0.3s
TURN Turunc 3.91 46 *i* P **Pn 17 00 30.8 -1.7**
TURN *i* S **Sn 17 01 10.7 -6.8**
TURN IAML_P
comp=Z,8µm,0.3s
PTL Penteli 3.94 346 *e*Pn **Pn 17 00 33.5 +0.6**
PTL Penteli 3.94 346 P **Pn 17 00 33.5 +0.6**
FETY Fethiye 4.07 53 PN **Pn 17 00 35.4 +0.7**
FETY Fethiye 4.07 53 *e*Pn **Pn 17 00 35.2 +0.5**
FETY Fethiye 4.07 53 P **Pn 17 00 35.2 +0.5**
FETY Fethiye 4.07 53 *i* P **Pn 17 00 35.9 +1.2**
FETY *i* S **Sn 17 01 17.4 -4.1**
FETY Fethiye 4.07 53 *i* P **Pn 17 00 35.8 +1.1**
FETY IAML_P
comp=Z,5µm,0.3s
AYDN Tasoluk 4.12 33 *i* P **Pn 17 00 37.1 +1.6**
AYDN Tasoluk 4.12 33 *i* P **Pn 17 00 37.9 +2.5**
AYDN IAML_P
comp=Z,4µm,0.3s
LTK Loutraki 4.16 336 *e*Pn **Pn 17 00 35.9 0.0**
LTK Loutraki 4.16 336 P **Pn 17 00 35.9 0.0**
KSL Kastellorizon 4.17 61 P **Pn 17 00 36.6 +0.6**
VILL Villia 4.18 341 P **Pn 17 00 36.5 +0.2**
AKAS Kas 4.22 60 PN **Pn 17 00 37.7 +0.8**
AKAS Kas 4.22 60 *i* P **Pn 17 00 38.0 +1.1**
AKAS *i* S **Sn 17 01 22.4 -3.0**
AKAS IAML_P
comp=Z,14µm,0.3s
AKAS Kas 4.22 60 *i* P **Pn 17 00 37.9 +1.0**
AKAS *i* S **Sn 17 01 24.2 -1.2**
AKAS IAML_P
comp=Z,14µm,0.3s
CHOS Chios island 4.23 11 PN **Pn 17 00 37.8 +0.8**
EREA Eretria 4.29 348 P **Pn 17 00 38.4 +0.7**
URLA Izmir 4.31 16 PN **Pn 17 00 38.9 +0.9**
GUR Goura 4.31 330 *e*Pn **Pn 17 00 38.7 +0.6**
GUR Goura 4.31 330 P **Pn 17 00 38.7 +0.6**
AYDB Zeytinkoy-Aydi 4.36 31 PN **Pn 17 00 35.2 +1.3**
BLCB Balcova 4.45 20 PN **Pn 17 00 40.8 +0.9**
MRKA Markates 4.63 345 P **Pn 17 00 42.9 +0.5**
ELL Elmali 4.68 56 PN **Pn 17 00 44.1 +0.8**
ATAL Atalanti 4.76 340 *e*Pn **Pn 17 00 44.3 +0.2**
ATAL Atalanti 4.76 340 P **Pn 17 00 44.3 +0.2**
AKUM Antalya-Kumluc 4.80 63 *i* P **Pn 17 00 45.9 +1.2**
AKUM *i* S **Sn 17 01 36.9 -2.4**
AKUM Antalya-Kumluc 4.80 63 *i* P **Pn 17 00 45.3 +0.6**
AKUM *i* S **Sn 17 01 38.5 -0.8**
AKUM IAML_P
comp=Z,10µm,0.2s
SWA2 4.98 176 P **Pn 17 00 47.0 -0.1**
baz=178
SIGR SIGRI 5.02 7 PN **Pn 17 00 48.3 +0.6**
MANT Manisa 5.11 32 *e*Pn **Pn 17 00 50.6 +1.4**
MANT Manisa 5.11 32 *i* P **Pn 17 00 50.9 +1.8**
MANT IAML_P
comp=Z,2µm,0.4s
KORT Korkueli 5.12 56 PN **Pn 17 00 50.4 +1.2**
KORT Korkueli 5.12 56 *i* P **Pn 17 00 51.5 +2.2**
KORT *i* S **Sn 17 01 46.4 -1.1**
KORT Korkueli 5.12 56 *i* P **Pn 17 00 51.2 +1.9**
KORT *i* S **Sn 17 01 49.6 +2.1**
KORT IAML_P
comp=Z,2µm,0.4s
KULA Kula-Manisa 5.17 33 PN **Pn 17 00 51.3 +1.4**
AGG Agios Georgios 5.27 336 *e*Pn **Pn 17 00 52.7 +1.5**
AGG Agios Georgios 5.27 336 *e*P **Pn 17 00 52.7 +1.5**
ANTB Antalya 5.28 58 PN **Pn 17 00 53.1 +1.8**
BRDR BURDUR-Merkez 5.33 48 *i* P **Pn 17 00 53.9 +1.8**
BRDR *i* S Sn 17 01 42.7 -10
BRDR IAML_P
comp=Z,2µm,0.3s
BRDR BURDUR-Merkez 5.33 48 *i* P **Pn 17 00 53.5 +1.5**
BRDR IAML_P
comp=Z,1µm,0.3s
XOR Xorichti 5.35 344 P **Pn 17 00 52.5 +0.2**
HBRG Burj al `Arab 5.43 131 P **Pn 17 00 51.7 -1.7**
baz=133
HBRG AMP 17 02 00.0
baz=133
KHAL Karahalli 5.47 40 *i* P **Pn 17 00 55.3 +1.3**
KHAL *i* S **Sn 17 01 54.0 -2.0**
KHAL IAML_P
comp=Z,972nm,0.2s
USAK Uak-Merkez 5.50 34 *i* P **Pn 17 00 56.6 +2.2**
USAK IAML_P
comp=Z,7µm,0.4s
BCK Bucak 5.53 53 PN **Pn 17 00 56.7 +1.9**
EZN Ezine 5.68 10 ⇑*i* P **Pn 17 00 57.9 +1.1**
ISP Isparta 5.70 49 PN **Pn 17 00 58.5 +1.4**
ISP Isparta 5.70 49 *e*Pn **Pn 17 00 57.6 +0.5**
ISP Isparta 5.70 49 *e*P **Pn 17 00 57.6 +0.5**
BALB Balikesir 5.86 22 *e*Pn **Pn 17 01 01.5 +2.3**
KEPZ Antalya-Kepez 5.96 61 *i* P **Pn 17 01 02.1 +1.4**
KEPZ *i* S **Sn 17 02 04.8 -3.3**
KEPZ Antalya-Kepez 5.96 61 *i* P **Pn 17 01 02.0 +1.3**
KEPZ *i* S **Sn 17 02 08.3 +0.2**
BAGO Egridir - ISPA 5.96 49 *i* P **Pn 17 01 02.1 +1.3**
BAGO Egridir - ISPA 5.96 49 *i* P **Pn 17 01 01.1 +0.3**
BAGO IAML_P
comp=Z,1µm,0.3s
LIT Litokhoron 6.22 341 *e*Pn **Pn 17 01 04.7 +0.5**
LIT Litokhoron 6.22 341 *e*P **Pn 17 01 04.7 +0.5**
ALFC Alefka 6.27 79 P **Pn 17 01 04.0 -1.0**
baz=261
ALFC S **Sn 17 02 12.7 -3.1**
SZAC Souni 6.47 83 P **Pn 17 01 05.8 -2.0**
baz=265
DOGA KONYA_Doganhis 6.59 52 *i* P **Pn 17 01 11.6 +2.1**
DOGA *i* S **Sn 17 02 20.1 -3.8**
DOGA IAML_P
comp=Z,2µm,0.3s
DOGA KONYA_Doganhis 6.59 52 *i* P **Pn 17 01 11.8 +2.3**
DOGA IAML_P
comp=Z,935nm,0.2s
ALN Alexandroupoli 6.71 6 *e*Pn **Pn 17 01 13.0 +2.1**
ALN Alexandroupoli 6.71 6 *e*P **Pn 17 01 13.0 +2.1**
SOH Sokhos 6.73 349 P Pn 17 01 16.5 +5.3
SOH pmax pmax
comp=Z,20nm,0.8s
MAMC Mammari 6.78 80 P **Pn 17 01 11.1 -0.8**
baz=262
CSS Mathiatis 6.85 81 P **Pn 17 01 11.6 -1.4**
baz=263
CSS S **Sn 17 02 28.6 -1.5**
KMER Konya-Meram 6.89 57 *i* P **Pn 17 01 16.1 +2.5**
KMER IAML_P
comp=Z,447nm,0.3s
KDHN Kadinhani 7.12 51 *i* P **Pn 17 01 17.7 +1.0**
KDHN IAML_P
comp=Z,503nm,0.3s
HSAF As Saff 7.17 128 P **Pn 17 01 15.5 -1.9**
baz=129
FNA Florina 7.17 337 *e*Pn **Pn 17 01 17.8 +0.4**
FNA Florina 7.17 337 *e*P **Pn 17 01 17.8 +0.4**
GLL Jalalah 7.30 128 P **Pn 17 01 16.9 -2.3**
baz=129
MMB Musomiste 7.43 352 *e*P **Pn 17 01 22.9 +2.0**
RZN Rozhen 7.46 358 *e*P **Pn 17 01 21.9 +0.5**
OHR Ohrid 7.66 335 *i* Pn **Pn 17 01 28.6 +4.5**
CTYL Yalikoy Yolu 7.67 18 ⇓*i* P **Pn 17 01 25.6 +1.4**
KRUS Krusevo 7.75 338 *i* Pn **Pn 17 01 25.2 0.0**
KKB Krupnik 7.79 349 *e*P Pn 17 01 34.5 +8.7
STIP Stip 7.80 344 *i* Pn **Pn 17 01 26.3 +0.4**
SKO Skopje 8.25 341 *e*Pn Pn 17 01 41.7 +10
TIP Timpagrande 8.30 309 *e*Pn **Pn 17 01 32.5 -0.4**
TIP Timpagrande 8.30 309 ⇑*i* P **Pn 17 01 32.7 -0.2**
ANTO Ankara 8.36 45 *e*Pn **Pn 17 01 34.1 +0.5**
ANTO Ankara 8.36 45 ⇑*i* P **Pn 17 01 35.0 +1.3**
ANTO Ankara 8.36 45 *e*P **Pn 17 01 34.1 +0.5**
VTS Vitosha 8.50 351 *e*Pn **Pn 17 01 37.5 +1.8**
VTS Vitosha 8.50 351 ⇑*i* P **Pn 17 01 35.4 -0.3**
VTS Vitosha 8.50 351 *e*P **Pn 17 01 37.5 +1.8**
VTS Vitosha 8.50 351 *e*P **Pn 17 01 37.1 +1.4**
SLTI Sal'it 8.59 101 Pn **Pn 17 01 32.4 -4.3**
SLTI Sn **Sn 17 03 07.4 -5.3**
MMA0B Mount Meron ar 8.70 95 Sn **Sn 17 03 11.3 -4.4**
MMAI Mount Meron Ar 8.70 95 Pn **Pn 17 01 36.3 -2.1**
comp=Z,9.7nm,0.3s,baz=289,slow=11,SNR=18
MMAI Sn **Sn 17 03 12.3 -3.4**
comp=Z,13nm,0.3s,baz=281,slow=22,SNR=3.5
AMAZ Amatzia 8.71 105 Pn **Pn 17 01 34.1 -4.3**
BR131 Keskin Array S 8.78 49 *e*Pn **Pn 17 01 39.7 +0.2**
BR131 Keskin Array S 8.78 49 P **Pn 17 01 42.2 +2.7**
SNR=9.2
BRTR Keskin Array B 8.78 49 Pn **Pn 17 01 40.3 +0.7**
comp=Z,1.2nm,0.3s,baz=221,slow=13,SNR=15
BRTR Sn **Sn 17 03 11.2 -6.5**
baz=199,slow=22,SNR=2.6
WDD Wied Dalam 8.80 284 *e*Pn **Pn 17 01 38.5 -1.1**
WDD *e*Sn **Sn 17 03 11.3 -6.5**
CGL1 Ceglie Messapi 8.81 319 *e*Pn **Pn 17 01 39.2 -0.6**
CGL1 Sn Sn 17 03 07.1 -11
MMLI Mount Malkishu 8.85 99 Pn **Pn 17 01 36.5 -3.8**
KSDI Kefar Szold 8.88 94 Pn **Pn 17 01 36.3 -4.5**
KSDI Sn **Sn 17 03 14.9 -5.1**
GEM Giv'at Ha'Em 8.88 94 Pn **Pn 17 01 37.4 -3.4**
YTIR Yattir 8.93 106 Pn **Pn 17 01 37.9 -3.6**
YTIR Sn **Sn 17 03 16.2 -5.0**
NATI Neve Ativ 8.94 93 Pn **Pn 17 01 38.1 -3.4**
NATI Sn **Sn 17 03 17.3 -4.0**
HMDT Nahal Hemdat 8.98 100 Pn **Pn 17 01 38.2 -3.9**
MASS Massafra 8.98 318 *e*Pn **Pn 17 01 40.8 -1.3**
FASA Fasano 8.99 319 *e*Pn **Pn 17 01 40.7 -1.5**
FASA Sn Sn 17 03 09.5 -13
KSHT Keshet 9.05 95 Pn **Pn 17 01 39.4 -3.7**
SHMJ Saham 9.06 97 P **Pn 17 01 43.7 +0.5**
comp=Z,200nm,0.9s
DSI Dead Sea 9.06 104 Pn **Pn 17 01 38.7 -4.6**
KRMI Paran Flat 9.15 114 Pn **Pn 17 01 41.4 -3.1**
DRME Dracevica, Mon 9.20 332 *e*Pn **Pn 17 01 42.8 -2.3**
VAE Valguarnera 9.24 294 Pn **Pn 17 01 46.8 +1.0**
comp=Z,4.9nm,0.3s,baz=5.0,slow=18,SNR=6.3
VAE Sn **Sn 17 03 24.2 -4.5**
comp=Z,5.5nm,0.3s,baz=346,slow=17,SNR=3.3
PRNI Paran 9.25 112 Pn **Pn 17 01 42.0 -3.9**
PDG Podgorica 9.38 333 ⇓*i* P **Pn 17 01 45.9 -1.6**
PDG Podgorica 9.38 333 *e*Pn **Pn 17 01 44.5 -3.0**
SG1 Sgolgore (BA) 9.38 317 *e*Pn **Pn 17 01 46.0 -1.6**
SG1 Sn Sn 17 03 19.7 -12
TTG Podgorica 9.38 333 *e*Pn **Pn 17 01 45.7 -1.8**
TTG Podgorica 9.38 333 *e*P **Pn 17 01 45.7 -1.8**
WALJ Wala 9.41 103 P **Pn 17 01 47.1 -1.0**
comp=Z,106nm,0.5s
HRFI Mount Harif 9.43 114 Pn **Pn 17 01 44.8 -3.5**
HRFI Mount Harif 9.43 114 P **Pn 17 01 47.1 -1.2**
comp=Z,79nm,0.5s
BAI Bari 9.45 319 *e*Pn **Pn 17 01 48.9 +0.4**
BAI Sn Sn 17 03 23.7 -10
EIL Elat 9.54 116 Pn **Pn 17 01 48.5 -1.3**
comp=Z,4.0nm,0.3s,baz=247,slow=0.6,SNR=16
EIL Sn **Sn 17 03 27.8 -8.5**
comp=Z,1.3nm,0.3s,baz=0.0,slow=20,SNR=2.7
AQBJ Aqaba 9.59 115 P **Pn 17 01 50.1 -0.4**
JDRJ Daraweish 9.61 108 P **Pn 17 01 51.9 +1.0**
comp=Z,76nm,0.8s
HCY Herceg Novi 9.70 330 *e*Pn **Pn 17 01 49.7 -2.2**
TREB Trebinje 9.98 330 *e*Pn **Pn 17 01 53.1 -2.7**
BRY Bratogost 10.06 331 *e*Pn **Pn 17 01 55.6 -1.4**
ICOR Ion Corvin 10.10 11 ⇓*i* P Pn 17 02 04.8 +7.3
ASF Jabal al Asfar 10.12 98 Pn **Pn 17 01 57.3 -0.5**
comp=Z,1.4nm,0.3s,baz=285,slow=0.6,SNR=7.7
ASF Sn **Sn 17 03 44.1 -6.4**
comp=Z,0.7nm,0.3s,baz=18,slow=20,SNR=2.3
ASF Jabal al Asfar 10.12 98 P **Pn 17 01 57.6 -0.3**
UPM Unac-Piva 10.17 334 *e*Pn **Pn 17 01 55.5 -3.1**
CLTB Caltabellotta 10.18 293 *e*Pn **Pn 17 01 58.1 -0.6**
STON Ston 10.38 328 *e*Pn **Pn 17 01 57.1 -4.1**
TIRR Tirgusor 10.54 13 ⇓*i* P **Pn 17 02 04.0 +0.5**
BBLS Lazići 10.58 337 *e*Pn **Pn 17 02 00.2 -3.9**
DIVS Divibare 10.62 340 *e*Pn **Pn 17 02 00.4 -4.2**
MDVR Moldovita 10.86 347 ⇓*i* P **Pn 17 02 08.1 +0.3**
HAPS Han Pijesak,Bl 10.93 336 *e*Pn **Pn 17 02 05.0 -3.9**
MLR Muntele Rosu 11.27 3 Pn **Pn 17 02 14.5 +0.9**
comp=Z,0.2nm,0.3s,baz=173,slow=12,SNR=4.2
MLR Muntele Rosu 11.27 3 *e*Pn **Pn 17 02 12.9 -0.7**
MLR Muntele Rosu 11.27 3 ⇓*i* P **Pn 17 02 14.6 +0.9**
BZS Buziias 11.68 348 ⇑*i* P **Pn 17 02 18.6 -0.5**
VRI Vrincioaia 11.70 6 ⇓*i* P **Pn 17 02 20.8 +1.5**
MGRS Mrkonjic Grad 11.90 331 *e*Pn **Pn 17 02 20.6 -1.5**
BLY Banja Luka 12.14 332 *e*Pn **Pn 17 02 22.8 -2.5**
BLY Banja Luka 12.14 332 *e*Pn Pn 17 02 20.0 -5.3
DRGR 12.68 353 ⇑*i* P **Pn 17 02 33.0 +0.2**
BIZ Bicaz 12.73 3 ⇑*i* P **Pn 17 02 34.8 +1.4**
MORH Mrgy, Hungar 12.94 340 *e*Pn Pn 17 02 28.8 -7.4
MORH Mrgy, Hungar 12.94 340 EPn **Pn 17 02 40.0 +3.8**
MORH Sn **Sn 17 04 58.0 -1.1**
KEST Kesra 12.98 281 Pn **Pn 17 02 37.4 +0.4**
comp=Z,0.1nm,0.3s,baz=179,slow=11,SNR=3.7
KEST Kesra 12.98 281 *e*Pn **Pn 17 02 37.6 +0.6**
KIS Kishinev 13.07 11 *e*P **Pn 17 02 38.0 -0.1**
KIS Kishinev 13.07 11 *e*P **Pn 17 02 38.0 -0.1**
TAMR Tamra 13.29 287 *e*Pn **Pn 17 02 39.6 -1.4**
BURAR Bucovina Array 13.38 0 ⇑*i* P **Pn 17 02 43.9 +1.6**
CRES Cresnjev 13.72 331 *e*Pn **Pn 17 02 42.7 -4.2**
TRPA Tarpa 14.02 353 ⇑*i* P **Pn 17 02 50.9 -0.1**
TRPA Tarpa 14.02 353 EPn **P 17 02 59.0 +0.5**
CEY Cerknica 14.09 328 *e*Pn **Pn 17 02 49.1 -2.8**
ANN Anapa 14.22 38 *e*P **P 17 02 58.9 -1.9**
ANN pmax pmax
comp=Z,70nm,1.4s
PSZ Piszkesteto 14.22 346 *e*Pn **Pn 17 02 52.5 -1.3**
PSZ Piszkesteto 14.22 346 ⇑*i* P **Pn 17 02 52.7 -1.1**
PSZ Piszkesteto 14.22 346 *e*P **Pn 17 02 52.5 -1.3**
PSZ Piszkesteto 14.22 346 EPn **P 17 02 59.1 -1.8**
PSZ Sn **Sn 17 05 30.1 -0.6**
JAVS Javornik 14.37 327 *i* Pn **Pn 17 02 52.8 -3.0**
JAVS *e*Sn Sn 17 05 20.1 -14
UZH Uzhgorod 14.54 353 *e*P **Pn 17 03 00.5 +2.4**
SOKA Soboth 14.58 332 *i* Pn **Pn 17 02 56.5 -2.3**
comp=Z,12nm,0.9s
OBKA Obir 14.64 330 *e*P **Pn 17 03 01.7 +2.1**
comp=Z,7.8nm,0.6s
KOLS Kolonicke sedl 14.84 353 *e*P **Pn 17 03 02.9 +0.7**
KOLS Kolonicke sedl 14.84 353 *e*PN **Pn 17 03 02.9 +0.7**
ARSA Arzberg 14.87 334 *i* Pn **Pn 17 03 02.7 +0.1**
comp=Z,6.6nm,1.0s
SOP Sopron 14.89 337 ⇓EPn **P 17 03 07.0 -1.2**
SOP Sn Sn 17 05 37.0 -10
BCA Borcka 14.92 56 ⇑*i* P **Pn 17 03 04.3 +1.0**
VYHS Vyhne 15.00 344 *e*P **P 17 03 10.0 +0.5**
VYHS Vyhne 15.00 344 *e*P **P 17 03 10.0 +0.5**
MYKA Terra Mystica 15.12 328 *i* Pn **Pn 17 03 05.3 -0.7**
comp=Z,9.3nm,0.8s
MODS Modra-Piesok 15.29 340 *e*P **P 17 03 12.1 -0.6**
MODS Modra-Piesok 15.29 340 *e*P **P 17 03 12.1 -0.6**
KWP Kalwaria Pacla 15.49 354 *e*Pn **Pn 17 03 10.8 0.0**
comp=Z,108nm,0.5s
KWP Kalwaria Pacla 15.49 354 *e*P **Pn 17 03 10.8 0.0**
KWP pmax pmax
comp=Z,109nm,0.5s
KBA Koelnbreinsper 15.60 329 *i* Pn **Pn 17 03 11.2 -1.1**
comp=Z,25nm,1.2s
KBA Koelnbreinsper 15.60 329 P **P 17 03 18.1 +1.8**
KBA pmax pmax
comp=Z,25nm,0.8s
LVV L'vov 15.60 358 *e*P **P 17 03 15.2 -1.0**
JAVC Velka Javorina 15.62 342 *e*PN **P 17 03 18.0 +1.5**
ABTA Abfaltersbach 15.71 326 *i* Pn **P 17 03 19.2 +1.7**
comp=Z,45nm,0.7s,SNR=22
MOA Molln 15.84 332 *e*Pn **Pn 17 03 15.8 +0.5**
comp=Z,18nm,0.8s,SNR=9.8
KRUC Moravsky 16.16 339 *e*P **P 17 03 21.7 -0.7**
AKH Akhalkalaki 16.21 58 *e*Pn **P 17 03 22.5 -0.7**
comp=Z,30nm,1.0s
AKH Akhalkalaki 16.21 58 *e*P **P 17 03 22.5 -0.7**
AKH pmax pmax
comp=Z,30nm,1.0s
VRAC Vranov 16.33 340 Pn **Pn 17 03 21.2 -0.3**
comp=Z,1.0nm,0.3s,baz=150,slow=9.4,SNR=15
VRAC Vranov 16.33 340 *e*P **P 17 03 23.5 -0.7**
OKC Ostrava-Krasne 16.42 344 *e*P **P 17 03 27.3 +2.2**
OKC Ostrava-Krasne 16.42 344 *e*P **P 17 03 27.3 +2.2**
NEY Neytrino 16.43 52 *de*P **P 17 03 24.5 -1.1**
WTTA Wattenberg 16.50 326 *e*P **P 17 03 26.8 +0.5**
comp=Z,23nm,0.7s,SNR=15
MORC Moravsky Berou 16.50 343 *e*Pn **P 17 03 25.6 -0.6**
comp=Z,8.0nm,1.1s
MORC Moravsky Berou 16.50 343 *e*P **P 17 03 25.6 -0.6**
MORC pmax pmax
comp=Z,8.0nm,1.1s
MORC Moravsky Berou 16.50 343 *e*P **Pn 17 03 24.9 +1.2**
WATA Walderalm 16.58 326 *e*P **P 17 03 26.7 -0.4**
comp=Z,12nm,0.6s,SNR=8.5
TREC Trest 16.65 338 *e*P **P 17 03 27.1 -0.7**
TREC Trest 16.65 338 *e*P **P 17 03 27.1 -0.7**
SQTA Sankt Quirin 16.67 325 *e*Pn **Pn 17 03 25.6 -0.3**
comp=Z,23nm,0.9s
FUORN Ofenpass-Fuorn 16.71 322 *e*Pn **P 17 03 31.5 +2.8**
comp=Z,21nm,0.8s
GNI Garni 16.74 64 Pn **P 17 03 30.5 +1.5**
comp=Z,1.1nm,0.3s,baz=312,slow=18,SNR=3.8
GNI Garni 16.74 64 *de*P **P 17 03 29.9 +0.8**
AKASG Malin Array Be 16.75 9 Pn **Pn 17 03 24.9 -1.8**
comp=Z,13nm,0.3s,baz=201,slow=10,SNR=50
AKASG Malin Array Be 16.75 9 P **Pn 17 03 25.0 -1.8**
AKBB Malin Array Si 16.75 9 *e*Pn **Pn 17 03 27.6 +0.9**
comp=Z,45nm,0.8s
AKBB Malin Array Si 16.75 9 *e*P **Pn 17 03 27.6 +0.9**
AKBB pmax pmax
comp=Z,45nm,0.8s
KIV Kislovodsk 16.75 49 *e*Pn **P 17 03 28.6 -0.4**
comp=Z,85nm,1.0s
KIV Kislovodsk 16.75 49 *i* P **P 17 03 30.1 +1.1**
SNR=14
KIV Kislovodsk 16.75 49 *e*P **P 17 03 30.3 +1.3**
KIV pmax pmax
comp=Z,237nm,0.9s
KIV Kislovodsk 16.75 49 P **P 17 03 30.9 +1.9**
SNR=27
KVAR Kislovodsk Arr 16.75 49 Pn **P 17 03 30.0 +0.9**
baz=255,slow=22,SNR=19
FETA Feichten 16.75 324 *i* Pn **Pn 17 03 27.4 +0.3**
comp=Z,54nm,1.6s,SNR=6.2
KBZ Khabaz 16.77 50 Pn **P 17 03 28.7 -0.4**
comp=Z,1.1nm,0.3s,baz=252,slow=8.1,SNR=34
MOTA Moosalm 16.81 325 *e*P **Pn 17 03 28.3 +0.6**
comp=Z,7.6nm,0.7s
GEC2 GERESS Array S 16.88 333 *e*PcP **PcP 17 08 15.2 +0.4**
GERES GERESS Array B 16.88 333 Pn **Pn 17 03 27.9 -0.6**
comp=Z,3.5nm,0.3s,baz=145,slow=12,SNR=118
GERES PcP **PcP 17 08 15.2 +0.4**
comp=Z,0.3nm,0.3s,baz=149,slow=3.0,SNR=5.1
DAVOX Davos/Dischmat 17.01 322 Pn **P 17 03 34.9 +2.9**
comp=Z,0.4nm,0.3s,baz=151,slow=15,SNR=9.4
ZEI Tsey 17.02 54 *e*P **Pn 17 03 30.9 +0.5**
ZEI pmax pmax
comp=Z,43nm,0.9s
RETA Reutte 17.07 325 *e*P **P 17 03 32.1 -0.4**
comp=Z,17nm,1.1s
NCK Nalchik 17.11 52 ⇓*e*P **P 17 03 34.3 +1.3**
KHC Kasperske Hory 17.16 334 *e*Pn **P 17 03 34.6 +1.2**
comp=Z,6.7nm,0.8s
KHC Kasperske Hory 17.16 334 *e*P **P 17 03 33.6 +0.1**
KHC Kasperske Hory 17.16 334 *e*P **P 17 03 33.6 +0.1**
KHC ex x 17 03 34.0
DPC Dobruska-Polom 17.34 341 *e*P **Pn 17 03 34.1 -0.2**
DPC Dobruska-Polom 17.34 341 *e*P **Pn 17 03 34.1 -0.2**
DAVA Damuels 17.36 323 *e*Pn **P 17 03 36.6 +0.9**
comp=Z,29nm,1.0s
GOPC GO Pecny, Ondr 17.41 337 *e*P **P 17 03 35.7 -0.5**
GOF Gofitskoye 17.53 47 ⇑*e*P **Pn 17 03 37.0 +0.4**
GOF pmax pmax
comp=Z,63nm,0.9s
PRU Pruhonice 17.55 337 *e*P **Pn 17 03 36.6 -0.2**
PRU Pruhonice 17.55 337 *e*P **Pn 17 03 36.6 -0.2**
OSTC Ostas 17.56 341 *e*P **Pn 17 03 36.5 -0.5**
UPC Upice 17.57 341 *e*P **Pn 17 03 35.8 -1.3**
UPC Upice 17.57 341 *e*P **Pn 17 03 35.8 -1.3**
UPC ex x 17 03 43.5
CHVC Chvalec 17.63 341 *e*P **P 17 03 38.8 +0.1**
SENIN Lac Senin/Sane 18.14 317 *e*Pn **P 17 03 45.0 +0.6**
comp=Z,7.0nm,0.7s
GROC Groznyy 18.46 55 *e*P **Pn 17 03 47.9 -0.1**
GROC pmax pmax
comp=Z,39nm,1.1s
NKC Novy Kostel 18.48 334 *e*P **Pn 17 03 50.6 +2.3**
NKC Novy Kostel 18.48 334 *e*P **Pn 17 03 50.6 +2.3**
BRG Berggiesshubel 18.51 337 *e*P **P 17 03 47.5 -0.8**
comp=Z,7.9nm,0.8s
BRG *i* 17 03 51.4
comp=Z,26nm,1.5s
GRA1 Grafenberg Arr 18.52 331 *e*P **Pn 17 03 48.8 +0.1**
comp=Z,15nm,0.7s
GRF Grafenberg Arr 18.52 331 *e*P **Pn 17 03 48.8 +0.1**
GRF pmax pmax
comp=Z,15nm,0.7s
GRFO Grafenberg 18.52 331 *e*P **Pn 17 03 48.9 +0.2**
comp=Z,24nm,0.9s
GRFO Grafenberg 18.52 331 *e*P **Pn 17 03 48.9 +0.2**
GRFO pmax pmax
comp=Z,24nm,0.9s
BFO Black Forest 18.83 323 *e*P **Pn 17 03 52.3 -0.2**
comp=Z,8.6nm,0.7s
BFO Black Forest 18.83 323 *e*P **Pn 17 03 52.3 -0.2**
BFO pmax pmax
comp=Z,9.0nm,0.7s
MOX Moxa 19.13 333 P **Pn 17 03 56.6 +0.5**
MOX pmax pmax
comp=Z,15nm,0.8s
CLL Collm 19.19 336 *e*P **P 17 03 54.1 -1.6**
comp=Z,12nm,0.7s
CLL Collm 19.19 336 *e*P **P 17 03 55.0 -0.7**
comp=Z,24nm,1.4s
CLL *e*pP **pP 17 04 02.0 -0.3**
CLL *es*PP 17 04 20.0
CLL Collm 19.19 336 *e*P **P 17 03 55.0 -0.7**
CLL pmax pmax
comp=Z,24nm,1.4s
SSB Saint Sauveur 19.21 311 *e*P **P 17 03 54.7 -1.3**
comp=Z,4.9nm,0.9s
SSB Saint Sauveur 19.21 311 *e*P **P 17 03 54.7 -1.3**
SSB pmax pmax
comp=Z,5.0nm,0.9s
AKT Akhty 19.27 61 *e*P **Pn 17 04 01.0 +3.0**
AKT *e*S **S 17 07 36.5 +3.0**
AKT pmax pmax
comp=Z,7.0nm,0.6s
ECH Echery 19.35 322 *e*P **P 17 03 57.5 0.0**
comp=Z,5.8nm,0.7s
ECH Echery 19.35 322 *e*P **P 17 03 57.5 0.0**
ECH pmax pmax
comp=Z,6.0nm,0.7s
VORD Divnogorie 19.68 27 *e*P **P 17 04 00.6 -0.4**
VORD pmax pmax
comp=Z,60nm,1.9s
VSR Storozhevoye 19.83 27 *e*P **P 17 04 02.6 -0.1**
VSR pmax pmax
comp=Z,10.0nm,0.5s
SSF Saint Saulge 20.71 315 P **P 17 04 12.0 -0.3**
SSF pmax pmax
comp=Z,17nm,1.2s
NACGM Naroch 20.71 3 *e* **P 17 04 10.0 -2.2**
WLF Walferdange 20.79 324 P **P 17 04 13.5 +0.3**
RAYN Ar Rayn 20.79 115 *e*P Pn 17 04 16.1 +0.2
comp=Z,17nm,0.9s
RAYN Ar Rayn 20.79 115 *e*P Pn 17 04 16.1 +0.1
RAYN pmax pmax
comp=Z,17nm,0.9s

LPSR Galich'ya Gora 20.88 24 *eP* **P 17 04 12.1 -2.0**
LPSR pmax pmax
comp=Z,30nm,0.6s
IDID Didziasalis 21.12 3 *eP* **P 17 04 14.9 -1.7**
IDID IAmb IAmb 17 04 24.5
comp=Z,8.4nm,0.9s
IIGN Ignalina 21.14 2 *eP* **P 17 04 15.4 -1.5**
IIGN IAmb IAmb 17 04 20.7
comp=Z,11nm,0.5s
PABE Paberze 21.30 358 *eP* **P 17 04 16.9 -1.6**
PABE IAmb IAmb 17 04 24.3
comp=Z,21nm,0.6s
MEM Membach 21.49 325 P **P 17 04 21.4 +0.7**
comp=Z,28nm,0.7s
MEM pP **sP 17 04 30.1 -0.4**
IZAR Zarasai 21.54 2 *eP* **P 17 04 19.7 -1.4**
IZAR IAmb IAmb 17 04 32.6
comp=Z,9.2nm,0.7s
DOU Dourbes 21.84 323 P **P 17 04 25.5 +1.1**
DOU pP **pP 17 04 30.5 -0.8**
DOU sP **pwP 17 04 38.3 +4.1**
DOU x x 17 04 43.7
BMRD Maredsous 21.89 323 P **P 17 04 21.2 -3.7**
BMRD PnPn **PnPn 17 04 44.6 -2.1**
PBUR Paburg 21.91 355 *eP* **P 17 04 20.8 -4.2**
PBUR IAmb IAmb 17 04 35.0
comp=Z,56nm,0.9s
CLF Chambon-Foret 21.92 316 *eP* **P 17 04 28.1 +2.8**
comp=Z,22nm,1.0s
OBN Obninsk 22.37 18 P **P 17 04 31.2 +1.1**
comp=Z,8.5nm,0.6s,baz=172,slow=1.5,SNR=14
OBN Obninsk 22.37 18 *eP* **P 17 04 28.4 -1.7**
comp=Z,41nm,0.7s
OBN Obninsk 22.37 18 *deP* **P 17 04 32.1 +2.0**
OBN *e* 17 04 52.4
OBN *e*PPP PPP 17 05 06.5
OBN pmax pmax
comp=Z,119nm,1.7s
MOS Moscow 23.20 18 *eP* **P 17 04 35.5 -3.2**
MOS *e* 17 05 22.6
MOS *e*S **S 17 08 42.8 -5.9**
MOS *e* 17 08 51.9
MOS pmax pmax
comp=Z,30nm,0.8s
ESDC Sonseca Array 23.77 292 P **P 17 04 44.6 0.0**
comp=Z,6.0nm,0.7s,baz=82,slow=9.4,SNR=48
ESLA Sonseca Array 23.77 292 *eP* **P 17 04 44.0 -0.5**
comp=Z,9.0nm,0.8s
PAB San Pablo 24.06 291 *eP* **P 17 04 47.0 -0.2**
comp=Z,3.4nm,0.8s
PAB San Pablo 24.06 291 *eP* **P 17 04 47.1 -0.2**
PAB pmax pmax
comp=Z,3.0nm,0.8s
VSU Vasula 24.27 2 *eP* **P 17 04 46.7 -2.2**
MDT Midelt 24.74 275 P **P 17 04 53.9 +0.3**
comp=Z,3.7nm,0.6s,baz=95,slow=12,SNR=10
MUD Monsted U'grnd 24.76 339 *eP* **P 17 04 51.7 -1.6**
MUD Monsted U'grnd 24.76 339 *i* P **P 17 04 51.7 -1.6**
PBRG Braganca 26.07 296 *eP* **P 17 05 05.8 +0.3**
comp=Z,32nm,1.4s
MVO Moncorvo 26.22 295 *eP* **P 17 05 07.4 +0.5**
comp=Z,33nm,2.0s
PMRV Marv??o 26.41 291 *eP* **P 17 05 08.6 0.0**
comp=Z,41nm,1.3s
PCBR Castelo Branco 26.49 292 *eP* **P 17 05 11.5 +2.3**
comp=Z,20nm,1.2s
MTE Manteigas 26.56 293 *eP* **P 17 05 10.2 +0.2**
comp=Z,48nm,2.0s
PVAQ Vaqueiros 26.70 286 *eP* **P 17 05 10.0 -1.2**
PVAQ Vaqueiros 26.70 286 *eP* **P 17 05 08.9 -2.3**
comp=Z,8.7nm,0.8s
PBEJ Beja 26.79 288 *eP* **P 17 05 11.5 -0.5**
comp=Z,26nm,1.3s
PVIS Viseu 26.85 294 *eP* **P 17 05 12.5 0.0**
PBDV Barranco-do-Ve 26.88 286 *eP* **P 17 05 13.4 +0.6**
GEYT Alibeck 26.89 72 P **P 17 05 12.9 0.0**
comp=Z,3.3nm,0.7s,baz=284,slow=9.0,SNR=8.4
GYA0B ALIBECK ARRAY 26.89 72 *eP* **P 17 05 11.0 -1.9**
comp=Z,5.7nm,0.8s
EVO Evora 26.89 289 *eP* **P 17 05 13.1 +0.2**
comp=Z,25nm,1.6s
PCVE Castro Verde 26.95 287 *eP* **P 17 05 14.3 +0.9**
HFS Hagfors 26.97 347 P **P 17 05 12.6 -0.8**
comp=Z,5.1nm,0.6s,baz=146,slow=11,SNR=19
PMTG Montargil 27.05 290 *eP* **P 17 05 13.9 -0.4**
comp=Z,26nm,1.3s
PTOM Tomar 27.20 291 *eP* **P 17 05 17.1 +1.5**
FIA0 FINESS Array S 27.25 1 *eP* **P 17 05 14.3 -1.4**
FIA0 FINESS Array S 27.25 1 *eP* **P 17 05 14.4 -1.4**
FINES FINESS Array B 27.25 1 P **P 17 05 14.3 -1.4**
comp=Z,3.5nm,0.4s,baz=160,slow=10,SNR=17
FIA1 FINESS Array S 27.25 1 *eP* **P 17 05 14.2 -1.5**
comp=Z,18nm,1.1s
PNCL Nicolau / Gran 27.31 288 *eP* **P 17 05 15.5 -1.1**
OSL Oslo 27.39 344 *eP* **P 17 05 16.4 -0.7**
KONO Kongsberg 27.40 343 *eP* **P 17 05 17.5 +0.3**
NC602 NORSAR Array S 27.94 346 *eP* **P 17 05 20.2 -1.8**
NC602 NORSAR Array S 27.94 346 *eP* **P 17 05 21.2 -0.8**
ASUD Al Ashush, Dub 27.95 102 P **P 17 05 23.9 +1.4**
NAZ Nazwa, Dubai 28.06 101 P **P 17 05 24.8 +1.4**
FAQ Al Faqa, Dubai 28.11 101 P **P 17 05 25.1 +1.1**
NAO01 NORSAR Array S 28.18 345 *eP* **P 17 05 22.7 -1.4**
comp=Z,12nm,0.7s
KLMR Klimovskoe 28.24 15 *eP* **P 17 05 21.5 -3.1**
KLMR pmax pmax
comp=Z,25nm,1.1s
KLMR Klimovskoe 28.24 15 *eP* **P 17 05 21.6 -3.1**
KLMR AMP 17 05 37.6
comp=Z,25nm,1.1s
NC405 NORSAR Array S 28.25 346 *eP* **P 17 05 23.9 -0.9**
NB201 NORSAR Array S 28.28 346 *eP* **P 17 05 23.8 -1.3**
NB2 NORSAR Subarra 28.29 346 P **P 17 05 24.0 -1.1**
comp=Z,4.1nm,0.8s,baz=156,slow=9.3
NOA NORSAR Array B 28.29 346 P **P 17 05 23.6 -1.5**
comp=Z,0.9nm,0.5s,baz=147,slow=8.7,SNR=17
MSFE Esma-Masafi 28.30 100 P **P 17 05 26.7 +1.0**
NBO00 NORSAR Array S 28.37 345 *eP* **P 17 05 24.4 -1.5**
comp=Z,29nm,1.1s
MDH Madha 28.44 100 P **P 17 05 27.5 +0.7**
HATD Hatta, Dubai 28.51 101 P **P 17 05 28.5 +1.0**
ASHO Ashiyiah 28.52 101 P **P 17 05 28.3 +0.7**
UOSS Minazif 28.52 101 *eP* **P 17 05 27.1 -0.4**
comp=Z,15nm,0.8s
UOSS Minazif 28.52 101 *i* P **P 17 05 28.0 +0.4**
SNR=5.2
ALNE Al Ain 28.55 103 *i* P **P 17 05 29.1 +1.2**
SNR=6.8
NC204 NORSAR Array S 28.59 346 *eP* **P 17 05 27.6 -0.3**
comp=Z,6.8nm,0.9s
SKAR Skarslia 28.62 343 *eP* **P 17 05 28.3 +0.2**
EKA Eskdalemuir Ar 28.77 326 P **P 17 05 29.5 +0.1**
comp=Z,3.6nm,0.6s,baz=122,slow=9.5,SNR=16
AKTO Aktyubinsk 28.95 46 P **P 17 05 30.1 -1.0**
comp=Z,3.4nm,0.6s,baz=249,slow=10,SNR=7.2
SOHO SOHO 29.15 102 P **P 17 05 35.0 +1.8**
SNR=7.6
KIRV Kirov 29.27 26 P **P 17 05 32.8 -1.0**
comp=Z,11nm,0.5s,baz=89,slow=19,SNR=4.0
TOA1 Torodi Ar. Sit 29.83 231 *eP* **P 17 05 38.2 -1.0**
TOA0 Torodi Ar. Sit 29.84 231 *eP* **P 17 05 39.9 +0.6**
comp=Z,30nm,0.6s
TORD Torodi Ar. Bea 29.84 231 P **P 17 05 38.2 -1.0**
comp=Z,19nm,0.6s,baz=25,slow=7.7,SNR=77
TORD LR LR 17 18 09.9
comp=Z,1μm,21.1s,baz=345,slow=38
PRGR Permogore 30.42 19 *eP* **P 17 05 42.3 -1.6**
PRGR pmax pmax
comp=Z,30nm,1.0s
WSAR Wadi Sarin 31.27 102 P **P 17 05 52.1 +0.2**
comp=Z,4.8nm,0.8s,baz=315,slow=6.2,SNR=3.3
ARU Arti 31.86 36 P **P 17 05 55.5 -1.2**
comp=Z,1.8nm,0.3s,baz=33,slow=3.7,SNR=10
ARU Arti 31.86 36 *eP* **P 17 05 56.2 -0.5**
comp=Z,11nm,0.7s
ARU Arti 31.86 36 *d iP* **P 17 05 56.1 -0.6**
ARU 17 07 01.3
ARU S **S 17 11 07.9 +2.4**
ARU SS **SnSn 17 12 51.6 -2.7**
ARU pmax pmax
comp=Z,20nm,1.2s
MOR8 Moi Rana 32.60 352 *eP* **P 17 06 02.9 -0.2**
SVE Sverdlovsk 33.05 36‖ *eP* **P 17 06 07.3 +0.1**
SVE pmax pmax
comp=Z,26nm,0.8s
APA Apatity 33.74 6‖ *iP* **P 17 06 15.8 +2.8**
APA pmax pmax
comp=Z,6.0nm,0.7s
APA MLR MLR
comp=Z,400nm,10.0s
STEI Steigen 34.22 353 *eP* **P 17 06 16.6 -0.5**
KTK1 Kautokeino 34.85 359 *eP* **P 17 06 22.8 +0.1**
MBAR Mbarara 35.05 170 P **P 17 06 26.2 +1.1**
comp=Z,3.5nm,0.2s,baz=343,slow=12,SNR=4.1
MBAR Mbarara 35.05 170‖ *eP* **P 17 06 26.7 +1.6**
ARCES ARCESS Array B 35.37 0 P **P 17 06 25.4 -1.7**
comp=Z,4.5nm,0.9s,baz=179,slow=9.9,SNR=15
ARE0 ARCESS Array B 35.37 0 *eP* **P 17 06 26.9 -0.2**
comp=Z,0.3nm,1.1s
BRVK Borovoye 37.00 45 *eP* **P 17 06 41.9 +0.7**
comp=Z,7.0nm,1.1s
BRVK Borovoye 37.00 45 *eP* **P 17 06 41.9 +0.7**
BRVK pmax pmax
comp=Z,7.0nm,1.1s
BVAR Borovoye Array 37.05 45 P **P 17 06 42.2 +0.5**
comp=Z,3.0nm,0.8s,baz=245,slow=6.4,SNR=18
ARSB Arslanbob 38.13 65 *eP* **P 17 06 50.5 -0.7**
comp=Z,16nm,0.8s
AML Almayashu 38.60 63 P P 17 06 50.3 -5.1
SNR=6.8
EKS2 Erkin-Say 38.62 63 P **P 17 06 56.4 +1.1**
SNR=19
DBIC Dimbokro 38.93 232 P **P 17 06 57.9 0.0**
comp=Z,6.5nm,0.5s,baz=8.9,slow=9.9,SNR=7.3
DBIC Dimbokro 38.93 232 *eP* **P 17 06 57.9 0.0**
comp=Z,16nm,1.0s
TIC Toumodi 39.05 232 *eP* **P 17 06 58.8 -0.2**
KIC Kosan Boka 39.09 232 *eP* **P 17 06 59.2 0.0**
comp=Z,38nm,0.8s
AAK Ala-Archa 39.15 63 P **P 17 07 01.1 +1.4**
comp=Z,6.7nm,0.5s,baz=231,slow=5.1,SNR=17
AAK Ala-Archa 39.15 63 P **P 17 07 01.1 +1.4**
SNR=6.9
AAK Ala-Archa 39.15 63 *eP* **P 17 07 01.0 +1.4**
comp=Z,8.4nm,0.6s
AAK Ala-Archa 39.15 63 *i* P **P 17 07 00.9 +1.2**
SNR=9.2
AAK Ala-Archa 39.15 63 *c iP* **P 17 07 00.9 +1.2**
AAK pmax pmax
comp=Z,21nm,1.7s
AAK Ala-Archa 39.15 63 P **P 17 07 01.4 +1.7**
SNR=6.4
UCH Uchtor 39.20 63 P **P 17 07 01.5 +1.1**
SNR=7.9
CHMS Chumysh 39.31 62 P **P 17 07 01.9 +1.0**
SNR=7.7
LIC Lamto 39.37 232 *eP* **P 17 07 01.3 -0.3**
comp=Z,56nm,0.9s
NIL Nilore 39.68 77 *eP* **P 17 07 04.5 +0.5**
comp=Z,15nm,0.6s
NIL Nilore 39.68 77 *eP* **P 17 07 04.6 +0.5**
NIL pmax pmax
comp=Z,15nm,0.6s
KZA Kyzart 39.75 63 P **P 17 07 06.6 +1.5**
SNR=11
TKM2 Tokmak 2 39.93 62 P **P 17 07 07.3 +1.0**
SNR=11
BOOM Boomskoye usch 40.22 63 *eP* **P 17 07 09.6 +0.9**
comp=Z,5.8nm,0.7s
BOOM Boomskoye usch 40.22 63 *eP* **P 17 07 09.6 +0.9**
BOOM pmax pmax
comp=Z,6.0nm,0.7s
ULHL Ulahol 40.47 63 P **P 17 07 12.3 +1.5**
SNR=12
KSH Kashi 40.62 67 P P 17 07 20.3 +8.3
KSH sP pwP 17 07 33.3 +11
KSH S S 17 13 30.1 +10
KSH pmax pmax
comp=Z,19nm,0.9s
KSH pmax pmax
comp=Z,590nm,7.1s
KSH LR LR
comp=N,1μm,13.2s
KSH LR LR
comp=E,1μm,12.8s
KSH LR LR
comp=Z,2μm,17.6s
KURK Kurchatov 41.83 50 *eP* **P 17 07 21.8 +0.2**
comp=Z,9.1nm,0.8s
KURK Kurchatov 41.83 50 *ceP* **P 17 07 21.9 +0.3**
KURK pmax pmax
comp=Z,21nm,1.7s
KURK Kurchatov 41.83 50 P **P 17 07 22.7 +1.1**
SNR=7.0
MAKZ Makanchi 44.14 56 *eP* **P 17 07 41.2 +0.8**
comp=Z,8.4nm,0.6s
MAKZ Makanchi 44.14 56 *eP* **P 17 07 41.2 +0.8**
MAKZ pmax pmax
comp=Z,8.0nm,0.6s
SCO Scoresbysund 44.18 339 *eP* **P 17 07 41.8 +1.5**
comp=Z,11nm,0.9s
SCO Scoresbysund 44.18 339 *i* P **P 17 07 42.1 +1.8**
SCO pmax pmax
comp=Z,11nm,0.9s
SCO Scoresbysund 44.18 339 *i* P **P 17 07 42.1 +1.8**
comp=Z,11nm,0.9s
SPA0 Spitsbergen Ar 44.22 357 *eP* **P 17 07 40.0 -0.5**
comp=Z,22nm,1.2s
SPITS Spitsbergen Ar 44.22 357 P **P 17 07 40.0 -0.5**
comp=Z,4.8nm,0.6s,baz=151,slow=10,SNR=14
SPITS PcP **PcP 17 09 25.5 +0.8**
comp=Z,2.2nm,0.5s,baz=128,slow=5.4,SNR=3.7
MK32 Makanchi Array 44.36 56 *ePP* PP 17 09 26.5 +0.9
MKAR Makanchi Array 44.36 56 P **P 17 07 42.7 +0.6**
comp=Z,17nm,0.6s,baz=276,slow=6.7,SNR=144
MKAR PcP **PcP 17 09 26.5 +0.8**
comp=Z,2.6nm,0.7s,baz=290,slow=4.3,SNR=2.3
NVS Novosibirsk 44.81 44 *i* P **P 17 07 46.3 +0.8**
NVS *e* 17 09 37.7
NVS *e* 17 14 19.2
NVS pmax pmax
comp=Z,24nm,1.0s
NVS pmax pmax
comp=N,6.0nm,0.7s
NVS pmax pmax
comp=E,6.0nm,0.9s
KBS Kingsbay 45.15 356 *eP* **P 17 07 48.2 +0.4**
comp=E,9.5nm,0.6s
KBS Kingsbay 45.15 356 *eP* **P 17 07 48.3 +0.4**
KBS pmax pmax
comp=Z,10.0nm,0.6s
ZALV Zalesovo Beam 45.71 46 P **P 17 07 52.5 -0.2**
comp=Z,10.0nm,0.4s,baz=268,slow=8.7,SNR=37
DAG Danmarks Havn 46.95 347 *i* P **P 17 08 01.8 -0.3**
DAG pmax pmax
comp=Z,21nm,1.2s
DAG Danmarks Havn 46.95 347 *i* P **P 17 08 01.8 -0.3**
comp=Z,13nm,1.2s
DGZ Jazzator, Alta 47.52 51 *c iP* **P 17 08 07.9 +0.7**
DGZ pmax pmax
comp=Z,4.0nm,0.9s
WMQ Urumqi 48.55 59 *eP* **P 17 08 16.8 +1.7**
WMQ sP pwP 17 08 29.8 +3.8
WMQ pmax pmax
comp=Z,33nm,0.7s
WMQ LR LR
comp=Z,950nm,16.7s
WMQ LR LR
comp=Z,2μm,18.5s
NRIK Noril'sk 48.76 25 P **P 17 08 16.5 +0.3**
comp=Z,7.0nm,0.7s,baz=254,slow=5.0,SNR=6.8
PYUN Piuthan 49.38 80 *eP* **P 17 08 22.5 +0.7**
comp=Z,56nm,0.7s
SUMG Summit 49.83 339 *eP* **P 17 08 25.1 +0.3**
comp=Z,6.3nm,0.8s
SUMG Summit 49.83 339 *i* P **P 17 08 25.4 +0.6**
SUMG Summit 49.83 339 *i* P **P 17 08 25.4 +0.6**
DANN Dangsing 49.91 80 *eP* **P 17 08 26.6 +0.6**
comp=Z,114nm,0.7s
GKN Gorkha 50.76 80 *eP* **P 17 08 32.4 +0.1**
comp=Z,16nm,0.2s
DMN Daman 51.30 80 *eP* **P 17 08 36.6 +0.2**
comp=Z,34nm,0.7s
KKN Kakani 51.37 80 *eP* **P 17 08 37.0 +0.1**
comp=Z,28nm,0.6s
PKI Pulchoki 51.56 80 *eP* **P 17 08 38.3 -0.1**
comp=Z,31nm,0.8s
GUN Gumba 51.81 79 *eP* **P 17 08 40.5 +0.2**
comp=Z,45nm,0.7s
JIRN Jiri 52.16 80 *eP* **P 17 08 43.0 0.0**
comp=Z,44nm,0.7s
LSA Lhasa 55.37 75 P **P 17 09 07.1 +0.5**
MOY Mondy 55.70 47 *eP* **P 17 09 09.6 +1.4**
MOY pmax pmax
comp=Z,19nm,1.3s
TLY Talaya 57.30 46 *eP* **P 17 09 20.6 +1.1**
comp=Z,8.0nm,0.9s
TLY Talaya 57.30 46 *d iP* **P 17 09 21.3 +1.8**
TLY pmax pmax
comp=Z,23nm,1.1s
TLY Talaya 57.30 46 P **P 17 09 21.9 +2.4**
SNR=5.8
ZAK Zakamensk 57.42 48 *eP* **P 17 09 21.2 +0.7**
ZAK pmax pmax
comp=Z,11nm,1.1s
ZAK pmax pmax
comp=Z,8.0nm,1.3s
IRK Irkutsk 57.52 46 *eP* **P 17 09 20.9 -0.1**
IRK pmax pmax
comp=Z,31nm,1.9s
GTA Gaotai 58.47 61 *eP* **P 17 09 28.8 +0.8**
GTA pP pP 17 09 33.8 -1.9
GTA sP sP 17 09 36.8 -2.0
GTA pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 60.14 50 P **P 17 09 40.0 +0.6**
comp=Z,9.2nm,0.7s,baz=286,slow=7.6,SNR=47
ULN Ulaanbaatar 60.55 50 *eP* **P 17 09 43.0 +0.8**
comp=Z,9.4nm,0.6s
ULN Ulaanbaatar 60.55 50 *eP* **P 17 09 43.0 +0.8**
ULN pmax pmax
comp=Z,9.0nm,0.6s
ULN Ulaanbaatar 60.55 50 P **P 17 09 43.5 +1.2**
SNR=6.7
BOSA Boshof 62.50 180 P **P 17 09 56.6 +1.2**
comp=Z,5.3nm,0.8s,baz=6.6,slow=6.5,SNR=8.0
SCHQ Schefferville 63.85 320 P **P 17 10 03.0 -1.1**
comp=Z,6.3nm,0.4s,baz=104,slow=7.2,SNR=4.0
CD2 Chengdu 64.80 69 P **P 17 10 11.8 +1.1**
CD2 pmax pmax
comp=Z,40nm,0.9s
CMMT Chiang Mai 66.59 83 P **P 17 10 24.0 +1.6**
KMI Kunming 66.62 75 P **P 17 10 24.0 +1.2**
KMI pmax pmax
comp=Z,22nm,0.5s
CM31 Chiang Mai Arr 66.76 83 *eP* **P 17 10 23.9 +0.4**
comp=Z,4.4nm,0.8s
CMAR Chiang Mai Arr 66.76 83 P **P 17 10 23.5 0.0**
comp=Z,2.3nm,0.7s,baz=300,slow=7.9,SNR=21
LAMP Lampang 67.29 83 P **P 17 10 27.5 +0.6**
comp=Z,23μm,0.7s
XAN Xi'an 67.32 63 P **P 17 10 27.0 +0.1**
XAN pP pwP 17 10 40.1 +2.3
XAN pmax pmax
comp=Z,10.0nm,0.6s
HIA Hailar 67.74 45‖ *eP* **P 17 10 30.4 +1.1**
HIA pmax pmax
comp=Z,79nm,1.2s
UTTA Uttaradit 68.44 83 P P 17 10 47.9 +14
ZEA Zeya 69.73 38 *eP* **P 17 10 42.2 +0.7**
ZEA pmax pmax
comp=Z,6.0nm,1.0s
CHAI Chaiyaphum 70.56 84 P **P 17 10 47.6 +0.4**
comp=Z,24μm,0.8s
KHON Khomkaen 71.02 83 P **P 17 10 50.5 +0.5**
comp=Z,38μm,0.8s
SKNT Sakolnakorn 71.64 82 P **P 17 10 54.6 +0.8**
comp=Z,10nm,0.8s
TIA Tai'an 72.23 58 P **P 17 10 57.4 +0.4**
TIA pmax pmax
comp=Z,9.0nm,0.8s
WHN Wuhan 73.02 64 P P 17 11 10.0 +8.2
CN2 Changchun 73.86 48 *eP* **P 17 11 07.1 +0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
BILL Bilibino 73.99 14 *eP* **P 17 11 06.9 +0.1**
BILL *e*PPP PPP 17 15 37.2
BILL pmax pmax
comp=Z,6.0nm,1.3s
SEY Seymchan 74.45 22‖ *eP* **P 17 11 10.5 +0.9**
KLR Kul'dur 74.52 41 P **P 17 11 10.8 +0.6**
comp=Z,5.8nm,1.0s,baz=301,slow=4.2,SNR=8.1
NJ2 Nanjing 75.57 61 *eP* **P 17 11 17.3 +0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
MA2 Magadan 76.36 25 P **P 17 11 21.0 +0.4**
comp=Z,8.7nm,0.7s,baz=331,slow=12,SNR=10.0
MA2 Magadan 76.36 25 *eP* **P 17 11 21.2 +0.6**
comp=Z,12nm,0.9s
MA2 Magadan 76.36 25‖ *eP* **P 17 11 21.7 +1.1**
MA2 pmax pmax
comp=Z,15nm,1.3s
INK Inuvik 76.53 352 P **P 17 11 20.8 -0.7**
comp=Z,2.4nm,0.9s,baz=349,slow=8.4,SNR=6.8
USRK Ussuriysk Ar. 77.56 45 P **P 17 11 27.8 +0.1**
comp=Z,11nm,0.6s,baz=297,slow=5.2,SNR=23
YKA Yellowknife Ar 78.31 342 P **P 17 11 31.3 -0.2**
comp=Z,0.8nm,0.6s,baz=27,slow=5.5,SNR=4.1
KSRS Korea Array 78.91 52 P **P 17 11 35.8 +0.5**
comp=Z,7.8nm,0.6s,baz=307,slow=4.6,SNR=39
TJN Taejon 79.15 53‖ *eP* **P 17 11 36.6 0.0**
COLA College 81.07 357‖ *eP* **P 17 11 47.9 +1.5**
COLA pmax pmax
comp=Z,4.0nm,1.2s
ILAR Eielson Array 81.13 357 P **P 17 11 47.0 +0.2**
comp=Z,1.7nm,0.9s,baz=349,slow=3.8,SNR=14
YSS Yuzh-Sakhalins 81.71 38 *eP* **P 17 11 50.6 +0.4**
YSS *e* 17 12 01.5
YSS pmax pmax
comp=Z,10.0nm,0.8s
BPAW Bear Paw Mtn. 81.96 358 *eP* **P 17 11 51.4 +0.2**
comp=Z,7.9nm,0.8s
MENT Mentasta 82.76 355 *eP* **P 17 11 56.6 +1.2**
comp=Z,3.5nm,0.8s
JNU Nakatsue 83.40 54 P **P 17 11 59.3 0.0**
comp=Z,4.6nm,0.7s,baz=306,slow=3.3,SNR=8.3
ASAJ Asahikawa 83.54 40 P **P 17 12 00.2 +0.5**
comp=Z,4.3nm,0.5s,baz=335,slow=3.8,SNR=22
PEA1 Petropavlovsk- 83.78 26 *eP* **P 17 12 00.1 -0.7**
PETK Petropavlovsk- 83.78 26 P **P 17 12 00.1 -0.7**
comp=Z,1.1nm,0.7s,baz=56,slow=3.9,SNR=3.5
SUA Susitna One 84.59 358 *eP* **P 17 12 05.4 +0.5**
comp=Z,12nm,0.7s
BDFB Brasilia 85.28 248 P **P 17 12 10.6 +1.5**
comp=Z,2.6nm,0.6s,baz=76,slow=7.9,SNR=5.1
ECSD EROS Data Cent 85.97 322 *eP* **P 17 12 12.8 +0.7**
comp=Z,6.6nm,0.8s
MJB9 Matsu-Tunnel 86.00 48 *eP* **P 17 12 12.8 +0.5**
comp=Z,6.8nm,0.8s
MAJO Matsushiro 86.00 48 *eP* **P 17 12 12.6 +0.3**
comp=Z,6.6nm,0.8s
MAJO Matsushiro 86.00 48‖ *eP* **P 17 12 12.5 +0.2**
MAJO pmax pmax
comp=Z,6.0nm,0.9s
MAT Matsushiro 86.00 48 P **P 17 12 12.5 +0.2**
MJAR Matsushiro Arr 86.01 48 P **P 17 12 12.9 +0.5**
comp=Z,11nm,1.0s,baz=302,slow=5.3,SNR=19
WVT Waverly 86.12 312 *eP* **P 17 12 12.9 0.0**
comp=Z,4.6nm,0.8s
WVT Waverly 86.12 312 *eP* **P 17 12 12.9 0.0**
WVT pmax pmax
comp=Z,5.0nm,0.8s
CCM Cathedral Cave 86.92 315 *eP* **P 17 12 17.3 +0.5**
comp=Z,6.3nm,0.6s
CCM Cathedral Cave 86.92 315 *eP* **P 17 12 17.3 +0.5**
CCM pmax pmax
comp=Z,6.0nm,0.6s
LRAL Lakeview Retre 87.58 309 *eP* **P 17 12 20.7 +0.6**
comp=Z,12nm,1.0s
KDAK Kodiak Island 88.33 359 *i* P **P 17 12 23.9 +0.8**
PDAR Pinedale Array 92.86 328 P **P 17 12 44.5 -0.4**
comp=Z,1.0nm,0.9s,baz=64,slow=3.4,SNR=5.1
WR1 Warramunga Arr 116.56 97 *e*PKPdf **PKPdf 17 18 15.5 -0.6**
WRA Warramunga Arr 116.56 97 PKP **PKPdf 17 18 15.5 -0.6**
comp=Z,0.9nm,0.5s,baz=265,slow=2.3,SNR=9.1
AS31 Alice Springs 117.95 101 *e*PKPdf **PKPdf 17 18 18.4 -0.3**
ASAR Alice Springs 117.95 101 PKP **PKPdf 17 18 18.4 -0.3**
comp=Z,0.8nm,0.8s,baz=318,slow=1.5,SNR=12
CASY Casey 119.05 153 *e*PKPdf **PKiKP 17 18 20.6 +1.1**

IDC ***15*** *17:02:00.0± 0.6, 34°.28N× 24°.96E, h0km, mb4.5/31, mb1 4.6/38, mb1mx4.4/56, mbtmp4.5/38, ML5.1/6, Error ellipse: s-maj=13.0km s-min=12.0km az=135.0*
BJI ***15*** *17:02:01.8± 0.0, 34°.33N× 24°.78E, h30km, mb4.9/21, mB5.3/8, Ms5.2/9, Ms7 4.9/8*
MOS ***15*** *17:02:03.8± 1.0, 34°.33N× 24°.92E, h33km, mb5.0/25, Error ellipse: s-maj=6.4km s-min=3.6km az=86.8*

NEIC ***15*** *17:02:04.0±2.3, 34°.31N×24°.98E, h20km±5km, mb4.8/74, ML4.2(THE), Error ellipse: s-maj=12.0km s-min=9.7km az=191.0*
ATH ***15*** *17:02:05.0, 34°.34N×25°.03E, h35km±3km, ML4.3/3, Error ellipse: s-maj=5.4km s-min=2.3km az=358.0*
ISCJB ***15*** *17:02:05.1±0.5, 34°.29N±0°.03×25°.04E±0°.02, h47km±4km, mb4.7/100, Error ellipse: s-maj=5.6km s-min=2.9km az=10.4*
ISK ***15*** *17:02:05.0, 34°.42N×25°.14E, h13km, ML4.4/24*
THE ***15*** *17:02:05.5, 34°.34N×25°.06E, h3km±2km, ML4.2/2, Error ellipse: s-maj=2.8km s-min=1.0km az=278.0*
GII ***15*** *17:02:06.0±0.0, 34°.17N×25°.70E, h1km, mb4.6/2, MD4.6/2*
NIC ***15*** *17:02:09.8±0.4, 34°.37N×25°.69E, h50km, mb4.9, ML4.5*
DDA ***15*** *17:03:15.4, 34°.77N×26°.40E, h30km±1km, ML4.4*
ISC 15 17:02:03.9±0.7, 34°.23N±0°.04×25°.06E±0°.03, h23km±4km, n418, σ1.9§85/446, mb4.8/102, 8C-12D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.82**	**345**	P	**Pb**	**17 02 18.9**	**-0.5**
SIVA				S	**Sb**	**17 02 29.9**	**-0.1**
SIVA	**Sivas**	**0.82**	**345**	P	**Pb**	**17 02 18.8**	**-0.6**
SIVA				S	**Sb**	**17 02 29.6**	**-0.4**
SIVA				AML	AML	17 02 35.8	
	comp=N,62677μm,0.7s						
SIVA				AML	AML	17 02 37.1	
	comp=E,82885μm,0.7s						
TMBK	**Timbaki Herakl**	**0.88**	**344**	P	**Pb**	**17 02 20.3**	**-0.1**
LAST	**Lasithi**	**0.99**	**20**	P	**Pb**	**17 02 21.9**	**-0.6**
LAST	**Lasithi**	**0.99**	**20**	P	**Pb**	**17 02 21.9**	**-0.6**
GVD	**Gavdhos**	**1.01**	**308**	PG	**Pb**	**17 02 23.8**	**+1.1**
GVD				SG	**Sn**	**17 02 38.1**	**+2.0**
GVD	**Gavdhos**	**1.01**	**308**	*e*Pn	**Pb**	**17 02 23.4**	**+0.7**
GVD	**Gavdhos**	**1.01**	**308**	P	**Pb**	**17 02 23.4**	**+0.7**
GVD	**Gavdhos**	**1.01**	**308**	P	**Pn**	**17 02 22.5**	**-0.1**
IDI	**Anoyia**	**1.07**	**353**	Pn	**Pn**	**17 02 23.1**	**-0.4**
	comp=E,220nm,0.3s,baz=169,slow=16,SNR=13						
IDI				Sn	**Sn**	**17 02 37.6**	**0.0**
	comp=E,895nm,0.3s,baz=157,slow=21,SNR=9.0						
KSTL	**Kastelli Herak**	**1.08**	**0**	P	**Pn**	**17 02 22.9**	**-0.6**
KSTL				S	**Sb**	**17 02 36.1**	**-1.3**
IACM	**Heraklion**	**1.08**	**0**	P	**Pb**	**17 02 24.3**	**+0.5**
IACM	**Heraklion**	**1.08**	**0**	P	**Pb**	**17 02 24.0**	**+0.2**
IACM				S	**Sn**	**17 02 37.3**	**-0.4**
NPS	**Neapolis**	**1.13**	**24**	P	**Pb**	**17 02 24.9**	**+0.1**
NPS	**Neapolis**	**1.13**	**24**	P	**Pb**	**17 02 24.8**	**+0.1**
NPS				S	**Sn**	**17 02 39.5**	**+0.4**
NPS				AML	AML	17 02 46.0	
	comp=E,27369μm,0.7s						
NPS				AML	AML	17 02 50.1	
	comp=N,14982μm,0.5s						
PRNS	**Prines Rethymn**	**1.23**	**338**	P	**Pb**	**17 02 26.8**	**+0.4**
ZKR	**Zakros**	**1.30**	**47**	PN	**Pb**	**17 02 27.2**	**-0.5**
ZKR	**Zakros**	**1.30**	**47**	*e*PcP	**Sb**	**17 02 45.4**	**+1.4**
ZKR				*e*PcP	**Sb**	**17 02 45.4**	**+1.4**
ZKR	**Zakros**	**1.30**	**47**	*e*Pn	**Pb**	**17 02 27.9**	**+0.2**
ZKR				*e*Pn	**Pb**	**17 02 27.9**	**+0.2**
ZKR	**Zakros**	**1.30**	**47**	P	**Pb**	**17 02 27.9**	**+0.2**
ZKR				S	**Sb**	**17 02 45.4**	**+1.4**
ZKR	**Zakros**	**1.30**	**47**	P	**Pb**	**17 02 28.2**	**+0.5**
VAM	**Vamos**	**1.38**	**329**	P	**Pb**	**17 02 28.6**	**-0.3**
VAM	**Vamos**	**1.38**	**329**	P	**Pb**	**17 02 28.8**	**-0.2**
IMMV	**Iera Moni Meta**	**1.52**	**325**	PN	**Pb**	**17 02 31.1**	**-0.3**
IMMV	**Iera Moni Meta**	**1.52**	**325**	P	**Pb**	**17 02 30.6**	**-0.8**
IMMV				S	**Sb**	**17 02 49.8**	**-0.4**
IMMV				AML	AML	17 03 07.3	
	comp=E,19402μm,0.8s						
IMMV				AML	AML	17 03 07.5	
	comp=N,16042μm,1.2s						
SANT	**Santorini**	**2.17**	**9**	PN	**Pn**	**17 02 39.1**	**+0.6**
SANT	**Santorini**	**2.17**	**9**	*e*Pn	**Pn**	**17 02 38.5**	**-0.1**
SANT	**Santorini**	**2.17**	**9**	P	**Pn**	**17 02 38.4**	**-0.1**
KARP	**Karpathos**	**2.17**	**52**	PN	**Pb**	**17 02 40.5**	**-2.0**
KARP	**Karpathos**	**2.17**	**52**	*e*Pn	**Pb**	**17 02 41.5**	**-1.0**
KARP	**Karpathos**	**2.17**	**52**	P	**Pb**	**17 02 41.6**	**-1.0**
KARP	**Karpathos**	**2.17**	**52**	P	**Pb**	**17 02 40.9**	**-1.6**
ANKY	**Antikythira Is**	**2.18**	**319**	*e*PcP	**Pn**	**17 02 40.4**	**+1.7**
ANKY	**Antikythira Is**	**2.18**	**319**	P	**Pn**	**17 02 40.4**	**+1.7**
ANAF	**Anafi Island**	**2.21**	**15**	P	**Pn**	**17 02 39.9**	**+0.8**
ANAF	**Anafi Island**	**2.21**	**15**	P	**Pn**	**17 02 39.9**	**+0.8**
THR2	**Thira island,**	**2.24**	**8**	*e*Pn	**Pn**	**17 02 39.7**	**+0.2**
THR2	**Thira island,**	**2.24**	**8**	P	**Pn**	**17 02 39.7**	**+0.2**
CMBO	**Columbo, Santo**	**2.26**	**7**	P	**Pn**	**17 02 40.5**	**+0.7**
IOSP	**Ios island**	**2.50**	**4**	P	**Pn**	**17 02 43.5**	**+0.4**
IOSP	**Ios island**	**2.50**	**4**	P	**Pn**	**17 02 43.5**	**+0.4**
MHLO	**Agia Marina, M**	**2.52**	**348**	P	**Pn**	**17 02 44.4**	**+1.1**
MHLO	**Agia Marina, M**	**2.52**	**348**	P	**Pn**	**17 02 43.6**	**+0.3**
MHLA	**Plaka, Milos I**	**2.57**	**348**	P	**Pn**	**17 02 44.2**	**+0.2**
AMGA	**Amorgos Island**	**2.69**	**14**	P	**Pn**	**17 02 46.1**	**+0.4**
AMGA	**Amorgos Island**	**2.69**	**14**	P	**Pn**	**17 02 45.9**	**+0.2**
APE	**Apeiranthos**	**2.86**	**8**	PN	**Pn**	**17 02 48.8**	**+0.7**
APE	**Apeiranthos**	**2.86**	**8**	*de*P	**Pn**	**17 02 48.5**	**+0.4**
APE	**Apeiranthos**	**2.86**	**8**	P	**Pn**	**17 02 48.4**	**+0.3**
ARG	**Arkhangelos**	**3.20**	**51**	PN	**Pn**	**17 02 54.9**	**+2.2**
ARG	**Arkhangelos**	**3.20**	**51**	*e*Pn	**Pn**	**17 02 54.8**	**+2.1**
ARG	**Arkhangelos**	**3.20**	**51**	P	**Pn**	**17 02 54.8**	**+2.1**
ARG	**Arkhangelos**	**3.20**	**51**	*e*P	**Pn**	**17 02 54.8**	**+2.1**
ARG	**Arkhangelos**	**3.20**	**51**	P	**Pn**	**17 02 54.4**	**+1.6**
DAT	**Datca**	**3.23**	**39**	PN	**Pn**	**17 02 54.7**	**+1.4**
DAT	**Datca**	**3.23**	**39**	*i* P	**Pn**	**17 02 55.0**	**+1.7**
DAT				IAML_P			
	comp=Z,2μm,0.1s						
DAT	**Datca**	**3.23**	**39**	*i* P	**Pn**	**17 02 54.8**	**+1.5**
DATC	**Datca-Mugla**	**3.30**	**39**	PN	**Pn**	**17 02 55.4**	**+1.3**
BODT	**Bodrum**	**3.37**	**32**	PN	**Pn**	**17 02 56.5**	**+1.4**
BDRM	**Kayabasi**	**3.44**	**34**	*i* P	**Pn**	**17 02 58.0**	**+2.1**
BDRM				IAML_P			
	comp=Z,1μm,0.2s						
BBRN	**Bozburun-Marma**	**3.46**	**44**	PN	**Pn**	**17 02 58.1**	**+1.8**
MRSB	**Marmaris-Mugla**	**3.57**	**45**	PN	**Pn**	**17 02 59.1**	**+1.3**
GCAM	**G?zelcaml?**	**3.89**	**26**	PN	**Pn**	**17 03 04.1**	**+1.9**
ITM	**Ithomi**	**3.90**	**320**	PN	**Pn**	**17 03 05.2**	**+2.9**
ITM	**Ithomi**	**3.90**	**320**	*e*Pn	**Pn**	**17 03 02.0**	**-0.3**
DALY	**Dalyan (Mula)**	**3.91**	**48**	PN	**Pn**	**17 03 03.8**	**+1.4**
DALY	**Dalyan (Mula)**	**3.91**	**48**	*i* P	**Pn**	**17 03 04.5**	**+2.1**
DALY				IAML_P			
	comp=Z,4μm,0.3s						
DALY	**Dalyan (Mula)**	**3.91**	**48**	*i* P	**Pn**	**17 03 04.8**	**+2.4**
DALY				*i* S	**Sn**	**17 03 47.8**	**+0.2**
DALY				IAML_P			
	comp=Z,4μm,0.3s						
YER	**Yerkesik**	**3.91**	**41**	PN	**Pn**	**17 03 04.5**	**+1.9**
TURN	**Turunc**	**3.91**	**47**	PN	**Pn**	**17 02 59.8**	**-2.7**
TURN	**Turunc**	**3.91**	**47**	*i* P	**Pn**	**17 03 00.3**	**-2.1**
TURN				IAML_P			
	comp=Z,4μm,0.2s						
TURN	**Turunc**	**3.91**	**47**	*i* P	**Pn**	**17 03 00.1**	**-2.4**
TURN				*i* S	**Sn**	**17 03 40.9**	**-6.8**
TURN				IAML_P			
	comp=Z,7μm,0.2s						
FETY	**Fethiye**	**4.07**	**53**	PN	**Pn**	**17 03 05.7**	**+1.0**
FETY	**Fethiye**	**4.07**	**53**	*i* P	**Pn**	**17 03 05.7**	**+1.0**
FETY				IAML_P			
	comp=Z,6μm,0.3s						
FETY	**Fethiye**	**4.07**	**53**	*i* P	**Pn**	**17 03 06.2**	**+1.5**
FETY				*i* S	**Sn**	**17 03 47.1**	**-4.5**
AYDN	**Tasoluk**	**4.12**	**33**	*i* P	**Pn**	**17 03 07.5**	**+2.1**
AYDN				IAML_P			
	comp=Z,4μm,0.4s						
AKAS	**Kas**	**4.22**	**60**	PN	**Pn**	**17 03 08.8**	**+1.9**
AKAS	**Kas**	**4.22**	**60**	*i* P	**Pn**	**17 03 08.4**	**+1.4**
AKAS				IAML_P			
	comp=Z,10μm,0.2s						
AKAS	**Kas**	**4.22**	**60**	*i* P	**Pn**	**17 03 08.4**	**+1.4**
AKAS				*i* S	**Sn**	**17 03 52.5**	**-3.1**
CHOS	**Chios island**	**4.23**	**11**	PN	**Pn**	**17 03 08.1**	**+1.2**
URLA	**Izmir**	**4.31**	**16**	PN	**Pn**	**17 03 08.9**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**4.36**	**31**	PN	**Pn**	**17 03 10.3**	**+1.5**
BLCB	**Balcova**	**4.45**	**21**	PN	**Pn**	**17 03 11.2**	**+1.3**
ELL	**Elmali**	**4.69**	**56**	PN	**Pn**	**17 03 14.8**	**+1.5**
AKUM	**Antalya-Kumluc**	**4.80**	**63**	*i* P	**Pn**	**17 03 15.9**	**+1.2**
AKUM				IAML_P			
	comp=Z,7μm,0.2s						
AKUM	**Antalya-Kumluc**	**4.80**	**63**	*i* P	**Pn**	**17 03 16.1**	**+1.4**
AKUM				*i* S	**Sn**	**17 04 06.6**	**-2.9**
SIGR	**SIGRI**	**5.02**	**7**	PN	**Pn**	**17 03 18.0**	**+0.3**
MANT	**Manisa**	**5.11**	**33**	*e*Pn	**Pn**	**17 03 17.0**	**-2.1**
MANT	**Manisa**	**5.11**	**33**	*i* P	**Pn**	**17 03 21.1**	**+2.0**
MANT				IAML_P			
	comp=Z,1μm,0.4s						
KORT	**Korkueli**	**5.12**	**56**	PN	**Pn**	**17 03 21.7**	**+2.5**
KORT	**Korkueli**	**5.12**	**56**	*i* P	**Pn**	**17 03 21.8**	**+2.5**
KORT				IAML_P			
	comp=Z,3μm,0.4s						
KORT	**Korkueli**	**5.12**	**56**	*i* P	**Pn**	**17 03 22.9**	**+3.6**
KORT				*i* S	**Sn**	**17 04 19.1**	**+1.4**
KORT				IAML_P			
	comp=Z,5μm,0.4s						
KULA	**Kula-Manisa**	**5.17**	**33**	PN	**Pn**	**17 03 21.9**	**+2.0**
AGG	**Agios Georgios**	**5.27**	**336**	*e*Pn	**Pn**	**17 03 20.3**	**-0.8**
AGG	**Agios Georgios**	**5.27**	**336**	*e*P	**Pn**	**17 03 20.3**	**-0.8**
ANTB	**Antalya**	**5.28**	**58**	PN	**Pn**	**17 03 24.0**	**+2.7**
BRDR	**BURDUR-Merkez**	**5.33**	**48**	*i* P	**Pn**	**17 03 24.2**	**+2.1**
BRDR				IAML_P			
	comp=Z,2μm,0.3s						
BRDR	**BURDUR-Merkez**	**5.33**	**48**	*i* P	**Pn**	**17 03 23.4**	**+1.3**
BRDR				*i* S	**Sn**	**17 04 23.0**	**+0.1**
BRDR				IAML_P			
	comp=Z,2μm,0.4s						
KHAL	**Karahalli**	**5.47**	**40**	*i* P	**Pn**	**17 03 25.6**	**+1.6**
KHAL				IAML_P			
	comp=Z,2μm,0.2s						
USAK	**Uak-Merkez**	**5.50**	**34**	*i* P	**Pn**	**17 03 26.4**	**+2.1**
USAK				IAML_P			
	comp=Z,6μm,0.5s						
ISP	**Isparta**	**5.70**	**49**	*e*Pn	**Pn**	**17 03 28.2**	**+1.1**
ISP	**Isparta**	**5.70**	**49**	*e*P	**Pn**	**17 03 28.2**	**+1.1**
KEPZ	**Antalya-Kepez**	**5.96**	**62**	*i* P	**Pn**	**17 03 32.6**	**+1.9**
KEPZ				*i* S	**Sn**	**17 04 38.1**	**-0.2**
KEPZ				IAML_P			
	comp=Z,3μm,0.2s						
KEPZ	**Antalya-Kepez**	**5.96**	**62**	*i* P	**Pn**	**17 03 32.1**	**+1.4**
KEPZ				*i* S	**Sn**	**17 04 36.0**	**-2.3**
BAGO	**Egridir - ISPA**	**5.97**	**49**	*i* P	**Pn**	**17 03 32.9**	**+2.1**
BAGO				IAML_P			
	comp=Z,1μm,0.3s						
PPCY	**Paphos**	**6.05**	**82**	P	**Pn**	**17 03 30.0**	**-1.8**
	baz=266						
LIT	**Litokhoron**	**6.21**	**341**	*e*Pn	**Pn**	**17 03 34.1**	**0.0**
LIT	**Litokhoron**	**6.21**	**341**	*e*P	**Pn**	**17 03 34.1**	**0.0**
ALFC	**Alefka**	**6.28**	**79**	P	**Pn**	**17 03 34.3**	**-0.8**
	baz=264						
ALFC				S	**Sn**	**17 04 39.7**	**-6.4**
SZAC	**Souni**	**6.48**	**83**	P	**Pn**	**17 03 37.2**	**-0.6**
	baz=268						
SZAC				S	**Sn**	**17 04 44.8**	**-6.2**
ALN	**Alexandroupoli**	**6.71**	**6**	*e*Pn	**Pn**	**17 03 41.6**	**+0.7**
ALN	**Alexandroupoli**	**6.71**	**6**	*e*P	**Pn**	**17 03 41.6**	**+0.7**
SOH	**Sokhos**	**6.72**	**349**	P	**Pn**	**17 03 41.6**	**+0.4**
SOH				pmax	pmax		
	comp=Z,16nm,0.6s						
MAMC	**Mammari**	**6.79**	**80**	P	**Pn**	**17 03 41.1**	**-0.9**
	baz=264						
CSS	**Mathiatis**	**6.86**	**82**	P	**Pn**	**17 03 41.4**	**-1.6**
	baz=266						
FNA	**Florina**	**7.17**	**337**	*e*Pn	**Pn**	**17 03 47.4**	**+0.1**
FNA				*e*Sn	**Sn**	**17 05 02.8**	**-5.3**
FNA	**Florina**	**7.17**	**337**	*e*P	**Pn**	**17 03 47.4**	**+0.1**
FNA				*e*		17 05 02.8	
TIR	**Tirane**	**8.21**	**331**	*e*Pn	**Pn**	**17 04 01.2**	**-0.3**
TIR	**Tirane**	**8.21**	**331**	*e*P	**Pn**	**17 04 01.2**	**-0.3**
TIP	**Timpagrande**	**8.30**	**309**	*e*Pn	**Pn**	**17 04 03.0**	**+0.2**
TIP				*e*Sn	Sn	17 05 22.9	-13
BR231	**Keskin MP Arra**	**8.33**	**45**	*e*Pn	**Pn**	**17 04 05.5**	**+2.2**
ANTO	**Ankara**	**8.36**	**45**	*e*Pn	**Pn**	**17 04 04.1**	**+0.5**
ANTO	**Ankara**	**8.36**	**45**	*e*P	**Pn**	**17 04 04.1**	**+0.5**
OFRI	**`Ofer**	**8.45**	**98**	Pn	**Pn**	**17 04 02.5**	**-2.4**
VTS	**Vitosha**	**8.50**	**351**	*e*Pn	**Pn**	**17 04 06.0**	**+0.4**
VTS	**Vitosha**	**8.50**	**351**	*e*P	**Pn**	**17 04 06.1**	**+0.4**
HNTI	**Hanita**	**8.51**	**95**	Pn	**Pn**	**17 04 04.2**	**-1.4**
SLTI	**Sal'it**	**8.59**	**101**	Pn	**Pn**	**17 04 05.4**	**-1.4**
SLTI				Sn	**Sn**	**17 05 36.3**	**-6.7**
MMAI	**Mount Meron Ar**	**8.71**	**95**	Pn	**Pn**	**17 04 08.2**	**-0.2**
	comp=Z,15nm,0.3s,baz=268,slow=11,SNR=6.8						
MMAI				Sn	**Sn**	**17 05 40.5**	**-5.5**
	comp=Z,15nm,0.3s,baz=270,slow=22,SNR=10						
AMAZ	**Amatzia**	**8.71**	**105**	Pn	**Pn**	**17 04 06.6**	**-1.9**
AMAZ				Sn	**Sn**	**17 05 40.3**	**-5.7**
AMAZ	**Amatzia**	**8.71**	**105**	P	**Sn**	**17 05 39.0**	**-7.0**
BR131	**Keskin Array S**	**8.79**	**49**	*e*Pn	**Pn**	**17 04 10.3**	**+0.8**
BRTR	**Keskin Array B**	**8.79**	**49**	Pn	**Pn**	**17 04 10.5**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=222,slow=15,SNR=5.2						
MMLI	**Mount Malkishu**	**8.85**	**99**	Pn	**Pn**	**17 04 07.7**	**-2.7**
MMLI	**Mount Malkishu**	**8.85**	**99**	P	**Sn**	**17 05 43.0**	**-6.4**
KSDI	**Kefar Szold**	**8.89**	**94**	Sn	**Sn**	**17 05 43.4**	**-6.9**
GEM	**Giv'at Ha'Em**	**8.89**	**94**	Pn	**Pn**	**17 04 09.0**	**-1.9**
GEM				Sn	**Sn**	**17 05 44.7**	**-5.6**
YTIR	**Yattir**	**8.93**	**106**	Pn	**Pn**	**17 04 09.4**	**-2.1**
NATI	**Neve Ativ**	**8.94**	**93**	Pn	**Pn**	**17 04 09.0**	**-2.6**
NATI				Sn	**Sn**	**17 05 46.3**	**-5.3**
MZDA	**Masada**	**9.15**	**106**	Pn	**Pn**	**17 04 12.6**	**-1.8**
KRMI	**Paran Flat**	**9.16**	**114**	Pn	**Pn**	**17 04 13.2**	**-1.4**
PRNI	**Paran**	**9.26**	**112**	Pn	**Pn**	**17 04 13.3**	**-2.7**
LISJ	**El Lisan**	**9.27**	**106**	P	**Sn**	**17 05 53.4**	**-6.1**
ZFRI	**Zfri**	**9.30**	**110**	Pn	**Pn**	**17 04 14.6**	**-1.9**
TTG	**Podgorica**	**9.37**	**333**	*e*Pn	**Pn**	**17 04 15.8**	**-1.6**
TTG				*e*Sn	**Sn**	**17 05 54.1**	**-7.9**
TTG	**Podgorica**	**9.37**	**333**	*e*P	**Pn**	**17 04 15.8**	**-1.6**
TTG				*e*		17 05 54.2	
HRFI	**Mount Harif**	**9.43**	**114**	Pn	**Pn**	**17 04 17.1**	**-1.2**
HRFI	**Mount Harif**	**9.43**	**114**	P	**Sn**	**17 05 57.9**	**-5.8**
EIL	**Elat**	**9.55**	**116**	Sn	**Sn**	**17 06 01.2**	**-5.3**
	comp=Z,10nm,0.3s,baz=270,slow=20,SNR=3.8						
HSUJ	**Al Zarqa**	**9.57**	**100**	P	**Sn**	**17 06 05.4**	**-1.6**
ASF	**Jabal al Asfar**	**10.13**	**98**	Sn	**Sn**	**17 06 15.7**	**-5.1**
	comp=Z,1.9nm,0.3s,baz=307,slow=20,SNR=4.0						
BOJS	**Bojanci**	**13.54**	**329**	*i* Pn	Pn	17 05 01.9	-12
VISS	**Visnje**	**13.95**	**329**	*i* Pn	Pn	17 05 11.1	-8.9
SKDS	**Skadanscina**	**14.12**	**326**	*i* Pn	Pn	17 05 14.0	-8.3
TRI	**Trieste**	**14.36**	**326**	*e*Pn	Pn	17 05 20.2	-5.3
TRI	**Trieste**	**14.36**	**326**	*e*P	Pn	17 05 20.3	-5.2
UZH	**Uzhgorod**	**14.54**	**353**	*e*P	**Pn**	**17 05 29.4**	**+1.4**
SOKA	**Soboth**	**14.58**	**332**	*e*Pn	**Pn**	**17 05 26.1**	**-2.6**
	comp=Z,19nm,1.1s						
OBKA	**Obir**	**14.64**	**330**	*e*Pn	**Pn**	**17 05 28.7**	**-0.7**
	comp=Z,19nm,1.1s						
KOLS	**Kolonicke sedl**	**14.84**	**353**	P	**P**	**17 05 40.0**	**+2.2**
KOLS	**Kolonicke sedl**	**14.84**	**353**	*e*	**P**	**17 05 40.0**	**+2.2**
ARSA	**Arzberg**	**14.87**	**334**	*e*Pn	**Pn**	**17 05 32.6**	**+0.1**
	comp=Z,12nm,0.5s						
VYHS	**Vyhne**	**14.99**	**344**	*e*P	**P**	**17 05 39.5**	**0.0**
VYHS	**Vyhne**	**14.99**	**344**	*e*P	**P**	**17 05 39.5**	**0.0**
MODS	**Modra-Piesok**	**15.29**	**340**	*e*P	**P**	**17 05 41.8**	**-0.9**
MODS	**Modra-Piesok**	**15.29**	**340**	*e*P	**P**	**17 05 41.8**	**-0.9**
KBA	**Koelnbreinsper**	**15.59**	**329**	*e*P	**P**	**17 05 44.9**	**-1.4**
	comp=Z,13nm,0.7s						
ABTA	**Abfaltersbach**	**15.71**	**327**	*e*Pn	**P**	**17 05 47.8**	**+0.3**
	comp=Z,35nm,0.5s,SNR=14						
DOMR	**Dombai**	**15.75**	**50⇑**	*e*P	**Pn**	**17 05 45.3**	**+1.0**
MOA	**Molln**	**15.84**	**332**	*e*P	**P**	**17 05 48.5**	**-0.4**
	comp=Z,22nm,0.8s,SNR=6.5						
KRUC	**Moravsky**	**16.16**	**339**	*e*P	**P**	**17 05 51.2**	**-1.2**
VRAC	**Vranov**	**16.32**	**340**	Pn	**Pn**	**17 05 50.9**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=152,slow=12,SNR=6.5						
VRAC	**Vranov**	**16.32**	**340**	*e*P	**P**	**17 05 53.2**	**-1.0**
NEY	**Neytrino**	**16.44**	**52**	*d i* P	**P**	**17 05 55.1**	**-0.6**
WTTA	**Wattenberg**	**16.49**	**326**	*e*Pn	**Pn**	**17 05 53.4**	**-0.4**
	comp=Z,36nm,1.1s,SNR=9.2						
MORC	**Moravsky Berou**	**16.50**	**343**	*e*Pn	**Pn**	**17 05 52.0**	**-1.7**
	comp=Z,14nm,1.2s						
MORC	**Moravsky Berou**	**16.50**	**343**	*e*P	**Pn**	**17 05 52.0**	**-1.7**
MORC				pmax	pmax		
	comp=Z,14nm,1.2s						
MORC	**Moravsky Berou**	**16.50**	**343**	*e*P	**Pn**	**17 05 54.3**	**+0.6**
WATA	**Walderalm**	**16.57**	**326**	*e*Pn	**Pn**	**17 05 52.8**	**-2.0**
	comp=Z,12nm,0.5s,SNR=6.0						
SHA1	**Shidzhatmaz**	**16.63**	**50**	*i* P	**P**	**17 05 59.3**	**+1.4**
SQTA	**Sankt Quirin**	**16.66**	**325**	*e*P	**P**	**17 05 58.5**	**+0.4**
	comp=Z,20nm,0.6s,SNR=6.8						
FUORN	**Ofenpass-Fuorn**	**16.70**	**322**	*e*Pn	**Pn**	**17 05 57.2**	**+0.7**
	comp=Z,21nm,0.6s						
AKASG	**Malin Array Be**	**16.75**	**9**	Pn	**Pn**	**17 05 55.0**	**-1.7**
	comp=Z,12nm,0.3s,baz=200,slow=11,SNR=15						
AKASG	**Malin Array Be**	**16.75**	**9**	P	**Pn**	**17 05 55.0**	**-1.7**
AKBB	**Malin Array Si**	**16.75**	**9**	*e*Pn	**Pn**	**17 05 55.1**	**-1.6**
	comp=Z,32nm,0.6s						
AKBB	**Malin Array Si**	**16.75**	**9**	*e*P	**Pn**	**17 05 55.1**	**-1.6**
AKBB				pmax	pmax		
	comp=Z,32nm,0.6s						
GNI	**Garni**	**16.75**	**64**	*e*Pn	**P**	**17 05 59.4**	**+0.2**
	comp=Z,17nm,0.6s						
GNI	**Garni**	**16.75**	**64**	*e*P	**P**	**17 05 59.4**	**+0.2**
GNI				pmax	pmax		
	comp=Z,17nm,0.6s						
FETA	**Feichten**	**16.75**	**324**	*e*Pn	**P**	**17 06 00.3**	**+1.2**
	comp=Z,28nm,1.2s,SNR=5.8						
KIV	**Kislovodsk**	**16.75**	**49**	*e*Pn	**P**	**17 05 58.8**	**-0.3**
	comp=Z,92nm,1.3s						
KIV	**Kislovodsk**	**16.75**	**49**	*e*P	**P**	**17 06 00.4**	**+1.3**
KIV				pmax	pmax		
	comp=Z,163nm,1.1s						
KVAR	**Kislovodsk Arr**	**16.76**	**49**	Pn	**P**	**17 05 59.7**	**+0.6**
	baz=257,slow=22,SNR=16						
KBZ	**Khabaz**	**16.78**	**50**	Pn	**P**	**17 05 59.0**	**-0.2**
	comp=Z,2.9nm,0.3s,baz=223,slow=4.0,SNR=14						
KBZ	**Khabaz**	**16.78**	**50**	P	**P**	**17 05 59.0**	**-0.2**
MOTA	**Moosalm**	**16.80**	**325**	*e*P	**Pn**	**17 05 58.4**	**+0.8**
	comp=Z,6.6nm,0.5s						
GEC2	**GERESS Array S**	**16.87**	**333**	*e*Pn	**Pn**	**17 05 57.5**	**-1.0**
	comp=Z,41nm,0.6s						
GEC2	**GERESS Array S**	**16.87**	**333**	*e*P	**Pn**	**17 05 57.5**	**-1.0**
GEC2				pmax	pmax		
	comp=Z,41nm,0.6s						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**Pn**	**17 05 57.6**	**-0.8**
	comp=Z,8.2nm,0.3s,baz=143,slow=12,SNR=52						
DAVOX	**Davos/Dischmat**	**17.01**	**322**	Pn	**P**	**17 06 02.9**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=133,slow=16,SNR=4.0						
ZEI	**Tsey**	**17.02**	**54**	*e*P	**P**	**17 06 01.5**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,38nm,1.0s						
RETA	**Reutte**	**17.07**	**325**	*e*Pn	**Pn**	**17 06 00.7**	**-0.1**
	comp=Z,11nm,0.6s,SNR=7.5						
TUE	**Stuetta**	**17.08**	**320**	*e*Pn	**P**	**17 06 03.9**	**+1.1**
	comp=Z,78nm,2.0s						
NCK	**Nalchik**	**17.12**	**52⇑**	*e*P	**P**	**17 06 03.5**	**+0.4**
NCK				pmax	pmax		
	comp=Z,37nm,1.4s						
KHC	**Kasperske Hory**	**17.16**	**334**	*e*Pn	**Pn**	**17 06 01.4**	**-0.6**
	comp=Z,20nm,1.3s						
KHC	**Kasperske Hory**	**17.16**	**334**	*e*P	**Pn**	**17 06 01.3**	**-0.6**
KHC	**Kasperske Hory**	**17.16**	**334**	*e*P	**Pn**	**17 06 01.3**	**-0.6**
KHC				*ex*	x	17 06 03.9	
KHC				*ex*	x	17 06 12.1	
DPC	**Dobruska-Polom**	**17.34**	**341**	*e*P	**Pn**	**17 06 04.0**	**-0.3**
DPC	**Dobruska-Polom**	**17.34**	**341**	*e*P	**Pn**	**17 06 04.0**	**-0.3**
DPC				*ep*P	**pP**	**17 06 12.3**	**+1.1**
DAVA	**Damuels**	**17.35**	**323**	*e*Pn	**Pn**	**17 06 04.7**	**+0.2**
	comp=Z,9.2nm,0.6s		

comp=Z,7.9nm,0.9s,baz=82,slow=9.5,SNR=6.8
ESLA Sonseca Array 23.77 292 *e*P **P 17 07 13.7 -0.9**
comp=Z,14nm,1.0s
VSU Vasula 24.27 2⇓*e*P **P 17 07 21.7 +2.7**
VSU pmax pmax
comp=Z,25nm,0.8s
VSU Vasula 24.27 2 *e*P **P 17 07 15.3 -3.6**
VSU IAmb IAmb 17 07 22.7
comp=Z,39nm,0.9s
PBRG Braganca 26.07 296 *e*P **P 17 07 35.4 -0.2**
comp=Z,24nm,1.5s
MVO Moncorvo 26.22 295 *e*P **P 17 07 37.2 +0.2**
comp=Z,25nm,1.3s
PMRV Marv??o 26.40 291 *e*P **P 17 07 38.6 0.0**
comp=Z,31nm,1.7s
PCBR Castelo Branco 26.48 292 *e*P **P 17 07 41.2 +1.9**
PVAQ Vaqueiros 26.70 286 *e*P **P 17 07 41.5 +0.3**
PVAQ Vaqueiros 26.70 286 *e*P **P 17 07 41.4 +0.2**
comp=Z,20nm,1.2s
PVIS Viseu 26.84 294 *e*P **P 17 07 44.3 +1.7**
GEYT Alibeck 26.89 72 P **P 17 07 43.7 +0.6**
comp=Z,3.8nm,0.9s,baz=273,slow=9.7,SNR=3.6
HFS Hagfors 26.97 347 P **P 17 07 41.5 -1.9**
comp=Z,3.2nm,0.4s,baz=163,slow=10.0,SNR=7.3
FINES FINESS Array B 27.24 1 P **P 17 07 42.6 -3.2**
comp=Z,2.6nm,0.5s,baz=151,slow=9.9,SNR=4.4
FIA1 FINESS Array S 27.24 1 *e*P **P 17 07 43.1 -2.8**
comp=Z,12nm,1.0s
KONO Kongsberg 27.40 343 *e*P **P 17 07 45.1 -2.1**
comp=Z,78nm,1.7s
KONO Kongsberg 27.40 343 *e*P **P 17 07 45.1 -2.1**
KONO pmax pmax
comp=Z,79nm,1.7s
NC602 NORSAR Array S 27.94 346 *e*P **P 17 07 50.6 -1.5**
comp=Z,48nm,1.4s
NAO01 NORSAR Array S 28.17 345 *e*P **P 17 07 52.8 -1.4**
comp=Z,24nm,0.7s
KLMR Klimovskoe 28.24 15 *e*P **P 17 07 51.4 -3.3**
KLMR pmax pmax
comp=Z,28nm,1.5s
KLMR Klimovskoe 28.24 15 *e*P **P 17 07 51.5 -3.3**
KLMR AMP 17 07 54.9
comp=Z,28nm,1.6s
NC405 NORSAR Array S 28.25 346 *e*P **P 17 07 53.5 -1.4**
comp=Z,15nm,1.1s
NB201 NORSAR Array S 28.27 346 *e*P **P 17 07 53.3 -1.9**
comp=Z,35nm,1.4s
NB2 NORSAR Subarra 28.28 346 P **P 17 07 53.9 -1.4**
comp=Z,2.5nm,0.6s,baz=159,slow=11
NOA NORSAR Array B 28.28 346 P **P 17 07 53.8 -1.4**
comp=Z,1.7nm,0.6s,baz=157,slow=9.2,SNR=8.8
NBO00 NORSAR Array S 28.36 345 *e*P **P 17 07 54.9 -1.0**
comp=Z,185nm,1.7s
NC303 NORSAR Array S 28.42 346 *e*P **P 17 07 54.6 -1.8**
UOSS Minazif 28.53 101 *e*P **P 17 07 58.7 +1.0**
comp=Z,6.5nm,0.6s
NC204 NORSAR Array S 28.59 346 *e*P **P 17 07 56.8 -1.1**
comp=Z,103nm,1.8s
EKA Eskdalemuir Ar 28.76 326 P **P 17 07 59.0 -0.5**
comp=Z,6.8nm,0.8s,baz=123,slow=9.0,SNR=6.6
EKA Eskdalemuir Ar 28.76 326 P **P 17 07 59.0 -0.5**
ESK Eskdalemuir 28.77 326 *e*P **P 17 07 59.4 -0.2**
comp=Z,34nm,1.5s
ESK Eskdalemuir 28.77 326 *e*P **P 17 07 59.4 -0.2**
ESK pmax pmax
comp=Z,34nm,1.5s
AKTO Aktyubinsk 28.95 46 P **P 17 08 00.6 -0.7**
comp=Z,2.9nm,0.4s,baz=248,slow=10,SNR=4.8
DSB Dublin 29.27 320 *e*P **P 17 08 02.7 -1.3**
comp=Z,53nm,1.5s
KIRV Kirov 29.27 26 P **P 17 08 02.5 -1.5**
comp=Z,16nm,0.5s,baz=293,slow=3.1,SNR=5.1
TOA1 Torodi Ar. Sit 29.83 231 *e*P **P 17 08 08.5 -0.9**
TOA0 Torodi Ar. Sit 29.83 231 *e*P **P 17 08 10.4 +1.0**
comp=Z,17nm,0.6s
TORD Torodi Ar. Bea 29.83 231 P **P 17 08 08.5 -0.9**
comp=Z,14nm,0.6s,baz=34,slow=8.8,SNR=19
PRGR Permogore 30.42 19 *e*P **P 17 08 09.5 -4.6**
PRGR pmax pmax
comp=Z,33nm,0.4s
ARU Arti 31.86 36 P **P 17 08 24.9 -2.0**
comp=Z,3.6nm,0.5s,baz=298,slow=9.0,SNR=5.8
ARU Arti 31.86 36 *e*P **P 17 08 25.5 -1.4**
comp=Z,46nm,1.5s
ARU Arti 31.86 36*c i*P **P 17 08 26.9 +0.1**
ARU 17 09 28.6
ARU S **S 17 13 38.5 +2.5**
ARU SS **SnSn 17 15 26.2 +1.7**
ARU pmax pmax
comp=Z,32nm,1.5s
SVE Sverdlovsk 33.05 36 *e*P **P 17 08 37.4 +0.1**
SVE pmax pmax
comp=Z,33nm,0.5s
APA Apatity 33.74 6⇓*i*P **P 17 08 40.7 -2.4**
APA pmax pmax
comp=Z,4.0nm,1.1s
APA MLR MLR
comp=Z,500nm,12.0s
LVZ Lovozero 34.17 6 *e*P **P 17 08 45.4 -1.5**
comp=Z,134nm,1.7s
LVZ Lovozero 34.17 6⇓*e*P **P 17 08 48.0 +1.1**
LVZ pmax pmax
comp=Z,31nm,1.4s
MBAR Mbarara 35.05 170⇑*e*P **P 17 08 57.4 +2.2**
MBAR pmax pmax
comp=Z,4.0nm,1.1s
ARCES ARCESS Array B 35.36 0 P **P 17 08 54.8 -2.4**
comp=Z,2.6nm,0.5s,baz=169,slow=9.7,SNR=8.7
ARE0 ARCESS Array S 35.36 0 *e*P **P 17 08 55.1 -2.1**
comp=Z,3.4nm,1.8s
CHGR Chuyangaron 35.49 70 *e*P P 17 08 50.9 -8.0
comp=Z,86nm,1.4s
KK31 Karatay Array 36.20 62 *e*P **P 17 09 05.1 +0.3**
comp=Z,8.4nm,0.8s
KK31 Karatay Array 36.20 62 *e*P **P 17 09 05.1 +0.3**
KK31 pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array 36.20 62 *e*P **P 17 09 05.1 +0.3**
comp=Z,8.4nm,0.8s
KKAR Karatay Array 36.20 62 *e*P **P 17 09 05.1 +0.3**
KKAR pmax pmax
comp=Z,8.0nm,0.8s
GAR Garm 36.35 69 *e*P **P 17 09 07.5 +1.3**
comp=Z,32nm,1.5s
GAR Garm 36.35 69 *e*P **P 17 09 07.5 +1.3**
GAR pmax pmax
comp=Z,32nm,1.5s
BVAR Borovoye Array 37.05 45 P **P 17 09 12.8 +1.0**
comp=Z,1.8nm,0.5s,baz=246,slow=4.6,SNR=6.3
ARSB Arslanbob 38.14 65 *e*P **P 17 09 21.3 -0.1**
comp=Z,10nm,0.6s
DBIC Dimbokro 38.92 232 P **P 17 09 27.5 -0.5**
comp=Z,8.0nm,0.8s,baz=10.0,slow=9.3,SNR=4.1
DBIC Dimbokro 38.92 232 *e*P **P 17 09 27.9 -0.1**
comp=Z,19nm,1.2s
TIC Toumodi 39.05 232 *e*P **P 17 09 29.7 +0.6**
KIC Kosan Boka 39.08 232 *e*P **P 17 09 30.0 +0.7**
comp=Z,18nm,0.7s
AAK Ala-Archa 39.15 63 P **P 17 09 30.8 +0.9**
comp=Z,5.5nm,0.5s,baz=237,slow=12,SNR=5.7
AAK Ala-Archa 39.15 63 *e*P **P 17 09 30.6 +0.7**
comp=Z,29nm,1.5s
AAK Ala-Archa 39.15 63*d i*P **P 17 09 31.2 +1.3**
AAK pmax pmax
comp=Z,9.0nm,1.1s
LIC Lamto 39.37 232 *e*P **P 17 09 32.4 +0.7**
comp=Z,86nm,1.8s
KSH Kashi 40.63 67 P P 17 09 49.3 +7.2
KSH pP pwP 17 09 58.4 +6.6
KSH PP **PnPn 17 11 27.8 +8.0**
KSH S S 17 16 00.3 +10
KSH pmax pmax
comp=Z,14nm,0.6s
KSH pmax pmax
comp=Z,590nm,9.0s
KSH LR LR
comp=N,1μm,19.0s
KSH LR LR
comp=E,740nm,11.2s
KSH LR LR
comp=Z,2μm,17.8s
KURK Kurchatov 41.84 50 *e*P **P 17 09 51.7 0.0**
comp=Z,28nm,1.4s
KURK Kurchatov 41.84 50*de*P **P 17 09 52.2 +0.5**
KURK pmax pmax
comp=Z,10.0nm,1.0s
MAKZ Makanchi 44.15 56 *e*P **P 17 10 10.8 +0.2**
comp=Z,5.4nm,0.8s
MAKZ Makanchi 44.15 56 *e*P **P 17 10 10.8 +0.2**
MAKZ pmax pmax
comp=Z,5.0nm,0.8s
SCO Scoresbysund 44.18 339 *e*P **P 17 10 11.2 +0.8**
comp=Z,6.3nm,0.9s
SPA0 Spitsbergen Ar 44.22 357 *e*P **P 17 10 09.5 -1.2**
comp=Z,46nm,1.5s
SPITS Spitsbergen Ar 44.22 357 P **P 17 10 09.4 -1.2**
comp=Z,3.5nm,0.5s,baz=142,slow=5.4,SNR=9.4
MK31 Makanchi Array 44.36 56 *e*P **P 17 10 12.5 +0.2**
comp=Z,8.2nm,0.8s
MK31 Makanchi Array 44.36 56 *e*P **P 17 10 12.5 +0.2**
MK31 pmax pmax
comp=Z,8.0nm,0.8s
MKAR Makanchi Array 44.36 56 P **P 17 10 12.6 +0.3**
comp=Z,8.6nm,0.5s,baz=276,slow=7.0,SNR=14
NVS Novosibirsk 44.81 44⇓*i*P **P 17 10 16.4 +0.7**
NVS *e* 17 12 02.0
NVS pmax pmax
comp=Z,19nm,0.7s
NVS pmax pmax
comp=N,3.0nm,0.5s
NVS pmax pmax
comp=E,4.0nm,0.7s
KBS Kingsbay 45.15 356 *e*P **P 17 10 17.5 -0.6**
comp=E,16nm,0.6s
KBS Kingsbay 45.15 356 *e*P **P 17 10 17.5 -0.6**
KBS pmax pmax
comp=Z,16nm,0.6s
ZAA0 Zalesovo Array 45.71 46 *e*P **P 17 10 22.4 -0.5**
comp=Z,21nm,0.4s
ZALV Zalesovo Beam 45.71 46 P **P 17 10 22.3 -0.5**
comp=Z,25nm,0.5s,baz=267,slow=8.7,SNR=31
DGZ Jazzator, Alta 47.52 51⇓*e*P **P 17 10 38.9 +1.6**
DGZ pmax pmax
comp=Z,4.0nm,1.1s
WMQ Urumqi 48.55 59 *e*P **P 17 10 48.1 +2.9**
WMQ pP pwP 17 10 56.3 +1.4
WMQ sP sP 17 10 59.8 +5.5
WMQ pmax pmax
comp=Z,26nm,0.7s
WMQ LR LR
comp=Z,570nm,21.1s
WMQ LR LR
comp=Z,870nm,18.9s
WMQ LR LR
comp=Z,1μm,17.7s
NRIK Noril'sk 48.76 25 P **P 17 10 46.8 +0.5**
comp=Z,3.8nm,0.5s,baz=239,slow=7.3,SNR=4.4
PYUN Piuthan 49.38 80 *e*P **P 17 10 53.2 +1.2**
comp=Z,22nm,0.7s
SUMG Summit 49.82 339 *e*P **P 17 10 54.7 -0.2**
comp=Z,4.9nm,0.7s
SUMG Summit 49.82 339 *e*P **P 17 10 54.7 -0.2**
SUMG pmax pmax
comp=Z,5.0nm,0.7s
DANN Dangsing 49.92 80 *e*P **P 17 10 57.6 +1.4**
comp=Z,58nm,0.8s
DMN Daman 51.30 80 *e*P **P 17 11 07.2 +0.6**
KKN Kakani 51.37 80 *e*P **P 17 11 07.6 +0.5**
comp=Z,21nm,0.7s
PKI Pulchoki 51.56 80 *e*P **P 17 11 09.1 +0.5**
comp=Z,19nm,0.9s
GUN Gumba 51.81 79 *e*P **P 17 11 11.4 +0.9**
comp=Z,20nm,0.7s
JIRN Jiri 52.16 80 *e*P **P 17 11 14.0 +0.8**
comp=Z,22nm,0.8s
RAMN Ramite 52.78 80 *e*P **P 17 11 17.5 -0.1**
TLY Talaya 57.30 46⇓*e*P **P 17 11 51.0 +1.4**
LBTB Lobatse 58.92 179 *e*P **P 17 12 03.4 +2.2**
comp=Z,17nm,1.4s
LBTB Lobatse 58.92 179 *e*P **P 17 12 03.4 +2.2**
LBTB pmax pmax
comp=Z,17nm,1.4s
SONA0 Songino Array 60.14 50 *e*P **P 17 12 10.4 +0.8**
SONM Songino Array 60.14 50 P **P 17 12 10.4 +0.8**
comp=Z,4.0nm,0.5s,baz=290,slow=7.0,SNR=11
ULN Ulaanbaatar 60.55 50 *e*P **P 17 12 12.8 +0.3**
comp=Z,7.7nm,0.6s
ULN Ulaanbaatar 60.55 50*de*P **P 17 12 13.4 +1.0**
ULN pmax pmax
comp=Z,7.0nm,1.1s
BOSA Boshof 62.50 180 P **P 17 12 26.8 +1.2**
comp=Z,4.2nm,0.7s,baz=335,slow=8.6,SNR=6.8
BOSA Boshof 62.50 180 *e*P **P 17 12 26.8 +1.2**
comp=Z,39nm,1.8s
LZH Lanzhou 62.69 63 *e*P **P 17 12 26.6 -0.4**
LZH pP sP 17 12 36.3 +0.4
LZH sP pwP 17 12 39.5 +2.8
LZH pmax pmax
comp=Z,25nm,1.2s
LZH pmax pmax
comp=Z,92nm,7.6s
SCHQ Schefferville 63.84 320 P **P 17 12 33.8 -0.4**
comp=Z,6.4nm,0.6s,baz=45,slow=13,SNR=4.1
SCHQ Schefferville 63.84 320 *e*P **P 17 12 33.4 -0.8**
comp=Z,32nm,1.8s
GBN Guysborough 64.39 309 *e*P **P 17 12 37.5 -0.3**
comp=Z,36nm,1.5s
RES Resolute Bay 64.55 345 *e*P **P 17 12 38.3 -0.1**
comp=Z,6.9nm,1.1s
RES Resolute Bay 64.55 345 *e*P **P 17 12 38.3 -0.1**
RES pmax pmax
comp=Z,7.0nm,1.1s
CD2 Chengdu 64.80 69 P **P 17 12 39.9 -1.0**
HHC Hu-ho-hao-te 66.23 56 *e*P **P 17 12 50.3 +0.3**
HHC pmax pmax
comp=Z,17nm,1.1s
LMN Caledonia Moun 66.31 310 *e*P **P 17 12 51.4 +1.0**
comp=Z,39nm,1.7s
BATG Bathurst New B 66.48 312 *e*P **P 17 12 50.4 -1.0**
comp=Z,53nm,1.8s
CHTO Chiang Mai 66.59 83 *e*P **P 17 12 54.6 +2.1**
comp=Z,10nm,1.6s
CHTO Chiang Mai 66.59 83 *e*P **P 17 12 54.6 +2.1**
CHTO pmax pmax
comp=Z,10.0nm,1.6s
KMI Kunming 66.63 75 P **P 17 12 54.3 +1.3**
KMI pmax pmax
comp=Z,12nm,0.5s
CMAR Chiang Mai Arr 66.76 83 P **P 17 12 54.0 +0.3**
comp=Z,0.6nm,0.8s,baz=303,slow=8.4,SNR=3.1
CMAR Chiang Mai Arr 66.76 83 P **P 17 12 54.0 +0.3**
HIA Hailar 67.75 45⇑*i*P **P 17 13 00.7 +1.2**
HIA pmax pmax
comp=Z,32nm,0.9s
PKME Peaks-Kenny Pk 69.39 311 *e*P **P 17 13 09.8 +0.1**
comp=Z,20nm,1.4s
RCBR Riachuelo 69.90 248 *e*P **P 17 13 14.3 +1.0**
comp=Z,16nm,1.3s
RCBR Riachuelo 69.90 248 *e*P **P 17 13 14.3 +1.0**
RCBR pmax pmax
comp=Z,16nm,1.3s
WHN Wuhan 73.02 64 P **P 17 13 34.6 +2.6**
D53A Lac Vacive, Po 73.52 316 *e*P **P 17 13 34.6 -0.1**
comp=Z,6.6nm,0.9s
BILL Bilibino 73.99 14 *e*P **P 17 13 36.7 -0.3**
BILL pmax pmax
comp=Z,2.0nm,1.1s
SEY Seymchan 74.45 22⇑*e*P **P 17 13 41.0 +1.2**
KLR Kul'dur 74.53 41 P **P 17 13 40.5 0.0**
comp=Z,1.5nm,0.6s,baz=304,slow=6.4,SNR=4.3
KLR Kul'dur 74.53 41⇑*e*P **P 17 13 41.3 +0.8**
KLR pmax pmax
comp=Z,4.0nm,1.1s
PSI Prapat 75.10 97 *e*P **P 17 13 44.8 +0.3**
comp=Z,43nm,1.7s
PSI Prapat 75.10 97 *e*P **P 17 13 44.8 +0.3**
PSI pmax pmax
comp=Z,43nm,1.7s
KULM Kulim 75.13 94 *e*P **P 17 13 45.7 +1.2**
comp=Z,54nm,2.0s
NJ2 Nanjing 75.57 61 *e*P **P 17 13 46.8 0.0**
NJ2 pmax pmax
comp=Z,11nm,0.5s
J55A Hilton 75.67 313 *e*P **P 17 13 46.4 -0.8**
comp=Z,25nm,1.5s
MA2 Magadan 76.36 25 P **P 17 13 50.9 +0.1**
comp=Z,3.9nm,0.7s,baz=331,slow=13,SNR=5.3
MA2 Magadan 76.36 25 *e*P **P 17 13 51.2 +0.4**
comp=Z,13nm,1.2s
USRK Ussuriysk Ar. 77.56 45 P **P 17 13 57.5 -0.3**
comp=Z,3.0nm,0.6s,baz=277,slow=3.4,SNR=6.6
YKA Yellowknife Ar 78.31 342 P **P 17 14 01.0 -0.7**
comp=Z,0.6nm,0.5s,baz=34,slow=5.5,SNR=4.4
YKA Yellowknife Ar 78.31 342 P **P 17 14 01.0 -0.7**
KSRS Korea Array 78.92 52 P **P 17 14 05.9 +0.4**
comp=Z,1.5nm,0.5s,baz=302,slow=4.3,SNR=5.6
CBYP Canovanas 80.69 286 *e*P **P 17 14 11.6 -3.9**
comp=Z,100nm,1.2s
ILAR Eielson Array 81.13 357 P **P 17 14 16.5 -0.4**
comp=Z,0.6nm,0.7s,baz=347,slow=4.5,SNR=5.1
WRH Wood River Hil 81.48 357 *e*P **P 17 14 18.9 +0.1**
comp=Z,6.5nm,0.6s
HDA Harding Lake 81.49 356 *e*P **P 17 14 18.8 -0.1**
comp=Z,3.7nm,0.7s
DOT Dot Lake 82.07 355 *e*P **P 17 14 21.8 -0.2**
comp=Z,4.8nm,1.1s
DHY Denali Highway 82.84 357 *e*P **P 17 14 26.2 0.0**
comp=Z,4.7nm,0.7s
ASAJ Asahikawa 83.54 40 P **P 17 14 30.0 +0.1**
comp=Z,1.6nm,0.5s,baz=304,slow=7.3,SNR=5.6
MAJO Matsushiro 86.01 48 *e*P **P 17 14 42.3 -0.2**
MAJO Matsushiro 86.01 48 *e*P **P 17 14 42.3 -0.2**
MJAR Matsushiro Arr 86.01 48 P **P 17 14 42.3 -0.2**
comp=Z,1.6nm,0.8s,baz=298,slow=5.0,SNR=4.5
LRAL Lakeview Retre 87.57 309 *e*P **P 17 14 50.2 +0.1**
comp=Z,7.7nm,0.9s
WRA Warramunga Arr 116.56 97 PKP **PKPdf 17 20 44.8 -1.5**
comp=Z,0.7nm,0.7s,baz=309,slow=1.4,SNR=3.6
WR1 Warramunga Arr 116.56 97 *e*PKPdf **PKPdf 17 20 44.8 -1.5**
ASAR Alice Springs 117.96 101 PKP **PKPdf 17 20 48.6 -0.4**
comp=Z,0.4nm,0.8s,baz=336,slow=1.4,SNR=4.1
AS31 Alice Springs 117.96 101 *e*PKPdf **PKPdf 17 20 48.6 -0.4**

ISCJB ***15*** *17:07:06.3±0.6, 33°.38N±0°.04×131°.67E±0°.04, h97km±5km, mb3.8/2, Error ellipse: s-maj=8.0km s-min=5.0km az=144.0*
IDC ***15*** *17:07:07.1±1.2, 33°.26N×131°.52E, h94km±13km, mb3.4/2, mb1 3.5/4, mb1mx3.1/63, mbtmp3.6/4, Error ellipse: s-maj=39.0km s-min=23.6km az=120.0*
JMA ***15*** *17:07:07.3, 33°.41N×131°.66E, h91km±1km, M3.3 Broadband fault plane solution: P waves. NP1: φs259.00000°, δ57.00000°, λ138.00000°. NP2: φs15.00000°, δ56.00000°, λ41.00000°. Principal axes: T Plg51.0000°, Azm226.0000°; N Plg39.0000°, Azm48.0000°; P Plg1.0000°, Azm317.0000°;*
JMA Felt I J1.
ISC 15 17:07:06.9±1.1,**33°.37N**±0°.05×**131°.66E**±0°.04,**h91**km±7km,
n18,σ0s**82**/32,**9C-2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JBEP	**Beppuamama**	**0.21**	**260**	⇑P	**Pn**	**17 07 20.5**	**+0.3**
JBEP				S	**Sn**	**17 07 30.6**	**+0.6**
JKI	**Kunimi**	**0.27**	**344**	⇑P	**Pn**	**17 07 20.5**	**+0.1**
JKI				S	**Sn**	**17 07 30.4**	**0.0**
JUS	**Usuki**	**0.32**	**166**	⇑P	**Pn**	**17 07 21.2**	**+0.6**
JUS				S	**Sn**	**17 07 31.1**	**+0.3**
JNU	**Nakatsue**	**0.70**	**249**	P	**Pn**	**17 07 23.9**	**+0.2**
	12nm,0.3s,baz=81,slow=3.2,SNR=261						
JNU				S	**Sn**	**17 07 36.1**	**+0.1**
	24nm,0.3s,baz=163,slow=20,SNR=48						
JNA	**Nagahama**	**0.71**	**75**	⇑P	**Pn**	**17 07 24.0**	**+0.4**
JNA				S	**Sn**	**17 07 36.6**	**+0.5**
UWA2	**Uwa jima 2**	**0.82**	**101**	⇑P	**Pn**	**17 07 25.0**	**+0.2**
UWA2				S	**Sn**	**17 07 38.2**	**0.0**
JHM	**Kurahashi**	**1.05**	**43**	⇑P	**Pn**	**17 07 27.4**	**+0.1**
JHM				S	**Sn**	**17 07 42.8**	**+0.2**
JTO	**Tosashimizu**	**1.09**	**118**	⇓P	**Pn**	**17 07 27.8**	**+0.1**
JTO				S	**Sn**	**17 07 43.1**	**-0.2**
JIU3	**Izumi3**	**1.09**	**221**	P	**Pn**	**17 07 28.6**	**+0.8**
JIU3				S	**Sn**	**17 07 43.4**	**0.0**
JKU	**Kubokawa**	**1.18**	**93**	⇑P	**Pn**	**17 07 28.9**	**+0.1**
JKU				S	**Sn**	**17 07 45.3**	**+0.1**
JET	**Tanbara**	**1.23**	**70**	⇑P	**Pn**	**17 07 29.6**	**+0.2**
JET				S	**Sn**	**17 07 46.0**	**-0.3**
JHT	**Toyohira**	**1.43**	**26**	⇑P	**Pn**	**17 07 32.2**	**+0.3**
JHT				S	**Sn**	**17 07 50.5**	**-0.3**
JTZ	**Takazaki**	**1.55**	**198**	⇓P	**Pn**	**17 07 34.4**	**+1.1**
JTZ				S	**Sn**	**17 07 54.2**	**+0.9**
KSRS	**Korea Array**	**5.09**	**324**	P	**Pn**	**17 08 21.2**	**+0.6**
	0.5nm,0.3s,baz=143,slow=14,SNR=11						
MAT	**Matsushiro**	**6.24**	**58**	P	**Pn**	**17 08 38.4**	**+2.0**
MAT				S	**Sn**	**17 09 46.4**	**+0.2**
MJAR	**Matsushiro Arr**	**6.24**	**58**	P	**Pn**	**17 08 38.7**	**+2.3**
	0.7nm,0.3s,baz=247,slow=14,SNR=76						
WRA	**Warramunga Arr**	**53.08**	**177**	P	**P**	**17 16 12.9**	**-2.0**
	1.4nm,0.8s,baz=22,slow=18,SNR=2.0						
ASAR	**Alice Springs**	**56.76**	**178**	P	**P**	**17 16 41.0**	**-0.5**
	0.4nm,0.7s,baz=358,slow=6.2,SNR=9.3						

IDC ***15*** *17:09:26.6±1.0, 34°.27N×25°.12E, h0km, mb3.8/11, mb1 4.0/17, mb1mx3.8/48, mbtmp3.9/17, ML4.2/6, Error ellipse: s-maj=18.3km s-min=16.3km az=39.0*
NEIC ***15*** *17:09:28.1±2.7, 34°.25N×25°.10E, h10km±4km, mb4.1/22, Error ellipse: s-maj=14.6km s-min=8.5km az=192.0*
ISCJB ***15*** *17:09:30.6±0.8, 34°.21N±0°.05×25°.12E±0°.04, h47km±5km, mb4.1/24, Error ellipse: s-maj=8.9km s-min=5.4km az=2.7*
ATH ***15*** *17:09:30.8, 34°.36N×25°.10E, h27km±1km, ML3.3/7, Error ellipse: s-maj=6.8km s-min=1.6km az=353.0*
THE ***15*** *17:09:30.2, 34°.29N×25°.07E, h0km±2km, ML3.4/6, Error ellipse: s-maj=4.5km s-min=1.5km az=174.0*
ISC 15 17:09:30.5±1.5,**34°.24N**±0°.07×**25°.09E**±0°.04,**h27**km±10km,
n103,σ1s**13**/110,**mb4.1**/24,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.81**	**343**	P	**Pb**	**17 09 45.1**	**-0.9**
SIVA				S	**Sn**	**17 09 57.4**	**+0.1**
	9μm,0.8s						
SIVA	**Sivas**	**0.81**	**343**	P	**Pb**	**17 09 45.0**	**-1.0**
SIVA				AML	AML	17 09 57.8	
	comp=N,10799μm,0.8s						
SIVA				AML	AML	17 09 59.9	
	comp=E,16075μm,0.8s						
LAST	**Lasithi**	**0.97**	**19**	P	**Pn**	**17 09 47.7**	**-0.8**
LAST				S	**Sn**	**17 10 01.6**	**+0.2**
	comp=E,1μm,0.7s						
LAST	**Lasithi**	**0.97**	**19**	P	**Pn**	**17 09 47.7**	**-0.8**
LAST				AML	AML	17 10 10.7	
	comp=N,1764μm,0.6s						
LAST				AML	AML	17 10 13.7	
	comp=E,1796μm,0.7s						
GVD	**Gavdhos**	**1.02**	**306**	P	**Pn**	**17 09 49.2**	**+0.1**
GVD				S	**Sb**	**17 10 03.2**	**+0.6**
	comp=E,3μm,0.4s						
GVD	**Gavdhos**	**1.02**	**306**	P	**Pn**	**17 09 49.0**	**-0.1**
GVD				S	**Sb**	**17 10 03.7**	**+1.1**
GVD				AML	AML	17 10 07.7	
	comp=N,7578μm,0.4s						
GVD				AML	AML	17 10 18.6	
	comp=E,5933μm,0.4s						
IDI	**Anoyia**	**1.06**	**351**	Pn	**Pn**	**17 09 49.0**	**-0.7**
	comp=E,132nm,0.3s,baz=167,slow=17,SNR=22						
IDI				Sn	**Sb**	**17 10 04.3**	**+0.6**
	comp=E,67nm,0.3s,baz=325,slow=3.7,SNR=11						
IDI	**Anoyia**	**1.06**	**351**	P	**Pn**	**17 09 48.2**	**-1.5**
IACM	**Heraklion**	**1.06**	**359**	P	**Pb**	**17 09 50.2**	**0.0**
IACM	**Heraklion**	**1.06**	**359**	P	**Pb**	**17 09 50.1**	**-0.2**
NPS	**Neapolis**	**1.10**	**23**	P	**Pn**	**17 09 50.1**	**-0.1**
NPS				S	**Sb**	**17 10 06.6**	**+1.6**
	comp=E,1μm,0.5s						
NPS	**Neapolis**	**1.10**	**23**	P	**Pn**	**17 09 49.7**	**-0.5**
NPS				AML	AML	17 10 15.9	
	comp=E,1688μm,0.4s						
NPS				AML	AML	17 10 18.9	
	comp=N,1531μm,0.5s						
ZKR	**Zakros**	**1.27**	**46**	P	**Pb**	**17 09 53.2**	**-0.6**
ZKR				S	**Sb**	**17 10 12.6**	**+2.9**
	comp=N,655nm,0.6s						
ZKR	**Zakros**	**1.27**	**46**	P	**Pn**	**17 09 53.1**	**+0.5**
ZKR				AML	AML	17 10 17.3	
	comp=N,591μm,0.7s						
ZKR				AML	AML	17 10 21.9	
	comp=E,1961μm,0.6s						
VAM	**Vamos**	**1.38**	**328**	P	**Pn**	**17 09 54.8**	**+0.8**
VAM	**Vamos**	**1.38**	**328**	P	**Pn**	**17 09 54.6**	**+0.7**
VAM				AML	AML	17 10 28.2	
	comp=N,2604μm,0.5s						
VAM				AML	AML	17 10 29.0	
	comp=E,2956μm,0.6s						
IMMV	**Iera Moni Meta**	**1.52**	**323**	P	**Pb**	**17 09 57.5**	**-0.6**
IMMV				S	**Sb**	**17 10 17.3**	**+0.3**
	comp=E,1μm,0.6s						
IMMV	**Iera Moni Meta**	**1.52**	**323**	P	**Pb**	**17 09 57.3**	**-0.8**

IMMV AML AML 17 10 28.1
comp=E,2155μm,0.8s
IMMV AML AML 17 10 36.3
comp=N,2055μm,1.0s
THR9 Santorini-Faro 2.12 6 P **Pn 17 10 05.6 +1.4**
THR6 Thira Island, 2.12 7 P **Pn 17 10 05.6 +1.3**
KARP Karpathos 2.14 52 *e*Pn **Pb 17 10 07.7 -0.9**
KARP Karpathos 2.14 52 P **Pb 17 10 07.2 -1.4**
SANT Santorini 2.14 8 *e*Pn **Pb 17 10 06.7 -2.0**
THR3 Thira Island, 2.18 7 P **Pn 17 10 05.4 +0.5**
THR5 Thira Island, 2.18 5 P **Pn 17 10 06.2 +1.2**
ANAF Anafi Island 2.18 15 P **Pn 17 10 05.5 +0.4**
ANKY Antikythira Is 2.19 318 P **Pb 17 10 07.6 -1.9**
THR2 Thira Island, 2.22 7 P **Pn 17 10 06.5 +0.9**
IOSP Ios island 2.48 4 P **Pn 17 10 09.5 +0.3**
MHLO Agia Marina, M 2.51 347 P **Pn 17 10 10.1 +0.6**
MHLA Plaka, Milos I 2.56 348 P **Pn 17 10 11.0 +0.8**
KYTH Kithira 2.62 321 P **Pn 17 10 13.5 +2.4**
AMGA Amorgos Island 2.66 14 P **Pn 17 10 13.8 +2.1**
APE Apeiranthos 2.84 7 P **Pn 17 10 14.7 +0.5**
SERI Serifos 2.95 351 P **Pn 17 10 16.1 +0.4**
VLI Veliai 3.03 325 P **Pn 17 10 17.3 +0.6**
DID Didima 3.59 336 P **Pn 17 10 24.8 +0.4**
EPID Epidavros 3.73 335 P **Pn 17 10 26.8 +0.5**
ITM Ithomi 3.90 320 *e*Pn **Pn 17 10 29.6 +0.9**
ITM Ithomi 3.90 320 P **Pn 17 10 29.6 +0.9**
VIL2 Platees 4.23 340 P **Pn 17 10 32.9 -0.3**
EREA Eretria 4.27 348 P **Pn 17 10 34.8 +0.9**
AGG Agios Georgios 5.26 336 *e*Pn **Pn 17 10 48.5 +1.1**
LIT Litokhoron 6.21 341 *e*Pn **Pn 17 11 00.4 +0.1**
ALN Alexandroupoli 6.69 6 *e*Pn **Pn 17 11 08.0 +1.1**
FNA Florina 7.17 337 *e*Pn **Pn 17 11 13.2 -0.4**
TIP Timpagrande 8.31 309 *e*Pn **Pn 17 11 30.1 +0.9**
ANTO Ankara 8.33 45 *e*Pn **Pn 17 11 30.5 +1.0**
VTS Vitosha 8.49 351 *e*Pn **Pn 17 11 30.5 -1.3**
MMAI Mount Meron Ar 8.68 95 Pn **Pn 17 11 33.6 -0.9**
comp=N,0.7nm,0.3s,baz=284,slow=12,SNR=3.6
BR101 Keskin Array S 8.75 49 *e*Pn **Pn 17 11 37.6 +2.1**
BRTR Keskin Array B 8.75 49 Pn **Pn 17 11 37.6 +2.1**
comp=N,0.1nm,0.3s,baz=254,slow=10,SNR=2.7
TTG Podgorica 9.37 332 *e*Pn **Pn 17 11 41.6 -2.1**
EIL Elat 9.53 116 Pn **Pn 17 11 45.3 -0.7**
comp=N,0.9nm,0.3s,baz=307,slow=10,SNR=3.2
MLR Muntele Rosu 11.25 3 *e*Pn **Pn 17 12 06.3 -3.4**
VRAC Vranov 16.32 340 Pn **P 17 13 20.0 -0.4**
comp=N,0.7nm,0.3s,baz=164,slow=10.0,SNR=7.1
FUORN Ofenpass-Fuorn 16.71 322 *e*P **P 17 13 27.6 +2.5**
comp=N,5.2nm,0.6s
KIV Kislovodsk 16.72 49 *e*Pn **Pn 17 13 21.6 -1.3**
comp=N,4.7nm,0.8s
AKASG Malin Array Be 16.72 9 Pn **Pn 17 13 23.1 +0.4**
comp=N,1.5nm,0.3s,baz=199,slow=10,SNR=13
AKBB Malin Array Si 16.72 9 *e*P **Pn 17 13 23.3 +0.5**
comp=N,8.0nm,0.8s
KBZ Khabaz 16.74 50 Pn **P 17 13 24.7 -0.4**
comp=N,0.1nm,0.3s,baz=260,slow=12,SNR=5.2
GEC2 GERESS Array S 16.87 333 *e*P **P 17 13 25.9 -0.7**
comp=N,6.1nm,0.6s
GERES GERESS Array B 16.87 333 Pn **P 17 13 27.0 +0.4**
comp=N,1.0nm,0.3s,baz=144,slow=12,SNR=29
TUE Stuetta 17.09 320 *e*P **P 17 13 31.1 +1.9**
comp=N,7.0nm,1.2s
KHC Kasperske Hory 17.15 334 *e*P **P 17 13 30.4 +0.8**
comp=N,1.0nm,0.8s
KHC Kasperske Hory 17.15 334 *e*P **Pn 17 13 28.0 -0.2**
SENIN Lac Senin/Sane 18.14 317 *e*P **P 17 13 41.8 +1.1**
comp=N,7.0nm,1.3s
BFO Black Forest 18.83 323 *e*P **Pn 17 13 48.8 0.0**
comp=N,6.9nm,1.3s
CLL Collm 19.18 336 *e*P **P 17 13 52.5 +0.6**
comp=N,4.8nm,1.1s
ECH Echery 19.35 322 *e*P P 17 13 45.9 -7.9
comp=N,16nm,1.8s
ESDC Sonseca Array 23.79 292 P **P 17 14 40.7 -0.3**
comp=N,0.2nm,0.4s,baz=80,slow=8.7,SNR=4.2
HFS Hagfors 26.96 347 P **P 17 15 08.2 -1.4**
comp=N,1.4nm,0.6s,baz=163,slow=10,SNR=7.7
FIA0 FINESS Array S 27.23 1 *e*P **P 17 15 10.0 -1.9**
FINES FINESS Array B 27.23 1 P **P 17 15 10.0 -1.9**
comp=N,2.0nm,0.8s,baz=154,slow=14,SNR=4.3
KONO Kongsberg 27.39 343 *e*P **P 17 15 15.6 +2.2**
comp=N,76nm,1.8s
NC602 NORSAR Array S 27.93 346 *e*P **P 17 15 17.5 -0.7**
comp=N,39nm,1.4s
NAO01 NORSAR Array S 28.16 345 *e*P **P 17 15 19.7 -0.7**
comp=N,86nm,1.6s
NC405 NORSAR Array S 28.24 346 *e*P **P 17 15 22.2 +1.2**
NB201 NORSAR Array S 28.26 346 *e*P **P 17 15 20.9 -0.3**
comp=N,20nm,1.3s
NB2 NORSAR Subarra 28.27 346 P **P 17 15 19.9 -1.4**
comp=Z,0.2nm,0.3s,baz=147,slow=9.3
NB200 NORSAR Array S 28.27 346 *e*P **P 17 15 20.5 -0.8**
NOA NORSAR Array B 28.27 346 P **P 17 15 20.5 -0.8**
comp=Z,0.5nm,0.7s,baz=184,slow=17,SNR=3.9
NBO00 NORSAR Array S 28.35 345 *e*P **P 17 15 21.9 -0.2**
comp=Z,125nm,1.9s
NC303 NORSAR Array S 28.41 346 *e*P **P 17 15 20.9 -1.6**
comp=Z,16nm,1.3s
EKA Eskdalemuir Ar 28.76 326 P **P 17 15 25.7 0.0**
comp=Z,0.9nm,0.5s,baz=122,slow=9.3,SNR=4.9
DSB Dublin 29.27 320 *e*P **P 17 15 30.7 +0.4**
comp=Z,33nm,1.2s
TOA1 Torodi Ar. Sit 29.86 231 *e*P **P 17 15 36.8 +0.9**
TOA0 Torodi Ar. Sit 29.86 231 *e*P **P 17 15 37.0 +1.2**
comp=Z,3.5nm,0.9s
TORD Torodi Ar. Bea 29.86 231 P **P 17 15 36.8 +0.9**
comp=Z,1.0nm,0.4s,baz=30,slow=8.9,SNR=13
ARU Arti 31.83 36 *e*P **P 17 15 53.8 +1.0**
comp=Z,16nm,1.6s
ARA0 ARCESS Array S 35.34 0 *e*P **P 17 16 21.5 -1.8**
ARCES ARCESS Array B 35.34 0 P **P 17 16 21.5 -1.8**
comp=Z,6.7nm,0.3s,baz=171,slow=8.6,SNR=4.1
MAKZ Makanchi 44.11 56 *e*P **P 17 17 36.8 +0.3**
comp=Z,2.2nm,1.4s
MK31 Makanchi Array 44.33 56 *e*P **P 17 17 39.3 +1.1**
comp=Z,3.7nm,1.5s
MK32 Makanchi Array 44.33 56 *e*P **P 17 17 38.4 +0.2**
MKAR Makanchi Array 44.33 56 P **P 17 17 38.4 +0.2**
comp=Z,0.7nm,0.6s,baz=263,slow=7.3,SNR=6.9
ZAA0 Zalesovo Array 45.68 46 *e*P **P 17 17 48.1 -0.7**
comp=Z,1.6nm,0.5s
ZAA1 Zalesovo Array 45.68 46 *e*P **P 17 17 48.5 -0.2**
ZALV Zalesovo Beam 45.68 46 P **P 17 17 48.5 -0.2**
comp=Z,1.7nm,0.5s,baz=267,slow=8.4,SNR=5.5
SONA0 Songino Array 60.11 50 *e*P **P 17 19 35.4 -0.2**
SONM Songino Array 60.11 50 P **P 17 19 35.4 -0.2**
comp=Z,0.5nm,0.5s,baz=284,slow=5.8,SNR=3.6
KSRS Korea Array 78.88 52 P **P 17 21 31.8 +0.4**
comp=Z,0.4nm,0.5s,baz=315,slow=3.9,SNR=2.9
ILAR Eielson Array 81.11 357 P **P 17 21 43.3 +0.3**
comp=Z,0.2nm,0.6s,baz=345,slow=5.5,SNR=2.6

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*IDC **15** 17:10:35.0±0.7,34°.25N×25°.06E,h0km,mb4.2/14, mb1 4.3/19,mb1mx4.0/45,mbtmp4.2/19,ML4.4/5,Error ellipse: s-maj=15.9km s-min=13.2km az=114.0*
*NEIC **15** 17:10:36.7±2.6,34°.18N×25°.09E,h12km±5km,mb4.5/26, ML3.9(THE),Error ellipse: s-maj=10.6km s-min=6.7km az=220.0*
*ISK **15** 17:10:38.9,34°.35N×25°.10E,h13km,ML3.9/13*
*THE **15** 17:10:39.8,34°.29N×25°.06E,h7km±4km,ML3.9/2,Error ellipse: s-maj=4.7km s-min=1.6km az=349.0*
*ISCJB **15** 17:10:39.5±0.6,34°.24N±0°.04×25°.14E±0°.03,h50km±4km, mb4.3/27,Error ellipse: s-maj=7.0km s-min=4.2km az=5.1*
*ATH **15** 17:10:40.3,34°.36N×25°.09E,h35km±2km,ML3.6/8,Error ellipse: s-maj=4.0km s-min=1.7km az=6.0*
ISC 15 17:10:39.4±1.3,**34°24N**±0°.05×**25°07E**±0°.04,**h31**km±9km, **n119**,σ1**9**50/138,**mb4.5**/5/27,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.81**	**344**	P	**Pn**	**17 10 54.6**	**-0.1**
SIVA				S	**Sn**	**17 11 05.4**	**-0.3**
SIVA	**Sivas**	**0.81**	**344**	P	**Pn**	**17 10 54.7**	**-0.1**
SIVA				S	**Sb**	**17 11 05.2**	**-0.4**
SIVA				AML	AML	17 11 06.3	
	comp=N,28058μm,0.7s						
SIVA				AML	AML	17 11 07.6	
	comp=E,38121μm,0.6s						
TMBK	**Timbaki Herakl**	**0.87**	**343**	P	**Pn**	**17 10 55.2**	**-0.4**
TMBK				S	**Sb**	**17 11 08.0**	**+0.6**
LAST	**Lasithi**	**0.98**	**20**	P	**Pn**	**17 10 56.7**	**-0.5**
LAST	**Lasithi**	**0.98**	**20**	P	**Pn**	**17 10 56.5**	**-0.7**
LAST				S	**Sn**	**17 11 09.8**	**-0.2**
LAST				AML	AML	17 11 17.5	
	comp=E,6187μm,0.6s						
LAST				AML	AML	17 11 23.4	
	comp=N,4964μm,1.2s						
GVD	**Gavdhos**	**1.01**	**307**	PG	**Pb**	**17 10 58.2**	**-0.2**
GVD				SG	**Sb**	**17 11 11.9**	**+0.5**
GVD	**Gavdhos**	**1.01**	**307**	P	**Pb**	**17 10 58.0**	**-0.4**
GVD				S	**Sb**	**17 11 11.5**	**+0.1**
GVD	**Gavdhos**	**1.01**	**307**	P	**Pb**	**17 10 58.1**	**-0.4**
GVD				AML	AML	17 11 16.6	
	comp=N,9797μm,0.4s						
GVD				AML	AML	17 11 27.4	
	comp=E,13354μm,0.5s						
IDI	**Anoyia**	**1.06**	**352**	Pn	**Pb**	**17 10 59.0**	**-0.3**
	comp=E,133nm,0.3s,baz=161,slow=22,SNR=7.3						
IDI				Sn	**Sb**	**17 11 12.8**	**-0.1**
	comp=E,237nm,0.3s,baz=96,slow=17,SNR=10						
IDI	**Anoyia**	**1.06**	**352**	P	**Pn**	**17 10 57.6**	**-0.6**
IDI				AML	AML	17 11 20.0	
	comp=E,3782μm,0.6s						
IDI				AML	AML	17 11 20.2	
	comp=N,4276μm,0.4s						
KSTL	**Kastelli Herak**	**1.06**	**360**	P	**Pn**	**17 10 57.8**	**-0.4**
KSTL				S	**Sn**	**17 11 11.4**	**-0.6**
IACM	**Heraklion**	**1.07**	**360**	P	**Pb**	**17 10 59.4**	**0.0**
NPS	**Neapolis**	**1.11**	**23**	P	**Pn**	**17 10 59.5**	**+0.5**
NPS	**Neapolis**	**1.11**	**23**	P	**Pn**	**17 10 59.5**	**+0.5**
NPS				S	**Sn**	**17 11 12.8**	**-0.4**
NPS				AML	AML	17 11 17.1	
	comp=N,3664μm,0.5s						
NPS				AML	AML	17 11 28.3	
	comp=E,4725μm,0.7s						
ZKR	**Zakros**	**1.29**	**47**	PN	**Pn**	**17 11 02.0**	**+0.7**
ZKR				SN	**Sn**	**17 11 18.9**	**+1.4**
ZKR	**Zakros**	**1.29**	**47**	P	**Pn**	**17 11 01.8**	**+0.5**
ZKR	**Zakros**	**1.29**	**47**	P	**Pb**	**17 11 03.0**	**-0.1**
ZKR				AML	AML	17 11 31.0	
	comp=E,5763μm,0.6s						
ZKR				AML	AML	17 11 31.1	
	comp=N,2519μm,0.6s						
VAM	**Vamos**	**1.37**	**329**	P	**Pb**	**17 11 04.0**	**-0.5**
VAM	**Vamos**	**1.37**	**329**	P	**Pb**	**17 11 03.9**	**-0.5**
VAM				S	**Sb**	**17 11 20.5**	**-1.1**
VAM				AML	AML	17 11 32.1	
	comp=E,6720μm,0.6s						
VAM				AML	AML	17 11 33.3	
	comp=N,4333μm,0.7s						
IMMV	**Iera Moni Meta**	**1.52**	**324**	PN	**Pn**	**17 11 05.1**	**+0.7**
IMMV	**Iera Moni Meta**	**1.52**	**324**	P	**Pn**	**17 11 05.2**	**+0.8**
IMMV				AML	AML	17 11 36.6	
	comp=N,4566μm,0.4s						
IMMV				AML	AML	17 11 44.6	
	comp=E,4783μm,0.8s						
THR6	**Thira Island,**	**2.13**	**7**	P	**Pn**	**17 11 13.5**	**+0.6**
SANT	**Santorini**	**2.15**	**8**	*e*Pn	**Pn**	**17 11 14.5**	**+1.2**
KARP	**Karpathos**	**2.16**	**52**	PN	**Pn**	**17 11 14.8**	**+1.5**
KARP	**Karpathos**	**2.16**	**52**	*e*Pn	**Pn**	**17 11 15.8**	**+2.5**
KARP	**Karpathos**	**2.16**	**52**	P	**Pn**	**17 11 16.2**	**+2.9**
KARP	**Karpathos**	**2.16**	**52**	P	**Pn**	**17 11 15.3**	**+2.0**
ANKY	**Antikythira Is**	**2.18**	**319**	P	**Pn**	**17 11 15.4**	**+1.8**
THR3	**Thira Island,**	**2.18**	**7**	P	**Pn**	**17 11 13.9**	**+0.3**
THR5	**Thira Island,**	**2.19**	**6**	P	**Pn**	**17 11 14.9**	**+1.2**
ANAF	**Anafi Island**	**2.19**	**15**	P	**Pn**	**17 11 14.6**	**+0.9**
IOSP	**Ios island**	**2.49**	**4**	P	**Pn**	**17 11 18.1**	**+0.3**
MHLO	**Agia Marina, M**	**2.51**	**348**	P	**Pn**	**17 11 18.9**	**+0.8**
MHLA	**Plaka, Milos I**	**2.56**	**348**	P	**Pn**	**17 11 20.5**	**+1.8**
KYTH	**Kithira**	**2.62**	**321**	P	**Pn**	**17 11 22.2**	**+2.6**
APE	**Apeiranthos**	**2.85**	**7**	P	**Pn**	**17 11 23.6**	**+0.8**
SERI	**Serifos**	**2.96**	**351**	P	**Pn**	**17 11 24.8**	**+0.5**
VLI	**Veliai**	**3.03**	**325**	P	**Pn**	**17 11 27.2**	**+1.9**
ARG	**Arkhangelos**	**3.19**	**51**	PN	**Pn**	**17 11 28.9**	**+1.5**
ARG	**Arkhangelos**	**3.19**	**51**	P	**Pn**	**17 11 28.8**	**+1.5**
DAT	**Datca**	**3.22**	**39**	PN	**Pn**	**17 11 29.2**	**+1.2**
DID	**Didima**	**3.59**	**336**	P	**Pn**	**17 11 33.3**	**+0.3**
EPID	**Epidavros**	**3.72**	**335**	P	**Pn**	**17 11 35.8**	**+1.0**
VLY	**Voula,Athens**	**3.75**	**344**	P	**Pn**	**17 11 35.9**	**+0.7**
ITM	**Ithomi**	**3.90**	**320**	*e*Pn	**Pn**	**17 11 37.0**	**-0.2**
YER	**Yerkesik**	**3.90**	**41**	PN	**Pn**	**17 11 38.9**	**+1.7**
YER	**Yerkesik**	**3.90**	**41**	P	**Pn**	**17 11 38.9**	**+1.7**
TURN	**Turunc**	**3.90**	**47**	PN	**Pn**	**17 11 34.7**	**-2.5**
AKAS	**Kas**	**4.21**	**60**	PN	**Pn**	**17 11 43.8**	**+2.2**
URLA	**Izmir**	**4.29**	**16**	PN	**Pn**	**17 11 44.0**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**4.35**	**31**	PN	**Pn**	**17 11 45.1**	**+1.6**
KORT	**Korkueli**	**5.11**	**56**	PN	**Pn**	**17 11 56.3**	**+2.4**
KULA	**Kula-Manisa**	**5.16**	**33**	PN	**Pn**	**17 11 56.3**	**+1.7**
AGG	**Agios Georgios**	**5.26**	**336**	*e*Pn	**Pn**	**17 11 58.1**	**+2.2**
LIT	**Litokhoron**	**6.21**	**341**	*e*Pn	**Pn**	**17 12 09.1**	**+0.1**
LIT				*e*Sn	**Sn**	**17 13 20.9**	**+2.2**
ALN	**Alexandroupoli**	**6.69**	**6**	*e*Pn	**Pn**	**17 12 15.7**	**+0.1**
FNA	**Florina**	**7.16**	**337**	*e*Pn	**Pn**	**17 12 20.3**	**-1.8**
FNA				*e*Sn	**Sn**	**17 13 37.6**	**-4.9**
TIP	**Timpagrande**	**8.30**	**309**	*e*Pn	**Pn**	**17 12 39.0**	**+1.3**
TIP				*e*		17 13 59.5	
VTS	**Vitosha**	**8.49**	**351**	*e*Pn	**Pn**	**17 12 38.7**	**-1.7**
MMAI	**Mount Meron Ar**	**8.70**	**95**	Pn	**Pn**	**17 12 43.0**	**-0.2**
	comp=E,3.9nm,0.3s,baz=273,slow=10.0,SNR=5.9						
MMAI				Sn	**Sn**	**17 14 14.4**	**-5.9**
	comp=E,2.3nm,0.3s,baz=290,slow=21,SNR=3.5						
BR101	**Keskin Array S**	**8.77**	**49**	*e*Pn	**Pn**	**17 12 44.4**	**+0.2**
BR101				*e*Sn	**Sn**	**17 14 21.9**	**-0.2**
BR131	**Keskin Array S**	**8.77**	**49**	*e*Pn	**Pn**	**17 12 43.9**	**-0.4**
BRTR	**Keskin Array B**	**8.77**	**49**	Pn	**Pn**	**17 12 44.4**	**+0.2**
	comp=E,0.2nm,0.3s,baz=223,slow=14,SNR=4.1						
BRTR				Sn	**Sn**	**17 14 21.8**	**-0.2**
	comp=E,0.2nm,0.3s,baz=215,slow=27,SNR=4.1						
TTG	**Podgorica**	**9.37**	**333**	*e*Pn	**Pn**	**17 12 51.0**	**-1.2**
TTG				*e*Sn	**Sn**	**17 14 28.5**	**-8.0**
EIL	**Elat**	**9.54**	**116**	Pn	**Pn**	**17 12 53.9**	**-0.9**
	comp=E,2.3nm,0.3s,baz=320,slow=3.9,SNR=9.4						
EIL				Sn	**Sn**	**17 14 37.8**	**-3.2**
	comp=E,1.6nm,0.3s,baz=338,slow=16,SNR=3.3						
ASF	**Jabal al Asfar**	**10.12**	**98**	Sn	**Sn**	**17 14 54.2**	**-0.9**
	comp=E,0.4nm,0.3s,baz=127,slow=20,SNR=2.7						
FUORN	**Ofenpass-Fuorn**	**16.70**	**322**	*e*P	**P**	**17 14 33.8**	**+0.5**
	comp=E,5.8nm,1.1s						
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**Pn**	**17 14 31.7**	**+0.3**
	comp=E,2.5nm,0.3s,baz=200,slow=10,SNR=17						
AKBB	**Malin Array Si**	**16.73**	**9**	*e*Pn	**Pn**	**17 14 31.1**	**-0.2**
	comp=E,14nm,0.7s						
KIV	**Kislovodsk**	**16.74**	**49**	*e*Pn	**Pn**	**17 14 31.3**	**-0.3**
	comp=E,9.0nm,0.9s						
KBZ	**Khabaz**	**16.76**	**50**	Pn	**P**	**17 14 35.9**	**+2.1**
	comp=E,0.4nm,0.3s,baz=255,slow=11,SNR=5.6						
GEC2	**GERESS Array S**	**16.87**	**333**	*e*P	**P**	**17 14 35.7**	**+0.7**
	comp=E,8.1nm,0.6s						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**P**	**17 14 35.2**	**+0.2**
	comp=E,1.0nm,0.3s,baz=145,slow=12,SNR=22						
TUE	**Stuetta**	**17.08**	**320**	*e*P	**P**	**17 14 39.3**	**+1.8**
	comp=E,3.9nm,1.0s						
KHC	**Kasperske Hory**	**17.15**	**334**	*e*P	**P**	**17 14 39.3**	**+1.2**
	comp=E,3.3nm,1.2s						
KHC	**Kasperske Hory**	**17.15**	**334**	*e*P	**P**	**17 14 39.0**	**+0.9**
DPC	**Dobruska-Polom**	**17.33**	**341**	*e*P	**P**	**17 14 41.2**	**+1.1**
BFO	**Black Forest**	**18.82**	**323**	*e*P	**Pn**	**17 14 58.5**	**+1.3**
	comp=E,3.9nm,0.9s						
CLL	**Collm**	**19.18**	**336**	*e*pP	**Pn**	**17 15 03.0**	**+1.6**
CLL				*e*		17 15 11.0	
CLL				*e*PP	**PnPn**	**17 15 15.0**	**+0.5**
SUW	**Suwalki**	**19.82**	**357**	*e*P	**P**	**17 15 06.3**	**-1.0**
	comp=E,27nm,0.5s						
RAYN	**Ar Rayn**	**20.80**	**116**	*e*P	**P**	**17 15 17.5**	**-0.7**
	comp=E,8.1nm,1.4s						
ESDC	**Sonseca Array**	**23.77**	**292**	P	**P**	**17 15 49.5**	**+0.2**
	comp=E,1.1nm,0.8s,baz=83,slow=9.2,SNR=5.8						
FIA0	**FINESS Array S**	**27.23**	**1**	*e*P	**P**	**17 16 18.6**	**-1.8**
FINES	**FINESS Array B**	**27.23**	**1**	P	**P**	**17 16 18.6**	**-1.8**
	comp=E,4.1nm,0.9s,baz=186,slow=15,SNR=4.0						
FIA1	**FINESS Array S**	**27.23**	**1**	*e*P	**P**	**17 16 21.7**	**+1.3**
	comp=E,13nm,1.3s						
NC602	**NORSAR Array S**	**27.93**	**346**	*e*P	**P**	**17 16 25.4**	**-1.2**
NAO01	**NORSAR Array S**	**28.16**	**345**	*e*P	**P**	**17 16 27.9**	**-0.8**
	comp=E,49nm,1.4s						
NC405	**NORSAR Array S**	**28.24**	**346**	*e*P	**P**	**17 16 28.9**	**-0.5**
	comp=E,28nm,1.5s						
NB201	**NORSAR Array S**	**28.27**	**346**	*e*P	**P**	**17 16 29.6**	**0.0**
	comp=E,163nm,1.8s						
NB200	**NORSAR Array S**	**28.27**	**346**	*e*P	**P**	**17 16 27.9**	**-1.8**
NOA	**NORSAR Array B**	**28.27**	**346**	P	**P**	**17 16 28.0**	**-1.8**
	comp=E,1.0nm,0.9s,baz=140,slow=9.1,SNR=3.1						
NBO00	**NORSAR Array S**	**28.35**	**345**	*e*P	**P**	**17 16 30.3**	**-0.1**
	comp=E,26nm,1.4s						
EKA	**Eskdalemuir Ar**	**28.76**	**326**	P	**P**	**17 16 34.8**	**+0.7**
	comp=E,0.4nm,0.4s,baz=122,slow=10,SNR=3.5						
TOA1	**Torodi Ar. Sit**	**29.85**	**231**	*e*P	**P**	**17 16 43.7**	**-0.4**
TOA0	**Torodi Ar. Sit**	**29.85**	**231**	*e*P	**P**	**17 16 45.2**	**+1.1**
	comp=E,9.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**29.85**	**231**	P	**P**	**17 16 43.7**	**-0.4**
	comp=E,5.2nm,0.5s,baz=29,slow=9.2,SNR=23						
ARU	**Arti**	**31.84**	**36**	P	**P**	**17 17 01.4**	**+0.1**
	comp=E,0.8nm,0.4s,baz=246,slow=10.0,SNR=3.4						
ARU	**Arti**	**31.84**	**36**	*e*P	**P**	**17 17 01.5**	**+0.1**
	comp=E,28nm,2.0s						
ARA0	**ARCESS Array S**	**35.35**	**0**	*e*P	**P**	**17 17 30.3**	**-1.4**
ARCES	**ARCESS Array B**	**35.35**	**0**	P	**P**	**17 17 30.3**	**-1.4**
	comp=E,7.9nm,0.3s,baz=186,slow=8.2,SNR=4.6						
DBIC	**Dimbokro**	**38.94**	**232**	P	**P**	**17 18 02.5**	**-0.1**
	comp=E,7.8nm,1.1s,baz=31,slow=12,SNR=3.5						
DBIC	**Dimbokro**	**38.94**	**232**	*e*P	**P**	**17 18 03.4**	**+0.7**
	comp=E,19nm,1.4s						
NIL	**Nilore**	**39.67**	**77**	*e*P	**P**	**17 18 07.0**	**-1.7**
	comp=E,6.0nm,0.6s						
MAKZ	**Makanchi**	**44.13**	**56**	*e*P	**P**	**17 18 45.6**	**+0.6**
	comp=E,2.6nm,1.3s						
MK31	**Makanchi Array**	**44.35**	**56**	*e*P	**P**	**17 18 47.1**	**+0.4**
	comp=E,1.6nm,0.8s						
MK32	**Makanchi Array**	**44.35**	**56**	*e*P	**P**	**17 18 47.4**	**+0.6**
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**17 18 47.4**	**+0.6**
	comp=E,1.6nm,0.6s,baz=279,slow=6.8,SNR=9.4						
KBS	**Kingsbay**	**45.13**	**356**	*e*P	**P**	**17 18 55.5**	**+3.0**
	comp=E,22nm,1.4s						
ZAA0	**Zalesovo Array**	**45.70**	**46**	*e*P	**P**	**17 18 57.2**	**0.0**
	comp=E,3.0nm,0.4s						
ZALV	**Zalesovo Beam**	**45.70**	**46**	P	**P**	**17 18 57.1**	**-0.2**
	comp=E,3.7nm,0.4s,baz=267,slow=8.9,SNR=12						
ZAA1	**Zalesovo Array**	**45.70**	**46**	*e*P	**P**	**17 18 57.1**	**-0.2**
SUMG	**Summit**	**49.81**	**339**	*e*P	**P**	**17 19 30.4**	**+1.0**
	comp=E,6.4nm,1.3s						
SONA0	**Songino Array**	**60.13**	**50**	*e*P	**P**	**17 20 43.5**	**-0.5**
SONM	**Songino Array**	**60.13**	**50**	P	**P**	**17 20 43.5**	**-0.5**
	comp=E,0.6nm,0.5s,baz=287,slow=6.8,SNR=4.2						
BOSA	**Boshof**	**62.51**	**180**	P	**P**	**17 21 01.4**	**+1.3**
	comp=E,1.9nm,0.7s,baz=349,slow=5.2,SNR=2.7						
BOSA	**Boshof**	**62.51**	**180**	*e*P	**P**	**17 20 59.8**	**-0.4**
	comp=E,60nm,1.8s						
SCHQ	**Schefferville**	**63.84**	**320**	*e*P	**P**	**17 21 08.1**	**-0.6**
	comp=E,21nm,1.6s						
USRK	**Ussuriysk Ar.**	**77.54**	**45**	P	**P**	**17 22 32.1**	**-0.1**
	comp=E,1.8nm,0.6s,baz=270,slow=4.3,SNR=5.0						
KSRS	**Korea Array**	**78.90**	**52**	P	**P**	**17 22 40.9**	**+1.0**
	comp=E,0.6nm,0.7s,baz=316,slow=4.8,SNR=4.3						

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*IDC **15** 17:11:39.7±1.4,34°.30N×25°.10E,h0km,mb4.0/4, mb1 3.9/9,mb1mx3.6/44,mbtmp3.8/9,ML4.1/3,Error ellipse: s-maj=23.6km s-min=18.7km az=62.0*
*ISCJB **15** 17:11:40.9±0.9,34°.23N±0°.09×25°.34E±0°.09,h25km, mb3.9/4,Error ellipse: s-maj=15.1km s-min=6.3km az=40.4*
ISC 15 17:11:42.8±1.1,**34°3N**±0°.1×**25°24E**±0°.10,**h25**km,**n10**, σ1**9**32/12,**mb3.9**/4,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.02**	**344**	Pn	**Pn**	**17 12 01.2**	**-0.3**
	46nm,0.3s,baz=166,slow=8.5,SNR=1.8						
IDI				Sn	**Sn**	**17 12 14.9**	**-0.3**
	101nm,0.3s,baz=303,slow=20,SNR=3.5						
MMAI	**Mount Meron Ar**	**8.57**	**96**	Pn	**Pn**	**17 13 47.0**	**+1.7**
	baz=264,slow=14,SNR=1.9						
MMAI				Sn	**Sn**	**17 15 19.7**	**-1.6**
	2.8nm,0.3s,baz=284,slow=21,SNR=3.1						
BRTR	**Keskin Array B**	**8.62**	**49**	Pn	Pn	17 13 50.9	+4.9
	0.1nm,0.3s,baz=225,slow=14,SNR=2.2						
EIL	**Elat**	**9.45**	**117**	Pn	**Pn**	**17 13 57.5**	**+0.2**
	1.4nm,0.3s,baz=328,slow=15,SNR=2.5						
EIL				Sn	**Sn**	**17 15 41.4**	**-1.4**
	0.9nm,0.3s,baz=74,slow=19,SNR=2.0						
AKASG	**Malin Array Be**	**16.64**	**9**	Pn	**Pn**	**17 15 32.1**	**-2.0**
	0.7nm,0.3s,baz=199,slow=10,SNR=2.5						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**P**	**17 15 39.1**	**+0.1**
	0.3nm,0.3s,baz=149,slow=12,SNR=3.5						
HFS	**Hagfors**	**26.92**	**347**	P	**P**	**17 17 22.7**	**+1.0**
	0.9nm,0.5s,baz=163,slow=11,SNR=2.8					

LAST AML AML 17 22 53.9
comp=N,22799µm,1.0s
GVD Gavdhos 1.01 308 PG **Pb 17 22 24.5 +0.4**
GVD SG **Sn 17 22 38.2 +0.8**
GVD Gavdhos 1.01 308 *e*Pn **Pb 17 22 24.4 +0.4**
GVD Gavdhos 1.01 308 P **Pb 17 22 24.4 +0.4**
GVD Gavdhos 1.01 308 P **Pb 17 22 24.5 +0.4**
IDI Anoyia 1.07 353 Pn **Pn 17 22 24.9 -0.1**
comp=N,298nm,0.3s,baz=178,slow=16,SNR=127
IDI Sn **Sn 17 22 39.4 +0.2**
comp=N,2µm,0.3s,baz=256,slow=17,SNR=28
IDI Anoyia 1.07 353 *e*Pn **Pn 17 22 24.2 -0.8**
IDI *e*Sn **Sb 17 22 38.2 -0.7**
IDI Anoyia 1.07 353 P **Pn 17 22 24.2 -0.8**
IDI S **Sb 17 22 38.2 -0.7**
KSTL Kastelli Herak 1.08 1 P **Pn 17 22 24.1 -0.9**
IACM Heraklion 1.08 1 P **Pb 17 22 25.4 0.0**
IACM Heraklion 1.08 1 P **Pb 17 22 26.3 +0.9**
IACM S **Sn 17 22 39.9 +0.7**
NPS Neapolis 1.14 24 P **Pb 17 22 26.1 -0.2**
NPS Neapolis 1.14 24 P **Pb 17 22 26.3 -0.1**
NPS S **Sb 17 22 40.4 -0.2**
NPS AML AML 17 22 56.8
comp=E,21545µm,0.6s
NPS AML AML 17 23 00.5
comp=N,13081µm,0.8s
PRNS Prines Rethymn 1.23 339 P **Pb 17 22 28.0 +0.2**
STIA Sitia Lasithi 1.30 41 P **Pb 17 22 29.5 +0.4**
ZKR Zakros 1.31 47 PN **Pn 17 22 28.7 +0.5**
ZKR SN **Sn 17 22 45.1 +0.1**
ZKR Zakros 1.31 47 *e*Pn **Pb 17 22 29.2 -0.1**
ZKR *e*Pn **Pb 17 22 29.2 -0.1**
ZKR *e*Sn **Sb 17 22 48.6 +2.9**
ZKR *e*Sn **Sb 17 22 48.6 +2.9**
ZKR Zakros 1.31 47 P **Pb 17 22 29.2 -0.1**
ZKR S **Sb 17 22 48.6 +2.9**
ZKR Zakros 1.31 47 P **Pb 17 22 29.6 +0.4**
VAM Vamos 1.38 330 P **Pb 17 22 30.1 -0.3**
VAM S **Sb 17 22 49.7 +2.2**
VAM Vamos 1.38 330 P **Pb 17 22 30.5 +0.1**
VAM S **Sb 17 22 49.9 +2.4**
VAM AML AML 17 23 01.9
comp=E,55948µm,0.6s
VAM AML AML 17 23 04.0
comp=N,22285µm,0.8s
IMMV Iera Moni Meta 1.52 325 PN **Pn 17 22 31.9 +0.9**
IMMV Iera Moni Meta 1.52 325 P **Pb 17 22 32.4 -0.4**
IMMV Iera Moni Meta 1.52 325 P **Pb 17 22 32.8 0.0**
IMMV S **Sb 17 22 51.7 +0.1**
IMMV AML AML 17 23 06.3
comp=N,25892µm,0.9s
IMMV AML AML 17 23 08.6
comp=E,34955µm,0.7s
CHAN Chania 1.54 328 P **Pb 17 22 33.2 +0.1**
THR9 Santorini-Faro 2.15 7 P **Pn 17 22 41.0 +1.3**
THR6 Thira Island, 2.15 7 *e*Pn **Pn 17 22 40.1 +0.4**
THR6 Thira Island, 2.15 7 P **Pn 17 22 40.1 +0.4**
SANT Santorini 2.17 9 PN **Pn 17 22 40.2 +0.1**
SANT Santorini 2.17 9 *e*Pn **Pn 17 22 39.5 -0.5**
SANT Santorini 2.17 9 P **Pn 17 22 40.6 +0.5**
SANT Santorini 2.17 9 ⇓*i*P **Pn 17 22 40.7 +0.6**
SANT Santorini 2.17 9 P **Pn 17 22 40.7 +0.6**
ANKY Antikythira Is 2.18 319 *e*Pn **Pb 17 22 42.3 -1.8**
ANKY Antikythira Is 2.18 319 P **Pb 17 22 42.3 -1.8**
ANKY Antikythira Is 2.18 319 P **Pb 17 22 42.3 -1.8**
THR3 Thira Island, 2.20 7 *e*Pn **Pn 17 22 41.4 +1.0**
THR3 Thira Island, 2.20 7 P **Pn 17 22 41.4 +1.0**
THR5 Thira Island, 2.21 6 P **Pn 17 22 41.7 +1.2**
ANAF Anafi Island 2.21 15 P **Pn 17 22 42.0 +1.4**
ANAF Anafi Island 2.21 15 P **Pn 17 22 42.2 +1.6**
THR7 Fira-Santorini 2.22 8 P **Pn 17 22 41.8 +1.1**
SAP3 Santorini-Thir 2.22 6 P **Pn 17 22 42.0 +1.3**
SAP3 Santorini-Thir 2.22 6 P **Pn 17 22 41.8 +1.1**
CMBO Columbo, Santo 2.26 7 P **Pn 17 22 42.5 +1.2**
IOSP Ios island 2.50 4 P **Pn 17 22 45.4 +0.8**
IOSP Ios island 2.50 4 P **Pn 17 22 45.4 +0.8**
MHLO Agia Marina, M 2.52 348 P **Pn 17 22 45.6 +0.8**
MHLO Agia Marina, M 2.52 348 P **Pn 17 22 45.7 +0.8**
MHLA Plaka, Milos I 2.57 349 P **Pn 17 22 46.4 +0.9**
KYTH Kithira 2.62 322 *e*Pn **Pn 17 22 48.4 +2.2**
KYTH Kithira 2.62 322 P **Pn 17 22 48.4 +2.2**
KYTH Kithira 2.62 322 P **Pn 17 22 48.0 +1.8**
KTHR Kythira 2.64 321 P **Pn 17 22 48.2 +1.8**
AMGA Amorgos Island 2.69 15 P **Pn 17 22 47.9 +0.7**
AMGA Amorgos Island 2.69 15 P **Pn 17 22 47.3 +0.1**
SLUM Salum 2.73 177 P **Pn 17 22 48.8 +1.2**
baz=182
SLUM AMP 17 23 00.0
baz=182
SLUM S **Sn 17 23 20.8 +0.9**
baz=182
APE Apeiranthos 2.87 8 PN **Pn 17 22 49.8 +0.1**
APE Apeiranthos 2.87 8 *e*Pn **Pn 17 22 50.4 +0.7**
APE Apeiranthos 2.87 8 P **Pn 17 22 50.4 +0.7**
APE Apeiranthos 2.87 8 ⇑*i*P **Pn 17 22 50.4 +0.7**
APE Apeiranthos 2.87 8 *ce*P **Pn 17 22 50.0 +0.3**
APE Apeiranthos 2.87 8 P **Pn 17 22 50.2 +0.6**
SERI Serifos 2.97 351 P **Pn 17 22 51.5 +0.5**
VLI Veliai 3.03 326 *e*Pn **Pn 17 22 52.4 +0.6**
VLI Veliai 3.03 326 P **Pn 17 22 52.4 +0.6**
VLI Veliai 3.03 326 P **Pn 17 22 52.6 +0.7**
ARG Arkhangelos 3.21 51 PN **Pn 17 22 55.8 +1.5**
ARG Arkhangelos 3.21 51 *e*Pn **Pn 17 22 56.4 +2.1**
ARG Arkhangelos 3.21 51 P **Pn 17 22 56.4 +2.1**
ARG Arkhangelos 3.21 51 *e*P **Pn 17 22 56.4 +2.1**
ARG Arkhangelos 3.21 51 P **Pn 17 22 56.5 +2.3**
DAT Datca 3.24 39 PN **Pn 17 22 55.6 +0.7**
DAT Datca 3.24 39 *i*P **Pn 17 22 56.5 +1.6**
DAT IAML_P
comp=Z,1µm,0.1s
BODT Bodrum 3.38 32 PN **Pn 17 22 57.4 +0.7**
BODT Bodrum 3.38 32 *e*Pn **Pn 17 22 58.1 +1.4**
BODT Bodrum 3.38 32 P **Pn 17 22 58.1 +1.4**
BDRM Kayabasi 3.44 34 *i*P **Pn 17 22 59.0 +1.5**
BDRM IAML_P
comp=Z,2µm,0.4s
KRND KRANIDI 3.51 334 P **Pn 17 22 59.0 +0.5**
DID Didima 3.59 336 *e*Pn **Pn 17 22 59.9 +0.3**
DID Didima 3.59 336 P **Pn 17 22 59.9 +0.3**
SMG Samos 3.77 22 P **Pn 17 23 03.1 +1.1**
PYL PYLOS 3.79 316 *e*Pn **Pn 17 23 01.7 -0.6**
PYL PYLOS 3.79 316 P **Pn 17 23 01.7 -0.6**
VLX Vlachokerasia 3.82 326 *e*Pn **Pn 17 23 03.9 +1.1**
VLX Vlachokerasia 3.82 326 P **Pn 17 23 03.9 +1.1**
ATHU Athens Univers 3.88 345 *e*Pn **Pn 17 23 04.1 +0.6**
ATHU Athens Univers 3.88 345 P **Pn 17 23 04.1 +0.6**
ATHU Athens Univers 3.88 345 S **Pn 17 23 04.5 +1.0**
ITM Ithomi 3.90 320 PN **Pn 17 23 04.9 +1.1**
ITM Ithomi 3.90 320 *e*Pn **Pn 17 23 04.0 +0.3**
ITM Ithomi 3.90 320 P **Pn 17 23 04.1 +0.3**
ITM Ithomi 3.90 320 P **Pn 17 23 04.2 +0.4**
DALY Dalyan (Mula) 3.92 48 PN **Pn 17 23 05.2 +1.2**
DALY Dalyan (Mula) 3.92 48 *i*P **Pn 17 23 06.8 +2.8**
DALY IAML_P
comp=Z,3µm,0.4s
YER Yerkesik 3.92 41 PN **Pn 17 23 05.3 +1.2**
YER Yerkesik 3.92 41 *e*Pn **Pn 17 23 06.2 +2.1**
YER Yerkesik 3.92 41 P **Pn 17 23 06.2 +2.1**
YER Yerkesik 3.92 41 *e*P **Pn 17 23 06.2 +2.1**
TURN Turunc 3.92 47 *i*P **Pn 17 23 02.5 -1.6**
TURN IAML_P
comp=Z,4µm,0.3s
PTL Penteli 3.94 346 *e*Pn **Pn 17 23 05.1 +0.8**
PTL Penteli 3.94 346 P **Pn 17 23 05.1 +0.8**
TRIP Tripoli 4.00 326 P **Pn 17 23 06.7 +1.5**
FETY Fethiye 4.08 53 PN **Pn 17 23 06.7 +0.4**
FETY Fethiye 4.08 53 *e*Pn **Pn 17 23 07.2 +0.9**
FETY Fethiye 4.08 53 P **Pn 17 23 07.2 +0.9**
FETY Fethiye 4.08 53 *i*P **Pn 17 23 07.5 +1.2**
FETY IAML_P
comp=Z,3µm,0.4s
DGB zmir 4.10 21 *i*P **Pn 17 23 08.0 +1.5**
DGB IAML_P
comp=Z,2µm,0.3s
AYDN Tasoluk 4.13 33 *i*P **Pn 17 23 09.5 +2.6**
AYDN IAML_P
comp=Z,3µm,0.3s
KSL Kastellorizon 4.18 61 P **Pn 17 23 08.8 +1.2**
AKAS Kas 4.23 60 PN **Pn 17 23 09.8 +1.3**
AKAS Kas 4.23 60 *i*P **Pn 17 23 10.3 +1.8**
AKAS IAML_P
comp=Z,4µm,0.2s
CHOS Chios island 4.24 11 PN **Pn 17 23 08.9 +0.4**
CHOS Chios island 4.24 11 P **Pn 17 23 09.1 +0.6**
EREA Eretria 4.29 348 P **Pn 17 23 10.1 +1.0**
EREA Eretria 4.29 348 S **Pn 17 23 10.5 +1.4**
comp=Z,188nm,0.5s
URLA Izmir 4.32 16 PN **Pn 17 23 10.5 +1.0**
AYDB Zeytinkoy-Aydi 4.37 31 PN **Pn 17 23 11.5 +1.1**
BLCB Balcova 4.46 21 PN **Pn 17 23 12.2 +0.8**
KLV Kalavryta, Ach 4.48 329 P **Pn 17 23 11.9 +0.1**
SKY Skiros Island 4.67 355 *e*Pn **Pn 17 23 15.1 +0.8**
SKY Skiros Island 4.67 355 P **Pn 17 23 15.1 +0.8**
AKUM Antalya-Kumluc 4.81 63 *i*P **Pn 17 23 17.1 +0.9**
AKUM *i*S **Sn 17 24 12.3 +1.0**
AKUM IAML_P
comp=Z,3µm,0.2s
SWA2 4.97 176 P **Pn 17 23 19.4 +0.9**
baz=178
SIGR SIGRI 5.02 7 PN **Pn 17 23 20.1 +0.9**
SIGR SIGRI 5.02 7 P **Pn 17 23 20.0 +0.9**
PRK Paraskevi 5.11 11 P **Pn 17 23 22.1 +1.7**
MANT Manisa 5.12 33 *e*Pn **Pn 17 23 21.7 +1.0**
MANT Manisa 5.12 33 *i*P **Pn 17 23 23.0 +2.3**
MANT IAML_P
comp=Z,2µm,0.7s
KORT Korkueli 5.13 56 PN **Pn 17 23 22.5 +1.7**
KORT Korkueli 5.13 56 *i*P **Pn 17 23 24.0 +3.2**
KORT IAML_P
comp=Z,2µm,0.6s
AKHS Akhisar 5.15 25 *i*P **Pn 17 23 23.7 +2.6**
AKHS IAML_P
comp=Z,3µm,0.6s
KULA Kula-Manisa 5.18 33 PN **Pn 17 23 23.1 +1.6**
KULA Kula-Manisa 5.18 33 P **Pn 17 23 23.8 +2.3**
AGG Agios Georgios 5.27 336 *e*Pn **Pn 17 23 21.0 -1.6**
AGG Agios Georgios 5.27 336 *e*P **Pn 17 23 21.0 -1.6**
NEO Neokhori 5.28 344 P **Pn 17 23 23.4 +0.6**
BRDR BURDUR-Merkez 5.34 48 *i*P **Pn 17 23 26.1 +2.4**
BRDR IAML_P
comp=Z,731nm,0.3s
XOR Xorichti 5.35 344 P **Pn 17 23 24.0 +0.3**
KHAL Karahalli 5.48 40 *i*P **Pn 17 23 27.3 +1.7**
KHAL IAML_P
comp=Z,839nm,0.2s
USAK Uak-Merkez 5.51 34 *i*P **Pn 17 23 28.5 +2.6**
USAK IAML_P
comp=Z,5µm,0.6s
EZN Ezine 5.69 10 *e*Pn **Pn 17 23 28.8 +0.5**
EZN Ezine 5.69 10 P **Pn 17 23 28.8 +0.5**
EZN Ezine 5.69 10 ⇑*i*P **Pn 17 23 28.7 +0.5**
EZN Ezine 5.69 10 *e*P **Pn 17 23 28.8 +0.5**
ISP Isparta 5.71 49 PN **Pn 17 23 30.4 +1.7**
ISP Isparta 5.71 49 *e*Pn **Pn 17 23 28.9 +0.2**
ISP Isparta 5.71 49 *e*P **Pn 17 23 28.9 +0.2**
ISP Isparta 5.71 49 Pn **Pn 17 23 30.2 +1.5**
BALB Balikesir 5.86 22 *e*Pn **Pn 17 23 30.9 +0.1**
KEPZ Antalya-Kepez 5.97 62 *i*P **Pn 17 23 34.0 +1.7**
KEPZ *i*S **Sn 17 24 38.2 -1.8**
KEPZ IAML_P
comp=Z,2µm,0.5s
GDZ Gediz 6.02 35 *i*P **Pn 17 23 35.1 +2.0**
GDZ IAML_P
comp=Z,1µm,0.7s
PPCY Paphos 6.05 82 P **Pn 17 23 33.8 +0.4**
baz=264
AFYO Afyonkarahisar 6.21 41 *i*P **Pn 17 23 37.5 +1.8**
AFYO IAML_P
comp=Z,2µm,0.4s
LIT Litokhoron 6.21 342 *e*Pn **Pn 17 23 35.5 -0.1**
LIT Litokhoron 6.21 342 P **Pn 17 23 35.3 -0.3**
LIT Litokhoron 6.21 342 *e*P **Pn 17 23 35.5 -0.1**
ALFC Alefka 6.29 79 P **Pn 17 23 37.5 +0.9**
baz=262
ALFC S **Sn 17 24 41.3 -6.5**
SZAC Souni 6.49 83 P **Pn 17 23 39.8 +0.4**
baz=266
SZAC S **Sn 17 24 45.5 -7.2**
LEF Lefka 6.52 80 *i*P **Pn 17 23 39.9 +0.1**
LEF IAML_P
comp=Z,1µm,0.3s
BOLV Bolvadin 6.54 45 *i*P **Pn 17 23 41.2 +1.0**
BOLV IAML_P
comp=Z,903nm,0.5s
DOGA KONYA_Doganhis 6.61 52 *i*P **Pn 17 23 43.7 +2.5**
DOGA *i*S **Sn 17 24 55.2 -0.6**
DOGA IAML_P
comp=Z,888nm,0.4s
ALN Alexandroupoli 6.71 6 *e*Pn **Pn 17 23 39.8 -2.6**
ALN Alexandroupoli 6.71 6 *e*P **Pn 17 23 39.8 -2.6**
SOH Sokhos 6.72 349 P **Pn 17 23 45.3 +2.7**
SOH pmax pmax
comp=Z,34nm,0.9s
MAMC Mammari 6.79 80 P **Pn 17 23 43.8 +0.2**
baz=263
ERMK Ermenek 6.86 67 *i*P **Pn 17 23 47.0 +2.4**
ERMK *i*S **Sn 17 25 00.3 -1.8**
ERMK IAML_P
comp=Z,5µm,0.5s
CSS Mathiatis 6.87 81 P **Pn 17 23 45.5 +0.9**
baz=265
SRS Serrai 6.98 351 P **Pn 17 23 46.3 +0.2**
KONT Konya--Tatoy 6.99 56 *i*P **Pn 17 23 50.0 +3.8**
KONT IAML_P
comp=Z,896nm,0.4s
KDHN Kadinhani 7.13 51 *i*P **Pn 17 23 50.0 +1.7**
KDHN IAML_P
comp=Z,816nm,0.8s
KNT Kendrikon 7.13 347 P **Pn 17 23 48.9 +0.7**
KOT Kottamia 7.17 125 P **Pn 17 23 47.8 -0.9**
baz=126
FNA Florina 7.17 337 *e*Pn **Pn 17 23 49.0 +0.2**
FNA Florina 7.17 337 *e*P **Pn 17 23 49.0 +0.2**
NVR Nevrokopi 7.18 353 P **Pn 17 23 49.3 +0.4**
HSAF As Saff 7.18 128 P **Pn 17 23 48.0 -0.9**
baz=129
YLV Yalova 7.21 27 ⇑*i*P **Pn 17 23 51.1 +1.8**
GULN MERSIN_Gulnar 7.22 72 *i*P **Pn 17 23 49.4 0.0**
GULN *i*S **Sn 17 25 05.8 -4.9**
GULN IAML_P
comp=Z,2µm,0.2s
GLL Jalalah 7.31 127 P **Pn 17 23 50.2 -0.5**
baz=129
VAY Valandovo 7.36 345 *i*Pn Pn 17 24 00.6 +9.4
VAY Valandovo 7.36 345 *i*Pn Pn 17 24 00.6 +9.4
MMB Musomiste 7.43 352 *e*P **Pn 17 23 52.3 0.0**
RZN Rozhen 7.46 358 *e*P **Pn 17 23 53.9 +1.1**
HFRF Wahat Farafira 7.59 157 P **Pn 17 23 54.4 -0.1**
baz=159
PHSR Pinarhisar 7.65 14 ⇓*i*P **Pn 17 23 56.2 +0.9**
OHR Ohrid 7.66 335 *e*Pn **Pn 17 23 55.7 +0.3**
OHR Ohrid 7.66 335 *e*Pn **Pn 17 23 55.7 +0.3**
CTYL Yalikoy Yolu 7.68 19 ⇑*i*P **Pn 17 23 56.4 +0.7**
KRUS Krusevo 7.74 338 *i*Pn **Pn 17 23 56.8 +0.1**
KRUS Krusevo 7.74 338 *i*Pn **Pn 17 23 56.8 +0.1**
KKB Krupnik 7.79 349 *e*P **Pn 17 23 58.9 +1.7**
STIP Stip 7.80 344 *i*Pn **Pn 17 23 57.6 +0.4**
STIP Stip 7.80 344 *i*Pn **Pn 17 23 57.6 +0.4**
MDUB Mudurnu 7.93 36 *e*Pn **Pn 17 24 01.2 +2.0**
RSH 8.01 112 P **Pn 17 23 58.4 -1.9**
baz=112
TIR Tirane 8.21 332 *e*Pn **Pn 17 24 02.4 -0.6**
TIR Tirane 8.21 332 *e*P **Pn 17 24 02.4 -0.6**
SKO Skopje 8.24 341 *e*Pn **Pn 17 24 04.2 +0.8**
SKO Skopje 8.24 341 *e*Pn **Pn 17 24 04.2 +0.8**
TIP Timpagrande 8.29 309 *e*Pn **Pn 17 24 03.5 -0.7**
TIP Timpagrande 8.29 309 ⇑*i*P **Pn 17 24 04.4 +0.2**
JMB Yambol 8.32 8 *e*P **Pn 17 24 05.2 +0.7**
BR231 Keskin MP Arra 8.34 46 *e*Pn **Pn 17 24 04.6 -0.3**
ANTO Ankara 8.37 45 *e*Pn **Pn 17 24 05.7 +0.4**
ANTO Ankara 8.37 45 ⇑*i*P **Pn 17 24 07.0 +1.8**
ANTO Ankara 8.37 45 *e*P **Pn 17 24 05.7 +0.4**
OFRI `Ofer 8.46 98 Pn **Pn 17 24 04.5 -1.9**
OFRI Sn **Sn 17 25 33.7 -7.5**
VTS Vitosha 8.50 351 *e*Pn **Pn 17 24 06.4 -0.8**
VTS Vitosha 8.50 351 ⇑*i*P **Pn 17 24 07.1 0.0**
VTS Vitosha 8.50 351 *e*P **Pn 17 24 06.4 -0.8**
VTS Vitosha 8.50 351 *e*P **Pn 17 24 08.8 +1.7**
HNTI Hanita 8.52 95 Pn **Pn 17 24 05.9 -1.3**
SLTI Sal'it 8.60 101 Pn **Pn 17 24 06.7 -1.6**
SLTI Sn **Sn 17 25 38.7 -5.9**
MMA0B Mount Meron ar 8.72 95 Pn **Pn 17 24 08.3 -1.7**
MMAI Mount Meron Ar 8.72 95 Pn **Pn 17 24 08.8 -1.2**
comp=Z,11nm,0.3s,baz=269,slow=12,SNR=41
MMAI Sn **Sn 17 25 41.4 -6.3**
comp=Z,11nm,0.3s,baz=257,slow=16,SNR=6.9
AMAZ Amatzia 8.72 105 Pn **Pn 17 24 08.6 -1.4**
AMAZ Sn **Sn 17 25 40.7 -6.9**
AMAZ Amatzia 8.72 105 P **Pn 17 24 09.9 -0.1**
comp=Z,262nm,0.5s,comp=Z,2.6nm
AMAZ Amatzia 8.72 105 P **Sn 17 25 41.2 -6.4**
comp=Z,659nm,0.6s
WDD Wied Dalam 8.78 284 *e*Pn **Pn 17 24 07.3 -3.6**
BR131 Keskin Array S 8.79 49 *e*Pn **Pn 17 24 11.6 +0.5**
BRTR Keskin Array B 8.79 49 Pn **Pn 17 24 11.6 +0.5**
comp=Z,0.3nm,0.3s,baz=222,slow=15,SNR=19
CGL1 Ceglie Messapi 8.80 319 *e*Pn **Pn 17 24 11.1 0.0**
TAR1 Taranto 8.82 318 *e*Pn **Pn 17 24 10.9 -0.4**
MMLI Mount Malkishu 8.86 99 Pn **Pn 17 24 10.0 -1.9**
MMLI Sn **Sn 17 25 43.9 -7.1**
MMLI Mount Malkishu 8.86 99 P **Pn 17 24 12.7 +0.8**
comp=Z,25nm,0.7s,comp=Z,0.4nm
MMLI Mount Malkishu 8.86 99 P **Sn 17 25 46.3 -4.7**
comp=Z,137nm,0.6s
KSDI Kefar Szold 8.90 94 Pn **Pn 17 24 11.1 -1.3**
GEM Giv'at Ha'Em 8.90 94 Pn **Pn 17 24 11.0 -1.4**
GEM Sn **Sn 17 25 45.8 -6.2**
YTIR Yattir 8.94 106 Pn **Pn 17 24 12.0 -1.1**
YTIR Sn **Sn 17 25 46.2 -6.9**
NATI Neve Ativ 8.95 93 Pn **Pn 17 24 11.7 -1.4**
NATI Sn **Sn 17 25 47.0 -6.2**
MASS Massafra 8.97 318 *e*Pn **Pn 17 24 12.6 -0.8**
FASA Fasano 8.98 319 *e*Pn **Pn 17 24 12.4 -1.1**
HMDT Nahal Hemdat 8.99 100 Pn **Pn 17 24 12.6 -1.1**
HMDT Sn **Sn 17 25 47.7 -6.5**
KSHT Keshet 9.06 95 Pn **Pn 17 24 14.0 -0.7**
SHMJ Saham 9.07 96 P **Pn 17 24 14.2 -0.7**
comp=Z,129nm,0.7s
SHMJ Saham 9.07 96 P **Sn 17 25 53.1 -3.2**
comp=Z,206nm,0.5s
DSI Dead Sea 9.08 104 Pn **Pn 17 24 14.0 -0.9**
DSI Sn **Sn 17 25 49.9 -6.5**
DELI KIRIKKALE 9.13 48 *i*P **Pn 17 24 16.2 +0.5**
DELI *i*S 17 24 46.1
DELI IAML_P
comp=Z,266nm,0.5s
MZDA Masada 9.15 106 Pn **Pn 17 24 14.9 -1.0**
MZDA Sn **Sn 17 25 52.0 -6.2**
KRMI Paran Flat 9.16 114 Pn **Pn 17 24 15.0 -1.1**
DRME Dracevica, Mon 9.19 332 *e*Pn **Pn 17 24 13.4 -3.0**
VAE Valguarnera 9.23 294 Pn **Pn 17 24 16.1 -0.9**
comp=Z,4.1nm,0.3s,baz=2.2,slow=21,SNR=7.4
MATE Matera 9.23 316 ⇑*i*P **Pn 17 24 15.4 -1.5**
PRNI Paran 9.27 112 Pn **Pn 17 24 16.8 -0.7**
PRNI Sn **Sn 17 25 55.5 -5.5**
LISJ El Lisan 9.28 106 P **Pn 17 24 18.1 +0.6**
comp=Z,90nm,0.7s
LISJ El Lisan 9.28 106 P **Sn 17 25 55.2 -5.9**
comp=Z,146nm,0.9s
ZFRI Zfri 9.31 110 Pn **Pn 17 24 16.1 -2.0**
ZFRI Sn **Sn 17 25 54.6 -7.4**
SG1 Sgolgore (BA) 9.37 317 *e*Pn **Pn 17 24 17.9 -1.0**
SG1 Sn **Sn** 17 25 54.2 -9.3
PDG Podgorica 9.37 333 ⇑*i*P **Pn 17 24 18.6 -0.3**
PDG Podgorica 9.37 333 *e*Pn **Pn 17 24 15.7 -3.2**
TTG Podgorica 9.37 333 *e*Pn **Pn 17 24 16.0 -2.9**
TTG Podgorica 9.37 333 *e*P **Pn 17 24 16.0 -2.9**
WALJ Wala 9.43 103 P **Pn 17 24 19.2 -0.5**
comp=Z,159nm,0.4s
WALJ Wala 9.43 103 P **Sn 17 26 00.6 -4.3**
HRFI Mount Harif 9.44 114 Pn **Pn 17 24 18.7 -1.2**
HRFI Sn **Sn 17 25 58.1 -7.2**
HRFI Mount Harif 9.44 114 P **Pn 17 24 20.2 +0.3**
comp=Z,237nm,0.5s
HRFI Mount Harif 9.44 114 P **Sn 17 25 57.2 -8.1**
comp=Z,224nm,0.7s
BAI Bari 9.44 319 *e*Pn **Pn 17 24 19.0 -0.8**
BAI Sn **Sn 17 25 59.3 -5.9**
MBRI Mt Berech 9.46 115 Pn **Pn 17 24 19.6 -0.7**
EIL Elat 9.55 116 Pn **Pn 17 24 21.1 -0.4**
comp=Z,24nm,0.3s,baz=284,slow=6.4,SNR=159
EIL Sn **Sn 17 25 59.9 -8.2**
comp=Z,3.1nm,0.3s,baz=349,slow=16,SNR=2.9
EIL Elat 9.55 116 Pn **Pn 17 24 20.8 -0.7**
EIL Sn **Sn 17 26 02.5 -5.6**
EIL Elat 9.55 116 P **Pn 17 24 20.1 -1.4**
comp=Z,91nm,0.6s
SIRC Yozgat 9.57 55 *i*P **Pn 17 24 26.6 +4.8**
SIRC IAML_P
comp=Z,777nm,0.7s
AQBJ Aqaba 9.60 115 P **Pn 17 24 22.2 +0.1**
JDRJ Daraweish 9.62 108 P **Pn 17 24 23.0 +0.5**
comp=Z,108nm,0.5s
ILGA Ilgaz 9.68 43 *e*Pn **Pn 17 24 20.9 -2.4**
HCY Herceg Novi 9.69 330 *e*Pn Pn 17 24 17.6 -5.7
COAL Corum-Alaca 9.95 50 *i*P Pn 17 24 19.4 -7.5
COAL *i*S **Pn 17 24 23.7 -3.2**
COAL IAML_P
comp=Z,1µm,0.1s
TREB Trebinje 9.97 330 *e*Pn Pn 17 24 22.2 -4.9
BRY Bratogost 10.05 331 *e*Pn **Pn 17 24 24.2 -4.1**
ASF Jabal al Asfar 10.13 98 Pn **Pn 17 24 28.6 -0.9**
comp=Z,2.4nm,0.3s,baz=234,slow=12,SNR=14
ASF Sn **Sn 17 26 17.3 -5.2**
comp=Z,0.9nm,0.3s,baz=336,slow=20,SNR=3.4
CLTB Caltabellotta 10.17 293 *e*Pn **Pn 17 24 25.7 -4.2**
UPM Unac-Piva 10.17 334 *e*Pn **Pn 17 24 26.4 -3.6**
STON Ston 10.37 329 *e*Pn **Pn 17 24 28.5 -4.1**
SRE Strehaia 10.52 353 ⇓*i*P **Pn 17 24 34.1 -0.6**
TIRR Tirgusor 10.55 13 *e*Pn **Pn 17 24 33.4 -1.6**
TIRR Tirgusor 10.55 13 ⇑*i*P Pn 17 24 30.0 -5.0
TIRR Tirgusor 10.55 13 *e*P **Pn 17 24 33.4 -1.6**
BBLS Lazići 10.58 337 *e*Pn **Pn 17 24 31.7 -3.8**
DIVS Divibare 10.61 340 *e*Pn **Pn 17 24 32.0 -4.0**
HERR Herculane 10.84 350 ⇓*i*P **Pn 17 24 39.8 +0.9**
MDVR Moldovita 10.86 347 ⇓*i*P **Pn 17 24 38.9 -0.3**
HAVZ Havza 10.87 48 *i*P Pn 17 24 31.5 -8.0
HAVZ *i*S **Pn 17 24 42.9 +3.4**
HAVZ IAML_P
comp=Z,526nm,0.1s
HAPS Han Pijesak,Bl 10.93 336 *e*Pn Pn 17 24 35.4 -4.9
VOIR 11.20 360 ⇓*i*P **Pn 17 24 44.1 +0.1**
LOT Lotru 11.26 355 ⇑*i*P **Pn 17 24 47.3 +2.5**
MLR Muntele Rosu 11.28 3 Pn **Pn 17 24 45.4 +0.4**
comp=Z,0.4nm,0.3s,baz=285,slow=18,SNR=4.6
MLR Muntele Rosu 11.28 3 *e*Pn **Pn 17 24 44.6 -0.5**
MLR Muntele Rosu 11.28 3 ⇑*i*P **Pn 17 24 46.8 +1.7**
MLR Muntele Rosu 11.28 3 *e*P **Pn 17 24 44.6 -0.5**
FRGS Fruska Gora 11.64 341 *e*Pn **Pn 17 24 49.2 -0.8**
PLOR Plostina 11.68 6 ⇓*i*P Pn 17 25 01.7 +11
BZS Buzias 11.68 348 ⇑*i*P **Pn 17 24 49.6 -0.9**
MGRS Mrkonjic Grad 11.90 331 *e*Pn **Pn 17 24 51.2 -2.3**
BLY Banja Luka 12.13 332 *e*Pn **Pn 17 24 53.2 -3.5**
BLY Banja Luka 12.13 332 *e*Pn **Pn 17 24 52.5 -4.2**
AQU L'Aquila 12.22 315 *e*Pn **Pn 17 24 57.7 -0.3**
AQU L'Aquila 12.22 315 *e*P **Pn 17 24 57.7 -0.3**
TESR Tescani 12.34 5 ⇓*i*P **P 17 25 07.6 -3.8**
BIZ Bicaz 12.73 3 ⇑*i*P **P 17 25 15.1 -0.7**
MORH Mrgy, Hungar 12.94 340 *e*Pn **Pn 17 25 03.0 -4.6**
MORH Mrgy, Hungar 12.94 340 EPn **Pn 17 25 05.1 -2.5**
MORH Sn Sn 17 27 21.1 -10
KEST Kesra 12.97 281 Pn **Pn 17 25 09.9 +1.7**
comp=Z,0.3nm,0.3s,baz=14,slow=8.3,SNR=3.9
KEST Sn **Sn 17 27 26.1 -5.8**
comp=Z,0.2nm,0.3s,baz=66,slow=19,SNR=2.7
KEST Kesra 12.97 281 *e*Pn **Pn 17 25 05.4 -2.8**
KIS Kishinev 13.08 11 *e*P P 17 25 29.0 +9.4
TAMR Tamra 13.27 287 *e*Pn **Pn 17 25 11.2 -1.1**
BUR08 Bucovina Ar. S 13.41 0 *e*Pn **Pn 17 25 11.4 -2.8**
BOJS Bojanci 13.54 329 *i*Pn **Pn 17 25 13.2 -2.6**
CRES Cresnjev 13.71 331 *i*Pn **Pn 17 25 15.4 -2.8**
CRES Cresnjev 13.71 331 *e*Pn **Pn 17 25 14.5 -3.7**
RIY Rijeka 13.73 327 *e*Pn **P 17 25 27.1 +0.2**
TRPA Tarpa 14.02 353 EPn **P 17 25 29.0 -1.1**
CEY Cerknica 14.08 328 *e*Pn **Pn 17 25 19.2 -4.1**
CSKK Cskako 14.09 341 EPn **P 17 25 27.0 -3.9**
SKDS Skadanscina 14.12 327 *i*Pn **Pn 17 25 21.6 -2.2**
PSZ Piszkesteto 14.22 346 *e*Pn **Pn 17 25 20.8 -4.4**
PSZ Piszkesteto 14.22 346 ⇑*i*P **Pn 17 25 21.2 -4.0**
PSZ Piszkesteto 14.22 346 *e*P **Pn 17 25 20.8 -4.4**
PSZ Piszkesteto 14.22 346 EPn **P 17 25 31.1 -1.3**
ANN Anapa 14.23 38 *e*P **P 17 25 32.6 +0.2**
ANN pmax pmax
comp=Z,68nm,1.3s
LJU Ljubljana 14.27 329 *e*Pn **Pn 17 25 22.4 -3.5**
TRI Trieste 14.35 326 *e*Pn **Pn 17 25 26.4 -0.6**

TRI Trieste 14.35 326 eP Pn 17 25 26.4 -0.6
PERS Pernice 14.51 332 i Pn Pn 17 25 25.4 -3.7
UZH Uzhgorod 14.54 353 eP Pn 17 25 30.1 +0.6
SOKA Soboth 14.58 332 ePn Pn 17 25 27.1 -3.0
comp=Z,46nm,1.0s,SNR=7.2
OBKA Obir 14.63 330 ePn Pn 17 25 29.4 -1.6
comp=Z,42nm,1.2s,SNR=7.2
KOLS Kolonicke sedl 14.84 353 eP Pn 17 25 34.0 +0.3
KOLS Kolonicke sedl 14.84 353 ePN Pn 17 25 34.0 +0.3
ARSA Arzberg 14.87 334 ePn Pn 17 25 30.8 -3.2
comp=Z,26nm,0.6s,SNR=7.3
SOP Sopron 14.89 337 P P 17 25 37.9 -1.8
SOP pmax pmax
comp=Z,40nm,0.5s
SOP Sopron 14.89 337 ⇑EPn P 17 25 40.0 +0.3
VYHS Vyhne 14.99 344 eP Pn 17 25 34.9 -0.8
VYHS Vyhne 14.99 344 ePN Pn 17 25 34.9 -0.8
VYHS Vyhne 14.99 344 eP P 17 25 40.5 -0.5
MYKA Terra Mystica 15.12 328 ePn Pn 17 25 36.6 -0.7
comp=Z,9.5nm,0.6s,SNR=7.7
ZST Bratislava 15.18 339 eP P 17 25 42.4 -0.5
ZST Bratislava 15.18 339 eP P 17 25 42.4 -0.5
MODS Modra-Piesok 15.29 340 eP P 17 25 43.7 -0.5
MODS Modra-Piesok 15.29 340 eP P 17 25 43.7 -0.5
KWP Kalwaria Pacla 15.50 354 ePn Pn 17 25 41.8 -0.5
comp=Z,679nm,0.4s
KWP Kalwaria Pacla 15.50 354 eP Pn 17 25 41.8 -0.5
KWP pmax pmax
comp=Z,679nm,0.4s
KBA Koelnbreinsper 15.59 329 i Pn Pn 17 25 42.1 -1.6
comp=Z,60nm,1.1s,SNR=19
LVV L'vov 15.61 358 eP P 17 25 47.0 -0.7
LVV eS Sn 17 28 36.0 +0.2
LVV MLR MLR
comp=Z,750nm,13.0s
JAVC Velka Javorina 15.62 342 ePN P 17 25 47.3 -0.7
ABTA Abfaltersbach 15.71 327 ePn Pn 17 25 42.8 -2.3
comp=Z,76nm,0.6s,SNR=25
DOMR Dombai 15.76 50⇑iP Pn 17 25 46.7 +0.8
MOA Molln 15.84 332 ePn Pn 17 25 43.8 -2.9
comp=Z,52nm,0.8s,SNR=17
KRUC Moravsky 16.16 339 eP P 17 25 53.3 -0.6
AKH Akhalkalaki 16.23 58 ePn Pn 17 25 51.6 -0.2
comp=Z,49nm,1.3s
AKH Akhalkalaki 16.23 58 eP Pn 17 25 51.7 -0.2
AKH pmax pmax
comp=Z,49nm,1.3s
VRAC Vranov 16.32 340 Pn Pn 17 25 52.5 -0.4
comp=Z,2.2nm,0.3s,baz=140,slow=10,SNR=23
VRAC Vranov 16.32 340 ePN Pn 17 25 52.8 -0.1
VRAC Vranov 16.32 340 eP P 17 25 55.5 -0.2
OKC Ostrava-Krasne 16.41 344 eP P 17 25 55.7 -0.9
OKC Ostrava-Krasne 16.41 344 eP P 17 25 55.7 -0.9
OKC ex x 17 25 57.9
OJC Ojcow 16.45 348 ePn Pn 17 25 52.4 -2.0
comp=Z,8.2nm,0.7s
OJC Ojcow 16.45 348 eP Pn 17 25 52.4 -2.0
OJC pmax pmax
comp=Z,8.0nm,0.7s
NEY Neytrino 16.45 52di P P 17 25 56.6 -0.7
WTTA Wattenberg 16.49 326 ePn Pn 17 25 53.9 -1.3
comp=Z,117nm,1.3s,SNR=22
MORC Moravsky Berou 16.50 343 ePn Pn 17 25 53.0 -2.2
comp=Z,12nm,0.8s
MORC Moravsky Berou 16.50 343⇑iP Pn 17 25 54.2 -1.0
MORC Moravsky Berou 16.50 343 eP Pn 17 25 53.0 -2.2
MORC pmax pmax
comp=Z,12nm,0.8s
MORC Moravsky Berou 16.50 343 ePN Pn 17 25 54.0 -1.2
MORC Moravsky Berou 16.50 343 eP P 17 25 57.3 -0.4
WATA Walderalm 16.57 326 ePn Pn 17 25 54.5 -1.7
comp=Z,24nm,0.5s,SNR=6.6
SHA1 Shidzhatmaz 16.64 50 eP P 17 25 58.9 -0.5
TREC Trest 16.64 338 eP Pn 17 25 55.7 -1.3
TREC Trest 16.64 338 eP Pn 17 25 55.7 -1.3
TREC ex x 17 25 59.0
TREC ex x 17 26 15.1
SQTA Sankt Quirin 16.66 325 ePn Pn 17 25 56.7 -0.6
comp=Z,29nm,0.6s,SNR=10
FUORN Ofenpass-Fuorn 16.70 322 ePn Pn 17 25 56.8 -1.2
comp=Z,53nm,0.7s
FETA Feichten 16.75 324 ePn Pn 17 25 57.6 -0.8
comp=Z,55nm,0.9s,SNR=18
AKASG Malin Array Be 16.75 9 Pn Pn 17 25 56.8 -1.5
comp=Z,13nm,0.3s,baz=200,slow=10,SNR=98
AKBB Malin Array Si 16.75 9 ePn Pn 17 25 56.5 -1.7
comp=Z,108nm,0.8s
AKBB Malin Array Si 16.75 9 eP Pn 17 25 56.5 -1.7
AKBB pmax pmax
comp=Z,108nm,0.8s
GNI Garni 16.76 64 Pn P 17 26 02.0 +1.3
comp=Z,1.0nm,0.3s,baz=327,slow=18,SNR=4.9
GNI Garni 16.76 64 ePn P 17 26 00.9 +0.2
comp=Z,60nm,1.1s
KIV Kislovodsk 16.76 49 ePn Pn 17 25 59.5 +0.9
comp=Z,80nm,1.0s
KIV Kislovodsk 16.76 49 P P 17 26 01.3 +0.6
KIV Kislovodsk 16.76 49 eP P 17 26 01.7 +1.0
KIV pmax pmax
comp=Z,241nm,1.0s
KVAR Kislovodsk Arr 16.77 49 Pn P 17 26 02.1 +1.4
baz=267,slow=23,SNR=18
KBZ Khabaz 16.79 50 Pn P 17 26 01.1 +0.4
comp=Z,1.7nm,0.3s,baz=253,slow=8.1,SNR=48
MOTA Moosalm 16.80 325 ePn Pn 17 25 57.3 -1.8
comp=Z,16nm,0.6s,SNR=9.1
GEC2 GERESS Array S 16.87 333 ePn Pn 17 25 58.7 -1.3
comp=Z,96nm,0.6s
GEC2 GERESS Array S 16.87 333 eP Pn 17 25 58.7 -1.3
GEC2 pmax pmax
comp=Z,96nm,0.6s
GERES GERESS Array B 16.87 333 Pn Pn 17 25 58.7 -1.3
comp=Z,12nm,0.3s,baz=146,slow=12,SNR=114
DAVOX Davos/Dischmat 17.01 322 Pn P 17 26 04.0 +0.6
comp=Z,1.0nm,0.3s,baz=129,slow=15,SNR=22
ZEI Tsey 17.03 54 eP Pn 17 26 02.6 +0.5
ZEI pmax pmax
comp=Z,32nm,0.7s
RETA Reutte 17.06 325 i Pn Pn 17 26 00.7 -1.6
comp=Z,22nm,0.6s,SNR=10.0
TUE Stuetta 17.08 320 ePn Pn 17 26 01.2 -1.5
comp=Z,21nm,0.9s
NCK Nalchik 17.13 52⇓eP P 17 26 04.6 0.0
KHC Kasperske Hory 17.16 334 ePn Pn 17 26 02.5 -0.9
comp=Z,22nm,0.9s
KHC Kasperske Hory 17.16 334 eP Pn 17 26 02.4 -1.0
KHC Kasperske Hory 17.16 334 eP Pn 17 26 02.4 -1.0
KHC ex x 17 26 06.2
KHC ex x 17 26 14.0
KHC ex x 17 28 13.0
TBLG Delisi 17.22 58 ePn Pn 17 26 04.0 -0.2
comp=Z,55nm,1.5s
TBLG Delisi 17.22 58 eP Pn 17 26 04.0 -0.2
TBLG pmax pmax
comp=Z,55nm,1.5s
DPC Dobruska-Polom 17.34 341 eP Pn 17 26 05.8 +0.1
DPC Dobruska-Polom 17.34 341 eP Pn 17 26 05.8 +0.1
DPC ex x 17 26 07.8
DPC ex x 17 26 17.4
DAVA Damuels 17.35 323 eP Pn 17 26 06.1 +0.2
comp=Z,36nm,0.8s,SNR=14
GOPC GO Pecny, Ondr 17.41 337 eP Pn 17 26 05.2 -1.3
GOPC ex x 17 26 07.8
GOF Gofitskoye 17.54 47⇑iP P 17 26 09.3 +0.1
GOF pmax pmax
comp=Z,74nm,1.1s
PRU Pruhonice 17.55 337 eP Pn 17 26 06.7 -1.6
PRU Pruhonice 17.55 337 eP Pn 17 26 06.7 -1.6
PRU ex x 17 26 09.2
OSTC Ostas 17.56 341 eP Pn 17 26 08.6 +0.2
UPC Upice 17.57 341 eP Pn 17 26 07.2 -1.3
UPC Upice 17.57 341 eP Pn 17 26 07.2 -1.3
UPC ex x 17 26 09.6
CHVC Chvalec 17.63 341 eP Pn 17 26 08.1 -1.2
CHVC ex x 17 26 10.3
BNI Bardonecchia 17.77 313 ePn Pn 17 26 09.1 -2.1
comp=Z,17nm,1.2s
BNI Bardonecchia 17.77 313 eP Pn 17 26 09.1 -2.1
BNI pmax pmax
comp=Z,17nm,1.2s
LPL La Plagne 17.98 314 P P 17 26 15.4 +1.1
LPL pmax pmax
comp=Z,8.0nm,0.6s
SENIN Lac Senin/Sane 18.13 317 ePn P 17 26 16.2 +0.3
comp=Z,15nm,0.6s

GROC Groznyy 18.47 55 eP P 17 26 18.0 -1.4
GROC eS Sn 17 29 42.4 -2.9
GROC pmax pmax
comp=Z,9.0nm,0.3s
NKC Novy Kostel 18.48 334 eP Pn 17 26 20.4 +0.7
NKC Novy Kostel 18.48 334 eP Pn 17 26 20.4 +0.7
BRG Berggiesshubel 18.51 337 i P P 17 26 19.3 -0.5
comp=Z,20nm,0.8s
GRFO Grafenberg 18.52 331 eP P 17 26 18.7 -1.2
comp=Z,189nm,1.4s
GRFO Grafenberg 18.52 331 eP P 17 26 18.7 -1.2
GRFO pmax pmax
comp=Z,189nm,1.4s
GRA1 Grafenberg Arr 18.52 331 eP P 17 26 18.2 -1.7
comp=Z,198nm,1.5s
GRF Grafenberg Arr 18.52 331 eP P 17 26 18.2 -1.7
GRF pmax pmax
comp=Z,198nm,1.5s
STU Stuttgart 18.72 326 eP P 17 26 20.7 -1.4
comp=Z,53nm,1.2s
STU Stuttgart 18.72 326 eP P 17 26 20.7 -1.4
STU pmax pmax
comp=Z,53nm,1.2s
BFO Black Forest 18.83 323 eP P 17 26 22.2 -1.0
comp=Z,16nm,0.7s
BFO Black Forest 18.83 323 eP P 17 26 22.3 -1.0
BFO pmax pmax
comp=Z,16nm,0.7s
GNBR Gunib 19.00 58⇑eP Pn 17 26 27.4 +1.3
CLL Collm 19.19 337 eP P 17 26 25.7 -1.5
comp=Z,33nm,0.9s
CLL Collm 19.19 337⇓iP P 17 26 27.3 +0.1
comp=Z,37nm,1.0s
CLL epP pP 17 26 32.0 -1.0
CLL Collm 19.19 337⇓iP P 17 26 27.3 +0.1
CLL pmax pmax
comp=Z,37nm,1.0s
SSB Saint Sauveur 19.20 311 eP P 17 26 25.3 -2.1
comp=Z,5.8nm,0.7s
SSB Saint Sauveur 19.20 311 eP P 17 26 25.3 -2.1
SSB pmax pmax
comp=Z,6.0nm,0.7s
AKT Akhty 19.29 61 eP Pn 17 26 30.5 +0.8
AKT eS Sn 17 30 05.1 -0.2
AKT pmax pmax
comp=Z,6.0nm,0.8s
ECH Echery 19.34 322 eP P 17 26 27.8 -1.2
comp=Z,58nm,1.6s
ECH Echery 19.34 322 eP P 17 26 27.8 -1.2
ECH pmax pmax
comp=Z,58nm,1.6s
VORD Divnogorie 19.69 28 eP P 17 26 31.7 -1.0
VORD pmax pmax
comp=Z,70nm,1.8s
SUW Suwalki 19.83 357 eP P 17 26 31.6 -2.6
comp=Z,334nm,1.0s
SUW Suwalki 19.83 357 eP P 17 26 31.6 -2.6
SUW pmax pmax
comp=Z,334nm,1.0s
VSR Storozhevoye 19.84 27deP P 17 26 33.0 -1.3
VSR pmax pmax
comp=Z,33nm,0.8s
RUE Ruedersdorf 19.96 340 eP P 17 26 34.6 -1.0
RUE IAmb IAmb 17 26 36.4
comp=Z,41nm,0.8s
VORR Voronezh 20.22 26 P Pn 17 26 50.0 +9.5
VORR pmax pmax
comp=Z,250nm,1.2s
MICGM Minsk 20.38 5 e P 17 26 38.0 -2.1
MNK Minsk 20.38 5 eP P 17 26 38.0 -2.1
TAM Tamanrasset 20.56 241 eP Pn 17 26 44.3 -0.5
comp=Z,8.8nm,0.8s
NACGM Naroch 20.71 3 e P 17 26 41.0 -2.8
WLF Walferdange 20.78 324 eP P 17 26 43.9 -0.7
comp=Z,343nm,1.0s
WLF Walferdange 20.78 324 eP P 17 26 43.9 -0.7
WLF pmax pmax
comp=Z,343nm,1.0s
WLF Walferdange 20.78 324 x Pn 17 26 48.9 +1.8
RAYN Ar Rayn 20.80 115 eP Pn 17 26 46.8 -0.8
comp=Z,30nm,1.0s
RAYN Ar Rayn 20.80 115 eP Pn 17 26 46.8 -0.8
RAYN pmax pmax
comp=Z,30nm,1.0s
LPSR Galich'ya Gora 20.89 24 eP P 17 26 43.6 -2.1
LPSR pmax pmax
comp=Z,100nm,1.4s
IDID Didziasalis 21.12 3 eP P 17 26 46.4 -1.8
IDID IAmb IAmb 17 26 47.1
comp=Z,8.8nm,0.8s
IIGN Ignalina 21.14 2 eP P 17 26 46.7 -1.8
IIGN IAmb IAmb 17 26 51.3
comp=Z,19nm,0.7s
PABE Paberze 21.30 358 eP P 17 26 47.7 -2.3
PABE IAmb IAmb 17 26 51.5
comp=Z,50nm,0.7s
MEM Membach 21.48 325 P P 17 26 51.7 -0.4
comp=Z,48nm,1.0s
MEM x x 17 26 52.9
HGN Heimansgroeve 21.62 326 eP P 17 26 53.9 +0.3
DOU Dourbes 21.84 323 P P 17 26 55.8 -0.1
comp=Z,27nm,0.7s
PBUR Paburg 21.91 355 eP P 17 26 53.7 -2.9
PBUR IAmb IAmb 17 26 55.5
comp=Z,92nm,0.7s
CLF Chambon-Foret 21.91 316 eP P 17 26 57.3 +0.5
comp=Z,84nm,1.4s
WTSB Winterswijk 22.08 329 eP P 17 26 58.7 +0.3
SNF Seneffe 22.25 323 P P 17 26 58.7 -1.7
OBN Obninsk 22.38 18 P P 17 27 03.4 +1.8
comp=Z,13nm,0.7s,baz=200,slow=22,SNR=7.0
OBN Obninsk 22.38 18 eP P 17 27 01.9 +0.2
comp=Z,107nm,1.0s
OBN Obninsk 22.38 18⇓eP P 17 27 03.3 +1.6
OBN e 17 27 27.6
OBN pmax pmax
comp=Z,80nm,0.9s
UCC Uccle 22.40 324 eP P 17 27 01.1 -0.7
comp=Z,37nm,1.0s
UCC Uccle 22.40 324 eP P 17 27 01.2 -0.7
UCC pmax pmax
comp=Z,37nm,1.0s
MOS Moscow 23.21 18 eP P 17 27 08.2 -2.1
MOS e 17 27 54.4
MOS eS S 17 31 19.8 -0.9
MOS pmax pmax
comp=Z,46nm,1.0s
ESDC Sonseca Array 23.76 292 P P 17 27 15.9 -0.1
comp=Z,5.3nm,0.7s,baz=83,slow=9.3,SNR=45
ESLA Sonseca Array 23.76 292 eP P 17 27 16.3 +0.3
comp=Z,9.8nm,0.8s
PAB San Pablo 24.05 291 eP P 17 27 18.9 +0.2
comp=Z,32nm,1.6s
PAB San Pablo 24.05 291 eP P 17 27 18.9 +0.2
PAB pmax pmax
comp=Z,32nm,1.6s
VSU Vasula 24.27 2ceP P 17 27 19.2 -1.3
VSU pmax pmax
comp=Z,36nm,0.6s
VSU Vasula 24.27 2 eP P 17 27 18.1 -2.3
VSU IAmb IAmb 17 27 22.9
comp=Z,48nm,0.6s
MDT Midelt 24.73 275 P P 17 27 26.1 +1.1
comp=Z,2.3nm,0.7s,baz=101,slow=12,SNR=6.3
MUD Monsted U'grnd 24.76 339⇑iP P 17 27 24.5 -0.4
MUD pmax pmax
comp=Z,61nm,1.1s
MUD Monsted U'grnd 24.76 339⇑iP P 17 27 24.5 -0.4
comp=Z,61nm,1.1s
PUL Pulkovo 25.80 6⇓eP P 17 27 33.3 -1.0
PUL pmax pmax
comp=Z,82nm,0.8s
PBRG Braganca 26.06 296 eP P 17 27 37.5 +0.5
comp=Z,31nm,1.5s
MVO Moncorvo 26.21 295 eP P 17 27 39.3 +0.9
comp=Z,42nm,1.6s
DAMY Dhamar 26.23 133 eP P 17 27 41.5 +2.5
comp=Z,38nm,1.4s
PMRV Marv??o 26.40 291 eP P 17 27 40.3 +0.3
comp=Z,28nm,1.3s
PCBR Castelo Branco 26.48 292 eP P 17 27 43.2 +2.5
MTE Manteigas 26.55 293 eP P 17 27 43.7 +2.3
MTE Manteigas 26.55 293 eP P 17 27 43.1 +1.7
comp=Z,43nm,1.7s
PVAQ Vaqueiros 26.69 286 eP P 17 27 42.7 +0.1
comp=Z,40nm,1.7s

PVAQ Vaqueiros 26.69 286 eP P 17 27 41.5 -1.2
comp=Z,11nm,0.7s
PBEJ Beja 26.78 288 eP P 17 27 45.0 +1.6
POLO Lamas de Olo 26.80 295 eP P 17 27 47.4 +3.7
comp=Z,13nm,1.4s
PVIS Viseu 26.83 294 eP P 17 27 44.3 +0.3
PBDV Barranco-do-Ve 26.87 286 eP P 17 27 44.2 -0.1
comp=Z,69nm,1.4s
EVO Evora 26.88 289 eP P 17 27 47.6 +3.2
GEYT Alibeck 26.90 72 P P 17 27 45.4 +0.8
comp=Z,0.8nm,0.4s,baz=262,slow=10.0,SNR=3.6
GYA0B ALIBECK ARRAY 26.90 72 eP P 17 27 45.3 +0.7
comp=Z,11nm,0.8s
PCVE Castro Verde 26.93 287 eP P 17 27 46.1 +1.3
HFS Hagfors 26.97 347 P P 17 27 43.5 -1.4
comp=Z,10.0nm,0.6s,baz=124,slow=7.4,SNR=30
PMTG Montargil 27.04 290 eP P 17 27 47.2 +1.4
PTOM Tomar 27.19 291 eP P 17 27 48.2 +1.1
comp=Z,33nm,1.4s
COI Coimbra 27.20 293 eP P 17 27 47.0 -0.2
COI Coimbra 27.20 293 eP P 17 27 46.8 -0.4
comp=Z,19nm,0.8s
COI Coimbra 27.20 293 eP P 17 27 46.8 -0.4
COI pmax pmax
comp=Z,19nm,0.8s
PGAV Gavieira, Arco 27.21 296 eP P 17 27 50.6 +3.2
FINES FINESS Array B 27.25 1 P P 17 27 45.4 -1.9
comp=Z,14nm,0.9s,baz=155,slow=10,SNR=21
FINES FINESS Array B 27.25 1 i P P 17 27 45.7 -1.6
FINES pmax pmax
comp=Z,14nm,0.9s
FIA1 FINESS Array S 27.25 1 eP P 17 27 45.0 -2.3
comp=Z,61nm,1.5s
PNCL Nicolau / Gran 27.30 288 eP P 17 27 52.5 +4.4
OSL Oslo 27.39 344 eP P 17 27 48.0 -0.6
KONO Kongsberg 27.40 343 eP P 17 27 47.5 -1.2
comp=Z,69nm,1.6s
KONO Kongsberg 27.40 343⇑eP P 17 27 47.8 -0.9
KONO pmax pmax
comp=Z,42nm,1.7s
KONO Kongsberg 27.40 343 eP P 17 27 47.5 -1.2
NC602 NORSAR Array S 27.94 346 eP P 17 27 52.0 -1.6
comp=Z,191nm,1.8s
ASUD Al Ashush, Dub 27.96 102 P P 17 27 56.3 +2.1
FAQ Al Faqa, Dubai 28.12 101 P P 17 27 57.1 +1.5
NAO01 NORSAR Array S 28.17 345 eP P 17 27 54.6 -1.1
comp=Z,65nm,0.8s
BANOM Banah 28.20 99 P P 17 27 57.8 +1.6
KLMR Klimovskoe 28.25 15 eP P 17 27 53.7 -2.6
KLMR pmax pmax
comp=Z,29nm,1.0s
KLMR Klimovskoe 28.25 15 eP P 17 27 53.7 -2.6
KLMR AMP 17 27 56.0
comp=Z,29nm,1.1s
NC405 NORSAR Array S 28.25 346 eP P 17 27 55.0 -1.4
NB201 NORSAR Array S 28.28 346 eP P 17 27 55.5 -1.1
comp=Z,150nm,1.7s
NB2 NORSAR Subarra 28.28 346 P P 17 27 55.4 -1.3
comp=Z,8.5nm,0.7s,baz=156,slow=9.3
NOA NORSAR Array B 28.28 346 P P 17 27 54.8 -1.9
comp=Z,3.7nm,0.6s,baz=151,slow=9.5,SNR=34
MSFE Esma-Masafi 28.32 100 P P 17 27 58.9 +1.5
NBO00 NORSAR Array S 28.36 345 eP P 17 27 56.3 -1.1
comp=Z,218nm,2.0s
ODD1 Odda 28.40 340 eP P 17 28 00.0 +2.3
NC303 NORSAR Array S 28.42 346 eP P 17 27 56.4 -1.5
comp=Z,87nm,1.7s
MDH Madha 28.46 100 P P 17 27 59.8 +1.2
HATD Hatta, Dubai 28.53 101 i P P 17 28 00.8 +1.6
SNR=6.1
ASHO Ashiyiah 28.53 101 P P 17 28 00.6 +1.3
UOSS Minazif 28.53 101 eP P 17 28 00.6 +1.3
comp=Z,9.6nm,0.6s
UOSS Minazif 28.53 101 i P P 17 28 00.3 +1.0
SNR=5.9
ALNE Al Ain 28.57 103 P P 17 28 01.4 +1.8
NC204 NORSAR Array S 28.59 346 eP P 17 27 58.7 -0.7
comp=Z,98nm,1.7s
SKAR Skarslia 28.62 343 eP P 17 27 59.9 +0.3
EKA Eskdalemuir Ar 28.76 326 P P 17 28 00.4 -0.6
comp=Z,14nm,0.8s,baz=129,slow=9.3,SNR=27
ESK Eskdalemuir 28.77 326 eP P 17 28 01.1 +0.1
comp=Z,140nm,2.0s
ESK Eskdalemuir 28.77 326 eP P 17 28 01.2 +0.1
ESK pmax pmax
comp=Z,140nm,2.0s
AKTO Aktyubinsk 28.96 46 P P 17 28 02.7 -0.1
comp=Z,3.9nm,0.7s,baz=246,slow=6.6,SNR=9.3
DSB Dublin 29.27 320 eP P 17 28 05.6 +0.1
comp=Z,53nm,1.3s
KIRV Kirov 29.28 26 P P 17 28 04.5 -0.9
comp=Z,27nm,0.8s,baz=226,slow=1.9,SNR=8.9
HYA Hoyanger 29.57 341 eP P 17 28 08.4 +0.4
DOMB Dombas 29.64 345 eP P 17 28 09.0 +0.2
ABKAR Akbulak array 29.75 49 eP P 17 28 10.0 +0.2
comp=Z,5.4nm,0.8s
TOA0 Torodi Ar. Sit 29.82 231 eP P 17 28 12.2 +1.5
comp=Z,22nm,0.6s
TORD Torodi Ar. Bea 29.82 231 P P 17 28 10.2 -0.5
comp=Z,15nm,0.6s,baz=27,slow=7.7,SNR=77
PRGR Permogore 30.42 19 eP P 17 28 10.1 -5.5
PRGR e*PP pP 17 28 19.5 -2.3
PRGR pmax pmax
comp=Z,24nm,0.5s
MOL Molde 30.44 344 eP P 17 28 16.1 +0.4
NSS Namsos 31.38 349 eP P 17 28 23.0 -0.9
ARU Arti 31.86 36 P P 17 28 27.7 -0.7
comp=Z,5.3nm,0.6s,baz=244,slow=11,SNR=29
ARU Arti 31.86 36 eP P 17 28 27.7 -0.7
comp=Z,19nm,0.6s
ARU Arti 31.86 36c iP P 17 28 27.4 -1.0
ARU 17 29 30.1
ARU S S 17 33 37.2 -0.3
ARU pmax pmax
comp=Z,21nm,0.7s
MOR8 Moi Rana 32.60 352 eP P 17 28 34.4 -0.4
SVE Sverdlovsk 33.06 36⇑eP P 17 28 39.0 +0.2
SVE pmax pmax
comp=Z,58nm,0.6s
SVE MLR MLR
comp=Z,782nm,18.0s
KONS Konsvik 33.08 351 eP P 17 28 39.0 +0.1
APA Apatity 33.74 6⇓iP P 17 28 42.8 -1.8
APA pmax pmax
comp=Z,1.0nm,0.7s
APA MLR MLR
comp=Z,400nm,13.0s
LVZ Lovozero 34.17 6 eP P 17 28 46.8 -1.6
comp=Z,192nm,1.9s
LVZ Lovozero 34.17 6 eP P 17 28 46.8 -1.6
LVZ pmax pmax
comp=Z,192nm,1.9s
STEI Steigen 34.22 353 eP P 17 28 48.5 -0.3
KTK1 Kautokeino 34.85 359 eP P 17 28 53.2 -1.1
MBAR Mbarara 35.05 170 eP P 17 28 58.3 +1.7
comp=Z,10.0nm,1.3s
MBAR Mbarara 35.05 170⇑eP P 17 28 58.8 +2.1
MBAR pmax pmax
comp=Z,6.0nm,1.2s
ARCES ARCESS Array B 35.37 0 P P 17 28 56.6 -2.0
comp=Z,5.6nm,0.6s,baz=180,slow=6.2,SNR=37
CHGR Chuyangaron 35.50 70 eP P 17 28 51.8 -8.6
comp=Z,42nm,1.0s
TRO Tromso 35.63 356 eP P 17 28 59.5 -1.4
KK31 Karatay Array 36.21 62 eP P 17 29 07.0 +0.8
comp=Z,8.7nm,0.8s
KK31 Karatay Array 36.21 62 eP P 17 29 07.1 +0.8
KK31 pmax pmax
comp=Z,9.0nm,0.8s
KKAR Karatay Array 36.21 62 eP P 17 29 06.8 +0.5
comp=Z,8.7nm,0.8s
KKAR Karatay Array 36.21 62 eP P 17 29 06.8 +0.5
KKAR pmax pmax
comp=Z,9.0nm,0.8s
GAR Garm 36.36 69 eP P 17 29 08.0 +0.2
comp=Z,13nm,0.9s
GAR Garm 36.36 69 eP P 17 29 08.0 +0.2
GAR pmax pmax
comp=Z,13nm,0.9s
KMBO Kilima Mbogo 36.98 159 eP P 17 29 14.2 +0.9
comp=Z,7.7nm,1.5s
KMBO Kilima Mbogo 36.98 159 eP P 17 29 14.2 +0.9
KMBO pmax pmax
comp=Z,8.0nm,1.5s
BRVK Borovoye 37.01 45 eP P 17 29 12.7 -0.2
comp=Z,6.9nm,0.9s

BRVK Borovoye 37.01 45⇑ eP P 17 29 13.2 +0.3
BRVK pmax pmax
comp=Z,6.0nm,0.9s
ARSB Arslanbob 38.15 65 eP P 17 29 24.0 +1.1
comp=Z,16nm,1.0s
DBIC Dimbokro 38.91 232 P P 17 29 30.1 +0.7
comp=Z,4.9nm,0.6s,baz=306,slow=17,SNR=9.3
DBIC Dimbokro 38.91 232 eP P 17 29 30.1 +0.7
comp=Z,40nm,0.8s
AAK Ala-Archa 39.16 63 eP P 17 29 32.4 +1.0
comp=Z,6.8nm,0.8s
AAK Ala-Archa 39.16 63 P P 17 29 32.9 +1.5
AAK Ala-Archa 39.16 63 ceP P 17 29 32.6 +1.2
AAK pmax pmax
comp=Z,13nm,1.7s
UCH Uchtor 39.21 63 P P 17 29 33.1 +0.9
SNR=7.2
CHMS Chumysh 39.32 62 P P 17 29 34.1 +1.5
SNR=6.0
NIL Nilore 39.70 77 eP P 17 29 37.5 +1.7
comp=Z,12nm,0.6s
NIL Nilore 39.70 77 eP P 17 29 37.5 +1.7
NIL pmax pmax
comp=Z,11nm,0.6s
KZA Kyzart 39.77 63 P P 17 29 38.6 +1.9
SNR=7.3
TKM2 Tokmak 2 39.95 62 P P 17 29 39.0 +1.0
SNR=7.0
ULHL Ulahol 40.48 63 P P 17 29 44.4 +1.9
SNR=9.1
CMLA Cha da Macela 40.67 290 eP P 17 29 43.1 -0.7
comp=Z,108nm,1.2s
CMLA Cha da Macela 40.67 290 eP P 17 29 43.1 -0.7
CMLA pmax pmax
comp=Z,108nm,1.2s
JMIC Jan Mayen 40.96 344 P P 17 29 46.4 +0.7
comp=Z,42nm,0.8s,baz=153,slow=5.3,SNR=4.0
BORG Borgarnes 41.33 332 P P 17 29 49.9 +1.1
comp=Z,7.2nm,0.8s,baz=127,slow=7.5,SNR=4.8
BORG Borgarnes 41.33 332 eP P 17 29 50.1 +1.2
comp=Z,64nm,1.9s
KURK Kurchatov 41.84 50 eP P 17 29 53.2 -0.1
comp=Z,16nm,0.8s
KURK Kurchatov 41.84 50 ceP P 17 29 53.6 +0.3
KURK pmax pmax
comp=Z,16nm,0.7s
MAKZ Makanchi 44.16 56 eP P 17 30 12.7 +0.6
comp=Z,7.6nm,0.7s
MAKZ Makanchi 44.16 56 eP P 17 30 12.7 +0.6
MAKZ pmax pmax
comp=Z,8.0nm,0.7s
SCO Scoresbysund 44.18 339 eP P 17 30 12.0 +0.2
comp=Z,9.6nm,1.0s
SCO Scoresbysund 44.18 339 i P P 17 30 13.3 +1.4
SCO pmax pmax
comp=Z,13nm,1.2s
SCO Scoresbysund 44.18 339 i P P 17 30 13.3 +1.4
comp=Z,13nm,1.2s
SPA0 Spitsbergen Ar 44.22 357 eP P 17 30 11.2 -1.0
comp=Z,21nm,0.6s
SPITS Spitsbergen Ar 44.22 357 P P 17 30 11.8 -0.3
comp=Z,6.0nm,0.6s,baz=151,slow=9.2,SNR=17
MK31 Makanchi Array 44.37 56 eP P 17 30 14.6 +0.8
comp=Z,13nm,0.6s
MKAR Makanchi Array 44.37 56 P P 17 30 14.6 +0.8
comp=Z,16nm,0.6s,baz=278,slow=6.5,SNR=173
NVS Novosibirsk 44.82 44⇑ iP P 17 30 18.3 +1.1
NVS e 17 30 22.3
NVS e 17 32 03.6
NVS eS S 17 36 48.0 -5.0
NVS pmax pmax
comp=Z,25nm,0.7s
NVS pmax pmax
comp=N,4.0nm,0.6s
NVS pmax pmax
comp=E,9.0nm,0.7s
NVS pmax pmax
comp=Z,13nm,1.4s
NVS pmax pmax
comp=N,11nm,2.0s
NVS pmax pmax
comp=E,8.0nm,1.5s
NVS smax smax
comp=N,9.0nm,1.4s
KBS Kingsbay 45.15 356 eP P 17 30 19.6 +0.1
comp=N,20nm,0.6s
KBS Kingsbay 45.15 356 eP P 17 30 19.6 +0.1
KBS pmax pmax
comp=Z,20nm,0.6s
ZAA0 Zalesovo Array 45.72 46 eP P 17 30 24.0 -0.3
comp=Z,21nm,0.6s
ZALV Zalesovo Beam 45.72 46 P P 17 30 24.0 -0.3
comp=Z,22nm,0.5s,baz=267,slow=8.8,SNR=70
DAG Danmarks Havn 46.94 347⇑ iP P 17 30 33.6 -0.1
DAG pmax pmax
comp=Z,9.0nm,0.8s
DAG Danmarks Havn 46.94 347⇑ iP P 17 30 33.6 -0.1
comp=Z,12nm,0.8s
DGZ Jazzator, Alta 47.53 51 dP P 17 30 39.9 +1.1
DGZ pmax pmax
comp=Z,4.0nm,0.8s
MSEY Mahe Island 48.18 137 eP P 17 30 46.2 +2.2
comp=Z,84nm,1.4s
MSEY Mahe Island 48.18 137 eP P 17 30 46.2 +2.2
MSEY pmax pmax
comp=Z,84nm,1.4s
WMQ Urumqi 48.56 59 eP P 17 30 49.4 +2.6
WMQ sP sP 17 30 55.8 -0.1
WMQ pmax pmax
comp=Z,29nm,1.1s
WMQ LR LR
comp=Z,600nm,16.3s
WMQ LR LR
comp=Z,290nm,19.3s
WMQ LR LR
comp=Z,470nm,16.3s
NRIK Noril'sk 48.77 25 P P 17 30 48.4 +0.6
comp=Z,11nm,0.8s,baz=234,slow=2.9,SNR=16
PYUN Piuthan 49.39 80 eP P 17 30 54.3 +0.8
comp=Z,59nm,0.7s
SUMG Summit 49.82 339 eP P 17 30 56.1 -0.2
comp=Z,6.9nm,0.8s
SUMG Summit 49.82 339 i P P 17 30 56.8 +0.4
SUMG pmax pmax
comp=Z,18nm,0.8s
SUMG Summit 49.82 339 i P P 17 30 56.8 +0.4
comp=Z,18nm,0.8s
DANN Dangsing 49.93 80 eP P 17 30 58.9 +1.2
comp=Z,130nm,0.7s
DMN Daman 51.31 80 eP P 17 31 09.3 +1.2
comp=Z,46nm,0.8s
PKI Pulchoki 51.57 80 eP P 17 31 10.8 +0.6
comp=Z,48nm,0.8s
GUN Gumba 51.82 79 eP P 17 31 12.7 +0.7
comp=Z,75nm,0.9s
JIRN Jiri 52.17 80 eP P 17 31 15.8 +1.1
comp=Z,63nm,0.7s
LSA Lhasa 55.38 75 eP P 17 31 39.1 +0.8
comp=Z,4.7nm,0.7s
LSA Lhasa 55.38 75 eP P 17 31 39.1 +0.8
LSA pmax pmax
comp=Z,5.0nm,0.7s
MOY Mondy 55.71 47 eP P 17 31 41.4 +1.5
MOY pmax pmax
comp=Z,13nm,1.6s
TLY Talaya 57.31 46 eP P 17 31 52.5 +1.3
comp=Z,8.0nm,0.8s
TLY Talaya 57.31 46 eP P 17 31 53.1 +2.0
TLY pmax pmax
comp=Z,25nm,0.9s
ZAK Zakamensk 57.44 48 eP P 17 31 52.6 +0.4
ZAK pmax pmax
comp=Z,12nm,1.0s
IRK Irkutsk 57.54 46 eP P 17 31 52.0 -0.7
IRK pmax pmax
comp=Z,20nm,1.9s
GTA Gaotai 58.49 61 eP P 17 32 00.8 +1.0
GTA pP pP 17 32 05.8 -0.6
GTA sP sP 17 32 08.4 -0.2
GTA pmax pmax
comp=Z,5.0nm,0.9s
SONM Songino Array 60.15 50 P P 17 32 12.0 +0.9
comp=Z,6.9nm,0.7s,baz=284,slow=8.6,SNR=39
ULN Ulaanbaatar 60.56 50 eP P 17 32 14.7 +0.7
comp=Z,8.3nm,0.7s
ULN Ulaanbaatar 60.56 50 ceP P 17 32 14.6 +0.7
ULN pmax pmax
comp=Z,15nm,1.3s
BOSA Boshof 62.49 180 P P 17 32 28.5 +1.5
comp=Z,7.3nm,0.8s,baz=355,slow=7.6,SNR=11
BOSA Boshof 62.49 180 eP P 17 32 28.5 +1.5
comp=Z,82nm,2.0s
LZH Lanzhou 62.70 63 eP P 17 32 24.3 -4.2
LZH pP pP 17 32 25.4 -10
LZH sP sP 17 32 26.3 -11
LZH ePP PP 17 34 45.0 -1.3
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,90nm,7.2s
LZH LR LR
comp=N,460nm,15.7s
LZH LR LR
comp=E,450nm,16.2s
LZH LR LR
comp=Z,560nm,17.5s
SCHQ Schefferville 63.84 320 P P 17 32 35.9 +0.3
comp=Z,9.5nm,0.6s,baz=67,slow=8.4,SNR=6.9
RES Resolute Bay 64.55 345 P P 17 32 40.4 +0.5
comp=Z,2.0nm,0.8s,baz=41,slow=9.8,SNR=6.5
RES Resolute Bay 64.55 345 eP P 17 32 39.9 0.0
comp=Z,12nm,1.4s
CD2 Chengdu 64.81 69 P P 17 32 48.3 +5.9
CD2 pmax pmax
comp=Z,40nm,0.9s
HHC Hu-ho-hao-te 66.24 56 eP P 17 32 52.4 +0.8
HHC pmax pmax
comp=Z,18nm,1.1s
HHC pmax pmax
comp=Z,380nm,5.1s
SUR Sutherland 66.37 184 eP P 17 32 53.8 +1.5
comp=Z,124nm,1.6s
CHTO Chiang Mai 66.60 83 eP P 17 32 55.1 +1.1
comp=Z,18nm,1.8s
CMMT Chiang Mai 66.60 83 P P 17 33 05.1 +11
KMI Kunming 66.64 75 P P 17 32 56.8 +2.3
KMI pmax pmax
comp=Z,23nm,0.5s
YAK Yakutsk 66.73 30 eP P 17 32 53.1 -1.1
comp=Z,9.7nm,0.8s
YAK Yakutsk 66.73 30 eP P 17 32 53.1 -1.1
YAK pmax pmax
comp=Z,10.0nm,0.8s
CMAR Chiang Mai Arr 66.77 83 P P 17 32 55.8 +0.7
comp=Z,1.4nm,0.8s,baz=295,slow=8.5,SNR=11
LAMP Lampang 67.31 82 P P 17 33 09.8 +11
XAN Xi'an 67.33 63 P P 17 32 59.4 +0.8
XAN pmax pmax
comp=Z,5.0nm,0.6s
XAN pmax pmax
comp=Z,140nm,7.1s
HIA Hailar 67.75 45 deP P 17 33 02.2 +1.2
HIA pmax pmax
comp=Z,61nm,1.0s
PQI Presque Isle 67.95 312 eP P 17 33 01.0 -1.2
comp=Z,76nm,1.9s
ZEA Zeya 69.74 38 eP P 17 33 14.0 +0.8
ZEA pmax pmax
comp=Z,9.0nm,1.0s
CHAI Chaiyaphum 70.57 84 P P 17 33 22.5 +3.6
SKNT Sakolnakorn 71.66 82 P P 17 33 36.4 +11
comp=Z,9.0nm,0.9s,comp=Z,0.2nm
D53A Lac Vacive, Po 73.52 316 eP P 17 33 37.5 +1.4
comp=Z,6.9nm,0.8s
CN2 Changchun 73.87 48 eP P 17 33 38.5 +0.3
CN2 pmax pmax
comp=Z,10.0nm,0.7s
BILL Bilibino 74.00 14 eP P 17 33 38.1 -0.4
comp=Z,7.4nm,1.3s
BILL Bilibino 74.00 14 eP P 17 33 38.2 -0.3
BILL e 17 33 53.8
BILL pmax pmax
comp=Z,7.0nm,1.3s
SEY Seymchan 74.46 22 deP P 17 33 42.3 +1.0
KLR Kul'dur 74.53 41 deP P 17 33 42.8 +0.8
KLR pmax pmax
comp=Z,6.0nm,1.0s
NJ2 Nanjing 75.58 61 eP P 17 33 47.8 -0.5
NJ2 pmax pmax
comp=Z,11nm,0.5s
GRNR Gornyy 76.07 38 eP P 17 33 50.0 -0.8
GRNR pmax pmax
comp=Z,13nm,1.0s
MA2 Magadan 76.37 25 eP P 17 33 52.6 +0.3
MA2 Magadan 76.37 25 deP P 17 33 53.2 +0.9
MA2 pmax pmax
comp=Z,19nm,1.7s
INK Inuvik 76.53 352 eP P 17 33 52.6 -0.4
comp=Z,5.8nm,1.3s
INK Inuvik 76.53 352 eP P 17 33 52.6 -0.4
INK pmax pmax
comp=Z,6.0nm,1.3s
USA0B Ussuriysk Arra 77.57 45 eP P 17 33 59.4 +0.1
comp=Z,11nm,0.7s
USRK Ussuriysk Ar. 77.57 45 P P 17 33 59.5 +0.2
comp=Z,9.6nm,0.7s,baz=292,slow=5.1,SNR=30
YKA Yellowknife Ar 78.31 342 P P 17 34 02.9 -0.2
comp=Z,0.6nm,0.5s,baz=35,slow=5.1,SNR=4.1
EPYK Eagle Plains 78.75 353 eP P 17 34 05.6 0.0
comp=Z,12nm,1.3s
COLD Coldfoot 78.80 358 eP P 17 34 06.7 +0.9
comp=Z,5.2nm,1.0s
KS15 Wonju Array Si 78.91 52 eP P 17 34 07.0 +0.2
comp=Z,15nm,1.1s
KSRS Korea Array 78.92 52 P P 17 34 07.4 +0.4
comp=Z,2.9nm,0.7s,baz=303,slow=4.6,SNR=18
E43A Lone Tree Farm 79.13 319 eP P 17 34 08.7 +0.7
comp=Z,5.5nm,0.9s
FYU Fort Yukon 79.25 356 eP P 17 34 09.5 +1.2
comp=Z,8.2nm,1.0s
FFC Flin Flon 80.41 332 i P P 17 34 14.7 0.0
COWI Conover 80.45 320 eP P 17 34 15.9 +0.7
comp=Z,6.4nm,0.7s
EGAK Eagle 80.73 354 eP P 17 34 16.8 +0.5
comp=Z,5.8nm,1.3s
ILAR Eielson Array 81.13 357 P P 17 34 19.2 +0.8
comp=Z,1.3nm,0.8s,baz=350,slow=4.3,SNR=15
ILB Eielson Array 81.13 357 eP P 17 34 18.9 +0.5
comp=Z,3.0nm,0.9s
DAWY Dawson 81.27 353 eP P 17 34 20.1 +0.8
comp=Z,6.1nm,0.9s
CCB Clear Creek Bu 81.30 357 eP P 17 34 19.4 +0.1
comp=Z,5.5nm,0.9s
WRH Wood River Hil 81.49 357 eP P 17 34 20.6 +0.3
comp=Z,12nm,0.7s
HDA Harding Lake 81.50 356 eP P 17 34 20.7 +0.4
comp=Z,7.9nm,0.8s
G40A Rib Lake 81.56 320 eP P 17 34 21.7 +0.6
comp=Z,4.9nm,0.8s
YSS Yuzh-Sakhalins 81.72 38 eP P 17 34 21.8 0.0
YSS e 17 34 33.4
YSS pmax pmax
comp=Z,10.0nm,0.8s
BPAW Bear Paw Mtn. 81.96 358 eP P 17 34 22.9 +0.1
comp=Z,6.0nm,0.8s
RIDG Independent Ri 82.04 355 eP P 17 34 24.3 +1.0
comp=Z,6.3nm,1.0s
DOT Dot Lake 82.08 355 eP P 17 34 24.4 +0.9
comp=Z,5.0nm,0.8s
KTH Kantishna Hill 82.50 358 eP P 17 34 25.9 +0.2
comp=Z,16nm,1.5s
TRF Thorofare Moun 82.59 358 eP P 17 34 26.6 +0.3
comp=Z,21nm,1.5s
CAST Castle Rocks 82.67 359 eP P 17 34 26.6 +0.1
comp=Z,5.5nm,0.9s
MENT Mentasta 82.76 355 eP P 17 34 28.2 +1.1
comp=Z,5.4nm,1.0s
DHY Denali Highway 82.85 357 eP P 17 34 28.0 +0.3
comp=Z,8.4nm,0.7s
PETK Petropavlovsk- 83.79 26 P P 17 34 31.7 -0.8
comp=Z,1.6nm,0.8s,baz=46,slow=4.3,SNR=3.5
SCM Sheep Creek Mo 84.08 356 eP P 17 34 35.0 +1.1
comp=Z,7.2nm,0.8s
SCM Sheep Creek Mo 84.08 356 eP P 17 34 35.0 +1.1
SCM pmax pmax
comp=Z,7.0nm,0.8s
GHO Glory Hole Cre 84.22 357 eP P 17 34 35.3 +0.7
comp=Z,9.2nm,0.9s
HYT Haines Junctio 84.22 352 eP P 17 34 36.0 +1.3
comp=Z,9.2nm,1.3s
BALM Baldy 84.53 354 eP P 17 34 37.1 +0.9
comp=Z,8.3nm,1.1s
BALM Baldy 84.53 354 eP P 17 34 37.1 +0.9
BALM pmax pmax
comp=Z,8.0nm,1.1s
KNK Knik Glacier 84.56 357 eP P 17 34 36.6 +0.3
comp=Z,8.2nm,0.9s
SUA Susitna One 84.59 358 eP P 17 34 37.2 +0.6
comp=Z,8.3nm,0.7s
RC01 Rabbit Creek A 84.94 357 eP P 17 34 38.9 +0.8
comp=Z,9.2nm,0.7s
GLI Glacier Island 85.02 356 eS S 17 45 07.1 +1.0
BDFB Brasilia 85.27 248 P P 17 34 43.0 +2.4
comp=Z,2.4nm,0.6s,baz=11,slow=4.1,SNR=3.7
BDFB Brasilia 85.27 248 P P 17 34 43.0 +2.4
ECSD EROS Data Cent 85.97 322 eP P 17 34 44.1 +0.4
comp=Z,5.2nm,0.8s
MJB9 Matsu-Tunnel 86.01 48 eP P 17 34 44.5 +0.5
comp=Z,16nm,1.5s
MAJO Matsushiro 86.02 48 eP P 17 34 44.4 +0.4
MAJO Matsushiro 86.02 48 eP P 17 34 44.4 +0.4
MJAR Matsushiro Arr 86.02 48 P P 17 34 44.4 +0.3
comp=Z,2.9nm,0.8s,baz=301,slow=6.4,SNR=11
CCM Cathedral Cave 86.91 315 eP P 17 34 48.7 +0.3
comp=Z,5.3nm,0.8s
CCM Cathedral Cave 86.91 315 eP P 17 34 48.7 +0.3
CCM pmax pmax
comp=Z,5.0nm,0.8s
LRAL Lakeview Retre 87.57 309 eP P 17 34 52.3 +0.6
comp=Z,7.5nm,0.8s
KDAK Kodiak Island 88.33 359 i P P 17 34 56.0 +1.3
PDAR Pinedale Array 92.85 328 P P 17 35 15.7 -0.8
comp=Z,0.4nm,0.6s,baz=26,slow=7.2,SNR=4.3
AS31 Alice Springs 117.97 101 ePKPdf PKPdf 17 40 50.4 -0.1
ASAR Alice Springs 117.97 101 PKP PKPdf 17 40 50.4 -0.1
comp=Z,0.5nm,0.6s,baz=308,slow=1.3,SNR=9.6

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*THE **15** 17:22:49.0, 38.°15N×23.°22E, h11km±5km, ML1.9/3, Error ellipse: s-maj=5.8km s-min=0.8km az=215.0*
ATH 15 17:22:49.1, 38.°16N×23.°19E, h13km±2km, ML2.0/4, Error ellipse: s-maj=2.2km s-min=0.8km az=113.0, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
VIL2	**Platees**	**0.08**	**52**	P	P	Pg	17 22 52.1	+0.2
VIL2				S	S	Sg	17 22 54.1	+0.2
VIL2				AML	AML		17 22 54.4	
	comp=N,2553μm,0.2s							
VIL2				AML	AML		17 22 54.5	
	comp=E,2037μm,0.2s							
LTK	**Loutraki**	**0.22**	**232**	P	P	Pg	17 22 53.9	0.0
LTK				S	S	Sg	17 22 57.9	+0.7
LTK	**Loutraki**	**0.22**	**232**	P	P	Pg	17 22 53.6	-0.3
LTK				S	S	Sg	17 22 57.7	+0.5
LOUT	**Loutraki**	**0.24**	**224**	P	P	Pg	17 22 53.7	-0.5
LOUT				S	S	Sg	17 22 57.5	-0.3
PROD	**Prodromos**	**0.25**	**293**	P	P	Pg	17 22 54.5	+0.2
PROD				S	S	Sb	17 22 59.0	-0.6
PROD	**Prodromos**	**0.25**	**293**	P	P	Pg	17 22 54.3	0.0
PROD				S	S	Sb	17 22 58.8	-0.9
PROD				AML	AML		17 22 59.7	
	comp=E,1238μm,0.3s							
PROD				AML	AML		17 22 59.8	
	comp=N,1306μm,0.3s							
ACOR	**Acrocorinthos**	**0.37**	**223**	P	P	Pg	17 22 56.4	-0.1
THAL	**Thalero**	**0.43**	**253**	P	P	Pb	17 22 58.2	-0.4
ATH	**Athens Observa**	**0.46**	**114**	P	P	Pg	17 22 57.9	-0.2
ATHU	**Athens Univers**	**0.51**	**112**	P	P	Pg	17 22 59.2	+0.1
ATHU	**Athens Univers**	**0.51**	**112**	P	P	Pg	17 22 59.2	+0.2
LKR	**Lokris**	**0.51**	**343**	P	P	Pg	17 22 58.8	-0.3
LKR				S	S	Sb	17 23 07.3	+0.1
	comp=N,182nm,0.2s							
LKR	**Lokris**	**0.51**	**343**	P	P	Pg	17 22 58.9	-0.2
LKR				S	S	Sg	17 23 06.1	+0.2
LKR				AML	AML		17 23 11.7	
	comp=N,421μm,0.2s							
LKR				AML	AML		17 23 12.3	
	comp=E,312μm,0.1s							
PTL	**Penteli**	**0.55**	**102**	P	P	Pb	17 23 00.4	-0.1
ATAL	**Atalanti**	**0.55**	**346**	P	P	Pg	17 22 59.3	-0.5
ATAL				S	S	Sb	17 23 08.2	-0.1
EPID	**Epidavros**	**0.55**	**186**	P	P	Pb	17 23 00.4	-0.2
VLY	**Voula,Athens**	**0.57**	**123**	P	P	Pg	17 23 00.1	-0.1
DSF	**Desfina**	**0.58**	**296**	P	P	Pg	17 23 00.0	-0.4
DSF				S	S	Sb	17 23 09.8	+0.6
	comp=E,145nm,0.1s							
DSF	**Desfina**	**0.58**	**296**	P	P	Pg	17 22 59.9	-0.5
DSF				S	S	Sg	17 23 08.4	+0.4
DSF				AML	AML		17 23 12.2	
	comp=E,268μm,0.2s							
DSF				AML	AML		17 23 13.1	
	comp=N,278μm,0.1s							
MRKA	**Markates**	**0.63**	**30**	P	P	Pg	17 23 00.3	-1.0
EREA	**Eretria**	**0.64**	**66**	P	P	Pg	17 23 01.4	-0.1
EREA	**Eretria**	**0.64**	**66**	P	P	Pg	17 23 01.2	-0.3
GUR	**Goura**	**0.70**	**252**	P	P	Pb	17 23 03.4	+0.1
GUR				S	S	Sg	17 23 12.3	+0.2
GUR	**Goura**	**0.70**	**252**	P	P	Pg	17 23 02.8	0.0
KLV	**Kalavryta, Ach**	**0.83**	**262**	P	P	Pb	17 23 05.6	+0.3
KLV	**Kalavryta, Ach**	**0.83**	**262**	P	P	Pg	17 23 05.0	-0.1
KALE	**Kalithea**	**0.86**	**286**	P	P	Pg	17 23 04.5	-1.2
LAKA	**Lakka**	**0.96**	**275**	P	P	Pg	17 23 07.6	+0.1

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*IDC **15** 17:24:09.4±0.8, 34.°21N×24.°99E, h0km, mb4.2/13, mb1 4.3/16, mb1mx4.0/51, mbtmp4.2/16, ML4.7/3, Error ellipse: s-maj=17.9km s-min=14.9km az=111.0*
*ISCJB **15** 17:24:10.4±0.4, 34.°15N±0.°05×24.°97E±0.°07, h20km, mb4.4/28, Error ellipse: s-maj=8.2km s-min=7.2km az=164.2*
*NEIC **15** 17:24:11.2±2.1, 34.°20N×24.°99E, h11km±5km, mb4.7/20, Error ellipse: s-maj=12.6km s-min=3.5km az=74.0*
ISC 15 17:24:12.4±0.6, 34.°17N±0.°07×25.°10E±0.°07, h20km, n47, σ1§51/48, mb4.6/28, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.13**	**351**	Pn	Pn		17 24 32.7	-0.6
	36nm,0.3s,baz=301,slow=19,SNR=4.4							
IDI				Sn	Sb		17 24 47.4	-0.3
	147nm,0.3s,baz=273,slow=18,SNR=7.3							
MMAI	**Mount Meron Ar**	**8.67**	**95**	Pn	Pn		17 26 18.8	+1.9
	13nm,0.3s,baz=280,slow=12,SNR=4.3							
MMAI				Sn	Sn		17 27 49.4	-4.6
	4.2nm,0.3s,baz=267,slow=24,SNR=4.4							
EIL	**Elat**	**9.49**	**115**	Sn	Sn		17 28 09.2	-5.0
	0.9nm,0.3s,baz=13,slow=18,SNR=3.2							
KIV	**Kislovodsk**	**16.76**	**49**	eP	P		17 28 09.5	+1.3
	15nm,1.0s							
AKASG	**Malin Array Be**	**16.80**	**9**	Pn	Pn		17 28 06.1	-0.2
	1.7nm,0.3s,baz=199,slow=11,SNR=4.0							
AKBB	**Malin Array Si**	**16.80**	**9**	ePn	Pn		17 28 06.8	+0.4
	7.5nm,0.8s							
GEC2	**GERESS Array S**	**16.94**	**333**	eP	P		17 28 10.2	+0.1
	4.9nm,0.6s							
GERES	**GERESS Array B**	**16.94**	**333**	Pn	P		17 28 10.1	0.0
	1.1nm,0.3s,baz=144,slow=12,SNR=6.6							
CLL	**Collm**	**19.25**	**336**	ePP	Pn		17 28 48.0	+11
ESDC	**Sonseca Array**	**23.82**	**292**	P	P		17 29 24.2	0.0
	1.5nm,0.7s,baz=82,slow=9.2,SNR=3.1							
GEYT	**Alibeck**	**26.88**	**72**	P	P		17 29 52.9	+1.0
	0.8nm,0.4s,baz=267,slow=8.7,SNR=2.8							
FIA0	**FINESS Array S**	**27.30**	**1**	eP	P		17 29 53.7	-1.7
FINES	**FINESS Array B**	**27.30**	**1**	P	P		17 29 53.7	-1.7
	1.3nm,0.5s,baz=172,slow=11,SNR=2.6							
NC602	**NORSAR Array S**	**28.00**	**346**	eP	P		17 30 01.2	-0.5
	55nm,1.6s							
NAO01	**NORSAR Array S**	**28.24**	**345**	eP	P		17 30 03.2	-0.6
	28nm,1.3s							
NB201	**NORSAR Array S**	**28.34**	**346**	eP	P		17 30 04.0	-0.8
NB200	**NORSAR Array S**	**28.35**	**346**	eP	P		17 30 03.7	-1.1
NOA	**NORSAR Array B**	**28.35**	**346**	P	P		17 30 03.7	-1.1
	0.3nm,0.5s,baz=157,slow=9.7,SNR=2.5							
NBO00	**NORSAR Array S**	**28.43**	**345**	eP	P		17 30 05.0	-0.6
	63nm,2.0s							
UOSS	**Minazif**	**28.48**	**100**	eP	P		17 30 05.4	-1.0
	10.0nm,1.2s							
EKA	**Eskdalemuir Ar**	**28.83**	**326**	P	P		17 30 08.3	-0.8
	1.8nm,1.0s,baz=120,slow=9.1,SNR=2.9							
TOA1	**Torodi Ar. Sit**	**29.82**	**231**	eP	P		17 30 17.3	-1.0
TORD	**Torodi Ar. Bea**	**29.82**	**231**	P	P		17 30 17.3	-1.0
	5.8nm,0.5s,baz=27,slow=9.2,SNR=13							
ARU	**Arti**	**31.89**	**35**	eP	P		17 30 37.5	+1.4
	6.5nm,0.8s							
ARA0	**ARCESS Array S**	**35.42**	**0**	eP	P		17 31 05.1	-1.6
ARCES	**ARCESS Array B**	**35.42**	**0**	P	P		17 31 05.1	-1.6
	5.2nm,0.3s,baz=178,slow=9.9,SNR=1.4							

KK31	Karatay Array	36.20	62	eP	P	17 31 15.1	+1.3
	20nm,1.8s						
GAR	Garm	36.34	69	eP	P	17 31 17.0	+1.8
	5.5nm,0.6s						
DBIC	Dimbokro	38.91	232	P	P	17 31 37.5	+0.5
	2.1nm,0.5s,baz=39,slow=11,SNR=3.4						
DBIC	Dimbokro	38.91	232	eP	P	17 31 37.5	+0.5
	26nm,1.5s						
FRU1	Bishkek	39.23	62	eP	P	17 31 40.6	+1.1
	12nm,0.5s						
NIL	Nilore	39.67	77	eP	P	17 31 45.1	+1.9
	5.8nm,0.4s						
MAKZ	Makanchi	44.15	56	eP	P	17 32 20.8	+1.2
	3.8nm,1.0s						
MK31	Makanchi Array	44.37	56	eP	P	17 32 22.4	+1.0
	2.7nm,0.8s						
MK32	Makanchi Array	44.37	56	eP	P	17 32 21.7	+0.3
MKAR	Makanchi Array	44.37	56	P	P	17 32 21.7	+0.3
	2.6nm,0.6s,baz=268,slow=7.5,SNR=6.4						
KBS	Kingsbay	45.20	356	eP	P	17 32 27.6	+0.1
	29nm,1.3s						
ZAA0	Zalesovo Array	45.73	45	eP	P	17 32 31.8	-0.2
	5.2nm,0.5s						
ZAA1	Zalesovo Array	45.73	45	eP	P	17 32 31.6	-0.4
ZALV	Zalesovo Beam	45.73	45	P	P	17 32 31.6	-0.4
	4.5nm,0.4s,baz=272,slow=8.8,SNR=6.5						
IVI	Ivigtut	52.79	324	eP	P	17 33 24.0	-1.9
	9.6nm,0.9s						
LBTB	Lobatse	58.86	179	eP	P	17 34 12.7	+2.9
	9.5nm,1.3s						
SONA0	Songino Array	60.16	50	eP	P	17 34 19.6	+0.9
SONM	Songino Array	60.16	50	P	P	17 34 19.7	+0.9
	1.4nm,0.5s,baz=289,slow=8.1,SNR=4.0						
BOSA	Boshof	62.44	180	P	P	17 34 34.0	-0.3
	1.8nm,0.6s,baz=347,slow=7.2,SNR=1.4						
BOSA	Boshof	62.44	180	eP	P	17 34 33.9	-0.3
	44nm,1.7s						
KSRS	Korea Array	78.92	52	P	P	17 36 15.6	+1.0
	0.7nm,0.6s,baz=301,slow=4.3,SNR=3.5						

*IDC **15** 17:26:17.5±1.2,34°.13N×25°.13E, h0km, mb3.7/5, mb1 3.8/8, mb1mx3.6/51, mbtmp3.7/8, ML4.2/2, Error ellipse: s-maj=25.4km s-min=20.2km az=160.0*
*ISCJB **15** 17:26:20.3±1.3,34°.3N±0°.1×25°.4E±0°.1, h20km, mb3.6/5, Error ellipse: s-maj=20.7km s-min=8.0km az=33.9*
ISC 15 17:26:20.4±1.0,34°.17N±0°.10×25°.16E±0°.09, h20km, n9, σ1§38/11, mb3.8/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	1.14	349	Pn	Pn	17 26 40.3	-1.0
	25nm,0.3s,baz=168,slow=20,SNR=4.1						
IDI				Sn	Sb	17 26 55.7	-0.2
	63nm,0.3s,baz=106,slow=18,SNR=6.6						
MMAI	Mount Meron Ar	8.62	95	Pn	Pn	17 28 25.7	+1.5
	baz=282,slow=14,SNR=2.0						
MMAI				Sn	Sn	17 29 58.6	-2.3
	1.3nm,0.3s,baz=268,slow=24,SNR=3.5						
AKASG	Malin Array Be	16.79	9	Pn	Pn	17 30 14.6	+0.4
	0.9nm,0.3s,baz=198,slow=10,SNR=3.6						
GERES	GERESS Array B	16.96	333	Pn	P	17 30 18.1	-0.3
	0.3nm,0.3s,baz=144,slow=12,SNR=5.6						
ESDC	Sonseca Array	23.86	292	P	P	17 31 34.4	+1.8
	0.2nm,0.5s,baz=89,slow=9.6,SNR=3.1						
TORD	Torodi Ar. Bea	29.86	231	P	P	17 32 25.2	-1.4
	0.5nm,0.4s,baz=43,slow=8.0,SNR=3.1						
MKAR	Makanchi Array	44.33	56	P	P	17 34 29.7	+0.7
	1.4nm,0.6s,baz=273,slow=7.2,SNR=6.3						
ZALV	Zalesovo Beam	45.70	45	P	P	17 34 39.5	-0.3
	0.7nm,0.4s,baz=289,slow=9.7,SNR=2.8						
SONM	Songino Array	60.12	50	P	P	17 36 27.1	+0.6
	0.5nm,0.6s,baz=280,slow=8.6,SNR=2.9						

*IDC **15** 17:28:36.6±1.2,34°.29N×25°.04E, h0km, mb3.9/5, mb1 3.9/9, mb1mx3.6/55, mbtmp3.8/9, ML3.9/4, Error ellipse: s-maj=24.0km s-min=18.2km az=73.0*
*ISCJB **15** 17:28:37.8±0.9,34°.14N±0°.08×25°.26E±0°.09, h20km, mb4.0/6, Error ellipse: s-maj=14.4km s-min=6.5km az=41.7*
ISC 15 17:28:39.4±1.0,34°.22N±0°.09×25°.13E±0°.10, h20km, n11, σ1§68/14, mb3.9/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	1.08	350	Pn	Pb	17 29 00.0	+0.5
	33nm,0.3s,baz=344,slow=20,SNR=6.2						
IDI				Sn	Sn	17 29 15.5	+1.5
	45nm,0.3s,baz=114,slow=18,SNR=5.1						
MMAI	Mount Meron Ar	8.65	95	Pn	Pn	17 30 46.1	+2.5
	0.9nm,0.3s,baz=270,slow=12,SNR=3.6						
MMAI				Sn	Sn	17 32 19.7	-0.9
	3.6nm,0.3s,baz=283,slow=19,SNR=5.6						
EIL	Elat	9.50	116	Pn	Pn	17 30 56.1	+1.0
	1.1nm,0.3s,baz=288,slow=9.6,SNR=3.9						
EIL				Sn	Sn	17 32 38.8	-2.4
	0.9nm,0.3s,baz=25,slow=19,SNR=2.6						
AKASG	Malin Array Be	16.74	9	Pn	Pn	17 32 31.1	-1.5
	0.7nm,0.3s,baz=201,slow=11,SNR=4.5						
GERES	GERESS Array B	16.90	333	Pn	P	17 32 36.0	-0.7
	0.2nm,0.3s,baz=147,slow=13,SNR=5.6						
FINES	FINESS Array B	27.25	1	P	P	17 34 19.6	-2.3
	2.5nm,0.8s,baz=184,slow=11,SNR=4.0						
TORD	Torodi Ar. Bea	29.87	231	P	P	17 34 46.4	+0.7
	0.2nm,0.3s,baz=22,slow=8.1,SNR=4.3						
ARCES	ARCESS Array B	35.37	0	P	P	17 35 31.1	-2.2
	6.6nm,0.3s,baz=180,slow=9.0,SNR=3.9						
MKAR	Makanchi Array	44.32	56	P	P	17 36 49.2	+1.3
	0.8nm,0.5s,baz=274,slow=7.1,SNR=7.4						
ZALV	Zalesovo Beam	45.67	46	P	P	17 36 58.6	0.0
	1.7nm,0.4s,baz=260,slow=9.2,SNR=5.7						
KSRS	Korea Array	78.87	52	P	P	17 40 41.6	+0.3
	0.3nm,0.4s,baz=292,slow=4.0,SNR=3.5						

TAP 15 17:29:04.3,24°.87N×121°.81E, h83km±1km, ML2.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIPB	Shuangxi	0.11	9	P	Pn	17 29 16.1	-0.2
	baz=9.0						
TIPB				eS	Sn	17 29 24.4	-0.6
	baz=9.0						
TWE	Neicheng	0.19	221	P	Pn	17 29 16.8	+0.4
	baz=217						
TWE				eS	Sn	17 29 25.8	+0.4
	baz=217						
TWA	Mucha	0.23	299	P	Pn	17 29 16.8	+0.2
	baz=299						
TWA				eS	Sn	17 29 26.3	+0.6
	baz=299						
NHDH	Xindian Distri	0.27	291	P	Pn	17 29 17.0	+0.2
	baz=290						
NHDH				eS	Sn	17 29 26.6	+0.6
	baz=290						
ENTT	Nioudou	0.31	224	P	Pn	17 29 17.4	+0.4
	baz=222						
ENTT				eS	Sn	17 29 27.3	+0.8
	baz=222						
YM01	YM01	0.35	322	P	Pn	17 29 17.6	+0.3
	baz=322						
YM01				eS	Sn	17 29 27.1	+0.2
	baz=322						
YM07	YM07	0.35	331	P	Pn	17 29 17.5	+0.2
	baz=331						
YM07				eS	Sn	17 29 27.4	+0.5
	baz=331						
NDT	Datong Townshi	0.38	226	P	Pn	17 29 17.6	+0.2
	baz=225						
NDT				eS	Sn	17 29 27.2	+0.1
	baz=225						
TWS1	Kuangyinshan	0.42	304	eP	Pn	17 29 18.2	+0.5
	baz=303						
TWS1				eS	Sn	17 29 28.1	+0.4
	baz=303						
EOS1	EOS1	0.43	137	eS	Sn	17 29 28.0	+0.3
	baz=137						
YHNB	Yeheng	0.44	244	P	Pn	17 29 18.0	+0.1
	baz=243						
YHNB				eS	Sn	17 29 27.6	-0.4
	baz=243						
ENA	Nanau	0.44	188	P	Pn	17 29 18.4	+0.5
	baz=186						
ENA				eS	Sn	17 29 29.1	+1.2
	baz=186						
NANB	Nanao	0.44	187	P	Pn	17 29 18.3	+0.4
	baz=186						
NANB				eS	Sn	17 29 29.1	+1.2
	baz=186						
NSK	Sanguang	0.45	245	P	Pn	17 29 18.0	0.0
	baz=244						
NSK				eS	Sn	17 29 28.6	+0.4
	baz=244						
WLTB	Daxi	0.50	269	eS	Sn	17 29 29.9	+1.2
	baz=268						
NNSB	Datong	0.58	222	P	Pn	17 29 19.6	+0.4
	baz=221						
NNSB				eS	Sn	17 29 30.2	-0.1
	baz=221						
NACB	Ninganchiao	0.72	196	P	Pn	17 29 20.8	+0.4
	baz=195						
NACB				eS	Sn	17 29 31.2	-1.1
	baz=195						
ETLH	Xiulin Townshi	0.72	204	P	Pn	17 29 20.7	+0.2
	baz=204						
ETLH				eS	Sn	17 29 32.3	-0.2
	baz=204						
LIOB	Emei	0.75	253	eP	Pn	17 29 21.2	+0.4
	baz=253						
LIOB				eS	Sn	17 29 33.4	+0.4
	baz=253						
NSTT	Nanjuang	0.77	252	eS	Sn	17 29 33.5	+0.2
	baz=252						
WHF	Hehuan Shan	0.87	215	eS	Sn	17 29 36.1	+0.1
	baz=214						
SANB	Taian	0.88	238	eP	Pn	17 29 23.0	+0.7
	baz=238						
SANB				eS	Sn	17 29 36.4	+0.6
	baz=238						
CHGB	Renai	0.99	216	eP	Pn	17 29 24.5	+0.9
	baz=215						
CHGB				eS	Sn	17 29 38.1	+0.1
	baz=215						

JMA 15 17:29:14.4±0.1,24°.18N×122°.87E, h31km±3km, M1.5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonaguni jima	0.28	14	P	Pb	17 29 21.4	-0.3
JYNG				eS	Sb	17 29 26.5	-0.1
YOJ	Yonaguni jima	0.31	25	P	Pb	17 29 21.9	-0.2
YOJ				eS	Sb	17 29 27.0	-0.3
IRIF	Iriomote-Funau	0.80	79	P	Pn	17 29 29.1	-0.4
IRIF				eS	Sb	17 29 40.1	-0.2
HATJ	Hateruma jima	0.86	98	P	Pn	17 29 30.0	-0.4
HATJ				eS	Sn	17 29 41.8	-0.2
JKRS	Kuro-shima	1.04	87	P	Pn	17 29 33.3	+0.4
JKRS				eS	Sb	17 29 46.8	-0.4
JIJ	Ishigaki jima	1.18	81	P	Pn	17 29 34.7	0.0
JIJ				S	Sn	17 29 49.7	0.0
JISG	Ishigakijimahi	1.38	73	eS	Sb	17 29 55.8	-0.9

*GII **15** 17:29:11.1±0.0,34°.42N×25°.07E, h10km*
*IDC **15** 17:29:14.2±1.1,34°.15N×25°.08E, h0km, mb4.2/8, mb1 4.2/14, mb1mx3.9/58, mbtmp4.1/14, ML4.2/5, Error ellipse: s-maj=21.2km s-min=17.3km az=2.0*
*ISCJB **15** 17:29:15.1±0.4,34°.00N±0°.04×25°.20E±0°.03, h25km, mb4.1/19, Error ellipse: s-maj=5.6km s-min=3.5km az=26.7*
*NEIC **15** 17:29:17.2±2.2,34°.23N×25°.08E, h17km±5km, mb4.1/16, Error ellipse: s-maj=10.6km s-min=3.9km az=59.0*
*ISK **15** 17:29:18.1,34°.30N×25°.19E, h14km, ML3.8/14*
ISC 15 17:29:17.4±0.6,34°.14N±0°.07×25°.17E±0°.05, h25km, n73, σ1§60/78, mb4.1/19, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	1.14	308	PG	Pn	17 29 39.0	+1.2
GVD				SG	Sn	17 29 53.9	+1.3
IDI	Anoyia	1.17	349	Pn	Pn	17 29 38.5	+0.2
	76nm,0.3s,baz=181,slow=15,SNR=4.8						
IDI				Sn	Sn	17 29 51.4	-2.2
	211nm,0.3s,baz=116,slow=9.6,SNR=9.4						
ZKR	Zakros	1.30	41	PN	Pn	17 29 40.9	+0.9
ZKR				SN	Sn	17 29 57.4	+0.8
IMMV	Iera Moni Meta	1.65	324	PN	Pn	17 29 45.7	+0.9
SANT	Santorini	2.24	6	ePn	Pn	17 29 51.3	-1.7
ARG	Arkhangelos	3.19	49	PN	Pn	17 30 07.8	+1.9
DAT	Datca	3.25	36	PN	Pn	17 30 08.4	+1.5
DALY	Dalyan (Mula)	3.90	46	PN	Pn	17 30 17.9	+2.2
TURN	Turunc	3.91	45	PN	Pn	17 30 13.7	-2.1
YER	Yerkesik	3.92	39	PN	Pn	17 30 17.9	+1.8
ITM	Ithomi	4.03	320	ePn	Pn	17 30 19.1	+1.6
FETY	Fethiye	4.05	51	PN	Pn	17 30 19.5	+1.6
AKAS	Kas	4.19	59	PN	Pn	17 30 22.5	+2.7
CHOS	Chios island	4.30	9	PN	Pn	17 30 22.7	+1.4
URLA	Izmir	4.37	15	PN	Pn	17 30 23.1	+0.9
AYDB	Zeytinkoy-Aydi	4.39	29	PN	Pn	17 30 24.4	+1.8
KORT	Korkueli	5.09	54	PN	Pn	17 30 35.2	+2.9
AGG	Agios Georgios	5.39	336	ePn	Pn	17 30 37.0	+0.8
BALB	Balikesir	5.91	21	ePn	Pn	17 30 43.9	+0.6
LIT	Litokhoron	6.33	341	ePn	Pn	17 30 47.3	-1.8
FNA	Florina	7.29	337	ePn	Pn	17 31 02.0	-0.3
FNA				eSn	Sn	17 32 16.5	-7.8
OFRI	`Ofer	8.34	98	Pn	Pn	17 31 13.3	-3.5
TIP	Timpagrande	8.43	309	ePn	Pn	17 31 16.9	-1.1
SLTI	Sal'it	8.48	100	Pn	Pn	17 31 16.5	-2.2
MMAI	Mount Meron Ar	8.61	95	Pn	Pn	17 31 20.7	+0.3
	1.5nm,0.3s,baz=287,slow=10,SNR=4.0						
MMAI				Sn	Sn	17 32 57.9	+1.1
	3.2nm,0.3s,baz=270,slow=19,SNR=3.3						
BR101	Keskin Array S	8.78	48	ePn	Pn	17 31 24.1	+1.3
BRTR	Keskin Array B	8.78	48	Pn	Pn	17 31 24.1	+1.3
	0.1nm,0.3s,baz=227,slow=15,SNR=3.9						
GEM	Giv'at Ha'Em	8.79	93	Sn	Sn	17 32 59.6	-1.6
NATI	Neve Ativ	8.84	93	Pn	Pn	17 31 20.9	-2.7
NATI				Sn	Sn	17 33 01.1	-1.4
HMDT	Nahal Hemdat	8.88	99	Pn	Pn	17 31 22.4	-1.7
MZDA	Masada	9.03	105	Pn	Pn	17 31 23.1	-3.1
PRNI	Paran	9.14	112	Pn	Pn	17 31 26.4	-1.3
ZFRI	Zfri	9.19	110	Pn	Pn	17 31 26.3	-2.0
HRFI	Mount Harif	9.31	113	Pn	Pn	17 31 29.2	-0.9
MBRI	Mt Berech	9.34	115	Pn	Pn	17 31 29.0	-1.5
EIL	Elat	9.43	116	Pn	Pn	17 31 33.7	+2.1
	1.6nm,0.3s,baz=225,slow=8.6,SNR=4.2						
EIL				Sn	Sn	17 33 15.7	-1.2
	1.6nm,0.3s,baz=53,slow=20,SNR=4.2						
EIL	Elat	9.43	116	Pn	Pn	17 31 30.9	-0.7
TTG	Podgorica	9.49	332	ePn	Pn	17 31 30.5	-2.0
TTG				eSn	Sn	17 33 07.7	-11
CLTB	Caltabellotta	10.29	293	ePn	Pn	17 31 43.8	+0.2
KIV	Kislovodsk	16.74	49	ePn	Pn	17 33 06.6	-3.6
	6.6nm,0.8s						
KBZ	Khabaz	16.76	50	Pn	P	17 33 13.5	+1.1
	0.4nm,0.3s,baz=222,slow=6.3,SNR=5.5						
AKASG	Malin Array Be	16.82	9	Pn	Pn	17 33 10.9	-0.1
	1.8nm,0.3s,baz=200,slow=10,SNR=10.0						
AKBB	Malin Array Si	16.82	9	ePn	Pn	17 33 10.8	-0.2
	8.0nm,0.6s						
GEC2	GERESS Array S	16.99	333	eP	Pn	17 33 15.0	+1.6
	3.9nm,0.7s						
GERES	GERESS Array B	16.99	333	Pn	Pn	17 33 14.7	+1.2
	0.5nm,0.3s,baz=145,slow=12,SNR=15						
TUE	Stuetta	17.21	320	ePn	Pn	17 33 15.1	-1.1
	14nm,1.6s						
KHC	Kasperske Hory	17.28	334	ePn	Pn	17 33 16.1	-0.7
	1.2nm,0.9s						
KHC	Kasperske Hory	17.28	334	eP	Pn	17 33 17.5	+0.6
CLL	Collm	19.31	336	esP	sP	17 33 47.0	-2.5
ESDC	Sonseca Array	23.89	292	P	P	17 34 28.3	-0.8
	1.2nm,0.8s,baz=87,slow=9.2,SNR=5.9						
HFS	Hagfors	27.07	347	P	P	17 34 57.2	-0.5
	2.0nm,0.7s,baz=156,slow=11,SNR=3.0						
NAO01	NORSAR Array S	28.28	345	eP	P	17 35 06.9	-1.6
	53nm,1.6s						
EKA	Eskdalemuir Ar	28.89	326	P	P	17 35 15.4	+1.5
	0.4nm,0.4s,baz=116,slow=9.5,SNR=3.4						
TOA1	Torodi Ar. Sit	29.85	231	eP	P	17 35 22.7	-0.2
TOA0	Torodi Ar. Sit	29.85	231	eP	P	17 35 24.5	+1.6
	7.0nm,0.6s						
TORD	Torodi Ar. Bea	29.85	231	P	P	17 35 22.7	-0.2
	3.2nm,0.4s,baz=27,slow=8.0,SNR=24						
ARA0	ARCESS Array S	35.45	0	eP	P	17 36 09.7	-1.6
ARCES	ARCESS Array B	35.45	0	P	P	17 36 09.7	-1.6
	0.5nm,0.4s,baz=171,slow=8.6,SNR=3.8						
KK31	Karatay Array	36.16	62	eP	P	17 36 19.4	+1.7
	2.3nm,0.9s						
KKAR	Karatay Array	36.16	62	eP	P	17 36 19.4	+1.7
	2.3nm,0.9s						
GAR	Garm	36.30	69	eP	P	17 36 20.7	+1.7
	3.9nm,0.9s						
BOOM	Boomskoye usch	40.19	63	eP	P	17 36 52.9	+1.0
	3.4nm,1.3s						
MAKZ	Makanchi	44.12	56	eP	P	17 37 25.4	+1.8
	1.6nm,1.1s						
MK31	Makanchi Array	44.33	56	eP	P	17 37 27.1	+1.7
	1.4nm,0.6s						
MK32	Makanchi Array	44.33	56	eP	P	17 37 26.8	+1.4
MKAR	Makanchi Array	44.33	56	P	P	17 37 26.8	+1.4
	1.5nm,0.6s,baz=279,slow=6.7,SNR=9.1						
ZAA0	Zalesovo Array	45.71	45	eP	P	17 37 36.7	+0.6
	3.3nm,0.6s						
ZALV	Zalesovo Beam	45.71	45	P	P	17 37 36.5	+0.4
	3.8nm,0.4s,baz=268,slow=9.0,SNR=11						
ZAA1	Zalesovo Array	45.71	45	eP	P	17 37 36.5	+0.4
IVI	Ivigtut	52.85	324	eP	P	17 38 30.0	-0.6
	17nm,1.3s						
TSUM	Tsumeb	53.53	189	eP	P	17 38 37.4	+1.2
	7.3nm,1.1s						
SONA0	Songino Array	60.13	50	eP	P	17 39 24.6	+1.8
SONM	Songino Array	60.13	50	P	P	17 39 24.6	+1.8
	0.7nm,0.5s,baz=294,slow=6.5,SNR=4.0						

*IDC **15** 17:34:23.7±0.3,12°.07N×86°.69W, h0km, mb5.3/38, mb1 5.4/39, mb1mx5.3/47, mbtmp5.3/39, ML4.8/1, MS6.2/43, Ms1 6.2/43, ms1mx6.2/47, Error ellipse: s-maj=13.0km s-min=7.1km az=61.0*
*MOS **15** 17:34:26.7±1.2, 11°.86N×86°.95W, h33km, mb6.1/80, MS6.3/93, Error ellipse: s-maj=6.7km s-min=3.8km az=106.8*
*SNET **15** 17:34:26.4±1.3, 11°.49N×87°.06W, h26km±19km, ML6.2, MW6.5*
*NEIC **15** 17:34:27.8±2.5, 11°.76N×86°.93W, h30km, mb6.1/617, ME5.9, MS6.3/727, MW6.3, MW6.5, MW6.5, MD6.6(UCR), MD6.7(SNET), Error ellipse: s-maj=10.7km s-min=6.2km az=229.0, Moment Tension Solution. s83 Moment tensor: Scale 10^{18}Nm; M_{rr}2.21; $M_{\theta\theta}$-1.78; $M_{\phi\phi}$-0.43; $M_{r\theta}$2.03; $M_{\theta\phi}$0.93; $M_{\phi r}$-0.74; Best double couple: M_o3.10000×10^{18} NP1:ϕ_s112.00000°, δ67.00000°, λ86.00000°. NP2: ϕ_s302.00000°, δ23.00000°, λ99.00000°. Principal axes: T 3.0900, Plg68.0000°, Azm15.0000°; N 0.0300, Plg4.0000°, Azm114.0000°; P -3.1200, Plg22.0000°, Azm205.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s315.00000°, δ25.00000°, λ90.00000°. NP2: ϕ_s135.00000°, δ65.00000°, λ90.00000°. Principal axes: T Plg70.0000°, Azm45.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm225.0000°; Complex event, with at least one larger event occurring about 2 seconds after the onset observed on broadband displacement seismograms. Depth from synthetics of broadband displacement seismograms based on first event. Apparent Stress 0.17 MPa. Energy computed from BB mechanism.*
NEIC Felt [IV] at Managua. Also felt at El Crucero, Granada, Leon and Quezalguaque. Felt [III] at San Salvador, El Salvador. Also felt at Antiguo Cuscatlan. Felt at Alajuela, San Pedro, Santa Cruz and Sardinal, Costa Rica and at Tegucigalpa, Honduras.
*UCR **15** 17:34:28.1±2.8, 11°.69N×87°.14W, h6km±11km, MD4.8, ML5.9, mb6.1(NEIC)*
*BJI **15** 17:34:29.0±0.0, 11°.71N×86°.96W, h40km, mB6.1/29, Ms6.6/52, Ms7 6.6/49*
*NEIC **15** 17:34:29.0±0.0, 11°.72N×86°.98W, h35km, Moment Tensor Solution. s25 Moment tensor: Scale 10^{18}Nm; M_{rr}5.49; $M_{\theta\theta}$-3.49; $M_{\phi\phi}$-1.99; $M_{r\theta}$3.31; $M_{\theta\phi}$2.25; $M_{\phi r}$-2.02; Best double couple: M_o6.60000×10^{18} NP1:ϕ_s123.00000°, δ63.00000°, λ88.00000°. NP2:ϕ_s308.00000°, δ27.00000°, λ94.00000°. Principal axes: T 6.7600, Plg71.0000°, Azm28.0000°; N -0.3800, Plg1.0000°, Azm124.0000°; P -6.3700, Plg18.0000°, Azm214.0000°;*
*ISCJB **15** 17:34:30.1±0.2, 11°.75N±0°.01×87°.01W±0°.01, h68km±1km, mb5.9/614 Error ellipse: s-maj=2.8km s-min=1.7km az=37.4*
*GCMT **15** 17:34:35.8±0.0, 11°.62N×87°.30W, h39km, MW6.4/142, Moment Tensor Solution. s138, c358; s142, c615; Duration: 4s0 Moment tensor: Scale 10^{18}Nm; M_{rr}4.87±.02; $M_{\theta\theta}$-3.63±.02; $M_{\phi\phi}$-1.25±.02; $M_{r\theta}$1.88±.02; $M_{\theta\phi}$2.63±.01; $M_{\phi r}$-1.34±.02; Best double couple: M_o5.59700×10^{18} NP1:ϕ_s124.00000°, δ57.00000°, λ91.00000°. NP2:ϕ_s302.00000°, δ33.00000°, λ88.00000°. Principal axes: T 5.3700, Plg78.0000°, Azm39.0000°; N 0.4450, Plg1.0000°, Azm303.0000°; P -5.8240, Plg12.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*GCG **15** 17:34:40.0±0.6, 11°.70N×88°.08W, h23km±999km, MD5.4*
*NEIC **15** 17:34:49.3±0.0, 11°.69N×86°.89W, h44km, Moment Tensor Solution. s88 Moment tensor: Scale 10^{18}Nm; M_{rr}5.96; $M_{\theta\theta}$-3.92; $M_{\phi\phi}$-2.05; $M_{r\theta}$2.45; $M_{\theta\phi}$2.24; $M_{\phi r}$-2.43; Best double couple: M_o6.70000×10^{18} NP1:ϕ_s299.00000°, δ30.00000°, λ81.00000°. NP2:ϕ_s129.00000°, δ61.00000°, λ95.00000°. Principal axes: T 6.9500, Plg74.0000°, Azm52.0000°; N -0.6000, Plg4.0000°, Azm307.0000°; P -6.3500, Plg15.0000°, Azm216.0000°;*
ISC 15 17:34:29.2±0.4,11°.74N±0°.03×87°.05W±0°.03, h41km±3km, h42km:pP-P, n2190, σ1§68/2160, mb6.1/626, MS6.3/789, 53C-21D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.62	46	eP	Pn	17 34 42.7	+1.0
CRUN	El Crucero	0.77	72	eP	Pn	17 34 44.6	+0.9
XAVN	Gruta Xavier	0.81	60	eP	Pn	17 34 45.4	+1.2
CNGN	Cerro Negro	0.83	24	eP	Pn	17 34 45.4	+0.9
MOMN	Momotombo	0.83	37	∥ iP	Pn	17 34 45.3	+0.9
MOMN	Momotombo	0.83	37	∥ iP	Pn	17 34 45.3	+0.9
APYN	Apoyeque	0.84	54	eP	Pn	17 34 45.7	+1.1
TEL3	Telica 3	0.85	13	eP	Pn	17 34 45.9	+1.2
MGAN	Managua	0.88	63	eP	Pn	17 34 46.4	+1.3
TELN	Telica	0.88	14	eP	Pn	17 34 46.8	+1.6
TELN				eS	Sn	17 35 03.0	+6.1
CRIN	San Cristobal	0.95	360	eP	Pn	17 34 47.0	+0.8
BRAN	Las Pilas	1.19	35	eP	Pn	17 34 46.0	-3.3
CSGN	Cosiguina Volc	1.32	338	ePn	Pn	17 34 52.2	+0.9
CSGN	Cosiguina Volc	1.32	338	eP	Pn	17 34 53.0	+1.7
CSGN				eS	Sn	17 35 12.7	+4.9
CSGN				IAML		17 35 17.2	
	comp=Z,1328μm,0.5s						
CSGN	Cosiguina Volc	1.32	338	eP	Pn	17 34 53.1	+1.8
CSG

JTS	Las Juntas de	2.51	125	Pn	Pn	17 35 07.6 +0.1
	comp=Z,149nm,0.3s,baz=6.6,slow=6.0,SNR=141					
JTS				Sn	Sn	17 35 44.5 +7.6
	comp=Z,4μm,0.3s,baz=119,slow=19,SNR=9.0					
JTS				LR	LR	17 35 58.6
	comp=Z,183μm,22.0s,baz=30,slow=39					
JTS	Las Juntas de	2.51	125	*c iP*	Pn	17 35 06.9 -0.6
JTS	Las Juntas de	2.51	125	*eP*	Pn	17 35 10.3 +2.7
SNVI	San Vicente	2.55	317	*eP*	Pn	17 35 09.2 +0.9
AIES	Las Flores	2.60	311	*eP*	Sn	17 35 35.9 -3.1
AIES				*eS*	Sn	17 35 43.3 +4.3
AIES				IAML		17 35 52.9
	comp=Z,62μm,0.5s					
AIES	Las Flores	2.60	311	*eP*	Sn	17 35 35.9 -3.1
AIES				*eS*	Sn	17 35 43.3 +4.3
AIES				IAML		17 35 52.9
	comp=Z,62μm,0.5s					
ARE1	Arenal 1	2.62	119	*eP*	Pn	17 35 09.7 +0.7
PAVA	Las Pavas	2.69	317	*eP*	Pn	17 35 11.3 +1.2
PAVA	Las Pavas	2.69	317	*eP*	Pn	17 35 11.3 +1.2
VICT	Victoria	2.70	325	*eP*	Pn	17 35 11.1 +0.9
VICT	Victoria	2.70	325	*eP*	Pn	17 35 11.1 +0.9
LFRS	El Faro	2.71	314	*eP*	Pn	17 35 10.4 -0.1
ESPN	Las Esperanzas	2.72	80	*ePn*	Pn	17 35 10.8 +0.3
ESPN	Las Esperanzas	2.72	80	*eP*	Pn	17 35 12.2 +1.8
LOMA	San Marcos	2.81	313	*eP*	Pn	17 35 12.2 +0.5
LOMA	San Marcos	2.81	313	*eP*	Pn	17 35 12.2 +0.5
SNET	Serv Nac Est T	2.88	312	*eP*	Pn	17 35 13.7 +1.0
SNET				*eS*	Sn	17 35 49.9 +3.7
SNET				AML	AML	17 35 57.2
	comp=Z,64μm,0.4s					
SNET	Serv Nac Est T	2.88	312	*eP*	Pn	17 35 13.5 +0.9
SNET				*eS*	Sn	17 35 49.9 +3.7
SNET				AML	AML	17 35 57.2
	comp=Z,64μm,0.4s					
UEES	San Salvador	2.91	313	*eP*	Pn	17 35 13.9 +0.8
UEES	San Salvador	2.91	313	*eP*	Pn	17 35 13.9 +0.8
BOQS	Boqueron	2.95	313	*eP*	Pn	17 35 14.3 +0.6
SRA1	San Ramn	3.01	123	*eP*	Pn	17 35 17.8 +3.2
CEDA	San Andres	3.07	312	*eP*	Pn	17 35 16.4 +1.1
CEDA	San Andres	3.07	312	*eP*	Pn	17 35 16.4 +1.1
SBLS	San Blas	3.27	310	*eP*	Pn	17 35 18.8 +0.7
SBLS	San Blas	3.27	310	*eP*	Pn	17 35 18.8 +0.7
HDC	Heredia	3.36	121	*ePn*	Pn	17 35 20.9 +1.6
HDC	Heredia	3.36	121	*eP*	Pn	17 35 22.9 +3.5
SJS	Escuela Geolog	3.44	121	*eP*	Pn	17 35 26.6 +6.1
MTO3	Montecristo	3.47	320	*eP*	Pn	17 35 22.0 +1.0
MTO3				*eS*	Sn	17 36 05.0 +4.0
MTO3	Montecristo	3.47	320	*eP*	Pn	17 35 22.0 +1.0
MTO3				*eS*	Sn	17 36 05.0 +4.0
LCR2	La Lucha 2	3.59	123	*eP*	Pn	17 35 25.5 +3.0
EDDO	Dominical	3.99	128	*eP*	Pn	17 35 31.7 +3.9
IXG	Ixpaco	4.10	306	*eP*	Pn	17 35 31.7 +2.2
IXG	Ixpaco	4.10	306	*eP*	Pn	17 35 31.7 +2.2
MRL	Marmol	4.20	323	*eP*	Pn	17 35 35.8 +4.9
MRL	Marmol	4.20	323	*eP*	Pn	17 35 36.9 +6.0
NBG	Las Nubes	4.28	312	*eP*	Pn	17 35 36.0 +3.9
NBG	Las Nubes	4.28	312	*eP*	Pn	17 35 36.0 +3.9
PCG	Pacaya	4.36	308	*eP*	Pn	17 35 37.4 +4.2
PCG	Pacaya	4.36	308	*eP*	Pn	17 35 37.4 +4.2
DRK0	Durika	4.48	123	*eP*	Pn	17 35 36.8 +2.1
EDPN	Palmar Norte	4.48	128	*eP*	Pn	17 35 39.5 +4.8
EDBA	Buenos Aires	4.51	124	*eP*	Pn	17 35 38.9 +3.9
FUG	Fuego 3	4.57	306	*eP*	Pn	17 35 38.7 +2.6
FUG	Fuego 3	4.57	306	*eP*	Pn	17 35 38.7 +2.6
APG	El Apazote	4.65	315	Pn	Pn	17 35 40.0 +2.9
	comp=Z,17nm,0.3s,baz=106,slow=2.2,SNR=36					
APG				LR	LR	17 36 48.3
	comp=Z,83μm,21.8s,baz=120,slow=31					
APG				Sn	Sn	17 36 49.0 +19
	comp=Z,495nm,0.3s,baz=29,slow=19,SNR=10					
PTJ1	Puerto Jimnez	4.87	130	*eP*	Pn	17 35 42.8 +2.8
BRU2	Volcan	5.19	124	*eP*	Pn	17 35 46.2 +1.7
STG3	Santiaguito 3,	5.30	304	*eP*	Pn	17 35 48.2 +2.2
PRVC	Isla de Provid	5.78	73	*eP*	Pn	17 35 54.6 +2.1
CCIG	Comitan	6.69	313	*ePn*	Pn	17 36 07.6 +2.4
BCIP	Isla Barro Col	7.54	109	*ePn*	Pn	17 36 17.3 +0.7
BCIP	Isla Barro Col	7.54	109	*eP*	Pn	17 36 17.3 +0.7
BCIP	Isla Barro Col	7.54	109	*eP*	Pn	17 36 18.9 +2.3
BCIP	Isla Barro Col	7.54	109	*eP*	Pn	17 36 16.2 -0.4
ZANG	Zanguenga, Cho	7.59	111	*eP*	Pn	17 36 18.3 +1.1
AZU	Azuero	7.74	120	*eP*	Pn	17 36 28.9 +9.5
AZU	Azuero	7.74	120	*eP*	Pn	17 36 21.6 +2.2
UPA	Univ. de Panam	7.88	110	*eP*	Pn	17 36 22.6 +1.3
TEIG	Tepich	8.52	352	*ePn*	Pn	17 36 33.1 +3.1
CMIG	Matias Romero	9.27	306	Pn	Pn	17 36 41.9 +1.6
	comp=Z,10nm,0.3s,baz=96,slow=9.3,SNR=72					
CMIG				Sn	Sn	17 38 27.1 +3.7
	comp=Z,26nm,0.3s,baz=246,slow=20,SNR=3.1					
FSCY	Frank Sound, G	9.41	36	*eP*	Pn	17 36 46.0 +3.8
MYIG	Mrida	9.52	345	*ePn*	Pn	17 36 46.5 +2.7
MCJ	Malvern	10.94	55	*i P*	Pn	17 37 08.9 +5.6
MCJ				*i P*	Pn	17 37 10.2 +7.0
CVJ	Coleyville	11.22	54	*i P*	Pn	17 37 12.5 +5.3
MTDJ	Mount Denham	11.22	54	*ePn*	Pn	17 37 10.4 +3.2
PCJ	Portland Cotta	11.27	57	*i P*	Pn	17 37 13.8 +6.1
BBJ	Bamboo Saint A	11.52	54	*i P*	Pn	17 37 18.8 +7.6
DBBC	Dabeiba	11.68	113	*eP*	Pn	17 37 16.0 +2.6
STH	Stony Hill	11.72	56	*i* PA	Pn	17 37 22.3 +8.3
HOJ	Hope	11.74	57	*i P*	Pn	17 37 22.7 +8.5
YHJ	Yallahs	11.89	58	*i P*	Pn	17 37 24.2 +7.9
LVIG	Laguna Verde	12.01	313	*ePn*	Pn	17 37 19.7 +1.9
CMJ	Castle Mountai	12.11	57	*i P*	P	17 37 28.1 -3.1
TLIG	Tlapa	12.56	299	*ePn*	Pn	17 37 27.8 +2.3
HELC	Santa Helena	12.64	115	*eP*	Pn	17 37 31.9 +5.1
ARGC	Ariguani, Magd	12.71	97	*eP*	Pn	17 37 26.5 -1.0
PAYG	Puerto Ayora	12.75	195	*ePn*	Pn	17 37 28.8 +0.8
GUY2C	Guyana, Caldas	13.24	118	*eP*	P	17 37 42.3 -1.9
BBAC	Balboa, Cauca	13.70	134	*eP*	P	17 37 45.5 -3.5
GTBY	Guantanamo Bay	14.07	53	*ePn*	Pn	17 37 47.6 +1.6
GTBY	Guantanamo Bay	14.07	53	*eP*	P	17 37 55.1 +2.2
GCUF	Volcan Galeras	14.21	137	*eP*	P	17 37 53.5 -1.5
CRUC	La Cruz	14.23	135	*eP*	P	17 37 55.9 +0.8
OTAV	Otavalo	14.26	143	*ePn*	Pn	17 37 51.7 +2.6
OTAV	Otavalo	14.26	143	*eP*	Pn	17 37 51.7 +2.6
OTAV	Otavalo	14.26	143	*eP*	Pn	17 37 46.4 -2.7
ROSC	El Rosal	14.33	118	Pn	P	17 37 55.3 -1.0
	comp=Z,1.1nm,0.3s,baz=5.9,slow=2.3,SNR=27					
ROSC				LR	LR	17 43 30.6
	comp=Z,46μm,21.4s,baz=327,slow=39					
ROSC	El Rosal	14.33	118	*ePn*	Pn	17 37 50.9 +1.0
BETC	Betania	14.61	127	*eP*	P	17 37 59.1 +0.1
BARC	Barichara	14.61	109	*eP*	P	17 37 59.9 +0.7
URIC	Uribia, Colomb	14.74	89	*eP*	P	17 37 59.9 -0.5
CHIC	Chingaza	14.95	117	*eP*	P	17 38 03.9 +0.8
FLOC	Florencia	15.15	131	*eP*	P	17 38 03.9 -1.1
061Z	Ochoppi	15.20	22	*ePn*	Pn	17 38 01.8 +0.8
	comp=Z,3μm,1.5s					
061Z	Ochoppi	15.20	22	P	Pn	17 38 02.7 +1.7
	baz=203,SNR=16					
059Z	Ave Maria	15.45	19	P	P	17 38 06.6 -1.6
	baz=200,SNR=55					
LGNH	Logne	15.47	62	*eP*	Pn	17 38 06.1 +1.5
	comp=Z,3μm,1.1s					
060Z	West Palm Beac	15.82	22	P	P	17 38 11.2 -1.1
	baz=204,SNR=31					
058A	Arcadia	16.01	17	P	P	17 38 15.0 +0.5
	baz=198,SNR=58					
DABV	Dabajuro	16.11	91	*eP*	P	17 38 17.4 +1.8
059A	Moore Haven	16.13	19	*eP*	Pn	17 38 14.1 +1.1
	comp=Z,2μm,1.0s					
059A	Moore Haven	16.13	19	P	P	17 38 15.8 +0.1
	baz=201,SNR=87					
SDV	Santo Domingo	16.39	98	Pn	Pn	17 38 17.3 +0.7
	comp=Z,2.8nm,0.3s,baz=280,slow=11,SNR=23					
SDV				Sn	S	17 41 28.0 -0.7
	comp=Z,3.4nm,0.3s,baz=163,slow=19,SNR=2.9					
SDV				LR	LR	17 46 25.0
	comp=Z,20μm,18.9s,baz=299,slow=45					
SDV				ScP	ScP	17 46 44.5 +5.1
	comp=Z,2.3nm,0.3s,baz=9.1,slow=9.3,SNR=3.3					
SDV	Santo Domingo	16.39	98	*eP*	Pn	17 38 16.8 +0.1
	comp=Z,696nm,1.0s					
SDV				*e*ScP	ScP	17 46 44.5 +5.1
060A	Indiantown	16.46	21	*eP*	P	17 38 19.4 0.0
	comp=Z,2μm,1.1s					
060A	Indiantown	16.46	21	P	P	17 38 20.1 +0.7
	baz=203,SNR=28					
957A	Wimauma	16.48	15	*eP*	P	17 38 20.1 +0.6
	comp=Z,2μm,1.1s					
957A	Wimauma	16.48	15	P	P	17 38 20.9 +1.3
	baz=196,SNR=6.4					
958A	Wauchula	16.53	17	P	P	17 38 21.6 +1.5
	baz=198,SNR=53					
959A	Okeechobee	16.73	19	P	P	17 38 23.7 +1.3
	baz=201,SNR=12					
SDDR	Presa de Saban	16.81	63	*eP*	P	17 38 23.1 -0.3
	comp=Z,3μm,1.9s					
857A	Zephyrhills	17.05	15	P	P	17 38 28.0 +2.1
	baz=196,SNR=41					
DWPF	Disney Wildern	17.11	17	*eP*	P	17 38 27.6 +0.9
	comp=Z,2μm,1.3s					
858A	St. Cloud	17.23	17	P	P	17 38 30.2 +2.3
	baz=199,SNR=36					
BANI	BANI	17.41	66	*eP*	Pn	17 38 28.3 -0.9
LNIG	Linares	17.59	320	*eP*	P	17 38 33.4 +1.4
	comp=Z,2μm,0.8s					
757A	Oxford	17.73	14	P	P	17 38 36.2 +2.7
	baz=196,SNR=67					
SDD	Santo Domingo	17.83	66	*ePn*	P	17 38 35.6 +1.0
	comp=Z,3μm,1.1s					
758A	Lake Helen	17.98	17	P	P	17 38 39.2 +3.0
	baz=198,SNR=40					
655A	Horseshoe Beac	18.03	11	P	P	17 38 39.4 +2.6
	baz=192,SNR=12					
656A	Willston	18.04	13	*ePn*	P	17 38 38.1 +1.3
	comp=Z,3μm,1.4s					
656A	Willston	18.04	13	P	P	17 38 39.2 +2.4
	baz=194,SNR=58					
GRTK	Grand Turk	18.06	55	*ePn*	P	17 38 38.8 +1.6
	comp=Z,5μm,1.6s					
657A	Interlachen	18.40	14	P	Pn	17 38 42.8 +1.7
	baz=196,SNR=52					
658A	Bunnell	18.40	16	*eP*	Pn	17 38 43.2 +2.1
	comp=Z,6μm,1.9s					
658A	Bunnell	18.40	16	P	Pn	17 38 43.1 +1.9
	baz=198,SNR=8.3					
658A				S	S	17 42 11.1 +2.2
	baz=198					
ZAIG	Zacatecas	18.42	309	*eP*	Pn	17 38 43.6 +1.8
	comp=Z,465nm,1.2s					
554A	Perry	18.52	9	P	Pn	17 38 44.5 +1.9
	baz=190,SNR=8.7					
556A	Lake Butler	18.68	13	P	Pn	17 38 46.2 +1.7
	baz=194,SNR=38					
555A	McAlpin	18.68	11	*eP*	Pn	17 38 46.1 +1.6
	comp=Z,6μm,1.8s					
555A	McAlpin	18.68	11	P	Pn	17 38 46.6 +2.1
	baz=192,SNR=49					
KVTX	Kingsville	18.73	329	*eP*	Pn	17 38 46.9 +1.7
	comp=Z,1μm,0.9s					
557A	Orange Park	18.84	14	P	Pn	17 38 47.9 +1.4
	baz=196,SNR=35					
449A	Pace	18.93	360	P	Pn	17 38 49.6 +2.1
	baz=179,SNR=20					
450A	Crestview	18.97	1	P	Pn	17 38 50.6 +2.5
	baz=181,SNR=26					
452A	Manna	19.09	5	P	Pn	17 38 52.2 +2.7
	baz=185,SNR=29					
454A	Quitman	19.14	9	P	Pn	17 38 51.9 +1.7
	baz=190,SNR=62					
453A	Whigham	19.19	7	*eP*	Pn	17 38 52.2 +1.5
	comp=Z,4μm,1.4s					
453A	Whigham	19.19	7	P	Pn	17 38 52.6 +1.9
	baz=188,SNR=56					
PCDR	Punta Cana, DR	19.23	67	*eP*	Pn	17 38 52.3 +1.1
	comp=Z,6μm,1.1s					
455A	Stateville	19.27	11	P	Pn	17 38 52.8 +1.1
	baz=192,SNR=70					
BRAL	Brewton	19.33	360	*eP*	Pn	17 38 53.5 +1.2
	comp=Z,2μm,1.1s					
BRAL	Brewton	19.33	360	P	Pn	17 38 53.3 +0.9
	baz=180,SNR=77					
456A	Hilliard	19.46	13	*eP*	Pn	17 38 54.5 +0.7
	comp=Z,2μm,1.2s					
456A	Hilliard	19.46	13	P	Pn	17 38 54.5 +0.7
	baz=194,SNR=37					
349A	Repton	19.52	360	P	Pn	17 38 55.5 +1.0
	baz=179,SNR=145					
350A	Dozier	19.59	2	P	Pn	17 38 56.5 +1.0
	baz=182,SNR=41					
353A	Camilla	19.69	7	P	Pn	17 38 57.2 +0.7
	baz=188,SNR=66					
352A	Blakely	19.74	5	*eP*	Pn	17 38 57.7 +0.5
	comp=Z,1μm,0.9s					
352A	Blakely	19.74	5	P	Pn	17 38 58.1 +0.9
	baz=186,SNR=102					
TIGA	Tifton	19.86	9	*eP*	Pn	17 38 59.3 +0.6
	comp=Z,3μm,1.0s					
TIGA	Tifton	19.86	9	P	Pn	17 38 59.0 +0.4
	baz=190,SNR=192					
HKT	Hockley	19.88	337	*eP*	Pn	17 38 58.6 -0.1
	comp=Z,918nm,1.0s					
HKT	Hockley	19.88	337	*eP*	Pn	17 38 58.7 -0.1
HKT				pmax	pmax	
	comp=Z,918nm,1.0s					
355A	Pearson	19.89	11	P	Pn	17 38 59.1 +0.1
	baz=192,SNR=11					
356A	Blackshear	20.01	12	P	Pn	17 39 00.1 -0.3
	baz=194,SNR=34					
249A	Camden	20.14	360	P	Pn	17 39 02.0 +0.1
	baz=179,SNR=242					
833A	Chaparral WMA,	20.14	327	*eP*	P	17 39 00.2 +0.4
	comp=Z,2μm,0.9s					
833A				LR	LR	
	comp=Z,17μm,22.0s					
833A	Chaparral WMA,	20.14	327	P	P	17 39 00.9 +1.0
	baz=142,SNR=561					
250A	Grady	20.15	2	*eP*	Pn	17 39 01.9 -0.2
	comp=Z,2μm,1.4s					
250A				LR	LR	
	comp=Z,54μm,19.0s					
250A	Grady	20.15	2	P	Pn	17 39 01.9 -0.2
	baz=182,SNR=103					
CRPR	Cabo Rojo, PR	20.24	70	*eP*	P	17 39 01.7 +0.6
	comp=Z,1μm,1.2s					
357A	Townsend	20.25	14	P	Pn	17 39 02.8 -0.4
	baz=196					
MPR	Mayaguez	20.27	69	*eP*	P	17 39 01.2 -0.2
	comp=Z,920nm,1.0s					
252A	Lumpkin	20.27	6	P	Pn	17 39 03.3 -0.2
	baz=186,SNR=232					
251A	Midway	20.31	4	P	Pn	17 39 03.8 -0.2
	baz=184,SNR=202					
AGP	Aguadilla	20.32	69	*eP*	P	17 39 02.9 +1.0
	comp=Z,2μm,1.1s					
253A	Americus	20.40	7	*eP*	Pn	17 39 04.2 -0.8
	comp=Z,3μm,1.5s					
253A				LR	LR	
	comp=Z,77μm,21.0s					
253A	Americus	20.40	7	P	Pn	17 39 04.7 -0.3
	baz=188,SNR=35					
254A	Abbeville	20.40	9	P	Pn	17 39 04.7 -0.3
	baz=190,SNR=70					
255A	Hazlehurst	20.53	11	*eP*	Pn	17 39 05.6 -0.8
	comp=Z,1μm,1.0s					
255A				LR	LR	
	comp=Z,145μm,19.0s					
255A	Hazlehurst	20.53	11	P	Pn	17 39 06.3 -0.1
	baz=192,SNR=45					
VBMS	Vicksburg	20.63	352	*eP*	Pn	17 39 06.6 -1.0
	comp=Z,753nm,0.8s					
VBMS				LR	LR	
	comp=Z,78μm,22.0s					
VBMS	Vicksburg	20.63	352	P	Pn	17 39 07.3 -0.4
	baz=170,SNR=44					
ATAH	Atahualpa	20.63	155	P	Pn	17 39 08.7 +0.5
	comp=Z,58nm,1.1s,baz=8.2,slow=5.2,SNR=13					
ATAH				S	Sn	17 43 01.8 +1.3
	comp=Z,7.1nm,0.8s,baz=119,slow=19,SNR=1.3					
ATAH				LR	LR	17 46 18.9
	comp=Z,77μm,21.1s,baz=344,slow=34					
ATAH				ScP	ScP	17 46 55.2 +6.3
	comp=Z,17nm,1.2s,baz=64,slow=2.0,SNR=2.5					
AOPR	Arecibo Observ	20.66	69	*eP*	P	17 39 05.9 +0.3
	comp=Z,905nm,1.1s					
256A	Glennville	20.70	12	P	Pn	17 39 07.6 -0.9
	baz=194,SNR=60					
OBIP	Obispado Ponce	20.71	70	*eP*	P	17 39 06.0 -0.2
	comp=Z,2μm,1.5s					
OBIP				LR	LR	
	comp=Z,98μm,22.0s					
ICMP	Isla Caja de M	20.75	70	*eP*	P	17 39 07.3 +0.8
	comp=Z,1μm,0.9s					
ICMP				LR	LR	
	comp=Z,71μm,18.0s					
151A	Opelika	20.75	4	P	Pn	17 39 09.1 0.0
	baz=184,SNR=177					
149A	Jones	20.76	1	P	Pn	17 39 08.6 -0.6
	baz=180,SNR=143					
150A	Eclectic	20.79	2	P	Pn	17 39 08.6 -0.9
	baz=182,SNR=447					
148A	Greensboro	20.81	359	P	Pn	17 39 09.1 -0.7
	baz=178,SNR=57					
147A	Livingston	20.86	357	*eP*	Pn	17 39 09.3 -1.1
	comp=Z,2μm,0.9s					
257A	Skidaway Islan	20.89	14	*eP*	P	17 39 09.1 +1.2
	comp=Z,5μm,1.4s					
257A				LR	LR	
	comp=Z,93μm,20.0s					
257A	Skidaway Islan	20.89	14	P	Pn	17 39 10.6 -0.1
	baz=196,SNR=18					
EMPR	Esperanza - Ma	20.90	69	*eP*	Pn	17 39 09.8 -1.1
	comp=Z,1μm,1.2s					
152A	Waverly Hall	20.94	5	*eP*	P	17 39 09.8 +1.3
	comp=Z,1μm,0.8s					
152A				LR	LR	
	comp=Z,64μm,20.0s					
152A	Waverly Hall	20.94	5	P	Pn	17 39 10.4 -0.8
	baz=186,SNR=430					
153A	Fort Valley	21.02	8	P	P	17 39 11.2 +1.8
	baz=188,SNR=38					
154A	Montrose	21.09	9	*eP*	P	17 39 11.6 +1.5
	comp=Z,2μm,0.9s					
154A				LR	LR	
	comp=Z,90μm,20.0s					
154A	Montrose	21.09	9	P	P	17 39 11.6 +1.5
	baz=190,SNR=141					
NATX	Nacogdoches	21.12	342	*eP*	P	17 39 11.6 +1.1
	comp=Z,2μm,1.0s					
NATX				LR	LR	
	comp=Z,18μm,20.0s					
NATX	Nacogdoches	21.12	342	P	P	17 39 11.8 +1.4
	baz=159,SNR=157					
SJG	San Juan	21.15	70	P	P	17 39 12.0 +1.1
	comp=Z,229nm,0.9s,baz=270,slow=8.2,SNR=30					
SJG				ScP	ScP	17 46 52.0 +2.4
	comp=Z,46nm,0.8s,baz=340,slow=2.5,SNR=8.6					
SJG				LR	LR	17 48 05.9
	comp=Z,55μm,18.1s,baz=242,slow=40					
SJG	San Juan	21.15	70	*eP*	P	17 39 10.7 -0.2
	comp=Z,3μm,1.8s					
SJG				LR	LR	
	comp=Z,84μm,22.0s					
SJG	San Juan	21.15	70	*eP*	P	17 39 10.7 -0.2
SJG				pmax	pmax	
	comp=Z,3μm,1.8s					
SJG				MLR	MLR	
	comp=Z,84μm,22.0s					
ETX01	County Road 47	21.16	342	*eP*	P	17 39 11.9 +1.1
ETX02	Prairie Street	21.19	342	*eP*	P	17 39 11.5 +0.4
LRAL	Lakeview Retre	21.19	0	*eP*	P	17 39 12.6 +1.4
	comp=Z,726nm,0.8s					
LRAL				LR	LR	
	comp=Z,54μm,20.0s					
LRAL	Lakeview Retre	21.19	0	P	P	17 39 12.6 +1.4
	baz=180,SNR=483					
155A	Kite	21.20	11	P	P	17 39 13.2 +1.9
	baz=192,SNR=111					
435B	Jarrell	21.32	334	*eP*	P	17 39 12.9 +0.4
	comp=Z,1μm,0.8s					
435B				LR	LR	
	comp=Z,7μm,21.0s					
435B	Jarrell	21.32	334	P	P	17 39 13.6 +1.1
	baz=150,SNR=135					
Z49A	Columbiana	21.36	1	P	P	17 39 14.5 +1.5
	baz=181,SNR=392					
156A	Sylvania	21.43	13	P	P	17 39 15.7 +2.0
	baz=195,SNR=51					
Z50A	Ashland	21.44	3	*eP*	P	17 39 14.2 +0.4
	comp=Z,688nm,0.8s					
Z50A				LR	LR	
	comp=Z,48μm,21.0s					
Z50A	Ashland	21.44	3	P	P	17 39 15.8 +1.9
	baz=183,SNR=417					
CBYP	Canovanas	21.46	70	*eP*	P	17 39 13.5 -0.8
	comp=Z,900nm,1.3s					
Z52A	Williamson	21.48	6	P	P	17 39 16.4 +2.1
	baz=187,SNR=217					
Z51A	Franklin	21.54	4	P	P	17 39 16.9 +1.9
	baz=185,SNR=140					
157A	Early Branch	21.57	14	P	P	17 39 17.3 +2.1
	baz=196,SNR=71					
Z53A	Monticello	21.67	8	P	P	17 39 18.3 +2.0
	baz=189,SNR=472					
MTP	Monte Pirata	21.70	70	*eP*	P	17 39 16.3 -0.4
	comp=Z,710nm,1.2s					
MTP				*e*S	S	17 43 18.9 +4.1
GOGA	Godfrey	21.82	8	*eP*	P	17 39 18.6 +0.7
	comp=Z,721nm,0.8s					
GOGA				LR	LR	
	comp=Z,88μm,22.0s					
GOGA	Godfrey	21.82	8	*eP*	P	17 39 18.6 +0.7
GOGA				pmax	pmax	
	comp=Z,721nm,0.8s					
GOGA				MLR	MLR	
	comp=Z,88μm,22.0s					
GOGA	Godfrey	21.82	8	P	P	17 39 19.5 +1.6
	baz=189,SNR=348					
158A	Hollywood	21.82	16	P	P	17 39 19.9 +1.9
	baz=198,SNR=19					
Z55A	Blythe	21.85	11	P	P	17 39 20.0 +1.8
	baz=193,SNR=8.6					
RGRS	Roger Stewart	21.99	16	*eP*	P	17 39 20.4 +0.7
	comp=Z,6μm,1.1s					
CUPR	Culebra, Puert	22.00	70	*eP*	P	17 39 20.7 +0.8
	comp=Z,2μm,1.8s					
CUPR				*e*S	S	17 43 24.6 +4.1
Y49A	Blount Mountai	22.02	1	*eP*	P	17 39 21.1 +0.9
	comp=Z,885nm,0.9s					
Y49A	Blount Mountai	22.02	1	P	P	17 39 21.0 +0.9
	baz=181,SNR=438					
Z41A	Richland Creek	22.06	347	*eP*	P	17 39 20.7 +0.3
	comp=Z,1μm,0.7s					
Z41A				LR	LR	
	comp=Z,20μm,21.0s					
Z41A	Richland Creek	22.06	347	P	P	17 39 21.6 +1.2
	baz=165,SNR=158					
Y48A	Jasper	22.07	360	P	P	17 39 21.4 +0.8
	baz=179,SNR=684					
Y50A	Piedmont	22.08	3	P	P	17 39 22.1 +1.3
	baz=183,SNR=468					
JCT	Junction City	22.08	330	*eP*	P	17 39 20.2 -0.6
	comp=Z,892nm,0.9s					
JCT				LR	LR	
	comp=Z,8μm,18.0s					
JCT	Junction City	22.08	330	*eP*	P	17 39 20.2 -0.6
JCT				pmax	pmax	
	comp=Z,893nm,0.9

comp=Z,929nm,1.1s
CCAR LR LR
WLAR White Oak Lake 22.54 347 *eP* **P 17 39 26.4 +0.8**
comp=Z,81µm,22.0s
WLAR LR LR
comp=Z,1µm,1.0s
comp=Z,15µm,21.0s
Z59A Georgetown, SC 22.55 17 P **P 17 39 26.9 +1.1**
baz=200
Y56A Pelion 22.57 13 P **P 17 39 26.6 +0.7**
baz=194
Y55A Saluda 22.60 11 P **P 17 39 27.3 +1.0**
baz=193,SNR=256
X48A Hartselle 22.61 0 *eP* **P 17 39 26.5 +0.2**
comp=Z,514nm,0.8s
X48A Hartselle 22.61 0 P **P 17 39 27.3 +0.9**
baz=180,SNR=178
X50B Fort Payne 22.65 3 P **P 17 39 27.4 +0.5**
baz=183,SNR=231
X49A Woodville 22.68 2 P **P 17 39 28.2 +1.1**
baz=182,SNR=306
X47A Russelville 22.68 358 P **P 17 39 27.6 +0.5**
baz=178,SNR=667
X46A Booneville 22.75 357 P **P 17 39 28.6 +0.7**
baz=176,SNR=112
OXF Oxford 22.77 355 *eP* **P 17 39 27.6 -0.4**
comp=Z,2µm,1.0s
OXF LR LR
comp=Z,57µm,22.0s
OXF Oxford 22.77 355 *eP* **P 17 39 27.6 -0.4**
OXF pmax pmax
comp=Z,2µm,1.0s
OXF MLR MLR
comp=Z,57µm,22.0s
X51A Calhoun 22.81 5 *eP* **P 17 39 29.5 +1.1**
comp=Z,530nm,0.8s
X51A Calhoun 22.81 5 P **P 17 39 29.7 +1.2**
baz=185,SNR=117
HODGE Hodges 22.81 10 *eP* **P 17 39 29.1 +0.6**
comp=Z,862nm,1.0s
HODGE LR LR
comp=Z,120µm,19.0s
X53A Estanollee 22.91 8 P **P 17 39 30.8 +1.3**
baz=189,SNR=123
X52A Dahlonega 22.94 7 P **P 17 39 30.8 +0.9**
baz=188,SNR=198
X43A Marvell 22.94 352 *eP* **P 17 39 29.8 -0.1**
comp=Z,3µm,1.9s
X43A LR LR
comp=Z,42µm,22.0s
Y57A Sumter 22.99 14 *eP* **P 17 39 30.9 +0.6**
comp=Z,932nm,1.0s
Y57A LR LR
comp=Z,88µm,20.0s
Y57A Sumter 22.99 14 P **P 17 39 31.3 +0.9**
baz=196,SNR=41
JSC Jenkinsville 23.05 12 *eP* **P 17 39 31.6 +0.6**
comp=Z,1µm,1.1s
JSC LR LR
comp=Z,88µm,18.0s
JSC Jenkinsville 23.05 12 *eP* **P 17 39 31.6 +0.6**
JSC pmax pmax
comp=Z,1µm,1.1s
JSC MLR MLR
comp=Z,88µm,18.0s
Y58A Scranton 23.07 16 *eP* **P 17 39 32.1 +1.0**
comp=Z,862nm,0.8s
Y58A LR LR
comp=Z,93µm,19.0s
Y58A Scranton 23.07 16 P **P 17 39 31.4 +0.3**
baz=198,SNR=53
X54A Belton 23.10 10 P **P 17 39 32.1 +0.6**
baz=191,SNR=110
HPIG 23.13 313 *eP* **P 17 39 32.6 +0.6**
comp=Z,548nm,0.9s
HPIG LR LR
comp=Z,103µm,20.0s
PLAL Pickwick Lake 23.16 358 *eP* **P 17 39 31.6 -0.4**
comp=Z,557nm,1.0s
PLAL LR LR
comp=Z,43µm,19.0s
X55A Gracelyn & Ava 23.16 11 P **P 17 39 32.6 +0.6**
baz=192,SNR=164
X40A Basin Creek Fa 23.25 348 *eP* **P 17 39 32.5 -0.4**
comp=Z,966nm,1.5s
X40A LR LR
comp=Z,106µm,22.0s
X40A Basin Creek Fa 23.25 348 P **P 17 39 33.1 +0.2**
baz=165,SNR=146
W49A Belvidere 23.28 2 P **P 17 39 33.4 +0.2**
baz=182,SNR=506
W48A Pulaski 23.29 0 P **P 17 39 33.3 -0.1**
baz=180,SNR=948
X56A White Oak 23.30 13 P **P 17 39 33.6 +0.2**
baz=195,SNR=271
W46A Michie 23.32 357 P **P 17 39 33.2 -0.4**
baz=176,SNR=56
TXAR Lajitas Array 23.37 321 P **P 17 39 35.0 +0.7**
comp=Z,1µm,0.8s,baz=139,slow=7.8,SNR=684
TXAR PcP **PcP 17 43 22.1 +1.8**
comp=Z,122nm,1.1s,baz=145,slow=3.3,SNR=7.0
TXAR P3KPbc 18 12 59.0
comp=Z,1.0nm,0.7s,baz=302,slow=1.7,SNR=5.4
TX31 Lajitas Ar. Si 23.37 321 *eP* **P 17 39 34.4 +0.1**
comp=Z,1µm,0.8s
SWET Sewanee 23.39 2 *eP* **P 17 39 34.2 -0.2**
comp=Z,2µm,1.6s
W50A Signal Mountai 23.41 4 *eP* **P 17 39 34.2 -0.3**
comp=Z,1µm,0.7s
W50A Signal Mountai 23.41 4 P **P 17 39 35.2 +0.7**
baz=184,SNR=491
W51A Cleveland 23.41 5 P **P 17 39 34.9 +0.4**
baz=185,SNR=249
W47A Westpoint 23.41 359 P **P 17 39 34.9 +0.3**
baz=178,SNR=218
W52A Murphy 23.42 6 *eP* **P 17 39 33.9 -0.8**
comp=Z,1µm,1.1s
W52A LR LR
comp=Z,76µm,20.0s
W52A Murphy 23.42 6 P **P 17 39 35.5 +0.9**
baz=187,SNR=46
MET Memphis--Engin 23.42 354 *eP* **P 17 39 33.8 -0.8**
comp=Z,591nm,1.1s
MET LR LR
comp=Z,49µm,22.0s
UALR University of 23.43 349 *eP* **P 17 39 34.0 -0.7**
comp=Z,1µm,1.4s
UALR LR LR
comp=Z,68µm,22.0s
PAULI Pauline 23.46 11 *eP* **P 17 39 35.6 +0.6**
comp=Z,1µm,1.2s
PAULI LR LR
comp=Z,116µm,19.0s
MIAR Mount Ida 23.47 346 *eP* **P 17 39 34.4 -0.7**
comp=Z,931nm,0.8s
MIAR LR LR
comp=Z,76µm,22.0s
MIAR Mount Ida 23.47 346 *eP* **P 17 39 34.4 -0.7**
MIAR pmax pmax
comp=Z,931nm,0.8s
MIAR MLR MLR
comp=Z,76µm,22.0s
MIAR Mount Ida 23.47 346 P **P 17 39 35.1 +0.1**
baz=164,SNR=893
X57A Johnson Farm, 23.49 15 P **P 17 39 35.8 +0.5**
baz=197,SNR=70
BIRD Birdtown, Kers 23.57 14 *eP* **P 17 39 36.0 0.0**
comp=Z,900nm,0.8s
BIRD LR LR
comp=Z,91µm,22.0s
Y60A Bolivia 23.58 19 *eP* **P 17 39 37.1 +1.0**
comp=Z,827nm,0.7s
Y60A LR LR
comp=Z,138µm,20.0s
Y60A Bolivia 23.58 19 P **P 17 39 37.0 +0.9**
baz=202,SNR=33
W53A Cullowhee 23.59 8 P **P 17 39 36.9 +0.6**
baz=189,SNR=92
W54A Cherokee Point 23.66 10 P **P 17 39 37.9 +1.0**
baz=192,SNR=325
CPCT Cooper Cave 23.71 5 *eP* **P 17 39 37.0 -0.4**
comp=Z,866nm,0.8s
X58A Rowland 23.77 16 *eP* **P 17 39 37.8 -0.1**
comp=Z,940nm,0.8s
X58A LR LR
comp=Z,84µm,20.0s
X58A Rowland 23.77 16 P **P 17 39 38.7 +0.8**
baz=199,SNR=41

ABTX Abilene, Hawle 23.79 333 *eP* **P 17 39 37.9 -0.3**
comp=Z,2µm,0.9s
ABTX LR LR
comp=Z,20µm,22.0s
ABTX Abilene, Hawle 23.79 333 P **P 17 39 38.1 0.0**
baz=148,SNR=774
W41B Gary Mavity, V 23.80 349 *eP* **P 17 39 37.1 -1.0**
comp=Z,644nm,1.4s
W41B LR LR
comp=Z,56µm,22.0s
W41B Gary Mavity, V 23.80 349 P **P 17 39 38.2 0.0**
baz=167,SNR=154
KMSC Kings Mountain 23.87 12 *eP* **P 17 39 39.0 +0.2**
comp=Z,562nm,0.8s
KMSC LR LR
comp=Z,97µm,19.0s
KMSC Kings Mountain 23.87 12 P **P 17 39 39.2 +0.4**
baz=194,SNR=210
V50A Pikevile 23.89 4 P **P 17 39 39.9 +0.8**
baz=184,SNR=288
V48A Smith Brothers 23.89 0 *eP* **P 17 39 38.7 -0.4**
comp=Z,545nm,0.8s
V48A Smith Brothers 23.89 0 P **P 17 39 39.3 +0.2**
baz=180,SNR=381
WHAR Wooly Hollow 23.92 349 *eP* **P 17 39 38.5 -0.8**
comp=Z,358nm,0.7s
WHAR LR LR
comp=Z,57µm,22.0s
HBAR Harrisburg 23.93 353 *eP* **P 17 39 38.9 -0.5**
comp=Z,1µm,0.7s
HBAR LR LR
comp=Z,41µm,22.0s
V49A McMinnville 23.94 2 P **P 17 39 40.0 +0.5**
baz=182,SNR=345
SEUS St. Eustatius 23.96 73 *eP* **P 17 39 38.6 -1.3**
comp=Z,3µm,1.5s
SEUS LR LR
comp=Z,85µm,19.0s
SEUS St. Eustatius 23.96 73 *eP* **P 17 39 39.2 -0.7**
V46A Holladay 23.97 358 P **P 17 39 39.1 -0.7**
baz=177,SNR=95
X37A Clayton 23.98 343 *eP* **P 17 39 40.2 +0.3**
comp=Z,3µm,1.4s
X37A LR LR
comp=Z,18µm,22.0s
V47A Nunnelly 23.98 359 P **P 17 39 39.7 -0.2**
baz=179,SNR=318
SMRT St. Maarten 23.98 72 *eP* **P 17 39 38.3 -1.8**
comp=Z,596nm,1.1s
SMRT LR LR
comp=Z,71µm,19.0s
SMRT St. Maarten 23.98 72 *eP* **P 17 39 36.9 -3.2**
X59A McDuffie Farm, 23.99 17 P **P 17 39 39.7 -0.3**
baz=200,SNR=24
W56A Indian Trail 24.02 13 P **P 17 39 40.5 +0.3**
baz=195,SNR=150
H06E1 SOCORRO T-PHAS 24.06 290 T T 18 04 31.2
SNR=664
BSK Brimstone Hill 24.07 74 *eP* **P 17 39 43.3 +2.4**
V51A Loudon 24.08 5 *eP* **P 17 39 41.4 +0.6**
comp=Z,876nm,1.1s
V51A Loudon 24.08 5 P **P 17 39 41.4 +0.6**
baz=186,SNR=122
SKDB Saint Kitts 2 24.11 74 *eP* **P 17 39 43.4 +2.2**
V53A Saluda 24.13 8 *eP* **P 17 39 41.8 +0.5**
comp=Z,720nm,0.9s
V53A LR LR
comp=Z,90µm,20.0s
V53A Saluda 24.13 8 P **P 17 39 41.8 +0.5**
baz=190,SNR=332
H06N1 SOCORRO T-PHAS 24.13 290 T T 18 04 44.2
SNR=31
W39A Magazine 24.14 346 *eP* **P 17 39 40.9 -0.4**
comp=Z,516nm,0.8s
W39A LR LR
comp=Z,73µm,21.0s
W39A Magazine 24.14 346 P **P 17 39 41.4 0.0**
baz=164,SNR=425
HALT Halls 24.15 355 *eP* **P 17 39 41.0 -0.5**
comp=Z,542nm,0.9s
HALT LR LR
comp=Z,45µm,22.0s
SKI Saint Kitts 24.16 74 *eP* **P 17 39 40.7 -1.1**
comp=Z,758nm,1.0s
SKI LR LR
comp=Z,88µm,20.0s
SKI Saint Kitts 24.16 74 *eP* **P 17 39 40.4 -1.4**
SKI Saint Kitts 24.16 74 *eP* **P 17 39 40.7 -1.1**
SKI pmax pmax
comp=Z,759nm,1.0s
SKI MLR MLR
comp=Z,88µm,20.0s
W57A Gilead 24.17 14 *eP* **P 17 39 41.7 +0.1**
comp=Z,672nm,0.8s
W57A LR LR
comp=Z,100µm,21.0s
W57A Gilead 24.17 14 P **P 17 39 41.7 +0.1**
baz=197,SNR=198
X60A Albert Glenn T 24.19 19 P **P 17 39 41.6 -0.1**
baz=202,SNR=74
V52A Sevierville 24.20 7 *eP* **P 17 39 42.1 +0.2**
comp=Z,233nm,0.8s
V52A Sevierville 24.20 7 P **P 17 39 42.1 +0.2**
baz=188,SNR=97
W58A Raeford 24.24 16 P **P 17 39 42.3 +0.1**
baz=199,SNR=207
NVBH Bath Hotel, Ne 24.24 74 *eP* **P 17 39 45.6 +3.1**
CLTN Cedars of Leba 24.25 1 *eP* **P 17 39 42.3 -0.1**
comp=Z,660nm,0.8s
GNAR Gosnell 24.27 354 *eP* **P 17 39 42.0 -0.4**
comp=Z,668nm,0.7s
GNAR LR LR
comp=Z,54µm,22.0s
NVRH Round Hill, Ne 24.27 74 *eP* **P 17 39 43.3 +0.6**
NEV Hard Times 24.29 74 *eP* **P 17 39 46.9 +4.0**
WVT Waverly 24.29 358 *eP* **P 17 39 41.5 -1.2**
comp=Z,213nm,0.6s
WVT Waverly 24.29 358 *eP* **P 17 39 41.5 -1.2**
WVT pmax pmax
comp=Z,213nm,0.6s
V54A Nebo 24.37 10 P **P 17 39 43.8 +0.4**
baz=192,SNR=159
FCAR Ozark Folk Cen 24.48 350 *eP* **P 17 39 43.7 -0.7**
comp=Z,414nm,0.8s
FCAR LR LR
comp=Z,51µm,22.0s
GLAT Glass 24.50 356 *eP* **P 17 39 43.9 -0.7**
comp=Z,801nm,0.8s
GLAT LR LR
comp=Z,41µm,21.0s
U46A Springville 24.53 358 P **P 17 39 44.6 -0.3**
baz=177,SNR=138
UTMT University of 24.55 356 *eP* **P 17 39 44.5 -0.5**
comp=Z,1µm,1.1s
V55A Taylorsville 24.58 11 P **P 17 39 45.1 -0.2**
baz=194,SNR=72
MLYT Lee's Yard 24.59 75 *eP* **P 17 39 45.5 -0.2**
U47A Clarksville 24.59 360 P **P 17 39 45.0 -0.5**
baz=179,SNR=257
W59A Clinton 24.59 17 P **P 17 39 45.6 +0.1**
baz=200
U50A Jamestown 24.65 4 P **P 17 39 45.9 -0.1**
baz=185,SNR=298
U48A Cassie Pea, Po 24.67 1 P **P 17 39 46.0 -0.1**
baz=181,SNR=221
PVMO Portageville 24.68 355 *eP* **P 17 39 48.1 +1.9**
comp=Z,434nm,0.7s
PVMO LR LR
comp=Z,52µm,22.0s
U51A La Follette 24.68 6 P **P 17 39 46.1 -0.2**
baz=187,SNR=81
V56A Mocksville 24.68 13 *eP* **P 17 39 47.0 +0.7**
comp=Z,821nm,1.2s
V56A LR LR
comp=Z,90µm,21.0s
V56A Mocksville 24.68 13 P **P 17 39 46.4 +0.1**
baz=195,SNR=140
U49A Red Boiling Sp 24.69 2 P **P 17 39 46.3 0.0**
baz=183,SNR=209
W60A Pink Hill 24.71 19 P **P 17 39 46.4 -0.1**
baz=202
U52A Thorn Hill 24.77 7 P **P 17 39 47.7 +0.6**
baz=188,SNR=136
CNNC Cliffs of the 24.82 18 *eP* **P 17 39 47.5 -0.1**
CNNC LR LR
comp=Z,104µm,19.0s
CNNC Cliffs of the 24.82 18 P **P 17 39 47.8 +0.3**
baz=201,SNR=6.3

GRGR Grenville 24.84 86 *eP* **P 17 39 46.9 -1.1**
comp=Z,2µm,1.2s
GRGR Grenville 24.84 86 *eP* **P 17 39 51.3 +3.3**
U53A Fall Branch 24.84 9 P **P 17 39 48.0 +0.2**
baz=190,SNR=183
GRSS Sisters 24.88 86 *eP* **P 17 39 46.2 -2.1**
TZTN Tazewell 24.89 7 *eP* **P 17 39 48.4 +0.1**
comp=Z,998nm,1.0s
TZTN Tazewell 24.89 7 P **P 17 39 49.0 +0.8**
baz=188,SNR=121
V57A Coltrane Farms 24.92 14 P **P 17 39 49.1 +0.7**
baz=197,SNR=165
PARMO Parma 24.93 355 *eP* **P 17 39 48.6 +0.1**
comp=Z,1µm,0.7s
PARMO LR LR
comp=Z,52µm,22.0s
BPA Boggy Peak 24.95 75 *eP* **P 17 39 50.1 +1.1**
V58A Windy Hill, Pi 25.00 15 P **P 17 39 49.2 +0.1**
baz=198,SNR=565
W61A Ground Anchor 25.05 20 P **P 17 39 50.5 +0.9**
baz=204,SNR=22
U40A Yellville 25.06 349 P **P 17 39 49.9 +0.2**
baz=166,SNR=382
PBMO Poplar Bluff 25.11 354 *eP* **P 17 39 48.6 -1.5**
comp=Z,266nm,0.6s
PBMO LR LR
comp=Z,46µm,22.0s
ANWB Willy Bob 25.12 73 *eP* **P 17 39 48.2 -2.2**
comp=Z,430nm,0.9s
ANWB LR LR
comp=Z,56µm,22.0s
ANWB Willy Bob 25.12 73 *eP* **P 17 39 46.4 -4.0**
U54A Nelsons Funny 25.12 10 *eP* **P 17 39 50.4 +0.1**
comp=Z,1µm,1.0s
U54A LR LR
comp=Z,94µm,19.0s
U54A Nelsons Funny 25.12 10 P **P 17 39 50.8 +0.4**
baz=192,SNR=134
T47A Sharon Grove 25.14 360 *eP* **P 17 39 49.6 -0.8**
comp=Z,862nm,1.0s
T47A Sharon Grove 25.14 360 P **P 17 39 49.8 -0.6**
baz=180,SNR=256
MDPO Dominica; Chan 25.15 78 *eP* **P 17 39 51.3 +0.6**
TPP Pointe-a-Pierr 25.16 91 *eP* **P 17 39 53.9 +3.1**
MDN Morne-Daniel 25.19 79 *eP* **P 17 39 55.4 +4.3**
DPMT Pointe Michel 25.20 79 *eP* **P 17 39 53.7 +2.5**
T46A Princeton 25.20 358 P **P 17 39 51.0 0.0**
baz=178,SNR=246
T45A Paducah 25.21 357 *eP* **P 17 39 50.4 -0.6**
comp=Z,1µm,0.6s
T45A LR LR
comp=Z,37µm,18.0s
T45A Paducah 25.21 357 P **P 17 39 50.4 -0.6**
baz=176,SNR=52
V59A Middlesex 25.21 17 P **P 17 39 51.2 +0.2**
baz=200,SNR=147
HHAR Hobbs 25.21 347 *eP* **P 17 39 50.0 -1.1**
comp=Z,414nm,0.7s
HHAR LR LR
comp=Z,91µm,22.0s
SVB Belmont 25.22 84 *eP* **P 17 39 50.6 -0.8**
SVB Belmont 25.22 84 *eP* **P 17 39 53.8 +2.4**
U56A King 25.23 13 P **P 17 39 51.9 +0.7**
baz=195,SNR=123
DBCT Belle View Cho 25.23 79 *eP* **P 17 39 51.9 +0.4**
U55A TA2, Sparta 25.24 11 P **P 17 39 51.5 +0.1**
baz=194,SNR=122
T50A Nancy 25.25 4 P **P 17 39 51.5 +0.1**
baz=185,SNR=97
WMOK Wichita Mounta 25.26 337 *eP* **P 17 39 49.6 -2.0**
comp=Z,2µm,0.9s
WMOK LR LR
comp=Z,17µm,22.0s
WMOK Wichita Mounta 25.26 337 *eP* **P 17 39 49.6 -2.0**
WMOK pmax pmax
comp=Z,2µm,0.9s
WMOK MLR MLR
comp=Z,17µm,22.0s
WMOK Wichita Mounta 25.26 337 P **P 17 39 51.6 0.0**
baz=152,SNR=1000
DSTT Stowe 25.27 79 *eP* **P 17 39 54.5 +2.7**
T48A Bowling Green 25.27 1 P **P 17 39 51.1 -0.5**
baz=181,SNR=56
LPIG La Paz 25.27 302 P **P 17 39 52.7 +1.0**
comp=Z,39nm,0.3s,baz=194,slow=2.9,SNR=8.5
LPIG LR LR 17 50 38.6
comp=Z,51µm,20.9s,baz=124,slow=38
T51A Gray 25.27 6 P **P 17 39 52.3 +0.7**
baz=187,SNR=183
SSV Crater Summit 25.28 84 *eP* **P 17 39 57.1 +5.1**
DWS Wesley 25.29 78 *eP* **P 17 39 54.1 +2.2**
T49A Edmonton 25.29 3 *eP* **P 17 39 51.5 -0.3**
comp=Z,1µm,1.0s
T49A Edmonton 25.29 3 P **P 17 39 51.6 -0.1**
baz=183,SNR=139
DLPL La Plaine 25.33 79 *eP* **P 17 39 58.3 +5.9**
TUL1 Leonard 25.33 343 *eP* **P 17 39 50.7 -1.5**
comp=Z,936nm,1.0s
TUL1 LR LR
comp=Z,12µm,18.0s
TUL1 Leonard 25.33 343 P **P 17 39 51.7 -0.5**
baz=159,SNR=138
FDF Fort de France 25.38 80 *eP* **P 17 39 51.6 -1.2**
comp=Z,746nm,1.3s
FDF Fort de France 25.38 80 *eP* **P 17 39 51.8 -1.1**
SLDE Delcer 25.42 83 *eP* **P 17 39 59.9 +6.7**
SLB Belfond 25.44 83 *eP* **P 17 39 55.7 +2.2**
T53A Wise 25.46 8 P **P 17 39 53.8 +0.4**
baz=190,SNR=44
V60A Jim Taylor Roa 25.50 19 *eP* **P 17 39 53.3 -0.4**
comp=Z,496nm,0.6s
V60A LR LR
comp=Z,95µm,19.0s
V60A Jim Taylor Roa 25.50 19 P **P 17 39 53.5 -0.2**
baz=202,SNR=17
SLBI Saint Lucia, B 25.51 82 *eP* **P 17 39 55.7 +1.7**
T52A Hallie 25.52 8 *eP* **P 17 39 54.0 +0.1**
comp=Z,2µm,1.5s
T52A Hallie 25.52 8 P **P 17 39 54.3 +0.5**
baz=189,SNR=38
MCLT Moule a Chique 25.53 83 *eP* **P 17 39 54.6 +0.4**
SLW Petit Monier 25.55 82 *eP* **P 17 39 59.1 +4.7**
U57A Blanch 25.55 15 P **P 17 39 54.3 +0.2**
baz=197,SNR=174
SLPA Patience 25.56 82 *eP* **P 17 39 58.8 +4.3**
CLNB Carlsbad 25.63 325 *eP* **P 17 39 56.5 +1.4**
NNA Nana 25.66 156 P **P 17 39 58.3 +3.0**
comp=Z,32nm,1.0s,baz=312,slow=9.2,SNR=3.3
NNA PcP **PcP 17 43 26.2 +0.8**
comp=Z,46nm,0.8s,baz=334,slow=4.3,SNR=5.8
NNA S **S 17 44 22.0 +0.8**
comp=Z,4.2nm,0.4s,baz=208,slow=17,SNR=2.0
NNA LR LR 17 49 07.6
comp=Z,16µm,22.0s,baz=296,slow=34
NNA Nana 25.66 156 *eP* **P 17 39 55.5 +0.1**
comp=Z,340nm,1.2s
T54A Tazewell 25.69 10 P **P 17 39 55.8 +0.3**
baz=192,SNR=62
U58A Oxford 25.71 16 P **P 17 39 55.4 -0.3**
baz=199,SNR=188
S47A Hartford 25.74 0 P **P 17 39 55.2 -0.7**
baz=180,SNR=37
V61A Roper 25.75 20 *eP* **P 17 39 55.9 0.0**
comp=Z,2µm,1.6s
V61A LR LR
comp=Z,87µm,21.0s
V61A Roper 25.75 20 P **P 17 39 56.1 +0.1**
baz=204
V62A Hyde County Ai 25.75 21 *eP* **P 17 39 57.8 +1.8**
comp=Z,642nm,1.0s
V62A LR LR
comp=Z,286µm,20.0s
S48A Wiedeman Farm, 25.82 2 P **P 17 39 55.8 -0.8**
baz=182,SNR=57
S46A Don Dixon Farm 25.84 359 P **P 17 39 56.3 -0.4**
baz=178,SNR=63
GDL2 Guadalupe Moun 25.86 325 *eP* **P 17 39 58.1 +1.0**
T55A Pulaski 25.89 12 P **P 17 39 57.4 +0.1**
baz=194,SNR=127
U59A Littleton 25.89 17 *eP* **P 17 39 56.9 -0.3**
comp=Z,525nm,1.2s
U59A LR LR
comp=Z,102µm,20.0s
U59A Littleton 25.89 17 P **P 17 39 57.0 -0.2**
baz=201,SNR=77
S44A Carbondale 25.92 356 P **P 17 39 57.5 +0.1**
baz=175,SNR=79

							baz=179,SNR=6.2
S50A	**Richmond**	**25.94**	**5**	P	**P**	**17 39 57.8**	**+0.2**
	baz=186,SNR=58						
SIUC	**Southern Illin**	**25.94**	**356**	*eP*	**P**	**17 39 57.0**	**-0.6**
	comp=Z,335nm,0.8s						
SIUC				LR	LR		
	comp=Z,32µm,18.0s						
T56A	**Rocky Mt**	**25.96**	**13**	P	**P**	**17 39 58.2**	**+0.4**
	baz=196,SNR=64						
S51A	**Beattyville**	**25.97**	**6**	*eP*	**P**	**17 39 57.8**	**-0.2**
	comp=Z,423nm,0.7s						
S51A	**Beattyville**	**25.97**	**6**	P	**P**	**17 39 57.6**	**-0.4**
	baz=187,SNR=146						
TOSP	**Speyside**	**25.98**	**88**	*eP*	**P**	**17 39 59.5**	**+1.3**
S49A	**Springfield**	**25.98**	**3**	P	**P**	**17 39 57.9**	**-0.1**
	baz=184,SNR=69						
BLA	**Blacksburg**	**26.05**	**12**	*eP*	**P**	**17 39 59.2**	**+0.5**
	comp=Z,741nm,1.1s						
BLA	**Blacksburg**	**26.05**	**12**	*eP*	**P**	**17 39 59.2**	**+0.5**
BLA				pmax	pmax		
	comp=Z,741nm,1.1s						
BLA	**Blacksburg**	**26.05**	**12**	P	**P**	**17 39 59.4**	**+0.7**
	baz=195,SNR=58						
S52A	**Salyersville**	**26.07**	**7**	P	**P**	**17 39 59.3**	**+0.5**
	baz=189,SNR=8.8						
MNTX	**Cornudas Mount**	**26.09**	**322**	*eP*	**P**	**17 39 59.0**	**-0.1**
	comp=Z,332nm,0.8s						
MNTX				LR	LR		
	comp=Z,21µm,20.0s						
MNTX	**Cornudas Mount**	**26.09**	**322**	P	**P**	**17 39 59.0**	**-0.1**
	baz=135,SNR=615						
T57A	**Hurt**	**26.11**	**14**	*eP*	**P**	**17 39 59.5**	**+0.3**
	comp=Z,743nm,1.1s						
T57A				LR	LR		
	comp=Z,66µm,20.0s						
T57A	**Hurt**	**26.11**	**14**	P	**P**	**17 39 58.7**	**-0.4**
	baz=197,SNR=132						
USIN	**University of**	**26.12**	**359**	*eP*	**P**	**17 39 58.9**	**-0.3**
	comp=Z,535nm,0.8s						
U60A	**Pendleton**	**26.19**	**18**	P	**P**	**17 39 59.7**	**-0.2**
	baz=202,SNR=16						
S53A	**Williamson**	**26.20**	**9**	P	**P**	**17 39 59.7**	**-0.4**
	baz=191,SNR=62						
CPRX	**Cap Rock**	**26.21**	**327**	*eP*	**P**	**17 40 01.0**	**+0.7**
T58A	**Grand View Acr**	**26.24**	**16**	P	**P**	**17 40 00.1**	**-0.2**
	baz=199,SNR=100						
U61A	**Possum Corner**	**26.29**	**20**	*eP*	**P**	**17 40 01.1**	**+0.3**
	comp=Z,965nm,1.3s						
U61A				LR	LR		
	comp=Z,64µm,20.0s						
U61A	**Possum Corner**	**26.29**	**20**	P	**P**	**17 40 01.0**	**+0.3**
	baz=204						
FVM	**French Village**	**26.31**	**354**	*eP*	**P**	**17 39 59.7**	**-1.3**
	comp=Z,97nm,0.7s						
FVM				LR	LR		
	comp=Z,52µm,22.0s						
FVM	**French Village**	**26.31**	**354**	*eP*	**P**	**17 39 59.7**	**-1.3**
FVM				pmax	pmax		
	comp=Z,97nm,0.7s						
FVM				MLR	MLR		
	comp=Z,52µm,22.0s						
R46A	**Gibon Southern**	**26.36**	**359**	P	**P**	**17 40 01.0**	**-0.5**
	baz=179,SNR=24						
MSTX	**Muleshoe**	**26.38**	**330**	*eP*	**P**	**17 40 01.4**	**-0.4**
	comp=Z,2µm,0.8s						
MSTX	**Muleshoe**	**26.38**	**330**	P	**P**	**17 40 01.4**	**-0.4**
	baz=143,SNR=817						
WCI	**Wyandotte Cave**	**26.39**	**1**	*eP*	**P**	**17 40 00.7**	**-1.0**
	comp=Z,410nm,0.8s						
WCI	**Wyandotte Cave**	**26.39**	**1**	*eP*	**P**	**17 40 00.7**	**-1.0**
WCI				pmax	pmax		
	comp=Z,410nm,0.8s						
R47A	**Wooly Knot Far**	**26.45**	**1**	P	**P**	**17 40 01.8**	**-0.4**
	baz=181,SNR=58						
S54A	**Dingess, Beckl**	**26.45**	**10**	P	**P**	**17 40 02.3**	**-0.1**
	baz=192,SNR=34						
R45A	**Skylar, Fairfi**	**26.46**	**358**	P	**P**	**17 40 01.8**	**-0.6**
	baz=177,SNR=49						
CCM	**Cathedral Cave**	**26.47**	**353**	*eP*	**P**	**17 40 01.1**	**-1.3**
	comp=Z,236nm,0.8s						
CCM				LR	LR		
	comp=Z,42µm,22.0s						
CCM	**Cathedral Cave**	**26.47**	**353**	*eP*	**P**	**17 40 01.1**	**-1.3**
CCM				pmax	pmax		
	comp=Z,236nm,0.8s						
CCM				MLR	MLR		
	comp=Z,42µm,22.0s						
R49A	**Shelbyville**	**26.49**	**3**	*eP*	**P**	**17 40 01.8**	**-0.9**
	comp=Z,460nm,1.2s						
R49A	**Shelbyville**	**26.49**	**3**	P	**P**	**17 40 02.2**	**-0.5**
	baz=184,SNR=62						
T59A	**Double "B" Far**	**26.53**	**17**	*eP*	**P**	**17 40 03.2**	**+0.2**
	comp=Z,609nm,1.1s						
T59A				LR	LR		
	comp=Z,91µm,20.0s						
T59A	**Double "B" Far**	**26.53**	**17**	P	**P**	**17 40 02.8**	**-0.3**
	baz=201,SNR=50						
R50A	**Paris**	**26.54**	**5**	*eP*	**P**	**17 40 02.3**	**-0.8**
	comp=Z,842nm,1.3s						
R50A	**Paris**	**26.54**	**5**	P	**P**	**17 40 02.8**	**-0.3**
	baz=186,SNR=68						
R48A	**Northridge Ran**	**26.57**	**2**	P	**P**	**17 40 02.9**	**-0.5**
	baz=182,SNR=33						
S55A	**Lewisburg**	**26.58**	**12**	P	**P**	**17 40 03.6**	**+0.1**
	baz=194,SNR=99						
AMTX	**Amarillo**	**26.60**	**332**	*eP*	**P**	**17 40 03.3**	**-0.5**
	comp=Z,1µm,0.8s						
AMTX				LR	LR		
	comp=Z,11µm,19.0s						
R51A	**Hillsboro**	**26.63**	**6**	P	**P**	**17 40 03.6**	**-0.3**
	baz=187,SNR=114						
S56A	**Natural Bridge**	**26.68**	**13**	P	**P**	**17 40 04.5**	**+0.1**
	baz=196,SNR=69						
R52A	**Catlettsburg**	**26.77**	**8**	P	**P**	**17 40 05.1**	**-0.1**
	baz=189,SNR=26						
U32A	**Winter Ranch,**	**26.80**	**338**	*eP*	**P**	**17 40 04.9**	**-0.6**
	comp=Z,1µm,0.9s						
U32A				LR	LR		
	comp=Z,14µm,20.0s						
BCHC	**Barbados, Cave**	**26.80**	**84**	*eP*	**P**	**17 40 07.1**	**+1.4**
EPT	**El Paso**	**26.82**	**321**	PFAKE		17 40 20.0	+14
EPT				LR	LR		
	comp=Z,20µm,20.0s						
R53A	**Hurricane**	**26.87**	**9**	*eP*	**P**	**17 40 05.9**	**-0.1**
	comp=Z,776nm,1.4s						
R53A				LR	LR		
	comp=Z,84µm,19.0s						
R53A	**Hurricane**	**26.87**	**9**	P	**P**	**17 40 06.0**	**0.0**
	baz=191,SNR=41						
R54A	**Victor**	**26.88**	**11**	P	**P**	**17 40 06.7**	**+0.5**
	baz=193,SNR=24						
OLIL	**Olney**	**26.90**	**358**	*eP*	**P**	**17 40 05.6**	**-0.7**
	comp=Z,295nm,0.8s						
OLIL				LR	LR		
	comp=Z,28µm,20.0s						
S57A	**Dark Hollow, R**	**26.91**	**14**	*eP*	**P**	**17 40 06.6**	**+0.2**
	comp=Z,244nm,0.9s						
S57A				LR	LR		
	comp=Z,70µm,21.0s						
S57A	**Dark Hollow, R**	**26.91**	**14**	P	**P**	**17 40 07.0**	**+0.6**
	baz=197,SNR=32						
SLM	**Saint Louis**	**26.93**	**354**	*eP*	**P**	**17 40 06.4**	**-0.2**
	comp=Z,175nm,0.8s						
SLM				LR	LR		
	comp=Z,42µm,21.0s						
SLM	**Saint Louis**	**26.93**	**354**	*eP*	**P**	**17 40 06.4**	**-0.2**
SLM				pmax	pmax		
	comp=Z,175nm,0.8s						
SLM				MLR	MLR		
	comp=Z,42µm,21.0s						
T60A	**Surry**	**26.93**	**18**	*eP*	**P**	**17 40 05.7**	**-0.9**
	comp=Z,1µm,1.3s						
T60A				LR	LR		
	comp=Z,100µm,19.0s						
S58A	**Poland Farm, P**	**27.00**	**16**	*eP*	**P**	**17 40 06.8**	**-0.3**
	comp=Z,318nm,1.0s						
S58A				LR	LR		
	comp=Z,98µm,20.0s						
S58A	**Poland Farm, P**	**27.00**	**16**	P	**P**	**17 40 06.8**	**-0.3**
	baz=199,SNR=62						
Q45A	**Warren Harvey,**	**27.06**	**358**	P	**P**	**17 40 07.7**	**0.0**
	baz=177,SNR=64						
Q47A	**Bedord North L**	**27.09**	**1**	P	**P**	**17 40 07.7**	**-0.3**
	baz=181,SNR=148						
Q48A	**North Vernon**	**27.10**	**2**	P	**P**	**17 40 07.7**	**-0.4**
	baz=183,SNR=82						
Q50A	**Georgetown**	**27.13**	**5**	P	**P**	**17 40 08.2**	**-0.1**
	baz=186,SNR=32						
Q46A	**CEJHS Indians,**	**27.17**	**359**	P	**P**	**17 40 08.5**	**-0.3**
Q49A	**Aurora**	**27.22**	**4**	P	**P**	**17 40 09.2**	**0.0**
	baz=184,SNR=139						
BLO	**Bloomington**	**27.32**	**1**	*eP*	**P**	**17 40 08.8**	**-1.3**
	comp=Z,274nm,0.8s						
BLO	**Bloomington**	**27.32**	**1**	*eP*	**P**	**17 40 08.8**	**-1.3**
BLO				pmax	pmax		
	comp=Z,274nm,0.8s						
S59A	**Mechanicsville**	**27.34**	**17**	P	**P**	**17 40 09.5**	**-0.8**
	baz=201,SNR=18						
Q51A	**Peebles**	**27.37**	**6**	*eP*	**P**	**17 40 10.1**	**-0.5**
	comp=Z,962nm,0.6s						
Q51A				LR	LR		
	comp=Z,82µm,21.0s						
Q51A	**Peebles**	**27.37**	**6**	P	**P**	**17 40 10.5**	**-0.1**
	baz=188,SNR=351						
R58B	**Mineral**	**27.37**	**16**	*eP*	**P**	**17 40 10.4**	**-0.2**
	comp=Z,824nm,1.4s						
R58B				LR	LR		
	comp=Z,92µm,20.0s						
R58B	**Mineral**	**27.37**	**16**	P	**P**	**17 40 10.8**	**+0.2**
	baz=200,SNR=49						
Q52A	**Bidwell**	**27.44**	**8**	P	**P**	**17 40 11.1**	**-0.1**
	baz=190,SNR=115						
Q53A	**Leroy**	**27.45**	**9**	P	**P**	**17 40 11.4**	**+0.1**
	baz=192,SNR=71						
S60A	**Water View**	**27.48**	**18**	P	**P**	**17 40 10.7**	**-0.9**
	baz=202,SNR=22						
R57A	**Stanardsville**	**27.52**	**15**	P	**P**	**17 40 12.0**	**+0.1**
	baz=198,SNR=92						
P47A	**Martinsville**	**27.64**	**1**	P	**P**	**17 40 12.3**	**-0.7**
	baz=181,SNR=76						
P48A	**Milroy**	**27.64**	**3**	*eP*	**P**	**17 40 11.4**	**-1.6**
	comp=Z,828nm,1.4s						
P48A	**Milroy**	**27.64**	**3**	P	**P**	**17 40 12.1**	**-0.9**
	baz=183,SNR=63						
R58A	**Rapidan**	**27.65**	**15**	P	**P**	**17 40 13.2**	**+0.1**
	baz=199,SNR=46						
P45A	**Graceland, Par**	**27.68**	**359**	*eP*	**P**	**17 40 11.7**	**-1.6**
	comp=Z,584nm,1.5s						
P45A				LR	LR		
	comp=Z,29µm,21.0s						
P45A	**Graceland, Par**	**27.68**	**359**	P	**P**	**17 40 12.7**	**-0.6**
	baz=178,SNR=22						
Q54A	**Coxs Mills**	**27.69**	**10**	*eP*	**P**	**17 40 13.0**	**-0.4**
	comp=Z,1µm,1.5s						
Q54A				LR	LR		
	comp=Z,75µm,19.0s						
Q54A	**Coxs Mills**	**27.69**	**10**	P	**P**	**17 40 12.6**	**-0.8**
	baz=193,SNR=132						
CBN	**Corbin Frederi**	**27.73**	**17**	*eP*	**P**	**17 40 14.3**	**+0.5**
	comp=Z,674nm,0.6s						
CBN				LR	LR		
	comp=Z,93µm,20.0s						
CBN	**Corbin Frederi**	**27.73**	**17**	P	**P**	**17 40 14.2**	**+0.5**
	baz=200,SNR=66						
P49A	**Miami Univ. Ec**	**27.76**	**4**	P	**P**	**17 40 13.0**	**-1.0**
	baz=185,SNR=98						
P46A	**Rosedale**	**27.76**	**360**	P	**P**	**17 40 13.5**	**-0.5**
	baz=179,SNR=22						
S61A	**Accomac**	**27.77**	**20**	*eP*	**P**	**17 40 14.3**	**+0.2**
	comp=Z,771nm,0.9s						
S61A				LR	LR		
	comp=Z,113µm,21.0s						
S61A	**Accomac**	**27.77**	**20**	P	**P**	**17 40 13.3**	**-0.8**
	baz=204						
R59A	**King George, V**	**27.80**	**17**	P	**P**	**17 40 15.4**	**+1.0**
	baz=201,SNR=29						
Q55A	**Buckhannon**	**27.84**	**12**	P	**P**	**17 40 14.6**	**-0.2**
	baz=194,SNR=98						
P51A	**Williamsport**	**27.85**	**7**	*eP*	**P**	**17 40 14.1**	**-0.8**
	comp=Z,179nm,0.8s						
P51A				LR	LR		
	comp=Z,84µm,21.0s						
P51A	**Williamsport**	**27.85**	**7**	P	**P**	**17 40 14.9**	**+0.1**
	baz=188,SNR=68						
P43A	**Skaggs, Pawnee**	**27.87**	**356**	P	**P**	**17 40 14.7**	**-0.4**
	baz=175,SNR=21						
P50A	**Jamestown**	**27.90**	**5**	P	**P**	**17 40 15.3**	**0.0**
	baz=186,SNR=58						
R60A	**Leonardtown, M**	**28.02**	**18**	P	**P**	**17 40 16.5**	**+0.2**
	baz=202						
Q56A	**Snyder Ridge,**	**28.07**	**13**	P	**P**	**17 40 17.2**	**+0.4**
	baz=196,SNR=116						
P53A	**Whipple**	**28.09**	**9**	*eP*	**P**	**17 40 16.5**	**-0.4**
	comp=Z,670nm,1.1s						
P53A				LR	LR		
	comp=Z,82µm,19.0s						
P53A	**Whipple**	**28.09**	**9**	P	**P**	**17 40 16.7**	**-0.2**
	baz=192,SNR=112						
P52A	**Corning**	**28.12**	**8**	P	**P**	**17 40 17.0**	**-0.2**
	baz=190,SNR=157						
121A	**Cookes Peak, D**	**28.13**	**321**	P	**P**	**17 40 18.8**	**+1.2**
	baz=133,SNR=226						
HSIG		**28.14**	**311**	*eP*	**P**	**17 40 19.3**	**+1.7**
	comp=Z,42nm,1.0s						
HSIG				LR	LR		
	comp=Z,86µm,21.0s						
Q57A	**Strasburg**	**28.25**	**14**	P	**P**	**17 40 19.2**	**+0.8**
	baz=198,SNR=51						
SRIG	**Santa Rosalia**	**28.27**	**307**	*eP*	**P**	**17 40 20.3**	**+1.6**
	comp=Z,321nm,1.3s						
SRIG				LR	LR		
	comp=Z,64µm,22.0s						
O44A	**Mansfield**	**28.33**	**358**	P	**P**	**17 40 18.6**	**-0.5**
	baz=177,SNR=46						
319A	**Douglas**	**28.34**	**317**	*eP*	**P**	**17 40 20.6**	**+1.1**
	comp=Z,338nm,0.9s						
319A				LR	LR		
	comp=Z,55µm,22.0s						
P55A	**Reedsville**	**28.39**	**12**	P	**P**	**17 40 20.2**	**+0.5**
	baz=195,SNR=71						
O47A	**Sheridan**	**28.39**	**1**	P	**P**	**17 40 18.1**	**-1.6**
	baz=182,SNR=75						
O45A	**Potomac**	**28.40**	**359**	P	**P**	**17 40 18.6**	**-1.1**
	baz=178,SNR=56						
O49A	**Covington**	**28.43**	**4**	*eP*	**P**	**17 40 19.0**	**-1.0**
	comp=Z,307nm,0.7s						
O49A	**Covington**	**28.43**	**4**	P	**P**	**17 40 19.0**	**-1.0**
	baz=185,SNR=52						
O48A	**Farmland**	**28.45**	**3**	P	**P**	**17 40 19.4**	**-0.8**
	baz=184,SNR=68						
O50A	**Cable**	**28.45**	**6**	P	**P**	**17 40 19.4**	**-0.8**
	baz=187,SNR=284						
SFIN	**Lafayette**	**28.52**	**360**	*eP*	**P**	**17 40 20.0**	**-0.8**
	comp=Z,264nm,0.8s						
SFIN				LR	LR		
	comp=Z,27µm,22.0s						
SFIN	**Lafayette**	**28.52**	**360**	P	**P**	**17 40 20.1**	**-0.8**
	baz=180,SNR=74						
MCWV	**Mont Chateau**	**28.53**	**12**	*eP*	**P**	**17 40 20.7**	**-0.1**
	comp=Z,89nm,0.8s						
MCWV				LR	LR		
	comp=Z,35µm,20.0s						
MCWV	**Mont Chateau**	**28.53**	**12**	P	**P**	**17 40 20.2**	**-0.7**
	baz=195,SNR=69						
KSU1	**Kansas State U**	**28.54**	**344**	PFAKE		17 40 30.0	+9.0
KSU1				LR	LR		
	comp=Z,52µm,21.0s						
KSU1	**Kansas State U**	**28.54**	**344**	P	**P**	**17 40 20.8**	**-0.2**
	baz=160,SNR=48						
O51A	**Pataskala**	**28.56**	**7**	P	**P**	**17 40 21.4**	**+0.2**
	baz=189,SNR=101						
BNM	**Barren Site**	**28.57**	**324**	*eP*	**P**	**17 40 22.1**	**+0.5**
P56A	**Dayton Farm, R**	**28.59**	**13**	P	**P**	**17 40 22.7**	**+1.2**
	baz=197,SNR=57						
ACSO	**Alum Creek Sta**	**28.60**	**7**	*eP*	**P**	**17 40 21.3**	**-0.2**
	comp=Z,447nm,0.6s						
ACSO				LR	LR		
	comp=Z,83µm,20.0s						
ACSO	**Alum Creek Sta**	**28.60**	**7**	P	**P**	**17 40 21.4**	**-0.2**
	baz=188,SNR=143						
O52A	**Adamsville**	**28.63**	**8**	*eP*	**P**	**17 40 21.6**	**-0.3**
	comp=Z,1µm,1.6s						
O52A				LR	LR		
	comp=Z,91µm,20.0s						
O52A	**Adamsville**	**28.63**	**8**	P	**P**	**17 40 21.5**	**-0.3**
	baz=190,SNR=94						
Y22D	**IRIS PASSCAL I**	**28.69**	**324**	*eP*	**P**	**17 40 23.6**	**+1.1**
	comp=Z,595nm,0.8s						
LPM	**Los Pinos Moun**	**28.70**	**325**	*eP*	**P**	**17 40 23.6**	**+0.9**
HDIL	**Hopedale**	**28.77**	**356**	*eP*	**P**	**17 40 21.6**	**-1.4**
	comp=Z,259nm,0.6s						
HDIL				LR	LR		
	comp=Z,26µm,21.0s						
HDIL	**Hopedale**	**28.77**	**356**	P	**P**	**17 40 22.2**	**-0.8**
	baz=175,SNR=33						
P57A	**Homestead Farm**	**28.77**	**15**	P	**P**	**17 40 23.5**	**+0.5**
	baz=198,SNR=123						
LENM	**Lemitar**	**28.78**	**324**	*eP*	**P**	**17 40 24.4**	**+0.9**
O53A	**New Philadelph**	**28.86**	**9**	P	**P**	**17 40 23.6**	**-0.2**
	baz=192,SNR=139						
Q60A	**Greensboro**	**28.92**	**18**	P	**P**	**17 40 25.2**	**+0.9**
	baz=203						
O54A	**Avella**	**28.93**	**11**	P	**P**	**17 40 23.7**	**-0.8**
	baz=193,SNR=55						
N44A	**Piper City**	**28.96**	**358**	P	**P**	**17 40 23.6**	**-1.0**
	baz=178,SNR=63						
N45A	**Kentland**	**29.00**	**359**	P	**P**	**17 40 23.9**	**-1.1**
	baz=179,SNR=53						
SDMD	**Soldier's Deli**	**29.01**	**16**	*eP*	**P**	**17 40 25.4**	**+0.2**
	comp=Z,210nm,0.9s						
SDMD				LR	LR		
	comp=Z,38µm,20.0s						
N46A	**Monticello**	**29.04**	**0**	P	**P**	**17 40 24.4**	**-1.0**
	baz=180,SNR=105						
BBSR	**BB Station**	**29.05**	**42**	*eP*	**P**	**17 40 26.4**	**+0.9**
	comp=Z,1µm,1.5s						
N41A	**Harden Midland**	**29.05**	**354**	*eP*	**P**	**17 40 24.3**	**-1.2**
	comp=Z,173nm,0.7s						
N41A				LR	LR		
	comp=Z,40µm,22.0s						
N41A	**Harden Midland**	**29.05**	**354**	P	**P**	**17 40 24.4**	**-1.0**
	baz=172,SNR=72						
LAZ	**Ladron**	**29.05**	**324**	*eP*	**P**	**17 40 27.1**	**+1.3**
N47A	**Urbana**	**29.05**	**2**	P	**P**	**17 40 24.3**	**-1.2**
	baz=182,SNR=53						
N48A	**Decatur**	**29.06**	**3**	P	**P**	**17 40 24.7**	**-0.9**
	baz=184,SNR=60						
ANMO	**Albuquerque**	**29.06**	**326**	P	**P**	**17 40 26.2**	**+0.3**
	comp=Z,77nm,1.0s,baz=143,slow=7.0,SNR=46						
ANMO				S	**S**	**17 45 11.4**	**-3.5**
	comp=Z,9.7nm,1.0s,baz=273,slow=19,SNR=1.8						
ANMO				ScP	**SS**	**17 47 16.9**	**-2.4**
	comp=Z,12nm,1.0s,baz=104,slow=4.2,SNR=4.1						
ANMO				LR	LR	17 53 39.5	
	comp=Z,31µm,21.6s,baz=121,slow=40						
ANMO	**Albuquerque**	**29.06**	**326**	*eP*	**P**	**17 40 26.3**	**+0.3**
	comp=Z,156nm,0.9s						
ANMO				LR	LR		
	comp=Z,33µm,22.0s						
ANMO	**Albuquerque**	**29.06**	**326**	*cP*	**P**	**17 40 27.1**	**+1.2**
ANMO				pmax	pmax		
	comp=Z,492nm,2.5s						
ANMO				MLR	MLR		
	comp=Z,32µm,21.0s						
TASM	**ASL Pad, Albuq**	**29.06**	**326**	P	**P**	**17 40 26.1**	**+0.1**
	baz=138,SNR=292						
TASM	**ASL Pad, Albuq**	**29.06**	**326**	P	**P**	**17 40 25.7**	**-0.2**
	baz=138,SNR=274						
N50A	**Nevada**	**29.12**	**6**	P	**P**	**17 40 25.9**	**-0.2**
	baz=188,SNR=51						
N43A	**Stutzman Famil**	**29.14**	**357**	P	**P**	**17 40 26.1**	**-0.2**
	baz=176,SNR=94						
O55A	**Ligonier**	**29.17**	**12**	P	**P**	**17 40 27.1**	**+0.5**
	baz=195,SNR=29						
N49A	**Columbus Grove**	**29.18**	**4**	*eP*	**P**	**17 40 25.1**	**-1.5**
	comp=Z,544nm,0.6s						
N49A				LR	LR		
	comp=Z,47µm,20.0s						
N49A	**Columbus Grove**	**29.18**	**4**	P	**P**	**17 40 26.2**	**-0.4**
	baz=186,SNR=190						
CBKS	**Cedar Bluff**	**29.23**	**339**	*eP*	**P**	**17 40 26.8**	**-0.5**
	comp=Z,556nm,0.9s						
CBKS				LR	LR		
	comp=Z,61µm,22.0s						
CBKS	**Cedar Bluff**	**29.23**	**339**	*eP*	**P**	**17 40 26.8**	**-0.5**
CBKS				pmax	pmax		
	comp=Z,556nm,0.9s						
CBKS				MLR	MLR		
	comp=Z,61µm,22.0s						
CBKS	**Cedar Bluff**	**29.23**	**339**	P	**P**	**17 40 27.0**	**-0.2**
	baz=154,SNR=33						
N40A	**Mertquake, Sal**	**29.30**	**353**	P	**P**	**17 40 27.0**	**-0.7**
	baz=171,SNR=49						
P59A	**Jarrettsville**	**29.31**	**17**	P	**P**	**17 40 26.8**	**-1.0**
	baz=201,SNR=50						
N52A	**McGinn's Farm,**	**29.34**	**8**	P	**P**	**17 40 27.5**	**-0.5**
	baz=190,SNR=15						
N51A	**Ashland**	**29.35**	**7**	*eP*	**P**	**17 40 27.5**	**-0.6**
	comp=Z,534nm,1.5s						
N51A				LR	LR		
	comp=Z,88µm,20.0s						
N51A	**Ashland**	**29.35**	**7**	P	**P**	**17 40 27.3**	**-0.8**
	baz=189,SNR=29						
O56A	**Blue Knob Stat**	**29.38**	**13**	*eP*	**P**	**17 40 28.7**	**+0.2**
	comp=Z,774nm,1.6s						
O56A				LR	LR		
	comp=Z,66µm,20.0s						
O56A	**Blue Knob Stat**	**29.38**	**13**	P	**P**	**17 40 28.7**	**+0.2**
	baz=197,SNR=48						
N53A	**Lisbon**	**29.46**	**10**	*eP*	**P**	**17 40 29.3**	**+0.2**
	comp=Z,260nm,0.8s						
N53A				LR	LR		
	comp=Z,82µm,19.0s						
N53A	**Lisbon**	**29.46**	**10**	P	**P**	**17 40 29.1**	**-0.1**
	baz=192,SNR=93						
M47A	**Cromwell**	**29.53**	**2**	P	**P**	**17 40 28.8**	**-1.0**
	baz=183,SNR=35						
M45A	**Boilermakers S**	**29.53**	**360**	P	**P**	**17 40 28.8**	**-0.9**
	baz=179,SNR=13						
M44A	**Midewin, Midew**	**29.55**	**358**	*eP*	**P**	**17 40 28.2**	**-1.6**
	comp=Z,313nm,1.3s						
M44A				LR	LR		
	comp=Z,31µm,19.0s						
M44A	**Midewin, Midew**	**29.55**	**358**	P	**P**	**17 40 28.8**	**-1.0**
	baz=178,SNR=25						
O57A	**Amberson**	**29.55**	**15**	P	**P**	**17 40 30.3**	**+0.4**
	baz=199,SNR=101						
M46A	**Old House Fiel**	**29.56**	**1**	*eP*	**P**	**17 40 28.3**	**-1.6**
	comp=Z,289nm,0.7s						
M46A				LR	LR		
	comp=Z,34µm,21.0s						
M46A	**Old House Fiel**	**29.56**	**1**	P	**P**	**17 40 28.9**	**-1.1**
	baz=181,SNR=54						
PTGA	**Pitinga**	**29.62**	**113**	P	**P**	**17 40 29.2**	**-1.6**
	comp=Z,31nm,0.8s,baz=297,slow=12,SNR=16						
PTGA				S	**S**	**17 45 22.3**	**-1.3**
	comp=Z,8.8nm,0.8s,baz=288,slow=19,SNR=1.8						
PTGA				LR	LR	17 53 15.4	
	comp=Z,36µm,20.6s,baz=298,slow=38						
PTGA	**Pitinga**	**29.62**	**113**	*eP*	**P**	**17 40 29.3**	**-1.6**
	comp=Z,62nm,1.0s						
PTGA				LR	LR		
	comp=Z,41µm,21.0s						
PTGA	**Pitinga**	**29.62**	**113**	*eP*	**P**	**17 40 29.4**	**-1.4**
M43A	**Waltham Townsh**	**29.63**	**357**	P	**P**	**17 40 29.8**	**-0.8**
	baz=176,SNR=83						
M41A	**Milan**	**29.68**	**355**	P	**P**	**17 40 30.1**	**-0.9**
	baz=173,SNR=26						
MVL	**Millersville**	**29.69**	**17**	*eP*	**P**	**17 40 31.1**	**0.0**
	comp=Z,663nm,1.3s						
MVL				LR	LR		
	comp=Z,102µm,21.0s						
M48A	**Edgerton**	**29.70**	**4**	*eP*	**P**	**17 40 30.1**	**-1.1**
	comp=Z,192nm,0.6s						
M48A				LR	LR		
	comp=Z,38µm,19.0s						
T25A	**Trinidad**	**29.71**	**331**	*eP*	**P**	**17 40 31.2**	**-0.5**

PAGS	Pennsylvania G	29.80	16	eP	P	17 40 32.4	+0.3
	comp=Z,696nm,1.0s						
PAGS				LR	LR		
	comp=Z,70µm,21.0s						
PSUB	Penn St. - Bra	29.89	18	eP	P	17 40 33.2	+0.2
	comp=Z,203nm,1.0s						
PSUB				LR	LR		
	comp=Z,171µm,19.0s						
SSPA	Standing Stone	29.89	14	eP	P	17 40 32.6	-0.3
	comp=Z,300nm,0.8s						
SSPA				LR	LR		
	comp=Z,73µm,20.0s						
TUC	Tucson	29.93	317	eP	P	17 40 34.5	+1.0
	comp=Z,242nm,0.9s						
TUC				LR	LR		
	comp=Z,100µm,22.0s						
TUC	Tucson	29.93	317	eP	P	17 40 34.5	+1.0
TUC				pmax	pmax		
	comp=Z,242nm,0.9s						
TUC				MLR	MLR		
	comp=Z,100µm,22.0s						
N56A	West Decatur	30.07	13	P	P	17 40 34.2	-0.3
	baz=197,SNR=44						
N57A	Milroy	30.09	14	P	P	17 40 34.5	-0.2
	baz=198,SNR=92						
M52A	Chesterland	30.10	9	eP	P	17 40 35.4	+0.6
	comp=Z,357nm,1.4s						
M52A				LR	LR		
	comp=Z,77µm,18.0s						
M52A	Chesterland	30.10	9	P	P	17 40 34.3	-0.5
	baz=191,SNR=22						
M53A	WI Miller and	30.11	10	P	P	17 40 34.5	-0.3
	baz=192,SNR=91						
PLIO	Pelee Island,	30.14	7	P	P	17 40 34.2	-0.9
	baz=188,SNR=36						
L47A	Sherwood	30.16	3	P	P	17 40 34.3	-1.0
	baz=183,SNR=49						
L46A	Eue Claire	30.16	1	eP	P	17 40 34.0	-1.4
	comp=Z,377nm,0.6s						
L46A				LR	LR		
	comp=Z,29µm,21.0s						
L46A	Eue Claire	30.16	1	P	P	17 40 33.9	-1.4
	baz=181,SNR=46						
L48A	N Adams	30.17	4	P	P	17 40 34.7	-0.8
	baz=185,SNR=22						
L42A	Oliver, Polo	30.23	356	eP	P	17 40 34.6	-1.3
	comp=Z,337nm,0.7s						
L42A				LR	LR		
	comp=Z,30µm,22.0s						
L42A	Oliver, Polo	30.23	356	P	P	17 40 35.1	-0.9
	baz=175,SNR=124						
O60A	Telford	30.26	18	P	P	17 40 36.1	-0.1
	baz=203,SNR=43						
L44A	Lake County Fo	30.33	359	P	P	17 40 35.7	-1.2
	baz=178,SNR=28						
M54A	Oil Creek Stat	30.35	11	eP	P	17 40 36.3	-0.7
	comp=Z,222nm,0.9s						
M54A				LR	LR		
	comp=Z,69µm,19.0s						
M54A	Oil Creek Stat	30.35	11	P	P	17 40 36.2	-0.8
	baz=194,SNR=67						
L49A	Milan	30.39	5	P	P	17 40 36.8	-0.6
	baz=186,SNR=49						
ALLY	Alegheny Colle	30.40	10	eP	P	17 40 36.9	-0.5
	comp=Z,388nm,1.0s						
ALLY				LR	LR		
	comp=Z,66µm,20.0s						
L50A	Kingsville	30.41	6	P	P	17 40 36.7	-0.8
	baz=188,SNR=18						
L40A	Anamosa	30.43	354	eP	P	17 40 36.2	-1.4
	comp=Z,320nm,0.6s						
L40A				LR	LR		
	comp=Z,32µm,22.0s						
L40A	Anamosa	30.43	354	P	P	17 40 37.0	-0.7
	baz=172,SNR=104						
M55A	Ridgway	30.49	12	P	P	17 40 37.5	-0.7
	baz=196,SNR=58						
KSCO	Kaye Shedlock'	30.49	336	eP	P	17 40 38.0	-0.4
	comp=Z,730nm,0.8s						
KSCO	Kaye Shedlock'	30.49	336	P	P	17 40 38.2	-0.2
	baz=149,SNR=88						
LUPA	Lehigh Univers	30.53	18	eP	P	17 40 39.0	+0.4
	comp=Z,34nm,0.9s						
LUPA				LR	LR		
	comp=Z,15µm,19.0s						
SCIA	State Center	30.53	351	eP	P	17 40 38.0	-0.6
	comp=Z,221nm,0.7s						
SCIA				LR	LR		
	comp=Z,30µm,21.0s						
SCIA	State Center	30.53	351	P	P	17 40 38.2	-0.4
	baz=168,SNR=18						
AAM	Ann Arbor	30.59	5	eP	P	17 40 39.1	+0.1
	comp=Z,275nm,0.6s						
AAM				LR	LR		
	comp=Z,73µm,21.0s						
AAM	Ann Arbor	30.59	5	eP	P	17 40 39.1	+0.1
AAM				pmax	pmax		
	comp=Z,275nm,0.6s						
AAM				MLR	MLR		
	comp=Z,73µm,21.0s						
AAM	Ann Arbor	30.59	5	P	P	17 40 38.6	-0.4
	baz=186,SNR=28						
M56A	Emporium	30.63	13	P	P	17 40 39.0	-0.5
	baz=197,SNR=108						
L53A	Girard	30.68	10	P	P	17 40 39.5	-0.4
	baz=193,SNR=68						
N59A	State Game Lan	30.71	17	eP	P	17 40 40.8	+0.6
	comp=Z,576nm,0.8s						
N59A				LR	LR		
	comp=Z,139µm,20.0s						
N59A	State Game Lan	30.71	17	P	P	17 40 40.4	+0.2
	baz=202,SNR=222						
SDCO	Great Sand Dun	30.72	331	eP	P	17 40 41.0	+0.4
	comp=Z,393nm,1.0s						
SDCO	Great Sand Dun	30.72	331	P	P	17 40 41.2	+0.5
	baz=142,SNR=805						
X18A	Snowflake	30.81	321	eP	P	17 40 43.4	+2.0
	comp=Z,153nm,0.8s						
X18A				LR	LR		
	comp=Z,50µm,19.0s						
K46A	Dorr	30.85	2	P	P	17 40 39.8	-1.5
	baz=182,SNR=50						
BRNJ	Basking Ridge	30.85	19	eP	P	17 40 41.8	+0.4
	comp=Z,504nm,1.0s						
BRNJ				LR	LR		
	comp=Z,153µm,18.0s						
K47A	Vermontville	30.86	3	P	P	17 40 40.5	-1.0
	baz=184,SNR=149						
K43A	Burlington	30.87	358	eP	P	17 40 40.6	-1.0
	comp=Z,203nm,0.9s						
K43A				LR	LR		
	comp=Z,34µm,19.0s						
K43A	Burlington	30.87	358	P	P	17 40 40.5	-1.0
	baz=177,SNR=40						
ERPA	Erie	30.88	10	eP	P	17 40 41.3	-0.4
	comp=Z,546nm,0.8s						
ERPA				LR	LR		
	comp=Z,60µm,20.0s						
ERPA	Erie	30.88	10	P	P	17 40 40.9	-0.8
	baz=193,SNR=91						
K48A	Perry	31.05	4	P	P	17 40 42.3	-0.9
	baz=185,SNR=272						
W18A	Petrified Fore	31.07	322	eP	P	17 40 46.0	+2.3
	comp=Z,518nm,0.8s						
W18A				LR	LR		
	comp=Z,38µm,21.0s						
W18A	Petrified Fore	31.07	322	P	P	17 40 44.2	+0.5
	baz=133						
K49A	Clarkson	31.08	5	P	P	17 40 42.9	-0.6
	baz=187,SNR=14						
214A	Organ Pipe Nat	31.11	314	P	P	17 40 45.3	+1.4
	baz=124,SNR=44						
BGNE	Belgrade	31.12	344	eP	P	17 40 43.4	-0.4
	comp=Z,2µm,0.8s						
BGNE				LR	LR		
	comp=Z,63µm,22.0s						
BGNE	Belgrade	31.12	344	P	P	17 40 43.1	-0.7
	baz=158,SNR=163						
L54A	Sinclairville	31.12	11	P	P	17 40 43.7	-0.1
	baz=194,SNR=41						
CPNY	Central Park	31.15	19	eP	P	17 40 44.4	+0.4
	comp=Z,267nm,1.3s						
CPNY				LR	LR		
	comp=Z,196µm,21.0s						
K50A	Casco	31.16	6	eP	P	17 40 43.5	-0.6
	comp=Z,192nm,0.7s						
K50A				LR	LR		
	comp=Z,93µm,21.0s						
K50A	Casco	31.16	6	P	P	17 40 43.3	-0.8
	baz=188,SNR=12						
JFWS	Jewell Farm	31.18	355	eP	P	17 40 42.9	-1.4
	comp=Z,183nm,0.6s						
JFWS				LR	LR		
	comp=Z,28µm,22.0s						
JFWS	Jewell Farm	31.18	355	eP	P	17 40 42.9	-1.4
JFWS				pmax	pmax		
	comp=Z,183nm,0.6s						
JFWS				MLR	MLR		
	comp=Z,28µm,22.0s						
JFWS	Jewell Farm	31.18	355	P	P	17 40 43.9	-0.5
	baz=174,SNR=57						
ODNJ	Ogdensburg	31.21	18	eP	P	17 40 44.7	+0.1
	comp=Z,357nm,1.2s						
ODNJ				LR	LR		
	comp=Z,162µm,18.0s						
L55A	Hinsdale	31.24	12	P	P	17 40 44.8	-0.2
	baz=196,SNR=33						
KSPA	Keystone Colle	31.30	16	eP	P	17 40 45.6	+0.2
	comp=Z,514nm,1.0s						
KSPA				LR	LR		
	comp=Z,136µm,20.0s						
PAL	Palisades	31.36	19	eP	P	17 40 45.8	0.0
	comp=Z,383nm,1.2s						
PAL				LR	LR		
	comp=Z,195µm,21.0s						
PAL	Palisades	31.36	19	eP	P	17 40 45.8	0.0
PAL				pmax	pmax		
	comp=Z,383nm,1.2s						
PAL				MLR	MLR		
	comp=Z,195µm,21.0s						
PAL	Palisades	31.36	19	P	P	17 40 46.1	+0.3
	baz=205,SNR=36						
S22A	4UR Ranch, Cre	31.38	329	eP	P	17 40 47.5	+1.0
	comp=Z,272nm,0.9s						
S22A				LR	LR		
	comp=Z,17µm,22.0s						
S22A	4UR Ranch, Cre	31.38	329	P	P	17 40 46.5	0.0
	baz=140,SNR=449						
K52A	Tillsonburg	31.41	9	P	P	17 40 45.8	-0.5
	baz=192,SNR=14						
J47A	Sunmer	31.44	3	eP	P	17 40 45.2	-1.4
	comp=Z,1µm,1.7s						
J47A				LR	LR		
	comp=Z,32µm,19.0s						
J47A	Sunmer	31.44	3	P	P	17 40 45.7	-0.9
	baz=184,SNR=21						
Q24A	Divide	31.53	332	eP	P	17 40 48.8	+0.9
	comp=Z,137nm,1.0s						
Q24A				LR	LR		
	comp=Z,4µm,20.0s						
Q24A	Divide	31.53	332	P	P	17 40 48.5	+0.6
	baz=144,SNR=62						
J48A	Bridge Port	31.57	5	eP	P	17 40 46.5	-1.2
	comp=Z,275nm,0.6s						
J48A				LR	LR		
	comp=Z,55µm,20.0s						
J48A	Bridge Port	31.57	5	P	P	17 40 47.0	-0.7
	baz=186,SNR=73						
J45A	Montague	31.58	1	eP	P	17 40 46.5	-1.3
	comp=Z,414nm,0.7s						
J45A				LR	LR		
	comp=Z,24µm,20.0s						
J45A	Montague	31.58	1	P	P	17 40 46.1	-1.7
	baz=181,SNR=5.7						
K54A	Basiliko Farm,	31.60	12	P	P	17 40 47.7	-0.4
	baz=196,SNR=41						
X16A	Lo Mia Camp, P	31.67	319	eP	P	17 40 49.9	+0.9
	comp=Z,336nm,0.7s						
X16A				LR	LR		
	comp=Z,53µm,19.0s						
M61A	Granite Spring	31.68	19	P	P	17 40 47.8	-0.9
	baz=205,SNR=47						
J49A	Marlette	31.68	5	P	P	17 40 47.5	-1.2
	baz=187,SNR=78						
BINY	Binghamton	31.84	16	eP	P	17 40 50.3	+0.1
	comp=Z,631nm,1.0s						
BINY				LR	LR		
	comp=Z,114µm,21.0s						
BINY	Binghamton	31.84	16	P	P	17 40 50.0	-0.1
	baz=201,SNR=144						
K55A	Perry	31.84	13	P	P	17 40 50.1	-0.1
	baz=197,SNR=46						
MVCO	Mesa Verde	31.85	326	eP	P	17 40 50.9	+0.3
	comp=Z,356nm,0.8s						
MVCO				LR	LR		
	comp=Z,28µm,21.0s						
MVCO	Mesa Verde	31.85	326	P	P	17 40 50.9	+0.3
	baz=137,SNR=269						
TYNO	Tyneside	31.85	10	P	P	17 40 50.0	-0.2
	baz=193,SNR=57						
MMNY	Mt. Morris Dam	31.88	13	eP	P	17 40 49.8	-0.6
	comp=Z,724nm,1.5s						
MMNY				LR	LR		
	comp=Z,74µm,20.0s						
J52A	Paris	31.90	9	P	P	17 40 50.4	-0.2
	baz=192,SNR=50						
OGNE	Ogallala	31.94	338	eP	P	17 40 52.3	+1.1
	comp=Z,718nm,0.8s						
OGNE				LR	LR		
	comp=Z,68µm,22.0s						
OGNE	Ogallala	31.94	338	P	P	17 40 51.6	+0.5
	baz=151,SNR=56						
YLE	Yale	31.96	20	eP	P	17 40 51.8	+0.7
	comp=Z,373nm,0.8s						
YLE				LR	LR		
	comp=Z,189µm,20.0s						
I42A	Draeger Farm,	32.07	357	eP	P	17 40 51.0	-1.1
	comp=Z,2µm,1.9s						
I42A				LR	LR		
	comp=Z,40µm,21.0s						
I42A	Draeger Farm,	32.07	357	P	P	17 40 51.9	-0.3
	baz=176,SNR=115						
STCO	Saint Catharin	32.09	11	P	P	17 40 52.4	+0.2
	baz=194,SNR=7.6						
I46A	Reed City	32.11	2	P	P	17 40 51.3	-1.2
	baz=183,SNR=36						
KSCT	Kent School, K	32.14	19	eP	P	17 40 53.2	+0.4
	comp=Z,570nm,1.3s						
KSCT				LR	LR		
	comp=Z,181µm,21.0s						
MEDO	Medina	32.18	12	eP	P	17 40 52.9	-0.2
	comp=Z,318nm,1.1s						
MEDO				LR	LR		
	comp=Z,66µm,22.0s						
MEDO	Medina	32.18	12	P	P	17 40 52.3	-0.8
	baz=196,SNR=11						
I45A	Fountain	32.19	1	eP	P	17 40 52.4	-0.7
	comp=Z,542nm,0.6s						
I45A				LR	LR		
	comp=Z,28µm,20.0s						
I45A	Fountain	32.19	1	P	P	17 40 52.1	-1.1
	baz=181,SNR=31						
113A	Mohawk Valley,	32.23	315	eP	P	17 40 55.9	+2.2
	comp=Z,89nm,1.0s						
113A				LR	LR		
	comp=Z,87µm,22.0s						
I47A	Gladwin	32.24	3	eP	P	17 40 53.0	-0.6
	comp=Z,490nm,0.6s						
I47A				LR	LR		
	comp=Z,30µm,21.0s						
I47A	Gladwin	32.24	3	P	P	17 40 52.8	-0.8
	baz=184,SNR=36						
J54A	Appleton	32.25	12	eP	P	17 40 53.1	-0.6
	comp=Z,322nm,0.9s						
J54A				LR	LR		
	comp=Z,66µm,19.0s						
J54A	Appleton	32.25	12	P	P	17 40 53.5	-0.2
	baz=195,SNR=34						
I49A	Point Hope	32.29	6	eP	P	17 40 53.3	-0.7
	comp=Z,264nm,0.6s						
I49A				LR	LR		
	comp=Z,87µm,21.0s						
I49A	Point Hope	32.29	6	P	P	17 40 53.1	-0.9
	baz=188,SNR=43						
I41A	Arkdale	32.29	356	eP	P	17 40 52.6	-1.5
	comp=Z,302nm,0.7s						
I41A				LR	LR		
	comp=Z,30µm,19.0s						
I41A	Arkdale	32.29	356	P	P	17 40 53.3	-0.8
	baz=175,SNR=25						
ACTO	Acton	32.32	10	P	P	17 40 54.6	+0.3
	baz=193,SNR=68						
WUAZ	Wupatki	32.34	321	eP	P	17 40 56.8	+2.0
	comp=Z,362nm,0.9s						
WUAZ				LR	LR		
	comp=Z,48µm,21.0s						
WUAZ	Wupatki	32.34	321	P	P	17 40 55.3	+0.5
	baz=131,SNR=137						
I51A	Listowel	32.37	8	P	P	17 40 54.3	-0.4
	baz=191,SNR=82						
Y14A	Wickenburg	32.39	317	eP	P	17 40 56.2	+1.1
	comp=Z,90nm,0.7s						
Y14A				LR	LR		
	comp=Z,68µm,20.0s						
J55A	Hilton	32.41	13	eP	P	17 40 54.9	-0.2
	comp=Z,306nm,1.4s						
J55A				LR	LR		
	comp=Z,75µm,21.0s						
J55A	Hilton	32.41	13	P	P	17 40 54.8	-0.3
	baz=197,SNR=11						
ISCO	Idaho Springs	32.42	333	eP	P	17 40 55.9	+0.2
	comp=Z,146nm,1.1s						
ISCO				LR	LR		
	comp=Z,6µm,22.0s						
ISCO	Idaho Springs	32.42	333	eP	P	17 40 55.9	+0.2
ISCO				pmax	pmax		
	comp=Z,146nm,1.1s						
ISCO				MLR	MLR		
	comp=Z,6µm,22.0s						
ISCO	Idaho Springs	32.42	333	P	P	17 40 55.4	-0.3
	baz=144,SNR=144						
I48A	Sherman Twp	32.46	4	P	P	17 40 54.8	-0.7
	baz=186,SNR=49						
BASO	Ashfield	32.49	7	P	P	17 40 54.5	-1.3
	baz=190,SNR=74						
SMCO	Snowmass	32.56	331	eP	P	17 40 57.8	+0.8
	comp=Z,321nm,1.0s						
SMCO				LR	LR		
	comp=Z,28µm,21.0s						
PV01	Paradox Valley	32.57	327	eP	P	17 40 57.7	+0.9
	comp=Z,263nm,0.9s						
PV01				LR	LR		
	comp=Z,34µm,22.0s						
I53A	Kortright Cn E	32.61	10	P	P	17 40 55.3	-1.6
	baz=193,SNR=8.3						
H43A	Windswept, Lux	32.62	359	eP	P	17 40 55.8	-1.1
	comp=Z,231nm,0.7s						
H43A				LR	LR		
	comp=Z,24µm,19.0s						
H43A	Windswept, Lux	32.62	359	P	P	17 40 55.5	-1.4
	baz=178,SNR=58						
BWLO	Walkerton	32.66	8	P	P	17 40 56.8	-0.5
	baz=190,SNR=70						
PV02	Paradox Valley	32.71	327	eP	P	17 40 58.5	+0.4
	comp=Z,254nm,0.7s						
PV02				LR	LR		
	comp=Z,29µm,22.0s						
PV13	Radium Mtn., P	32.72	327	eP	P	17 40 58.5	+0.3
	comp=Z,359nm,0.7s						
PV13				LR	LR		
	comp=Z,26µm,22.0s						
H46A	Fife Lake	32.72	2	P	P	17 40 55.7	-2.1
	baz=183,SNR=26						
BRCO	Bruce Peninsul	32.74	7	P	P	17 40 57.1	-1.0
	baz=190,SNR=21						
I52A	Shelburne	32.75	9	P	P	17 40 57.0	-1.1
	baz=192,SNR=114						
H45A	Beulah	32.78	1	P	P	17 40 57.1	-1.2
	baz=182,SNR=20						
PV03	Paradox Valley	32.80	327	eP	P	17 40 59.1	+0.2
	comp=Z,605nm,0.7s						
PV03				LR	LR		
	comp=Z,22µm,21.0s						
PV05	Paradox Valley	32.81	327	eP	P	17 40 59.4	+0.4
	comp=Z,534nm,0.7s						
PV05				LR	LR		
	comp=Z,24µm,22.0s						
DRWO	Darlington Wes	32.81	11	P	P	17 40 58.1	-0.4
	baz=195,SNR=71						
DRCO	St. Marys Ceme	32.82	11	P	P	17 40 58.2	-0.4
	baz=195,SNR=46						
PV12	Saucer Basin,	32.83	327	eP	P	17 40 60.0	+0.9
	comp=Z,1µm,0.7s						
PV12				LR	LR		
	comp=Z,31µm,22.0s						
PV18	Skein Mesa, Pa	32.83	327	eP	P	17 40 59.6	+0.5
	comp=Z,956nm,0.7s						
PV18				LR	LR		
	comp=Z,21µm,21.0s						
H47A	Mio	32.83	4	P	P	17 40 57.8	-1.0
	baz=185,SNR=30						
PV07	Paradox Valley	32.83	328	eP	P	17 41 00.1	+0.9
	comp=Z,376nm,0.9s						
PV07				LR	LR		
	comp=Z,19µm,20.0s						
PKRO	Pickering	32.84	11	P	P	17 40 58.3	-0.5
	baz=194,SNR=7.3						
PV11	David Mesa, Pa	32.85	327	eP	P	17 41 00.2	+0.9
	comp=Z,742nm,0.6s						
PV11				LR	LR		
	comp=Z,25µm,21.0s						
PV16	Nyswonger Mesa	32.88	327	eP	P	17 41 00.5	+0.9
	comp=Z,640nm,0.8s						
PV16				LR	LR		
	comp=Z,20µm,21.0s						
PV17	East Wray Mesa	32.88	327	eP	P	17 41 00.5	+0.9
	comp=Z,1µm,0.6s						
PV17				LR	LR		
	comp=Z,25µm,21.0s						
PV19	Morning Glory	32.91	327	eP	P	17 41 00.5	+0.6
	comp=Z,608nm,0.7s						
PV19				LR	LR		
	comp=Z,22µm,22.0s						
WLVO	Wesleyville	32.92	12	P	P	17 40 59.2	-0.3
	baz=196,SNR=72						
PV20	West Nyswonger	32.93	327	eP	P	17 41 01.0	+1.0
	comp=Z,543nm,0.6s						
PV20				LR	LR		
	comp=Z,20µm,21.0s						
ECSD	EROS Data Cent	32.93	347	eP	P	17 40 58.0	-1.8
	comp=Z,451nm,0.7s						
ECSD				LR	LR		
	comp=Z,64µm,22.0s						
ECSD	EROS Data Cent	32.93	347	P	P	17 40 58.4	-1.3
	baz=162,SNR=721						
PV04	Paradox Valley	32.94	327	eP	P	17 41 00.8	+0.8
	comp=Z,639nm,0.9s						
PV04				LR	LR		
	comp=Z,24µm,20.0s						
BRYW	Bryant College	32.98	22	eP	P	17 41 00.5	+0.4
	comp=Z,206nm,0.7s						
BRYW				LR	LR		
	comp=Z,161µm,20.0s						
PV22	Blue Mesa, Par	32.98	328	eP	P	17 41 00.4	-0.1
	comp=Z,306nm,0.8s						
PV22				LR	LR		
	comp=Z,18µm,20.0s						
PV14	Lion Creek, Pa	32.98	327	eP	P	17 41 01.4	+0.8
	comp=Z,554nm,0.7s						
PV14				LR	LR		
	comp=Z,24µm,21.0s						
PV10	Paradox Valley	32.99	327	eP	P	17 41 00.9	+0.3
	comp=Z,682nm,0.7s						
PV10				LR	LR		
	comp=Z,23µm,21.0s						
TRY	Troy	32.99	18	eP	P	17 41 00.8	+0.6
	comp=Z,750nm,1.0s						
TRY				LR	LR		
	comp=Z,139µm,19.0s						
H48A	Harrisville	33.00	5	eP	P	17 40 59.2	-1.0
	comp=Z,1µm,0.6s						
H48A				LR	LR		
	comp=Z,68µm,21.0s						
H48A	Harrisville	33.00	5	P	P	17 40 59.1	-1.1
	baz=186,SNR=200						
QUA2	Belchertown	33.01	20	eP	P	17 41 00.5	+0.1
	comp=Z,230nm,0.7s						
QUA2				LR	LR		
	comp=Z,141µm,20.0s						
GLMI	Grayling	33.03	3	eP	P	17 40 60.0	-0.6
	comp=Z,388nm,0.6s						
GLMI				LR	LR		
	comp=Z,29µm,21.0s						
GLMI	Grayling	33.03	3	P	P	17 40 59.8	-0.8
	baz=184,SNR=14						
PV23	Carpenter Ridg	33.03	327	eP	P	17 41 01.5	+0.5
	comp=Z,657nm,0.8s						
PV23				LR	LR		
	comp=Z,21µm,20.0s						
PV21	Cone Mtn., Par	33.10	328	eP	P	17 41 02.1	+0.6
	comp=Z,131nm,0.6s						
PV21				LR	LR		
	comp=Z,19µm,22.0s						
BMRO	Meriville Lake	33.12	8	P	P	17 41 00.3	-1.0

baz=190,SNR=72
GLA Glamis 33.13 314 *e*P **P 17 41 01.1 -0.5**
GLA LR LR
comp=Z,190nm,0.8s
comp=Z,90μm,22.0s
GLA Glamis 33.13 314 *e*P **P 17 41 01.1 -0.5**
GLA pmax pmax
comp=Z,190nm,0.8s
GLA MLR MLR
comp=Z,90μm,22.0s
GLA Glamis 33.13 314 P **P 17 41 01.5 -0.1**
baz=123
PV09 Paradox Valley 33.13 327 *e*P **P 17 41 02.4 +0.5**
G45A Suttons Bay 33.20 2 *e*P **P 17 41 00.9 -1.1**
comp=Z,409nm,0.7s
G45A LR LR
comp=Z,38μm,20.0s
G45A Suttons Bay 33.20 2 P **P 17 41 01.0 -1.0**
baz=182,SNR=96
PECO Prince Edward 33.23 13 *e*P **P 17 41 01.5 -0.8**
comp=Z,417nm,1.2s
PECO LR LR
comp=Z,71μm,19.0s
PECO Prince Edward 33.23 13 P **P 17 41 01.2 -1.1**
baz=198,SNR=57
Y12C Blythe 33.31 316 *e*P **P 17 41 04.4 +1.3**
comp=Z,133nm,1.0s
Y12C LR LR
comp=Z,63μm,22.0s
Y12C Blythe 33.31 316 P **P 17 41 03.1 0.0**
baz=125,SNR=34
I55A Frankford 33.35 12 P **P 17 41 02.9 -0.4**
baz=197,SNR=118
H52A Wyevale 33.36 9 P **P 17 41 02.8 -0.5**
baz=193,SNR=38
PDMCI Parker Dam,Lak 33.37 317 P **P 17 41 04.8 +1.2**
baz=126,SNR=116
G47A Hillman 33.43 4 P **P 17 41 02.8 -1.1**
baz=185,SNR=116
N23A Red Feather La 33.46 334 *e*P **P 17 41 04.7 +0.1**
comp=Z,247nm,1.2s
N23A LR LR
comp=Z,6μm,21.0s
N23A Red Feather La 33.46 334 P **P 17 41 03.9 -0.8**
baz=145,SNR=135
WES Weston 33.46 21 *e*P **P 17 41 04.9 +0.6**
comp=Z,442nm,1.4s
WES LR LR
comp=Z,161μm,19.0s
BCX Boston College 33.48 22 *e*P **P 17 41 04.7 +0.3**
comp=Z,417nm,1.2s
BCX LR LR
comp=Z,138μm,20.0s
HRV Adam Dziewonsk 33.49 21 *e*P **P 17 41 04.8 +0.3**
comp=Z,232nm,1.2s
HRV LR LR
comp=Z,151μm,19.0s
HRV Adam Dziewonsk 33.49 21 *e*P **P 17 41 04.8 +0.3**
HRV pmax pmax
comp=Z,232nm,1.2s
HRV MLR MLR
comp=Z,151μm,19.0s
U15A North Rim 33.49 321 *e*P **P 17 41 06.2 +1.2**
comp=Z,157nm,0.6s
U15A LR LR
comp=Z,38μm,21.0s
G46A Petoskey 33.51 3 P **P 17 41 03.4 -1.3**
baz=184,SNR=22
G40A Rib Lake 33.52 356 *e*P **P 17 41 03.3 -1.5**
comp=Z,186nm,0.6s
G40A LR LR
comp=Z,34μm,22.0s
G40A Rib Lake 33.52 356 P **P 17 41 03.9 -0.9**
baz=174,SNR=254
LPAZ La Paz 33.55 146 P **P 17 41 07.2 +1.2**
comp=Z,16nm,0.6s,baz=341,slow=6.7,SNR=25
LPAZ S **S 17 46 28.4 +2.3**
comp=Z,3.6nm,0.8s,baz=60,slow=20,SNR=1.9
LPAZ ScP **ScP 17 47 33.9 +6.2**
comp=Z,16nm,1.1s,baz=302,slow=16,SNR=4.2
LPAZ LR LR 17 55 01.7
comp=Z,29μm,20.8s,baz=315,slow=37
LPAZ La Paz 33.55 146 *e*P **P 17 41 05.8 -0.2**
LPAZ *e*pP **P 17 41 06.0 0.0**
LPAZ *e*ScP **ScP 17 47 31.2 +3.5**
LPAZ La Paz 33.55 146 *e*P **P 17 41 05.8 -0.2**
LPAZ La Paz 33.55 146 *e*P **P 17 41 06.5 +0.4**
PHWY Pilot Hill 33.59 335 PFAKE 17 41 20.0 +14
PHWY LR LR
comp=Z,36μm,22.0s
ACCN Adirondack Com 33.59 18 *e*P **P 17 41 05.5 +0.1**
comp=Z,660nm,1.5s
ACCN LR LR
comp=Z,134μm,18.0s
SADO Sadowa 33.60 10 P **P 17 41 03.8 -1.7**
comp=Z,173nm,0.7s,baz=243,slow=5.2,SNR=46
SADO S **S 17 46 23.2 -2.0**
comp=Z,18nm,1.0s,baz=276,slow=19,SNR=2.1
SADO LR LR 17 55 38.1
comp=Z,61μm,18.3s,baz=190,slow=38
SADO Sadowa 33.60 10 *e*P **P 17 41 04.5 -1.0**
comp=Z,740nm,1.5s
SADO LR LR
comp=Z,63μm,19.0s
G39A Holcombe 33.62 355 P **P 17 41 04.7 -0.9**
baz=172,SNR=428
DELO Deloro Mine 33.65 12 *e*P **P 17 41 05.4 -0.5**
comp=Z,483nm,1.6s
DELO LR LR
comp=Z,74μm,20.0s
DELO Deloro Mine 33.65 12 P **P 17 41 04.9 -1.1**
baz=197,SNR=48
W13A Hualapai Mount 33.67 318 *e*P **P 17 41 08.0 +1.5**
comp=Z,145nm,0.8s
W13A LR LR
comp=Z,58μm,19.0s
TOBO Tobermory, Bru 33.70 7 P **P 17 41 05.4 -0.9**
baz=190,SNR=108
SPMN Marine on St. 33.73 353 *e*P **P 17 41 04.9 -1.7**
comp=Z,560nm,0.5s
SPMN LR LR
comp=Z,25μm,22.0s
SPMN Marine on St. 33.73 353 P **P 17 41 05.6 -1.0**
baz=170,SNR=135
SWSC Sam W. Stewart 33.76 313 P **P 17 41 07.4 +0.4**
baz=122
H55A Tweed 33.77 13 P **P 17 41 06.2 -0.8**
baz=197,SNR=103
IKP In-Ko-Pah, Jac 33.83 313 P **P 17 41 07.1 -0.7**
baz=121
F45A CMU Biological 33.85 2 P **P 17 41 06.5 -1.1**
baz=182,SNR=51
BC3 Big Chuckawall 33.90 315 P **P 17 41 08.9 +0.5**
baz=123,SNR=201
F42A Maple Grove Fa 33.91 359 P **P 17 41 06.8 -1.4**
baz=178,SNR=52
O20A White River Ci 33.92 330 *e*P **P 17 41 09.8 +1.3**
comp=Z,869nm,0.8s
O20A LR LR
comp=Z,34μm,22.0s
O20A White River Ci 33.92 330 P **P 17 41 08.6 0.0**
baz=140,SNR=489
NEE2 Needles Airpor 33.96 317 P **P 17 41 09.4 +0.7**
baz=126,SNR=41
IRM Iron Mountain 33.96 316 P **P 17 41 10.3 +1.4**
baz=124,SNR=80
NCB Newcomb 33.97 17 *e*P **P 17 41 08.5 -0.2**
comp=Z,122nm,0.8s
NCB LR LR
comp=Z,122μm,19.0s
KLBO Killbear Provi 34.01 9 P **P 17 41 08.3 -0.6**
baz=192,SNR=54
H56A Elgin 34.02 14 P **P 17 41 08.7 -0.4**
baz=199,SNR=164
G53A Haliburton 34.04 11 P **P 17 41 08.6 -0.7**
baz=195,SNR=111
BANO Bancroft 34.07 12 P **P 17 41 08.6 -1.0**
baz=196,SNR=44
SUSD Miller 34.16 345 P **P 17 41 08.8 -1.6**
baz=159,SNR=157
F40A Park Falls 34.16 356 P **P 17 41 09.5 -0.9**
baz=174,SNR=244
F49A Sandfield 34.17 6 P **P 17 41 08.7 -1.7**
baz=188,SNR=130
PKCU Pink Cliffs 34.17 323 *e*P **P 17 41 12.9 +1.9**
comp=Z,829nm,0.9s
MONP2 Monument Peak 34.18 313 P **P 17 41 09.8 -1.1**
baz=121
F48A Evansville 34.18 6 P **P 17 41 09.3 -1.2**
baz=188,SNR=191
F37A Hinrichs Farm, 34.20 353 P **P 17 41 09.3 -1.4**
baz=170,SNR=27
KNB Kanab 34.20 322 *e*P **P 17 41 12.2 +1.1**
comp=Z,274nm,0.8s
KNB Kanab 34.20 322 *e*P **P 17 41 12.2 +1.1**
KNB pmax pmax
comp=Z,274nm,0.8s
BUKO Buck Lake 34.21 10 P **P 17 41 10.4 -0.5**
baz=193,SNR=89
F39A Loretta 34.22 355 P **P 17 41 09.5 -1.3**
baz=173,SNR=442
BAR Barrett 34.25 312 *e*P **P 17 41 12.9 +1.6**
comp=Z,38nm,0.9s
BAR LR LR
comp=Z,38μm,19.0s
PLVO Plevna 34.26 13 *e*P **P 17 41 10.6 -0.7**
comp=Z,320nm,0.9s
PLVO LR LR
comp=Z,72μm,20.0s
PLVO Plevna 34.26 13 P **P 17 41 10.3 -1.0**
baz=197,SNR=125
COWI Conover 34.29 357 *e*P **P 17 41 09.6 -1.9**
comp=Z,279nm,0.6s
COWI LR LR
comp=Z,28μm,20.0s
FFD Franklin Falls 34.31 20 *e*P **P 17 41 12.5 +0.9**
comp=Z,377nm,0.8s
FFD LR LR
comp=Z,114μm,20.0s
HNH Hanover 34.31 19 *e*P **P 17 41 12.6 +0.9**
comp=Z,372nm,1.3s
HNH LR LR
comp=Z,154μm,22.0s
SRU San Rafael Swe 34.32 327 *e*P **P 17 41 12.3 +0.2**
comp=Z,569nm,0.8s
SRU San Rafael Swe 34.32 327 *e*P **P 17 41 12.3 +0.2**
SRU pmax pmax
comp=Z,569nm,0.8s
F38A Pierce - Schro 34.35 354 P **P 17 41 11.0 -0.9**
baz=171,SNR=300
LCMT Little Creek M 34.45 321 *e*P **P 17 41 14.0 +0.8**
comp=Z,130nm,0.8s
BELC Belle Mtn. Jos 34.47 315 P **P 17 41 10.9 -2.4**
baz=123,SNR=124
LDFC Landfair 34.47 317 *e*P **P 17 41 15.3 +2.0**
comp=Z,269nm,0.8s
LDFC LR LR
comp=Z,65μm,21.0s
LONY Lake Ozonia 34.47 16 *e*P **P 17 41 12.3 -0.7**
comp=Z,430nm,0.8s
LONY LR LR
comp=Z,131μm,20.0s
LONY Lake Ozonia 34.47 16 P **P 17 41 12.4 -0.6**
baz=202,SNR=240
MTPU Mount Pierson 34.50 324 *e*P **P 17 41 15.5 +1.6**
comp=Z,381nm,0.8s
E43A Lone Tree Farm 34.52 0 *e*P **P 17 41 12.5 -1.0**
comp=Z,352nm,0.6s
E43A LR LR
comp=Z,28μm,20.0s
E43A Lone Tree Farm 34.52 0 P **P 17 41 12.4 -1.0**
baz=180,SNR=331
Q16A Castle Valley 34.54 326 *e*P **P 17 41 14.7 +0.7**
comp=Z,381nm,1.1s
G55A Calabogie 34.55 13 P **P 17 41 13.4 -0.3**
baz=198,SNR=89
F52A Sundridge 34.57 10 P **P 17 41 13.3 -0.6**
baz=193,SNR=82
PFO Pinyon Flats O 34.58 314 *e*P **P 17 41 15.9 +1.6**
comp=Z,114nm,0.9s
PFO LR LR
comp=Z,56μm,20.0s
PFO Pinyon Flats O 34.58 314 *e*P **P 17 41 15.9 +1.6**
PFO pmax pmax
comp=Z,114nm,0.9s
PFO MLR MLR
comp=Z,56μm,20.0s
PFO Pinyon Flats O 34.58 314 P **P 17 41 13.4 -0.9**
baz=122,SNR=77
E46A Sault Ste Mari 34.59 3 *e*P **P 17 41 13.1 -1.0**
comp=Z,81nm,0.7s
E46A LR LR
comp=Z,37μm,22.0s
E46A Sault Ste Mari 34.59 3 P **P 17 41 12.5 -1.5**
baz=184,SNR=55
F51A Arnstein 34.61 9 P **P 17 41 13.4 -0.8**
baz=192,SNR=35
MDP Montagnes des 34.64 98 P **P 17 41 13.5 -1.4**
comp=Z,21nm,1.0s,baz=290,slow=8.0,SNR=6.9
RWWY Rawlins 34.66 333 *e*P **P 17 41 15.3 +0.2**
comp=Z,533nm,0.8s
RWWY LR LR
comp=Z,39μm,22.0s
GMRC Granite Mounta 34.67 316 P **P 17 41 15.3 +0.3**
baz=124,SNR=91
109C Camp Elliot, M 34.67 312 P **P 17 41 14.0 -0.9**
baz=120
CPE Camp Elliot 34.67 312 *e*P **P 17 41 17.7 +2.7**
comp=Z,75nm,0.8s
CPE LR LR
comp=Z,35μm,20.0s
P17A Butcher Ranch, 34.70 327 *e*P **P 17 41 15.7 +0.3**
comp=Z,924nm,0.9s
VT1 Waterbury 34.73 18 *e*P **P 17 41 15.7 +0.4**
comp=Z,152nm,1.0s
VT1 LR LR
comp=Z,151μm,22.0s
SZCU Shurtz Canyon 34.74 322 *e*P **P 17 41 16.9 +1.1**
comp=Z,292nm,0.8s
E47A Iron Bridge 34.74 5 P **P 17 41 14.8 -0.6**
baz=186,SNR=138
E44A Grand Marais A 34.77 1 *e*P **P 17 41 15.1 -0.5**
comp=Z,3μm,1.8s
E44A LR LR
comp=Z,32μm,20.0s
E44A Grand Marais A 34.77 1 P **P 17 41 15.2 -0.5**
baz=182,SNR=90
MSU Marysvale 34.82 324 *e*P **P 17 41 17.5 +1.1**
MSU Marysvale 34.82 324 *e*P **P 17 41 17.5 +1.1**
TMUT Trail Mountain 34.83 326 *e*P **P 17 41 17.2 +0.6**
comp=Z,287nm,0.8s
PEMO Pembroke 34.84 12 P **P 17 41 15.2 -0.9**
baz=197,SNR=110
E48A Lockeyer 34.87 6 P **P 17 41 15.8 -0.6**
baz=188,SNR=175
CCUT Cedar City 34.87 322 *e*P **P 17 41 18.4 +1.5**
comp=Z,176nm,0.8s
LBNH Lisbon 34.90 19 *e*P **P 17 41 16.9 +0.1**
comp=Z,241nm,0.8s
LBNH LR LR
comp=Z,139μm,22.0s
LBNH Lisbon 34.90 19 *e*P **P 17 41 16.9 +0.1**
LBNH pmax pmax
comp=Z,241nm,0.8s
LBNH MLR MLR
comp=Z,139μm,22.0s
LBNH Lisbon 34.90 19 P **P 17 41 16.6 -0.2**
baz=206,SNR=85
FRNY Flat Rock 34.94 17 *e*P **P 17 41 16.5 -0.6**
comp=Z,512nm,1.4s
FRNY LR LR
comp=Z,150μm,19.0s
ALGO Algonquin Park 34.95 11 P **P 17 41 16.1 -1.0**
baz=195,SNR=139
E38A The Farm, Brul 34.96 355 *e*P **P 17 41 15.4 -1.8**
comp=Z,346nm,0.6s
E38A LR LR
comp=Z,32μm,22.0s
E38A The Farm, Brul 34.96 355 P **P 17 41 15.9 -1.3**
baz=172,SNR=179
E50A Wahnapitae 34.98 8 P **P 17 41 16.0 -1.4**
baz=191,SNR=55
ORIO Orleans, Innes 35.01 14 P **P 17 41 17.1 -0.5**
baz=200,SNR=62
TCRU Three Creeks R 35.04 324 *e*P **P 17 41 19.9 +1.5**
comp=Z,568nm,0.9s
MURC Murrieta 35.10 313 P **P 17 41 17.4 -1.3**
baz=121,SNR=64
D46A Sault St. Mari 35.13 4 P **P 17 41 17.5 -1.2**
baz=185,SNR=115
K22A Casper 35.15 335 *e*P **P 17 41 19.2 0.0**
comp=Z,335nm,0.9s
K22A LR LR
comp=Z,17μm,21.0s
K22A Casper 35.15 335 P **P 17 41 19.1 0.0**
baz=145,SNR=147
HEC Hector,Ludlow 35.15 316 P **P 17 41 17.9 -1.3**
baz=124
E52A Mattawa 35.16 10 P **P 17 41 18.6 -0.3**
baz=194,SNR=92
MNMC Minye Minye 35.17 151 *e*P **P 17 41 19.9 +0.2**
comp=Z,394nm,1.1s
MNMC LR LR
comp=Z,22μm,21.0s
F55A Otter Lake 35.18 13 P **P 17 41 18.9 -0.2**
baz=198,SNR=56
TUQ Turquoise Moun 35.22 317 P **P 17 41 20.0 +0.3**
baz=125,SNR=59
D41A Chassel 35.23 358 *e*P **P 17 41 18.2 -1.3**
comp=Z,751nm,1.6s
D41A LR LR
comp=Z,25μm,19.0s
D41A Chassel 35.23 358 P **P 17 41 18.4 -1.1**
baz=177,SNR=75
E51A G1948 Merrick 35.26 9 P **P 17 41 19.4 -0.5**
baz=193,SNR=152
SHPR Sheep Range 35.34 319 *e*P **P 17 41 22.6 +1.7**
comp=Z,67nm,1.1s
SHPR LR LR
comp=Z,47μm,20.0s
D47A Chapleau 35.36 5 P **P 17 41 19.8 -0.9**
baz=186,SNR=96
E53A Dumoine, Ponti 35.43 11 P **P 17 41 20.7 -0.6**
baz=196,SNR=81
RSSD Black Hills 35.43 339 *e*P **P 17 41 21.8 +0.2**
comp=Z,333nm,0.9s
RSSD LR LR
comp=Z,40μm,21.0s
RSSD Black Hills 35.43 339 *e*P **P 17 41 21.8 +0.2**
RSSD pmax pmax
comp=Z,333nm,0.9s
RSSD MLR MLR
comp=Z,40μm,21.0s
MPU Maple Canyon 35.57 327 *e*P **P 17 41 23.7 +0.9**
comp=Z,538nm,0.9s
E54A Lac Daplat, Po 35.57 12 P **P 17 41 21.8 -0.7**
baz=196,SNR=156
D48A Paudash Townsh 35.59 6 P **P 17 41 21.9 -0.8**
baz=189,SNR=259
PB11 IPOC Station P 35.68 151 *e*P **P 17 41 24.7 +0.8**
comp=Z,172nm,0.9s
PB11 LR LR
comp=Z,35μm,22.0s
SHOC Shoshone, Teco 35.72 317 P **P 17 41 23.5 -0.4**
baz=125
GSC Goldstone, Bar 35.73 316 *e*P **P 17 41 26.1 +1.9**
comp=Z,58nm,0.9s
GSC LR LR
comp=Z,67μm,20.0s
GSC Goldstone, Bar 35.73 316 *e*P **P 17 41 26.1 +1.9**
GSC pmax pmax
comp=Z,58nm,0.9s
GSC MLR MLR
comp=Z,67μm,20.0s
GSC Goldstone, Bar 35.73 316 P **P 17 41 23.3 -0.9**
baz=124,SNR=58
D49A Beulah Townshi 35.74 7 P **P 17 41 23.2 -0.8**
baz=189,SNR=215
BFSC Mount Baldy Ra 35.76 314 P **P 17 41 23.7 -0.7**
baz=121
MOQ Mont Orford 35.77 18 *e*P **P 17 41 23.7 -0.6**
PSUT Pine Spring 35.81 323 *e*P **P 17 41 26.1 +1.1**
comp=Z,422nm,0.8s
GO01 Chusmiza 35.82 150 PFAKE 17 41 40.0 +15
GO01 LR LR
comp=Z,32μm,21.0s
D52A ZEK Kipawa Sen 35.87 10 P **P 17 41 24.3 -0.7**
baz=194,SNR=105
CIS Catalina Islan 35.88 312 P **P 17 41 23.7 -1.7**
baz=120
JLU Jordanelle 35.89 328 *e*P **P 17 41 26.2 +0.5**
comp=Z,363nm,0.9s
FMP Fort Macarthur 35.94 313 P **P 17 41 24.3 -1.6**
baz=120
WVL Waterville 35.96 21 *e*P **P 17 41 26.7 +0.9**
comp=Z,418nm,1.1s
WVL LR LR
comp=Z,130μm,20.0s
TRQ Mont Tremblant 35.97 15 *e*P **P 17 41 25.1 -0.9**
MWC Mount Wilson 36.03 313 *e*P **P 17 41 28.0 +1.1**
comp=Z,138nm,0.9s
MWC LR LR
comp=Z,29μm,20.0s
MWC Mount Wilson 36.03 313 *e*P **P 17 41 28.0 +1.1**
MWC pmax pmax
comp=Z,139nm,0.9s
MWC MLR MLR
comp=Z,29μm,20.0s
D53A Lac Vacive, Po 36.09 11 *e*P **P 17 41 26.1 -0.9**
comp=Z,267nm,0.9s
D53A LR LR
comp=Z,89μm,21.0s
D53A Lac Vacive, Po 36.09 11 P **P 17 41 26.0 -0.9**
baz=195,SNR=157
PASC Pasadena Art C 36.10 313 *e*P **P 17 41 29.8 +2.6**
comp=Z,135nm,0.9s
PASC LR LR
comp=Z,32μm,20.0s
C40A Isle Royale Na 36.10 358 *e*P **P 17 41 25.2 -1.8**
comp=Z,405nm,0.6s
C40A LR LR
comp=Z,22μm,21.0s
C40A Isle Royale Na 36.10 358 P **P 17 41 25.6 -1.4**
baz=176,SNR=104
CTU Camp Tracy 36.12 327 *e*P **P 17 41 27.7 +0.2**
comp=Z,370nm,0.8s
DECC Green Verdugo 36.24 313 P **P 17 41 27.8 -0.7**
baz=121
TCUT Toone Canyon 36.24 328 *e*P **P 17 41 29.3 +0.7**
comp=Z,586nm,0.8s
EYMN Ely 36.28 355 *e*P **P 17 41 26.7 -1.9**
comp=Z,148nm,0.7s
EYMN LR LR
comp=Z,26μm,20.0s
EYMN Ely 36.28 355 P **P 17 41 27.1 -1.4**
baz=172,SNR=88
TPNV Topopah Spring 36.31 319 *e*P **P 17 41 30.2 +1.0**
comp=Z,267nm,0.9s
TPNV LR LR
comp=Z,56μm,21.0s
TPNV Topopah Spring 36.31 319 P **P 17 41 29.4 +0.2**
baz=126,SNR=313
EDW2 Edwards Air Fo 36.33 314 P **P 17 41 29.5 +0.3**
baz=122,SNR=127
DUG Dugway, Tooele 36.34 326 *e*P **P 17 41 29.9 +0.5**
comp=Z,249nm,0.9s
DUG LR LR
comp=Z,45μm,20.0s
DUG Dugway, Tooele 36.34 326 *e*P **P 17 41 29.9 +0.5**
DUG pmax pmax
comp=Z,249nm,0.9s
DUG MLR MLR
comp=Z,45μm,20.0s
DUG Dugway, Tooele 36.34 326 P **P 17 41 30.3 +1.0**
baz=134,SNR=446
D54A Lac Fusel, La 36.37 12 P **P 17 41 28.9 -0.4**
baz=197,SNR=156
FURC Furnace Creek, 36.43 318 P **P 17 41 31.3 +1.4**
baz=125,SNR=103
LRMC Laurel Mtn Rad 36.43 316 P **P 17 41 30.1 -0.1**
baz=123,SNR=36
BW06 Boulder Array 36.58 332 *e*P **P 17 41 30.8 -0.7**
BW06 LR LR
comp=Z,9μm,22.0s
BW06 Boulder Array 36.58 332 P **P 17 41 31.8 +0.3**
baz=141,SNR=502
PD31 Pinedale Array 36.58 332 *e*P **P 17 41 30.8 -0.7**
comp=Z,200nm,0.6s
PD31 *e*PcP **PcP 17 43 56.5 +2.2**
PD31 *e*ScP **ScP 17 47 41.1 +3.4**
PDAR Pinedale Array 36.58 332 P **P 17 41 31.3 -0.2**
comp=Z,292nm,0.8s,baz=133,slow=10,SNR=229
PDAR PcP **PcP 17 43 56.4 +2.2**
comp=Z,24nm,0.6s,baz=140,slow=4.7,SNR=5.1
PDAR S **S 17 47 14.3 +2.7**
comp=Z,2.1nm,0.9s,baz=54,slow=34,SNR=2.0
PDAR ScP **ScP 17 47 40.9 +3.1**
comp=Z,20nm,0.9s,baz=167,slow=4.4,SNR=10.0
PDAR LR LR 18 01 23.1
comp=Z,27μm,18.8s,baz=136,slow=44
SNCC San Nicolas Is 36.62 311 *e*P **P 17 41 34.0 +2.3**
comp=Z,164nm,1.1s
SNCC LR LR
comp=Z,29μm,20.0s

MPMC	Manual Prospec	36.62	317	P	P	17 41 32.0 +0.1
	baz=124,SNR=152					
HWUT	Hardware Ranch	36.68	329	eP	P	17 41 32.8 +0.5
	comp=Z,711nm,0.8s					
HWUT				LR	LR	
	comp=Z,8μm,21.0s					
PKME	Peaks-Kenny Pk	36.69	21	eP	P	17 41 32.2 +0.1
	comp=Z,343nm,0.8s					
PKME				LR	LR	
	comp=Z,123μm,20.0s					
PKME	Peaks-Kenny Pk	36.69	21	P	P	17 41 32.6 +0.5
	baz=210,SNR=88					
BLG	Laguna Peak, P	36.70	313	P	P	17 41 33.4 +1.1
	baz=120					
OSI	Osito Audit: C	36.70	314	PFAKE		17 41 40.0 +7.5
OSI				LR	LR	
	comp=Z,54μm,20.0s					
OSI	Osito Audit: C	36.70	314	P	P	17 41 33.3 +0.8
	baz=121					
R11A	Troy Canyon, C	36.74	321	eP	P	17 41 34.7 +1.8
	comp=Z,117nm,0.8s					
R11A				LR	LR	
	comp=Z,31μm,20.0s					
R11A	Troy Canyon, C	36.74	321	P	P	17 41 34.0 +1.2
	baz=128,SNR=301					
DAC	Darwin (Calif)	36.81	317	eP	P	17 41 36.9 +3.4
	comp=Z,59nm,0.9s					
DAC				LR	LR	
	comp=Z,64μm,20.0s					
DAC	Darwin (Calif)	36.81	317	eP	P	17 41 36.9 +3.4
DAC				pmax	pmax	
	comp=Z,59nm,0.9s					
DAC				MLR	MLR	
	comp=Z,64μm,20.0s					
PB01	IPOC Station P	36.87	152	eP	P	17 41 35.4 +1.4
	comp=Z,98nm,1.0s					
PB01				LR	LR	
	comp=Z,17μm,22.0s					
EMMW	East Machias	36.90	23	eP	P	17 41 34.2 +0.4
	comp=Z,200nm,1.1s					
EMMW				LR	LR	
	comp=Z,82μm,18.0s					
SPUT	South Promonto	36.92	327	eP	P	17 41 34.9 +0.5
	comp=Z,558nm,0.9s					
BGU	Big Grassy Mou	36.96	326	eP	P	17 41 35.3 +0.6
	comp=Z,379nm,1.0s					
ARVC	Arvin	37.04	314	P	P	17 41 36.8 +1.6
	baz=121					
SCZ2	Santa Cruz Isl	37.05	312	P	P	17 41 36.0 +0.6
	baz=119					
GRAC	Grapevine Rang	37.06	318	P	P	17 41 36.8 +1.4
	baz=125,SNR=34					
ISA	Isabella, Lake	37.07	315	eP	P	17 41 37.2 +1.6
	comp=Z,67nm,0.9s					
ISA				LR	LR	
	comp=Z,70μm,21.0s					
ISA	Isabella, Lake	37.07	315	eP	P	17 41 37.2 +1.6
ISA				pmax	pmax	
	comp=Z,67nm,0.9s					
ISA				MLR	MLR	
	comp=Z,70μm,21.0s					
ISA	Isabella, Lake	37.07	315	P	P	17 41 36.7 +1.1
	baz=122,SNR=61					
VLDQ	Val d'Or	37.13	11	eP	P	17 41 35.0 -0.8
	comp=Z,211nm,1.2s					
VLDQ				LR	LR	
	comp=Z,64μm,20.0s					
AGMN	Agassiz Nation	37.18	350	eP	P	17 41 34.1 -2.1
	comp=Z,1μm,1.4s					
AGMN				LR	LR	
	comp=Z,30μm,22.0s					
AGMN	Agassiz Nation	37.18	350	P	P	17 41 35.5 -0.7
	baz=166,SNR=305					
AHID	Auburn Hatcher	37.31	330	eP	P	17 41 37.2 -0.5
	comp=Z,462nm,0.7s					
AHID				LR	LR	
	comp=Z,6μm,20.0s					
HVU	Hansel Valley	37.43	328	eP	P	17 41 38.9 +0.2
	comp=Z,383nm,0.8s					
HVU	Hansel Valley	37.43	328	eP	P	17 41 38.9 +0.2
HVU				pmax	pmax	
	comp=Z,383nm,0.8s					
GGN	Saint George	37.48	24	eP	P	17 41 39.1 +0.3
	comp=Z,249nm,1.3s					
GGN				LR	LR	
	comp=Z,77μm,21.0s					
LATQ	La Tuque	37.50	16	P	P	17 41 38.2 -0.7
	baz=203,SNR=10					
MDND	Maddock	37.50	346	eP	P	17 41 38.1 -0.8
	comp=Z,3μm,0.8s					
MDND				LR	LR	
	comp=Z,50μm,21.0s					
MDND	Maddock	37.50	346	P	P	17 41 38.6 -0.3
	baz=159,SNR=113					
VES	Vestal, Richgr	37.59	315	P	P	17 41 39.8 -0.1
	baz=122,SNR=40					
PKM	Mcpherson Peak	37.62	313	P	P	17 41 40.8 +0.4
	baz=120					
TIN	Tinemaha, Big	37.67	317	P	P	17 41 41.5 +0.8
	baz=124,SNR=45					
SNOW	Snow King Moun	37.67	331	eP	P	17 41 41.1 +0.3
	comp=Z,1μm,0.7s					
SNOW				LR	LR	
	comp=Z,12μm,22.0s					
SIV	San Ignacio	37.68	136	P	P	17 41 40.4 -0.5
	comp=Z,407nm,0.8s,baz=322,slow=8.8,SNR=515					
SIV				PcP	PcP	17 43 58.9 +1.1
	comp=Z,80nm,0.6s,baz=310,slow=2.0,SNR=6.7					
SIV				S	S	17 47 31.3 +2.9
	comp=Z,5.0nm,0.9s,baz=161,slow=16,SNR=5.7					
SIV				ScP	ScP	17 47 47.0 +4.9
	comp=Z,13nm,0.7s,baz=293,slow=3.5,SNR=7.6					
LOHW	Long Hollow	37.72	332	eP	P	17 41 42.0 +0.8
	comp=Z,263nm,0.8s					
LOHW				LR	LR	
	comp=Z,5μm,21.0s					
TPAW	Teton Pass	37.79	331	eP	P	17 41 41.9 +0.1
	comp=Z,813nm,0.9s					
TPAW				LR	LR	
	comp=Z,15μm,22.0s					
MOOW	Moose Ponds	37.89	332	eP	P	17 41 43.0 +0.4
	comp=Z,441nm,0.8s					
MOOW				LR	LR	
	comp=Z,8μm,18.0s					
FXWY	Fox Creek	37.94	331	eP	P	17 41 43.4 +0.4
	comp=Z,269nm,1.0s					
SMMC	Simmler	37.96	314	P	P	17 41 44.6 +1.5
	baz=120,SNR=55					
ELK	Elko	38.07	324	eP	P	17 41 44.6 +0.4
	comp=Z,253nm,0.9s					
ELK				LR	LR	
	comp=Z,23μm,21.0s					
ELK	Elko	38.07	324	eP	P	17 41 44.6 +0.4
ELK				pmax	pmax	
	comp=Z,253nm,0.9s					
ELK				MLR	MLR	
	comp=Z,23μm,21.0s					
IMW	Indian Meadow	38.09	332	eP	P	17 41 43.9 -0.5
	comp=Z,254nm,0.6s					
IMW				LR	LR	
	comp=Z,20μm,22.0s					
FLWY	Flagg Ranch	38.12	332	eP	P	17 41 44.7 +0.2
	comp=Z,485nm,0.8s					
FLWY				LR	LR	
	comp=Z,46μm,22.0s					
H17A	Grant Village	38.31	333	eP	P	17 41 47.4 +1.2
	comp=Z,361nm,1.4s					
H17A				LR	LR	
	comp=Z,97μm,22.0s					
H17A	Grant Village	38.31	333	P	P	17 41 46.8 +0.7
	baz=141,SNR=30					
RLMT	Red Lodge	38.31	334	eP	P	17 41 45.9 -0.2
	comp=Z,266nm,0.7s					
RLMT				LR	LR	
	comp=Z,22μm,21.0s					
RLMT	Red Lodge	38.31	334	P	P	17 41 45.7 -0.4
	baz=143,SNR=287					
YPP	Pitchstone Pla	38.32	332	eP	P	17 41 46.9 +0.6
	comp=Z,258nm,1.2s					
CLDB	Colider	38.32	125	eP	P	17 41 44.3 -2.0
PAGB	Antelope Grade	38.35	314	eP	P	17 41 47.8 +1.5
	comp=Z,242nm,0.9s					
PAGB				LR	LR	
	comp=Z,66μm,20.0s					
PQI	Presque Isle	38.36	21	eP	P	17 41 46.1 0.0
	comp=Z,311nm,1.1s					
PQI				LR	LR	
	comp=Z,111μm,19.0s					
LKWY	Lake	38.36	333	eP	P	17 41 47.8 +1.2
LKWY				LR	LR	
	comp=Z,46μm,20.0s					
LKWY	Lake	38.36	333	eP	P	17 41 47.8 +1.2
LKWY				MLR	MLR	
	comp=Z,46μm,20.0s					
MLAC	Mammoth, Mammo	38.39	318	P	P	17 41 46.3 -0.6
	baz=124					
NV11	Mina Array Sit	38.40	319	eP	P	17 41 48.3 +1.5
	comp=Z,17nm,1.2s					
NV11				LR	LR	
	comp=Z,4μm,21.0s					
LAO	LASA Array	38.42	339	eP	P	17 41 46.8 0.0
	comp=Z,276nm,0.9s					
LAO				LR	LR	
	comp=Z,30μm,22.0s					
LAO	LASA Array	38.42	339	P	P	17 41 46.8 0.0
	baz=149,SNR=24					
YFT	Old Faithful	38.47	332	eP	P	17 41 49.0 +1.5
	comp=Z,272nm,0.8s					
OMMB	Old Mammoth Mi	38.49	318	eP	P	17 41 49.5 +1.7
	comp=Z,99nm,0.9s					
OMMB				LR	LR	
	comp=Z,40μm,22.0s					
LVC	Limon Verde	38.49	152	P	P	17 41 50.7 +2.7
	comp=Z,34nm,0.9s,baz=324,slow=4.9,SNR=18					
LVC				PcP	PcP	17 44 04.1 +3.6
	comp=Z,56nm,0.9s,baz=317,slow=2.6,SNR=4.8					
LVC	Limon Verde	38.49	152	eP	P	17 41 49.3 +1.3
	comp=Z,227nm,1.4s					
LVC	Limon Verde	38.49	152	eP	P	17 41 49.0 +1.0
NV01	Mina Array Sit	38.49	319	ePcP	PcP	17 44 02.0 +1.8
NV01				eScP	ScP	17 47 49.9 +4.9
NVAR	Mina Array Bea	38.49	319	P	P	17 41 49.2 +1.5
	comp=Z,174nm,1.0s,baz=128,slow=7.3,SNR=92					
NVAR				PcP	PcP	17 44 02.0 +1.8
	comp=Z,122nm,0.7s,baz=134,slow=2.8,SNR=14					
NVAR				ScP	ScP	17 47 49.9 +4.9
	comp=Z,9.8nm,0.7s,baz=129,slow=4.7,SNR=7.2					
NVAR				LR	LR	17 59 08.4
	comp=Z,45μm,21.2s,baz=136,slow=39					
NVAR				PKP2ab		18 15 56.6
	comp=Z,0.2nm,0.5s,baz=272,slow=5.5,SNR=3.7					
MDPB	Devils Postpil	38.55	317	eP	P	17 41 49.3 +1.1
	comp=Z,145nm,0.9s					
MDPB				LR	LR	
	comp=Z,37μm,22.0s					
PB10	IPOC Station P	38.58	155	eP	P	17 41 50.1 +1.9
	comp=Z,325nm,1.5s					
MATQ	Matagami	38.69	10	P	P	17 41 48.2 -0.7
	baz=195,SNR=202					
YMR	Madison River	38.70	332	eP	P	17 41 50.4 +1.0
	comp=Z,329nm,0.8s					
KVN	Kaiserville	38.73	320	eP	P	17 41 50.1 +0.5
	comp=Z,215nm,0.8s					
KVN				LR	LR	
	comp=Z,58μm,20.0s					
YHH	Holmes Hill	38.74	333	eP	P	17 41 50.3 +0.5
	comp=Z,226nm,0.9s					
RYN	Ryan	38.75	319	eP	P	17 41 50.9 +1.1
	comp=Z,145nm,1.0s					
RYN				LR	LR	
	comp=Z,45μm,21.0s					
YHB	Horse Butte	38.87	332	eP	P	17 41 51.8 +1.0
	comp=Z,262nm,0.7s					
LMN	Caledonia Moun	38.91	25	eP	P	17 41 50.7 -0.1
	comp=Z,305nm,0.8s					
LMN				LR	LR	
	comp=Z,43μm,21.0s					
BMN	Battle Mountai	39.02	322	eP	P	17 41 53.0 +0.9
	comp=Z,317nm,0.9s					
BMN				LR	LR	
	comp=Z,30μm,22.0s					
BMN	Battle Mountai	39.02	322	eP	P	17 41 53.0 +0.9
BMN				pmax	pmax	
	comp=Z,317nm,0.9s					
BMN				MLR	MLR	
	comp=Z,30μm,22.0s					
QLMT	Earthquake Lak	39.03	332	eP	P	17 41 53.3 +1.1
ULM	Lac du Bonnet	39.08	351	P	P	17 41 49.9 -2.2
	comp=Z,398nm,0.6s,baz=170,slow=8.5,SNR=100					
ULM				LR	LR	18 00 07.2
	comp=Z,26μm,20.4s,baz=164,slow=40					
ULM	Lac du Bonnet	39.08	351	eP	P	17 41 49.6 -2.6
	comp=Z,492nm,0.6s					
ULM				LR	LR	
	comp=Z,27μm,20.0s					
WAKR	Walker	39.27	318	eP	P	17 41 55.8 +1.6
	comp=Z,198nm,1.2s					
WAKR				eS	S	17 47 54.6 +2.3
WAKR				LR	LR	
	comp=Z,52μm,21.0s					
DGMT	Dagmar	39.31	342	eP	P	17 41 53.5 -0.7
	comp=Z,870nm,0.8s					
DGMT				eScP	S	17 47 51.3 -1.0
DGMT				LR	LR	
	comp=Z,55μm,22.0s					
DGMT	Dagmar	39.31	342	P	P	17 41 53.8 -0.4
	baz=153,SNR=99					
YERR	Yerington	39.41	319	eP	P	17 41 56.5 +1.1
	comp=Z,135nm,0.9s					
YERR				eS	S	17 47 54.5 0.0
YERR				LR	LR	
	comp=Z,36μm,19.0s					
CHGQ	Chibougamau	39.47	13	P	P	17 41 54.7 -0.7
	baz=200,SNR=52					
HLID	Hailey	39.55	328	eP	P	17 41 56.1 -0.3
	comp=Z,220nm,0.8s					
HLID				LR	LR	
	comp=Z,43μm,20.0s					
HLID	Hailey	39.55	328	P	P	17 41 56.8 +0.4
	baz=135,SNR=503					
BATG	Bathurst New B	39.58	23	eP	P	17 41 56.4 0.0
	comp=Z,408nm,1.2s					
BATG				LR	LR	
	comp=Z,88μm,20.0s					
CMB	Columbia Colle	39.64	317	eP	P	17 41 58.3 +1.2
	comp=Z,70nm,0.9s					
CMB				eScP	S	17 47 54.1 -3.4
CMB				LR	LR	
	comp=Z,38μm,20.0s					
CMB	Columbia Colle	39.64	317	eP	P	17 41 58.3 +1.2
CMB				e		17 47 54.2
CMB				pmax	pmax	
	comp=Z,71nm,0.9s					
CMB				MLR	MLR	
	comp=Z,38μm,20.0s					
MCMT	McKenzie Canyo	39.69	331	eP	P	17 41 58.1 +0.4
PNTR	Pine Nut	39.70	319	eP	P	17 41 59.5 +1.7
	comp=Z,171nm,0.7s					
PNTR				eScP	S	17 47 55.3 -3.6
PNTR				LR	LR	
	comp=Z,40μm,21.0s					
SAO	San Andreas Ge	39.70	315	eP	P	17 41 58.8 +1.2
	comp=Z,57nm,0.8s					
SAO				LR	LR	
	comp=Z,63μm,20.0s					
BOZ	Bozeman (W)	39.71	333	eP	P	17 41 58.3 +0.6
	comp=Z,252nm,0.7s					
BOZ				LR	LR	
	comp=Z,28μm,21.0s					
BOZ	Bozeman (W)	39.71	333	eP	P	17 41 58.3 +0.6
BOZ				pmax	pmax	
	comp=Z,252nm,0.7s					
BOZ				MLR	MLR	
	comp=Z,28μm,21.0s					
BOZ	Bozeman (W)	39.71	333	P	P	17 41 58.5 +0.8
	baz=140,SNR=500					
VCNR	Virginia City	39.85	319	eP	P	17 41 59.6 +0.6
	comp=Z,110nm,0.9s					
VCNR				LR	LR	
	comp=Z,28μm,21.0s					
PAHR	Pah Rah Range	39.92	320	eP	P	17 42 00.8 +1.2
	comp=Z,167nm,1.3s					
PAHR				eS	S	17 47 55.9 -6.1
PAHR				LR	LR	
	comp=Z,28μm,19.0s					
DLMT	Dillon	39.98	332	eP	P	17 42 00.2 +0.3
	comp=Z,342nm,0.8s					
DLMT				LR	LR	
	comp=Z,44μm,22.0s					
GBN	Guysborough	40.00	28	eP	P	17 41 60.0 +0.1
	comp=Z,202nm,1.0s					
RUBR	Rubicon Trail	40.04	319	PFAKE		17 42 10.0 +9.4
RUBR				LR	LR	
	comp=Z,56μm,20.0s					
GO02	Mina Guanaco	40.44	155	eP	P	17 42 05.0 +0.9
	comp=Z,232nm,1.0s					
AFDM	Forest Hills D	40.51	318	eP	P	17 42 06.1 +1.8
	comp=Z,44nm,1.0s					
AFDM				LR	LR	
	comp=Z,30μm,20.0s					
BEKR	Beckworth	40.62	320	eP	P	17 42 06.9 +1.5
	comp=Z,125nm,0.8s					
BEKR				LR	LR	
	comp=Z,46μm,21.0s					
HRY	Holter Researc	40.66	334	eP	P	17 42 05.3 -0.3
EGMT	Eagleton	40.86	337	PFAKE		17 42 20.0 +13
EGMT				LR	LR	
	comp=Z,35μm,22.0s					
EGMT	Eagleton	40.86	337	P	P	17 42 07.5 +0.4
	baz=145,SNR=89					
WVOR	Wild Horse Val	41.10	324	eP	P	17 42 08.8 -0.5
	comp=Z,454nm,0.9s					
WVOR				LR	LR	
	comp=Z,21μm,20.0s					
WVOR	Wild Horse Val	41.10	324	eP	P	17 42 08.8 -0.5
WVOR				pmax	pmax	
	comp=Z,454nm,0.9s					
WVOR				MLR	MLR	
	comp=Z,21μm,20.0s					
ORV	Oroville	41.19	318	eP	P	17 42 11.6 +1.7
	comp=Z,92nm,0.8s					
ORV				LR	LR	
	comp=Z,33μm,19.0s					
ORV	Oroville	41.19	318	eP	P	17 42 11.6 +1.7
ORV				pmax	pmax	
	comp=Z,92nm,0.8s					
ORV				MLR	MLR	
	comp=Z,33μm,19.0s					
MCCM	Marconi Confer	41.38	316	PFAKE		17 42 20.0 +8.6
MCCM				LR	LR	
	comp=Z,46μm,22.0s					
PLID	Pearl Lake	41.43	329	eP	P	17 42 11.5 -0.6
	comp=Z,362nm,0.8s					
PLID				LR	LR	
	comp=Z,44μm,21.0s					
J08A	Circle Bar Ran	41.60	325	eP	P	17 42 13.9 +0.7
	comp=Z,221nm,0.9s					
J08A				LR	LR	
	comp=Z,23μm,21.0s					
GDXM	Geysers	41.65	317	PFAKE		17 42 30.0 +16
GDXM				LR	LR	
	comp=Z,58μm,21.0s					
MSO	Missoula	41.69	332	eP	P	17 42 13.6 -0.4
	comp=Z,257nm,0.9s					
MSO				LR	LR	
	comp=Z,30μm,21.0s					
MSO	Missoula	41.69	332	P	P	17 42 14.2 +0.1
	baz=138,SNR=128					
MOD	Modoc Plateau	41.77	322	eP	P	17 42 14.5 -0.2
	comp=Z,235nm,1.4s					
MOD				LR	LR	
	comp=Z,63μm,21.0s					
O03E	Paynes Creek	41.78	319	P	P	17 42 14.9 +0.1
	baz=123,SNR=74					
HOPS	Hopland Field	41.93	317	PFAKE		17 42 30.0 +14
HOPS				LR	LR	
	comp=Z,48μm,22.0s					
BMO	Blue Mountains	41.94	328	eP	P	17 42 14.7 -1.4
	comp=Z,272nm,0.8s					
BMO				LR	LR	
	comp=Z,39μm,22.0s					
BMO	Blue Mountains	41.94	328	eP	P	17 42 14.7 -1.4
BMO				pmax	pmax	
	comp=Z,273nm,0.8s					
BMO				MLR	MLR	
	comp=Z,39μm,22.0s					
O02D	Mt. Diablo Mer	42.36	318	P	P	17 42 18.6 -0.9
	baz=122,SNR=32					
GO03	Copiap	42.36	158	eP	P	17 42 20.7 +1.1
	comp=Z,99nm,0.9s					
GO03				ePcP	PcP	17 44 15.2 +2.7
WDC	Whiskeytown Da	42.41	319	eP	P	17 42 19.4 -0.4
	comp=Z,39nm,1.1s					
WDC				ePcP	PcP	17 44 13.4 +1.0
WDC				LR	LR	
	comp=Z,22μm,20.0s					
WDC	Whiskeytown Da	42.41	319	eP	P	17 42 19.4 -0.4
WDC				e		17 44 13.5
WDC				pmax	pmax	
	comp=Z,39nm,1.1s					
WDC				MLR	MLR	
	comp=Z,22μm,20.0s					
K05A	Summer Lake	42.60	323	eP	P	17 42 22.0 +0.4
	comp=Z,96nm,1.1s					
K05A				ePcP	PcP	17 44 14.6 +1.2
K05A				LR	LR	
	comp=Z,60μm,21.0s					
KCPM	Cahto Peak	42.62	317	eP	P	17 42 23.3 +1.6
	comp=Z,161nm,1.0s					
KCPM				ePcP	PcP	17 44 13.7 +0.3
KCPM				LR	LR	
	comp=Z,45μm,22.0s					
M04C	Macdoel	42.63	321	P	P	17 42 22.0 +0.2
	baz=124,SNR=60					
I07A	Izee	42.63	325	eP	P	17 42 21.4 -0.3
	comp=Z,148nm,0.8s					
I07A				LR	LR	
	comp=Z,22μm,21.0s					
F10A	Beach Ranch, E	42.67	329	eP	P	17 42 21.1 -0.8
	comp=Z,430nm,0.8s					
F10A				LR	LR	
	comp=Z,36μm,21.0s					
N02D	Trinity Center	42.73	319	P	P	17 42 21.7 -0.8
	baz=123,SNR=12					
KMRM	Mail Ridge	42.98	318	eP	P	17 42 26.2 +1.6
	comp=Z,198nm,0.9s					
KMRM				LR	LR	
	comp=Z,36μm,21.0s					
M02C	Callahan	43.05	320	P	P	17 42 24.9 -0.2
	baz=123,SNR=19					
K04D	Chiloquin, OR	43.06	322	P	P	17 42 25.0 -0.2
	baz=125					
G08A	Pilot Rock	43.11	327	eP	P	17 42 26.0 +0.4
	comp=Z,97nm,0.9s					
G08A				LR	LR	
	comp=Z,29μm,22.0s					
J05D	Fort Rock, OR	43.14	323	P	P	17 42 25.6 -0.2
	baz=126,SNR=61					
YBH	Yreka Blue Hor	43.15	320	eP	P	17 42 25.9 0.0
	comp=Z,46nm,1.1s					
YBH				LR	LR	
	comp=Z,36μm,21.0s					
YBH	Yreka Blue Hor	43.15	320	eP	P	17 42 25.9 0.0
YBH				pmax	pmax	
	comp=Z,46nm,1.1s					
YBH				MLR	MLR	
	comp=Z,36μm,21.0s					
L04D	Klamath Falls	43.16	321	P	P	17 42 26.1 0.0
	baz=124,SNR=128					
PINE	Pine Mountain	43.27	324	eP	P	17 42 27.3 +0.3
	comp=Z,169nm,0.9s					
PINE				ePcP	PcP	17 44 17.6 +2.0
PINE				LR	LR	
	comp=Z,34μm,20.0s					
KHMM	Horse Mountain	43.33	319	eP	P	17 42 28.6 +1.2
	comp=Z,127nm,0.8s					
KHMM				ePcP	PcP	17 44 18.1 +2.3
KHMM				LR	LR	
	comp=Z,36μm,20.0s					
WALA	Waterton Lakes	43.37	334	eP	P	17 42 27.3 -0.3
	comp=Z,182nm,0.9s					
WALA				LR	LR	
	comp=Z,42μm,22.0s					
LCO	Las Campanas	43.48	159	eP	P	17 42 29.4 +0.5
	comp=Z,212nm,1.2s					
LCO	Las Campanas	43.48	159	eP	P	17 42 29.4 +0.5
LCO				pmax	pmax	
	comp=Z,212nm,1.2s					
LCO	Las Campanas	43.48	159	eP	P	17 42 28.4 -0.4
JCC	Jacoby Creek,	43.50	318	eP	P	17 42 31.2 +2.6
	comp=Z,218nm,1.0s					
JCC				ePcP	PcP	17 44 21.5 +5.5
JCC				LR	LR	
	comp=Z,30μm,21.0s					
E09A	Wood Farm, Sta	43.50	329	eP	P	17 42 28.7 +0.2
	comp=Z,345nm,0.9s					
E09A				LR	LR	
	comp=Z,34μm,21.0s					
J04D	Umpqua Nationa	43.63	323	P	P	17 42 29.7 -0.2
	baz=125,SNR=82					
HUMO	Hull Mountain	43.78	321	eP	P	17 42 32.2 +1.3
	comp=Z,28nm,1.0s					

HUMO *e*PcP **PcP** **17 44 17.9 +0.9**
HUMO LR LR
comp=Z,34µm,22.0s
KRMB Red Mountain 43.79 319 *e*P **P** **17 42 33.2 +2.1**
comp=Z,358nm,1.9s
KRMB *e*PcP **PcP** **17 44 18.0 +0.7**
KRMB LR LR
comp=Z,28µm,19.0s
I05D Terrebonne, OR 43.83 324 P **P** **17 42 31.5 +0.2**
baz=127,SNR=56
L02E Cave Junction 43.94 320 P **P** **17 42 31.7 -0.5**
baz=123,SNR=9.7
E08A Dider Farm, El 43.95 328 *e*P **P** **17 42 32.2 0.0**
comp=Z,240nm,0.9s
E08A *e*PcP **PcP** **17 44 17.2 -0.3**
E08A LR LR
comp=Z,21µm,22.0s
G06A Carlson Farm, 43.98 326 *e*P **P** **17 42 33.0 +0.5**
comp=Z,253nm,1.4s
G06A *e*PcP **PcP** **17 44 17.0 -0.8**
G06A LR LR
comp=Z,36µm,22.0s
F07A Phinny Hill Vi 44.02 327 *e*P **P** **17 42 32.6 -0.1**
comp=Z,132nm,0.8s
F07A LR LR
comp=Z,22µm,22.0s
I04A Tendick Farm, 44.13 323 P **P** **17 42 33.4 -0.3**
baz=125,SNR=99
HAWA Hanford 44.13 328 *e*P **P** **17 42 33.1 -0.5**
comp=Z,352nm,0.8s
HAWA *e*PcP **PcP** **17 44 20.0 +1.9**
HAWA LR LR
comp=Z,41µm,22.0s
NEW Newport 44.22 331 P **P** **17 42 33.7 -0.6**
comp=Z,65nm,0.6s,baz=146,slow=8.8,SNR=52
NEW Newport 44.22 331 *e*P **P** **17 42 33.4 -1.0**
comp=Z,110nm,0.8s
NEW *e*PP **PcP** **17 44 18.4 -0.1**
NEW LR LR
comp=Z,28µm,20.0s
NEW Newport 44.22 331 P **P** **17 42 33.9 -0.4**
baz=135,SNR=157
SMTB Santa Maria do 44.25 116 *e*P **P** **17 42 33.3 -1.7**
D08A Wollman Farm, 44.26 329 *e*P **P** **17 42 34.3 -0.4**
comp=Z,619nm,0.8s
D08A LR LR
comp=Z,34µm,22.0s
K02D Willamette Mer 44.27 321 P **P** **17 42 34.7 -0.2**
baz=123,SNR=17
RPN Rapa Nui 44.28 209 PFAKE 17 42 50.0 +15
RPN LR LR
comp=Z,39µm,22.0s
G05D Wamic, OR 44.37 325 P **P** **17 42 36.0 +0.4**
baz=128,SNR=88
C09A Chrisman Ranch 44.45 330 *e*P **P** **17 42 35.6 -0.5**
comp=Z,396nm,0.8s
C09A *e*PcP **PcP** **17 44 18.9 -0.3**
C09A LR LR
comp=Z,40µm,20.0s
AQDB Aquidauana 44.45 136 *e*P **P** **17 42 35.1 -1.3**
FFC Flin Flon 44.47 348 *e*P **P** **17 42 34.9 -1.3**
comp=Z,4µm,0.8s
FFC LR LR
comp=Z,48µm,22.0s
FFC Flin Flon 44.47 348 *i* P **P** **17 42 35.4 -0.8**
GO04 Tololo Observa 44.51 160 *e*P **P** **17 42 37.6 +0.5**
comp=Z,821nm,1.9s
GO04 *e*PcP **PP** **17 44 21.7 +0.1**
GO04 LR LR
comp=Z,8µm,20.0s
H04A Detroit Lake 44.52 324 *e*P **P** **17 42 36.8 0.0**
comp=Z,254nm,0.8s
H04A *e*PcP **PP** **17 44 20.7 -0.5**
H04A LR LR
comp=Z,39µm,20.0s
I03D Drain, OR 44.63 322 P **P** **17 42 39.4 +1.8**
baz=124,SNR=54
DRLN Deer Lake 44.68 27 *e*P **P** **17 42 36.8 -1.2**
comp=Z,241nm,1.0s
DRLN LR LR
comp=Z,42µm,19.0s
J01E Myrtle Point 44.69 321 P **P** **17 42 38.6 +0.5**
baz=123,SNR=47
H04D Lebanon 44.74 324 P **P** **17 42 39.4 +0.9**
baz=126,SNR=32
KEBM Edson Butte 44.78 321 *e*P **P** **17 42 39.4 +0.5**
comp=Z,350nm,1.0s
KEBM LR LR
comp=Z,44µm,19.0s
F05D White Salmon 44.84 326 P **P** **17 42 40.3 +1.0**
baz=128,SNR=111
COR Corvallis 45.11 323 *e*P **P** **17 42 41.0 -0.4**
COR *e*PcP **PcP** **17 44 24.1 +2.5**
COR LR LR
comp=Z,26µm,20.0s
COR Corvallis 45.11 323 *e*P **P** **17 42 41.0 -0.4**
COR *e* 17 44 24.1
COR MLR MLR
comp=Z,26µm,20.0s
I02D Swisshome 45.16 323 P **P** **17 42 42.8 +1.0**
baz=124,SNR=32
PEXB Peixe 45.18 120 *e*P **P** **17 42 40.9 -1.4**
LTY Liberty 45.29 328 *e*P **P** **17 42 42.8 -0.2**
comp=Z,392nm,1.2s
LTY *e*PcP **PcP** **17 44 23.8 +1.6**
C2SB Chapadao do Su 45.35 132 *e*P **P** **17 42 43.2 -0.5**
G03D McMinnville, O 45.45 324 P **P** **17 42 44.7 +0.5**
baz=126,SNR=49
LON Longmire 45.57 327 *e*P **P** **17 42 45.3 +0.2**
comp=Z,151nm,0.8s
LON *e*PcP **PcP** **17 44 23.6 +0.4**
LON LR LR
comp=Z,17µm,22.0s
LON Longmire 45.57 327 *e*P **P** **17 42 45.3 +0.2**
LON *e* 17 44 23.6
LON pmax pmax
comp=Z,151nm,0.8s
LON MLR MLR
comp=Z,17µm,22.0s
F04D Rainier, OR 45.82 325 P **P** **17 42 47.4 +0.3**
baz=127,SNR=58
C06D Leavenworth 45.84 329 P **P** **17 42 47.8 +0.6**
baz=130,SNR=37
SCHQ Schefferville 45.84 16 P **P** **17 42 45.7 -1.4**
comp=Z,109nm,0.5s,baz=217,slow=6.3,SNR=37
SCHQ LR LR 18 02 07.5
comp=Z,104µm,21.5s,baz=211,slow=37
SCHQ Schefferville 45.84 16 *e*P **P** **17 42 45.3 -1.8**
comp=Z,265nm,0.9s
SCHQ LR LR
comp=Z,109µm,22.0s
E04D Cinebar 45.86 326 P **P** **17 42 47.4 0.0**
baz=128,SNR=45
D05A Enumclaw 45.94 327 *e*P **P** **17 42 48.1 +0.1**
comp=Z,320nm,0.9s
D05A *e*PcP **PcP** **17 44 25.4 +1.0**
D05A LR LR
comp=Z,39µm,22.0s
F03A Seaside 46.04 325 *e*P **P** **17 42 49.4 +0.6**
comp=Z,593nm,0.9s
F03A *e*PcP **PcP** **17 44 26.0 +1.2**
F03A LR LR
comp=Z,41µm,21.0s
D04E Lakebay 46.35 327 P **P** **17 42 51.1 -0.1**
baz=128,SNR=15
B06A Marblemount 46.52 329 *e*P **P** **17 42 51.9 -0.7**
comp=Z,659nm,0.8s
B06A LR LR
comp=Z,23µm,21.0s
B05A Bryant 46.67 328 P **P** **17 42 53.1 -0.6**
baz=129,SNR=110
D03D Eldon 46.74 327 P **P** **17 42 53.9 -0.3**
baz=128,SNR=138
ROC1 El Roble 47.03 162 *e*P **P** **17 42 56.2 -0.7**
NLWA Neilton Lookou 47.08 326 *e*P **P** **17 42 57.0 +0.1**
comp=Z,245nm,0.9s
NLWA *e*PcP **PcP** **17 44 29.9 +1.4**
NLWA LR LR
comp=Z,58µm,22.0s
FCC Fort Churchill 47.23 355 *e*P **P** **17 42 55.9 -1.9**
comp=Z,226nm,0.8s
FCC LR LR
comp=Z,24µm,20.0s
FCC Fort Churchill 47.23 355 *e*P **P** **17 42 55.9 -1.9**
FCC pmax pmax
comp=Z,226nm,0.8s
FCC MLR MLR
comp=Z,24µm,20.0s
BDFB Brasilia 47.25 124 P **P** **17 42 57.1 -1.7**
comp=Z,45nm,0.8s,baz=285,slow=8.2,SNR=34
BDFB ScP **ScP** **17 48 25.5 +5.0**
comp=Z,9.0nm,0.8s,baz=323,slow=5.1,SNR=3.7
BDFB LR LR 18 04 22.8
comp=Z,38µm,20.3s,baz=307,slow=38
BDFB Brasilia 47.25 124 *e*P **P** **17 42 56.0 -2.8**
comp=Z,71nm,1.0s
BDFB LR LR
comp=Z,38µm,20.0s
A04D Lummi Island 47.28 328 P **P** **17 42 58.1 -0.3**
baz=129,SNR=40
PEL Peldehue 47.28 161 *e*P **P** **17 42 57.4 -1.3**
comp=Z,273nm,1.3s
PEL Peldehue 47.28 161 *e*P **P** **17 42 57.4 -1.3**
PEL pmax pmax
comp=Z,273nm,1.3s
CPUP Villa Florida 47.62 143 P **P** **17 43 00.7 -0.6**
comp=Z,46nm,0.7s,baz=334,slow=8.1,SNR=39
CPUP ScP **ScP** **17 48 26.6 +5.0**
comp=Z,17nm,1.1s,baz=328,slow=7.2,SNR=4.1
CPUP LR LR 18 04 45.4
comp=Z,6µm,20.6s,baz=320,slow=38
CPUP Villa Florida 47.62 143 *e*P **P** **17 43 01.1 -0.2**
PGC Sidney 47.62 328 *e*P **P** **17 43 00.4 -0.6**
comp=Z,143nm,0.9s
PGC *e*PcP **PcP** **17 44 32.2 +1.9**
PGC LR LR
comp=Z,18µm,20.0s
ITRB Iturama 47.77 131 *e*P **P** **17 43 01.4 -1.3**
LLLB Lillooet 48.09 331 *e*P **P** **17 43 04.1 -0.6**
comp=Z,321nm,0.8s
LLLB LR LR
comp=Z,20µm,22.0s
GO05 Huala 48.65 163 *e*P **P** **17 43 08.9 -0.3**
comp=Z,240nm,1.1s
GO05 *e*PcP **PcP** **17 44 33.6 -0.5**
NBMO Morrinhos-CE 49.07 105 *e*P **P** **17 43 11.2 -1.6**
PTGB Pitanga 49.78 137 *e*P **P** **17 43 16.3 -1.9**
BB19B Bebedouro 49.95 131 *e*P **P** **17 43 16.7 -2.7**
BB19B *i* 17 43 21.7
BB19B *i* 17 43 34.0
BB19B *i* 17 44 41.9
BB19B *i* 17 45 16.2
BB19B *i* 17 46 06.5
BB19B *i* 17 54 42.8
BB19B Bebedouro 49.95 131 *e*P **P** **17 43 18.7 -0.7**
PMNB Patos De Minas 50.10 126 *e*P **P** **17 43 20.2 -0.4**
FRTB Fartura 50.61 134 *e*P **P** **17 43 23.6 -0.7**
MCI8 Montes Claros 51.13 123 *e*P **P** **17 43 25.9 -2.5**
MCI9 Montes Claros 51.17 123 *e*P **P** **17 43 26.2 -2.5**
MCI6 Montes Claros 51.23 123 *e*P **P** **17 43 27.3 -1.8**
ITAB Concordia 51.47 139 *e*P **P** **17 43 29.2 -1.5**
RCLB Rio Claro- Sao 51.51 131 *e*P **P** **17 43 30.4 -0.7**
BBB Bella Bella 52.13 329 *e*P **P** **17 43 35.8 +0.6**
comp=Z,106nm,0.8s
BBB LR LR
comp=Z,35µm,21.0s
TIJ01 Guaruva-PR 52.26 135 *e*P **P** **17 43 35.9 -0.9**
SPB Sao Paulo 52.29 132 *e*P **P** **17 43 35.1 -1.8**
comp=Z,293nm,2.0s
SPB Sao Paulo 52.29 132 *e*P **P** **17 43 35.1 -1.8**
NBPA Parau_RN 52.62 107 *e*P **P** **17 43 37.3 -2.2**
BSCB Bom Sucesso 52.76 128 *i* **P** **17 43 40.2 -0.3**
BSCB *i* 17 43 51.3
BSCB *i* 17 44 01.5
BSCB *i* 17 44 14.1
BSCB *i* 17 44 22.7
BSCB Bom Sucesso 52.76 128 *e*P **P** **17 43 39.2 -1.3**
FRB Frobisher Bay 53.55 10 P **P** **17 43 43.3 -2.2**
comp=Z,92nm,0.6s,baz=208,slow=8.6,SNR=47
CNLB Canela 53.72 140 *e*P **P** **17 43 47.0 -0.4**
RCBR Riachuelo 53.78 106 *e*P **P** **17 43 45.0 -3.0**
comp=Z,62nm,0.9s
RCBR LR LR
comp=Z,49µm,21.0s
RCBR Riachuelo 53.78 106 *e*P **P** **17 43 45.1 -3.0**
RCBR pmax pmax
comp=Z,62nm,0.9s
RCBR MLR MLR
comp=Z,49µm,21.0s
RCBR Riachuelo 53.78 106 *e*P **P** **17 43 46.0 -2.1**
ESAR Angra dos Reis 54.16 130 *e*P **P** **17 43 50.8 +0.2**
YKA Yellowknife Ar 54.40 345 P **P** **17 43 50.0 -1.7**
comp=Z,233nm,0.8s,baz=138,slow=7.5,SNR=248
YKA PcP **PcP** **17 44 55.3 +0.3**
comp=Z,22nm,0.5s,baz=145,slow=4.1,SNR=13
YKA ScP **ScP** **17 48 52.0 +1.7**
comp=Z,6.8nm,0.9s,baz=150,slow=4.7,SNR=3.9
YKA LR LR 18 09 25.8
comp=Z,3µm,21.0s,baz=150,slow=39
YKA PKPPKP P'P'df 18 13 54.8 -12
comp=Z,1.3nm,0.8s,baz=358,slow=2.0,SNR=4.0
PLCA Paso Flores 54.40 165 P **P** **17 43 53.1 +1.0**
comp=Z,25nm,0.9s,baz=3.2,slow=9.2,SNR=13
PLCA LR LR 18 01 40.5
comp=Z,7µm,21.4s,baz=35,slow=30
PLCA Paso Flores 54.40 165 *e*P **P** **17 43 52.9 +0.8**
comp=Z,288nm,1.3s
PLCA Paso Flores 54.40 165 *e*P **P** **17 43 52.3 +0.2**
SJMB Sao Joao De Ma 54.41 123 *e*P **P** **17 43 50.0 -2.6**
YKW3 Yellowknife Ar 54.45 345 *e*P **P** **17 43 50.8 -1.4**
comp=Z,337nm,0.9s
YKW3 *e*PcP **PcP** **17 44 58.1 +2.9**
YKW3 LR LR
comp=Z,31µm,21.0s
TRQA Tornquist 54.82 156 *e*P **P** **17 43 54.4 -0.8**
comp=Z,680nm,2.0s
TRQA Tornquist 54.82 156 *e*P **P** **17 43 54.4 -0.8**
TRQA pmax pmax
comp=Z,680nm,2.0s
TRQA Tornquist 54.82 156 *e*P **P** **17 43 55.2 0.0**
DIB Dawson Inlet, 54.90 328 *e*P **P** **17 43 55.6 +0.1**
comp=Z,179nm,0.8s
DIB LR LR
comp=Z,30µm,21.0s
OGAUY Aigu 55.16 147 *e*P **P** **17 43 58.5 +0.8**
DUB01 Friburgo-RJ 55.22 127 *e*P **P** **17 43 58.6 +0.2**
RIB01 Linhares ES 55.36 123 *e*P **P** **17 43 59.0 -0.3**
CAM01 Campos-RJ 55.64 127 *e*P **P** **17 43 59.6 -1.7**
PTCN Pitcairn Islan 55.68 229 PFAKE 17 44 10.0 +8.4
PTCN LR LR
comp=Z,7µm,18.0s
ALF01 Guarapari-ES 55.75 125 *e*P **P** **17 44 00.5 -1.7**
GO07 Milladeo Hill, 55.95 168 *e*P **P** **17 44 03.5 +0.4**
comp=Z,1µm,1.8s
GO07 LR LR
comp=Z,24µm,22.0s
CRAG Craig 56.42 331 *e*P **P** **17 44 06.5 +0.1**
comp=Z,129nm,0.9s
CRAG LR LR
comp=Z,20µm,20.0s
WRAK Wrangell Islan 56.57 332 *e*P **P** **17 44 07.6 +0.1**
comp=Z,68nm,0.8s
WRAK LR LR
comp=Z,24µm,22.0s
TAOE Nuku Hiva Isla 56.62 251 *e*T **T** 18 44 50.7
comp=Z,107nm,0.2s
TAOE Nuku Hiva Isla 56.62 251 PFAKE 17 44 20.0 +11
TAOE LR LR
comp=Z,24µm,19.0s
DLBC Dease Lake 56.71 335 *e*P **P** **17 44 08.4 -0.1**
comp=Z,249nm,0.9s
DLBC LR LR
comp=Z,39µm,20.0s
IVI Ivigtut 56.90 21 *e*P **P** **17 44 07.4 -2.3**
comp=Z,188nm,1.5s
IVI LR LR
comp=Z,51µm,19.0s
NRS Narsarsuaq 57.87 22 *e*P **P** **17 44 14.5 -2.1**
comp=Z,50nm,0.8s
NRS LR LR
comp=Z,43µm,19.0s
NRS Narsarsuaq 57.87 22 *e*P **P** **17 44 14.5 -2.1**
NRS pmax pmax
comp=Z,50nm,0.8s
NRS MLR MLR
comp=Z,43µm,19.0s
NRS Narsarsuaq 57.87 22 *i* P **P** **17 44 14.2 -2.4**
comp=Z,43µm,19.0s
SIT Sitka 58.30 331 *e*P **P** **17 44 18.4 -1.2**
comp=Z,50nm,1.0s
SIT LR LR
comp=Z,30µm,22.0s
SIT Sitka 58.30 331 *e*P **P** **17 44 18.4 -1.2**
SIT pmax pmax
comp=Z,50nm,1.0s
SIT MLR MLR
comp=Z,30µm,22.0s
RKT Rikitea 58.32 233 *e*P P 17 44 26.6 +6.3
comp=Z,156nm,1.1s
RKT *e*S **S** **17 52 20.6 +0.5**
comp=Z,42µm,29.0s
RKT *e*LQ LQ 17 58 57.9
comp=Z,20µm,34.8s
RKT *e*LR LR 18 01 24.7
comp=Z,32µm,26.0s
ROSA Rosais 58.48 52 PFAKE 17 44 30.0 +8.7
ROSA LR LR
comp=Z,28µm,22.0s
JIS Juneau Island 58.51 333 *e*P **P** **17 44 20.5 -0.5**
comp=Z,88nm,1.0s
JIS LR LR
comp=Z,36µm,20.0s
BESE Bessie Mountai 58.88 333 *e*P **P** **17 44 22.9 -0.9**
comp=Z,89nm,0.8s
BESE LR LR
comp=Z,43µm,20.0s
SKAG Skagway 59.56 334 *e*P **P** **17 44 27.8 -0.5**
comp=Z,58nm,0.9s
SKAG LR LR
comp=Z,23µm,21.0s
WHY Whitehorse 60.02 335 *e*P **P** **17 44 30.5 -1.1**
comp=Z,61nm,0.9s
WHY LR LR
comp=Z,31µm,21.0s
SFJD Kangerlussuaq 60.29 16 P **P** **17 44 31.2 -2.0**
comp=Z,24nm,0.8s,baz=227,slow=8.1,SNR=15
SFJD LR LR 18 10 06.7
comp=Z,66µm,21.8s,baz=220,slow=36
SFJD Kangerlussuaq 60.29 16 *e*P **P** **17 44 31.1 -2.0**
comp=Z,74nm,1.2s
SFJD LR LR
comp=Z,62µm,21.0s
SFJD Kangerlussuaq 60.29 16⇑ *i*P **P** **17 44 30.3 -2.9**
SFJD MLR MLR
comp=Z,61µm,24.0s
SFJD Kangerlussuaq 60.29 16⇑ *i*P **P** **17 44 30.3 -2.9**
comp=Z,61µm,24.0s
CMLA Cha da Macela 60.44 53 PFAKE 17 44 50.0 +15
CMLA LR LR
comp=Z,38µm,22.0s
HYT Haines Junctio 61.20 334 *e*P **P** **17 44 39.3 -0.5**
comp=Z,93nm,1.0s
HYT LR LR
comp=Z,42µm,22.0s
YKU2 Yakutat 61.51 333 PFAKE 17 44 50.0 +8.4
YKU2 LR LR
comp=Z,37µm,21.0s
BCPM Bancas Point 61.70 333 *e*P **P** **17 44 42.9 0.0**
comp=Z,173nm,1.0s
BCPM LR LR
comp=Z,39µm,22.0s
ILULI Ilulissat 61.84 14 *e*P **P** **17 44 42.6 -1.1**
comp=Z,47nm,1.1s
ILULI LR LR
comp=Z,60µm,19.0s
ILULI Ilulissat 61.84 14 *e*P **P** **17 44 42.6 -1.1**
ILULI pmax pmax
comp=Z,47nm,1.1s
ILULI MLR MLR
comp=Z,60µm,19.0s
ILULI Ilulissat 61.84 14 *i* P **P** **17 44 41.4 -2.3**
comp=Z,60µm,18.0s
PCA Pinnacle 62.04 333 *e*P **P** **17 44 45.2 -0.1**
comp=Z,138nm,0.8s
PCA *e*PcP **PcP** **17 45 28.9 +3.4**
PCA LR LR
comp=Z,38µm,22.0s
CTGM Chitina Glacie 62.91 334 *e*P **P** **17 44 51.2 0.0**
comp=Z,133nm,0.8s
CTGM LR LR
comp=Z,32µm,21.0s
RES Resolute Bay 63.08 358 *e*P **P** **17 44 50.1 -1.8**
comp=Z,65nm,0.8s
RES LR LR
comp=Z,21µm,20.0s
RES Resolute Bay 63.08 358 *e*P **P** **17 44 50.1 -1.8**
RES pmax pmax
comp=Z,65nm,0.8s
RES MLR MLR
comp=Z,21µm,20.0s
ANGG Ammassalik, Gr 63.35 21 *e*P **P** **17 44 51.6 -2.2**
comp=Z,59nm,0.7s
ANGG LR LR
comp=Z,48µm,22.0s
BALM Baldy 63.38 333 *e*P **P** **17 44 53.9 -0.4**
comp=Z,148nm,0.9s
BALM LR LR
comp=Z,16µm,20.0s
BALM Baldy 63.38 333 *e*P **P** **17 44 53.9 -0.4**
BALM pmax pmax
comp=Z,148nm,0.9s
BALM MLR MLR
comp=Z,16µm,20.0s
DAWY Dawson 63.60 337 *e*P **P** **17 44 54.0 -1.6**
comp=Z,127nm,1.1s
DAWY LR LR
comp=Z,46µm,22.0s
CRQM Cirque 63.62 333 *e*P **P** **17 44 55.3 -0.7**
comp=Z,169nm,0.8s
CRQM LR LR
comp=Z,37µm,21.0s
EPYK Eagle Plains 63.86 340 *e*P **P** **17 44 56.3 -1.0**
comp=Z,214nm,0.9s
EPYK LR LR
comp=Z,21µm,22.0s
EPYK Eagle Plains 63.86 340 P **P** **17 44 56.2 -1.0**
baz=124,SNR=155
HMT Hamilton 63.95 332 *e*P **P** **17 44 58.0 +0.1**
comp=Z,219nm,1.0s
HMT LR LR
comp=Z,47µm,21.0s
INK Inuvik 64.00 343 P **P** **17 44 57.2 -0.8**
comp=Z,201nm,0.9s,baz=115,slow=7.6,SNR=202
INK PP **PP** **17 47 21.6 +2.6**
comp=Z,45nm,1.0s,baz=122,slow=9.5,SNR=3.6
INK PKPPKP **P'P'df** **18 13 44.9 -7.3**
comp=Z,5.7nm,1.1s,baz=279,slow=4.2,SNR=4.3
INK LR LR 18 16 09.1
comp=Z,33µm,20.8s,baz=123,slow=39
INK Inuvik 64.00 343 *e*P **P** **17 44 56.8 -1.3**
comp=Z,271nm,1.0s
INK LR LR
comp=Z,42µm,19.0s
GO09 Cerro Castillo 64.04 170 *e*P **P** **17 44 58.8 +0.3**
comp=Z,228nm,1.5s
MID Middleton Isla 64.57 331 PFAKE 17 45 10.0 +8.1
MID LR LR
comp=Z,12µm,20.0s
EGAK Eagle 64.62 337 *e*P **P** **17 45 00.9 -1.3**
comp=Z,141nm,0.9s
EGAK LR LR
comp=Z,47µm,22.0s
EYAK Cordova Ski Ar 64.71 332 *e*P **P** **17 45 02.7 -0.1**
comp=Z,248nm,0.9s
EYAK LR LR
comp=Z,60µm,22.0s
MENT Mentasta 64.79 335 *e*P **P** **17 45 02.6 -0.9**
comp=Z,61nm,0.8s
MENT LR LR
comp=Z,42µm,22.0s
DIV Divide 64.94 333 *e*P **P** **17 45 04.1 -0.4**
comp=Z,168nm,1.0s
DIV LR LR
comp=Z,40µm,22.0s
KULLO Kullorsuaq 65.03 8 *i* P **P** **17 45 02.5 -2.2**
KULLO MLR MLR
comp=Z,62µm,19.0s
KULLO Kullorsuaq 65.03 8 *i* P **P** **17 45 02.5 -2.2**
comp=Z,62µm,19.0s
DOT Dot Lake 65.24 336 *e*P **P** **17 45 05.2 -1.1**
comp=Z,175nm,0.8s
DOT LR LR
comp=Z,23µm,20.0s
GLI Glacier Island 65.45 332 PFAKE 17 45 20.0 +12
GLI LR LR
comp=Z,41µm,21.0s
TULEG Thule 65.51 5 *e*P **P** **17 45 06.4 -1.4**
comp=Z,129nm,1.1s
TULEG LR LR
comp=Z,9916µm,21.0s
PAX Paxson 65.53 335 *e*P **P** **17 45 07.1 -1.2**

	comp=Z,88nm,0.9s						
PAX				LR	LR		
	comp=Z,28µm,21.0s						
PAX	**Paxson**	**65.53**	**335**	*e*P	**P**	**17 45 07.1**	**-1.2**
PAX				pmax	pmax		
	comp=Z,88nm,0.9s						
PAX				MLR	MLR		
	comp=Z,28µm,21.0s						
RIDG	**Independent Ri**	**65.59**	**336**	*e*P	**P**	**17 45 07.5**	**-1.1**
	comp=Z,255nm,0.9s						
RIDG				LR	LR		
	comp=Z,26µm,20.0s						
VAH	**Vaihoa**	**65.70**	**247**	*e*P	P	17 45 15.9	+5.9
	comp=Z,264nm,1.2s						
HATHI	**Halema'uma'u T**	**65.80**	**286**	*e*P	**P**	**17 45 10.5**	**-0.3**
	comp=Z,644nm,1.1s						
KKO	**Keanakako`i**	**65.81**	**286**	*e*P	**P**	**17 45 10.1**	**-0.8**
	comp=Z,609nm,1.1s						
UWB	**Uwekahuna B**	**65.82**	**286**	*e*P	**P**	**17 45 09.8**	**-1.2**
	comp=Z,367nm,1.1s						
UWE	**Uwekahuna**	**65.83**	**286**	*e*P	**P**	**17 45 08.2**	**-2.9**
	comp=Z,487nm,1.1s						
SDHHI	**Sand Hill**	**65.84**	**286**	*e*P	**P**	**17 45 10.4**	**-0.7**
	comp=Z,296nm,0.8s						
HLP	**Hilina Pali**	**65.86**	**286**	*e*P	**P**	**17 45 10.1**	**-1.0**
	comp=Z,347nm,0.8s						
PMOR	**Pomariorio Ree**	**65.86**	**248**	*e*P	P	17 45 17.0	+6.0
	comp=Z,300nm,1.3s						
PMOR	**Pomariorio Ree**	**65.86**	**248**	*e*T	T	18 56 22.3	
	comp=Z,19nm,0.2s						
SCM	**Sheep Creek Mo**	**65.90**	**333**	*e*P	**P**	**17 45 10.0**	**-0.7**
	comp=Z,166nm,1.0s						
SCM				LR	LR		
	comp=Z,21µm,21.0s						
SCM	**Sheep Creek Mo**	**65.90**	**333**	*e*P	**P**	**17 45 10.0**	**-0.7**
SCM				pmax	pmax		
	comp=Z,166nm,1.0s						
SCM				MLR	MLR		
	comp=Z,21µm,21.0s						
MLH	**Mauna Loa**	**65.92**	**286**	*e*P	**P**	**17 45 13.1**	**+1.4**
	comp=Z,244nm,1.0s						
HMH	**Humu'ula Sheep**	**66.00**	**286**	*e*P	**P**	**17 45 12.1**	**-0.2**
	comp=Z,224nm,1.0s						
POHA	**Pohakuloa**	**66.03**	**286**	PFAKE		17 45 30.0	+18
POHA				LR	LR		
	comp=Z,24µm,21.0s						
MLOA	**Mauna Loa Obse**	**66.09**	**286**	PFAKE		17 45 30.0	+17
MLOA				LR	LR		
	comp=Z,21µm,20.0s						
MWH	**Moku'aweowe**	**66.11**	**286**	*e*P	**P**	**17 45 15.1**	**+1.7**
	comp=Z,235nm,1.0s						
HPAH	**Hawaii Prepara**	**66.17**	**287**	PFAKE		17 45 30.0	+17
HPAH				LR	LR		
	comp=Z,22µm,22.0s						
KNK	**Knik Glacier**	**66.25**	**333**	PFAKE		17 45 30.0	+17
KNK				LR	LR		
	comp=Z,44µm,20.0s						
SEW	**Seward**	**66.28**	**331**	*e*P	**P**	**17 45 12.3**	**-0.7**
	comp=Z,199nm,0.9s						
SEW				LR	LR		
	comp=Z,19µm,21.0s						
HUH	**Hualalai**	**66.32**	**286**	*e*P	**P**	**17 45 16.0**	**+1.6**
	comp=Z,392nm,1.4s						
SML	**Sawmill**	**66.33**	**333**	*e*P	**P**	**17 45 12.4**	**-1.0**
SML	**Sawmill**	**66.33**	**333**	*e*P	**P**	**17 45 12.4**	**-1.0**
DHY	**Denali Highway**	**66.38**	**334**	*e*P	**P**	**17 45 12.1**	**-1.7**
	comp=Z,66nm,1.0s						
DHY				LR	LR		
	comp=Z,24µm,22.0s						
KHLU	**Kahalu`u**	**66.39**	**286**	PFAKE		17 45 30.0	+15
KHLU				LR	LR		
	comp=Z,26µm,21.0s						
GHO	**Glory Hole Cre**	**66.59**	**333**	*e*P	**P**	**17 45 13.9**	**-1.2**
	comp=Z,299nm,0.9s						
GHO				LR	LR		
	comp=Z,28µm,21.0s						
PRP	**Porcupine Dome**	**66.60**	**337**	*e*P	**P**	**17 45 14.1**	**-1.1**
	comp=Z,118nm,0.9s						
PRP				LR	LR		
	comp=Z,58µm,22.0s						
PMR	**Palmer**	**66.62**	**333**	*e*P	**P**	**17 45 14.0**	**-1.2**
	comp=Z,79nm,0.9s						
PMR				LR	LR		
	comp=Z,43µm,21.0s						
PMR	**Palmer**	**66.62**	**333**	*e*P	**P**	**17 45 14.0**	**-1.2**
PMR				pmax	pmax		
	comp=Z,79nm,0.9s						
PMR				MLR	MLR		
	comp=Z,43µm,21.0s						
HLK	**Haleakala**	**66.63**	**288**	PFAKE		17 45 30.0	+14
HLK				LR	LR		
	comp=Z,16µm,21.0s						
HDA	**Harding Lake**	**66.71**	**336**	*e*P	**P**	**17 45 14.5**	**-1.2**
	comp=Z,332nm,1.1s						
HDA				LR	LR		
	comp=Z,25µm,20.0s						
RC01	**Rabbit Creek A**	**66.73**	**332**	*e*P	**P**	**17 45 15.1**	**-0.8**
	comp=Z,246nm,0.8s						
RC01				*e*PcP	**PcP**	**17 45 48.0**	**+3.4**
RC01				LR	LR		
	comp=Z,26µm,20.0s						
KHLH	**Kahului Airpor**	**66.79**	**288**	PFAKE		17 45 30.0	+13
KHLH				LR	LR		
	comp=Z,16µm,22.0s						
ILAR	**Eielson Array**	**66.82**	**336**	P	**P**	**17 45 14.9**	**-1.5**
	comp=Z,172nm,1.0s,baz=116,slow=4.7,SNR=196						
ILAR				PP	**PP**	**17 47 40.6**	**-3.2**
	comp=Z,12nm,1.0s,baz=109,slow=7.0,SNR=3.7						
ILAR				PKPPKP	P'P'df	18 13 38.9	-8.7
	comp=Z,1.2nm,1.0s,baz=298,slow=1.9,SNR=3.3						
ILAR				LR	LR	18 18 37.0	
	comp=Z,25µm,20.2s,baz=108,slow=40						
ILAR	**Eielson Array**	**66.82**	**336**	P	**P**	**17 45 15.0**	**-1.5**
ILB	**Eielson Array**	**66.82**	**336**	*e*P	**P**	**17 45 15.5**	**-0.9**
	comp=Z,252nm,1.1s						
PMOZ	**Porto Moniz, M**	**66.85**	**59**	*e*P	**P**	**17 45 17.8**	**+0.5**
	comp=Z,209nm,1.5s						
PMOZ				*e*S	**S**	**17 54 08.6**	**+1.2**
PMOZ				*e*LQ	LQ	18 02 07.2	
PMOZ				*e*LR	LR	18 05 46.0	
	comp=Z,32µm,22.0s						
BRLK	**Bradley Lake**	**66.86**	**330**	*e*P	**P**	**17 45 16.5**	**-0.3**
	comp=Z,274nm,1.0s						
BRLK				LR	LR		
	comp=Z,17µm,19.0s						
FYU	**Fort Yukon**	**66.93**	**338**	*e*P	**P**	**17 45 16.3**	**-0.7**
	comp=Z,179nm,1.0s						
FYU				LR	LR		
	comp=Z,19µm,22.0s						
CNPM	**China Poot**	**66.97**	**330**	*e*P	**P**	**17 45 17.0**	**-0.5**
	comp=Z,125nm,0.8s						
CNPM				LR	LR		
	comp=Z,17µm,21.0s						
MEH	**Mehetia**	**67.03**	**245**	*e*P	P	17 45 24.4	+5.8
	comp=Z,83nm,1.3s						
MEH	**Mehetia**	**67.03**	**245**	*e*T	T	18 57 50.4	
	comp=Z,30nm,0.3s						
RND	**Reindeer**	**67.12**	**334**	*e*P	**P**	**17 45 18.0**	**-0.5**
	comp=Z,559nm,0.8s						
RND				LR	LR		
	comp=Z,31µm,21.0s						
CCB	**Clear Creek Bu**	**67.14**	**336**	*e*P	**P**	**17 45 16.7**	**-1.7**
	comp=Z,94nm,1.0s						
CCB				LR	LR		
	comp=Z,22µm,20.0s						
KDAK	**Kodiak Island**	**67.17**	**328**	P	**P**	**17 45 18.3**	**-0.4**
	comp=Z,158nm,0.8s,baz=109,slow=3.0,SNR=56						
KDAK	**Kodiak Island**	**67.17**	**328**	*e*P	**P**	**17 45 17.8**	**-1.0**
	comp=Z,130nm,0.8s						
KDAK				LR	LR		
	comp=Z,26µm,22.0s						
POKR	**Poker Plat Res**	**67.17**	**336**	P	**P**	**17 45 17.4**	**-1.2**
	baz=112,SNR=48						
SUMG	**Summit**	**67.17**	**14**	*e*P	**P**	**17 45 17.0**	**-2.0**
	comp=Z,213nm,1.3s						
SUMG				LR	LR		
	comp=Z,41µm,18.0s						
SUMG	**Summit**	**67.17**	**14⇑**	*i*P	**P**	**17 45 16.9**	**-2.1**
SUMG				MLR	MLR		
	comp=Z,100µm,18.0s						
SUMG	**Summit**	**67.17**	**14⇑**	*i*P	**P**	**17 45 16.9**	**-2.1**
	comp=Z,105µm,18.0s						
WRH	**Wood River Hil**	**67.19**	**336**	*e*P	**P**	**17 45 17.4**	**-1.3**
	comp=Z,150nm,0.9s						
WRH				LR	LR		
	comp=Z,28µm,20.0s						
HOM	**Homer**	**67.20**	**330**	*e*P	**P**	**17 45 19.5**	**+0.6**
	comp=Z,274nm,0.8s						
HOM				LR	LR		
	comp=Z,12µm,20.0s						
COLA	**College**	**67.25**	**336**	*e*P	**P**	**17 45 18.1**	**-1.0**
	comp=Z,155nm,0.8s						
COLA				LR	LR		
	comp=Z,22µm,20.0s						
COLA	**College**	**67.25**	**336**	*e*P	**P**	**17 45 18.1**	**-1.0**
COLA				pmax	pmax		
	comp=Z,155nm,0.8s						
COLA				MLR	MLR		
	comp=Z,22µm,20.0s						
TCOL	**CIGO, UAF Yank**	**67.25**	**336**	P	**P**	**17 45 17.8**	**-1.3**
	baz=112,SNR=27						
MCK	**McKinley**	**67.27**	**335**	*e*P	**P**	**17 45 18.4**	**-0.9**
	comp=Z,286nm,0.9s						
MCK				LR	LR		
	comp=Z,45µm,22.0s						
MCK	**McKinley**	**67.27**	**335**	*e*P	**P**	**17 45 18.4**	**-0.9**
MCK				pmax	pmax		
	comp=Z,286nm,0.9s						
MCK				MLR	MLR		
	comp=Z,45µm,22.0s						
SUA	**Susitna One**	**67.31**	**332**	*e*P	**P**	**17 45 18.9**	**-0.8**
	comp=Z,114nm,0.9s						
SUA				LR	LR		
	comp=Z,34µm,21.0s						
OHAK	**Old Harbor**	**67.40**	**327**	*e*P	**P**	**17 45 19.9**	**-0.3**
	comp=Z,139nm,0.7s						
OHAK				LR	LR		
	comp=Z,25µm,22.0s						
MDM	**Murphy Dome**	**67.43**	**336**	*e*P	**P**	**17 45 19.5**	**-0.8**
	comp=Z,89nm,1.0s						
MDM				LR	LR		
	comp=Z,20µm,21.0s						
MACI	**Morro de la Ar**	**67.48**	**64**	*e*P	**P**	**17 45 19.7**	**-1.8**
	comp=Z,354nm,1.1s						
PMPST	**Porto Santo, M**	**67.58**	**59**	*e*P	**P**	**17 45 20.4**	**-1.4**
	comp=Z,215nm,1.6s						
BWN	**Browne**	**67.64**	**335**	*e*P	**P**	**17 45 20.5**	**-1.1**
	comp=Z,938nm,1.0s						
BWN				LR	LR		
	comp=Z,24µm,22.0s						
SII	**Sitkinak Islan**	**67.73**	**327**	*e*P	**P**	**17 45 21.8**	**-0.5**
	comp=Z,242nm,0.8s						
SII				LR	LR		
	comp=Z,20µm,21.0s						
TRF	**Thorofare Moun**	**67.74**	**334**	*e*P	**P**	**17 45 21.3**	**-1.1**
	comp=Z,198nm,0.8s						
TRF				LR	LR		
	comp=Z,11µm,22.0s						
RSO	**Redoubt South**	**67.96**	**331**	*e*P	**P**	**17 45 23.0**	**-0.9**
KTH	**Kantishna Hill**	**68.05**	**334**	*e*P	**P**	**17 45 22.7**	**-1.6**
	comp=Z,151nm,0.9s						
KTH				LR	LR		
	comp=Z,40µm,21.0s						
TVO	**Taravao**	**68.05**	**245**	*e*P	P	17 45 30.7	+5.6
	comp=Z,24nm,1.0s						
TIAR	**Tiarei**	**68.06**	**246**	*e*P	P	17 45 30.6	+5.6
	comp=Z,57nm,1.1s						
OPA	**Opana**	**68.20**	**289**	PFAKE		17 45 40.0	+14
OPA				LR	LR		
	comp=Z,12µm,22.0s						
KIP	**Kipapa**	**68.22**	**288**	PFAKE		17 45 40.0	+14
KIP				LR	LR		
	comp=Z,10µm,22.0s						
KIP	**Kipapa**	**68.22**	**288⇑**	*e*P	**P**	**17 45 25.0**	**-1.1**
KIP				pmax	pmax		
	comp=Z,234nm,2.7s						
BPAW	**Bear Paw Mtn.**	**68.25**	**335**	*e*P	**P**	**17 45 24.1**	**-1.4**
	comp=Z,260nm,1.1s						
BPAW				LR	LR		
	comp=Z,28µm,21.0s						
PPTF	**Pamatai, Papee**	**68.27**	**246**	PFAKE		17 45 40.0	+14
PPTF				LR	LR		
	comp=Z,20µm,21.0s						
PPT	**Papeete**	**68.27**	**246**	LR	LR	18 07 31.8	
	comp=Z,18µm,20.9s,baz=66,slow=29						
PPT2	**Papeete2**	**68.28**	**246**	*e*P	P	17 45 32.3	+5.8
	comp=Z,107nm,1.3s						
PPT2				*e*S	**S**	**17 54 25.1**	**+0.4**
	comp=Z,38µm,28.2s						
PPT2				*e*SS	**SS**	**17 58 48.0**	**-0.7**
	comp=Z,9µm,29.5s						
PPT2				*e*LR	LR	18 05 56.4	
	comp=Z,53µm,25.2s,baz=56						
PAE	**Paea**	**68.30**	**246**	*e*P	P	17 45 32.3	+5.8
	comp=Z,33nm,1.2s						
MLY	**Manley**	**68.45**	**336**	PFAKE		17 45 40.0	+13
MLY				LR	LR		
	comp=Z,25µm,21.0s						
CAST	**Castle Rocks**	**68.50**	**334**	*e*P	**P**	**17 45 25.5**	**-1.5**
	comp=Z,114nm,0.9s						
CAST				LR	LR		
	comp=Z,19µm,20.0s						
COLD	**Coldfoot**	**69.00**	**338**	*e*P	**P**	**17 45 29.9**	**-0.2**
	comp=Z,131nm,1.0s						
COLD				LR	LR		
	comp=Z,39µm,22.0s						
BORG	**Borgarnes**	**69.18**	**25**	P	**P**	**17 45 30.3**	**-0.9**
	comp=Z,16nm,1.0s,baz=238,slow=6.5,SNR=7.9						
BORG	**Borgarnes**	**69.18**	**25**	*e*P	**P**	**17 45 30.4**	**-0.8**
	comp=Z,62nm,1.4s						
BORG				LR	LR		
	comp=Z,26µm,20.0s						
BORG	**Borgarnes**	**69.18**	**25**	*i*P	**P**	**17 45 33.7**	**+2.5**
TOLK	**Toolik Lake Re**	**69.29**	**340**	*e*P	**P**	**17 45 30.8**	**-1.1**
	comp=Z,44nm,0.6s						
TOLK				LR	LR		
	comp=Z,31µm,21.0s						
TOLK	**Toolik Lake Re**	**69.29**	**340**	P	**P**	**17 45 30.9**	**-1.0**
	baz=112,SNR=47						
SVW2	**Sparrevohn**	**69.46**	**331**	*e*P	**P**	**17 45 31.2**	**-1.8**
	comp=Z,129nm,1.5s						
SVW2				LR	LR		
	comp=Z,19µm,21.0s						
CHGN	**Chignik**	**69.98**	**326**	*e*P	**P**	**17 45 35.9**	**-0.4**
	comp=Z,703nm,0.8s						
CHGN				LR	LR		
	comp=Z,14µm,21.0s						
TTA	**Tatalina**	**70.09**	**333**	*e*P	**P**	**17 45 34.8**	**-2.1**
	comp=Z,90nm,1.0s						
TTA				LR	LR		
	comp=Z,25µm,21.0s						
TTA	**Tatalina**	**70.09**	**333**	*e*P	**P**	**17 45 34.8**	**-2.1**
TTA				pmax	pmax		
	comp=Z,90nm,1.0s						
TTA				MLR	MLR		
	comp=Z,25µm,21.0s						
TBI	**Tubuai**	**70.30**	**240**	*e*S	**S**	**17 54 49.4**	**+1.1**
	comp=Z,20µm,27.0s						
TBI	**Tubuai**	**70.30**	**240**	*e*LR	LR	18 06 53.6	
	comp=Z,43µm,24.8s,baz=66						
TBI	**Tubuai**	**70.30**	**240**	*e*T	T	19 01 54.0	
	comp=Z,22nm,0.2s						
XMAS	**Kiritimati**	**70.40**	**268**	PFAKE		17 45 50.0	+10
XMAS				LR	LR		
	comp=Z,28µm,22.0s						
SCO	**Scoresbysund**	**70.79**	**19**	*e*P	**P**	**17 45 40.4**	**-0.5**
	comp=Z,21nm,0.8s						
SCO				LR	LR		
	comp=Z,56µm,18.0s						
SCO	**Scoresbysund**	**70.79**	**19⇑**	*i*P	**P**	**17 45 38.0**	**-3.0**
SCO				MLR	MLR		
	comp=Z,54µm,17.0s						
SCO	**Scoresbysund**	**70.79**	**19⇑**	*i*P	**P**	**17 45 38.0**	**-3.0**
	comp=Z,54µm,17.0s						
SDPT	**Sand Point**	**71.00**	**325**	*e*P	**P**	**17 45 42.5**	**-0.1**
	comp=Z,366nm,0.7s						
PMAFR	**Mafra**	**73.23**	**53**	*e*P	**P**	**17 45 55.2**	**-1.1**
PMAFR				*e*S	**S**	**17 55 21.5**	**-0.3**
IGLA	**Glengowla, Co**	**73.31**	**38**	*e*P	P	17 45 49.9	-6.5
IGLA				IAMs_20	IAMs_20	18 12 55.2	
	comp=Z,25µm,20.8s						
LIS	**Lisbon**	**73.35**	**53**	*e*P	**P**	**17 45 56.9**	**-0.1**
LIS				*e*PP	**PP**	**17 48 39.9**	**-0.7**
LIS				*e*S	**S**	**17 55 23.6**	**+0.6**
LIS				AMS	AMS	18 13 44.6	
	comp=Z,32µm,20.2s						
LIS	**Lisbon**	**73.35**	**53**	*e*P	**P**	**17 45 56.8**	**-0.1**
LIS				*e*		17 48 39.9	
LIS				*e*S	**S**	**17 55 23.5**	**+0.6**
PFVI	**Vila Bisbo**	**73.66**	**55**	*e*P	**P**	**17 46 00.7**	**+1.9**
	comp=Z,257nm,1.4s						
PFVI				*e*S	**S**	**17 55 27.5**	**+0.9**
PFVI	**Vila Bisbo**	**73.66**	**55**	PFAKE		17 46 10.0	+11
PFVI				LR	LR		
	comp=Z,33µm,22.0s						
PTEO	**Sao Teotonio**	**73.72**	**54**	*e*P	**P**	**17 45 59.9**	**+0.7**
	comp=Z,262nm,1.6s						
DAG	**Danmarks Havn**	**73.75**	**13⇑**	*i*P	**P**	**17 45 55.4**	**-3.2**
DAG				MLR	MLR		
	comp=Z,73µm,19.0s						
DAG	**Danmarks Havn**	**73.75**	**13⇑**	*i*P	**P**	**17 45 55.4**	**-3.2**
	comp=Z,70µm,19.0s						
MORF	**Marmelete**	**73.79**	**54**	*e*P	**P**	**17 45 59.4**	**-0.2**
MORF				*e*S	**S**	**17 55 28.6**	**+0.3**
MORF				AMS	AMS	18 12 46.1	
	comp=Z,33µm,24.2s						
MORF	**Marmelete**	**73.79**	**54**	*e*P	**P**	**17 46 00.0**	**+0.4**
	comp=Z,256nm,1.3s						
MORF				*e*S	**S**	**17 55 28.7**	**+0.5**
MORF	**Marmelete**	**73.79**	**54**	*e*P	**P**	**17 45 59.4**	**-0.2**
MORF				*e*S	**S**	**17 55 28.5**	**+0.3**
PCAS	**Casmilo, Conde**	**73.81**	**52**	*e*P	**P**	**17 45 59.2**	**-0.4**
	comp=Z,342nm,1.4s						
PCAS				*e*S	**SKiKP**	**17 55 26.5**	**+0.8**
PNCL	**Nicolau / Gran**	**73.86**	**54**	*e*P	**P**	**17 46 01.3**	**+1.4**
	comp=Z,84nm,1.3s						
PNCL				*e*S	**S**	**17 55 29.7**	**+0.9**
COI	**Coimbra**	**73.87**	**51**	*e*P	**P**	**17 46 00.0**	**+0.1**
	comp=Z,388nm,1.4s						
COI	**Coimbra**	**73.87**	**51**	*e*P	**P**	**17 45 58.7**	**-1.2**
	comp=Z,256nm,1.1s						
COI				LR	LR		
	comp=Z,35µm,20.0s						
COI	**Coimbra**	**73.87**	**51**	*e*P	**P**	**17 45 58.7**	**-1.2**
COI				pmax	pmax		
	comp=Z,255nm,1.1s						
COI				MLR	MLR		
	comp=Z,35µm,20.0s						
PTOM	**Tomar**	**73.89**	**52**	*e*P	**P**	**17 46 01.4**	**+1.3**
	comp=Z,166nm,1.4s						
RDOG	**Red Dog Mine**	**73.90**	**338**	*e*P	**P**	**17 45 58.5**	**-1.2**
	comp=Z,136nm,1.2s						
RDOG				LR	LR		
	comp=Z,29µm,22.0s						
PGAV	**Gavieira, Arco**	**73.93**	**50**	*e*P	**P**	**17 45 58.7**	**-1.7**
	comp=Z,185nm,1.7s						
PGAV	**Gavieira, Arco**	**73.93**	**50**	*e*LQ	LQ	18 06 07.0	
PGAV				*e*LR	LR	18 08 45.2	
	comp=Z,15µm,24.0s						
AKUT	**Akutan**	**73.97**	**323**	*e*P	**P**	**17 45 59.6**	**-0.6**
	comp=Z,175nm,0.6s						
AKUT				LR	LR		
	comp=Z,10µm,21.0s						
PMTG	**Montargil**	**74.05**	**53**	*e*P	**P**	**17 46 00.0**	**-1.1**
	comp=Z,148nm,1.4s						
MESJ	**Messejana**	**74.11**	**54**	*e*P	**P**	**17 46 01.3**	**-0.1**
MESJ				*e*S	**S**	**17 55 31.9**	**+0.2**
MESJ				AMS	AMS	18 12 42.6	
	comp=Z,28µm,19.4s						
MESJ	**Messejana**	**74.11**	**54**	*e*P	**P**	**17 46 01.3**	**-0.1**
MESJ				*e*S	**S**	**17 55 31.8**	**+0.2**
PCAB	**Cabril**	**74.11**	**50**	*e*P	**P**	**17 46 01.6**	**+0.2**
	comp=Z,103nm,1.3s						
EVO	**Evora**	**74.24**	**53**	*e*P	**P**	**17 46 00.9**	**-1.3**
	comp=Z,107nm,1.4s						
EVO	**Evora**	**74.24**	**53⇑**	*i*P	**P**	**17 46 01.5**	**-0.7**
EVO				*e*S	**S**	**17 55 30.5**	**-2.6**
PVIS	**Viseu**	**74.25**	**51**	*e*P	**P**	**17 46 00.9**	**-1.3**
	comp=Z,222nm,1.3s						
PCVE	**Castro Verde**	**74.26**	**54**	*e*P	**P**	**17 46 02.3**	**0.0**
	comp=Z,74nm,1.5s						
POLO	**Lamas de Olo**	**74.30**	**50**	*e*P	**P**	**17 46 01.4**	**-1.2**
	comp=Z,73nm,1.3s						
PVRL	**Vila Real**	**74.36**	**50**	*e*P	**P**	**17 46 01.7**	**-1.2**
	comp=Z,111nm,1.4s						
PBDV	**Barranco-do-Ve**	**74.37**	**54**	*e*P	**P**	**17 46 03.0**	**0.0**
	comp=Z,139nm,1.5s						
PBDV				*e*S	**S**	**17 55 33.8**	**-0.9**
PBEJ	**Beja**	**74.38**	**54**	*e*P	**P**	**17 46 03.2**	**+0.2**
	comp=Z,95nm,1.4s						
UNV	**Unalaska Valle**	**74.39**	**323**	*e*P	**P**	**17 46 03.3**	**+0.6**
	comp=Z,389nm,0.7s						
UNV				LR	LR		
	comp=Z,11µm,22.0s						
ANM	**Nome**	**74.46**	**334**	*e*P	**P**	**17 46 02.9**	**0.0**
	comp=Z,145nm,1.3s						
ANM				LR	LR		
	comp=Z,20µm,22.0s						
ANM	**Nome**	**74.46**	**334**	*e*P	**P**	**17 46 02.9**	**0.0**
ANM				pmax	pmax		
	comp=Z,145nm,1.3s						
ANM				MLR	MLR		
	comp=Z,20µm,22.0s						
IDGL	**Inch Island, C**	**74.47**	**36**	*e*P	P	17 45 54.8	-8.3
IDGL				IAMs_20	IAMs_20	18 13 44.8	
	comp=Z,27µm,20.6s						
MTE	**Manteigas**	**74.53**	**51**	*e*P	**P**	**17 46 02.3**	**-1.6**
	comp=Z,204nm,1.4s						
MTE	**Manteigas**	**74.53**	**51**	*e*LQ	LQ	18 04 29.4	
MTE				*e*LR	LR	18 09 11.3	
	comp=Z,35µm,20.0s						
MTE	**Manteigas**	**74.53**	**51**	*e*P	**P**	**17 46 02.3**	**-1.6**
	comp=Z,161nm,1.2s						
MTE				LR	LR		
	comp=Z,34µm,20.0s						
PVAQ	**Vaqueiros**	**74.53**	**54**	*e*P	**P**	**17 46 03.5**	**-0.4**
	comp=Z,128nm,1.3s						
PVAQ				*e*S	**S**	**17 55 36.7**	**+0.3**
PVAQ	**Vaqueiros**	**74.53**	**54**	*e*LQ	LQ	18 06 09.1	
PVAQ				*e*LR	LR	18 09 49.6	
	comp=Z,37µm,22.0s						
PVAQ	**Vaqueiros**	**74.53**	**54**	*e*P	**P**	**17 46 02.4**	**-1.4**
	comp=Z,91nm,1.2s						
PVAQ				LR	LR		
	comp=Z,45µm,22.0s						
PCBR	**Castelo Branco**	**74.60**	**52**	*e*P	**P**	**17 46 03.0**	**-1.2**
	comp=Z,107nm,1.5s						
PMRV	**Marv??o**	**74.69**	**52**	*e*P	**P**	**17 46 03.3**	**-1.5**
	comp=Z,131nm,1.6s						
PMRV	**Marv??o**	**74.69**	**52**	*e*LR	LR	18 06 30.7	
	comp=Z,26µm,22.0s						
IWEX	**Carrickbyrne,**	**74.86**	**39**	*e*P	P	17 45 58.6	-6.9
IWEX				IAMs_20	IAMs_20	18 14 02.2	
	comp=Z,38µm,20.7s						
ASCN	**Ascension**	**74.87**	**102**	PFAKE		17 46 20.0	+14
ASCN				LR	LR		
	comp=Z,10µm,22.0s						
MVO	**Moncorvo**	**74.88**	**50**	*e*P	**P**	**17 46 04.3**	**-1.7**
	comp=Z,169nm,1.2s						
MVO				*e*S	**S**	**17 55 41.4**	**+1.0**
MVO	**Moncorvo**	**74.88**	**50**	*e*LQ	LQ	18 05 58.6	
MVO				*e*LR	LR	18 09 20.7	
	comp=Z,17µm,20.0s						
SOFL	**Sornfelli, Far**	**75.06**	**29**	*e*P	P	17 46 01.0	-5.5
SOFL				IAMs_20	IAMs_20	18 16 14.7	
	comp=Z,39µm,20.3s						
PBRG	**Braganca**	**75.07**	**50**	*e*P	**P**	**17 46 05.9**	**-1.1**
	comp=Z,181nm,1.4s						
DSB	**Dublin**	**75.11**	**38**	PFAKE		17 46 20.0	+13
DSB				LR	LR		
	comp=Z,20µm,20.0s						
JMIC	**Jan Mayen**	**75.24**	**19**	*e*P	**P**	**17 46 07.2**	**-0.1**
CLGH	**Cloghs, Cushen**	**75.28**	**36**	*e*P	P	17 45 59.4	-8.4
CLGH				IAMs_20	IAMs_20	18 14 00.1	
	comp=Z,23µm,21.1s						
KPL	**Plockton**	**75.56**	**34**	*e*P	P	17 46 02.7	-6.7
KPL				IAMs_20	IAMs_20	18 14 22.2	
	comp=Z,36µm,21.1s

comp=Z,23µm,24.5s
WLF1 Llynfaes 76.30 38 *e*P P 17 46 06.0 -7.6
WLF1 IAms_20 IAms_20 18 15 00.5
comp=Z,50µm,20.4s
HTL Hartland 76.30 40 *e*P P 17 46 06.8 -6.9
HTL IAms_20 IAms_20 18 14 37.8
comp=Z,37µm,20.6s
INVG Invergeldie, C 76.44 35 *e*P P 17 46 07.0 -7.4
INVG IAms_20 IAms_20 18 13 35.6
comp=Z,29µm,23.0s
BIGH Upper Bighouse 76.49 32 *e*P P 17 46 06.0 -8.7
BIGH IAms_20 IAms_20 18 14 50.9
comp=Z,23µm,21.1s
CEU Ceuta 76.52 56⇑ *i*P **P 17 46 14.5 -0.7**
CEU *e*S **S 17 55 56.6 -1.8**
SPIA Saint Paul Isl 76.54 326 *e*P **P 17 46 15.7 +0.8**
comp=Z,1µm,1.2s
SPIA LR LR
comp=Z,16µm,22.0s
IFR Ifrane 76.93 58⇑ *i*P **P 17 46 15.4 -2.5**
IFR *e*S **S 17 56 00.8 -2.6**
EDI Edinburgh 76.93 35 *e*P P 17 46 08.9 -8.3
EDI IAms_20 IAms_20 18 13 48.8
comp=Z,23µm,22.6s
ESK Eskdalemuir 76.94 36 *e*P **P 17 46 15.4 -1.9**
comp=Z,51nm,1.0s
ESK LR LR
comp=Z,22µm,20.0s
ESK Eskdalemuir 76.94 36 *e*P **P 17 46 15.4 -1.9**
ESK pmax pmax
comp=Z,51nm,1.0s
ESK MLR MLR
comp=Z,22µm,20.0s
EKA Eskdalemuir Ar 76.97 36 P **P 17 46 14.5 -2.9**
comp=Z,50nm,1.1s,baz=277,slow=5.1,SNR=22
EKA LR LR 18 15 31.7
comp=Z,19µm,21.1s,baz=270,slow=32
KESW Keswick, Cumbr 77.02 36 *e*P P 17 46 10.4 -7.3
KESW IAms_20 IAms_20 18 15 53.7
comp=Z,26µm,20.6s
FOEL Foel Wylfa 77.03 38 *e*P P 17 46 09.9 -8.0
FOEL IAms_20 IAms_20 18 15 33.5
comp=Z,28µm,21.2s
PAB San Pablo 77.03 52 *e*P **P 17 46 16.6 -1.6**
comp=Z,94nm,1.3s
PAB LR LR
comp=Z,33µm,22.0s
PAB San Pablo 77.03 52 *e*P **P 17 46 16.6 -1.6**
PAB pmax pmax
comp=Z,94nm,1.3s
PAB MLR MLR
comp=Z,33µm,22.0s
MCH1 Michaelchurch 77.19 39 *e*P P 17 46 11.0 -7.7
MCH1 IAms_20 IAms_20 18 14 34.3
comp=Z,47µm,22.2s
EMAL Malaga-Limoner 77.20 55⇑ *i*P **P 17 46 17.6 -1.5**
EMAL *e*S **S 17 56 10.8 +5.0**
HLM1 Long Mynd 77.24 39 *e*P P 17 46 10.5 -8.6
HLM1 IAms_20 IAms_20 18 14 35.8
comp=Z,32µm,21.5s
DRUM Mains of Drumt 77.29 34 *e*P P 17 46 11.4 -7.8
DRUM IAms_20 IAms_20 18 14 02.6
comp=Z,32µm,23.4s
ESDC Sonseca Array 77.31 52 P **P 17 46 16.9 -2.9**
comp=Z,43nm,0.8s,baz=285,slow=5.2,SNR=71
ESDC PKKPbc **PKKPbc 18 05 28.3 +2.3**
comp=Z,0.5nm,0.7s,baz=81,slow=1.2,SNR=4.1
ESDC PKPPKP **P'P'df 18 13 28.1 -2.3**
comp=Z,0.1nm,0.3s,baz=69,slow=1.2,SNR=4.9
ESDC LR LR 18 16 02.9
comp=Z,21µm,20.7s,baz=275,slow=32
ESLA Sonseca Array 77.31 52 *e*P **P 17 46 17.9 -1.9**
comp=Z,80nm,1.0s
ESLA LR LR
comp=Z,26µm,20.0s
MONM Monmouth 77.32 39 *e*P P 17 46 12.8 -6.7
MONM IAms_20 IAms_20 18 14 37.6
comp=Z,48µm,21.7s
MDT Midelt 77.43 59 P **P 17 46 19.3 -1.3**
comp=Z,24nm,1.0s,baz=291,slow=6.3,SNR=11
MDT LR LR 18 15 05.5
comp=Z,39µm,21.8s,baz=284,slow=32
PVLZ Peæn de 77.45 56⇑ *i*P **P 17 46 19.1 -1.4**
PVLZ *e*S **S 17 56 04.7 -3.9**
STNC Stoke 77.62 38 *e*P P 17 46 12.7 -8.4
STNC IAms_20 IAms_20 18 16 01.4
comp=Z,25µm,21.9s
EDMD Edmundbyers 77.67 36 *e*P P 17 46 12.8 -8.6
EDMD IAms_20 IAms_20 18 15 33.2
comp=Z,28µm,21.4s
UCM Universidad Co 77.81 51⇑ *i*P **P 17 46 21.6 -0.9**
UCM *e*S **S 17 56 08.0 -4.4**
LRW Lerwick 77.86 31 *e*P P 17 46 14.7 -7.6
LRW IAms_20 IAms_20 18 15 17.3
comp=Z,26µm,22.4s
JSA Saint Aubin 77.88 42 *e*P P 17 46 15.6 -7.1
JSA IAms_20 IAms_20 18 18 24.0
comp=Z,47µm,18.6s
LBWR Ladybower, Pea 77.89 38 *e*P P 17 46 16.1 -6.5
LBWR IAms_20 IAms_20 18 19 58.1
comp=Z,22µm,17.9s
HPK Haverah Park 77.92 37 *e*P P 17 46 15.4 -7.3
HPK IAms_20 IAms_20 18 15 29.7
comp=Z,20µm,20.4s
SWN1 Swindon 77.96 40 *e*P P 17 46 15.8 -7.2
SWN1 IAms_20 IAms_20 18 15 29.1
comp=Z,47µm,21.0s
CWF Charnwood Fore 78.18 38 *e*P P 17 46 16.0 -8.3
CWF IAms_20 IAms_20 18 16 09.0
comp=Z,31µm,20.7s
PMSA Palmer Station 78.25 170 *e*P **P 17 46 25.1 +0.9**
GDLE Glaisdale, N Y 78.36 37 *e*P P 17 46 18.4 -6.8
GDLE IAms_20 IAms_20 18 21 12.2
comp=Z,20µm,17.9s
HOPE Hope Point 78.40 152 *e*P **P 17 46 27.3 +2.0**
comp=Z,1µm,1.8s
HOPE LR LR
comp=Z,7µm,20.0s
RAR Rarotonga 78.55 245 LR LR 18 12 15.9
comp=Z,16µm,21.4s,baz=66,slow=29
RAR Rarotonga 78.55 245 *e*P **P 17 46 26.4 -0.4**
comp=Z,277nm,1.8s
RAR LR LR
comp=Z,18µm,20.0s
RAR Rarotonga 78.55 245 *e*P **P 17 46 26.4 -0.4**
RAR pmax pmax
comp=Z,277nm,1.8s
RAR MLR MLR
comp=Z,18µm,20.0s
MELI Melilla 78.55 56⇑ *i*P **P 17 46 24.2 -2.4**
MELI *e*S **S 17 56 16.9 -3.6**
LMK Market Rasen 78.72 38 *e*P P 17 46 20.6 -6.6
LMK IAms_20 IAms_20 18 13 48.5
comp=Z,19µm,26.7s
ATKA Atka Island 79.09 321 *e*P **P 17 46 29.8 +0.6**
comp=Z,199nm,0.6s
ATKA LR LR
comp=Z,9µm,21.0s
WACR West Acre 79.36 38 *e*P P 17 46 23.1 -7.6
WACR IAms_20 IAms_20 18 18 26.0
comp=Z,34µm,20.0s
JOHN Johnston Islan 79.59 285 PFAKE 17 46 40.0 +7.3
JOHN LR LR
comp=Z,20µm,22.0s
ELSH Elham, Standar 79.83 40 *e*P P 17 46 25.4 -7.8
ELSH IAms_20 IAms_20 18 16 49.4
comp=Z,46µm,21.0s
GSTR Great Sitkin T 80.24 321 *e*P **P 17 46 37.1 +1.6**
KBS Kingsbay 80.28 11 *e*P **P 17 46 35.6 +0.3**
comp=Z,102nm,1.2s
KBS LR LR
comp=Z,51µm,21.0s
KBS Kingsbay 80.28 11 *ce*P **P 17 46 36.7 +1.4**
KBS pmax pmax
comp=Z,180nm,0.9s
KBS MLR MLR
comp=Z,200µm,21.0s
KBS Kingsbay 80.28 11 *e*P **P 17 46 38.3 +3.1**
KBS IVMs_BB IVMs_BB 18 22 36.5
comp=Z,16µm,21.0s
ADK Adak 80.65 321 *e*P **P 17 46 37.9 +0.2**
comp=Z,594nm,0.8s
ADK LR LR
comp=Z,6µm,21.0s
ADK Adak 80.65 321 *e*P **P 17 46 37.9 +0.2**
ADK pmax pmax
comp=Z,594nm,0.8s
ADK MLR MLR
comp=Z,6µm,21.0s
SUE Sulen 80.70 30 *e*P **P 17 46 38.1 +0.4**
SUE IVMs_BB IVMs_BB 18 18 57.6
comp=Z,10µm,19.1s
TIC Toumodi 80.90 85 *e*P **P 17 46 41.6 +1.8**
CLF Chambon-Foret 80.92 43 *e*P **P 17 46 37.4 -1.8**
comp=Z,281nm,1.5s
CLF LR LR
comp=Z,46µm,22.0s
LIC Lamto 80.97 85 *e*P **P 17 46 39.7 -0.5**
comp=Z,92nm,0.9s
ASK Askoy 80.98 30 IVMs_BB IVMs_BB 18 18 31.1
comp=Z,9µm,23.6s
DBIC Dimbokro 81.05 85 P **P 17 46 40.3 -0.3**
comp=Z,17nm,1.0s,baz=293,slow=5.4,SNR=9.5
DBIC LR LR 18 21 26.0
comp=Z,11µm,20.0s,baz=263,slow=35
DBIC Dimbokro 81.05 85 *e*P **P 17 46 39.7 -0.9**
comp=Z,68nm,1.4s
BER Bergen 81.07 30 *e*P **P 17 46 40.9 +1.2**
BER IVMs_BB IVMs_BB 18 18 33.3
comp=Z,9µm,19.6s
KMY Karmoy 81.19 31 *e*P **P 17 46 40.9 +0.5**
KMY IVMs_BB IVMs_BB 18 16 37.2
comp=Z,5µm,19.8s
KIC Kosan Boka 81.22 85 *e*P **P 17 46 41.2 -0.3**
comp=Z,182nm,1.4s
SPA0 Spitsbergen Ar 81.31 12 *e*P **P 17 46 41.0 +0.1**
comp=Z,87nm,1.2s
SPA0 Spitsbergen Ar 81.31 12 *e*P **P 17 46 41.3 +0.5**
SPA0 IVMs_BB IVMs_BB 18 23 39.1
comp=Z,19µm,21.5s
SPITS Spitsbergen Ar 81.31 12 P **P 17 46 40.1 -0.8**
comp=Z,9.7nm,0.4s,baz=191,slow=0.9,SNR=24
HYA Hoyanger 81.37 29 *e*P **P 17 46 40.0 -1.3**
HSPB Hornsund (broa 81.45 13 *e*P **P 17 46 44.3 +2.8**
HSPB Hornsund (broa 81.45 13 *e*P **P 17 46 44.3 +2.8**
STAV Stavanger 81.46 32 *e*P **P 17 46 46.4 +4.6**
STAV IVMs_BB IVMs_BB 18 16 32.1
comp=Z,7µm,21.5s
AKN Aaknes 81.59 28 *e*P **P 17 46 38.2 -4.4**
AKN IVMs_BB IVMs_BB 18 18 42.4
comp=Z,9µm,21.8s
ODD1 Odda 81.78 31 *e*P **P 17 46 41.9 -1.7**
MOL Molde 81.78 28 *e*P **P 17 46 43.7 +0.2**
MOL IVMs_BB IVMs_BB 18 19 01.2
comp=Z,7µm,21.1s
BRQR Ronquire 81.84 40 x **P 17 46 45.5 +1.5**
BRQR sP **sP 17 47 01.9 +0.8**
UCC Uccle 81.89 40 PFAKE 17 47 00.0 +16
UCC LR LR
comp=Z,49µm,20.0s
DOU Dourbes 82.15 41 P **P 17 46 44.6 -1.1**
DOU x x 17 46 47.0
DOU pP **pP 17 46 56.5 -1.7**
BMRD Maredsous 82.22 40 P **P 17 46 45.6 -0.5**
BMRD sP **sP 17 47 04.0 +0.7**
BGES Gesves 82.42 40 P **P 17 46 46.4 -0.7**
BGES x x 17 46 48.4
BGES x x 17 46 53.2
BGES sP **sP 17 47 04.5 +0.3**
SKAR Skarslia 82.47 30 *e*P **P 17 44 46.6 -2.7**
SKAR *e*ScS S 17 57 10.8 +10
SKAR IVMs_BB IVMs_BB 18 19 60.0
comp=Z,9µm,19.2s
BCLA Clavier 82.55 40 P **P 17 46 47.1 -0.6**
BCLA sP **sP 17 47 05.6 +0.6**
DOMB Dombas 82.58 28 *e*P **P 17 46 47.1 -0.7**
DOMB *e*PP **PP 17 49 56.5 -0.7**
DOMB IVMs_BB IVMs_BB 18 19 23.5
comp=Z,10µm,19.7s
SSB Saint Sauveur 82.88 45 *e*P **P 17 46 48.2 -1.4**
comp=Z,29nm,1.1s
SSB LR LR
comp=Z,32µm,20.0s
SSB Saint Sauveur 82.88 45 *e*P **P 17 46 48.3 -1.4**
SSB pmax pmax
comp=Z,29nm,1.1s
SSB MLR MLR
comp=Z,32µm,20.0s
TBLU Trondheim 82.88 27 *e*P **P 17 46 48.4 -0.9**
MEM Membach 82.96 40 P **P 17 46 48.5 -1.4**
MEM Membach 82.96 40 P **P 17 46 48.5 -1.4**
MEM x x 17 46 51.4
MEM sP **sP 17 47 07.1 0.0**
BHOU Houvegnez 83.00 40 P **P 17 46 47.1 -3.0**
BHOU sP **sP 17 47 08.0 +0.7**
HOMB Homborsund 83.02 32 *e*P **P 17 46 48.7 -1.3**
HOMB *e*SS SS 18 02 31.5 +1.7
HOMB IVMs_BB IVMs_BB 18 19 05.6
comp=Z,9µm,21.6s
BJO Bjornoya 83.04 15 *e*P **P 17 46 48.4 -1.5**
BJO *e*S **S 17 57 07.2 +1.3**
BJO IVMs_BB IVMs_BB 18 24 49.2
comp=Z,8µm,20.1s
LOF Lofoten 83.11 22 *e*P **P 17 46 52.5 +2.2**
LOF *e*S **S 17 57 08.1 +1.4**
LOF IVMs_BB IVMs_BB 18 21 52.4
comp=Z,9µm,23.7s
LKLB Kalborn 83.11 40 P **P 17 46 50.2 -0.5**
WLF Walferdange 83.21 41 *e*P **P 17 46 49.1 -2.2**
comp=Z,622nm,1.7s
WLF LR LR
comp=Z,176µm,22.0s
WLF Walferdange 83.21 41 *e*P **P 17 46 49.1 -2.2**
WLF pmax pmax
comp=Z,622nm,1.7s
WLF MLR MLR
comp=Z,176µm,22.0s
WLF Walferdange 83.21 41 P **P 17 46 49.3 -1.9**
WLF sP **sP 17 47 09.4 +1.0**
KONO Kongsberg 83.30 31 PFAKE 17 47 00.0 +8.5
KONO LR LR
comp=Z,20µm,22.0s
KONO Kongsberg 83.30 31 *e*P **P 17 46 49.8 -1.6**
KONO *e*S **S 17 57 09.9 +0.9**
KONO IVMs_BB IVMs_BB 18 19 50.9
comp=Z,6µm,25.0s
NSS Namsos 83.34 25 *e*P **P 17 46 52.6 +1.0**
KONS Konsvik 83.34 23 *e*P **P 17 46 53.3 +1.7**
NC204 NORSAR Array S 83.53 29 *e*P **P 17 46 51.8 -0.9**
comp=Z,52nm,1.1s
NC204 NORSAR Array S 83.53 29 *e*P **P 17 46 51.3 -1.4**
NBO00 NORSAR Array S 83.59 29 *e*P **P 17 46 52.1 -0.8**
comp=Z,103nm,1.1s
NBO00 NORSAR Array S 83.59 29 *e*P **P 17 46 53.0 +0.1**
NBO00 IVMs_BB IVMs_BB 18 21 06.0
comp=Z,11µm,19.2s
NAO01 NORSAR Array S 83.68 29 *e*P **P 17 46 53.6 +0.2**
comp=Z,126nm,1.2s
NAO01 NORSAR Array S 83.68 29 *e*P **P 17 46 53.0 -0.4**
NAO01 IVMs_BB IVMs_BB 18 20 58.4
comp=Z,9µm,18.0s
MUD Monsted U'grnd 83.73 34 *i*P **P 17 46 50.5 -3.2**
MUD MLR MLR
comp=Z,32µm,21.0s
MUD Monsted U'grnd 83.73 34 *i*P **P 17 46 50.5 -3.2**
comp=Z,32µm,21.0s
STEI Steigen 83.78 22 *e*P **P 17 46 54.6 +0.8**
STEI *e*PP **PP 17 50 06.4 -0.4**
STEI *e*SS SS 18 02 40.1 -0.5
STEI IVMs_BB IVMs_BB 18 22 13.8
comp=Z,9µm,21.0s
NB2 NORSAR Subarra 83.79 29 P **P 17 46 51.7 -2.3**
comp=Z,897nm,5.0s,baz=283,slow=5.1
NB2 NORSAR Subarra 83.79 29 P **P 17 46 51.7 -2.3**
baz=283,slow=5.1
NOA NORSAR Array B 83.79 29 P **P 17 46 51.8 -2.3**
comp=Z,6.1nm,0.9s,baz=285,slow=5.1,SNR=18
NOA LR LR 18 21 35.9
comp=Z,26µm,20.4s,baz=270,slow=34
NB201 NORSAR Array S 83.83 29 *e*P **P 17 46 53.5 -0.7**
comp=Z,198nm,1.4s
NB201 NORSAR Array S 83.83 29 *e*P **P 17 46 54.3 +0.1**
MOR8 Moi Rana 83.94 24 *e*P **P 17 46 54.9 +0.2**
MOR8 *e*P **PcP 17 46 55.9 -2.7**
MOR8 *e*SKSac **S 17 57 15.6 +0.3**
MOR8 IVMs_BB IVMs_BB 18 19 47.9
comp=Z,10µm,21.2s
NC405 NORSAR Array S 84.01 29 *e*P **P 17 46 54.6 -0.5**
comp=Z,292nm,1.6s
NC602 NORSAR Array S 84.02 29 *e*P **P 17 46 54.5 -0.6**
comp=Z,126nm,1.3s
NC602 NORSAR Array S 84.02 29 *e*P **P 17 46 54.9 -0.3**
ECH Echery 84.13 42 *e*P **P 17 46 55.1 -0.9**
comp=Z,68nm,1.4s
ECH LR LR
comp=Z,37µm,20.0s
ECH Echery 84.13 42 *e*P **P 17 46 55.1 -0.9**
ECH pmax pmax
comp=Z,68nm,1.4s
ECH MLR MLR
comp=Z,37µm,20.0s
BNI Bardonecchia 84.40 45 *e*P **P 17 46 56.8 -0.8**
comp=Z,71nm,1.6s
BNI LR LR
comp=Z,41µm,20.0s
BNI Bardonecchia 84.40 45 *e*P **P 17 46 56.8 -0.8**
BNI pmax pmax
comp=Z,71nm,1.6s
BNI MLR MLR
comp=Z,41µm,20.0s
TRO Tromso 84.55 20 *e*P **P 17 46 58.4 +0.7**
TRO *e*PP **PP 17 50 09.4 -3.7**
TRO *e*SS SS 18 02 54.6 +2.8
TRO IVMs_BB IVMs_BB 18 24 06.6
comp=Z,6µm,20.4s
SENIN Lac Senin/Sane 84.58 44 *e*P **P 17 46 57.2 -1.3**
comp=Z,61nm,1.2s
SENIN LR LR
comp=Z,33µm,20.0s
MIDW Midway 84.82 298 PFAKE 17 47 10.0 +10
MIDW LR LR
comp=Z,5µm,20.0s
BFO Black Forest 84.87 42 *e*P **P 17 46 57.6 -2.1**
comp=Z,18nm,1.0s
BFO LR LR
comp=Z,35µm,20.0s
BFO Black Forest 84.87 42 *i*P **P 17 46 59.6 -0.2**
SHEL Horse Pasture 85.00 107 PFAKE 17 47 10.0 +9.0
SHEL LR LR
comp=Z,17µm,21.0s
SET Setif 85.12 54 P P 17 47 11.0 +10
TRIS Tristan da Cun 85.13 129 PFAKE 17 47 10.0 +8.9
TRIS LR LR
comp=Z,8µm,21.0s
HFS Hagfors 85.20 30 P **P 17 46 58.0 -3.1**
comp=Z,3.9nm,0.7s,baz=204,slow=3.3,SNR=17
HFS LR LR 18 21 46.0
comp=Z,19µm,21.1s,baz=286,slow=34
HFS Hagfors 85.20 30 P **P 17 46 58.0 -3.1**
BILL Bilibino 85.32 339 *e*P **P 17 47 00.4 -1.1**
comp=Z,116nm,0.7s
BILL LR LR
comp=Z,24µm,22.0s
BILL Bilibino 85.32 339 *c i*P **P 17 47 00.9 -0.7**
BILL *e* 17 50 18.6
BILL *e*PPP PPP 17 52 12.0
BILL *e*S **S 17 57 23.4 -5.5**
BILL *e*SS **SS 18 03 06.1 +2.7**
BILL *e*SSS SSS 18 06 37.6
BILL pmax pmax
comp=Z,227nm,1.3s
BILL MLR MLR
comp=Z,15µm,23.0s
STU Stuttgart 85.34 41 *e*P **P 17 47 00.8 -1.3**
comp=Z,29nm,0.9s
STU LR LR
comp=Z,32µm,22.0s
KNTN Kanton 85.35 266 PFAKE 17 47 10.0 +7.2
KNTN LR LR
comp=Z,19µm,22.0s
HAMF Hammerfest 85.70 18 *e*P **P 17 47 03.2 -0.2**
HAMF *e*PP **PP 17 50 22.0 -0.3**
HAMF *e*SS SS 18 03 23.5 +15
HAMF IVMs_BB IVMs_BB 18 23 31.3
comp=Z,6µm,21.8s
TUE Stuetta 85.94 44 *e*P **P 17 47 03.5 -1.9**
comp=Z,84nm,1.3s
TUE LR LR
comp=Z,42µm,21.0s
SMY Shemya 86.05 323 *e*P **P 17 47 05.1 -0.4**
comp=Z,267nm,0.8s
SMY LR LR
comp=Z,6µm,22.0s
SMY Shemya 86.05 323 *e*P **P 17 47 05.1 -0.4**
SMY pmax pmax
comp=Z,267nm,0.8s
SMY MLR MLR
comp=Z,6µm,22.0s
DAVA Damuels 86.12 43 *i*P **P 17 47 06.0 -0.1**
comp=Z,42nm,1.1s,SNR=13
TOC7 Torodi Ar. Sit 86.16 77 PFAKE 17 47 20.0 +13
TOC7 LR LR
comp=Z,15µm,20.0s
TOC5 Torodi Ar. Sit 86.16 77 PFAKE 17 47 20.0 +13
TOC5 LR LR
comp=Z,18µm,20.0s
TOB5 Torodi Ar. Sit 86.16 77 PFAKE 17 47 20.0 +13
TOB5 LR LR
comp=Z,18µm,22.0s
TOB4 Torodi Ar. Sit 86.17 77 PFAKE 17 47 20.0 +13
TOB4 LR LR
comp=Z,15µm,20.0s
TOA1 Torodi Ar. Sit 86.17 77 PFAKE 17 47 20.0 +13
TOA1 LR LR
comp=Z,15µm,20.0s
TOA0 Torodi Ar. Sit 86.18 77 *e*P **P 17 47 04.9 -2.0**
comp=Z,23nm,1.3s
TOA0 LR LR
comp=Z,15µm,20.0s
TOA3 Torodi Ar. Sit 86.18 77 PFAKE 17 47 20.0 +13
TOA3 LR LR
comp=Z,15µm,20.0s
TORD Torodi Ar. Bea 86.18 77 P **P 17 47 04.8 -2.1**
comp=Z,2.7nm,0.8s,baz=294,slow=4.3,SNR=8.4
TORD PP **PP 17 50 27.7 -0.2**
comp=Z,7.1nm,1.0s,baz=275,slow=6.5,SNR=4.9
TORD PKKPbc **PKKPbc 18 05 08.7 +3.6**
comp=Z,3.1nm,0.9s,baz=49,slow=1.8,SNR=9.0
TORD PKPPKP 18 13 09.6
comp=Z,2.8nm,1.1s,baz=236,slow=1.6,SNR=4.3
TORD LR LR 18 23 16.8
comp=Z,13µm,19.7s,baz=310,slow=34
TOC1 Torodi Ar. Sit 86.18 77 PFAKE 17 47 20.0 +13
TOC1 LR LR
comp=Z,18µm,20.0s
TOA2 Torodi Ar. Sit 86.18 77 PFAKE 17 47 20.0 +13
TOA2 LR LR
comp=Z,15µm,20.0s
TOC4 Torodi Ar. Sit 86.19 77 PFAKE 17 47 20.0 +13
TOC4 LR LR
comp=Z,16µm,20.0s
TOB2 Torodi Ar. Sit 86.19 77 PFAKE 17 47 20.0 +13
TOB2 LR LR
comp=Z,15µm,20.0s
TOB3 Torodi Ar. Sit 86.19 77 PFAKE 17 47 20.0 +13
TOB3 LR LR
comp=Z,15µm,20.0s
KTK1 Kautokeino 86.20 20 *e*P **P 17 47 06.2 +0.3**
KTK1 IVMs_BB IVMs_BB 18 21 23.5
comp=Z,5µm,25.7s
TOC2 Torodi Ar. Sit 86.20 77 PFAKE 17 47 20.0 +13
TOC2 LR LR
comp=Z,15µm,20.0s
TOC3 Torodi Ar. Sit 86.20 77 PFAKE 17 47 20.0 +13
TOC3 LR LR
comp=Z,15µm,20.0s
DAVOX Davos/Dischmat 86.23 43 P **P 17 47 04.5 -2.2**
comp=Z,9.4nm,0.8s,baz=302,slow=6.2,SNR=3.1
DAVOX LR LR 18 20 27.0
comp=Z,40µm,21.5s,baz=284,slow=32
GRFO Grafenberg 86.43 40 PFAKE 17 47 20.0 +13
GRFO LR LR
comp=Z,44µm,20.0s
GRA1 Grafenberg Arr 86.43 40 *e*P **P 17 47 06.6 -0.9**
comp=Z,60nm,1.2s
GRA1 LR LR
comp=Z,46µm,20.0s
GRF Grafenberg Arr 86.43 40 *e*P **P 17 47 06.6 -0.9**
GRF pmax pmax
comp=Z,60nm,1.2s
GRF MLR MLR
comp=Z,46µm,20.0s
RGN Rugen 86.47 35 PFAKE 17 47 20.0 +13
RGN LR LR
comp=Z,18µm,20.0s
RGN Rugen 86.47 35 *e*P **P 17 47 06.4 -1.0**
RGN IAmb IAmb 17 47 09.3

comp=Z,216nm,1.1s
FUORN Ofenpass-Fuorn 86.53 43 *e*P **P 17 47 06.9 -1.4**
comp=Z,167nm,1.6s
FUORN LR LR
comp=Z,44μm,21.0s
RETA Reutte 86.66 42 *e*P **P 17 47 08.6 -0.1**
comp=Z,32nm,0.9s,SNR=15
ARCES ARCESS Array B 86.72 19 P **P 17 47 07.6 -0.9**
comp=Z,5.9nm,0.3s,baz=278,slow=4.6,SNR=21
ARCES PP **PP 17 50 26.9 -3.8**
comp=Z,8.9nm,0.9s,baz=302,slow=5.2,SNR=4.3
ARCES PKKPbc **PKKPbc 18 05 02.4 -3.2**
comp=Z,2.0nm,0.8s,baz=87,slow=2.0,SNR=6.2
ARCES LR LR 18 23 30.1
comp=Z,15μm,21.6s,baz=301,slow=34
ARE0 ARCESS Array S 86.72 19 PFAKE 17 47 20.0 +12
ARE0 LR LR
comp=Z,800nm,22.0s
ARE0 ARCESS Array S 86.72 19 *e*P **P 17 47 08.2 -0.3**
FETA Feichten 86.74 43 *e*PcP **P 17 47 09.2 -0.1**
comp=Z,23nm,0.9s,SNR=10
MOTA Moosalm 86.91 42 *e*P **P 17 47 09.5 -0.6**
comp=Z,4.3nm,0.7s
MOTA *e*PP **PP 17 50 28.9 -4.2**
comp=Z,12nm,1.2s
SQTA Sankt Quirin 87.01 42 *e*P **P 17 47 10.2 -0.3**
comp=Z,14nm,1.0s
CLL Collm 87.13 38 *e*P **P 17 47 09.8 -1.0**
comp=Z,62nm,1.4s
CLL LR LR
comp=Z,28μm,21.0s
CLL Collm 87.13 38⇑*i*P **P 17 47 10.1 -0.7**
comp=Z,39nm,1.2s
CLL *i* 17 47 28.9
CLL *i* 17 47 50.8
CLL *e*PP **PP 17 50 35.0 +0.6**
CLL *e*sPP 17 50 47.0
CLL *e*S **S 17 57 54.0 +6.9**
CLL *e*PS PS 17 58 55.0 +1.6
CLL *e*PPS PPS 17 59 13.0
CLL *e*SS **SS 18 03 36.0 +5.3**
CLL *e* 18 04 02.0
CLL *e* 18 07 48.0
CLL *e*SSSS 18 10 00.0
CLL *e*PKPPKPdf 18 13 14.0
CLL LmV 18 21 00.0
comp=Z,28μm,21.3s
CLL Lm MLR 18 26 00.0
comp=N,13μm,19.9s
CLL Lm MLR 18 26 00.0
comp=E,17μm,19.3s
CLL Lm MLR 18 26 00.0
comp=Z,24μm,19.4s
CLL Lmax 18 26 00.0
CLL Collm 87.13 38⇑*i*P **P 17 47 10.1 -0.7**
CLL *i* 17 47 28.9
CLL pmax pmax
comp=Z,39nm,1.2s
CLL MLR MLR
comp=Z,24μm,19.4s
VLC Villacollemand 87.18 46 PFAKE 17 47 20.0 +8.7
VLC LR LR
comp=Z,18μm,22.0s
NIUE Niue 87.19 250 PFAKE 17 47 20.0 +8.3
NIUE LR LR
comp=Z,16μm,20.0s
BSD Bornholm Skovb 87.20 34 *i* P **P 17 47 08.7 -2.3**
BSD MLR MLR
comp=Z,16μm,23.0s
BSD Bornholm Skovb 87.20 34 *i* P **P 17 47 08.7 -2.3**
comp=Z,16μm,23.0s
WATA Walderalm 87.23 42 *e*P **P 17 47 11.0 -0.6**
comp=Z,7.5nm,0.8s
RUE Ruedersdorf 87.28 37 *e*P **P 17 47 09.8 -1.6**
RUE IAmb IAmb 17 47 14.8
comp=Z,22nm,0.8s
WTTA Wattenberg 87.28 42 *i* P **P 17 47 11.5 -0.4**
comp=Z,15nm,1.4s
WTTA *e*PP **PP 17 50 32.3 -3.8**
comp=Z,19nm,1.5s
BRG Berggiesshubel 87.81 38 *i* P **P 17 47 13.7 -0.4**
comp=Z,51nm,1.9s
BRG *i* sP **sP 17 47 33.2 +1.9**
comp=Z,149nm,1.9s
BRG PP **PP 17 50 38.0 -2.0**
BRG S **S 17 57 58.0 +4.2**
BRG SS **SS 18 03 38.0 -2.7**
BRG *e*PKKP **PKKPdf 18 04 58.3 +2.4**
comp=Z,1.5nm,0.8s
comp=N,15μm,20.9s
comp=E,20μm,20.5s
comp=Z,31μm,20.8s
TAM Tamanrasset 87.86 67 PFAKE 17 47 30.0 +15
TAM LR LR
comp=Z,22μm,20.0s
TAMR Tamra 87.86 53 PFAKE 17 47 30.0 +15
TAMR LR LR
comp=Z,100nm,19.0s
ABTA Abfaltersbach 88.00 43 *e*PcP **P 17 47 14.8 -0.4**
comp=Z,30nm,1.0s,SNR=12
ABTA PP **PP 17 50 40.8 -0.9**
comp=Z,20nm,1.2s
KHC Kasperske Hory 88.06 40 *e*P **P 17 47 14.2 -1.2**
comp=Z,51nm,2.0s
KHC LR LR
comp=Z,17μm,22.0s
KHC Kasperske Hory 88.06 40 *e*P **P 17 47 15.0 -0.4**
KHC *e* 17 47 33.5
KHC *e*S **S 17 57 56.4 +0.1**
KHC MLR MLR
comp=Z,40μm,21.3s
KHC Kasperske Hory 88.06 40 *e*P **P 17 47 15.0 -0.4**
KHC *e*PCP **PcP 17 47 17.5 +0.4**
KHC *ex* x 17 47 33.5
KHC *e*S **S 17 57 56.4 +0.1**
KHC AMS AMS 18 21 20.0
comp=Z,40μm,21.3s
GEC2 GERESS Array S 88.22 40 *e*P **P 17 47 15.1 -1.1**
comp=Z,40nm,1.3s
GEC2 *e*PKKPdf **PKKPbc 18 04 59.8 -1.6**
GEC2 LR LR
comp=Z,46μm,21.0s
GEC2 GERESS Array S 88.22 40 *e*P **P 17 47 15.1 -1.1**
GEC2 pmax pmax
comp=Z,40nm,1.3s
GEC2 MLR MLR
comp=Z,46μm,21.0s
GERES GERESS Array B 88.22 40 P **P 17 47 15.8 -0.5**
comp=Z,6.9nm,0.8s,baz=298,slow=2.9,SNR=28
GERES PKKPbc **PKKPbc 18 05 00.9 -0.6**
comp=Z,1.3nm,0.9s,baz=40,slow=2.3,SNR=6.9
GERES PKPPKP 18 13 09.7
comp=Z,0.5nm,0.6s,baz=239,slow=0.6,SNR=3.7
GERES LR LR 18 21 53.5
comp=Z,43μm,21.6s,baz=271,slow=32
KEST Kesra 88.35 54 P **P 17 47 17.1 +0.1**
comp=Z,11nm,0.8s,baz=294,slow=2.7,SNR=8.0
KEST LR LR 18 22 06.3
comp=Z,20μm,21.9s,baz=235,slow=33
KEST Kesra 88.35 54 *e*P **P 17 47 16.0 -1.1**
comp=Z,80nm,1.0s
KEST LR LR
comp=Z,21μm,21.0s
PRU Pruhonice 88.43 39 *e*P **P 17 47 16.9 -0.1**
PRU *e* 17 47 35.3
PRU *e*S **S 17 57 58.4 -1.2**
PRU MLR MLR
comp=Z,42μm,20.0s
PRU Pruhonice 88.43 39 *e*P **P 17 47 16.9 -0.1**
PRU *ex* x 17 47 35.3
PRU *e*S **S 17 57 58.4 -1.2**
PRU AMS AMS 18 22 50.0
comp=Z,42μm,20.0s
KBA Koelnbreinsper 88.46 42 *e*PcP **P 17 47 17.0 -0.5**
comp=Z,13nm,0.9s,SNR=6.5
KBA *e*PP **PP 17 50 41.6 -3.9**
comp=Z,13nm,1.0s
GOPC GO Pecny, Ondr 88.60 39 *e*S **S 17 58 09.9 +8.6**
GOPC AMS AMS 18 23 30.0
comp=Z,45μm,19.7s
MYKA Terra Mystica 88.78 43 *e*P **P 17 47 18.2 -0.7**
comp=Z,11nm,1.0s,SNR=6.6
MOA Molln 88.85 41 *i* P **P 17 47 18.6 -0.6**
comp=Z,8.0nm,0.9s
CADS Cadrg 88.95 43 *i* P **P 17 47 18.9 -0.7**
TRI Trieste 89.11 44 PFAKE 17 47 30.0 +10
TRI LR LR
comp=Z,27μm,21.0s
UPC Upice 89.18 38 *e*P **P 17 47 20.4 -0.2**
UPC *e*S **S 17 58 09.4 +2.7**
UPC MLR MLR
comp=Z,21μm,20.8s
UPC Upice 89.18 38 *e*P **P 17 47 20.4 -0.2**
UPC *e*PCP **PcP 17 47 23.0 +1.0**
UPC *ex* x 17 47 40.7
UPC *e*S **S 17 58 09.4 +2.7**
UPC AMS AMS 18 23 10.0
comp=Z,21μm,20.8s
CHVC Chvalec 89.18 38 AMS AMS 18 27 00.0
comp=Z,15μm,19.5s
TREC Trest 89.21 40 *e*P **P 17 47 20.4 -0.4**
TREC *e*S **S 17 58 08.0 +0.9**
TREC MLR MLR
comp=Z,39μm,18.8s
TREC Trest 89.21 40 *e*P **P 17 47 20.4 -0.4**
TREC *ex* x 17 47 22.4
TREC *ex* x 17 47 43.9
TREC *e*S **S 17 58 08.0 +0.9**
TREC AMS AMS 18 25 30.0
comp=Z,39μm,18.8s
JAVS Javornik 89.26 43 *i* P **P 17 47 21.0 -0.2**
OSTC Ostas 89.29 38 *e*P **P 17 47 20.7 -0.4**
OSTC *ex* x 17 47 23.0
OSTC *ex* x 17 47 37.6
OSTC *e*S **S 17 58 07.7 -0.1**
OSTC AMS AMS 18 28 40.0
comp=Z,14μm,18.5s
OBKA Obir 89.41 43 *e*P **P 17 47 20.9 -1.0**
comp=Z,6.7nm,0.8s
OBKA *e*PP **PP 17 50 51.2 -1.8**
comp=Z,18nm,1.6s
DPC Dobruska-Polom 89.42 39 *e*P **P 17 47 21.5 -0.3**
DPC *e* 17 47 40.3
DPC *e*S **SKSac 17 57 53.4 +4.6**
DPC MLR MLR
comp=Z,25μm,20.5s
DPC Dobruska-Polom 89.42 39 *e*P **P 17 47 21.5 -0.3**
DPC *e*PCP **PcP 17 47 23.8 +0.7**
DPC *ex* x 17 47 40.3
DPC *ex* x 17 57 53.4
DPC AMS AMS 18 23 10.0
comp=Z,25μm,20.5s
LJU Ljubljana 89.53 43 *i* P **P 17 47 22.3 0.0**
LJU *e*PP **PP 17 50 53.5 -0.4**
SOKA Soboth 89.68 42 *e*P **P 17 47 22.1 -1.1**
comp=Z,6.5nm,0.8s
SOKA *e*PP **PP 17 50 55.4 +0.2**
comp=Z,15nm,1.3s
PERS Pernice 89.75 42 *e*P **P 17 47 20.1 -3.3**
AQU L'Aquila 89.77 47 PFAKE 17 47 30.0 +6.4
AQU LR LR
comp=Z,20μm,21.0s
ARSA Arzberg 89.84 42 *e*P **P 17 47 23.2 -0.6**
comp=Z,6.3nm,1.0s
KRUC Moravsky 89.85 40 *e*P **P 17 47 23.0 -0.8**
KRUC *e*PP **PP 17 50 54.8 -1.5**
KRUC *e*S **S 17 58 10.2 -2.8**
KRUC *e*PS PS 17 59 26.3 +2.5
KRUC *e*SS **SS 18 04 10.1 -0.3**
CONA Conrad Observa 89.86 41 *e*PcP **P 17 47 23.8 -0.1**
comp=Z,18nm,1.1s,SNR=9.7
VRAC Vranov 89.90 39 P **P 17 47 23.8 -0.2**
comp=Z,11nm,0.9s,baz=292,slow=5.3,SNR=12
VRAC LR LR 18 26 28.3
comp=Z,30μm,18.4s,baz=277,slow=35
VRAC Vranov 89.90 39⇑*i*P **P 17 47 24.0 0.0**
VRAC Vranov 89.90 39⇑P **P 17 47 24.0 0.0**
VRAC Vranov 89.90 39 *e*P **P 17 47 23.3 -0.7**
VRAC *e*PP **PP 17 50 55.8 -0.9**
VRAC *e*S **S 17 58 12.2 -1.3**
VRAC *e*PS **PS 17 59 27.2 +2.8**
VRAC *e*SS **SS 18 04 16.0 +4.8**
APA Apatity 90.22 19⇓*i*P **P 17 47 29.4 +4.4**
APA *i* 17 50 56.0
APA *i* PPP PPP 17 52 59.0
APA *i* 17 57 58.0
APA *i* S **S 17 58 21.0 +5.4**
APA *i* PS **PS 17 59 34.0 +6.9**
APA pmax pmax
comp=Z,4.0nm,1.2s
SLIT Slitere, Latvi 90.23 31 *e*P **P 17 47 23.2 -2.1**
SLIT IAmb IAmb 17 47 36.5
comp=Z,128nm,0.8s
MORC Moravsky Berou 90.34 39 *e*P **P 17 47 25.2 -0.8**
comp=Z,43nm,1.8s
MORC LR LR
comp=Z,42μm,20.0s
MORC Moravsky Berou 90.34 39⇑*i*P **P 17 47 25.3 -0.8**
MORC Moravsky Berou 90.34 39⇑P **P 17 47 25.3 -0.8**
MORC Moravsky Berou 90.34 39 *e*P **P 17 47 25.1 -1.0**
MORC *e*PP **PP 17 50 58.4 -1.8**
MORC *e*S **S 17 58 14.5 -3.1**
MORC *e*PS **PnS 17 59 31.6 +2.3**
MORC *e*SS **SS 18 04 21.8 +4.2**
SOP Sopron 90.38 41 EP **P 17 47 24.0 -2.2**
FINES FINESS Array B 90.43 26 P **P 17 47 24.7 -1.4**
comp=Z,3.9nm,0.6s,baz=279,slow=3.0,SNR=14
FINES PP **PP 17 50 58.8 -1.6**
comp=Z,5.4nm,0.8s,baz=316,slow=3.8,SNR=3.2
FINES PKKPbc **PKKPbc 18 04 57.3 +1.1**
comp=Z,2.5nm,0.8s,baz=88,slow=1.9,SNR=5.3
FINES LR LR 18 24 56.9
comp=Z,31μm,21.1s,baz=285,slow=34
LVZ Lovozero 90.43 19 PFAKE 17 47 40.0 +14
LVZ LR LR
comp=Z,21μm,22.0s
LVZ Lovozero 90.43 19⇓*e*P **P 17 47 25.5 -0.6**
LVZ pmax pmax
comp=Z,18nm,1.2s
LVZ MLR MLR
comp=Z,20μm,21.0s
MODS Modra-Piesok 90.62 40 *e*P **P 17 47 26.6 -0.8**
MODS pmax pmax
comp=Z,193nm,2.5s
MODS Modra-Piesok 90.62 40 *e*P **P 17 47 26.6 -0.8**
PBUR Paburg 90.66 32 *e*P **P 17 47 26.4 -0.9**
PBUR IAmb IAmb 17 47 47.6
comp=Z,45nm,1.0s
OKC Ostrava-Krasne 90.69 39 *e*P **P 17 47 27.6 -0.1**
OKC *e* 17 47 46.2
OKC *e*S S 17 58 11.2 -10
OKC MLR MLR
comp=Z,30μm,19.5s
OKC Ostrava-Krasne 90.69 39 *e*P **P 17 47 27.6 -0.1**
OKC *ex* x 17 47 46.2
OKC *ex* x 17 58 11.2
OKC AMS AMS 18 25 00.0
comp=Z,30μm,19.5s
JAVC Velka Javorina 90.72 40 *e*P **P 17 47 28.9 +1.0**
JAVC *e*PP **PP 17 51 00.1 -3.1**
JAVC *e*PS PS 17 59 39.8 +6.3
CLTB Caltabellotta 90.91 51 PFAKE 17 47 40.0 +11
CLTB LR LR
comp=Z,31μm,19.0s
TIH Tihany 91.49 42 EP P 17 47 26.0 -5.4
TIH EPP 17 51 10.0
TIH ES **S 17 58 32.1 +4.0**
TIH ESS 18 04 39.1
VYHS Vyhne 91.56 40 *e*P **P 17 47 32.0 +0.2**
VYHS Vyhne 91.56 40 *e*P **P 17 47 32.0 +0.2**
OJC Ojcow 91.57 38 *e*P **P 17 47 31.9 +0.2**
OJC Ojcow 91.57 38 *e*P **P 17 47 31.6 -0.1**
comp=Z,20nm,1.2s
OJC Ojcow 91.57 38 *e*P **P 17 47 31.9 +0.2**
CSKK Cskako 91.57 41 EP P 17 47 24.1 -7.7
CSKK Cskako 91.57 41 EP P 17 47 39.1 +7.3
CSKK EPP 17 51 17.1
CSKK ES **S 17 58 36.0 +7.1**
CSKK ESS 18 04 24.1
BEL Belsk 91.58 36 *e*P **P 17 47 32.1 +0.4**
BEL Belsk 91.58 36 *e*P **P 17 47 32.1 +0.4**
BLY Banja Luka 91.70 44 PFAKE 17 47 40.0 +7.6
BLY LR LR
comp=Z,21μm,19.0s
VAE Valguarnera 91.85 51 P **P 17 47 32.9 -0.5**
comp=Z,4.2nm,0.6s,baz=20,slow=12,SNR=2.5
PABE Paberze 91.92 32 *e*P **P 17 47 31.7 -1.5**
PABE IAmb IAmb 17 47 52.4
comp=Z,20nm,1.1s
VSU Vasula 92.04 29 *e*P **P 17 47 31.7 -2.0**
VSU IAmb IAmb 17 47 38.3
comp=Z,27nm,0.5s
SUW Suwalki 92.10 34 PFAKE 17 47 50.0 +16
SUW LR LR
comp=Z,17μm,20.0s
NIE Niedzica 92.15 39 *e*P **P 17 47 32.2 -2.2**
NIE *e*PP **PP 17 51 18.8 +4.3**
NIE Niedzica 92.15 39 *e*P **P 17 47 32.3 -2.2**
NIE *e* 17 51 18.8
MORH Mrgy, Hungar 92.20 42⇑EP **P 17 47 33.0 -1.7**
MORH EPP 17 51 13.1
MORH ES **S 17 58 30.0 -4.5**
WDD Wied Dalam 92.39 53 PFAKE 17 47 50.0 +14
WDD LR LR
comp=Z,16μm,21.0s
PSZ Piszkesteto 92.43 40 *e*P **P 17 47 35.7 -0.1**
comp=Z,41nm,1.2s
PSZ LR LR
comp=Z,24μm,21.0s
PSZ Piszkesteto 92.43 40⇓*i*P **P 17 47 35.9 +0.1**
PSZ Piszkesteto 92.43 40⇓P **P 17 47 35.9 +0.1**
MATE Matera 92.63 48⇑*i*P **P 17 47 35.8 -1.0**
SEY Seymchan 92.75 337 PKKPbc PKKPbc 18 04 47.2 -3.2
comp=Z,5.0nm,0.8s,baz=191,slow=8.1,SNR=7.9
SEY Seymchan 92.75 337*ce*P **P 17 47 36.6 -0.3**
IZAR Zarasai 92.99 31 *e*P **P 17 47 36.2 -1.9**
IZAR IAmb IAmb 17 47 41.2
comp=Z,8.3nm,0.9s
ISAL Salakas 93.01 32 IAmb IAmb 17 47 45.8
comp=Z,9.2nm,1.1s
PUL Pulkovo 93.06 27 *e*P **P 17 47 36.6 -1.7**
TIP Timpagrande 93.12 49 PFAKE 17 47 50.0 +11
TIP LR LR
comp=Z,32μm,20.0s
IIGN Ignalina 93.15 32 *e*P **P 17 47 38.2 -0.7**
IIGN IAmb IAmb 17 47 46.4
comp=Z,4.4nm,0.5s
IDID Didziasalis 93.43 32 *e*P **P 17 47 37.7 -2.4**
KWP Kalwaria Pacla 93.53 38 PFAKE 17 47 50.0 +9.2
KWP LR LR
comp=Z,137μm,20.0s
KOLS Kolonicke sedl 93.53 39 *e*P **P 17 47 41.1 +0.2**
KOLS Kolonicke sedl 93.53 39 *e*P **P 17 47 41.0 +0.2**
NACGM Naroch 93.64 32 *e*P **P 17 47 38.0 -3.1**
NACGM *e*PP **PP 17 51 26.0 +0.1**
NACGM *e*PS PS 18 00 14.0 +8.6
NACGM *e*SS SS 18 05 19.0 +15
NACGM *e*SSS SSS 18 08 44.0
NACGM *e*LQ LQ 18 18 12.0
NACGM *e*LR LR 18 20 20.0
NACGM LRM MLR 18 23 26.0
comp=Z,43nm,24.0s
UZH Uzhgorod 93.66 39 *e*P **P 17 47 41.2 -0.2**
UZH *e* 17 47 50.8
UZH *e* 17 47 56.0
UZH *e* 17 58 15.3
UZH *e*S **S 17 58 43.5 -3.8**
UZH *i* 18 00 00.4
PDG Podgorica 93.88 45⇑*i*P **P 17 47 42.2 -0.3**
TTG Podgorica 93.88 45 *e*P **P 17 47 41.7 -0.8**
comp=Z,23nm,1.3s
TTG LR LR
comp=Z,17μm,19.0s
TTG Podgorica 93.88 45 *e*P **P 17 47 41.7 -0.8**
TTG pmax pmax
comp=Z,23nm,1.3s
TTG MLR MLR
comp=Z,17μm,19.0s
TRPA Tarpa 94.00 39 EP **P 17 47 41.0 -1.9**
TRPA EPP 17 51 33.1
TRPA ⇓ES **S 17 58 46.0 -4.3**
TRPA ESS 18 04 55.1
SIRR Siria 94.14 41⇑*i*P **P 17 47 43.5 -0.2**
LVV L'vov 94.25 37 *e*P **P 17 47 43.3 -0.8**
LVV *e* 17 51 33.8
LVV *e* 17 58 18.0
LVV *e*S **S 17 58 48.7 -3.8**
LVV *e*PS PS 18 00 40.3 +28
LVV MLR MLR
comp=N,6μm,20.0s
LVV MLR MLR
comp=E,16μm,20.0s
LVV MLR MLR
comp=Z,18μm,20.0s
BZS Buzias 94.35 42⇑*i*P **P 17 47 43.6 -1.1**
BZS Buzias 94.35 42⇑P **P 17 47 43.6 -1.1**
DRGR 94.62 40⇓*i*P **P 17 47 45.7 -0.3**
DRGR 94.62 40⇓P **P 17 47 45.7 -0.3**
TIR Tirane 94.67 46 PFAKE 17 48 00.0 +14
TIR LR LR
comp=Z,13μm,22.0s
PET Petropavlovsk 94.72 326 *e*P **P 17 47 46.2 0.0**
comp=Z,35nm,1.1s
PET LR LR
comp=Z,8μm,22.0s
PET Petropavlovsk 94.72 326*ce*P **P 17 47 47.9 +1.8**
PET *e* 17 51 34.3
PET *e*S **S 17 58 55.2 -1.2**
PET *e*PS **PS 18 00 22.6 +5.3**
PET pmax pmax
comp=Z,33nm,0.8s
PET pmax pmax
comp=Z,2μm,20.5s
PET pmax pmax
comp=Z,2μm,22.3s
PET pmax pmax
comp=Z,2μm,18.0s
PET pmax pmax
comp=Z,2μm,18.7s
PEA0B Petropavlovsk- 95.20 327 *e*P **P 17 47 48.4 0.0**
comp=Z,68nm,1.4s
PEA0B LR LR
comp=Z,9μm,21.0s
PETK Petropavlovsk- 95.20 327 P **P 17 47 48.0 -0.4**
comp=Z,18nm,0.7s,baz=77,slow=9.6,SNR=28
PETK PP PP 17 51 28.3 -10
comp=Z,5.8nm,0.9s,baz=56,slow=5.0,SNR=3.6
PETK PKKPbc **PKKPbc 18 04 45.0 +1.3**
comp=Z,4.2nm,0.7s,baz=160,slow=1.2,SNR=9.7
PETK PKPPKP 18 12 54.9
comp=Z,2.8nm,1.0s,baz=212,slow=5.3,SNR=3.8
PETK LR LR 18 32 32.2
comp=Z,5μm,21.5s,baz=51,slow=37
PETK Petropavlovsk- 95.20 327 P **P 17 47 48.0 -0.4**
MA2 Magadan 95.25 334 P **P 17 47 47.5 -1.0**
comp=Z,16nm,0.8s,baz=68,slow=7.4,SNR=4.0
MA2 Magadan 95.25 334 *e*P **P 17 47 47.5 -1.0**
comp=Z,22nm,1.0s
MA2 LR LR
comp=Z,11μm,22.0s
MA2 Magadan 95.25 334*ce*P **P 17 47 47.7 -0.7**
MA2 pmax pmax
comp=Z,23nm,1.0s
MA2 MLR MLR
comp=Z,9μm,24.0s
BURAR Bucovina Array 95.86 39⇑*i*P **P 17 47 51.8 +0.1**
BURAR Bucovina Array 95.86 39⇑P **P 17 47 51.8 +0.1**
FNA Florina 95.94 46 PFAKE 17 48 00.0 +7.9
FNA LR LR
comp=Z,22μm,21.0s
KLMR Klimovskoe 96.28 23 *e*P **P 17 47 51.5 -1.6**
KLMR *e* 17 51 45.5
KLMR pmax pmax
comp=Z,6.0nm,0.7s
KLMR Klimovskoe 96.28 23 *e*P **P 17 47 51.5 -1.6**
KLMR AMP 17 47 58.7
comp=Z,6.0nm,0.7s
KLMR *e*PP **PP 17 51 45.6 -0.5**
RAO Raoul Island 96.39 242 PFAKE 17 48 10.0 +16
RAO LR LR
comp=Z,10μm,22.0s
VTS Vitosha 96.56 44 PFAKE 17 48 10.0 +15
VTS LR LR
comp=Z,11μm,19.0s
VTS Vitosha 96.56 44⇑*i*P **P 17 47 54.3 -0.7**
VTS Vitosha 96.56 44⇑P **P 17 47 54.3 -0.7**
VOIR 96.65 41⇓*i*P **P 17 47 58.2 +3.0**
VOIR 96.65 41⇓P **P 17 47 58.2 +3.0**
AKASG Malin Array Be 96.87 35 P **P 17 47 53.6 -2.4**
comp=Z,1.2nm,0.7s,baz=280,slow=4.2,SNR=5.1
AKASG PP **PP 17 51 48.8 -2.3**
comp=Z,4.2nm,1.0s,baz=297,slow=7.1,SNR=5.2
AKASG PKKPbc **PKKPdf 18 04 40.8 +0.8**

comp=Z,1.3nm,0.7s,baz=82,slow=2.4,SNR=6.7
AKASG LR LR 18 27 38.8
comp=Z,24μm,21.8s,baz=290,slow=33
AKASG Malin Array Be 96.87 35 *ce*P **P 17 47 57.2 +1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
AKBB Malin Array Si 96.87 35 *e*P **P 17 47 54.0 -2.0**
comp=Z,35nm,1.9s
AKBB *e*PP **PP 17 51 49.9 -1.2**
AKBB LR LR
comp=Z,26μm,21.0s
LIT Litokhoron 96.98 47 PFAKE 17 48 10.0 +13
LIT LR LR
comp=Z,10μm,20.0s
VNA3 Neumayer Olymp 97.01 161 Pdiff Pdif 17 47 56.2 0.0
SKR Severo-Kuril's 97.20 325⇑ *e*P Pdif 17 47 58.9 +1.4
MLR Muntele Rosu 97.20 41 P **P 17 47 57.1 -0.7**
comp=Z,4.7nm,0.9s,baz=142,slow=8.4,SNR=6.0
MLR PKKPbc **PKKPdf 18 04 42.8 +3.2**
comp=Z,2.4nm,0.6s,baz=121,slow=9.5,SNR=5.1
MLR LR LR 18 28 13.9
comp=Z,35μm,21.1s,baz=304,slow=33
MLR Muntele Rosu 97.20 41 *e*P **P 17 47 56.9 -0.9**
comp=Z,53nm,1.5s
MLR LR LR
comp=Z,34μm,20.0s
MLR Muntele Rosu 97.20 41⇓ *i*P **P 17 47 57.8 0.0**
MLR Muntele Rosu 97.20 41⇓ P **P 17 47 57.8 0.0**
AGG Agios Georgios 97.26 48 PFAKE 17 48 10.0 +12
AGG LR LR
comp=Z,17μm,22.0s
VNA1 Neumayer--Stat 97.30 161 Pdiff Pdif 17 47 59.5 +2.0
ITM Ithomi 97.62 50 PFAKE 17 48 10.0 +10
ITM LR LR
comp=Z,10μm,21.0s
VNA2 Neumayer--Watz 97.65 161 Pdiff Pdif 17 47 59.4 +0.3
baz=302,slow=5.0
PRGR Permogore 98.01 21 *e*P **P 17 47 58.2 -2.7**
PRGR pmax pmax
comp=Z,19nm,0.7s
KIS Kishinev 98.34 38 *e*P **P 17 48 02.0 -0.7**
KIS Kishinev 98.34 38 *i* PP **PP 17 52 04.0 +1.5**
comp=Z,2μm,14.0s
KIS Kishinev 98.34 38 *e*PPP PPP 17 54 10.0
KIS *e*SKS **SKSac 17 58 30.0 -7.5**
KIS *e*SKKS **SKKSac 17 59 08.0 +1.0**
KIS Kishinev 98.34 38 *e*PS PS 18 00 54.0 -3.1
KIS Kishinev 98.34 38 *e*P **P 17 48 02.0 -0.7**
KIS *i* 17 52 04.0
KIS *e*PPP PPP 17 54 10.0
KIS *e* 17 58 30.0
KIS *e*PS PS 18 00 54.0 -3.1
KIS *e*SS SS 18 06 08.0 -3.3
KIS pmax pmax
comp=Z,2μm,14.0s
OBN Obninsk 98.39 29 LR LR 18 32 00.6
comp=Z,3μm,19.0s,baz=294,slow=35
OBN Obninsk 98.39 29 *e*P **P 17 48 02.4 -0.3**
comp=Z,66nm,1.6s
OBN LR LR
comp=Z,13μm,20.0s
OBN Obninsk 98.39 29⇓ *e*P Pdif 17 48 03.9 +1.2
OBN *e* 17 51 58.3
OBN *e*PPP PPP 17 54 08.9
OBN *e*SS SS 18 06 15.0 +3.5
OBN *e*SSS SSS 18 10 02.9
OBN pmax pmax
comp=Z,8.0nm,0.8s
OBN MLR MLR
comp=Z,13μm,20.0s
MOS Moscow 98.53 28 *e*P **P 17 48 01.9 -1.4**
MOS *e* 17 48 20.3
MOS *e* 17 51 59.9
MOS MLR MLR
comp=N,12μm,20.0s
MOS MLR MLR
comp=E,14μm,20.0s
MOS MLR MLR
comp=Z,22μm,20.0s
NRIK Noril'sk 99.03 2 LR LR 18 33 58.9
comp=Z,30μm,21.4s,baz=347,slow=36
ALN Alexandroupoli 99.17 45 PFAKE 17 48 20.0 +13
ALN LR LR
comp=Z,8μm,20.0s
TIRR Tirgusor 99.23 41 PFAKE 17 48 20.0 +13
TIRR LR LR
comp=Z,108μm,22.0s
SNAA Sanae 99.24 161 Pdiff **Pdif 17 48 06.6 +0.4**
SNAA Sanae 99.24 161 *e*P **Pdif 17 48 05.9 -0.3**
comp=Z,50nm,1.5s
SNAA LR LR
comp=Z,5μm,22.0s
SNAA Sanae 99.24 161⇓ *e*P **Pdif 17 48 06.6 +0.4**
TARA Tarawa 99.54 273 PFAKE 17 48 20.0 +11
TARA LR LR
comp=Z,18μm,20.0s
SANT Santorini 100.55 49 PFAKE 17 48 20.0 +7.1
SANT LR LR
comp=Z,9μm,21.0s
MXZ Matakaoa Point 100.71 234 PFAKE 17 48 30.0 +17
MXZ LR LR
comp=Z,10μm,21.0s
H11N3 WAKE ISLAND Hyl 100.79 293 T T 19 40 50.2
baz=78,slow=74,SNR=4.2
H11N2 WAKE ISLAND Hyl 100.80 293 T T 19 40 50.8
baz=78,slow=74,SNR=4.3
H11N1 WAKE ISLAND Hyl 100.81 293 T T 19 40 52.6
baz=78,slow=74,SNR=3.7
BALB Balikesir 100.97 46 PFAKE 17 48 30.0 +15
BALB LR LR
comp=Z,37μm,21.0s
YAK Yakutsk 101.06 343 PFAKE 17 48 30.0 +16
YAK LR LR
comp=Z,11μm,22.0s
WAKE Wake Island 101.14 292 PFAKE 17 48 30.0 +14
WAKE LR LR
comp=Z,7μm,20.0s
H11S1 WAKE ISLAND Hyl 101.32 292 T T 19 41 21.8
baz=77,slow=74,SNR=16
H11S2 WAKE ISLAND Hyl 101.32 292 T T 19 41 18.7
baz=77,slow=74,SNR=16
H11S3 WAKE ISLAND Hyl 101.34 292 T T 19 41 20.1
baz=77,slow=74,SNR=8.9
QSPA South Pole Qui 101.71 180 *e*Pdif **Pdif 17 48 19.3 +1.9**
QSPA LR LR
comp=Z,5μm,20.0s
URZ Urewera 101.72 233 PFAKE 17 48 30.0 +12
URZ LR LR
comp=Z,7μm,20.0s
MANT Manisa 101.93 46 PFAKE 17 48 30.0 +11
MANT LR LR
comp=Z,44μm,20.0s
KARP Karpathos 102.15 50 PFAKE 17 48 30.0 +10
KARP LR LR
comp=Z,12μm,20.0s
BKZ Black Stump Fm 102.29 232 PFAKE 17 48 30.0 +10
BKZ LR LR
comp=Z,14μm,21.0s
BFZ Birch Farm 102.61 231 PFAKE 17 48 30.0 +8.2
BFZ LR LR
comp=Z,13μm,22.0s
MDUB Mudurnu 102.88 44 PFAKE 17 48 30.0 +6.8
MDUB LR LR
comp=Z,35μm,21.0s
HIZ Hauiti 103.51 233 PFAKE 17 48 40.0 +14
HIZ LR LR
comp=Z,8μm,22.0s
ISP Isparta 103.62 46 PFAKE 17 48 40.0 +13
ISP LR LR
comp=Z,12μm,20.0s
SNZO South Karori 103.82 230 PFAKE 17 48 40.0 +13
SNZO LR LR
comp=Z,15μm,20.0s
ANTO Ankara 104.24 44 PFAKE 17 48 40.0 +11
ANTO LR LR
comp=Z,12μm,20.0s
OUZ Omahuta 104.27 236 PFAKE 17 48 40.0 +11
OUZ LR LR
comp=Z,10μm,20.0s
ILGA Ilgaz 104.27 42 PFAKE 17 48 40.0 +10
ILGA LR LR
comp=Z,15μm,21.0s
ANN Anapa 104.64 37 *i* P **Pdif 17 48 27.4 -3.4**
ANN *e* 17 52 47.1
ANN *e* 17 59 05.7
ANN *e*SP SP 18 01 54.2 -4.2
ANN pmax pmax
comp=Z,31nm,1.2s
ANN MLR MLR
comp=N,11μm,21.0s
ANN MLR MLR
comp=Z,24μm,21.0s
ANN MLR MLR
comp=E,23μm,21.0s
KHZ Kahutara 104.75 229 PFAKE 17 48 40.0 +8.8
KHZ LR LR
comp=Z,8μm,21.0s
SBA Scott Base 104.80 192 PFAKE 17 48 40.0 +9.3
SBA LR LR
comp=Z,6μm,22.0s
BRTR Keskin Array B 104.88 43 PKiKP **PKiKP 17 52 47.0 -0.2**
comp=Z,1.9nm,0.9s,baz=243,slow=1.3,SNR=3.9
BRTR PKKPbc **PKKPbc 18 04 17.9 +1.9**
comp=Z,3.3nm,1.0s,baz=131,slow=3.5,SNR=9.3
THZ Tophouse 105.19 230 PFAKE 17 53 00.0 +12
THZ LR LR
comp=Z,14μm,20.0s
MQZ McQueen's Vall 105.44 228 PFAKE 17 53 00.0 +12
MQZ LR LR
comp=Z,19μm,22.0s
CRLZ Canterbury Las 105.46 228 PFAKE 17 53 00.0 +12
CRLZ LR LR
comp=Z,19μm,22.0s
LTZ Lake Taylor 105.69 229 PFAKE 17 53 00.0 +12
LTZ LR LR
comp=Z,8μm,19.0s
OXZ Oxford 105.88 228 PFAKE 17 53 00.0 +11
OXZ LR LR
comp=Z,13μm,21.0s
ARU Arti 106.31 19 PP **PP 17 52 54.0 -7.7**
comp=Z,1.9nm,0.8s,baz=315,slow=3.5,SNR=4.1
ARU Arti 106.31 19 PFAKE 17 53 00.0 +11
ARU LR LR
comp=Z,22μm,20.0s
RPZ Rata Peaks 106.60 228 PFAKE 17 53 00.0 +10
RPZ LR LR
comp=Z,15μm,20.0s
YSS Yuzh-Sakhalins 106.60 327 PFAKE 17 53 00.0 +10
YSS LR LR
comp=Z,6μm,22.0s
YSS Yuzh-Sakhalins 106.60 327 *e*P **Pdif 17 48 35.3 -4.2**
YSS *e* 17 53 09.8
YSS *e* 17 59 18.8
YSS *e*PPS PPS 18 02 23.1
YSS MLR MLR
comp=Z,7μm,24.0s
YSS MLR MLR
comp=N,6μm,24.5s
YSS MLR MLR
comp=E,8μm,24.0s
ODZ Otahua Downs 106.89 226 PFAKE 17 53 00.0 +9.5
ODZ LR LR
comp=Z,12μm,19.0s
LBZ Lake Benmore 107.23 227 PFAKE 17 53 00.0 +8.8
LBZ LR LR
comp=Z,14μm,22.0s
TSUM Tsumeb 107.45 107 PFAKE 17 53 00.0 +7.6
TSUM LR LR
comp=Z,8μm,20.0s
FOZ Fox Glacier 107.50 228 PFAKE 17 53 00.0 +8.4
FOZ LR LR
comp=Z,19μm,22.0s
MARNC Mare, Loyalty 107.97 251 PFAKE 17 53 10.0 +17
MARNC LR LR
comp=Z,8μm,22.0s
WKZ Wanaka 108.05 227 PFAKE 17 53 00.0 +7.3
WKZ LR LR
comp=Z,15μm,20.0s
KIV Kislovodsk 108.19 36 PFAKE 17 53 00.0 +6.8
KIV LR LR
comp=Z,13μm,21.0s
ASAJ Asahikawa 108.45 325 PKiKP **PKiKP 17 52 54.1 +0.6**
comp=Z,7.4nm,0.9s,baz=293,slow=7.3,SNR=4.9
ASAJ PKKPbc **PKKPbc 18 04 06.3 +1.4**
comp=Z,2.9nm,0.8s,baz=319,slow=10,SNR=5.3
KBZ Khabaz 108.45 36 PP **PP 17 53 11.1 -6.8**
comp=Z,6.6nm,1.0s,baz=354,slow=4.7,SNR=3.8
KBZ PKKPbc **PKKPbc 18 04 08.2 +3.3**
comp=Z,4.2nm,0.8s,baz=171,slow=4.9,SNR=5.7
ZEA Zeya 108.54 339 *e*P **Pdif 17 48 38.0 -10**
PINNC Pines Island, 108.62 250 PFAKE 17 53 10.0 +16
PINNC LR LR
comp=Z,6μm,22.0s
MLZ Mavora Lakes 108.67 226 PFAKE 17 53 10.0 +16
MLZ LR LR
comp=Z,13μm,20.0s
WHZ Wether Hill Ro 108.77 225 PFAKE 17 53 10.0 +16
WHZ LR LR
comp=Z,9μm,18.0s
DCZ Deep Cove 109.35 226 PFAKE 17 53 10.0 +15
DCZ LR LR
comp=Z,8μm,20.0s
MMAI Mount Meron Ar 109.38 49 PKKPbc PKKPbc 18 04 03.8 +2.1
comp=Z,2.9nm,0.8s,baz=211,slow=2.5,SNR=3.1
ERM Erimo 109.41 323 PFAKE 17 53 10.0 +15
ERM LR LR
comp=Z,7μm,22.0s
DZM Mont Dzumac 109.49 251 *e*SKSac **SKSac 17 59 31.7 +1.7**
comp=Z,3μm,23.7s
DZM *e*SP SP 18 02 53.0 +2.8
comp=Z,6μm,32.2s
DZM *e*SS **SS 18 08 49.0 +1.9**
comp=Z,27μm,28.8s
DZM Mont Dzumac 109.49 251 *e*LQ LQ 18 20 28.5
comp=Z,5μm,38.9s
DZM *e*LR LR 18 25 08.1
comp=Z,15μm,23.1s
DZM Mont Dzumac 109.49 251 PFAKE 17 53 10.0 +14
DZM LR LR
comp=Z,7μm,20.0s
ONTNC Ouen Toro 109.50 250 PFAKE 17 53 10.0 +14
ONTNC LR LR
comp=Z,9μm,20.0s
AKH Akhalkalaki 110.22 38 PFAKE 17 53 10.0 +13
AKH LR LR
comp=Z,9μm,21.0s
KLR Kul'dur 110.34 334 PKiKP **PKiKP 17 52 57.2 +0.3**
comp=Z,4.8nm,0.6s,baz=85,slow=5.2,SNR=16
KLR PKKPbc **PKKPbc 18 03 59.6 +0.6**
comp=Z,2.4nm,0.9s,baz=278,slow=3.8,SNR=4.8
KLR Kul'dur 110.34 334⇑ *i*PKIKP **PKiKP 17 52 57.7 +0.8**
GROC Groznyy 110.43 35 *i* PKIKP **PKiKP 17 52 55.8 -1.5**
GROC *e* 17 53 31.0
GROC *e* 18 00 05.5
GROC pmax pmax
comp=Z,7.0nm,0.4s
AKTO Aktyubinsk 110.97 23 PKKPbc PKKPbc 18 04 00.0 +2.9
comp=Z,2.7nm,0.9s,baz=104,slow=5.4,SNR=5.3
SUR Sutherland 111.22 120 PKKP PKKPbc 18 04 11.3 +15
comp=Z,28nm,1.1s,baz=118,slow=5.6,SNR=7.1
SUR Sutherland 111.22 120 PFAKE 17 53 10.0 +11
SUR LR LR
comp=Z,8μm,20.0s
MAK Makhachkala 111.53 34 *e*P **Pdif 17 49 04.7 +3.2**
MAK *e* 17 53 46.4
MAK *e* 17 56 04.7
MAK *e* 17 59 37.3
MAK *e*PS **PS 18 03 03.9 -9.1**
MAK pmax pmax
comp=Z,117nm,0.8s
GNI Garni 111.74 38 PFAKE 17 53 10.0 +10
GNI LR LR
comp=Z,9μm,20.0s
PATS Pohnpei 112.43 282 PFAKE 17 53 10.0 +8.2
PATS LR LR
comp=Z,15μm,22.0s
BRVK Borovoye 112.60 15 PFAKE 17 53 10.0 +8.9
BRVK LR LR
comp=Z,24μm,20.0s
BRVK Borovoye 112.60 15⇓ *i*PKIKP **PKiKP 17 53 03.7 +2.6**
AKT Akhty 112.64 35 *i* PKIKP **PKiKP 17 53 01.8 +0.1**
AKT *e* 17 53 48.7
AKT pmax pmax
comp=Z,13nm,1.7s
BVAR Borovoye Array 112.65 15 Pdiff **Pdif 17 49 07.4 +1.1**
comp=Z,0.2nm,0.5s,baz=323,slow=3.6,SNR=2.9
BVAR PKiKP **PKiKP 17 53 00.7 -0.5**
comp=Z,3.2nm,0.6s,baz=15,slow=0.2,SNR=9.2
BVAR PKKPbc **PKKPbc 18 03 52.8 +1.1**
comp=Z,1.4nm,0.7s,baz=137,slow=3.0,SNR=6.2
SYO Syowa Base 113.53 162⇑ *i*pPKiKP PKiKP 17 53 16.8 +15
USA0B Ussuriysk Arra 114.00 330 PFAKE 17 53 20.0 +16
USA0B LR LR
comp=Z,10μm,21.0s
USRK Ussuriysk Ar. 114.00 330 PKiKP **PKiKP 17 53 04.5 +0.4**
comp=Z,15nm,0.9s,baz=270,slow=4.3,SNR=13
USRK PKKPbc **PKKPbc 18 03 46.5 -0.3**
comp=Z,1.9nm,0.6s,baz=163,slow=4.3,SNR=4.4
ZAA0 Zalesovo Array 114.20 5 PFAKE 17 53 20.0 +16
ZAA0 LR LR
comp=Z,31μm,22.0s
ZALV Zalesovo Beam 114.20 5 PKiKP **PKiKP 17 53 03.7 -0.4**
comp=Z,10.0nm,0.6s,baz=290,slow=1.7,SNR=22
ZALV PKKPbc **PKKPbc 18 03 45.9 -0.5**
comp=Z,1.4nm,0.6s,baz=268,slow=4.3,SNR=4.5
HNR Honiara 114.24 265 PFAKE 17 53 20.0 +15
HNR LR LR
comp=Z,10μm,20.0s
MDJ Mudanjiang 114.82 332 PKP PKPdf 17 53 09.3 +3.7
MDJ Mudanjiang 114.82 332 PFAKE 17 53 20.0 +14
MDJ LR LR
comp=Z,9μm,20.0s
HIA Hailar 114.83 341 PFAKE 17 53 20.0 +14
HIA LR LR
comp=Z,18μm,20.0s
BOSA Boshof 115.03 116 *i* P **PKiKP 17 53 07.0 +0.5**
BOSA Boshof 115.03 116 PKP **PKPdf 17 53 06.0 -0.5**
comp=Z,26nm,0.9s,baz=315,slow=1.3,SNR=16
BOSA PKKPbc **PKKPab 18 03 45.8 -2.1**
comp=Z,7.9nm,0.9s,baz=130,slow=3.9,SNR=6.9
BOSA Boshof 115.03 116 *i* P **PKiKP 17 53 07.0 +0.5**
IRK Irkutsk 115.53 352 *e*PKIKP **PKiKP 17 52 59.7 -7.1**
IRK *e* 18 03 39.8
IRK pmax pmax
comp=Z,43nm,2.3s
MSHR Mys Shultsa 115.60 330⇓ *i*PKIKP **PKPdf 17 53 07.7 +0.6**
MJAR Matsushiro Arr 115.81 321 PKP **PKiKP 17 53 07.3 -0.5**
comp=Z,16nm,1.1s,baz=153,slow=0.4,SNR=17
MJAR PKKPbc **PKKPbc 18 03 42.3 +1.9**
comp=Z,3.4nm,0.8s,baz=199,slow=3.1,SNR=12
MAJO Matsushiro 115.81 321 *e*PKPdf **PKiKP 17 53 05.8 -1.9**
MAJO LR LR
comp=Z,5μm,21.0s
MAJO Matsushiro 115.81 321 *e*PKIKP **PKiKP 17 53 05.9 -1.9**
MAJO MLR MLR
comp=Z,5μm,21.0s
MAT Matsushiro 115.81 321 PKP **PKPdf 17 53 07.8 0.0**
MJB9 Matsu-Tunnel 115.81 321 *e*PKPdf **PKiKP 17 53 05.9 -1.9**
MJB9 LR LR
comp=Z,6μm,22.0s
TLY Talaya 116.16 353 *e*PKPdf **PKiKP 17 53 07.0 -1.0**
TLY LR LR
comp=Z,14μm,20.0s
TLY Talaya 116.16 353 *i* PKIKP **PKPdf 17 53 09.1 +1.1**
TLY *e* 17 54 11.4
TLY *e*PS **PKKPdf 18 04 00.3 -4.1**
TLY *e*PS PS 18 05 17.7 +83
TLY *e*SS SS 18 10 05.0 -6.6
TLY pmax pmax
comp=Z,22nm,1.1s
LHI Lord Howe Isla 116.36 241 PFAKE 17 53 20.0 +11
LHI LR LR
comp=Z,7μm,21.0s
MOY Mondy 116.47 354 *e*PKIKP **PKPdf 17 53 12.3 +3.6**
MOY pmax pmax
comp=Z,39nm,3.0s
KURK Kurchatov 116.56 10 *e*PKPdf **PKPdf 17 53 07.8 -1.0**
KURK LR LR
comp=Z,25μm,19.0s
KURK Kurchatov 116.56 10⇓ *i*PKIKP **PKPdf 17 53 08.3 -0.5**
KURK pmax pmax
comp=Z,11nm,1.0s
JHJ2 Mitsune 116.88 317 PFAKE 17 53 20.0 +10
JHJ2 LR LR
comp=Z,4μm,21.0s
LSZ Lusaka 117.12 101 PKP **PKiKP 17 53 11.1 +0.2**
comp=Z,14nm,1.0s,baz=262,slow=1.0,SNR=19
LSZ Lusaka 117.12 101 *e*PKPdf **PKPdf 17 53 09.8 -1.1**
LSZ LR LR
comp=Z,7μm,20.0s
LSZ Lusaka 117.12 101 *e*PKIKP **PKPdf 17 53 09.8 -1.1**
LSZ MLR MLR
comp=Z,7μm,20.0s
MBAR Mbarara 117.30 85 PKP **PKiKP 17 53 12.0 +0.6**
comp=Z,2.7nm,0.2s,baz=36,slow=1.4,SNR=4.9
MBAR PKKPbc **PKKPab 18 03 42.6 +3.7**
comp=Z,2.0nm,0.2s,baz=130,slow=3.6,SNR=3.8
MBAR Mbarara 117.30 85 *e*PKPdf **PKiKP 17 53 11.4 0.0**
MBAR LR LR
comp=Z,10μm,20.0s
CN2 Changchun 117.30 334 *e*PKP **PKiKP 17 53 12.5 +2.1**
CN2 *e*PP **PP 17 54 27.1 +6.5**
CN2 AMB AMB
comp=Z,900nm,15.0s
CN2 LR LR
comp=Z,6μm,19.0s
CN2 LR LR
comp=Z,5μm,19.0s
CN2 LR LR
comp=Z,6μm,20.0s
INU Inuyama 117.31 320 *e*PKPdf **PKiKP 17 53 10.8 +0.1**
INU LR LR
comp=Z,5μm,22.0s
ZAK Zakamensk 117.48 353 *e*PKIKP **PKPdf 17 53 10.1 -0.6**
ZAK pmax pmax
comp=Z,9.0nm,1.2s
MATP Matopo 117.79 107 *i* P **PKiKP 17 53 12.6 +0.5**
MATP Matopo 117.79 107 PKKPbc PKKPbc 18 03 41.7 +8.7
comp=Z,2.8nm,0.6s,baz=66,slow=2.3,SNR=8.4
MATP Matopo 117.79 107 *i* P **PKiKP 17 53 12.6 +0.5**
DGZ Jazzator, Alta 118.63 4 *d* *i*PKIKP **PKPdf 17 53 12.9 -0.1**
ULN Ulaanbaatar 119.35 349 *e*PKPdf **PKPdf 17 53 13.7 -0.8**
ULN LR LR
comp=Z,14μm,21.0s
ULN Ulaanbaatar 119.35 349 *c* *i*PKIKP **PKPdf 17 53 14.3 -0.2**
ULN pmax pmax
comp=Z,28nm,1.0s
ULN Ulaanbaatar 119.35 349 P **PKPdf 17 53 14.2 -0.3**
SNR=13
ULN P **PKPdf 17 53 14.2 -0.3**
SNR=13
SONM Songino Array 119.50 350 PKP **PKPdf 17 53 14.0 -0.7**
comp=Z,22nm,0.6s,baz=340,slow=1.3,SNR=49
SONM PKKPbc **PKKPab 18 03 30.0 -0.1**
comp=Z,6.3nm,0.9s,baz=193,slow=2.8,SNR=12
SONM Songino Array 119.50 350 PKIKP **PKPdf 17 53 14.0 -0.7**
SNY Shenyang 119.70 334 PKP **PKiKP 17 53 18.1 +3.0**
SNY PP **PP 17 54 41.3 +4.1**
SNY SKKS 18 01 31.3
SNY AMB AMB
comp=Z,1μm,15.3s
SNY LR LR
comp=Z,8μm,24.1s
SNY LR LR
comp=Z,13μm,23.0s
MAW Mawson 120.76 167 PKP **PKiKP 17 53 16.7 +0.4**
comp=Z,34nm,0.9s,baz=253,slow=5.3,SNR=16
MAW PKKPbc **PKKPab 18 03 19.6 -1.9**
comp=Z,2.3nm,0.9s,baz=358,slow=5.8,SNR=4.5
MAW Mawson 120.76 167 *e*PKPdf **PKPdf 17 53 16.3 0.0**
MAW LR LR
comp=Z,2μm,22.0s
GEYT Alibeck 120.79 32 PKP **PKPdf 17 53 16.2 -1.2**
comp=Z,8.2nm,0.6s,baz=272,slow=3.7,SNR=20
GEYT SKP 17 56 52.8
comp=Z,3.2nm,0.5s,baz=298,slow=4.1,SNR=4.8
GEYT PKKPbc **PKKPab 18 03 26.1 +1.8**
comp=Z,1.5nm,0.8s,baz=193,slow=6.1,SNR=4.2
GYA0B ALIBECK ARRAY 120.79 32 *e*PKPdf **PKPdf 17 53 16.1 -1.2**
GYA0B LR LR
comp=Z,15μm,21.0s
MAKZ Makanchi 120.89 9 PFAKE 17 53 30.0 +13
MAKZ LR LR
comp=Z,24μm,20.0s
MK31 Makanchi Array 120.95 9 *e*PKPdf **PKPdf 17 53 15.9 -1.5**
MK31 Makanchi Array 120.95 9 *e*PKIKP **PKPdf 17 53 15.9 -1.5**
MKAR Makanchi Array 120.95 9 PKP **PKPdf 17 53 15.7 -1.7**
comp=Z,2.1nm,0.4s,baz=354,slow=2.4,SNR=18
MKAR PKKPbc **PKKPab 18 03 24.6 +1.0**
comp=Z,2.0nm,0.9s,baz=146,slow=5.3,SNR=5.8
RABL Rabaul 120.98 272 *e*PKPdf **PKPdf 17 53 16.8 -1.5**
RABL LR LR
comp=Z,18μm,22.0s
KSRS Korea Array 121.08 328 PKP **PKPdf 17 53 17.9 0.0**
comp=Z,85nm,0.7s,baz=7.5,slow=1.4,SNR=202
KSRS SKP 17 56 54.0

comp=Z,5,6nm,0.9s,baz=4.9,slow=1.8,SNR=4.9
KSRS PKKPbc **PKKPbc** **18 03 21.2 -0.2**
comp=Z,7,5nm,1.0s,baz=231,slow=2.7,SNR=19
KS15 Wonju Array Si 121.11 328 *e*PKPdf **PKPdf** **17 53 17.7 -0.2**
KS15 *e*PKKPab **PKKPab** **18 03 23.4 +0.6**
KK31 Karatay Array 121.69 19 *e*PKPdf **PKPdf** **17 53 17.1 -1.8**
KK31 Karatay Array 121.69 19 *e*PKIKP **PKIKP** **17 53 17.1 -1.8**
KKAR Karatay Array 121.69 19 *e*PKPdf **PKPdf** **17 53 17.6 -1.3**
KKAR Karatay Array 121.69 19 *e*PKIKP **PKPdf** **17 53 17.6 -1.3**
RAYN Ar Rayn 121.84 53 PFAKE 17 53 30.0 +10
RAYN LR LR
comp=Z,23μm,22.0s
TJN Taejon 122.19 327*c i*PKIKP **PKPdf** **17 53 19.6 -0.4**
FURI Furi 122.27 72 PFAKE 17 53 30.0 +8.7
FURI LR LR
comp=Z,14μm,20.0s
JNU Nakatsue 122.57 322 PKP **PKPdf** **17 53 20.1 -0.9**
comp=Z,29nm,0.9s,baz=28,slow=4.0,SNR=16
JNU PKKPbc **PKKPab** **18 03 16.1 -0.4**
comp=Z,5.2nm,0.6s,baz=219,slow=5.9,SNR=13
JNU Nakatsue 122.57 322 *e*PKPdf **PKPdf** **17 53 19.1 -1.8**
JNU *e*PKKPab **PKKPab** **18 03 16.8 +0.2**
GUMO Guam 122.70 295 PKP **PKiKP** **17 53 21.6 -0.1**
comp=Z,54nm,0.7s,baz=12,slow=9.3,SNR=3.2
GUMO Guam 122.70 295 PFAKE 17 53 30.0 +8.3
GUMO LR LR
comp=Z,4μm,21.0s
USP Ospenovka 122.72 16 P **PKPdf** **17 53 20.9 0.0**
SNR=12
ARMA Armidale 122.80 241 PFAKE 17 53 30.0 +8.3
ARMA LR LR
comp=Z,8μm,21.0s
DL2 Dalian 122.95 334 PKP **PKPdf** **17 53 21.1 -0.3**
DL2 PP **PP** **17 55 03.3 +3.9**
DL2 SS SS 18 11 45.4 +5.7
DL2 AMB AMB
comp=Z,980nm,9.9s
DL2 LR LR
comp=Z,7μm,23.7s
DL2 LR LR
comp=Z,4μm,23.6s
DL2 LR LR
comp=Z,12μm,26.3s
CHMS Chumysh 123.03 16 P **PKiKP** **17 53 21.6 -0.1**
SNR=5.9
EKS2 Erkin-Say 123.08 17 P **PKPdf** **17 53 18.6 -3.1**
SNR=13
FRU1 Bishkek 123.18 16 *e*PKPdf **PKPdf** **17 53 21.1 -0.7**
FRU1 LR LR
comp=Z,24μm,21.0s
FRU1 Bishkek 123.18 16 *e*PKIKP **PKPdf** **17 53 21.1 -0.7**
FRU1 MLR MLR
comp=Z,24μm,21.0s
AAK Ala-Archa 123.30 16 PKP **PKiKP** **17 53 22.4 0.0**
comp=Z,8.2nm,0.8s,baz=140,slow=1.5,SNR=14
AAK PKKPbc **PKKPab** **18 03 14.4 +0.7**
comp=Z,1.6nm,0.4s,baz=163,slow=4.7,SNR=4.1
AAK Ala-Archa 123.30 16 *e*PKPdf **PKiKP** **17 53 22.5 0.0**
AAK LR LR
comp=Z,22μm,20.0s
AAK Ala-Archa 123.30 16*c i*PKIKP **PKPdf** **17 53 22.2 0.0**
AAK pmax pmax
comp=Z,16nm,1.0s
AAK Ala-Archa 123.30 16 P **PKiKP** **17 53 25.8 +3.3**
SNR=14
TKM2 Tokmak 2 123.33 15 P **PKiKP** **17 53 22.6 +0.1**
SNR=8.7
NAI Nairobi 123.36 84 PFAKE 17 53 30.0 +6.6
NAI LR LR
comp=Z,11μm,20.0s
KBK Karagaybulak 123.41 16 P **PKiKP** **17 53 23.0 +0.3**
SNR=7.3
AML Almayashu 123.54 17 P **PKiKP** **17 53 24.2 +1.0**
SNR=8.7
EIDS Eidsvold 123.64 247 PFAKE 17 53 40.0 +17
EIDS LR LR
comp=Z,7μm,21.0s
UCH Uchtor 123.69 16 P **PKiKP** **17 53 24.1 +0.5**
SNR=22
KMBO Kilima Mbogo 123.76 83 PKP **PKiKP** **17 53 25.3 +1.1**
comp=Z,3.0nm,1.0s,baz=340,slow=2.4,SNR=7.6
KMBO Kilima Mbogo 123.76 83 *e*PKPdf **PKiKP** **17 53 25.2 +1.1**
KMBO LR LR
comp=Z,8μm,20.0s
ULHL Ulahol 124.13 15 P **PKiKP** **17 53 24.8 +0.7**
SNR=18
BJI Beijing 124.15 339 PKP **PKiKP** **17 53 23.8 -0.1**
BJI PP **PP** **17 55 09.4 +2.1**
BJI SS SS 18 12 02.8 +8.2
BJI LR LR
comp=Z,8μm,23.5s
BJI LR LR
comp=Z,3μm,24.5s
BJT Baijiatuau 124.17 339 *e*PKPdf **PKPdf** **17 53 23.0 -0.7**
BJT LR LR
comp=Z,26μm,21.0s
BJT Baijiatuau 124.17 339 *e*PKIKP **PKPdf** **17 53 23.0 -0.7**
BJT MLR MLR
comp=Z,26μm,21.0s
CASY Casey 124.24 188 *e*PKPdf **PKiKP** **17 53 23.6 +0.4**
CASY LR LR
comp=Z,8μm,22.0s
CAN Canberra 124.31 235 PFAKE 17 53 40.0 +16
CAN LR LR
comp=Z,12μm,22.0s
WMQ Urumqi 124.50 5 PKP **PKPdf** **17 53 24.4 0.0**
WMQ PP **PP** **17 55 11.4 +1.9**
WMQ PKS 17 56 55.6
WMQ AMB AMB
comp=Z,2μm,11.8s
WMQ Urumqi 124.50 5 PFAKE 17 53 40.0 +15
WMQ LR LR
comp=Z,36μm,22.0s
BTK Batken 124.52 21 *e*PKPdf **PKPdf** **17 53 24.1 -0.4**
BTK *e*PP **PP** **17 55 07.2 -2.7**
BTK Batken 124.52 21 *e*PKIKP **PKPdf** **17 53 24.1 -0.4**
BTK *e* 17 55 07.2
HHC Hu-ho-hao-te 124.91 343 *e*PKP **PKiKP** **17 53 26.0 +0.4**
HHC PP **PP** **17 55 19.4 +6.9**
HHC SS SS 18 12 06.8 +2.5
HHC AMB AMB
comp=Z,2μm,5.5s
HHC LR LR
comp=Z,8μm,21.8s
HHC LR LR
comp=Z,23μm,20.8s
CHGR Chuyangaron 125.16 23 *e*PKPdf **PKPdf** **17 53 23.8 -2.0**
CHGR LR LR
comp=Z,54μm,22.0s
MANU Manus Island 125.22 276 PFAKE 17 53 40.0 +13
MANU LR LR
comp=Z,15μm,22.0s
DAMY Dhamar 125.24 63 PFAKE 17 53 40.0 +13
DAMY LR LR
comp=Z,13μm,22.0s
GAR Garm 125.28 22 *e*PKPdf **PKPdf** **17 53 25.3 -0.8**
GAR LR LR
comp=Z,38μm,21.0s
GAR Garm 125.28 22 *e*PKIKP **PKPdf** **17 53 25.3 -0.8**
GAR MLR MLR
comp=Z,38μm,21.0s
BTO Baotou 125.57 344 *e*PKP **PKPdf** **17 53 26.0 -0.5**
TOO Toolangi 126.59 232 *e*PKPdf **PKPdf** **17 53 28.6 +0.2**
TOO LR LR
comp=Z,7μm,22.0s
KSH Kashi 126.61 16 PKP **PKiKP** **17 53 29.8 +0.7**
KSH sPKP 17 53 43.3
KSH PP **PP** **17 55 26.1 +2.3**
KSH SKS **SKSdf** **18 00 38.3 +0.8**
KSH AMB AMB
comp=Z,2μm,7.5s
PMG Port Moresby 126.73 267 PKP **PKiKP** **17 53 32.7 +3.0**
comp=Z,62nm,1.2s,baz=328,slow=2.6,SNR=5.9
PMG Port Moresby 126.73 267 *e*PKPdf **PKPdf** **17 53 26.5 -2.7**
PMG LR LR
comp=Z,8μm,20.0s
PMG Port Moresby 126.73 267⇑*i*PKIKP **PKiKP** **17 53 31.6 +1.9**
TIA Tai'an 127.13 335 PKP **PKiKP** **17 53 29.9 -0.1**
TIY Taiyuan 127.52 341 *e*PKP **PKiKP** **17 53 33.0 +2.1**
TIY PP **PP** **17 55 34.3 +4.5**
TIY SKKS 18 02 22.1
TIY SS **SS** **18 12 42.5 +5.6**
TIY LR LR
comp=Z,11μm,19.7s
TIY LR LR
comp=Z,17μm,25.4s
CTA Charters Tower 128.25 254 PKP **PKiKP** **17 53 33.3 +0.6**
comp=Z,49nm,1.0s,baz=57,slow=1.1,SNR=7.9
CTA SKPbc **SKiKP** **17 56 59.7 -5.8**
comp=Z,28nm,1.0s,baz=70,slow=4.5,SNR=9.5
CTAO Charters Tower 128.25 254 *e*PKPdf **PKPdf** **17 53 31.4 -0.6**
CTAO LR LR
comp=Z,8μm,21.0s
JOW Kunigami 128.55 319 PKP **PKiKP** **17 53 33.6 +0.5**
comp=Z,12nm,1.1s,baz=144,slow=13,SNR=20
JOW Kunigami 128.55 319 *e*PKPdf **PKPdf** **17 53 31.1 -1.4**
JOW LR LR
comp=Z,4μm,21.0s
KBL Kabul 128.68 25 *e*PKPdf **PKPdf** **17 53 29.6 -3.2**
KBL LR LR
comp=Z,17μm,21.0s
GTA Gaotai 128.71 353 *e*PKP PKPpre 17 53 18.8
GTA PP **PP** **17 55 31.8 -5.7**
GTA PKS 17 56 55.6
GTA Gaotai 128.71 353 SS SS 18 12 39.5 -12
GTA AMB AMB
comp=Z,1μm,16.5s
GTA LR LR
comp=N,8μm,24.1s
GTA LR LR
comp=E,8μm,21.0s
GTA LR LR
comp=Z,16μm,24.4s
UOSS Minazif 128.87 44 *e*PKPpre PKPpre 17 53 23.1
UOSS LR LR
comp=Z,9μm,21.0s
HATD Hatta, Dubai 128.90 44 P **PKiKP** **17 53 37.0 +3.1**
SNR=5.8
SSE Sheshan 129.51 328 PKP **PKiKP** **17 53 35.3 +0.4**
SSE PP **PP** **17 55 46.1 +3.0**
SSE SS SS 18 13 03.6 +1.5
SSE AMB AMB
comp=Z,630nm,15.8s
SSE LR LR
comp=Z,1μm,22.7s
SSE LR LR
comp=Z,3μm,23.0s
SSE Sheshan 129.51 328 *e*PKPdf **PKPdf** **17 53 34.1 0.0**
SSE LR LR
comp=Z,8μm,19.0s
SOHO SOHO 129.63 45 P **PKiKP** **17 53 38.0 +2.6**
SNR=6.1
NJ2 Nanjing 129.89 331 *e*PKP **PKPdf** **17 53 34.3 -0.6**
NJ2 AMB AMB
comp=Z,1μm,10.4s
NJ2 LR LR
comp=Z,8μm,20.6s
NJ2 LR LR
comp=Z,11μm,21.7s
COEN Coen 131.06 262 *e*PKPdf **PKPdf** **17 53 37.7 +0.2**
COEN LR LR
comp=Z,4μm,20.0s
STKA Stephens Creek 131.06 238 PKP **PKiKP** **17 53 38.3 +0.3**
comp=Z,26nm,0.9s,baz=138,slow=0.8,SNR=27
STKA SKPbc **SKiKP** **17 57 05.0 -5.8**
comp=Z,3.3nm,0.8s,baz=326,slow=20,SNR=6.2
STKA Stephens Creek 131.06 238 *e*PKPdf **PKPdf** **17 53 37.1 +0.1**
STKA LR LR
comp=Z,3μm,22.0s
NIL Nilore 131.12 22 *e*PKPpre PKPpre 17 53 27.0
NIL *e*PKPdf **PKPdf** **17 53 36.8 -0.4**
NIL LR LR
comp=Z,8μm,22.0s
NIL Nilore 131.12 22 *e*PKHKP PKPpre 17 53 27.0
NIL *e* 17 53 36.8
NIL MLR MLR
comp=Z,8μm,22.0s
LZH Lanzhou 131.33 348⇑PKP **PKiKP** **17 53 39.4 +0.7**
LZH sPKP 17 53 55.0
LZH PP **PP** **17 56 00.3 +5.7**
LZH SKS **SKSdf** **18 00 47.4 +1.0**
LZH SKKS **SKKSac** **18 02 49.9 +0.4**
LZH SS **SS** **18 13 28.3 +4.5**
LZH AMB AMB
comp=Z,1μm,9.0s
WSAR Wadi Sarin 131.65 44 SKPbc **SKPab** **17 57 01.9 +0.4**
comp=Z,13nm,0.7s,baz=266,slow=3.6,SNR=19
JAY Jayapura 131.81 277 SKP 17 57 12.8
comp=Z,32nm,1.1s,baz=102,slow=4.5,SNR=3.6
XAN Xi'an 132.01 342 PKP **PKPdf** **17 53 39.0 +0.1**
XAN sPKP 17 53 53.1
XAN SKS **SKSdf** **18 00 45.5 -1.9**
XAN AMB AMB
comp=Z,1μm,14.4s
XAN LR LR
comp=Z,7μm,19.6s
XAN LR LR
comp=Z,16μm,21.6s
XAN Xi'an 132.01 342 *e*PKPdf **PKPdf** **17 53 38.5 -0.5**
XAN LR LR
comp=Z,18μm,21.0s
WHN Wuhan 133.19 334 PKP **PKiKP** **17 53 41.8 -0.5**
WHN PP **PP** **17 56 08.8 +2.1**
WHN PKS **PKSdf** **17 57 11.6 -6.0**
WHN LR LR
comp=Z,5μm,16.6s
DHRM DHARAMSHALA 133.44 20 *e*P **PKPdf** **17 53 36.5 -5.5**
DHRM IAMs_20 IAMs_20 18 20 08.9
comp=Z,1μm,13.7s
YOJ Yonaguni jima 133.57 321 *e*PKPpre PKPpre 17 53 28.4
YOJ LR LR
comp=Z,8μm,21.0s
YOJ Yonaguni jima 133.57 321 *e*PKHKP PKPpre 17 53 28.4
YOJ MLR MLR
comp=Z,8μm,21.0s
TATO Taipei 134.10 323 *e*PKPdf **PKPdf** **17 53 42.1 -0.9**
TATO LR LR
comp=Z,5μm,21.0s
YHNB Yeheng 134.40 323 PFAKE 17 54 00.0 +15
YHNB LR LR
comp=Z,6μm,22.0s
NACB Ninganchiao 134.64 322 *e*PKPpre PKPpre 17 53 28.6
NACB *e*PKPdf **PKPdf** **17 53 43.4 -0.6**
NACB LR LR
comp=Z,5μm,22.0s
SMLA Simla 134.76 19 *ex* PKPpre 17 53 35.2
SMLA IAMs_20 IAMs_20 18 30 43.4
comp=Z,6μm,30.1s
ENH Enshi 135.30 340 *e*PKPpre PKPpre 17 53 32.5
ENH *e*PKPdf **PKPdf** **17 53 44.5 -0.7**
ENH LR LR
comp=Z,12μm,22.0s
SSLB Suanglung 135.32 322 *e*PKPpre PKPpre 17 53 34.6
SSLB *e*PKPdf **PKPdf** **17 53 45.1 -0.3**
SSLB LR LR
comp=Z,5μm,21.0s
BBOO Buckleboo 135.33 235 *e*PKPpre PKPpre 17 53 33.3
BBOO *e*PKPdf **PKPdf** **17 53 45.0 0.0**
BBOO LR LR
comp=Z,5μm,18.0s
OPO Ambohidratompo 135.40 105 SKPbc **SKPab** **17 57 16.8 -1.3**
comp=Z,13nm,1.1s,baz=288,slow=3.3,SNR=5.9
YULB Yu-li 135.41 322 *e*PKPpre PKPpre 17 53 34.1
YULB *e*PKPdf **PKPdf** **17 53 45.3 -0.2**
YULB LR LR
comp=Z,3μm,21.0s
ABPO Ambohimpanom 135.42 105 PFAKE 17 54 00.0 +13
ABPO LR LR
comp=Z,8μm,21.0s
QZH Quanzhou 135.78 326⇑*i*PKP **PKPdf** **17 53 46.0 -0.1**
QZH PP **PP** **17 56 24.0 +0.5**
QZH PKS 17 57 20.0
QZH SS SS 18 14 20.9 +2.4
QZH LR LR
comp=Z,5μm,21.7s
QZH LR LR
comp=Z,3μm,20.4s
QZH LR LR
comp=Z,7μm,21.8s
DDI Dehra Dun 135.79 19 *e*P **PKPdf** **17 53 44.4 -1.8**
TWG Pinlang 135.97 321 PFAKE 17 54 00.0 +12
TWG LR LR
comp=Z,18μm,21.0s
KNMB Chin-men Tao 136.28 326 *e*PKPpre PKPpre 17 53 40.1
KNMB *e*PKPdf **PKPdf** **17 53 47.6 +0.5**
KNMB LR LR
comp=Z,7μm,21.0s
CD2 Chengdu 136.34 347 PKP **PKPdf** **17 53 46.0 -1.1**
CD2 sPKP 17 54 02.1
CD2 PP **PP** **17 56 26.1 -0.3**
CD2 SKS **SKSdf** **18 00 53.9 -1.3**
CD2 SKKS **SKKSac** **18 03 21.0 +1.3**
CD2 SS **SS** **18 14 23.8 -0.3**
CD2 AMB AMB
comp=Z,2μm,16.9s
CD2 LR LR
comp=Z,22μm,24.0s
NDI New Delhi 137.03 20 *e*P **PKPdf** **17 53 49.2 +0.8**
BHJ Bhuj 138.41 33 *e*P **PKPdf** **17 53 50.1 -1.0**
LSA Lhasa 138.76 2 PKP **PKPdf** **17 53 52.8 +0.6**
LSA PP **PP** **17 56 41.8 -0.1**
LSA Lhasa 138.76 2 *e*PKPpre PKPpre 17 53 42.3
LSA *e*PKPdf **PKPdf** **17 53 50.3 -1.9**
LSA LR LR
comp=Z,18μm,22.0s
LSA Lhasa 138.76 2 *e*PKHKP PKPpre 17 53 42.3
LSA *e* 17 53 50.3
LSA MLR MLR
comp=Z,18μm,22.0s
ASAR Alice Springs 139.37 247 PKhKP PKPpre 17 53 45.0
comp=Z,7.1nm,0.8s,baz=106,slow=3.5,SNR=25
ASAR PKP **PKPdf** **17 53 53.3 +0.5**
comp=Z,24nm,0.9s,baz=108,slow=3.0,SNR=36
ASAR SKPbc **SKiKP** **17 57 31.8 +3.6**
comp=Z,7.6nm,0.7s,baz=100,slow=2.4,SNR=6.7
WC2 Warramunga Arr 139.43 253 PFAKE 17 54 10.0 +15
WC2 LR LR
comp=Z,10μm,21.0s
WB2 Warramunga Arr 139.44 253 *e*PKPpre PKPpre 17 53 45.5
WB2 *e*PKPdf **PKPdf** **17 53 52.4 -0.7**
WB2 LR LR
comp=Z,11μm,22.0s
WRAB Tennant Creek 139.44 253 PFAKE 17 54 10.0 +15
WRAB LR LR
comp=Z,11μm,22.0s
WRAB Tennant Creek 139.44 253*de*PKIKP **PKPdf** **17 53 52.3 -0.7**
WRA Warramunga Arr 139.45 253 PKhKP PKPpre 17 53 45.5
comp=Z,3.4nm,0.5s,baz=101,slow=1.7,SNR=14
WRA PKP **PKPdf** **17 53 53.8 +0.8**
comp=Z,58nm,0.7s,baz=90,slow=2.4,SNR=43
WRA SKPbc **SKPab** **17 57 33.2 -2.6**
comp=Z,16nm,0.9s,baz=92,slow=2.5,SNR=7.0
WC1 Warramunga Arr 139.45 253 PFAKE 17 54 10.0 +15
WC1 LR LR
comp=Z,8μm,22.0s
GYA Guiyang 139.76 341⇑*i*PKP **PKPdf** **17 53 53.9 +0.3**
GYA sPKP 17 54 09.3
GYA PP **PP** **17 56 49.8 +1.9**
GYA PKS **PKSdf** **17 57 27.5 -2.4**
GYA SKS **SKSdf** **18 00 58.8 -2.4**
GYA SKKS **SKKSac** **18 03 37.9 -2.4**
GYA SS **SS** **18 15 03.8 -1.1**
GYA LR LR
comp=Z,7μm,27.1s
GYA LR LR
comp=Z,7μm,23.9s
GYA LR LR
comp=Z,9μm,28.3s
GZH Guangzhou 140.04 330 PKP **PKPdf** **17 53 51.0 -3.0**
GZH SS SS 18 15 09.5 +0.9
GZH LR LR
comp=Z,5μm,20.1s
GZH LR LR
comp=Z,6μm,21.8s
FAKI Fak Fak 140.10 280 *e*PKPdf **PKPdf** **17 53 53.0 -1.4**
FAKI LR LR
comp=Z,14μm,22.0s
FAKI Fak Fak 140.10 280 PKP **PKiKP** **17 53 56.5 -0.4**
HKPS Hong Kong Po S 140.32 328 PFAKE 17 54 10.0 +13
HKPS LR LR
comp=Z,16μm,21.0s
SIJI Sorong 140.48 283 SKPbc **SKiKP** **17 57 35.0 +4.3**
comp=Z,25nm,1.0s,baz=41,slow=7.5,SNR=5.9
TAWA Tawang 140.88 2 *e*P **PKPdf** **17 53 54.6 -1.4**
GTK Tadong 140.94 6 *e*P **PKPdf** **17 53 54.7 -1.1**
ZIRO ZIRO 140.96 359 *e*P **PKPdf** **17 53 54.2 -1.6**
JORH JORHAT 141.72 358 *e*P **PKPdf** **17 53 54.9 -2.1**
TEZP TEZPUR 141.87 0 *e*P **PKPdf** **17 53 54.5 -2.8**
BHPL Bhopal 142.05 24 *e*P **PKPdf** **17 53 54.9 -2.9**
SAUI Saumlaki 142.06 272 PFAKE 17 54 10.0 +9.2
SAUI LR LR
comp=Z,11μm,22.0s
KMI Kunming 142.14 345 PKP **PKPdf** **17 53 58.6 +0.5**
KMI pPKP pPKPdf 17 54 06.9 -4.2
KMI PP **PP** **17 57 05.1 +2.7**
KMI PKS 17 57 32.8
KMI SS SS 18 15 36.8 +4.1
KMI LR LR
comp=Z,9μm,26.0s
KMI LR LR
comp=Z,16μm,22.8s
KMI Kunming 142.14 345 PFAKE 17 54 10.0 +9.0
KMI LR LR
comp=Z,10μm,20.0s
MOKO MOKOCHONG 142.14 358 *e*P **PKPdf** **17 53 56.0 -1.9**
TGY Tagaytay City 142.20 312 PKP **PKPdf** **17 53 57.0 -1.2**
comp=Z,126nm,0.4s,baz=201,slow=13,SNR=5.3
TGY Tagaytay City 142.20 312 PKIKP **PKPdf** **17 53 57.0 -1.2**
MSEY Mahe Island 142.28 82 PFAKE 17 54 10.0 +8.6
MSEY LR LR
comp=Z,8μm,22.0s
MSEY Mahe Island 142.28 82 *i* PKIKP **PKiKP** **17 54 02.8 +1.4**
FORT Forrest 142.42 234 *e*PKPdf **PKPdf** **17 53 57.4 -0.6**
FORT LR LR
comp=Z,8μm,19.0s
DAV Davao City (W) 142.55 298 PFAKE 17 54 10.0 +8.1
DAV LR LR
comp=Z,4μm,20.0s
DAV Davao City (W) 142.55 298⇑*e*P **PKPdf** **17 53 52.0 -6.7**
CGP Cagayan de Oro 142.60 301 *e*P **PKPdf** **17 53 57.8 -1.1**
MTN Manton Dam 142.70 264 *e*PKPpre PKPpre 17 53 54.7
MTN *e*PKPdf **PKiKP** **17 54 00.7 -1.4**
MTN LR LR
comp=Z,8μm,20.0s
KOHI KOHIMA 142.75 358 *e*P **PKPdf** **17 53 56.2 -2.9**
SHL Shillong 142.90 2 *e*PKPdf **PKPdf** **17 53 58.2 -1.2**
SHL LR LR
comp=Z,15μm,21.0s
SHL Shillong 142.90 2 *e*PKIKP **PKPdf** **17 53 58.2 -1.2**
SHL MLR MLR
comp=Z,15μm,21.0s
SHL Shillong 142.90 2 *e*P **PKPdf** **17 53 57.9 -1.5**
SHL *ex* x 17 57 39.0
SHL IAMs_20 IAMs_20 18 22 00.9
comp=Z,3μm,23.7s
RER Riviere de l'E 143.19 110 PFAKE 17 54 10.0 +6.9
RER LR LR
comp=Z,7μm,22.0s
MSAI Masohi 143.41 280 PKP PKPbc 17 53 58.8 +1.3
TNTI Ternate 143.63 288 *e*PKPdf **PKPdf** **17 54 00.5 -0.2**
TNTI LR LR
comp=Z,5μm,22.0s
TNTI Ternate 143.63 288 PKP **PKPdf** **17 54 00.7 0.0**
BOM Bombay 143.65 33 *ex* PKPbc 17 53 57.4 -0.6
BOM IAMs_20 IAMs_20 18 57 31.0
comp=Z,6μm,27.4s
BOK Bokaro 144.01 11 *e*P PKPbc 17 53 59.9 +0.9
BOK IAMs_20 IAMs_20 18 29 25.0
comp=Z,2μm,24.9s
SGSI Sangihe 144.16 293 PKP **PKPdf** **17 54 01.6 0.0**
AAI Ambon 144.21 280 PKP **PKPdf** **17 54 01.0 -0.7**
POO Poona 144.50 32 *e*P **PKPab** **17 53 59.2 -1.3**
NGP Nagpur 144.57 23 *e*P **PKPab** **17 54 00.6 0.0**
NGP AMS AMS 19 02 42.8
comp=Z,8μm,29.1s
MRIV Mauritius Mete 144.94 109 *e*PKPdf **PKPdf** **17 54 02.6 -0.2**
MRIV LR LR
comp=Z,2μm,20.0s
QIZ Qiongzhong 145.18 331 *e*PKPbc **PKPdf** **17 54 03.4 +0.2**
QIZ LR LR
comp=Z,15μm,21.0s
BELO BELONIA 145.19 2 *e*P **PKPbc** **17 54 01.8 -0.9**
SLVN Son La 145.41 342 *e*PKPdf **PKPdf** **17 54 03.7 0.0**
SLVN LR LR
comp=Z,11μm,21.0s
BRDH Bariadhala 145.77 2 PKPbc **PKPab** **17 54 05.0 +0.1**
comp=Z,143nm,0.4s,baz=68,slow=10.0,SNR=7.7
SANI Sanana 145.86 284 PKP **PKPdf** **17 54 04.8 +0.2**
KMSI Cibinong 146.84 290 PKP **PKPbc** **17 54 07.4 -0.7**
GOA Goa 146.97 35 *e*P **PKPdf** **17 54 03.4 -3.0**
GOA IAmb IAmb 17 54 11.8
comp=Z,51nm,0.8s
BWNR Bhubaneshwar 147.40 13 *e*P **PKPdf** **17 54 04.0 -3.0**
BWNR IAMs_20 IAMs_20 18 44 07.5

comp=Z,2μm,15.8s
HYB Hyderabad 147.72 26 *i* PKP **PKPdf 17 54 08.0 +0.4**
HYB *e*PP **PP 17 57 36.0 +0.2**
FITZ Fitzroy Crossi 147.82 255 PKPbc **PKPdf 17 54 08.8 +1.1**
comp=Z,109nm,0.9s,baz=77,slow=1.9,SNR=51
FITZ Fitzroy Crossi 147.82 255 *e*PKPdf **PKPdf 17 54 08.3 +0.6**
PAYA Payao 148.35 347 PKP **PKPab 17 54 15.1 0.0**
LUWI Luwuk 148.56 288 *e*PKPdf **PKPdf 17 54 07.1 -1.9**
LUWI *e*PKPbc **PKPbc 17 54 12.4 -0.3**
LUWI LR LR
comp=Z,3μm,22.0s
CHTO Chiang Mai 149.07 349 *e*PKPdf **PKPdf 17 54 08.9 -0.8**
CHTO *e*PKPbc **PKPbc 17 54 13.2 -0.7**
CHTO LR LR
comp=Z,12μm,22.0s
CHTO Chiang Mai 149.07 349 *e*PKIKP **PKPdf 17 54 08.9 -0.8**
CHTO *e* 17 54 13.2
CHTO MLR MLR
comp=Z,12μm,22.0s
CMMT Chiang Mai 149.07 349 PKP **PKPdf 17 54 09.7 -0.1**
PANO Nakornpanom 149.07 338 PKP **PKPdf 17 54 10.3 +0.5**
SOEI Soe 149.18 271 *e*PKPdf **PKPdf 17 54 11.0 +0.8**
SOEI *e*PKPbc **PKiKP 17 54 15.9 +0.3**
SOEI LR LR
comp=Z,8μm,22.0s
SOEI Soe 149.18 271 PKP **PKPdf 17 54 11.2 +1.0**
NWAO Narrogin (SRO) 149.34 223 PKPbc **PKiKP 17 54 14.9 -0.4**
comp=Z,85nm,0.7s,baz=125,slow=3.6,SNR=19
NWAO Narrogin (SRO) 149.34 223 *e*PKPdf **PKPdf 17 54 11.3 +1.5**
NWAO LR LR
comp=Z,6μm,19.0s
NWAO Narrogin (SRO) 149.34 223 *e*PKHKP **PKPdf 17 54 11.3 +1.5**
NWAO MLR MLR
comp=Z,6μm,19.0s
CM31 Chiang Mai Arr 149.42 349 *e*PKPdf **PKPdf 17 54 09.9 -0.4**
CM31 *e*PKPbc **PKPbc 17 54 14.1 -0.6**
CMAR Chiang Mai Arr 149.42 349 PKP **PKPdf 17 54 10.5 +0.2**
comp=Z,104nm,1.0s,baz=313,slow=2.4,SNR=167
CMAR PKPbc **PKPbc 17 54 13.8 -1.0**
comp=Z,145nm,0.7s,baz=336,slow=3.1,SNR=70
APSI Ampana 149.56 289 PKP **PKPdf 17 54 11.9 +1.2**
BATI Baumata 149.82 270 PKPbc **PKiKP 17 54 18.4 +1.6**
comp=Z,306nm,0.9s,baz=275,slow=1.2,SNR=12
KHON Khomkaen 150.44 341 PKP **PKPdf 17 54 13.0 +1.0**
MPSI Mapaga 150.67 292 PKP **PKPdf 17 54 12.8 +0.4**
KKM Kota Kinabalu 150.89 306 *e*PKPdf **PKPdf 17 54 13.7 +0.8**
KKM *e*PKPbc **PKPbc 17 54 17.3 -1.2**
KKM LR LR
comp=Z,8μm,22.0s
MMRI Maumere 151.02 273 *e*PKPdf **PKPdf 17 54 13.5 +0.5**
MMRI *e*PKPbc **PKPbc 17 54 17.7 -1.0**
MMRI LR LR
comp=Z,2μm,21.0s
MMRI Maumere 151.02 273 PKP **PKPdf 17 54 14.2 +1.3**
EDFI Ende, Flores 151.57 273 PKP **PKPdf 17 54 11.7 -2.2**
DLV T Lat 151.87 326 *e*PKPdf **PKPbc 17 54 18.5 -2.4**
DLV LR LR
comp=Z,11μm,22.0s
TTSI Tana Toraja 152.02 286 PKP **PKPdf 17 54 13.6 -0.9**
BNSI Bone 152.16 283 PKP **PKPdf 17 54 12.5 -2.2**
MDRS Chennai 152.31 27 *e*P **PKPdf 17 54 14.2 -0.7**
SPSI Sidrap Palu 152.36 284 PKP **PKPdf 17 54 15.7 +0.7**
PSAD2 Pilbara Seismi 152.37 246 PFAKE 17 54 30.0 -1.8
PSAD2 LR LR
comp=Z,8μm,21.0s
BKSI Bulukumba 152.40 281 PKP **PKPdf 17 54 15.9 +0.9**
MORW Morawa 152.43 228 PFAKE 17 54 30.0 -1.7
MORW LR LR
comp=Z,10μm,20.0s
PSAC2 Pilbara Seismi 152.44 246 PFAKE 17 54 30.0 -2.1
PSAC2 LR LR
comp=Z,7μm,20.0s
PSAB3 Pilbara Seismi 152.47 246 PFAKE 17 54 30.0 -2.2
PSAB3 LR LR
comp=Z,7μm,20.0s
PSAA3 Pilbara Seismi 152.48 246 PFAKE 17 54 30.0 -2.2
PSAA3 LR LR
comp=Z,7μm,20.0s
PSAB2 Pilbara Seismi 152.48 246 PFAKE 17 54 30.0 -2.2
PSAB2 LR LR
comp=Z,8μm,22.0s
PSA00 Pilbara Seismi 152.49 246 *e*PKPdf **PKPdf 17 54 11.9 -3.1**
PSA00 *e*PKPbc **PKPbc 17 54 18.1 -3.7**
PSA00 LR LR
comp=Z,8μm,22.0s
PSAA2 Pilbara Seismi 152.49 246 PFAKE 17 54 30.0 -2.3
PSAA2 LR LR
comp=Z,8μm,22.0s
PSAC3 Pilbara Seismi 152.49 246 PFAKE 17 54 30.0 -2.3
PSAC3 LR LR
comp=Z,8μm,21.0s
PSAA1 Pilbara Seismi 152.49 246 PFAKE 17 54 30.0 -2.3
PSAA1 LR LR
comp=Z,8μm,22.0s
PSAB1 Pilbara Seismi 152.51 246 PFAKE 17 54 30.0 -2.3
PSAB1 LR LR
comp=Z,8μm,22.0s
PSAD3 Pilbara Seismi 152.53 246 PFAKE 17 54 30.0 -2.4
PSAD3 LR LR
comp=Z,9μm,22.0s
PSAC1 Pilbara Seismi 152.53 246 PFAKE 17 54 30.0 -2.4
PSAC1 LR LR
comp=Z,9μm,22.0s
PSAD1 Pilbara Seismi 152.53 246 PFAKE 17 54 30.0 -2.4
PSAD1 LR LR
comp=Z,8μm,20.0s
KAPI Kappang 152.68 282 PKPbc **PKiKP 17 54 23.7 +1.0**
comp=Z,81nm,0.9s,baz=222,slow=0.6,SNR=14
MBWA Marble Bar 152.70 246 PFAKE 17 54 30.0 -3.2
MBWA LR LR
comp=Z,8μm,20.0s
WSI Waingapu 153.06 272 PKP **PKPdf 17 54 17.5 +1.6**
CHBT CHBT 153.95 339 PKP **PKiKP 17 54 26.2 +0.9**
BKB Balikpapan 154.06 292 PKP **PKPdf 17 54 18.8 +1.4**
TRD Trivandrum 154.35 39 *e*P **PKPdf 17 54 14.6 -3.2**
PHET Kaeng Krachan 154.63 345 PKP **PKPdf 17 54 19.7 +1.5**
MTKI Muara Teweh, K 155.73 295 PKP **PKPdf 17 54 20.1 +0.4**
SBUM Sibu 156.22 305 *e*PKPdf **PKPdf 17 54 19.5 -0.9**
SBUM *e*PKPdif **PKPdf 17 54 24.7 +4.3**
SBUM LR LR
comp=Z,4μm,22.0s
PBA Port Blair 156.75 1 PFAKE 17 54 30.0 +9.0
PBA LR LR
comp=Z,27μm,22.0s
PBA Port Blair 156.75 1 *e*P PKPdf 17 54 18.3 -2.8
PBA IAMs_20 IAMs_20 18 26 04.8
comp=Z,4μm,29.3s
GIRL Giralia 156.99 239 PFAKE 17 54 30.0 +8.9
GIRL LR LR
comp=Z,11μm,20.0s
PALK Pallekele 157.52 33 PKP **PKPdf 17 54 22.1 0.0**
comp=Z,30nm,0.9s,baz=220,slow=0.2,SNR=6.3
PALK Pallekele 157.52 33 *e*PKPdf **PKPdf 17 54 20.4 -1.7**
PALK LR LR
comp=Z,9μm,20.0s
KSM Kuching 158.32 306 *e*PKPdf **PKPdf 17 54 22.3 -0.8**
KSM *e*PKPab **PKPab 17 54 57.4 0.0**
KSM LR LR
comp=Z,10μm,22.0s
JAGI Jajag, Banyuwa 158.88 277 PFAKE 17 54 30.0 +6.3
JAGI LR LR
comp=Z,2μm,22.0s
DGAR Diego Garcia 159.34 80 PFAKE 17 54 40.0 +16
DGAR LR LR
comp=Z,8μm,20.0s
TRTT Trang 159.43 341 PKP **PKPdf 17 54 25.1 +0.8**
SKLT Songkhla 159.72 338 PKP **PKPdf 17 54 28.1 +3.4**
KULM Kulim 161.43 335 *e*PKPdf **PKPdf 17 54 25.6 -0.9**
IPM Ipoh 162.00 333 *e*PKPdf **PKPdf 17 54 26.5 -0.7**
MYKOM Kota Tinggi 162.74 320 *e*PKPdf **PKPdf 17 54 27.9 0.0**
PSI Prapat 164.38 337 PKP **PKPdf 17 54 29.9 +0.3**
comp=Z,88nm,0.9s,baz=233,slow=2.4,SNR=18
PSI PKPab **PKPab 17 55 25.1 +1.4**
comp=Z,37nm,0.8s,baz=24,slow=7.3,SNR=5.8
PSI Prapat 164.38 337 *e*PKPdf **PKPdf 17 54 28.2 -1.4**
PSI *e*PKPab **PKPab 17 55 24.0 +0.3**
LEM Lembang 164.73 287 PKP **PKPdf 17 54 30.3 +0.4**
comp=Z,129nm,1.1s,baz=131,slow=3.5,SNR=16
LEM PKPab **PKPab 17 55 29.2 +3.5**
comp=Z,114nm,0.9s,baz=26,slow=9.4,SNR=7.5
CISI Cisompet, Garu 164.77 285 *e*PKPdf **PKPdf 17 54 28.4 -1.4**
CISI *e*PKPab **PKPab 17 55 27.9 +2.2**
BKNI Bangkinang 165.57 326 *e*PKPdf **PKPdf 17 54 28.4 -2.0**
GSI Gunungsitoli 166.25 340 *e*PKPdf **PKPdf 17 54 30.2 -0.8**

IDC ***15*** *17:35:47.2±1.0, 34°.26N×25°.08E, h0km, mb3.8/9, mb1 3.9/15, mb1mx3.7/66, mbtmp3.8/15, ML4.2/5, MS4.7/1, Ms1 4.7/1, ms1mx3.4/61, Error ellipse: s-maj=17.9km s-min=16.5km az=23.0*
NEIC ***15*** *17:35:49.5±1.9, 34°.19N×24°.99E, h16km±3km, mb4.2/16, Error ellipse: s-maj=11.4km s-min=7.6km az=207.0*
ATH ***15*** *17:35:51.2, 34°.29N×25°.06E, h31km±1km, ML3.2/8, Error ellipse: s-maj=2.5km s-min=1.4km az=345.0*
ISK ***15*** *17:35:51.2, 34°.35N×25°.14E, h11km, ML3.6/15*
ISCJB ***15*** *17:35:52.5±0.7, 34°.27N±0°.06×25°.07E±0°.03, h54km±5km, mb4.1/22, MS4.7/1, Error ellipse: s-maj=9.7km s-min=4.6km az=3.8*
THE ***15*** *17:35:54.2, 34°.42N×25°.08E, h11km±4km, ML3.2/2, Error ellipse: s-maj=5.5km s-min=1.7km az=317.0*
ISC 15 17:35:52.1±1.4,**34°.23N**±0°.06×**25°.12E**±0°.04,**h35**km±7km, **n116**,σ1°**22**/127,**mb4.0**/22,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.83**	**342**	P	**Pn**	**17 36 06.2**	**-1.1**
SIVA				S	**Sn**	**17 36 16.8**	**-1.6**
SIVA	**Sivas**	**0.83**	**342**	P	**Pn**	**17 36 06.3**	**-1.0**
SIVA				S	**Sn**	**17 36 17.9**	**-0.5**
SIVA				AML	AML	17 36 24.4	
	comp=E,12611μm,0.5s						
SIVA				AML	AML	17 36 26.2	
	comp=N,8903μm,0.5s						
TMBK	**Timbaki Herakl**	**0.89**	**341**	P	**Pn**	**17 36 07.6**	**-0.6**
LAST	**Lasithi**	**0.98**	**18**	P	**Pn**	**17 36 09.2**	**-0.3**
LAST	**Lasithi**	**0.98**	**18**	P	**Pn**	**17 36 09.3**	**-0.2**
LAST				S	**Sn**	**17 36 22.9**	**+0.7**
LAST				AML	AML	17 36 30.6	
	comp=E,2250μm,0.7s						
LAST				AML	AML	17 36 31.5	
	comp=N,2075μm,0.6s						
GVD	**Gavdhos**	**1.05**	**306**	PG	**Pn**	**17 36 10.9**	**+0.6**
GVD				SG	**Sb**	**17 36 25.1**	**-0.2**
GVD	**Gavdhos**	**1.05**	**306**	P	**Pn**	**17 36 11.0**	**+0.6**
GVD	**Gavdhos**	**1.05**	**306**	P	**Pn**	**17 36 09.9**	**-0.4**
GVD				AML	AML	17 36 31.2	
	comp=E,3924μm,0.3s						
GVD				AML	AML	17 36 35.0	
	comp=N,4141μm,0.4s						
IDI	**Anoyia**	**1.08**	**350**	Pn	**Pn**	**17 36 10.4**	**-0.4**
	comp=N,43nm,0.3s,baz=165,slow=21,SNR=9.7						
IDI				Sn	**Sn**	**17 36 25.1**	**+0.5**
	comp=N,71nm,0.3s,baz=285,slow=20,SNR=8.8						
IDI	**Anoyia**	**1.08**	**350**	P	**Pn**	**17 36 09.5**	**-1.3**
IDI	**Anoyia**	**1.08**	**350**	P	**Pn**	**17 36 09.5**	**-1.3**
IDI				S	**Sn**	**17 36 24.6**	**0.0**
KSTL	**Kastelli Herak**	**1.08**	**358**	P	**Pn**	**17 36 10.1**	**-0.6**
IACM	**Heraklion**	**1.08**	**358**	P	**Pb**	**17 36 11.7**	**-0.6**
NPS	**Neapolis**	**1.11**	**21**	P	**Pn**	**17 36 11.6**	**+0.3**
NPS	**Neapolis**	**1.11**	**21**	P	**Pn**	**17 36 11.4**	**+0.1**
NPS				AML	AML	17 36 37.5	
	comp=N,1534μm,0.6s						
NPS				AML	AML	17 36 37.7	
	comp=E,1751μm,0.6s						
STIA	**Sitia Lasithi**	**1.26**	**39**	P	**Pb**	**17 36 15.7**	**+0.3**
ZKR	**Zakros**	**1.27**	**45**	PN	**Pn**	**17 36 14.2**	**+0.8**
ZKR				SN	**Sb**	**17 36 31.2**	**-0.4**
ZKR	**Zakros**	**1.27**	**45**	P	**Pb**	**17 36 14.9**	**-0.7**
ZKR				S	**Sn**	**17 36 30.4**	**+1.2**
ZKR	**Zakros**	**1.27**	**45**	P	**Pb**	**17 36 14.7**	**-0.9**
ZKR				S	**Sb**	**17 36 31.9**	**+0.3**
ZKR				AML	AML	17 36 40.9	
	comp=E,1675μm,0.8s						
ZKR				AML	AML	17 36 41.1	
	comp=N,799μm,0.4s						
VAM	**Vamos**	**1.40**	**328**	P	**Pn**	**17 36 16.3**	**+1.1**
VAM	**Vamos**	**1.40**	**328**	P	**Pn**	**17 36 16.0**	**+0.8**
VAM				S	**Sn**	**17 36 33.3**	**+0.9**
VAM				AML	AML	17 36 41.2	
	comp=N,1693μm,0.4s						
VAM				AML	AML	17 36 47.0	
	comp=E,2474μm,0.8s						
IMMV	**Iera Moni Meta**	**1.55**	**323**	PN	**Pn**	**17 36 18.3**	**+1.1**
IMMV	**Iera Moni Meta**	**1.55**	**323**	P	**Pn**	**17 36 18.2**	**+1.0**
IMMV				AML	AML	17 36 57.6	
	comp=E,1715μm,0.8s						
IMMV				AML	AML	17 36 57.6	
	comp=N,1599μm,0.6s						
KARP	**Karpathos**	**2.14**	**51**	PN	**Pn**	**17 36 27.3**	**+2.0**
KARP	**Karpathos**	**2.14**	**51**	*e*Pn	**Pb**	**17 36 28.6**	**-1.6**
KARP	**Karpathos**	**2.14**	**51**	P	**Pb**	**17 36 28.8**	**-1.4**
KARP	**Karpathos**	**2.14**	**51**	P	**Pb**	**17 36 28.1**	**-2.1**
THR6	**Thira Island,**	**2.14**	**6**	P	**Pn**	**17 36 25.5**	**+0.2**
SANT	**Santorini**	**2.16**	**7**	PN	**Pn**	**17 36 26.2**	**+0.5**
SANT	**Santorini**	**2.16**	**7**	*e*Pn	**Pn**	**17 36 26.6**	**+1.0**
THR3	**Thira Island,**	**2.19**	**6**	P	**Pn**	**17 36 26.6**	**+0.5**
THR3	**Thira Island,**	**2.19**	**6**	P	**Pn**	**17 36 27.4**	**+1.3**
ANAF	**Anafi Island**	**2.19**	**14**	P	**Pn**	**17 36 27.0**	**+0.8**
THR5	**Thira Island,**	**2.20**	**5**	P	**Pn**	**17 36 26.9**	**+0.8**
THR8	**Santorini-Mono**	**2.20**	**8**	P	**Pn**	**17 36 26.5**	**+0.4**
ANKY	**Antikythira Is**	**2.21**	**318**	P	**Pn**	**17 36 27.3**	**+0.9**
IOSP	**Ios island**	**2.50**	**3**	P	**Pn**	**17 36 30.6**	**+0.3**
IOSP	**Ios island**	**2.50**	**3**	P	**Pn**	**17 36 30.8**	**+0.5**
MHLO	**Agia Marina, M**	**2.53**	**347**	P	**Pn**	**17 36 31.2**	**+0.6**
MHLA	**Plaka, Milos I**	**2.58**	**347**	P	**Pn**	**17 36 32.5**	**+1.1**
KYTH	**Kithira**	**2.65**	**321**	P	**Pn**	**17 36 34.6**	**+2.2**
KYTH				AML	AML	17 37 25.0	
	comp=E,311μm,0.6s						
KYTH				AML	AML	17 37 28.5	
	comp=N,256μm,0.6s						
AMGA	**Amorgos Island**	**2.68**	**13**	P	**Pn**	**17 36 33.5**	**+0.7**
APE	**Apeiranthos**	**2.86**	**7**	PN	**Pn**	**17 36 35.9**	**+0.6**
APE	**Apeiranthos**	**2.86**	**7**	P	**Pn**	**17 36 35.7**	**+0.5**
SERI	**Serifos**	**2.97**	**350**	P	**Pn**	**17 36 36.8**	**-0.1**
VLI	**Veliai**	**3.06**	**325**	P	**Pn**	**17 36 38.7**	**+0.8**
ARG	**Arkhangelos**	**3.17**	**50**	PN	**Pn**	**17 36 41.4**	**+2.0**
ARG	**Arkhangelos**	**3.17**	**50**	P	**Pn**	**17 36 42.0**	**+2.5**
DAT	**Datca**	**3.21**	**38**	PN	**Pn**	**17 36 41.5**	**+1.4**
BBRN	**Bozburun-Marma**	**3.43**	**44**	PN	**Pn**	**17 36 44.8**	**+1.7**
DID	**Didima**	**3.61**	**336**	P	**Pn**	**17 36 45.6**	**0.0**
VLY	**Voula,Athens**	**3.77**	**344**	P	**Pn**	**17 36 48.3**	**+0.5**
PYL	**PYLOS**	**3.83**	**315**	P	**Pn**	**17 36 50.4**	**+1.8**
DALY	**Dalyan (Mula)**	**3.87**	**47**	PN	**Pn**	**17 36 51.2**	**+2.0**
TURN	**Turunc**	**3.88**	**46**	PN	**Pn**	**17 36 47.0**	**-2.3**
YER	**Yerkesik**	**3.88**	**41**	PN	**Pn**	**17 36 51.3**	**+1.9**
ITM	**Ithomi**	**3.93**	**320**	PN	**Pn**	**17 36 52.4**	**+2.4**
ITM	**Ithomi**	**3.93**	**320**	*e*Pn	**Pn**	**17 36 51.0**	**+1.0**
TRIP	**Tripoli**	**4.03**	**326**	P	**Pn**	**17 36 53.4**	**+2.0**
FETY	**Fethiye**	**4.03**	**52**	PN	**Pn**	**17 36 52.9**	**+1.5**
KSL	**Kastellorizon**	**4.13**	**61**	P	**Pn**	**17 36 54.1**	**+1.4**
LTK	**Loutraki**	**4.17**	**336**	P	**Pn**	**17 36 53.5**	**+0.2**
AKAS	**Kas**	**4.18**	**60**	PN	**Pn**	**17 36 55.1**	**+1.5**
VIL2	**Platees**	**4.25**	**340**	P	**Pn**	**17 36 53.9**	**-0.5**
GUR	**Goura**	**4.33**	**330**	P	**Pn**	**17 36 56.8**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**4.34**	**30**	PN	**Pn**	**17 36 57.5**	**+1.8**
KORT	**Korkueli**	**5.08**	**55**	PN	**Pn**	**17 37 08.9**	**+3.0**
AGG	**Agios Georgios**	**5.29**	**336**	*e*Pn	**Pn**	**17 37 09.2**	**+0.6**
FNA	**Florina**	**7.19**	**337**	*e*Pn	**Pn**	**17 37 33.9**	**-0.9**
TIP	**Timpagrande**	**8.34**	**309**	*e*Pn	**Pn**	**17 37 50.9**	**+0.4**
TIP				*e*Sn	Sn	17 39 11.5	-12
MMAI	**Mount Meron Ar**	**8.66**	**95**	Pn	**Pn**	**17 37 55.2**	**+0.2**
	comp=N,1.4nm,0.3s,baz=296,slow=12,SNR=8.4						
MMAI				Sn	**Sn**	**17 39 28.1**	**-3.5**
	comp=N,4.1nm,0.3s,baz=286,slow=22,SNR=10.0						
BR101	**Keskin Array S**	**8.75**	**49**	*e*Pn	**Pn**	**17 37 55.9**	**-0.4**
BRTR	**Keskin Array B**	**8.75**	**49**	Pn	**Pn**	**17 37 55.9**	**-0.4**
	comp=N,0.1nm,0.3s,baz=238,slow=14,SNR=2.7						
EIL	**Elat**	**9.51**	**116**	Pn	**Pn**	**17 38 05.9**	**-0.7**
	comp=N,1.7nm,0.3s,baz=173,slow=4.1,SNR=18						
EIL				Sn	**Sn**	**17 39 48.3**	**-3.9**
	comp=N,1.0nm,0.3s,baz=90,slow=18,SNR=3.7						
AKASG	**Malin Array Be**	**16.74**	**9**	Pn	**Pn**	**17 39 43.8**	**+0.1**
	comp=N,1.5nm,0.3s,baz=200,slow=10,SNR=11						
AKBB	**Malin Array Si**	**16.74**	**9**	*e*Pn	**Pn**	**17 39 44.4**	**+0.7**
	comp=N,7.7nm,0.7s						
KBZ	**Khabaz**	**16.74**	**50**	Pn	**Pn**	**17 39 44.7**	**+0.9**
	comp=N,0.3nm,0.3s,baz=236,slow=10.0,SNR=5.3						
GEC2	**GERESS Array S**	**16.89**	**333**	*e*P	**P**	**17 39 48.1**	**+0.5**
	comp=N,4.7nm,0.6s						
GERES	**GERESS Array B**	**16.89**	**333**	Pn	**Pn**	**17 39 46.2**	**+0.4**
	comp=N,0.7nm,0.3s,baz=147,slow=11,SNR=28						
KHC	**Kasperske Hory**	**17.18**	**334**	*e*P	**P**	**17 39 50.2**	**-0.4**
	comp=N,1.8nm,1.1s						
KHC	**Kasperske Hory**	**17.18**	**334**	*e*P	**P**	**17 39 51.6**	**+1.0**
SENIN	**Lac Senin/Sanar**	**18.16**	**317**	*e*P	**P**	**17 40 02.9**	**+1.2**
	comp=N,8.8nm,1.5s						
CLL	**Collm**	**19.20**	**336**	*e*P	**P**	**17 40 13.0**	**+0.1**
ESDC	**Sonseca Array**	**23.81**	**292**	P	**P**	**17 41 02.8**	**+1.0**
	comp=N,0.1nm,0.3s,baz=99,slow=9.0,SNR=2.9						
HFS	**Hagfors**	**26.98**	**347**	P	**P**	**17 41 29.9**	**-0.3**
	comp=N,1.1nm,0.7s,baz=158,slow=9.0,SNR=8.5						
FIA0	**FINESS Array S**	**27.24**	**1**	*e*P	**P**	**17 41 31.2**	**-1.4**
FINES	**FINESS Array B**	**27.24**	**1**	P	**P**	**17 41 31.2**	**-1.4**
	comp=N,0.9nm,0.6s,baz=168,slow=9.8,SNR=4.6						
NC602	**NORSAR Array S**	**27.95**	**346**	*e*P	**P**	**17 41 38.8**	**-0.2**
NAO01	**NORSAR Array S**	**28.18**	**345**	*e*P	**P**	**17 41 40.8**	**-0.3**
NC405	**NORSAR Array S**	**28.26**	**346**	*e*P	**P**	**17 41 41.9**	**+0.2**
	comp=N,7.9nm,1.0s						
NB201	**NORSAR Array S**	**28.29**	**346**	*e*P	**P**	**17 41 41.2**	**-0.8**
NB200	**NORSAR Array S**	**28.29**	**346**	*e*P	**P**	**17 41 41.1**	**-1.0**
NOA	**NORSAR Array B**	**28.29**	**346**	P	**P**	**17 41 41.1**	**-1.0**
	comp=N,0.2nm,0.4s,baz=160,slow=8.5,SNR=2.8						
NBO00	**NORSAR Array S**	**28.38**	**345**	*e*P	**P**	**17 41 42.2**	**-0.6**
	comp=N,22nm,1.3s						
NC204	**NORSAR Array S**	**28.60**	**346**	*e*P	**P**	**17 41 44.3**	**-0.6**
	comp=N,58nm,1.5s						
EKA	**Eskdalemuir Ar**	**28.79**	**326**	P	**P**	**17 41 46.1**	**-0.4**
	comp=N,0.2nm,0.3s,baz=118,slow=9.0,SNR=2.8						
TOA1	**Torodi Ar. Sit**	**29.87**	**231**	*e*P	**P**	**17 41 56.0**	**-0.5**
TOA0	**Torodi Ar. Sit**	**29.87**	**231**	*e*P	**P**	**17 41 57.8**	**+1.3**
	comp=N,3.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**29.87**	**231**	P	**P**	**17 41 56.0**	**-0.5**
	comp=N,2.1nm,0.4s,baz=31,slow=8.7,SNR=18						
ARA0	**ARCESS Array S**	**35.36**	**0**	*e*P	**P**	**17 42 41.9**	**-2.0**
ARCES	**ARCESS Array B**	**35.36**	**0**	P	**P**	**17 42 41.9**	**-2.0**
	comp=N,1.8nm,0.9s,baz=174,slow=8.8,SNR=4.0						
KK31	**Karatay Array**	**36.16**	**62**	*e*P	**P**	**17 42 53.2**	**+2.1**
	comp=N,1.4nm,0.9s						
KKAR	**Karatay Array**	**36.16**	**62**	*e*P	**P**	**17 42 53.3**	**+2.1**
	comp=N,1.4nm,0.9s						
BORG	**Borgarnes**	**41.35**	**332**	LR	LR	18 02 05.5	
	comp=N,1μm,21.8s,baz=11,slow=38						
MAKZ	**Makanchi**	**44.11**	**56**	*e*P	**P**	**17 43 58.5**	**+1.6**
	comp=N,1.4nm,1.1s						
SPA0	**Spitsbergen Ar**	**44.22**	**357**	*e*P	**P**	**17 43 57.9**	**+0.5**
	comp=N,16nm,1.1s						
MK31	**Makanchi Array**	**44.32**	**56**	*e*P	**P**	**17 44 00.3**	**+1.6**
	comp=N,1.1nm,0.8s						
MK32	**Makanchi Array**	**44.32**	**56**	*e*P	**P**	**17 43 60.0**	**+1.3**
MKAR	**Makanchi Array**	**44.32**	**56**	P	**P**	**17 43 60.0**	**+1.3**
	comp=N,0.9nm,0.6s,baz=280,slow=6.1,SNR=12						
KBS	**Kingsbay**	**45.15**	**356**	*e*P	**P**	**17 44 05.0**	**+0.2**
	comp=N,34nm,1.4s						
ZAA0	**Zalesovo Array**	**45.68**	**46**	*e*P	**P**	**17 44 09.8**	**+0.5**
	comp=N,2.9nm,0.4s						
ZAA1	**Zalesovo Array**	**45.68**	**46**	*e*P	**P**	**17 44 09.6**	**+0.3**
ZALV	**Zalesovo Beam**	**45.68**	**46**	P	**P**	**17 44 09.6**	**+0.3**
	comp=N,3.2nm,0.3s,baz=267,slow=8.7,SNR=12						
SONA0	**Songino Array**	**60.11**	**50**	*e*P	**P**	**17 45 56.7**	**+0.7**
SONM	**Songino Array**	**60.11**	**50**	P	**P**	**17 45 56.7**	**+0.7**
	comp=N,0.6nm,0.4s,baz=283,slow=8.6,SNR=4.2						
BATG	**Bathurst New B**	**66.52**	**312**	*e*P	**P**	**17 46 36.9**	**-1.4**
	comp=N,40nm,1.6s						

IDC ***15*** *17:41:24.4±3.4, 34°.29N×25°.17E, h0km, mb3.9/2, mb1 3.5/7, mb1mx3.3/68, mbtmp3.4/7, ML3.3/5, Error ellipse: s-maj=59.8km s-min=20.6km az=46.0*
ISCJB ***15*** *17:41:25.7±1.9, 34°.2N±0°.1×25°.3E±0°.2, h25km, mb3.8/2, Error ellipse: s-maj=30.8km s-min=9.2km az=138.8*
ISC 15 17:41:26.5±1.9,**34°.2N**±0°.1×**25°.0E**±0°.2,**h25**km,**n8**,σ0°**60**/9, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.13**	**354**	Pn	**Pn**	**17 41 46.0**	**-0.8**
	18nm,0.3s,baz=168,slow=14,SNR=5.6						
IDI				Sn	**Sb**	**17 42 02.4**	**+0.6**
	15nm,0.3s,baz=356,slow=6.4,SNR=3.1						
MMAI	**Mount Meron Ar**	**8.72**	**95**	Pn	**Pn**	**17 43 31.0**	**-0.2**
	0.3nm,0.3s,baz=272,slow=11,SNR=3.1						
BRTR	**Keskin Array B**	**8.84**	**49**	Pn	**Pn**	**17 43 32.8**	**0.0**
	0.0nm,0.3s,baz=215,slow=18,SNR=2.3						
EIL	**Elat**	**9.54**	**115**	Pn	**Pn**	**17 43 42.5**	**+0.2**
	0.2nm,0.3s,baz=308,slow=18,SNR=3.5						
AKASG	**Malin Array Be**	**16.81**	**9**	Pn	**Pn**	**17 45 19.3**	**-0.8**
	0.5nm,0.3s,baz=198,slow=11,SNR=3.4						
GERES	**GERESS Array B**	**16.92**	**334**	Pn	**P**	**17 45 23.9**	**+0.5**
	0.1nm,0.3s,baz=146,slow=12,SNR=5.5						
SPITS	**Spitsbergen Ar**	**44.28**	**357**	P	**P**	**17 49 33.6**	**0.0**
	5.2nm,0.8s,baz=188,slow=7.3,SNR=2.6						
MKAR	**Makanchi Array**	**44.41**	**56**	P	**P**	**17 49 35.5**	**+0.4**
	0.2nm,0.4s,baz=267,slow=6.3,SNR=3.2						

IDC ***15*** *17:41:33.1±0.8, 12°.35N×86°.26W, h0km, mb4.5/4, mb1 4.6/7, mb1mx4.1/57, mbtmp4.4/7, ML3.4/3, Error ellipse: s-maj=63.7km s-min=12.6km az=55.0*
ISCJB ***15*** *17:41:37.5±0.8, 11°.63N±0°.09×87°.06W±0°.08, h60km±10km, mb4.5/4, Error ellipse: s-maj=19.3km s-min=5.4km az=40.9*
UCR ***15*** *17:41:37.7±2.0, 11°.62N×87°.05W, h39km±9km, ML4.6*
SNET ***15*** *17:41:39.1±1.2, 11°.66N×87°.17W, h34km±403km, ML4.8, MW3.8*
ISC 15 17:41:38.9±1.5,**11°.71N**±0°.10×**86°.98W**±0°.08,**h50**km±13km, **n30**,σ0°**79**/44,**mb4.4**/4,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.83**	**19**	*e*P	**Pn**	**17 41 54.6**	**+0.1**
CNGN				IAML		17 42 12.6	
	comp=Z,3μm,0

comp=Z,1.8nm,0.7s,baz=20,slow=1.8,SNR=10
ASAR Alice Springs 139.42 247 PKP **PKPdf 18 01 02.5 +0.9**
comp=Z,0.8nm,0.6s,baz=87,slow=2.6,SNR=3.5
WRA Warramunga Arr 139.50 253 PKP **PKPdf 18 01 02.7 +0.9**
comp=Z,2.6nm,0.9s,baz=107,slow=0.9,SNR=4.0
CMAR Chiang Mai Arr 149.46 349 PKP **PKPdf 18 01 19.8 +0.8**
comp=Z,3.1nm,0.7s,baz=343,slow=2.8,SNR=4.7
CMAR PKPbc **PKPbc 18 01 23.8 +0.3**
comp=Z,0.7nm,0.5s,baz=347,slow=3.7,SNR=4.3

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*IDC **15** 17:54:17.8±1.3, 34°.29N×25°.07E, h0km, mb3.7/2, mb1 3.7/6, mb1mx3.4/71, mbtmp3.6/6, ML3.8/4, MS4.3/1, Ms1 4.3/1, ms1mx3.2/47, Error ellipse: s-maj=24.8km s-min=18.9km az=80.0*
*ISCJB **15** 17:54:18.9±1.2, 34°.12N±0°.05×25°.15E±0°.05, h22km±8km, mb3.6/2, Error ellipse: s-maj=9.0km s-min=6.7km az=25.0*
*ATH **15** 17:54:20.7, 34°.28N×25°.10E, h27km±1km, ML3.1/5, Error ellipse: s-maj=4.1km s-min=1.7km az=352.0*
*THE **15** 17:54:21.5, 34°.34N×25°.12E, h0km±2km, ML3.1/4, Error ellipse: s-maj=3.7km s-min=1.3km az=173.0*
ISC 15 17:54:19.5±1.6, 34°.23N±0°.06×25°.11E±0°.04, h11km±10km, n25, σ0°60/36, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.82**	**343**	P	**Pg**	**17 54 35.6**	**+0.2**
SIVA				S	**Sb**	**17 54 46.7**	**-0.3**
	5μm,0.4s						
SIVA	**Sivas**	**0.82**	**343**	P	**Pg**	**17 54 35.6**	**+0.2**
SIVA				S	**Sb**	**17 54 47.7**	**+0.7**
SIVA				AML	AML	17 54 52.0	
	comp=N,5831μm,0.4s						
SIVA				AML	AML	17 54 55.0	
	comp=E,8611μm,0.3s						
LAST	**Lasithi**	**0.98**	**18**	P	**Pb**	**17 54 38.5**	**-0.1**
LAST				S	**Sb**	**17 54 51.9**	**+0.4**
	comp=E,760nm,0.6s						
LAST	**Lasithi**	**0.98**	**18**	P	**Pb**	**17 54 38.7**	**+0.2**
LAST				S	**Sn**	**17 54 52.6**	**-0.6**
LAST				AML	AML	17 54 58.5	
	comp=E,838μm,0.4s						
LAST				AML	AML	17 54 58.8	
	comp=N,1194μm,0.4s						
GVD	**Gavdhos**	**1.04**	**306**	P	**Pg**	**17 54 39.6**	**+0.1**
GVD				S	**Sn**	**17 54 55.8**	**+1.3**
	comp=N,1μm,0.4s						
GVD	**Gavdhos**	**1.04**	**306**	P	**Pg**	**17 54 39.9**	**+0.4**
GVD				S	**Sn**	**17 54 55.3**	**+0.8**
GVD				AML	AML	17 55 00.4	
	comp=N,2729μm,0.4s						
GVD				AML	AML	17 55 04.4	
	comp=E,3040μm,0.4s						
IDI	**Anoyia**	**1.07**	**351**	Pn	**Pg**	**17 54 39.8**	**-0.3**
	comp=E,46nm,0.3s,baz=196,slow=15,SNR=6.5						
IDI				Sn	**Sb**	**17 54 54.2**	**0.0**
	comp=E,70nm,0.3s,baz=327,slow=23,SNR=10						
NPS	**Neapolis**	**1.11**	**22**	P	**Pn**	**17 54 41.2**	**+0.1**
NPS	**Neapolis**	**1.11**	**22**	P	**Pn**	**17 54 41.2**	**+0.1**
NPS				S	**Sn**	**17 54 56.0**	**-0.4**
NPS				AML	AML	17 54 58.7	
	comp=N,653μm,0.6s						
NPS				AML	AML	17 55 00.6	
	comp=E,905μm,0.5s						
ZKR	**Zakros**	**1.27**	**46**	P	**Pg**	**17 54 44.5**	**+0.6**
ZKR				S	**Sn**	**17 55 01.0**	**+0.7**
	comp=E,345nm,0.5s						
ZKR	**Zakros**	**1.27**	**46**	P	**Pg**	**17 54 44.6**	**+0.6**
ZKR				S	**Sn**	**17 55 01.3**	**+0.9**
VAM	**Vamos**	**1.39**	**328**	P	**Pn**	**17 54 44.7**	**-0.2**
VAM	**Vamos**	**1.39**	**328**	P	**Pg**	**17 54 46.2**	**-0.1**
VAM				S	**Sg**	**17 55 04.1**	**-0.2**
VAM				AML	AML	17 55 13.5	
	comp=E,1359μm,0.6s						
VAM				AML	AML	17 55 13.9	
	comp=N,1089μm,0.6s						
IMMV	**Iera Moni Meta**	**1.54**	**323**	P	**Pb**	**17 54 48.2**	**+0.2**
IMMV	**Iera Moni Meta**	**1.54**	**323**	P	**Pb**	**17 54 48.4**	**+0.3**
IMMV				S	**Sn**	**17 55 07.1**	**+0.2**
ANAF	**Anafi Island**	**2.19**	**14**	P	**Pn**	**17 54 56.5**	**+0.6**
IOSP	**Ios island**	**2.49**	**3**	P	**Pn**	**17 55 00.3**	**+0.3**
AMGA	**Amorgos Island**	**2.68**	**14**	P	**Pn**	**17 55 03.7**	**+1.2**
MMAI	**Mount Meron Ar**	**8.67**	**95**	Pn	**Pn**	**17 56 24.4**	**-0.6**
	comp=N,1.5nm,0.3s,baz=288,slow=11,SNR=6.4						
EIL	**Elat**	**9.52**	**116**	Pn	**Pn**	**17 56 35.9**	**-0.7**
	comp=N,1.2nm,0.3s,baz=260,slow=6.9,SNR=8.3						
GNI	**Garni**	**16.71**	**64**	LR	LR	18 06 02.7	
	comp=N,922nm,18.9s,baz=227,slow=42						
AKASG	**Malin Array Be**	**16.74**	**9**	Pn	**Pn**	**17 58 13.1**	**-0.6**
	comp=N,0.8nm,0.3s,baz=199,slow=10,SNR=4.2						
GERES	**GERESS Array B**	**16.89**	**333**	Pn	**Pn**	**17 58 14.4**	**-1.4**
	comp=N,0.1nm,0.3s,baz=146,slow=11,SNR=4.6						
TORD	**Torodi Ar. Bea**	**29.86**	**231**	P	**P**	**18 00 27.3**	**+0.2**
	comp=N,0.9nm,0.4s,baz=29,slow=8.9,SNR=11						
MKAR	**Makanchi Array**	**44.33**	**56**	P	**P**	**18 02 29.8**	**+0.3**
	comp=N,0.3nm,0.5s,baz=269,slow=8.0,SNR=4.2						

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*IDC **15** 17:55:48.8±1.3, 34°.21N×24°.97E, h0km, mb4.0/4, mb1 4.1/8, mb1mx3.6/70, mbtmp4.0/8, ML4.2/4, Error ellipse: s-maj=25.3km s-min=18.8km az=86.0*
*ATH **15** 17:55:53.2, 34°.29N×25°.02E, h20km±3km, ML3.2/4, Error ellipse: s-maj=6.0km s-min=1.7km az=3.0*
*THE **15** 17:55:54.2, 34°.38N×25°.07E, h0km±4km, ML3.5/2, Error ellipse: s-maj=6.1km s-min=1.7km az=152.0*
ISC 15 17:55:51.0±1.8, 34°.19N±0°.07×25°.02E±0°.04, h15km±10km, n26, σ0°83/33, mb3.7/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.84**	**348**	P	**Pb**	**17 56 07.8**	**+0.4**
SIVA				S	**Sb**	**17 56 18.0**	**-0.5**
	8μm,0.6s						
SIVA	**Sivas**	**0.84**	**348**	P	**Pn**	**17 56 08.5**	**+0.1**
SIVA				S	**Sb**	**17 56 17.7**	**-0.8**
SIVA				AML	AML	17 56 25.1	
	comp=E,12366μm,0.6s						
SIVA				AML	AML	17 56 25.3	
	comp=N,11543μm,0.6s						
GVD	**Gavdhos**	**1.00**	**310**	P	**Pn**	**17 56 11.3**	**+0.7**
GVD				S	**Sn**	**17 56 27.4**	**+2.9**
	comp=N,2μm,0.5s						
GVD	**Gavdhos**	**1.00**	**310**	P	**Pn**	**17 56 11.2**	**+0.6**
GVD				S	**Sn**	**17 56 24.3**	**-0.2**
GVD				AML	AML	17 56 34.1	
	comp=N,2637μm,0.4s						
GVD				AML	AML	17 56 40.1	
	comp=E,3407μm,0.6s						
LAST	**Lasithi**	**1.04**	**21**	P	**Pb**	**17 56 10.7**	**-0.1**
LAST	**Lasithi**	**1.04**	**21**	P	**Pg**	**17 56 10.9**	**-0.2**
IDI	**Anoyia**	**1.10**	**354**	Pn	**Pg**	**17 56 12.0**	**-0.3**
	comp=E,53nm,0.3s,baz=169,slow=18,SNR=6.4						
IDI				Sn	**Sg**	**17 56 25.9**	**-0.8**
	comp=E,94nm,0.3s,baz=332,slow=19,SNR=8.7						
NPS	**Neapolis**	**1.18**	**24**	P	**Pg**	**17 56 14.1**	**+0.5**
ZKR	**Zakros**	**1.35**	**47**	P	**Pg**	**17 56 17.5**	**+0.5**
ZKR	**Zakros**	**1.35**	**47**	P	**Pg**	**17 56 17.7**	**+0.7**
ZKR				S	**Sg**	**17 56 34.8**	**+0.2**
ZKR				AML	AML	17 56 46.6	
	comp=E,1273μm,0.9s						
ZKR				AML	AML	17 56 48.2	
	comp=N,562μm,0.7s						
VAM	**Vamos**	**1.39**	**331**	P	**Pb**	**17 56 17.1**	**+0.4**
VAM	**Vamos**	**1.39**	**331**	P	**Pg**	**17 56 17.4**	**-0.4**
VAM				S	**Sg**	**17 56 36.4**	**+0.6**
VAM				AML	AML	17 56 48.8	
	comp=E,1582μm,0.7s						
VAM				AML	AML	17 56 48.8	
	comp=N,1318μm,0.7s						
IMMV	**Iera Moni Meta**	**1.53**	**326**	P	**Pg**	**17 56 20.2**	**-0.2**
IMMV	**Iera Moni Meta**	**1.53**	**326**	P	**Pg**	**17 56 20.9**	**+0.5**
ANKY	**Antikythira Is**	**2.19**	**320**	P	**Pb**	**17 56 29.4**	**-0.9**
KARP	**Karpathos**	**2.22**	**52**	P	**Pb**	**17 56 30.3**	**-0.6**
THR5	**Thira Island,**	**2.24**	**7**	P	**Pn**	**17 56 28.3**	**+0.7**
IOSP	**Ios island**	**2.54**	**5**	P	**Pn**	**17 56 32.4**	**+0.7**
MMAI	**Mount Meron Ar**	**8.74**	**95**	Pn	**Pn**	**17 57 57.5**	**+0.4**
	comp=N,1.8nm,0.3s,baz=289,slow=9.0,SNR=5.0						
EIL	**Elat**	**9.57**	**115**	Pn	**Pn**	**17 58 07.9**	**-0.3**
	comp=N,0.7nm,0.3s,baz=52,slow=12,SNR=3.7						
AKASG	**Malin Array Be**	**16.78**	**9**	Pn	**Pn**	**17 59 45.8**	**+0.4**
	comp=N,1.3nm,0.3s,baz=200,slow=10,SNR=6.0						
GERES	**GERESS Array B**	**16.89**	**333**	Pn	**P**	**17 59 49.5**	**+0.6**
	comp=N,0.8nm,0.3s,baz=145,slow=12,SNR=29						
NOA	**NORSAR Array B**	**28.30**	**346**	P	**P**	**18 01 43.5**	**-0.4**
	comp=N,0.1nm,0.4s,baz=161,slow=12,SNR=1.3						
TORD	**Torodi Ar. Bea**	**29.78**	**231**	P	**P**	**18 01 57.3**	**-0.1**
	comp=N,1.2nm,0.4s,baz=30,slow=8.0,SNR=12						
ARCES	**ARCESS Array B**	**35.40**	**0**	P	**P**	**18 02 44.0**	**-1.9**
	comp=N,0.6nm,0.6s,baz=171,slow=8.6,SNR=4.6						
MKAR	**Makanchi Array**	**44.41**	**56**	P	**P**	**18 04 01.6**	**+0.5**
	comp=N,0.6nm,0.5s,baz=273,slow=8.9,SNR=4.7						

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*IDC **15** 17:57:47.5±1.3, 34°.21N×25°.08E, h0km, mb3.9/3, mb1 3.8/7, mb1mx3.4/66, mbtmp3.7/7, ML3.8/4, Error ellipse: s-maj=23.7km s-min=19.2km az=79.0*
*ISCJB **15** 17:57:49.9±1.6, 34°.10N±0°.04×25°.21E±0°.05, h31km±12km, mb4.1/6, Error ellipse: s-maj=7.8km s-min=6.3km az=32.1*
*NEIC **15** 17:57:49.4±2.0, 34°.13N×25°.25E, h14km±7km, mb4.3/4, Error ellipse: s-maj=14.4km s-min=5.2km az=216.0*
*THE **15** 17:57:51.9, 34°.34N×25°.12E, h0km±3km, ML3.2/3, Error ellipse: s-maj=5.7km s-min=1.2km az=156.0*
*ATH **15** 17:57:54.3, 34°.51N×25°.09E, h28km±1km, ML2.9/7, Error ellipse: s-maj=6.4km s-min=1.3km az=352.0*
ISC 15 17:57:51.2±1.6, 34°.22N±0°.07×25°.18E±0°.04, h24km±12km, n40, σ1°17/48, mb4.2/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.85**	**339**	P	**Pb**	**17 58 05.7**	**-1.7**
SIVA				S	**Sb**	**17 58 17.3**	**-1.1**
	5μm,0.5s						
SIVA	**Sivas**	**0.85**	**339**	P	**Pb**	**17 58 05.7**	**-1.7**
SIVA				AML	AML	17 58 37.9	
	comp=N,6086μm,0.4s						
SIVA				AML	AML	17 58 40.4	
	comp=E,8311μm,0.6s						
LAST	**Lasithi**	**0.97**	**15**	P	**Pb**	**17 58 09.0**	**-0.5**
LAST				S	**Sn**	**17 58 23.1**	**+0.5**
	comp=E,790nm,0.8s						
LAST	**Lasithi**	**0.97**	**15**	P	**Pb**	**17 58 09.0**	**-0.5**
LAST				AML	AML	17 58 30.3	
	comp=E,1335μm,0.8s						
LAST				AML	AML	17 58 33.2	
	comp=N,1077μm,0.8s						
GVD	**Gavdhos**	**1.09**	**305**	P	**Pn**	**17 58 10.9**	**-0.1**
GVD				S	**Sn**	**17 58 26.5**	**+1.1**
	comp=N,1μm,0.6s						
GVD	**Gavdhos**	**1.09**	**305**	P	**Pn**	**17 58 11.1**	**0.0**
GVD				S	**Sb**	**17 58 25.0**	**-0.3**
GVD				AML	AML	17 58 38.8	
	comp=E,2957μm,0.4s						
GVD				AML	AML	17 58 46.2	
	comp=N,2633μm,0.3s						
IDI	**Anoyia**	**1.09**	**348**	Pn	**Pn**	**17 58 10.3**	**-0.9**
	comp=N,26nm,0.3s,baz=352,slow=14,SNR=5.0						
IDI				Sn	**Sn**	**17 58 25.6**	**0.0**
	comp=N,39nm,0.3s,baz=72,slow=18,SNR=6.2						
IDI	**Anoyia**	**1.09**	**348**	P	**Pn**	**17 58 09.4**	**-1.8**
NPS	**Neapolis**	**1.10**	**19**	P	**Pb**	**17 58 11.5**	**-0.1**
NPS	**Neapolis**	**1.10**	**19**	P	**Pn**	**17 58 11.3**	**+0.1**
NPS				AML	AML	17 58 38.5	
	comp=N,913μm,0.5s						
NPS				AML	AML	17 58 51.6	
	comp=E,1133μm,0.6s						
ZKR	**Zakros**	**1.24**	**44**	P	**Pb**	**17 58 14.9**	**+1.0**
ZKR				S	**Sb**	**17 58 31.2**	**+1.7**
ZKR				AML	AML	17 58 45.0	
	comp=E,1425μm,0.5s						
ZKR				AML	AML	17 58 54.3	
	comp=N,492μm,0.5s						
VAM	**Vamos**	**1.43**	**326**	P	**Pn**	**17 58 16.1**	**+0.4**
VAM				AML	AML	17 58 57.9	
	comp=E,1427μm,0.7s						
VAM				AML	AML	17 58 58.8	
	comp=N,1031μm,0.6s						
IMMV	**Iera Moni Meta**	**1.58**	**322**	P	**Pb**	**17 58 19.3**	**-0.5**
IMMV				AML	AML	17 58 59.8	
	comp=N,790μm,0.5s						
IMMV				AML	AML	17 59 04.9	
	comp=E,983μm,0.8s						
KARP	**Karpathos**	**2.10**	**50**	*e*Pn	**Pb**	**17 58 27.2**	**-1.5**
KARP	**Karpathos**	**2.10**	**50**	P	**Pb**	**17 58 28.8**	**+0.1**
SANT	**Santorini**	**2.16**	**6**	*e*Pn	**Pn**	**17 58 26.5**	**+0.7**
ANAF	**Anafi Island**	**2.19**	**13**	P	**Pn**	**17 58 27.3**	**+1.2**
ANKY	**Antikythira Is**	**2.25**	**317**	P	**Pn**	**17 58 28.4**	**+1.5**
IOSP	**Ios island**	**2.50**	**2**	P	**Pn**	**17 58 31.1**	**+0.7**
MHLO	**Agia Marina, M**	**2.55**	**346**	P	**Pn**	**17 58 31.6**	**+0.5**
AMGA	**Amorgos Island**	**2.67**	**12**	P	**Pn**	**17 58 33.8**	**+1.0**
KYTH	**Kithira**	**2.69**	**320**	P	**Pn**	**17 58 35.0**	**+2.1**
SERI	**Serifos**	**2.99**	**349**	P	**Pn**	**17 58 37.4**	**+0.2**
ITM	**Ithomi**	**3.96**	**319**	*e*Pn	**Pn**	**17 58 53.0**	**+2.4**
MMAI	**Mount Meron Ar**	**8.62**	**95**	Pn	**Pn**	**17 59 54.2**	**-0.3**
	comp=E,0.7nm,0.3s,baz=288,slow=10,SNR=3.1						
MMAI				Sn	**Sn**	**18 01 28.0**	**-3.0**
	comp=E,2.0nm,0.3s,baz=295,slow=27,SNR=5.0						
EIL	**Elat**	**9.46**	**116**	Pn	**Pn**	**18 00 07.7**	**+1.6**
	comp=E,0.5nm,0.3s,baz=275,slow=1.7,SNR=8.7						
EIL				Sn	**Sn**	**18 01 49.6**	**-2.0**
	comp=E,0.4nm,0.3s,baz=60,slow=20,SNR=2.7						
AKASG	**Malin Array Be**	**16.74**	**9**	Pn	**Pn**	**18 01 44.4**	**+0.5**
	comp=E,0.9nm,0.3s,baz=200,slow=10,SNR=4.4						
AKBB	**Malin Array Si**	**16.74**	**9**	*e*Pn	**Pn**	**18 01 45.0**	**+1.0**
GEC2	**GERESS Array S**	**16.92**	**333**	*e*Pn	**Pn**	**18 01 47.0**	**+0.6**
	comp=E,4.3nm,1.4s						
GERES	**GERESS Array B**	**16.92**	**333**	Pn	**P**	**18 01 48.2**	**-0.1**
	comp=E,0.2nm,0.3s,baz=144,slow=12,SNR=4.4						
NBO00	**NORSAR Array S**	**28.39**	**345**	*e*P	**P**	**18 03 43.4**	**-0.1**
TOA1	**Torodi Ar. Sit**	**29.90**	**231**	*e*P	**P**	**18 03 56.3**	**-1.0**
TOA0	**Torodi Ar. Sit**	**29.90**	**231**	*e*P	**P**	**18 03 58.3**	**+1.0**
	comp=E,9.2nm,1.4s						
TORD	**Torodi Ar. Bea**	**29.90**	**231**	P	**P**	**18 03 56.3**	**-1.0**
	comp=E,1.1nm,0.4s,baz=33,slow=8.3,SNR=10						
MAKZ	**Makanchi**	**44.07**	**56**	*e*P	**P**	**18 05 55.4**	**-1.9**
	comp=E,7.2nm,1.6s						
MK32	**Makanchi Array**	**44.29**	**56**	*e*P	**P**	**18 05 59.4**	**+0.4**
MKAR	**Makanchi Array**	**44.29**	**56**	P	**P**	**18 05 59.4**	**+0.4**
	comp=E,0.6nm,0.7s,baz=288,slow=7.1,SNR=3.6						
ZAA0	**Zalesovo Array**	**45.65**	**46**	*e*P	**P**	**18 06 08.9**	**-0.8**
	comp=E,7.0nm,1.5s						
ZAA1	**Zalesovo Array**	**45.65**	**45**	*e*P	**P**	**18 06 09.2**	**-0.5**
ZALV	**Zalesovo Beam**	**45.65**	**46**	P	**P**	**18 06 09.2**	**-0.5**
	comp=E,0.9nm,0.3s,baz=273,slow=9.6,SNR=4.2						

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*IDC **15** 17:58:58.1±0.7, 11°.98N×86°.70W, h0km, mb4.5/15, mb1 4.8/16, mb1mx4.4/43, mbtmp4.5/16, ML4.4/1, Error ellipse: s-maj=31.1km s-min=12.4km az=55.0*
*NEIC **15** 17:59:03.3±2.2, 11°.79N×86°.97W, h35km, mb4.8/340, MD4.9(SNET), Error ellipse: s-maj=15.5km s-min=10.4km az=228.0*
NEIC Felt [I] at La Union, El Salvador.
*ISCJB **15** 17:59:04.6±0.3, 11°.80N±0°.02×86°.99W±0°.02, h66km±2km, mb4.7/305, Error ellipse: s-maj=4.2km s-min=2.7km az=28.5*
*SNET **15** 17:59:04.0±0.9, 11°.72N×87°.12W, h28km±11km, ML4.9*
*UCR **15** 17:59:04.0±2.2, 11°.76N×87°.09W, h25km±7km, ML4.7, mb4.8(NEIC)*
ISC 15 17:59:06.0±0.8, 11°.84N±0°.04×87°.01W±0°.04, h62km±7km, n792, σ0°97/792, mb4.7/304, 4C-10D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.53**	**50**	⇑*i*P	**Pn**	**17 59 17.4**	**-1.1**
COPN	**Copaltepe**	**0.53**	**50**	⇑*i*P	**Pn**	**17 59 17.4**	**-1.1**
CRUN	**El Crucero**	**0.71**	**78**	*e*P	**Pn**	**17 59 20.0**	**-0.6**
CNGN	**Cerro Negro**	**0.72**	**25**	⇓*i*P	**Pn**	**17 59 19.9**	**-0.9**
CNGN				IAML		17 59 37.1	
	comp=N,11μm,0.4s						
CNGN	**Cerro Negro**	**0.72**	**25**	⇓*i*P	**Pn**	**17 59 19.9**	**-0.9**
MOMN	**Momotombo**	**0.73**	**39**	⇓*i*P	**Pn**	**17 59 19.9**	**-0.9**
MOMN	**Momotombo**	**0.73**	**39**	⇓*i*P	**Pn**	**17 59 19.9**	**-0.9**
XAVN	**Gruta Xavier**	**0.73**	**65**	*e*P	**Pn**	**17 59 19.9**	**-0.9**
TEL3	**Telica 3**	**0.74**	**12**	*e*P	**Pn**	**17 59 19.3**	**-1.7**
APYN	**Apoyeque**	**0.75**	**59**	*e*P	**Pn**	**17 59 20.6**	**-0.5**
MGAN	**Managua**	**0.80**	**68**	*e*P	**Pn**	**17 59 20.9**	**-0.8**
MASN	**Masaya**	**0.85**	**80**	*e*P	**Pn**	**17 59 20.9**	**-1.5**
CRIN	**San Cristobal**	**0.85**	**357**	*e*P	**Pn**	**17 59 21.3**	**-1.2**
CRIN				IAML		18 00 06.9	
	comp=E,33μm,0.5s						
CSGN	**Cosiguina Volc**	**1.25**	**335**	*e*Pn	**Pn**	**17 59 27.4**	**-0.2**
CSGN	**Cosiguina Volc**	**1.25**	**335**	*e*P	**Pn**	**17 59 26.9**	**-0.6**
CSGN				*e*S	**Sn**	**17 59 45.0**	**+1.4**
CSGN				IAML		17 59 51.1	
	comp=N,164μm,0.4s						
CSGN	**Cosiguina Volc**	**1.25**	**335**	*e*P	**Pn**	**17 59 27.4**	**-0.2**
ESTN	**Estel**	**1.40**	**26**	*e*Pn	**Pn**	**17 59 29.5**	**-0.1**
ESTN	**Estel**	**1.40**	**26**	*e*P	**Pn**	**17 59 29.5**	**-0.1**
ESTN	**Estel**	**1.40**	**26**	⇓*i*P	**Pn**	**17 59 29.6**	**+0.1**
MATN	**Matagalpa**	**1.51**	**44**	⇓*i*P	**Pn**	**17 59 31.2**	**+0.1**
MATN				*e*S	**Sn**	**17 59 52.4**	**+2.5**
CNCH	**Conchagua**	**1.64**	**331**	*e*P	**Pn**	**17 59 32.0**	**-0.8**
CNCH				*e*S	**Sn**	**17 59 54.4**	**+1.4**
CNCH	**Conchagua**	**1.64**	**331**	⇓*i*P	**Pn**	**17 59 31.8**	**-0.9**
CNCH				*e*S	**Sn**	**17 59 54.4**	**+1.4**
LCND	**La Caada**	**1.69**	**330**	⇓*e*P	**Pn**	**17 59 32.5**	**-1.0**
LCND				*e*S	**Sn**	**17 59 54.2**	**+0.1**
LCND				IAML		17 59 58.0	
	comp=Z,17μm,0.4s						
LCND	**La Caada**	**1.69**	**330**	⇓*e*P	**Pn**	**17 59 32.5**	**-1.0**
LCND				*e*S	**Sn**	**17 59 54.2**	**+0.1**
LCND				IAML		17 59 58.0	
	comp=Z,17μm,0.4s						
ACON	**Acoyapa**	**1.80**	**86**	*e*Pn	**Pn**	**17 59 33.5**	**-1.3**
ACON	**Acoyapa**	**1.80**	**86**	⇓*e*P	**Pn**	**17 59 33.6**	**-1.2**
GB1A	**Borinquen Arri**	**1.88**	**123**	*e*P	**Pn**	**17 59 33.2**	**-2.7**
BUEV	**Buena Vista**	**1.88**	**123**	*e*P	**Pn**	**17 59 33.2**	**-2.8**
VSM	**San Miguel**	**2.00**	**322**	*e*P	**Pn**	**17 59 37.4**	**-0.4**
LCY	**Lacayo**	**2.01**	**322**	*e*P	**Pn**	**17 59 36.9**	**-0.9**
LCY	**Lacayo**	**2.01**	**322**	*e*P	**Pn**	**17 59 36.9**	**-0.9**
MESS	**Mesas**	**2.09**	**121**	*e*P	**Pn**	**17 59 37.1**	**-1.7**
TECA	**Tecapa**	**2.20**	**319**	*e*P	**Pn**	**17 59 39.2**	**-1.2**
TECA	**Tecapa**	**2.20**	**319**	*e*P	**Pn**	**17 59 39.2**	**-1.2**
TGUH	**Tegucigalpa,Un**	**2.22**	**353**	*e*Pn	**Pn**	**17 59 41.1**	**+0.5**
SNVI	**San Vicente**	**2.51**	**315**	*e*P	**Pn**	**17 59 43.6**	**-1.0**
JTS	**Las Juntas de**	**2.54**	**127**	Pn	**Pn**	**17 59 42.9**	**-2.0**
	comp=Z,70nm,0.3s,baz=169,slow=22,SNR=60						
JTS				Sn	**Sn**	**18 00 17.8**	**+3.1**
	comp=Z,227nm,0.3s,baz=209,slow=19,SNR=9.5						
JTS	**Las Juntas de**	**2.54**	**127**	*e*Pn	**Pn**	**17 59 43.4**	**-1.5**
JTS	**Las Juntas de**	**2.54**	**127**	*e*P	**Pn**	**17 59 44.1**	**-0.8**
ARE1	**Arenal 1**	**2.63**	**121**	*e*P	**Pn**	**17 59 45.5**	**-0.7**
VICT	**Victoria**	**2.64**	**323**	*e*P	**Pn**	**17 59 46.0**	**-0.4**
VICT	**Victoria**	**2.64**	**323**	*e*P	**Pn**	**17 59 46.0**	**-0.4**
PAVA	**Las Pavas**	**2.65**	**315**	*e*P	**Pn**	**17 59 45.6**	**-0.8**
PAVA	**Las Pavas**	**2.65**	**315**	*e*P	**Pn**	**17 59 45.6**	**-0.8**
ESPN	**Las Esperanzas**	**2.67**	**82**	*e*Pn	**Pn**	**17 59 46.3**	**-0.4**
ESPN	**Las Esperanzas**	**2.67**	**82**	*e*P	**Pn**	**17 59 46.5**	**-0.2**
LFRS	**El Faro**	**2.67**	**312**	⇑*e*P	**Pn**	**17 59 45.4**	**-1.4**
LOMA	**San Marcos**	**2.78**	**311**	*e*P	**Pn**	**17 59 46.7**	**-1.5**
LOMA				IAML		18 00 24.2	
	comp=Z,5μm,0.5s						
LOMA	**San Marcos**	**2.78**	**311**	*e*P	**Pn**	**17 59 46.7**	**-1.5**
LOMA				IAML		18 00 24.2	
	comp=Z,5μm,0.5s						
LFU	**La Fuente**	**2.79**	**313**	*e*P	**Pn**	**17 59 47.6**	**-0.8**
LFU	**La Fuente**	**2.79**	**313**	*e*P	**Pn**	**17 59 47.6**	**-0.8**
SNET	**Serv Nac Est T**	**2.84**	**310**	*e*P	**Pn**	**17 59 48.2**	**-0.9**
SNET				*e*S	**Sn**	**18 00 20.5**	**-1.7**
SNET				IAML		18 00 28.9	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**2.84**	**310**	*e*P	**Pn**	**17 59 48.2**	**-0.9**
SNET				IAML		18 00 28.9	
	comp=Z,2μm,0.3s						
UEES	**San Salvador**	**2.88**	**311**	*e*P	**Pn**	**17 59 48.8**	**-0.8**
UEES	**San Salvador**	**2.88**	**311**	*e*P	**Pn**	**17 59 48.8**	**-0.8**
BOQS	**Boqueron**	**2.91**	**311**	*e*P	**Pn**	**17 59 49.3**	**-0.8**
SRA1	**San Ramn**	**3.04**	**125**	*e*P	**Pn**	**17 59 53.0**	**+1.2**
SBLS	**San Blas**	**3.23**	**308**	*e*P	**Pn**	**17 59 53.6**	**-0.9**
SBLS	**San Blas**	**3.23**	**308**	*e*P	**Pn**	**17 59 53.6**	**-0.9**
HDC	**Heredia**	**3.38**	**122**	*e*Pn	**Pn**	**17 59 54.7**	**-1.8**
HDC	**Heredia**	**3.38**	**122**	*e*P	**Pn**	**17 59 55.9**	**-0.6**
LCR2	**La Lucha 2**	**3.62**	**125**	*e*P	**Pn**	**18 00 00.4**	**+0.6**
EDDO	**Dominical**	**4.02**	**129**	*e*P	**Pn**	**18 00 09.4**	**+4.3**
DRK0	**Durika**	**4.50**	**124**	*e*P	**Pn**	**18 00 12.6**	**+0.7**
EDPN	**Palmar Norte**	**4.51**	**129**	*e*P	**Pn**	**18 00 13.2**	**+1.3**
APG	**El Apazote**	**4.60**	**313**	Pn	**Pn**	**18 00 13.7**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=121,slow=11,SNR=4.1						
APG

255A	Hazlehurst baz=193	20.42	11	P	Pn	18 03 40.1	-0.6
VBMS	Vicksburg comp=Z,26nm,0.7s	20.54	351	eP	P	18 03 39.3	0.0
AOPR	Arecibo Observ comp=Z,34nm,1.0s	20.59	69	eP	P	18 03 37.6	-2.5
256A	Glennville baz=194	20.59	12	P	Pn	18 03 42.5	-0.3
OBIP	Obispado Ponce comp=Z,24nm,1.0s	20.64	70	eP	P	18 03 39.3	-1.4
151A	Opelika baz=184,SNR=9.4	20.65	4	P	Pn	18 03 42.8	-0.6
149A	Jones baz=180,SNR=8.1	20.66	1	P	Pn	18 03 43.1	-0.4
ICMP	Isla Caja de M comp=Z,113nm,1.2s	20.68	71	eP	P	18 03 42.0	+1.0
150A	Eclectic baz=183,SNR=18	20.69	2	P	Pn	18 03 43.5	-0.4
ATAH	Atahualpa comp=Z,8.3nm,0.8s,baz=341,slow=10,SNR=4.5	20.71	155	P	Pn	18 03 47.6	+2.9
148A	Greensboro baz=178,SNR=5.2	20.71	359	P	Pn	18 03 43.4	-0.8
147A	Livingston comp=Z,48nm,0.5s	20.77	357	eP	P	18 03 41.8	-0.1
147A	Livingston baz=176,SNR=6.7	20.77	357	P	Pn	18 03 45.7	+0.9
152A	Waverly Hall comp=Z,33nm,0.4s	20.84	5	eP	P	18 03 43.7	+1.1
152A	Waverly Hall baz=186,SNR=11	20.84	5	P	Pn	18 03 45.0	-0.6
153A	Fort Valley baz=189	20.92	8	P	Pn	18 03 46.2	-0.4
154A	Montrose comp=Z,80nm,1.0s	20.98	9	eP	P	18 03 44.7	+0.5
154A	Montrose baz=190	20.98	9	P	Pn	18 03 46.4	-0.9
NATX	Nacogdoches comp=Z,202nm,1.5s	21.04	342	eP	P	18 03 44.2	-0.7
NATX	Nacogdoches baz=159	21.04	342	P	P	18 03 47.5	+2.7
LRAL	Lakeview Retre comp=Z,23nm,1.1s	21.09	0	eP	P	18 03 46.8	+1.4
LRAL	Lakeview Retre baz=180,SNR=10	21.09	0	P	P	18 03 47.3	+1.9
155A	Kite baz=192	21.10	11	P	P	18 03 47.7	+2.3
435B	Jarrell comp=Z,27nm,0.6s	21.24	334	eP	P	18 03 46.9	-0.1
435B	Jarrell baz=150	21.24	334	P	P	18 03 49.1	+2.1
Z49A	Columbiana baz=181,SNR=10	21.26	1	P	P	18 03 49.1	+2.0
156A	Sylvania baz=195	21.33	13	P	P	18 03 49.6	+1.8
Z50A	Ashland comp=Z,22nm,0.9s	21.34	3	eP	P	18 03 49.8	+1.8
Z50A	Ashland baz=183,SNR=10	21.34	3	P	P	18 03 49.9	+2.0
Z52A	Williamson baz=187,SNR=8.7	21.38	6	P	P	18 03 50.9	+2.5
Z51A	Franklin baz=185,SNR=5.9	21.44	4	P	P	18 03 52.2	+3.1
Z53A	Monticello baz=189,SNR=19	21.57	8	P	P	18 03 53.1	+2.7
MTP	Monte Pirata comp=Z,22nm,0.9s	21.63	71	eP	P	18 03 53.4	+2.2
Z54A	Sparta baz=191	21.64	10	P	P	18 03 52.4	+1.3
GOGA	Godfrey comp=Z,52nm,1.1s	21.71	8	eP	P	18 03 53.8	+1.8
GOGA	Godfrey baz=189,SNR=19	21.71	8	P	P	18 03 54.0	+2.0
Y49A	Blount Mountai comp=Z,28nm,1.0s	21.92	1	eP	P	18 03 55.4	+1.1
Y49A	Blount Mountai baz=181,SNR=14	21.92	1	P	P	18 03 56.0	+1.8
CUPR	Culebra, Puert comp=Z,39nm,1.1s	21.93	70	eP	P	18 03 56.3	+1.9
Z41A	Richland Creek comp=Z,20nm,0.6s	21.97	347	eP	P	18 03 55.8	+1.1
Z41A	Richland Creek baz=165	21.97	347	P	P	18 03 55.6	+0.9
Y48A	Jasper baz=180,SNR=15	21.97	360	P	P	18 03 56.1	+1.4
Y50A	Piedmont baz=183,SNR=17	21.98	3	P	P	18 03 55.9	+1.1
CSU	Charleston Sou	21.99	16	eP	P	18 03 55.8	+0.9
Z56A	Williston comp=Z,22nm,0.6s	22.00	13	eP	P	18 03 57.0	+1.9
JCT	Junction City comp=Z,30nm,1.0s	22.02	329	eP	P	18 03 54.9	-0.4
JCT	Junction City baz=145,SNR=6.8	22.02	329	P	P	18 03 56.2	+0.9
Y51A	Rockmart baz=185,SNR=27	22.03	4	P	P	18 03 57.0	+1.6
NHSC	New Hope comp=Z,104nm,1.4s	22.07	15	eP	P	18 03 55.9	+0.1
NHSC	New Hope baz=198	22.07	15	P	P	18 03 56.3	+0.5
Y52A	Lilburn comp=Z,60nm,1.0s	22.09	7	eP	P	18 03 56.8	+0.8
Y52A	Lilburn baz=188,SNR=17	22.09	7	P	P	18 03 58.0	+2.0
Z57A	Bowman baz=196	22.12	14	P	P	18 03 57.4	+1.1
Y53A	Monroe baz=189,SNR=20	22.14	8	P	P	18 03 58.6	+2.1
WHTX	Lake Whitney, comp=Z,82nm,1.0s	22.25	336	eP	P	18 03 57.2	-0.5
WHTX	Lake Whitney, baz=152,SNR=22	22.25	336	P	P	18 03 57.8	+0.1
Y54A	Tignall baz=191,SNR=11	22.27	10	P	P	18 03 59.9	+1.9
Z58A	St. Stephen baz=199,SNR=6.5	22.39	16	P	P	18 03 58.9	-0.3
CCAR	Cane Creek comp=Z,59nm,1.3s	22.40	350	eP	P	18 03 59.7	+0.3
WLAR	White Oak Lake comp=Z,127nm,1.7s	22.45	347	eP	P	18 03 60.0	+0.1
Y55A	Saluda baz=193,SNR=6.5	22.49	11	P	P	18 04 00.8	+0.4
X48A	Hartselle comp=Z,18nm,1.0s	22.51	360	eP	P	18 03 59.8	-0.7
X48A	Hartselle baz=180,SNR=5.8	22.51	360	P	P	18 04 01.5	+0.9
X50B	Fort Payne baz=183,SNR=13	22.55	3	P	P	18 04 02.0	+1.0
X49A	Woodville baz=182,SNR=7.3	22.58	1	P	P	18 04 02.1	+0.8
X47A	Russelville baz=178,SNR=13	22.59	358	P	P	18 04 02.1	+0.7
X46A	Booneville baz=176,SNR=7.5	22.66	357	P	P	18 04 02.4	+0.3
OXF	Oxford comp=Z,29nm,0.4s	22.67	355	eP	P	18 04 02.0	-0.2
OXF	Oxford baz=174	22.67	355	P	P	18 04 02.3	0.0
HODGE	Hodges comp=Z,46nm,1.4s	22.70	10	eP	P	18 04 03.7	+1.1
X51A	Calhoun comp=Z,32nm,1.1s	22.71	5	eP	P	18 04 03.5	+0.9
X51A	Calhoun baz=185	22.71	5	P	P	18 04 03.5	+0.9
X53A	Estanollee baz=189	22.81	8	P	P	18 04 04.5	+0.8
X52A	Dahlonega baz=188,SNR=10	22.84	7	P	P	18 04 05.1	+1.0
Y57A	Sumter comp=Z,51nm,1.3s	22.89	14	eP	P	18 04 05.2	+0.7
JSC	Jenkinsville comp=Z,67nm,1.3s	22.95	12	eP	P	18 04 05.8	+0.8
Y58A	Scranton comp=Z,76nm,1.1s	22.96	16	eP	P	18 04 07.2	+2.0
X54A	Belton baz=192	22.99	10	P	P	18 04 06.1	+0.5
X55A	Gracelyn & Ava baz=193,SNR=5.1	23.05	11	P	P	18 04 06.3	+0.2
PLAL	Pickwick Lake comp=Z,15nm,1.1s	23.06	358	eP	P	18 04 05.6	-0.6
HPIG	comp=Z,18nm,0.9s	23.09	313	eP	P	18 04 07.7	+0.9
X40A	Basin Creek Fa comp=Z,17nm,1.2s	23.16	348	eP	P	18 04 07.4	+0.2
X40A	Basin Creek Fa baz=165	23.16	348	P	P	18 04 07.8	+0.6
W49A	Belvidere baz=182,SNR=12	23.18	2	P	P	18 04 07.6	+0.1
W48A	Pulaski baz=180,SNR=21	23.19	0	P	P	18 04 08.4	+0.8
X56A	White Oak baz=195,SNR=6.6	23.20	13	P	P	18 04 08.0	+0.5
SWET	Sewanee comp=Z,26nm,0.5s	23.29	2	eP	P	18 04 08.8	+0.3
W51A	Cleveland baz=185,SNR=14	23.30	5	P	P	18 04 09.5	+0.9
W50A	Signal Mountai comp=Z,44nm,0.5s	23.31	4	eP	P	18 04 08.9	+0.3
W50A	Signal Mountai baz=184,SNR=24	23.31	4	P	P	18 04 09.3	+0.7
W47A	Westpoint baz=178,SNR=16	23.31	359	P	P	18 04 09.1	+0.4
TXAR	Lajitas Array comp=Z,15nm,0.5s,baz=139,slow=9.2,SNR=321	23.32	321	P	P	18 04 09.4	+0.5
TXAR	comp=Z,2.1nm,0.8s,baz=162,slow=5.3,SNR=3.6			PcP	PcP	18 07 55.7	+1.2
TX31	Lajitas Ar. Si comp=Z,46nm,1.1s	23.32	321	eP	P	18 04 09.0	+0.1
W52A	Murphy comp=Z,44nm,1.0s	23.32	6	eP	P	18 04 09.7	+1.0
W52A	Murphy baz=188,SNR=7.5	23.32	6	P	P	18 04 09.7	+1.0
UALR	University of comp=Z,23nm,1.2s	23.34	349	eP	P	18 04 07.8	-1.1
PAULI	Pauline comp=Z,26nm,1.0s	23.36	11	eP	P	18 04 09.2	+0.2
MIAR	Mount Ida comp=Z,28nm,0.8s	23.38	346	eP	P	18 04 09.3	0.0
MIAR	Mount Ida baz=164,SNR=20	23.38	346	P	P	18 04 09.5	+0.2
BIRD	Birdtown, Kers comp=Z,33nm,1.1s	23.47	14	eP	P	18 04 10.8	+0.7
W53A	Cullowhee baz=189,SNR=6.4	23.48	8	P	P	18 04 10.0	-0.4
W54A	Cherokee Point baz=192,SNR=9.9	23.55	10	P	P	18 04 11.7	+0.8
CPCT	Cooper Cave comp=Z,43nm,1.2s	23.61	5	eP	P	18 04 11.9	+0.5
X58A	Rowland comp=Z,49nm,0.6s	23.66	16	eP	P	18 04 12.3	+0.4
W41B	Gary Mavity, V comp=Z,15nm,1.1s	23.71	349	eP	P	18 04 12.4	+0.1
W41B	Gary Mavity, V baz=167,SNR=5.3	23.71	349	P	P	18 04 12.6	+0.3
ABTX	Abilene, Hawle comp=Z,56nm,1.2s	23.72	333	eP	P	18 04 12.5	0.0
ABTX	Abilene, Hawle baz=148,SNR=12	23.72	333	P	P	18 04 12.3	-0.1
KMSC	Kings Mountain comp=Z,19nm,0.9s	23.76	12	eP	P	18 04 13.6	+0.9
KMSC	Kings Mountain baz=194,SNR=7.2	23.76	12	P	P	18 04 13.7	+0.9
V50A	Pikeville baz=184,SNR=7.5	23.79	4	P	P	18 04 13.5	+0.5
V48A	Smith Brothers comp=Z,12nm,0.6s	23.79	0	eP	P	18 04 13.1	+0.1
V48A	Smith Brothers baz=180,SNR=9.0	23.79	0	P	P	18 04 13.8	+0.8
WHAR	Wooly Hollow comp=Z,54nm,1.7s	23.83	349	eP	P	18 04 13.4	0.0
V49A	McMinnville baz=183,SNR=12	23.84	2	P	P	18 04 13.7	+0.2
V46A	Holladay baz=177,SNR=7.3	23.88	358	P	P	18 04 13.5	-0.3
V47A	Nunnelly baz=179,SNR=15	23.89	359	P	P	18 04 14.1	+0.2
X37A	Clayton comp=Z,63nm,1.1s	23.89	343	eP	P	18 04 13.7	-0.2
W56A	Indian Trail baz=196,SNR=5.2	23.91	13	P	P	18 04 14.9	+0.8
V51A	Loudon comp=Z,25nm,1.1s	23.98	5	eP	P	18 04 14.5	-0.3
V51A	Loudon baz=186	23.98	5	P	P	18 04 15.2	+0.5
V53A	Saluda comp=Z,36nm,1.1s	24.02	8	eP	P	18 04 15.7	+0.4
V53A	Saluda baz=190,SNR=15	24.02	8	P	P	18 04 16.3	+1.1
W39A	Magazine comp=Z,31nm,1.1s	24.05	346	eP	P	18 04 16.0	+0.6
W39A	Magazine baz=164,SNR=13	24.05	346	P	P	18 04 16.0	+0.6
H06E1	SOCORRO T-PHAS SNR=92	24.06	290	T	T	18 29 04.0	
W57A	Gilead comp=Z,53nm,1.5s	24.07	14	eP	P	18 04 15.3	-0.2
W57A	Gilead baz=197,SNR=5.1	24.07	14	P	P	18 04 16.0	+0.5
X60A	Albert Glenn T baz=202	24.08	19	P	P	18 04 15.7	0.0
V52A	Sevierville comp=Z,22nm,1.1s	24.09	7	eP	P	18 04 16.3	+0.5
V52A	Sevierville baz=188	24.09	7	P	P	18 04 16.5	+0.7
W58A	Raeford baz=199	24.13	16	P	P	18 04 16.6	+0.4
CLTN	Cedars of Leba comp=Z,18nm,0.6s	24.15	1	eP	P	18 04 16.9	+0.6
WVT	Waverly comp=Z,9.8nm,1.1s	24.19	358	eP	P	18 04 15.7	-1.0
WVT	Waverly baz=178	24.19	358	P	P	18 04 16.8	+0.2
V54A	Nebo baz=192,SNR=8.3	24.27	10	P	P	18 04 18.7	+1.3
U46A	Springville baz=177,SNR=7.6	24.43	358	P	P	18 04 18.8	0.0
V55A	Taylorsville baz=194	24.47	11	P	P	18 04 19.6	+0.4
U47A	Clarksville baz=179,SNR=10	24.50	359	P	P	18 04 18.9	-0.5
U50A	Jamestown baz=185,SNR=9.8	24.55	4	P	P	18 04 20.5	+0.6
U48A	Cassie Pea, Po baz=181,SNR=7.0	24.57	1	P	P	18 04 20.4	+0.4
U51A	La Follette baz=187	24.58	6	P	P	18 04 20.4	+0.1
V56A	Mocksville comp=Z,22nm,1.0s	24.58	13	eP	P	18 04 20.9	+0.7
V56A	Mocksville baz=195	24.58	13	P	P	18 04 20.7	+0.5
U49A	Red Boiling Sp baz=183,SNR=9.4	24.59	2	P	P	18 04 20.4	+0.1
U52A	Thorn Hill baz=188	24.66	7	P	P	18 04 21.5	+0.5
U53A	Fall Branch baz=190	24.74	9	P	P	18 04 22.5	+0.8
TZTN	Tazewell comp=Z,25nm,0.9s	24.79	7	eP	P	18 04 23.0	+0.8
TZTN	Tazewell baz=188	24.79	7	P	P	18 04 22.8	+0.6
V57A	Coltrane Farms baz=197	24.82	14	P	P	18 04 23.2	+0.8
V58A	Windy Hill, Pi baz=198,SNR=14	24.89	15	P	P	18 04 23.8	+0.8
U40A	Yellville baz=166,SNR=16	24.97	349	P	P	18 04 23.6	-0.2
U54A	Nelsons Funny comp=Z,25nm,0.9s	25.01	10	eP	P	18 04 25.5	+1.3
U54A	Nelsons Funny baz=192	25.01	10	P	P	18 04 24.8	+0.6
PBMO	Poplar Bluff comp=Z,16nm,0.4s	25.02	353	eP	P	18 04 23.9	-0.3
T47A	Sharon Grove comp=Z,43nm,1.4s	25.04	360	eP	P	18 04 24.0	-0.4
T47A	Sharon Grove baz=180,SNR=8.2	25.04	360	P	P	18 04 24.4	0.0
T46A	Princeton baz=178,SNR=7.2	25.11	358	P	P	18 04 24.6	-0.4
V59A	Middlesex baz=200,SNR=5.0	25.11	17	P	P	18 04 25.3	+0.3
T45A	Paducah baz=176	25.11	357	P	P	18 04 24.9	-0.1
U56A	King baz=195	25.12	13	P	P	18 04 25.9	+0.7
HHAR	Hobbs comp=Z,20nm,1.0s	25.13	347	eP	P	18 04 25.0	-0.2
T50A	Nancy baz=185	25.15	4	P	P	18 04 25.2	-0.1
T51A	Gray baz=187	25.17	6	P	P	18 04 26.1	+0.5
WMOK	Wichita Mounta comp=Z,65nm,0.9s	25.18	337	eP	P	18 04 25.4	-0.3
WMOK	Wichita Mounta baz=152,SNR=72	25.18	337	P	P	18 04 25.5	-0.3
T49A	Edmonton comp=Z,40nm,1.1s	25.19	3	eP	P	18 04 26.0	+0.2
T49A	Edmonton baz=183	25.19	3	P	P	18 04 26.2	+0.4
TUL1	Leonard comp=Z,56nm,1.0s	25.25	343	eP	P	18 04 25.7	-0.6
TUL1	Leonard baz=160,SNR=10	25.25	343	P	P	18 04 25.7	-0.6
T53A	Wise baz=190	25.36	8	P	P	18 04 27.8	+0.5
T52A	Hallie comp=Z,44nm,1.5s	25.42	8	eP	P	18 04 28.7	+0.9
T52A	Hallie baz=189	25.42	8	P	P	18 04 29.3	+1.5
U57A	Blanch baz=198,SNR=6.3	25.44	15	P	P	18 04 28.9	+0.8
CLNB	Carlsbad	25.57	325	eP	P	18 04 30.1	+0.7
T54A	Tazewell baz=192	25.58	10	P	P	18 04 30.4	+1.0
U58A	Oxford baz=199	25.61	16	P	P	18 04 30.5	+0.9
S47A	Hartford baz=180	25.64	0	P	P	18 04 30.7	+0.9
S48A	Wiedeman Farm, baz=182	25.72	2	P	P	18 04 31.2	+0.6
S46A	Don Dixon Farm baz=178	25.74	359	P	P	18 04 31.5	+0.8
T55A	Pulaski baz=194	25.78	11	P	P	18 04 31.8	+0.6
U59A	Littleton baz=201	25.78	17	P	P	18 04 31.5	+0.4
GDL2	Guadalupe Moun	25.80	324	eP	P	18 04 33.3	+1.8
S44A	Carbondale baz=175	25.82	356	P	P	18 04 31.6	+0.1
S50A	Richmond baz=186	25.84	5	P	P	18 04 31.5	-0.1
SIUC	Southern Illin comp=Z,15nm,1.0s	25.84	356	eP	P	18 04 30.8	-0.8
T56A	Rocky Mt baz=196	25.85	13	P	P	18 04 32.6	+0.8
S51A	Beattyville comp=Z,51nm,1.7s	25.87	6	eP	P	18 04 32.2	+0.3
S51A	Beattyville baz=188	25.87	6	P	P	18 04 32.2	+0.3
S49A	Springfield baz=184	25.88	3	P	P	18 04 32.2	+0.2
BLA	Blacksburg comp=Z,29nm,1.3s	25.95	12	eP	P	18 04 31.0	-1.7
T57A	Hurt comp=Z,27nm,1.1s	26.00	14	eP	P	18 04 33.9	+0.7
T57A	Hurt baz=197	26.00	14	P	P	18 04 33.8	+0.7
MNTX	Cornudas Mount comp=Z,49nm,1.7s	26.03	322	eP	P	18 04 33.7	+0.3
MNTX	Cornudas Mount baz=135,SNR=25	26.03	322	P	P	18 04 34.0	+0.5
CPRX	Cap Rock	26.15	326	eP	P	18 04 35.6	+0.9
WCI	Wyandotte Cave comp=Z,12nm,0.8s	26.29	1	eP	P	18 04 35.7	+0.1
WCI	Wyandotte Cave baz=182	26.29	1	P	P	18 04 35.8	+0.1
MSTX	Muleshoe comp=Z,74nm,1.1s	26.31	329	eP	P	18 04 36.1	0.0
R47A	Wooly Knot Far baz=181	26.35	1	P	P	18 04 36.3	+0.1
R45A	Skylar, Fairfi baz=177	26.37	358	P	P	18 04 36.4	0.0
CCM	Cathedral Cave comp=Z,17nm,1.1s	26.38	352	eP	P	18 04 36.0	-0.5
CCM	Cathedral Cave baz=171	26.38	352	P	P	18 04 36.2	-0.3
R49A	Shelbyville baz=184	26.39	3	P	P	18 04 36.6	0.0
T59A	Double "B" Far comp=Z,21nm,1.0s	26.43	17	eP	P	18 04 37.1	+0.2
T59A	Double "B" Far baz=201	26.43	17	P	P	18 04 37.2	+0.2
R50A	Paris baz=186	26.44	5	P	P	18 04 37.2	+0.1
S55A	Lewisburg baz=194	26.47	12	P	P	18 04 38.0	+0.6
R51A	Hillsboro baz=187	26.53	6	P	P	18 04 38.5	+0.7
AMTX	Amarillo comp=Z,32nm,0.8s	26.53	332	eP	P	18 04 37.0	-1.0
AMTX	Amarillo baz=146	26.53	332	P	P	18 04 38.6	+0.6
U32A	Winter Ranch, comp=Z,71nm,1.2s	26.72	338	eP	P	18 04 39.1	-0.6
R53A	Hurricane baz=191	26.76	9	P	P	18 04 40.1	+0.2
R54A	Victor baz=193	26.78	11	P	P	18 04 40.4	+0.3
S57A	Dark Hollow, R baz=198	26.80	14	P	P	18 04 40.5	+0.2
S58A	Poland Farm, P baz=200	26.89	16	P	P	18 04 40.7	-0.4
Q45A	Warren Harvey, baz=177	26.96	358	P	P	18 04 42.0	+0.2
Q47A	Bedord North L baz=181	26.99	1	P	P	18 04 42.1	+0.1
Q48A	North Vernon baz=183	27.00	2	P	P	18 04 42.1	+0.1
Q50A	Georgetown baz=186	27.03	5	P	P	18 04 43.1	+0.8
Q49A	Aurora baz=184	27.12	4	P	P	18 04 43.2	0.0
Q51A	Peebles comp=Z,21nm,0.5s	27.27	6	eP	P	18 04 45.1	+0.6
Q51A	Peebles baz=188,SNR=11	27.27	6	P	P	18 04 45.1	+0.6
Q52A	Bidwell baz=190	27.34	8	P	P	18 04 46.1	+1.0
Q53A	Leroy baz=192	27.35	9	P	P	18 04 46.3	+1.1
R57A	Stanardsville baz=198	27.41	15	P	P	18 04 46.8	+1.0
P48A	Milroy baz=183	27.54	3	P	P	18 04 47.3	+0.4
P45A	Graceland, Par baz=178	27.58	359	P	P	18 04 48.0	+0.7
Q54A	Coxs Mills comp=Z,10nm,0.9s	27.58	10	eP	P	18 04 47.9	+0.6
Q54A	Coxs Mills baz=193	27.58	10	P	P	18 04 47.8	+0.5
P49A	Miami Univ. Ec baz=185	27.66	4	P	P	18 04 47.8	-0.2
Q55A	Buckhannon baz=194	27.74	12	P	P	18 04 49.7	+1.0
P43A	Skaggs, Pawnee baz=175	27.78	356	P	P	18 04 50.3	+1.3
P50A	Jamestown baz=187	27.80	5	P	P	18 04 50.2	+0.9
Q56A	Snyder Ridge, baz=196	27.97	13	P	P	18 04 52.4	+1.7
P53A	Whipple comp=Z,28nm,1.1s	27.98	9	eP	P	18 04 51.5	+0.6
P53A	Whipple baz=192	27.98	9	P	P	18 04 52.1	+1.2
P52A	Corning baz=190	28.02	8	P	P	18 04 52.1	+0.9
121A	Cookes Peak, D baz=133,SNR=8.7	28.08	320	P	P	18 04 54.0	+2.0
Q57A	Strasburg baz=198	28.14	14	P	P	18 04 53.6	+1.3
O44A	Mansfield baz=177	28.23	358	P	P	18 04 53.3	+0.3
SRIG	Santa Rosalia comp=Z,52nm,1.6s	28.24	307	eP	P	18 04 54.2	+0.9
P55A	Reedsville baz=195	28.28	12	P	P	18 04 54.4	+0.8
O47A	Sheridan baz=182	28.29	1	P	P	18 04 53.7	+0.1
319A	Douglas comp=Z,8.9nm,0.7s	28.30	317	eP	P	18 04 52.4	-1.5
O49A	Covington comp=Z,37nm,1.6s	28.33	4	eP	P	18 04 53.4	-0.5
O49A	Covington baz=185	28.33	4	P	P	18 04 54.3	+0.3
O48A	Farmland baz=184	28.35	3	P	P	18 04 53.9	-0.3
O50A	Cable baz=187,SNR=8.1	28.35	5	P	P	18 04 54.3	+0.1
SFIN	Lafayette comp=Z,8.8nm,0.7s	28.43	360	eP	P	18 04 54.0	-0.8
KSU1	Kansas State U baz=160	28.46	344	P	P	18 04 55.2	+0.1
O51A	Pataskala baz=189	28.46	7	P	P	18 04 55.0	-0.1
ACSO	Alum Creek Sta comp=Z,24nm,0.4s	28.50	6	eP	P	18 04 55.8	+0.3
ACSO	Alum Creek Sta	28.50	6	P	P	18 04 56.1	+0.6

	baz=188							
BNM	Barren Site	28.52	324	eP		P	18 04 55.7	-0.3
O52A	Adamsville	28.53	8	eP		P	18 04 54.4	-1.4
	comp=Z,16nm,1.1s							
O52A	Adamsville	28.53	8	P		P	18 04 56.3	+0.5
	baz=190							
P57A	Homestead Farm	28.66	15	P		P	18 04 58.5	+1.6
	baz=198							
HDIL	Hopedale	28.67	356	eP		P	18 04 57.1	+0.1
	comp=Z,13nm,0.6s							
HDIL	Hopedale	28.67	356	P		P	18 04 57.0	+0.1
	baz=175							
LENM	Lemitar	28.73	324	eP		P	18 04 57.2	-0.6
O54A	Avella	28.83	11	P		P	18 04 57.9	-0.5
	baz=193							
N45A	Kentland	28.90	359	P		P	18 04 58.2	-0.8
	baz=179							
N46A	Monticello	28.94	0	P		P	18 04 58.9	-0.4
	baz=180							
N47A	Urbana	28.95	2	P		P	18 04 59.1	-0.3
	baz=183							
N41A	Harden Midland	28.95	354	eP		P	18 04 59.0	-0.5
	comp=Z,14nm,1.1s							
N48A	Decatur	28.96	3	P		P	18 04 59.1	-0.4
	baz=184							
LAZ	Ladron	28.99	324	eP		P	18 04 58.8	-1.3
ANMO	Albuquerque	29.00	326	P		P	18 05 01.2	+1.0
	comp=Z,2.9nm,0.6s,baz=141,slow=8.6,SNR=7.9							
ANMO	Albuquerque	29.00	326	eP		P	18 05 00.7	+0.5
	comp=Z,8.1nm,1.3s							
ANMO	Albuquerque	29.00	326	P		P	18 05 01.2	+1.0
	baz=138							
TASM	ASL Pad, Albuq	29.00	326	P		P	18 05 00.7	+0.5
	baz=138,SNR=6.9							
TASM	ASL Pad, Albuq	29.00	326	P		P	18 05 01.0	+0.7
	baz=138,SNR=7.2							
N50A	Nevada	29.02	6	P		P	18 05 00.3	+0.3
	baz=188							
N43A	Stutzman Famil	29.05	357	P		P	18 04 59.8	-0.5
	baz=176,SNR=9.1							
N49A	Columbus Grove	29.07	4	eP		P	18 05 00.3	-0.2
	comp=Z,17nm,0.6s							
N49A	Columbus Grove	29.07	4	P		P	18 05 00.4	-0.2
	baz=186,SNR=7.4							
N40A	Mertquake, Sal	29.21	353	P		P	18 05 01.0	-0.7
	baz=171							
N51A	Ashland	29.25	7	P		P	18 05 01.9	-0.2
	baz=189							
O56A	Blue Knob Stat	29.28	13	eP		P	18 05 02.8	+0.4
	comp=Z,9.5nm,1.1s							
N53A	Lisbon	29.36	10	eP		P	18 05 03.3	+0.2
	comp=Z,20nm,1.1s							
N53A	Lisbon	29.36	10	P		P	18 05 03.1	0.0
	baz=192							
M45A	Boilermakers S	29.43	360	P		P	18 05 03.1	-0.6
	baz=179							
M44A	Midewin, Midew	29.45	358	eP		P	18 05 02.9	-1.0
	comp=Z,11nm,1.0s							
M44A	Midewin, Midew	29.45	358	P		P	18 05 03.2	-0.6
	baz=178							
M43A	Waltham Townsh	29.53	357	P		P	18 05 05.1	+0.5
	baz=176							
M41A	Milan	29.58	355	P		P	18 05 05.5	+0.4
	baz=173							
MVL	Millersville	29.59	17	eP		P	18 05 06.1	+1.0
	comp=Z,20nm,1.1s							
PTGA	Pitinga	29.62	113	P		P	18 05 05.8	+0.1
	comp=Z,2.9nm,0.8s,baz=162,slow=14,SNR=3.1							
PTGA	Pitinga	29.62	113	eP		P	18 05 06.0	+0.3
	comp=Z,7.8nm,1.0s							
M49A	Liberty Center	29.64	5	P		P	18 05 06.1	+0.5
	baz=186							
T25A	Trinidad	29.65	331	eP		P	18 05 07.5	+1.5
	comp=Z,11nm,1.1s							
T25A	Trinidad	29.65	331	P		P	18 05 06.2	+0.2
	baz=144,SNR=7.2							
M50A	Fremont	29.65	6	P		P	18 05 06.3	+0.6
	baz=188							
N54A	Moraine State	29.66	11	P		P	18 05 05.9	+0.2
	baz=194							
PAGS	Pennsylvania G	29.70	16	eP		P	18 05 06.8	+0.7
	comp=Z,28nm,1.1s							
SSPA	Standing Stone	29.79	14	eP		P	18 05 07.2	+0.3
	comp=Z,16nm,0.9s							
SSPA	Standing Stone	29.79	14	P		P	18 05 07.7	+0.8
	baz=198							
TUC	Tucson	29.88	317	eP		P	18 05 08.7	+0.7
	comp=Z,14nm,1.3s							
N56A	West Decatur	29.96	13	P		P	18 05 08.5	+0.1
	baz=197							
N57A	Milroy	29.98	14	P		P	18 05 08.6	0.0
	baz=199							
M53A	WI Miller and	30.00	10	P		P	18 05 09.3	+0.5
	baz=192							
L47A	Sherwood	30.06	3	P		P	18 05 09.6	+0.3
	baz=183							
L42A	Oliver, Polo	30.14	356	eP		P	18 05 09.4	-0.6
	comp=Z,22nm,1.0s							
L42A	Oliver, Polo	30.14	356	P		P	18 05 09.0	-0.9
	baz=175							
L44A	Lake County Fo	30.23	359	P		P	18 05 10.3	-0.5
	baz=178							
M54A	Oil Creek Stat	30.25	11	eP		P	18 05 10.9	0.0
	comp=Z,11nm,1.0s							
M54A	Oil Creek Stat	30.25	11	P		P	18 05 11.2	+0.3
	baz=194							
L40A	Anamosa	30.33	354	eP		P	18 05 10.6	-1.1
	comp=Z,12nm,0.8s							
L40A	Anamosa	30.33	354	P		P	18 05 11.5	-0.1
	baz=172,SNR=7.6							
M55A	Ridgway	30.39	12	P		P	18 05 12.3	+0.1
	baz=196							
SCIA	State Center	30.44	351	eP		P	18 05 12.3	-0.3
	comp=Z,9.7nm,0.5s							
AAM	Ann Arbor	30.49	5	eP		P	18 05 13.5	+0.5
	comp=Z,40nm,1.4s							
M56A	Emporium	30.53	13	P		P	18 05 13.8	+0.3
	baz=197							
L53A	Girard	30.57	10	P		P	18 05 14.4	+0.5
	baz=193							
N59A	State Game Lan	30.60	17	eP		P	18 05 15.1	+0.9
	comp=Z,14nm,0.9s							
N59A	State Game Lan	30.60	17	P		P	18 05 15.0	+0.9
	baz=202,SNR=5.3							
SDCO	Great Sand Dun	30.65	330	eP		P	18 05 15.4	+0.5
	comp=Z,10nm,1.0s							
SDCO	Great Sand Dun	30.65	330	P		P	18 05 15.7	+0.8
	baz=143,SNR=16							
X18A	Snowflake	30.75	321	eP		P	18 05 17.2	+1.4
	comp=Z,20nm,1.6s							
K47A	Vermontville	30.76	3	P		P	18 05 15.4	-0.1
	baz=184							
K43A	Burlington	30.77	358	eP		P	18 05 14.0	-1.5
	comp=Z,12nm,0.9s							
K43A	Burlington	30.77	358	P		P	18 05 15.1	-0.4
	baz=177							
ERPA	Erie	30.78	10	eP		P	18 05 14.4	-1.2
	comp=Z,39nm,1.3s							
K48A	Perry	30.95	4	P		P	18 05 16.3	-0.8
	baz=185,SNR=9.8							
L54A	Sinclairville	31.01	11	P		P	18 05 17.6	-0.1
	baz=195							
W18A	Petrified Fore	31.02	322	eP		P	18 05 19.5	+1.5
	comp=Z,15nm,1.0s							
W18A	Petrified Fore	31.02	322	P		P	18 05 19.5	+1.5
	baz=133,SNR=5.1							
BGNE	Belgrade	31.03	344	eP		P	18 05 17.9	0.0
	comp=Z,46nm,0.7s							
BGNE	Belgrade	31.03	344	P		P	18 05 18.3	+0.4
	baz=158							
JFWS	Jewell Farm	31.09	355	eP		P	18 05 17.9	-0.4
	comp=Z,8.7nm,0.8s							
JFWS	Jewell Farm	31.09	355	P		P	18 05 18.2	-0.1
	baz=174							
L55A	Hinsdale	31.14	12	P		P	18 05 18.7	-0.1
	baz=196							
S22A	4UR Ranch, Cre	31.31	329	eP		P	18 05 21.5	+0.8
	comp=Z,5.9nm,0.8s							
S22A	4UR Ranch, Cre	31.31	329	P		P	18 05 21.6	+0.8
	baz=140,SNR=12							
J47A	Sunmer	31.34	3	eP		P	18 05 20.0	-0.5
	comp=Z,17nm,0.5s							
J48A	Bridge Port	31.47	5	P		P	18 05 21.6	0.0
	baz=186							
M61A	Granite Spring	31.57	19	P		P	18 05 22.2	-0.3
	baz=205							
J49A	Marlette	31.58	5	P		P	18 05 23.3	+0.7
	baz=187							
X16A	Lo Mia Camp, P	31.62	319	eP		P	18 05 24.8	+1.4
	comp=Z,6.8nm,0.7s							
BINY	Binghamton	31.74	16	eP		P	18 05 24.9	+0.8
	comp=Z,30nm,1.2s							
BINY	Binghamton	31.74	16	P		P	18 05 24.6	+0.5
	baz=201							
K55A	Perry	31.74	13	P		P	18 05 24.7	+0.6
	baz=197							
TYNO	Tyneside	31.75	10	P		P	18 05 24.7	+0.6
	baz=193							
MVCO	Mesa Verde	31.78	326	eP		P	18 05 25.4	+0.6
	comp=Z,8.7nm,0.7s							
MVCO	Mesa Verde	31.78	326	P		P	18 05 25.3	+0.4
	baz=137							
J52A	Paris	31.79	9	P		P	18 05 24.9	+0.3
	baz=192							
OGNE	Ogallala	31.86	338	eP		P	18 05 25.5	+0.2
	comp=Z,39nm,1.2s							
OGNE	Ogallala	31.86	338	P		P	18 05 25.5	+0.2
	baz=151,SNR=5.8							
I42A	Draeger Farm,	31.98	357	eP		P	18 05 25.3	-0.8
	comp=Z,34nm,1.3s							
I42A	Draeger Farm,	31.98	357	P		P	18 05 25.3	-0.8
	baz=176,SNR=8.5							
113A	Mohawk Valley,	32.19	315	eP		P	18 05 27.8	-0.3
	comp=Z,4.3nm,0.9s							
I49A	Point Hope	32.19	6	eP		P	18 05 27.8	-0.1
	comp=Z,17nm,1.0s							
I49A	Point Hope	32.19	6	P		P	18 05 27.9	-0.1
	baz=188							
ACTO	Acton	32.22	9	P		P	18 05 28.2	0.0
	baz=193							
WUAZ	Wupatki	32.28	321	eP		P	18 05 30.7	+1.6
	comp=Z,15nm,1.1s							
Y14A	Wickenburg	32.34	317	eP		P	18 05 30.6	+1.0
	comp=Z,9.3nm,1.4s							
ISCO	Idaho Springs	32.35	333	eP		P	18 05 30.6	+0.8
	comp=Z,7.3nm,1.2s							
ISCO	Idaho Springs	32.35	333	P		P	18 05 30.3	+0.4
	baz=144							
I48A	Sherman Twp	32.36	4	P		P	18 05 30.2	+0.8
	baz=186							
BASO	Ashfield	32.39	7	P		P	18 05 30.2	+0.5
	baz=190							
SMCO	Snowmass	32.49	330	eP		P	18 05 32.3	+1.1
	comp=Z,25nm,1.2s							
H43A	Windswept, Lux	32.52	359	eP		P	18 05 30.6	-0.3
	comp=Z,15nm,1.0s							
H43A	Windswept, Lux	32.52	359	P		P	18 05 31.2	+0.3
	baz=178							
BWLO	Walkerton	32.56	8	P		P	18 05 31.2	0.0
	baz=191							
H46A	Fife Lake	32.62	2	P		P	18 05 31.8	0.0
	baz=183							
PV02	Paradox Valley	32.65	327	eP		P	18 05 33.4	+1.0
	comp=Z,14nm,1.2s							
I52A	Shelburne	32.65	9	P		P	18 05 32.2	+0.2
	baz=192							
PV13	Radium Mtn., P	32.65	327	eP		P	18 05 33.3	+0.9
	comp=Z,15nm,1.0s							
DRWO	Darlington Wes	32.71	11	P		P	18 05 32.3	-0.2
	baz=195							
PV03	Paradox Valley	32.74	327	eP		P	18 05 34.5	+1.3
	comp=Z,15nm,0.7s							
PV05	Paradox Valley	32.74	327	eP		P	18 05 34.1	+0.8
	comp=Z,12nm,0.9s							
PV12	Saucer Basin,	32.76	327	eP		P	18 05 34.6	+1.3
	comp=Z,26nm,0.7s							
PV18	Skein Mesa, Pa	32.77	327	eP		P	18 05 34.7	+1.3
	comp=Z,28nm,0.5s							
PV07	Paradox Valley	32.77	328	eP		P	18 05 34.5	+1.0
	comp=Z,19nm,1.2s							
PV11	David Mesa, Pa	32.78	327	eP		P	18 05 34.3	+0.8
	comp=Z,29nm,0.6s							
PV16	Nyswonger Mesa	32.82	327	eP		P	18 05 34.2	+0.3
	comp=Z,19nm,0.6s							
PV17	East Wray Mesa	32.82	327	eP		P	18 05 34.5	+0.6
	comp=Z,34nm,0.6s							
ECSD	EROS Data Cent	32.84	347	eP		P	18 05 32.4	-1.3
	comp=Z,27nm,1.0s							
ECSD	EROS Data Cent	32.84	347	P		P	18 05 32.6	-1.2
	baz=162,SNR=27							
PV19	Morning Glory	32.85	327	eP		P	18 05 35.6	+1.4
	comp=Z,21nm,0.5s							
PV20	West Nyswonger	32.87	327	eP		P	18 05 35.6	+1.3
	comp=Z,14nm,0.6s							
PV04	Paradox Valley	32.87	327	eP		P	18 05 35.0	+0.8
	comp=Z,16nm,0.9s							
H48A	Harrisville	32.90	5	eP		P	18 05 33.6	-0.6
	comp=Z,43nm,0.4s							
H48A	Harrisville	32.90	5	P		P	18 05 33.3	-0.8
	baz=187,SNR=9.6							
PV22	Blue Mesa, Par	32.91	328	eP		P	18 05 35.7	+1.0
	comp=Z,42nm,1.7s							
PV14	Lion Creek, Pa	32.92	327	eP		P	18 05 35.5	+0.7
	comp=Z,45nm,0.8s							
PV10	Paradox Valley	32.93	327	eP		P	18 05 34.9	0.0
	comp=Z,18nm,0.7s							
GLMI	Grayling	32.93	3	eP		P	18 05 34.6	+0.1
	comp=Z,25nm,0.6s							
PV23	Carpenter Ridg	32.97	327	eP		P	18 05 35.7	+0.4
	comp=Z,17nm,1.0s							
BMRO	Meriville Lake	33.02	8	P		P	18 05 34.7	-0.5
	baz=190							
PV21	Cone Mtn., Par	33.03	327	eP		P	18 05 36.1	+0.3
	comp=Z,4.9nm,0.6s							
PV09	Paradox Valley	33.07	327	eP		P	18 05 37.4	+1.2
GLA	Glamis	33.09	314	eP		P	18 05 37.9	+1.9
	comp=Z,8.9nm,1.2s							
G45A	Suttons Bay	33.10	2	P		P	18 05 35.4	-0.6
	baz=182							
I55A	Frankford	33.24	12	P		P	18 05 36.6	-0.6
	baz=197							
G47A	Hillman	33.33	4	P		P	18 05 37.4	-0.5
	baz=186							
N23A	Red Feather La	33.39	333	eP		P	18 05 39.4	+0.6
	comp=Z,4.3nm,0.9s							
G46A	Petoskey	33.41	3	P		P	18 05 38.4	-0.2
	baz=184							
G40A	Rib Lake	33.42	356	eP		P	18 05 37.0	-1.8
	comp=Z,17nm,1.1s							
G40A	Rib Lake	33.42	356	P		P	18 05 37.6	-1.2
	baz=174,SNR=12							
U15A	North Rim	33.44	321	eP		P	18 05 41.3	+1.9
	comp=Z,4.0nm,0.8s							
SADO	Sadowa	33.50	10	P		P	18 05 39.1	-0.3
	comp=Z,3.6nm,0.4s,baz=228,slow=5.1,SNR=9.5							
SADO	Sadowa	33.50	10	eP		P	18 05 39.2	-0.2
	comp=Z,11nm,1.1s							
PHWY	Pilot Hill	33.51	334	eP		P	18 05 39.4	-0.6
	comp=Z,21nm,1.5s							
G39A	Holcombe	33.52	355	P		P	18 05 38.3	-1.3
	baz=173,SNR=26							
DELO	Deloro Mine	33.55	12	eP		P	18 05 40.2	+0.3
	comp=Z,10nm,1.1s							
DELO	Deloro Mine	33.55	12	P		P	18 05 39.4	-0.4
	baz=197							
TOBO	Tobermory, Bru	33.60	7	P		P	18 05 39.7	-0.5
	baz=190							
LPAZ	La Paz	33.61	146	P		P	18 05 41.8	+0.4
	comp=Z,1.9nm,0.7s,baz=333,slow=7.6,SNR=6.5							
LPAZ	La Paz	33.61	146	eP		P	18 05 40.7	-0.7
LPAZ				epP		P	18 05 41.2	-0.2
W13A	Hualapai Mount	33.62	318	eP		P	18 05 42.6	+1.7
	comp=Z,10nm,1.4s							
SPMN	Marine on St.	33.63	353	eP		P	18 05 39.1	-1.5
	comp=Z,31nm,0.5s							
SPMN	Marine on St.	33.63	353	P		P	18 05 39.9	-0.7
	baz=170,SNR=15							
F45A	CMU Biological	33.75	2	P		P	18 05 41.6	0.0
	baz=183							
O20A	White River Ci	33.85	330	eP		P	18 05 43.4	+0.7
	comp=Z,34nm,1.1s							
O20A	White River Ci	33.85	330	P		P	18 05 43.5	+0.7
	baz=141,SNR=8.9							
BC3	Big Chuckawall	33.85	315	P		P	18 05 43.9	+1.0
	baz=123,SNR=5.1							
NCB	Newcomb	33.86	17	eP		P	18 05 42.2	-0.4
	comp=Z,24nm,1.5s							
KLBO	Killbear Provi	33.90	9	P		P	18 05 42.1	-0.8
	baz=192							
H56A	Elgin	33.92	14	P		P	18 05 42.5	-0.5
	baz=199							
G53A	Haliburton	33.93	11	P		P	18 05 42.8	-0.4
	baz=195							
F40A	Park Falls	34.07	356	P		P	18 05 42.8	-1.6
	baz=174,SNR=8.1							
F49A	Sandfield	34.07	6	P		P	18 05 42.7	-1.6
	baz=189,SNR=5.2							
F48A	Evansville	34.08	5	P		P	18 05 43.4	-1.1
	baz=188,SNR=5.5							
BUKO	Buck Lake	34.11	10	P		P	18 05 42.9	-1.8
	baz=193							
PKCU	Pink Cliffs	34.12	323	eP		P	18 05 46.8	+1.4
	comp=Z,27nm,1.0s							
F39A	Loretta	34.12	355	P		P	18 05 43.6	-1.2
	baz=173,SNR=13							
KNB	Kanab	34.15	322	eP		P	18 05 44.7	-0.7
	comp=Z,18nm,1.2s							
PLVO	Plevna	34.16	13	P		P	18 05 43.8	-1.3
	baz=197							
COWI	Conover	34.19	357	eP		P	18 05 44.1	-1.4
	comp=Z,9.1nm,0.8s							
F38A	Pierce - Schro	34.25	354	P		P	18 05 44.6	-1.4
	baz=172,SNR=7.6							
SRU	San Rafael Swe	34.26	327	eP		P	18 05 46.3	0.0
	comp=Z,15nm,0.7s							
LONY	Lake Ozonia	34.36	16	eP		P	18 05 46.5	-0.5
	comp=Z,22nm,1.2s							
LONY	Lake Ozonia	34.36	16	P		P	18 05 45.8	-1.1
	baz=202							
LCMT	Little Creek M	34.40	321	eP		P	18 05 49.6	+2.1
	comp=Z,3.9nm,0.9s							
LDFC	Landfair	34.42	317	eP		P	18 05 49.4	+1.7
	comp=Z,15nm,0.5s							
E43A	Lone Tree Farm	34.42	0	eP		P	18 05 46.2	-1.2
	comp=Z,13nm,0.6s							
E43A	Lone Tree Farm	34.42	0	P		P	18 05 46.3	-1.1
	baz=180,SNR=11							
MTPU	Mount Pierson	34.45	324	eP		P	18 05 50.1	+1.9
	comp=Z,8.5nm,0.8s							
F52A	Sundridge	34.47	10	P		P	18 05 46.2	-1.6
	baz=193							
Q16A	Castle Valley	34.48	326	eP		P	18 05 49.6	+1.3
	comp=Z,7.6nm,0.6s							
P18A	Preston Nutter	34.49	327	eP		P	18 05 49.1	+0.6
	comp=Z,15nm,1.0s							
RWWY	Rawlins	34.59	333	eP		P	18 05 49.7	+0.4
	comp=Z,28nm,1.2s							
P17A	Butcher Ranch,	34.64	327	eP		P	18 05 50.7	+1.1
	comp=Z,18nm,0.9s							
E47A	Iron Bridge	34.64	5	P		P	18 05 48.5	-0.8
	baz=186,SNR=5.8							
E44A	Grand Marais A	34.68	1	eP		P	18 05 49.7	+0.1
	comp=Z,21nm,0.9s							
E44A	Grand Marais A	34.68	1	P		P	18 05 49.0	-0.6
	baz=182							
SZCU	Shurtz Canyon	34.68	322	eP		P	18 05 50.7	+0.6
	comp=Z,9.9nm,1.0s							
PEMO	Pembroke	34.73	12	P		P	18 05 49.7	-0.4
	baz=197							
MSU	Marysvale	34.76	324	eP		P	18 05 52.0	+1.3
TMUT	Trail Mountain	34.76	326	eP		P	18 05 51.5	+0.6
	comp=Z,15nm,1.2s							
E48A	Lockeyer	34.77	6	P		P	18 05 49.3	-1.1
	baz=188,SNR=5.8							
CCUT	Cedar City	34.82	322	eP		P	18 05 53.6	+2.4
	comp=Z,4.6nm,1.0s							
ALGO	Algonquin Park	34.84	11	P		P	18 05 50.0	-1.1
	baz=195							
E38A	The Farm, Brul	34.86	355	eP		P	18 05 50.0	-1.2
	comp=Z,16nm,0.8s							
E38A	The Farm, Brul	34.86	355	P		P	18 05 50.1	-1.1
	baz=172,SNR=7.8							
E50A	Wahnapitae	34.88	8	P		P	18 05 50.5	-0.8
	baz=191							
TCRU	Three Creeks R	34.98	324	eP		P	18 05 53.9	+1.2
	comp=Z,15nm,0.9s							
D46A	Sault St. Mari	35.02	4	P		P	18 05 51.7	-0.9
	baz=185							
E52A	Mattawa	35.05	10	P		P	18 05 52.1	-0.7
	baz=194							
K22A	Casper	35.08	335	eP		P	18 05 53.1	-0.3
	comp=Z,16nm,1.2s							
K22A	Casper	35.08	335	P		P	18 05 53.2	-0.1
	baz=145,SNR=5.5							
D41A	Chassel	35.13	358	eP		P	18 05 52.6	-0.9
	comp=Z,28nm,1.5s							
D41A	Chassel	35.13	358	P		P	18 05 52.2	-1.3
	baz=177							
E51A	G1948 Merrick	35.16	9	P		P	18 05 53.4	-0.4
	baz=193							
MNMC	Minye Minye	35.24	151	eP		P	18 05 55.0	-0.1
	comp=Z,22nm,1.0s							
D47A	Chapleau	35.25	5	P		P	18 05 53.8	-0.8
	baz=186							
SHPR	Sheep Range	35.29	319	eP		P	18 05 56.3	+1.0
	comp=Z,2.6nm,1.0s							
E53A	Dumoine, Ponti	35.32	11	P		P	18 05 54.5	-0.6
	baz=196							
RSSD	Black Hills	35.35	339	eP		P	18 05 56.1	+0.4
	comp=Z,12nm,1.1s							
RSSD	Black Hills	35.35	339	P		P	18 05 56.5	+0.8
	baz=150							
E54A	Lac Daplat, Po	35.47	12	P		P	18 05 56.0	-0.4
	baz=197							
D48A	Paudash Townsh	35.49	6	P		P	18 05 55.6	-1.0
	baz=189,SNR=11							
MPU	Maple Canyon	35.51	327	eP		P	18 05 58.0	+0.9
	comp=Z,19nm,1.1s							
D49A	Beulah Townshi	35.64	7	P		P	18 05 57.2	-0.7
	baz=189,SNR=8.9							
GSC	Goldstone, Bar	35.69	316	eP		P	18 06 01.0	+2.4
	comp=Z,3.9nm,1.0s							
NLU	North Lily Min	35.70	326	eP		P	18 05 59.3	+0.5
	comp=Z,5.0nm,0.9s							
PSUT	Pine Spring	35.75	323	eP		P	18 05 59.9	+0.6
	comp=Z,6.1nm,0.7s							
JLU	Jordanelle	35.83	327	eP		P	18 06 00.8	+0.9
	comp=Z,9.7nm,1.0s							
GO01	Chusmiza	35.89	151	eP		P	18 06 01.7	+0.8
	comp=Z,12nm,0.9s							
D53A	Lac Vacive, Po	35.99	11	eP		P	18 06 00.9	+0.1
	comp=Z,8.7nm,1.0s							
D53A	Lac Vacive, Po	35.99	11	P		P	18 06 00.4	-0.5
	baz=196							
C40A	Isle Royale Na	36.01	358	eP		P	18 05 59.8	-1.2
	comp=Z,15nm,1.0s							
C40A	Isle Royale Na	36.01	358	P		P	18 06 00.1	-0.8
	baz=176							
CTU	Camp Tracy	36.05	327	eP		P	18 06 01.7	0.0
	comp=Z,22nm,1.2s							
TCUT	Toone Canyon	36.18	328	eP		P	18 06 03.5	+0.6
	comp=Z,67nm,1.7s							
EYMN	Ely	36.19	355	eP		P	18 06 00.8	-1.7
	comp=Z,15nm,1.3s							
EYMN	Ely	36.19	355	P		P	18 06 01.3	-1.3
	baz=172							
TPNV	Topopah Spring	36.26	319	eP		P	18 06 05.6	+2.0
	comp=Z,5.1nm,0.9s							
TPNV	Topopah Spring	36.26	319	P		P	18 06 05.2	+1.7
	baz=126,SNR=5.4							
D54A	Lac Fusel, La	36.26	12	P		P	18 06 02.7	-0.5
	baz=197,SNR=5.4							
DUG

AGMN	Agassiz Nation	37.09 350	P	P	18 06 08.9	-1.3
	baz=166,SNR=17					
AHID	Auburn Hatcher	37.24 330	eP	P	18 06 11.6	-0.3
	comp=Z,28nm,1.3s					
HVU	Hansel Valley	37.37 328	eP	P	18 06 13.3	+0.5
	comp=Z,12nm,1.1s					
MDND	Maddock	37.41 346	eP	P	18 06 12.4	-0.6
	comp=Z,268nm,1.4s					
MDND	Maddock	37.41 346	P	P	18 06 12.4	-0.6
	baz=159					
REDW	Red Top Meadow	37.58 331	eP	P	18 06 15.1	+0.4
	comp=Z,71nm,1.2s					
SNOW	Snow King Moun	37.60 331	eP	P	18 06 15.6	+0.6
	comp=Z,29nm,0.8s					
LOHW	Long Hollow	37.65 332	eP	P	18 06 15.8	+0.5
	comp=Z,17nm,1.1s					
TPAW	Teton Pass	37.72 331	eP	P	18 06 16.3	+0.3
	comp=Z,32nm,1.1s					
MOOW	Moose Ponds	37.82 332	eP	P	18 06 17.0	+0.3
	comp=Z,11nm,1.0s					
FXWY	Fox Creek	37.87 331	eP	P	18 06 17.1	0.0
	comp=Z,11nm,1.4s					
ELK	Elko	38.01 324	eP	P	18 06 19.7	+1.3
	comp=Z,10nm,1.0s					
IMW	Indian Meadow	38.02 332	eP	P	18 06 18.9	+0.3
	comp=Z,18nm,1.4s					
LSQQ	Lebel-sur-Quev	38.03 11	P	P	18 06 17.2	-1.0
	baz=196					
FLWY	Flagg Ranch	38.05 332	eP	P	18 06 19.3	+0.5
	comp=Z,15nm,1.0s					
RLMT	Red Lodge	38.24 334	eP	P	18 06 20.2	0.0
	comp=Z,18nm,1.4s					
RLMT	Red Lodge	38.24 334	P	P	18 06 20.3	0.0
	baz=143					
H17A	Grant Village	38.24 332	eP	P	18 06 20.4	+0.1
	comp=Z,30nm,1.8s					
YPP	Pitchstone Pla	38.25 332	eP	P	18 06 21.2	+0.7
	comp=Z,10.0nm,1.4s					
NV11	Mina Array Sit	38.35 319	eP	P	18 06 22.3	+1.1
	comp=Z,0.6nm,1.3s					
YFT	Old Faithful	38.40 332	eP	P	18 06 23.3	+1.6
	comp=Z,16nm,1.1s					
OMMB	Old Mammoth Mi	38.44 317	eP	P	18 06 23.4	+1.2
	comp=Z,16nm,1.8s					
NV01	Mina Array Sit	38.44 319	ePcP	PcP	18 08 36.0	+1.7
NVAR	Mina Array Bea	38.44 319	P	P	18 06 23.9	+1.8
	comp=Z,1.6nm,0.5s,baz=134,slow=6.4,SNR=24					
NVAR			PcP	PcP	18 08 36.0	+1.7
	comp=Z,6.6nm,0.9s,baz=139,slow=3.4,SNR=9.2					
MDPB	Devils Postpil	38.50 317	eP	P	18 06 24.7	+2.0
	comp=Z,5.9nm,0.8s					
MATQ	Matagami	38.59 10	P	P	18 06 21.9	-0.9
	baz=195					
YHH	Holmes Hill	38.67 333	eP	P	18 06 24.8	+0.9
	comp=Z,12nm,1.3s					
KVN	Kaiserville	38.67 320	eP	P	18 06 25.3	+1.3
	comp=Z,7.0nm,1.1s					
RYN	Ryan	38.70 319	eP	P	18 06 25.6	+1.5
	comp=Z,3.6nm,1.0s					
YHB	Horse Butte	38.80 332	eP	P	18 06 25.9	+0.9
	comp=Z,5.5nm,0.7s					
GCMT	Greycliff	38.94 335	eP	P	18 06 26.0	0.0
QLMT	Earthquake Lak	38.96 332	eP	P	18 06 27.7	+1.4
BMN	Battle Mountai	38.97 322	eP	P	18 06 27.8	+1.4
	comp=Z,17nm,1.2s					
ULM	Lac du Bonnet	38.98 351	P	P	18 06 24.6	-1.6
	comp=Z,16nm,0.5s,baz=161,slow=10.0,SNR=17					
ULM	Lac du Bonnet	38.98 351	eP	P	18 06 24.4	-1.7
	comp=Z,22nm,0.6s					
WAKR	Walker	39.22 318	eP	P	18 06 31.1	+2.5
	comp=Z,8.8nm,1.2s					
DGMT	Dagmar	39.23 342	eP	P	18 06 28.4	+0.1
	comp=Z,40nm,0.5s					
DGMT	Dagmar	39.23 342	P	P	18 06 28.4	+0.1
	baz=153,SNR=5.1					
YERR	Yerington	39.36 319	eP	P	18 06 31.6	+1.9
	comp=Z,16nm,1.6s					
HLID	Hailey	39.48 328	eP	P	18 06 30.4	-0.2
	comp=Z,5.7nm,0.9s					
HLID	Hailey	39.48 328	P	P	18 06 30.7	0.0
	baz=135,SNR=8.8					
CMB	Columbia Colle	39.59 317	eP	P	18 06 32.8	+1.4
	comp=Z,4.5nm,1.1s					
MCMT	McKenzie Canyo	39.62 331	eP	P	18 06 32.7	+0.8
BOZ	Bozeman (W)	39.64 333	eP	P	18 06 32.5	+0.6
	comp=Z,7.6nm,0.8s					
BOZ	Bozeman (W)	39.64 333	P	P	18 06 32.3	+0.4
	baz=140,SNR=16					
PAHR	Pah Rah Range	39.86 320	eP	P	18 06 35.4	+1.6
	comp=Z,13nm,1.6s					
DLMT	Dillon	39.91 332	eP	P	18 06 34.6	+0.5
	comp=Z,23nm,1.3s					
LRM	Limekiln Ridge	40.19 332	eP	P	18 06 37.1	+0.6
BEKR	Beckworth	40.57 319	eP	P	18 06 41.5	+1.8
	comp=Z,3.1nm,0.7s					
HRY	Holter Researc	40.59 334	eP	P	18 06 40.0	+0.3
EGMT	Eagleton	40.78 337	eP	P	18 06 41.1	-0.1
	comp=Z,26nm,1.5s					
EGMT	Eagleton	40.78 337	P	P	18 06 41.6	+0.3
	baz=145					
WVOR	Wild Horse Val	41.05 324	eP	P	18 06 44.0	+0.5
	comp=Z,9.1nm,1.0s					
ORV	Oroville	41.14 318	eP	P	18 06 45.1	+0.9
	comp=Z,5.7nm,1.1s					
PLID	Pearl Lake	41.37 329	eP	P	18 06 46.1	-0.1
	comp=Z,20nm,1.3s					
J08A	Circle Bar Ran	41.54 325	eP	P	18 06 48.1	+0.5
	comp=Z,4.6nm,0.6s					
MSO	Missoula	41.62 332	eP	P	18 06 48.0	-0.2
	comp=Z,15nm,1.1s					
MSO	Missoula	41.62 332	P	P	18 06 48.5	+0.4
	baz=138,SNR=6.6					
MOD	Modoc Plateau	41.71 322	eP	P	18 06 48.5	-0.5
	comp=Z,4.1nm,0.9s					
BMO	Blue Mountains	41.88 327	eP	P	18 06 49.6	-0.7
	comp=Z,7.5nm,0.9s					
I07A	Izee	42.57 325	eP	P	18 06 55.6	-0.4
	comp=Z,5.5nm,1.2s					
M04C	Macdoel	42.58 321	P	P	18 06 55.9	-0.2
	baz=124					
F10A	Beach Ranch, E	42.60 329	eP	P	18 06 55.6	-0.5
	comp=Z,15nm,1.0s					
N02D	Trinity Center	42.68 319	P	P	18 06 57.1	+0.3
	baz=123					
G08A	Pilot Rock	43.05 327	eP	P	18 07 00.5	+0.7
	comp=Z,2.6nm,1.0s					
L04D	Klamath Falls	43.11 321	P	P	18 07 00.6	+0.2
	baz=124					
PINE	Pine Mountain	43.21 324	eP	P	18 07 01.7	+0.4
	comp=Z,6.9nm,1.0s					
KHMM	Horse Mountain	43.28 319	eP	P	18 07 02.4	+0.6
	comp=Z,36nm,1.6s					
WALA	Waterton Lakes	43.29 334	eP	P	18 07 01.6	-0.1
	comp=Z,5.2nm,0.9s					
E09A	Wood Farm, Sta	43.44 329	eP	P	18 07 03.3	+0.6
	comp=Z,11nm,0.9s					
J04D	Umpqua Nationa	43.57 322	P	P	18 07 04.6	+0.4
	baz=125					
I05D	Terrebonne, OR	43.77 324	P	P	18 07 06.6	+1.1
	baz=127					
E08A	Dider Farm, El	43.89 328	eP	P	18 07 05.3	-1.1
	comp=Z,15nm,1.1s					
HAWA	Hanford	44.07 328	eP	P	18 07 07.9	0.0
	comp=Z,7.7nm,0.8s					
I04A	Tendick Farm,	44.07 323	P	P	18 07 08.4	+0.4
	baz=126					
NEW	Newport	44.15 331	eP	P	18 07 08.2	-0.3
	comp=Z,5.0nm,1.0s					
NEW	Newport	44.15 331	P	P	18 07 08.1	-0.3
	baz=135					
D08A	Wollman Farm,	44.20 329	eP	P	18 07 08.7	-0.1
	comp=Z,12nm,0.8s					
FFC	Flin Flon	44.38 348	eP	P	18 07 09.7	-0.5
	comp=Z,26nm,1.3s					
H04A	Detroit Lake	44.46 324	eP	P	18 07 10.9	-0.2
	comp=Z,17nm,1.3s					
I03D	Drain, OR	44.58 322	P	P	18 07 12.4	+0.5
	baz=124					
KEBM	Edson Butte	44.72 321	eP	P	18 07 14.2	+1.0
	comp=Z,42nm,1.2s					
LON	Longmire	45.51 327	eP	P	18 07 19.1	-0.3
	comp=Z,4.2nm,0.9s					
D05A	Enumclaw	45.88 327	eP	P	18 07 21.8	-0.4
	comp=Z,11nm,0.9s					
B06A	Marblemount	46.46 329	eP	P	18 07 26.3	-0.4
	comp=Z,14nm,0.6s					
D03D	Eldon	46.68 327	P	P	18 07 28.1	-0.4
	baz=128					
NLWA	Neilton Lookou	47.02 326	eP	P	18 07 31.7	+0.6
	comp=Z,14nm,1.3s					
FCC	Fort Churchill	47.13 355	eP	P	18 07 30.7	-1.1
	comp=Z,9.3nm,1.0s					
BDFB	Brasilia	47.28 124	P	P	18 07 32.3	-1.4
	comp=Z,2.8nm,0.7s,baz=233,slow=7.2,SNR=4.5					
BDFB	Brasilia	47.28 124	eP	P	18 07 32.1	-1.6
	comp=Z,9.1nm,0.7s					
PGC	Sidney	47.56 328	eP	P	18 07 34.8	-0.5
	comp=Z,5.4nm,0.8s					
CPUP	Villa Florida	47.67 143	P	P	18 07 35.4	-1.0
	comp=Z,6.6nm,0.7s,baz=326,slow=8.0,SNR=16					
CPUP	Villa Florida	47.67 143	eP	P	18 07 35.3	-1.1
	comp=Z,8.7nm,0.8s					
LLLB	Lillooet	48.02 331	eP	P	18 07 38.9	0.0
	comp=Z,24nm,1.2s					
YKA	Yellowknife Ar	54.31 345	P	P	18 08 24.7	-1.0
	comp=Z,5.6nm,0.7s,baz=138,slow=7.6,SNR=28					
YKW3	Yellowknife Ar	54.37 345	eP	P	18 08 24.9	-1.2
	comp=Z,11nm,1.0s					
PLCA	Paso Flores	54.48 165	P	P	18 08 27.8	+0.4
	comp=Z,2.9nm,0.9s,baz=355,slow=13,SNR=3.2					
PLCA	Paso Flores	54.48 165	eP	P	18 08 28.0	+0.7
	comp=Z,9.5nm,1.0s					
DLBC	Dease Lake	56.64 335	eP	P	18 08 43.0	+0.3
	comp=Z,11nm,0.9s					
EPYK	Eagle Plains	63.78 340	eP	P	18 09 30.5	-0.8
	comp=Z,5.8nm,0.9s					
EPYK	Eagle Plains	63.78 340	P	P	18 09 30.9	-0.4
	baz=124					
INK	Inuvik	63.91 343	P	P	18 09 31.4	-0.5
	comp=Z,8.7nm,1.0s,baz=116,slow=8.4,SNR=20					
INK	Inuvik	63.91 343	eP	P	18 09 31.5	-0.5
	comp=Z,10nm,1.0s					
EGAK	Eagle	64.54 337	eP	P	18 09 35.1	-1.1
	comp=Z,5.0nm,1.1s					
EYAK	Cordova Ski Ar	64.64 332	eP	P	18 09 36.9	0.0
	comp=Z,21nm,1.3s					
MENT	Mentasta	64.72 335	eP	P	18 09 37.6	+0.1
	comp=Z,3.6nm,1.0s					
DIV	Divide	64.87 333	eP	P	18 09 38.7	+0.2
	comp=Z,6.0nm,0.9s					
DOT	Dot Lake	65.16 336	eP	P	18 09 40.1	-0.2
	comp=Z,7.7nm,0.8s					
PAX	Paxson	65.46 335	eP	P	18 09 43.3	+1.0
	comp=Z,4.4nm,1.1s					
RIDG	Independent Ri	65.52 336	eP	P	18 09 42.4	-0.3
	comp=Z,11nm,1.0s					
KNK	Knik Glacier	66.19 332	eP	P	18 09 46.6	-0.3
	comp=Z,11nm,1.1s					
KNK			ePcP	PcP	18 10 14.1	-2.6
SEW	Seward	66.21 331	eP	P	18 09 46.1	-1.0
	comp=Z,8.5nm,1.0s					
DHY	Denali Highway	66.30 334	eP	P	18 09 48.6	+0.8
	comp=Z,4.7nm,1.3s					
GHO	Glory Hole Cre	66.52 333	eP	P	18 09 48.9	-0.3
	comp=Z,9.2nm,0.9s					
PRP	Porcupine Dome	66.52 337	eP	P	18 09 48.4	-0.8
	comp=Z,4.6nm,0.7s					
PRP			ePcP	PcP	18 10 16.0	-2.2
PMR	Palmer	66.55 333	eP	P	18 09 48.4	-0.8
	comp=Z,7.1nm,1.1s					
HDA	Harding Lake	66.63 336	eP	P	18 09 48.6	-1.1
	comp=Z,10nm,1.0s					
RC01	Rabbit Creek A	66.66 332	eP	P	18 09 49.5	-0.4
	comp=Z,12nm,1.0s					
ILAR	Eielson Array	66.75 336	P	P	18 09 49.6	-0.8
	comp=Z,3.4nm,0.8s,baz=112,slow=4.7,SNR=33					
ILB	Eielson Array	66.75 336	eP	P	18 09 49.4	-1.1
	comp=Z,12nm,1.3s					
BRLK	Bradley Lake	66.80 330	eP	P	18 09 50.7	-0.2
	comp=Z,16nm,1.1s					
FYU	Fort Yukon	66.86 338	eP	P	18 09 50.5	-0.6
	comp=Z,16nm,1.5s					
RND	Reindeer	67.05 334	eP	P	18 09 52.2	-0.3
	comp=Z,20nm,0.9s					
CCB	Clear Creek Bu	67.07 336	eP	P	18 09 51.1	-1.4
	comp=Z,3.9nm,1.2s					
SUMG	Summit	67.07 14	eP	P	18 09 52.1	-0.8
	comp=Z,5.7nm,1.0s					
POKR	Poker Flat Res	67.10 336	P	P	18 09 52.3	-0.4
	baz=112					
WRH	Wood River Hil	67.11 336	eP	P	18 09 51.3	-1.5
	comp=Z,3.9nm,0.8s					
MCK	McKinley	67.19 335	eP	P	18 09 52.8	-0.6
	comp=Z,13nm,1.1s					
SUA	Susitna One	67.24 332	eP	P	18 09 53.2	-0.6
	comp=Z,7.8nm,1.1s					
BWN	Browne	67.57 335	eP	P	18 09 54.7	-1.0
	comp=Z,40nm,1.1s					
TRF	Thorofare Moun	67.67 334	eP	P	18 09 55.5	-1.1
	comp=Z,3.0nm,1.1s					
SPU	Mont Spurr	67.76 332	eP	P	18 09 57.0	0.0
RSO	Redoubt South	67.89 331	eP	P	18 09 57.7	-0.3
KTH	Kantishna Hill	67.97 334	eP	P	18 09 57.2	-1.1
	comp=Z,4.9nm,0.9s					
BPAW	Bear Paw Mtn.	68.17 335	eP	P	18 09 58.4	-1.2
	comp=Z,10nm,1.0s					
MLY	Manley	68.38 336	eP	P	18 10 00.1	-0.7
	comp=Z,7.5nm,0.8s					
MLY			ePcP	PcP	18 10 27.4	+1.6
CAST	Castle Rocks	68.43 334	eP	P	18 09 59.7	-1.4
	comp=Z,7.7nm,1.2s					
CAST			ePcP	PcP	18 10 27.5	+1.4
COLD	Coldfoot	68.92 338	eP	P	18 10 04.5	+0.4
	comp=Z,7.0nm,1.2s					
ESDC	Sonseca Array	77.22 52	P	P	18 10 52.8	-1.0
	comp=Z,1.0nm,0.7s,baz=286,slow=5.7,SNR=8.8					
BILL	Bilibino	85.24 339	eP	P	18 11 35.3	-0.3
	comp=Z,11nm,1.4s					
ARA0	ARCESS Array S	86.62 19	eP	P	18 11 43.0	+0.6
ARCES	ARCESS Array B	86.62 19	P	P	18 11 43.0	+0.6
	comp=Z,6.3nm,0.3s,baz=260,slow=5.4,SNR=4.4					
KSRS	Korea Array	121.02 328	PKP	PKiKP	18 17 52.7	+0.6
	comp=Z,3.0nm,0.8s,baz=14,slow=1.4,SNR=18					
KS15	Wonju Array Si	121.04 328	ePKPdf	PKiKP	18 17 52.1	-0.1
WMQ	Urumqi	124.40 5	ePKP	PKiKP	18 17 59.3	+0.6
HHC	Hu-ho-hao-te	124.83 343	ePKP	PKiKP	18 18 00.3	+0.6
KSH	Kashi	126.51 16	ePKP	PKiKP	18 18 05.4	+2.3
GTA	Gaotai	128.62 353	ePKP	PKiKP	18 18 07.4	+0.1
NJ2	Nanjing	129.82 331	ePKP	PKiKP	18 18 09.9	+0.1
LZH	Lanzhou	131.24 348	ePKP	PKiKP	18 18 13.5	+0.7
LZH			sPKP		18 18 29.8	
LZH			LR	LR		
	comp=Z,130nm,18.3s					
LZH			LR	LR		
	comp=Z,130nm,18.1s					
LZH			LR	LR		
	comp=Z,170nm,20.2s					
ENH	Enshi	135.22 340	ePKPdf	PKPdf	18 18 19.2	0.0
AS31	Alice Springs	139.44 247	ePKPdf	PKPdf	18 18 28.1	+0.9
ASAR	Alice Springs	139.44 247	PKhKP	PKPpre	18 18 19.7	
	comp=Z,1.1nm,0.9s,baz=112,slow=3.8,SNR=8.5					
ASAR			PKP	PKPdf	18 18 28.1	+0.9
	comp=Z,2.6nm,0.8s,baz=102,slow=2.2,SNR=13					
WRA	Warramunga Arr	139.51 253	PKP	PKPdf	18 18 27.5	+0.2
	comp=Z,3.6nm,0.9s,baz=87,slow=2.3,SNR=7.3					
FITZ	Fitzroy Crossi	147.89 255	ePKPbc	PKPbc	18 18 45.9	+0.8
CHTO	Chiang Mai	148.98 349	ePKPdf	PKPdf	18 18 44.0	+0.1
CMMT	Chiang Mai	148.98 349	P	PKiKP	18 18 48.7	-0.5
	comp=Z,4.2nm,1.1s					
LAMP	Lampang	149.13 348	P	PKiKP	18 18 49.8	+0.3
	comp=Z,26μm,0.6s,comp=Z,292μm					
CM31	Chiang Mai Arr	149.33 349	ePKPdf	PKPdf	18 18 44.9	+0.5
CMAR	Chiang Mai Arr	149.33 349	PKP	PKPdf	18 18 45.2	+0.8
	comp=Z,3.8nm,0.7s,baz=312,slow=2.5,SNR=15					
CMAR			PKPbc	PKiKP	18 18 49.5	-0.5
	comp=Z,3.6nm,0.7s,baz=310,slow=2.6,SNR=17					
KHON	Khomkaen	150.36 341	P	PKiKP	18 18 52.6	+0.5
	comp=Z,66μm,1.1s					
CHAI	Chaiyaphum	151.03 342	P	PKiKP	18 18 54.2	+0.7
	comp=Z,35μm,1.1s,comp=Z,427μm					
KSM	Kuching	158.30 306	ePKPdf	PKPdf	18 18 55.5	-1.8
KSM			ePKPab	PKPab	18 19 29.9	-1.6

TAP ***15*** *17:59:16.6,24.°88N×122.°72E,h28km±1km,ML2.5,D*
JMA ***15*** *17:59:16.7±0.2,24.°86N×122.°66E,h0km,M1.8*
ISCJB ***15*** *17:59:17.8±0.6,24.°84N±0.°05×122.°66E±0.°03,h16km±6km,*
Error ellipse: s-maj=8.8km s-min=4.0km az=13.0
ISC 15 17:59:16.8±1.2,24.°86N±0.°06×122.°67E±0.°03,h16km±11km,
n35,σ0°48/43,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.48	148	P	Pg	17 59 26.5	+0.2
JYNG				S	Sb	17 59 33.8	+0.2
YOJ	Yonaguni jima	0.50	141	eP	Pg	17 59 26.7	-0.1
	baz=147						
YOJ	Yonaguni jima	0.50	141	P	Pb	17 59 27.1	-0.2
YOJ				eS	Sb	17 59 34.1	-0.3
EOS1	EOS1	0.58	238	eP	Pb	17 59 29.1	+0.6
	baz=232						
EOS1				eS	Sn	17 59 38.4	-1.2
	baz=232						
TIPB	Shuangxi	0.77	279	eP	Pg	17 59 31.2	-0.6
	baz=277						
TWC	Suao	0.78	252	eP	Pg	17 59 31.6	-0.4
	baz=252						
TWE	Neicheng	0.92	262	eP	Pb	17 59 34.5	+0.1
	baz=261						
TWE				eS	Sn	17 59 47.8	-0.2
	baz=261						
NANB	Nanao	0.94	243	eP	Pb	17 59 34.2	-0.5
	baz=235						
ENA	Nanau	0.94	243	eP	Pn	17 59 35.5	+0.1
	baz=234						
YM07	YM07	1.00	289	eP	Pn	17 59 36.9	+0.7
	baz=287						
ENTT	Nioudou	1.02	258	eP	Pg	17 59 37.2	+0.6
	baz=267						
YM08	YM08	1.03	289	eP	Pb	17 59 35.9	-0.4
	baz=287						
YM01	YM01	1.04	286	eP	Pn	17 59 37.0	+0.2
	baz=285						
NWLT	Wulai	1.06	266	eP	Pb	17 59 36.1	-0.7
	baz=275						
NDT	Datong Townshi	1.08	257	eP	Pg	17 59 38.1	+0.4
	baz=265						
IRIF	Iriomote-Funau	1.10	118	P	Pg	17 59 38.9	+0.9
YHNB	Yeheng	1.19	261	eP	Pb	17 59 39.4	+0.4
	baz=271						
NACB	Ninganchiao	1.19	235	eP	Pn	17 59 38.3	-0.6
	baz=236						
NACB				eS	Sb	17 59 54.5	+0.3
	baz=236						
NSK	Sanguang	1.20	262	eP	Pb	17 59 39.8	+0.5
	baz=270						
NNSB	Datong	1.24	250	eP	Pb	17 59 40.3	+0.3
	baz=251						
NNS	Nan Shan	1.25	251	eP	Pb	17 59 40.5	+0.5
	baz=251						
ETLH	Xiulin Townshi	1.26	239	eP	Pn	17 59 39.9	+0.1
	baz=226						
WHF	Hehuan Shan	1.46	241	eP	Pb	17 59 43.9	0.0
	baz=243						
TWT	Tachien	1.48	246	eP	Pb	17 59 45.0	+0.8
	baz=248						
TDCB	Techi	1.50	247	eP	Pb	17 59 44.5	+0.1
	baz=248						
LIOB	Emei	1.52	262	eP	Pb	17 59 44.5	0.0
	baz=263						
JISG	Ishigakijimahi	1.52	100	P	Pb	17 59 44.4	-0.2
JISG				eS	Sg	18 00 05.4	-0.4
NSTT	Nanjuang	1.53	262	eP	Pb	17 59 44.9	0.0
	baz=263						
CHGB	Renai	1.57	240	eP	Pb	17 59 45.6	-0.1
	baz=226						
CHGB				eS	Sn	18 00 05.3	+0.8
	baz=226						
SANB	Taian	1.60	254	eP	Pb	17 59 46.4	+0.4
	baz=255						
OWD	Renai	1.63	237	eP	Pn	17 59 45.5	+0.5
	baz=224						
OWD				eS	Sn	18 00 05.5	-0.2
	baz=224						
HGSD	Ruisui	1.77	220	eP	Pn	17 59 46.2	-0.6
	baz=210						
VWDT	VWDT	1.77	232	eP	Pn	17 59 47.3	+0.5
	baz=223						
DPDB	Guoxing	1.79	243	eP	Pb	17 59 48.7	-0.5
	baz=233						
YULB	Yu-li	1.92	221	eP	Pn	17 59 48.7	-0.2
	baz=238						

IDC ***15*** *17:59:25.4±1.0,11.°95N×86.°79W,h0km,mb4.8/9,*
mb1 5.1/10,mb1mx4.4/45,mbtmp4.8/10,ML4.5/1,Error
ellipse: s-maj=48.9km s-min=21.3km az=48.0
NEIC ***15*** *17:59:32.1±3.0,11.°85N×87.°11W,h35km,mb4.9/189,*
Error ellipse: s-maj=20.7km s-min=13.1km az=233.0
ISCJB ***15*** *17:59:38.6±0.7,12.°04N±0.°06×86.°98W±0.°04,h107km±6km,*
mb4.8/164,Error ellipse: s-maj=9.7km s-min=7.0km
az=15.7
ISC 15 17:59:37.8±1.2,12.°06N±0.°09×87.°09W±0.°09,h86km±9km,
n219,σ1$31/229,mb4.8/164,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	1.02	333	eSn	Sn	18 00 09.8	-2.5
ESTN	Estel	1.25	34	ePn	Pn	18 00 01.0	+0.6
ACON	Acoyapa	1.88	93	ePn	Pn	18 00 07.8	-0.5
TGUH	Tegucigalpa,Un	1.99	355	ePn	Pn	18 00 09.7	-0.2
JTS	Las Juntas de	2.74	130	Pn	Pn	18 00 06.9	-13
	113nm,0.3s,baz=357,slow=18,SNR=6.9						
JTS	Las Juntas de	2.74	130	ePn	Pn	18 00 19.3	-0.5
HDC	Heredia	3.57	125	eP	Pn	18 00 32.5	+1.4
TEIG	Tepich	8.20	352	ePn	Pn	18 01 38.2	+4.1
FSCY	Frank Sound, G	9.18	38	ePn	Pn	18 01 48.8	+1.4
MTDJ	Mount Denham	11.07	55	ePn	Pn	18 02 14.3	+0.9
GTBY	Guantanamo Bay	13.91	54	ePn	Pn	18 02 53.5	+2.2
LNIG	Linares	17.33	319	ePn	P	18 03 36.1	+1.7
	61nm,0.8s						
BRAL	Brewton	19.02	0	eP	Pn	18 03 54.3	-0.2
	82nm,1.0s						
456A	Hilliard	19.16	13	eP	P	18 03 53.6	-0.8
	124nm,1.0s						
TIGA	Tifton	19.55	9	eP	Pn	18 04 01.4	+0.6
	140nm,1.1s						
HKT	Hockley	19.57	337	eP	Pn	18 04 00.5	-0.5
	70nm,1.1s						
250A	Grady	19.84	2	eP	P	18 04 02.3	+0.4
	76nm,1.2s						
833A	Chaparral WMA,	19.85	326	eP	P	18 04 01.9	-0.1
	209nm,1.1s						
MPR	Mayaguez	20.20	70	eP	P	18 04 01.9	-4.0
	160nm,1.6s						
147A	Livingston	20.54	357	eP	Pn	18 04 11.8	-0.6
	82nm,0.8s						
152A	Waverly Hall	20.63	6	eP	P	18 04 11.0	+0.7
	40nm,0.8s						
154A	Montrose	20.78	10	eP	P	18 04 11.8	-0.2
	152nm,0.9s						
NATX	Nacogdoches	20.81	342	eP	P	18 04 14.0	+1.7
	125nm,1.0s						
LRAL	Lakeview Retre	20.88	0	eP	P	18 04 12.1	-0.9
	25nm,0.8s						
435B	Jarrell	21.01	334	eP	P	18 04 15.2	+0.7
	43nm,0.8s						
GOGA	Godfrey	21.51	8	eP	P	18 04 22.3	+2.5
	41nm,1.0s						
MTP	Monte Pirata	21.63	71	eP	P	18 04 21.7	+0.5
	23nm,1.0s						
Y49A	Blount Mountai	21.70	2	eP	P	18 04 23.7	+1.8

TXAR	Lajitas Array	23.10	321	P	P	18 04 36.6	0.0
	68nm,1.1s,baz=135,slow=10,SNR=5.3						
TXAR				PcP	PcP	18 08 24.0	+1.0
	3.5nm,0.9s,baz=152,slow=5.7,SNR=5.3						
TX31	Lajitas Ar. Si	23.10	321	eP	P	18 04 38.0	+1.4
	34nm,0.8s						
W52A	Murphy	23.11	7	eP	P	18 04 38.2	+1.7
	61nm,1.1s						
UALR	University of	23.11	349	eP	P	18 04 37.8	+1.3
	21nm,0.8s						
MIAR	Mount Ida	23.15	346	eP	P	18 04 37.7	+0.8
	42nm,0.8s						
BIRD	Birdtown, Kers	23.28	14	eP	P	18 04 38.2	+0.1
	46nm,1.2s						
Y60A	Bolivia	23.30	19	eP	P	18 04 39.0	+0.7
	52nm,0.8s						
CPCT	Cooper Cave	23.40	5	eP	P	18 04 39.7	+0.5
	41nm,0.9s						
W41B	Gary Mavity, V	23.48	349	eP	P	18 04 38.8	-1.1
	28nm,1.2s						
ABTX	Abilene, Hawle	23.49	333	eP	P	18 04 40.4	+0.3
	97nm,1.3s						
V48A	Smith Brothers	23.58	1	eP	P	18 04 41.7	+0.9
	19nm,1.0s						
WHAR	Wooly Hollow	23.60	349	eP	P	18 04 42.0	+0.9
	21nm,1.1s						
X37A	Clayton	23.66	343	eP	P	18 04 43.3	+1.7
	146nm,1.1s						
V51A	Loudon	23.77	6	eP	P	18 04 43.6	+1.1
	55nm,1.3s						
W39A	Magazine	23.82	346	eP	P	18 04 43.7	+0.8
	59nm,1.2s						
V53A	Saluda	23.82	9	eP	P	18 04 42.6	-0.5
	32nm,1.0s						
W57A	Gilead	23.87	14	eP	P	18 04 43.9	+0.4
	25nm,0.8s						
CLTN	Cedars of Leba	23.93	2	eP	P	18 04 44.7	+0.7
	19nm,0.6s						
WVT	Waverly	23.97	359	eP	P	18 04 45.5	+1.1
	13nm,0.6s						
U54A	Nelsons Funny	24.81	10	eP	P	18 04 52.3	+0.3
	39nm,0.9s						
T47A	Sharon Grove	24.82	360	eP	P	18 04 53.0	+0.9
	54nm,1.1s						
T45A	Paducah	24.89	357	eP	P	18 04 53.1	+0.4
	56nm,0.6s						
HHAR	Hobbs	24.89	347	eP	P	18 04 53.2	+0.4
	22nm,0.9s						
WMOK	Wichita Mounta	24.95	337	eP	P	18 04 55.6	+2.3
	124nm,1.0s						
T49A	Edmonton	24.98	3	eP	P	18 04 53.6	+0.2
	40nm,1.1s						
TUL1	Leonard	25.01	343	eP	P	18 04 54.5	+0.7
	103nm,1.0s						
SVB	Belmont	25.23	84	eP	P	18 04 55.3	-0.7
	79nm,0.8s						
GDL2	Guadalupe Moun	25.57	324	eP	P	18 04 59.7	+0.6
SIUC	Southern Illin	25.62	356	eP	P	18 04 59.8	+0.6
	24nm,1.0s						
MNTX	Cornudas Mount	25.81	322	eP	P	18 05 02.3	+1.2
	26nm,1.3s						
T57A	Hurt	25.81	15	eP	P	18 05 00.3	-0.7
	27nm,1.0s						
WCI	Wyandotte Cave	26.07	1	eP	P	18 05 03.9	+0.6
	22nm,1.0s						
MSTX	Muleshoe	26.08	329	eP	P	18 05 03.3	-0.4
	67nm,0.9s						
CCM	Cathedral Cave	26.15	353	eP	P	18 05 04.4	+0.3
	34nm,1.1s						
U32A	Winter Ranch,	26.49	338	eP	P	18 05 07.0	-0.2
	69nm,0.8s						
Q51A	Peebles	27.06	6	eP	P	18 05 13.9	+1.6
Q54A	Coxs Mills	27.38	11	eP	P	18 05 16.5	+1.3
	62nm,1.6s						
ACSO	Alum Creek Sta	28.29	7	eP	P	18 05 22.9	-0.3
	41nm,1.3s						
O52A	Adamsville	28.33	9	eP	P	18 05 23.6	0.0
	26nm,1.1s						
HDIL	Hopedale	28.45	356	eP	P	18 05 24.2	-0.4
	27nm,0.6s						
N41A	Harden Midland	28.73	354	eP	P	18 05 26.1	-1.0
	42nm,1.2s						
N49A	Columbus Grove	28.86	5	eP	P	18 05 28.8	+0.5
	48nm,1.3s						
N53A	Lisbon	29.16	10	eP	P	18 05 30.9	0.0
	12nm,0.8s						
M44A	Midewin, Midew	29.23	359	eP	P	18 05 30.6	-0.9
	13nm,0.6s						
M50A	Fremont	29.44	6	eP	P	18 05 34.5	+1.1
	18nm,0.9s						
SSPA	Standing Stone	29.59	14	eP	P	18 05 35.9	+1.1
	9.8nm,0.8s						
TUC	Tucson	29.66	317	eP	P	18 05 37.3	+1.7
	12nm,1.2s						
L46A	Eue Claire	29.85	1	eP	P	18 05 35.8	-1.2
	31nm,0.9s						
L42A	Oliver, Polo	29.91	356	eP	P	18 05 37.5	-0.1
	27nm,0.7s						
M54A	Oil Creek Stat	30.05	11	eP	P	18 05 40.0	+1.2
	21nm,1.3s						
L40A	Anamosa	30.11	354	eP	P	18 05 39.8	+0.5
	30nm,0.9s						
LUPA	Lehigh Univers	30.24	18	eP	P	18 05 40.4	-0.1
	0.7nm,0.8s						
N59A	State Game Lan	30.42	17	eP	P	18 05 43.1	+1.0
	13nm,0.9s						
SDCO	Great Sand Dun	30.42	330	eP	P	18 05 44.6	+2.1
	24nm,1.4s						
K43A	Burlington	30.55	358	eP	P	18 05 43.1	0.0
	18nm,1.0s						
W18A	Petrified Fore	30.80	322	eP	P	18 05 48.1	+2.4
	18nm,1.0s						
BGNE	Belgrade	30.80	344	eP	P	18 05 45.3	-0.2
	82nm,0.8s						
JFWS	Jewell Farm	30.86	355	eP	P	18 05 46.1	+0.2
	27nm,1.0s						
ODNJ	Ogdensburg	30.92	19	eP	P	18 05 46.6	+0.2
	14nm,1.2s						
S22A	4UR Ranch, Cre	31.08	329	eP	P	18 05 49.9	+1.6
	9.1nm,0.9s						
BINY	Binghamton	31.55	16	eP	P	18 05 53.6	+1.6
	20nm,0.9s						
OGNE	Ogallala	31.63	338	eP	P	18 05 54.6	+1.8
	43nm,1.3s						
I42A	Draeger Farm,	31.75	357	eP	P	18 05 53.6	-0.1
	33nm,0.8s						
KSCT	Kent School, K	31.86	19	eP	P	18 05 56.8	+2.1
	38nm,1.6s						
J54A	Appleton	31.95	12	eP	P	18 05 56.4	+1.0
	15nm,0.9s						
I49A	Point Hope	31.98	6	eP	P	18 05 57.1	+1.4
	15nm,1.0s						
ISCO	Idaho Springs	32.12	333	eP	P	18 06 01.1	+3.7
	3.0nm,0.7s						
SMCO	Snowmass	32.26	330	eP	P	18 06 00.5	+1.7
	15nm,1.1s						
H43A	Windswept, Lux	32.30	359	eP	P	18 05 58.4	-0.2
	26nm,0.9s						
PV02	Paradox Valley	32.42	327	eP	P	18 06 02.1	+2.1
	36nm,1.6s						
PV13	Radium Mtn., P	32.43	327	eP	P	18 06 01.2	+1.2
	15nm,1.0s						
PV03	Paradox Valley	32.51	327	eP	P	18 06 02.4	+1.6
	12nm,0.7s						
PV05	Paradox Valley	32.52	327	eP	P	18 06 02.9	+2.1
	13nm,0.7s						
PV12	Saucer Basin,	32.53	327	eP	P	18 06 02.8	+1.9
	28nm,0.8s						
PV18	Skein Mesa, Pa	32.54	327	eP	P	18 06 02.1	+1.1
	20nm,0.6s						
PV07	Paradox Valley	32.54	328	eP	P	18 06 02.8	+1.7
	20nm,1.2s						
PV11	David Mesa, Pa	32.56	327	eP	P	18 06 02.8	+1.6
	25nm,0.7s						
PV16	Nyswonger Mesa	32.59	327	eP	P	18 06 03.0	+1.6
	13nm,0.7s						
PV17	East Wray Mesa	32.59	327	eP	P	18 06 03.7	+2.3
	28nm,0.6s						
ECSD	EROS Data Cent	32.61	347	eP	P	18 06 01.4	+0.1
	50nm,1.0s						
PV19	Morning Glory	32.62	327	eP	P	18 06 03.8	+2.0
	18nm,0.9s						
PV20	West Nyswonger	32.64	327	eP	P	18 06 04.6	+2.7
	15nm,0.9s						
PV04	Paradox Valley	32.65	327	eP	P	18 06 03.9	+2.0
	12nm,0.7s						
H48A	Harrisville	32.69	5	eP	P	18 06 01.0	-0.9
	50nm,1.0s						
PV22	Blue Mesa, Par	32.69	328	eP	P	18 06 04.0	+1.7
	37nm,1.5s						
PV10	Paradox Valley	32.70	327	eP	P	18 06 03.1	+0.6
	15nm,0.7s						
TRY	Troy	32.71	18	eP	P	18 06 02.6	+0.5
	52nm,1.4s						
PV23	Carpenter Ridg	32.74	327	eP	P	18 06 06.3	+3.4
	14nm,0.7s						
PV21	Cone Mtn., Par	32.81	327	eP	P	18 06 06.0	+2.6
	5.2nm,0.7s						
PV09	Paradox Valley	32.84	327	eP	P	18 06 06.5	+2.7
G45A	Suttons Bay	32.89	2	eP	P	18 06 03.2	-0.5
	49nm,1.1s						
PECO	Prince Edward	32.93	13	eP	P	18 06 04.7	+0.6
	8.3nm,0.9s						
G40A	Rib Lake	33.20	356	eP	P	18 06 05.3	-1.1
	26nm,1.0s						
HRV	Adam Dziewonsk	33.21	21	eP	P	18 06 07.1	+0.6
	65nm,1.6s						
SADO	Sadowa	33.30	10	eP	P	18 06 07.3	0.0
	42nm,1.6s						
DELO	Deloro Mine	33.35	12	eP	P	18 06 08.6	+0.9
	10nm,1.2s						
SPMN	Marine on St.	33.41	353	eP	P	18 06 07.1	-1.1
	76nm,0.4s						
COWI	Conover	33.97	357	eP	P	18 06 12.5	-0.6
	14nm,0.8s						
SRU	San Rafael Swe	34.03	326	eP	P	18 06 16.3	+2.3
	25nm,1.1s						
LONY	Lake Ozonia	34.17	16	eP	P	18 06 16.5	+1.6
	22nm,1.2s						
CPE	Camp Elliot	34.42	312	eP	P	18 06 20.4	+3.3
	12nm,1.1s						
MSU	Marysvale	34.54	324	ePcP	PcP	18 08 53.1	+1.5
TMUT	Trail Mountain	34.54	326	eP	P	18 06 20.5	+2.1
	12nm,0.8s						
TMUT				ePcP	PcP	18 08 52.7	+1.0
CCUT	Cedar City	34.60	322	eP	P	18 06 20.9	+1.9
	7.4nm,1.1s						
CCUT				ePcP	PcP	18 08 53.0	+1.2
D41A	Chassel	34.91	358	eP	P	18 06 20.7	-0.4
	23nm,1.0s						
TPNV	Topopah Spring	36.04	318	eP	P	18 06 32.9	+1.6
	12nm,1.2s						
TPNV				ePcP	PcP	18 08 57.6	+1.7
PD31	Pinedale Array	36.28	332	eP	P	18 06 33.4	+0.1
	8.2nm,1.0s						
PDAR	Pinedale Array	36.28	332	P	P	18 06 33.8	+0.5
	2.9nm,0.5s,baz=133,slow=10.0,SNR=4.3						
HWUT	Hardware Ranch	36.39	328	eP	P	18 06 34.8	+0.7
	22nm,1.0s						
HWUT				ePcP	PcP	18 08 57.3	+0.4
AGMN	Agassiz Nation	36.86	350	eP	P	18 06 36.7	-1.1
	46nm,0.9s						
MDND	Maddock	37.18	346	eP	P	18 06 39.8	-0.8
	283nm,1.3s						
REDW	Red Top Meadow	37.34	331	eP	P	18 06 43.1	+0.8
	83nm,1.3s						
SNOW	Snow King Moun	37.38	331	eP	P	18 06 43.2	+0.7
	56nm,1.2s						
LOHW	Long Hollow	37.42	332	eP	P	18 06 43.5	+0.6
	15nm,1.0s						
TPAW	Teton Pass	37.49	331	eP	P	18 06 43.8	+0.2
	23nm,0.8s						
MOOW	Moose Ponds	37.59	332	eP	P	18 06 44.8	+0.4
	8.7nm,0.9s						
FXWY	Fox Creek	37.64	331	eP	P	18 06 45.0	+0.3
	7.2nm,0.9s						
ELK	Elko	37.79	324	eP	P	18 06 47.0	+1.0
	17nm,1.4s						
ELK				ePcP	PcP	18 09 02.3	+1.0
IMW	Indian Meadow	37.79	332	eP	P	18 06 46.8	+0.6
	8.1nm,0.6s						
RLMT	Red Lodge	38.01	334	eP	P	18 06 47.9	0.0
	14nm,1.1s						
NV11	Mina Array Sit	38.13	319	eP	P	18 06 51.6	+2.6
	1.4nm,1.4s						
NV11				ePcP	PcP	18 09 03.3	+1.1
NV01	Mina Array Sit	38.23	319	eP	P	18 06 50.1	+0.4
NV01				ePcP	PcP	18 09 03.7	+1.1
NVAR	Mina Array Bea	38.23	319	P	P	18 06 50.1	+0.4
	3.4nm,0.9s,baz=134,slow=7.7,SNR=4.8						
NVAR				PcP	PcP	18 09 03.7	+1.1
	4.4nm,0.7s,baz=135,slow=3.9,SNR=7.4						
KVN	Kaiserville	38.46	320	eP	P	18 06 53.6	+2.0
	7.7nm,1.1s						
KVN				ePcP	PcP	18 09 04.2	+1.0
QLMT	Earthquake Lak	38.73	332	eP	P	18 06 55.6	+1.7
ULM	Lac du Bonnet	38.76	351	P	P	18 06 52.5	-1.2
	35nm,0.9s,baz=158,slow=10.0,SNR=6.6						
DGMT	Dagmar	39.00	342	eP	P	18 06 56.2	+0.4
	35nm,0.8s						
DLMT	Dillon	39.68	332	eP	P	18 07 02.4	+0.7
	21nm,1.0s						
BEKR	Beckworth	40.36	319	eP	P	18 07 05.8	-1.7
	8.1nm,1.1s						
GO02	Mina Guanaco	40.74	155	eP	P	18 07 11.7	+0.8
	20nm,1.3s						
J08A	Circle Bar Ran	41.31	325	ePcP	PcP	18 09 13.6	+1.3
BMO	Blue Mountains	41.65	327	eP	P	18 07 17.4	-0.5
	8.6nm,1.0s						
K05A	Summer Lake	42.33	322	ePcP	PcP	18 09 17.2	+1.5
I07A	Izee	42.35	325	eP	P	18 07 25.0	+1.3
	5.5nm,1.2s						
I07A				ePcP	PcP	18 09 16.9	+1.2
HAWA	Hanford	43.84	328	eP	P	18 07 36.1	+0.6
	8.2nm,0.9s						
D08A	Wollman Farm,	43.97	329	eP	P	18 07 37.1	+0.7
	11nm,1.0s						
D08A				ePP	PcP	18 09 21.3	+0.4
FFC	Flin Flon	44.15	348	eP	P	18 07 37.1	-0.7
	355nm,1.3s						
FCC	Fort Churchill	46.91	355	eP	P	18 07 58.2	-1.2
	15nm,0.9s						
PGC	Sidney	47.33	328	eP	P	18 08 01.7	-1.1
	8.9nm,1.0s						
LLLB	Lillooet	47.79	331	eP	P	18 08 07.2	+0.7
	20nm,1.0s						
YKA	Yellowknife Ar	54.08	345	P	P	18 08 52.7	-0.7
	6.7nm,0.7s,baz=139,slow=7.2,SNR=7.5						
YKW3	Yellowknife Ar	54.14	345	eP	P	18 08 52.7	-1.1
	13nm,0.9s						
DLBC	Dease Lake	56.41	335	eP	P	18 09 11.0	+0.6
	8.9nm,0.9s						
DAWY	Dawson	63.29	337	eP	P	18 09 56.5	-0.9
	6.5nm,1.1s						
EPYK	Eagle Plains	63.55	340	eP	P	18 09 58.8	-0.2
	19nm,1.1s						
INK	Inuvik	63.68	343	P	P	18 09 59.6	-0.2
	13nm,1.0s,baz=124,slow=6.1,SNR=10						
INK	Inuvik	63.68	343	eP	P	18 09 59.2	-0.5
	17nm,1.1s						
EGAK	Eagle	64.31	337	eP	P	18 10 03.8	-0.2
	7.6nm,1.0s						
EYAK	Cordova Ski Ar	64.41	332	eP	P	18 10 05.1	+0.4
	14nm,1.0s						
ILAR	Eielson Array	66.52	336	P	P	18 10 16.2	-2.0
	16nm,1.1s,baz=117,slow=5.1,SNR=9.5						
ILB	Eielson Array	66.52	336	eP	P	18 10 17.8	-0.5
	13nm,1.0s						
BRLK	Bradley Lake	66.57	330	eP	P	18 10 18.8	+0.1
	14nm,1.0s						
SPU	Mount Spurr	67.53	332	eP	P	18 10 24.7	-0.1
KTH	Kantishna Hill	67.74	334	eP	P	18 10 25.6	-0.5
	9.1nm,1.2s						
COLD	Coldfoot	68.69	338	eP	P	18 10 31.8	0.0
	10nm,1.1s						
ESDC	Sonseca Array	77.15	52	P	P	18 11 20.7	-1.8
	3.0nm,0.9s,baz=283,slow=6.5,SNR=4.9						
ESDC	Sonseca Array	77.15	52	eP	P	18 11 20.7	-1.8
BILL	Bilibino	85.01	339	eP	P	18 12 01.9	-1.7
	11nm,1.1s						
ARA0	ARCESS Array S	86.44	19	eP	P	18 12 11.2	+0.6
ARCES	ARCESS Array B	86.44	19	P	P	18 12 11.2	+0.6
	10.0nm,0.3s,baz=316,slow=3.3,SNR=4.5						
SONA0	Songino Array	119.17	350	ePKPdf	PKPdf	18 18 15.8	-1.5
SONM	Songino Array	119.17	350	PKP	PKPdf	18 18 15.8	-1.5
	1.5nm,0.5s,baz=324,slow=0.7,SNR=5.7						
MK32	Makanchi Array	120.64	8	ePKPdf	PKPdf	18 18 17.9	-2.1
MKAR	Makanchi Array	120.64	8	PKP	PKPdf	18 18 17.9	-2.1
	0.3nm,0.4s,baz=313,slow=3.1,SNR=4.6						
KSRS	Korea Array	120.79	328	PKP	PKPdf	18 18 20.4	-0.1
	2.7nm,0.7s,baz=40,slow=1.5,SNR=9.0						
KS15	Wonju Array Si	120.82	328	ePKPdf	PKPdf	18 18 20.0	-0.6
ENH	Enshi	134.99	340	ePKPdf	PKPdf	18 18 47.0	-0.8
AS31	Alice Springs	139.45	248	ePKPdf	PKPdf	18 18 54.9	-1.3
ASAR	Alice Springs	139.45	248	PKP	PKPdf	18 18 54.9	-1.3
	2.1nm,0.9s,baz=100,slow=2.4,SNR=5.1						
WR1	Warramunga Arr	139.50	253	ePKPdf	PKPdf	18 18 55.2	-1.1
WRA	Warramunga Arr	139.50	253	PKP	PKPdf	18 18 55.2	-1.1
	2.9nm,0.7s						
NONG	Nongkai	148.41	341	P	PKPbc	18 19 15.2	-0.2
CM31	Chiang Mai Arr	149.10	349	ePKPdf	PKPdf	18 19 12.3	-0.7
CMAR	Chiang Mai Arr	149.10	349	PKP	PKPdf	18 19 12.5	-0.5
	4.3nm,0.8s,baz=219,slow=1.4,SNR=4.6						
CMAR				PKPbc	PKPbc	18 19 16.6	-0.6
	5.1nm,0.8s,baz=336,slow=2.0,SNR=6.0						
UTTA	Uttaradit	149.44	346	P	PKPdf	18 19 15.4	+1.9
CHAI	Chaiyaphum	150.80	342	P	PKPdf	18 19 17.9	+2.2
	26μm,0.9s						
UMPA	Umpang Tak	151.30	348	P	PKiKP	18 19 25.1	+2.1

*IDC **15** 18:05:41.2±1.4, 34°.32N×25°.04E, h0km, mb3.8/4, mb1 3.7/8, mb1mx3.5/51, mbtmp3.7/8, ML3.7/4, Error ellipse: s-maj=26.5km s-min=22.0km az=63.0*

*ISCJB **15** 18:05:42.7±1.0, 34°.2N±0°.1×25°.21E±0°.10, h25km, mb3.6/4, Error ellipse: s-maj=16.6km s-min=8.9km az=30.3*

ISC 15 18:05:44.5±1.1, 34°.4N±0°.1×25°.1E±0°.1, h25km, n9, σ0§91/10, mb3.6/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	0.95	349	Pn	Pb	18 06 02.6	+0.1
	8.5nm,0.3s,baz=167,slow=18,SNR=2.4						
MMAI	Mount Meron Ar	8.68	96	Pn	Pn	18 07 48.9	+0.3
	1.3nm,0.3s,baz=264,slow=13,SNR=5.4						
MMAI				Sn	Sn	18 09 24.7	-0.9
	1.1nm,0.3s,baz=266,slow=17,SNR=3.3						
EIL	Elat	9.56	117	Pn	Pn	18 08 00.4	-0.2
	0.6nm,0.3s,baz=315,slow=20,SNR=4.9						
AKASG	Malin Array Be	16.61	9	Pn	P	18 09 37.4	-0.4
	0.4nm,0.3s,baz=200,slow=10,SNR=3.9						
GERES	GERESS Array B	16.78	333	Pn	P	18 09 39.6	-0.3
	0.1nm,0.3s,baz=152,slow=12,SNR=6.8						
FINES	FINESS Array B	27.11	1	P	P	18 11 24.1	-1.1
	1.4nm,0.8s,baz=184,slow=12,SNR=2.5						
TORD	Torodi Ar. Bea	29.95	231	P	P	18 11 50.9	0.0
	0.6nm,0.6s,baz=41,slow=8.5,SNR=3.6						
MKAR	Makanchi Array	44.25	56	P	P	18 13 53.6	+1.8
	0.6nm,0.7s,baz=286,slow=6.0,SNR=6.8						
ZALV	Zalesovo Beam	45.59	46	P	P	18 14 02.6	+0.3
	1.0nm,0.4s,baz=268,slow=8.1,SNR=4.2						

*IDC **15** 18:05:54.5±5.5, 34°.22N×25°.02E, h0km, mb4.2/2, mb1 3.9/5, mb1mx3.4/50, mbtmp3.8/5, ML3.9/3, MS4.6/1, Ms1 4.6/1, ms1mx3.7/47, Error ellipse: s-maj=107.4km s-min=28.3km az=49.0*

*ISCJB **15** 18:05:56.0±2.9, 34°.2N±0°.3×25°.2E±0°.4, h20km, mb3.9/2, MS4.6/1, Error ellipse: s-maj=60.9km s-min=14.2km az=139.0*

ISC 15 18:05:58.0±3.6, 34°.3N±0°.4×25°.1E±0°.4, h20km, n7, σ0§52/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	0.97	349	Pn	Pn	18 06 16.4	-0.2
	34nm,0.3s,baz=215,slow=12,SNR=6.7						
EIL	Elat	9.55	116	Pn	Pn	18 08 14.2	-0.2
	0.6nm,0.3s,baz=270,slow=3.0,SNR=4.9						
AKASG	Malin Array Be	16.63	9	Pn	P	18 09 52.0	-0.1
	0.7nm,0.3s,baz=201,slow=10,SNR=4.7						
GERES	GERESS Array B	16.80	333	Pn	P	18 09 54.5	+0.4
	0.2nm,0.3s,baz=146,slow=12,SNR=7.3						
FINES	FINESS Array B	27.14	1	P	P	18 11 38.9	-0.5
	1.6nm,0.9s,baz=166,slow=12,SNR=3.3						
ZALV	Zalesovo Beam	45.60	46	P	P	18 14 17.1	+0.6
	1.2nm,0.3s,baz=256,slow=9.2,SNR=4.8						
LSZ	Lusaka	49.42	176	LR	LR	18 34 04.7	
	comp=Z,668nm,21.5s,baz=274,slow=34						

*MOS **15** 18:10:40.1±1.1, 11°.95N×86°.93W, h33km, mb5.1/42, Error ellipse: s-maj=13.4km s-min=5.1km az=114.1*

*SNET **15** 18:10:40.7±0.9, 11°.58N×87°.15W, h32km±33km, ML5.0*

*IDC **15** 18:10:41.2±2.2, 12°.09N×86°.53W, h33km±16km, mb4.4/24, mb1 4.6/27, mb1mx4.4/47, mbtmp4.6/27, ML4.2/3, Error ellipse: s-maj=19.8km s-min=8.6km az=57.0*

*UCR **15** 18:10:41.3±2.2, 11°.68N×87°.13W, h22km±7km, ML4.8, mb5.0(NEIC)*

*ISCJB **15** 18:10:42.5±0.2, 11°.74N±0°.02×87°.02W±0°.02, h69km±2km, mb4.9/348, Error ellipse: s-maj=3.6km s-min=2.4km az=34.6*

*NEIC **15** 18:10:42.0±2.1, 11°.78N×86°.97W, h41km±3km, mb5.0/393, MD5.0(SNET), Error ellipse: s-maj=13.3km s-min=8.8km az=50.0*

NEIC Felt [I] at La Union, El Salvador.

ISC 15 18:10:43.6±0.7, 11°.77N±0°.04×87°.02W±0°.04, h60km±5km, n1067, σ1§04/1108, mb5.0/348, 11C-12D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.59	46	⇑iP	Pn	18 10 55.7	-0.9
COPN	Copaltepe	0.59	46	⇑iP	Pn	18 10 55.7	-0.9
CRUN	El Crucero	0.74	73	eP	Pn	18 10 57.7	-0.7
XAVN	Gruta Xavier	0.78	61	eP	Pn	18 10 58.3	-0.6
MOMN	Momotombo	0.79	37	⇓iP	Pn	18 10 58.3	-0.7
MOMN	Momotombo	0.79	37	⇓iP	Pn	18 10 58.3	-0.7
CNGN	Cerro Negro	0.80	24	⇓iP	Pn	18 10 58.3	-0.8
CNGN				eS	Sn	18 11 13.0	+2.5
CNGN				IAML		18 11 13.7	
	comp=E,36μm,0.4s						
CNGN	Cerro Negro	0.80	24	⇓iP	Pn	18 10 58.3	-0.8
CNGN				eS	Sn	18 11 13.0	+2.5
APYN	Apoyeque	0.81	55	eP	Pn	18 10 58.9	-0.2
TEL3	Telica 3	0.82	12	eP	Pn	18 10 57.3	-2.1
MGAN	Managua	0.85	64	eP	Pn	18 10 59.3	-0.3
MGAN				eS	Sn	18 11 13.4	+1.8
TELN	Telica	0.85	13	eP	Pn	18 10 58.7	-1.1
MASN	Masaya	0.88	76	eP	Pn	18 10 59.1	-1.0
MASN				eS	Sn	18 11 14.4	+2.0
CRIN	San Cristobal	0.93	358	⇓iP	Pn	18 11 00.0	-0.8
CRIN				eS	Sn	18 11 13.9	+0.5
CRIN				IAML		18 11 16.1	
	comp=E,74μm,0.5s						
CSGN	Cosiguina Volc	1.31	337	ePn	Pn	18 11 05.5	-0.3
CSGN	Cosiguina Volc	1.31	337	eP	Pn	18 11 05.4	-0.4
CSGN				eS	Sn	18 11 24.3	+1.8
CSGN	Cosiguina Volc	1.31	337	eP	Pn	18 11 05.4	-0.4

JTS eSn Sn 18 11 56.0 +4.5
JTS Las Juntas de 2.51 126 eP Pn 18 11 20.4 -1.6
JTS e 18 11 56.0
JTS Las Juntas de 2.51 126 eP Pn 18 11 21.4 -0.6
SNVI San Vicente 2.55 316 eP Pn 18 11 21.1 -1.6
ARE1 Arenal 1 2.61 120 eP Pn 18 11 22.5 -0.9
PAVA Las Pavas 2.69 316 eP Pn 18 11 23.2 -1.4
PAVA Las Pavas 2.69 316 eP Pn 18 11 23.2 -1.4
VICT Victoria 2.69 324 f/iP Pn 18 11 23.6 -0.9
VICT Victoria 2.69 324 f/iP Pn 18 11 23.6 -0.9
ESPN Las Esperanzas 2.70 81 ePn Pn 18 11 24.2 -0.4
ESPN Las Esperanzas 2.70 81 eP Pn 18 11 24.5 -0.1
LFRS El Faro 2.71 313 eP Pn 18 11 23.0 -1.9
LBRS Las Brisas 2.78 315 eP Pn 18 11 24.4 -1.4
LOMA San Marcos 2.81 312 eP Pn 18 11 24.2 -2.0
LOMA San Marcos 2.81 312 eP Pn 18 11 24.2 -2.0
LFU La Fuente 2.83 314 eP Pn 18 11 25.4 -1.2
LFU La Fuente 2.83 314 eP Pn 18 11 25.4 -1.2
SNET Serv Nac Est T 2.88 312 eP Pn 18 11 25.9 -1.2
SNET IAML 18 12 13.2
comp=Z,3µm,0.4s
SNET Serv Nac Est T 2.88 312 eP Pn 18 11 25.9 -1.2
SNET IAML 18 12 13.2
comp=Z,3µm,0.4s
BOQS Boqueron 2.94 312 eP Pn 18 11 26.8 -1.3
SRA1 San Ramn 3.01 124 eP Pn 18 11 29.9 +1.0
CEDA San Andres 3.07 311 eP Pn 18 11 28.3 -1.5
CEDA IAML 18 12 23.7
comp=Z,5µm,0.5s
CEDA San Andres 3.07 311 eP Pn 18 11 28.3 -1.5
CEDA IAML 18 12 23.7
comp=Z,5µm,0.5s
SBLS San Blas 3.27 309 eP Pn 18 11 31.2 -1.3
SBLS San Blas 3.27 309 eP Pn 18 11 31.2 -1.3
HDC Heredia 3.35 121 ePn Pn 18 11 34.0 +0.3
HDC Heredia 3.35 121 eP Pn 18 11 35.0 +1.3
LCR2 La Lucha 2 3.59 124 eP Pn 18 11 36.6 -0.3
EDDO Dominical 3.99 129 eP Pn 18 11 43.7 +1.5
EDLM Las Mercedes 4.19 126 eP Pn 18 11 45.1 +0.1
DRK0 Durika 4.47 123 eP Pn 18 11 49.0 0.0
EDBA Buenos Aires 4.50 125 eP Pn 18 11 49.6 +0.3
APG El Apazote 4.64 314 Pn Pn 18 11 52.1 +0.7
comp=Z,2.4nm,0.3s,baz=70,slow=2.4,SNR=15
EDSV San Vito 4.95 126 eP Pn 18 11 59.2 +3.7
BRU2 Volcan 5.19 124 eP Pn 18 11 59.2 +0.3
PRVC Isla de Provid 5.75 73 eP Pn 18 12 07.3 +0.9
CCIG Comitan 6.69 313 ePn Pn 18 12 16.9 -2.5
BCIP Isla Barro Col 7.53 109 ePn Pn 18 12 29.7 -1.0
BCIP Isla Barro Col 7.53 109 eP Pn 18 12 29.7 -1.0
TEIG Tepich 8.50 352 ePn Pn 18 12 45.2 +1.2
CMIG Matias Romero 9.27 306 Pn Pn 18 12 53.9 -0.7
comp=Z,3.9nm,0.3s,baz=106,slow=10.0,SNR=32
CMIG Sn Sn 18 14 30.7 -6.7
comp=Z,0.8nm,0.3s,baz=30,slow=15,SNR=1.4
FSCY Frank Sound, G 9.38 36 ePn Pn 18 12 56.0 0.0
MYIG Mrida 9.50 344 ePn Pn 18 12 59.1 +1.4
MTDJ Mount Denham 11.19 54 ePn Pn 18 13 24.0 +3.1
LVIG Laguna Verde 12.01 312 ePn Pn 18 13 34.6 +2.6
TLIG Tlapa 12.56 299 ePn Pn 18 13 40.6 +0.9
ZARC Zaragoza, Cauc 12.72 108 eP Pn 18 13 43.0 +1.2
PAYG Puerto Ayora 12.78 195 ePn Pn 18 13 43.5 +1.0
GUY2C Guyana, Caldas 13.23 118 eP P 18 13 57.7 +0.5
POPC Popayan, Colom 13.76 131 eP P 18 14 01.0 -1.8
GTBY Guantanamo Bay 14.04 53 ePn P 18 14 03.0 -2.6
OTAV Otavalo 14.27 143 ePn Pn 18 14 03.6 +0.5
OTAV Otavalo 14.27 143 eP Pn 18 14 03.6 +0.5
ROSC El Rosal 14.33 118 ePn P 18 14 07.8 -1.5
CHIC Chingaza 14.94 117 eP P 18 14 18.3 +2.2
FLOC Florencia 15.15 131 eP P 18 14 20.3 +2.3
061Z Ochoppi 15.17 22 ePn P 18 14 20.3 +2.2
comp=Z,99nm,0.8s
061Z Ochoppi 15.17 22 P Pn 18 14 15.0 +0.8
baz=203
VILC Villavicencio, 15.23 119 eP P 18 14 20.3 +1.3
059Z Ave Maria 15.42 19 P Pn 18 14 17.8 +0.4
baz=201,SNR=5.5
LGNH Logne 15.44 63 ePn P 18 14 23.6 +2.4
comp=Z,127nm,0.9s
YOPC Yopal, Colombi 15.78 113 eP Pn 18 14 22.3 +0.1
060Z West Palm Beac 15.79 22 P Pn 18 14 22.5 +0.4
baz=204
058A Arcadia 15.98 17 P Pn 18 14 25.4 +0.8
baz=199
059A Moore Haven 16.10 19 ePn Pn 18 14 25.7 -0.4
comp=Z,76nm,0.8s
059A Moore Haven 16.10 19 P Pn 18 14 26.9 +0.8
baz=201
SDV Santo Domingo 16.38 99 Pn Pn 18 14 29.6 -0.3
comp=Z,2.4nm,0.3s,baz=252,slow=4.3,SNR=5.6
SDV Santo Domingo 16.38 99 ePn P 18 14 31.5 -0.3
comp=Z,43nm,1.1s
060A Indiantown 16.43 21 P P 18 14 31.4 -0.6
baz=203
958A Wauchula 16.50 17 P P 18 14 33.1 +0.2
baz=198
959A Okeechobee 16.70 19 P P 18 14 35.6 +0.5
baz=201
SDDR Presa de Saban 16.77 63 ePn Pn 18 14 35.3 +0.6
comp=Z,21nm,1.0s
DWPF Disney Wildern 17.08 17 ePn P 18 14 41.5 +2.2
comp=Z,51nm,1.0s
858A St. Cloud 17.20 17 P P 18 14 41.8 +1.2
baz=199
BANI BANI 17.38 66 ePn P 18 14 43.1 +0.3
LNIG Linares 17.59 320 ePn P 18 14 45.0 0.0
comp=Z,100nm,0.8s
757A Oxford 17.70 14 P P 18 14 47.8 +1.7
baz=196
758A Lake Helen 17.95 17 P Pn 18 14 50.5 +1.5
baz=199
656A Willston 18.01 13 ePn Pn 18 14 51.8 +2.1
comp=Z,55nm,0.6s
GRTK Grand Turk 18.03 55 ePn Pn 18 14 50.1 +0.1
comp=Z,61nm,0.8s
657A Interlachen 18.37 14 P Pn 18 14 55.3 +1.2
baz=196
658A Bunnell 18.37 16 eP Pn 18 14 55.2 +1.1
comp=Z,154nm,1.2s
658A Bunnell 18.37 16 P Pn 18 14 55.4 +1.3
baz=198
ZAIG Zacatecas 18.42 308 eP Pn 18 14 55.4 +0.3
comp=Z,15nm,1.0s
556A Lake Butler 18.64 13 P Pn 18 14 58.9 +1.5
baz=194
555A McAlpin 18.65 11 eP Pn 18 14 58.2 +0.8
comp=Z,68nm,0.8s
555A McAlpin 18.65 11 P Pn 18 14 59.1 +1.7
baz=192
KVTX Kingsville 18.72 329 eP Pn 18 14 59.3 +1.0
comp=Z,125nm,0.8s
557A Orange Park 18.81 14 P Pn 18 15 00.5 +1.1
baz=196
449A Pace 18.90 359 P Pn 18 15 02.1 +1.6
baz=179
450A Crestview 18.95 1 P Pn 18 15 02.8 +1.7
baz=181
452A Marianna 19.07 5 P Pn 18 15 03.4 +1.0
baz=185
454A Quitman 19.11 9 P Pn 18 15 03.0 0.0
baz=190,SNR=8.5
453A Whigham 19.16 7 eP Pn 18 15 05.1 +1.5
comp=Z,139nm,0.8s
453A Whigham 19.16 7 P Pn 18 15 04.0 +0.4
baz=188,SNR=7.5
455A Stateville 19.24 10 P Pn 18 15 05.3 +0.7
baz=192,SNR=5.6
BRAL Brewton 19.31 360 eP P 18 15 02.3 -1.5
comp=Z,265nm,0.4s
BRAL Brewton 19.31 360 P Pn 18 15 06.5 +1.2
baz=180
456A Hilliard 19.43 13 eP P 18 15 05.1 0.0
comp=Z,118nm,0.8s
456A Hilliard 19.43 13 P Pn 18 15 07.3 +0.5
baz=195
349A Repton 19.49 360 P Pn 18 15 08.3 +0.8
baz=179,SNR=24
350A Dozier 19.57 2 P Pn 18 15 09.3 +0.9
baz=182,SNR=7.1
353A Camilla 19.66 7 P Pn 18 15 10.2 +0.7
baz=188,SNR=10
352A Blakely 19.71 5 eP Pn 18 15 10.1 0.0
comp=Z,132nm,0.8s
352A Blakely 19.71 5 P Pn 18 15 10.6 +0.5
baz=186,SNR=8.2
TIGA Tifton 19.83 9 eP Pn 18 15 11.2 -0.3
comp=Z,154nm,0.9s
TIGA Tifton 19.83 9 P Pn 18 15 11.8 +0.3
baz=190,SNR=14
HKT Hockley 19.86 337 eP P 18 15 10.7 +1.0
comp=Z,88nm,1.0s
HKT Hockley 19.86 337 eP P 18 15 10.7 +1.0
HKT pmax pmax
comp=Z,88nm,1.0s
249A Camden 20.11 360 P Pn 18 15 14.6 -0.2
baz=180,SNR=11
250A Grady 20.13 2 eP P 18 15 13.3 +0.6
comp=Z,46nm,0.7s
250A Grady 20.13 2 P Pn 18 15 14.8 -0.2
baz=182,SNR=9.6
833A Chaparral WMA, 20.13 327 eP P 18 15 12.7 -0.1
comp=Z,242nm,0.8s
833A Chaparral WMA, 20.13 327 P P 18 15 13.1 +0.3
baz=182,SNR=46
CRPR Cabo Rojo, PR 20.21 70 eP Pn 18 15 15.2 -1.0
comp=Z,58nm,0.9s
MPR Mayaguez 20.24 69 eP P 18 15 14.5 +0.5
comp=Z,122nm,1.5s
252A Lumpkin 20.24 6 P Pn 18 15 15.9 -0.5
baz=186,SNR=17
251A Midway 20.28 4 P Pn 18 15 16.3 -0.5
baz=184,SNR=21
AGP Aguadilla 20.29 69 eP Pn 18 15 16.0 -1.0
comp=Z,135nm,1.1s
253A Americus 20.37 7 eP Pn 18 15 16.9 -1.0
comp=Z,80nm,0.8s
253A Americus 20.37 7 P Pn 18 15 17.1 -0.8
baz=188
254A Abbeville 20.38 9 P Pn 18 15 17.1 -0.8
baz=190,SNR=8.1
255A Hazlehurst 20.50 11 eP Pn 18 15 18.2 -1.1
comp=Z,187nm,1.4s
255A Hazlehurst 20.50 11 P Pn 18 15 18.7 -0.6
baz=193
VBMS Vicksburg 20.61 352 eP Pn 18 15 19.4 -1.2
comp=Z,76nm,0.7s
VBMS Vicksburg 20.61 352 P Pn 18 15 19.8 -0.8
baz=170
AOPR Arecibo Observ 20.63 69 eP Pn 18 15 19.8 -1.2
comp=Z,43nm,1.0s
ATAH Atahualpa 20.65 155 P P 18 15 20.2 +1.3
comp=Z,6.0nm,0.8s,baz=274,slow=16,SNR=3.3
OBIP Obispado Ponce 20.68 70 eP P 18 15 20.1 +1.3
comp=Z,45nm,1.1s
ICMP Isla Caja de M 20.72 70 eP P 18 15 20.2 +1.1
comp=Z,153nm,1.3s
151A Opelika 20.72 4 P Pn 18 15 21.3 -0.7
baz=184,SNR=19
149A Jones 20.73 1 P Pn 18 15 21.1 -1.0
baz=180,SNR=22
150A Eclectic 20.76 2 P Pn 18 15 21.6 -0.9
baz=183,SNR=82
148A Greensboro 20.79 359 P Pn 18 15 21.3 -1.4
baz=178,SNR=19
147A Livingston 20.84 357 eP Pn 18 15 22.0 -1.4
comp=Z,199nm,0.6s
147A Livingston 20.84 357 P P 18 15 21.9 +1.5
baz=176,SNR=25
257A Skidaway Islan 20.86 14 eP Pn 18 15 22.3 -1.3
comp=Z,142nm,0.8s
152A Waverly Hall 20.91 5 eP P 18 15 22.5 +1.3
comp=Z,116nm,0.6s
152A Waverly Hall 20.91 5 P Pn 18 15 23.0 -1.2
baz=186,SNR=58
153A Fort Valley 20.99 8 P P 18 15 23.5 +1.5
baz=189
154A Montrose 21.06 9 eP P 18 15 24.1 +1.5
comp=Z,175nm,0.6s
154A Montrose 21.06 9 P P 18 15 24.2 +1.5
baz=190,SNR=11
NATX Nacogdoches 21.11 342 eP P 18 15 24.4 +1.1
comp=Z,162nm,0.7s
NATX Nacogdoches 21.11 342 P P 18 15 24.4 +1.1
baz=159,SNR=9.8
SJG San Juan 21.12 70 P P 18 15 21.7 -1.8
comp=Z,4.3nm,0.4s,baz=15,slow=20,SNR=2.4
SJG San Juan 21.12 70 eP P 18 15 24.1 +0.6
comp=Z,60nm,1.1s
SJG San Juan 21.12 70 eP P 18 15 24.1 +0.6
SJG pmax pmax
comp=Z,60nm,1.1s
LRAL Lakeview Retre 21.17 0 eP P 18 15 25.6 +1.7
comp=Z,56nm,0.8s
LRAL Lakeview Retre 21.17 0 P P 18 15 25.6 +1.7
baz=180,SNR=39
155A Kite 21.18 11 P P 18 15 24.9 +0.9
baz=192
435B Jarrell 21.30 334 eP P 18 15 25.5 +0.1
comp=Z,80nm,0.8s
435B Jarrell 21.30 334 P P 18 15 25.4 +0.1
baz=150,SNR=9.4
Z49A Columbiana 21.33 1 P P 18 15 27.4 +1.8
baz=181,SNR=42
156A Sylvania 21.40 13 P P 18 15 27.9 +1.5
baz=195,SNR=5.8
Z50A Ashland 21.41 3 eP P 18 15 27.9 +1.4
comp=Z,54nm,0.6s
Z50A Ashland 21.41 3 P P 18 15 27.9 +1.4
baz=183,SNR=38
CBYP Canovanas 21.43 70 eP P 18 15 25.7 -1.2
comp=Z,37nm,1.1s
Z52A Williamson 21.46 6 P P 18 15 28.3 +1.3
baz=187,SNR=23
Z51A Franklin 21.52 4 P P 18 15 29.1 +1.5
baz=185,SNR=28
157A Early Branch 21.54 14 P P 18 15 28.8 +1.0
baz=196,SNR=7.7
Z53A Monticello 21.64 8 P P 18 15 30.3 +1.3
baz=189,SNR=49
MTP Monte Pirata 21.67 71 eP P 18 15 30.1 +0.7
comp=Z,28nm,0.8s
Z54A Sparta 21.71 10 P P 18 15 30.7 +1.0
baz=191
GOGA Godfrey 21.79 8 eP P 18 15 32.1 +1.6
comp=Z,96nm,0.6s
GOGA Godfrey 21.79 8 eP P 18 15 32.1 +1.6
GOGA pmax pmax
comp=Z,96nm,0.6s
GOGA Godfrey 21.79 8 P P 18 15 31.8 +1.2
baz=189,SNR=50
158A Hollywood 21.79 16 P P 18 15 31.3 +0.8
baz=198
CUPR Culebra, Puert 21.97 70 eP P 18 15 33.9 +1.3
comp=Z,81nm,1.4s
Y49A Blount Mountai 22.00 1 eP P 18 15 33.9 +1.1
comp=Z,104nm,0.7s
Y49A Blount Mountai 22.00 1 P P 18 15 33.9 +1.1
baz=181,SNR=52
Z41A Richland Creek 22.04 347 eP P 18 15 33.4 +0.2
comp=Z,74nm,0.6s
Z41A Richland Creek 22.04 347 P P 18 15 33.7 +0.5
baz=165,SNR=7.1
Y48A Jasper 22.05 360 P P 18 15 34.4 +1.1
baz=180,SNR=86
Y50A Piedmont 22.05 3 P P 18 15 34.5 +1.1
baz=183,SNR=35
CSU Charleston Sou 22.06 16 eP P 18 15 34.8 +1.3
JCT Junction City 22.07 329 eP P 18 15 33.1 -0.6
comp=Z,62nm,0.9s
JCT Junction City 22.07 329 eP P 18 15 33.1 -0.6
JCT pmax pmax
comp=Z,62nm,0.9s
JCT Junction City 22.07 329 P P 18 15 32.8 -0.8
baz=145,SNR=16
Z56A Williston 22.07 13 eP P 18 15 34.7 +1.1
comp=Z,73nm,0.8s
Z56A Williston 22.07 13 P P 18 15 34.6 +1.0
baz=195
Y51A Rockmart 22.10 4 P P 18 15 35.2 +1.3
baz=185,SNR=70
NHSC New Hope 22.15 15 eP P 18 15 36.5 +2.2
comp=Z,159nm,1.1s
NHSC New Hope 22.15 15 P P 18 15 35.1 +0.7
baz=198,SNR=6.0
Y52A Lilburn 22.16 7 eP P 18 15 36.1 +1.6
comp=Z,128nm,0.9s
Y52A Lilburn 22.16 7 P P 18 15 35.8 +1.2
baz=188,SNR=36
Z57A Bowman 22.20 14 P P 18 15 35.7 +0.8
baz=196,SNR=6.2
Y53A Monroe 22.21 8 P P 18 15 36.1 +1.0
baz=189,SNR=61
WHTX Lake Whitney, 22.31 336 eP P 18 15 35.7 -0.4
comp=Z,135nm,0.8s
WHTX Lake Whitney, 22.31 336 P P 18 15 36.2 +0.1
baz=152,SNR=47
Y54A Tignall 22.35 10 P P 18 15 37.6 +1.1
baz=191,SNR=28
Z58A St. Stephen 22.46 16 P P 18 15 38.9 +1.1
baz=199,SNR=13
CCAR Cane Creek 22.47 350 eP P 18 15 38.8 +0.9
comp=Z,92nm,1.4s
WLAR White Oak Lake 22.52 347 eP P 18 15 39.6 +1.2
comp=Z,75nm,0.7s
Z59A Georgetown, SC 22.52 17 P P 18 15 39.3 +0.9
baz=200
Y56A Pelion 22.54 13 P P 18 15 39.5 +0.9
baz=195
Y55A Saluda 22.57 11 P P 18 15 39.7 +0.8
baz=193,SNR=18
X48A Hartselle 22.58 360 eP P 18 15 39.0 0.0
comp=Z,53nm,0.6s
X48A Hartselle 22.58 360 P P 18 15 39.5 +0.5
baz=180,SNR=37
X50B Fort Payne 22.63 3 P P 18 15 40.2 +0.7
baz=183,SNR=45
X49A Woodville 22.65 1 P P 18 15 40.6 +0.8
baz=182,SNR=53
X47A Russelville 22.66 358 P P 18 15 40.2 +0.4
baz=178,SNR=41
X46A Booneville 22.73 357 P P 18 15 40.9 +0.3
baz=176,SNR=29
OXF Oxford 22.75 355 eP P 18 15 40.4 -0.4
comp=Z,84nm,0.6s
OXF Oxford 22.75 355 eP P 18 15 40.4 -0.4
OXF pmax pmax
comp=Z,84nm,0.6s
OXF Oxford 22.75 355 P P 18 15 40.6 -0.2
baz=174
HODGE Hodges 22.78 10 eP P 18 15 42.1 +0.9
comp=Z,37nm,0.9s
X51A Calhoun 22.78 5 eP P 18 15 41.5 +0.3
comp=Z,39nm,0.5s
X51A Calhoun 22.78 5 P P 18 15 41.9 +0.7
baz=185,SNR=12
X53A Estanollee 22.89 8 P P 18 15 43.0 +0.8
baz=189,SNR=16
X52A Dahlonega 22.91 7 P P 18 15 43.4 +0.8
baz=188,SNR=25
X43A Marvell 22.92 352 eP P 18 15 42.8 +0.3
comp=Z,50nm,0.5s
Y57A Sumter 22.96 14 eP P 18 15 43.8 +0.8
comp=Z,45nm,0.7s
JSC Jenkinsville 23.02 12 eP P 18 15 44.6 +1.0
comp=Z,46nm,0.7s
JSC Jenkinsville 23.02 12 eP P 18 15 44.6 +1.0
JSC pmax pmax
comp=Z,46nm,0.7s
Y58A Scranton 23.04 16 eP P 18 15 43.0 -0.8
comp=Z,139nm,0.6s
Y58A Scranton 23.04 16 P P 18 15 44.5 +0.8
baz=198,SNR=6.4
X54A Belton 23.07 10 P P 18 15 44.6 +0.5
baz=192,SNR=14
HPIG 23.12 313 eP P 18 15 45.9 +1.0
comp=Z,33nm,0.9s
X55A Gracelyn & Ava 23.13 11 P P 18 15 45.4 +0.8
baz=193,SNR=15
PLAL Pickwick Lake 23.13 358 eP P 18 15 44.3 -0.4
comp=Z,22nm,0.9s
X40A Basin Creek Fa 23.23 348 eP P 18 15 45.5 -0.1
comp=Z,23nm,0.8s
X40A Basin Creek Fa 23.23 348 P P 18 15 45.6 -0.1
baz=165,SNR=13
W49A Belvidere 23.26 2 P P 18 15 46.3 +0.4
baz=182,SNR=61
W48A Pulaski 23.27 0 P P 18 15 46.6 +0.6
baz=180,SNR=45
X56A White Oak 23.27 13 P P 18 15 46.7 +0.7
baz=195,SNR=32
W46A Michie 23.29 357 P P 18 15 46.0 -0.3
baz=176
TX31 Lajitas Ar. Si 23.36 321 eP P 18 15 47.0 0.0
comp=Z,56nm,0.6s
TXAR Lajitas Array 23.36 321 P P 18 15 47.4 +0.3
comp=Z,64nm,0.8s,baz=140,slow=9.6,SNR=323
TXAR PcP PcP 18 19 34.1 +1.8
comp=Z,4.0nm,0.6s,baz=147,slow=5.8,SNR=13
SWET Sewanee 23.36 2 eP P 18 15 46.6 -0.4
comp=Z,56nm,0.5s
W51A Cleveland 23.38 5 P P 18 15 47.9 +0.9
baz=185,SNR=39
W50A Signal Mountai 23.38 4 eP P 18 15 47.4 +0.3
comp=Z,146nm,0.6s
W50A Signal Mountai 23.38 4 P P 18 15 47.6 +0.5
baz=184,SNR=90
W47A Westpoint 23.39 359 P P 18 15 47.3 +0.2
baz=178,SNR=37
W52A Murphy 23.39 6 eP P 18 15 47.7 +0.5
comp=Z,82nm,0.9s
W52A Murphy 23.39 6 P P 18 15 48.1 +0.9
baz=188,SNR=20
UALR University of 23.41 349 eP P 18 15 47.1 -0.2
comp=Z,50nm,0.8s
PAULI Pauline 23.43 11 eP P 18 15 48.5 +0.9
comp=Z,58nm,0.8s
MIAR Mount Ida 23.45 346 eP P 18 15 47.5 -0.2
comp=Z,99nm,0.7s
MIAR Mount Ida 23.45 346 eP P 18 15 47.5 -0.2
MIAR pmax pmax
comp=Z,99nm,0.7s
MIAR Mount Ida 23.45 346 P P 18 15 47.3 -0.4
baz=164,SNR=58
X57A Johnson Farm, 23.46 15 P P 18 15 48.4 +0.7
baz=197,SNR=10
BIRD Birdtown, Kers 23.55 14 eP P 18 15 49.5 +0.9
comp=Z,83nm,0.9s
Y60A Bolivia 23.55 19 eP P 18 15 49.6 +1.0
comp=Z,94nm,0.8s
Y60A Bolivia 23.55 19 P P 18 15 48.1 -0.5
baz=202
W53A Cullowhee 23.56 8 P P 18 15 49.5 +0.7
baz=189,SNR=11
W54A Cherokee Point 23.63 10 P P 18 15 50.4 +1.0
baz=192,SNR=27
CPCT Cooper Cave 23.69 5 eP P 18 15 50.6 +0.7
comp=Z,86nm,0.7s
X58A Rowland 23.74 16 eP P 18 15 50.7 +0.3
comp=Z,77nm,0.8s
X58A Rowland 23.74 16 P P 18 15 50.6 +0.3
baz=199
ABTX Abilene, Hawle 23.78 333 eP P 18 15 50.1 -0.6
comp=Z,80nm,0.9s
ABTX Abilene, Hawle 23.78 333 P P 18 15 50.5 -0.3
baz=148,SNR=23
W41B Gary Mavity, V 23.78 349 eP P 18 15 50.0 -0.7
comp=Z,56nm,1.2s
W41B Gary Mavity, V 23.78 349 P P 18 15 50.2 -0.5
baz=167,SNR=16
KMSC Kings Mountain 23.84 12 eP P 18 15 51.9 +0.6
comp=Z,49nm,0.8s
KMSC Kings Mountain 23.84 12 P P 18 15 51.8 +0.6
baz=194,SNR=25
V50A Pikevile 23.86 4 P P 18 15 51.7 +0.2
baz=184,SNR=37
V48A Smith Brothers 23.87 0 eP P 18 15 52.3 +0.8
comp=Z,46nm,0.8s
V48A Smith Brothers 23.87 0 P P 18 15 51.9 +0.3
baz=180,SNR=30
WHAR Wooly Hollow 23.90 349 eP P 18 15 51.3 -0.5
comp=Z,27nm,0.7s
HBAR Harrisburg 23.91 353 eP P 18 15 51.2 -0.6
comp=Z,82nm,0.8s
V49A McMinnville 23.91 2 P P 18 15 51.9 -0.1
baz=183,SNR=48
V46A Holladay 23.95 358 P P 18 15 51.4 -0.8
baz=177,SNR=19
X37A Clayton 23.96 343 eP P 18 15 52.5 +0.1
comp=Z,161nm,0.8s
V47A Nunnelly 23.96 359 P P 18 15 52.4 0.0
baz=179,SNR=39
X59A McDuffie Farm, 23.96 17 P P 18 15 52.3 -0.1
baz=200,SNR=7.3
W56A Indian Trail 23.99 13 P P 18 15 53.3 +0.7
baz=196,SNR=14
V51A Loudon 24.05 5 eP P 18 15 53.6 +0.4
comp=Z,56nm,0.8s
V51A Loudon 24.05 5 P P 18 15 53.9 +0.7
baz=186,SNR=28
V53A Saluda 24.10 8 eP P 18 15 54.2 +0.5
comp=Z,56nm,0.6s
V53A Saluda 24.10 8 P P 18 15 54.4 +0.7

	baz=190,SNR=38							
W39A	Magazine	24.12	346	eP		P	18 15 53.5	-0.3
	comp=Z,60nm,0.7s							
W39A	Magazine	24.12	346	P		P	18 15 54.2	+0.4
	baz=164,SNR=33							
SKI	Saint Kitts	24.14	74	eP		P	18 15 54.8	+0.7
	comp=Z,69nm,0.7s							
W57A	Gilead	24.14	14	eP		P	18 15 54.4	+0.4
	comp=Z,52nm,0.6s							
W57A	Gilead	24.14	14	P		P	18 15 54.6	+0.6
	baz=197,SNR=17							
X60A	Albert Glenn T	24.16	18	P		P	18 15 54.5	+0.4
	baz=202,SNR=8.0							
V52A	Sevierville	24.17	7	eP		P	18 15 54.3	0.0
	comp=Z,45nm,0.8s							
V52A	Sevierville	24.17	7	P		P	18 15 54.9	+0.7
	baz=188,SNR=23							
W58A	Raeford	24.21	16	P		P	18 15 55.4	+0.8
	baz=199,SNR=16							
CLTN	Cedars of Leba	24.23	1	eP		P	18 15 55.0	+0.2
	comp=Z,82nm,0.6s							
WVT	Waverly	24.27	358	eP		P	18 15 54.7	-0.4
	comp=Z,27nm,0.6s							
WVT	Waverly	24.27	358	eP		P	18 15 54.7	-0.4
WVT				pmax		pmax		
	comp=Z,27nm,0.6s							
WVT	Waverly	24.27	358	P		P	18 15 54.6	-0.4
	baz=178							
V54A	Nebo	24.34	10	P		P	18 15 56.5	+0.7
	baz=192,SNR=33							
GLAT	Glass	24.48	356	eP		P	18 15 56.5	-0.5
	comp=Z,74nm,0.6s							
U46A	Springville	24.51	358	P		P	18 15 57.0	-0.3
	baz=177,SNR=34							
V55A	Taylorsville	24.55	11	P		P	18 15 58.4	+0.7
	baz=194,SNR=7.0							
U47A	Clarksville	24.57	359	P		P	18 15 57.5	-0.4
	baz=179,SNR=25							
U50A	Jamestown	24.62	4	P		P	18 15 58.7	+0.4
	baz=185,SNR=58							
U48A	Cassie Pea, Po	24.64	1	P		P	18 15 58.4	-0.1
	baz=181,SNR=18							
U51A	La Follette	24.65	6	P		P	18 15 59.2	+0.5
	baz=187,SNR=18							
V56A	Mocksville	24.66	13	eP		P	18 15 59.5	+0.8
	comp=Z,36nm,0.8s							
V56A	Mocksville	24.66	13	P		P	18 15 58.7	+0.1
	baz=195,SNR=14							
U49A	Red Boiling Sp	24.66	2	P		P	18 15 59.0	+0.3
	baz=183,SNR=49							
W60A	Pink Hill	24.68	19	P		P	18 15 58.7	-0.1
	baz=202							
U52A	Thorn Hill	24.74	7	P		P	18 15 60.0	+0.5
	baz=188,SNR=18							
CNNC	Cliffs of the	24.80	18	eP		P	18 16 00.1	+0.2
	comp=Z,52nm,0.8s							
U53A	Fall Branch	24.82	9	P		P	18 16 00.8	+0.6
	baz=190,SNR=20							
TZTN	Tazewell	24.87	7	eP		P	18 16 01.3	+0.7
	comp=Z,73nm,1.0s							
TZTN	Tazewell	24.87	7	P		P	18 16 01.0	+0.3
	baz=188,SNR=16							
V57A	Coltrane Farms	24.89	14	P		P	18 16 01.2	+0.4
	baz=197,SNR=20							
PARMO	Parma	24.91	355	eP		P	18 16 00.3	-0.6
	comp=Z,255nm,0.4s							
V58A	Windy Hill, Pi	24.97	15	P		P	18 16 02.1	+0.6
	baz=198,SNR=51							
U40A	Yellville	25.04	349	P		P	18 16 01.9	-0.3
	baz=166,SNR=45							
U54A	Nelsons Funny	25.09	10	eP		P	18 16 03.4	+0.7
	comp=Z,77nm,0.7s							
U54A	Nelsons Funny	25.09	10	P		P	18 16 03.4	+0.7
	baz=192,SNR=23							
PBMO	Poplar Bluff	25.09	354	eP		P	18 16 01.9	-0.8
	comp=Z,48nm,0.6s							
T47A	Sharon Grove	25.11	360	eP		P	18 16 02.2	-0.6
	comp=Z,51nm,0.6s							
T47A	Sharon Grove	25.11	360	P		P	18 16 02.7	-0.1
	baz=180,SNR=32							
T46A	Princeton	25.18	358	P		P	18 16 03.0	-0.4
	baz=178,SNR=25							
V59A	Middlesex	25.18	17	P		P	18 16 03.9	+0.5
	baz=200,SNR=17							
T45A	Paducah	25.19	357	eP		P	18 16 02.4	-1.1
	comp=Z,199nm,0.6s							
HHAR	Hobbs	25.19	347	eP		P	18 16 03.0	-0.6
	comp=Z,37nm,0.7s							
U56A	King	25.20	13	P		P	18 16 04.4	+0.8
	baz=195,SNR=11							
U55A	TA2, Sparta	25.21	11	P		P	18 16 04.2	+0.4
	baz=194,SNR=10							
T50A	Nancy	25.22	4	P		P	18 16 04.0	+0.1
	baz=185,SNR=11							
T48A	Bowling Green	25.24	1	P		P	18 16 03.8	-0.1
	baz=181,SNR=8.7							
T51A	Gray	25.24	6	P		P	18 16 04.2	+0.2
	baz=187,SNR=17							
WMOK	Wichita Mounta	25.25	337	eP		P	18 16 03.6	-0.5
	comp=Z,178nm,0.9s							
WMOK	Wichita Mounta	25.25	337	eP		P	18 16 03.6	-0.5
WMOK				pmax		pmax		
	comp=Z,178nm,0.9s							
WMOK	Wichita Mounta	25.25	337	P		P	18 16 03.8	-0.3
	baz=152,SNR=188							
T49A	Edmonton	25.27	3	eP		P	18 16 04.0	-0.2
	comp=Z,60nm,0.9s							
T49A	Edmonton	25.27	3	P		P	18 16 04.2	0.0
	baz=183,SNR=20							
TUL1	Leonard	25.31	343	eP		P	18 16 03.9	-0.8
	comp=Z,146nm,0.9s							
TUL1	Leonard	25.31	343	P		P	18 16 04.1	-0.5
	baz=160,SNR=33							
T53A	Wise	25.43	8	P		P	18 16 06.4	+0.7
	baz=190,SNR=8.7							
V60A	Jim Taylor Roa	25.47	19	eP		P	18 16 06.8	+0.8
	comp=Z,62nm,0.6s							
T52A	Hallie	25.49	8	eP		P	18 16 06.2	-0.1
	comp=Z,19nm,0.8s							
T52A	Hallie	25.49	8	P		P	18 16 06.3	0.0
	baz=189							
U57A	Blanch	25.52	15	P		P	18 16 07.3	+0.8
	baz=198,SNR=16							
CLNB	Carlsbad	25.62	325	eP		P	18 16 07.8	+0.2
T54A	Tazewell	25.66	10	P		P	18 16 08.2	+0.3
	baz=192,SNR=6.6							
U58A	Oxford	25.68	16	P		P	18 16 08.4	+0.4
	baz=199,SNR=12							
S47A	Hartford	25.72	0	P		P	18 16 07.7	-0.6
	baz=180							
S48A	Wiedeman Farm,	25.80	2	P		P	18 16 09.2	+0.2
	baz=182,SNR=9.0							
S46A	Don Dixon Farm	25.82	359	P		P	18 16 09.2	0.0
	baz=178,SNR=7.4							
GDL2	Guadalupe Moun	25.85	325	eP		P	18 16 11.5	+1.7
T55A	Pulaski	25.86	11	P		P	18 16 09.8	+0.2
	baz=194,SNR=10							
U59A	Littleton	25.86	17	eP		P	18 16 10.1	+0.5
	comp=Z,24nm,1.0s							
U59A	Littleton	25.86	17	P		P	18 16 10.0	+0.4
	baz=201,SNR=5.6							
S44A	Carbondale	25.89	356	P		P	18 16 09.4	-0.5
	baz=175,SNR=12							
S50A	Richmond	25.91	5	P		P	18 16 10.1	+0.1
	baz=186,SNR=10							
SIUC	Southern Illin	25.91	356	eP		P	18 16 09.6	-0.5
	comp=Z,41nm,0.9s							
T56A	Rocky Mt	25.93	13	P		P	18 16 11.0	+0.7
	baz=196,SNR=6.3							
S51A	Beattyville	25.95	6	eP		P	18 16 10.6	+0.2
	comp=Z,30nm,0.8s							
S51A	Beattyville	25.95	6	P		P	18 16 10.8	+0.4
	baz=188,SNR=13							
S49A	Springfield	25.95	3	P		P	18 16 10.8	+0.3
	baz=184,SNR=14							
BLA	Blacksburg	26.02	12	eP		P	18 16 11.9	+0.8
	comp=Z,28nm,0.9s							
BLA	Blacksburg	26.02	12	eP		P	18 16 11.9	+0.8
BLA				pmax		pmax		
	comp=Z,28nm,0.9s							
BLA	Blacksburg	26.02	12	P		P	18 16 10.8	-0.3
	baz=195							
T57A	Hurt	26.08	14	eP		P	18 16 12.3	+0.7
	comp=Z,38nm,1.0s							
T57A	Hurt	26.08	14	P		P	18 16 12.0	+0.4
	baz=197,SNR=11							
MNTX	Cornudas Mount	26.08	322	eP		P	18 16 11.9	+0.2
	comp=Z,19nm,0.7s							
MNTX	Cornudas Mount	26.08	322	P		P	18 16 11.5	-0.2
	baz=136,SNR=34							
USIN	University of	26.09	359	eP		P	18 16 11.2	-0.5
	comp=Z,44nm,0.6s							
S53A	Williamson	26.18	9	P		P	18 16 12.7	+0.2
	baz=191							
CPRX	Cap Rock	26.20	327	eP		P	18 16 13.3	+0.4
T58A	Grand View Acr	26.21	16	P		P	18 16 13.1	+0.4
	baz=199							
U61A	Possum Corner	26.25	20	eP		P	18 16 13.5	+0.4
	comp=Z,62nm,0.5s							
FVM	French Village	26.28	354	eP		P	18 16 12.9	-0.5
	comp=Z,10nm,0.4s							
FVM	French Village	26.28	354	eP		P	18 16 12.9	-0.5
FVM				pmax		pmax		
	comp=Z,10.0nm,0.4s							
R46A	Gibon Southern	26.34	359	P		P	18 16 13.6	-0.3
	baz=179,SNR=7.1							
WCI	Wyandotte Cave	26.36	1	eP		P	18 16 13.8	-0.3
	comp=Z,40nm,0.6s							
WCI	Wyandotte Cave	26.36	1	eP		P	18 16 13.8	-0.3
WCI				pmax		pmax		
	comp=Z,40nm,0.6s							
WCI	Wyandotte Cave	26.36	1	P		P	18 16 13.8	-0.3
	baz=182							
MSTX	Muleshoe	26.37	329	eP		P	18 16 13.5	-0.8
	comp=Z,110nm,0.8s							
MSTX				ePcP		PcP	18 19 40.0	+1.1
MSTX	Muleshoe	26.37	329	P		P	18 16 13.9	-0.4
	baz=143							
R47A	Wooly Knot Far	26.42	1	P		P	18 16 14.2	-0.5
	baz=181,SNR=12							
R45A	Skylar, Fairfi	26.44	358	P		P	18 16 14.4	-0.4
	baz=177,SNR=8.3							
CCM	Cathedral Cave	26.45	353	eP		P	18 16 14.1	-0.8
	comp=Z,51nm,1.0s							
CCM	Cathedral Cave	26.45	353	eP		P	18 16 14.1	-0.8
CCM				pmax		pmax		
	comp=Z,51nm,1.0s							
CCM	Cathedral Cave	26.45	353	P		P	18 16 14.5	-0.4
	baz=171							
R49A	Shelbyville	26.47	3	P		P	18 16 14.8	-0.3
	baz=184,SNR=7.9							
T59A	Double "B" Far	26.50	17	eP		P	18 16 16.2	+0.8
	comp=Z,34nm,1.0s							
T59A	Double "B" Far	26.50	17	P		P	18 16 15.6	+0.2
	baz=201							
R50A	Paris	26.51	5	P		P	18 16 15.3	-0.2
	baz=186,SNR=10							
R48A	Northridge Ran	26.54	2	P		P	18 16 15.4	-0.3
	baz=182,SNR=5.8							
S55A	Lewisburg	26.55	12	P		P	18 16 16.4	+0.6
	baz=194,SNR=7.4							
AMTX	Amarillo	26.59	332	eP		P	18 16 16.1	-0.3
	comp=Z,76nm,0.8s							
AMTX	Amarillo	26.59	332	P		P	18 16 16.3	0.0
	baz=146							
R51A	Hillsboro	26.60	6	P		P	18 16 16.2	-0.1
	baz=187,SNR=11							
S56A	Natural Bridge	26.65	13	P		P	18 16 17.0	+0.2
	baz=196							
R52A	Catlettsburg	26.75	8	P		P	18 16 17.4	-0.1
	baz=189							
U32A	Winter Ranch,	26.78	338	eP		P	18 16 17.6	-0.4
	comp=Z,184nm,0.8s							
R53A	Hurricane	26.84	9	eP		P	18 16 18.9	+0.5
	comp=Z,16nm,0.8s							
R53A	Hurricane	26.84	9	P		P	18 16 18.5	+0.1
	baz=191,SNR=5.5							
OLIL	Olney	26.87	358	eP		P	18 16 18.4	-0.3
	comp=Z,29nm,0.8s							
S57A	Dark Hollow, R	26.88	14	eP		P	18 16 19.2	+0.4
	comp=Z,13nm,0.7s							
S57A	Dark Hollow, R	26.88	14	P		P	18 16 18.8	+0.1
	baz=198							
SLM	Saint Louis	26.91	354	eP		P	18 16 18.2	-0.8
	comp=Z,21nm,0.6s							
SLM	Saint Louis	26.91	354	eP		P	18 16 18.2	-0.8
SLM				pmax		pmax		
	comp=Z,21nm,0.6s							
S58A	Poland Farm, P	26.96	16	eP		P	18 16 19.7	+0.2
	comp=Z,16nm,0.6s							
S58A	Poland Farm, P	26.96	16	P		P	18 16 20.1	+0.5
	baz=200,SNR=5.5							
Q45A	Warren Harvey,	27.04	358	P		P	18 16 19.8	-0.4
	baz=177,SNR=7.6							
Q47A	Bedord North L	27.06	1	P		P	18 16 19.9	-0.5
	baz=181,SNR=25							
Q48A	North Vernon	27.07	2	P		P	18 16 20.0	-0.6
	baz=183,SNR=9.7							
Q50A	Georgetown	27.10	5	P		P	18 16 20.5	-0.3
	baz=186,SNR=5.6							
Q49A	Aurora	27.19	4	P		P	18 16 21.4	-0.2
	baz=184,SNR=17							
BLO	Bloomington	27.30	1	eP		P	18 16 21.5	-1.0
	comp=Z,28nm,1.0s							
BLO	Bloomington	27.30	1	eP		P	18 16 21.5	-1.0
BLO				pmax		pmax		
	comp=Z,28nm,1.0s							
R58B	Mineral	27.34	16	eP		P	18 16 23.5	+0.6
	comp=Z,15nm,0.9s							
R58B	Mineral	27.34	16	P		P	18 16 23.2	+0.3
	baz=200							
Q51A	Peebles	27.34	6	eP		P	18 16 23.1	+0.1
	comp=Z,73nm,0.6s							
Q51A	Peebles	27.34	6	P		P	18 16 23.3	+0.3
	baz=188,SNR=28							
Q52A	Bidwell	27.41	8	P		P	18 16 23.8	+0.3
	baz=190,SNR=11							
Q53A	Leroy	27.42	9	P		P	18 16 23.6	0.0
	baz=192,SNR=5.8							
R57A	Stanardsville	27.49	15	P		P	18 16 24.6	+0.3
	baz=198,SNR=7.7							
P47A	Martinsville	27.61	1	P		P	18 16 24.5	-0.8
	baz=182,SNR=14							
P48A	Milroy	27.62	3	P		P	18 16 24.5	-0.8
	baz=183,SNR=9.0							
R58A	Rapidan	27.62	15	P		P	18 16 25.5	+0.1
	baz=199							
P45A	Graceland, Par	27.66	359	eP		P	18 16 25.0	-0.8
	comp=Z,55nm,1.4s							
P45A	Graceland, Par	27.66	359	P		P	18 16 25.5	-0.2
	baz=178,SNR=7.7							
Q54A	Coxs Mills	27.66	10	eP		P	18 16 26.2	+0.5
	comp=Z,24nm,0.6s							
Q54A	Coxs Mills	27.66	10	P		P	18 16 26.2	+0.5
	baz=193,SNR=15							
CBN	Corbin Frederi	27.70	17	eP		P	18 16 26.7	+0.6
	comp=Z,58nm,0.6s							
CBN	Corbin Frederi	27.70	17	P		P	18 16 26.6	+0.4
	baz=200							
P49A	Miami Univ. Ec	27.73	4	P		P	18 16 25.7	-0.7
	baz=185,SNR=11							
S61A	Accomac	27.74	20	eP		P	18 16 26.6	+0.1
	comp=Z,175nm,1.1s							
P46A	Rosedale	27.74	360	P		P	18 16 26.0	-0.5
	baz=180							
Q55A	Buckhannon	27.81	12	P		P	18 16 27.9	+0.7
	baz=194,SNR=8.2							
P51A	Williamsport	27.83	7	eP		P	18 16 27.1	-0.2
	comp=Z,34nm,1.2s							
P51A	Williamsport	27.83	7	P		P	18 16 27.0	-0.2
	baz=188							
P43A	Skaggs, Pawnee	27.85	356	P		P	18 16 27.6	+0.1
	baz=175							
P50A	Jamestown	27.88	5	P		P	18 16 28.0	+0.3
	baz=187,SNR=6.9							
R60A	Leonardtown, M	27.99	18	P		P	18 16 28.7	0.0
	baz=202							
Q56A	Snyder Ridge,	28.04	13	P		P	18 16 30.3	+1.1
	baz=196,SNR=8.7							
P53A	Whipple	28.06	9	eP		P	18 16 29.8	+0.5
	comp=Z,25nm,0.6s							
P53A	Whipple	28.06	9	P		P	18 16 29.9	+0.6
	baz=192,SNR=10							
P52A	Corning	28.09	8	P		P	18 16 29.7	+0.1
	baz=190,SNR=15							
121A	Cookes Peak, D	28.12	321	P		P	18 16 31.5	+1.3
	baz=133,SNR=17							
Q57A	Strasburg	28.22	14	P		P	18 16 31.4	+0.7
	baz=198							
SRIG	Santa Rosalia	28.27	307	eP		P	18 16 32.9	+1.6
	comp=Z,22nm,0.9s							
O44A	Mansfield	28.30	358	P		P	18 16 30.8	-0.7
	baz=177,SNR=10							
319A	Douglas	28.34	317	eP		P	18 16 33.9	+1.8
	comp=Z,20nm,0.8s							
P55A	Reedsville	28.36	12	P		P	18 16 30.3	-1.7
	baz=195,SNR=5.1							
O47A	Sheridan	28.37	1	P		P	18 16 31.2	-0.9
	baz=182,SNR=8.2							
O45A	Potomac	28.38	359	P		P	18 16 31.6	-0.5
	baz=178,SNR=8.6							
O49A	Covington	28.41	4	eP		P	18 16 32.0	-0.4
	comp=Z,61nm,1.4s							
O49A	Covington	28.41	4	P		P	18 16 32.2	-0.3
	baz=185,SNR=8.8							
O48A	Farmland	28.43	3	P		P	18 16 32.0	-0.6
	baz=184,SNR=7.4							
O50A	Cable	28.43	5	P		P	18 16 32.6	0.0
	baz=187,SNR=28							
MCWV	Mont Chateau	28.50	12	eP		P	18 16 33.9	+0.6
	comp=Z,8.9nm,0.6s							
SFIN	Lafayette	28.50	360	eP		P	18 16 32.1	-1.1
	comp=Z,31nm,0.7s							
SFIN	Lafayette	28.50	360	P		P	18 16 32.4	-0.8
	baz=180,SNR=13							
KSU1	Kansas State U	28.53	344	P		P	18 16 33.1	-0.3
	baz=160,SNR=10							
O51A	Pataskala	28.54	7	P		P	18 16 33.4	-0.2
	baz=189,SNR=10.0							
P56A	Dayton Farm, R	28.56	13	P		P	18 16 34.9	+1.0
	baz=197,SNR=10							
ACSO	Alum Creek Sta	28.58	6	eP		P	18 16 33.9	0.0
	comp=Z,41nm,0.6s							
ACSO	Alum Creek Sta	28.58	6	P		P	18 16 34.1	+0.2
	baz=188,SNR=11							
O52A	Adamsville	28.61	8	eP		P	18 16 33.7	-0.5
	comp=Z,37nm,0.6s							
O52A	Adamsville	28.61	8	P		P	18 16 34.4	+0.2
	baz=190,SNR=13							
P57A	Homestead Farm	28.74	15	P		P	18 16 36.3	+0.9
	baz=198,SNR=9.6							
HDIL	Hopedale	28.75	356	eP		P	18 16 35.0	-0.4
	comp=Z,74nm,0.6s							
HDIL	Hopedale	28.75	356	P		P	18 16 35.2	-0.2
	baz=175,SNR=11							
LENM	Lemitar	28.78	324	eP		P	18 16 37.2	+1.2
O53A	New Philadelph	28.83	9	P		P	18 16 36.1	-0.1
	baz=192,SNR=11							
O54A	Avella	28.91	11	P		P	18 16 36.7	-0.2
	baz=193							
N44A	Piper City	28.93	358	P		P	18 16 35.9	-1.2
	baz=178,SNR=8.2							
N45A	Kentland	28.97	359	P		P	18 16 36.4	-1.0
	baz=179,SNR=11							
N46A	Monticello	29.02	0	P		P	18 16 37.1	-0.7
	baz=180,SNR=19							
N47A	Urbana	29.02	2	P		P	18 16 37.3	-0.5
	baz=183,SNR=6.5							
N41A	Harden Midland	29.02	354	eP		P	18 16 36.5	-1.3
	comp=Z,37nm,0.8s							
N41A	Harden Midland	29.02	354	P		P	18 16 36.6	-1.3
	baz=172							
N48A	Decatur	29.03	3	P		P	18 16 37.7	-0.2
	baz=184,SNR=5.3							
ANMO	Albuquerque	29.05	326	P		P	18 16 39.9	+1.4
	comp=Z,6.8nm,0.7s,baz=144,slow=9.3,SNR=19							
ANMO				PcP		PcP	18 19 46.9	+1.3
	comp=Z,6.9nm,0.9s,baz=187,slow=9.4,SNR=6.2							
ANMO	Albuquerque	29.05	326	eP		P	18 16 39.1	+0.7
	comp=Z,9.2nm,0.8s							
ANMO				ePcP		PcP	18 19 46.7	+1.1
ANMO	Albuquerque	29.05	326	eP		P	18 16 39.8	+1.3
ANMO				pmax		pmax		
	comp=Z,8.0nm,0.7s							
ANMO	Albuquerque	29.05	326	P		P	18 16 39.2	+0.7
	baz=138							
TASM	ASL Pad, Albuq	29.05	326	P		P	18 16 39.5	+1.1
	baz=138,SNR=12							
TASM	ASL Pad, Albuq	29.05	326	P		P	18 16 39.6	+1.1
	baz=138,SNR=13							
N50A	Nevada	29.09	6	P		P	18 16 38.1	-0.4
	baz=188							
N43A	Stutzman Famil	29.12	357	P		P	18 16 38.4	-0.4
	baz=176,SNR=17							
O55A	Ligonier	29.14	12	P		P	18 16 38.4	-0.6
	baz=196							
N49A	Columbus Grove	29.15	4	eP		P	18 16 38.6	-0.4
	comp=Z,54nm,0.7s							
N49A	Columbus Grove	29.15	4	P		P	18 16 38.7	-0.3
	baz=186,SNR=19							
CBKS	Cedar Bluff	29.22	339	P		P	18 16 39.1	-0.6
	baz=154							
P59A	Jarrettsville	29.28	17	P		P	18 16 40.9	+0.7
	baz=201,SNR=5.3							
N40A	Mertquake, Sal	29.28	353	P		P	18 16 39.1	-1.0
	baz=171,SNR=9.7							
N52A	McGinn's Farm,	29.31	8	P		P	18 16 39.8	-0.7
	baz=191							
N51A	Ashland	29.32	7	eP		P	18 16 40.0	-0.6
	comp=Z,32nm,1.3s							
N51A	Ashland	29.32	7	P		P	18 16 39.8	-0.8
	baz=189							
O56A	Blue Knob Stat	29.36	13	eP		P	18 16 41.5	+0.6
	comp=Z,14nm,0.9s							
O56A	Blue Knob Stat	29.36	13	P		P	18 16 39.8	-1.1
	baz=197							
N53A	Lisbon	29.43	10	eP		P	18 16 41.2	-0.3
	comp=Z,23nm,0.6s							
N53A	Lisbon	29.43	10	P		P	18 16 41.8	+0.2
	baz=192,SNR=7.9							
M47A	Cromwell	29.50	2	P		P	18 16 41.7	-0.4
	baz=183,SNR=5.2							
M45A	Boilermakers S	29.51	360	P		P	18 16 40.9	-1.2
	baz=179							
M44A	Midewin, Midew	29.52	358	eP		P	18 16 40.8	-1.5
	comp=Z,33nm,1.0s							
M44A	Midewin, Midew	29.52	358	P		P	18 16 40.8	-1.5
	baz=178,SNR=6.7							
O57A	Amberson	29.52	15	P		P	18 16 42.9	+0.6
	baz=199,SNR=8.1							
M46A	Old House Fiel	29.53	1	eP		P	18 16 41.3	-1.1
	comp=Z,44nm,0.8s							
M46A	Old House Fiel	29.53	1	P		P	18 16 41.8	-0.6
	baz=181,SNR=7.7							
M43A	Waltham Townsh	29.60	357	P		P	18 16 42.2	-0.8
	baz=176,SNR=11							
PTGA	Pitinga	29.61	113	P		P	18 16 42.5	-0.9
	comp=Z,5.7nm,0.9s,baz=333,slow=11,SNR=6.3							
PTGA				PcP		PcP	18 19 47.7	+0.6
	comp=Z,3.9nm,0.6s,baz=321,slow=23,SNR=6.1							
PTGA	Pitinga	29.61	113	eP		P	18 16 42.0	-1.3
	comp=Z,11nm,1.0s							
M41A	Milan	29.66	355	P		P	18 16 42.7	-0.8
	baz=173,SNR=5.9							
MVL	Millersville	29.66	17	eP		P	18 16 44.7	+1.2
	comp=Z,15nm,0.7s							
P60A	Greenville	29.70	18	P		P	18 16 42.9	-1.0
	baz=203							
T25A	Trinidad	29.70	331	eP		P	18 16 45.0	+0.8
	comp=Z,16nm,0.8s							
T25A	Trinidad	29.70	331	P		P	18 16 45.1	+0.8
	baz=144,SNR=12							
M49A	Liberty Center	29.71	5	P		P	18 16 43.4	-0.6
	baz=186,SNR=5.8							
M50A	Fremont	29.73	6	P		P	18 16 43.8	-0.3

baz=192,SNR=7.7
PLIO **Pelee Island,** 30.12 7 P P 18 16 47.2 -0.3
baz=188
L47A **Sherwood** 30.14 3 P P 18 16 47.0 -0.7
baz=183,SNR=9.3
L46A **Eue Claire** 30.14 1 eP P 18 16 45.7 -2.0
comp=Z,56nm,0.8s
L46A **Eue Claire** 30.14 1 P P 18 16 46.5 -1.2
baz=181,SNR=5.8
L48A **N Adams** 30.15 4 P P 18 16 46.7 -1.2
baz=185,SNR=5.3
L42A **Oliver, Polo** 30.21 356 eP P 18 16 47.3 -1.1
comp=Z,66nm,0.8s
L42A **Oliver, Polo** 30.21 356 P P 18 16 47.6 -0.7
baz=175,SNR=14
O60A **Telford** 30.23 18 P P 18 16 48.8 +0.2
baz=203
L44A **Lake County Fo** 30.31 359 P P 18 16 47.9 -1.3
baz=178,SNR=5.8
M54A **Oil Creek Stat** 30.32 11 eP P 18 16 49.6 +0.2
comp=Z,22nm,0.5s
M54A **Oil Creek Stat** 30.32 11 P P 18 16 49.4 0.0
baz=194,SNR=12
L49A **Milan** 30.36 5 P P 18 16 49.9 +0.2
baz=186
ALLY **Alegheny Colle** 30.37 10 eP P 18 16 49.5 -0.3
comp=Z,18nm,0.8s
L40A **Anamosa** 30.40 354 eP P 18 16 49.0 -1.1
comp=Z,57nm,0.8s
L40A **Anamosa** 30.40 354 P P 18 16 49.3 -0.8
baz=172,SNR=29
M55A **Ridgway** 30.46 12 P P 18 16 50.4 -0.2
baz=196,SNR=5.8
KSCO **Kaye Shedlock'** 30.48 336 eP P 18 16 51.0 +0.1
comp=Z,26nm,0.9s
KSCO **Kaye Shedlock'** 30.48 336 P P 18 16 51.1 +0.1
baz=149
LUPA **Lehigh Univers** 30.50 18 eP P 18 16 51.9 +0.9
comp=Z,2.2nm,0.7s
SCIA **State Center** 30.51 351 eP P 18 16 50.6 -0.4
comp=Z,30nm,0.7s
SCIA **State Center** 30.51 351 P P 18 16 50.6 -0.4
baz=168
AAM **Ann Arbor** 30.56 5 eP P 18 16 51.3 -0.1
comp=Z,36nm,0.6s
AAM **Ann Arbor** 30.56 5 eP P 18 16 51.3 -0.1
AAM pmax pmax
comp=Z,36nm,0.6s
AAM **Ann Arbor** 30.56 5 P P 18 16 51.6 +0.2
baz=186
M56A **Emporium** 30.60 13 P P 18 16 52.1 +0.2
baz=197,SNR=8.4
L53A **Girard** 30.65 10 P P 18 16 52.1 -0.1
baz=193,SNR=6.5
N59A **State Game Lan** 30.68 17 eP P 18 16 53.2 +0.6
comp=Z,45nm,0.6s
N59A **State Game Lan** 30.68 17 P P 18 16 53.5 +0.9
baz=202,SNR=31
SDCO **Great Sand Dun** 30.71 331 eP P 18 16 54.3 +1.1
comp=Z,21nm,1.1s
SDCO **Great Sand Dun** 30.71 331 P P 18 16 53.9 +0.7
baz=143,SNR=10
X18A **Snowflake** 30.80 321 eP P 18 16 55.1 +1.2
comp=Z,9.1nm,1.0s
BRNJ **Basking Ridge** 30.82 19 eP P 18 16 55.0 +1.2
comp=Z,32nm,0.6s
K46A **Dorr** 30.82 2 P P 18 16 53.1 -0.7
baz=182
K47A **Vermontville** 30.84 3 P P 18 16 53.2 -0.7
baz=184
K43A **Burlington** 30.84 358 P P 18 16 52.7 -1.3
baz=177,SNR=6.6
ERPA **Erie** 30.85 10 eP P 18 16 53.9 -0.2
comp=Z,40nm,0.6s
ERPA **Erie** 30.85 10 P P 18 16 54.2 +0.1
baz=193,SNR=7.7
K48A **Perry** 31.02 4 P P 18 16 54.5 -1.0
baz=185,SNR=27
K49A **Clarkson** 31.06 5 P P 18 16 55.7 -0.2
baz=187
W18A **Petrified Fore** 31.07 322 eP P 18 16 58.0 +1.8
comp=Z,23nm,0.8s
W18A **Petrified Fore** 31.07 322 P P 18 16 58.4 +2.1
baz=133,SNR=9.1
L54A **Sinclairville** 31.09 11 P P 18 16 56.3 +0.2
baz=195
BGNE **Belgrade** 31.10 344 eP P 18 16 56.1 -0.2
comp=Z,227nm,0.6s
BGNE **Belgrade** 31.10 344 P P 18 16 56.2 -0.1
baz=158,SNR=7.1
214A **Organ Pipe Nat** 31.10 314 P P 18 16 57.5 +1.1
baz=124
K50A **Casco** 31.13 6 P P 18 16 55.7 -0.7
baz=188
JFWS **Jewell Farm** 31.16 355 eP P 18 16 55.5 -1.2
comp=Z,34nm,0.8s
JFWS **Jewell Farm** 31.16 355 eP P 18 16 55.5 -1.2
JFWS pmax pmax
comp=Z,34nm,0.8s
JFWS **Jewell Farm** 31.16 355 P P 18 16 56.0 -0.7
baz=174,SNR=13
ODNJ **Ogdensburg** 31.18 18 eP P 18 16 57.7 +0.8
comp=Z,16nm,0.9s
L55A **Hinsdale** 31.21 12 P P 18 16 57.3 0.0
baz=196,SNR=6.0
KSPA **Keystone Colle** 31.27 16 eP P 18 16 58.5 +0.8
comp=Z,37nm,1.1s
PAL **Palisades** 31.32 19 P P 18 16 58.8 +0.6
baz=205
S22A **4UR Ranch, Cre** 31.36 329 eP P 18 16 59.6 +0.6
comp=Z,11nm,0.8s
S22A **4UR Ranch, Cre** 31.36 329 P P 18 16 59.7 +0.8
baz=140,SNR=16
J47A **Sunmer** 31.41 3 eP P 18 16 58.2 -0.8
comp=Z,37nm,1.0s
J47A **Sunmer** 31.41 3 P P 18 16 58.1 -0.8
baz=184
J48A **Bridge Port** 31.54 5 eP P 18 16 59.0 -1.1
comp=Z,32nm,0.8s
J48A **Bridge Port** 31.54 5 P P 18 16 59.2 -0.8
baz=186,SNR=9.8
K54A **Basiliko Farm,** 31.57 12 P P 18 17 00.7 +0.3
baz=196
M61A **Granite Spring** 31.65 19 P P 18 17 01.4 +0.4
baz=205
J49A **Marlette** 31.66 5 P P 18 17 01.1 0.0
baz=187,SNR=8.5
X16A **Lo Mia Camp, P** 31.66 319 eP P 18 17 02.7 +1.2
comp=Z,12nm,0.7s
BINY **Binghamton** 31.81 16 eP P 18 17 03.0 +0.5
comp=Z,35nm,0.9s
BINY **Binghamton** 31.81 16 P P 18 17 02.7 +0.2
baz=201,SNR=7.8
K55A **Perry** 31.81 13 P P 18 17 02.0 -0.6
baz=197
MVCO **Mesa Verde** 31.84 326 eP P 18 17 04.0 +0.9
comp=Z,21nm,0.6s
MVCO ePcP PcP 18 19 53.0 +0.1
MVCO **Mesa Verde** 31.84 326 P P 18 17 03.7 +0.6
baz=137
MMNY **Mt. Morris Dam** 31.85 13 eP P 18 17 03.4 +0.5
comp=Z,30nm,1.4s
J52A **Paris** 31.87 9 P P 18 17 03.0 +0.1
baz=192,SNR=5.2
OGNE **Ogallala** 31.92 338 eP P 18 17 03.6 0.0
comp=Z,46nm,1.0s
OGNE **Ogallala** 31.92 338 P P 18 17 04.0 +0.4
baz=151,SNR=9.3
I42A **Draeger Farm,** 32.05 357 eP P 18 17 03.2 -1.3
comp=Z,55nm,0.8s
I42A **Draeger Farm,** 32.05 357 P P 18 17 03.9 -0.6
baz=176,SNR=29
I46A **Reed City** 32.09 2 P P 18 17 03.9 -0.9
baz=183
KSCT **Kent School, K** 32.11 19 eP P 18 17 05.2 +0.1
comp=Z,16nm,0.5s
I45A **Fountain** 32.16 1 P P 18 17 05.1 -0.5
baz=181
I47A **Gladwin** 32.21 3 P P 18 17 05.5 -0.5
baz=184,SNR=5.2
J54A **Appleton** 32.22 12 P P 18 17 05.7 -0.4
baz=195
I49A **Point Hope** 32.26 6 P P 18 17 05.9 -0.5
baz=188
I41A **Arkdale** 32.27 356 P P 18 17 06.2 -0.3
baz=175
ACTO **Acton** 32.29 9 P P 18 17 06.4 -0.3
baz=193,SNR=11

WUAZ **Wupatki** 32.33 321 eP P 18 17 08.6 +1.2
comp=Z,15nm,0.8s
WUAZ **Wupatki** 32.33 321 P P 18 17 08.9 +1.6
baz=131,SNR=8.4
I51A **Listowel** 32.34 8 P P 18 17 07.2 +0.1
baz=191,SNR=7.7
Y14A **Wickenburg** 32.39 317 eP P 18 17 08.7 +0.9
comp=Z,4.6nm,0.8s
ISCO **Idaho Springs** 32.41 333 eP P 18 17 08.0 -0.1
comp=Z,5.8nm,0.7s
ISCO **Idaho Springs** 32.41 333 eP P 18 17 08.0 -0.1
ISCO pmax pmax
comp=Z,6.0nm,0.7s
ISCO **Idaho Springs** 32.41 333 P P 18 17 08.3 +0.2
baz=144
I48A **Sherman Twp** 32.43 4 P P 18 17 07.8 0.0
baz=186
BASO **Ashfield** 32.46 7 P P 18 17 07.7 -0.4
baz=190,SNR=9.0
SMCO **Snowmass** 32.55 330 eP P 18 17 09.3 -0.2
comp=Z,16nm,0.8s
PV01 **Paradox Valley** 32.56 327 eP P 18 17 10.8 +1.5
comp=Z,8.3nm,1.0s
H43A **Windswept, Lux** 32.59 359 eP P 18 17 08.0 -1.3
comp=Z,39nm,0.8s
H43A **Windswept, Lux** 32.59 359 P P 18 17 08.3 -1.0
baz=179,SNR=10
BWLO **Walkerton** 32.63 8 P P 18 17 08.6 -1.1
baz=191,SNR=8.0
H46A **Fife Lake** 32.69 2 P P 18 17 09.2 -1.0
baz=183,SNR=5.2
PV02 **Paradox Valley** 32.70 327 eP P 18 17 11.1 +0.5
comp=Z,15nm,0.9s
PV13 **Radium Mtn., P** 32.71 327 eP P 18 17 11.6 +0.9
comp=Z,18nm,0.6s
I52A **Shelburne** 32.72 9 P P 18 17 09.7 -0.8
baz=192,SNR=15
DRWO **Darlington Wes** 32.78 11 P P 18 17 10.4 -0.5
baz=195,SNR=7.7
DRCO **St. Marys Ceme** 32.79 11 P P 18 17 10.7 -0.3
baz=195,SNR=6.3
PV03 **Paradox Valley** 32.79 327 eP P 18 17 12.2 +0.8
comp=Z,32nm,0.6s
PV05 **Paradox Valley** 32.80 327 eP P 18 17 11.8 +0.4
comp=Z,29nm,0.7s
H47A **Mio** 32.81 4 P P 18 17 10.3 -0.9
baz=185
PV18 **Skein Mesa, Pa** 32.82 327 eP P 18 17 12.2 +0.5
comp=Z,46nm,0.8s
PV07 **Paradox Valley** 32.82 328 eP P 18 17 12.2 +0.6
comp=Z,19nm,1.0s
PV11 **David Mesa, Pa** 32.84 327 eP P 18 17 12.6 +0.8
comp=Z,61nm,0.6s
WLVO **Wesleyville** 32.90 12 P P 18 17 11.4 -0.5
baz=196
PV19 **Morning Glory** 32.91 327 eP P 18 17 12.7 +0.3
comp=Z,45nm,0.6s
ECSD **EROS Data Cent** 32.91 347 eP P 18 17 10.7 -1.5
comp=Z,98nm,1.0s
ECSD **EROS Data Cent** 32.91 347 P P 18 17 11.1 -1.0
baz=162,SNR=96
PV20 **West Nyswonger** 32.92 327 eP P 18 17 13.1 +0.6
comp=Z,28nm,0.7s
PV20 ePcP PcP 18 19 56.9 +1.1
PV04 **Paradox Valley** 32.92 327 eP P 18 17 13.2 +0.7
comp=Z,23nm,0.6s
TRY **Troy** 32.96 18 eP P 18 17 13.4 +0.8
comp=Z,41nm,0.8s
H48A **Harrisville** 32.97 5 eP P 18 17 11.4 -1.2
comp=Z,96nm,0.6s
H48A **Harrisville** 32.97 5 P P 18 17 12.0 -0.7
baz=187,SNR=22
GLMI **Grayling** 33.01 3 eP P 18 17 12.8 -0.1
comp=Z,54nm,0.8s
GLMI **Grayling** 33.01 3 P P 18 17 12.2 -0.7
baz=184
BMRO **Meriville Lake** 33.09 8 P P 18 17 13.2 -0.5
baz=190,SNR=10
PV09 **Paradox Valley** 33.12 327 eP P 18 17 15.3 +0.9
GLA **Glamis** 33.13 314 P P 18 17 16.0 +1.8
baz=123,SNR=5.6
G45A **Suttons Bay** 33.18 2 eP P 18 17 13.0 -1.4
comp=Z,86nm,1.0s
G45A **Suttons Bay** 33.18 2 P P 18 17 13.2 -1.2
baz=182,SNR=13
PECO **Prince Edward** 33.20 13 P P 18 17 13.9 -0.6
baz=198
I55A **Frankford** 33.32 12 P P 18 17 15.3 -0.4
baz=197,SNR=5.9
H52A **Wyevale** 33.33 9 P P 18 17 15.4 -0.3
baz=193,SNR=5.2
PDMCI **Parker Dam,Lak** 33.36 317 P P 18 17 15.9 -0.3
baz=126
G47A **Hillman** 33.40 4 P P 18 17 15.4 -1.0
baz=186,SNR=9.8
N23A **Red Feather La** 33.45 334 eP P 18 17 17.7 +0.5
comp=Z,6.3nm,0.8s
N23A **Red Feather La** 33.45 334 P P 18 17 17.4 +0.3
baz=145,SNR=6.3
U15A **North Rim** 33.49 321 eP P 18 17 18.7 +1.1
comp=Z,7.2nm,0.6s
G40A **Rib Lake** 33.50 356 eP P 18 17 15.3 -1.9
comp=Z,46nm,1.0s
G40A **Rib Lake** 33.50 356 P P 18 17 16.1 -1.1
baz=174,SNR=35
LPAZ **La Paz** 33.56 146 P P 18 17 19.4 +0.7
comp=Z,1.6nm,0.5s,baz=333,slow=11,SNR=6.0
LPAZ PcP PcP 18 19 59.8 +1.3
comp=Z,1.8nm,0.6s,baz=287,slow=4.2,SNR=5.2
LPAZ **La Paz** 33.56 146 eP P 18 17 19.3 +0.6
LPAZ ePcP PcP 18 19 59.2 +0.8
LPAZ **La Paz** 33.56 146 eP P 18 17 19.3 +0.6
LPAZ e 18 19 59.3
PHWY **Pilot Hill** 33.57 334 eP P 18 17 18.2 -0.1
comp=Z,8.2nm,0.6s
SADO **Sadowa** 33.58 10 P P 18 17 16.9 -1.0
comp=Z,17nm,0.6s,baz=244,slow=5.6,SNR=25
SADO PcP PcP 18 19 57.6 +0.4
comp=Z,1.7nm,0.4s,baz=108,slow=5.0,SNR=3.1
SADO **Sadowa** 33.58 10 eP P 18 17 17.1 -0.8
comp=Z,22nm,0.9s
G39A **Holcombe** 33.59 355 P P 18 17 17.0 -1.0
baz=173,SNR=77
DELO **Deloro Mine** 33.62 12 P P 18 17 17.7 -0.5
baz=197
W13A **Hualapai Mount** 33.66 318 eP P 18 17 20.4 +1.3
comp=Z,9.5nm,0.8s
TOBO **Tobermory, Bru** 33.67 7 P P 18 17 18.4 -0.3
baz=190,SNR=12
SPMN **Marine on St.** 33.71 353 eP P 18 17 17.3 -1.7
comp=Z,132nm,0.5s
SPMN **Marine on St.** 33.71 353 P P 18 17 17.7 -1.3
baz=170,SNR=46
H55A **Tweed** 33.74 13 P P 18 17 18.7 -0.7
baz=197
F45A **CMU Biological** 33.83 2 P P 18 17 19.6 -0.4
baz=183,SNR=7.4
F42A **Maple Grove Fa** 33.89 359 P P 18 17 19.6 -1.0
baz=178,SNR=6.2
BC3 **Big Chuckawall** 33.90 315 P P 18 17 21.9 +1.0
baz=123,SNR=11
O20A **White River Ci** 33.91 330 eP P 18 17 21.6 +0.6
comp=Z,40nm,1.0s
O20A **White River Ci** 33.91 330 P P 18 17 22.0 +1.0
baz=141,SNR=25
NCB **Newcomb** 33.94 17 eP P 18 17 20.9 -0.1
comp=Z,13nm,1.1s
NEE2 **Needles Airpor** 33.95 317 P P 18 17 22.6 +1.3
baz=126
IRM **Iron Mountain** 33.96 316 P P 18 17 23.1 +1.7
baz=124
KLBO **Killbear Provi** 33.98 9 P P 18 17 20.9 -0.5
baz=192
H56A **Elgin** 33.99 14 P P 18 17 21.5 0.0
baz=199,SNR=9.4
G53A **Haliburton** 34.01 11 P P 18 17 20.7 -0.9
baz=195,SNR=8.4
BANO **Bancroft** 34.04 12 P P 18 17 20.6 -1.3
baz=196
F40A **Park Falls** 34.14 356 P P 18 17 21.4 -1.4
baz=174,SNR=31
SUSD **Miller** 34.14 345 P P 18 17 21.9 -0.9
baz=159,SNR=13
F49A **Sandfield** 34.15 6 P P 18 17 21.5 -1.3
baz=189,SNR=10
F48A **Evansville** 34.15 5 P P 18 17 21.7 -1.1
baz=188,SNR=14
PKCU **Pink Cliffs** 34.17 323 eP P 18 17 24.8 +1.2

comp=Z,40nm,1.0s
F37A **Hinrichs Farm,** 34.18 353 P P 18 17 21.6 -1.5
baz=170
BUKO **Buck Lake** 34.19 10 P P 18 17 22.0 -1.1
baz=193,SNR=9.1
F39A **Loretta** 34.19 355 P P 18 17 21.8 -1.4
baz=173,SNR=44
KNB **Kanab** 34.19 322 eP P 18 17 23.8 +0.2
comp=Z,13nm,0.7s
KNB **Kanab** 34.19 322 eP P 18 17 23.8 +0.2
KNB pmax pmax
comp=Z,13nm,0.7s
PLVO **Plevna** 34.23 13 eP P 18 17 23.2 -0.4
comp=Z,12nm,0.9s
PLVO **Plevna** 34.23 13 P P 18 17 23.4 -0.2
baz=197,SNR=5.9
COWI **Conover** 34.26 357 eP P 18 17 22.3 -1.6
comp=Z,43nm,0.6s
SRU **San Rafael Swe** 34.31 327 eP P 18 17 24.9 +0.3
comp=Z,29nm,0.6s
SRU **San Rafael Swe** 34.31 327 eP P 18 17 24.9 +0.3
SRU pmax pmax
comp=Z,29nm,0.6s
F38A **Pierce - Schro** 34.33 354 P P 18 17 23.3 -1.1
baz=172,SNR=56
LONY **Lake Ozonia** 34.44 16 eP P 18 17 25.0 -0.4
comp=Z,23nm,0.8s
LONY **Lake Ozonia** 34.44 16 P P 18 17 24.8 -0.5
baz=202
LCMT **Little Creek M** 34.45 321 eP P 18 17 27.0 +1.3
comp=Z,8.8nm,0.8s
BELC **Belle Mtn. Jos** 34.46 315 P P 18 17 26.5 +0.5
baz=123,SNR=5.0
E43A **Lone Tree Farm** 34.49 0 eP P 18 17 24.4 -1.4
comp=Z,50nm,0.6s
E43A **Lone Tree Farm** 34.49 0 P P 18 17 24.9 -0.9
baz=180,SNR=36
MTPU **Mount Pierson** 34.49 324 eP P 18 17 28.1 +1.7
comp=Z,20nm,0.7s
Q16A **Castle Valley** 34.53 326 eP P 18 17 27.3 +0.8
comp=Z,12nm,0.6s
F52A **Sundridge** 34.54 10 P P 18 17 25.6 -0.6
baz=193,SNR=6.4
E46A **Sault Ste Mari** 34.56 3 eP P 18 17 25.0 -1.4
comp=Z,7.8nm,0.6s
E46A **Sault Ste Mari** 34.56 3 P P 18 17 25.4 -1.0
baz=185
PFO **Pinyon Flats O** 34.58 314 P P 18 17 28.9 +2.0
comp=Z,1.8nm,0.4s,baz=128,slow=5.3,SNR=3.6
PFO PcP PcP 18 20 02.4 +1.9
comp=Z,5.2nm,0.6s,baz=136,slow=2.4,SNR=6.8
PFO **Pinyon Flats O** 34.58 314 eP P 18 17 29.2 +2.3
comp=Z,3.7nm,0.7s
PFO ePcP PcP 18 20 02.0 +1.5
PFO **Pinyon Flats O** 34.58 314 eP P 18 17 29.2 +2.3
PFO e 18 20 02.0
PFO pmax pmax
comp=Z,4.0nm,0.7s
F51A **Arnstein** 34.58 9 P P 18 17 25.8 -0.7
baz=192
MDP **Montagnes des** 34.62 98 PcP PcP 18 20 01.7 +0.9
comp=Z,11nm,1.0s,baz=124,slow=1.0,SNR=4.4
RWWY **Rawlins** 34.65 333 eP P 18 17 27.8 +0.3
comp=Z,25nm,0.8s
P17A **Butcher Ranch,** 34.69 327 eP P 18 17 28.4 +0.6
comp=Z,27nm,0.8s
E47A **Iron Bridge** 34.72 5 P P 18 17 27.4 -0.3
baz=186,SNR=13
E44A **Grand Marais A** 34.75 1 eP P 18 17 27.7 -0.3
comp=Z,63nm,1.0s
E44A **Grand Marais A** 34.75 1 P P 18 17 27.3 -0.8
baz=182,SNR=9.7
PEMO **Pembroke** 34.81 12 P P 18 17 28.0 -0.5
baz=197
MSU **Marysvale** 34.81 324 eP P 18 17 29.9 +0.9
MSU ePcP PcP 18 20 03.1 +1.8
MSU **Marysvale** 34.81 324 eP P 18 17 29.9 +0.9
MSU e 18 20 03.1
TMUT **Trail Mountain** 34.82 326 eP P 18 17 29.8 +0.7
comp=Z,13nm,0.6s
E48A **Lockeyer** 34.84 6 P P 18 17 27.7 -1.2
baz=188,SNR=17
CCUT **Cedar City** 34.87 322 eP P 18 17 30.9 +1.5
comp=Z,8.5nm,1.0s
LBNH **Lisbon** 34.87 19 P P 18 17 29.1 0.0
baz=206
ALGO **Algonquin Park** 34.92 11 P P 18 17 28.5 -1.0
baz=195,SNR=13
E38A **The Farm, Brul** 34.93 355 eP P 18 17 28.1 -1.5
comp=Z,45nm,0.8s
E38A **The Farm, Brul** 34.93 355 P P 18 17 28.4 -1.2
baz=172,SNR=17
E50A **Wahnapitae** 34.95 8 P P 18 17 28.7 -1.0
baz=191,SNR=8.5
ORIO **Orleans, Innes** 34.98 14 P P 18 17 29.4 -0.6
baz=200
D46A **Sault St. Mari** 35.10 4 P P 18 17 30.1 -0.9
baz=185,SNR=12
E52A **Mattawa** 35.13 10 P P 18 17 30.3 -1.0
baz=194,SNR=8.3
K22A **Casper** 35.13 335 eP P 18 17 32.0 +0.4
comp=Z,18nm,0.9s
K22A **Casper** 35.13 335 P P 18 17 30.9 -0.7
baz=145,SNR=8.9
F55A **Otter Lake** 35.15 13 P P 18 17 31.1 -0.3
baz=198
MNMC **Minye Minye** 35.18 151 eP P 18 17 34.1 +1.8
comp=Z,19nm,0.8s
D41A **Chassel** 35.20 358 eP P 18 17 30.8 -1.1
comp=Z,27nm,0.8s
D41A **Chassel** 35.20 358 P P 18 17 30.6 -1.3
baz=177,SNR=9.5
E51A **G1948 Merrick** 35.23 9 P P 18 17 31.6 -0.6
baz=193,SNR=18
D47A **Chapleau** 35.33 5 P P 18 17 32.0 -1.0
baz=186,SNR=16
E53A **Dumoine, Ponti** 35.40 11 P P 18 17 32.8 -0.9
baz=196,SNR=9.6
RSSD **Black Hills** 35.41 339 eP P 18 17 34.4 +0.3
comp=Z,15nm,0.6s
RSSD **Black Hills** 35.41 339 eP P 18 17 34.4 +0.3
RSSD pmax pmax
comp=Z,15nm,0.6s
RSSD **Black Hills** 35.41 339 P P 18 17 34.4 +0.3
baz=150
E54A **Lac Daplat, Po** 35.54 12 P P 18 17 34.0 -0.9
baz=197,SNR=14
MPU **Maple Canyon** 35.56 327 eP P 18 17 35.4 0.0
comp=Z,24nm,1.0s
D48A **Paudash Townsh** 35.56 6 P P 18 17 34.0 -1.1
baz=189,SNR=36
D49A **Beulah Townshi** 35.71 7 P P 18 17 35.4 -0.9
baz=189,SNR=35
NLU **North Lily Min** 35.76 326 eP P 18 17 36.2 -0.8
comp=Z,6.1nm,0.7s
PSUT **Pine Spring** 35.80 323 eP P 18 17 38.7 +1.2
comp=Z,11nm,0.8s
GO01 **Chusmiza** 35.84 150 eP P 18 17 38.1 -0.1
comp=Z,17nm,1.3s
D52A **ZEK Kipawa Sen** 35.84 10 P P 18 17 37.0 -0.4
baz=194
JLU **Jordanelle** 35.88 328 eP P 18 17 38.4 +0.3
comp=Z,16nm,0.6s
D53A **Lac Vacive, Po** 36.07 11 eP P 18 17 38.9 -0.5
comp=Z,14nm,0.8s
D53A **Lac Vacive, Po** 36.07 11 P P 18 17 39.0 -0.3
baz=196,SNR=12
C40A **Isle Royale Na** 36.08 358 P P 18 17 38.1 -1.3
baz=176,SNR=9.6
CTU **Camp Tracy** 36.10 327 eP P 18 17 40.6 +0.6
comp=Z,17nm,0.7s
TCUT **Toone Canyon** 36.23 328 eP P 18 17 41.8 +0.7
comp=Z,32nm,0.7s
EYMN **Ely** 36.26 355 eP P 18 17 38.8 -2.2
comp=Z,23nm,0.9s
EYMN **Ely** 36.26 355 P P 18 17 39.5 -1.5
baz=172
TPNV **Topopah Spring** 36.30 319 eP P 18 17 43.0 +1.3
comp=Z,11nm,0.9s
TPNV **Topopah Spring** 36.30 319 P P 18 17 43.4 +1.6
baz=126
DUG **Dugway, Tooele** 36.33 326 eP P 18 17 42.8 +0.9
comp=Z,12nm,1.0s
DUG **Dugway, Tooele** 36.33 326 eP P 18 17 42.8 +0.9
DUG pmax pmax
comp=Z,12nm,1.0s
DUG **Dugway, Tooele** 36.33 326 P P 18 17 43.1 +1.2
baz=134

D54A Lac Fusel, La 36.34 12 P P 18 17 41.0 -0.7
baz=197,SNR=9.5
FURC Furnace Creek, 36.42 318 P P 18 17 44.1 +1.5
baz=125,SNR=8.0
BW06 Boulder Array 36.57 332 eP P 18 17 43.6 -0.4
comp=Z,13nm,0.7s
BW06 Boulder Array 36.57 332 P P 18 17 44.1 +0.2
baz=141
PD31 Pinedale Array 36.57 332 eP P 18 17 43.6 -0.4
comp=Z,12nm,0.7s
PD31 ePcP PcP 18 20 06.6 +0.2
PDAR Pinedale Array 36.57 332 P P 18 17 43.5 -0.4
comp=Z,11nm,0.6s,baz=129,slow=9.9,SNR=91
PDAR PcP PcP 18 20 06.4 +0.1
comp=Z,3.1nm,0.8s,baz=136,slow=5.8,SNR=5.3
PDAR ScP ScP 18 23 51.6 +3.6
comp=Z,0.9nm,0.8s,baz=147,slow=3.0,SNR=5.2
MPMC Manual Prospec 36.61 316 P P 18 17 44.9 +0.5
baz=124,SNR=9.9
PKME Peaks-Kenny Pk 36.66 21 eP P 18 17 45.0 +0.6
comp=Z,21nm,0.8s
PKME Peaks-Kenny Pk 36.66 21 P P 18 17 45.1 +0.7
baz=210
HWUT Hardware Ranch 36.67 329 eP P 18 17 45.0 +0.2
comp=Z,33nm,0.8s
R11A Troy Canyon, C 36.73 321 eP P 18 17 47.3 +1.9
comp=Z,6.6nm,1.1s
R11A ePcP PcP 18 20 08.3 +1.4
R11A Troy Canyon, C 36.73 321 P P 18 17 46.5 +1.1
baz=128,SNR=10
SPUT South Promonto 36.91 327 eP P 18 17 47.2 +0.4
comp=Z,18nm,0.7s
BGU Big Grassy Mou 36.95 326 eP P 18 17 47.0 -0.2
comp=Z,22nm,1.2s
GRAC Grapevine Rang 37.06 318 P P 18 17 49.9 +1.9
baz=125
ISA Isabella, Lake 37.07 315 eP P 18 17 49.8 +1.6
comp=Z,3.2nm,0.9s
ISA Isabella, Lake 37.07 315 eP P 18 17 49.8 +1.6
ISA pmax pmax
comp=Z,3.0nm,0.9s
ISA Isabella, Lake 37.07 315 P P 18 17 49.6 +1.5
baz=122
AGMN Agassiz Nation 37.16 350 eP P 18 17 47.2 -1.3
comp=Z,69nm,0.9s
AGMN Agassiz Nation 37.16 350 P P 18 17 47.3 -1.3
baz=166
AHID Auburn Hatcher 37.30 330 eP P 18 17 50.0 -0.2
comp=Z,33nm,0.9s
HVU Hansel Valley 37.42 328 eP P 18 17 51.5 +0.4
comp=Z,15nm,0.9s
HVU Hansel Valley 37.42 328 eP P 18 17 51.5 +0.4
HVU pmax pmax
comp=Z,15nm,0.9s
MDND Maddock 37.48 346 eP P 18 17 51.1 -0.3
comp=Z,298nm,0.7s
MDND Maddock 37.48 346 P P 18 17 50.9 -0.4
baz=159,SNR=10
REDW Red Top Meadow 37.63 331 eP P 18 17 53.3 +0.3
comp=Z,74nm,0.8s
SNOW Snow King Moun 37.66 331 eP P 18 17 53.7 +0.4
comp=Z,68nm,0.8s
SIV San Ignacio 37.68 136 P P 18 17 53.7 +0.2
comp=Z,139nm,0.6s,baz=314,slow=8.1,SNR=578
SIV PcP PcP 18 20 10.5 +0.7
comp=Z,13nm,0.7s,baz=289,slow=2.1,SNR=6.7
LOHW Long Hollow 37.71 332 eP P 18 17 54.1 +0.5
comp=Z,21nm,1.1s
TPAW Teton Pass 37.78 331 eP P 18 17 54.7 +0.4
comp=Z,34nm,0.8s
MOOW Moose Ponds 37.88 332 eP P 18 17 55.1 +0.1
comp=Z,19nm,0.8s
FXWY Fox Creek 37.92 331 eP P 18 17 55.4 -0.1
comp=Z,12nm,0.8s
ELK Elko 38.06 324 eP P 18 17 57.2 +0.6
comp=Z,10nm,0.9s
ELK Elko 38.06 324 eP P 18 17 57.2 +0.6
ELK pmax pmax
comp=Z,10.0nm,0.9s
IMW Indian Meadow 38.08 332 eP P 18 17 57.1 +0.3
comp=Z,13nm,0.8s
LSQQ Lebel-sur-Quev 38.10 11 P P 18 17 55.5 -1.0
baz=196
FLWY Flagg Ranch 38.11 332 eP P 18 17 57.0 0.0
comp=Z,30nm,0.9s
RLMT Red Lodge 38.30 334 eP P 18 17 58.4 -0.2
comp=Z,16nm,0.7s
RLMT Red Lodge 38.30 334 P P 18 17 58.6 +0.1
baz=143
YPP Pitchstone Pla 38.31 332 eP P 18 17 59.3 +0.5
comp=Z,7.7nm,0.9s
NV11 Mina Array Sit 38.39 319 eP P 18 18 00.8 +1.5
comp=Z,0.7nm,0.9s
YFT Old Faithful 38.46 332 eP P 18 18 00.8 +0.9
comp=Z,34nm,1.2s
OMMB Old Mammoth Mi 38.48 317 eP P 18 18 01.4 +1.1
comp=Z,4.9nm,0.8s
NV01 Mina Array Sit 38.49 319 ePcP PcP 18 20 14.0 +1.7
NV01 eS S 18 23 59.5 +7.8
NVAR Mina Array Bea 38.49 319 P P 18 18 01.4 +1.2
comp=Z,5.1nm,0.7s,baz=131,slow=6.8,SNR=33
NVAR PcP PcP 18 20 14.0 +1.7
comp=Z,11nm,0.7s,baz=130,slow=3.6,SNR=26
NVAR ScP ScP 18 23 59.5 +4.2
comp=Z,0.5nm,0.7s,baz=126,slow=4.9,SNR=3.3
MDPB Devils Postpil 38.55 317 eP P 18 18 01.7 +0.9
comp=Z,8.3nm,0.8s
MATQ Matagami 38.66 10 P P 18 18 00.2 -1.1
baz=195,SNR=12
YMR Madison River 38.69 332 eP P 18 18 02.7 +0.9
comp=Z,25nm,0.9s
KVN Kaiserville 38.72 320 eP P 18 18 03.3 +1.1
comp=Z,12nm,1.0s
KVN ePcP PcP 18 20 14.3 +1.3
YHH Holmes Hill 38.73 333 eP P 18 18 02.8 +0.6
comp=Z,11nm,0.9s
RYN Ryan 38.74 319 eP P 18 18 03.6 +1.3
comp=Z,6.8nm,1.0s
YHB Horse Butte 38.85 332 eP P 18 18 03.9 +0.6
comp=Z,14nm,0.7s
GCMT Greycliff 39.00 335 eP P 18 18 04.3 -0.1
BMN Battle Mountai 39.02 322 eP P 18 18 05.1 +0.5
comp=Z,13nm,0.8s
QLMT Earthquake Lak 39.02 332 eP P 18 18 05.7 +1.1
ULM Lac du Bonnet 39.05 351 P P 18 18 02.8 -1.8
comp=Z,50nm,0.6s,baz=165,slow=8.6,SNR=32
ULM PcP PcP 18 20 13.6 +0.1
comp=Z,8.5nm,0.7s,baz=177,slow=6.4,SNR=3.5
ULM Lac du Bonnet 39.05 351 eP P 18 18 02.7 -1.8
comp=Z,66nm,0.9s
ULM Lac du Bonnet 39.05 351 eP P 18 18 02.7 -1.8
ULM pmax pmax
comp=Z,66nm,0.9s
WAKR Walker 39.26 318 eP P 18 18 09.1 +2.3
comp=Z,7.8nm,0.9s
DGMT Dagmar 39.30 342 eP P 18 18 06.2 -0.4
comp=Z,91nm,0.6s
DGMT Dagmar 39.30 342 P P 18 18 06.4 -0.2
baz=153
YERR Yerington 39.41 319 eP P 18 18 09.2 +1.3
comp=Z,6.0nm,0.8s
HLID Hailey 39.54 328 eP P 18 18 09.4 +0.5
comp=Z,8.5nm,0.8s
HLID Hailey 39.54 328 P P 18 18 09.2 +0.2
baz=135
MCMT McKenzie Canyo 39.68 331 eP P 18 18 10.9 +0.8
PNTR Pine Nut 39.70 319 eP P 18 18 11.6 +1.2
comp=Z,8.8nm,0.7s
BOZ Bozeman (W) 39.70 333 P P 18 18 10.6 +0.4
baz=140
PAHR Pah Rah Range 39.91 320 eP P 18 18 13.4 +1.4
comp=Z,5.8nm,0.9s
DLMT Dillon 39.96 332 eP P 18 18 13.0 +0.6
comp=Z,19nm,0.9s
AFDM Forest Hills D 40.51 318 eP P 18 18 17.4 +0.6
comp=Z,2.5nm,0.7s
AFDM ePcP PcP 18 20 19.5 +1.1
BEKR Beckworth 40.62 319 eP P 18 18 18.7 +0.8
comp=Z,9.9nm,1.1s
BEKR ePcP PcP 18 20 20.9 +1.9
HRY Holter Researc 40.65 334 eP P 18 18 18.5 +0.5
EGMT Eagleton 40.84 337 eP P 18 18 19.4 -0.1
comp=Z,16nm,0.7s
EGMT Eagleton 40.84 337 P P 18 18 19.7 +0.2
baz=145
WVOR Wild Horse Val 41.10 324 eP P 18 18 21.6 -0.1
comp=Z,12nm,0.9s
WVOR ePcP PcP 18 20 22.6 +2.2
WVOR Wild Horse Val 41.10 324 eP P 18 18 21.7 -0.1
WVOR e 18 20 22.6
WVOR pmax pmax
comp=Z,12nm,0.9s
PLID Pearl Lake 41.42 329 eP P 18 18 24.0 -0.5
comp=Z,18nm,0.9s
PLID ePcP PcP 18 20 23.2 +1.6
J08A Circle Bar Ran 41.59 325 eP P 18 18 26.1 +0.4
comp=Z,12nm,1.0s
J08A ePcP PcP 18 20 23.5 +1.5
MSO Missoula 41.68 332 eP P 18 18 26.5 +0.1
MSO Missoula 41.68 332 P P 18 18 26.9 +0.5
baz=138
MOD Modoc Plateau 41.76 322 eP P 18 18 27.5 +0.3
comp=Z,10nm,1.4s
MOD ePcP PcP 18 20 24.5 +1.9
O03E Paynes Creek 41.78 319 P P 18 18 27.8 +0.5
baz=123
BMO Blue Mountains 41.93 328 eP P 18 18 28.0 -0.5
comp=Z,13nm,0.9s
BMO Blue Mountains 41.93 328 eP P 18 18 28.0 -0.5
BMO pmax pmax
comp=Z,13nm,0.9s
O02D Mt. Diablo Mer 42.35 318 P P 18 18 32.0 0.0
baz=122
I07A Izee 42.62 325 eP P 18 18 34.0 -0.1
comp=Z,6.5nm,0.9s
I07A ePcP PcP 18 20 26.9 +1.5
F10A Beach Ranch, E 42.66 329 eP P 18 18 33.8 -0.6
comp=Z,21nm,0.7s
G08A Pilot Rock 43.10 327 eP P 18 18 38.0 0.0
comp=Z,5.0nm,0.9s
G08A ePcP PcP 18 20 28.4 +1.4
J05D Fort Rock, OR 43.13 323 P P 18 18 39.0 +0.7
baz=126
L04D Klamath Falls 43.16 321 P P 18 18 39.2 +0.7
baz=124
PINE Pine Mountain 43.26 324 eP P 18 18 40.2 +0.7
comp=Z,11nm,0.9s
PINE ePP PcP 18 20 28.4 +0.7
KHMM Horse Mountain 43.33 319 eP P 18 18 41.4 +1.4
comp=Z,13nm,0.9s
WALA Waterton Lakes 43.35 334 eP P 18 18 40.1 +0.1
comp=Z,12nm,0.8s
E09A Wood Farm, Sta 43.49 329 eP P 18 18 41.5 +0.5
comp=Z,20nm,1.0s
J04D Umpqua Nationa 43.62 322 P P 18 18 43.1 +0.7
baz=125
G06A Carlson Farm, 43.98 326 eP P 18 18 46.6 +1.6
comp=Z,4.8nm,0.9s
G06A ePP PcP 18 20 31.9 +2.0
I04A Tendick Farm, 44.12 323 P P 18 18 46.2 0.0
baz=126
HAWA Hanford 44.12 328 eP P 18 18 45.7 -0.3
comp=Z,16nm,0.8s
HAWA ePP PcP 18 20 31.5 +1.3
NEW Newport 44.20 331 eP P 18 18 46.0 -0.8
comp=Z,6.1nm,0.8s
NEW Newport 44.20 331 eP P 18 18 46.0 -0.8
NEW pmax pmax
comp=Z,6.0nm,0.8s
NEW Newport 44.20 331 P P 18 18 46.3 -0.4
baz=135
D08A Wollman Farm, 44.25 329 eP P 18 18 46.9 -0.2
comp=Z,23nm,0.8s
D08A ePP PP 18 20 31.9 +0.7
K02D Willamette Mer 44.26 321 P P 18 18 48.1 +0.7
baz=123
G05D Wamic, OR 44.36 325 P P 18 18 49.0 +1.0
baz=128
C09A Chrisman Ranch 44.43 330 eP P 18 18 48.4 -0.1
comp=Z,17nm,0.8s
C09A ePcP PcP 18 20 32.0 +0.7
FFC Flin Flon 44.45 348 eP P 18 18 47.9 -0.6
comp=Z,380nm,0.8s
FFC Flin Flon 44.45 348 i P P 18 18 48.2 -0.3
H04A Detroit Lake 44.51 324 eP P 18 18 49.6 +0.4
comp=Z,24nm,1.3s
H04A ePcP PcP 18 20 32.9 +1.2
J01E Myrtle Point 44.68 321 P P 18 18 51.5 +1.0
baz=123
F05D White Salmon 44.83 326 P P 18 18 52.3 +0.6
baz=128
LTY Liberty 45.28 328 eP P 18 18 55.4 0.0
comp=Z,12nm,0.8s
G03D McMinnville, O 45.44 324 P P 18 18 57.2 +0.7
baz=126
LON Longmire 45.56 327 eP P 18 18 57.4 -0.2
comp=Z,6.3nm,0.8s
LON ePcP PcP 18 20 36.1 +0.8
LON Longmire 45.56 327 eP P 18 18 57.4 -0.2
LON e 18 20 36.1
LON pmax pmax
comp=Z,6.0nm,0.8s
SCHQ Schefferville 45.81 16 P P 18 18 56.0 -3.3
comp=Z,12nm,0.6s,baz=206,slow=9.8,SNR=5.4
SCHQ Schefferville 45.81 16 eP P 18 18 57.7 -1.6
comp=Z,20nm,1.1s
F04D Rainier, OR 45.81 325 P P 18 19 00.2 +0.7
baz=127
C06D Leavenworth 45.83 328 P P 18 18 60.0 +0.3
baz=130
E04D Cinebar 45.85 326 P P 18 19 00.1 +0.4
baz=128
D05A Enumclaw 45.93 327 eP P 18 19 00.9 +0.5
comp=Z,14nm,0.8s
F03A Seaside 46.03 325 eP P 18 19 02.3 +1.1
comp=Z,37nm,1.2s
B06A Marblemount 46.51 329 eP P 18 19 04.5 -0.4
comp=Z,32nm,0.8s
B05A Bryant 46.66 328 P P 18 19 05.5 -0.6
baz=129
D03D Eldon 46.73 327 P P 18 19 06.5 -0.2
baz=128
CFA Coronel Fontan 46.74 158 P P 18 19 06.4 -0.5
comp=Z,1.0nm,0.3s,baz=195,slow=12,SNR=2.4
CFA PcP PcP 18 20 40.6 +1.1
comp=Z,1.2nm,0.4s,baz=320,slow=7.9,SNR=4.7
NLWA Neilton Lookou 47.07 326 eP P 18 19 09.5 +0.1
comp=Z,12nm,1.0s
NLWA ePcP PcP 18 20 42.1 +1.5
FCC Fort Churchill 47.20 355 eP P 18 19 08.6 -1.5
comp=Z,42nm,0.7s
FCC ePcP PcP 18 20 39.2 -1.5
FCC Fort Churchill 47.20 355 eP P 18 19 08.6 -1.5
FCC e 18 20 39.2
FCC pmax pmax
comp=Z,41nm,0.7s
BDFB Brasilia 47.25 124 P P 18 19 09.8 -1.4
comp=Z,7.8nm,0.5s,baz=281,slow=9.2,SNR=12
BDFB Brasilia 47.25 124 eP P 18 19 09.4 -1.9
comp=Z,8.2nm,0.8s
BDFB Brasilia 47.25 124 eP P 18 19 09.4 -1.9
BDFB pmax pmax
comp=Z,8.0nm,0.8s
A04D Lummi Island 47.27 328 P P 18 19 10.9 +0.1
baz=129
CPUP Villa Florida 47.62 143 P P 18 19 12.3 -1.5
comp=Z,3.8nm,0.6s,baz=323,slow=7.4,SNR=10
CPUP PcP PcP 18 20 43.4 +0.7
comp=Z,3.3nm,0.7s,baz=298,slow=8.5,SNR=3.9
LLLB Lillooet 48.08 331 eP P 18 19 17.2 0.0
comp=Z,23nm,0.8s
YKA Yellowknife Ar 54.38 345 P P 18 20 02.9 -1.1
comp=Z,26nm,0.7s,baz=140,slow=7.5,SNR=102
YKA PcP PcP 18 21 07.2 +0.1
comp=Z,3.0nm,0.5s,baz=146,slow=3.9,SNR=8.9
PLCA Paso Flores 54.42 165 P P 18 20 05.0 +0.3
comp=Z,4.5nm,0.8s,baz=11,slow=12,SNR=3.1
PLCA Paso Flores 54.42 165 eP P 18 20 05.2 +0.5
comp=Z,15nm,1.3s
PLCA Paso Flores 54.42 165 eP P 18 20 05.2 +0.5
PLCA pmax pmax
comp=Z,15nm,1.3s
YKW3 Yellowknife Ar 54.44 345 eP P 18 20 03.1 -1.4
comp=Z,36nm,0.8s
YKW3 ePcP PcP 18 21 07.5 +0.1
DLBC Dease Lake 56.70 335 eP P 18 20 21.4 +0.5
comp=Z,24nm,0.8s
BESE Bessie Mountai 58.87 333 eP P 18 20 36.1 +0.1
comp=Z,5.8nm,0.7s
WHY Whitehorse 60.00 335 eP P 18 20 43.4 -0.5
comp=Z,4.4nm,0.8s
HYT Haines Junctio 61.19 334 eP P 18 20 52.1 +0.1
comp=Z,7.7nm,0.9s
CTGM Chitina Glacie 62.90 334 eP P 18 21 03.5 0.0
comp=Z,12nm,0.8s
RES Resolute Bay 63.05 358 eP P 18 21 02.8 -1.3
comp=Z,8.6nm,0.9s
RES Resolute Bay 63.05 358 eP P 18 21 02.8 -1.3
RES pmax pmax
comp=Z,9.0nm,0.9s
DAWY Dawson 63.58 337 eP P 18 21 06.5 -1.4
comp=Z,7.3nm,0.9s
EPYK Eagle Plains 63.85 340 eP P 18 21 08.9 -0.6
comp=Z,19nm,0.8s
EPYK Eagle Plains 63.85 340 P P 18 21 09.2 -0.4
baz=124
INK Inuvik 63.98 343 P P 18 21 09.7 -0.6
comp=Z,20nm,0.9s,baz=114,slow=7.7,SNR=80
INK Inuvik 63.98 343 eP P 18 21 09.2 -1.1
comp=Z,23nm,0.9s
INK Inuvik 63.98 343 eP P 18 21 09.2 -1.1
INK pmax pmax
comp=Z,23nm,0.9s
EGAK Eagle 64.60 337 eP P 18 21 13.3 -1.1
comp=Z,11nm,0.9s
EYAK Cordova Ski Ar 64.70 332 eP P 18 21 15.3 +0.2
comp=Z,16nm,0.8s
MENT Mentasta 64.78 335 eP P 18 21 15.4 -0.2
comp=Z,7.0nm,0.6s
DOT Dot Lake 65.22 336 eP P 18 21 18.5 -0.1
RIDG Independent Ri 65.58 336 eP P 18 21 20.6 -0.3
comp=Z,24nm,0.8s
SCM Sheep Creek Mo 65.89 333 eP P 18 21 22.6 -0.3
comp=Z,10.0nm,0.8s
SCM Sheep Creek Mo 65.89 333 eP P 18 21 22.6 -0.3
SCM pmax pmax
comp=Z,10.0nm,0.8s
KNK Knik Glacier 66.24 333 eP P 18 21 24.6 -0.6
comp=Z,18nm,0.8s
SEW Seward 66.27 331 eP P 18 21 25.0 -0.2
comp=Z,14nm,1.0s
DHY Denali Highway 66.36 334 eP P 18 21 25.2 -0.8
comp=Z,6.8nm,1.1s
GHO Glory Hole Cre 66.57 333 eP P 18 21 26.3 -1.0
comp=Z,22nm,0.9s
HDA Harding Lake 66.69 336 eP P 18 21 27.0 -0.9
comp=Z,23nm,0.8s
RC01 Rabbit Creek A 66.72 332 eP P 18 21 27.9 -0.3
comp=Z,19nm,0.9s
ILAR Eielson Array 66.81 336 P P 18 21 27.8 -0.9
comp=Z,11nm,0.7s,baz=115,slow=4.7,SNR=102
ILAR PP PP 18 23 47.0 -9.4
comp=Z,0.7nm,0.9s,baz=90,slow=9.2,SNR=3.6
ILB Eielson Array 66.81 336 eP P 18 21 27.8 -0.9
comp=Z,13nm,0.7s
BRLK Bradley Lake 66.85 330 eP P 18 21 28.8 -0.3
comp=Z,18nm,0.9s
RND Reindeer 67.11 334 eP P 18 21 30.4 -0.3
comp=Z,51nm,0.8s
RND Reindeer 67.11 334 eP P 18 21 30.4 -0.3
RND pmax pmax
comp=Z,51nm,0.8s
CCB Clear Creek Bu 67.13 336 eP P 18 21 29.5 -1.2
comp=Z,6.3nm,0.8s
SUMG Summit 67.14 14 eP P 18 21 29.7 -1.5
comp=Z,6.2nm,0.9s
SUMG Summit 67.14 14 eP P 18 21 29.7 -1.5
SUMG pmax pmax
comp=Z,6.0nm,0.9s
POKR Poker Plat Res 67.16 336 P P 18 21 30.7 -0.2
baz=112
KDAK Kodiak Island 67.16 328 i P P 18 21 30.9 -0.1
WRH Wood River Hil 67.17 336 eP P 18 21 29.8 -1.2
comp=Z,9.6nm,0.8s
COLA College 67.23 336⇑ eP P 18 21 30.3 -1.0
COLA pmax pmax
comp=Z,11nm,0.8s
TCOL CIGO, UAF Yank 67.23 336 P P 18 21 30.9 -0.4
baz=112
MCK McKinley 67.25 335 eP P 18 21 31.2 -0.4
comp=Z,23nm,0.9s
MCK McKinley 67.25 335 eP P 18 21 31.2 -0.4
MCK pmax pmax
comp=Z,23nm,0.9s
SUA Susitna One 67.30 332 eP P 18 21 31.7 -0.3
comp=Z,8.4nm,0.8s
BWN Browne 67.63 335 eP P 18 21 33.2 -0.6
comp=Z,69nm,0.8s
TRF Thorofare Moun 67.73 334 eP P 18 21 34.0 -0.7
comp=Z,18nm,1.0s
RSO Redoubt South 67.95 331 eP P 18 21 36.0 -0.2
KTH Kantishna Hill 68.03 334 eP P 18 21 35.8 -0.7
comp=Z,14nm,0.8s
BPAW Bear Paw Mtn. 68.23 335 eP P 18 21 36.5 -1.2
comp=Z,19nm,0.8s
CAST Castle Rocks 68.49 334 eP P 18 21 38.1 -1.2
comp=Z,9.1nm,0.8s
COLD Coldfoot 68.98 338 eP P 18 21 42.4 +0.1
comp=Z,12nm,0.8s
TOLK Toolik Lake Re 69.27 340 eP P 18 21 43.8 -0.4
comp=Z,7.3nm,0.8s
TOLK Toolik Lake Re 69.27 340 P P 18 21 43.4 -0.7
baz=112
CHGN Chignik 69.98 326 eP P 18 21 48.6 0.0
comp=Z,38nm,0.8s
TTA Tatalina 70.07 333 eP P 18 21 47.9 -1.3
comp=Z,6.9nm,0.8s
TTA Tatalina 70.07 333 eP P 18 21 47.9 -1.3
TTA pmax pmax
comp=Z,7.0nm,0.8s
PVIS Viseu 74.21 51 eP P 18 22 13.6 -0.7
POLO Lamas de Olo 74.27 50 eP P 18 22 12.4 -2.3
MVO Moncorvo 74.85 50 eP P 18 22 17.0 -1.1
EKA Eskdalemuir Ar 76.93 36 P P 18 22 26.1 -3.4
comp=Z,1.3nm,0.7s,baz=270,slow=5.2,SNR=5.5
ESDC Sonseca Array 77.28 52 P P 18 22 29.4 -2.5
comp=Z,4.7nm,0.7s,baz=284,slow=5.6,SNR=31
ADK Adak 80.64 321 eP P 18 22 50.6 +0.7
comp=Z,32nm,0.9s
ADK Adak 80.64 321 eP P 18 22 50.6 +0.7
ADK pmax pmax
comp=Z,31nm,0.9s
SPITS Spitsbergen Ar 81.29 12 P P 18 22 51.9 -1.0
baz=259,slow=2.9
NB2 NORSAR Subarra 83.76 29 P P 18 23 05.7 -0.4
comp=Z,0.8nm,0.6s,baz=285,slow=4.8
NOA NORSAR Array B 83.76 29 P P 18 23 05.7 -0.4
comp=Z,0.8nm,0.6s,baz=285,slow=4.9,SNR=5.7
HFS Hagfors 85.17 30 P P 18 23 10.3 -2.9
comp=Z,1.4nm,0.6s,baz=245,slow=3.1,SNR=6.2
BILL Bilibino 85.30 339 eP P 18 23 12.6 -1.2
comp=Z,17nm,0.9s
BILL Bilibino 85.30 339⇑ eP P 18 23 13.4 -0.3
BILL e 18 23 23.5
BILL e 18 26 32.5
BILL ePPP PPP 18 28 26.4
BILL pmax pmax
comp=Z,17nm,0.8s
TOA1 Torodi Ar. Sit 86.15 77 eP P 18 23 17.1 -1.8
TORD Torodi Ar. Bea 86.15 77 P P 18 23 17.2 -1.8
comp=Z,0.2nm,0.4s,baz=290,slow=5.2,SNR=3.2
ARCES ARCESS Array B 86.69 19 P P 18 23 18.6 -2.0
comp=Z,1.2nm,0.6s,baz=291,slow=3.4,SNR=11
GERES GERESS Array B 88.18 40 P P 18 23 25.2 -3.1
comp=Z,0.6nm,0.7s,baz=280,slow=2.9,SNR=7.0
FINES FINESS Array B 90.40 26 P P 18 23 36.3 -1.9
comp=Z,2.4nm,1.0s,baz=209,slow=3.5,SNR=5.9
VYHS Vyhne 91.53 40 eP P 18 23 39.8 -4.0
VYHS Vyhne 91.53 40 eP P 18 23 39.8 -4.0
SEY Seymchan 92.74 337⇓ eP P 18 23 49.1 0.0
PETK Petropavlovsk- 95.19 327 P P 18 24 00.9 +0.4
comp=Z,2.8nm,0.7s,baz=62,slow=9.3,SNR=8.9
VNA3 Neumayer Olymp 97.03 161 Pdiff P 18 24 08.1 -0.4
VNA1 Neumayer–Stat 97.32 161 Pdiff Pdif 18 24 10.3 +0.5
OBN Obninsk 98.36 29 eP P 18 24 14.5 -0.3
OBN pmax pmax
comp=Z,3.0nm,0.9s
SNAA Sanae 99.25 161 Pdiff Pdif 18 24 16.3 -2.2
BVAR Borovoye Array 112.62 15 PKiKP PKiKP 18 29 13.6 +0.3
comp=Z,0.9nm,0.7s,baz=153,slow=0.3,SNR=4.5
ZALV Zalesovo Beam 114.18 5 PKiKP PKiKP 18 29 15.2 -1.0
comp=Z,1.7nm,0.4s,baz=295,slow=2.3,SNR=9.0
BOSA Boshof 115.02 116 PKP PKiKP 18 29 18.8 +0.1
comp=Z,2.7nm,0.6s,baz=260,slow=0.9,SNR=11
MJAR Matsushiro Arr 115.80 321 PKP PKPdf 18 29 20.1 +0.2
comp=Z,1.0nm,0.7s,baz=135,slow=1.0,SNR=11
MAJO Matsushiro 115.80 321 ePKPdf PKPdf 18 29 20.1 +0.2
MAJO Matsushiro 115.80 321 ePKIKP PKPdf 18 29 20.1 +0.2
KURK Kurchatov 116.53 10 ⇓ i/PKIKP PKPdf 18 29 20.7 -0.1
LSZ Lusaka 117.11 101 PKP PKiKP 18 29 23.3 +0.3
comp=Z,2.0nm,0.5s,baz=44,slow=4.4,SNR=4.8
ULN Ulaanbaatar 119.33 349 ⇑ i/PKIKP PKiKP 18 29 26.8 +0.2

ULN				pmax	pmax				
	comp=Z,3.0nm,0.8s								
SONM	**Songino Array**	**119.47**	**350**	PKP	**PKiKP**	**18 29 26.9**	**+0.1**		
	comp=Z,4.9nm,0.6s,baz=336,slow=1.4,SNR=33								
GEYT	**Alibeck**	**120.75**	**32**	PKP	**PKPdf**	**18 29 28.6**	**-0.8**		
	comp=Z,2.8nm,0.6s,baz=259,slow=3.8,SNR=7.6								
MAW	**Mawson**	**120.78**	**167**	PKP	**PKiKP**	**18 29 29.2**	**+0.7**		
	comp=Z,3.8nm,0.7s,baz=246,slow=2.3,SNR=6.2								
MKAR	**Makanchi Array**	**120.92**	**9**	PKP	**PKPdf**	**18 29 28.6**	**-0.8**		
	comp=Z,0.7nm,0.4s,baz=341,slow=2.8,SNR=7.2								
MKAR	**Makanchi Array**	**120.92**	**9**	*i*PKIKP	**PKPdf**	**18 29 28.5**	**-1.0**		
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.4s								
KSRS	**Korea Array**	**121.07**	**328**	PKP	**PKiKP**	**18 29 30.8**	**+0.8**		
	comp=Z,13nm,0.8s,baz=11,slow=1.6,SNR=84								
KS15	**Wonju Array Si**	**121.10**	**328**	*e*PKPdf	**PKiKP**	**18 29 30.8**	**+0.7**		
AAK	**Ala-Archa**	**123.27**	**16**	PKP	**PKPdf**	**18 29 33.8**	**-0.4**		
	comp=Z,2.0nm,0.6s,baz=160,slow=4.6,SNR=6.0								
AAK	**Ala-Archa**	**123.27**	**16**	*i*PKIKP	**PKiKP**	**18 29 35.1**	**+0.6**		
AAK				pmax	pmax				
	comp=Z,5.0nm,2.5s								
BOOM	**Boomskoye usch**	**123.79**	**15**	*e*PKPdf	**PKPdf**	**18 29 35.3**	**0.0**		
BOOM	**Boomskoye usch**	**123.79**	**15**	*e*PKIKP	**PKPdf**	**18 29 35.3**	**0.0**		
WMQ	**Urumqi**	**124.47**	**5**	*e*PKP	**PKiKP**	**18 29 37.1**	**+0.4**		
WMQ				LR	LR				
	comp=Z,830nm,19.7s								
WMQ				LR	LR				
	comp=Z,2μm,19.7s								
HHC	**Hu-ho-hao-te**	**124.90**	**343**	*e*PKP	**PKiKP**	**18 29 40.3**	**+2.6**		
GAR	**Garm**	**125.25**	**22**	*e*PKPdf	**PKiKP**	**18 29 39.0**	**+0.5**		
GAR	**Garm**	**125.25**	**22**	*e*PKIKP	**PKiKP**	**18 29 39.0**	**+0.5**		
KSH	**Kashi**	**126.58**	**16**	*e*PKP	**PKiKP**	**18 29 42.8**	**+1.7**		
GTA	**Gaotai**	**128.69**	**353**	*e*PKP	**PKiKP**	**18 29 45.4**	**+0.1**		
NJ2	**Nanjing**	**129.88**	**331**	*e*PKP	**PKPdf**	**18 29 46.8**	**-0.1**		
STKA	**Stephens Creek**	**131.09**	**238**	PKP	**PKiKP**	**18 29 50.4**	**+0.2**		
	comp=Z,2.2nm,0.5s,baz=51,slow=2.5,SNR=9.2								
LZH	**Lanzhou**	**131.31**	**348**	*e*PKP	**PKPdf**	**18 29 48.5**	**-1.3**		
LZH				sPKP		18 30 06.0			
LZH				LR	LR				
	comp=Z,160nm,18.3s								
LZH				LR	LR				
	comp=Z,160nm,18.1s								
LZH				LR	LR				
	comp=Z,250nm,20.2s								
XAN	**Xi'an**	**131.99**	**342**	PKP	**PKiKP**	**18 29 51.8**	**-0.2**		
XAN	**Xi'an**	**131.99**	**342**	*e*PKPdf	**PKPdf**	**18 29 51.4**	**+0.4**		
XAN	**Xi'an**	**131.99**	**342**	*e*PKIKP	**PKPdf**	**18 29 51.4**	**+0.4**		
ENH	**Enshi**	**135.28**	**340**	*e*PKPdf	**PKPdf**	**18 29 57.1**	**-0.1**		
ABPO	**Ambohimpanom**	**135.41**	**105**	*e*PKPdf	**PKiKP**	**18 30 00.5**	**+1.1**		
ABPO	**Ambohimpanom**	**135.41**	**105**	*e*PKIKP	**PKiKP**	**18 30 00.5**	**+1.1**		
LSA	**Lhasa**	**138.74**	**2**	*e*PKPdf	**PKPdf**	**18 30 04.9**	**+0.7**		
LSA	**Lhasa**	**138.74**	**2**	*e*PKIKP	**PKPdf**	**18 30 04.9**	**+0.7**		
ASAR	**Alice Springs**	**139.40**	**247**	PKhKP	PKPpre	18 29 58.9			
	comp=Z,1.3nm,0.8s,baz=112,slow=3.9,SNR=21								
ASAR				PKP	**PKPdf**	**18 30 04.6**	**-0.4**		
	comp=Z,3.0nm,0.7s,baz=107,slow=2.6,SNR=20								
ASAR				SKPab	**SKPab**	**18 33 46.2**	**+0.4**		
	comp=Z,1.1nm,0.8s,baz=108,slow=2.6,SNR=7.3								
WB2	**Warramunga Arr**	**139.47**	**253**	*e*PKPdf	**PKPdf**	**18 30 06.1**	**+1.0**		
WRAB	**Tennant Creek**	**139.47**	**253**	*i*PKIKP	**PKPdf**	**18 30 05.8**	**+0.6**		
WRAB				pmax	pmax				
	comp=Z,15nm,1.3s								
WRA	**Warramunga Arr**	**139.48**	**253**	PKhKP	PKPpre	18 29 59.0			
	comp=Z,1.3nm,0.6s,baz=78,slow=4.4,SNR=6.8								
WRA				PKP	**PKiKP**	**18 30 06.5**	**-1.0**		
	comp=Z,6.0nm,0.7s,baz=98,slow=1.3,SNR=24								
SHL	**Shillong**	**142.88**	**2**	*e*PKPdf	**PKPdf**	**18 30 11.0**	**-0.4**		
SHL	**Shillong**	**142.88**	**2**	*e*PKIKP	**PKPdf**	**18 30 11.0**	**-0.4**		
SLVN	**Son La**	**145.40**	**342**	*e*PKPdf	**PKPbc**	**18 30 15.6**	**-0.1**		
FITZ	**Fitzroy Crossi**	**147.85**	**255**	*e*PKPbc	**PKPbc**	**18 30 23.6**	**+0.8**		
CHTO	**Chiang Mai**	**149.05**	**349**	*e*PKPdf	**PKPdf**	**18 30 22.0**	**+0.2**		
CHTO				*e*PKPbc	**PKPbc**	**18 30 25.8**	**-0.1**		
CHTO	**Chiang Mai**	**149.05**	**349**	*e*PKIKP	**PKPdf**	**18 30 22.0**	**+0.2**		
CM31	**Chiang Mai Arr**	**149.40**	**349**	*e*PKPdf	**PKPdf**	**18 30 22.7**	**+0.3**		
CM31				*e*PKPbc	**PKiKP**	**18 30 27.6**	**-0.3**		
CMAR	**Chiang Mai Arr**	**149.40**	**349**	PKP	**PKPdf**	**18 30 23.8**	**+1.4**		
	comp=Z,18nm,0.7s,baz=310,slow=2.3,SNR=87								
CMAR				PKPbc	**PKiKP**	**18 30 27.6**	**-0.4**		
	comp=Z,19nm,0.7s,baz=323,slow=2.6,SNR=67								
KKM	**Kota Kinabalu**	**150.89**	**306**	*e*PKPbc	**PKiKP**	**18 30 31.6**	**+0.4**		
DLV	**T Lat**	**151.86**	**326**	*e*PKPbc	**PKiKP**	**18 30 34.2**	**+0.8**		
KSM	**Kuching**	**158.33**	**306**	*e*PKPdf	**PKPdf**	**18 30 34.8**	**-0.3**		
KSM				*e*PKPab	**PKPab**	**18 31 10.9**	**+1.3**		

*IDC **15** 18:15:54.8±4.2,29°.61S×176°.98W,h0km,mb3.9/3, mb1 4.2/5,mb1mx3.8/29,mbtmp4.1/5,ML4.0/1,Error ellipse: s-maj=84.0km s-min=38.3km az=95.0*
*NEIC **15** 18:16:05.1±2.8,29°.92S×177°.49W,h60km±46km,mb4.7/13, Error ellipse: s-maj=105.5km s-min=27.9km az=96.0*
ISC 15 18:15:55.0±3.3,29°.89S±0°.10×176°.3W±0°.3,h28km,n26, σ=61/32,mb4.3/7,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.56**	**294**	*e*Pn	**Pn**	**18 16 20.8**	**-0.1**
MXZ	**Matakaoa Point**	**8.88**	**209**	*e*Pn	**Pn**	**18 18 04.6**	**+3.2**
URZ	**Urewera**	**9.98**	**212**	Pn	**Pn**	**18 18 16.5**	**0.0**
	baz=137,slow=19,SNR=4.2						
URZ				Sn	**Sn**	**18 20 12.1**	**+4.5**
	2.9nm,0.3s,baz=131,slow=14,SNR=12						
URZ	**Urewera**	**9.98**	**212**	*e*Pn	**Pn**	**18 18 18.6**	**+2.1**
BKZ	**Black Stump Fm**	**11.00**	**211**	*e*Pn	**Pn**	**18 18 32.1**	**+1.6**
BFZ	**Birch Farm**	**12.37**	**208**	*e*Pn	**Pn**	**18 18 50.5**	**+1.3**
BFZ				*e*Sn	**Sn**	**18 21 09.0**	**+3.0**
THZ	**Tophouse**	**14.72**	**214**	*e*Pn	**Pn**	**18 19 23.7**	**+2.4**
KHZ	**Kahutara**	**14.94**	**210**	*e*Pn	**Pn**	**18 19 23.9**	**-0.3**
KHZ				*e*Sn	Sn	18 21 57.9	-11
LTZ	**Lake Taylor**	**15.81**	**212**	*e*Pn	**Pn**	**18 19 37.0**	**+1.4**
	98nm,1.6s						
OXZ	**Oxford**	**16.34**	**212**	*e*Pn	**Pn**	**18 19 39.1**	**-3.3**
	101nm,1.6s						
OXZ				*e*Sn	**Sn**	**18 22 37.4**	**-5.3**
MQZ	**McQueen's Vall**	**16.37**	**210**	*e*Pn	**Pn**	**18 19 39.0**	**-3.7**
	133nm,1.6s						
MQZ				*e*Sn	**Sn**	**18 22 37.4**	**-6.0**
RPZ	**Rata Peaks**	**17.09**	**213**	P	**Pn**	**18 19 52.9**	**+1.0**
	0.5nm,0.3s,baz=64,slow=1.0,SNR=3.1						
RPZ				S	**Sn**	**18 22 56.1**	**-5.0**
	0.4nm,0.3s,baz=35,slow=16,SNR=3.0						
RPZ	**Rata Peaks**	**17.09**	**213**	*e*Pn	**Pn**	**18 19 51.3**	**-0.6**
	72nm,1.5s						
ODZ	**Otahua Downs**	**18.31**	**211**	*e*P	**Pn**	**18 20 08.7**	**+1.9**
	64nm,1.5s						
WKZ	**Wanaka**	**18.90**	**214**	*e*P	**Pn**	**18 20 15.7**	**+1.7**
	54nm,1.2s						
WHZ	**Wether Hill Ro**	**20.19**	**213**	*e*P	Pn	18 20 28.9	-0.5
	36nm,1.3s						
STKA	**Stephens Creek**	**36.04**	**256**	P	**P**	**18 22 55.2**	**+1.1**
	0.9nm,0.4s,baz=106,slow=13,SNR=5.1						
STKA	**Stephens Creek**	**36.04**	**256**	*e*P	**P**	**18 22 53.7**	**-0.4**
	2.3nm,1.5s						
BBOO	**Buckleboo**	**40.54**	**253**	*e*P	**P**	**18 23 32.8**	**+0.9**
	22nm,1.5s						
AS31	**Alice Springs**	**44.63**	**266**	*e*P	**P**	**18 24 04.5**	**-0.8**
AS31				*e*PcP	**PP**	**18 25 50.3**	**+0.7**
ASAR	**Alice Springs**	**44.63**	**266**	P	**P**	**18 24 04.5**	**-0.8**
	0.6nm,0.4s,baz=104,slow=7.5,SNR=33						
ASAR				PcP	**PP**	**18 25 50.3**	**+0.7**
	0.3nm,0.9s,baz=100,slow=3.9,SNR=3.8						
WC3	**Warramunga Arr**	**45.54**	**271**	*e*P	**P**	**18 24 10.4**	**-2.2**
	3.8nm,1.0s						
WB2	**Warramunga Arr**	**45.56**	**271**	*e*P	**P**	**18 24 11.1**	**-1.6**
	22nm,1.5s						
WR1	**Warramunga Arr**	**45.57**	**271**	*e*P	**P**	**18 24 10.9**	**-1.9**
WRA	**Warramunga Arr**	**45.57**	**271**	P	**P**	**18 24 10.9**	**-1.9**
	0.9nm,0.4s,baz=101,slow=8.5,SNR=18						
FITZ	**Fitzroy Crossi**	**53.85**	**269**	*e*P	**P**	**18 25 14.5**	**-1.3**
	15nm,1.6s						

*IDC **15** 18:16:46.3±1.2,34°.30N×25°.06E,h0km,mb3.8/6, mb1 3.8/10,mb1mx3.5/48,mbtmp3.8/10,ML4.0/4,Error ellipse: s-maj=22.0km s-min=17.9km az=67.0*
*ATH **15** 18:16:49.0,34°.29N×25°.03E,h27km±1km,ML3.1/7,Error ellipse: s-maj=4.5km s-min=1.7km az=357.0*
*THE **15** 18:16:49.8,34°.32N×25°.04E,h1km±4km,ML3.1/2,Error ellipse: s-maj=6.0km s-min=1.4km az=187.0*
ISC 15 18:16:48.4±1.9,34°.23N±0°.07×25°.10E±0°.04,h14km±11km, n40,σ=38/46,mb3.6/7,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.82**	**343**	P	**Pg**	**18 17 04.1**	**-0.2**
SIVA				S	**Sb**	**18 17 15.0**	**-0.3**
SIVA	**Sivas**	**0.82**	**343**	P	**Pg**	**18 17 04.0**	**-0.2**
SIVA				S	**Sb**	**18 17 14.8**	**-0.5**
SIVA				AML	AML	18 17 21.2	
	comp=N,8116μm,0.5s						
SIVA				AML	AML	18 17 22.4	
	comp=E,14188μm,0.4s						
TMBK	**Timbaki Herakl**	**0.88**	**342**	P	**Pb**	**18 17 05.5**	**0.0**
TMBK				S	**Sb**	**18 17 17.4**	**+0.3**
LAST	**Lasithi**	**0.98**	**18**	P	**Pg**	**18 17 07.1**	**-0.2**
LAST				S	**Sb**	**18 17 21.0**	**+1.1**
LAST	**Lasithi**	**0.98**	**18**	P	**Pg**	**18 17 07.2**	**-0.1**
LAST				AML	AML	18 17 26.8	
	comp=N,1088μm,0.8s						
LAST				AML	AML	18 17 33.6	
	comp=E,938μm,0.6s						
GVD	**Gavdhos**	**1.03**	**306**	P	**Pg**	**18 17 07.5**	**-0.9**
GVD	**Gavdhos**	**1.03**	**306**	P	**Pg**	**18 17 07.3**	**-1.0**
GVD				AML	AML	18 17 26.7	
	comp=N,2709μm,0.4s						
GVD				AML	AML	18 17 35.3	
	comp=E,3507μm,0.4s						
IDI	**Anoyia**	**1.07**	**351**	Pn	**Pg**	**18 17 08.2**	**-0.8**
	comp=E,21nm,0.3s,baz=157,slow=15,SNR=4.1						
IDI				Sn	**Sb**	**18 17 22.6**	**+0.1**
	comp=E,80nm,0.3s,baz=220,slow=23,SNR=15						
IDI	**Anoyia**	**1.07**	**351**	P	**Pg**	**18 17 07.9**	**-1.1**
IDI	**Anoyia**	**1.07**	**351**	P	**Pg**	**18 17 07.8**	**-1.2**
KSTL	**Kastelli Herak**	**1.07**	**359**	P	**Pg**	**18 17 07.8**	**-1.2**
NPS	**Neapolis**	**1.11**	**22**	P	**Pg**	**18 17 09.1**	**-0.7**
NPS	**Neapolis**	**1.11**	**22**	P	**Pg**	**18 17 09.6**	**-0.2**
NPS				AML	AML	18 17 28.2	
	comp=N,664μm,0.4s						
NPS				AML	AML	18 17 33.1	
	comp=E,896μm,0.5s						
PRNS	**Prines Rethymn**	**1.23**	**336**	P	**Pb**	**18 17 11.5**	**0.0**
ZKR	**Zakros**	**1.27**	**46**	P	**Pn**	**18 17 13.0**	**+1.3**
ZKR	**Zakros**	**1.27**	**46**	P	**Pn**	**18 17 13.1**	**+1.3**
ZKR				AML	AML	18 17 37.5	
	comp=E,914μm,0.5s						
ZKR				AML	AML	18 17 41.2	
	comp=N,364μm,0.6s						
VAM	**Vamos**	**1.39**	**328**	P	**Pn**	**18 17 13.5**	**+0.2**
VAM	**Vamos**	**1.39**	**328**	P	**Pn**	**18 17 13.8**	**+0.5**
VAM				AML	AML	18 17 44.8	
	comp=E,1847μm,0.5s						
VAM				AML	AML	18 17 47.5	
	comp=N,2162μm,0.5s						
IMMV	**Iera Moni Meta**	**1.53**	**323**	P	**Pn**	**18 17 15.6**	**+0.2**
IMMV				AML	AML	18 17 48.6	
	comp=E,1144μm,0.5s						
IMMV				AML	AML	18 17 49.3	
	comp=N,1134μm,0.7s						
THR6	**Thira Island,**	**2.13**	**6**	P	**Pn**	**18 17 24.5**	**+0.9**
KARP	**Karpathos**	**2.14**	**52**	P	**Pn**	**18 17 26.9**	**+3.2**
KARP	**Karpathos**	**2.14**	**52**	P	**Pn**	**18 17 26.5**	**+2.8**
THR3	**Thira Island,**	**2.19**	**6**	P	**Pn**	**18 17 25.1**	**+0.9**
IOSP	**Ios island**	**2.49**	**3**	P	**Pn**	**18 17 28.8**	**+0.4**
MHLO	**Agia Marina, M**	**2.52**	**347**	P	**Pn**	**18 17 29.3**	**+0.4**
APE	**Apeiranthos**	**2.85**	**7**	P	**Pn**	**18 17 33.8**	**+0.3**
SERI	**Serifos**	**2.96**	**350**	P	**Pn**	**18 17 35.4**	**+0.3**
ARG	**Arkhangelos**	**3.17**	**50**	P	**Pn**	**18 17 39.8**	**+2.0**
MMAI	**Mount Meron Ar**	**8.68**	**95**	Pn	**Pn**	**18 18 54.2**	**+0.6**
	comp=N,1.6nm,0.3s,baz=294,slow=11,SNR=8.7						
MMAI				Sn	**Sn**	**18 20 26.2**	**-5.0**
	comp=N,1.5nm,0.3s,baz=287,slow=20,SNR=4.1						
BRTR	**Keskin Array B**	**8.76**	**49**	Pn	**Pn**	**18 18 55.5**	**+0.8**
	comp=N,0.1nm,0.3s,baz=224,slow=13,SNR=2.7						
EIL	**Elat**	**9.52**	**116**	Pn	**Pn**	**18 19 04.8**	**-0.2**
	comp=N,2.2nm,0.3s,baz=269,slow=5.0,SNR=16						
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**Pn**	**18 20 42.7**	**+0.5**
	comp=N,0.9nm,0.3s,baz=199,slow=10,SNR=5.7						
GERES	**GERESS Array B**	**16.88**	**333**	Pn	**P**	**18 20 46.3**	**0.0**
	comp=N,0.1nm,0.3s,baz=144,slow=11,SNR=7.4						
ESDC	**Sonseca Array**	**23.80**	**292**	P	**P**	**18 22 03.8**	**+3.0**
	comp=N,0.2nm,0.5s,baz=105,slow=10,SNR=3.4						
HFS	**Hagfors**	**26.97**	**347**	P	**P**	**18 22 27.8**	**-1.4**
	comp=N,1.4nm,0.9s,baz=153,slow=13,SNR=3.0						
FINES	**FINESS Array B**	**27.23**	**1**	P	**P**	**18 22 29.6**	**-2.0**
	comp=N,1.9nm,1.0s,baz=156,slow=11,SNR=2.6						
TORD	**Torodi Ar. Bea**	**29.86**	**231**	P	**P**	**18 22 55.7**	**+0.2**
	comp=N,0.2nm,0.4s,baz=27,slow=11,SNR=3.7						
MKAR	**Makanchi Array**	**44.33**	**56**	P	**P**	**18 24 58.1**	**+0.2**
	comp=N,0.6nm,0.6s,baz=278,slow=6.8,SNR=8.0						
ZALV	**Zalesovo Beam**	**45.68**	**46**	P	**P**	**18 25 07.8**	**-0.7**
	comp=N,1.6nm,0.3s,baz=258,slow=8.4,SNR=6.2						
SONM	**Songino Array**	**60.11**	**50**	P	**P**	**18 26 56.0**	**+0.7**
	comp=N,0.3nm,0.4s,baz=286,slow=10,SNR=3.2						

*ATH **15** 18:20:15.9,34°.14N×25°.09E,h19km±3km,ML2.9/7,Error ellipse: s-maj=12.4km s-min=2.6km az=353.0*
*IDC **15** 18:20:26.6±1.8,34°.32N×25°.10E,h0km,mb3.4/1, mb1 3.7/4,mb1mx3.2/46,mbtmp3.6/4,ML3.8/3,Error ellipse: s-maj=37.2km s-min=19.6km az=89.0*
ISC 15 18:20:21.5±3.3,34°.2N±0°.2×25°.2E±0°.1,h20km,n12, σ=15/8,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.91**	**337**	P	Pb	18 20 33.2	-5.4
SIVA				AML	AML	18 20 57.8	
	comp=E,5420μm,0.7s						
SIVA				AML	AML	18 21 00.9	
	comp=N,4353μm,0.5s						
LAST	**Lasithi**	**1.00**	**11**	P	**Pb**	**18 20 36.0**	**-4.3**
LAST				AML	AML	18 21 07.5	
	comp=E,595μm,0.6s						
LAST				AML	AML	18 21 10.7	
	comp=N,582μm,0.6s						
NPS	**Neapolis**	**1.13**	**16**	P	**Pn**	**18 20 39.3**	**-2.9**
NPS				AML	AML	18 21 13.9	
	comp=E,585μm,0.5s						
NPS				AML	AML	18 21 19.2	
	comp=N,559μm,0.7s						
IDI	**Anoyia**	**1.15**	**346**	Pn	Pb	18 20 47.7	+5.0
	comp=N,20nm,0.3s,baz=162,slow=16,SNR=7.0						
IDI				Sn	**Sn**	**18 21 02.0**	**+4.4**
	comp=N,44nm,0.3s,baz=307,slow=18,SNR=8.6						
GVD	**Gavdhos**	**1.16**	**305**	P	Pn	18 20 36.6	-6.0
GVD				AML	AML	18 21 09.0	
	comp=N,2403μm,0.4s						
GVD				AML	AML	18 21 13.1	
	comp=E,1528μm,0.4s						
ZKR	**Zakros**	**1.24**	**41**	P	**Pn**	**18 20 41.2**	**-2.5**
ZKR				AML	AML	18 21 17.7	
	comp=E,645μm,0.7s						
ZKR				AML	AML	18 21 18.7	
	comp=N,272μm,0.4s						
VAM	**Vamos**	**1.50**	**326**	P	**Pn**	**18 20 43.6**	**-3.7**
VAM				AML	AML	18 21 23.2	
	comp=E,789μm,0.5s						
VAM				AML	AML	18 21 23.8	
	comp=N,791μm,0.4s						
IMMV	**Iera Moni Meta**	**1.65**	**322**	P	**Pn**	**18 20 45.2**	**-4.2**
IMMV				AML	AML	18 21 28.4	
	comp=N,543μm,0.6s						
IMMV				AML	AML	18 21 29.5	
	comp=E,636μm,0.5s						
EIL	**Elat**	**9.40**	**116**	Pn	Pn	18 22 44.8	+9.0
	comp=E,0.5nm,0.3s,baz=300,slow=8.1,SNR=6.8						
AKASG	**Malin Array Be**	**16.77**	**9**	Pn	**P**	**18 24 22.2**	**+5.0**
	comp=E,0.8nm,0.3s,baz=198,slow=10,SNR=6.3						
GERES	**GERESS Array B**	**16.98**	**333**	Pn	**P**	**18 24 24.6**	**+4.9**
	comp=E,0.1nm,0.3s,baz=146,slow=13,SNR=7.7						
TORD	**Torodi Ar. Bea**	**29.91**	**231**	P	P	18 26 36.3	+8.2
	comp=E,0.2nm,0.4s,baz=27,slow=8.6,SNR=3.8						

*BJI **15** 18:24:47.5±0.0,35°.00N×24°.34E,h18km,mb4.7/18, mB5.0/7,Ms4.8/1,Ms7 4.6/1*
*IDC **15** 18:24:47.3±0.8,34°.24N×24°.93E,h0km,mb4.2/18, mb1 4.3/25,mb1mx4.1/49,mbtmp4.2/25,ML4.4/6,Error ellipse: s-maj=16.6km s-min=14.4km az=23.0*
*ISCJB **15** 18:24:48.9±0.7,34°.10N±0°.03×25°.04E±0°.02,h23km±5km, mb4.3/50,MS4.6/1,Error ellipse: s-maj=4.7km s-min=2.8km az=30.5*
*HLW **15** 18:24:49.6,34°.36N×25°.17E,h9km±25km,Ml3.8*
*ISK **15** 18:24:50.1,34°.39N×25°.00E,h5km,ML3.8/19*
*NEIC **15** 18:24:53.6±0.0,34°.45N×24°.99E,h1km,mb4.3/42,After THE.*
*THE **15** 18:24:53.6,34°.45N×24°.99E,h1km±3km,ML3.5/2,Error ellipse: s-maj=4.6km s-min=1.2km az=186.0*

*ATH **15** 18:24:53.9,34°.49N×24°.99E,h30km±1km,ML3.5/7,Error ellipse: s-maj=4.5km s-min=1.3km az=1.0*
*GII **15** 18:24:56.6±0.0,34°.19N×25°.62E,h25km±1km,mb4.3/2, MD4.1/2*
ISC 15 18:24:50.1±1.4,34°.15N±0°.03×25°.04E±0°.03,h18km±8km, n242,σ=84/269,mb4.3/50,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.88**	**348**	P	**Pb**	**18 25 05.6**	**-1.3**
SIVA				S	**Sb**	**18 25 13.6**	**-4.7**
SIVA	**Sivas**	**0.88**	**348**	P	**Pb**	**18 25 05.8**	**-1.0**
SIVA				AML	AML	18 25 27.8	
	comp=N,24350μm,0.6s						
SIVA				AML	AML	18 25 28.0	
	comp=E,37832μm,0.5s						
TMBK	**Timbaki Herakl**	**0.94**	**346**	P	**Pb**	**18 25 07.0**	**-0.9**
GVD	**Gavdhos**	**1.04**	**311**	PG	**Pb**	**18 25 07.8**	**-1.8**
GVD				SG	**Sb**	**18 25 21.1**	**-1.8**
GVD	**Gavdhos**	**1.04**	**311**	P	**Pb**	**18 25 08.9**	**-0.7**
GVD	**Gavdhos**	**1.04**	**311**	P	**Pb**	**18 25 09.2**	**-0.4**
GVD				AML	AML	18 25 27.9	
	comp=E,16235μm,0.3s						
GVD				AML	AML	18 25 29.3	
	comp=N,9067μm,0.4s						
LAST	**Lasithi**	**1.07**	**20**	P	**Pb**	**18 25 09.3**	**-0.8**
LAST				S	**Sb**	**18 25 21.7**	**-2.1**
LAST	**Lasithi**	**1.07**	**20**	P	**Pb**	**18 25 09.2**	**-0.8**
LAST				AML	AML	18 25 34.4	
	comp=N,3776μm,0.6s						
LAST				AML	AML	18 25 36.3	
	comp=E,2821μm,0.5s						
IDI	**Anoyia**	**1.14**	**354**	Pn	**Pb**	**18 25 10.1**	**-1.2**
	comp=E,78nm,0.3s,baz=168,slow=22,SNR=26						
IDI				Sn	**Sg**	**18 25 27.0**	**-0.1**
	comp=E,169nm,0.3s,baz=251,slow=18,SNR=14						
IDI	**Anoyia**	**1.14**	**354**	P	**Pb**	**18 25 09.6**	**-1.7**
IACM	**Heraklion**	**1.15**	**1**	P	**Pn**	**18 25 10.2**	**-1.1**
NPS	**Neapolis**	**1.20**	**23**	P	**Pn**	**18 25 11.6**	**-0.4**
NPS	**Neapolis**	**1.20**	**23**	P	**Pn**	**18 25 11.8**	**-0.3**
NPS				AML	AML	18 25 32.8	
	comp=E,4140μm,0.6s						
NPS				AML	AML	18 25 40.1	
	comp=N,3580μm,0.6s						
PRNS	**Prines Rethymn**	**1.29**	**340**	P	**Pn**	**18 25 13.0**	**-0.1**
STIA	**Sitia Lasithi**	**1.36**	**39**	P	**Pb**	**18 25 15.4**	**+0.4**
ZKR	**Zakros**	**1.37**	**45**	PN	**Pb**	**18 25 15.1**	**0.0**
ZKR	**Zakros**	**1.37**	**45**	P	**Pb**	**18 25 15.4**	**+0.3**
ZKR	**Zakros**	**1.37**	**45**	P	**Pg**	**18 25 15.9**	**-0.6**
ZKR				AML	AML	18 25 45.6	
	comp=N,1630μm,0.6s						
ZKR				AML	AML	18 25 46.2	
	comp=E,2950μm,0.5s						
VAM	**Vamos**	**1.43**	**331**	P	**Pn**	**18 25 14.9**	**-0.2**
VAM	**Vamos**	**1.43**	**331**	P	**Pn**	**18 25 15.5**	**+0.4**
VAM				AML	AML	18 25 48.2	
	comp=N,3341μm,0.6s						
VAM				AML	AML	18 25 49.5	
	comp=E,4532μm,0.4s						
IMMV	**Iera Moni Meta**	**1.57**	**327**	PN	**Pn**	**18 25 17.4**	**+0.4**
IMMV				SN	**Sn**	**18 25 36.8**	**-0.1**
IMMV	**Iera Moni Meta**	**1.57**	**327**	P	**Pn**	**18 25 17.7**	**+0.7**
IMMV	**Iera Moni Meta**	**1.57**	**327**	P	**Pb**	**18 25 18.1**	**-0.4**
IMMV				AML	AML	18 25 54.2	
	comp=N,3034μm,0.7s						
IMMV				AML	AML	18 25 57.9	
	comp=E,3343μm,0.6s						
CHAN	**Chania**	**1.59**	**329**	P	**Pn**	**18 25 17.9**	**+0.6**
THR9	**Santorini-Faro**	**2.22**	**7**	P	**Pn**	**18 25 26.8**	**+0.9**
THR6	**Thira Island,**	**2.22**	**7**	P	**Pn**	**18 25 26.7**	**+0.8**
THR6	**Thira Island,**	**2.22**	**7**	P	**Pn**	**18 25 26.9**	**+1.0**
ANKY	**Antikythira Is**	**2.23**	**321**	P	**Pn**	**18 25 27.2**	**+1.1**
ANKY	**Antikythira Is**	**2.23**	**321**	P	**Pn**	**18 25 27.1**	**+1.0**
KARP	**Kar

ELL Elmali 4.74 56 PN **Pn 18 26 03.5 +2.7**
LAKA Lakka 4.77 330 P **Pn 18 26 02.2 +1.2**
KALE Kalithea 4.84 332 P **Pn 18 26 02.7 +0.7**
TRIZ Trizonia 4.84 331 P **Pn 18 26 02.4 +0.4**
AKUM Antalya-Kumluc 4.85 62 *i* P **Pn 18 26 03.9 +1.8**
AKUM IAML_P
comp=Z,2μm,0.1s
SWA2 4.91 176 P **Pn 18 26 06.0 +3.1**
baz=177
ANX Ano Chora 5.10 331 P **Pn 18 26 06.5 +0.9**
KORT Korkueli 5.18 55 PN **Pn 18 26 10.1 +3.4**
KORT Korkueli 5.18 55 *i* P **Pn 18 26 10.1 +3.4**
KORT *i* S **Sn 18 27 08.5 +2.4**
KORT IAML_P
comp=Z,486nm,0.2s
MANT Manisa 5.18 32 *e*Pn **Pn 18 26 07.2 +0.4**
AGG Agios Georgios 5.33 337 *e*Pn **Pn 18 26 06.9 -1.8**
BRDR BÜRDUR-Merkez 5.39 48 *i* P **Pn 18 26 13.7 +4.0**
BRDR IAML_P
comp=Z,334nm,0.2s
KHAL Karahalli 5.54 39 *i* P **Pn 18 26 13.4 +1.8**
KHAL *i* S **Sn 18 27 12.9 -2.0**
KHAL IAML_P
comp=Z,180nm,0.2s
USAK Uak-Merkez 5.57 34 *i* P **Pn 18 26 14.6 +2.6**
USAK IAML_P
comp=Z,1μm,0.3s
BALB Balikesir 5.93 22 *e*Pn **Pn 18 26 16.9 -0.1**
KEPZ Antalya-Kepez 6.01 61 *i* P **Pn 18 26 20.1 +1.9**
KEPZ IAML_P
comp=Z,373nm,0.3s
LIT Litokhoron 6.28 342 *e*Pn **Pn 18 26 21.2 -0.6**
FNA Florina 7.23 337 *e*Pn **Pn 18 26 34.8 -0.1**
GLL Jalalah 7.28 127 P **Pn 18 26 37.2 +1.6**
baz=128
HFRF Wahat Farafira 7.53 157 P **Pn 18 26 41.0 +2.0**
baz=158
NBNS Bani Suef 7.68 134 P **Pn 18 26 43.3 +2.3**
baz=135
KRUS Krusevo 7.80 339 *i* Pn **Pn 18 26 41.0 -1.7**
TIP Timpagrande 8.33 309 *e*Pn **Pn 18 26 49.9 -0.1**
OFRI `Ofer 8.46 98 Pn **Pn 18 26 52.0 +0.3**
OFRI Sn **Sn 18 28 21.0 -5.7**
VTS Vitosha 8.57 351 *e*Pn **Pn 18 26 52.3 -1.0**
SLTI Sal'it 8.60 100 Pn **Pn 18 26 53.3 -0.3**
SLTI Sn **Sn 18 28 25.5 -4.6**
AMAZ Amatzia 8.71 105 Pn **Pn 18 26 55.0 -0.2**
AMAZ Sn **Sn 18 28 28.6 -4.3**
MMA0B Mount Meron ar 8.72 95 Pn **Pn 18 26 55.0 -0.4**
MMA0B Sn **Sn 18 28 28.3 -5.0**
MMAI Mount Meron Ar 8.72 95 Pn **Pn 18 26 55.4 0.0**
comp=Z,2.5nm,0.3s,baz=262,slow=13,SNR=16
MMAI Sn **Sn 18 28 29.6 -3.6**
comp=Z,7.8nm,0.3s,baz=269,slow=25,SNR=12
BR101 Keskin Array S 8.85 49 *e*Pn **Pn 18 26 59.3 +2.2**
BR131 Keskin Array S 8.85 49 *e*Pn **Pn 18 26 58.2 +1.1**
BRTR Keskin Array B 8.85 49 Pn **Pn 18 26 59.3 +2.2**
comp=Z,0.1nm,0.3s,baz=222,slow=18,SNR=3.9
MMLI Mount Malkishu 8.86 98 Pn **Pn 18 26 56.9 -0.3**
MMLI Sn **Sn 18 28 31.1 -5.5**
KSDI Kefar Szold 8.90 93 Pn **Pn 18 26 57.0 -0.8**
KSDI Sn **Sn 18 28 32.2 -5.4**
GEM Giv'at Ha'Em 8.90 93 Pn **Pn 18 26 57.2 -0.6**
YTIR Yattir 8.93 105 Pn **Pn 18 26 58.1 -0.1**
YTIR Sn **Sn 18 28 33.2 -5.2**
NATI Neve Ativ 8.96 93 Pn **Pn 18 26 58.1 -0.4**
HMDT Nahal Hemdat 8.99 99 Pn **Pn 18 26 59.1 +0.1**
HMDT Sn **Sn 18 28 34.0 -5.7**
KSHT Keshet 9.06 94 Pn **Pn 18 26 59.7 -0.4**
KRMI Paran Flat 9.14 113 Pn **Pn 18 27 01.7 +0.6**
KRMI Sn **Sn 18 28 38.5 -5.1**
MZDA Masada 9.15 105 Pn **Pn 18 27 01.3 +0.2**
MZDA Sn **Sn 18 28 38.8 -4.7**
PRNI Paran 9.25 111 Pn **Pn 18 27 03.0 +0.4**
PRNI Sn **Sn 18 28 42.1 -4.1**
ZFRI Zfri 9.29 110 Pn **Pn 18 27 03.3 +0.2**
HRFI Mount Harif 9.42 113 Pn **Pn 18 27 06.0 +1.1**
HRFI Sn **Sn 18 28 45.8 -4.6**
MBRI Mt Berech 9.44 115 Pn **Pn 18 27 06.5 +1.2**
MBRI Sn **Sn 18 28 46.6 -4.4**
EIL Elat 9.53 115 Pn **Pn 18 27 07.7 +1.3**
comp=Z,2.6nm,0.3s,baz=266,slow=4.9,SNR=18
EIL Sn **Sn 18 28 45.9 -7.2**
comp=Z,0.5nm,0.3s,baz=309,slow=14,SNR=3.0
EIL Elat 9.53 115 Pn **Pn 18 27 07.3 +0.9**
EIL Sn **Sn 18 28 48.7 -4.4**
PSZ Piszkesteto 14.29 346 *e*Pn **Pn 18 28 12.9 +1.5**
SOKA Soboth 14.63 332 *e*Pn **Pn 18 28 18.4 +2.2**
comp=Z,4.3nm,1.1s
OBKA Obir 14.69 330 *e*Pn **Pn 18 28 19.0 +2.0**
comp=Z,6.9nm,1.1s
ARSA Arzberg 14.93 334 *i* Pn **P 18 28 23.7 -1.9**
comp=Z,2.2nm,0.6s
VYHS Vyhne 15.06 344 *e*PN Pn 18 28 15.0 -6.8
VYHS Vyhne 15.06 344 *e*P **P 18 28 27.1 0.0**
MODS Modra-Piesok 15.35 340 *e*P **P 18 28 29.3 -1.0**
KBA Koelnbreinsper 15.65 329 *e*Pn **P 18 28 33.9 +0.2**
comp=Z,3.4nm,0.7s
ABTA Abfaltersbach 15.76 327 *e*Pn **P 18 28 35.6 +0.7**
comp=Z,5.2nm,0.6s
MOA Molln 15.89 333 *i* Pn **P 18 28 35.8 -0.6**
comp=Z,3.9nm,0.8s
VRAC Vranov 16.39 340 Pn **Pn 18 28 40.1 +1.1**
comp=Z,0.7nm,0.3s,baz=169,slow=9.5,SNR=6.3
WTTA Wattenberg 16.55 326 *e*Pn **P 18 28 43.4 -0.3**
comp=Z,5.9nm,0.7s
MORC Moravsky Berou 16.56 343 *e*Pn **P 18 28 42.7 -1.1**
comp=Z,2.8nm,0.8s
WATA Walderalm 16.62 326 *e*Pn **Pn 18 28 42.4 +0.2**
comp=Z,4.1nm,0.6s
SQTA Sankt Quirin 16.71 325 *i* Pn **Pn 18 28 43.5 +0.3**
comp=Z,4.6nm,0.9s
FUORN Ofenpass-Fuorn 16.75 322 *e*Pn **P 18 28 46.8 +0.7**
comp=Z,11nm,1.1s
GNI Garni 16.80 63 *e*Pn **Pn 18 28 45.3 +0.9**
comp=Z,10nm,0.8s
KIV Kislovodsk 16.81 49 *e*Pn **P 18 28 47.2 +0.6**
comp=Z,23nm,1.4s
AKASG Malin Array Be 16.82 9 Pn **Pn 18 28 44.1 -0.3**
comp=Z,3.9nm,0.3s,baz=200,slow=10,SNR=17
AKBB Malin Array Si 16.82 9 *e*Pn **Pn 18 28 43.5 -1.0**
comp=Z,10nm,0.6s
KBZ Khabaz 16.84 50 Pn **P 18 28 47.4 +0.7**
comp=Z,0.2nm,0.3s,baz=229,slow=9.9,SNR=7.7
MOTA Moosalm 16.85 326 *e*Pn **P 18 28 47.2 +0.1**
comp=Z,3.5nm,0.9s
GEC2 GERESS Array S 16.93 334 *e*Pn **P 18 28 46.8 +0.8**
comp=Z,7.9nm,0.7s
GERES GERESS Array B 16.93 334 Pn **Pn 18 28 45.3 -0.7**
comp=Z,1.0nm,0.3s,baz=144,slow=12,SNR=50
TUE Stuetta 17.13 321 *e*Pn **P 18 28 49.5 -0.7**
comp=Z,11nm,1.4s
KHC Kasperske Hory 17.21 334 *e*Pn **P 18 28 50.5 -0.5**
comp=Z,1.6nm,0.8s
KHC Kasperske Hory 17.21 334 *e*P **P 18 28 51.1 +0.1**
DPC Dobruska-Polom 17.41 341 *e*P **Pn 18 28 50.8 -1.1**
GOPC GO Pecny, Ondr 17.47 337 *e*P **Pn 18 28 53.0 +0.4**
PRU Pruhonice 17.61 337 *e*P **Pn 18 28 54.5 +0.1**
SENIN Lac Senin/Sane 18.17 317 *e*Pn **Pn 18 29 00.3 -1.3**
comp=Z,5.2nm,0.8s
GRA1 Grafenberg Arr 18.57 331 *e*Pn **P 18 29 04.2 -1.7**
comp=Z,9.4nm,1.0s
GRFO Grafenberg 18.57 331 *e*Pn **P 18 29 05.2 -0.7**
comp=Z,12nm,0.7s
CLL Collm 19.25 337 *e*P **P 18 29 13.0 -0.3**
CLL *e* 18 29 18.0
SUW Suwalki 19.90 357 *e*P **P 18 29 18.5 -1.9**
comp=Z,51nm,1.0s
TAM Tamanrasset 20.52 242 *e*P **P 18 29 27.9 +0.4**
comp=Z,2.2nm,0.6s
ESDC Sonseca Array 23.78 292 P **P 18 30 01.4 -0.3**
comp=Z,1.8nm,0.8s,baz=82,slow=9.4,SNR=15
ESLA Sonseca Array 23.78 292 *e*P **P 18 30 01.3 -0.4**
comp=Z,2.1nm,0.8s
SFS San Fernando 25.55 284 *e*P **P 18 30 18.4 +0.7**
comp=Z,103nm,1.1s
DAMY Dhamar 26.19 133 *e*P **P 18 30 27.0 +2.9**
comp=Z,6.8nm,0.6s
HFS Hagfors 27.04 347 P **P 18 30 29.0 -2.0**
comp=Z,1.4nm,0.5s,baz=146,slow=10,SNR=14
FIA0 FINESS Array S 27.32 1 *e*PcP **PcP 18 33 51.6 -0.8**
FIA1 FINESS Array S 27.32 1 *e*P **P 18 30 31.6 -1.9**
comp=Z,18nm,1.3s
FINES FINESS Array B 27.32 1 P **P 18 30 31.3 -2.2**
comp=Z,1.7nm,0.4s,baz=162,slow=11,SNR=30
FINES PcP **PcP 18 33 51.6 -0.8**
comp=Z,2.6nm,1.0s,baz=132,slow=2.8,SNR=5.4
KONO Kongsberg 27.46 343 *e*P **P 18 30 32.2 -2.6**
comp=Z,34nm,1.3s
NC602 NORSAR Array S 28.00 346 *e*P **P 18 30 37.8 -1.9**
comp=Z,29nm,1.4s
NAO01 NORSAR Array S 28.24 345 *e*P **P 18 30 40.4 -1.4**
comp=Z,46nm,1.5s
NC405 NORSAR Array S 28.32 346 *e*P **P 18 30 40.3 -2.2**
NB201 NORSAR Array S 28.34 346 *e*P **P 18 30 40.4 -2.3**
comp=Z,6.3nm,1.0s
NB2 NORSAR Subarra 28.35 346 P **P 18 30 40.7 -2.0**
comp=Z,0.8nm,0.4s,baz=159,slow=10
NOA NORSAR Array B 28.35 346 P **P 18 30 41.1 -1.6**
comp=Z,0.7nm,0.6s,baz=159,slow=9.8,SNR=9.3
NBO00 NORSAR Array S 28.43 345 *e*P **P 18 30 42.1 -1.3**
NC303 NORSAR Array S 28.49 346 *e*P **P 18 30 41.3 -2.6**
comp=Z,24nm,1.3s
UOSS Minazif 28.53 100 *e*P **P 18 30 44.8 0.0**
comp=Z,6.1nm,1.2s
NC204 NORSAR Array S 28.66 346 *e*P **P 18 30 43.2 -2.3**
EKA Eskdalemuir Ar 28.81 326 P **P 18 30 46.2 -0.6**
comp=Z,1.6nm,0.7s,baz=117,slow=9.0,SNR=7.8
ESK Eskdalemuir 28.82 326 *e*P **P 18 30 44.8 -2.1**
comp=Z,28nm,1.4s
AKTO Aktyubinsk 29.01 46 P **P 18 30 48.5 -0.3**
comp=Z,0.9nm,0.4s,baz=233,slow=8.3,SNR=3.7
TOA1 Torodi Ar. Sit 29.77 231 *e*P **P 18 30 55.7 -0.1**
TOA0 Torodi Ar. Sit 29.77 231 *e*P **P 18 30 57.9 +2.1**
comp=Z,0.2nm,0.6s
TORD Torodi Ar. Bea 29.77 231 P **P 18 30 55.7 -0.1**
comp=Z,2.2nm,0.6s,baz=30,slow=8.6,SNR=16
ABKAR Akbulak array 29.80 49 *e*P **P 18 30 55.5 -0.3**
comp=Z,2.2nm,1.3s
ARU Arti 31.93 35 P **P 18 31 13.9 -0.5**
comp=Z,0.9nm,0.4s,baz=273,slow=9.5,SNR=6.2
ARU Arti 31.93 35 *e*P **P 18 31 13.7 -0.7**
comp=Z,8.8nm,1.4s
LVZ Lovozero 34.24 6 *e*P **P 18 31 34.8 +0.3**
comp=Z,42nm,1.3s
ARCES ARCESS Array B 35.44 0 P **P 18 31 42.7 -2.0**
comp=Z,8.2nm,0.4s,baz=176,slow=9.4,SNR=25
ARE0 ARCESS Array S 35.44 0 *e*P **P 18 31 42.2 -2.6**
comp=Z,1.0nm,1.4s
KK31 Karatay Array 36.25 62 *e*P **P 18 31 53.0 +0.9**
comp=Z,2.5nm,0.9s
KKAR Karatay Array 36.25 62 *e*P **P 18 31 53.0 +0.9**
comp=Z,2.5nm,0.9s
ARSB Arslanbob 38.19 65 *e*P **P 18 32 10.3 +1.5**
comp=Z,7.6nm,1.3s
AAK Ala-Archa 39.20 63 P **P 18 32 17.6 +0.4**
comp=Z,1.1nm,0.3s,baz=232,slow=7.5,SNR=3.5
NIL Nilore 39.72 77 *e*P **P 18 32 23.4 +1.9**
comp=Z,3.6nm,0.9s
KSH Kashi 40.67 67 P **P 18 32 27.9 -1.6**
KSH S **S 18 38 34.8 -4.0**
KSH pmax pmax
comp=Z,10.0nm,0.5s
KURK Kurchatov 41.90 50 *e*P **P 18 32 39.6 +0.5**
comp=Z,2.9nm,0.6s
ROSA Rosais 42.61 292 *e*P **P 18 32 46.4 +1.2**
comp=Z,338nm,1.5s
MAKZ Makanchi 44.20 56 *e*P **P 18 32 58.9 +0.9**
comp=Z,2.4nm,1.1s
SCO Scoresbysund 44.24 339 *e*P **P 18 32 58.6 +0.8**
comp=Z,3.2nm,1.0s
SPA0 Spitsbergen Ar 44.29 357 *e*P **P 18 32 57.3 -0.9**
comp=Z,15nm,1.0s
SPITS Spitsbergen Ar 44.29 357 P **P 18 32 57.2 -1.0**
comp=Z,5.6nm,0.8s,baz=152,slow=11,SNR=19
MK31 Makanchi Array 44.42 56 *e*P **P 18 33 00.6 +0.9**
comp=Z,2.2nm,0.6s
MKAR Makanchi Array 44.42 56 P **P 18 33 00.5 +0.8**
comp=Z,2.2nm,0.5s,baz=268,slow=7.9,SNR=32
KBS Kingsbay 45.22 356 *e*P **P 18 33 05.1 -0.5**
comp=Z,12nm,0.9s
ZAA0 Zalesovo Array 45.78 45 *e*P **P 18 33 10.1 -0.2**
comp=Z,6.2nm,0.6s
ZALV Zalesovo Beam 45.78 45 P **P 18 33 10.1 -0.3**
comp=Z,6.0nm,0.4s,baz=270,slow=8.9,SNR=26
WMQ Urumqi 48.60 59 *e*P **P 18 33 35.6 +3.0**
WMQ sP pwP 18 33 42.0 +0.9
SONA0 Songino Array 60.20 50 *e*P **P 18 34 57.9 +0.9**
SONM Songino Array 60.20 50 P **P 18 34 57.9 +0.9**
comp=Z,1.1nm,0.5s,baz=292,slow=7.5,SNR=10
LZH Lanzhou 62.73 63 *e*P **P 18 35 15.0 +0.7**
LZH pP pP 18 35 18.3 -1.1
LZH *e*PP **PP 18 37 34.8 +2.7**
LZH pmax pmax
comp=Z,17nm,1.3s
LZH pmax pmax
comp=Z,63nm,7.5s
LZH LR LR
comp=Z,230nm,15.8s
LZH LR LR
comp=Z,250nm,16.0s
LZH LR LR
comp=Z,390nm,17.4s
HHC Hu-ho-hao-te 66.28 56 *e*P **P 18 35 38.1 +0.7**
HHC pmax pmax
comp=Z,15nm,1.1s
KMI Kunming 66.67 75 P **P 18 35 43.0 +2.8**
KMI pmax pmax
comp=Z,14nm,0.7s
NJ2 Nanjing 75.62 61 *e*P **P 18 36 33.8 -0.3**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
USA0B Ussuriysk Arra 77.62 45 *e*P **P 18 36 45.4 +0.2**
comp=Z,3.1nm,0.8s
USRK Ussuriysk Ar. 77.62 45 P **P 18 36 45.1 -0.1**
comp=Z,2.5nm,0.5s,baz=280,slow=5.3,SNR=7.9
KSRS Korea Array 78.97 52 P **P 18 36 53.6 +0.8**
comp=Z,1.7nm,0.8s,baz=303,slow=4.5,SNR=9.5
ILAR Eielson Array 81.20 357 P **P 18 37 04.8 +0.5**
comp=Z,0.3nm,0.8s,baz=18,slow=3.1,SNR=3.9
MAJO Matsushiro 86.07 48 *e*P **P 18 37 31.0 +1.2**
MJAR Matsushiro Arr 86.07 48 P **P 18 37 31.0 +1.2**
comp=Z,1.3nm,0.9s,baz=300,slow=5.6,SNR=6.1

*IDC **15** 18:30:31.7±1.3, 34°.21N×24°.98E, h0km, mb3.6/3, mb1 3.7/6, mb1mx3.4/37, mbtmp3.6/6, ML3.7/3, Error ellipse: s-maj=24.2km s-min=19.7km az=87.0*
*ATH **15** 18:30:36.9, 34°.39N×25°.05E, h33km±8km, ML2.9/7, Error ellipse: s-maj=8.8km s-min=1.6km az=183.0*
*THE **15** 18:30:36.9, 34°.39N×25°.09E, h0km±4km, ML2.9/2, Error ellipse: s-maj=6.6km s-min=1.6km az=179.0*
ISC 15 18:30:35.3±1.7, 34°.28N±0°.08×25°.10E±0°.04, h16km±10km, n30, σ1.9 20/36, mb3.7/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**342**	P	**Pg**	**18 30 50.0**	**-0.4**
SIVA				S	**Sn**	**18 31 01.9**	**-0.9**
SIVA	**Sivas**	**0.78**	**342**	P	**Pg**	**18 30 50.2**	**-0.2**
SIVA				S	**Sb**	**18 31 01.1**	**+0.4**
SIVA				AML	AML	18 31 07.6	
	comp=N,4577μm,0.5s						
SIVA				AML	AML	18 31 10.3	
	comp=E,6687μm,0.7s						
TMBK	**Timbaki Herakl**	**0.84**	**341**	P	**Pb**	**18 30 51.6**	**+0.1**
TMBK				S	**Sb**	**18 31 02.4**	**-0.1**
LAST	**Lasithi**	**0.94**	**19**	P	**Pg**	**18 30 53.1**	**-0.4**
LAST				S	**Sb**	**18 31 05.5**	**+0.1**
LAST	**Lasithi**	**0.94**	**19**	P	**Pb**	**18 30 53.4**	**+0.2**
LAST				AML	AML	18 31 19.8	
	comp=E,883μm,0.7s						
LAST				AML	AML	18 31 20.2	
	comp=N,954μm,0.7s						
GVD	**Gavdhos**	**1.00**	**304**	P	**Pg**	**18 30 54.6**	**-0.2**
GVD	**Gavdhos**	**1.00**	**304**	P	**Pg**	**18 30 54.5**	**-0.3**
GVD				S	**Sg**	**18 31 07.3**	**-0.7**
GVD				AML	AML	18 31 15.4	
	comp=N,2094μm,0.4s						
GVD				AML	AML	18 31 17.8	
	comp=E,2748μm,0.5s						
IDI	**Anoyia**	**1.02**	**350**	Pn	**Pg**	**18 30 54.4**	**-0.7**
	comp=E,13nm,0.3s,baz=187,slow=9.4,SNR=8.3						
IDI				Sn	**Sn**	**18 31 08.9**	**-0.1**
	comp=E,34nm,0.3s,baz=144,slow=17,SNR=12						
KSTL	**Kastelli Herak**	**1.02**	**359**	P	**Pg**	**18 30 53.8**	**-1.3**
NPS	**Neapolis**	**1.07**	**23**	P	**Pg**	**18 30 55.8**	**-0.3**
NPS				AML	AML	18 31 18.3	
	comp=E,806μm,0.8s						
NPS				AML	AML	18 31 20.8	
	comp=N,519μm,0.7s						
PRNS	**Prines Rethymn**	**1.19**	**336**	P	**Pn**	**18 30 58.2**	**+1.0**
ZKR	**Zakros**	**1.25**	**47**	P	**Pb**	**18 30 59.2**	**+0.8**
ZKR	**Zakros**	**1.25**	**47**	P	**Pb**	**18 30 59.0**	**+0.7**
ZKR				S	**Sn**	**18 31 15.7**	**+1.3**
ZKR				AML	AML	18 31 28.2	
	comp=E,802μm,0.6s						
ZKR				AML	AML	18 31 28.2	
	comp=N,311μm,1.3s						
VAM	**Vamos**	**1.35**	**327**	P	**Pn**	**18 31 00.2**	**+0.8**
VAM	**Vamos**	**1.35**	**327**	P	**Pn**	**18 30 59.7**	**+0.3**
VAM				AML	AML	18 31 28.2	
	comp=E,1104μm,0.6s						
VAM				AML	AML	18 31 40.9	
	comp=N,832μm,0.5s						
IMMV	**Iera Moni Meta**	**1.50**	**322**	P	**Pn**	**18 31 02.7**	**+1.2**
IMMV				AML	AML	18 31 35.4	
	comp=N,811μm,0.9s						
IMMV				AML	AML	18 31 37.4	
	comp=E,621μm,0.7s						
KARP	**Karpathos**	**2.12**	**53**	P	**Pb**	**18 31 13.0**	**-0.3**
KARP	**Karpathos**	**2.12**	**53**	P	**Pn**	**18 31 12.6**	**+2.6**
THR3	**Thira Island,**	**2.14**	**7**	P	**Pn**	**18 31 09.7**	**-0.6**
THR5	**Thira Island,**	**2.15**	**5**	P	**Pn**	**18 31 11.2**	**+0.8**
THR5	**Thira Island,**	**2.15**	**5**	P	**Pn**	**18 31 10.9**	**+0.6**
ANAF	**Anafi Island**	**2.15**	**15**	P	**Pn**	**18 31 11.5**	**+1.1**
IOSP	**Ios island**	**2.45**	**4**	P	**Pn**	**18 31 15.0**	**+0.5**
APE	**Apeiranthos**	**2.81**	**7**	P	**Pn**	**18 31 19.9**	**+0.4**
MMAI	**Mount Meron Ar**	**8.68**	**95**	Pn	**Pn**	**18 32 40.8**	**+0.5**
	comp=E,0.7nm,0.3s,baz=277,slow=11,SNR=4.4						
MMAI				Sn	**Sn**	**18 34 13.1**	**-4.8**
	comp=E,0.8nm,0.3s,baz=292,slow=22,SNR=3.3						
EIL	**Elat**	**9.54**	**116**	Pn	Pn	18 32 50.0	-2.0
	comp=E,0.8nm,0.3s,baz=198,slow=3.7,SNR=8.0						
GERES	**GERESS Array B**	**16.84**	**333**	Pn	**Pn**	**18 34 31.9**	**+1.6**
	comp=E,0.1nm,0.3s,baz=146,slow=12,SNR=6.6						
TORD	**Torodi Ar. Bea**	**29.89**	**231**	P	P	18 36 40.0	-2.3
	comp=E,0.7nm,0.5s,baz=31,slow=9.2,SNR=10						
MKAR	**Makanchi Array**	**44.31**	**56**	P	**P**	**18 38 44.5**	**+0.2**
	comp=E,0.3nm,0.7s,baz=292,slow=7.0,SNR=4.1						
ZALV	**Zalesovo Beam**	**45.66**	**46**	P	**P**	**18 38 54.6**	**-0.2**
	comp=E,0.6nm,0.4s,baz=265,slow=8.4,SNR=2.6						

*IDC **15** 18:33:31.7±1.1, 34°.14N×25°.07E, h0km, mb3.7/5, mb1 3.8/10, mb1mx3.6/39, mbtmp3.7/10, ML3.8/5, Error ellipse: s-maj=19.5km s-min=18.7km az=89.0*
*ISCJB **15** 18:33:33.1±1.2, 34°.03N±0°.05×25°.13E±0°.05, h18km±8km, mb3.5/5, Error ellipse: s-maj=8.6km s-min=6.4km az=14.9*
*ATH **15** 18:33:36.4, 34°.31N×25°.13E, h26km±1km, ML3.1/7, Error ellipse: s-maj=4.6km s-min=1.4km az=356.0*
*THE **15** 18:33:36.0, 34°.28N×25°.14E, h0km±1km, ML3.2/5, Error ellipse: s-maj=3.3km s-min=1.2km az=170.0*
ISC 15 18:33:35.6±1.7, 34°.17N±0°.07×25°.16E±0°.04, h26km±13km, n45, σ1.9 29/54, mb3.7/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.90**	**341**	P	**Pb**	**18 33 51.0**	**-1.5**
SIVA				S	**Sb**	**18 34 03.8**	**-0.3**
	5μm,0.7s						
SIVA	**Sivas**	**0.90**	**341**	P	**Pb**	**18 33 51.2**	**-1.3**
SIVA				S	**Sb**	**18 34 02.5**	**-1.5**
SIVA				AML	AML	18 34 14.0	
	comp=E,6972μm,0.8s						
SIVA				AML	AML	18 34 14.3	
	comp=N,7199μm,0.6s						
LAST	**Lasithi**	**1.02**	**15**	P	**Pn**	**18 33 53.8**	**-0.7**
LAST				S	**Sn**	**18 34 08.3**	**+0.3**
	comp=N,688nm,0.7s						
LAST	**Lasithi**	**1.02**	**15**	P	**Pn**	**18 33 53.7**	**-0.7**
LAST				AML	AML	18 34 18.8	
	comp=N,1077μm,0.6s						
LAST				AML	AML	18 34 28.4	
	comp=E,978μm,0.7s						
GVD	**Gavdhos**	**1.11**	**307**	P	**Pn**	**18 33 55.3**	**-0.2**
GVD				S	**Sb**	**18 34 11.8**	**+1.6**
	comp=E,1μm,0.4s						
GVD	**Gavdhos**	**1.11**	**307**	P	**Pn**	**18 33 55.5**	**0.0**
GVD				S	**Sb**	**18 34 10.7**	**+0.5**
GVD				AML	AML	18 34 17.1	
	comp=E,3339μm,0.4s						
GVD				AML	AML	18 34 18.1	
	comp=N,2607μm,0.4s						
IDI	**Anoyia**	**1.14**	**349**	Pn	**Pn**	**18 33 55.3**	**-0.7**
	comp=N,42nm,0.3s,baz=169,slow=10,SNR=14						
IDI				Sn	**Sb**	**18 34 13.9**	**+2.8**
	comp=N,36nm,0.3s,baz=253,slow=19,SNR=10						
NPS	**Neapolis**	**1.15**	**19**	P	**Pn**	**18 33 55.9**	**-0.3**
NPS	**Neapolis**	**1.15**	**19**	P	**Pn**	**18 33 55.9**	**-0.3**
NPS				AML	AML	18 34 24.1	
	comp=N,869μm,0.8s						
NPS				AML	AML	18 34 27.6	
	comp=E,1130μm,0.9s						
ZKR	**Zakros**	**1.28**	**42**	P	**Pn**	**18 33 59.2**	**+1.3**
ZKR				S	**Sb**	**18 34 16.7**	**+1.5**
	comp=E,355nm,0.6s						
ZKR	**Zakros**	**1.28**	**42**	P	**Pn**	**18 33 59.3**	**+1.3**
ZKR				AML	AML	18 34 27.1	
	comp=N,445μm,0.4s						
ZKR				AML	AML	18 34 32.5	
	comp=E,938μm,0.7s						
VAM	**Vamos**	**1.47**	**328**	P	**Pn**	**18 34 01.4**	**+1.0**
VAM	**Vamos**	**1.47**	**328**	P	**Pn**	**18 34 01.5**	**+1.1**
VAM				AML	AML	18 34 30.2	
	comp=E,1770μm,0.7s						
VAM				AML	AML	18 34 33.9	
	comp=N,1172μm,0.4s						
IMMV	**Iera Moni Meta**	**1.61**	**323**	P	**Pn**	**18 34 03.4**	**+0.9**
IMMV				S	**Sb**	**18 34 24.7**	**0.0**
	comp=N,682nm,0.7s						
IMMV	**Iera Moni Meta**	**1.61**	**323**	P	**Pn**	**18 34 03.8**	**+1.4**
IMMV				AML	AML	18 34 38.9	
	comp=N,1211μm,0.8s						
IMMV				AML	AML	18 34 41.5	
	comp=E,1502μm,0.7s						
KARP	**Karpathos**	**2.15**	**50**	P	**Pb**	**18 34 13.0**	**-0.8**
THR6	**Thira Island,**	**2.19**	**5**	P	**Pn**	**18 34 11.8**	**+1.4**
ANAF	**Anafi Island**	**2.24**	**13**	P	**Pn**	**18 34 11.7**	**+0.6**
THR3	**Thira Island,**	**2.25**	**5**	P	**Pn**	**18 34 12.2**	**+1.1**
THR3	**Thira Island,**	**2.25**	**5**	P	**Pn**	**18 34 12.5**	**+1.3**
THR5	**Thira Island,**	**2.25**	**4**	P	**Pn**	**18 34 12.6**	**+1.4**
THR5	**Thira Island,**	**2.25**	**4**	P	**Pn**	**18 34 13.2**	**+2.0**
ANKY	**Antikythira Is**	**2.28**	**319**	P	**Pn**	**18 34 12.8**	**+1.2**
IOSP	**Ios island**	**2.55**	**2**	P	**Pn**	**18 34 15.7**	**+0.3**
MHLO	**Agia Marina, M**	**2.59**	**346**	P	**Pn**	**18 34 16.5**	**+0.6**
MHLA	**Plaka, Milos I**	**2.64**	**347**	P	**Pn**	**18 34 17.4**	**+0.9**
KYTH	**Kithira**	**2.71**	**321**	P	**Pn**	**18 34 18.9**	**+1.2**
AMGA	**Amorgos Island**	**2.72**	**12**	P	**Pn**	**18 34 18.7**	**+1.0**
APE	**Apeiranthos**	**2.91**	**6**	P	**Pn**	**18 34 20.7**	**+0.3**
VLI	**Veliai**	**3.12**	**325**	P	**Pn**	**18 34 24.0**	**+0.7**
ARG	**Arkhangelos**	**3.17**	**49**	P	**Pn**	**18 34 26.8**	**+2.9**
DID	**Didima**	**3.68**	**335**	P	**Pn**	**18 34 31.1**	**+0.2**
PYL	**PYLOS**	**3.90**	**315**	P	**Pn**	**18 34 35.6**	**+1.7**
LTK	**Loutraki**	**4.24**	**336**	P	**Pn**	**18 34 38.7**	**+0.1**
VIL2	**Platees**	**4.32**	**340**	P	**Pn**	**18 34 39.1**	**-0.6**
MMAI	**Mount Meron Ar**	**8.62**	**95**	Pn	**Pn**	**18 35 40.8**	**+2.0**
	comp=E,1.6nm,0.3s,baz=283,slow=12,SNR=7.8						
MMAI				Sn	**Sn**	**18 37 11.7**	**-3.7**
	comp=E,0.8nm,0.3s,baz=301,slow=26,SNR=3.4						
EIL	**Elat**	**9.45**	**116**	Pn	**Pn**	**18 35 50.7**	**+0.6**
	comp=E,0.8nm,0.3s,baz=304,slow=7.0,SNR=4.6						
KBZ	**Khabaz**	**16.75**	**50**	Pn	**P**	**18 37 32.1**	**+1.7**
	comp=E,0.1nm,0.3s,baz=339,slow=8.6,SNR=2.4						
AKASG	**Malin Array Be**	**16.79**	**9**	Pn	**Pn**	**18 37 28.9**	**+0.1**
	comp=E,0.8nm,0.3s,baz=201,slow=10,SNR=7.4						
GERES	**GERESS Array B**	**16.96**	**333**	Pn	**P**	**18 37 33.0**	**+0.1**
	comp=E,0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.36**	**356**	T	T	18 54 02.7	
	baz=174,slow=74,SNR=30						
H01W1	**Cape Leeuwin H**	**14.37**	**356**	T	T	18 54 09.8	
	baz=174,slow=74,SNR=24						
H01W3	**Cape Leeuwin H**	**14.38**	**356**	T	T	18 54 10.9	
	baz=174,slow=74,SNR=34						
STKA	**Stephens Creek**	**26.29**	**58**	P	P	18 40 52.9	-1.1
	3.0nm,0.8s,baz=195,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**29.45**	**37**	P	P	18 41 22.7	+0.3
	1.1nm,0.9s,baz=203,slow=8.4,SNR=12						
WRA	**Warramunga Arr**	**32.99**	**34**	P	P	18 41 54.2	+0.6
	2.4nm,1.1s,baz=205,slow=8.7,SNR=6.1						
ANMO	**Albuquerque**	**146.37**	**99**	PKPbc	PKPdf	18 54 58.8	+0.5
	0.5nm,0.3s,baz=284,slow=4.2,SNR=3.3						

IDC ***15*** *18:41:09.8±1.2, 34°.27N×25°.09E, h0km, mb3.8/5, mb1 3.8/10, mb1mx3.5/44, mbtmp3.7/10, ML3.8/4, MS4.7/1, Ms1 4.7/1, ms1mx3.8/49, Error ellipse: s-maj=22.5km s-min=21.6km az=75.0*

ISCJB ***15*** *18:41:11.1±0.9, 34°.17N±0°.10×25°.2E±0°.1, h25km, mb3.6/5, Error ellipse: s-maj=15.9km s-min=11.2km az=43.3*

ISC 15 18:41:13.3±1.1, 34°.2N±0°.1×25°.22E±0°.09, h25km, n12, σ1§64/12, mb3.7/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.09**	**346**	Pn	**Pn**	**18 41 32.3**	**-0.8**
	23nm,0.3s,baz=172,slow=17,SNR=6.9						
MMAI	**Mount Meron Ar**	**8.58**	**95**	Pn	**Pn**	**18 43 16.9**	**+1.0**
	0.9nm,0.3s,baz=266,slow=12,SNR=6.1						
MMAI				Sn	**Sn**	**18 44 48.5**	**-3.4**
	1.1nm,0.3s,baz=315,slow=55,SNR=4.7						
BRTR	**Keskin Array B**	**8.69**	**48**	Pn	**Pn**	**18 43 19.5**	**+2.1**
	0.1nm,0.3s,baz=224,slow=10,SNR=3.2						
EIL	**Elat**	**9.43**	**116**	Pn	**Pn**	**18 43 28.0**	**+0.5**
	0.7nm,0.3s,baz=315,slow=7.6,SNR=5.3						
VRAC	**Vranov**	**16.37**	**340**	LR	LR	18 51 25.5	
	comp=Z,3μm,20.2s,baz=310,slow=38						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**18 45 05.8**	**+0.1**
	0.9nm,0.3s,baz=201,slow=10,SNR=6.3						
GERES	**GERESS Array B**	**16.93**	**333**	Pn	**Pn**	**18 45 07.9**	**-0.6**
	0.1nm,0.3s,baz=145,slow=12,SNR=16						
FINES	**FINESS Array B**	**27.24**	**1**	P	**P**	**18 46 53.5**	**-1.5**
	4.4nm,1.1s,baz=172,slow=13,SNR=2.4						
TORD	**Torodi Ar. Bea**	**29.94**	**231**	P	**P**	**18 47 19.4**	**-0.1**
	0.3nm,0.4s,baz=33,slow=8.4,SNR=7.9						
MKAR	**Makanchi Array**	**44.25**	**56**	P	**P**	**18 49 21.3**	**+0.8**
	0.3nm,0.5s,baz=270,slow=8.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**45.62**	**46**	P	**P**	**18 49 31.0**	**-0.2**
	0.6nm,0.3s,baz=258,slow=8.0,SNR=3.5						
SONM	**Songino Array**	**60.04**	**50**	P	**P**	**18 51 19.9**	**+1.8**
	0.3nm,0.5s,baz=297,slow=7.0,SNR=2.8						

ISCJB ***15*** *18:43:56.9±1.1, 34°.16N±0°.05×25°.16E±0°.05, h23km±7km, mb3.5/3, Error ellipse: s-maj=9.5km s-min=6.6km az=28.1*

IDC ***15*** *18:43:56.0±1.3, 34°.29N×25°.11E, h0km, mb3.6/3, mb1 3.6/7, mb1mx3.4/43, mbtmp3.5/7, ML3.7/4, Error ellipse: s-maj=23.4km s-min=19.1km az=68.0*

THE ***15*** *18:43:58.8, 34°.32N×25°.06E, h0km±2km, ML2.9/4, Error ellipse: s-maj=3.8km s-min=1.2km az=171.0*

ATH ***15*** *18:43:59.8, 34°.39N×25°.06E, h25km±2km, ML2.8/5, Error ellipse: s-maj=3.4km s-min=1.3km az=355.0*

ISC 15 18:43:56.8±1.7, 34°.22N±0°.06×25°.09E±0°.03, h5km±10km, n22, σ1§05/35, mb3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.83**	**344**	P	**Pg**	**18 44 13.0**	**+0.3**
SIVA				S	**Sb**	**18 44 24.1**	**-0.9**
SIVA	**Sivas**	**0.83**	**344**	P	**Pg**	**18 44 13.1**	**+0.5**
SIVA				S	**Sg**	**18 44 22.4**	**-1.0**
SIVA				AML	AML	18 44 32.0	
	comp=E,6498μm,0.4s						
SIVA				AML	AML	18 44 37.0	
	comp=N,5279μm,0.5s						
LAST	**Lasithi**	**0.99**	**19**	P	**Pg**	**18 44 16.2**	**+0.3**
LAST				S	**Sb**	**18 44 30.6**	**+0.7**
	comp=N,562nm,0.6s						
LAST	**Lasithi**	**0.99**	**19**	P	**Pg**	**18 44 16.1**	**+0.3**
LAST				S	**Sg**	**18 44 27.9**	**-0.8**
LAST				AML	AML	18 44 36.3	
	comp=N,799μm,0.5s						
LAST				AML	AML	18 44 40.8	
	comp=E,628μm,1.0s						
GVD	**Gavdhos**	**1.03**	**307**	P	**Pg**	**18 44 16.8**	**+0.3**
GVD				S	**Sb**	**18 44 32.0**	**+1.1**
	comp=E,1μm,0.5s						
GVD	**Gavdhos**	**1.03**	**307**	P	**Pg**	**18 44 17.1**	**+0.6**
GVD				S	**Sb**	**18 44 31.3**	**+0.4**
GVD				AML	AML	18 44 37.5	
	comp=E,2671μm,0.3s						
GVD				AML	AML	18 44 39.7	
	comp=N,2074μm,0.3s						
IDI	**Anoyia**	**1.08**	**351**	Pn	**Pg**	**18 44 16.9**	**-0.6**
	comp=N,9.8nm,0.3s,baz=166,slow=19,SNR=3.4						
IDI				Sn	**Sb**	**18 44 32.0**	**-0.3**
	comp=N,37nm,0.3s,baz=302,slow=21,SNR=6.9						
NPS	**Neapolis**	**1.13**	**22**	P	**Pg**	**18 44 18.8**	**+0.4**
NPS				S	**Sn**	**18 44 35.1**	**0.0**
	comp=N,635nm,0.7s						
NPS	**Neapolis**	**1.13**	**22**	P	**Pg**	**18 44 18.8**	**+0.4**
NPS				S	**Sg**	**18 44 32.3**	**-0.7**
NPS				AML	AML	18 44 39.1	
	comp=E,780μm,0.6s						
NPS				AML	AML	18 44 39.5	
	comp=N,659μm,0.5s						
ZKR	**Zakros**	**1.29**	**46**	P	**Pg**	**18 44 22.5**	**+1.0**
ZKR	**Zakros**	**1.29**	**46**	P	**Pg**	**18 44 22.8**	**+1.2**
ZKR				S	**Sb**	**18 44 39.9**	**+1.5**
ZKR				AML	AML	18 44 49.3	
	comp=E,727μm,0.7s						
ZKR				AML	AML	18 44 51.0	
	comp=N,379μm,0.5s						
VAM	**Vamos**	**1.39**	**329**	P	**Pg**	**18 44 23.2**	**-0.2**
VAM	**Vamos**	**1.39**	**329**	P	**Pb**	**18 44 23.8**	**+0.6**
VAM				S	**Sg**	**18 44 40.2**	**-1.3**
IMMV	**Iera Moni Meta**	**1.54**	**324**	P	**Pn**	**18 44 25.4**	**+0.6**
IMMV				S	**Sn**	**18 44 45.8**	**+0.7**
	comp=N,462nm,0.6s						
IMMV	**Iera Moni Meta**	**1.54**	**324**	P	**Pn**	**18 44 25.4**	**+0.6**
IMMV				S	**Sg**	**18 44 44.4**	**-1.7**
MMAI	**Mount Meron Ar**	**8.69**	**95**	Pn	Pn	18 46 00.8	-2.3
	comp=N,0.2nm,0.3s,baz=260,slow=13,SNR=2.5						
MMAI				Sn	**Sn**	**18 47 37.9**	**-3.7**
	comp=N,1.0nm,0.3s,baz=281,slow=22,SNR=3.9						
EIL	**Elat**	**9.53**	**116**	Pn	**Pn**	**18 46 14.1**	**-0.6**
	comp=N,1.4nm,0.3s,baz=281,slow=5.2,SNR=6.3						
AKASG	**Malin Array Be**	**16.75**	**9**	Pn	**Pn**	**18 47 51.1**	**-0.8**
	comp=N,0.6nm,0.3s,baz=199,slow=10,SNR=4.0						
GERES	**GERESS Array B**	**16.89**	**333**	Pn	**Pn**	**18 47 55.1**	**+1.3**
	comp=N,0.1nm,0.3s,baz=151,slow=12,SNR=6.8						
TORD	**Torodi Ar. Bea**	**29.84**	**231**	P	**P**	**18 50 05.5**	**+0.4**
	comp=N,0.4nm,0.5s,baz=28,slow=9.2,SNR=6.2						
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**18 52 07.4**	**-0.4**
	comp=N,0.3nm,0.6s,baz=278,slow=6.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**45.70**	**46**	P	**P**	**18 52 18.9**	**+0.5**
	comp=N,0.6nm,0.4s,baz=261,slow=9.5,SNR=3.1						

IDC ***15*** *18:46:46.2±1.5, 34°.19N×25°.18E, h0km, mb3.3/2, mb1 3.5/5, mb1mx3.2/42, mbtmp3.4/5, ML3.8/3, Error ellipse: s-maj=24.8km s-min=23.5km az=142.0*

THE ***15*** *18:46:50.3, 34°.31N×25°.10E, h0km±2km, ML3.0/5, Error ellipse: s-maj=4.7km s-min=1.2km az=165.0*

ATH ***15*** *18:46:50.4, 34°.27N×25°.03E, h19km±3km, ML3.0/4, Error ellipse: s-maj=5.3km s-min=2.0km az=3.0*

ISC 15 18:46:47.5±1.9, 34°.15N±0°.07×25°.11E±0°.04, h3km±12km, n20, σ1§38/31, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.91**	**344**	P	**Pg**	**18 47 04.4**	**-0.5**
SIVA				S	**Sg**	**18 47 16.4**	**-0.2**
	3μm,0.7s						
SIVA	**Sivas**	**0.91**	**344**	P	**Pb**	**18 47 06.1**	**+0.3**
SIVA				S	**Sg**	**18 47 15.8**	**-0.8**
SIVA				AML	AML	18 47 19.0	
	comp=E,5214μm,0.7s						
SIVA				AML	AML	18 47 24.3	
	comp=N,4419μm,0.7s						
LAST	**Lasithi**	**1.06**	**17**	P	**Pg**	**18 47 07.8**	**0.0**
LAST				S	**Sb**	**18 47 22.1**	**-0.7**
	comp=N,488nm,0.8s						
LAST	**Lasithi**	**1.06**	**17**	P	**Pg**	**18 47 07.9**	**0.0**
LAST				S	**Sb**	**18 47 22.3**	**-0.5**
GVD	**Gavdhos**	**1.09**	**310**	P	**Pg**	**18 47 09.1**	**+0.6**
GVD				S	**Sb**	**18 47 23.9**	**+0.2**
	comp=N,810nm,0.4s						
GVD	**Gavdhos**	**1.09**	**310**	P	**Pg**	**18 47 09.0**	**+0.6**
GVD				S	**Sg**	**18 47 22.1**	**-0.5**
GVD				AML	AML	18 47 30.2	
	comp=N,1649μm,0.4s						
GVD				AML	AML	18 47 30.4	
	comp=E,1546μm,0.4s						
IDI	**Anoyia**	**1.16**	**351**	Pn	**Pg**	**18 47 09.0**	**-0.6**
	comp=E,12nm,0.3s,baz=166,slow=22,SNR=5.8						
IDI				Sn	**Sg**	**18 47 22.1**	**-2.5**
	comp=E,32nm,0.3s,baz=240,slow=21,SNR=7.6						
NPS	**Neapolis**	**1.19**	**20**	P	**Pg**	**18 47 09.9**	**-0.4**
NPS				S	**Sg**	**18 47 25.4**	**-0.3**
	comp=E,515nm,0.8s						
NPS	**Neapolis**	**1.19**	**20**	P	**Pb**	**18 47 12.1**	**+1.4**
ZKR	**Zakros**	**1.33**	**43**	P	**Pg**	**18 47 14.4**	**+1.4**
ZKR				S	**Sn**	**18 47 33.6**	**+2.4**
VAM	**Vamos**	**1.47**	**329**	P	**Pg**	**18 47 15.0**	**-0.6**
VAM				S	**Sb**	**18 47 34.4**	**0.0**
	comp=E,742nm,0.5s						
VAM	**Vamos**	**1.47**	**329**	P	**Pg**	**18 47 15.0**	**-0.6**
VAM				S	**Sg**	**18 47 32.9**	**-1.7**
VAM				AML	AML	18 47 44.3	
	comp=E,817μm,0.6s						
VAM				AML	AML	18 47 45.0	
	comp=N,676μm,0.3s						
IMMV	**Iera Moni Meta**	**1.61**	**325**	P	**Pn**	**18 47 17.4**	**+0.6**
IMMV	**Iera Moni Meta**	**1.61**	**325**	P	**Pn**	**18 47 17.8**	**+1.0**
IMMV				S	**Sg**	**18 47 38.6**	**-0.6**
IMMV				AML	AML	18 47 49.6	
	comp=N,558μm,0.7s						
IMMV				AML	AML	18 47 50.7	
	comp=E,665μm,1.1s						
MMAI	**Mount Meron Ar**	**8.66**	**95**	Sn	**Sn**	**18 50 27.1**	**-4.9**
	comp=E,1.5nm,0.3s,baz=290,slow=22,SNR=4.9						
EIL	**Elat**	**9.48**	**115**	Pn	**Pn**	**18 49 05.7**	**+0.8**
	comp=E,0.3nm,0.3s,baz=22,slow=16,SNR=2.8						
AKASG	**Malin Array Be**	**16.82**	**9**	Pn	**Pn**	**18 50 43.1**	**-0.7**
	comp=E,0.6nm,0.3s,baz=201,slow=10,SNR=4.6						
GERES	**GERESS Array B**	**16.96**	**333**	Pn	**Pn**	**18 50 47.0**	**+1.2**
	comp=E,0.2nm,0.3s,baz=140,slow=12,SNR=8.1						
TORD	**Torodi Ar. Bea**	**29.81**	**231**	P	**P**	**18 52 55.2**	**-0.6**
	comp=E,0.5nm,0.8s,baz=35,slow=9.4,SNR=4.8						
MKAR	**Makanchi Array**	**44.37**	**56**	P	P	18 54 56.9	-2.2
	comp=E,0.1nm,0.4s,baz=262,slow=8.6,SNR=2.6						

NEIC ***15*** *18:50:09.2±2.0, 11°.74N×87°.05W, h35km, mb4.5/161, MD4.3(SNET), Error ellipse: s-maj=13.9km s-min=8.2km az=200.0*

NEIC Felt [I] at La Union, El Salvador.

ISCJB ***15*** *18:50:10.2±0.4, 11°.76N±0°.03×87°.08W±0°.02, h63km±2km, mb4.5/150, Error ellipse: s-maj=5.9km s-min=3.5km az=18.8*

UCR ***15*** *18:50:10.1±2.9, 11°.97N×87°.18W, h2km±9km, ML4.3, mb4.5(NEIC)*

IDC ***15*** *18:50:11.6±1.3, 12°.11N×86°.71W, h50km±14km, mb4.1/10, mb1 4.3/13, mb1mx3.9/45, mbtmp4.3/13, ML3.4/3, Error ellipse: s-maj=34.2km s-min=10.1km az=48.0*

SNET ***15*** *18:50:11.2±0.6, 11°.93N×87°.31W, h8km±7km, ML4.3*

ISC 15 18:50:10.4±1.1, 11°.70N±0°.06×87°.16W±0°.05, h51km±9km, n504, σ1§08/514, mb4.5/150, 5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.73**	**49**	*eP*	**Pn**	**18 50 23.7**	**-1.0**
XAVN	**Gruta Xavier**	**0.93**	**61**	*eP*	**Pn**	**18 50 26.6**	**-0.7**
MOMN	**Momotombo**	**0.93**	**40**	*eP*	**Pn**	**18 50 25.9**	**-1.3**
APYN	**Apoyeque**	**0.95**	**56**	*eP*	**Pn**	**18 50 26.9**	**-0.7**
MGAN	**Managua**	**0.99**	**63**	*eP*	**Pn**	**18 50 27.4**	**-0.7**
MGAN				*eS*	**Sn**	**18 50 40.7**	**-0.4**
MGAN				IAML		18 50 43.5	
	comp=E,3μm,0.4s						
MASN	**Masaya**	**1.02**	**74**	*eP*	**Pn**	**18 50 27.7**	**-0.9**
MASN				*eS*	**Sn**	**18 50 43.2**	**+1.3**
CSGN	**Cosiguina Volc**	**1.33**	**343**	*ePn*	**Pn**	**18 50 32.4**	**-0.3**
CSGN				*eSn*	**Sn**	**18 50 48.5**	**-0.9**
ESTN	**Estel**	**1.59**	**29**	*ePn*	**Pn**	**18 50 35.4**	**-1.0**
CNCH	**Conchagua**	**1.70**	**337**	*i,iP*	**Pn**	**18 50 36.9**	**-1.0**
CNCH				*eS*	**Sn**	**18 50 56.7**	**-1.9**
CNCH	**Conchagua**	**1.70**	**337**	*i,iP*	**Pn**	**18 50 36.9**	**-1.0**
CNCH				*eS*	**Sn**	**18 50 57.0**	**-1.5**
LCND	**La Caada**	**1.75**	**336**	*i,iP*	**Pn**	**18 50 37.6**	**-0.9**
LCND				IAML		18 51 01.1	
	comp=Z,9μm,0.5s						
LCND	**La Caada**	**1.75**	**336**	*i,iP*	**Pn**	**18 50 37.6**	**-0.9**
LCND				IAML		18 51 01.1	
	comp=Z,9μm,0.5s						
ACON	**Acoyapa**	**1.96**	**82**	*ePn*	**Pn**	**18 50 40.5**	**-0.7**
VSM	**San Miguel**	**2.04**	**328**	*eP*	**Pn**	**18 50 42.6**	**+0.1**
VSM				*eS*	**Sn**	**18 51 10.0**	**+3.0**
LCY	**Lacayo**	**2.04**	**327**	*eP*	**Pn**	**18 50 42.2**	**-0.3**
LCY	**Lacayo**	**2.04**	**327**	*eP*	**Pn**	**18 50 42.2**	**-0.3**
TECA	**Tecapa**	**2.22**	**324**	*eP*	**Pn**	**18 50 44.4**	**-0.5**
TECA	**Tecapa**	**2.22**	**324**	*eP*	**Pn**	**18 50 44.4**	**-0.5**
TGUH	**Tegucigalpa,Un**	**2.35**	**357**	*ePn*	**Pn**	**18 50 46.2**	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.35**	**357**	*eP*	**Pn**	**18 50 46.3**	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.35**	**357**	*i,iP*	**Pn**	**18 50 46.4**	**-0.3**
SNVI	**San Vicente**	**2.51**	**319**	*eP*	**Pn**	**18 50 49.4**	**+0.4**
JTS	**Las Juntas de**	**2.58**	**123**	P	**Pn**	**18 50 51.7**	**+2.0**
	comp=Z,18nm,0.3s,baz=29,slow=13,SNR=23						
JTS				S	**Sn**	**18 51 19.7**	**-0.2**
	comp=Z,46nm,0.3s,baz=14,slow=7.5,SNR=7.7						
JTS	**Las Juntas de**	**2.58**	**123**	*ePn*	**Pn**	**18 50 51.2**	**+1.4**
JTS	**Las Juntas de**	**2.58**	**123**	*eP*	**Pn**	**18 50 51.4**	**+1.7**
LFRS	**El Faro**	**2.67**	**316**	*eP*	**Pn**	**18 50 50.6**	**-0.4**
VICT	**Victoria**	**2.67**	**327**	*eP*	**Pn**	**18 50 51.2**	**0.0**
VICT				*eS*	**Sn**	**18 51 21.9**	**-0.5**
VICT	**Victoria**	**2.67**	**327**	*eP*	**Pn**	**18 50 51.2**	**0.0**
VICT				*eS*	**Sn**	**18 51 21.9**	**-0.5**
LOMA	**San Marcos**	**2.77**	**315**	*eP*	**Pn**	**18 50 52.3**	**0.0**
LOMA				IAML		18 51 28.1	
	comp=Z,1μm,0.3s						
LOMA	**San Marcos**	**2.77**	**315**	*eP*	**Pn**	**18 50 52.3**	**0.0**
LOMA				IAML		18 51 28.1	
	comp=Z,1μm,0.3s						
ESPN	**Las Esperanzas**	**2.84**	**80**	*ePn*	**Pn**	**18 50 53.1**	**-0.1**
BOQS	**Boqueron**	**2.90**	**315**	*eP*	**Pn**	**18 50 54.4**	**+0.1**
BOQS				*eS*	**Sn**	**18 51 27.7**	**-0.4**
SBLS	**San Blas**	**3.21**	**312**	*eP*	**Pn**	**18 50 58.9**	**+0.2**
SBLS	**San Blas**	**3.21**	**312**	*eP*	**Pn**	**18 50 58.9**	**+0.2**
HDC	**Heredia**	**3.43**	**119**	*ePn*	**Pn**	**18 51 02.0**	**+0.4**
LCR2	**La Lucha 2**	**3.66**	**122**	*eS*	Sn	18 51 59.9	+13
APG	**El Apazote**	**4.60**	**316**	P	**Pn**	**18 51 19.9**	**+2.2**
	comp=Z,0.7nm,0.3s,baz=127,slow=0.3,SNR=9.8						
CCIG	**Comitan**	**6.64**	**314**	*ePn*	Pn	18 51 49.6	+3.9
BCIP	**Isla Barro Col**	**7.62**	**109**	*ePn*	**Pn**	**18 51 58.4**	**-0.6**
TEIG	**Tepich**	**8.55**	**353**	*ePn*	**Pn**	**18 52 13.5**	**+1.9**
CMIG	**Matias Romero**	**9.21**	**307**	P	**Pn**	**18 52 22.0**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=146,slow=12,SNR=11						
FSCY	**Frank Sound, G**	**9.51**	**37**	*ePn*	**Pn**	**18 52 26.2**	**+1.5**
MTDJ	**Mount Denham**	**11.33**	**54**	*ePn*	**Pn**	**18 52 49.7**	**-0.1**
TLIG	**Tlapa**	**12.48**	**299**	*ePn*	**Pn**	**18 53 07.7**	**+2.1**
PAYG	**Puerto Ayora**	**12.68**	**194**	*ePn*	**P**	**18 53 13.4**	**-4.7**
GTBY	**Guantanamo Bay**	**14.18**	**53**	*ePn*	Pn	18 53 32.4	+3.8
LNIG	**Linares**	**17.56**	**320**	*ePn*	**P**	**18 54 14.2**	**+2.0**
	comp=Z,33nm,0.9s						
658A	**Bunnell**	**18.47**	**16**	P	**P**	**18 54 22.9**	**+0.7**
	baz=198						
453A	**Whigham**	**19.24**	**7**	P	**P**	**18 54 31.6**	**+1.0**
	baz=188						
455A	**Stateville**	**19.33**	**11**	P	**P**	**18 54 32.8**	**+1.3**
	baz=192						
349A	**Repton**	**19.56**	**360**	P	**P**	**18 54 36.0**	**+2.0**
	baz=180						
350A	**Dozier**	**19.64**	**2**	P	**P**	**18 54 36.7**	**+1.7**
	baz=182						
353A	**Camilla**	**19.74**	**7**	P	**P**	**18 54 37.7**	**+1.7**
	baz=188						
HKT	**Hockley**	**19.87**	**337**	*eP*	**P**	**18 54 38.6**	**+1.2**
	comp=Z,9.7nm,0.9s						
833A	**Chaparral WMA,**	**20.12**	**327**	*eP*	**P**	**18 54 40.4**	**+0.2**
	comp=Z,21nm,0.8s						
833A	**Chaparral WMA,**	**20.12**	**327**	P	**P**	**18 54 41.1**	**+1.0**
	baz=143						
249A	**Camden**	**20.18**	**0**	P	**P**	**18 54 42.2**	**+1.5**
	baz=180						
250A	**Grady**	**20.20**	**2**	P	**P**	**18 54 43.3**	**+2.3**
	baz=182						
252A	**Lumpkin**	**20.32**	**6**	P	**P**	**18 54 44.3**	**+2.0**
	baz=186						
251A	**Midway**	**20.36**	**4**	P	**P**	**18 54 44.0**	**+1.3**
	baz=185						
255A	**Hazlehurst**	**20.59**	**11**	P	**P**	**18 54 47.9**	**+2.7**
	baz=193						
151A	**Opelika**	**20.80**	**4**	P	**P**	**18 54 49.4**	**+1.9**
	baz=185						
149A	**Jones**	**20.80**	**1**	P	**P**	**18 54 50.1**	**+2.5**
	baz=181						
150A	**Eclectic**	**20.84**	**3**	P	**P**	**18 54 49.9**	**+2.0**
	baz=183,SNR=8.2						
147A	**Livingston**	**20.90**	**357**	*eP*	**P**	**18 54 50.1**	**+1.5**
	comp=Z,31nm,0.6s						
147A	**Livingston**	**20.90**	**357**	P	**P**	**18 54 51.7**	**+3.1**
	baz=177,SNR=5.4						
152A	**Waverly Hall**	**20.99**	**6**	*eP*	**P**	**18 54 51.3**	**+1.7**
	comp=Z,20nm,0.7s						
152A	**Waverly Hall**	**20.99**	**6**	P	**P**	**18 54 52.0**	**+2.4**
	baz=186						
153A	**Fort Valley**	**21.08**	**8**	P	**P**	**18 54 52.8**	**+2.3**
	baz=189						
NATX	**Nacogdoches**	**21.13**	**342**	*eP*	**P**	**18 54 52.4**	**+1.3**
	comp=Z,19nm,0.8s						
LRAL	**Lakeview Retre**	**21.24**	**0**	*eP*	**P**	**18 54 53.1**	**+0.9**
	comp=Z,14nm,1.0s						
LRAL	**Lakeview Retre**	**21.24**	**0**	P	**P**	**18 54 53.8**	**+1.6**
	baz=180						
435B	**Jarrell**	**21.31**	**335**	*eP*	**P**	**18 54 54.0**	**+1.0**
	comp=Z,13nm,0.7s						
Z49A	**Columbiana**	**21.40**	**1**	P	**P**	**18 54 55.2**	**+1.3**
	baz=181						
Z50A	**Ashland**	**21.48**	**3**	*eP*	**P**	**18 54 55.9**	**+1.0**
	comp=Z,11nm,0.7s						
Z50A	**Ashland**	**21.48**	**3**	P	**P**	**18 54 57.0**	**+2.2**
	baz=183,SNR=8.7						
156A	**Sylvania**	**21.50**	**13**	P	**P**	**18 54 57.4**	**+2.5**
	baz=195						
Z52A	**Williamson**	**21.54**	**6**	P	**P**	**18 54 57.8**	**+2.3**
	baz=187						
Z51A	**Franklin**	**21.59**	**5**	P	**P**	**18 54 58.3**	**+2.3**
	baz=185						
Z53A	**Monticello**	**21.73**	**8**	P	**P**	**18 54 59.5**	**+2.1**
	baz=189,SNR=7.2						
Z54A	**Sparta**	**21.80**	**10**	P	**P**	**18 55 00.3**	**+2.1**
	baz=191						
GOGA	**Godfrey**	**21.88**	**8**	*eP*	**P**	**18 55 00.2**	**+1.2**
	comp=Z,17nm,0.8s						
GOGA	**Godfrey**	**21.88**	**8**	P	**P**	**18 55 01.0**	**+2.0**
	baz=189,SNR=8.5						
158A	**Hollywood**	**21.89**	**16**	P	**P**	**18 55 01.6**	**+2.4**
	baz=198						
JCT	**Junction City**	**22.07**	**330**	*eP*	**P**	**18 55 01.8**	**+0.6**
	comp=Z,9.2nm,0.8s						
JCT	**Junction City**	**22.07**	**330**	P	**P**	**18 55 02.9**	**+1.8**
	baz=145						
Y49A	**Blount Mountai**	**22.07**	**2**	*eP*	**P**	**18 55 01.4**	**+0.3**
	comp=Z,12nm,0.6s						
Y49A	**Blount Mountai**	**22.07**	**2**	P	**P**	**18 55 01.7**	**+0.6**
	baz=182,SNR=5.1						
Z41A	**Richland Creek**	**22.07**	**347**	*eP*	**P**	**18 55 01.6**	**+0.5**
	comp=Z,22nm,0.6s						
Z41A	**Richland Creek**	**22.07**	**347**	P	**P**	**18 55 01.7**	**+0.5**
	baz=165						
Y48A	**Jasper**	**22.11**	**360**	P	**P**	**18 55 02.2**	**+0.7**
	baz=180,SNR=7.6						
Y50A	**Piedmont**	**22.13**	**3**	P	**P**	**18 55 02.8**	**+1.0**
	baz=183						
Y51A	**Rockmart**	**22.18**	**5**	P	**P**	**18 55 03.7**	**+1.3**
	baz=185,SNR=7.8						
Y52A	**Lilburn**	**22.24**	**7**	*eP*	**P**	**18 55 04.1**	**+1.1**
	comp=Z,19nm,0.9s						
Y52A	**Lilburn**	**22.24**	**7**	P	**P**	**18 55 04.3**	**+1.3**
	baz=188,SNR=8.0						
Y53A	**Monroe**	**22.30**	**8**	P	**P**	**18 55 05.0**	**+1.4**
	baz=189,SNR=10						
WHTX	**Lake Whitney,**	**22.32**	**336**	*eP*	**P**	**18 55 04.2**	**+0.4**
	comp=Z,28nm,0.8s						
WHTX	**Lake Whitney,**	**22.32**	**336**	P	**P**	**18 55 04.4**	**+0.6**
	baz=152,SNR=6.8						
Y54A	**Tignall**	**22.44**	**10**	P	**P**	**18 55 06.4**	**+1.3**
	baz=191,SNR=6.4						
WLAR	**White Oak Lake**	**22.56**	**347**	*eP*	**P**	**18 55 07.3**	**+1.0**
	comp=Z,18nm,0.9s						
X48A	**Hartselle**	**22.65**	**0**	*eP*	**P**	**18 55 06.3**	**-1.0**
	comp=Z,5.8nm,0.6s						
X48A	**Hartselle**	**22.65**	**0**	P	**P**	**18 55 06.8**	**-0.5**
	baz=180						
**Y

ABTX	Abilene, Hawle	23.78	333	eP	P	18 55 18.4	-0.1		comp=Z,16nm,0.6s
ABTX	Abilene, Hawle	23.78	333	P	P	18 55 18.5	+0.1		baz=148,SNR=7.6
W41B	Gary Mavity, V	23.82	350	eP	P	18 55 18.1	-0.6		comp=Z,18nm,1.6s
W41B	Gary Mavity, V	23.82	350	P	P	18 55 18.2	-0.6		baz=167
X58A	Rowland	23.84	16	P	P	18 55 19.6	+0.7		baz=199
KMSC	Kings Mountain	23.93	12	eP	P	18 55 19.6	-0.2		comp=Z,8.6nm,0.8s
KMSC	Kings Mountain	23.93	12	P	P	18 55 20.1	+0.3		baz=194
V48A	Smith Brothers	23.94	1	eP	P	18 55 19.2	-0.6		comp=Z,5.5nm,0.8s
V48A	Smith Brothers	23.94	1	P	P	18 55 18.9	-0.9		baz=180
V50A	Pikevile	23.94	4	P	P	18 55 19.2	-0.6		baz=185
WHAR	Wooly Hollow	23.94	350	eP	P	18 55 19.2	-0.7		comp=Z,6.8nm,0.7s
X37A	Clayton	23.98	343	eP	P	18 55 20.1	-0.2		comp=Z,37nm,1.4s
V49A	McMinnville	23.99	3	P	P	18 55 19.5	-0.8		baz=183
V46A	Holladay	24.01	358	P	P	18 55 19.1	-1.4		baz=177
V47A	Nunnelly	24.02	359	P	P	18 55 20.0	-0.6		baz=179
X59A	McDuffie Farm,	24.07	18	P	P	18 55 19.6	-1.4		baz=201
W56A	Indian Trail	24.08	13	P	P	18 55 21.3	+0.1		baz=196
V51A	Loudon	24.13	6	eP	P	18 55 21.6	-0.1		comp=Z,9.7nm,0.9s
V51A	Loudon	24.13	6	P	P	18 55 21.3	-0.3		baz=186
W39A	Magazine	24.16	347	eP	P	18 55 21.8	0.0		comp=Z,9.7nm,0.8s
W39A	Magazine	24.16	347	P	P	18 55 21.4	-0.5		baz=164
V53A	Saluda	24.19	9	eP	P	18 55 22.6	+0.4		comp=Z,13nm,1.2s
V53A	Saluda	24.19	9	P	P	18 55 22.0	-0.2		baz=190
W57A	Gilead	24.24	14	eP	P	18 55 22.2	-0.4		comp=Z,31nm,1.5s
W57A	Gilead	24.24	14	P	P	18 55 22.2	-0.4		baz=197
V52A	Sevierville	24.25	7	eP	P	18 55 22.6	-0.1		comp=Z,50nm,2.0s
V52A	Sevierville	24.25	7	P	P	18 55 22.3	-0.5		baz=188
CLTN	Cedars of Leba	24.30	2	eP	P	18 55 23.2	+0.1		comp=Z,10.0nm,0.7s
W58A	Raeford	24.31	16	P	P	18 55 23.3	0.0		baz=199
WVT	Waverly	24.33	359	eP	P	18 55 22.7	-0.7		comp=Z,4.9nm,0.7s
WVT	Waverly	24.33	359	P	P	18 55 22.3	-1.1		baz=178
V54A	Nebo	24.43	10	P	P	18 55 24.1	-0.2		baz=192
U46A	Springville	24.57	358	P	P	18 55 24.8	-0.8		baz=177
U47A	Clarksville	24.64	360	P	P	18 55 25.2	-0.9		baz=179
V55A	Taylorsville	24.64	12	P	P	18 55 26.8	+0.6		baz=194
U50A	Jamestown	24.70	4	P	P	18 55 26.6	-0.2		baz=185,SNR=5.1
U48A	Cassie Pea, Po	24.71	1	P	P	18 55 26.3	-0.6		baz=181
U51A	La Follette	24.74	6	P	P	18 55 26.9	-0.2		baz=187
U49A	Red Boiling Sp	24.74	3	P	P	18 55 28.1	+1.0		baz=183,SNR=6.2
V56A	Mocksville	24.75	13	eP	P	18 55 27.1	-0.1		comp=Z,10.0nm,0.9s
V56A	Mocksville	24.75	13	P	P	18 55 27.3	0.0		baz=195
U52A	Thorn Hill	24.82	7	P	P	18 55 27.7	-0.3		baz=189
U53A	Fall Branch	24.90	9	P	P	18 55 28.3	-0.4		baz=190
TZTN	Tazewell	24.95	7	eP	P	18 55 28.6	-0.5		comp=Z,59nm,2.0s
TZTN	Tazewell	24.95	7	P	P	18 55 28.8	-0.3		baz=188
V57A	Coltrane Farms	24.99	14	P	P	18 55 29.5	0.0		baz=197
V58A	Windy Hill, Pi	25.07	16	P	P	18 55 30.1	-0.1		baz=199,SNR=5.8
U40A	Yellville	25.08	349	P	P	18 55 29.6	-0.7		baz=166,SNR=7.7
PBMO	Poplar Bluff	25.14	354	eP	P	18 55 30.1	-0.7		comp=Z,11nm,0.6s
U54A	Nelsons Funny	25.18	10	eP	P	18 55 31.5	+0.2		comp=Z,17nm,1.1s
U54A	Nelsons Funny	25.18	10	P	P	18 55 30.6	-0.6		baz=192
T47A	Sharon Grove	25.18	0	eP	P	18 55 30.4	-0.7		comp=Z,12nm,0.6s
T47A	Sharon Grove	25.18	0	P	P	18 55 30.2	-1.0		baz=180
HHAR	Hobbs	25.23	347	eP	P	18 55 30.6	-1.0		comp=Z,6.3nm,0.6s
T46A	Princeton	25.24	359	P	P	18 55 30.5	-1.2		baz=178
T45A	Paducah	25.25	357	P	P	18 55 30.1	-1.6		baz=176
WMOK	Wichita Mounta	25.26	337	eP	P	18 55 31.1	-0.8		comp=Z,19nm,0.9s
WMOK	Wichita Mounta	25.26	337	P	P	18 55 32.0	+0.1		baz=152,SNR=20
V59A	Middlesex	25.28	17	P	P	18 55 32.2	+0.1		baz=200
U56A	King	25.29	13	P	P	18 55 32.4	+0.2		baz=195
T50A	Nancy	25.30	4	P	P	18 55 31.2	-1.0		baz=185
U55A	TA2, Sparta	25.30	12	P	P	18 55 32.0	-0.3		baz=194
T51A	Gray	25.32	6	P	P	18 55 32.6	+0.1		baz=187
T49A	Edmonton	25.34	3	eP	P	18 55 31.9	-0.7		comp=Z,10nm,1.1s
T49A	Edmonton	25.34	3	P	P	18 55 31.8	-0.7		baz=183
TUL1	Leonard	25.34	343	eP	P	18 55 31.2	-1.4		comp=Z,12nm,0.8s
TUL1	Leonard	25.34	343	P	P	18 55 32.0	-0.6		baz=160
T53A	Wise	25.52	9	P	P	18 55 33.3	-1.0		baz=190
U57A	Blanch	25.62	15	P	P	18 55 35.6	+0.5		baz=198
NNA	Nana	25.66	156	eP	P	18 55 35.9	+0.2		comp=Z,47nm,1.4s
T54A	Tazewell	25.75	10	P	P	18 55 36.4	0.0		baz=192
U58A	Oxford	25.79	16	P	P	18 55 36.4	-0.3		baz=199
GDL2	Guadalupe Moun	25.83	325	eP	P	18 55 38.1	+0.8		
S48A	Wiedeman Farm,	25.87	2	P	P	18 55 36.8	-0.6		baz=182
T55A	Pulaski	25.95	12	P	P	18 55 38.4	+0.2		baz=194
S44A	Carbondale	25.95	356	P	P	18 55 36.9	-1.2		baz=175
SIUC	Southern Illin	25.97	356	eP	P	18 55 37.1	-1.1		comp=Z,7.4nm,0.8s
S50A	Richmond	25.99	5	P	P	18 55 38.5	0.0		baz=186
T56A	Rocky Mt	26.02	13	P	P	18 55 38.6	-0.2		baz=196
S51A	Beattyville	26.03	6	eP	P	18 55 38.2	-0.6		comp=Z,9.8nm,0.6s
S51A	Beattyville	26.03	6	P	P	18 55 38.5	-0.4		baz=188
S49A	Springfield	26.03	3	P	P	18 55 38.0	-0.9		baz=184
MNTX	Cornudas Mount	26.05	323	eP	P	18 55 39.4	+0.3		comp=Z,4.9nm,0.7s
MNTX	Cornudas Mount	26.05	323	P	P	18 55 40.1	+0.9		baz=136,SNR=13
T57A	Hurt	26.18	14	eP	P	18 55 40.7	+0.6		comp=Z,9.9nm,1.0s
T57A	Hurt	26.18	14	P	P	18 55 40.1	0.0		baz=198
S53A	Williamson	26.26	9	P	P	18 55 40.3	-0.7		baz=191
T58A	Grand View Acr	26.31	16	P	P	18 55 40.6	-0.7		baz=199
MSTX	Muleshoe	26.36	330	eP	P	18 55 41.5	-0.5		comp=Z,29nm,0.7s
MSTX	Muleshoe	26.36	330	P	P	18 55 42.0	-0.1		baz=143,SNR=15
WCI	Wyandotte Cave	26.43	2	eP	P	18 55 41.9	-0.6		comp=Z,8.4nm,0.8s
WCI	Wyandotte Cave	26.43	2	P	P	18 55 41.9	-0.6		baz=182
R47A	Wooly Knot Far	26.49	1	P	P	18 55 41.9	-1.1		baz=181
CCM	Cathedral Cave	26.50	353	eP	P	18 55 42.6	-0.4		comp=Z,4.1nm,0.8s
CCM	Cathedral Cave	26.50	353	P	P	18 55 43.1	0.0		baz=171
R45A	Skylar, Fairfi	26.50	358	P	P	18 55 42.6	-0.5		baz=177
AMTX	Amarillo	26.59	333	eP	P	18 55 43.8	-0.3		comp=Z,13nm,0.7s
R50A	Paris	26.59	5	P	P	18 55 43.4	-0.5		baz=186
S55A	Lewisburg	26.64	12	P	P	18 55 44.2	-0.2		baz=194
R51A	Hillsboro	26.68	6	P	P	18 55 44.7	0.0		baz=188
U32A	Winter Ranch,	26.80	338	eP	P	18 55 44.5	-1.3		comp=Z,36nm,1.1s
R53A	Hurricane	26.93	9	eP	P	18 55 46.1	-0.8		comp=Z,67nm,2.0s
R53A	Hurricane	26.93	9	P	P	18 55 46.1	-0.8		baz=191
S58A	Poland Farm, P	27.07	16	P	P	18 55 48.0	-0.1		baz=200
Q45A	Warren Harvey,	27.10	358	P	P	18 55 47.5	-0.9		baz=178
Q47A	Bedord North L	27.13	1	P	P	18 55 47.7	-1.0		baz=181
Q48A	North Vernon	27.15	2	P	P	18 55 47.9	-1.0		baz=183
Q49A	Aurora	27.27	4	P	P	18 55 49.2	-0.8		baz=185
Q51A	Peebles	27.43	6	eP	P	18 55 50.9	-0.5		comp=Z,28nm,0.6s
Q51A	Peebles	27.43	6	P	P	18 55 51.4	-0.1		baz=188,SNR=14
Q52A	Bidwell	27.50	8	P	P	18 55 51.5	-0.5		baz=190
R57A	Stanardsville	27.59	15	P	P	18 55 52.9	0.0		baz=198
P48A	Milroy	27.69	3	P	P	18 55 52.6	-1.2		baz=183
P45A	Graceland, Par	27.72	359	P	P	18 55 53.1	-0.9		baz=178
R58A	Rapidan	27.72	16	P	P	18 55 53.9	-0.1		baz=199
Q54A	Coxs Mills	27.75	11	P	P	18 55 54.2	0.0		baz=193
P49A	Miami Univ. Ec	27.81	4	P	P	18 55 54.0	-0.8		baz=185
Q55A	Buckhannon	27.91	12	P	P	18 55 55.8	+0.1		baz=195
P50A	Jamestown	27.96	6	P	P	18 55 55.8	-0.3		baz=187
121A	Cookes Peak, D	28.09	321	P	P	18 55 59.5	+1.9		baz=133
Q56A	Snyder Ridge,	28.14	13	P	P	18 55 57.6	-0.2		baz=196
P53A	Whipple	28.14	9	eP	P	18 55 57.0	-0.8		comp=Z,33nm,1.5s
P53A	Whipple	28.14	9	P	P	18 55 57.3	-0.5		baz=192
P52A	Corning	28.18	8	P	P	18 55 57.5	-0.6		baz=190
P55A	Reedsville	28.45	12	P	P	18 56 00.7	+0.1		baz=195
Q49A	Covington	28.48	5	P	P	18 55 59.7	-1.2		baz=186
Q48A	Farmland	28.50	3	P	P	18 55 59.8	-1.1		baz=184
O50A	Cable	28.51	6	P	P	18 56 00.4	-0.7		baz=187
SFIN	Lafayette	28.57	0	P	P	18 56 00.4	-1.1		baz=180
O51A	Pataskala	28.62	7	P	P	18 56 01.5	-0.6		baz=189
Q59A	Harwood	28.62	17	P	P	18 56 00.2	-1.8		baz=202
ACSO	Alum Creek Sta	28.66	7	eP	P	18 56 01.7	-0.6		comp=Z,13nm,0.6s
ACSO	Alum Creek Sta	28.66	7	P	P	18 56 02.0	-0.4		baz=188
O52A	Adamsville	28.69	9	P	P	18 56 02.4	-0.2		baz=191
LENM	Lemitar	28.76	324	eP	P	18 56 05.1	+1.6		
P57A	Homestead Farm	28.84	15	P	P	18 56 04.4	+0.4		baz=199
O53A	New Philadelph	28.92	9	P	P	18 56 04.6	-0.1		baz=192
ANMO	Albuquerque	29.04	326	P	P	18 56 06.9	+0.9		comp=Z,1.8nm,0.8s,baz=133,slow=11,SNR=6.9
ANMO	Albuquerque	29.04	326	eP	P	18 56 07.1	+1.0		comp=Z,2.2nm,0.8s
ANMO	Albuquerque	29.04	326	P	P	18 56 06.6	+0.6		baz=138
TASM	ASL Pad, Albuq	29.04	326	P	P	18 56 07.0	+0.9		baz=138
TASM	ASL Pad, Albuq	29.04	326	P	P	18 56 06.6	+0.6		baz=138
Q61A	Milford	29.05	19	P	P	18 56 06.3	+0.5		baz=204
N46A	Monticello	29.09	1	P	P	18 56 05.2	-0.9		baz=181
N43A	Stutzman Famil	29.18	357	P	P	18 56 06.0	-1.0		baz=176
N49A	Columbus Grove	29.23	5	eP	P	18 56 04.9	-2.5		comp=Z,8.6nm,0.6s
N49A	Columbus Grove	29.23	5	P	P	18 56 05.9	-1.5		baz=186
P59A	Jarrettsville	29.38	17	P	P	18 56 09.0	+0.2		baz=202
O56A	Blue Knob Stat	29.45	13	P	P	18 56 09.3	-0.1		baz=197
N53A	Lisbon	29.52	10	P	P	18 56 09.7	-0.3		baz=192
O57A	Amberson	29.62	15	P	P	18 56 10.5	-0.4		baz=199
M43A	Waltham Townsh	29.66	357	P	P	18 56 10.8	-0.4		baz=176
T25A	Trinidad	29.70	331	P	P	18 56 12.5	+0.6		baz=144
M50A	Fremont	29.81	6	P	P	18 56 11.8	-0.8		baz=188
N54A	Moraine State	29.82	11	P	P	18 56 11.9	-0.8		baz=194
SSPA	Standing Stone	29.96	14	P	P	18 56 13.4	-0.5		baz=198
O59A	Robesonia	30.10	17	P	P	18 56 15.1	0.0		baz=202
N56A	West Decatur	30.13	13	P	P	18 56 15.2	-0.3		baz=197
N57A	Milroy	30.16	15	P	P	18 56 15.9	+0.2		baz=199
M53A	WI Miller and	30.17	10	P	P	18 56 15.6	-0.2		baz=192
L42A	Oliver, Polo	30.27	356	P	P	18 56 15.7	-0.9		baz=175
M54A	Oil Creek Stat	30.41	11	P	P	18 56 17.8	-0.1		baz=194
KSCO	Kaye Shedlock'	30.49	336	P	P	18 56 19.2	+0.4		baz=149
SCIA	State Center	30.56	351	P	P	18 56 18.9	-0.3		baz=168
M56A	Emporium	30.70	13	P	P	18 56 20.1	-0.3		baz=197
SDCO	Great Sand Dun	30.70	331	eP	P	18 56 21.0	+0.1		comp=Z,4.7nm,0.9s
SDCO	Great Sand Dun	30.70	331	P	P	18 56 21.9	+1.0		baz=143,SNR=10
L53A	Girard	30.74	10	P	P	18 56 20.2	-0.6		baz=193
N59A	State Game Lan	30.78	17	eP	P	18 56 20.7	-0.5		comp=Z,7.6nm,0.7s
ERPA	Erie	30.94	10	P	P	18 56 21.9	-0.6		baz=194
K48A	Perry	31.10	4	P	P	18 56 22.9	-1.1		baz=186
BGNE	Belgrade	31.13	344	P	P	18 56 23.6	-0.6		baz=159
S22A	4UR Ranch, Cre	31.36	329	P	P	18 56 27.6	+1.0		baz=141,SNR=6.3
J48A	Bridge Port	31.62	5	P	P	18 56 28.3	-0.2		baz=186
X16A	Lo Mia Camp, P	31.63	320	eP	P	18 56 31.1	+2.1		comp=Z,4.7nm,0.6s
J49A	Marlette	31.74	6	P	P	18 56 28.7	-0.8		baz=187
M61A	Granite Spring	31.75	19	P	P	18 56 29.8	+0.1		baz=205
MVCO	Mesa Verde	31.82	327	eP	P	18 56 31.3	+0.6		comp=Z,4.5nm,0.7s
MVCO	Mesa Verde	31.82	327	P	P	18 56 31.0	+0.4		baz=137
BINY	Binghamton	31.91	16	P	P	18 56 31.2	+0.1		baz=201
I42A	Draeger Farm,	32.11	358	P	P	18 56 32.5	-0.3		baz=177
WUAZ	Wupatki	32.30	321	P	P	18 56 36.6	+1.8		baz=131
J54A	Appleton	32.31	12	P	P	18 56 34.4	-0.2		baz=196
I49A	Point Hope	32.34	6	P	P	18 56 33.9	-0.9		baz=188
ACTO	Acton	32.38	10	P	P	18 56 34.6	-0.6		baz=193
ISCO	Idaho Springs	32.41	333	P	P	18 56 35.9	0.0		baz=144
I51A	Listowel	32.42	8	P	P	18 56 34.9	-0.7		baz=191
PV01	Paradox Valley	32.55	328	eP	P	18 56 37.9	+0.9		comp=Z,2.7nm,0.8s
BASO	Ashfield	32.55	7	P	P	18 56 36.2	-0.4		baz=190
PV02	Paradox Valley	32.69	328	eP	P	18 56 38.7	+0.5		comp=Z,8.6nm,1.1s
PV13	Radium Mtn., P	32.70	327	eP	P	18 56 39.5	+1.2		comp=Z,6.6nm,0.6s
PV03	Paradox Valley	32.78	327	eP	P	18 56 39.3	+0.2		comp=Z,13nm,0.6s
PV05	Paradox Valley	32.78	327	eP	P	18 56 39.8	+0.7		comp=Z,12nm,0.6s
PV12	Saucer Basin,	32.80	328	eP	P	18 56 40.0	+0.8		comp=Z,24nm,0.6s
PV18	Skein Mesa, Pa	32.81	327	eP	P	18 56 40.3	+1.1		comp=Z,23nm,0.6s
I52A	Shelburne	32.81	9	P	P	18 56 38.4	-0.5		baz=192
PV11	David Mesa, Pa	32.83	328	eP	P	18 56 40.4	+0.9		comp=Z,20nm,0.6s
PV17	East Wray Mesa	32.86	327	eP	P	18 56 40.5	+0.8		comp=Z,26nm,0.6s
PV16	Nyswonger Mesa	32.86	327	eP	P	18 56 40.4	+0.6		comp=Z,12nm,0.6s
PV19	Morning Glory	32.89	327	eP	P	18 56 41.2	+1.2		comp=Z,16nm,0.6s
PV20	West Nyswonger	32.91	327	eP	P	18 56 40.9	+0.8		comp=Z,12nm,0.6s
PV04	Paradox Valley	32.91	328	eP	P	18 56 41.0	+0.8		comp=Z,9.7nm,0.6s
ECSD	EROS Data Cent	32.95	347	eP	P	18 56 38.4	-1.8		comp=Z,7.1nm,0.6s
ECSD	EROS Data Cent	32.95	347	P	P	18 56 38.6	-1.6		baz=163,SNR=12
PV22	Blue Mesa, Par	32.96	328	eP	P	18 56 41.8	+1.2		comp=Z,4.3nm,0.6s
WLVO	Wesleyville	32.99	12	P	P	18 56 39.8	-0.6		baz=196
PV23	Carpenter Ridg	33.01	328	eP	P	18 56 42.3	+1.1		comp=Z,8.2nm,0.7s
H48A	Harrisville	33.05	5	eP	P	18 56 39.6	-1.5		comp=Z,25nm,0.6s
H48A	Harrisville	33.05	5	P	P	18 56 39.5	-1.5		baz=187
BMRO	Meriville Lake	33.18	8	P	P	18 56 40.8	-1.3		baz=190
I55A	Frankford	33.41	12	P	P	18 56 43.9	-0.3		baz=197
G47A	Hillman	33.48	4	P	P	18 56 43.9	-0.9		baz=186
G40A	Rib Lake	33.55	356	eP	P	18 56 43.3	-2.2		comp=Z,3.3nm,0.9s
G40A	Rib Lake	33.55	356	P	P	18 56 43.8	-1.6		baz=174
G39A	Holcombe	33.65	355	P	P	18 56 44.8	-1.4		baz=173
SADO	Sadowa	33.66	10	P	P	18 56 45.0	-1.4		comp=Z,5.3nm,0.6s,baz=252,slow=8.3,SNR=9.6
SADO	Sadowa	33.66	10	eP	P	18 56 45.2	-1.2		comp=Z,5.8nm,0.6s
TOBO	Tobermory, Bru	33.76	7	P	P	18 56 46.2	-0.9		baz=190
SPMN	Marine on St.	33.76	353	eP	P	18 56 45.1	-2.1		comp=Z,12nm,0.4s
SPMN	Marine on St.	33.76	353	P	P	18 56 45.8	-1.4		baz=170,SNR=5.3
BC3	Big Chuckawall	33.85	315	P	P	18 56 50.1	+1.8		baz=124
O20A	White River Ci	33.90	330	eP	P	18 56 49.3	+0.5		comp=Z,11nm,0.7s
O20A	White River Ci	33.90	330	P	P	18 56 50.0	+1.2		baz=141,SNR=8.4
KLBO	Killbear Provi	34.06	9	P	P	18 56 48.8	-1.0		baz=192
H56A	Elgin	34.09	14	P	P	18 56 49.6	-0.4		baz=199
G53A	Haliburton	34.10	11	P	P	18 56 49.1	-1.1		baz=195
F40A	Park Falls	34.20	356	P	P	18 56 49.1	-1.9		baz=175
F49A	Sandfield	34.23	6	P	P	18 56 49.9	-1.4		baz=189
F48A	Evansville	34.23	6	P	P	18 56 49.9	-1.4		baz=188
F39A	Loretta	34.25	355	P	P	18 56 49.3	-2.2		baz=173,SNR=6.6
BUKO	Buck Lake	34.27	10	P	P	18 56 50.3	-1.4		baz=193
SRU	San Rafael Swe	34.30	327	eP	P	18 56 52.8	+0.5		comp=Z,12nm,0.6s
COWI	Conover	34.33	358	eP	P	18 56 49.3	-2.9		comp=Z,5.5nm,0.6s
PLVO	Plevna	34.33	13	P	P	18 56 51.9	-0.2		baz=198
F38A	Pierce - Schro	34.38	354	P	P	18 56 50.6	-2.0		baz=172
BELC	Belle Mtn. Jos	34.42	315	P	P	18 56 54.9	+1.6		baz=123
LCMT	Little Creek M	34.42	321	eP	P	18 56 54.4	+1.2		comp=Z,6.6nm,1.1s
MTPU	Mount Pierson	34.47	324	eP	P	18 56 54.7	+0.8		comp=Z,6.0nm,0.8s
Q16A	Castle Valley	34.51	326	eP	P	18 56 55.0	+1.0		comp=Z,4.4nm,0.6s
LONY	Lake Ozonia	34.54	16	eP	P	18 56 53.2	-0.8		comp=Z,6.3nm,0.8s
LONY	Lake Ozonia	34.54	16	P	P	18 56 53.6	-0.4		baz=202
E43A	Lone Tree Farm	34.56	0	P	P	18 56 52.3	-1.9		baz=180,SNR=7.0
G55A	Calabogie	34.61	13	P	P	18 56 53.8	-0.8		baz=198
F52A	Sundridge	34.63	10	P	P	18 56 53.7	-1.1		baz=193
P17A	Butcher Ranch,	34.68	327	eP	P	18 56 56.2	+0.7		comp=Z,14nm,0.7s
MSU	Marysvale	34.79	324	eP	P	18 56 57.5	+0.9		
E47A	Iron Bridge	34.80	5	P	P	18 56 55.0	-1.2		baz=186
PEMO	Pembroke	34.90	12	P	P	18 56 56.3	-0.8		baz=197
E48A	Lockeyer	34.92	6	P	P	18 56 55.9	-1.3		baz=188
LBNH	Lisbon	34.98	19	P	P	18 56 57.0	-0.8		baz=206
E38A	The Farm, Brul	34.99	355	eP	P	18 56 55.6	-2.2		comp=Z,5.8nm,0.8s
E38A	The Farm, Brul	34.99	355	P	P	18 56 56.1	-1.7		baz=172
ALGO	Algonquin Park	35.01	11	P	P	18 56 56.8	-1.2		baz=196
E50A	Wahnapitae	35.03	8	P	P	18 56 57.1	-1.1		

baz=191
K22A Casper 35.14 335 P P 18 56 59.1 -0.3
baz=146
E52A Mattawa 35.22 10 P P 18 56 58.6 -1.2
baz=194
D41A Chassel 35.27 358 P P 18 56 58.9 -1.3
baz=177
E51A G1948 Merrick 35.32 9 P P 18 56 59.6 -1.1
baz=193
D47A Chapleau 35.41 5 P P 18 56 59.9 -1.6
baz=187
RSSD Black Hills 35.43 339 eP P 18 57 02.2 +0.3
comp=Z,3.9nm,0.7s
RSSD Black Hills 35.43 339 P P 18 57 02.1 +0.2
baz=150
E54A Lac Daplat, Po 35.64 12 P P 18 57 02.2 -1.2
baz=197
D48A Paudash Townsh 35.65 6 P P 18 57 01.9 -1.5
baz=189,SNR=8.3
GSC Goldstone, Bar 35.69 316 P P 18 57 05.2 +1.0
baz=124
PSUT Pine Spring 35.78 323 eP P 18 57 06.6 +1.6
comp=Z,4.7nm,0.7s
D49A Beulah Townshi 35.79 7 P P 18 57 03.3 -1.4
baz=190,SNR=5.3
JLU Jordanelle 35.87 328 eP P 18 57 04.2 -1.6
comp=Z,5.8nm,0.6s
D52A ZEK Kipawa Sen 35.93 10 P P 18 57 04.5 -1.4
baz=194
C40A Isle Royale Na 36.14 358 P P 18 57 05.8 -1.8
baz=176
D53A Lac Vacive, Po 36.16 11 P P 18 57 07.0 -0.9
baz=196
TCUT Toone Canyon 36.22 328 eP P 18 57 09.5 +0.7
comp=Z,11nm,0.8s
TPNV Topopah Spring 36.27 319 eP P 18 57 10.9 +1.7
comp=Z,3.5nm,0.9s
EDW2 Edwards Air Fo 36.28 315 P P 18 57 11.0 +1.8
baz=122
DUG Dugway, Tooele 36.31 326 eP P 18 57 10.2 +0.7
comp=Z,3.3nm,0.9s
DUG Dugway, Tooele 36.31 326 P P 18 57 10.5 +1.0
baz=134
EYMN Ely 36.31 355 P P 18 57 06.8 -2.4
baz=173
FURC Furnace Creek, 36.39 318 P P 18 57 12.1 +2.2
baz=125
D54A Lac Fusel, La 36.43 12 P P 18 57 09.2 -1.0
baz=197
PD31 Pinedale Array 36.57 332 eP P 18 57 11.3 -0.4
comp=Z,3.8nm,0.6s
PDAR Pinedale Array 36.57 332 P P 18 57 11.7 -0.1
comp=Z,4.3nm,0.6s,baz=127,slow=10.0,SNR=45
PDAR PcP PcP 18 59 34.1 -0.2
comp=Z,0.3nm,0.7s,baz=176,slow=2.7,SNR=2.6
BW06 Boulder Array 36.57 332 eP P 18 57 11.2 -0.5
comp=Z,4.3nm,0.6s
BW06 Boulder Array 36.57 332 P P 18 57 11.6 -0.1
baz=141,SNR=8.0
MPMC Manual Prospec 36.57 317 P P 18 57 13.4 +1.6
baz=124
HWUT Hardware Ranch 36.66 329 eP P 18 57 12.6 +0.1
comp=Z,12nm,0.6s
R11A Troy Canyon, C 36.70 321 eP P 18 57 14.0 +1.1
comp=Z,1.4nm,0.9s
R11A Troy Canyon, C 36.70 321 P P 18 57 13.3 +0.4
baz=129
PKME Peaks-Kenny Pk 36.77 21 P P 18 57 12.9 -0.2
baz=210
BGU Big Grassy Mou 36.94 327 eP P 18 57 15.4 +0.5
comp=Z,4.6nm,1.1s
AGMN Agassiz Nation 37.20 350 eP P 18 57 14.7 -2.0
comp=Z,9.1nm,0.4s
AGMN Agassiz Nation 37.20 350 P P 18 57 15.2 -1.5
baz=166
AHID Auburn Hatcher 37.30 330 eP P 18 57 16.4 -1.4
comp=Z,12nm,0.6s
HVU Hansel Valley 37.41 328 eP P 18 57 18.8 0.0
comp=Z,5.8nm,0.8s
MDND Maddock 37.52 346 P P 18 57 18.3 -1.1
baz=160
REDW Red Top Meadow 37.63 331 eP P 18 57 20.9 +0.2
comp=Z,26nm,0.6s
SNOW Snow King Moun 37.66 332 eP P 18 57 20.7 -0.3
comp=Z,23nm,0.6s
LOHW Long Hollow 37.71 332 eP P 18 57 21.0 -0.4
comp=Z,3.8nm,0.6s
TPAW Teton Pass 37.77 331 eP P 18 57 22.4 +0.4
comp=Z,12nm,0.6s
MOOW Moose Ponds 37.88 332 eP P 18 57 22.6 -0.2
comp=Z,6.3nm,0.7s
FXWY Fox Creek 37.92 331 eP P 18 57 23.2 0.0
comp=Z,2.4nm,0.7s
ELK Elko 38.04 325 eP P 18 57 25.3 +1.0
comp=Z,3.4nm,0.8s
IMW Indian Meadow 38.08 332 eP P 18 57 24.3 -0.3
comp=Z,4.3nm,0.6s
FLWY Flagg Ranch 38.11 332 eP P 18 57 24.9 +0.2
comp=Z,7.4nm,0.8s
LSQQ Lebel-sur-Quev 38.19 11 P P 18 57 23.5 -1.6
baz=196
RLMT Red Lodge 38.30 335 eP P 18 57 26.1 -0.3
comp=Z,5.8nm,0.6s
RLMT Red Lodge 38.30 335 P P 18 57 26.0 -0.3
baz=143,SNR=6.3
YPP Pitchstone Pla 38.31 332 eP P 18 57 26.3 -0.2
comp=Z,1.8nm,0.8s
NV01 Mina Array Sit 38.46 319 ePcP PcP 18 59 42.0 +1.8
NVAR Mina Array Bea 38.46 319 P P 18 57 29.8 +2.0
comp=Z,1.4nm,0.7s,baz=134,slow=8.0,SNR=11
NVAR PcP PcP 18 59 42.0 +1.8
comp=Z,2.1nm,0.7s,baz=133,slow=4.4,SNR=16
KVN Kaiserville 38.69 320 eP P 18 57 31.0 +1.4
comp=Z,2.8nm,0.9s
MATQ Matagami 38.75 10 P P 18 57 28.6 -1.2
baz=195,SNR=5.7
YHB Horse Butte 38.85 332 eP P 18 57 32.0 +1.0
comp=Z,6.1nm,0.8s
BMN Battle Mountai 38.99 323 eP P 18 57 32.5 +0.3
comp=Z,4.7nm,0.9s
ULM Lac du Bonnet 39.10 351 P P 18 57 30.1 -2.6
comp=Z,7.2nm,0.5s,baz=162,slow=7.9,SNR=7.0
ULM Lac du Bonnet 39.10 351 eP P 18 57 30.0 -2.7
comp=Z,7.9nm,0.6s
DGMT Dagmar 39.32 342 P P 18 57 34.2 -0.4
baz=153
HLID Hailey 39.53 328 eP P 18 57 37.1 +0.6
comp=Z,3.8nm,0.8s
HLID Hailey 39.53 328 P P 18 57 37.2 +0.6
baz=135,SNR=11
CHGQ Chibougamau 39.53 13 P P 18 57 34.7 -1.6
baz=200
MCMT McKenzie Canyo 39.68 331 eP P 18 57 38.9 +1.0
BOZ Bozeman (W) 39.70 333 eP P 18 57 38.0 0.0
comp=Z,5.6nm,0.6s
BOZ Bozeman (W) 39.70 333 P P 18 57 38.3 +0.3
baz=140,SNR=6.0
DLMT Dillon 39.96 332 eP P 18 57 40.3 +0.1
comp=Z,5.2nm,0.8s
HRY Holter Researc 40.66 334 eP P 18 57 46.0 +0.2
EGMT Eagleton 40.85 337 P P 18 57 46.8 -0.6
baz=145
WVOR Wild Horse Val 41.08 324 eP P 18 57 50.0 +0.6
comp=Z,5.3nm,0.9s
MSO Missoula 41.68 332 P P 18 57 53.7 -0.5
baz=138
BMO Blue Mountains 41.92 328 eP P 18 57 55.1 -1.1
comp=Z,3.2nm,0.8s
I07A Izee 42.61 325 eP P 18 58 01.1 -0.7
comp=Z,3.7nm,1.2s
F10A Beach Ranch, E 42.65 329 eP P 18 58 01.1 -1.0
comp=Z,5.8nm,0.7s
L04D Klamath Falls 43.13 321 P P 18 58 06.1 0.0
baz=124
I05D Terrebonne, OR 43.80 324 P P 18 58 11.7 +0.4
baz=127
I04A Tendick Farm, 44.10 323 P P 18 58 13.7 -0.1
baz=126
NEW Newport 44.20 331 P P 18 58 13.9 -0.6
baz=135
D08A Wollman Farm, 44.24 329 eP P 18 58 14.6 -0.2
comp=Z,8.0nm,0.7s
FFC Flin Flon 44.49 348 eP P 18 58 15.6 -1.0
comp=Z,69nm,0.6s
D03D Eldon 46.72 327 P P 18 58 34.2 -0.1
baz=128
CPUP Villa Florida 47.65 143 P P 18 58 42.3 +0.5
comp=Z,3.6nm,0.6s,baz=339,slow=8.4,SNR=11

LLLB Lillooet 48.07 331 eP P 18 58 44.6 -0.3
comp=Z,5.7nm,0.7s
YKA Yellowknife Ar 54.41 345 P P 18 59 30.8 -1.3
comp=Z,3.8nm,0.7s,baz=139,slow=7.5,SNR=18
DLBC Dease Lake 56.71 335 eP P 18 59 48.9 +0.1
comp=Z,4.3nm,0.8s
EPYK Eagle Plains 63.87 340 P P 19 00 36.5 -1.1
baz=124
INK Inuvik 64.00 343 eP P 19 00 37.4 -0.9
comp=Z,4.0nm,0.9s
DOT Dot Lake 65.23 336 eP P 19 00 45.7 -0.7
comp=Z,3.0nm,0.8s
RIDG Independent Ri 65.58 336 eP P 19 00 48.4 -0.4
comp=Z,4.6nm,1.0s
PRP Porcupine Dome 66.60 337 eP P 19 00 53.2 -2.1
comp=Z,7.4nm,0.6s
HDA Harding Lake 66.70 336 eP P 19 00 54.7 -1.1
comp=Z,3.5nm,0.8s
HDA Harding Lake 66.70 336 P P 19 00 55.3 -0.6
baz=113
ILAR Eielson Array 66.82 336 P P 19 00 55.6 -1.0
comp=Z,1.7nm,0.8s,baz=153,slow=4.5,SNR=18
ILB Eielson Array 66.82 336 eP P 19 00 55.3 -1.3
comp=Z,3.0nm,0.9s
RND Reindeer 67.11 335 eP P 19 00 57.5 -1.1
comp=Z,8.8nm,0.7s
POKR Poker Plat Res 67.17 337 P P 19 00 58.6 -0.3
baz=112
ESDC Sonseca Array 77.42 52 P P 19 01 57.9 -2.7
comp=Z,0.5nm,0.7s,baz=294,slow=6.2,SNR=4.8
VYHS Vyhne 91.67 40 eP P 19 03 11.9 -0.5
SONA0 Songino Array 119.52 350 ePKPdf PKPdf 19 08 54.1 -0.8
SONM Songino Array 119.52 350 PKP PKPdf 19 08 54.1 -0.8
comp=Z,0.4nm,0.6s,baz=334,slow=4.0,SNR=3.9
MK32 Makanchi Array 121.01 8 ePKPdf PKPdf 19 08 58.5 +0.9
MKAR Makanchi Array 121.01 8 PKP PKPdf 19 08 58.5 +0.9
comp=Z,0.2nm,0.7s,baz=46,slow=4.6,SNR=2.6
KSRS Korea Array 121.06 328 PKP PKiKP 19 08 59.2 +1.2
comp=Z,1.8nm,0.7s,baz=6.4,slow=1.9,SNR=14
KSH Kashi 126.68 16 ePKP PKiKP 19 09 12.1 +2.8
LZH Lanzhou 131.35 348 ePKP PKPdf 19 09 18.8 +0.9
LZH sPKP 19 09 28.0
LZH pPKP pPKPdf 19 09 32.6 -0.6
AS31 Alice Springs 139.25 247 ePKPpre PKPpre 19 09 25.4
ASAR Alice Springs 139.25 247 PKhKP PKPpre 19 09 25.4
comp=Z,0.3nm,0.7s,baz=110,slow=3.5,SNR=4.7
ASAR PKP PKPdf 19 09 34.0 +1.3
comp=Z,0.8nm,0.7s,baz=120,slow=3.9,SNR=6.2
WRA Warramunga Arr 139.33 253 PKP PKiKP 19 09 34.8 -0.4
comp=Z,1.6nm,0.7s,baz=113,slow=1.9,SNR=10
CM31 Chiang Mai Arr 149.44 349 ePKPbc PKPbc 19 09 55.8 +0.9
CMAR Chiang Mai Arr 149.44 349 PKP PKPdf 19 09 51.8 +1.3
comp=Z,1.9nm,0.6s,baz=298,slow=1.9,SNR=11
CMAR PKPbc PKPbc 19 09 55.9 +1.0
comp=Z,2.0nm,0.6s,baz=326,slow=2.7,SNR=18

IDC 15 18:51:17.0±1.7, 34°.19N×25°.10E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/38, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=30.0km s-min=22.7km az=105.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	1.11	351	Pn	Pb	18 51 39.6	+0.4
13nm,0.3s,baz=168,slow=19,SNR=7.7							
IDI				Sn	Sn	18 51 57.7	+1.6
12nm,0.3s,baz=69,slow=11,SNR=3.8							
GERES	GERESS Array B	16.92	333	Pn	P	18 55 16.6	-0.7
0.1nm,0.3s,baz=137,slow=12,SNR=5.0							
TORD	Torodi Ar. Bea	29.83	231	P	P	18 57 25.9	-0.1
0.3nm,0.5s,baz=34,slow=9.2,SNR=4.5							
MKAR	Makanchi Array	44.36	56	P	P	18 59 29.1	+0.1
0.1nm,0.4s,baz=272,slow=8.6,SNR=2.7							

SJA 15 19:00:17.5±0.6, 31°.02S×67°.52W, h31km±1km, ML3.2, MW3.6, 1C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMOG	MOGNA	0.84	275	eP	Pb	19 00 34.8	+1.1
AMOG				eS	Sb	19 00 46.7	+1.9
CFA	Coronel Fontan	0.85	227	eP	Pb	19 00 34.3	+0.5
CFA				IAML		19 00 46.6	
CFA				eS	Sb	19 00 46.8	+1.9
RTLL	Cerro Villicun	0.88	249	eP	Pb	19 00 35.2	+1.0
RTLL				⇑eSg	Sn	19 00 42.4	-3.2
RTLL				eS	Sb	19 00 47.5	+1.7
SJA	San Juan	1.03	240	eP	Pb	19 00 37.7	+0.9
SJA				eS	Sb	19 00 52.0	+2.0
SJA				IAML		19 00 53.9	
comp=Z,439nm,0.1s							
SJA				AMSG		19 00 54.0	
comp=Z,21μm,0.1s							
ZON	Zonda	1.12	242	eP	Pb	19 00 39.1	+0.7
ZON				eS	Sb	19 00 55.0	+2.2
ZON				IAML		19 00 55.6	
comp=Z,540nm,0.3s							
ZON				AMSG		19 00 55.8	
comp=Z,13μm,0.3s							
RTCV	Cerro Valdivia	1.21	226	eP	Pb	19 00 40.3	+0.4
RTCV				eS	Sb	19 00 57.2	+2.0
ACAN	Cantantal	1.28	168	eP	Pb	19 00 41.3	+0.3
RTLS	Leoncito	1.71	243	eP	Pb	19 00 49.0	+0.5
RTLS				eS	Sb	19 01 10.5	+0.8
RTLS				IAML		19 01 14.7	
comp=Z,227nm,0.2s							
AUSP	Uspallata	2.00	233	eP	Pb	19 00 53.8	+0.5
AUSP				eS	Sb	19 01 17.6	-0.3
MRA	San Martin	2.07	133	eP	Pb	19 00 52.9	-1.6
MRA				IAML		19 01 23.8	
comp=Z,241nm,0.3s							
TCA	Tanti	2.52	98	eP	Pn	19 00 58.5	+2.1
TCA				IAML		19 01 44.9	
comp=Z,93nm,0.4s							
CYA	Choya	2.97	31	eP	Pn	19 01 05.0	+2.4
CYA				IAML		19 01 59.6	
comp=Z,42nm,0.2s							
GO03	Copiap	4.16	325	eP	Pn	19 01 22.5	+3.5

*IDC **15** 19:02:01.2±0.9, 34°.24N×25°.07E, h0km, mb3.9/10, mb1 4.0/17, mb1mx3.8/46, mbtmp3.9/17, ML4.0/7, Error ellipse: s-maj=17.5km s-min=14.7km az=22.0*
*ISCJB **15** 19:02:02.5±1.2, 34°.09N±0°.05×25°.08E±0°.04, h22km±8km, mb3.8/13, Error ellipse: s-maj=8.6km s-min=5.5km az=11.9*
*ATH **15** 19:02:04.8, 34°.28N×25°.06E, h26km±2km, ML3.3/5, Error ellipse: s-maj=4.9km s-min=1.6km az=342.0*
*THE **15** 19:02:05.6, 34°.33N×25°.04E, h0km±2km, ML3.3/3, Error ellipse: s-maj=4.2km s-min=1.1km az=192.0*

ISC 15 19:02:03.7±1.6, 34°.20N±0°.06×25°.06E±0°.04, h17km±9km, n67, σ1°47/77, mb3.9/13, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.84	346	P	Pg	19 02 19.6	-0.4
SIVA				S	Sb	19 02 30.6	-0.2
SIVA	Sivas	0.84	346	P	Pg	19 02 19.7	-0.4
SIVA				S	Sn	19 02 31.3	-1.4
SIVA				AML	AML	19 02 38.1	
comp=N,10176μm,0.4s							
SIVA				AML	AML	19 02 39.0	
comp=E,17540μm,0.9s							
TMBK	Timbaki Herakl	0.90	344	P	Pb	19 02 21.1	+0.2
LAST	Lasithi	1.02	20	P	Pg	19 02 22.8	-0.7
LAST				S	Sn	19 02 36.7	-0.5
LAST	Lasithi	1.02	20	P	Pg	19 02 22.8	-0.7
LAST				S	Sb	19 02 35.8	-0.2
LAST				AML	AML	19 02 42.6	
comp=E,1982μm,0.7s							
LAST				AML	AML	19 02 44.0	
comp=N,1882μm,0.5s							
GVD	Gavdhos	1.02	309	P	Pg	19 02 23.3	-0.3
GVD	Gavdhos	1.02	309	P	Pg	19 02 23.5	-0.1
GVD				S	Sn	19 02 38.5	+1.2
GVD				AML	AML	19 02 45.2	
comp=E,5727μm,0.5s							
GVD				AML	AML	19 02 49.4	
comp=N,5222μm,0.4s							
IDI	Anoyia	1.09	353	Pn	Pg	19 02 23.7	-1.2
comp=N,63nm,0.3s,baz=176,slow=19,SNR=55							
IDI				Sn	Sn	19 02 38.5	-0.5
comp=N,75nm,0.3s,baz=108,slow=20,SNR=13							

IDI	Anoyia	1.09	353	P	Pg	19 02 23.0	-1.9
KSTL	Kastelli Herak	1.10	0	P	Pg	19 02 23.1	-1.9
NPS	Neapolis	1.15	23	P	Pg	19 02 25.1	-0.9
NPS	Neapolis	1.15	23	P	Pg	19 02 25.3	-0.7
NPS				S	Sn	19 02 40.9	+0.4
NPS				AML	AML	19 02 46.2	
comp=E,2119μm,0.7s							
NPS				AML	AML	19 02 47.1	
comp=N,1467μm,0.6s							
PRNS	Prines Rethymn	1.25	339	P	Pb	19 02 26.8	0.0
STIA	Sitia Lasithi	1.31	40	P	Pb	19 02 29.0	+1.2
ZKR	Zakros	1.32	46	P	Pn	19 02 28.7	+1.4
ZKR				S	Sn	19 02 46.7	+2.2
ZKR	Zakros	1.32	46	P	Pn	19 02 28.6	+1.2
ZKR				S	Sn	19 02 46.2	+1.6
ZKR				AML	AML	19 02 53.8	
comp=N,1119μm,0.4s							
ZKR				AML	AML	19 03 00.4	
comp=E,2219μm,0.6s							
VAM	Vamos	1.40	330	P	Pn	19 02 29.2	+0.8
VAM	Vamos	1.40	330	P	Pn	19 02 29.5	+1.1
IMMV	Iera Moni Meta	1.54	325	P	Pn	19 02 31.5	+1.2
IMMV	Iera Moni Meta	1.54	325	P	Pb	19 02 32.2	+0.4
KARP	Karpathos	2.19	52	P	Pn	19 02 42.4	+3.1
KARP	Karpathos	2.19	52	P	Pn	19 02 41.8	+2.5
ANKY	Antikythira Is	2.20	320	P	Pn	19 02 41.3	+1.8
THR5	Thira Island,	2.22	6	P	Pn	19 02 40.8	+1.0
ANAF	Anafi Island	2.23	15	P	Pn	19 02 41.4	+1.6
ANAF	Anafi Island	2.23	15	P	Pn	19 02 41.2	+1.3
IOSP	Ios island	2.52	4	P	Pn	19 02 44.5	+0.6
IOSP	Ios island	2.52	4	P	Pn	19 02 44.3	+0.4
APE	Apeiranthos	2.89	7	P	Pn	19 02 49.4	+0.5
DAT	Datca	3.25	38	*i* P	Pn	19 02 55.6	+1.6
DAT				IAML_P			
comp=Z,193nm,0.2s							
TURN	Turunc	3.93	46	*i* P	Pn	19 03 02.0	-1.2
TURN				IAML_P			
comp=Z,998nm,0.2s							
YER	Yerkesik	3.93	41	P	Pn	19 03 05.2	+1.9
FETY	Fethiye	4.09	52	*i* P	Pn	19 03 06.6	+1.2
FETY				IAML_P			
comp=Z,486nm,0.3s							
AYDN	Tasoluk	4.14	33	*i* P	Pn	19 03 08.1	+1.9
AYDN				IAML_P			
comp=Z,306nm,0.2s							
AKAS	Kas	4.24	60	*i* P	Pn	19 03 08.8	+1.3
AKAS				IAML_P			
comp=Z,953nm,0.2s							
MRKA	Markates	4.65	346	P	Pn	19 03 13.7	+0.6
AKUM	Antalya-Kumluc	4.81	62	*i* P	Pn	19 03 16.7	+1.4
AKUM				IAML_P			
comp=Z,1μm,0.2s							
MANT	Manisa	5.13	32	*i* P	Pn	19 03 22.4	+2.5
MANT				IAML_P			
comp=Z,189nm,0.2s							
KORT	Korkueli	5.14	56	*i* P	Pn	19 03 22.9	+3.0
KORT				IAML_P			
comp=Z,361nm,0.2s							
KHAL	Karahalli	5.49	39	*i* P	Pn	19 03 26.1	+1.3
KHAL				IAML_P			
comp=Z,89nm,0.2s							
USAK	Uak-Merkez	5.52	34	*i* P	Pn	19 03 27.8	+2.7
USAK				IAML_P			
comp=Z,720nm,0.5s							
KEPZ	Antalya-Kepez	5.98	61	*i* P	Pn	19 03 33.3	+1.9
KEPZ				IAML_P			
comp=Z,349nm,0.2s							
GULN	MERSIN_Gulnar	7.22	72	*i* P	Pn	19 03 49.4	+1.0
GULN				IAML_P			
comp=Z,360nm,0.5s							
KERG	Konya-Eregli	8.03	64	*i* P	Pn	19 04 01.4	+1.7
KERG				IAML_P			
comp=Z,104nm,0.4s							
MMAI	Mount Meron Ar	8.71	95	Pn	Pn	19 04 08.1	-0.9
comp=Z,1.7nm,0.3s,baz=279,slow=12,SNR=10.0							
MMAI				Sn	Sn	19 05 41.9	-4.9
comp=Z,3.4nm,0.3s,baz=271,slow=26,SNR=7.6							
BRTR	Keskin Array B	8.80	49	Pn	Pn	19 04 09.8	-0.5
comp=Z,0.1nm,0.3s,baz=223,slow=11,SNR=2.6							
EIL	Elat	9.54	116	Pn	Pn	19 04 20.0	-0.3
comp=Z,1.1nm,0.3s,baz=231,slow=1.6,SNR=18							
EIL				Sn	Sn	19 06 01.0	-6.1
comp=Z,1.0nm,0.3s,baz=294,slow=18,SNR=4.9							
ASF	Jabal al Asfar	10.12	98	Pn	Pn	19 04 27.1	-1.3
comp=Z,0.3nm,0.3s,baz=294,slow=20,SNR=2.6							
ASF				Sn	Sn	19 06 15.8	-5.8
comp=Z,0.4nm,0.3s,baz=285,slow=16,SNR=2.9							
MLR	Muntele Rosu	11.30	3	Sn	Sn	19 06 49.8	-0.5
comp=Z,0.1nm,0.3s,baz=144,slow=19,SNR=3.3							
AKASG	Malin Array Be	16.77	9	Pn	Pn	19 05 57.9	+0.3
comp=Z,1.3nm,0.3s,baz=200,slow=10,SNR=7.2							
KVAR	Kislovodsk Arr	16.77	49	Pn	P	19 06 01.9	+2.0
baz=266,slow=22,SNR=4.7							
KBZ	Khabaz	16.79	50	Pn	P	19 06 01.9	+1.8
comp=Z,0.4nm,0.3s,baz=233,slow=11,SNR=7.5							
GERES	GERESS Array B	16.89	333	Pn	P	19 06 01.8	+0.5
comp=Z,0.4nm,0.3s,baz=144,slow=12,SNR=19							
ESDC	Sonseca Array	23.78	292	P	P	19 07 16.4	+1.0
comp=Z,0.1nm,0.3s,baz=86,slow=9.5,SNR=3.1							
HFS	Hagfors	26.99	347	P	P	19 07 43.7	-0.7
comp=Z,1.4nm,0.8s,baz=161,slow=10,SNR=4.1							
FINES	FINESS Array B	27.27	1	P	P	19 07 43.9	-2.9
comp=Z,2.9nm,1.0s,baz=168,slow=8.2,SNR=2.9							
NB2	NORSAR Subarra	28.30	346	P	P	19 07 54.8	-1.3
comp=Z,0.4nm,0.4s,baz=157,slow=10							
NOA	NORSAR Array B	28.30	346	P	P	19 07 54.3	-1.8
comp=Z,0.2nm,0.4s,baz=160,slow=11,SNR=3.7							
EKA	Eskdalemuir Ar	28.78	326	P	P	19 08 01.3	+1.0
comp=Z,0.3nm,0.4s,baz=122,slow=9.4,SNR=2.5							
AKTO	Aktyubinsk	28.97	46	P	P	19 08 01.9	-0.2
comp=Z,0.5nm,0.4s,baz=217,slow=10,SNR=4.6							
TORD	Torodi Ar. Bea	29.82	231	P	P	19 08 09.8	-0.2
comp=Z,1.0nm,0.5s,baz=26,slow=8.5,SNR=23							
ARCES	ARCESS Array B	35.39	0	P	P	19 08 56.2	-1.9
comp=Z,6.6nm,0.3s,baz=191,slow=9.2,SNR=3.4							
MKAR	Makanchi Array	44.38	56	P	P	19 10 13.7	+0.6
comp=Z,1.3nm,0.5s,baz=277,slow=6.8,SNR=20							
ZALV	Zalesovo Beam	45.73	45	P	P	19 10 23.4	-0.3
comp=Z,3.7nm,0.4s,baz=265,slow=9.0,SNR=16							
SONM	Songino Array	60.16	50	P	P	19 12 10.5	+0.1
comp=Z,0.7nm,0.6s,baz=281,slow=7.8,SNR=5.1							
KSRS	Korea Array	78.93	52	P	P	19 14 06.7	+0.4
comp=Z,0.5nm,0.5s,baz=303,slow=4.7,SNR=4.2							
MJAR	Matsushiro Arr	86.03	48	P	P	19 14 43.8	+0.3
comp=Z,1.1nm,1.0s,baz=308,slow=4.7,SNR=3.7							

*IDC **15** 19:03:07.8±1.5, 34°.19N×25°.06E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.4/44, mbtmp3.5/5, ML4.0/2, Error ellipse: s-maj=27.7km s-min=21.3km az=90.0*
*GII **15** 19:03:43.5±0.5, 34°.37N×25°.27E, h80km, mb4.5/1, MD4.4/1*

ISC 15 19:03:10.6±1.2, 34°.2N±0°.1×25°.1E±0°.1, h20km, n28, σ0°50/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	1.11	352	Pn	Pn	19 03 30.4	-0.7
35nm,0.3s,baz=168,slow=19,SNR=1.5							
IDI				Sn	Sn	19 03 46.2	+0.2
21nm,0.3s,baz=114,slow=20,SNR=1.6							
OFRI	Ofer	8.43	98	Sn	Sb	19 07 13.7	-2.1
HNTI	Hanita	8.49	95	Sn	Sb	19 07 15.1	-2.4
SLTI	Sal'it	8.57	100	Sn	Sn	19 07 18.0	+28
MMA0B	Mount Meron ar	8.70	95	Pn	Pn	19 05 44.3	+29
MMAI	Mount Meron Ar	8.70	95	Pn	Pn	19 05 15.2	-0.1
baz=285,slow=13,SNR=2.6							
MMLI	Mount Malkishu	8.83	98	Pn	Pn	19 05 46.2	+29
MMLI				Sn	Sn	19 07 24.3	+28
GEM	Giv'at Ha'Em	8.88	93	Pn	Pn	19 05 47.2	+30
GEM				Sn	Sn	19 07 24.3	+27
KSDI	Kefar Szold	8.88	93	Pn	Pn	19 05 46.3	+29
YTIR	Yattir	8.91	106	Pn	Pn	19 05 47.9	+30
YTIR	Yattir	8.91	106	Pn	Pn	19 05 48.0	+30
NATI	Neve Ativ	8.93	93	Pn	Pn	19 05 47.8	+29
NATI				Sn	Sn	19 07 26.0	+28
HMDT	Nahal Hemdat	8.96	99	Pn	Pn	19 05 48.5	+30
SHMJ	Saham	9.05	96	P	Pn	19 05 54.2	+34
58nm,0.6s							
MZDA	Masada	9.12	105	Pn	Pn	19 05 50.9	+30
KRMI	Paran Flat	9.13	114	Pn	Pn	19 05 51.5	+30
PRNI	Paran	9.23	112	Pn	Pn	19 05 52.5	+30
PRNI				Sn	Sn	19 07 34.9	+29
WALJ	Wala	9.40	103	P	Pn	19 05 57.9	+33

58nm,0.4s
HRFI Mount Harif 9.40 113 Pn Pn 19 05 55.1 +30
HRFI Mount Harif 9.40 113 P Pn 19 05 54.4 +29
MBRI Mt Berech 9.43 115 Pn Pn 19 05 55.6 +30
MBRI Sn Sn 19 07 40.6 +30
EIL Elat 9.52 116 Pn Pn 19 05 56.4 +30
EIL Elat 9.52 116 Pn Pn 19 05 57.0 +30
EIL Sn Sn 19 07 42.8 +30
JDRJ Daraweish 9.59 108 P Pn 19 05 58.8 +31
AKASG Malin Array Be 16.79 9 Pn **Pn 19 07 04.5 +0.2**
0.6nm,0.3s,baz=197,slow=10,SNR=2.3
GERES GERESS Array B 16.92 333 Pn **P 19 07 08.5 +0.5**
0.3nm,0.3s,baz=146,slow=12,SNR=6.0
TORD Torodi Ar. Bea 29.81 231 P **P 19 09 16.3 -0.1**
0.7nm,0.6s,baz=32,slow=8.9,SNR=4.8
MKAR Makanchi Array 44.38 56 P **P 19 11 19.9 +0.3**
0.2nm,0.5s,baz=285,slow=6.4,SNR=2.6

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*BJI **15** 19:03:58.2±0.0, 34°.29N±24°.56E, h10km, mb4.6/20, mB4.5/1, Ms4.9/5, Ms7 5.0/5*
*IDC **15** 19:04:01.7±0.6, 34°.35N±25°.07E, h0km, mb4.3/24, mb1 4.4/32, mb1mx4.3/48, mbtmp4.3/32, ML4.4/7, Error ellipse: s-maj=13.6km s-min=11.8km az=177.0*
*MOS **15** 19:04:03.7±1.1, 34°.34N±25°.04E, h20km, mb4.6/20, Error ellipse: s-maj=6.9km s-min=4.0km az=79.9*
*ISK **15** 19:04:05.5, 34°.41N±25°.07E, h14km, ML4.1/17*
*THE **15** 19:04:06.2, 34°.38N±25°.05E, h1km±3km, ML4.4/2, Error ellipse: s-maj=4.3km s-min=1.3km az=159.0*
*ATH **15** 19:04:06.5, 34°.44N±25°.06E, h28km±1km, ML4.0/4, Error ellipse: s-maj=4.6km s-min=1.7km az=354.0*
*NEIC **15** 19:04:06.2±0.0, 34°.38N±25°.05E, h1km, mb4.3/42, ML4.4(THE), After THE.*
ISC 15 19:04:05.5±1.4, 34°.34N±0°.05±25°.09E±0°.03, h24km±9km, n320, σ1°.51/337, mb4.5/64, 19C-10D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
SIVA	**Sivas**	**0.72**	**341**	P	**Pb**	**19 04 19.1**	**-0.4**
SIVA				S	**Sn**	**19 04 29.8**	**-0.6**
SIVA	**Sivas**	**0.72**	**341**	P	**Pb**	**19 04 19.0**	**-0.4**
SIVA				S	**Sb**	**19 04 28.1**	**-0.8**
SIVA				AML	AML	19 04 38.9	
SIVA				AML	AML	19 04 39.5	
	comp=N,64151μm,0.8s						
TMBK	**Timbaki Herakl**	**0.78**	**340**	P	**Pb**	**19 04 20.6**	**+0.1**
TMBK				S	**Sn**	**19 04 32.0**	**0.0**
LAST	**Lasithi**	**0.88**	**21**	P	**Pb**	**19 04 22.0**	**-0.2**
LAST	**Lasithi**	**0.88**	**21**	P	**Pb**	**19 04 21.8**	**-0.4**
LAST				S	**Sb**	**19 04 33.7**	**+0.1**
LAST				AML	AML	19 04 43.1	
	comp=E,6361μm,0.5s						
LAST				AML	AML	19 04 48.7	
	comp=N,7892μm,0.6s						
IDI	**Anoyia**	**0.96**	**350**	Pn	**Pn**	**19 04 23.3**	**-0.3**
	comp=N,195nm,0.3s,baz=156,slow=17,SNR=16						
IDI				Sn	**Sn**	**19 04 36.8**	**+0.2**
	comp=N,356nm,0.3s,baz=90,slow=20,SNR=8.8						
IDI	**Anoyia**	**0.96**	**350**	*e*Pg	**Pn**	**19 04 22.8**	**-0.8**
IDI				*e*Sg	**Sn**	**19 04 36.8**	**+0.2**
IDI	**Anoyia**	**0.96**	**350**	P	**Pn**	**19 04 22.8**	**-0.8**
KSTL	**Kastelli Herak**	**0.97**	**359**	P	**Pn**	**19 04 22.5**	**-1.1**
IACM	**Heraklion**	**0.97**	**359**	P	**Pb**	**19 04 24.1**	**+0.5**
IACM	**Heraklion**	**0.97**	**359**	P	**Pb**	**19 04 23.8**	**+0.1**
GVD	**Gavdhos**	**0.97**	**301**	PG	**Pb**	**19 04 23.8**	**+0.1**
GVD				SG	**Sn**	**19 04 36.9**	**+0.3**
GVD	**Gavdhos**	**0.97**	**301**	*e*Pg	**Pb**	**19 04 23.9**	**+0.2**
GVD				*e*Sg	**Sn**	**19 04 36.6**	**-0.1**
GVD	**Gavdhos**	**0.97**	**301**	P	**Pb**	**19 04 23.9**	**+0.2**
GVD				S	**Sn**	**19 04 36.6**	**-0.1**
GVD	**Gavdhos**	**0.97**	**301**	P	**Pb**	**19 04 23.8**	**+0.2**
GVD				S	**Sn**	**19 04 36.5**	**-0.1**
GVD				AML	AML	19 04 44.2	
	comp=E,35596μm,0.6s						
GVD				AML	AML	19 04 44.5	
	comp=N,33321μm,0.6s						
NPS	**Neapolis**	**1.02**	**25**	P	**Pn**	**19 04 24.2**	**-0.1**
NPS	**Neapolis**	**1.02**	**25**	P	**Pn**	**19 04 24.3**	**-0.1**
NPS				S	**Sn**	**19 04 38.6**	**+0.8**
NPS				AML	AML	19 04 52.7	
	comp=E,9123μm,0.9s						
NPS				AML	AML	19 04 56.2	
	comp=N,7056μm,0.8s						
PRNS	**Prines Rethymn**	**1.14**	**335**	P	**Pb**	**19 04 26.6**	**+0.1**
STIA	**Sitia Lasithi**	**1.19**	**43**	P	**Pb**	**19 04 28.5**	**+1.1**
ZKR	**Zakros**	**1.21**	**50**	PN	**Pb**	**19 04 28.2**	**+0.5**
ZKR				SN	**Sb**	**19 04 44.9**	**+2.0**
ZKR	**Zakros**	**1.21**	**50**	*e*Pg	**Pb**	**19 04 28.6**	**+0.9**
ZKR				*e*Pg	**Pb**	**19 04 28.6**	**+0.9**
ZKR	**Zakros**	**1.21**	**50**	P	**Pb**	**19 04 28.6**	**+0.9**
ZKR	**Zakros**	**1.21**	**50**	P	**Pb**	**19 04 28.6**	**+0.9**
VAM	**Vamos**	**1.30**	**326**	P	**Pb**	**19 04 28.9**	**-0.3**
VAM	**Vamos**	**1.30**	**326**	P	**Pb**	**19 04 28.9**	**-0.3**
IMMV	**Iera Moni Meta**	**1.45**	**321**	PN	**Pb**	**19 04 31.3**	**-0.5**
IMMV				SN	**Sb**	**19 04 49.6**	**-0.2**
IMMV	**Iera Moni Meta**	**1.45**	**321**	P	**Pb**	**19 04 32.1**	**+0.3**
IMMV	**Iera Moni Meta**	**1.45**	**321**	P	**Pb**	**19 04 32.3**	**+0.5**
CHAN	**Chania**	**1.46**	**324**	P	**Pb**	**19 04 32.7**	**+0.6**
THR6	**Thira Island,**	**2.03**	**7**	*e*Pn	**Pb**	**19 04 40.2**	**-1.5**
THR6	**Thira Island,**	**2.03**	**7**	P	**Pb**	**19 04 40.2**	**-1.5**
SAP1	**Santorini-Akro**	**2.03**	**7**	P	**Pb**	**19 04 40.2**	**-1.6**
SANT	**Santorini**	**2.05**	**8**	PN	**Pn**	**19 04 39.8**	**+1.2**
SANT	**Santorini**	**2.05**	**8**	*e*Pn	**Pn**	**19 04 40.3**	**+1.7**
SANT				*e*Sn	**Sb**	**19 05 06.7**	**-0.6**
SANT	**Santorini**	**2.05**	**8**	P	**Pb**	**19 04 40.8**	**-1.3**
KARP	**Karpathos**	**2.08**	**54**	PN	**Pb**	**19 04 41.1**	**-1.6**
KARP	**Karpathos**	**2.08**	**54**	*e*Pn	**Pb**	**19 04 42.1**	**-0.5**
KARP				*e*Sn	**Sb**	**19 05 08.0**	**-0.2**
KARP	**Karpathos**	**2.08**	**54**	P	**Pb**	**19 04 42.2**	**-0.5**
KARP	**Karpathos**	**2.08**	**54**	P	**Pb**	**19 04 42.2**	**-0.5**
THR3	**Thira Island,**	**2.08**	**7**	*e*Pn	**Pb**	**19 04 40.6**	**+1.7**
THR3	**Thira Island,**	**2.08**	**7**	P	**Pb**	**19 04 40.6**	**+1.7**
THR5	**Thira Island,**	**2.09**	**6**	P	**Pb**	**19 04 40.6**	**+1.6**
ANAF	**Anafi Island**	**2.09**	**15**	P	**Pb**	**19 04 40.9**	**+1.8**
ANAF	**Anafi Island**	**2.09**	**15**	P	**Pb**	**19 04 39.6**	**+0.5**
SAP3	**Santorini-Thir**	**2.10**	**6**	P	**Pn**	**19 04 40.8**	**+1.5**
THR2	**Thira island,**	**2.12**	**7**	*e*Pn	**Pn**	**19 04 40.6**	**+1.1**
THR2	**Thira island,**	**2.12**	**7**	P	**Pn**	**19 04 40.6**	**+1.1**
IOSP	**Ios island**	**2.39**	**4**	P	**Pn**	**19 04 44.1**	**+1.0**
IOSP	**Ios island**	**2.39**	**4**	P	**Pn**	**19 04 44.2**	**+1.0**
MHLO	**Agia Marina, M**	**2.42**	**347**	P	**Pn**	**19 04 44.5**	**+1.0**
MHLO	**Agia Marina, M**	**2.42**	**347**	P	**Pn**	**19 04 44.3**	**+0.8**
MHLA	**Plaka, Milos I**	**2.47**	**347**	P	**Pn**	**19 04 46.1**	**+1.9**
AMGA	**Amorgos Island**	**2.57**	**14**	P	**Pn**	**19 04 46.1**	**+0.4**
APE	**Apeiranthos**	**2.75**	**7**	PN	**Pn**	**19 04 49.6**	**+1.4**
APE	**Apeiranthos**	**2.75**	**7**	*e*Pn	**Pn**	**19 04 49.2**	**+1.1**
APE	**Apeiranthos**	**2.75**	**7**	P	**Pn**	**19 04 49.2**	**+1.1**
APE	**Apeiranthos**	**2.75**	**7**	*de*P	**Pn**	**19 04 49.3**	**+1.1**
APE	**Apeiranthos**	**2.75**	**7**	P	**Pn**	**19 04 49.1**	**+0.9**
ARG	**Arkhangelos**	**3.11**	**52**	PN	**Pn**	**19 04 55.5**	**+2.4**
ARG	**Arkhangelos**	**3.11**	**52**	P	**Pn**	**19 04 55.4**	**+2.4**
DAT	**Datca**	**3.13**	**40**	PN	**Pn**	**19 04 55.2**	**+1.8**
DAT	**Datca**	**3.13**	**40**	*i* P	**Pn**	**19 04 55.2**	**+1.8**
DAT				IAML_P			
	comp=Z,499nm,0.4s						
DATC	**Datca-Mugla**	**3.20**	**40**	PN	**Pn**	**19 04 55.6**	**+1.4**
BODT	**Bodrum**	**3.26**	**33**	PN	**Pn**	**19 04 57.2**	**+2.0**
BBRN	**Bozburun-Marma**	**3.36**	**45**	PN	**Pn**	**19 04 58.8**	**+2.3**
YER	**Yerkesik**	**3.81**	**42**	PN	**Pn**	**19 05 04.9**	**+2.1**
YER	**Yerkesik**	**3.81**	**42**	*e*Pn	**Pn**	**19 05 04.7**	**+1.9**
YER	**Yerkesik**	**3.81**	**42**	P	**Pn**	**19 05 04.7**	**+1.9**
YER	**Yerkesik**	**3.81**	**42**	*e*P	**Pn**	**19 05 04.7**	**+1.9**
DALY	**Dalyan (Mula)**	**3.81**	**49**	PN	**Pn**	**19 05 05.1**	**+2.4**
DALY	**Dalyan (Mula)**	**3.81**	**49**	*i* P	**Pn**	**19 05 05.4**	**+2.7**
DALY				IAML_P			
	comp=Z,2μm,0.2s						
TURN	**Turunc**	**3.82**	**47**	PN	**Pn**	**19 05 00.5**	**-2.3**
TURN	**Turunc**	**3.82**	**47**	*i* P	**Pn**	**19 05 00.6**	**-2.1**
TURN				IAML_P			
	comp=Z,2μm,0.3s						
ITM	**Ithomi**	**3.83**	**319**	PN	**Pn**	**19 05 04.6**	**+1.6**
ITM	**Ithomi**	**3.83**	**319**	*e*Pn	**Pn**	**19 05 03.8**	**+0.8**
FETY	**Fethiye**	**3.98**	**54**	PN	**Pn**	**19 05 06.3**	**+1.2**
FETY	**Fethiye**	**3.98**	**54**	*i* P	**Pn**	**19 05 06.1**	**+1.1**
FETY				IAML_P			
	comp=Z,2μm,0.2s						
AYDN	**Tasoluk**	**4.01**	**33**	*i* P	**Pn**	**19 05 08.4**	**+2.9**
AYDN				IAML_P			
	comp=Z,2μm,0.3s						
CHOS	**Chios island**	**4.12**	**11**	PN	**Pn**	**19 05 08.8**	**+1.8**
AKAS	**Kas**	**4.15**	**62**	*i* P	**Pn**	**19 05 08.4**	**+1.0**
AKAS				IAML_P			
	comp=Z,3μm,0.3s						
URLA	**Izmir**	**4.20**	**16**	PN	**Pn**	**19 05 10.0**	**+2.0**
AYDB	**Zeytinkoy-Aydi**	**4.25**	**31**	PN	**Pn**	**19 05 11.3**	**+2.4**
BLCB	**Balcova**	**4.34**	**21**	PN	**Pn**	**19 05 11.6**	**+1.7**
MRKA	**Markates**	**4.53**	**345**	P	**Pn**	**19 05 13.1**	**+0.6**
AKUM	**Antalya-Kumluc**	**4.73**	**64**	*i* P	**Pn**	**19 05 16.8**	**+1.5**
AKUM				*i* S	**Sn**	**19 06 10.9**	**+1.6**
AKUM				IAML_P			
	comp=Z,4μm,0.2s						
MANT	**Manisa**	**5.00**	**33**	*e*Pn	**Pn**	**19 05 21.1**	**+1.9**
MANT	**Manisa**	**5.00**	**33**	*i* P	**Pn**	**19 05 22.0**	**+2.8**
MANT				IAML_P			
	comp=Z,853nm,0.4s						
KORT	**Korkueli**	**5.04**	**57**	*i* P	**Pn**	**19 05 22.2**	**+2.5**
KORT				IAML_P			
	comp=Z,241nm,0.2s						
AGG	**Agios Georgios**	**5.18**	**335**	PN	**Pn**	**19 05 23.1**	**+1.6**
AGG	**Agios Georgios**	**5.18**	**335**	*e*Pn	**Pn**	**19 05 23.5**	**+2.0**
AGG	**Agios Georgios**	**5.18**	**335**	*e*P	**Pn**	**19 05 23.5**	**+2.0**
BRDR	**BÜRDUR-Merkez**	**5.24**	**49**	*i* P	**Pn**	**19 05 24.4**	**+2.0**
BRDR				IAML_P			
	comp=Z,230nm,0.1s						
KHAL	**Karahalli**	**5.37**	**40**	*i* P	**Pn**	**19 05 25.5**	**+1.3**
KHAL				IAML_P			
	comp=Z,433nm,0.2s						
USAK	**Uak-Merkez**	**5.39**	**35**	*i* P	**Pn**	**19 05 27.1**	**+2.6**
USAK				IAML_P			
	comp=Z,3μm,0.5s						
ISP	**Isparta**	**5.61**	**50**	*e*Pn	**Pn**	**19 05 29.7**	**+2.2**
ISP	**Isparta**	**5.61**	**50**	*e*P	**Pn**	**19 05 29.7**	**+2.2**
BALB	**Balikesir**	**5.74**	**22**	*e*Pn	**Pn**	**19 05 31.9**	**+2.7**
KEPZ	**Antalya-Kepez**	**5.89**	**62**	*i* P	**Pn**	**19 05 33.0**	**+1.7**
KEPZ				IAML_P			
	comp=Z,832nm,0.2s						
GDZ	**Gediz**	**5.91**	**35**	*i* P	**Pn**	**19 05 34.1**	**+2.5**
GDZ				IAML_P			
	comp=Z,518nm,0.4s						
LIT	**Litokhoron**	**6.12**	**341**	*e*Pn	**Pn**	**19 05 36.7**	**+2.3**
LIT	**Litokhoron**	**6.12**	**341**	*e*P	**Pn**	**19 05 36.7**	**+2.3**
DOGA	**KONYA_Doganhis**	**6.51**	**53**	*i* P	**Pn**	**19 05 43.4**	**+3.5**
DOGA				IAML_P			
	comp=Z,556nm,0.3s						
ALN	**Alexandroupoli**	**6.59**	**6**	*e*Pn	**Pn**	**19 05 42.2**	**+1.4**
ALN	**Alexandroupoli**	**6.59**	**6**	*e*P	**Pn**	**19 05 42.3**	**+1.4**
ERMK	**Ermenek**	**6.78**	**68**	*i* P	**Pn**	**19 05 46.0**	**+2.3**
ERMK				IAML_P			
	comp=Z,2μm,0.3s						
FNA	**Florina**	**7.08**	**336**	*e*Pn	**Pn**	**19 05 48.9**	**+1.2**
FNA	**Florina**	**7.08**	**336**	*e*P	**Pn**	**19 05 48.9**	**+1.2**
VAY	**Valandovo**	**7.25**	**345**	*i* Pn	Pn	19 05 56.6	+6.7
KRUS	**Krusevo**	**7.65**	**338**	*i* Pn	**Pn**	**19 05 55.9**	**+0.4**
MDUB	**Mudurnu**	**7.81**	**37**	*e*Pn	**Pn**	**19 06 00.1**	**+2.4**
BR231	**Keskin MP Arra**	**8.24**	**46**	*e*Pn	**Pn**	**19 06 05.2**	**+1.7**
TIP	**Timpagrande**	**8.25**	**308**	*e*Pn	**Pn**	**19 06 05.5**	**+1.7**
TIP				*e*Sn	**Sn**	**19 07 31.4**	**-4.8**
ANTO	**Ankara**	**8.26**	**46**	*e*Pn	**Pn**	**19 06 05.9**	**+2.0**
ANTO	**Ankara**	**8.26**	**46**	*e*P	**Pn**	**19 06 05.9**	**+2.0**
VTS	**Vitosha**	**8.40**	**351**	*e*Pn	**Pn**	**19 06 06.9**	**+1.1**
VTS	**Vitosha**	**8.40**	**351**	*e*P	**Pn**	**19 06 06.9**	**+1.1**
BR131	**Keskin Array S**	**8.69**	**49**	*e*Pn	**Pn**	**19 06 11.1**	**+1.2**
BR131				*e*Sn	**Sn**	**19 07 48.2**	**+1.0**
BRTR	**Keskin Array B**	**8.69**	**49**	Pn	**Pn**	**19 06 10.9**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=218,slow=14,SNR=6.6						
BRTR				Sn	**Sn**	**19 07 46.7**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=221,slow=24,SNR=4.2						
BRTR	**Keskin Array B**	**8.69**	**49**	*ce*P	**Pn**	**19 06 12.5**	**+2.6**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MMAI	**Mount Meron Ar**	**8.69**	**96**	Pn	**Pn**	**19 06 08.0**	**-1.8**
	comp=Z,1.7nm,0.3s,baz=299,slow=9.5,SNR=3.2						
MMAI				Sn	**Sn**	**19 07 40.8**	**-6.3**
	comp=Z,7.9nm,0.3s,baz=278,slow=24,SNR=6.4						
WDD	**Wied Dalam**	**8.79**	**283**	*e*Pn	**Pn**	**19 06 11.1**	**0.0**
VAE	**Valguarnera**	**9.21**	**293**	Sn	**Sn**	**19 08 00.2**	**+0.3**
	comp=Z,5.8nm,0.3s,baz=191,slow=18,SNR=4.4						
TTG	**Podgorica**	**9.29**	**332**	*e*Pn	**Pn**	**19 06 19.1**	**+1.3**
TTG				*e*Sn	**Sn**	**19 07 57.9**	**-3.6**
TTG	**Podgorica**	**9.29**	**332**	*e*P	**Pn**	**19 06 19.1**	**+1.3**
TTG				*e*		19 07 57.9	
EIL	**Elat**	**9.57**	**116**	Pn	**Pn**	**19 06 20.1**	**-1.7**
	comp=Z,4.7nm,0.3s,baz=248,slow=7.2,SNR=9.5						
EIL				Sn	**Sn**	**19 08 00.8**	**-7.8**
	comp=Z,1.9nm,0.3s,baz=25,slow=19,SNR=4.6						
ASF	**Jabal al Asfar**	**10.12**	**99**	Sn	**Sn**	**19 08 16.3**	**-5.7**
	comp=Z,0.5nm,0.3s,baz=331,slow=19,SNR=2.2						
CLTB	**Caltabellotta**	**10.16**	**292**	*e*Pn	**Pn**	**19 06 29.3**	**-0.6**
LOT	**Lotru**	**11.14**	**355**	⇑*i*P	Pn	19 06 55.1	+12
MLR	**Muntele Rosu**	**11.16**	**3**	*e*Pn	**Pn**	**19 06 44.0**	**+0.4**
MLR	**Muntele Rosu**	**11.16**	**3**	⇑*i*P	Pn	19 06 53.6	+10
MLR	**Muntele Rosu**	**11.16**	**3**	*e*P	**Pn**	**19 06 44.0**	**+0.4**
BZS	**Buzias**	**11.58**	**348**	⇑*i*P	**Pn**	**19 06 48.7**	**-0.5**
OZUR		**11.76**	**2**	⇑*i*P	Pn	19 07 04.4	+13
BLY	**Banja Luka**	**12.05**	**332**	*e*Pn	**Pn**	**19 06 56.4**	**+0.7**
AQU	**L'Aquila**	**12.17**	**315**	*e*Pn	**Pn**	**19 06 58.2**	**+0.9**
AQU	**L'Aquila**	**12.17**	**315**	*e*P	**Pn**	**19 06 58.2**	**+0.9**
BIZ	**Bicaz**	**12.61**	**3**	⇑*i*P	**P**	**19 07 13.3**	**-1.3**
BURAR	**Bucovina Array**	**13.27**	**0**	⇑*i*P	**P**	**19 07 24.0**	**+2.1**
BUR08	**Bucovina Ar. S**	**13.30**	**0**	*e*Pn	**Pn**	**19 07 14.3**	**+1.5**
BOJS	**Bojanci**	**13.46**	**320**	*i* Pn	**Pn**	**19 07 12.6**	**-2.2**
CRES	**Cresnjev**	**13.63**	**330**	*i* Pn	**Pn**	**19 07 14.0**	**-3.2**
GBRS	**Gornja Briga**	**13.67**	**328**	*i* Pn	**Pn**	**19 07 15.6**	**-2.2**
SOKA	**Soboth**	**14.49**	**331**	*e*Pn	**Pn**	**19 07 29.1**	**0.0**
	comp=Z,5.2nm,0.9s						
OBKA	**Obir**	**14.55**	**330**	*e*Pn	**Pn**	**19 07 29.3**	**-0.6**
	comp=Z,4.6nm,0.8s						
KOLS	**Kolonicke sedl**	**14.74**	**353**	*e*P	**P**	**19 07 39.5**	**+1.3**
KOLS	**Kolonicke sedl**	**14.74**	**353**	*e*P	**P**	**19 07 39.5**	**+1.3**
ARSA	**Arzberg**	**14.78**	**334**	*e*Pn	**Pn**	**19 07 33.4**	**+0.4**
	comp=Z,4.2nm,0.7s						
VYHS	**Vyhne**	**14.90**	**344**	*e*P	**Pn**	**19 07 33.8**	**-0.7**
VYHS	**Vyhne**	**14.90**	**344**	*e*PN	**Pn**	**19 07 33.8**	**-0.7**
MODS	**Modra-Piesok**	**15.19**	**340**	*e*P	**P**	**19 07 43.0**	**-0.2**
MODS	**Modra-Piesok**	**15.19**	**340**	*e*P	**P**	**19 07 43.0**	**-0.2**
ABTA	**Abfaltersbach**	**15.63**	**326**	*e*Pn	**Pn**	**19 07 43.3**	**-0.9**
	comp=Z,15nm,0.7s,SNR=8.1						
MOA	**Molln**	**15.75**	**332**	Pn	**Pn**	**19 07 46.7**	**+1.0**
	comp=Z,12nm,1.1s						
KRUC	**Moravsky**	**16.07**	**339**	*e*P	**P**	**19 07 52.0**	**-0.9**
AKH	**Akhalkalaki**	**16.14**	**59**	*e*Pn	**Pn**	**19 07 51.5**	**+0.6**
	comp=Z,17nm,1.3s						
AKH	**Akhalkalaki**	**16.14**	**59**	*e*P	**Pn**	**19 07 51.5**	**+0.6**
AKH				pmax	pmax		
	comp=Z,17nm,1.3s						
VRAC	**Vranov**	**16.23**	**340**	Pn	**Pn**	**19 07 53.0**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=157,slow=9.8,SNR=12						
VRAC	**Vranov**	**16.23**	**340**	P	**Pn**	**19 07 53.0**	**+1.2**
VRAC	**Vranov**	**16.23**	**340**	*e*P	**P**	**19 07 54.3**	**-0.4**
NEY	**Neytrino**	**16.35**	**52**	⇑*e*P	**P**	**19 07 55.8**	**-0.5**
MORC	**Moravsky Berou**	**16.40**	**342**	*e*Pn	**Pn**	**19 07 54.0**	**0.0**
	comp=Z,4.1nm,1.0s						
MORC	**Moravsky Berou**	**16.40**	**342**	⇓*i*P	**P**	**19 08 01.9**	**+5.2**
MORC	**Moravsky Berou**	**16.40**	**342**	*e*P	**Pn**	**19 07 54.0**	**0.0**
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MORC	**Moravsky Berou**	**16.40**	**342**	*e*P	**P**	**19 07 55.9**	**-0.8**
WTTA	**Wattenberg**	**16.42**	**326**	*e*Pn	**Pn**	**19 07 54.9**	**+0.6**
	comp=Z,35nm,1.6s,SNR=10						
WATA	**Walderalm**	**16.50**	**326**	*e*Pn	**Pn**	**19 07 55.7**	**+0.3**
	comp=Z,11nm,0.6s,SNR=8.6						
SHA1	**Shidzhatmaz**	**16.54**	**50**	*e*P	**P**	**19 07 59.6**	**+1.2**
SQTA	**Sankt Quirin**	**16.59**	**325**	*e*Pn	**Pn**	**19 07 56.4**	**-0.1**
	comp=Z,16nm,1.1s						
AKASG	**Malin Array Be**	**16.63**	**9**	Pn	**Pn**	**19 07 55.8**	**-1.1**
	comp=Z,6.6nm,0.3s,baz=200,slow=10,SNR=23						
AKBB	**Malin Array Si**	**16.63**	**9**	*e*Pn	**Pn**	**19 07 57.5**	**+0.7**
	comp=Z,21nm,0.6s						
AKBB	**Malin Array Si**	**16.63**	**9**	*e*P	**Pn**	**19 07 57.5**	**+0.7**
AKBB				pmax	pmax		
	comp=Z,21nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**16.64**	**322**	*e*Pn	**P**	**19 07 59.5**	**0.0**
	comp=Z,28nm,1.2s						
KIV	**Kislovodsk**	**16.66**	**50**	*e*Pn	**P**	**19 07 59.8**	**+0.1**
	comp=Z,31nm,1.0s						
KIV	**Kislovodsk**	**16.66**	**50**	⇓*i*P	**P**	**19 08 01.0**	**+1.4**
KIV	**Kislovodsk**	**16.66**	**50**	*e*P	**P**	**19 08 00.6**	**+1.0**
KIV				pmax	pmax		
	comp=Z,95nm,1.0s						
KVAR	**Kislovodsk Arr**	**16.66**	**50**	Pn	**P**	**19 08 01.8**	**+2.1**
	baz=276,slow=24,SNR=12						
FETA	**Feichten**	**16.68**	**324**	*e*Pn	**P**	**19 07 60.0**	**+0.1**
	comp=Z,21nm,1.6s,SNR=6.5						
KBZ	**Khabaz**	**16.68**	**51**	Pn	**P**	**19 08 01.4**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=249,slow=8.8,SNR=22						
MOTA	**Moosalm**	**16.73**	**325**	*e*Pn	**Pn**	**19 07 57.6**	**-0.6**
	comp=Z,5.6nm,1.0s						
GEC2	**GERESS Array S**	**16.79**	**333**	*e*Pn	**P**	**19 08 01.0**	**0.0**
	comp=Z,9.9nm,0.8s						
GEC2	**GERESS Array S**	**16.79**	**333**	*e*P	**P**	**19 08 01.0**	**0.0**
GEC2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GERES	**GERESS Array B**	**16.79**	**333**	Pn	**Pn**	**19 07 58.8**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=146,slow=12,SNR=31						
ZEI	**Tsey**	**16.93**	**55**	*e*P	**Pn**	**19 08 01.7**	**+0.7**
ZEI				pmax	pmax		
	comp=Z,26nm,1.2s						
DAVOX	**Davos/Dischmat**	**16.94**	**322**	Pn	**P**	**19 08 04.7**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=143,slow=17,SNR=7.8						
RETA	**Reutte**	**16.99**	**325**	*e*Pn	**Pn**	**19 08 02.1**	**+0.6**
	comp=Z,6.6nm,0.6s						
TUE	**Stuetta**	**17.01**	**320**	*e*Pn	**P**	**19 08 03.4**	**-0.3**
	comp=Z,10nm,1.1s						
NCK	**Nalchik**	**17.03**	**52**	⇑*e*P	**P**	**19 08 04.6**	**+1.0**
KHC	**Kasperske Hory**	**17.07**	**333**	*e*Pn	**P**	**19 08 04.1**	**0.0**
	comp=Z,3.3nm,1.0s						
KHC	**Kasperske Hory**	**17.07**	**333**	*e*P	**P**	**19 08 04.1**	**0.0**
KHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KHC	**Kasperske Hory**	**17.07**	**333**	*e*P	**P**	**19 08 03.8**	**-0.3**
KHC				*ex*	x	19 08 10.5	
TBLG	**Delisi**	**17.13**	**59**	*e*Pn	**P**	**19 08 04.1**	**-0.6**
	comp=Z,13nm,1.3s						
TBLG	**Delisi**	**17.13**	**59**	*e*P	**P**	**19 08 04.1**	**-0.6**
TBLG				pmax	pmax		
	comp=Z,13nm,1.3s						
DPC	**Dobruska-Polom**	**17.25**	**341**	*e*P	**Pn**	**19 08 04.9**	**+0.2**
DPC	**Dobruska-Polom**	**17.25**	**341**	*e*P	**Pn**	**19 08 04.9**	**+0.2**
DPC				*ex*	x	19 08 17.3	
DAVA	**Damuels**	**17.28**	**323**	*e*Pn	**Pn**	**19 08 05.7**	**+0.5**
	comp=Z,12nm,0.9s						
SENIN	**Lac Senin/Sane**	**18.07**	**317**	*e*Pn	**P**	**19 08 15.9**	**+0.6**
	comp=Z,4.6nm,0.8s						
GROC	**Groznyy**	**18.38**	**55**	*e*P	**P**	**19 08 14.3**	**-4.2**
GROC				pmax	pmax		
	comp=Z,17nm,0.5s						
BRG	**Berggiesshubel**	**18.42**	**337**	*e*P	**Pn**	**19 08 19.0**	**0.0**
	comp=Z,4.1nm,1.0s						
GRFO	**Grafenberg**	**18.44**	**331**	*e*P	**Pn**	**19 08 19.6**	**+0.3**
	comp=Z,52nm,1.4s						
GRFO	**Grafenberg**	**18.44**	**331**	*e*P	**Pn**	**19 08 19.6**	**+0.3**
GRFO				pmax	pmax	

ARU	Arti	31.75	36	*de*P		P	19 10 27.0 -0.5
ARU				pmax		pmax	
comp=Z,12nm,1.3s							
SVE	Sverdlovsk	32.95	36	⇑*e*P		P	19 10 38.1 +0.2
SVE				pmax		pmax	
comp=Z,17nm,0.6s							
ARCES	ARCESS Array B	35.25	0	P		P	19 10 55.9 -1.9
comp=Z,1.4nm,0.4s,baz=171,slow=9.2,SNR=18							
ARE0	ARCESS Array S	35.25	0	*e*P		P	19 10 56.6 -1.1
comp=Z,1.2nm,1.5s							
KKAR	Karatay Array	36.13	62	*e*P		P	19 11 06.4 +0.8
comp=Z,5.8nm,0.9s							
KKAR	Karatay Array	36.13	62	*e*P		P	19 11 06.4 +0.8
KKAR				pmax		pmax	
comp=Z,6.0nm,0.9s							
BRVK	Borovoye	36.90	45	*e*P		P	19 11 11.8 -0.3
comp=Z,4.7nm,1.3s							
BRVK	Borovoye	36.90	45	⇓*e*P		P	19 11 12.6 +0.5
BRVK				pmax		pmax	
comp=Z,3.0nm,1.1s							
DBIC	Dimbokro	39.01	232	P		P	19 11 30.4 +0.2
comp=Z,4.0nm,0.8s,baz=350,slow=5.2,SNR=4.7							
DBIC	Dimbokro	39.01	232	*e*P		P	19 11 30.1 -0.2
comp=Z,21nm,1.3s							
DBIC	Dimbokro	39.01	232	*e*P		P	19 11 30.1 -0.2
DBIC				pmax		pmax	
comp=Z,21nm,1.3s							
AAK	Ala-Archa	39.08	63	*e*P		P	19 11 31.4 +0.6
comp=Z,5.7nm,1.1s							
AAK	Ala-Archa	39.08	63	⇑*e*P		P	19 11 31.9 +1.1
AAK				pmax		pmax	
comp=Z,9.0nm,1.7s							
KSH	Kashi	40.56	67	P		P	19 11 42.9 -0.2
KSH				pmax		pmax	
comp=Z,10.0nm,0.6s							
KSH				LR		LR	
comp=Z,2μm,15.0s							
KURK	Kurchatov	41.74	50	*e*P		P	19 11 53.0 +0.5
comp=Z,5.2nm,0.6s							
KURK	Kurchatov	41.74	50	*ce*P		P	19 11 52.6 +0.1
KURK				pmax		pmax	
comp=Z,9.0nm,1.3s							
MAKZ	Makanchi	44.06	56	*e*P		P	19 12 11.6 +0.2
comp=Z,2.0nm,0.7s							
MAKZ	Makanchi	44.06	56	*e*P		P	19 12 11.6 +0.2
MAKZ				pmax		pmax	
comp=Z,2.0nm,0.7s							
SCO	Scoresbysund	44.09	339	*e*P		P	19 12 12.7 +1.6
comp=Z,14nm,1.5s							
MK31	Makanchi Array	44.28	56	*e*P		P	19 12 13.8 +0.7
comp=Z,3.9nm,0.8s							
MK31	Makanchi Array	44.28	56	*e*P		P	19 12 13.8 +0.7
MK31				pmax		pmax	
comp=Z,4.0nm,0.8s							
MK32	Makanchi Array	44.28	56	*e*P		P	19 12 13.6 +0.5
MKAR	Makanchi Array	44.28	56	P		P	19 12 13.6 +0.5
comp=Z,3.8nm,0.5s,baz=278,slow=6.6,SNR=25							
MKAR	Makanchi Array	44.28	56	*i* P		P	19 12 13.8 +0.7
MKAR				pmax		pmax	
comp=Z,4.0nm,0.5s							
NVS	Novosibirsk	44.71	44	*e*P		P	19 12 17.5 +1.1
NVS				*e*			19 12 21.3
NVS				pmax		pmax	
comp=Z,12nm,0.9s							
NVS				pmax		pmax	
comp=E,6.0nm,0.9s							
ZAA0	Zalesovo Array	45.62	46	*e*P		P	19 12 23.3 -0.3
comp=E,9.1nm,0.6s							
ZALV	Zalesovo Beam	45.62	46	P		P	19 12 23.2 -0.4
comp=E,12nm,0.5s,baz=268,slow=8.7,SNR=35							
DGZ	Jazzator, Alta	47.43	51	*d i* P		P	19 12 39.0 +0.9
DGZ				pmax		pmax	
comp=Z,2.0nm,0.9s							
WMQ	Urumqi	48.47	59	*e*P		P	19 12 47.9 +1.8
WMQ				pP		pP	19 12 53.6 +0.6
WMQ				pmax		pmax	
comp=Z,22nm,0.7s							
WMQ				LR		LR	
comp=Z,800nm,21.7s							
WMQ				LR		LR	
comp=Z,2μm,25.7s							
NRIK	Noril'sk	48.65	25	P		P	19 12 47.2 +0.2
comp=Z,4.4nm,0.7s,baz=265,slow=6.0,SNR=5.4							
LSA	Lhasa	55.32	75	*e*P		P	19 13 38.0 +0.1
comp=Z,3.4nm,0.7s							
LSA	Lhasa	55.32	75	*e*P		P	19 13 38.0 +0.1
LSA				pmax		pmax	
comp=Z,3.0nm,0.7s							
TLY	Talaya	57.20	47	*e*P		P	19 13 51.4 +0.9
comp=Z,3.9nm,0.9s							
TLY	Talaya	57.20	47	*de*P		P	19 13 52.2 +1.7
ZAK	Zakamensk	57.33	48	*e*P		P	19 13 52.3 +0.8
ZAK				pmax		pmax	
comp=Z,6.0nm,1.1s							
GTA	Gaotai	58.40	61	*e*P		P	19 14 00.3 +1.1
GTA				pP		pP	19 14 04.4 -1.8
GTA				sP		sP	19 14 07.5 -1.4
GTA				pmax		pmax	
comp=Z,4.0nm,0.8s							
SONA0	Songino Array	60.05	50	*e*P		P	19 14 11.2 +0.7
SONM	Songino Array	60.05	50	P		P	19 14 11.2 +0.7
comp=Z,3.2nm,0.7s,baz=284,slow=7.9,SNR=22							
LZH	Lanzhou	62.61	63	*e*P		P	19 14 28.9 +0.8
LZH				pP		pP	19 14 32.3 -2.8
LZH				sP		sP	19 14 33.8 -4.0
LZH				*e*PP		PP	19 16 48.0 +2.3
LZH				pmax		pmax	
comp=Z,15nm,1.2s							
LZH				pmax		pmax	
comp=Z,43nm,7.2s							
LZH				LR		LR	
comp=Z,180nm,15.7s							
LZH				LR		LR	
comp=Z,170nm,16.1s							
LZH				LR		LR	
comp=Z,240nm,17.5s							
SCHQ	Schefferville	63.78	320	P		P	19 14 35.4 +0.1
comp=Z,1.9nm,0.5s,baz=90,slow=6.1,SNR=2.5							
SCHQ	Schefferville	63.78	320	*e*P		P	19 14 35.5 +0.1
comp=Z,5.0nm,0.8s							
KMI	Kunming	66.57	75	P		P	19 14 53.3 -0.9
KMI				pmax		pmax	
comp=Z,18nm,0.6s							
CMAR	Chiang Mai Arr	66.72	83	P		P	19 14 54.5 -0.4
comp=Z,0.8nm,0.6s,baz=302,slow=8.4,SNR=7.9							
HIA	Hailar	67.65	45	*e*P		P	19 15 00.8 +0.4
comp=Z,6.1nm,0.5s							
HIA	Hailar	67.65	45	⇑*e*P		P	19 15 00.9 +0.5
HIA				pmax		pmax	
comp=Z,42nm,1.2s							
BILL	Bilibino	73.88	14	*e*P		P	19 15 36.8 -1.1
BILL				*e*			19 15 50.2
BILL				pmax		pmax	
comp=Z,1.0nm,1.0s							
SEY	Seymchan	74.34	22	P		P	19 15 41.4 +0.8
comp=Z,0.8nm,0.4s,baz=268,slow=5.6,SNR=4.2							
KLR	Kul'dur	74.42	41	⇓*e*P		P	19 15 42.0 +0.6
KLR				pmax		pmax	
comp=Z,4.0nm,1.0s							
MA2	Magadan	76.25	25	P		P	19 15 52.2 +0.5
comp=Z,4.6nm,0.6s,baz=337,slow=11,SNR=5.4							
MA2	Magadan	76.25	25	⇓*e*P		P	19 15 52.5 +0.8
MA2				pmax		pmax	
comp=Z,6.0nm,1.0s							
INK	Inuvik	76.42	352	P		P	19 15 52.2 -0.3
comp=Z,1.2nm,0.8s,baz=56,slow=3.6,SNR=3.0							
USRK	Ussuriysk Ar.	77.46	45	P		P	19 15 58.8 0.0
comp=Z,4.5nm,0.5s,baz=291,slow=4.9,SNR=13							
KS15	Wonju Array Si	78.81	52	*e*P		P	19 16 07.1 +0.7
comp=Z,12nm,1.4s							
KSRS	Korea Array	78.83	52	P		P	19 16 07.2 +0.8
comp=Z,2.4nm,0.7s,baz=304,slow=5.1,SNR=14							
ILAR	Eielson Array	81.02	357	P		P	19 16 18.1 +0.3
comp=Z,0.7nm,0.7s,baz=357,slow=4.3,SNR=8.3							
ILB	Eielson Array	81.02	357	*e*P		P	19 16 18.0 +0.2
comp=Z,2.0nm,0.9s							
WRH	Wood River Hil	81.38	357	*e*P		P	19 16 19.9 +0.2
comp=Z,5.0nm,0.8s							
YSS	Yuzh-Sakhalins	81.61	38	*e*P		P	19 16 24.0 +2.7
DOT	Dot Lake	81.97	355	*e*P		P	19 16 23.8 +0.9
comp=Z,2.4nm,0.8s							
MAJO	Matsushiro	85.91	48	*e*P		P	19 16 44.2 +0.6
MAJO	Matsushiro	85.91	48	*e*P		P	19 16 44.2 +0.6
MAT	Matsushiro	85.91	48	P		P	19 16 43.7 +0.1
MJAR	Matsushiro Arr	85.92	48	P		P	19 16 44.2 +0.6
comp=Z,3.6nm,0.9s,baz=302,slow=5.2,SNR=15							
ASAR	Alice Springs	117.95	101	PKP	PKPdf		19 22 50.1 -0.4
comp=Z,0.6nm,1.1s,baz=320,slow=1.5,SNR=3.8							

ROM 15 19:05:36.4±0.1, 40°.323N±0°.004×15°.974E±0°.004, h10km, ML1.1/6, Error ellipse: s-maj=0.5km s-min=0.2km az=201.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCEL	Monticello	0.13	271	P	Pg	19 05 39.9	+0.5
MCEL				S	Sg	19 05 42.4	+0.8
MCEL				AML	AML		
comp=E,120μm,0.3s							
MCEL				AML	AML		
comp=N,120μm,0.2s							
MCEL				AML	AML		
comp=N,120μm,0.2s							
MCEL				AML	AML		
comp=E,120μm,0.3s							
SCHR	S. Chirico Rap	0.15	148	P	Pg	19 05 40.1	+0.4
SCHR				S	Sg	19 05 42.9	+0.9
SCHR				AML	AML		
comp=E,145μm,0.4s							
SCHR				AML	AML		
comp=N,125μm,0.3s							
SCHR				AML	AML		
comp=N,125μm,0.3s							
SCHR				AML	AML		
comp=E,145μm,0.4s							
SIRI	Monte Sirino -	0.16	210	P	Pg	19 05 40.5	+0.5
SIRI				S	Sg	19 05 43.5	+1.1
SIRI				AML	AML		
comp=E,109μm,0.2s							
SIRI				AML	AML		
comp=N,136μm,1.0s							
SIRI				AML	AML		
comp=E,109μm,0.2s							
SIRI				AML	AML		
comp=N,136μm,1.0s							
MTSN	Montesano sull	0.18	252	P	Pg	19 05 40.7	+0.4
MTSN				S	Sg	19 05 44.2	+1.3
MTSN				AML	AML		
comp=E,73μm,0.2s							
MTSN				AML	AML		
comp=N,71μm,0.1s							
MTSN				AML	AML		
comp=N,71μm,0.1s							
MTSN				AML	AML		
comp=E,73μm,0.2s							
SLCN	Sala Consilina	0.27	285	P	Pb	19 05 42.8	-0.7
SLCN				S	Sb	19 05 47.0	-1.2
SLCN				AML	AML		
comp=E,77μm,0.6s							
SLCN				AML	AML		
comp=N,52μm,1.5s							
SLCN				AML	AML		
comp=N,52μm,1.5s							
SLCN				AML	AML		
comp=E,77μm,0.6s							
MIGL	Miglionico	0.45	52	P	Pg	19 05 45.6	+0.3
MIGL				S	Sb	19 05 53.0	-0.4
SALB	San Lorenzo Be	0.53	147	P	Pg	19 05 47.1	+0.4
SALB				AML	AML		
comp=E,35μm,0.3s							
SALB				AML	AML		
comp=N,22μm,1.5s							
SALB				AML	AML		
comp=E,35μm,0.3s							
SALB				AML	AML		
comp=N,22μm,1.5s							

*IDC **15** 19:08:25.9±1.1, 21°.89N×121°.03E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/51, mbtmp3.5/5, Error ellipse: s-maj=42.9km s-min=21.0km az=69.0*
*ISCJB **15** 19:08:30.4±0.3, 22°.02N±0°.02×121°.41E±0°.02, h43km±5km, mb3.5/4, Error ellipse: s-maj=3.3km s-min=2.8km az=164.7*
*JMA **15** 19:08:31.4±0.2, 22°.19N×121°.35E, h41km, M3.6*
*TAP **15** 19:08:31.5, 22°.11N×121°.31E, h28km, ML3.7, C*

ISC 15 19:08:30.8±1.0, 22°.03N±0°.04×121°.37E±0°.02, h34km±2km, n115, σ1§55/207, mb3.5/4, 4C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.17	86	P	Pb	19 08 38.0	+0.7
LAY	baz=97			S	Sb	19 08 42.8	+1.0
TSEB	Hengchuen, Pin	0.45	254	⇑P	Pb	19 08 41.5	+0.8
TSEB	baz=252			S	Sn	19 08 49.0	+1.3
TWKBT	Hengchun	0.52	261	⇑P	Pb	19 08 41.6	-0.1
TWKBT	baz=258			S	Sb	19 08 48.6	-0.8
TAW	Tawu	0.55	307	⇓P	Pn	19 08 40.9	-1.2
TAW	baz=312			*e*S	Sb	19 08 47.9	-2.1
HEN	Hengchun	0.58	268	⇑P	Pn	19 08 42.6	0.0
HEN	baz=262			S	Sb	19 08 50.5	-0.4
EAST	Anshuo	0.60	307	⇓P	Pn	19 08 41.8	-1.1
EAST	baz=309			S	Sb	19 08 48.9	-2.5
ECL	Taimali	0.68	326	P	Pn	19 08 42.4	-1.6
ECL	baz=327			S	Sn	19 08 50.4	-3.1
TTN	Taitung	0.75	344	P	Pn	19 08 44.9	-0.1
TTN	baz=348			S	Sn	19 08 55.6	+0.4
SCZT	Fangliau	0.77	297	P	Pn	19 08 44.9	-0.4
SCZT	baz=293			S	Sn	19 08 54.0	-1.7
TWGBT	Beinan	0.83	341	P	Pn	19 08 44.5	-1.6
TWGBT	baz=334			*e*S	Sn	19 08 54.0	-3.1
TWG	Pinlang	0.83	341	⇓P	Pn	19 08 44.5	-1.7
TWG	baz=334			S	Sn	19 08 54.0	-3.2
SSPT	Xinbi	0.87	302	P	Pn	19 08 46.8	+0.2
SSPT	baz=299			*e*S	Sn	19 08 57.1	-1.0
MASBT	Mashibuluo	0.89	311	⇓P	Pn	19 08 46.3	-0.7
MASBT	baz=315			*e*S	Sn	19 08 56.0	-2.7
WLCH	Liuqiu	0.97	290	*e*P	Pn	19 08 50.0	+2.0
WLCH	baz=287			*e*S	Sn	19 09 02.7	+2.2
SSD	Sandimen	0.99	317	*e*P	Pn	19 08 47.8	-0.5
CHKT	Chengkung	1.07	360	*e*P	Pn	19 08 48.2	-1.2
CHKT	baz=12			*e*S	Sn	19 09 01.5	-1.5
SGLT	Jiouru	1.07	311	*e*P	Pn	19 08 50.4	+1.1
SGLT	baz=310			*e*S	Sn	19 09 04.1	+1.1
SLGT	Liugui	1.17	325	*e*P	Pn	19 08 50.7	-0.1
SLGT	baz=326			*e*S	Sn	19 09 06.1	+0.5
TWM1	Shoushan	1.18	312	*e*P	Pn	19 08 53.0	+2.1
TWM1	baz=312			*e*S	Sb	19 09 10.2	+2.4
SNJT	Kaohsiung City	1.20	307	*e*P	Pn	19 08 53.0	+1.8
ELDTW	Lidau	1.20	344	*e*P	Pn	19 08 49.5	-1.8
ELDTW	baz=346			*e*S	Sn	19 09 03.0	-3.4
STYT	Tauyuan	1.26	334	*e*P	Pn	19 08 51.8	-0.4
STYT	baz=346			*e*S	Sn	19 09 05.9	-2.1
SGST	Jiashian	1.27	326	⇑P	Pn	19 08 53.4	+1.2
SGST	baz=326			S	Sn	19 09 09.9	+1.7
TWF1	Yuli	1.32	357	*e*P	Pn	19 08 51.2	-1.6
TWF1	baz=349			*e*S	Sn	19 09 05.8	-3.5
YULB	Yu-li	1.36	357	*e*P	Pn	19 08 52.0	-1.5
YULB	baz=349			*e*S	Sn	19 09 07.1	-3.2
CHN1	Nanshi	1.39	326	*e*P	Pn	19 08 54.9	+1.1
CHN1	baz=327			S	Sn	19 09 13.3	+2.3
WTP	Ta-pu	1.40	330	*e*P	Pn	19 08 55.0	+1.1
WTP	baz=331			S	Sn	19 09 12.8	+1.5
SNST	Tainan City	1.43	326	*e*P	Pn	19 08 56.1	+1.8
SNST	baz=327			*e*S	Sn	19 09 13.2	+1.1
HGSD	Ruisui	1.46	2	*e*P	Pn	19 08 55.0	+0.3
HGSD	baz=15			*e*S	Sn	19 09 12.4	-0.3
EHY	Hungye	1.47	358	*e*P	Pn	19 08 53.4	-1.6
TWK	Hsinying	1.48	327	*e*P	Pn	19 08 55.9	+0.8
TWK	baz=328			*e*S	Sn	19 09 15.4	+2.2
YUS	Yu-Shan	1.50	345	*e*P	Pn	19 08 55.1	-0.7
YUS	baz=352			*e*S	Sn	19 09 12.8	-1.7
ALS	Alishan	1.56	341	*e*P	Pn	19 08 56.7	+0.3
ALS	baz=342			*e*S	Sn	19 09 15.9	+0.1
SCLT	Jiali	1.57	317	*e*S	Sn	19 09 16.8	+1.2
EGFH	Guangfu	1.64	2	*e*P	Pn	19 08 57.7	+0.5
EGFH	baz=353			*e*S	Sn	19 09 18.4	+1.3
CHN5	Tsauling	1.69	338	*e*P	Pn	19 08 59.1	+1.2
CHN5	baz=339			*e*S	Sn	19 09 20.4	+2.0
CHN8	Yiju	1.69	321	*e*S	Sn	19 09 20.1	+1.7
CHY	Chiayi	1.70	329	*e*P	Pn	19 08 58.5	+0.4
CHY	baz=330			*e*S	Sn	19 09 19.8	+1.1
WHYT	Xinyi Township	1.73	344	*e*P	Pn	19 08 59.5	+1.0
WHYT	baz=345			*e*S	Sn	19 09 20.3	+0.9
VWDT	VWDT	1.73	353	*e*P	Pn	19 08 58.6	+0.1
VWDT	baz=7.0			*e*S	Sn	19 09 19.9	+0.5
WLGB	Puzi	1.75	326	*e*P	Pn	19 08 59.2	+0.5
WLGB	baz=327			*e*S	Sn	19 09 20.9	+1.1
ESL	Shilin	1.78	2	*e*P	Pn	19 08 59.5	+0.3
ESL	baz=4.0			*e*S	Sn	19 09 17.4	-3.2
SSLB	Suanglung	1.79	348	*e*P	Pn	19 09 01.2	+1.8
SSLB	baz=349			*e*S	Sn	19 09 21.5	+0.5
WGK	Gukeng	1.81	336	*e*P	Pn	19 09 01.3	+1.8
WGK	baz=337			*e*S	Sn	19 09 23.6	+2.3
WDLH	Douliu	1.82	335	*e*P	Pn	19 09 00.3	+0.5
WDLH	baz=336			*e*S	Sn	19 09 23.3	+1.7
WJS	Zhushan	1.88	342	*e*P	Pn	19 09 02.5	+1.9
WJS	baz=343			*e*S	Sn	19 09 25.6	+2.5
SMLT	Sun Moon Lake	1.90	347	⇓*e*P	Pn	19 09 02.6	+1.8
SMLT	baz=348			*e*S	Sn	19 09 25.2	+1.5
WSF	Szhu	1.92	327	*e*P	Pn	19 09 01.4	+0.3
WSF	baz=328			*e*S	Sn	19 09 24.9	+0.9
OWD	Renai	1.93	355	*e*P	Pn	19 09 02.0	+0.7
OWD	baz=6.0			*e*S	Sn	19 09 22.3	-2.2
TYC	Yuchr	1.93	346	⇓*e*P	Pn	19 09 02.8	+1.7
TYC	baz=348			S	Sn	19 09 25.9	+1.7
WNT	Mingjian	1.95	341	*e*P	Pn	19 09 03.2	+1.7
WNT	baz=343			*e*S	Sn	19 09 26.7	+2.0
WDGT	Dungji	2.00	308	*e*P	Pn	19 09 02.3	+0.1
WDGT	baz=308			*e*S	Sn	19 09 24.2	-1.7
CHGB	Renai	2.03	355	*e*P	Pn	19 09 04.3	+1.5
CHGB	baz=5.0			*e*S	Sn	19 09 25.5	-1.6
DPDB	Guoxing	2.04	349	*e*P	Pn	19 09 04.3	+1.6
DPDB	baz=350			*e*S	Sn	19 09 28.8	+1.7
TWD	Chiawan	2.05	6	*e*P	Pn	19 09 03.6	+0.6
TWD	baz=358			*e*S	Sn	19 09 27.8	+0.5
RLNB	Erlin	2.07	334	*e*S	Sn	19 09 28.2	+0.4
WHF	Hehuan Shan	2.11	357	*e*P	Pn	19 09 04.3	+0.2
WHF	baz=9.0			*e*S	Sn	19 09 28.8	-0.6
VCHM	Qimei	2.14	304	*e*P	Pn	19 09 04.0	-0.1
VCHM	baz=304			*e*S	Sn	19 09 27.6	-1.9
NACB	Ninganchiao	2.15	6	*e*P	Pn	19 09 04.9	+0.7
NACB	baz=358			*e*S	Sn	19 09 28.5	-1.2
ETLH	Xiulin Townshi	2.17	3	*e*P	Pn	19 09 05.8	+1.2
ETLH	baz=4.0			*e*S	Sn	19 09 29.2	-1.2
WCHH	Zhanghua	2.17	340	*e*P	Pn	19 09 05.8	+1.2
WCHH	baz=328			*e*S	Sn	19 09 31.8	+1.4
TCU	Taichung	2.20	343	*e*P	Pn	19 09 06.5	+1.5
TCU	baz=332			*e*S	Sn	19 09 33.1	+2.0
PHUB	P'eng-hu	2.22	312	*e*S	Sn	19 09 30.2	-1.2
TDCB	Techi	2.22	355	*e*P	Pn	19 09 07.5	+2.0
TDCB	baz=6.0			*e*S	Sn	19 09 32.4	+0.6
PNG	Penghu	2.27	313	*e*P	Pn	19 09 05.7	-0.1
PNG	baz=313			*e*S	Sn	19 09 32.1	-0.6
WHP	Taichung City	2.27	350	*e*P	Pn	19 09 08.1	+2.0

WHP				*eS*		**Sn**	**19 09 35.8 +2.8**
	baz=351						
TWQ1	**Liyutan**	**2.37**	**347**	*eP*		**Pn**	**19 09 08.7 +1.3**
	baz=348						
TWQ1				*eS*		**Sn**	**19 09 37.4 +2.1**
	baz=348						
SANB	**Taian**	**2.39**	**352**	*eP*		**Pn**	**19 09 09.6 +1.9**
	baz=340						
SANB				*eS*		**Sn**	**19 09 37.8 +2.0**
	baz=340						
NNSB	**Datong**	**2.39**	**0**	*eP*		**Pn**	**19 09 09.5 +1.8**
	baz=10.0						
NNSB				*eS*		**Sn**	**19 09 34.7 -1.2**
	baz=10.0						
NNS	**Nan Shan**	**2.40**	**0**	*eP*		**Pn**	**19 09 09.9 +2.1**
	baz=10.0						
NNS				*eS*		**Sn**	**19 09 38.5 +2.4**
	baz=10.0						
WDJ	**Dajia District**	**2.41**	**344**	*eS*		**Sn**	**19 09 37.0 +1.0**
	baz=345						
ENA	**Nanau**	**2.42**	**8**	*eP*		**Pn**	**19 09 09.4 +1.5**
	baz=359						
ENA				*eS*		**Sn**	**19 09 37.1 +0.8**
	baz=359						
NANB	**Nanao**	**2.42**	**8**	*eP*		**Pn**	**19 09 08.8 +0.9**
	baz=359						
NANB				*eS*		**Sn**	**19 09 37.2 +0.9**
	baz=359						
NSY	**Sanyi**	**2.44**	**347**	*eP*		**Pn**	**19 09 10.0 +1.7**
	baz=348						
NSY				*eS*		**Sn**	**19 09 39.5 +2.6**
	baz=348						
PTSB	**Yuanli**	**2.48**	**346**	*eS*		**Sn**	**19 09 40.5 +2.5**
	baz=347						
NMLH	**Miaoli**	**2.55**	**348**	*eS*		**Sn**	**19 09 41.9 +2.2**
	baz=349						
NDT	**Datong Townshi**	**2.57**	**3**	*eP*		**Pn**	**19 09 12.0 +2.0**
	baz=4.0						
NDT				*eS*		**Sn**	**19 09 40.2 +0.1**
	baz=4.0						
ENTT	**Nioudou**	**2.61**	**4**	*eP*		**Pn**	**19 09 12.5 +2.0**
	baz=5.0						
ENTT				*eS*		**Sn**	**19 09 40.7 -0.3**
	baz=5.0						
EOS1	**EOS1**	**2.61**	**15**	*eP*		**Pn**	**19 09 12.4 +1.9**
	baz=26						
EOS1				*eS*		**Sn**	**19 09 42.6 +1.7**
	baz=26						
TWC	**Suao**	**2.61**	**10**	*eP*		**Pn**	**19 09 11.8 +1.3**
	baz=360						
TWC				*eS*		**Sn**	**19 09 43.0 +2.0**
	baz=360						
NSTT	**Nanjuang**	**2.61**	**353**	*eP*		**Pn**	**19 09 12.7 +2.1**
	baz=341						
NSTT				*eS*		**Sn**	**19 09 42.5 +1.3**
	baz=341						
LIOB	**Emei**	**2.63**	**353**	*eP*		**Pn**	**19 09 13.2 +2.3**
	baz=341						
LIOB				*eS*		**Sn**	**19 09 43.1 +1.6**
	baz=341						
YHNB	**Yeheng**	**2.63**	**0**	*eP*		**Pn**	**19 09 12.3 +1.3**
	baz=12						
YHNB				*eS*		**Sn**	**19 09 41.8 +0.1**
	baz=12						
NSK	**Sanguang**	**2.64**	**360**	*eP*		**Pn**	**19 09 13.5 +2.5**
	baz=12						
NSK				*eS*		**Sn**	**19 09 41.0 -0.9**
	baz=12						
TWE	**Neicheng**	**2.70**	**6**	*eP*		**Pn**	**19 09 13.4 +1.6**
	baz=7.0						
TWE				*eS*		**Sn**	**19 09 43.8 +0.6**
	baz=7.0						
NWLT	**Wulai**	**2.74**	**3**	*eP*		**Pn**	**19 09 13.8 +1.4**
	baz=3.0						
NWLT				*eS*		**Sn**	**19 09 43.7 -0.7**
	baz=3.0						
WLTB	**Daxi**	**2.81**	**358**	*eS*		**Sn**	**19 09 48.0 +1.9**
	baz=345						
JYNG	**Yonaguni jima**	**2.82**	**31**	P		**Pn**	**19 09 14.5 +1.1**
JYNG				S		**Sn**	**19 09 45.5 -0.7**
YOJ	**Yonaguni jima**	**2.86**	**32**	*eP*		**Pn**	**19 09 15.0 +1.0**
	baz=43						
YOJ				*eS*		**Sn**	**19 09 47.7 +0.5**
	baz=43						
YOJ	**Yonaguni jima**	**2.86**	**32**	P		**Pn**	**19 09 15.0 +1.0**
YOJ				S		**Sn**	**19 09 45.9 -1.3**
NHDH	**Xindian Distri**	**2.93**	**3**	*eS*		**Sn**	**19 09 50.2 +1.3**
	baz=4.0						
TATO	**Taipei**	**2.94**	**2**	*eS*		**Sn**	**19 09 49.1 0.0**
	baz=13						
TIPB	**Shuangxi**	**2.96**	**8**	*eP*		**Pn**	**19 09 17.1 +1.7**
	baz=360						
TIPB				*eS*		**Sn**	**19 09 49.7 -0.2**
	baz=360						
HATJ	**Hateruma jima**	**3.02**	**48**	*eS*		**Sn**	**19 09 50.4 -0.8**
YM01	**YM01**	**3.11**	**3**	*eP*		**Pn**	**19 09 20.1 +2.6**
	baz=4.0						
YM01				*eS*		**Sn**	**19 09 54.0 +0.5**
	baz=4.0						
YM04	**YM04**	**3.12**	**3**	*eP*		**Pn**	**19 09 19.5 +1.9**
	baz=4.0						
YM04				*eS*		**Sn**	**19 09 56.4 +2.8**
	baz=4.0						
YM10	**YM10**	**3.12**	**3**	*eP*		**Pn**	**19 09 19.8 +2.2**
	baz=4.0						
YM10				*eS*		**Sn**	**19 09 55.6 +1.9**
	baz=4.0						
YM11	**YM11**	**3.13**	**3**	*eS*		**Sn**	**19 09 53.6 -0.5**
	baz=4.0						
YM03	**YM03**	**3.14**	**3**	*eP*		**Pn**	**19 09 21.8 +3.8**
	baz=4.0						
YM03				*eS*		**Sn**	**19 09 55.1 +0.8**
	baz=4.0						
YM07	**YM07**	**3.14**	**4**	*eP*		**Pn**	**19 09 19.7 +1.8**
	baz=5.0						
YM07				*eS*		**Sn**	**19 09 54.4 0.0**
	baz=5.0						
IRIF	**Iriomote-Funau**	**3.16**	**43**	P		**Pn**	**19 09 19.2 +1.0**
IRIF				S		**Sn**	**19 09 53.6 -1.1**
JKRS	**Kuro-shima**	**3.28**	**47**	P		**Pn**	**19 09 20.9 +1.1**
JKRS				*eS*		**Sn**	**19 09 56.5 -1.1**
JIJ	**Ishigaki jima**	**3.46**	**47**	P		**Pn**	**19 09 23.0 +0.8**
JIJ				S		**Sn**	**19 09 59.9 -2.0**
PTMZ	**Houxiangcun**	**3.64**	**326**	*eP*		**Pn**	**19 09 24.4 -0.3**
	baz=326						
PTMZ				*eS*		**Sn**	**19 10 03.7 -2.8**
	baz=326						
KNMB	**Chin-men Tao**	**3.66**	**312**	*eP*		**Pn**	**19 09 24.9 -0.1**
	baz=313						
KNMB				*eS*		**Sn**	**19 10 06.2 -0.8**
	baz=313						
JISG	**Ishigakijimahi**	**3.72**	**46**	P		**Pn**	**19 09 26.3 +0.5**
JISG				*eS*		**Sn**	**19 10 07.7 -0.7**
JTJ	**Tarama**	**4.02**	**49**	P		**Pn**	**19 09 31.0 +1.0**
JTJ				S		**Sn**	**19 10 14.6 -1.3**
JIRB	**Irabujima**	**4.47**	**51**	P		**Pn**	**19 09 36.8 +0.6**
JMJ2	**Miyako jima3**	**4.53**	**53**	P		**Pn**	**19 09 38.4 +1.4**
JMJ2				S		**Sn**	**19 10 28.3 -0.2**
JIKM	**Ikemajima**	**4.58**	**50**	S		**Sn**	**19 10 29.2 -0.6**
MJAR	**Matsushiro Arr**	**20.57**	**42**	P		Pn	19 13 10.0 +0.9
	1.7nm,0.9s,baz=229,slow=10,SNR=9.8						
MKAR	**Makanchi Array**	**40.02**	**318**	P		**P**	**19 16 01.5 -0.9**
	0.5nm,0.6s,baz=115,slow=9.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**42.15**	**328**	P		**P**	**19 16 19.2 -0.6**
	0.6nm,0.5s,baz=120,slow=8.7,SNR=3.0						
WRA	**Warramunga Arr**	**43.60**	**162**	P		**P**	**19 16 31.1 -0.8**
	1.5nm,1.1s,baz=351,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**47.03**	**164**	P		**P**	**19 16 59.3 +0.2**
	0.3nm,0.8s,baz=345,slow=8.2,SNR=6.4						

*IDC **15** 19:14:00.9±1.5, 34°.29N×25°.05E, h0km, mb3.5/1, mb1 3.6/5, mb1mx3.3/41, mbtmp3.5/5, ML3.6/3, Error ellipse: s-maj=26.9km s-min=18.9km az=83.0*
*ISCJB **15** 19:14:02.3±1.1, 34°.17N±0°.06×25°.07E±0°.06, h24km±8km, mb3.3/1, Error ellipse: s-maj=9.9km s-min=7.1km az=26.2*
*ATH **15** 19:14:02.4, 34°.24N×25°.06E, h24km±2km, ML3.1/7, Error ellipse: s-maj=8.0km s-min=1.8km az=356.0*
*THE **15** 19:14:05.0, 34°.35N×25°.04E, h11km±3km, ML3.2/3, Error ellipse: s-maj=3.8km s-min=1.7km az=4.0*

ISC 15 19:14:03.7±2.0, 34°.25N±0°.09×25°.08E±0°.05, h25km±15km, n29, σ1ˢ13/35, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.80**	**344**	P	**Pb**	**19 14 18.0**	**-0.8**
SIVA	**Sivas**	**0.80**	**344**	P	**Pb**	**19 14 18.2**	**-0.7**
SIVA				AML	AML	19 14 53.6	
	comp=E,8028μm,0.4s						
SIVA				AML	AML	19 14 55.8	
	comp=N,8316μm,0.6s						
TMBK	**Timbaki Herakl**	**0.86**	**343**	P	**Pb**	**19 14 19.4**	**-0.5**
TMBK				S	**Sb**	**19 14 31.2**	**+0.2**
LAST	**Lasithi**	**0.97**	**20**	P	**Pn**	**19 14 21.2**	**-0.5**
LAST	**Lasithi**	**0.97**	**20**	P	**Pn**	**19 14 21.3**	**-0.5**
LAST				AML	AML	19 14 57.1	
	comp=E,959μm,0.7s						
LAST				AML	AML	19 14 59.7	
	comp=N,758μm,0.5s						
GVD	**Gavdhos**	**1.00**	**306**	P	**Pn**	**19 14 21.5**	**-0.7**
GVD				S	**Sn**	**19 14 36.2**	**+0.7**
GVD	**Gavdhos**	**1.00**	**306**	P	**Pn**	**19 14 21.5**	**-0.7**
GVD				AML	AML	19 14 55.7	
	comp=N,2697μm,0.3s						
GVD				AML	AML	19 15 00.5	
	comp=E,4918μm,0.4s						
IDI	**Anoyia**	**1.05**	**352**	Pn	**Pn**	**19 14 22.2**	**-0.6**
	comp=E,12nm,0.3s,baz=176,slow=19,SNR=18						
IDI				Sn	**Sb**	**19 14 36.5**	**+0.1**
	comp=E,42nm,0.3s,baz=159,slow=14,SNR=17						
IDI	**Anoyia**	**1.05**	**352**	P	**Pn**	**19 14 21.2**	**-1.6**
NPS	**Neapolis**	**1.10**	**24**	P	**Pn**	**19 14 23.7**	**+0.2**
NPS	**Neapolis**	**1.10**	**24**	P	**Pn**	**19 14 23.7**	**+0.2**
NPS				AML	AML	19 15 00.4	
	comp=E,1313μm,0.9s						
NPS				AML	AML	19 15 03.0	
	comp=N,910μm,0.7s						
PRNS	**Prines Rethymn**	**1.21**	**337**	P	**Pn**	**19 14 25.4**	**+0.4**
ZKR	**Zakros**	**1.27**	**47**	P	**Pn**	**19 14 26.9**	**+1.0**
ZKR				S	**Sb**	**19 14 44.0**	**+1.0**
ZKR	**Zakros**	**1.27**	**47**	P	**Pn**	**19 14 26.9**	**+1.0**
ZKR				AML	AML	19 15 10.3	
	comp=E,792μm,1.1s						
ZKR				AML	AML	19 15 12.5	
	comp=N,485μm,0.5s						
VAM	**Vamos**	**1.36**	**328**	P	**Pn**	**19 14 27.5**	**+0.4**
VAM				S	**Sn**	**19 14 43.0**	**-1.3**
VAM	**Vamos**	**1.36**	**328**	P	**Pn**	**19 14 27.9**	**+0.9**
VAM				AML	AML	19 15 10.8	
	comp=E,1653μm,0.7s						
VAM				AML	AML	19 15 14.5	
	comp=N,1900μm,0.7s						
IMMV	**Iera Moni Meta**	**1.50**	**324**	P	**Pn**	**19 14 29.7**	**+0.6**
IMMV	**Iera Moni Meta**	**1.50**	**324**	P	**Pn**	**19 14 30.1**	**+1.1**
IMMV				AML	AML	19 15 25.6	
	comp=N,743μm,0.4s						
IMMV				AML	AML	19 15 27.8	
	comp=E,1453μm,0.7s						
KARP	**Karpathos**	**2.15**	**52**	P	**Pn**	**19 14 39.6**	**+1.7**
IOSP	**Ios island**	**2.47**	**4**	P	**Pn**	**19 14 43.4**	**+1.1**
APE	**Apeiranthos**	**2.84**	**7**	P	**Pn**	**19 14 49.0**	**+1.6**
SERI	**Serifos**	**2.94**	**351**	P	**Pn**	**19 14 50.1**	**+1.3**
VLI	**Veliai**	**3.02**	**325**	P	**Pn**	**19 14 50.6**	**+0.7**
ARG	**Arkhangelos**	**3.17**	**51**	P	**Pn**	**19 14 52.7**	**+0.7**
MMAI	**Mount Meron Ar**	**8.70**	**95**	Pn	**Pn**	**19 16 08.5**	**+0.5**
	comp=E,0.3nm,0.3s,baz=283,slow=15,SNR=4.5						
MMAI				Sn	**Sn**	**19 17 41.4**	**-3.9**
	comp=E,0.8nm,0.3s,baz=281,slow=24,SNR=2.8						
EIL	**Elat**	**9.55**	**116**	Pn	**Pn**	**19 16 19.6**	**+0.1**
	comp=E,0.3nm,0.3s,baz=243,slow=4.5,SNR=6.3						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**19 17 56.5**	**+0.5**
	baz=199,slow=11,SNR=2.8						
GERES	**GERESS Array B**	**16.86**	**333**	Pn	**P**	**19 18 00.3**	**+0.5**
	comp=E,0.1nm,0.3s,baz=146,slow=12,SNR=9.8						
TORD	**Torodi Ar. Bea**	**29.86**	**231**	P	**P**	**19 20 10.1**	**+0.9**
	comp=E,0.3nm,0.5s,baz=39,slow=10,SNR=3.7						

*IDC **15** 19:14:13.6±1.1, 34°.32N×24°.98E, h0km, mb3.8/7, mb1 3.9/11, mb1mx3.6/40, mbtmp3.8/11, ML3.9/4, Error ellipse: s-maj=22.9km s-min=21.7km az=153.0*
*ISCJB **15** 19:14:14.1±0.8, 34°.17N±0°.08×25°.2E±0°.1, h20km, mb3.8/8, Error ellipse: s-maj=15.9km s-min=8.6km az=142.9*

ISC 15 19:14:16.4±1.0, 34°.20N±0°.09×25°.18E±0°.09, h20km, n15, σ1ˢ67/17, mb3.8/8, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.12**	**348**	Sn	**Sb**	**19 14 50.9**	**-0.3**
	90nm,0.3s,baz=106,slow=20,SNR=9.6						
MMAI	**Mount Meron Ar**	**8.61**	**95**	Pn	**Pn**	**19 16 21.6**	**+1.7**
	1.1nm,0.3s,baz=259,slow=12,SNR=6.1						
MMAI				Sn	**Sn**	**19 17 54.1**	**-2.3**
	1.9nm,0.3s,baz=267,slow=25,SNR=5.4						
EIL	**Elat**	**9.45**	**116**	Pn	**Pn**	**19 16 32.2**	**+0.9**
	1.4nm,0.3s,baz=277,slow=19,SNR=12						
EIL				Sn	**Sn**	**19 18 13.9**	**-3.0**
	0.7nm,0.3s,baz=86,slow=13,SNR=4.9						
KBZ	**Khabaz**	**16.72**	**50**	Pn	**P**	**19 18 14.0**	**+2.5**
	0.1nm,0.3s,baz=213,slow=12,SNR=4.2						
AKASG	**Malin Array Be**	**16.76**	**9**	Pn	**Pn**	**19 18 08.9**	**-0.9**
	0.9nm,0.3s,baz=199,slow=10,SNR=9.6						
GERES	**GERESS Array B**	**16.94**	**333**	Pn	**P**	**19 18 14.4**	**+0.2**
	0.7nm,0.3s,baz=145,slow=12,SNR=34						
KHC	**Kasperske Hory**	**17.23**	**334**	*eP*	**Pn**	**19 18 15.0**	**-0.7**
HFS	**Hagfors**	**27.02**	**347**	P	**P**	**19 19 56.4**	**-0.4**
	0.9nm,0.5s,baz=158,slow=12,SNR=3.7						
FINES	**FINESS Array B**	**27.27**	**1**	P	**P**	**19 19 57.3**	**-1.8**
	2.3nm,0.9s,baz=192,slow=9.9,SNR=3.1						
NOA	**NORSAR Array B**	**28.34**	**346**	P	**P**	**19 20 06.7**	**-2.0**
	0.1nm,0.4s,baz=148,slow=9.9,SNR=2.5						
TORD	**Torodi Ar. Bea**	**29.89**	**231**	P	**P**	**19 20 22.9**	**+0.1**
	0.8nm,0.4s,baz=29,slow=8.9,SNR=13						
ARCES	**ARCESS Array B**	**35.39**	**0**	P	**P**	**19 21 08.7**	**-1.8**
	10nm,0.5s,baz=167,slow=9.3,SNR=3.8						
MKAR	**Makanchi Array**	**44.29**	**56**	P	**P**	**19 22 25.3**	**+0.6**
	0.5nm,0.5s,baz=279,slow=7.0,SNR=7.0						
ZALV	**Zalesovo Beam**	**45.66**	**45**	P	**P**	**19 22 35.7**	**+0.3**
	1.6nm,0.4s,baz=271,slow=8.8,SNR=6.5						
SONM	**Songino Array**	**60.08**	**50**	P	**P**	**19 24 23.7**	**+1.5**
	0.3nm,0.4s,baz=277,slow=6.2,SNR=2.9						

*NEIC **15** 19:17:34.8±0.0, 15°.57N×93°.54W, h59km, MD4.0(MEX), After MEX.*

MEX 15 19:17:34.8±0.7, 15°.57N×93°.54W, h59km±28km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.27**	**18**	*e*Pn	Pn	19 17 55.6	-0.9
TGIG				*e*Sn	Sn	19 18 10.3	-2.3
TGIG		**1.27**	**18**	*e*P	Pn	19 17 55.6	-0.9
TGIG				*e*S	Sn	19 18 10.3	-2.3
THIG		**1.39**	**118**	*e*Sn	Sn	19 18 13.9	-1.6
THIG		**1.39**	**118**	*e*S	Sn	19 18 13.9	-1.6
CCIG	**Comitan**	**1.53**	**62**	*e*Pn	Pn	19 17 58.6	-1.4
CCIG				*e*Sn	Sn	19 18 17.0	-2.0
CCIG	**Comitan**	**1.53**	**62**	*e*P	Pn	19 17 58.2	-1.8
CCIG				*i* S	Sn	19 18 16.6	-2.3
CMIG	**Matias Romero**	**1.99**	**320**	*e*Pn	Pn	19 18 07.4	+1.3
CMIG				*e*Sn	Sn	19 18 28.1	-1.9
CMIG	**Matias Romero**	**1.99**	**320**	*e*P	Pn	19 18 07.4	+1.3
CMIG				*e*S	Sn	19 18 28.1	-1.9
HUIG	**Huatulco**	**2.48**	**275**	*e*Pn	Pn	19 18 13.5	+0.6
HUIG				*e*Sn	Sn	19 18 40.0	-2.0
HUIG	**Huatulco**	**2.48**	**275**	*e*P	Pn	19 18 13.5	+0.6
HUIG				*e*S	Sn	19 18 40.0	-2.0
TEIG	**Tepich**	**6.83**	**46**	*e*Pn	Pn	19 19 07.2	-5.2

MAN 15 19:17:51.5, 13°.21N×124°.81E, h16km, mb4.6, ML3.4, MS3.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.71**	**192**	*e*P	Pg	19 18 05.0	-0.3
CNP				*e*S	Sn	19 18 18.3	+1.0
PVCP	**Virac**	**0.75**	**301**	*e*P	Pg	19 18 05.0	-1.1
PVCP				*e*S	Sn	19 18 19.0	+0.6
BESP	**Borongan**	**1.71**	**159**	*e*P	Pn	19 18 21.0	+0.4
BESP				*e*S	Sn	19 18 42.6	+0.5
PLP	**Palo**	**2.04**	**175**	*e*P	Pn	19 18 25.5	+0.4
PLP				*i* S	Sn	19 18 50.6	+0.4
AUQP	**San Andres**	**2.08**	**273**	*e*P	Pn	19 18 26.8	+1.0
AUQP				*e*S	Sn	19 18 52.3	+1.0
BOAC	**Boac**	**2.90**	**275**	*e*P	Pn	19 18 37.2	+0.2

*ATH **15** 19:18:29.3, 34°.04N×25°.14E, h24km±3km, ML3.1/6, Error ellipse: s-maj=5.9km s-min=2.2km az=356.0*
*IDC **15** 19:18:31.0±1.1, 34°.22N×25°.09E, h0km, mb3.7/5, mb1 3.6/11, mb1mx3.4/48, mbtmp3.5/11, ML3.5/6, MS4.2/1, Ms1 4.1/1, ms1mx3.3/52, Error ellipse: s-maj=18.8km s-min=18.3km az=149.0*
*ISCJB **15** 19:18:31.0±1.3, 34°.05N±0°.05×25°.24E±0°.05, h19km±9km, mb3.6/5, Error ellipse: s-maj=9.5km s-min=5.4km az=32.3*
*THE **15** 19:18:36.5, 34°.34N×25°.14E, h0km±3km, ML3.2/3, Error ellipse: s-maj=6.8km s-min=1.6km az=167.0*

ISC 15 19:18:31.1±1.8, 34°.14N±0°.06×25°.19E±0°.05, h5km±11km, n30, σ1ˢ18/39, mb3.8/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.93**	**340**	P	**Pn**	**19 18 49.9**	**-0.9**
SIVA				S	**Sb**	**19 19 02.4**	**+0.1**
	4μm,0.6s						
SIVA	**Sivas**	**0.93**	**340**	P	**Pg**	**19 18 48.7**	**-0.2**
SIVA				S	**Sb**	**19 19 02.4**	**+0.1**
SIVA				AML	AML	19 19 04.8	
	comp=N,4552μm,0.7s						
SIVA				AML	AML	19 19 05.0	
	comp=E,6992μm,0.6s						
LAST	**Lasithi**	**1.04**	**13**	P	**Pn**	**19 18 52.8**	**+0.3**
LAST				S	**Sn**	**19 19 06.9**	**-0.6**
LAST	**Lasithi**	**1.04**	**13**	P	**Pb**	**19 18 51.3**	**-0.4**
LAST				AML	AML	19 19 19.8	
	comp=N,900μm,0.6s						
LAST				AML	AML	19 19 23.4	
	comp=E,954μm,0.6s						
GVD	**Gavdhos**	**1.14**	**308**	P	**Pn**	**19 18 55.6**	**+1.8**
GVD				S	**Sn**	**19 19 10.2**	**+0.4**
	comp=E,1μm,0.5s						
GVD	**Gavdhos**	**1.14**	**308**	P	**Pg**	**19 18 51.8**	**-1.3**
GVD				AML	AML	19 19 20.1	
	comp=E,1891μm,0.5s						
GVD				AML	AML	19 19 23.5	
	comp=N,1468μm,0.4s						
IDI	**Anoyia**	**1.17**	**348**	Pn	**Pg**	**19 18 53.0**	**-0.5**
	comp=N,20nm,0.3s,baz=329,slow=23,SNR=8.4						
IDI				Sn	**Sn**	**19 19 09.5**	**-1.0**
	comp=N,24nm,0.3s,baz=313,slow=21,SNR=5.4						
NPS	**Neapolis**	**1.17**	**17**	P	**Pn**	**19 18 55.6**	**+1.5**
NPS				S	**Sn**	**19 19 10.9**	**+0.4**
NPS	**Neapolis**	**1.17**	**17**	P	**Pn**	**19 18 54.4**	**+0.3**
ZKR	**Zakros**	**1.29**	**41**	P	**Pg**	**19 18 54.8**	**-1.1**
ZKR				AML	AML	19 19 28.2	
	comp=E,810μm,0.6s						
ZKR				AML	AML	19 19 28.4	
	comp=N,255μm,0.5s						
VAM	**Vamos**	**1.50**	**327**	P	**Pg**	**19 19 01.5**	**+1.6**
VAM				S	**Sg**	**19 19 19.5**	**+0.1**
	comp=N,965nm,0.8s						
VAM	**Vamos**	**1.50**	**327**	P	**Pn**	**19 18 58.1**	**-0.6**
VAM				AML	AML	19 19 29.3	
	comp=E,895μm,0.6s						
VAM				AML	AML	19 19 32.9	
	comp=N,1004μm,0.6s						
IMMV	**Iera Moni Meta**	**1.65**	**323**	P	**Pn**	**19 18 59.4**	**-1.3**
IMMV				AML	AML	19 19 37.0	
	comp=E,708μm,0.6s						
IMMV				AML	AML	19 19 44.1	
	comp=N,792μm,0.9s						
KARP	**Karpathos**	**2.14**	**49**	P	**Pn**	**19 19 06.5**	**-1.0**
ANAF	**Anafi Island**	**2.26**	**12**	P	**Pn**	**19 19 09.1**	**-0.1**
ANKY	**Antikythira Is**	**2.31**	**319**	P	**Pn**	**19 19 08.7**	**-1.1**
IOSP	**Ios island**	**2.58**	**2**	P	**Pn**	**19 19 13.2**	**-0.2**
MHLO	**Agia Marina, M**	**2.62**	**346**	P	**Pn**	**19 19 14.9**	**+0.8**
SERI	**Serifos**	**3.06**	**349**	P	**Pn**	**19 19 20.3**	**+0.1**
MMAI	**Mount Meron Ar**	**8.60**	**95**	Pn	**Pn**	**19 20 37.8**	**+1.5**
	comp=N,0.3nm,0.3s,baz=278,slow=9.8,SNR=2.9						
MMAI				Sn	**Sn**	**19 22 12.2**	**-1.4**
	comp=N,0.9nm,0.3s,baz=282,slow=20,SNR=4.6						
BRTR	**Keskin Array B**	**8.76**	**48**	Pn	**Pn**	**19 20 41.4**	**+2.9**
	comp=N,0.1nm,0.3s,baz=246,slow=13,SNR=2.5						
EIL	**Elat**	**9.42**	**116**	Pn	**Pn**	**19 20 49.9**	**+2.4**
	comp=N,0.3nm,0.3s,baz=301,slow=5.9,SNR=3.9						
EIL				Sn	**Sn**	**19 22 31.6**	**-2.2**
	comp=N,0.2nm,0.3s,baz=322,slow=19,SNR=2.6						
KBZ	**Khabaz**	**16.75**	**50**	Pn	**P**	**19 22 30.3**	**+1.7**
	comp=N,0.1nm,0.3s,baz=222,slow=16,SNR=2.8						
KBZ				LR	LR	19 29 41.1	
	comp=N,922nm,20.6s,baz=120,slow=40						
AKASG	**Malin Array Be**	**16.81**	**9**	Pn	**P**	**19 22 28.1**	**-1.2**
	comp=N,0.6nm,0.3s,baz=200,slow=10,SNR=5.0						
GERES	**GERESS Array B**	**16.99**	**333**	Pn	**P**	**19 22 31.0**	**-0.5**
	comp=N,0.2nm,0.3s,baz=145,slow=12,SNR=9.5						
ESDC	**Sonseca Array**	**23.90**	**292**	P	**P**	**19 23 45.9**	**+0.2**
	comp=N,0.1nm,0.3s,baz=82,slow=9.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**29.86**	**231**	P	**P**	**19 24 39.8**	**+0.2**
	comp=N,1.0nm,0.6s,baz=33,slow=9.0,SNR=14						
SPITS	**Spitsbergen Ar**	**44.30**	**357**	P	**P**	**19 26 41.2**	**-0.2**
	comp=N,3.3nm,0.8s,baz=142,slow=4.9,SNR=4.5						
MKAR	**Makanchi Array**	**44.32**	**56**	P	**P**	**19 26 43.2**	**+1.3**
	comp=N,0.8nm,0.6s,baz=275,slow=6.5,SNR=5.4						
ZALV	**Zalesovo Beam**	**45.70**	**45**	P	**P**	**19 26 52.6**	**-0.1**
	comp=N,0.5nm,0.5s,baz=260,slow=8.8,SNR=3.3						

*SJA **15** 19:19:36.2±0.5, 20°.97S×68°.85W, h87km±20km, ML2.1, MW3.8*
*ISCJB **15** 19:19:37.1±1.1, 20°.83S±0°.03×69°.2W±0°.1, h112km±10km, Error ellipse: s-maj=17.3km s-min=5.3km az=2.9*
*GUC **15** 19:19:37.1±0.6, 20°.83S×69°.10W, h111km±3km, ML2.8*

ISC 15 19:19:36.2±1.8, 20°.83S±0°.04×69°.04W±0°.08, h113km±13km, n16, σ0ˢ68/27, 5C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.47**	**243**	⇑*i*P	**Pn**	**19 19 53.0**	**-0.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	Pn	19 25 25.1	+0.2
	0.5nm,0.3s,baz=198,slow=10,SNR=3.7						
GERES	**GERESS Array B**	**16.89**	**333**	Pn	P	19 25 28.7	-0.7
	0.1nm,0.3s,baz=144,slow=12,SNR=4.8						
TORD	**Torodi Ar. Bea**	**29.89**	**231**	P	P	19 27 38.8	0.0
	0.5nm,0.6s,baz=37,slow=8.2,SNR=7.2						

*IDC **15** 19:21:54.2±0.9, 34°.18N×25°.02E, h0km, mb3.9/12, mb1 3.9/18, mb1mx3.8/46, mbtmp3.9/18, ML4.1/5, Error ellipse: s-maj=17.6km s-min=16.2km az=21.0*
*ATH **15** 19:21:59.2, 34°.34N×25°.14E, h29km±1km, ML3.3/10, Error ellipse: s-maj=4.2km s-min=1.5km az=9.0*
*THE **15** 19:22:03.1, 34°.45N×25°.18E, h22km±9km, ML3.6/2, Error ellipse: s-maj=10.4km s-min=1.8km az=71.0*
ISC 15 19:21:57.7±1.6, 34°.15N±0°.07×25°.16E±0°.04, h24km±11km, n66, σ1°.48/78, mb3.9/13, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.91**	**342**	P	**Pb**	**19 22 15.2**	**+0.4**
SIVA				S	**Sb**	**19 22 24.9**	**-1.6**
	8μm,0.5s						
SIVA	**Sivas**	**0.91**	**342**	P	**Pb**	**19 22 13.2**	**-1.5**
SIVA				S	**Sb**	**19 22 24.5**	**-1.9**
SIVA				AML	AML	19 22 38.3	
	comp=E,12970μm,0.4s						
SIVA				AML	AML	19 22 39.1	
	comp=N,10914μm,0.6s						
LAST	**Lasithi**	**1.04**	**15**	P	**Pn**	**19 22 16.4**	**-0.4**
LAST	**Lasithi**	**1.04**	**15**	P	**Pn**	**19 22 16.2**	**-0.6**
LAST				AML	AML	19 22 35.5	
	comp=N,1628μm,0.7s						
LAST				AML	AML	19 22 37.5	
	comp=E,1984μm,0.7s						
GVD	**Gavdhos**	**1.12**	**308**	P	**Pb**	**19 22 20.4**	**+2.1**
GVD				S	**Sb**	**19 22 33.2**	**+0.8**
	comp=E,3μm,0.5s						
GVD	**Gavdhos**	**1.12**	**308**	P	**Pb**	**19 22 18.9**	**+0.6**
GVD				S	**Sb**	**19 22 33.1**	**+0.6**
GVD				AML	AML	19 22 45.6	
	comp=E,4961μm,0.4s						
GVD				AML	AML	19 22 50.0	
	comp=N,5861μm,0.6s						
IDI	**Anoyia**	**1.15**	**349**	Pn	**Pn**	**19 22 18.5**	**+0.2**
	comp=N,78nm,0.3s,baz=164,slow=20,SNR=13						
IDI				Sn	**Sn**	**19 22 33.1**	**-0.3**
	comp=N,72nm,0.3s,baz=82,slow=19,SNR=8.8						
IDI	**Anoyia**	**1.15**	**349**	P	**Pn**	**19 22 18.2**	**-0.2**
NPS	**Neapolis**	**1.17**	**19**	P	**Pn**	**19 22 19.6**	**+1.1**
NPS	**Neapolis**	**1.17**	**19**	P	**Pn**	**19 22 19.0**	**+0.5**
NPS				AML	AML	19 22 44.4	
	comp=N,1690μm,0.6s						
NPS				AML	AML	19 22 47.1	
	comp=E,2164μm,0.6s						
ZKR	**Zakros**	**1.30**	**42**	P	**Pn**	**19 22 20.9**	**+0.6**
ZKR				AML	AML	19 22 51.9	
	comp=N,745μm,0.5s						
ZKR				AML	AML	19 22 52.0	
	comp=E,2078μm,1.1s						
VAM	**Vamos**	**1.48**	**328**	P	**Pn**	**19 22 23.1**	**+0.3**
VAM				S	**Sn**	**19 22 41.0**	**-0.3**
VAM				AML	AML	19 22 52.6	
	comp=E,2289μm,0.7s						
VAM				AML	AML	19 22 53.9	
	comp=N,2254μm,0.7s						
IMMV	**Iera Moni Meta**	**1.62**	**324**	P	**Pn**	**19 22 25.7**	**+0.9**
IMMV				AML	AML	19 23 04.1	
	comp=N,1934μm,0.7s						
IMMV				AML	AML	19 23 05.0	
	comp=E,1793μm,0.7s						
KARP	**Karpathos**	**2.16**	**49**	P	**Pb**	**19 22 35.5**	**-0.5**
KARP				AML	AML	19 23 31.0	
	comp=E,604μm,0.8s						
KARP				AML	AML	19 23 33.8	
	comp=N,563μm,0.7s						
THR6	**Thira Island,**	**2.21**	**5**	P	**Pn**	**19 22 33.5**	**+0.7**
SANT	**Santorini**	**2.23**	**6**	P	**Pn**	**19 22 34.1**	**+1.0**
ANAF	**Anafi Island**	**2.26**	**13**	P	**Pn**	**19 22 34.8**	**+1.3**
ANAF				AML	AML	19 23 02.8	
	comp=N,1999μm,0.4s						
ANAF				AML	AML	19 23 04.0	
	comp=E,1796μm,0.3s						
THR3	**Thira Island,**	**2.26**	**5**	P	**Pn**	**19 22 34.4**	**+0.9**
THR5	**Thira Island,**	**2.27**	**4**	P	**Pn**	**19 22 34.5**	**+0.9**
THR8	**Santorini-Mono**	**2.27**	**7**	P	**Pn**	**19 22 33.6**	**0.0**
THR2	**Thira island,**	**2.30**	**6**	P	**Pn**	**19 22 34.9**	**+0.8**
IOSP	**Ios island**	**2.57**	**2**	P	**Pn**	**19 22 38.3**	**+0.5**
MHLO	**Agia Marina, M**	**2.60**	**347**	P	**Pn**	**19 22 38.7**	**+0.5**
MHLO				AML	AML	19 23 29.5	
	comp=N,1302μm,0.5s						
MHLO				AML	AML	19 23 32.4	
	comp=E,1568μm,0.7s						
MHLA	**Plaka, Milos I**	**2.66**	**347**	P	**Pn**	**19 22 39.1**	**+0.2**
KYTH	**Kithira**	**2.73**	**321**	P	**Pn**	**19 22 41.7**	**+1.7**
AMGA	**Amorgos Island**	**2.74**	**12**	P	**Pn**	**19 22 41.7**	**+1.5**
APE	**Apeiranthos**	**2.93**	**6**	P	**Pn**	**19 22 42.7**	**-0.1**
SERI	**Serifos**	**3.05**	**350**	P	**Pn**	**19 22 44.9**	**+0.5**
VLI	**Veliai**	**3.14**	**325**	P	**Pn**	**19 22 46.2**	**+0.7**
ARG	**Arkhangelos**	**3.19**	**49**	P	**Pn**	**19 22 49.0**	**+2.8**
DAT	**Datca**	**3.24**	**37**	*i* P	**Pn**	**19 22 49.4**	**+2.3**
DAT				*i* S	**Sn**	**19 23 27.3**	**+2.2**
DAT				IAML_P			
	comp=Z,213nm,0.1s						
DID	**Didima**	**3.69**	**336**	P	**Pn**	**19 22 53.2**	**0.0**
SMG	**Samos**	**3.80**	**21**	P	**Pn**	**19 22 55.7**	**+1.0**
VLY	**Voula,Athens**	**3.85**	**344**	P	**Pn**	**19 22 56.0**	**+0.5**
DALY	**Dalyan (Mula)**	**3.90**	**46**	*i* P	**Pn**	**19 22 58.6**	**+2.6**
DALY				IAML_P			
	comp=Z,345nm,0.2s						
TURN	**Turunc**	**3.91**	**45**	*i* P	**Pn**	**19 22 54.1**	**-2.0**
TURN				IAML_P			
	comp=Z,946nm,0.3s						
PTL	**Penteli**	**4.03**	**345**	P	**Pn**	**19 22 58.2**	**+0.3**
FETY	**Fethiye**	**4.05**	**51**	*i* P	**Pn**	**19 23 00.1**	**+1.9**
FETY				*i* S	**Sn**	**19 23 46.1**	**+1.2**
FETY				IAML_P			
	comp=Z,627nm,0.3s						
KSL	**Kastellorizon**	**4.14**	**60**	P	**Pn**	**19 23 01.0**	**+1.7**
AYDN	**Tasoluk**	**4.14**	**31**	*i* P	**Pn**	**19 23 02.4**	**+3.0**
AYDN				IAML_P			
	comp=Z,609nm,0.3s						
AKAS	**Kas**	**4.19**	**59**	*i* P	**Pn**	**19 23 02.4**	**+2.2**
AKAS				IAML_P			
	comp=Z,3μm,0.1s						
LTK	**Loutraki**	**4.25**	**336**	P	**Pn**	**19 23 01.3**	**+0.5**
GUR	**Goura**	**4.41**	**330**	P	**Pn**	**19 23 03.8**	**+0.6**
AKUM	**Antalya-Kumluc**	**4.76**	**62**	*i* P	**Pn**	**19 23 10.5**	**+2.6**
AKUM				*i* S	**Sn**	**19 24 04.6**	**+2.3**
AKUM				IAML_P			
	comp=Z,1μm,0.2s						
MANT	**Manisa**	**5.13**	**31**	*i* P	**Pn**	**19 23 15.1**	**+1.9**
MANT				IAML_P			
	comp=Z,171nm,0.4s						
KHAL	**Karahalli**	**5.47**	**39**	*i* P	**Pn**	**19 23 19.5**	**+1.6**
KHAL				*i* S	**Sn**	**19 24 18.2**	**-1.9**
KHAL				IAML_P			
	comp=Z,186nm,0.2s						
MMAI	**Mount Meron Ar**	**8.62**	**95**	Pn	**Pn**	**19 24 01.5**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=275,slow=12,SNR=9.7						
MMAI				Sn	**Sn**	**19 25 34.3**	**-3.3**
	comp=Z,1.5nm,0.3s,baz=290,slow=24,SNR=4.7						
BRTR	**Keskin Array B**	**8.77**	**48**	Pn	**Pn**	**19 24 04.7**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=216,slow=17,SNR=3.7						
EIL	**Elat**	**9.45**	**116**	Pn	**Sn**	**19 24 12.9**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=247,slow=7.3,SNR=4.8						
EIL				Sn	**Sn**	**19 25 53.9**	**-3.8**
	comp=Z,0.6nm,0.3s,baz=21,slow=17,SNR=4.1						
ASF	**Jabal al Asfar**	**10.04**	**98**	Sn	**Sn**	**19 26 08.7**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=194,slow=17,SNR=2.4						
KBZ	**Khabaz**	**16.76**	**50**	Pn	**P**	**19 25 53.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=236,slow=8.8,SNR=2.7						
AKASG	**Malin Array Be**	**16.80**	**9**	Pn	**Pn**	**19 25 51.5**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=200,slow=10,SNR=9.8						
GERES	**GERESS Array B**	**16.97**	**333**	Pn	**P**	**19 25 55.4**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=145,slow=12,SNR=26						
ESDC	**Sonseca Array**	**23.87**	**292**	P	**P**	**19 27 07.4**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=86,slow=8.3,SNR=6.5						
HFS	**Hagfors**	**27.05**	**347**	P	**P**	**19 27 37.5**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=157,slow=11,SNR=4.0						
FINES	**FINESS Array B**	**27.31**	**1**	P	**P**	**19 27 38.4**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=171,slow=14,SNR=4.2						
EKA	**Eskdalemuir Ar**	**28.86**	**326**	P	**P**	**19 27 54.2**	**+0.1**
	comp=Z,3.3nm,1.1s,baz=125,slow=8.7,SNR=3.2						
TORD	**Torodi Ar. Bea**	**29.85**	**231**	P	**P**	**19 28 02.8**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=31,slow=9.4,SNR=23						
ARU	**Arti**	**31.87**	**35**	P	**P**	**19 28 21.1**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=183,slow=18,SNR=3.8						
ARCES	**ARCESS Array B**	**35.44**	**0**	P	**P**	**19 28 49.8**	**-1.7**
	comp=Z,7.1nm,0.4s,baz=187,slow=9.4,SNR=4.3						
SPITS	**Spitsbergen Ar**	**44.29**	**357**	P	**P**	**19 30 04.9**	**-0.1**
	comp=Z,4.9nm,1.0s,baz=168,slow=11,SNR=2.7						
MKAR	**Makanchi Array**	**44.34**	**56**	P	**P**	**19 30 07.1**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=264,slow=7.8,SNR=13						
ZALV	**Zalesovo Beam**	**45.71**	**45**	P	**P**	**19 30 17.3**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=268,slow=9.0,SNR=4.9						
SONM	**Songino Array**	**60.13**	**50**	P	**P**	**19 32 04.6**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=284,slow=7.3,SNR=3.1						
KSRS	**Korea Array**	**78.90**	**52**	P	**P**	**19 33 59.9**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=298,slow=4.0,SNR=4.7						
MJAR	**Matsushiro Arr**	**86.00**	**48**	P	**P**	**19 34 37.7**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=310,slow=5.0,SNR=2.6						

*ISCJB **15** 19:23:22.3±0.4, 36°.30N±0°.05×70°.68E±0°.05, h100km, mb3.5/8, Error ellipse: s-maj=7.2km s-min=4.5km az=34.1*
*IDC **15** 19:23:23.4±3.5, 36°.20N×70°.92E, h116km±31km, mb3.3/7, mb1 3.4/12, mb1mx3.1/55, mbtmp3.8/12, Error ellipse: s-maj=29.5km s-min=18.9km az=32.0*
*NNC **15** 19:23:31.3±3.4, 36°.93N×70°.47E, h111km±84km, mb3.5, mpv3.9, Error ellipse: s-maj=36.7km s-min=16.3km az=150.0*
ISC 15 19:23:22.8±0.7, 36°.34N±0°.06×70°.79E±0°.06, h100km, n36, σ2°.43/44, mb3.6/8, 3C-8D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.21**	**20**	P	**Pn**	**19 24 54.8**	**+2.6**
	SNR=38						
UCH	**Uchtor**	**6.55**	**25**	P	**Pn**	**19 25 00.1**	**+3.2**
	SNR=17						
KZA	**Kyzart**	**6.69**	**30**	P	**Pn**	**19 25 03.6**	**+4.8**
	SNR=7.6						
EKS2	**Erkin-Say**	**6.72**	**19**	P	**Pn**	**19 25 01.9**	**+2.9**
	SNR=11						
KK31	**Karatay Array**	**6.76**	**358**	⇓P	**Pn**	**19 25 02.0**	**+2.7**
	8.0nm,0.5s,baz=182,slow=12,SNR=136						
KK31				⇓S	**Sn**	**19 26 12.5**	**-2.2**
	4.5nm,0.3s,baz=189,slow=26,SNR=4.1						
AAK	**Ala-Archa**	**6.91**	**23**	P	**Pn**	**19 25 04.3**	**+2.8**
	2.9nm,0.3s,baz=189,slow=6.7,SNR=13						
AAK				S	**Sn**	**19 26 17.7**	**-0.9**
	1.5nm,0.3s,baz=288,slow=20,SNR=4.3						
AAK	**Ala-Archa**	**6.91**	**23**	P	**Pn**	**19 25 05.5**	**+4.0**
	SNR=7.9						
AAK	**Ala-Archa**	**6.91**	**23**	⇓P	**Pn**	**19 25 05.5**	**+4.0**
	2.6nm,0.3s						
AAK				⇓S	**Sn**	**19 26 15.9**	**-2.8**
	9.6nm,0.7s						
CHMS	**Chumysh**	**7.32**	**23**	P	**Pn**	**19 25 09.6**	**+2.7**
	SNR=7.6						
TKM2	**Tokmak 2**	**7.54**	**28**	P	**Pn**	**19 25 14.4**	**+4.2**
	SNR=9.9						
TKM2	**Tokmak 2**	**7.54**	**28**	⇑P	**Pn**	**19 25 13.4**	**+3.2**
	5.8nm,0.6s						
TKM2				⇓S	**Sn**	**19 26 33.2**	**-1.0**
	4.3nm,0.8s						
GEYT	**Alibeck**	**10.24**	**283**	P	**Pn**	**19 25 48.6**	**+1.9**
	0.8nm,0.3s,baz=108,slow=9.7,SNR=13						
GEYT				S	**Sn**	**19 27 38.0**	**-1.7**
	1.0nm,0.3s,baz=102,slow=23,SNR=7.5						
GYA0B	**ALIBECK ARRAY**	**10.24**	**283**	⇓P	**Pn**	**19 25 48.2**	**+1.4**
GYA0B				⇑S	**Sn**	**19 27 39.8**	**+0.2**
PYUN	**Piuthan**	**13.19**	**125**	*e*Pn	**Pn**	**19 26 26.1**	**-0.3**
	14nm,0.4s						
MKAR	**Makanchi Array**	**13.52**	**36**	P	**Pn**	**19 26 30.7**	**+0.3**
	0.1nm,0.3s,baz=220,slow=8.8,SNR=5.1						
KOLN	**Koldanda**	**13.81**	**125**	*e*Pn	**Pn**	**19 26 34.9**	**+0.4**
	10.0nm,0.5s						
GKN	**Gorkha**	**14.37**	**121**	*e*Pn	**P**	**19 26 42.7**	**-3.0**
	29nm,0.3s						
DMN	**Daman**	**14.94**	**122**	*e*Pn	**P**	**19 26 50.0**	**-2.1**
	11nm,0.4s						
KKN	**Kakani**	**14.94**	**121**	*e*Pn	**P**	**19 26 51.2**	**-0.9**
	27nm,0.5s						
AB31	**Akbulak array**	**15.14**	**332**	P	**Pn**	**19 26 51.2**	**+0.1**
	1.0nm,0.4s,baz=142,slow=12,SNR=61						
AB31				⇓S	Sn	19 29 28.5	-10
	2.6nm,0.6s,baz=157,slow=24,SNR=6.5						
PKIN	**Phulchoki**	**15.16**	**121**	*e*Pn	**P**	**19 26 52.8**	**-1.7**
	7.7nm,0.2s						
PKI	**Pulchoki**	**15.17**	**121**	*e*Pn	**P**	**19 26 53.4**	**-1.3**
	31nm,0.6s						
JIRN	**Jiri**	**15.66**	**119**	*e*Pn	**P**	**19 26 59.6**	**-0.6**
	47nm,0.4s						
BVAR	**Borovoye Array**	**16.68**	**359**	P	**Pn**	**19 27 10.5**	**+0.2**
	0.5nm,0.3s,baz=168,slow=11,SNR=11						
AKTO	**Aktyubinsk**	**16.83**	**331**	P	**Pn**	**19 27 14.1**	**+1.9**
	0.6nm,0.3s,baz=154,slow=7.1,SNR=22						
AKTO				S	**Sn**	**19 30 13.8**	**-5.1**
	0.3nm,0.3s,baz=111,slow=17,SNR=3.5						
AKTO	**Aktyubinsk**	**16.83**	**331**	⇓P	**Pn**	**19 27 14.1**	**+1.9**
	8.3nm,0.8s						
AKTO				⇑S	**Sn**	**19 30 13.9**	**-5.0**
	2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**20.13**	**25**	P	**P**	**19 27 48.6**	**0.0**
	2.1nm,0.4s,baz=216,slow=9.5,SNR=9.3						
ARU	**Arti**	**21.73**	**341**	P	**P**	**19 28 06.8**	**+1.1**
	0.8nm,0.7s,baz=159,slow=10,SNR=3.9						
CMAR	**Chiang Mai Arr**	**30.53**	**118**	P	**P**	**19 29 27.9**	**+1.1**
	0.5nm,0.6s,baz=299,slow=8.1,SNR=4.1						
FINES	**FINESS Array B**	**37.52**	**326**	P	**P**	**19 30 27.2**	**+0.6**
	0.6nm,0.4s,baz=117,slow=11,SNR=6.8						
ARCES	**ARCESS Array B**	**41.23**	**338**	P	**P**	**19 30 57.9**	**+0.5**
	0.6nm,0.5s,baz=108,slow=7.8,SNR=5.9						
HFS	**Hagfors**	**43.09**	**322**	P	**P**	**19 31 12.8**	**+0.3**
	0.6nm,0.3s,baz=104,slow=9.2,SNR=6.4						
NB2	**NORSAR Subarra**	**44.40**	**323**	P	**P**	**19 31 23.3**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=100,slow=7.9						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**19 31 23.3**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=100,slow=7.8,SNR=4.1						
WRA	**Warramunga Arr**	**82.05**	**122**	P	**P**	**19 35 29.9**	**-2.3**
	comp=Z,1.4nm,1.0s,baz=305,slow=5.8,SNR=5.1						
ASAR	**Alice Springs**	**84.31**	**125**	P	**P**	**19 35 41.8**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=312,slow=5.2,SNR=7.9						

*ISCJB **15** 19:24:02.9±1.0, 34°.09N±0°.09×25°.27E±0°.09, h20km, mb3.4/4, Error ellipse: s-maj=13.6km s-min=9.0km az=33.2*
*IDC **15** 19:24:02.4±1.4, 34°.20N×25°.06E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.4/40, mbtmp3.5/6, ML4.0/2, Error ellipse: s-maj=26.6km s-min=20.5km az=116.0*
ISC 15 19:24:05.0±1.1, 34°.16N±0°.10×25°.2E±0°.1, h20km, n8, σ0°.92/9, mb3.5/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.15**	**348**	Pn	**Pb**	**19 24 25.3**	**-0.9**
	37nm,0.3s,baz=168,slow=19,SNR=7.8						
IDI				Sn	**Sb**	**19 24 40.6**	**-0.1**
	24nm,0.3s,baz=266,slow=12,SNR=4.0						
MMAI	**Mount Meron Ar**	**8.60**	**95**	Sn	**Sn**	**19 27 44.0**	**-1.0**
	0.7nm,0.3s,baz=275,slow=23,SNR=4.3						
AKASG	**Malin Array Be**	**16.79**	**9**	Pn	**Pn**	**19 27 59.4**	**+0.7**
	0.6nm,0.3s,baz=197,slow=11,SNR=4.3						
GERES	**GERESS Array B**	**16.97**	**333**	Pn	**Pn**	**19 28 02.0**	**+0.8**
	0.2nm,0.3s,baz=144,slow=12,SNR=5.8						
ESDC	**Sonseca Array**	**23.89**	**292**	P	**P**	**19 29 16.8**	**-0.5**
	0.2nm,0.4s,baz=82,slow=9.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**29.87**	**231**	P	**P**	**19 30 11.1**	**-0.2**
	0.8nm,0.5s,baz=30,slow=9.5,SNR=7.2						
MKAR	**Makanchi Array**	**44.31**	**56**	P	**P**	**19 32 14.9**	**+1.4**
	0.3nm,0.6s,baz=271,slow=7.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**45.68**	**45**	P	**P**	**19 32 24.3**	**+0.1**
	0.6nm,0.5s,baz=267,slow=8.5,SNR=2.8						

*IDC **15** 19:27:37.6±1.1, 34°.30N×25°.06E, h0km, mb3.7/7, mb1 3.8/13, mb1mx3.6/39, mbtmp3.7/13, ML4.3/4, Error ellipse: s-maj=17.9km s-min=17.5km az=32.0*
*ATH **15** 19:27:41.8, 34°.34N×25°.07E, h35km±2km, ML3.5/10, Error ellipse: s-maj=3.1km s-min=1.4km az=352.0*
*THE **15** 19:27:41.9, 34°.34N×25°.09E, h0km±1km, ML3.4/6, Error ellipse: s-maj=2.7km s-min=0.9km az=178.0*
ISC 15 19:27:40.0±1.5, 34°.25N±0°.06×25°.11E±0°.03, h14km±9km, n70, σ1°.37/86, mb3.8/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.81**	**342**	P	**Pg**	**19 27 55.7**	**0.0**
SIVA				S	**Sb**	**19 28 07.1**	**+0.5**
	11μm,0.8s						
SIVA	**Sivas**	**0.81**	**342**	P	**Pg**	**19 27 55.8**	**+0.2**
SIVA				S	**Sb**	**19 28 07.3**	**+0.7**
SIVA				AML	AML	19 28 12.3	
	comp=E,23110μm,0.5s						
SIVA				AML	AML	19 28 13.6	
	comp=N,17500μm,0.8s						
TMBK	**Timbaki Herakl**	**0.87**	**341**	P	**Pb**	**19 27 57.3**	**+0.4**
TMBK				S	**Sn**	**19 28 09.3**	**-1.0**
LAST	**Lasithi**	**0.96**	**18**	P	**Pg**	**19 27 58.5**	**0.0**
LAST				S	**Sb**	**19 28 12.0**	**+0.9**
	comp=N,2μm,0.6s						
LAST	**Lasithi**	**0.96**	**18**	P	**Pg**	**19 27 58.6**	**0.0**
LAST				S	**Sb**	**19 28 11.6**	**+0.5**
LAST				AML	AML	19 28 19.6	
	comp=E,3141μm,0.7s						
LAST				AML	AML	19 28 23.9	
	comp=N,2118μm,0.6s						
GVD	**Gavdhos**	**1.03**	**305**	P	**Pg**	**19 27 59.9**	**0.0**
GVD				S	**Sn**	**19 28 15.6**	**+1.4**
	comp=N,4μm,0.4s						
GVD	**Gavdhos**	**1.03**	**305**	P	**Pg**	**19 28 00.1**	**+0.2**
GVD				S	**Sg**	**19 28 13.2**	**-0.2**
GVD				AML	AML	19 28 19.9	
	comp=E,6141μm,0.3s						
GVD				AML	AML	19 28 21.1	
	comp=N,7665μm,0.4s						
IDI	**Anoyia**	**1.05**	**350**	Pn	**Pg**	**19 28 00.0**	**-0.4**
	comp=N,52nm,0.3s,baz=163,slow=20,SNR=25						
IDI				Sn	**Sb**	**19 28 13.2**	**-0.5**
	comp=N,164nm,0.3s,baz=108,slow=20,SNR=23						
IDI	**Anoyia**	**1.05**	**350**	P	**Pg**	**19 27 59.8**	**-0.6**
IDI				S	**Sb**	**19 28 13.1**	**-0.6**
KSTL	**Kastelli Herak**	**1.05**	**358**	P	**Pg**	**19 27 59.0**	**-1.4**
KSTL				S	**Sg**	**19 28 12.2**	**-2.0**
IACM	**Heraklion**	**1.06**	**358**	P	**Pb**	**19 28 00.6**	**+0.6**
NPS	**Neapolis**	**1.09**	**22**	P	**Pg**	**19 28 00.6**	**-0.5**
NPS				S	**Sn**	**19 28 16.1**	**+0.2**
	comp=N,2μm,0.6s						
NPS	**Neapolis**	**1.09**	**22**	P	**Pg**	**19 28 00.8**	**-0.3**
NPS				S	**Sn**	**19 28 16.0**	**+0.2**
NPS				AML	AML	19 28 24.6	
	comp=N,1958μm,0.6s						
NPS				AML	AML	19 28 28.6	
	comp=E,2688μm,0.6s						
PRNS	**Prines Rethymn**	**1.22**	**336**	P	**Pb**	**19 28 02.8**	**-0.1**
STIA	**Sitia Lasithi**	**1.25**	**40**	P	**Pb**	**19 28 04.2**	**+0.9**
ZKR	**Zakros**	**1.26**	**46**	P	**Pb**	**19 28 04.0**	**+0.6**
ZKR				S	**Sn**	**19 28 22.8**	**+3.0**
	comp=E,758nm,0.7s						
ZKR	**Zakros**	**1.26**	**46**	P	**Pb**	**19 28 04.0**	**+0.6**
ZKR				AML	AML	19 28 35.3	
	comp=N,961μm,0.5s						
ZKR				AML	AML	19 28 36.1	
	comp=E,1939μm,0.9s						
VAM	**Vamos**	**1.38**	**327**	P	**Pn**	**19 28 05.5**	**+0.7**
VAM				S	**Sg**	**19 28 24.4**	**-0.1**
	comp=E,2μm,0.6s						
VAM	**Vamos**	**1.38**	**327**	P	**Pn**	**19 28 05.6**	**+0.7**
VAM				S	**Sb**	**19 28 21.6**	**-1.4**
VAM				AML	AML	19 28 40.7	
	comp=N,3060μm,0.6s						
VAM				AML	AML	19 28 40.7	
	comp=E,4073μm,0.7s						
IMMV	**Iera Moni Meta**	**1.53**	**323**	P	**Pn**	**19 28 07.9**	**+1.1**
IMMV	**Iera Moni Meta**	**1.53**	**323**	P	**Pn**	**19 28 08.0**	**+1.1**
IMMV				AML	AML	19 28 40.5	
	comp=N,2615μm,0.7s						
IMMV				AML	AML	19 28 41.6	
	comp=E,2594μm,0.5s						
THR6	**Thira Island,**	**2.12**	**6**	P	**Pn**	**19 28 15.0**	**+0.1**
KARP	**Karpathos**	**2.13**	**52**	P	**Pn**	**19 28 18.2**	**+3.1**
KARP	**Karpathos**	**2.13**	**52**	P	**Pn**	**19 28 17.2**	**+2.1**
SANT	**Santorini**	**2.14**	**8**	P	**Pn**	**19 28 15.5**	**+0.2**
THR3	**Thira Island,**	**2.17**	**6**	P	**Pn**	**19 28 16.8**	**+1.1**
THR3	**Thira Island,**	**2.17**	**6**	P	**Pn**	**19 28 17.1**	**+1.4**
ANAF	**Anafi Island**	**2.17**	**14**	P	**Pn**	**19 28 17.7**	**+2.0**
ANAF	**Anafi Island**	**2.17**	**14**	P	**Pn**	**19 28 16.3**	**+0.5**
ANAF				AML	AML	19 29 00.7	
	comp=N,2118μm,0.4s						
ANAF				AML	AML	19 29 03.1	
	comp=E,1308μm,0.4s						
THR5	**Thira Island,**	**2.17**	**5**	P	**Pn**	**19 28 16.8**	**+1.0**
THR8	**Santorini-Mono**	**2.18**	**8**	P	**Pn**	**19 28 16.1**	**+0.3**
ANKY	**Antikythira Is**	**2.19**	**318**	P	**Pn**	**19 28 18.2**	**+2.2**
ANKY	**Antikythira Is**	**2.19**	**318**	P	**Pn**	**19 28 16.8**	**+0.8**
ANKY				AML	AML	19 29 05.8	
	comp=E,1058μm,0.7s						
ANKY				AML	AML	19 29 13.1	
	comp=N,529μm,1.1s						
THR2	**Thira island,**	**2.21**	**7**	P	**Pn**	**19 28 17.1**	**+0.8**
IOSP	**Ios island**	**2.48**	**3**	P	**Pn**	**19 28 20.4**	**+0.5**
MHLO	**Agia Marina, M**	**2.51**	**347**	P	**Pn**	**19

*NEIC **15** 19:30:51.3±1.3,22°.47S×174°.89W,h9km±4km,mb4.8/61, Error ellipse: s-maj=20.2km s-min=15.8km az=108.0*
*IDC **15** 19:30:51.4±0.6,22°.56S×175°.04W,h0km,mb4.5/13, mb1 4.7/14,mb1mx4.5/27,mbtmp4.5/14,ML4.5/1,Error ellipse: s-maj=25.9km s-min=18.4km az=131.0*
*ISCJB **15** 19:30:53.7±0.3,22°.57S±0°.05×174°.98W±0°.06,h33km, mb4.7/66,Error ellipse: s-maj=9.0km s-min=5.8km az=34.8*

ISC 15 19:30:55.6±0.5,**22°.55S**±0°.07×**174°.97W**±0°.10,**h33**km, **n126**,σ1§**37**/125,**mb4.8**/66,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.85**	**55**	*e*Pn	Pn	19 32 11.4	-8.6
NIUE	**Niue**	**5.85**	**55**	P	Pn	19 32 10.1	-10
	baz=5.3,SNR=9.2						
RAO	**Raoul Island**	**7.18**	**201**	*e*Pn	**Pn**	**19 32 37.4**	**-1.0**
RAO				*e*Sn	**Sn**	**19 33 55.8**	**-3.0**
RAR	**Rarotonga**	**14.17**	**87**	Pn	Pn	19 34 04.9	-9.2
	3.4nm,0.3s,baz=231,slow=11,SNR=6.9						
RAR				Sn	Sn	19 36 26.2	-24
	1.8nm,0.3s,baz=108,slow=19,SNR=2.3						
RAR	**Rarotonga**	**14.17**	**87**	*e*Pn	Pn	19 34 05.0	-9.1
URZ	**Urewera**	**17.07**	**202**	P	**Pn**	**19 34 50.4**	**-1.3**
	1.7nm,0.3s,baz=11,slow=16,SNR=10.0						
URZ				S	Sn	19 37 44.8	-16
	1.1nm,0.3s,baz=323,slow=20,SNR=8.2						
URZ	**Urewera**	**17.07**	**202**	*e*Pn	**Pn**	**19 34 50.9**	**-0.8**
	28nm,1.0s						
DZM	**Mont Dzumac**	**17.21**	**268**	P	**P**	**19 34 57.7**	**+2.8**
	0.5nm,0.3s,baz=105,slow=20,SNR=6.0						
DZM	**Mont Dzumac**	**17.21**	**268**	*e*Pn	**P**	**19 34 55.2**	**+0.2**
	41nm,1.4s						
BKZ	**Black Stump Fm**	**18.09**	**202**	*e*Pn	**Pn**	**19 35 03.4**	**-1.1**
	29nm,1.5s						
BFZ	**Birch Farm**	**19.54**	**200**	*e*P	**P**	**19 35 20.8**	**+0.4**
	51nm,1.3s						
SNZO	**South Karori**	**20.62**	**203**	*e*P	**P**	**19 35 33.6**	**+1.4**
	54nm,1.2s						
KHZ	**Kahutara**	**22.01**	**203**	*e*P	**P**	**19 35 46.0**	**-1.1**
	55nm,1.4s						
RPZ	**Rata Peaks**	**24.07**	**205**	P	**P**	**19 36 05.6**	**-2.3**
	6.8nm,0.8s,baz=45,slow=2.9,SNR=2.1						
ARMA	**Armidale**	**30.82**	**248**	*e*P	**P**	**19 37 09.1**	**+0.3**
	38nm,1.4s						
ARMA	**Armidale**	**30.82**	**248**	P	**P**	**19 37 09.9**	**+1.2**
	baz=31,SNR=4.5						
EIDS	**Eidsvold**	**31.10**	**258**	*e*P	**P**	**19 37 11.2**	**0.0**
	6.5nm,1.1s						
EIDS	**Eidsvold**	**31.10**	**258**	P	**P**	**19 37 11.0**	**-0.2**
	baz=31,SNR=3.6						
CMSA	**Cobar Meteorol**	**36.01**	**247**	P	**P**	**19 37 53.4**	**-0.4**
	baz=36,SNR=13						
CTAO	**Charters Tower**	**36.14**	**266**	*e*P	**P**	**19 37 55.1**	**0.0**
	20nm,1.4s						
TOO	**Toolangi**	**37.06**	**237**	*e*P	**P**	**19 38 03.4**	**+0.7**
	15nm,1.2s						
STKA	**Stephens Creek**	**39.51**	**247**	P	**P**	**19 38 23.0**	**-0.4**
	2.0nm,0.4s,baz=92,slow=10,SNR=8.8						
STKA	**Stephens Creek**	**39.51**	**247**	*e*P	**P**	**19 38 23.2**	**-0.2**
	0.7nm,0.8s						
STKA	**Stephens Creek**	**39.51**	**247**	P	**P**	**19 38 24.4**	**+1.0**
	baz=40,SNR=4.8						
HTT	**Hallett**	**41.84**	**245**	P	**P**	**19 38 43.4**	**+0.8**
	baz=42,SNR=6.6						
BBOO	**Buckleboo**	**44.22**	**246**	*e*P	**P**	**19 39 00.9**	**-1.0**
	18nm,1.3s						
BBOO	**Buckleboo**	**44.22**	**246**	P	**P**	**19 39 01.6**	**-0.3**
	baz=45,SNR=7.2						
AS31	**Alice Springs**	**46.83**	**258**	*e*P	**P**	**19 39 22.0**	**-0.7**
ASAR	**Alice Springs**	**46.83**	**258**	P	**P**	**19 39 22.0**	**-0.7**
	8.9nm,0.7s,baz=96,slow=6.8,SNR=103						
ASAR				PcP	**PcP**	**19 40 56.5**	**+1.1**
	1.5nm,0.7s,baz=100,slow=3.7,SNR=4.7						
WC3	**Warramunga Arr**	**47.10**	**263**	*e*P	**P**	**19 39 23.6**	**-1.3**
	7.4nm,0.6s						
WB2	**Warramunga Arr**	**47.13**	**263**	*e*P	**P**	**19 39 23.9**	**-1.1**
	7.8nm,0.6s						
WRAB	**Tennant Creek**	**47.13**	**263**	*e*P	**P**	**19 39 23.6**	**-1.5**
	9.0nm,0.9s						
WR1	**Warramunga Arr**	**47.14**	**263**	*e*P	**P**	**19 39 23.7**	**-1.4**
WRA	**Warramunga Arr**	**47.14**	**263**	P	**P**	**19 39 23.7**	**-1.4**
	6.6nm,0.7s,baz=92,slow=9.0,SNR=51						
WRA				PcP	**PcP**	**19 40 57.6**	**+1.0**
	1.1nm,0.5s,baz=109,slow=3.7,SNR=2.8						
KDU	**Kakadu**	**50.83**	**272**	P	**P**	**19 39 52.6**	**-0.8**
	baz=51,SNR=6.7						
FORT	**Forrest**	**51.11**	**248**	*e*P	**P**	**19 39 54.9**	**-0.5**
	18nm,0.6s						
FORT	**Forrest**	**51.11**	**248**	P	**P**	**19 39 54.4**	**-1.0**
	baz=52,SNR=13						
WRKA	**Warakurna**	**51.65**	**255**	P	**P**	**19 39 58.7**	**-0.9**
	baz=52,SNR=65						
MTN	**Manton Dam**	**52.01**	**271**	*e*P	**P**	**19 40 01.2**	**-1.1**
	25nm,1.0s						
MTN	**Manton Dam**	**52.01**	**271**	P	**P**	**19 40 01.6**	**-0.7**
	baz=52,SNR=4.6						
GUMO	**Guam**	**53.28**	**309**	*e*P	**P**	**19 40 11.0**	**-0.5**
	164nm,1.5s						
KNRA	**Kununurra**	**53.35**	**267**	P	**P**	**19 40 11.9**	**-0.3**
	baz=54,SNR=6.2						
FITZ	**Fitzroy Crossi**	**55.57**	**263**	*e*P	**P**	**19 40 28.2**	**-0.1**
	13nm,1.4s						
FITZ	**Fitzroy Crossi**	**55.57**	**263**	P	**P**	**19 40 28.3**	**-0.1**
	baz=56,SNR=6.0						
SBA	**Scott Base**	**56.04**	**185**	*e*P	**P**	**19 40 31.6**	**+0.8**
	3.6nm,0.9s						
VNDA	**Vanda**	**56.15**	**186**	P	**P**	**19 40 35.2**	**+3.7**
	1.8nm,0.9s,baz=2.8,slow=5.1,SNR=8.8						
VNDA	**Vanda**	**56.15**	**186**	*e*P	**P**	**19 40 32.8**	**+1.2**
	4.2nm,1.1s						
SOEI	**Soe**	**59.38**	**272**	*e*P	**P**	**19 40 55.9**	**+0.5**
	60nm,1.2s						
PSAB2	**Pilbara Seismi**	**59.95**	**257**	*e*P	**P**	**19 40 58.5**	**-0.6**
	5.5nm,1.0s						
MMRI	**Maumere**	**61.65**	**272**	*e*P	**P**	**19 41 10.3**	**-0.5**
	34nm,1.1s						
MORW	**Morawa**	**61.67**	**248**	*e*P	**P**	**19 41 10.5**	**-0.2**
	7.6nm,1.2s						
MORW	**Morawa**	**61.67**	**248**	P	**P**	**19 41 10.9**	**+0.2**
	baz=62,SNR=5.6						
CASY	**Casey**	**63.34**	**206**	*e*P	**P**	**19 41 22.2**	**+1.1**
	6.6nm,0.9s						
QSPA	**South Pole Qui**	**67.53**	**180**	*e*P	**P**	**19 41 47.5**	**-0.9**
	4.7nm,0.9s						
KKM	**Kota Kinabalu**	**73.00**	**284**	*e*P	**P**	**19 42 22.1**	**-0.6**
	10.0nm,1.0s						
MJAR	**Matsushiro Arr**	**73.54**	**322**	P	**P**	**19 42 25.3**	**0.0**
	4.0nm,0.7s,baz=163,slow=5.9,SNR=27						
MAJO	**Matsushiro**	**73.54**	**322**	*e*P	**P**	**19 42 24.7**	**-0.6**
	4.4nm,0.7s						
MAT	**Matsushiro**	**73.54**	**322**	P	**P**	**19 42 25.4**	**+0.1**
SBUM	**Sibu**	**75.12**	**279**	*e*P	**P**	**19 42 35.2**	**+0.2**
	1.5nm,1.2s						
JNU	**Nakatsue**	**75.70**	**315**	*e*P	**P**	**19 42 37.5**	**-0.5**
	6.3nm,1.1s						
KSM	**Kuching**	**76.48**	**277**	*e*P	**P**	**19 42 42.5**	**-0.3**
	5.8nm,0.8s						
TWG	**Pinlang**	**76.86**	**302**	*e*P	**P**	**19 42 43.4**	**-1.3**
	33nm,0.9s						
SSLB	**Suanglung**	**77.45**	**302**	*e*P	**P**	**19 42 47.5**	**-0.5**
	16nm,1.3s						
ISA	**Isabella, Lake**	**78.80**	**44**	*e*P	**P**	**19 42 54.2**	**-1.2**
	4.7nm,0.9s						
PEA0B	**Petropavlovsk-**	**79.00**	**344**	*e*P	**P**	**19 42 55.2**	**-0.7**
	11nm,0.9s						
PETK	**Petropavlovsk-**	**79.00**	**344**	P	**P**	**19 42 57.0**	**+1.1**
	8.4nm,0.8s,baz=127,slow=8.6,SNR=16						
YSS	**Yuzh-Sakhalins**	**79.00**	**332**	*e*P	**P**	**19 42 55.5**	**-0.6**
	16nm,0.9s						
KSRS	**Korea Array**	**80.29**	**317**	P	**P**	**19 43 04.8**	**+1.5**
	1.7nm,0.8s,baz=141,slow=6.1,SNR=7.4						
MAW	**Mawson**	**80.58**	**199**	P	**P**	**19 43 06.0**	**+1.6**
	2.1nm,0.6s,baz=154,slow=7.8,SNR=11						
MAW	**Mawson**	**80.58**	**199**	*e*P	**P**	**19 43 05.4**	**+1.0**
	1.0nm,1.0s						
NVAR	**Mina Array Bea**	**80.62**	**42**	P	**P**	**19 43 06.2**	**+0.9**
	2.9nm,1.0s,baz=227,slow=11,SNR=12						
NV11	**Mina Array Sit**	**80.72**	**42**	*e*P	**P**	**19 43 04.3**	**-1.5**
	0.5nm,1.4s						
USRK	**Ussuriysk Ar.**	**82.25**	**325**	P	**P**	**19 43 16.1**	**+2.6**
	7.8nm,0.8s,baz=117,slow=3.0,SNR=13						
USA0B	**Ussuriysk Arra**	**82.25**	**325**	*e*P	**P**	**19 43 13.4**	**-0.1**
	11nm,1.0s						
PINE	**Pine Mountain**	**82.52**	**36**	*e*P	**P**	**19 43 13.8**	**-1.4**
	8.9nm,1.3s						
WVOR	**Wild Horse Val**	**82.93**	**38**	*e*P	**P**	**19 43 15.5**	**-1.8**
	7.9nm,1.3s						
J08A	**Circle Bar Ran**	**83.61**	**38**	*e*P	**P**	**19 43 19.2**	**-1.6**
	9.2nm,1.3s						
PKCU	**Pink Cliffs**	**83.85**	**45**	*e*P	**P**	**19 43 21.1**	**-1.3**
	8.6nm,0.9s						
ELK	**Elko**	**83.91**	**41**	*e*P	**P**	**19 43 20.7**	**-1.8**
	3.3nm,1.0s						
MTPU	**Mount Pierson**	**84.27**	**45**	*e*P	**P**	**19 43 23.3**	**-1.3**
	6.3nm,0.9s						
G08A	**Pilot Rock**	**84.56**	**36**	*e*P	**P**	**19 43 24.0**	**-1.6**
	7.0nm,1.0s						
KLR	**Kul'dur**	**85.73**	**328**	P	**P**	**19 43 32.3**	**+1.1**
	1.9nm,0.9s,baz=74,slow=3.2,SNR=5.0						
TX31	**Lajitas Ar. Si**	**85.82**	**56**	*e*P	**P**	**19 43 30.7**	**-1.5**
	6.1nm,1.2s						
TXAR	**Lajitas Array**	**85.82**	**56**	P	**P**	**19 43 32.9**	**+0.6**
	2.3nm,1.0s,baz=216,slow=6.2,SNR=13						
SNAA	**Sanae**	**85.87**	**178**	Pdiff	**P**	**19 43 34.7**	**+2.9**
VNA3	**Neumayer Olymp**	**85.90**	**175**	Pdiff	**P**	**19 43 34.5**	**+2.6**
SRU	**San Rafael Swe**	**85.95**	**45**	*e*P	**P**	**19 43 31.7**	**-1.0**
	10nm,1.4s						
IPM	**Ipoh**	**86.18**	**276**	*e*P	**P**	**19 43 34.6**	**+0.3**
	13nm,0.8s						
VNA2	**Neumayer--Watz**	**86.37**	**176**	Pdiff	**P**	**19 43 34.9**	**+0.7**
	baz=177,slow=4.5						
VNA1	**Neumayer--Stat**	**86.58**	**176**	Pdiff	**P**	**19 43 36.7**	**+1.5**
PANO	**Nakornpanom**	**87.97**	**289**	P	**P**	**19 43 45.4**	**+2.6**
RND	**Reindeer**	**88.11**	**11**	*e*P	**P**	**19 43 41.4**	**-1.1**
	7.7nm,0.4s						
GSI	**Gunungsitoli**	**88.14**	**272**	*e*P	**P**	**19 43 43.7**	**-0.1**
	53nm,0.7s						
MCK	**McKinley**	**88.39**	**11**	*e*P	**P**	**19 43 42.5**	**-1.2**
	17nm,0.6s						
SKNT	**Sakolnakorn**	**88.45**	**289**	P	**P**	**19 43 47.4**	**+2.3**
RIDG	**Independent Ri**	**89.19**	**13**	*e*P	**P**	**19 43 46.8**	**-0.8**
	8.1nm,1.1s						
KHON	**Khomkaen**	**89.21**	**288**	P	**P**	**19 43 51.6**	**+2.9**
WRH	**Wood River Hil**	**89.22**	**11**	*e*P	**P**	**19 43 46.9**	**-0.7**
	8.2nm,1.3s						
CCB	**Clear Creek Bu**	**89.43**	**11**	*e*P	**P**	**19 43 47.9**	**-0.7**
	3.7nm,1.2s						
ENH	**Enshi**	**89.52**	**303**	*e*P	**P**	**19 43 49.0**	**-0.9**
	19nm,1.0s						
ILAR	**Eielson Array**	**89.71**	**12**	P	**P**	**19 43 50.5**	**+0.6**
	1.0nm,0.9s,baz=211,slow=5.7,SNR=6.1						
ILB	**Eielson Array**	**89.71**	**12**	*e*P	**P**	**19 43 49.3**	**-0.6**
	6.0nm,1.4s						
PBKT	**Sadao Pong**	**90.94**	**287**	P	**P**	**19 44 00.2**	**+3.5**
UTTA	**Uttaradit**	**91.76**	**288**	P	**P**	**19 44 04.8**	**+4.3**
LAMP	**Lampang**	**92.87**	**289**	P	**P**	**19 44 09.3**	**+3.6**
CM31	**Chiang Mai Arr**	**93.45**	**288**	*e*P	**P**	**19 44 09.1**	**+0.8**
	10nm,1.0s						
CMAR	**Chiang Mai Arr**	**93.45**	**288**	P	**P**	**19 44 10.7**	**+2.3**
	5.3nm,0.9s,baz=128,slow=3.2,SNR=39						
CMMT	**Chiang Mai**	**93.58**	**289**	P	**P**	**19 44 11.5**	**+2.5**
CHTO	**Chiang Mai**	**93.58**	**289**	*e*P	**P**	**19 44 08.9**	**-0.1**
	6.0nm,0.8s						
MKAR	**Makanchi Array**	**114.65**	**312**	PKP	**PKiKP**	**19 49 32.5**	**0.0**
	0.3nm,0.6s,baz=174,slow=1.4,SNR=4.6						
BVAR	**Borovoye Array**	**122.46**	**319**	PKP	**PKiKP**	**19 49 47.6**	**+0.2**
	0.2nm,0.4s,baz=90,slow=2.9,SNR=2.7						
ARA0	**ARCESS Array S**	**131.42**	**351**	*e*PKPdf	**PKiKP**	**19 50 04.2**	**-0.7**
ARCES	**ARCESS Array B**	**131.42**	**351**	PKP	**PKiKP**	**19 50 04.2**	**-0.7**
	8.0nm,0.4s,baz=45,slow=2.2,SNR=5.8						
HFS	**Hagfors**	**141.96**	**353**	PKhKP	PKPpre	19 50 18.2	
	1.2nm,0.5s,baz=35,slow=3.5,SNR=6.6						
SUW	**Suwalki**	**145.72**	**341**	*e*PKPdf	**PKPdf**	**19 50 29.8**	**-0.6**
AKASG	**Malin Array Be**	**146.15**	**332**	PKPbc	**PKPab**	**19 50 32.5**	**-0.5**
	4.0nm,0.6s,baz=39,slow=4.0,SNR=18						
AKBB	**Malin Array Si**	**146.15**	**332**	*e*PKPdf	**PKPdf**	**19 50 30.4**	**-0.9**
EKA	**Eskdalemuir Ar**	**146.70**	**9**	PKPbc	**PKPbc**	**19 50 33.7**	**0.0**
	1.2nm,0.8s,baz=352,slow=3.4,SNR=3.7						
BUR08	**Bucovina Ar. S**	**150.19**	**332**	*e*PKPdf	**PKPdf**	**19 50 36.7**	**-1.5**
ASF	**Jabal al Asfar**	**150.21**	**296**	PKPbc	**PKiKP**	**19 50 45.0**	**+0.4**
	1.6nm,0.5s,baz=97,slow=4.1,SNR=6.5						
BR131	**Keskin Array S**	**150.30**	**312**	*e*PKPdf	**PKPdf**	**19 50 36.4**	**-2.2**
BRTR	**Keskin Array B**	**150.30**	**312**	PKPbc	**PKiKP**	**19 50 44.5**	**-0.1**
	2.3nm,0.9s,baz=137,slow=2.7,SNR=11						
CLL	**Collm**	**150.63**	**350**	*e*PKPbc	**PKiKP**	**19 50 45.0**	**+0.3**
	comp=Z,16nm,1.8s						
CLL				*i* PKPab	**sPKPdf**	**19 50 51.2**	**-0.1**
	comp=Z,5.0nm,0.7s						
MMAI	**Mount Meron Ar**	**151.27**	**298**	PKPbc	**PKiKP**	**19 50 47.4**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=82,slow=6.3,SNR=5.5						
GERES	**GERESS Array B**	**152.87**	**347**	PKPbc	**PKiKP**	**19 50 50.0**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=90,slow=1.3,SNR=4.9						
TORD	**Torodi Ar. Bea**	**170.12**	**161**	PKPab	**PKPab**	**19 52 17.8**	**+1.6**
	comp=Z,0.7nm,0.9s,baz=191,slow=5.9,SNR=2.9						

*IDC **15** 19:36:04.0±1.4,34°.32N×25°.01E,h0km,mb3.5/2, mb1 3.6/5,mb1mx3.3/47,mbtmp3.5/5,ML3.7/3,MS4.3/1, Ms1 4.3/1,ms1mx3.4/42,Error ellipse: s-maj=24.6km s-min=19.1km az=76.0*
*ISCJB **15** 19:36:05.5±1.1,34°.19N±0°.05×25°.07E±0°.05,h23km±7km, mb3.4/2,Error ellipse: s-maj=9.3km s-min=7.4km az=20.0*
*THE **15** 19:36:06.8,34°.34N×25°.06E,h0km±1km,ML3.3/3,Error ellipse: s-maj=2.1km s-min=0.8km az=179.0*
*ATH **15** 19:36:06.8,34°.34N×25°.03E,h30km±1km,ML3.2/3,Error ellipse: s-maj=4.5km s-min=1.7km az=9.0*

ISC 15 19:36:05.0±1.8,**34°.26N**±0°.07×**25°.04E**±0°.04,**h4**km±12km, **n24**,σ0§**75**/32,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**346**	P	**Pg**	**19 36 20.8**	**+0.9**
SIVA				S	**Sb**	**19 36 31.7**	**-0.3**
SIVA	**Sivas**	**0.78**	**346**	P	**Pg**	**19 36 21.0**	**+1.0**
SIVA				S	**Sb**	**19 36 31.2**	**-0.8**
SIVA				AML	AML	19 36 32.5	
	comp=E,10006μm,0.2s						
SIVA				AML	AML	19 36 34.1	
	comp=N,8473μm,0.3s						
TMBK	**Timbaki Herakl**	**0.84**	**344**	P	**Pb**	**19 36 22.3**	**+0.1**
TMBK				S	**Sb**	**19 36 34.0**	**+0.2**
LAST	**Lasithi**	**0.97**	**22**	P	**Pg**	**19 36 24.0**	**+0.5**
LAST	**Lasithi**	**0.97**	**22**	P	**Pg**	**19 36 24.1**	**+0.5**
LAST				S	**Sb**	**19 36 37.9**	**+0.3**
LAST				AML	AML	19 36 46.1	
	comp=E,750μm,0.6s						
LAST				AML	AML	19 36 47.8	
	comp=N,780μm,0.6s						
GVD	**Gavdhos**	**0.98**	**306**	P	**Pg**	**19 36 24.8**	**+1.1**
GVD				S	**Sn**	**19 36 39.9**	**+0.1**
GVD	**Gavdhos**	**0.98**	**306**	P	**Pg**	**19 36 24.5**	**+0.8**
GVD				S	**Sn**	**19 36 39.8**	**+0.1**
GVD				AML	AML	19 36 49.6	
	comp=E,3966μm,0.5s						
GVD				AML	AML	19 36 52.6	
	comp=N,3771μm,0.4s						
IDI	**Anoyia**	**1.03**	**353**	Pn	**Pg**	**19 36 25.0**	**+0.3**
	comp=N,36nm,0.3s,baz=173,slow=18,SNR=19						
IDI				Sn	**Sb**	**19 36 38.7**	**-0.7**
	comp=N,34nm,0.3s,baz=328,slow=20,SNR=7.0						
IDI	**Anoyia**	**1.03**	**353**	P	**Pg**	**19 36 24.7**	**-0.1**
KSTL	**Kastelli Herak**	**1.04**	**1**	P	**Pg**	**19 36 24.4**	**-0.5**
NPS	**Neapolis**	**1.10**	**25**	P	**Pg**	**19 36 26.5**	**+0.4**
NPS	**Neapolis**	**1.10**	**25**	P	**Pg**	**19 36 26.6**	**+0.4**
PRNS	**Prines Rethymn**	**1.19**	**338**	P	**Pg**	**19 36 27.9**	**+0.1**
ZKR	**Zakros**	**1.29**	**48**	P	**Pg**	**19 36 30.1**	**+0.3**
ZKR				S	**Sb**	**19 36 47.5**	**+0.7**
ZKR	**Zakros**	**1.29**	**48**	P	**Pg**	**19 36 30.0**	**+0.3**
VAM	**Vamos**	**1.34**	**329**	P	**Pg**	**19 36 30.7**	**+0.1**
VAM	**Vamos**	**1.34**	**329**	P	**Pg**	**19 36 30.8**	**+0.1**
IMMV	**Iera Moni Meta**	**1.48**	**324**	P	**Pn**	**19 36 32.9**	**+0.5**
IMMV				S	**Sg**	**19 36 50.9**	**-1.7**
MMAI	**Mount Meron Ar**	**8.73**	**95**	Pn	**Pn**	**19 38 13.0**	**+0.9**
	comp=N,0.6nm,0.3s,baz=278,slow=14,SNR=3.6						
EIL	**Elat**	**9.58**	**116**	Pn	**Pn**	**19 38 22.0**	**-1.7**
	comp=N,0.4nm,0.3s,baz=331,slow=10,SNR=4.4						
MLR	**Muntele Rosu**	**11.24**	**3**	LR	LR	19 43 35.9	
	comp=N,2μm,21.5s,baz=103,slow=40						
GERES	**GERESS Array B**	**16.83**	**333**	Pn	**Pn**	**19 40 02.8**	**+1.2**
	comp=N,0.2nm,0.3s,baz=151,slow=12,SNR=9.1						
TORD	**Torodi Ar. Bea**	**29.84**	**231**	P	**P**	**19 42 13.1**	**-0.4**
	comp=N,0.4nm,0.4s,baz=33,slow=8.3,SNR=7.2						
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**19 44 16.1**	**-0.3**
	comp=N,0.4nm,0.8s,baz=279,slow=9.3,SNR=3.4						

*IDC **15** 19:36:36.6±4.1,12°.01N×86°.40W,h0km,mb3.5/3, mb1 4.0/3,mb1mx3.5/34,mbtmp3.5/3,Error ellipse: s-maj=163.4km s-min=62.8km az=42.0*

*SNET **15** 19:36:41.9±0.8,11°.61N×87°.07W,h25km±10km,ML3.8*
*UCR **15** 19:36:41.4±2.0,11°.56N×87°.07W,h27km±8km,ML3.9*

ISC 15 19:36:39.8±1.2,**11°.54N**±0°.08×**87°.10W**±0°.06,**h22**km±6km, **n27**,σ1§**13**/35,**mb3.5**/3,**2D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.81**	**38**	*e*P	**Pn**	**19 36 56.4**	**+0.5**
XAVN	**Gruta Xavier**	**0.97**	**51**	*e*P	**Pn**	**19 36 58.6**	**+0.5**
APYN	**Apoyeque**	**1.01**	**46**	*e*P	**Pn**	**19 36 59.0**	**+0.4**
MOMN	**Momotombo**	**1.02**	**32**	*e*P	**Pb**	**19 36 59.1**	**+0.3**
MGAN	**Managua**	**1.03**	**54**	*e*P	**Pn**	**19 36 59.3**	**+0.4**
MGAN				*e*S	**Sn**	**19 37 13.3**	**+0.6**
CNGN	**Cerro Negro**	**1.03**	**22**	‖*e*P	**Pn**	**19 36 59.1**	**+0.1**
CNGN	**Cerro Negro**	**1.03**	**22**	‖*e*P	**Pn**	**19 36 59.1**	**+0.1**
TEL3	**Telica 3**	**1.06**	**13**	*e*P	**Pn**	**19 36 59.6**	**+0.3**
TELN	**Telica**	**1.09**	**14**	*e*P	**Pn**	**19 37 00.1**	**+0.2**
CRIN	**San Cristobal**	**1.16**	**2**	*e*P	**Pn**	**19 37 01.1**	**+0.4**
CRIN				*e*S	**Sn**	**19 37 20.0**	**+4.0**
CSGN	**Cosiguina Volc**	**1.50**	**343**	*e*P	**Pb**	**19 37 06.9**	**-0.1**
CSGN				*e*S	**Sb**	**19 37 26.3**	**+0.7**
CSGN				IAML		19 37 28.1	
	comp=N,16μm,0.5s						
CSGN	**Cosiguina Volc**	**1.50**	**343**	*e*P	**Pb**	**19 37 06.9**	**-0.1**
ESTN	**Estel**	**1.71**	**25**	*e*P	**Pn**	**19 37 09.0**	**+0.6**
ESTN				*e*S	**Sb**	**19 37 31.1**	**-0.7**
ESTN	**Estel**	**1.71**	**25**	*e*P	**Pn**	**19 37 08.9**	**+0.5**
MATN	**Matagalpa**	**1.80**	**39**	*e*P	**Pn**	**19 37 10.1**	**+0.5**
CNCH	**Conchagua**	**1.87**	**337**	*e*P	**Pn**	**19 37 11.6**	**+1.0**
CNCH				*e*S	**Sb**	**19 37 35.2**	**-1.2**
CNCH				IAML		19 37 42.0	
	comp=E,2μm,0.3s						
CNCH	**Conchagua**	**1.87**	**337**	*e*P	**Pn**	**19 37 11.4**	**+0.8**
CNCH				*e*S	**Sb**	**19 37 35.2**	**-1.2**
CNCH				IAML		19 37 42.0	
	comp=E,2μm,0.3s						
LCND	**La Caada**	**1.93**	**336**	*e*P	**Pn**	**19 37 12.1**	**+0.8**
LCND				*e*S	**Sn**	**19 37 35.9**	**+1.1**
LCND				IAML		19 37 39.1	
	comp=Z,2μm,0.4s						
LCND	**La Caada**	**1.93**	**336**	*e*P	**Pn**	**19 37 12.1**	**+0.8**
LCND				*e*S	**Sn**	**19 37 35.9**	**+1.1**
LCND				IAML		19 37 39.1	
	comp=Z,2μm,0.4s						
ACON	**Acoyapa**	**1.93**	**77**	*e*P	**Pn**	**19 37 11.4**	**+0.1**
JTS	**Las Juntas de**	**2.44**	**120**	*e*P	**Pn**	**19 37 20.1**	**+1.8**
TGUH	**Tegucigalpa,Un**	**2.51**	**356**	*e*P	**Pn**	**19 37 20.6**	**+1.3**
TGUH	**Tegucigalpa,Un**	**2.51**	**356**	*e*P	**Pn**	**19 37 20.6**	**+1.3**
TXAR	**Lajitas Array**	**23.50**	**321**	P	**P**	**19 41 48.9**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=131,slow=11,SNR=14						
PDAR	**Pinedale Array**	**36.74**	**332**	P	**P**	**19 43 45.4**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=138,slow=9.6,SNR=4.9						
YKA	**Yellowknife Ar**	**54.58**	**345**	P	**P**	**19 46 04.1**	**-2.1**
	comp=Z,0.5nm,0.6s,baz=148,slow=6.4,SNR=3.3						
CMAR	**Chiang Mai Arr**	**149.61**	**349**	PKPbc	**PKPbc**	**19 56 27.9**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=336,slow=3.3,SNR=5.1						

*IDC **15** 19:37:24.6±1.1,34°.24N×25°.07E,h0km,mb3.7/5, mb1 3.7/10,mb1mx3.5/51,mbtmp3.6/10,ML4.0/4,Error ellipse: s-maj=19.7km s-min=18.7km az=61.0*
*ISCJB **15** 19:37:25.3±1.3,34°.11N±0°.07×25°.23E±0°.06,h18km±9km, mb3.5/5,Error ellipse: s-maj=12.2km s-min=6.9km az=31.8*
*ATH **15** 19:37:28.0,34°.27N

	comp=N,16150µm,0.2s						
VLC				AML	AML		
	comp=E,18300µm,0.6s						
VLC				AML	AML		
	comp=N,16250µm,0.2s						
VLC				AML	AML		
	comp=E,18050µm,0.6s						
VLC				AML	AML		
	comp=N,16150µm,0.2s						
VLC				AML	AML		
	comp=E,18300µm,0.6s						
VLC				AML	AML		
	comp=N,16250µm,0.2s						
VLC				AML	AML		
	comp=E,18050µm,0.6s						
VLC				AML	AML		
	comp=E,18300µm,0.6s						
VLC				AML	AML		
	comp=N,16150µm,0.2s						
VLC				AML	AML		
	comp=N,16250µm,0.2s						
SARO	**Sassorosso**	**0.24**	**83**	P	**Pg**	**19 41 20.3**	**-0.4**
SARO				S	**Sg**	**19 41 23.1**	**-0.9**
SARO	**Sassorosso**	**0.24**	**83**	P	**Pg**	**19 41 20.4**	**-0.4**
SARO				S	**Sg**	**19 41 23.2**	**-0.7**
SARO				AML	AML		
	comp=E,27900µm,0.4s						
SARO				AML	AML		
	comp=N,25000µm,0.5s						
SARO				AML	AML		
	comp=E,27900µm,0.4s						
SARO				AML	AML		
	comp=N,25000µm,0.5s						
SARO				AML	AML		
	comp=E,27900µm,0.4s						
SARO				AML	AML		
	comp=N,25000µm,0.5s						
SARO				AML	AML		
	comp=E,27900µm,0.4s						
SARO				AML	AML		
	comp=N,25000µm,0.5s						
CARD	**Cardoso**	**0.32**	**114**	P	**Pg**	**19 41 22.2**	**-0.1**
CARD				S	**Sg**	**19 41 25.8**	**-0.7**
CARD	**Cardoso**	**0.32**	**114**	P	**Pg**	**19 41 22.0**	**-0.3**
CARD				S	**Sg**	**19 41 26.1**	**-0.4**
CARD				AML	AML		
	comp=E,21650µm,0.5s						
CARD				AML	AML		
	comp=N,23000µm,0.6s						
CARD				AML	AML		
	comp=E,21650µm,0.5s						
CARD				AML	AML		
	comp=N,23000µm,0.6s						
CARD				AML	AML		
	comp=E,21650µm,0.5s						
CARD				AML	AML		
	comp=N,23000µm,0.6s						
CARD				AML	AML		
	comp=N,23000µm,0.6s						
CARD				AML	AML		
	comp=E,21650µm,0.5s						
GRAM	**Graiana**	**0.34**	**359**	P	**Pg**	**19 41 23.3**	**+0.7**
GRAM				S	**Sg**	**19 41 27.8**	**+0.6**
GRAM	**Graiana**	**0.34**	**359**	P	**Pg**	**19 41 23.4**	**+0.7**
GRAM				S	**Sg**	**19 41 28.4**	**+1.3**
GRAM				AML	AML		
	comp=E,43050µm,0.4s						
GRAM				AML	AML		
	comp=N,33300µm,1.1s						
GRAM				AML	AML		
	comp=E,43050µm,0.4s						
GRAM				AML	AML		
	comp=N,33300µm,1.1s						
ERBM	**Eremo**	**0.36**	**42**	P	**Pg**	**19 41 23.3**	**+0.2**
ERBM				S	**Sg**	**19 41 28.6**	**+0.8**
ERBM				AML	AML		
	comp=E,20850µm,0.7s						
ERBM				AML	AML		
	comp=N,32300µm,1.0s						
ERBM				AML	AML		
	comp=E,20800µm,0.7s						
ERBM				AML	AML		
	comp=N,32250µm,1.0s						
ERBM				AML	AML		
	comp=E,20850µm,0.7s						
ERBM				AML	AML		
	comp=N,32250µm,1.0s						
ERBM				AML	AML		
	comp=N,32250µm,1.0s						
ERBM				AML	AML		
	comp=E,20850µm,0.7s						
MAIM	**Mastiano**	**0.39**	**129**	P	**Pg**	**19 41 23.4**	**-0.1**
MAIM				S	**Sg**	**19 41 28.2**	**-0.4**
MAIM	**Mastiano**	**0.39**	**129**	P	**Pg**	**19 41 23.4**	**-0.1**
MAIM				S	**Sg**	**19 41 28.5**	**-0.1**
MAIM				AML	AML		
	comp=E,25600µm,0.3s						
MAIM				AML	AML		
	comp=N,16550µm,0.4s						
MAIM				AML	AML		
	comp=E,25600µm,0.3s						
MAIM				AML	AML		
	comp=N,16550µm,0.4s						
MAIM				AML	AML		
	comp=E,25600µm,0.3s						
MAIM				AML	AML		
	comp=N,16550µm,0.4s						
MAIM				AML	AML		
	comp=N,16550µm,0.4s						
MAIM				AML	AML		
	comp=E,25600µm,0.3s						
BDI	**Bagni Di Lucca**	**0.39**	**104**	P	**Pg**	**19 41 23.1**	**-0.5**
BDI				S	**Sg**	**19 41 28.1**	**-0.6**
BDI				AML	AML		
	comp=E,12150µm,0.6s						
BDI				AML	AML		
	comp=N,9305µm,0.3s						
BDI				AML	AML		
	comp=E,11920µm,0.5s						
BDI				AML	AML		
	comp=N,12450µm,0.3s						
BDI				AML	AML		
	comp=E,12150µm,0.6s						
BDI				AML	AML		
	comp=N,9270µm,0.3s						
BDI				AML	AML		
	comp=E,11920µm,0.5s						
BDI				AML	AML		
	comp=N,12450µm,0.3s						
BDI				AML	AML		
	comp=E,11920µm,0.5s						
BDI				AML	AML		
	comp=E,12150µm,0.6s						
BDI				AML	AML		
	comp=N,12450µm,0.3s						
BDI				AML	AML		
	comp=N,9270µm,0.3s						
MSSA	**Maissana**	**0.43**	**292**	P	**Pb**	**19 41 25.9**	**-0.2**
MSSA				AML	AML		
	comp=E,5485µm,0.4s						
MSSA				AML	AML		
	comp=N,4700µm,0.5s						
MSSA				AML	AML		
	comp=E,5485µm,0.4s						
MSSA				AML	AML		
	comp=N,4700µm,0.5s						
NEVI	**Neviano degli**	**0.46**	**22**	P	**Pb**	**19 41 25.9**	**-0.6**
POPM	**Popiglio**	**0.50**	**102**	P	**Pg**	**19 41 25.2**	**-0.5**
POPM				S	**Sg**	**19 41 31.4**	**-1.0**
POPM	**Popiglio**	**0.50**	**102**	P	**Pg**	**19 41 25.2**	**-0.5**
POPM				AML	AML		
	comp=E,11615µm,0.2s						
POPM				AML	AML		
	comp=N,13050µm,0.5s						
POPM				AML	AML		
	comp=E,11615µm,0.2s						
POPM				AML	AML		
	comp=N,13050µm,0.5s						
POPM				AML	AML		
	comp=E,11615µm,0.2s						
POPM				AML	AML		
	comp=N,13050µm,0.5s						
POPM				AML	AML		
	comp=E,11615µm,0.2s						
POPM				AML	AML		
	comp=N,13050µm,0.5s						
PRMA	**PARMA**	**0.63**	**16**	P	**Pb**	**19 41 29.6**	**+0.2**
PRMA				AML	AML		
	comp=E,6110µm,0.8s						
PRMA				AML	AML		
	comp=N,13950µm,0.6s						
PRMA				AML	AML		
	comp=E,6110µm,0.8s						
PRMA				AML	AML		
	comp=N,13950µm,0.6s						
ZCCA	**Zocca**	**0.68**	**73**	P	**Pb**	**19 41 30.0**	**-0.2**
ZCCA				AML	AML		
	comp=E,3655µm,0.5s						
ZCCA				AML	AML		
	comp=N,6080µm,0.5s						
ZCCA				AML	AML		
	comp=E,3600µm,0.5s						
ZCCA				AML	AML		
	comp=N,6250µm,0.5s						
ZCCA				AML	AML		
	comp=E,3655µm,0.5s						
ZCCA				AML	AML		
	comp=N,6075µm,0.5s						
ZCCA				AML	AML		
	comp=E,3600µm,0.5s						
ZCCA				AML	AML		
	comp=N,6250µm,0.5s						
ZCCA				AML	AML		
	comp=N,6075µm,0.5s						
ZCCA				AML	AML		
	comp=E,3655µm,0.5s						
MTCR	**Monte La Croce**	**0.68**	**101**	P	**Pg**	**19 41 28.4**	**-0.6**
MTCR				S	**Sg**	**19 41 37.9**	**0.0**
MTCR				AML	AML		
	comp=E,7105µm,0.5s						
MTCR				AML	AML		
	comp=N,8775µm,0.7s						
MTCR				AML	AML		
	comp=E,7080µm,0.5s						
MTCR				AML	AML		
	comp=N,8760µm,0.7s						
MTCR				AML	AML		
	comp=N,8760µm,0.7s						
MTCR				AML	AML		
	comp=E,7080µm,0.5s						
GORR	**Gorreto**	**0.72**	**309**	P	**Pb**	**19 41 31.0**	**0.0**
GORR				S	**Sg**	**19 41 40.1**	**+0.8**
GORR	**Gorreto**	**0.72**	**309**	P	**Pb**	**19 41 30.8**	**-0.2**
GORR				AML	AML		
	comp=E,3400µm,0.9s						
GORR				AML	AML		
	comp=N,3080µm,0.4s						
GORR				AML	AML		
	comp=N,3080µm,0.4s						
GORR				AML	AML		
	comp=E,3400µm,0.9s						
CRMI	**Carmignano**	**0.74**	**119**	P	**Pg**	**19 41 30.6**	**+0.3**
CRMI				AML	AML		
	comp=E,4415µm,0.4s						
CRMI				AML	AML		
	comp=N,5445µm,0.3s						
CRMI				AML	AML		
	comp=E,1845µm,0.4s						
CRMI				AML	AML		
	comp=N,2300µm,0.3s						
CRMI				AML	AML		
	comp=E,4415µm,0.4s						
CRMI				AML	AML		
	comp=N,5445µm,0.3s						
CRMI				AML	AML		
	comp=E,1845µm,0.4s						
CRMI				AML	AML		
	comp=N,2300µm,0.3s						
CRMI				AML	AML		
	comp=N,2300µm,0.3s						
CRMI				AML	AML		
	comp=E,1845µm,0.4s						
CRMI				AML	AML		
	comp=E,4415µm,0.4s						
PTF	**Prato**	**0.74**	**105**	P	**Pg**	**19 41 29.8**	**-0.5**
PTF				S	**Sg**	**19 41 40.3**	**+0.3**
FNVD	**Fontana Vidola**	**0.75**	**89**	P	**Pg**	**19 41 30.1**	**-0.5**
FNVD				AML	AML		
	comp=E,4495µm,0.8s						
FNVD				AML	AML		
	comp=N,4105µm,0.5s						
FNVD				AML	AML		
	comp=E,4495µm,0.8s						
FNVD				AML	AML		
	comp=N,4105µm,0.5s						
FNVD				AML	AML		
	comp=N,4105µm,0.5s						
FNVD				AML	AML		
	comp=E,4495µm,0.8s						
BOB	**Bobbio (Coli)**	**0.76**	**324**	P	**Pb**	**19 41 31.6**	**-0.1**
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
	comp=E,4345µm,1.1s						
BOB				AML	AML		
	comp=N,4160µm,1.1s						
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
	comp=N,4160µm,1.1s						
BOB				AML	AML		
	comp=E,4345µm,1.1s						
NOVE	**Novellara**	**0.79**	**35**	P	**Pb**	**19 41 32.3**	**+0.2**
NOVE				AML	AML		
	comp=E,15450µm,0.4s						
NOVE				AML	AML		
	comp=N,13600µm,0.6s						
NOVE				AML	AML		
	comp=E,15450µm,0.4s						
NOVE				AML	AML		
	comp=N,13600µm,0.6s						
SEI	**Scarperia**	**0.93**	**96**	P	**Pg**	**19 41 33.3**	**-0.5**
SEI				AML	AML		
	comp=E,5985µm,0.4s						
SEI				AML	AML		
	comp=N,14550µm,0.5s						
SEI				AML	AML		
	comp=E,5985µm,0.4s						
SEI				AML	AML		
	comp=N,14550µm,0.5s						
SEI				AML	AML		
	comp=N,14550µm,0.5s						
SEI				AML	AML		
	comp=E,5985µm,0.4s						
RAVA	**Ravarino**	**0.96**	**51⇑**	*e*Pg	**Pn**	**19 41 37.1**	**+1.2**
CAVE	**Cavezzo**	**0.97**	**43**	AML	AML		
	comp=E,8460µm,0.6s						
CAVE				AML	AML		
	comp=E,8460µm,0.6s						
CAVE				AML	AML		
	comp=N,6245µm,0.6s						
CAVE				AML	AML		
	comp=N,6245µm,0.6s						
BRIS	**BRISIGHELLA**	**1.03**	**90**	AML	AML		
	comp=N,2105µm,0.8s						
BRIS				AML	AML		
	comp=E,3095µm,0.7s						
BRIS				AML	AML		
	comp=N,2105µm,0.8s						
BRIS				AML	AML		
	comp=E,3095µm,0.7s						
BRIS				AML	AML		
	comp=N,2105µm,0.8s						
BRIS				AML	AML		
	comp=E,3095µm,0.7s						
OSSC	**Osservatorio P**	**1.06**	**126**	P	**Pb**	**19 41 36.5**	**-0.2**
OSSC				AML	AML		
	comp=E,4835µm,1.6s						
OSSC				AML	AML		
	comp=N,4625µm,0.5s						
OSSC				AML	AML		
	comp=E,4835µm,1.6s						
OSSC				AML	AML		
	comp=N,4625µm,0.5s						
RUFI	**Rufina**	**1.08**	**106**	AML	AML		
RUFI				AML	AML		
	comp=E,1838µm,0.5s						
RUFI				AML	AML		
	comp=E,1844µm,0.6s						
RUFI				AML	AML		
	comp=N,1880µm,0.5s						
RUFI				AML	AML		
	comp=E,1838µm,0.5s						
RUFI				AML	AML		
	comp=N,1884µm,0.5s						
RUFI				AML	AML		
	comp=N,1884µm,0.5s						
CSNT	**Castellina Chi**	**1.11**	**127**	P	**Pg**	**19 41 37.0**	**-0.4**
CSNT				S	**Sg**	**19 41 51.4**	**-0.4**
CSNT				AML	AML		
	comp=E,2970µm,0.7s						
CSNT				AML	AML		
	comp=N,4945µm,0.5s						
CSNT				AML	AML		
	comp=E,2970µm,0.7s						
CSNT				AML	AML		
	comp=N,4945µm,0.5s						
CSNT				AML	AML		
	comp=N,4945µm,0.5s						
CSNT				AML	AML		
	comp=E,2970µm,0.7s						
FIU	**Minerbio Fiu**	**1.12**	**64**	AML	AML		
	comp=E,6210µm,0.8s						
FIU				AML	AML		
	comp=E,6210µm,0.8s						
FIU				AML	AML		
	comp=N,5460µm,0.6s						
FIU				AML	AML		
	comp=N,5460µm,0.6s						
CTL8	**Castelleone**	**1.14**	**349**	AML	AML		
	comp=N,2270µm,0.4s						
CTL8				AML	AML		
	comp=E,6615µm,0.5s						
CTL8				AML	AML		
	comp=N,8050µm,0.5s						
CTL8				AML	AML		
	comp=E,2230µm,0.4s						
CTL8				AML	AML		
	comp=N,2270µm,0.4s						
CTL8				AML	AML		
	comp=E,6615µm,0.5s						
CTL8				AML	AML		
	comp=E,2230µm,0.4s						
CTL8				AML	AML		
	comp=N,8050µm,0.5s						
PCP	**Piancastagn**	**1.16**	**290**	P	**Pn**	**19 41 38.9**	**0.0**
PCP				S	**Sg**	**19 41 52.9**	**-0.6**
PCP	**Piancastagn**	**1.16**	**290**	P	**Pn**	**19 41 38.8**	**0.0**
PCP				AML	AML		
	comp=E,789µm,1.2s						
PCP				AML	AML		
	comp=N,692µm,0.8s						
PCP				AML	AML		
	comp=E,789µm,1.2s						
PCP				AML	AML		
	comp=N,692µm,0.8s						
TRIF	**Trifonti**	**1.20**	**150**	P	**Pb**	**19 41 39.1**	**-0.1**
TRIF				AML	AML		
	comp=E,1500µm,0.7s						
TRIF				AML	AML		
	comp=N,1166µm,0.7s						
TRIF				AML	AML		
	comp=E,1500µm,0.7s						
TRIF				AML	AML		
	comp=N,1166µm,0.7s						
TRIF				AML	AML		
	comp=N,1166µm,0.7s						
TRIF				AML	AML		
	comp=E,1500µm,0.7s						
GAZZ	**Gazzo Veronese**	**1.20**	**37**	*e*Pg	**Pn**	**19 41 41.4**	**+2.1**
GAZZ				*e*Sg	**Sn**	**19 41 59.9**	**+4.1**
SERM	**Sermide**	**1.22**	**45**	AML	AML		
	comp=N,2353µm,0.8s						
SERM				AML	AML		
	comp=E,2610µm,1.0s						
SERM				AML	AML		
	comp=N,1335µm,0.7s						
SERM				AML	AML		
	comp=E,5570µm,0.8s						
SERM				AML	AML		
	comp=E,5570µm,0.8s						
SERM				AML	AML		
	comp=N,2353µm,0.8s						
SERM				AML	AML		
	comp=E,2610µm,1.0s						
SERM				AML	AML		
	comp=N,1335µm,0.7s						
FROS	**Frosini**	**1.23**	**140**	P	**Pg**	**19 41 39.1**	**-0.4**
FROS				AML	AML		
	comp=E,4260µm,0.4s						
FROS				AML	AML		
	comp=N,4225µm,0.6s						
FROS				AML	AML		
	comp=E,4260µm,0.4s						
FROS				AML	AML		
	comp=N,4225µm,0.6s						
FROS				AML	AML		
	comp=N,4225µm,0.6s						
FROS				AML	AML		
	comp=E,4260µm,0.4s						
QLNO	**Quiliano**	**1.25**	**278**	P	**Pn**	**19 41 40.1**	**+0.1**
QLNO				S	**Sn**	**19 41 58.3**	**+1.1**
QLNO				AML	AML		
	comp=E,601µm,0.5s						
QLNO				AML	AML		
	comp=N,628µm,0.5s						
QLNO				AML	AML		
	comp=N,628µm,0.5s						
QLNO				AML	AML		
	comp=E,601µm,0.5s						
FINB	**Finale Ligure**	**1.26**	**272**	P	**Pg**	**19 41 40.3**	**+0.1**
FINB				AML	AML		
	comp=E,820µm,0.4s						
FINB				AML	AML		
	comp=N,918µm,0.3s						
FINB				AML	AML		
	comp=N,918µm,0.3s						
FINB				AML	AML		
	comp=E,820µm,0.4s						
ASQU	**Asqua**	**1.29**	**106**	AML	AML		
	comp=N,1115µm,0.9s						
ASQU				AML	AML		
	comp=E,1260µm,0.8s						
ASQU				AML	AML		
	comp=N,1115µm,0.9s						
ASQU				AML	AML		
	comp=E,1260µm,0.8s						
ASQU				AML	AML		
	comp=N,1115µm,0.9s						
ASQU				AML	AML		
	comp=E,1260µm,0.8s						
SFI	**Santa Sofia**	**1.30**	**100**	AML	AML		
	comp=E,1120µm,0.5s						
SFI				AML	AML		
	comp=E,1210µm,1.3s						
SFI				AML	AML		
	comp=N,1136µm,0.9s						
SFI				AML	AML		
	comp=E,1120µm,0.5s						
SFI				AML	AML		
	comp=N,1515µm,0.9s						
SFI				AML	AML		
	comp=N,1520µm,0.9s						
SFI				AML	AML		
	comp=N,1520µm,0.9s						
SFI				AML	AML		
	comp=E,1120µm,0.5s						
CELB	**S.Piero in Cam**	**1.41**	**176**	P	**Pn**	**19 41 41.5**	**-0.7**
CELB				AML	AML		
	comp=E,604µm,0.2s						
CELB				AML	AML		
	comp=N,863µm,0.2s						
CELB				AML	AML		
	comp=E,604µm,0.2s						
CELB				AML	AML		
	comp=N,863µm,0.2s						
ROTM	**Rocchetta Tana**	**1.42**	**300**	AML	AML		
	comp=N,5240µm,0.5s						
ROTM				AML	AML		
	comp=E,3365µm,0.7s						
ROTM				AML	AML		
	comp=N,5240µm,0.5s						
ROTM				AML	AML		
	comp=E,3365µm,0.7s						
RORO	**Rocca Rossa**	**1.45**	**269**	P	**Pn**	**19 41 42.7**	**+0.1**
RORO				AML	AML		
	comp=E,346µm,0.8s						

RORO				AML	AML	
	comp=N,416µm,0.5s					
RORO				AML	AML	
	comp=N,416µm,0.5s					
RORO				AML	AML	
	comp=E,346µm,0.8s					
CNCS	**Concesio**	**1.45**	**4**	P	**Pg**	**19 41 44.7 +0.7**
CASP	**Castiglione de**	**1.48**	**157**	P	**Pn**	**19 41 42.6 -0.5**
CASP				AML	AML	
	comp=E,758µm,0.5s					
CASP				AML	AML	
	comp=N,840µm,0.4s					
CASP				AML	AML	
	comp=E,758µm,0.5s					
CASP				AML	AML	
	comp=N,840µm,0.4s					
CASP				AML	AML	
	comp=N,840µm,0.4s					
CASP				AML	AML	
	comp=E,758µm,0.5s					
IMI	**Imperia**	**1.59**	**262**	P	**Pn**	**19 41 44.7 0.0**
IMI				AML	AML	
	comp=E,648µm,0.3s					
IMI				AML	AML	
	comp=N,683µm,0.3s					
IMI				AML	AML	
	comp=N,683µm,0.3s					
IMI				AML	AML	
	comp=E,648µm,0.3s					
SSP9	**Sansepolcro**	**1.60**	**111**	P	**Pn**	**19 41 43.8 -1.0**
CAFI	**Castiglion Fio**	**1.60**	**120**	P	**Pn**	**19 41 44.0 -0.8**
CAFI				AML	AML	
	comp=E,405µm,0.6s					
CAFI				AML	AML	
	comp=N,575µm,0.8s					
CAFI				AML	AML	
	comp=E,405µm,0.6s					
CAFI				AML	AML	
	comp=N,575µm,0.8s					
GBOS	**Grotte di Boss**	**1.61**	**274**	P	**Pn**	**19 41 45.5 +0.5**
GBOS				AML	AML	
	comp=E,234µm,0.5s					
GBOS				AML	AML	
	comp=N,323µm,0.4s					
GBOS				AML	AML	
	comp=N,323µm,0.4s					
GBOS				AML	AML	
	comp=E,234µm,0.5s					
BALD	**Monte Baldo**	**1.62**	**19**	*e*Pn	**Pb**	**19 41 46.7 +0.4**
BALD				*e*Sn	**Sg**	**19 42 09.2 +1.2**
MGRO	**Montegrosso**	**1.64**	**267**	P	**Pn**	**19 41 45.5 +0.1**
MGRO				AML	AML	
	comp=E,1098µm,0.4s					
MGRO				AML	AML	
	comp=N,620µm,0.5s					
MGRO				AML	AML	
	comp=E,1098µm,0.4s					
MGRO				AML	AML	
	comp=N,620µm,0.5s					
PARC	**Parchiule**	**1.64**	**107**	P	**Pn**	**19 41 44.2 -1.2**
PARC				AML	AML	
	comp=E,422µm,1.1s					
PARC				AML	AML	
	comp=N,655µm,0.7s					
PARC				AML	AML	
	comp=N,655µm,0.7s					
PARC				AML	AML	
	comp=E,422µm,1.1s					
ROVR	**Rover Verones**	**1.65**	**25**	P	**Pb**	**19 41 46.5 -0.4**
ARCI	**Arcidosso**	**1.65**	**142**	AML	AML	
	comp=N,431µm,1.1s					
ARCI				AML	AML	
	comp=E,338µm,0.5s					
ARCI				AML	AML	
	comp=N,431µm,1.1s					
ARCI				AML	AML	
	comp=E,338µm,0.5s					
TEOL	**Teolo**	**1.66**	**43**	*e*Pn	**Pb**	**19 41 46.3 -0.5**
TEOL				*e*Sn	**Sg**	**19 42 10.4 +1.2**
TEOL	**Teolo**	**1.66**	**43**	P	**Pn**	**19 41 46.0 +0.4**
TEOL				AML	AML	
	comp=E,4335µm,0.5s					
TEOL				AML	AML	
	comp=N,2895µm,0.5s					
TEOL				AML	AML	
	comp=E,4335µm,0.5s					
TEOL				AML	AML	
	comp=N,2895µm,0.5s					
MAGA	**Magasa**	**1.67**	**13**	*e*Pn	**Pb**	**19 41 46.8 -0.3**
MAGA	**Magasa**	**1.67**	**13**	P	**Pn**	**19 41 46.4 +0.6**
MAGA				AML	AML	
	comp=E,4790µm,0.6s					
MAGA				AML	AML	
	comp=N,2705µm,0.6s					
MAGA				AML	AML	
	comp=E,4790µm,0.6s					
MAGA				AML	AML	
	comp=N,2705µm,0.6s					
MARN	**Marana (Italy)**	**1.69**	**28**	*e*Pn	**Pb**	**19 41 47.1 -0.3**
MARN				*e*Sn	**Sg**	**19 42 11.4 +1.2**
NEGI	**Seborga**	**1.74**	**261**	P	**Pn**	**19 41 46.8 +0.1**
NEGI				AML	AML	
	comp=E,396µm,0.6s					
NEGI				AML	AML	
	comp=N,451µm,1.5s					
NEGI				AML	AML	
	comp=E,396µm,0.6s					
NEGI				AML	AML	
	comp=N,451µm,1.5s					
ATMI	**Monte Miggiano**	**1.79**	**117**	P	**Pn**	**19 41 47.0 -0.4**
ATMI				AML	AML	
	comp=E,1052µm,0.5s					
ATMI				AML	AML	
	comp=N,1540µm,1.2s					
ATMI				AML	AML	
	comp=E,1052µm,0.5s					
ATMI				AML	AML	
	comp=N,1540µm,1.2s					
MONC	**Moncucco Torin**	**1.79**	**302**	AML	AML	
	comp=N,1296µm,0.4s					
MONC				AML	AML	
	comp=E,1380µm,0.4s					
MONC				AML	AML	
	comp=E,1380µm,0.4s					
MONC				AML	AML	
	comp=N,1296µm,0.4s					
PGF	**Pioggiola**	**1.79**	**206**	*e*Pn	**Pn**	**19 41 47.4 0.0**
PGF	**Pioggiola**	**1.79**	**206**	*e*Pg	**Pg**	**19 41 51.2 +0.9**
PGF				*e*Sn	**Sn**	**19 42 09.2 -1.3**
	comp=N,67nm,0.2s					
PGF	**Pioggiola**	**1.79**	**206**	P	**Pn**	**19 41 47.4 0.0**
PGF				AML	AML	
	comp=E,332µm,1.0s					
PGF				AML	AML	
	comp=N,328µm,0.4s					
PGF				AML	AML	
	comp=E,332µm,1.0s					
PGF				AML	AML	
	comp=N,328µm,0.4s					
PE3	**Peglio**	**1.81**	**104**	AML	AML	
	comp=E,1145µm,0.5s					
PE3				AML	AML	
	comp=E,1145µm,0.5s					
PE3				AML	AML	
	comp=N,1610µm,0.6s					
PE3				AML	AML	
	comp=N,1610µm,0.6s					
SAOF	**Saorge**	**1.82**	**266**	P	**Pn**	**19 41 48.4 +0.6**
SAOF				AML	AML	
	comp=E,826µm,0.7s					
SAOF				AML	AML	
	comp=N,968µm,0.9s					
SAOF				AML	AML	
	comp=E,826µm,0.7s					
SAOF				AML	AML	
	comp=N,968µm,0.9s					
ATPI	**Pietralunga -**	**1.83**	**112**	AML	AML	
	comp=N,490µm,0.9s					
ATPI				AML	AML	
	comp=E,386µm,1.4s					
ATPI				AML	AML	
	comp=N,490µm,0.9s					
ATPI				AML	AML	
	comp=E,386µm,1.4s					
ATVO	**AVT- Monte Val**	**1.86**	**114**	AML	AML	
	comp=N,568µm,0.7s					
ATVO				AML	AML	
	comp=E,622µm,0.5s					
ATVO				AML	AML	
	comp=E,622µm,0.5s					
ATVO				AML	AML	
	comp=N,568µm,0.7s					
RNI	**Roncone**	**1.86**	**12**	*e*Pn	**Pb**	**19 41 50.2 -0.4**
SACS	**San Casciano d**	**1.87**	**134**	AML	AML	
	comp=N,160µm,0.4s					
SACS				AML	AML	
	comp=E,170µm,0.9s					
SACS				AML	AML	
	comp=E,170µm,0.9s					
SACS				AML	AML	
	comp=N,160µm,0.4s					
PIEI	**Pieia**	**1.88**	**108**	AML	AML	
	comp=E,332µm,0.6s					
PIEI				AML	AML	
	comp=E,332µm,0.6s					
PIEI				AML	AML	
	comp=N,236µm,1.5s					
PIEI				AML	AML	
	comp=N,236µm,1.5s					
MAON	**Monte Argentar**	**1.89**	**156**	AML	AML	
	comp=E,342µm,1.0s					
MAON				AML	AML	
	comp=N,374µm,0.8s					
MAON				AML	AML	
	comp=N,374µm,0.8s					
MAON				AML	AML	
	comp=E,342µm,1.0s					
NARO	**Abbazia di Nar**	**1.89**	**106**	AML	AML	
	comp=N,178µm,0.3s					
NARO				AML	AML	
	comp=E,246µm,1.5s					
NARO				AML	AML	
	comp=N,178µm,0.3s					
NARO				AML	AML	
	comp=E,246µm,1.5s					
DOSS	**Dosso del Somm**	**1.90**	**24**	*e*Pn	**Pn**	**19 41 50.1 +1.1**
DOSS				*e*Sn	**Sg**	**19 42 17.5 +0.5**
ENR	**Entracque**	**1.91**	**273**	P	**Pb**	**19 41 50.4 -0.9**
MUGIO	**Muggio**	**1.91**	**338**	AML	AML	
	comp=N,690µm,0.5s					
MUGIO				AML	AML	
	comp=E,594µm,0.6s					
MUGIO				AML	AML	
	comp=N,690µm,0.5s					
MUGIO				AML	AML	
	comp=E,594µm,0.6s					
MABI	**Malga Bissina**	**1.93**	**9**	*e*Pn	**Pb**	**19 41 50.9 -0.7**
SBF	**Sospel**	**1.93**	**262**	*e*Pn	**Pn**	**19 41 49.8 +0.5**
SBF				*e*Sn	**Sn**	**19 42 12.8 -1.1**
	comp=E,159nm,0.2s					
MGAB	**Montegabbione**	**1.93**	**129**	AML	AML	
	comp=N,400µm,0.4s					
MGAB				AML	AML	
	comp=E,373µm,0.5s					
MGAB				AML	AML	
	comp=N,400µm,0.4s					
MGAB				AML	AML	
	comp=E,373µm,0.5s					
VARE	**Varese**	**1.95**	**332**	AML	AML	
	comp=E,856µm,0.5s					
VARE				AML	AML	
	comp=E,856µm,0.5s					
VARE				AML	AML	
	comp=N,886µm,0.8s					
VARE				AML	AML	
	comp=N,886µm,0.8s					
STV	**Sant Anna di V**	**1.98**	**274**	AML	AML	
	comp=E,242µm,0.7s					
STV				AML	AML	
	comp=E,242µm,0.7s					
STV				AML	AML	
	comp=N,199µm,0.8s					
STV				AML	AML	
	comp=N,199µm,0.8s					
REVF	**Revere**	**2.00**	**259**	Pn	**Pb**	**19 41 52.3 -0.5**
FRON	**Frontone**	**2.02**	**107**	AML	AML	
	comp=N,336µm,0.8s					
FRON				AML	AML	
	comp=E,286µm,0.7s					
FRON				AML	AML	
	comp=N,336µm,0.8s					
FRON				AML	AML	
	comp=E,286µm,0.7s					
GAGG	**Gaggia**	**2.03**	**18**	*e*Pn	**Pn**	**19 41 51.8 +1.0**
DOI	**San Damiano**	**2.06**	**281**	P	**Pn**	**19 41 51.9 +0.7**
DOI				AML	AML	
	comp=E,719µm,0.6s					
DOI				AML	AML	
	comp=N,516µm,0.4s					
DOI				AML	AML	
	comp=E,719µm,0.6s					
DOI				AML	AML	
	comp=N,516µm,0.4s					
PANI	**Panarotta**	**2.09**	**25**	*e*Pn	**Pn**	**19 41 52.8 +1.0**
CGRP	**Cima Grappa**	**2.11**	**35**	*e*Pn	**Pn**	**19 41 53.0 +0.9**
CGRP	**Cima Grappa**	**2.11**	**35**	AML	AML	
	comp=N,882µm,1.5s					
CGRP				AML	AML	
	comp=E,1460µm,0.8s					
CGRP				AML	AML	
	comp=N,882µm,1.5s					
CGRP				AML	AML	
	comp=E,1460µm,0.8s					
BHB	**Bricherasio**	**2.13**	**290**	P	**Pn**	**19 41 53.1 +1.1**
BHB				AML	AML	
	comp=E,290µm,0.5s					
BHB				AML	AML	
	comp=N,351µm,0.6s					
BHB				AML	AML	
	comp=E,290µm,0.5s					
BHB				AML	AML	
	comp=N,351µm,0.6s					
SMPL	**Sampolo**	**2.14**	**196**	Pn	**Pn**	**19 41 53.1 +0.9**
SMPL				Sn	**Sn**	**19 42 19.1 +0.1**
SMPL	**Sampolo**	**2.14**	**196**	P	**Pn**	**19 41 52.9 +0.7**
SMPL				S	**Sn**	**19 42 19.2 +0.2**
SMPL				AML	AML	
	comp=E,9130µm,0.5s					
SMPL				AML	AML	
	comp=N,11750µm,0.5s					
SMPL				AML	AML	
	comp=E,9130µm,0.5s					
SMPL				AML	AML	
	comp=N,11750µm,0.5s					
TRAV	**Traversella**	**2.14**	**310**	AML	AML	
	comp=E,647µm,1.1s					
TRAV				AML	AML	
	comp=E,647µm,1.1s					
TRAV				AML	AML	
	comp=N,603µm,1.2s					
TRAV				AML	AML	
	comp=N,603µm,1.2s					
PZZ	**Stroppo**	**2.15**	**280**	AML	AML	
	comp=E,325µm,0.4s					
PZZ				AML	AML	
	comp=N,378µm,0.5s					
PZZ				AML	AML	
	comp=N,378µm,0.5s					
PZZ				AML	AML	
	comp=E,325µm,0.4s					
CTI	**Castel Tesino**	**2.20**	**30**	AML	AML	
	comp=N,1115µm,0.3s					
CTI				AML	AML	
	comp=E,949µm,1.3s					
CTI				AML	AML	
	comp=E,949µm,1.3s					
CTI				AML	AML	
	comp=N,1115µm,0.3s					
RSP	**Reno Superiore**	**2.24**	**297**	AML	AML	
	comp=N,212µm,0.6s					
RSP				AML	AML	
	comp=E,270µm,0.5s					
RSP				AML	AML	
	comp=N,212µm,0.6s					
RSP				AML	AML	
	comp=E,270µm,0.5s					
BERNI	**Berninapass**	**2.26**	**359**	AML	AML	
	comp=E,296µm,0.4s					
BERNI				AML	AML	
	comp=N,271µm,0.6s					
BERNI				AML	AML	
	comp=E,296µm,0.4s					
BERNI				AML	AML	
	comp=N,271µm,0.6s					
CARE	**Lago del Cares**	**2.31**	**11**	*e*Pn	**Pb**	**19 41 57.2 -1.1**
SATI	**Passo dei Sala**	**2.33**	**318**	AML	AML	
	comp=E,442µm,0.8s					
SATI				AML	AML	
	comp=E,442µm,0.8s					
SATI				AML	AML	
	comp=N,440µm,0.9s					
SATI				AML	AML	
	comp=N,440µm,0.9s					
VARN	**Col Varnada, M**	**2.33**	**37**	*e*Pn	**Pn**	**19 41 55.4 +0.5**
OZOL	**Ozolo**	**2.35**	**17**	*e*Pn	**Pn**	**19 41 56.9 +1.7**
SURF	**Saint Ours**	**2.37**	**279**	Pn	**Pb**	**19 41 57.6 -1.5**
SURF				Sn	**Sn**	**19 42 26.2 +1.4**
TUE	**Stuetta**	**2.37**	**348**	*e*Pn	**Pn**	**19 41 55.7 +0.1**
TUE	**Stuetta**	**2.37**	**348**	*e*Pn	**Pb**	**19 41 58.0 -1.2**
TUE	**Stuetta**	**2.37**	**348**	AML	AML	
	comp=E,452µm,1.6s					
TUE				AML	AML	
	comp=E,350µm,1.6s					
TUE				AML	AML	
	comp=N,411µm,0.3s					
TUE				AML	AML	
	comp=E,452µm,1.6s					
TUE				AML	AML	
	comp=N,507µm,0.3s					
TUE				AML	AML	
	comp=E,350µm,1.6s					
TUE				AML	AML	
	comp=N,411µm,0.3s					
TUE				AML	AML	
	comp=N,507µm,0.3s					
CING	**Cingoli**	**2.39**	**108**	AML	AML	
	comp=E,222µm,1.6s					
CING				AML	AML	
	comp=N,177µm,0.5s					
CING				AML	AML	
	comp=E,222µm,1.6s					
CING				AML	AML	
	comp=N,177µm,0.5s					
CESX	**Cesi**	**2.39**	**129**	AML	AML	
	comp=N,242µm,0.6s					
CESX				AML	AML	
	comp=E,242µm,0.4s					
CESX				AML	AML	
	comp=E,242µm,0.4s					
CESX				AML	AML	
	comp=N,242µm,0.6s					
MMK	**Mattmark**	**2.41**	**322**	AML	AML	
	comp=N,334µm,0.8s					
MMK				AML	AML	
	comp=E,319µm,0.7s					
MMK				AML	AML	
	comp=N,334µm,0.8s					
MMK				AML	AML	
	comp=E,319µm,0.7s					
MBDF	**Montbardon**	**2.44**	**285**	*e*Pn	**Pn**	**19 41 56.9 +0.5**
MBDF				*e*Sn	**Sn**	**19 42 25.8 -0.7**
	comp=E,66nm,0.4s					
FDMO	**Fiordimonte**	**2.46**	**116**	AML	AML	
	comp=E,150µm,0.6s					
FDMO				AML	AML	
	comp=E,150µm,0.6s					
FDMO				AML	AML	
	comp=N,200µm,0.4s					
FDMO				AML	AML	
	comp=N,200µm,0.4s					
FUORN	**Ofenpass-Fuorn**	**2.47**	**3**	*e*Pn	**Pn**	**19 41 57.1 +0.1**
FUORN				*e*Sn	**Sn**	**19 42 26.4 -1.1**
KOSI	**Kohlern**	**2.48**	**21**	*e*Pn	**Pn**	**19 41 58.6 +1.5**
KOSI	**Kohlern**	**2.48**	**21**	AML	AML	
	comp=N,454µm,1.0s					
KOSI				AML	AML	
	comp=E,682µm,0.6s					
KOSI				AML	AML	
	comp=N,454µm,1.0s					
KOSI				AML	AML	
	comp=E,682µm,0.6s					
CAE	**Caneva**	**2.50**	**41**	*e*Pn	**Pn**	**19 41 58.1 +1.0**
FUSIO	**Fusio**	**2.51**	**337**	AML	AML	
	comp=N,360µm,1.6s					
FUSIO				AML	AML	
	comp=E,551µm,0.4s					
FUSIO				AML	AML	
	comp=E,551µm,0.4s					
FUSIO				AML	AML	
	comp=N,360µm,1.6s					
TOLF	**Tolfa**	**2.52**	**145**	AML	AML	
	comp=E,96µm,1.1s					
TOLF				AML	AML	
	comp=N,102µm,1.0s					
TOLF				AML	AML	
	comp=E,96µm,1.1s					
TOLF				AML	AML	
	comp=N,102µm,1.0s					
POLC	**Polcenigo**	**2.54**	**42**	AML	AML	
	comp=E,852µm,0.6s					
POLC				AML	AML	
	comp=E,852µm,0.6s					
POLC				AML	AML	
	comp=N,952µm,1.2s					
POLC				AML	AML	
	comp=N,952µm,1.2s					
FRF	**La Foret Royal**	**2.55**	**258**	*e*Pn	**Pn**	**19 41 58.3 +0.5**
FRF				*e*Sn	**Sn**	**19 42 27.6 -1.5**
	comp=N,64nm,0.3s					
BNI	**Bardonecchia**	**2.59**	**291**	*e*Pn	**Pn**	**19 41 58.9 +0.4**
DAVOX	**Davos/Dischmat**	**2.63**	**357**	Pn	**Pb**	**19 42 02.1 -1.5**
	comp=N,49nm,0.3s,baz=173,slow=10.0,SNR=75					
DAVOX				Lg	Lg	19 42 36.4
	comp=N,24nm,0.3s,baz=317,slow=18,SNR=10					
DAVOX	**Davos/Dischmat**	**2.63**	**357**	AML	AML	
	comp=N,338µm,1.3s					
DAVOX				AML	AML	
	comp=E,316µm,0.6s					
DAVOX				AML	AML	
	comp=N,338µm,1.3s					
DAVOX				AML	AML	
	comp=E,316µm,0.6s					
LNSS	**Leonessa**	**2.66**	**125**	AML	AML	
	comp=E,302µm,0.8s					
LNSS				AML	AML	
	comp=N,324µm,1.1s					
LNSS				AML	AML	
	comp=N,324µm,1.1s					
LNSS				AML	AML	
	comp=E,302µm,0.8s					
REMY	**Saint-Rhmy-en**	**2.67**	**310**	AML	AML	
	comp=E,429µm,0.6s					
REMY				AML	AML	
	comp=E,429µm,0.6s					
REMY				AML	AML	
	comp=N,692µm,0.5s					
REMY				AML	AML	
	comp=N,692µm,0.5s					
LMR	**La Mourre**	**2.71**	**254**	*e*Pn	**Pn**	**19 42 00.2 +0.2**
LMR				*e*Sn	**Sn**	**19 42 32.4 -0.7**
	comp=N,51nm,0.2s					
ABSI	**Aberstueckl**	**2.72**	**18**	AML	AML	
	comp=N,967µm,0.7s					
ABSI				AML	AML	
	comp=E,1050µm,0.5s					
ABSI				AML	AML	
	comp=N,967µm,0.7s					
ABSI				AML	AML	
	comp=E,1050µm,0.5s					
LPG	**La Plagne**	**2.72**	**301**	*e*P	**Pb**	**19 42 03.0 -2.2**
LPG				*e*Sn	**Sn**	**19 42 31.9 -1.8**
	comp=E,37nm,0.4s					
LPL	**La Plagne**	**2.74**	**301**	*e*P	**Pb**	**19 42 04.0 -1.5**
LPL				*e*Sg	**Sg**	**19 42 43.8 -0.3**
	comp=E,99nm,0.5s					
FETA	**Feichten**	**2.90**	**9**	*e*Pn	**Pb**	**19 42 06.5 -1.8**
	comp=E,2.5nm,0.3s					
FETA				Sn	**Sb**	**19 42 42.0 -2.0**
	comp=E,36nm,0.6s					
ROSI	**Rosskopf**	**2.93**	**18**	AML	AML	
	comp=N,806µm,1.5s					
ROSI				AML	AML	
	comp=E,581µm,1.4s					
ROSI				AML	AML	
	comp=N,806µm,1.5s					
ROSI				AML	AML	
	comp=E,581µm,1.4s					
PLONS	**Plons/SG**	**2.94**	**351**	AML	AML	
	comp=N,300µm,0.5s					
PLONS				AML	AML	
	comp=E,233µm,0.6s					
PLONS				AML	AML	
	comp=E,233µm,0.6s					

PLONS AML AML
comp=N,300μm,0.5s
BNALP Bannalp 2.95 337 AML AML
comp=N,212μm,0.9s
BNALP AML AML
comp=E,243μm,0.5s
BNALP AML AML
comp=N,212μm,0.9s
BNALP AML AML
comp=E,243μm,0.5s
SENIN Lac Senin/Sane 2.95 319 *e*Pn **Pb 19 42 08.1 -1.0**
AQU L'Aquila 3.02 125 *e*Pn **Pn 19 42 04.8 +0.4**
AQU L'Aquila 3.02 125 *e*Pn **Pn 19 42 05.1 +0.7**
TRI Trieste 3.04 58 *e*Pn **Pn 19 42 03.5 -1.1**
TRI Trieste 3.04 58 AML AML
comp=N,122μm,0.5s
TRI AML AML
comp=E,155μm,0.6s
TRI AML AML
comp=E,155μm,0.6s
TRI AML AML
comp=N,122μm,0.5s
SABO M.te Sabotino 3.09 53 AML AML
comp=E,550μm,0.5s
SABO AML AML
comp=N,572μm,0.6s
SABO AML AML
comp=N,572μm,0.6s
SABO AML AML
comp=E,550μm,0.5s
ORIF Oris-en-Rattie 3.10 286 *e*P **Pn 19 42 08.0 +2.6**
ORIF *e*Sn **Sn 19 42 40.5 -2.2**
comp=E,84nm,0.5s
ORIF Oris-en-Rattie 3.10 286 AML AML
comp=N,98μm,0.6s
ORIF AML AML
comp=E,192μm,0.5s
ORIF AML AML
comp=N,98μm,0.6s
ORIF AML AML
comp=E,192μm,0.5s
FVI Forni Avoltri 3.10 37 AML AML
comp=N,308μm,0.6s
FVI AML AML
comp=E,240μm,1.4s
FVI AML AML
comp=N,308μm,0.6s
FVI AML AML
comp=E,240μm,1.4s
ABTA Abfaltersbach 3.11 33 *i* Pn **Pn 19 42 07.9 +2.3**
ABTA *e*Sn **Sn 19 42 45.9 +2.9**
comp=E,11nm,0.3s
comp=E,32nm,0.4s
RISI Rein 3.13 26 AML AML
comp=N,772μm,0.5s
RISI AML AML
comp=E,748μm,0.5s
RISI AML AML
comp=N,772μm,0.5s
RISI AML AML
comp=E,748μm,0.5s
SKDS Skadanscina 3.13 62 *i* Pn **Pn 19 42 05.5 -0.3**
DAVA Damuels 3.13 358 *e*Pn **Pb 19 42 09.3 -2.9**
comp=E,66nm,0.4s,SNR=37
DAVA *e*Sn **Sb 19 42 47.6 -3.0**
comp=E,116nm,0.4s
SQTA Sankt Quirin 3.17 14 *i* Pn **Pn 19 42 09.7 +3.2**
comp=E,50nm,0.3s,SNR=52
SQTA *i* Sn **Sb 19 42 48.6 -2.9**
comp=E,80nm,0.4s
PTCC Patocco-Chiusa 3.23 45 AML AML
comp=E,164μm,0.6s
PTCC AML AML
comp=N,180μm,0.6s
PTCC AML AML
comp=N,180μm,0.6s
PTCC AML AML
comp=E,164μm,0.6s
SMRF Simiane la Rot 3.25 268 *e*P **Pn 19 42 09.3 +1.8**
SMRF *e*Sn **Sn 19 42 44.4 -2.0**
comp=E,31nm,0.3s
MOTA Moosalm 3.27 12 *i* Pn **Pn 19 42 11.2 +3.4**
comp=E,38nm,0.3s,SNR=65
WTTA Wattenberg 3.29 19 *i* Pn **Pn 19 42 11.0 +2.8**
comp=E,34nm,0.3s,SNR=42
WTTA *e*Sn **Sn 19 42 50.9 +3.2**
comp=E,246nm,0.6s
WTTA Wattenberg 3.29 19 AML AML
comp=E,578μm,0.7s
WTTA AML AML
comp=N,268μm,0.6s
WTTA AML AML
comp=E,578μm,0.7s
WTTA AML AML
comp=N,268μm,0.6s
CADS Cadrg 3.31 50 *i* Pn **Pn 19 42 08.7 +0.3**
RUSF Rustrel 3.32 268 Pn **Pn 19 42 10.2 +1.8**
JAVS Javornik 3.32 57 *i* Pn **Pn 19 42 08.5 0.0**
WATA Walderalm 3.35 18 *e*Pn **Pn 19 42 12.3 +3.3**
comp=N,38nm,0.3s,SNR=68
WATA *e*Sn **Sb 19 42 53.5 -3.4**
comp=N,33nm,0.4s
RIY Rijeka 3.35 68 *e*Pn **Pn 19 42 09.1 +0.3**
RETA Reutte 3.37 8 *e*Pn **Pn 19 42 12.5 +3.4**
comp=N,7.4nm,0.2s,SNR=9.7
RETA *e*Sn **Sn 19 42 52.3 +2.9**
comp=N,12nm,0.4s
ACOM Acomizza, Ital 3.41 44 AML AML
comp=N,320μm,0.6s
ACOM AML AML
comp=E,410μm,0.9s
ACOM AML AML
comp=N,320μm,0.6s
ACOM AML AML
comp=E,410μm,0.9s
NVLJ Novalja 3.46 82 *e*Pn **Pn 19 42 11.1 +0.8**
NVLJ Sn **Sn 19 42 50.3 -1.2**
CEY Cerknica 3.47 61 *e*Pn **Pn 19 42 10.2 -0.3**
GORS Gorjuse 3.51 51 *i* Pn **Pn 19 42 11.4 +0.3**
MYKA Terra Mystica 3.53 44 *i* Pn **Pn 19 42 14.0 +2.7**
comp=E,6.6nm,0.4s
MYKA *e*Sn **Sn 19 42 56.4 +3.1**
comp=E,30nm,0.4s
GIMEL St. Georges / 3.59 313 AML AML
comp=E,103μm,0.5s
GIMEL AML AML
comp=N,85μm,1.0s
GIMEL AML AML
comp=E,103μm,0.5s
GIMEL AML AML
comp=N,85μm,1.0s
LJU Ljubljana 3.67 58 *e*Pn **Pn 19 42 12.6 -0.7**
LJU Ljubljana 3.67 58 AML AML
comp=N,654μm,0.6s
LJU AML AML
comp=E,388μm,0.4s
LJU AML AML
comp=N,654μm,0.6s
LJU AML AML
comp=E,388μm,0.4s
KBA Koelnbreinsper 3.71 37 *e*Pn **Pn 19 42 17.3 +3.3**
comp=E,4.8nm,0.3s,SNR=7.8
KBA *i* Sn **Sn 19 43 00.5 +2.4**
comp=E,38nm,0.7s
CABF La Chapelle 3.73 313 *e*P **Pn 19 42 17.3 +3.1**
CABF *e*Sn **Sn 19 42 56.7 -1.7**
comp=E,25nm,0.3s
MOZS Mozjanca 3.75 54 *i* Pn **Pn 19 42 16.0 +1.6**
CHMF Charmoille 3.91 323 Pn **Pn 19 42 19.4 +2.7**
CHMF Sn **Sn 19 43 02.5 -0.4**
BOJS Bojanci 3.92 68 AML AML
comp=E,76μm,0.6s
BOJS AML AML
comp=N,74μm,0.9s
BOJS AML AML
comp=N,74μm,0.9s
BOJS AML AML
comp=E,76μm,0.6s
LOMF Lomont 3.92 326 Pn **Pn 19 42 18.9 +2.2**
VIVF Saint-Julien-l 3.93 282 *e*P **Pn 19 42 19.3 +2.5**
VIVF *e*Sn **Sn 19 43 00.9 -2.3**
comp=E,8.6nm,0.3s
OBKA Obir 3.94 52 *i* Pn **Pn 19 42 18.3 +1.4**
comp=E,9.5nm,0.4s,SNR=12
OBKA *e*Sn **Sn 19 43 04.4 +1.0**
comp=E,74nm,0.6s
KIZ Kirchzarten 4.09 339 Pn **Pn 19 42 20.4 +1.4**

UDBI Udbina 4.10 83 *i* Pn **Pn 19 42 20.8 +1.7**
UDBI Sn **Sn 19 43 05.3 -2.0**
OZLJ Ozalj 4.10 67 *e*Pn **Pn 19 42 20.3 +1.2**
SSB Saint Sauveur 4.10 288 *e*Pn **Pn 19 42 19.9 +0.7**
CRES Cresnjev 4.17 64 *e*Pn **Pn 19 42 20.7 +0.7**
MOF Molkenrain 4.23 332 Pn **Pn 19 42 23.6 +2.6**
HINF Hinteralfeld 4.30 330 *e*P **Pn 19 42 24.4 +2.5**
HINF *e*Sn **Sn 19 43 08.9 -3.3**
comp=E,42nm,0.3s
SOKA Soboth 4.31 52 *e*Pn **Pn 19 42 22.9 +0.9**
comp=E,6.9nm,0.3s,SNR=18
SOKA *i* Sn **Sn 19 43 12.9 +0.3**
comp=E,15nm,0.5s
BFO Black Forest 4.35 344 *e*Pn **Pn 19 42 23.2 +0.7**
LASF Ste Croix 4.48 271 *e*Pn **Pn 19 42 25.2 +0.8**
LASF *e*Sn **Sn 19 43 15.1 -1.6**
comp=E,12nm,0.4s
ECH Echery 4.54 335 *e*Pn **Pn 19 42 26.0 +0.8**
ECH *e*Sn **Sn 19 43 17.9 -0.3**
ECH Echery 4.54 335 Pn **Pn 19 42 27.2 +2.1**
HAU Haudompre 4.64 327 *e*P **Pn 19 42 29.1 +2.5**
HAU *e*Sn **Sn 19 43 17.3 -3.4**
comp=E,225nm,0.5s
STU Stuttgart 4.66 353 *e*Pn **Pn 19 42 27.2 +0.4**
WLS Welschbruch 4.66 337 Pn **Pn 19 42 28.7 +1.9**
CDF Champ du Feu 4.68 336 *e*P **Pn 19 42 28.5 +1.3**
CDF *e*Sn **Sn 19 43 17.9 -3.8**
comp=E,78nm,0.4s
MOA Molln 4.71 37 *i* Pn **Pn 19 42 29.3 +1.8**
comp=E,13nm,0.3s,SNR=13
MOA *e*Sn **Sn 19 43 23.8 +1.4**
comp=E,21nm,0.4s
SGRT San Giovanni R 4.80 118 AML AML
comp=E,46μm,0.4s
SGRT AML AML
comp=N,41μm,1.3s
SGRT AML AML
comp=N,41μm,1.3s
SGRT AML AML
comp=E,46μm,0.4s
ARSA Arzberg 4.91 49 *e*Pn **Pn 19 42 31.0 +0.7**
comp=E,12nm,0.3s,SNR=21
THEF They Montfort 4.96 327 Pn **Pn 19 42 33.8 +2.8**
MGRS Mrkonjic Grad 5.04 85 *e*Pn **Pn 19 42 33.7 +1.7**
SMF Signal de Mont 5.05 302 *e*P **Pn 19 42 34.8 +2.7**
SMF *e*Sn **Sn 19 43 27.2 -3.5**
comp=E,18nm,0.3s
BLY Banja Luka 5.12 81 *e*Pn **Pn 19 42 32.7 -0.5**
BLY Banja Luka 5.12 81 *e*Pn **Pn 19 42 34.2 +1.0**
GEC2 GERESS Array S 5.32 27 *e*Pn **Pn 19 42 36.8 +0.9**
GEC2 *e*Sn **Sn 19 43 35.6 -1.8**
GERES GERESS Array B 5.32 27 Pn **Pn 19 42 36.6 +0.7**
comp=E,2.8nm,0.3s,baz=201,slow=13,SNR=61
GERES Sn **Sn 19 43 35.0 -2.4**
comp=E,2.8nm,0.3s,baz=204,slow=24,SNR=6.8
GERES Lg Lg 19 44 04.0
baz=213,slow=33,SNR=3.3
PAGF Fort de Pagny 5.33 327 *e*P **Pn 19 42 39.5 +3.5**
baz=134
PAGF *e*Sn **Sn 19 43 34.1 -3.6**
comp=E,57nm,0.5s
SFTF Sexfontaines 5.35 321 *e*P **Pn 19 42 39.2 +2.9**
baz=136
SFTF *e*Sn **Sn 19 43 34.8 -3.4**
comp=E,40nm,0.5s
LOR Lormes 5.35 308 *e*P **Pn 19 42 38.6 +2.3**
LOR *e*Sn **Sn 19 43 38.9 +0.7**
comp=E,38nm,0.3s
AVF Avril sur Loir 5.41 301 *e*P **Pn 19 42 40.0 +2.9**
AVF *e*Sn **Sn 19 43 35.9 -3.8**
comp=E,6.4nm,0.4s
SSF Saint Saulge 5.45 305 *e*P **Pn 19 42 39.8 +2.2**
SSF *e*Sn **Sn 19 43 36.7 -3.9**
comp=E,12nm,0.3s
CONA Conrad Observa 5.52 45 *e*Pn **Pn 19 42 40.1 +1.4**
comp=E,5.2nm,0.3s,SNR=13
CONA *e*Sn **Sn 19 43 44.7 +2.3**
comp=E,22nm,0.7s
KHC Kasperske Hory 5.53 25 *e*Pn **Pn 19 42 38.3 -0.5**
KHC Kasperske Hory 5.53 25 *e*PN **Pn 19 42 39.4 +0.6**
KHC *e*PG **Pg 19 42 58.5 -3.4**
KHC *e*SN **Sn 19 43 41.5 -1.1**
KHC *e*SG **Sg 19 44 14.0 +0.5**
MEZF Maizieres J'vi 5.57 323 *e*P **Pn 19 42 42.0 +2.7**
baz=143
MEZF *e*Sn **Sn 19 43 39.1 -4.4**
comp=E,30nm,0.5s
GRA1 Grafenberg Arr 5.59 8 *e*Pn **Pn 19 42 39.4 -0.3**
BGF Bois d'Agland 5.63 298 *e*P **Pn 19 42 43.6 +3.4**
BGF *e*Sn **Sn 19 43 41.5 -3.6**
comp=E,29nm,0.4s
STON Ston 5.69 100 *e*Pn **Pn 19 42 40.5 -0.4**
STON Ston 5.69 100 *e*Pn **Pn 19 42 40.6 -0.4**
SOP Sopron 5.74 50 EPn **Pn 19 42 43.1 +1.5**
SOP Sn **Sn 19 43 47.0 -0.6**
MTLF Montolieu 5.75 265 *e*Pn **Pn 19 42 43.0 +1.2**
MTLF *e*Sn **Sn 19 43 45.0 -3.0**
comp=E,4.9nm,0.3s
CAF Calviac 5.78 280 *e*P **Pn 19 42 44.1 +1.9**
CAF *e*Sn **Sn 19 43 44.7 -4.1**
comp=E,6.1nm,0.5s
TCF Toulx Ste Croi 5.95 294 *e*P **Pn 19 42 48.3 +3.7**
TCF *e*Sn **Sn 19 43 49.0 -4.0**
comp=E,8.1nm,0.3s
HYF Humbligny 6.07 303 *e*P **Pn 19 42 49.7 +3.6**
HYF *e*Sn **Sn 19 43 50.9 -4.9**
TREB Trebinje 6.19 101 *e*Pn **Pn 19 42 48.3 +0.4**
RJF Les Rejaudoux 6.21 284 *e*P **Pn 19 42 51.5 +3.5**
RJF *e*Sn **Sn 19 43 55.3 -3.9**
comp=E,3.9nm,0.4s
BRY Bratogost 6.28 99 *e*Pn **Pn 19 42 50.0 +0.8**
ZST Bratislava 6.33 48 *e*PN **Pn 19 42 50.5 +0.7**
ZST *e*SN **Sn 19 43 59.9 -2.4**
TREC Trest 6.34 34 *e*PN **Pn 19 42 50.2 +0.2**
TREC *e*SN **Sn 19 44 01.3 -1.3**
HCY Herceg Novi 6.38 103 *e*Pn **Pn 19 42 49.8 -0.6**
MONQ Montcuq 6.38 275 Pn **Pn 19 42 52.5 +2.1**
HAPS Han Pijesak,Bl 6.39 88 *e*Pn **Pn 19 42 50.4 -0.3**
MORH Mrgy, Hungar 6.39 68 *e*Pn **Pn 19 42 50.1 -0.5**
MORH Mrgy, Hungar 6.39 68 EPn **Pn 19 42 52.1 +1.5**
MORH Sn **Sn 19 43 56.1 -7.8**
UPM Unac-Piva 6.47 95 *e*Pn **Pn 19 42 53.4 +1.5**
MODS Modra-Piesok 6.53 47 *e*PN **Pn 19 42 53.5 +0.9**
MODS *e*SN **Sn 19 44 03.5 -3.8**
MODS *e*LG Lg 19 44 07.4
KRUC Moravsky 6.56 39 *e*PN **Pn 19 42 53.3 +0.4**
CSKK Cskako 6.56 58 EPn **Pn 19 42 54.0 +1.1**
CSKK Sn **Sn 19 44 08.0 0.0**
PRU Pruhonice 6.58 26 *e*PN **Pn 19 42 54.0 +0.8**
PRU *e*SN **Sn 19 44 06.7 -1.8**
GOPC GO Pecny, Ondr 6.60 28 *e*PN **Pn 19 42 54.0 +0.6**
GOPC *e*SN **Sn 19 44 07.2 -1.7**
LFF La Frestale 6.72 280 *e*P **Pn 19 42 58.0 +2.9**
LFF *e*Sn **Sn 19 44 07.2 -4.6**
comp=E,7.2nm,0.5s
BBLS Lazići 6.73 89 *e*Pn **Pn 19 42 56.3 +0.9**
VRAC Vranov 6.83 39 Pn **Pn 19 42 57.5 +1.0**
comp=E,0.2nm,0.3s,baz=230,slow=17,SNR=1.7
VRAC Sn **Sn 19 44 12.6 -1.9**
baz=127,slow=20,SNR=5.4
VRAC Lg Lg 19 44 55.6
comp=E,0.6nm,0.3s,baz=151,slow=19,SNR=3.7
VRAC Vranov 6.83 39 ⇓*iP* **Sn 19 44 13.4 -1.1**
VRAC Vranov 6.83 39 *e*PN **Pn 19 42 56.8 +0.2**
PDG Podgorica 6.92 101 *e*Pn **Pn 19 42 58.7 +0.9**
GIVF Givet 6.94 331 *e*P **Pn 19 43 01.9 +3.8**
GIVF *e*Sn **Sn 19 44 11.2 -6.1**
comp=E,2.2nm,0.2s
DRME Dracevica, Mon 6.94 103 *e*Pn **Pn 19 42 58.4 +0.2**
DOU Dourbes 7.02 330 ⇑Pn **Pn 19 43 00.0 +0.8**
DOU ⇓Sn **Sn 19 44 18.1 -1.1**
comp=E,17nm,0.0s
MEM Membach 7.02 338 ⇑Pn **Pn 19 43 03.7 +4.5**
MEM ⇓Sn **Sn 19 44 18.4 -0.8**
comp=E,13nm,0.0s
JAVC Velka Javorina 7.04 45 *e*PN **Pn 19 43 01.9 +2.4**
BAIF Baives 7.13 328 *e*P **Pn 19 43 04.8 +4.1**
BAIF *e*Sn **Sn 19 44 17.0 -5.0**
comp=E,14nm,0.7s
EPF Esparros 7.16 264 *e*Pn **Pn 19 43 03.1 +1.9**
EPF *e*Sn **Sn 19 44 18.3 -4.5**
comp=E,1.0nm,0.2s
BRG Berggiesshubel 7.21 20 PN **Pn 19 43 04.5 +2.7**
BRG *e* 19 44 20.8

BRG Berggiesshubel 7.21 20 SG **Sg 19 45 07.6 +0.2**
comp=E,9.3nm,1.0s
CLL Collm 7.42 14 *e*Pn **Pn 19 43 08.0 +3.3**
CLL *e*Sn Sn 19 44 04.0 -25
CLL *e* 19 44 30.0
CLL *e*Sg **Sg 19 45 15.0 +0.8**
comp=Z,14nm,0.9s
VYHS Vyhne 7.46 51 *e*PN **Pn 19 43 05.1 -0.1**
VYHS *e*SN **Sn 19 44 27.5 -2.5**
UPC Upice 7.52 30 *e*PN **Pn 19 43 06.2 +0.1**
UPC *e*SN **Sn 19 44 29.5 -2.1**
MFF Saint Martin d 7.60 292 *e*P **Pn 19 43 10.6 +3.4**
MFF *e*Sn **Sn 19 44 28.1 -5.5**
comp=Z,3.6nm,0.5s
CHVC Chvalec 7.61 30 *e*PN **Pn 19 43 07.4 +0.1**
CHVC *e*SN **Sn 19 44 31.4 -2.3**
OSTC Ostas 7.64 31 *e*PN **Pn 19 43 08.0 +0.3**
OSTC *e*SN **Sn 19 44 31.9 -2.6**
PSZ Piszkesteto 7.80 58 *e*Pn **Pn 19 43 09.2 -0.8**
PSZ Piszkesteto 7.80 58 EPn **Pn 19 43 11.0 +1.1**
PSZ Sn **Sn 19 44 35.0 -3.5**
ETSF Etsaut 7.83 264 *e*P **Pn 19 43 13.5 +3.1**
ETSF *e*Sn **Sn 19 44 33.8 -5.5**
comp=Z,2.7nm,0.3s
SJPF Ste Jean 8.27 267 *e*P **Pn 19 43 18.0 +1.7**
SJPF *e*Sn **Sn 19 44 44.4 -5.5**
comp=Z,0.6nm,0.3s
BZS Buzias 8.32 76 ⇓*iP* **Pn 19 43 17.7 +0.6**
LDF La Druitiere 8.33 306 *e*P **Pn 19 43 21.1 +3.9**
LDF *e*Sn **Sn 19 44 45.8 -5.7**
comp=Z,2.4nm,0.4s
MDVR Moldovita 8.35 82 ⇑*iP* **Pn 19 43 17.5 0.0**
FLN La Foliniere 8.62 306 *e*P **Pn 19 43 25.3 +4.2**
baz=123
GRR Gorron 8.68 303 *e*P **Pn 19 43 25.3 +3.4**
KRUS Krusevo 8.68 105 *e*Pn Pn 19 43 15.0 -7.1
HERR Herculane 8.85 81 ⇑*iP* **Pn 19 43 27.1 +2.8**
STIP Stip 9.22 101 *e*Pn **Pn 19 43 30.9 +1.5**
VTS Vitosha 9.71 95 *e*Pn **Pn 19 43 36.1 -0.1**
VTS Vitosha 9.71 95 ⇑*iP* **Pn 19 43 36.0 -0.2**
ESDC Sonseca Array 11.38 252 Pn **Pn 19 44 00.6 +1.6**
comp=Z,0.3nm,0.3s,baz=54,slow=14,SNR=6.0
EKA Eskdalemuir Ar 14.05 327 Pn **Pn 19 44 35.8 +0.4**
baz=140,slow=14,SNR=5.9
FIA0 FINESS Array S 19.73 23 *e*P **P 19 45 46.8 +0.8**
FINES FINESS Array B 19.73 23 P **P 19 45 46.8 +0.8**
comp=Z,0.2nm,0.3s,baz=220,slow=11,SNR=9.4
TOA1 Torodi Ar. Sit 31.72 196 *e*P **P 19 47 42.0 +1.4**
TORD Torodi Ar. Bea 31.73 196 P **P 19 47 41.9 +1.4**
comp=Z,0.1nm,0.5s,baz=1.3,slow=8.0,SNR=2.6
MK32 Makanchi Array 49.05 60 *e*P **P 19 50 04.4 +0.8**
MKAR Makanchi Array 49.05 60 P **P 19 50 04.4 +0.8**
comp=Z,0.5nm,0.6s,baz=288,slow=5.3,SNR=6.7
ILAR Eielson Array 69.92 350 P **P 19 52 28.8 +1.5**
comp=Z,0.2nm,0.7s,baz=1.4,slow=7.2,SNR=2.9

ISCJB ***15*** *19:50:59.5±2.4, 1°.31S±0°.04×120°.09E±0°.05, h0km±17km, mb3.7/4, Error ellipse: s-maj=8.7km s-min=6.0km az=25.6*
IDC ***15*** *19:51:00.1±1.2, 0°.24S×122°.12E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/40, mbtmp3.7/4, Error ellipse: s-maj=329.1km s-min=21.9km az=62.0*
DJA ***15*** *19:51:02.1±0.3, 1°.S±2°.×12°.0E±°., h10km, M4.0/8, MLv4.0/8*
ISC 15 19:51:00.1±3.8,**1°.32S**±0°.04×**120°.11E**±0°.06,**h1**km±26km,
n13,σ1º**25**/18,**mb3.8**/4,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.59**	**75**	P	**Pn**	**19 51 29.5**	**+0.1**
APSI				S	**Sb**	**19 51 51.5**	**+0.5**
MPSI	**Mapaga**	**1.66**	**353**	P	**Pn**	**19 51 30.1**	**-0.3**
MPSI				S	**Sn**	**19 51 53.4**	**+1.0**
TTSI	**Tana Toraja**	**1.73**	**190**	P	**Pn**	**19 51 30.6**	**-0.8**
TTSI				S	**Sn**	**19 51 54.6**	**+0.5**
SPSI	**Sidrap Palu**	**2.65**	**187**	P	**Pn**	**19 51 45.2**	**+1.3**
SPSI				S	**Sb**	**19 52 19.5**	**-1.8**
LUWI	**Luwuk**	**2.68**	**84**	P	**Pn**	**19 51 44.1**	**-0.2**
LUWI				S	**Sn**	**19 52 17.6**	**+0.2**
BNSI	**Bone**	**3.06**	**180**	P	**Pn**	**19 51 51.3**	**+1.7**
BKSI	**Bulukumba**	**3.97**	**180**	P	**Pn**	**19 52 03.3**	**+1.1**
KMSI	**Cibinong**	**4.30**	**64**	P	**Pb**	**19 52 16.8**	**+0.2**
PBKI	**Pangkalan Bun**	**8.55**	**261**	P	**Pn**	**19 53 06.1**	**+1.0**
WRA	**Warramunga Arr**	**23.16**	**144**	P	**P**	**19 56 05.8**	**-2.4**
	1.8nm,0.8s,baz=321,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**25.93**	**150**	P	**P**	**19 56 35.0**	**+0.9**
	0.4nm,0.8s,baz=334,slow=9.0,SNR=4.8						
MKAR	**Makanchi Array**	**58.27**	**330**	P	**P**	**20 00 57.3**	**+0.9**
	0.9nm,0.7s,baz=123,slow=8.8,SNR=7.9						
ZALV	**Zalesovo Beam**	**62.37**	**337**	P	**P**	**20 01 22.8**	**-1.4**
	0.8nm,0.5s,baz=142,slow=5.4,SNR=4.4						

IDC ***15*** *19:52:00.8±3.8, 14°.19N×91°.62W, h0km, mb3.7/2, mb1 4.1/3, mb1mx3.6/34, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=142.3km s-min=65.7km az=46.0*
ISCJB ***15*** *19:52:04.7±1.6, 13°.98N±0°.10×92°.19W±0°.08, h40km±17km, mb3.8/2, Error ellipse: s-maj=20.1km s-min=6.6km az=38.7*
MEX ***15*** *19:52:04.4±0.4, 13°.86N×92°.16W, h53km±18km, MD4.1*
SNET ***15*** *19:52:07.6±0.8, 14°.03N×92°.00W, h35km±999km, ML3.1*
ISC 15 19:52:04.7±2.7,**14°.0N**±0°.1×**92°.18W**±0°.09,**h24**km±16km,
n11,σ0º**96**/16,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.90**	**355**	*e*P	**Pb**	**19 52 21.1**	**-0.5**
THIG				*e*S	**Sb**	**19 52 34.2**	**+1.0**
CCIG	**Comitan**	**2.26**	**1**	*e*P	**Pb**	**19 52 44.2**	**-0.7**
CCIG				*i* S	**Sn**	**19 53 07.7**	**-0.3**
RTR	**El Retiro**	**2.46**	**92**	*e*P	**Pn**	**19 52 44.0**	**+0.5**
RTR				*e*S	**Sn**	**19 53 11.6**	**-1.4**
SBLS	**San Blas**	**2.49**	**94**	*e*P	**Pn**	**19 52 44.5**	**+0.6**
SBLS				*e*S	**Sn**	**19 53 13.4**	**-0.2**
MTO3	**Montecristo**	**2.76**	**82**	*e*P	**Pn**	**19 52 48.0**	**+0.4**
TGIG		**2.90**	**342**	*e*P	**Pn**	**19 52 49.0**	**-0.4**
TGIG				*i* S	**Sn**	**19 53 24.4**	**+0.8**
CMIG	**Matias Romero**	**4.02**	**320**	*e*P	**Pn**	**19 53 04.3**	**-0.6**
TXAR	**Lajitas Array**	**18.59**	**327**	P	**Pn**	**19 56 21.6**	**+0.8**
	0.0nm,0.3s,baz=147,slow=12,SNR=7.3						
NVAR	**Mina Array Bea**	**33.55**	**321**	P	**P**	**19 58 44.7**	**+1.6**
	0.6nm,0.7s,baz=126,slow=9.3,SNR=5.5						
YKA	**Yellowknife Ar**	**50.98**	**347**	P	**P**	**20 01 03.0**	**-1.2**
	0.9nm,0.6s,baz=156,slow=7.0,SNR=4.9						
CMAR	**Chiang Mai Arr**	**145.93**	**341**	PKPbc	**PKPab**	**20 11 42.8**	**-0.8**
	1.2nm,0.7s,baz=331,slow=2.7,SNR=12						

CRAAG ***15*** *20:01:09.4, 36°.74N×5°.24E, Ml2.7*
ISCJB ***15*** *20:01:12.1±0.5, 37°.03N±0°.04×5°.38E±0°.04, h18km, Error ellipse: s-maj=5.2km s-min=4.2km az=18.3*
MDD ***15*** *20:01:13.2±0.2, 36°.77N×5°.41E, h0km, mb3.8/2, Error ellipse: s-maj=2.6km s-min=2.1km az=57.0, PRXIMO*
LDG ***15*** *20:01:14.3±0.2, 36°.82N×5°.31E, h10km, Md3.3/2, Ml3.4/6, Error ellipse: s-maj=5.3km s-min=3.4km az=46.0*
ISC 15 20:01:12.0±0.9,**36°.82N**±0°.05×**5°.38E**±0°.04,**h18**km,**n30,**
σ1º**90**/48,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	**0.48**	**125**	P	**Pg**	**20 01 22.7**	**+0.9**
DFRA	**Djebel Bou Aff**	**0.48**	**125**	P	**Pg**	**20 01 22.7**	**+0.9**
SET	**Setif**	**0.62**	**179**	P	**Pb**	**20 01 23.0**	**-1.3**
SET	**Setif**	**0.62**	**179**	P	**Pb**	**20 01 23.0**	**-1.3**
CKHR	**Kef el Ahmar**	**0.81**	**173**	P	**Pb**	**20 01 25.7**	**-1.9**
CKHR	**Kef el Ahmar**	**0.81**	**173**	P	**Pb**	**20 01 25.7**	**-1.9**
CASM	**Ain Smara**	**1.05**	**122**	P	**Pb**	**20 01 31.3**	**-0.4**
CASM	**Ain Smara**	**1.05**	**122**	P	**Pb**	**20 01 31.3**	**-0.4**
CAEH	**'Ain El Ouahch**	**1.18**	**92**	P	**Pb**	**20 01 35.8**	**+1.9**
CAEH	**'Ain El Ouahch**	**1.18**	**92**	P	**Pb**	**20 01 35.8**	**+1.9**
CMAH	**Djebel Manchou**	**1.65**	**96**	P	**Pn**	**20 01 41.1**	**+1.0**
CMAH	**Djebel Manchou**	**1.65**	**96**	P	**Pn**	**20 01 41.1**	**+1.0**
ETOS	**Mallorca**	**3.57**	**326**	P	**Pn**	**20 02 08.0**	**+1.5**
	1.1nm,0.1s,SNR=7.9						
ETOS				S	**Sn**	**20 02 45.9**	**-2.3**
	2.5nm,0.4s,SNR=7.9						
EIBI	**Ibiza**	**3.88**	**306**	P	**Pn**	**20 02 11.8**	**+1.1**
	1.3nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**20 02 54.6**	**-1.2**
	1.5nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**5.38**	**283**	P	**Pn**	**20 02 32.1**	**+0.7**
	0.1nm,0.1s,SNR=7.9						

EMUR				S		Sn	20 03 31.9	-0.9
	0.2nm,0.3s,SNR=7.9							
CFON	**Fontmartina**	**5.44**	**336**	P		**Pn**	**20 02 32.5**	**+0.2**
	0.3nm,0.1s,SNR=7.9							
CFON				S		Sn	20 03 31.8	-2.6
	0.2nm,0.3s,SNR=7.9							
EPOB	**Poblet**	**5.63**	**325**	P		**Pn**	**20 02 36.4**	**+1.5**
	0.6nm,0.1s,SNR=7.9							
EPOB				S		Sn	20 03 36.6	-2.4
	0.6nm,0.2s,SNR=7.9							
ETOB	**Tobarra**	**5.79**	**290**	P		**Pn**	**20 02 40.1**	**+3.0**
	0.4nm,0.1s,SNR=7.9							
ETOB				S		Sn	20 03 44.2	+1.2
	0.5nm,0.3s,SNR=7.9							
EMOS	**Mosqueruela**	**5.79**	**309**	P		**Pn**	**20 02 38.7**	**+1.5**
	0.1nm,0.1s,SNR=7.9							
EMOS				S		Sn	20 03 41.4	-1.9
	0.0nm,0.1s,SNR=7.9							
PGF	**Pioggiola**	**6.36**	**25**	*e*Pn		**Pn**	**20 02 46.6**	**+1.6**
PGF				*e*Sn		Sn	20 03 55.4	-1.8
	7.8nm,0.3s							
PGF	**Pioggiola**	**6.36**	**25**	P		**Pn**	**20 02 46.6**	**+1.6**
PGF				S		Sn	20 03 55.4	-1.8
	3.9nm,0.3s							
LMR	**La Mourre**	**6.56**	**7**	*e*Pn		**Pn**	**20 02 48.0**	**+0.4**
LMR				*e*Sn		Sn	20 03 59.6	-2.3
	2.1nm,0.2s							
LMR	**La Mourre**	**6.56**	**7**	P		**Pn**	**20 02 48.0**	**+0.4**
LMR				S		Sn	20 03 59.6	-2.3
	1.1nm,0.2s							
FRF	**La Foret Royal**	**6.80**	**8**	*e*Pn		**Pn**	**20 02 51.7**	**+0.8**
FRF				*e*Sn		Sn	20 04 05.0	-2.8
	3.0nm,0.2s							
FRF	**La Foret Royal**	**6.80**	**8**	P		**Pn**	**20 02 51.7**	**+0.8**
FRF				S		Sn	20 04 05.0	-2.8
	1.5nm,0.2s							
EQES	**Quesada**	**6.81**	**281**	P		**Pn**	**20 02 53.4**	**+2.2**
	0.4nm,0.2s,SNR=7.9							
EQES				S		Sn	20 04 11.0	+2.8
	1.2nm,0.7s,SNR=7.9							
SMRF	**Simiane la Rot**	**7.15**	**1**	*e*Pn		**Pn**	**20 02 56.2**	**+0.5**
SMRF				*e*Sn		Sn	20 04 13.2	-3.2
	0.9nm,0.3s							
SMRF	**Simiane la Rot**	**7.15**	**1**	P		**Pn**	**20 02 56.2**	**+0.5**
SMRF				S		Sn	20 04 13.2	-3.2
	0.9nm,0.3s							
SBF	**Sospel**	**7.21**	**12**	*e*Pn		**Pn**	**20 02 57.1**	**+0.6**
SBF				*e*Sn		Sn	20 04 14.6	-3.3
	3.9nm,0.3s							
SBF	**Sospel**	**7.21**	**12**	P		**Pn**	**20 02 57.1**	**+0.6**
SBF				S		Sn	20 04 14.6	-3.3
	1.9nm,0.3s							

SOME ***15*** *20:11:03.2, 43.°42N×70.°25E, h0km*
NNC ***15*** *20:11:04.3±0.8, 43.°34N×70.°21E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=6.3km s-min=4.1km az=55.0, Suspected Mining explosion.*
KRNET ***15*** *20:11:05.1±0.1, 43.°43N×69.°63E, mb2.7*
ISC 15 20:11:02.8±1.1, 43.°45N±0.°04×70.°32E±0.°04, h0km, n45, σ1§61/78, 29C-14D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**0.35**	**159**	⇓P	**Pg**	**20 11 10.1**	**+0.5**
KK09				⇓S	**Sg**	**20 11 14.9**	**+0.8**
KK05	**Karatay Array**	**0.36**	**156**	⇑P	**Pg**	**20 11 10.3**	**+0.5**
KK05				⇑S	**Sg**	**20 11 15.1**	**+0.6**
KK04	**Karatay Array**	**0.37**	**159**	⇑P	**Pg**	**20 11 10.3**	**+0.5**
KK04				⇓S	**Sg**	**20 11 15.1**	**+0.5**
KK08	**Karatay Array**	**0.37**	**161**	⇑P	**Pg**	**20 11 10.4**	**+0.6**
KK08				⇑S	**Sg**	**20 11 15.0**	**+0.4**
KK01	**Karatay Array**	**0.37**	**159**	⇓P	**Pg**	**20 11 10.4**	**+0.5**
KK01				⇑S	**Sg**	**20 11 15.1**	**+0.4**
KK03	**Karatay Array**	**0.37**	**160**	⇓P	**Pg**	**20 11 10.5**	**+0.6**
KK03				⇑S	**Sg**	**20 11 15.3**	**+0.6**
KK02	**Karatay Array**	**0.37**	**158**	⇑P	**Pg**	**20 11 10.4**	**+0.4**
KK02				⇑S	**Sg**	**20 11 15.3**	**+0.5**
KK31	**Karatay Array**	**0.37**	**158**	P	**Pg**	**20 11 10.3**	**+0.3**
	5.3nm,0.3s,baz=293,slow=18,SNR=4394						
KK31				⇑S	**Sg**	**20 11 15.2**	**+0.4**
	54nm,0.4s,baz=304,slow=39,SNR=4.3						
KK07	**Karatay Array**	**0.38**	**160**	⇓P	**Pg**	**20 11 10.7**	**+0.5**
KK07				⇑S	**Sg**	**20 11 15.6**	**+0.5**
KK06	**Karatay Array**	**0.39**	**157**	⇑P	**Pg**	**20 11 10.7**	**+0.5**
KK06				⇑S	**Sg**	**20 11 15.7**	**+0.5**
BRLS	**Borolday**	**0.55**	**220**	*e*P	**Pn**	**20 11 17.9**	**-0.1**
	baz=58						
BRLS				*e*S	**Sn**	**20 11 27.1**	**-0.8**
	baz=58						
BRLS	**Borolday**	**0.55**	**220**	*e*P	**Pn**	**20 11 17.9**	**-0.1**
	0.3nm,0.1s						
BRLS				*e*S	**Sn**	**20 11 27.2**	**-0.8**
	30nm,0.6s						
IUG	**Iuzhnay**	**1.32**	**189**	P	**Pg**	**20 11 27.9**	**-0.3**
	8.2nm,0.3s						
IUG				S	**Sg**	**20 11 44.8**	**-0.5**
	93nm,0.7s						
IUG	**Iuzhnay**	**1.32**	**189**	*e*P	**Pg**	**20 11 27.9**	**-0.3**
	8.2nm,0.3s						
IUG				*e*S	**Sg**	**20 11 44.8**	**-0.5**
	112nm,0.5s						
ARK	**Arkit**	**2.05**	**143**	⇓*e*P	**Pg**	**20 11 42.7**	**+0.6**
	baz=33						
ARK				⇓*i*S	**Sg**	**20 12 11.0**	**+2.4**
	baz=33						
MRKS	**Merke**	**2.24**	**107**	Pg	**Pg**	**20 11 45.7**	**0.0**
	7.3nm,0.4s						
MRKS				Lg	Lg	20 12 16.1	
	27nm,0.5s						
MRKS	**Merke**	**2.24**	**107**	*e*P	**Pg**	**20 11 45.7**	**0.0**
	7.3nm,0.4s						
MRKS				*e*S	**Sg**	**20 12 15.5**	**+0.7**
	27nm,0.5s						
EKS2	**Erkin-Say**	**2.65**	**106**	⇑*i*P	**Pg**	**20 11 52.6**	**-1.0**
	baz=3.0						
EKS2				⇑*i*S	**Sg**	**20 12 28.5**	**+0.5**
	baz=3.0						
AML	**Almayashu**	**2.81**	**117**	⇑*i*P	**Pb**	**20 11 55.2**	**+1.1**
	baz=12						
AML				⇑*i*S	**Sg**	**20 12 32.4**	**-0.7**
	baz=12						
ARSB	**Arslanbob**	**2.90**	**136**	⇑*i*P	**Pb**	**20 11 55.7**	**+0.2**
	baz=29						
ARSB				⇑*i*S	**Sb**	**20 12 33.2**	**+1.7**
	baz=29						
USP	**Ospenovka**	**3.05**	**92**	⇑*i*P	**Pb**	**20 11 58.5**	**+0.5**
	baz=91						
USP				⇑*i*S	**Sb**	**20 12 37.4**	**+1.6**
	baz=91						
BTLS	**Baital**	**3.11**	**58**	Pg	**Pg**	**20 12 04.4**	**+1.9**
	7.4nm,0.5s						
BTLS				Lg	Lg	20 12 47.4	
	7.2nm,0.5s						
BTLS	**Baital**	**3.11**	**58**	*e*P	**Pg**	**20 12 04.4**	**+1.9**
	7.4nm,0.5s						
BTLS				*e*S	**Sg**	**20 12 47.4**	**+4.7**
	7.2nm,0.5s						
AAK	**Ala-Archa**	**3.16**	**103**	⇑Pn	**Pg**	**20 12 02.3**	**-1.2**
	3.1nm,0.3s						
AAK				⇑Lg	Lg	20 12 45.0	
	6.2nm,0.5s						
AAK	**Ala-Archa**	**3.16**	**103**	⇑*i*P	**Pb**	**20 12 00.4**	**+0.4**
	baz=1.0						
AAK				⇑*i*S	**Sb**	**20 12 40.7**	**+1.5**
	baz=1.0						
UCH	**Uchtor**	**3.31**	**110**	⇑*i*P	**Pb**	**20 12 02.3**	**-0.5**
	baz=7.0						
UCH				⇑*i*S	**Sb**	**20 12 44.6**	**+0.8**
	baz=7.0						
KBK	**Karagaybulak**	**3.48**	**102**	⇓*e*P	**Pb**	**20 12 04.1**	**-1.3**
	baz=99						
KBK				⇓*i*S	**Sb**	**20 12 48.6**	**+0.3**
	baz=99						
TKM2	**Tokmak 2**	**3.89**	**96**	⇓Pn	**Pn**	**20 12 07.4**	**+3.3**
	2.7nm,0.4s						
TKM2				⇓Lg	Lg	20 13 09.4	
	6.5nm,0.6s						
DGS	**Degeres**	**3.98**	**91**	Pg	**Pg**	**20 12 19.2**	**+0.1**
	2.9nm,0.5s						
DGS				Lg	Lg	20 13 12.6	
	18nm,0.6s						
DGS	**Degeres**	**3.98**	**91**	*e*P	**Pg**	**20 12 19.2**	**+0.1**
	2.9nm,0.5s						
DGS				*e*S	**Sg**	**20 13 12.6**	**+2.0**
	18nm,0.6s						
KST	**Kastek**	**4.14**	**94**	Pg	**Pg**	**20 12 20.7**	**-1.5**
	6.2nm,0.6s						
KST				Lg	Lg	20 13 15.5	
	4.5nm,0.7s						
KST	**Kastek**	**4.14**	**94**	*e*P	**Pg**	**20 12 20.7**	**-1.5**
	6.2nm,0.6s						
KST				*e*S	**Sg**	**20 13 15.5**	**-0.3**
	4.5nm,0.7s						
BOOM	**Boomskoye usch**	**4.23**	**101**	⇑*i*P	**Pb**	**20 12 14.8**	**-3.4**
	baz=99						
BOOM				⇑*i*S	**Sb**	**20 13 06.8**	**-3.1**
	baz=99						
KUU	**Kurty**	**4.39**	**82**	*e*P	**Pg**	**20 12 27.0**	**+0.1**
	1.4nm,0.4s						
KUU				*e*S	**Sg**	**20 13 25.6**	**+1.9**
	16nm,0.5s						
KTBS	**Karatobe**	**4.63**	**85**	Pg	**Pg**	**20 12 30.2**	**-1.2**
	1.9nm,0.7s						
KTBS				Lg	Lg	20 13 31.4	
	20nm,0.5s						
KTBS	**Karatobe**	**4.63**	**85**	*e*P	**Pg**	**20 12 30.2**	**-1.2**
	1.9nm,0.7s						
KTBS				*e*S	**Sg**	**20 13 31.4**	**0.0**
	20nm,0.5s						
CHKK	**Chushkaly**	**4.85**	**83**	Pg	**Pg**	**20 12 33.7**	**-2.1**
	1.7nm,0.4s						
CHKK				Lg	Lg	20 13 38.2	
	10.0nm,0.5s						
CHKK	**Chushkaly**	**4.85**	**83**	*e*P	**Pg**	**20 12 33.8**	**-2.1**
	1.7nm,0.4s						
CHKK				*e*S	**Sg**	**20 13 38.2**	**-0.5**
	10.0nm,0.5s						
TNSS	**Tian-Shan**	**4.86**	**93**	*e*P	**Pg**	**20 12 34.5**	**-1.4**
	2.4nm,0.3s						
TNSS				*e*S	**Sg**	**20 13 38.5**	**-0.3**
	8.4nm,0.5s						
KOTS	**Kotyrbulak**	**4.96**	**90**	Pg	**Pg**	**20 12 35.3**	**-2.5**
	2.1nm,0.7s						
KOTS				Lg	Lg	20 13 40.2	
	15nm,0.6s						
KOTS	**Kotyrbulak**	**4.96**	**90**	*e*P	**Pg**	**20 12 35.3**	**-2.5**
	2.1nm,0.7s						
KOTS				*e*S	**Sg**	**20 13 40.2**	**-1.8**
	15nm,0.6s						
ARXS	**Arharly**	**5.48**	**79**	Pg	**Pg**	**20 12 44.2**	**-3.6**
	2.1nm,0.9s						
ARXS				Lg	Lg	20 13 55.6	
	3.6nm,0.6s						
ARXS	**Arharly**	**5.48**	**79**	*e*P	**Pg**	**20 12 44.2**	**-3.6**
	2.1nm,0.9s						
ARXS				*e*S	**Sg**	**20 13 55.6**	**-3.3**
	3.6nm,0.6s						
PDGK	**Podgornoye**	**6.68**	**88**	Pg	**Pg**	**20 13 07.3**	**-3.5**
	0.7nm,0.5s						
PDGK				Lg	Lg	20 14 34.9	
	0.8nm,0.8s						
PDGK	**Podgornoye**	**6.68**	**88**	⇓Pg	**Pg**	**20 13 07.0**	**-3.8**
	0.9nm,0.5s						
PDGK				⇓Lg	Lg	20 14 42.5	
	2.1nm,0.6s						

IDC ***15*** *20:25:30.4±1.6, 34.°17N×25.°12E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.3/34, mbtmp3.5/4, ML4.0/2, Error ellipse: s-maj=46.9km s-min=26.5km az=130.0*
ISCJB ***15*** *20:25:31.4±1.6, 34.°08N±0.°08×25.°07E±0.°06, h15km±9km, mb3.2/2, Error ellipse: s-maj=13.1km s-min=7.7km az=179.2*
ATH ***15*** *20:25:32.5, 34.°22N×25.°07E, h22km±2km, ML2.7/7, Error ellipse: s-maj=4.6km s-min=1.8km az=2.0*
THE ***15*** *20:25:35.0, 34.°39N×25.°09E, h0km±3km, ML3.0/2, Error ellipse: s-maj=6.2km s-min=1.6km az=146.0*
ISC 15 20:25:31.3±2.1, 34.°19N±0.°08×25.°11E±0.°04, h3km±12km, n27, σ0§70/34, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**344**	P	**Pb**	**20 25 48.6**	**-0.2**
SIVA				S	**Sg**	**20 25 58.5**	**-0.5**
SIVA	**Sivas**	**0.86**	**344**	P	**Pb**	**20 25 48.7**	**-0.2**
SIVA				S	**Sg**	**20 25 59.0**	**0.0**
SIVA				AML	AML	20 26 13.6	
	comp=N,2687μm,0.4s						
SIVA				AML	AML	20 26 15.8	
	comp=E,3749μm,0.6s						
TMBK	**Timbaki Herakl**	**0.92**	**342**	P	**Pb**	**20 25 50.2**	**+0.3**
LAST	**Lasithi**	**1.02**	**17**	P	**Pg**	**20 25 51.4**	**+0.6**
LAST	**Lasithi**	**1.02**	**17**	P	**Pg**	**20 25 50.8**	**0.0**
LAST				S	**Sn**	**20 26 06.6**	**-0.7**
LAST				AML	AML	20 26 11.3	
	comp=E,429μm,1.0s						
LAST				AML	AML	20 26 14.9	
	comp=N,392μm,0.5s						
GVD	**Gavdhos**	**1.06**	**308**	P	**Pb**	**20 25 52.6**	**+0.3**
GVD				S	**Sn**	**20 26 08.2**	**-0.1**
GVD	**Gavdhos**	**1.06**	**308**	P	**Pg**	**20 25 52.0**	**+0.4**
GVD				S	**Sb**	**20 26 07.0**	**+0.4**
GVD				AML	AML	20 26 14.7	
	comp=N,1646μm,0.4s						
GVD				AML	AML	20 26 14.7	
	comp=E,2078μm,0.4s						
IDI	**Anoyia**	**1.11**	**351**	P	**Pg**	**20 25 52.2**	**-0.4**
IDI	**Anoyia**	**1.11**	**351**	P	**Pg**	**20 25 52.4**	**-0.2**
NPS	**Neapolis**	**1.15**	**21**	P	**Pb**	**20 25 54.4**	**+0.6**
NPS	**Neapolis**	**1.15**	**21**	P	**Pb**	**20 25 54.2**	**+0.4**
NPS				AML	AML	20 26 19.7	
	comp=N,423μm,0.5s						
NPS				AML	AML	20 26 23.2	
	comp=E,524μm,0.8s						
PRNS	**Prines Rethymn**	**1.27**	**337**	P	**Pg**	**20 25 55.6**	**-0.1**
ZKR	**Zakros**	**1.30**	**44**	P	**Pn**	**20 25 58.0**	**+1.6**
ZKR				S	**Sn**	**20 26 15.8**	**+1.6**
ZKR				AML	AML	20 26 21.5	
	comp=N,193μm,0.5s						
ZKR				AML	AML	20 26 24.6	
	comp=E,378μm,0.5s						
VAM	**Vamos**	**1.43**	**329**	P	**Pb**	**20 25 58.5**	**+0.1**
VAM	**Vamos**	**1.43**	**329**	P	**Pb**	**20 25 58.6**	**+0.1**
VAM				S	**Sn**	**20 26 18.4**	**+1.1**
VAM				AML	AML	20 26 28.5	
	comp=E,606μm,0.5s						
VAM				AML	AML	20 26 29.1	
	comp=N,603μm,0.9s						
IMMV	**Iera Moni Meta**	**1.57**	**324**	P	**Pb**	**20 26 01.2**	**+0.3**
IMMV				AML	AML	20 26 39.0	
	comp=E,522μm,0.6s						
IMMV				AML	AML	20 26 39.3	
	comp=N,514μm,0.7s						
KARP	**Karpathos**	**2.17**	**51**	P	**Pb**	**20 26 10.3**	**-0.8**
ANKY	**Antikythira Is**	**2.23**	**319**	P	**Pn**	**20 26 10.5**	**+1.3**
IOSP	**Ios island**	**2.53**	**3**	P	**Pn**	**20 26 13.6**	**+0.3**
MHLO	**Agia Marina, M**	**2.56**	**347**	P	**Pn**	**20 26 13.5**	**-0.1**
KYTH	**Kithira**	**2.67**	**321**	P	**Pn**	**20 26 16.1**	**+0.9**
SERI	**Serifos**	**3.01**	**351**	P	**Pn**	**20 26 20.1**	**+0.3**
VLI	**Veliai**	**3.08**	**326**	P	**Pn**	**20 26 20.9**	**+0.1**
AKASG	**Malin Array Be**	**16.77**	**9**	Pn	**Pn**	**20 29 25.6**	**-1.4**
	comp=N,0.5nm,0.3s,baz=197,slow=11,SNR=3.8						
GERES	**GERESS Array B**	**16.92**	**333**	Pn	**P**	**20 29 31.1**	**-0.1**
	comp=N,0.2nm,0.3s,baz=144,slow=12,SNR=9.1						
TORD	**Torodi Ar. Bea**	**29.84**	**231**	P	**P**	**20 31 39.3**	**-0.6**
	comp=N,0.5nm,0.5s,baz=33,slow=9.0,SNR=8.4						
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**20 33 42.5**	**-0.2**
	comp=N,0.1nm,0.4s,baz=265,slow=7.3,SNR=2.8						

CRAAG ***15*** *20:35:00.6, 36.°67N×5.°25E, Ml3.0*
ISCJB ***15*** *20:35:01.6±0.4, 36.°96N±0.°03×5.°32E±0.°04, h18km, Error ellipse: s-maj=4.7km s-min=3.9km az=44.0*
LDG ***15*** *20:35:04.5±0.2, 36.°80N×5.°29E, h10km, Md3.3/2, Ml3.3/6, Error ellipse: s-maj=5.0km s-min=3.0km az=41.0*
MDD ***15*** *20:35:04.1±0.2, 36.°78N×5.°37E, h0km, mb3.8/1, Error ellipse: s-maj=2.3km s-min=2.0km az=41.0, PRXIMO*
ISC 15 20:35:01.9±0.9, 36.°78N±0.°04×5.°34E±0.°03, h18km, n37, σ1§91/52, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	**0.49**	**118**	P	**Pg**	**20 35 13.0**	**+1.1**
DFRA	**Djebel Bou Aff**	**0.49**	**118**	P	**Pg**	**20 35 13.0**	**+1.1**
SET	**Setif**	**0.58**	**175**	P	**Pb**	**20 35 12.5**	**-1.0**
SET	**Setif**	**0.58**	**175**	P	**Pb**	**20 35 12.5**	**-1.0**
CKHR	**Kef el Ahmar**	**0.77**	**169**	P	**Pb**	**20 35 16.0**	**-0.9**
CKHR	**Kef el Ahmar**	**0.77**	**169**	P	**Pb**	**20 35 16.0**	**-0.9**
CASM	**Ain Smara**	**1.06**	**119**	P	**Pn**	**20 35 23.3**	**+1.4**
CASM	**Ain Smara**	**1.06**	**119**	P	**Pn**	**20 35 23.3**	**+1.4**
CTEI	**Djebel Teioual**	**1.12**	**129**	P	**Pn**	**20 35 22.5**	**-0.3**
CTEI	**Djebel Teioual**	**1.12**	**129**	P	**Pn**	**20 35 22.5**	**-0.3**
CKFL	**Kef-Lekhel**	**1.18**	**108**	P	**Pg**	**20 35 26.1**	**+1.4**
CKFL	**Kef-Lekhel**	**1.18**	**108**	P	**Pg**	**20 35 26.1**	**+1.4**
CAEH	**'Ain El Ouahch**	**1.22**	**89**	P	**Pb**	**20 35 25.5**	**+1.1**
CAEH	**'Ain El Ouahch**	**1.22**	**89**	P	**Pb**	**20 35 25.5**	**+1.1**
ATAF	**Djebel Tarf**	**1.24**	**224**	P	**Pn**	**20 35 25.0**	**+0.5**
ATAF	**Djebel Tarf**	**1.24**	**224**	P	**Pn**	**20 35 25.0**	**+0.5**
AKET	**Djebel Ketaf**	**1.38**	**239**	P	**Pn**	**20 35 27.2**	**+0.8**
AKET	**Djebel Ketaf**	**1.38**	**239**	P	**Pn**	**20 35 27.2**	**+0.8**
CMAH	**Djebel Manchou**	**1.68**	**95**	P	**Pn**	**20 35 31.8**	**+1.3**
CMAH	**Djebel Manchou**	**1.68**	**95**	P	**Pn**	**20 35 31.8**	**+1.3**
ETOS	**Mallorca**	**3.59**	**327**	P	**Pn**	**20 35 58.0**	**+1.4**
	1.4nm,0.1s,SNR=7.9						
ETOS				S	**Sn**	**20 36 36.5**	**-2.0**
	3.3nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.88**	**307**	P	**Pn**	**20 36 02.2**	**+1.7**
	0.4nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**20 36 44.7**	**-1.0**
	1.2nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**5.35**	**283**	P	**Pn**	**20 36 21.6**	**+0.7**
	0.1nm,0.1s,SNR=7.9						
EMUR				S	**Sn**	**20 37 21.9**	**-0.1**
	2.0nm,0.5s,SNR=7.9						
EPOB	**Poblet**	**5.64**	**325**	P	**Pn**	**20 36 25.9**	**+0.9**
	0.1nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**20 37 25.3**	**-4.0**
	1.6nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**5.77**	**291**	P	**Pn**	**20 36 28.7**	**+2.1**
	SNR=7.9						
ETOB				S	**Sn**	**20 37 32.5**	**+0.1**
	0.5nm,0.5s,SNR=7.9						
SESP	**Santiago Espad**	**6.41**	**284**	P	**Pn**	**20 36 38.7**	**+3.1**
	0.2nm,0.3s,SNR=7.9						
PGF	**Pioggiola**	**6.42**	**25**	*e*Pn	**Pn**	**20 36 37.3**	**+1.7**
PGF				*e*Sn	**Sn**	**20 37 46.0**	**-2.5**
	11nm,0.4s						
PGF	**Pioggiola**	**6.42**	**25**	P	**Pn**	**20 36 37.3**	**+1.7**
PGF				S	**Sn**	**20 37 46.0**	**-2.5**
	5.3nm,0.4s						
EBER	**Berja**	**6.60**	**274**	P	**Pn**	**20 36 40.0**	**+1.8**
	0.1nm,0.1s,SNR=7.9						
LMR	**La Mourre**	**6.61**	**7**	*e*Pn	**Pn**	**20 36 38.8**	**+0.7**
LMR				*e*Sn	**Sn**	**20 37 50.2**	**-2.8**
	1.8nm,0.2s						
LMR	**La Mourre**	**6.61**	**7**	P	**Pn**	**20 36 38.8**	**+0.7**
LMR				S	**Sn**	**20 37 50.2**	**-2.8**
	0.9nm,0.2s						
FRF	**La Foret Royal**	**6.85**	**8**	*e*Pn	**Pn**	**20 36 42.3**	**+0.9**
FRF				*e*Sn	**Sn**	**20 37 55.6**	**-3.3**
	2.6nm,0.4s						
FRF	**La Foret Royal**	**6.85**	**8**	P	**Pn**	**20 36 42.3**	**+0.9**
FRF				S	**Sn**	**20 37 55.6**	**-3.3**
	1.3nm,0.4s						
SMRF	**Simiane la Rot**	**7.19**	**1**	*e*Pn	**Pn**	**20 36 46.5**	**+0.3**
SMRF				*e*Sn	**Sn**	**20 38 03.9**	**-3.5**
	0.7nm,0.3s						
SMRF	**Simiane la Rot**	**7.19**	**1**	P	**Pn**	**20 36 46.5**	**+0.3**
SMRF				S	**Sn**	**20 38 03.9**	**-3.5**
	0.7nm,0.3s						
SBF	**Sospel**	**7.26**	**12**	*e*Pn	**Pn**	**20 36 47.9**	**+0.8**
SBF				*e*Sn	**Sn**	**20 38 05.3**	**-3.7**
	4.6nm,0.3s						
SBF	**Sospel**	**7.26**	**12**	P	**Pn**	**20 36 47.9**	**+0.8**
SBF				S	**Sn**	**20 38 05.3**	**-3.7**
	2.3nm,0.3s						

ISCJB ***15*** *20:37:29.9±0.4, 0.°76N±0.°09×28.°23W±0.°07, h7km, mb4.4/31, MS4.1/7, Error ellipse: s-maj=14.4km s-min=7.6km az=146.5*
IDC ***15*** *20:37:30.9±0.5, 0.°86N×28.°25W, h0km, mb4.1/18, mb1 4.3/18, mb1mx4.0/61, mbtmp4.1/18, ML5.2/1, MS4.1/6, Ms1 4.1/6, ms1mx3.5/48, Error ellipse: s-maj=22.6km s-min=11.8km az=140.0*
NEIC ***15*** *20:37:32.1±0.8, 0.°77N×28.°26W, h10km, mb4.6/22, Error ellipse: s-maj=24.1km s-min=16.0km az=138.0*
ISC 15 20:37:31.6±0.5, 0.°84N±0.°10×28.°28W±0.°09, h7km, n59, σ1§30/50, mb4.4/31, MS4.2/7, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.09**	**229**	Pn	**Pn**	**20 39 55.6**	**-1.5**
	19nm,0.3s,baz=336,slow=0.4,SNR=168						
RCBR				Sn	Sn	20 41 39.9	-11
	baz=75,slow=1.8,SNR=1.8						
RCBR	**Riachuelo**	**10.09**	**229**	*e*Pn	**Pn**	**20 39 54.7**	**-2.5**
RCBR				*e*Sn	Sn	20 41 40.3	-10
SACV	**Santiago Islan**	**14.78**	**18**	*e*Pn	**Pn**	**20 40 58.3**	**-3.0**
H10N3	**ASCENSION HYDR**	**16.22**	**122**	T	T	20 58 06.3	
	baz=301,slow=74,SNR=410						
H10N2	**ASCENSION HYDR**	**16.23**	**122**	T	T	20 58 05.7	
	baz=301,slow=74,SNR=520						
H10N1	**ASCENSION HYDR**	**16.25**	**122**	T	T	20 58 06.5	
	baz=301,slow=74,SNR=609						
H10S3	**ASCENSION HYDR**	**16.70**	**126**	T	T	20 58 40.1	
	baz=305,slow=74,SNR=303						
H10S1	**ASCENSION HYDR**	**16.70**	**126**	T	T	20 58 40.4	
	baz=305,slow=74,SNR=392						
H10S2	**ASCENSION HYDR**	**16.71**	**126**	T	T	20 58 41.3	
	baz=305,slow=74,SNR=222						
DBIC	**Dimbokro**	**24.07**	**76**	P	**P**	**20 42 47.6**	**-0.4**
	7.2nm,0.8s,baz=257,slow=12,SNR=5.3						
DBIC				LR	LR	20 49 59.8	
	comp=Z,184nm,20.3s,baz=174,slow=31						
DBIC	**Dimbokro**	**24.07**	**76**	*e*P	**P**	**20 42 47.7**	**-0.2**
	12nm,0.9s						
BDFB	**Brasilia**	**25.46**	**229**	P	**P**	**20 43 00.3**	**-0.4**
	8.9nm,0.7s,baz=63,slow=10,SNR=7.4						
BDFB				LR	LR	20 52 05.3	
	comp=Z

comp=Z,4.1nm,0.9s
JFWS Jewell Farm 69.20 316 *e*P **P 20 48 40.1 +0.8**
comp=Z,20nm,1.6s
AKASG Malin Array Be 69.34 35 P **P 20 48 39.4 -0.5**
comp=Z,1.9nm,0.6s,baz=244,slow=6.3,SNR=8.5
AKBB Malin Array Si 69.34 35 *e*P **P 20 48 39.8 -0.1**
comp=Z,4.0nm,0.8s
FIA0 FINESS Array S 72.97 24 *e*P **P 20 49 01.9 +0.2**
FINES FINESS Array B 72.97 24 P **P 20 49 01.9 +0.2**
comp=Z,1.8nm,0.8s,baz=220,slow=6.0,SNR=3.4
FINES LR LR 21 17 05.9
comp=Z,126nm,21.6s,baz=290,slow=33
JCT Junction City 73.68 301 *e*P **P 20 49 07.2 +0.5**
comp=Z,4.9nm,1.0s
SNAA Sanae 74.23 172 P **P 20 49 11.3 +2.3**
comp=Z,1.2nm,0.9s,baz=346,slow=4.2,SNR=4.1
SNAA Sanae 74.23 172 *e*P **P 20 49 08.6 -0.5**
comp=Z,9.0nm,1.5s
AGMN Agassiz Nation 74.60 320 *e*P **P 20 49 11.7 +0.1**
comp=Z,4.1nm,0.6s
TXAR Lajitas Array 76.86 300 P **P 20 49 26.0 +1.0**
comp=Z,0.8nm,1.0s,baz=124,slow=6.2,SNR=6.4
PD31 Pinedale Array 83.02 313 *e*P **P 20 49 58.7 +0.4**
comp=Z,1.6nm,1.1s
PDAR Pinedale Array 83.02 313 P **P 20 49 59.0 +0.7**
comp=Z,0.7nm,0.7s,baz=79,slow=7.7,SNR=5.6
NV01 Mina Array Sit 89.50 308 *e*P **P 20 50 32.7 +2.4**
NVAR Mina Array Bea 89.50 308 P **P 20 50 32.7 +2.4**
comp=Z,0.4nm,0.7s,baz=99,slow=4.8,SNR=3.9
KSH Kashi 100.44 50 *e*P **Pdif 20 51 23.5 +3.4**
LZH Lanzhou 122.32 45 *e*PKP **PKPdf 20 56 27.0 -1.4**
LZH sPKP 20 56 35.8
LZH LR LR
comp=Z,72nm,17.8s
LZH LR LR
comp=Z,83nm,18.2s
LZH LR LR
comp=Z,95nm,20.0s
HHC Hu-ho-hao-te 124.77 37 *e*PKP **PKPdf 20 56 29.4 -3.4**
NJ2 Nanjing 134.87 41 *e*PKP **PKPdf 20 56 52.1 0.0**
ASAR Alice Springs 151.48 144 PKPbc **PKiKP 20 57 29.1 +1.2**
comp=Z,0.4nm,0.8s,baz=210,slow=2.0,SNR=3.0
AS31 Alice Springs 151.48 144 *e*PKPbc **PKiKP 20 57 29.1 +1.2**

EAF 15 20:37:45.7±0.3, 6°.57S×35°.34E, h38km±999km, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOND	**Kondoa**	**1.71**	**15**	*i* S	Sn	20 38 32.8	-1.1
KIBA	**Kibaya**	**1.76**	**44**	*i* P	Pn	20 38 13.6	-0.2
KIBA				*i* S	Sn	20 38 33.8	-1.2

*SJA **15** 20:46:40.7±0.5, 24°.05S×70°.26W, h76km±2km, ML3.8, MW3.9*
*IDC **15** 20:46:41.5±5.5, 24°.45S×69°.66W, h43km±42km, mb3.9/1, mb1 3.8/3, mb1mx3.4/23, mbtmp3.9/3, ML3.8/2, Error ellipse: s-maj=69.7km s-min=36.9km az=106.0*
*GUC **15** 20:46:42.5±0.7, 24°.04S×70°.12W, h53km±2km, ML3.8*
ISC 15 20:46:42.5±1.4, 24°.04S±0°.03×70°.18W±0°.05, h30km±11km, n26,σ1ˢ36/37, 6C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.62**	**199**	*e*P	**Pn**	**20 46 56.0**	**+0.3**
PB14				*e*S	**Sn**	**20 47 07.6**	**+2.8**
PB14	**IPOC Station P**	**0.62**	**199**	⇑*i*P	**Pn**	**20 46 55.9**	**+0.3**
PB14				*e*S	**Sn**	**20 47 05.9**	**+1.1**
PB14				IAML		20 47 07.4	
comp=N,6μm,0.4s							
PB10	**IPOC Station P**	**0.62**	**327**	*e*P	**Pn**	**20 46 55.6**	**+0.3**
PB10				*e*S	**Sn**	**20 47 07.2**	**+2.8**
PB10	**IPOC Station P**	**0.62**	**327**	⇑*i*P	**Pn**	**20 46 55.7**	**+0.3**
PB10				*e*S	**Sn**	**20 47 05.7**	**+1.4**
PB10				IAML		20 47 09.7	
comp=E,4μm,0.3s							
PB15	**IPOC Station P**	**1.05**	**38**	*e*P	**Pn**	**20 47 02.3**	**+0.8**
PB15				*e*S	**Sb**	**20 47 18.0**	**+2.2**
PB15	**IPOC Station P**	**1.05**	**38**	*e*P	**Pn**	**20 47 01.1**	**-0.3**
PB15				*e*S	**Sn**	**20 47 15.4**	**+0.2**
GO02	**Mina Guanaco**	**1.24**	**155**	*e*P	**Pn**	**20 47 04.7**	**+0.5**
GO02				*e*S	**Sn**	**20 47 20.9**	**+0.8**
PB06	**IPOC Station P**	**1.44**	**23**	*e*P	**Pn**	**20 47 07.0**	**+0.3**
PB06				*e*S	**Sn**	**20 47 26.6**	**+1.9**
PB06	**IPOC Station P**	**1.44**	**23**	⇓*i*P	**Pn**	**20 47 06.8**	**+0.1**
PB06				*e*S	**Sn**	**20 47 25.3**	**+0.6**
PB06				IAML		20 47 28.6	
PB04	**IPOC Station P**	**1.69**	**1**	⇑*i*P	**Pn**	**20 47 10.1**	**-0.1**
PB04				*i* S	**Sn**	**20 47 32.1**	**+1.0**
LVC	**Limon Verde**	**1.84**	**40**	P	**Pn**	**20 47 13.3**	**+0.9**
comp=E,126nm,0.3s,baz=193,slow=11,SNR=1491							
LVC				S	**Sn**	**20 47 36.2**	**+1.4**
comp=E,480nm,0.3s,baz=52,slow=18,SNR=41							
LVC	**Limon Verde**	**1.84**	**40**	*e*P	**Pn**	**20 47 13.3**	**+0.9**
LVC				*e*S	**Sn**	**20 47 37.1**	**+2.2**
LVC				IAML		20 47 39.9	
comp=Z,713nm,0.3s							
PB07	**IPOC Station P**	**2.31**	**7**	⇑*i*P	**Pn**	**20 47 18.5**	**-0.3**
PB09	**IPOC Station P**	**2.39**	**21**	*e*P	**Pn**	**20 47 20.4**	**+0.5**
PB09	**IPOC Station P**	**2.39**	**21**	⇑*i*P	**Pn**	**20 47 20.6**	**+0.8**
PB09				*e*S	**Sn**	**20 47 49.4**	**+1.2**
PB09				IAML		20 47 56.4	
comp=N,574nm,0.4s							
PB02	**IPOC Station P**	**2.72**	**6**	*e*P	**Pn**	**20 47 24.0**	**-0.3**
PB01	**IPOC Station P**	**3.05**	**12**	⇑*i*P	**Pn**	**20 47 28.4**	**-0.4**
PB01				*e*S	**Sn**	**20 48 04.7**	**+0.4**
PB01				IAML		20 48 18.5	
comp=E,707nm,0.4s							
GO03	**Copiap**	**3.54**	**181**	*e*P	**Pn**	**20 47 35.2**	**-0.4**
PSGCX	**Pisagua**	**4.42**	**1**	*e*P	**Pn**	**20 47 45.2**	**-2.5**
LPAZ	**La Paz**	**7.95**	**14**	P	**Pn**	**20 48 37.5**	**+0.9**
comp=E,0.2nm,0.3s,baz=201,slow=7.6,SNR=4.1							
SIV	**San Ignacio**	**11.71**	**49**	P	**Pn**	**20 49 24.6**	**-3.2**
comp=E,2.0nm,0.3s,baz=234,slow=10,SNR=25							
SIV				S	Sn	20 51 28.6	-9.0
comp=E,0.1nm,0.3s,baz=156,slow=20,SNR=2.5							
TORD	**Torodi Ar. Bea**	**79.31**	**70**	P	P	20 58 41.6	-4.2
comp=E,1.2nm,0.6s,baz=254,slow=4.8,SNR=9.4							
TORD				pP	pP	20 58 55.7	0.0
comp=E,0.7nm,0.6s,baz=251,slow=4.6,SNR=3.9							
H11S2	**WAKE ISLAND Hyl26.99**		**276**	T	T	23 25 22.6	
baz=107,slow=75,SNR=11							
H11S1	**WAKE ISLAND Hyl27.00**		**276**	T	T	23 25 23.9	
baz=107,slow=75,SNR=7.1							
H11S3	**WAKE ISLAND Hyl27.01**		**276**	T	T	23 25 25.6	
baz=107,slow=75,SNR=7.8							
MKAR	**Makanchi Array**	**148.36**	**37**	PKPbc	**PKPdf**	**21 06 22.3**	**-0.2**
comp=E,0.7nm,0.7s,baz=301,slow=2.3,SNR=7.1							
MKAR				pPKPbc	**pPKPab**	**21 06 38.6**	**-0.7**
comp=E,1.1nm,0.8s,baz=326,slow=1.6,SNR=5.7							

*IDC **15** 20:47:18.3±1.3, 34°.25N×25°.09E, h0km, mb3.7/3, mb1 3.7/7, mb1mx3.4/44, mbtmp3.6/7, ML3.8/4, Error ellipse: s-maj=22.9km s-min=18.8km az=73.0*
*ATH **15** 20:47:21.4, 34°.30N×25°.02E, h26km±1km, ML2.9/6, Error ellipse: s-maj=3.6km s-min=1.3km az=349.0*
*THE **15** 20:47:22.1, 34°.33N×25°.04E, h0km±3km, ML2.8/3, Error ellipse: s-maj=4.9km s-min=1.4km az=193.0*
ISC 15 20:47:19.7±1.5, 34°.20N±0°.06×25°.09E±0°.04, h13km±9km, n46,σ1ˢ45/59, mb3.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.85**	**344**	P	**Pg**	**20 47 36.2**	**0.0**
SIVA				S	**Sb**	**20 47 47.1**	**-0.5**
SIVA	**Sivas**	**0.85**	**344**	P	**Pg**	**20 47 36.4**	**+0.2**
SIVA				S	**Sb**	**20 47 47.4**	**-0.2**
SIVA				AML	AML	20 47 55.7	
comp=E,8484μm,0.8s							
SIVA				AML	AML	20 47 58.0	
comp=N,5468μm,0.6s							
TMBK	**Timbaki Herakl**	**0.91**	**343**	P	**Pb**	**20 47 37.8**	**+0.4**
TMBK				S	**Sn**	**20 47 50.1**	**-1.1**
LAST	**Lasithi**	**1.01**	**18**	P	**Pg**	**20 47 39.5**	**+0.2**
LAST				S	**Sn**	**20 47 53.5**	**-0.4**
LAST	**Lasithi**	**1.01**	**18**	P	**Pg**	**20 47 39.5**	**+0.2**
LAST				S	**Sn**	**20 47 53.7**	**-0.2**
LAST				AML	AML	20 47 59.6	
comp=N,895μm,0.5s							
LAST				AML	AML	20 48 04.7	
comp=E,720μm,0.6s							
GVD	**Gavdhos**	**1.04**	**308**	P	**Pg**	**20 47 40.0**	**+0.1**
GVD	**Gavdhos**	**1.04**	**308**	P	**Pg**	**20 47 39.8**	**-0.1**
GVD				S	**Sg**	**20 47 52.3**	**-1.2**
GVD				AML	AML	20 48 06.1	
comp=N,1840μm,0.4s							
GVD				AML	AML	20 48 14.6	
comp=E,1825μm,0.5s							
IDI	**Anoyia**	**1.10**	**352**	Pn	**Pg**	**20 47 40.4**	**-0.6**
comp=E,13nm,0.3s,baz=169,slow=19,SNR=18							
IDI				Sn	**Sn**	**20 47 55.3**	**-0.6**
comp=E,38nm,0.3s,baz=100,slow=19,SNR=17							
IDI	**Anoyia**	**1.10**	**352**	P	**Pg**	**20 47 39.6**	**-1.4**
IDI	**Anoyia**	**1.10**	**352**	P	**Pg**	**20 47 39.6**	**-1.4**
IDI				S	**Sg**	**20 47 53.8**	**-1.5**
KSTL	**Kastelli Herak**	**1.10**	**359**	P	**Pg**	**20 47 40.0**	**-1.0**
NPS	**Neapolis**	**1.15**	**22**	P	**Pb**	**20 47 42.1**	**+0.7**
NPS	**Neapolis**	**1.15**	**22**	P	**Pg**	**20 47 42.0**	**+0.1**
NPS				S	**Sb**	**20 47 56.7**	**+0.5**
NPS				AML	AML	20 48 08.2	
comp=E,819μm,0.7s							
NPS				AML	AML	20 48 12.7	
comp=N,644μm,0.6s							
PRNS	**Prines Rethymn**	**1.26**	**338**	P	**Pb**	**20 47 43.4**	**+0.1**
ZKR	**Zakros**	**1.31**	**45**	P	**Pn**	**20 47 45.1**	**+1.4**
ZKR				S	**Sn**	**20 48 03.4**	**+2.4**
ZKR	**Zakros**	**1.31**	**45**	P	**Pb**	**20 47 45.3**	**+1.2**
ZKR				S	**Sn**	**20 48 03.2**	**+2.2**
VAM	**Vamos**	**1.41**	**329**	P	**Pn**	**20 47 45.9**	**+0.8**
VAM	**Vamos**	**1.41**	**329**	P	**Pn**	**20 47 46.1**	**+1.0**
VAM				AML	AML	20 48 17.3	
comp=E,1186μm,0.9s							
VAM				AML	AML	20 48 23.8	
comp=N,963μm,0.8s							
IMMV	**Iera Moni Meta**	**1.56**	**325**	P	**Pb**	**20 47 48.7**	**+0.3**
IMMV	**Iera Moni Meta**	**1.56**	**325**	P	**Pn**	**20 47 47.9**	**+0.9**
IMMV				AML	AML	20 48 21.4	
comp=N,702μm,0.8s							
IMMV				AML	AML	20 48 30.5	
comp=E,833μm,0.7s							
KARP	**Karpathos**	**2.17**	**51**	P	**Pb**	**20 47 59.2**	**+0.3**
KARP	**Karpathos**	**2.17**	**51**	P	**Pn**	**20 47 58.6**	**+3.0**
ANKY	**Antikythira Is**	**2.22**	**319**	P	**Pn**	**20 47 57.8**	**+1.6**
IOSP	**Ios island**	**2.53**	**4**	P	**Pn**	**20 48 01.2**	**+0.8**
MHLO	**Agia Marina, M**	**2.55**	**348**	P	**Pn**	**20 48 01.8**	**+1.0**
KYTH	**Kithira**	**2.66**	**322**	P	**Pn**	**20 48 03.3**	**+1.1**
SERI	**Serifos**	**3.00**	**351**	P	**Pn**	**20 48 06.9**	**0.0**
VLI	**Veliai**	**3.07**	**326**	P	**Pn**	**20 48 09.1**	**+1.3**
KRND	**KRANIDI**	**3.55**	**334**	P	**Pn**	**20 48 16.0**	**+1.5**
DID	**Didima**	**3.63**	**336**	P	**Pn**	**20 48 15.8**	**+0.2**
PYL	**PYLOS**	**3.83**	**316**	P	**Pn**	**20 48 20.6**	**+2.3**
VLX	**Vlachokerasia**	**3.86**	**326**	P	**Pn**	**20 48 20.8**	**+2.0**
ITM	**Ithomi**	**3.93**	**320**	P	**Pn**	**20 48 21.3**	**+1.5**
LTK	**Loutraki**	**4.19**	**336**	P	**Pn**	**20 48 24.2**	**+0.9**
VIL2	**Platees**	**4.27**	**340**	P	**Pn**	**20 48 24.2**	**-0.1**
EREA	**Eretria**	**4.32**	**348**	P	**Pn**	**20 48 26.0**	**+0.9**
GUR	**Goura**	**4.34**	**330**	P	**Pn**	**20 48 26.5**	**+1.0**
KLV	**Kalavryta, Ach**	**4.51**	**329**	P	**Pn**	**20 48 28.3**	**+0.5**
KALE	**Kalithea**	**4.81**	**331**	P	**Pn**	**20 48 32.9**	**+1.0**
MMAI	**Mount Meron Ar**	**8.69**	**95**	Pn	**Pn**	**20 49 25.4**	**+0.3**
comp=E,0.8nm,0.3s,baz=264,slow=13,SNR=7.7							
MMAI				Sn	**Sn**	**20 50 57.4**	**-5.6**
comp=E,0.6nm,0.3s,baz=278,slow=23,SNR=3.9							
EIL	**Elat**	**9.52**	**116**	Pn	**Pn**	**20 49 37.1**	**+0.7**
comp=E,1.0nm,0.3s,baz=293,slow=12,SNR=12							
EIL				Sn	**Sn**	**20 51 18.8**	**-4.5**
comp=E,0.5nm,0.3s,baz=47,slow=19,SNR=2.4							
AKASG	**Malin Array Be**	**16.77**	**9**	Pn	**Pn**	**20 51 14.1**	**0.0**
comp=E,0.3nm,0.3s,baz=196,slow=12,SNR=2.7							
GERES	**GERESS Array B**	**16.91**	**333**	Pn	**P**	**20 51 18.3**	**+0.3**
comp=E,0.2nm,0.3s,baz=146,slow=12,SNR=7.3							
TORD	**Torodi Ar. Bea**	**29.83**	**231**	P	**P**	**20 53 27.3**	**+0.7**
comp=E,0.2nm,0.4s,baz=33,slow=10,SNR=3.5							
MKAR	**Makanchi Array**	**44.36**	**56**	P	**P**	**20 55 30.2**	**+0.6**
comp=E,0.7nm,0.8s,baz=270,slow=7.5,SNR=6.4							
ZALV	**Zalesovo Beam**	**45.72**	**45**	P	**P**	**20 55 39.9**	**-0.3**
comp=E,0.8nm,0.4s,baz=260,slow=8.9,SNR=4.3							

*IDC **15** 20:48:21.3±1.3, 34°.28N×25°.11E, h0km, mb3.6/3, mb1 3.8/8, mb1mx3.4/44, mbtmp3.6/8, ML3.5/5, Error ellipse: s-maj=23.2km s-min=19.1km az=74.0*
*ISCJB **15** 20:48:22.4±1.1, 34°.15N±0°.05×25°.11E±0°.06, h22km±8km, mb3.5/3, Error ellipse: s-maj=9.5km s-min=7.3km az=33.5*
*ATH **15** 20:48:23.9, 34°.27N×25°.06E, h21km±3km, ML3.0/5, Error ellipse: s-maj=4.8km s-min=1.7km az=351.0*
*THE **15** 20:48:25.6, 34°.32N×24°.99E, h16km±8km, ML3.1/3, Error ellipse: s-maj=10.1km s-min=1.8km az=166.0*
ISC 15 20:48:22.5±1.7, 34°.19N±0°.06×25°.12E±0°.04, h14km±11km, n22,σ1ˢ38/34, mb3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.87**	**343**	P	**Pg**	**20 48 39.0**	**-0.3**
SIVA				S	**Sg**	**20 48 49.7**	**-1.0**
SIVA	**Sivas**	**0.87**	**343**	P	**Pg**	**20 48 39.1**	**-0.1**
SIVA				S	**Sg**	**20 48 50.2**	**-0.4**
SIVA				AML	AML	20 48 58.1	
comp=E,10338μm,0.7s							
SIVA				AML	AML	20 48 59.4	
comp=N,7135μm,0.6s							
TMBK	**Timbaki Herakl**	**0.93**	**342**	P	**Pb**	**20 48 40.4**	**+0.1**
TMBK				S	**Sb**	**20 48 51.5**	**-1.0**
LAST	**Lasithi**	**1.02**	**17**	P	**Pb**	**20 48 42.0**	**+0.1**
LAST				S	**Sb**	**20 48 55.7**	**+0.5**
LAST	**Lasithi**	**1.02**	**17**	P	**Pb**	**20 48 42.0**	**+0.1**
LAST				S	**Sb**	**20 48 55.6**	**+0.5**
LAST				AML	AML	20 49 01.7	
comp=E,841μm,0.8s							
LAST				AML	AML	20 49 02.1	
comp=N,1164μm,0.6s							
GVD	**Gavdhos**	**1.07**	**308**	P	**Pb**	**20 48 42.9**	**+0.1**
GVD				S	**Sb**	**20 48 54.4**	**-2.2**
GVD	**Gavdhos**	**1.07**	**308**	P	**Pb**	**20 48 42.8**	**+0.1**
GVD				S	**Sb**	**20 48 56.3**	**-0.3**
GVD				AML	AML	20 49 03.4	
comp=N,2379μm,0.3s							
GVD				AML	AML	20 49 03.6	
comp=E,2725μm,0.4s							
IDI	**Anoyia**	**1.11**	**350**	Pn	**Pb**	**20 48 43.1**	**-0.4**
comp=E,2.7nm,0.3s,baz=164,slow=20,SNR=2.2							
IDI				Sn	**Sb**	**20 48 57.7**	**-0.3**
comp=E,43nm,0.3s,baz=96,slow=17,SNR=5.5							
IDI	**Anoyia**	**1.11**	**350**	P	**Pb**	**20 48 42.0**	**-1.6**
KSTL	**Kastelli Herak**	**1.11**	**358**	P	**Pb**	**20 48 42.6**	**-0.9**
NPS	**Neapolis**	**1.15**	**21**	P	**Pb**	**20 48 44.6**	**+0.5**
NPS	**Neapolis**	**1.15**	**21**	P	**Pb**	**20 48 44.6**	**+0.5**
NPS				S	**Sn**	**20 49 00.3**	**+0.6**
NPS				AML	AML	20 49 00.9	
comp=E,679μm,0.6s							
NPS				AML	AML	20 49 02.0	
comp=N,651μm,0.5s							
VAM	**Vamos**	**1.43**	**329**	P	**Pb**	**20 48 49.2**	**+0.3**
VAM				S	**Sn**	**20 49 06.9**	**+0.3**
VAM				AML	AML	20 49 21.0	
comp=E,1112μm,0.6s							
VAM				AML	AML	20 49 22.2	
comp=N,965μm,0.8s							
IMMV	**Iera Moni Meta**	**1.58**	**324**	P	**Pb**	**20 48 51.5**	**+0.1**
MMAI	**Mount Meron Ar**	**8.66**	**95**	Pn	**Pb**	**20 50 29.0**	**+1.6**
comp=N,0.1nm,0.3s,baz=258,slow=13,SNR=2.7							
MMAI				Sn	**Sn**	**20 52 01.6**	**-3.3**
comp=N,0.6nm,0.3s,baz=273,slow=26,SNR=2.2							
EIL	**Elat**	**9.49**	**116**	Pn	**Pn**	**20 50 39.9**	**+1.2**
comp=N,0.3nm,0.3s,baz=264,slow=10,SNR=3.6							
EIL				Sn	**Sn**	**20 52 20.2**	**-5.0**
comp=N,0.5nm,0.3s,baz=0.0,slow=16,SNR=2.7							
KBZ	**Khabaz**	**16.77**	**50**	Pn	**P**	**20 52 20.6**	**+1.7**
comp=N,0.1nm,0.3s,baz=231,slow=7.8,SNR=4.1							
AKASG	**Malin Array Be**	**16.78**	**9**	Pn	**Pn**	**20 52 16.8**	**0.0**
comp=N,0.4nm,0.3s,baz=204,slow=11,SNR=3.1							
GERES	**GERESS Array B**	**16.93**	**333**	Pn	**P**	**20 52 20.6**	**-0.2**
comp=N,0.1nm,0.3s,baz=144,slow=11,SNR=6.0							
TORD	**Torodi Ar. Bea**	**29.84**	**231**	P	**P**	**20 54 30.9**	**+1.5**
comp=N,0.3nm,0.7s,baz=42,slow=10.0,SNR=3.0							
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**20 56 32.3**	**+0.2**
comp=N,0.6nm,0.8s,baz=281,slow=6.1,SNR=4.3							
ZALV	**Zalesovo Beam**	**45.71**	**45**	P	**P**	**20 56 42.5**	**-0.2**
comp=N,0.9nm,0.5s,baz=276,slow=9.2,SNR=3.4							

SJA 15 20:49:22.8±0.5, 29°.01S×68°.85W, h143km±3km, ML3.4, MW3.6, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.63**	**64**	*e*P	Pn	20 49 45.2	+0.9
VCA				*e*S	Sn	20 50 00.8	+0.3
VCA				IAML		20 50 01.9	
comp=Z,622nm,0.5s							
GO03	**Copiap**	**1.87**	**319**	*e*P	Pn	20 49 56.7	+0.6
GO03				*e*S	Sn	20 50 22.1	+0.6
CFA	**Coronel Fontan**	**2.64**	**169**	*e*P	Pn	20 50 06.1	+0.8
CYA	**Choya**	**2.74**	**79**	*e*P	Pn	20 50 07.3	+0.8
CYA				*e*S	Sn	20 50 40.8	+0.5
CYA				IAML		20 50 47.4	
comp=Z,146nm,0.8s							
AHML	**Horco Molle**	**3.82**	**55**	*e*P	Pn	20 50 21.7	+1.1
AHML				*e*S	Sn	20 51 04.8	-0.6
AHML				IAML		20 51 07.4	
comp=Z,69nm,0.4s							
FSA	**Cafayete**	**3.85**	**42**	*e*P	Pn	20 50 22.4	+1.2
TCA	**Tanti**	**4.35**	**123**	*e*P	Pn	20 50 28.8	+1.2
TCA				IAML		20 52 07.5	

*IDC **15** 20:50:57.5±1.4, 34°.27N×25°.07E, h0km, mb3.3/2, mb1 3.5/5, mb1mx3.2/41, mbtmp3.4/5, ML3.5/3, Error ellipse: s-maj=24.7km s-min=19.6km az=74.0*
*ISCJB **15** 20:50:58.0±1.1, 34°.12N±0°.05×25°.06E±0°.04, h18km±8km, mb3.0/2, Error ellipse: s-maj=9.2km s-min=5.8km az=17.2*
*ATH **15** 20:50:58.8, 34°.23N×25°.05E, h22km±1km, ML2.7/7, Error ellipse: s-maj=3.3km s-min=1.5km az=6.0*
*THE **15** 20:51:02.4, 34°.39N×24°.99E, h12km±2km, ML2.5/3, Error ellipse: s-maj=3.8km s-min=1.1km az=344.0*
ISC 15 20:50:58.8±1.6, 34°.22N±0°.06×25°.10E±0°.03, h11km±10km, n45,σ1ˢ25/54, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.83**	**343**	P	**Pb**	**20 51 14.9**	**-0.3**
SIVA	**Sivas**	**0.83**	**343**	P	**Pg**	**20 51 14.6**	**-0.2**
SIVA				S	**Sb**	**20 51 26.8**	**+0.4**
SIVA				AML	AML	20 51 32.8	
comp=N,2507μm,0.5s							
SIVA				AML	AML	20 51 34.9	
comp=E,3151μm,0.5s							
LAST	**Lasithi**	**0.99**	**18**	P	**Pb**	**20 51 18.1**	**+0.1**
LAST				S	**Sb**	**20 51 31.5**	**+0.4**
comp=E,248nm,0.8s							
LAST	**Lasithi**	**0.99**	**18**	P	**Pb**	**20 51 18.3**	**+0.3**
LAST				S	**Sb**	**20 51 31.0**	**-0.1**
LAST				AML	AML	20 51 46.9	
comp=E,382μm,0.6s							
LAST				AML	AML	20 51 47.8	
comp=N,440μm,0.9s							
GVD	**Gavdhos**	**1.04**	**307**	P	**Pb**	**20 51 19.1**	**+0.3**
GVD				S	**Sg**	**20 51 31.3**	**-1.0**
comp=N,552nm,0.4s							
GVD	**Gavdhos**	**1.04**	**307**	P	**Pg**	**20 51 18.7**	**-0.1**
GVD				S	**Sg**	**20 51 31.4**	**-0.9**
GVD				AML	AML	20 51 42.5	
comp=E,1520μm,0.3s							
GVD				AML	AML	20 51 43.5	
comp=N,1132μm,0.4s							
IDI	**Anoyia**	**1.08**	**351**	Pn	**Pb**	**20 51 19.4**	**-0.1**
comp=N,12nm,0.3s,baz=172,slow=18,SNR=12							
IDI				Sn	**Sn**	**20 51 33.9**	**-1.0**
comp=N,32nm,0.3s,baz=314,slow=22,SNR=7.4							
IDI	**Anoyia**	**1.08**	**351**	P	**Pg**	**20 51 18.7**	**-0.9**
NPS	**Neapolis**	**1.12**	**22**	P	**Pg**	**20 51 20.4**	**0.0**
NPS	**Neapolis**	**1.12**	**22**	P	**Pb**	**20 51 20.6**	**+0.4**
NPS				AML	AML	20 51 46.2	
comp=E,463μm,0.5s							
NPS				AML	AML	20 51 49.0	
comp=N,414μm,0.7s							
ZKR	**Zakros**	**1.28**	**46**	P	**Pg**	**20 51 24.6**	**+1.2**
ZKR				S	**Sn**	**20 51 41.3**	**+1.5**
comp=N,125nm,0.4s							
ZKR	**Zakros**	**1.28**	**46**	P	**Pn**	**20 51 23.4**	**+0.8**
ZKR				AML	AML	20 51 54.0	
comp=E,439μm,0.5s							
ZKR				AML	AML	20 51 55.8	
comp=N,166μm,0.5s							
VAM	**Vamos**	**1.40**	**328**	P	**Pn**	**20 51 24.1**	**-0.1**
VAM	**Vamos**	**1.40**	**328**	P	**Pb**	**20 51 24.9**	**0.0**
VAM				S	**Sn**	**20 51 44.7**	**+2.1**
VAM				AML	AML	20 51 53.7	
comp=E,694μm,0.5s							
VAM				AML	AML	20 51 54.2	
comp=N,478μm,0.5s							
IMMV	**Iera Moni Meta**	**1.54**	**324**	P	**Pn**	**20 51 24.9**	**-1.3**
IMMV	**Iera Moni Meta**	**1.54**	**324**	P	**Pn**	**20 51 25.6**	**-0.7**
IMMV				AML	AML	20 51 58.8	
comp=N,381μm,0.4s							
IMMV				AML	AML	20 52 02.9	
comp=E,675μm,0.8s							
KARP	**Karpathos**	**2.15**	**51**	P	**Pb**	**20 51 37.7**	**-0.1**
ANAF	**Anafi Island**	**2.20**	**14**	P	**Pn**	**20 51 36.7**	**+1.4**
THR5	**Thira Island,**	**2.20**	**5**	P	**Pn**	**20 51 35.0**	**-0.3**
ANKY	**Antikythira Is**	**2.21**	**319**	P	**Pn**	**20 51 36.3**	**+0.9**
IOSP	**Ios island**	**2.50**	**3**	P	**Pn**	**20 51 39.9**	**+0.5**
MHLA	**Plaka, Milos I**	**2.58**	**348**	P	**Pn**	**20 51 41.6**	**+1.1**
AMGA	**Amorgos Island**	**2.69**	**14**	P	**Pn**	**20 51 43.1**	**+1.1**
APE	**Apeiranthos**	**2.86**	**7**	P	**Pn**	**20 51 44.7**	**+0.3**
SERI	**Serifos**	**2.98**	**350**	P	**Pn**	**20 51 46.2**	**+0.3**
VLI	**Veliai**	**3.05**	**325**	P	**Pn**	**20 51 47.3**	**+0.3**
ARG	**Arkhangelos**	**3.18**	**50**	P	**

0.1nm,0.3s,baz=150,slow=12,SNR=5.6
TORD Torodi Ar. Bea 30.02 231 P **P 21 03 11.5 +0.2**
0.2nm,0.3s,baz=31,slow=8.0,SNR=5.0
MKAR Makanchi Array 44.18 56 P **P 21 05 12.5 +1.5**
0.2nm,0.6s,baz=273,slow=8.1,SNR=2.6
ZALV Zalesovo Beam 45.52 46 P **P 21 05 25.8 +4.3**
0.6nm,0.4s,baz=277,slow=7.6,SNR=2.6

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*JMA **15** 21:01:25.6±0.2, 23°.00N×122°.93E, h51km, M2.6*
*ISCJB **15** 21:01:26.2±0.3, 23°.08N±0°.02×122°.95E±0°.02, h73km,*
Error ellipse: s-maj=3.4km s-min=1.9km az=161.6
*TAP **15** 21:01:26.9, 23°.06N×122°.92E, h73km±1km, ML3.2, D*
ISC 15 21:01:26.2±1.2, 23°.03N±0°.04×122°.96E±0°.03, h73km, n80, σ1↟43/149, **2C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.29**	**37**	P	**Pn**	**21 01 48.3**	**-0.2**
HATJ				S	**Sn**	**21 02 04.1**	**-1.1**
JYNG	**Yonagunijimaku**	**1.42**	**360**	P	**Pn**	**21 01 50.1**	**-0.1**
JYNG				*e*S	**Sn**	**21 02 08.0**	**-0.3**
YOJ	**Yonaguni jima**	**1.43**	**2**	P	**Pn**	**21 01 50.5**	**+0.2**
	baz=8.0						
YOJ				S	**Sn**	**21 02 08.1**	**-0.4**
	baz=8.0						
YOJ	**Yonaguni jima**	**1.43**	**2**	P	**Pn**	**21 01 50.5**	**+0.2**
YOJ				S	**Sn**	**21 02 07.9**	**-0.6**
HGSD	**Ruisui**	**1.48**	**288**	⇓*e*P	**Pn**	**21 01 49.7**	**-1.3**
	baz=288						
HGSD				*e*S	**Sn**	**21 02 06.8**	**-3.0**
	baz=288						
IRIF	**Iriomote-Funau**	**1.48**	**28**	P	**Pn**	**21 01 51.2**	**+0.2**
IRIF				*e*S	**Sn**	**21 02 09.3**	**-0.5**
EGFH	**Guangfu**	**1.54**	**295**	⇑P	**Pn**	**21 01 51.1**	**-0.7**
	baz=302						
EGFH				S	**Sn**	**21 02 09.1**	**-2.1**
	baz=302						
JKRS	**Kuro-shima**	**1.54**	**39**	P	**Pn**	**21 01 52.2**	**+0.4**
JKRS				*e*S	**Sn**	**21 02 10.5**	**-0.7**
TWF1	**Yuli**	**1.56**	**282**	⇓P	**Pn**	**21 01 51.3**	**-0.8**
	baz=282						
TWF1				S	**Sn**	**21 02 09.8**	**-1.9**
	baz=282						
YULB	**Yu-li**	**1.57**	**284**	⇑P	**Pn**	**21 01 51.7**	**-0.5**
	baz=279						
YULB				S	**Sn**	**21 02 09.4**	**-2.4**
	baz=279						
EHY	**Hungye**	**1.58**	**288**	*e*P	**Pn**	**21 01 51.6**	**-0.7**
	baz=283						
EHY				S	**Sn**	**21 02 10.3**	**-1.7**
	baz=283						
ESL	**Shilin**	**1.60**	**300**	*e*P	**Pn**	**21 01 51.6**	**-1.0**
	baz=299						
ESL				S	**Sn**	**21 02 09.5**	**-3.1**
	baz=299						
LAY	**Lan-yu**	**1.63**	**233**	*e*P	**Pn**	**21 01 52.0**	**-1.0**
	baz=232						
LAY				*e*S	**Sn**	**21 02 09.6**	**-3.7**
	baz=232						
TWD	**Chiawan**	**1.63**	**310**	*e*P	**Pn**	**21 01 52.1**	**-0.9**
	baz=310						
TWD				S	**Sn**	**21 02 10.9**	**-2.3**
	baz=310						
NACB	**Ninganchiao**	**1.69**	**313**	P	**Pn**	**21 01 52.9**	**-0.9**
	baz=306						
NACB				*e*S	**Sn**	**21 02 11.3**	**-3.4**
	baz=306						
EOS1	**EOS1**	**1.69**	**334**	*e*P	**Pn**	**21 01 53.4**	**-0.5**
	baz=326						
EOS1				*e*S	**Sn**	**21 02 14.3**	**-0.4**
	baz=326						
JIJ	**Ishigaki jima**	**1.72**	**39**	P	**Pn**	**21 01 54.1**	**-0.1**
JIJ				*e*S	**Sn**	**21 02 13.8**	**-1.6**
TWGBT	**Beinan**	**1.74**	**263**	P	**Pn**	**21 01 54.3**	**-0.2**
	baz=263						
TWGBT				*e*S	**Sn**	**21 02 14.4**	**-1.5**
	baz=263						
TWG	**Pinlang**	**1.75**	**264**	P	**Pn**	**21 01 54.3**	**-0.3**
	baz=263						
TWG				*e*S	**Sn**	**21 02 14.6**	**-1.5**
	baz=263						
NANB	**Nanao**	**1.78**	**322**	*e*P	**Pn**	**21 01 55.6**	**+0.7**
	baz=329						
NANB				S	**Sn**	**21 02 16.0**	**-0.8**
	baz=329						
ENA	**Nanau**	**1.79**	**322**	*e*P	**Pn**	**21 01 55.6**	**+0.6**
	baz=329						
ENA				*e*S	**Sn**	**21 02 16.2**	**-0.7**
	baz=329						
ETLH	**Xiulin Townshi**	**1.79**	**311**	*e*P	**Pn**	**21 01 55.2**	**-0.1**
	baz=307						
ETLH				*e*S	**Sn**	**21 02 15.4**	**-1.8**
	baz=307						
ELDTW	**Lidau**	**1.79**	**276**	P	**Pn**	**21 01 54.5**	**-0.7**
	baz=280						
ELDTW				*e*S	**Sn**	**21 02 14.9**	**-2.4**
	baz=280						
VWDT	**VWDT**	**1.82**	**294**	⇓*e*P	**Pn**	**21 01 55.7**	**+0.2**
	baz=298						
VWDT				*e*S	**Sn**	**21 02 16.5**	**-1.2**
	baz=298						
OWD	**Renai**	**1.88**	**300**	P	**Pn**	**21 01 56.2**	**-0.2**
	baz=306						
OWD				S	**Sn**	**21 02 17.4**	**-1.9**
	baz=306						
ECL	**Taimali**	**1.90**	**257**	*e*P	**Pn**	**21 01 56.1**	**-0.4**
	baz=256						
ECL				*e*S	**Sn**	**21 02 18.1**	**-1.5**
	baz=256						
YUS	**Yu-Shan**	**1.90**	**284**	*e*P	**Pn**	**21 01 57.0**	**0.0**
	baz=278						
YUS				*e*S	**Sn**	**21 02 18.1**	**-2.3**
	baz=278						
WHF	**Hehuan Shan**	**1.91**	**306**	*e*P	**Pn**	**21 01 56.9**	**-0.2**
	baz=306						
WHF				*e*S	**Sn**	**21 02 18.9**	**-1.7**
	baz=306						
CHGB	**Renai**	**1.93**	**303**	*e*P	**Pn**	**21 01 57.4**	**+0.1**
	baz=302						
CHGB				*e*S	**Sn**	**21 02 19.4**	**-1.3**
	baz=302						
JISG	**Ishigakijimahi**	**1.99**	**38**	P	**Pn**	**21 01 57.8**	**+0.1**
JISG				*e*S	**Sn**	**21 02 20.9**	**-0.9**
SSLB	**Suanglung**	**1.99**	**293**	*e*P	**Pn**	**21 01 58.1**	**+0.3**
	baz=298						
SSLB				S	**Sn**	**21 02 20.1**	**-1.8**
	baz=298						
NNSB	**Datong**	**2.01**	**314**	*e*P	**Pn**	**21 01 58.7**	**+0.6**
	baz=314						
NNSB				*e*S	**Sn**	**21 02 20.9**	**-1.5**
	baz=314						
NNS	**Nan Shan**	**2.02**	**314**	*e*P	**Pn**	**21 01 58.8**	**+0.5**
	baz=314						
NNS				S	**Sn**	**21 02 21.1**	**-1.6**
	baz=314						
WHYT	**Xinyi Township**	**2.04**	**289**	*e*P	**Pn**	**21 01 59.4**	**+0.9**
	baz=286						
WHYT				*e*S	**Sn**	**21 02 23.0**	**-0.2**
	baz=286						
EAST	**Anshuo**	**2.05**	**252**	*e*P	**Pn**	**21 01 59.4**	**+0.8**
	baz=258						
EAST				*e*S	**Sn**	**21 02 22.6**	**-0.8**
	baz=258						
ENTT	**Nioudou**	**2.05**	**322**	*e*P	**Pn**	**21 01 59.6**	**+1.0**
	baz=322						
ENTT				*e*S	**Sn**	**21 02 21.8**	**-1.5**
	baz=322						
NDT	**Datong Townshi**	**2.05**	**320**	*e*P	**Pn**	**21 01 59.4**	**+0.7**
	baz=327						
NDT				*e*S	**Sn**	**21 02 22.1**	**-1.3**
	baz=327						
TDCB	**Techi**	**2.05**	**307**	*e*P	**Pn**	**21 01 59.1**	**+0.3**
	baz=307						
TDCB				*e*S	**Sn**	**21 02 22.1**	**-1.5**
	baz=307						
TWE	**Neicheng**	**2.06**	**325**	*e*P	**Pn**	**21 01 59.5**	**+0.8**
	baz=332						
TWE				*e*S	**Sn**	**21 02 23.2**	**-0.2**
	baz=332						
SMLT	**Sun Moon Lake**	**2.07**	**295**	*e*P	**Pn**	**21 01 59.6**	**+0.6**
	baz=298						
SMLT				*e*S	**Sn**	**21 02 22.1**	**-1.9**
	baz=298						
DPDB	**Guoxing**	**2.12**	**299**	*e*P	**Pn**	**21 02 00.4**	**+0.9**
	baz=303						
DPDB				*e*S	**Sn**	**21 02 23.7**	**-1.2**
	baz=303						
TYC	**Yuchr**	**2.12**	**295**	*e*P	**Pn**	**21 02 00.4**	**+1.0**
	baz=298						
TYC				*e*S	**Sn**	**21 02 24.5**	**-0.3**
	baz=298						
SLGT	**Liugui**	**2.13**	**270**	*e*P	**Pn**	**21 02 00.7**	**+1.0**
	baz=269						
SLGT				*e*S	**Sn**	**21 02 24.6**	**-0.6**
	baz=269						
SSD	**Sandimen**	**2.16**	**263**	*e*P	**Pn**	**21 02 01.1**	**+1.0**
	baz=266						
WTP	**Ta-pu**	**2.17**	**276**	*e*P	**Pn**	**21 02 01.9**	**+1.7**
	baz=276						
WTP				*e*S	**Sn**	**21 02 27.5**	**+1.3**
	baz=276						
MASBT	**Mashibuluo**	**2.18**	**260**	*e*P	**Pn**	**21 02 00.6**	**+0.3**
	baz=255						
YHNB	**Yeheng**	**2.18**	**319**	*e*P	**Pn**	**21 02 01.5**	**+1.0**
	baz=318						
YHNB				*e*S	**Sn**	**21 02 25.7**	**-0.9**
	baz=318						
SGST	**Jiashian**	**2.19**	**272**	*e*P	**Pn**	**21 02 02.3**	**+1.8**
	baz=275						
SGST				*e*S	**Sn**	**21 02 29.0**	**+2.4**
	baz=275						
NWLT	**Wulai**	**2.19**	**323**	*e*P	**Pn**	**21 02 01.9**	**+1.3**
	baz=330						
NWLT				*e*S	**Sn**	**21 02 26.5**	**-0.3**
	baz=330						
WJS	**Zhushan**	**2.19**	**292**	*e*P	**Pn**	**21 02 02.6**	**+2.1**
	baz=295						
WJS				*e*S	**Sn**	**21 02 28.1**	**+1.3**
	baz=295						
TIPB	**Shuangxi**	**2.19**	**332**	*e*P	**Pn**	**21 02 01.2**	**+0.6**
	baz=332						
TIPB				*e*S	**Sn**	**21 02 25.2**	**-1.7**
	baz=332						
NSK	**Sanguang**	**2.20**	**319**	*e*P	**Pn**	**21 02 01.6**	**+1.0**
	baz=318						
NSK				*e*S	**Sn**	**21 02 26.7**	**-0.3**
	baz=318						
WHP	**Taichung City**	**2.22**	**304**	*e*P	**Pn**	**21 02 02.1**	**+1.0**
	baz=304						
WHP				*e*S	**Sn**	**21 02 26.6**	**-1.0**
	baz=304						
CHN1	**Nanshi**	**2.24**	**275**	*e*P	**Pn**	**21 02 03.4**	**+2.2**
	baz=277						
CHN1				*e*S	**Sn**	**21 02 30.0**	**+2.1**
	baz=277						
WNT	**Mingjian**	**2.25**	**293**	*e*P	**Pn**	**21 02 03.7**	**+2.4**
	baz=296						
WNT				*e*S	**Sn**	**21 02 29.9**	**+1.7**
	baz=296						
SCZT	**Fangliau**	**2.25**	**254**	*e*P	**Pn**	**21 02 01.9**	**+0.6**
	baz=253						
SCZT				*e*S	**Sn**	**21 02 28.9**	**+0.7**
	baz=253						
SANB	**Taian**	**2.26**	**307**	*e*P	**Pn**	**21 02 03.2**	**+1.6**
	baz=302						
SANB				*e*S	**Sn**	**21 02 28.0**	**-0.6**
	baz=302						
JTJ	**Tarama**	**2.27**	**45**	P	**Pn**	**21 02 02.1**	**+0.6**
JTJ				S	**Sn**	**21 02 28.3**	**-0.2**
SNST	**Tainan City**	**2.27**	**275**	*e*P	**Pn**	**21 02 03.8**	**+2.2**
	baz=275						
SNST				*e*S	**Sn**	**21 02 31.3**	**+2.7**
	baz=275						
TWK	**Hsinying**	**2.28**	**276**	*e*P	**Pn**	**21 02 03.7**	**+1.9**
	baz=276						
TWK				*e*S	**Sn**	**21 02 30.9**	**+1.9**
	baz=276						
HEN	**Hengchun**	**2.29**	**244**	*e*S	**Sn**	**21 02 28.9**	**-0.1**
	baz=237						
WDLH	**Douliu**	**2.32**	**287**	*e*P	**Pn**	**21 02 04.6**	**+2.4**
	baz=286						
WDLH				*e*S	**Sn**	**21 02 32.1**	**+2.3**
	baz=286						
TWM1	**Shoushan**	**2.34**	**266**	*e*P	**Pn**	**21 02 06.3**	**+3.7**
	baz=265						
TCU	**Taichung**	**2.37**	**299**	*e*S	**Sn**	**21 02 33.7**	**+2.7**
	baz=307						
WLTB	**Daxi**	**2.39**	**320**	*e*S	**Sn**	**21 02 32.5**	**+1.0**
	baz=313						
TWQ1	**Liyutan**	**2.40**	**304**	*e*P	**Pn**	**21 02 05.3**	**+2.0**
	baz=303						
TWQ1				*e*S	**Sn**	**21 02 32.9**	**+1.3**
	baz=303						
LIOB	**Emei**	**2.40**	**313**	*e*P	**Pn**	**21 02 05.4**	**+2.1**
	baz=312						
LIOB				*e*S	**Sn**	**21 02 32.1**	**+0.3**
	baz=312						
NSTT	**Nanjuang**	**2.40**	**312**	*e*P	**Pn**	**21 02 04.2**	**+0.9**
	baz=312						
NSTT				*e*S	**Sn**	**21 02 32.0**	**+0.3**
	baz=312						
WCHH	**Zhanghua**	**2.44**	**296**	*e*P	**Pn**	**21 02 06.9**	**+3.1**
	baz=304						
WCHH				*e*S	**Sn**	**21 02 34.9**	**+2.2**
	baz=304						
YM01	**YM01**	**2.46**	**329**	*e*P	**Pn**	**21 02 05.9**	**+1.7**
	baz=338						
YM01				*e*S	**Sn**	**21 02 31.9**	**-1.4**
	baz=338						
YM07	**YM07**	**2.46**	**331**	*e*P	**Pn**	**21 02 05.7**	**+1.5**
	baz=339						
YM07				*e*S	**Sn**	**21 02 31.6**	**-1.7**
	baz=339						
YM04	**YM04**	**2.48**	**329**	*e*S	**Sn**	**21 02 32.9**	**-0.9**
	baz=337						
JIRB	**Irabujima**	**2.71**	**48**	P	**Pn**	**21 02 08.1**	**+0.6**
JIRB				S	**Sn**	**21 02 38.7**	**-0.5**
JMJ2	**Miyako jima3**	**2.76**	**51**	P	**Pn**	**21 02 08.8**	**+0.6**
JMJ2				*e*S	**Sn**	**21 02 40.1**	**-0.4**
JMJ	**Miyako jima 2**	**2.78**	**50**	*e*S	**Sn**	**21 02 40.0**	**-1.0**
	baz=50						
JIKM	**Ikemajima**	**2.82**	**48**	P	**Pn**	**21 02 09.6**	**+0.6**
JIKM				*e*S	**Sn**	**21 02 42.0**	**+0.1**
JOGS	**Gusukube**	**2.83**	**52**	P	**Pn**	**21 02 10.1**	**+1.0**
JOGS				*e*S	**Sn**	**21 02 42.6**	**+0.5**
PTTC	**Pingtan**	**3.81**	**311**	*e*S	**Sn**	**21 03 04.1**	**-1.9**
	baz=311						
PTMZ	**Houxiangcun**	**4.04**	**301**	*e*S	**Sn**	**21 03 09.5**	**-2.2**
	baz=300						
MATB	**Ma-tsu**	**4.15**	**319**	*e*S	**Sn**	**21 03 12.1**	**-2.2**
	baz=319						

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*IDC **15** 21:08:18.5±1.1, 34°.21N×25°.10E, h0km, mb3.8/10,*
mb1 3.9/15, mb1mx3.7/41, mbtmp3.8/15, ML3.8/5, Error
ellipse: s-maj=21.0km s-min=16.7km az=6.0
*ATH **15** 21:08:22.9, 34°.35N×25°.08E, h27km±1km, ML3.2/7, Error*
ellipse: s-maj=4.1km s-min=1.4km az=349.0
*THE **15** 21:08:23.8, 34°.40N×25°.03E, h0km±2km, ML3.3/3, Error*
ellipse: s-maj=3.7km s-min=1.1km az=168.0
ISC 15 21:08:21.1±1.8, 34°.25N±0°.07×25°.05E±0°.04, h13km±10km, n56, σ1↟17/63, **mb3.7**/10, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.79**	**346**	P	**Pg**	**21 08 36.9**	**+0.6**
SIVA				S	**Sg**	**21 08 46.2**	**-0.5**
SIVA	**Sivas**	**0.79**	**346**	P	**Pb**	**21 08 37.1**	**+0.4**
SIVA				S	**Sb**	**21 08 47.1**	**-0.2**
SIVA				AML	AML	21 08 56.1	
	comp=E,16856μm,0.4s						
SIVA				AML	AML	21 08 56.9	
	comp=N,10044μm,0.5s						
TMBK	**Timbaki Herakl**	**0.85**	**344**	P	**Pb**	**21 08 38.4**	**+0.7**
TMBK				S	**Sb**	**21 08 48.8**	**-0.3**
LAST	**Lasithi**	**0.97**	**21**	P	**Pg**	**21 08 40.1**	**+0.3**
LAST				S	**Sb**	**21 08 53.7**	**+1.0**
LAST	**Lasithi**	**0.97**	**21**	P	**Pg**	**21 08 40.1**	**+0.3**
LAST				S	**Sg**	**21 08 52.5**	**-0.1**
LAST				AML	AML	21 08 59.7	
	comp=E,1344μm,0.6s						
LAST				AML	AML	21 09 03.3	
	comp=N,1653μm,0.6s						
GVD	**Gavdhos**	**0.99**	**307**	P	**Pg**	**21 08 40.8**	**+0.7**
GVD				S	**Sn**	**21 08 55.3**	**+0.8**
GVD	**Gavdhos**	**0.99**	**307**	P	**Pb**	**21 08 41.0**	**+0.9**
GVD				S	**Sn**	**21 08 55.5**	**+1.0**
GVD				AML	AML	21 08 59.8	
	comp=N,4885μm,0.2s						
GVD				AML	AML	21 09 06.2	
	comp=E,5656μm,0.6s						
IDI	**Anoyia**	**1.04**	**353**	Pn	**Pg**	**21 08 41.1**	**0.0**
	comp=E,52nm,0.3s,baz=134,slow=16,SNR=43						
IDI				Sn	**Sg**	**21 08 52.2**	**-2.5**
	comp=E,50nm,0.3s,baz=337,slow=23,SNR=9.7						
IDI	**Anoyia**	**1.04**	**353**	P	**Pg**	**21 08 40.4**	**-0.8**
IDI	**Anoyia**	**1.04**	**353**	P	**Pg**	**21 08 40.7**	**-0.5**
KSTL	**Kastelli Herak**	**1.05**	**1**	P	**Pb**	**21 08 40.5**	**-0.6**
IACM	**Heraklion**	**1.05**	**1**	P	**Pb**	**21 08 41.8**	**+0.7**
NPS	**Neapolis**	**1.11**	**25**	P	**Pb**	**21 08 42.5**	**+0.3**
NPS	**Neapolis**	**1.11**	**25**	P	**Pb**	**21 08 42.6**	**+0.4**
NPS				S	**Sb**	**21 08 56.9**	**+0.3**
NPS				AML	AML	21 09 09.6	
	comp=N,1268μm,0.6s						
NPS				AML	AML	21 09 10.2	
	comp=E,1408μm,1.1s						
PRNS	**Prines Rethymn**	**1.20**	**338**	P	**Pb**	**21 08 44.2**	**+0.5**
STIA	**Sitia Lasithi**	**1.28**	**42**	P	**Pb**	**21 08 46.8**	**+1.8**
ZKR	**Zakros**	**1.29**	**48**	P	**Pn**	**21 08 45.8**	**+0.9**
ZKR	**Zakros**	**1.29**	**48**	P	**Pn**	**21 08 46.1**	**+1.3**
ZKR				AML	AML	21 09 14.4	
	comp=N,603μm,0.6s						
ZKR				AML	AML	21 09 17.8	
	comp=E,1314μm,1.0s						
VAM	**Vamos**	**1.35**	**329**	P	**Pn**	**21 08 46.5**	**+0.9**
VAM	**Vamos**	**1.35**	**329**	P	**Pb**	**21 08 46.9**	**+0.6**
VAM				AML	AML	21 09 14.1	
	comp=N,2201μm,0.5s						
VAM				AML	AML	21 09 17.0	
	comp=E,2187μm,0.9s						
IMMV	**Iera Moni Meta**	**1.49**	**324**	P	**Pn**	**21 08 48.9**	**+1.3**
IMMV	**Iera Moni Meta**	**1.49**	**324**	P	**Pb**	**21 08 49.1**	**+0.4**
IMMV				AML	AML	21 09 25.7	
	comp=N,1623μm,0.7s						
IMMV				AML	AML	21 09 30.3	
	comp=E,1737μm,0.5s						
ANKY	**Antikythira Is**	**2.16**	**319**	P	**Pb**	**21 08 59.5**	**-0.5**
THR3	**Thira Island,**	**2.17**	**7**	P	**Pn**	**21 08 58.3**	**+1.3**
ANAF	**Anafi Island**	**2.18**	**16**	P	**Pn**	**21 08 58.8**	**+1.7**
IOSP	**Ios island**	**2.47**	**4**	P	**Pn**	**21 09 01.7**	**+0.6**
MHLO	**Agia Marina, M**	**2.49**	**348**	P	**Pn**	**21 09 02.8**	**+1.5**
MHLA	**Plaka, Milos I**	**2.54**	**349**	P	**Pn**	**21 09 03.9**	**+1.8**
KYTH	**Kithira**	**2.59**	**321**	P	**Pb**	**21 09 06.2**	**-1.3**
APE	**Apeiranthos**	**2.84**	**8**	P	**Pn**	**21 09 07.2**	**+1.0**
VLI	**Veliai**	**3.00**	**326**	P	**Pn**	**21 09 09.7**	**+1.3**
DID	**Didima**	**3.56**	**336**	P	**Pn**	**21 09 17.5**	**+1.3**
VLY	**Voula,Athens**	**3.73**	**345**	P	**Pn**	**21 09 20.5**	**+2.0**
SMG	**Samos**	**3.74**	**22**	P	**Pn**	**21 09 19.4**	**+0.8**
PYL	**PYLOS**	**3.77**	**315**	P	**Pn**	**21 09 21.5**	**+2.5**
ITM	**Ithomi**	**3.87**	**320**	P	**Pn**	**21 09 22.1**	**+1.7**
LTK	**Loutraki**	**4.12**	**336**	P	**Pn**	**21 09 25.1**	**+1.3**
GUR	**Goura**	**4.28**	**330**	P	**Pn**	**21 09 28.2**	**+2.2**
KLV	**Kalavryta, Ach**	**4.45**	**329**	P	**Pn**	**21 09 31.5**	**+3.1**
MMAI	**Mount Meron Ar**	**8.72**	**95**	Pn	**Pn**	**21 10 25.3**	**-1.8**
	comp=E,0.6nm,0.3s,baz=266,slow=12,SNR=5.1						
MMAI				Sn	Sn	21 11 54.2	-11
	comp=E,0.3nm,0.3s,baz=265,slow=16,SNR=3.3						
BRTR	**Keskin Array B**	**8.78**	**49**	Pn	**Pn**	**21 10 28.9**	**+1.1**
	comp=E,0.0nm,0.3s,baz=218,slow=11,SNR=2.7						
EIL	**Elat**	**9.57**	**116**	Pn	Pn	21 10 35.8	-2.8
	comp=E,0.8nm,0.3s,baz=299,slow=18,SNR=3.8						
EIL				Sn	Sn	21 12 16.4	-10
	comp=E,0.2nm,0.3s,baz=342,slow=20,SNR=2.2						
ASF	**Jabal al Asfar**	**10.14**	**99**	Sn	Sn	21 12 32.6	-7.5
	comp=E,0.2nm,0.3s,baz=360,slow=19,SNR=2.7						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**21 12 15.1**	**+0.1**
	comp=E,0.7nm,0.3s,baz=201,slow=10,SNR=7.1						
KBZ	**Khabaz**	**16.77**	**50**	Pn	**P**	**21 12 18.8**	**+1.0**
	comp=E,0.2nm,0.3s,baz=265,slow=8.0,SNR=4.9						
GERES	**GERESS Array B**	**16.84**	**333**	Pn	**P**	**21 12 19.3**	**+0.6**
	comp=E,0.2nm,0.3s,baz=144,slow=12,SNR=12						
ESDC	**Sonseca Array**	**23.75**	**292**	P	**P**	**21 13 33.1**	**-0.1**
	comp=E,0.3nm,0.7s,baz=85,slow=10,SNR=3.0						
FINES	**FINESS Array B**	**27.21**	**1**	P	**P**	**21 14 03.7**	**-0.7**
	comp=E,1.2nm,0.8s,baz=179,slow=12,SNR=2.0						
NOA	**NORSAR Array B**	**28.25**	**346**	P	**P**	**21 14 13.1**	**-0.7**
	comp=E,0.6nm,0.9s,baz=146,slow=8.8,SNR=2.2						
EKA	**Eskdalemuir Ar**	**28.73**	**326**	P	**P**	**21 14 17.7**	**-0.4**
	comp=E,0.5nm,0.6s,baz=125,slow=8.7,SNR=2.7						
TORD	**Torodi Ar. Bea**	**29.84**	**231**	P	**P**	**21 14 28.5**	**+0.2**
	comp=E,0.5nm,0.4s,baz=41,slow=7.5,SNR=5.9						
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**21 16 30.1**	**-0.9**
	comp=E,0.8nm,0.6s,baz=276,slow=7.2,SNR=10						
ZALV	**Zalesovo Beam**	**45.70**	**46**	P	**P**	**21 16 40.8**	**-0.8**
	comp=E,2.2nm,0.4s,baz=272,slow=9.0,SNR=8.8						
SONM	**Songino Array**	**60.13**	**50**	P	**P**	**21 18 28.7**	**+0.3**
	comp=E,0.6nm,0.5s,baz=304,slow=8.7,SNR=4.7						
USRK	**Ussuriysk Ar.**	**77.55**	**45**	P	**P**	**21 20 15.8**	**-0.9**
	comp=E,1.2nm,0.7s,baz=277,slow=4.8,SNR=4.1						
ULM	**Lac du Bonnet**	**81.01**	**326**	P	**P**	**21 20 34.4**	**-1.1**
	comp=E,1.9nm,0.4s,baz=90,slow=1.0,SNR=3.4						

MEX 15 21:12:04.0±0.5, 15°.19N×95°.88W, h24km±11km, MD3.7,
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.61**	**339**	*i* P	Pb	21 12 13.8	-2.3
HUIG				*e*S	Sb	21 12 22.3	-2.1
PNIG	**Pinotepa**	**2.47**	**299**	*i* S	Sn	21 13 07.2	-5.0

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*IDC **15** 21:14:52.8±1.1, 34°.23N×25°.03E, h0km, mb3.9/8,*
mb1 3.9/14, mb1mx3.7/42, mbtmp3.8/14, ML4.0/5, MS3.1/1,
Ms1 3.1/1, ms1mx2.5/46, Error ellipse: s-maj=20.5km
s-min=17.8km az=164.0
*ATH **15** 21:14:56.5, 34°.29N×25°.07E, h24km±1km, ML3.3/6, Error*
ellipse: s-maj=3.0km s-min=1.2km az=2.0
*ISCJB **15** 21:14:56.7±0.8, 34°.24N±0°.03×25°.13E±0°.04, h28km±6km,*
mb3.9/9, Error ellipse: s-maj=6.0km s-min=5.1km
az=149.1
*ISK **15** 21:14:57.4, 34°.43N×25°.11E, h12km, ML3.5/13*
*THE **15** 21:14:58.3, 34°.41N×25°.06E, h0km±2km, ML3.4/3, Error*
ellipse: s-maj=3.7km s-min=1.1km az=168.0
*HLW **15** 21:14:58.8, 34°.27N×25°.24E, h20km±19km, Ml3.8*
ISC 15 21:14:57.2±1.2, 34°.28N±0°.04×25°.11E±0°.03, h29km±9km,
n74, σ1↟74/88, **mb3.9**/9, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**341**	P	**Pb**	**21 15 11.3**	**-0.9**
SIVA				S	**Sb**	**21 15 21.8**	**-0.6**
SIVA	**Sivas**	**0.78**	**341**	P	**Pb**	**21 15 11.4**	**-0.9**
SIVA				S	**Sb**	**21 15 22.1**	**-0.3**
SIVA				AML	AML	21 15 32.5	
	comp=E,25848μm,0.7s						
SIVA				AML	AML	21 15 33.8	
	comp=N,14596μm,0.7s						
TMBK	**Timbaki Herakl**	**0.84**	**340**	P	**Pb**	**21 15 12.7**	**-0.6**
TMBK				S	**

ZKR	Zakros	1.23	47	P	Pb	21 15 20.2	+0.3
ZKR	Zakros	1.23	47	P	Pb	21 15 19.9	0.0
ZKR				S	Sb	21 15 38.4	+2.9
ZKR				AML	AML	21 15 48.8	
	comp=N,840μm,0.8s						
ZKR				AML	AML	21 15 51.9	
	comp=E,1179μm,0.4s						
VAM	Vamos	1.35	326	P	Pn	21 15 20.9	+0.7
VAM	Vamos	1.35	326	P	Pb	21 15 21.3	-0.6
VAM				S	Sb	21 15 39.8	+1.0
VAM				AML	AML	21 15 51.3	
	comp=E,2553μm,0.5s						
VAM				AML	AML	21 15 55.1	
	comp=N,2477μm,0.5s						
IMMV	Iera Moni Meta	1.50	322	PN	Pn	21 15 23.4	+1.2
IMMV	Iera Moni Meta	1.50	322	P	Pb	21 15 24.1	-0.3
IMMV	Iera Moni Meta	1.50	322	P	Pb	21 15 24.2	-0.2
KARP	Karpathos	2.10	53	PN	Pn	21 15 32.3	+1.7
KARP	Karpathos	2.10	53	P	Pb	21 15 34.1	-0.6
KARP	Karpathos	2.10	53	P	Pb	21 15 33.7	-1.1
SANT	Santorini	2.10	8	PN	Pn	21 15 31.5	+0.9
SANT	Santorini	2.10	8	P	Pn	21 15 32.6	+2.1
ANAF	Anafi Island	2.14	14	P	Pb	21 15 33.5	-1.8
THR5	Thira Island,	2.14	5	P	Pn	21 15 32.9	+1.9
SAP3	Santorini-Thir	2.16	7	P	Pn	21 15 32.8	+1.6
ANKY	Antikythira Is	2.17	317	P	Pn	21 15 32.6	+1.2
IOSP	Ios island	2.44	3	P	Pn	21 15 36.2	+1.1
MHLO	Agia Marina, M	2.47	347	P	Pn	21 15 36.7	+1.1
MHLA	Plaka, Milos I	2.52	347	P	Pn	21 15 38.9	+2.6
KYTH	Kithira	2.60	320	P	Pn	21 15 40.6	+3.2
AMGA	Amorgos Island	2.62	14	P	Pn	21 15 39.8	+2.2
SLUM	Salum	2.78	178	P	Pn	21 15 42.0	+2.1
	baz=181						
SLUM				AMP		21 16 00.0	
	baz=181						
SLUM				S	Sn	21 16 13.0	+0.5
	baz=181						
APE	Apeiranthos	2.80	7	PN	Pn	21 15 40.8	+0.6
APE	Apeiranthos	2.80	7	P	Pn	21 15 41.0	+0.8
VLI	Veliai	3.01	324	P	Pn	21 15 44.5	+1.5
ARG	Arkhangelos	3.13	51	PN	Pn	21 15 46.9	+2.3
ARG	Arkhangelos	3.13	51	P	Pn	21 15 47.0	+2.3
DAT	Datca	3.16	39	PN	Pn	21 15 46.5	+1.3
DID	Didima	3.56	335	P	Pn	21 15 51.1	+0.5
SMG	Samos	3.69	22	P	Pn	21 15 53.7	+1.3
VLY	Voula,Athens	3.72	344	P	Pn	21 15 54.7	+2.0
DALY	Dalyan (Mula)	3.84	48	PN	Pn	21 15 56.8	+2.5
YER	Yerkesik	3.84	41	PN	Pn	21 15 56.6	+2.1
TURN	Turunc	3.84	47	PN	Pn	21 15 52.3	-2.1
ITM	Ithomi	3.88	319	PN	Pn	21 15 57.4	+2.4
ITM	Ithomi	3.88	319	P	Pn	21 15 56.8	+1.8
FETY	Fethiye	4.00	53	PN	Pn	21 15 57.8	+1.2
AYDB	Zeytinkoy-Aydi	4.29	31	PN	Pn	21 16 02.8	+2.1
SWA2		5.03	177	P	Pn	21 16 12.4	+1.7
	baz=177						
AGG	Agios Georgios	5.23	336	PN	Pn	21 16 16.1	+2.5
NBNS	Bani Suef	7.72	135	P	Pn	21 16 49.6	+1.8
	baz=135						
MMAI	Mount Meron Ar	8.67	96	Pn	Pn	21 17 00.2	-0.6
	comp=N,1.5nm,0.3s,baz=270,slow=11,SNR=12						
MMAI				Sn	Sn	21 18 31.8	-5.9
	comp=N,1.8nm,0.3s,baz=264,slow=22,SNR=7.0						
BRTR	Keskin Array B	8.72	49	Pn	Pn	21 17 02.8	+1.3
	comp=N,0.1nm,0.3s,baz=226,slow=12,SNR=3.4						
BRTR				LR	LR	21 21 14.4	
	comp=N,117nm,18.7s,baz=252,slow=43						
EIL	Elat	9.54	116	Pn	Pn	21 17 12.2	-0.4
	comp=N,1.0nm,0.3s,baz=323,slow=4.9,SNR=6.5						
EIL				Sn	Sn	21 18 52.4	-6.5
	comp=N,0.5nm,0.3s,baz=252,slow=20,SNR=3.1						
ASF	Jabal al Asfar	10.09	99	Sn	Sn	21 19 07.9	-4.7
	comp=N,0.3nm,0.3s,baz=266,slow=6.3,SNR=2.2						
AKASG	Malin Array Be	16.68	9	Pn	Pn	21 18 48.6	-0.2
	comp=N,1.0nm,0.3s,baz=200,slow=11,SNR=7.9						
KBZ	Khabaz	16.71	50	Pn	P	21 18 53.6	+2.4
	comp=N,0.3nm,0.3s,baz=246,slow=9.8,SNR=3.8						
GERES	GERESS Array B	16.84	333	Pn	P	21 18 53.5	+0.8
	comp=N,0.3nm,0.3s,baz=142,slow=12,SNR=11						
ESDC	Sonseca Array	23.79	292	P	P	21 20 07.3	-0.2
	comp=N,0.2nm,0.3s,baz=86,slow=10.0,SNR=3.9						
FINES	FINESS Array B	27.19	1	P	P	21 20 36.5	-1.5
	comp=N,3.2nm,1.0s,baz=187,slow=11,SNR=2.9						
AKTO	Aktyubinsk	28.88	46	P	P	21 20 53.4	+0.1
	comp=N,0.6nm,0.5s,baz=238,slow=9.5,SNR=3.3						
TORD	Torodi Ar. Bea	29.90	231	P	P	21 21 01.5	-1.2
	comp=N,1.6nm,0.4s,baz=30,slow=7.7,SNR=26						
ARCES	ARCESS Array B	35.31	0	P	P	21 21 48.4	-1.0
	comp=N,7.6nm,0.3s,baz=171,slow=12,SNR=1.5						
MKAR	Makanchi Array	44.30	56	P	P	21 23 05.6	+1.2
	comp=N,0.7nm,0.5s,baz=283,slow=6.4,SNR=10						
ZALV	Zalesovo Beam	45.64	46	P	P	21 23 15.2	+0.3
	comp=N,2.3nm,0.4s,baz=268,slow=9.3,SNR=11						
SONM	Songino Array	60.07	50	P	P	21 25 03.5	+1.7
	comp=N,0.3nm,0.5s,baz=298,slow=9.7,SNR=2.7						
USRK	Ussuriysk Ar.	77.49	45	P	P	21 26 50.5	+0.5
	comp=N,1.1nm,0.6s,baz=341,slow=4.0,SNR=4.6						

*IDC **15** 21:24:39.4±2.1, 30.°50S×177.°86W, h0km, mb4.3/3, mb1 4.5/4, mb1mx3.8/32, mbtmp4.3/4, ML3.2/1, Error ellipse: s-maj=63.5km s-min=34.7km az=138.0*
*ISCJB **15** 21:24:40.1±5.4, 30.°8S±0.°2×177.°5W±0.°8, h35km, mb4.3/3, Error ellipse: s-maj=100.8km s-min=15.7km az=8.6*
ISC 15 21:24:41.1±2.2, 30.°7S±0.°2×177.°3W±0.°4, h35km, n6, σ0°99/7, mb4.4/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	8.81	210	Pn	Pn	21 26 46.0	+0.1
	0.3nm,0.3s,baz=36,slow=19,SNR=2.9						
URZ				Sn	Sn	21 28 23.5	-0.4
	1.3nm,0.3s,baz=3.5,slow=19,SNR=8.3						
STKA	Stephens Creek	34.96	257	P	P	21 31 31.2	+1.3
	5.4nm,0.7s,baz=102,slow=10,SNR=18						
ASAR	Alice Springs	43.66	267	P	P	21 32 42.1	-0.6
	1.0nm,0.5s,baz=103,slow=7.5,SNR=16						
WRA	Warramunga Arr	44.68	272	P	P	21 32 49.8	-1.0
	2.8nm,0.5s,baz=109,slow=8.8,SNR=6.9						
FINES	FINESS Array B	145.63	340	PKPbc	PKPdf	21 44 15.5	+0.6
	0.9nm,0.4s,baz=48,slow=4.1,SNR=11						
HFS	Hagfors	149.66	349	PKPbc	PKPab	21 44 30.9	-0.7
	2.9nm,1.1s,baz=42,slow=2.3,SNR=5.4						

*ISCJB **15** 21:36:14.3±0.7, 31.°60S±0.°06×138.°72E±0.°06, h10km, Error ellipse: s-maj=8.1km s-min=7.0km az=176.7*
*AUST **15** 21:36:15.8±0.0, 31.°68S×138.°70E, h10km, Error ellipse: s-maj=0.3km s-min=0.1km az=346.0*
*IDC **15** 21:36:21.7±3.6, 30.°78S×139.°44E, h0km, mb1 3.2/3, mb1mx3.1/23, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=100.0km s-min=15.9km az=42.0*
ISC 15 21:36:14.9±0.9, 31.°61S±0.°06×138.°72E±0.°05, h10km, n8, σ2°23/14, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	Hallett	1.82	175	P	Pn	21 36 46.7	+0.3
	baz=1.8						
HTT				S	Sb	21 37 09.6	-1.6
	baz=1.8						
STKA	Stephens Creek	2.46	97	Pn	Pb	21 36 59.1	-0.1
	1.8nm,0.3s,baz=281,slow=14,SNR=23						
STKA				Lg	Lg	21 37 29.4	
	2.4nm,0.3s,baz=313,slow=19,SNR=8.0						
STKA	Stephens Creek	2.46	97	P	Pn	21 36 57.2	+2.1
	baz=2.5						
STKA				S	Sn	21 37 26.4	+1.1
	baz=2.5						
BBOO	Buckleboo	2.55	241	P	Pn	21 36 57.6	+1.3
	baz=2.5						
BBOO				S	Sn	21 37 27.9	+0.4
	baz=2.5						
ARPS	Mount Arapiles	5.76	154	P	Pn	21 37 40.4	0.0
	baz=5.7						
CMSA	Cobar Meteorol	5.95	91	P	Pn	21 37 44.0	+1.0
	baz=6.0						
CMSA				S	Sn	21 38 49.1	-2.2
	baz=6.0						
ASAR	Alice Springs	8.99	330	Pn	Pn	21 38 27.9	+3.1
	0.0nm,0.3s,baz=143,slow=14,SNR=2.9						
ASAR				Sn	Sn	21 40 03.6	-2.7
	0.1nm,0.3s,baz=157,slow=22,SNR=3.4						
WRA	Warramunga Arr	12.27	340	Pn	Pn	21 39 10.7	+1.0
	0.0nm,0.3s,baz=155,slow=14,SNR=3.3						
WRA				Sn	Sn	21 41 22.1	-4.6
	0.0nm,0.3s,baz=160,slow=26,SNR=2.7						

*IDC **15** 21:36:46.4±1.0, 44.°49N×137.°87E, h0km, mb3.6/8, mb1 3.8/13, mb1mx3.6/44, mbtmp3.6/13, ML3.6/3, Error ellipse: s-maj=23.1km s-min=14.7km az=1.0*
*JMA **15** 21:36:46.9±0.2, 43.°99N×137.°91E, h29km, M3.8*
*ISCJB **15** 21:36:47.3±0.5, 44.°01N±0.°05×137.°88E±0.°05, h33km, mb3.6/8, Error ellipse: s-maj=7.9km s-min=4.7km az=29.6*
ISC 15 21:36:48.8±0.7, 43.°99N±0.°06×137.°88E±0.°04, h35km, n27, σ1°05/31, mb3.8/8, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	Shakotan	1.99	108	P	Pn	21 37 19.3	-0.6
JSK				eS	Sn	21 37 42.8	-0.8
JSH	Shimam	2.08	130	P	Pn	21 37 20.6	-0.5
JSH				eS	Sn	21 37 45.0	-0.8
JHST	Hiyamasetana	2.14	136	P	Pn	21 37 21.9	-0.1
JHST				eS	Sn	21 37 47.1	-0.3
JOSM	Okushiri--Mats	2.24	148	P	Pn	21 37 22.7	-0.7
JOSM				eS	Sn	21 37 49.1	-0.7
JYG	Yagishiri	2.58	79	P	Pn	21 37 27.2	-0.9
JKB	Kayabe	3.13	131	P	Pn	21 37 36.3	+0.7
JWK2	Keihoku	3.16	64	P	Pn	21 37 37.1	+1.1
ASAJ	Asahikawa	3.40	86	Pn	Pn	21 37 39.1	-0.3
	8.0nm,0.3s,baz=279,slow=11,SNR=41						
ASAJ				Sn	Sn	21 38 18.2	-0.2
	4.2nm,0.3s,baz=311,slow=20,SNR=4.9						
JOT	Ohata	3.50	137	P	Pn	21 37 41.7	+1.0
JKK2	Kamakawa 2	3.52	90	P	Pn	21 37 40.7	-0.3
USRK	Ussuriysk Ar.	4.25	275	Pn	Pn	21 37 51.5	+0.4
	1.6nm,0.3s,baz=81,slow=14,SNR=28						
USRK				Sn	Sn	21 38 38.2	-1.2
	3.3nm,0.3s,baz=86,slow=23,SNR=5.8						
USRK				Lg	Lg	21 38 59.2	
	10nm,0.3s,baz=88,slow=27,SNR=12						
JTKR	Abashiri--Toko	4.35	88	P	Pn	21 37 51.8	-0.6
KLR	Kul'dur	6.73	323	Pn	Pn	21 38 21.8	-3.3
	0.4nm,0.3s,baz=109,slow=21,SNR=9.2						
KLR				Lg	Lg	21 40 07.6	
	0.6nm,0.3s,baz=107,slow=19,SNR=2.6						
MJAR	Matsushiro Arr	7.45	178	Pn	Pn	21 38 44.6	+10
	0.0nm,0.3s,baz=360,slow=14,SNR=13						
KSRS	Korea Array	9.98	233	Pn	Pn	21 39 15.4	+5.6
	0.4nm,0.3s,baz=44,slow=14,SNR=4.1						
SONM	Songino Array	22.16	291	P	P	21 41 43.5	+1.8
	0.3nm,0.5s,baz=82,slow=10,SNR=2.5						
ILAR	Eielson Array	45.23	36	P	P	21 45 01.9	-0.4
	0.3nm,0.7s,baz=292,slow=8.9,SNR=6.5						
INK	Inuvik	49.53	29	P	P	21 45 34.9	-0.6
	0.6nm,0.5s,baz=234,slow=5.2,SNR=4.5						
FINES	FINESS Array B	61.43	329	P	P	21 47 00.8	-0.3
	1.3nm,0.6s,baz=54,slow=6.5,SNR=9.3						
AKASG	Malin Array Be	67.21	319	P	P	21 47 38.8	-0.4
	0.4nm,0.4s,baz=46,slow=6.1,SNR=3.5						
NVAR	Mina Array Bea	72.96	53	P	P	21 48 17.0	+2.1
	0.8nm,0.7s,baz=281,slow=6.0,SNR=7.2						
PDAR	Pinedale Array	74.67	45	P	P	21 48 25.9	+1.0
	0.7nm,0.6s,baz=324,slow=2.9,SNR=8.1						
TXAR	Lajitas Array	87.87	50	P	P	21 49 35.7	+0.7
	0.1nm,0.5s,baz=254,slow=3.3,SNR=3.0						
SNAA	Sanae	146.44	201	PKPdf	PKiKP	21 56 27.5	-0.4
VNA2	Neumayer--Watz	148.07	201	PKPdf	PKPab	21 56 31.9	-0.3
	baz=100,slow=1.8						
VNA3	Neumayer Olymp	148.43	199	PKPdf	PKPab	21 56 32.7	-1.0
VNA1	Neumayer--Stat	148.47	201	PKPdf	PKPab	21 56 33.0	-0.8

*IDC **15** 21:37:20.2±1.2, 34.°32N×24.°92E, h0km, mb3.8/5, mb1 3.8/9, mb1mx3.5/56, mbtmp3.7/9, ML3.8/4, Error ellipse: s-maj=24.1km s-min=18.5km az=80.0*
*ATH **15** 21:37:23.4, 34.°23N×25.°12E, h28km±2km, ML3.1/5, Error ellipse: s-maj=5.5km s-min=2.1km az=9.0*
*THE **15** 21:37:27.3, 34.°43N×25.°08E, h5km±2km, ML3.4/3, Error ellipse: s-maj=2.3km s-min=0.8km az=50.0*
ISC 15 21:37:23.2±1.2, 34.°23N±0.°05×25.°15E±0.°04, h20km±4km, n39, σ1°74/51, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.84	341	P	Pb	21 37 39.3	+0.2
SIVA				S	Sg	21 37 48.8	-2.0
	5μm,0.6s						
SIVA	Sivas	0.84	341	P	Pb	21 37 39.6	+0.5
SIVA				S	Sb	21 37 51.0	+1.0
SIVA				AML	AML	21 37 55.4	
	comp=E,9393μm,0.5s						
SIVA				AML	AML	21 37 59.5	
	comp=N,9658μm,0.5s						
TMBK	Timbaki Herakl	0.90	340	P	Pb	21 37 40.3	+0.1
TMBK				S	Sg	21 37 51.5	-1.3
LAST	Lasithi	0.97	16	P	Pn	21 37 42.5	+0.6
LAST				S	Sg	21 37 55.1	+0.1
LAST	Lasithi	0.97	16	P	Pn	21 37 42.7	+0.8
LAST				AML	AML	21 38 07.9	
	comp=E,803μm,0.6s						
LAST				AML	AML	21 38 10.8	
	comp=N,768μm,0.8s						
GVD	Gavdhos	1.07	305	P	Pn	21 37 44.3	+1.2
GVD				S	Sn	21 37 58.4	+1.0
	comp=N,2μm,0.5s						
GVD	Gavdhos	1.07	305	P	Pg	21 37 43.0	-0.9
GVD				S	Sn	21 37 58.8	+1.4
GVD				AML	AML	21 38 09.4	
	comp=E,3543μm,0.4s						
GVD				AML	AML	21 38 10.8	
	comp=N,3875μm,0.6s						
KSTL	Kastelli Herak	1.08	357	P	Pb	21 37 42.9	-0.3
IDI	Anoyia	1.08	349	Pn	Pb	21 37 42.6	-0.8
	comp=N,36nm,0.3s,baz=161,slow=12,SNR=17						
IDI				Sn	Sb	21 37 55.9	-1.2
	comp=N,25nm,0.3s,baz=355,slow=20,SNR=6.5						
NPS	Neapolis	1.10	20	P	Pg	21 37 45.1	+0.5
NPS	Neapolis	1.10	20	P	Pg	21 37 45.3	+0.6
NPS				AML	AML	21 38 13.3	
	comp=N,606μm,0.6s						
NPS				AML	AML	21 38 16.8	
	comp=E,880μm,0.6s						
ZKR	Zakros	1.25	44	P	Pg	21 37 47.6	+0.2
PRNS	Prines Rethymn	1.25	335	P	Pg	21 37 47.3	-0.2
PRNS				S	Sb	21 38 01.9	-0.1
VAM	Vamos	1.41	327	P	Pg	21 37 49.4	-1.1
VAM				S	Sg	21 38 07.1	-1.9
	comp=E,1μm,0.6s						
VAM	Vamos	1.41	327	P	Pg	21 37 49.5	-1.0
VAM				S	Sg	21 38 07.9	-1.1
VAM				AML	AML	21 38 15.9	
	comp=N,1342μm,0.4s						
VAM				AML	AML	21 38 16.7	
	comp=E,1601μm,0.8s						
IMMV	Iera Moni Meta	1.56	322	P	Pb	21 37 51.1	-0.4
IMMV	Iera Moni Meta	1.56	322	P	Pb	21 37 51.1	-0.4
SAP1	Santorini-Akro	2.14	5	P	Pn	21 37 59.6	+1.8
ANAF	Anafi Island	2.19	13	P	Pn	21 37 59.8	+1.3
THR3	Thira Island,	2.19	5	P	Pb	21 38 01.1	-1.0
THR5	Thira Island,	2.19	4	P	Pn	21 38 00.1	+1.5
ANKY	Antikythira Is	2.23	318	P	Pn	21 38 00.7	+1.6
IOSP	Ios island	2.49	3	P	Pn	21 38 03.6	+0.8
IOSP	Ios island	2.49	3	P	Pn	21 38 03.5	+0.8
MHLO	Agia Marina, M	2.53	346	P	Pn	21 38 03.9	+0.6
MHLA	Plaka, Milos I	2.58	347	P	Pn	21 38 04.7	+0.7
APE	Apeiranthos	2.85	6	P	Pn	21 38 08.6	+0.8
VLI	Veliai	3.07	325	P	Pn	21 38 12.8	+2.1
SMG	Samos	3.73	21	P	Pn	21 38 21.4	+1.6
MMAI	Mount Meron Ar	8.64	95	Pn	Pn	21 39 30.1	+2.9
	comp=E,0.5nm,0.3s,baz=268,slow=11,SNR=5.0						
MMAI				Sn	Sn	21 40 59.7	-4.4
	comp=E,1.8nm,0.3s,baz=288,slow=20,SNR=7.6						
EIL	Elat	9.48	116	Pn	Pn	21 39 41.5	+2.8
	comp=E,0.4nm,0.3s,baz=350,slow=18,SNR=5.2						
EIL				Sn	Sn	21 41 19.6	-5.2
	comp=E,0.4nm,0.3s,baz=210,slow=20,SNR=3.0						
AKASG	Malin Array Be	16.73	9	Pn	Pn	21 41 15.9	-0.5
	comp=E,0.8nm,0.3s,baz=202,slow=11,SNR=4.1						
GERES	GERESS Array B	16.91	333	Pn	Pn	21 41 17.2	-1.5
	comp=E,0.2nm,0.3s,baz=144,slow=12,SNR=14						
CLL	Collm	19.21	336	eP	Pn	21 41 52.0	+5.1
FINES	FINESS Array B	27.24	1	P	P	21 43 03.4	-2.3
	comp=E,1.1nm,0.7s,baz=154,slow=14,SNR=4.9						
TORD	Torodi Ar. Bea	29.89	231	P	P	21 43 29.2	-0.5
	comp=E,0.3nm,0.4s,baz=34,slow=8.5,SNR=6.9						
MKAR	Makanchi Array	44.30	56	P	P	21 45 32.4	+0.7
	comp=E,0.4nm,0.4s,baz=268,slow=7.5,SNR=8.2						
ZALV	Zalesovo Beam	45.66	46	P	P	21 45 42.9	+0.6
	comp=E,1.6nm,0.4s,baz=270,slow=9.5,SNR=7.2						
SONM	Songino Array	60.09	50	P	P	21 47 29.1	-0.1
	comp=E,0.3nm,0.4s,baz=273,slow=2.6,SNR=2.7						

*GII **15** 21:51:45.2±0.0, 34.°27N×25.°02E, h5km, mb4.2/1, MD4.0/1*
*IDC **15** 21:51:52.5±0.9, 34.°30N×25.°06E, h0km, mb3.8/12, mb1 4.0/20, mb1mx3.8/54, mbtmp3.9/20, ML4.2/7, MS3.4/1, Ms1 3.4/1, ms1mx2.4/44, Error ellipse: s-maj=17.9km s-min=13.8km az=9.0*
*HLW **15** 21:51:55.3, 34.°34N×25.°12E, h10km±22km, Ml3.7*
*ISK **15** 21:51:56.7, 34.°37N×25.°08E, h8km, ML3.7/14*
*ATH **15** 21:51:57.0, 34.°34N×25.°08E, h27km, ML3.6/15, Error ellipse: s-maj=1.9km s-min=0.9km az=356.0*
*THE **15** 21:51:57.3, 34.°35N×25.°04E, h0km±2km, ML3.6/3, Error ellipse: s-maj=4.4km s-min=1.1km az=184.0*
ISC 15 21:51:54.7±1.3, 34.°21N±0.°04×25.°09E±0.°03, h16km±8km, n131, σ1°74/144, mb3.8/13, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.84	344	P	Pg	21 52 11.2	+0.1
SIVA				S	Sb	21 52 22.1	+0.2
SIVA	Sivas	0.84	344	P	Pg	21 52 11.2	+0.1
SIVA				S	Sb	21 52 21.8	-0.1
SIVA				AML	AML	21 52 28.5	
	comp=E,41384μm,0.7s						
SIVA				AML	AML	21 52 32.2	
	comp=N,30714μm,0.7s						
TMBK	Timbaki Herakl	0.90	343	P	Pb	21 52 12.7	+0.7
TMBK				S	Sb	21 52 23.3	-0.4
LAST	Lasithi	1.00	19	P	Pg	21 52 14.3	+0.1
LAST				S	Sn	21 52 28.1	+0.1
LAST	Lasithi	1.00	19	P	Pg	21 52 14.3	+0.1
LAST				S	Sb	21 52 26.9	+0.1
LAST				AML	AML	21 52 34.1	
	comp=N,4526μm,0.9s						
LAST				AML	AML	21 52 42.1	
	comp=E,4084μm,0.8s						
GVD	Gavdhos	1.04	308	PG	Pg	21 52 15.2	+0.3
GVD				SG	Sb	21 52 28.8	+1.1
GVD	Gavdhos	1.04	308	P	Pg	21 52 14.9	+0.1
GVD	Gavdhos	1.04	308	P	Pg	21 52 15.1	+0.3
GVD				S	Sb	21 52 29.2	+1.5
GVD				AML	AML	21 52 31.9	
	comp=N,17934μm,0.3s						
GVD				AML	AML	21 52 36.7	
	comp=E,14658μm,0.5s						
IDI	Anoyia	1.09	351	Pn	Pg	21 52 15.4	-0.4
	comp=E,57nm,0.3s,baz=175,slow=20,SNR=67						
IDI				Sn	Sg	21 52 26.4	-3.6
	comp=E,81nm,0.3s,baz=253,slow=17,SNR=15						
IDI	Anoyia	1.09	351	P	Pg	21 52 14.4	-1.4
IDI	Anoyia	1.09	351	P	Pg	21 52 15.3	-0.5
IDI				S	Sn	21 52 29.7	-0.4
KSTL	Kastelli Herak	1.09	359	P	Pg	21 52 14.8	-1.1
IACM	Heraklion	1.09	359	P	Pb	21 52 16.2	+0.9
NPS	Neapolis	1.14	22	P	Pg	21 52 16.5	-0.2
NPS				S	Sn	21 52 32.5	+1.3
NPS	Neapolis	1.14	22	P	Pg	21 52 16.6	-0.2
NPS				S	Sb	21 52 30.8	+0.2
NPS				AML	AML	21 52 46.8	
	comp=E,4987μm,1.0s						
NPS				AML	AML	21 52 47.5	
	comp=N,2784μm,0.6s						
PRNS	Prines Rethymn	1.25	337	P	Pb	21 52 18.3	+0.4
ZKR	Zakros	1.30	46	PN	Pg	21 52 20.3	+0.5
ZKR				SN	Sn	21 52 36.9	+1.7
ZKR	Zakros	1.30	46	P	Pn	21 52 19.8	+1.6
ZKR	Zakros	1.30	46	P	Pn	21 52 19.9	+1.8
ZKR				S	Sg	21 52 36.3	-0.4
ZKR				AML	AML	21 52 50.4	
	comp=N,1508μm,0.7s						
ZKR				AML	AML	21 52 50.5	
	comp=E,3092μm,0.8s						
VAM	Vamos	1.40	329	P	Pn	21 52 20.6	+1.0
VAM	Vamos	1.40	329	P	Pn	21 52 20.9	+1.3
VAM				S	Sg	21 52 39.5	-0.5
VAM				AML	AML	21 52 51.5	
	comp=N,5270μm,0.5s						
VAM				AML	AML	21 52 51.8	
	comp=E,5056μm,0.4s						
IMMV	Iera Moni Meta	1.54	324	PN	Pb	21 52 23.7	+0.7
IMMV	Iera Moni Meta	1.54	324	P	Pn	21 52 23.0	+1.4
IMMV	Iera Moni Meta	1.54	324	P	Pn	21 52 23.1	+1.6
IMMV				S	Sb	21 52 42.6	+0.3
IMMV				AML	AML	21 52 56.8	
	comp=E,5138μm,0.7s						
IMMV				AML	AML	21 52 57.8	
	comp=N,4362μm,0.7s						
CHAN	Chania	1.56	327	P	Pn	21 52 23.3	+1.5
THR6	Thira Island,	2.16	7	P	Pb	21 52 32.8	-0.6
KARP	Karpathos	2.17	51	PN	Pn	21 52 32.7	+2.5
KARP	Karpathos	2.17	51	P	Pb	21 52 33.8	+0.2
KARP	Karpathos	2.17	51	P	Pn	21 52 33.4	+3.2
SANT	Santorini	2.18	8	PN	Pn	21 52 32.5	+2.2
THR3	Thira Island,	2.21	7	P	Pn	21 52 32.9	+2.2
ANKY	Antikythira Is	2.21	319	P	Pn	21 52 33.0	+2.3
ANKY	Antikythira Is	2.21	319	P	Pn	21 52 33.1	+2.3
ANKY				S	Sn	21 52 58.9	+1.2
ANKY

comp=N,293μm,1.1s
DAT Datca 3.23 38 PN **Pn 21 52 47.4 +2.5**
DATC Datca-Mugla 3.30 39 PN **Pn 21 52 48.1 +2.4**
DID Didima 3.62 336 P **Pn 21 52 51.0 +0.9**
SMG Samos 3.77 22 P **Pn 21 52 54.1 +1.9**
DALY Dalyan (Mula) 3.90 47 PN **Pn 21 52 57.1 +3.1**
TURN Turunc 3.91 46 PN **Pn 21 52 52.9 -1.2**
YER Yerkesik 3.91 41 PN **Pn 21 52 56.9 +2.7**
ITM Ithomi 3.92 320 PN **Pn 21 52 57.8 +3.5**
FETY Fethiye 4.06 52 PN **Pn 21 52 59.5 +3.3**
KSL Kastellorizon 4.16 61 P **Pn 21 52 59.6 +2.1**
CHOS Chios island 4.24 10 PN **Pn 21 53 01.6 +2.9**
AYDB Zeytinkoy-Aydi 4.37 31 PN **Pn 21 53 03.5 +3.0**
SWA2 4.96 176 P **Pn 21 53 10.9 +2.3**
baz=176
AGG Agios Georgios 5.29 336 PN **Pn 21 53 14.9 +1.8**
HNAT Natroun 6.55 133 P **Pn 21 53 33.1 +2.7**
baz=133
GLL Jalalah 7.28 128 P **Pn 21 53 42.6 +2.1**
baz=128
KRUS Krusevo 7.76 338 *i* Pn **Pn 21 53 46.8 -0.4**
OFRI `Ofer 8.43 98 Sn Sn 21 55 25.0 -5.9
HNTI Hanita 8.48 95 Pn Pn 21 53 50.6 -6.4
SLTI Sal'it 8.57 100 Pn Pn 21 53 52.0 -6.1
SLTI Sn Sn 21 55 28.9 -5.5
AMAZ Amatzia 8.69 105 Sn Sn 21 55 32.3 -5.1
MMA0B Mount Meron ar 8.69 95 Pn **Pn 21 53 53.6 -6.2**
MMA0B Sn **Sn 21 55 32.3 -5.1**
MMAI Mount Meron Ar 8.69 95 Pn **Pn 21 53 59.7 -0.1**
comp=N,2.6nm,0.3s,baz=274,slow=12,SNR=8.6
MMAI Sn Sn 21 55 31.1 -6.3
comp=N,1.4nm,0.3s,baz=286,slow=10,SNR=4.1
BRTR Keskin Array B 8.78 49 Pn **Pn 21 54 00.1 -1.0**
comp=N,0.1nm,0.3s,baz=223,slow=15,SNR=2.8
BRTR Sn **Sn 21 55 40.3 +0.5**
comp=N,0.1nm,0.3s,baz=214,slow=26,SNR=3.1
MMLI Mount Malkishu 8.83 99 Pn Pn 21 53 55.1 -6.6
MMLI Sn Sn 21 55 35.0 -5.8
KSDI Kefar Szold 8.87 94 Pn Pn 21 53 55.5 -6.7
KSDI Sn Sn 21 55 35.9 -5.8
YTIR Yattir 8.91 106 Pn Pn 21 53 56.5 -6.3
YTIR Sn Sn 21 55 37.7 -5.2
NATI Neve Ativ 8.92 93 Pn Pn 21 53 56.9 -6.0
NATI Sn **Sn 21 55 38.4 -4.6**
MASS Massafra 9.00 318 *e*Pn **Pn 21 54 04.0 0.0**
FASA Fasano 9.01 319 *e*Pn **Pn 21 54 04.3 +0.2**
FASA Sn Sn 21 55 34.4 -11
KSHT Keshet 9.03 95 Pn Pn 21 53 57.1 -7.4
DSI Dead Sea 9.05 104 Pn Pn 21 53 58.1 -6.5
DSI Sn Sn 21 55 40.8 -5.4
MZDA Masada 9.12 106 Pn Pn 21 53 58.7 -6.9
MZDA Sn Sn 21 55 42.3 -5.7
KRMI Paran Flat 9.13 114 Pn Pn 21 53 58.6 -7.2
VAE Valguarnera 9.26 294 Pn **Pn 21 54 07.2 -0.4**
comp=N,0.8nm,0.3s,baz=90,slow=20,SNR=3.7
VAE Sn **Sn 21 55 46.2 -5.2**
comp=N,1.4nm,0.3s,baz=74,slow=7.4,SNR=2.8
ZFRI Zfri 9.28 110 Sn Sn 21 55 45.6 -6.2
SG1 Sgolgore (BA) 9.40 317 *e*Pn **Pn 21 54 09.6 +0.1**
SG1 Sn Sn 21 55 45.0 -10
HRFI Mount Harif 9.40 114 Pn Pn 21 54 03.5 -6.1
HRFI Sn Sn 21 55 49.9 -5.2
MBRI Mt Berech 9.43 115 Sn Sn 21 55 51.0 -4.8
EIL Elat 9.52 116 Pn **Pn 21 54 11.3 +0.2**
comp=N,1.3nm,0.3s,baz=257,slow=1.4,SNR=30
EIL Sn Sn 21 55 52.8 -5.1
comp=N,0.9nm,0.3s,baz=259,slow=19,SNR=3.2
ASF Jabal al Asfar 10.10 98 Sn **Sn 21 56 09.5 -2.7**
comp=N,0.1nm,0.3s,baz=275,slow=19,SNR=2.0
BOJS Bojanci 13.56 329 *i* Pn **Pn 21 55 05.4 -0.9**
BOJS *i* Sn Sn 21 57 24.6 -12
CRES Cresnjev 13.74 330 *i* Pn **Pn 21 55 06.4 -2.3**
CRES *i* Sn Sn 21 57 27.6 -13
JAVS Javornik 14.38 327 *i* Pn **Pn 21 55 16.1 -1.6**
JAVS *i* Sn Sn 21 57 46.2 -11
KOLS Kolonicke sedl 14.86 353 *e*P **P 21 55 32.8 +3.0**
ARSA Arzberg 14.89 334 *e*P **P 21 55 30.4 +0.2**
comp=N,3.0nm,0.5s,SNR=4.4
VYHS Vyhne 15.02 344 *e*P **P 21 55 33.0 +1.5**
MODS Modra-Piesok 15.31 340 *e*P **P 21 55 34.7 -0.1**
ABTA Abfaltersbach 15.73 326 *e*P **P 21 55 41.2 +1.6**
comp=N,7.4nm,0.5s,SNR=10
MOA Molln 15.86 332 *e*P **P 21 55 41.9 +1.0**
comp=N,4.4nm,0.9s
VRAC Vranov 16.35 340 Pn **Pn 21 55 42.9 -0.5**
comp=N,0.4nm,0.3s,baz=134,slow=8.3,SNR=10
WTTA Wattenberg 16.52 326 *e*P **P 21 55 49.9 +1.5**
comp=N,6.9nm,0.9s
WATA Walderalm 16.60 326 *e*Pn **Pn 21 55 47.4 +0.6**
comp=N,1.7nm,0.5s
AKASG Malin Array Be 16.76 9 Pn **Pn 21 55 48.0 -0.6**
comp=N,1.0nm,0.3s,baz=200,slow=10,SNR=8.1
KBZ Khabaz 16.77 50 Pn **Pn 21 55 50.8 +2.0**
comp=N,0.3nm,0.3s,baz=232,slow=10,SNR=8.9
MOTA Moosalm 16.83 325 *e*Pn **Pn 21 55 51.4 +1.7**
comp=N,2.4nm,0.5s
GERES GERESS Array B 16.90 333 Pn **Pn 21 55 50.6 +0.1**
comp=N,1.3nm,0.3s,baz=147,slow=13,SNR=67
DAVOX Davos/Dischmat 17.03 322 Pn **Pn 21 55 50.4 -1.9**
comp=N,0.2nm,0.3s,baz=157,slow=17,SNR=1.9
RETA Reutte 17.09 325 *i* Pn **Pn 21 55 54.5 +1.6**
comp=N,2.2nm,0.4s
KHC Kasperske Hory 17.18 334 *e*P **Pn 21 55 56.4 +2.4**
DPC Dobruska-Polom 17.36 341 *e*P **Pn 21 55 58.2 +1.9**
DAVA Damuels 17.38 323 *e*Pn **Pn 21 55 58.3 +1.7**
comp=N,2.3nm,0.5s
GOPC GO Pecny, Ondr 17.43 337 *e*P **Pn 21 55 58.6 +1.5**
CLL Collm 19.21 336 *e*P **P 21 56 18.0 +0.2**
ESDC Sonseca Array 23.79 292 P **P 21 57 07.1 +0.4**
comp=N,2.0nm,0.7s,baz=82,slow=9.4,SNR=20
PBRG Braganca 26.09 296 *e*P **P 21 57 28.5 +0.8**
MVO Moncorvo 26.25 295 *e*P **P 21 57 28.2 -0.9**
GEYT Alibeck 26.88 72 P **P 21 57 35.2 +0.4**
comp=N,0.3nm,0.3s,baz=289,slow=9.0,SNR=3.0
HFS Hagfors 26.99 347 P **P 21 57 35.5 0.0**
comp=N,1.0nm,0.5s,baz=167,slow=8.8,SNR=8.5
FINES FINESS Array B 27.26 1 P **P 21 57 36.5 -1.4**
comp=N,2.1nm,0.9s,baz=170,slow=10,SNR=4.9
FINES PcP **PcP 22 00 57.5 +0.3**
comp=N,0.8nm,0.6s,baz=174,slow=1.9,SNR=6.4
NB2 NORSAR Subarra 28.30 346 P **P 21 57 47.2 -0.1**
comp=Z,0.9nm,0.5s,baz=160,slow=11
NOA NORSAR Array B 28.30 346 P **P 21 57 45.3 -2.0**
comp=Z,0.3nm,0.4s,baz=185,slow=17,SNR=8.4
EKA Eskdalemuir Ar 28.79 326 P **P 21 57 50.0 -1.6**
comp=Z,1.1nm,0.7s,baz=128,slow=8.8,SNR=9.4
TORD Torodi Ar. Bea 29.84 231 P **P 21 58 01.8 +0.5**
comp=Z,0.9nm,0.4s,baz=43,slow=11,SNR=31
ARCES ARCESS Array B 35.38 0 P **P 21 58 47.8 -1.5**
comp=Z,6.9nm,0.3s,baz=174,slow=9.1,SNR=3.1
ARCES PcP **PcP 22 01 19.0 +0.1**
comp=Z,1.0nm,0.8s,baz=224,slow=3.8,SNR=2.0
AAK Ala-Archa 39.14 63 LR LR 22 16 18.7
comp=Z,52nm,21.9s,baz=340,slow=38
MKAR Makanchi Array 44.35 56 P **P 22 00 05.5 +1.4**
comp=Z,0.9nm,0.5s,baz=280,slow=5.9,SNR=12
ZALV Zalesovo Beam 45.71 45 P **P 22 00 14.9 +0.2**
comp=Z,1.5nm,0.4s,baz=263,slow=8.6,SNR=6.8
SONM Songino Array 60.14 50 P **P 22 01 59.9 -1.7**
comp=Z,0.7nm,1.0s,baz=274,slow=8.5,SNR=2.8
KSRS Korea Array 78.91 52 P **P 22 03 58.4 +1.0**
comp=Z,0.3nm,0.4s,baz=298,slow=5.0,SNR=2.8
ILAR Eielson Array 81.14 357 P **P 22 04 09.4 +0.4**
comp=Z,0.2nm,0.6s,baz=352,slow=5.5,SNR=3.0

PGC 15 21:56:37.2±0.9, 61°.54N×140°.64W, h8km, ML2.2/11, 188km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK3	**Moose Creek**	**0.25**	**20**	P	Pg	21 56 41.8	-0.6
YUK3				S	Sg	21 56 45.5	-0.3
YUK2	**White River**	**0.27**	**339**	P	Pg	21 56 42.0	-0.6
YUK2				S	Sg	21 56 46.1	0.0
YUK1	**Sand Pete Hill**	**0.62**	**5**	P	Pg	21 56 48.3	-0.9
YUK1				S	Sg	21 56 56.6	-0.7
CTGM	**Chitina Glacie**	**0.67**	**210**	P	Pg	21 56 49.2	-0.9
CTGM				S	Sg	21 56 58.5	-0.4
LOGN	**Logan Glacier**	**0.74**	**194**	P	Pg	21 56 50.4	-1.1
LOGN				S	Sg	21 57 01.2	+0.1
BVCY	**Beaver Creek**	**0.88**	**353**	P	Pg	21 56 52.8	-1.4
BVCY				S	Sg	21 57 05.1	-0.6
BALM	**Baldy**	**0.97**	**239**	P	Pg	21 56 54.3	-1.5
BALM				S	Sg	21 57 07.9	-0.4
GRNC	**Granite Creek**	**0.97**	**214**	P	Pg	21 56 54.4	-1.6
GRNC				S	Sg	21 57 08.0	-0.6
YUK4	**Talbot Arm**	**0.98**	**101**	P	Pg	21 56 55.3	-0.7
YUK4				S	Sg	21 57 08.7	0.0
KIAG	**Kiagna River**	**1.04**	**234**	P	Pg	21 56 55.7	-1.4
KIAG				S	Sg	21 57 10.4	-0.2
YUK6	**Outpost Mounta**	**1.25**	**118**	P	Pn	21 56 59.3	-2.0
YUK6				S	Sg	21 57 17.3	-0.3
RKAV	**Rock Avalanche**	**1.29**	**196**	P	Pn	21 57 00.3	-1.4
RKAV				S	Sb	21 57 17.0	-1.6
YUK5	**Granite Creek**	**1.40**	**106**	Pn	Pn	21 57 01.7	-1.5
YUK5				Sn	Sb	21 57 20.2	-1.6
SAMH	**Samovar Hills**	**1.42**	**183**	Pn	Pn	21 57 03.1	-0.2
SAMH				Sg	Sg	21 57 23.1	+0.3
PCA	**Pinnacle**	**1.46**	**172**	Pn	Pn	21 57 04.0	+0.1
PCA				Sg	Sg	21 57 24.0	-0.1
MESA	**MESA**	**1.51**	**206**	Pn	Pb	21 57 05.2	-0.4
MESA				Sg	Sg	21 57 25.8	+0.1
YUK7	**Dusty Glacier**	**1.58**	**129**	Pn	Pn	21 57 06.1	+0.3
HYT	**Haines Junctio**	**1.68**	**114**	Pn	Pn	21 57 07.3	+0.3
HYT				Sg	Sb	21 57 30.0	+0.2
PNL	**Peninsula**	**1.98**	**161**	Pn	Pb	21 57 12.5	-0.9
PNL				Sg	Sg	21 57 41.5	+0.8
DIV	**Divide**	**2.51**	**263**	Pn	Pb	21 57 21.3	-1.2
DIV				Sg	Sb	21 57 54.2	+0.8
DAWY	**Dawson**	**2.60**	**12**	Pn	Pn	21 57 20.0	+0.4
DAWY				Sg	Sb	21 57 56.9	+0.7
DOT	**Dot Lake**	**2.64**	**325**	Pn	Pn	21 57 20.0	-0.1
DOT				Sg	Sb	21 57 58.9	+1.5
WHY	**Whitehorse**	**2.93**	**105**	Pn	Pn	21 57 24.4	+0.2
WHY				Sg	Sb	21 58 08.3	+2.5

*IDC **15** 21:58:05.4±1.2, 34°.23N×25°.09E, h0km, mb3.4/5, mb1 3.4/9, mb1mx3.3/46, mbtmp3.3/9, ML3.8/2, MS3.0/3, Ms1 2.9/3, ms1mx2.6/28, Error ellipse: s-maj=20.7km s-min=19.2km az=143.0*
*ISCJB **15** 21:58:08.4±0.8, 34°.18N±0°.03×25°.12E±0°.04, h23km±6km, mb3.4/5, Error ellipse: s-maj=6.0km s-min=5.2km az=151.5*
*ATH **15** 21:58:09.4, 34°.31N×25°.11E, h26km±1km, ML2.9/7, Error ellipse: s-maj=2.6km s-min=1.1km az=350.0*
*THE **15** 21:58:10.2, 34°.35N×25°.11E, h1km±3km, ML2.9/2, Error ellipse: s-maj=4.8km s-min=1.2km az=175.0*
*HLW **15** 21:58:15.7, 33°.89N×25°.49E, h10km±12km, Ml3.5*
ISC 15 21:58:08.2±1.4, 34°.24N±0°.04×25°.10E±0°.04, h17km±9km, n55, σ1§54/64, mb3.5/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.81**	**343**	P	**Pb**	**21 58 24.0**	**+0.1**
SIVA				S	**Sb**	**21 58 34.7**	**+0.1**
SIVA	**Sivas**	**0.81**	**343**	P	**Pb**	**21 58 24.1**	**+0.1**
SIVA				S	**Sb**	**21 58 35.0**	**+0.4**
SIVA				AML	AML	21 58 42.5	
	comp=E,7043μm,0.7s						
SIVA				AML	AML	21 58 49.2	
	comp=N,3959μm,0.5s						
TMBK	**Timbaki Herakl**	**0.88**	**342**	P	**Pb**	**21 58 25.5**	**+0.5**
TMBK				S	**Sb**	**21 58 37.7**	**+1.3**
LAST	**Lasithi**	**0.97**	**19**	P	**Pg**	**21 58 26.9**	**-0.2**
LAST				S	**Sg**	**21 58 39.8**	**-0.2**
LAST	**Lasithi**	**0.97**	**19**	P	**Pg**	**21 58 26.9**	**-0.2**
LAST				S	**Sg**	**21 58 39.7**	**-0.2**
LAST				AML	AML	21 58 40.8	
	comp=E,767μm,0.6s						
LAST				AML	AML	21 58 41.5	
	comp=N,550μm,0.4s						
GVD	**Gavdhos**	**1.03**	**306**	P	**Pn**	**21 58 28.6**	**+0.8**
GVD	**Gavdhos**	**1.03**	**306**	P	**Pn**	**21 58 28.8**	**+1.0**
GVD				S	**Sn**	**21 58 42.5**	**+0.7**
GVD				AML	AML	21 58 47.1	
	comp=N,2662μm,0.4s						
GVD				AML	AML	21 58 48.3	
	comp=E,2224μm,0.5s						
IDI	**Anoyia**	**1.06**	**351**	Pn	**Pg**	**21 58 28.2**	**-0.6**
	comp=E,26nm,0.3s,baz=190,slow=8.4,SNR=78						
IDI				Sn	**Sb**	**21 58 42.8**	**+1.0**
	comp=E,39nm,0.3s,baz=198,slow=20,SNR=12						
IDI	**Anoyia**	**1.06**	**351**	P	**Pg**	**21 58 27.4**	**-1.4**
IDI	**Anoyia**	**1.06**	**351**	P	**Pg**	**21 58 27.8**	**-1.0**
KSTL	**Kastelli Herak**	**1.06**	**359**	P	**Pg**	**21 58 27.1**	**-1.7**
NPS	**Neapolis**	**1.11**	**22**	P	**Pg**	**21 58 29.2**	**-0.4**
NPS	**Neapolis**	**1.11**	**22**	P	**Pg**	**21 58 29.3**	**-0.4**
NPS				S	**Sg**	**21 58 43.9**	**-0.2**
NPS				AML	AML	21 58 52.5	
	comp=N,530μm,0.7s						
NPS				AML	AML	21 58 53.1	
	comp=E,698μm,0.5s						
PRNS	**Prines Rethymn**	**1.23**	**337**	P	**Pg**	**21 58 31.3**	**-0.6**
ZKR	**Zakros**	**1.27**	**46**	P	**Pg**	**21 58 32.6**	**-0.1**
ZKR	**Zakros**	**1.27**	**46**	P	**Pg**	**21 58 32.7**	**-0.1**
ZKR				S	**Sg**	**21 58 49.4**	**0.0**
ZKR				AML	AML	21 59 01.9	
	comp=N,304μm,0.5s						
ZKR				AML	AML	21 59 04.2	
	comp=E,663μm,0.6s						
VAM	**Vamos**	**1.38**	**328**	P	**Pg**	**21 58 33.8**	**-1.0**
VAM	**Vamos**	**1.38**	**328**	P	**Pn**	**21 58 34.0**	**+1.3**
VAM				S	**Sn**	**21 58 52.2**	**+1.6**
VAM				AML	AML	21 59 08.1	
	comp=E,918μm,0.5s						
VAM				AML	AML	21 59 09.1	
	comp=N,989μm,0.8s						
IMMV	**Iera Moni Meta**	**1.53**	**323**	P	**Pn**	**21 58 36.2**	**+1.5**
IMMV	**Iera Moni Meta**	**1.53**	**323**	P	**Pb**	**21 58 36.3**	**+0.3**
IMMV				S	**Sg**	**21 58 56.3**	**-1.2**
IMMV				AML	AML	21 59 08.3	
	comp=N,958μm,0.4s						
IMMV				AML	AML	21 59 15.8	
	comp=E,826μm,0.6s						
THR6	**Thira Island,**	**2.13**	**7**	P	**Pn**	**21 58 45.3**	**+2.3**
SAP1	**Santorini-Akro**	**2.13**	**7**	P	**Pn**	**21 58 45.2**	**+2.2**
KARP	**Karpathos**	**2.14**	**52**	P	**Pn**	**21 58 45.0**	**+1.8**
THR3	**Thira Island,**	**2.18**	**6**	P	**Pn**	**21 58 45.2**	**+1.5**
THR3	**Thira Island,**	**2.18**	**6**	P	**Pn**	**21 58 45.7**	**+2.0**
THR5	**Thira Island,**	**2.18**	**5**	P	**Pn**	**21 58 45.4**	**+1.7**
THR5	**Thira Island,**	**2.18**	**5**	P	**Pn**	**21 58 45.5**	**+1.7**
ANAF	**Anafi Island**	**2.19**	**14**	P	**Pn**	**21 58 45.5**	**+1.7**
ANAF	**Anafi Island**	**2.19**	**14**	P	**Pn**	**21 58 45.7**	**+1.9**
THR8	**Santorini-Mono**	**2.19**	**8**	P	**Pn**	**21 58 44.7**	**+0.9**
ANKY	**Antikythira Is**	**2.19**	**318**	P	**Pn**	**21 58 46.4**	**+2.5**
IOSP	**Ios island**	**2.48**	**4**	P	**Pn**	**21 58 49.1**	**+1.2**
MHLO	**Agia Marina, M**	**2.51**	**347**	P	**Pn**	**21 58 49.4**	**+1.2**
MHLA	**Plaka, Milos I**	**2.56**	**348**	P	**Pn**	**21 58 51.1**	**+2.1**
AMGA	**Amorgos Island**	**2.67**	**14**	P	**Pn**	**21 58 51.8**	**+1.3**
SLUM	**Salum**	**2.74**	**178**	P	**Pn**	**21 58 54.6**	**+3.2**
	baz=186						
SLUM				AMP		21 59 00.0	
	baz=186						
SLUM				S	**Sn**	**21 59 22.6**	**-1.5**
	baz=186						
APE	**Apeiranthos**	**2.85**	**7**	P	**Pn**	**21 58 54.0**	**+1.0**
VLI	**Veliai**	**3.04**	**325**	P	**Pn**	**21 58 57.3**	**+1.8**
ARG	**Arkhangelos**	**3.17**	**51**	P	**Pn**	**21 58 59.9**	**+2.6**
DID	**Didima**	**3.59**	**336**	P	**Pn**	**21 59 04.4**	**+1.2**
SWA2		**4.99**	**176**	P	**Pn**	**21 59 25.1**	**+2.8**
	baz=181						
GLL	**Jalalah**	**7.29**	**128**	P	**Pn**	**21 59 56.0**	**+1.9**
	baz=127						
MMAI	**Mount Meron Ar**	**8.68**	**95**	Pn	**Pn**	**22 00 13.4**	**+0.3**
	comp=E,0.4nm,0.3s,baz=279,slow=12,SNR=3.6						
MMAI				Sn	Sn	22 01 45.2	-5.4
	comp=E,1.5nm,0.3s,baz=271,slow=22,SNR=4.9						
BRTR	**Keskin Array B**	**8.76**	**49**	Pn	**Pn**	**22 00 16.9**	**+2.7**
	comp=E,0.0nm,0.3s,baz=224,slow=8.1,SNR=2.4						
EIL	**Elat**	**9.53**	**116**	Sn	Sn	22 02 03.9	-7.5
	comp=E,0.3nm,0.3s,baz=9.3,slow=19,SNR=2.6						
EIL				LR	LR	22 04 44.5	
	comp=E,50nm,20.8s,baz=287,slow=42						
ASF	**Jabal al Asfar**	**10.10**	**98**	Sn	**Sn**	**22 02 20.8**	**-4.7**
	comp=E,0.2nm,0.3s,baz=215,slow=19,SNR=2.2						
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**Pn**	**22 02 00.6**	**-1.0**
	comp=E,1.0nm,0.3s,baz=202,slow=10,SNR=4.6						
KVAR	**Kislovodsk Arr**	**16.73**	**49**	LR	LR	22 08 59.9	
	comp=E,66nm,20.0s,baz=240,slow=39						
KBZ	**Khabaz**	**16.75**	**50**	LR	LR	22 08 59.6	
	comp=E,62nm,20.1s,baz=348,slow=39						
GERES	**GERESS Array B**	**16.88**	**333**	Pn	**Pn**	**22 02 04.9**	**+1.3**
	baz=155,slow=12,SNR=3.7						
ESDC	**Sonseca Array**	**23.79**	**292**	P	**P**	**22 03 20.3**	**+0.2**
	comp=E,0.1nm,0.4s,baz=97,slow=10,SNR=3.4						
TORD	**Torodi Ar. Bea**	**29.86**	**231**	P	**P**	**22 04 14.3**	**-0.6**
	comp=E,0.3nm,0.4s,baz=29,slow=8.4,SNR=8.0						
MKAR	**Makanchi Array**	**44.33**	**56**	P	**P**	**22 06 18.0**	**+0.6**
	comp=E,0.2nm,0.3s,baz=261,slow=8.0,SNR=4.3						
ZALV	**Zalesovo Beam**	**45.68**	**46**	P	**P**	**22 06 25.8**	**-2.1**
	comp=E,0.8nm,0.4s,baz=253,slow=6.4,SNR=3.5						
SONM	**Songino Array**	**60.11**	**50**	P	**P**	**22 08 14.7**	**0.0**
	comp=E,0.3nm,0.5s,baz=310,slow=8.3,SNR=2.6						

*IDC **15** 22:01:20.0±1.0, 34°.23N×24°.99E, h0km, mb3.8/9, mb1 3.9/15, mb1mx3.7/46, mbtmp3.8/15, ML4.0/5, Error ellipse: s-maj=17.7km s-min=16.9km az=178.0*
*ATH **15** 22:01:22.7, 34°.22N×25°.08E, h24km±1km, ML3.3/7, Error ellipse: s-maj=3.0km s-min=1.2km az=355.0*
*THE **15** 22:01:23.7, 34°.30N×25°.05E, h0km±3km, ML3.1/3, Error ellipse: s-maj=6.0km s-min=1.4km az=187.0*
ISC 15 22:01:20.8±1.7, 34°.13N±0°.06×25°.05E±0°.04, h11km±10km, n56, σ1§60/69, mb3.9/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.91**	**347**	P	**Pb**	**22 01 38.4**	**-0.1**
SIVA				S	**Sb**	**22 01 50.5**	**-0.1**
SIVA	**Sivas**	**0.91**	**347**	P	**Pb**	**22 01 38.5**	**-0.1**
SIVA				S	**Sb**	**22 01 50.3**	**-0.3**
SIVA				AML	AML	22 01 55.5	
	comp=N,9455μm,0.4s						
SIVA				AML	AML	22 02 00.7	
	comp=E,15025μm,0.7s						
TMBK	**Timbaki Herakl**	**0.97**	**346**	P	**Pb**	**22 01 39.9**	**+0.3**
GVD	**Gavdhos**	**1.07**	**312**	P	**Pn**	**22 01 42.1**	**+0.5**
GVD	**Gavdhos**	**1.07**	**312**	P	**Pn**	**22 01 42.3**	**+0.7**
GVD				S	**Sn**	**22 01 57.4**	**+1.0**
GVD				AML	AML	22 02 05.4	
	comp=E,6004μm,0.7s						
GVD				AML	AML	22 02 08.0	
	comp=N,4880μm,0.6s						
LAST	**Lasithi**	**1.09**	**19**	P	**Pb**	**22 01 41.6**	**0.0**
LAST				S	**Sb**	**22 01 55.4**	**-0.5**
LAST	**Lasithi**	**1.09**	**19**	P	**Pb**	**22 01 41.6**	**0.0**
LAST				S	**Sb**	**22 01 55.8**	**-0.1**
LAST				AML	AML	22 02 07.0	
	comp=E,1297μm,0.8s						
LAST				AML	AML	22 02 14.7	
	comp=N,1319μm,0.8s						
IDI	**Anoyia**	**1.17**	**354**	Pn	**Pg**	**22 01 42.6**	**-0.6**
	comp=N,52nm,0.3s,baz=188,slow=16,SNR=31						
IDI				Sn	**Sb**	**22 01 57.2**	**-0.8**
	comp=N,45nm,0.3s,baz=121,slow=14,SNR=8.4						
IDI				LR	LR	22 02 08.6	
	comp=N,134nm,18.3s,baz=110,slow=46						
IDI	**Anoyia**	**1.17**	**354**	P	**Pg**	**22 01 41.8**	**-1.4**
KSTL	**Kastelli Herak**	**1.17**	**1**	P	**Pg**	**22 01 42.0**	**-1.4**
IACM	**Heraklion**	**1.18**	**1**	P	**Pn**	**22 01 43.3**	**+0.2**
NPS	**Neapolis**	**1.22**	**22**	P	**Pb**	**22 01 44.0**	**+0.1**
NPS				S	**Sb**	**22 01 59.8**	**+0.1**
NPS	**Neapolis**	**1.22**	**22**	P	**Pb**	**22 01 44.0**	**+0.1**
NPS				S	**Sn**	**22 02 00.6**	**+0.2**
NPS				AML	AML	22 02 14.6	
	comp=N,1067μm,0.6s						
NPS				AML	AML	22 02 16.9	
	comp=E,1432μm,0.6s						
PRNS	**Prines Rethymn**	**1.31**	**340**	P	**Pn**	**22 01 45.5**	**+0.5**
ZKR	**Zakros**	**1.38**	**44**	P	**Pg**	**22 01 47.0**	**-0.2**
ZKR	**Zakros**	**1.38**	**44**	P	**Pg**	**22 01 47.6**	**+0.4**
ZKR				S	**Sn**	**22 02 05.1**	**+1.1**
ZKR				AML	AML	22 02 16.1	
	comp=N,748μm,0.7s						
ZKR				AML	AML	22 02 19.5	
	comp=E,1424μm,0.6s						
VAM	**Vamos**	**1.46**	**331**	P	**Pb**	**22 01 47.8**	**0.0**
VAM	**Vamos**	**1.46**	**331**	P	**Pg**	**22 01 48.1**	**-0.7**
VAM				S	**Sg**	**22 02 07.2**	**-0.5**
VAM				AML	AML	22 02 18.6	
	comp=N,2134μm,0.5s						
VAM				AML	AML	22 02 21.2	
	comp=E,3052μm,0.9s						
IMMV	**Iera Moni Meta**	**1.59**	**327**	P	**Pb**	**22 01 49.9**	**-0.3**
IMMV	**Iera Moni Meta**	**1.59**	**327**	P	**Pb**	**22 01 50.4**	**+0.2**
IMMV				S	**Sg**	**22 02 11.5**	**-0.6**
IMMV				AML	AML	22 02 25.1	
	comp=E,1691μm,0.5s						
IMMV				AML	AML	22 02 29.7	
	comp=N,1613μm,0.5s						
KARP	**Karpathos**	**2.24**	**50**	P	**Pb**	**22 02 01.6**	**+0.4**
KARP	**Karpathos**	**2.24**	**50**	P	**Pb**	**22 02 01.5**	**+0.2**
THR6	**Thira Island,**	**2.24**	**7**	P	**Pb**	**22 02 00.3**	**-0.9**
ANKY	**Antikythira Is**	**2.25**	**321**	P	**Pb**	**22 02 00.7**	**-0.7**
THR3	**Thira Island,**	**2.29**	**7**	P	**Pn**	**22 02 00.1**	**+1.6**
THR5	**Thira Island,**	**2.30**	**6**	P	**Pn**	**22 02 00.3**	**+1.8**
ANAF	**Anafi Island**	**2.30**	**15**	P	**Pn**	**22 02 00.4**	**+1.8**
ANAF	**Anafi Island**	**2.30**	**15**	P	**Pb**	**22 02 00.8**	**-1.5**
THR8	**Santorini-Mono**	**2.30**	**9**	P	**Pb**	**22 02 00.5**	**-1.7**
IOSP	**Ios island**	**2.60**	**4**	P	**Pn**	**22 02 03.6**	**+0.9**
MHLO	**Agia Marina, M**	**2.61**	**348**	P	**Pn**	**22 02 04.1**	**+1.3**
MHLA	**Plaka, Milos I**	**2.66**	**349**	P	**Pn**	**22 02 05.4**	**+1.8**
AMGA	**Amorgos Island**	**2.79**	**14**	P	**Pn**	**22 02 07.3**	**+2.0**
APE	**Apeiranthos**	**2.96**	**7**	P	**Pn**	**22 02 08.4**	**+0.7**
VLI	**Veliai**	**3.11**	**327**	P	**Pn**	**22 02 11.2**	**+1.5**
ARG	**Arkhangelos**	**3.27**	**50**	P	**Pn**	**22 02 14.8**	**+2.9**
DID	**Didima**	**3.68**	**337**	P	**Pn**	**22 02 19.0**	**+1.4**
KSL	**Kastellorizon**	**4.23**	**60**	P	**Pn**	**22 02 27.0**	**+2.0**
MMAI	**Mount Meron Ar**	**8.71**	**94**	Pn	**Pn**

1.4nm,0.3s,baz=345,slow=22,SNR=6.0
ASAR Alice Springs 17.95 168 P P 22 22 58.5 -0.2
1.4nm,0.3s,baz=343,slow=9.5,SNR=46
ASAR S Sn 22 26 05.5 -13
0.2nm,0.3s,baz=345,slow=20,SNR=4.1
KSRS Korea Array 43.33 358 LR LR 22 42 40.8
comp=Z,46nm,20.9s,baz=171,slow=33
SONM Songino Array 57.48 342 LR LR 22 54 58.2
comp=Z,48nm,18.2s,baz=100,slow=38
MKAR Makanchi Array 67.31 327 P P 22 29 43.7 0.0
1.6nm,0.6s,baz=123,slow=7.8,SNR=20
MA2 Magadan 67.55 11 LR LR 22 59 25.5
comp=Z,15nm,18.4s,baz=110,slow=36
BVAR Borovoye Array 77.14 328 LR LR 23 07 28.3
comp=Z,81nm,21.3s,baz=180,slow=38

*IDC **15** 22:19:40.4±1.4, 34°.15N×25°.04E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.4/28, mbtmp3.6/5, ML4.0/2, Error ellipse: s-maj=44.9km s-min=24.1km az=135.0*
*ISCJB **15** 22:19:44.0±1.5, 34°.22N±0°.08×25°.09E±0°.05, h25km±8km, mb3.5/3, Error ellipse: s-maj=12.6km s-min=7.5km az=1.0*
*ATH **15** 22:19:45.6, 34°.38N×25°.06E, h29km±1km, ML2.9/6, Error ellipse: s-maj=2.8km s-min=1.3km az=357.0*
*THE **15** 22:19:46.9, 34°.43N×25°.03E, h1km±3km, ML3.1/2, Error ellipse: s-maj=4.5km s-min=1.2km az=158.0*
ISC 15 22:19:44.4±1.5, 34°.28N±0°.07×25°.08E±0°.03, h19km±4km, n32, σ0.81/40, mb3.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.76**	**343**	P	**Pb**	**22 19 58.7**	**-0.4**
SIVA				S	**Sg**	**22 20 08.9**	**-0.6**
SIVA	**Sivas**	**0.76**	**343**	P	**Pb**	**22 19 59.1**	**+0.1**
SIVA				S	**Sg**	**22 20 09.0**	**-0.6**
SIVA				AML	AML	22 20 17.2	
	comp=N,5887μm,0.6s						
SIVA				AML	AML	22 20 17.7	
	comp=E,6774μm,0.5s						
TMBK	**Timbaki Herakl**	**0.83**	**342**	P	**Pg**	**22 20 00.5**	**0.0**
LAST	**Lasithi**	**0.94**	**21**	P	**Pb**	**22 20 02.2**	**+0.2**
LAST	**Lasithi**	**0.94**	**21**	P	**Pb**	**22 20 02.2**	**+0.2**
LAST				S	**Sn**	**22 20 14.8**	**-0.7**
LAST				AML	AML	22 20 32.9	
	comp=E,635μm,0.6s						
LAST				AML	AML	22 20 34.1	
	comp=N,721μm,0.6s						
GVD	**Gavdhos**	**0.99**	**304**	P	**Pg**	**22 20 04.3**	**+0.8**
GVD				S	**Sg**	**22 20 16.5**	**0.0**
GVD	**Gavdhos**	**0.99**	**304**	P	**Pb**	**22 20 03.5**	**+0.6**
GVD				S	**Sg**	**22 20 16.3**	**-0.2**
GVD				AML	AML	22 20 21.7	
	comp=N,2071μm,0.4s						
GVD				AML	AML	22 20 24.1	
	comp=E,2095μm,0.3s						
KSTL	**Kastelli Herak**	**1.02**	**360**	P	**Pb**	**22 20 02.6**	**-0.8**
NPS	**Neapolis**	**1.07**	**24**	P	**Pb**	**22 20 04.4**	**+0.1**
NPS	**Neapolis**	**1.07**	**24**	P	**Pb**	**22 20 04.7**	**+0.4**
NPS				S	**Sg**	**22 20 18.6**	**-0.6**
NPS				AML	AML	22 20 32.4	
	comp=N,467μm,0.5s						
NPS				AML	AML	22 20 35.6	
	comp=E,618μm,0.6s						
PRNS	**Prines Rethymn**	**1.18**	**336**	P	**Pn**	**22 20 06.0**	**+0.2**
ZKR	**Zakros**	**1.25**	**48**	P	**Pg**	**22 20 09.4**	**+0.8**
ZKR	**Zakros**	**1.25**	**48**	P	**Pb**	**22 20 08.5**	**+1.1**
VAM	**Vamos**	**1.33**	**327**	P	**Pb**	**22 20 09.2**	**+0.4**
VAM	**Vamos**	**1.33**	**327**	P	**Pb**	**22 20 09.4**	**+0.7**
VAM				S	**Sg**	**22 20 26.0**	**-1.5**
VAM				AML	AML	22 20 37.8	
	comp=N,1149μm,0.5s						
VAM				AML	AML	22 20 37.8	
	comp=E,1138μm,0.6s						
IMMV	**Iera Moni Meta**	**1.48**	**323**	P	**Pb**	**22 20 11.7**	**+0.4**
IMMV	**Iera Moni Meta**	**1.48**	**323**	P	**Pb**	**22 20 11.4**	**+0.1**
IMMV				S	**Sb**	**22 20 29.7**	**0.0**
IMMV				AML	AML	22 20 46.1	
	comp=N,600μm,0.7s						
IMMV				AML	AML	22 20 49.3	
	comp=E,901μm,0.5s						
KARP	**Karpathos**	**2.13**	**53**	P	**Pb**	**22 20 22.3**	**0.0**
KARP	**Karpathos**	**2.13**	**53**	P	**Pb**	**22 20 21.7**	**-0.6**
THR5	**Thira Island,**	**2.14**	**6**	P	**Pn**	**22 20 20.2**	**+1.1**
SAP3	**Santorini-Thir**	**2.16**	**6**	P	**Pn**	**22 20 20.4**	**+1.1**
IOSP	**Ios island**	**2.44**	**4**	P	**Pn**	**22 20 23.9**	**+0.7**
MHLO	**Agia Marina, M**	**2.46**	**347**	P	**Pn**	**22 20 24.5**	**+0.9**
AMGA	**Amorgos Island**	**2.63**	**14**	P	**Pn**	**22 20 26.9**	**+1.1**
APE	**Apeiranthos**	**2.80**	**7**	P	**Pn**	**22 20 28.9**	**+0.7**
VLI	**Veliai**	**2.99**	**325**	P	**Pn**	**22 20 32.1**	**+1.3**
DID	**Didima**	**3.54**	**336**	P	**Pn**	**22 20 39.1**	**+0.7**
AKASG	**Malin Array Be**	**16.68**	**9**	Pn	**Pn**	**22 23 37.2**	**+0.2**
	comp=E,0.6nm,0.3s,baz=196,slow=11,SNR=3.1						
GERES	**GERESS Array B**	**16.83**	**333**	Pn	**Pn**	**22 23 40.2**	**+1.4**
	comp=E,0.2nm,0.3s,baz=143,slow=12,SNR=13						
TORD	**Torodi Ar. Bea**	**29.88**	**231**	P	**P**	**22 25 48.8**	**-2.1**
	comp=E,0.5nm,0.5s,baz=32,slow=8.7,SNR=11						
MKAR	**Makanchi Array**	**44.32**	**56**	P	**P**	**22 27 53.3**	**+0.3**
	comp=E,0.2nm,0.5s,baz=263,slow=7.7,SNR=3.1						
ZALV	**Zalesovo Beam**	**45.66**	**46**	P	**P**	**22 28 02.8**	**-0.8**
	comp=E,0.5nm,0.3s,baz=268,slow=8.4,SNR=3.4						

*IDC **15** 22:56:00.8±1.3, 34°.28N×25°.15E, h0km, mb3.7/4, mb1 3.9/9, mb1mx3.5/53, mbtmp3.7/9, ML3.9/5, Error ellipse: s-maj=24.0km s-min=18.1km az=56.0*
*THE **15** 22:56:04.7, 34°.30N×25°.02E, h0km±3km, ML2.9/3, Error ellipse: s-maj=5.8km s-min=1.8km az=169.0*
*ATH **15** 22:56:05.8, 34°.40N×25°.02E, h26km±1km, ML2.9/6, Error ellipse: s-maj=2.8km s-min=1.1km az=353.0*
ISC 15 22:56:01.8±1.7, 34°.18N±0°.06×25°.04E±0°.03, h11km±10km, n41, σ1.35/52, mb3.7/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**347**	P	**Pb**	**22 56 19.0**	**+0.3**
SIVA				S	**Sb**	**22 56 29.7**	**-0.5**
SIVA	**Sivas**	**0.86**	**347**	P	**Pb**	**22 56 19.1**	**+0.4**
SIVA				S	**Sg**	**22 56 28.0**	**-1.5**
SIVA				AML	AML	22 56 35.4	
	comp=N,4082μm,0.5s						
SIVA				AML	AML	22 56 39.8	
	comp=E,4210μm,0.7s						
TMBK	**Timbaki Herakl**	**0.92**	**346**	P	**Pn**	**22 56 20.5**	**-0.1**
GVD	**Gavdhos**	**1.03**	**310**	P	**Pn**	**22 56 22.8**	**+0.7**
GVD				S	**Sn**	**22 56 37.4**	**+0.9**
GVD	**Gavdhos**	**1.03**	**310**	P	**Pn**	**22 56 22.9**	**+0.7**
GVD				S	**Sn**	**22 56 35.5**	**-1.0**
GVD				AML	AML	22 56 47.2	
	comp=E,2576μm,0.4s						
GVD				AML	AML	22 56 47.3	
	comp=N,2012μm,0.8s						
LAST	**Lasithi**	**1.04**	**20**	P	**Pg**	**22 56 22.1**	**+0.3**
LAST				S	**Sn**	**22 56 38.4**	**+1.3**
LAST	**Lasithi**	**1.04**	**20**	P	**Pg**	**22 56 22.2**	**+0.3**
LAST				S	**Sg**	**22 56 34.6**	**-0.8**
LAST				AML	AML	22 56 45.3	
	comp=N,755μm,0.7s						
LAST				AML	AML	22 56 48.4	
	comp=E,564μm,0.7s						
IDI	**Anoyia**	**1.11**	**354**	Pn	**Pg**	**22 56 23.2**	**0.0**
	comp=E,21nm,0.3s,baz=167,slow=20,SNR=13						
IDI				Sn	**Sb**	**22 56 37.5**	**-0.1**
	comp=E,38nm,0.3s,baz=244,slow=7.8,SNR=11						
KSTL	**Kastelli Herak**	**1.12**	**1**	P	**Pb**	**22 56 23.2**	**0.0**
NPS	**Neapolis**	**1.18**	**23**	P	**Pg**	**22 56 24.7**	**+0.3**
NPS	**Neapolis**	**1.18**	**23**	P	**Pg**	**22 56 25.2**	**+0.8**
NPS				S	**Sb**	**22 56 38.9**	**-0.6**
NPS				AML	AML	22 56 45.4	
	comp=E,732μm,0.8s						
NPS				AML	AML	22 56 48.6	
	comp=N,635μm,0.6s						
PRNS	**Prines Rethymn**	**1.26**	**340**	P	**Pg**	**22 56 26.6**	**+0.5**
ZKR	**Zakros**	**1.34**	**46**	P	**Pb**	**22 56 27.9**	**+0.9**
ZKR	**Zakros**	**1.34**	**46**	P	**Pg**	**22 56 29.1**	**+1.4**
VAM	**Vamos**	**1.41**	**331**	P	**Pg**	**22 56 28.6**	**-0.2**
VAM	**Vamos**	**1.41**	**331**	P	**Pg**	**22 56 29.3**	**+0.5**
VAM				S	**Sg**	**22 56 46.0**	**-1.1**
VAM				AML	AML	22 56 54.4	
	comp=N,743μm,0.4s						
VAM				AML	AML	22 57 00.3	
	comp=E,839μm,0.6s						
IMMV	**Iera Moni Meta**	**1.55**	**326**	P	**Pg**	**22 56 31.4**	**-0.1**
IMMV	**Iera Moni Meta**	**1.55**	**326**	P	**Pg**	**22 56 31.5**	**+0.1**
IMMV				S	**Sb**	**22 56 49.9**	**-0.2**
IMMV				AML	AML	22 57 02.4	
	comp=N,672μm,0.6s						
IMMV				AML	AML	22 57 13.6	
	comp=E,767μm,1.1s						
THR6	**Thira Island,**	**2.19**	**8**	P	**Pn**	**22 56 39.9**	**+1.7**
SAP1	**Santorini-Akro**	**2.19**	**7**	P	**Pn**	**22 56 39.8**	**+1.7**
ANKY	**Antikythira Is**	**2.21**	**320**	P	**Pb**	**22 56 41.1**	**-0.6**
KARP	**Karpathos**	**2.21**	**51**	P	**Pb**	**22 56 41.5**	**-0.3**
THR5	**Thira Island,**	**2.25**	**6**	P	**Pn**	**22 56 40.7**	**+1.8**
THR8	**Santorini-Mono**	**2.25**	**9**	P	**Pn**	**22 56 40.1**	**+1.1**
IOSP	**Ios island**	**2.54**	**4**	P	**Pn**	**22 56 44.0**	**+1.0**
MHLO	**Agia Marina, M**	**2.56**	**348**	P	**Pn**	**22 56 44.5**	**+1.3**
MHLA	**Plaka, Milos I**	**2.61**	**349**	P	**Pn**	**22 56 45.6**	**+1.7**
KYTH	**Kithira**	**2.64**	**322**	P	**Pb**	**22 56 47.4**	**-1.8**
VLI	**Veliai**	**3.06**	**326**	P	**Pn**	**22 56 51.7**	**+1.6**
DID	**Didima**	**3.63**	**337**	P	**Pn**	**22 56 59.0**	**+1.0**
MMAI	**Mount Meron Ar**	**8.72**	**95**	Pn	**Pn**	**22 58 06.4**	**-1.5**
	comp=E,0.2nm,0.3s,baz=268,slow=12,SNR=2.9						
MMAI				Sn	**Sn**	**22 59 40.6**	**-5.7**
	comp=E,0.9nm,0.3s,baz=275,slow=17,SNR=4.1						
EIL	**Elat**	**9.54**	**115**	Pn	**Pn**	**22 58 19.3**	**+0.1**
	comp=E,0.5nm,0.3s,baz=197,slow=1.3,SNR=12						
AKASG	**Malin Array Be**	**16.79**	**9**	Pn	**Pn**	**22 59 57.3**	**+0.5**
	comp=E,0.8nm,0.3s,baz=198,slow=10.0,SNR=4.4						
KVAR	**Kislovodsk Arr**	**16.80**	**49**	Pn	**Pn**	**22 59 56.8**	**-0.3**
	baz=269,slow=6.3,SNR=3.4						
GERES	**GERESS Array B**	**16.91**	**333**	Pn	**P**	**23 00 00.5**	**+0.2**
	comp=E,0.5nm,0.3s,baz=144,slow=12,SNR=28						
EKA	**Eskdalemuir Ar**	**28.79**	**326**	P	**P**	**23 02 02.1**	**+2.7**
	comp=E,0.2nm,0.4s,baz=122,slow=9.4,SNR=2.6						
TORD	**Torodi Ar. Bea**	**29.79**	**231**	P	**P**	**23 02 10.6**	**+1.8**
	comp=E,0.3nm,0.5s,baz=25,slow=8.5,SNR=4.2						
ARCES	**ARCESS Array B**	**35.41**	**0**	P	**P**	**23 02 55.2**	**-2.1**
	comp=E,12nm,0.4s,baz=186,slow=7.9,SNR=3.6						
AAK	**Ala-Archa**	**39.19**	**63**	P	**P**	**23 03 29.8**	**-0.2**
	comp=E,1.3nm,0.3s,baz=216,slow=8.7,SNR=3.0						
MKAR	**Makanchi Array**	**44.40**	**56**	P	**P**	**23 04 12.4**	**+0.1**
	comp=E,0.3nm,0.6s,baz=268,slow=7.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**45.75**	**45**	P	**P**	**23 04 22.9**	**-0.1**
	comp=E,0.7nm,0.4s,baz=273,slow=7.7,SNR=3.2						

*IDC **15** 23:02:30.1±2.7, 11°.50N×84°.95W, h0km, mb3.6/3, mb1 4.1/3, mb1mx3.5/39, mbtmp3.6/3, MS3.4/3, Ms1 3.5/3, ms1mx2.8/33, Error ellipse: s-maj=90.9km s-min=11.7km az=80.0*
*ISCJB **15** 23:02:31.0±0.8, 10°.49N±0°.06×86°.16W±0°.04, h10km, mb3.5/3, MS3.4/1, Error ellipse: s-maj=9.2km s-min=4.3km az=24.4*
*UCR **15** 23:02:33.2±2.0, 10°.55N×86°.10W, h16km±7km, ML3.6*
ISC 15 23:02:32.0±1.2, 10°.54N±0°.07×86°.10W±0°.06, h10km, n29, σ0.62/32, mb3.5/3, 3C-2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBS3	**Finca Las Img**	**0.68**	**69**	*i P*	**Pg**	**23 02 45.7**	**+0.5**
LAPC	**Finca la Perla**	**0.69**	**71**	*i P*	**Pg**	**23 02 45.8**	**+0.3**
BUEV	**Buena Vista**	**0.73**	**69**	*i P*	**Pg**	**23 02 46.5**	**+0.4**
GB1A	**Borinquen Arri**	**0.74**	**68**	⇓*eP*	**Pg**	**23 02 46.7**	**+0.3**
GB1A				*eS*	**Sb**	**23 02 58.5**	**+1.0**
MESS	**Mesas**	**0.91**	**77**	*i P*	**Pg**	**23 02 49.5**	**-0.1**
MESS				⇓*eP*	**Pg**	**23 02 49.5**	**-0.1**
MESS				*eS*	**Sb**	**23 03 02.7**	**+0.4**
CUI	**Cuipilapa**	**0.93**	**82**	*i P*	**Pg**	**23 02 49.8**	**-0.2**
CUI				*i S*	**Sg**	**23 03 03.3**	**+0.9**
JTS	**Las Juntas de**	**1.16**	**102**	Pg	**Pb**	**23 02 53.0**	**-1.1**
	149nm,0.3s,baz=358,slow=12,SNR=521						
JTS				LR	LR	23 03 00.6	
	comp=Z,35nm,20.2s,baz=29,slow=26						
JTS				Lg	Lg	23 03 09.2	
	204nm,0.3s,baz=0.0,slow=19,SNR=22						
JTS	**Las Juntas de**	**1.16**	**102**	⇑*eP*	**Pb**	**23 02 53.0**	**-1.1**
JTS				*eS*	**Sg**	**23 03 08.6**	**-0.7**
ARE1	**Arenal 1**	**1.36**	**93**	⇑*eP*	**Pn**	**23 02 56.9**	**-0.3**
MASN	**Masaya**	**1.44**	**358**	*eP*	**Pn**	**23 02 58.2**	**-0.1**
TISN	**Laguna Tiscapa**	**1.60**	**354**	*eP*	**Pn**	**23 03 00.3**	**-0.2**
XAVN	**Gruta Xavier**	**1.62**	**352**	*eP*	**Pn**	**23 03 00.4**	**-0.3**
SRA1	**San Ramn**	**1.66**	**106**	*eP*	**Pn**	**23 03 01.7**	**+0.4**
ACON	**Acoyapa**	**1.69**	**32**	⇑*iP*	**Pn**	**23 03 01.1**	**-0.6**
ACON				*eS*	**Sn**	**23 03 23.7**	**+0.4**
ACON				IAML		23 03 24.9	
	comp=N,713nm,1.4s						
COPN	**Copaltepe**	**1.70**	**344**	*eP*	**Pn**	**23 03 01.4**	**-0.5**
APYN	**Apoyeque**	**1.70**	**352**	*eP*	**Pn**	**23 03 01.7**	**-0.2**
MOMN	**Momotombo**	**1.91**	**347**	*eP*	**Pn**	**23 03 05.3**	**+0.6**
HDC	**Heredia**	**2.02**	**105**	*eP*	**Pn**	**23 03 07.9**	**+1.5**
CNGN	**Cerro Negro**	**2.04**	**343**	*eP*	**Pn**	**23 03 06.3**	**-0.2**
CNGN				*eP*	**Pn**	**23 03 06.4**	**-0.2**
LCR2	**La Lucha 2**	**2.21**	**111**	*eP*	**Pn**	**23 03 08.6**	**-0.4**
MATN	**Matagalpa**	**2.38**	**4**	*eP*	**Pn**	**23 03 10.7**	**-0.6**
ESPN	**Las Esperanzas**	**2.41**	**47**	*eP*	**Pn**	**23 03 11.1**	**-0.5**
CSGN	**Cosiguina Volc**	**2.81**	**330**	*eP*	**Pn**	**23 03 17.8**	**+0.6**
SDV	**Santo Domingo**	**15.33**	**95**	LR	LR	23 12 37.3	
	comp=N,834nm,21.7s,baz=71,slow=42						
ATAH	**Atahualpa**	**19.16**	**156**	LR	LR	23 13 00.7	
	comp=N,38nm,20.8s,baz=25,slow=32						
TXAR	**Lajitas Array**	**24.89**	**321**	P	**P**	**23 07 54.6**	**-0.7**
	comp=N,1.1nm,0.5s,baz=145,slow=8.8,SNR=22						
PDAR	**Pinedale Array**	**38.08**	**332**	P	**P**	23 09 47.6	-3.6
	comp=N,0.2nm,0.4s,baz=133,slow=12,SNR=3.2						
NVAR	**Mina Array Bea**	**40.01**	**319**	P	**P**	**23 10 08.2**	**+0.7**
	comp=N,0.6nm,0.5s,baz=127,slow=7.8,SNR=8.4						
ILAR	**Eielson Array**	**68.29**	**336**	LR	LR	23 47 07.6	
	comp=N,20nm,18.8s,baz=32,slow=39						

*IDC **15** 23:05:41.1±1.3, 34°.30N×25°.27E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.4/39, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=23.7km s-min=21.4km az=46.0*
*ATH **15** 23:05:46.1, 34°.36N×25°.06E, h26km±1km, ML3.0/5, Error ellipse: s-maj=3.0km s-min=1.3km az=355.0*
*THE **15** 23:05:46.2, 34°.33N×25°.08E, h3km±5km, ML2.8/3, Error ellipse: s-maj=5.5km s-min=1.8km az=264.0*
ISC 15 23:05:43.2±0.8, 34°.17N±0°.07×25°.11E±0°.04, h20km±5km, n31, σ1.63/43, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.88**	**344**	P	**Pb**	**23 05 59.9**	**+0.1**
SIVA				S	**Sb**	**23 06 11.0**	**-0.2**
SIVA	**Sivas**	**0.88**	**344**	P	**Pb**	**23 06 00.0**	**+0.2**
SIVA				S	**Sb**	**23 06 10.0**	**-1.2**
SIVA				AML	AML	23 06 16.5	
	comp=E,5442μm,0.7s						
SIVA				AML	AML	23 06 17.9	
	comp=N,5821μm,0.7s						
TMBK	**Timbaki Herakl**	**0.94**	**343**	P	**Pn**	**23 06 01.4**	**+0.1**
TMBK				S	**Sn**	**23 06 14.1**	**-0.1**
LAST	**Lasithi**	**1.03**	**17**	P	**Pn**	**23 06 02.9**	**+0.3**
LAST				S	**Sn**	**23 06 16.4**	**-0.1**
LAST	**Lasithi**	**1.03**	**17**	P	**Pn**	**23 06 02.9**	**+0.3**
LAST				S	**Sb**	**23 06 15.0**	**-0.7**
LAST				AML	AML	23 06 27.4	
	comp=N,611μm,1.0s						
LAST				AML	AML	23 06 32.4	
	comp=E,691μm,0.8s						
GVD	**Gavdhos**	**1.08**	**309**	P	**Pb**	**23 06 04.0**	**+0.9**
GVD	**Gavdhos**	**1.08**	**309**	P	**Pb**	**23 06 04.0**	**+0.9**
GVD				S	**Sb**	**23 06 17.2**	**+0.4**
GVD				AML	AML	23 06 22.1	
	comp=N,1940μm,0.5s						
GVD				AML	AML	23 06 27.3	
	comp=E,2690μm,0.4s						
IDI	**Anoyia**	**1.13**	**351**	Pn	**Pb**	**23 06 04.0**	**-0.1**
	comp=E,18nm,0.3s,baz=165,slow=20,SNR=41						
IDI				Sn	**Sb**	**23 06 15.5**	**-2.9**
	comp=E,14nm,0.3s,baz=170,slow=20,SNR=7.3						
NPS	**Neapolis**	**1.17**	**21**	P	**Pb**	**23 06 05.3**	**+0.6**
NPS				S	**Sn**	**23 06 19.6**	**-0.1**
NPS	**Neapolis**	**1.17**	**21**	P	**Pb**	**23 06 05.5**	**+0.8**
PRNS	**Prines Rethymn**	**1.29**	**337**	P	**Pb**	**23 06 07.1**	**+0.3**
ZKR	**Zakros**	**1.31**	**44**	P	**Pb**	**23 06 08.9**	**+1.8**
ZKR	**Zakros**	**1.31**	**44**	P	**Pb**	**23 06 09.1**	**+2.0**
ZKR				S	**Sb**	**23 06 25.7**	**+2.2**
ZKR				AML	AML	23 06 38.2	
	comp=E,1260μm,0.5s						
ZKR				AML	AML	23 06 41.0	
	comp=N,438μm,0.5s						
VAM	**Vamos**	**1.45**	**329**	P	**Pb**	**23 06 09.3**	**-0.1**
VAM	**Vamos**	**1.45**	**329**	P	**Pb**	**23 06 09.7**	**+0.3**
VAM				S	**Sn**	**23 06 27.1**	**+0.6**
VAM				AML	AML	23 06 40.0	
	comp=N,1002μm,0.5s						
VAM				AML	AML	23 06 40.1	
	comp=E,1112μm,0.8s						
IMMV	**Iera Moni Meta**	**1.59**	**325**	P	**Pb**	**23 06 11.9**	**0.0**
IMMV	**Iera Moni Meta**	**1.59**	**325**	P	**Pb**	**23 06 12.1**	**+0.3**
KARP	**Karpathos**	**2.18**	**50**	P	**Pb**	**23 06 23.1**	**+1.2**
KARP	**Karpathos**	**2.18**	**50**	P	**Pb**	**23 06 22.7**	**+0.8**
IOSP	**Ios island**	**2.55**	**3**	P	**Pn**	**23 06 25.0**	**+1.6**
MHLO	**Agia Marina, M**	**2.58**	**347**	P	**Pn**	**23 06 26.0**	**+2.3**
MHLA	**Plaka, Milos I**	**2.63**	**348**	P	**Pn**	**23 06 26.9**	**+2.5**
AMGA	**Amorgos Island**	**2.73**	**13**	P	**Pn**	**23 06 28.3**	**+2.4**
APE	**Apeiranthos**	**2.91**	**7**	P	**Pn**	**23 06 30.7**	**+2.3**
MMAI	**Mount Meron Ar**	**8.66**	**95**	Pn	**Pn**	**23 07 46.5**	**-1.0**
	comp=E,0.2nm,0.3s,baz=279,slow=12,SNR=2.6						
MMAI				Sn	**Sn**	**23 09 20.0**	**-4.6**
	comp=E,0.6nm,0.3s,baz=298,slow=19,SNR=3.7						
EIL	**Elat**	**9.49**	**116**	Pn	**Pn**	**23 07 58.2**	**-0.4**
	comp=E,0.3nm,0.3s,baz=304,slow=15,SNR=2.8						
EIL				Sn	**Sn**	**23 09 40.8**	**-3.9**
	comp=E,0.3nm,0.3s,baz=330,slow=16,SNR=3.5						
GERES	**GERESS Array B**	**16.94**	**333**	Pn	**P**	**23 09 40.5**	**-0.4**
	comp=E,0.1nm,0.3s,baz=143,slow=12,SNR=6.3						
TORD	**Torodi Ar. Bea**	**29.83**	**231**	P	**P**	**23 11 51.8**	**+2.8**
	comp=E,0.5nm,0.5s,baz=33,slow=8.6,SNR=9.2						
ARCES	**ARCESS Array B**	**35.42**	**0**	P	**P**	**23 12 35.4**	**-2.0**
	comp=E,13nm,0.4s,baz=172,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**44.36**	**56**	P	**P**	**23 13 52.8**	**+0.8**
	comp=E,0.3nm,0.6s,baz=270,slow=7.0,SNR=3.6						
ZALV	**Zalesovo Beam**	**45.72**	**45**	P	**P**	**23 14 01.8**	**-0.8**
	comp=E,0.9nm,0.4s,baz=266,slow=9.6,SNR=4.5						

*IDC **15** 23:30:29.6±1.3, 34°.23N×25°.11E, h0km, mb3.7/3, mb1 3.6/6, mb1mx3.3/41, mbtmp3.5/6, ML3.8/3, Error ellipse: s-maj=24.6km s-min=20.1km az=96.0*
*ISCJB **15** 23:30:30.1±1.1, 34°.16N±0°.09×25°.2E±0°.1, h17km, Error ellipse: s-maj=17.5km s-min=11.0km az=153.2*
ISC 15 23:30:32.0±1.2, 34°.23N±0°.10×25°.26E±0°.10, h17km, n7, σ1.89/9, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.10**	**344**	Pn	**Pg**	**23 30 53.2**	**-0.2**
	9.8nm,0.3s,baz=167,slow=19,SNR=3.4						
IDI				Sn	**Sb**	**23 31 06.5**	**-0.2**
	48nm,0.3s,baz=127,slow=20,SNR=9.6						
MMAI	**Mount Meron Ar**	**8.55**	**95**	Pn	**Pn**	**23 32 37.8**	**+2.7**
	0.3nm,0.3s,baz=280,slow=13,SNR=3.3						
MMAI				Sn	**Sn**	**23 34 07.6**	**-3.5**
	0.5nm,0.3s,baz=291,slow=12,SNR=3.2						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**23 34 25.1**	**-0.2**
	0.6nm,0.3s,baz=196,slow=11,SNR=5.6						
GERES	**GERESS Array B**	**16.94**	**333**	Pn	**Pn**	**23 34 28.5**	**+0.2**
	0.2nm,0.3s,baz=146,slow=12,SNR=10						
TORD	**Torodi Ar. Bea**	**29.96**	**231**	P	**P**	**23 36 38.7**	**-0.8**
	0.6nm,0.5s,baz=28,slow=9.4,SNR=13						
MKAR	**Makanchi Array**	**44.23**	**56**	P	**P**	**23 38 41.1**	**+0.8**
	0.2nm,0.5s,baz=274,slow=5.7,SNR=2.7						
ZALV	**Zalesovo Beam**	**45.59**	**46**	P	**P**	**23 38 50.6**	**-0.4**
	0.9nm,0.4s,baz=278,slow=8.8,SNR=3.6						

*GII **15** 23:33:54.4±0.0, 34°.35N×25°.08E, h1km, MD3.1/1*
*IDC **15** 23:34:00.3±1.3, 34°.26N×25°.33E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.4/40, mbtmp3.6/6, ML3.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.0/39, Error ellipse: s-maj=23.0km s-min=22.0km az=8.0*
*ISCJB **15** 23:34:02.7±0.7, 34°.03N±0°.06×25°.25E±0°.04, h52km±9km, mb3.8/5, MS2.7/1, Error ellipse: s-maj=11.7km s-min=3.4km az=26.9*
*ATH **15** 23:34:05.3, 34°.31N×25°.07E, h27km±1km, ML3.0/7, Error ellipse: s-maj=3.1km s-min=1.2km az=352.0*
*THE **15** 23:34:05.9, 34°.35N×25°.09E, h0km±2km, ML3.1/2, Error ellipse: s-maj=4.1km s-min=1.3km az=189.0*
ISC 15 23:34:05.3±1.4, 34°.21N±0°.07×25°.18E±0°.05, h38km±2km, n79, σ1.78/88, mb3.8/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**339**	P	**Pn**	**23 34 19.9**	**-1.0**
SIVA				S	**Sn**	**23 34 30.4**	**-1.8**
SIVA	**Sivas**	**0.86**	**339**	P	**Pn**	**23 34 19.9**	**-1.0**
SIVA				S	**Sn**	**23 34 30.5**	**-1.8**
SIVA				AML	AML	23 34 32.1	
	comp=E,10995μm,0.7s						
SIVA				AML	AML

TRIP	Tripoli	4.07	325	P	Pn	23 35 07.3 +2.3
KSL	Kastellorizon	4.09	61	P	Pn	23 35 07.8 +2.6
MES3	Kyparissia	4.16	318	P	Pn	23 35 08.2 +2.0
LTK	Loutraki	4.20	335	P	Pn	23 35 08.2 +1.3
VIL2	Platees	4.28	339	P	Pn	23 35 08.1 +0.2
THAL	Thalero	4.33	333	P	Pn	23 35 10.2 +1.7
GUR	Goura	4.37	329	P	Pn	23 35 11.1 +1.9
KLV	Kalavryta, Ach	4.54	328	P	Pn	23 35 12.4 +0.9
MRKA	Markates	4.67	344	P	Pn	23 35 14.2 +1.0
LAKA	Lakka	4.78	328	P	Pn	23 35 16.7 +1.9
KALE	Kalithea	4.84	330	P	Pn	23 35 17.3 +1.6
ANX	Ano Chora	5.10	330	P	Pn	23 35 20.8 +1.6
AGG	Agios Georgios	5.32	335	P	Pn	23 35 24.1 +1.9
PDO	Prodromos	5.44	325	P	Pn	23 35 27.0 +3.3
OFRI	˙Ofer	8.35	98	Sn	Sn	23 37 34.7 -2.1
HNTI	Hanita	8.41	95	Sn	Sn	23 37 37.0 -1.2
SLTI	Sal'it	8.49	101	Pn	Pn	23 36 01.1 -4.6
MMA0B	Mount Meron ar	8.61	95	Sn	Sn	23 37 41.8 -1.4
MMAI	Mount Meron Ar	8.61	95	Pn	Pn	23 36 05.8 -1.6
	comp=E,0.2nm,0.3s,baz=282,slow=11,SNR=2.2					
MMAI				Sn	Sn	23 37 40.5 -2.7
	comp=E,2.2nm,0.3s,baz=267,slow=28,SNR=5.8					
AMAZ	Amatzia	8.61	105	Pn	Pn	23 36 01.9 -5.5
AMAZ				Sn	Sn	23 37 41.9 -1.3
MMLI	Mount Malkishu	8.75	99	Pn	Pn	23 36 04.0 -5.3
MMLI				Sn	Sn	23 37 45.3 -1.3
KSDI	Kefar Szold	8.79	94	Pn	Pn	23 36 04.8 -5.0
KSDI				Sn	Sn	23 37 45.9 -1.6
YTIR	Yattir	8.83	106	Pn	Pn	23 36 05.0 -5.5
YTIR				Sn	Sn	23 37 47.4 -1.4
NATI	Neve Ativ	8.84	93	Pn	Pn	23 36 04.7 -5.8
NATI				Sn	Sn	23 37 47.5 -1.3
HMDT	Nahal Hemdat	8.88	100	Pn	Pn	23 36 05.4 -5.7
HMDT				Sn	Sn	23 37 48.5 -1.3
DSI	Dead Sea	8.97	104	Sn	Sn	23 37 50.4 -1.6
MZDA	Masada	9.05	106	Sn	Sn	23 37 52.6 -1.2
PRNI	Paran	9.16	112	Pn	Pn	23 36 10.1 -4.8
PRNI				Sn	Sn	23 37 55.8 -1.0
HRFI	Mount Harif	9.34	114	Pn	Pn	23 36 11.7 -5.6
HRFI				Sn	Sn	23 38 00.3 -0.7
MBRI	Mt Berech	9.36	115	Pn	Pn	23 36 12.2 -5.5
MBRI				Sn	Sn	23 38 00.1 -1.7
GERES	GERESS Array B	16.93	333	Pn	Pn	23 37 58.0 -1.2
	comp=E,0.2nm,0.3s,baz=150,slow=12,SNR=2.8					
FINES	FINESS Array B	27.25	1	P	P	23 39 44.9 -0.7
	comp=E,0.6nm,0.5s,baz=165,slow=12,SNR=3.1					
FINES				LR	LR	23 52 28.9
	comp=E,21nm,21.4s,baz=14,slow=41					
TORD	Torodi Ar. Bea	29.90	231	P	P	23 40 11.1 +1.5
	comp=E,0.7nm,0.4s,baz=31,slow=8.5,SNR=21					
ARCES	ARCESS Array B	35.38	0	P	P	23 40 56.1 -0.7
	comp=E,5.9nm,0.3s,baz=172,slow=9.4,SNR=4.1					
MKAR	Makanchi Array	44.29	56	P	P	23 42 10.3 -0.9
	comp=E,0.2nm,0.7s,baz=265,slow=5.3,SNR=2.4					
ZALV	Zalesovo Beam	45.65	45	P	P	23 42 21.7 -0.2
	comp=E,0.6nm,0.4s,baz=266,slow=9.6,SNR=2.9					

IDC 15 23:40:36.0±19.0, 18°22S×178°53W, h566km±236km, mb3.2/4, mb1 3.5/4, mb1mx2.9/26, mbtmp4.2/4, Error ellipse: s-maj=174.3km s-min=57.1km az=175.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.38	241	P	P	23 47 08.9	-0.7
	1.0nm,0.3s,baz=99,slow=7.2,SNR=4.6						
WRA	Warramunga Arr	44.47	260	P	P	23 47 56.9	-0.8
	1.2nm,0.5s,baz=89,slow=7.6,SNR=7.4						
ASAR	Alice Springs	44.60	255	P	P	23 47 59.4	+0.6
	11nm,0.5s,baz=88,slow=8.3,SNR=212						
TXAR	Lajitas Array	86.26	58	P	P	23 52 18.6	+0.1
	0.3nm,0.8s,baz=213,slow=3.0,SNR=3.6						
GERES	GERESS Array B	147.88	347	PKPbc	PKPbc	23 59 17.1	-0.8
	0.2nm,0.3s,baz=29,slow=3.0,SNR=4.0						

*ISCJB **16** 00:12:21.6±0.4, 31°.92S±0°.04×179°.9W±0°.1, h200km, mb3.9/6, Error ellipse: s-maj=13.2km s-min=3.4km az=18.5*

*IDC **16** 00:12:25.4±4.4, 31°.98S×179°.71W, h235km±40km, mb3.7/6, mb1 3.8/7, mb1mx3.5/26, mbtmp4.3/7, Error ellipse: s-maj=37.3km s-min=25.1km az=19.0*

*WEL **16** 00:12:26.7±0.5, 32°.S±7°.×18°.0W±1°.6, h33km, M4.9/13, mB5.2/7, ML5.4/12, MLv5.2/13, Mw(mB)4.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=112.1*

ISC 16 00:12:23.0±0.6, 31°.97S±0°.06×179°.7W±0°.1, h200km, n38, σ2§41/54, mb4.0/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.11	30	P	Pn	00 13 13.4	-0.5
GLKZ				S	Sn	00 13 52.9	-0.8
RIZ	Raoul Island	3.12	30	P	Pn	00 13 13.5	-0.5
RIZ				S	Sn	00 13 53.8	-0.1
MXZ	Matakaoa Point	5.82	196	P	Pn	00 13 52.1	+4.3
MXZ				S	Sn	00 14 53.2	-1.6
WMGZ	Waiomatatini S	6.04	194	P	Pn	00 13 52.5	+1.9
WMGZ				S	Sn	00 15 00.8	+0.7
HAZ	Te Kaha	6.13	199	P	Pn	00 13 56.2	+4.4
HAZ				S	Sn	00 15 01.6	-0.6
PKGZ	Pakihiroa	6.18	196	P	Pn	00 13 56.3	+3.7
PKGZ				S	Sn	00 15 03.7	+0.2
PUZ	Puketiti	6.32	195	P	Pn	00 13 53.6	-0.6
PUZ				S	Sn	00 15 05.2	-1.4
RUGZ	Raukumara Rang	6.36	199	P	Pn	00 13 58.5	+3.6
RUGZ				S	Sn	00 15 04.3	-3.5
OUZ	Omahuta	6.46	238	P	Pn	00 13 59.7	+3.6
TWGZ	Tauwhareparae	6.48	196	P	Pn	00 13 58.2	+1.8
TWGZ				S	Sn	00 15 09.6	-0.9
CNGZ	Carnagh Statio	6.72	194	P	Pn	00 14 01.4	+1.9
CNGZ				S	Sn	00 15 15.7	-0.4
MWZ	Matawai	6.74	199	P	Pn	00 13 59.8	0.0
MWZ				S	Sn	00 15 13.9	-2.7
TKGZ	Te Karaka	6.76	197	P	Pn	00 14 02.8	+2.9
TKGZ				S	Sn	00 15 14.7	-2.3
URZ	Urewera	6.80	202	P	Pn	00 14 02.7	+2.3
	6.1nm,0.3s,baz=260,slow=4.3,SNR=66						
URZ				S	Sn	00 15 15.1	-2.8
	15nm,0.3s,baz=346,slow=22,SNR=18						
URZ	Urewera	6.80	202	P	Pn	00 14 01.8	+1.4
URZ				S	Sn	00 15 14.9	-3.0
MUGZ	Murupara	7.11	203	P	Pn	00 14 06.9	+2.4
MUGZ				S	Sn	00 15 22.7	-2.4
PRGZ	Paritu Road	7.21	195	P	Pn	00 14 09.3	+3.4
PRGZ				S	Sn	00 15 23.9	-3.8
SNGZ	Shannon Statio	7.21	199	P	Pn	00 14 08.6	+2.7
SNGZ				S	Sn	00 15 24.7	-3.1
ALRZ	Allen Road	7.33	205	P	Pn	00 14 11.2	+3.8
RPZ	Rata Peaks	13.80	209	P	Pn	00 15 27.1	-3.2
	2.4nm,0.3s,baz=28,slow=2.0,SNR=8.5						
RPZ				S	S	00 17 50.2	-14
	2.8nm,0.3s,baz=336,slow=21,SNR=13						
CTA	Charters Tower	32.66	283	P	P	00 18 37.2	+0.8
	2.1nm,0.3s,baz=106,slow=13,SNR=2.4						
STKA	Stephens Creek	32.73	260	P	P	00 18 36.3	-0.5
	1.8nm,0.5s,baz=99,slow=12,SNR=6.1						
ASAR	Alice Springs	41.59	269	P	P	00 19 50.2	-1.3
	1.9nm,0.5s,baz=105,slow=7.1,SNR=31						
WRA	Warramunga Arr	42.73	275	P	P	00 19 58.5	-2.2
	4.7nm,0.5s,baz=108,slow=8.6,SNR=22						
SNAA	Sanae	76.63	179	P	P	00 23 50.6	-0.5
VNA3	Neumayer Olymp	76.84	177	P	P	00 23 51.8	-0.5
VNA2	Neumayer--Watz	77.25	177	P	P	00 23 54.5	-0.1
	baz=193,slow=5.0						
VNA1	Neumayer--Stat	77.49	177	P	P	00 23 55.8	0.0
KSRS	Korea Array	84.61	321	P	P	00 24 32.4	-1.4
	0.9nm,0.7s,baz=146,slow=5.7,SNR=5.0						
PETK	Petropavlovsk-	86.98	347	P	P	00 24 43.7	-1.3
	2.3nm,0.8s,baz=99,slow=8.9,SNR=3.6						
ARCES	ARCESS Array B	139.79	347	PKhKP	PKPpre	00 31 16.4	
	0.5nm,0.3s,baz=70,slow=4.0,SNR=9.1						
FINES	FINESS Array B	146.08	338	PKPbc	PKPdf	00 31 36.2	-1.1
	12nm,0.6s,baz=49,slow=4.3,SNR=118						
NB2	NORSAR Subarra	150.05	349	PKP	PKPdf	00 31 46.3	+2.4
	comp=Z,1.0nm,0.5s,baz=19,slow=2.5						
NOA	NORSAR Array B	150.05	349	PKPbc	PKPdf	00 31 46.9	+3.0
	comp=Z,1.2nm,0.5s,baz=17,slow=4.1,SNR=15						
AKASG	Malin Array Be	151.60	320	PKPbc	PKPdf	00 31 50.8	+4.3
	comp=Z,1.2nm,0.4s,baz=60,slow=2.3,SNR=9.0						
AKASG				PKPab	PKPab	00 32 00.3	-2.0
	comp=Z,0.7nm,0.3s,baz=51,slow=5.1,SNR=6.0						
BRTR	Keskin Array B	152.00	295	PKPbc	PKPdf	00 31 52.2	+4.5
	comp=Z,0.4nm,0.5s,baz=142,slow=3.4,SNR=8.4						
GERES	GERESS Array B	160.34	333	PKPab	PKPab	00 32 38.2	-1.9
	comp=Z,0.4nm,0.7s,baz=15,slow=5.5,SNR=4.7						
TORD	Torodi Ar. Bea	161.22	184	PKPab	PKPab	00 32 43.4	-1.1
	comp=Z,0.3nm,0.5s,baz=194,slow=2.8,SNR=6.3						

MEX 16 00:13:37.5±0.5, 16°.00N×96°.99W, h19km±13km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PANG	Puerto Angel	0.60	124	eP	Pb	00 13 47.6	-1.7
PANG				i S	Sb	00 13 55.8	-1.6
HUIG	Huatulco	0.88	105	eP	Pb	00 13 51.1	-3.1
HUIG				eS	Sb	00 14 02.2	-3.5
VHO	Vista Hermosa	1.09	13	eP	Pb	00 13 54.5	-3.5
VHO				eS	Sb	00 14 07.6	-4.4
CMIG	Matias Romero	2.29	62	eP	Pn	00 14 12.0	-2.4
CMIG				i S	Sn	00 14 38.7	-3.4

*IDC **16** 00:32:07.1±1.0, 57°.67S×24°.04W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.8/24, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=41.5km s-min=25.5km az=63.0*

ISC 16 00:32:08.2±0.9, 57°.9S±0°.1×24°.0W±0°.3, h10km, n12, σ1§79/13, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.45	159	P	Pn	00 35 34.1	+1.7
VNA1				S	Sn	00 38 08.3	-4.0
VNA3	Neumayer Olymp	14.69	162	P	Pn	00 35 36.5	+0.8
VNA3				S	Sn	00 38 05.0	-13
VNA2	Neumayer--Watz	14.84	159	P	Pn	00 35 38.2	+0.4
	baz=329,slow=15						
VNA2				S	Sn	00 38 12.0	-10
	baz=329,slow=23						
SNAA	Sanae	16.36	156	P	Pn	00 35 59.1	+1.5
SNAA				S	Sn	00 38 48.6	-10
SNAA	Sanae	16.36	156	Pn	Pn	00 35 58.3	+0.7
	0.3nm,0.3s,baz=35,slow=15,SNR=34						
CPUP	Villa Florida	39.34	309	P	P	00 39 37.0	-0.4
	3.1nm,0.9s,baz=154,slow=8.3,SNR=5.8						
VNDA	Vanda	44.83	182	P	P	00 40 24.2	+2.6
	1.2nm,0.9s,baz=186,slow=5.7,SNR=5.8						
LPAZ	La Paz	52.87	303	P	P	00 41 23.2	-1.4
	1.7nm,0.8s,baz=143,slow=8.0,SNR=7.3						
TORD	Torodi Ar. Bea	73.84	26	P	P	00 43 42.7	0.0
	1.2nm,0.8s,baz=189,slow=8.2,SNR=5.5						
YKA	Yellowknife Ar	138.71	315	PKP	PKPdf	00 51 32.6	-0.2
	0.7nm,0.8s,baz=133,slow=2.7,SNR=3.7						
SONM	Songino Array	149.06	87	PKPbc	PKPbc	00 51 55.5	-0.1
	0.9nm,0.8s,baz=220,slow=4.1,SNR=3.9						
ILAR	Eielson Array	152.64	308	PKPbc	PKiKP	00 52 03.5	-0.1
	2.2nm,0.9s,baz=110,slow=1.3,SNR=14						

NDI 16 00:39:21.7±2.4, 27°.56N×92°.41E, h10km, ML3.7, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAWA	Tawang	0.48	274	eP	Pg	00 39 31.6	+0.4
TAWA				eS	Sg	00 39 37.4	-0.2
TAWA				IAML		00 39 39.3	
	comp=N,6μm,0.1s						
TAWA				IAML		00 39 39.5	
	comp=E,5μm,0.1s						
TEZP	TEZPUR	1.00	160	eP	Pg	00 39 39.2	-1.8
TEZP				eS	Sb	00 39 55.0	+0.6
TEZP				IAML		00 39 59.2	
	comp=N,1μm,0.1s						
ZIRO	ZIRO	1.28	91	eP	Pn	00 39 44.3	-1.5
ZIRO				eS	Sn	00 40 03.9	+0.7
ZIRO				IAML		00 40 06.3	
	comp=E,3μm,0.2s						
ZIRO				IAML		00 40 07.1	
	comp=N,6μm,0.2s						
GUWA	GUWAHATI	1.50	205	eP	Pn	00 39 48.9	+0.1
GUWA				eS	Sb	00 40 09.1	+0.3
GUWA				IAML		00 40 11.3	
	comp=E,495nm,0.2s						
GUWA				IAML		00 40 12.8	
	comp=N,592nm,0.2s						
JORH	JORHAT	1.83	116	eP	Pn	00 39 52.8	-0.5
JORH				eS	Sb	00 40 18.8	+0.5
JORH				IAML		00 40 20.7	
	comp=N,3μm,0.2s						
JORH				IAML		00 40 21.0	
	comp=E,1μm,0.2s						
SHL	Shillong	2.04	193	eP	Pn	00 39 56.4	+0.1
SHL				eS	Sb	00 40 24.1	-0.4
MOKO	MOKOCHONG	2.25	123	eP	Pn	00 39 59.3	+0.2
MOKO				eS	Sn	00 40 26.7	-0.3
MOKO				IAML		00 40 32.8	
	comp=E,749nm,0.5s						
MOKO				IAML		00 40 34.9	
	comp=N,400nm,0.3s						
KOHI	KOHIMA	2.38	140	eP	Pn	00 40 01.7	+0.7
KOHI				eS	Sn	00 40 31.3	+1.0
KOHI				IAML		00 40 38.4	
	comp=N,144nm,0.3s						
KOHI				IAML		00 40 39.4	
	comp=E,211nm,0.2s						
LKP	Lekhapani	3.06	93	eP	Pn	00 40 10.9	+0.7
LKP				eS	Sn	00 40 46.6	-0.4
SAIH	SAIHA	5.08	174	eP	Pn	00 40 38.5	+0.5

*IDC **16** 00:42:19.3±1.5, 57°.86S×23°.80W, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.5/21, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=51.9km s-min=42.1km az=43.0*

ISC 16 00:42:19.8±1.1, 58°.2S±0°.2×23°.9W±0°.3, h10km, n8, σ1§46/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.18	158	P	P	00 45 46.7	-1.1
VNA3	Neumayer Olymp	14.41	161	P	P	00 45 49.3	-1.2
VNA2	Neumayer--Watz	14.57	158	P	P	00 45 51.0	-1.2
	baz=322,slow=13						
SNAA	Sanae	16.09	156	P	P	00 46 11.7	+2.6
SNAA	Sanae	16.09	156	Pn	P	00 46 10.0	+0.9
	0.1nm,0.3s,baz=316,slow=16,SNR=11						
SNAA				Sn	Sn	00 49 04.7	+0.8
	0.0nm,0.3s,baz=319,slow=18,SNR=4.1						
LPAZ	La Paz	53.05	303	P	P	00 51 38.0	+0.4
	0.4nm,0.5s,baz=180,slow=6.1,SNR=2.7						
TORD	Torodi Ar. Bea	74.08	26	P	P	00 53 55.4	-0.3
	0.3nm,0.7s,baz=190,slow=7.3,SNR=3.2						
ILAR	Eielson Array	152.85	308	PKPbc	PKiKP	01 02 15.8	+0.3
	0.5nm,0.8s,baz=129,slow=1.3,SNR=4.3						

*ATH **16** 00:42:18.4, 34°.01N×25°.10E, h10km±31km, ML2.8/7, Error ellipse: s-maj=31.6km s-min=2.7km az=0.0*

*IDC **16** 00:42:20.8±1.6, 34°.20N×24°.53E, h0km, mb3.3/2, mb1 3.3/3, mb1mx3.1/38, mbtmp3.2/3, ML2.9/1, MS2.9/1, Ms1 2.9/1, ms1mx2.1/26, Error ellipse: s-maj=44.3km s-min=20.0km az=118.0*

*ISCJB **16** 00:42:26.0±1.6, 34°.2N±0°.1×24°.78E±0°.08, h58km±16km, mb3.2/2, MS2.8/1, Error ellipse: s-maj=20.8km s-min=11.1km az=179.2*

ISC 16 00:42:25.3±1.9, 34°.1N±0°.2×24°.95E±0°.05, h37km±4km, n29, σ2§58/34, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.89	353	P	Pn	00 42 41.5	+0.2
SIVA				S	Sn	00 42 52.7	-0.3
SIVA	Sivas	0.89	353	P	Pn	00 42 37.5	-3.8
SIVA				S	Sn	00 42 52.3	-0.7
SIVA				AML	AML	00 42 53.2	
	comp=N,2045μm,0.3s						
SIVA				AML	AML	00 43 03.2	
	comp=E,2463μm,0.7s						
GVD	Gavdhos	1.00	315	P	Pn	00 42 45.1	+2.3
GVD	Gavdhos	1.00	315	P	Pn	00 42 40.6	-2.2
GVD				AML	AML	00 43 09.8	
	comp=N,1147μm,0.7s						
GVD				AML	AML	00 43 15.4	
	comp=E,1119μm,0.4s						
LAST	Lasithi	1.12	23	P	Pn	00 42 44.1	-0.3
LAST				S	Sn	00 42 57.9	-0.7
LAST	Lasithi	1.12	23	P	Pn	00 42 40.3	-4.1
LAST				AML	AML	00 43 05.3	
	comp=E,388μm,0.9s						
LAST				AML	AML	00 43 09.7	
	comp=N,422μm,0.8s						
IDI	Anoyia	1.16	358	Pn	Pn	00 42 45.7	+0.8
	comp=N,13nm,0.3s,baz=326,slow=19,SNR=9.4						
IDI				Sn	Sn	00 42 59.2	-0.3
	comp=N,25nm,0.3s,baz=328,slow=24,SNR=10						
NPS	Neapolis	1.25	26	P	Pn	00 42 48.3	+2.1
NPS	Neapolis	1.25	26	P	Pn	00 42 42.7	-3.5
NPS				AML	AML	00 43 07.9	
	comp=E,352μm,0.4s						
NPS				AML	AML	00 43 12.4	
	comp=N,369μm,0.6s						
VAM	Vamos	1.42	334	P	Pn	00 42 51.5	+3.1
VAM				S	Sn	00 43 10.4	+4.6
VAM	Vamos	1.42	334	P	Pn	00 42 46.9	-1.6
VAM				S	Sn	00 43 10.3	+4.5
VAM				AML	AML	00 43 19.1	
	comp=E,496μm,0.5s						
VAM				AML	AML	00 43 20.5	
	comp=N,493μm,0.7s						
ZKR	Zakros	1.43	46	P	Pn	00 42 51.8	+3.1
ZKR				S	Sn	00 43 08.8	+2.5
ZKR	Zakros	1.43	46	P	Pn	00 42 45.8	-2.9
ZKR				AML	AML	00 43 16.4	
	comp=N,236μm,0.5s						
ZKR				AML	AML	00 43 16.9	
	comp=E,405μm,0.5s						
IMMV	Iera Moni Meta	1.55	329	P	Pn	00 42 58.9	+8.6
IMMV	Iera Moni Meta	1.55	329	P	Pn	00 42 50.1	-0.2
IMMV				AML	AML	00 43 27.1	
	comp=N,406μm,0.8s						
IMMV				AML	AML	00 43 37.0	
	comp=E,430μm,0.8s						
KARP	Karpathos	2.30	52	P	Pn	00 43 03.8	+3.1
KARP	Karpathos	2.30	52	P	Pn	00 42 58.2	-2.5
MHLO	Agia Marina, M	2.59	350	P	Pn	00 43 06.3	+1.7
MHLO	Agia Marina, M	2.59	350	P	Pn	00 43 05.8	+1.1
IOSP	Ios island	2.60	6	P	Pn	00 43 05.7	+1.0
IOSP	Ios island	2.60	6	P	Pn	00 43 05.5	+0.7
MHLA	Plaka, Milos I	2.64	351	P	Pn	00 43 06.5	+1.1
SERI	Serifos	3.05	353	P	Pn	00 43 11.2	+0.3
VLI	Velial	3.06	328	S	Sn	00 43 41.5	-4.9
DID	Didima	3.65	338	P	Pn	00 43 20.8	+1.6
GERES	GERESS Array B	16.92	334	Pn	Pn	00 46 16.5	-2.5
	comp=E,0.0nm,0.3s,baz=145,slow=12,SNR=2.2						
AKTO	Aktyubinsk	29.08	46	LR	LR	01 03 17.7	
	comp=E,23nm,19.6s,baz=221,slow=43						
TORD	Torodi Ar. Bea	29.70	231	P	P	00 48 26.7	-1.2
	comp=E,0.2nm,0.4s,baz=25,slow=8.3,SNR=3.6						
MKAR	Makanchi Array	44.49	56	P	P	00 50 35.1	+2.3
	comp=E,0.2nm,0.5s,baz=259,slow=10,SNR=2.4						

*IDC **16** 00:44:34.1±0.6, 1°.56N×96°.98E, h0km, mb4.5/24, mb1 4.6/25, mb1mx4.3/50, mbtmp4.5/25, ML3.7/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/38, Error ellipse: s-maj=20.7km s-min=12.3km az=40.0*

*BJI **16** 00:44:35.6±0.0, 1°.47N×97°.12E, h24km, mb4.8/55, mB4.8/33, Ms4.5/28, Ms7 4.2/27*

*MOS **16** 00:44:36.7±0.9, 1°.57N×96°.97E, h27km, mb5.1/27, Error ellipse: s-maj=12.4km s-min=6.8km az=90.5*

*ISCJB **16** 00:44:37.3±0.3, 1°.62N±0°.04×97°.00E±0°.03, h28km, mb4.7/74, MS3.9/15, Error ellipse: s-maj=6.2km s-min=3.9km az=35.9*

*NEIC **16** 00:44:40.2±1.2, 1°.67N×97°.04E, h35km±3km, mb4.7/35, Error ellipse: s-maj=13.5km s-min=7.4km az=62.0*

*DJA **16** 00:44:40.3±0.8, 2°.N±4°.×9°.7E±°, h30km±7km, M4.6/13, mb4.6/12, mB5.2/6, MLv4.6/13, Mw(mB)4.6/6*

ISC 16 00:44:39.4±0.5, 1°.69N±0°.05×96°.98E±0°.05, h28km, n171, σ1§49/179, mb4.7/74, MS3.8/15, 14C-9D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.71	123	ePn	Pn	00 44 53.0	-0.6
GSI	Gunungsitoli	0.71	123	P	Pb	00 44 52.8	-0.4
SNSI	Sinabang, Aceh	0.97	317	P	Pb	00 44 57.6	0.0
KCSI	Kotacane, Aceh	1.98	23	P	Pn	00 45 11.5	+0.4
PSI	Prapat	2.23	60	Pn	Pn	00 45 13.9	-0.8
	4.6nm,0.3s,baz=263,slow=7.0,SNR=23						
PSI				Sn	Sn	00 45 41.1	-0.2
	35nm,0.3s,baz=221,slow=12,SNR=9.8						
PSI				LR	LR	00 45 52.0	
	comp=Z,811nm,21.1s,baz=284,slow=35						
PSI	Prapat	2.23	60	ePn	Pn	00 45 14.2	-0.4
PSI	Prapat	2.23	60	eP	Pn	00 45 14.2	-0.4
TSI	Tuntungan	2.39	41	P	Pn	00 45 17.2	+0.4
MLSI	Meulaboh, Aceh	2.62	347	P	Pn	00 45 19.9	0.0
LHMI	Lhok Sumawe	3.51	359	ePn	Pn	00 45 32.1	-0.1
SISI	Saibi	3.67	145	P	Pn	00 45 37.0	+2.7
PPI	Padang Panjang	4.03	122	P	Pn	00 45 39.7	+0.4
BKNI	Bangkinang	4.28	108	ePn	Pn	00 45 42.1	-0.6
BKNI	Bangkinang	4.28	108	P	Pn	00 45 43.4	+0.7
PDSI	Padang	4.34	127	P	Pn	00 45 47.4	+3.8
KULM	Kulim	5.12	46	ePn	Pn	00 45 54.1	-0.2
SDSI	Sungai Dareh	5.15	120	P	Pn	00 45 54.5	-0.3
	39nm,0.7s,1μm0.4nm						
KRJI	Kerinci	5.85	130	P	Pb	00 46 20.6	-0.2
SKLT	Songkhla	6.54	34	P	Pb	00 46 23.4	-9.1
TRTT	Trang	6.67	24	P	Pn	00 46 16.5	+0.8
	53nm,0.7s,0.4nm						
MYKOM	Kota Tinggi	6.87	89	ePn	Pn	00 46 18.7	+0.4
MNAI	Manna	8.47	135	ePn	Pn	00 46 40.6	+0.2
CHAI	Chaiyaphum	14.96	19	P	P	00 48 15.8	+1.5
	17μm,0.8s						
SBUM	Sibu	15.25	87	ePn	Pn	00 48 12.3	-0.7
	6.3nm,1.0s						
PBKT	Sadao Pong	15.29	15	P	Pn	00 48 15.6	+2.1
	13nm,0.9s,606nm						
SKNT	Sakolnakorn

comp=Z,67nm,1.1s
APSI Ampana 24.80 96 P **P 00 49 57.6 -1.8**
LUWI Luwuk 25.93 96 *eP* **P 00 50 08.6 -1.0**
comp=Z,50nm,0.9s
LUWI Luwuk 25.93 96 P **P 00 50 11.2 +1.6**
H08S2 Diego Garcia H 26.13 249 T T 01 17 34.5
baz=70,slow=75,SNR=1858
H08S3 Diego Garcia H 26.13 249 T T 01 17 30.0
baz=70,slow=75,SNR=1190
H08S1 Diego Garcia H 26.15 249 T T 01 17 26.9
baz=70,slow=75,SNR=2155
GYA Guiyang 26.32 20⇓*iP* **P 00 50 12.8 -0.4**
GYA pP pP 00 50 20.6 -0.6
GYA PP **PnPn 00 50 54.8 +1.7**
GYA S **S 00 54 50.4 +5.8**
GYA sS pS 00 54 52.8 -1.2
GYA SS **SnSn 00 55 49.4 +3.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.1s
GYA LR LR
comp=Z,470nm,16.2s
GYA LR LR
comp=Z,190nm,14.0s
GYA LR LR
comp=Z,690nm,14.9s
CD2 Chengdu 29.76 12 *eP* **P 00 50 44.3 +0.6**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,560nm,16.1s
CD2 LR LR
comp=Z,800nm,26.1s
CD2 LR LR
comp=Z,690nm,19.0s
YULB Yu-li 31.95 46 *eP* **P 00 51 02.7 -0.5**
comp=Z,11nm,0.8s
SSLB Suanglung 31.96 45 *eP* **P 00 51 01.4 -1.8**
comp=Z,15nm,1.0s
XAN Xi'an 34.06 18 P **P 00 51 19.9 -1.6**
XAN pP sP 00 51 35.3 +2.2
XAN pmax pmax
comp=Z,33nm,0.9s
XAN pmax pmax
comp=Z,100nm,4.9s
XAN LR LR
comp=Z,340nm,16.2s
XAN LR LR
comp=Z,230nm,16.7s
XAN LR LR
comp=Z,410nm,16.2s
XAN Xi'an 34.06 18 *eP* **P 00 51 19.8 -1.7**
comp=Z,26nm,0.8s
XAN Xi'an 34.06 18 *eP* **P 00 51 19.8 -1.7**
XAN pmax pmax
comp=Z,26nm,0.8s
FITZ Fitzroy Crossi 34.39 126 P **P 00 51 21.2 -3.2**
comp=Z,0.9nm,0.6s,baz=289,slow=5.3,SNR=3.9
LZH Lanzhou 34.81 10 *eP* **P 00 51 27.8 -0.3**
LZH pP pP 00 51 35.3 -0.9
LZH sP sP 00 51 38.6 -0.7
LZH *e*PP **PnPn 00 52 46.0 +1.2**
LZH pmax pmax
comp=Z,27nm,1.1s
LZH pmax pmax
comp=Z,93nm,4.9s
LZH LR LR
comp=Z,240nm,12.9s
LZH LR LR
comp=Z,280nm,13.0s
LZH LR LR
comp=Z,370nm,16.5s
NJ2 Nanjing 36.56 32 *eP* **P 00 51 44.3 +1.3**
NJ2 pmax pmax
comp=Z,11nm,0.5s
GTA Gaotai 37.63 4 *eP* **P 00 51 52.3 +0.2**
GTA pP pP 00 51 59.3 -0.7
GTA sP sP 00 52 01.8 -1.6
GTA pmax pmax
comp=Z,13nm,1.1s
NIL Nilore 38.79 328 *eP* **P 00 52 01.9 +0.1**
comp=Z,7.1nm,0.8s
NIL Nilore 38.79 328 *eP* **P 00 52 01.9 +0.1**
NIL pmax pmax
comp=Z,7.0nm,0.8s
HHC Hu-ho-hao-te 41.15 17 *eP* **P 00 52 22.8 +1.3**
HHC S **S 00 58 35.3 +2.2**
HHC sS sS 00 58 45.4 -1.4
HHC pmax pmax
comp=Z,13nm,1.0s
HHC pmax pmax
comp=Z,150nm,5.4s
HHC LR LR
comp=Z,410nm,16.5s
HHC LR LR
comp=Z,200nm,12.6s
HHC LR LR
comp=Z,330nm,15.5s
BJT Baijiatuau 41.94 22 *eP* **P 00 52 28.5 +0.7**
comp=Z,28nm,0.8s
BJT Baijiatuau 41.94 22 *eP* **P 00 52 28.5 +0.7**
BJT pmax pmax
comp=Z,28nm,0.9s
BJI Beijing 41.97 22⇓*eP* **P 00 52 29.0 +1.0**
BJI pP **pP 00 52 36.3 +0.1**
BJI pmax pmax
comp=Z,18nm,1.0s
KSH Kashi 42.23 336 P **P 00 52 29.8 -0.6**
KSH sP pP 00 52 36.9 -1.6
KSH PcP **PcP 00 54 26.3 +2.2**
KSH S **S 00 58 47.4 -1.8**
KSH SS **SS 01 01 49.3 -8.8**
KSH pmax pmax
comp=Z,13nm,1.0s
KSH pmax pmax
comp=Z,230nm,4.3s
KSH LR LR
comp=Z,210nm,6.4s
KSH LR LR
comp=Z,220nm,9.5s
KSH LR LR
comp=Z,380nm,19.7s
WRA Warramunga Arr 42.48 122 P **P 00 52 30.5 -2.1**
comp=Z,3.6nm,0.9s,baz=295,slow=9.4,SNR=7.5
WR1 Warramunga Arr 42.48 122 *eP* **P 00 52 30.5 -2.1**
WRAB Tennant Creek 42.49 122⇑*eP* **P 00 52 31.3 -1.3**
WRAB pmax pmax
comp=Z,3.0nm,0.8s
WMQ Urumqi 42.75 350 *eP* **P 00 52 36.6 +2.1**
WMQ LR LR
comp=Z,43nm,17.5s
WMQ LR LR
comp=Z,66nm,21.1s
WMQ LR LR
comp=Z,57nm,25.1s
ASAR Alice Springs 43.87 127 P **P 00 52 43.2 -0.5**
comp=Z,2.9nm,1.0s,baz=307,slow=7.7,SNR=14
AS31 Alice Springs 43.87 127 *eP* **P 00 52 43.2 -0.5**
GAR Garm 44.40 330 *eP* **P 00 52 48.0 +0.1**
comp=Z,19nm,1.1s
ULHL Ulahol 44.46 338 P **P 00 52 50.1 +1.7**
SNR=8.6
TJN Taejon 44.50 36*de*P **P 00 52 48.2 -0.3**
JNU Nakatsue 44.58 42 *eP* **P 00 52 48.7 -0.6**
comp=Z,18nm,1.1s
CHGR Chuyangaron 44.73 329 *ep*P pP 00 53 01.4 +2.6
BOOM Boomskoye usch 44.78 338 *eP* **P 00 52 51.6 +0.6**
UCH Uchtor 45.11 336 P **P 00 52 55.4 +1.5**
SNR=16
TKM2 Tokmak 2 45.28 338 P **P 00 52 56.5 +1.6**
SNR=9.0
KBK Karagaybulak 45.30 337 P **P 00 52 56.9 +1.8**
SNR=12
AAK Ala-Archa 45.47 337⇑*eP* **P 00 52 59.3 +2.9**
AAK pmax pmax
comp=Z,6.0nm,1.0s
KS15 Wonju Array Si 45.54 35 *eP* **P 00 52 56.4 -0.4**
comp=Z,14nm,0.9s
KSRS Korea Array 45.57 35 P **P 00 52 56.7 -0.3**
comp=Z,9.7nm,0.8s,baz=222,slow=9.1,SNR=49
KSRS LR LR 01 13 28.0
comp=Z,82nm,18.8s,baz=225,slow=38
EKS2 Erkin-Say 45.77 336 P **P 00 53 00.7 +2.0**
SNR=8.5
USP Ospenovka 46.00 337 P **P 00 53 01.8 +1.4**
SNR=21
SONA0 Songino Array 46.68 9 *e*PcP **PcP 00 54 38.8 -0.4**
SONM Songino Array 46.68 9 P **P 00 53 06.3 +0.5**
comp=Z,6.5nm,0.6s,baz=190,slow=9.0,SNR=32
SONM PcP **PcP 00 54 38.8 -0.4**
comp=Z,1.9nm,0.8s,baz=204,slow=3.2,SNR=3.4
MK31 Makanchi Array 46.71 346 *eP* **P 00 53 06.7 +0.8**
comp=Z,19nm,0.9s
MK31 Makanchi Array 46.71 346 *eP* **P 00 53 06.7 +0.8**
MK31 pmax pmax
comp=Z,19nm,0.8s
MKAR Makanchi Array 46.71 346 P **P 00 53 06.8 +0.8**
comp=Z,21nm,0.8s,baz=159,slow=7.9,SNR=145
MKAR LR LR 01 16 24.6
comp=Z,90nm,20.1s,baz=158,slow=41
MAKZ Makanchi 46.80 346 *eP* **P 00 53 07.2 +0.6**
comp=Z,18nm,0.9s
MAKZ Makanchi 46.80 346 *eP* **P 00 53 07.2 +0.6**
MAKZ pmax pmax
comp=Z,18nm,0.9s
KK31 Karatay Array 47.52 334 *eP* **P 00 53 12.8 +0.5**
comp=Z,7.6nm,1.0s
KKAR Karatay Array 47.52 334 *eP* **P 00 53 12.9 +0.7**
comp=Z,7.6nm,1.0s
DGZ Jazzator, Alta 48.52 352*d iP* **P 00 53 21.6 +1.5**
DGZ pmax pmax
comp=Z,14nm,0.9s
ZAK Zakamensk 48.80 5 *eP* **P 00 53 22.1 -0.1**
ZAK pmax pmax
comp=Z,4.0nm,0.9s
INU Inuyama 50.02 43 *eP* **P 00 53 30.9 -0.7**
comp=Z,14nm,1.0s
TLY Talaya 50.12 5 *eP* **P 00 53 32.4 +0.3**
comp=Z,8.9nm,0.7s
TLY Talaya 50.12 5 *eP* **P 00 53 33.3 +1.2**
TLY pmax pmax
comp=Z,21nm,0.8s
GEYT Alibeck 50.70 320 P **P 00 53 37.9 +1.1**
comp=Z,1.8nm,0.7s,baz=151,slow=10,SNR=6.9
GEYT LR LR 01 17 28.6
comp=Z,51nm,19.6s,baz=200,slow=39
GYA0B ALIBECK ARRAY 50.70 320 *eP* **P 00 53 37.0 +0.2**
comp=Z,4.5nm,0.7s
HIA Hailar 51.25 19⇑*iP* **P 00 53 41.2 +0.5**
HIA pmax pmax
comp=Z,28nm,0.8s
KURK Kurchatov 51.26 345 *eP* **P 00 53 41.6 +1.0**
comp=Z,20nm,1.0s
KURK Kurchatov 51.26 345*c iP* **P 00 53 41.4 +0.7**
KURK pmax pmax
comp=Z,26nm,1.3s
MAJO Matsushiro 51.48 43 *eP* **P 00 53 41.9 -0.7**
MAJO Matsushiro 51.48 43⇑*eP* **P 00 53 43.3 +0.7**
MAJO pmax pmax
comp=Z,7.0nm,0.8s
MAT Matsushiro 51.48 43 P **P 00 53 41.3 -1.3**
MJAR Matsushiro Arr 51.48 43 P **P 00 53 41.9 -0.7**
comp=Z,4.7nm,0.8s,baz=217,slow=6.4,SNR=25
MJAR LR LR 01 19 24.6
comp=Z,50nm,18.6s,baz=225,slow=40
VLA Vladivostok 51.67 32⇓*eP* **P 00 53 44.3 +0.5**
VLA pmax pmax
comp=Z,15nm,1.1s
USA0B Ussuriysk Arra 52.46 31 *eP* **P 00 53 49.4 -0.4**
comp=Z,22nm,1.1s
USA0B Ussuriysk Arra 52.46 31 *eP* **P 00 53 49.3 -0.4**
USA0B pmax pmax
comp=Z,221nm,1.1s
USRK Ussuriysk Ar. 52.46 31 P **P 00 53 49.5 -0.2**
comp=Z,13nm,1.0s,baz=232,slow=4.6,SNR=21
ZALV Zalesovo Beam 53.04 351 P **P 00 53 54.5 +0.6**
comp=Z,49nm,1.0s,baz=176,slow=5.9,SNR=94
ZALV Zalesovo Beam 53.04 351 *i P* **P 00 53 54.5 +0.6**
ZALV pmax pmax
comp=Z,50nm,1.0s
STKA Stephens Creek 53.85 132 P **P 00 53 59.4 -0.8**
comp=Z,2.3nm,0.6s,baz=317,slow=7.9,SNR=5.3
STKA LR LR 01 18 53.8
comp=Z,71nm,21.0s,baz=356,slow=38
STKA Stephens Creek 53.85 132 *eP* **P 00 53 58.8 -1.4**
comp=Z,7.0nm,1.9s
STKA Stephens Creek 53.85 132 *eP* **P 00 53 58.8 -1.4**
STKA pmax pmax
comp=Z,7.0nm,1.9s
NVS Novosibirsk 54.16 350⇓*iP* **P 00 54 02.5 +0.5**
NVS pmax pmax
comp=N,13nm,1.0s
NVS pmax pmax
comp=Z,17nm,1.0s
NVS pmax pmax
comp=E,10.0nm,1.2s
BRVK Borovoye 55.78 341 *eP* **P 00 54 13.9 +0.1**
comp=E,6.8nm,0.9s
BRVK Borovoye 55.78 341*c iP* **P 00 54 13.6 -0.2**
BRVK pmax pmax
comp=Z,7.0nm,1.0s
KLR Kul'dur 55.91 27*c iP* **P 00 54 15.0 +0.2**
KLR pmax pmax
comp=Z,14nm,0.9s
AKTO Aktyubinsk 58.70 332 P **P 00 54 34.0 -0.5**
comp=Z,3.3nm,0.9s,baz=136,slow=7.3,SNR=10.0
YSS Yuzh-Sakhalins 60.07 35 *eP* **P 00 54 44.0 0.0**
comp=Z,30nm,0.9s
YSS Yuzh-Sakhalins 60.07 35⇑*eP* **P 00 54 44.2 +0.2**
YSS *e* 00 54 57.3
YSS pmax pmax
comp=Z,30nm,0.9s
TBLG Delisi 61.47 318 *eP* **P 00 54 13.9 +0.6**
comp=Z,4.9nm,0.8s
TBLG Delisi 61.47 318 *eP* **P 00 54 54.3 +0.6**
TBLG pmax pmax
comp=Z,5.0nm,0.8s
SVE Sverdlovsk 62.15 338 *eP* **P 00 54 58.2 +0.3**
SVE pmax pmax
comp=Z,9.0nm,0.9s
KUR Kuril'sk 62.20 38⇑*iP* **P 00 54 59.1 +0.6**
ARU Arti 62.65 337 *eP* **P 00 55 00.6 -0.7**
comp=Z,4.4nm,0.8s
ARU Arti 62.65 337*d iP* **P 00 55 00.8 -0.5**
ARU 00 55 38.8
ARU S **S 01 03 28.4 +0.7**
ARU SS **SS 01 07 31.4 -1.1**
ARU pmax pmax
comp=Z,6.0nm,1.0s
KBZ Khabaz 63.56 319 P **P 00 55 06.8 -0.8**
comp=Z,4.2nm,0.9s,baz=106,slow=5.8,SNR=6.9
KIV Kislovodsk 63.79 319 *eP* **P 00 55 08.3 -0.9**
comp=Z,6.3nm,0.9s
KIV Kislovodsk 63.79 319 *eP* **P 00 55 10.6 +1.3**
KIV pmax pmax
comp=Z,23nm,1.1s
YAK Yakutsk 65.01 16 *eP* **P 00 55 16.6 -0.1**
comp=Z,42nm,0.9s
YAK Yakutsk 65.01 16 *eP* **P 00 55 16.2 -0.5**
KIRV Kirov 67.77 335 P **P 00 55 34.5 +0.1**
comp=Z,8.9nm,0.7s,baz=107,slow=16,SNR=4.4
NRIK Noril'sk 67.83 356 P **P 00 55 34.5 -0.1**
comp=Z,5.4nm,0.8s,baz=170,slow=6.4,SNR=7.2
BRTR Keskin Array B 68.62 312 P **P 00 55 39.5 -0.9**
comp=Z,2.3nm,0.8s,baz=132,slow=6.3,SNR=16
VSR Storozhevoye 69.04 325⇓*eP* **P 00 55 41.7 -0.9**
VSR pmax pmax
comp=Z,9.0nm,1.0s
PRGR Permogore 71.10 337 *eP* **P 00 55 54.2 -0.8**
PRGR pmax pmax
comp=Z,30nm,0.4s
PETK Petropavlovsk- 71.45 34 P **P 00 55 55.8 -1.5**
comp=Z,1.9nm,0.8s,baz=150,slow=3.3,SNR=4.8
PEA1 Petropavlovsk- 71.45 34 *eP* **P 00 55 55.8 -1.5**
OBN Obninsk 72.09 328⇓*eP* **P 00 56 01.4 +0.4**
OBN pmax pmax
comp=Z,6.0nm,0.7s
KLMR Klimovskoe 73.22 334 *eP* **P 00 56 06.1 -1.5**
KLMR pmax pmax
comp=Z,13nm,1.5s
KLMR Klimovskoe 73.22 334 *eP* **P 00 56 06.2 -1.4**
KLMR AMP 00 56 18.8
comp=Z,13nm,1.6s
SEY Seymchan 73.39 23⇑*eP* **P 00 56 08.5 -0.2**
AKASG Malin Array Be 74.74 322 P **P 00 56 16.1 -0.6**
comp=Z,2.0nm,0.7s,baz=82,slow=4.4,SNR=8.5
TESR Tescani 75.31 318⇑*iP* **P 00 56 20.9 +0.7**
MLR Muntele Rosu 75.56 317 P **P 00 56 21.0 -0.8**
comp=Z,3.8nm,0.8s,baz=14,slow=2.5,SNR=7.0
BURAR Bucovina Array 76.51 319⇑*iP* **P 00 56 28.0 +0.8**
BUR08 Bucovina Ar. S 76.53 319 *eP* **P 00 56 27.7 +0.4**
comp=Z,6.8nm,1.1s
DRGR 78.02 317⇑*iP* **P 00 56 33.5 -2.1**
TRPA Tarpa 78.38 319⇑*iP* **P 00 56 38.6 +1.2**
KOLS Kolonicke sedl 78.70 320 *eP* **P 00 56 40.6 +1.4**
KOLS pmax pmax
comp=Z,6.0nm,1.1s
KOLS Kolonicke sedl 78.70 320 *eP* **P 00 56 40.6 +1.4**
FIA0 FINESS Array S 79.46 332 *eP* **P 00 56 42.2 -0.9**
FIA0 FINESS Array S 79.46 332 *eP* **P 00 56 42.2 -0.9**
FINES FINESS Array B 79.46 332 P **P 00 56 42.2 -0.9**
comp=Z,3.9nm,0.9s,baz=116,slow=6.3,SNR=7.6
BILL Bilibino 80.78 21 *eP* **P 00 56 52.0 +1.9**
BILL pmax pmax
comp=Z,1.0nm,1.0s
ARA0 ARCESS Array S 82.00 340 *eP* **P 00 56 56.9 +0.3**
ARCES ARCESS Array B 82.00 340 P **P 00 56 56.9 +0.3**
comp=Z,3.9nm,0.9s,baz=90,slow=3.9,SNR=7.5
GERES GERESS Array B 84.30 319 P **P 00 57 08.2 -0.8**
comp=Z,1.8nm,0.9s,baz=101,slow=5.6,SNR=14
CLL Collm 84.91 321 *eP* **P 00 57 12.0 +0.1**
CLL Collm 84.91 321 *eP* **P 00 57 12.0 +0.1**
NB2 NORSAR Subarra 86.47 331 P **P 00 57 19.4 -0.1**
comp=Z,0.9nm,0.8s,baz=93,slow=5.3
NOA NORSAR Array B 86.47 331 P **P 00 57 19.3 -0.1**
comp=Z,1.6nm,0.8s,baz=94,slow=5.3,SNR=6.0
NOA LR LR 01 39 01.6
comp=Z,17nm,19.1s,baz=45,slow=38
YKA Yellowknife Ar 111.67 15 Pdiff **Pdif 00 59 13.4 -0.4**
comp=Z,0.7nm,0.9s,baz=338,slow=4.7,SNR=3.1
YKB5 Yellowknife Ar 111.67 15 *e*Pdif **Pdif 00 59 13.4 -0.4**
TXAR Lajitas Array 143.36 31 PKP PKPbc 01 04 09.4 +0.2
comp=Z,0.3nm,0.8s,baz=222,slow=1.7,SNR=4.1
CPUP Villa Florida 145.22 223 PKPbc **PKPbc 01 04 14.2 -0.7**
comp=Z,2.3nm,0.8s,baz=95,slow=2.6,SNR=7.3

BJI ***16*** *00:53:28.0±0.0, 33°.86N×24°.59E, h10km, mb4.7/27, mB4.9/19, Ms4.6/3, Ms7 4.3/4*
IDC ***16*** *00:53:31.7±0.6, 34°.36N×25°.03E, h0km, mb4.3/24, mb1 4.4/34, mb1mx4.3/54, mbtmp4.3/34, ML4.2/9, MS3.4/13, Ms1 3.4/13, ms1mx3.2/42, Error ellipse: s-maj=11.8km s-min=11.3km az=87.0*
ISCJB ***16*** *00:53:33.9±0.5, 34°.17N±0°.02×25°.09E±0°.02, h28km±4km, mb4.4/55, MS3.2/1, Error ellipse: s-maj=3.8km s-min=2.3km az=39.0*
MOS ***16*** *00:53:34.4±1.1, 34°.28N×25°.02E, h26km, mb4.7/24, Error ellipse: s-maj=6.5km s-min=3.7km az=81.2*
ATH ***16*** *00:53:35.0, 34°.28N×25°.08E, h29km±1km, ML3.9/16, Error ellipse: s-maj=2.0km s-min=1.0km az=351.0*
THE ***16*** *00:53:36.1, 34°.34N×25°.09E, h0km±2km, ML4.3/2, Error ellipse: s-maj=3.0km s-min=0.7km az=171.0*
GII ***16*** *00:53:36.0±0.0, 34°.25N×25°.13E, h30km, mb4.2/6, MD4.0/7*
NEIC ***16*** *00:53:36.1±0.0, 34°.34N×25°.09E, h1km, mb4.5/32, ML4.3(THE), After THE.*
MED_RC ***16*** *00:53:37.0±0.8, 34°.25N×25°.13E, h25km±4km, MW4.4/4, Moment Tensor Solution.Mantle waves: s4,c7; Duration: 1*10^{0} *Moment tensor: Scale* 10^{15}*Nm; Mrr-0.39±1.40; Mθθ4.25±.94; Mφφ-3.86±1.16; Mrθ1.96±1.06; Mrφ-1.54±.50; Mθφ1.48±1.06; Best double couple: Mo*4.99000×10^{15} *NP1:*ϕ_s*237.00000°,* δ*87.00000°,* λ*-150.00000°. NP2:* ϕ_s*145.00000°,* δ*60.00000°,* λ*-4.00000°. Principal axes: T 5.0700, Plg18.0000°, Azm7.0000°; N -0.1600, Plg60.0000°, Azm242.0000°; P -4.9200, Plg23.0000°, Azm105.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
HLW ***16*** *00:53:38.4, 34°.16N×25°.30E, h17km±11km, Md3.9*
ISC 16 00:53:35.8±0.8, 34°.26N±0°.04×25°.13E±0°.03, h26km±5km, n468, σ**1$47/488, mb4.5/60, 19C-19D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.80**	**341**	P	**Pb**	**00 53 50.3**	**-0.8**
SIVA				S	**Sb**	**00 54 01.0**	**-0.6**
SIVA	**Sivas**	**0.80**	**341**	P	**Pb**	**00 53 50.3**	**-0.8**
SIVA				S	**Sb**	**00 54 01.5**	**-0.1**
SIVA				AML	AML	00 54 07.0	
	comp=E,92601μm,0.8s						
SIVA				AML	AML	00 54 09.9	
	comp=N,63115μm,0.7s						
TMBK	**Timbaki Herakl**	**0.86**	**340**	P	**Pb**	**00 53 51.8**	**-0.4**
TMBK				S	**Sn**	**00 54 04.3**	**+0.3**
LAST	**Lasithi**	**0.94**	**18**	P	**Pn**	**00 53 53.0**	**-0.5**
LAST	**Lasithi**	**0.94**	**18**	P	**Pn**	**00 53 53.2**	**-0.3**
LAST				AML	AML	00 54 15.4	
	comp=E,10707μm,0.8s						
LAST				AML	AML	00 54 17.7	
	comp=N,9204μm,0.7s						
GVD	**Gavdhos**	**1.04**	**304**	P	**Pn**	**00 53 54.6**	**-0.1**
GVD	**Gavdhos**	**1.04**	**304**	*e*Pg	**Pn**	**00 53 54.5**	**-0.1**
GVD	**Gavdhos**	**1.04**	**304**	P	**Pn**	**00 53 54.5**	**-0.1**
GVD	**Gavdhos**	**1.04**	**304**	P	**Pn**	**00 53 54.6**	**-0.1**
GVD				S	**Sn**	**00 54 09.2**	**+0.9**
GVD				AML	AML	00 54 16.0	
	comp=E,31830μm,0.5s						
GVD				AML	AML	00 54 25.3	
	comp=N,22066μm,0.5s						
KSTL	**Kastelli Herak**	**1.04**	**357**	P	**Pn**	**00 53 53.4**	**-1.3**
KSTL				S	**Sn**	**00 54 06.7**	**-1.7**
IACM	**Heraklion**	**1.05**	**357**	P	**Pn**	**00 53 54.6**	**-0.2**
IACM	**Heraklion**	**1.05**	**357**	P	**Pb**	**00 53 55.2**	**0.0**
IDI	**Anoyia**	**1.05**	**349**	Pn	**Pn**	**00 53 53.7**	**-1.2**
	comp=N,152nm,0.3s,baz=166,slow=18,SNR=148						
IDI				Sn	**Sb**	**00 54 08.3**	**-0.4**
	comp=N,370nm,0.3s,baz=292,slow=19,SNR=18						
IDI	**Anoyia**	**1.05**	**349**	P	**Pn**	**00 53 53.5**	**-1.3**
IDI				S	**Sn**	**00 54 08.7**	**+0.1**
IDI				AML	AML	00 54 17.0	
	comp=N,8462μm,0.5s						
IDI				AML	AML	00 54 21.7	
	comp=E,6951μm,0.5s						
NPS	**Neapolis**	**1.08**	**21**	P	**Pn**	**00 53 55.4**	**+0.2**
NPS	**Neapolis**	**1.08**	**21**	P	**Pn**	**00 53 55.5**	**+0.2**
NPS				S	**Sb**	**00 54 11.3**	**+1.8**
NPS				AML	AML	00 54 22.5	
	comp=N,10464μm,0.9s						
NPS				AML	AML	00 54 23.3	
	comp=E,13882μm,1.5s						
PRNS	**Prines Rethymn**	**1.22**	**335**	P	**Pn**	**00 53 57.5**	**+0.4**
PRNS				S	**Sb**	**00 54 15.2**	**+1.7**
STIA	**Sitia Lasithi**	**1.23**	**40**	P	**Pb**	**00 53 58.9**	**+0.5**
ZKR	**Zakros**	**1.24**	**46**	P	**Pb**	**00 53 58.5**	**0.0**
ZKR	**Zakros**	**1.24**	**46**	*e*Pg	**Pb**	**00 53 58.7**	**+0.2**
ZKR				*e*Pg	**Pb**	**00 53 58.7**	**+0.2**
ZKR	**Zakros**	**1.24**	**46**	P	**Pb**	**00 53 58.7**	**+0.2**
ZKR	**Zakros**	**1.24**	**46**	P	**Pb**	**00 53 58.8**	**+0.3**
ZKR				S	**Sb**	**00 54 16.2**	**+2.1**
ZKR				AML	AML	00 54 27.0	
	comp=N,3932μm,0.6s						
ZKR				AML	AML	00 54 32.8	
	comp=E,8178μm,0.8s						
VAM	**Vamos**	**1.38**	**327**	P	**Pn**	**00 53 59.6**	**+0.3**
VAM				S	**Sb**	**00 54 18.2**	**+0.1**
VAM	**Vamos**	**1.38**	**327**	P	**Pn**	**00 54 00.0**	**+0.7**
VAM				AML	AML	00 54 33.3	
	comp=E,16626μm,0.9s						
VAM				AML	AML	00 54 36.8	
	comp=N,10495μm,0.7s						
IMMV	**Iera Moni Meta**	**1.53**	**322**	P	**Pb**	**00 54 03.1**	**-0.3**
IMMV	**Iera Moni Meta**	**1.53**	**322**	P	**Pn**	**00 54 02.0**	**+0.6**
IMMV	**Iera Moni Meta**	**1.53**	**322**	P	**Pb**	**00 54 02.7**	**-0.7**
IMMV				AML	AML	00 54 41.0	
	comp=E,15426μm,1.0s						
IMMV				AML	AML	00 54 45.6	
	comp=N,6764μm,0.8s						
CHAN	**Chania**	**1.54**	**325**	P	**Pb**	**00 54 03.0**	**-0.7**
THR9	**Santorini-Faro**	**2.10**	**5**	P	**Pn**	**00 54 10.6**	**+1.4**
THR9	**Santorini-Faro**	**2.10**	**5**	P	**Pn**	**00 54 10.7**	**+1.4**
THR6	**Thira Island,**	**2.10**	**6**	*e*Pn	**Pn**	**00 54 10.4**	**+1.1**
THR6	**Thira Island,**	**2.10**	**6**	P	**Pn**	**00 54 10.4**	**+1.1**
THR6	**Thira Island,**	**2.10**	**6**	P	**Pn**	**00 54 10.7**	**+1.4**
SAP1	**Santorini-Akro**	**2.10**	**6**	P	**Pn**	**00 54 10.5**	**+1.2**
SAP1	**Santorini-Akro**	**2.10**	**6**	P	**Pn**	**00 54 10.5**	**+1.2**
KARP	**Karpathos**	**2.11**	**52**	*e*P	**Pn**	**00 54 09.8**	**+0.4**
KARP	**Karpathos**	**2.11**	**52**	*e*Pn	**Pb**	**00 54 11.5**	**-1.8**
KARP	**Karpathos**	**2.11**	**52**	P	**Pb**	**00 54 12.7**	**-0.7**
KARP	**Karpathos**	**2.11**	**52**	P	**Pb**	**00 54 12.6**	**-0.7**
KARP				AML	AML	00 54 43.0	
	comp=N,2223μm,0.6s						
KARP				AML	AML	00 54 54.8	

comp=E,2509µm,0.7s
SANT Santorini 2.12 7 eP Pn 00 54 10.6 +0.9
SANT Santorini 2.12 7⇓iP Pn 00 54 10.5 +0.9
SANT Santorini 2.12 7 P Pn 00 54 10.3 +0.6
SANT AML AML 00 54 57.5
comp=E,3934µm,0.6s
SANT AML AML 00 55 07.5
comp=N,1218µm,1.0s
THR3 Thira Island, 2.16 6 ePn Pn 00 54 10.8 +0.8
THR3 Thira Island, 2.16 6 P Pn 00 54 10.8 +0.8
THR3 Thira Island, 2.16 6 P Pn 00 54 10.9 +0.9
ANAF Anafi Island 2.16 14 P Pn 00 54 11.1 +1.0
ANAF Anafi Island 2.16 14 P Pn 00 54 11.1 +1.0
ANAF AML AML 00 54 52.4
comp=N,4651µm,0.5s
ANAF AML AML 00 54 56.5
comp=E,6001µm,0.7s
THR5 Thira Island, 2.16 5 P Pn 00 54 11.6 +1.5
THR5 Thira Island, 2.16 5 P Pn 00 54 11.7 +1.5
SFIR Foira Santorin 2.17 6 P Pn 00 54 11.4 +1.1
THR7 Fira-Santorini 2.17 6 P Pn 00 54 11.4 +1.1
SAP3 Santorini-Thir 2.18 5 P Pn 00 54 11.6 +1.2
SAP3 Santorini-Thir 2.18 5 P Pn 00 54 11.2 +0.8
THT2 Imerovigli 2.18 6 P Pn 00 54 11.7 +1.3
THT2 Imerovigli 2.18 6 P Pn 00 54 11.6 +1.1
ANKY Antikythira Is 2.20 317 ePn Pn 00 54 12.2 +1.6
ANKY Antikythira Is 2.20 317 P Pn 00 54 12.2 +1.6
ANKY Antikythira Is 2.20 317 P Pn 00 54 11.5 +0.9
ANKY AML AML 00 55 07.9
comp=N,2516µm,1.2s
ANKY AML AML 00 55 10.4
comp=E,3995µm,1.0s
THR2 Thira island, 2.20 6 ePn Pn 00 54 11.5 +0.9
THR2 Thira island, 2.20 6 P Pn 00 54 11.5 +0.9
CMBO Columbo, Santo 2.22 6 P Pn 00 54 11.8 +0.9
CMBO Columbo, Santo 2.22 6 P Pn 00 54 11.5 +0.6
IOSP Ios island 2.46 3 P Pn 00 54 14.9 +0.7
IOSP Ios island 2.46 3 P Pn 00 54 15.1 +0.8
IOSP AML AML 00 54 57.0
comp=E,2579µm,0.6s
IOSP AML AML 00 54 57.5
comp=N,2895µm,0.7s
MHLO Agia Marina, M 2.50 346 P Pn 00 54 15.2 +0.5
MHLO Agia Marina, M 2.50 346 P Pn 00 54 15.4 +0.7
MHLO AML AML 00 55 05.5
comp=N,7836µm,1.0s
MHLO AML AML 00 55 09.3
comp=E,7312µm,0.7s
MHLA Plaka, Milos I 2.55 347 P Pn 00 54 16.2 +0.8
KYTH Kithira 2.63 320 ePn Pn 00 54 18.3 +1.7
KYTH Kithira 2.63 320 P Pn 00 54 18.3 +1.7
KYTH Kithira 2.63 320 P Pn 00 54 18.7 +2.1
KYTH AML AML 00 55 22.1
comp=E,1879µm,1.2s
KYTH AML AML 00 55 28.2
comp=N,1798µm,1.3s
AMGA Amorgos Island 2.64 13 P Pn 00 54 18.1 +1.4
AMGA Amorgos Island 2.64 13 P Pn 00 54 17.5 +0.7
KTHR Kythira 2.65 320 P Pn 00 54 18.4 +1.6
SLUM Salum 2.76 179 P Pn 00 54 20.0 +1.7
baz=182
APE Apeiranthos 2.82 7 eP Pn 00 54 20.1 +0.8
APE Apeiranthos 2.82 7 ePn Pn 00 54 19.8 +0.5
APE Apeiranthos 2.82 7 P Pn 00 54 19.8 +0.5
APE Apeiranthos 2.82 7⇑iP Pn 00 54 19.8 +0.5
APE Apeiranthos 2.82 7c iP Pn 00 54 19.7 +0.5
APE Apeiranthos 2.82 7 P Pn 00 54 20.0 +0.7
APE AML AML 00 55 07.1
comp=N,690µm,0.7s
APE AML AML 00 55 23.2
comp=E,828µm,1.7s
SERI Serifos 2.94 350 P Pn 00 54 21.4 +0.6
VLI Veliai 3.04 325 ePn Pn 00 54 22.5 +0.4
VLI Veliai 3.04 325 P Pn 00 54 22.5 +0.4
VLI Veliai 3.04 325 P Pn 00 54 22.7 +0.5
ARG Arkhangelos 3.13 51 eP Pn 00 54 25.7 +2.2
ARG Arkhangelos 3.13 51 ePn Pn 00 54 26.0 +2.5
ARG Arkhangelos 3.13 51 P Pn 00 54 26.0 +2.5
ARG Arkhangelos 3.13 51 eP Pn 00 54 26.0 +2.5
ARG Arkhangelos 3.13 51 P Pn 00 54 26.0 +2.5
DAT Datca 3.17 38 eP Pn 00 54 25.7 +1.6
DATC Datca-Mugla 3.24 39 eP Pn 00 54 25.5 +0.6
BODT Bodrum 3.31 32 eP Pn 00 54 27.3 +1.3
BBRN Bozburun-Marma 3.40 44 eP Pn 00 54 29.1 +2.0
MATC Matruh 3.40 148 P Pn 00 54 29.0 +1.8
baz=149
MATC S Sn 00 55 04.4 -2.2
baz=149
MRSB Marmaris-Mugla 3.50 45 eP Pn 00 54 30.5 +1.9
KRND KRANIDI 3.51 333 P Pn 00 54 28.8 +0.2
KRND KRANIDI 3.51 333 P Pn 00 54 29.2 +0.6
DID Didima 3.59 335 ePn Pn 00 54 29.7 0.0
DID Didima 3.59 335 P Pn 00 54 29.7 0.0
DID Didima 3.59 335 P Pn 00 54 29.9 +0.2
SMG Samos 3.71 21 P Pn 00 54 32.4 +1.0
SMG Samos 3.71 21 P Pn 00 54 32.7 +1.3
EPID Epidavros 3.73 335 P Pn 00 54 32.3 +0.7
VLY Voula,Athens 3.75 344 ePn Pn 00 54 31.9 0.0
VLY Voula,Athens 3.75 344 P Pn 00 54 31.9 0.0
VLY Voula,Athens 3.75 344 P Pn 00 54 32.3 +0.4
PYL PYLOS 3.81 315 ePn Pn 00 54 32.0 -0.8
PYL PYLOS 3.81 315 P Pn 00 54 32.0 -0.8
PYL PYLOS 3.81 315 P Pn 00 54 32.8 -0.1
VLX Vlachokerasia 3.83 325 ePn Pn 00 54 34.4 +1.3
VLX Vlachokerasia 3.83 325 P Pn 00 54 34.4 +1.3
VLX Vlachokerasia 3.83 325 P Pn 00 54 34.4 +1.3
GCAM G?zelcaml? 3.83 26 eP Pn 00 54 34.9 +1.8
DALY Dalyan (Mula) 3.84 47 eP Pn 00 54 35.6 +2.4
TURN Turunc 3.85 46 eP Pn 00 54 30.9 -2.4
YER Yerkesik 3.85 41 eP Pn 00 54 35.2 +1.8
YER Yerkesik 3.85 41 ePn Pn 00 54 35.6 +2.2
YER Yerkesik 3.85 41 P Pn 00 54 35.6 +2.2
YER Yerkesik 3.85 41 eP Pn 00 54 35.6 +2.2
ATHU Athens Univers 3.86 344 ePn Pn 00 54 33.6 +0.2
ATHU Athens Univers 3.86 344 P Pn 00 54 33.6 +0.2
ATHU Athens Univers 3.86 344 P Pn 00 54 34.1 +0.7
ITM Ithomi 3.91 319 eP Pn 00 54 36.8 +2.6
ITM Ithomi 3.91 319 ePn Pn 00 54 34.4 +0.3
ITM ePg Pb 00 54 34.5 -10
ITM Ithomi 3.91 319 P Pn 00 54 34.5 +0.3
ITM Ithomi 3.91 319 P Pn 00 54 34.5 +0.3
PTL Penteli 3.92 345 ePn Pn 00 54 34.8 +0.5
PTL Penteli 3.92 345 P Pn 00 54 34.8 +0.5
PTL Penteli 3.92 345 P Pn 00 54 35.0 +0.7
TRIP Tripoli 4.00 325 P Pn 00 54 37.2 +1.7
TRIP Tripoli 4.00 325 P Pn 00 54 37.3 +1.8
FETY Fethiye 4.00 53 eP Pn 00 54 36.8 +1.3
FETY Fethiye 4.00 53 ePn Pn 00 54 36.7 +1.3
FETY Fethiye 4.00 53 P Pn 00 54 36.7 +1.3
ACOR Acrocorinthos 4.06 334 P Pn 00 54 37.3 +1.1
KSL Kastellorizon 4.11 61 P Pn 00 54 38.5 +1.7
LOUT Loutraki 4.11 335 P Pn 00 54 37.5 +0.6
LTK Loutraki 4.14 336 ePn Pn 00 54 37.9 +0.5
LTK Loutraki 4.14 336 P Pn 00 54 37.9 +0.5
LTK Loutraki 4.14 336 P Pn 00 54 37.6 +0.2
VILL Villia 4.17 340 P Pn 00 54 37.9 +0.2
CHOS Chios island 4.19 10 eP Pn 00 54 39.4 +1.4
CHOS Chios island 4.19 10 P Pn 00 54 38.9 +0.9
CHOS Chios island 4.19 10 P Pn 00 54 39.0 +1.0
VIL2 Platees 4.22 340 P Pn 00 54 38.3 -0.2
URLA Izmir 4.26 16 eP Pn 00 54 40.3 +1.3
EREA Eretria 4.26 347 P Pn 00 54 39.6 +0.6
EREA Eretria 4.26 347 P Pn 00 54 39.9 +0.9
THAL Thalero 4.27 333 P Pn 00 54 39.5 +0.5
AYDB Zeytinkoy-Aydi 4.30 30 eP Pn 00 54 41.6 +1.9
GUR Goura 4.31 329 ePn Pn 00 54 40.4 +0.7
GUR Goura 4.31 329 P Pn 00 54 40.4 +0.7
GUR Goura 4.31 329 P Pn 00 54 40.4 +0.7
PROD Prodromos 4.38 336 P Pn 00 54 41.3 +0.7
BLCB Balcova 4.40 20 eP Pn 00 54 41.9 +1.1
KLV Kalavryta, Ach 4.48 328 P Pn 00 54 41.8 -0.2
KLV Kalavryta, Ach 4.48 328 P Pn 00 54 42.4 +0.3
DRO Drossia 4.61 324 P Pn 00 54 45.1 +1.3
MRKA Markates 4.61 345 P Pn 00 54 44.2 +0.4
MRKA Markates 4.61 345 P Pn 00 54 44.5 +0.7
SKY Skiros Island 4.63 354 ePn Pn 00 54 44.6 +0.5
SKY Skiros Island 4.63 354 P Pn 00 54 44.6 +0.5
DSF Desfina 4.65 334 P Pn 00 54 45.6 +1.3
LKR Lokris 4.71 339 P Pn 00 54 45.0 -0.1
LKR Lokris 4.71 339 P Pn 00 54 45.6 +0.5
LAKA Lakka 4.72 328 P Pn 00 54 47.1 +1.8

ATAL Atalanti 4.74 340 ePn Pn 00 54 45.5 -0.1
ATAL Atalanti 4.74 340 P Pn 00 54 45.5 -0.1
ATAL Atalanti 4.74 340 P Pn 00 54 46.4 +0.8
KALE Kalithea 4.78 331 P Pn 00 54 46.9 +0.8
RLS Riolos of Patr 4.81 323 P Pn 00 54 47.7 +1.2
SERG Sergoula 4.83 330 P Pn 00 54 47.8 +1.0
SMIA Simia 4.86 342 P Pn 00 54 48.2 +0.9
SIGR SIGRI 4.98 7 P Pn 00 54 49.6 +0.8
PRK Paraskevi 5.06 10 P Pn 00 54 51.5 +1.6
PRK Paraskevi 5.06 10 P Pn 00 54 51.6 +1.7
KULA Kula-Manisa 5.11 33 P Pn 00 54 53.1 +2.3
PVO Paravola 5.23 327 P Pn 00 54 54.8 +2.5
AGG Agios Georgios 5.26 335 P Pn 00 54 52.8 +0.1
AGG Agios Georgios 5.26 335 P Pn 00 54 53.8 +1.0
NEO Neokhori 5.26 344 P Pn 00 54 53.2 +0.4
NEO Neokhori 5.26 344 P Pn 00 54 53.4 +0.6
XOR Xorichti 5.33 344 P Pn 00 54 53.9 +0.2
EVR Evrytania 5.36 331 P Pn 00 54 55.8 +1.7
PDO Prodromos 5.37 325 P Pn 00 54 57.4 +3.1
PDO Prodromos 5.37 325 P Pn 00 54 56.7 +2.4
EZN Ezine 5.64 9⇑iP Pn 00 54 57.4 -0.5
BALB Balikesir 5.80 21 ePn Pn 00 55 02.1 +1.9
THL Klokotos Trika 5.85 336 P Pn 00 55 01.1 +0.3
OUR Ouranopolis 6.13 352 ePn Pn 00 55 05.4 +0.7
OUR Ouranopolis 6.13 352 P Pn 00 55 05.4 +0.7
OUR Ouranopolis 6.13 352 eP Pn 00 55 05.4 +0.7
LIT Litokhoron 6.20 341 ePn Pn 00 55 06.8 +1.2
LIT Litokhoron 6.20 341 eP Pn 00 55 06.8 +1.2
LEF Lefka 6.45 80⇓iP Pn 00 55 09.2 +0.2
HMYD Mayadein 6.55 131 P Pn 00 55 11.9 +1.4
baz=131
HNAT Natroun 6.56 133 P Pn 00 55 12.2 +1.7
baz=133
SOH Sokhos 6.70 348 P Pn 00 55 16.2 +3.7
SOH pmax pmax
comp=Z,18nm,1.1s
SRS Serrai 6.95 350 P Pn 00 55 16.6 +0.6
KNT Kendrikon 7.11 346 P Pn 00 55 19.2 +1.0
KOT Kottamia 7.14 125 P Pn 00 55 19.3 +0.8
baz=125
KOT S Sn 00 56 34.3 -4.5
baz=125
NVR Nevrokopi 7.15 352 P Pn 00 55 19.4 +0.7
HSAF As Saff 7.15 129 P Pn 00 55 19.9 +1.1
baz=128
FNA Florina 7.16 337 ePn Pn 00 55 18.6 -0.3
FNA e 00 55 19.1
FNA Florina 7.16 337 P Pn 00 55 18.6 -0.3
FNA Florina 7.16 337 P Pn 00 55 20.3 +1.4
FNA pmax pmax
comp=Z,12nm,0.8s
GLL Jalalah 7.28 128 P Pn 00 55 21.2 +0.7
baz=128
HHAG Hagoal 7.30 124 P Pn 00 55 22.6 +1.8
baz=124
VAY Valandovo 7.33 345 iPn Pn 00 55 30.1 +8.9
MMB Musomiste 7.40 352 eP Pn 00 55 23.4 +1.3
RZN Rozhen 7.42 358 eP Pn 00 55 23.4 +0.8
HFRF Wahat Farafira 7.60 158 P Pn 00 55 25.1 +0.3
baz=158
KRUS Krusevo 7.73 338 iPn Pn 00 55 27.2 +0.5
KKB Krupnik 7.76 349 eP Pn 00 55 35.4 +8.3
STIP Stip 7.78 343 iPn Pn 00 55 28.7 +1.4
TIR Tirane 8.21 331 ePn Pn 00 55 33.4 +0.2
TIR Tirane 8.21 331 eP Pn 00 55 33.4 +0.2
BR231 Keskin MP Arra 8.27 45 ePn Pn 00 55 34.9 +0.8
ANTO Ankara 8.30 45 ePn Pn 00 55 35.4 +1.0
ANTO Ankara 8.30 45 eP Pn 00 55 35.4 +1.0
TIP Timpagrande 8.32 309 ePn Pn 00 55 35.1 +0.3
TIP Timpagrande 8.32 309⇑iP Pn 00 55 31.0 -3.8
OFRI `Ofer 8.40 98 Pn Pn 00 55 36.8 +1.0
VTS Vitosha 8.48 350 ePn Pn 00 55 37.1 +0.1
VTS Vitosha 8.48 350⇑iP Pn 00 55 36.5 -0.5
VTS Vitosha 8.48 350 eP Pn 00 55 37.1 +0.1
VTS Vitosha 8.48 350 eP Pn 00 55 40.8 +3.8
SLTI Sal'it 8.54 101 Pn Pn 00 55 37.0 -0.8
MMAI Mount Meron Ar 8.66 95 Pn Pn 00 55 38.6 -0.8
comp=Z,3.7nm,0.3s,baz=266,slow=12,SNR=24
MMAI Sn Sn 00 57 12.8 -3.4
comp=Z,15nm,0.3s,baz=277,slow=21,SNR=12
AMAZ Amatzia 8.66 106 Pn Pn 00 55 39.8 +0.3
AMAZ Amatzia 8.66 106 P Sn 00 57 11.1 -5.3
comp=Z,1.3nmcomp=Z,372nm,0.7s
BR131 Keskin Array S 8.72 49 ePn Pn 00 55 39.9 -0.4
BRTR Keskin Array B 8.72 49 LR LR 01 00 05.8
comp=Z,206nm,19.4s,baz=230,slow=45
BRTR Keskin Array B 8.72 49 iP Pn 00 55 40.4 +0.1
BRTR pmax pmax
comp=Z,2.0nm,0.8s
MMLI Mount Malkishu 8.80 99 Pn Pn 00 55 40.6 -0.7
MMLI Mount Malkishu 8.80 99 P Sn 00 57 13.1 -6.6
comp=Z,0.2nmcomp=Z,66nm,0.7s
GEM Giv'at Ha'Em 8.84 94 Pn Pn 00 55 42.3 +0.5
YTIR Yattir 8.89 106 Pn Pn 00 55 43.1 +0.5
NATI Neve Ativ 8.89 93 Pn Pn 00 55 42.1 -0.4
HMDT Nahal Hemdat 8.93 100 Pn Pn 00 55 43.7 +0.6
SHMJ Saham 9.01 97 P Pn 00 55 44.9 +0.7
comp=Z,39nm,0.9s,comp=Z,1µm
SHMJ Saham 9.01 97 P Sn 00 57 22.6 -2.3
comp=Z,0.7nmcomp=Z,207nm,0.8s
DSI Dead Sea 9.02 104 Pn Pn 00 55 44.8 +0.4
KRMI Paran Flat 9.12 114 Pn Pn 00 55 45.3 -0.4
DRME Dracevica, Mon 9.19 331 ePn Pn 00 55 43.5 -3.1
PRNI Paran 9.22 112 Pn Pn 00 55 47.5 +0.4
LISJ El Lisan 9.22 106 P Pn 00 55 47.1 +0.1
comp=Z,19nm,0.5s,comp=Z,666nm
LISJ El Lisan 9.22 106 P Sn 00 57 23.6 -6.3
comp=Z,86nm,1.0s
VAE Valguarnera 9.27 293 Pn Pn 00 55 49.9 +2.0
comp=Z,0.4nm,0.3s,baz=90,slow=20,SNR=5.4
PDG Podgorica 9.37 332⇑iP Pn 00 55 46.6 -2.4
PDG Podgorica 9.37 332 ePn Pn 00 55 45.4 -3.7
TTG Podgorica 9.37 332 ePn Pn 00 55 46.7 -2.4
TTG Podgorica 9.37 332 eP Pn 00 55 46.7 -2.4
WALJ Wala 9.37 104 P Pn 00 55 49.1 -0.1
comp=Z,60nm,0.8s,comp=Z,851nm
WALJ Wala 9.37 104 P Sn 00 57 29.6 -4.1
comp=Z,129nm,0.8s
HRFI Mount Harif 9.39 114 Pn Pn 00 55 50.1 +0.6
HRFI Mount Harif 9.39 114 P Sn 00 57 28.9 -5.4
MBRI Mt Berech 9.42 116 Pn Pn 00 55 50.1 +0.2
EIL Elat 9.51 116 Pn Pn 00 55 51.1 0.0
comp=Z,3.5nm,0.3s,baz=344,slow=1.3,SNR=45
EIL Sn Sn 00 57 24.1 -13
comp=Z,0.8nm,0.3s,baz=293,slow=8.9,SNR=4.1
EIL Elat 9.51 116 Pn Pn 00 55 50.8 -0.3
HSUJ Al Zarqa 9.52 100 P Sn 00 57 34.6 -2.7
AQBJ Aqaba 9.56 116 P Pn 00 55 52.3 +0.6
comp=Z,72nm,0.5s,comp=Z,1µm
JDRJ Daraweish 9.57 109 P Pn 00 55 54.0 +2.0
comp=Z,27nm,0.5s,comp=Z,1µm
JDRJ Daraweish 9.57 109 P Sn 00 57 36.2 -2.5
HCY Herceg Novi 9.69 329 ePn Pn 00 55 48.5 -5.0
TREB Trebinje 9.97 330 ePn Pn 00 55 53.2 -4.2
BRY Bratogost 10.05 331 ePn Pn 00 55 53.7 -4.8
ASF Jabal al Asfar 10.07 99 Pn Pn 00 55 58.5 -0.3
comp=Z,0.5nm,0.3s,baz=252,slow=4.4,SNR=4.4
ASF Sn Sn 00 57 46.6 -4.4
comp=Z,0.9nm,0.3s,baz=346,slow=18,SNR=5.9
ASF Jabal al Asfar 10.07 99 P Pn 00 55 59.8 +0.9
comp=Z,6.4nm,0.8s
HHRG Al Ghardaqah 10.09 132 P Pn 00 56 00.7 +1.6
baz=132
UPM Unac-Piva 10.16 333 ePn Pn 00 55 59.0 -1.1
STON Ston 10.38 328 ePn Pn 00 56 00.4 -2.4
BBLS Lazići 10.57 337 ePn Pn 00 56 02.4 -3.2
DIVS Divibare 10.60 339 ePn Pn 00 56 00.0 -6.0
HAPS Han Pijesak,BI 10.92 336 ePn Pn 00 56 02.8 -7.6
ARR Arges 11.10 358⇑iP Pn 00 56 04.1 -8.7
MLR Muntele Rosu 11.24 3 LR LR 01 00 56.6
comp=Z,222nm,21.4s,baz=132,slow=40
MLR Muntele Rosu 11.24 3⇑iP Pn 00 56 14.5 -0.2
FRGS Fruska Gora 11.63 341 ePn Pn 00 56 21.5 +1.5
BZS Buzias 11.66 348⇓iP Pn 00 56 19.6 -0.8
VRI Vrincioaia 11.66 6⇓iP Pn 00 56 20.2 -0.2
BLY Banja Luka 12.13 332 ePn Pn 00 56 24.4 -2.5
BLY Banja Luka 12.13 332⇓iP Pn 00 56 25.1 -1.8
BLY Banja Luka 12.13 332 ePn Pn 00 56 24.3 -2.6
MORH Mrgy, Hungar 12.92 339 ePn Pn 00 56 35.3 -2.3
MORH Mrgy, Hungar 12.92 339 EPn Pn 00 56 36.0 -1.6
MORH EP P 00 56 47.0 -1.0
CRES Cresnjev 13.71 330 ePn Pn 00 56 44.0 -4.4
CEY Cerknica 14.08 328 ePn Pn 00 56 50.8 -2.7

ANN Anapa 14.16 38 eP Pn 00 56 55.6 +1.1
ANN pmax pmax
comp=Z,36nm,1.5s
PSZ Piszkesteto 14.20 346 eP Pn 00 56 36.9 -18
UZH Uzhgorod 14.52 352 eP P 00 57 04.1 -1.6
SOKA Soboth 14.57 331 ePn Pn 00 56 55.8 -4.5
comp=Z,9.3nm,1.0s,SNR=6.0
SOKA eP P 00 57 07.1 +0.6
comp=Z,9.3nm,1.0s
OBKA Obir 14.64 330 ePn Pn 00 56 59.9 -1.2
comp=Z,7.5nm,0.9s
OBKA iP P 00 57 07.3 +0.1
comp=Z,7.5nm,0.9s
ARSA Arzberg 14.86 334 ePn Pn 00 57 03.3 -0.8
comp=Z,11nm,1.0s
ARSA eP P 00 57 10.8 +1.2
comp=Z,6.1nm,0.6s
VYHS Vyhne 14.98 344 eP Pn 00 56 59.6 -6.0
VYHS Vyhne 14.98 344 ePN Pn 00 56 59.6 -6.0
VYHS Vyhne 14.98 344 eP P 00 57 10.5 -0.4
MODS Modra-Piesok 15.27 340 eP P 00 57 14.0 -0.2
MODS Modra-Piesok 15.27 340 eP P 00 57 14.0 -0.2
CONA Conrad Observa 15.32 336 ePn Pn 00 57 10.2 0.0
comp=Z,0.2nm,0.3s
KBA Koelnbreinsper 15.59 329 eP P 00 57 18.9 +1.0
comp=Z,4.6nm,0.6s,SNR=7.8
KBA Koelnbreinsper 15.59 329 P P 00 57 20.2 +2.3
KBA pmax pmax
comp=Z,18nm,0.7s
KARS Kars 15.60 61 ePn P 00 57 16.8 -1.2
comp=Z,78nm,1.1s
KARS Kars 15.60 61 eP P 00 57 16.8 -1.2
KARS pmax pmax
comp=Z,79nm,1.1s
JAVC Velka Javorina 15.61 341 ePN P 00 57 18.9 +1.0
ABTA Abfaltersbach 15.71 326 ePn Pn 00 57 14.9 -0.5
comp=Z,0.8nm,0.4s,SNR=13
ABTA eP P 00 57 20.4 +1.3
comp=Z,14nm,0.6s
MOA Molln 15.84 332 ePn Pn 00 57 17.2 +0.3
comp=Z,0.1nm,0.1s,SNR=6.1
MOA iP P 00 57 21.2 +0.8
comp=Z,9.8nm,0.9s
KRUC Moravsky 16.15 339 ePN P 00 57 23.0 -0.9
VRAC Vranov 16.31 340 Pn Pn 00 57 22.4 -0.5
comp=Z,0.3nm,0.3s,baz=150,slow=9.4,SNR=22
VRAC Sn Sn 01 00 19.9 -3.1
comp=Z,0.5nm,0.3s,baz=271,slow=12,SNR=4.9
VRAC Vranov 16.31 340⇑iP Pn 00 57 20.9 -2.0
VRAC Vranov 16.31 340 ePN P 00 57 24.6 -1.1
NEY Neytrino 16.37 52⇓eP Pn 00 57 22.6 -1.3
OKC Ostrava-Krasne 16.39 344 eP P 00 57 27.7 +1.1
OKC MLR MLR
comp=Z,200nm,12.5s
OKC Ostrava-Krasne 16.39 344 eP P 00 57 27.7 +1.1
OKC AMS AMS 01 04 50.0
comp=Z,200nm,12.5s
MORC Moravsky Berou 16.48 342 ePN P 00 57 27.0 -0.6
WTTA Wattenberg 16.50 326 ePn Pn 00 57 24.5 -1.0
comp=Z,12nm,0.8s,SNR=10
WTTA iP P 00 57 29.2 +1.2
comp=Z,10.0nm,0.7s
SHA1 Shidzhatmaz 16.56 50⇓eP Pn 00 57 27.1 +0.7
WATA Walderalm 16.58 326 ePn Pn 00 57 26.5 0.0
comp=Z,39nm,1.3s,SNR=9.9
TREC Trest 16.63 337 eP P 00 57 28.9 -0.4
TREC Trest 16.63 337 eP P 00 57 28.9 -0.4
SQTA Sankt Quirin 16.67 325 ePn Pn 00 57 27.6 0.0
comp=Z,0.6nm,0.2s
GNI Garni 16.68 64 Pn P 00 57 29.5 -0.5
comp=Z,1.1nm,0.3s,baz=234,slow=8.2,SNR=3.4
GNI Garni 16.68 64⇑eP Pn 00 57 28.9 +1.0
KIV Kislovodsk 16.69 49 ePn P 00 57 29.3 -0.7
comp=Z,19nm,0.9s
KIV Kislovodsk 16.69 49⇑iP Pn 00 57 28.9 +1.1
KIV Kislovodsk 16.69 49 eP P 00 57 29.3 -0.7
KIV pmax pmax
comp=Z,19nm,0.9s
KVAR Kislovodsk Arr 16.69 49 Pn Pn 00 57 28.8 +0.9
baz=270,slow=20,SNR=4.3
AKASG Malin Array Be 16.70 9 Pn Pn 00 57 26.5 -1.4
comp=Z,3.5nm,0.3s,baz=200,slow=10,SNR=54
AKASG Sn Sn 01 00 34.6 +2.2
comp=Z,0.7nm,0.3s,baz=195,slow=21,SNR=4.7
AKBB Malin Array Si 16.70 9 ePn Pn 00 57 26.5 -1.3
comp=Z,40nm,0.8s
AKBB Malin Array Si 16.70 9 eP Pn 00 57 26.5 -1.3
AKBB pmax pmax
comp=Z,40nm,0.8s
KBZ Khabaz 16.71 50 Pn P 00 57 29.3 -0.8
comp=Z,0.4nm,0.3s,baz=236,slow=9.2,SNR=18
KBZ LR LR 01 05 43.1
comp=Z,102nm,19.3s,baz=254,slow=44
FUORN Ofenpass-Fuorn 16.71 322 ePn Pn 00 57 25.8 -2.5
comp=Z,18nm,0.9s
FETTA Feichten 16.76 324 ePn Pn 00 57 28.2 -0.6
comp=Z,19nm,1.4s,SNR=6.8
MOTA Moosalm 16.81 325 ePn Pn 00 57 29.3 -0.1
comp=Z,2.6nm,0.8s
MOTA iPn P 00 57 30.4 -1.0
comp=Z,0.6nm,0.3s
GEC2 GERESS Array S 16.87 333 ePn Pn 00 57 30.1 0.0
comp=Z,19nm,0.7s
GEC2 GERESS Array S 16.87 333 eP Pn 00 57 30.1 0.0
GEC2 pmax pmax
comp=Z,19nm,0.7s
GERES GERESS Array B 16.87 333 Pn Pn 00 57 29.6 -0.4
comp=Z,1.5nm,0.3s,baz=148,slow=12,SNR=65
GERES LR LR 01 05 32.0
comp=Z,148nm,18.4s,baz=143,slow=43
ZEI Tsey 16.95 54 eP P 00 57 33.9 +0.8
ZEI pmax pmax
comp=Z,17nm,0.8s
DAVOX Davos/Dischmat 17.02 322 Pn Pn 00 57 29.8 -2.2
comp=Z,0.3nm,0.3s,baz=138,slow=16,SNR=2.9
NCK Nalchik 17.05 52⇑eP P 00 57 35.2 +1.2
RETA Reutte 17.07 325 ePn Pn 00 57 33.2 +0.6
comp=Z,3.5nm,1.0s
TUE Stuetta 17.09 320 ePn Pn 00 57 32.7 -0.3
comp=Z,8.8nm,0.8s
KHC Kasperske Hory 17.15 334 ePn Pn 00 57 32.9 -0.7
comp=Z,28nm,2.0s
KHC Kasperske Hory 17.15 334 eP Pn 00 57 33.3 -0.2
KHC epP sP 00 57 45.2 +0.6
KHC AMS AMS 01 05 00.0
comp=Z,200nm,15.4s
DPC Dobruska-Polom 17.33 341 eP P 00 57 36.8 -0.2
DPC MLR MLR
comp=Z,200nm,12.3s
DPC Dobruska-Polom 17.33 341 eP P 00 57 36.8 -0.2
DPC AMS AMS 01 05 20.0
comp=Z,200nm,12.3s
DAVA Damuels 17.36 323 ePn P 00 57 37.6 +0.2
comp=Z,3.1nm,0.6s
GOF Gofitskoye 17.47 47⇑eP Pn 00 57 37.7 +0.2
GOF pmax pmax
comp=Z,16nm,0.6s
PRU Pruhonice 17.54 337 eP Pn 00 57 38.4 +0.1
PRU Pruhonice 17.54 337 eP Pn 00 57 38.4 +0.1
OSTC Ostas 17.54 341 eP P 00 57 39.8 +0.5
OSTC AMS AMS 01 05 20.0
comp=Z,200nm,7.1s
UPC Upice 17.56 340 eP Pn 00 57 38.2 -0.3
UPC MLR MLR
comp=Z,200nm,9.4s
UPC Upice 17.56 340 eP Pn 00 57 38.2 -0.3
UPC AMS AMS 01 05 20.0
comp=Z,200nm,9.4s
CHVC Chvalec 17.62 341 AMS AMS 01 05 20.0
comp=Z,200nm,25.4s
PVCC Panska Ves 18.00 338 eP Pn 00 57 42.1 -1.9
PVCC Panska Ves 18.00 338 eP Pn 00 57 42.1 -1.9
SENIN Lac Senin/Sane 18.15 317 ePn Pn 00 57 45.6 -0.4
comp=Z,5.6nm,0.8s
GROC Groznyy 18.39 55 eP Pn 00 57 49.6 +0.7
GROC eS Sn 01 01 12.4 -1.1
GROC pmax pmax
comp=Z,27nm,1.0s
NKC Novy Kostel 18.48 334 eP Pn 00 57 51.3 +1.5
NKC MLR MLR
comp=Z,200nm,14.3s
NKC Novy Kostel 18.48 334 eP Pn 00 57 51.3 +1.5
NKC AMS AMS 01 05 50.0
comp=Z,200nm,14.3s
BRG Berggiesshubel 18.50 337 eP P 00 57 48.8 -1.0
comp=Z,4.4nm,0.7s

GRA1	Grafenberg Arr	18.52	331	eP		P	00 57 49.1	-1.0	
	comp=Z,26nm,1.1s								
GRF	Grafenberg Arr	18.52	331	eP		P	00 57 49.1	-1.0	
GRF					pmax	pmax			
	comp=Z,26nm,1.1s								
GRFO	Grafenberg	18.52	331	eP		P	00 57 50.0	-0.1	
	comp=Z,144nm,2.0s								
GRFO	Grafenberg	18.52	331	eP		P	00 57 50.0	-0.1	
GRFO					pmax	pmax			
	comp=Z,144nm,2.0s								
BFO	Black Forest	18.84	323	i P		Pn	00 57 56.6	+2.4	
GNBR	Gunib	18.92	58⇓	eP		Pn	00 57 55.9	+0.6	
MOX	Moxa	19.12	333	P		Pn	00 57 58.0	+0.4	
MOX					pmax	pmax			
	comp=Z,11nm,0.9s								
CLL	Collm	19.18	336	eP		P	00 57 56.0	-1.3	
	comp=Z,35nm,1.9s								
CLL				i			00 58 07.0		
CLL	Collm	19.18	336	eP		P	00 57 56.0	-1.3	
CLL					pmax	pmax			
	comp=Z,35nm,1.9s								
VSR	Storozhevoye	19.78	27⇑	eP		P	00 58 02.5	-1.3	
VSR					pmax	pmax			
	comp=Z,9.0nm,0.8s								
TAM	Tamanrasset	20.63	242	eP		P	00 58 13.8	+0.3	
	comp=Z,36nm,2.0s								
TAM	Tamanrasset	20.63	242	eP		P	00 58 13.8	+0.3	
TAM					pmax	pmax			
	comp=Z,36nm,2.0s								
SSF	Saint Saulge	20.72	315	P		P	00 58 15.0	+0.9	
SSF					pmax	pmax			
	comp=Z,33nm,1.9s								
WLF	Walferdange	20.79	323	eP		P	00 58 15.1	+0.2	
	comp=Z,91nm,1.0s								
WLF	Walferdange	20.79	323	eP		P	00 58 15.1	+0.2	
WLF					pmax	pmax			
	comp=Z,91nm,1.0s								
WLF	Walferdange	20.79	323	P		P	00 58 15.5	+0.7	
WLF				PnPn		PnPn	00 58 32.9	-0.5	
IDID	Didziasalis	21.08	3	eP		P	00 58 16.0	-1.9	
IDID				IAmb		IAmb	00 58 27.4		
	comp=Z,5.2nm,0.8s								
IIGN	Ignalina	21.10	2	eP		P	00 58 16.6	-1.6	
IIGN				IAmb		IAmb	00 58 26.0		
	comp=Z,5.3nm,0.8s								
PABE	Paberze	21.26	358	eP		P	00 58 17.4	-2.4	
PABE				IAmb		IAmb	00 58 22.6		
	comp=Z,29nm,0.8s								
ISAL	Salakas	21.32	2	eP		P	00 58 18.8	-1.6	
MEM	Membach	21.49	325	P		P	00 58 22.2	-0.1	
	comp=Z,16nm,0.7s								
IZAR	Zarasai	21.50	2	eP		P	00 58 20.9	-1.6	
IZAR				IAmb		IAmb	00 58 23.9		
	comp=Z,3.0nm,0.8s								
DOU	Dourbes	21.84	323	P		P	00 58 25.6	-0.6	
DOU				PnPn		PnPn	00 58 47.3	-0.4	
PBUR	Paburg	21.88	355	eP		P	00 58 20.8	-5.6	
PBUR				IAmb		IAmb	00 58 25.1		
	comp=Z,53nm,0.9s								
OBN	Obninsk	22.32	17	P		P	00 58 31.5	+0.3	
	comp=Z,3.9nm,0.6s,baz=198,slow=20,SNR=6.9								
OBN	Obninsk	22.32	17	eP		P	00 58 32.3	+1.1	
	comp=Z,46nm,1.2s								
OBN	Obninsk	22.32	17	ceP		P	00 58 32.7	+1.5	
OBN				e			00 58 55.0		
OBN				eS		S	01 02 37.5	+2.4	
OBN					pmax	pmax			
	comp=Z,27nm,1.0s								
OBN					MLR	MLR			
	comp=Z,103nm,17.0s								
ESDC	Sonseca Array	23.81	292	P		P	00 58 45.0	-1.5	
	comp=Z,1.7nm,0.7s,baz=80,slow=9.4,SNR=17								
ESDC					LR	LR	01 08 43.6		
	comp=Z,39nm,21.2s,baz=220,slow=38								
ESLA	Sonseca Array	23.81	292	eP		P	00 58 46.7	+0.1	
	comp=Z,7.1nm,1.1s								
VSU	Vasula	24.23	2⇓	eP		P	00 58 50.2	0.0	
VSU					pmax	pmax			
	comp=Z,22nm,1.0s								
MDT	Midelt	24.79	275	P		P	00 58 54.5	-1.2	
	comp=Z,2.2nm,1.0s,baz=76,slow=4.2,SNR=2.2								
PBRG	Braganca	26.10	296	eP		P	00 59 07.9	+0.4	
MVO	Moncorvo	26.26	295	eP		P	00 59 09.9	+1.0	
PMRV	Marv??o	26.45	291	eP		P	00 59 10.8	+0.3	
GEYT	Alibeck	26.83	73	P		P	00 59 14.5	+0.5	
	comp=Z,1.1nm,0.7s,baz=294,slow=11,SNR=4.6								
HFS	Hagfors	26.95	347	P		P	00 59 13.2	-1.6	
	comp=Z,3.1nm,0.6s,baz=156,slow=8.1,SNR=7.4								
FIA0	FINESS Array S	27.21	1	eP		P	00 59 14.7	-2.4	
FIA0	FINESS Array S	27.21	1	eP		P	00 59 14.7	-2.4	
FINES	FINESS Array B	27.21	1	P		P	00 59 14.7	-2.4	
	comp=Z,3.6nm,0.7s,baz=171,slow=11,SNR=8.2								
FINES					PcP	PcP	01 02 36.1	-0.5	
	comp=Z,1.0nm,0.7s,baz=224,slow=2.5,SNR=3.6								
FINES					LR	LR	01 10 49.8		
	comp=Z,87nm,18.6s,baz=194,slow=38								
FINES	FINESS Array B	27.21	1	i P		P	00 59 18.2	+1.1	
FINES					pmax	pmax			
	comp=Z,4.0nm,0.7s								
NAO01	NORSAR Array S	28.15	345	eP		P	00 59 25.6	0.0	
	comp=Z,155nm,1.9s								
KLMR	Klimovskoe	28.19	15	eP		P	00 59 23.5	-2.4	
KLMR					pmax	pmax			
	comp=Z,9.0nm,0.9s								
KLMR	Klimovskoe	28.19	15	eP		P	00 59 23.5	-2.4	
KLMR					AMP		00 59 25.6		
	comp=Z,9.0nm,0.8s								
NB2	NORSAR Subarra	28.26	346	P		P	00 59 25.7	-0.9	
	comp=Z,3.3nm,1.0s,baz=156,slow=9.3								
NOA	NORSAR Array B	28.26	346	P		P	00 59 24.2	-2.4	
	comp=Z,1.0nm,0.7s,baz=172,slow=10,SNR=9.1								
NOA					LR	LR	01 12 33.3		
	comp=Z,57nm,20.1s,baz=155,slow=41								
EKA	Eskdalemuir Ar	28.77	326	P		P	00 59 30.7	-0.4	
	comp=Z,4.2nm,0.8s,baz=128,slow=9.6,SNR=10.0								
AKTO	Aktyubinsk	28.89	46	P		P	00 59 31.3	-0.9	
	comp=Z,0.9nm,0.5s,baz=260,slow=6.8,SNR=4.9								
AKTO					LR	LR	01 14 55.4		
	comp=Z,66nm,20.6s,baz=240,slow=44								
TOA0	Torodi Ar. Sit	29.90	231	eP		P	00 59 41.9	+0.4	
	comp=Z,10nm,0.6s								
TORD	Torodi Ar. Bea	29.90	231	P		P	00 59 40.8	-0.8	
	comp=Z,6.9nm,0.5s,baz=22,slow=7.4,SNR=106								
TORD					LR	LR	01 14 49.1		
	comp=Z,163nm,18.9s,baz=5.0,slow=43								
PRGR	Permogore	30.37	19	eP		P	00 59 41.0	-4.2	
PRGR					pmax	pmax			
	comp=Z,14nm,0.8s								
ARU	Arti	31.80	36	eP		P	00 59 57.1	-0.8	
	comp=Z,7.7nm,0.7s								
ARU	Arti	31.80	36	c i P		P	00 59 56.7	-1.2	
ARU				S		S	01 05 08.1	+1.8	
ARU					pmax	pmax			
	comp=Z,10.0nm,0.8s								
MBAR	Mbarara	35.08	170	P		P	01 00 29.2	+2.3	
	comp=Z,2.4nm,0.2s,baz=278,slow=5.9,SNR=3.5								
MBAR	Mbarara	35.08	170	⇓eP		P	01 00 28.6	+1.6	
MBAR					pmax	pmax			
	comp=Z,5.0nm,1.2s								
ARCES	ARCESS Array B	35.33	0	P		P	01 00 26.4	-2.1	
	comp=Z,2.1nm,0.8s,baz=166,slow=8.1,SNR=12								
ARCES					LR	LR	01 16 06.8		
	comp=Z,61nm,19.3s,baz=162,slow=38								
KK31	Karatay Array	36.14	62	eP		P	01 00 37.0	+1.2	
	comp=Z,24nm,1.8s								
KK31	Karatay Array	36.14	62	eP		P	01 00 37.0	+1.2	
KK31					pmax	pmax			
	comp=Z,24nm,1.8s								
KKAR	Karatay Array	36.14	62	eP		P	01 00 37.0	+1.2	
	comp=Z,24nm,1.8s								
KKAR	Karatay Array	36.14	62	eP		P	01 00 37.0	+1.2	
KKAR					pmax	pmax			
	comp=Z,24nm,1.8s								
BRVK	Borovoye	36.94	45	eP		P	01 00 42.7	+0.3	
	comp=Z,4.6nm,1.3s								
BRVK	Borovoye	36.94	45	⇓eP		P	01 00 43.0	+0.6	
BRVK					pmax	pmax			
	comp=Z,4.0nm,1.3s								
DBIC	Dimbokro	38.99	232	P		P	01 00 59.6	-0.5	
	comp=Z,1.7nm,0.5s,baz=60,slow=4.7,SNR=5.7								
DBIC					LR	LR	01 20 16.0		
	comp=Z,82nm,20.1s,baz=40,slow=41								
AAK	Ala-Archa	39.09	63	deP		P	01 01 02.5	+1.6	
AAK					pmax	pmax			
	comp=Z,6.0nm,1.4s								
BOOM	Boomskoye usch	40.16	63	eP		P	01 01 12.0	+2.2	
	comp=Z,7.4nm,1.3s								
BOOM	Boomskoye usch	40.16	63	eP		P	01 01 12.0	+2.2	
BOOM					pmax	pmax			
	comp=Z,7.0nm,1.3s								
KSH	Kashi	40.56	67	eP		P	01 01 13.4	+0.2	
KURK	Kurchatov	41.77	50	eP		P	01 01 23.6	+0.8	
	comp=Z,5.6nm,0.8s								
KURK	Kurchatov	41.77	50	ceP		P	01 01 22.9	+0.2	
KURK					pmax	pmax			
	comp=Z,4.0nm,0.8s								
SCO	Scoresbysund	44.17	339	i P		P	01 01 42.7	+0.8	
SCO					pmax	pmax			
	comp=Z,3.0nm,0.8s								
SCO	Scoresbysund	44.17	339	i P		P	01 01 42.7	+0.8	
	comp=Z,3.2nm,0.8s								
MKAR	Makanchi Array	44.30	56	P		P	01 01 44.5	+1.2	
	comp=Z,3.8nm,0.6s,baz=279,slow=6.3,SNR=35								
NVS	Novosibirsk	44.75	44	⇓iP		P	01 01 47.9	+1.2	
NVS					pmax	pmax			
	comp=Z,18nm,1.5s								
NVS					pmax	pmax			
	comp=N,7.0nm,1.3s								
NVS					pmax	pmax			
	comp=E,6.0nm,1.3s								
ZAA0	Zalesovo Array	45.65	46	eP		P	01 01 54.2	+0.3	
	comp=E,6.0nm,0.6s								
ZALV	Zalesovo Beam	45.65	46	P		P	01 01 53.4	-0.5	
	comp=E,6.6nm,0.5s,baz=266,slow=9.1,SNR=24								
DAG	Danmarks Havn	46.92	347	i P		P	01 02 03.2	-0.4	
DAG					pmax	pmax			
	comp=Z,5.0nm,0.8s								
DAG	Danmarks Havn	46.92	347	i P		P	01 02 03.2	-0.4	
	comp=Z,6.5nm,0.8s								
DGZ	Jazzator, Alta	47.46	51	ceP		P	01 02 09.2	+0.8	
DGZ					pmax	pmax			
	comp=Z,2.0nm,0.9s								
WMQ	Urumqi	48.48	59	eP		P	01 02 17.9	+1.6	
WMQ				pP		pP	01 02 23.0	-0.5	
WMQ					pmax	pmax			
	comp=Z,12nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,55nm,3.9s								
NRIK	Noril'sk	48.70	25	P		P	01 02 17.1	-0.4	
	comp=Z,4.4nm,0.8s,baz=76,slow=14,SNR=7.4								
SUMG	Summit	49.81	339	⇓iP		P	01 02 27.1	+0.7	
SUMG					pmax	pmax			
	comp=Z,11nm,0.8s								
SUMG	Summit	49.81	339	⇓iP		P	01 02 27.1	+0.7	
	comp=Z,11nm,0.8s								
TLY	Talaya	57.24	47	⇓eP		P	01 03 22.6	+1.9	
ZAK	Zakamensk	57.36	48	eP		P	01 03 22.4	+0.7	
ZAK					pmax	pmax			
	comp=Z,5.0nm,1.4s								
SHEL	Horse Pasture	57.95	216	i P		P	01 03 27.5	+1.5	
SONA0	Songino Array	60.08	50	eP		P	01 03 41.0	+0.3	
SONM	Songino Array	60.08	50	P		P	01 03 41.0	+0.3	
	comp=Z,2.5nm,0.7s,baz=280,slow=7.9,SNR=16								
BOSA	Boshof	62.53	180	P		P	01 03 59.2	+1.9	
	comp=Z,8.3nm,1.1s,baz=350,slow=8.9,SNR=6.3								
LZH	Lanzhou	62.62	63	eP		P	01 03 59.4	+1.3	
LZH				pP		pP	01 04 02.8	-2.7	
LZH				sP		sP	01 04 04.3	-4.0	
LZH				ePP		PP	01 06 18.5	+2.7	
LZH					pmax	pmax			
	comp=Z,19nm,1.3s								
LZH					pmax	pmax			
	comp=Z,65nm,7.3s								
LZH					LR	LR			
	comp=Z,200nm,16.0s								
LZH					LR	LR			
	comp=Z,200nm,16.3s								
LZH					LR	LR			
	comp=Z,290nm,18.0s								
CD2	Chengdu	64.74	69	eP		P	01 04 11.6	-0.4	
HHC	Hu-ho-hao-te	66.16	56	eP		P	01 04 21.8	+0.7	
HHC					pmax	pmax			
	comp=Z,8.0nm,0.9s								
HHC					pmax	pmax			
	comp=Z,79nm,4.7s								
CMAR	Chiang Mai Arr	66.70	83	P		P	01 04 25.2	+0.4	
	comp=Z,0.8nm,0.3s,baz=297,slow=8.0,SNR=3.3								
HIA	Hailar	67.68	45	⇓eP		P	01 04 30.8	+0.2	
HIA					pmax	pmax			
	comp=Z,40nm,1.1s								
SEY	Seymchan	74.40	22	⇓eP		P	01 05 12.1	+1.1	
KLR	Kul'dur	74.46	41	⇓eP		P	01 05 12.5	+0.9	
KLR					pmax	pmax			
	comp=Z,4.0nm,1.0s								
NJ2	Nanjing	75.51	61	eP		P	01 05 18.0	+0.1	
NJ2					pmax	pmax			
	comp=Z,12nm,0.5s								
USRK	Ussuriysk Ar.	77.49	45	P		P	01 05 29.4	+0.4	
	comp=Z,4.3nm,0.7s,baz=349,slow=6.0,SNR=8.6								
YKA	Yellowknife Ar	78.30	342	P		P	01 05 31.4	-1.7	
	comp=Z,0.4nm,0.7s,baz=24,slow=5.5,SNR=3.1								
KSRS	Korea Array	78.85	52	P		P	01 05 37.0	+0.4	
	comp=Z,1.8nm,0.7s,baz=305,slow=5.1,SNR=11								
ILAR	Eielson Array	81.10	357	P		P	01 05 47.4	-0.9	
	comp=Z,0.7nm,0.7s,baz=358,slow=3.9,SNR=8.7								
CCB	Clear Creek Bu	81.27	357	eP		P	01 05 49.2	0.0	
	comp=Z,2.6nm,0.9s								
WRH	Wood River Hil	81.45	357	eP		P	01 05 50.0	-0.1	
	comp=Z,4.4nm,0.8s								
DHY	Denali Highway	82.81	357	eP		P	01 05 57.5	-0.1	
	comp=Z,4.1nm,0.8s								
SCM	Sheep Creek Mo	84.05	356	eP		P	01 06 04.9	+1.1	
	comp=Z,12nm,0.7s								
SCM	Sheep Creek Mo	84.05	356	eP		P	01 06 04.9	+1.1	
SCM					pmax	pmax			
	comp=Z,12nm,0.7s								
MAJO	Matsushiro	85.94	48	⇓eP		P	01 06 14.3	+0.6	
MAJO					pmax	pmax			
	comp=Z,5.0nm,1.0s								
MJAR	Matsushiro Arr	85.94	48	P		P	01 06 13.5	-0.2	
	comp=Z,3.0nm,1.0s,baz=303,slow=5.1,SNR=8.8								
MJAR					LR	LR	01 47 02.0		
	comp=Z,69nm,20.2s,baz=130,slow=37								
DAV	Davao City (W)	94.62	78	LR		LR	01 54 45.7		
	comp=Z,16nm,19.6s,baz=25,slow=39								

IDC 16 00:58:05.5±3.6, 2°.22S×140°.77E, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.5/26, mbtmp3.8/3, ML4.2/1, Error ellipse: s-maj=125.8km s-min=30.2km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.71	199	P	P	01 02 24.8	-0.9
	0.7nm,0.3s,baz=20,slow=11,SNR=17						
ASAR	Alice Springs	22.34	197	P	P	01 03 05.0	-0.2
	1.6nm,0.6s,baz=28,slow=11,SNR=26						
MKAR	Makanchi Array	70.67	322	P	P	01 09 23.6	+0.4
	0.7nm,0.9s,baz=130,slow=6.4,SNR=4.5						

*IDC **16** 01:03:55.9±0.8, 12°.48N×87°.23W, h0km, mb4.3/10, mb1 4.5/12, mb1mx4.1/41, mbtmp4.3/12, ML3.4/3, MS3.1/7, Ms1 3.1/7, ms1mx2.9/28, Error ellipse: s-maj=35.4km s-min=14.1km az=53.0*

*UCR **16** 01:04:00.4±2.4, 12°.12N×87°.72W, h25km±7km, MD4.2, ML4.3, mb4.6(NEIC)*

*SNET **16** 01:04:00.0±1.7, 12°.04N×87°.74W, h33km±41km, ML4.5*

*ISCJB **16** 01:04:01.0±0.4, 12°.14N±0°.03×87°.63W±0°.02, h62km±2km, mb4.5/72, Error ellipse: s-maj=5.7km s-min=3.3km az=26.3*

*NEIC **16** 01:04:01.6±2.1, 12°.21N×87°.63W, h35km, mb4.6/165, Error ellipse: s-maj=12.7km s-min=8.3km az=247.0*

ISC 16 01:04:02.6±1.0, 12°.19N±0°.06×87°.64W±0°.04, h54km±9km, n448, σ1°.06/468, mb4.5/72, MS3.1/6, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.77	48	i P	Pn	01 04 16.8	-0.7
CSGN	Cosiguina Volc	0.79	6	ePn	Pn	01 04 17.1	-0.7
CSGN				eSn	Sn	01 04 25.0	-3.9
CSGN	Cosiguina Volc	0.79	6	i P	Pn	01 04 17.4	-0.4
CSGN				eS	Sn	01 04 30.7	+1.8
CSGN				IAML		01 04 31.9	
	comp=N,107μm,0.3s						
CSGN	Cosiguina Volc	0.79	6	i P	Pn	01 04 17.4	-0.4
CSGN				eS	Sn	01 04 30.7	+1.8
TEL3	Telica 3	0.87	64	eP	Pn	01 04 17.5	-1.2
TELN	Telica	0.89	62	eP	Pn	01 04 17.8	-1.4
TELN				eS	Sn	01 04 32.1	+0.8
CNGN	Cerro Negro	0.97	71	IAML		01 04 40.4	
	comp=N,2μm,0.7s						
MOMN	Momotombo	1.10	78	eP	Pn	01 04 20.1	-1.7
CNCH	Conchagua	1.10	350	eP	Pn	01 04 20.9	-1.1
CNCH				eS	Sn	01 04 36.7	+0.5
CNCH				IAML		01 04 42.4	
	comp=Z,74μm,0.3s						
CNCH	Conchagua	1.10	350	eP	Pn	01 04 20.9	-1.1
CNCH				eS	Sn	01 04 36.7	+0.5
CNCH				IAML		01 04 42.4	
	comp=Z,74μm,0.3s						
LCND	La Caada	1.14	348	eP	Pn	01 04 20.9	-1.5
LCND				eS	Sn	01 04 38.5	+1.5
LCND				IAML		01 04 42.5	
	comp=Z,9μm,0.4s						
LCND	La Caada	1.14	348	eP	Pn	01 04 20.9	-1.5
LCND				eS	Sn	01 04 38.5	+1.5
LCND				IAML		01 04 42.5	
	comp=Z,9μm,0.4s						
APYN	Apoyeque	1.26	88	eP	Pn	01 04 22.6	-1.4
XAVN	Gruta Xavier	1.29	92	eP	Pn	01 04 22.8	-1.5
MGAN	Managua	1.36	92	eP	Pn	01 04 24.3	-1.1
MGAN				eS	Sn	01 04 44.6	+2.3
VSM	San Miguel	1.38	333	eP	Pn	01 04 24.8	-1.0
VSM	San Miguel	1.38	333	eP	Pn	01 04 24.8	-1.0
LCY	Lacayo	1.39	333	eP	Pn	01 04 24.4	-1.4
LCY	Lacayo	1.39	333	eP	Pn	01 04 24.4	-1.4
ESTN	Estel	1.54	54	ePn	Pn	01 04 27.0	-0.8
ESTN	Estel	1.54	54	eP	Pn	01 04 27.3	-0.5
ESTN				IAML		01 04 50.8	
	comp=E,486nm,0.4s						
ESTN	Estel	1.54	54	eP	Pn	01 04 27.3	-0.5
TECA	Tecapa	1.55	327	eP	Pn	01 04 26.5	-1.6
TECA	Tecapa	1.55	327	eP	Pn	01 04 26.5	-1.6
MATN	Matagalpa	1.83	66	i P	Pn	01 04 31.2	-0.7
MATN				IAML		01 04 58.7	
	comp=N,10μm,0.6s						
SNVI	San Vicente	1.84	321	eP	Pn	01 04 30.3	-1.7
TGUH	Tegucigalpa,Un	1.89	11	ePn	Pn	01 04 32.4	-0.2
PAVA	Las Pavas	1.98	320	eP	Pn	01 04 33.0	-0.8
PAVA				eS	Sn	01 04 59.3	+1.8
PAVA	Las Pavas	1.98	320	eP	Pn	01 04 33.0	-0.8
PAVA				eS	Sn	01 04 59.3	+1.8
LFRS	El Faro	1.99	316	eP	Pn	01 04 32.0	-2.0
VICT	Victoria	2.01	331	eP	Pn	01 04 33.6	-0.7
VICT				eS	Sn	01 04 60.0	+1.5
VICT	Victoria	2.01	331	eP	Pn	01 04 33.6	-0.7
VICT				eS	Sn	01 04 60.0	+1.5
LBRS	Las Brisas	2.06	319	eP	Pn	01 04 34.0	-1.0
LOMA	San Marcos	2.09	314	eP	Pn	01 04 33.1	-2.1
LOMA	San Marcos	2.09	314	eP	Pn	01 04 33.1	-2.1
LFU	La Fuente	2.12	317	eP	Pn	01 04 34.2	-1.5
LFU	La Fuente	2.12	317	eP	Pn	01 04 34.2	-1.5
SNET	Serv Nac Est T	2.15	314	eP	Pn	01 04 35.5	-0.7
SNET				eS	Sn	01 05 00.3	-1.5
SNET				IAML		01 05 09.0	
	comp=Z,2μm,0.4s						
SNET	Serv Nac Est T	2.15	314	eP	Pn	01 04 35.5	-0.7
SNET				eS	Sn	01 05 00.3	-1.5
SNET				IAML		01 05 09.0	
	comp=Z,2μm,0.4s						
BOQS	Boqueron	2.22	314	eP	Pn	01 04 36.0	-1.2
ACON	Acoyapa	2.42	95	ePn	Pn	01 04 39.1	-0.7
ACON	Acoyapa	2.42	95	eP	Pn	01 04 39.0	-0.8
SBLS	San Blas	2.54	311	eP	Pn	01 04 40.5	-1.1
SBLS	San Blas	2.54	311	eP	Pn	01 04 40.5	-1.1
GB1A	Borinquen Arri	2.58	122	eP	Pn	01 04 39.3	-2.8
BUEV	Buena Vista	2.59	122	eP	Pn	01 04 41.1	-1.1
MESS	Mesas	2.80	121	eP	Pn	01 04 45.3	+0.3
JTS	Las Juntas de	3.24	125	Pn	Pn	01 04 47.6	-3.5
	comp=Z,4.2nm,0.3s,baz=19,slow=18,SNR=22						
JTS				Lg	Lg	01 05 37.2	
	comp=Z,5.2nm,0.3s,baz=15,slow=20,SNR=3.8						
JTS	Las Juntas de	3.24	125	ePn	Pn	01 04 50.8	-0.3
JTS	Las Juntas de	3.24	125	eP	Pn	01 04 51.5	+0.4
ESPN	Las Esperanzas	3.27	89	ePn	Pn	01 04 51.5	+0.1
ESPN	Las Esperanzas	3.27	89	eP	Pn	01 04 51.7	+0.3
ARE1	Arenal 1	3.34	121	eP	Pn	01 04 51.9	-0.5
APG	El Apazote	3.92	316	Pn	Pn	01 04 59.8	-0.8
	comp=Z,0.9nm,0.3s,baz=132,slow=10,SNR=3.8						
APG				Sn	Sn	01 05 53.3	+7.8
	comp=Z,3.6nm,0.3s,baz=325,slow=18,SNR=2.6						
APG				LR	LR	01 06 30.4	
	comp=Z,186nm,21.9s,baz=106,slow=38						
LCR2	La Lucha 2	4.32	124	eP	Pn	01 05 06.3	+0.2
DRK0	Durika	5.21	123	eP	Pn	01 05 18.3	+0.1
CCIG	Comitan	5.96	314	ePn	Pn	01 05 29.4	+0.8
CMIG	Matias Romero	8.54	306	Pn	Pn	01 06 03.0	-0.6
	comp=Z,1.6nm,0.3s,baz=130,slow=6.6,SNR=11						
CMIG				Sn	Sn	01 07 48.2	+10
	comp=Z,0.7nm,0.3s,baz=0,0,slow=18,SNR=3.2						
TLIG	Tlapa	11.84	298	ePn	Pn	01 06 49.7	+0.8
ROSC	El Rosal	15.05	118	LR	LR	01 13 15.8	
	comp=Z,103nm,20.1s,baz=346,slow=38						
LNIG	Linares	16.88	320	eP	Pn	01 07 56.1	+0.8
	comp=Z,18nm,0.8s						
ZAIG	Zacatecas	17.69	309	eP	P	01 08 07.3	+1.4
	comp=Z,8.1nm,0.9s						
449A	Pace	18.49	1	P	P	01 08 14.4	+0.1
	baz=181						
452A	Marianna	18.71	7	P	P	01 08 17.6	+0.9
	baz=187						
454A	Quitman	18.81	11	P	P	01 08 19.4	+1.6
	baz=192						
453A	Whigham	18.83	9	P	P	01 08 19.1	+1.0
	baz=190						
BRAL	Brewton	18.90	2	P	P	01 08

baz=194
Z49A Columbiana 20.94 3 P P 01 08 42.3 +1.3
baz=183
Z50A Ashland 21.03 4 eP P 01 08 42.7 +0.7
comp=Z,13nm,0.8s
Z50A Ashland 21.03 4 P P 01 08 42.7 +0.7
baz=185,SNR=10
Z52A Williamson 21.11 8 P P 01 08 43.9 +1.0
baz=189,SNR=6.2
Z51A Franklin 21.15 6 P P 01 08 44.6 +1.3
baz=187
Z53A Monticello 21.32 9 P P 01 08 46.4 +1.3
baz=191,SNR=12
JCT Junction City 21.41 330 eP P 01 08 46.9 +0.8
comp=Z,35nm,0.7s
JCT Junction City 21.41 330 P P 01 08 45.6 -0.5
baz=146,SNR=14
Z54A Sparta 21.41 11 P P 01 08 46.8 +0.8
baz=193
GOGA Godfrey 21.47 10 P P 01 08 47.9 +1.3
baz=191,SNR=16
Z41A Richland Creek 21.50 348 eP P 01 08 47.8 +0.9
comp=Z,40nm,0.6s
Z41A Richland Creek 21.50 348 P P 01 08 47.1 +0.1
baz=166,SNR=7.1
Y49A Blount Mountai 21.60 3 eP P 01 08 48.6 +0.5
comp=Z,19nm,0.6s
Y49A Blount Mountai 21.60 3 P P 01 08 48.8 +0.8
baz=183,SNR=11
Y48A Jasper 21.63 1 P P 01 08 48.4 0.0
baz=181,SNR=6.3
Y50A Piedmont 21.68 4 P P 01 08 50.0 +1.1
baz=185,SNR=8.3
Y51A Rockmart 21.74 6 P P 01 08 50.8 +1.2
baz=187,SNR=16
Y52A Lilburn 21.82 8 eP P 01 08 51.2 +0.7
comp=Z,17nm,0.7s
Y52A Lilburn 21.82 8 P P 01 08 52.0 +1.5
baz=189,SNR=10
Y53A Monroe 21.89 9 P P 01 08 53.1 +2.0
baz=191,SNR=17
WLAR White Oak Lake 21.98 348 eP P 01 08 53.1 +1.0
comp=Z,22nm,0.7s
Y54A Tignall 22.05 11 P P 01 08 54.7 +1.9
baz=193,SNR=11
X48A Hartselle 22.17 1 eP P 01 08 54.6 +0.4
comp=Z,6.5nm,0.9s
X48A Hartselle 22.17 1 P P 01 08 54.7 +0.4
baz=182
X47A Russelville 22.23 360 P P 01 08 54.3 -0.6
baz=179,SNR=5.9
X50B Fort Payne 22.25 4 P P 01 08 54.6 -0.4
baz=185,SNR=7.8
X49A Woodville 22.26 3 P P 01 08 54.5 -0.6
baz=183,SNR=7.7
X46A Booneville 22.29 358 P P 01 08 55.2 -0.2
baz=178,SNR=5.8
Y55A Saluda 22.29 13 P P 01 08 56.0 +0.6
baz=195
X51A Calhoun 22.42 6 P P 01 08 56.7 -0.2
baz=187
HODGE Hodges 22.49 12 eP P 01 08 58.4 +0.8
comp=Z,14nm,0.8s
X53A Estanollee 22.57 9 P P 01 08 58.8 +0.4
baz=191,SNR=8.4
X52A Dahlonega 22.57 8 P P 01 08 58.6 +0.1
baz=190,SNR=7.4
TXAR Lajitas Array 22.66 321 P P 01 08 60.0 +0.3
comp=Z,39nm,0.7s,baz=137,slow=9.9,SNR=513
TXAR PcP PcP 01 12 51.9 +1.1
comp=Z,0.6nm,0.7s,baz=149,slow=2.9,SNR=4.4
TXAR LR LR 01 20 35.9
comp=Z,26nm,18.4s,baz=0.0,slow=44
X40A Basin Creek Fa 22.70 349 eP P 01 09 00.0 +0.2
comp=Z,4.1nm,0.8s
JSC Jenkinsville 22.75 14 eP P 01 09 00.6 +0.3
comp=Z,8.2nm,0.7s
X54A Belton 22.77 11 P P 01 09 01.4 +0.9
baz=193,SNR=6.6
Y58A Scranton 22.81 17 P P 01 09 01.5 +0.5
baz=200
X55A Gracelyn & Ava 22.85 13 P P 01 09 01.6 +0.2
baz=195,SNR=5.9
W48A Pulaski 22.86 1 P P 01 09 01.6 +0.1
baz=182,SNR=5.6
W49A Belvidere 22.87 3 P P 01 09 01.5 0.0
baz=183,SNR=6.3
UALR University of 22.89 350 eP P 01 09 01.6 -0.2
comp=Z,13nm,0.6s
MIAR Mount Ida 22.90 347 P P 01 09 02.1 +0.2
baz=165,SNR=25
X56A White Oak 23.01 14 P P 01 09 03.4 +0.4
baz=197,SNR=5.6
W50A Signal Mountai 23.01 5 P P 01 09 03.0 0.0
baz=186,SNR=15
W51A Cleveland 23.02 6 P P 01 09 03.6 +0.5
baz=187,SNR=8.8
W52A Murphy 23.05 8 P P 01 09 03.8 +0.3
baz=189
ABTX Abilene, Hawle 23.13 333 P P 01 09 03.4 -1.0
baz=149,SNR=14
W53A Cullowhee 23.24 9 P P 01 09 05.3 -0.1
baz=191
W41B Gary Mavity, V 23.26 350 eP P 01 09 06.1 +0.6
comp=Z,30nm,1.7s
W41B Gary Mavity, V 23.26 350 P P 01 09 05.3 -0.2
baz=168
BIRD Birdtown, Kers 23.29 15 eP P 01 09 05.5 -0.3
comp=Z,15nm,0.7s
W54A Cherokee Point 23.33 11 P P 01 09 05.7 -0.5
baz=194,SNR=8.9
CPCT Cooper Cave 23.33 6 eP P 01 09 06.7 +0.5
comp=Z,13nm,0.7s
X37A Clayton 23.39 344 eP P 01 09 07.2 +0.5
comp=Z,21nm,0.8s
V48A Smith Brothers 23.46 2 P P 01 09 06.9 -0.5
baz=182,SNR=5.5
V50A Pikeville 23.50 5 P P 01 09 07.7 0.0
baz=186
V46A Holladay 23.52 359 P P 01 09 06.6 -1.3
baz=179
V49A McMinnville 23.53 4 P P 01 09 06.8 -1.2
baz=184
V47A Nunnelly 23.54 0 P P 01 09 06.7 -1.4
baz=180,SNR=6.2
KMSC Kings Mountain 23.56 13 P P 01 09 08.5 +0.2
baz=196,SNR=9.4
W39A Magazine 23.58 347 P P 01 09 08.3 -0.1
baz=165,SNR=7.8
V51A Loudon 23.70 7 P P 01 09 09.9 +0.3
baz=188,SNR=7.6
W56A Indian Trail 23.73 14 P P 01 09 10.1 +0.2
baz=197
V53A Saluda 23.79 10 P P 01 09 10.8 +0.4
baz=192,SNR=9.8
V52A Sevierville 23.83 8 eP P 01 09 11.0 +0.2
comp=Z,16nm,1.1s
V52A Sevierville 23.83 8 P P 01 09 11.1 +0.3
baz=190,SNR=6.0
WVT Waverly 23.84 360 eP P 01 09 11.3 +0.5
comp=Z,3.7nm,0.9s
WVT Waverly 23.84 360 P P 01 09 10.4 -0.5
baz=180
W57A Gilead 23.89 16 eP P 01 09 10.9 -0.4
comp=Z,11nm,0.6s
W57A Gilead 23.89 16 P P 01 09 11.1 -0.3
baz=199
X60A Albert Glenn T 23.96 20 P P 01 09 11.6 -0.3
baz=204
W58A Raeford 23.98 17 P P 01 09 11.6 -0.6
baz=200,SNR=6.5
V54A Nebo 24.05 11 P P 01 09 13.5 +0.8
baz=194,SNR=8.7
U46A Springville 24.07 359 P P 01 09 12.0 -1.0
baz=179,SNR=9.7
U47A Clarksville 24.15 1 P P 01 09 12.4 -1.3
baz=181,SNR=9.3
U48A Cassie Pea, Po 24.24 2 P P 01 09 13.8 -0.8
baz=183
U50A Jamestown 24.26 5 P P 01 09 14.0 -0.7
baz=187,SNR=9.3
V55A Taylorsville 24.27 13 P P 01 09 14.6 -0.2
baz=195
U49A Red Boiling Sp 24.28 4 P P 01 09 14.4 -0.5
baz=184,SNR=5.4
U51A La Follette 24.31 7 P P 01 09 15.5 +0.3
baz=189,SNR=5.6
V56A Mocksville 24.39 14 eP P 01 09 16.1 +0.1
comp=Z,8.8nm,0.8s
V56A Mocksville 24.39 14 P P 01 09 16.4 +0.5
baz=197,SNR=5.5
U52A Thorn Hill 24.41 8 P P 01 09 15.7 -0.4
baz=190
U53A Fall Branch 24.50 10 P P 01 09 17.3 +0.3
baz=192,SNR=11
U40A Yellville 24.52 350 P P 01 09 16.6 -0.5
baz=168,SNR=7.6
TZTN Tazewell 24.53 8 P P 01 09 16.6 -0.6
baz=190
WMOK Wichita Mounta 24.63 338 P P 01 09 17.4 -0.7
baz=153,SNR=29
V57A Coltrane Farms 24.64 15 P P 01 09 18.2 0.0
baz=199,SNR=5.1
T47A Sharon Grove 24.70 1 P P 01 09 17.6 -1.1
baz=181,SNR=15
V58A Windy Hill, Pi 24.74 17 P P 01 09 19.0 0.0
baz=200,SNR=8.7
TUL1 Leonard 24.74 344 P P 01 09 18.3 -0.8
baz=161,SNR=11
T46A Princeton 24.75 360 P P 01 09 18.1 -1.1
baz=179,SNR=7.7
U54A Nelsons Funny 24.79 11 P P 01 09 19.3 -0.4
baz=194
T50A Nancy 24.86 5 P P 01 09 20.2 0.0
baz=186
T49A Edmonton 24.89 4 P P 01 09 19.8 -0.6
baz=185,SNR=6.7
T51A Gray 24.90 7 P P 01 09 20.3 -0.2
baz=189
U55A TA2, Sparta 24.93 13 P P 01 09 21.1 +0.2
baz=195,SNR=5.2
U56A King 24.93 14 P P 01 09 20.9 +0.1
baz=197
V59A Middlesex 24.97 18 P P 01 09 21.0 -0.2
baz=202
T53A Wise 25.11 10 P P 01 09 22.0 -0.6
baz=192
T52A Hallie 25.16 9 P P 01 09 22.9 0.0
baz=191
U57A Blanch 25.27 16 P P 01 09 23.8 -0.1
baz=199
V60A Jim Taylor Roa 25.28 20 P P 01 09 23.8 -0.2
baz=204
T54A Tazewell 25.36 11 P P 01 09 25.0 +0.2
baz=194
MNTX Cornudas Mount 25.38 323 P P 01 09 25.4 +0.4
baz=136,SNR=25
S46A Don Dixon Farm 25.39 360 P P 01 09 24.2 -0.8
baz=180
S48A Wiedeman Farm, 25.40 3 P P 01 09 24.1 -0.9
baz=184
S44A Carbondale 25.44 357 P P 01 09 24.7 -0.8
baz=176
U58A Oxford 25.46 17 P P 01 09 25.4 -0.2
baz=201
S50A Richmond 25.55 6 P P 01 09 26.6 +0.1
baz=187
T55A Pulaski 25.58 13 P P 01 09 26.8 +0.1
baz=196
S49A Springfield 25.58 4 P P 01 09 26.5 -0.2
baz=185
S51A Beattyville 25.60 7 P P 01 09 26.7 -0.2
baz=189
T56A Rocky Mt 25.66 14 P P 01 09 27.8 +0.3
baz=197
MSTX Muleshoe 25.70 330 P P 01 09 27.8 -0.2
baz=144,SNR=64
S52A Salyersville 25.71 8 P P 01 09 28.4 +0.4
baz=190
BLA Blacksburg 25.75 13 P P 01 09 28.5 +0.2
baz=196
T57A Hurt 25.83 16 P P 01 09 29.2 +0.2
baz=199
S53A Williamson 25.86 10 P P 01 09 28.9 -0.4
baz=192
R46A Gibon Southern 25.92 0 P P 01 09 28.8 -0.9
baz=180
AMTX Amarillo 25.94 333 P P 01 09 29.8 -0.3
baz=147
U60A Pendleton 25.96 20 P P 01 09 29.5 -0.6
baz=204
CCM Cathedral Cave 25.96 353 eP P 01 09 29.5 -0.7
comp=Z,13nm,0.6s
CCM Cathedral Cave 25.96 353 P P 01 09 29.2 -1.0
baz=172
WCI Wyandotte Cave 25.96 2 eP P 01 09 29.8 -0.3
comp=Z,9.0nm,0.8s
WCI Wyandotte Cave 25.96 2 P P 01 09 29.7 -0.5
baz=183
R45A Skylar, Fairfi 26.00 359 P P 01 09 29.4 -1.1
baz=179
R47A Wooly Knot Far 26.02 2 P P 01 09 29.6 -1.0
baz=182
R49A Shelbyville 26.09 4 P P 01 09 30.4 -1.0
baz=185
S54A Dingess, Beckl 26.13 11 P P 01 09 31.0 -0.7
baz=194
S55A Lewisburg 26.27 13 P P 01 09 32.9 -0.1
baz=196
R53A Hurricane 26.53 10 P P 01 09 35.1 -0.1
baz=192
R54A Victor 26.56 12 P P 01 09 35.6 0.0
baz=195
Q45A Warren Harvey, 26.60 359 P P 01 09 35.5 -0.4
baz=179
Q47A Bedord North L 26.66 2 P P 01 09 35.9 -0.6
baz=183
Q48A North Vernon 26.69 3 P P 01 09 36.0 -0.7
baz=184
Q51A Peebles 27.00 7 P P 01 09 39.2 -0.3
baz=189
Q52A Bidwell 27.09 9 P P 01 09 40.1 -0.2
baz=192
R58B Mineral 27.11 17 P P 01 09 40.6 +0.1
baz=201
Q53A Leroy 27.11 11 P P 01 09 40.2 -0.4
baz=193
P47A Martinsville 27.22 2 P P 01 09 40.8 -0.7
baz=183
P48A Milroy 27.24 4 P P 01 09 40.3 -1.3
baz=185
R57A Stanardsville 27.25 16 P P 01 09 42.2 +0.5
baz=200
Q54A Coxs Mills 27.37 12 P P 01 09 42.7 -0.1
baz=194,SNR=5.0
R58A Rapidan 27.39 17 P P 01 09 42.7 -0.3
baz=201
121A Cookes Peak, D 27.42 321 P P 01 09 45.0 +1.4
baz=133,SNR=9.7
Q55A Buckhannon 27.53 13 P P 01 09 44.2 -0.1
baz=196
P53A Whipple 27.75 10 eP P 01 09 46.5 +0.2
comp=Z,12nm,0.6s
P53A Whipple 27.75 10 P P 01 09 46.5 +0.2
baz=193,SNR=6.5
P52A Corning 27.77 9 P P 01 09 46.1 -0.3
baz=192,SNR=5.4
Q56A Snyder Ridge, 27.78 14 P P 01 09 46.3 -0.2
baz=198
BNM Barren Site 27.88 325 eP P 01 09 49.2 +1.5
O45A Potomac 27.95 360 P P 01 09 46.5 -1.5
baz=180,SNR=5.7
KSU1 Kansas State U 27.96 345 P P 01 09 46.2 -2.0
baz=161
O47A Sheridan 27.97 2 P P 01 09 46.4 -1.8
baz=183
P54A Burton 28.03 12 P P 01 09 48.6 -0.2
baz=195
O49A Covington 28.04 5 P P 01 09 48.4 -0.5
baz=187
O50A Cable 28.08 7 P P 01 09 48.4 -0.7
baz=188
SFIN Lafayette 28.09 1 P P 01 09 47.9 -1.3
baz=181
O51A Pataskala 28.20 8 P P 01 09 49.6 -0.6
baz=190
MCWV Mont Chateau 28.22 13 P P 01 09 49.4 -1.0
baz=196
ACSO Alum Creek Sta 28.24 8 P P 01 09 50.0 -0.5
baz=190
O52A Adamsville 28.29 9 eP P 01 09 50.7 -0.3
comp=Z,7.8nm,0.6s
O52A Adamsville 28.29 9 P P 01 09 50.7 -0.3
baz=192
P56A Dayton Farm, R 28.30 14 P P 01 09 51.0 -0.2
baz=198
ANMO Albuquerque 28.37 326 P P 01 09 52.9 +0.8
comp=Z,1.9nm,0.7s,baz=111,slow=9.9,SNR=4.3
ANMO PcP PcP 01 13 04.8 +1.1
comp=Z,1.8nm,1.0s,baz=195,slow=5.6,SNR=3.3
ANMO Albuquerque 28.37 326 P P 01 09 53.1 +1.1
baz=138
TASM ASL Pad, Albuq 28.37 326 P P 01 09 52.8 +0.7
baz=138
TASM ASL Pad, Albuq 28.37 326 P P 01 09 52.5 +0.4
baz=138
P57A Homestead Farm 28.50 16 P P 01 09 52.8 -0.1
baz=200
N44A Piper City 28.50 359 P P 01 09 51.9 -0.9
baz=179
O53A New Philadelph 28.52 10 P P 01 09 53.0 -0.1
baz=193,SNR=6.1
N46A Monticello 28.61 1 P P 01 09 53.1 -0.7
baz=182,SNR=5.5
O54A Avella 28.61 12 P P 01 09 53.7 -0.2
baz=195
CBKS Cedar Bluff 28.62 340 P P 01 09 53.4 -0.7
baz=155
N47A Urbana 28.63 3 P P 01 09 53.2 -0.9
baz=184
N48A Decatur 28.65 4 P P 01 09 53.6 -0.7
baz=185
N50A Nevada 28.75 7 P P 01 09 54.9 -0.1
baz=189
N49A Columbus Grove 28.79 5 eP P 01 09 54.6 -0.8
comp=Z,7.7nm,0.8s
N49A Columbus Grove 28.79 5 P P 01 09 54.7 -0.7
baz=187
N40A Mertquake, Sal 28.80 354 P P 01 09 54.1 -1.4
baz=172
T25A Trinidad 29.05 332 eP P 01 09 59.2 +1.2
comp=Z,6.6nm,0.9s
T25A Trinidad 29.05 332 P P 01 09 58.6 +0.6
baz=145,SNR=8.1
P59A Jarrettsville 29.06 18 P P 01 09 58.1 +0.2
baz=203
N53A Lisbon 29.13 11 P P 01 09 57.6 -0.9
baz=194
M46A Old House Fiel 29.13 2 P P 01 09 57.3 -1.2
baz=183
M43A Waltham Townsh 29.16 358 P P 01 09 58.0 -0.7
baz=177
TUC Tucson 29.20 317 eP P 01 10 01.9 +2.5
comp=Z,12nm,1.8s
O57A Amberson 29.28 16 P P 01 09 59.8 0.0
baz=200
M49A Liberty Center 29.35 6 P P 01 09 59.4 -1.0
baz=187
M50A Fremont 29.38 7 P P 01 09 59.6 -1.1
baz=189
M51A Elyria 29.43 8 P P 01 10 00.1 -0.9
baz=191
N54A Moraine State 29.44 12 P P 01 10 00.5 -0.8
baz=195
N55A Marion Center 29.48 13 P P 01 10 00.7 -1.0
baz=197
SSPA Standing Stone 29.61 15 P P 01 10 02.4 -0.4
baz=200
N56A West Decatur 29.77 14 P P 01 10 03.9 -0.3
baz=199
O59A Robesonia 29.78 18 P P 01 10 04.0 -0.2
baz=203
N57A Milroy 29.81 16 P P 01 10 03.8 -0.7
baz=200
L40A Anamosa 29.93 355 P P 01 10 04.5 -1.0
baz=173
SCIA State Center 30.01 352 P P 01 10 05.6 -0.7
baz=169
M54A Oil Creek Stat 30.03 12 P P 01 10 06.0 -0.5
baz=196
SDCO Great Sand Dun 30.05 331 P P 01 10 07.5 +0.5
baz=143,SNR=14
K43A Burlington 30.41 359 P P 01 10 08.4 -1.4
baz=179
K46A Dorr 30.43 3 P P 01 10 08.4 -1.5
baz=184
K47A Vermontville 30.46 4 P P 01 10 09.0 -1.2
baz=185
BGNE Belgrade 30.53 344 P P 01 10 10.2 -0.7
baz=160
K48A Perry 30.66 5 P P 01 10 10.9 -1.1
baz=187
S22A 4UR Ranch, Cre 30.70 329 eP P 01 10 13.3 +0.5
comp=Z,6.1nm,0.9s
S22A 4UR Ranch, Cre 30.70 329 P P 01 10 13.2 +0.5
baz=141,SNR=9.8
X16A Lo Mia Camp, P 30.95 320 eP P 01 10 16.3 +1.4
comp=Z,2.7nm,0.6s
OGNE Ogallala 31.31 339 P P 01 10 18.0 +0.1
baz=152
BINY Binghamton 31.58 17 P P 01 10 19.4 -0.8
baz=202
I42A Draeger Farm, 31.61 358 P P 01 10 18.4 -2.0
baz=178
I46A Reed City 31.70 3 P P 01 10 19.4 -1.8
baz=184
ISCO Idaho Springs 31.76 333 P P 01 10 21.7 -0.4
baz=145
ACTO Acton 31.99 10 P P 01 10 23.1 -0.5
baz=194
PV03 Paradox Valley 32.12 328 eP P 01 10 26.1 +0.9
comp=Z,10nm,0.7s
BASO Ashfield 32.13 8 P P 01 10 24.2 -0.7
baz=191
H43A Windswept, Lux 32.17 360 P P 01 10 24.7 -0.6
baz=180
PV04 Paradox Valley 32.25 328 eP P 01 10 26.9 +0.6
comp=Z,12nm,0.7s
PV22 Blue Mesa, Par 32.30 328 eP P 01 10 27.5 +0.8
comp=Z,11nm,1.3s
BWLO Walkerton 32.31 9 P P 01 10 25.7 -0.7
baz=192
PV23 Carpenter Ridg 32.35 328 eP P 01 10 28.0 +0.7
comp=Z,9.3nm,0.8s
ECSD EROS Data Cent 32.38 348 P P 01 10 25.7 -1.4
baz=164,SNR=18
I52A Shelburne 32.41 10 P P 01 10 26.9 -0.5
baz=194
H48A Harrisville 32.61 6 P P 01 10 28.2 -0.9
baz=188
BMRO Meriville Lake 32.76 8 P P 01 10 29.8 -0.6
baz=192
G45A Suttons Bay 32.78 3 P P 01 10 29.1 -1.5
baz=184
G40A Rib Lake 33.04 357 P P 01 10 31.5 -1.4
baz=175,SNR=5.3
G39A Holcombe 33.12 355 P P 01 10 31.7 -1.9
baz=174,SNR=9.0
SPMN Marine on St. 33.22 353 P P 01 10 32.4 -2.0
baz=171,SNR=6.1
O20A White River Ci 33.24 331 eP P 01 10 36.0 +1.1
comp=Z,21nm,1.0s
O20A White River Ci 33.24 331 P P 01 10 35.7 +0.7
baz=141,SNR=16
SADO Sadowa 33.28 11 P P 01 10 32.4 -2.5
comp=Z,4.3nm,0.7s,baz=248,slow=6.2,SNR=7.5
TOBO Tobermory, Bru 33.34 8 P P 01 10 34.5 -0.9
baz=191
SUSD Miller 33.58 345 P P 01 10 36.4 -1.3
baz=160,SNR=5.5
SRU San Rafael Swe 33.63 327 eP P 01 10 39.0 +0.7
comp=Z,6.6nm,0.7s
F40A Park Falls 33.69 357 P P 01 10 37.4 -1.1
baz=176
G53A Haliburton 33.72 12 P P 01 10 37.5 -1.2
baz=196
F39A Loretta 33.73 356 P P 01 10 36.9 -2.0
baz=174,SNR=8.3
H56A Elgin 33.74 15 P P 01 10 38.0 -0.9
baz=200
F48A Evansville 33.80 6 P P 01 10 37.9 -1.6
baz=189
F49A Sandfield 33.80 7 P P 01 10 37.9 -1.6
baz=190
MTPU Mount Pierson 33.80 324 eP P 01 10 41.6 +1.5
comp=Z,3.4nm,0.8s
Q16A Castle Valley 33.84 326 eP P 01 10 40.9 +0.7
comp=Z,4.1nm,0.6s
F38A Pierce - Schro 33.85 355 P P 01 10 38.2 -1.7
baz=173,SNR=5.4
BUKO Buck Lake 33.88 10 P P 01 10 39.6 -0.5
baz=194
E43A Lone Tree Farm 34.08 1 P P 01 10 40.7 -1.2
baz=181
TMUT Trail Mountain 34.13 326 eP P 01 10 43.6 +0.7
comp=Z,6.0nm,1.0s

LONY	Lake Ozonia	34.21	17	P	P	01 10 42.0 -1.0
	baz=203					
F52A	Sundridge	34.24	10	P	P	01 10 42.0 -1.2
	baz=194					
LPAZ	La Paz	34.25	145	LR	LR	01 24 32.6
	comp=Z,89nm,19.0s,baz=304,slow=36					
E47A	Iron Bridge	34.35	5	P	P	01 10 44.0 -0.2
	baz=188					
E38A	The Farm, Brul	34.47	355	P	P	01 10 44.1 -1.2
	baz=173					
E48A	Lockeyer	34.49	7	P	P	01 10 45.2 -0.3
	baz=189					
K22A	Casper	34.50	335	P	P	01 10 46.1 +0.3
	baz=146					
E50A	Wahnapitae	34.62	8	P	P	01 10 45.0 -1.5
	baz=192					
ALGO	Algonquin Park	34.63	12	P	P	01 10 45.7 -0.9
	baz=197					
RSSD	Black Hills	34.81	339	eP	P	01 10 48.9 +0.4
	comp=Z,6.5nm,0.6s					
RSSD	Black Hills	34.81	339	P	P	01 10 48.1 -0.4
	baz=151					
E51A	G1948 Merrick	34.92	10	P	P	01 10 47.2 -2.0
	baz=194					
D47A	Chapleau	34.97	5	P	P	01 10 48.2 -1.4
	baz=188					
PSUT	Pine Spring	35.11	323	eP	P	01 10 51.7 +0.5
	comp=Z,2.7nm,0.9s					
JLU	Jordanelle	35.21	328	eP	P	01 10 52.5 +0.5
	comp=Z,5.5nm,0.8s					
D48A	Paudash Townsh	35.22	7	P	P	01 10 50.4 -1.3
	baz=190					
E54A	Lac Daplat, Po	35.26	13	P	P	01 10 51.3 -0.8
	baz=198					
TCUT	Toone Canyon	35.56	328	eP	P	01 10 55.7 +0.6
	comp=Z,15nm,0.7s					
EDW2	Edwards Air Fo	35.60	314	P	P	01 10 54.1 -1.2
	baz=122					
D53A	Lac Vacive, Po	35.78	12	P	P	01 10 55.1 -1.4
	baz=197					
EYMN	Ely	35.79	356	P	P	01 10 54.2 -2.4
	baz=174					
PDAR	Pinedale Array	35.92	332	P	P	01 10 58.1 0.0
	comp=Z,4.4nm,0.8s,baz=130,slow=10,SNR=31					
PDAR				LR	LR	01 30 22.9
	comp=Z,24nm,19.0s,baz=129,slow=44					
BW06	Boulder Array	35.92	332	P	P	01 10 57.5 -0.5
	baz=142,SNR=8.7					
HWUT	Hardware Ranch	36.00	329	eP	P	01 10 59.2 +0.4
D54A	Lac Fusel, La	36.06	13	P	P	01 10 58.1 -0.8
	baz=198					
BGU	Big Grassy Mou	36.27	327	eP	P	01 11 01.4 +0.3
	comp=Z,3.9nm,0.9s					
PKME	Peaks-Kenny Pk	36.50	22	P	P	01 11 02.4 -0.2
	baz=211					
AGMN	Agassiz Nation	36.65	351	P	P	01 11 02.5 -1.4
	baz=166,SNR=9.2					
MDND	Maddock	36.94	347	P	P	01 11 05.9 -0.5
	baz=160					
ELK	Elko	37.37	325	eP	P	01 11 12.2 +1.7
	comp=Z,3.3nm,0.8s					
ELK				ePcP	PcP	01 13 29.8 +1.1
YPP	Pitchstone Pla	37.66	332	eP	P	01 11 14.6 +1.6
	comp=Z,4.9nm,0.8s					
RLMT	Red Lodge	37.66	335	P	P	01 11 12.9 0.0
	baz=144,SNR=9.6					
NV01	Mina Array Sit	37.78	319	eP	P	01 11 15.2 +1.3
NV01				ePcP	PcP	01 13 30.8 +0.9
NVAR	Mina Array Bea	37.78	319	P	P	01 11 15.2 +1.3
	comp=Z,1.9nm,0.8s,baz=138,slow=7.1,SNR=11					
NVAR				PcP	PcP	01 13 30.8 +0.9
	comp=Z,2.0nm,0.8s,baz=133,slow=4.0,SNR=9.1					
LAO	LASA Array	37.80	339	P	P	01 11 14.1 +0.3
	baz=150					
LSQQ	Lebel-sur-Quev	37.81	11	P	P	01 11 12.5 -1.3
	baz=197					
YFT	Old Faithful	37.81	333	eP	P	01 11 15.6 +1.4
	comp=Z,13nm,0.8s					
KVN	Kaiserville	38.01	320	eP	P	01 11 16.9 +1.0
	comp=Z,2.5nm,0.8s					
MATQ	Matagami	38.36	10	P	P	01 11 17.8 -0.5
	baz=196					
QLMT	Earthquake Lak	38.37	332	eP	P	01 11 19.4 +0.6
SIV	San Ignacio	38.40	136	P	P	01 11 18.8 -0.4
	comp=Z,3.3nm,0.7s,baz=322,slow=9.2,SNR=17					
ULM	Lac du Bonnet	38.55	352	P	P	01 11 17.9 -2.1
	comp=Z,12nm,0.6s,baz=156,slow=7.4,SNR=8.7					
ULM				LR	LR	01 28 57.9
	comp=Z,44nm,19.9s,baz=134,slow=39					
YERR	Yerington	38.70	319	eP	P	01 11 22.4 +0.7
	comp=Z,4.7nm,1.1s					
DGMT	Dagmar	38.71	342	eP	P	01 11 21.2 -0.2
	comp=Z,41nm,0.6s					
DGMT	Dagmar	38.71	342	P	P	01 11 21.0 -0.4
	baz=154,SNR=6.9					
HLID	Hailey	38.87	329	P	P	01 11 23.1 +0.1
	baz=136,SNR=11					
BOZ	Bozeman (W)	39.06	333	P	P	01 11 24.8 +0.3
	baz=141,SNR=20					
PAHR	Pah Rah Range	39.20	320	eP	P	01 11 27.5 +1.7
	comp=Z,2.2nm,0.8s					
EGMT	Eagleton	40.22	337	P	P	01 11 34.2 +0.1
	baz=145					
MSO	Missoula	41.03	332	P	P	01 11 40.6 -0.2
	baz=139,SNR=13					
M04C	Macdoel	41.92	321	P	P	01 11 47.9 -0.3
	baz=125					
N02D	Trinity Center	42.01	319	P	P	01 11 48.4 -0.5
	baz=123					
M02C	Callahan	42.34	320	P	P	01 11 51.0 -0.5
	baz=123					
L04D	Klamath Falls	42.45	321	P	P	01 11 52.7 +0.1
	baz=125					
WALA	Waterton Lakes	42.72	335	eP	P	01 11 54.7 +0.1
J04D	Umpqua Nationa	42.92	323	P	P	01 11 56.4 0.0
	baz=126					
I04A	Tendick Farm,	43.43	323	P	P	01 12 00.1 -0.2
	baz=126					
HAWA	Hanford	43.45	328	eP	P	01 11 59.7 -0.7
	comp=Z,7.0nm,0.8s					
NEW	Newport	43.55	331	P	P	01 12 00.3 -0.9
	baz=136,SNR=5.3					
K02D	Willamette Mer	43.56	321	P	P	01 12 01.4 +0.1
	baz=124					
G05D	Wamic, OR	43.67	325	P	P	01 12 02.3 +0.1
	baz=128					
H04A	Detroit Lake	43.82	324	eP	P	01 12 03.0 -0.4
	comp=Z,6.5nm,0.9s					
FFC	Flin Flon	43.92	348	eP	P	01 12 03.6 -0.3
	comp=Z,6.5nm,0.8s					
I03D	Drain, OR	43.92	322	P	P	01 12 04.6 +0.5
	baz=125					
J01E	Myrtle Point	43.98	321	P	P	01 12 05.5 +0.9
	baz=124					
H04D	Lebanon	44.04	324	P	P	01 12 04.8 -0.3
	baz=126					
F05D	White Salmon	44.15	326	P	P	01 12 06.3 +0.2
	baz=129					
I02D	Swisshome	44.45	323	P	P	01 12 09.1 +0.7
	baz=124					
G03D	McMinnville, O	44.75	324	P	P	01 12 11.6 +0.8
	baz=126					
LON	Longmire	44.88	327	eP	P	01 12 11.6 -0.3
	comp=Z,5.2nm,0.8s					
F04D	Rainier, OR	45.13	325	P	P	01 12 14.3 +0.6
	baz=127					
D05A	Enumclaw	45.25	327	eP	P	01 12 14.2 -0.5
	comp=Z,8.9nm,0.8s					
SCHQ	Schefferville	45.58	17	P	P	01 12 14.7 -2.6
	comp=Z,6.7nm,0.5s,baz=223,slow=6.1,SNR=7.7					
SCHQ	Schefferville	45.58	17	eP	P	01 12 15.9 -1.3
	comp=Z,46nm,1.9s					
B06A	Marblemount	45.84	329	eP	P	01 12 19.2 -0.2
	comp=Z,16nm,0.8s					
B05A	Bryant	45.99	328	P	P	01 12 20.2 -0.4
	baz=130					
D03D	Eldon	46.05	327	P	P	01 12 20.8 -0.3
	baz=128,SNR=6.9					
NLWA	Neilton Lookou	46.39	326	eP	P	01 12 22.7 -1.0
CPUP	Villa Florida	48.32	143	P	P	01 12 39.2 +0.3
	comp=Z,0.7nm,0.7s,baz=9.1,slow=8.0,SNR=3.3					
YKA	Yellowknife Ar	53.82	345	P	P	01 13 18.3 -1.3
	comp=Z,3.7nm,0.7s,baz=138,slow=7.8,SNR=27					
YKA				LR	LR	01 39 27.7
	comp=Z,4.6nm,18.7s,baz=224,slow=40					
DLBC	Dease Lake	56.07	335	eP	P	01 13 34.7 -1.4
	comp=Z,9.5nm,0.9s					
EPYK	Eagle Plains	63.25	340	P	P	01 14 24.5 -0.8
	baz=124					
DOT	Dot Lake	64.59	336	eP	P	01 14 32.9 -1.4
	comp=Z,3.3nm,0.7s					
HDA	Harding Lake	66.07	336	P	P	01 14 42.8 -0.9
	baz=113					
ILAR	Eielson Array	66.19	336	P	P	01 14 43.5 -1.0
	comp=Z,1.6nm,0.7s,baz=152,slow=4.5,SNR=24					
RND	Reindeer	66.47	335	eP	P	01 14 45.3 -1.1
	comp=Z,8.2nm,0.8s					
CCB	Clear Creek Bu	66.50	336	eP	P	01 14 45.4 -1.0
	comp=Z,8.8nm,1.8s					
TCOL	CIGO, UAF Yank	66.61	336	P	P	01 14 46.4 -0.7
	baz=112					
TRF	Thorofare Moun	67.09	334	eP	P	01 14 49.8 -0.7
	comp=Z,4.9nm,1.0s					
BPAW	Bear Paw Mtn.	67.60	335	eP	P	01 14 52.0 -1.5
	comp=Z,3.2nm,0.7s					
TOLK	Toolik Lake Re	68.67	340	P	P	01 14 59.5 -0.7
	baz=112					
KSRS	Korea Array	120.39	328	PKP	PKPdf	01 22 48.4 -0.1
	comp=Z,1.4nm,0.6s,baz=12,slow=1.6,SNR=8.8					
KS15	Wonju Array Si	120.42	328	ePKPdf	PKPdf	01 22 48.4 -0.2
WMQ	Urumqi	124.10	4	ePKP	PKiKP	01 22 56.3 +0.5
HHC	Hu-ho-hao-te	124.32	342	ePKP	PKiKP	01 22 57.3 +0.9
KSH	Kashi	126.35	16	ePKP	PKiKP	01 23 02.1 +1.6
NJ2	Nanjing	129.22	331	ePKP	PKPdf	01 23 05.1 -0.4
LZH	Lanzhou	130.78	348	ePKP	PKPdf	01 23 07.3 -1.3
LZH				sPKP		01 23 25.3
LZH				LR	LR	
	comp=Z,78nm,17.8s					
LZH				LR	LR	
	comp=Z,97nm,20.1s					
CD2	Chengdu	135.77	346	PKP	PKPdf	01 23 17.1 -0.9
AS31	Alice Springs	139.00	248	ePKPdf	PKPdf	01 23 24.3 +0.2
ASAR	Alice Springs	139.00	248	PKP	PKPdf	01 23 24.3 +0.2
	comp=Z,0.3nm,0.5s,baz=133,slow=2.2,SNR=5.0					
CM31	Chiang Mai Arr	148.87	348	ePKPdf	PKPdf	01 23 42.3 +0.9
CM31				ePKPbc	PKPbc	01 23 45.1 -0.2
CMAR	Chiang Mai Arr	148.87	348	PKP	PKPdf	01 23 42.3 +0.9
	comp=Z,3.1nm,0.7s,baz=339,slow=3.3,SNR=12					
CMAR				PKPbc	PKPbc	01 23 45.1 -0.2
	comp=Z,2.4nm,0.6s,baz=301,slow=2.7,SNR=12					

*HLW **16** 01:10:28.5, 34°.52N×24°.74E, h5km±9km, Ml3.7*
*IDC **16** 01:10:31.9±1.1, 34°.30N×25°.04E, h0km, mb3.7/6,*
mb1 3.8/12, mb1mx3.6/45, mbtmp3.7/12, ML4.0/5, Error ellipse: s-maj=19.0km s-min=17.4km az=77.0
*GII **16** 01:10:32.2±0.0, 34°.38N×25°.09E, h1km*
*ATH **16** 01:10:35.8, 34°.32N×25°.07E, h30km±3km, ML3.2/5, Error ellipse: s-maj=6.2km s-min=1.7km az=2.0*
*THE **16** 01:10:36.7, 34°.38N×25°.09E, h1km±2km, ML2.9/2, Error ellipse: s-maj=3.6km s-min=1.0km az=184.0*

ISC 16 01:10:31.7±1.4, 34°.27N±0°.03×25°.19E±0°.03, h6km±10km, n99, σ2s47/105, mb3.6/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.81	337	P	Pn	01 10 50.3	+0.6
SIVA	Sivas	0.81	337	P	Pn	01 10 50.4	+0.6
SIVA				AML	AML	01 11 04.3	
	comp=E,15688μm,0.7s						
SIVA				AML	AML	01 11 09.7	
	comp=N,10584μm,0.7s						
TMBK	Timbaki Herakl	0.87	337	P	Pn	01 10 51.7	+1.1
TMBK				S	Sn	01 11 03.1	-0.6
LAST	Lasithi	0.92	15	P	Pn	01 10 53.0	+1.6
LAST				S	Sn	01 11 05.2	+0.2
LAST	Lasithi	0.92	15	P	Pn	01 10 53.1	+1.7
LAST				S	Sn	01 11 06.8	+1.8
LAST				AML	AML	01 11 07.4	
	comp=E,1854μm,0.6s						
LAST				AML	AML	01 11 11.7	
	comp=N,1305μm,0.4s						
KSTL	Kastelli Herak	1.04	355	P	Pn	01 10 53.6	+0.7
IDI	Anoyia	1.05	346	Pn	Pn	01 10 54.3	+1.2
	comp=N,52nm,0.3s,baz=173,slow=21,SNR=48						
IDI				Sn	Sn	01 11 08.7	+0.6
	comp=N,114nm,0.3s,baz=270,slow=20,SNR=19						
NPS	Neapolis	1.05	19	P	Pn	01 10 55.4	+2.3
NPS				S	Sn	01 11 10.6	+2.5
NPS	Neapolis	1.05	19	P	Pn	01 10 55.4	+2.3
NPS				AML	AML	01 11 12.5	
	comp=E,1792μm,0.5s						
NPS				AML	AML	01 11 13.5	
	comp=N,1147μm,0.3s						
GVD	Gavdhos	1.07	302	eP	Pn	01 10 54.3	+0.9
GVD	Gavdhos	1.07	302	P	Pn	01 10 54.4	+1.1
GVD	Gavdhos	1.07	302	P	Pn	01 10 54.5	+1.1
GVD				S	Sn	01 11 08.3	-0.3
GVD				AML	AML	01 11 15.9	
	comp=E,5495μm,0.4s						
GVD				AML	AML	01 11 19.2	
	comp=N,3363μm,0.4s						
STIA	Sitia Lasithi	1.19	38	P	Pn	01 10 58.3	+3.3
ZKR	Zakros	1.20	45	eP	Pn	01 10 58.9	+3.8
ZKR	Zakros	1.20	45	P	Pn	01 10 58.8	+3.8
ZKR	Zakros	1.20	45	P	Pn	01 10 58.8	+3.8
PRNS	Prines Rethymn	1.23	333	P	Pn	01 10 57.5	+2.0
VAM	Vamos	1.40	325	P	Pb	01 10 59.7	+1.4
VAM	Vamos	1.40	325	P	Pb	01 10 59.9	+1.6
IMMV	Iera Moni Meta	1.55	320	eP	Pg	01 11 02.5	+1.0
IMMV	Iera Moni Meta	1.55	320	P	Pg	01 11 02.2	+0.8
IMMV	Iera Moni Meta	1.55	320	P	Pg	01 11 02.3	+0.8
KARP	Karpathos	2.06	51	eP	Pg	01 11 12.5	+1.3
KARP	Karpathos	2.06	51	P	Pg	01 11 12.9	+1.6
KARP	Karpathos	2.06	51	P	Pg	01 11 12.6	+1.3
THR6	Thira Island,	2.09	5	P	Pb	01 11 10.5	+0.4
SANT	Santorini	2.11	6	eP	Pg	01 11 11.5	-0.7
THR3	Thira Island,	2.14	5	P	Pb	01 11 10.7	-0.3
THR5	Thira Island,	2.15	3	P	Pb	01 11 11.1	0.0
SAP3	Santorini-Thir	2.17	3	P	Pb	01 11 11.2	-0.2
ANKY	Antikythira Is	2.22	316	P	Pb	01 11 10.3	-2.0
IOSP	Ios island	2.45	2	P	Pb	01 11 14.8	-1.4
IOSP	Ios island	2.45	2	P	Pb	01 11 15.0	-1.2
IOSP				AML	AML	01 11 30.2	
	comp=N,463μm,0.5s						
IOSP				AML	AML	01 11 45.2	
	comp=E,411μm,0.4s						
MHLO	Agia Marina, M	2.50	345	P	Pb	01 11 15.4	-1.7
MHLO	Agia Marina, M	2.50	345	P	Pb	01 11 15.4	-1.7
MHLA	Plaka, Milos I	2.55	346	P	Pb	01 11 16.6	-1.3
KYTH	Kithira	2.65	319	P	Pb	01 11 19.1	-0.6
SLUM	Salum	2.77	180	P	Pb	01 11 20.1	-1.5
	baz=172						
SLUM				AMP		01 11 00.0	
	baz=172						
SLUM				S	Sn	01 11 51.9	+1.5
	baz=172						
APE	Apeiranthos	2.81	6	eP	Pb	01 11 21.0	-1.4
APE	Apeiranthos	2.81	6	P	Pn	01 11 19.8	+2.5
SERI	Serifos	2.94	349	P	Pn	01 11 21.4	+2.2
ARG	Arkhangelos	3.09	50	eP	Pb	01 11 26.5	-0.6
ARG	Arkhangelos	3.09	50	P	Pb	01 11 25.8	-1.3
DAT	Datca	3.13	38	eP	Pb	01 11 26.0	-2.0
DAT	Datca	3.13	38	i P	Pn	01 11 25.1	+3.3
DAT				IAML_P			
	comp=Z,113nm,0.2s						
DID	Didima	3.60	334	P	Pn	01 11 29.9	+1.8
DALY	Dalyan (Mula)	3.80	47	eP	Pb	01 11 36.8	-2.4
DALY	Dalyan (Mula)	3.80	47	i P	Pb	01 11 36.4	-2.8
DALY				IAML_P			
	comp=Z,317nm,0.2s						
TURN	Turunc	3.81	46	eP	Pn	01 11 31.9	+1.0
YER	Yerkesik	3.81	40	eP	Pn	01 11 35.8	+4.7
FETY	Fethiye	3.96	52	eP	Pb	01 11 38.7	-3.3
FETY	Fethiye	3.96	52	i P	Pn	01 11 37.3	+4.2
FETY				IAML_P			
	comp=Z,287nm,0.2s						
AYDN	Tasoluk	4.03	32	i P	Pb	01 11 39.4	-3.8
AYDN				IAML_P			
	comp=Z,457nm,0.3s						
AKAS	Kas	4.11	60	i P	Pn	01 11 39.8	+4.5
AKAS				IAML_P			
	comp=Z,931nm,0.2s						
CHOS	Chios island	4.17	9	eP	Pn	01 11 39.9	+3.9
VILL	Villia	4.17	339	P	Pn	01 11 33.4	-2.6
AYDB	Zeytinkoy-Aydi	4.27	30	eP	Pn	01 11 41.8	+4.3
AKUM	Antalya-Kumluc	4.69	63	i P	Pn	01 11 47.0	+3.9
AKUM				IAML_P			
	comp=Z,1μm,0.2s						
KORT	Korkueli	5.01	56	i P	Pn	01 11 53.2	+5.6
KORT				i S	Sn	01 12 49.6	+3.7
KORT				IAML_P			
	comp=Z,229nm,0.2s						
SWA2		5.02	177	P	Pn	01 11 50.5	+2.9
	baz=173						
AGG	Agios Georgios	5.27	335	eP	Pn	01 11 55.5	+4.4
USAK	Uak-Merkez	5.40	34	i P	Pn	01 11 57.3	+4.4
USAK				IAML_P			
	comp=Z,492nm,0.4s						
KEPZ	Antalya-Kepez	5.85	61	i P	Pn	01 12 03.8	+4.7
KEPZ				IAML_P			
	comp=Z,171nm,0.2s						
HNAT	Natroun	6.53	134	P	Pn	01 12 11.8	+3.4
	baz=132						
HSAF	As Saff	7.12	129	P	Pn	01 12 19.8	+3.2
	baz=128						
GLL	Jalalah	7.25	128	P	Pn	01 12 21.0	+2.7
	baz=127						
HFRF	Wahat Farafira	7.59	158	P	Pn	01 12 25.1	+2.2
	baz=156						
NBNS	Bani Suef	7.67	136	P	Pn	01 12 27.7	+3.6
	baz=134						
SLTI	Sal'it	8.49	101	Pn	Pn	01 12 38.2	+2.8
MMAI	Mount Meron Ar	8.61	96	Pn	Pn	01 12 39.8	+2.8
	comp=Z,1.3nm,0.3s,baz=269,slow=12,SNR=12						
AMAZ	Amatzia	8.62	106	Pn	Pn	01 12 40.2	+3.1
AMAZ	Amatzia	8.62	106	P	Sn	01 14 11.6	-3.1
BRTR	Keskin Array B	8.68	49	Pn	Pn	01 12 43.5	+5.5
	comp=Z,0.1nm,0.3s,baz=214,slow=14,SNR=4.7						
MMLI	Mount Malkishu	8.75	99	Pn	Pn	01 12 41.8	+2.9
KSDI	Kefar Szold	8.79	94	Pn	Pn	01 12 42.8	+3.4
NATI	Neve Ativ	8.84	94	Pn	Pn	01 12 43.5	+3.4
YTIR	Yattir	8.84	106	Pn	Pn	01 12 42.8	+2.6
HMDT	Nahal Hemdat	8.89	100	Pn	Pn	01 12 44.1	+3.4
SHMJ	Saham	8.96	97	P	Sn	01 14 21.4	-1.8
	comp=Z,0.3nmcomp=Z,0.3nmcomp=Z,1μmcomp=Z,58nm,0.5s						
DSI	Dead Sea	8.98	105	Pn	Pn	01 12 45.7	+3.7
MZDA	Masada	9.06	106	Pn	Pn	01 12 46.3	+3.3
LISJ	El Lisan	9.18	106	P	Sn	01 14 27.6	-0.7
PRNI	Paran	9.18	112	Pn	Pn	01 12 47.8	+3.0
WALJ	Wala	9.33	104	P	Sn	01 14 29.1	-2.9
HRFI	Mount Harif	9.35	114	Pn	Pn	01 12 50.1	+2.9
MBRI	Mt Berech	9.38	116	Pn	Pn	01 12 49.9	+2.3
EIL	Elat	9.47	116	Pn	Pn	01 12 51.1	+2.3
	comp=Z,0.9nm,0.3s,baz=267,slow=1.6,SNR=16						
EIL	Elat	9.47	116	Pn	Pn	01 12 51.3	+2.5
JDRJ	Daraweish	9.53	109	P	Sn	01 14 34.4	-2.7
	comp=Z,0.2nmcomp=Z,0.2nmcomp=Z,32nm,0.4s						
VRAC	Vranov	16.32	340	Pn	P	01 14 23.2	-1.3
	comp=Z,0.1nm,0.3s,baz=144,slow=8.4,SNR=3.7						
AKASG	Malin Array Be	16.68	9	Pn	P	01 14 27.7	-0.8
	comp=Z,1.5nm,0.3s,baz=199,slow=10,SNR=13						
GERES	GERESS Array B	16.88	333	Pn	P	01 14 30.5	-0.3
	comp=Z,0.3nm,0.3s,baz=147,slow=12,SNR=22						
ESDC	Sonseca Array	23.85	292	P	P	01 15 46.0	+0.1
	comp=Z,0.4nm,0.6s,baz=80,slow=9.2,SNR=5.6						
FINES	FINESS Array B	27.20	1	P	P	01 16 15.2	-0.8
	comp=Z,1.0nm,0.6s,baz=172,slow=10,SNR=3.6						
NOA	NORSAR Array B	28.27	346	P	P	01 16 25.4	-0.3
	comp=Z,0.8nm,0.9s,baz=164,slow=12,SNR=3.1						
TORD	Torodi Ar. Bea	29.94	231	P	P	01 16 41.5	+0.6
	comp=Z,0.7nm,0.5s,baz=27,slow=8.4,SNR=16						
ARCES	ARCESS Array B	35.32	0	P	P	01 17 26.7	-0.7
	comp=Z,0.6nm,0.7s,baz=178,slow=8.0,SNR=4.3						
MKAR	Makanchi Array	44.25	56	P	P	01 18 44.3	+2.3
	comp=Z,0.5nm,0.5s,baz=265,slow=7.7,SNR=5.5						
ZALV	Zalesovo Beam	45.61	46	P	P	01 18 53.4	+0.8
	comp=Z,1.6nm,0.4s,baz=276,slow=9.0,SNR=5.9						

KRSC 16 01:10:42.8±0.9, 51°.94N×160°.14E, h14km±19km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	1.11	297	eP	Pb	01 11 03.4	-0.4
SPN	Mys Shipunski	1.16	357	eP	Pn	01 11 03.8	-0.8
SPN				eS	Sb	01 11 18.6	-0.9
KDTR	Khodutka, Kamc	1.28	265	eP	Pn	01 11 06.1	-0.1
KDTR				eS	Sn	01 11 23.5	+0.3
MTVR	Mutnovka	1.32	295	eP	Pn	01 11 06.4	-0.5
MTVR				eS	Sb	01 11 23.0	-1.2
NLC	Nalytchevo	1.32	339	eP	Pn	01 11 07.0	+0.2
NLC				eS	Sg	01 11 25.1	-0.3
DALK	Dalny	1.38	323	eP	Pn	01 11 07.8	+0.2
DALK				eS	Sn	01 11 25.6	0.0
ASAK	Asacha	1.45	289	eP	Pn	01 11 08.8	+0.2
UGLR	Uglovaya	1.50	328	eP	Pn	01 11 09.7	+0.3
KRMR	Karymshinskiy	1.52	307	eP	Pn	01 11 09.0	-0.5
KRMR				eS	Sn	01 11 28.7	-0.3
SDLR	Sedlovina	1.54	331	eP	Pn	01 11 10.0	+0.1
SMAR	Somma	1.55	329	eP	Pn	01 11 10.2	0.0
AVH	Avacha	1.58	328	eP	Pb	01 11 11.2	-0.5
KRER	Koryakskii	1.60	329	eP	Pb	01 11 11.8	-0.5
KOK	Koryaka	1.63	327	eP	Pb	01 11 12.1	-0.6
KRX	Arik	1.68	328	eP	Pn	01 11 12.6	+0.7
GNL	Ganaly	2.20	324	eP	Pn	01 11 20.2	+1.2
GNL				eS	Sb	01 11 48.6	-1.0

*ISCJB **16** 01:12:41.5±0.6, 18°.57S±0°.04×69°.53W±0°.08, h127km±4km, mb3.2/2, Error ellipse: s-maj=12.9km s-min=7.1km az=177.8*
*GUC **16** 01:12:42.6±0.6, 18°.54S×69°.42W, h112km±2km, ML3.2*
*IDC **16** 01:12:42.9±1.9, 18°.64S×69°.25W, h129km±17km, mb3.2/3, mb1 3.2/6, mb1mx3.1/21, mbtmp3.5/6, Error ellipse: s-maj=35.5km s-min=14.8km az=101.0*

ISC 16 01:12:41.7±0.9, 18°.55S±0°.05×69°.49W±0°.08, h119km±7km, n23, σ0s98/36, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.21	355	i P	Pn	01 12 58.9	-0.1
PB16				i S	Sn	01 13 13.3	+1.4
PB16	IPOC Station P	0.21	355⇑	eP	Pn	01 12 59.0	-0.1
PB16				i S	Sn	01 13 11.8	0.0
PB16				IAML		01 13 12.8	
	comp=E,1μm,0.3s						
MNMC	Minye Minye	0.59	190⇑	eP	Pn	01 13 00.7	+0.2
MNMC				eS	Sn	01 13 14.5	-0.2
MNMCX	Minye Minye	0.59

comp=Z,8.4nm,0.4s
SIV San Ignacio 8.43 74 P **Pn 01 14 38.4 -2.7**
comp=Z,0.9nm,0.3s,baz=273,slow=12,SNR=14
BDFB Brasilia 20.73 85 P **P 01 17 12.5 -0.6**
comp=Z,0.7nm,0.5s,baz=233,slow=5.5,SNR=3.6
TORD Torodi Ar. Bea 76.90 71 P **P 01 24 20.1 -1.4**
comp=Z,0.2nm,0.4s,baz=243,slow=5.1,SNR=6.0
YKA Yellowknife Ar 88.23 341 P **P 01 25 19.8 +0.8**
comp=Z,0.2nm,0.7s,baz=131,slow=4.5,SNR=4.5

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*IDC **16** 01:29:44.8±1.2, 34°.18N×25°.06E, h0km, mb3.8/5, mb1 3.9/10, mb1mx3.5/50, mbtmp3.8/10, ML3.7/5, Error ellipse: s-maj=21.1km s-min=20.6km az=11.0*
*ATH **16** 01:29:49.1, 34°.26N×25°.01E, h39km±4km, ML3.2/3, Error ellipse: s-maj=7.0km s-min=2.7km az=357.0*
*THE **16** 01:29:50.5, 34°.39N×25°.00E, h0km±2km, ML3.3/2, Error ellipse: s-maj=3.3km s-min=0.9km az=166.0*
ISC 16 01:29:50.0±1.7, 34°.39N±0°.09×25°.00E±0°.03, h17km±10km, n73, σ1§13/75, mb3.7/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.65**	**346**	P	**Pb**	**01 30 03.8**	**+0.9**
SIVA				S	**Sn**	**01 30 13.9**	**-0.3**
SIVA	**Sivas**	**0.65**	**346**	P	**Pn**	**01 30 04.2**	**-0.2**
SIVA				S	**Sn**	**01 30 16.4**	**+2.2**
SIVA	comp=N,7678μm,1.0s			AML	AML	01 30 19.9	
SIVA	comp=E,8486μm,0.5s			AML	AML	01 30 20.1	
TMBK	**Timbaki Herakl**	**0.71**	**344**	P	**Pn**	**01 30 05.0**	**-0.2**
LAST	**Lasithi**	**0.87**	**27**	P	**Pb**	**01 30 06.9**	**+0.2**
LAST	**Lasithi**	**0.87**	**27**	P	**Pb**	**01 30 06.8**	**+0.2**
LAST	comp=E,910μm,0.6s			AML	AML	01 30 29.3	
LAST	comp=N,1308μm,0.6s			AML	AML	01 30 35.2	
GVD	**Gavdhos**	**0.88**	**301**	*e*P	**Pg**	**01 30 06.6**	**-0.5**
GVD	**Gavdhos**	**0.88**	**301**	P	**Pg**	**01 30 07.0**	**-0.1**
GVD				S	**Sn**	**01 30 21.4**	**+1.5**
GVD	**Gavdhos**	**0.88**	**301**	P	**Pg**	**01 30 07.1**	**0.0**
GVD	comp=E,2692μm,0.4s			AML	AML	01 30 26.4	
GVD	comp=N,2943μm,0.4s			AML	AML	01 30 27.2	
IDI	**Anoyia**	**0.91**	**354**	Pn	**Pb**	**01 30 07.8**	**+0.5**
IDI	comp=N,27nm,0.3s,baz=231,slow=7.4,SNR=27			Sn	**Sn**	**01 30 21.2**	**+0.5**
KSTL	**Kastelli Herak**	**0.92**	**4**	P	**Pb**	**01 30 07.6**	**+0.2**
KSTL	comp=N,54nm,0.3s,baz=289,slow=24,SNR=12			S	**Sn**	**01 30 20.3**	**-0.6**
IACM	**Heraklion**	**0.92**	**4**	P	**Pn**	**01 30 09.3**	**+1.2**
NPS	**Neapolis**	**1.01**	**30**	P	**Pn**	**01 30 10.1**	**+0.7**
NPS	**Neapolis**	**1.01**	**30**	P	**Pn**	**01 30 09.9**	**+0.5**
VAM	**Vamos**	**1.21**	**327**	P	**Pn**	**01 30 13.0**	**+0.8**
VAM	**Vamos**	**1.21**	**327**	P	**Pn**	**01 30 12.9**	**+0.8**
ZKR	**Zakros**	**1.24**	**54**	*e*P	**Pn**	**01 30 12.9**	**+0.4**
ZKR	**Zakros**	**1.24**	**54**	P	**Pg**	**01 30 14.0**	**+0.1**
ZKR	**Zakros**	**1.24**	**54**	P	**Pn**	**01 30 13.3**	**+0.9**
IMMV	**Iera Moni Meta**	**1.36**	**322**	*e*P	**Pn**	**01 30 14.2**	**0.0**
IMMV	**Iera Moni Meta**	**1.36**	**322**	P	**Pb**	**01 30 15.7**	**+0.7**
IMMV	**Iera Moni Meta**	**1.36**	**322**	P	**Pn**	**01 30 14.8**	**+0.7**
THR6	**Thira Island,**	**1.99**	**9**	P	**Pn**	**01 30 24.3**	**+1.4**
SAP1	**Santorini-Akro**	**2.00**	**9**	P	**Pn**	**01 30 24.1**	**+1.2**
SANT	**Santorini**	**2.02**	**11**	*e*P	**Pn**	**01 30 23.8**	**+0.6**
ANKY	**Antikythira Is**	**2.03**	**317**	P	**Pn**	**01 30 25.1**	**+1.7**
THR3	**Thira Island,**	**2.05**	**9**	P	**Pn**	**01 30 24.6**	**+1.0**
THR5	**Thira Island,**	**2.05**	**8**	P	**Pn**	**01 30 24.9**	**+1.3**
ANAF	**Anafi Island**	**2.07**	**18**	P	**Pn**	**01 30 23.9**	**+0.1**
SAP3	**Santorini-Thir**	**2.07**	**8**	P	**Pn**	**01 30 24.3**	**+0.4**
KARP	**Karpathos**	**2.12**	**56**	*e*P	**Pn**	**01 30 25.4**	**+0.8**
KARP	**Karpathos**	**2.12**	**56**	P	**Pn**	**01 30 26.7**	**+2.1**
IOSP	**Ios island**	**2.34**	**6**	P	**Pn**	**01 30 28.4**	**+0.7**
MHLO	**Agia Marina, M**	**2.35**	**348**	P	**Pn**	**01 30 28.5**	**+0.7**
MHLO	**Agia Marina, M**	**2.35**	**348**	P	**Pn**	**01 30 28.0**	**+0.3**
MHLA	**Plaka, Milos I**	**2.40**	**349**	P	**Pn**	**01 30 29.4**	**+0.9**
AMGA	**Amorgos Island**	**2.55**	**16**	P	**Pn**	**01 30 30.9**	**+0.4**
APE	**Apeiranthos**	**2.71**	**9**	*e*P	**Pn**	**01 30 33.3**	**+0.5**
APE	**Apeiranthos**	**2.71**	**9**	P	**Pn**	**01 30 32.9**	**+0.1**
SERI	**Serifos**	**2.80**	**352**	P	**Pn**	**01 30 34.4**	**+0.4**
ARG	**Arkhangelos**	**3.14**	**54**	*e*P	**Pn**	**01 30 39.7**	**+1.0**
ARG	**Arkhangelos**	**3.14**	**54**	P	**Pn**	**01 30 39.6**	**+1.0**
DAT	**Datca**	**3.14**	**41**	*e*P	**Pn**	**01 30 39.7**	**+0.9**
DAT	**Datca**	**3.14**	**41**	*i* P	**Pn**	**01 30 39.5**	**+0.7**
DAT	comp=Z,193nm,0.2s			IAML_P			
DID	**Didima**	**3.43**	**336**	P	**Pn**	**01 30 42.6**	**0.0**
VLY	**Voula,Athens**	**3.60**	**345**	P	**Pn**	**01 30 45.8**	**+0.9**
ITM	**Ithomi**	**3.75**	**319**	*e*P	**Pn**	**01 30 48.6**	**+1.6**
PTL	**Penteli**	**3.77**	**346**	P	**Pn**	**01 30 47.9**	**+0.6**
YER	**Yerkesik**	**3.83**	**43**	*e*P	**Pn**	**01 30 49.5**	**+1.4**
DALY	**Dalyan (Mula)**	**3.84**	**50**	*e*P	**Pn**	**01 30 49.4**	**+1.2**
DALY	**Dalyan (Mula)**	**3.84**	**50**	*i* P	**Pn**	**01 30 49.9**	**+1.7**
DALY	comp=Z,655nm,0.2s			IAML_P			
TURN	**Turunc**	**3.84**	**49**	*e*P	**Pn**	**01 30 45.1**	**-3.2**
TURN	**Turunc**	**3.84**	**49**	*i* P	**Pn**	**01 30 46.0**	**-2.3**
TURN	comp=Z,815nm,0.2s			IAML_P			
FETY	**Fethiye**	**4.02**	**55**	*e*P	**Pn**	**01 30 50.8**	**+0.1**
FETY	**Fethiye**	**4.02**	**55**	*i* P	**Pn**	**01 30 51.3**	**+0.6**
FETY	comp=Z,667nm,0.2s			IAML_P			
AKAS	**Kas**	**4.19**	**63**	*i* P	**Pn**	**01 30 53.6**	**+0.4**
AKAS	comp=Z,3μm,0.1s			IAML_P			
AYDB	**Zeytinkoy-Aydi**	**4.25**	**32**	*e*P	**Pn**	**01 30 55.7**	**+1.6**
AKUM	**Antalya-Kumluc**	**4.78**	**65**	*i* P	**Pn**	**01 31 01.3**	**+0.2**
AKUM	comp=Z,2μm,0.2s			IAML_P			
KORT	**Korkueli**	**5.08**	**58**	*i* P	**Pn**	**01 31 08.0**	**+2.6**
KORT	comp=Z,480nm,0.2s			IAML_P			
KHAL	**Karahalli**	**5.38**	**41**	*i* P	**Pn**	**01 31 10.6**	**+1.1**
KHAL	comp=Z,190nm,0.2s			IAML_P			
KEPZ	**Antalya-Kepez**	**5.93**	**63**	*i* P	**Pn**	**01 31 17.4**	**+0.4**
KEPZ	comp=Z,165nm,0.3s			IAML_P			
DOGA	**KONYA_Doganhis**	**6.54**	**54**	*i* P	**Pn**	**01 31 27.6**	**+2.0**
DOGA	comp=Z,229nm,0.2s			IAML_P			
ERMK	**Ermenek**	**6.83**	**69**	*i* P	**Pn**	**01 31 30.6**	**+1.0**
ERMK	comp=Z,345nm,0.2s			IAML_P			
BRTR	**Keskin Array B**	**8.72**	**50**	Pn	**Pn**	**01 31 55.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=236,slow=10,SNR=3.3						
MMAI	**Mount Meron Ar**	**8.78**	**96**	Pn	Pn	01 31 52.6	-3.5
	comp=Z,0.8nm,0.3s,baz=266,slow=12,SNR=8.3						
MMAI				Sn	Sn	01 33 27.0	-7.6
	comp=Z,1.0nm,0.3s,baz=273,slow=24,SNR=4.4						
EIL	**Elat**	**9.66**	**116**	Pn	Pn	01 32 03.6	-4.6
	comp=Z,0.5nm,0.3s,baz=242,slow=1.2,SNR=18						
AKASG	**Malin Array Be**	**16.60**	**9**	Pn	**Pn**	**01 33 40.7**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=199,slow=9.8,SNR=6.7						
GERES	**GERESS Array B**	**16.71**	**333**	Pn	**P**	**01 33 45.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=147,slow=12,SNR=21						
KBZ	**Khabaz**	**16.71**	**51**	Pn	**Pn**	**01 33 43.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=242,slow=12,SNR=3.7						
FINES	**FINESS Array B**	**27.09**	**1**	P	**P**	**01 35 28.8**	**-2.6**
	comp=Z,1.4nm,0.8s,baz=166,slow=12,SNR=3.7						
EKA	**Eskdalemuir Ar**	**28.60**	**326**	P	**P**	**01 35 45.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=126,slow=9.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**29.89**	**231**	P	P	01 35 53.1	-3.7
	comp=Z,0.9nm,0.6s,baz=39,slow=8.1,SNR=9.4						
MKAR	**Makanchi Array**	**44.31**	**56**	P	**P**	**01 37 58.0**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=272,slow=8.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**45.64**	**46**	P	**P**	**01 38 07.3**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=254,slow=9.1,SNR=3.5						

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*MOS **16** 01:33:18.5±1.6, 17°.75S×174°.66W, h48km, mb4.8/11, Error ellipse: s-maj=18.8km s-min=12.3km az=54.0*
*BJI **16** 01:33:25.8±0.0, 17°.02S×174°.07W, h53km, mb5.0/10, mB5.0/6, Ms4.8/3, Ms7 4.5/3*
*IDC **16** 01:33:25.4±6.5, 18°.10S×174°.48W, h112km±58km, mb4.2/17, mb1 4.4/18, mb1mx4.1/39, mbtmp4.6/18, MS3.3/2, Ms1 3.3/2, ms1mx2.7/22, Error ellipse: s-maj=24.6km s-min=17.8km az=142.0*
*NEIC **16** 01:33:26.0±1.1, 18°.05S×174°.54W, h115km±5km, mb4.5/78, Error ellipse: s-maj=24.4km s-min=17.3km az=170.0*

ISC 16 01:33:27.1±0.5, 18°.35S±0°.1×174°.39W±0°.09, h132km, n140, σ1§20/136, mb4.5/45, 4C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.29**	**100**	*e*Pn	**Pn**	**01 34 29.4**	**-1.3**
DZM	**Mont Dzumac**	**18.37**	**255**	P	**Pn**	**01 37 33.0**	**-0.5**
	0.2nm,0.3s,baz=80,slow=18,SNR=4.2						
DZM	**Mont Dzumac**	**18.37**	**255**	*e*P	**Pn**	**01 37 33.0**	**-0.5**
	51nm,1.5s						
URZ	**Urewera**	**21.19**	**199**	P	**P**	**01 38 03.8**	**+1.8**
	21nm,0.5s,baz=329,slow=3.5,SNR=14						
PPT	**Papeete**	**23.61**	**92**	LR	LR	01 44 34.6	
	comp=Z,60nm,19.8s,baz=213,slow=28						
RPZ	**Rata Peaks**	**28.11**	**203**	LR	LR	01 49 32.2	
	comp=Z,68nm,18.3s,baz=305,slow=34						
CTAO	**Charters Tower**	**37.15**	**261**	*e*P	**P**	**01 40 24.9**	**-0.6**
	28nm,1.6s						
CTAO	**Charters Tower**	**37.15**	**261**	*e*P	**P**	**01 40 24.9**	**-0.6**
CTAO	comp=Z,28nm,1.6s			pmax	pmax		
STKA	**Stephens Creek**	**41.80**	**242**	P	**P**	**01 41 04.5**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=83,slow=9.3,SNR=10.0						
STKA	**Stephens Creek**	**41.80**	**242**	*e*P	**P**	**01 41 04.5**	**+0.6**
	comp=Z,6.0nm,1.9s						
STKA	**Stephens Creek**	**41.80**	**242**	*e*P	**P**	**01 41 04.5**	**+0.6**
STKA	comp=Z,6.0nm,1.9s			pmax	pmax		
WB2	**Warramunga Arr**	**48.30**	**259**	*e*P	**P**	**01 41 54.4**	**-1.1**
	comp=Z,5.3nm,0.6s						
WR1	**Warramunga Arr**	**48.31**	**259**	*e*P	**P**	**01 41 54.6**	**-0.9**
WRA	**Warramunga Arr**	**48.31**	**259**	P	**P**	**01 41 54.6**	**-0.9**
	comp=Z,3.3nm,0.3s,baz=90,slow=7.6,SNR=62						
AS31	**Alice Springs**	**48.36**	**254**	*e*P	**P**	**01 41 55.5**	**-0.4**
ASAR	**Alice Springs**	**48.36**	**254**	P	**P**	**01 41 55.5**	**-0.4**
	comp=Z,38nm,0.7s,baz=88,slow=8.3,SNR=309						
ASAR				S	**S**	**01 48 41.3**	**-5.1**
	comp=Z,0.3nm,0.6s,baz=93,slow=15,SNR=4.4						
MJAR	**Matsushiro Arr**	**70.60**	**321**	P	**P**	**01 44 26.6**	**-1.5**
	comp=Z,5.5nm,0.7s,baz=177,slow=5.9,SNR=5.8						
MAJO	**Matsushiro**	**70.60**	**321**	*e*P	**P**	**01 44 26.6**	**-1.5**
PETK	**Petropavlovsk-**	**75.14**	**343**	P	**P**	**01 44 53.3**	**-1.3**
	comp=Z,2.9nm,0.7s,baz=118,slow=9.1,SNR=6.0						
PEA1	**Petropavlovsk-**	**75.15**	**343**	*e*P	**P**	**01 44 53.3**	**-1.3**
ISA	**Isabella, Lake**	**75.41**	**44**	*e*P	**P**	**01 44 57.2**	**+0.6**
	comp=Z,9.3nm,1.0s						
ISA	**Isabella, Lake**	**75.41**	**44**	*e*P	**P**	**01 44 57.2**	**+0.6**
ISA	comp=Z,9.0nm,1.0s			pmax	pmax		
CMB	**Columbia Colle**	**75.59**	**41**	*e*P	**P**	**01 44 57.9**	**+0.4**
	comp=Z,7.5nm,0.9s						
CMB	**Columbia Colle**	**75.59**	**41**	*e*P	**P**	**01 44 57.9**	**+0.4**
CMB	comp=Z,8.0nm,0.9s			pmax	pmax		
AFDM	**Forest Hills D**	**75.78**	**40**	*e*P	**P**	**01 44 58.8**	**+0.2**
	comp=Z,7.4nm,0.9s						
ORV	**Oroville**	**75.84**	**39**	*e*P	**P**	**01 44 59.2**	**+0.3**
	comp=Z,5.7nm,0.9s						
ORV	**Oroville**	**75.84**	**39**	*e*P	**P**	**01 44 59.2**	**+0.3**
ORV	comp=Z,6.0nm,0.9s			pmax	pmax		
WDC	**Whiskeytown Da**	**75.86**	**38**	*e*P	**P**	**01 44 59.5**	**+0.5**
	comp=Z,6.8nm,0.8s						
WDC	**Whiskeytown Da**	**75.86**	**38**	*e*P	**P**	**01 44 59.5**	**+0.5**
WDC	comp=Z,7.0nm,0.8s			pmax	pmax		
MDPB	**Devils Postpil**	**76.17**	**42**	*e*P	**P**	**01 45 01.6**	**+0.5**
	comp=Z,8.2nm,0.8s						
OMMB	**Old Mammoth Mi**	**76.21**	**42**	*e*P	**P**	**01 45 01.9**	**+0.5**
	comp=Z,4.6nm,1.0s						
WAKR	**Walker**	**76.47**	**41**	*e*P	**P**	**01 45 03.4**	**+0.7**
	comp=Z,8.9nm,0.8s						
YBH	**Yreka Blue Hor**	**76.50**	**37**	*e*P	**P**	**01 45 03.0**	**+0.3**
	comp=Z,8.7nm,0.9s						
YBH	**Yreka Blue Hor**	**76.50**	**37**	*e*P	**P**	**01 45 03.0**	**+0.3**
YBH	comp=Z,9.0nm,0.9s			pmax	pmax		
PNTR	**Pine Nut**	**76.72**	**41**	*e*P	**P**	**01 45 05.1**	**+1.0**
	comp=Z,13nm,0.8s						
BEKR	**Beckworth**	**76.72**	**40**	*e*P	**P**	**01 45 04.4**	**+0.3**
	comp=Z,7.5nm,1.0s						
HUMO	**Hull Mountain**	**76.93**	**36**	*e*P	**P**	**01 45 05.7**	**+0.7**
	comp=Z,3.8nm,0.9s						
RYN	**Ryan**	**77.11**	**42**	*e*P	**P**	**01 45 06.7**	**+0.4**
	comp=Z,6.1nm,0.9s						
NVAR	**Mina Array Bea**	**77.14**	**42**	P	**P**	**01 45 06.6**	**+0.1**
	comp=Z,5.8nm,0.8s,baz=225,slow=9.6,SNR=44						
PAHR	**Pah Rah Range**	**77.22**	**40**	*e*P	**P**	**01 45 07.2**	**+0.4**
	comp=Z,6.9nm,1.1s						
NV11	**Mina Array Sit**	**77.23**	**42**	*e*P	**P**	**01 45 07.4**	**+0.4**
	comp=Z,0.6nm,0.9s						
TJN	**Taejon**	**77.37**	**315⇓**	*e*P	**P**	**01 45 11.5**	**+4.0**
KSRS	**Korea Array**	**77.61**	**316**	P	**P**	**01 45 09.3**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=134,slow=6.1,SNR=8.4						
KS15	**Wonju Array Si**	**77.63**	**316**	*e*P	**P**	**01 45 09.3**	**+0.4**
	comp=Z,14nm,1.4s						
KDAK	**Kodiak Island**	**77.98**	**12**	P	**P**	**01 45 09.7**	**-0.7**
	comp=Z,12nm,0.7s,baz=217,slow=3.7,SNR=24						
KDAK	**Kodiak Island**	**77.98**	**12**	*e*P	**P**	**01 45 09.1**	**-1.3**
	comp=Z,13nm,0.7s						
PINE	**Pine Mountain**	**78.82**	**36**	*e*P	**P**	**01 45 15.3**	**-0.3**
	comp=Z,9.8nm,1.1s						
TUC	**Tucson**	**78.98**	**51**	*e*P	**P**	**01 45 17.3**	**+0.7**
	comp=Z,3.4nm,0.9s						
TUC	**Tucson**	**78.98**	**51**	*e*P	**P**	**01 45 17.3**	**+0.7**
TUC	comp=Z,3.0nm,0.9s			pmax	pmax		
NJ2	**Nanjing**	**81.20**	**308**	*e*P	P	01 45 34.5	+6.1
NJ2	comp=Z,7.0nm,0.5s			pmax	pmax		
BMO	**Blue Mountains**	**81.53**	**37**	*e*P	**P**	**01 45 29.6**	**-0.4**
	comp=Z,9.7nm,1.6s						
BMO	**Blue Mountains**	**81.53**	**37**	*e*P	**P**	**01 45 29.6**	**-0.4**
BMO	comp=Z,10.0nm,1.6s			pmax	pmax		
TXAR	**Lajitas Array**	**83.03**	**56**	P	**P**	**01 45 39.2**	**+1.0**
	comp=Z,1.9nm,0.9s,baz=225,slow=8.1,SNR=20						
TCUT	**Toone Canyon**	**83.04**	**43**	*e*P	**P**	**01 45 38.3**	**+0.1**
	comp=Z,9.3nm,0.9s						
ANMO	**Albuquerque**	**83.41**	**50**	*e*P	**P**	**01 45 40.6**	**+0.4**
	comp=Z,2.3nm,0.8s						
ANMO	**Albuquerque**	**83.41**	**50⇓**	*e*P	**P**	**01 45 41.0**	**+0.9**
ANMO	comp=Z,2.0nm,0.9s			pmax	pmax		
MAW	**Mawson**	**84.72**	**199**	P	**P**	**01 45 47.6**	**+1.7**
	comp=Z,1.9nm,0.6s,baz=178,slow=5.6,SNR=8.1						
MAW	**Mawson**	**84.72**	**199**	*e*P	**P**	**01 45 47.6**	**+1.7**
	comp=Z,4.7nm,1.9s						
MAW	**Mawson**	**84.72**	**199**	*e*P	**P**	**01 45 47.6**	**+1.7**
MAW	comp=Z,5.0nm,1.9s			pmax	pmax		
DLBC	**Dease Lake**	**84.77**	**22**	P	**P**	**01 45 45.7**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=272,slow=6.5,SNR=4.0						
PDAR	**Pinedale Array**	**85.08**	**42**	P	**P**	**01 45 47.8**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=212,slow=2.9,SNR=12						
SEY	**Seymchan**	**85.11**	**345**	P	**P**	**01 45 46.6**	**-1.1**
	comp=Z,3.1nm,0.8s,baz=141,slow=9.1,SNR=5.3						
SEY	**Seymchan**	**85.11**	**345⇓**	*e*P	**P**	**01 45 47.0**	**-0.8**
COLA	**College**	**85.42**	**11**	*e*P	**P**	**01 45 48.0**	**-1.2**
	comp=Z,27nm,0.8s						
COLA	**College**	**85.42**	**11**	*e*P	**P**	**01 45 48.0**	**-1.2**
COLA	comp=Z,27nm,0.8s			pmax	pmax		
ILAR	**Eielson Array**	**85.50**	**11**	P	**P**	**01 45 48.2**	**-1.6**
	comp=Z,4.6nm,0.7s,baz=230,slow=6.1,SNR=108						
BILL	**Bilibino**	**87.29**	**353**	*e*P	**P**	**01 45 57.2**	**-1.2**
	comp=Z,4.7nm,0.8s						
BILL	**Bilibino**	**87.29**	**353⇑**	*i* P	**P**	**01 45 57.4**	**-1.0**
BILL				*e*S	**S**	**01 56 30.9**	**+3.9**
BILL	comp=Z,5.0nm,1.1s			pmax	pmax		
BILL	comp=Z,218nm,24.0s			MLR	MLR		
HHC	**Hu-ho-hao-te**	**90.33**	**313**	*e*P	P	01 46 19.1	+5.6
HHC	comp=Z,12nm,1.0s			pmax	pmax		
HHC	comp=Z,96nm,7.5s			pmax	pmax		
INK	**Inuvik**	**91.34**	**14**	P	**P**	**01 46 16.6**	**-0.7**
	comp=Z,5.2nm,0.9s,baz=173,slow=5.5,SNR=6.1						
CD2	**Chengdu**	**92.54**	**302**	*e*P	P	01 46 30.3	+6.4
CD2	comp=Z,330nm,13.1s			LR	LR		
CD2	comp=Z,400nm,16.7s			LR	LR		
CD2	comp=Z,320nm,14.9s			LR	LR		
YKA	**Yellowknife Ar**	**93.16**	**24**	P	**P**	**01 46 24.9**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=233,slow=4.3,SNR=7.5						
LZH	**Lanzhou**	**94.21**	**307**	*e*P	P	01 46 37.5	+5.9
LZH				pP	pP	01 46 53.3	-12
LZH				sP	pwP	01 46 59.3	-5.7
LZH				*e*PP	**PP**	**01 50 26.5**	**+6.2**
LZH	comp=Z,16nm,1.4s			pmax	pmax		
LZH	comp=Z,58nm,9.2s			pmax	pmax		
LZH	comp=Z,110nm,17.2s			LR	LR		
LZH	comp=Z,130nm,17.5s			LR	LR		
LZH	comp=Z,180nm,19.3s			LR	LR		
KSH	**Kashi**	**116.44**	**306**	*e*PKP	**PKiKP**	**01 52 01.1**	**+5.4**
ARA0	**ARCESS Array S**	**127.37**	**351**	*e*PKPdf	**PKPdf**	**01 52 15.2**	**-0.4**
ARCES	**ARCESS Array B**	**127.37**	**351**	PKP	**PKPdf**	**01 52 15.2**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=18,slow=1.1,SNR=25						
FIA0	**FINESS Array S**	**134.58**	**346**	*e*PKPdf	**PKPdf**	**01 52 29.7**	**+0.3**
FIA0	**FINESS Array S**	**134.58**	**346**	*e*PKIKP	**PKPdf**	**01 52 29.7**	**+0.3**
FINES	**FINESS Array B**	**134.58**	**346**	PKP	**PKPdf**	**01 52 29.7**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=51,slow=2.5,SNR=13						
NB200	**NORSAR Array S**	**137.17**	**356**	*e*PKPdf	**PKPdf**	**01 52 33.8**	**-0.5**
NOA	**NORSAR Array B**	**137.17**	**356**	PKP	**PKPdf**	**01 52 33.8**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=15,slow=4.0,SNR=2.5						
GKP	**Gorka Klasztor**	**143.99**	**348**	*e*PKP	PKiKP	01 53 01.8	+11
OJC	**Ojcow**	**146.23**	**344**	*e*PKP	**PKPbc**	**01 52 52.0**	**0.0**
OJC	**Ojcow**	**146.23**	**344**	*e*PKP2	**PKPbc**	**01 52 52.0**	**0.0**
KSP	**Ksiaz**	**146.48**	**348**	*e*PKP	**PKPab**	**01 52 53.2**	**-0.7**
KSP	**Ksiaz**	**146.48**	**348**	*e*PKP2	**PKPab**	**01 52 53.2**	**-0.7**
CLL	**Collm**	**146.59**	**352⇑**	*i*PKPbc	**PKPdf**	**01 52 51.4**	**+0.1**
	comp=Z,26nm,1.3s						
CLL	**Collm**	**146.59**	**352⇑**	*i*PKIKP	**PKPdf**	**01 52 51.4**	**+0.1**
CLL				pmax	pmax		
	comp=Z,26nm,1.3s						
KOLS	**Kolonicke sedl**	**146.64**	**340**	*e*PKP2	**PKPab**	**01 52 53.9**	**-0.7**
KOLS	**Kolonicke sedl**	**146.64**	**340**	*e*PKP	**PKPab**	**01 52 53.9**	**-0.7**
OSTC	**Ostas**	**146.77**	**348**	*e*PKP	**PKPbc**	**01 52 53.6**	**0.0**
CHVC	**Chvalec**	**146.77**	**348**	*e*PKP	**PKPab**	**01 52 54.2**	**-0.9**
NIE	**Niedzica**	**146.82**	**342**	*e*PKP	**PKPab**	**01 52 54.4**	**-0.9**
NIE	**Niedzica**	**146.82**	**342**	*e*PKP2	**PKPab**	**01 52 54.4**	**-0.9**
UPC	**Upice**	**146.85**	**348**	*e*PKP2	**PKPbc**	**01 52 53.6**	**-0.2**
UPC	**Upice**	**146.85**	**348**	*e*PKP	**PKPbc**	**01 52 53.6**	**-0.2**
UPC				*ex*	x	01 53 07.4	
BRG	**Berggiesshubel**	**146.87**	**350**	*i* PKP	**PKPbc**	**01 52 53.4**	**-0.4**
	comp=Z,8.4nm,0.9s						
DPC	**Dobruska-Polom**	**146.94**	**347**	*e*PKP2	**PKPbc**	**01 52 54.1**	**0.0**
DPC	**Dobruska-Polom**	**146.94**	**347**	*e*PKP	**PKPbc**	**01 52 54.1**	**0.0**
PVCC	**Panska Ves**	**147.10**	**349**	*e*PKP2	**PKPbc**	**01 52 54.5**	**0.0**
PVCC	**Panska Ves**	**147.10**	**349**	*e*PKP	**PKPbc**	**01 52 54.5**	**0.0**
MORC	**Moravsky Berou**	**147.21**	**346**	*e*PKP	**PKPbc**	**01 52 54.8**	**-0.1**
LANS	**Liptovska Anna**	**147.29**	**343**	*e*PKP2	**PKPab**	**01 52 56.3**	**-0.9**
LANS	**Liptovska Anna**	**147.29**	**343**	*e*PKP	**PKPab**	**01 52 56.3**	**-0.9**
PRU	**Pruhonice**	**147.63**	**349**	*e*PKP2	**PKPbc**	**01 52 55.8**	**-0.2**
PRU	**Pruhonice**	**147.63**	**349**	*e*PKP	**PKPbc**	**01 52 55.8**	**-0.2**
GOPC	**GO Pecny, Ondr**	**147.66**	**349**	*e*PKP2	**PKPbc**	**01 52 55.7**	**-0.4**
GOPC	**GO Pecny, Ondr**	**147.66**	**349**	*e*PKP	**PKPbc**	**01 52 55.7**	**-0.4**
BR101	**Keskin Array S**	**147.75**	**317**	*e*PKPbc	**PKPbc**	**01 52 56.5**	**-0.3**
BRTR	**Keskin Array B**	**147.75**	**317**	PKPbc	**PKPbc**	**01 52 56.5**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=138,slow=4.9,SNR=9.4						
VRAC	**Vranov**	**147.87**	**346**	*e*PKP	**PKPbc**	**01 52 57.2**	**+0.6**
JAVC	**Velka Javorina**	**148.03**	**345**	*e*PKP	**PKiKP**	**01 52 58.5**	**-0.4**
VYHS	**Vyhne**	**148.06**	**343**	*e*PKP2	**PKPbc**	**01 52 57.2**	**0.0**
VYHS	**Vyhne**	**148.06**	**343**	*e*PKP	**PKPbc**	**01 52 57.2**	**0.0**
TREC	**Trest**	**148.11**	**348**	*e*PKIKP	**PKPbc**	**01 52 56.1**	**-1.2**
TREC	**Trest**	**148.11**	**348**	*e*PKP	**PK

comp=Z,20nm,0.8s
MAT Matsushiro 3.41 299 P Pn 01 44 31.8 +0.7
MAT S Sn 01 45 12.7 +0.9
MJB9 Matsu-Tunnel 3.42 299 *e*Pn **Pn 01 44 32.2 +1.1**
INU Inuyama 4.03 277 *e*Pn **Pn 01 44 40.6 +1.1**
ERM Erimo 7.15 8 *e*Pn **Pn 01 45 20.4 -1.9**
ASAJ Asahikawa 9.19 3 Pn **Pn 01 45 48.5 -1.9**
comp=Z,2.2nm,0.3s,baz=220,slow=11,SNR=14
JNU Nakatsue 9.33 262 Pn **Pn 01 45 52.6 +0.3**
comp=Z,0.7nm,0.3s,baz=86,slow=7.8,SNR=7.4
JNU Nakatsue 9.33 262 *e*Pn **Pn 01 45 50.5 -1.8**
KSRS Korea Array 11.58 287 Pn **Pn 01 46 23.2 +0.2**
comp=Z,0.3nm,0.3s,baz=98,slow=14,SNR=5.7
KSRS LR LR 01 50 45.9
comp=Z,70nm,20.7s,baz=100,slow=37
KS15 Wonju Array Si 11.61 287 *e*Pn **Pn 01 46 23.2 -0.2**
USRK Ussuriysk Ar. 12.00 323 Pn **Pn 01 46 28.8 -0.1**
comp=Z,0.4nm,0.3s,baz=151,slow=12,SNR=6.0
USRK LR LR 01 51 11.9
comp=Z,79nm,21.6s,baz=163,slow=38
KLR Kul'dur 16.14 335 Pn **Pn 01 47 24.8 +0.2**
comp=Z,0.1nm,0.3s,baz=221,slow=2.8,SNR=4.0
PETK Petropavlovsk- 21.35 27 LR LR 01 56 22.3
comp=Z,35nm,21.5s,baz=227,slow=36
HHC Hu-ho-hao-te 24.59 293 *e*P **P 01 48 59.4 +1.2**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,140nm,5.3s
SONA0 Songino Array 29.33 307 *e*P **P 01 49 40.9 +0.1**
SONM Songino Array 29.33 307 P **P 01 49 40.9 +0.1**
comp=Z,2.1nm,0.9s,baz=110,slow=8.9,SNR=9.0
LZH Lanzhou 30.88 283 *e*P **P 01 49 55.3 +0.7**
LZH pP pwP 01 50 02.5 -0.3
LZH sP sP 01 50 06.0 +11
LZH *e*PP **PnPn 01 50 58.5 +3.7**
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,45nm,5.0s
CD2 Chengdu 32.14 274 *e*P **P 01 50 05.1 -0.5**
CM31 Chiang Mai Arr 41.40 258 *e*P **P 01 51 22.8 -1.7**
comp=Z,4.9nm,1.0s
CMAR Chiang Mai Arr 41.40 258 P **P 01 51 22.8 -1.7**
comp=Z,1.0nm,0.3s,baz=53,slow=6.9,SNR=5.3
CMAR LR LR 02 09 49.2
comp=Z,42nm,18.2s,baz=88,slow=38
WMQ Urumqi 42.18 299 *e*P **P 01 51 32.1 +1.4**
ZAA1 Zalesovo Array 43.65 314 *e*P **P 01 51 42.8 +0.5**
ZALV Zalesovo Beam 43.65 314 P **P 01 51 42.8 +0.5**
comp=Z,2.0nm,0.6s,baz=87,slow=6.3,SNR=7.7
ZALV Zalesovo Beam 43.65 314 PKIKP **P 01 51 42.8 +0.4**
MK31 Makanchi Array 45.60 304 *e*P **P 01 51 58.6 +0.4**
comp=Z,2.0nm,0.8s
MK31 Makanchi Array 45.60 304 *e*PKIKP **P 01 51 58.6 +0.5**
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MK32 Makanchi Array 45.60 304 *e*P **P 01 51 58.6 +0.5**
MKAR Makanchi Array 45.60 304 P **P 01 51 58.6 +0.5**
comp=Z,1.5nm,0.7s,baz=90,slow=9.9,SNR=11
MKAR Makanchi Array 45.60 304 PKIKP **P 01 51 58.6 +0.5**
KURK Kurchatov 47.56 310 *e*P **P 01 52 13.6 +0.2**
comp=Z,5.7nm,0.6s
ILAR Eielson Array 51.07 31 P **P 01 52 41.6 +1.6**
comp=Z,0.8nm,0.8s,baz=264,slow=6.0,SNR=9.3
ILB Eielson Array 51.07 31 *e*P **P 01 52 41.6 +1.6**
comp=Z,1.3nm,0.8s
BRVK Borovoye 52.35 314 *e*P **P 01 52 49.8 0.0**
comp=Z,3.2nm,0.6s
KK31 Karatay Array 54.54 302 *e*P **P 01 53 06.0 -0.1**
comp=Z,4.5nm,0.8s
KKAR Karatay Array 54.54 302 *e*P **P 01 53 06.1 0.0**
comp=Z,4.5nm,0.8s
WR1 Warramunga Arr 55.04 189 *e*P **P 01 53 09.4 -0.3**
WRA Warramunga Arr 55.04 189 P **P 01 53 09.4 -0.3**
comp=Z,1.5nm,0.5s,baz=2.2,slow=7.0,SNR=5.1
ARU Arti 58.21 320 *e*P **P 01 53 31.6 -0.3**
comp=Z,5.2nm,0.8s
AS31 Alice Springs 58.76 189 *e*P **P 01 53 36.9 +0.7**
ASAR Alice Springs 58.76 189 P **P 01 53 36.9 +0.7**
comp=Z,0.5nm,0.6s,baz=14,slow=7.7,SNR=4.1
ABKAR Abkulak array 59.61 311 *e*P **P 01 53 41.6 -0.2**
comp=Z,1.8nm,0.6s
GEYT Alibeck 65.22 300 P **P 01 54 18.3 -1.3**
comp=Z,2.0nm,0.8s,baz=66,slow=15,SNR=4.9
ARA0 ARCESS Array S 66.11 340 *e*P **P 01 54 24.5 -0.2**
ARCES ARCESS Array B 66.11 340 P **P 01 54 24.5 -0.2**
comp=Z,1.3nm,0.9s,baz=93,slow=9.2,SNR=2.9
FIA0 FINESS Array S 70.86 333 *e*P **P 01 54 54.5 -0.1**
FINES FINESS Array B 70.86 333 P **P 01 54 54.5 -0.1**
comp=Z,1.4nm,0.7s,baz=56,slow=7.1,SNR=7.4
FINES LR LR 02 28 57.9
comp=Z,27nm,18.3s,baz=286,slow=38
GNI Garni 73.29 307 LR LR 02 31 35.8
comp=Z,19nm,18.1s,baz=88,slow=39
NB2 NORSAR Subarra 76.28 338 P **P 01 55 27.0 +0.5**
comp=Z,0.5nm,0.5s,baz=41,slow=5.9
NB200 NORSAR Array S 76.28 338 *e*P **P 01 55 27.3 +0.8**
NOA NORSAR Array B 76.28 338 P **P 01 55 27.3 +0.8**
comp=Z,0.9nm,0.7s,baz=39,slow=5.7,SNR=4.9
BR101 Keskin Array S 80.55 312 *e*P **P 01 55 51.4 +0.8**
BRTR Keskin Array B 80.55 312 P **P 01 55 51.4 +0.8**
comp=Z,0.5nm,0.7s,baz=85,slow=3.1,SNR=3.3
CLL Collm 83.12 331 *i*P **P 01 56 03.1 -0.7**
LPAZ La Paz 147.35 63 PKPbc **PKPab 02 03 24.5 -0.4**
comp=Z,0.5nm,0.5s,baz=0.0,slow=3.0,SNR=4.2

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*NNC **16** 01:57:29.3±2.7, 37°.60N×71°.49E, h0km, mb4.6, mpv4.1, Error ellipse: s-maj=25.3km s-min=12.8km az=150.0*
*IDC **16** 01:57:29.7±2.7, 37°.12N×71°.99E, h183km±23km, mb3.3/14, mb1 3.6/19, mb1mx3.4/46, mbtmp4.0/19, MS2.9/2, Ms1 2.9/2, ms1mx2.2/37, Error ellipse: s-maj=21.2km s-min=11.3km az=176.0*
*BJI **16** 01:57:30.1±0.0, 37°.40N×72°.00E, h167km, mb4.5/11, mB4.5/9*
*MOS **16** 01:57:30.4±1.1, 37°.31N×71°.96E, h192km, mb4.3/5, Error ellipse: s-maj=11.4km s-min=6.0km az=95.9*
*ISCJB **16** 01:57:30.4±0.2, 37°.26N±0°.03×71°.98E±0°.04, h200km, mb3.8/18, Error ellipse: s-maj=4.5km s-min=3.4km az=160.1*
*NEIC **16** 01:57:32.1±0.5, 37°.36N×72°.01E, h187km±18km, mb4.3/4, Error ellipse: s-maj=24.6km s-min=15.7km az=118.0*
ISC 16 01:57:31.6±0.5, 37°.30N±0°.05×71°.96E±0°.04, h200km, n93, σ1§80/108, mb3.8/18, 10C-11D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.13**	**323**	*e*Pn	**Pn**	**Pn**	**01 58 11.0**	**-0.5**
GAR	**Garm**	**2.13**	**323**	*e*PN	**Pn**	**Pn**	**01 58 11.0**	**-0.5**
BTK	**Batken**	**2.89**	**342**	*e*Pn	**Pn**	**Pn**	**01 58 20.3**	**+0.3**
BTK	**Batken**	**2.89**	**342**	*e*PN	**Pn**	**Pn**	**01 58 20.3**	**+0.3**
CEP	**Cherat**	**3.47**	**181**	P	**Pn**	**Pn**	**01 58 26.6**	**-0.5**
CEP				S	**Sn**	**Sn**	01 59 08.0	**-2.5**
KBL	**Kabul**	**3.63**	**221**	*e*Pn	**Pn**	**Pn**	**01 58 29.6**	**+0.6**
KBL	**Kabul**	**3.63**	**221**	*e*PN	**Pn**	**Pn**	**01 58 29.6**	**+0.6**
CHCP	**Chirah Chowk**	**3.79**	**163**	P	**Pn**	**Pn**	**01 58 31.3**	**+0.5**
NIL	**Nilore**	**3.80**	**163**	*e*Pn	**Pn**	**Pn**	**01 58 31.4**	**+0.5**
NIL	**Nilore**	**3.80**	**163**	*e*PN	**Pn**	**Pn**	**01 58 31.4**	**+0.5**
KSH	**Kashi**	**3.85**	**54**	P	**Pn**	**Pn**	**01 58 26.9**	**-4.7**
KSH				S	Sn	Sn	01 59 06.6	-12
KSH				smax	smax			
	comp=N,910nm,0.7s							
KSH				smax	smax			
	comp=E,920nm,1.0s							
THW	**Thamme Wali**	**4.50**	**182**	P	**Pn**	**Pn**	**01 58 38.8**	**-0.9**
AML	**Almayashu**	**5.00**	**15**	P	**Pn**	**Pn**	**01 58 46.2**	**-0.1**
	SNR=30							
UCH	**Uchtor**	**5.30**	**21**	P	**Pn**	**Pn**	**01 58 50.0**	**-0.1**
	SNR=65							
KZA	**Kyzart**	**5.40**	**27**	P	**Pn**	**Pn**	**01 58 50.7**	**-0.7**
	SNR=16							
SARP	**Sargodha**	**5.40**	**174**	P	**Pn**	**Pn**	**01 58 49.7**	**-1.4**
EKS2	**Erkin-Say**	**5.53**	**14**	P	**Pn**	**Pn**	**01 58 53.6**	**+0.8**
	SNR=11							
AAK	**Ala-Archa**	**5.67**	**19**	P	**Pn**	**Pn**	**01 58 55.0**	**+0.4**
	9.0nm,0.3s,baz=166,slow=6.1,SNR=44							
AAK				S		**Sn**	**01 59 56.9**	**-3.4**
	5.9nm,0.3s,baz=191,slow=13,SNR=5.0							
AAK	**Ala-Archa**	**5.67**	**19**	P	**Pn**	**Pn**	**01 58 55.0**	**+0.4**
	SNR=26							
AAK	**Ala-Archa**	**5.67**	**19**	*e*Pn	**Pn**	**Pn**	**01 58 54.3**	**-0.3**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.67**	**19**	⇑P	**Pn**	**Pn**	**01 58 54.7**	**+0.1**
	12nm,0.4s							
AAK				⇓S	**Sn**	**Sn**	**01 59 57.5**	**-2.9**
	40nm,0.6s							
AAK	**Ala-Archa**	**5.67**	**19**	PN	**Pn**	**Pn**	**01 58 54.6**	**0.0**
AAK				S	**Sn**	**Sn**	**01 59 58.2**	**-2.2**
AAK				pmax	pmax			
	comp=Z,12nm,0.4s							
AAK				smax	smax			
	comp=N,40nm,0.6s							
KBK	**Karagaybulak**	**5.82**	**22**	P	**Pn**	**Pn**	**01 58 57.6**	**+1.1**
	SNR=7.0							
KK31	**Karatay Array**	**5.90**	**350**	*e*Pn	**Pn**	**Pn**	**01 58 57.0**	**-0.5**
KK31	**Karatay Array**	**5.90**	**350**	⇑P	**Pn**	**Pn**	**01 58 55.0**	**-2.4**
	comp=N,5.0nm,0.3s,baz=162,slow=16,SNR=98							
KK31				⇑S	**Sn**	**Sn**	**02 00 00.0**	**-5.4**
	comp=N,92nm,0.6s,baz=165,slow=18,SNR=19							
KK31	**Karatay Array**	**5.90**	**350**	*e*PN	**Pn**	**Pn**	**01 58 56.8**	**-0.6**
KK31				pmax	pmax			
	comp=Z,5.0nm,0.3s							
KKAR	**Karatay Array**	**5.90**	**350**	*e*Pn	**Pn**	**Pn**	**01 58 57.1**	**-0.3**
KKAR	**Karatay Array**	**5.90**	**350**	*e*PN	**Pn**	**Pn**	**01 58 57.1**	**-0.3**
ULHL	**Ulahol**	**5.94**	**32**	P	**Pn**	**Pn**	**01 58 57.7**	**-0.4**
	SNR=13							
BOOM	**Boomskoye usch**	**6.02**	**29**	*e*Pn	**Pn**	**Pn**	**01 58 58.7**	**-0.4**
BOOM	**Boomskoye usch**	**6.02**	**29**	*e*PN	**Pn**	**Pn**	**01 58 58.7**	**-0.4**
CHMS	**Chumysh**	**6.08**	**20**	P	**Pn**	**Pn**	**01 59 00.3**	**+0.6**
	SNR=13							
TKM2	**Tokmak 2**	**6.26**	**25**	P	**Pn**	**Pn**	**01 59 02.3**	**-0.1**
	SNR=14							
TKM2	**Tokmak 2**	**6.26**	**25**	⇓P	**Pn**	**Pn**	**01 59 02.1**	**-0.3**
	comp=Z,7.8nm,0.5s							
TKM2				⇓S	**Sn**	**Sn**	**02 00 12.6**	**-1.7**
	comp=Z,16nm,0.8s							
TKM2	**Tokmak 2**	**6.26**	**25**	*i* PN	**Pn**	**Pn**	**01 59 02.2**	**-0.1**
TKM2				pmax	pmax			
	comp=Z,8.0nm,0.5s							
GEYT	**Alibeck**	**11.00**	**277**	P	**Pn**	**Pn**	**02 00 02.0**	**-1.6**
	comp=Z,3.6nm,0.3s,baz=100,slow=11,SNR=44							
GEYT				S	**Sn**	**Sn**	**02 01 59.6**	**-6.7**
	comp=Z,2.1nm,0.3s,baz=100,slow=15,SNR=6.6							
GYA0B	**ALIBECK ARRAY**	**11.00**	**277**	⇓P	**Pn**	**Pn**	**02 00 01.5**	**-2.1**
GYA0B				⇓S	**Sn**	**Sn**	**02 02 02.0**	**-4.3**
MKAR	**Makanchi Array**	**12.19**	**36**	P	**Pn**	**Pn**	**02 00 18.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=216,slow=18,SNR=2.5							
PYUN	**Piuthan**	**13.05**	**132**	*e*P	**Pn**	**Pn**	**02 00 28.0**	**-1.9**
	comp=Z,41nm,0.3s							
DANN	**Dangsing**	**13.34**	**129**	*e*P	**Pn**	**Pn**	**02 00 31.6**	**-2.0**
	comp=Z,58nm,0.4s							
WMQ	**Urumqi**	**13.61**	**57**	*e*P	**Pn**	**Pn**	**02 00 37.1**	**+0.5**
KOLN	**Koldanda**	**13.66**	**131**	*e*P	**Pn**	**Pn**	**02 00 36.0**	**-1.5**
	comp=Z,22nm,0.3s							
KURK	**Kurchatov**	**14.23**	**17**	*e*Pn	**P**	**Pn**	**02 00 45.3**	**-0.4**
KURK	**Kurchatov**	**14.23**	**17**	⇑*e*P	**P**	**P**	**02 00 46.7**	**+1.0**
KURK				pmax	pmax			
	comp=Z,4.0nm,0.8s							
KKN	**Kakani**	**14.69**	**126**	*e*P	**Pn**	**Pn**	**02 00 48.3**	**-1.9**
	comp=Z,34nm,0.4s							
DMN	**Daman**	**14.71**	**127**	*e*P	**Pn**	**Pn**	**02 00 49.3**	**-1.1**
	comp=Z,27nm,0.3s							
AB31	**Akbulak array**	**14.78**	**328**	⇓P	**P**	**P**	**02 00 52.3**	**+0.5**
	comp=Z,6.2nm,0.6s,baz=142,slow=12,SNR=96							
AB31				⇑S	**S**	**S**	**02 03 31.7**	**-3.3**
	comp=Z,8.7nm,0.5s,baz=149,slow=24,SNR=8.5							
AB31	**Akbulak array**	**14.78**	**328**	*i* P	**Pn**	**Pn**	**02 00 49.6**	**-1.3**
AB31				pmax	pmax			
	comp=Z,6.0nm,0.6s							
ABKAR	**Akbulak array**	**14.78**	**328**	*e*Pn	**Pn**	**Pn**	**02 00 50.2**	**-0.7**
PKIN	**Phulchoki**	**14.91**	**127**	*e*P	**Pn**	**Pn**	**02 00 51.7**	**-1.3**
	comp=Z,35nm,0.5s							
PKI	**Pulchoki**	**14.92**	**127**	*e*P	**Pn**	**Pn**	**02 00 51.3**	**-1.9**
	comp=Z,34nm,0.4s							
GUN	**Gumba**	**15.00**	**125**	*e*P	**Pn**	**Pn**	**02 00 52.3**	**-1.8**
	comp=Z,46nm,0.5s							
JIRN	**Jiri**	**15.37**	**125**	*e*P	**Pn**	**Pn**	**02 00 57.1**	**-1.6**
	comp=Z,60nm,0.3s							
BVAR	**Borovoye Array**	**15.76**	**357**	P	**P**	**P**	**02 01 02.1**	**-0.5**
	comp=Z,1.8nm,0.3s,baz=163,slow=11,SNR=41							
BVAR				S	**S**	**S**	**02 03 55.7**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=161,slow=23,SNR=3.9							
BVAR				LR	LR		02 06 36.2	
	comp=Z,42nm,18.6s,baz=358,slow=34							
BRVK	**Borovoye**	**15.80**	**356**	*e*Pn	**Pn**	**Pn**	**02 01 03.1**	**-0.1**
	comp=Z,8.2nm,0.4s							
BRVK	**Borovoye**	**15.80**	**356**	⇑P	**Pn**	**Pn**	**02 01 07.9**	**+4.7**
	comp=Z,3.1nm,0.4s							
BRVK	**Borovoye**	**15.80**	**356**	*ce*P	**Pn**	**Pn**	**02 01 03.7**	**+0.5**
AKTO	**Aktyubinsk**	**16.49**	**327**	P	**P**	**P**	**02 01 11.3**	**+0.6**
	comp=Z,8.7nm,0.3s,baz=128,slow=11,SNR=79							
AKTO				S	**S**	**S**	**02 04 09.0**	**-3.9**
	comp=Z,0.7nm,0.3s,baz=243,slow=4.3,SNR=7.7							
AKTO	**Aktyubinsk**	**16.49**	**327**	⇓P	**Pn**	**Pn**	**02 01 13.5**	**+1.9**
	comp=Z,18nm,0.5s							
AKTO				⇑S	**Sn**	**Sn**	**02 04 15.6**	**-1.4**
	comp=Z,12nm,0.8s							
AKTO	**Aktyubinsk**	**16.49**	**327**	P	**Pn**	**Pn**	**02 01 12.0**	**+0.4**
AKTO				pmax	pmax			
	comp=Z,18nm,0.5s							
ZAA0	**Zalesovo Array**	**18.87**	**24**	*e*P	**P**	**P**	**02 01 37.1**	**+0.6**
	comp=Z,5.2nm,0.4s							
ZALV	**Zalesovo Beam**	**18.87**	**24**	P	**P**	**P**	**02 01 37.5**	**+1.0**
	comp=Z,3.5nm,0.3s,baz=213,slow=11,SNR=36							
AKT	**Akhty**	**19.16**	**290**	*e*P	**P**	**P**	**02 01 41.9**	**+1.9**
AKT				*e*S	**S**	**S**	**02 05 11.7**	**+5.3**
AKT				pmax	pmax			
	comp=Z,10.0nm,0.5s							
GNBR	**Gunib**	**19.82**	**293**	⇓*e*P	**P**	**P**	**02 01 49.2**	**+2.2**
SVE	**Sverdlovsk**	**20.95**	**342**	*e*P	**P**	**P**	**02 02 00.0**	**+1.4**
ARU	**Arti**	**21.14**	**339**	P	**P**	**P**	**02 02 01.7**	**+1.0**
	comp=Z,1.3nm,0.4s,baz=173,slow=10,SNR=7.8							
ARU	**Arti**	**21.14**	**339**	*e*P	**P**	**P**	**02 02 01.6**	**+0.8**
	comp=Z,20nm,1.4s							
ARU	**Arti**	**21.14**	**339**	*d* iP	**P**	**P**	**02 02 01.5**	**+0.8**
ARU				pmax	pmax			
	comp=Z,14nm,1.3s							
GNI	**Garni**	**21.39**	**286**	*de*P	**P**	**P**	**02 02 06.3**	**+2.6**
GNI				*i* *PP		**pP**	**02 02 36.0**	**-1.8**
GNI				pmax	pmax			
	comp=Z,16nm,1.1s							
KBZ	**Khabaz**	**22.93**	**295**	P	**P**	**P**	**02 02 17.6**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=153,slow=7.8,SNR=4.1							
LZH	**Lanzhou**	**25.54**	**83**	⇑P	**P**	**P**	**02 02 42.3**	**+0.3**
LZH				pP	pP	pP	02 03 18.5	-4.7
LZH				PP	**PnPn**	**PnPn**	**02 03 31.6**	**+0.4**
LZH				pmax	pmax			
	comp=Z,21nm,1.0s							
LZH				pmax	pmax			
	comp=Z,65nm,4.8s							
CD2	**Chengdu**	**27.01**	**94**	*e*P	**P**	**P**	**02 02 55.8**	**+0.7**
SONM	**Songino Array**	**27.25**	**56**	P	**P**	**P**	**02 02 57.8**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=260,slow=9.0,SNR=4.3							
OBN	**Obninsk**	**29.84**	**318**	⇓*e*P		**P**	**02 03 21.6**	**+1.8**
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BR131	**Keskin Array S**	**29.93**	**287**	*e*P	**P**	**P**	**02 03 22.9**	**+1.9**
	comp=Z,11nm,2.0s							
BR131	**Keskin Array S**	**29.93**	**287**	*e*P	**P**	**P**	**02 03 22.9**	**+1.9**
BR131				pmax	pmax			
	comp=Z,11nm,2.0s							
BRTR	**Keskin Array B**	**29.93**	**287**	P	**P**	**P**	**02 03 23.2**	**+2.2**
	comp=Z,0.9nm,0.5s,baz=96,slow=6.8,SNR=18							
HHC	**Hu-ho-hao-te**	**30.77**	**71**	*e*P	**P**	**P**	**02 03 30.3**	**+2.0**
HHC				pmax	pmax			
	comp=Z,15nm,0.8s							
HHC				pmax	pmax			
	comp=Z,80nm,4.5s							
AKASG	**Malin Array Be**	**33.05**	**308**	P	**P**	**P**	**02 03 48.9**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=110,slow=8.1,SNR=6.0							
AKASG	**Malin Array Be**	**33.05**	**308**	*ce*P	**P**	**P**	**02 03 47.2**	**-0.7**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
FINES	**FINESS Array B**	**37.25**	**325**	P	**P**	**P**	**02 04 24.9**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=118,slow=10.0,SNR=16							
ARCES	**ARCESS Array B**	**40.70**	**337**	P	**P**	**P**	**02 04 53.6**	**+1.5**
	comp=Z,7.2nm,0.3s,baz=114,slow=8.7,SNR=31							
VRAC	**Vranov**	**41.16**	**305**	LR	LR		02 25 36.5	
	comp=Z,16nm,20.2s,baz=185,slow=41							
CLL	**Collm**	**43.29**	**308**	*e*P	**P**	**P**	**02 05 13.0**	**-0.2**
KLR	**Kul'dur**	**44.05**	**55**	P	**P**	**P**	**02 05 20.6**	**+1.2**
	comp=Z,1.0nm,0.4s,baz=285,slow=5.9,SNR=6.5							
NB2	**NORSAR Subarra**	**44.21**	**322**	P	**P**	**P**	**02 05 20.9**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**44.21**	**322**	P	**P**	**P**	**02 05 21.2**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=108,slow=7.3,SNR=10.0							
NOA				pP		**pP**	**02 06 05.3**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=95,slow=8.1,SNR=3.4							

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**51.95**	**69**	P	**P**	**P**	**02 06 20.3**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=291,slow=9.7,SNR=4.4							
ESDC	**Sonseca Array**	**57.76**	**298**	P	**P**	**P**	**02 07 02.5**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=50,slow=7.9,SNR=5.2							
TORD	**Torodi Ar. Bea**	**66.50**	**269**	P	**P**	**P**	**02 07 59.4**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=41,slow=6.5,SNR=16							
ILAR	**Eielson Array**	**73.80**	**16**	P	**P**	**P**	**02 08 43.6**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=335,slow=4.0,SNR=4.1							
YKA	**Yellowknife Ar**	**80.41**	**3**	P	**P**	**P**	**02 09 21.2**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=350,slow=5.5,SNR=8.0							
WRA	**Warramunga Arr**	**81.77**	**123**	P	**P**	**P**	**02 09 27.5**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=322,slow=5.1,SNR=2.8							

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*ISCJB **16** 02:10:06.6±0.9, 2°.5N±0°.1×89°.37E±0°.09, h10km, mb3.6/9, MS3.0/1, Error ellipse: s-maj=22.6km s-min=10.4km az=25.8*
*IDC **16** 02:10:07.1±1.1, 2°.51N×89°.42E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.5/53, mbtmp3.6/9, ML4.2/1, MS2.9/2, Ms1 3.0/2, ms1mx2.5/36, Error ellipse: s-maj=39.6km s-min=19.7km az=47.0*
ISC 16 02:10:08.6±1.2, 2°.5N±0°.2×89°.4E±0°.1, h10km, n19, σ1§08/12, mb3.6/9, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**9.91**	**299**		**Sn**	**Sn**	**02 14 22.6**	**+0.1**
	1.7nm,0.3s,baz=296,slow=8.7,SNR=4.9							
CMAR	**Chiang Mai Arr**	**18.38**	**30**	P	**P**	**P**	**02 14 23.6**	**-0.1**
	0.3nm,0.3s,baz=225,slow=16,SNR=3.1							
CMAR				LR	LR		02 20 19.2	
	comp=Z,29nm,18.7s,baz=25,slow=33							
H08S3	**Diego Garcia H**	**19.69**	**239**	T	T		02 35 29.6	
	baz=60,slow=75,SNR=29							
H08S2	**Diego Garcia H**	**19.69**	**239**	T	T		02 35 32.4	
	baz=60,slow=75,SNR=29							
H08S1	**Diego Carcia H**	**19.71**	**239**	T	T		02 35 24.9	
	baz=60,slow=75,SNR=23							
AAK	**Ala-Archa**	**42.12**	**344**	LR	LR		02 36 24.4	
	comp=Z,23nm,20.9s,baz=155,slow=37							
H01W3	**Cape Leeuwin H**	**43.83**	**150**	T	T		03 04 55.7	
	baz=326,slow=75,SNR=10							
H01W2	**Cape Leeuwin H**	**43.84**	**150**	T	T		03 05 06.5	
	baz=326,slow=75,SNR=11							
H01W1	**Cape Leeuwin H**	**43.85**	**150**	T	T		03 05 00.7	
	baz=326,slow=75,SNR=11							
MKAR	**Makanchi Array**	**44.54**	**353**	P	**P**	**P**	**02 18 21.1**	**+0.5**
	0.3nm,0.5s,baz=175,slow=7.1,SNR=4.4							
GEYT	**Alibeck**	**45.45**	**325**	P	**P**	**P**	**02 18 26.1**	**-1.9**
	0.5nm,0.7s,baz=169,slow=8.2,SNR=2.3							
SONM	**Songino Array**	**47.46**	**15**	P	**P**	**P**	**02 18 44.9**	**+1.2**
	1.8nm,0.4s,baz=195,slow=8.8,SNR=11							
WRA	**Warramunga Arr**	**49.38**	**119**	P	**P**	**P**	**02 18 58.5**	**-0.4**
	0.9nm,0.8s,baz=286,slow=10,SNR=2.7							
ASAR	**Alice Springs**	**50.48**	**124**	P	**P**	**P**	**02 19 07.2**	**+0.1**
	0.3nm,0.9s,baz=302,slow=7.3,SNR=3.3							
ZALV	**Zalesovo Beam**	**51.41**	**357**	P	**P**	**P**	**02 19 11.8**	**-1.8**
	0.6nm,0.4s,baz=162,slow=10.0,SNR=2.8							
BRTR	**Keskin Array B**	**62.56**	**314**	P	**P**	**P**	**02 20 34.4**	**+1.3**
	0.3nm,0.7s,baz=108,slow=7.7,SNR=2.7							
GERES	**GERESS Array B**	**78.74**	**319**	P	**P**	**P**	**02 22 11.9**	**+0.4**
	0.1nm,0.3s,baz=76,slow=4.1,SNR=1.9							
ARCES	**ARCESS Array B**	**78.74**	**341**	P	**P**	**P**	**02 22 11.3**	**+0.3**
	1.7nm,0.9s,baz=89,slow=11,SNR=3.0							
TXAR	**Lajitas Array**	**145.93**	**21**	PKPbc		**PKPab**	**02 29 49.4**	**-0.3**
	0.1nm,0.6s,baz=0.0,slow=1.8,SNR=2.6							

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*GII **16** 02:13:34.8±0.0, 34°.25N×25°.09E, h2km*
*IDC **16** 02:13:34.1±1.8, 34°.24N×25°.07E, h0km, mb3.9/1, mb1 3.6/4, mb1mx3.2/38, mbtmp3.5/4, ML3.8/3, Error ellipse: s-maj=35.4km s-min=19.8km az=98.0*
*ISCJB **16** 02:13:36.0±1.0, 34°.15N±0°.05×25°.16E±0°.06, h26km±9km, mb3.6/1, Error ellipse: s-maj=10.8km s-min=6.4km az=40.4*
*ATH **16** 02:13:37.6, 34°.30N×25°.13E, h30km±3km, ML2.8/4, Error ellipse: s-maj=7.1km s-min=1.8km az=10.0*
*THE **16** 02:13:38.1, 34°.32N×25°.08E, h0km±2km, ML2.8/2, Error ellipse: s-maj=3.8km s-min=1.

SIVA Sivas 0.82 343 P **Pb 02 19 57.3 -1.1**
SIVA S **Sb 02 20 08.0 -1.0**
SIVA AML AML 02 20 15.6
comp=N,2579μm,0.5s
SIVA AML AML 02 20 16.6
comp=E,3022μm,0.5s
LAST Lasithi 0.97 18 P **Pb 02 20 00.5 -0.5**
LAST S **Sb 02 20 14.9 +1.4**
LAST Lasithi 0.97 18 P **Pb 02 20 00.5 -0.5**
LAST AML AML 02 20 19.9
comp=E,319μm,0.8s
LAST AML AML 02 20 20.4
comp=N,320μm,0.5s
GVD Gavdhos 1.04 306 P **Pb 02 20 01.0 -1.0**
GVD S **Sn 02 20 18.1 +2.0**
comp=N,478nm,0.6s
GVD Gavdhos 1.04 306 P **Pb 02 20 01.0 -1.0**
GVD AML AML 02 20 20.9
comp=E,1016μm,0.8s
GVD AML AML 02 20 26.7
comp=N,894μm,0.4s
IDI Anoyia 1.07 350 Pn **Pn 02 20 01.4 -1.2**
comp=N,5.2nm,0.3s,baz=202,slow=12,SNR=23
NPS Neapolis 1.11 22 P **Pn 02 20 03.1 -0.1**
NPS Neapolis 1.11 22 P **Pn 02 20 02.5 -0.7**
ZKR Zakros 1.27 46 P **Pn 02 20 04.4 -0.9**
VAM Vamos 1.39 328 P **Pn 02 20 06.8 -0.2**
VAM Vamos 1.39 328 P **Pn 02 20 06.9 -0.1**
IMMV Iera Moni Meta 1.54 323 P **Pn 02 20 09.3 +0.2**
IMMV Iera Moni Meta 1.54 323 P **Pn 02 20 08.8 -0.3**
IOSP Ios island 2.49 3 P **Pn 02 20 22.4 +0.2**
VLI Veliai 3.05 325 P **Pn 02 20 29.1 -0.7**
GERES GERESS Array B 16.88 333 Pn **Pn 02 23 38.6 +0.7**
comp=N,0.1nm,0.3s,baz=150,slow=12,SNR=4.8
TORD Torodi Ar. Bea 29.87 231 P **P 02 25 49.4 +0.4**
comp=N,0.4nm,0.8s,baz=27,slow=8.4,SNR=4.4
ARU Arti 31.83 36 LR LR 02 39 37.9
comp=N,19nm,18.6s,baz=156,slow=38
MKAR Makanchi Array 44.32 56 P **P 02 27 51.3 0.0**
comp=N,0.1nm,0.4s,baz=294,slow=7.4,SNR=3.4

*IDC **16** 02:29:45.1±1.7,34°.28N×25°.06E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.1/41, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=52.8km s-min=30.2km az=140.0*
*ISCJB **16** 02:29:47.6±1.6, 34°.21N±0°.08×25°.07E±0°.06, h19km±10km, mb3.2/2, Error ellipse: s-maj=14.1km s-min=8.4km az=14.7*
*ATH **16** 02:29:47.2, 34°.24N×25°.06E, h26km±3km, ML3.0/2, Error ellipse: s-maj=5.8km s-min=2.2km az=7.0*
*THE **16** 02:29:51.0, 34°.47N×25°.04E, h0km±2km, ML2.7/4, Error ellipse: s-maj=3.0km s-min=0.8km az=161.0*
ISC 16 02:29:46.9±2.2, 34°.26N±0°.08×25°.08E±0°.04, h6km±13km, n23, σ0§74/30, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**344**	P	**Pb**	**02 30 02.7**	**-0.2**
SIVA				S	**Sg**	**02 30 12.4**	**+0.2**
2μm,0.9s							
SIVA	**Sivas**	**0.78**	**344**	P	**Pb**	**02 30 02.7**	**-0.2**
SIVA				S	**Sb**	**02 30 14.6**	**+0.8**
SIVA				AML	AML	02 30 22.5	
comp=N,2176μm,0.5s							
SIVA				AML	AML	02 30 22.5	
comp=E,4236μm,0.7s							
TMBK	**Timbaki Herakl**	**0.85**	**342**	P	**Pb**	**02 30 04.3**	**+0.3**
TMBK				S	**Sg**	**02 30 13.5**	**-0.7**
LAST	**Lasithi**	**0.95**	**20**	P	**Pb**	**02 30 06.1**	**+0.2**
LAST	**Lasithi**	**0.95**	**20**	P	**Pb**	**02 30 06.0**	**+0.2**
GVD	**Gavdhos**	**1.00**	**305**	P	**Pb**	**02 30 07.5**	**+0.9**
GVD				S	**Sn**	**02 30 21.8**	**-0.1**
comp=E,570nm,0.4s							
GVD	**Gavdhos**	**1.00**	**305**	P	**Pb**	**02 30 07.5**	**+0.9**
GVD				S	**Sb**	**02 30 20.3**	**+0.3**
GVD				AML	AML	02 30 29.1	
comp=N,961μm,0.5s							
GVD				AML	AML	02 30 29.2	
comp=E,1324μm,0.3s							
KSTL	**Kastelli Herak**	**1.04**	**360**	P	**Pg**	**02 30 06.5**	**-0.3**
NPS	**Neapolis**	**1.09**	**24**	P	**Pb**	**02 30 08.4**	**+0.3**
NPS	**Neapolis**	**1.09**	**24**	P	**Pb**	**02 30 08.4**	**+0.3**
PRNS	**Prines Rethymn**	**1.20**	**337**	P	**Pg**	**02 30 10.0**	**+0.1**
STIA	**Sitia Lasithi**	**1.25**	**41**	P	**Pn**	**02 30 12.3**	**+1.4**
ZKR	**Zakros**	**1.26**	**47**	P	**Pn**	**02 30 13.0**	**+1.9**
ZKR	**Zakros**	**1.26**	**47**	P	**Pn**	**02 30 12.6**	**+1.5**
VAM	**Vamos**	**1.35**	**328**	P	**Pg**	**02 30 12.5**	**-0.4**
VAM				S	**Sb**	**02 30 30.4**	**+0.2**
comp=E,482nm,0.6s							
VAM	**Vamos**	**1.35**	**328**	P	**Pg**	**02 30 12.5**	**-0.4**
IMMV	**Iera Moni Meta**	**1.50**	**323**	P	**Pb**	**02 30 16.0**	**+0.9**
IMMV				S	**Sg**	**02 30 34.5**	**-0.6**
comp=E,178nm,0.7s							
IMMV	**Iera Moni Meta**	**1.50**	**323**	P	**Pg**	**02 30 15.5**	**-0.1**
KARP	**Karpathos**	**2.14**	**53**	P	**Pb**	**02 30 26.1**	**+0.1**
IOSP	**Ios island**	**2.46**	**4**	P	**Pn**	**02 30 27.5**	**0.0**
GERES	**GERESS Array B**	**16.85**	**333**	Pn	**Pn**	**02 33 43.3**	**0.0**
comp=E,0.1nm,0.3s,baz=142,slow=11,SNR=4.8							
TORD	**Torodi Ar. Bea**	**29.87**	**231**	P	**P**	**02 35 54.4**	**-0.9**
comp=E,0.2nm,0.5s,baz=29,slow=8.7,SNR=5.0							
MKAR	**Makanchi Array**	**44.33**	**56**	P	**P**	**02 37 56.7**	**-0.9**
comp=E,0.5nm,0.8s,baz=267,slow=11,SNR=2.3							

*IDC **16** 02:29:57.7±1.1, 35°.54N×76°.05E, h0km, mb3.6/8, mb1 3.7/12, mb1mx3.5/42, mbtmp3.6/12, ML3.6/4, MS2.6/2, Ms1 2.6/2, ms1mx2.2/37, Error ellipse: s-maj=25.1km s-min=20.2km az=22.0*
*ISCJB **16** 02:29:58.9±0.5, 35°.48N±0°.06×76°.4E±0°.1, h33km, mb3.5/9, MS2.6/1, Error ellipse: s-maj=13.0km s-min=6.0km az=151.0*
*BJI **16** 02:29:59.0±0.0, 35°.22N×76°.27E, h25km, ML3.8/3, Ms3.5/2, Ms7 3.3/1*
ISC 16 02:30:01.8±0.8, 35°.49N±0°.09×76°.3E±0°.1, h35km, n23, σ1§58/22, mb3.6/9, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.27**	**350**	Lg	Lg	02 33 46.6	
0.4nm,0.3s,baz=251,slow=18,SNR=3.9							
PYUN	**Piuthan**	**9.32**	**140**	*e*P	**Pn**	**02 32 13.5**	**-0.4**
42nm,0.4s							
DANN	**Dangsing**	**9.55**	**136**	*e*P	**Pn**	**02 32 16.3**	**-0.8**
23nm,0.3s							
KKN	**Kakani**	**10.85**	**132**	*e*P	**Pn**	**02 32 33.1**	**-1.8**
4.2nm,0.2s							
PKIN	**Phulchoki**	**11.08**	**133**	*e*P	**Pn**	**02 32 36.7**	**-1.3**
PKI	**Pulchoki**	**11.09**	**133**	*e*P	**Pn**	**02 32 36.4**	**-1.9**
7.8nm,0.4s							
GUN	**Gumba**	**11.13**	**130**	*e*P	**Pn**	**02 32 36.6**	**-2.3**
19nm,0.5s							
JIRN	**Jiri**	**11.51**	**130**	*e*P	**Pn**	**02 32 41.4**	**-2.6**
24nm,0.4s							
WMQ	**Urumqi**	**12.11**	**43**	*e*P	Pn	02 32 56.8	+4.9
MKAR	**Makanchi Array**	**12.17**	**20**	Pn	**Pn**	**02 32 52.1**	**-0.5**
0.2nm,0.3s,baz=199,slow=12,SNR=6.4							
MKAR				Sn	**Sn**	**02 35 05.9**	**-1.1**
0.1nm,0.3s,baz=182,slow=21,SNR=2.4							
MKAR				LR	LR	02 37 48.5	
comp=Z,16nm,18.3s,baz=170,slow=39							
BVAR	**Borovoye Array**	**18.02**	**348**	P	**P**	**02 34 09.4**	**-0.1**
0.2nm,0.3s,baz=154,slow=10,SNR=3.8							
ZALV	**Zalesovo Beam**	**19.41**	**15**	P	**Pn**	**02 34 24.9**	**-1.2**
0.3nm,0.3s,baz=205,slow=9.6,SNR=2.9							
AKTO	**Aktyubinsk**	**19.96**	**324**	P	**P**	**02 34 30.0**	**-0.8**
0.6nm,0.3s,baz=115,slow=12,SNR=12							
AKTO				LR	LR	02 42 23.8	
comp=Z,23nm,18.7s,baz=145,slow=38							
ARU	**Arti**	**24.16**	**336**	P	**P**	**02 35 15.3**	**+0.8**
0.8nm,0.5s,baz=156,slow=8.6,SNR=4.4							
SONM	**Songino Array**	**25.50**	**52**	P	**P**	**02 35 29.2**	**+2.3**
0.9nm,0.7s,baz=254,slow=11,SNR=4.2							
CMAR	**Chiang Mai Arr**	**26.28**	**124**	P	**P**	**02 35 37.1**	**+3.0**
1.6nm,0.8s,baz=312,slow=9.5,SNR=3.3							
BRTR	**Keskin Array B**	**33.80**	**290**	P	**P**	**02 36 39.3**	**-1.3**
0.3nm,0.6s,baz=106,slow=9.2,SNR=2.5							
FINES	**FINESS Array B**	**40.72**	**326**	P	**P**	**02 37 38.4**	**-0.4**
1.9nm,0.9s,baz=116,slow=13,SNR=7.5							
ARCES	**ARCESS Array B**	**43.73**	**337**	P	**P**	**02 38 02.9**	**-0.4**
1.7nm,0.9s,baz=98,slow=8.7,SNR=5.0							
NB2	**NORSAR Subarra**	**47.75**	**323**	P	**P**	**02 38 37.0**	**+1.9**
comp=Z,0.4nm,0.6s,baz=90,slow=7.9							
NOA	**NORSAR Array B**	**47.75**	**323**	P	**P**	**02 38 36.5**	**+1.4**
comp=Z,0.7nm,0.6s,baz=90,slow=7.6,SNR=4.6							
TORD	**Torodi Ar. Bea**	**69.99**	**272**	P	**P**	**02 41 09.7**	**-0.5**
comp=Z,0.6nm,1.1s,baz=48,slow=4.5,SNR=3.0							
ILAR	**Eielson Array**	**74.52**	**18**	P	**P**	**02 41 36.9**	**+0.5**
comp=Z,0.2nm,0.8s,baz=327,slow=6.5,SNR=3.5							

*ATH **16** 02:39:42.4, 34°.25N×25°.04E, h22km±2km, ML2.4/3, Error ellipse: s-maj=4.3km s-min=2.0km az=356.0*
THE 16 02:39:42.7, 34°.27N×25°.08E, h0km±2km, ML2.6/2, Error ellipse: s-maj=4.2km s-min=1.3km az=157.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.77**	**344**	P	Pg	02 39 58.0	+0.5
SIVA				S	Sb	02 40 09.9	-0.2
652nm,0.4s							
SIVA	**Sivas**	**0.77**	**344**	P	Pg	02 39 58.2	+0.6
SIVA				S	Sb	02 40 09.4	-0.7
SIVA				AML	AML	02 40 15.9	
comp=N,706μm,0.3s							
SIVA				AML	AML	02 40 17.6	
comp=E,1241μm,0.5s							
SIVA	**Sivas**	**0.77**	**344**	P	Pg	02 39 58.0	+0.5
SIVA				S	Sb	02 40 09.0	-1.1
SIVA				AML	AML	02 40 15.9	
comp=N,706μm,0.3s							
SIVA				AML	AML	02 40 17.6	
comp=E,1241μm,0.5s							
LAST	**Lasithi**	**0.95**	**20**	P	Pg	02 40 01.0	+0.2
LAST				S	Sb	02 40 14.8	-0.4
LAST	**Lasithi**	**0.95**	**20**	P	Pg	02 40 00.9	+0.1
LAST				S	Sb	02 40 14.6	-0.5
LAST	**Lasithi**	**0.95**	**20**	P	Pg	02 40 01.1	+0.2
LAST				S	Sb	02 40 14.9	-0.2
GVD	**Gavdhos**	**0.99**	**305**	P	Pg	02 40 01.4	-0.3
GVD				S	Sb	02 40 16.9	+0.5
comp=E,228nm,0.4s							
GVD	**Gavdhos**	**0.99**	**305**	P	Pg	02 40 01.5	-0.2
GVD				S	Sb	02 40 16.2	-0.2
GVD				AML	AML	02 40 18.4	
comp=N,394μm,0.4s							
GVD				AML	AML	02 40 23.3	
comp=E,522μm,0.4s							
GVD	**Gavdhos**	**0.99**	**305**	P	Pg	02 40 01.4	-0.3
GVD				S	Sg	02 40 13.8	-0.8
GVD				AML	AML	02 40 23.3	
comp=E,522μm,0.4s							
GVD				AML	AML	02 40 24.0	
comp=N,352μm,0.3s							
NPS	**Neapolis**	**1.08**	**24**	P	Pg	02 40 03.7	+0.3
NPS	**Neapolis**	**1.08**	**24**	P	Pg	02 40 03.6	+0.1
NPS				S	Sb	02 40 19.8	+0.8
NPS	**Neapolis**	**1.08**	**24**	P	Pg	02 40 03.6	+0.2
VAM	**Vamos**	**1.34**	**328**	P	Pg	02 40 07.5	-0.9
VAM	**Vamos**	**1.34**	**328**	P	Pg	02 40 07.4	-1.0
VAM	**Vamos**	**1.34**	**328**	P	Pg	02 40 07.5	-0.9
VAM				S	Sn	02 40 27.3	+0.1
IMMV	**Iera Moni Meta**	**1.49**	**323**	P	Pn	02 40 10.4	-0.3
IMMV	**Iera Moni Meta**	**1.49**	**323**	P	Pn	02 40 10.2	-0.5
IMMV				S	Sn	02 40 32.4	+1.6
IMMV				AML	AML	02 40 42.5	
comp=E,173μm,0.8s							
IMMV				AML	AML	02 40 44.2	
comp=N,115μm,0.4s							
IMMV	**Iera Moni Meta**	**1.49**	**323**	P	Pn	02 40 10.2	-0.5
IMMV				S	Sg	02 40 29.8	-0.7
IMMV				AML	AML	02 40 42.5	
comp=E,173μm,0.8s							
IMMV				AML	AML	02 40 44.2	
comp=N,115μm,0.4s							

*MOS **16** 02:51:33.6±0.9, 56°.31S×27°.54W, h79km, mb5.7/14, Error ellipse: s-maj=18.2km s-min=10.3km az=106.9*
*ISCJB **16** 02:51:33.6±1.2, 56°.27S±0°.04×27°.52W±0°.08, h84km±11km, mb5.4/67, Error ellipse: s-maj=8.3km s-min=5.2km az=135.8*
*BJI **16** 02:51:34.3±0.0, 56°.20S×27°.50W, h83km, mB5.3/20, Ms5.0/15, Ms7 4.8/17*
*NEIC **16** 02:51:35.8±1.6, 56°.28S×27°.44W, h91km±3km, mb5.5/78, MW5.5, Error ellipse: s-maj=14.3km s-min=11.7km az=212.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^{17}Nm; M_{rr}0.14; $M_{\theta\theta}$0.81; $M_{\phi\phi}$-0.95; $M_{r\theta}$-0.98; $M_{\theta\phi}$1.61; $M_{\phi r}$-1.10; Best double couple: $M_0$2.40000×10^{17} NP1:ϕ_s193.00000°, δ80.00000°, λ147.00000°. NP2: ϕ_s289.00000°, δ57.00000°, λ12.00000°. Principal axes: T 2.5900, Plg30.0000°, Azm146.0000°; N -0.5600, Plg55.0000°, Azm358.0000°; P -2.0200, Plg15.0000°, Azm245.0000°;*
*IDC **16** 02:51:36.4±0.5, 56°.24S×27°.46W, h98km±3km, mb5.1/32, mb1 5.1/33, mb1mx5.0/36, mbtmp5.4/33, MS4.4/19, Ms1 4.4/19, ms1mx4.4/21 Error ellipse: s-maj=10.2km s-min=7.8km az=23.0*
*GCMT **16** 02:51:36.8±0.1, 56°.38S±0°.01×26°.99W±0°.01, h79km±1km, MW5.5/121, Moment Tensor Solution. s113, c203; s121, c246; Duration: 18s4 Moment tensor: Scale 10^{17} Nm; M_{rr}0.26±.03; $M_{\theta\theta}$0.78±.03; $M_{\phi\phi}$-1.04±.03; $M_{r\theta}$-1.06±.02; $M_{\theta\phi}$1.59±.03; $M_{\phi r}$-1.05±.02; Best double couple: $M_0$2.32300×10^{17} NP1:ϕ_s192.00000°, δ77.00000°, λ148.00000°. NP2:ϕ_s290.00000°, δ58.00000°, λ15.00000°. Principal axes: T 2.6030, Plg32.0000°, Azm147.0000°; N -0.5620, Plg55.0000°, Azm353.0000°; P -2.0430, Plg12.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 02:51:36.4±0.5, 56°.36S±0°.05×27°.61W±0°.05, h98km±3km, h98km:pP-P, n455, σ1§28/503, mb5.5/67, 7C-7D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.48**	**289**	*e*Pn	**Pn**	**02 52 56.5**	**+1.1**
HOPE				*e*Sn	**Sn**	**02 53 54.7**	**-2.3**
VNA1	**Neumayer--Stat**	**16.60**	**157**	P	**Pn**	**02 55 22.2**	**-0.5**
VNA1	**Neumayer--Stat**	**16.60**	**157**	ScP	**ScP**	**03 03 32.0**	**+0.1**
VNA3	**Neumayer Olymp**	**16.78**	**160**	P	**Pn**	**02 55 24.0**	**-1.0**
VNA3	**Neumayer Olymp**	**16.78**	**160**	ScP	**ScP**	**03 03 32.3**	**0.0**
VNA3				ScS	**ScS**	**03 07 11.8**	**+0.5**
VNA2	**Neumayer--Watz**	**17.00**	**157**	P	**Pn**	**02 55 28.3**	**+0.7**
baz=313,slow=11							
VNA2	**Neumayer--Watz**	**17.00**	**157**	ScP	**ScP**	**03 03 32.6**	**-0.1**
baz=325,slow=5.2							
VNA2				ScS	**ScS**	**03 07 12.9**	**+1.0**
baz=262,slow=5.5							
EFI	**East Falkland**	**18.41**	**272**	*e*P	**P**	**02 55 44.7**	**+1.2**
369nm,0.9s							
EFI	**East Falkland**	**18.41**	**272**	*e*P	**Pn**	**02 55 45.1**	**+0.4**
SNAA	**Sanae**	**18.56**	**155**	P	**P**	**02 55 45.6**	**+0.5**
SNAA	**Sanae**	**18.56**	**155**	ScP	**ScP**	**03 03 35.8**	**-0.2**
SNAA				ScS	**ScS**	**03 07 17.8**	**+1.0**
SNAA	**Sanae**	**18.56**	**155**	P	**P**	**02 55 45.5**	**+0.4**
154nm,0.3s,baz=305,slow=8.6,SNR=8991							
SNAA				LR	LR	03 02 19.8	
comp=Z,1μm,18.3s,baz=319,slow=34							
SNAA				ScP	**ScP**	**03 03 34.5**	**-1.6**
2.4nm,0.3s,baz=231,slow=1.6,SNR=25							
SNAA	**Sanae**	**18.56**	**155**	*e*P	**P**	**02 55 45.5**	**+0.4**
819nm,0.8s							
SNAA				*e*ScP	**ScP**	**03 03 34.5**	**-1.6**
SNAA	**Sanae**	**18.56**	**155**	*c*P	**P**	**02 55 45.3**	**+0.2**
PMSA	**Palmer Station**	**19.52**	**230**	P	**Pn**	**02 55 58.3**	**+0.6**
21nm,0.3s,baz=44,slow=7.2,SNR=28							
PMSA				LR	LR	03 02 58.1	
comp=Z,1μm,20.2s,baz=82,slow=35							
PMSA				ScP	**ScP**	**03 03 36.9**	**-1.3**
1.3nm,0.3s,baz=313,slow=4.5,SNR=4.2							
PMSA	**Palmer Station**	**19.52**	**230**	*e*P	**Pn**	**02 55 57.9**	**+0.2**
686nm,1.4s							
PMSA	**Palmer Station**	**19.52**	**230**	*e*P	**Pn**	**02 56 00.4**	**+2.7**
USHA	**Ushuaia**	**22.88**	**257**	P	**P**	**02 56 32.1**	**+0.8**
61nm,0.8s,baz=291,slow=5.6,SNR=24							
USHA				ScP	**ScP**	**03 03 45.5**	**-1.1**
19nm,0.6s,baz=219,slow=1.2,SNR=11							
GO09	**Cerro Castillo**	**26.52**	**262**	*e*P	**P**	**02 57 04.8**	**+0.5**
163nm,1.1s							
OGAUY	**Aigu**	**28.78**	**308**	*e*P	**P**	**02 57 23.2**	**-1.5**
TRQA	**Tornquist**	**29.23**	**294**	*e*P	**P**	**02 57 29.2**	**+0.5**
146nm,1.4s							
TRQA				*e*PcP	**PcP**	**03 00 34.3**	**+1.1**
TRQA	**Tornquist**	**29.23**	**294**	*e*P	**P**	**02 57 29.2**	**+0.5**
TRQA				*e*		03 00 34.3	
TRQA				pmax	pmax		
comp=Z,146nm,1.4s							
TRQA	**Tornquist**	**29.23**	**294**	*e*P	**P**	**02 57 27.1**	**-1.5**
PLCA	**Paso Flores**	**31.83**	**281**	P	**P**	**02 57 51.9**	**+0.3**
comp=Z,9.0nm,0.9s,baz=169,slow=4.1,SNR=12							
PLCA				PcP	**PcP**	**03 00 41.0**	**+0.9**
comp=Z,5.8nm,0.6s,baz=164,slow=1.8,SNR=6.4							
PLCA				ScP	**ScP**	**03 04 12.2**	**-2.0**
comp=Z,16nm,0.8s,baz=120,slow=3.0,SNR=19							
PLCA				LR	LR	03 10 44.3	
comp=Z,1μm,19.1s,baz=150,slow=36							
PLCA	**Paso Flores**	**31.83**	**281**	*e*P	**P**	**02 57 52.4**	**+0.8**
comp=Z,98nm,1.9s							
PLCA				*e*PcP	**PcP**	**03 00 41.0**	**+0.9**
PLCA				*e*ScP	**ScP**	**03 04 12.3**	**-1.9**
PLCA	**Paso Flores**	**31.83**	**281**	*e*P	**P**	**02 57 52.4**	**+0.8**
PLCA				*e*		03 00 41.0	
PLCA				pmax	pmax		
comp=Z,98nm,1.9s							
PLCA	**Paso Flores**	**31.83**	**281**	*e*P	**P**	**02 57 51.4**	**-0.2**
QSPA	**South Pole Qui**	**33.89**	**180**	*e*P	**P**	**02 58 10.8**	**+1.4**
comp=Z,1μm,1.5s							
ITAB	**Concordia**	**34.00**	**319**	*e*P	**P**	**02 58 10.1**	**-0.3**
TIJ01	**Guaruva-PR**	**34.67**	**325**	*e*P	**P**	**02 58 16.2**	**-0.2**
ESAR	**Angra dos Reis**	**35.52**	**333**	*e*P	**P**	**02 58 24.9**	**+1.2**
SPB	**Sao Paulo**	**35.81**	**328**	*e*P	**P**	**02 58 27.2**	**+1.2**
comp=Z,67nm,1.1s							
SPB	**Sao Paulo**	**35.81**	**328**	*e*P	**P**	**02 58 26.9**	**+0.9**
DUB01	**Friburgo-RJ**	**35.93**	**336**	*e*P	**P**	**02 58 28.5**	**+1.3**
VAS01	**Vassouras-RJ**	**35.99**	**335**	*e*P	**P**	**02 58 29.2**	**+1.5**
PTGB	**Pitanga**	**36.27**	**320**	*e*P	**P**	**02 58 29.9**	**-0.2**
FRTB	**Fartura**	**36.70**	**325**	*e*P	**P**	**02 58 33.9**	**+0.2**
GO05	**Huala**	**36.74**	**287**	*e*P	**P**	**02 58 33.1**	**-0.9**
comp=Z,27nm,0.6s							
CPUP	**Villa Florida**	**36.84**	**312**	P	**P**	**02 58 34.9**	**0.0**
comp=Z,45nm,0.6s,baz=152,slow=6.9,SNR=190							
CPUP				PcP	**PcP**	**03 00 55.0**	**+0.4**
comp=Z,18nm,0.6s,baz=140,slow=2.4,SNR=8.0							
CPUP				ScP	**ScP**	**03 04 31.3**	**-0.8**
comp=Z,14nm,1.0s,baz=142,slow=3.5,SNR=9.2							
CPUP				LR	LR	03 15 44.5	
comp=Z,324nm,18.5s,baz=162,slow=39							
CPUP	**Villa Florida**	**36.84**	**312**	*e*P	**P**	**02 58 32.8**	**-2.0**
RCLB	**Rio Claro- Sao**	**36.94**	**328**	*e*P	**P**	**02 58 36.7**	**+0.9**
CFA	**Coronel Fontan**	**37.47**	**294**	P	**P**	**02 58 39.2**	**-0.9**
comp=Z,21nm,0.4s,baz=140,slow=8.8,SNR=62							
CFA				PcP	**PcP**	**03 00 57.2**	**+0.7**
comp=Z,21nm,0.6s,baz=116,slow=3.1,SNR=5.3							
PEL	**Peldehue**	**37.52**	**290**	*e*P	**P**	**02 58 39.9**	**-0.7**
comp=Z,78nm,0.7s							
PEL	**Peldehue**	**37.52**	**290**	*e*P	**P**	**02 58 39.9**	**-0.7**
PEL				pmax	pmax		
comp=Z,78nm,0.7s							
BSCB	**Bom Sucesso**	**37.54**	**333**	*e*P	**P**	**02 58 42.0**	**+1.1**
RIB01	**Linhares ES**	**38.21**	**340**	*e*P	**P**	**02 58 47.2**	**+0.8**
BB19B	**Bebedouro**	**38.51**	**328**	*e*P	**P**	**02 58 49.7**	**+0.7**
BSFB	**Barra de Sao F**	**38.77**	**340**	*e*P	**P**	**02 58 51.9**	**+0.9**
SJMB	**Sao Joao De Ma**	**38.95**	**339**	*e*P	**P**	**02 58 53.3**	**+0.7**
GO04	**Tololo Observa**	**39.92**	**293**	*e*P	**P**	**02 59 00.8**	**-0.2**
comp=Z,43nm,0.7s							
MAW	**Mawson**	**40.04**	**143**	P	**P**	**02 59 01.9**	**+0.7**
comp=Z,158nm,0.6s,baz=230,slow=8.0,SNR=445							
MAW				ScP	**ScP**	**03 04 43.9**	**+0.2**
comp=Z,54nm,0.8s,baz=229,slow=3.9,SNR=28							
MAW				LR	LR	03 13 09.0	
comp=Z,852nm,21.5s,baz=250,slow=32							
MAW	**Mawson**	**40.04**	**143**	*e*P	**P**	**02 59 01.2**	**0.0**
comp=Z,41nm,0.6s							
MAW				*e*ScP	**ScP**	**03 04 43.7**	**0.0**
PMNB	**Patos De Minas**	**40.33**	**332**	*e*P	**P**	**02 59 05.3**	**+1.2**
ITRB	**Iturama**	**40.35**	**326**	*e*P	**P**	**02 59 05.2**	**+0.9**
LCO	**Las Campanas**	**40.81**	**294**	*e*P	**P**	**02 59 08.2**	**-0.1**
comp=Z,49nm,0.8s							
LCO	**Las Campanas**	**40.81**	**294**	*e*P	**P**	**02 59 08.2**	**-0.1**
LCO				pmax	pmax		
comp=Z,49nm,0.8s							
LCO	**Las Campanas**	**40.81**	**294**	*e*P	**P**	**02 59 07.8**	**-0.5**
SUR	**Sutherland**	**40.95**	**75**	P	**P**	**02 59 09.5**	**+0.2**
comp=Z,14nm,0.7s,baz=224,slow=11,SNR=11							
SUR				ScP	**ScP**	**03 04 46.9**	**-1.2**
comp=Z,8.2nm,1.0s,baz=42,slow=3.7,SNR=4.3							
SUR				LR	LR	03 11 53.4	
comp=Z,873nm,21.5s,baz=212,slow=30							
SUR	**Sutherland**	**40.95**	**75**	*e*P	**P**	**02 59 09.5**	**+0.2**
comp=Z,134nm,1.6s							
SUR				*e*ScP	**ScP**	**03 04 46.9**	**-1.2**
MCI6	**Montes Claros**	**41.37**	**336**	*e*P	**P**	**02 59 12.9**	**+0.2**
AQDB	**Aquidauana**	**41.47**	**318**	*e*P	**P**	**02 59 12.9**	**-0.5**
MCI9	**Montes Claros**	**41.47**	**336**	*e*P	**P**	**02 59 13.8**	**+0.2**
MCI8	**Montes Claros**	**41.52**	**336**	*e*P	**P**	**02 59 13.9**	**+0.1**
C2SB	**Chapadao do Su**	**42.03**	**323**	*e*P	**P**	**02 59 18.6**	**+0.6**
GO02	**Mina Guanaco**	**43.43**	**298**	*e*P	**P**	**02 59 29.9**	**+0.3**
comp=Z,175nm,0.6s							
BDFB	**Brasilia**	**43.51**	**331**	P	**P**	**02 59 31.4**	**+1.2**
comp=Z,22nm,0.7s,baz=150,slow=4.0,SNR=41							
BDFB				ScP	**ScP**	**03 04 58.1**	**-0.4**
comp=Z,4.6nm,0.8s,baz=122,slow=8.5,SNR=3.2							
BDFB				LR	LR	03 14 54.8	
comp=Z,492nm,21.4s,baz=156,slow=32							
BDFB	**Brasilia**	**43.51**	**331**	*e*P	**P**	**02 59 30.2**	**+0.1**
comp=Z,93nm,1.6s							
BDFB				*e*P	**P**	**02 59 31.4**	**+1.2**

H10N3 **ASCENSION HYDR** 49.48 17 T T 03 54 15.4
baz=188,slow=75,SNR=58
H10N2 **ASCENSION HYDR** 49.50 17 T T 03 54 16.7
baz=188,slow=75,SNR=80
SMTB **Santa Maria do** 49.90 334 eP P 03 00 21.2 +1.4
TSUM **Tsumeb** 50.03 61 P P 03 00 20.8 -0.1
comp=Z,9.9nm,0.8s,baz=196,slow=5.5,SNR=15
TSUM **Tsumeb** 50.03 61 eP P 03 00 20.1 -0.9
comp=Z,49nm,1.2s
LPAZ **La Paz** 50.36 306 P P 03 00 25.1 +1.1
comp=Z,176nm,0.6s,baz=144,slow=5.7,SNR=568
LPAZ LR LR 03 23 38.8
comp=Z,243nm,18.9s,baz=160,slow=38
LPAZ **La Paz** 50.36 306 eP P 03 00 24.8 +0.8
LPAZ **La Paz** 50.36 306 eP P 03 00 25.4 +1.4
CLDB **Colider** 50.39 323 eP P 03 00 23.3 -0.2
RCBR **Riachuelo** 50.82 349 eP P 03 00 27.0 +0.3
comp=Z,42nm,1.4s
RCBR **Riachuelo** 50.82 349 eP P 03 00 27.0 +0.3
RCBR pmax pmax
comp=Z,42nm,1.4s
CASY **Casey** 53.70 160 eP P 03 00 48.7 +1.3
comp=Z,139nm,0.8s
MATP **Matopo** 54.60 73 i P P 03 00 53.6 -1.1
MATP **Matopo** 54.60 73 P P 03 00 53.4 -1.3
comp=Z,22nm,0.8s,baz=220,slow=7.4,SNR=28
MATP **Matopo** 54.60 73 i P P 03 00 53.6 -1.1
NNA **Nana** 58.19 299 P P 03 01 19.9 -0.3
comp=Z,15nm,0.4s,baz=139,slow=9.3,SNR=9.3
NNA **Nana** 58.19 299 eP P 03 01 20.4 +0.3
comp=Z,67nm,1.1s
NNA **Nana** 58.19 299 eP P 03 01 20.4 +0.3
NNA pmax pmax
comp=Z,67nm,1.1s
LSZ **Lusaka** 58.70 69 eP P 03 01 22.9 -0.9
comp=Z,42nm,0.8s
LSZ **Lusaka** 58.70 69 eP P 03 01 22.9 -0.9
LSZ pmax pmax
comp=Z,42nm,0.8s
PTGA **Pitinga** 61.27 322 P P 03 01 40.3 -0.8
comp=Z,23nm,0.8s,baz=154,slow=8.6,SNR=36
PTGA **Pitinga** 61.27 322 eP P 03 01 40.7 -0.4
comp=Z,54nm,1.3s
ATAH **Atahualpa** 63.15 300 P P 03 01 54.8 +0.6
comp=Z,35nm,0.6s,baz=152,slow=3.2,SNR=30
MDP **Montagnes des** 64.60 332 P P 03 02 02.4 -0.7
comp=Z,68nm,0.8s,baz=166,slow=7.5,SNR=12
LIC **Lamto** 65.07 25 ePKIKP P 03 02 06.0 -0.2
comp=Z,80nm,0.5s
KIC **Kosan Boka** 65.27 25 ePKIKP P 03 02 06.4 -1.1
comp=Z,131nm,1.3s
TIC **Toumodi** 65.48 25 ePKIKP P 03 02 05.9 -2.9
DBIC **Dimbokro** 65.54 25 P P 03 02 08.8 -0.4
comp=Z,15nm,0.5s,baz=172,slow=6.5,SNR=49
DBIC pP pP 03 02 31.7 -1.7
comp=Z,12nm,0.7s,baz=168,slow=4.9,SNR=3.3
DBIC LR LR 03 24 43.4
comp=Z,519nm,19.5s,baz=174,slow=30
DBIC **Dimbokro** 65.54 25 eP P 03 02 09.1 -0.1
DBIC epP pP 03 02 31.7 -1.7
ABPO **Ambohimpanom** 65.99 88 eP P 03 02 13.7 +1.3
comp=Z,18nm,0.9s
ABPO **Ambohimpanom** 65.99 88 eP P 03 02 13.7 +1.3
ABPO pmax pmax
comp=Z,18nm,0.9s
PTLC **Puerto Leguiza** 67.93 308 eP P 03 02 22.5 -1.9
MACC **Macarena, Meta** 69.28 309 eP P 03 02 32.1 -0.8
FLOC **Florencia** 69.56 308 eP P 03 02 34.6 -0.1
OTAV **Otavalo** 69.63 304 eP P 03 02 36.6 +1.0
comp=Z,94nm,0.6s
OTAV **Otavalo** 69.63 304 eP P 03 02 36.6 +1.0
OTAV pmax pmax
comp=Z,94nm,0.6s
OTAV **Otavalo** 69.63 304 eP P 03 02 37.1 +1.6
OTAV **Otavalo** 69.63 304 eP P 03 02 36.6 +1.0
GCUF **Volcan Galeras** 70.00 306 eP P 03 02 39.7 +1.8
CRUC **La Cruz** 70.13 306 eP P 03 02 40.7 +2.2
BETC **Betania** 70.45 308 eP P 03 02 41.0 +0.9
SOTA **Rioblanco** 70.48 307 eP P 03 02 42.7 +1.9
PCON **Cinco Dias** 70.56 307 eP P 03 02 42.7 +1.3
BBAC **Balboa, Cauca** 70.66 306 eP P 03 02 42.1 +0.6
MRIV **Mauritius Mete** 70.67 98 eP P 03 02 41.5 +0.1
comp=Z,44nm,1.2s
POPC **Popayan, Colom** 70.87 307 eP P 03 02 44.4 +1.6
VILC **Villavicencio,** 70.98 311 eP P 03 02 44.1 +0.7
PRAC **Prado** 71.13 309 eP P 03 02 44.2 +0.1
CHIC **Chingaza** 71.46 311 eP P 03 02 46.9 +0.3
ELOV **Elorza** 71.89 316 eP P 03 02 48.8 +0.2
ROSC **El Rosal** 71.90 310 P P 03 02 49.6 +0.4
comp=Z,29nm,0.8s,baz=155,slow=5.8,SNR=23
ROSC LR LR 03 34 38.7
comp=Z,148nm,21.8s,baz=136,slow=36
ROSC **El Rosal** 71.90 310 eP P 03 02 49.7 +0.4
comp=Z,27nm,0.7s
ROSC **El Rosal** 71.90 310 eP P 03 02 49.8 +0.6
YOTC **Yotoco, Valle** 72.01 308 eP P 03 02 50.1 +0.5
YOTC **Yotoco, Valle** 72.01 308 eP P 03 02 49.0 -0.5
RUSC **La Rusia** 72.33 312 eP P 03 02 50.4 -1.5
MALC **Bahia Malaga** 72.47 307 eP P 03 02 54.4 +2.3
MALC **Bahia Malaga** 72.47 307 eP P 03 02 54.7 +2.6
MBAR **Mbarara** 72.50 63 eP P 03 02 54.1 +1.6
comp=Z,30nm,1.3s
MBAR **Mbarara** 72.50 63 i P P 03 02 54.2 +1.7
MBAR pmax pmax
comp=Z,22nm,1.5s
GUY2C **Guyana, Caldas** 72.69 309 eP P 03 02 52.7 -1.3
NORC **Norcasia** 72.78 310 eP P 03 02 52.0 -2.0
PLMC **San Jos del P** 72.80 308 eP P 03 02 54.1 -0.1
BARC **Barichara** 73.00 312 eP P 03 02 53.5 -2.0
TOA0 **Torodi Ar. Sit** 73.44 30 eP P 03 02 57.7 0.0
comp=Z,165nm,1.3s
TORD **Torodi Ar. Bea** 73.44 30 P P 03 02 56.2 -1.5
comp=Z,24nm,0.5s,baz=199,slow=5.9,SNR=151
TORD pP pP 03 03 20.4 -2.1
comp=Z,45nm,0.5s,baz=201,slow=6.0,SNR=14
TORD LR LR 03 30 16.0
comp=Z,279nm,18.8s,baz=265,slow=32
TOA1 **Torodi Ar. Sit** 73.44 30 eP P 03 02 56.2 -1.5
TOA1 epP pP 03 03 20.4 -2.1
PTBC **PUERTO BERRIO,** 73.49 311 eP P 03 02 55.9 -2.2
SOCV **Socops** 73.60 315 eP P 03 02 58.6 -0.2
HELC **Santa Helena** 73.63 310 eP P 03 02 58.7 -0.7
BRRC **Barranca, Sant** 73.69 312 eP P 03 02 58.1 -1.2
CAPV **Capacho** 73.80 313 eP P 03 03 00.4 +0.2
SDV **Santo Domingo** 74.06 315 P P 03 03 01.7 +0.1
comp=Z,64nm,0.7s,baz=174,slow=5.6,SNR=38
SDV **Santo Domingo** 74.06 315 eP P 03 03 02.0 +0.3
comp=Z,69nm,0.7s
SDV **Santo Domingo** 74.06 315 eP P 03 03 01.7 +0.1
ZARC **Zaragoza, Cauc** 74.51 311 eP P 03 03 02.7 -1.4
OCAC **Ocana** 74.55 313 eP P 03 03 02.7 -1.8
DBBC **Dabeiba** 74.66 309 eP P 03 03 05.3 +0.3
SMLC **San Martn de** 75.36 312 eP P 03 03 07.4 -1.5
KMBO **Kilima Mbogo** 75.37 69 P P 03 03 10.2 +0.9
comp=Z,0.8nm,0.3s,baz=196,slow=8.0,SNR=5.8
KMBO LR LR 03 34 49.9
comp=Z,168nm,18.9s,baz=196,slow=34
KMBO **Kilima Mbogo** 75.37 69 eP P 03 03 10.2 +0.9
comp=Z,14nm,1.3s
DABV **Dabajuro** 75.92 316 eP P 03 03 11.3 -0.8
CODC **Agustn Codazz** 76.13 313 eP P 03 03 12.7 -0.6
ARGC **Ariguani, Magd** 76.39 313 eP P 03 03 15.5 +0.7
AZU **Azuero** 77.14 306 eP P 03 03 20.3 +1.3
URIC **Uribia, Colomb** 77.16 315 eP P 03 03 17.2 -1.9
WHZ **Wether Hill Ro** 77.29 191 eP P 03 03 21.1 +1.6
comp=Z,146nm,1.7s
SMRC **Santa Marta, M** 77.56 313 eP P 03 03 21.5 +0.2
MLZ **Mavora Lakes** 77.79 191 eP P 03 03 24.1 +1.7
comp=Z,37nm,0.6s
UPA **Univ. de Panam** 77.86 307 eP P 03 03 24.3 +1.2
BCIP **Isla Barro Col** 78.16 307 eP P 03 03 25.8 +1.1
RPZ **Rata Peaks** 79.06 194 P P 03 03 29.8 +0.4
comp=Z,32nm,0.7s,baz=212,slow=1.5,SNR=14
MTP **Monte Pirata** 80.73 324 eP P 03 03 38.0 -0.5
comp=Z,70nm,1.3s
SNZO **South Karori** 80.89 197 eP P 03 03 40.3 +1.1
comp=Z,81nm,0.8s
SJG **San Juan** 80.95 323 P P 03 03 38.9 -0.7
comp=Z,16nm,0.7s,baz=110,slow=7.8,SNR=7.2
TAU **Tasmania Unive** 81.01 176 eP P 03 03 40.6 +0.8
comp=Z,86nm,0.7s
TAU **Tasmania Unive** 81.01 176 eP P 03 03 40.6 +0.8
TAU pmax pmax
comp=Z,85nm,0.7s
OBIP **Obispado Ponce** 81.04 323 eP P 03 03 39.2 -0.9
comp=Z,127nm,1.9s
JTS **Las Juntas de** 81.48 303 P P 03 03 43.3 +0.6
comp=Z,20nm,0.6s,baz=289,slow=0.4,SNR=47
JTS **Las Juntas de** 81.48 303 eP P 03 03 43.0 +0.4
comp=Z,26nm,0.6s
JTS **Las Juntas de** 81.48 303 eP P 03 03 43.8 +1.2
JTS i *PP pP 03 04 06.3 -1.0
JTS pmax pmax
comp=Z,21nm,0.9s
ESPN **Las Esperanzas** 82.85 305 eP P 03 03 49.5 -0.2
comp=Z,108nm,0.6s
URZ **Urewera** 83.44 199 P P 03 03 53.7 +1.1
comp=Z,9.3nm,0.4s,baz=206,slow=8.8,SNR=9.4
TAM **Tamanrasset** 83.68 30 eP P 03 03 55.2 +1.3
comp=Z,27nm,1.2s
TAM **Tamanrasset** 83.68 30 eP P 03 03 55.3 +1.3
TAM pmax pmax
comp=Z,27nm,1.2s
TGUH **Tegucigalpa,Un** 85.85 303 eP P 03 04 05.3 +0.5
comp=Z,24nm,0.6s
NWAO **Narrogin (SRO)** 86.17 151 P P 03 04 06.0 -0.4
comp=Z,12nm,0.6s,baz=184,slow=4.2,SNR=12
NWAO **Narrogin (SRO)** 86.17 151 P P 03 04 06.0 -0.4
TBI **Tubuai** 86.71 231 eS S 03 14 34.6 -3.6
comp=Z,477nm,28.5s
TBI **Tubuai** 86.71 231 eLQ LQ 03 28 12.1
comp=Z,575nm,29.8s
TBI eLR LR 03 31 46.6
comp=Z,642nm,30.5s,baz=159
APG **El Apazote** 88.19 301 P P 03 04 17.1 +0.7
comp=Z,49nm,0.7s,baz=297,slow=3.9,SNR=51
FORT **Forrest** 90.77 159 eP P 03 04 28.9 +0.6
comp=Z,127nm,1.2s
MDT **Midelt** 90.95 19 P P 03 04 29.9 +1.2
comp=Z,12nm,0.7s,baz=204,slow=3.4,SNR=41
TEIG **Tepich** 91.69 305 eP P 03 04 33.2 +0.8
comp=Z,180nm,0.5s
PPT2 **Papete2** 91.81 234 eLQ LQ 03 30 20.0
comp=Z,663nm,29.5s
PPT2 eLR LR 03 34 07.0
comp=Z,743nm,29.8s
PPT **Papeete** 91.83 234 LR LR 03 37 25.2
comp=Z,217nm,21.8s,baz=132,slow=30
CMIG **Matias Romero** 92.12 298 P P 03 04 34.6 +0.1
comp=Z,11nm,0.7s,baz=123,slow=3.8,SNR=31
061Z **Ochoppi** 93.48 314 P P 03 04 42.3 +1.8
baz=153
060Z **West Palm Beac** 93.82 314 P P 03 04 43.5 +1.4
baz=154
059Z **Ave Maria** 94.12 313 P P 03 04 44.4 +1.0
baz=153
060A **Indiantown** 94.31 315 P P 03 04 45.1 +0.9
baz=154
059A **Moore Haven** 94.56 314 P P 03 04 46.8 +1.4
baz=153
058A **Arcadia** 94.91 313 P P 03 04 48.1 +1.1
baz=153
959A **Okeechobee** 94.95 314 P P 03 04 48.7 +1.5
baz=153
H07S1 **FLORES T-PHASE** 95.42 357 T T 04 51 00.5
SNR=7.2
KEST **Kesra** 96.96 30 LR LR 03 46 01.3
comp=Z,186nm,18.3s,baz=259,slow=34
ESDC **Sonseca Array** 97.74 18 P Pdif 03 05 00.8 +1.1
comp=Z,0.6nm,0.5s,baz=188,slow=4.2,SNR=9.8
ESDC pP pP 03 05 25.3 -0.2
comp=Z,1.2nm,0.7s,baz=192,slow=4.9,SNR=4.7
ESDC PKKPbc **PKKPdf** 03 21 36.2 -0.7
comp=Z,0.4nm,0.6s,baz=355,slow=2.9,SNR=5.7
ASAR **Alice Springs** 98.77 163 P P 03 05 04.7 -0.2
comp=Z,15nm,0.7s,baz=185,slow=3.9,SNR=226
ASAR PP PP 03 09 01.0 -5.2
comp=Z,2.8nm,0.7s,baz=194,slow=6.2,SNR=4.2
ASAR S **SKSac** 03 15 30.7 -3.3
comp=Z,2.3nm,0.9s,baz=171,slow=7.3,SNR=9.9
ASAR PKKPbc **PKKPdf** 03 21 31.4 -0.1
comp=Z,1.3nm,0.7s,baz=17,slow=2.2,SNR=12
ASAR SKKPbc **SKKPbc** 03 24 59.6 +3.2
comp=Z,0.5nm,0.7s,baz=353,slow=1.8,SNR=4.9
ASAR LR LR 03 49 25.4
comp=Z,331nm,18.1s,baz=189,slow=35
252A **Lumpkin** 100.45 313 P **Pdif** 03 05 12.9 +1.1
baz=152
W60A **Pink Hill** 100.49 320 P **Pdif** 03 05 13.3 +1.3
baz=154
251A **Midway** 100.81 313 P **Pdif** 03 05 14.7 +1.3
baz=151
DZM **Mont Dzumac** 100.98 193 eLR LR 03 38 30.7
comp=Z,521nm,25.6s
Y55A **Saluda** 101.03 317 P **Pdif** 03 05 15.2 +0.8
baz=153
152A **Waverly Hall** 101.03 314 P **Pdif** 03 05 15.4 +0.9
baz=152
250A **Grady** 101.06 312 P **Pdif** 03 05 15.6 +1.0
baz=151
V59A **Middlesex** 101.32 320 P **Pdif** 03 05 16.6 +1.0
baz=154
WR1 **Warramunga Arr** 102.48 163 ePdif **Pdif** 03 05 21.5 0.0
WRA **Warramunga Arr** 102.48 163 P **Pdif** 03 05 21.5 0.0
comp=Z,5.4nm,0.5s,baz=188,slow=4.9,SNR=52
WB2 **Warramunga Arr** 102.49 163 ePdif **Pdif** 03 05 21.9 +0.5
WRAB **Tennant Creek** 102.50 163 eP **Pdif** 03 05 21.6 +0.1
TXAR **Lajitas Array** 106.73 298 Pdiff **Pdif** 03 05 40.8 +0.8
comp=Z,0.4nm,0.6s,baz=141,slow=7.8,SNR=6.1
TXAR PKiKP **PKiKP** 03 09 49.3 -0.4
comp=Z,0.9nm,0.7s,baz=119,slow=3.2,SNR=8.0
TXAR PKKPbc **PKKPbc** 03 21 09.2 +2.4
comp=Z,0.2nm,0.4s,baz=168,slow=0.7,SNR=6.7
BRTR **Keskin Array B** 108.81 46 PKKPbc PKKPbc 03 21 12.3 +12
comp=Z,0.9nm,0.7s,baz=59,slow=2.9,SNR=4.8
GERES **GERESS Array B** 110.33 28 PKiKP **PKiKP** 03 09 55.7 -0.2
comp=Z,0.5nm,0.8s,baz=191,slow=1.4,SNR=3.6
GERES PKKPbc **PKKPbc** 03 20 58.2 +2.1
comp=Z,0.5nm,0.8s,baz=20,slow=4.4,SNR=3.5
KHC **Kasperske Hory** 110.57 28 AMS AMS 03 52 20.0
comp=Z,300nm,22.5s
TREC **Trest** 111.22 29 AMS AMS 03 50 10.0
comp=Z,200nm,20.3s
121A **Cookes Peak, D** 111.37 297 P **PKiKP** 03 09 59.3 +0.8
baz=144
GOPC **GO Pecny, Ondr** 111.60 28 AMS AMS 03 53 00.0
comp=Z,200nm,15.7s
PRU **Pruhonice** 111.60 28 AMS AMS 03 53 10.0
comp=Z,300nm,20.2s
PVCC **Panska Ves** 112.10 28 AMS AMS 03 53 20.0
comp=Z,300nm,22.9s
DPC **Dobruska-Polom** 112.40 29 AMS AMS 03 54 30.0
comp=Z,200nm,20.4s
CLL **Collm** 112.43 26 ePKPdf **PKiKP** 03 10 02.0 +2.4
CLL eSdif Sdif 03 18 30.0 +12
CLL ePS **PS** 03 20 26.0 +4.2
CLL eSS **SS** 03 26 30.0 +10
CLL eSSS SSS 03 30 36.0
CLL eSSSS 03 33 48.0
CLL LmV 04 14 00.0
comp=Z,100nm,19.3s
OKC **Ostrava-Krasne** 112.44 30 AMS AMS 03 53 50.0
comp=Z,200nm,21.3s
UPC **Upice** 112.46 28 AMS AMS 03 50 20.0
comp=Z,100nm,19.8s
OSTC **Ostas** 112.56 29 AMS AMS 03 54 00.0
comp=Z,200nm,19.8s
F45A **CMU Biological** 112.65 320 P **PKiKP** 03 10 01.8 +1.6
baz=149
ANMO **Albuquerque** 112.66 299 i PKIKP **PKiKP** 03 10 00.9 0.0
ANMO **Albuquerque** 112.66 299 P **PKiKP** 03 10 01.7 +0.8
baz=144
TASM **ASL Pad, Albuq** 112.66 299 P **PKiKP** 03 10 01.8 +0.9
baz=144
TUC **Tucson** 112.70 294 P **PKiKP** 03 10 01.8 +1.0
baz=143
EKA **Eskdalemuir Ar** 113.10 15 PKKPbc PKKPbc 03 20 48.2 +1.3
comp=Z,0.5nm,0.4s,baz=358,slow=2.8,SNR=13
T25A **Trinidad** 113.45 302 P **PKiKP** 03 10 03.4 +1.1
baz=144
E44A **Grand Marais A** 113.60 320 P **PKiKP** 03 10 03.8 +1.8
baz=149
W18A **Petrified Fore** 114.41 297 P **PKiKP** 03 10 05.2 +1.0
baz=143
SDCO **Great Sand Dun** 114.45 302 P **PKiKP** 03 10 05.0 +0.7
baz=143
S22A **4UR Ranch, Cre** 115.08 301 P **PKiKP** 03 10 06.4 +0.8
baz=143
MVCO **Mesa Verde** 115.46 299 P **PKiKP** 03 10 07.1 +0.9
baz=142
WUAZ **Wupatki** 115.54 296 P **PKiKP** 03 10 07.3 +1.0
baz=142
Y12C **Blythe** 115.75 293 P **PKiKP** 03 10 07.6 +1.0
baz=142
PDMCI **Parker Dam,Lak** 115.99 293 P **PKiKP** 03 10 08.0 +1.0
baz=142
KIV **Kislovodsk** 116.05 49 i PKIKP **PKiKP** 03 10 07.9 +1.0
KIV e 03 20 56.4
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,340nm,22.0s
MONP2 **Monument Peak** 116.06 291 P **PKiKP** 03 10 08.3 +0.8
baz=142
ISCO **Idaho Springs** 116.14 303 P **PKiKP** 03 10 08.5 +1.0
baz=143
BC3 **Big Chuckawall** 116.16 292 P **PKiKP** 03 10 08.3 +0.8
baz=142
IRM **Iron Mountain** 116.39 292 P **PKiKP** 03 10 08.7 +0.9
baz=142
PV12 **Saucer Basin,** 116.48 300 ePKPdf **PKPdf** 03 10 08.2 +0.1
AKASG **Malin Array Be** 116.58 37 PKP **PKPdf** 03 10 06.8 -0.8
comp=Z,0.8nm,0.5s,baz=251,slow=1.5,SNR=5.2
AKASG SKP 03 13 31.8
comp=Z,0.1nm,0.2s,baz=225,slow=2.6,SNR=4.2
AKASG PKKPbc **PKKPab** 03 20 37.1 +0.3
comp=Z,0.6nm,0.4s,baz=38,slow=4.4,SNR=4.6
BELC **Belle Mtn. Jos** 116.71 292 P **PKiKP** 03 10 09.3 +0.7
baz=142
GMRC **Granite Mounta** 117.14 292 P **PKiKP** 03 10 10.1 +0.7
baz=141
N23A **Red Feather La** 117.16 303 P **PKiKP** 03 10 09.7 +0.3
baz=142
MAK **Makhachkala** 117.33 53 eP **Pdif** 03 06 28.3 +1.7
MAK e 03 11 22.9
MAK pmax pmax
comp=Z,215nm,1.4s
KNB **Kanab** 117.44 296 ePKPdf **PKiKP** 03 10 10.1 +0.1
KNB **Kanab** 117.44 296 ePKIKP **PKiKP** 03 10 10.1 +0.1
CIS **Catalina Islan** 117.50 289 P **PKiKP** 03 10 10.5 +0.5
baz=141
HEC **Hector,Ludlow** 117.53 292 P **PKiKP** 03 10 10.2 +0.1
baz=141
O20A **White River Ci** 117.64 301 P **PKiKP** 03 10 10.4 +0.1
baz=142
BFSC **Mount Baldy Ra** 117.75 291 P **PKiKP** 03 10 11.1 +0.5
baz=141
TUQ **Turquoise Moun** 117.79 293 P **PKiKP** 03 10 11.2 +0.5
baz=141
CCUT **Cedar City** 118.13 296 ePKPdf **PKiKP** 03 10 12.4 +1.1
GSC **Goldstone, Bar** 118.14 292 P **PKiKP** 03 10 11.9 +0.7
baz=141
MPSI **Mapaga** 118.31 142 PKP **PKiKP** 03 10 14.0 +1.8
SHOC **Shoshone, Teco** 118.33 293 P **PKiKP** 03 10 12.1 +0.5
baz=141
EDW2 **Edwards Air Fo** 118.43 291 P **PKiKP** 03 10 12.4 +0.6
baz=141
LRMC **Laurel Mtn Rad** 118.73 291 P **PKiKP** 03 10 13.1 +0.7
baz=141
RSSD **Black Hills** 118.83 307 ePKPdf **PKPdf** 03 10 11.8 -0.6
RSSD **Black Hills** 118.83 307 ePKIKP **PKPdf** 03 10 11.9 -0.6
RSSD **Black Hills** 118.83 307 P **PKPdf** 03 10 12.2 -0.2
baz=142
FURC **Furnace Creek,** 119.06 293 P **PKiKP** 03 10 13.7 +0.8
baz=140
MPMC **Manual Prospec** 119.07 292 P **PKiKP** 03 10 13.6 +0.3
baz=140
TPNV **Topopah Spring** 119.12 294 P **PKiKP** 03 10 14.0 +0.8
baz=140
ISA **Isabella, Lake** 119.28 291 P **PKiKP** 03 10 14.6 +1.1
baz=140
PKM **Mcpherson Peak** 119.38 289 P **PKiKP** 03 10 14.9 +1.1
baz=140
CWC **Cottonwood Cre** 119.67 292 P **PKiKP** 03 10 15.3 +1.0
baz=140
SMMC **Simmler** 119.81 290 P **PKiKP** 03 10 15.4 +0.9
baz=140
R11A **Troy Canyon, C** 119.86 295 P **PKiKP** 03 10 15.6 +1.0
baz=140
DUG **Dugway, Tooele** 119.90 298 ePKPdf **PKiKP** 03 10 14.7 +0.1
DUG **Dugway, Tooele** 119.90 298 ePKIKP **PKiKP** 03 10 14.7 +0.1
DUG **Dugway, Tooele** 119.90 298 P **PKiKP** 03 10 14.9 +0.3
baz=140
TIN **Tinemaha, Big** 120.22 292 P **PKiKP** 03 10 15.8 +0.5
baz=140
ULM **Lac du Bonnet** 120.31 316 PKP **PKPdf** 03 10 14.0 -0.8
comp=Z,6.4nm,0.5s,baz=218,slow=0.4,SNR=5.9
ULM SKP 03 13 39.1
comp=Z,5.7nm,0.6s,baz=109,slow=3.1,SNR=4.7
ULM **Lac du Bonnet** 120.31 316 PKIKP **PKPdf** 03 10 14.0 -0.8
BW06 **Boulder Array** 120.31 302 P **PKPdf** 03 10 15.1 -0.3
baz=140
PDAR **Pinedale Array** 120.31 302 PKhKP PKPpre 03 10 04.6
comp=Z,0.2nm,0.4s,baz=96,slow=4.5,SNR=4.1
PDAR PKP **PKPdf** 03 10 14.5 -0.9
comp=Z,1.9nm,0.5s,baz=113,slow=4.9,SNR=20
PDAR SKP 03 13 39.5
comp=Z,1.0nm,0.6s,baz=141,slow=5.6,SNR=4.0
PDAR PKKPbc **PKKPab** 03 20 22.5 +0.6
comp=Z,0.9nm,0.6s,baz=132,slow=0.6,SNR=9.8
VSR **Storozhevoye** 120.52 42 i PKIKP **PKPdf** 03 10 14.9 -0.2
NB2 **NORSAR Subarra** 120.98 21 PKPdf **PKPdf** 03 10 14.9 -0.9
comp=Z,0.2nm,0.4s,baz=202,slow=1.9
NOA **NORSAR Array B** 120.98 21 PKP **PKPdf** 03 10 15.8 +0.1
comp=Z,1.5nm,0.6s,baz=205,slow=2.0,SNR=14
NOA SKP 03 13 40.6
comp=Z,0.9nm,0.6s,baz=203,slow=1.9,SNR=5.8
NVAR **Mina Array Bea** 121.30 293 PKP **PKiKP** 03 10 18.1 +0.6
comp=Z,5.1nm,0.6s,baz=148,slow=3.1,SNR=40
NVAR SKP 03 13 43.3
comp=Z,2.0nm,0.7s,baz=151,slow=3.6,SNR=5.5
NVAR PKKPbc **PKKPab** 03 20 19.9 +1.8
comp=Z,1.2nm,0.6s,baz=289,slow=3.7,SNR=8.9
ELK **Elko** 121.51 297 ePKPdf **PKiKP** 03 10 18.2 +0.3
ELK **Elko** 121.51 297 ePKIKP **PKiKP** 03 10 18.2 +0.3
LAO **LASA Array** 121.80 307 P **PKPdf** 03 10 17.9 +0.1
baz=140
RLMT **Red Lodge** 121.98 304 P **PKiKP** 03 10 18.8 +0.1
baz=140
DGMT **Dagmar** 122.29 310 P **PKiKP** 03 10 19.2 +0.4
baz=140
VSU **Vasula** 122.43 30 d i PKIKP **PKiKP** 03 10 18.9 +0.2
NIL **Nilore** 123.07 78 ePKPdf **PKPdf** 03 10 20.8 +0.1
NIL **Nilore** 123.07 78 ePKIKP **PKPdf** 03 10 20.8 +0.1
HLID **Hailey** 123.23 300 P **PKiKP** 03 10 21.3 +0.2
baz=138
BOZ **Bozeman (W)** 123.43 303 P **PKiKP** 03 10 21.7 +0.3
baz=138
EGMT **Eagleton** 124.38 306 P **PKiKP** 03 10 23.4 +0.3
baz=138
O03E **Paynes Creek** 124.49 292 P **PKiKP** 03 10 23.7 +0.1
baz=138
PBKT **Sadao Pong** 124.63 114 PKP **PKiKP** 03 10 25.0 +0.6
FINES **FINESS Array B** 124.76 28 PKP **PKPdf** 03 10 22.5 -0.4
comp=Z,8.8nm,0.5s,baz=177,slow=1.6,SNR=120
FINES SKP 03 13 47.6
comp=Z,2.3nm,0.6s,baz=147,slow=4.5,SNR=4.5
FINES SKKPbc SKKPbc 03 23 44.7 -2.6
comp=Z,1.3nm,0.7s,baz=50,slow=4.6,SNR=6.9
FIA1 **FINESS Array S** 124.77 28 ePKPdf **PKPdf** 03 10 22.6 -0.3
O02D **Mt. Diablo Mer** 124.92 291 P **PKiKP** 03 10 25.2 +0.8
baz=137
PLID **Pearl Lake** 125.12 300 ePKPdf **PKPdf** 03 10 24.7 +0.2
CM31 **Chiang Mai Arr** 125.17 111 ePKPdf **PKPdf** 03 10 24.9 -0.2
CMAR **Chiang Mai Arr** 125.17 111 PKP **PKPdf** 03 10 24.9 -0.2
comp=Z,7.6nm,0.8s,baz=229,slow=3.8,SNR=24
CMAR **Chiang Mai Arr** 125.17 111 PKIKP **PKPdf** 03 10 25.0 -0.2
UTTA **Uttaradit** 125.41 113 PKP **PKiKP** 03 10 26.6 +0.7
MSO **Missoula** 125.42 303 P **PKiKP** 03 10 25.7 +0.5
baz=137
N02D **Trinity Center** 125.46 292 P **PKiKP** 03 10 25.7 +0.3
baz=137,SNR=18
M04C **Macdoel** 125.61 293 P **PKiKP** 03 10 26.1 +0.3
baz=137,SNR=17
M02C **Callahan** 125.84 292 P **PKiKP** 03 10 26.9 +0.7
baz=137,SNR=13
FFC **Flin Flon** 126.14 316 i PKIKP **PKiKP** 03 10 28.3 +2.1
L04D **Klamath Falls** 126.16 294 P **PKiKP** 03 10 26.9 0.0
baz=137
FCC **Fort Churchill** 126.39 324 ePKPdf **PKPdf** 03 10 25.6 -0.5
FCC **Fort Churchill** 126.39 324 ePKIKP **PKPdf** 03 10 25.6 -0.5
J05D **Fort Rock, OR** 126.39 295 P **PKiKP** 03 10 27.6 +0.3
baz=136,SNR=17
L02E **Cave Junction** 126.78 293 P **PKiKP** 03 10 28.1 +0.1
baz=136,SNR=11
J04D **Umpqua Nationa** 126.80 295 P **PKiKP** 03 10 28.3 0.0
baz=136
SHL **Shillong** 127.16 99 eP **PKPdf** 03 10 29.0 0.0
K02D **Willamette Mer** 127.20 293 P **PKiKP** 03 10 29.3 +0.4
baz=136,SNR=9.9

I05D	Terrebonne, OR	127.20	296		P	PKiKP	03 10 29.4	+0.6
	baz=136,SNR=19							
I04A	Tendick Farm,	127.35	295		P	PKiKP	03 10 30.0	+0.9
	baz=136							
J01E	Myrtle Point	127.67	293		P	PKiKP	03 10 30.6	+1.0
	baz=136							
KEBM	Edson Butte	127.67	293		ePKPdf	PKiKP	03 10 30.4	+0.6
AKTO	Aktyubinsk	127.70	54		SKPbc	SKPbc	03 13 35.1	
	comp=Z,4.8nm,0.8s,baz=236,slow=5.2,SNR=6.1							
AKTO					SKKPbc	SKKPbc	03 23 34.4	-1.7
	comp=Z,1.4nm,0.7s,baz=93,slow=4.4,SNR=5.1							
I03D	Drain, OR	127.76	294		P	PKiKP	03 10 31.1	+1.3
	baz=136							
G05D	Wamic, OR	127.83	297		P	PKiKP	03 10 30.9	+0.9
	baz=135							
NEW	Newport	127.95	302		P	PKiKP	03 10 31.3	+1.1
	baz=135							
H04D	Lebanon	128.03	295		P	PKiKP	03 10 31.5	+1.1
	baz=135							
KLMR	Klimovskoe	128.21	35		ePKIKP	PKPdf	03 10 28.0	-1.5
KLMR					pmax	pmax		
	comp=Z,10.0nm,1.3s							
KLMR	Klimovskoe	128.21	35		ePKPdf	PKPdf	03 10 28.0	-1.5
KLMR					AMP		03 10 35.3	
	comp=Z,10.0nm,1.3s							
I02D	Swisshome	128.30	294		P	PKiKP	03 10 32.4	+1.5
	baz=135							
F05D	White Salmon	128.36	297		P	PKiKP	03 10 32.2	+1.2
	baz=135							
KK31	Karatay Array	128.55	68		ePKPdf	PKPdf	03 10 30.2	-0.7
KK31	Karatay Array	128.55	68		ePKIKP	PKPdf	03 10 30.2	-0.7
G03D	McMinnville, O	128.79	296		P	PKiKP	03 10 32.9	+1.1
	baz=135							
SUMG	Summit	128.86	356		ePKPdf	PKiKP	03 10 31.7	0.0
SUMG	Summit	128.86	356		ePKIKP	PKiKP	03 10 31.7	0.0
SUMG	Summit	128.86	356		*i* P	PKiKP	03 10 33.8	+2.1
F04D	Rainier, OR	129.27	296		P	PKiKP	03 10 33.8	+1.1
	baz=134							
E04D	Cinebar	129.38	297		P	PKiKP	03 10 33.6	+0.6
	baz=134							
D04E	Lakebay	129.91	298		P	PKiKP	03 10 35.1	+1.0
	baz=134							
EKS2	Erkin-Say	129.94	71		P	PKiKP	03 10 34.6	+0.2
	SNR=6.0							
UCH	Uchtor	130.02	71		P	PKiKP	03 10 35.3	+0.2
	SNR=13							
AAK	Ala-Archa	130.30	71		SKPbc	SKPbc	03 13 47.4	-1.1
	comp=Z,11nm,0.7s,baz=194,slow=4.6,SNR=13							
AAK	Ala-Archa	130.30	71		P	PKPdf	03 10 34.7	+0.3
	SNR=8.8							
AAK	Ala-Archa	130.30	71		ePKPdf	PKPdf	03 10 34.3	0.0
AAK	Ala-Archa	130.30	71	*c*	*i*PKIKP	PKPdf	03 10 34.4	0.0
KZA	Kyzart	130.31	72		P	PKiKP	03 10 35.8	+0.2
	SNR=12							
D03D	Eldon	130.31	298		P	PKiKP	03 10 36.2	+1.4
	baz=133							
B05A	Bryant	130.33	299		P	PKiKP	03 10 35.4	+0.6
	baz=133							
KBK	Karagaybulak	130.55	71		P	PKPdf	03 10 35.2	+0.3
	SNR=9.6							
USP	Ospenovka	130.74	71		P	PKiKP	03 10 35.9	0.0
	SNR=5.1							
PRGR	Permogore	130.79	37		ePKIKP	PKPdf	03 10 33.8	-0.6
PRGR					pmax	pmax		
	comp=Z,15nm,0.6s							
A04D	Lummi Island	130.94	299		P	PKiKP	03 10 37.3	+1.3
	baz=133							
ULHL	Ulahol	130.95	73		P	PKiKP	03 10 36.5	-0.2
	SNR=5.6							
QIZ	Qiongzhong	131.09	122		PKP	PKiKP	03 10 37.9	+0.6
QIZ					PP	PP	03 12 54.8	+0.4
QIZ					SS	SS	03 30 25.1	+7.3
QIZ					LR	LR		
	comp=Z,170nm,20.6s							
QIZ					LR	LR		
	comp=Z,190nm,21.1s							
ARCES	ARCESS Array B	131.31	22		PKhKP	PKPpre	03 10 20.1	
	comp=Z,1.4nm,1.0s,baz=96,slow=1.2,SNR=5.4							
ARCES					PKP	PKPdf	03 10 35.0	-0.2
	comp=Z,11nm,0.5s,baz=198,slow=1.4,SNR=36							
ARCES					SKPbc	SKPbc	03 13 48.5	-2.6
	comp=Z,5.2nm,0.7s,baz=199,slow=2.6,SNR=4.9							
ARCES					SKKPbc	SKKPbc	03 23 24.6	+0.1
	comp=Z,1.5nm,0.8s,baz=46,slow=6.9,SNR=3.8							
ARE0	ARCESS Array S	131.31	22		ePKPdf	PKPdf	03 10 34.6	-0.6
TGY	Tagaytay City	131.44	138		SKPbc	SKPbc	03 13 52.0	-1.3
	comp=Z,232nm,0.3s,baz=273,slow=2.6,SNR=3.5							
APA	Apatity	131.58	27	‖	*i*PKIKP	PKPdf	03 10 35.1	-0.7
APA					pmax	pmax		
	comp=Z,4.0nm,0.6s							
ARU	Arti	132.08	48		SKPbc	SKPbc	03 13 53.1	-1.0
	comp=Z,3.5nm,0.7s,baz=219,slow=3.8,SNR=11							
ARU	Arti	132.08	48		ePKPdf	PKiKP	03 10 37.8	-0.4
ARU	Arti	132.08	48		*i* PKIKP	PKPdf	03 10 37.6	+0.6
ARU							03 13 00.4	
LVZ	Lovozero	132.14	27		ePKPdf	PKiKP	03 10 38.1	+0.1
LVZ	Lovozero	132.14	27		ePKIKP	PKiKP	03 10 38.1	+0.1
KMI	Kunming	132.65	110		PKP	PKiKP	03 10 41.1	+0.5
DAG	Danmarks Havn	132.99	3		*i* PKIKP	PKiKP	03 10 40.2	+0.8
DAG	Danmarks Havn	132.99	3		*i* P	PKiKP	03 10 40.2	+0.8
SVE	Sverdlovsk	133.20	49		ePKIKP	PKiKP	03 10 40.6	+0.2
SVE					pmax	pmax		
	comp=Z,14nm,0.8s							
BRVK	Borovoye	135.11	58	⇑	ePKIKP	PKPdf	03 10 43.3	+0.4
BVAR	Borovoye Array	135.14	58		SKPbc	SKPbc	03 14 03.9	-0.6
	comp=Z,13nm,1.0s,baz=241,slow=2.7,SNR=11							
BVAR					SKKPbc	SKKPbc	03 23 06.9	-2.2
	comp=Z,1.5nm,0.6s,baz=79,slow=2.7,SNR=7.5							
GYA	Guiyang	135.76	113		ePKP	PKPdf	03 10 43.6	-1.5
GYA					sPKP		03 11 13.6	
GYA					AMB	AMB		
	comp=Z,160nm,8.4s							
YKA	Yellowknife Ar	136.24	318		PKhKP	PKPpre	03 10 30.0	
	comp=Z,1.2nm,0.6s,baz=121,slow=3.8,SNR=14							
YKA					PKP	PKPdf	03 10 44.9	+0.2
	comp=Z,7.9nm,0.4s,baz=125,slow=2.2,SNR=52							
YKA					pPKP	pPKPdf	03 11 09.8	-1.7
	comp=Z,7.7nm,0.5s,baz=124,slow=2.5,SNR=4.7							
YKA					PP	PP	03 13 23.5	-3.7
	comp=Z,1.7nm,0.7s,baz=119,slow=6.4,SNR=5.2							
YKA					SKPbc	SKPbc	03 14 05.8	-1.7
	comp=Z,9.4nm,0.7s,baz=132,slow=3.8,SNR=20							
YKA					SKKPbc	SKKPbc	03 23 03.8	-1.8
	comp=Z,1.3nm,0.7s,baz=315,slow=3.6,SNR=10.0							
YKB5	Yellowknife Ar	136.24	318		*e*pPKPdf	pPKPdf	03 11 09.8	-1.7
SPITS	Spitsbergen Ar	136.91	12		PKhKP	PKPpre	03 10 39.0	
	comp=Z,1.0nm,0.5s,baz=161,slow=5.3,SNR=5.6							
SPITS					PKP	PKPdf	03 10 45.9	+0.3
	comp=Z,1.2nm,0.3s,baz=134,slow=4.8,SNR=9.0							
MKAR	Makanchi Array	137.21	72		PKhKP	PKPpre	03 10 34.0	
	comp=Z,0.8nm,0.5s,baz=228,slow=6.6,SNR=6.3							
MKAR					PKP	PKPdf	03 10 45.3	-1.7
	comp=Z,2.1nm,0.5s,baz=208,slow=1.3,SNR=10.0							
MKAR					SKPbc	SKPbc	03 14 09.4	-1.6
	comp=Z,11nm,0.9s,baz=248,slow=3.3,SNR=18							
KURK	Kurchatov	137.75	65	⇑	ePKIKP	PKPdf	03 10 48.3	+0.5
CD2	Chengdu	137.80	106		PKP	PKPdf	03 10 49.3	+0.6
RES	Resolute Bay	138.06	338		PKhKP	PKPpre	03 10 41.3	
	comp=Z,2.4nm,0.6s,baz=176,slow=7.3,SNR=9.3							
RES					PKP	PKPdf	03 10 47.5	-0.2
	comp=Z,11nm,0.8s,baz=127,slow=3.3,SNR=21							
RES					SKPbc	SKPbc	03 14 10.9	-1.6
	comp=Z,14nm,0.9s,baz=144,slow=6.5,SNR=12							
WMQ	Urumqi	138.19	79		ePKP	PKiKP	03 10 50.3	-0.8
WMQ					LR	LR		
	comp=Z,64nm,19.1s							
WMQ					LR	LR		
	comp=Z,110nm,19.5s							
LZH	Lanzhou	141.78	101		ePKP	PKPdf	03 10 55.5	-0.4
LZH					pPKP	pPKPdf	03 11 18.9	-3.9
LZH					sPKP		03 11 28.8	
LZH					SS	SS	03 32 29.3	+3.4
LZH					LR	LR		
	comp=Z,180nm,16.8s							
LZH					LR	LR		
	comp=Z,340nm,20.6s							
GTA	Gaotai	141.94	94		ePKP	PKPdf	03 10 51.8	-4.2
NVS	Novosibirsk	142.40	62	⇑	*i*PKIKP	PKPdf	03 10 52.8	-3.3
NVS					*e*		03 11 25.3	
NVS					*e*		03 14 06.0	
NVS					pmax	pmax		
	comp=Z,32nm,1.6s							
NVS					pmax	pmax		
	comp=N,8.0nm,0.9s							
NVS					pmax	pmax		
	comp=E,7.0nm,0.7s							
ZAA0	Zalesovo Array	142.71	64		*e*PKPpre	PKPpre	03 10 52.2	
ZALV	Zalesovo Beam	142.71	64		PKhKP	PKPpre	03 10 52.1	
	comp=E,6.1nm,0.5s,baz=230,slow=4.2,SNR=21							
ZALV					SKPbc	SKPbc	03 14 24.1	-1.3
	comp=E,4.5nm,0.7s,baz=245,slow=3.3,SNR=6.6							
XAN	Xi'an	142.97	108		PKP	PKPdf	03 10 55.0	-2.9
XAN					pPKP	pPKPdf	03 11 20.4	-4.4
XAN					LR	LR		
	comp=E,140nm,20.6s							
XAN					LR	LR		
	comp=E,130nm,24.9s							
XAN	Xi'an	142.97	108		*e*PKPdf	PKPdf	03 10 55.5	-2.4
XAN	Xi'an	142.97	108		*e*PKIKP	PKPdf	03 10 55.5	-2.4
MIDW	Midway	144.60	230		*e*PKPdf	PKPdf	03 11 00.6	-0.2
JOW	Kunigami	145.78	140		PKPbc	PKPab	03 11 04.9	+0.7
	comp=E,4.0nm,0.6s,baz=174,slow=14,SNR=26							
JOW					SKPbc	SKiKP	03 14 33.2	-0.9
	comp=E,0.9nm,0.6s,baz=180,slow=13,SNR=4.6							
INK	Inuvik	145.89	320		PKPbc	PKPbc	03 11 02.5	-0.1
	comp=E,161nm,0.7s,baz=68,slow=3.2,SNR=171							
INK					SKPbc	SKPbc	03 14 31.4	-0.9
	comp=E,24nm,0.8s,baz=69,slow=4.5,SNR=6.4							
INK	Inuvik	145.89	320		*e*PKPbc	PKPbc	03 11 02.6	0.0
NJ2	Nanjing	146.38	122		*e*PKPbc	PKPbc	03 11 05.4	+0.2
EPYK	Eagle Plains	146.49	316		P	PKPbc	03 11 04.8	+0.3
	baz=108							
TIY	Taiyuan	147.61	108		*e*PKPbc	PKPbc	03 11 08.0	-0.6
TIY					pPKP	pPKPdf	03 11 30.3	-2.4
TIY					PP	PP	03 14 39.8	+3.4
TIY					SKKS		03 21 20.1	
TIY					AMB	AMB		
	comp=E,110nm,5.0s							
TIY					LR	LR		
	comp=E,110nm,24.2s							
BTO	Baotou	148.40	102		*e*PKPbc	PKPbc	03 11 10.0	-0.7
DOT	Dot Lake	148.66	310		*e*PKPdf	PKPdf	03 11 06.1	-0.6
DOT					*e*PKPbc	PKPbc	03 11 11.1	+0.6
DOT					*e*PKPab	PKPab	03 11 16.4	+1.8
TIA	Tai'an	148.89	115		PKPbc	PKPbc	03 11 11.8	-0.1
NRIK	Noril'sk	149.39	39		PKPbc	PKPbc	03 11 11.4	-0.7
	comp=E,10nm,0.8s,baz=219,slow=1.1,SNR=12							
HHC	Hu-ho-hao-te	149.41	103		*e*PKPbc	PKPdf	03 11 08.3	-0.4
HHC					PP	PP	03 14 50.0	+3.1
HHC					SS	SS	03 33 56.3	+3.8
HHC					AMB	AMB		
	comp=E,140nm,8.2s							
HHC					LR	LR		
	comp=E,180nm,19.6s							
HHC					LR	LR		
	comp=E,240nm,19.6s							
MOY	Mondy	150.03	77		*e*PKHKP	PKPpre	03 11 09.5	
MOY					pmax	pmax		
	comp=Z,69nm,2.5s							
HDA	Harding Lake	150.09	311		P	PKiKP	03 11 14.8	0.0
	baz=103							
ILAR	Eielson Array	150.14	311		PKP	PKPdf	03 11 07.0	-1.9
	comp=Z,2.8nm,0.8s,baz=312,slow=0.7,SNR=47							
ILAR					PKPbc	PKPbc	03 11 14.3	+0.2
	comp=Z,92nm,0.8s,baz=136,slow=3.2,SNR=322							
ILAR					pPKPbc	pPKPdf	03 11 39.0	+3.3
	comp=Z,65nm,0.8s,baz=128,slow=2.5,SNR=7.1							
ILB	Eielson Array	150.14	311		*e*PKPbc	PKPbc	03 11 14.3	+0.2
POKR	Poker Plat Res	150.44	312		P	PKPbc	03 11 15.1	+0.3
	baz=102							
COLA	College	150.57	311		*e*PKPbc	PKPbc	03 11 14.7	-0.3
COLA					*e*PKPab	PKPab	03 11 23.2	+1.0
COLA	College	150.57	311	*de*	PKIKP	PKPbc	03 11 13.0	-2.0
TCOL	CIGO, UAF Yank	150.57	311		P	PKPbc	03 11 14.9	-0.2
	baz=102							
BRLK	Bradley Lake	150.59	301		*e*PKPbc	PKiKP	03 11 15.8	-0.2
KDAK	Kodiak Island	150.74	296		*e*PKPbc	PKPbc	03 11 15.9	+0.2
KDAK	Kodiak Island	150.74	296		*e*PKIKP	PKPbc	03 11 15.9	+0.2
SONA0	Songino Array	150.98	87		*e*PKPbc	PKPbc	03 11 16.4	-0.4
SONM	Songino Array	150.98	87		PKP	PKPdf	03 11 10.6	-0.3
	comp=Z,1.1nm,0.6s,baz=200,slow=2.1,SNR=8.8							
SONM					PKPbc	PKPbc	03 11 16.4	-0.4
	comp=Z,27nm,0.6s,baz=224,slow=2.7,SNR=91							
SII	Sitkinak Islan	151.10	293		*e*PKPbc	PKiKP	03 11 17.1	0.0
BJT	Baijiatuao	151.28	109		*e*PKPbc	PKPbc	03 11 17.1	-0.4
BJT	Baijiatuao	151.28	109		*e*PKIKP	PKPbc	03 11 17.1	-0.4
TLY	Talaya	151.48	79		*e*PKIKP	PKiKP	03 11 18.2	+0.1
TLY					pmax	pmax		
	comp=Z,80nm,1.1s							
TOLK	Toolik Lake Re	151.76	319		P	PKiKP	03 11 18.3	+0.1
	baz=93							
IRK	Irkutsk	152.08	78		*e*PKIKP	PKPbc	03 11 18.6	-0.4
IRK					*e*		03 11 41.8	
IRK					pmax	pmax		
	comp=Z,60nm,2.4s							
JNU	Nakatsue	152.42	138		PKPbc	PKPbc	03 11 19.0	-1.4
	comp=Z,25nm,0.7s,baz=326,slow=3.6,SNR=28							
DL2	Dalian	153.23	118		PKPbc	PKPdf	03 11 11.3	-3.1
DL2					pPKP	PKPab	03 11 32.8	-1.4
DL2					PKPab	pPKPdf	03 11 33.8	-7.5
DL2					PP	PP	03 15 09.0	+0.6
DL2					AMB	AMB		
	comp=Z,180nm,4.6s							
DL2					LR	LR		
	comp=Z,150nm,23.4s							
DL2					LR	LR		
	comp=Z,130nm,17.8s							
DL2					LR	LR		
	comp=Z,150nm,21.7s							
KSRS	Korea Array	154.99	129		PKP	PKPdf	03 11 17.2	+0.3
	comp=Z,0.7nm,0.5s,baz=222,slow=0.7,SNR=7.9							
KSRS					PKPab	PKPab	03 11 41.8	+0.1
	comp=Z,8.0nm,0.6s,baz=224,slow=3.7,SNR=30							
MAJO	Matsushiro	157.99	148		*e*PKPdf	PKPdf	03 11 19.9	-0.9
MAJO					*e*PKPab	PKPab	03 11 55.2	+0.6
MAJO	Matsushiro	157.99	148		*e*PKIKP	PKPdf	03 11 19.9	-0.9
MAJO					*e*		03 11 55.2	
MAT	Matsushiro	157.99	148		*e*PKP	PKPdf	03 11 20.3	-0.6
MJAR	Matsushiro Arr	157.99	148		PKP	PKPdf	03 11 19.9	-0.9
	comp=Z,0.7nm,0.6s,baz=147,slow=2.5,SNR=5.2							
MJAR					PKPab	PKPab	03 11 55.2	+0.6
	comp=Z,5.3nm,0.6s,baz=182,slow=5.6,SNR=14							
CN2	Changchun	158.79	115		*e*PKP	PKPdf	03 11 21.0	-0.5
CN2					*es*PKP		03 11 58.5	
CN2					*e*PP	PP	03 15 41.0	+1.7
CN2					AMB	AMB		
	comp=Z,200nm,4.0s							
CN2					LR	LR		
	comp=Z,80nm,23.0s							
CN2					LR	LR		
	comp=Z,90nm,23.0s							
CN2					LR	LR		
	comp=Z,90nm,23.0s							
USA0B	Ussuriysk Arra	162.25	125		*e*PKPab	PKPab	03 12 11.9	-1.1
USRK	Ussuriysk Ar.	162.25	125		PKPab	PKPab	03 12 12.0	-1.0
	comp=Z,11nm,0.6s,baz=207,slow=3.8,SNR=30							
USRK	Ussuriysk Ar.	162.25	125		PKP2	PKPab	03 12 12.0	-1.0
YSS	Yuzh-Sakhalins	168.86	144		*e*PKIKP	PKPdf	03 11 30.7	+0.1
YSS					*e*		03 12 42.0	
YSS					*e*		03 30 21.0	
GRNR	Gornyy	168.99	114		*e*PKP2	PKPab	03 12 39.4	-3.2
PEA0B	Petropavlovsk-	175.52	226		*e*PKPab	PKPab	03 13 12.4	+0.8
PETK	Petropavlovsk-	175.52	226		PKP	PKPdf	03 11 31.6	-1.8
	comp=Z,5.0nm,0.8s,baz=95,slow=3.7,SNR=9.0							
PETK					PKPab	PKPab	03 13 12.3	+0.8
	comp=Z,13nm,0.7s,baz=102,slow=7.4,SNR=17							
PEA1	Petropavlovsk-	175.53	226		*e*PKPdf	PKPdf	03 11 31.6	-1.8

SJA 16 02:57:54.9±0.3, 31°.30S×66°.40W, h157km±12km, ML2.3, MW3.8, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MRA	San Martin	1.26	153	*i* P	Pn		02 58 23.2	+0.5
MRA				*i* S	Sn		02 58 44.3	+0.2
MRA				IAML			02 58 46.4	
	comp=Z,17nm,0.6s							
TCA	Tanti	1.55	92	*i* P	Pn		02 58 26.2	+0.6
TCA				IAML			02 58 27.7	
	comp=Z,27nm,0.4s							
TCA				*i* S	Sn		02 58 49.3	+0.2
ASAL	Salagasta	2.44	237	*i* P	Pn		02 58 36.5	+0.8

ISCJB **16** *03:12:01.8±0.4, 26°.63N±0°.03×57°.90E±0°.05, h10km, mb3.5/8, MS3.1/4, Error ellipse: s-maj=6.2km s-min=4.1km az=18.2*
TEH **16** *03:12:02.4, 26°.70N×57°.81E, h7km, ML3.8*
DSN **16** *03:12:02.4±2.7, 26°.43N×57°.96E, h10km, ML3.6/8, Error ellipse: s-maj=35.1km s-min=11.5km az=14.0*
IDC **16** *03:12:02.8±1.5, 26°.59N×57°.58E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.5/46, mbtmp3.7/9, ML3.7/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/44, Error ellipse: s-maj=31.6km s-min=25.0km az=97.0*
OMAN **16** *03:12:07.0±4.4, 26°.40N×57°.81E, h19km, ml3.5/8, Error ellipse: s-maj=46.3km s-min=12.5km az=29.0*

ISC 16 03:12:02.8±0.7, 26°.59N±0°.04×57°.82E±0°.05, h10km, n60, σ1§63/60, mb3.7/8, MS3.1/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
JSK1	Jask	0.95	183	*e*Pg	Pn		03 12 24.4	+2.2
NIAN	Nian	1.30	318	*e*Pg	Pn		03 12 26.9	-0.2
NIAN				IAMB	IAmb		03 12 50.3	
	comp=Z,0.0nm,0.3s							
KHNJ	Kahnooj	1.36	356	*e*Pg	Pn		03 12 26.2	-1.7
BANOM	Banah	1.52	244	*e*P	Pn		03 12 29.7	-0.3
	SNR=379							
BANOM	Banah	1.52	244	P	Pn		03 12 29.9	-0.1
	SNR=15							
BANOM				S	Sg		03 12 51.7	+0.1
SHME	Shamm	1.60	251	*e*P	Pb		03 12 31.8	-0.6
	SNR=161							
SHME				S	Sg		03 12 54.1	-0.1
SHME	Shamm	1.60	251	*e*Pn	Pb		03 12 32.0	-0.5
GENO	Geno	1.68	299	*e*Pn	Pn		03 12 32.9	+0.5
GENO				IAMB	IAmb		03 13 05.5	
	comp=Z,0.0nm,0.5s							
MDH	Madha	1.88	227	*e*P	Pn		03 12 33.9	-1.1
	SNR=94							
MDH	Madha	1.88	227	P	Pn		03 12 33.9	-1.1
	SNR=35							
MDH	Madha	1.88	227	*e*Pn	Pn		03 12 33.8	-1.1
MSFE	Esma-Masafi	1.93	231	*e*P	Pn		03 12 34.8	-1.0
	SNR=45							
MSFE	Esma-Masafi	1.93	231	*e*Pn	Pn		03 12 35.1	-0.7
UOSS	Minazif	2.19	222	*e*P	Pn		03 12 37.9	-1.4
	SNR=21							
UOSS	Minazif	2.19	222	P	Pn		03 12 38.0	-1.3
	SNR=7.3							
UOSS	Minazif	2.19	222	*e*Pn	Pn		03 12 37.4	-1.9
UMQ	Umm Al-Quwin	2.21	242	*e*Pn	Pb		03 12 42.8	0.0
HATD	Hatta, Dubai	2.32	221	*e*P	Pn		03 12 39.8	-1.4
	SNR=12							
HATD	Hatta, Dubai	2.32	221	*e*Pn	Pn		03 12 40.2	-0.9
ASHO	Ashiyiah	2.47	220	*e*P	Pn		03 12 42.2	-1.0
	SNR=25							
ASHO	Ashiyiah	2.47	220	P	Pn		03 12 44.6	+1.3
	SNR=9.0							
ASHO	Ashiyiah	2.47	220	*e*Pn	Pn		03 12 44.5	+1.3
NAZ	Nazwa, Dubai	2.51	231	*e*P	Pn		03 12 45.4	+1.7
	SNR=40							
NAZ	Nazwa, Dubai	2.51	231	P	Pb		03 12 45.9	-2.2
	SNR=12							
NAZ	Nazwa, Dubai	2.51	231	*e*Pn	Pb		03 12 46.0	-2.1
CHBR	Chabahar	2.59	112	*e*Pn	Pn		03 12 44.2	-0.6
FAQ	Al Faqa, Dubai	2.72	228	P	Pn		03 12 48.8	+2.2
	SNR=9.7							
FAQ	Al Faqa, Dubai	2.72	228	*e*Pn	Pb		03 12 49.0	-2.6
ASUD	Al Ashush, Dub	2.98	230	*e*P	Pn		03 12 51.1	+1.0
	SNR=7.3							
ASUD	Al Ashush, Dub	2.98	230	*e*Pn	Pn		03 12 52.9	+2.8
HOQ	Hoqain	3.03	189	*e*Pn	Pn		03 12 50.8	-0.1
BIDO	Bidbid	3.07	175	*e*Pn	Pn		03 12 52.3	+0.9
ALNE	Al Ain	3.14	217	*e*Pn	Pn		03 12 54.7	+2.3
NGRK	Negar Kerman	3.19	343	*e*Pn	Pn		03 12 55.0	+1.6
NGRK				IAMB	IAmb		03 13 57.6	
	comp=Z,0.0nm,1.0s							
AJN	Ajban	3.26	232	*e*Pg	Pb		03 13 00.7	0.0
WSAR	Wadi Sarin	3.42	167	Pn	Pn		03 12 56.2	0.0
	comp=Z,7.5nm,0.3s,baz=332,slow=4.6,SNR=50							
WSAR				Sn	Sn		03 13 35.4	-1.4
	comp=Z,8.0nm,0.3s,baz=63,slow=23,SNR=16							
WSAR	Wadi Sarin	3.42	167	P	Pn		03 12 55.7	-0.5
WSAR				S	Sn		03 13 34.4	-2.4
KRBR	Kerman	3.51	345	*e*Pn	Pn		03 12 56.0	-1.7
TVBK	TV Kerman	3.51	345	*e*Pn	Pn		03 12 59.3	+1.5
TVBK				IAMB	IAmb		03 14 00.1	
	comp=Z,0.0nm,0.6s							
SMDO	Samad	3.52	177	P	Pn		03 13 01.1	+3.4
	SNR=13							
KHGB	Koh Gabri	3.95	343	*e*Pn	Pn		03 13 06.2	+2.4
KHGB				IAMB	IAmb		03 14 23.2	
	comp=Z,0.0nm,0.8s							
ZHSF	Zahedan	3.99	40	*e*Pn	Pn		03 13 04.4	+0.2
GHIR	Ghir-Karzin	4.61	293	*e*Pn	Pn		03 13 07.5	-5.3
IKOO	Kooshah	5.91	10	*e*P

GVD	**Gavdhos**	**1.05 301**	P	**Pn**	**03 26 09.7**	**-0.8**
GVD			S	**Sn**	**03 26 25.3**	**+1.1**
GVD	**Gavdhos**	**1.05 301**	P	**Pn**	**03 26 09.6**	**-0.8**
GVD			S	**Sn**	**03 26 24.9**	**+0.7**
GVD			AML	AML	03 26 30.3	
	comp=E,1363μm,0.4s					
GVD			AML	AML	03 26 30.5	
	comp=N,1184μm,0.4s					
ZKR	**Zakros**	**1.18 46**	P	**Pb**	**03 26 13.5**	**+0.4**
ZKR			S	**Sb**	**03 26 29.9**	**+2.0**
ZKR			AML	AML	03 26 38.0	
	comp=E,501μm,0.7s					
ZKR			AML	AML	03 26 41.8	
	comp=N,234μm,0.9s					
VAM	**Vamos**	**1.36 324**	P	**Pn**	**03 26 15.0**	**+0.2**
VAM			S	**Sb**	**03 26 34.6**	**+1.4**
VAM	**Vamos**	**1.36 324**	P	**Pn**	**03 26 15.0**	**+0.2**
VAM			S	**Sb**	**03 26 34.2**	**+0.9**
VAM			AML	AML	03 26 41.6	
	comp=E,639μm,0.4s					
VAM			AML	AML	03 26 41.6	
	comp=N,773μm,0.3s					
IMMV	**Iera Moni Meta**	**1.52 320**	P	**Pb**	**03 26 18.0**	**-0.9**
IMMV			S	**Sb**	**03 26 38.2**	**+0.6**
IMMV			AML	AML	03 26 50.1	
	comp=N,484μm,0.5s					
IMMV			AML	AML	03 26 58.3	
	comp=E,575μm,0.8s					
ANKY	**Antikythira Is**	**2.19 316**	P	**Pb**	**03 26 34.3**	**+4.0**
GERES	**GERESS Array B**	**16.85 333**	Pn	**Pn**	**03 29 45.1**	**-0.4**
	comp=E,0.1nm,0.3s,baz=144,slow=12,SNR=4.4					
FINES	**FINESS Array B**	**27.16 1**	P	**P**	**03 31 30.9**	**-1.6**
	comp=E,1.6nm,1.0s,baz=184,slow=20,SNR=2.6					
TORD	**Torodi Ar. Bea**	**29.96 231**	P	**P**	**03 31 57.2**	**-0.5**
	comp=E,0.4nm,0.5s,baz=37,slow=8.0,SNR=8.2					

*IDC **16** 03:26:13.6±4.8, 31°.84S×179°.91E, h388km±44km, mb3.6/4, mb1 3.9/5, mb1mx3.3/24, mbtmp4.5/5, Error ellipse: s-maj=52.9km s-min=21.3km az=33.0*
*ISCJB **16** 03:26:16.3±0.7, 31°.78S±0°.08×179°.8E±0°.2, h363km, mb3.8/4, Error ellipse: s-maj=25.1km s-min=6.1km az=21.4*
*WEL **16** 03:26:19.6±0.7, 32°S±12°×18°0W±3°0, h329km±13km, M4.6/35, mB5.1/23, ML5.1/6, MLv5.2/35, Mw(mB)4.5/23, Error ellipse: s-maj=0.0km s-min=0.0km az=110.2*

ISC 16 03:26:14.9±0.8, 31°.79S±0°.08×179°.8E±0°.2, h363km, n53, σ1§94/59, mb3.9/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**3.18**	**38**	P	**Pn**	**03 27 18.2**	**+1.3**
RIZ				S	**S**	**03 28 08.2**	**+1.3**
MXZ	**Matakaoa Point**	**5.90**	**192**	P	**Pn**	**03 27 49.3**	**+4.5**
MXZ				S	**S**	**03 28 57.3**	**-0.6**
WMGZ	**Waiomatatini S**	**6.13**	**191**	P	**Pn**	**03 27 50.5**	**+3.0**
WMGZ				S	**S**	**03 29 01.2**	**-1.5**
HAZ	**Te Kaha**	**6.19**	**195**	P	**Pn**	**03 27 51.5**	**+3.4**
HAZ				S	**S**	**03 29 03.6**	**-0.4**
PKGZ	**Pakihiroa**	**6.26**	**193**	P	**Pn**	**03 27 51.5**	**+2.5**
PUZ	**Puketiti**	**6.40**	**191**	P	**Pn**	**03 27 52.9**	**+2.2**
PUZ				S	**S**	**03 29 07.7**	**-0.8**
RUGZ	**Raukumara Rang**	**6.42**	**195**	P	**Pn**	**03 27 53.1**	**+2.3**
RUGZ				S	**S**	**03 29 06.1**	**-2.8**
TWGZ	**Tauwhareparae**	**6.56**	**193**	P	**Pn**	**03 27 54.7**	**+2.3**
TWGZ				S	**S**	**03 29 13.3**	**+1.6**
OPRZ	**Ohinepanea**	**6.62**	**203**	P	**Pn**	**03 27 56.4**	**+3.3**
MWZ	**Matawai**	**6.80**	**196**	P	**P**	**03 27 56.6**	**+0.2**
MWZ				S	**S**	**03 29 17.3**	**+0.4**
CNGZ	**Carnagh Statio**	**6.81**	**191**	P	**P**	**03 27 58.1**	**+1.6**
URZ	**Urewera**	**6.83**	**198**	P	**Pn**	**03 27 54.9**	**-0.6**
	34nm,0.3s,baz=264,slow=5.6,SNR=92						
URZ				S	**S**	**03 29 17.0**	**-0.4**
	9.7nm,0.3s,baz=231,slow=23,SNR=13						
URZ	**Urewera**	**6.83**	**198**	P	**Pn**	**03 27 55.4**	**-0.1**
TKGZ	**Te Karaka**	**6.84**	**193**	P	**P**	**03 27 58.2**	**+1.5**
RAGZ	**Rawiri**	**6.98**	**196**	P	**P**	**03 27 58.7**	**+0.1**
HLRZ	**Highlands Stat**	**7.06**	**203**	P	**P**	**03 28 01.4**	**+2.1**
RIGZ	**Rimuhau**	**7.11**	**193**	P	**P**	**03 28 00.3**	**+0.3**
MUGZ	**Murupara**	**7.13**	**200**	P	**P**	**03 28 01.0**	**+0.8**
HSRZ	**Hossack Road**	**7.15**	**203**	P	**P**	**03 28 04.8**	**+4.4**
HRRZ	**Handcock Road**	**7.20**	**203**	P	**P**	**03 28 02.5**	**+1.5**
RTZ	**Ruatahuna**	**7.20**	**198**	P	**P**	**03 28 02.9**	**+1.9**
PRRZ	**Plateau Road**	**7.27**	**202**	P	**P**	**03 28 03.1**	**+1.4**
SNGZ	**Shannon Statio**	**7.27**	**196**	P	**P**	**03 28 02.6**	**+0.8**
PRGZ	**Paritu Road**	**7.30**	**192**	P	**P**	**03 28 03.5**	**+1.4**
ALRZ	**Allen Road**	**7.34**	**202**	P	**P**	**03 28 04.3**	**+1.7**
TLZ	**Tolley Road**	**7.42**	**207**	P	**P**	**03 28 07.1**	**+3.6**
KNZ	**Kokohu**	**7.43**	**193**	P	**P**	**03 28 03.9**	**+0.3**
RAHZ	**Arahi**	**7.46**	**197**	P	**P**	**03 28 04.4**	**+0.5**
MTHZ	**Maungataniwha**	**7.46**	**198**	P	**P**	**03 28 06.0**	**+2.0**
WHHZ	**Waihua**	**7.58**	**196**	P	**P**	**03 28 07.4**	**+2.1**
WATZ	**Wairara**	**7.68**	**205**	P	**P**	**03 28 07.9**	**+1.5**
NMHZ	**Naumai**	**7.70**	**198**	P	**P**	**03 28 07.1**	**+0.3**
ARHZ	**Aropaoanui**	**7.81**	**196**	P	**P**	**03 28 08.9**	**+0.9**
MCHZ	**McNeill Hill**	**8.06**	**198**	P	**P**	**03 28 11.9**	**-0.1**
KWHZ	**Kaweka Forest**	**8.11**	**199**	P	**P**	**03 28 12.1**	**-0.6**
CKHZ	**Cape Kidnapper**	**8.17**	**195**	P	**P**	**03 28 13.9**	**+0.7**
KAHZ	**Kahuranaki**	**8.35**	**196**	P	**P**	**03 28 14.8**	**-0.4**
PXZ	**Pawanui**	**8.57**	**196**	P	**P**	**03 28 17.2**	**-0.5**
WPHZ	**Waipukurau**	**8.71**	**197**	P	**P**	**03 28 19.9**	**+0.6**
PRHZ	**Porangahau**	**8.85**	**196**	P	**P**	**03 28 21.0**	**+0.2**
ANWZ	**Angora Road**	**9.07**	**196**	P	**P**	**03 28 24.1**	**+0.8**
CTA	**Charters Tower**	**32.24**	**283**	P	**P**	**03 32 09.2**	**-1.8**
	3.4nm,0.5s,baz=114,slow=13,SNR=4.4						
ASAR	**Alice Springs**	**41.21**	**270**	P	P	03 33 22.4	-3.4
	2.0nm,0.6s,baz=106,slow=7.3,SNR=38						
WRA	**Warramunga Arr**	**42.33**	**275**	P	P	03 33 31.2	-3.6
	2.4nm,0.4s,baz=100,slow=9.4,SNR=39						
SNAA	**Sanae**	**76.81**	**179**	P	**P**	**03 37 24.4**	**-2.7**
VNA3	**Neumayer Olymp**	**77.04**	**177**	P	**P**	**03 37 25.8**	**-2.4**
VNA2	**Neumayer--Watz**	**77.45**	**178**	P	**P**	**03 37 28.2**	**-2.2**
	baz=174,slow=3.3						
VNA1	**Neumayer--Stat**	**77.69**	**177**	P	**P**	**03 37 29.6**	**-2.1**
PLCA	**Paso Flores**	**82.91**	**134**	P	P	03 37 54.3	-5.6
	3.8nm,1.1s,baz=146,slow=6.9,SNR=2.8						
FINES	**FINESS Array B**	**145.76**	**338**	PKPbc	**PKPdf**	**03 45 06.8**	**-3.0**
	2.8nm,0.6s,baz=53,slow=5.0,SNR=24						
AKASG	**Malin Array Be**	**151.21**	**320**	PKPbc	**PKPdf**	**03 45 21.2**	**+2.3**
	0.2nm,0.2s,baz=39,slow=2.9,SNR=4.4						
BRTR	**Keskin Array B**	**151.57**	**296**	PKPbc	**PKPdf**	**03 45 21.4**	**+1.3**
	0.5nm,0.5s,baz=135,slow=3.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**161.37**	**186**	PKPab	**PKPab**	**03 46 16.4**	**-2.8**
	0.6nm,1.0s,baz=192,slow=5.8,SNR=5.4						

*IDC **16** 03:30:00.8±1.6, 34°.31N×24°.96E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.2/28, mbtmp3.4/3, ML3.8/1, Error ellipse: s-maj=36.1km s-min=19.7km az=104.0*
*ISCJB **16** 03:30:02.5±1.5, 34°.24N±0°.05×25°.08E±0°.04, h4km±8km, mb3.5/2, Error ellipse: s-maj=9.3km s-min=5.7km az=9.2*
*ATH **16** 03:30:03.5, 34°.28N×25°.10E, h19km±3km, ML2.9/7, Error ellipse: s-maj=3.9km s-min=1.3km az=2.0*
*THE **16** 03:30:05.4, 34°.38N×25°.06E, h2km±3km, ML3.0/4, Error ellipse: s-maj=3.6km s-min=1.2km az=155.0*

ISC 16 03:30:02.5±1.9, 34°.25N±0°.07×25°.08E±0°.03, h3km±12km, n33, σ0§98/47, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.80**	**344**	P	**Pb**	**03 30 18.5**	**-0.5**
SIVA				S	**Sb**	**03 30 29.3**	**-0.8**
	4μm,0.5s						
SIVA	**Sivas**	**0.80**	**344**	P	**Pb**	**03 30 18.3**	**-0.6**
SIVA				S	**Sb**	**03 30 29.1**	**-1.1**
SIVA				AML	AML	03 30 35.5	
	comp=N,4974μm,0.5s						
SIVA				AML	AML	03 30 37.4	
	comp=E,7128μm,0.4s						
TMBK	**Timbaki Herakl**	**0.86**	**343**	P	**Pb**	**03 30 19.9**	**-0.1**
TMBK				S	**Sb**	**03 30 31.2**	**-0.7**
LAST	**Lasithi**	**0.97**	**20**	P	**Pg**	**03 30 21.4**	**+0.3**
LAST				S	**Sb**	**03 30 34.4**	**-0.8**
LAST	**Lasithi**	**0.97**	**20**	P	**Pg**	**03 30 21.3**	**+0.2**
LAST				S	**Sb**	**03 30 34.0**	**-1.1**
LAST				AML	AML	03 30 45.2	
	comp=N,643μm,0.5s						
LAST				AML	AML	03 30 52.1	
	comp=E,581μm,0.6s						
GVD	**Gavdhos**	**1.01 306**	*eP*	**Pb**	**03 30 23.0**	**+0.5**
GVD	**Gavdhos**	**1.01 306**	P	**Pb**	**03 30 22.8**	**+0.3**
GVD			S	**Sb**	**03 30 36.4**	**+0.2**
	comp=E,1μm,0.4s					
GVD	**Gavdhos**	**1.01 306**	P	**Pb**	**03 30 22.9**	**+0.3**
GVD			S	**Sb**	**03 30 36.3**	**+0.1**
GVD			AML	AML	03 30 45.6	
	comp=E,2431μm,0.4s					
GVD			AML	AML	03 30 50.3	
	comp=N,2314μm,0.4s					
IDI	**Anoyia**	**1.05 352**	Pn	**Pg**	**03 30 21.8**	**-0.8**
	comp=N,17nm,0.3s,baz=164,slow=15,SNR=18					
IDI			Sn	**Sb**	**03 30 36.4**	**-1.1**
	comp=N,19nm,0.3s,baz=237,slow=18,SNR=12					
KSTL	**Kastelli Herak**	**1.05 360**	P	**Pg**	**03 30 21.9**	**-0.8**
NPS	**Neapolis**	**1.10 23**	P	**Pg**	**03 30 23.9**	**+0.2**
NPS			S	**Sb**	**03 30 39.0**	**0.0**
	comp=N,542nm,0.4s					
NPS	**Neapolis**	**1.10 23**	P	**Pg**	**03 30 23.8**	**+0.2**
NPS			S	**Sb**	**03 30 38.8**	**-0.2**
NPS			AML	AML	03 30 49.9	
	comp=E,731μm,0.3s					
NPS			AML	AML	03 30 50.2	
	comp=N,583μm,0.5s					
ZKR	**Zakros**	**1.28 47**	*eP*	**Pn**	**03 30 27.9**	**+0.7**
ZKR	**Zakros**	**1.28 47**	P	**Pb**	**03 30 27.7**	**+0.6**
ZKR	**Zakros**	**1.28 47**	P	**Pb**	**03 30 27.6**	**+0.4**
ZKR			S	**Sb**	**03 30 43.9**	**-0.1**
ZKR			AML	AML	03 30 51.5	
	comp=N,458μm,0.5s					
ZKR			AML	AML	03 30 59.8	
	comp=E,763μm,0.6s					
VAM	**Vamos**	**1.36 328**	P	**Pn**	**03 30 28.8**	**+0.5**
VAM	**Vamos**	**1.36 328**	P	**Pg**	**03 30 28.6**	**0.0**
VAM			S	**Sn**	**03 30 48.5**	**+1.6**
VAM			AML	AML	03 31 02.3	
	comp=N,1184μm,0.5s					
VAM			AML	AML	03 31 08.3	
	comp=E,1025μm,0.5s					
IMMV	**Iera Moni Meta**	**1.51 324**	*eP*	**Pg**	**03 30 31.5**	**+0.2**
IMMV	**Iera Moni Meta**	**1.51 324**	P	**Pg**	**03 30 31.3**	**-0.1**
IMMV			S	**Sb**	**03 30 50.2**	**-0.4**
	comp=E,458nm,0.5s					
IMMV	**Iera Moni Meta**	**1.51 324**	P	**Pg**	**03 30 31.6**	**+0.2**
IMMV			S	**Sn**	**03 30 51.9**	**+1.4**
IMMV			AML	AML	03 31 07.0	
	comp=N,810μm,0.4s					
IMMV			AML	AML	03 31 13.3	
	comp=E,1016μm,0.6s					
KARP	**Karpathos**	**2.15 52**	*eP*	**Pn**	**03 30 40.4**	**+1.2**
KARP	**Karpathos**	**2.15 52**	P	**Pb**	**03 30 41.5**	**-0.5**
ANKY	**Antikythira Is**	**2.17 318**	P	**Pn**	**03 30 39.7**	**+0.2**
APE	**Apeiranthos**	**2.84 7**	*eP*	**Pn**	**03 30 49.5**	**+0.8**
ARG	**Arkhangelos**	**3.18 51**	P	**Pn**	**03 30 54.9**	**+1.6**
DAT	**Datca**	**3.21 39**	*eP*	**Pn**	**03 30 55.1**	**+1.3**
DALY	**Dalyan (Mula)**	**3.88 48**	*eP*	**Pn**	**03 31 05.4**	**+2.4**
YER	**Yerkesik**	**3.89 41**	*eP*	**Pn**	**03 31 04.9**	**+1.8**
ITM	**Ithomi**	**3.89 320**	*eP*	**Pn**	**03 31 05.1**	**+2.0**
TURN	**Turunc**	**3.89 47**	*eP*	**Pn**	**03 31 00.9**	**-2.1**
GERES	**GERESS Array B**	**16.86 333**	Pn	**Pn**	**03 33 59.6**	**+0.2**
	comp=E,0.1nm,0.3s,baz=143,slow=13,SNR=3.8					
TORD	**Torodi Ar. Bea**	**29.86 231**	P	**P**	**03 36 09.5**	**-1.6**
	comp=E,0.7nm,0.5s,baz=31,slow=8.9,SNR=16					
MKAR	**Makanchi Array**	**44.34 56**	P	**P**	**03 38 13.0**	**-0.8**
	comp=E,0.3nm,0.6s,baz=278,slow=7.3,SNR=2.4					

*IDC **16** 03:56:19.7±1.7, 34°.26N×25°.20E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.2/32, mbtmp3.4/3, ML3.7/1, Error ellipse: s-maj=51.9km s-min=30.1km az=140.0*
*ATH **16** 03:56:23.6, 34°.25N×25°.06E, h21km±5km, ML2.5/4, Error ellipse: s-maj=6.6km s-min=2.3km az=4.0*
*THE **16** 03:56:25.0, 34°.33N×25°.04E, h1km±6km, ML2.7/2, Error ellipse: s-maj=8.9km s-min=1.9km az=145.0*

ISC 16 03:56:22.2±2.3, 34°.2N±0°.1×25°.10E±0°.05, h13km±13km, n17, σ0§63/22, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**344**	P	**Pg**	**03 56 38.8**	**-0.1**
SIVA				S	**Sg**	**03 56 49.8**	**-0.4**
SIVA	**Sivas**	**0.86**	**344**	P	**Pg**	**03 56 38.9**	**0.0**
SIVA				S	**Sg**	**03 56 49.4**	**-0.8**
SIVA				AML	AML	03 56 51.5	
	comp=N,1588μm,0.6s						
SIVA				AML	AML	03 56 52.6	
	comp=E,1589μm,0.3s						
TMBK	**Timbaki Herakl**	**0.93**	**343**	P	**Pb**	**03 56 40.4**	**+0.2**
LAST	**Lasithi**	**1.02**	**18**	P	**Pg**	**03 56 41.8**	**-0.2**
LAST	**Lasithi**	**1.02**	**18**	P	**Pg**	**03 56 41.9**	**-0.1**
LAST				AML	AML	03 57 00.3	
	comp=E,178μm,0.7s						
LAST				AML	AML	03 57 05.1	
	comp=N,247μm,0.6s						
GVD	**Gavdhos**	**1.06**	**308**	P	**Pg**	**03 56 42.4**	**-0.2**
GVD				S	**Sn**	**03 56 57.3**	**-0.2**
GVD	**Gavdhos**	**1.06**	**308**	P	**Pb**	**03 56 42.8**	**+0.4**
GVD				S	**Sb**	**03 56 56.5**	**+0.2**
GVD				AML	AML	03 57 03.2	
	comp=N,902μm,0.4s						
GVD				AML	AML	03 57 03.4	
	comp=E,552μm,0.3s						
KSTL	**Kastelli Herak**	**1.12**	**359**	P	**Pb**	**03 56 43.6**	**+0.2**
NPS	**Neapolis**	**1.16**	**21**	P	**Pn**	**03 56 45.4**	**+1.2**
PRNS	**Prines Rethymn**	**1.27**	**338**	P	**Pn**	**03 56 46.1**	**+0.3**
ZKR	**Zakros**	**1.31**	**45**	P	**Pn**	**03 56 47.3**	**+1.1**
VAM	**Vamos**	**1.43**	**329**	P	**Pb**	**03 56 49.1**	**+0.4**
VAM	**Vamos**	**1.43**	**329**	P	**Pb**	**03 56 48.8**	**+0.1**
VAM				S	**Sg**	**03 57 08.8**	**+0.6**
VAM				AML	AML	03 57 15.6	
	comp=N,307μm,0.3s						
VAM				AML	AML	03 57 18.3	
	comp=E,320μm,0.6s						
IMMV	**Iera Moni Meta**	**1.57**	**324**	P	**Pb**	**03 56 51.3**	**+0.1**
GERES	**GERESS Array B**	**16.92**	**333**	Pn	**Pn**	**04 00 18.7**	**-0.1**
	comp=E,0.1nm,0.3s,baz=146,slow=13,SNR=8.3						
TORD	**Torodi Ar. Bea**	**29.83**	**231**	P	**P**	**04 02 29.6**	**+0.3**
	comp=E,0.6nm,1.0s,baz=41,slow=8.2,SNR=5.1						
MKAR	**Makanchi Array**	**44.36**	**56**	P	**P**	**04 04 30.7**	**-1.5**
	comp=E,0.3nm,0.7s,baz=268,slow=6.7,SNR=2.5						

IDC 16 03:57:22.7±1.2, 22°.29N×143°.65E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/32, mbtmp3.6/4, Error ellipse: s-maj=78.7km s-min=23.1km az=97.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**28.50**	**344**	P	P	04 03 21.0	+1.3
	1.0nm,0.5s,baz=146,slow=3.6,SNR=3.3						
WRA	**Warramunga Arr**	**42.94**	**193**	P	P	04 05 23.5	-0.1
	0.5nm,0.3s,baz=4.3,slow=7.5,SNR=11						
ASAR	**Alice Springs**	**46.65**	**192**	P	P	04 05 53.0	-0.1
	0.2nm,0.4s,baz=11,slow=7.0,SNR=4.7						
YKA	**Yellowknife Ar**	**75.73**	**28**	P	P	04 09 09.2	-0.8
	0.1nm,0.3s,baz=294,slow=5.9,SNR=3.2						

IDC 16 04:11:55.7±6.6, 21°.40S×170°.72E, h127km±41km, mb3.8/4, mb1 3.8/5, mb1mx3.5/28, mbtmp4.1/5, Error ellipse: s-maj=87.3km s-min=46.8km az=152.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.03**	**260**	P	Pn	04 12 55.3	-0.6
	5.3nm,0.3s,baz=93,slow=16,SNR=206						
DZM				S	Sn	04 13 43.5	+0.9
	45nm,0.3s,baz=103,slow=22,SNR=44						
CTA	**Charters Tower**	**22.92**	**269**	P	P	04 16 48.1	-0.8
	1.1nm,0.4s,baz=100,slow=12,SNR=2.9						
STKA	**Stephens Creek**	**27.97**	**242**	P	P	04 17 33.5	-1.1
	1.1nm,0.5s,baz=102,slow=9.3,SNR=4.0						
ASAR	**Alice Springs**	**34.03**	**259**	P	P	04 18 28.0	+0.2
	7.7nm,0.7s,baz=84,slow=9.3,SNR=90						
WRA	**Warramunga Arr**	**34.03**	**266**	P	P	04 18 28.3	+0.4
	0.9nm,0.4s,baz=91,slow=8.9,SNR=15						
GERES	**GERESS Array B**	**147.04**	**332**	PKPbc	PKPbc	04 31 23.5	-0.2
	0.5nm,0.6s,baz=35,slow=3.3,SNR=6.2						

*IDC **16** 04:19:27.7±1.9, 40°.96S×74°.26W, h0km, mb3.7/5, mb1 3.9/7, mb1mx3.7/25, mbtmp3.8/7, ML4.4/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/25, Error ellipse: s-maj=37.8km s-min=22.8km az=95.0*
*ISCJB **16** 04:19:30.2±0.6, 40°.93S±0°.03×74°.33W±0°.08, h33km, MS3.4/1, Error ellipse: s-maj=9.1km s-min=5.0km az=5.1*
*GUC **16** 04:19:31.9±0.4, 41°.02S×74°.23W, h35km±9km, ML4.2*
*NEIC **16** 04:19:31.0±0.0, 41°.02S×74°.23W, h35km, ML4.2(GUC), After GUC.*

ISC 16 04:19:32.0±1.1, 41°.02S±0°.06×74°.3W±0°.1, h35km, n24, σ1§75/27, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	**Milladeo Hill,**	**2.14**	**168**	*e*Pn	**Pn**	**04 20 05.1**	**-0.1**
GO07	**Milladeo Hill,**	**2.14**	**168**	*e*P	**Pn**	**04 20 05.9**	**+0.6**
GO07				*e*S	**Sn**	**04 20 31.7**	**+1.2**
GO07				IAML		04 20 45.6	
	comp=E,3μm,0.5s						
PLCA	**Paso Flores**	**2.84**	**85**	Pn	**Pn**	**04 20 15.5**	**+0.5**
	comp=E,26nm,0.3s,baz=285,slow=14,SNR=282						
PLCA				Sn	**Sn**	**04 20 48.5**	**+0.5**
	comp=E,17nm,0.3s,baz=359,slow=20,SNR=4.7						
PLCA				LR	LR	04 21 32.7	
	comp=E,442nm,20.6s,baz=254,slow=44						
PLCA	**Paso Flores**	**2.84**	**85**	*e*P	**Pn**	**04 20 15.4**	**+0.5**
PLCA				*e*S	**Sn**	**04 20 48.4**	**+0.5**
CCHI	**Chillan**	**4.74**	**22**	*i* P	**Pn**	**04 20 41.6**	**+0.7**
COYC	**Coyhaique**	**4.82**	**161**	*e*P	**Pn**	**04 20 43.7**	**+1.6**
GO05	**Huala**	**6.28**	**18**	*e*Pn	**Pn**	**04 21 01.9**	**-0.3**
PEL	**Peldehue**	**8.37**	**21**	*e*Pn	**Pn**	**04 21 30.6**	**-0.3**
ROC1	**El Roble**	**8.44**	**19**	*e*Pn	**Pn**	**04 21 31.1**	**-1.0**
CFA	**Coronel Fontan**	**10.58**	**29**	Pn	**Pn**	**04 22 00.3**	**-0.9**
	comp=E,0.6nm,0.3s,baz=205,slow=12,SNR=5.5						
CFA				Sn	**Sn**	**04 23 59.8**	**+1.4**
	comp=E,0.2nm,0.3s,baz=353,slow=17,SNR=3.5						
CFA				LR	LR	04 26 44.2	
	comp=E,223nm,18.6s,baz=228,slow=42						
GO04	**Tololo Observa**	**11.19**	**16**	*e*Pn	**Pn**	**04 22 09.8**	**+0.1**
LVC	**Limon Verde**	**18.91**	**15**	LR	LR	04 30 55.5	
	comp=E,86nm,22.0s,baz=194,slow=36						
CPUP	**Villa Florida**	**20.28**	**49**	P	**P**	**04 24 04.8**	**+0.2**
	comp=E,1.1nm,0.4s,baz=223,slow=9.2,SNR=6.8						
CPUP				LR	LR	04 32 38.0	
	comp=E,139nm,18.2s,baz=233,slow=39						
LPAZ	**La Paz**	**25.21**	**14**	P	**P**	**04 24 55.5**	**+0.3**
	comp=E,0.6nm,0.7s,baz=190,slow=11,SNR=2.2						
SIV	**San Ignacio**	**27.44**	**28**	P	**P**	**04 25 14.9**	**+0.3**
	comp=E,0.8nm,0.8s,baz=210,slow=11,SNR=4.4						
BDFB	**Brasilia**	**34.01**	**50**	P	**P**	**04 26 11.5**	**-1.3**
	comp=E,2.0nm,0.7s,baz=197,slow=7.1,SNR=3.5						
VNA3	**Neumayer Olymp**	**43.65**	**155**	P	**P**	**04 27 34.0**	**+1.4**
VNA3				S	**S**	**04 34 01.2**	**+1.6**
VNA2	**Neumayer--Watz**	**44.34**	**154**	P	**P**	**04 27 39.9**	**+1.6**
	baz=270,slow=7.7						
VNA2				S	**S**	**04 34 04.8**	**-5.0**
	baz=270,slow=9.8						
SNAA	**Sanae**	**45.86**	**155**	P	**P**	**04 27 51.8**	**+1.5**
SNAA				S	**S**	**04 34 26.9**	**-4.9**
SNAA	**Sanae**	**45.86**	**155**	P	**P**	**04 27 51.5**	**+1.2**
	comp=E,1.9nm,0.8s,baz=289,slow=6.7,SNR=14						
SNAA	**Sanae**	**45.86**	**155**	*e*P	**P**	**04 27 48.9**	**-1.4**
H11S2	**WAKE ISLAND Hyl**	**23.67**	**266**	T	T	06 54 33.3	
	baz=126,slow=75,SNR=5.9						
H11S1	**WAKE ISLAND Hyl**	**23.69**	**266**	T	T	06 54 32.8	
	baz=126,slow=75,SNR=4.3						
H11S3	**WAKE ISLAND Hyl**	**23.69**	**266**	T	T	06 54 33.2	
	baz=126,slow=75,SNR=4.7						

*MOS **16** 04:32:46.7±1.3, 34°.36N×25°.03E, h16km, mb4.5/12, Error ellipse: s-maj=8.5km s-min=4.7km az=83.8*
*GII **16** 04:32:48.5±0.0, 34°.35N×25°.14E, h30km, mb4.1/1, MD3.8/2*
*THE **16** 04:32:49.9, 34°.41N×25°.09E, h0km±1km, ML3.9/3, Error ellipse: s-maj=2.1km s-min=0.8km az=178.0*
*HLW **16** 04:32:49.3, 34°.32N×25°.19E, h10km±12km, Md4.0*
*ISCJB **16** 04:32:49.5±0.3, 34°.27N±0°.02×25°.11E±0°.02, h42km±3km, mb4.1/33, MS3.2/7, Error ellipse: s-maj=4.3km s-min=2.7km az=30.2*
*ATH **16** 04:32:50.4, 34°.43N×25°.04E, h29km±1km, ML3.8/7, Error ellipse: s-maj=3.2km s-min=1.1km az=358.0*
*IDC **16** 04:32:53.1±1.4, 34°.56N×25°.04E, h46km±10km, mb3.8/19, mb1 3.9/28, mb1mx3.8/57, mbtmp4.0/28, ML3.9/9, MS3.2/13, Ms1 3.2/13, ms1mx2.9/49, Error ellipse: s-maj=16.6km s-min=12.0km az=6.0*
*NEIC **16** 04:32:53.6±0.0, 34°.52N×25°.17E, h10km, mb4.2/16, ML4.0(THE), After THE.*

ISC 16 04:32:49.2±1.1, 34°.29N±0°.05×25°.10E±0°.03, h24km±7km, n311, σ1§66/327, mb4.1/33, MS3.2/7, 5C-4D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.77**	**342**	P	**Pb**	**04 33 03.1**	**-0.7**
SIVA				S	**Sb**	**04 33 13.3**	**-0.5**
SIVA	**Sivas**	**0.77**	**342**	P	**Pb**	**04 33 03.2**	**-0.6**
SIVA				S	**Sb**	**04 33 12.6**	**-1.2**
SIVA				AML	AML	04 33 19.4	
	comp=N,33932μm,0.7s						
SIVA

THR5 **Thira Island,** 2.13 5 P Pn 04 33 24.3 +1.0
THR5 **Thira Island,** 2.13 5 P Pn 04 33 25.0 +1.7
ANAF **Anafi Island** 2.13 15 P Pn 04 33 24.6 +1.3
ANAF **Anafi Island** 2.13 15 P Pn 04 33 25.0 +1.7
SAP3 **Santorini-Thir** 2.15 5 P Pn 04 33 24.5 +1.0
SAP3 **Santorini-Thir** 2.15 5 P Pn 04 33 25.1 +1.6
THT2 **Imerovigli** 2.16 7 P Pn 04 33 23.8 +0.1
ANKY **Antikythira Is** 2.16 317 P Pn 04 33 25.3 +1.7
ANKY **Antikythira Is** 2.16 317 P Pn 04 33 25.5 +1.9
THR2 **Thira island,** 2.17 7 P Pn 04 33 24.7 +0.9
CMBO **Columbo, Santo** 2.19 6 P Pb 04 33 26.1 -1.9
IOSP **Ios island** 2.43 4 P Pn 04 33 28.1 +0.7
IOSP **Ios island** 2.43 4 P Pn 04 33 28.2 +0.7
MHLO **Agia Marina, M** 2.46 347 P Pn 04 33 28.2 +0.4
MHLO **Agia Marina, M** 2.46 347 P Pn 04 33 28.6 +0.8
MHLA **Plaka, Milos I** 2.51 347 P Pn 04 33 29.9 +1.4
KYTH **Kithira** 2.59 320 P Pn 04 33 31.8 +2.2
KYTH **Kithira** 2.59 320 P Pn 04 33 31.8 +2.2
AMGA **Amorgos Island** 2.62 14 P Pn 04 33 31.9 +1.9
SLUM **Salum** 2.79 178 P Pn 04 33 34.2 +1.9
baz=179
SLUM S **Sn** 04 34 06.3 +1.1
baz=179
APE **Apeiranthos** 2.79 7 *e*P Pn 04 33 33.8 +1.4
APE **Apeiranthos** 2.79 7⇑*e*P Pn 04 33 32.9 +0.5
APE **Apeiranthos** 2.79 7 P Pn 04 33 32.9 +0.5
SERI **Serifos** 2.91 350 P Pn 04 33 34.6 +0.6
SERI **Serifos** 2.91 350 P Pn 04 33 34.3 +0.3
VLI **Veliai** 3.00 325 P Pn 04 33 35.7 +0.5
VLI **Veliai** 3.00 325 P Pn 04 33 35.8 +0.6
ARG **Arkhangelos** 3.13 51 *e*P Pn 04 33 39.4 +2.4
ARG **Arkhangelos** 3.13 51 P Pn 04 33 39.2 +2.2
ARG **Arkhangelos** 3.13 51 P Pn 04 33 39.5 +2.4
DAT **Datca** 3.16 39 *e*P Pn 04 33 39.4 +1.9
DAT **Datca** 3.16 39 *i*P Pn 04 33 39.5 +1.9
DAT IAML_P
comp=Z,606nm,0.2s
BODT **Bodrum** 3.30 32 *e*P Pn 04 33 41.1 +1.8
BDRM **Kayabasi** 3.36 34 *i*P Pn 04 33 42.4 +2.1
BDRM IAML_P
comp=Z,657nm,0.3s
KRND **KRANIDI** 3.47 333 P Pn 04 33 42.6 +1.0
MRSB **Marmaris-Mugla** 3.50 45 *e*P Pn 04 33 44.5 +2.4
DID **Didima** 3.55 335 P Pn 04 33 42.6 -0.2
DID **Didima** 3.55 335 P Pn 04 33 43.0 +0.2
EPID **Epidavros** 3.69 335 P Pn 04 33 45.4 +0.7
SMG **Samos** 3.69 22 P Pn 04 33 45.6 +0.9
VLY **Voula,Athens** 3.71 344 P Pn 04 33 45.5 +0.5
VLY **Voula,Athens** 3.71 344 P Pn 04 33 46.2 +1.2
VLX **Vlachokerasia** 3.79 325 P Pn 04 33 47.3 +1.2
GCAM **G?zelcaml?** 3.82 26 *e*P Pn 04 33 48.5 +2.1
ATHU **Athens Univers** 3.82 344 P Pn 04 33 46.9 +0.4
DALY **Dalyan (Mula)** 3.84 48 *e*P Pn 04 33 49.0 +2.3
DALY **Dalyan (Mula)** 3.84 48 *i*P Pn 04 33 49.2 +2.5
DALY IAML_P
comp=Z,1μm,0.2s
YER **Yerkesik** 3.84 41 *e*P Pn 04 33 48.8 +1.9
YER **Yerkesik** 3.84 41 P Pn 04 33 48.7 +1.9
TURN **Turunc** 3.84 47 *e*P Pn 04 33 45.2 -1.6
TURN **Turunc** 3.84 47 *i*P Pn 04 33 45.5 -1.3
TURN IAML_P
comp=Z,2μm,0.1s
ITM **Ithomi** 3.87 319 *e*P Pn 04 33 49.7 +2.5
ITM **Ithomi** 3.87 319 *e*Pn Pn 04 33 47.8 +0.5
ITM **Ithomi** 3.87 319 P Pn 04 33 47.7 +0.5
PTL **Penteli** 3.88 345 P Pn 04 33 47.8 +0.4
PTL **Penteli** 3.88 345 P Pn 04 33 48.0 +0.6
TRIP **Tripoli** 3.97 325 P Pn 04 33 50.4 +1.8
FETY **Fethiye** 4.00 53 *e*P Pn 04 33 50.3 +1.3
FETY **Fethiye** 4.00 53 P Pn 04 33 50.0 +1.0
FETY **Fethiye** 4.00 53 *i*P Pn 04 33 50.7 +1.7
FETY IAML_P
comp=Z,1μm,0.2s
ACOR **Acrocorinthos** 4.02 334 P Pn 04 33 50.1 +0.8
AYDN **Tasoluk** 4.05 33 *i*P Pn 04 33 52.3 +2.6
AYDN IAML_P
comp=Z,2μm,0.3s
MES3 **Kyparissia** 4.06 318 P Pn 04 33 50.8 +1.0
LTK **Loutraki** 4.11 336 P Pn 04 33 50.6 +0.1
KSL **Kastellorizon** 4.11 62 P Pn 04 33 51.6 +1.1
KSL **Kastellorizon** 4.11 62 P Pn 04 33 51.7 +1.3
VILL **Villia** 4.13 340 P Pn 04 33 50.8 0.0
CHOS **Chios island** 4.16 10 *e*P Pn 04 33 53.4 +2.2
CHOS **Chios island** 4.16 10 P Pn 04 33 52.3 +1.1
AKAS **Kas** 4.16 61 *i*P Pn 04 33 52.9 +1.6
AKAS IAML_P
comp=Z,5μm,0.1s
VIL2 **Platees** 4.19 340 P Pn 04 33 51.1 -0.4
URLA **Izmir** 4.24 16 *e*P Pn 04 33 54.1 +1.9
GUR **Goura** 4.27 329 P Pn 04 33 53.9 +1.1
GUR **Goura** 4.27 329 P Pn 04 33 54.1 +1.3
AYDB **Zeytinkoy-Aydi** 4.29 31 *e*P Pn 04 33 55.1 +2.0
PROD **Prodromos** 4.34 336 P Pn 04 33 53.6 -0.1
KLV **Kalavryta, Ach** 4.44 328 P Pn 04 33 55.5 +0.4
DRO **Drossia** 4.57 324 P Pn 04 33 59.0 +2.2
MRKA **Markates** 4.57 345 P Pn 04 33 57.3 +0.4
MRKA **Markates** 4.57 345 P Pn 04 33 57.3 +0.4
DSF **Desfina** 4.61 334 P Pn 04 33 58.1 +0.8
LKR **Lokris** 4.67 339 P Pn 04 33 58.9 +0.8
LAKA **Lakka** 4.68 328 P Pn 04 34 00.3 +2.0
ATAL **Atalanti** 4.70 340 P Pn 04 33 58.7 +0.1
AKUM **Antalya-Kumluc** 4.74 63 *i*P Pn 04 34 00.1 +1.0
AKUM IAML_P
comp=Z,2μm,0.1s
KALE **Kalithea** 4.74 331 P Pn 04 33 59.9 +0.7
TRIZ **Trizonia** 4.75 330 P Pn 04 34 00.7 +1.5
SERG **Sergoula** 4.79 330 P Pn 04 34 01.1 +1.2
SIGR **SIGRI** 4.95 7 P Pn 04 34 02.6 +0.6
ANX **Ano Chora** 5.00 330 P Pn 04 34 03.5 +0.7
MANT **Manisa** 5.03 33 *i*P Pn 04 34 05.7 +2.4
MANT IAML_P
comp=Z,579nm,0.3s
SWA2 5.04 176 P Pn 04 34 04.6 +1.4
baz=177
KORT **Korkueli** 5.06 56 *i*P Pn 04 34 07.7 +4.1
KORT *i*S **Sn** 04 35 05.6 +4.3
KORT IAML_P
comp=Z,2μm,0.2s
PVO **Paravola** 5.19 327 P Pn 04 34 08.5 +3.2
AGG **Agios Georgios** 5.22 336 *e*P Pn 04 34 08.7 +2.9
AGG **Agios Georgios** 5.22 336 *e*Pn Pn 04 34 06.0 +0.2
AGG **Agios Georgios** 5.22 336 *e*P Pn 04 34 06.0 +0.2
AGG **Agios Georgios** 5.22 336 P Pn 04 34 07.0 +1.2
BRDR **BURDUR-Merkez** 5.26 48 *i*P Pn 04 34 08.1 +1.7
BRDR IAML_P
comp=Z,423nm,0.2s
EVR **Evrytania** 5.32 331 P Pn 04 34 09.9 +2.7
PDO **Prodromos** 5.34 325 P Pn 04 34 10.3 +3.0
KHAL **Karahalli** 5.40 40 *i*P Pn 04 34 10.0 +1.8
KHAL *i*S **Sn** 04 35 08.8 -0.9
KHAL IAML_P
comp=Z,364nm,0.2s
USAK **Uak-Merkez** 5.43 34 *i*P Pn 04 34 11.0 +2.4
USAK IAML_P
comp=Z,2μm,0.3s
FSK **Fiskardo** 5.54 320 P Pn 04 34 13.5 +3.4
EVGI **Lefkada island** 5.62 322 P Pn 04 34 13.0 +1.9
LKD2 **Lefkada island** 5.74 323 P Pn 04 34 13.7 +0.8
BALB **Balikesir** 5.79 22 *e*Pn Pn 04 34 13.4 0.0
THL **Klokotos Trika** 5.82 336 P Pn 04 34 14.5 +0.6
KEPZ **Antalya-Kepez** 5.90 62 *i*P Pn 04 34 17.4 +2.2
KEPZ IAML_P
comp=Z,438nm,0.2s
LIT **Litokhoron** 6.16 341 *e*Pn Pn 04 34 18.4 -0.3
LIT **Litokhoron** 6.16 341 *e*P Pn 04 34 18.4 -0.3
HMYD **Mayadein** 6.59 131 P Pn 04 34 25.9 +1.3
baz=131
ALN **Alexandroupoli** 6.64 6 *e*Pn Pn 04 34 25.1 -0.1
ALN **Alexandroupoli** 6.64 6 *e*P Pn 04 34 25.1 -0.1
ERMK **Ermenek** 6.79 68 *i*P Pn 04 34 30.7 +3.2
ERMK IAML_P
comp=Z,1μm,0.2s
KMER **Konya-Meram** 6.83 57 *i*P Pn 04 34 31.4 +3.4
KMER IAML_P
comp=Z,232nm,0.2s
FNA **Florina** 7.13 337 *e*Pn Pn 04 34 32.1 +0.1
FNA **Florina** 7.13 337 *e*P Pn 04 34 32.1 +0.1
KOT **Kottamia** 7.17 125 P Pn 04 34 33.9 +1.3
baz=126
VAY **Valandovo** 7.30 345 *i*Pn Pn 04 34 44.4 +10
HHAG **Hagoal** 7.34 124 P Pn 04 34 37.0 +2.1
baz=124
KRUS **Krusevo** 7.70 338 *i*Pn Pn 04 34 40.0 +0.2
NBNS **Bani Suef** 7.74 135 P Pn 04 34 41.9 +1.6
baz=135
STIP **Stip** 7.74 344 *e*Pn Pn 04 34 39.8 -0.6
TIP **Timpagrande** 8.29 308 *e*Pn Pn 04 34 48.8 +0.9
VTS **Vitosha** 8.44 351 *e*Pn Pn 04 34 50.6 +0.5
VTS **Vitosha** 8.44 351 *e*P Pn 04 34 50.6 +0.5
MMAI **Mount Meron Ar** 8.68 96 P Pn 04 34 56.3 +3.0
comp=Z,3.9nm,0.3s,baz=290,slow=9.9,SNR=4.3
MMAI S **Sn** 04 36 27.3 -3.2
comp=Z,8.5nm,0.3s,baz=307,slow=31,SNR=4.2
AMAZ **Amatzia** 8.70 106 P Sn 04 36 27.1 -3.7
BR101 **Keskin Array S** 8.72 49 *e*Pn Pn 04 34 54.5 +0.6
BR101 *e*Sn **Sn** 04 36 27.4 -4.0
BR131 **Keskin Array S** 8.72 49 *e*Pn Pn 04 34 54.2 +0.4
BRTR **Keskin Array B** 8.72 49 P Pn 04 34 54.5 +0.6
comp=Z,0.2nm,0.3s,baz=75,slow=26,SNR=6.6
BRTR S **Sn** 04 36 27.4 -4.0
baz=218,slow=26,SNR=2.0
BRTR LR LR 04 39 13.1
comp=Z,166nm,19.0s,baz=227,slow=44
MMLI **Mount Malkishu** 8.83 99 Pn Pn 04 34 54.5 -0.8
MMLI **Mount Malkishu** 8.83 99 P Sn 04 36 27.5 -6.5
GEM **Giv'at Ha'Em** 8.86 94 Pn Pn 04 34 55.2 -0.5
NATI **Neve Ativ** 8.91 94 Pn Pn 04 34 56.4 0.0
YTIR **Yattir** 8.92 106 Pn Pn 04 34 56.5 -0.1
YTIR Sn **Sn** 04 36 30.9 -5.4
HMDT **Nahal Hemdat** 8.96 100 Pn Pn 04 34 57.0 -0.1
SHMJ **Saham** 9.04 97 P Sn 04 36 36.7 -2.5
SHMJ **Saham** 9.04 97 P Pn 04 35 02.6 +4.4
DSI **Dead Sea** 9.05 105 Pn Pn 04 34 58.9 +0.5
MZDA **Masada** 9.13 106 Pn Pn 04 34 58.4 -1.0
MZDA Sn **Sn** 04 36 35.9 -5.5
KRMI **Paran Flat** 9.15 114 Pn Pn 04 34 59.3 -0.4
VAE **Valguarnera** 9.24 293 P Pn 04 35 02.5 +1.5
comp=Z,0.8nm,0.3s,baz=67,slow=15,SNR=2.1
VAE S **Sn** 04 36 38.2 -6.0
comp=Z,0.7nm,0.3s,baz=256,slow=17,SNR=1.7
PRNI **Paran** 9.25 112 Pn Pn 04 35 00.5 -0.6
LISJ **El Lisan** 9.25 106 P Sn 04 36 40.6 -3.7
ZFRI **Zfri** 9.29 111 Pn Pn 04 35 01.1 -0.5
WALJ **Wala** 9.40 104 P Sn 04 36 44.4 -3.7
WALJ **Wala** 9.40 104 P Pn 04 35 04.6 +1.5
HRFI **Mount Harif** 9.43 114 Pn Pn 04 35 03.3 -0.2
HRFI **Mount Harif** 9.43 114 P Sn 04 36 43.1 -5.6
HRFI **Mount Harif** 9.43 114 P Pn 04 35 04.3 +0.8
comp=Z,29nm,0.5s
MBRI **Mt Berech** 9.45 116 Pn Pn 04 35 03.4 -0.5
EIL **Elat** 9.55 116 P Pn 04 35 06.7 +1.5
comp=Z,2.6nm,0.3s,baz=243,slow=9.0,SNR=21
EIL S **Sn** 04 36 47.1 -4.5
comp=Z,2.4nm,0.3s,baz=74,slow=15,SNR=5.4
EIL **Elat** 9.55 116 Pn Pn 04 35 04.7 -0.4
AQBJ **Aqaba** 9.59 116 P Sn 04 36 52.1 -0.6
AQBJ **Aqaba** 9.59 116 P Pn 04 35 06.8 +1.1
HSNJ **Maan** 9.82 111 P Sn 04 36 54.4 -4.1
ASF **Jabal al Asfar** 10.10 99 P Pn 04 35 17.7 +4.9
comp=Z,0.4nm,0.3s,baz=218,slow=18,SNR=2.7
ASF S **Sn** 04 37 01.7 -3.8
comp=Z,0.7nm,0.3s,baz=290,slow=20,SNR=3.5
STON **Ston** 10.34 328 *e*Pn Pn 04 35 12.8 -3.1
STON Sn Sn 04 36 59.0 -12
MLR **Muntele Rosu** 11.21 3 LR LR 04 40 23.5
comp=Z,118nm,20.1s,baz=117,slow=41
UDBI **Udbina** 12.51 328 *e*Pn Pn 04 35 43.5 -2.1
NVLJ **Novalja** 12.94 325 *e*Pn Pn 04 35 49.3 -2.2
SOKA **Soboth** 14.54 331 *e*P P 04 36 20.7 +1.0
comp=Z,4.3nm,1.2s
OBKA **Obir** 14.60 330 *e*Pn Pn 04 36 15.0 +0.8
comp=Z,0.6nm,0.5s
ARSA **Arzberg** 14.83 334 *e*P P 04 36 23.8 +0.9
comp=Z,1.9nm,0.5s
SOP **Sopron** 14.84 337 P P 04 36 25.8 +2.8
SOP pmax pmax
comp=Z,7.0nm,0.6s
VYHS **Vyhne** 14.94 344 *e*P P 04 36 25.6 +1.5
MYKA **Terra Mystica** 15.08 328 *e*Pn Pn 04 36 22.5 +1.9
comp=Z,0.4nm,0.4s
MODS **Modra-Piesok** 15.24 340 *e*P P 04 36 27.0 -0.4
MODS **Modra-Piesok** 15.24 340 *e*PN P 04 36 27.0 -0.4
KBA **Koelnbreinsper** 15.56 329 *e*Pn P 04 36 31.4 +0.3
comp=Z,2.9nm,0.6s
KBA **Koelnbreinsper** 15.56 329 P P 04 36 34.3 +3.2
KBA pmax pmax
comp=Z,7.0nm,1.3s
ABTA **Abfaltersbach** 15.68 326 *e*Pn P 04 36 33.1 +0.7
comp=Z,4.7nm,1.1s
MOA **Molln** 15.80 332 *e*Pn P 04 36 33.5 -0.1
comp=Z,3.8nm,1.0s
VRAC **Vranov** 16.27 340 P Pn 04 36 37.1 +1.1
comp=Z,0.3nm,0.3s,baz=190,slow=13,SNR=5.8
VRAC LR LR 04 43 36.5
comp=Z,43nm,18.7s,baz=186,slow=40
NEY **Neytrino** 16.37 52⇑*e*P P 04 36 39.4 -0.8
WTTA **Wattenberg** 16.46 326 *e*Pn P 04 36 40.2 -1.0
comp=Z,24nm,1.6s
WATA **Walderalm** 16.54 326 *e*Pn P 04 36 43.2 +1.2
comp=Z,4.9nm,0.6s
SHA1 **Shidzhatmaz** 16.56 50⇑*e*P Pn 04 36 40.3 +0.4
SQTA **Sankt Quirin** 16.63 325 *e*Pn Pn 04 36 40.6 -0.1
comp=Z,14nm,1.6s
FUORN **Ofenpass-Fuorn** 16.68 322 *e*Pn Pn 04 36 41.6 +0.2
comp=Z,18nm,1.3s
AKASG **Malin Array Be** 16.68 9 P Pn 04 36 41.3 +0.2
comp=Z,4.2nm,0.3s,baz=201,slow=10,SNR=12
AKBB **Malin Array Si** 16.68 9 *e*Pn Pn 04 36 41.1 0.0
comp=Z,16nm,0.9s
KIV **Kislovodsk** 16.68 49 *e*Pn Pn 04 36 41.0 -0.4
comp=Z,22nm,0.9s
KIV **Kislovodsk** 16.68 49 *e*P Pn 04 36 40.5 -0.9
KIV pmax pmax
comp=Z,54nm,1.1s
KIV MLR MLR
comp=Z,98nm,13.0s
GNI **Garni** 16.69 64 LR LR 04 44 37.0
comp=Z,171nm,19.3s,baz=266,slow=42
KVAR **Kislovodsk Arr** 16.69 49 P P 04 36 43.5 -0.2
baz=114,slow=20,SNR=6.4
KBZ **Khabaz** 16.71 50 P P 04 36 44.1 +0.4
comp=Z,0.3nm,0.3s,baz=245,slow=7.7,SNR=12
KBZ LR LR 04 44 28.2
comp=Z,32nm,18.4s,baz=319,slow=42
FETA **Feichten** 16.72 324 *e*Pn P 04 36 44.5 +0.5
comp=Z,9.5nm,1.3s
MOTA **Moosalm** 16.77 325 Pn P 04 36 44.6 +0.1
comp=Z,0.9nm,0.4s
GEC2 **GERESS Array S** 16.83 333 *e*Pn Pn 04 36 43.2 0.0
comp=Z,4.9nm,0.6s
GEC2 **GERESS Array S** 16.83 333 *e*P Pn 04 36 43.2 0.0
GEC2 pmax pmax
comp=Z,5.0nm,0.6s
GERES **GERESS Array B** 16.83 333 P Pn 04 36 42.6 -0.6
comp=Z,0.6nm,0.3s,baz=146,slow=12,SNR=29
GERES LR LR 04 45 21.5
comp=Z,60nm,18.5s,baz=104,slow=45
ZEI **Tsey** 16.95 54 *e*P P 04 36 47.5 +0.8
ZEI pmax pmax
comp=Z,25nm,1.1s
DAVOX **Davos/Dischmat** 16.98 322 P Pn 04 36 45.7 +0.6
comp=Z,0.2nm,0.3s,baz=157,slow=15,SNR=2.3
DAVOX LR LR 04 44 45.6
comp=Z,64nm,18.1s,baz=114,slow=43
RETA **Reutte** 17.03 325 *e*Pn P 04 36 48.4 +1.0
comp=Z,1.1nm,0.4s
KHC **Kasperske Hory** 17.11 334 *e*Pn Pn 04 36 47.0 +0.3
comp=Z,13nm,1.9s
KHC **Kasperske Hory** 17.11 334 *e*P Pn 04 36 47.0 +0.3
KHC pmax pmax
comp=Z,13nm,1.9s
KHC **Kasperske Hory** 17.11 334 *e*P Pn 04 36 46.1 -0.6
KHC *e*x x 04 36 48.5
DPC **Dobruska-Polom** 17.29 341 *e*P Pn 04 36 48.9 0.0
DPC **Dobruska-Polom** 17.29 341 *e*P Pn 04 36 48.9 0.0
DAVA **Damuels** 17.32 323 Pn P 04 36 52.4 +1.7
comp=Z,4.0nm,0.6s
GRA1 **Grafenberg Arr** 18.48 331 *e*Pn P 04 37 03.3 0.0
comp=Z,28nm,1.3s
GRF **Grafenberg Arr** 18.48 331 *e*P P 04 37 03.3 0.0
GRF pmax pmax
comp=Z,28nm,1.3s
GNBR **Gunib** 18.92 58⇓*e*P P 04 37 07.6 -0.7
CLL **Collm** 19.14 336 *e*P Pn 04 37 11.0 -0.4
CLL *e*(sP) **pP** 04 37 17.0 +0.4
CLL **Collm** 19.14 336 *e*P Pn 04 37 11.0 -0.4
VSR **Storozhevoye** 19.76 27⇑*e*P P 04 37 16.8 -0.4
VSR pmax pmax
comp=Z,14nm,0.9s
SUW **Suwalki** 19.77 357 *e*P P 04 37 15.7 -1.6
comp=Z,28nm,0.9s
SUW **Suwalki** 19.77 357 *e*P P 04 37 15.7 -1.6
SUW pmax pmax
comp=Z,28nm,0.9s
MEM **Membach** 21.45 325 P P 04 37 35.9 +0.3
DOU **Dourbes** 21.81 323 P P 04 37 40.0 +0.7
OBN **Obninsk** 22.30 18⇓*e*P P 04 37 45.8 +1.2
OBN *e* 04 38 06.7
OBN pmax pmax
comp=Z,42nm,2.5s
OBN MLR MLR
comp=Z,67nm,15.0s
ESDC **Sonseca Array** 23.78 292 P P 04 37 60.0 +0.1
comp=Z,0.5nm,0.4s,baz=91,slow=10,SNR=14
MDT **Midelt** 24.77 275 P P 04 38 10.8 +1.6
comp=Z,0.7nm,0.4s,baz=99,slow=12,SNR=5.1
GEYT **Alibeck** 26.84 73 P P 04 38 29.9 +2.1
comp=Z,0.9nm,0.7s,baz=8.5,slow=11,SNR=3.2
HFS **Hagfors** 26.91 347 P P 04 38 27.6 -0.5
comp=Z,1.0nm,0.3s,baz=162,slow=11,SNR=15
HFS LR LR 04 48 44.1
comp=Z,46nm,21.4s,baz=44,slow=36
FIA0 **FINESS Array S** 27.18 1 *e*P P 04 38 28.3 -2.2
FIA0 *e*PcP **PcP** 04 41 50.6 +0.4
FIA0 **FINESS Array S** 27.18 1 *e*P P 04 38 28.3 -2.2
FIA0 *e* 04 41 50.6
FINES **FINESS Array B** 27.18 1 P P 04 38 28.3 -2.2
comp=Z,0.7nm,0.3s,baz=162,slow=10,SNR=15
FINES PcP **PcP** 04 41 50.6 +0.4
comp=Z,1.2nm,0.7s,baz=159,slow=2.2,SNR=6.9
FINES LR LR 04 51 30.4
comp=Z,52nm,19.8s,baz=142,slow=42
FINES **FINESS Array B** 27.18 1 *i*P P 04 38 28.7 -1.8
FINES pmax pmax
comp=Z,1.0nm,0.3s
KLMR **Klimovskoe** 28.17 15 *e*P P 04 38 36.0 -3.4
KLMR pmax pmax
comp=Z,11nm,1.4s
KLMR **Klimovskoe** 28.17 15 *e*P P 04 38 36.0 -3.4
KLMR AMP 04 38 51.3
comp=Z,11nm,1.4s
NB2 **NORSAR Subarra** 28.23 346 P P 04 38 39.3 -0.7
comp=Z,1.0nm,0.5s,baz=159,slow=11
NB2 **NORSAR Subarra** 28.23 346 P P 04 38 39.0 -1.0
NB2 pmax pmax
comp=Z,3.0nm,0.3s
NB200 **NORSAR Array S** 28.23 346 *e*P P 04 38 38.6 -1.4
NOA **NORSAR Array B** 28.23 346 P P 04 38 38.6 -1.4
comp=Z,0.6nm,0.8s,baz=264,slow=5.5,SNR=8.3
NOA LR LR 04 51 42.6
comp=Z,30nm,21.2s,baz=20,slow=40
EKA **Eskdalemuir Ar** 28.73 326 P P 04 38 44.2 -0.2
comp=Z,1.0nm,0.6s,baz=120,slow=8.2,SNR=9.1
AKTO **Aktyubinsk** 28.88 46 P P 04 38 45.6 -0.3
comp=Z,0.7nm,0.3s,baz=232,slow=6.4,SNR=4.8
ABKAR **Akbulak array** 29.67 49 *e*P P 04 38 52.4 -0.5
comp=Z,2.6nm,1.0s
TOA1 **Torodi Ar. Sit** 29.90 231 *e*P P 04 38 56.8 +1.7
TORD **Torodi Ar. Bea** 29.90 231 P P 04 38 56.8 +1.6
comp=Z,3.1nm,0.4s,baz=34,slow=8.4,SNR=68
ARU **Arti** 31.79 36 *e*P P 04 39 09.5 -1.9
comp=Z,5.0nm,0.9s
ARU **Arti** 31.79 36*d*i*P P 04 39 09.7 -1.7
ARU 04 40 10.6
ARU S **S** 04 44 20.9 +0.9
ARU pmax pmax
comp=Z,6.0nm,0.9s
SVE **Sverdlovsk** 32.98 36 *e*P P 04 39 21.9 0.0
PMOZ **Porto Moniz, M** 35.10 280 *e*P P 04 39 43.8 +3.0
ARA0 **ARCESS Array S** 35.30 0 *e*P P 04 39 40.0 -1.8
ARCES **ARCESS Array B** 35.30 0 P P 04 39 40.0 -1.8
comp=Z,9.3nm,0.3s,baz=175,slow=9.5,SNR=19
ARCES LR LR 04 54 52.7
comp=Z,46nm,19.1s,baz=90,slow=38
KK31 **Karatay Array** 36.14 62 *e*P P 04 39 50.3 +0.8
comp=Z,2.1nm,0.8s
KK31 **Karatay Array** 36.14 62 *e*P P 04 39 50.3 +0.8
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KKAR **Karatay Array** 36.14 62 *e*P P 04 39 49.9 +0.4
comp=Z,2.1nm,0.8s
KKAR **Karatay Array** 36.14 62 *e*P P 04 39 49.9 +0.4
KKAR pmax pmax
comp=Z,2.0nm,0.8s
AAK **Ala-Archa** 39.09 63⇓*e*P P 04 40 16.2 +1.6
AAK pmax pmax
comp=Z,6.0nm,1.7s
KURK **Kurchatov** 41.77 50 *e*P P 04 40 36.0 -0.4
comp=Z,4.4nm,0.9s
KURK **Kurchatov** 41.77 50*ce*P P 04 40 36.6 +0.2
KURK pmax pmax
comp=Z,5.0nm,1.3s
SPA0 **Spitsbergen Ar** 44.15 357 *e*P P 04 40 54.2 -1.2
comp=Z,34nm,1.5s
SPITS **Spitsbergen Ar** 44.15 357 P P 04 40 54.2 -1.2
comp=Z,0.8nm,0.5s,baz=162,slow=5.5,SNR=5.9
MK31 **Makanchi Array** 44.30 56 *e*P P 04 40 57.4 +0.4
comp=Z,2.3nm,0.6s
MK31 **Makanchi Array** 44.30 56 *e*P P 04 40 57.4 +0.4
MK31 pmax pmax
comp=Z,2.0nm,0.6s
MK32 **Makanchi Array** 44.30 56 *e*P P 04 40 57.6 +0.6
MKAR **Makanchi Array** 44.30 56 P P 04 40 57.6 +0.6
comp=Z,2.1nm,0.7s,baz=275,slow=6.1,SNR=16
ZAA1 **Zalesovo Array** 45.64 46 *e*P P 04 41 07.2 -0.3
ZALV **Zalesovo Beam** 45.64 46 P P 04 41 07.2 -0.3
comp=Z,4.2nm,0.3s,baz=262,slow=8.8,SNR=18
ZALV LR LR 05 04 27.5
comp=Z,24nm,18.2s,baz=68,slow=42
ZALV **Zalesovo Beam** 45.64 46 *i*P P 04 41 07.1 -0.4
ZALV pmax pmax
comp=Z,4.0nm,0.3s
WMQ **Urumqi** 48.49 59 *e*P P 04 41 32.3 +2.3
NRIK **Noril'sk** 48.69 25 P P 04 41 29.7 -1.3
comp=Z,2.9nm,0.6s,baz=231,slow=5.8,SNR=3.9
ZAK **Zakamensk** 57.36 48 *e*P P 04 42 35.7 +0.3
ZAK pmax pmax
comp=Z,4.0nm,1.2s
GTA **Gaotai** 58.42 61 *e*P P 04 42 43.9 +0.9
GTA pP pP 04 42 48.3 -1.3
GTA sP pwP 04 42 51.3 -2.2
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA smax smax
comp=N,14nm,0.8s
GTA smax smax
comp=E,10.0nm,1.0s
SONA0 **Songino Array** 60.08 50 *e*P P 04 42 54.7 +0.3
SONM **Songino Array** 60.08 50 P P 04 42 54.7 +0.3
comp=E,1.0nm,0.4s,baz=287,slow=8.4,SNR=8.3
BOSA **Boshof** 62.56 180 LR LR 05 13 44.4
comp=E,71nm,20.4s,baz=148,slow=39
LZH **Lanzhou** 62.63 63 *e*P P 04 43 12.0 +0.2
LZH pP pP 04 43 15.3 -3.2
LZH sP pwP 04 43 16.8 -5.6
LZH *e*PP **PP** 04 45 32.5 +3.0
LZH pmax pmax
comp=Z,17nm,1.3s
LZH pmax pmax
comp=Z,49nm,7.5s
CD2 **Chengdu** 64.75 69 *e*P P 04 43 25.3 -0.5
USRK **Ussuriysk Ar.** 77.49 45 P P 04 44 42.4 -0.2
comp=Z,1.7nm,0.6s,baz=295,slow=6.0,SNR=5.0
YKA **Yellowknife Ar** 78.26 342 P P 04 44 46.5 -0.1
comp=Z,0.2nm,0.4s,baz=32,slow=5.3,SNR=5.4
YKB5 **Yellowknife Ar** 78.26 342 *e*P P 04 44 46.5 -0.1
KS15 **Wonju Array Si** 78.83 52 *e*P P 04 44 50.8 +0.5
comp=Z,21nm,1.6s
KSRS **Korea Array** 78.85 52 P P 04 44 50.8 +0.4
comp=Z,1.4nm,0.7s,baz=290,slow=4.7,SNR=6.4
ILAR **Eielson Array** 81.07 357 P P 04 45 01.9 +0.1
comp=Z,0.4nm,0.8s,baz=28,slow=4.1,SNR=4.1
ILB **Eielson Array** 81.07 357 *e*P P 04 45 01.9 +0.1
comp=Z,10nm,1.9s
MAJO **Matsushiro** 85.94 48 *e*P P 04 45 28.1 +0.8
MAJO **Matsushiro** 85.94 48 *e*P P 04 45 28.2 +0.8
MJAR **Matsushiro Arr** 85.94 48 P P 04 45 28.1 +0.7
comp=Z,2.2nm,0.9s,baz=306,slow=6.3,SNR=6.9

SVSA 16 04:51:18.4±0.7, 37.56N×25.16W, h5km, MD3.6, ML2.5, 2C-1D, Error ellipse: s-maj=3.7km s-min=1.3km az=74.0,

Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	**0.22**	**358**	*i* P	Pg	04 51 22.3	-0.5
BART				*e* S	Sg	04 51 25.9	+0.2
BART				A	A	04 51 28.2	
	812nm,0.3s						
PCALD	**Caldeiras da R**	**0.35**	**313**	*e* S	Sg	04 51 29.4	-0.5
PCALD				A	A	04 51 32.7	
	117nm,0.5s						
PDA	**Ponta Delgada**	**0.44**	**296**	*i* P	Pg	04 51 25.8	-1.1
PDA				*e* S	Sg	04 51 32.2	-0.5
PDA				A	A	04 51 32.8	
	195nm,0.1s						
PSET	**Sete Cidades**	**0.52**	**301**	*e* P	Pg	04 51 27.3	-1.1
PSET				*e* S	Sg	04 51 34.1	-1.0
PSET				A	A	04 51 36.3	
	207nm,0.5s						
PSMN	**Pico do Norte,**	**0.56**	**172**	*e* P	Pg	04 51 27.9	-1.2
PSMN				*e* S	Sg	04 51 35.1	-1.3
PSMN				A	A	04 51 36.5	
	30nm,0.5s						
PSMA	**Santa Maria**	**0.56**	**177**	*e* P	Pg	04 51 27.9	-1.3
PSMA				*e* S	Sg	04 51 35.2	-1.3
PSMA				A	A	04 51 36.0	
	67nm,0.2s						

IDC ***16*** *05:59:03.9±5.2, 34°.27N×25°.04E, h20km±34km, mb3.5/4, mb1 3.4/8, mb1mx3.3/39, mbtmp3.4/8, ML3.3/4, Error ellipse: s-maj=25.7km s-min=18.8km az=131.0*
ISCJB ***16*** *04:59:04.1±0.9, 34°.23N±0°.04×25°.10E±0°.06, h26km±8km, mb3.5/4, Error ellipse: s-maj=8.2km s-min=6.0km az=1.6*
ATH ***16*** *04:59:04.9, 34°.32N×25°.04E, h26km±2km, ML2.9/5, Error ellipse: s-maj=4.4km s-min=1.5km az=352.0*
HLW ***16*** *04:59:06.0, 34°.16N×25°.94E, h10km±10km, Ml3.3*
THE ***16*** *04:59:06.2, 34°.37N×25°.02E, h6km±4km, ML3.2/2, Error ellipse: s-maj=5.0km s-min=1.8km az=4.0*
ISC 16 04:59:04.9±1.4, 34°.28N±0°.04×25°.03E±0°.04, h26km±12km, n34, σ0°93/43, mb3.8/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.76**	**346**	P	**Pb**	**04 59 19.1**	**-0.4**
SIVA				S	**Sn**	**04 59 29.5**	**-1.1**
SIVA	**Sivas**	**0.76**	**346**	P	**Pb**	**04 59 19.3**	**-0.2**
SIVA				S	**Sb**	**04 59 29.2**	**-0.2**
SIVA				AML	AML	04 59 38.4	
	comp=E,6116μm,0.5s						
SIVA				AML	AML	04 59 44.4	
	comp=N,4201μm,0.5s						
TMBK	**Timbaki Herakl**	**0.82**	**345**	P	**Pn**	**04 59 20.6**	**-0.2**
TMBK				S	**Sn**	**04 59 31.9**	**-0.2**
LAST	**Lasithi**	**0.95**	**23**	P	**Pn**	**04 59 22.3**	**-0.4**
LAST	**Lasithi**	**0.95**	**23**	P	**Pn**	**04 59 22.7**	**0.0**
LAST				S	**Sn**	**04 59 36.2**	**+0.7**
LAST				AML	AML	04 59 50.9	
	comp=E,906μm,1.3s						
LAST				AML	AML	04 59 51.3	
	comp=N,823μm,0.9s						
GVD	**Gavdhos**	**0.96**	**306**	P	**Pb**	**04 59 22.9**	**0.0**
GVD				S	**Sn**	**04 59 36.1**	**+0.6**
GVD	**Gavdhos**	**0.96**	**306**	P	**Pb**	**04 59 23.0**	**+0.1**
GVD				S	**Sn**	**04 59 36.7**	**+1.2**
GVD				AML	AML	04 59 46.7	
	comp=E,3554μm,0.5s						
GVD				AML	AML	04 59 48.5	
	comp=N,2372μm,0.4s						
IDI	**Anoyia**	**1.01**	**353**	Pg	**Pn**	**04 59 23.4**	**-0.1**
	comp=N,9.9nm,0.3s,baz=246,slow=9.8,SNR=46						
IDI				Lg	Lg	04 59 36.1	
	comp=N,28nm,0.3s,baz=159,slow=23,SNR=14						
KSTL	**Kastelli Herak**	**1.02**	**2**	P	**Pn**	**04 59 23.0**	**-0.6**
KSTL				S	**Sn**	**04 59 35.3**	**-1.8**
NPS	**Neapolis**	**1.09**	**26**	P	**Pn**	**04 59 24.9**	**+0.3**
NPS	**Neapolis**	**1.09**	**26**	P	**Pn**	**04 59 24.8**	**+0.3**
NPS				AML	AML	04 59 55.7	
	comp=N,830μm,0.9s						
NPS				AML	AML	05 00 00.1	
	comp=E,824μm,0.9s						
PRNS	**Prines Rethymn**	**1.17**	**338**	P	**Pb**	**04 59 26.3**	**-0.1**
ZKR	**Zakros**	**1.28**	**49**	P	**Pb**	**04 59 28.9**	**+0.5**
ZKR				AML	AML	04 59 55.2	
	comp=N,264μm,0.6s						
ZKR				AML	AML	05 00 03.2	
	comp=E,873μm,0.7s						
VAM	**Vamos**	**1.32**	**329**	P	**Pb**	**04 59 29.0**	**0.0**
VAM	**Vamos**	**1.32**	**329**	P	**Pb**	**04 59 29.0**	**0.0**
IMMV	**Iera Moni Meta**	**1.46**	**324**	P	**Pb**	**04 59 31.1**	**-0.3**
IMMV	**Iera Moni Meta**	**1.46**	**324**	P	**Pb**	**04 59 31.1**	**-0.3**
KARP	**Karpathos**	**2.16**	**54**	P	**Pb**	**04 59 43.0**	**-0.3**
IOSP	**Ios island**	**2.45**	**5**	P	**Pn**	**04 59 44.3**	**+1.1**
MHLO	**Agia Marina, M**	**2.46**	**348**	P	**Pn**	**04 59 44.3**	**+1.0**
KYTH	**Kithira**	**2.56**	**321**	P	**Pb**	**04 59 47.6**	**-2.6**
SLUM	**Salum**	**2.78**	**177**	P	**Pn**	**04 59 49.3**	**+1.5**
	baz=194						
SLUM				AMP		05 00 00.0	
	baz=194						
SLUM				S	**Sn**	**05 00 20.8**	**+0.3**
	baz=194						
APE	**Apeiranthos**	**2.81**	**8**	P	**Pn**	**04 59 48.9**	**+0.6**
VLI	**Veliai**	**2.97**	**326**	P	**Pn**	**04 59 52.5**	**+2.1**
SWA2		**5.03**	**176**	P	**Pn**	**05 00 19.6**	**+0.9**
	baz=185						
SWA2				S	**Sn**	**05 01 13.5**	**-2.5**
	baz=185						
HFRF	**Wahat Farafira**	**7.65**	**157**	P	**Pn**	**05 00 54.5**	**-0.1**
	baz=163						
BRTR	**Keskin Array B**	**8.77**	**49**	Pn	**Pn**	**05 01 10.4**	**+0.3**
	comp=E,0.0nm,0.3s,baz=272,slow=39,SNR=2.6						
AKASG	**Malin Array Be**	**16.70**	**9**	Pn	**Pn**	**05 02 57.8**	**+0.9**
	comp=E,0.3nm,0.3s,baz=200,slow=10,SNR=2.6						
KBZ	**Khabaz**	**16.76**	**50**	Pn	**Pn**	**05 02 58.4**	**+0.7**
	comp=E,0.2nm,0.3s,baz=245,slow=11,SNR=2.0						
GERES	**GERESS Array B**	**16.81**	**333**	Pn	**P**	**05 03 00.7**	**+0.2**
	comp=E,0.1nm,0.3s,baz=144,slow=12,SNR=4.6						
ESDC	**Sonseca Array**	**23.73**	**292**	P	**P**	**05 04 14.6**	**-0.3**
	comp=E,0.1nm,0.3s,baz=97,slow=10,SNR=3.5						
TORD	**Torodi Ar. Bea**	**29.85**	**231**	P	**P**	**05 05 09.6**	**-0.6**
	comp=E,1.0nm,0.6s,baz=34,slow=8.7,SNR=13						
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**05 07 13.4**	**+0.5**
	comp=E,0.7nm,0.6s,baz=277,slow=6.3,SNR=6.6						
ZALV	**Zalesovo Beam**	**45.69**	**46**	P	**P**	**05 07 22.9**	**-0.5**
	comp=E,0.9nm,0.5s,baz=261,slow=9.6,SNR=3.9						

ATH ***16*** *05:02:56.0, 34°.35N×25°.12E, h38km±2km, ML3.2/6, Error ellipse: s-maj=4.4km s-min=1.7km az=348.0*
THE ***16*** *05:02:55.9, 34°.34N×25°.11E, h0km±2km, ML3.2/4, Error ellipse: s-maj=4.3km s-min=1.4km az=166.0*
IDC ***16*** *05:02:55.5±4.2, 34°.33N×25°.14E, h26km±25km, mb3.5/4, mb1 3.5/6, mb1mx3.3/40, mbtmp3.6/6, ML4.1/2, Error ellipse: s-maj=34.9km s-min=21.3km az=133.0*
ISCJB ***16*** *05:02:56.8±1.0, 34°.32N±0°.09×25°.11E±0°.04, h53km±9km, mb3.8/5, Error ellipse: s-maj=14.7km s-min=5.5km az=178.6*
ISC 16 05:02:58.1±1.5, 34°.38N±0°.09×25°.09E±0°.03, h45km±14km, n59, σ1°17/69, mb4.1/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.67**	**340**	P	**Pn**	**05 03 09.7**	**-1.6**
SIVA				S	**Sn**	**05 03 22.2**	**+1.3**
SIVA	**Sivas**	**0.67**	**340**	P	**Pn**	**05 03 09.8**	**-1.6**
SIVA				S	**Sn**	**05 03 21.6**	**+0.7**
SIVA				AML	AML	05 03 27.2	
	comp=N,8476μm,0.7s						
SIVA				AML	AML	05 03 28.2	
	comp=E,11152μm,0.5s						
TMBK	**Timbaki Herakl**	**0.74**	**339**	P	**Pn**	**05 03 11.2**	**-1.0**
LAST	**Lasithi**	**0.84**	**22**	P	**Pn**	**05 03 12.7**	**-1.0**
LAST				S	**Sn**	**05 03 25.7**	**+0.7**
LAST	**Lasithi**	**0.84**	**22**	P	**Pn**	**05 03 12.9**	**-0.8**
LAST				S	**Sn**	**05 03 24.6**	**-0.3**
LAST				AML	AML	05 03 34.0	
	comp=N,1441μm,0.9s						
LAST				AML	AML	05 03 34.4	
	comp=E,1886μm,0.8s						
IDI	**Anoyia**	**0.92**	**350**	Pg	**Pn**	**05 03 13.8**	**-0.9**
	comp=E,54nm,0.3s,baz=172,slow=19,SNR=36						
IDI				Lg	Lg	05 03 27.2	
	comp=E,61nm,0.3s,baz=229,slow=13,SNR=10						
IDI				LR	LR	05 03 58.2	
	comp=E,129nm,21.8s,baz=230,slow=64						
KSTL	**Kastelli Herak**	**0.92**	**359**	P	**Pn**	**05 03 13.3**	**-1.3**
IACM	**Heraklion**	**0.92**	**359**	P	**Pn**	**05 03 14.5**	**-0.2**
GVD	**Gavdhos**	**0.94**	**299**	P	**Pn**	**05 03 14.4**	**-0.6**
GVD	**Gavdhos**	**0.94**	**299**	P	**Pn**	**05 03 14.1**	**-0.9**
GVD				S	**Sn**	**05 03 30.2**	**+2.8**
GVD	**Gavdhos**	**0.94**	**299**	P	**Pn**	**05 03 14.7**	**-0.3**
GVD				S	**Sn**	**05 03 28.6**	**+1.3**
GVD				AML	AML	05 03 37.9	
	comp=N,4837μm,0.4s						
GVD				AML	AML	05 03 38.9	
	comp=E,4662μm,0.5s						
NPS	**Neapolis**	**0.98**	**26**	P	**Pn**	**05 03 15.0**	**-0.5**
NPS				S	**Sn**	**05 03 29.8**	**+1.6**
NPS	**Neapolis**	**0.98**	**26**	P	**Pn**	**05 03 15.2**	**-0.3**
NPS				S	**Sn**	**05 03 29.6**	**+1.5**
NPS				AML	AML	05 03 43.5	
	comp=N,1180μm,0.5s						
NPS				AML	AML	05 03 48.0	
	comp=E,1180μm,0.9s						
PRNS	**Prines Rethymn**	**1.09**	**334**	P	**Pn**	**05 03 17.1**	**+0.1**
ZKR	**Zakros**	**1.18**	**51**	*e* P	**Pn**	**05 03 17.4**	**-0.8**
ZKR	**Zakros**	**1.18**	**51**	P	**Pn**	**05 03 19.0**	**+0.8**
ZKR	**Zakros**	**1.18**	**51**	P	**Pn**	**05 03 18.1**	**-0.1**
ZKR				S	**Sn**	**05 03 33.4**	**+0.3**
ZKR				AML	AML	05 03 50.0	
	comp=E,1935μm,0.5s						
ZKR				AML	AML	05 03 51.0	
	comp=N,719μm,0.8s						
VAM	**Vamos**	**1.26**	**325**	P	**Pn**	**05 03 19.4**	**+0.1**
VAM	**Vamos**	**1.26**	**325**	P	**Pn**	**05 03 19.7**	**+0.5**
VAM				S	**Sn**	**05 03 36.1**	**+1.1**
VAM				AML	AML	05 03 46.0	
	comp=N,1925μm,0.5s						
VAM				AML	AML	05 03 48.4	
	comp=E,2265μm,0.6s						
IMMV	**Iera Moni Meta**	**1.41**	**320**	*e* P	**Pn**	**05 03 22.3**	**+1.0**
IMMV	**Iera Moni Meta**	**1.41**	**320**	P	**Pn**	**05 03 21.8**	**+0.5**
IMMV	**Iera Moni Meta**	**1.41**	**320**	P	**Pn**	**05 03 21.9**	**+0.6**
SANT	**Santorini**	**2.01**	**9**	P	**Pn**	**05 03 30.3**	**+0.7**
KARP	**Karpathos**	**2.06**	**55**	*e* P	**Pn**	**05 03 29.9**	**-0.4**
KARP	**Karpathos**	**2.06**	**55**	P	**Pn**	**05 03 32.3**	**+2.0**
ANKY	**Antikythira Is**	**2.08**	**316**	P	**Pn**	**05 03 31.6**	**+1.0**
ANKY	**Antikythira Is**	**2.08**	**316**	P	**Pn**	**05 03 31.3**	**+0.8**
IOSP	**Ios island**	**2.34**	**4**	P	**Pn**	**05 03 34.1**	**0.0**
MHLO	**Agia Marina, M**	**2.37**	**346**	P	**Pn**	**05 03 34.4**	**-0.1**
KYTH	**Kithira**	**2.51**	**319**	P	**Pn**	**05 03 37.8**	**+1.2**
APE	**Apeiranthos**	**2.70**	**7**	*e* P	**Pn**	**05 03 39.8**	**+0.7**
APE	**Apeiranthos**	**2.70**	**7**	P	**Pn**	**05 03 38.9**	**-0.2**
VLI	**Veliai**	**2.92**	**324**	P	**Pn**	**05 03 41.7**	**-0.3**
DAT	**Datca**	**3.10**	**40**	*e* P	**Pn**	**05 03 44.6**	**0.0**
DAT	**Datca**	**3.10**	**40**	*i* P	**Pn**	**05 03 46.1**	**+1.6**
DAT				IAML_P			
	comp=Z,227nm,0.2s						
BBRN	**Bozburun-Marma**	**3.33**	**46**	*e* P	**Pn**	**05 03 47.9**	**+0.2**
YER	**Yerkesik**	**3.78**	**42**	*e* P	**Pn**	**05 03 54.6**	**+0.7**
DALY	**Dalyan (Mula)**	**3.79**	**49**	*e* P	**Pn**	**05 03 54.4**	**+0.5**
DALY	**Dalyan (Mula)**	**3.79**	**49**	*i* P	**Pn**	**05 03 55.5**	**+1.6**
DALY				IAML_P			
	comp=Z,506nm,0.3s						
TURN	**Turunc**	**3.79**	**48**	*e* P	**Pn**	**05 03 50.9**	**-3.1**
TURN	**Turunc**	**3.79**	**48**	*i* P	**Pn**	**05 03 51.1**	**-2.8**
TURN				IAML_P			
	comp=Z,696nm,0.2s						
FETY	**Fethiye**	**3.96**	**54**	*e* P	**Pn**	**05 03 56.5**	**+0.2**
FETY	**Fethiye**	**3.96**	**54**	*i* P	**Pn**	**05 03 57.2**	**+0.9**
FETY				IAML_P			
	comp=Z,363nm,0.2s						
AYDN	**Tasoluk**	**3.98**	**34**	*i* P	**Pn**	**05 03 58.9**	**+2.3**
AYDN				IAML_P			
	comp=Z,534nm,0.3s						
AKAS	**Kas**	**4.13**	**62**	*e* P	**Pn**	**05 03 59.0**	**+0.2**
AKAS	**Kas**	**4.13**	**62**	*i* P	**Pn**	**05 03 59.1**	**+0.4**
AKAS				IAML_P			
	comp=Z,785nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**4.22**	**32**	*e* P	**Pn**	**05 04 01.3**	**+1.3**
AKUM	**Antalya-Kumluc**	**4.71**	**64**	*i* P	**Pn**	**05 04 06.0**	**-0.5**
AKUM				IAML_P			
	comp=Z,821nm,0.2s						
KORT	**Korkueli**	**5.01**	**57**	*e* P	**Pn**	**05 04 12.2**	**+1.3**
KORT	**Korkueli**	**5.01**	**57**	*i* P	**Pn**	**05 04 13.5**	**+2.6**
KORT				IAML_P			
	comp=Z,253nm,0.2s						
KHAL	**Karahalli**	**5.33**	**40**	*i* P	**Pn**	**05 04 16.7**	**+1.4**
KHAL				IAML_P			
	comp=Z,134nm,0.2s						
KEPZ	**Antalya-Kepez**	**5.87**	**63**	*i* P	**Pn**	**05 04 24.0**	**+1.4**
KEPZ				IAML_P			
	comp=Z,212nm,0.2s						
AKASG	**Malin Array Be**	**16.59**	**9**	Pn	**Pn**	**05 06 47.4**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=200,slow=10,SNR=4.9						
GERES	**GERESS Array B**	**16.74**	**333**	Pn	**P**	**05 06 51.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=146,slow=13,SNR=14						
ESDC	**Sonseca Array**	**23.73**	**291**	P	**P**	**05 08 06.0**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=75,slow=9.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**29.95**	**231**	P	**P**	**05 09 01.5**	**-0.6**
	comp=Z,1.6nm,0.4s,baz=38,slow=8.3,SNR=16						
ARCES	**ARCESS Array B**	**35.21**	**0**	P	**P**	**05 09 46.2**	**-1.3**
	comp=Z,8.9nm,0.3s,baz=173,slow=8.0,SNR=4.4						
MKAR	**Makanchi Array**	**44.25**	**56**	P	**P**	**05 11 02.9**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=271,slow=5.9,SNR=2.7						
ZALV	**Zalesovo Beam**	**45.59**	**46**	P	**P**	**05 11 12.7**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=285,slow=9.4,SNR=4.5						

DDA 16 05:03:05.0, 39°.67N×27°.64E, h16km, ML1.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.07**	**349**	*i* P	Pg	05 03 08.4	+0.1
BALY				*i* S	Sg	05 03 11.7	+1.2
BALY				IAML_P			
	comp=Z,1μm,0.2s						
STEP	**BALIKESIR_Sava**	**0.30**	**168**	*i* P	Pb	05 03 11.9	0.0
STEP				*i* S	Sb	05 03 17.2	+0.5
STEP				IAML_P			
	comp=Z,324nm,0.1s						

BJI ***16*** *05:18:57.1±0.0, 18°.31N×99°.07W, h35km, mb5.9/5, mB5.9/45, Ms5.7/58, Ms7 5.5/55*
ISCJB ***16*** *05:19:00.5±0.3, 18°.41N±0°.01×98°.97W±0°.01, h56km±2km, mb5.9/586, MS5.3/455, Error ellipse: s-maj=2.5km s-min=1.7km az=27.1*
MOS ***16*** *05:19:00.7±1.0, 18°.37N×99°.03W, h59km, mb6.2/94, MS5.2/68, Error ellipse: s-maj=5.8km s-min=3.5km az=90.9*
NEIC ***16*** *05:19:00.0±2.6, 18°.16N×99°.20W, h52km, mb5.9/613, ME5.6, MS5.3/427, MW5.8, MW5.8, MD5.8(MEX), Error ellipse: s-maj=8.0km s-min=7.3km az=236.0, Moment Tensor Solution. s56 Moment tensor: Scale 10^{17}Nm; M_{rr}=5.85; $M_{\theta\theta}$=3.39; $M_{\phi\phi}$=2.45; $M_{r\theta}$=3.07; $M_{\theta\phi}$=-2.80; $M_{\phi r}$=1.04; Best double couple: M_0=6.70000×10^{17} NP1:ϕ_s=320.00000°, δ=32.00000°, λ=-73.00000°. NP2:ϕ_s=120.00000°, δ=59.00000°, λ=-100.00000°. Principal axes: T 6.5100, Plg14.0000°, Azm218.0000°; N 0.2700, Plg9.0000°, Azm125.0000°; P -6.7800, Plg73.0000°, Azm4.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s=132.00000°, δ=51.00000°, λ=-98.00000°. NP2:ϕ_s=325.00000°, δ=40.00000°, λ=-80.00000°. Principal axes: T Plg5.0000°, Azm228.0000°; N Plg0.0000°, Azm0.0000°; P Plg82.0000°, Azm358.0000°; Apparent Stress 0.57 MPa Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Power outages occurred and 19 religious sites damaged in the epicentral area. Felt [VI] at Ixtac Zoquitlan and Mexico; [V] at Atlixco; [IV] at Chilpancingo, Cuautla, Cuernavaca, Huitzuco, Huixquilucan, Metepec, Naucalpan, Tlalnepantla and Toluca; [III] at Puebla.
NEIC ***16*** *05:19:01.0±0.0, 18°.33N×99°.05W, h60km, Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M_{rr}=4.51; $M_{\theta\theta}$=4.12; $M_{\phi\phi}$=0.39; $M_{r\theta}$=4.55; $M_{\theta\phi}$=-1.60; $M_{\phi r}$=1.03; Best double couple: M_0=6.50000×10^{17} NP1:ϕ_s=105.00000°, δ=68.00000°, λ=-94.00000°. NP2:ϕ_s=296.00000°, δ=23.00000°, λ=-79.00000°. Principal axes: T 6.6300, Plg22.0000°, Azm198.0000°; N -0.1500, Plg4.0000°, Azm106.0000°; P -6.4800, Plg66.0000°, Azm6.0000°;*
IDC ***16*** *05:19:01.4±0.3, 18°.30N×99°.06W, h56km±2km, mb5.1/41, mb1 5.2/46, mb1mx5.1/51, mbtmp5.4/46, MS5.2/28, Ms1 5.2/28, ms1mx5.1/30 Error ellipse: s-maj=11.4km s-min=5.9km az=50.0*
MEX ***16*** *05:19:02.4±1.1, 18°.11N×99°.23W, h55km±9km, MD5.8*
GCMT ***16*** *05:19:04.0±0.1, 18°.25N±0°.01×99°.18W±0°.01, h50km, MW5.9/133, Moment Tensor Solution. s133, c292; s122, c367; Duration: 2s1 Moment tensor: Scale 10^{17} Nm; M_{rr}=-6.60±.06; $M_{\theta\theta}$=5.19±.05; $M_{\phi\phi}$=1.42±.05; $M_{r\theta}$=-3.55±.06; $M_{\theta\phi}$=-3.41±.04; $M_{\phi r}$=0.69±.05; Best double couple: M_0=7.80000×10^{17} NP1:ϕ_s=111.00000°, δ=59.00000°, λ=-100.00000°. NP2:ϕ_s=311.00000°, δ=33.00000°, λ=-73.00000°. Principal axes: T 8.0070, Plg13.0000°, Azm209.0000°; N -0.4030, Plg9.0000°, Azm117.0000°; P -7.5940, Plg74.0000°, Azm354.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 16 05:19:00.7±0.2, 18°.17N±0°.02×99°.15W±0°.03, h55km±1km, h55km:pP-P, n2066, σ1°59/2296, mb5.9/623, MS5.3/483, 22C-115D, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**0.40**	**304**	*e* Pn	**Pn**	**05 19 10.7**	**-0.6**
PLIG				*e* Sn	**Sn**	**05 19 18.0**	**-1.0**
PLIG	**Platanillo**	**0.40**	**304**	*i* eP	**Pn**	**05 19 10.7**	**-0.6**
PLIG				*i* S	**Sn**	**05 19 18.0**	**-1.0**
MEIG	**Mezcala**	**0.51**	**242**	*e* Pn	**Pn**	**05 19 11.4**	**-1.0**
MEIG				*e* Sn	**Sn**	**05 19 19.4**	**-1.5**
MEIG	**Mezcala**	**0.51**	**242**	*i* eP	**Pn**	**05 19 11.4**	**-1.0**
MEIG				*i* S	**Sn**	**05 19 19.4**	**-1.5**
YAIG	**Yautepec**	**0.70**	**7**	*e* Pn	**Pn**	**05 19 15.0**	**+0.2**
YAIG				*e* Sn	**Sn**	**05 19 25.5**	**+0.5**
YAIG	**Yautepec**	**0.70**	**7**	*i* P	**Pn**	**05 19 15.0**	**+0.2**
YAIG				*i* S	**Sn**	**05 19 25.5**	**+0.5**
TLIG	**Tlapa**	**0.82**	**137**	*e* Pn	**Pn**	**05 19 16.4**	**+0.1**
TLIG				*e* Sn	**Sn**	**05 19 28.2**	**+0.5**
TLIG	**Tlapa**	**0.82**	**137**	*e* P	**Pn**	**05 19 17.0**	**+0.7**
TLIG				*e* S	**Sn**	**05 19 27.6**	**-0.1**
MAVM	**Malinalco, Edo**	**0.85**	**338**	*i* P	**Pn**	**05 19 17.0**	**+0.1**
MAVM				*i* S	**Sn**	**05 19 28.3**	**-0.4**
PPM	**Popocatepetl**	**1.02**	**29**	*e* Pn	**Pn**	**05 19 20.2**	**+0.8**
PPM				*e* Sn	**Sn**	**05 19 35.0**	**+1.9**
PPM	**Popocatepetl**	**1.02**	**29**	*i* eP	**Pn**	**05 19 20.2**	**+0.8**
PPM				*i* S	**Sn**	**05 19 35.0**	**+1.9**
PPM	**Popocatepetl**	**1.02**	**29**	*e* eP	**Pn**	**05 19 20.2**	**+0.8**
PPM				*e*		05 19 35.0	
ARIG	**Puente Sto Nin**	**1.14**	**276**	*i* P	**Pn**	**05 19 20.1**	**-0.4**
ARIG				*i* S	**Sn**	**05 19 33.6**	**-1.6**
UNM	**Universidad Na**	**1.16**	**359**	*i* P	**Sn**	**05 19 36.7**	**+0.8**
UNM				*e* S	Sn	05 19 52.9	+17
TOVM	**TOLUCA**	**1.22**	**336**	*i* eP	**Pn**	**05 19 22.6**	**+0.8**
TOVM				*i* S	**Sn**	**05 19 37.6**	**+0.1**
PBVM	**Pinon**	**1.27**	**3**	*e* Pn	**Pn**	**05 19 23.1**	**+0.9**
PBVM	**Pinon**	**1.27**	**3**	*i* P	**Pn**	**05 19 23.1**	**+0.9**
PBVM				*i* S	**Sn**	**05 19 40.0**	**+1.8**
CAIG	**El Cayaco**	**1.54**	**224**	*e* Pn	**Pn**	**05 19 24.1**	**-1.7**
CAIG				*e* Sn	**Sn**	**05 19 40.5**	**-4.2**
VTVM	**Tizayuca**	**1.64**	**13**	*i* P	**Pn**	**05 19 28.1**	**+0.7**
VTVM				*e* S	**Sn**	**05 19 43.7**	**-3.9**
TPIG	**Tehuac#an**	**1.72**	**81**	*e* Pn	**Pn**	**05 19 30.1**	**+1.7**
TPIG				*e* Sn	**Sn**	**05 19 43.4**	**-6.0**
PNIG	**Pinotepa**	**2.02**	**151**	*e* Pn	**Pn**	**05 19 32.4**	**+0.1**
DEIG	**Demacu**	**2.13**	**3**	*e* Pn	**Pn**	**05 19 34.2**	**+0.2**
DEIG				*e* Sn	Sn	05 19 48.9	-11
ZIIG	**Zihuatanejo**	**2.27**	**256**	*e* Pn	**Pn**	**05 19 34.4**	**-1.4**
VHO	**Vista Hermosa**	**2.55**	**115**	*e* Pn	**Pn**	**05 19 42.1**	**+2.3**
OXBJ	**Oaxaca**	**2.56**	**115**	*e* P	**Pn**	**05 19 42.4**	**+2.5**
LVIG	**Laguna Verde**	**3.02**	**59**	*e* Pn	**Pn**	**05 19 46.0**	**+0.1**
LVIG				*e* Pn	Pn	05 19 46.1	+0.2
LVIG	**Laguna Verde**	**3.02**	**59**	*i* eP	**Pn**	**05 19 46.1**	**+0.1**
URUA	**Uruapan**	**3.04**	**295**	*e* P	**Pn**	**05 19 47.5**	**+1.1**
IGIG	**Irapuato, Guan**	**3.29**	**322**	*i* eP	**Pn**	**05 19 50.3**	**+0.3**
HUIG	**Huatulco**	**3.76**	**129**	*e* Pn	**Pn**	**05 19 57.9**	**+1.6**
HUIG	**Huatulco**	**3.76**	**129**	*i* eP	**Pn**	**05 19 57.9**	**+1.6**
MMIG	**Aquila**	**3.99**	**272**	*e* Pn	**Pn**	**05 19 58.4**	**-0.9**
MMIG	**Aquila**	**3.99**	**272**	*i* P	**Pn**	**05 19 58.4**	**-0.9**
CMIG	**Matias Romero**	**4.21**	**104**	P	**Pn**	**05 20 04.0**	**+1.7**
	484nm,0.3s,baz=273,slow=11,SNR=3136						
CMIG				S	**Sn**	**05 20 49.5**	**-0.7**
	308nm,0.3s,baz=349,slow=9.4,SNR=5.6						
CMIG				LR	LR	05 21 51.2	
	comp=Z,27μm,19.3s,baz=278,slow=41						
CMIG	**Matias Romero**	**4.21**	**104**	*e* Pn	**Pn**	**05 20 04.3**	**+2.0**
CMIG				*e* Sn	**Sn**	**05 20 49.5**	**-0.7**
CMIG	**Matias Romero**	**4.21**	**104**	*i* eP	**Pn**	**05 20 04.3**	**+2.0**
ZAIG	**Zacatecas**	**5.59**	**326**	*e* Pn	**Pn**	**05 20 22.4**	**+0.9**
CJM	**Chamela**	**5.74**	**284**	*e* Pn	**Pn**	**05 20 23.5**	**+0.2**
ANIG	**Ahuacatlan**	**5.82**	**300**	*e* Pn	**Pn**	**05 20 25.8**	**+1.2**
LNIG	**Linares**	**6.71**	**358**	*e* Pn	**Pn**	**05 20 36.3**	**-0.3**
CCIG

2µm,1.9s
WMOK Wichita Mounta 16.51 1 *e*P **Pn 05 22 47.2 -1.4**
WMOK pmax pmax
comp=Z,2µm,1.9s
WMOK Wichita Mounta 16.51 1 P **Pn 05 22 47.3 -1.3**
baz=181,SNR=348
449A Pace 16.57 39 P **Pn 05 22 48.0 -1.4**
baz=224,SNR=7.9
X37A Clayton 16.70 11 *e*Pn **Pn 05 22 50.6 -0.4**
comp=Z,945nm,0.9s
AMTX Amarillo 16.80 353 *e*Pn **Pn 05 22 52.3 0.0**
comp=Z,2µm,1.4s
AMTX Amarillo 16.80 353 P **Pn 05 22 52.1 -0.3**
baz=172
BRAL Brewton 16.97 38 *e*Pn **Pn 05 22 52.8 -1.4**
comp=Z,822nm,1.1s
BRAL Brewton 16.97 38 P **Pn 05 22 52.9 -1.4**
baz=223,SNR=14
450A Crestview 16.98 40 P **Pn 05 22 53.2 -1.3**
baz=225,SNR=7.8
349A Repton 17.02 37 P **Pn 05 22 53.9 -1.1**
baz=222,SNR=32
CCAR Cane Creek 17.02 21 *e*Pn **Pn 05 22 54.5 -0.4**
comp=Z,4µm,1.8s
MIAR Mount Ida 17.05 16 *e*Pn **Pn 05 22 54.5 -0.9**
comp=Z,1µm,1.1s
MIAR Mount Ida 17.05 16 *e*P **Pn 05 22 54.5 -0.9**
MIAR pmax pmax
comp=Z,1µm,1.1s
MIAR Mount Ida 17.05 16 P **Pn 05 22 54.6 -0.7**
baz=198,SNR=270
FSCY Frank Sound, G 17.06 83 *e*Pn **Pn 05 22 55.0 -0.5**
comp=Z,2µm,1.1s
X40A Basin Creek Fa 17.20 18 *e*Pn **Pn 05 22 56.7 -0.5**
comp=Z,959nm,1.4s
X40A Basin Creek Fa 17.20 18 P **Pn 05 22 56.5 -0.8**
baz=201,SNR=120
BNM Barren Site 17.27 339 *e*Pn **P 05 22 59.8 +0.7**
Y22D IRIS PASSCAL I 17.30 338 *e*Pn **P 05 23 00.5 +1.1**
comp=Z,2µm,1.4s
Y22D IRIS PASSCAL I 17.30 338 P **P 05 23 00.5 +1.1**
baz=155
552A Lynn Haven 17.35 44 P **Pn 05 22 58.1 -1.0**
baz=230
LENM Lemitar 17.40 338 *e*Pn **P 05 23 01.1 +0.6**
LPM Los Pinos Moun 17.41 339 *e*Pn **P 05 23 00.9 +0.3**
147A Livingston 17.45 32 *e*Pn **Pn 05 22 58.9 -1.4**
comp=Z,2µm,1.4s
147A Livingston 17.45 32 P **Pn 05 22 59.0 -1.3**
baz=217,SNR=26
249A Camden 17.52 36 P **Pn 05 22 60.0 -1.1**
baz=221,SNR=60
TUC Tucson 17.56 326 *e*Pn **P 05 23 03.1 +1.0**
comp=Z,829nm,1.5s
TUC Tucson 17.56 326 *e*P **P 05 23 03.1 +1.0**
TUC pmax pmax
comp=Z,829nm,1.5s
TUC Tucson 17.56 326 P **P 05 23 03.5 +1.3**
baz=141
350A Dozier 17.57 39 P **Pn 05 23 00.6 -1.1**
baz=224,SNR=45
UALR University of 17.62 19 *e*Pn **Pn 05 23 01.8 -0.5**
comp=Z,8µm,1.8s
W39A Magazine 17.62 15 *e*Pn **Pn 05 23 01.9 -0.5**
comp=Z,2µm,1.4s
W39A Magazine 17.62 15 P **Pn 05 23 02.4 0.0**
baz=197,SNR=154
LAZ Ladron 17.67 338 *e*Pn **P 05 23 04.5 +1.0**
148A Greensboro 17.79 34 P **Pn 05 23 03.6 -0.8**
baz=219
X43A Marvell 17.88 23 *e*P **Pn 05 23 05.4 -0.1**
comp=Z,3µm,1.5s
X43A Marvell 17.88 23 P **P 05 23 05.8 +0.2**
baz=206,SNR=98
452A Marianna 17.89 43 P **Pn 05 23 04.3 -1.4**
baz=228
TUL1 Leonard 17.93 9 *e*Pn **P 05 23 05.3 -0.7**
comp=Z,3µm,1.4s
TUL1 Leonard 17.93 9 P **P 05 23 05.6 -0.5**
baz=190,SNR=216
TUL1 S **Sn 05 26 25.6 +0.4**
baz=190
ANMO Albuquerque 17.93 340 P **Pn 05 23 07.4 +1.0**
comp=Z,5.7nm,0.3s,baz=150,slow=12,SNR=146
ANMO LR LR 05 30 42.6
comp=Z,38µm,19.4s,baz=157,slow=39
ANMO Albuquerque 17.93 340 *e*Pn **Pn 05 23 07.4 +1.0**
comp=Z,714nm,1.5s
ANMO Albuquerque 17.93 340 *d i*P **Pn 05 23 07.1 +0.7**
ANMO pmax pmax
comp=Z,409nm,2.5s
ANMO Albuquerque 17.93 340 P **Pn 05 23 07.4 +1.0**
baz=157
TASM ASL Pad, Albuq 17.93 340 P **Pn 05 23 07.5 +1.1**
baz=157,SNR=210
TASM ASL Pad, Albuq 17.93 340 P **Pn 05 23 07.5 +1.1**
baz=157,SNR=212
250A Grady 18.01 38 *e*P **P 05 23 05.2 -1.8**
comp=Z,2µm,1.7s
250A Grady 18.01 38 P **P 05 23 05.4 -1.6**
baz=223,SNR=34
W41B Gary Mavity, V 18.02 19 *e*P **P 05 23 06.4 -0.6**
comp=Z,2µm,1.5s
W41B Gary Mavity, V 18.02 19 P **P 05 23 06.4 -0.6**
baz=202,SNR=73
062Z Marathon 18.06 66 P **P 05 23 05.4 -2.2**
baz=252
WHAR Wooly Hollow 18.11 18 *e*P **P 05 23 07.0 -1.1**
comp=Z,957nm,1.2s
U32A Winter Ranch, 18.14 0 *e*P **P 05 23 08.5 0.0**
comp=Z,1µm,0.8s
149A Jones 18.18 35 P **P 05 23 07.8 -1.0**
baz=221,SNR=62
957A Wimauma 18.21 56 P **P 05 23 06.2 -3.0**
baz=242
058A Arcadia 18.28 58 P **P 05 23 07.0 -3.0**
baz=245,SNR=13
059Z Ave Maria 18.28 60 P **P 05 23 07.3 -2.7**
baz=247,SNR=15
655A Horseshoe Beac 18.39 49 P **P 05 23 09.5 -1.7**
baz=236
LRAL Lakeview Retre 18.40 34 *e*P **P 05 23 10.3 -0.9**
comp=Z,1µm,1.7s
LRAL Lakeview Retre 18.40 34 P **P 05 23 10.6 -0.6**
baz=219,SNR=71
554A Perry 18.42 47 P **P 05 23 10.8 -0.6**
baz=233
OXF Oxford 18.45 26 *e*P **P 05 23 10.7 -1.2**
comp=Z,547nm,0.9s
OXF Oxford 18.45 26 *e*P **P 05 23 10.7 -1.2**
OXF pmax pmax
comp=Z,547nm,0.9s
OXF Oxford 18.45 26 P **P 05 23 10.8 -1.0**
baz=211,SNR=96
214A Organ Pipe Nat 18.46 321 P **Pn 05 23 13.4 +0.8**
baz=135,SNR=176
453A Whigham 18.46 44 *e*P **P 05 23 10.4 -1.5**
comp=Z,2µm,1.7s
453A Whigham 18.46 44 P **P 05 23 11.0 -1.0**
baz=230
352A Blakely 18.48 41 *e*P **P 05 23 10.9 -1.2**
comp=Z,716nm,1.2s
352A Blakely 18.48 41 P **P 05 23 10.8 -1.4**
baz=227,SNR=15
857A Zephyrhills 18.50 54 P **P 05 23 09.8 -2.6**
baz=241
958A Wauchula 18.55 57 P **P 05 23 10.6 -2.4**
baz=243
061Z Ochoppi 18.56 62 *e*P **P 05 23 10.9 -2.1**
comp=Z,968nm,1.2s
061Z Ochoppi 18.56 62 P **P 05 23 11.5 -1.5**
baz=249,SNR=9.2
251A Midway 18.60 39 P **P 05 23 12.5 -1.0**
baz=225,SNR=62
150A Eclectic 18.61 37 P **P 05 23 12.8 -0.8**
baz=223,SNR=80
HHAR Hobbs 18.62 13 *e*P **P 05 23 13.0 -0.7**
comp=Z,747nm,1.3s
FCAR Ozark Folk Cen 18.72 18 *e*P **P 05 23 14.4 -0.3**
comp=Z,2µm,1.6s
Z49A Columbiana 18.77 35 P **P 05 23 14.6 -0.8**
baz=220,SNR=81
MET Memphis--Engin 18.77 24 *e*P **P 05 23 14.9 -0.5**
comp=Z,2µm,1.6s
059A Moore Haven 18.78 59 *e*P **P 05 23 14.0 -1.5**
comp=Z,330nm,0.9s
059A Moore Haven 18.78 59 P **P 05 23 13.9 -1.5**
baz=246,SNR=7.0

454A Quitman 18.83 46 P **P 05 23 15.3 -0.7**
baz=232,SNR=5.7
656A Willston 18.83 51 P **P 05 23 14.5 -1.6**
baz=237
353A Camilla 18.84 43 P **P 05 23 15.5 -0.6**
baz=229,SNR=14
X46A Booneville 18.85 28 P **P 05 23 15.5 -0.7**
baz=213,SNR=122
HBAR Harrisburg 18.89 22 *e*P **P 05 23 16.4 -0.2**
comp=Z,629nm,1.1s
X18A Snowflake 18.93 332 *e*P **Pn 05 23 19.1 +0.7**
comp=Z,854nm,1.2s
555A McAlpin 18.94 48 *e*P **P 05 23 16.8 -0.4**
comp=Z,993nm,1.3s
555A McAlpin 18.94 48 P **P 05 23 15.5 -1.7**
baz=235
252A Lumpkin 18.95 41 P **P 05 23 16.6 -0.7**
baz=227,SNR=64
U40A Yellville 18.96 16 P **P 05 23 17.0 -0.3**
baz=199,SNR=272
757A Oxford 18.96 52 P **P 05 23 15.8 -1.6**
baz=239
151A Opelika 18.96 38 P **P 05 23 16.7 -0.8**
baz=224,SNR=97
Y48A Jasper 19.00 32 P **P 05 23 16.6 -1.2**
baz=217,SNR=61
DWPF Disney Wildern 19.04 55 *e*P **P 05 23 17.7 -0.7**
comp=Z,522nm,0.8s
DWPF Disney Wildern 19.04 55 P **P 05 23 16.2 -2.2**
baz=242
060Z West Palm Beac 19.05 61 P **P 05 23 17.0 -1.4**
baz=248
858A St. Cloud 19.15 55 P **P 05 23 18.2 -1.3**
baz=242,SNR=5.5
X47A Russelville 19.15 30 P **P 05 23 18.5 -0.9**
baz=215,SNR=102
Z50A Ashland 19.15 36 *e*P **P 05 23 18.9 -0.6**
comp=Z,816nm,1.6s
Z50A Ashland 19.15 36 P **P 05 23 18.9 -0.6**
baz=222,SNR=115
959A Okeechobee 19.22 58 P **P 05 23 18.8 -1.5**
baz=245
455A Stateville 19.26 46 P **P 05 23 19.9 -0.9**
baz=233
556A Lake Butler 19.27 49 P **P 05 23 20.5 -0.4**
baz=236,SNR=11
TIGA Tifton 19.31 44 *e*P **P 05 23 22.0 +0.7**
comp=Z,1µm,1.6s
TIGA Tifton 19.31 44 P **P 05 23 20.4 -0.8**
baz=230
W18A Petrified Fore 19.33 333 *e*P **Pn 05 23 23.2 +0.1**
comp=Z,2µm,1.6s
W18A Petrified Fore 19.33 333 P **Pn 05 23 23.1 -0.1**
baz=148,SNR=31
Y49A Blount Mountai 19.34 34 *e*P **P 05 23 20.5 -1.2**
comp=Z,2µm,2.0s
Y49A Blount Mountai 19.34 34 P **P 05 23 20.3 -1.4**
baz=219,SNR=58
253A Americus 19.37 42 *e*P **P 05 23 21.4 -0.6**
comp=Z,2µm,1.8s
253A Americus 19.37 42 P **P 05 23 20.2 -1.7**
baz=228,SNR=15
152A Waverly Hall 19.42 39 *e*P **P 05 23 21.4 -1.2**
comp=Z,366nm,1.0s
152A Waverly Hall 19.42 39 P **P 05 23 21.3 -1.2**
baz=225,SNR=34
W46A Michie 19.43 27 P **P 05 23 21.0 -1.5**
baz=212,SNR=68
PLAL Pickwick Lake 19.43 28 *e*P **P 05 23 21.1 -1.4**
comp=Z,490nm,1.0s
657A Interlachen 19.44 51 P **P 05 23 21.6 -1.1**
baz=238
060A Indiantown 19.45 60 P **P 05 23 20.9 -1.8**
baz=247
T25A Trinidad 19.46 347 P **Pn 05 23 24.1 -0.6**
baz=165,SNR=98
X48A Hartselle 19.49 31 *e*P **P 05 23 21.7 -1.5**
comp=Z,1µm,1.8s
X48A Hartselle 19.49 31 P **P 05 23 21.6 -1.5**
baz=217,SNR=82
GNAR Gosnell 19.49 23 *e*P **P 05 23 23.0 -0.2**
comp=Z,6µm,2.0s
X16A Lo Mia Camp, P 19.55 328 *e*P **Pn 05 23 25.8 0.0**
comp=Z,735nm,0.8s
113A Mohawk Valley, 19.60 321 *e*P **Pn 05 23 25.8 -0.4**
comp=Z,852nm,1.3s
Z51A Franklin 19.62 37 P **P 05 23 23.5 -1.1**
baz=223,SNR=44
758A Lake Helen 19.63 54 P **P 05 23 23.7 -1.0**
baz=241
HALT Halls 19.70 24 *e*P **P 05 23 24.7 -0.7**
comp=Z,2µm,1.6s
Y50A Piedmont 19.73 35 P **P 05 23 24.3 -1.5**
baz=221,SNR=33
355A Pearson 19.75 45 P **P 05 23 24.6 -1.4**
baz=232
557A Orange Park 19.77 50 P **P 05 23 25.3 -1.0**
baz=237
NEJ Negril 19.78 86 *i*P **P 05 23 26.9 +0.4**
658A Bunnell 19.81 52 P **P 05 23 25.0 -1.7**
baz=240
254A Abbeville 19.83 43 P **P 05 23 25.6 -1.3**
baz=230,SNR=23
W47A Westpoint 19.88 29 P **P 05 23 25.9 -1.5**
baz=214,SNR=57
X49A Woodville 19.90 33 P **P 05 23 26.1 -1.5**
baz=218,SNR=63
153A Fort Valley 19.95 41 P **P 05 23 26.6 -1.7**
baz=227,SNR=14
456A Hilliard 19.95 48 *e*P **P 05 23 28.7 +0.4**
comp=Z,306nm,0.9s
456A Hilliard 19.95 48 P **P 05 23 26.2 -2.1**
baz=235
Z52A Williamson 19.97 39 P **P 05 23 27.2 -1.3**
baz=225,SNR=52
PVMO Portageville 20.00 23 *e*P **P 05 23 27.8 -1.0**
comp=Z,765nm,0.9s
Y14A Wickenburg 20.01 324 *e*P Pn 05 23 30.4 -0.7
comp=Z,1µm,1.2s
GLAT Glass 20.03 24 *e*P **P 05 23 28.1 -1.0**
comp=Z,3µm,1.6s
PBMO Poplar Bluff 20.07 21 *e*P **P 05 23 28.6 -0.9**
comp=Z,438nm,0.9s
PBMO LR LR
comp=Z,2µm,22.0s
W48A Pulaski 20.09 30 P **P 05 23 28.3 -1.5**
baz=216,SNR=82
V46A Holladay 20.10 27 P **P 05 23 28.2 -1.6**
baz=212,SNR=174
Y51A Rockmart 20.11 36 P **P 05 23 28.5 -1.4**
baz=222,SNR=120
PARMO Parma 20.20 22 *e*P **P 05 23 30.1 -0.9**
comp=Z,876nm,0.9s
X50B Fort Payne 20.21 34 P **P 05 23 29.3 -1.8**
baz=220,SNR=50
457A Yulee 20.23 49 P **P 05 23 29.6 -1.7**
baz=236
356A Blackshear 20.23 46 P **P 05 23 28.8 -2.4**
baz=234
UTMT University of 20.26 25 *e*P **P 05 23 30.2 -1.4**
comp=Z,1µm,1.0s
SDCO Great Sand Dun 20.29 345 *e*P **P 05 23 31.4 -0.8**
comp=Z,473nm,1.6s
SDCO LR LR
comp=Z,26µm,22.0s
SDCO Great Sand Dun 20.29 345 P **P 05 23 32.6 +0.4**
baz=163,SNR=184
255A Hazlehurst 20.36 45 *e*P **P 05 23 32.1 -0.5**
comp=Z,2µm,1.8s
255A Hazlehurst 20.36 45 P **P 05 23 30.4 -2.3**
baz=232,SNR=8.2
154A Montrose 20.38 42 *e*P **P 05 23 31.7 -1.2**
comp=Z,745nm,1.1s
154A Montrose 20.38 42 P **P 05 23 31.3 -1.6**
baz=229,SNR=28
V47A Nunnelly 20.39 28 P **P 05 23 31.3 -1.7**
baz=213,SNR=121
WUAZ Wupatki 20.40 330 *e*P Pn 05 23 35.4 -0.5
comp=Z,2µm,1.1s
WUAZ LR LR
comp=Z,12µm,19.0s
WUAZ Wupatki 20.40 330 P Pn 05 23 35.6 -0.2
baz=145,SNR=884
W49A Belvidere 20.41 32 P **P 05 23 31.7 -1.5**
baz=217,SNR=51
MCJ Malvern 20.41 87 *i*P **P 05 23 34.4 +1.0**
GLA Glamis 20.44 319 *e*P **P 05 23 34.8 +1.2**
comp=Z,2µm,1.5s

GLA LR LR
comp=Z,9µm,18.0s
GLA Glamis 20.44 319 P Pn 05 23 35.1 -1.2
baz=133,SNR=205
WVT Waverly 20.50 27 *e*P **P 05 23 32.5 -1.7**
comp=Z,616nm,1.3s
WVT Waverly 20.50 27 *e*P **P 05 23 32.5 -1.7**
WVT pmax pmax
comp=Z,616nm,1.3s
WVT Waverly 20.50 27 P **P 05 23 32.2 -2.0**
baz=212
CVJ Coleyville 20.54 86 *i*P Pn 05 23 37.0 -0.5
MTDJ Mount Denham 20.54 86 *e*P **P 05 23 35.0 +0.2**
comp=Z,630nm,0.9s
MTDJ Mount Denham 20.54 86 *e*P **P 05 23 36.0 +1.2**
Z53A Monticello 20.54 40 P **P 05 23 32.8 -1.8**
baz=227,SNR=25
U46A Springville 20.55 26 P **P 05 23 32.7 -2.0**
baz=211,SNR=25
CBKS Cedar Bluff 20.58 359 *e*P **P 05 23 35.1 0.0**
comp=Z,3µm,1.5s
CBKS Cedar Bluff 20.58 359 *e*P **P 05 23 35.1 0.0**
CBKS pmax pmax
comp=Z,3µm,1.5s
CBKS Cedar Bluff 20.58 359 P **P 05 23 34.8 -0.3**
baz=179,SNR=32
V48A Smith Brothers 20.64 30 *e*P **P 05 23 34.0 -1.6**
comp=Z,700nm,1.4s
V48A Smith Brothers 20.64 30 P **P 05 23 33.9 -1.7**
baz=215,SNR=37
S22A 4UR Ranch, Cre 20.64 343 *e*P **P 05 23 36.8 +0.9**
comp=Z,1µm,1.4s
S22A LR LR
comp=Z,29µm,19.0s
S22A 4UR Ranch, Cre 20.64 343 P **P 05 23 37.0 +1.0**
baz=159,SNR=334
SWET Sewanee 20.65 32 *e*P **P 05 23 34.2 -1.6**
comp=Z,2µm,2.0s
PAYG Puerto Ayora 20.65 154 *e*P **P 05 23 36.6 +0.7**
comp=Z,147nm,1.0s
PAYG LR LR
comp=Z,12µm,20.0s
Y52A Lilburn 20.65 38 *e*P **P 05 23 34.6 -1.3**
comp=Z,668nm,1.2s
Y52A Lilburn 20.65 38 P **P 05 23 34.0 -1.8**
baz=224,SNR=24
MVCO Mesa Verde 20.68 338 *e*P **P 05 23 36.8 +0.4**
comp=Z,2µm,1.7s
MVCO LR LR
comp=Z,29µm,19.0s
MVCO Mesa Verde 20.68 338 P **P 05 23 36.7 +0.4**
baz=154,SNR=609
GOGA Godfrey 20.69 40 *e*P **P 05 23 35.1 -1.1**
comp=Z,1µm,1.8s
GOGA Godfrey 20.69 40 *e*P **P 05 23 35.2 -1.1**
GOGA pmax pmax
comp=Z,1µm,1.8s
GOGA Godfrey 20.69 40 P **P 05 23 34.6 -1.7**
baz=227,SNR=29
X51A Calhoun 20.72 35 *e*P **P 05 23 36.2 -0.3**
comp=Z,571nm,1.0s
X51A Calhoun 20.72 35 P **P 05 23 34.6 -1.9**
baz=222,SNR=50
357A Townsend 20.73 47 P **P 05 23 35.3 -1.4**
baz=234
Y12C Blythe 20.74 321 *e*P **P 05 23 37.6 +0.8**
comp=Z,2µm,1.4s
Y12C LR LR
comp=Z,7µm,20.0s
Y12C Blythe 20.74 321 P **P 05 23 38.1 +1.3**
baz=135,SNR=257
BCIP Isla Barro Col 20.77 113 *e*P **P 05 23 37.2 0.0**
comp=Z,264nm,1.4s
BCIP LR LR
comp=Z,4µm,21.0s
BCIP Isla Barro Col 20.77 113 *e*P **P 05 23 37.2 0.0**
BCIP pmax pmax
comp=Z,264nm,1.4s
BCIP MLR MLR
comp=Z,4µm,21.0s
BCIP Isla Barro Col 20.77 113 *e*P **P 05 23 37.3 0.0**
256A Glennville 20.79 45 P **P 05 23 35.9 -1.4**
baz=233
155A Kite 20.80 43 P **P 05 23 36.5 -1.0**
baz=230,SNR=30
PDMCI Parker Dam,Lak 20.91 323 P **P 05 23 40.0 +1.4**
baz=137,SNR=235
Y53A Monroe 20.93 39 P **P 05 23 36.6 -2.2**
baz=226,SNR=17
T45A Paducah 20.93 24 *e*P **P 05 23 37.6 -1.3**
comp=Z,696nm,0.8s
T45A Paducah 20.93 24 P **P 05 23 37.2 -1.6**
baz=209,SNR=14
W50A Signal Mountai 20.95 33 *e*P **P 05 23 37.4 -1.7**
comp=Z,586nm,1.3s
W50A Signal Mountai 20.95 33 P **P 05 23 37.3 -1.9**
baz=220,SNR=50
Z54A Sparta 20.96 41 P **P 05 23 36.9 -2.3**
baz=228
KSU1 Kansas State U 20.98 6 P **P 05 23 38.5 -0.8**
baz=187,SNR=14
SWSC Sam W. Stewart 20.98 318 P **P 05 23 40.7 +1.2**
baz=131,SNR=161
CCM Cathedral Cave 20.99 18 *e*P **P 05 23 38.2 -1.2**
comp=Z,1µm,1.1s
CCM Cathedral Cave 20.99 18 *e*P **P 05 23 38.2 -1.2**
CCM pmax pmax
comp=Z,1µm,1.1s
CCM Cathedral Cave 20.99 18 P **P 05 23 38.0 -1.4**
baz=202
KSCO Kaye Shedlock' 20.99 352 *e*P **P 05 23 39.7 +0.1**
comp=Z,1µm,1.1s
KSCO Kaye Shedlock' 20.99 352 P **P 05 23 39.7 +0.1**
baz=171,SNR=61
IKP In-Ko-Pah, Jac 21.00 317 P **P 05 23 41.3 +1.6**
baz=130,SNR=159
U47A Clarksville 21.00 28 P **P 05 23 37.4 -2.1**
baz=213,SNR=56
AZU Azuero 21.06 117 *e*P **P 05 23 40.6 +0.2**
V49A McMinnville 21.10 31 P **P 05 23 38.6 -2.0**
baz=217,SNR=94
UPA Univ. de Panam 21.12 113 *e*P **P 05 23 38.0 -3.1**
CLTN Cedars of Leba 21.15 30 *e*P **P 05 23 39.4 -1.8**
comp=Z,394nm,1.3s
FVM French Village 21.17 19 *e*P **P 05 23 39.8 -1.6**
comp=Z,613nm,1.0s
FVM French Village 21.17 19 *e*P **P 05 23 39.8 -1.6**
FVM pmax pmax
comp=Z,613nm,1.0s
W51A Cleveland 21.21 34 P **P 05 23 39.7 -2.2**
baz=221,SNR=47
STH Stony Hill 21.23 87 *i*P **P 05 23 43.7 +1.4**
BC3 Big Chuckawall 21.24 320 P **P 05 23 43.2 +1.0**
baz=133,SNR=337
T46A Princeton 21.25 26 P **P 05 23 40.4 -1.8**
baz=211,SNR=109
X52A Dahlonega 21.28 37 P **P 05 23 40.6 -2.1**
baz=224,SNR=19
HOJ Hope 21.30 87 *i*P **P 05 23 44.5 +1.6**
S44A Carbondale 21.30 22 P **P 05 23 40.9 -1.9**
baz=207,SNR=55
SIUC Southern Illin 21.34 22 *e*P **P 05 23 41.8 -1.3**
comp=Z,654nm,0.9s
MONP2 Monument Peak 21.35 317 P **P 05 23 44.7 +1.1**
baz=129,SNR=219
W13A Hualapai Mount 21.36 325 *e*P **P 05 23 44.7 +1.1**
comp=Z,2µm,1.8s
W13A LR LR
comp=Z,16µm,20.0s
257A Skidaway Islan 21.37 47 P **P 05 23 42.3 -1.3**
baz=234
Q24A Divide 21.37 347 *e*P **P 05 23 43.3 -0.6**
comp=Z,217nm,1.3s
Q24A LR LR
comp=Z,6µm,22.0s
Q24A Divide 21.37 347 P **P 05 23 43.7 -0.2**
baz=164,SNR=14
BAR Barrett 21.39 316 *e*P **P 05 23 44.4 +0.7**
comp=Z,2µm,1.9s
BAR LR LR
comp=Z,5µm,18.0s
IRM Iron Mountain 21.39 321 P **P 05 23 45.3 +1.4**
baz=134,SNR=599
U48A Cassie Pea, Po 21.40 29 P **P 05 23 41.7 -2.1**
baz=215,SNR=131
Z55A Blythe 21.40 42 P **P 05 23 41.2 -2.7**
baz=230,SNR=6.3
V50A Pikevile 21.43 33 P **P 05 23 42.1 -2.0**

baz=219,SNR=119
156A Sylvania 21.46 44 P P 05 23 42.7 -1.8
baz=232
Y54A Tignall 21.48 40 P P 05 23 42.3 -2.4
baz=227,SNR=29
NEE2 Needles Airpor 21.52 323 P P 05 23 46.3 +1.2
baz=136,SNR=47
PV01 Paradox Valley 21.53 339 eP P 05 23 45.8 +0.3
comp=Z,1μm,1.4s
PV01 LR LR
comp=Z,38μm,18.0s
T47A Sharon Grove 21.54 27 eP P 05 23 43.9 -1.4
comp=Z,697nm,0.9s
T47A Sharon Grove 21.54 27 P P 05 23 43.4 -2.0
baz=213,SNR=109
X53A Estanollee 21.55 38 P P 05 23 43.4 -2.1
baz=225,SNR=16
CPCT Cooper Cave 21.56 34 eP P 05 23 43.4 -2.1
comp=Z,498nm,1.1s
U15A North Rim 21.58 330 eP P 05 23 47.4 +1.4
comp=Z,2μm,1.5s
U15A LR LR
comp=Z,12μm,20.0s
W52A Murphy 21.62 36 eP P 05 23 44.4 -1.9
comp=Z,1μm,1.8s
W52A Murphy 21.62 36 P P 05 23 44.3 -1.9
baz=223,SNR=31
PV13 Radium Mtn., P 21.64 339 eP P 05 23 46.7 0.0
comp=Z,672nm,1.5s
PV13 LR LR
comp=Z,32μm,18.0s
CMJ Castle Mountai 21.64 87 i P P 05 23 48.3 +1.6
PV02 Paradox Valley 21.66 339 eP P 05 23 47.0 +0.2
comp=Z,669nm,1.3s
PV02 LR LR
comp=Z,39μm,19.0s
PV05 Paradox Valley 21.66 338 eP P 05 23 47.0 +0.1
comp=Z,322nm,1.1s
PV05 LR LR
comp=Z,29μm,19.0s
PV03 Paradox Valley 21.74 339 eP P 05 23 47.7 +0.1
comp=Z,800nm,1.3s
PV03 LR LR
comp=Z,33μm,18.0s
PV18 Skein Mesa, Pa 21.75 339 eP P 05 23 47.9 +0.1
comp=Z,596nm,1.2s
PV18 LR LR
comp=Z,32μm,19.0s
U49A Red Boiling Sp 21.75 30 P P 05 23 45.6 -2.0
baz=216,SNR=76
PV12 Saucer Basin, 21.78 339 eP P 05 23 48.2 +0.1
comp=Z,1μm,1.3s
PV12 LR LR
comp=Z,45μm,19.0s
PV11 David Mesa, Pa 21.78 339 eP P 05 23 48.0 -0.2
comp=Z,1μm,1.5s
PV11 LR LR
comp=Z,38μm,18.0s
PV17 East Wray Mesa 21.80 339 eP P 05 23 48.1 -0.2
comp=Z,620nm,1.2s
PV17 LR LR
comp=Z,38μm,19.0s
109C Camp Elliot, M 21.80 316 P P 05 23 48.9 +0.7
baz=128,SNR=79
CPE Camp Elliot 21.80 316 eP P 05 23 48.7 +0.6
comp=Z,848nm,1.4s
CPE LR LR
comp=Z,4μm,19.0s
BELC Belle Mtn. Jos 21.80 320 P P 05 23 49.2 +0.8
baz=132,SNR=331
157A Early Branch 21.81 45 P P 05 23 46.1 -2.1
baz=233,SNR=7.1
PV16 Nyswonger Mesa 21.81 339 eP P 05 23 47.6 -0.9
comp=Z,1μm,1.5s
PV16 LR LR
comp=Z,31μm,18.0s
SLM Saint Louis 21.83 19 eP P 05 23 46.5 -1.9
comp=Z,718nm,1.0s
SLM Saint Louis 21.83 19 eP P 05 23 46.5 -1.9
SLM pmax pmax
comp=Z,719nm,1.0s
PV19 Morning Glory 21.83 339 eP P 05 23 48.5 -0.2
comp=Z,656nm,1.3s
PV19 LR LR
comp=Z,29μm,19.0s
PV07 Paradox Valley 21.83 340 eP P 05 23 48.5 -0.2
comp=Z,1μm,1.3s
PV07 LR LR
comp=Z,38μm,18.0s
PFO Pinyon Flats O 21.84 318 P P 05 23 49.6 +0.9
comp=Z,187nm,1.1s,baz=123,slow=9.9,SNR=111
PFO LR LR 05 33 12.1
comp=Z,4μm,19.2s,baz=132,slow=39
PFO Pinyon Flats O 21.84 318 eP P 05 23 49.3 +0.6
comp=Z,453nm,1.1s
PFO LR LR
comp=Z,6μm,19.0s
PFO Pinyon Flats O 21.84 318 P P 05 23 49.5 +0.9
baz=131,SNR=165
PV20 West Nyswonger 21.86 339 eP P 05 23 48.5 -0.4
comp=Z,444nm,1.2s
PV20 LR LR
comp=Z,32μm,18.0s
S46A Don Dixon Farm 21.88 25 P P 05 23 47.3 -1.7
baz=210,SNR=10
PV04 Paradox Valley 21.88 339 eP P 05 23 49.2 +0.1
comp=Z,1μm,1.2s
PV04 LR LR
comp=Z,41μm,18.0s
PV14 Lion Creek, Pa 21.90 339 eP P 05 23 49.2 -0.2
comp=Z,628nm,1.2s
PV14 LR LR
comp=Z,35μm,18.0s
PV10 Paradox Valley 21.91 339 eP P 05 23 48.1 -1.5
comp=Z,680nm,1.2s
PV10 LR LR
comp=Z,34μm,19.0s
V51A Loudon 21.92 34 eP P 05 23 47.0 -2.4
comp=Z,242nm,0.9s
V51A Loudon 21.92 34 P P 05 23 46.8 -2.6
baz=221,SNR=39
T48A Bowling Green 21.95 28 P P 05 23 47.6 -2.2
baz=214,SNR=42
Z56A Williston 21.96 43 eP P 05 23 48.8 -1.0
comp=Z,361nm,1.1s
Z56A Williston 21.96 43 P P 05 23 48.2 -1.6
baz=231,SNR=8.5
PV22 Blue Mesa, Par 21.97 339 eP P 05 23 50.4 +0.3
comp=Z,751nm,1.2s
PV22 LR LR
comp=Z,38μm,18.0s
PV23 Carpenter Ridg 21.97 339 eP P 05 23 50.0 -0.3
comp=Z,672nm,1.2s
PV23 LR LR
comp=Z,41μm,18.0s
HODGE Hodges 21.99 40 eP P 05 23 48.8 -1.4
comp=Z,1μm,1.8s
SMCO Snowmass 22.01 344 eP P 05 23 50.6 -0.2
comp=Z,221nm,1.0s
SMCO LR LR
comp=Z,17μm,18.0s
LDFC Landfair 22.02 323 eP P 05 23 52.6 +1.9
comp=Z,663nm,0.8s
LDFC LR LR
comp=Z,8μm,18.0s
Y55A Saluda 22.04 41 P P 05 23 48.2 -2.6
baz=229,SNR=22
PV09 Paradox Valley 22.05 339 eP P 05 23 51.2 +0.1
PV21 Cone Mtn., Par 22.05 339 eP P 05 23 51.4 +0.3
comp=Z,460nm,1.1s
PV21 LR LR
comp=Z,38μm,18.0s
W53A Cullowhee 22.11 37 P P 05 23 49.7 -1.9
baz=224,SNR=37
X54A Belton 22.13 39 P P 05 23 49.6 -2.1
baz=227,SNR=23
GMRC Granite Mounta 22.14 322 P P 05 23 52.6 +0.7
baz=134,SNR=355
U50A Jamestown 22.14 32 P P 05 23 49.2 -2.6
baz=219,SNR=38
USIN University of 22.14 25 eP P 05 23 50.4 -1.3
comp=Z,697nm,1.3s
S47A Hartford 22.15 27 P P 05 23 49.5 -2.4
baz=212,SNR=55
R45A Skylar, Fairfi 22.19 23 P P 05 23 50.2 -2.0
baz=208,SNR=66
ISCO Idaho Springs 22.27 347 eP P 05 23 53.1 -0.4
comp=Z,150nm,1.0s
ISCO LR LR
comp=Z,11μm,19.0s
ISCO Idaho Springs 22.27 347 eP P 05 23 53.1 -0.4
ISCO pmax pmax
comp=Z,150nm,1.0s
ISCO MLR MLR
comp=Z,11μm,19.0s
ISCO Idaho Springs 22.27 347 P P 05 23 53.4 -0.2
baz=164,SNR=185
Y56A Pelion 22.30 42 P P 05 23 51.9 -1.6
baz=230
KNB Kanab 22.30 330 eP P 05 23 54.8 +1.1
comp=Z,3μm,1.5s
KNB Kanab 22.30 330 eP P 05 23 54.8 +1.1
KNB pmax pmax
comp=Z,3μm,1.5s
MURC Murrieta 22.30 317 P P 05 23 54.3 +0.7
baz=129,SNR=146
T49A Edmonton 22.35 30 eP P 05 23 51.7 -2.3
comp=Z,284nm,1.1s
T49A Edmonton 22.35 30 P P 05 23 51.7 -2.3
baz=216,SNR=39
V52A Sevierville 22.35 35 eP P 05 23 51.8 -2.3
comp=Z,428nm,1.4s
V52A Sevierville 22.35 35 P P 05 23 51.6 -2.5
baz=222,SNR=46
Z57A Bowman 22.38 44 P P 05 23 52.2 -2.2
baz=232,SNR=23
158A Hollywood 22.39 46 P P 05 23 52.9 -1.6
baz=234
PKCU Pink Cliffs 22.41 332 eP P 05 23 56.2 +1.2
comp=Z,2μm,1.4s
R46A Gibon Southern 22.41 25 P P 05 23 52.7 -2.0
baz=210,SNR=16
RGRS Roger Stewart 22.48 46 eP P 05 23 55.2 -0.3
comp=Z,1μm,0.9s
LCMT Little Creek M 22.50 329 eP P 05 23 56.1 +0.3
comp=Z,463nm,1.0s
X55A Gracelyn & Ava 22.53 40 P P 05 23 53.6 -2.3
baz=228,SNR=34
U51A La Follette 22.53 33 P P 05 23 53.9 -2.1
baz=220,SNR=54
BBRC Big Bear Solar 22.55 319 P P 05 23 57.3 +0.8
baz=131,SNR=65
S48A Wiedeman Farm, 22.56 28 P P 05 23 53.7 -2.6
baz=214,SNR=40
HEC Hector,Ludlow 22.57 321 P P 05 23 57.0 +0.5
baz=133,SNR=138
T50A Nancy 22.61 31 P P 05 23 54.1 -2.8
baz=218,SNR=90
W54A Cherokee Point 22.61 38 P P 05 23 55.1 -1.8
baz=226,SNR=75
NHSC New Hope 22.61 45 eP P 05 23 56.3 -0.6
comp=Z,686nm,1.1s
NHSC New Hope 22.61 45 P P 05 23 54.5 -2.4
baz=233,SNR=29
CSU Charleston Sou 22.61 46 eP P 05 23 57.3 +0.4
JSC Jenkinsville 22.64 41 eP P 05 23 55.6 -1.5
comp=Z,682nm,1.6s
JSC Jenkinsville 22.64 41 eP P 05 23 55.6 -1.5
JSC pmax pmax
comp=Z,682nm,1.6s
OLIL Olney 22.64 23 eP P 05 23 54.8 -2.3
comp=Z,1μm,1.4s
UPD2 Meteti 22.65 112 eP P 05 23 57.3 -0.2
PAULI Pauline 22.66 40 eP P 05 23 55.6 -1.7
comp=Z,409nm,1.2s
V53A Saluda 22.66 36 eP P 05 23 56.1 -1.3
comp=Z,3μm,1.8s
V53A Saluda 22.66 36 P P 05 23 55.4 -2.0
baz=224,SNR=55
TUQ Turquoise Moun 22.75 322 P P 05 23 59.1 +0.7
baz=135,SNR=84
Q45A Warren Harvey, 22.77 23 P P 05 23 55.9 -2.5
baz=208,SNR=33
GTBY Guantanamo Bay 22.79 82 eP P 05 23 58.8 -0.1
comp=Z,1μm,0.9s
GTBY Guantanamo Bay 22.79 82 eP P 05 23 58.4 -0.4
SCI2 San Clemente I 22.83 314 P P 05 23 59.7 +0.6
baz=126,SNR=47
OGNE Ogallala 22.84 354 eP P 05 23 58.4 -0.8
comp=Z,3μm,1.8s
OGNE Ogallala 22.84 354 P P 05 23 58.7 -0.6
baz=173,SNR=58
MTPU Mount Pierson 22.85 333 eP P 05 24 00.7 +1.0
comp=Z,4μm,1.6s
U52A Thorn Hill 22.89 34 P P 05 23 57.3 -2.4
baz=222,SNR=55
R47A Wooly Knot Far 22.89 26 P P 05 23 57.3 -2.4
baz=212,SNR=93
SZCU Shurtz Canyon 22.89 331 eP P 05 24 00.2 +0.2
comp=Z,2μm,1.6s
TZTN Tazewell 22.90 34 eP P 05 23 57.7 -2.2
comp=Z,577nm,1.2s
TZTN Tazewell 22.90 34 P P 05 23 57.8 -2.1
baz=221,SNR=95
X56A White Oak 22.92 41 P P 05 23 58.0 -2.0
baz=229,SNR=34
WCI Wyandotte Cave 22.93 27 eP P 05 23 57.6 -2.5
comp=Z,359nm,0.9s
WCI Wyandotte Cave 22.93 27 eP P 05 23 57.6 -2.5
WCI pmax pmax
comp=Z,359nm,0.9s
WCI Wyandotte Cave 22.93 27 P P 05 23 57.8 -2.3
baz=213
P43A Skaggs, Pawnee 22.97 19 P P 05 23 58.6 -1.9
baz=204,SNR=61
CIS Catalina Islan 22.99 315 P P 05 24 00.8 +0.1
baz=127,SNR=90
CCUT Cedar City 22.99 330 eP P 05 24 00.3 -0.7
comp=Z,490nm,1.1s
Z58A St. Stephen 23.00 45 P P 05 23 59.1 -1.7
baz=234,SNR=14
RRX Edison Barstow 23.00 320 P P 05 24 01.7 +0.7
baz=132,SNR=48
BFSC Mount Baldy Ra 23.00 318 P P 05 24 01.2 +0.1
baz=130,SNR=91
S49A Springfield 23.01 29 P P 05 23 58.1 -2.9
baz=216,SNR=62
T51A Gray 23.02 32 P P 05 23 58.8 -2.2
baz=220,SNR=83
Y57A Sumter 23.03 43 eP P 05 24 00.0 -1.1
comp=Z,289nm,1.4s
Y57A Sumter 23.03 43 P P 05 23 59.4 -1.7
baz=231,SNR=7.0
FMP Fort Macarthur 23.09 316 P P 05 24 02.1 +0.4
baz=128,SNR=14
SHPR Sheep Range 23.09 325 eP P 05 24 01.6 -0.4
comp=Z,1μm,1.9s
SHPR LR LR
comp=Z,13μm,22.0s
SRU San Rafael Swe 23.09 337 eP P 05 24 01.5 -0.5
comp=Z,765nm,1.2s
SRU San Rafael Swe 23.09 337 eP P 05 24 01.5 -0.5
SRU pmax pmax
comp=Z,765nm,1.2s
KMSC Kings Mountain 23.16 40 eP P 05 24 00.8 -1.7
comp=Z,364nm,1.4s
KMSC Kings Mountain 23.16 40 P P 05 24 00.4 -2.1
baz=228,SNR=36
GSC Goldstone, Bar 23.17 321 eP P 05 24 02.5 -0.2
comp=Z,749nm,1.4s
GSC LR LR
comp=Z,9μm,18.0s
GSC Goldstone, Bar 23.17 321 eP P 05 24 02.5 -0.2
GSC pmax pmax
comp=Z,749nm,1.4s
GSC MLR MLR
comp=Z,9μm,18.0s
GSC Goldstone, Bar 23.17 321 P P 05 24 03.4 +0.7
baz=133,SNR=164
Q16A Castle Valley 23.17 336 eP P 05 24 03.0 +0.2
comp=Z,1μm,1.2s
Q46A CEJHS Indians, 23.18 24 P P 05 24 00.2 -2.4
baz=210
BGNE Belgrade 23.18 2 eP P 05 24 02.0 -0.6
comp=Z,1μm,1.3s
BGNE Belgrade 23.18 2 P P 05 24 01.8 -0.9
baz=182,SNR=40
V54A Nebo 23.23 38 P P 05 24 01.3 -1.9
baz=225,SNR=45
MSU Marysvale 23.24 333 eP P 05 24 04.5 +1.1
MSU Marysvale 23.24 333 eP P 05 24 04.5 +1.1
MWC Mount Wilson 23.25 317 eP P 05 24 03.6 +0.1
comp=Z,2μm,1.5s
MWC LR LR
comp=Z,4μm,20.0s
MWC Mount Wilson 23.25 317 eP P 05 24 03.6 +0.1
MWC pmax pmax
comp=Z,2μm,1.5s
MWC MLR MLR
comp=Z,4μm,20.0s
R48A Northridge Ran 23.26 27 P P 05 24 01.1 -2.2
baz=214,SNR=38
O20A White River Ci 23.26 342 eP P 05 24 03.6 0.0
comp=Z,1μm,1.3s
O20A LR LR
comp=Z,27μm,19.0s
O20A White River Ci 23.26 342 P P 05 24 03.9 +0.3
baz=158,SNR=404
SHOC Shoshone, Teco 23.27 323 P P 05 24 04.0 +0.4
baz=135,SNR=62
U53A Fall Branch 23.30 36 P P 05 24 01.3 -2.5
baz=223,SNR=13
PASC Pasadena Art C 23.30 317 eP P 05 24 04.2 +0.3
comp=Z,1μm,1.6s
PASC ePcP PcP 05 27 51.2 +1.5
PASC LR LR
comp=Z,5μm,20.0s
Z59A Georgetown, SC 23.30 46 P P 05 24 02.7 -1.2
baz=235
S50A Richmond 23.35 31 P P 05 24 02.3 -2.0
baz=218,SNR=107
BIRD Birdtown, Kers 23.38 42 eP P 05 24 02.7 -1.8
comp=Z,359nm,1.4s
N23A Red Feather La 23.39 347 eP P 05 24 04.2 -0.7
comp=Z,644nm,1.5s
N23A LR LR
comp=Z,9μm,22.0s
N23A Red Feather La 23.39 347 P P 05 24 04.5 -0.4
baz=164,SNR=154
Y58A Scranton 23.43 44 eP P 05 24 04.0 -1.1
comp=Z,209nm,0.8s
Y58A Scranton 23.43 44 P P 05 24 03.9 -1.1
baz=233,SNR=19
TCRU Three Creeks R 23.44 333 eP P 05 24 05.5 +0.1
comp=Z,1μm,1.8s
DECC Green Verdugo 23.45 317 P P 05 24 06.2 +0.9
baz=128,SNR=52
P18A Preston Nutter 23.45 338 eP P 05 24 05.4 -0.1
comp=Z,1μm,1.3s
Q47A Bedord North L 23.47 26 P P 05 24 03.3 -2.1
baz=212,SNR=80
P45A Graceland, Par 23.47 23 eP P 05 24 03.5 -1.8
comp=Z,1μm,1.6s
P45A Graceland, Par 23.47 23 P P 05 24 03.0 -2.3
baz=208,SNR=44
R49A Shelbyville 23.48 28 eP P 05 24 02.9 -2.5
comp=Z,188nm,0.9s
R49A Shelbyville 23.48 28 P P 05 24 03.0 -2.4
baz=215,SNR=57
P17A Butcher Ranch, 23.49 337 eP P 05 24 05.3 -0.5
comp=Z,1μm,1.3s
X57A Johnson Farm, 23.50 43 P P 05 24 03.5 -2.2
baz=231,SNR=9.5
TMUT Trail Mountain 23.52 336 eP P 05 24 05.9 -0.3
comp=Z,777nm,1.0s
N40A Mertquake, Sal 23.56 14 P P 05 24 03.8 -2.4
baz=198,SNR=92
N41A Harden Midland 23.57 16 eP P 05 24 04.2 -2.1
comp=Z,807nm,1.4s
N41A Harden Midland 23.57 16 P P 05 24 04.3 -2.1
baz=200,SNR=35
W56A Indian Trail 23.62 41 P P 05 24 04.7 -2.1
baz=229,SNR=24
T52A Hallie 23.62 34 eP P 05 24 05.1 -1.8
comp=Z,1μm,1.7s
T52A Hallie 23.62 34 P P 05 24 05.1 -1.8
baz=221,SNR=66
EDW2 Edwards Air Fo 23.63 319 P P 05 24 07.3 +0.4
baz=130,SNR=160
BLO Bloomington 23.63 25 eP P 05 24 04.8 -2.1
comp=Z,475nm,1.4s
BLO Bloomington 23.63 25 eP P 05 24 04.8 -2.1
BLO pmax pmax
comp=Z,475nm,1.4s
SNCC San Nicolas Is 23.65 313 eP P 05 24 06.9 -0.3
comp=Z,1μm,1.8s
SNCC LR LR
comp=Z,6μm,20.0s
SNCC San Nicolas Is 23.65 313 P P 05 24 07.6 +0.4
baz=125,SNR=13
PHWY Pilot Hill 23.68 348 eP P 05 24 06.3 -1.4
comp=Z,206nm,1.1s
S51A Beattyville 23.71 32 eP P 05 24 05.6 -2.1
comp=Z,1μm,1.8s
S51A Beattyville 23.71 32 P P 05 24 05.8 -1.8
baz=219,SNR=82
V55A Taylorsville 23.71 38 P P 05 24 06.0 -1.6
baz=227,SNR=38
P46A Rosedale 23.75 23 P P 05 24 06.0 -1.9
baz=209,SNR=38
Q48A North Vernon 23.76 27 P P 05 24 06.0 -2.1
baz=213,SNR=68
T53A Wise 23.77 35 P P 05 24 06.5 -1.8
baz=222,SNR=47
O44A Mansfield 23.78 21 P P 05 24 06.0 -2.2
baz=206,SNR=45
LRMC Laurel Mtn Rad 23.82 320 P P 05 24 09.7 +0.8
baz=132,SNR=74
U54A Nelsons Funny 23.83 36 eP P 05 24 07.0 -1.8
comp=Z,2μm,1.9s
U54A Nelsons Funny 23.83 36 P P 05 24 06.9 -1.9
baz=224,SNR=49
BLG Laguna Peak, P 23.84 316 P P 05 24 10.0 +1.1
baz=127,SNR=37
R50A Paris 23.86 30 eP P 05 24 06.7 -2.2
comp=Z,385nm,1.0s
R50A Paris 23.86 30 P P 05 24 06.8 -2.2
baz=217,SNR=43
HDIL Hopedale 23.88 19 eP P 05 24 07.1 -2.0
comp=Z,1μm,1.6s
HDIL Hopedale 23.88 19 P P 05 24 07.2 -1.9
baz=204,SNR=70
OSI Osito Audit: C 23.92 317 eP P 05 24 10.3 +0.6
comp=Z,344nm,0.9s
OSI LR LR
comp=Z,6μm,19.0s
OSI Osito Audit: C 23.92 317 P P 05 24 10.5 +0.8
baz=128,SNR=37
W57A Gilead 24.00 41 eP P 05 24 08.3 -1.9
comp=Z,1μm,1.9s
W57A Gilead 24.00 41 P P 05 24 08.2 -2.1
baz=230,SNR=19
P47A Martinsville 24.00 25 P P 05 24 08.5 -1.8
baz=211,SNR=49
PSUT Pine Spring 24.01 331 eP P 05 24 11.2 +0.6
comp=Z,297nm,0.9s
S52A Salyersville 24.01 33 P P 05 24 08.7 -1.7
baz=220,SNR=51
TPNV Topopah Spring 24.01 325 eP P 05 24 11.5 +0.9
comp=Z,448nm,0.9s
TPNV LR LR
comp=Z,9μm,22.0s
TPNV Topopah Spring 24.01 325 eP P 05 24 11.5 +0.9
TPNV pmax pmax
comp=Z,448nm,0.9s
TPNV MLR MLR
comp=Z,9μm,22.0s
TPNV Topopah Spring 24.01 325 P P 05 24 11.5 +0.9
baz=137,SNR=457
FURC Furnace Creek, 24.01 323 P P 05 24 11.0 +0.6
baz=135,SNR=147
X58A Rowland 24.04 43 eP P 05 24 09.3 -1.3
comp=Z,850nm,2.0s
X58A Rowland 24.04 43 P P 05 24 09.5 -1.2
baz=232,SNR=18
MPMC Manual Prospec 24.09 321 P P 05 24 12.1 +0.7
baz=133,SNR=290
V56A Mocksville 24.12 40 eP P 05 24 09.2 -2.2
comp=Z,561nm,1.4s
V56A Mocksville 24.12 40 P P 05 24 09.7 -1.6
baz=228,SNR=28
O45A Potomac 24.12 22 P P 05 24 09.7 -1.6
baz=208,SNR=22
SCZ2 Santa Cruz Isl 24.16 315 P P 05 24 12.4 +0.6
baz=126,SNR=7.4
Q49A Aurora 24.18 28 P P 05 24 10.1 -1.8
baz=215,SNR=61
SCIA State Center 24.20 11 eP P 05 24 10.8 -1.3
comp=Z,4μm,1.8s
SCIA State Center 24.20 11 P P 05 24 10.8 -1.3
baz=194,SNR=13
R51A Hillsboro 24.23 31 P P 05 24 10.6 -1.8
baz=218,SNR=72
U55A TA2, Sparta 24.26 38 P P 05 24 11.0 -1.7

baz=226,SNR=52
N43A Stutzman Famil 24.26 19 P P 05 24 11.2 -1.4
baz=204,SNR=65
M41A Milan 24.28 16 P P 05 24 11.1 -1.7
baz=200,SNR=78
MPU Maple Canyon 24.30 336 eP P 05 24 13.2 0.0
comp=Z,535nm,1.1s
DAC Darwin (Calif) 24.30 322 eP P 05 24 15.7 +2.4
comp=Z,382nm,1.3s
DAC LR LR
comp=Z,6µm,22.0s
ARVC Arvin 24.31 318 P P 05 24 14.1 +1.0
baz=129,SNR=104
P48A Milroy 24.33 26 eP P 05 24 11.9 -1.3
comp=Z,748nm,1.0s
P48A Milroy 24.33 26 P P 05 24 11.1 -2.1
baz=213,SNR=32
T54A Tazewell 24.35 36 P P 05 24 11.8 -1.8
baz=224,SNR=80
W58A Raeford 24.40 43 P P 05 24 12.0 -1.9
baz=232,SNR=14
NLU North Lily Min 24.42 335 eP P 05 24 14.4 +0.1
comp=Z,361nm,0.9s
ISA Isabella, Lake 24.43 319 eP P 05 24 15.1 +0.8
comp=Z,271nm,1.1s
ISA ePcP PcP 05 27 54.0 +1.8
ISA LR LR
comp=Z,5µm,20.0s
ISA Isabella, Lake 24.43 319 eP P 05 24 15.1 +0.8
ISA e 05 27 54.0
ISA pmax pmax
comp=Z,271nm,1.1s
ISA MLR MLR
comp=Z,5µm,20.0s
ISA Isabella, Lake 24.43 319 P P 05 24 15.2 +0.9
baz=131,SNR=225
RWWY Rawlins 24.44 345 eP P 05 24 14.4 -0.2
comp=Z,490nm,1.2s
RWWY LR LR
comp=Z,17µm,18.0s
SFIN Lafayette 24.46 23 eP P 05 24 12.8 -1.6
comp=Z,1µm,1.9s
SFIN Lafayette 24.46 23 P P 05 24 12.6 -1.8
baz=209,SNR=25
N44A Piper City 24.46 21 P P 05 24 12.8 -1.7
baz=206,SNR=13
Y60A Bolivia 24.47 46 P P 05 24 13.1 -1.5
baz=235
SBC Santa Barbara 24.47 316 P P 05 24 15.0 +0.4
baz=126,SNR=13
Q50A Georgetown 24.47 30 P P 05 24 12.6 -2.0
baz=217,SNR=48
S53A Williamson 24.51 34 P P 05 24 13.1 -1.8
baz=222,SNR=31
X59A McDuffie Farm, 24.54 44 P P 05 24 13.0 -2.1
baz=233,SNR=22
U56A King 24.55 39 P P 05 24 13.6 -1.7
baz=227,SNR=14
V57A Coltrane Farms 24.61 40 P P 05 24 14.6 -1.2
baz=229,SNR=53
GRAC Grapevine Rang 24.67 323 P P 05 24 17.5 +1.0
baz=135,SNR=33
O47A Sheridan 24.68 24 P P 05 24 14.3 -2.2
baz=211,SNR=42
P49A Miami Univ. Ec 24.70 27 P P 05 24 14.1 -2.5
baz=214,SNR=46
CWC Cottonwood Cre 24.70 321 P P 05 24 17.6 +0.7
baz=133
R11A Troy Canyon, C 24.70 328 eP P 05 24 17.3 +0.4
comp=Z,332nm,1.0s
R11A LR LR
comp=Z,19µm,19.0s
R11A Troy Canyon, C 24.70 328 P P 05 24 17.7 +0.8
baz=140,SNR=853
N45A Kentland 24.72 21 P P 05 24 15.6 -1.2
baz=207,SNR=23
R52A Catlettsburg 24.73 32 P P 05 24 14.9 -2.0
baz=220,SNR=16
JLU Jordanelle 24.74 337 eP P 05 24 17.1 -0.3
comp=Z,223nm,1.2s
L40A Anamosa 24.76 14 eP P 05 24 15.2 -2.0
comp=Z,656nm,1.2s
L40A Anamosa 24.76 14 P P 05 24 15.2 -2.0
baz=198,SNR=44
M43A Waltham Townsh 24.78 19 P P 05 24 15.8 -1.5
baz=204,SNR=69
PKM Mcpherson Peak 24.80 316 P P 05 24 18.7 +0.9
baz=127,SNR=160
T55A Pulaski 24.84 37 P P 05 24 17.0 -1.0
baz=225,SNR=21
Q51A Peebles 24.92 30 eP P 05 24 16.9 -1.7
comp=Z,416nm,1.1s
Q51A Peebles 24.92 30 P P 05 24 16.6 -2.0
baz=218,SNR=58
DUG Dugway, Tooele 24.92 335 eP P 05 24 18.9 +0.1
comp=Z,902nm,1.3s
DUG LR LR
comp=Z,18µm,19.0s
DUG Dugway, Tooele 24.92 335 P P 05 24 19.5 +0.6
baz=148,SNR=657
VES Vestal, Richgr 24.92 319 P P 05 24 19.8 +1.2
baz=130,SNR=217
CTU Camp Tracy 24.93 337 eP P 05 24 18.9 0.0
comp=Z,283nm,1.1s
DBBC Dabeiba 24.95 113 eP P 05 24 23.2 +4.0
V58A Windy Hill, Pi 24.96 41 P P 05 24 18.1 -0.9
baz=230,SNR=37
X60A Albert Glenn T 24.96 45 P P 05 24 17.8 -1.2
baz=234,SNR=7.9
W59A Clinton 25.00 43 P P 05 24 18.6 -0.8
baz=233
M44A Midewin, Midew 25.03 20 eP P 05 24 18.0 -1.6
comp=Z,526nm,1.3s
M44A Midewin, Midew 25.03 20 P P 05 24 18.0 -1.6
baz=206,SNR=15
S54A Dingess, Beckl 25.03 35 P P 05 24 18.3 -1.4
baz=224,SNR=30
N46A Monticello 25.04 23 P P 05 24 18.2 -1.4
baz=209,SNR=18
SMRC Santa Marta, M 25.08 103 eP P 05 24 22.0 +1.6
R53A Hurricane 25.08 33 eP P 05 24 18.8 -1.4
comp=Z,1µm,1.8s
R53A Hurricane 25.08 33 P P 05 24 18.7 -1.4
baz=222,SNR=76
L42A Oliver, Polo 25.10 17 eP P 05 24 18.4 -1.9
comp=Z,784nm,1.2s
L42A Oliver, Polo 25.10 17 P P 05 24 18.3 -1.9
baz=202,SNR=78
O48A Farmland 25.11 26 P P 05 24 18.1 -2.2
baz=213,SNR=112
BLA Blacksburg 25.11 37 eP P 05 24 18.6 -1.9
comp=Z,238nm,1.1s
BLA Blacksburg 25.11 37 eP P 05 24 18.6 -1.9
BLA pmax pmax
comp=Z,238nm,1.1s
BLA Blacksburg 25.11 37 P P 05 24 18.6 -1.9
baz=226,SNR=46
P50A Jamestown 25.17 29 P P 05 24 18.9 -2.0
baz=216,SNR=69
SMMC Simmler 25.18 317 P P 05 24 22.4 +1.3
baz=128,SNR=133
TCUT Toone Canyon 25.18 338 eP P 05 24 20.9 -0.4
comp=Z,2µm,1.3s
LGNH Logne 25.19 85 eP P 05 24 19.5 -1.8
comp=Z,476nm,1.3s
K22A Casper 25.20 347 eP P 05 24 20.8 -0.5
comp=Z,335nm,1.1s
K22A LR LR
comp=Z,6µm,20.0s
K22A Casper 25.20 347 P P 05 24 20.8 -0.5
baz=164,SNR=154
TIN Tinemaha, Big 25.21 322 P P 05 24 22.6 +1.2
baz=133,SNR=50
T56A Rocky Mt 25.21 38 P P 05 24 19.7 -1.7
baz=227,SNR=20
U57A Blanch 25.23 40 P P 05 24 19.8 -1.7
baz=229,SNR=35
M45A Boilermakers S 25.29 21 P P 05 24 20.9 -1.0
baz=207,SNR=17
Q52A Bidwell 25.40 32 P P 05 24 21.3 -1.6
baz=220,SNR=188
O49A Covington 25.40 27 eP P 05 24 20.8 -2.2
comp=Z,499nm,0.9s
O49A Covington 25.40 27 P P 05 24 20.8 -2.2
baz=214,SNR=55
CNNC Cliffs of the 25.40 44 eP P 05 24 22.3 -0.8
comp=Z,170nm,1.1s
CNNC Cliffs of the 25.40 44 P P 05 24 22.0 -1.1
baz=233,SNR=14
W60A Pink Hill 25.41 44 P P 05 24 22.0 -1.1
baz=234,SNR=20
P51A Williamsport 25.41 30 eP P 05 24 21.1 -2.0
comp=Z,1µm,1.8s
P51A LR LR
comp=Z,2µm,20.0s
P51A Williamsport 25.41 30 P P 05 24 21.1 -2.0
baz=218,SNR=26
VOG Valley Oaks Go 25.42 319 P P 05 24 23.8 +0.7
baz=130,SNR=11
N47A Urbana 25.42 24 P P 05 24 20.9 -2.2
baz=211,SNR=102
S55A Lewisburg 25.46 36 P P 05 24 21.8 -1.8
baz=225,SNR=15
R54A Victor 25.48 35 P P 05 24 21.9 -1.8
baz=224,SNR=54
V59A Middlesex 25.50 42 P P 05 24 22.0 -1.8
baz=232,SNR=18
ARGC Ariguani, Magd 25.51 106 eP P 05 24 26.6 +2.3
ECSD EROS Data Cent 25.58 4 eP P 05 24 23.1 -1.5
comp=Z,394nm,1.3s
ECSD EROS Data Cent 25.58 4 P P 05 24 23.4 -1.2
baz=186,SNR=271
PAGB Antelope Grade 25.59 317 eP P 05 24 25.6 +0.8
comp=Z,1µm,1.7s
BGU Big Grassy Mou 25.63 335 eP P 05 24 25.2 0.0
comp=Z,398nm,1.3s
M46A Old House Fiel 25.63 23 eP P 05 24 22.9 -2.1
comp=Z,547nm,1.4s
M46A Old House Fiel 25.63 23 P P 05 24 23.1 -1.9
baz=209,SNR=27
T57A Hurt 25.65 39 eP P 05 24 23.7 -1.6
comp=Z,653nm,1.8s
T57A Hurt 25.65 39 P P 05 24 24.3 -1.0
baz=228,SNR=34
HWUT Hardware Ranch 25.67 338 eP P 05 24 25.3 -0.3
comp=Z,309nm,1.1s
HWUT LR LR
comp=Z,11µm,19.0s
N48A Decatur 25.67 25 P P 05 24 23.0 -2.4
baz=212,SNR=76
O50A Cable 25.68 28 P P 05 24 23.5 -2.1
baz=216,SNR=59
U58A Oxford 25.69 41 P P 05 24 24.0 -1.6
baz=230,SNR=25
Q53A Leroy 25.70 33 P P 05 24 24.0 -1.7
baz=222,SNR=54
SPUT South Promonto 25.73 336 eP P 05 24 25.9 -0.2
comp=Z,214nm,1.2s
L44A Lake County Fo 25.78 19 P P 05 24 25.0 -1.4
baz=205,SNR=12
JFWS Jewell Farm 25.80 15 eP P 05 24 24.6 -2.0
comp=Z,879nm,1.4s
JFWS Jewell Farm 25.80 15 eP P 05 24 24.6 -2.0
JFWS pmax pmax
comp=Z,879nm,1.4s
JFWS Jewell Farm 25.80 15 P P 05 24 24.8 -1.8
baz=200,SNR=36
M47A Cromwell 25.86 24 P P 05 24 24.8 -2.3
baz=211,SNR=19
S56A Natural Bridge 25.93 37 P P 05 24 25.9 -1.9
baz=227,SNR=15
HELC Santa Helena 25.93 114 eP P 05 24 31.2 +2.7
PLMC San Jos del P 25.95 118 eP P 05 24 30.6 +2.3
MLAC Mammoth, Mammo 25.95 322 P P 05 24 29.3 +1.0
baz=133,SNR=54
W61A Ground Anchor 25.97 45 P P 05 24 26.9 -1.2
baz=235
P52A Corning 25.98 31 P P 05 24 26.0 -2.3
baz=219,SNR=69
OMMB Old Mammoth Mi 26.04 322 eP P 05 24 29.9 +0.7
comp=Z,602nm,1.6s
OMMB LR LR
comp=Z,6µm,20.0s
ACSO Alum Creek Sta 26.04 29 eP P 05 24 26.9 -1.9
comp=Z,302nm,1.0s
ACSO LR LR
comp=Z,3µm,22.0s
ACSO Alum Creek Sta 26.04 29 P P 05 24 26.7 -2.2
baz=217,SNR=48
T58A Grand View Acr 26.05 40 P P 05 24 27.0 -1.9
baz=230,SNR=39
BW06 Boulder Array 26.07 342 eP P 05 24 28.6 -0.7
comp=Z,668nm,1.4s
BW06 LR LR
comp=Z,30µm,20.0s
BW06 Boulder Array 26.07 342 P P 05 24 28.9 -0.4
baz=157,SNR=324
PD31 Pinedale Array 26.07 342 eP P 05 24 28.7 -0.6
comp=Z,668nm,1.5s
PD31 ePcP PcP 05 27 56.4 +0.4
PD31 eScP ScP 05 31 36.0 +4.8
PDAR Pinedale Array 26.07 342 P P 05 24 28.7 -0.6
comp=Z,86nm,0.7s,baz=143,slow=8.4,SNR=365
PDAR pP pP 05 24 43.9 +0.3
comp=Z,42nm,0.8s,baz=150,slow=11,SNR=7.1
PDAR PcP PcP 05 27 56.4 +0.4
comp=Z,4.5nm,0.9s,baz=132,slow=4.5,SNR=5.4
PDAR ScP ScP 05 31 36.0 +4.8
comp=Z,1.7nm,0.8s,baz=161,slow=3.8,SNR=2.5
PDAR LR LR 05 35 51.7
comp=Z,27µm,18.9s,baz=167,slow=39
SMLC San Martn de 26.07 108 eP P 05 24 30.9 +1.6
N49A Columbus Grove 26.07 26 eP P 05 24 26.8 -2.3
comp=Z,234nm,0.8s
N49A Columbus Grove 26.07 26 P P 05 24 26.9 -2.2
baz=214,SNR=37
MDPB Devils Postpil 26.10 322 eP P 05 24 30.3 +0.7
comp=Z,327nm,1.1s
MDPB LR LR
comp=Z,5µm,20.0s
NV11 Mina Array Sit 26.12 324 eP P 05 24 30.8 +1.0
comp=Z,63nm,1.4s
NV11 LR LR
comp=Z,600nm,18.0s
V60A Jim Taylor Roa 26.13 44 eP P 05 24 28.4 -1.2
comp=Z,164nm,1.1s
V60A Jim Taylor Roa 26.13 44 P P 05 24 28.1 -1.5
baz=234,SNR=14
K43A Burlington 26.13 18 eP P 05 24 27.9 -1.7
comp=Z,869nm,1.5s
K43A Burlington 26.13 18 P P 05 24 27.9 -1.7
baz=204,SNR=9.7
U59A Littleton 26.14 42 eP P 05 24 28.2 -1.4
comp=Z,539nm,1.9s
U59A Littleton 26.14 42 P P 05 24 28.3 -1.4
baz=232,SNR=9.4
Q54A Coxs Mills 26.15 34 eP P 05 24 28.2 -1.6
comp=Z,423nm,1.5s
Q54A Coxs Mills 26.15 34 P P 05 24 28.5 -1.3
baz=223
O51A Pataskala 26.15 30 P P 05 24 27.4 -2.4
baz=218,SNR=77
L46A Eue Claire 26.18 22 eP P 05 24 28.4 -1.6
comp=Z,465nm,1.2s
L46A Eue Claire 26.18 22 P P 05 24 28.2 -1.8
baz=209,SNR=17
SUSD Miller 26.20 0 P P 05 24 28.8 -1.4
baz=180
RSSD Black Hills 26.20 352 eP P 05 24 30.2 -0.2
comp=Z,373nm,1.4s
RSSD Black Hills 26.20 352 eP P 05 24 30.2 -0.2
RSSD pmax pmax
comp=Z,373nm,1.4s
RSSD Black Hills 26.20 352 P P 05 24 30.3 -0.2
baz=170
NV01 Mina Array Sit 26.21 324 eP P 05 24 31.6 +1.1
NV01 ePcP PcP 05 27 57.3 +1.0
NV01 eScP ScP 05 31 38.9 +7.3
NVAR Mina Array Bea 26.21 324 P P 05 24 31.6 +1.1
comp=Z,314nm,1.0s,baz=144,slow=9.4,SNR=646
NVAR PcP PcP 05 27 57.3 +1.0
comp=Z,8.6nm,0.8s,baz=130,slow=2.2,SNR=3.7
NVAR ScP ScP 05 31 38.9 +7.3
comp=Z,8.0nm,1.0s,baz=133,slow=4.0,SNR=6.6
NVAR LR LR 05 36 24.1
comp=Z,6µm,18.9s,baz=140,slow=40
CODC Agustn Codazz 26.22 105 eP P 05 24 31.2 +0.6
P53A Whipple 26.24 32 eP P 05 24 29.0 -1.6
comp=Z,965nm,1.7s
P53A Whipple 26.24 32 P P 05 24 28.7 -1.8
baz=221,SNR=28
HVU Hansel Valley 26.26 337 eP P 05 24 31.0 0.0
comp=Z,223nm,1.0s
HVU Hansel Valley 26.26 337 eP P 05 24 31.0 0.0
HVU pmax pmax
comp=Z,223nm,1.0s
M48A Edgerton 26.32 25 eP P 05 24 29.3 -2.0
comp=Z,347nm,1.2s
M48A Edgerton 26.32 25 P P 05 24 28.9 -2.4
baz=212,SNR=10
S57A Dark Hollow, R 26.34 38 eP P 05 24 30.0 -1.5
comp=Z,617nm,1.8s
S57A Dark Hollow, R 26.34 38 P P 05 24 29.9 -1.6
baz=228,SNR=41
YOTC Yotoco, Valle 26.40 120 eP P 05 24 33.9 +1.5
N50A Nevada 26.40 28 P P 05 24 29.7 -2.3
baz=216,SNR=18
SDDR Presa de Saban 26.41 84 eP P 05 24 34.1 +1.6
comp=Z,300nm,1.1s
ELK Elko 26.42 332 LR LR 05 36 27.5
comp=Z,10µm,18.7s,baz=126,slow=40
ELK Elko 26.42 332 eP P 05 24 32.8 +0.3
comp=Z,227nm,1.1s
ELK LR LR
comp=Z,11µm,18.0s
ELK Elko 26.42 332 eP P 05 24 32.8 +0.3
ELK pmax pmax
comp=Z,227nm,1.1s
ELK MLR MLR
comp=Z,11µm,18.0s
RYN Ryan 26.47 324 eP P 05 24 33.5 +0.6
comp=Z,585nm,1.5s
RYN LR LR
comp=Z,8µm,19.0s
O52A Adamsville 26.50 31 eP P 05 24 30.5 -2.4
comp=Z,202nm,0.8s
O52A LR LR
comp=Z,2µm,18.0s
O52A Adamsville 26.50 31 P P 05 24 30.6 -2.3
baz=219,SNR=81
KVN Kaiserville 26.54 326 eP P 05 24 34.4 +0.8
comp=Z,256nm,1.0s
KVN LR LR
comp=Z,13µm,18.0s
KVN Kaiserville 26.54 326 eP P 05 24 34.4 +0.8
KVN pmax pmax
comp=Z,256nm,1.0s
KVN MLR MLR
comp=Z,13µm,18.0s
AHID Auburn Hatcher 26.54 340 PFAKE 05 24 40.0 +6.5
AHID LR LR
comp=Z,18µm,19.0s
GRTK Grand Turk 26.55 78 eP P 05 24 32.3 -1.2
comp=Z,358nm,1.0s
L47A Sherwood 26.55 24 P P 05 24 30.9 -2.4
baz=211,SNR=38
GUY2C Guyana, Caldas 26.56 116 eP P 05 24 37.6 +3.4
Q55A Buckhannon 26.56 35 P P 05 24 32.2 -1.4
baz=224,SNR=51
V61A Roper 26.59 44 eP P 05 24 32.6 -1.2
comp=Z,548nm,1.4s
V61A Roper 26.59 44 P P 05 24 31.9 -1.9
baz=235
U60A Pendleton 26.62 42 P P 05 24 32.4 -1.6
baz=233,SNR=25
M49A Liberty Center 26.62 26 P P 05 24 31.6 -2.3
baz=214,SNR=30
T59A Double "B" Far 26.68 41 eP P 05 24 33.1 -1.4
comp=Z,365nm,1.7s
T59A Double "B" Far 26.68 41 P P 05 24 33.2 -1.3
baz=231,SNR=16
PTBC PUERTO BERRIO, 26.70 113 eP P 05 24 36.4 +1.4
RREF El Recreo 26.74 117 eP P 05 24 41.0 +4.9
S58A Poland Farm, P 26.78 39 eP P 05 24 34.1 -1.3
comp=Z,194nm,1.3s
S58A Poland Farm, P 26.78 39 P P 05 24 33.6 -1.8
baz=229
P54A Burton 26.79 33 P P 05 24 34.0 -1.6
baz=222
NORC Norcasia 26.81 115 eP P 05 24 39.4 +3.3
L48A N Adams 26.83 25 P P 05 24 33.6 -2.2
baz=212,SNR=38
N51A Ashland 26.87 29 eP P 05 24 33.8 -2.4
comp=Z,152nm,0.9s
N51A LR LR
comp=Z,2µm,18.0s
N51A Ashland 26.87 29 P P 05 24 33.7 -2.6
baz=217,SNR=26
WAKR Walker 26.90 323 eP P 05 24 37.8 +1.0
comp=Z,460nm,1.5s
WAKR LR LR
comp=Z,7µm,20.0s
O53A New Philadelph 26.91 31 P P 05 24 34.2 -2.4
baz=220,SNR=20
R57A Stanardsville 26.95 38 P P 05 24 35.2 -1.8
baz=228,SNR=21
K46A Dorr 26.95 22 P P 05 24 35.0 -1.9
baz=209,SNR=5.5
M50A Fremont 26.96 27 eP P 05 24 35.0 -2.0
comp=Z,261nm,1.4s
M50A Fremont 26.96 27 P P 05 24 34.8 -2.2
baz=216,SNR=12
I41A Arkdale 26.97 15 eP P 05 24 35.6 -1.5
comp=Z,999nm,1.9s
I41A Arkdale 26.97 15 P P 05 24 35.1 -2.0
baz=200,SNR=13
SAO San Andreas Ge 26.99 318 eP P 05 24 37.5 +0.1
comp=Z,358nm,1.5s
SAO LR LR
comp=Z,5µm,18.0s
SAO San Andreas Ge 26.99 318 eP P 05 24 37.5 +0.1
SAO pmax pmax
comp=Z,358nm,1.5s
SAO MLR MLR
comp=Z,5µm,18.0s
URIC Uribia, Colomb 27.00 100 eP P 05 24 37.9 +0.2
U61A Possum Corner 27.00 43 P P 05 24 35.3 -2.1
baz=234
OTAV Otavalo 27.04 129 eP P 05 24 41.5 +2.9
comp=Z,53nm,1.1s
OTAV LR LR
comp=Z,2µm,20.0s
I42A Draeger Farm, 27.06 16 eP P 05 24 36.2 -1.7
comp=Z,317nm,1.2s
I42A Draeger Farm, 27.06 16 P P 05 24 36.2 -1.7
baz=202,SNR=24
SNOW Snow King Moun 27.06 341 eP P 05 24 38.2 -0.1
comp=Z,613nm,1.5s
SNOW LR LR
comp=Z,20µm,21.0s
P55A Reedsville 27.07 34 P P 05 24 36.5 -1.6
baz=224,SNR=48
Q56A Snyder Ridge, 27.09 36 P P 05 24 37.2 -1.1
baz=225,SNR=64
BRRC Barranca, Sant 27.11 111 eP P 05 24 39.2 +0.6
N52A McGinn's Farm, 27.11 30 P P 05 24 35.7 -2.7
baz=219,SNR=18
BMN Battle Mountai 27.11 329 eP P 05 24 39.1 +0.5
comp=Z,659nm,1.6s
BMN LR LR
comp=Z,14µm,20.0s
R58B Mineral 27.11 39 eP P 05 24 36.9 -1.5
comp=Z,375nm,1.8s
R58B Mineral 27.11 39 P P 05 24 36.5 -2.0
baz=229,SNR=19
YERR Yerington 27.12 324 eP P 05 24 39.6 +0.8
comp=Z,369nm,1.3s
YERR LR LR
comp=Z,5µm,21.0s
CMB Columbia Colle 27.14 321 eP P 05 24 38.8 +0.1
comp=Z,252nm,1.4s
CMB LR LR
comp=Z,4µm,21.0s
CMB Columbia Colle 27.14 321 eP P 05 24 38.8 +0.1
CMB pmax pmax
comp=Z,252nm,1.4s
CMB MLR MLR
comp=Z,4µm,21.0s
TPAW Teton Pass 27.14 341 eP P 05 24 39.0 -0.1
comp=Z,327nm,1.2s
TPAW LR LR
comp=Z,14µm,21.0s
LOHW Long Hollow 27.15 342 eP P 05 24 38.7 -0.3
comp=Z,1µm,1.8s
LOHW LR LR
comp=Z,28µm,19.0s
MCWV Mont Chateau 27.17 34 eP P 05 24 37.3 -1.7
comp=Z,133nm,1.1s
MCWV Mont Chateau 27.17 34 P P 05 24 37.5 -1.4
baz=224,SNR=40
K47A Vermontville 27.23 23 P P 05 24 37.3 -2.1
baz=210,SNR=26
L49A Milan 27.23 26 P P 05 24 37.4 -2.1
baz=213,SNR=11

GCUF	Volcan Galeras	27.23	126	eP	P	05 24 43.8	+3.5
SOTA	Rioblanco	27.25	123	eP	P	05 24 43.2	+2.7
R58A	Rapidan	27.26	38	P	P	05 24 38.1	-1.7
	baz=228,SNR=37						
O54A	Avella	27.27	33	P	P	05 24 37.9	-2.0
	baz=222,SNR=19						
M51A	Elyria	27.29	29	P	P	05 24 37.4	-2.6
	baz=217,SNR=19						
T60A	Surry	27.30	42	PFAKE		05 24 50.0	+10
T60A				LR	LR		
	comp=Z,3μm,22.0s						
T60A	Surry	27.30	42	P	P	05 24 38.7	-1.4
	baz=232						
FXWY	Fox Creek	27.30	341	eP	P	05 24 40.1	-0.3
	comp=Z,335nm,1.5s						
PCON	Cinco Dias	27.30	123	eP	P	05 24 44.2	+3.2
MOOW	Moose Ponds	27.32	341	eP	P	05 24 40.1	-0.4
	comp=Z,197nm,1.1s						
MOOW				LR	LR		
	comp=Z,26μm,20.0s						
CRUC	La Cruz	27.33	125	eP	P	05 24 43.7	+2.7
S59A	Mechanicsville	27.34	40	P	P	05 24 39.0	-1.4
	baz=230,SNR=10						
MARP	Paez Belalcaza	27.36	121	eP	P	05 24 44.7	+3.5
PNTR	Pine Nut	27.39	324	eP	P	05 24 42.3	+1.1
	comp=Z,868nm,1.6s						
PNTR				LR	LR		
	comp=Z,4μm,20.0s						
J45A	Montague	27.40	20	P	P	05 24 38.7	-2.3
	baz=207						
PLIO	Pelee Island,	27.42	28	P	P	05 24 38.8	-2.4
	baz=216,SNR=18						
AAM	Ann Arbor	27.44	25	eP	P	05 24 39.6	-1.7
	comp=Z,404nm,1.3s						
AAM	Ann Arbor	27.44	25	eP	P	05 24 39.6	-1.7
AAM				pmax	pmax		
	comp=Z,404nm,1.3s						
AAM	Ann Arbor	27.44	25	P	P	05 24 39.3	-2.0
	baz=213,SNR=39						
SPMN	Marine on St.	27.50	10	eP	P	05 24 39.9	-2.0
	comp=Z,161nm,1.0s						
SPMN	Marine on St.	27.50	10	P	P	05 24 39.7	-2.1
	baz=193,SNR=48						
IMW	Indian Meadow	27.51	341	eP	P	05 24 41.5	-0.8
	comp=Z,214nm,1.4s						
IMW				LR	LR		
	comp=Z,22μm,20.0s						
N53A	Lisbon	27.51	31	eP	P	05 24 39.7	-2.4
	comp=Z,657nm,1.7s						
N53A				LR	LR		
	comp=Z,2μm,22.0s						
N53A	Lisbon	27.51	31	P	P	05 24 39.9	-2.2
	baz=220,SNR=23						
Q57A	Strasburg	27.52	37	P	P	05 24 41.0	-1.1
	baz=227,SNR=26						
VCNR	Virginia City	27.56	324	eP	P	05 24 43.7	+1.0
	comp=Z,205nm,1.2s						
VCNR				LR	LR		
	comp=Z,5μm,21.0s						
CBN	Corbin Frederi	27.57	39	eP	P	05 24 41.6	-1.0
	comp=Z,176nm,1.1s						
CBN	Corbin Frederi	27.57	39	P	P	05 24 41.0	-1.5
	baz=230,SNR=11						
J46A	Howard City	27.58	22	P	P	05 24 40.9	-1.7
	baz=209,SNR=16						
L50A	Kingsville	27.58	27	P	P	05 24 40.2	-2.4
	baz=215,SNR=14						
P56A	Dayton Farm, R	27.60	35	P	P	05 24 41.5	-1.3
	baz=225,SNR=60						
FLWY	Flagg Ranch	27.61	342	eP	P	05 24 43.1	0.0
	comp=Z,708nm,1.7s						
FLWY				LR	LR		
	comp=Z,29μm,18.0s						
ROSC	El Rosal	27.65	116	P	P	05 24 45.2	+1.3
	comp=Z,17nm,1.0s,baz=16,slow=2.5,SNR=28						
ROSC	El Rosal	27.65	116	eP	P	05 24 48.2	+4.3
	comp=Z,143nm,1.2s						
ROSC	El Rosal	27.65	116	eP	P	05 24 48.7	+4.7
K48A	Perry	27.68	24	P	P	05 24 41.3	-2.2
	baz=212,SNR=34						
RUBR	Rubicon Trail	27.68	323	eP	P	05 24 45.0	+1.2
	comp=Z,957nm,1.4s						
RUBR				LR	LR		
	comp=Z,6μm,21.0s						
S60A	Water View	27.69	41	P	P	05 24 42.6	-1.0
	baz=232,SNR=14						
PAHR	Pah Rah Range	27.70	325	eP	P	05 24 44.5	+0.6
	comp=Z,483nm,1.7s						
PAHR				LR	LR		
	comp=Z,6μm,20.0s						
R59A	King George, V	27.72	39	P	P	05 24 42.9	-1.0
	baz=230,SNR=20						
SDD	Santo Domingo	27.75	85	PFAKE		05 25 00.0	+16
SDD				LR	LR		
	comp=Z,5μm,21.0s						
J47A	Sunmer	27.78	23	eP	P	05 24 42.5	-1.9
	comp=Z,235nm,1.0s						
J47A	Sunmer	27.78	23	P	P	05 24 42.3	-2.1
	baz=210,SNR=22						
BARC	Barichara	27.80	111	eP	P	05 24 47.2	+2.0
YPP	Pitchstone Pla	27.81	342	eP	P	05 24 44.9	-0.1
	comp=Z,298nm,1.9s						
M52A	Chesterland	27.83	29	eP	P	05 24 42.5	-2.4
	comp=Z,246nm,0.9s						
M52A				LR	LR		
	comp=Z,2μm,21.0s						
M52A	Chesterland	27.83	29	P	P	05 24 42.4	-2.5
	baz=218,SNR=25						
G39A	Holcombe	27.85	12	P	P	05 24 43.2	-1.8
	baz=196,SNR=101						
O55A	Ligonier	27.85	34	P	P	05 24 43.2	-1.9
	baz=224,SNR=39						
H17A	Grant Village	27.86	342	eP	P	05 24 45.3	-0.1
	comp=Z,338nm,1.6s						
H17A				LR	LR		
	comp=Z,43μm,21.0s						
H17A	Grant Village	27.86	342	P	P	05 24 45.2	-0.1
	baz=156,SNR=58						
H43A	Windswept, Lux	27.91	18	eP	P	05 24 43.4	-2.1
	comp=Z,243nm,1.2s						
H43A	Windswept, Lux	27.91	18	P	P	05 24 43.5	-2.0
	baz=204						
K49A	Clarkson	27.92	25	P	P	05 24 43.3	-2.4
	baz=213,SNR=32						
LKWY	Lake	27.96	343	eP	P	05 24 47.2	+0.9
	comp=Z,627nm,1.9s						
LKWY				LR	LR		
	comp=Z,10μm,18.0s						
LKWY	Lake	27.96	343	eP	P	05 24 47.2	+0.9
LKWY				pmax	pmax		
	comp=Z,627nm,1.9s						
LKWY				MLR	MLR		
	comp=Z,10μm,18.0s						
YFT	Old Faithful	27.98	342	eP	P	05 24 47.3	+0.8
	comp=Z,422nm,1.8s						
I45A	Fountain	27.99	20	eP	P	05 24 44.6	-1.6
	comp=Z,405nm,1.3s						
I45A	Fountain	27.99	20	P	P	05 24 44.4	-1.8
	baz=207						
F37A	Hinrichs Farm,	28.01	10	P	P	05 24 44.6	-1.8
	baz=193,SNR=24						
G40A	Rib Lake	28.04	14	eP	P	05 24 44.8	-1.9
	comp=Z,138nm,1.1s						
G40A				LR	LR		
	comp=Z,4μm,21.0s						
G40A	Rib Lake	28.04	14	P	P	05 24 44.8	-1.9
	baz=198,SNR=46						
CAPV	Capacho	28.04	108	eP	P	05 24 47.2	-0.1
P57A	Homestead Farm	28.05	36	P	P	05 24 45.8	-1.0
	baz=227,SNR=34						
N54A	Moraine State	28.05	32	eP	P	05 24 44.8	-2.1
	comp=Z,123nm,1.0s						
N54A				LR	LR		
	comp=Z,2μm,22.0s						
N54A	Moraine State	28.05	32	P	P	05 24 44.8	-2.1
	baz=222,SNR=30						
M53A	WI Miller and	28.08	30	P	P	05 24 44.5	-2.6
	baz=220,SNR=33						
AFDM	Forest Hills D	28.08	322	eP	P	05 24 47.7	+0.5
	comp=Z,307nm,1.7s						
AFDM				LR	LR		
	comp=Z,3μm,21.0s						
R60A	Leonardtown, M	28.09	40	P	P	05 24 45.7	-1.5
	baz=231						
RLMT	Red Lodge	28.18	345	eP	P	05 24 48.0	-0.2
	comp=Z,386nm,1.1s						
RLMT				LR	LR		
	comp=Z,10μm,18.0s						
RLMT	Red Lodge	28.18	345	P	P	05 24 48.0	-0.2
	baz=160,SNR=203						
RUSC	La Rusia	28.21	112	eP	P	05 24 51.5	+2.4
YMR	Madison River	28.22	342	eP	P	05 24 48.8	+0.3
	comp=Z,596nm,1.6s						
J48A	Bridge Port	28.23	24	P	P	05 24 46.3	-2.0
	baz=212,SNR=26						
CHIC	Chingaza	28.26	115	eP	P	05 24 52.5	+3.1
K50A	Casco	28.26	26	eP	P	05 24 46.3	-2.3
	comp=Z,352nm,1.2s						
K50A	Casco	28.26	26	P	P	05 24 45.9	-2.7
	baz=215,SNR=18						
O56A	Blue Knob Stat	28.29	35	eP	P	05 24 47.3	-1.7
	comp=Z,644nm,1.8s						
O56A	Blue Knob Stat	28.29	35	P	P	05 24 47.5	-1.5
	baz=225,SNR=67						
S61A	Accomac	28.29	42	PFAKE		05 25 00.0	+11
S61A				LR	LR		
	comp=Z,3μm,22.0s						
S61A	Accomac	28.29	42	P	P	05 24 46.5	-2.5
	baz=233						
YHH	Holmes Hill	28.30	342	eP	P	05 24 49.5	+0.2
	comp=Z,332nm,1.6s						
BEKR	Beckworth	28.35	324	eP	P	05 24 50.5	+0.7
	comp=Z,523nm,1.6s						
BEKR				LR	LR		
	comp=Z,5μm,18.0s						
YHB	Horse Butte	28.36	342	eP	P	05 24 49.8	0.0
	comp=Z,187nm,1.5s						
F38A	Pierce - Schro	28.36	11	P	P	05 24 47.6	-2.0
	baz=195,SNR=61						
HLID	Hailey	28.41	336	eP	P	05 24 50.2	0.0
	comp=Z,200nm,1.2s						
HLID				LR	LR		
	comp=Z,12μm,18.0s						
HLID	Hailey	28.41	336	P	P	05 24 50.4	+0.2
	baz=148,SNR=248						
Q59A	Harwood	28.43	39	P	P	05 24 48.7	-1.5
	baz=230						
N55A	Marion Center	28.43	33	eP	P	05 24 48.3	-2.0
	comp=Z,545nm,1.6s						
N55A	Marion Center	28.43	33	P	P	05 24 48.5	-1.8
	baz=224,SNR=75						
ALLY	Alegheny Colle	28.49	31	eP	P	05 24 48.7	-2.1
	comp=Z,128nm,1.0s						
ALLY				LR	LR		
	comp=Z,2μm,22.0s						
F39A	Loretta	28.50	12	P	P	05 24 48.4	-2.4
	baz=197,SNR=40						
QLMT	Earthquake Lak	28.50	342	eP	P	05 24 51.6	+0.6
QLMT				ePcP	PcP	05 28 04.1	+2.4
J49A	Marlette	28.53	25	P	P	05 24 48.8	-2.3
	baz=213,SNR=41						
I47A	Gladwin	28.57	22	eP	P	05 24 49.5	-1.8
	comp=Z,276nm,1.1s						
I47A	Gladwin	28.57	22	P	P	05 24 49.2	-2.2
	baz=210,SNR=12						
H45A	Beulah	28.58	20	P	P	05 24 49.3	-2.1
	baz=207						
M54A	Oil Creek Stat	28.62	32	eP	P	05 24 50.2	-1.7
	comp=Z,270nm,1.4s						
M54A				LR	LR		
	comp=Z,800nm,20.0s						
M54A	Oil Creek Stat	28.62	32	P	P	05 24 49.9	-2.0
	baz=221,SNR=35						
L53A	Girard	28.67	30	P	P	05 24 49.8	-2.5
	baz=220,SNR=25						
F40A	Park Falls	28.67	13	P	P	05 24 50.5	-1.8
	baz=198,SNR=154						
SDMD	Soldier's Deli	28.67	38	eP	P	05 24 51.0	-1.4
	comp=Z,37nm,1.1s						
SDMD				LR	LR		
	comp=Z,800nm,22.0s						
K51A	Iona Station	28.70	28	P	P	05 24 49.3	-3.2
	baz=217						
MCCM	Marconi Confer	28.73	319	eP	P	05 24 53.4	+0.5
	comp=Z,203nm,1.0s						
MCCM				LR	LR		
	comp=Z,5μm,18.0s						
O57A	Amberson	28.76	36	P	P	05 24 51.5	-1.7
	baz=226,SNR=26						
H46A	Fife Lake	28.78	21	P	P	05 24 50.8	-2.4
	baz=208,SNR=14						
ORV	Oroville	28.79	322	eP	P	05 24 54.3	+0.8
	comp=Z,318nm,1.4s						
ORV				LR	LR		
	comp=Z,4μm,19.0s						
ORV	Oroville	28.79	322	eP	P	05 24 54.3	+0.8
ORV				pmax	pmax		
	comp=Z,318nm,1.4s						
ORV				MLR	MLR		
	comp=Z,4μm,19.0s						
N56A	West Decatur	28.90	34	P	P	05 24 52.7	-1.7
	baz=224,SNR=74						
R61A	Willards	28.90	41	P	P	05 24 53.3	-1.1
	baz=232						
GCMT	Greycliff	28.90	345	eP	P	05 24 54.2	-0.3
SSPA	Standing Stone	28.92	35	eP	P	05 24 53.0	-1.5
	comp=Z,788nm,1.8s						
SSPA				LR	LR		
	comp=Z,2μm,18.0s						
SSPA	Standing Stone	28.92	35	P	P	05 24 53.1	-1.5
	baz=225						
ERPA	Erie	28.93	30	eP	P	05 24 52.3	-2.4
	comp=Z,154nm,1.0s						
ERPA				LR	LR		
	comp=Z,2μm,21.0s						
ERPA	Erie	28.93	30	P	P	05 24 52.2	-2.4
	baz=220,SNR=14						
MCMT	McKenzie Canyo	28.95	340	eP	P	05 24 55.8	+0.7
F42A	Maple Grove Fa	29.00	16	P	P	05 24 53.1	-2.1
	baz=202,SNR=11						
Q60A	Greensboro	29.00	39	P	P	05 24 53.5	-1.8
	baz=231,SNR=9.6						
I48A	Sherman Twp	29.01	23	P	P	05 24 53.4	-1.9
	baz=212,SNR=13						
LAO	LASA Array	29.04	350	eP	P	05 24 54.5	-1.1
	comp=Z,691nm,1.6s						
LAO				LR	LR		
	comp=Z,4μm,20.0s						
LAO	LASA Array	29.04	350	P	P	05 24 54.6	-1.1
	baz=166,SNR=97						
P59A	Jarettsville	29.04	38	P	P	05 24 53.9	-1.7
	baz=229,SNR=18						
YOPC	Yopal, Colombi	29.05	113	eP	P	05 24 59.1	+3.0
E38A	The Farm, Brul	29.05	11	eP	P	05 24 53.6	-2.0
	comp=Z,145nm,0.9s						
E38A				LR	LR		
	comp=Z,5μm,21.0s						
E38A	The Farm, Brul	29.05	11	P	P	05 24 53.7	-2.0
	baz=195,SNR=49						
M55A	Ridgway	29.05	33	P	P	05 24 53.7	-2.0
	baz=223,SNR=38						
COWI	Conover	29.07	14	eP	P	05 24 54.0	-1.8
	comp=Z,254nm,1.4s						
G45A	Suttons Bay	29.07	20	eP	P	05 24 53.8	-2.1
	comp=Z,174nm,0.8s						
G45A	Suttons Bay	29.07	20	P	P	05 24 53.5	-2.3
	baz=207,SNR=6.9						
GDXM	Geysers	29.09	320	eP	P	05 24 57.4	+1.2
	comp=Z,157nm,1.3s						
K52A	Tillsonburg	29.10	29	P	P	05 24 53.3	-2.8
	baz=218,SNR=18						
TAMC	Tame, Arauca	29.11	110	eP	P	05 24 59.3	+2.8
I49A	Point Hope	29.14	25	eP	P	05 24 54.2	-2.2
	comp=Z,225nm,1.3s						
I49A	Point Hope	29.14	25	P	P	05 24 54.3	-2.2
	baz=213,SNR=9.2						
H47A	Mio	29.18	22	P	P	05 24 54.8	-2.1
	baz=210,SNR=16						
SDV	Santo Domingo	29.18	105	P	P	05 24 58.9	+1.5
	comp=Z,44nm,0.8s,baz=286,slow=6.1,SNR=12						
SDV				pP	pP	05 25 13.5	+1.9
	comp=Z,43nm,0.6s,baz=274,slow=4.0,SNR=5.4						
SDV				LR	LR	05 37 17.3	
	comp=Z,5μm,21.9s,baz=290,slow=38						
SDV	Santo Domingo	29.18	105	eP	P	05 24 59.2	+1.8
SDV				epP	pP	05 25 13.5	+1.9
SDV				LR	LR		
	comp=Z,5μm,22.0s						
N57A	Milroy	29.18	35	P	P	05 24 55.5	-1.4
	baz=226,SNR=44						
SOCV	Socops	29.20	106	eP	P	05 24 59.2	+1.8
GLMI	Grayling	29.23	21	eP	P	05 24 55.7	-1.6
	comp=Z,244nm,1.0s						
GLMI				LR	LR		
	comp=Z,4μm,20.0s						
GLMI	Grayling	29.23	21	P	P	05 24 55.5	-1.7
	baz=209						
Q61A	Milford	29.24	40	P	P	05 24 56.5	-0.9
	baz=232						
BOZ	Bozeman (W)	29.26	342	eP	P	05 24 58.1	+0.4
	comp=Z,594nm,1.8s						
BOZ				LR	LR		
	comp=Z,26μm,18.0s						
BOZ	Bozeman (W)	29.26	342	eP	P	05 24 58.1	+0.4
BOZ				pmax	pmax		
	comp=Z,594nm,1.8s						
BOZ				MLR	MLR		
	comp=Z,26μm,18.0s						
BOZ	Bozeman (W)	29.26	342	P	P	05 24 57.8	+0.1
	baz=155,SNR=140						
PAGS	Pennsylvania G	29.28	37	eP	P	05 24 55.5	-2.3
	comp=Z,356nm,1.8s						
PAGS				LR	LR		
	comp=Z,2μm,22.0s						
WVOR	Wild Horse Val	29.32	330	eP	P	05 24 58.6	+0.3
	comp=Z,802nm,1.4s						
WVOR				LR	LR		
	comp=Z,18μm,20.0s						
WVOR	Wild Horse Val	29.32	330	eP	P	05 24 58.6	+0.3
WVOR				pmax	pmax		
	comp=Z,802nm,1.4s						
WVOR				MLR	MLR		
	comp=Z,18μm,20.0s						
L54A	Sinclairville	29.34	31	P	P	05 24 55.9	-2.4
	baz=221,SNR=15						
DLMT	Dillon	29.34	340	eP	P	05 24 59.2	+0.7
	comp=Z,534nm,1.3s						
DLMT				LR	LR		
	comp=Z,12μm,21.0s						
MVL	Millersville	29.34	37	eP	P	05 24 57.2	-1.1
	comp=Z,127nm,1.4s						
M56A	Emporium	29.36	33	P	P	05 24 56.7	-1.8
	baz=224,SNR=46						
HOPS	Hopland Field	29.37	320	eP	P	05 25 00.3	+1.7
	comp=Z,465nm,1.5s						
HOPS				LR	LR		
	comp=Z,6μm,18.0s						
O03E	Paynes Creek	29.45	323	P	P	05 24 59.3	-0.1
	baz=132,SNR=28						
MACC	Macarena, Meta	29.48	120	eP	P	05 25 02.4	+2.5
J52A	Paris	29.57	28	P	P	05 24 57.3	-3.0
	baz=218,SNR=15						
G46A	Petoskey	29.58	21	P	P	05 24 58.2	-2.1
	baz=208,SNR=11						
H48A	Harrisville	29.59	23	eP	P	05 24 59.0	-1.4
	comp=Z,139nm,1.0s						
H48A				LR	LR		
	comp=Z,2μm,21.0s						
H48A	Harrisville	29.59	23	P	P	05 24 58.4	-2.0
	baz=212,SNR=8.5						
MDND	Maddock	29.61	359	eP	P	05 24 59.6	-1.0
	comp=Z,491nm,1.1s						
MDND	Maddock	29.61	359	P	P	05 24 59.7	-0.8
	baz=179,SNR=17						
P60A	Greenville	29.64	38	P	P	05 24 59.3	-1.6
	baz=230,SNR=10						
O59A	Robesonia	29.64	37	P	P	05 24 59.5	-1.5
	baz=228,SNR=37						
BASO	Ashfield	29.67	26	P	P	05 24 58.6	-2.6
	baz=215,SNR=5.8						
F45A	CMU Biological	29.69	19	P	P	05 24 59.3	-2.0
	baz=207,SNR=6.8						
TYNO	Tyneside	29.73	29	P	P	05 24 59.2	-2.6
	baz=219,SNR=18						
L55A	Hinsdale	29.74	32	P	P	05 24 59.9	-2.0
	baz=223,SNR=24						
MOD	Modoc Plateau	29.76	327	eP	P	05 25 02.5	+0.3
	comp=Z,968nm,1.6s						
MOD				LR	LR		
	comp=Z,11μm,18.0s						
I51A	Listowel	29.78	27	P	P	05 24 59.5	-2.6
	baz=216,SNR=39						
G47A	Hillman	29.80	22	P	P	05 25 00.1	-2.2
	baz=210,SNR=10						
PSUB	Penn St. - Bra	29.82	38	eP	P	05 25 00.8	-1.7
	comp=Z,87nm,1.4s						
PSUB				LR	LR		
	comp=Z,1μm,21.0s						
E43A	Lone Tree Farm	29.88	17	eP	P	05 25 01.0	-1.9
	comp=Z,237nm,1.4s						
E43A				LR	LR		
	comp=Z,7μm,22.0s						
E43A	Lone Tree Farm	29.88	17	P	P	05 25 00.8	-2.1
	baz=204,SNR=37						
K54A	Basiliko Farm,	29.93	31	P	P	05 25 01.1	-2.4
	baz=222,SNR=9.9						
O02D	Mt. Diablo Mer	29.95	322	P	P	05 25 02.6	-1.1
	baz=130,SNR=8.6						
BRCO	Bruce Peninsul	29.95	26	P	P	05 25 01.3	-2.4
	baz=215						
J08A	Circle Bar Ran	29.96	331	eP	P	05 25 04.5	+0.6
	comp=Z,1μm,1.4s						
J08A				LR	LR		
	comp=Z,18μm,18.0s						
BWLO	Walkerton	29.98	26	P	P	05 25 01.6	-2.3
	baz=216,SNR=13						
ACTO	Acton	30.05	28	P	P	05 25 01.9	-2.6
	baz=218,SNR=6.9						
P61A	Hammonton	30.06	39	P	P	05 25 03.5	-1.1
	baz=232,SNR=8.1						
WDC	Whiskeytown Da	30.07	323	eP	P	05 25 03.0	-1.7
	comp=Z,29nm,0.9s						
WDC				LR	LR		
	comp=Z,3μm,20.0s						
WDC	Whiskeytown Da	30.07	323	eP	P	05 25 03.0	-1.7
WDC				pmax	pmax		
	comp=Z,29nm,0.9s						
WDC				MLR	MLR		
	comp=Z,3μm,20.0s						
O60A	Telford	30.10	38	P	P	05 25 04.3	-0.7
	baz=230,SNR=20						
D41A	Chassel	30.11	14	eP	P	05 25 03.5	-1.5
	comp=Z,337nm,1.1s						
D41A				LR	LR		
	comp=Z,5μm,21.0s						
D41A	Chassel	30.11	14	P	P	05 25 03.5	-1.5
	baz=200,SNR=96						
KCPM	Cahto Peak	30.11	320	eP	P	05 25 06.7	+1.4
	comp=Z,352nm,1.4s						
KCPM				LR	LR		
	comp=Z,5μm,18.0s						
STCO	Saint Catharin	30.15	30	P	P	05 25 02.8	-2.5
	baz=220						
AGMN	Agassiz Nation	30.17	4	eP	P	05 25 04.4	-1.1
	comp=Z,697nm,1.8s						
AGMN	Agassiz Nation	30.17	4	P	P	05 25 04.2	-1.4
	baz=186,SNR=79						
N59A	State Game Lan	30.28	37	eP	P	05 25 05.4	-1.2
	comp=Z,254nm,1.6s						
N59A				LR	LR		
	comp=Z,2μm,21.0s						
N59A	State Game Lan	30.28	37	P	P	05 25 05.0	-1.7
	baz=228,SNR=24						
LUPA	Lehigh Univers	30.30	37	eP	P	05 25 05.9	-0.9
	comp=Z,12nm,1.3s						
LUPA				ePcP	PcP	05 28 06.9	+0.8
LUPA				LR	LR		
	comp=Z,100nm,19.0s						
PLID	Pearl Lake	30.31	336	eP	P	05 25 06.9	-0.1
	comp=Z,919nm,1.4s						
K55A	Perry	30.32	32	P	P	05 25 05.2	-1.8
	baz=223,SNR=20						
HRY	Holter Researc	30.33	343	eP	P	05 25 07.3	+0.2
BMRO	Meriville Lake	30.34	26	P	P	05 25 04.9	-2.1
	baz=215,SNR=12						
EYMN	Ely	30.36	10	eP	P	05 25 05.2	-2.0
	comp=Z,514nm,2.0s						
EYMN				LR	LR		
	comp=Z,6μm,20.0s						
EYMN	Ely	30.36	10	P	P	05 25 05.0	-2.2
	baz=195,SNR=46						
I52A	Shelburne	30.36	28	P	P	05 25 04.8	-2.5
	baz=218,SNR=12						
TORO	Toronto–Lesli	30.38	29	P	P	05 25 04.7	-2.6
	baz=220						
E44A	Grand Marais A	30.41	18	eP	P	05 25 06.7	-1.0
	comp=Z,289nm,1.4s						
E44A				LR	LR		
	comp=Z,7μm,21.0s						
E44A	Grand Marais A	30.41	18	P	P	05 25 05.9	-1.8
	baz=206,SNR=8.0						
MMNY	Mt. Morris Dam	30.41	32	eP	P	05 25 06.0	-1.7
	comp=Z,257nm,1.6s						
MMNY				LR	LR		

comp=Z,2μm,22.0s
N02D Trinity Center 30.42 323 P P 05 25 06.2 -1.7
baz=132,SNR=17
I53A Kortright Cn E 30.43 29 P P 05 25 04.8 -3.0
baz=219,SNR=8.9
J54A Appleton 30.45 30 *eP* **P 05 25 05.9 -2.2**
comp=Z,150nm,1.5s
J54A LR LR
comp=Z,3μm,21.0s
J54A Appleton 30.45 30 P P 05 25 05.9 -2.2
baz=221,SNR=7.3
MEDO Medina 30.46 31 *eP* **P 05 25 06.0 -2.1**
comp=Z,58nm,0.9s
MEDO LR LR
comp=Z,3μm,22.0s
MEDO Medina 30.46 31 P P 05 25 06.1 -2.0
baz=222,SNR=10
O61A Allentown 30.46 39 P P 05 25 06.2 -2.0
baz=231,SNR=9.0
M04C Macdoel 30.49 325 P P 05 25 08.8 +0.2
baz=134,SNR=161
DGMT Dagmar 30.50 353 *eP* **P 05 25 08.3 -0.2**
comp=Z,731nm,1.3s
DGMT Dagmar 30.50 353 P P 05 25 08.3 -0.2
baz=171,SNR=68
KMRM Mail Ridge 30.52 321 *eP* **P 05 25 09.8 +1.0**
comp=Z,667nm,1.7s
KMRM LR LR
comp=Z,7μm,19.0s
BMO Blue Mountains 30.64 334 *eP* **P 05 25 09.3 -0.5**
comp=Z,606nm,1.5s
BMO LR LR
comp=Z,12μm,18.0s
BMO Blue Mountains 30.64 334 *eP* **P 05 25 09.3 -0.5**
BMO pmax pmax
comp=Z,606nm,1.5s
BMO MLR MLR
comp=Z,12μm,18.0s
K05A Summer Lake 30.66 328 *eP* **P 05 25 10.4 +0.3**
comp=Z,646nm,1.9s
K05A LR LR
comp=Z,9μm,21.0s
E46A Sault Ste Mari 30.69 20 *eP* **P 05 25 08.3 -1.8**
comp=Z,149nm,1.5s
E46A LR LR
comp=Z,4μm,20.0s
E46A Sault Ste Mari 30.69 20 P P 05 25 08.2 -1.8
baz=208,SNR=18
KSPA Keystone Colle 30.71 36 *eP* **P 05 25 09.1 -1.3**
comp=Z,185nm,1.7s
KSPA LR LR
comp=Z,2μm,21.0s
TOBO Tobermory, Bru 30.73 25 P P 05 25 08.5 -2.0
baz=214,SNR=34
AOPR Arecibo Observ 30.75 85 *eP* **P 05 25 10.2 -0.8**
comp=Z,206nm,1.6s
PKRO Pickering 30.77 29 P P 05 25 08.5 -2.4
baz=220,SNR=6.3
C40A Isle Royale Na 30.78 13 *eP* **P 05 25 09.2 -1.7**
comp=Z,220nm,1.4s
C40A *eS* **S 05 30 06.8 -3.5**
C40A LR LR
comp=Z,4μm,21.0s
C40A Isle Royale Na 30.78 13 P P 05 25 08.9 -2.0
baz=199,SNR=18
M02C Callahan 30.78 324 P P 05 25 09.8 -1.3
baz=132,SNR=31
F48A Evansville 30.81 23 P P 05 25 09.5 -1.7
baz=212,SNR=12
BRNJ Basking Ridge 30.83 38 *eP* **P 05 25 10.2 -1.2**
comp=Z,138nm,1.1s
BRNJ LR LR
comp=Z,2μm,21.0s
J55A Hilton 30.84 31 *eP* **P 05 25 09.3 -2.3**
comp=Z,315nm,1.5s
J55A LR LR
comp=Z,2μm,22.0s
J55A Hilton 30.84 31 P P 05 25 09.2 -2.3
baz=222,SNR=18
DRWO Darlington Wes 30.86 29 P P 05 25 09.5 -2.2
baz=220,SNR=6.7
DRCO St. Marys Ceme 30.88 29 P P 05 25 09.1 -2.7
baz=220
OBIP Obispado Ponce 30.91 85 *eP* **P 05 25 12.4 0.0**
comp=Z,136nm,1.3s
YBH Yreka Blue Hor 30.93 324 *eP* **P 05 25 11.0 -1.4**
comp=Z,38nm,0.8s
YBH LR LR
comp=Z,4μm,18.0s
YBH Yreka Blue Hor 30.93 324 *eP* **P 05 25 11.0 -1.4**
YBH pmax pmax
comp=Z,38nm,0.8s
YBH MLR MLR
comp=Z,4μm,18.0s
H52A Wyevale 30.94 27 P P 05 25 09.9 -2.4
baz=218,SNR=18
KHMM Horse Mountain 30.95 322 *eP* **P 05 25 13.0 +0.3**
comp=Z,194nm,0.9s
KHMM *ePcP* **PcP 05 28 10.1 +2.1**
KHMM LR LR
comp=Z,5μm,19.0s
F49A Sandfield 30.97 24 P P 05 25 10.8 -1.8
baz=213,SNR=33
I07A Izee 30.99 331 *eP* **P 05 25 12.8 -0.2**
comp=Z,218nm,1.3s
I07A LR LR
comp=Z,18μm,19.0s
ICMP Isla Caja de M 31.00 85 PFAKE 05 25 30.0 +17
ICMP LR LR
comp=Z,2μm,20.0s
EGMT Eagleton 31.02 346 *eP* **P 05 25 13.2 +0.1**
comp=Z,923nm,1.5s
EGMT Eagleton 31.02 346 P P 05 25 13.0 -0.1
baz=160,SNR=211
K04D Chiloquin, OR 31.03 327 P P 05 25 13.5 +0.2
baz=135,SNR=33
BINY Binghamton 31.03 35 *eP* **P 05 25 12.3 -1.0**
comp=Z,566nm,1.5s
BINY LR LR
comp=Z,2μm,19.0s
BINY Binghamton 31.03 35 P P 05 25 11.6 -1.6
baz=226,SNR=79
L04D Klamath Falls 31.04 325 P P 05 25 13.1 -0.3
baz=134,SNR=86
WLVO Wesleyville 31.06 30 P P 05 25 10.8 -2.6
baz=221,SNR=16
ODNJ Ogdensburg 31.06 37 *eP* **P 05 25 12.4 -1.1**
comp=Z,82nm,1.1s
ODNJ LR LR
comp=Z,2μm,21.0s
MSO Missoula 31.08 340 *eP* **P 05 25 13.5 -0.2**
comp=Z,180nm,1.0s
MSO LR LR
comp=Z,14μm,20.0s
MSO Missoula 31.08 340 P P 05 25 13.5 -0.2
baz=152,SNR=159
JCC Jacoby Creek, 31.08 322 *eP* **P 05 25 14.4 +0.8**
comp=Z,638nm,1.4s
JCC LR LR
comp=Z,6μm,19.0s
E47A Iron Bridge 31.11 21 P P 05 25 12.4 -1.4
baz=210,SNR=39
J05D Fort Rock, OR 31.23 328 P P 05 25 14.6 -0.5
baz=137,SNR=50
D46A Sault St. Mari 31.24 20 P P 05 25 13.2 -1.8
baz=209,SNR=34
CPNY Central Park 31.25 39 *eP* **P 05 25 14.1 -1.0**
comp=Z,189nm,1.5s
SJG San Juan 31.34 85 P P 05 25 15.8 -0.3
comp=Z,61nm,0.8s,baz=267,slow=5.4,SNR=24
SJG pP **pP 05 25 31.7 +1.3**
comp=Z,34nm,0.8s,baz=253,slow=8.6,SNR=4.3
SJG PcP **PcP 05 28 08.7 -0.5**
comp=Z,15nm,0.8s,baz=241,slow=5.6,SNR=3.6
SJG LR LR 05 38 23.3
comp=Z,971nm,20.4s,baz=266,slow=37
SJG San Juan 31.34 85 *eP* **P 05 25 16.5 +0.4**
comp=Z,134nm,0.8s
SJG San Juan 31.34 85 *eP* **P 05 25 16.1 0.0**
SADO Sadowa 31.37 28 P P 05 25 13.4 -2.7
comp=Z,25nm,0.4s,baz=262,slow=8.2,SNR=50
SADO pP **pP 05 25 27.7 -2.8**
comp=Z,34nm,0.9s,baz=263,slow=10.0,SNR=6.0
SADO Sadowa 31.37 28 *eP* **P 05 25 13.7 -2.4**
comp=Z,44nm,0.7s
SADO LR LR
comp=Z,3μm,22.0s
KLBO Killbear Provi 31.37 26 P P 05 25 13.5 -2.6
baz=216,SNR=23
PAL Palisades 31.42 38 *eP* **P 05 25 15.4 -1.2**
comp=Z,126nm,1.0s
PAL *eS* **S 05 30 21.8 +1.4**
PAL LR LR
comp=Z,1μm,22.0s
PAL Palisades 31.42 38 *eP* **P 05 25 15.4 -1.2**
PAL *eS* **S 05 30 21.8 +1.4**
PAL pmax pmax
comp=Z,126nm,1.0s
PAL MLR MLR
comp=Z,1μm,22.0s
PAL Palisades 31.42 38 P P 05 25 14.7 -1.8
baz=231,SNR=29
PINE Pine Mountain 31.46 329 *eP* **P 05 25 16.8 -0.4**
comp=Z,105nm,1.0s
PINE LR LR
comp=Z,9μm,18.0s
KRMB Red Mountain 31.46 323 *eP* **P 05 25 17.2 0.0**
F10A Beach Ranch, E 31.52 336 *eP* **P 05 25 17.5 -0.1**
comp=Z,654nm,1.0s
F10A LR LR
comp=Z,10μm,18.0s
E48A Lockeyer 31.53 23 P P 05 25 15.6 -2.0
baz=212,SNR=24
CBYP Canovanas 31.60 85 *eP* **P 05 25 18.4 -0.1**
comp=Z,575nm,1.7s
I55A Frankford 31.62 30 P P 05 25 15.9 -2.5
baz=222,SNR=20
HUMP Col San Antoni 31.62 85 *eP* **P 05 25 19.0 +0.4**
comp=Z,669nm,1.7s
HUMP *ePcP* **PcP 05 28 10.5 +0.6**
J04D Umpqua Nationa 31.65 327 P P 05 25 19.0 +0.1
baz=135,SNR=119
HUMO Hull Mountain 31.66 325 *eP* **P 05 25 17.2 -1.5**
comp=Z,87nm,1.6s
HUMO LR LR
comp=Z,6μm,19.0s
G08A Pilot Rock 31.69 333 *eP* **P 05 25 18.9 -0.2**
comp=Z,576nm,1.3s
G08A LR LR
comp=Z,7μm,18.0s
M61A Granite Spring 31.69 38 P P 05 25 17.5 -1.5
baz=231,SNR=45
D47A Chapleau 31.69 21 P P 05 25 17.2 -1.8
baz=210,SNR=29
L02E Cave Junction 31.71 324 P P 05 25 18.6 -0.6
baz=132,SNR=33
PECO Prince Edward 31.74 31 *eP* **P 05 25 17.3 -2.1**
comp=Z,62nm,0.9s
PECO LR LR
comp=Z,2μm,21.0s
PECO Prince Edward 31.74 31 P P 05 25 17.1 -2.3
baz=223,SNR=20
BUKO Buck Lake 31.78 27 P P 05 25 17.2 -2.5
baz=218,SNR=38
G53A Haliburton 31.87 28 P P 05 25 17.9 -2.7
baz=219,SNR=32
DELO Deloro Mine 31.87 30 *eP* **P 05 25 18.5 -2.1**
comp=Z,348nm,1.8s
DELO LR LR
comp=Z,3μm,21.0s
DELO Deloro Mine 31.87 30 P P 05 25 18.1 -2.5
baz=221,SNR=32
MTP Monte Pirata 31.91 85 *eP* **P 05 25 21.8 +0.6**
comp=Z,553nm,1.3s
F51A Arnstein 31.95 26 P P 05 25 18.7 -2.6
baz=216,SNR=26
E50A Wahnapitae 32.03 24 P P 05 25 19.8 -2.1
baz=214,SNR=49
I05D Terrebonne, OR 32.05 329 P P 05 25 22.2 -0.1
baz=138,SNR=131
F52A Sundridge 32.10 27 P P 05 25 19.9 -2.6
baz=217,SNR=27
K02D Willamette Mer 32.10 325 P P 05 25 22.2 -0.5
baz=132,SNR=60
H55A Tweed 32.10 30 P P 05 25 20.2 -2.4
baz=222,SNR=43
BANO Bancroft 32.11 29 P P 05 25 20.0 -2.6
baz=220,SNR=22
ULM Lac du Bonnet 32.12 4 P P 05 25 20.6 -2.1
comp=Z,77nm,1.1s,baz=189,slow=8.9,SNR=48
ULM PcP **PcP 05 28 10.2 -0.6**
comp=Z,21nm,0.7s,baz=246,slow=4.6,SNR=3.5
ULM LR LR 05 39 19.2
comp=Z,4μm,19.7s,baz=176,slow=38
ULM Lac du Bonnet 32.12 4 *eP* **P 05 25 20.5 -2.1**
comp=Z,213nm,1.4s
ULM LR LR
comp=Z,5μm,19.0s
KSCT Kent School, K 32.12 38 *eP* **P 05 25 21.7 -1.0**
comp=Z,166nm,1.1s
KSCT LR LR
comp=Z,1μm,21.0s
YLE Yale 32.18 39 *eP* **P 05 25 22.1 -1.3**
comp=Z,110nm,0.9s
YLE LR LR
comp=Z,2μm,21.0s
I04A Tendick Farm, 32.20 328 P P 05 25 22.9 -0.6
baz=135,SNR=44
D48A Paudash Townsh 32.25 22 P P 05 25 22.0 -1.8
baz=212,SNR=34
E09A Wood Farm, Sta 32.33 335 *eP* **P 05 25 23.4 -1.1**
comp=Z,268nm,0.9s
E09A LR LR
comp=Z,12μm,18.0s
G06A Carlson Farm, 32.39 331 *eP* **P 05 25 24.9 -0.4**
comp=Z,233nm,1.3s
G06A LR LR
comp=Z,19μm,18.0s
ATAH Atahualpa 32.43 139 P P 05 25 28.9 +2.7
comp=Z,16nm,0.8s,baz=343,slow=7.3,SNR=7.7
ATAH pP **pP 05 25 43.3 +2.8**
comp=Z,37nm,0.9s,baz=344,slow=5.0,SNR=10
D49A Beulah Townshi 32.50 23 P P 05 25 24.0 -2.0
baz=213,SNR=34
PLVO Plevna 32.52 30 *eP* **P 05 25 24.0 -2.2**
comp=Z,198nm,1.6s
PLVO LR LR
comp=Z,2μm,20.0s
PLVO Plevna 32.52 30 P P 05 25 23.8 -2.4
baz=222,SNR=31
J01E Myrtle Point 32.56 325 P P 05 25 27.3 +0.7
baz=132,SNR=148
H56A Elgin 32.58 31 P P 05 25 24.4 -2.4
baz=223,SNR=24
F07A Phinny Hill Vi 32.58 333 *eP* **P 05 25 26.5 -0.3**
comp=Z,494nm,1.5s
F07A LR LR
comp=Z,9μm,18.0s
KEBM Edson Butte 32.59 324 *eP* **P 05 25 27.9 +1.0**
comp=Z,2μm,1.3s
KEBM LR LR
comp=Z,6μm,22.0s
I03D Drain, OR 32.61 327 P P 05 25 27.0 -0.1
baz=134,SNR=124
E51A G1948 Merrick 32.62 26 P P 05 25 24.9 -2.2
baz=216,SNR=83
TRY Troy 32.66 36 *eP* **P 05 25 26.5 -0.9**
comp=Z,166nm,1.5s
TRY LR LR
comp=Z,2μm,22.0s
CDVI St. Croix 32.69 85 *eP* **P 05 25 27.5 -0.5**
comp=Z,264nm,1.0s
E08A Dider Farm, El 32.69 334 *eP* **P 05 25 26.2 -1.5**
comp=Z,47nm,0.9s
E08A LR LR
comp=Z,7μm,18.0s
G05D Wamic, OR 32.71 330 P P 05 25 27.7 -0.2
baz=139,SNR=36
H04A Detroit Lake 32.72 329 *eP* **P 05 25 27.9 -0.2**
comp=Z,803nm,1.2s
H04A LR LR
comp=Z,10μm,19.0s
E52A Mattawa 32.77 27 P P 05 25 26.0 -2.4
baz=218,SNR=16
ALGO Algonquin Park 32.77 28 P P 05 25 25.8 -2.6
baz=219,SNR=27
HAWA Hanford 32.80 334 *eP* **P 05 25 27.9 -0.9**
comp=Z,154nm,1.4s
HAWA LR LR
comp=Z,4μm,21.0s
G55A Calabogie 32.85 30 P P 05 25 26.7 -2.4
baz=222,SNR=23
H04D Lebanon 32.88 328 P P 05 25 28.6 -0.8
baz=136,SNR=130
PEMO Pembroke 32.92 29 P P 05 25 27.3 -2.5
baz=221,SNR=33
WALA Waterton Lakes 33.05 342 *eP* **P 05 25 31.0 0.0**
comp=Z,594nm,1.4s
D08A Wollman Farm, 33.08 335 *eP* **P 05 25 30.1 -1.0**
comp=Z,302nm,1.5s
D08A LR LR
comp=Z,8μm,21.0s
ACCN Adirondack Com 33.09 35 *eP* **P 05 25 30.0 -1.3**
comp=Z,294nm,1.5s
ACCN LR LR
comp=Z,2μm,21.0s
D51A Lot 18 Range I 33.11 25 P P 05 25 29.2 -2.2
baz=216
QUA2 Belchertown 33.12 38 *eP* **P 05 25 30.3 -1.3**
comp=Z,363nm,1.7s
QUA2 LR LR
comp=Z,2μm,21.0s
I02D Swisshome 33.15 327 P P 05 25 32.4 +0.6
baz=134,SNR=91
NCB Newcomb 33.18 34 *eP* **P 05 25 30.5 -1.6**
comp=Z,255nm,1.7s
NCB LR LR
comp=Z,1μm,19.0s
COR Corvallis 33.21 328 *eP* **P 05 25 32.3 +0.1**
comp=Z,760nm,1.3s
COR LR LR
comp=Z,9μm,18.0s
COR Corvallis 33.21 328 *eP* **P 05 25 32.3 +0.1**
COR pmax pmax
comp=Z,760nm,1.3s
COR MLR MLR
comp=Z,9μm,18.0s
F05D White Salmon 33.26 331 P P 05 25 33.5 +0.8
baz=139,SNR=111
E53A Dumoine, Ponti 33.27 28 P P 05 25 30.6 -2.1
baz=219,SNR=34
BRYW Bryant College 33.38 39 *eP* **P 05 25 32.1 -1.7**
comp=Z,70nm,1.0s
BRYW LR LR
comp=Z,1μm,20.0s
NEW Newport 33.40 338 P P 05 25 33.6 -0.4
comp=Z,114nm,1.0s,baz=141,slow=8.5,SNR=174
NEW PcP **PcP 05 28 14.4 0.0**
comp=Z,23nm,0.8s,baz=126,slow=2.1,SNR=5.2
NEW Newport 33.40 338 *eP* **P 05 25 32.7 -1.2**
comp=Z,306nm,1.4s
NEW LR LR
comp=Z,18μm,18.0s
NEW Newport 33.40 338 P P 05 25 32.9 -1.1
baz=148,SNR=178
D52A ZEK Kipawa Sen 33.42 26 P P 05 25 32.2 -1.9
baz=218,SNR=24
C09A Chrisman Ranch 33.44 336 *eP* **P 05 25 33.8 -0.5**
comp=Z,365nm,0.9s
C09A LR LR
comp=Z,15μm,18.0s
LONY Lake Ozonia 33.44 33 *eP* **P 05 25 32.2 -2.1**
comp=Z,211nm,1.6s
LONY LR LR
comp=Z,3μm,22.0s
LONY Lake Ozonia 33.44 33 P P 05 25 32.4 -1.9
baz=226,SNR=27
F55A Otter Lake 33.45 29 P P 05 25 32.3 -2.1
baz=222,SNR=16
E54A Lac Daplat, Po 33.52 28 P P 05 25 32.8 -2.2
baz=220,SNR=58
ORHO Orleans, Herit 33.56 31 P P 05 25 32.9 -2.4
baz=224
ORIO Orleans, Innes 33.57 31 P P 05 25 33.3 -2.1
baz=224,SNR=31
G03D McMinnville, O 33.63 329 P P 05 25 36.3 +0.4
baz=136,SNR=108
M65A Busby, Falmout 33.71 40 P P 05 25 34.9 -1.8
baz=235
HRV Adam Dziewonsk 33.73 38 *eP* **P 05 25 35.8 -1.0**
comp=Z,166nm,1.3s
HRV LR LR
comp=Z,1μm,21.0s
HRV Adam Dziewonsk 33.73 38 *eP* **P 05 25 35.8 -1.0**
HRV pmax pmax
comp=Z,166nm,1.3s
HRV MLR MLR
comp=Z,1μm,21.0s
HRV Adam Dziewonsk 33.73 38 P P 05 25 35.7 -1.0
baz=232
WES Weston 33.79 38 *eP* **P 05 25 35.8 -1.5**
comp=Z,121nm,1.2s
WES *eS* **S 05 31 02.6 +5.3**
WES LR LR
comp=Z,1μm,20.0s
WES Weston 33.79 38 *eP* **P 05 25 35.8 -1.5**
WES *eS* **S 05 31 02.6 +5.3**
WES pmax pmax
comp=Z,121nm,1.2s
WES MLR MLR
comp=Z,1μm,20.0s
D53A Lac Vacive, Po 33.80 27 *eP* **P 05 25 35.6 -1.8**
comp=Z,232nm,1.8s
D53A LR LR
comp=Z,4μm,22.0s
D53A Lac Vacive, Po 33.80 27 P P 05 25 35.7 -1.7
baz=219,SNR=24
BCX Boston College 33.85 39 *eP* **P 05 25 36.8 -1.1**
comp=Z,127nm,1.3s
BCX LR LR
comp=Z,1μm,21.0s
LTY Liberty 33.97 333 *eP* **P 05 25 39.1 +0.1**
comp=Z,2μm,1.8s
LTY LR LR
comp=Z,5μm,22.0s
BBSR BB Station 34.05 59 PFAKE 05 25 50.0 +10
BBSR LR LR
comp=Z,2μm,18.0s
HNH Hanover 34.06 36 *eP* **P 05 25 39.0 -0.7**
comp=Z,214nm,1.4s
HNH LR LR
comp=Z,2μm,21.0s
LON Longmire 34.08 332 *eP* **P 05 25 40.3 +0.5**
comp=Z,650nm,1.5s
LON LR LR
comp=Z,15μm,18.0s
LON Longmire 34.08 332 *eP* **P 05 25 40.3 +0.5**
LON pmax pmax
comp=Z,650nm,1.5s
LON MLR MLR
comp=Z,15μm,18.0s
FRNY Flat Rock 34.10 33 *eP* **P 05 25 38.5 -1.5**
comp=Z,202nm,1.4s
FRNY LR LR
comp=Z,3μm,22.0s
F04D Rainier, OR 34.14 330 P P 05 25 40.9 +0.6
baz=137,SNR=25
VT1 Waterbury 34.21 35 *eP* **P 05 25 39.7 -1.3**
comp=Z,52nm,1.0s
VT1 LR LR
comp=Z,2μm,21.0s
SMRT St. Maarten 34.26 84 PFAKE 05 25 50.0 +8.3
SMRT LR LR
comp=Z,2μm,22.0s
SMRT St. Maarten 34.26 84 *eP* **P 05 25 40.8 -0.9**
FFD Franklin Falls 34.27 37 *eP* **P 05 25 40.2 -1.2**
comp=Z,262nm,1.9s
FFD LR LR
comp=Z,2μm,22.0s
E04D Cinebar 34.28 331 P P 05 25 41.7 +0.2
baz=138,SNR=56
D54A Lac Fusel, La 34.31 28 P P 05 25 39.5 -2.3
baz=220,SNR=34
SEUS St. Eustatius 34.41 85 *eP* **P 05 25 42.1 -0.8**
comp=Z,412nm,1.1s
SEUS St. Eustatius 34.41 85 *eP* **P 05 25 43.8 +0.9**
D05A Enumclaw 34.49 332 *eP* **P 05 25 43.6 +0.3**
comp=Z,429nm,1.0s
D05A LR LR
comp=Z,14μm,18.0s
BSK Brimstone Hill 34.56 86 *eP* **P 05 25 45.9 +1.6**
SKDB Saint Kitts 2 34.58 86 *eP* **P 05 25 46.2 +1.7**
C06D Leavenworth 34.58 334 P P 05 25 44.7 +0.5
baz=142,SNR=24
TRQ Mont Tremblant 34.59 31 *eP* **P 05 25 42.7 -1.6**
LBNH Lisbon 34.60 35 *eP* **P 05 25 43.9 -0.5**
comp=Z,328nm,1.5s
LBNH LR LR
comp=Z,2μm,21.0s
LBNH Lisbon 34.60 35 *eP* **P 05 25 43.9 -0.5**
LBNH pmax pmax
comp=Z,328nm,1.5s
LBNH MLR MLR
comp=Z,2μm,21.0s

LBNH	Lisbon	34.60	35	P		P	05 25 43.7 -0.7
	baz=230,SNR=29						
SKI	Saint Kitts	34.65	86	eP		P	05 25 45.0 -0.2
	comp=Z,537nm,1.1s						
SKI				LR		LR	
	comp=Z,4μm,21.0s						
SKI	Saint Kitts	34.65	86	eP		P	05 25 45.0 -0.2
SKI	Saint Kitts	34.65	86	eP		P	05 25 45.0 -0.2
SKI				pmax		pmax	
	comp=Z,537nm,1.1s						
SKI				MLR		MLR	
	comp=Z,4μm,21.0s						
VLDQ	Val d'Or	34.71	26	eP		P	05 25 43.0 -2.3
	comp=Z,179nm,1.5s						
VLDQ				LR		LR	
	comp=Z,2μm,20.0s						
NVBH	Bath Hotel, Ne	34.80	86	eP		P	05 25 47.9 +1.6
NVRH	Round Hill, Ne	34.80	86	eP		P	05 25 47.3 +0.8
D04E	Lakebay	34.83	331	P		P	05 25 46.6 +0.4
	baz=138,SNR=11						
MOQ	Mont Orford	35.13	34	eP		P	05 25 48.0 -0.9
D03D	Eldon	35.24	332	P		P	05 25 49.8 -0.1
	baz=138,SNR=146						
MLYT	Lee's Yard	35.25	87	eP		P	05 25 50.0 -0.3
B06A	Marblemount	35.30	334	eP		P	05 25 49.6 -0.6
	comp=Z,172nm,0.9s						
B06A				LR		LR	
	comp=Z,5μm,18.0s						
B05A	Bryant	35.36	333	P		P	05 25 49.8 -0.9
	baz=140,SNR=65						
NLWA	Neilton Lookou	35.49	331	eP		P	05 25 52.6 +0.5
	comp=Z,599nm,1.4s						
NLWA				LR		LR	
	comp=Z,16μm,18.0s						
ANWB	Willy Bob	35.52	85	PFAKE			05 26 00.0 +7.4
ANWB				LR		LR	
	comp=Z,2μm,22.0s						
ANWB	Willy Bob	35.52	85	eP		P	05 25 46.8 -5.7
LSQQ	Lebel-sur-Quev	35.65	25	P		P	05 25 51.3 -2.0
	baz=218						
MATQ	Matagami	35.95	24	P		P	05 25 54.2 -1.7
	baz=216,SNR=66						
A04D	Lummi Island	35.97	333	P		P	05 25 56.0 0.0
	baz=140,SNR=103						
WVL	Waterville	36.07	37	eP		P	05 25 56.3 -0.7
	comp=Z,274nm,1.6s						
PGC	Sidney	36.24	333	eP		P	05 25 58.0 -0.3
	comp=Z,231nm,1.0s						
LATQ	La Tuque	36.27	31	P		P	05 25 57.1 -1.5
	baz=226,SNR=21						
FFC	Flin Flon	36.56	357	eP		P	05 25 59.7 -1.3
	comp=Z,503nm,1.6s						
FFC				LR		LR	
	comp=Z,4μm,20.0s						
FFC	Flin Flon	36.56	357	i P		P	05 25 59.7 -1.3
FDF	Fort de France	36.56	90	eP		P	05 25 58.3 -3.2
PKME	Peaks-Kenny Pk	36.71	36	eP		P	05 26 01.2 -1.2
	comp=Z,186nm,1.4s						
PKME				LR		LR	
	comp=Z,3μm,21.0s						
PKME	Peaks-Kenny Pk	36.71	36	P		P	05 26 01.4 -0.9
	baz=232,SNR=13						
SVB	Belmont	36.76	92	eP		P	05 26 02.8 -0.4
SLBI	Saint Lucia, B	36.87	91	eP		P	05 26 04.8 +0.7
MCLT	Moule a Chique	36.96	91	eP		P	05 26 07.7 +2.8
LLLB	Lillooet	37.10	336	eP		P	05 26 05.8 +0.1
	comp=Z,1μm,1.4s						
LLLB				LR		LR	
	comp=Z,8μm,18.0s						
NNA	Nana	37.18	142	PFAKE			05 26 20.0 +13
NNA				LR		LR	
	comp=Z,6μm,22.0s						
CHGQ	Chibougamau	37.39	26	P		P	05 26 06.4 -1.7
	baz=221,SNR=38						
EMMW	East Machias	37.43	38	eP		P	05 26 07.5 -1.0
	comp=Z,134nm,1.3s						
GGN	Saint George	38.02	38	eP		P	05 26 12.4 -1.1
	comp=Z,95nm,1.3s						
PQI	Presque Isle	38.27	35	eP		P	05 26 14.4 -1.2
	comp=Z,113nm,1.2s						
LMN	Caledonia Moun	39.62	38	eP		P	05 26 25.2 -1.7
	comp=Z,196nm,1.4s						
BATG	Bathurst New B	39.71	36	eP		P	05 26 26.0 -1.6
	comp=Z,199nm,1.5s						
FCC	Fort Churchill	40.71	4	eP		P	05 26 34.4 -1.3
	comp=Z,599nm,1.9s						
FCC	Fort Churchill	40.71	4	eP		P	05 26 34.4 -1.3
FCC				pmax		pmax	
	comp=Z,599nm,1.9s						
BBB	Bella Bella	40.86	333	P		P	05 26 37.4 +0.4
	comp=Z,39nm,0.6s,baz=120,slow=6.5,SNR=69						
BBB				pP		pP	05 26 52.0 +0.4
	comp=Z,44nm,1.0s,baz=63,slow=6.7,SNR=5.2						
BBB	Bella Bella	40.86	333	eP		P	05 26 37.0 0.0
	comp=Z,505nm,1.7s						
BBB				LR		LR	
	comp=Z,4μm,22.0s						
GBN	Guysborough	41.38	41	eP		P	05 26 40.3 -1.1
	comp=Z,271nm,1.7s						
PTGA	Pitinga	42.86	112	P		P	05 26 54.8 +0.9
	comp=Z,21nm,0.9s,baz=301,slow=8.5,SNR=24						
PTGA				pP		pP	05 27 07.8 -0.8
	comp=Z,26nm,0.9s,baz=311,slow=9.5,SNR=11						
PTGA	Pitinga	42.86	112	eP		P	05 26 54.6 +0.7
	comp=Z,98nm,1.4s						
PTGA				LR		LR	
	comp=Z,1μm,22.0s						
PTGA	Pitinga	42.86	112	eP		P	05 26 54.3 +0.4
MOBC	Moresby Island	43.23	332	PFAKE			05 27 10.0 +14
MOBC				LR		LR	
	comp=Z,8μm,18.0s						
DIB	Dawson Inlet,	43.49	331	eP		P	05 26 59.1 +0.6
	comp=Z,403nm,1.3s						
DIB				LR		LR	
	comp=Z,7μm,20.0s						
SCHQ	Schefferville	44.14	26	P		P	05 27 02.5 -1.2
	comp=Z,25nm,0.4s,baz=225,slow=5.6,SNR=23						
SCHQ				pP		pP	05 27 16.9 -1.5
	comp=Z,26nm,0.6s,baz=250,slow=7.9,SNR=4.3						
SCHQ				LR		LR	05 48 08.0
	comp=Z,2μm,18.1s,baz=226,slow=40						
SCHQ	Schefferville	44.14	26	eP		P	05 27 02.0 -1.7
	comp=Z,313nm,1.6s						
CRAG	Craig	45.27	333	eP		P	05 27 13.4 +0.8
	comp=Z,911nm,1.4s						
CRAG				LR		LR	
	comp=Z,6μm,19.0s						
YKA	Yellowknife Ar	45.58	350	P		P	05 27 13.4 -1.5
	comp=Z,126nm,0.8s,baz=158,slow=7.3,SNR=793						
YKA				PcP		PcP	05 28 52.6 0.0
	comp=Z,12nm,0.8s,baz=154,slow=3.2,SNR=6.8						
YKA				ScP		ScP	05 32 43.8 +2.9
	comp=Z,4.2nm,1.1s,baz=147,slow=4.4,SNR=3.8						
YKA				LR		LR	05 48 21.4
	comp=Z,386nm,20.8s,baz=163,slow=39						
YKB5	Yellowknife Ar	45.58	350	eP		P	05 27 13.4 -1.5
YKB5				ePcP		PcP	05 28 52.6 0.0
YKB5				eScP		ScP	05 32 43.9 +2.9
WRAK	Wrangell Islan	45.59	335	eP		P	05 27 15.8 +0.6
	comp=Z,71nm,0.9s						
WRAK				LR		LR	
	comp=Z,5μm,18.0s						
DRLN	Deer Lake	45.60	38	eP		P	05 27 13.9 -1.5
	comp=Z,274nm,1.5s						
YKW3	Yellowknife Ar	45.64	350	eP		P	05 27 14.1 -1.4
	comp=Z,627nm,1.5s						
YKW3				LR		LR	
	comp=Z,4μm,21.0s						
LPAZ	La Paz	45.88	136	P		P	05 27 19.5 +0.9
	comp=Z,7.0nm,0.7s,baz=329,slow=7.8,SNR=27						
LPAZ				pP		pP	05 27 33.9 +0.5
	comp=Z,37nm,1.0s,baz=326,slow=11,SNR=21						
LPAZ				LR		LR	05 45 37.6
	comp=Z,3μm,20.5s,baz=312,slow=35						
LPAZ	La Paz	45.88	136	eP		P	05 27 19.5 +0.9
DLBC	Dease Lake	46.15	338	eP		P	05 27 21.2 +1.6
	comp=Z,443nm,1.1s						
DLBC				LR		LR	
	comp=Z,13μm,19.0s						
MNMC	Minye Minye	47.08	140	eP		P	05 27 28.2 +0.6
	comp=Z,70nm,0.9s						
MDP	Montagnes des	47.22	100	P		P	05 27 28.2 -0.4
	comp=Z,19nm,0.9s,baz=287,slow=7.7,SNR=9.2						
SIT	Sitka	47.24	334	eP		P	05 27 28.4 +0.3
	comp=Z,81nm,1.0s						
SIT	Sitka	47.24	334	eP		P	05 27 28.4 +0.3
SIT				pmax		pmax	
	comp=Z,81nm,1.0s						
PB11	IPOC Station P	47.52	141	eP		P	05 27 31.6 +0.7
	comp=Z,160nm,1.1s						
JIS	Juneau Island	47.67	336	eP		P	05 27 32.2 +0.9
	comp=Z,312nm,1.4s						
JIS				LR		LR	
	comp=Z,5μm,21.0s						
GO01	Chusmiza	47.73	141	eP		P	05 27 34.8 +1.9
	comp=Z,93nm,1.1s						
BESE	Bessie Mountai	48.05	336	eP		P	05 27 35.1 +0.7
BESE				LR		LR	
	comp=Z,5μm,22.0s						
SKAG	Skagway	48.83	336	eP		P	05 27 40.9 +0.7
	comp=Z,183nm,1.4s						
SKAG				LR		LR	
	comp=Z,3μm,20.0s						
WHY	Whitehorse	49.47	338	eP		P	05 27 45.7 +0.3
	comp=Z,108nm,1.0s						
LVC	Limon Verde	50.17	143	P		P	05 27 52.7 +1.3
	comp=Z,9.0nm,0.8s,baz=299,slow=7.1,SNR=5.1						
LVC	Limon Verde	50.17	143	eP		P	05 27 52.2 +0.8
	comp=Z,46nm,1.1s						
LVC				LR		LR	
	comp=Z,2μm,22.0s						
LVC	Limon Verde	50.17	143	eP		P	05 27 52.2 +0.8
LVC				pmax		pmax	
	comp=Z,46nm,1.1s						
LVC				MLR		MLR	
	comp=Z,2μm,22.0s						
LVC	Limon Verde	50.17	143	eP		P	05 27 52.8 +1.4
HYT	Haines Junctio	50.55	337	eP		P	05 27 54.8 +1.3
	comp=Z,778nm,1.5s						
HYT				LR		LR	
	comp=Z,5μm,18.0s						
YKU2	Yakutat	50.57	335	PFAKE			05 28 10.0 +16
YKU2				LR		LR	
	comp=Z,8μm,18.0s						
SIV	San Ignacio	50.58	130	P		P	05 27 54.3 +0.1
	comp=Z,22nm,0.9s,baz=311,slow=8.9,SNR=101						
SIV				pP		pP	05 28 08.6 -0.6
	comp=Z,30nm,0.9s,baz=319,slow=7.2,SNR=14						
BCPM	Bancas Point	50.83	335	PFAKE			05 28 10.0 +15
BCPM				LR		LR	
	comp=Z,6μm,18.0s						
PCA	Pinnacle	51.16	335	eP		P	05 27 59.3 +1.3
	comp=Z,518nm,1.3s						
PCA				LR		LR	
	comp=Z,7μm,18.0s						
CLDB	Colider	51.61	121	eP		P	05 28 02.1 +0.1
GO02	Mina Guanaco	51.80	145	eP		P	05 28 04.5 +0.9
	comp=Z,97nm,1.1s						
GO02				LR		LR	
	comp=Z,900nm,19.0s						
CTGM	Chitina Glacie	52.11	335	PFAKE			05 28 20.0 +15
CTGM				LR		LR	
	comp=Z,6μm,22.0s						
BALM	Baldy	52.55	335	eP		P	05 28 09.4 +0.9
	comp=Z,480nm,1.4s						
BALM				LR		LR	
	comp=Z,8μm,19.0s						
BALM	Baldy	52.55	335	eP		P	05 28 09.4 +0.9
BALM				pmax		pmax	
	comp=Z,480nm,1.4s						
BALM				MLR		MLR	
	comp=Z,8μm,19.0s						
CRQM	Cirque	52.71	335	eP		P	05 28 10.8 +1.0
	comp=Z,582nm,1.4s						
CRQM				LR		LR	
	comp=Z,5μm,22.0s						
PUH	Pauahi	52.90	281	eP		P	05 28 10.4 -1.3
	comp=Z,139nm,0.9s						
HMT	Hamilton	52.94	334	eP		P	05 28 12.3 +1.1
	comp=Z,550nm,1.2s						
HMT				LR		LR	
	comp=Z,4μm,18.0s						
MLH	Mauna Loa	53.04	281	eP		P	05 28 12.0 -0.8
	comp=Z,483nm,1.4s						
MLH	Mauna Loa	53.04	281	eP		P	05 28 12.0 -0.8
MLH				pmax		pmax	
	comp=Z,483nm,1.4s						
HMH	Humu'ula Sheep	53.11	281	eP		P	05 28 14.7 +1.3
	comp=Z,590nm,1.4s						
AIN	Ainahou	53.12	281	eP		P	05 28 14.0 +0.6
	comp=Z,820nm,1.2s						
POHA	Pohakuloa	53.14	281	PFAKE			05 28 30.0 +16
POHA				LR		LR	
	comp=Z,3μm,19.0s						
MLOA	Mauna Loa Obse	53.21	281	eP		P	05 28 13.8 -0.5
	comp=Z,322nm,1.1s						
HPAH	Hawaii Prepara	53.25	282	PFAKE			05 28 30.0 +16
HPAH				LR		LR	
	comp=Z,2μm,20.0s						
KHU	Kahuku	53.29	281	eP		P	05 28 12.7 -2.0
	comp=Z,305nm,1.3s						
KHU	Kahuku	53.29	281	eP		P	05 28 12.7 -2.0
KHU				pmax		pmax	
	comp=Z,305nm,1.3s						
DAWY	Dawson	53.31	339	eP		P	05 28 13.7 -0.2
	comp=Z,266nm,1.5s						
DAWY				LR		LR	
	comp=Z,9μm,18.0s						
MID	Middleton Isla	53.37	332	eP		P	05 28 14.0 -0.3
	comp=Z,974nm,1.7s						
MID				LR		LR	
	comp=Z,2μm,20.0s						
MID	Middleton Isla	53.37	332	eP		P	05 28 14.0 -0.3
MID				pmax		pmax	
	comp=Z,974nm,1.7s						
MID				MLR		MLR	
	comp=Z,2μm,20.0s						
GO03	Copiap	53.43	148	PFAKE			05 28 30.0 +15
GO03				LR		LR	
	comp=Z,2μm,22.0s						
KHLU	Kahalu`u	53.50	281	PFAKE			05 28 30.0 +14
KHLU				LR		LR	
	comp=Z,3μm,22.0s						
EYAK	Cordova Ski Ar	53.68	334	eP		P	05 28 17.6 +1.0
	comp=Z,438nm,1.3s						
EYAK				LR		LR	
	comp=Z,7μm,18.0s						
RKT	Rikitea	53.93	222	eS		S	05 35 53.3 +2.7
	comp=Z,2μm,30.3s						
RKT				eLR		LR	05 44 05.8
	comp=Z,7μm,27.8s						
RKT	Rikitea	53.93	222	eT		T	06 24 30.1
	comp=Z,19nm,0.3s						
DIV	Divide	53.99	334	eP		P	05 28 19.8 +0.8
	comp=Z,710nm,1.6s						
DIV				LR		LR	
	comp=Z,4μm,22.0s						
EPYK	Eagle Plains	54.03	342	eP		P	05 28 18.8 -0.4
	comp=Z,633nm,1.8s						
EPYK				LR		LR	
	comp=Z,8μm,18.0s						
EPYK	Eagle Plains	54.03	342	P		P	05 28 19.0 -0.2
	baz=134,SNR=82						
MENT	Mentasta	54.17	337	eP		P	05 28 20.7 +0.5
	comp=Z,318nm,1.4s						
MENT				LR		LR	
	comp=Z,3μm,19.0s						
EGAK	Eagle	54.36	339	eP		P	05 28 21.2 -0.3
	comp=Z,649nm,1.6s						
EGAK				LR		LR	
	comp=Z,6μm,21.0s						
LCO	Las Campanas	54.36	149	eP		P	05 28 22.8 +0.5
	comp=Z,77nm,1.1s						
LCO				LR		LR	
	comp=Z,3μm,22.0s						
LCO	Las Campanas	54.36	149	eP		P	05 28 23.4 +1.1
GLI	Glacier Island	54.42	333	eP		P	05 28 22.4 +0.3
	comp=Z,354nm,1.0s						
GLI				LR		LR	
	comp=Z,3μm,19.0s						
INK	Inuvik	54.59	345	eP		P	05 28 22.5 -0.6
	comp=Z,204nm,0.8s						
INK				eS		S	05 35 56.6 -1.7
INK				LR		LR	
	comp=Z,10μm,20.0s						
INK	Inuvik	54.59	345	eP		P	05 28 22.5 -0.6
INK				eS		S	05 35 56.6 -1.7
INK				pmax		pmax	
	comp=Z,204nm,0.8s						
INK				MLR		MLR	
	comp=Z,10μm,20.0s						
DOT	Dot Lake	54.70	337	eP		P	05 28 24.8 +0.7
	comp=Z,628nm,1.4s						
DOT				LR		LR	
	comp=Z,12μm,18.0s						
PAX	Paxson	54.85	336	eP		P	05 28 25.4 +0.2
	comp=Z,410nm,1.4s						
PAX				LR		LR	
	comp=Z,8μm,19.0s						
PAX	Paxson	54.85	336	eP		P	05 28 25.4 +0.2
PAX				pmax		pmax	
	comp=Z,411nm,1.4s						
PAX				MLR		MLR	
	comp=Z,8μm,19.0s						
SCM	Sheep Creek Mo	55.00	334	PFAKE			05 28 40.0 +14
SCM				LR		LR	
	comp=Z,5μm,21.0s						
SEW	Seward	55.08	332	eP		P	05 28 26.7 0.0
	comp=Z,568nm,1.4s						
SEW				eS		S	05 36 10.2 +5.0
SEW				LR		LR	
	comp=Z,3μm,18.0s						
KIP	Kipapa	55.21	284	eP		P	05 28 29.5 +1.2
	comp=Z,697nm,1.7s						
KIP	Kipapa	55.21	284	deP		P	05 28 29.9 +1.6
KIP				pmax		pmax	
	comp=Z,240nm,1.3s						
HON	Honolulu	55.21	284	eP		P	05 28 29.7 +1.3
	comp=Z,1μm,1.6s						
HON	Honolulu	55.21	284	eP		P	05 28 29.7 +1.3
HON				pmax		pmax	
	comp=Z,1μm,1.6s						
KNK	Knik Glacier	55.26	334	eP		P	05 28 28.3 +0.1
	comp=Z,583nm,1.4s						
KNK				LR		LR	
	comp=Z,3μm,21.0s						
GO04	Tololo Observa	55.28	150	eP		P	05 28 30.4 +1.6
	comp=Z,66nm,1.1s						
GO04				LR		LR	
	comp=Z,4μm,22.0s						
BRLK	Bradley Lake	55.58	331	eP		P	05 28 30.9 +0.5
	comp=Z,449nm,1.1s						
BRLK				eS		S	05 36 12.4 +0.4
BRLK				LR		LR	
	comp=Z,3μm,22.0s						
KDAK	Kodiak Island	55.59	329	P		P	05 28 30.7 +0.2
	comp=Z,108nm,1.1s,baz=114,slow=4.8,SNR=66						
KDAK				pP		pP	05 28 46.5 +0.7
	comp=Z,52nm,0.9s,baz=177,slow=6.5,SNR=6.6						
KDAK	Kodiak Island	55.59	329	eP		P	05 28 31.1 +0.7
	comp=Z,537nm,1.5s						
KDAK				LR		LR	
	comp=Z,3μm,21.0s						
GHO	Glory Hole Cre	55.63	334	eP		P	05 28 31.1 +0.2
	comp=Z,300nm,1.0s						
GHO				LR		LR	
	comp=Z,5μm,22.0s						
PMR	Palmer	55.63	334	eP		P	05 28 30.9 +0.2
	comp=Z,189nm,0.9s						
PMR				LR		LR	
	comp=Z,3μm,22.0s						
PMR	Palmer	55.63	334	eP		P	05 28 30.9 +0.2
PMR				pmax		pmax	
	comp=Z,189nm,0.9s						
PMR				MLR		MLR	
	comp=Z,3μm,22.0s						
CNPM	China Poot	55.64	331	eP		P	05 28 31.3 +0.4
	comp=Z,538nm,1.4s						
CNPM				eS		S	05 36 14.1 +1.3
CNPM				LR		LR	
	comp=Z,2μm,20.0s						
DHY	Denali Highway	55.65	336	PFAKE			05 28 40.0 +9.0
DHY				LR		LR	
	comp=Z,3μm,20.0s						
RC01	Rabbit Creek A	55.66	333	eP		P	05 28 31.4 +0.5
	comp=Z,246nm,1.1s						
RC01				LR		LR	
	comp=Z,4μm,18.0s						
OHAK	Old Harbor	55.74	328	eP		P	05 28 32.2 +0.7
	comp=Z,553nm,1.3s						
OHAK				LR		LR	
	comp=Z,2μm,20.0s						
IVI	Ivigtut	55.88	27	eP		P	05 28 31.3 -1.1
	comp=Z,36nm,1.0s						
IVI				LR		LR	
	comp=Z,2μm,22.0s						
HOM	Homer	55.88	331	eP		P	05 28 33.1 +0.5
	comp=Z,605nm,1.2s						
HOM				LR		LR	
	comp=Z,2μm,22.0s						
SII	Sitkinak Islan	55.96	327	eP		P	05 28 33.6 +0.3
	comp=Z,529nm,1.3s						
SII				LR		LR	
	comp=Z,2μm,20.0s						
HDA	Harding Lake	56.19	337	eP		P	05 28 34.6 -0.1
	comp=Z,295nm,1.2s						
HDA				eS		S	05 36 19.9 +0.1
HDA				LR		LR	
	comp=Z,7μm,18.0s						
HDA	Harding Lake	56.19	337	P		P	05 28 34.7 0.0
	baz=122						
SUA	Susitna One	56.26	333	eP		P	05 28 36.0 +0.6
	comp=Z,428nm,0.8s						
SUA				eS		S	05 36 22.7 +1.6
SUA				LR		LR	
	comp=Z,4μm,21.0s						
PRP	Porcupine Dome	56.28	339	PFAKE			05 28 50.0 +14
PRP				LR		LR	
	comp=Z,6μm,19.0s						
ILAR	Eielson Array	56.36	338	P		P	05 28 35.6 -0.2
	comp=Z,130nm,1.2s,baz=134,slow=4.4,SNR=337						
ILAR				PcP		PcP	05 29 32.9 +0.4
	comp=Z,16nm,0.8s,baz=158,slow=2.4,SNR=7.4						
ILAR				LR		LR	05 55 07.8
	comp=Z,11μm,18.9s,baz=128,slow=38						
ILAR				PKPPKP		P'P'df	05 58 33.2 -1.7
	comp=Z,0.6nm,0.9s,baz=319,slow=3.4,SNR=5.2						
ILB	Eielson Array	56.36	338	eP		P	05 28 35.9 0.0
	comp=Z,1μm,1.7s						
ILB				ePcP		PcP	05 29 32.9 +0.4
ILB				⇑e			05 58 33.2
RND	Reindeer	56.39	336	eP		P	05 28 36.9 +0.7
	comp=Z,879nm,1.4s						
RND				eS		S	05 36 21.9 -0.9
RND				LR		LR	
	comp=Z,4μm,18.0s						
RES	Resolute Bay	56.58	1	P		P	05 28 35.8 -1.6
	comp=Z,29nm,0.8s,baz=189,slow=11,SNR=52						
RES	Resolute Bay	56.58	1	eP		P	05 28 35.9 -1.4
	comp=Z,248nm,1.6s						
RES				LR		LR	
	comp=Z,3μm,18.0s						
RES	Resolute Bay	56.58	1	eP		P	05 28 35.9 -1.4
RES				pmax		pmax	
	comp=Z,247nm,1.6s						
RES				MLR		MLR	
	comp=Z,3μm,18.0s						
MCK	McKinley	56.59	336	eP		P	05 28 37.7 +0.2
	comp=Z,441nm,1.4s						
MCK				LR		LR	
	comp=Z,5μm,19.0s						
CCB	Clear Creek Bu	56.63	337	eP		P	05 28 37.6 -0.2
	comp=Z,491nm,1.8s						
CCB				LR		LR	
	comp=Z,7μm,18.0s						
WRH	Wood River Hil	56.64	337	eP		P	05 28 37.5 -0.3
	comp=Z,204nm,1.4s						
WRH				LR		LR	
	comp=Z,5μm,20.0s						
SPU	Mount Spurr	56.71	332	eP		P	05 28 38.8 +0.3
SPU				eS		S	05 36 26.9 0.0
RSO	Redoubt South	56.72	332	eP		P	05 28 38.9 +0.1
RSO				eS		S	05 36 28.2 +0.8
POKR	Poker Plat Res	56.74	338	P		P	05 28 38.6 0.0
	baz=122,SNR=42						
COLA	College	56.76	337	eP		P	05 28 38.7 0.0
	comp=Z,418nm,1.5s						
COLA				LR		LR	
	comp=Z,8μm,19.0s						
COLA	College	56.76	337	d iP		P	05 28 38.4 -0.3
COLA				pmax		pmax	
	comp=Z,130nm,1.2s						
TCOL	CIGO, UAF Yank	56.77	337	P		P	05 28 38.3 -0.4
	baz=121,SNR=28						
FYU	Fort Yukon	56.79	340	eP		P	05 28 38.8 -0.1
	comp=Z,744nm,1.7s						
FYU				LR		LR	
	comp=Z,6μm,20.0s						
MDM	Murphy Dome	56.94	337	eP		P	05 28 39.8 -0.3
	comp=Z,276nm,1.7s						
MDM				LR		LR	

comp=Z,6μm,19.0s
TRF Thorofare Moun 56.98 335 eP P 05 28 41.1 +0.5
comp=Z,504nm,1.7s
TRF eS S 05 36 30.3 -0.5
TRF LR LR
comp=Z,1μm,20.0s
BWN Browne 57.01 336 eP P 05 28 40.5 0.0
comp=Z,3μm,1.4s
BWN eS S 05 36 33.1 +2.4
BWN LR LR
comp=Z,7μm,18.0s
NRS Narsarsuaq 57.06 28 PFAKE 05 28 50.0 +9.1
NRS LR LR
comp=Z,2μm,22.0s
NRS Narsarsuaq 57.06 28⇓iP P 05 28 39.5 -1.4
NRS MLR MLR
comp=Z,4μm,27.0s
NRS Narsarsuaq 57.06 28⇓iP P 05 28 39.5 -1.4
comp=Z,4μm,27.0s
KTH Kantishna Hill 57.28 335 eP P 05 28 42.4 -0.2
comp=Z,704nm,1.6s
KTH LR LR
comp=Z,5μm,18.0s
AQDB Aquidauana 57.36 130 eP P 05 28 43.8 +0.2
SMTB Santa Maria do 57.54 113 eP P 05 28 45.9 +0.9
BPAW Bear Paw Mtn. 57.56 336 eP P 05 28 44.5 0.0
comp=Z,436nm,1.4s
BPAW LR LR
comp=Z,4μm,19.0s
CAST Castle Rocks 57.69 335 eP P 05 28 45.0 -0.4
comp=Z,442nm,1.3s
CFA Coronel Fontan 57.70 149 P **P 05 28 47.4 +1.6**
comp=Z,30nm,1.0s,baz=328,slow=6.8,SNR=34
CFA pP **pP 05 29 02.4 +1.4**
comp=Z,51nm,1.0s,baz=321,slow=6.8,SNR=14
PEL Peldehue 57.82 152 eP P 05 28 47.0 +0.4
comp=Z,47nm,1.1s
PEL LR LR
comp=Z,4μm,21.0s
SFJD Kangerlussuaq 57.83 20 P **P 05 28 45.0 -1.3**
comp=Z,28nm,1.1s,baz=224,slow=7.3,SNR=14
SFJD Kangerlussuaq 57.83 20 eP P 05 28 45.2 -1.0
comp=Z,92nm,1.3s
SFJD LR LR
comp=Z,3μm,22.0s
SFJD Kangerlussuaq 57.83 20⇓iP P 05 28 44.8 -1.4
SFJD pmax pmax
comp=Z,90nm,1.4s
SFJD Kangerlussuaq 57.83 20⇓iP P 05 28 44.8 -1.4
comp=Z,90nm,1.4s
MLY Manley 57.91 337 PFAKE 05 29 00.0 +13
MLY LR LR
comp=Z,4μm,20.0s
CHGN Chignik 58.12 326 eP P 05 28 48.3 -0.1
comp=Z,464nm,1.4s
CHGN LR LR
comp=Z,1μm,22.0s
VAH Vaihoa 58.16 238 eP P 05 28 51.5 +2.2
comp=Z,66nm,0.9s
VAH epP **pP 05 29 06.6 +2.0**
comp=Z,100nm,1.1s
SVW2 Sparrevohn 58.25 332 eP P 05 28 48.7 -0.6
comp=Z,192nm,1.3s
SVW2 eS S 05 36 46.6 -0.5
SVW2 LR LR
comp=Z,2μm,22.0s
PMOR Pomariorio Ree 58.25 239 eP P 05 28 52.0 +2.1
comp=Z,27nm,0.8s
PMOR epP **pP 05 29 07.0 +1.8**
comp=Z,150nm,1.4s
C2SB Chapadao do Su 58.46 126 eP P 05 28 53.0 +1.7
PEXB Peixe 58.50 117 eP P 05 28 52.4 +0.7
COLD Coldfoot 58.80 339 eP P 05 28 53.3 +0.4
comp=Z,296nm,1.8s
COLD LR LR
comp=Z,4μm,18.0s
GO05 Huala 58.87 154 eP P 05 28 53.4 -0.5
comp=Z,67nm,1.0s
GO05 LR LR
comp=Z,3μm,21.0s
ILULI Ilulissat 58.91 18 eP P 05 28 52.8 -0.9
comp=Z,61nm,1.3s
ILULI Ilulissat 58.91 18⇓iP P 05 28 52.3 -1.4
ILULI pmax pmax
comp=Z,59nm,1.3s
ILULI Ilulissat 58.91 18⇓iP P 05 28 52.3 -1.4
comp=Z,59nm,1.3s
SDPT Sand Point 59.01 324 eP P 05 28 52.5 -2.1
comp=Z,328nm,1.3s
SDPT LR LR
comp=Z,1μm,20.0s
TTA Tatalina 59.11 333 eP P 05 28 54.9 -0.4
comp=Z,444nm,1.6s
TTA eS S 05 36 56.9 -1.5
TTA Tatalina 59.11 333 eP P 05 28 54.9 -0.4
TTA eS S 05 36 56.9 -1.5
TTA pmax pmax
comp=Z,444nm,1.6s
TOLK Toolik Lake Re 59.32 341 eP P 05 28 56.7 +0.1
comp=Z,570nm,1.8s
TOLK LR LR
comp=Z,7μm,18.0s
TOLK Toolik Lake Re 59.32 341 P **P 05 28 56.7 +0.1**
baz=122,SNR=96
CPUP Villa Florida 60.05 136 P **P 05 29 02.2 0.0**
comp=Z,22nm,0.9s,baz=325,slow=7.2,SNR=49
CPUP pP **pP 05 29 16.7 -0.8**
comp=Z,38nm,1.0s,baz=323,slow=7.2,SNR=14
CPUP LR LR 05 54 31.9
comp=Z,2μm,21.3s,baz=326,slow=36
CPUP Villa Florida 60.05 136 eP P 05 29 02.6 +0.4
TULEG Thule 60.43 8 eP P 05 29 01.8 -2.2
comp=Z,306nm,1.8s
TULEG LR LR
comp=Z,2μm,21.0s
BDFB Brasilia 60.55 121 P **P 05 29 06.7 +0.8**
comp=Z,57nm,0.8s,baz=298,slow=8.5,SNR=94
BDFB pP **pP 05 29 20.6 -0.6**
comp=Z,32nm,1.0s,baz=254,slow=12,SNR=7.5
BDFB LR LR 05 56 30.2
comp=Z,2μm,20.2s,baz=299,slow=37
BDFB Brasilia 60.55 121 eP P 05 29 06.7 +0.8
BDFB eP **P 05 29 07.0 +1.1**
BDFB epP **pP 05 29 20.6 -0.6**
KULLO Kullorsuaq 60.80 12⇓iP P 05 29 05.5 -1.1
KULLO pmax pmax
comp=Z,130nm,1.1s
KULLO MLR MLR
comp=Z,3μm,24.0s
KULLO Kullorsuaq 60.80 12⇓iP P 05 29 05.5 -1.1
comp=Z,130nm,1.1s
comp=Z,3μm,24.0s
TIAR Tiarei 60.81 237 eP P 05 29 09.4 +1.9
comp=Z,20nm,0.9s
TIAR epP **pP 05 29 24.9 +2.0**
comp=Z,28nm,0.9s
TVO Taravao 60.85 237 eP P 05 29 09.9 +2.0
comp=Z,17nm,0.9s
TVO epP **pP 05 29 25.5 +2.2**
comp=Z,31nm,1.0s
ITRB Iturama 60.90 126 eP P 05 29 08.9 +0.8
PPT Papeete 61.00 237 LR LR 05 48 17.1
comp=Z,2μm,20.8s,baz=58,slow=29
PPT2 Papeete2 61.01 237 eS S 05 37 23.7 -0.2
comp=Z,995nm,23.5s
PPT2 eSS **SS 05 41 25.6 +1.1**
comp=Z,2μm,36.0s
PPT2 eLQ LQ 05 44 49.0
comp=Z,2μm,28.8s
PPT2 eLR LR 05 47 10.7
comp=Z,10μm,27.2s,baz=51
ANGG Ammassalik, Gr 61.95 24 eP P 05 29 12.6 -2.0
comp=Z,269nm,1.7s
UNV Unalaska Valle 62.19 322 eP P 05 29 16.1 -0.2
comp=Z,708nm,1.6s
UNV LR LR
comp=Z,1μm,21.0s
BB19B Bebedouro 63.09 126 eP P 05 29 24.0 +1.2
NIKH Nikolski High 63.50 321 eP P 05 29 23.6 -1.4
comp=Z,148nm,0.9s
RDOG Red Dog Mine 63.56 338 eP P 05 29 25.0 -0.3
comp=Z,403nm,1.5s
RDOG LR LR
comp=Z,4μm,20.0s
ANM Nome 63.57 334 eP P 05 29 25.4 0.0
comp=Z,600nm,1.9s
ANM LR LR
comp=Z,4μm,18.0s
ANM Nome 63.57 334 eP P 05 29 25.4 0.0
ANM pmax pmax
comp=Z,600nm,1.9s
ANM MLR MLR
comp=Z,4μm,18.0s
FRTB Fartura 63.61 129 eP P 05 29 27.3 +1.0
HOR Horta 63.84 55 eP P 05 29 29.2 +1.6
comp=Z,575nm,1.8s
PCAN Candelaria 63.95 56 eP P 05 29 29.5 +1.1
comp=Z,443nm,1.8s
PPNO Prainha do Nor 64.13 56 eP P 05 29 30.8 +1.2
comp=Z,556nm,1.7s
ROSA Rosais 64.13 55 eP P 05 29 30.8 +1.3
ITAB Concordia 64.15 134 eP P 05 29 31.0 +1.4
TBI Tubuai 64.16 232 eS S 05 38 03.4 +0.4
comp=Z,783nm,25.1s
TBI eSS **SS 05 42 14.7 +1.2**
comp=Z,2μm,35.8s
TBI eLR LR 05 48 48.9
comp=Z,8μm,27.2s,baz=56
SUMG Summit 64.17 17 eP P 05 29 28.9 -0.8
comp=Z,112nm,1.3s
SUMG Summit 64.17 17⇓iP P 05 29 29.0 -0.6
SUMG pmax pmax
comp=Z,330nm,1.3s
SUMG Summit 64.17 17⇓iP P 05 29 29.0 -0.6
comp=Z,327nm,1.3s
PMAN Manadas 64.26 55 eP P 05 29 30.9 +0.6
comp=Z,237nm,1.5s
PGRA Graciosa 64.32 55 eP P 05 29 31.8 +1.1
comp=Z,669nm,1.6s
PLCA Paso Flores 64.35 156 P **P 05 29 31.8 +1.0**
comp=Z,12nm,1.1s,baz=9.8,slow=7.6,SNR=10
PLCA pP **pP 05 29 46.5 +0.3**
comp=Z,39nm,1.0s,baz=356,slow=9.0,SNR=20
PLCA LR LR 05 52 15.6
comp=Z,2μm,18.7s,baz=18,slow=31
PLCA Paso Flores 64.35 156 eP P 05 29 33.2 +2.4
MCI8 Montes Claros 64.44 119 eP P 05 29 33.2 +1.4
MCI9 Montes Claros 64.48 119 eP P 05 29 33.4 +1.3
MCI6 Montes Claros 64.54 119 eP P 05 29 33.6 +1.1
RCLB Rio Claro- Sao 64.61 127 eP P 05 29 33.7 +0.8
ADH Angra Heroismo 64.92 55 eP P 05 29 36.9 +2.3
comp=Z,323nm,1.5s
PSCM Serra do Cume 65.01 55 eP P 05 29 36.7 +1.4
comp=Z,377nm,1.7s
GO07 Milladeo Hill, 65.33 160 eP P 05 29 37.8 +0.8
comp=Z,176nm,0.9s
SPB Sao Paulo 65.35 128 eP P 05 29 37.8 +0.2
comp=Z,44nm,1.3s
SPB Sao Paulo 65.35 128 eP P 05 29 38.6 +1.0
NBPA Parau_RN 65.62 105 eP P 05 29 41.0 +1.5
TRQA Tornquist 65.93 149 eP P 05 29 41.6 +0.6
comp=Z,50nm,1.1s
TRQA LR LR
comp=Z,5μm,22.0s
TRQA Tornquist 65.93 149 eP P 05 29 41.6 +0.6
TRQA pmax pmax
comp=Z,51nm,1.1s
TRQA MLR MLR
comp=Z,5μm,22.0s
TRQA Tornquist 65.93 149 eP P 05 29 42.7 +1.6
BSCB Bom Sucesso 65.98 124 eP P 05 29 42.9 +1.1
PSET Sete Cidades 66.17 56 eP P 05 29 44.0 +1.2
comp=Z,732nm,1.8s
PDA Ponta Delgada 66.23 56 eP P 05 29 44.8 +1.7
comp=Z,434nm,1.8s
CNLB Canela 66.33 135 eP P 05 29 44.3 +0.4
CMLA Cha da Macela 66.33 56 eP P 05 29 44.6 +0.8
comp=Z,573nm,2.0s
CMLA Cha da Macela 66.33 56 eP P 05 29 43.6 -0.2
comp=Z,400nm,1.3s
CMLA Cha da Macela 66.33 56 eP P 05 29 43.6 -0.2
CMLA pmax pmax
comp=Z,400nm,1.3s
PCALD Caldeiras da R 66.36 56 eP P 05 29 45.4 +1.4
comp=Z,567nm,1.8s
NBLI Livramento-PB 66.40 107 eP P 05 29 47.1 +2.5
BART Pico Bartolome 66.61 56 eP P 05 29 46.8 +1.1
comp=Z,724nm,1.5s
ATKA Atka Island 66.72 320 eP P 05 29 44.7 -1.2
comp=Z,457nm,1.6s
PSMA Santa Maria 66.72 57 eP P 05 29 47.2 +0.9
comp=Z,296nm,1.7s
RCBR Riachuelo 66.76 105 eP P 05 29 46.1 -0.8
comp=Z,82nm,1.3s
RCBR LR LR
comp=Z,1μm,19.0s
RCBR Riachuelo 66.76 105 eP P 05 29 46.1 -0.8
RCBR pmax pmax
comp=Z,82nm,1.3s
RCBR MLR MLR
comp=Z,1μm,19.0s
RCBR Riachuelo 66.76 105 eP P 05 29 48.8 +1.9
PSMN Pico do Norte, 66.77 57 eP P 05 29 46.9 +0.3
comp=Z,401nm,1.9s
OGAUY Aigu 67.18 141 eP P 05 29 50.4 +1.3
VAS01 Vassouras-RJ 67.71 124 eP P 05 29 53.8 +1.1
SJMB Sao Joao De Ma 67.71 120 eP P 05 29 53.8 +1.0
GSTR Great Sitkin T 67.87 320 eP P 05 29 52.6 -0.6
BSFB Barra de Sao F 68.06 120 eP P 05 29 56.0 +1.1
ADK Adak 68.26 319 eP P 05 29 54.7 -1.0
comp=Z,316nm,1.1s
ADK LR LR
comp=Z,2μm,22.0s
ADK Adak 68.26 319 eP P 05 29 54.7 -1.0
ADK pmax pmax
comp=Z,316nm,1.1s
ADK MLR MLR
comp=Z,2μm,22.0s
DUB01 Friburgo-RJ 68.45 123 eP P 05 29 58.6 +1.3
BORG Borgarnes 68.53 27 eP P 05 29 58.0 +0.8
comp=Z,62nm,1.2s
BORG Borgarnes 68.53 27 iP P 05 29 58.7 +1.6
RIB01 Linhares ES 68.66 120 eP P 05 29 59.6 +0.9
SCO Scoresbysund 68.74 21 eP P 05 29 57.7 -0.6
comp=Z,29nm,1.2s
SCO LR LR
comp=Z,2μm,19.0s
SCO Scoresbysund 68.74 21⇓iP P 05 29 57.5 -0.8
SCO MLR MLR
comp=Z,1μm,20.0s
SCO Scoresbysund 68.74 21⇓iP P 05 29 57.5 -0.8
comp=Z,1μm,20.0s
DAG Danmarks Havn 70.26 14 iP P 05 30 05.9 -1.7
DAG pmax pmax
comp=Z,80nm,1.0s
DAG MLR MLR
comp=Z,5μm,25.0s
DAG Danmarks Havn 70.26 14 iP P 05 30 05.9 -1.7
comp=Z,80nm,1.0s
comp=Z,4μm,25.0s
MIDW Midway 71.52 294 eP P 05 30 16.8 +0.7
comp=Z,1μm,1.6s
PMOZ Porto Moniz, M 73.79 60 eP P 05 30 30.1 +0.4
comp=Z,211nm,2.0s
PMOZ iLQ LQ 05 30 51.1
PMOZ eS S **05 40 04.0 +6.8**
PMOZ Porto Moniz, M 73.79 60 eP P 05 30 28.6 -1.1
SMY Shemya 73.81 321 eP P 05 30 28.4 -0.8
comp=Z,145nm,1.2s
SMY LR LR
comp=Z,900nm,22.0s
SMY Shemya 73.81 321 eP P 05 30 28.5 -0.8
SMY pmax pmax
comp=Z,145nm,1.2s
SMY MLR MLR
comp=Z,900nm,22.0s
PMAR Madeira 74.04 60 eP P 05 30 31.8 +0.5
comp=Z,167nm,2.3s
PMAR iLQ LQ 05 30 51.6
FUL Funchal 74.07 60 eP P 05 30 31.2 0.0
comp=Z,148nm,1.8s
PMPST Porto Santo, M 74.45 60 eP P 05 30 33.9 +0.5
comp=Z,355nm,1.7s
PMPST iLQ LQ 05 30 54.3
PMPST eS S **05 40 10.2 +5.9**
BILL Bilibino 75.02 337 eP P 05 30 36.5 +0.5
comp=Z,545nm,1.4s
BILL LR LR
comp=Z,4μm,19.0s
BILL Bilibino 75.02 337diP P 05 30 36.2 +0.2
BILL e 05 33 22.2
BILL iS S **05 40 09.9 +0.5**
BILL eSS **SS 05 45 03.0 +4.6**
BILL pmax pmax
comp=Z,555nm,1.7s
BILL MLR MLR
comp=Z,3μm,17.0s
KBS Kingsbay 76.24 11 eP P 05 30 42.6 -0.3
comp=Z,584nm,1.9s
KBS LR LR
comp=Z,2μm,22.0s
KBS Kingsbay 76.24 11diP P 05 30 43.7 +0.9
KBS pmax pmax
comp=Z,997nm,1.7s
KBS Kingsbay 76.24 11 eP P 05 30 43.9 +1.0
KPL Plockton 76.77 34 eP P 05 30 45.1 -1.1
KPL IAmb IAmb 05 30 47.3
comp=Z,343nm,1.7s
KPL IAMs_20 IAMs_20 06 00 36.1
comp=Z,3μm,25.5s
RSC Scourie 76.79 33 eP P 05 30 45.7 -0.5
KAC Achnashellach 76.92 34 eP P 05 30 46.6 -0.4
LAWE Loch Awe, Argy 77.15 35 eP P 05 30 47.4 -0.9
LAWE IAmb IAmb 05 30 49.6
comp=Z,223nm,1.6s
LAWE IAMs_20 IAMs_20 05 59 48.5
comp=Z,3μm,25.2s
DSB Dublin 77.29 38 eP P 05 30 48.2 -1.0
comp=Z,166nm,1.6s
DSB LR LR
comp=Z,1μm,19.0s
SPA0 Spitsbergen Ar 77.36 11 eP P 05 30 49.0 -0.2
comp=Z,285nm,1.4s
SPA0 epP **pP 05 31 06.5 +1.4**
SPITS Spitsbergen Ar 77.36 11 P **P 05 30 49.3 +0.1**
comp=Z,5.4nm,0.4s,baz=252,slow=0.5,SNR=59
SPITS pP **pP 05 31 06.5 +1.4**
comp=Z,12nm,0.7s,baz=352,slow=2.9,SNR=2.4
EAB Aberfoyle 77.74 35 eP P 05 30 51.3 -0.3
HSPB Hornsund (broa 77.76 12 eP P 05 30 52.0 +0.6
HSPB LMZ LR 05 58 21.8
comp=Z,11μm,34.0s
HSPB Hornsund (broa 77.76 12 eP P 05 30 52.0 +0.6
INVG Invergeldie, C 77.84 34 eP P 05 30 51.8 -0.4
INVG IAmb IAmb 05 30 53.5
comp=Z,120nm,1.6s
INVG IAMs_20 IAMs_20 06 00 10.3
comp=Z,3μm,23.1s
MCD Coleburn Disti 77.97 33 eP P 05 30 52.9 +0.1
EAU Auchinoon 78.31 35 eP P 05 30 54.7 -0.2
EDU Dundee 78.36 34 eP P 05 30 54.9 -0.2
EDI Edinburgh 78.43 35 eP P 05 30 55.4 -0.1
EDI IAmb IAmb 05 30 56.9
comp=Z,125nm,1.2s
EDI IAMs_20 IAMs_20 06 00 10.3
comp=Z,3μm,26.9s
DRUM Mains of Drumt 78.55 34 eP P 05 30 56.0 -0.1
DRUM IAMs_20 IAMs_20 06 01 27.1
comp=Z,3μm,26.9s
RSBS Rosebush, Pemb 78.57 39 eP P 05 30 56.6 +0.3
RSBS IAmb IAmb 05 30 56.9
comp=Z,80nm,1.4s
RSBS IAMs_20 IAMs_20 05 59 30.8
comp=Z,984nm,28.1s
ESK Eskdalemuir 78.58 35 eP P 05 30 56.5 +0.2
comp=Z,268nm,1.8s
ESK Eskdalemuir 78.58 35 eP P 05 30 55.6 -0.7
ESK IAmb IAmb 05 30 57.5
comp=Z,299nm,1.8s
ESK IAMs_20 IAMs_20 06 00 00.3
comp=Z,10μm,24.0s
ESK Eskdalemuir 78.58 35 iP P 05 30 57.3 +1.0
BHH Howats Hill 78.63 36 eP P 05 30 56.5 -0.2
PTO Porto 78.69 50 eP P 05 30 57.6 +0.4
comp=Z,156nm,1.6s
PMAFR Mafra 78.71 53 eP P 05 30 57.4 0.0
comp=Z,190nm,1.7s
PMAFR eS S **05 40 50.2 -0.6**
PGAV Gavieira, Arco 78.72 49 eP P 05 30 57.6 +0.1
comp=Z,174nm,1.8s
PGAV iLQ LQ 05 31 17.7
PGAV eS S **05 40 52.9 +1.9**
ESY Stoneypath 78.75 35 eP P 05 30 57.4 +0.2
KESW Keswick, Cumbr 78.83 36 eP P 05 30 57.6 -0.1
KESW IAmb IAmb 05 30 59.1
comp=Z,758nm,2.7s
KESW IAMs_20 IAMs_20 05 59 03.7
comp=Z,2μm,25.0s
LIS Lisbon 78.87 53 eP P 05 30 58.7 +0.5
LIS AMb AMB 05 31 03.4
comp=Z,280nm,2.2s
LIS Lisbon 78.87 53 eP P 05 30 59.0 +0.8
comp=Z,279nm,2.1s
LIS Lisbon 78.87 53 eP P 05 30 58.7 +0.5
PCAB Cabril 78.96 50 eP P 05 30 59.0 +0.2
comp=Z,183nm,1.7s
PCAB iLQ LQ 05 31 20.4
PCAS Casmilo, Conde 79.03 51 eP P 05 30 59.8 +0.7
comp=Z,382nm,1.7s
PCAS iLQ LQ 05 31 19.3
PCAS eS S **05 40 54.0 -0.1**
COI Coimbra 79.05 51 eP P 05 30 59.6 +0.4
comp=Z,191nm,1.8s
COI iLQ LQ 05 31 20.0
COI eS S **05 40 55.3 +1.0**
COI Coimbra 79.05 51 eP P 05 30 59.3 +0.1
comp=Z,317nm,1.7s
COI Coimbra 79.05 51 eP P 05 30 59.3 +0.1
COI pmax pmax
comp=Z,317nm,1.7s
PTOM Tomar 79.20 52 eP P 05 31 00.3 +0.2
comp=Z,240nm,1.4s
PTOM iLQ LQ 05 31 21.6
POLO Lamas de Olo 79.22 50 eP P 05 31 00.3 +0.1
comp=Z,82nm,1.8s
POLO iLQ LQ 05 31 21.2
POLO eS S **05 40 57.7 +1.4**
FOEL Foel Wylfa 79.23 38 eP P 05 30 59.4 -0.6
FOEL IAmb IAmb 05 31 00.4
comp=Z,88nm,1.2s
FOEL IAMs_20 IAMs_20 06 00 36.8
comp=Z,3μm,32.1s
PVRL Vila Real 79.30 50 eP P 05 31 00.6 0.0
comp=Z,145nm,1.8s
PVIS Viseu 79.31 51 eP P 05 31 00.6 -0.1
comp=Z,149nm,1.7s
PVIS iLQ LQ 05 31 21.7
EDMD Edmundbyers 79.40 36 eP P 05 31 01.1 +0.2
EDMD IAmb IAmb 05 31 02.4
comp=Z,333nm,1.6s
EDMD IAMs_20 IAMs_20 05 59 23.1
comp=Z,2μm,24.8s
PMTG Montargil 79.48 52 eP P 05 31 01.7 +0.1
comp=Z,217nm,1.6s
PMTG iLQ LQ 05 31 22.6
PMTG eS S **05 40 58.3 -0.6**
PTEO Sao Teotonio 79.49 54 eP P 05 31 02.2 +0.5
comp=Z,239nm,1.8s
PTEO iLQ LQ 05 31 23.5
PNCL Nicolau / Gran 79.50 53 eP P 05 31 01.7 0.0
comp=Z,106nm,2.0s
PNCL iLQ LQ 05 31 22.5
PNCL eS S **05 40 59.4 +0.3**
PFVI Vila Bisbo 79.52 54 eP P 05 31 01.9 +0.1
comp=Z,234nm,1.6s
PFVI iLQ LQ 05 31 23.2
PFVI eS S **05 41 00.0 +0.6**
PFVI Vila Bisbo 79.52 54 eP P 05 31 01.6 -0.2
comp=Z,206nm,1.1s
HLM1 Long Mynd 79.52 38 eP P 05 31 00.5 -1.1
HLM1 IAmb IAmb 05 31 01.8
comp=Z,463nm,1.9s
HLM1 IAMs_20 IAMs_20 06 00 55.7
comp=Z,4μm,37.2s
MCH1 Michaelchurch 79.60 39 eP P 05 31 01.4 -0.6
MCH1 IAmb IAmb 05 31 02.5
comp=Z,118nm,1.4s
MCH1 IAMs_20 IAMs_20 06 03 07.5
comp=Z,2μm,27.4s
MORF Marmelete 79.61 54 eP P 05 31 02.8 +0.3
MORF AMb AMB 05 31 08.8
comp=Z,170nm,2.0s
MORF eS S **05 41 00.5 0.0**
MORF Marmelete 79.61 54 eP P 05 31 03.0 +0.6
comp=Z,171nm,1.9s
MORF iLQ LQ 05 31 23.5
MORF eS S **05 41 01.2 +0.7**
MORF Marmelete 79.61 54 eP P 05 31 02.7 +0.3

MORF				*e*S	**S**	**05 41 00.4**	**0.0**
MTE	**Manteigas**	**79.65**	**51**	*e*P	**P**	**05 31 02.6**	**0.0**
	comp=Z,168nm,1.6s						
MTE				*i* LQ	LQ	05 31 22.9	
MTE				*e*S	**S**	**05 41 00.7**	**-0.1**
MTE	**Manteigas**	**79.65**	**51**	*e*P	**P**	**05 31 01.9**	**-0.7**
	comp=Z,90nm,1.0s						
STNC	**Stoke**	**79.76**	**37**	*e*P	**P**	**05 31 03.2**	**+0.4**
STNC				IAmb	IAmb	05 31 04.6	
	comp=Z,753nm,1.9s						
STNC				IAMs_20	IAMs_20	06 01 06.0	
	comp=Z,2μm,30.2s						
MONM	**Monmouth**	**79.76**	**39**	*e*P	**P**	**05 31 02.8**	**0.0**
MONM				IAmb	IAmb	05 31 04.2	
	comp=Z,671nm,2.0s						
MONM				IAMs_20	IAMs_20	06 03 00.0	
	comp=Z,2μm,24.2s						
EVO	**Evora**	**79.78**	**53**	*e*P	**P**	**05 31 03.6**	**+0.4**
	comp=Z,156nm,1.7s						
EVO				*i* LQ	LQ	05 31 23.9	
EVO	**Evora**	**79.78**	**53**	⇓*i*P	**P**	**05 31 03.6**	**+0.4**
EVO				*i* S	**S**	**05 41 02.8**	**+0.7**
MESJ	**Messejana**	**79.80**	**54**	*e*P	**P**	**05 31 03.9**	**+0.5**
MESJ				AMb	AMB	05 31 06.4	
	comp=Z,145nm,1.7s						
MESJ				*e*S	**S**	**05 41 02.3**	**-0.1**
MESJ	**Messejana**	**79.80**	**54**	*e*P	**P**	**05 31 03.8**	**+0.5**
MESJ				*e*S	**S**	**05 41 02.2**	**-0.1**
MVO	**Moncorvo**	**79.83**	**50**	*e*P	**P**	**05 31 03.8**	**+0.3**
	comp=Z,193nm,1.9s						
MVO				*i* LQ	LQ	05 31 24.3	
MVO				*e*S	**S**	**05 41 01.4**	**-1.3**
PCBR	**Castelo Branco**	**79.84**	**51**	*e*P	**P**	**05 31 03.9**	**+0.4**
	comp=Z,186nm,1.7s						
PCBR				*i* LQ	LQ	05 31 24.8	
PBRG	**Braganca**	**79.87**	**49**	*e*P	**P**	**05 31 03.9**	**+0.2**
	comp=Z,162nm,1.9s						
PBRG				*i* LQ	LQ	05 31 24.6	
LBWR	**Ladybower, Pea**	**79.94**	**37**	*e*P	**P**	**05 31 04.2**	**+0.3**
LBWR				IAmb	IAmb	05 31 05.5	
	comp=Z,474nm,1.8s						
LBWR				IAMs_20	IAMs_20	06 00 57.5	
	comp=Z,2μm,27.5s						
OLDB	**Oldbury-Upon-S**	**79.96**	**39**	*e*P	**P**	**05 31 03.3**	**-0.6**
OLDB				IAmb	IAmb	05 31 05.3	
	comp=Z,667nm,2.1s						
OLDB				IAMs_20	IAMs_20	06 00 22.6	
	comp=Z,3μm,37.9s						
PCVE	**Castro Verde**	**79.99**	**54**	*e*P	**P**	**05 31 04.3**	**-0.1**
	comp=Z,178nm,1.6s						
PCVE				*i* LQ	LQ	05 31 25.5	
PCVE				*e*S	**S**	**05 41 07.1**	**+2.7**
PMRV	**Marv??o**	**80.01**	**52**	*e*P	**P**	**05 31 04.3**	**-0.2**
	comp=Z,211nm,1.8s						
PMRV				*i* LQ	LQ	05 31 25.2	
PMRV				*e*S	**S**	**05 41 04.6**	**0.0**
PBEJ	**Beja**	**80.02**	**53**	*e*P	**P**	**05 31 05.8**	**+1.2**
	comp=Z,149nm,1.6s						
PBEJ				*i* LQ	LQ	05 31 27.0	
PBDV	**Barranco-do-Ve**	**80.18**	**54**	*e*P	**P**	**05 31 05.8**	**+0.4**
	comp=Z,224nm,2.1s						
PBDV				*i* LQ	LQ	05 31 26.6	
PBDV				*e*S	**S**	**05 41 06.9**	**+0.5**
PVAQ	**Vaqueiros**	**80.30**	**54**	*e*P	**P**	**05 31 06.3**	**+0.2**
	comp=Z,205nm,1.5s						
PVAQ				*i* LQ	LQ	05 31 27.3	
PVAQ				*e*S	**S**	**05 41 08.1**	**+0.5**
PVAQ	**Vaqueiros**	**80.30**	**54**	*e*P	**P**	**05 31 06.6**	**+0.6**
	comp=Z,141nm,1.1s						
CWF	**Charnwood Fore**	**80.38**	**38**	*e*P	**P**	**05 31 06.3**	**+0.1**
CWF				IAmb	IAmb	05 31 07.5	
	comp=Z,505nm,2.1s						
CWF				IAMs_20	IAMs_20	06 01 10.8	
	comp=Z,2μm,26.5s						
SWN1	**Swindon**	**80.45**	**39**	*e*P	**P**	**05 31 07.4**	**+0.9**
SWN1				IAmb	IAmb	05 31 08.2	
	comp=Z,764nm,1.7s						
SUE	**Sulen**	**80.82**	**29**	*e*P	**P**	**05 31 09.1**	**+0.8**
WOL	**Wolverton**	**80.86**	**39**	*e*P	**P**	**05 31 08.8**	**+0.1**
WOL				IAmb	IAmb	05 31 10.2	
	comp=Z,1μm,1.9s						
WOL				IAMs_20	IAMs_20	06 04 13.2	
	comp=Z,2μm,25.8s						
JVM	**Valle D.L. Mar**	**80.88**	**41**	*e*P	**P**	**05 31 08.8**	**0.0**
JSA	**Saint Aubin**	**80.91**	**41**	*e*P	**P**	**05 31 09.3**	**+0.3**
JSA				IAMs_20	IAMs_20	06 04 15.2	
	comp=Z,2μm,24.0s						
JRS	**Jersey**	**80.95**	**41**	*e*P	**P**	**05 31 09.4**	**+0.2**
JQE	**Queens East**	**80.99**	**41**	*e*P	**P**	**05 31 09.3**	**-0.1**
ASK	**Askoy**	**81.22**	**29**	*e*P	**P**	**05 31 10.9**	**+0.5**
BER	**Bergen**	**81.33**	**29**	*e*P	**P**	**05 31 12.2**	**+1.1**
LOF	**Lofoten**	**81.38**	**20**	*e*P	**P**	**05 31 11.8**	**+0.6**
AKN	**Aaknes**	**81.40**	**27**	*e*P	**P**	**05 31 12.1**	**+0.7**
HYA	**Hoyanger**	**81.42**	**28**	*e*P	**P**	**05 31 13.6**	**+2.1**
MOL	**Molde**	**81.48**	**27**	*e*P	**P**	**05 31 12.5**	**+0.7**
WACR	**West Acre**	**81.50**	**37**	*e*P	**P**	**05 31 11.8**	**-0.3**
WACR				IAmb	IAmb	05 31 13.6	
	comp=Z,257nm,1.0s						
WACR				IAMs_20	IAMs_20	05 59 09.0	
	comp=Z,2μm,35.4s						
KMY	**Karmoy**	**81.71**	**30**	*e*P	**P**	**05 31 13.4**	**+0.3**
SFS	**San Fernando**	**81.72**	**54**	PFAKE		05 31 20.0	+6.4
SFS				LR	LR		
	comp=Z,500nm,22.0s						
SFS	**San Fernando**	**81.72**	**54**	⇓*i*P	**P**	**05 31 15.4**	**+1.8**
SFS				*i* S	**S**	**05 41 28.0**	**+5.6**
GIBL	**Gibalbin**	**81.80**	**54**	⇓*i*P	**P**	**05 31 16.1**	**+2.0**
CNIL	**Conil**	**81.86**	**54**	⇓*i*P	**P**	**05 31 16.5**	**+2.1**
KONS	**Konsvik**	**81.99**	**22**	*e*P	**P**	**05 31 15.9**	**+1.6**
STOK	**Stokkvaagen**	**82.03**	**22**	*e*P	**P**	**05 31 15.9**	**+1.3**
STAV	**Stavanger**	**82.03**	**30**	*e*P	**P**	**05 31 15.6**	**+0.8**
STEI	**Steigen**	**82.04**	**20**	*e*P	**P**	**05 31 15.7**	**+1.0**
ODD1	**Odda**	**82.10**	**29**	*e*P	**P**	**05 31 16.6**	**+1.4**
ALJ	**Aljibe**	**82.13**	**54**	*e*P	**P**	**05 31 17.7**	**+1.9**
MOMI	**Momias**	**82.14**	**54**	*e*P	**P**	**05 31 17.7**	**+1.9**
LIJA	**Lijar**	**82.21**	**54**	⇓*i*P	**P**	**05 31 17.9**	**+1.6**
PAB	**San Pablo**	**82.24**	**51**	*e*P	**P**	**05 31 17.1**	**+0.6**
	comp=Z,82nm,0.9s						
PAB	**San Pablo**	**82.24**	**51**	*e*P	**P**	**05 31 17.1**	**+0.6**
PAB				pmax	pmax		
	comp=Z,82nm,0.9s						
TRO	**Tromso**	**82.32**	**18**	*e*P	**P**	**05 31 17.4**	**+1.3**
TBLU	**Trondheim**	**82.34**	**26**	*e*P	**P**	**05 31 17.7**	**+1.4**
DOMB	**Dombas**	**82.34**	**27**	*e*P	**P**	**05 31 17.5**	**+1.0**
NSS	**Namsos**	**82.46**	**24**	*e*P	**P**	**05 31 17.9**	**+1.1**
REAL	**Reales**	**82.49**	**54**	⇓*i*P	**P**	**05 31 19.6**	**+1.7**
ESDC	**Sonseca Array**	**82.49**	**51**	P	**P**	**05 31 18.2**	**+0.5**
	comp=Z,9.9nm,0.7s,baz=303,slow=4.6,SNR=105						
ESDC				pP	**pP**	**05 31 33.6**	**0.0**
	comp=Z,4.2nm,0.7s,baz=298,slow=4.7,SNR=3.4						
ESDC				PKKPbc	**PKKPbc**	**05 49 43.5**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=108,slow=2.9,SNR=6.3						
ESLA	**Sonseca Array**	**82.49**	**51**	*e*P	**P**	**05 31 17.8**	**+0.1**
	comp=Z,306nm,2.0s						
CEU	**Ceuta**	**82.53**	**55**	⇓*i*P	**P**	**05 31 19.4**	**+1.6**
CEU				*i* S	**S**	**05 41 33.7**	**+3.0**
SKAR	**Skarslia**	**82.57**	**28**	*e*P	**P**	**05 31 18.9**	**+1.2**
MOR8	**Moi Rana**	**82.61**	**22**	*e*P	**P**	**05 31 19.0**	**+1.3**
PET	**Petropavlovsk**	**82.78**	**323**	*e*P	**P**	**05 31 19.1**	**+0.3**
	comp=Z,890nm,1.5s						
PET				LR	LR		
	comp=Z,900nm,20.0s						
PET	**Petropavlovsk**	**82.78**	**323**	*e*P	**P**	**05 31 18.8**	**0.0**
PET				*e*S	**S**	**05 41 33.6**	**+1.0**
PET				*e*SS	**SS**	**05 46 57.9**	**+2.5**
PET				pmax	pmax		
	comp=Z,3μm,3.3s						
PET				pmax	pmax		
	comp=Z,416nm,1.4s						
PET				pmax	pmax		
	comp=Z,1μm,11.9s						
PET				MLR	MLR		
	comp=Z,1μm,18.0s						
PET				MLR	MLR		
	comp=Z,900nm,19.0s						
UCM	**Universidad Co**	**82.83**	**50**	⇓*i*P	**P**	**05 31 20.3**	**+0.9**
UCM				*i* S	**S**	**05 41 34.7**	**+0.9**
EMAL	**Malaga-Limoner**	**83.00**	**54**	⇓*i*P	**P**	**05 31 21.7**	**+1.4**
EMAL				*i* S	**S**	**05 41 37.1**	**+1.6**
HAMF	**Hammerfest**	**83.09**	**16**	*e*P	**P**	**05 31 20.5**	**+0.4**
PEA1	**Petropavlovsk-**	**83.29**	**324**	*e*P	**P**	**05 31 22.5**	**+1.0**
PEA0B	**Petropavlovsk-**	**83.29**	**324**	*e*P	**P**	**05 31 22.8**	**+1.3**
	comp=Z,2μm,1.6s						
PEA0B				LR	LR		
	comp=Z,800nm,21.0s						
PETK	**Petropavlovsk-**	**83.29**	**324**	P	**P**	**05 31 22.5**	**+1.0**
	comp=Z,147nm,0.7s,baz=71,slow=10,SNR=279						
PETK				LR	LR	06 08 31.2	
	comp=Z,636nm,19.1s,baz=58,slow=36						
NC204	**NORSAR Array S**	**83.40**	**27**	*e*P	**P**	**05 31 22.5**	**+0.5**
	comp=Z,2μm,2.0s						
IFR	**Ifrane**	**83.42**	**57**	⇓*i*P	**P**	**05 31 23.8**	**+1.0**
IFR				*e*S	**S**	**05 41 41.6**	**+1.3**
NBO00	**NORSAR Array S**	**83.52**	**27**	*e*P	**P**	**05 31 23.9**	**+1.4**
	comp=Z,3μm,1.9s						
PVLZ	**Peæn de**	**83.58**	**55**	⇓*i*P	**P**	**05 31 23.2**	**-0.1**
PVLZ				*i* S	**S**	**05 41 40.9**	**-0.5**
KONO	**Kongsberg**	**83.58**	**29**	*e*P	**P**	**05 31 22.8**	**0.0**
	comp=Z,1μm,1.8s						
KONO				LR	LR		
	comp=Z,1μm,21.0s						
KONO	**Kongsberg**	**83.58**	**29**	*d i*P	**P**	**05 31 24.2**	**+1.4**
KONO				pmax	pmax		
	comp=Z,750nm,1.7s						
KONO	**Kongsberg**	**83.58**	**29**	*e*P	**P**	**05 31 24.6**	**+1.8**
HOMB	**Homborsund**	**83.65**	**30**	*e*P	**P**	**05 31 24.9**	**+1.8**
NAO01	**NORSAR Array S**	**83.65**	**28**	*e*P	**P**	**05 31 24.5**	**+1.4**
	comp=Z,3μm,1.8s						
NC303	**NORSAR Array S**	**83.69**	**27**	*e*P	**P**	**05 31 23.9**	**+0.6**
	comp=Z,786nm,1.5s						
NB2	**NORSAR Subarra**	**83.70**	**27**	P	**P**	**05 31 24.4**	**+0.9**
	comp=Z,1μm,2.0s,baz=300,slow=5.1						
NB2	**NORSAR Subarra**	**83.70**	**27**	P	**P**	**05 31 24.4**	**+0.9**
	baz=300,slow=5.1						
NB2				P	**P**	**05 31 24.4**	**+0.9**
	baz=300,slow=5.1						
NB200	**NORSAR Array S**	**83.70**	**27**	*e*P	**P**	**05 31 24.1**	**+0.6**
NB200				*ep*P	**pP**	**05 31 40.5**	**+1.0**
NOA	**NORSAR Array B**	**83.70**	**27**	P	**P**	**05 31 24.1**	**+0.6**
	comp=Z,55nm,1.0s,baz=301,slow=5.0,SNR=108						
NOA				pP	**pP**	**05 31 40.5**	**+1.0**
	comp=Z,16nm,0.9s,baz=300,slow=5.0,SNR=4.6						
NB201	**NORSAR Array S**	**83.73**	**27**	*e*P	**P**	**05 31 24.7**	**+1.1**
	comp=Z,633nm,1.3s						
NC405	**NORSAR Array S**	**83.89**	**27**	*e*P	**P**	**05 31 25.2**	**+0.8**
	comp=Z,2μm,2.0s						
KTK1	**Kautokeino**	**83.94**	**18**	*e*P	**P**	**05 31 25.2**	**+0.8**
OSL	**Oslo**	**83.97**	**28**	*e*P	**P**	**05 31 26.4**	**+1.6**
NC602	**NORSAR Array S**	**83.98**	**28**	*e*P	**P**	**05 31 25.7**	**+0.9**
	comp=Z,3μm,2.0s						
NC602	**NORSAR Array S**	**83.98**	**28**	*e*P	**P**	**05 31 25.3**	**+0.4**
CLF	**Chambon-Foret**	**84.06**	**41**	*e*P	**P**	**05 31 25.8**	**+0.2**
	comp=Z,649nm,1.5s						
MA2	**Magadan**	**84.23**	**331**	P	**P**	**05 31 27.1**	**+0.9**
	comp=Z,128nm,0.9s,baz=63,slow=4.4,SNR=70						
MA2				pP	**pP**	**05 31 42.8**	**+0.7**
	comp=Z,46nm,0.9s,baz=46,slow=4.2,SNR=5.5						
MA2	**Magadan**	**84.23**	**331**	*e*P	**P**	**05 31 27.1**	**+0.9**
	comp=Z,1μm,2.0s						
MA2				LR	LR		
	comp=Z,1μm,20.0s						
BSKQ	**Steenkerk**	**84.23**	**39**	P	**P**	**05 31 26.1**	**-0.2**
	comp=Z,193nm,1.8s						
BBOU	**Bougnies**	**84.25**	**39**	P	**P**	**05 31 24.4**	**-2.0**
	comp=Z,256nm,2.0s						
BBOU				pP	**pP**	**05 31 39.6**	**-2.8**
BBOU				sP	**sP**	**05 31 47.3**	**-1.3**
ARA0	**ARCESS Array S**	**84.27**	**17**	*e*P	**P**	**05 31 26.4**	**+0.3**
ARA0				*ep*P	**pP**	**05 31 41.5**	**-0.8**
ARCES	**ARCESS Array B**	**84.27**	**17**	P	**P**	**05 31 26.4**	**+0.3**
	comp=Z,55nm,0.7s,baz=311,slow=4.6,SNR=367						
ARCES				pP	**pP**	**05 31 41.5**	**-0.8**
	comp=Z,33nm,0.8s,baz=316,slow=5.1,SNR=5.2						
ARCES				LR	LR	06 10 40.6	
	comp=Z,719nm,20.9s,baz=314,slow=37						
ARE0	**ARCESS Array S**	**84.27**	**17**	*e*P	**P**	**05 31 26.5**	**+0.3**
	comp=Z,42nm,1.6s						
ARE0	**ARCESS Array S**	**84.27**	**17**	*e*P	**P**	**05 31 26.4**	**+0.2**
BRQR	**Ronquire**	**84.34**	**39**	P	**P**	**05 31 27.5**	**+0.7**
	comp=Z,163nm,1.7s						
UCC	**Uccle**	**84.35**	**38**	*e*P	**P**	**05 31 27.0**	**+0.1**
	comp=Z,148nm,1.0s						
UCC	**Uccle**	**84.35**	**38**	*e*P	**P**	**05 31 27.0**	**+0.1**
UCC				pmax	pmax		
	comp=Z,148nm,1.0s						
UCC	**Uccle**	**84.35**	**38**	P	**P**	**05 31 27.4**	**+0.6**
	comp=Z,102nm,1.8s						
UCC				sP	**sP**	**05 31 47.2**	**-1.9**
SNF	**Seneffe**	**84.41**	**39**	P	**P**	**05 31 27.7**	**+0.5**
	comp=Z,171nm,2.0s						
SNF				sP	**sP**	**05 31 49.1**	**-0.3**
BCES	**Court-Saint-Et**	**84.55**	**38**	P	**P**	**05 31 28.3**	**+0.4**
BCES				sP	**sP**	**05 31 48.8**	**-1.3**
BDSL	**Dessel**	**84.60**	**38**	P	**P**	**05 31 29.4**	**+1.2**
	comp=Z,279nm,1.9s						
BDSL				sP	**sP**	**05 31 49.3**	**-1.1**
MELI	**Melilla**	**84.61**	**55**	⇓*i*P	**P**	**05 31 28.4**	**-0.1**
MELI				*e*S	**S**	**05 41 51.1**	**-0.5**
BMOL	**Mol**	**84.61**	**38**	P	**P**	**05 31 29.2**	**+0.9**
	comp=Z,292nm,2.1s						
MUD	**Monsted U'grnd**	**84.73**	**32**	⇓*i*P	**P**	**05 31 29.4**	**+0.7**
MUD				*i*		05 31 50.6	
MUD				pmax	pmax		
	comp=Z,140nm,1.1s						
MUD	**Monsted U'grnd**	**84.73**	**32**	⇓*i*P	**P**	**05 31 29.4**	**+0.7**
	comp=Z,135nm,1.1s						
MUD				*i*		05 31 50.6	
DOU	**Dourbes**	**84.75**	**39**	P	**P**	**05 31 28.5**	**-0.5**
	comp=Z,139nm,2.0s						
DOU				sP	**sP**	**05 31 51.1**	**-0.1**
BMRD	**Maredsous**	**84.77**	**39**	P	**P**	**05 31 29.8**	**+0.7**
	comp=Z,236nm,1.8s						
BMRD				sP	**sP**	**05 31 51.2**	**-0.1**
BGES	**Gesves**	**84.93**	**39**	P	**P**	**05 31 29.6**	**-0.3**
	comp=Z,260nm,1.7s						
BGES				sP	**sP**	**05 31 52.0**	**-0.1**
BOPT	**Opiter**	**84.97**	**38**	P	**P**	**05 31 30.9**	**+0.9**
	comp=Z,358nm,1.7s						
BOPT				sP	**sP**	**05 31 51.4**	**-0.8**
BCLA	**Clavier**	**85.05**	**38**	P	**P**	**05 31 30.8**	**+0.4**
	comp=Z,197nm,1.9s						
BCLA				sP	**sP**	**05 31 52.6**	**-0.1**
SKR	**Severo-Kuril's**	**85.11**	**322**	*d i*P	**P**	**05 31 30.6**	**-0.1**
BEBN	**Eben Emael**	**85.12**	**38**	P	**P**	**05 31 31.2**	**+0.5**
	comp=Z,194nm,1.7s						
BEBN				sP	**sP**	**05 31 51.3**	**-1.7**
BSTI	**Sart Tilman**	**85.14**	**38**	P	**P**	**05 31 30.9**	**0.0**
BSTI				sP	**sP**	**05 31 52.5**	**-0.6**
HKB	**Herkenbosch**	**85.25**	**38**	P	**P**	**05 31 32.5**	**+1.1**
	comp=Z,184nm,2.1s						
HKB				sP	**sP**	**05 31 53.5**	**-0.1**
MEM	**Membach**	**85.39**	**38**	P	**P**	**05 31 32.5**	**+0.3**
MEM				sP	**sP**	**05 31 52.8**	**-1.5**
BHOU	**Houvegnez**	**85.48**	**38**	P	**P**	**05 31 33.4**	**+0.8**
	comp=Z,161nm,2.0s						
BHOU				sP	**pP**	**05 31 51.6**	**+2.9**
LKLB	**Kalborn**	**85.65**	**39**	P	**P**	**05 31 34.3**	**+0.8**
	comp=Z,202nm,1.8s						
LKLB				sP	**sP**	**05 31 56.0**	**+0.3**
LVIA	**Vianden**	**85.77**	**39**	P	**P**	**05 31 34.8**	**+0.8**
	comp=Z,139nm,1.8s						
LVIA				sP	**sP**	**05 31 56.4**	**+0.1**
WLF	**Walferdange**	**85.84**	**39**	*e*P	**P**	**05 31 35.1**	**+0.7**
	comp=Z,733nm,1.1s						
WLF				LR	LR		
	comp=Z,5μm,21.0s						
WLF	**Walferdange**	**85.84**	**39**	*e*P	**P**	**05 31 35.1**	**+0.7**
WLF				pmax	pmax		
	comp=Z,733nm,1.1s						
WLF				MLR	MLR		
	comp=Z,5μm,21.0s						
WLF	**Walferdange**	**85.84**	**39**	P	**P**	**05 31 34.9**	**+0.4**
	comp=Z,185nm,1.8s						
WLF				sP	**sP**	**05 31 56.9**	**+0.3**
SSB	**Saint Sauveur**	**86.53**	**43**	*e*P	**P**	**05 31 37.2**	**-0.8**
	comp=Z,317nm,1.9s						
SSB				LR	LR		
	comp=Z,700nm,22.0s						
SSB	**Saint Sauveur**	**86.53**	**43**	*e*P	**P**	**05 31 37.2**	**-0.8**
SSB				pmax	pmax		
	comp=Z,317nm,1.9s						
SSB				MLR	MLR		
	comp=Z,700nm,22.0s						
COP	**Copenhagen**	**86.71**	**32**	*i* P	**P**	**05 31 38.7**	**+0.2**
COP				MLR	MLR		
	comp=Z,2μm,26.0s						
COP	**Copenhagen**	**86.71**	**32**	*i* P	**P**	**05 31 38.7**	**+0.2**
	comp=Z,2μm,26.0s						
ECH	**Echery**	**87.03**	**40**	*e*P	**P**	**05 31 39.7**	**-0.6**
	comp=Z,46nm,1.1s						
ECH				LR	LR		
	comp=Z,1μm,20.0s						
ECH	**Echery**	**87.03**	**40**	*e*P	**P**	**05 31 39.7**	**-0.6**
ECH				pmax	pmax		
	comp=Z,46nm,1.1s						
ECH				MLR	MLR		
	comp=Z,1μm,20.0s						
EANR	**'Ain N'Sour**	**87.49**	**53**	P	**P**	**05 31 45.1**	**+2.3**
TARA	**Tarawa**	**87.61**	**271**	PFAKE		05 31 50.0	+6.3
TARA				LR	LR		
	comp=Z,1μm,20.0s						
ECHA	**Ech Chlef**	**87.62**	**53**	P	**P**	**05 31 47.0**	**+3.7**
EBNR	**Beni Rached**	**87.69**	**53**	P	**P**	**05 31 46.4**	**+2.6**
BFO	**Black Forest**	**87.70**	**40**	*e*P	**P**	**05 31 42.9**	**-0.6**
	comp=Z,30nm,1.0s						
BFO				LR	LR		
	comp=Z,1μm,18.0s						
BFO	**Black Forest**	**87.70**	**40**	*i* P	**P**	**05 31 43.5**	**0.0**
RGN	**Rugen**	**87.70**	**33**	PFAKE		05 31 50.0	+6.7
RGN				LR	LR		
	comp=Z,1μm,20.0s						
RGN	**Rugen**	**87.70**	**33**	*e*P	**P**	**05 31 43.2**	**-0.1**
RGN				IAmb	IAmb	05 31 56.1	
	comp=Z,94nm,1.0s						
APA	**Apatity**	**87.74**	**16**	⇓*i*P	**P**	**05 31 41.9**	**-1.4**
APA				*i*		05 35 10.0	
APA				*i*		05 42 03.0	
APA				*i* S	**SKSac**	**05 42 12.0**	**+5.5**
APA				*i* PS	**PS**	**05 43 33.0**	**+3.1**
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LVZ	**Lovozero**	**87.83**	**16**	*e*P	**P**	**05 31 42.9**	**-0.8**
	comp=Z,117nm,1.3s						
LVZ				LR	LR		
	comp=Z,1μm,22.0s						
LVZ	**Lovozero**	**87.83**	**16**	*d i*P	**P**	**05 31 43.0**	**-0.8**
LVZ				pmax	pmax		
	comp=Z,157nm,1.7s						
ETRT	**Tiaret**	**87.84**	**54**	P	**P**	**05 31 46.2**	**+1.6**
SENIN	**Lac Senin/Sane**	**87.87**	**42**	*e*P	**P**	**05 31 44.2**	**-0.5**
	comp=Z,95nm,1.6s						
SENIN				LR	LR		
	comp=Z,1μm,20.0s						
WAKE	**Wake Island**	**87.94**	**289**	PFAKE		05 32 00.0	+15
WAKE				LR	LR		
	comp=Z,1μm,21.0s						
BNI	**Bardonecchia**	**88.01**	**43**	*e*P	**P**	**05 31 44.4**	**-0.8**
	comp=Z,61nm,1.5s						
BNI				LR	LR		
	comp=Z,900nm,18.0s						
BNI	**Bardonecchia**	**88.01**	**43**	*e*P	**P**	**05 31 44.4**	**-0.8**
BNI				pmax	pmax		
	comp=Z,61nm,1.5s						
BNI				MLR	MLR		
	comp=Z,900nm,18.0s						
STU	**Stuttgart**	**88.03**	**39**	*e*P	**P**	**05 31 45.0**	**-0.1**
	comp=Z,50nm,1.0s						
STU				LR	LR		
	comp=Z,700nm,21.0s						
STU	**Stuttgart**	**88.03**	**39**	*e*P	**P**	**05 31 45.0**	**-0.1**
STU				pmax	pmax		
	comp=Z,50nm,1.0s						
STU				MLR	MLR		
	comp=Z,700nm,21.0s						
BSD	**Bornholm Skovb**	**88.23**	**32**	*i* P	**P**	**05 31 44.0**	**-1.8**
BSD	**Bornholm Skovb**	**88.23**	**32**	*i* P	**P**	**05 31 44.0**	**-1.8**
GRFO	**Grafenberg**	**88.81**	**38**	*e*P	**P**	**05 31 49.0**	**+0.2**
	comp=Z,169nm,1.9s						
GRFO	**Grafenberg**	**88.81**	**38**	*e*P	**P**	**05 31 49.0**	**+0.2**
GRFO				pmax	pmax		
	comp=Z,169nm,1.9s						
GRA1	**Grafenberg Arr**	**88.81**	**38**	*e*P	**P**	**05 31 49.0**	**+0.2**
	comp=Z,152nm,1.8s						
GRA1				LR	LR		
	comp=Z,900nm,21.0s						
GRF	**Grafenberg Arr**	**88.81**	**38**	*e*P	**P**	**05 31 49.0**	**+0.2**
GRF				pmax	pmax		
	comp=Z,152nm,1.8s						
GRF				MLR	MLR		
	comp=Z,900nm,21.0s						
CLL	**Collm**	**89.07**	**36**	*e*P	**P**	**05 31 49.6**	**-0.4**
	comp=Z,47nm,1.1s						
CLL				LR	LR		
	comp=Z,1μm,22.0s						
CLL	**Collm**	**89.07**	**36**	⇓*i*P	**P**	**05 31 49.8**	**-0.1**
	comp=Z,80nm,1.6s						
CLL				*ep*P	**pP**	**05 32 04.0**	**-2.0**
CLL				*i* sP	**sP**	**05 32 11.3**	**-0.9**
	comp=Z,54nm,1.1s						
CLL				*e*PP	**PP**	**05 35 19.0**	**-0.9**
CLL				*es*PP		05 35 41.0	
CLL				*e*SKSac	**SKSac**	**05 42 12.0**	**-3.1**
CLL				*e*S	**S**	**05 42 34.0**	**-0.3**
CLL				*es*S	**sS**	**05 43 04.0**	**+2.4**
CLL				*e*SP	**SP**	**05 43 37.0**	**-0.9**
CLL				*e*PPS	PPS	05 44 07.0	
CLL				*e*SS	**SS**	**05 48 26.0**	**-1.7**
CLL				*es*SS		05 48 55.0	
CLL				*es*SSS		05 52 36.0	
CLL				*e*		05 53 48.0	
CLL				*e*		05 55 48.0	
CLL				LmV		06 16 00.0	
	comp=Z,1μm,21.1s						
CLL	**Collm**	**89.07**	**36**	⇓*i*P	**P**	**05 31 49.8**	**-0.1**
CLL				*i* *SP	**sP**	**05 32 11.3**	**-0.9**
CLL				*e*S	**S**	**05 42 34.0**	**-0.3**
CLL				pmax	pmax		
	comp

BRG sP **sP** **05 32 15.0 -0.7**
BRG PP **PP** **05 35 22.0 -3.8**
BRG SKS **SKSac** **05 42 19.0 -0.4**
BRG S **ScS** **05 42 46.0 +0.7**
BRG SS SS 05 48 26.0 -12
comp=N,836nm,19.3s
comp=E,714nm,23.8s
comp=Z,1μm,27.9s
MOTA Moosalm 89.81 40 *e*PcP **P** **05 31 53.7 +0.1**
comp=Z,18nm,0.9s,SNR=22
MOTA *e*S **sP** **05 32 15.8 -0.2**
comp=Z,28nm,0.9s
SQTA Sankt Quirin 89.93 40 *e*PcP **P** **05 31 54.4 +0.3**
comp=Z,42nm,1.3s,SNR=27
SQTA *e*S **sP** **05 32 16.7 +0.2**
comp=Z,39nm,1.1s
SQTA *e*PP **PP** **05 35 26.5 -0.6**
comp=Z,25nm,1.6s
WATA Walderalm 90.10 40 *e*PcP **P** **05 31 55.0 0.0**
comp=Z,29nm,1.3s,SNR=17
WATA *e*S **sP** **05 32 18.3 +1.0**
comp=Z,30nm,1.0s
WATA PP **PP** **05 35 28.4 0.0**
comp=Z,23nm,1.7s
WTTA Wattenberg 90.17 40 *e*PcP **P** **05 31 55.5 +0.2**
comp=Z,60nm,1.7s,SNR=24
WTTA *e*S **sP** **05 32 17.8 +0.1**
comp=Z,36nm,1.2s
WTTA PP **PP** **05 35 28.2 -0.8**
comp=Z,16nm,1.3s
PVCC Panska Ves 90.32 36 *e*P **P** **05 31 55.7 -0.1**
PVCC *e* 05 32 16.8
PVCC *e*S **S** **05 42 51.1 +5.2**
PVCC MLR MLR
comp=Z,1μm,23.8s
PVCC smax smax
comp=N,14nm,0.4s
PVCC Panska Ves 90.32 36 *e*P **P** **05 31 55.7 -0.1**
PVCC *e*x x 05 32 04.9
PVCC *e*sP **sP** **05 32 16.8 -1.3**
PVCC *e*x x 05 42 51.1
PVCC AMS AMS 06 12 10.0
comp=N,1μm,23.8s
SLIT Slitere, Latvi 90.32 27 *e*P **P** **05 31 53.2 -2.4**
SLIT IAmb IAmb 05 31 55.8
comp=Z,217nm,1.0s
GKP Gorka Klasztor 90.35 33 *e*P **P** **05 31 56.0 +0.2**
GKP *e*S **S** **05 42 52.0 +6.1**
GKP LMZ LR 06 04 37.1
comp=Z,4μm,33.0s
GKP Gorka Klasztor 90.35 33 *e*P **P** **05 31 56.0 +0.2**
KHC Kasperske Hory 90.44 37 *e*P **P** **05 31 55.7 -0.7**
comp=Z,47nm,1.8s
KHC LR LR
comp=Z,400nm,21.0s
KHC Kasperske Hory 90.44 37 *e*P **P** **05 31 56.9 +0.5**
KHC *e* 05 32 12.5
KHC *e* 05 32 18.4
KHC *e*S **S** **05 42 44.9 -2.2**
KHC MLR MLR
comp=Z,1μm,19.1s
KHC Kasperske Hory 90.44 37 *e*P **P** **05 31 56.9 +0.5**
KHC *e*x x 05 32 04.9
KHC *e*pP **pP** **05 32 12.5 -0.1**
KHC *e*sP **sP** **05 32 18.4 -0.3**
KHC *e*S **S** **05 42 44.9 -2.2**
KHC AMS AMS 06 12 20.0
comp=Z,1μm,19.1s
PRU Pruhonice 90.57 36 *e*P **P** **05 31 56.9 0.0**
PRU *e* 05 32 14.1
PRU *e*S **SKSac** **05 42 22.9 -1.0**
PRU *e* 05 52 28.4
PRU MLR MLR
comp=Z,1μm,23.7s
PRU smax smax
comp=N,3.0nm,0.3s
PRU Pruhonice 90.57 36 *e*P **P** **05 31 56.9 0.0**
PRU *e*x x 05 32 03.8
PRU *e*pP **pP** **05 32 14.1 +1.0**
PRU *e*SKS **SKSac** **05 42 22.9 -1.0**
PRU AMS AMS 06 12 20.0
comp=N,1μm,23.7s
SET Setif 90.63 52 P **P** **05 31 58.0 +0.3**
GEC2 GERESS Array S 90.65 38 *e*P **P** **05 31 56.9 -0.6**
comp=N,97nm,1.6s
GEC2 *e*pP **pP** **05 32 14.7 +1.1**
GEC2 *e*PKKPdf **PKKPbc** **05 49 23.3 -1.5**
GEC2 LR LR
comp=Z,900nm,21.0s
GEC2 GERESS Array S 90.65 38 *e*P **P** **05 31 56.9 -0.6**
GEC2 *e**PP **pP** **05 32 14.7 +1.1**
GEC2 pmax pmax
comp=Z,97nm,1.6s
GEC2 MLR MLR
comp=Z,900nm,21.0s
GERES GERESS Array B 90.65 38 P **P** **05 31 57.5 0.0**
comp=Z,4.3nm,0.7s,baz=329,slow=4.7,SNR=52
GERES pP **pP** **05 32 14.7 +1.1**
comp=Z,7.3nm,0.8s,baz=328,slow=4.7,SNR=6.5
GERES PKKPbc **PKKPbc** **05 49 23.3 -1.5**
comp=Z,1.0nm,0.8s,baz=141,slow=2.6,SNR=9.1
GERES LR LR 06 15 55.8
comp=Z,676nm,18.8s,baz=303,slow=38
GOPC GO Pecny, Ondr 90.74 36 *e*P **P** **05 31 58.0 +0.2**
GOPC *e* 05 32 19.4
GOPC *e*S **S** **05 42 52.2 +2.3**
GOPC *e* 05 52 23.7
GOPC MLR MLR
comp=Z,1μm,22.3s
GOPC smax smax
comp=N,4.0nm,0.9s
GOPC smax smax
comp=N,3.0nm,0.5s
GOPC GO Pecny, Ondr 90.74 36 *e*P **P** **05 31 58.0 +0.2**
GOPC *e*sP **sP** **05 32 19.4 -0.7**
GOPC *e*S **S** **05 42 52.2 +2.3**
GOPC AMS AMS 06 12 20.0
comp=N,1μm,22.3s
VLC Villacollemand 90.79 43 *e*P **P** **05 31 56.9 -1.2**
comp=N,45nm,1.2s
VLC LR LR
comp=Z,300nm,20.0s
DFRA Djebel Bou Aff 90.85 51 P **P** **05 31 59.4 +0.7**
ABTA Abfaltersbach 90.94 40 *e*PcP **P** **05 31 59.1 +0.2**
comp=Z,44nm,1.2s,SNR=29
ABTA *e*S **sP** **05 32 21.3 +0.1**
comp=Z,66nm,1.1s
ABTA *e*PP **PP** **05 35 34.6 -0.5**
comp=Z,10nm,1.4s
CHVC Chvalec 91.11 35 *e*P **P** **05 31 59.3 -0.2**
CHVC *e*x x 05 32 20.5
CHVC AMS AMS 06 05 50.0
comp=Z,2μm,27.3s
KSP Ksiaz 91.11 35 *e*P **P** **05 31 59.8 +0.3**
KSP *e*S **S** **05 42 58.7 +5.6**
KSP LMZ LR 06 07 35.4
comp=Z,2μm,26.6s
KSP Ksiaz 91.11 35 *e*P **P** **05 31 59.8 +0.3**
UPC Upice 91.13 35 *e*P **P** **05 31 59.7 +0.2**
UPC *e* 05 32 20.9
UPC *e*S **S** **05 42 49.9 -3.4**
UPC MLR MLR
comp=Z,2μm,24.6s
UPC smax smax
comp=N,3.0nm,0.4s
UPC Upice 91.13 35 *e*P **P** **05 31 59.7 +0.2**
UPC *e*sP **sP** **05 32 20.9 -1.0**
UPC *e*S **S** **05 42 49.9 -3.4**
UPC AMS AMS 06 06 00.0
comp=N,2μm,24.6s
OSTC Ostas 91.21 35 *e*P **P** **05 32 00.0 0.0**
OSTC *e*x x 05 32 21.4
OSTC *e*S **SKSac** **05 42 29.2 +1.6**
OSTC AMS AMS 06 06 00.0
comp=N,2μm,28.7s
YAK Yakutsk 91.25 339 *e*P **P** **05 32 00.3 +0.5**
comp=N,437nm,1.0s
YAK LR LR
comp=Z,2μm,20.0s
YAK Yakutsk 91.25 339 *d*iP **P** **05 32 00.6 +0.8**
YAK *e*S **SKSac** **05 42 28.3 +1.0**
KBA Koelnbreinsper 91.28 39 PcP **P** **05 32 00.7 +0.1**
comp=Z,38nm,1.7s,SNR=18
KBA *e*PP **PP** **05 35 37.5 -0.4**
comp=Z,14nm,1.2s

DPC Dobruska-Polom 91.38 35 *e*P **P** **05 32 00.8 0.0**
DPC *e* 05 32 15.7
DPC *e* 05 32 22.1
DPC *e*S **S** **05 42 50.6 -5.1**
DPC MLR MLR
comp=Z,2μm,25.0s
DPC Dobruska-Polom 91.38 35 *e*P **P** **05 32 00.8 0.0**
DPC *e*x x 05 32 06.8
DPC *e*pP **pP** **05 32 15.7 -1.2**
DPC *e*sP **sP** **05 32 22.1 -1.0**
DPC *e*S **S** **05 42 50.6 -5.1**
DPC AMS AMS 06 06 00.0
comp=Z,2μm,25.0s
CASM Ain Smara 91.42 51 P **P** **05 32 02.0 +0.8**
CTEI Djebel Teioual 91.43 51 P **P** **05 32 02.3 +0.9**
TREC Trest 91.45 37 *e*P **P** **05 32 01.1 0.0**
TREC *e* 05 32 22.9
TREC *e*S **S** **05 42 52.2 -4.1**
TREC MLR MLR
comp=Z,1μm,19.5s
TREC smax smax
comp=N,3.0nm,0.2s
TREC smax smax
comp=N,11nm,0.6s
TREC Trest 91.45 37 *e*P **P** **05 32 01.1 0.0**
TREC *e*sP **sP** **05 32 22.9 -0.5**
TREC *e*S **S** **05 42 52.2 -4.1**
TREC AMS AMS 06 13 40.0
comp=N,1μm,19.5s
MOA Molln 91.46 38 *e*PcP **P** **05 32 01.4 +0.2**
comp=N,25nm,1.3s,SNR=17
MOA *e*S **sP** **05 32 22.6 -0.9**
comp=N,26nm,0.9s
MOA *e*PP **PP** **05 35 38.0 -1.0**
comp=N,29nm,1.6s
CAEH 'Ain El Ouahch 91.47 51 P **P** **05 32 01.4 0.0**
CKFL Kef-Lekhel 91.53 51 P **P** **05 32 02.4 +0.5**
MYKA Terra Mystica 91.68 39 *e*PcP **P** **05 32 02.0 -0.3**
comp=N,46nm,1.8s,SNR=20
MYKA S **sP** **05 32 24.2 -0.4**
comp=N,27nm,1.2s
VSU Vasula 91.68 25 *d*iP **P** **05 31 59.8 -2.1**
VSU pmax pmax
comp=Z,276nm,2.0s
VSU Vasula 91.68 25 *e*P **P** **05 32 00.3 -1.5**
VSU IAmb IAmb 05 32 02.7
comp=Z,359nm,1.7s
TIC Toumodi 91.86 82 *e*P **P** **05 32 05.9 +2.3**
CMAH Djebel Manchou 91.95 50 P **P** **05 32 03.4 -0.3**
LIC Lamto 91.98 83 *e*P **P** **05 32 03.8 -0.4**
comp=Z,146nm,0.9s
DBIC Dimbokro 92.00 82 P **P** **05 32 04.3 0.0**
comp=Z,23nm,0.8s,baz=263,slow=4.1,SNR=18
DBIC pP **pP** **05 32 19.9 -0.7**
comp=Z,27nm,0.8s,baz=244,slow=6.6,SNR=7.5
DBIC LR LR 06 11 45.4
comp=Z,476nm,20.5s,baz=272,slow=34
VRAC Vranov 92.06 36 ‖*i*P **P** **05 32 04.0 +0.1**
VRAC Vranov 92.06 36 ‖P **P** **05 32 04.0 +0.1**
VRAC Vranov 92.06 36 ‖*i*P **P** **05 32 04.0 +0.1**
VRAC Vranov 92.06 36 *e*S **S** **05 43 03.8 +2.0**
KRUC Moravsky 92.08 36 ‖*i*P **P** **05 32 03.8 -0.2**
KRUC Moravsky 92.08 36 *e*S **S** **05 43 00.7 -1.2**
ABSA Djebel Ababsia 92.14 51 P **P** **05 32 05.0 +0.3**
TRI Trieste 92.20 40 *e*P **P** **05 32 04.5 -0.1**
comp=Z,68nm,1.1s
TRI LR LR
comp=Z,700nm,20.0s
TRI Trieste 92.20 40 *e*P **P** **05 32 04.5 -0.1**
TRI pmax pmax
comp=Z,68nm,1.1s
TRI MLR MLR
comp=Z,700nm,20.0s
KIC Kosan Boka 92.21 83 *e*P **P** **05 32 04.8 -0.5**
comp=Z,113nm,0.9s
OBKA Obir 92.28 39 *e*PcP **P** **05 32 04.9 -0.2**
comp=Z,18nm,0.8s,SNR=18
OBKA *e*S **sP** **05 32 27.0 -0.5**
comp=Z,29nm,1.0s
OBKA PP **PP** **05 35 42.1 -3.5**
comp=Z,8.3nm,1.7s
JAVS Javornik 92.29 40 *i*P **P** **05 32 05.1 -0.1**
JAVS *e*SKSac **SKSac** **05 42 36.0 +1.9**
JAVS *e*S **S** **05 43 00.2 -4.0**
NKL Nikolayevsk 92.32 329 *i*P **P** **05 32 06.0 +1.1**
NKL *e*S **S** **05 43 05.0 +1.2**
NKL pmax pmax
comp=E,290nm,1.5s
NKL pmax pmax
comp=Z,650nm,1.5s
NKL smax smax
comp=N,2μm,7.0s
NKL smax smax
comp=E,1μm,7.0s
PABE Paberze 92.33 28 *e*P **P** **05 32 03.9 -1.0**
PABE IAmb IAmb 05 32 05.3
comp=Z,59nm,1.1s
MORC Moravsky Berou 92.35 35 *e*P **P** **05 32 04.9 -0.4**
comp=Z,194nm,1.9s
MORC LR LR
comp=Z,1μm,20.0s
MORC Moravsky Berou 92.35 35 ‖*i*P **P** **05 32 05.8 +0.5**
MORC Moravsky Berou 92.35 35 ‖P **P** **05 32 05.8 +0.5**
MORC Moravsky Berou 92.35 35 ‖*i*P **P** **05 32 05.4 +0.1**
MORC Moravsky Berou 92.35 35 *e*S **S** **05 43 05.9 +1.5**
CONA Conrad Observa 92.35 38 *e*PcP **P** **05 32 05.8 +0.4**
comp=Z,64nm,1.9s,SNR=29
CONA *e*S **sP** **05 32 27.8 +0.1**
comp=Z,45nm,2.2s
CONA *e*PP **PP** **05 35 42.8 -3.3**
comp=Z,8.9nm,1.5s
KUR Kuril'sk 92.47 319 *de*P **P** **05 32 05.7 -0.1**
KUR *i* 05 35 45.1
KUR *i*S **SKSac** **05 42 32.5 -2.3**
KUR pmax pmax
comp=Z,269nm,1.6s
KUR pmax pmax
comp=N,37nm,1.7s
KUR pmax pmax
comp=E,65nm,1.6s
KUR pmax pmax
comp=Z,1μm,4.9s
KUR MLR MLR
comp=Z,585nm,17.0s
SOKA Soboth 92.49 39 *e*PcP **P** **05 32 05.7 -0.3**
comp=Z,53nm,1.8s,SNR=30
SOKA *e*S **sP** **05 32 27.8 -0.5**
comp=Z,52nm,1.1s
SOKA *e*PP **PP** **05 35 45.1 -2.1**
comp=Z,9.7nm,1.5s
ARSA Arzberg 92.50 38 *e*PcP **P** **05 32 05.7 -0.2**
comp=Z,5.9nm,0.8s,SNR=16
ARSA *e*S **sP** **05 32 26.3 -2.0**
comp=Z,13nm,1.4s
ARSA PP **PP** **05 35 42.1 -5.1**
comp=Z,0.2nm,0.4s
LJU Ljubljana 92.50 40 ‖*i*P **P** **05 32 06.0 0.0**
PERS Pernice 92.56 39 *i*P **P** **05 32 05.6 -0.7**
PERS *e*SKSac **SKSac** **05 42 45.9 +10**
PERS *e*S **S** **05 43 00.1 -6.4**
CEY Cerknica 92.59 40 ‖*i*P **P** **05 32 06.7 +0.3**
NRIK Noril'sk 92.60 358 P **P** **05 32 05.9 -0.1**
comp=Z,45nm,0.9s,baz=31,slow=2.9,SNR=98
NRIK pP **pP** **05 32 22.0 -0.1**
comp=Z,17nm,0.8s,baz=332,slow=6.7,SNR=4.6
NRIK LR LR 06 17 32.5
comp=Z,1μm,19.7s,baz=28,slow=38
OKC Ostrava-Krasne 92.65 35 *e*P **P** **05 32 07.3 +0.7**
OKC *e* 05 32 28.7
OKC *e*S **SKSac** **05 42 39.6 +3.9**
OKC MLR MLR
comp=Z,1μm,21.2s
OKC Ostrava-Krasne 92.65 35 *e*P **P** **05 32 07.3 +0.7**
OKC *e*x x 05 32 12.4
OKC *e*sP **sP** **05 32 28.7 -0.2**
OKC *e*SKS **SKSac** **05 42 39.6 +3.9**
OKC AMS AMS 06 08 20.0
comp=Z,1μm,21.2s
VISS Visnje 92.81 40 *e*P **P** **05 32 07.5 +0.1**
VISS *i*SKSac **SKSac** **05 42 40.3 +3.6**
RIY Rijeka 92.82 40 ‖*i*P **P** **05 32 07.5 0.0**
SUW Suwalki 92.86 30 *e*P **P** **05 32 06.4 -1.1**
SUW LMZ LR 06 07 15.8
comp=Z,3μm,32.0s
SUW Suwalki 92.86 30 *e*P **P** **05 32 06.2 -1.2**
comp=Z,52nm,1.1s
SUW LR LR
comp=Z,900nm,21.0s
SUW Suwalki 92.86 30 *e*P **P** **05 32 06.4 -1.1**
SOP Sopron 92.88 38 ‖EP **P** **05 32 07.1 -0.6**
SOP ES **S** **05 43 08.0 -1.1**
JAVC Velka Javorina 92.90 36 ‖*i*P **P** **05 32 09.1 +1.2**
JAVC Velka Javorina 92.90 36 *e*S **S** **05 43 18.3 +8.9**
ZST Bratislava 92.93 37 *e*P **P** **05 32 07.7 -0.2**
ZST Bratislava 92.93 37 *e*P **P** **05 32 07.7 -0.2**
MODS Modra-Piesok 92.94 37 *e*P **P** **05 32 08.0 0.0**
MODS pmax pmax
comp=Z,241nm,2.0s
MODS Modra-Piesok 92.94 37 *e*P **P** **05 32 08.0 0.0**
BEL Belsk 92.95 33 *e*P **P** **05 32 07.8 -0.1**
BEL LMZ LR 06 06 14.8
comp=Z,3μm,33.1s
BEL Belsk 92.95 33 *e*P **P** **05 32 07.8 -0.1**
CRES Cresnjev 93.17 40 ‖*i*P **P** **05 32 09.0 -0.1**
BOJS Bojanci 93.21 40 *i*P **P** **05 32 09.4 +0.2**
BOJS *e*SKSac SKSac 05 42 26.2 -13
BOJS *e*S **SKSac** **05 42 40.6 +1.6**
OJC Ojcow 93.33 34 *e*P **P** **05 32 09.9 +0.1**
OJC *e*S **S** **05 43 17.5 +4.5**
OJC LMZ LR 06 08 54.8
comp=Z,2μm,28.4s
OJC Ojcow 93.33 34 *e*P **P** **05 32 09.3 -0.4**
comp=Z,60nm,1.1s
OJC Ojcow 93.33 34 *e*P **P** **05 32 09.9 +0.1**
OJC *e*S **S** **05 43 17.5 +4.5**
IIGN Ignalina 93.44 28 *e*P **P** **05 32 09.1 -1.0**
IIGN IAmb IAmb 05 32 10.8
comp=Z,25nm,1.2s
AQU L'Aquila 93.57 43 *e*P **P** **05 32 10.6 -0.5**
comp=Z,38nm,1.3s
AQU L'Aquila 93.57 43 *e*P **P** **05 32 10.6 -0.5**
AQU pmax pmax
comp=Z,39nm,1.3s
AQU L'Aquila 93.57 43 ‖*i*P **P** **05 32 11.0 -0.1**
BEHE Becsehely 93.63 39 ‖*i*P **P** **05 32 11.2 0.0**
BEHE Becsehely 93.63 39 EP **P** **05 32 11.0 -0.2**
IDID Didziasalis 93.69 28 *e*P **P** **05 32 10.1 -1.2**
IDID IAmb IAmb 05 32 11.6
comp=Z,13nm,1.1s
KEST Kesra 93.74 51 P **P** **05 32 12.2 +0.2**
comp=Z,18nm,0.9s,baz=222,slow=2.3,SNR=24
KEST pP **pP** **05 32 29.1 +0.9**
comp=Z,14nm,0.9s,baz=216,slow=5.3,SNR=4.0
KEST PKKPbc **PKKPbc** **05 49 17.4 +0.9**
comp=Z,1.7nm,0.7s,baz=274,slow=8.9,SNR=4.8
KEST LR LR 06 14 32.9
comp=Z,429nm,19.2s,baz=272,slow=36
LANS Liptovska Anna 93.74 35 *e*P **P** **05 32 13.1 +1.4**
LANS Liptovska Anna 93.74 35 *e*P **P** **05 32 13.1 +1.4**
VYHS Vyhne 93.75 36 *e*P **P** **05 32 12.1 +0.4**
VYHS pmax pmax
comp=Z,107nm,2.1s
VYHS Vyhne 93.75 36 *e*P **P** **05 32 12.1 +0.4**
CSKK Cskako 94.03 37 EP **P** **05 32 12.1 -0.9**
NIE Niedzica 94.05 35 *e*P **P** **05 32 13.9 +0.8**
NIE LMZ LR 06 05 50.4
comp=Z,900nm,33.5s
NIE Niedzica 94.05 35 *e*P **P** **05 32 13.9 +0.8**
TIH Tihany 94.06 38 ‖EP **P** **05 32 13.0 -0.1**
YUK Yuzh-Kuril'sk 94.30 319 *e*P P 05 32 08.7 -5.6
YUK *e* 05 36 06.8
YUK pmax pmax
comp=Z,376nm,1.7s
YUK pmax pmax
comp=Z,255nm,1.3s
YUK pmax pmax
comp=E,97nm,1.1s
YUK MLR MLR
comp=E,332nm,19.0s
YUK MLR MLR
comp=Z,481nm,19.0s
KLMR Klimovskoe 94.55 19 *e*P **P** **05 32 11.2 -3.9**
KLMR *e* 05 35 59.9
KLMR *e*S **SKSac** **05 42 40.7 -4.8**
KLMR pmax pmax
comp=Z,175nm,1.6s
KLMR Klimovskoe 94.55 19 *e*P **P** **05 32 11.2 -3.9**
KLMR AMP 05 32 16.1
comp=Z,175nm,1.6s
KLMR *e*PP **PP** **05 36 00.0 -2.6**
KLMR *e*S **SKSac** **05 42 40.8 -4.8**
KLMR *e*S **SKSac** **05 42 40.8 -4.8**
YSS Yuzh-Sakhalins 94.64 323 *e*P **P** **05 32 15.7 -0.1**
comp=Z,613nm,2.0s
YSS LR LR
comp=Z,600nm,18.0s
YSS Yuzh-Sakhalins 94.64 323κ *i*P **P** **05 32 16.2 +0.4**
YSS *e**PP **pP** **05 32 34.0 +2.0**
YSS *e* 05 36 03.2
YSS *e*S **S** **05 43 28.7 +4.1**
YSS *e*PS **PS** **05 44 39.2 -7.8**
YSS *e*PPS PPS 05 45 18.0
YSS *e*SS **SS** **05 49 58.0 +10**
YSS pmax pmax
comp=Z,70nm,1.3s
YSS pmax pmax
comp=Z,900nm,3.0s
YSS pmax pmax
comp=Z,400nm,4.2s
PSZ Piszkesteto 94.66 36 *e*P **P** **05 32 16.4 +0.4**
comp=Z,66nm,1.4s
PSZ LR LR
comp=Z,1μm,21.0s
PSZ Piszkesteto 94.66 36 ‖*i*P **P** **05 32 16.3 +0.4**
PSZ Piszkesteto 94.66 36 ‖P **P** **05 32 16.3 +0.4**
PSZ Piszkesteto 94.66 36 ‖EP **P** **05 32 16.1 +0.1**
PSZ ES **S** **05 43 16.1 -8.8**
KECS Kecovo 94.67 35 *e*P **P** **05 32 16.7 +0.8**
KECS pmax pmax
comp=Z,153nm,1.6s
KECS Kecovo 94.67 35 *e*P **P** **05 32 16.7 +0.8**
MICGM Minsk 94.72 28 *e*P **P** **05 32 15.0 -1.0**
MICGM eLR LR 06 06 54.0
MNK Minsk 94.72 28 *e*P **P** **05 32 15.0 -1.0**
BLY Banja Luka 94.77 40 *e*P **P** **05 32 16.8 +0.3**
comp=Z,78nm,1.3s
BLY LR LR
comp=Z,800nm,20.0s
BLY Banja Luka 94.77 40 ‖*i*P **P** **05 32 17.0 +0.5**
BLY Banja Luka 94.77 40 ‖*i*P **P** **05 32 16.9 +0.5**
MORH Mrgy, Hungar 94.87 38 ‖*i*P **P** **05 32 16.3 -0.5**
MORH Mrgy, Hungar 94.87 38 ‖EP **P** **05 32 16.0 -0.8**
MORH ES S 05 43 13.1 -13
KWP Kalwaria Pacla 95.21 34 *e*P **P** **05 32 19.0 +0.6**
KWP LMZ LR 06 09 04.5
comp=Z,2μm,30.0s
KWP Kalwaria Pacla 95.21 34 PFAKE 05 32 30.0 +12
KWP LR LR
comp=Z,6μm,22.0s
KWP Kalwaria Pacla 95.21 34 *e*P **P** **05 32 19.0 +0.6**
KOLS Kolonicke sedl 95.39 34 *e*P **P** **05 32 20.3 +1.1**
KOLS pmax pmax
comp=Z,114nm,1.9s
KOLS Kolonicke sedl 95.39 34 *e*P **P** **05 32 20.3 +1.1**
UZH Uzhgorod 95.58 35 *e*P **P** **05 32 19.5 -0.5**
UZH *e* 05 32 33.1
UZH *i* 05 32 39.9
UZH *e* 05 36 10.3
UZH *e* 05 38 17.4
UZH *e* 05 42 48.2
UZH *e*S **S** **05 43 28.0 -4.6**
UZH *e* 05 44 49.8
UZH *e* 05 53 41.7
PRGR Permogore 95.66 16 ‖*i*P **P** **05 32 19.5 -0.6**
PRGR *e**PP **pP** **05 32 37.1 +0.8**
PRGR pmax pmax
comp=Z,78nm,0.8s
CLTB Caltabellotta 95.70 48 PFAKE 05 32 30.0 +9.0
CLTB LR LR
comp=Z,800nm,20.0s
LVV L'vov 95.80 33 *e*P **P** **05 32 20.3 -0.7**
LVV *e* 05 32 42.1
GRNR Gornyy 95.85 328 *e*P **P** **05 32 21.0 -0.3**
GRNR pmax pmax
comp=Z,63nm,1.0s
TAM Tamanrasset 95.91 64 *e*P **P** **05 32 22.7 +0.4**
comp=Z,104nm,1.8s
TAM LR LR
comp=Z,1μm,22.0s

TAM	**Tamanrasset**	**95.91**	**64**	*e*P	**P**	**05 32 22.7**	**+0.4**
TAM				pmax	pmax		
	comp=Z,104nm,1.8s						
TAM				MLR	MLR		
	comp=Z,1μm,22.0s						
TOC7	**Torodi Ar. Sit**	**95.96**	**74**	PFAKE		05 32 30.0	+7.5
TOC7				LR	LR		
	comp=Z,1μm,21.0s						
TOB5	**Torodi Ar. Sit**	**95.97**	**74**	PFAKE		05 32 30.0	+7.5
TOB5				LR	LR		
	comp=Z,1μm,21.0s						
TOC5	**Torodi Ar. Sit**	**95.97**	**74**	PFAKE		05 32 30.0	+7.5
TOC5				LR	LR		
	comp=Z,1μm,20.0s						
TOB4	**Torodi Ar. Sit**	**95.98**	**74**	PFAKE		05 32 30.0	+7.5
TOB4				LR	LR		
	comp=Z,900nm,21.0s						
TOA1	**Torodi Ar. Sit**	**95.98**	**74**	*e*P	**P**	**05 32 21.6**	**-0.9**
TOA1				*e*pP	**pP**	**05 32 37.3**	**-1.4**
TOA1				*e*PKKPdf	**PKKPbc**	**05 49 09.6**	**-0.4**
TOA1				LR	LR		
	comp=Z,1μm,21.0s						
TOC1	**Torodi Ar. Sit**	**95.98**	**74**	PFAKE		05 32 30.0	+7.5
TOC1				LR	LR		
	comp=Z,1μm,21.0s						
TOA0	**Torodi Ar. Sit**	**95.98**	**74**	*e*P	**P**	**05 32 21.4**	**-1.2**
	comp=Z,39nm,1.4s						
TOA0				LR	LR		
	comp=Z,1μm,20.0s						
TOA3	**Torodi Ar. Sit**	**95.98**	**74**	PFAKE		05 32 30.0	+7.5
TOA3				LR	LR		
	comp=Z,1μm,21.0s						
TORD	**Torodi Ar. Bea**	**95.98**	**74**	P	**P**	**05 32 21.6**	**-0.9**
	comp=Z,5.2nm,0.9s,baz=316,slow=6.2,SNR=23						
TORD				pP	**pP**	**05 32 37.3**	**-1.4**
	comp=Z,9.2nm,1.0s,baz=314,slow=5.8,SNR=9.2						
TORD				PKKP	**PKKPbc**	**05 49 09.6**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=66,slow=3.2,SNR=6.9						
TORD				LR	LR	06 17 07.0	
	comp=Z,572nm,18.1s,baz=315,slow=36						
TOB2	**Torodi Ar. Sit**	**95.99**	**74**	PFAKE		05 32 30.0	+7.4
TOB2				LR	LR		
	comp=Z,1μm,20.0s						
TOB3	**Torodi Ar. Sit**	**96.00**	**74**	PFAKE		05 32 30.0	+7.4
TOB3				LR	LR		
	comp=Z,900nm,20.0s						
TOC4	**Torodi Ar. Sit**	**96.00**	**74**	PFAKE		05 32 30.0	+7.4
TOC4				LR	LR		
	comp=Z,900nm,20.0s						
TRPA	**Tarpa**	**96.00**	**35**⇑	*i*P	**P**	**05 32 22.2**	**+0.2**
TRPA	**Tarpa**	**96.00**	**35**	⇓EP	**P**	**05 32 22.0**	**+0.1**
TRPA				ES	**S**	**05 43 32.1**	**-4.2**
TOC2	**Torodi Ar. Sit**	**96.00**	**74**	PFAKE		05 32 30.0	+7.4
TOC2				LR	LR		
	comp=Z,1μm,21.0s						
TOC3	**Torodi Ar. Sit**	**96.01**	**74**	PFAKE		05 32 30.0	+7.3
TOC3				LR	LR		
	comp=Z,1μm,21.0s						
STON	**Ston**	**96.06**	**41**	⇓*i*P	**P**	**05 32 22.2**	**-0.1**
FRGS	**Fruska Gora**	**96.13**	**39**	⇓*i*P	**P**	**05 32 22.7**	**0.0**
HAPS	**Han Pijesak,BI**	**96.19**	**40**	*e*P	**P**	**05 32 22.0**	**-1.1**
ASAJ	**Asahikawa**	**96.27**	**320**	P	**P**	**05 32 24.4**	**+1.1**
	comp=Z,15nm,0.8s,baz=71,slow=5.5,SNR=15						
URZ	**Urewera**	**96.28**	**232**	PFAKE		05 32 30.0	+6.7
URZ				LR	LR		
	comp=Z,2μm,21.0s						
MATE	**Matera**	**96.57**	**44**	⇓*i*P	**P**	**05 32 24.6**	**-0.1**
BRY	**Bratogost**	**96.57**	**41**	*e*P	**P**	**05 32 24.6**	**-0.3**
SIRR	**Siria**	**96.58**	**37**	⇓*i*P	**P**	**05 32 24.7**	**0.0**
BBLS	**Lazići**	**96.59**	**40**	*e*P	**P**	**05 32 25.3**	**+0.4**
UPM	**Unac-Piva**	**96.64**	**41**	*e*P	**P**	**05 32 25.1**	**-0.1**
DIVS	**Divibare**	**96.82**	**39**	*e*P	**P**	**05 32 26.0**	**+0.1**
DRGR		**96.88**	**36**	⇓*i*P	**P**	**05 32 25.9**	**-0.2**
DRGR		**96.88**	**36**	⇓P	**P**	**05 32 25.9**	**-0.2**
BZS	**Buzias**	**96.93**	**37**	⇓*i*P	**P**	**05 32 26.6**	**+0.4**
BZS	**Buzias**	**96.93**	**37**	⇓P	**P**	**05 32 26.6**	**+0.4**
ERM	**Erimo**	**97.04**	**318**	*e*P	Pdif	05 32 27.0	+0.1
	comp=Z,247nm,1.6s						
ERM				LR	LR		
	comp=Z,900nm,22.0s						
ERM	**Erimo**	**97.04**	**318**	*d i*P	Pdif	05 32 27.4	+0.5
ERM				pmax	pmax		
	comp=Z,172nm,1.7s						
PDG	**Podgorica**	**97.27**	**41**	⇓*i*P	**P**	**05 32 27.8**	**0.0**
PDG	**Podgorica**	**97.27**	**41**	⇓*i*P	**P**	**05 32 27.5**	**-0.3**
TTG	**Podgorica**	**97.27**	**41**	*e*P	**P**	**05 32 27.6**	**-0.2**
	comp=Z,40nm,1.2s						
TTG				LR	LR		
	comp=Z,700nm,19.0s						
TTG	**Podgorica**	**97.27**	**41**	*e*P	**P**	**05 32 27.6**	**-0.2**
TTG				pmax	pmax		
	comp=Z,40nm,1.2s						
TTG				MLR	MLR		
	comp=Z,700nm,19.0s						
TIP	**Timpagrande**	**97.35**	**45**	*e*P	**P**	**05 32 25.8**	**-2.6**
	comp=Z,21nm,0.9s						
TIP	**Timpagrande**	**97.35**	**45**⇑	*i*P	**P**	**05 32 27.3**	**-1.1**
DRME	**Dracevica, Mon**	**97.36**	**41**	⇓*i*P	Pdif	05 32 28.4	+0.1
CJR	**Cluj-Napoca**	**97.42**	**36**	⇓*i*P	**P**	**05 32 28.5**	**0.0**
CJR	**Cluj-Napoca**	**97.42**	**36**	⇓P	**P**	**05 32 28.5**	**0.0**
WDD	**Wied Dalam**	**97.45**	**49**	PFAKE		05 32 40.0	+11
WDD				LR	LR		
	comp=Z,400nm,20.0s						
MDVR	**Moldovita**	**97.46**	**38**	⇓*i*P	**P**	**05 32 28.3**	**-0.4**
BUR08	**Bucovina Ar. S**	**97.73**	**34**	*e*P	**P**	**05 32 29.5**	**-0.4**
	comp=Z,38nm,1.8s						
BURAR	**Bucovina Array**	**97.75**	**34**	⇓*i*P	**P**	**05 32 29.9**	**-0.2**
BURAR	**Bucovina Array**	**97.75**	**34**	⇓P	**P**	**05 32 29.9**	**-0.2**
AKASG	**Malin Array Be**	**97.83**	**30**	P	**P**	**05 32 28.8**	**-1.4**
	comp=Z,2.8nm,0.8s,baz=296,slow=3.3,SNR=16						
AKASG				PP	**PP**	**05 36 24.6**	**-3.7**
	comp=Z,2.5nm,0.8s,baz=312,slow=6.9,SNR=5.5						
AKASG				LR	LR	06 20 08.9	
	comp=Z,437nm,19.2s,baz=315,slow=38						
AKBB	**Malin Array Si**	**97.83**	**30**	*e*P	**P**	**05 32 28.8**	**-1.4**
	comp=Z,70nm,1.9s						
AKBB				*e*PP	**PP**	**05 36 24.6**	**-3.7**
AKBB	**Malin Array Si**	**97.83**	**30**	*e*P	**P**	**05 32 28.8**	**-1.4**
AKBB				*e*		05 36 24.6	
AKBB				pmax	pmax		
	comp=Z,70nm,1.9s						
MOS	**Moscow**	**97.83**	**23**	*e*P	**P**	**05 32 27.6**	**-2.5**
MOS				*e*		05 32 47.0	
MOS				pmax	pmax		
	comp=Z,136nm,1.7s						
MOS				pmax	pmax		
	comp=Z,400nm,2.5s						
MOS				MLR	MLR		
	comp=Z,2μm,24.0s						
OBN	**Obninsk**	**97.90**	**24**	*e*P	**P**	**05 32 29.3**	**-1.0**
	comp=Z,290nm,1.8s						
OBN				LR	LR		
	comp=Z,900nm,20.0s						
OBN	**Obninsk**	**97.90**	**24**	⇓*i*P	**P**	**05 32 29.5**	**-0.8**
OBN	**Obninsk**	**97.90**	**24**	*d i*P	**P**	**05 32 29.6**	**-0.8**
OBN				*e*		05 36 29.2	
OBN				*i* S	**SKSac**	**05 43 03.6**	**+0.3**
OBN				*i* PS	PS	05 45 17.0	-5.1
OBN				*i* SS	**SS**	**05 50 37.3**	**+4.2**
OBN				pmax	pmax		
	comp=Z,152nm,1.7s						
OBN				MLR	MLR		
	comp=Z,875nm,20.0s						
ZEA	**Zeya**	**98.06**	**334**	*e*P	**P**	**05 32 31.2**	**0.0**
ZEA				*e*		05 43 06.0	
ZEA				pmax	pmax		
	comp=Z,92nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,500nm,5.0s						
LOT	**Lotru**	**98.26**	**37**⇑	*i*P	Pdif	05 32 34.6	+2.2
SRE	**Strehaia**	**98.40**	**38**	⇓*i*P	Pdif	05 32 33.5	+0.6
SRE	**Strehaia**	**98.40**	**38**	⇓P	Pdif	05 32 33.5	+0.6
BIZ	**Bicaz**	**98.65**	**34**	⇓*i*P	**P**	**05 32 33.9**	**-0.1**
ARR	**Arges**	**98.80**	**36**	⇓*i*P	Pdif	05 32 34.9	+0.1
DOPR	**Dopca**	**98.86**	**36**	⇓*i*P	**P**	**05 32 34.4**	**-0.5**
VOIR		**98.99**	**36**	⇓*i*P	**P**	**05 32 35.4**	**-0.2**
VOIR		**98.99**	**36**	⇓P	**P**	**05 32 35.4**	**-0.2**
OZUR		**99.00**	**35**	⇓*i*P	Pdif	05 32 35.4	-0.2
KLR	**Kul'dur**	**99.15**	**329**	P	**Pdif**	**05 32 36.4**	**+0.2**
	comp=Z,4.5nm,0.7s,baz=42,slow=3.6,SNR=27						
KLR				PP	**PP**	**05 36 36.0**	**-2.5**
	comp=Z,15nm,1.3s,baz=61,slow=10.0,SNR=7.2						
KLR				PKKP	**PKKPbc**	**05 49 00.1**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=248,slow=4.2,SNR=3.8						
KLR	**Kul'dur**	**99.15**	**329**	*d i*P	**Pdif**	**05 32 36.3**	**+0.2**
KLR				pmax	pmax		
	comp=Z,19nm,1.4s						
TEY	**Ternei**	**99.26**	**324**	⇓*e*P	**Pdif**	**05 32 36.8**	**+0.1**
TEY				pmax	pmax		
	comp=Z,10.0nm,2.0s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
KIRV	**Kirov**	**99.26**	**16**	P	**Pdif**	**05 32 35.6**	**-0.7**
	comp=N,30nm,0.8s,baz=317,slow=6.0,SNR=22						
MLR	**Muntele Rosu**	**99.45**	**36**	*e*P	**Pdif**	**05 32 36.7**	**-1.1**
	comp=N,26nm,1.1s						
MLR				LR	LR		
	comp=Z,1μm,22.0s						
MLR	**Muntele Rosu**	**99.45**	**36**⇑	*i*P	**Pdif**	**05 32 37.7**	**-0.1**
MLR	**Muntele Rosu**	**99.45**	**36**	⇑P	**Pdif**	**05 32 37.7**	**-0.1**
FNA	**Florina**	**99.50**	**42**	*e*Pdif	**Pdif**	**05 32 37.6**	**-0.4**
	comp=Z,16nm,1.0s						
FNA				LR	LR		
	comp=Z,800nm,20.0s						
FNA	**Florina**	**99.50**	**42**	*e*P	**Pdif**	**05 32 37.6**	**-0.4**
FNA				pmax	pmax		
	comp=Z,16nm,1.0s						
FNA				MLR	MLR		
	comp=Z,800nm,20.0s						
VTS	**Vitosha**	**99.61**	**39**	*e*Pdif	**Pdif**	**05 32 37.7**	**-0.9**
	comp=Z,15nm,1.4s						
VTS				LR	LR		
	comp=Z,600nm,20.0s						
VTS	**Vitosha**	**99.61**	**39**	⇓*i*P	**Pdif**	**05 32 38.2**	**-0.3**
VTS	**Vitosha**	**99.61**	**39**	⇓P	**Pdif**	**05 32 38.2**	**-0.3**
PLOR	**Plostina**	**99.62**	**35**	⇓*i*P	**Pdif**	**05 32 37.3**	**-1.1**
PLOR	**Plostina**	**99.62**	**35**	⇓P	**Pdif**	**05 32 37.3**	**-1.1**
PETR	**Petresti**	**100.02**	**35**	⇓*i*P	**Pdif**	**05 32 34.7**	**-5.4**
KIS	**Kishinev**	**100.05**	**33**	*e*P	**Pdif**	**05 32 39.0**	**-1.2**
KIS				*e*LR	LR	06 05 24.0	
	comp=Z,1μm,22.0s						
MILM	**Milestii Mici**	**100.10**	**33**	⇓*i*P	**Pdif**	**05 32 39.3**	**-1.1**
DZM	**Mont Dzumac**	**100.57**	**250**	*e*SP	SP	05 45 46.2	+0.3
	comp=Z,509nm,29.7s						
DZM	**Mont Dzumac**	**100.57**	**250**	*e*LR	LR	06 05 32.3	
	comp=Z,5μm,26.4s						
DZM	**Mont Dzumac**	**100.57**	**250**	PFAKE		05 32 50.0	+6.9
DZM				LR	LR		
	comp=Z,2μm,20.0s						
LPSR	**Galich'ya Gora**	**100.72**	**25**	*e*P	**Pdif**	**05 32 42.0**	**-1.0**
LPSR				pmax	pmax		
	comp=Z,40nm,1.2s						
CFR	**Carcaliu**	**100.86**	**35**	⇓*i*P	**Pdif**	**05 32 40.3**	**-3.5**
CFR	**Carcaliu**	**100.86**	**35**	⇓P	**Pdif**	**05 32 40.4**	**-3.4**
AGG	**Agios Georgios**	**101.10**	**43**	PFAKE		05 33 00.0	+15
AGG				LR	LR		
	comp=Z,800nm,21.0s						
OXZ	**Oxford**	**101.39**	**228**	PFAKE		05 33 00.0	+14
OXZ				LR	LR		
	comp=Z,2μm,21.0s						
TIRR	**Tirgusor**	**101.47**	**35**	PFAKE		05 33 00.0	+13
TIRR				LR	LR		
	comp=Z,3μm,22.0s						
TIRR	**Tirgusor**	**101.47**	**35**	⇓*i*P	**Pdif**	**05 32 42.5**	**-4.0**
TIRR	**Tirgusor**	**101.47**	**35**	⇓P	**Pdif**	**05 32 42.5**	**-4.0**
VORR	**Voronezh**	**101.54**	**25**	*e*P	**Pdif**	**05 32 45.0**	**-1.7**
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
ITM	**Ithomi**	**101.86**	**44**	PFAKE		05 33 00.0	+11
ITM				LR	LR		
	comp=Z,400nm,22.0s						
VSR	**Storozhevoye**	**101.87**	**25**	*d i*P	**Pdif**	**05 32 47.0**	**-1.2**
VORD	**Divnogorie**	**102.11**	**25**	*e*P	**Pdif**	**05 32 48.5**	**-0.8**
VORD				pmax	pmax		
	comp=Z,20nm,1.3s						
ALN	**Alexandroupoli**	**102.32**	**39**	PFAKE		05 33 00.0	+10
ALN				LR	LR		
	comp=Z,300nm,21.0s						
USA0B	**Ussuriysk Arra**	**102.34**	**325**	*e*Pdif	**Pdif**	**05 32 50.4**	**-0.1**
USA0B				LR	LR		
	comp=Z,900nm,18.0s						
USRK	**Ussuriysk Ar.**	**102.34**	**325**	P	**Pdif**	**05 32 50.3**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=57,slow=7.0,SNR=9.9						
MJAR	**Matsushiro Arr**	**103.25**	**316**	Pdiff	**Pdif**	**05 32 55.5**	**+0.8**
	comp=Z,3.6nm,0.7s,baz=49,slow=3.8,SNR=11						
MJAR				PP	**PP**	**05 37 08.3**	**-1.6**
	comp=Z,0.9nm,0.7s,baz=50,slow=6.5,SNR=4.8						
MAJO	**Matsushiro**	**103.26**	**316**	*e*Pdif	**Pdif**	**05 32 54.1**	**-0.6**
MAJO				*e*PP	**PP**	**05 37 08.3**	**-1.6**
MAJO				LR	LR		
	comp=Z,500nm,21.0s						
MAJO	**Matsushiro**	**103.26**	**316**	*e*P	**Pdif**	**05 32 54.1**	**-0.6**
MAJO				*e*		05 37 08.3	
MAJO				MLR	MLR		
	comp=Z,500nm,21.0s						
MJB9	**Matsu-Tunnel**	**103.26**	**316**	*e*Pdif	**Pdif**	**05 32 54.4**	**-0.4**
MJB9				LR	LR		
	comp=Z,500nm,21.0s						
ARU	**Arti**	**103.36**	**13**	Pdiff	**Pdif**	**05 32 54.2**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=315,slow=2.5,SNR=19						
ARU				PP	**PP**	**05 37 06.9**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=298,slow=2.5,SNR=3.8						
ARU	**Arti**	**103.36**	**13**	*e*Pdif	**Pdif**	**05 32 54.1**	**-0.6**
ARU				*e*PP	**PP**	**05 37 06.9**	**-2.8**
ARU				LR	LR		
	comp=Z,800nm,22.0s						
ARU	**Arti**	**103.36**	**13**	P	**Pdif**	**05 32 54.1**	**-0.6**
ARU						05 37 08.8	
ARU				PPP	PPP	05 39 18.0	
ARU				S	**SKSac**	**05 43 28.4**	**-1.5**
ARU				SP	SP	05 46 12.8	0.0
ARU				MLR	MLR		
	comp=Z,1μm,25.0s						
SIM	**Simferopol'**	**104.16**	**32**	*e*P	**Pdif**	**05 32 57.4**	**-1.1**
SIM				*e*PS	PS	05 46 27.0	-2.1
SIM				*e*SS	SS	05 51 56.0	-4.5
SIM				pmax	pmax		
	comp=Z,30nm,6.8s						
SIM				pmax	pmax		
	comp=Z,110nm,12.5s						
HIA	**Hailar**	**104.51**	**335**	PFAKE		05 33 10.0	+10
HIA				LR	LR		
	comp=Z,1μm,20.0s						
MANT	**Manisa**	**105.33**	**40**	PFAKE		05 37 30.0	+12
MANT				LR	LR		
	comp=Z,2μm,20.0s						
CN2	**Changchun**	**106.05**	**328**	Pdif	**Pdif**	**05 33 02.1**	**-4.9**
CN2				*e*PP	**PP**	**05 37 28.6**	**-1.5**
CN2				*e*S	**Sdif**	**05 44 55.5**	**-5.5**
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,350nm,21.0s						
CN2				LR	LR		
	comp=Z,180nm,21.0s						
CN2				LR	LR		
	comp=Z,460nm,23.0s						
KARP	**Karpathos**	**106.25**	**43**	PFAKE		05 37 30.0	+11
KARP				LR	LR		
	comp=Z,700nm,22.0s						
ILGA	**Ilgaz**	**106.65**	**35**	PFAKE		05 37 30.0	+10
ILGA				LR	LR		
	comp=Z,700nm,22.0s						
ANTO	**Ankara**	**106.93**	**37**	PFAKE		05 37 30.0	+9.3
ANTO				LR	LR		
	comp=Z,400nm,21.0s						
ISP	**Isparta**	**106.94**	**40**	PFAKE		05 37 30.0	+9.2
ISP				LR	LR		
	comp=Z,500nm,20.0s						
IRK	**Irkutsk**	**106.98**	**345**	*e*P	**Pdif**	**05 33 11.6**	**+0.6**
IRK				pmax	pmax		
	comp=Z,54nm,2.3s						
BR101	**Keskin Array S**	**107.51**	**36**	*e*PKiKP	**PKiKP**	**05 37 22.0**	**+0.1**
BR101				*e*PKKPbc	**PKKPbc**	**05 48 36.8**	**-0.7**
BR101				*e*PKKPdf	**PKKPdf**	**05 48 50.5**	**+0.6**
BRTR	**Keskin Array B**	**107.51**	**36**	PKiKP	**PKiKP**	**05 37 22.0**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=243,slow=2.6,SNR=3.7						
BRTR				PKKPbc	**PKKPbc**	**05 48 36.8**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=120,slow=4.7,SNR=4.1						
BRTR				PKKP	**PKKPdf**	**05 48 50.5**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=147,slow=7.1,SNR=5.1						
TLY	**Talaya**	**107.65**	**345**	PFAKE		05 37 30.0	+8.4
TLY				LR	LR		
	comp=Z,899nm,19.0s						
ZAA1	**Zalesovo Array**	**108.10**	**358**	*e*Pdif	**Pdif**	**05 33 16.1**	**+0.3**
ZAA1				*e*PKiKP	**PKiKP**	**05 37 21.4**	**-0.9**
ZAA1				*e*PKKPdf	**PKKPdf**	**05 48 46.8**	**-1.9**
ZAA0	**Zalesovo Array**	**108.10**	**358**	*e*Pdif	**Pdif**	**05 33 15.0**	**-0.8**
ZAA0				LR	LR		
	comp=Z,800nm,21.0s						
ZALV	**Zalesovo Beam**	**108.10**	**358**	Pdiff	**Pdif**	**05 33 16.1**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=350,slow=4.4,SNR=5.9						
ZALV				PKiKP	**PKiKP**	**05 37 21.4**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=329,slow=5.0,SNR=3.0						
ZALV				PKKP	**PKKPdf**	**05 48 46.8**	**-1.8**
	comp=Z,1.7nm,0.8s,baz=197,slow=1.5,SNR=4.5						
SNY	**Shenyang**	**108.43**	**328**	Pdif	**Pdif**	**05 33 15.4**	**-2.1**
SNY				AMB	AMB		
	comp=Z,310nm,5.1s						
SNY				LR	LR		
	comp=Z,540nm,17.5s						
SNY				LR	LR		
	comp=Z,690nm,19.9s						
SNY				LR	LR		
	comp=Z,1μm,26.5s						
BRVK	**Borovoye**	**108.49**	**7**	PFAKE		05 37 30.0	+6.9
BRVK				LR	LR		
	comp=Z,2μm,21.0s						
BVAR	**Borovoye Array**	**108.53**	**7**	Pdiff	**Pdif**	**05 33 20.5**	**+2.7**
	comp=Z,1.5nm,0.8s,baz=318,slow=1.9,SNR=5.5						
BVAR				PKiKP	**PKiKP**	**05 37 22.7**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=331,slow=1.8,SNR=2.7						
BVAR				PKKPbc	**PKKPbc**	**05 48 33.0**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=224,slow=6.2,SNR=3.8						
BVAR				PKKP	**PKKPdf**	**05 48 45.3**	**-2.6**
	comp=Z,1.2nm,0.8s,baz=177,slow=7.4,SNR=5.5						
ZAK	**Zakamensk**	**108.94**	**345**	*e*P	**Pdif**	**05 33 18.7**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.8s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
KIV	**Kislovodsk**	**109.00**	**28**	PFAKE		05 37 40.0	+16
KIV				LR	LR		
	comp=Z,400nm,20.0s						
RABL	**Rabaul**	**109.04**	**272**	PFAKE		05 37 40.0	+15
RABL				LR	LR		
	comp=Z,1μm,22.0s						
SNAA	**Sanae**	**109.09**	**161**	PFAKE		05 37 30.0	+6.4
SNAA				LR	LR		
	comp=Z,700nm,22.0s						
LHI	**Lord Howe Isla**	**109.09**	**242**	PFAKE		05 37 40.0	+15
LHI				LR	LR		
	comp=Z,2μm,20.0s						
KSRS	**Korea Array**	**109.13**	**322**	Pdiff	**Pdif**	**05 33 22.9**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=50,slow=3.7,SNR=3.2						
KSRS				PKiKP	**PKiKP**	**05 37 25.1**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=18,slow=1.3,SNR=13						
KSRS				PKKP	**PKKPab**	**05 48 44.8**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=230,slow=5.1,SNR=8.8						
KS15	**Wonju Array Si**	**109.16**	**322**	*e*PKiKP	**PKiKP**	**05 37 25.1**	**+0.3**
KS15				*e*PKKPab	**PKKPab**	**05 48 44.8**	**-1.0**
GUMO	**Guam**	**109.43**	**292**	PFAKE		05 37 40.0	+14
GUMO				LR	LR		
	comp=Z,400nm,19.0s						
VNDA	**Vanda**	**109.56**	**193**	PKiKP	**PKiKP**	**05 37 24.1**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=343,slow=2.5,SNR=5.4						
VNDA				PKKPbc	**PKKPbc**	**05 48 27.9**	**-4.0**
	comp=Z,1.0nm,1.0s,baz=189,slow=2.7,SNR=4.5						
JNU	**Nakatsue**	**110.12**	**317**	PFAKE		05 37 40.0	+13
JNU				LR	LR		
	comp=Z,600nm,21.0s						
ABKAR	**Akbulak array**	**110.36**	**14**	*e*Pdif	**Pdif**	**05 33 25.4**	**-0.6**
SONA0	**Songino Array**	**110.42**	**342**	*e*Pdif	**Pdif**	**05 33 27.0**	**+0.5**
SONA0				*e*PKiKP	**PKiKP**	**05 37 26.3**	**-0.8**
SONA0				*e*PKKPbc	**PKKPbc**	**05 48 26.6**	**-2.0**
SONM	**Songino Array**	**110.42**	**342**	Pdiff	**Pdif**	**05 33 27.0**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=357,slow=3.4,SNR=5.0						
SONM				PKiKP	**PKiKP**	**05 37 26.3**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=272,slow=0.8,SNR=5.8						
SONM				PKKPbc	**PKKPbc**	**05 48 26.6**	**-2.0**
	comp=Z,1.1nm,0.7s,baz=197,slow=4.6,SNR=4.8						
AKH	**Akhalkalaki**	**111.36**	**29**	PFAKE		05 37 40.0	+11
AKH				LR	LR		
	comp=Z,500nm,22.0s						
KURK	**Kurchatov**	**111.39**	**2**	PFAKE		05 37 40.0	+11
KURK				LR	LR		
	comp=Z,2μm,22.0s						
KURK	**Kurchatov**	**111.39**	**2**	*c i*PKIKP	**PKiKP**	**05 37 28.2**	**-0.4**
DL2	**Dalian**	**111.59**	**327**	*e*PKP	**PKiKP**	**05 37 30.8**	**+1.5**
DL2				*es*PKP		05 37 44.0	
DL2				PP	**PP**	**05 38 09.1**	**-1.3**
DL2				SS	SS	05 53 39.3	-1.7
DL2				AMB	AMB		
	comp=Z,330nm,5.8s						
DL2				LR	LR		
	comp=Z,510nm,20.0s						
DL2				LR	LR		
	comp=Z,570nm,19.3s						
DL2				LR	LR		
	comp=Z,860nm,17.1s						
MAK	**Makhachkala**	**111.88**	**26**	*e*P	**Pdif**	**05 33 28.8**	**-4.1**
MAK				*i*		05 37 29.0	
MAK				*e*		05 38 11.3	
MAK				*e*		05 40 30.3	
MAK				*e*		05 44 03.2	
MAK				*e*PS	**PS**	**05 47 38.7**	**-7.4**
MAK				pmax	pmax		
	comp=Z,173nm,1.4s						
MANU	**Manus Island**	**112.93**	**276**	PFAKE		05 37 40.0	+7.5
MANU				LR	LR		
	comp=Z,1μm,20.0s						
GNI	**Garni**	**112.94**	**29**	PFAKE		05 37 40.0	+7.9
GNI				LR	LR		
	comp=Z,500nm,22.0s						
AKT	**Akhty**	**113.19**	**27**	*i* PKIKP	**PKiKP**	**05 37 35.3**	**+2.8**
AKT				*e*		05 38 27.1	
AKT				pmax	pmax		

comp=Z,1μm,18.0s
NJ2 Nanjing 118.20 324 *e*PKP **PKPdf 05 37 41.8 -0.4**
NJ2 LR LR
comp=Z,780nm,15.7s
NJ2 LR LR
comp=Z,630nm,18.4s
NJ2 LR LR
comp=Z,1μm,15.7s
KK31 Karatay Array 118.30 9 *e*PKPdf **PKPdf 05 37 41.6 -0.5**
KK31 Karatay Array 118.30 9 *e*PKIKP **PKPdf 05 37 41.7 -0.5**
KKAR Karatay Array 118.30 9 *e*PKPdf **PKPdf 05 37 41.8 -0.4**
KKAR Karatay Array 118.30 9 *e*PKIKP **PKPdf 05 37 41.8 -0.4**
USP Ospenovka 118.59 5 P **PKiKP 05 37 43.0 +0.2**
SNR=12
TKM2 Tokmak 2 119.03 4 P **PKiKP 05 37 44.0 +0.1**
SNR=7.9
FRU1 Bishkek 119.06 5 PFAKE 05 37 50.0 +6.3
FRU1 LR LR
comp=Z,1μm,20.0s
EKS2 Erkin-Say 119.13 6 P **PKiKP 05 37 44.6 +0.7**
SNR=16
AAK Ala-Archa 119.22 5 P **PKiKP 05 37 44.5 +0.3**
SNR=5.7
AAK Ala-Archa 119.22 5 *e*PKPdf **PKiKP 05 37 44.2 +0.1**
AAK LR LR
comp=Z,1μm,22.0s
AAK Ala-Archa 119.22 5 *i* PKiKP **PKPdf 05 37 43.5 -0.6**
SNR=6.2
AAK Ala-Archa 119.22 5*d* *i*PKIKP **PKPdf 05 37 44.1 0.0**
AAK pmax pmax
comp=Z,24nm,1.7s
KBK Karagaybulak 119.24 5 P **PKiKP 05 37 44.5 +0.3**
SNR=7.3
BOOM Boomskoye usch 119.48 4 *e*PKPdf **PKPdf 05 37 44.2 -0.4**
BOOM LR LR
comp=Z,1μm,20.0s
BOOM Boomskoye usch 119.48 4 *e*PKIKP **PKPdf 05 37 44.2 -0.4**
BOOM MLR MLR
comp=Z,1μm,20.0s
UCH Uchtor 119.63 5 P **PKiKP 05 37 45.8 +0.4**
SNR=20
AML Almayashu 119.64 6 P **PKPdf 05 37 45.1 -0.2**
SNR=8.1
ULHL Ulahol 119.74 4 P **PKiKP 05 37 45.8 +0.5**
SNR=20
KZA Kyzart 119.84 5 P **PKiKP 05 37 46.4 +0.6**
SNR=12
GTA Gaotai 120.04 343 *e*PKP **PKiKP 05 37 46.0 +0.2**
GTA sPKP 05 38 00.1
GTA SS SS 05 55 31.8 +0.6
GTA AMB AMB
comp=Z,140nm,8.9s
GTA LR LR
comp=Z,1μm,19.9s
GTA LR LR
comp=Z,740nm,20.6s
GTA LR LR
comp=Z,2μm,19.9s
GEYT Alibeck 120.25 21 PKP **PKiKP 05 37 46.5 +0.4**
comp=Z,7.7nm,0.7s,baz=270,slow=3.0,SNR=23
GEYT pPKP **pPKPdf** 05 38 02.0 -0.7
comp=Z,13nm,0.8s,baz=280,slow=2.6,SNR=13
GYA0B ALIBECK ARRAY 120.25 21 *e*PKPdf **PKPdf 05 37 46.1 0.0**
GYA0B LR LR
comp=Z,800nm,20.0s
TSUM Tsumeb 120.37 102 *e*PKPdf **PKPdf 05 37 45.8 -1.0**
ARSB Arslanbob 120.37 7 *e*PKPdf **PKPdf 05 37 45.8 -0.6**
ARSB LR LR
comp=Z,1μm,22.0s
XAN Xi'an 121.60 333 PKP **PKPdf 05 37 48.5 -0.3**
XAN AMB AMB
comp=Z,380nm,7.7s
XAN LR LR
comp=Z,580nm,23.1s
XAN LR LR
comp=Z,750nm,22.6s
XAN LR LR
comp=Z,1μm,20.6s
XAN Xi'an 121.60 333 *e*PKPdf **PKPdf 05 37 48.5 -0.3**
XAN LR LR
comp=Z,1μm,22.0s
XAN Xi'an 121.60 333 *e*PKIKP **PKPdf 05 37 48.5 -0.3**
XAN MLR MLR
comp=Z,1μm,22.0s
LZH Lanzhou 121.82 338 ⇓PKP **PKiKP 05 37 49.8 +0.3**
LZH PP **PP** 05 39 23.9 +2.1
LZH SKKS 05 46 13.8
LZH SS **SS** 05 55 56.1 +1.9
LZH AMB AMB
comp=Z,520nm,6.0s
LZH LR LR
comp=Z,1μm,16.3s
LZH LR LR
comp=Z,920nm,16.3s
LZH LR LR
comp=Z,2μm,20.1s
WHN Wuhan 121.82 326 ⇑PKP **PKPdf 05 37 49.3 +0.1**
WHN AMB AMB
comp=Z,440nm,9.3s
WHN LR LR
comp=Z,2μm,30.9s
YHNB Yeheng 121.93 316 PFAKE 05 38 00.0 +10
YHNB LR LR
comp=Z,600nm,22.0s
NACB Ninganchiao 122.12 315 PFAKE 05 38 00.0 +10
NACB LR LR
comp=Z,500nm,20.0s
GAR Garm 122.29 10 *e*PKPdf **PKiKP 05 37 50.3 0.0**
GAR LR LR
comp=Z,4μm,22.0s
GAR Garm 122.29 10 *e*PKIKP **PKiKP 05 37 50.3 0.0**
GAR MLR MLR
comp=Z,4μm,22.0s
CHGR Chuyangaron 122.42 11 *e*PKPdf **PKPdf 05 37 49.3 -1.0**
CHGR LR LR
comp=Z,3μm,22.0s
KSH Kashi 122.44 4 PKP **PKiKP 05 37 51.3 +0.8**
KSH sPKP 05 38 05.1
KSH PP **PP** 05 39 32.8 +7.1
KSH SS SS 05 56 06.8 +5.3
KSH AMB AMB
comp=Z,440nm,8.3s
KSH LR LR
comp=Z,2μm,16.7s
KSH LR LR
comp=Z,1μm,15.1s
KSH LR LR
comp=Z,3μm,23.4s
SSLB Suanglung 122.81 315 *e*PKPdf **PKPdf 05 37 50.5 -0.8**
SSLB LR LR
comp=Z,300nm,20.0s
YULB Yu-li 122.85 315 PFAKE 05 38 00.0 +8.4
YULB LR LR
comp=Z,400nm,22.0s
SYO Syowa Base 123.13 164⇑*e*PKPdf **PKPdf 05 37 48.4 -2.0**
SYO Syowa Base 123.13 164⇓*e*PKiKP **PKiKP 05 37 52.0 +1.3**
STKA Stephens Creek 123.93 243 PKP **PKiKP 05 37 53.4 -0.1**
comp=Z,17nm,0.8s,baz=60,slow=1.6,SNR=36
STKA pPKP **pPKPdf** 05 38 08.3 -1.5
comp=Z,21nm,0.9s,baz=79,slow=2.5,SNR=10
STKA Stephens Creek 123.93 243 *e*PKPdf **PKPdf 05 37 52.9 -0.2**
KNMB Chin-men Tao 124.01 318 PFAKE 05 38 00.0 +6.2
KNMB LR LR
comp=Z,500nm,22.0s
ENH Enshi 124.50 330 *e*PKPdf **PKPdf 05 37 54.0 -0.5**
ENH LR LR
comp=Z,900nm,19.0s
RAYN Ar Rayn 126.08 41 PFAKE 05 38 10.0 +12
RAYN LR LR
comp=Z,400nm,21.0s
KBL Kabul 126.40 12 *e*PKPdf **PKPdf 05 37 58.1 -0.1**
KBL LR LR
comp=Z,800nm,20.0s
KBL Kabul 126.40 12 *e*PKIKP **PKPdf 05 37 58.1 -0.1**
KBL MLR MLR
comp=Z,800nm,20.0s
CD2 Chengdu 126.47 335 PKP **PKPdf 05 37 58.3 +0.1**
CD2 PP **PP** 05 39 51.4 -1.5
CD2 SKS **SKSdf** 05 45 03.8 -2.0
CD2 SKKS **SKKSac** 05 46 44.1 -3.5
CD2 AMB AMB
comp=Z,550nm,7.5s
CD2 LR LR
comp=Z,1μm,28.0s
CD2 LR LR
comp=Z,2μm,22.9s
CD2 LR LR
comp=Z,2μm,24.3s
FAKI Fak Fak 127.45 281 PFAKE 05 38 10.0 +9.0
FAKI LR LR
comp=Z,1μm,21.0s
MBAR Mbarara 127.80 76 *e*PKPdf **PKiKP 05 38 02.2 +0.3**
MBAR LR LR
comp=Z,1μm,22.0s
MBAR Mbarara 127.80 76*d* *i*PKIKP **PKiKP 05 38 02.2 +0.3**
NIL Nilore 127.97 8 *e*PKPdf **PKPdf 05 38 00.3 -0.7**
NIL LR LR
comp=Z,500nm,21.0s
NIL Nilore 127.97 8 *e*PKIKP **PKPdf 05 38 00.3 -0.7**
NIL MLR MLR
comp=Z,500nm,21.0s
CASY Casey 128.14 195 *e*PKPdf **PKiKP 05 38 00.7 0.0**
BOSA Boshof 128.31 112 PKP **PKPdf 05 38 01.4 -0.4**
comp=Z,13nm,0.9s,baz=262,slow=2.3,SNR=10
BOSA pPKP **pPKPdf** 05 38 18.1 -0.3
comp=Z,16nm,1.0s,baz=228,slow=3.2,SNR=6.5
BOSA Boshof 128.31 112 *e*PKPdf **PKPdf 05 38 01.6 -0.2**
LBTB Lobatse 128.46 108 *e*PKPdf **PKPdf 05 38 02.2 +0.1**
LBTB Lobatse 128.46 108 *e*PKIKP **PKPdf 05 38 02.3 +0.1**
BBOO Buckleboo 128.61 242 *e*PKPdf **PKPdf 05 38 01.6 -0.5**
GYA Guiyang 129.05 330⇓*i*PKP **PKPdf 05 38 03.4 +0.1**
GYA PP **PP** 05 40 08.8 -1.4
GYA SKKS 05 46 58.8
GYA AMB AMB
comp=Z,330nm,6.1s
GYA LR LR
comp=Z,880nm,25.5s
GYA LR LR
comp=Z,330nm,22.7s
GYA LR LR
comp=Z,1μm,24.9s
MAW Mawson 129.25 171 PKP **PKiKP 05 38 02.8 -0.1**
comp=Z,22nm,0.8s,baz=225,slow=3.6,SNR=47
MAW pPKP **pPKPdf** 05 38 18.8 0.0
comp=Z,33nm,0.9s,baz=251,slow=3.5,SNR=13
MAW SKP 05 41 33.4
comp=Z,2.8nm,0.9s,baz=225,slow=1.4,SNR=2.2
MAW Mawson 129.25 171 *e*PKPdf **PKiKP 05 38 03.2 +0.3**
MAW *e*SKPdf **SKPdf** 05 41 33.4 +0.5
WB2 Warramunga Arr 129.57 259 *e*PKPdf **PKPdf 05 38 04.0 -0.3**
WB2 LR LR
comp=Z,1μm,20.0s
WRAB Tennant Creek 129.57 259 *e*PKPdf **PKPdf 05 38 04.1 -0.2**
WRAB Tennant Creek 129.57 259*d* *i*PKIKP **PKPdf 05 38 04.1 -0.2**
WRAB pmax pmax
comp=Z,73nm,1.7s
WR1 Warramunga Arr 129.59 259 *e*PKPdf **PKPdf 05 38 04.0 -0.3**
WR1 *e*pPKPdf **pPKPdf** 05 38 20.9 -0.1
WR1 *e*SKPdf **SKPdf** 05 41 34.4 -0.7
WRA Warramunga Arr 129.59 259 PKhKP PKPpre 05 37 48.5
comp=Z,1.1nm,0.8s,baz=103,slow=3.7,SNR=3.4
WRA PKP **PKPdf** 05 38 04.0 -0.3
comp=Z,19nm,0.8s,baz=80,slow=1.4,SNR=42
WRA pPKP pPKPdf 05 38 20.9 -0.1
comp=Z,33nm,0.9s,baz=99,slow=1.2,SNR=17
WRA SKP 05 41 34.4
comp=Z,3.1nm,0.9s,baz=72,slow=3.8,SNR=3.5
LSZ Lusaka 129.62 95 *e*PKPdf **PKiKP 05 38 05.6 +0.2**
LSZ Lusaka 129.62 95 *e*PKIKP **PKiKP 05 38 05.6 +0.2**
SHME Shamm 129.91 29 *i* PKiKP **PKPdf 05 38 04.5 -0.4**
SNR=5.3
AS31 Alice Springs 130.36 254 *e*PKPpre PKPpre 05 37 53.4
AS31 *e*PKPdf **PKPdf** 05 38 05.5 -0.2
AS31 *e*pPKPdf pPKPdf 05 38 22.4 -0.1
AS31 *e*SKPdf **SKiKP** 05 41 37.2 -0.8
ASAR Alice Springs 130.37 254 PKhKP PKPpre 05 37 53.4
comp=Z,2.0nm,0.7s,baz=92,slow=3.9,SNR=16
ASAR PKP **PKPdf** 05 38 05.5 -0.2
comp=Z,9.9nm,0.8s,baz=92,slow=2.0,SNR=21
ASAR pPKP pPKPdf 05 38 22.4 -0.1
comp=Z,19nm,0.9s,baz=84,slow=2.1,SNR=14
ASAR SKP 05 41 37.2
comp=Z,10nm,1.1s,baz=89,slow=3.7,SNR=8.1
ASAR SKKPbc SKKPbc 05 50 53.5 -10
comp=Z,1.3nm,1.0s,baz=292,slow=2.7,SNR=4.7
FURI Furi 130.44 61 PFAKE 05 38 20.0 +13
FURI LR LR
comp=Z,700nm,22.0s
MSFE Esma-Masafi 130.51 30 *i* PKiKP **PKPdf 05 38 05.8 -0.2**
SNR=9.0
TNTI Ternate 130.55 287 PFAKE 05 38 20.0 +13
TNTI LR LR
comp=Z,300nm,22.0s
NAZ Nazwa, Dubai 130.59 31 *i* PKiKP **PKPdf 05 38 06.0 -0.2**
SNR=5.6
NAZ Nazwa, Dubai 130.59 31 P **PKPdf 05 38 05.1 -1.0**
SNR=8.7
AJN Ajban 130.61 32 P **PKPdf 05 38 06.4 +0.2**
MDH Madha 130.63 30 *i* PKiKP **PKPdf 05 38 06.0 -0.2**
SNR=7.9
MDH Madha 130.63 30 P **PKPdf 05 38 05.4 -0.8**
SNR=5.2
ASUD Al Ashush, Dub 130.73 31 *i* PKiKP **PKiKP 05 38 07.4 +0.1**
SNR=5.1
ASUD Al Ashush, Dub 130.73 31 P **PKPdf 05 38 06.6 +0.2**
SNR=5.4
FAQ Al Faqa, Dubai 130.76 31 P **PKPdf 05 38 06.2 -0.2**
SNR=5.6
UOSS Minazif 130.88 30 *e*PKPdf **PKPdf 05 38 06.0 -0.7**
UOSS LR LR
comp=Z,500nm,22.0s
UOSS Minazif 130.88 30 *i* PKiKP **PKPdf 05 38 06.3 -0.4**
SNR=6.9
UOSS Minazif 130.88 30 P **PKPdf 05 38 06.0 -0.7**
SNR=5.9
HATD Hatta, Dubai 130.95 30 *i* PKiKP **PKPdf 05 38 07.1 +0.2**
SNR=9.1
HATD Hatta, Dubai 130.95 30 P **PKPdf 05 38 06.6 -0.3**
SNR=12
ASHO Ashiyiah 131.03 30 *i* PKiKP **PKPdf 05 38 07.2 +0.1**
SNR=8.1
ASHO Ashiyiah 131.03 30 P **PKPdf 05 38 06.8 -0.2**
SNR=6.2
MTN Manton Dam 131.38 269 PFAKE 05 38 20.0 +11
MTN LR LR
comp=Z,2μm,21.0s
LSA Lhasa 131.39 348 *e*PKPdf **PKPdf 05 38 08.0 -0.2**
LSA LR LR
comp=Z,800nm,21.0s
LSA Lhasa 131.39 348 *e*PKIKP **PKPdf 05 38 08.0 -0.2**
LSA MLR MLR
comp=Z,800nm,21.0s
ALNE Al Ain 131.41 31 *i* PKiKP **PKPdf 05 38 08.1 +0.4**
SNR=5.2
DAMY Dhamar 131.53 50 *e*PKPdf **PKPdf 05 38 08.4 -0.1**
DAMY LR LR
comp=Z,800nm,22.0s
SOHO SOHO 131.73 30 P **PKPdf 05 38 07.8 -0.5**
SNR=15
KMI Kunming 131.98 333 PKP **PKPdf 05 38 09.1 0.0**
KMI sPKP 05 38 26.3
KMI PP **PP** 05 40 32.5 +3.3
KMI SS SS 05 57 59.5 -1.8
KMI AMB AMB
comp=Z,450nm,8.0s
KMI LR LR
comp=Z,790nm,21.3s
KMI LR LR
comp=Z,490nm,21.0s
KMI LR LR
comp=Z,1μm,23.4s
KMI Kunming 131.98 333 PFAKE 05 38 20.0 +10
KMI LR LR
comp=Z,800nm,20.0s
BIDO Bidbid 133.00 29 P **PKPdf 05 38 10.7 0.0**
SNR=6.9
QIZ Qiongzhong 133.34 321 PKP **PKPdf 05 38 11.3 -0.2**
QIZ PP **PP** 05 40 36.5 -1.6
QIZ SS SS 05 58 15.4 -2.8
QIZ LR LR
comp=Z,270nm,26.0s
QIZ LR LR
comp=Z,460nm,27.5s
QIZ LR LR
comp=Z,430nm,27.5s
QIZ Qiongzhong 133.34 321 PFAKE 05 38 20.0 +7.3
QIZ LR LR
comp=Z,500nm,19.0s
WSAR Wadi Sarin 133.47 29 P **PKPdf 05 38 11.8 +0.2**
SNR=6.9
NAI Nairobi 133.64 74 PFAKE
NAI LR LR
comp=Z,2μm,22.0s
KMBO Kilima Mbogo 133.99 73 PKP **PKiKP 05 38 14.0 -0.4**
comp=Z,5.9nm,1.1s,baz=309,slow=2.3,SNR=18
KMBO Kilima Mbogo 133.99 73 PFAKE 05 38 20.0 +5.6
KMBO LR LR
comp=Z,1μm,22.0s
KMBO Kilima Mbogo 133.99 73 *i* PKiKP **PKiKP 05 38 15.4 +1.0**
SNR=8.0
SLVN Son La 134.71 329 PFAKE 05 38 30.0 +14
SLVN LR LR
comp=Z,700nm,18.0s
SHL Shillong 135.22 346 *e*PKPdf **PKPdf 05 38 14.2 -0.9**
SHL LR LR
comp=Z,1μm,21.0s
SHL Shillong 135.22 346 *e*PKIKP **PKPdf 05 38 14.2 -0.9**
SHL MLR MLR
comp=Z,1μm,21.0s
SHL Shillong 135.22 346 *e*P **PKPdf 05 38 14.0 -1.1**
SHL *e*S **SKPab** 05 41 45.5 0.0
FITZ Fitzroy Crossi 137.52 263 *e*PKPdf **PKPdf 05 38 17.8 -1.4**
PAYA Payao 138.29 332 PKP **PKPdf 05 38 21.2 +0.5**
CHTO Chiang Mai 139.18 333 *e*PKPdf **PKPdf 05 38 21.9 -0.4**
CHTO LR LR
comp=Z,600nm,20.0s
CHTO Chiang Mai 139.18 333 *e*PKIKP **PKPdf 05 38 21.9 -0.4**
CHTO MLR MLR
comp=Z,600nm,20.0s
UTTA Uttaradit 139.39 330 PKP **PKiKP 05 38 25.0 0.0**
CM31 Chiang Mai Arr 139.49 333 *e*PKPdf **PKPdf 05 38 21.6 -1.3**
CM31 *e*PP **PP** 05 41 17.4 +1.1
CMAR Chiang Mai Arr 139.49 333 PKhKP PKPpre 05 38 13.6
comp=Z,1.3nm,0.3s,baz=347,slow=4.9,SNR=6.0
CMAR PKP **PKPdf** 05 38 23.4 +0.4
comp=Z,17nm,0.8s,baz=336,slow=2.2,SNR=44
CMAR pPKP pPKPdf 05 38 40.5 +0.8
comp=Z,13nm,0.8s,baz=308,slow=2.2,SNR=5.8
CMAR PP **PP** 05 41 17.4 +1.1
comp=Z,1.0nm,0.3s,baz=14,slow=7.2,SNR=4.4
PBKT Sadao Pong 140.20 329 PKP **PKPdf 05 38 18.5 -5.7**
UMPA Umpang Tak 141.51 331 PKP **PKPdf 05 38 27.3 +0.7**
SBUM Sibu 142.93 300 *e*PKPpre PKPpre 05 38 25.1
SRDT SRDT 143.01 330 PKP **PKPdf 05 38 27.7 -1.5**
PSA00 Pilbara Seismi 143.23 258 *e*PKPpre PKPpre 05 38 25.5
PHET Kaeng Krachan 143.99 328 PKP **PKPdf 05 38 30.1 -0.9**
NWAO Narrogin (SRO) 144.23 239 *e*PKPdf **PKPab 05 38 28.5 -0.3**
NWAO Narrogin (SRO) 144.23 239 *e*PKIKP **PKPab 05 38 28.5 -0.3**
HYB Hyderabad 144.57 4 *i* PKP **PKPab 05 38 29.0 -1.5**
HYB *e*SKS **SKSdf** 05 45 30.0 -7.2
KSM Kuching 145.05 301 *e*PKPbc **PKPab 05 38 32.7 +0.3**
KSM LR LR
comp=Z,300nm,22.0s
MORW Morawa 146.10 245 *e*PKPdf **PKPbc 05 38 35.1 -0.1**
JAGI Jajag, Banyuwa 146.25 282 *e*PKPdf **PKPdf 05 38 34.0 -0.9**
PBA Port Blair 148.13 338 *e*PKPbc PKPbc 05 38 40.7 -0.5
ABPO Ambohimpanom 148.15 97 *e*PKPbc **PKPbc 05 38 40.0 -1.4**
ABPO Ambohimpanom 148.15 97 *e*PKIKP **PKPbc 05 38 40.0 -1.4**
SKLT Songkhla 148.15 321 PKP **PKPbc 05 38 41.9 +0.6**
TRTT Trang 148.16 323 PKP **PKPbc 05 38 41.7 +0.3**
GIRL Giralia 148.44 256 *e*PKPdf **PKPdf 05 38 37.5 -0.7**
PKDT Phuket 148.88 325 PKP **PKiKP 05 38 45.5 +0.9**
SMRI Semarang 149.13 287 *e*PKPdf **PKPdf 05 38 39.0 -0.7**
SMRI *e*PKPbc **PKPbc** 05 38 44.5 +0.6
UGM Wanagama 149.40 286 *e*PKPbc **PKPbc 05 38 44.1 -0.5**
KULM Kulim 149.59 318 *e*PKPdf **PKPdf 05 38 39.2 -1.2**
KULM *e*PKPbc **PKPbc** 05 38 45.5 +0.5
KULM LR LR
comp=Z,1μm,22.0s
MYKOM Kota Tinggi 149.90 309 *e*PKPdf **PKPdf 05 38 39.6 -1.3**
MYKOM *e*PKPbc **PKiKP** 05 38 46.7 0.0
MYKOM LR LR
comp=Z,400nm,21.0s
LEM Lembang 151.59 290 PKPbc **PKPbc 05 38 49.8 -0.2**
comp=Z,114nm,0.8s,baz=75,slow=7.0,SNR=5.1
LEM pPKPbc **sPKPdf** 05 39 05.8 -0.8
comp=Z,213nm,0.8s,baz=359,slow=13,SNR=5.6
CISI Cisompet, Garu 151.72 288 *e*PKPdf **PKPdf 05 38 43.0 -0.8**
CISI *e*PKPbc **PKPbc** 05 38 49.7 -0.4
PSI Prapat 152.59 318 PKP **PKPdf 05 38 44.8 -0.4**
comp=Z,26nm,1.0s,baz=259,slow=1.9,SNR=11
PSI PKPbc **PKPbc** 05 38 52.0 -0.3
comp=Z,97nm,0.8s,baz=59,slow=0.9,SNR=28
PSI Prapat 152.59 318 *e*PKPdf **PKPdf 05 38 44.2 -1.0**
PSI *e*PKPbc **PKPbc** 05 38 51.9 -0.3
PSI *e*PKPab **PKPab** 05 39 03.6 +0.9
PSI LR LR
comp=Z,800nm,21.0s
BKNI Bangkinang 152.95 311 *e*PKPdf **PKPdf 05 38 44.5 -1.1**
BKNI *e*PKPbc **PKPbc** 05 38 51.8 -1.1
BKNI *e*PKPab **PKPab** 05 39 04.6 +0.5
BKNI LR LR
comp=Z,600nm,20.0s
GSI Gunungsitoli 154.60 318 *e*PKPdf **PKPdf 05 38 47.5 -0.4**
GSI *e*PKPbc **PKiKP** 05 38 56.8 +0.4
GSI *e*PKPab **PKPab** 05 39 11.5 +0.4
PALK Pallekele 154.72 0 PKPbc **PKiKP 05 38 59.0 +2.3**
comp=Z,23nm,0.9s,baz=296,slow=2.2,SNR=3.5

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*ISCJB **16** 05:51:38.6±0.3, 24°.65N±0°.03×122°.56E±0°.02, h23km±4km,*
Error ellipse: s-maj=5.2km s-min=2.6km az=10.7
*JMA **16** 05:51:38.9, 24°.61N×122°.57E, h28km±2km, M2.7*
*TAP **16** 05:51:38.7, 24°.63N×122°.56E, h28km, ML3.0, B*
ISC 16 05:51:38.5±1.0, 24°.65N±0°.04×122°.56E±0°.02, h26km±10km,
n41, σ0.45/68, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.40**	**120**	P	**Pb**	**05 51 47.1**	**0.0**
JYNG				S	**Sb**	**05 51 52.9**	**-0.1**
EOS1	**EOS1**	**0.41**	**256**	⇑P	**Pb**	**05 51 47.1**	**0.0**
EOS1	baz=258			S	**Sb**	**05 51 53.3**	**+0.2**
YOJ	**Yonaguni jima**	**0.45**	**115**	⇑P	**Pb**	**05 51 47.7**	**-0.2**
YOJ	baz=111			S	**Sb**	**05 51 54.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.45**	**115**	P	**Pb**	**05 51 47.9**	**0.0**
YOJ				S	**Sb**	**05 51 54.1**	**-0.2**
TWB1	**Santiao Chiao**	**0.63**	**304**	P	**Pb**	**05 51 50.6**	**-0.3**
TWB1	baz=306			*e*S	**Sb**	**05 51 59.1**	**-0.3**
TWC	**Suao**	**0.65**	**266**	P	**Pb**	**05 51 50.5**	**-0.7**
TWC	baz=267			S	**Sb**	**05 52 00.1**	**+0.2**
NTC	**Toucheng**	**0.69**	**287**	P	**Pb**	**05 51 51.7**	**-0.3**
TIPB	**Shuangxi**	**0.74**	**296**	P	**Pb**	**05 51 52.9**	**+0.1**
TIPB	baz=296			S	**Sb**	**05 52 03.2**	**+0.7**
NANB	**Nanao**	**0.77**	**253**	P	**Pb**	**05 51 53.1**	**-0.2**
NANB	baz=254			S	**Sb**	**05 52 03.2**	**-0.2**
ENA	**Nanau**	**0.78**	**254**	P	**Pb**	**05 51 53.5**	**+0.1**
ENA	baz=254			S	**Sb**	**05 52 03.4**	**-0.2**
TWE	**Neicheng**	**0.82**	**275**	P	**Pb**	**05 51 53.9**	**-0.2**
TWE	baz=276			S	**Sb**	**05 52 04.8**	**+0.1**
NWF	**Wu-fen Shan**	**0.82**	**301**	*e*P	**Pn**	**05 51 54.2**	**-0.2**
WFSB	**Wu-fen Shan**	**0.82**	**301**	P	**Pn**	**05 51 54.2**	**-0.2**
WFSB	baz=301			*e*S	**Sb**	**05 52 05.0**	**+0.2**
ENTT	**Nioudou**	**0.91**	**270**	*e*P	**Pn**	**05 51 55.6**	**0.0**
NDT	**Datong Townshi**	**0.95**	**267**	*e*P	**Pb**	**05 51 56.7**	**+0.3**
NWLT	**Wulai**	**0.97**	**278**	*e*P	**Pn**	**05 51 56.8**	**+0.4**
NWLT	baz=278			*e*S	**Sn**	**05 52 09.3**	**-0.2**
NHDH	**Xindian Distri**	**0.99**	**288**	*e*S	**Sn**	**05 52 09.7**	**-0.2**
NACB	**Ninganchiao**	**1.00**	**242**	*e*P	**Pb**	**05 51 57.3**	**+0.2**
NACB	baz=242			*e*S	**Sn**	**05 52 09.7**	**-0.5**

YM07	**YM07**	**1.00 302**	*e*P	**Pn**	**05 51 56.6**	**-0.3**
	baz=302					
YM07			*e*S	**Sn**	**05 52 09.6**	**-0.6**
	baz=302					
YM01	**YM01**	**1.03 299**	*e*P	**Pn**	**05 51 56.8**	**-0.4**
	baz=299					
YM01			*e*S	**Sn**	**05 52 10.6**	**-0.2**
	baz=299					
TWD	**Chiawan**	**1.05 237**	*e*P	**Pb**	**05 51 58.4**	**+0.5**
	baz=237					
TWD			*e*S	**Sn**	**05 52 10.2**	**-1.1**
	baz=237					
YM04	**YM04**	**1.06 298**	*e*P	**Pn**	**05 51 57.5**	**-0.1**
	baz=299					
PCYT	**Pengchaiyu**	**1.07 336**	*e*P	**Pb**	**05 51 58.9**	**+0.6**
	baz=336					
TWY	**Chenhua**	**1.07 306**	*e*P	**Pn**	**05 51 57.6**	**-0.2**
	baz=306					
TWY			*e*S	**Sn**	**05 52 12.1**	**+0.3**
	baz=306					
ETLH	**Xiulin Townshi**	**1.08 246**	*e*P	**Pb**	**05 51 58.7**	**+0.2**
	baz=246					
ETLH			*e*S	**Sb**	**05 52 12.4**	**+0.1**
	baz=246					
YHNB	**Yeheng**	**1.08 271**	*e*P	**Pb**	**05 51 58.8**	**+0.3**
	baz=271					
YHNB			*e*S	**Sn**	**05 52 12.2**	**+0.1**
	baz=271					
NSK	**Sanguang**	**1.09 272**	*e*P	**Pb**	**05 51 59.2**	**+0.4**
	baz=272					
NSK			*e*S	**Sn**	**05 52 11.9**	**-0.6**
	baz=272					
NNSB	**Datong**	**1.10 259**	*e*P	**Pb**	**05 51 58.8**	**0.0**
	baz=259					
NNSB			*e*S	**Sn**	**05 52 11.8**	**-0.8**
	baz=259					
NNS	**Nan Shan**	**1.10 259**	*e*P	**Pb**	**05 51 59.7**	**+0.8**
	baz=259					
NNS			*e*S	**Sb**	**05 52 13.5**	**+0.6**
	baz=259					
IRIF	**Iriomote-Funau**	**1.11 106**	P	**Pn**	**05 51 58.1**	**-0.2**
IRIF			*e*S	**Sn**	**05 52 12.6**	**-0.2**
HATJ	**Hateruma jima**	**1.28 117**	P	**Pn**	**05 52 01.0**	**+0.3**
HATJ			*e*S	**Sb**	**05 52 18.9**	**+1.0**
JKRS	**Kuro-shima**	**1.38 107**	P	**Pn**	**05 52 02.5**	**+0.4**
JKRS			*e*S	**Sb**	**05 52 20.1**	**-0.8**
OWD	**Renai**	**1.44 242**	*e*P	**Pb**	**05 52 04.7**	**0.0**
	baz=241					
JIJ	**Ishigaki jima**	**1.47 101**	P	**Pn**	**05 52 03.8**	**+0.5**
JIJ			*e*S	**Sb**	**05 52 22.7**	**-0.7**
HGSD	**Ruisui**	**1.55 222**	*e*P	**Pn**	**05 52 04.6**	**+0.2**
	baz=222					
JISG	**Ishigakijimahi**	**1.59 92**	P	**Pb**	**05 52 06.4**	**-0.8**
JISG			*e*S	**Sn**	**05 52 25.8**	**+1.1**
SSLB	**Suanglung**	**1.70 240**	*e*P	**Pn**	**05 52 06.6**	**+0.1**
	baz=240					
YULB	**Yu-li**	**1.70 223**	*e*P	**Pn**	**05 52 06.9**	**+0.4**
	baz=223					
TYC	**Yuchr**	**1.72 245**	*e*P	**Pn**	**05 52 07.3**	**+0.6**
	baz=244					
TWF1	**Yuli**	**1.73 222**	*e*P	**Pn**	**05 52 06.7**	**-0.3**
	baz=221					
JTJ	**Tarama**	**1.95 90**	P	**Pn**	**05 52 10.7**	**+0.8**

MEX 16 06:03:17.0±0.5, 18°.15N×99°.23W, h55km±5km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**0.35**	**313**	*i* P	Pn	06 03 25.5	-1.7
PLIG				*i* S	Sn	06 03 32.9	-1.7
MEIG	**Mezcala**	**0.43**	**239**	*i* P	Pn	06 03 26.2	-1.8
MEIG				*i* S	Sn	06 03 34.2	-1.7
YAIG	**Yautepec**	**0.72**	**12**	*i* P	Pn	06 03 29.9	-1.6
YAIG				*i* S	Sn	06 03 40.1	-1.9
TLIG	**Tlapa**	**0.86**	**133**	*i* P	Pn	06 03 31.8	-1.4
TLIG				*i* S	Sn	06 03 43.1	-1.9
ARIG	**Puente Sto Nin**	**1.07**	**277**	*e*P	Pn	06 03 34.8	-1.1
ARIG				*e*S	Sn	06 03 47.3	-2.5
PPM	**Popocatepetl**	**1.07**	**32**	*i* P	Pn	06 03 33.5	-2.9
CAIG	**El Cayaco**	**1.48**	**222**	*e*P	Pn	06 03 39.2	-2.1
CAIG				*e*S	Sn	06 03 57.7	-1.9

MEX 16 06:16:19.0±0.7, 18°.15N×99°.24W, h58km±6km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**0.34**	**315**	*e*P	Pn	06 16 27.8	-1.6
PLIG				*e*S	Sn	06 16 34.8	-2.1
MEIG	**Mezcala**	**0.42**	**238**	*i* P	Pn	06 16 28.6	-1.5
MEIG				*i* S	Sn	06 16 36.6	-1.5
YAIG	**Yautepec**	**0.73**	**13**	*e*P	Pn	06 16 32.2	-1.5
YAIG				*i* S	Sn	06 16 42.4	-2.0
TLIG	**Tlapa**	**0.87**	**132**	*i* P	Pn	06 16 34.1	-1.4
TLIG				*e*S	Sn	06 16 45.3	-2.2
ARIG	**Puente Sto Nin**	**1.06**	**277**	*e*P	Pn	06 16 37.0	-0.7
ARIG				*e*S	Sn	06 16 49.0	-2.6
PPM	**Popocatepetl**	**1.08**	**33**	*i* P	Pn	06 16 37.4	-1.2
PPM				*i* S	Sn	06 16 51.4	-1.6
CAIG	**El Cayaco**	**1.47**	**222**	*e*P	Pn	06 16 41.2	-2.0
CAIG				*e*S	Sn	06 16 58.8	-2.6

*IDC **16** 06:22:07.8±0.9, 19°.18S×167°.73E, h0km, mb4.0/8, mb1 4.3/9, mb1mx4.0/27, mbtmp4.0/9, ML4.3/1, Error ellipse: s-maj=34.4km s-min=21.3km az=142.0*
*ISCJB **16** 06:22:10.6±0.5, 19°.23S±0°.04×167°.67E±0°.10, h28km, mb4.3/12, Error ellipse: s-maj=13.1km s-min=5.8km az=9.7*
*NEIC **16** 06:22:11.6±2.0, 19°.26S×167°.75E, h27km±6km, mb4.4/7, Error ellipse: s-maj=21.5km s-min=17.5km az=158.0*
ISC 16 06:22:11.8±0.7, 19°.23S±0°.08×167°.7E±0°.1, h28km, n29, σ0°.91/30, mb4.2/11, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.26**	**173**	*e*Pn	**Pn**	**06 22 45.8**	**-1.5**
DZM	**Mont Dzumac**	**3.07**	**203**	Pn	**Pn**	**06 22 57.7**	**-0.9**
	36nm,0.3s,baz=60,slow=11,SNR=537						
DZM				Sn	**Sn**	**06 23 33.6**	**-0.8**
	44nm,0.3s,baz=129,slow=23,SNR=23						
DZM	**Mont Dzumac**	**3.07**	**203**	*e*Pn	**Pn**	**06 22 57.6**	**-0.9**
DZM				*e*Sn	**Sn**	**06 23 34.1**	**-0.3**
OUENC	**Ouen Island, N**	**3.28**	**194**	*e*Pn	**Pn**	**06 23 01.4**	**+0.1**
OUENC				*e*Sn	**Sn**	**06 23 40.9**	**+1.5**
PINNC	**Pines Island,**	**3.38**	**184**	*e*Pn	**Pn**	**06 23 02.4**	**-0.2**
PINNC				*e*Sn	**Sn**	**06 23 42.4**	**+0.6**
CTA	**Charters Tower**	**20.24**	**264**	P	Pn	06 26 46.3	-0.7
	2.5nm,0.8s,baz=80,slow=12,SNR=6.3						
CTAO	**Charters Tower**	**20.24**	**264**	*e*P	Pn	06 26 48.0	+1.0
	14nm,1.0s						
STKA	**Stephens Creek**	**26.65**	**237**	P	**P**	**06 27 49.4**	**+1.2**
	1.3nm,0.5s,baz=85,slow=6.1,SNR=5.2						
STKA	**Stephens Creek**	**26.65**	**237**	*e*P	**P**	**06 27 46.5**	**-1.7**
	2.5nm,1.4s						
AS31	**Alice Springs**	**31.74**	**256**	*e*P	**P**	**06 28 33.6**	**-0.1**
ASAR	**Alice Springs**	**31.74**	**256**	P	**P**	**06 28 33.6**	**-0.1**
	0.9nm,0.5s,baz=82,slow=8.3,SNR=18						
CM31	**Chiang Mai Arr**	**77.20**	**295**	*e*P	**P**	**06 34 04.2**	**+0.6**
	3.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**77.20**	**295**	P	**P**	**06 34 03.5**	**-0.1**
	0.8nm,0.3s,baz=142,slow=4.6,SNR=4.5						
SHL	**Shillong**	**86.09**	**299**	*e*P	**P**	**06 34 51.4**	**+0.7**
	14nm,0.4s						
SONA0	**Songino Array**	**86.36**	**324**	*e*P	**P**	**06 34 51.2**	**-0.2**
SONM	**Songino Array**	**86.36**	**324**	P	**P**	**06 34 51.2**	**-0.2**
	1.2nm,0.8s,baz=147,slow=3.5,SNR=5.2						
PMSA	**Palmer Station**	**87.41**	**160**	P	**P**	**06 34 56.2**	**+0.1**
	19nm,0.9s,baz=90,slow=1.0,SNR=4.1						
AFDM	**Forest Hills D**	**88.21**	**48**	*e*P	**P**	**06 35 00.4**	**-0.1**
	3.3nm,1.0s						
SNAA	**Sanae**	**89.10**	**183**	P	**P**	**06 35 04.8**	**+0.6**
VNA3	**Neumayer Olymp**	**89.75**	**181**	P	**P**	**06 35 07.6**	**+0.4**
NV01	**Mina Array Sit**	**89.87**	**49**	*e*P	**P**	**06 35 09.4**	**+0.9**
NVAR	**Mina Array Bea**	**89.87**	**49**	P	**P**	**06 35 09.4**	**+0.9**
	0.5nm,0.5s,baz=224,slow=7.5,SNR=5.4						
VNA2	**Neumayer--Watz**	**90.02**	**182**	P	**P**	**06 35 09.4**	**+0.9**
	baz=171,slow=4.1						
ILAR	**Eielson Array**	**90.65**	**18**	P	**P**	**06 35 10.7**	**-0.6**
	0.7nm,0.7s,baz=235,slow=5.4,SNR=7.5						
ILB	**Eielson Array**	**90.65**	**18**	*e*P	**P**	**06 35 10.1**	**-1.2**
	1.2nm,0.9s						
G08A	**Pilot Rock**	**92.32**	**43**	*e*P	**P**	**06 35 18.5**	**-1.1**
	3.6nm,0.9s						
TXAR	**Lajitas Array**	**98.02**	**62**	P	Pdif	06 35 47.2	+1.1
	0.1nm,0.4s,baz=252,slow=4.6,SNR=2.2						
YKA	**Yellowknife Ar**	**101.32**	**28**	P	**Pdif**	**06 36 01.2**	**+1.4**
	0.3nm,0.7s,baz=257,slow=4.5,SNR=5.2						
YKB5	**Yellowknife Ar**	**101.32**	**28**	*e*Pdif	**Pdif**	**06 36 01.2**	**+1.4**

*IDC **16** 06:26:09.0±0.7, 19°.15S×167°.66E, h0km, mb4.3/14, mb1 4.5/15, mb1mx4.3/27, mbtmp4.3/15, ML4.6/1, Error ellipse: s-maj=24.9km s-min=17.1km az=129.0*
*ISCJB **16** 06:26:11.2±0.2, 19°.30S±0°.03×167°.65E±0°.06, h26km, mb4.8/69, MS4.7/1, Error ellipse: s-maj=7.9km s-min=4.2km az=20.2*
*NEIC **16** 06:26:12.5±1.3, 19°.31S×167°.76E, h27km±4km, mb4.9/55, Error ellipse: s-maj=20.2km s-min=16.4km az=108.0*
*BJI **16** 06:26:12.4±0.0, 19°.30S×167°.80E, h27km, mb5.0/20, mB5.1/6, Ms4.9/3, Ms7 4.6/2*
ISC 16 06:26:12.7±0.4, 19°.36S±0°.06×167°.81E±0°.10, h26km, n169, σ1°.06/175, mb4.9/68, 2D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.12**	**175**	*e*Pn	**Pn**	**06 26 46.5**	**-0.1**
MARNC				*e*Sn	**Sn**	**06 27 11.6**	**-0.5**
DZM	**Mont Dzumac**	**2.99**	**205**	Pn	**Pn**	**06 26 58.9**	**+0.3**
	73nm,0.3s,baz=30,slow=20,SNR=50						
DZM				Sn	**Sn**	**06 27 34.2**	**+0.6**
	102nm,0.3s,baz=130,slow=23,SNR=26						
DZM	**Mont Dzumac**	**2.99**	**205**	*e*Pn	**Pn**	**06 26 58.6**	**+0.1**
DZM				*e*Sn	**Sn**	**06 27 33.5**	**-0.1**
OUENC	**Ouen Island, N**	**3.18**	**196**	*e*Pn	**Pn**	**06 27 02.1**	**+1.0**
PINNC	**Pines Island,**	**3.26**	**186**	*e*Pn	**Pn**	**06 27 03.4**	**+1.2**
PINNC				*e*Sn	**Sn**	**06 27 39.4**	**-0.7**
CTA	**Charters Tower**	**20.31**	**264**	P	**P**	**06 30 46.6**	**-0.3**
	9.9nm,0.8s,baz=89,slow=12,SNR=12						
CTAO	**Charters Tower**	**20.31**	**264**	*e*P	Pn	06 30 48.5	-0.6
	29nm,0.9s						
RPZ	**Rata Peaks**	**24.44**	**174**	P	**P**	**06 31 31.9**	**+2.6**
	17nm,1.0s,baz=18,slow=9.6,SNR=4.2						
STKA	**Stephens Creek**	**26.65**	**237**	P	**P**	**06 31 49.6**	**+0.2**
	5.0nm,0.8s,baz=68,slow=10.0,SNR=9.7						
STKA	**Stephens Creek**	**26.65**	**237**	*e*P	**P**	**06 31 49.1**	**-0.4**
	1.8nm,1.0s						
WR1	**Warramunga Arr**	**31.50**	**263**	*e*P	**P**	**06 32 31.0**	**-1.8**
WRA	**Warramunga Arr**	**31.50**	**263**	P	**P**	**06 32 31.0**	**-1.8**
	0.7nm,0.7s,baz=76,slow=6.7,SNR=3.9						
AS31	**Alice Springs**	**31.79**	**256**	*e*P	**P**	**06 32 33.9**	**-1.4**
ASAR	**Alice Springs**	**31.79**	**256**	P	**P**	**06 32 33.9**	**-1.5**
	2.6nm,0.6s,baz=83,slow=8.7,SNR=18						
CASY	**Casey**	**59.48**	**203**	*e*P	**P**	**06 36 12.9**	**-0.3**
	12nm,1.3s						
KSRS	**Korea Array**	**67.85**	**327**	P	**P**	**06 37 07.3**	**-1.5**
	0.4nm,0.3s,baz=148,slow=7.0,SNR=3.5						
KS15	**Wonju Array Si**	**67.86**	**327**	*e*P	**P**	**06 37 06.2**	**-2.6**
	7.2nm,1.4s						
NJ2	**Nanjing**	**69.36**	**317**	*e*P	**P**	**06 37 20.9**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
PETK	**Petropavlovsk-**	**72.69**	**354**	P	**P**	**06 37 38.0**	**-0.1**
	2.5nm,0.7s,baz=140,slow=6.4,SNR=4.7						
PEA1	**Petropavlovsk-**	**72.70**	**354**	*e*P	**P**	**06 37 38.0**	**-0.2**
KMI	**Kunming**	**77.20**	**303**	P	**P**	**06 38 06.3**	**+1.3**
KMI				pmax	pmax		
	comp=Z,21nm,0.5s						
KMI				pmax	pmax		
	comp=Z,130nm,4.9s						
CM31	**Chiang Mai Arr**	**77.33**	**295**	*e*P	**P**	**06 38 02.3**	**-3.3**
	4.4nm,1.0s						
CMAR	**Chiang Mai Arr**	**77.33**	**295**	P	**P**	**06 38 05.7**	**+0.1**
	0.9nm,0.4s,baz=124,slow=4.3,SNR=5.0						
MAW	**Mawson**	**77.81**	**202**	P	**P**	**06 38 08.6**	**+1.1**
	2.7nm,0.8s,baz=159,slow=6.1,SNR=5.8						
MAW	**Mawson**	**77.81**	**202**	*e*P	**P**	**06 38 08.1**	**+0.6**
	1.9nm,1.5s						
CD2	**Chengdu**	**79.25**	**308**	P	**P**	**06 38 15.8**	**-0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC	**Hu-ho-hao-te**	**79.44**	**320**	*e*P	**P**	**06 38 18.8**	**+1.8**
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,7.1s						
LZH	**Lanzhou**	**81.81**	**313**	*e*P	**P**	**06 38 32.5**	**+2.6**
LZH				pP	sP	06 38 40.8	+2.2
LZH				sP	pwP	06 38 44.1	-0.1
LZH				*e*PP	**PP**	**06 41 42.8**	**+5.3**
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,92nm,8.7s						
LZH				LR	LR		
	comp=N,190nm,17.2s						
LZH				LR	LR		
	comp=E,210nm,17.0s						
LZH				LR	LR		
	comp=Z,330nm,19.1s						
OHAK	**Old Harbor**	**82.92**	**20**	*e*P	**P**	**06 38 34.0**	**-0.8**
	9.5nm,0.8s						
SYO	**Syowa Base**	**84.44**	**197**	*e*P	**P**	**06 38 39.2**	**-3.5**
CNPM	**China Poot**	**85.41**	**20**	*e*P	**P**	**06 38 47.3**	**-0.2**
	21nm,1.0s						
RSO	**Redoubt South**	**85.69**	**18**	*e*P	**P**	**06 38 48.2**	**-1.0**
SONA0	**Songino Array**	**86.51**	**324**	*e*P	**P**	**06 38 52.9**	**-0.6**
SONM	**Songino Array**	**86.51**	**324**	P	**P**	**06 38 52.9**	**-0.6**
	3.3nm,0.9s,baz=141,slow=5.5,SNR=12						
KHMM	**Horse Mountain**	**87.24**	**45**	*e*P	**P**	**06 38 57.0**	**-0.2**
	18nm,1.2s						
SCI2	**San Clemente I**	**87.42**	**54**	P	**P**	**06 38 59.9**	**+1.8**
	baz=245						
BLG	**Laguna Peak, P**	**87.50**	**53**	P	**P**	**06 39 00.3**	**+1.8**
	baz=245						
O02D	**Mt. Diablo Mer**	**87.55**	**46**	P	**P**	**06 38 59.4**	**+0.7**
	baz=242						
WDC	**Whiskeytown Da**	**87.90**	**46**	*e*P	**P**	**06 38 59.6**	**-0.6**
	10nm,1.1s						
L02E	**Cave Junction**	**87.94**	**44**	P	**P**	**06 39 01.1**	**+0.8**
	baz=242						
N02D	**Trinity Center**	**87.97**	**45**	P	**P**	**06 39 00.7**	**+0.1**
	baz=242,SNR=7.2						
M02C	**Callahan**	**88.07**	**45**	P	**P**	**06 39 01.1**	**0.0**
	baz=242,SNR=8.1						
ORV	**Oroville**	**88.14**	**47**	*e*P	**P**	**06 39 00.8**	**-0.6**
	5.2nm,0.8s						
K02D	**Willamette Mer**	**88.15**	**43**	P	**P**	**06 39 01.7**	**+0.2**
	baz=242						
AFDM	**Forest Hills D**	**88.24**	**48**	*e*P	**P**	**06 39 00.8**	**-1.1**
	9.5nm,1.0s						
CMB	**Columbia Colle**	**88.24**	**49**	*e*P	**P**	**06 39 01.5**	**-0.4**
	5.8nm,0.8s						
O03E	**Paynes Creek**	**88.27**	**46**	P	**P**	**06 39 02.4**	**+0.3**
	baz=243,SNR=5.2						
YBH	**Yreka Blue Hor**	**88.33**	**45**	*e*P	**P**	**06 39 01.8**	**-0.5**
	6.3nm,0.9s						
HUMO	**Hull Mountain**	**88.57**	**44**	*e*P	**P**	**06 39 02.9**	**-0.4**
	6.7nm,0.9s						
ISA	**Isabella, Lake**	**88.60**	**51**	P	**P**	**06 39 04.3**	**+0.5**
	baz=245						
BFSC	**Mount Baldy Ra**	**88.62**	**53**	P	**P**	**06 39 04.3**	**+0.4**
	baz=246						
I02D	**Swisshome**	**88.71**	**42**	P	**P**	**06 39 04.8**	**+0.9**
	baz=241						
TRF	**Thorofare Moun**	**88.77**	**17**	*e*P	**P**	**06 39 02.4**	**-1.5**
	1.2nm,0.9s						
I03D	**Drain, OR**	**88.83**	**43**	P	**P**	**06 39 05.3**	**+0.9**
	baz=242						
M04C	**Macdoel**	**88.93**	**45**	P	**P**	**06 39 05.9**	**+0.7**
	baz=243						
SNAA	**Sanae**	**88.98**	**183**	P	**P**	**06 39 05.3**	**+0.4**
MDPB	**Devils Postpil**	**89.00**	**49**	*e*P	**P**	**06 39 05.8**	**0.0**
	5.8nm,1.0s						
MONP2	**Monument Peak**	**89.01**	**55**	P	**P**	**06 39 06.1**	**+0.2**
	baz=246						
BEKR	**Beckworth**	**89.07**	**47**	*e*P	**P**	**06 39 06.1**	**+0.2**
	7.3nm,1.0s						
WAKR	**Walker**	**89.12**	**49**	*e*P	**P**	**06 39 06.2**	**-0.1**
	9.8nm,1.3s						
RND	**Reindeer**	**89.15**	**18**	*e*P	**P**	**06 39 04.9**	**-0.7**
	5.8nm,1.1s						
IKP	**In-Ko-Pah, Jac**	**89.16**	**55**	P	**P**	**06 39 06.7**	**+0.3**
	baz=246						
CWC	**Cottonwood Cre**	**89.22**	**51**	P	**P**	**06 39 07.0**	**+0.3**
	baz=245						
TIN	**Tinemaha, Big**	**89.37**	**50**	P	**P**	**06 39 08.1**	**+0.7**
	baz=245						
J04D	**Umpqua Nationa**	**89.42**	**43**	P	**P**	**06 39 08.4**	**+0.9**
	baz=243						
MPMC	**Manual Prospec**	**89.50**	**51**	P	**P**	**06 39 08.5**	**+0.5**
	baz=246						
SWSC	**Sam W. Stewart**	**89.51**	**55**	P	**P**	**06 39 08.3**	**+0.4**
	baz=247						
G03D	**McMinnville, O**	**89.60**	**41**	P	**P**	**06 39 08.4**	**+0.3**
	baz=242						
H04D	**Lebanon**	**89.61**	**42**	P	**P**	**06 39 08.4**	**+0.3**
	baz=242						
VNA3	**Neumayer Olymp**	**89.62**	**181**	P	**P**	**06 39 08.2**	**+0.4**
PAHR	**Pah Rah Range**	**89.67**	**47**	*e*P	**P**	**06 39 07.5**	**-1.3**
	9.8nm,1.1s						
GSC	**Goldstone, Bar**	**89.69**	**52**	P	**P**	**06 39 09.6**	**+0.7**
	baz=246						
BELC	**Belle Mtn. Jos**	**89.78**	**54**	P	**P**	**06 39 09.5**	**+0.1**
	baz=246						
NVAR	**Mina Array Bea**	**89.89**	**49**	P	**P**	**06 39 10.4**	**+0.5**
	2.4nm,0.8s,baz=227,slow=8.2,SNR=14						
NV01	**Mina Array Sit**	**89.89**	**49**	*e*P	**P**	**06 39 10.4**	**+0.5**
VNA2	**Neumayer--Watz**	**89.89**	**182**	P	**P**	**06 39 09.7**	**+0.6**
	baz=173,slow=3.7						
GRAC	**Grapevine Rang**	**89.97**	**51**	P	**P**	**06 39 10.4**	**+0.3**
	baz=246						
K05A	**Summer Lake**	**89.98**	**44**	*e*P	**P**	**06 39 09.3**	**-0.9**
	18nm,1.2s						
NV11	**Mina Array Sit**	**90.00**	**49**	*e*P	**P**	**06 39 09.8**	**-0.5**
	0.5nm,1.0s						
J05D	**Fort Rock, OR**	**90.01**	**44**	P	**P**	**06 39 11.1**	**+0.9**
	baz=243						
MOD	**Modoc Plateau**	**90.01**	**45**	*e*P	**P**	**06 39 10.8**	**+0.5**
	13nm,1.1s						
H04A	**Detroit Lake**	**90.03**	**42**	*e*P	**P**	**06 39 09.7**	**-0.5**
	21nm,1.3s						
BC3	**Big Chuckawall**	**90.06**	**54**	P	**P**	**06 39 11.2**	**+0.6**
	baz=247						
FURC	**Furnace Creek,**	**90.12**	**51**	P	**P**	**06 39 11.6**	**+0.9**
	baz=246						
WRH	**Wood River Hil**	**90.18**	**18**	*e*P	**P**	**06 39 08.3**	**-2.0**
	2.6nm,0.9s						
VNA1	**Neumayer--Stat**	**90.19**	**181**	P	**P**	**06 39 11.1**	**+0.6**
NLWA	**Neilton Lookou**	**90.27**	**39**	*e*P	**P**	**06 39 12.2**	**+1.0**
	12nm,1.2s						
KVN	**Kaiserville**	**90.30**	**48**	*e*P	**P**	**06 39 09.1**	**-2.6**
	4.1nm,0.7s						
GLA	**Glamis**	**90.31**	**55**	P	**P**	**06 39 12.9**	**+1.2**
	baz=247						
SHOC	**Shoshone, Teco**	**90.33**	**52**	P	**P**	**06 39 12.1**	**+0.3**
	baz=246						
CCB	**Clear Creek Bu**	**90.39**	**18**	*e*P	**P**	**06 39 09.7**	**-1.6**
	8.2nm,1.6s						
I05D	**Terrebonne, OR**	**90.41**	**43**	P	**P**	**06 39 12.6**	**+0.6**
	baz=243						
PINE	**Pine Mountain**	**90.42**	**43**	*e*P	**P**	**06 39 10.9**	**-1.3**
	19nm,1.1s						
HDA	**Harding Lake**	**90.46**	**18**	*e*P	**P**	**06 39 10.2**	**-1.5**
	4.8nm,0.9s						
HDA	**Harding Lake**	**90.46**	**18**	P	**P**	**06 39 11.2**	**-0.5**
	baz=222						
IRM	**Iron Mountain**	**90.49**	**54**	P	**P**	**06 39 13.5**	**+0.9**
	baz=247						
E04D	**Cinebar**	**90.66**	**40**	P	**P**	**06 39 14.0**	**+1.0**
	baz=242						
ILAR	**Eielson Array**	**90.75**	**18**	P	**P**	**06 39 11.2**	**-1.7**
	1.3nm,0.6s,baz=236,slow=4.7,SNR=19						
ILB	**Eielson Array**	**90.75**	**18**	*e*P	**P**	**06 39 11.1**	**-1.9**
	2.9nm,0.8s						
TPNV	**Topopah Spring**	**90.77**	**51**	*e*P	**P**	**06 39 11.8**	**-2.2**
	6.8nm,1.0s						
TPNV	**Topopah Spring**	**90.77**	**51**	P	**P**	**06 39 14.5**	**+0.5**
	baz=246						
D03D	**Eldon**	**90.81**	**39**	P	**P**	**06 39 13.9**	**+0.3**
	baz=242,SNR=7.5						
Y12C	**Blythe**	**90.81**	**54**	P	**P**	**06 39 14.6**	**+0.6**
	baz=247						
G05D	**Wamic, OR**	**90.84**	**42**	P	**P**	**06 39 14.4**	**+0.5**
	baz=243						
F05D	**White Salmon**	**91.04**	**41**	P	**P**	**06 39 15.1**	**+0.4**
	baz=243						
PGC	**Sidney**	**91.12**	**38**	*e*P	**P**	**06 39 13.8**	**-1.2**
	11nm,1.0s						
LON	**Longmire**	**91.22**	**40**	*e*P	**P**	**06 39 15.3**	**-0.3**
	6.1nm,1.1s						
D05A	**Enumclaw**	**91.31**	**40**	*e*P	**P**	**06 39 15.9**	**-0.1**
	19nm,1.0s						
PDMCI	**Parker Dam,Lak**	**91.32**	**54**	P	**P**	**06 39 16.9**	**+0.6**
	baz=248						
WVOR	**Wild Horse Val**	**91.35**	**45**	*e*P	**P**	**06 39 17.2**	**+0.7**
	9.6nm,1.0s						
SHPR	**Sheep Range**	**91.40**	**52**	*e*P	**P**	**06 39 15.8**	**-1.1**
	7.1nm,1.5s						
214A	**Organ Pipe Nat**	**91.47**	**57**	P	**P**	**06 39 17.5**	**+0.3**
	baz=248						
BMN	**Battle Mountai**	**91.48**	**48**	*e*P	**P**	**06 39 16.9**	**-0.3**
	8.7nm,1.1s						
I07A	**Izee**	**91.48**	**43**	*e*P	**P**	**06 39 17.7**	**+0.6**
	13nm,1.0s						
A04D	**Lummi Island**	**91.59**	**38**	P	**P**	**06 39 17.3**	**+0.1**
	baz=242						
B05A	**Bryant**	**91.74**	**39**	P	**P**	**06 39 17.8**	**-0.1**
	baz=243,SNR=6.8						
R11A	**Troy Canyon, C**	**91.81**	**50**	P	**P**	**06 39 18.7**	**-0.1**
	baz=247						
W13A	**Hualapai Mount**	**91.81**	**53**	*e*P	**P**	**06 39 18.4**	**-0.5**
	6.5nm,1.2s						
J08A	**Circle Bar Ran**	**91.85**	**44**	*e*P	**P**	**06

0.6nm,0.5s
MOA Molln 144.38 329 *e*PKPdf PKPbc 06 45 45.4 +0.4
2.4nm,0.7s
SOKA Soboth 144.79 327 *e*PKPdf **PKPab 06 45 46.0 -0.4**
1.8nm,0.6s
OBKA Obir 145.15 327 *e*PKPdf **PKPbc 06 45 47.3 -0.4**
2.7nm,0.8s
KBA Koelnbreinsper 145.37 329 *e*PKPdf **PKPbc 06 45 47.9 -0.5**
3.6nm,0.9s
MYKA Terra Mystica 145.53 328 *e*PKPab **PKPdf 06 45 48.3 -0.4**
2.5nm,0.6s
MEM Membach 145.63 339 PKiKP **PKPbc 06 45 48.8 -0.1**
MEM pPKiKP **sPKPdf 06 45 57.6 -0.2**
ABTA Abfaltersbach 146.00 329 *e*PKPab **PKPdf 06 45 49.6 0.0**
6.5nm,1.0s
WATA Walderalm 146.03 331 *e*PKPab **PKPab 06 45 50.7 -0.3**
4.1nm,0.8s
WTTA Wattenberg 146.05 330 *e*PKPab **PKPbc 06 45 50.5 -0.1**
7.0nm,1.0s
MOTA Moosalm 146.24 331 *e*PKPab **PKPbc 06 45 50.9 -0.2**
7.1nm,1.0s
SQTA Sankt Quirin 146.28 331 *e*PKPab **PKPbc 06 45 50.6 -0.6**
4.8nm,0.7s
RETA Reutte 146.28 332 *e*PKPab **PKPbc 06 45 51.2 0.0**
8.3nm,1.1s
WLF Walferdange 146.39 338 ⇓PKP **PKPab 06 45 51.9 -0.2**
FETA Feichten 146.65 331 *e*PKPab **PKPdf 06 45 51.4 +0.7**
2.4nm,0.6s
BFO Black Forest 146.67 335 *e*PKPdf **PKPdf 06 45 50.1 -0.5**
BFO *e*PKPbc **PKPbc 06 45 52.4 +0.2**
DAVA Damuels 146.83 332 *e*PKPab **PKPbc 06 45 53.1 +0.2**
2.4nm,0.7s
FUORN Ofenpass-Fuorn 147.16 331 *e*PKPdf **PKPdf 06 45 51.2 -0.5**
FUORN *e*PKPbc **PKPbc 06 45 54.5 +0.5**
ECH Echery 147.22 336 *e*PKPdf **PKPdf 06 45 49.5 -1.9**
TUE Stuetta 147.69 332 *e*PKPbc **PKPbc 06 45 55.3 0.0**
BNI Bardonecchia 149.97 333 *e*PKPdf **PKPdf 06 45 56.2 0.0**
BNI *e*PKPbc **PKiKP 06 46 01.6 -0.4**

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*SJA **16** 06:27:14.5±0.6,20°.97S×67°.41W,h245km±17km,ML3.8, MW4.1*
*ISCJB **16** 06:27:16.1±0.4,20°.88S±0°.03×67°.30W±0°.05,h209km±6km, mb3.1/3,Error ellipse: s-maj=8.0km s-min=5.0km az=165.5*
*IDC **16** 06:27:16.1±0.7,20°.86S×67°.15W,h192km±9km,mb3.0/4, mb1 3.3/10,mb1mx3.1/33,mbtmp3.6/10,Error ellipse: s-maj=15.2km s-min=9.4km az=110.0*
*GUC **16** 06:27:18.3±0.6,20°.86S×67°.61W,h231km±7km,ML3.9*

ISC 16 06:27:16.6±0.8,20°.83S±0°.05×67°.26W±0°.06,h197km±9km, n32,σ1°21/50,mb3.2/3,6C,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.90**	**291**	*i* P	**Pn**	**06 27 55.7**	**+1.3**
PB08	**IPOC Station P**	**1.90**	**291**	⇑*i* P	**Pn**	**06 27 55.9**	**+1.5**
PB08				*i* S	**Sn**	**06 28 24.6**	**+1.0**
PB09	**IPOC Station P**	**2.08**	**242**	⇑*e*P	**Pn**	**06 27 57.0**	**+1.1**
PB09				*e*S	**Sn**	**06 28 27.1**	**+0.6**
PB01	**IPOC Station P**	**2.09**	**264**	⇑*e*P	**Pn**	**06 27 56.3**	**+0.4**
PB01				*e*S	**Sn**	**06 28 26.0**	**-0.5**
PB01				IAML		06 28 28.0	
	comp=N,283nm,0.3s						
GO01	**Chusmiza**	**2.15**	**302**	⇑*i* P	**Pn**	**06 27 58.3**	**+1.3**
LVC	**Limon Verde**	**2.34**	**221**	P	**Pn**	**06 27 59.7**	**+0.8**
	comp=N,5.7nm,0.3s,baz=34,slow=10,SNR=86						
LVC				S	**Sn**	**06 28 31.7**	**-0.3**
	comp=N,8.8nm,0.3s,baz=281,slow=21,SNR=22						
PB11	**IPOC Station P**	**2.49**	**295**	*i* P	**Pn**	**06 28 00.8**	**+0.5**
PB11	**IPOC Station P**	**2.49**	**295**	⇑*e*P	**Pn**	**06 28 00.9**	**+0.5**
PB11				*e*S	**Sn**	**06 28 33.5**	**-0.8**
PB11				IAML		06 28 37.4	
	comp=N,472nm,0.4s						
PB02	**IPOC Station P**	**2.51**	**258**	*i* P	**Pn**	**06 28 00.3**	**-0.2**
PB02				*i* S	**Sn**	**06 28 34.2**	**-0.4**
PB02	**IPOC Station P**	**2.51**	**258**	*e*P	**Pn**	**06 28 00.8**	**+0.3**
PB02				*i* S	**Sn**	**06 28 33.1**	**-1.6**
PB02				IAML		06 28 34.8	
	comp=E,455nm,0.3s						
PB07	**IPOC Station P**	**2.60**	**250**	*e*P	**Pn**	**06 28 02.0**	**+0.3**
PB07				*i* S	**Sn**	**06 28 35.1**	**-1.7**
PB07				IAML		06 28 35.7	
	comp=N,376nm,0.3s						
MNMC	**Minye Minye**	**2.77**	**307**	*e*P	**Pn**	**06 28 04.8**	**+1.0**
MNMC				*e*S	**Sn**	**06 28 40.6**	**+0.1**
MNMC				IAML		06 28 47.9	
	comp=N,267nm,0.4s						
MNMCX	**Minye Minye**	**2.77**	**307**	*i* P	**Pn**	**06 28 04.9**	**+1.2**
PB06	**IPOC Station P**	**2.84**	**229**	*e*P	**Pn**	**06 28 04.8**	**+0.4**
PB06				*i* S	**Sn**	**06 28 40.6**	**-1.1**
PB06				IAML		06 28 41.7	
	comp=E,147nm,0.2s						
HJA	**Humahuaca**	**2.92**	**144**	*i* P	**Pn**	**06 28 07.2**	**+1.7**
HJA				IAML		06 28 46.1	
	comp=Z,163nm,0.5s						
PSGC	**Pisagua**	**2.96**	**294**	*e*P	**Pn**	**06 28 05.5**	**-0.1**
PSGC				*e*S	**Sn**	**06 28 42.0**	**-2.0**
PSGC				IAML		06 28 43.8	
	comp=N,171nm,0.3s						
PSGCX	**Pisagua**	**2.96**	**294**	*i* P	**Pn**	**06 28 05.8**	**+0.1**
PB04	**IPOC Station P**	**3.08**	**240**	*e*P	**Pn**	**06 28 07.2**	**0.0**
PB04				*e*S	**Sn**	**06 28 44.8**	**-1.8**
PB04				IAML		06 28 47.9	
	comp=N,84nm,0.4s						
PB15	**IPOC Station P**	**3.13**	**221**	*e*P	**Pn**	**06 28 08.8**	**+1.0**
PB15				*i* S	**Sn**	**06 28 46.9**	**-1.0**
PB16	**IPOC Station P**	**3.26**	**319**	⇑*e*P	**Pn**	**06 28 11.9**	**+2.0**
PB16				*e*S	**Sn**	**06 28 53.1**	**+1.7**
PB12	**IPOC Station P**	**3.63**	**307**	*e*P	**Pn**	**06 28 13.3**	**-0.6**
PB12				*i* S	**Sn**	**06 28 56.4**	**-2.3**
AZAP	**Zapla**	**3.94**	**149**	*i* P	**Pn**	**06 28 18.0**	**+0.3**
AZAP				*i* S	**Sn**	**06 29 04.6**	**-1.1**
LPAZ	**La Paz**	**4.59**	**350**	P	**Pn**	**06 28 28.0**	**+1.6**
	comp=N,4.7nm,0.3s,baz=151,slow=5.9,SNR=201						
LPAZ				S	**Sn**	**06 29 21.4**	**+0.2**
	baz=248,slow=19,SNR=3.0						
SIV	**San Ignacio**	**7.59**	**52**	P	**Pn**	**06 29 03.8**	**-0.9**
	comp=N,1.5nm,0.3s,baz=261,slow=10,SNR=40						
SIV				S	**Sn**	**06 30 27.2**	**-3.3**
	comp=N,0.3nm,0.3s,baz=168,slow=23,SNR=3.9						
CPUP	**Villa Florida**	**10.62**	**123**	P	**Pn**	**06 29 42.4**	**-1.5**
	comp=N,0.1nm,0.3s,baz=310,slow=14,SNR=1.7						
CFA	**Coronel Fontan**	**10.77**	**184**	P	**Pn**	**06 29 44.2**	**-1.5**
	comp=N,0.4nm,0.3s,baz=11,slow=12,SNR=3.8						
BDFB	**Brasilia**	**18.99**	**77**	P	**P**	**06 31 23.4**	**-0.2**
	comp=N,0.2nm,0.3s,baz=267,slow=17,SNR=3.7						
PLCA	**Paso Flores**	**20.04**	**187**	P	**P**	**06 31 34.8**	**+0.3**
	comp=N,1.9nm,0.8s,baz=43,slow=14,SNR=5.0						
TXAR	**Lajitas Array**	**60.98**	**324**	P	**P**	**06 37 09.8**	**+0.5**
	comp=N,0.1nm,0.4s,baz=153,slow=8.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**75.68**	**70**	P	**P**	**06 38 40.0**	**-0.8**
	comp=N,0.3nm,0.6s,baz=234,slow=7.8,SNR=4.1						
YKA	**Yellowknife Ar**	**91.08**	**340**	P	**P**	**06 39 58.7**	**+0.5**
	comp=N,0.3nm,0.6s,baz=129,slow=4.8,SNR=12						
MKAR	**Makanchi Array**	**144.19**	**37**	PKP	**PKPab**	**06 46 27.8**	**+0.7**
	comp=N,0.3nm,0.8s,baz=64,slow=3.4,SNR=2.9						

MEX 16 06:46:51.1±0.3,16°.74N×99°.03W,h34km±6km,MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.83**	**279**	*i* P	Pn	06 47 04.8	-1.7
ACP2				*e*S	Sn	06 47 14.2	-3.5
TLIG	**Tlapa**	**0.93**	**28**	*i* P	Pn	06 47 05.8	-2.1
TLIG				*e*S	Sn	06 47 17.4	-2.7
CAIG	**El Cayaco**	**1.23**	**285**	*e*P	Pn	06 47 09.8	-2.1
CAIG				*e*S	Sn	06 47 24.3	-3.0
MEIG	**Mezcala**	**1.31**	**334**	*e*P	Pn	06 47 11.2	-1.9
MEIG				*e*S	Sn	06 47 27.1	-2.4
PLIG	**Platanillo**	**1.70**	**345**	*e*P	Pn	06 47 16.8	-1.8
PLIG				*e*S	Sn	06 47 37.0	-2.3
ARIG	**Puente Sto Nin**	**1.98**	**321**	*e*P	Pn	06 47 20.5	-1.9
ARIG				*e*S	Sn	06 47 43.7	-2.4

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*ISCJB **16** 06:50:03.2±0.7,8°.73S±0°.06×107°.78E±0°.06,h33km, mb3.8/4,Error ellipse: s-maj=10.9km s-min=6.3km az=137.6*
*IDC **16** 06:50:04.7±6.2,8°.67S×107°.53E,h60km±49km,mb3.6/4, mb1 3.9/5,mb1mx3.4/33,mbtmp4.0/5,ML3.9/1,Error ellipse: s-maj=75.4km s-min=17.1km az=58.0*
*DJA **16** 06:50:04.7±0.5,9°.S±4°.×10°.8E±°.,h10km,M4.6/12,mb5.0/2, mB6.3/2,MLv4.4/12,Mw(mB)6.0/2*

ISC 16 06:50:04.4±0.9,8°.655±0°.08×107°.81E±0°.07,h35km,n21, σ1°83/23,mb3.8/4,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**1.09**	**0**	P	**Pn**	**06 50 22.9**	**-0.4**
CISI				S	**Sn**	**06 50 36.0**	**-1.1**
LEM	**Lembang**	**1.82**	**354**	P	**Pn**	**06 50 34.4**	**+1.0**
	106nm,0.3s,baz=120,slow=7.5,SNR=33						
LEM				S	**Sn**	**06 50 56.7**	**+1.3**
	104nm,0.3s,baz=179,slow=23,SNR=14						
LEM	**Lembang**	**1.82**	**354**	P	**Pn**	**06 50 34.3**	**+0.8**
LEM				S	**Sn**	**06 50 56.6**	**+1.2**
YOGI	**Yogyakarta**	**2.59**	**72**	P	**Pn**	**06 50 45.8**	**+1.9**
UGM	**Wanagama**	**2.78**	**75**	P	**Pn**	**06 50 46.8**	**+0.3**
CGJI	**Cibinong**	**2.92**	**314**	P	**Pn**	**06 50 49.7**	**+1.4**
SMRI	**Semarang**	**3.05**	**59**	P	**Pn**	**06 50 51.7**	**+1.5**
WOJI	**Wonogiri, Jawa**	**3.19**	**76**	P	**Pn**	**06 50 54.0**	**+2.0**
PWJI	**Pagerwojo**	**4.00**	**81**	P	**Pn**	**06 51 06.2**	**+3.0**
KASI	**Kota Agung**	**4.53**	**313**	P	**Pn**	**06 51 12.7**	**+2.2**
TPI	**Tanjungpandan**	**5.86**	**358**	P	**Pn**	**06 51 30.3**	**+1.5**
	154nm,1.4s,63μm1.0nm						
MNAI	**Manna**	**6.44**	**311**	P	**Pn**	**06 51 38.7**	**+1.9**
FITZ	**Fitzroy Crossi**	**19.71**	**120**	P	**P**	**06 54 31.7**	**+0.7**
	0.3nm,0.3s,baz=286,slow=8.8,SNR=11						
WRA	**Warramunga Arr**	**28.00**	**116**	P	**P**	**06 55 51.1**	**-1.2**
	1.0nm,0.5s,baz=282,slow=12,SNR=15						
WRA				PcP	**PcP**	**06 59 05.1**	**-1.8**
	1.9nm,1.1s,baz=261,slow=3.3,SNR=4.3						
ASAR	**Alice Springs**	**29.09**	**124**	P	**P**	**06 56 01.4**	**-0.7**
	0.6nm,0.5s,baz=296,slow=8.3,SNR=9.6						
ASAR				PcP	**PcP**	**06 59 07.0**	**-2.6**
	0.3nm,0.5s,baz=302,slow=2.1,SNR=4.4						
H08S2	**Diego Garcia H**	**34.97**	**269**	T	T	07 34 13.7	
	baz=93,slow=75,SNR=19						
H08S3	**Diego Garcia H**	**34.98**	**269**	T	T	07 34 14.5	
	baz=93,slow=75,SNR=23						
H08S1	**Diego Carcia H**	**34.99**	**269**	T	T	07 34 15.1	
	baz=93,slow=75,SNR=20						
STKA	**Stephens Creek**	**38.95**	**131**	P	**P**	**06 57 27.8**	**+0.5**
	2.6nm,0.5s,baz=306,slow=8.5,SNR=11						
KSH	**Kashi**	**56.28**	**331**	*e*P	**P**	**06 59 43.8**	**+2.0**
MKAR	**Makanchi Array**	**59.70**	**340**	P	**P**	**07 00 01.9**	**-3.6**
	0.4nm,0.6s,baz=160,slow=7.5,SNR=5.3						

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*IDC **16** 07:26:37.5±1.3,34°.24N×25°.10E,h0km,mb3.7/4, mb1 3.7/6,mb1mx3.4/37,mbtmp3.6/6,ML4.2/2,MS3.1/1, Ms1 3.1/1,ms1mx2.5/43,Error ellipse: s-maj=24.5km s-min=13.5km az=90.0*
*ISCJB **16** 07:26:41.0±0.4,34°.22N±0°.03×25°.12E±0°.05,h25km, mb3.9/5,Error ellipse: s-maj=5.6km s-min=3.8km az=179.7*
*HLW **16** 07:26:42.1,34°.27N×25°.40E,h8km±23km,Md3.6,Ml3.8*
*THE **16** 07:26:42.0,34°.35N×25°.09E,h0km±3km,ML3.2/3,Error ellipse: s-maj=5.2km s-min=1.2km az=184.0*
*ATH **16** 07:26:43.8,34°.49N×25°.05E,h28km±2km,ML3.3/3,Error ellipse: s-maj=7.9km s-min=2.0km az=357.0*

ISC 16 07:26:41.5±0.7,34°.31N±0°.04×25°.06E±0°.04,h25km,n41, σ1°42/48,mb4.1/5,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.73**	**344**	P	**Pb**	**07 26 55.9**	**+0.3**
SIVA				S	**Sn**	**07 27 07.7**	**+1.0**
SIVA	**Sivas**	**0.73**	**344**	P	**Pb**	**07 26 56.0**	**+0.3**
SIVA				AML	AML	07 27 13.3	
	comp=N,11225μm,0.9s						
SIVA				AML	AML	07 27 14.6	
	comp=E,13475μm,0.7s						
TMBK	**Timbaki Herakl**	**0.80**	**342**	P	**Pn**	**07 26 57.3**	**+0.1**
LAST	**Lasithi**	**0.91**	**22**	P	**Pb**	**07 26 59.0**	**+0.2**
LAST				S	**Sn**	**07 27 12.0**	**+0.7**
LAST	**Lasithi**	**0.91**	**22**	P	**Pb**	**07 26 59.0**	**+0.2**
GVD	**Gavdhos**	**0.96**	**303**	P	**Pn**	**07 27 00.4**	**+1.0**
GVD	**Gavdhos**	**0.96**	**303**	P	**Pn**	**07 27 00.6**	**+1.2**
IDI	**Anoyia**	**0.98**	**352**	Pg	**Pb**	**07 26 59.7**	**-0.3**
	comp=E,67nm,0.3s,baz=168,slow=16,SNR=60						
IDI				Lg	Lg	07 27 11.3	
	comp=E,69nm,0.3s,baz=68,slow=19,SNR=12						
IDI	**Anoyia**	**0.98**	**352**	P	**Pb**	**07 26 59.1**	**-0.9**
NPS	**Neapolis**	**1.05**	**25**	P	**Pn**	**07 27 01.1**	**+0.4**
NPS				S	**Sn**	**07 27 16.3**	**+1.7**
NPS	**Neapolis**	**1.05**	**25**	P	**Pb**	**07 27 01.4**	**+0.4**
PRNS	**Prines Rethymn**	**1.15**	**337**	P	**Pb**	**07 27 03.1**	**+0.4**
ZKR	**Zakros**	**1.24**	**50**	P	**Pb**	**07 27 04.9**	**+0.6**
ZKR	**Zakros**	**1.24**	**50**	P	**Pb**	**07 27 05.1**	**+0.8**
ZKR				AML	AML	07 27 31.4	
	comp=N,700μm,0.6s						
ZKR				AML	AML	07 27 37.9	
	comp=E,2239μm,0.7s						
VAM	**Vamos**	**1.30**	**327**	P	**Pb**	**07 27 05.6**	**+0.3**
VAM	**Vamos**	**1.30**	**327**	P	**Pb**	**07 27 05.7**	**+0.4**
VAM				AML	AML	07 27 29.8	
	comp=N,1956μm,0.6s						
VAM				AML	AML	07 27 31.5	
	comp=E,2483μm,0.5s						
IMMV	**Iera Moni Meta**	**1.45**	**323**	P	**Pb**	**07 27 08.1**	**+0.3**
IMMV	**Iera Moni Meta**	**1.45**	**323**	P	**Pb**	**07 27 08.3**	**+0.5**
ANKY	**Antikythira Is**	**2.12**	**318**	P	**Pb**	**07 27 17.8**	**-1.5**
KARP	**Karpathos**	**2.12**	**54**	P	**Pb**	**07 27 18.8**	**-0.5**
KARP	**Karpathos**	**2.12**	**54**	P	**Pb**	**07 27 18.8**	**-0.5**
KYTH	**Kithira**	**2.55**	**320**	P	**Pb**	**07 27 24.1**	**+2.7**
SLUM	**Salum**	**2.81**	**177**	P	**Pn**	**07 27 26.8**	**+1.9**
	baz=184						
SLUM				S	**Sn**	**07 27 59.0**	**+1.0**
	baz=184						
SLUM				AMP		07 28 00.0	
	baz=184						
DAT	**Datca**	**3.17**	**40**	*i* P	**Pn**	**07 27 32.3**	**+2.4**
DAT				IAML_P			
	comp=Z,102nm,0.1s						
DALY	**Dalyan (Mula)**	**3.85**	**48**	*i* P	**Pn**	**07 27 43.4**	**+4.3**
DALY				IAML_P			
	comp=Z,354nm,0.2s						
TURN	**Turunc**	**3.85**	**47**	*i* P	**Pn**	**07 27 38.1**	**-1.1**
TURN				*i* S	Sn	07 28 15.0	-8.6
TURN				IAML_P			
	comp=Z,534nm,0.2s						
FETY	**Fethiye**	**4.02**	**54**	*i* P	**Pn**	**07 27 42.8**	**+1.3**
FETY				*i* S	**Sn**	**07 28 25.4**	**-2.4**
FETY				IAML_P			
	comp=Z,31nm,0.1s						
AYDN	**Tasoluk**	**4.05**	**34**	*i* P	**Pn**	**07 27 44.4**	**+2.5**
AYDN				IAML_P			
	comp=Z,76nm,0.1s						
AKAS	**Kas**	**4.18**	**61**	*i* P	**Pn**	**07 27 46.5**	**+2.6**
AKAS				*i* S	**Sn**	**07 28 31.8**	**-0.2**
AKAS				IAML_P			
	comp=Z,529nm,0.2s						
SWA2		**5.07**	**176**	P	**Pn**	**07 27 57.2**	**+1.4**
	baz=179						
SWA2				S	**Sn**	**07 28 52.0**	**-1.5**
	baz=179						
SWA2				AMP		07 29 00.0	
	baz=179						
KHAL	**Karahalli**	**5.40**	**40**	*i* P	**Pn**	**07 28 02.5**	**+1.9**
KHAL				IAML_P			
	comp=Z,28nm,0.2s						
USAK	**Uak-Merkez**	**5.43**	**35**	*i* P	**Pn**	**07 28 03.7**	**+2.8**
USAK				IAML_P			
	comp=Z,205nm,0.4s						
HFRF	**Wahat Farafira**	**7.67**	**158**	P	**Pn**	**07 28 31.6**	**-0.1**
	baz=159						
SUZ	**Suez**	**7.96**	**122**	P	**Pn**	**07 28 35.5**	**-0.2**
	baz=123						
AKASG	**Malin Array Be**	**16.66**	**9**	Pn	**Pn**	**07 30 32.0**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=199,slow=10,SNR=4.7						
GERES	**GERESS Array B**	**16.80**	**333**	Pn	**P**	**07 30 37.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=144,slow=13,SNR=11						
GERES				LR	LR	07 38 18.4	
	comp=Z,65nm,19.7s,baz=102,slow=42						
ESDC	**Sonseca Array**	**23.74**	**292**	P	**P**	**07 31 51.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=79,slow=8.7,SNR=2.7						
TORD	**Torodi Ar. Bea**	**29.89**	**231**	P	**P**	**07 32 47.0**	**-0.2**
	comp=Z,2.3nm,0.4s,baz=33,slow=7.8,SNR=42						
ARCES	**ARCESS Array B**	**35.28**	**0**	P	**P**	**07 33 32.2**	**-1.7**
	comp=Z,8.6nm,0.3s,baz=181,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**44.31**	**56**	P	**P**	**07 34 50.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=271,slow=5.7,SNR=4.9						
ZALV	**Zalesovo Beam**	**45.65**	**46**	P	**P**	**07 34 59.3**	**-0.5**

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comp=Z,1.1nm,0.4s,baz=266,slow=12,SNR=4.2

IDC 16 07:36:48.4±1.4,19°.07S×177°.65W,h0km,mb3.8/8, mb1 4.1/8,mb1mx3.9/22,mbtmp3.8/8,Error ellipse: s-maj=63.3km s-min=21.5km az=151.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.72**	**243**	P	P	07 44 15.2	+0.8
	2.3nm,0.9s,baz=142,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**45.14**	**261**	P	P	07 45 06.5	-0.6
	0.5nm,0.3s,baz=94,slow=6.8,SNR=16						
ASAR	**Alice Springs**	**45.18**	**255**	P	P	07 45 07.0	-0.5
	2.0nm,0.6s,baz=92,slow=8.2,SNR=38						
MJAR	**Matsushiro Arr**	**69.27**	**323**	P	P	07 47 58.1	+0.6
	0.7nm,0.6s,baz=108,slow=7.8,SNR=4.1						
NVAR	**Mina Array Bea**	**79.77**	**43**	P	P	07 48 59.5	+0.6
	0.3nm,0.6s,baz=208,slow=5.1,SNR=3.7						
TXAR	**Lajitas Array**	**86.01**	**57**	P	P	07 49 31.7	+0.4
	0.2nm,0.7s,baz=224,slow=5.2,SNR=3.5						
ILAR	**Eielson Array**	**86.86**	**13**	P	P	07 49 33.1	-1.3
	0.3nm,0.6s,baz=235,slow=4.5,SNR=5.5						
PDAR	**Pinedale Array**	**87.70**	**43**	P	P	07 49 39.1	-0.3
	2.0nm,0.5s,baz=205,slow=4.0,SNR=3.2						

MEX 16 07:52:17.5±0.4,17°.85N×101°.50W,h52km±5km,MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.25**	**172**	*i* P	Pn	07 52 24.9	-1.6
ZIIG				*i* S	Sn	07 52 31.1	-1.7
ARIG	**Puente Sto Nin**	**1.18**	**69**	*e*P	Pn	07 52 36.6	-1.1
ARIG				*e*S	Sn	07 52 50.1	-2.7
CAIG	**El Cayaco**	**1.43**	**124**	*e*P	Pn	07 52 39.3	-1.7
CAIG				*i* S	Sn	07 52 56.8	-1.9
MEIG	**Mezcala**	**1.79**	**87**	*e*P	Pn	07 52 44.7	-1.5
MEIG				*i* S	Sn	07 53 05.3	-2.6
PLIG	**Platanillo**	**1.98**	**74**	*e*P	Pn	07 52 47.2	-1.5
PLIG				*i* S	Sn	07 53 10.4	-2.0
TLIG	**Tlapa**	**2.81**	**95**	*e*P	Pn	07 52 58.9	-1.2
TLIG				*e*S	Sn	07 53 31.3	-1.7

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*NSSC **16** 07:55:03.3±1.0,33°.69N×35°.74E,h17km±17km,ML1.4*
*GRAL **16** 07:55:03.9±0.3,33°.72N×35°.96E,h14km±8km,MD2.7*

ISC 16 07:55:04.0±1.2,33°.74N±0°.05×35°.89E±0°.05,h12km±12km, n7,σ0°64/12,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.24**	**190**	*e*P	**Pg**	**07 55 08.9**	**-0.4**
RCY				*e*S	**Sg**	**07 55 12.6**	**-0.3**
BHL	**Bhannes**	**0.26**	**310**	*e*P	**Pg**	**07 55 10.1**	**+0.6**
DQRL	**Deir Qamar**	**0.27**	**263**	*e*P	**Pg**	**07 55 10.2**	**+0.5**
DQRL				*e*S	**Sb**	**07 55 14.8**	**-0.6**
BRBR	**Barbar**	**0.33**	**171**	*e*P	**Pg**	**07 55 10.7**	**-0.1**
BRBR				*e*S	**Sg**	**07 55 15.3**	**-0.1**
BRBR				AML	AML	07 55 20.4	
	comp=N,34nm,0.5s						
BRBR				AML	AML	07 55 20.9	
	comp=E,26nm,0.5s						
QASN	**Qassioun**	**0.38**	**122**	*e*P	**Pb**	**07 55 13.2**	**+0.4**
QASN				*e*S	**Sb**	**07 55 19.6**	**+0.9**
QASN				AML	AML	07 55 20.5	
	comp=N,54nm,0.4s						
QASN				AML	AML	07 55 26.4	
	comp=E,96nm,0.5s						
HWQ	**Hawqa**	**0.54**	**5**	*e*P	**Pg**	**07 55 14.1**	**-0.6**
TOTH	**TOTAH**	**0.59**	**130**	*e*P	**Pb**	**07 55 15.7**	**-0.6**
TOTH				*e*S	**Sb**	**07 55 25.2**	**+0.7**
TOTH				AML	AML	07 55 30.0	
	comp=E,13nm,0.4s						
TOTH				AML	AML	07 55 34.5	
	comp=N,7.8nm,0.5s						

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*NSSC **16** 07:58:27.8±0.7,33°.83N×36°.77E,h8km±12km,ML2.3*
*ISCJB **16** 07:58:29.9±1.8,33°.77N±0°.09×36°.6E±0°.1,h36km±29km, Error ellipse: s-maj=18.1km s-min=15.1km az=18.1*
*GRAL **16** 07:58:32.2±0.3,33°.78N×36°.47E,h29km±17km,MD3.2*

ISC 16 07:58:30.4±2.6,33°.78N±0°.06×36°.5E±0°.1,h25km±15km,n8, σ0°54/13,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QASN	**Qassioun**	**0.33**	**223**	*e*P	**Pb**	**07 58 38.2**	**+0.3**
QASN				*e*S	**Sn**	**07 58 45.2**	**-0.6**
QASN				AML	AML	07 58 47.2	
	comp=N,289nm,0.5s						
QASN				AML	AML	07 58 50.3	
	comp=E,514nm,0.4s						
TOTH	**TOTAH**	**0.42**	**193**	*e*P	**Pb**	**07 58 38.8**	**-0.6**
TOTH				*e*S	**Sb**	**07 58 46.0**	**+0.5**
TOTH				AML	AML	07 58 49.1	
	comp=E,122nm,0.4s						
TOTH				AML	AML	07 58 49.2	
	comp=N,118nm,0.5s						
BRBR	**Barbar**	**0.61**	**234**	*e*P	**Pb**	**07 58 43.0**	**+0.3**
BRBR				*e*S	**Sn**	**07 58 53.9**	**+0.9**
BRBR				AML	AML	07 58 58.6	
	comp=N,153nm,0.4s						
BRBR				AML	AML	07 59 00.4	
	comp=E,92nm,0.5s						
RCY	**Rachaya**	**0.65**	**245**	*e*P	**Pb**	**07 58 43.4**	**+0.1**
HWQ	**Hawqa**	**0.70**	**316**	*e*P	**Pb**	**07 58 44.4**	**+0.2**
BHL	**Bhannes**	**0.75**	**280**	*e*P	**Pb**	**07 58 44.7**	**-0.2**
SHBL	**Chebaa**	**0.79**	**238**	*e*P	**Pb**	**07 58 45.8**	**+

SMRI	Semarang	5.89	94	P	Pn	08 01 32.6	+0.5
UGM	Wanagama	6.08	102	*e*Pn	Pn	08 01 34.9	+0.2
UGM	Wanagama	6.08	102	P	Pn	08 01 36.1	+1.4
DSRI	Dabo	6.17	1	P	Pn	08 01 36.1	+0.3
SDSI	Sungai Dareh	6.50	332	P	Pn	08 01 43.5	+3.2
PWJI	Pagerwojo	7.35	101	P	Pn	08 01 54.6	+2.6
BKNI	Bangkinang	7.78	333	*e*Pn	Pn	08 01 59.1	+1.1
MYKOM	Kota Tinggi	8.45	355	*e*Pn	Pn	08 02 07.0	-0.1
JAGI	Jajag, Banyuwa	9.72	101	*e*Pn	Pn	08 02 25.4	+0.9
BATI	Baumata	19.26	102	P	Pn	08 04 28.8	-0.4
	11nm,0.3s,baz=288,slow=16,SNR=6.7						
SOEI	Soe	19.78	100	*e*P	P	08 04 34.1	+0.5
	77nm,1.0s						
FITZ	Fitzroy Crossi	23.51	121	P	P	08 05 13.4	+0.5
	3.6nm,0.9s,baz=277,slow=6.3,SNR=3.9						
FITZ	Fitzroy Crossi	23.51	121	*e*P	P	08 05 13.4	+0.5
	21nm,1.6s						
PANO	Nakornpanom	23.68	0	P	P	08 05 15.5	+1.1
	0.3nm,0.9s						
CM31	Chiang Mai Arr	25.59	348	*e*P	P	08 05 28.6	-3.1
	8.1nm,1.0s						
CMAR	Chiang Mai Arr	25.59	348	P	P	08 05 28.6	-3.1
	2.8nm,0.5s,baz=173,slow=10,SNR=12						
H01W3	Cape Leeuwin H	29.43	164	T	T	08 37 36.8	
	baz=342,slow=76,SNR=31						
H01W1	Cape Leeuwin H	29.44	164	T	T	08 37 38.2	
	baz=342,slow=76,SNR=54						
H01W2	Cape Leeuwin H	29.44	164	T	T	08 37 39.7	
	baz=342,slow=76,SNR=46						
KMI	Kunming	31.67	357	P	P	08 06 30.4	+4.3
KMI				pmax	pmax		
	comp=Z,23nm,0.5s						
KMI				pmax	pmax		
	comp=Z,130nm,4.2s						
H08S2	Diego Garcia H	31.78	266	T	T	08 40 11.8	
	baz=89,slow=75,SNR=127						
H08S3	Diego Garcia H	31.79	266	T	T	08 40 12.5	
	baz=89,slow=75,SNR=133						
WR1	Warramunga Arr	31.80	117	*e*P	P	08 06 28.4	+1.2
WRA	Warramunga Arr	31.80	117	P	P	08 06 28.4	+1.2
	3.5nm,0.7s,baz=286,slow=12,SNR=27						
H08S1	Diego Carcia H	31.80	266	T	T	08 40 13.3	
	baz=89,slow=75,SNR=129						
ASAR	Alice Springs	32.89	124	P	P	08 06 38.8	+2.0
	2.1nm,0.9s,baz=296,slow=8.1,SNR=16						
AS31	Alice Springs	32.89	124	*e*P	P	08 06 38.8	+2.0
CD2	Chengdu	37.39	359	P	P	08 07 17.3	+2.0
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2	Nanjing	40.88	19	*e*P	P	08 07 49.6	+5.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LZH	Lanzhou	42.55	359	*e*P	P	08 08 01.1	+2.9
LZH				sP	sP	08 08 16.8	-0.4
LZH				*e*PP	PP	08 09 43.3	+5.5
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,82nm,5.6s						
LZH				LR	LR		
	comp=N,370nm,13.5s						
LZH				LR	LR		
	comp=E,380nm,13.3s						
LZH				LR	LR		
	comp=Z,450nm,16.5s						
STKA	Stephens Creek	42.69	131	P	P	08 08 02.0	+2.7
	3.5nm,0.7s,baz=303,slow=8.6,SNR=8.8						
STKA	Stephens Creek	42.69	131	*e*P	P	08 08 02.6	+3.2
	1.0nm,0.8s						
HHC	Hu-ho-hao-te	47.75	7	*e*P	P	08 08 43.5	+4.2
HHC				S	S	08 15 38.5	+6.4
HHC				sS	sS	08 15 57.0	+2.8
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
HHC				LR	LR		
	comp=N,140nm,13.5s						
HHC				LR	LR		
	comp=E,310nm,15.9s						
HHC				LR	LR		
	comp=Z,270nm,14.2s						
KS15	Wonju Array Si	49.03	25	*e*P	P	08 08 46.9	-2.2
	5.5nm,1.1s						
KS15				*e*PcP	PcP	08 10 12.7	+0.3
KSRS	Korea Array	49.05	25	P	P	08 08 46.9	-2.4
	0.9nm,0.5s,baz=223,slow=7.6,SNR=5.9						
KSRS				PcP	PcP	08 10 12.7	+0.3
	0.3nm,0.3s,baz=228,slow=4.1,SNR=4.4						
NIL	Nilore	49.88	326	*e*P	P	08 08 55.8	0.0
	16nm,0.8s						
WMQ	Urumqi	52.53	345	*e*P	P	08 09 17.5	+2.1
WMQ				LR	LR		
	comp=N,180nm,19.1s						
WMQ				LR	LR		
	comp=E,280nm,24.3s						
WMQ				LR	LR		
	comp=Z,160nm,25.1s						
KSH	Kashi	53.01	332	P	P	08 09 18.0	-1.2
KSH				pP	pP	08 09 27.8	-4.7
KSH				PP	PP	08 11 20.0	+0.5
KSH				S	S	08 16 41.4	-4.0
KSH				SS	SS	08 20 20.0	-5.5
KSH				pmax	pmax		
	comp=Z,20nm,0.7s						
KSH				pmax	pmax		
	comp=Z,220nm,4.4s						
KSH				LR	LR		
	comp=N,120nm,6.5s						
KSH				LR	LR		
	comp=E,170nm,7.6s						
KSH				LR	LR		
	comp=Z,200nm,19.1s						
MAJO	Matsushiro	53.35	34	*e*PcP	PcP	08 10 28.8	+0.3
MAT	Matsushiro	53.35	34	P	P	08 09 18.3	-3.2
MJAR	Matsushiro Arr	53.35	34	P	P	08 09 18.4	-3.1
	2.6nm,0.6s,baz=209,slow=8.4,SNR=14						
MJAR				PcP	PcP	08 10 28.8	+0.3
	1.6nm,0.8s,baz=211,slow=4.7,SNR=6.0						
SONA0	Songino Array	54.31	2	*e*P	P	08 09 26.2	-2.3
SONA0				*e*PcP	PcP	08 10 32.2	+0.2
SONM	Songino Array	54.31	2	P	P	08 09 26.2	-2.3
	0.7nm,0.4s,baz=185,slow=9.5,SNR=6.3						
SONM				PcP	PcP	08 10 32.2	+0.2
	1.6nm,0.5s,baz=180,slow=3.3,SNR=5.8						
GAR	Garm	55.42	328	*e*P	P	08 09 36.2	-0.4
	11nm,0.8s						
ARSB	Arslanbob	55.84	332	*e*P	P	08 09 39.2	-0.4
	13nm,1.0s						
USRK	Ussuriysk Ar.	56.40	23	P	P	08 09 41.7	-1.7
	3.9nm,0.5s,baz=205,slow=6.1,SNR=12						
MK31	Makanchi Array	56.79	342	*e*P	P	08 09 45.1	-1.1
	3.7nm,0.6s						
MK32	Makanchi Array	56.79	342	*e*P	P	08 09 45.5	-0.8
MKAR	Makanchi Array	56.79	342	P	P	08 09 45.5	-0.7
	3.9nm,0.4s,baz=148,slow=8.2,SNR=53						
KLR	Kul'dur	60.56	20	P	P	08 10 10.6	-1.7
	4.2nm,0.8s,baz=238,slow=5.7,SNR=14						
KURK	Kurchatov	61.40	342	*e*P	P	08 10 17.4	-0.6
	5.8nm,0.8s						
GEYT	Alibeck	61.91	320	P	P	08 10 22.9	+1.2
	4.2nm,0.6s,baz=129,slow=5.9,SNR=12						
ZAA0	Zalesovo Array	62.65	347	*e*P	P	08 10 24.6	-1.7
	8.8nm,1.0s						
ZALV	Zalesovo Beam	62.65	347	P	P	08 10 25.0	-1.3
	4.0nm,0.3s,baz=156,slow=5.5,SNR=20						
ZAA1	Zalesovo Array	62.65	347	*e*P	P	08 10 25.0	-1.3
BVAR	Borovoye Array	66.14	338	P	P	08 10 49.0	-0.2
	4.8nm,0.6s,baz=147,slow=8.3,SNR=27						
ABKAR	Abkulak array	67.90	330	*e*P	P	08 11 00.7	+0.3
	26nm,1.3s						
ARU	Arti	73.30	335	P	P	08 11 33.4	+0.3
	1.9nm,0.5s,baz=134,slow=3.1,SNR=11						
ARU	Arti	73.30	335	*e*P	P	08 11 32.9	-0.2
	14nm,1.1s						
PETK	Petropavlovsk-	74.54	30	P	P	08 11 39.2	-1.3
	3.1nm,0.8s,baz=159,slow=4.6,SNR=5.2						
PEA1	Petropavlovsk-	74.55	30	*e*P	P	08 11 39.2	-1.3
KBZ	Khabaz	74.78	319	P	P	08 11 43.7	+1.7
	3.3nm,0.8s,baz=102,slow=9.3,SNR=5.6						
SYO	Syowa Base	74.95	200	*e*P	P	08 11 43.4	+0.8
NRIK	Noril'sk	76.76	354	P	P	08 11 51.7	-1.1
	3.1nm,0.4s,baz=123,slow=4.2,SNR=7.4						
BR101	Keskin Array S	79.79	312	*e*P	P	08 12 11.6	+1.2
BR131	Keskin Array S	79.79	312	*e*P	P	08 12 08.7	-1.7
	2.6nm,0.8s						
BRTR	Keskin Array B	79.79	312	P	P	08 12 11.6	+1.2
	2.4nm,0.7s,baz=137,slow=6.4,SNR=12						
AKASG	Malin Array Be	85.92	322	P	P	08 12 42.9	+1.2
	0.7nm,0.5s,baz=90,slow=4.5,SNR=4.0						
AKBB	Malin Array Si	85.92	322	*e*P	P	08 12 41.3	-0.4
	3.0nm,1.0s						
BUR08	Bucovina Ar. S	87.75	318	*e*P	P	08 12 50.3	-0.5
	3.0nm,0.8s						
KOLS	Kolonicke sedl	89.92	319	*e*P	P	08 13 04.1	+3.2
FIA0	FINESS Array S	90.33	332	*e*P	P	08 13 03.9	+1.3
FINES	FINESS Array B	90.33	332	P	P	08 13 03.9	+1.3
	1.5nm,0.7s,baz=115,slow=9.0,SNR=6.0						
VYHS	Vyhne	92.10	318	*e*P	P	08 13 12.5	+1.4
ARA0	ARCESS Array S	92.39	340	*e*P	P	08 13 12.5	+0.5
ARCES	ARCESS Array B	92.39	340	P	P	08 13 12.5	+0.5
	1.3nm,0.6s,baz=90,slow=4.9,SNR=7.7						
PD31	Pinedale Array	133.17	34	*e*PKPdf	PKPdf	08 19 16.8	-1.1
PDAR	Pinedale Array	133.17	34	PKP	PKiKP	08 19 19.0	-0.1
	0.2nm,0.5s,baz=49,slow=1.6,SNR=3.7						
WMOK	Wichita Mounta	144.78	34	*e*PKPdf	PKPdf	08 19 38.2	-0.8
BDFB	Brasilia	144.89	231	PKPbc	PKiKP	08 19 43.5	-0.1
	1.7nm,0.8s,baz=177,slow=6.7,SNR=4.5						
KSCT	Kent School, K	145.06	357	*e*PKPbc	PKPdf	08 19 38.8	-0.5
TX31	Lajitas Ar. Si	145.17	46	*e*PKPbc	PKPdf	08 19 40.9	+0.9
TXAR	Lajitas Array	145.18	46	PKP	PKPdf	08 19 41.0	+1.0
	5.7nm,0.8s,baz=276,slow=1.4,SNR=49						
KSPA	Keystone Colle	145.28	0	*e*PKPbc	PKPdf	08 19 39.8	+0.1
TUL1	Leonard	145.47	30	*e*PKPdf	PKPab	08 19 40.8	+0.3
CCM	Cathedral Cave	145.66	22	*e*PKPdf	PKPab	08 19 40.8	-0.3
N53A	Lisbon	145.69	7	*e*PKPdf	PKPab	08 19 41.0	-0.1
ODNJ	Ogdensburg	145.74	359	*e*PKPdf	PKPdf	08 19 40.2	-0.3
ABTX	Abilene, Hawle	145.78	38	*e*PKPdf	PKPdf	08 19 40.0	-0.8
N55A	Marion Center	145.91	5	*e*PKPdf	PKPab	08 19 41.8	-0.2
N59A	State Game Lan	145.92	0	*e*PKPdf	PKPbc	08 19 41.2	-0.2
N59A				*e*PKPbc	PKPab	08 19 42.2	+0.2
ACSO	Alum Creek Sta	145.93	10	*e*PKPdf	PKPab	08 19 41.5	-0.5
HHAR	Hobbs	146.05	27	*e*PKPdf	PKPab	08 19 42.5	-0.1
SSPA	Standing Stone	146.13	3	*e*PKPdf	PKPab	08 19 42.6	-0.2
LUPA	Lehigh Univers	146.24	360	*e*PKPdf	PKPab	08 19 42.9	-0.2
O56A	Blue Knob Stat	146.45	4	*e*PKPbc	PKPab	08 19 44.1	0.0
X37A	Clayton	146.72	31	*e*PKPdf	PKPdf	08 19 42.6	+0.3
MVL	Millersville	146.83	1	*e*PKPbc	PKPab	08 19 44.5	-0.9
PSUB	Penn St. - Bra	146.91	360	*e*PKPdf	PKPdf	08 19 41.8	-0.7
P53A	Whipple	146.92	8	*e*PKPdf	PKPbc	08 19 44.0	-0.4
Q51A	Peebles	147.03	11	*e*PKPdf	PKPdf	08 19 42.8	+0.1
Q51A				*e*PKPbc	PKPab	08 19 45.3	-1.0
PBMO	Poplar Bluff	147.09	22	*e*PKPbc	PKPab	08 19 45.6	-1.0
WCI	Wyandotte Cave	147.11	16	*e*PKPdf	PKPdf	08 19 42.7	-0.2
JCT	Junction City	147.12	41	*e*PKPbc	PKPab	08 19 46.9	-0.1
WHTX	Lake Whitney,	147.54	36	*e*PKPdf	PKPdf	08 19 40.0	-3.8
WHTX				*e*PKPbc	PKPbc	08 19 46.1	-0.2
MIAR	Mount Ida	147.64	29	*e*PKPdf	PKPdf	08 19 41.8	-2.1
MIAR				*e*PKPbc	PKPab	08 19 47.7	-1.2
R53A	Hurricane	147.96	10	*e*PKPbc	PKPbc	08 19 47.8	+0.4
WVT	Waverly	148.59	19	*e*PKPbc	PKiKP	08 19 49.8	-0.8
833A	Chaparral WMA,	148.78	44	*e*PKPdf	PKPdf	08 19 43.8	-2.1
833A				*e*PKPbc	PKiKP	08 19 50.9	-0.3
V52A	Sevierville	150.05	13	*e*PKPdf	PKPdf	08 19 45.8	-1.9
V52A				*e*PKPbc	PKiKP	08 19 53.2	-0.4
V53A	Saluda	150.38	12	*e*PKPdf	PKPdf	08 19 47.1	-1.2
V53A				*e*PKPbc	PKiKP	08 19 55.1	+0.7

BJI **16** *08:04:17.2±0.0,3°.68S×129°.48E,h35km,mb5.0/58, mB5.0/42,Ms4.4/30,Ms7 4.1/26*

IDC **16** *08:04:19.3±0.4,3°.18S×128°.89E,h0km,mb4.6/27, mb1 4.7/31,mb1mx4.5/49,mbtmp4.6/31,ML4.2/3,MS3.9/17, Ms1 3.9/17,ms1mx3.7/26,Error ellipse: s-maj=15.8km s-min=9.5km az=71.0*

MOS **16** *08:04:22.7±0.9,3°.06S×128°.99E,h33km,mb5.2/36,Error ellipse: s-maj=14.9km s-min=6.9km az=120.2*

ISCJB **16** *08:04:23.4±0.4,3°.10S±0°.02×129°.08E±0°.02,h40km±3km, mb5.0/116,MS4.0/29,Error ellipse: s-maj=4.1km s-min=3.9km az=19.0*

DJA **16** *08:04:23.5±0.4,3°S±2°×12°9E±°,h13km±3km,M5.1/48, mB5.5/22,mb5.1/48,MLv5.3/19,Mw(mB)5.0/22*

NEIC **16** *08:04:24.3±1.5,3°.15S×128°.96E,h35km±2km,mb4.9/69, Error ellipse: s-maj=10.7km s-min=2.9km az=145.0*

GCMT **16** *08:04:26.3±0.3,2°.95S±0°.02×128°.91E±0°.03,h36km±1km, MW5.0/58,Moment Tensor Solution. s26,c31; s58,c70; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.56±.28; Mθθ-2.53±.16; Mφφ-0.03±.20; Mrθ0.55±.18; Mφφ2.29±.12; Mθr0.94±.22; Best double couple: M0 3.54400×10^16 NP1:φs327.00000°,δ52.00000°,λ130.00000°. NP2: φs94.00000°,δ52.00000°,λ50.00000°. Principal axes: T 3.1980, Plg60.0000°, Azm301.0000°; N 0.6900, Plg30.0000°, Azm121.0000°; P -3.8890, Plg0.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM **16** *08:04:30.0,3°.33S×128°.97E,h72km,mb5.0*

ISC 16 08:04:24.7±0.3,**3°.15S**±0°.04×**129°.07E**±0°.04,**h36**km±1km, **n280**,σ1**§69**/295,**mb4.9**/116,**MS4.0**/30,**9C-6D,Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.24	215	P	Pn	08 04 31.7	-0.9
MSAI				S	Sn	08 04 37.3	-1.7
AAI	Ambon	1.02	238	P	Pn	08 04 44.3	+1.7
AAI				S	Sn	08 04 59.8	+4.1
BNDI	Bandanaira	1.60	149	P	Pn	08 04 53.6	+3.1
SIJI	Sorong	3.15	44	Pn	Pn	08 05 12.6	+0.8
	502nm,0.3s,baz=58,slow=9.5,SNR=1308						
SIJI				Sn	Sn	08 05 46.5	-1.8
	464nm,0.3s,baz=16,slow=23,SNR=25						
SIJI				LR	LR	08 06 33.9	
	comp=Z,2μm,19.1s,baz=306,slow=41						
SWI	Sorong	3.15	44	P	Pn	08 05 11.9	+0.1
FAKI	Fak Fak	3.18	86	*e*Pn	Pn	08 05 13.8	+1.5
FAKI	Fak Fak	3.18	86	P	Pn	08 05 13.5	+1.2
SANI	Sanana	3.27	289	P	Pn	08 05 11.5	-1.9
TNTI	Ternate	4.25	336	*e*Pn	Pn	08 05 26.4	-0.5
SAUI	Saumlaki	5.29	155	*e*Pn	Pn	08 05 40.6	-0.7
SAUI	Saumlaki	5.29	155	P	Pn	08 05 44.7	+3.4
RKPI	Ransiki, Papua	5.36	72	P	Pn	08 05 42.6	+0.4
KMSI	Cibinong	6.29	306	P	Pn	08 05 54.8	-0.2
KDI	Kendari	6.49	263	P	Pn	08 05 59.4	+1.7
LUWI	Luwuk	6.63	288	*e*Pn	Pn	08 05 58.2	-1.5
LUWI	Luwuk	6.63	288	P	Pn	08 05 59.4	-0.3
SRPI	Serui, Papua	7.28	80	P	Pn	08 06 08.8	+0.2
BAKI	Biak	7.30	75	P	Pn	08 06 09.6	+0.8
APSI	Ampana	7.74	287	P	Pn	08 06 15.7	+0.8
MMRI	Maumere	8.71	231	*e*Pn	Pn	08 06 26.5	-1.8
MMRI	Maumere	8.71	231	P	Pn	08 06 30.7	+2.4
BATI	Baumata	8.83	217	Pn	Pn	08 06 31.1	+1.2
	2.8nm,0.3s,baz=84,slow=18,SNR=1.9						
BATI				Sn	Sn	08 08 03.3	-5.0
	3.0nm,0.3s,baz=73,slow=20,SNR=1.6						
BATI	Baumata	8.83	217	P	Pn	08 06 39.7	+10
BNSI	Bone	9.03	262	P	Pn	08 06 34.6	+2.0
BSSI	Bau Bau, Buton	9.05	250	P	Pn	08 06 34.5	+1.5
BKSI	Bulukumba	9.18	256	P	Pn	08 06 37.9	+3.2
EDFI	Ende, Flores	9.21	232	P	Pn	08 06 38.9	+3.7
TTSI	Tana Toraja	9.24	270	P	Pn	08 06 41.5	+6.0
SPSI	Sidrap Palu	9.32	265	P	Pn	08 06 38.1	+1.5
KAPI	Kappang	9.48	258	Pn	Pn	08 06 39.0	+0.2
	1.1nm,0.3s,baz=71,slow=6.5,SNR=30						
MPSI	Mapaga	9.80	291	P	Pn	08 06 44.0	+0.8
MTN	Manton Dam	9.85	168	*e*Pn	Pn	08 06 47.3	+3.4
WSI	Waingapu	10.86	233	P	Pn	08 07 00.5	+2.8
	1μm,0.5s,21μm						
GENI	Genyem	11.10	87	P	Pn	08 07 11.5	+10
JAY	Jayapura	11.64	87	Pn	Pn	08 07 10.1	+1.6
	0.6nm,0.3s,baz=279,slow=19,SNR=3.2						
PLAI	Plampang	12.57	243	P	P	08 07 36.5	+4.3
SRBI	Singaraja	14.63	250	P	P	08 08 07.4	+12
FITZ	Fitzroy Crossi	15.23	193	Pn	Pn	08 07 56.7	-0.6
	0.2nm,0.3s,baz=24,slow=14,SNR=6.0						
FITZ	Fitzroy Crossi	15.23	193	*e*Pn	Pn	08 07 56.9	-0.4
	28nm,0.8s						
GMJI	Gumukmas	16.36	251	P	P	08 08 13.8	-0.5
WRAB	Tennant Creek	17.46	163	*e*Pn	Pn	08 08 25.8	+0.2
	37nm,0.9s						
WRAB	Tennant Creek	17.46	163	*e*eP	P	08 08 26.6	0.0
WRAB				pmax	pmax		
	comp=Z,54nm,1.3s						
WR1	Warramunga Arr	17.47	163	*e*Pn	Pn	08 08 24.9	-0.8
WRA	Warramunga Arr	17.47	163	P	Pn	08 08 24.9	-0.8
	comp=Z,3.6nm,0.3s,baz=344,slow=13,SNR=52						
WRA				S	Sn	08 11 35.5	-3.7
	comp=Z,0.7nm,0.3s,baz=336,slow=24,SNR=4.2						
WB2	Warramunga Arr	17.47	163	*e*Pn	P	08 08 25.5	-0.3
	comp=Z,49nm,1.0s						
COEN	Coen	17.59	128	*e*Pn	P	08 08 28.3	+0.3
	comp=Z,49nm,0.9s						
SBUM	Sibu	17.74	288	*e*Pn	P	08 08 27.8	-1.8
	comp=Z,14nm,1.2s						
PWJI	Pagerwojo	17.85	254	P	P	08 08 33.4	+2.6
	comp=Z,55nm,1.1s						
NGJI	Ngawi	18.02	256	P	P	08 08 35.8	+3.0
	comp=Z,76nm,1.1s						
WOJI	Wonogiri, Jawa	18.65	255	P	Pn	08 08 40.7	+0.5
	comp=Z,83nm,1.6s						
SMRI	Semarang	18.95	257	*e*P	P	08 08 41.6	-1.5
	comp=Z,340nm,1.1s						
SMRI	Semarang	18.95	257	P	Pn	08 08 45.0	+1.1
	comp=Z,284nm,1.0s						
PMG	Port Moresby	19.02	110	P	Pn	08 08 46.4	+1.8
	comp=Z,0.9nm,0.3s,baz=301,slow=9.5,SNR=2.2						
PMG	Port Moresby	19.02	110	*e*P	P	08 08 44.8	+1.1
	comp=Z,32nm,0.8s						
PMG	Port Moresby	19.02	110	*i*P	Pn	08 08 45.7	+1.0
PMG				pmax	pmax		
	comp=Z,49nm,1.0s						
KSM	Kuching	19.31	283	*e*P	Pn	08 08 47.8	-0.4
	comp=Z,66nm,1.3s						
PSA00	Pilbara Seismi	20.39	205	*e*P	P	08 08 58.1	-0.6
	comp=Z,74nm,1.0s						
AS31	Alice Springs	20.93	168	*e*P	P	08 09 05.5	+1.1
AS31				*e*S	S	08 12 53.7	-2.3
ASAR	Alice Springs	20.93	168	P	P	08 09 05.5	+1.1
	comp=Z,67nm,0.6s,baz=351,slow=12,SNR=488						
ASAR				S	S	08 12 53.7	-2.3
	comp=Z,10.0nm,0.8s,baz=349,slow=22,SNR=6.0						
ASAR				LR	LR	08 17 59.7	
	comp=Z,529nm,18.3s,baz=348,slow=39						
LEM	Lembang	21.68	259	P	P	08 09 10.6	-2.1
	comp=Z,12nm,0.3s,baz=320,slow=19,SNR=2.0						
RABL	Rabaul	23.07	93	*e*P	P	08 09 28.8	+1.4
	comp=Z,93nm,0.8s						
CTA	Charters Tower	23.76	136	P	P	08 09 35.4	+1.3
	comp=Z,5.8nm,0.9s,baz=321,slow=12,SNR=5.1						
CTAO	Charters Tower	23.76	136	*e*P	P	08 09 35.1	+1.0
	comp=Z,64nm,1.4s						
CTAO	Charters Tower	23.76	136	*e*P	P	08 09 35.1	+1.0
CTAO				pmax	pmax		
	comp=Z,64nm,1.4s						
DSRI	Dabo	24.62	276	P	P	08 09 45.5	+3.5
	comp=Z,125nm,1.1s						
MDSI	Maura Dua	24.87	266	P	P	08 09 45.5	+1.2
	comp=Z,19nm,1.2s,comp=Z,1μm						
DLV	T Lat	25.37	307	*e*P	P	08 09 48.4	-0.6
	comp=Z,72nm,1.1s						
JMBI	JAMBI	25.45	273	P	P	08 09 54.7	+5.1
	comp=Z,631nm,1.5s						
MYKOM	Kota Tinggi	25.68	281	*e*P	P	08 09 49.7	-2.0
	comp=Z,71nm,1.3s						
MYKOM	Kota Tinggi	25.68	281	P	P	08 09 53.0	+1.3
FORT	Forrest	27.50	182	*e*P	P	08 10 07.2	-0.7
	comp=Z,34nm,0.8s						
SDSI	Sungai Dareh	27.71	274	P	P	08 10 11.0	+1.0
	comp=Z,26nm,1.6s						
BKNI	Bangkinang	28.23	277	P	P	08 10 17.6	+3.0
	comp=Z,70nm,1.2s,comp=Z,2μm						
PDSI	Padang	28.67	274	P	P	08 10 19.5	+0.9
	comp=Z,27nm,1.1s,comp=Z,2μm						
QIZ	Qiongzhong	29.04	320	P	P	08 10 22.3	+0.5
QIZ				S	S	08 15 13.0	+2.0
QIZ				pmax	pmax		
	comp=Z,16nm,1.2s						
QIZ				LR	LR		
	comp=Z,230nm,16.7s						
QIZ				LR	LR		
	comp=Z,180nm,15.2s						
KULM	Kulim	29.60	286	*e*P	P	08 10 25.7	-1.1
	comp=Z,34nm,1.4s						
KULM	Kulim	29.60	286	P	P	08 10 28.0	+1.2
BBOO	Buckleboo	30.23	168	*e*P	P	08 10 31.4	-0.7
	comp=Z,22nm,1.2s						
PSI	Prapat	30.70	281	*e*P	P	08 10 35.9	-0.8
	comp=Z,46nm,1.0s						
PSI	Prapat	30.70	281	*e*P	P	08 10 35.9	-0.8
PSI				pmax	pmax		
	comp=Z,46nm,1.0s						
STKA	Stephens Creek	30.91	159	P	P	08 10 38.8	+0.6
	comp=Z,11nm,0.8s,baz=336,slow=8.8,SNR=15						
STKA	Stephens Creek	30.91	159	*e*P	P	08 10 38.6	+0.4
	comp=Z,2.6nm,0.9s						
STKA	Stephens Creek	30.91	159	*e*P	P	08 10 38.6	+0.4
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PANO	Nakornpanom	31.46	311	P	P	08 10 44.0	+0.9
	comp=Z,0.5nm,2.0s						
SKNT	Sakolnakorn	31.83	310	P	P	08 10 47.0	+0.5
	comp=Z,29nm,2.6s						
KHON	Khomkaen

MJAR LR LR 08 26 26.9
comp=Z,167nm,21.8s,baz=185,slow=33
MAJO Matsushiro 40.40 11 *e*P **P 08 11 58.0 -1.4**
comp=Z,11nm,0.8s
MAJO *e*PcP **PcP 08 14 02.8 +0.6**
MAJO Matsushiro 40.40 11 *d i*P **P 08 11 58.7 -0.7**
MAJO pmax pmax
comp=Z,12nm,0.9s
MAT Matsushiro 40.40 11 P **P 08 11 57.9 -1.5**
MAT S **S 08 18 04.6 -0.7**
KS15 Wonju Array Si 40.40 359 *e*P **P 08 11 58.9 -0.4**
comp=Z,6.0nm,0.8s
KS15 *e*PcP **PcP 08 14 02.2 +0.1**
MJB9 Matsu-Tunnel 40.40 11 *e*P **P 08 11 57.9 -1.5**
comp=Z,10nm,0.8s
KSRS Korea Array 40.41 359 P **P 08 11 57.7 -1.8**
comp=Z,1.4nm,0.8s,baz=177,slow=7.6,SNR=2.6
KSRS PcP **PcP 08 14 02.2 +0.1**
comp=Z,1.9nm,0.9s,baz=185,slow=3.4,SNR=5.2
DZM Mont Dzumac 40.85 121 *e*LQ LQ 08 21 45.1
comp=Z,537nm,34.3s
DZM *e*LR LR 08 23 30.6
comp=Z,231nm,21.8s
XAN Xi'an 41.58 334 P **P 08 12 08.3 -1.0**
XAN pP sP 08 12 22.3 -1.5
XAN sP pP 08 12 28.8 +9.0
XAN pmax pmax
comp=Z,18nm,1.5s
XAN pmax pmax
comp=Z,120nm,5.3s
XAN LR LR
comp=Z,160nm,19.5s
XAN LR LR
comp=Z,150nm,20.6s
XAN Xi'an 41.58 334 *e*P **P 08 12 08.4 -0.8**
comp=Z,16nm,0.9s
XAN Xi'an 41.58 334 *e*P **P 08 12 08.4 -0.8**
XAN pmax pmax
comp=Z,16nm,0.9s
CD2 Chengdu 41.59 326 ⇓*i*P **P 08 12 09.3 -0.1**
CD2 sP sP 08 12 23.4 -0.4
CD2 PP **PP 08 13 50.5 +4.5**
CD2 S **S 08 18 25.1 +1.8**
CD2 pmax pmax
comp=Z,70nm,1.0s
CD2 pmax pmax
comp=Z,200nm,6.5s
CD2 LR LR
comp=Z,500nm,12.8s
CD2 LR LR
comp=Z,520nm,24.1s
CD2 LR LR
comp=Z,420nm,26.1s
BJI Beijing 44.58 346 P **P 08 12 32.6 -0.7**
BJI pP **pP 08 12 41.9 -2.0**
BJI pmax pmax
comp=Z,5.0nm,1.4s
LZH Lanzhou 45.60 331 ⇓P **P 08 12 42.4 +0.7**
LZH pP sP 08 12 53.6 -2.7
LZH sP pP 08 12 58.4 +6.1
LZH sS sS 08 19 39.4 +1.9
LZH SS **ScS 08 22 38.6 +2.9**
LZH pmax pmax
comp=Z,53nm,1.2s
LZH pmax pmax
comp=Z,110nm,8.7s
LZH LR LR
comp=Z,190nm,15.2s
LZH LR LR
comp=Z,190nm,14.6s
LZH LR LR
comp=Z,250nm,16.8s
SHL Shillong 45.97 311 *e*P **P 08 12 44.3 -0.5**
comp=Z,26nm,0.9s
SHL Shillong 45.97 311 *e*P **P 08 12 44.3 -0.5**
SHL pmax pmax
comp=Z,26nm,0.9s
SHL Shillong 45.97 311 *e*P **P 08 12 45.0 +0.2**
HHC Hu-ho-hao-te 46.62 342 *e*P **P 08 12 50.4 +0.8**
HHC S **S 08 19 36.3 -0.1**
HHC sS sS 08 19 57.8 +5.9
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,73nm,5.6s
HHC LR LR
comp=Z,160nm,17.1s
HHC LR LR
comp=Z,340nm,12.9s
HHC LR LR
comp=Z,390nm,16.2s
CN2 Changchun 46.85 356 *e*P **P 08 12 50.8 -0.4**
CN2 *e*sP sP 08 13 04.6 -1.3
CN2 *e*S **S 08 19 42.3 +2.9**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,150nm,20.0s
CN2 LR LR
comp=Z,70nm,20.0s
CN2 LR LR
comp=Z,190nm,22.0s
USA0B Ussuriysk Arra 47.21 3 *e*P **P 08 12 53.7 -0.3**
comp=Z,11nm,0.8s
USA0B Ussuriysk Arra 47.21 3 *e*P **P 08 12 53.7 -0.3**
USA0B pmax pmax
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 47.21 3 P **P 08 12 53.9 -0.1**
comp=Z,6.2nm,0.8s,baz=160,slow=6.1,SNR=14
ASAJ Asahikawa 48.59 13 P **P 08 13 05.7 +0.9**
comp=Z,3.3nm,0.9s,baz=222,slow=12,SNR=2.7
LSA Lhasa 48.82 315 *e*P **P 08 13 05.8 -1.5**
comp=Z,18nm,1.1s
LSA Lhasa 48.82 315 *e*P **P 08 13 05.8 -1.5**
LSA pmax pmax
comp=Z,18nm,1.1s
GTA Gaotai 50.18 330 *e*P **P 08 13 17.0 -0.1**
GTA pP pP 08 13 26.0 -1.9
GTA sP sP 08 13 29.8 -2.1
GTA pmax pmax
comp=Z,22nm,1.2s
GTA pmax pmax
comp=Z,110nm,5.8s
GTA LR LR
comp=Z,91nm,19.2s
GTA LR LR
comp=Z,93nm,17.2s
GTA LR LR
comp=Z,170nm,20.3s
KLR Kul'dur 52.22 2 P **P 08 13 32.2 +0.2**
comp=Z,7.4nm,1.0s,baz=238,slow=1.6,SNR=13
SONA0 Songino Array 54.52 341 *e*P **P 08 13 49.3 +0.2**
SONM Songino Array 54.52 341 P **P 08 13 49.3 +0.2**
comp=Z,14nm,1.0s,baz=161,slow=8.0,SNR=49
ZAK Zakamensk 57.74 341 *e*P **P 08 14 10.8 -1.3**
ZAK pmax pmax
comp=Z,6.0nm,1.4s
TLY Talaya 58.75 342 *ce*P **P 08 14 20.2 +1.2**
TLY pmax pmax
comp=Z,37nm,1.7s
IRK Irkutsk 59.05 342 *e*P **P 08 14 21.3 +0.2**
IRK pmax pmax
comp=Z,52nm,12.2s
WMQ Urumqi 59.69 326 *e*P **P 08 14 25.9 +0.2**
WMQ pP sP 08 14 38.0 -2.6
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ pmax pmax
comp=Z,49nm,3.7s
WMQ LR LR
comp=Z,320nm,19.1s
WMQ LR LR
comp=Z,130nm,22.5s
PEA0B Petropavlovsk- 60.99 19 *e*P **P 08 14 34.0 -0.4**
comp=Z,17nm,1.0s
PEA0B Petropavlovsk- 60.99 19 *e*P **P 08 14 34.0 -0.4**
PEA0B pmax pmax
comp=Z,17nm,1.0s
PETK Petropavlovsk- 60.99 19 P **P 08 14 35.4 +1.0**
comp=Z,7.7nm,0.8s,baz=190,slow=5.1,SNR=14
PETK LR LR 08 36 52.6
comp=Z,82nm,21.7s,baz=206,slow=32
PEA1 Petropavlovsk- 61.00 19 *e*P **P 08 14 35.4 +1.0**
DGZ Jazzator, Alta 63.70 331 *i*P **P 08 14 52.9 +0.1**
DGZ pmax pmax
comp=Z,5.0nm,1.2s
MK31 Makanchi Array 64.52 326 *e*P **P 08 14 57.2 -0.9**
comp=Z,12nm,1.2s
MK31 Makanchi Array 64.52 326 *e*P **P 08 14 57.2 -0.9**
MK31 pmax pmax
comp=Z,12nm,1.2s
MK32 Makanchi Array 64.52 326 *e*P **P 08 14 57.5 -0.5**
MKAR Makanchi Array 64.52 326 P **P 08 14 57.5 -0.5**
comp=Z,6.0nm,0.8s,baz=124,slow=8.2,SNR=38
KSH Kashi 64.58 317 P **P 08 14 59.3 +0.5**
KSH pP pP 08 15 04.6 -5.2
KSH PP **PP 08 17 22.6 +1.4**
KSH S **S 08 23 33.5 -2.6**
KSH pmax pmax
comp=Z,25nm,1.0s
KSH pmax pmax
comp=Z,140nm,8.5s
KSH LR LR
comp=Z,130nm,6.4s
KSH LR LR
comp=Z,160nm,7.0s
KSH LR LR
comp=Z,280nm,19.4s
MAKZ Makanchi 64.70 326 *e*P **P 08 14 58.6 -0.7**
comp=Z,19nm,1.3s
MAKZ Makanchi 64.70 326 *e*P **P 08 14 58.6 -0.7**
MAKZ pmax pmax
comp=Z,19nm,1.3s
YAK Yakutsk 65.00 0 *e*P **P 08 15 00.9 +0.1**
comp=Z,42nm,0.8s
YAK Yakutsk 65.00 0 *e*P **P 08 15 00.9 +0.1**
YAK pmax pmax
comp=Z,42nm,0.8s
BOOM Boomskoye usch 66.02 320 *e*P **P 08 15 07.8 -0.3**
comp=Z,9.8nm,0.9s
BOOM Boomskoye usch 66.02 320 *e*P **P 08 15 07.8 -0.3**
BOOM pmax pmax
comp=Z,10.0nm,0.9s
KZA Kyzart 66.27 319 P **P 08 15 10.3 +0.3**
SNR=11
TKM2 Tokmak 2 66.45 320 P **P 08 15 10.7 -0.2**
SNR=7.2
UCH Uchtor 66.82 319 P **P 08 15 13.7 +0.1**
SNR=11
AAK Ala-Archa 67.03 319 P **P 08 15 14.5 +0.1**
comp=Z,4.1nm,0.8s,baz=129,slow=5.6,SNR=10
AAK Ala-Archa 67.03 319 *e*P **P 08 15 13.9 -0.6**
comp=Z,9.5nm,1.1s
AAK Ala-Archa 67.03 319 *ce*P **P 08 15 14.6 +0.1**
AAK pmax pmax
comp=Z,24nm,2.5s
USP Ospenovka 67.32 320 P **P 08 15 16.3 +0.1**
SNR=10
EKS2 Erkin-Say 67.51 319 P **P 08 15 17.6 +0.1**
SNR=9.3
KBL Kabul 67.60 309 *e*P **P 08 15 17.1 -1.3**
comp=Z,12nm,1.1s
KBL Kabul 67.60 309 *e*P **P 08 15 17.1 -1.3**
KBL pmax pmax
comp=Z,12nm,1.1s
ZAA0 Zalesovo Array 67.74 334 *e*P **P 08 15 17.4 -1.2**
comp=Z,33nm,1.5s
ZALV Zalesovo Beam 67.74 334 P **P 08 15 17.7 -0.8**
comp=Z,4.6nm,0.8s,baz=122,slow=5.6,SNR=13
ZAA1 Zalesovo Array 67.74 334 *e*P **P 08 15 17.7 -0.8**
GAR Garm 68.32 314 *e*P **P 08 15 21.8 -0.9**
comp=Z,49nm,1.3s
GAR Garm 68.32 314 *e*P **P 08 15 21.8 -0.9**
GAR pmax pmax
comp=Z,49nm,1.3s
KURK Kurchatov 68.77 328 *e*P **P 08 15 24.6 -0.5**
comp=Z,28nm,1.0s
KURK Kurchatov 68.77 328 *ce*P **P 08 15 24.7 -0.4**
KURK pmax pmax
comp=Z,26nm,0.8s
NVS Novosibirsk 69.03 334 *e*P **P 08 15 25.2 -1.3**
NVS pmax pmax
comp=N,16nm,1.5s
NVS pmax pmax
comp=E,14nm,1.5s
NVS pmax pmax
comp=Z,26nm,1.5s
KK31 Karatay Array 69.86 318 *e*P **P 08 15 30.4 -1.6**
comp=Z,11nm,1.1s
KK31 Karatay Array 69.86 318 *e*P **P 08 15 30.4 -1.6**
KK31 pmax pmax
comp=Z,11nm,1.1s
KKAR Karatay Array 69.86 318 *e*P **P 08 15 30.3 -1.7**
comp=Z,11nm,1.1s
KKAR Karatay Array 69.86 318 *e*P **P 08 15 30.3 -1.7**
KKAR pmax pmax
comp=Z,11nm,1.1s
BVAR Borovoye Array 74.33 328 P **P 08 15 58.3 -0.2**
comp=Z,8.7nm,0.9s,baz=130,slow=6.2,SNR=34
BRVK Borovoye 74.40 328 *e*P **P 08 15 58.2 -0.7**
comp=Z,14nm,1.0s
BRVK Borovoye 74.40 328 *ce*P **P 08 15 58.6 -0.4**
BRVK pmax pmax
comp=Z,15nm,1.0s
BILL Bilibino 75.60 14 *i*P **P 08 16 04.2 -1.4**
BILL *e* 08 18 55.0
BILL *e*S **S 08 25 50.1 +6.3**
BILL pmax pmax
comp=Z,4.0nm,1.2s
UOSS Minazif 75.87 297 *e*P **P 08 16 07.1 -0.9**
comp=Z,16nm,1.2s
VNDA Vanda 76.36 173 P **P 08 16 09.5 -0.3**
comp=Z,3.4nm,0.6s,baz=323,slow=6.8,SNR=21
VNDA LR LR 08 49 20.2
comp=Z,98nm,19.9s,baz=344,slow=35
VNDA Vanda 76.36 173 *e*P **P 08 16 09.5 -0.3**
VNDA *e* 08 16 09.8
GEYT Alibeck 77.04 310 P **P 08 16 13.8 -0.7**
comp=Z,5.5nm,1.0s,baz=151,slow=3.4,SNR=13
GEYT LR LR 08 56 37.6
comp=Z,23nm,19.7s,baz=85,slow=41
GYA0B ALIBECK ARRAY 77.04 310 *e*P **P 08 16 13.8 -0.6**
comp=Z,12nm,1.1s
LPH Laupahoehoe 77.52 69 *e*P **P 08 16 20.2 +2.8**
NRIK Noril'sk 77.62 346 P **P 08 16 17.3 +0.3**
comp=Z,9.9nm,0.9s,baz=139,slow=5.0,SNR=14
MAW Mawson 78.18 201 P **P 08 16 19.8 -0.3**
comp=Z,7.5nm,1.0s,baz=53,slow=6.4,SNR=10
MAW LR LR 08 49 14.7
comp=Z,113nm,18.5s,baz=58,slow=34
MAW Mawson 78.18 201 *e*P **P 08 16 19.8 -0.3**
comp=Z,3.4nm,1.2s
MAW Mawson 78.18 201 *e*P **P 08 16 19.8 -0.3**
MAW pmax pmax
comp=Z,3.0nm,1.2s
ABKAR Abkulak array 78.94 321 *e*P **P 08 16 23.9 -0.8**
comp=Z,9.5nm,0.9s
AKTO Aktyubinsk 80.48 322 P **P 08 16 32.2 -0.8**
comp=Z,6.3nm,0.9s,baz=101,slow=6.6,SNR=17
AKTO LR LR 08 55 18.8
comp=Z,65nm,21.9s,baz=105,slow=38
PPT Papeete 80.82 107 LR LR 08 49 27.6
comp=Z,55nm,20.7s,baz=330,slow=33
PPT2 Papeete2 80.82 107 *e*LR LR 08 41 59.5
comp=Z,165nm,30.0s
TBI Tubuai 80.93 113 *e*LR LR 08 42 04.2
comp=Z,147nm,28.8s
SVE Sverdlovsk 81.01 329 *e*P **P 08 16 35.5 -0.2**
SVE pmax pmax
comp=Z,18nm,1.2s
ARU Arti 81.97 328 P **P 08 16 39.9 -0.9**
comp=Z,0.6nm,0.3s,baz=82,slow=1.3,SNR=9.1
ARU Arti 81.97 328 *e*P **P 08 16 38.9 -1.9**
comp=Z,11nm,1.1s
ARU Arti 81.97 328 *c i*P **P 08 16 39.1 -1.7**
ARU S **S 08 26 51.6 -0.6**
ARU pmax pmax
comp=Z,14nm,1.1s
OHAK Old Harbor 85.96 32 *e*P **P 08 17 01.2 +0.1**
comp=Z,12nm,1.0s
TTA Tatalina 85.96 26 *e*P **P 08 17 01.6 +0.5**
comp=Z,9.6nm,1.2s
TTA Tatalina 85.96 26 *e*P **P 08 17 01.6 +0.5**
TTA pmax pmax
comp=Z,10.0nm,1.2s
KDAK Kodiak Island 86.44 32 *e*P **P 08 17 04.4 +0.9**
comp=Z,14nm,1.0s
KDAK Kodiak Island 86.44 32 *e*P **P 08 17 04.4 +0.9**
KDAK pmax pmax
comp=Z,14nm,1.0s
QSPA South Pole Qui 86.81 180 *e*P **P 08 17 04.5 -0.8**
comp=Z,12nm,1.1s
SYO Syowa Base 86.90 201 ⇓*i*P **P 08 17 03.8 -1.7**
SYO Syowa Base 86.90 201 ⇓*e*PcP **P 08 17 05.6 +0.1**
KIRV Kirov 87.28 329 P **P 08 17 06.4 -1.1**
comp=Z,5.5nm,0.6s,baz=116,slow=9.0,SNR=5.0
KIRV LR LR 08 59 30.6
comp=Z,54nm,20.4s,baz=142,slow=38
CNPM China Poot 87.47 30 *e*P **P 08 17 08.0 -0.5**
comp=Z,16nm,1.0s
GNI Garni 87.67 310 P **P 08 17 09.3 -0.7**
comp=Z,2.7nm,0.4s,baz=187,slow=18,SNR=3.2
GNI Garni 87.67 310 *i*P **P 08 17 09.8 -0.3**
GNI pmax pmax
comp=Z,19nm,1.1s
BRLK Bradley Lake 87.69 30 *e*P **P 08 17 09.0 -0.6**
comp=Z,8.2nm,1.0s
ZEI Tsey 88.57 313 *e*P **P 08 17 12.2 -2.1**
ZEI pmax pmax
comp=Z,28nm,1.4s
AKH Akhalkalaki 88.74 311 *e*P **P 08 17 15.3 +0.2**
comp=Z,26nm,1.1s
AKH Akhalkalaki 88.74 311 *e*P **P 08 17 15.3 +0.2**
AKH pmax pmax
comp=Z,26nm,1.1s
NCK Nalchik 88.86 313 *i*P **P 08 17 15.7 +0.3**
NCK pmax pmax
comp=Z,1.0nm,1.4s
RND Reindeer 89.24 26 *e*P **P 08 17 16.2 -0.7**
comp=Z,4.6nm,0.8s
RND Reindeer 89.24 26 *e*P **P 08 17 16.2 -0.7**
RND pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 89.38 314 P **P 08 17 17.4 -0.5**
comp=Z,3.3nm,0.9s,baz=212,slow=5.2,SNR=5.0
KBZ LR LR 09 02 42.3
comp=Z,26nm,20.9s,baz=72,slow=39
NEY Neytrino 89.47 313 *i*P **P 08 17 19.4 +0.9**
NEY pmax pmax
comp=Z,1.0nm,1.1s
KIV Kislovodsk 89.55 314 *e*P **P 08 17 18.5 -0.3**
KIV pmax pmax
comp=Z,16nm,1.1s
WRH Wood River Hil 89.73 25 *e*P **P 08 17 17.2 -1.8**
comp=Z,3.7nm,1.0s
DHY Denali Highway 89.86 27 *e*P **P 08 17 18.8 -1.0**
comp=Z,3.9nm,1.0s
CCB Clear Creek Bu 89.87 25 *e*P **P 08 17 17.9 -1.7**
comp=Z,3.4nm,1.0s
ILAR Eielson Array 90.28 25 P **P 08 17 19.5 -2.1**
comp=Z,0.9nm,0.9s,baz=265,slow=4.5,SNR=10
ILAR LR LR 08 54 33.0
comp=Z,48nm,19.7s,baz=264,slow=33
ILB Eielson Array 90.28 25 *e*P **P 08 17 19.7 -1.9**
comp=Z,4.0nm,1.5s
KMBO Kilima Mbogo 91.75 269 P **P 08 17 29.4 -0.4**
comp=Z,1.3nm,0.6s,baz=46,slow=8.3,SNR=3.9
KMBO LR LR 08 55 11.0
comp=Z,108nm,20.9s,baz=91,slow=33
KMBO Kilima Mbogo 91.75 269 *e*P **P 08 17 26.9 -3.0**
comp=Z,3.1nm,1.2s
KMBO Kilima Mbogo 91.75 269 *i*P **P 08 17 30.7 +0.8**
KMBO pmax pmax
comp=Z,1.0nm,0.6s
KLMR Klimovskoe 92.50 331 *e*P **P 08 17 28.8 -3.2**
KLMR pmax pmax
comp=Z,6.0nm,1.1s
KLMR Klimovskoe 92.50 331 *e*P **P 08 17 28.8 -3.2**
KLMR AMP 08 17 32.9
comp=Z,6.0nm,1.1s
PCA Pinnacle 93.04 30 *e*P **P 08 17 33.4 -1.2**
comp=Z,18nm,0.4s
DAWY Dawson 93.48 26 *e*P **P 08 17 36.8 +0.3**
comp=Z,7.2nm,1.2s
OBN Obninsk 93.99 325 ⇓*i*P **P 08 17 36.3 -2.6**
OBN *e* 08 21 24.7
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN MLR MLR
comp=Z,83nm,21.0s
EPYK Eagle Plains 94.56 24 *e*P **P 08 17 41.2 -0.2**
comp=Z,8.9nm,1.1s
EIL Elat 95.12 299 P **P 08 17 46.2 +1.5**
INK Inuvik 95.65 22 P **P 08 17 45.4 -0.8**
comp=Z,2.8nm,1.0s,baz=266,slow=5.0,SNR=8.5
INK Inuvik 95.65 22 *e*P **P 08 17 45.5 -0.7**
comp=Z,3.3nm,1.0s
BRTR Keskin Array B 96.18 309 LR LR 09 10 14.6
comp=Z,12nm,18.4s,baz=92,slow=41
ARA0 ARCESS Array S 97.67 340 *e*P **P 08 17 54.7 -0.7**
ARCES ARCESS Array B 97.67 340 P **P 08 17 54.7 -0.7**
comp=Z,4.3nm,1.0s,baz=95,slow=6.1,SNR=7.7
FINES FINESS Array B 98.96 332 LR LR 09 08 12.1
comp=Z,68nm,19.4s,baz=48,slow=39
SNAA Sanae 99.17 194 P **Pdif 08 18 03.4 +1.1**
VNA2 Neumayer--Watz 100.75 193 P **Pdif 08 18 09.1 -0.1**
baz=130,slow=3.7
VNA3 Neumayer Olymp 101.02 193 P **Pdif 08 18 18.7 +8.3**
VNA1 Neumayer--Stat 101.15 193 P **Pdif 08 18 10.6 -0.3**
BURAR Bucovina Array 101.65 316 ⇑*i*P **Pdif 08 18 26.2 +12**
YKB5 Yellowknife Ar 104.71 25 *e*Pdif **Pdif 08 18 26.4 -0.5**
YKB5 *e*PKiKP **PKiKP 08 22 42.3 0.0**
YKA Yellowknife Ar 104.71 25 Pdiff **Pdif 08 18 26.4 -0.5**
comp=Z,0.2nm,0.8s,baz=285,slow=4.0,SNR=3.3
YKA PKiKP **PKiKP 08 22 42.3 0.0**
comp=Z,0.4nm,0.7s,baz=303,slow=1.9,SNR=5.7
NB200 NORSAR Array S 105.94 333 *e*Pdif **Pdif 08 18 30.8 -1.7**
NOA NORSAR Array B 105.94 333 Pdiff **Pdif 08 18 30.8 -1.7**
comp=Z,0.3nm,0.8s,baz=64,slow=8.0,SNR=3.3
PD31 Pinedale Array 114.81 44 *e*PKiKP **PKiKP 08 23 01.9 -0.3**
PDAR Pinedale Array 114.81 44 PKP **PKiKP 08 23 01.9 -0.3**
comp=Z,0.3nm,0.7s,baz=129,slow=2.1,SNR=3.6
PV13 Radium Mtn., P 116.87 48 *e*PKPdf **PKPdf 08 23 04.7 -1.6**
ANMO Albuquerque 119.69 51 PKP **PKiKP 08 23 12.6 +0.7**
comp=Z,1.0nm,0.7s,baz=194,slow=3.1,SNR=5.0
ANMO Albuquerque 119.69 51 *e*PKPdf **PKPdf 08 23 09.7 -2.1**
ANMO Albuquerque 119.69 51 *c i*PKIKP **PKPdf 08 23 10.4 -1.4**
ANMO pmax pmax
comp=Z,3.0nm,1.3s
MNTX Cornudas Mount 121.56 54 *e*PKPdf **PKiKP 08 23 15.7 +0.2**
MSTX Muleshoe 122.89 51 *e*PKPdf **PKPdf 08 23 16.0 -1.9**
TXAR Lajitas Array 123.67 57 PKP **PKiKP 08 23 20.3 +0.5**
comp=Z,0.9nm,0.8s,baz=210,slow=1.4,SNR=8.3
ESDC Sonseca Array 124.09 317 PKP **PKiKP 08 23 20.2 0.0**
comp=Z,0.5nm,0.7s,baz=22,slow=3.7,SNR=4.3
JCT Junction City 126.48 54 *e*PKPdf **PKPdf 08 23 24.5 -0.3**
JCT Junction City 126.48 54 *e*PKiKP **PKPdf 08 23 24.5 -0.3**
TORD Torodi Ar. Bea 127.07 284 PKP **PKiKP 08 23 26.2 -0.5**
comp=Z,3.8nm,1.0s,baz=97,slow=1.7,SNR=7.6
TOA1 Torodi Ar. Sit 127.07 284 *e*PKiKP **PKiKP 08 23 26.2 -0.5**
MIAR Mount Ida 129.57 47 *e*PKPdf **PKPdf 08 23 29.7 -0.8**
MIAR Mount Ida 129.57 47 *e*PKiKP **PKPdf 08 23 29.7 -0.8**
LRAL Lakeview Retre 135.04 44 *e*PKPdf **PKPdf 08 23 41.1 +0.3**
GO03 Copiap 144.22 150 *e*PKPdf **PKPdf 08 23 56.6 -1.2**
JTS Las Juntas de 145.50 76 PKPbc **PKPab 08 24 01.4 +0.9**
comp=Z,23nm,0.9s,baz=350,slow=3.0,SNR=22
JTS Las Juntas de 145.50 76 *e*PKPdf **PKPdf 08 23 59.0 -1.3**
JTS Las Juntas de 145.50 76 *e*PKP2 **PKPdf 08 23 59.0 -1.3**
GO02 Mina Guanaco 146.54 148 *e*PKPdf **PKPdf 08 23 59.8 -2.3**
CPUP Villa Florida 150.05 168 PKPbc **PKPbc 08 24 11.8 -0.6**
comp=Z,6.2nm,0.9s,baz=292,slow=0.6,SNR=9.4
NNA Nana 150.18 121 PKPbc **PKPbc 08 24 13.2 +0.2**
comp=Z,2.5nm,0.3s,baz=354,slow=3.0,SNR=3.7
ATAH Atahualpa 150.75 111 PKPbc **PKiKP 08 24 16.8 +1.2**
comp=Z,7.7nm,0.7s,baz=135,slow=5.0,SNR=6.2
LPAZ La Paz 154.27 139 *e*PKPdf **PKPdf 08 24 12.7 -2.1**
LPAZ La Paz 154.27 139 *e*PKiKP **PKPdf 08 24 12.7 -2.1**
ROSC El Rosal 156.61 85 PKPab **PKPab 08 24 48.3 +1.5**
comp=Z,2.0nm,0.4s,baz=246,slow=20,SNR=3.4

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*ANF **16** 08:08:36.0±0.7, 35°.57N×97°.30W, ML3.5/8, Error ellipse: s-maj=12.4km s-min=5.2km az=155.0*
*ISCJB **16** 08:08:36.8±0.6, 35°.56N±0°.03×97°.28W±0°.03, h8km±4km, Error ellipse: s-maj=5.7km s-min=3.5km az=166.1*
*NEIC **16** 08:08:37.5±0.0, 35°.57N×97°.31W, h7km, ML3.1(TUL), After TUL.*
NEIC Felt at Spencer.
*TUL **16** 08:08:37.5, 35°.57N×97°.31W, h7km, ML3.1*
ISC 16 08:08:36.9±1.1, 35°.57N±0°.03×97°.30W±0°.02, h2km±8km, n29, σ1°.26/42, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK001	**Jones High Sch**	**0.01**	**146**	*e*Pg	**Pg**	**08 08 38.6**	**+1.1**
OK009	**Oakdale Elemen**	**0.10**	**274**	*e*Pg	**Pg**	**08 08 39.9**	**+1.0**

OK005	Luther M Schoo	0.12	48	*e*Pg	Pg	08 08 40.4	+1.1
TUL1	Leonard	1.27	74	*e*Pn	Pn	08 09 00.1	-1.6
TUL1				*e*Sg	Sb	08 09 17.7	-0.7
TUL1	Leonard	1.27	74	P	Pn	08 09 00.1	-1.6
	baz=255						
TUL1				S	Sb	08 09 18.0	-0.5
	baz=255						
WMOK	Wichita Mounta	1.47	236	*e*Pn	Pn	08 09 03.9	-0.6
WMOK				*e*Sn	Sb	08 09 23.9	-0.3
WMOK	Wichita Mounta	1.47	236	P	Pn	08 09 03.8	-0.7
	baz=55						
WMOK				S	Sn	08 09 23.2	-1.1
	baz=55						
U32A	Winter Ranch,	1.60	301	*e*Pn	Pn	08 09 06.6	+0.3
U32A				*e*Sn	Sb	08 09 27.9	+0.1
X37A	Clayton	1.86	121	*e*Pn	Pb	08 09 10.9	-0.8
HHAR	Hobbs	2.82	75	*e*Pn	Pn	08 09 25.4	+2.4
W39A	Magazine	2.90	96	*e*Pn	Pn	08 09 25.4	+1.4
W39A	Magazine	2.90	96	P	Pn	08 09 23.3	-0.8
	baz=278						
W39A				S	Sn	08 09 59.8	+0.3
	baz=278						
MIAR	Mount Ida	3.22	107	*e*Pn	Pn	08 09 28.3	-0.2
MIAR	Mount Ida	3.22	107	P	Pn	08 09 29.5	+0.9
	baz=290						
MIAR				S	Sn	08 10 07.2	-0.3
	baz=290						
ABTX	Abilene, Hawle	3.53	214	*e*Pn	Pn	08 09 32.0	-0.7
ABTX				*e*Sg	Sb	08 10 26.4	+3.0
ABTX	Abilene, Hawle	3.53	214	P	Pn	08 09 31.7	-1.1
	baz=33						
ABTX				S	Sn	08 10 15.6	+0.5
	baz=33						
KSU1	Kansas State U	3.56	9	P	Pn	08 09 33.2	0.0
	baz=189						
KSU1				S	Sn	08 10 16.8	+0.9
	baz=189						
WHTX	Lake Whitney,	3.58	182	*e*Pn	Pn	08 09 33.3	-0.1
WHTX	Lake Whitney,	3.58	182	Pb	Pb	08 09 40.3	-0.6
	baz=1.9						
WHTX				S	Sn	08 10 16.7	+0.5
	baz=1.9						
AMTX	Amarillo	3.65	260	*e*Pn	Pn	08 09 34.0	-0.6
AMTX	Amarillo	3.65	260	Pb	Pb	08 09 41.4	-0.9
	baz=78						
AMTX				S	Sn	08 10 19.0	+0.8
	baz=78						
CBKS	Cedar Bluff	3.77	330	*e*Pn	Pn	08 09 36.4	+0.2
X40A	Basin Creek Fa	3.82	105	*e*Sn	Sg	08 10 36.6	-3.1
WLAR	White Oak Lake	3.93	117	*e*Pn	Pn	08 09 38.2	-0.1
WLAR				*e*Sg	Sb	08 10 38.8	+3.8
WHAR	Wooly Hollow	4.10	93	*e*Pn	Pn	08 09 40.4	-0.2
W41B	Gary Mavity, V	4.15	94	*e*Pn	Pn	08 09 41.4	+0.2
FCAR	Ozark Folk Cen	4.22	84	*e*Pn	Pn	08 09 42.0	-0.3
MSTX	Muleshoe	4.78	252	*e*Pn	Pn	08 09 49.6	-0.4
X43A	Marvell	5.37	99	*e*Pn	Pn	08 09 58.0	0.0

HLW **16** *08:15:14.8, 34°.52N×25°.00E, h22km±51km, Md4.6, Ml4.3*
MOS **16** *08:15:14.8±1.4, 34°.24N×24°.83E, h33km, mb4.7/18, Error ellipse: s-maj=7.6km s-min=4.1km az=76.9*
GII **16** *08:15:14.4±0.0, 34°.27N×25°.12E, h10km, mb4.3/3, MD4.1/3*
ISCJB **16** *08:15:15.8±0.3, 34°.19N±0°.02×25°.12E±0°.02, h41km±3km, mb4.3/56, MS4.2/1, Error ellipse: s-maj=3.6km s-min=2.3km az=37.5*
IDC **16** *08:15:15.9±2.1, 34°.32N×25°.07E, h28km±13km, mb4.1/25, mb1 4.2/35, mb1mx4.1/54, mbtmp4.3/35, ML4.2/10, MS3.1/5, Ms1 3.1/5, ms1mx2.8/34, Error ellipse: s-maj=14.1km s-min=11.6km az=1.0*
NSSC **16** *08:15:16.6±0.8, 37°.38N×26°.31E, h4km±999km, ML3.5*
NEIC **16** *08:15:16.7±0.0, 34°.33N×25°.04E, h0km, mb4.3/29, ML4.0(THE), After THE.*
THE **16** *08:15:16.7, 34°.33N×25°.04E, h0km±1km, ML4.0/4, Error ellipse: s-maj=2.1km s-min=0.7km az=178.0*
ATH **16** *08:15:18.3, 34°.46N×25°.05E, h29km, ML3.8/16, Error ellipse: s-maj=2.4km s-min=1.0km az=1.0*
DDA **16** *08:15:22.6, 34°.23N×25°.16E, h15km±1km, ML4.3*
ISC 16 08:15:16.4±0.9, 34°.28N±0°.04×25°.06E±0°.03, h30km±6km, n391, σ1.92/428, mb4.5/56, 13C-16D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.76	344	P	Pn	08 15 30.9	-0.2
SIVA				S	Sb	08 15 41.4	+0.2
SIVA	Sivas	0.76	344	P	Pb	08 15 30.7	-0.4
SIVA				S	Sb	08 15 39.1	-2.1
SIVA				AML	AML	08 15 50.4	
	comp=E,68481μm,0.5s						
SIVA				AML	AML	08 15 53.8	
	comp=N,61886μm,0.5s						
TMBK	Timbaki Herakl	0.82	343	P	Pn	08 15 32.4	+0.5
TMBK				S	Sn	08 15 44.9	+1.8
LAST	Lasithi	0.94	21	P	Pn	08 15 33.9	+0.2
LAST				S	Sn	08 15 48.0	+1.8
LAST	Lasithi	0.94	21	P	Pn	08 15 34.1	+0.5
LAST				AML	AML	08 15 54.1	
	comp=N,12670μm,0.4s						
LAST				AML	AML	08 15 55.5	
	comp=E,8220μm,0.7s						
GVD	Gavdhos	0.97	305	P	Pn	08 15 34.9	+0.8
GVD	Gavdhos	0.97	305	*e*Pg	Pn	08 15 34.7	+0.7
GVD				*e*Sn	Sn	08 15 49.4	+2.6
GVD	Gavdhos	0.97	305	P	Pn	08 15 34.7	+0.7
GVD				S	Sn	08 15 49.4	+2.6
GVD	Gavdhos	0.97	305	P	Pn	08 15 34.8	+0.8
GVD				S	Sn	08 15 48.1	+1.3
GVD				AML	AML	08 15 54.5	
	comp=N,22121μm,0.3s						
GVD				AML	AML	08 16 00.3	
	comp=E,26590μm,0.4s						
IDI	Anoyia	1.01	352	Pg	Pb	08 15 34.7	-0.8
	comp=E,150nm,0.3s,baz=168,slow=22,SNR=93						
IDI				Lg	Lg	08 15 48.2	
	comp=E,542nm,0.3s,baz=114,slow=18,SNR=20						
IDI				LR	LR	08 16 18.8	
	comp=E,1μm,19.4s,baz=109,slow=64						
IDI	Anoyia	1.01	352	P	Pb	08 15 34.9	-0.6
KSTL	Kastelli Herak	1.02	1	P	Pn	08 15 34.3	-0.3
KSTL				S	Sn	08 15 48.6	+0.7
IACM	Heraklion	1.02	1	P	Pb	08 15 35.4	-0.1
IACM				S	Sn	08 15 49.5	+1.6
IACM	Heraklion	1.02	1	P	Pb	08 15 35.2	-0.3
IACM				S	Sb	08 15 46.5	-2.1
NPS	Neapolis	1.08	25	P	Pb	08 15 36.1	-0.4
NPS	Neapolis	1.08	25	P	Pb	08 15 36.4	-0.1
NPS				AML	AML	08 15 58.3	
	comp=N,6810μm,0.5s						
NPS				AML	AML	08 16 06.5	
	comp=E,9553μm,0.7s						
PRNS	Prines Rethymn	1.17	337	P	Pb	08 15 37.9	-0.2
STIA	Sitia Lasithi	1.25	43	P	Pb	08 15 39.8	+0.4
ZKR	Zakros	1.27	49	P	Pb	08 15 39.3	-0.4
ZKR	Zakros	1.27	49	*e*Pg	Pb	08 15 39.7	0.0
ZKR				*e*Pg	Pb	08 15 39.7	0.0
ZKR				*e*Sn	Sb	08 15 58.4	+2.8
ZKR				*e*Sn	Sb	08 15 58.4	+2.8
ZKR	Zakros	1.27	49	P	Pb	08 15 39.7	0.0
ZKR				S	Sb	08 15 58.4	+2.8
ZKR	Zakros	1.27	49	P	Pb	08 15 39.6	-0.1
ZKR				AML	AML	08 16 04.4	
	comp=N,3221μm,0.6s						
ZKR				AML	AML	08 16 11.8	
	comp=E,7682μm,1.0s						
VAM	Vamos	1.33	328	P	Pb	08 15 40.2	-0.5
VAM	Vamos	1.33	328	P	Pb	08 15 40.6	-0.1
VAM				AML	AML	08 16 08.2	
	comp=N,8449μm,0.5s						
VAM				AML	AML	08 16 13.1	
	comp=E,15361μm,0.5s						
IMMV	Iera Moni Meta	1.47	323	P	Pb	08 15 43.1	-0.1
IMMV	Iera Moni Meta	1.47	323	P	Pb	08 15 42.1	-1.1
IMMV	Iera Moni Meta	1.47	323	P	Pb	08 15 42.9	-0.3
IMMV				S	Sb	08 16 01.1	-0.4
IMMV				AML	AML	08 16 14.8	
	comp=E,7515μm,0.4s						
IMMV				AML	AML	08 16 15.9	
	comp=N,7145μm,0.8s						
SNT2	Vlychada, Sant	2.08	8	P	Pn	08 15 50.9	+1.7
THR9	Santorini-Faro	2.08	7	P	Pn	08 15 50.2	+1.0
THR6	Thira Island,	2.09	8	*e*Pn	Pb	08 15 51.3	-2.3
THR6	Thira Island,	2.09	8	P	Pb	08 15 51.3	-2.3
THR6	Thira Island,	2.09	8	P	Pb	08 15 51.5	-2.2
SAP1	Santorini-Akro	2.09	7	P	Pn	08 15 51.1	+1.8
SANT	Santorini	2.11	9	*e*Pn	Pb	08 15 51.8	-2.3
KARP	Karpathos	2.14	53	P	Pb	08 15 51.9	-2.6
KARP	Karpathos	2.14	53	*e*Pn	Pb	08 15 53.9	-0.6
KARP	Karpathos	2.14	53	P	Pb	08 15 53.3	-1.2
KARP	Karpathos	2.14	53	P	Pb	08 15 53.7	-0.8
KARP				AML	AML	08 16 49.9	
	comp=E,2625μm,1.0s						
KARP				AML	AML	08 16 52.1	
	comp=N,2563μm,0.8s						
ANKY	Antikythira Is	2.14	318	*e*Pn	Pb	08 15 52.7	-1.8
ANKY	Antikythira Is	2.14	318	P	Pb	08 15 52.7	-1.8
ANKY	Antikythira Is	2.14	318	P	Pb	08 15 53.0	-1.5
ANKY				AML	AML	08 16 42.9	
	comp=E,2900μm,0.8s						
ANKY				AML	AML	08 16 45.6	
	comp=N,1595μm,1.0s						
THR3	Thira Island,	2.14	7	P	Pb	08 15 52.3	-2.2
THR5	Thira Island,	2.14	6	P	Pn	08 15 51.9	+1.8
THR5	Thira Island,	2.14	6	P	Pb	08 15 52.1	-2.4
ANAF	Anafi Island	2.15	16	P	Pb	08 15 52.6	-2.1
ANAF	Anafi Island	2.15	16	P	Pb	08 15 52.4	-2.3
ANAF				AML	AML	08 16 32.5	
	comp=E,4717μm,0.4s						
ANAF				AML	AML	08 16 36.3	
	comp=N,6586μm,0.4s						
SAP3	Santorini-Thir	2.16	6	P	Pn	08 15 51.9	+1.6
IOSP	Ios island	2.44	4	P	Pn	08 15 55.6	+1.4
IOSP	Ios island	2.44	4	P	Pn	08 15 56.0	+1.7
MHLO	Agia Marina, M	2.46	348	P	Pn	08 15 55.9	+1.4
MHLO	Agia Marina, M	2.46	348	P	Pn	08 15 56.3	+1.8
MHLO				AML	AML	08 16 45.2	
	comp=N,5197μm,0.6s						
MHLO				AML	AML	08 16 52.6	
	comp=E,6019μm,0.6s						
MHLA	Plaka, Milos I	2.51	348	P	Pn	08 15 57.1	+1.9
KYTH	Kithira	2.57	321	*e*Pn	Pb	08 15 59.0	-2.9
KYTH	Kithira	2.57	321	P	Pb	08 15 59.0	-2.9
KYTH	Kithira	2.57	321	P	Pb	08 15 59.4	-2.5
KYTH				AML	AML	08 16 58.5	
	comp=N,1431μm,1.2s						
KYTH				AML	AML	08 17 04.7	
	comp=E,1352μm,0.6s						
AMGA	Amorgos Island	2.63	15	P	Pn	08 15 58.2	+1.3
AMGA	Amorgos Island	2.63	15	P	Pn	08 15 58.1	+1.3
AMGA				AML	AML	08 16 50.8	
	comp=N,929μm,0.5s						
AMGA				AML	AML	08 16 51.0	
	comp=E,1140μm,0.6s						
SLUM	Salum	2.79	177	P	Pn	08 16 00.2	+1.3
	baz=176						
SLUM				AMP		08 16 00.0	
	baz=176						
SLUM				S	Sn	08 16 31.5	0.0
	baz=176						
APE	Apeiranthos	2.81	8	P	Pn	08 16 01.3	+2.0
APE	Apeiranthos	2.81	8	*e*Pn	Pn	08 16 00.6	+1.3
APE	Apeiranthos	2.81	8	P	Pn	08 16 00.6	+1.3
APE	Apeiranthos	2.81	8⇑	*i*P	Pn	08 16 01.3	+2.0
APE	Apeiranthos	2.81	8	*de*P	Pn	08 16 00.7	+1.5
APE	Apeiranthos	2.81	8	P	Pn	08 16 00.7	+1.5
APE				AML	AML	08 16 50.0	
	comp=E,525μm,0.5s						
APE				AML	AML	08 16 56.4	
	comp=N,467μm,0.4s						
SERI	Serifos	2.91	351	P	Pn	08 16 01.8	+1.1
SERI	Serifos	2.91	351	P	Pn	08 16 01.9	+1.3
VLI	Veliai	2.98	325	*e*Pn	Pn	08 16 03.1	+1.5
VLI	Veliai	2.98	325	P	Pn	08 16 03.1	+1.5
VLI	Veliai	2.98	325	P	Pn	08 16 04.1	+2.4
VLI				AML	AML	08 17 04.3	
	comp=N,797μm,0.7s						
VLI				AML	AML	08 17 13.8	
	comp=E,605μm,0.5s						
ARG	Arkhangelos	3.17	52	*e*P	Pn	08 16 06.0	+1.9
ARG	Arkhangelos	3.17	52	*e*Pn	Pn	08 16 06.9	+2.8
ARG	Arkhangelos	3.17	52	P	Pn	08 16 06.9	+2.8
ARG	Arkhangelos	3.17	52	*e*P	Pn	08 16 06.9	+2.8
ARG	Arkhangelos	3.17	52	P	Pn	08 16 07.1	+2.9
ARG				AML	AML	08 17 15.5	
	comp=N,619μm,1.1s						
ARG				AML	AML	08 17 17.4	
	comp=E,690μm,1.0s						
DAT	Datca	3.19	39	P	Pn	08 16 06.4	+1.8
DAT	Datca	3.19	39	*i*P	Pn	08 16 06.1	+1.5
BODT	Bodrum	3.32	33	*e*P	Pn	08 16 07.6	+1.3
BDRM	Kayabasi	3.39	34	*i*P	Pn	08 16 10.3	+3.1
BDRM				IAML_P			
	comp=Z,782nm,0.2s						
BBRN	Bozburun-Marma	3.42	45	*e*P	Pn	08 16 09.3	+1.6
KRND	KRANIDI	3.46	334	P	Pn	08 16 09.6	+1.4
KRND	KRANIDI	3.46	334	P	Pn	08 16 10.3	+2.1
DID	Didima	3.54	336	*e*Pn	Pn	08 16 10.2	+0.9
DID	Didima	3.54	336	P	Pn	08 16 10.2	+0.9
DID	Didima	3.54	336	P	Pn	08 16 10.6	+1.3
EPID	Epidavros	3.68	335	P	Pn	08 16 13.0	+1.8
VLY	Voula,Athens	3.71	344	P	Pn	08 16 13.8	+2.2
SMG	Samos	3.71	22	P	Pn	08 16 13.3	+1.7
SMG	Samos	3.71	22	P	Pn	08 16 13.5	+1.9
PYL	PYLOS	3.75	315	P	Pn	08 16 13.7	+1.5
VLX	Vlachokerasia	3.77	326	P	Pn	08 16 15.6	+3.0
ATHU	Athens Univers	3.82	345	P	Pn	08 16 14.6	+1.5
ITM	Ithomi	3.85	320	*e*Pn	Pn	08 16 15.7	+2.1
ITM	Ithomi	3.85	320	P	Pn	08 16 15.2	+1.6
YER	Yerkesik	3.87	42	*e*P	Pn	08 16 15.9	+2.0
YER	Yerkesik	3.87	42	*e*Pn	Pn	08 16 16.3	+2.4
YER	Yerkesik	3.87	42	P	Pn	08 16 16.3	+2.4
YER	Yerkesik	3.87	42	*e*P	Pn	08 16 16.3	+2.4
DALY	Dalyan (Mula)	3.87	48	*e*P	Pn	08 16 16.6	+2.8
DALY	Dalyan (Mula)	3.87	48	*i*P	Pn	08 16 16.6	+2.8
DALY				IAML_P			
	comp=Z,1μm,0.2s						
TURN	Turunc	3.88	47	*e*P	Pn	08 16 11.9	-2.0
TURN	Turunc	3.88	47	*i*P	Pn	08 16 12.5	-1.3
TURN				*i*S	Sn	08 16 51.8	-6.6
TURN				IAML_P			
	comp=Z,2μm,0.3s						
PTL	Penteli	3.88	346	*e*Pn	Pn	08 16 15.3	+1.3
PTL	Penteli	3.88	346	P	Pn	08 16 15.3	+1.3
PTL	Penteli	3.88	346	P	Pn	08 16 15.6	+1.6
TRIP	Tripoli	3.95	326	P	Pn	08 16 18.2	+3.2
FETY	Fethiye	4.04	53	*e*P	Pn	08 16 18.1	+1.9
FETY	Fethiye	4.04	53	*i*P	Pn	08 16 17.5	+1.3
AYDN	Tasoluk	4.07	33	*i*P	Pn	08 16 20.4	+3.8
AYDN				*i*S	Sb	08 17 11.8	-4.4
AYDN				IAML_P			
	comp=Z,2μm,0.3s						
LTK	Loutraki	4.10	336	P	Pn	08 16 18.5	+1.5
ZEY	zmir	4.12	16	*i*P	Pn	08 16 19.1	+1.9
ZEY				IAML_P			
	comp=Z,1μm,0.2s						
VILL	Villia	4.12	340	P	Pn	08 16 18.5	+1.1
CHOS	Chios island	4.17	11	*e*P	Pn	08 16 20.2	+2.1
CHOS	Chios island	4.17	11	P	Pn	08 16 19.7	+1.6
CHOS	Chios island	4.17	11	P	Pn	08 16 20.0	+2.0
VIL2	Platees	4.18	340	P	Pn	08 16 18.9	+0.8
AKAS	Kas	4.20	61	*e*P	Pn	08 16 20.9	+2.4
AKAS	Kas	4.20	61	*i*P	Pn	08 16 20.1	+1.6
AKAS				*i*S	Sn	08 17 06.5	-0.1
AKAS				IAML_P			
	comp=Z,4μm,0.3s						
URLA	Izmir	4.25	17	*e*P	Pn	08 16 21.5	+2.4
URLA	Izmir	4.25	17	*i*P	Pn	08 16 19.9	+0.7
GUR	Goura	4.26	330	P	Pn	08 16 21.4	+2.2
AYDB	Zeytinkoy-Aydi	4.32	31	*e*P	Pn	08 16 21.9	+1.8
PROD	Prodromos	4.33	337	P	Pn	08 16 21.8	+1.5
KLV	Kalavryta, Ach	4.43	329	P	Pn	08 16 23.6	+2.0
DRO	Drossia	4.56	324	P	Pn	08 16 25.8	+2.5
MRKA	Markates	4.57	345	P	Pn	08 16 24.9	+1.4
MRKA	Markates	4.57	345	P	Pn	08 16 24.9	+1.4
ELL	Elmali	4.66	57	*e*P	Pn	08 16 26.8	+2.0
LKR	Lokris	4.66	340	P	Pn	08 16 26.4	+1.7
ATAL	Atalanti	4.70	340	*e*Pn	Pn	08 16 26.6	+1.4
ATAL	Atalanti	4.70	340	P	Pn	08 16 26.6	+1.4
AKUM	Antalya-Kumluc	4.78	63	*i*P	Pn	08 16 27.9	+1.6
AKUM				*i*S	Sn	08 17 19.6	-1.0
AKUM				IAML_P			
	comp=Z,2μm,0.2s						
ANX	Ano Chora	4.99	330	P	Pn	08 16 32.2	+2.9
SWA2		5.04	176	P	Pn	08 16 30.7	+0.8
	baz=175						
SWA2				AMP		08 17 00.0	
	baz=175						
SWA2				S	Sn	08 17 25.9	-1.1
	baz=175						
MANT	Manisa	5.06	33	*e*Pn	Pn	08 16 32.5	+2.1
MANT	Manisa	5.06	33	*i*P	Pn	08 16 33.1	+2.8
MANT				IAML_P			
	comp=Z,712nm,0.4s						
KORT	Korkueli	5.09	56	*e*P	Pn	08 16 33.2	+2.5
KULA	Kula-Manisa	5.13	33	*e*P	Pn	08 16 33.6	+2.4
PVO	Paravola	5.18	328	P	Pn	08 16 35.0	+3.2
AGG	Agios Georgios	5.21	336	*e*Pn	Pn	08 16 33.8	+1.5
AGG	Agios Georgios	5.21	336	P	Pn	08 16 33.7	+1.4
AGG	Agios Georgios	5.21	336	*e*P	Pn	08 16 33.8	+1.5
AGG	Agios Georgios	5.21	336	P	Pn	08 16 34.7	+2.4
ANTB	Antalya	5.25	59	*e*P	Pn	08 16 36.1	+3.3
BRDR	BURDUR-Merkez	5.30	49	*i*P	Pn	08 16 33.3	-0.2
VLS	Valsamata	5.31	318	P	Pn	08 16 36.4	+2.8
VLS	Valsamata	5.31	318	P	Pn	08 16 36.4	+2.8
EVR	Evrytania	5.31	331	P	Pn	08 16 36.9	+3.1
KHAL	Karahalli	5.43	40	*i*P	Pn	08 16 37.2	+1.9
KHAL				*i*S	Sn	08 17 35.8	-1.0
KHAL				IAML_P			
	comp=Z,413nm,0.2s						
USAK	Uak-Merkez	5.45	35	*i*P	Pn	08 16 38.0	+2.4
USAK				IAML_P			
	comp=Z,2μm,0.4s						
HBRG	Burj al `Arab	5.48	131	P	Pn	08 16 37.1	+1.2
	baz=132						
BCK	Bucak	5.50	53	*e*P	Pn	08 16 39.2	+2.9
FSK	Fiskardo	5.53	320	P	Pn	08 16 39.6	+3.1
BAYC	CANAKKALE_Bayr	5.58	12	*i*P	Pn	08 16 39.1	+1.8
BAYC				IAML_P			
	comp=Z,479nm,0.4s						
EZN	Ezine	5.62	10⇓	*i*P	Pn	08 16 39.9	+2.0
LKD2	Lefkada island	5.72	323	P	Pn	08 16 41.1	+1.8
LKD2	Lefkada island	5.72	323	P	Pn	08 16 41.3	+1.9
BALB	Balikesir	5.80	22	*e*Pn	Pn	08 16 41.3	+0.9
KEPZ	Antalya-Kepez	5.94	62	*i*P	Pn	08 16 44.7	+2.4
KEPZ				*i*S	Sn	08 17 47.3	-2.0
KEPZ				IAML_P			
	comp=Z,712nm,0.3s						
GDZ	Gediz	5.97	35	*i*P	Pn	08 16 45.2	+2.4
GDZ				IAML_P			
	comp=Z,384nm,0.5s						
DURS	Dursunbey	5.97	26	*i*P	Pn	08 16 45.1	+2.3
DURS				IAML_P			
	comp=Z,598nm,0.5s						
LEF	Lefka	6.50	80⇑	*i*P	Pn	08 16 47.0	-3.0
LEF	Lefka	6.50	80	*i*P	Pn	08 16 47.9	-2.1
LEF				*i*S	Sn	08 17 57.2	-6.0
HNAT	Natroun	6.62	133	P	Pn	08 16 52.1	+0.5
	baz=134						
HNAT				S	Sn	08 18 03.6	-2.4
	baz=134						
ALN	Alexandroupoli	6.65	6	*e*Pn	Pn	08 16 53.3	+1.3
ALN	Alexandroupoli	6.65	6	*e*P	Pn	08 16 53.3	+1.3
ULDT	Uludag	6.69	28	*i*P	Pn	08 16 55.1	+2.3
ULDT				IAML_P			
	comp=Z,25nm,0.2s						
ERMK	Ermenek	6.83	68	*i*P	Pn	08 16 56.9	+2.3
ERMK				IAML_P			
	comp=Z,137nm,0.1s						
KONT	Konya--Tatoy	6.95	56	*i*P	Pn	08 17 00.2	+4.1
KONT				IAML_P			
	comp=Z,326nm,0.3s						
KDHN	Kadinhani	7.09	51	*i*P	Pn	08 16 59.5	+1.3
KDHN				IAML_P			
	comp=Z,143nm,0.3s						
FNA	Florina	7.12	337	*e*Pn	Pn	08 16 59.8	+1.3
FNA	Florina	7.12	337	*e*P	Pn	08 16 59.8	+1.3
GULN	MERSIN_Gulnar	7.20	72	*i*P	Pn	08 17 00.1	+0.5
GULN				*i*S	Sn	08 18 14.5	-5.7
GULN				IAML_P			
	comp=Z,773nm,0.5s						
KOT	Kottamia	7.20	125	P	Pn	08 17 00.0	+0.4
	baz=126						
HHAG	Hagoal	7.37	124	P	Pn	08 17 01.3	-0.7
	baz=125						
MMB	Musomiste	7.37	352	*e*P	Pn	08 17 04.8	+2.9
RZN	Rozhen	7.40	358	*e*P	Pn	08 17 03.7	+1.2
EREN	Erenkoy	7.59	78	*i*P	Pn	08 17 08.0	+3.1
EREN				*i*S	Sn	08 18 22.2	-7.7
EREN				IAML_P			
	comp=Z,6μm,0.4s						
HFRF	Wahat Farafira	7.64	158	P	Pn	08 17 06.0	+0.3
	baz=157						
KRUS	Krusevo	7.69	338	*e*Pn	Pn	08 17 06.7	+0.4
KKB	Krupnik	7.73	349	*e*P	Pn	08 17 08.7	+1.9
STIP	Stip	7.74	344	*e*Pn	Pn	08 17 07.6	+0.7
NBNS	Bani Suef	7.76	135	P	Pn	08 17 08.3	+1.1
	baz=135						
MDUB	Mudurnu	7.87	37	*e*Pn	Pn	08 17 09.9	+1.0
KERG	Konya-Eregli	8.00	64	*i*P	Pn	08 17 12.5	+1.8
KERG				*i*S	Sn	08 18 36.2	-3.9
KERG				IAML_P			
	comp=Z,24nm,0.2s						
TIR	Tirane	8.16	331	*e*Pn	Pn	08 17 13.7	+0.9
TIR	Tirane	8.16	331	*e*P	Pn	08 17 13.7	+0.9
TIP	Timpagrande	8.26	309	*e*Pn	Pn	08 17 15.1	+0.9
TIP	Timpagrande	8.26	309	‖*i*P	Pn	08 17 15.7	+1.5
BR231	Keskin MP Arra	8.29	46	*e*Pn	Pn	08 17 14.9	+0.2
ANTO	Ankara	8.32	46	*e*Pn	Pn	08 17 15.6	+0.6
ANTO	Ankara	8.32	46	*e*P	Pn	08 17 15.6	+0.6
CEL	Celeste	8.40	301	*e*Pn	Pn	08 17 17.3	+1.3
VTS	Vitosha	8.44	351⇑	*i*P	Pn	08 17 19.2	+2.4
GULE	Gulek	8.45	66	*i*P	Pn	08 17 19.8	+3.0
GULE				*i*S	Sn	08 18 50.8	-0.4
GULE				IAML_P			
	comp=Z,246nm,0.2s						
MMA0B	Mount

HRFI	Mount Harif	9.46	114	P		Pn	08 17 31.2 +0.6
HRFI	Mount Harif	9.46	114	P		Sn	08 19 10.6 -5.3
comp=E,66nm,0.8s							
MBRI	Mt Berech	9.48	115	Pn		Pn	08 17 30.3 -0.7
TOTH	TOTAH	9.50	92	eP		Pn	08 17 31.6 +0.4
TOTH				eS		Sn	08 19 08.0 -9.1
TOTH				AML		AML	08 19 18.5
comp=E,24nm,0.4s							
TOTH				AML		AML	08 19 19.0
comp=N,26nm,0.5s							
EIL	Elat	9.58	116	Pn		Pn	08 17 31.3 -0.9
comp=N,3.3nm,0.3s,baz=172,slow=5.2,SNR=15							
EIL				Sn		Sn	08 19 12.6 -6.1
comp=N,3.1nm,0.3s,baz=30,slow=16,SNR=3.9							
EIL	Elat	9.58	116	Pn		Pn	08 17 31.6 -0.6
JDRJ	Daraweish	9.63	109	P		Sn	08 19 18.5 -1.8
HSNJ	Maan	9.85	111	P		Sn	08 19 25.0 -0.7
ASF	Jabal al Asfar	10.14	99	Pn		Pn	08 17 38.2 -1.8
comp=N,0.5nm,0.3s,baz=240,slow=8.1,SNR=3.6							
ASF				Sn		Sn	08 19 23.0 -10
comp=N,0.3nm,0.3s,baz=297,slow=18,SNR=2.0							
HERR	Herculane	10.78	350⇑	iP		Pn	08 17 51.2 +2.6
MDVR	Moldovita	10.80	347⇑	iP		Pn	08 17 51.0 +2.1
VOIR		11.14	360⇑	iP		Pn	08 17 54.8 +1.2
MLR	Muntele Rosu	11.21	3⇑	iP		Pn	08 17 57.3 +2.6
BZS	Buzias	11.62	348⇑	iP		Pn	08 18 01.8 +1.7
VRI	Vrincioaia	11.64	6⇑	iP		Pn	08 18 02.5 +2.1
NVLJ	Novalja	12.93	326	i Pn		Pn	08 18 15.8 -2.1
KEST	Kesra	12.96	281	LR		LR	08 22 55.6
comp=N,54nm,20.9s,baz=313,slow=35							
SOKA	Soboth	14.53	331	ePn		Pn	08 18 42.1 +2.2
comp=N,0.4nm,0.2s							
SOKA				eP		P	08 18 48.7 +2.6
comp=N,6.0nm,1.0s							
OBKA	Obir	14.59	330	eP		P	08 18 44.1 -2.7
comp=N,0.5nm,0.4s							
ARSA	Arzberg	14.82	334	ePn		Pn	08 18 45.8 +2.1
comp=N,0.3nm,0.4s							
ARSA				eP		P	08 18 51.3 +2.0
comp=N,1.6nm,0.5s							
VYHS	Vyhne	14.94	344	eP		Pn	08 18 41.4 -3.9
VYHS	Vyhne	14.94	344	ePN		Pn	08 18 41.4 -3.9
VYHS	Vyhne	14.94	344	eP		P	08 18 50.3 -0.3
MYKA	Terra Mystica	15.07	328	P		P	08 18 53.4 +1.3
comp=N,0.7nm,0.4s							
MODS	Modra-Piesok	15.23	340	eP		P	08 18 54.4 +0.6
MODS	Modra-Piesok	15.23	340	eP		P	08 18 54.4 +0.6
KWP	Kalwaria Pacla	15.44	354	ePn		Pn	08 18 51.7 -0.2
comp=N,101nm,0.8s							
KWP	Kalwaria Pacla	15.44	354	eP		Pn	08 18 51.7 -0.2
KWP				pmax		pmax	
comp=Z,101nm,0.8s							
KBA	Koelnbreinsper	15.54	329	eP		P	08 19 00.1 +2.7
comp=Z,7.9nm,0.8s							
KBA	Koelnbreinsper	15.54	329	P		P	08 19 00.8 +3.3
KBA				pmax		pmax	
comp=Z,12nm,1.0s							
JAVC	Velka Javorina	15.57	342	ePN		P	08 18 57.0 -0.6
ABTA	Abfaltersbach	15.66	326	eP		P	08 19 00.6 +1.9
comp=Z,6.9nm,0.6s							
MOA	Molln	15.79	332	eP		P	08 19 01.3 +1.3
comp=Z,6.7nm,1.0s							
KRUC	Moravsky	16.11	339	ePN		P	08 19 04.8 +1.3
VRAC	Vranov	16.27	340	Pn		Pn	08 19 02.0 -0.6
comp=Z,0.3nm,0.3s,baz=154,slow=11,SNR=2.8							
VRAC	Vranov	16.27	340	P		Pn	08 19 02.0 -0.6
VRAC	Vranov	16.27	340	ePN		P	08 19 05.5 +0.1
NEY	Neytrino	16.40	52⇓	iP		P	08 19 08.9 +1.8
NEY				pmax		pmax	
comp=Z,5.0nm,1.0s							
MORC	Moravsky Berou	16.44	343	ePn		Pn	08 19 04.8 0.0
comp=Z,2.6nm,0.8s							
MORC	Moravsky Berou	16.44	343	eP		Pn	08 19 04.8 0.0
MORC				pmax		pmax	
comp=Z,3.0nm,0.8s							
WTTA	Wattenberg	16.45	326	Pn		P	08 19 07.8 +0.3
comp=Z,3.1nm,0.6s							
WATA	Walderalm	16.53	326	ePn		Pn	08 19 06.5 +0.5
comp=Z,0.7nm,0.4s							
SHA1	Shidzhatmaz	16.59	50	i P		P	08 19 11.4 +2.2
SQTA	Sankt Quirin	16.61	325	eP		P	08 19 11.9 +2.6
comp=Z,1.9nm,0.5s							
FUORN	Ofenpass-Fuorn	16.66	322	ePn		Pn	08 19 07.1 -0.7
comp=Z,22nm,1.3s							
AKASG	Malin Array Be	16.69	9	Pn		Pn	08 19 07.3 -0.6
comp=Z,3.8nm,0.3s,baz=200,slow=10,SNR=30							
AKASG	Malin Array Be	16.69	9	cePn		Pn	08 19 06.3 -1.5
AKASG				pmax		pmax	
comp=Z,18nm,0.6s							
AKBB	Malin Array Si	16.69	9	ePn		Pn	08 19 07.2 -0.6
comp=Z,24nm,0.8s							
AKBB	Malin Array Si	16.69	9	eP		Pn	08 19 07.2 -0.6
AKBB				pmax		pmax	
comp=Z,24nm,0.8s							
FETA	Feichten	16.70	324	ePn		P	08 19 12.2 +1.9
comp=Z,8.8nm,1.4s							
KIV	Kislovodsk	16.72	49	ePn		Pn	08 19 08.4 +0.1
comp=Z,15nm,0.8s							
KIV	Kislovodsk	16.72	49	eP		P	08 19 10.5 +0.1
KIV				pmax		pmax	
comp=Z,64nm,1.1s							
KIV				MLR		MLR	
comp=Z,113nm,13.0s							
KVAR	Kislovodsk Arr	16.72	50	Pn		P	08 19 09.8 -0.7
baz=73,slow=20,SNR=4.6							
KBZ	Khabaz	16.74	50	Pn		P	08 19 10.2 -0.3
comp=Z,0.7nm,0.3s,baz=242,slow=9.7,SNR=25							
MOTA	Moosalm	16.75	325	epP		P	08 19 15.8 +4.9
comp=Z,1.8nm,0.7s							
GEC2	GERESS Array S	16.82	333	ePn		Pn	08 19 10.6 +1.0
comp=Z,10nm,0.6s							
GEC2	GERESS Array S	16.82	333	eP		Pn	08 19 10.6 +1.0
GEC2				pmax		pmax	
comp=Z,10.0nm,0.6s							
GERES	GERESS Array B	16.82	333	Pn		Pn	08 19 09.2 -0.4
comp=Z,1.4nm,0.3s,baz=145,slow=12,SNR=70							
DAVOX	Davos/Dischmat	16.96	322	Pn		Pn	08 19 11.4 -0.1
comp=Z,0.1nm,0.3s,baz=167,slow=19,SNR=1.8							
ZEI	Tsey	16.99	54	eP		P	08 19 15.1 +1.5
ZEI				pmax		pmax	
comp=Z,10.0nm,0.6s							
RETA	Reutte	17.02	325	eP		P	08 19 15.8 +2.1
comp=Z,2.2nm,0.6s							
NCK	Nalchik	17.08	52⇓	iP		P	08 19 16.9 +2.5
NCK				pmax		pmax	
comp=Z,13nm,1.2s							
KHC	Kasperske Hory	17.10	334	eP		Pn	08 19 13.9 +0.8
comp=Z,3.3nm,1.1s							
KHC	Kasperske Hory	17.10	334	eP		P	08 19 16.1 +1.5
KHC	Kasperske Hory	17.10	334	eP		P	08 19 16.1 +1.5
KHC				ex		x	08 19 21.5
DPC	Dobruska-Polom	17.29	341	eP		P	08 19 16.3 -0.3
DPC	Dobruska-Polom	17.29	341	eP		P	08 19 16.3 -0.3
DPC				ex		x	08 19 23.5
DAVA	Damuels	17.30	323	P		P	08 19 19.0 +2.0
comp=Z,6.3nm,1.3s							
BRG	Berggiesshubel	18.45	337	eP		Pn	08 19 30.2 +0.5
comp=Z,4.2nm,0.8s							
BTLR	Botlikh	18.53	57⇓	iP		Pn	08 19 34.3 +3.5
BTLR				pmax		pmax	
comp=Z,5.0nm,0.8s							
GNBR	Gunib	18.96	58⇓	iP		Pn	08 19 39.8 +3.8
GNBR				pmax		pmax	
comp=Z,16nm,0.5s							
MOX	Moxa	19.07	333	P		Pn	08 19 39.5 +2.3
MOX				pmax		pmax	
comp=Z,7.0nm,0.9s							
CLL	Collm	19.13	336	eP		Pn	08 19 37.7 -0.2
comp=Z,4.9nm,0.8s							
CLL	Collm	19.13	336	eP		Pn	08 19 38.0 +0.1
CLL				i			08 19 44.8
CLL	Collm	19.13	336	eP		Pn	08 19 38.0 +0.1
SUW	Suwalki	19.77	357	eP		P	08 19 42.6 -1.2
comp=Z,56nm,0.9s							
SUW	Suwalki	19.77	357	eP		P	08 19 42.6 -1.2
SUW				pmax		pmax	
comp=Z,56nm,0.9s							
KLNR	Kaliningrad	20.60	352	d iP		P	08 19 50.8 -2.0
KLNR				pmax		pmax	
comp=Z,50nm,1.1s							
WLF	Walferdange	20.74	324	pPn		Pn	08 19 59.8 +2.9
MEM	Membach	21.44	325	P		P	08 20 03.7 +1.9
MEM				pPn		pP	08 20 07.5 -2.0
DOU	Dourbes	21.79	323	P		P	08 20 07.8 +2.2
comp=Z,7.1nm,1.0s							
OBN	Obninsk	22.32	18	P		P	08 20 11.3 0.0
comp=Z,3.2nm,0.4s,baz=175,slow=22,SNR=4.7							
OBN	Obninsk	22.32	18	eP		P	08 20 12.0 +0.7
comp=Z,25nm,0.4s							
OBN	Obninsk	22.32	18⇓	iP		P	08 20 11.1 -0.2
OBN				pmax		pmax	
comp=Z,13nm,0.7s							
ESDC	Sonseca Array	23.75	292	P		P	08 20 26.0 0.0
comp=Z,0.2nm,0.3s,baz=86,slow=9.2,SNR=8.1							
MDT	Midelt	24.73	275	P		P	08 20 35.9 +0.7
comp=Z,1.0nm,0.6s,baz=96,slow=12,SNR=4.2							
GEYT	Alibeck	26.88	73	P		P	08 20 55.3 +0.7
comp=Z,1.9nm,0.5s,baz=297,slow=6.5,SNR=4.4							
HFS	Hagfors	26.91	347	P		P	08 20 54.0 -0.6
comp=Z,3.1nm,0.8s,baz=155,slow=11,SNR=15							
HFS	Hagfors	26.91	347	P		P	08 20 54.0 -0.6
FIA0	FINESS Array S	27.19	1	eP		P	08 20 56.3 -0.7
FIA0	FINESS Array S	27.19	1	eP		P	08 20 56.3 -0.7
FINES	FINESS Array B	27.19	1	P		P	08 20 56.3 -0.7
comp=Z,2.3nm,0.7s,baz=170,slow=11,SNR=7.8							
KONO	Kongsberg	27.34	343⇓	iP		P	08 20 56.1 -2.3
KONO				pmax		pmax	
comp=Z,24nm,1.4s							
KLMR	Klimovskoe	28.19	15	eP		P	08 21 04.1 -1.8
KLMR				pmax		pmax	
comp=Z,8.0nm,0.9s							
KLMR	Klimovskoe	28.19	15	eP		P	08 21 04.1 -1.8
KLMR				AMP			08 21 06.2
comp=Z,8.0nm,0.9s							
NB2	NORSAR Subarra	28.23	346	P		P	08 21 06.1 -0.3
comp=Z,1.0nm,0.6s,baz=156,slow=9.3							
NB200	NORSAR Array S	28.23	346	eP		P	08 21 05.2 -1.1
NOA	NORSAR Array B	28.23	346	P		P	08 21 05.2 -1.1
comp=Z,0.2nm,0.3s,baz=165,slow=9.1,SNR=7.9							
NOA				LR		LR	08 33 50.5
comp=Z,21nm,19.9s,baz=170,slow=40							
EKA	Eskdalemuir Ar	28.71	326	P		P	08 21 10.6 -0.1
comp=Z,1.6nm,0.8s,baz=126,slow=9.4,SNR=4.4							
AKTO	Aktyubinsk	28.91	46	P		P	08 21 12.5 0.0
comp=Z,1.4nm,0.4s,baz=249,slow=6.5,SNR=5.2							
KIRV	Kirov	29.22	26	P		P	08 21 15.1 0.0
comp=Z,10nm,0.5s,baz=218,slow=3.0,SNR=3.2							
TOA1	Torodi Ar. Sit	29.86	231	eP		P	08 21 21.2 -0.1
TOA0	Torodi Ar. Sit	29.87	231	eP		P	08 21 22.2 +0.9
comp=Z,9.3nm,0.6s							
TORD	Torodi Ar. Bea	29.87	231	P		P	08 21 21.2 -0.1
comp=Z,7.1nm,0.5s,baz=32,slow=8.2,SNR=69							
TORD				LR		LR	08 36 38.9
comp=Z,66nm,19.1s,baz=345,slow=43							
PRGR	Permogore	30.36	19	eP		P	08 21 23.0 -2.2
PRGR				pmax		pmax	
comp=Z,9.0nm,0.8s							
ARU	Arti	31.81	36	P		P	08 21 35.7 -2.3
comp=Z,2.4nm,0.5s,baz=206,slow=8.5,SNR=9.4							
ARU	Arti	31.81	36	eP		P	08 21 38.0 -0.1
comp=Z,7.9nm,0.5s							
ARU	Arti	31.81	36	d iP		P	08 21 37.6 -0.5
ARU				S		S	08 26 46.2 -0.1
ARU				pmax		pmax	
comp=Z,6.0nm,0.6s							
SVE	Sverdlovsk	33.01	36⇑	eP		P	08 21 49.4 +0.9
SVE				pmax		pmax	
comp=Z,19nm,0.6s							
ARA0	ARCESS Array S	35.31	0	eP		P	08 22 06.2 -2.1
ARA0				ePcP		PcP	08 24 38.7 +0.6
ARCES	ARCESS Array B	35.31	0	P		P	08 22 06.2 -2.1
comp=Z,1.1nm,0.6s,baz=175,slow=10,SNR=7.2							
ARCES				PcP		PcP	08 24 38.7 +0.6
comp=Z,0.7nm,0.6s,baz=198,slow=2.6,SNR=3.9							
KK31	Karatay Array	36.18	62	eP		P	08 22 17.7 +1.6
comp=Z,5.7nm,0.9s							
KK31	Karatay Array	36.18	62	eP		P	08 22 17.7 +1.6
KK31				pmax		pmax	
comp=Z,6.0nm,0.9s							
KKAR	Karatay Array	36.18	62	eP		P	08 22 17.7 +1.6
comp=Z,5.7nm,0.9s							
KKAR	Karatay Array	36.18	62	eP		P	08 22 17.7 +1.6
KKAR				pmax		pmax	
comp=Z,6.0nm,0.9s							
GAR	Garm	36.33	69	eP		P	08 22 18.6 +1.0
comp=Z,6.1nm,0.8s							
GAR	Garm	36.33	69	eP		P	08 22 18.6 +1.0
GAR				pmax		pmax	
comp=Z,6.0nm,0.8s							
BRVK	Borovoye	36.96	45	ce		P	08 22 24.4 +1.7
BRVK				pmax		pmax	
comp=Z,2.0nm,0.8s							
BVAR	Borovoye Array	37.02	46	P		P	08 22 21.1 -2.0
comp=Z,2.1nm,0.8s,baz=262,slow=5.4,SNR=10							
ARSB	Arslanbob	38.12	65	eP		P	08 22 33.5 +0.8
comp=Z,7.2nm,0.9s							
DBIC	Dimbokro	38.96	232	LR		LR	08 42 12.7
comp=Z,52nm,19.0s,baz=15,slow=42							
DBIC	Dimbokro	38.96	232	eP		P	08 22 40.9 +1.0
comp=Z,20nm,1.3s							
DBIC	Dimbokro	38.96	232	eP		P	08 22 40.9 +1.0
DBIC				pmax		pmax	
comp=Z,20nm,1.3s							
AAK	Ala-Archa	39.13	63	P		P	08 22 41.8 +0.5
comp=Z,2.7nm,0.4s,baz=241,slow=7.0,SNR=7.2							
AAK	Ala-Archa	39.13	63	eP		P	08 22 42.5 +1.3
comp=Z,7.4nm,1.1s							
AAK	Ala-Archa	39.13	63	iP		P	08 22 42.9 +1.6
AAK				pmax		pmax	
comp=Z,4.0nm,0.9s							
KSH	Kashi	40.61	67	eP		P	08 22 52.4 -1.2
KSH				S		S	08 28 58.9 -2.5
KSH				pmax		pmax	
comp=Z,11nm,0.5s							
KSH				pmax		pmax	
comp=Z,160nm,5.3s							
KSH				LR		LR	
comp=N,140nm,13.6s							
KSH				LR		LR	
comp=E,140nm,11.7s							
KSH				LR		LR	
comp=Z,280nm,19.4s							
KURK	Kurchatov	41.80	50	eP		P	08 23 04.0 +1.0
comp=Z,5.8nm,0.8s							
KURK	Kurchatov	41.80	50	d iP		P	08 23 04.3 +1.3
KURK				pmax		pmax	
comp=Z,6.0nm,0.9s							
MAKZ	Makanchi	44.12	56	eP		P	08 23 23.3 +1.4
comp=Z,3.7nm,1.0s							
MAKZ	Makanchi	44.12	56	eP		P	08 23 23.3 +1.4
MAKZ				pmax		pmax	
comp=Z,4.0nm,1.0s							
MK31	Makanchi Array	44.33	56	eP		P	08 23 25.2 +1.6
comp=Z,5.1nm,0.8s							
MK31	Makanchi Array	44.33	56	eP		P	08 23 25.2 +1.6
MK31				pmax		pmax	
comp=Z,5.0nm,0.8s							
MK32	Makanchi Array	44.33	56	eP		P	08 23 24.6 +1.0
MKAR	Makanchi Array	44.33	56	P		P	08 23 24.6 +1.0
comp=Z,6.4nm,0.7s,baz=277,slow=6.5,SNR=58							
MKAR	Makanchi Array	44.33	56	i P		P	08 23 25.1 +1.5
MKAR				pmax		pmax	
comp=Z,7.0nm,0.7s							
NVS	Novosibirsk	44.77	44	i P		P	08 23 28.7 +1.8
NVS				pmax		pmax	
comp=E,5.0nm,0.8s							
NVS				pmax		pmax	
comp=Z,14nm,0.8s							
ZAA0	Zalesovo Array	45.67	46	eP		P	08 23 34.6 +0.5
comp=Z,9.2nm,0.6s							
ZAA1	Zalesovo Array	45.67	46	eP		P	08 23 34.6 +0.5
ZALV	Zalesovo Beam	45.67	46	P		P	08 23 34.6 +0.5
comp=Z,11nm,0.4s,baz=269,slow=8.8,SNR=36							
DGZ	Jazzator, Alta	47.49	51⇓	iP		P	08 23 50.4 +1.8
DGZ				pmax		pmax	
comp=Z,2.0nm,0.8s							
WMQ	Urumqi	48.52	59	eP		P	08 23 59.3 +2.7
WMQ				pP		sP	08 24 05.6 -3.0
WMQ				pmax		pmax	
comp=Z,18nm,0.7s							
WMQ				pmax		pmax	
comp=Z,57nm,5.9s							
WMQ				LR		LR	
comp=N,190nm,22.3s							
WMQ				LR		LR	
comp=Z,160nm,19.9s							
NRIK	Noril'sk	48.71	25	P		P	08 23 58.0 +0.5
comp=Z,3.8nm,0.7s,baz=228,slow=7.9,SNR=6.4							
TLY	Talaya	57.26	47⇓	iP		P	08 25 02.2 +1.3
ZAK	Zakamensk	57.39	48	eP		P	08 25 03.5 +1.6
ZAK				pmax		pmax	
comp=Z,5.0nm,0.9s							
SONA0	Songino Array	60.11	50	eP		P	08 25 20.9 0.0
SONM	Songino Array	60.11	50	P		P	08 25 20.9 0.0
comp=Z,3.4nm,0.7s,baz=286,slow=8.9,SNR=14							
BOSA	Boshof	62.56	180	P		P	08 25 37.5 0.0
comp=Z,3.0nm,0.6s,baz=6.4,slow=9.3,SNR=7.1							
LZH	Lanzhou	62.66	63	eP		P	08 25 39.3 +0.9
LZH				pP		pP	08 25 42.5 -4.3
LZH				sP		sP	08 25 44.1 -5.9
LZH				ePP		PP	08 27 59.0 +2.8
LZH				pmax		pmax	
comp=Z,15nm,1.2s							
LZH				pmax		pmax	
comp=Z,46nm,8.0s							
LZH				LR		LR	
comp=N,72nm,16.2s							
LZH				LR		LR	
comp=E,76nm,15.6s							
LZH				LR		LR	
comp=Z,93nm,18.0s							
CD2	Chengdu	64.78	69	eP		P	08 25 51.9 -0.4
HHC	Hu-ho-hao-te	66.20	56	eP		P	08 26 02.0 +0.6
HHC				pmax		pmax	
comp=Z,21nm,1.0s							
HHC				pmax		pmax	
comp=Z,150nm,8.0s							
CM31	Chiang Mai Arr	66.76	83	eP		P	08 26 02.9 -2.3
comp=Z,4.4nm,0.4s							
CMAR	Chiang Mai Arr	66.76	83	P		P	08 26 03.3 -1.9
comp=Z,0.6nm,0.4s,baz=302,slow=7.4,SNR=3.8							
BILL	Bilibino	73.93	14⇓	iP		P	08 26 49.1 +0.9
BILL				pmax		pmax	
comp=Z,2.0nm,1.1s							
USRK	Ussuriysk Ar.	77.52	45	P		P	08 27 08.7 -0.5
comp=Z,6.1nm,0.7s,baz=308,slow=5.0,SNR=9.6							
YKA	Yellowknife Ar	78.26	342	P		P	08 27 12.9 +0.1
comp=Z,0.1nm,0.4s,baz=33,slow=5.2,SNR=6.2							
YKB5	Yellowknife Ar	78.26	342	eP		P	08 27 12.9 +0.1
KS15	Wonju Array Si	78.86	52	eP		P	08 27 18.1 +1.4
comp=Z,3.7nm,0.9s							
KSRS	Korea Array	78.88	52	P		P	08 27 16.8 0.0
comp=Z,2.2nm,0.8s,baz=298,slow=4.6,SNR=13							
ILAR	Eielson Array	81.07	357	P		P	08 27 26.4 -1.8
comp=Z,0.5nm,0.8s,baz=359,slow=5.4,SNR=3.6							
ILB	Eielson Array	81.07	357	eP		P	08 27 27.6 -0.5
comp=Z,0.9nm,0.8s							
DAWY	Dawson	81.21	353	eP		P	08 27 30.1 +1.1
comp=Z,2.1nm,0.9s							
WRH	Wood River Hil	81.43	357	eP		P	08 27 31.0 +0.9
comp=Z,3.5nm,0.8s							
HDA	Harding Lake	81.44	356	eP		P	08 27 31.1 +1.0
comp=Z,2.4nm,0.8s							
DHY	Denali Highway	82.79	357	eP		P	08 27 38.5 +1.1
comp=Z,3.7nm,0.9s							
MAJO	Matsushiro	85.97	48	eP		P	08 27 53.3 -0.6
MAJO	Matsushiro	85.97	48	eP		P	08 27 53.3 -0.6
MJAR	Matsushiro Arr	85.97	48	P		P	08 27 53.3 -0.6
comp=Z,2.9nm,0.9s,baz=302,slow=5.6,SNR=9.2							
WRAB	Tennant Creek	116.58	97	i PKIKP		PKPdf	08 33 56.4 -1.4

*IDC **16** 08:18:46.5±2.4, 7°.87S×127°.71E, h0km, mb3.5/1, mb1 3.7/3, mb1mx3.3/25, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=280.9km s-min=33.3km az=64.0*

ISC 16 08:18:49.5±1.4, 7.7S±0°.4×12°.9E±°, h35km, n4, σ3.9±0.7/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.05	159	Pn	P	P	08 22 00.3	-2.1
0.2nm,0.3s,baz=331,slow=13,SNR=12								
WRA				Sn		Sn	08 24 18.3	+1.7
0.6nm,0.3s,baz=333,slow=22,SNR=9.2								
ASAR	Alice Springs	16.43	165	Pn	P	P	08 22 43.8	+3.8
0.1nm,0.3s,baz=334,slow=9.1,SNR=9.1								
ASAR				Sn		Sn	08 25 37.2	-1.7
0.1nm,0.3s,baz=356,slow=26,SNR=3.5								
XAN	Xi'an	45.86	336	P	P	P	08 27 11.1	+2.6
XAN				pP		pP	08 27 17.5	-0.1
XAN				pmax		pmax		
comp=Z,5.0nm,1.1s								
XAN				LR		LR		
comp=E,110nm,17.4s								
XAN				LR		LR		
comp=Z,130nm,21.7s								
MKAR	Makanchi Array	68.52	327	P	P	P	08 29 45.9	-2.6
comp=Z,0.2nm,0.5s,baz=116,slow=8.2,SNR=3.6								

*UCR **16** 08:22:58.9±2.0, 13°.84N×91°.85W, h7km±24km, MD3.9, ML3.9, mb4.1(NEIC)*
*NEIC **16** 08:22:59.5±0.0, 13°.89N×91°.98W, h24km, mb4.1/54, MD4.1(MEX), After MEX.*
*MEX **16** 08:22:59.5±0.5, 13°.89N×91°.98W, h24km±23km, MD4.1*
*SNET **16** 08:22:59.4±2.0, 14°.10N×91°.95W, h63km±179km, ML4.3*
*ISCJB **16** 08:22:59.5±0.6, 14°.01N±0°.04×91°.94W±0°.04, h40km±5km, mb4.1/49, MS3.6/2, Error ellipse: s-maj=8.6km s-min=3.9km az=36.5*
*IDC **16** 08:23:00.2±2.3, 13°.89N×92°.08W, h41km±20km, mb3.7/6, mb1 4.0/10, mb1mx3.7/33, mbtmp3.9/10, ML3.4/4, MS3.4/3, Ms1 3.5/3, ms1mx3.0/31, Error ellipse: s-maj=18.3km s-min=9.8km az=17.0*
*GCG **16** 08:23:03.0±0.3, 14°.31N×91°.72W, h67km±43km, MD4.3*

ISC 16 08:22:59.1±1.9, 13°.88N±0°.06×92°.05W±0°.05, h31km±13km, n124, σ1.9±0.50/137, mb4.1/49, 1D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.72	40	eP	Pb	Pb	08 23 13.3	0.0
STG3	Santiaguito 3,	0.95	29⇓	eP	Pn	Pn	08 23 15.6	-0.9
THIG		1.04	348	ePn	Pn	Pn	08 23 15.9	-1.7
THIG				eSn	Sn	Sn	08 23 28.8	-2.3
THIG		1.04	348	eP	Pn	Pn	08 23 15.9	-1.7
THIG				eS	Sn	Sn	08 23 28.8	-2.3
FUG	Fuego 3	1.30	64	eP	Pn	Pn	08 23 20.2	-1.0
FUG	Fuego 3	1.30	64	eP	Pn	Pn	08 23 20.2	-1.0
PCG	Pacaya	1.49	70	eP	Pn	Pn	08 23 23.3	-0.6
PCG	Pacaya	1.49	70	eP	Pn	Pn	08 23 23.3	-0.6
IXG	Ixpaco	1.59	79	eP	Pn	Pn	08 23 23.5	-1.7
IXG	Ixpaco	1.59

CNCH				IAML			08 25 03.4
	comp=Z,939nm,0.6s						
CNCH	**Conchagua**	**4.14**	**98**	*eP*		**Pn**	**08 24 01.6 +1.3**
CNCH				IAML			08 25 03.4
	comp=Z,939nm,0.6s						
CMIG	**Matias Romero**	**4.20**	**320**	P		**Pn**	**08 24 00.8 -0.3**
	comp=Z,3.3nm,0.3s,baz=147,slow=14,SNR=45						
CMIG				S		**Sn**	**08 24 49.2 +0.1**
	comp=Z,26nm,0.3s,baz=134,slow=19,SNR=6.6						
CMIG	**Matias Romero**	**4.20**	**320**	*e*Pn		**Pn**	**08 24 00.7 -0.4**
CMIG	**Matias Romero**	**4.20**	**320**	*eP*		**Pn**	**08 24 00.7 -0.4**
HUIG	**Huatulco**	**4.35**	**296**	*e*Pn		Pn	08 24 00.2 -2.9
HUIG	**Huatulco**	**4.35**	**296**	*eP*		Pn	08 24 00.2 -2.9
CSGN	**Cosiguina Volc**	**4.46**	**101**	*e*Pn		**Pn**	**08 24 05.0 +0.4**
TGUH	**Tegucigalpa,Un**	**4.64**	**87**	*e*Pn		**Pn**	**08 24 06.2 -0.8**
ESTN	**Estel**	**5.58**	**97**	*e*Pn		**Pn**	**08 24 20.0 -0.1**
LVIG	**Laguna Verde**	**7.16**	**325**	*e*Pn		**Pn**	**08 24 43.0 +1.3**
TLIG	**Tlapa**	**7.27**	**301**	*e*Pn		**Pn**	**08 24 43.2 -0.1**
TLIG				*e*Sn		**Sn**	**08 26 10.8 +6.0**
TEIG	**Tepich**	**7.27**	**29**	*e*Pn		**Pn**	**08 24 42.9 -0.3**
TEIG				*e*Sn		**Sn**	**08 26 04.3 -0.4**
MYIG	**Mrida**	**7.38**	**17**	*e*Pn		**Pn**	**08 24 45.3 +0.7**
MYIG				*e*Sn		**Sn**	**08 26 06.4 -0.9**
ESPN	**Las Esperanzas**	**7.73**	**102**	*e*Pn		**Pn**	**08 24 50.4 +0.8**
ESPN				*e*Sn		**Sn**	**08 26 09.1 -7.1**
JTS	**Las Juntas de**	**7.80**	**116**	P		**Pn**	**08 24 52.1 +1.5**
	comp=Z,0.4nm,0.3s,baz=257,slow=17,SNR=4.5						
JTS				LR		LR	08 27 44.7
	comp=Z,226nm,20.1s,baz=4.5,slow=36						
JTS	**Las Juntas de**	**7.80**	**116**	*e*Pn		**Pn**	**08 24 48.0 -2.6**
LNIG	**Linares**	**13.00**	**329**	*e*Pn		**Pn**	**08 26 00.3 -1.4**
H06E1	**SOCORRO T-PHAS**	**18.76**	**288**	T		T	08 46 34.5
	SNR=19						
TX31	**Lajitas Ar. Si**	**18.77**	**327**	*eP*		**Pn**	**08 27 17.0 +0.5**
	comp=Z,4.1nm,0.9s						
TXAR	**Lajitas Array**	**18.77**	**327**	P		**Pn**	**08 27 17.0 +0.5**
	comp=Z,0.2nm,0.3s,baz=156,slow=12,SNR=31						
LRAL	**Lakeview Retre**	**19.62**	**13**	*eP*		**P**	**08 27 26.0 +1.0**
	comp=Z,5.6nm,0.8s						
ROSC	**El Rosal**	**19.65**	**116**	P		**Pn**	**08 27 27.5 +0.1**
	comp=Z,0.3nm,0.3s,baz=25,slow=14,SNR=4.0						
152A	**Waverly Hall**	**19.86**	**18**	*eP*		**P**	**08 27 28.4 +0.7**
	comp=Z,8.7nm,1.3s						
Z50A	**Ashland**	**20.08**	**15**	*eP*		**P**	**08 27 31.2 +1.2**
	comp=Z,6.9nm,1.0s						
154A	**Montrose**	**20.36**	**22**	*eP*		**P**	**08 27 32.8 -0.2**
	comp=Z,17nm,0.8s						
MIAR	**Mount Ida**	**20.62**	**356**	*eP*		**P**	**08 27 36.3 +0.4**
	comp=Z,4.7nm,0.8s						
X37A	**Clayton**	**20.84**	**352**	*eP*		**P**	**08 27 39.2 +1.0**
	comp=Z,27nm,1.6s						
GOGA	**Godfrey**	**20.95**	**20**	*eP*		**P**	**08 27 39.4 -0.1**
	comp=Z,6.6nm,0.9s						
X48A	**Hartselle**	**20.98**	**12**	*eP*		**P**	**08 27 40.5 +0.8**
	comp=Z,9.1nm,1.2s						
GDL2	**Guadalupe Moun**	**21.44**	**330**	*eP*		**P**	**08 27 46.8 +2.0**
MNTX	**Cornudas Mount**	**21.54**	**328**	*eP*		**P**	**08 27 47.0 +1.1**
	comp=Z,5.9nm,0.8s						
WMOK	**Wichita Mounta**	**21.64**	**345**	*eP*		**P**	**08 27 46.8 -0.1**
	comp=Z,2.9nm,0.9s						
SWET	**Sewanee**	**21.95**	**13**	*eP*		**P**	**08 27 49.6 -0.6**
	comp=Z,8.8nm,1.0s						
MSTX	**Muleshoe**	**22.24**	**336**	*eP*		**P**	**08 27 53.4 -0.1**
	comp=Z,5.0nm,0.9s						
V48A	**Smith Brothers**	**22.27**	**11**	*eP*		**P**	**08 27 53.0 -0.7**
	comp=Z,4.4nm,0.8s						
WVT	**Waverly**	**22.48**	**9**	*eP*		**P**	**08 27 54.3 -1.5**
	comp=Z,3.2nm,0.8s						
AMTX	**Amarillo**	**22.65**	**339**	*eP*		**P**	**08 27 57.4 -0.5**
	comp=Z,12nm,0.6s						
PBMO	**Poplar Bluff**	**22.85**	**3**	*eP*		**P**	**08 27 57.5 -2.2**
	comp=Z,8.2nm,1.1s						
T47A	**Sharon Grove**	**23.43**	**10**	*eP*		**P**	**08 28 03.8 -1.8**
	comp=Z,11nm,0.9s						
319A	**Douglas**	**23.53**	**321**	*eP*		**P**	**08 28 07.2 +0.5**
	comp=Z,7.8nm,1.0s						
SIUC	**Southern Illin**	**23.87**	**6**	*eP*		**P**	**08 28 07.8 -2.0**
	comp=Z,11nm,0.8s						
CCM	**Cathedral Cave**	**24.09**	**2**	*eP*		**P**	**08 28 09.1 -2.7**
	comp=Z,3.7nm,0.9s						
BNM	**Barren Site**	**24.12**	**329**	*eP*		**P**	**08 28 14.3 +1.8**
LPM	**Los Pinos Moun**	**24.25**	**330**	*eP*		**P**	**08 28 15.6 +1.9**
LENM	**Lemitar**	**24.31**	**329**	*eP*		**P**	**08 28 14.8 +0.6**
LAZ	**Ladron**	**24.58**	**329**	*eP*		**P**	**08 28 16.6 0.0**
ANMO	**Albuquerque**	**24.68**	**331**	P		**P**	**08 28 18.8 +1.3**
	comp=Z,4.0nm,0.8s,baz=152,slow=12,SNR=26						
OLIL	**Olney**	**25.00**	**7**	*eP*		**P**	**08 28 18.8 -1.3**
	comp=Z,8.4nm,0.7s						
T25A	**Trinidad**	**25.66**	**337**	*eP*		**P**	**08 28 28.7 +2.3**
	comp=Z,2.5nm,0.7s						
X16A	**Lo Mia Camp, P**	**26.95**	**323**	*eP*		**P**	**08 28 40.3 +2.2**
	comp=Z,2.8nm,0.8s						
MVCO	**Mesa Verde**	**27.48**	**331**	*eP*		**P**	**08 28 44.0 +1.1**
	comp=Z,4.8nm,1.0s						
WUAZ	**Wupatki**	**27.69**	**324**	*eP*		**P**	**08 28 45.2 +0.5**
	comp=Z,3.1nm,0.8s						
PV13	**Radium Mtn., P**	**28.40**	**331**	*eP*		**P**	**08 28 52.1 +1.1**
	comp=Z,3.7nm,1.0s						
PV12	**Saucer Basin,**	**28.52**	**332**	*eP*		**P**	**08 28 53.6 +1.5**
	comp=Z,2.5nm,0.8s						
PV04	**Paradox Valley**	**28.62**	**332**	*eP*		**P**	**08 28 53.7 +0.7**
	comp=Z,3.3nm,0.9s						
KNB	**Kanab**	**29.58**	**325**	*eP*		**P**	**08 29 03.0 +1.6**
	comp=Z,2.6nm,0.7s						
CCUT	**Cedar City**	**30.26**	**325**	*eP*		**P**	**08 29 10.5 +2.9**
	comp=Z,2.6nm,0.9s						
TCRU	**Three Creeks R**	**30.54**	**327**	*eP*		**P**	**08 29 12.8 +2.7**
	comp=Z,2.9nm,0.8s						
MPU	**Maple Canyon**	**31.20**	**330**	*eP*		**P**	**08 29 16.1 +0.3**
	comp=Z,2.2nm,0.8s						
PDAR	**Pinedale Array**	**32.51**	**336**	P		**P**	**08 29 26.3 -1.0**
	comp=Z,0.3nm,0.6s,baz=132,slow=8.9,SNR=3.7						
BGU	**Big Grassy Mou**	**32.58**	**330**	*eP*		**P**	**08 29 29.8 +2.0**
	comp=Z,2.2nm,0.9s						
HVU	**Hansel Valley**	**33.11**	**331**	*eP*		**P**	**08 29 34.1 +1.6**
	comp=Z,1.9nm,1.0s						
ELK	**Elko**	**33.57**	**327**	*eP*		**P**	**08 29 38.6 +2.0**
	comp=Z,1.8nm,0.8s						
SNOW	**Snow King Moun**	**33.57**	**335**	*eP*		**P**	**08 29 37.7 +1.0**
	comp=Z,6.0nm,0.6s						
NV11	**Mina Array Sit**	**33.65**	**321**	*eP*		**P**	**08 29 37.8 +0.6**
	comp=Z,0.3nm,0.8s						
NVAR	**Mina Array Bea**	**33.73**	**321**	P		**P**	**08 29 39.4 +1.3**
	comp=Z,3.1nm,0.8s,baz=137,slow=8.4,SNR=23						
HLID	**Hailey**	**35.26**	**331**	*eP*		**P**	**08 29 52.0 +0.8**
	comp=Z,2.6nm,1.1s						
MCMT	**McKenzie Canyo**	**35.56**	**334**	*eP*		**P**	**08 29 55.5 +1.7**
BEKR	**Beckworth**	**35.88**	**321**	*eP*		**P**	**08 29 57.9 +1.4**
	comp=Z,1.8nm,0.8s						
WVOR	**Wild Horse Val**	**36.56**	**326**	*eP*		**P**	**08 30 03.8 +1.5**
	comp=Z,2.4nm,0.8s						
J08A	**Circle Bar Ran**	**37.12**	**327**	*eP*		**P**	**08 30 08.4 +1.5**
	comp=Z,6.3nm,0.8s						
I07A	**Izee**	**38.16**	**327**	*eP*		**P**	**08 30 17.2 +1.5**
	comp=Z,2.1nm,0.9s						
LPAZ	**La Paz**	**38.17**	**141**	P		**P**	**08 30 16.1 -0.6**
	comp=Z,0.9nm,0.9s,baz=308,slow=9.0,SNR=3.0						
F10A	**Beach Ranch, E**	**38.39**	**331**	*eP*		**P**	**08 30 18.2 +0.5**
	comp=Z,7.1nm,0.9s						
PINE	**Pine Mountain**	**38.73**	**326**	*eP*		**P**	**08 30 21.2 +0.5**
	comp=Z,2.3nm,0.9s						
H04A	**Detroit Lake**	**39.99**	**326**	*eP*		**P**	**08 30 31.8 +0.9**
	comp=Z,4.1nm,0.8s						
LTY	**Liberty**	**40.96**	**330**	*eP*		**P**	**08 30 39.8 +0.8**
	comp=Z,5.4nm,1.4s						
YKA	**Yellowknife Ar**	**51.13**	**347**	P		**P**	**08 31 57.8 -0.9**
	comp=Z,0.7nm,0.5s,baz=152,slow=7.5,SNR=24						
YKA				PcP		**PcP**	**08 33 13.1 -0.9**
	comp=Z,0.8nm,0.8s,baz=147,slow=4.1,SNR=10.0						
DLBC	**Dease Lake**	**52.74**	**336**	*eP*		**P**	**08 32 12.0 +1.1**
	comp=Z,5.4nm,1.0s						
GHO	**Glory Hole Cre**	**62.48**	**333**	*eP*		**P**	**08 33 20.4 +1.0**
	comp=Z,5.8nm,1.0s						
ILAR	**Eielson Array**	**62.93**	**337**	P		**P**	**08 33 20.5 -1.8**
	comp=Z,2.5nm,0.9s,baz=127,slow=4.8,SNR=18						
ILB	**Eielson Array**	**62.93**	**337**	*eP*		**P**	**08 33 22.4 +0.1**
	comp=Z,2.9nm,0.9s						
RND	**Reindeer**	**63.12**	**335**	*eP*		**P**	**08 33 24.3 +0.7**
	comp=Z,3.9nm,0.9s						
COLD	**Coldfoot**	**65.22**	**339**	*eP*		**P**	**08 33 37.9 +0.6**
	comp=Z,1.6nm,0.9s						
TOLK	**Toolik Lake Re**	**65.62**	**340**	*eP*		**P**	**08 33 40.2 +0.4**
	comp=Z,3.4nm,0.8s						
NOA	**NORSAR Array B**	**84.27**	**28**	LR		LR	09 14 55.1
	comp=Z,17nm,18.5s,baz=55,slow=37						
GERES	**GERESS Array B**	**89.72**	**39**	LR		LR	09 19 35.5
	comp=Z,29nm,18.0s,baz=65,slow=38						
LZH	**Lanzhou**	**128.08**	**344**	*e*PKP	**PKPdf**		**08 42 03.3 +0.5**
LZH				pPKP	sPKPdf		08 42 14.5 -2.1
LZH				sPKP			08 42 18.8
CD2	**Chengdu**	**132.95**	**341**	PKP	**PKPdf**		**08 42 10.9 -1.1**
CMAR	**Chiang Mai Arr**	**146.09**	**341**	PKPbc	**PKPbc**		**08 42 36.9 0.0**
	comp=Z,3.5nm,0.8s,baz=334,slow=3.5,SNR=16						

*IDC **16** 08:24:52.7±2.2,2.°76S×129.°83E,h0km,mb3.9/3,*
mb1 4.1/4,mb1mx3.6/24,mbtmp3.9/4,ML3.9/1,Error
ellipse: s-maj=175.2km s-min=26.1km az=68.0
*ISCJB **16** 08:24:56.7±0.6,3.°08S±0.°07×129.°04E±0.°06,h28km,*
mb3.6/2,Error ellipse: s-maj=10.5km s-min=7.6km
az=144.7
*DJA **16** 08:24:57.3±0.7,3.°S±8.°×12.°9E±.°,h11km±9km,M4.1/9,*
mb4.6/2,mB4.5/1,MLv3.9/9,Mw(mB)3.7/1
ISC 16 08:24:57.8±0.8,3.°12S±0.°07×129.°09E±0.°07,h28km,n11,
σ2s29/14,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.28**	**215**	P	**Pn**	**08 25 06.1**	**+0.1**
MSAI				S	**Sn**	**08 25 12.5**	**+1.2**
AAI	**Ambon**	**1.05**	**238**	P	**Pb**	**08 25 18.2**	**+0.7**
SWI	**Sorong**	**3.12**	**44**	P	**Pn**	**08 25 46.2**	**+1.0**
SWI				S	**Sn**	**08 26 22.1**	**+0.5**
FAKI	**Fak Fak**	**3.16**	**86**	P	**Pn**	**08 25 48.1**	**+2.3**
SANI	**Sanana**	**3.27**	**289**	P	**Pn**	**08 25 45.8**	**-1.5**
APSI	**Ampana**	**7.75**	**286**	P	**Pn**	**08 26 49.6**	**+0.7**
	33nm,0.6s,0.2nm						
WRA	**Warramunga Arr**	**17.49**	**163**	P	**Pn**	**08 28 59.8**	**-0.1**
	0.4nm,0.3s,baz=349,slow=13,SNR=22						
ASAR	**Alice Springs**	**20.95**	**168**	P	**P**	**08 29 39.7**	**+1.0**
	6.7nm,0.6s,baz=350,slow=12,SNR=78						
ASAR				S	**S**	**08 33 24.2**	**-6.7**
	0.5nm,1.0s,baz=352,slow=24,SNR=2.9						
KRJI	**Kerinci**	**27.62**	**271**	P	**P**	**08 30 44.0**	**+0.7**
STKA	**Stephens Creek**	**30.93**	**159**	P	**P**	**08 31 12.2**	**-0.3**
	1.4nm,1.0s,baz=323,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**64.51**	**326**	P	**P**	**08 35 32.1**	**-0.1**
	0.2nm,0.5s,baz=133,slow=7.1,SNR=4.1						

WEL 16 08:31:56.6±1.2,38.°S±10.°×18.°0E±.°,h33km,M3.3/9,
ML3.6/11,MLv3.3/9,Error ellipse: s-maj=0.0km
s-min=0.0km az=156.5,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.25**	**267**	P	Pn	08 32 17.5	-0.2
WMGZ				S	Sn	08 32 33.6	+0.2
TWGZ	**Tauwhareparae**	**1.64**	**255**	P	Pn	08 32 23.4	+0.2
TWGZ				S	Sn	08 32 44.5	+1.4
HAZ	**Te Kaha**	**1.75**	**269**	P	Pn	08 32 24.8	+0.2
HAZ				S	Sn	08 32 45.8	+0.1
TKGZ	**Te Karaka**	**1.82**	**247**	P	Pn	08 32 25.4	-0.2
TKGZ				S	Sn	08 32 48.5	+1.0
RUGZ	**Raukumara Rang**	**1.84**	**263**	P	Pn	08 32 26.0	0.0
RIGZ	**Rimuhau**	**1.99**	**241**	P	Pn	08 32 27.9	-0.1
RIGZ				S	Sn	08 32 52.9	+1.0
MWZ	**Matawai**	**2.02**	**253**	P	Pn	08 32 28.1	-0.4
MWZ				S	Sn	08 32 52.9	+0.3
RAGZ	**Rawiri**	**2.16**	**249**	P	Pn	08 32 31.0	+0.6
RAGZ				S	Sn	08 32 56.7	+0.8
KNZ	**Kokohu**	**2.21**	**234**	P	Pn	08 32 30.3	-0.7
KNZ				S	Sn	08 32 57.6	+0.4
URZ	**Urewera**	**2.33**	**257**	P	Pn	08 32 33.2	+0.7
URZ				S	Sn	08 33 01.0	+1.0
RTZ	**Ruatahuna**	**2.52**	**249**	P	Pn	08 32 35.6	+0.3
WHHZ	**Waihua**	**2.53**	**238**	P	Pn	08 32 35.5	+0.1
WHHZ				S	Sn	08 33 05.5	+0.4
RAHZ	**Arahi**	**2.56**	**242**	P	Pn	08 32 35.9	+0.1
RAHZ				S	Sn	08 33 06.2	+0.4
MTHZ	**Maungataniwha**	**2.71**	**245**	P	Pn	08 32 37.9	+0.1
MTHZ				S	Sn	08 33 09.7	+0.2
ARHZ	**Aropaoanui**	**2.79**	**236**	P	Pn	08 32 38.9	0.0
NMHZ	**Naumai**	**2.83**	**241**	P	Pn	08 32 39.3	-0.3
NMHZ				S	Sn	08 33 12.7	+0.1
MRHZ	**Matea Rd**	**3.01**	**248**	P	Pn	08 32 41.9	0.0
MCHZ	**McNeill Hill**	**3.08**	**236**	P	Pn	08 32 42.9	0.0
BKZ	**Black Stump Fm**	**3.08**	**242**	P	Pn	08 32 42.9	-0.1
KWHZ	**Kaweka Forest**	**3.25**	**238**	P	Pn	08 32 44.5	-0.8
KRHZ	**Kereru**	**3.40**	**235**	P	Pn	08 32 46.4	-1.0
PNHZ	**Pukenui**	**3.66**	**233**	P	Pn	08 32 49.7	-1.2
DVHZ	**Dannevirke**	**3.91**	**228**	P	Pn	08 32 52.3	-2.1
KBAZ	**Karaka Road Bo**	**4.11**	**278**	P	Pn	08 32 53.8	-3.3
MRZ	**Mangatainoka R**	**4.49**	**228**	P	Pn	08 32 59.6	-2.7

*ISCJB **16** 08:40:57.9±0.2,38.°23N±0.°01×22.°14E±0.°02,h10km±1km,*
mb3.6/6,Error ellipse: s-maj=2.6km s-min=2.3km
az=158.9
*ATH **16** 08:40:58.0,38.°23N×22.°15E,h9km±1km,ML3.3/18,Error*
ellipse: s-maj=1.2km s-min=0.5km az=270.0
*THE **16** 08:40:57.9,38.°23N×22.°13E,h9km±1km,ML3.4/17,Error*
ellipse: s-maj=1.1km s-min=0.4km az=281.0
*IDC **16** 08:41:04.0±2.2,37.°98N×22.°32E,h63km±26km,mb3.4/7,*
mb1 3.6/10,mb1mx3.3/50,mbtmp3.6/10,ML3.1/3,MS2.8/1,
Ms1 2.8/1,ms1mx2.1/35,Error ellipse: s-maj=18.6km
s-min=16.1km az=72.0
ISC 16 08:40:58.0±0.7,38.°22N±0.°01×22.°15E±0.°02,h10km±3km,
n90,σ0s92/129,mb3.6/6,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG1	**Aigion**	**0.01**	**194**	P	**Pg**	**08 40 59.6**	**-0.1**
AIG1				S	**Sg**	**08 41 01.0**	**+0.1**
AIG3	**Aigion**	**0.05**	**317**	P	**Pg**	**08 40 59.5**	**-0.5**
AIG3				S	**Sg**	**08 41 01.2**	**-0.1**
ALIK	**Aliki, Aigiali**	**0.05**	**326**	P	**Pg**	**08 40 59.7**	**-0.3**
ALIK				S	**Sg**	**08 41 01.3**	**0.0**
AIG2	**Aigio**	**0.06**	**289**	P	**Pg**	**08 40 59.6**	**-0.5**
AIG2				S	**Sg**	**08 41 00.8**	**-0.8**
AIG4	**Aigion**	**0.06**	**301**	P	**Pg**	**08 40 59.8**	**-0.3**
AIG4				S	**Sg**	**08 41 01.2**	**-0.5**
LAKA	**Lakka**	**0.13**	**278**	P	**Pg**	**08 41 01.7**	**+0.6**
LAKA				S	**Sg**	**08 41 03.8**	**+0.6**
LAKA				AML	AML	08 41 04.2	
	comp=N,55346μm,0.5s						
LAKA				AML	AML	08 41 04.2	
	comp=E,46809μm,0.4s						
TRIZ	**Trizonia**	**0.15**	**338**	P	**Pg**	**08 41 01.1**	**-0.3**
TRIZ				S	**Sg**	**08 41 03.5**	**-0.3**
TRIZ	**Trizonia**	**0.15**	**338**	P	**Pg**	**08 41 01.1**	**-0.3**
TRIZ				S	**Sg**	**08 41 03.6**	**-0.1**
KALE	**Kalithea**	**0.17**	**359**	P	**Pg**	**08 41 01.6**	**-0.1**
KALE				S	**Sg**	**08 41 04.3**	**0.0**
KALE	**Kalithea**	**0.17**	**359**	P	**Pg**	**08 41 01.6**	**-0.1**
KALE				S	**Sg**	**08 41 04.7**	**+0.4**
KALE				AML	AML	08 41 05.0	
	comp=N,61395μm,0.5s						
KALE				AML	AML	08 41 05.5	
	comp=E,28227μm,0.4s						
KLV	**Kalavryta, Ach**	**0.18**	**179**	P	**Pg**	**08 41 01.7**	**-0.1**
KLV				S	**Sg**	**08 41 04.6**	**+0.1**
KLV	**Kalavryta, Ach**	**0.18**	**179**	P	**Pg**	**08 41 01.7**	**-0.1**
KLV				S	**Sg**	**08 41 04.8**	**+0.3**
KLV				AML	AML	08 41 05.0	
	comp=N,19879μm,0.3s						
KLV				AML	AML	08 41 05.0	
	comp=E,16389μm,0.2s						
SERG	**Sergoula**	**0.20**	**340**	P	**Pg**	**08 41 02.0**	**-0.3**
SERG				S	**Sg**	**08 41 05.0**	**-0.2**
SERG	**Sergoula**	**0.20**	**340**	P	**Pg**	**08 41 02.0**	**-0.3**
SERG				S	**Sg**	**08 41 05.5**	**+0.3**
SERG				AML	AML	08 41 06.6	
	comp=E,34294μm,0.3s						
SERG				AML	AML	08 41 07.7	
	comp=N,39934μm,0.3s						
EFP	**Efpalio**	**0.28**	**318**	P	**Pg**	**08 41 03.1**	**-0.5**
EFP				S	**Sg**	**08 41 07.1**	**-0.3**
EFP	**Efpalio**	**0.28**	**318**	P	**Pg**	**08 41 03.3**	**-0.3**
EFP				S	**Sg**	**08 41 07.6**	**+0.2**
EFP				AML	AML	08 41 08.3	
	comp=E,16707μm,0.4s						
EFP				AML	AML	08 41 09.9	
	comp=N,14612μm,0.4s						
UPR	**University Cam**	**0.29**	**282**	P	**Pg**	**08 41 03.8**	**0.0**
UPR				S	**Sg**	**08 41 07.5**	**-0.2**
GUR	**Goura**	**0.33**	**151**	P	**Pg**	**08 41 04.2**	**-0.3**
GUR				S	**Sg**	**08 41 09.5**	**+0.6**
GUR	**Goura**	**0.33**	**151**	P	**Pg**	**08 41 04.3**	**-0.2**
GUR				S	**Sg**	**08 41 08.7**	**-0.2**
GUR				AML	AML	08 41 10.2	
	comp=E,39749μm,0.4s						
GUR				AML	AML	08 41 10.3	
	comp=N,28966μm,0.4s						
DSF	**Desfina**	**0.35**	**58**	P	**Pg**	**08 41 04.8**	**-0.3**
DSF				S	**Sg**	**08 41 09.9**	**+0.1**
DSF				AML	AML	08 41 11.2	
	comp=N,6364μm,0.2s						
DSF				AML	AML	08 41 11.2	
	comp=E,4678μm,0.2s						
ANX	**Ano Chora**	**0.41**	**335**	P	**Pg**	**08 41 05.4**	**-0.7**
ANX				S	**Sg**	**08 41 11.1**	**-0.5**
ANX	**Ano Chora**	**0.41**	**335**	P	**Pg**	**08 41 05.8**	**-0.3**
ANX				S	**Sg**	**08 41 12.1**	**+0.5**
ANX				AML	AML	08 41 15.4	
	comp=E,14583μm,0.2s						
ANX				AML	AML	08 41 15.5	
	comp=N,23248μm,0.6s						
DRO	**Drossia**	**0.44**	**232**	P	**Pg**	**08 41 06.2**	**-0.4**
DRO				S	**Sg**	**08 41 13.0**	**+0.7**
DRO	**Drossia**	**0.44**	**232**	P	**Pg**	**08 41 06.2**	**-0.4**
DRO				S	**Sg**	**08 41 13.2**	**+0.9**
DRO				AML	AML	08 41 15.9	
	comp=N,20875μm,0.3s						
DRO				AML	AML	08 41 16.9	
	comp=E,22570μm,0.3s						
RLS	**Riolos of Patr**	**0.56**	**253**	P	**Pb**	**08 41 09.5**	**-0.4**
PROD	**Prodromos**	**0.60**	**86**	P	**Pg**	**08 41 09.9**	**+0.3**
PROD				S	**Sg**	**08 41 17.8**	**+0.4**
PROD				AML	AML	08 41 20.0	
	comp=N,4010μm,0.2s						
PROD				AML	AML	08 41 21.8	
	comp=E,4292μm,0.2s						
PVO	**Paravola**	**0.63**	**309**	P	**Pg**	**08 41 10.1**	**0.0**
LTK	**Loutraki**	**0.68**	**107**	P	**Pb**	**08 41 11.8**	**-0.1**
LTK				S	**Sb**	**08 41 20.7**	**-0.7**
LTK				AML	AML	08 41 24.3	
	comp=E,2390μm,0.4s						
LTK				AML	AML	08 41 24.4	
	comp=N,1869μm,0.5s						
LOUT	**Loutraki**	**0.69**	**109**	P	**Pb**	**08 41 12.0**	**-0.2**
LOUT	**Loutraki**	**0.69**	**109**	P	**Pb**	**08 41 12.0**	**-0.2**
LOUT				S	**Sg**	**08 41 20.8**	**+0.2**
TRIP	**Tripoli**	**0.70**	**172**	P	**Pg**	**08 41 10.3**	**-1.3**
TRIP				S	**Sg**	**08 41 21.3**	**+0.6**
TRIP	**Tripoli**	**0.70**	**172**	P	**Pg**	**08 41 10.6**	**-0.9**
TRIP				S	**Sg**	**08 41 21.5**	**+0.8**
TRIP				AML	AML	08 41 25.0	
	comp=E,5718μm,0.3s						
TRIP				AML	AML	08 41 28.6	
	comp=N,3289μm,0.6s						
EVR	**Evrytania**	**0.74**	**339**	P	**Pg**	**08 41 11.3**	**-1.1**
EVR				S	**Sg**	**08 41 22.2**	**+0.1**
EVR	**Evrytania**	**0.74**	**339**	P	**Pg**	**08 41 11.4**	**-0.9**
EVR				S	**Sb**	**08 41 22.8**	**-0.6**
EVR				AML	AML	08 41 26.4	
	comp=N,5572μm,0.5s						
EVR				AML	AML	08 41 31.6	
	comp=E,4104μm,0.7s						
AMT	**Artemida-Makis**	**0.77**	**207**	P	**Pg**	**08 41 12.0**	**-0.9**
AMT				S	**Sb**	**08 41 24.8**	**+0.7**
AGG	**Agios Georgios**	**0.81**	**10**	P	**Pg**	**08 41 12.3**	**-1.4**
AGG	**Agios Georgios**	**0.81**	**10**	P	**Pg**	**08 41 12.8**	**-0.9**
AGG				S	**Sg**	**08 41 24.0**	**-0.3**
AGG				AML	AML	08 41 29.7	
	comp=N,3236μm,0.7s						
AGG				AML	AML	08 41 30.5	
	comp=E,2060μm,0.7s						
VTN	**Vitineika**	**0.82**	**248**	P	**Pb**	**08 41 14.2**	**-0.1**
VTN				S	**Sb**	**08 41 25.2**	**-0.1**
ATAL	**Atalanti**	**0.83**	**55**	P	**Pg**	**08 41 12.9**	**-1.2**
ATAL				S	**Sg**	**08 41 24.7**	**-0.3**
ATAL	**Atalanti**	**0.83**	**55**	P	**Pg**	**08 41 13.6**	**-0.5**
PDO	**Prodromos**	**0.84**	**297**	P	**Pg**	**08 41 13.6**	**-0.7**
VLX	**Vlachokerasia**	**0.87**	**168**	P	**Pg**	**08 41 13.7**	**-1.1**
VLX				S	**Sb**	**08 41 27.1**	**+0.1**
VLX	**Vlachokerasia**	**0.87**	**168**	P	**Pg**	**08 41 13.9**	**-0.9**
VLX				S	**Sb**	**08 41 27.2**	**+0.1**
VLX				AML	AML

*SNET **16** 08:46:47.2±1.7, 14.°49N×89.°15W, h1km±4km, ML3.5*
*UCR **16** 08:46:48.3±2.8, 14.°48N×89.°15W, h5km, MD3.2, ML3.5*
*GCG **16** 08:46:49.0±0.7, 14.°64N×89.°15W, h13km±68km, MD3.7*
ISC 16 08:46:48.0±1.1,**14.°49N**±0.°03×**89.°13W**±0.°02,**h5**km±9km,
n62,σ1°**16**/99,**1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTO3	**Montecristo**	**0.24**	**249**	*eP*	**Pg**	**08 46 52.5**	**-0.4**
MTO3				*eS*	**Sg**	**08 46 56.4**	**+0.3**
MTO3	**Montecristo**	**0.24**	**249**	*eP*	**Pg**	**08 46 52.5**	**-0.4**
MTO3				*eS*	**Sg**	**08 46 56.4**	**+0.3**
LLGN	**La Laguna**	**0.36**	**152**	*eP*	**Pg**	**08 46 55.4**	**+0.3**
LLGN				*eS*	**Sg**	**08 47 01.3**	**+1.6**
LLGN	**La Laguna**	**0.36**	**152**	*eP*	**Pg**	**08 46 55.4**	**+0.3**
LLGN				*eS*	**Sg**	**08 47 01.3**	**+1.6**
UNIC	**Santa Ana**	**0.65**	**220**	*eP*	**Pg**	**08 47 00.3**	**-0.2**
UNIC				*eS*	**Sg**	**08 47 09.9**	**+0.9**
UNIC	**Santa Ana**	**0.65**	**220**	*eP*	**Pg**	**08 47 00.3**	**-0.2**
UNIC				*eS*	**Sg**	**08 47 09.9**	**+0.9**
VICT	**Victoria**	**0.71**	**138**	*eP*	**Pg**	**08 47 01.4**	**-0.3**
VICT				*eS*	**Sg**	**08 47 11.8**	**+1.0**
VICT	**Victoria**	**0.71**	**138**	*eP*	**Pg**	**08 47 01.4**	**-0.3**
VICT				*eS*	**Sg**	**08 47 11.8**	**+1.0**
CEDA	**San Andres**	**0.73**	**201**	*eP*	**Pg**	**08 47 02.2**	**+0.1**
CEDA				IAML		08 47 21.9	
	comp=Z,2μm,0.4s						
CEDA	**San Andres**	**0.73**	**201**	*eP*	**Pg**	**08 47 02.2**	**+0.1**
CEDA				IAML		08 47 21.9	
	comp=Z,2μm,0.4s						
LFU	**La Fuente**	**0.74**	**179**	*eP*	**Pg**	**08 47 02.3**	**+0.1**
LFU	**La Fuente**	**0.74**	**179**	*eP*	**Pg**	**08 47 02.3**	**+0.1**
LBRS	**Las Brisas**	**0.75**	**174**	*eP*	**Pg**	**08 47 02.6**	**+0.1**
UDBS	**Soyapango**	**0.76**	**182**	*eP*	**Pg**	**08 47 02.9**	**+0.3**
UDBS				*eS*	**Sb**	**08 47 14.6**	**+0.1**
UDBS	**Soyapango**	**0.76**	**182**	*eP*	**Pg**	**08 47 02.9**	**+0.3**
UDBS				*eS*	**Sb**	**08 47 14.6**	**+0.1**
BOQS	**Boqueron**	**0.76**	**191**	*eP*	**Pg**	**08 47 03.2**	**+0.5**
BOQS				*eS*	**Sn**	**08 47 17.0**	**-0.6**
UEES	**San Salvador**	**0.77**	**189**	*eP*	**Pg**	**08 47 03.1**	**+0.4**
UEES				IAML		08 47 19.0	
	comp=Z,2μm,0.2s						
UEES	**San Salvador**	**0.77**	**189**	*eP*	**Pg**	**08 47 03.1**	**+0.4**
UEES				IAML		08 47 19.0	
	comp=Z,2μm,0.2s						
OPAM	**San Salvador**	**0.77**	**185**	*eP*	**Pg**	**08 47 03.1**	**+0.3**
OPAM				*eS*	**Sb**	**08 47 15.1**	**+0.3**
OPAM	**San Salvador**	**0.77**	**185**	*eP*	**Pg**	**08 47 03.1**	**+0.3**
OPAM				*eS*	**Sb**	**08 47 15.1**	**+0.3**
SNJE	**San Jose**	**0.77**	**217**	*eP*	**Pg**	**08 47 02.9**	**0.0**
SNJE	**San Jose**	**0.77**	**217**	*eP*	**Pg**	**08 47 02.9**	**0.0**
RTR	**El Retiro**	**0.77**	**221**	*eP*	**Pg**	**08 47 03.3**	**+0.3**
RTR	**El Retiro**	**0.77**	**221**	*eP*	**Pg**	**08 47 03.3**	**+0.3**
UESS	**San Salvador**	**0.78**	**185**	*eP*	**Pg**	**08 47 03.2**	**+0.2**
UESS				*eS*	**Sb**	**08 47 14.8**	**-0.3**
UESS	**San Salvador**	**0.78**	**185**	*eP*	**Pg**	**08 47 03.2**	**+0.2**
UESS				*eS*	**Sb**	**08 47 14.8**	**-0.3**
PAVA	**Las Pavas**	**0.79**	**167**	*eP*	**Pg**	**08 47 03.3**	**0.0**
PAVA				*eS*	**Sb**	**08 47 15.3**	**-0.1**
PAVA				IAML		08 47 22.0	
	comp=Z,3μm,0.3s						
PAVA	**Las Pavas**	**0.79**	**167**	*eP*	**Pg**	**08 47 03.3**	**0.0**
PAVA				*eS*	**Sb**	**08 47 15.3**	**-0.1**
PAVA				IAML		08 47 22.0	
	comp=Z,3μm,0.3s						
MRL	**Marmol**	**0.80**	**318**	*eP*	**Pg**	**08 47 02.3**	**-1.1**
MRL	**Marmol**	**0.80**	**318**	*eP*	**Pg**	**08 47 02.3**	**-1.1**
MRL				*eS*	**Sg**	**08 47 12.7**	**-1.1**
SNET	**Serv Nac Est T**	**0.80**	**187**	*eP*	**Pg**	**08 47 03.5**	**0.0**
SNET				*eS*	**Sb**	**08 47 16.4**	**+0.7**
SNET				IAML		08 47 20.5	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**0.80**	**187**	*eP*	**Pg**	**08 47 03.5**	**0.0**
SNET				*eS*	**Sb**	**08 47 16.4**	**+0.7**
SNET				IAML		08 47 20.5	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	**0.81**	**217**	*eP*	**Pg**	**08 47 03.5**	**0.0**
SBLS	**San Blas**	**0.81**	**217**	*eP*	**Pg**	**08 47 03.5**	**0.0**
LOMA	**San Marcos**	**0.83**	**183**	*eP*	**Pg**	**08 47 04.4**	**+0.3**
LOMA				*eS*	**Sb**	**08 47 16.9**	**+0.4**
LOMA				IAML		08 47 22.9	
	comp=Z,1μm,0.4s						
LOMA	**San Marcos**	**0.83**	**183**	*eP*	**Pg**	**08 47 04.4**	**+0.3**
LOMA				*eS*	**Sb**	**08 47 16.9**	**+0.4**
LOMA				IAML		08 47 22.9	
	comp=Z,1μm,0.4s						
LFRS	**El Faro**	**0.86**	**176**	*eP*	**Pg**	**08 47 04.6**	**0.0**
SNVI	**San Vicente**	**0.92**	**162**	*eP*	**Pg**	**08 47 05.5**	**-0.1**
SNVI				*eS*	**Sb**	**08 47 19.8**	**+0.8**
SNVI	**San Vicente**	**0.92**	**162**	*eP*	**Pg**	**08 47 05.1**	**-0.5**
SNVI				*eS*	**Sb**	**08 47 19.8**	**+0.8**
UESV	**Ojushtada**	**1.15**	**163**	*eP*	Pg	08 47 05.1	-5.0
UESV				*eS*	**Sg**	**08 47 18.4**	**-6.6**
UESV				IAML		08 47 24.8	
	comp=Z,2μm,0.3s						
UESV	**Ojushtada**	**1.15**	**163**	*eP*	Pg	08 47 05.1	-5.0
UESV				*eS*	**Sg**	**08 47 18.4**	**-6.6**
UESV				IAML		08 47 24.8	
	comp=Z,2μm,0.3s						
TECA	**Tecapa**	**1.16**	**148**	*eP*	**Pg**	**08 47 09.6**	**-0.7**
TECA	**Tecapa**	**1.16**	**148**	*eP*	**Pg**	**08 47 09.6**	**-0.7**
NBG	**Las Nubes**	**1.19**	**275**	*eP*	**Pg**	**08 47 10.3**	**-0.5**
NBG				*eS*	**Sb**	**08 47 27.1**	**+0.2**
NBG	**Las Nubes**	**1.19**	**275**	*eP*	**Pg**	**08 47 10.3**	**-0.5**
NBG				*eS*	**Sb**	**08 47 27.1**	**+0.2**
IXG	**Ixpaco**	**1.31**	**256**	*eP*	**Pg**	**08 47 12.8**	**-0.5**
IXG				*eS*	**Sb**	**08 47 30.4**	**-0.1**
IXG	**Ixpaco**	**1.31**	**256**	*eP*	**Pg**	**08 47 12.8**	**-0.5**
IXG				*eS*	**Sb**	**08 47 30.4**	**-0.1**
LCY	**Lacayo**	**1.33**	**143**	*eP*	**Pn**	**08 47 12.6**	**-0.8**
LCY	**Lacayo**	**1.33**	**143**	*eP*	**Pn**	**08 47 12.6**	**-0.8**
VSM	**San Miguel**	**1.34**	**142**	*eP*	**Pn**	**08 47 12.8**	**-0.9**
VSM	**San Miguel**	**1.34**	**142**	*eP*	**Pn**	**08 47 12.7**	**-0.9**
PCG	**Pacaya**	**1.44**	**266**	*eP*	**Pg**	**08 47 15.5**	**-0.2**
PCG				*eS*	**Sn**	**08 47 35.3**	**+0.9**
PCG	**Pacaya**	**1.44**	**266**	*eP*	**Pg**	**08 47 15.5**	**-0.2**
PCG				*eS*	**Sn**	**08 47 35.1**	**+0.7**
FUG	**Fuego 3**	**1.66**	**269**	*eP*	**Pb**	**08 47 19.4**	**+0.1**
FUG				*eS*	**Sg**	**08 47 42.9**	**+1.4**
FUG	**Fuego 3**	**1.66**	**269**	*eS*	**Sg**	**08 47 43.1**	**+1.6**
LCND	**La Caada**	**1.68**	**134**	*eP*	**Pn**	**08 47 18.1**	**0.0**
LCND				*eS*	**Sb**	**08 47 41.3**	**+0.5**
LCND				IAML		08 47 44.1	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	**1.68**	**134**	*eP*	**Pn**	**08 47 18.1**	**0.0**
LCND				*eS*	**Sb**	**08 47 41.3**	**+0.5**
LCND				IAML		08 47 44.1	
	comp=Z,1μm,0.3s						
CNCH	**Conchagua**	**1.74**	**134**	*eP*	**Pn**	**08 47 19.3**	**+0.3**
CNCH				*eS*	**Sb**	**08 47 43.6**	**+0.8**
CNCH	**Conchagua**	**1.74**	**134**	*eP*	**Pn**	**08 47 19.6**	**+0.6**
CNCH				*eS*	**Sb**	**08 47 43.6**	**+0.8**
TGUH	**Tegucigalpa,Un**	**1.85**	**103**	*eP*	**Pn**	**08 47 21.2**	**+0.9**
ESTN	**Estel**	**3.01**	**117**	*eP*	**Pn**	**08 47 35.9**	**-0.6**
ESTN				*eS*	**Sb**	**08 48 21.5**	**+2.1**
ESTN				IAML		08 48 28.9	
	comp=N,120nm,0.6s						
MATN	**Matagalpa**	**3.48**	**116**	*eP*	**Pn**	**08 47 42.2**	**-0.6**
MATN				*eS*	**Sb**	**08 48 35.0**	**+2.3**
MATN				IAML		08 48 38.7	
	comp=N,337nm,0.6s						

*GCG **16** 08:58:35.1±0.5, 14.°63N×89.°04W, h13km±96km, MD3.4*
*SNET **16** 08:58:35.7±2.0, 14.°46N×89.°16W, h1km±4km, ML3.2*
ISC 16 08:58:35.1±1.3,**14.°54N**±0.°05×**89.°11W**±0.°03,**h5**km±11km,
n25,σ0°**45**/36,**3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTO3	**Montecristo**	**0.28**	**240**	*eP*	**Pg**	**08 58 40.3**	**-0.4**
MTO3				*eS*	**Sg**	**08 58 44.1**	**-0.3**
LLGN	**La Laguna**	**0.40**	**157**	*eP*	**Pg**	**08 58 43.2**	**+0.3**
LLGN				*eS*	**Sg**	**08 58 49.2**	**+1.1**
UNIC	**Santa Ana**	**0.70**	**219**	*eP*	**Pg**	**08 58 48.1**	**-0.5**
UNIC				*eS*	**Sg**	**08 58 57.8**	**+0.1**
UNIC				IAML		08 58 58.3	
	comp=Z,747nm,0.3s						
VICT	**Victoria**	**0.74**	**142**	*eP*	**Pg**	**08 58 49.2**	**-0.1**
VICT				*eS*	**Sg**	**08 58 59.7**	**+0.8**
MRL	**Marmol**	**0.77**	**314**	*eP*	**Pg**	**08 58 50.1**	**0.0**
CEDA	**San Andres**	**0.78**	**201**	*eP*	**Pg**	**08 58 50.0**	**-0.2**
CEDA				*eS*	**Sg**	**08 59 01.0**	**+0.6**
CEDA				IAML		08 59 14.7	
	comp=Z,671nm,0.4s						
LFU	**La Fuente**	**0.79**	**180**	*eP*	**Pg**	**08 58 50.6**	**+0.3**
UDBS	**Soyapango**	**0.81**	**183**	*eP*	**Pg**	**08 58 50.9**	**+0.1**
UEES	**San Salvador**	**0.82**	**189**	*eP*	**Pg**	**08 58 51.0**	**+0.1**
UEES				*eS*	**Sb**	**08 59 03.0**	**-0.3**
UEES				IAML		08 59 08.5	
	comp=Z,839nm,0.2s						
SNJE	**San Jose**	**0.82**	**216**	*eP*	**Pg**	**08 58 50.6**	**-0.4**
RTR	**El Retiro**	**0.82**	**219**	*eP*	**Pg**	**08 58 51.1**	**+0.1**
UESS	**San Salvador**	**0.83**	**186**	*eP*	**Pg**	**08 58 50.8**	**-0.4**
PAVA	**Las Pavas**	**0.84**	**168**	*eP*	**Pg**	**08 58 51.3**	**0.0**
PAVA				*eS*	**Sb**	**08 59 03.3**	**-0.6**
PAVA				IAML		08 59 04.1	
	comp=Z,847nm,0.3s						
SBLS	**San Blas**	**0.86**	**216**	*eP*	**Pg**	**08 58 51.3**	**-0.4**
LOMA	**San Marcos**	**0.89**	**184**	*eP*	**Pg**	**08 58 52.2**	**0.0**
SNVI	**San Vicente**	**0.96**	**164**	*eS*	**Sb**	**08 59 07.4**	**+0.1**
TECA	**Tecapa**	**1.20**	**150**	*eP*	**Pg**	**08 58 57.5**	**-0.6**
NBG	**Las Nubes**	**1.20**	**272**	*eP*	**Pg**	**08 58 58.2**	**0.0**
NBG				*eS*	**Sn**	**08 59 16.5**	**+0.9**
IXG	**Ixpaco**	**1.34**	**254**	*eP*	**Pn**	**08 59 00.6**	**-0.1**
IXG				*eS*	**Sb**	**08 59 17.8**	**-0.7**
VSM	**San Miguel**	**1.37**	**144**	*eP*	**Pn**	**08 59 00.9**	**-0.2**
PCG	**Pacaya**	**1.46**	**264**	*eP*	**Pb**	**08 59 03.0**	**+0.1**
FUG	**Fuego 3**	**1.68**	**267**	*eP*	**Pb**	**08 59 06.9**	**+0.2**
LCND	**La Caada**	**1.70**	**136**	*eP*	**Pn**	**08 59 05.6**	**+0.1**
LCND				*eS*	**Sg**	**08 59 29.4**	**-0.5**
LCND				IAML		08 59 35.2	
	comp=Z,910nm,0.5s						
CNCH	**Conchagua**	**1.76**	**135**	*eP*	**Pb**	**08 59 07.9**	**-0.2**
CNCH				*eS*	**Sg**	**08 59 32.2**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.84**	**105**	*eP*	**Pb**	**08 59 08.9**	**-0.5**

*ISCJB **16** 09:04:34.2±1.7, 11.°66N±0.°1×87.°12W±0.°07, h49km, Error ellipse: s-maj=18.1km s-min=6.7km az=23.8*
*UCR **16** 09:04:35.4±1.3, 11.°66N×87.°10W, h27km±5km, ML3.9*
*SNET **16** 09:04:35.8±1.4, 11.°72N×87.°04W, h71km±49km, ML4.1*
ISC 16 09:04:35.9±2.6,**11.°6N**±0.°2×**87.°08W**±0.°07,**h49**km,**n20**,
σ0°**65**/26,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.73**	**41**	*i P*	**Pn**	**09 04 49.4**	**-0.6**
XAVN	**Gruta Xavier**	**0.90**	**55**	*eP*	**Pn**	**09 04 52.0**	**-0.3**
APYN	**Apoyeque**	**0.93**	**49**	*eP*	**Pn**	**09 04 52.5**	**-0.2**
CNGN	**Cerro Negro**	**0.94**	**23**	*eP*	**Pn**	**09 04 52.0**	**-0.9**
CNGN				IAML		09 05 07.5	
	comp=E,672nm,0.4s						
CNGN	**Cerro Negro**	**0.94**	**23**	*eP*	**Pn**	**09 04 52.0**	**-0.9**
MGAN	**Managua**	**0.96**	**57**	*eP*	**Pn**	**09 04 52.8**	**-0.3**
MGAN				*eS*	**Sn**	**09 05 06.9**	**+1.1**
TELN	**Telica**	**1.00**	**14**	*eP*	**Pn**	**09 04 53.2**	**-0.5**
BRAN	**Las Pilas**	**1.30**	**33**	*eP*	Pn	09 04 52.5	-5.2
CSGN	**Cosiguina Volc**	**1.42**	**341**	*eP*	**Pn**	**09 04 59.6**	**+0.2**
CSGN				*eS*	**Sn**	**09 05 18.2**	**+1.1**
CSGN				IAML		09 05 19.4	
	comp=E,12μm,0.4s						
CSGN	**Cosiguina Volc**	**1.42**	**341**	*eP*	**Pn**	**09 04 59.6**	**+0.2**
CSGN				*eS*	**Sn**	**09 05 18.2**	**+1.1**
ESTN	**Estel**	**1.62**	**25**	*eP*	**Pn**	**09 05 01.9**	**-0.3**
ESTN	**Estel**	**1.62**	**25**	*eP*	**Pn**	**09 05 01.8**	**-0.4**
MATN	**Matagalpa**	**1.72**	**41**	*eP*	**Pn**	**09 05 03.4**	**-0.1**
MATN				IAML		09 05 29.7	
	comp=N,1μm,0.4s						
CNCH	**Conchagua**	**1.80**	**336**	*eP*	**Pn**	**09 05 04.1**	**-0.6**
CNCH				*eS*	**Sn**	**09 05 26.5**	**+0.1**
CNCH				IAML		09 05 34.2	
	comp=Z,5μm,0.5s						
CNCH	**Conchagua**	**1.80**	**336**	*eP*	**Pn**	**09 05 04.5**	**-0.2**
CNCH				*eS*	**Sn**	**09 05 26.5**	**+0.1**
CNCH				IAML		09 05 34.2	
	comp=Z,5μm,0.5s						
LCND	**La Caada**	**1.85**	**335**	*eP*	**Pn**	**09 05 04.5**	**-0.8**
LCND				*eS*	**Sn**	**09 05 26.7**	**-0.8**
LCND				IAML		09 05 31.7	
	comp=Z,600nm,0.3s						
LCND	**La Caada**	**1.85**	**335**	*eP*	**Pn**	**09 05 04.5**	**-0.8**
LCND				*eS*	**Sn**	**09 05 26.7**	**-0.8**
LCND				IAML		09 05 31.7	
	comp=Z,600nm,0.3s						
ACON	**Acoyapa**	**1.89**	**79**	*eP*	**Pn**	**09 05 05.3**	**-0.4**
TGUH	**Tegucigalpa,Un**	**2.42**	**355**	*eP*	**Pn**	**09 05 13.3**	**+0.3**
LBRS	**Las Brisas**	**2.85**	**318**	*eP*	**Pn**	**09 05 19.2**	**+0.3**

*ATH **16** 09:15:50.0, 38.°23N×22.°14E, h12km, ML3.2/29, Error ellipse: s-maj=0.9km s-min=0.5km az=285.0*
*ISCJB **16** 09:15:50.1±0.2, 38.°24N±0.°01×22.°13E±0.°02, h11km±1km, mb3.5/7, MS2.9/1, Error ellipse: s-maj=2.3km s-min=2.1km az=41.9*
*THE **16** 09:15:50.1, 38.°23N×22.°14E, h9km, ML3.3/25, Error ellipse: s-maj=0.8km s-min=0.4km az=349.0*
*IDC **16** 09:15:55.6±3.3, 38.°12N×22.°23E, h55km±30km, mb3.4/8, mb1 3.5/10, mb1mx3.3/52, mbtmp3.6/10, ML3.5/2, MS3.1/1, Ms1 3.2/1, ms1mx2.2/33, Error ellipse: s-maj=25.3km s-min=19.4km az=170.0*
ISC 16 09:15:50.2±0.7,**38.°23N**±0.°01×**22.°14E**±0.°01,**h11**km±3km,
n116,σ0°**76**/173,**mb3.6**/7,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG1	**Aigion**	**0.01**	**185**	P	**Pg**	**09 15 52.1**	**0.0**
AIG1				S	**Sg**	**09 15 53.3**	**-0.1**
AIG3	**Aigion**	**0.04**	**316**	P	**Pg**	**09 15 52.1**	**-0.1**
AIG3				S	**Sg**	**09 15 53.8**	**+0.1**
ALIK	**Aliki, Aigiali**	**0.04**	**325**	P	**Pg**	**09 15 52.0**	**-0.2**
ALIK				S	**Sg**	**09 15 53.7**	**0.0**
AIG2	**Aigio**	**0.06**	**287**	P	**Pg**	**09 15 52.0**	**-0.4**
AIG2				S	**Sg**	**09 15 53.1**	**-0.8**
AIG4	**Aigion**	**0.06**	**299**	P	**Pg**	**09 15 52.2**	**-0.2**
AIG4				S	**Sg**	**09 15 53.8**	**-0.2**
LAKA	**Lakka**	**0.13**	**277**	P	**Pb**	**09 15 54.2**	**-0.5**
LAKA				S	**Sg**	**09 15 56.2**	**+0.6**
LAKA				AML	AML	09 15 56.3	
	comp=E,45054μm,0.4s						
LAKA				AML	AML	09 15 56.5	
	comp=N,49943μm,0.4s						
TRIZ	**Trizonia**	**0.15**	**339**	P	**Pg**	**09 15 53.5**	**-0.1**
TRIZ				S	**Sg**	**09 15 55.8**	**-0.2**
TRIZ	**Trizonia**	**0.15**	**339**	P	**Pg**	**09 15 53.5**	**-0.1**
TRIZ				S	**Sg**	**09 15 55.9**	**-0.1**
KALE	**Kalithea**	**0.17**	**359**	P	**Pg**	**09 15 53.9**	**0.0**
KALE				S	**Sg**	**09 15 56.4**	**-0.1**
KALE	**Kalithea**	**0.17**	**359**	P	**Pg**	**09 15 54.0**	**+0.1**
KALE				S	**Sg**	**09 15 56.9**	**+0.3**
KALE				AML	AML	09 15 57.5	
	comp=N,54546μm,0.3s						
KALE				AML	AML	09 15 57.9	
	comp=E,27313μm,0.3s						
KLV	**Kalavryta, Ach**	**0.18**	**178**	P	**Pg**	**09 15 54.1**	**0.0**
KLV				S	**Sg**	**09 15 57.0**	**+0.1**
KLV	**Kalavryta, Ach**	**0.18**	**178**	P	**Pg**	**09 15 54.2**	**0.0**
KLV				S	**Sg**	**09 15 57.4**	**+0.5**
KLV				AML	AML	09 15 57.4	
	comp=E,12194μm,0.2s						
KLV				AML	AML	09 15 59.7	
	comp=N,16737μm,0.4s						
SERG	**Sergoula**	**0.20**	**340**	P	**Pg**	**09 15 54.3**	**-0.1**
SERG				S	**Sg**	**09 15 57.2**	**-0.2**
SERG	**Sergoula**	**0.20**	**340**	P	**Pg**	**09 15 54.4**	**-0.1**
SERG				S	**Sg**	**09 15 57.7**	**+0.3**
SERG				AML	AML	09 15 58.0	
	comp=N,26962μm,0.2s						
SERG				AML	AML	09 15 58.4	
	comp=E,34140μm,0.3s						
EFP	**Efpalio**	**0.27**	**317**	P	**Pg**	**09 15 55.5**	**-0.3**
EFP				S	**Sg**	**09 15 59.1**	**-0.4**
EFP	**Efpalio**	**0.27**	**317**	P	**Pg**	**09 15 55.5**	**-0.3**
EFP				S	**Sg**	**09 15 59.2**	**-0.4**
EFP				AML	AML	09 16 00.2	
	comp=E,16672μm,0.4s						
EFP				AML	AML	09 16 00.5	
	comp=N,13554μm,0.3s						
UPR	**University Cam**	**0.29**	**282**	P	**Pg**	**09 15 55.9**	**-0.1**
UPR	**University Cam**	**0.29**	**282**	P	**Pg**	**09 15 56.0**	**+0.1**
GUR	**Goura**	**0.33**	**151**	P	**Pg**	**09 15 56.6**	**-0.1**
GUR				S	**Sg**	**09 16 01.9**	**+0.7**
GUR	**Goura**	**0.33**	**151**	P	**Pg**	**09 15 56.7**	**-0.1**
GUR				S	**Sg**	**09 16 02.0**	**+0.7**
GUR				AML	AML	09 16 02.7	
	comp=E,45898μm,0.4s						
GUR				AML	AML	09 16 02.7	
	comp=N,41831μm,0.5s						
DSF	**Desfina**	**0.35**	**58**	P	**Pg**	**09 15 57.2**	**0.0**
DSF				S	**Sg**	**09 16 02.4**	**+0.3**
DSF	**Desfina**	**0.35**	**58**	P	**Pg**	**09 15 57.3**	**0.0**
DSF				S	**Sg**	**09 16 02.3**	**+0.3**
DSF				AML	AML	09 16 03.1	
	comp=E,11263μm,0.3s						
DSF				AML	AML	09 16 03.9	
	comp=N,16843μm,0.2s						
DLFA	**Delphi**	**0.38**	**48**	P	**Pg**	**09 15 57.6**	**-0.1**
DLFA				S	**Sg**	**09 16 03.1**	**+0.5**
ANX	**Ano Chora**	**0.41**	**335**	P	**Pg**	**09 15 57.8**	**-0.4**
ANX				S	**Sg**	**09 16 03.5**	**-0.2**
ANX	**Ano Chora**	**0.41**	**335**	P	**Pg**	**09 15 57.9**	**-0.4**
ANX				S	**Sg**	**09 16 04.1**	**+0.4**
ANX				AML	AML	09 16 07.7	
	comp=N,20439μm,0.5s						
ANX				AML	AML	09 16 10.7	
	comp=E,13974μm,0.4s						
DRO	**Drossia**	**0.44**	**232**	P	**Pg**	**09 15 58.5**	**-0.2**
DRO				S	**Sg**	**09 16 05.3**	**+0.8**
DRO	**Drossia**	**0.44**	**232**	P	**Pg**	**09 15 58.5**	**-0.2**
DRO				S	**Sg**	**09 16 05.3**	**+0.8**
DRO				AML	AML	09 16 08.3	
	comp=N,20926μm,0.6s						
DRO				AML	AML	09 16 09.2	
	comp=E,20683μm,0.3s						
THAL	**Thalero**	**0.45**	**114**	P	**Pg**	**09 15 59.1**	**+0.1**
THAL				S	**Sg**	**09 16 05.8**	**+0.8**
THAL	**Thalero**	**0.45**	**114**	P	**Pg**	**09 15 59.2**	**+0.1**
THAL				S	**Sb**	**09 16 06.0**	**-0.9**
THAL				AML	AML	09 16 07.0	
	comp=E,13205μm,0.2s						
THAL				AML	AML	09 16 09.4	
	comp=N,13078μm,0.2s						
RLS	**Riolos of Patr**	**0.56**	**253**	P	**Pg**	**09 16 00.3**	**-0.7**
RLS				S	**Sg**	**09 16 08.6**	**+0.2**
RLS	**Riolos of Patr**	**0.56**	**253**	P	**Pg**	**09 16 00.5**	**-0.5**
RLS				S	**Sb**	**09 16 09.7**	**-0.3**
RLS				AML	AML	09 16 12.8	
	comp=E,3845μm,0.4s						
RLS				AML	AML	09 16 14.5	
	comp=N,2693μm,0.4s						
PROD	**Prodromos**	**0.60**	**87**	P	**Pg**	**09 16 02.0**	**+0.2**
PROD				S	**Sb**	**09 16 10.8**	**-0.3**
PROD	**Prodromos**	**0.60**	**87**	P	**Pb**	**09 16 02.2**	**-0.4**
PROD				S	**Sb**	**09 16 10.6**	**-0.5**
PROD				AML	AML	09 16 12.7	
	comp=N,7119μm,0.3s						
PROD				AML	AML	09 16 13.3	
	comp=E,5462μm,0.2s						
PVO	**Paravola**	**0.62**	**309**	P	**Pg**	**09 16 01.7**	**-0.6**
PVO				S	**Sb**	**09 16 11.1**	**-0.7**
PVO	**Paravola**	**0.62**	**309**	P	**Pg**	**09 16 01.9**	**-0.3**
ACOR	**Acrocorinthos**	**0.66**	**120**	P	**Pg**	**09 16 02.9**	**-0.1**
ACOR				AML	AML	09 16 16.6	
	comp=N,1670μm,0.3s						
ACOR				AML	AML	09 16 18.7	
	comp=E,1310μm,0.4s						
LTK	**Loutraki**	**0.68**	**107**	P	**Pg**	**09 16 03.5**	**+0.2**
LTK				S	**Sg**	**09 16 12.3**	**0.0**
LTK	**Loutraki**	**0.68**	**107**	P	**Pb**	**09 16 03.8**	**-0.2**
LTK				S	**Sg**	**09 16 12.0**	**-0.3**
LTK				AML	AML	09 16 16.9	
	comp=E,5024μm,0.4s						
LTK				AML	AML	09 16 18.8	
	comp=N,2859μm,0.3s						
LOUT	**Loutraki**	**0.70**	**110**	P	**Pg**	**09 16 03.5**	**-0.2**
TRIP	**Tripoli**	**0.70**	**172**	P	**Pg**	**09 16 03.2**	**-0.6**
TRIP				S	**Sb**	**09 16 13.8**	**-0.4**
TRIP	**Tripoli**	**0.70**	**172**	P	**Pg**	**09 16 03.5**	**-0.3**
TRIP				S	**Sg**	**09 16 13.3**	**+0.3**
TRIP				AML	AML	09 16 17.5	
	comp=E,5776μm,0.4s						
TRIP				AML	AML	09 16 23.8	
	comp=N,3436μm,0.5s						
EVR	**Evrytania**	**0.74**	**339**	P	**Pg**	**09 16 03.7**	**-0.7**
EVR				S	**Sg**	**09 16 13.9**	**-0.3**
EVR	**Evrytania**	**0.74**	**339**	P	**Pg**	**09 16 03.8**	**-0.7**
EVR				S	**Sg**	**09 16 13.8**	**-0.3**
EVR				AML	AML	09 16 18.6	
	comp=N,3886μm,0.4s						
EVR				AML	AML	09 16 21.2	
	comp=E,4024μm,0.7s						
AMT	**Artemida-Makis**	**0.77**	**207**	P	**Pg**	**09 16 04.3**	**-0.8**
AMT				S	**Sn**	**09 16 17.4

comp=N,1438μm,0.6s
VLS AML AML 09 16 39.0
comp=E,918μm,0.5s
MRKA Markates 1.23 67 P **Pb 09 16 13.2 -0.2**
MRKA AML AML 09 16 32.7
comp=N,1676μm,0.3s
MRKA AML AML 09 16 35.0
comp=E,1678μm,0.5s
EVGI Lefkada island 1.23 289 P **Pn 09 16 12.7 -0.7**
EVGI Lefkada island 1.23 289 P **Pn 09 16 12.9 -0.5**
FSK Fiskardo 1.26 281 P **Pn 09 16 12.7 -1.1**
FSK Fiskardo 1.26 281 P **Pn 09 16 12.7 -1.1**
ATH Athens Observa 1.27 101 P **Pn 09 16 13.3 -0.5**
ATH AML AML 09 16 36.2
comp=E,2301μm,0.5s
ATH AML AML 09 16 36.6
comp=N,1378μm,0.6s
LKD2 Lefkada island 1.29 296 P **Pn 09 16 13.5 -0.7**
TSLK Tsoukalades, L 1.31 298 P **Pb 09 16 14.6 -0.2**
ATHU Athens Univers 1.32 101 P **Pn 09 16 14.5 0.0**
FYTO Fytoko, Volos 1.34 28 P **Pn 09 16 14.6 -0.2**
THL Klokotos Trika 1.34 356 P **Pb 09 16 14.8 -0.5**
THL S **Sg 09 16 33.8 +0.4**
THL Klokotos Trika 1.34 356 P **Pb 09 16 15.1 -0.2**
THL AML AML 09 16 38.7
comp=N,684μm,0.4s
THL AML AML 09 16 39.1
comp=E,1275μm,0.6s
VLY Voula,Athens 1.36 105 P **Pn 09 16 15.1 0.0**
VLY S **Sn 09 16 33.2 +0.1**
VLY AML AML 09 16 37.1
comp=E,1165μm,0.3s
VLY AML AML 09 16 38.4
comp=N,1011μm,0.5s
PYL PYLOS 1.36 194 P **Pn 09 16 14.7 -0.5**
PTL Penteli 1.37 97 P **Pn 09 16 15.2 0.0**
PTL S **Sg 09 16 34.1 -0.1**
PTL AML AML 09 16 37.1
comp=N,1088μm,0.6s
PTL AML AML 09 16 40.4
comp=E,953μm,0.7s
XOR Xorichti 1.40 35 P **Pn 09 16 15.3 -0.4**
XOR Xorichti 1.40 35 P **Pn 09 16 15.5 -0.2**
EREA Eretria 1.42 82 P **Pb 09 16 16.5 -0.2**
VLI Veliai 1.63 157 P **Pn 09 16 19.1 +0.3**
VLI Veliai 1.63 157 P **Pb 09 16 19.7 -0.6**
KPRO Kipourio 1.83 341 P **Pb 09 16 23.8 +0.1**
LIT Litokhoron 1.89 8 P **Pn 09 16 22.9 +0.4**
KYTH Kithira 2.08 159 P **Pb 09 16 26.6 -1.5**
KNT Kendrikon 2.99 11 P **Pn 09 16 38.4 +0.9**
VAY Valandovo 3.11 6 *i* Pn **Pn 09 16 39.9 +0.7**
KRUS Krusevo 3.21 348 *e*Pn **Pn 09 16 39.7 -0.9**
STIP Stip 3.46 1 *e*Pn **Pn 09 16 42.2 -1.8**
MMB Musomiste 3.57 19 *e*P **Pn 09 16 45.6 0.0**
IDI Anoyia 3.67 142 S **Sn 09 17 27.4 -2.8**
comp=E,4.3nm,0.3s,baz=305,slow=16,SNR=1.8
KKB Krupnik 3.71 11 *e*P **Pn 09 16 48.5 +1.1**
RZN Rozhen 3.98 29 *e*P **Pn 09 16 52.5 +1.2**
VTS Vitosha 4.47 10 *e*P **Pn 09 16 58.2 +0.3**
MLR Muntele Rosu 7.79 20 P **Pn 09 17 47.2 +3.6**
comp=E,0.3nm,0.3s,baz=187,slow=8.1,SNR=3.0
UDBI Udbina 7.91 325 *e*Pn **Pn 09 17 47.3 +2.1**
BRTR Keskin Array B 9.08 77 P **Pn 09 18 03.7 +2.4**
comp=E,0.4nm,0.3s,baz=261,slow=12,SNR=12
ESDC Sonseca Array 20.34 282 P Pn 09 20 27.8 -0.6
comp=E,1.7nm,0.6s,baz=75,slow=11,SNR=16
ESDC LR LR 09 29 15.2
comp=E,56nm,19.2s,baz=40,slow=39
HFS Hagfors 22.58 349 P **P 09 20 53.2 +2.9**
comp=E,1.5nm,0.6s,baz=164,slow=16,SNR=3.9
NOA NORSAR Array B 23.84 347 P **P 09 21 04.5 +1.4**
comp=E,0.4nm,0.6s,baz=147,slow=9.6,SNR=3.1
EKA Eskdalemuir Ar 24.14 323 P **P 09 21 07.1 +1.1**
comp=E,1.7nm,0.7s,baz=118,slow=10,SNR=7.3
TORD Torodi Ar. Bea 30.89 222 P **P 09 22 06.7 -0.1**
comp=E,0.3nm,0.5s,baz=36,slow=8.5,SNR=4.3
MKAR Makanchi Array 44.19 59 P **P 09 23 58.7 -0.3**
comp=E,1.6nm,0.5s,baz=282,slow=6.6,SNR=20
ZALV Zalesovo Beam 44.71 48 P **P 09 24 02.5 -0.5**
comp=E,1.2nm,0.3s,baz=272,slow=8.2,SNR=5.1
YKA Yellowknife Ar 73.78 341 P **P 09 27 24.2 +0.1**
comp=E,0.1nm,0.7s,baz=35,slow=5.3,SNR=3.9
ASAR Alice Springs 120.91 97 PKP **PKPdf 09 34 42.1 -0.8**
comp=E,0.2nm,0.3s,baz=296,slow=1.6,SNR=6.0

KRSC 16 09:23:12.2±0.8, 49°.56N×156°.38E, h13km±11km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.14**	**352**		*e*S	Sb	09 23 48.0	-0.4
ALID	**Alaid**	**1.42**	**338**		*e*P	Pn	09 23 37.3	-0.5
ALID					*e*S	Sn	09 23 55.6	-0.7
PAU	**Pauzhetka**	**1.93**	**8**		*e*S	Sb	09 24 11.0	-0.2
KDTR	**Khodutka, Kamc**	**2.50**	**25**		*e*P	Pn	09 23 53.9	+1.4
KDTR					*e*S	Sn	09 24 24.8	+2.0
AVH	**Avacha**	**4.00**	**21**		*e*P	Pn	09 24 16.9	+3.8
KRX	**Arik**	**4.06**	**20**		*e*P	Pn	09 24 18.1	+4.0
SPN	**Mys Shipunski**	**4.22**	**31**		*e*P	Pn	09 24 20.3	+4.2

*ISCJB **16** 09:31:37.7±1.7, 13°.88N±0°.06×92°.07W±0°.04, h11km±12km, mb3.9/11, Error ellipse: s-maj=9.9km s-min=5.6km az=14.2*
*NEIC **16** 09:31:39.9±0.0, 13°.85N×91°.98W, h24km, mb3.9/15, MD4.1(MEX), After MEX.*
*MEX **16** 09:31:39.9±0.5, 13°.85N×91°.98W, h24km±26km, MD4.1*
*GCG **16** 09:31:39.6±0.7, 13°.69N×91°.77W, h4km±12km, MD4.0*
*IDC **16** 09:31:40.7±2.8, 13°.85N×92°.05W, h47km±25km, mb3.4/4, mb1 3.7/7, mb1mx3.4/31, mbtmp3.6/7, ML3.4/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/17, Error ellipse: s-maj=30.5km s-min=19.3km az=168.0*
*UCR **16** 09:31:44.6±1.6, 14°.06N×91°.68W, h20km±22km, MD3.6, mb3.9(NEIC)*

ISC 16 09:31:37.8±1.8, 13°.92N±0°.07×91°.95W±0°.04, h9km±10km, n48, σ2°.9±16°.62, mb3.9/11, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.63**	**35**		*e*P	**Pn**	**09 31 54.5**	**+1.5**
STG3	**Santiaguito 3,**	**0.87**	**25**	‖	*e*P	**Pn**	**09 31 56.7**	**+0.3**
THIG		**1.03**	**343**		*e*Pn	**Pg**	**09 31 56.5**	**-1.2**
THIG					*e*Sn	**Sb**	**09 32 10.3**	**-1.2**
THIG		**1.03**	**343**		*e*P	**Pg**	**09 31 56.5**	**-1.2**
THIG					*i* S	**Sb**	**09 32 10.3**	**-1.2**
FUG	**Fuego 3**	**1.19**	**64**		*e*P	**Pn**	**09 32 01.5**	**+0.6**
FUG	**Fuego 3**	**1.19**	**64**		*e*P	**Pn**	**09 32 01.5**	**+0.6**
PCG	**Pacaya**	**1.38**	**70**		*e*P	**Pb**	**09 32 04.8**	**+0.8**
PCG	**Pacaya**	**1.38**	**70**		*e*P	**Pb**	**09 32 04.8**	**+0.8**
IXG	**Ixpaco**	**1.48**	**80**		*e*P	**Pn**	**09 32 04.8**	**0.0**
IXG					*e*S	**Sb**	**09 32 22.3**	**-2.3**
IXG	**Ixpaco**	**1.48**	**80**		*e*P	**Pn**	**09 32 04.8**	**0.0**
IXG					*i* S	**Sb**	**09 32 24.7**	**0.0**
NBG	**Las Nubes**	**1.69**	**67**		*e*P	**Pg**	**09 32 10.0**	**-0.2**
NBG	**Las Nubes**	**1.69**	**67**		*e*P	**Pg**	**09 32 10.2**	**0.0**
NBG					*e*S	**Sg**	**09 32 33.5**	**+1.3**
APG	**El Apazote**	**1.79**	**53**		P	**Pg**	**09 32 11.1**	**-1.2**
APG	22nm,0.3s,baz=236,slow=11,SNR=98 48nm,0.3s,baz=308,slow=19,SNR=14				S	**Sg**	**09 32 34.5**	**-1.0**
APG	comp=Z,78nm,21.0s,baz=266,slow=34				LR	LR	09 32 45.4	
CCIG	**Comitan**	**2.36**	**356**		*e*Pn	**Pb**	**09 32 19.3**	**-1.3**
CCIG					*e*Sn	**Sg**	**09 32 53.9**	**+0.2**
CCIG	**Comitan**	**2.36**	**356**		*e*P	**Pn**	**09 32 16.9**	**0.0**
CCIG					*e*S	**Sn**	**09 32 45.0**	**-1.1**
TGIG		**3.06**	**338**		*e*Pn	**Pn**	**09 32 26.0**	**-0.5**
TGIG					*e*Sn	**Sn**	**09 33 01.1**	**-2.2**
TGIG		**3.06**	**338**		*e*P	**Pn**	**09 32 26.0**	**-0.5**
TGIG					*e*S	**Sn**	**09 33 01.1**	**-2.2**
CMIG	**Matias Romero**	**4.24**	**318**		P	**Pn**	**09 32 41.6**	**-1.0**
CMIG	0.8nm,0.3s,baz=145,slow=12,SNR=17 3.7nm,0.3s,baz=128,slow=10,SNR=5.6				S	**Sn**	**09 33 27.7**	**-4.7**
CMIG	comp=Z,82nm,19.4s,baz=130,slow=41				LR	LR	09 34 34.3	
CMIG	**Matias Romero**	**4.24**	**318**		*e*Pn	**Pn**	**09 32 41.9**	**-0.8**
CMIG	**Matias Romero**	**4.24**	**318**		*e*P	**Pn**	**09 32 41.9**	**-0.8**
CSGN	**Cosiguina Volc**	**4.37**	**102**		*e*Pn	**Pn**	**09 32 46.6**	**+2.0**
CSGN					*e*Sn	**Sb**	**09 33 44.4**	**-3.4**
TGUH	**Tegucigalpa,Un**	**4.54**	**88**		*e*Pg	**Pb**	**09 32 56.7**	**-1.0**
TEIG	**Tepich**	**7.19**	**29**		*e*Pn	**Pn**	**09 33 24.8**	**+1.7**
TLIG	**Tlapa**	**7.33**	**300**		*e*Pn	**Pn**	**09 33 25.7**	**+0.4**
TLIG					*e*Sn	**Sn**	**09 34 56.0**	**+7.2**
JTS	**Las Juntas de**	**7.73**	**117**		P	**Pn**	**09 33 32.1**	**+1.4**
JTS	0.3nm,0.3s,baz=16,slow=20,SNR=3.6 0.2nm,0.3s,baz=12,slow=20,SNR=1.5				S	**Sn**	**09 34 54.0**	**-4.5**
656A	**Willston**	**17.67**	**28**		*e*Pn	**P**	**09 35 51.1**	**+5.8**
JCT	49nm,1.3s **Junction City**	**18.00**	**338**		*e*Pn	**P**	**09 35 52.0**	**+3.1**
WHTX	2.0nm,0.4s **Lake Whitney,**	**18.68**	**345**		*e*P	**Pn**	**09 35 59.0**	**+2.3**
TX31	6.5nm,0.5s **Lajitas Ar. Si**	**18.79**	**327**		*e*P	**Pn**	**09 35 59.4**	**+1.1**
TXAR	2.7nm,1.3s **Lajitas Array**	**18.79**	**327**		P	**P**	**09 35 57.3**	**-0.5**
H06E1	0.1nm,0.3s,baz=151,slow=13,SNR=13 **SOCORRO T-PHASE**	**18.84**	**287**		T	T	09 55 19.3	
GOGA	SNR=3.4 **Godfrey**	**20.88**	**20**		*e*P	**P**	**09 36 20.3**	**-0.1**
MNTX	2.2nm,0.8s **Cornudas Mount**	**21.56**	**327**		*e*P	**P**	**09 36 28.5**	**+0.7**
BNM	1.8nm,0.8s **Barren Site**	**24.14**	**329**		*e*P	**P**	**09 36 55.6**	**+1.0**
LPM	**Los Pinos Moun**	**24.27**	**329**		*e*P	**P**	**09 36 57.0**	**+1.2**
LENM	**Lemitar**	**24.33**	**329**		*e*P	**P**	**09 36 57.6**	**+1.4**
SLM	**Saint Louis**	**24.67**	**3**		*e*P	**P**	**09 37 01.5**	**+2.5**
ANMO	8.3nm,0.4s **Albuquerque**	**24.70**	**330**		P	**P**	**09 36 58.9**	**-0.7**
ANMO	0.7nm,0.4s,baz=160,slow=12,SNR=8.7 **Albuquerque**	**24.70**	**330**		*e*P	**P**	**09 37 00.1**	**+0.5**
NV11	1.6nm,0.9s **Mina Array Sit**	**33.68**	**321**		*e*P	**P**	**09 38 22.4**	**+3.0**
NVAR	0.2nm,1.2s **Mina Array Bea**	**33.77**	**321**		P	**P**	**09 38 19.6**	**-0.7**
MCMT	1.2nm,0.8s,baz=136,slow=8.2,SNR=9.9 **McKenzie Canyo**	**35.57**	**334**		*e*P	**P**	**09 38 37.2**	**+1.4**
J08A	**Circle Bar Ran**	**37.14**	**327**		*e*P	**P**	**09 38 50.4**	**+1.3**
PQI	2.1nm,0.8s **Presque Isle**	**38.32**	**27**		*e*P	**P**	**09 39 02.4**	**+3.5**
F10A	14nm,1.3s **Beach Ranch, E**	**38.41**	**331**		*e*P	**P**	**09 38 59.9**	**+0.2**
KEBM	2.6nm,0.9s **Edson Butte**	**40.11**	**322**		*e*P	**P**	**09 39 16.2**	**+2.2**
YKA	10nm,1.3s **Yellowknife Ar**	**51.12**	**347**		P	**P**	**09 40 38.3**	**-2.4**
YKA	0.2nm,0.6s,baz=151,slow=7.4,SNR=7.2				PcP	**PcP**	**09 41 53.7**	**-2.5**
ILAR	0.3nm,0.8s,baz=141,slow=4.0,SNR=3.9 **Eielson Array**	**62.93**	**337**		P	**P**	**09 42 00.4**	**-4.0**
	0.6nm,0.8s,baz=90,slow=5.1,SNR=3.3							

*IDC **16** 09:44:45.9±1.0, 0°.93S×138°.16E, h0km, mb4.1/7, mb1 4.3/8, mb1mx3.9/26, mbtmp4.1/8, ML4.9/2, MS3.1/7, Ms1 3.1/7, ms1mx2.8/34, Error ellipse: s-maj=32.9km s-min=16.6km az=72.0*
*DJA **16** 09:44:46.5±1.0, 1°.S±12°.×13°.8E±°, h35km±11km, M5.0/6, mb5.0/6, mB6.0/5, MLv4.6/6, Mw(mB)5.7/5*
*ISCJB **16** 09:44:48.8±0.4, 1°.08S±0°.05×138°.04E±0°.03, h33km, mb4.3/13, MS3.3/5, Error ellipse: s-maj=7.2km s-min=4.2km az=16.3*
*NEIC **16** 09:44:52.9±2.6, 1°.06S×137°.96E, h50km±4km, mb4.4/14, Error ellipse: s-maj=20.7km s-min=17.7km az=76.0*

ISC 16 09:44:50.5±0.6, 1°.04S±0°.07×138°.09E±0°.04, h35km, n48, σ1°.9±90°.48, mb4.4/13, MS3.0/5, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**1.98**	**266**		P	**Pn**	**09 45 17.9**	**-3.7**
SRPI	**Serui, Papua**	**2.02**	**246**		P	**Pn**	**09 45 21.3**	**-0.8**
SRPI					S	**Sn**	**09 45 45.2**	**-1.0**
GENI	**Genyem**	**2.59**	**127**		P	**Pn**	**09 45 29.7**	**-0.3**
GENI					S	**Sn**	**09 46 01.0**	**+0.7**
JAY	**Jayapura**	**3.00**	**119**		Pn	**Pn**	**09 45 34.0**	**-1.7**
JAY	23nm,0.3s,baz=281,slow=6.3,SNR=88 20nm,0.3s,baz=66,slow=20,SNR=17				Sn	**Sn**	**09 46 07.2**	**-3.2**
JAY	comp=Z,546nm,19.8s,baz=6.5,slow=45				LR	LR	09 47 00.4	
JAY	**Jayapura**	**3.00**	**119**		P	**Pn**	**09 45 33.8**	**-1.9**
JAY					S	**Sn**	**09 46 08.1**	**-2.4**
RKPI	**Ransiki, Papua**	**3.94**	**263**		P	**Pn**	**09 45 46.7**	**-1.8**
FAKI	**Fak Fak**	**6.12**	**252**		*e*Pn	**Pn**	**09 46 16.1**	**-2.6**
FAKI					*e*Sn	**Sn**	**09 47 26.7**	**-0.8**
FAKI	**Fak Fak**	**6.12**	**252**		P	**Pn**	**09 46 16.0**	**-2.6**
SIJI	**Sorong**	**6.82**	**271**		Pn	**Pn**	**09 46 24.9**	**-3.2**
SIJI	2.9nm,0.3s,baz=36,slow=23,SNR=20 1.3nm,0.3s,baz=319,slow=19,SNR=3.0				Sn	**Sn**	**09 47 37.9**	**-6.8**
SIJI	1.8nm,0.3s,baz=143,slow=20,SNR=5.2				Lg	Lg	09 48 23.6	
SIJI	comp=Z,123nm,18.0s,baz=78,slow=39				LR	LR	09 49 12.4	
MSAI	**Masohi**	**9.43**	**256**		P	**Pn**	**09 47 07.0**	**+3.0**
AAI	**Ambon**	**10.23**	**255**		P	**Pn**	**09 47 15.5**	**+0.6**
PMG	**Port Moresby**	**12.27**	**133**		*e*Pn	**Pn**	**09 47 44.5**	**+1.5**
MTN	**Manton Dam**	**13.60**	**210**		*e*Pn	**Pn**	**09 48 00.4**	**-0.7**
COEN	**Coen**	**13.79**	**159**		*e*Pn	**Pn**	**09 48 04.1**	**+0.4**
COEN					*e*Sn	**Sn**	**09 50 34.4**	**-1.3**
KMSI	**Cibinong**	**14.20**	**276**		P	**P**	**09 48 17.6**	**+1.5**
RABL	**Rabaul**	**14.41**	**103**		*e*Pn	**Pn**	**09 48 12.8**	**+0.7**
DAV	**Davao City (W)**	**14.85**	**303**		LR	LR	09 54 12.3	
APSI	comp=Z,69nm,18.1s,baz=122,slow=38 **Ampana**	**16.43**	**270**		P	**Pn**	**09 48 36.3**	**-2.3**
WRAB	**Tennant Creek**	**19.13**	**191**		*e*P	**Pn**	**09 49 11.9**	**0.0**
WB2	73nm,0.8s **Warramunga Arr**	**19.14**	**191**		*e*P	**Pn**	**09 49 11.6**	**-0.4**
WR1	68nm,0.7s **Warramunga Arr**	**19.14**	**191**		*e*P	**Pn**	**09 49 12.6**	**+0.6**
WRA	**Warramunga Arr**	**19.14**	**191**		P	**Pn**	**09 49 12.6**	**+0.6**
WC3	8.4nm,0.3s,baz=8.9,slow=12,SNR=219 **Warramunga Arr**	**19.15**	**191**		*e*P	**Pn**	**09 49 12.2**	**+0.1**
WSI	68nm,0.8s **Waingapu**	**19.66**	**244**		P	**P**	**09 49 15.3**	**-1.3**
CTA	2μm,1.1s **Charters Tower**	**20.55**	**158**		P	Pn	09 49 28.8	+0.1
CTAO	3.8nm,0.6s,baz=334,slow=11,SNR=7.2 **Charters Tower**	**20.55**	**158**		*e*P	Pn	09 49 28.7	+0.1
FITZ	4.7nm,0.8s **Fitzroy Crossi**	**20.90**	**215**		P	Pn	09 49 31.6	-1.2
FITZ	12nm,1.3s,baz=355,slow=3.3,SNR=3.6 comp=Z,30nm,20.3s,baz=26,slow=35				LR	LR	09 57 10.0	
FITZ	**Fitzroy Crossi**	**20.90**	**215**		*e*P	Pn	09 49 32.1	-0.6
AS31	21nm,1.4s **Alice Springs**	**22.86**	**190**		*e*P	**P**	**09 49 51.8**	**+0.8**
ASAR	**Alice Springs**	**22.86**	**190**		P	**P**	**09 49 51.8**	**+0.8**
EIDS	32nm,0.9s,baz=13,slow=8.0,SNR=152 **Eidsvold**	**27.25**	**154**		*e*P	**P**	**09 50 32.5**	**+0.9**
STKA	7.4nm,0.8s **Stephens Creek**	**30.85**	**174**		P	**P**	**09 51 04.9**	**+1.4**
STKA	1.9nm,0.7s,baz=357,slow=5.8,SNR=6.3 **Stephens Creek**	**30.85**	**174**		*e*P	**P**	**09 51 04.4**	**+0.9**
FORT	1.2nm,1.3s **Forrest**	**31.07**	**197**		*e*P	**P**	**09 51 05.2**	**-0.3**
BBOO	11nm,0.9s **Buckleboo**	**31.66**	**183**		*e*P	**P**	**09 51 12.2**	**+1.6**
KSRS	9.4nm,1.2s **Korea Array**	**39.44**	**347**		P	**P**	**09 52 18.2**	**+1.0**
CMAR	0.4nm,0.6s,baz=159,slow=8.9,SNR=3.4 **Chiang Mai Arr**	**43.08**	**299**		P	**P**	**09 52 48.5**	**+1.0**
CMAR	1.5nm,0.4s,baz=134,slow=7.7,SNR=4.2 comp=Z,12nm,21.3s,baz=91,slow=36				LR	LR	10 10 50.8	
PETK	**Petropavlovsk-**	**56.40**	**14**		LR	LR	10 15 18.2	
CASY	comp=Z,14nm,20.9s,baz=193,slow=33 **Casey**	**67.97**	**192**		*e*P	**P**	**09 55 46.5**	**+0.9**
MK31	9.3nm,0.6s **Makanchi Array**	**68.09**	**322**		*e*P	**P**	**09 55 47.9**	**+1.0**
MK32	2.1nm,0.8s **Makanchi Array**	**68.09**	**322**		*e*P	**P**	**09 55 46.4**	**-0.5**
MKAR	**Makanchi Array**	**68.09**	**322**		P	**P**	**09 55 46.4**	**-0.5**
MAKZ	1.4nm,0.8s,baz=122,slow=5.4,SNR=5.6 **Makanchi**	**68.29**	**322**		*e*P	**P**	**09 55 49.3**	**+1.2**
KSH	3.9nm,0.7s **Kashi**	**69.49**	**313**		*e*P	**P**	**09 55 57.8**	**+1.9**
KSH					S	**S**	**10 05 03.4**	**+2.1**
KSH	comp=Z,8.0nm,0.5s				pmax	pmax		
KSH	comp=Z,220nm,4.5s				pmax	pmax		
KSH	comp=N,260nm,11.0s				LR	LR		
KSH	comp=E,130nm,6.9s				LR	LR		
KSH	comp=Z,150nm,12.2s				LR	LR		
PPT	**Papeete**	**72.86**	**108**		LR	LR	10 24 48.0	
CHGR	comp=Z,27nm,19.2s,baz=70,slow=33 **Chuyangaron**	**74.32**	**311**		*e*pP	pP	09 56 37.8	+3.4
BPAW	**Bear Paw Mtn.**	**82.69**	**25**		*e*P	**P**	**09 57 12.3**	**+2.0**
LPAZ	comp=Z,3.4nm,1.4s **La Paz**	**148.92**	**125**		PKPbc	**PKPbc**	**10 04 36.1**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=314,slow=8.1,SNR=5.3							

JMA 16 09:45:14.7±0.1, 24°.74N×123°.39E, h13km±4km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.44**	**231**		P	Pg	09 45 23.4	-0.1
YOJ					S	Sg	09 45 29.3	-0.1
JYNG	**Yonagunijimaku**	**0.50**	**235**		P	Pg	09 45 24.4	-0.1
JYNG					*e*S	Sg	09 45 31.4	+0.3
IRIF	**Iriomote-Funau**	**0.51**	**142**		P	Pg	09 45 24.5	-0.2
IRIF					*e*S	Sg	09 45 31.2	-0.3
JKRS	**Kuro-shima**	**0.75**	**131**		P	Pg	09 45 29.1	-0.2
JKRS					S	Sg	09 45 39.2	0.0
HATJ	**Hateruma jima**	**0.78**	**151**		P	Pg	09 45 29.2	-0.6
HATJ					*e*S	Sg	09 45 40.0	0.0
JIJ	**Ishigaki jima**	**0.78**	**119**		P	Pg	09 45 29.7	-0.2
JIJ					*e*S	Sg	09 45 39.1	-1.0
JISG	**Ishigakijimahi**	**0.85**	**100**		P	Pg	09 45 30.8	-0.4
JISG					S	Sg	09 45 42.3	0.0

TAP 16 09:45:41.1, 24°.32N×121°.44E, h11km±1km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.12**	**332**		*i* P	Pb	09 45 44.9	-0.6
NNSB	baz=332				*i* S	Sg	09 45 46.7	+0.4
ETLH	**Xiulin Townshi**	**0.12**	**163**		*i* P	Pb	09 45 45.2	-0.3
ETLH	baz=163				S	Sg	09 45 47.1	+0.8
NNS	**Nan Shan**	**0.13**	**331**		*i* P	Pb	09 45 45.1	-0.6
NNS	baz=333				*i* S	Sg	09 45 47.1	+0.4
NACB	**Ninganchiao**	**0.20**	**137**		*i* P	Pb	09 45 46.5	-0.3
NACB	baz=137				S	Sg	09 45 49.5	+1.2
WHF	**Hehuan Shan**	**0.24**	**223**		P	Pb	09 45 47.1	-0.6
WHF	baz=221				*e*S	Sg	09 45 51.2	+1.5
TWD	**Chiawan**	**0.28**	**150**		*e*P	Pb	09 45 48.0	-0.2
TWD	baz=148				*e*S	Sb	09 45 52.4	-0.5
NDT	**Datong Townshi**	**0.28**	**13**		P	Pb	09 45 48.2	-0.1
NDT	baz=12				*e*S	Sb	09 45 52.3	-0.8
ENA	**Nanau**	**0.29**	**69**		*e*P	Pb	09 45 48.3	-0.1
ENA	baz=69				*e*S	Sb	09 45 53.1	-0.1
NANB	**Nanao**	**0.30**	**70**		P	Pg	09 45 47.6	+0.5
NANB	baz=69				S	Sb	09 45 53.0	-0.5
ENTT	**Nioudou**	**0.34**	**20**		*i* P	Pb	09 45 49.1	-0.1
ENTT	baz=20				S	Sb	09 45 54.1	-0.4
YHNB	**Yeheng**	**0.35**	**350**		P	Pb	09 45 49.6	+0.2
YHNB	baz=349				S	Sb	09 45 54.0	-1.1
CHGB	**Renai**	**0.36**	**223**		P	Pb	09 45 49.3	-0.4
CHGB	baz=223				S	Sb	09 45 54.9	-0.6
OWD	**Renai**	**0.44**	**214**		P	Pb	09 45 50.6	-0.4
OWD	baz=213				S	Sb	09 45 56.7	-1.0
TWE	**Neicheng**	**0.45**	**27**		*e*P	Pb	09 45 51.2	+0.2
TWE	baz=29				*e*S	Sb	09 45 58.2	+0.5
NWLT	**Wulai**	**0.46**	**7**		*e*P	Pb	09 45 51.0	-0.2
NWLT	baz=6.0				S	Sb	09 45 57.6	-0.5
TWC	**Suao**	**0.47**	**52**		*e*P	Pb	09 45 52.2	+0.8
TWC	baz=53				*e*S	Sb	09 45 58.3	0.0
LIOB	**Emei**	**0.51**	**310**		*e*P	Pb	09 45 52.1	+0.1
LIOB	baz=309				S	Sb	09 46 00.2	+0.8
VWDT	**VWDT**	**0.63**	**206**		*e*P	Pg	09 45 53.6	+0.3
VWDT	baz=205				*e*S	Sb	09 46 02.7	-0.3
VWDT	baz=205							

*SJA **16** 10:29:56.9±0.6, 30°.68S×72°.08W, h10km±5km, ML3.5, MW3.7*
*GUC **16** 10:30:01.3±0.6, 30°.72S×71°.67W, h46km±6km, ML3.3*

ISC 16 10:29:57.2±2.3, 30°.72S±0°.04×72°.0W±0°.1, h2km±14km, n14, σ1°.51±1°.18, 1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.98**	**119**	⇑	*i* P	**Pg**	**10 30 16.9**	**+0.8**
CO02					*i* S	**Sg**	**10 30 28.4**	**-0.4**
LSCH	**La Serena**	**1.04**	**39**		*e*P	**Pn**	**10 30 18.6**	**-0.3**
LSCH					*i* S	**Sg**	**10 30 31.0**	**+0.3**
GO04	**Tololo Observa**	**1.17**	**62**		*i* P	**Pb**	**10 30 20.2**	**-0.2**
GO04					*i* S	**Sn**	**10 30 37.4**	**-0.2**
LCO	**Las Campanas**	**2.04**	**34**		*i* P	**Pb**	**10 30 33.8**	**-1.5**
LCO	**Las Campanas**	**2.04**	**34**		*e*P	**Pb**	**10 30 33.6**	**-1.6**
LCO					*i* S	**Sn**	**10 30 58.9**	**-0.3**
LCO					IAML		10 31 03.0	
ROCH	comp=E,256nm,0.2s **El Roble**	**2.40**	**160**		IAML		10 31 17.9	
ROC1	comp=N,275nm,0.5s **El Roble**	**2.40**	**160**		*i* P	**Pb**	**10 30 39.5**	**-1.8**
ROC1					*i* S	**Sb**	**10 31 11.7**	**+0.2**
RTLS	**Leoncito**	**2.55**	**116**		*i* P	**Pb**	**10 30 42.9**	**-1.1**
RTLS					IAML		10 31 18.1	
PEL	comp=Z,145nm,0.4s **Peldehue**	**2.66**	**155**		*e*P	**Pn**	**10 30 42.4**	**+1.2**
PEL					IAML		10 31 22.6	
AUSP	comp=E,146nm,0.3s **Uspallata**	**2.69**	**125**		*i* P	**Pb**	**10 30 44.6**	**-1.6**
AUSP					*i* S	**Sb**	**10 31 19.6**	**-0.2**
FCH	**Farellones**	**2.98**	**151**		*e*P	**Pn**	**10 30 47.5**	**+1.6**
FCH					IAML		10 31 35.6	
AMOG	comp=E,90nm,0.3s **MOGNA**	**3.02**	**95**		*i* P	**Pb**	**10 30 49.0**	**-2.9**
LMEL	**Las Melosas**	**3.47**	**154**		IAML		10 31 53.1	
VCA	comp=E,102nm,0.5s **Vinchina**	**

PCG	Pacaya	0.66	13	⇓eP	Pn	10 30 44.7	-0.3
FUG	Fuego 3	0.70	354	⇑eP	Pn	10 30 45.1	-0.3
NBG	Las Nubes	0.93	26	eP	Pn	10 30 48.1	0.0
RTR	El Retiro	1.10	82	eP	Pn	10 30 49.8	-0.3
SBLS	San Blas	1.11	85	eP	Pn	10 30 49.6	-0.7
SNJE	San Jose	1.13	84	eP	Pn	10 30 49.9	-0.7
STG3	Santiaguito 3,	1.24	321	⇓eP	Pn	10 30 51.8	0.0
UEES	San Salvador	1.48	91	eP	Pn	10 30 54.6	-0.3
UEES				eS	Sn	10 31 13.6	-0.1
UEES				IAML		10 31 18.3	
	comp=Z,350nm,0.2s						
LOMA	San Marcos	1.55	93	eP	Pn	10 30 55.6	-0.1
LOMA				eS	Sn	10 31 16.2	+1.0
LOMA				IAML		10 31 16.9	
	comp=Z,467nm,0.2s						
LFU	La Fuente	1.61	90	eP	Pn	10 30 56.1	-0.5
LCND	La Caada	2.83	98	eP	Pn	10 31 12.1	-0.9
LCND				eS	Sn	10 31 47.7	+1.7
LCND				IAML		10 31 51.4	
	comp=Z,82nm,0.3s						

THE ***16*** *10:33:18.3, 34.°34N×25.°10E, h1km±3km, ML2.5/2, Error ellipse: s-maj=5.1km s-min=1.1km az=145.0*

ATH 16 10:33:18.7, 34.°35N×25.°07E, h23km±6km, ML2.2/3, Error ellipse: s-maj=7.7km s-min=1.8km az=342.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.70	343	P	Pb	10 33 32.4	+0.1
SIVA				S	Sn	10 33 43.5	+0.2
	802nm,0.5s						
SIVA	Sivas	0.70	343	P	Pb	10 33 31.9	-0.4
SIVA				S	Sn	10 33 42.6	-0.7
SIVA				AML	AML	10 33 53.4	
	comp=N,869μm,0.4s						
SIVA				AML	AML	10 33 54.2	
	comp=E,1518μm,0.6s						
SIVA	Sivas	0.70	343	P	Pb	10 33 32.7	+0.4
SIVA				S	Sn	10 33 43.1	-0.2
SIVA				AML	AML	10 33 44.9	
	comp=N,799μm,0.5s						
SIVA				AML	AML	10 33 46.2	
	comp=E,1401μm,0.6s						
LAST	Lasithi	0.88	23	P	Pb	10 33 35.3	-0.1
LAST	Lasithi	0.88	23	P	Pb	10 33 35.3	-0.1
LAST				S	Sn	10 33 48.8	+0.9
LAST	Lasithi	0.88	23	P	Pb	10 33 35.3	-0.1
LAST				S	Sn	10 33 47.5	-0.4
LAST				AML	AML	10 33 55.6	
	comp=E,119μm,0.5s						
LAST				AML	AML	10 33 56.6	
	comp=N,108μm,0.5s						
GVD	Gavdhos	0.94	302	P	Pn	10 33 36.9	+0.3
GVD				S	Sn	10 33 51.4	+2.1
	comp=N,188nm,0.4s						
GVD	Gavdhos	0.94	302	P	Pn	10 33 36.8	+0.2
GVD				S	Sn	10 33 50.9	+1.6
GVD				AML	AML	10 33 56.8	
	comp=N,362μm,0.3s						
GVD				AML	AML	10 34 01.1	
	comp=E,408μm,0.5s						
GVD	Gavdhos	0.94	302	P	Pn	10 33 36.8	+0.3
GVD				S	Sn	10 33 49.5	+0.1
GVD				AML	AML	10 33 56.8	
	comp=N,362μm,0.3s						
GVD				AML	AML	10 34 01.1	
	comp=E,408μm,0.5s						
NPS	Neapolis	1.02	26	P	Pn	10 33 37.4	-0.2
NPS				S	Sn	10 33 53.0	+1.8
NPS	Neapolis	1.02	26	P	Pb	10 33 38.9	+1.2
NPS				S	Sn	10 33 51.8	+0.6
VAM	Vamos	1.27	326	P	Pb	10 33 42.8	+0.8
VAM	Vamos	1.27	326	P	Pb	10 33 42.1	0.0
VAM				S	Sb	10 34 01.6	+3.5
VAM				AML	AML	10 34 09.1	
	comp=E,172μm,0.3s						
VAM				AML	AML	10 34 15.7	
	comp=N,230μm,0.4s						
VAM	Vamos	1.27	326	P	Pb	10 33 42.8	+0.7
VAM				S	Sb	10 34 01.2	+3.2
KARP	Karpathos	2.10	55	P	Pb	10 33 54.6	-1.5

IDC ***16*** *10:34:36.7±1.7, 38.°57N×43.°90E, h0km, mb3.3/5, mb1 3.4/8, mb1mx3.3/42, mbtmp3.3/8, ML2.9/3, MS2.9/5, Ms1 2.9/5, ms1mx2.5/32, Error ellipse: s-maj=29.1km s-min=10.0km az=137.0*

AZER ***16*** *10:34:36.0±1.3, 38.°41N×43.°34E, h18km, ml3.9/20, Error ellipse: s-maj=10.8km s-min=9.5km az=102.0*

ISK ***16*** *10:34:38.8, 38.°87N×43.°62E, h5km, ML3.9/22*

NSSP ***16*** *10:34:38.3, 38.°87N×43.°62E, h10km, Ms3.7*

DDA ***16*** *10:34:39.4, 38.°88N×43.°58E, h18km±1km, ML4.0*

TEH ***16*** *10:34:39.3, 38.°86N×43.°59E, h11km, ML3.8*

ISC 16 10:34:39.7±1.0, 38.°83N±0.°01×43.°63E±0.°01, h6km±7km, n120, σ1§50/163, mb3.3/4, 7C-13D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.16	344	⇓iP	Pg	10 34 43.6	+0.5
VMUR				i S	Sg	10 34 46.1	+0.7
VMUR	Van-Muradiye	0.16	344	ePg	Pg	10 34 42.8	-0.3
ERCV	ERCIS-VAN	0.29	310	PG	Pg	10 34 45.1	-0.5
ERCV				SG	Sg	10 34 50.5	+1.0
ERCV	ERCIS-VAN	0.29	310	ePg	Pg	10 34 44.9	-0.7
VANB	Van	0.30	219	PG	Pb	10 34 47.8	+0.1
VANB				SG	Sb	10 34 55.0	+2.1
VANB	Van	0.30	219	ePg	Pb	10 34 47.7	+0.1
TVAN	Van	0.35	210	⇓iP	Pb	10 34 48.4	-0.1
TVAN				i S	Sb	10 34 54.5	+0.1
TVAN				IAML_P			
	comp=Z,222μm,0.4s						
TVAN	Van	0.35	210	ePg	Pb	10 34 47.7	-0.8
CLDR	Caldiran	0.38	36	PG	Pg	10 34 46.9	-0.4
CLDR				SG	Sg	10 34 53.4	+1.0
CLDR	Caldiran	0.38	36	⇑iP	Pg	10 34 47.7	+0.4
CLDR				i S	Sb	10 34 54.2	-1.2
CLDR				IAML_P			
	comp=Z,133μm,0.2s						
CLDR	Caldiran	0.38	36	ePg	Pg	10 34 46.8	-0.5
GEVA	Gevas	0.69	221	⇑iP	Pb	10 34 53.2	-0.9
GEVA				i S	Sb	10 35 04.1	+0.1
GEVA				IAML_P			
	comp=Z,25μm,0.1s						
GEVA	Gevas	0.69	221	ePg	Pg	10 34 52.5	-0.4
ADCV	BITLIS_Adilcev	0.71	268	⇑iP	Pg	10 34 53.3	-0.1
ADCV				i S	Sb	10 35 04.3	-0.4
DYDN	Diyadin	0.71	4	⇓iP	Pg	10 34 52.5	-1.0
DYDN				i S	Sg	10 35 03.2	+0.4
DYDN				IAML_P			
	comp=Z,62μm,0.2s						
DYDN	Diyadin	0.71	4	ePg	Pg	10 34 52.4	-1.0
AKDM	Akdamar-Van	0.71	226	PG	Pg	10 34 53.3	-0.2
AKDM				SG	Sb	10 35 05.5	+0.7
TUTA	Tutak	0.85	312	⇓iP	Pg	10 34 55.2	-0.9
TUTA				i S	Sg	10 35 07.5	+0.3
AGRB	Hanur-Agry	0.89	327	PG	Pg	10 34 55.7	-1.2
AGRB	Hanur-Agry	0.89	327	ePg	Pg	10 34 55.6	-1.3
MLAZ	Malazgirt-MUS	0.90	290	PG	Pg	10 34 55.8	-1.2
MLAZ	Malazgirt-MUS	0.90	290	ePg	Pg	10 34 55.1	-1.9
IGDI	IGDIR	1.09	18	⇓iP	Pg	10 34 59.9	-0.8
IGDI				i S	Sn	10 35 18.7	+1.6
IGDI				IAML_P			
	comp=Z,9μm,0.2s						
IGDI	IGDIR	1.09	18	ePg	Pg	10 34 59.8	-0.9
TASB	TASBURUN-IGDIR	1.24	22	PN	Pg	10 35 02.8	-0.8
TASB	TASBURUN-IGDIR	1.24	22	ePn	Pg	10 35 02.9	-0.7
BLIS	Bitlis-Merkez	1.26	251	⇑iP	Pg	10 35 02.2	-1.6
BLIS				i S	Sb	10 35 20.2	-0.2
BLIS	Bitlis-Merkez	1.26	251	ePg	Pg	10 35 02.0	-1.9
HAKT	HAKKARI	1.27	177	⇓iP	Pg	10 35 03.3	-0.9
HAKT				i S	Sn	10 35 25.5	+3.7
HAKT				IAML_P			
	comp=Z,9μm,0.4s						
HAKT	HAKKARI	1.27	177	ePg	Pg	10 35 03.0	-1.2
HYR	Heyderabad	1.30	47	P	Pg	10 35 03.9	-0.8
	SNR=52						
HYR				S	Sn	10 35 26.6	+4.4
EATA	Eleskirt	1.35	320	⇓iP	Pg	10 35 04.6	-1.1
EATA				i S	Sb	10 35 23.2	-0.2
ARUZ	Aruch	1.49	14	⇓iP	Pn	10 35 07.4	+0.2
ARUZ				⇓iS	Sg	10 35 28.2	+0.4
NAX	Nakhchivan	1.49	76	P	Pb	10 35 07.5	-0.4
	SNR=103						
NAX				S	Sg	10 35 30.3	+2.5
GNI	Garni	1.57	33	PN	Pn	10 35 08.3	0.0
GNI	Garni	1.57	33	Pg	Pb	10 35 08.9	-0.4
	comp=Z,90nm,0.3s,baz=259,slow=2.2,SNR=93						
GNI				Lg	Lg	10 35 31.6	
	comp=Z,43nm,0.3s,baz=298,slow=17,SNR=5.8						
GNI				LR	LR	10 36 06.2	
	comp=Z,129nm,20.4s,baz=220,slow=52						
GNI	Garni	1.57	33	⇑iP	Pb	10 35 08.9	-0.4
GNI				⇓iS	Sn	10 35 29.4	+0.3
GNI	Garni	1.57	33	ePn	Pb	10 35 08.8	-0.5
CUKT	Cukurca	1.58	181	PN	Pb	10 35 08.9	-0.5
CUKT	Cukurca	1.58	181	iPg	Pg	10 35 09.4	-0.7
CUKT				i S	Sg	10 35 35.6	+5.1
CUKT	Cukurca	1.58	181	ePn	Pb	10 35 09.0	-0.5
SRTM	Siirt_Merkez	1.58	238	⇑iP	Pn	10 35 08.6	+0.2
SRTM				i S	Sg	10 35 31.1	+0.6
SRTM				IAML_P			
	comp=Z,16μm,0.4s						
SRTM	Siirt_Merkez	1.58	238	ePn	Pb	10 35 09.1	-0.3
DIGO	Kars	1.59	353	⇓iP	Pg	10 35 09.8	-0.5
DIGO				i S	Sg	10 35 33.7	+2.7
DIGO				IAML_P			
	comp=Z,24μm,0.3s						
DIGO	Kars	1.59	353	ePn	Pn	10 35 08.9	+0.2
SBZ	Shahbuz	1.60	69	P	Pg	10 35 09.9	-0.5
	SNR=116						
SBZ				S	Sg	10 35 32.7	+1.6
IMRD	Marand	1.62	94	IAMB	IAmb	10 35 48.8	
	comp=Z,11μm,0.6s						
IMRD				ePn	Pn	10 35 09.3	+0.2
SIRN	Sırnak	1.64	216	iPg	Pg	10 35 11.1	-0.1
SIRN				i S	Sg	10 35 34.9	+2.3
SIRN				IAML_P			
	comp=Z,5μm,0.3s						
SIRN	Sırnak	1.64	216	ePn	Pg	10 35 10.5	-0.7
ISHB	Shabestar	1.65	109	IAMB	IAmb	10 35 11.5	
	comp=Z,11μm,0.6s						
ISHB				ePn	Pn	10 35 09.8	+0.3
MUSM	Mu-Merkez	1.66	267	⇑iP	Pn	10 35 08.4	-1.1
MUSM				i S	Sg	10 35 32.2	-0.8
MUSM				IAML_P			
	comp=Z,4μm,0.2s						
MUSM	Mu-Merkez	1.66	267	ePn	Pn	10 35 08.4	-1.1
VRTB	Varto-Mus	1.73	282	PN	Pb	10 35 11.1	-0.8
VRTB	Varto-Mus	1.73	282	eP	Pn	10 35 10.3	-0.1
VRTB				i S	Sg	10 35 37.6	+2.4
KOPR	Koprukoy-ERZUR	1.80	311	PN	Pb	10 35 12.3	-0.9
HOMI	Horasan	1.80	313	eP	Pg	10 35 13.6	-0.7
HOMI				i S	Sg	10 35 39.8	+2.1
HOMI				IAML_P			
	comp=Z,6μm,0.4s						
KARS	Kars	1.84	347	ePn	Pb	10 35 13.2	-0.7
ORD	Ordubad	1.85	86	P	Pn	10 35 11.5	-0.6
ORD				S	Sg	10 35 38.9	-0.2
EAK	Akyaka	1.85	359	iP	Pg	10 35 15.5	+0.2
EAK				i S	Sg	10 35 43.2	+4.0
EAK	Akyaka	1.85	359	ePn	Pg	10 35 14.7	-0.6
BNGL	BINGOL	1.94	274	iP	Pb	10 35 15.0	-0.6
BNGL				i S	Sg	10 35 42.1	+0.1
SENK	Senkaya-Erzuru	1.99	331	PN	Pn	10 35 14.9	+0.8
SENK	Senkaya-Erzuru	1.99	331	ePn	Pb	10 35 16.8	+0.3
SVAN	Silvan-Diyarba	2.02	251	PN	Pb	10 35 15.8	-1.2
SVAN	Silvan-Diyarba	2.02	251	eP	Pb	10 35 16.7	-0.3
SVAN				i S	Sg	10 35 44.5	-0.3
SVAN				IAML_P			
	comp=Z,6μm,0.2s						
SVAN	Silvan-Diyarba	2.02	251	ePn	Pb	10 35 16.2	-0.8
ITBZ	Tabriz	2.06	106	ePn	Pb	10 35 16.5	-1.2
BTMN	Batman	2.08	244	iP	Pb	10 35 16.9	-1.0
BTMN				i S	Sg	10 35 45.6	-0.9
IAZR	Azarshahr	2.18	121	ePn	Pb	10 35 19.1	-0.6
IAZR				IAMB	IAmb	10 35 26.6	
	comp=Z,7μm,0.4s						
ECAT	Cat-ERZURUM	2.20	291	iP	Pb	10 35 19.5	-0.6
ECAT				i S	Sg	10 35 50.8	+0.2
STEZ	Stepenevan	2.25	15	⇓eP	Pn	10 35 17.0	-0.6
STEZ				⇓eS	Sg	10 35 51.0	-0.9
BNGB	Bingl	2.31	275	PN	Pn	10 35 19.0	+0.6
BGOL	Bingol	2.31	275	iP	Pb	10 35 20.8	-1.1
BGOL				i S	Sg	10 35 54.6	+0.6
BGD	Bogdanovka	2.43	359	P	Pb	10 35 24.7	+0.7
YEDI	Yedisu-Bingol	2.47	285	PN	Pn	10 35 21.8	+1.1
GDB	GEDABAY	2.50	40	P	Pn	10 35 22.7	+1.6
	SNR=19						
GDB				S	Sg	10 35 59.3	-0.7
KRIK	Erzurum-spir	2.57	307	iP	Pb	10 35 27.1	+0.7
KRIK				i S	Sg	10 36 03.2	+0.8
KRIK				IAML_P			
	comp=Z,98nm,0.1s						
AKH	Akhalkalaki	2.58	358	PN	Pn	10 35 23.2	+1.0
AKH	Akhalkalaki	2.58	358	P	Pg	10 35 28.0	-1.1
AKH				S	Sg	10 36 03.4	+0.8
QZX	Qazax, Azerbai	2.60	31	P	Pb	10 35 25.6	-1.1
	SNR=18						
QZX				S	Sg	10 36 01.8	-1.4
KZRT	Kazreti	2.62	13	P	Pb	10 35 27.0	-0.1
IHRS	Heris	2.72	100	ePn	Pn	10 35 25.7	+1.5
IHRS				IAMB	IAmb	10 35 32.2	
	comp=Z,2μm,0.3s						
GANJ	Ganja	2.75	48	P	Pn	10 35 25.9	+1.5
GANJ				S	Sb	10 36 05.5	+2.0
MAZI	Mazidag	2.86	242	PN	Pn	10 35 26.5	+0.5
TBLG	Delisi	3.02	16	PN	Pn	10 35 29.2	+1.1
TBLG	Delisi	3.02	16	P	Pb	10 35 34.3	+0.5
TBLG				S	Sg	10 36 15.7	-1.0
BCA	Borcka	3.03	330	PN	Pn	10 35 29.2	+1.0
BAYT	Aydıntepe-Bayb	3.11	301	PN	Pn	10 35 30.7	+1.2
ERZN	Erzincan	3.13	285	PN	Pn	10 35 31.3	+1.6
BATM	Batumi	3.14	332	PN	Pn	10 35 30.5	+0.8
BATM	Batumi	3.14	332	P	Pb	10 35 36.8	+0.8
MNGR	Mingechevir, A	3.29	53	S	Sb	10 36 16.8	-2.0
ISRB	Sarab	3.33	106	ePn	Pn	10 35 34.3	+1.8
ISRB				IAMB	IAmb	10 35 49.3	
	comp=Z,1μm,0.3s						
SVRC	Sivrice-ELAZID	3.42	264	PN	Pn	10 35 34.8	+1.1
TKB	Tkibuli	3.55	352	P	Pb	10 35 44.8	+1.8
ZKTA	Zakatala	3.62	38	P	Pn	10 35 37.4	+1.1
ZKTA				S	Sb	10 36 26.3	-2.0
SEKA	Sheki	3.62	48	P	Pn	10 35 37.4	+1.0
SEKA				S	Sb	10 36 26.8	-1.7
LRK	Lerik	3.69	91	P	Pn	10 35 35.8	-1.6
GLBA	Clilabad	3.73	82	P	Pn	10 35 36.3	-1.5
GLBA				S	Sn	10 36 24.1	+2.0
ONI	Oni	3.76	358	P	Pb	10 35 48.5	+2.0
QBL	Gabala	3.87	56	P	Pn	10 35 40.3	+0.6
QBL				S	Sn	10 36 30.5	+5.1
IML	Ismayilli	4.02	59	S	Sn	10 36 34.0	+4.8
LKRN	Lenkeran, Azer	4.03	90	P	Pn	10 35 39.8	-2.1
LKRN				S	Sn	10 36 30.1	+0.7
URFA	Urfa	4.04	251	PN	Pn	10 35 44.4	+2.3
ASTR	Astara	4.05	92	P	Pn	10 35 39.9	-2.3
ASTR				S	Sn	10 36 30.3	+0.5
GBS	Qobustan	4.44	66	P	Pn	10 35 47.4	-0.2
GBS				S	Sn	10 36 44.2	+4.5
QSAR	Qusar	4.45	51	P	Pn	10 35 48.3	+0.5
QUBA	Quba, Azerbaij	4.50	54	S	Sn	10 36 46.9	+5.8
ATGJ	Altiaghaj	4.56	62	P	Pn	10 35 49.3	0.0
KBZ	Khabaz	4.92	354	Pn	Pn	10 35 59.1	+4.9
	comp=Z,0.2nm,0.3s,baz=144,slow=14,SNR=2.3						
KBZ				LR	LR	10 38 18.9	
	comp=Z,62nm,21.8s,baz=98,slow=43						
BRTR	Keskin Array B	7.80	280	Pn	Pn	10 36 38.6	+4.7
	comp=Z,0.1nm,0.3s,baz=102,slow=18,SNR=2.8						
MMAI	Mount Meron Ar	8.84	231	LR	LR	10 40 30.3	
	comp=Z,99nm,18.1s,baz=55,slow=40						
AKTO	Aktyubinsk	15.44	37	Pn	Pn	10 38 16.0	-2.0
	comp=Z,0.1nm,0.3s,baz=225,slow=16,SNR=2.2						
AKTO				LR	LR	10 45 54.0	
	comp=Z,34nm,18.9s,baz=243,slow=44						
ARU	Arti	20.20	24	P	P	10 39 14.0	-1.0
	comp=Z,0.7nm,0.3s,baz=202,slow=19,SNR=3.2						
BVAR	Borovoye Array	23.23	44	P	P	10 39 47.1	-0.3
	comp=Z,0.1nm,0.3s,baz=227,slow=19,SNR=2.2						
GERES	GERESS Array B	23.66	305	P	P	10 39 51.9	0.0
	comp=Z,0.6nm,0.9s,baz=132,slow=5.8,SNR=2.9						
HFS	Hagfors	28.43	328	LR	LR	10 52 03.7	
	comp=Z,32nm,19.1s,baz=122,slow=36						
NOA	NORSAR Array B	29.95	328	LR	LR	10 54 26.4	
	comp=Z,19nm,18.8s,baz=240,slow=39						
ESDC	Sonseca Array	36.52	287	P	P	10 41 45.0	-0.9
	comp=Z,0.6nm,0.4s,baz=66,slow=9.0,SNR=9.3						
TORD	Torodi Ar. Bea	45.00	247	P	P	10 42 54.2	-1.9
	comp=Z,0.6nm,1.0s,baz=37,slow=10,SNR=2.9						

IDC 16 10:35:25.4±10.0, 35.°03S×110.°74W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.7/22, mbtmp3.5/4, Error ellipse: s-maj=374.5km s-min=216.8km az=120.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	64.36	7	P	P	10 46 03.4	+0.3
	0.3nm,0.8s,baz=190,slow=14,SNR=5.0						
NVAR	Mina Array Bea	73.42	354	P	P	10 47 00.0	+0.5
	0.5nm,0.6s,baz=188,slow=10.0,SNR=6.0						
PDAR	Pinedale Array	77.43	1	P	P	10 47 21.6	-0.8
	0.1nm,0.4s,baz=143,slow=3.3,SNR=2.0						
YKA	Yellowknife Ar	97.23	358	P	Pdif	10 48 59.5	+0.1
	0.1nm,0.7s,baz=165,slow=5.3,SNR=3.2						

NNC ***16*** *10:35:48.0±0.8, 41.°82N×78.°16E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=5.4km s-min=3.3km az=173.0, Suspected Mining explosion.*

ISCJB ***16*** *10:35:48.0±0.9, 41.°84N±0.°05×78.°22E±0.°05, h0km, Error ellipse: s-maj=7.7km s-min=4.8km az=163.7*

ISC 16 10:35:47.0±1.4, 41.°77N±0.°07×78.°08E±0.°04, h0km, n33, σ1§27/44, 10C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	Saty	1.31	10	P	Pg	10 36 11.3	-0.7
	8.6nm,0.2s						
SATY				S	Sg	10 36 29.0	+0.1
	56nm,0.2s						
ULHL	Ulahol	1.45	290	P	Pb	10 36 15.2	+0.2
	SNR=13						
TNSS	Tian-Shan	1.52	327	P	Pn	10 36 15.6	-0.1
	65nm,0.2s						
TNSS				S	Sn	10 36 36.4	0.0
	38nm,0.4s						
UZB	Uzynbulak	1.54	27	P	Pn	10 36 14.0	-1.8
	22nm,0.4s						
UZB				S	Sg	10 36 33.8	-2.6
	23nm,0.3s						
MDOK	Medeo	1.58	331	Pg	Pn	10 36 16.3	-0.1
	33nm,0.2s						
MDOK				Lg	Lg	10 36 37.6	
	46nm,0.4s						
KOTS	Kotyrbulak	1.63	334	P	Pn	10 36 17.2	+0.2
	34nm,0.3s						
KOTS				S	Sb	10 36 39.0	-0.1
	57nm,0.3s						
KNDC	Almaty	1.66	331	⇓P	Pb	10 36 18.2	-0.3
	27nm,0.3s						
KNDC				⇓S	Sg	10 36 40.9	+0.5
	53nm,0.5s						
IZV	Izvestkoviy	1.67	320	P	Pg	10 36 18.7	-0.2
	29nm,0.2s						
IZV				S	Sg	10 36 42.0	+1.5
	51nm,0.3s						
AAA	Alma-Ata	1.67	329	P	Pb	10 36 18.1	-0.6
	119nm,0.3s						
AAA				S	Sb	10 36 40.5	+0.2
	41nm,0.3s						
PDGK	Podgornoye	1.87	33	P	Pn	10 36 20.2	-0.2
	14nm,0.3s						
PDGK				S	Sn	10 36 44.2	-0.6
	16nm,0.5s						
PDGK	Podgornoye	1.87	33	⇑Pn	Pn	10 36 19.1	-1.2
	19nm,0.4s						
PDGK				⇓Lg	Lg	10 36 46.4	
	35nm,0.5s						
KST	Kastek	2.02	310	Pg	Pb	10 36 24.9	+0.3
	60nm,0.4s						
KST				Lg	Lg	10 36 52.3	
	51nm,0.5s						
KZA	Kyzart	2.13	279	P	Pg	10 36 30.4	+2.5
	SNR=114						
TKM2	Tokmak 2	2.17	303	P	Pg	10 36 28.0	-0.5
	SNR=27						
TKM2	Tokmak 2	2.17	303	⇑Pn	Pb	10 36 25.9	-1.3
	28nm,0.3s						
TKM2				⇑Lg	Lg	10 36 58.1	
	65nm,0.6s						
KTBS	Karatobe	2.19	332	Pg	Pb	10 36 27.7	+0.1
	74nm,0.3s						
KTBS				Lg	Lg	10 36 57.0	
	172nm,0.5s						
CHKK	Chushkaly	2.23	339	Pg	Pb	10 36 27.7	-0.5
	190nm,0.4s						
CHKK				Lg	Lg	10 36 56.8	
	103nm,0.5s						
DGS	Degeres	2.25	311	Pg	Pb	10 36 28.8	+0.2
	112nm,0.5s						
DGS				Lg	Lg	10 36 58.8	
	59nm,0.5s						
MNBS	Baschi	2.32	6	Pg	Pb	10 36 29.0	-0.7
	46nm,0.4s						
MNBS				Lg	Lg	10 36 59.5	
	69nm,0.3s						
KTMS	Ketmen	2.37	44	Pg	Pb	10 36 29.2	-1.3
	72nm,0.5s						
KTMS				Lg	Lg	10 37 00.1	
	70nm,0.5s						
KUU	Kurty	2.48	329	Pg	Pb	10 36 31.3	-1.0
	56nm,0.3s						
KUU				Lg	Lg	10 37 03.2	
	101nm,0.4s						
KBK	Karagaybulak	2.49	292	P	Pg	10 36 34.0	-0.7
	SNR=13						
UCH	Uchtor	2.70	281	P	Pg	10 36 38.5	-0.1
	SNR=13						
CHMS	Chumysh	2.75	297	P	Pb	10 36 36.9	-0.2
	SNR=6.2						
AAK	Ala-Archa	2.80	289	P	Pb	10 36 38.6	+0.6
	SNR=18						
AAK	Ala-Archa	2.80	289	⇑Pn	Pb	10 36 36.3	-1.6
	5.7nm,0.3s						
AAK				⇓Lg	Lg	10 37 17.5	
	44nm,0.7s						
USP	Ospenovka	3.04	301	P	Pb	10 36 40.1	-1.8
	SNR=13						
AML	Almayashu	3.29	278	P	Pg	10 36 48.6	-1.5
	SNR=6.4						
EKS2	Erkin-Say	3.32	287	P	Pb	10 36 47.1	+0.4
	SNR=14						
MRKS	Merke	3.73	287	Pg	Pg	10 36 56.6	-1.9
	5.9nm,0.5s						
MRKS				Lg	Lg	10 37 46.6	
	12nm,0.4s

CJM				eSn	Sn	10 48 50.6	-4.1	
CJM	Chamela	1.44	27	eP	Pn	10 48 33.6	-2.2	
CJM				eS	Sn	10 48 50.6	-4.1	
EZ5V		2.38	58	eP	Pn	10 48 48.4	-0.6	
ANIG	Ahuacatlan	3.05	22	ePn	Pn	10 48 57.8	-0.2	
ANIG				eSn	Sn	10 49 31.6	-3.0	
ANIG	Ahuacatlan	3.05	22	i P	Pn	10 48 57.8	-0.2	
ANIG				eS	Sn	10 49 31.6	-3.0	
H06E1	SOCORRO T-PHAS SNR=417	4.96	277	T	T	10 54 02.3		
H06N1	SOCORRO T-PHAS SNR=11	5.02	278	T	T	10 54 09.5		
ZAIG	Zacatecas	5.42	33	ePn	Pn	10 49 32.7	+1.9	
ZAIG				eSg	Sg	10 51 20.5	+17	
TLIG	Tlapa	6.86	94	ePn	Pn	10 49 48.3	-2.2	
TLIG				eSn	Sn	10 51 07.9	-0.7	
LPIG	La Paz comp=Z,170nm,19.3s,baz=185,slow=31	7.25	325	LR	LR	10 51 56.2		
HPIG		8.68	0	ePn	Pn	10 50 19.1	+3.6	
LNIG	Linares	8.85	40	ePn	Pn	10 50 22.6	+5.0	
CMIG	Matias Romero 0.1nm,0.3s,baz=266,slow=7.7,SNR=4.0	10.41	95	Pn	Pn	10 50 39.6	+0.6	
CMIG	comp=Z,179nm,20.8s,baz=275,slow=37			LR	LR	10 54 39.4		
SRIG	Santa Rosalia	10.87	328	ePn	Pn	10 50 46.4	+1.1	
TX31	Lajitas Ar. Si	11.23	9	ePn	Pn	10 50 55.1	+4.7	
TXAR	Lajitas Array 0.1nm,0.3s,baz=187,slow=13,SNR=24	11.23	9	Pn	Pn	10 50 54.5	+4.1	
TXAR	comp=Z,136nm,21.4s,baz=0.0,slow=37			LR	LR	10 55 21.5		
833A	Chaparral WMA,	11.62	29	ePn	Pn	10 51 00.9	+5.2	
833A	Chaparral WMA, baz=211	11.62	29	P	Pn	10 51 02.1	+6.4	
HSIG		11.77	337	ePn	Pn	10 50 59.4	+1.8	
JCT	Junction City	13.35	23	ePn	Pn	10 51 24.2	+5.0	
JCT	Junction City baz=205	13.35	23	P	Pn	10 51 24.4	+5.1	
MNTX	Cornudas Mount	13.43	1	ePn	Pn	10 51 23.8	+3.4	
MNTX	Cornudas Mount baz=181	13.43	1	P	Pn	10 51 24.0	+3.6	
319A	Douglas	13.49	347	ePn	Pn	10 51 24.5	+3.2	
GDL2	Guadalupe Moun	13.98	5	ePn	Pn	10 51 31.9	+4.0	
121A	Cookes Peak, D baz=172	14.38	353	P	Pn	10 51 36.7	+3.2	
TUC	Tucson	14.76	343	ePn	Pn	10 51 40.5	+2.0	
TUC	Tucson baz=161	14.76	343	P	Pn	10 51 40.2	+1.6	
HKT	Hockley	14.76	36	ePn	Pn	10 51 41.5	+3.0	
APG	El Apazote comp=Z,65nm,21.2s,baz=260,slow=36	14.98	100	LR	LR	10 57 15.6		
214A	Organ Pipe Nat baz=153,SNR=14	15.10	336	P	Pn	10 51 44.5	+1.3	
ABTX	Abilene, Hawle 33nm,1.3s	15.36	20	ePn	P	10 51 53.6	+2.3	
ABTX	Abilene, Hawle baz=202,SNR=8.1	15.36	20	P	Pn	10 51 48.6	+2.0	
WHTX	Lake Whitney, 25nm,1.3s	15.62	27	ePn	Pn	10 51 52.4	+2.5	
WHTX	Lake Whitney, baz=210	15.62	27	P	Pn	10 51 52.6	+2.6	
Y22D	IRIS PASSCAL I baz=176	15.83	356	P	Pn	10 51 53.7	+0.9	
BNM	Barren Site	15.89	357	ePn	Pn	10 51 55.5	+1.8	
MSTX	Muleshoe 48nm,1.4s	15.91	9	ePn	Pn	10 51 56.3	+2.4	
MSTX	Muleshoe baz=190,SNR=8.1	15.91	9	P	Pn	10 51 55.6	+1.8	
LENM	Lemitar	15.93	356	ePn	Pn	10 51 55.4	+1.4	
LPM	Los Pinos Moun	16.05	357	ePn	P	10 51 59.0	-0.2	
LAZ	Ladron	16.17	356	ePn	Pn	10 51 59.6	+2.4	
113A	Mohawk Valley, 12nm,0.9s	16.19	335	ePn	Pn	10 51 57.2	-0.1	
TASM	ASL Pad, Albuq baz=178,SNR=8.5	16.68	358	P	Pn	10 52 05.1	+1.4	
TASM	ASL Pad, Albuq baz=178,SNR=8.9	16.68	358	P	Pn	10 52 04.6	+0.9	
ANMO	Albuquerque 0.1nm,0.3s,baz=172,slow=13,SNR=9.9	16.68	358	P	Pn	10 52 05.9	+2.2	
ANMO				LR	LR	10 57 48.2		
ANMO	comp=Z,124nm,20.4s,baz=182,slow=34 Albuquerque 7.6nm,1.2s	16.68	358	ePn	Pn	10 52 05.9	+2.2	
ANMO	Albuquerque baz=178	16.68	358	P	Pn	10 52 05.0	+1.3	
X18A	Snowflake 7.6nm,1.2s	16.68	348	ePn	Pn	10 52 06.2	+2.5	
NATX	Nacogdoches 44nm,1.4s	16.80	34	ePn	P	10 52 08.5	+1.3	
NATX	Nacogdoches baz=219	16.80	34	P	Pn	10 52 07.4	+2.4	
GLA	Glamis 13nm,1.0s	16.88	333	ePn	Pn	10 52 06.0	-0.1	
GLA	Glamis baz=149	16.88	333	P	Pn	10 52 07.1	+0.9	
X16A	Lo Mia Camp, P 17nm,1.1s	16.92	344	ePn	Pn	10 52 08.7	+1.9	
Y14A	Wickenburg 6.5nm,1.1s	16.96	339	ePn	Pn	10 52 08.1	+1.0	
AMTX	Amarillo 18nm,1.3s	16.99	11	ePn	P	10 52 10.6	+1.1	
AMTX	Amarillo baz=193	16.99	11	P	Pn	10 52 08.2	+0.7	
ETX06	Route 59 and C 25nm,1.4s	16.99	35	ePn	Pn	10 52 08.8	+1.4	
IKP	In-Ko-Pah, Jac baz=144	17.14	329	P	Pn	10 52 10.4	+0.9	
W18A	Petrified Fore 6.2nm,0.8s	17.21	349	ePn	P	10 52 12.6	+0.6	
W18A	Petrified Fore baz=167	17.21	349	P	Pn	10 52 10.3	-0.1	
SWSC	Sam W. Stewart baz=146	17.23	330	P	Pn	10 52 10.9	+0.4	
Y12C	Blythe baz=151	17.36	335	P	Pn	10 52 13.4	+1.4	
MONP2	Monument Peak baz=144,SNR=6.4	17.49	329	P	Pn	10 52 14.8	+0.9	
WMOK	Wichita Mounta baz=202,SNR=7.1	17.59	19	P	Pn	10 52 16.0	+1.1	
BC3	Big Chuckawall baz=148,SNR=9.4	17.67	332	P	Pn	10 52 16.3	+0.2	
PDMCI	Parker Dam,Lak baz=153,SNR=7.2	17.69	337	P	Pn	10 52 17.1	+0.9	
109C	Camp Elliot, M baz=142	17.83	327	P	Pn	10 52 18.0	+0.1	
WUAZ	Wupatki baz=162,SNR=16	17.95	345	P	P	10 52 21.3	+1.2	
IRM	Iron Mountain baz=150,SNR=5.9	17.97	334	P	Pn	10 52 20.0	+0.3	
PFO	Pinyon Flats O 9.7nm,1.3s	18.09	330	ePn	Pn	10 52 22.1	+0.9	
PFO	Pinyon Flats O baz=145	18.09	330	P	Pn	10 52 21.8	+0.5	
BELC	Belle Mtn. Jos baz=147,SNR=13	18.20	332	P	Pn	10 52 22.9	+0.3	
NEE2	Needles Airpor baz=152	18.29	336	P	Pn	10 52 23.3	-0.2	
MURC	Murrieta baz=143	18.44	328	P	P	10 52 25.2	-0.2	
SCI2	San Clemente I baz=139	18.67	324	P	P	10 52 27.8	-0.1	
GMRC	Granite Mounta baz=149,SNR=6.2	18.72	334	P	P	10 52 28.5	0.0	
X37A	Clayton 24nm,1.3s	18.74	28	ePn	Pn	10 52 30.6	+1.5	
LDFC	Landfair 29nm,1.1s	18.75	335	ePn	Pn	10 52 30.5	+1.2	
BBRC	Big Bear Solar baz=145	18.85	330	P	P	10 52 30.4	+0.3	
T25A	Trinidad baz=184	18.89	3	P	P	10 52 31.6	+1.1	
CIS	Catalina Islan baz=140	18.92	326	P	P	10 52 30.6	0.0	
Z41A	Richland Creek 33nm,1.4s	18.95	35	ePn	Pn	10 52 33.2	+1.6	
Z41A	Richland Creek baz=221	18.95	35	P	P	10 52 31.6	+0.7	
HEC	Hector,Ludlow baz=148	19.05	332	P	P	10 52 31.6	-0.5	
MVCO	Mesa Verde baz=172	19.08	353	P	P	10 52 31.9	-0.7	
FMP	Fort Macarthur baz=141	19.09	326	P	P	10 52 31.8	-0.7	
BFSC	Mount Baldy Ra baz=143	19.18	329	P	P	10 52 33.4	-0.3	
RRX	Edison Barstow baz=146	19.39	331	P	P	10 52 35.9	+0.1	
TUQ	Turquoise Moun	19.39	334	P	P	10 52 35.5	-0.4	
SNCC	San Nicolas Is baz=137	19.42	323	P	P	10 52 36.8	+0.6	
SDCO	Great Sand Dun 12nm,1.5s	19.46	1	eP	P	10 52 38.0	+1.1	
SDCO	Great Sand Dun baz=181,SNR=5.8	19.46	1	P	P	10 52 36.4	-0.4	
S22A	4UR Ranch, Cre baz=177	19.48	357	P	P	10 52 36.0	-1.1	
DECC	Green Verdugo baz=142	19.54	327	P	P	10 52 36.7	-0.7	
MIAR	Mount Ida baz=217	19.55	31	P	P	10 52 37.8	+0.3	
VBMS	Vicksburg baz=228	19.56	42	P	P	10 52 39.8	+2.1	
GSC	Goldstone, Bar baz=147	19.66	332	P	P	10 52 38.9	+0.1	
TUL1	Leonard baz=209	19.70	25	P	P	10 52 39.8	+0.6	
BLG	Laguna Peak, P baz=140	19.81	326	P	P	10 52 40.5	+0.2	
LCMT	Little Creek M 8.6nm,1.0s	19.86	342	eP	P	10 52 42.0	+1.0	
EDW2	Edwards Air Fo baz=144	19.86	329	P	P	10 52 40.5	-0.6	
X40A	Basin Creek Fa baz=219	19.88	33	P	P	10 52 42.1	+1.0	
SHOC	Shoshone, Teco baz=149	19.93	334	P	P	10 52 41.8	+0.1	
W39A	Magazine baz=215	19.97	30	P	P	10 52 43.7	+1.5	
PV05	Paradox Valley 7.1nm,1.1s	20.01	352	eP	P	10 52 44.4	+1.6	
OSI	Osito Audit: C baz=141	20.02	327	P	P	10 52 42.1	-0.6	
SCZ2	Santa Cruz Isl baz=138	20.03	324	P	P	10 52 43.5	+0.7	
PV03	Paradox Valley 10nm,1.3s	20.15	353	eP	P	10 52 45.0	+0.7	
PV12	Saucer Basin, 19nm,1.2s	20.21	353	eP	P	10 52 45.4	+0.5	
SBC	Santa Barbara baz=139	20.41	325	P	P	10 52 47.8	+0.9	
ARVC	Arvin baz=142	20.47	328	P	P	10 52 47.0	-0.6	
MPMC	Manual Prospec baz=146,SNR=11	20.59	332	P	P	10 52 48.9	-0.2	
FURC	Furnace Creek, baz=149	20.66	334	P	P	10 52 48.9	-0.7	
Q24A	Divide baz=182	20.68	1	P	P	10 52 49.8	-0.4	
W41B	Gary Mavity, V baz=219	20.71	33	P	P	10 52 51.5	+1.4	
ISA	Isabella, Lake baz=144	20.72	330	P	P	10 52 50.3	0.0	
WHAR	Wooly Hollow 36nm,1.5s	20.78	32	eP	P	10 52 53.7	+2.8	
PKM	Mcpherson Peak baz=139	20.80	326	P	P	10 52 51.0	-0.4	
TPNV	Topopah Spring baz=151,SNR=16	20.83	336	P	P	10 52 52.0	+0.3	
449A	Pace baz=238	20.94	50	P	P	10 52 54.5	+1.8	
X43A	Marvell baz=223	20.95	36	P	P	10 52 55.2	+2.5	
MSU	Marysvale	20.99	346	eP	P	10 52 54.3	+0.9	
Q16A	Castle Valley 13nm,1.1s	21.16	348	eP	P	10 52 56.1	+0.8	
VES	Vestal, Richgr baz=142	21.16	329	P	P	10 52 54.5	-0.5	
CWC	Cottonwood Cre baz=146	21.17	331	P	P	10 52 54.7	-0.7	
CBKS	Cedar Bluff 66nm,1.3s	21.18	13	eP	P	10 52 56.0	+0.8	
CBKS	Cedar Bluff baz=196	21.18	13	P	P	10 52 55.5	+0.2	
SMMC	Simmler baz=140	21.22	326	P	P	10 52 56.2	+0.5	
349A	Repton baz=236	21.28	49	P	P	10 52 59.8	+3.5	
BRAL	Brewton baz=237	21.28	49	P	P	10 52 57.7	+1.4	
GRAC	Grapevine Rang baz=148	21.33	334	P	P	10 52 56.6	-0.2	
U40A	Yellville baz=216	21.35	30	P	P	10 52 58.1	+1.0	
PSUT	Pine Spring 5.0nm,0.9s	21.45	342	eP	P	10 52 58.6	+0.3	
ISCO	Idaho Springs baz=180	21.51	0	P	P	10 52 59.3	+0.2	
TMUT	Trail Mountain 7.6nm,1.1s	21.54	348	eP	P	10 52 59.9	+0.5	
249A	Camden baz=235	21.68	47	P	P	10 53 01.4	+0.8	
TIN	Tinemaha, Big baz=146	21.75	332	P	P	10 53 01.1	-0.4	
148A	Greensboro baz=233	21.76	45	P	P	10 53 03.4	+1.9	
OXF	Oxford baz=226	21.80	39	P	P	10 53 03.1	+1.2	
R11A	Troy Canyon, C baz=154,SNR=9.9	21.83	339	P	P	10 53 01.6	-0.7	
350A	Dozier baz=238	21.93	49	P	P	10 53 04.9	+1.6	
O20A	White River Ci 15nm,1.4s	21.95	355	eP	P	10 53 03.8	+0.1	
O20A	White River Ci baz=174,SNR=5.3	21.95	355	P	P	10 53 03.6	-0.1	
552A	Lynn Haven baz=242	22.06	54	P	P	10 53 07.2	+2.5	
149A	Jones baz=234	22.26	46	P	P	10 53 08.5	+1.7	
KSU1	Kansas State U baz=203	22.27	19	P	P	10 53 08.9	+1.9	
250A	Grady 54nm,1.1s	22.28	48	eP	P	10 53 10.9	+3.8	
250A	Grady baz=237,SNR=6.0	22.28	48	P	P	10 53 09.0	+1.9	
MPU	Maple Canyon 5.8nm,1.0s	22.32	348	eP	P	10 53 08.4	+0.8	
X46A	Booneville baz=228,SNR=5.1	22.33	40	P	P	10 53 08.5	+0.9	
LRAL	Lakeview Retre 27nm,1.4s	22.38	45	eP	P	10 53 11.9	+3.8	
LRAL	Lakeview Retre baz=233,SNR=5.9	22.38	45	P	P	10 53 10.6	+2.5	
MLAC	Mammoth, Mammo baz=146	22.50	332	P	P	10 53 08.4	-1.2	
N23A	Red Feather La baz=179	22.61	360	P	P	10 53 09.5	-1.2	
DUG	Dugway, Tooele baz=162,SNR=12	22.74	346	P	P	10 53 11.7	-0.4	
X47A	Russelville baz=229	22.75	41	P	P	10 53 13.5	+1.4	
553A	Crawfordville baz=243	22.75	54	P	P	10 53 14.2	+2.1	
Z49A	Columbiana baz=234	22.79	45	P	P	10 53 14.2	+1.8	
Y48A	Jasper baz=231,SNR=14	22.80	43	P	P	10 53 13.7	+1.1	
150A	Eclectic baz=236	22.80	47	P	P	10 53 14.2	+1.5	
W46A	Michie baz=227	22.84	39	P	P	10 53 14.6	+1.6	
OGNE	Ogallala baz=189	22.88	7	P	P	10 53 13.8	+0.4	
NVAR	Mina Array Bea 2.5nm,0.9s,baz=159,slow=8.7,SNR=18	22.93	334	P	P	10 53 13.1	-1.1	
NVAR	comp=Z,85nm,21.2s,baz=64,slow=34			LR	LR	11 01 10.5		
251A	Midway baz=238	22.96	49	P	P	10 53 15.7	+1.5	
352A	Blakely baz=240	22.99	51	P	P	10 53 15.6	+1.0	
RYN	Ryan 8.8nm,1.3s	23.19	334	eP	P	10 53 16.2	-0.6	
X48A	Hartselle 23nm,1.2s	23.22	42	eP	P	10 53 17.8	+0.8	
X48A	Hartselle baz=231,SNR=9.1	23.22	42	P	P	10 53 17.5	+0.6	
Z50A	Ashland baz=235,SNR=9.0	23.24	46	P	P	10 53 18.2	+1.0	
151A	Opelika baz=237	23.25	48	P	P	10 53 18.3	+1.1	
Y49A	Blount Mountai baz=233	23.26	44	P	P	10 53 18.0	+0.6	
554A	Perry baz=245	23.29	55	P	P	10 53 19.6	+2.0	
655A	Horseshoe Beac baz=246	23.39	57	P	P	10 53 19.8	+1.1	
252A	Lumpkin baz=239	23.39	50	P	P	10 53 19.6	+1.0	
W47A	Westpoint baz=228	23.40	40	P	P	10 53 19.9	+1.2	
V46A	Holladay baz=226,SNR=5.5	23.45	38	P	P	10 53 20.2	+0.9	
CCM	Cathedral Cave 58nm,1.5s	23.48	30	eP	P	10 53 20.4	+0.8	
CCM	Cathedral Cave baz=217	23.48	30	P	P	10 53 19.4	-0.1	
WAKR	Walker 8.6nm,1.1s	23.48	332	eP	P	10 53 19.5	-0.3	
454A	Quitman baz=243	23.61	54	P	P	10 53 22.3	+1.5	
X49A	Woodville baz=232	23.72	43	P	P	10 53 22.8	+0.9	
W48A	Pulaski baz=230	23.73	41	P	P	10 53 22.7	+0.7	
Y50A	Piedmont baz=234	23.74	45	P	P	10 53 23.1	+1.1	
152A	Waverly Hall baz=238,SNR=6.3	23.76	49	P	P	10 53 23.9	+1.6	
857A	Zephyrhills baz=250	23.77	61	P	P	10 53 24.9	+2.5	
U46A	Springville baz=225	23.81	37	P	P	10 53 23.3	+0.6	
V47A	Nunnelly baz=227,SNR=7.1	23.83	39	P	P	10 53 23.8	+0.9	
WVT	Waverly 8.9nm,1.3s	23.85	38	eP	P	10 53 25.0	+1.9	
WVT	Waverly baz=226	23.85	38	P	P	10 53 23.8	+0.6	
253A	Americus baz=240	23.87	51	P	P	10 53 25.3	+1.9	
ELK	Elko 3.4nm,0.9s,baz=147,slow=6.9,SNR=15	23.90	342	P	P	10 53 23.1	-0.8	
ELK	comp=Z,138nm,19.7s,baz=174,slow=34			LR	LR	11 01 48.1		
T45A	Paducah baz=223	24.02	35	P	P	10 53 25.7	+1.0	
455A	Stateville baz=244	24.08	55	P	P	10 53 27.2	+1.8	
X50B	Fort Payne baz=233,SNR=10	24.13	44	P	P	10 53 27.7	+1.9	
757A	Oxford baz=249	24.13	59	P	P	10 53 27.6	+1.8	
W49A	Belvidere baz=231,SNR=12	24.14	42	P	P	10 53 26.5	+0.7	
S44A	Carbondale baz=221	24.19	33	P	P	10 53 26.8	+0.5	
V48A	Smith Brothers baz=229,SNR=5.8	24.19	40	P	P	10 53 25.8	-0.6	
Y51A	Rockmart baz=235,SNR=7.1	24.19	46	P	P	10 53 27.5	+1.1	
Z52A	Williamson baz=237,SNR=17	24.25	48	P	P	10 53 28.7	+1.8	
K22A	Casper baz=178	24.37	359	P	P	10 53 26.3	-1.8	
U47A	Clarksville baz=227	24.38	38	P	P	10 53 29.2	+1.1	
153A	Fort Valley baz=239	24.38	50	P	P	10 53 29.5	+1.3	
T46A	Princeton baz=225	24.45	36	P	P	10 53 30.3	+1.6	
BW06	Boulder Array baz=171	24.69	353	P	P	10 53 29.4	-1.7	
PDAR	Pinedale Array 1.1nm,1.0s,baz=176,slow=8.9,SNR=6.0	24.69	353	P	P	10 53 29.9	-1.1	
PDAR	comp=Z,85nm,19.4s,baz=179,slow=36			LR	LR	11 03 08.4		
X51A	Calhoun baz=234	24.72	45	P	P	10 53 32.0	+0.8	
V49A	McMinnville baz=230,SNR=9.5	24.78	41	P	P	10 53 32.9	+1.2	
W50A	Signal Mountai baz=232,SNR=15	24.80	43	P	P	10 53 33.1	+1.1	
758A	Lake Helen baz=250	24.85	60	P	P	10 53 35.0	+2.6	
456A	Hilliard baz=245	24.86	55	P	P	10 53 34.3	+1.8	
T47A	Sharon Grove baz=226,SNR=12	24.86	37	P	P	10 53 34.0	+1.5	
Y52A	Lilburn baz=237	24.86	47	P	P	10 53 34.2	+1.7	
U48A	Cassie Pea, Po baz=228,SNR=9.3	24.87	39	P	P	10 53 33.4	+0.9	
154A	Montrose baz=240	24.89	50	P	P	10 53 34.9	+2.2	
Z53A	Monticello baz=238,SNR=14	24.90	49	P	P	10 53 34.2	+1.4	
S46A	Don Dixon Farm baz=224	25.01	35	P	P	10 53 35.3	+1.6	
255A	Hazlehurst baz=242	25.04	53	P	P	10 53 36.3	+2.2	
GOGA	Godfrey 49nm,1.1s	25.04	48	eP	P	10 53 34.3	+0.3	
GOGA	Godfrey baz=238,SNR=25	25.04	48	P	P	10 53 35.6	+1.5	
W51A	Cleveland baz=233	25.14	44	P	P	10 53 36.6	+1.7	
R45A	Skylar, Fairfi baz=222	25.15	34	P	P	10 53 36.5	+1.5	
Y53A	Monroe baz=237	25.19	47	P	P	10 53 36.5	+1.1	
V50A	Pikevile baz=232,SNR=7.4	25.23	42	P	P	10 53 37.4	+1.6	
ORV	Oroville 8.4nm,1.1s	25.27	331	eP	P	10 53 34.7	-1.5	
U49A	Red Boiling Sp baz=229	25.33	40	P	P	10 53 38.2	+1.5	
T48A	Bowling Green baz=227	25.36	38	P	P	10 53 38.0	+1.0	
155A	Kite baz=241	25.37	51	P	P	10 53 39.2	+2.1	
X52A	Dahlonega baz=236,SNR=11	25.39	46	P	P	10 53 38.2	+0.9	
Z54A	Sparta baz=240	25.40	49	P	P	10 53 39.1	+1.8	
S47A	Hartford baz=226,SNR=6.2	25.41	37	P	P	10 53 38.8	+1.4	
REDW	Red Top Meadow 8.8nm,1.0s	25.44	351	eP	P	10 53 37.4	-0.5	
R46A	Gibon Southern baz=224,SNR=7.1	25.50	35	P	P	10 53 38.8	+0.6	
P43A	Skaggs, Pawnee baz=218	25.56	30	P	P	10 53 39.3	+0.6	
W52A	Murphy baz=235	25.65	45	P	P	10 53 41.2	+1.6	
LOHW	Long Hollow 6.2nm,0.9s	25.65	352	eP	P	10 53 39.6	-0.2	
N40A	Mertquake, Sal baz=212	25.66	25	P	P	10 53 40.2	+0.6	
Q45A	Warren Harvey, baz=222	25.66	33	P	P	10 53 40.7	+1.1	
X53A	Estanollee baz=237	25.74	47	P	P	10 53 41.2	+0.8	
V51A	Loudon baz=233	25.79	43	P	P	10 53 41.6	+0.8	
Y54A	Tignall baz=239,SNR=7.1	25.83	48	P	P	10 53 41.8	+0.6	
U50A	Jamestown baz=231	25.85	41	P	P	10 53 42.5	+1.0	
S48A	Wiedeman Farm, baz=227,SNR=6.6	25.93	38	P	P	10 53 43.1	+1.0	
O03E	Paynes Creek baz=143	26.00	331	P	P	10 53 42.2	-0.7	
R47A	Wooly Knot Far baz=225	26.10	36	P	P	10 53 44.8	+1.1	
257A	Skidaway Islan baz=244	26.16	54	P	P	10 53 46.7	+2.5	
WCI	Wyandotte Cave 6.3nm,1.0s	26.19	36	eP	P	10 53 45.2	+0.8	
WCI	Wyandotte Cave baz=226	26.19	36	P	P	10 53 45.5	+1.0	
W53A	Cullowhee baz=236,SNR=13	26.21	45	P	P	10 53 45.3	+0.5	
V52A	Sevierville baz=234	26.30	44	P	P	10 53 46.3	+0.8	
HLID	Hailey baz=161,SNR=6.4	26.31	346	P	P	10 53 44.7	-1.0	
P45A	Graceland, Par baz=221	26.35	33	P	P	10 53 46.6	+0.7	
U51A	La Follette baz=232	26.35	42	P	P	10 53 47.3	+1.3	
X54A	Belton baz=238,SNR=9.0	26.41	47	P	P	10 53 47.9	+1.4	

Y55A	Saluda baz=240	26.46	49	P	P	10 53 48.7 +1.7
S49A	Springfield baz=228	26.47	38	P	P	10 53 47.4 +0.4
157A	Early Branch baz=243	26.49	52	P	P	10 53 49.1 +1.8
Q47A	Bedord North L baz=224	26.61	35	P	P	10 53 49.1 +0.8
V53A	Saluda 6.9nm,1.0s	26.72	45	eP	P	10 53 50.4 +1.0
V53A	Saluda baz=235	26.72	45	P	P	10 53 50.9 +1.5
TZTN	Tazewell baz=233	26.75	43	P	P	10 53 51.0 +1.4
T51A	Gray baz=232	26.76	41	P	P	10 53 51.0 +1.4
U52A	Thorn Hill baz=233	26.78	43	P	P	10 53 51.3 +1.4
W54A	Cherokee Point baz=237	26.83	47	P	P	10 53 52.3 +2.0
R49A	Shelbyville baz=228	26.87	38	P	P	10 53 52.4 +1.8
X55A	Gracelyn & Ava baz=239	26.89	48	P	P	10 53 53.3 +2.4
O45A	Potomac baz=220	26.90	32	P	P	10 53 51.4 +0.6
S50A	Richmond baz=230	26.93	40	P	P	10 53 52.7 +1.6
N02D	Trinity Center baz=142	26.96	331	P	P	10 53 51.7 +0.2
Q48A	North Vernon baz=226	26.99	36	P	P	10 53 53.1 +1.4
P47A	Martinsville baz=224	27.09	34	P	P	10 53 53.1 +0.6
M04C	Macdoel baz=145	27.22	333	P	P	10 53 52.2 -1.7
U53A	Fall Branch baz=235	27.28	44	P	P	10 53 55.4 +1.1
X56A	White Oak baz=240	27.33	49	P	P	10 53 55.9 +1.1
R50A	Paris baz=229	27.36	39	P	P	10 53 55.6 +0.5
V54A	Nebo baz=236	27.37	46	P	P	10 53 56.5 +1.3
L42A	Oliver, Polo baz=215	27.39	27	P	P	10 53 54.3 -0.9
S51A	Beattyville baz=231	27.40	41	P	P	10 53 56.1 +0.7
KMSC	Kings Mountain baz=238	27.45	47	P	P	10 53 57.2 +1.3
BOZ	Bozeman (W) baz=168	27.74	351	P	P	10 53 58.5 0.0
L04D	Klamath Falls baz=144	27.78	333	P	P	10 53 56.7 -2.2
R51A	Hillsboro baz=230	27.82	39	P	P	10 54 00.2 +1.0
U54A	Nelsons Funny baz=236	27.87	44	P	P	10 54 01.1 +1.4
JFWS	Jewell Farm baz=213	27.91	25	P	P	10 54 00.5 +0.6
J05D	Fort Rock, OR baz=148	28.22	336	P	P	10 54 01.1 -1.8
O48A	Farmland baz=225	28.24	35	P	P	10 54 03.9 +1.0
L02E	Cave Junction baz=142	28.31	331	P	P	10 54 02.9 -0.5
T54A	Tazewell baz=235	28.34	44	P	P	10 54 05.4 +1.6
V56A	Mocksville baz=238	28.38	47	P	P	10 54 05.0 +0.8
N47A	Urbana baz=223	28.40	33	P	P	10 54 04.9 +0.6
J04D	Umpqua Nationa baz=146	28.54	334	P	P	10 54 04.8 -0.9
PINE	Pine Mountain 2.9nm,0.8s	28.54	337	eP	P	10 54 03.3 -2.4
O49A	Covington baz=226	28.64	36	P	P	10 54 07.3 +0.8
N48A	Decatur baz=224	28.74	34	P	P	10 54 08.1 +0.9
U56A	King baz=238	28.74	46	P	P	10 54 09.5 +2.1
K02D	Willamette Mer baz=142	28.76	332	P	P	10 54 06.5 -1.1
M47A	Cromwell baz=223	28.79	33	P	P	10 54 09.0 +1.2
R53A	Hurricane baz=233	28.84	41	P	P	10 54 10.2 +2.0
T55A	Pulaski baz=236	28.89	44	P	P	10 54 10.2 +1.4
V57A	Coltrane Farms baz=239	28.92	47	P	P	10 54 11.3 +2.3
SPMN	Marine on St. baz=206	29.01	19	P	P	10 54 10.3 +0.6
I04A	Tendick Farm, baz=146	29.12	335	P	P	10 54 09.3 -1.4
I05D	Terrebonne, OR baz=148	29.16	337	P	P	10 54 09.9 -1.1
I42A	Draeger Farm, baz=214	29.26	25	P	P	10 54 12.4 +0.5
MSO	Missoula baz=164,SNR=7.5	29.33	348	P	P	10 54 11.9 -0.7
R54A	Victor baz=234	29.36	42	P	P	10 54 14.8 +1.9
S55A	Lewisburg baz=236	29.44	43	P	P	10 54 16.0 +2.4
G39A	Holcombe baz=209	29.60	21	P	P	10 54 15.8 +0.9
P53A	Whipple baz=232	29.90	40	P	P	10 54 19.3 +1.7
EGMT	Eagleton baz=172	29.91	355	P	P	10 54 17.3 -0.4
Q54A	Coxs Mills baz=233	29.93	41	P	P	10 54 18.9 +0.9
F38A	Pierce - Schro baz=207	29.96	20	P	P	10 54 18.8 +0.8
Q55A	Buckhannon baz=234	30.41	42	P	P	10 54 23.5 +1.2
S57A	Dark Hollow, R baz=238	30.46	45	P	P	10 54 24.9 +2.3
P54A	Burton baz=233	30.52	40	P	P	10 54 24.8 +1.6
G03D	McMinnville, O baz=146	30.63	335	P	P	10 54 23.7 -0.3
P55A	Reedsville baz=234	30.88	41	P	P	10 54 28.0 +1.7
NEW	Newport baz=159	31.38	345	P	P	10 54 29.9 -0.7
E04D	Cinebar baz=148	31.50	338	P	P	10 54 30.3 -1.3
P56A	Dayton Farm, R baz=235	31.50	42	P	P	10 54 33.3 +1.6
Q57A	Strasburg baz=237	31.51	43	P	P	10 54 33.8 +1.9
N54A	Moraine State baz=232	31.65	39	P	P	10 54 33.9 +0.9
I48A	Sherman Twp baz=222	31.83	31	P	P	10 54 35.8 +1.2
EYMN	Ely baz=206	31.86	18	P	P	10 54 34.5 -0.2
M54A	Oil Creek Stat baz=232	32.18	38	P	P	10 54 38.9 +1.2
D03D	Eldon baz=148	32.52	338	P	P	10 54 39.4 -1.2
N56A	West Decatur baz=234	32.65	40	P	P	10 54 43.1 +1.2
O57A	Amberson baz=236	32.66	42	P	P	10 54 43.0 +1.1
B05A	Bryant baz=150	32.80	340	P	P	10 54 41.4 -1.6
J52A	Paris baz=228	32.83	35	P	P	10 54 42.9 -0.5
ULM	Lac du Bonnet comp=Z,67nm,19.8s,baz=203,slow=36	32.92	12	LR	LR	11 08 00.7
N57A	Milroy baz=235	33.02	41	P	P	10 54 46.0 +0.9
M56A	Emporium baz=234	33.05	40	P	P	10 54 46.6 +1.2
BWLO	Walkerton baz=226	33.07	33	P	P	10 54 46.3 +0.8
K54A	Basiliko Farm, baz=232	33.43	38	P	P	10 54 49.6 +1.0
F48A	Evansville baz=222	33.55	30	P	P	10 54 50.6 +0.9
O59A	Robesonia baz=238	33.64	43	P	P	10 54 50.2 -0.4
N59A	State Game Lan baz=238	34.23	42	P	P	10 54 57.4 +1.7
BINY	Binghamton baz=236	34.80	40	P	P	10 55 02.2 +1.6
E50A	Wahnapitae baz=225	34.89	31	P	P	10 55 01.7 +0.4
DELO	Deloro Mine baz=231	35.23	36	P	P	10 55 04.5 +0.3
BANO	Bancroft baz=230	35.38	35	P	P	10 55 06.1 +0.6
PLVO	Plevna baz=231	35.86	35	P	P	10 55 11.8 +2.2
ALGO	Algonquin Park baz=229	35.92	34	P	P	10 55 12.0 +1.9
LSQQ	Lebel-sur-Quev baz=227	38.54	31	P	P	10 55 32.0 -0.4
NNA	Nana comp=Z,73nm,20.9s,baz=304,slow=31	41.40	134	LR	LR	11 09 12.6
DLBC	Dease Lake 5.5nm,0.9s	43.95	342	eP	P	10 56 15.9 -0.9
YKA	Yellowknife Ar 0.9nm,0.8s,baz=167,slow=7.2,SNR=14	44.67	354	P	P	10 56 20.1 -2.2
YKA	comp=Z,7.1nm,18.7s,slow=35			LR	LR	11 14 30.1
LPAZ	La Paz 1.4nm,1.0s,baz=258,slow=8.5,SNR=4.0	50.46	131	P	P	10 57 05.1 -3.6
LPAZ	comp=Z,45nm,20.2s,baz=314,slow=33			LR	LR	11 15 49.0
LPAZ	La Paz	50.46	131	eP	P	10 57 05.6 -3.1
EPYK	Eagle Plains baz=142	52.21	345	P	P	10 57 18.9 -1.5
EGAK	Eagle 2.8nm,0.8s	52.22	342	eP	P	10 57 18.8 -1.8
INK	Inuvik 4.5nm,0.9s	53.05	347	eP	P	10 57 24.3 -2.3
ILAR	Eielson Array 2.0nm,0.9s,baz=154,slow=6.0,SNR=16	54.02	340	P	P	10 57 31.4 -2.5
ILB	Eielson Array 3.6nm,1.0s	54.02	340	eP	P	10 57 31.8 -2.0
TRF	Thorofare Moun 3.0nm,1.5s	54.41	337	eP	P	10 57 35.4 -1.5
PPT2	Papeete2 comp=Z,189nm,26.5s,baz=60	55.90	233	eLR	LR	11 13 38.3
TOLK	Toolik Lake Re baz=128	57.30	342	P	P	10 57 55.3 -2.1
TBI	Tubuai 42nm,29.5s	59.41	228	eS	S	11 05 50.0 -32
TBI	comp=Z,209nm,28.0s,baz=41			eLR	LR	11 15 11.0
CPUP	Villa Florida	64.58	132	LR	LR	11 24 20.2
NOA	comp=Z,29nm,18.6s,baz=208,slow=34 NORSAR Array B	86.46	26	LR	LR	11 38 35.9
FINES	comp=Z,24nm,21.5s,baz=300,slow=35 FINESS Array B	91.84	21	LR	LR	11 41 13.9
DZM	comp=Z,44nm,20.3s,baz=29,slow=34 Mont Dzumac	94.73	248	eLR	LR	11 31 39.9
	comp=Z,193nm,28.9s					

*SOME **16** 11:10:14.1, 39°.35N×74°.90E, h10km*
*NNC **16** 11:10:19.3±1.9, 39°.65N×74°.80E, h0km, mb3.6, mpv3.2,*
Error ellipse: s-maj=13.9km s-min=8.5km az=162.0
ISC 16 11:10:23.2±2.5, 39°.8N±0°.1×74°.77E±0°.05, h10km, n23,
σ1°44/35, 1C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa 8.0nm,0.6s	2.81	356	⇓Pn	Pn	11 11 09.7	+1.4
AAK	12nm,1.1s			⇓Lg	Lg	11 11 54.1	
MRKS	Merke 5.5nm,0.4s	3.13	339	Pg	Pb	11 11 19.2	+0.2
MRKS	5.3nm,0.6s			Lg	Lg	11 12 04.0	
MRKS	Merke 5.5nm,0.4s	3.13	339	eP	Pb	11 11 19.6	+0.6
MRKS	5.3nm,0.6s			eS	Sg	11 12 04.7	+1.0
TKM2	Tokmak 2 5.5nm,0.4s	3.14	11	⇓Pn	Pn	11 11 13.4	+0.5
TKM2	6.6nm,0.9s			⇓Sn	Sb	11 11 55.3	-2.5
TKM2	13nm,0.8s			⇓Lg	Lg	11 12 04.9	
IZV	Izvestkoviy 3.6nm,0.6s	3.48	23	Pg	Pb	11 11 25.1	0.0
IZV	9.1nm,0.2s			Lg	Lg	11 12 15.1	
IZV	Izvestkoviy 2.4nm,0.4s	3.48	23	eP	Pb	11 11 25.1	0.0
IZV	9.1nm,0.2s			eS	Sg	11 12 14.8	-0.3
DGS	Degeres 8.0nm,0.6s	3.48	12	eP	Pb	11 11 26.2	+1.2
DGS	14nm,0.4s			eS	Sg	11 12 15.8	+0.8
TNSS	Tian-Shan 3.7nm,0.5s	3.59	26	Pg	Pb	11 11 27.1	0.0
TNSS	6.2nm,0.6s			Lg	Lg	11 12 18.1	
TNSS	Tian-Shan 3.7nm,0.5s	3.59	26	eP	Pb	11 11 27.7	+0.7
TNSS	6.2nm,0.6s			eS	Sg	11 12 18.6	0.0
MDOK	Medeo 1.1nm,0.2s	3.74	27	Pg	Pb	11 11 28.8	-0.6
MDOK	6.3nm,0.4s			Lg	Lg	11 12 20.5	
MDOK	Medeo 1.1nm,0.2s	3.74	27	eP	Pb	11 11 28.8	-0.6
MDOK	6.3nm,0.4s			eS	Sg	11 12 20.5	-2.7
KOTS	Kotyrbulak 2.1nm,0.4s	3.82	27	Pg	Pb	11 11 31.2	+0.4
KOTS	10nm,0.7s			Lg	Lg	11 12 24.6	
KOTS	Kotyrbulak 2.1nm,0.4s	3.82	27	eP	Pb	11 11 31.2	+0.4
KOTS	10nm,0.7s			eS	Sg	11 12 24.6	-1.3
KUU	Kurty 4.2nm,0.8s	4.22	16	Pg	Pb	11 11 38.6	+1.1
KUU	11nm,0.8s			Lg	Lg	11 12 37.8	
KUU	Kurty 4.2nm,0.8s	4.22	16	eP	Pb	11 11 38.6	+1.1
KUU	11nm,0.8s			eS	Sg	11 12 37.8	-0.8
CHKK	Chushkaly 1.9nm,0.5s	4.34	22	Pg	Pb	11 11 41.7	+2.1
CHKK	5.0nm,0.4s			Lg	Lg	11 12 42.5	
CHKK	Chushkaly 1.9nm,0.5s	4.34	22	eP	Pb	11 11 41.7	+2.1
CHKK	5.0nm,0.4s			eS	Sg	11 12 42.5	0.0
KK31	Karatay Array 0.3nm,0.3s,baz=145,slow=14	4.57	317	⇑Pn	Pn	11 11 31.5	-0.8
KK31	1.2nm,0.6s,baz=131,slow=22,SNR=3.5			⇓Sn	Sn	11 12 27.6	+2.0
KK31	1.1nm,0.4s,baz=140,slow=28,SNR=4.3			⇓Lg	Lg	11 12 48.4	
BRLS	Borolday 0.5nm,0.1s	4.89	312	Pg	Pb	11 11 49.8	+0.8
BRLS	3.0nm,0.6s			Lg	Lg	11 12 56.4	
BRLS	Borolday 0.5nm,0.1s	4.89	312	eP	Pb	11 11 49.8	+0.8
BRLS	3.0nm,0.6s			eS	Sg	11 12 56.4	-3.8
ARXS	Arharly 5.6nm,0.8s	4.93	27	Pg	Pb	11 11 51.3	+1.7
ARXS	4.0nm,0.8s			Lg	Lg	11 12 58.9	
ARXS	Arharly 5.6nm,0.8s	4.93	27	eP	Pb	11 11 51.3	+1.7
ARXS	4.0nm,0.8s			eS	Sg	11 12 58.9	-2.5
PDGK	Podgornoye 0.9nm,0.6s	4.97	44	Pg	Pb	11 11 50.2	-0.1
PDGK	2.6nm,0.6s			Lg	Lg	11 12 57.8	

*IDC **16** 11:20:57.7±1.1, 29°.05N×51°.06E, h0km, mb3.8/13,*
mb1 4.0/17, mb1mx3.8/39, mbtmp3.9/17, ML3.5/4, MS2.9/1,
Ms1 3.0/1, ms1mx2.3/29, Error ellipse: s-maj=24.0km
s-min=17.4km az=28.0

*ISCJB **16** 11:20:59.3±0.4, 29°.03N±0°.04×51°.16E±0°.05, h17km,*
mb3.8/15, MS2.9/1, Error ellipse: s-maj=7.3km
s-min=4.5km az=148.6
*TEH **16** 11:20:59.4, 29°.20N×51°.31E, h5km, ML3.7*
ISC 16 11:21:00.7±0.6, 29°.16N±0°.06×51°.26E±0°.06, h17km, n51,
σ2°00/53, mb3.8/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	Kazeroun	0.80	39	ePg	Pg	11 21 14.1	-2.3
IKAZ	comp=Z,58μm,0.4s			IAMB	IAmb	11 21 30.9	
SHI	Shiraz	1.20	66	ePg	Pg	11 21 22.5	-1.3
SHI	comp=Z,8μm,0.4s			IAMB	IAmb	11 21 52.4	
IPAR	Pars	1.70	66	ePn	Pb	11 21 30.7	-1.0
IPAR	comp=Z,8μm,0.7s			IAMB	IAmb	11 22 01.8	
GHIR	Ghir-Karzin	1.75	119	ePn	Pb	11 21 32.7	+0.3
JHRM	Jahrom	2.13	107	ePn	Pb	11 21 39.5	+0.6
IRAM	Ramesheh	2.81	20	ePn	Pb	11 21 47.4	-3.2
IRAM	comp=Z,5μm,0.8s			IAMB	IAmb	11 22 38.5	
ZNGN	Zangian	2.97	353	ePn	Pn	11 21 49.6	+2.3
JHBN	Jahan bin	3.11	351	ePn	Pn	11 21 51.6	+2.4
ROKH	ROKH	3.18	357	ePn	Pn	11 21 52.6	+2.4
IGAR	Gharneh	3.31	12	ePn	Pn	11 21 54.5	+2.6
IGAR	comp=Z,1μm,0.8s			IAMB	IAmb	11 22 50.5	
ISAD	Sadrabad	3.45	37	ePn	Pn	11 21 56.5	+2.6
IPIR	Pirpir	3.53	355	ePn	Pn	11 21 56.7	+1.7
IPIR	comp=Z,1μm,0.6s			IAMB	IAmb	11 23 02.8	
SHGR	Shooshtar-Gavs	3.62	325	ePn	Pn	11 21 57.8	+1.8
IMEH	Mehriz	3.66	52	ePn	Pn	11 21 59.6	+2.9
IMEH	comp=Z,2μm,0.7s			IAMB	IAmb	11 22 08.7	
IZEF	Zefreh	3.84	14	ePn	Pn	11 22 02.5	+3.3
NASN	Na'in	3.87	20	ePn	Pn	11 22 01.4	+1.7
IKLH	Kolahrood comp=Z,890nm,0.3s	4.16	4	IAMB	IAmb	11 22 12.2	
IKLH				ePn	Pn	11 22 05.9	+2.3
YZKH	Yazd	4.31	41	ePn	Pn	11 22 07.8	+2.2
IBAF	Bafgh comp=E,651nm,0.6s	4.44	56	IAMB	IAmb	11 22 25.3	
IBAF				ePn	Pn	11 22 09.1	+1.7
KRSH	Karshahi	4.86	9	ePn	Pn	11 22 14.9	+1.8
KRBR	Kerman	4.86	79	ePn	Pn	11 22 15.8	+2.5
SHME	Shamm	5.32	124	ePn	Pn	11 22 19.5	+0.1
ASUD	Al Ashush, Dub	5.79	140	ePn	Pn	11 22 27.2	+1.4
MDH	Madha	5.91	129	ePn	Pn	11 22 27.6	+0.2
IKOM	Komasi	5.94	328	ePn	Pn	11 22 30.8	+2.9
UOSS	Minazif	6.08	132	ePn	Pn	11 22 31.4	+1.5
HATD	Hatta, Dubai	6.12	134	ePn	Pn	11 22 31.5	+1.1
ASHO	Ashiyiah	6.18	135	ePn	Pn	11 22 31.7	+0.5
MZR	Muzera	6.45	161	ePn	Pn	11 22 36.5	+1.7
TABS	Tabas	6.72	47	ePn	Pn	11 22 41.1	+2.5
BSRN	Basiran	7.34	66	ePn	Pn	11 22 49.6	+2.4
WSAR	Wadi Sarin	8.86	130	Pn	Pn	11 23 07.4	-0.6
WSAR	comp=E,0.7nm,0.3s,baz=306,slow=10,SNR=6.8			Sn	Sn	11 24 42.6	-4.9
GEYT	comp=E,0.4nm,0.3s,baz=165,slow=21,SNR=1.6 Alibeck	10.45	31	Pn	Pn	11 23 32.9	+3.2
KBZ	comp=E,0.3nm,0.3s,baz=205,slow=9.1,SNR=3.2 Khabaz	16.01	338	Pn	Pn	11 24 46.1	+1.1
BRTR	comp=E,0.3nm,0.3s,baz=167,slow=7.5,SNR=6.7 Keskin Array B	17.92	311	P	Pn	11 25 08.4	-0.8
AKTO	comp=E,0.1nm,0.3s,baz=135,slow=12,SNR=12 Aktyubinsk	21.86	12	P	P	11 25 53.6	+1.3
MLR	comp=E,4.2nm,0.6s,baz=200,slow=12,SNR=15 Mutele Rosu	25.75	316	P	P	11 26 32.8	+2.3
AKASG	comp=E,6.4nm,0.8s,baz=343,slow=8.0,SNR=12 Malin Array Be	27.17	328	P	P	11 26 41.8	-1.2
BVAR	comp=E,0.6nm,0.5s,baz=130,slow=8.3,SNR=5.1 Borovoye Array	27.69	25	P	P	11 26 48.7	+0.9
MKAR	comp=E,1.1nm,0.6s,baz=224,slow=6.0,SNR=7.5 Makanchi Array	29.87	45	P	P	11 27 09.5	+2.3
ZALV	comp=E,0.5nm,0.4s,baz=227,slow=6.1,SNR=5.8 Zalesovo Beam	34.73	35	P	P	11 27 50.1	+0.4
FINES	comp=E,1.1nm,0.4s,baz=247,slow=8.4,SNR=5.1 FINESS Array B	36.35	340	P	P	11 28 03.4	0.0
NB2	comp=E,1.1nm,0.6s,baz=146,slow=12,SNR=6.7 NORSAR Subarra	41.47	332	P	P	11 28 46.0	-0.4
NOA	comp=Z,1.5nm,0.7s,baz=124,slow=9.3 NORSAR Array B	41.47	332	P	P	11 28 46.0	-0.4
NOA	comp=Z,0.6nm,0.7s,baz=125,slow=8.6,SNR=4.1			LR	LR	11 48 57.4	
ARCES	comp=Z,14nm,18.1s,baz=60,slow=40 ARCESS Array B	43.05	347	P	P	11 28 58.5	-0.6
ARCES	comp=Z,0.6nm,0.6s,baz=152,slow=11,SNR=7.4			PP	PcP	11 30 45.3	-3.6
CMAR	comp=Z,1.3nm,0.7s,baz=138,slow=9.6,SNR=4.1 Chiang Mai Arr	44.65	93	P	P	11 29 13.7	+1.1
TORD	comp=Z,0.5nm,0.4s,baz=309,slow=8.8,SNR=2.8 Torodi Ar. Bea	48.53	262	P	P	11 29 42.2	-1.0
KSRS	comp=Z,1.2nm,1.0s,baz=58,slow=8.3,SNR=6.2 Korea Array	62.99	60	P	P	11 31 28.4	+1.7
ILAR	comp=Z,0.7nm,0.5s,baz=281,slow=6.8,SNR=5.4 Eielson Array	85.31	8	P	P	11 33 35.9	-0.5
YKA	comp=Z,0.4nm,0.7s,baz=325,slow=4.2,SNR=6.2 Yellowknife Ar	87.97	353	P	P	11 33 50.2	+0.8
ASAR	comp=Z,0.3nm,0.7s,baz=9.5,slow=5.1,SNR=3.9 Alice Springs	95.21	114	P	P	11 34 22.9	-0.8
	comp=Z,0.5nm,0.9s,baz=300,slow=4.8,SNR=5.6						

WEL 16 11:28:06.8±1.2, 34°S±12°×17°8E±1°2, h248km±22km,
M4.5/9, MLv4.5/9, Error ellipse: s-maj=0.0km
s-min=0.0km az=54.8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSRZ	White Island S	3.89	191	S	S	11 29 58.2	-0.5
WIZ	White Island	3.90	191	S	S	11 29 55.6	-3.1
HAZ	Te Kaha	4.06	183	P	Pn	11 29 12.2	+1.1
HAZ				S	S	11 30 04.6	+2.3
WMGZ	Waiomatatini S	4.13	176	P	Pn	11 29 11.2	-0.7
WMGZ				S	S	11 30 04.6	+0.9
HBAZ	Herne Bay Bore	4.18	220	S	S	11 30 04.8	0.0
PKGZ	Pakihiroa	4.19	180	P	Pn	11 29 12.3	-0.4
PKGZ				S	S	11 30 07.1	+1.9
RUGZ	Raukumara Rang	4.28	184	P	Pn	11 29 14.3	+0.4
PUZ	Puketiti	4.37	178	P	Pn	11 29 14.2	-0.6
PUZ				S	S	11 30 06.6	-2.5
TWGZ	Tauwhareparae	4.48	181	P	Pn	11 29 16.3	+0.2
TWGZ				S	S	11 30 12.0	+0.7
URZ	Urewera	4.63	190	P	Pn	11 29 19.4	+1.5
URZ				S	S	11 30 19.2	+4.7
MWZ	Matawai	4.66	185	P	Pn	11 29 18.8	+0.5
MWZ				S	S	11 30 17.0	+1.8
TKGZ	Te Karaka	4.74	182	P	Pn	11 29 19.7	+0.4
CNGZ	Carnagh Statio	4.78	179	P	Pn	11 29 18.9	-0.9
RIGZ	Rimuhau	5.01	183	P	Pn	11 29 22.7	+0.1
SNGZ	Shannon Statio	5.12	187	P	Pn	11 29 24.3	+0.4
KNZ	Kokohu	5.33	184	P	Pn	11 29 25.9	-0.5
KNZ				S	S	11 30 26.3	-3.8
BFZ	Birch Farm	7.13	191	P	Pn	11 29 47.3	-1.6
BFZ				S	S	11 31 12.5	+1.4

JMA 16 11:29:21.1, 24°.05N×123°.17E, h26km±1km,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.43	341	P	Pb	11 29 30.2	-0.1
YOJ				S	Sb	11 29 36.6	+0.1
JYNG	Yonagunijimaku	0.45	333	P	Pb	11 29 30.4	-0.1
JYNG				S	Sb	11 29 36.9	0.0
HATJ	Hateruma jima	0.58	89	P	Pb	11 29 32.3	-0.4
HATJ				S	Sb	11 29 40.3	-0.3
IRIF	Iriomote-Funau	0.58	61	P	Pb	11 29 32.5	-0.3
IRIF				S	Sb	11 29 40.7	0.0
JKRS	Kuro-shima	0.79	76	P	Pb	11 29 35.8	-0.4
JKRS				S	Sb	11 29 46.2	-0.3
JIJ	Ishigaki jima	0.94	70	P	Pn	11 29 38.3	-0.3
JIJ				eS	Sn	11 29 51.1	-0.2
JISG	Ishigakijimahi	1.17	63	P	Pn	11 29 42.0	+0.2

TAP 16 11:29:57.6, 24°.27N×121°.65E, h6km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.11	209	eP	Pg	11 30 00.6	+0.6

baz=209
NACB eS Sg 11 30 02.7 +1.1
baz=209
ETLH Xiulin Townshi 0.17 248 eP Pg 11 30 01.9 +0.9
baz=248
ETLH eS Sg 11 30 05.4 +2.0
baz=248
ENA Nanau 0.18 27 eS Sg 11 30 05.5 +1.9
baz=29
NANB Nanao 0.18 29 eP Pg 11 30 01.6 +0.3
baz=29
TWD Chiawan 0.20 195 eS Sg 11 30 05.8 +1.7
baz=193
NNSB Datong 0.29 303 eP Pb 11 30 04.8 -0.6
baz=302
NNSB eS Sb 11 30 09.4 -1.2
baz=302
NNS Nan Shan 0.31 304 eP Pb 11 30 05.4 -0.2
baz=303
NDT Datong Townshi 0.35 339 P Pb 11 30 06.0 -0.4
baz=338
NDT eS Sb 11 30 11.3 -0.9
baz=338
WHF Hehuan Shan 0.38 251 P Pb 11 30 06.2 -0.7
baz=250
WHF S Sb 11 30 12.3 -0.9
baz=250
ENTT Nioudou 0.38 348 S Sb 11 30 12.2 -0.7
baz=348
TWT Tachien 0.44 268 eP Pb 11 30 08.7 +0.8
baz=267
TWE Neicheng 0.45 2 eP Pb 11 30 08.1 +0.2
baz=3.0
YHNB Yeheng 0.47 328 eP Pb 11 30 08.3 -0.1
baz=327
YHNB eS Sb 11 30 15.5 -0.1
baz=327
CHGB Renai 0.48 245 eP Pb 11 30 08.4 -0.2
baz=244
CHGB eS Sb 11 30 15.7 -0.5
baz=244
NSK Sanguang 0.48 326 eS Sb 11 30 16.5 +0.4
baz=326
ESL Shilin 0.50 204 eP Pg 11 30 07.4 +0.2
baz=203
EOS1 EOS1 0.52 57 eS Sb 11 30 18.4 +1.6
baz=57
NWLT Wulai 0.52 345 eS Sb 11 30 17.0 -0.1
baz=344
OWD Renai 0.54 234 eP Pb 11 30 09.2 -0.3
baz=234
VWDT VWDT 0.69 222 eP Pn 11 30 13.7 -0.3
baz=222
TIPB Shuangxi 0.72 13 eP Pb 11 30 12.4 -0.2
baz=12
SSLB Suanglung 0.80 233 eP Pg 11 30 13.4 +0.4
baz=233
YULB Yu-li 0.93 201 eP Pn 11 30 16.9 -0.3
baz=200

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*BJI **16** 11:32:57.6±0.0, 4°.75N×94°.30E, h50km, mb4.7/35, mB4.8/25, Ms4.2/14, Ms7 4.0/10*
*ISCJB **16** 11:33:01.4±0.7, 5°.12N±0°.03×94°.32E±0°.04, h61km±6km, mb4.5/57, Error ellipse: s-maj=7.4km s-min=4.7km az=150.4*
*NEIC **16** 11:33:02.7±1.5, 5°.24N×94°.39E, h52km±6km, mb4.7/34, Error ellipse: s-maj=15.0km s-min=6.4km az=182.0*
*IDC **16** 11:33:02.6±0.6, 5°.35N×94°.45E, h49km±4km, mb4.0/26, mb1 4.1/28, mb1mx4.0/47, mbtmp4.3/28, MS3.3/6, Ms1 3.4/6, ms1mx3.1/29, Error ellipse: s-maj=14.7km s-min=10.6km az=38.0*
*DJA **16** 11:33:03.0±0.9, 5°N±4°×9°4E±°, h54km±8km, M4.5/8, mB4.5/1, mb4.5/6, MLv4.5/8, Mw(mB)3.7/1*
ISC 16 11:33:02.7±0.5, 5°.15N±0°.05×94°.32E±0°.05, h53km±4km, h53km:pP-P, n135, σ1°30/155, mb4.5/56, MS3.8/9, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**2.25**	**113**	P			**Pn**	**11 33 38.1**	**+0.6**
LHMI	**Lhok Sumawe**	**2.62**	**88**	ePn			**Pn**	**11 33 42.2**	**-0.3**
LHMI	**Lhok Sumawe**	**2.62**	**88**	P			**Pn**	**11 33 42.3**	**-0.2**
LHMI				S			**Sn**	**11 34 15.5**	**+2.4**
SNSI	**Sinabang, Aceh**	**3.38**	**144**	P			**Pn**	**11 33 51.6**	**-1.4**
SNSI				S			**Sn**	**11 34 30.5**	**-1.4**
KCSI	**Kotacane, Aceh**	**3.80**	**115**	P			**Pn**	**11 34 00.0**	**+1.2**
TSI	**Tuntungan**	**4.54**	**111**	P			**Pn**	**11 34 09.4**	**+0.5**
PKDT	**Phuket**	**4.83**	**55**	P			**Pn**	**11 34 11.9**	**-1.0**
GSI	**Gunungsitoli**	**5.02**	**140**	ePn			**Pn**	**11 34 15.4**	**0.0**
GSI				eSn			**Sn**	**11 35 11.5**	**-0.7**
GSI	**Gunungsitoli**	**5.02**	**140**	P			**Pn**	**11 34 15.3**	**-0.2**
PSI	**Prapat**	**5.15**	**117**	P			**Pn**	**11 34 18.3**	**+0.9**
	8.2nm,0.3s,baz=286,slow=13,SNR=13								
PSI				S			**Sn**	**11 35 14.6**	**-1.1**
	0.5nm,0.3s,baz=324,slow=22,SNR=1.0								
PSI				LR			LR	11 36 53.7	
	comp=Z,219nm,18.2s,baz=159,slow=45								
PSI	**Prapat**	**5.15**	**117**	ePn			**Pn**	**11 34 18.0**	**+0.6**
KULM	**Kulim**	**6.30**	**88**	ePn			**Pn**	**11 34 32.0**	**-1.1**
KULM				eSn			**Sn**	**11 35 43.5**	**-0.4**
SKLT	**Songkhla**	**6.58**	**72**	P			**Pn**	**11 34 37.3**	**+0.5**
	42nm,0.7s,0.2nm								
PHET	**Kaeng Krachan**	**9.32**	**34**	P			**Pn**	**11 35 15.2**	**+0.7**
CHBT	**CHBT**	**10.93**	**46**	P			**Pn**	**11 35 37.6**	**+1.1**
	134nm,0.5s,3μm								
UMPA	**Umpang Tak**	**11.85**	**22**	P			**Pn**	**11 35 49.0**	**-0.1**
	33μm,0.6s								
MNAI	**Manna**	**12.79**	**137**	ePn			**Pn**	**11 36 00.7**	**-1.3**
PBKT	**Sadao Pong**	**13.09**	**29**	P			**Pn**	**11 36 07.5**	**+1.6**
	7.7nm,0.5s								
PALK	**Pallekele**	**13.70**	**280**	P			**Pn**	**11 36 15.8**	**+1.4**
	1.3nm,0.3s,baz=115,slow=14,SNR=7.5								
PALK				S			Sn	11 38 31.7	-13
	2.5nm,0.3s,baz=115,slow=5.0,SNR=17								
PALK				LR			LR	11 40 59.1	
	comp=Z,198nm,21.7s,baz=116,slow=34								
PALK	**Pallekele**	**13.70**	**280**	ePn			**Pn**	**11 36 15.9**	**+1.5**
PALK				eSn			Sn	11 38 32.8	-12
MDSI	**Maura Dua**	**13.73**	**134**	P			**Pn**	**11 36 14.6**	**-0.2**
KHON	**Khomkaen**	**13.90**	**36**	P			**P**	**11 36 23.8**	**+0.1**
UTTA	**Uttaradit**	**13.92**	**25**	P			**P**	**11 36 23.2**	**-0.7**
	34μm,0.6s								
CM31	**Chiang Mai Arr**	**13.97**	**18**	ePn			**Pn**	**11 36 20.4**	**+2.3**
CMAR	**Chiang Mai Arr**	**13.97**	**18**	P			**Pn**	**11 36 17.7**	**-0.3**
	2.8nm,0.3s,baz=207,slow=15,SNR=69								
CMAR				LR			LR	11 41 12.9	
	comp=Z,112nm,19.6s,baz=218,slow=36								
LAMP	**Lampang**	**14.27**	**21**	P			**P**	**11 36 27.0**	**-0.8**
	48μm,0.7s,450μm								
CHTO	**Chiang Mai**	**14.31**	**18**	ePn			**Pn**	**11 36 25.0**	**+2.5**
CMMT	**Chiang Mai**	**14.31**	**18**	P			**Pn**	**11 36 24.8**	**+2.3**
	16nm,0.7s								
SKNT	**Sakolnakorn**	**15.09**	**38**	P			**P**	**11 36 36.0**	**-0.9**
	15nm,0.8s								
PAYA	**Payao**	**15.12**	**20**	P			**P**	**11 36 37.1**	**-0.2**
	58μm,0.8s,585μm								
NONG	**Nongkai**	**15.46**	**33**	P			**P**	**11 36 40.6**	**-0.4**
	0.3nm,0.8s								
DLV	**T Lat**	**15.54**	**63**	ePn			**P**	**11 36 40.6**	**-1.5**
	62nm,1.5s								
PANO	**Nakornpanom**	**15.61**	**39**	P			**P**	**11 36 43.2**	**+0.5**
	0.4nm,1.0s								
PANO				P			**pP**	**11 36 54.7**	**+0.6**
	0.4nm,1.0s								
KSM	**Kuching**	**16.37**	**102**	eP			**P**	**11 36 51.2**	**+0.1**
	10.0nm,0.9s								
SLVN	**Son La**	**18.58**	**29**	eP			**P**	**11 37 15.3**	**-0.3**
	3.5nm,0.8s								
QIZ	**Qiongzhong**	**20.48**	**46**	P			Pn	11 37 37.3	-1.5
QIZ				S			**S**	**11 41 24.4**	**+1.7**
QIZ				pmax			pmax		
	comp=Z,14nm,1.4s								
QIZ				LR			LR		
	comp=N,140nm,13.7s								
QIZ				LR			LR		
	comp=E,180nm,16.7s								
WOJI	**Wonogiri, Jawa**	**21.00**	**128**	P			**P**	**11 37 42.4**	**+0.5**
	19nm,1.7s								
KMI	**Kunming**	**21.44**	**21**	P			**P**	**11 37 49.3**	**+2.5**
KMI				pmax			pmax		
	comp=Z,16nm,0.7s								
KMI				pmax			pmax		
	comp=Z,59nm,3.5s								
RAMN	**Ramite**	**22.89**	**342**	eP			**P**	**11 37 59.7**	**-2.6**
	24nm,0.5s								
JIRN	**Jiri**	**23.68**	**342**	eP			**P**	**11 38 07.4**	**-2.7**
	18nm,0.4s								
PKI	**Pulchoki**	**23.86**	**340**	eP			**P**	**11 38 09.0**	**-2.6**
	16nm,0.5s								
PKIN	**Phulchoki**	**23.87**	**340**	eP			**P**	**11 38 09.5**	**-2.1**
	11nm,0.5s								
JAGI	**Jajag, Banyuwa**	**23.96**	**124**	eP			**P**	**11 38 12.8**	**+0.4**
	108nm,1.4s								
GUN	**Gumba**	**24.02**	**341**	eP			**P**	**11 38 10.9**	**-2.2**
	38nm,0.7s								
GYA	**Guiyang**	**24.25**	**28⇑**	iP			**P**	**11 38 14.3**	**-0.7**
GYA				pP			pP	11 38 27.3	-0.4
GYA				PP			**PnPn**	**11 38 47.3**	**+0.2**
GYA				S			**S**	**11 42 26.9**	**-3.3**
GYA				pmax			pmax		
	comp=Z,20nm,0.7s								
GYA				pmax			pmax		
	comp=Z,90nm,4.9s								
GYA				LR			LR		
	comp=N,170nm,14.3s								
GYA				LR			LR		
	comp=E,190nm,16.5s								
GYA				LR			LR		
	comp=Z,260nm,17.7s								
LSA	**Lhasa**	**24.60**	**353**	eP			**P**	**11 38 18.2**	**-0.3**
	17nm,0.4s								
DANN	**Dangsing**	**25.16**	**338**	eP			**P**	**11 38 22.4**	**-1.0**
	44nm,0.5s								
H08S3	**Diego Garcia H**	**25.22**	**240**	T			T	12 04 20.0	
	baz=60,slow=76,SNR=657								
H08S2	**Diego Garcia H**	**25.22**	**240**	T			T	12 04 17.2	
	baz=60,slow=76,SNR=499								
H08S1	**Diego Garcia H**	**25.23**	**240**	T			T	12 04 26.1	
	baz=60,slow=76,SNR=281								
PYUN	**Piuthan**	**25.24**	**336**	eP			**P**	**11 38 23.0**	**-1.1**
	49nm,0.4s								
MPSI	**Mapaga**	**25.98**	**100**	P			**P**	**11 38 30.7**	**-0.1**
CD2	**Chengdu**	**27.12**	**18**	P			**P**	**11 38 40.5**	**-0.3**
CD2				pmax			pmax		
	comp=Z,20nm,0.6s								
KAPI	**Kappang**	**27.33**	**111**	P			**P**	**11 38 43.3**	**+0.5**
	3.8nm,0.4s,baz=304,slow=8.7,SNR=6.8								
XAN	**Xi'an**	**31.78**	**23**	P			**P**	**11 39 19.4**	**-2.8**
XAN				pP			pP	11 39 31.8	-3.2
XAN				sP			pwP	11 39 38.0	-0.1
XAN				pmax			pmax		
	comp=Z,15nm,0.7s								
XAN				pmax			pmax		
	comp=Z,62nm,5.1s								
XAN				LR			LR		
	comp=N,160nm,17.4s								
XAN	**Xi'an**	**31.78**	**23**	eP			**P**	**11 39 19.9**	**-2.2**
	11nm,0.7s								
LZH	**Lanzhou**	**32.01**	**15**	eP			**P**	**11 39 27.0**	**+2.7**
LZH				pP			pwP	11 39 39.8	-0.7
LZH				sP			sP	11 39 48.8	+5.8
LZH				ePP			**PP**	**11 40 36.3**	**-1.1**
LZH				pmax			pmax		
	comp=Z,24nm,1.2s								
LZH				pmax			pmax		
	comp=Z,81nm,5.3s								
LZH				LR			LR		
	comp=N,370nm,13.0s								
LZH				LR			LR		
	comp=E,370nm,13.2s								
LZH				LR			LR		
	comp=Z,450nm,16.5s								
NJ2	**Nanjing**	**35.26**	**38**	eP			**P**	**11 39 56.1**	**+3.7**
NJ2				pmax			pmax		
	comp=Z,15nm,0.5s								
KSH	**Kashi**	**38.02**	**337**	eP			**P**	**11 40 15.1**	**-0.8**
FAKI	**Fak Fak**	**38.73**	**101**	eP			**P**	**11 40 21.2**	**-0.9**
	44nm,1.2s								
HHC	**Hu-ho-hao-te**	**38.76**	**21**	eP			**P**	**11 40 24.0**	**+1.8**
HHC				pP			pP	11 40 33.8	-1.4
HHC				S			**S**	**11 46 21.0**	**+5.1**
HHC				pmax			pmax		
	comp=Z,17nm,0.9s								
HHC				pmax			pmax		
	comp=Z,89nm,4.6s								
HHC				LR			LR		
	comp=N,140nm,13.8s								
HHC				LR			LR		
	comp=E,170nm,14.2s								
HHC				LR			LR		
	comp=Z,140nm,17.0s								
WMQ	**Urumqi**	**38.95**	**352**	eP			**P**	**11 40 25.3**	**+1.7**
WMQ				LR			LR		
	comp=N,150nm,20.3s								
WMQ				LR			LR		
	comp=E,190nm,22.9s								
GAR	**Garm**	**40.10**	**331**	eP			**P**	**11 40 34.3**	**+0.9**
	6.5nm,0.9s								
MTN	**Manton Dam**	**40.71**	**116**	eP			**P**	**11 40 37.3**	**-1.3**
	26nm,1.3s								
ARSB	**Arslanbob**	**40.76**	**335**	eP			**P**	**11 40 38.5**	**-0.4**
	9.9nm,0.6s								
MK32	**Makanchi Array**	**42.77**	**348**	ePcP			**PcP**	**11 42 45.6**	**-0.1**
MKAR	**Makanchi Array**	**42.77**	**348**	P			**P**	**11 40 54.4**	**-0.6**
	14nm,0.5s,baz=168,slow=7.7,SNR=162								
MKAR				PcP			**PcP**	**11 42 45.6**	**-0.1**
	0.4nm,0.4s,baz=181,slow=4.2,SNR=3.7								
MKAR				LR			LR	12 01 32.7	
	comp=Z,49nm,19.6s,baz=97,slow=40								
MAKZ	**Makanchi**	**42.85**	**348**	eP			**P**	**11 40 55.0**	**-0.6**
	18nm,0.6s								
KKAR	**Karatay Array**	**43.27**	**334**	eP			**P**	**11 40 58.9**	**-0.2**
	2.7nm,0.7s								
SONA0	**Songino Array**	**43.77**	**12**	eP			**P**	**11 41 01.7**	**-1.4**
SONA0				ePcP			**PcP**	**11 42 48.5**	**-0.7**
SONM	**Songino Array**	**43.77**	**12**	P			**P**	**11 41 01.7**	**-1.4**
	3.1nm,0.7s,baz=189,slow=9.0,SNR=7.2								
SONM				PcP			**PcP**	**11 42 48.5**	**-0.7**
	1.3nm,0.5s,baz=198,slow=3.4,SNR=3.5								
JNU	**Nakatsue**	**43.95**	**46**	P			**P**	**11 41 02.6**	**-2.2**
	3.2nm,0.7s,baz=239,slow=19,SNR=2.3								
JNU	**Nakatsue**	**43.95**	**46**	eP			**P**	**11 41 04.4**	**-0.4**
	4.4nm,0.8s								
H01W3	**Cape Leeuwin H**	**43.98**	**156**	T			T	12 28 00.1	
	baz=332								
H01W2	**Cape Leeuwin H**	**43.99**	**156**	T			T	12 28 17.7	
	baz=332								
H01W1	**Cape Leeuwin H**	**44.00**	**156**	T			T	12 28 03.6	
	baz=332								
KS15	**Wonju Array Si**	**44.39**	**39**	eP			**P**	**11 41 08.1**	**0.0**
	4.2nm,1.0s								
KSRS	**Korea Array**	**44.42**	**39**	P			**P**	**11 41 06.6**	**-1.8**
	0.9nm,0.7s,baz=215,slow=9.5,SNR=8.1								
GEYT	**Alibeck**	**46.36**	**320**	P			**P**	**11 41 23.8**	**0.0**
	2.8nm,0.6s,baz=152,slow=9.5,SNR=4.6								
GEYT				pP			**pP**	**11 41 36.8**	**-0.8**
	2.1nm,0.6s,baz=151,slow=9.7,SNR=3.8								
GYA0B	**ALIBECK ARRAY**	**46.36**	**320**	eP			**P**	**11 41 23.3**	**-0.5**
	4.3nm,0.6s								
WRA	**Warramunga Arr**	**46.58**	**124**	P			**P**	**11 41 25.8**	**0.0**
	3.9nm,0.5s,baz=309,slow=9.2,SNR=49								
WRA				pP			**pP**	**11 41 38.7**	**-0.3**
	7.2nm,0.6s,baz=296,slow=9.7,SNR=8.1								
WRA				PcP			**PcP**	**11 42 59.6**	**+0.4**
	0.4nm,0.3s,baz=297,slow=2.7,SNR=2.5								
WRA				S			**S**	**11 48 10.3**	**-0.9**
	0.7nm,0.8s,baz=290,slow=17,SNR=3.0								
WR1	**Warramunga Arr**	**46.58**	**124**	ePcP			**PcP**	**11 42 59.6**	**+0.4**
WRAB	**Tennant Creek**	**46.58**	**124**	eP			**P**	**11 41 26.0**	**+0.2**
	8.2nm,0.6s								
WB2	**Warramunga Arr**	**46.59**	**124**	eP			**P**	**11 41 25.8**	**0.0**
	9.1nm,0.7s								
KURK	**Kurchatov**	**47.28**	**346**	eP			**P**	**11 41 30.5**	**-0.2**
	11nm,0.8s								
AS31	**Alice Springs**	**48.07**	**128**	ePcP			**PcP**	**11 43 04.6**	**+0.1**
ASAR	**Alice Springs**	**48.07**	**128**	P			**P**	**11 41 37.5**	**+0.2**
	1.4nm,0.4s,baz=301,slow=7.7,SNR=40								
ASAR				pP			**pP**	**11 41 51.0**	**+0.4**
	2.8nm,0.5s,baz=303,slow=7.9,SNR=8.8								
ASAR				PcP			**PcP**	**11 43 04.6**	**+0.1**
	0.7nm,0.4s,baz=316,slow=2.9,SNR=3.0								
ASAR				S			**S**	**11 48 37.6**	**+5.3**
	0.4nm,0.9s,baz=296,slow=14,SNR=3.8								
ZAA0	**Zalesovo Array**	**49.26**	**353**	eP			**P**	**11 41 44.8**	**-1.1**
	8.9nm,0.6s								
ZALV	**Zalesovo Beam**	**49.26**	**353**	P			**P**	**11 41 45.3**	**-0.6**
	9.6nm,0.5s,baz=186,slow=7.3,SNR=35								
USRK	**Ussuriysk Ar.**	**51.02**	**34**	P			**P**	**11 41 58.3**	**-1.1**
	1.0nm,0.5s,baz=251,slow=5.4,SNR=5.3								
BRVK	**Borovoye**	**51.67**	**342**	eP			**P**	**11 42 03.6**	**-0.6**
	4.7nm,0.8s								
OPO	**Ambohidratompo**	**52.09**	**242**	P			**P**	**11 42 10.0**	**+2.0**
	1.4nm,0.6s,baz=52,slow=12,SNR=2.6								
ABKAR	**Akbulak array**	**52.70**	**332**	eP			**P**	**11 42 11.5**	**-0.3**
	6.0nm,1.1s								
KLR	**Kul'dur**	**54.14**	**29**	P			**P**	**11 42 21.5**	**-0.9**
	0.6nm,0.4s,baz=198,slow=9.6,SNR=3.7								
BBOO	**Buckleboo**	**54.70**	**137**	eP			**P**	**11 42 26.5**	**-0.3**
	17nm,1.4s								
ASAJ	**Asahikawa**	**57.36**	**40**	P			**P**	**11 42 44.6**	**-1.0**
	2.8nm,0.9s,baz=267,slow=17,SNR=3.2								
ARU	**Arti**	**58.45**	**338**	eP			**P**	**11 42 52.1**	**-0.8**
	8.6nm,0.9s								
KBZ	**Khabaz**	**59.22**	**319**	PcP			**PcP**	**11 43 47.0**	**+0.6**
	1.1nm,0.5s,baz=117,slow=4.5,SNR=2.8								
BR101	**Keskin Array S**	**64.35**	**312**	eP			**P**	**11 43 32.7**	**-0.6**
BR101				ePcP			**PcP**	**11 44 07.4**	**-0.1**
BR131	**Keskin Array S**	**64.35**	**312**	eP			**P**	**11 43 32.9**	**-0.4**
	2.5nm,0.8s								
BRTR	**Keskin Array B**	**64.35**	**312**	P			**P**	**11 43 32.7**	**-0.6**
	1.3nm,0.6s,baz=130,slow=7.0,SNR=6.7								
BRTR				pP			**pP**	**11 43 47.8**	**0.0**
	0.9nm,0.7s,baz=116,slow=5.9,SNR=3.0								
BRTR				PcP			**PcP**	**11 44 07.4**	**-0.1**
	0.5nm,0.6s,baz=125,slow=3.8,SNR=2.5								
MA2	**Magadan**	**69.09**	**27**	P			**P**	**11 44 01.2**	**-1.7**
	1.4nm,0.4s,baz=174,slow=18,SNR=3.1								
PETK	**Petropavlovsk-**	**70.11**	**35**	P			**P**	**11 44 08.7**	**-0.7**
	1.1nm,0.6s,baz=234,slow=4.8,SNR=3.6								
PEA1	**Petropavlovsk-**	**70.11**	**35**	eP			**P**	**11 44 08.7**	**-0.7**
AKASG	**Malin Array Be**	**70.39**	**322**	P			**P**	**11 44 09.8**	**-1.3**
	1.6nm,0.4s,baz=90,slow=4.6,SNR=8.2								
LIT	**Litokhoron**	**72.81**	**310**	eP			**P**	**11 44 25.4**	**-0.7**
	3.0nm,0.9s								
ITM	**Ithomi**	**72.89**	**307**	eP			**P**	**11 44 27.5**	**+1.0**
	10nm,1.0s								
BOSA	**Boshof**	**74.31**	**239**	P			**P**	**11 44 37.6**	**+2.5**
	2.2nm,0.7s,baz=128,slow=4.2,SNR=4.9								
BOSA				LR			LR	12 11 34.2	
	comp=Z,29nm,21.2s,baz=143,slow=31								
FINES	**FINESS Array B**	**75.19**	**333**	P			**P**	**11 44 38.6**	**-0.7**
	0.9nm,0.5s,baz=101,slow=4.6,SNR=9.0								
FINES				pP			**PcP**	**11 44 52.1**	**-0.5**
	1.8nm,0.7s,baz=104,slow=5.9,SNR=3.1								
OJC	**Ojcow**	**76.17**	**320**	eP			**P**	**11 44 45.0**	**-0.2**
	6.5nm,0.6s								
VYHS	**Vyhne**	**76.55**	**319**	eP			**P**	**11 44 47.6**	**+0.2**
ARA0	**ARCESS Array S**	**77.87**	**340**	eP			**P**	**11 44 54.5**	**0.0**
ARCES	**ARCESS Array B**	**77.87**	**340**	P			**P**	**11 44 54.5**	**0.0**
	1.1nm,0.6s,baz=79,slow=7.5,SNR=14								
ARCES				pP			**pP**	**11 45 09.2**	**+0.6**
	1.4nm,0.5s,baz=92,slow=5.7,SNR=4.0								
ARE0	**ARCESS Array S**	**77.87**	**340**	eP			**P**	**11 44 54.6**	**+0.2**
	0.3nm,1.3s								
GEC2	**GERESS Array S**	**79.97**	**319**	eP			**P**	**11 45 06.5**	**0.0**
	3.9nm,0.8s								
GERES	**GERESS Array B**	**79.97**	**319**	P			**P**	**11 45 06.7**	**+0.3**
	2.5nm,0.7s,baz=97,slow=5.5,SNR=19								
GERES				pP			**pP**	**11 45 20.9**	**-0.2**
	1.5nm,0.7s,baz=102,slow=5.9,SNR=5.9								
KHC	**Kasperske Hory**	**80.07**	**319**	eP			**P**	**11 45 06.5**	**-0.4**
KHC				ex			x	12 03 47.3	
NOA	**NORSAR Array B**	**82.18**	**331**	P			**P**	**11 45 17.2**	**-0.6**
	0.4nm,0.6s,baz=97,slow=7.9,SNR=2.9								
NOA				LR			LR	12 24 48.3	
	comp=Z,16nm,20.9s,baz=20,slow=38								
FUORN	**Ofenpass-Fuorn**	**82.20**	**316**	eP			**P**	**11 45 19.8**	**+1.2**
	2.9nm,0.7s								
SPA0	**Spitsbergen Ar**	**82.52**	**348**	eP			**P**	**11 45 19.6**	**+0.3**
	9.9nm,1.0s								
ESDC	**Sonseca Array**	**93.10**	**310**	P			**P**	**11 46 11.8**	**+0.6**
	0.2nm,0.4s,baz=56,slow=4.3,SNR=3.5								
ILAR	**Eielson Array**	**97.18**	**22**	P			**P**	**11 46 28.3**	**-1.0**
	0.2nm,0.6s,baz=290,slow=4.4,SNR=2.9								
ILB	**Eielson Array**	**97.18**	**22**	eP			**P**	**11 46 28.3**	**-1.0**
	3.1nm,1.4s								
KDAK	**Kodiak Island**	**97.70**	**30**	P			**P**	**11 46 30.1**	**-1.6**
	2.0nm,0.6s,baz=300,slow=8.1,SNR=3.3								
INK	**Inuvik**	**99.54**	**16**	P			**Pdif**	**11 46 38.3**	**-1.4**
	0.5nm,0.7s,baz=346,slow=3.3,SNR=4.8								
INK	**Inuvik**	**99.54**	**16**	eP			**Pdif**	**11 46 40.2**	**+0.5**
	3.7nm,1.5s								
PDAR	**Pinedale Array**	**127.61**	**22**	PKP			**PKPdf**	**11 52 02.6**	**0.0**
	0.4nm,0.7s,baz=86,slow=2.2,SNR=4.0								
656A	**Willston**	**145.54**	**355**	ePKPdf			**PKPab**	**11 52 36.4**	**+0.3**
CPUP	**Villa Florida**	**145.69**	**229**	PKPbc			**PKPab**	**11 52 37.0**	**+0.2**
	1.7nm,0.9s,baz=108,slow=3.2,SNR=3.1								
LNIG	**Linares**	**147.26**	**24**	ePKPbc			**PKPbc**	**11 52 40.5**	**-0.6**
CUPR	**Culebra, Puert**	**149.21**	**320**	ePKPbc			**PKiKP**	**11 52 47.7**	**+0.2**
MTP	**Monte Pirata**	**149.54**	**320**	ePKPbc			**PKiKP**	**11 52 49.1**	**+0.9**
OBIP	**Obispado Ponce**	**150.25**	**321**	ePKPbc			**PKiKP**	**11 52 49.9**	**+0.2**
MPR	**Mayaguez**	**150.45**	**322**	ePKPbc			**PKiKP**	**11 52 50.6**	**+0.5**
BANI	**BANI**	**152.15**	**328**	ePKPbc			**PKPbc**	**11 52 53.3**	**-0.2**

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*ISCJB **16** 11:43:18.1±0.4, 16°.58N±0°.06×94°.01W±0°.03, h137km±4km, mb3.7/7, Error ellipse: s-maj=9.3km s-min=4.7km az=3.4*
*IDC **16** 11:43:19.2±1.0, 16°.68N×93°.84W, h134km±10km, mb3.5/5, mb1 3.6/7, mb1mx3.3/37, mbtmp3.8/7, Error ellipse: s-maj=35.7km s-min=10.4km az=34.0*
*NEIC **16** 11:43:21.7±0.0, 16°.67N×93°.98W, h127km, mb3.8/14, MD4.2(MEX), After MEX.*
*MEX **16** 11:43:21.7±0.5, 16°.67N×93°.98W, h127km±5km, MD4.2*
ISC 16 11:43:19.1±0.6, 16°.57N±0°.06×94°.00W±0°.03, h131km±5km, n39, σ1°98/55, mb3.8/7, Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TGIG		**0.87**	**76**	ePn			**Pn**	**11 43 41.7**	**+0.7**
TGIG				eSn			**Sn**	**11 43 57.1**	**-0.4**
TGIG		**0.87**	**76**	iP			**Pn**	**11 43 41.7**	**+0

9.1nm,1.3s
Y52A Lilburn 19.40 26 *e*P **Pn 11 47 37.5 0.0**
6.2nm,0.7s
WCI Wyandotte Cave 22.62 16 *e*P **P 11 48 07.8 -1.0**
2.6nm,0.6s
NVAR Mina Array Bea 30.47 320 P **P 11 49 21.5 +1.7**
0.8nm,0.7s,baz=140,slow=9.0,SNR=5.0
SIV San Ignacio 45.85 133 P **P 11 51 27.4 -0.9**
0.9nm,0.4s,baz=333,slow=7.7,SNR=8.9
YKA Yellowknife Ar 48.10 347 P **P 11 51 43.6 -1.6**
0.4nm,0.3s,baz=152,slow=7.3,SNR=14
YKA pP **pP 11 52 14.5 -1.0**
0.3nm,0.7s,baz=149,slow=7.3,SNR=3.8
YKA sP **sP 11 52 28.6 -1.6**
0.2nm,0.6s,baz=152,slow=7.6,SNR=4.0
INK Inuvik 57.44 344 P **P 11 52 53.0 -0.7**
1.2nm,0.4s,baz=124,slow=5.5,SNR=14
NOA NORSAR Array B 82.81 28 P **P 11 55 27.6 -0.9**
0.5nm,0.7s,baz=294,slow=5.4,SNR=3.6
ARCES ARCESS Array B 84.31 18 P **P 11 55 34.9 -1.0**
1.3nm,0.7s,baz=310,slow=4.6,SNR=17
WRA Warramunga Arr 134.09 258 PKP **PKPdf 12 02 21.6 -0.2**
0.8nm,0.7s,baz=85,slow=2.0,SNR=4.9
ASAR Alice Springs 134.63 253 PKP **PKPdf 12 02 22.7 -0.2**
0.2nm,0.8s,baz=91,slow=1.7,SNR=3.3

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*ISCJB **16** 11:45:04.4±0.9, 17°.7S±0°.2×178°.2W±0°.2, h590km, mb4.0/13, Error ellipse: s-maj=35.5km s-min=12.1km az=151.5*
*IDC **16** 11:45:08.6±2.6, 17°.86S×178°.23W, h635km±31km, mb3.4/13, mb1 3.6/14, mb1mx3.3/37, mbtmp4.4/14, Error ellipse: s-maj=32.4km s-min=12.6km az=151.0*
ISC 16 11:45:04.7±1.0, 17°.8S±0°.2×178°.1W±0°.2, h590km, n51, σ0972/50, mb4.0/13, 9C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.11**	**251**	P	**P**	**11 48 15.8**	**+1.4**
0.3nm,0.3s,baz=83,slow=23,SNR=2.8							
CTA	**Charters Tower**	**33.73**	**260**	P	**P**	**11 50 59.5**	**+0.8**
3.8nm,0.6s,baz=101,slow=12,SNR=9.1							
STKA	**Stephens Creek**	**38.90**	**241**	P	**P**	**11 51 41.7**	**+0.7**
1.8nm,0.6s,baz=98,slow=11,SNR=4.8							
JAY	**Jayapura**	**43.15**	**286**	P	**P**	**11 52 15.3**	**+0.4**
3.8nm,0.4s,baz=248,slow=19,SNR=4.5							
WRA	**Warramunga Arr**	**44.91**	**259**	P	**P**	**11 52 28.2**	**-0.2**
2.4nm,0.4s,baz=88,slow=7.3,SNR=15							
ASAR	**Alice Springs**	**45.07**	**254**	P	**P**	**11 52 29.6**	**0.0**
3.7nm,0.4s,baz=90,slow=8.4,SNR=42							
ASAR				PcP	**PcP**	**11 53 56.8**	**-0.7**
0.9nm,0.5s,baz=105,slow=4.2,SNR=6.6							
ASAR				S	**S**	**11 58 23.9**	**-2.8**
0.7nm,0.7s,baz=90,slow=14,SNR=7.1							
SIJI	**Sorong**	**52.48**	**283**	P	**P**	**11 53 24.6**	**+0.3**
4.0nm,0.4s,baz=231,slow=22,SNR=2.0							
MJAR	**Matsushiro Arr**	**68.01**	**323**	P	**P**	**11 55 06.5**	**+0.3**
1.5nm,0.6s,baz=165,slow=6.1,SNR=6.8							
PETK	**Petropavlovsk-**	**73.68**	**345**	P	**P**	**11 55 39.6**	**+0.6**
4.4nm,0.7s,baz=138,slow=6.3,SNR=8.4							
NVAR	**Mina Array Bea**	**79.18**	**44**	P	**P**	**11 56 10.1**	**+0.3**
2.5nm,0.7s,baz=224,slow=8.5,SNR=20							
TXAR	**Lajitas Array**	**85.73**	**58**	P	**P**	**11 56 43.9**	**+1.1**
2.5nm,0.7s,baz=220,slow=5.6,SNR=14							
ILAR	**Eielson Array**	**85.75**	**13**	P	**P**	**11 56 41.3**	**-0.6**
1.5nm,0.4s,baz=220,slow=4.8,SNR=40							
PDAR	**Pinedale Array**	**87.11**	**43**	P	**P**	**11 56 49.2**	**+0.1**
1.6nm,0.7s,baz=222,slow=3.2,SNR=13							
YKA	**Yellowknife Ar**	**94.15**	**25**	P	**P**	**11 57 20.2**	**-0.6**
0.4nm,0.5s,baz=241,slow=4.6,SNR=14							
ARCES	**ARCESS Array B**	**126.29**	**350**	PKP	**PKPdf**	**12 02 59.6**	**-0.9**
6.9nm,0.3s,baz=48,slow=1.3,SNR=5.5							
FINES	**FINESS Array B**	**133.19**	**344**	PKP	**PKPdf**	**12 03 12.2**	**-1.6**
1.7nm,0.8s,baz=72,slow=4.5,SNR=4.5							
BURAR	**Bucovina Array**	**144.68**	**332**	↑*i*P	PKPbc	12 03 35.9	+0.3
BIZ	**Bicaz**	**144.78**	**331**	↑↑*i*P	PKPbc	12 03 35.9	+0.1
TESR	**Tescani**	**144.83**	**330**	↑*i*P	PKPbc	12 03 35.6	-0.4
BRTR	**Keskin Array B**	**144.92**	**315**	PKP	**PKPdf**	**12 03 36.0**	**+0.1**
2.0nm,0.6s,baz=42,slow=0.8,SNR=9.4							
VRI	**Vrincioaia**	**145.26**	**329**	↑*i*P	**PKPbc**	**12 03 37.1**	**-0.2**
TRPA	**Tarpa**	**145.40**	**335**	↑*i*P	**PKPbc**	**12 03 37.7**	**+0.2**
OSTC	**Ostas**	**145.40**	**344**	*e*PKKP	**PKPbc**	**12 03 37.6**	**+0.1**
CHVC	**Chvalec**	**145.41**	**344**	*e*PKKP	**PKPbc**	**12 03 37.7**	**+0.1**
CLL	**Collm**	**145.45**	**348**	↓↓*i*PKPbc	**PKPdf**	**12 03 36.2**	**0.0**
comp=Z,10.0nm,0.8s							
UPC	**Upice**	**145.50**	**344**	*e*PKKP	**PKPbc**	**12 03 37.6**	**-0.2**
UPC				*ex*	x	12 03 39.8	
DPC	**Dobruska-Polom**	**145.56**	**344**	*e*PKKP	**PKPbc**	**12 03 38.0**	**0.0**
BRG	**Berggiesshubel**	**145.66**	**346**	*e*PKP	**PKPbc**	**12 03 38.0**	**-0.2**
comp=Z,13nm,1.4s							
MORC	**Moravsky Berou**	**145.73**	**342**	*e*PKP	**PKPbc**	**12 03 38.6**	**+0.1**
DOPR	**Dopca**	**145.83**	**330**	↑*i*P	**PKPbc**	**12 03 39.7**	**+0.8**
PVCC	**Panska Ves**	**145.84**	**346**	*e*PKKP	**PKPbc**	**12 03 38.9**	**+0.2**
MLR	**Muntele Rosu**	**145.91**	**329**	↑*i*P	**PKPbc**	**12 03 39.3**	**0.0**
PRU	**Pruhonice**	**146.34**	**345**	*e*PKKP	**PKPbc**	**12 03 40.1**	**-0.1**
PRU				*ex*	x	12 03 42.9	
DRGR		**146.39**	**334**	↑↑*i*P	**PKPbc**	**12 03 40.4**	**-0.1**
KRUC	**Moravsky**	**146.70**	**343**	*e*PKP	**PKPbc**	**12 03 40.9**	**-0.3**
KHC	**Kasperske Hory**	**147.37**	**346**	*e*PKKP	**PKPbc**	**12 03 42.0**	**-1.0**
GERES	**GERESS Array B**	**147.61**	**345**	PKPbc	**PKPbc**	**12 03 43.2**	**-0.5**
comp=Z,2.1nm,0.6s,baz=29,slow=3.0,SNR=19							
BZS	**Buzias**	**147.79**	**334**	↑↑*i*P	**PKPbc**	**12 03 43.9**	**-0.2**
CONA	**Conrad Observa**	**147.88**	**342**	*e*PKPbc	**PKPbc**	**12 03 44.7**	**+0.3**
comp=Z,5.2nm,1.1s							
VTS	**Vitosha**	**149.34**	**328**	↓↓*i*P	**PKPbc**	**12 03 48.0**	**-0.2**
KBA	**Koelnbreinsper**	**149.34**	**345**	*e*PKPbc	**PKPbc**	**12 03 47.5**	**-0.6**
comp=Z,3.2nm,0.6s							
WATA	**Walderalm**	**149.52**	**347**	*e*PKPbc	**PKPbc**	**12 03 47.5**	**-1.0**
comp=Z,2.2nm,0.6s							
RETA	**Reutte**	**149.54**	**348**	*e*PKPbc	**PKiKP**	**12 03 48.9**	**-0.3**
comp=Z,1.6nm,0.5s							
WTTA	**Wattenberg**	**149.57**	**347**	*e*PKPbc	**PKPbc**	**12 03 48.4**	**-0.2**
comp=Z,6.1nm,0.5s							
MOTA	**Moosalm**	**149.61**	**348**	*e*PKPbc	**PKPbc**	**12 03 48.0**	**-0.7**
comp=Z,1.9nm,0.6s							
MYKA	**Terra Mystica**	**149.68**	**344**	*e*PKPbc	**PKPbc**	**12 03 47.8**	**-1.0**
comp=Z,2.8nm,0.5s							
SQTA	**Sankt Quirin**	**149.70**	**347**	*i* PKPbc	**PKPbc**	**12 03 48.5**	**-0.4**
comp=Z,4.5nm,0.7s							
ABTA	**Abfaltersbach**	**149.86**	**345**	*e*PKPbc	**PKPbc**	**12 03 48.4**	**-0.8**
comp=Z,5.6nm,0.6s							
DAVA	**Damuels**	**149.90**	**349**	*e*PKPbc	**PKPbc**	**12 03 49.1**	**-0.2**
comp=Z,8.2nm,1.2s							
FETA	**Feichten**	**149.99**	**348**	*e*PKPbc	**PKPbc**	**12 03 49.4**	**-0.3**
comp=Z,3.3nm,0.9s							
ESDC	**Sonseca Array**	**157.66**	**12**	PKPab	**PKPab**	**12 04 30.2**	**-0.6**
comp=Z,0.2nm,0.3s,baz=352,slow=5.0,SNR=4.7							

GCG 16 12:10:30.8±0.6, 13°.62N×92°.16W, h2km±158km, MD3.8, 1D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.22**	**28**	↓↓*e*P	Pg	12 10 54.1	-0.2
FUG	**Fuego 3**	**1.52**	**57**	*e*P	Pn	12 10 58.9	-0.3
PCG	**Pacaya**	**1.69**	**63**	*e*P	Pn	12 11 02.2	+0.6
PCG				*e*S	Sn	12 11 20.7	-3.3
IXG	**Ixpaco**	**1.75**	**72**	*e*P	Pn	12 11 02.3	-0.2

MEX 16 12:22:54.1±0.4, 14°.84N×92°.29W, h100km±5km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.07**	**15**	*e*P	Pn	12 23 06.8	-1.3
THIG				*i* S	Sn	12 23 16.8	-1.7
CCIG	**Comitan**	**1.44**	**6**	*e*S	Sn	12 23 37.9	-1.5

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*HLW **16** 12:25:36.1, 34°.26N×25°.39E, h7km±16km, Md3.7, Ml4.0*
*THE **16** 12:25:37.4, 34°.32N×25°.10E, h0km±1km, ML3.3/4, Error ellipse: s-maj=2.1km s-min=0.7km az=176.0*
*ATH **16** 12:25:39.4, 34°.46N×25°.08E, h30km±1km, ML3.2/11, Error ellipse: s-maj=4.5km s-min=1.5km az=353.0*
*IDC **16** 12:25:39.6±2.5, 34°.37N×25°.00E, h42km±20km, mb3.5/10, mb1 3.8/15, mb1mx3.6/39, mbtmp3.8/15, ML4.1/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/35, Error ellipse: s-maj=25.8km s-min=17.8km az=157.0*
*DDA **16** 12:26:06.7, 34°.29N×25°.38E, h11km, ML3.7*
ISC 16 12:25:36.1±0.9, 34°.25N±0°.04×25°.09E±0°.03, h19km±3km, n124, σ1953/143, mb3.8/11, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.80**	**344**	P	**Pg**	**12 25 51.9**	**+0.1**
SIVA				S	**Sn**	**12 26 03.7**	**0.0**
SIVA	**Sivas**	**0.80**	**344**	P	**Pn**	**12 25 52.3**	**-0.1**
SIVA				S	**Sb**	**12 26 00.8**	**-1.0**
SIVA				AML	AML	12 26 04.8	
comp=N,14472μm,0.8s							
SIVA				AML	AML	12 26 06.8	
comp=E,24067μm,0.8s							
TMBK	**Timbaki Herakl**	**0.86**	**342**	P	**Pn**	**12 25 53.3**	**+0.1**
LAST	**Lasithi**	**0.96**	**20**	P	**Pb**	**12 25 54.6**	**+0.3**
LAST				S	**Sn**	**12 26 09.2**	**+1.2**
LAST	**Lasithi**	**0.96**	**20**	P	**Pb**	**12 25 54.6**	**+0.3**
LAST				S	**Sb**	**12 26 06.2**	**-0.5**
LAST				AML	AML	12 26 17.7	
comp=N,1854μm,0.6s							
LAST				AML	AML	12 26 20.7	
comp=E,2345μm,0.8s							
GVD	**Gavdhos**	**1.01**	**306**	P	**Pg**	**12 25 56.3**	**+0.5**
GVD	**Gavdhos**	**1.01**	**306**	P	**Pg**	**12 25 56.2**	**+0.5**
GVD				S	**Sn**	**12 26 11.2**	**+2.2**
GVD	**Gavdhos**	**1.01**	**306**	P	**Pg**	**12 25 56.3**	**+0.5**
GVD				S	**Sn**	**12 26 10.6**	**+1.6**
GVD				AML	AML	12 26 15.8	
comp=N,6956μm,0.3s							
GVD				AML	AML	12 26 25.6	
comp=E,6386μm,0.4s							
IDI	**Anoyia**	**1.05**	**351**	P	**Pn**	**12 25 56.0**	**+0.1**
comp=E,66nm,0.3s,baz=170,slow=14,SNR=86							
IDI				S	**Sn**	**12 26 11.9**	**+1.9**
comp=E,89nm,0.3s,baz=66,slow=2.6,SNR=8.6							
IDI	**Anoyia**	**1.05**	**351**	P	**Pn**	**12 25 55.9**	**+0.1**
IDI				AML	AML	12 26 19.1	
comp=N,1840μm,0.5s							
IDI				AML	AML	12 26 22.7	
comp=E,1385μm,0.4s							
KSTL	**Kastelli Herak**	**1.05**	**359**	P	**Pb**	**12 25 55.0**	**-0.7**
IACM	**Heraklion**	**1.05**	**359**	P	**Pg**	**12 25 56.8**	**+0.2**
IACM	**Heraklion**	**1.05**	**359**	P	**Pg**	**12 25 57.1**	**+0.5**
NPS	**Neapolis**	**1.10**	**23**	P	**Pb**	**12 25 56.7**	**+0.1**
NPS	**Neapolis**	**1.10**	**23**	P	**Pn**	**12 25 57.1**	**+0.6**
NPS				S	**Sb**	**12 26 08.4**	**-2.1**
NPS				AML	AML	12 26 25.9	
comp=N,1816μm,0.5s							
NPS				AML	AML	12 26 32.5	
comp=E,1925μm,0.8s							
PRNS	**Prines Rethymn**	**1.21**	**337**	P	**Pg**	**12 25 59.1**	**-0.5**
STIA	**Sitia Lasithi**	**1.26**	**41**	P	**Pg**	**12 26 00.4**	**-0.1**
ZKR	**Zakros**	**1.27**	**47**	P	**Pb**	**12 26 00.1**	**+0.6**
ZKR	**Zakros**	**1.27**	**47**	P	**Pb**	**12 26 00.0**	**+0.6**
ZKR				S	**Sg**	**12 26 17.7**	**+0.3**
ZKR	**Zakros**	**1.27**	**47**	P	**Pg**	**12 26 00.6**	**-0.2**
ZKR				S	**Sg**	**12 26 17.4**	**0.0**
ZKR				AML	AML	12 26 24.4	
comp=N,764μm,0.5s							
ZKR				AML	AML	12 26 27.2	
comp=E,1625μm,0.6s							
VAM	**Vamos**	**1.36**	**328**	P	**Pb**	**12 26 01.4**	**+0.3**
VAM	**Vamos**	**1.36**	**328**	P	**Pg**	**12 26 01.9**	**-0.6**
VAM				AML	AML	12 26 35.2	
comp=N,3254μm,0.5s							
VAM				AML	AML	12 26 36.5	
comp=E,4173μm,0.6s							
IMMV	**Iera Moni Meta**	**1.51**	**323**	P	**Pb**	**12 26 04.2**	**+0.7**
IMMV	**Iera Moni Meta**	**1.51**	**323**	P	**Pb**	**12 26 03.8**	**+0.3**
IMMV	**Iera Moni Meta**	**1.51**	**323**	P	**Pg**	**12 26 04.8**	**-0.5**
IMMV				AML	AML	12 26 35.1	
comp=E,2744μm,0.6s							
IMMV				AML	AML	12 26 43.2	
comp=N,2230μm,1.0s							
SANT	**Santorini**	**2.14**	**8**	*e*P	**Pn**	**12 26 12.0**	**+1.2**
KARP	**Karpathos**	**2.14**	**52**	*e*P	**Pn**	**12 26 12.4**	**+1.5**
KARP	**Karpathos**	**2.14**	**52**	P	**Pb**	**12 26 14.0**	**-0.3**
KARP	**Karpathos**	**2.14**	**52**	P	**Pb**	**12 26 14.6**	**+0.3**
ANKY	**Antikythira Is**	**2.18**	**318**	P	**Pb**	**12 26 13.9**	**-1.0**
ANKY	**Antikythira Is**	**2.18**	**318**	P	**Pb**	**12 26 14.3**	**-0.6**
ANKY				AML	AML	12 27 12.9	
comp=E,661μm,0.8s							
ANKY				AML	AML	12 27 13.6	
comp=N,514μm,1.0s							
IOSP	**Ios island**	**2.47**	**4**	P	**Pn**	**12 26 16.7**	**+1.3**
IOSP	**Ios island**	**2.47**	**4**	P	**Pn**	**12 26 16.7**	**+1.3**
MHLO	**Agia Marina, M**	**2.50**	**347**	P	**Pn**	**12 26 16.5**	**+0.8**
MHLO	**Agia Marina, M**	**2.50**	**347**	P	**Pn**	**12 26 17.1**	**+1.3**
MHLA	**Plaka, Milos I**	**2.55**	**348**	P	**Pn**	**12 26 17.9**	**+1.5**
KYTH	**Kithira**	**2.61**	**321**	P	**Pb**	**12 26 20.6**	**-1.7**
KYTH	**Kithira**	**2.61**	**321**	P	**Pb**	**12 26 20.6**	**-1.7**
KYTH				AML	AML	12 27 25.8	
comp=E,346μm,0.7s							
KYTH				AML	AML	12 27 31.7	
comp=N,339μm,1.4s							
KTHR	**Kythira**	**2.63**	**320**	P	**Pb**	**12 26 20.8**	**-1.9**
SLUM	**Salum**	**2.75**	**178**	P	**Pn**	**12 26 20.4**	**+1.1**
baz=184							
SLUM				AMP		12 26 00.0	
baz=184							
APE	**Apeiranthos**	**2.83**	**7**	*e*P	**Pn**	**12 26 22.2**	**+1.8**
APE	**Apeiranthos**	**2.83**	**7**	P	**Pn**	**12 26 21.7**	**+1.3**
APE	**Apeiranthos**	**2.83**	**7**	P	**Pn**	**12 26 21.4**	**+1.0**
APE				AML	AML	12 27 14.6	
comp=E,223μm,0.8s							
APE				AML	AML	12 27 24.3	
comp=N,130μm,0.5s							
SERI	**Serifos**	**2.94**	**351**	P	**Pn**	**12 26 23.3**	**+1.4**
SERI	**Serifos**	**2.94**	**351**	P	**Pn**	**12 26 23.3**	**+1.4**
VLI	**Veliai**	**3.02**	**325**	P	**Pn**	**12 26 24.5**	**+1.5**
VLI	**Veliai**	**3.02**	**325**	P	**Pn**	**12 26 24.7**	**+1.8**
ARG	**Arkhangelos**	**3.17**	**51**	*e*P	**Pn**	**12 26 27.2**	**+2.2**
ARG	**Arkhangelos**	**3.17**	**51**	P	**Pn**	**12 26 27.6**	**+2.7**
ARG	**Arkhangelos**	**3.17**	**51**	P	**Pn**	**12 26 27.7**	**+2.7**
DAT	**Datca**	**3.20**	**39**	*e*P	**Pn**	**12 26 27.1**	**+1.6**
DAT	**Datca**	**3.20**	**39**	*i* P	**Pn**	**12 26 28.2**	**+2.7**
DAT				IAML_P			
comp=Z,295nm,0.2s							
BDRM	**Kayabasi**	**3.40**	**34**	*i* P	**Pn**	**12 26 30.9**	**+2.7**
BBRN	**Bozburun-Marma**	**3.43**	**44**	*e*P	**Pn**	**12 26 30.7**	**+2.1**
DID	**Didima**	**3.58**	**336**	P	**Pn**	**12 26 31.3**	**+0.7**
DID	**Didima**	**3.58**	**336**	P	**Pn**	**12 26 31.8**	**+1.2**
VLY	**Voula,Athens**	**3.74**	**344**	P	**Pn**	**12 26 34.9**	**+2.1**
PYL	**PYLOS**	**3.79**	**315**	P	**Pn**	**12 26 36.7**	**+3.1**
DALY	**Dalyan (Mula)**	**3.88**	**48**	*e*P	**Pn**	**12 26 37.0**	**+2.3**
DALY	**Dalyan (Mula)**	**3.88**	**48**	*i* P	**Pn**	**12 26 37.5**	**+2.8**
DALY				*i* S	**Sn**	**12 27 21.3**	**+1.7**
DALY				IAML_P			
comp=Z,610nm,0.2s							
YER	**Yerkesik**	**3.88**	**41**	*e*P	**Pn**	**12 26 37.4**	**+2.6**
YER	**Yerkesik**	**3.88**	**41**	P	**Pn**	**12 26 36.9**	**+2.1**
TURN	**Turunc**	**3.88**	**47**	*e*P	**Pn**	**12 26 33.1**	**-1.6**
TURN	**Turunc**	**3.88**	**47**	*i* P	**Pn**	**12 26 33.5**	**-1.2**
TURN				*i* S	Sn	12 27 08.1	-12
ITM	**Ithomi**	**3.89**	**320**	P	**Pn**	**12 26 37.3**	**+2.4**
ITM	**Ithomi**	**3.89**	**320**	P	**Pn**	**12 26 37.0**	**+2.1**
PTL	**Penteli**	**3.92**	**346**	P	**Pn**	**12 26 36.5**	**+1.2**
FETY	**Fethiye**	**4.04**	**53**	*i* P	**Pn**	**12 26 38.1**	**+1.2**
FETY				*i* S	**Sn**	**12 27 22.3**	**-1.5**
FETY				IAML_P			
comp=Z,883nm,0.2s							
AYDN	**Tasoluk**	**4.09**	**33**	*i* P	**Pn**	**12 26 39.9**	**+2.3**
AYDN				IAML_P			
comp=Z,351nm,0.3s							
AKAS	**Kas**	**4.20**	**61**	*e*P	**Pn**	**12 26 41.1**	**+1.9**
AKAS	**Kas**	**4.20**	**61**	*i* P	**Pn**	**12 26 40.7**	**+1.5**
AKAS				*i* S	**Sn**	**12 27 25.5**	**-2.2**
URLA	**Izmir**	**4.28**	**16**	*e*P	**Pn**	**12 26 43.2**	**+2.9**
URLA	**Izmir**	**4.28**	**16**	*i* P	**Pb**	**12 26 48.6**	**-2.1**
AYDB	**Zeytinkoy-Aydi**	**4.33**	**31**	*e*P	**Pn**	**12 26 43.1**	**+2.0**
ELL	**Elmali**	**4.66**	**56**	*e*P	**Pn**	**12 26 48.7**	**+3.1**
AKUM	**Antalya-Kumluc**	**4.77**	**63**	*i* P	**Pn**	**12 26 48.5**	**+1.5**
AKUM				*i* S	**Sn**	**12 27 40.6**	**-1.2**
SWA2		**5.00**	**176**	P	**Pn**	**12 26 51.3**	**+1.1**
baz=179							
SWA2				S	**Sn**	**12 27 46.2**	**-1.3**
baz=179							
SWA2				AMP		12 28 00.0	
baz=179							
MANT	**Manisa**	**5.08**	**33**	*i* P	**Pn**	**12 26 53.3**	**+1.9**
KORT	**Korkueli**	**5.09**	**56**	*e*P	**Pn**	**12 26 54.8**	**+3.3**
KORT	**Korkueli**	**5.09**	**56**	*i* P	**Pn**	**12 26 55.8**	**+4.3**
BRDR	**BURDUR-Merkez**	**5.30**	**48**	*i* P	**Pn**	**12 26 56.9**	**+2.5**
KHAL	**Karahalli**	**5.44**	**40**	*i* P	**Pn**	**12 26 58.1**	**+1.9**
KHAL				*i* S	**Sn**	**12 27 57.5**	**-0.8**
KHAL				IAML_P			
comp=Z,228nm,0.1s							
USAK	**Uak-Merkez**	**5.47**	**34**	*i* P	**Pn**	**12 26 59.0**	**+2.4**
USAK				IAML_P			
comp=Z,423nm,0.4s							
BAYC	**CANAKKALE_Bayr**	**5.60**	**12**	*i* P	**Pn**	**12 26 57.6**	**-0.8**
KEPZ	**Antalya-Kepez**	**5.93**	**62**	*i* P	**Pn**	**12 27 04.4**	**+1.4**
KEPZ				*i* S	**Sn**	**12 28 07.9**	**-2.6**
KDHN	**Kadinhani**	**7.09**	**51**	*i* P	**Pn**	**12 27 19.4**	**+0.4**
GLL	**Jalalah**	**7.31**	**128**	P	**Pn**	**12 27 21.2**	**-0.7**
baz=129							
HFRF	**Wahat Farafira**	**7.60**	**158**	P	**Pn**	**12 27 25.8**	**-0.2**
baz=159							
BRTR	**Keskin Array B**	**8.75**	**49**	P	**Pn**	**12 27 43.7**	**+1.8**
comp=Z,0.1nm,0.3s,baz=224,slow=10,SNR=2.4							
HKAT	**Jabal Katrina**	**9.51**	**124**	P	**Pn**	**12 27 51.4**	**-0.9**
baz=125							
EIL	**Elat**	**9.54**	**116**	P	**Pn**	**12 27 53.0**	**+0.5**
comp=Z,1.6nm,0.3s,baz=332,slow=16,SNR=9.7							
EIL				S	**Sn**	**12 29 37.2**	**-2.1**
comp=Z,0.6nm,0.3s,baz=10,slow=14,SNR=1.7							
STON	**Ston**	**10.36**	**328**	*e*Pn	**Pn**	**12 28 02.9**	**-0.7**
MLR	**Muntele Rosu**	**11.25**	**3**	LR	LR	12 33 22.1	
comp=Z,60nm,18.3s,baz=123,slow=42							
UDBI	**Udbina**	**12.53**	**328**	*e*Pn	**Pn**	**12 28 32.3**	**-1.1**
SOKA	**Soboth**	**14.56**	**331**	*e*P	**P**	**12 29 09.2**	**+1.6**
comp=Z,2.4nm,0.8s							
ARSA	**Arzberg**	**14.85**	**334**	*e*P	**P**	**12 29 12.1**	**+1.3**
comp=Z,2.2nm,0.5s							
KBA	**Koelnbreinsper**	**15.58**	**329**	*e*P	**P**	**12 29 19.7**	**+0.7**
comp=Z,5.1nm,0.7s							
ABTA	**Abfaltersbach**	**15.70**	**326**	*e*P	**P**	**12 29 21.9**	**+1.7**
comp=Z,5.1nm,0.6s							
MOA	**Molln**	**15.82**	**332**	*e*P	**P**	**12 29 22.3**	**+0.8**
comp=Z,5.1nm,0.6s							
VRAC	**Vranov**	**16.31**	**340**	P	**Pn**	**12 29 23.3**	**-0.7**
comp=Z,0.1nm,0.3s,baz=162,slow=9.8,SNR=2.2							
WTTA	**Wattenberg**	**16.48**	**326**	P	**P**	**12 29 31.2**	**+2.2**
comp=Z,6.4nm,1.0s							
WATA	**Walderalm**	**16.56**	**326**	P	**P**	**12 29 31.3**	**+1.5**
comp=Z,1.5nm,0.5s							
SQTA	**Sankt Quirin**	**16.65**	**325**	P	**P**	**12 29 32.9**	**+2.1**
comp=Z,1.8nm,0.5s							
AKASG	**Malin Array Be**	**16.72**	**9**	P	**Pn**	**12 29 29.9**	**+0.7**
comp=Z,1.3nm,0.3s,baz=200,slow=10,SNR=14							
KBZ	**Khabaz**	**16.74**	**50**	P	**P**	**12 29 31.9**	**+0.2**
comp=Z,0.3nm,0.3s,baz=269,slow=8.1,SNR=8.2							
MOTA	**Moosalm**	**16.79**	**325**	Pn	**P**	**12 29 33.0**	**+0.6**
comp=Z,0.7nm,0.4s							
GERES	**GERESS Array B**	**16.86**	**333**	P	**Pn**	**12 29 30.7**	**-0.4**
comp=Z,0.8nm,0.3s,baz=147,slow=12,SNR=36							
DAVOX	**Davos/Dischmat**	**17.00**	**322**	P	**P**	**12 29 35.8**	**+1.1**
comp=Z,0.1nm,0.3s,baz=152,slow=7.5,SNR=5.8							
RETA	**Reutte**	**17.05**	**325**	P	**P**	**12 29 38.1**	**+2.9**
comp=Z,2.0nm,0.5s							
KHC	**Kasperske Hory**	**17.14**	**334**	*e*P	**P**	**12 29 37.5**	**+1.4**
KHC				*ex*	x	12 29 52.5	
DPC	**Dobruska-Polom**	**17.32**	**341**	*e*P	**P**	**12 29 39.4**	**+1.3**
DPC				*ex*	x	12 29 49.4	
CLL	**Collm**	**19.17**	**336**	*i* P	**P**	**12 29 57.9**	**-0.5**
comp=Z,7.0nm,1.2s							
CLL				*e*pP	**pP**	**12 30 02.0**	**-1.2**
CLL				*e*PP	**PnPn**	**12 30 13.0**	**+0.8**
ESDC	**Sonseca Array**	**23.78**	**292**	P	**P**	**12 30 47.4**	**-0.1**
comp=Z,0.1nm,0.3s,baz=87,slow=8.8,SNR=3.5							
HFS	**Hagfors**	**26.95**	**347**	P	**P**	**12 31 15.9**	**-0.2**
comp=Z,1.5nm,0.7s,baz=163,slow=10,SNR=4.1							
FINES	**FINESS Array B**	**27.22**	**1**	P	**P**	**12 31 19.1**	**+0.7**
comp=Z,2.9nm,0.9s,baz=172,slow=11,SNR=3.4							
NB2	**NORSAR Subarra**	**28.26**	**346**	P	**P**	**12 31 27.3**	**-0.6**
comp=Z,1.8nm,1.1s,baz=156,slow=9.3							
NOA	**NORSA

DRO	**Drossia**	**0.44 230**	P	Pg	12 26 26.8	-0.3
DRO			S	Sg	12 26 33.3	+0.5
DRO			AML	AML	12 26 34.2	
	comp=E,2448μm,0.3s					
DRO			AML	AML	12 26 36.5	
	comp=N,1739μm,0.4s					
THAL	**Thalero**	**0.46 116**	P	Pg	12 26 27.2	-0.1
RLS	**Riolos of Patr**	**0.56 251**	P	Pg	12 26 28.4	-0.8
RLS			S	Sb	12 26 37.5	-0.8
RLS	**Riolos of Patr**	**0.56 251**	P	Pg	12 26 28.9	-0.3
RLS			S	Sg	12 26 37.0	+0.4
RLS			AML	AML	12 26 39.9	
	comp=N,236μm,0.3s					
RLS			AML	AML	12 26 43.3	
	comp=E,405μm,0.6s					
PROD	**Prodromos**	**0.60 88**	P	Pg	12 26 30.2	+0.2
PROD			S	Sb	12 26 39.0	-0.5
PROD	**Prodromos**	**0.60 88**	P	Pb	12 26 30.8	-0.1
PROD			S	Sb	12 26 39.1	-0.4
PROD			AML	AML	12 26 40.5	
	comp=E,860μm,0.2s					
PROD			AML	AML	12 26 40.6	
	comp=N,985μm,0.2s					
PVO	**Paravola**	**0.61 308**	P	Pg	12 26 30.4	+0.2
PVO	**Paravola**	**0.61 308**	P	Pg	12 26 30.5	+0.3
ACOR	**Acrocorinthos**	**0.67 121**	P	Pb	12 26 31.9	-0.3
LTK	**Loutraki**	**0.69 108**	P	Pg	12 26 31.8	+0.1
LTK			S	Sg	12 26 41.1	+0.4
LTK	**Loutraki**	**0.69 108**	P	Pg	12 26 32.0	+0.4
TRIP	**Tripoli**	**0.72 172**	P	Pg	12 26 31.6	-0.6
TRIP			S	Sb	12 26 42.5	-0.4
TRIP	**Tripoli**	**0.72 172**	P	Pg	12 26 31.6	-0.6
EVR	**Evrytania**	**0.72 339**	P	Pg	12 26 32.1	-0.3
EVR			S	Sb	12 26 43.3	+0.1
EVR	**Evrytania**	**0.72 339**	P	Pg	12 26 32.2	-0.2
AMT	**Artemida-Makis**	**0.78 206**	P	Pg	12 26 32.9	-0.5
AMT			S	Sb	12 26 44.6	-0.1
AMT	**Artemida-Makis**	**0.78 206**	P	Pg	12 26 33.0	-0.4
AMT			S	Sb	12 26 44.9	+0.2
AMT			AML	AML	12 26 49.2	
	comp=N,904μm,0.3s					
AMT			AML	AML	12 26 50.4	
	comp=E,706μm,0.4s					
LKR	**Lokris**	**0.79 58**	P	Pg	12 26 32.9	-0.8
AGG	**Agios Georgios**	**0.80 11**	P	Pg	12 26 33.0	-0.8
AGG			S	Sb	12 26 45.4	+0.2
AGG	**Agios Georgios**	**0.80 11**	P	Pg	12 26 33.1	-0.7
ATAL	**Atalanti**	**0.83 56**	P	Pg	12 26 34.1	-0.2
PDO	**Prodromos**	**0.83 296**	P	Pg	12 26 34.3	-0.1
PDO			S	Sb	12 26 46.5	+0.3
PDO	**Prodromos**	**0.83 296**	P	Pg	12 26 34.4	0.0
VLX	**Vlachokerasia**	**0.89 167**	P	Pg	12 26 34.4	-1.0
VLX	**Vlachokerasia**	**0.89 167**	P	Pg	12 26 34.3	-1.1
MRKA	**Markates**	**1.23 67**	P	Pn	12 26 41.2	-0.4
MRKA			S	Sn	12 26 58.5	+0.2
MRKA	**Markates**	**1.23 67**	P	Pb	12 26 41.7	0.0
THL	**Klokotos Trika**	**1.33 356**	P	Pb	12 26 43.5	+0.1

*IDC **16** 12:29:31.7±1.9, 34°.27N×25°.18E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.2/36, mbtmp3.3/4, ML3.9/2, MS3.6/1, Ms1 3.6/1, ms1mx2.5/15, Error ellipse: s-maj=34.1km s-min=23.1km az=96.0*
*ISCJB **16** 12:29:32.7±1.3, 34°.15N±0°.06×25°.23E±0°.07, h18km±8km, mb3.0/2, MS3.5/1, Error ellipse: s-maj=10.8km s-min=9.5km az=28.5*
*ATH **16** 12:29:34.1, 34°.28N×25°.11E, h14km±5km, ML2.6/5, Error ellipse: s-maj=5.8km s-min=1.9km az=2.0*
*THE **16** 12:29:34.1, 34°.28N×25°.14E, h0km±2km, ML2.7/3, Error ellipse: s-maj=3.5km s-min=1.0km az=155.0*

ISC 16 12:29:33.3±2.1, 34°.24N±0°.08×25°.14E±0°.05, h11km±11km, n19, σ0°50/29, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.82**	**341**	P	**Pg**	**12 29 49.5**	**+0.3**
SIVA				S	**Sb**	**12 30 01.1**	**+0.4**
SIVA	**Sivas**	**0.82**	**341**	P	**Pg**	**12 29 49.4**	**+0.2**
SIVA				S	**Sg**	**12 29 59.7**	**-0.2**
SIVA				AML	AML	12 30 02.2	
	comp=N,1546μm,0.6s						
SIVA				AML	AML	12 30 04.2	
	comp=E,2598μm,0.8s						
TMBK	**Timbaki Herakl**	**0.89**	**340**	P	**Pb**	**12 29 51.0**	**+0.3**
TMBK				S	**Sn**	**12 30 04.2**	**-0.3**
LAST	**Lasithi**	**0.96**	**17**	P	**Pb**	**12 29 52.0**	**0.0**
LAST				S	**Sn**	**12 30 06.3**	**-0.2**
LAST	**Lasithi**	**0.96**	**17**	P	**Pb**	**12 29 51.9**	**-0.1**
LAST				S	**Sb**	**12 30 03.8**	**-0.9**
LAST				AML	AML	12 30 15.0	
	comp=N,264μm,0.8s						
LAST				AML	AML	12 30 18.8	
	comp=E,221μm,0.8s						
GVD	**Gavdhos**	**1.05**	**305**	P	**Pb**	**12 29 53.5**	**-0.1**
GVD				S	**Sn**	**12 30 09.7**	**+1.0**
GVD	**Gavdhos**	**1.05**	**305**	P	**Pb**	**12 29 53.1**	**-0.5**
GVD				S	**Sg**	**12 30 07.5**	**+0.1**
GVD				AML	AML	12 30 23.0	
	comp=E,850μm,0.4s						
GVD				AML	AML	12 30 23.2	
	comp=N,966μm,0.5s						
IDI	**Anoyia**	**1.06**	**349**	Pn	**Pb**	**12 29 53.6**	**-0.2**
	comp=N,8.9nm,0.3s,baz=169,slow=19,SNR=8.6						
IDI				Sn	**Sn**	**12 30 09.6**	**+0.5**
	comp=N,14nm,0.3s,baz=66,slow=2.7,SNR=6.4						
NPS	**Neapolis**	**1.09**	**21**	P	**Pb**	**12 29 54.6**	**+0.4**
NPS	**Neapolis**	**1.09**	**21**	P	**Pb**	**12 29 54.6**	**+0.4**
VAM	**Vamos**	**1.40**	**327**	P	**Pn**	**12 29 59.2**	**+0.4**
VAM				S	**Sg**	**12 30 18.5**	**+0.2**
VAM				AML	AML	12 30 32.7	
	comp=N,366μm,0.5s						
VAM				AML	AML	12 30 34.0	
	comp=E,445μm,0.7s						
IMMV	**Iera Moni Meta**	**1.55**	**322**	P	**Pb**	**12 30 01.8**	**-0.2**
IMMV				S	**Sb**	**12 30 21.9**	**+0.3**
IMMV	**Iera Moni Meta**	**1.55**	**322**	P	**Pb**	**12 30 02.1**	**+0.1**
IMMV				S	**Sg**	**12 30 22.6**	**-0.5**
IMMV				AML	AML	12 30 32.5	
	comp=E,321μm,0.7s						
IMMV				AML	AML	12 30 40.6	
	comp=N,270μm,1.1s						
ANKY	**Antikythira Is**	**2.22**	**318**	P	**Pb**	**12 30 12.1**	**-1.3**
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**12 33 26.6**	**-0.8**
	comp=N,0.4nm,0.3s,baz=197,slow=10,SNR=3.0						
GERES	**GERESS Array B**	**16.89**	**333**	Pn	**P**	**12 33 31.6**	**-0.1**
	comp=N,0.2nm,0.3s,baz=143,slow=12,SNR=4.6						
TORD	**Torodi Ar. Bea**	**29.89**	**231**	P	**P**	**12 35 41.5**	**+0.4**
	comp=N,0.2nm,0.4s,baz=40,slow=7.6,SNR=1.7						
ARCES	**ARCESS Array B**	**35.35**	**0**	LR	LR	12 50 42.1	
	comp=N,92nm,20.3s,baz=74,slow=36						
MKAR	**Makanchi Array**	**44.30**	**56**	P	**P**	**12 37 42.7**	**-0.3**
	comp=N,0.1nm,0.5s,baz=280,slow=8.6,SNR=1.7						

GCG 16 12:35:25.9±0.5, 13°.67N×90°.86W, h41km±51km, MD3.5, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.65**	**39**	*e*P	Pn	12 35 39.2	+0.3
IXG				*e*S	Sn	12 35 49.6	+1.5
PCG	**Pacaya**	**0.76**	**19**	*e*P	Pn	12 35 40.8	+0.3
PCG				*e*S	Sn	12 35 53.0	+2.0
FUG	**Fuego 3**	**0.78**	**1**	*e*P	Pn	12 35 41.0	+0.4
STG3	**Santiaguito 3,**	**1.25**	**327**	⇓*e*P	Pn	12 35 47.8	+0.7
STG3				*e*S	Sn	12 36 04.3	+1.5

*DJA **16** 13:01:45.9±0.5, 2°.N±4°.×12°.7E±°, h96km±6km, M4.3/10, mB4.6/4, mb4.4/7, MLv4.5/10, Mw(mB)3.8/4*
*ISCJB **16** 13:01:47.5±0.8, 2°.21N±0°.06×127°.23E±0°.06, h117km±8km, mb4.5/18, Error ellipse: s-maj=12.8km s-min=7.6km az=135.1*
*IDC **16** 13:01:47.8±2.3, 2°.24N×127°.18E, h103km±20km, mb4.0/8, mb1 4.1/10, mb1mx3.5/41, mbtmp4.3/10, MS3.6/2, Ms1 3.6/2, ms1mx2.6/50, Error ellipse: s-maj=34.9km s-min=14.8km az=66.0*
*NEIC **16** 13:01:48.6±0.9, 2°.21N×127°.28E, h115km±8km, mb4.4/10, Error ellipse: s-maj=13.1km s-min=6.6km az=52.0*
*BJI **16** 13:01:49.8±0.0, 2°.54N×127°.29E, h114km, mb4.8/9, mB4.8/8*

ISC 16 13:01:47.0±1.1, 2°.28N±0°.06×127°.23E±0°.08, h94km±9km, n51, σ1°65/53, mb4.7/18, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.50**	**175**	*e*Pn	**Pn**	**13 02 14.1**	**+1.1**
TNTI	**Ternate**	**1.50**	**175**	P	**Pn**	**13 02 14.3**	**+1.3**
TNTI				S	**Sn**	**13 02 34.8**	**+2.1**
SGSI	**Sangihe**	**2.20**	**309**	P	**Pn**	**13 02 19.8**	**-2.2**
SGSI				S	**Sn**	**13 02 45.5**	**-3.3**
KMSI	**Cibinong**	**3.67**	**243**	P	**Pn**	**13 02 43.2**	**+1.6**
SANI	**Sanana**	**4.48**	**196**	P	**Pn**	**13 02 52.1**	**-0.5**
SIJI	**Sorong**	**5.10**	**128**	P	Pn	13 03 02.8	+1.6
	4.5nm,0.3s,baz=167,slow=21,SNR=13						
SIJI				S	**Sn**	**13 03 56.0**	**-2.8**
	baz=150,slow=24,SNR=1.0						
NLAI	**Namlea**	**5.48**	**181**	P	**Pn**	**13 03 07.1**	**+0.8**
LUWI	**Luwuk**	**5.55**	**234**	*e*Pn	**Pn**	**13 03 09.5**	**+2.3**
APSI	**Ampana**	**6.42**	**240**	P	**Pn**	**13 03 20.6**	**+1.6**
FAKI	**Fak Fak**	**7.20**	**136**	*e*Pn	Pn	13 03 31.7	+2.0
MPSI	**Mapaga**	**7.58**	**255**	P	**Pn**	**13 03 36.1**	**+1.2**
TTSI	**Tana Toraja**	**9.10**	**235**	P	**Pn**	**13 03 55.5**	**-0.1**
KAPI	**Kappang**	**10.41**	**226**	P	**Pn**	**13 04 14.2**	**+0.8**
	0.7nm,0.3s,baz=72,slow=9.6,SNR=3.9						
KAPI				S	**Sn**	**13 06 04.0**	**-4.2**
	1.0nm,0.3s,baz=187,slow=19,SNR=1.6						
SBUM	**Sibu**	**15.00**	**271**	*e*Pn	**Pn**	**13 05 16.2**	**+2.1**
	4.4nm,1.1s						
MTN	**Manton Dam**	**15.52**	**166**	*e*Pn	**Pn**	**13 05 18.1**	**-2.6**
	63nm,1.8s						
FITZ	**Fitzroy Crossi**	**20.31**	**184**	P	**P**	**13 06 14.9**	**-0.7**
	3.3nm,0.3s,baz=16,slow=9.1,SNR=25						
FITZ	**Fitzroy Crossi**	**20.31**	**184**	*e*P	**P**	**13 06 14.7**	**-0.8**
	18nm,1.5s						
WRAB	**Tennant Creek**	**23.15**	**163**	*e*P	**P**	**13 06 44.5**	**-1.0**
	19nm,0.4s						
WR1	**Warramunga Arr**	**23.16**	**163**	*e*P	**P**	**13 06 44.7**	**-0.8**
WR1				*e*PcP	**PcP**	**13 10 31.4**	**+0.2**
WRA	**Warramunga Arr**	**23.16**	**163**	P	**P**	**13 06 44.7**	**-0.8**
	14nm,0.4s,baz=343,slow=11,SNR=386						
WRA				PcP	**PcP**	**13 10 31.5**	**+0.2**
	1.1nm,0.8s,baz=265,slow=3.8,SNR=4.8						
WB2	**Warramunga Arr**	**23.16**	**163**	*e*P	**P**	**13 06 44.6**	**-1.0**
	18nm,0.8s						
AS31	**Alice Springs**	**26.59**	**166**	*e*P	**P**	**13 07 15.9**	**-0.7**
AS31				*e*PcP	**PcP**	**13 10 38.9**	**+0.1**
AS31				*e*ScP	**ScP**	**13 14 09.4**	**-1.1**
ASAR	**Alice Springs**	**26.59**	**166**	P	**P**	**13 07 15.9**	**-0.7**
	3.1nm,0.5s,baz=349,slow=7.3,SNR=114						
ASAR				PcP	**PcP**	**13 10 38.9**	**+0.1**
	2.0nm,0.5s,baz=350,slow=2.3,SNR=17						
ASAR				ScP	**ScP**	**13 14 09.4**	**-1.1**
	0.3nm,0.9s,baz=350,slow=3.4,SNR=3.6						
PSI	**Prapat**	**28.29**	**272**	LR	LR	13 20 19.0	
	comp=Z,44nm,18.9s,baz=178,slow=39						
NJ2	**Nanjing**	**30.65**	**346**	*e*P	**P**	**13 07 53.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CD2	**Chengdu**	**36.11**	**324**	*e*P	**P**	**13 08 40.1**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
STKA	**Stephens Creek**	**36.60**	**159**	P	**P**	**13 08 44.2**	**0.0**
	13nm,0.7s,baz=322,slow=8.7,SNR=43						
STKA	**Stephens Creek**	**36.60**	**159**	*e*P	**P**	**13 08 44.0**	**-0.2**
	2.7nm,0.8s						
LZH	**Lanzhou**	**40.00**	**330**	*e*P	**P**	**13 09 15.3**	**+2.4**
LZH				pP	sP	13 09 39.0	-5.6
LZH				sP	pwP	13 09 51.3	+14
LZH				PP	**PnPn**	**13 10 53.5**	**+2.6**
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,65nm,5.4s						
HHC	**Hu-ho-hao-te**	**40.92**	**342**	*e*P	**P**	**13 09 22.8**	**+2.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,6.5s						
H11S3	**WAKE ISLAND Hy**	**41.87**	**65**	T	T	13 53 15.8	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**41.89**	**65**	T	T	13 53 03.7	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**41.89**	**65**	T	T	13 53 20.3	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**42.44**	**63**	T	T	13 53 37.2	
	baz=249						
H11N2	**WAKE ISLAND Hy**	**42.45**	**63**	T	T	13 53 39.9	
	baz=249						
H11N3	**WAKE ISLAND Hy**	**42.46**	**63**	T	T	13 53 41.0	
	baz=249						
WMQ	**Urumqi**	**54.19**	**325**	*e*P	**P**	**13 11 04.3**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,66nm,3.7s						
MK31	**Makanchi Array**	**59.03**	**326**	*e*P	**P**	**13 11 37.3**	**+0.2**
	5.8nm,0.6s						
MK32	**Makanchi Array**	**59.03**	**326**	*e*P	**P**	**13 11 37.5**	**+0.3**
MKAR	**Makanchi Array**	**59.03**	**326**	P	**P**	**13 11 37.5**	**+0.3**
	1.6nm,0.6s,baz=120,slow=8.7,SNR=20						
MAKZ	**Makanchi**	**59.21**	**325**	*e*P	**P**	**13 11 38.2**	**-0.2**
	4.4nm,0.7s						
KSH	**Kashi**	**59.42**	**316**	*e*P	**P**	**13 11 43.8**	**+3.7**
KURK	**Kurchatov**	**63.23**	**328**	*e*P	**P**	**13 12 05.2**	**-0.1**
	4.9nm,0.8s						
BVAR	**Borovoye Array**	**68.80**	**327**	P	**P**	**13 12 40.9**	**-0.2**
	1.2nm,0.9s,baz=132,slow=6.4,SNR=5.7						
BVAR				pP	**PcP**	**13 13 07.9**	**+2.8**
	0.7nm,0.5s,baz=124,slow=8.9,SNR=5.2						
RAR	**Rarotonga**	**75.02**	**113**	LR	LR	13 41 51.0	
	comp=Z,106nm,19.7s,baz=320,slow=32						
VNDA	**Vanda**	**81.93**	**173**	P	**P**	**13 13 55.1**	**-0.6**
	0.6nm,0.7s,baz=315,slow=7.8,SNR=5.0						
VNDA	**Vanda**	**81.93**	**173**	*e*P	**P**	**13 13 54.7**	**-1.1**
MAW	**Mawson**	**82.58**	**200**	P	**P**	**13 13 58.5**	**-0.8**
	0.8nm,0.2s,baz=51,slow=6.5,SNR=3.7						
MAW	**Mawson**	**82.58**	**200**	*e*P	**P**	**13 13 58.2**	**-1.1**
	5.1nm,1.9s						
ARA0	**ARCESS Array S**	**91.97**	**340**	*e*P	**P**	**13 14 43.1**	**-1.7**
ARCES	**ARCESS Array B**	**91.97**	**340**	P	**P**	**13 14 43.1**	**-1.7**
	6.4nm,0.3s,baz=82,slow=6.7,SNR=7.1						

*SOME **16** 13:10:36.4, 42°.62N×81°.88E, h10km*
*NNC **16** 13:10:37.2±1.0, 42°.69N×81°.85E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=7.8km s-min=4.0km az=151.0*

ISC 16 13:10:39.0±2.3, 42°.68N±0°.10×81°.96E±0°.08, h10km, n30, σ1°59/49, 6C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.40**	**304**	P	**Pn**	**13 11 02.8**	**-1.9**
	65nm,0.4s						
KTMS				S	**Sn**	**13 11 22.0**	**-1.4**
	80nm,0.3s						
KTMS	**Ketmen**	**1.40**	**304**	*e*P	**Pn**	**13 11 02.8**	**-1.9**
	65nm,0.3s						
KTMS				*e*S	**Sn**	**13 11 21.9**	**-1.5**
	80nm,0.3s						
PDGK	**Podgornoye**	**1.92**	**290**	⇓Pn	**Pn**	**13 11 10.8**	**-1.1**
	13nm,0.4s						
PDGK				⇑Lg	Lg	13 11 36.4	
	92nm,0.7s						
UZB	**Uzynbulak**	**2.21**	**283**	Pg	**Pn**	**13 11 15.4**	**-0.4**
	6.6nm,0.4s						
UZB				Lg	Lg	13 11 44.2	
	70nm,0.4s						
UZB	**Uzynbulak**	**2.21**	**283**	*e*P	**Pn**	**13 11 16.0**	**+0.1**
	6.6nm,0.4s						
UZB				*e*S	**Sn**	**13 11 44.2**	**+1.0**
	70nm,0.4s						
DJR	**Jarkent**	**2.28**	**317**	Pg	**Pn**	**13 11 17.5**	**+0.7**
	6.5nm,0.2s						
DJR				Lg	Lg	13 11 48.0	
	14nm,0.4s						
DJR	**Jarkent**	**2.28**	**317**	*e*P	**Pn**	**13 11 17.5**	**+0.7**
	6.5nm,0.2s						
DJR				*e*S	**Sb**	**13 11 47.7**	**-0.9**
	14nm,0.4s						
KPKS	**Kokpek**	**2.52**	**289**	*e*P	**Pb**	**13 11 21.4**	**-3.1**
	22nm,0.2s						
KPKS				*e*S	**Sb**	**13 11 53.5**	**-2.1**
	99nm,0.4s						
MNBS	**Baschi**	**2.94**	**300**	Pg	**Pn**	**13 11 27.2**	**+1.3**
	1.5nm,0.1s						
MNBS				Lg	Lg	13 12 04.5	
	28nm,0.2s						
MNBS	**Baschi**	**2.94**	**300**	*e*P	**Pb**	**13 11 29.8**	**-1.8**
	2.2nm,0.2s						
MNBS				*e*S	**Sb**	**13 12 08.0**	**+0.2**
	28nm,0.2s						
KAPS	**Kapalarasan**	**3.21**	**325**	*e*P	**Pb**	**13 11 35.5**	**-0.6**
	2.6nm,0.2s						
KAPS				*e*S	**Sb**	**13 12 17.9**	**+2.6**
	8.3nm,0.3s						
ARXS	**Arharly**	**3.37**	**298**	Pg	**Pb**	**13 11 37.5**	**-1.4**
	5.5nm,0.4s						
ARXS				Lg	Lg	13 12 21.7	
	13nm,0.3s						
ARXS	**Arharly**	**3.37**	**298**	*e*P	**Pb**	**13 11 37.5**	**-1.4**
	5.5nm,0.4s						
ARXS				*e*S	**Sb**	**13 12 21.7**	**+1.6**
	13nm,0.3s						
KOTS	**Kotyrbulak**	**3.60**	**280**	Pg	**Pb**	**13 11 41.6**	**-1.2**
	2.3nm,0.5s						
KOTS				Lg	Lg	13 12 28.4	
	30nm,0.4s						
KOTS	**Kotyrbulak**	**3.60**	**280**	*e*P	**Pb**	**13 11 41.6**	**-1.2**
	2.3nm,0.5s						
KOTS				*e*S	**Sb**	**13 12 28.4**	**+1.9**
	30nm,0.4s						
MDOK	**Medeo**	**3.64**	**279**	Pg	**Pb**	**13 11 41.8**	**-1.6**
	2.6nm,0.5s						
MDOK				Lg	Lg	13 12 29.0	
	10nm,0.8s						
MDOK	**Medeo**	**3.64**	**279**	*e*P	**Pb**	**13 11 41.8**	**-1.6**
	2.6nm,0.5s						
MDOK				*e*S	**Sb**	**13 12 29.0**	**+1.3**
	10nm,0.8s						
TNSS	**Tian-Shan**	**3.70**	**277**	Pg	**Pb**	**13 11 43.5**	**-1.1**
	2.6nm,0.3s						
TNSS				Lg	Lg	13 12 31.7	
	8.8nm,0.4s						
TNSS	**Tian-Shan**	**3.70**	**277**	*e*P	**Pb**	**13 11 43.5**	**-1.1**
	2.6nm,0.3s						
TNSS				*e*S	**Sb**	**13 12 31.7**	**+1.9**
	8.8nm,0.4s						
IZV	**Izvestkoviy**	**3.94**	**277**	Pg	**Pb**	**13 11 47.4**	**-1.3**
	2.2nm,0.2s						
IZV				Lg	Lg	13 12 38.4	
	14nm,0.8s						
IZV	**Izvestkoviy**	**3.94**	**277**	*e*P	**Pb**	**13 11 47.4**	**-1.3**
	2.2nm,0.2s						
IZV				*e*S	**Sb**	**13 12 38.4**	**+1.8**
	14nm,0.8s						
KTBS	**Karatobe**	**3.99**	**287**	Pg	**Pb**	**13 11 48.8**	**-0.7**
	1.7nm,0.5s						
KTBS				Lg	Lg	13 12 40.9	
	12nm,0.6s						
KTBS	**Karatobe**	**3.99**	**287**	*e*P	**Pb**	**13 11 48.8**	**-0.7**
	1.7nm,0.5s						
KTBS				*e*S	**Sb**	**13 12 40.9**	**+3.1**
	12nm,0.6s						
MK31	**Makanchi Array**	**4.12**	**3**	⇓Pn	**Pn**	**13 11 39.9**	**-2.1**
	0.2nm,0.3s,baz=109,slow=7.9,SNR=13						
MK31				⇑Pg	**Pb**	**13 11 51.9**	**+0.4**
	0.4nm,0.3s,baz=192,slow=16,SNR=6.5						
MK31				⇓Sn	**Sn**	**13 12 31.1**	**+0.9**
	0.2nm,0.2s,baz=184,slow=24,SNR=6.0						
MK31				⇓Lg	Lg	13 12 45.9	
	6.8nm,0.6s,baz=184,slow=28,SNR=12						
MAKZ	**Makanchi**	**4.12**	**0**	⇑Pn	**Pn**	**13 11 41.5**	**-0.6**
	1.5nm,0.6s						
MAKZ				⇑Pg	**Pb**	**13 11 50.8**	**-0.9**
	0.9nm,0.3s						
MAKZ				⇓Sn	**Sn**	**13 12 32.3**	**+1.9**
	1.2nm,0.3s						
MAKZ				⇑Lg	Lg	13 12 48.6	
	2.6nm,0.4s						
KUU	**Kurty**	**4.28**	**288**	Pg	**Pb**	**13 11 53.6**	**-0.7**
	1.6nm,0.3s						
KUU				Lg	Lg	13 12 48.9	
	9.4nm,0.5s						
KUU	**Kurty**	**4.28**	**288**	*e*P	**Pb**	**13 11 53.6**	**-0.7**
	1.6nm,0.3s						
KUU				*e*S	**Sb**	**13 12 48.9**	**+3.0**
	9.4nm,0.5s						
KST	**Kastek**	**4.42**	**277**	Pg	**Pb**	**13 11 57.9**	**+1.1**
	4.3nm,0.5s						
KST				Lg	Lg	13 12 56.1	
	5.1nm,0.6s						
KST	**Kastek**	**4.42**	**277**	*e*P	**Pb**	**13 11 56.2**	**-0.6**
	4.0nm,0.4s						
KST				*e*S	**Sb**	**13 12 53.2**	**+3.0**
	5.1nm,0.6s						
TKM2	**Tokmak 2**	**4.69**	**275**	⇑Pg	**Pb**	**13 12 01.9**	**+0.6**
	2.2nm,0.7s						
TKM2				⇓Lg	Lg	13 13 04.5	
	2.7nm,0.4s						

*IDC **16** 13:28:01.6±1.7, 34°.33N×25°.07E, h0km, mb3.4/4, mb1 3.6/6, mb1mx3.3/36, mbtmp3.4/6, ML4.0/2, Error ellipse: s-maj=26.8km s-min=20.8km az=112.0*
*ISCJB **16** 13:28:02.9±1.5, 34°.19N±0°.07×25°.20E±0°.07, h23km±8km, mb3.2/4, Error ellipse: s-maj=12.1km s-min=9.9km az=13.5*
*ATH **16** 13:28:02.3, 34°.19N×25°.14E, h23km±2km, ML3.2/2, Error ellipse: s-maj=4.3km s-min=1.9km az=9.0*
*THE **16** 13:28:03.9, 34°.30N×25°.11E, h0km±2km, ML3.1/3, Error ellipse: s-maj=3.3km s-min=1.2km az=165.0*

ISC 16 13:28:04.7±2.0, 34°.29N±0°.09×25°.09E±0°.04, h23km±13km, n25, σ1°12/33, mb3.2/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.76**	**342**	P	**Pb**	**13 28 18.6**	**-0.7**
SIVA				S	**Sn**	**13 28 31.2**	**+0.4**
SIVA	**Sivas**	**0.76**	**342**	P	**Pb**	**13 28 18.9**	**-0.4**
SIVA				S	**Sn**	**13 28 31.3**	**+0.4**
SIVA				AML	AML	13 28 33.7	
	comp=E,5402μm,0.9s						
SIVA				AML	AML	13 28 36.5	
	comp=N,2772μm,0.4s						
TMBK	**Timbaki Herakl**	**0.83**	**341**	P	**Pn**	**13 28 20.4**	**-0.5**
TMBK				S	**Sn**	**13 28 32.4**	**+0.1**
LAST	**Lasithi**	**0.93**	**20**	P	**Pn**	**13 28 21.4**	**-1.0**
LAST	**Lasithi**	**0.93**	**20**	P	**Pn**	**13 28 21.5**	**-0.8**
GVD	**Gavdhos**	**0.99**	**304**	P	**Pn**	**13 28 23.0**	**-0.2**
GVD				S	**Sn**	**13 28 38.0**	**+1.5**
GVD	**Gavdhos**	**0.99**	**304**	P	**Pn**	**13 28 23.1**	**-0.1**
GVD				S	**S

Ms1 2.6/3, ms1mx2.4/31, Error ellipse: s-maj=43.6km s-min=23.7km az=15.0
ISCJB ***16*** *13:28:17.8±0.8, 13°.73N±0°.08×92°.33W±0°.06, h32km, mb4.2/27, MS2.8/1, Error ellipse: s-maj=12.3km s-min=5.7km az=31.7*
NEIC ***16*** *13:28:21.0±1.6, 13°.74N×92°.25W, h46km±13km, mb4.2/29, Error ellipse: s-maj=20.8km s-min=11.4km az=50.0*

ISC 16 13:28:19.6±0.9, 13°.74N±0°.09×92°.36W±0°.08, h32km, n154, σ0s79/150, mb4.3/27, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**2.23**	**56**	Pn	**Pn**	**13 28 55.4**	**+0.8**
	4.3nm,0.3s,baz=227,slow=19,SNR=33						
APG				Sn	**Sb**	**13 29 27.1**	**+0.5**
	6.2nm,0.3s,baz=342,slow=18,SNR=6.4						
APG				LR	LR	13 29 36.9	
	comp=Z,67nm,21.1s,baz=17,slow=34						
CCIG	**Comitan**	**2.53**	**5**	ePn	**Pb**	**13 29 02.5**	**-2.1**
CMIG	**Matias Romero**	**4.12**	**324**	Pn	**Pn**	**13 29 19.3**	**-1.1**
	0.8nm,0.3s,baz=143,slow=12,SNR=6.9						
CMIG				Sn	**Sn**	**13 30 08.4**	**+0.8**
	0.7nm,0.3s,baz=143,slow=18,SNR=2.5						
CSGN	**Cosiguina Volc**	**4.74**	**99**	ePn	**Pn**	**13 29 28.8**	**-0.1**
ESTN	**Estel**	**5.87**	**96**	ePn	**Pn**	**13 29 42.8**	**-1.7**
TEIG	**Tepich**	**7.54**	**31**	ePn	**Pn**	**13 30 06.0**	**-1.4**
ESPN	**Las Esperanzas**	**8.01**	**100**	ePn	**Pn**	**13 30 15.1**	**+1.2**
JTS	**Las Juntas de**	**8.02**	**115**	Pn	**Pn**	**13 30 13.7**	**-0.3**
	0.3nm,0.3s,baz=22,slow=14,SNR=6.2						
JTS				LR	LR	13 32 58.8	
	comp=Z,49nm,19.8s,baz=32,slow=35						
452A	**Marianna**	**18.26**	**20**	P	**Pn**	**13 32 32.3**	**+1.7**
	baz=202						
TXAR	**Lajitas Array**	**18.72**	**328**	P	**Pn**	**13 32 37.5**	**+1.2**
	0.0nm,0.3s,baz=152,slow=13,SNR=5.3						
249A	**Camden**	**18.77**	**14**	P	**Pn**	**13 32 37.5**	**+0.7**
	baz=196						
353A	**Camilla**	**19.05**	**22**	P	**Pn**	**13 32 41.1**	**+0.9**
	baz=204						
251A	**Midway**	**19.34**	**18**	P	**Pn**	**13 32 44.1**	**+0.4**
	baz=200						
150A	**Eclectic**	**19.65**	**16**	P	**Pn**	**13 32 47.3**	**-0.1**
	baz=198						
LRAL	**Lakeview Retre**	**19.82**	**13**	eP	**P**	**13 32 48.1**	**+0.5**
	4.9nm,0.8s						
LRAL	**Lakeview Retre**	**19.82**	**13**	P	**Pn**	**13 32 48.6**	**-0.8**
	baz=195						
ABTX	**Abilene, Hawle**	**19.94**	**342**	eP	**P**	**13 32 49.6**	**+0.6**
	6.6nm,0.8s						
ABTX	**Abilene, Hawle**	**19.94**	**342**	P	**Pn**	**13 32 50.5**	**-0.3**
	baz=159						
Z49A	**Columbiana**	**20.08**	**14**	P	Pn	13 32 51.6	-0.8
	baz=196						
152A	**Waverly Hall**	**20.09**	**19**	P	Pn	13 32 52.5	-0.1
	baz=202						
Z50A	**Ashland**	**20.29**	**16**	eP	Pn	13 32 54.3	-0.6
	6.9nm,0.9s						
Z50A	**Ashland**	**20.29**	**16**	P	Pn	13 32 54.1	-0.8
	baz=198						
Z51A	**Franklin**	**20.56**	**17**	P	**P**	**13 32 56.6**	**+1.0**
	baz=200						
Y48A	**Jasper**	**20.63**	**12**	P	**P**	**13 32 57.0**	**+0.5**
	baz=194						
Z52A	**Williamson**	**20.67**	**19**	P	Pn	13 32 59.0	-0.4
	baz=202						
MIAR	**Mount Ida**	**20.74**	**357**	P	**P**	**13 32 57.7**	**0.0**
	baz=176						
Y49A	**Blount Mountai**	**20.74**	**14**	eP	**P**	**13 32 58.5**	**+0.8**
	32nm,1.9s						
Y49A	**Blount Mountai**	**20.74**	**14**	P	**P**	**13 32 58.1**	**+0.5**
	baz=196						
Y50A	**Piedmont**	**20.94**	**16**	P	**P**	**13 33 01.1**	**+1.2**
	baz=198						
Z53A	**Monticello**	**21.03**	**21**	P	**P**	**13 33 02.6**	**+1.8**
	baz=204						
X47A	**Russelville**	**21.08**	**10**	P	**P**	**13 33 02.4**	**+1.0**
	baz=192						
Y51A	**Rockmart**	**21.13**	**17**	P	**P**	**13 33 02.5**	**+0.6**
	baz=200						
X48A	**Hartselle**	**21.17**	**12**	eP	**P**	**13 33 02.6**	**+0.3**
	9.9nm,1.1s						
X48A	**Hartselle**	**21.17**	**12**	P	**P**	**13 33 02.8**	**+0.5**
	baz=194						
GOGA	**Godfrey**	**21.19**	**21**	P	**P**	**13 33 03.4**	**+0.9**
	baz=204						
X49A	**Woodville**	**21.39**	**14**	P	**P**	**13 33 04.9**	**+0.3**
	baz=196						
Y52A	**Lilburn**	**21.40**	**19**	eP	**P**	**13 33 05.8**	**+1.1**
	5.8nm,0.8s						
Y52A	**Lilburn**	**21.40**	**19**	P	**P**	**13 33 06.2**	**+1.4**
	baz=202						
MNTX	**Cornudas Mount**	**21.50**	**328**	eP	**P**	**13 33 07.2**	**+1.4**
	3.5nm,1.2s						
MNTX	**Cornudas Mount**	**21.50**	**328**	P	**P**	**13 33 06.9**	**+1.1**
	baz=143						
X50B	**Fort Payne**	**21.50**	**15**	P	**P**	**13 33 05.8**	**-0.2**
	baz=198,SNR=5.1						
Y53A	**Monroe**	**21.55**	**20**	P	**P**	**13 33 06.7**	**+0.3**
	baz=203						
WMOK	**Wichita Mounta**	**21.69**	**346**	eP	**P**	**13 33 08.7**	**+0.7**
	6.0nm,1.3s						
WMOK	**Wichita Mounta**	**21.69**	**346**	P	**P**	**13 33 08.3**	**+0.4**
	baz=163						
W48A	**Pulaski**	**21.86**	**12**	P	**P**	**13 33 09.8**	**+0.1**
	baz=194						
Y54A	**Tignall**	**21.87**	**22**	P	**P**	**13 33 10.7**	**+0.9**
	baz=206						
W49A	**Belvidere**	**21.98**	**13**	P	**P**	**13 33 11.0**	**0.0**
	baz=196,SNR=6.5						
X52A	**Dahlonega**	**22.14**	**19**	P	**P**	**13 33 12.1**	**-0.6**
	baz=202						
SWET	**Sewanee**	**22.15**	**14**	eP	**P**	**13 33 12.8**	**0.0**
	12nm,0.8s						
X53A	**Estanollee**	**22.24**	**20**	P	**P**	**13 33 13.8**	**0.0**
	baz=204						
W50A	**Signal Mountai**	**22.29**	**15**	eP	**P**	**13 33 14.7**	**+0.3**
	8.6nm,1.0s						
W50A	**Signal Mountai**	**22.29**	**15**	P	**P**	**13 33 14.0**	**-0.3**
	baz=198						
V46A	**Holladay**	**22.29**	**9**	P	**P**	**13 33 13.4**	**-1.0**
	baz=191						
W51A	**Cleveland**	**22.40**	**17**	P	**P**	**13 33 14.7**	**-0.8**
	baz=199						
V47A	**Nunnelly**	**22.42**	**10**	P	**P**	**13 33 15.1**	**-0.6**
	baz=192						
V48A	**Smith Brothers**	**22.46**	**12**	eP	**P**	**13 33 15.6**	**-0.5**
	12nm,1.0s						
V48A	**Smith Brothers**	**22.46**	**12**	P	**P**	**13 33 15.6**	**-0.5**
	baz=194,SNR=8.3						
U40A	**Yellville**	**22.52**	**359**	P	**P**	**13 33 16.9**	**+0.1**
	baz=178						
W52A	**Murphy**	**22.58**	**18**	P	**P**	**13 33 16.7**	**-0.8**
	baz=201						
X54A	**Belton**	**22.60**	**22**	P	**P**	**13 33 17.1**	**-0.5**
	baz=206						
WVT	**Waverly**	**22.66**	**10**	P	**P**	**13 33 17.7**	**-0.6**
	baz=191						
AMTX	**Amarillo**	**22.67**	**340**	eP	**P**	**13 33 19.9**	**+1.4**
	14nm,1.1s						
AMTX	**Amarillo**	**22.67**	**340**	P	**P**	**13 33 19.4**	**+0.9**
	baz=156						
V49A	**McMinnville**	**22.69**	**14**	P	**P**	**13 33 18.1**	**-0.5**
	baz=196						
JSC	**Jenkinsville**	**22.79**	**24**	eP	**P**	**13 33 19.8**	**+0.2**
	7.1nm,0.9s						
V50A	**Pikevile**	**22.79**	**15**	P	**P**	**13 33 19.1**	**-0.5**
	baz=198						
U46A	**Springville**	**22.83**	**9**	P	**P**	**13 33 19.9**	**-0.1**
	baz=190						
W53A	**Cullowhee**	**22.89**	**20**	P	**P**	**13 33 20.5**	**-0.3**
	baz=203						
CLTN	**Cedars of Leba**	**22.90**	**13**	eP	**P**	**13 33 19.7**	**-1.1**
	4.1nm,0.9s						
PBMO	**Poplar Bluff**	**23.00**	**4**	eP	**P**	**13 33 21.3**	**-0.5**
	6.0nm,0.8s						
V51A	**Loudon**	**23.12**	**17**	P	**P**	**13 33 23.4**	**+0.4**
	baz=200						
W54A	**Cherokee Point**	**23.15**	**22**	P	**P**	**13 33 23.5**	**+0.2**
	baz=206						
U48A	**Cassie Pea, Po**	**23.27**	**12**	P	**P**	**13 33 24.6**	**+0.2**
	baz=194						
V52A	**Sevierville**	**23.37**	**18**	P	**P**	**13 33 25.7**	**+0.1**
	baz=202						
U49A	**Red Boiling Sp**	**23.43**	**13**	P	**P**	**13 33 25.5**	**-0.6**
	baz=196,SNR=9.9						
V53A	**Saluda**	**23.46**	**20**	P	**P**	**13 33 26.6**	**+0.1**
	baz=204						
KMSC	**Kings Mountain**	**23.52**	**23**	eP	**P**	**13 33 26.6**	**-0.3**
	8.8nm,1.0s						
KMSC	**Kings Mountain**	**23.52**	**23**	P	**P**	**13 33 26.8**	**-0.1**
	baz=207						
T46A	**Princeton**	**23.54**	**9**	P	**P**	**13 33 26.6**	**-0.6**
	baz=191						
U50A	**Jamestown**	**23.56**	**15**	P	**P**	**13 33 27.0**	**-0.4**
	baz=198,SNR=12						
T47A	**Sharon Grove**	**23.62**	**11**	eP	**P**	**13 33 27.7**	**-0.2**
	13nm,1.2s						
U51A	**La Follette**	**23.75**	**17**	P	**P**	**13 33 28.9**	**-0.3**
	baz=200,SNR=6.3						
W56A	**Indian Trail**	**23.80**	**24**	P	**P**	**13 33 29.4**	**-0.3**
	baz=209						
U52A	**Thorn Hill**	**23.95**	**18**	P	**P**	**13 33 30.8**	**-0.3**
	baz=202						
S44A	**Carbondale**	**24.01**	**6**	P	**P**	**13 33 31.4**	**-0.2**
	baz=187						
SIUC	**Southern Illin**	**24.04**	**6**	eP	**P**	**13 33 31.6**	**-0.3**
	21nm,0.8s						
TZTN	**Tazewell**	**24.04**	**18**	P	**P**	**13 33 31.2**	**-0.7**
	baz=201						
T49A	**Edmonton**	**24.05**	**13**	eP	**P**	**13 33 31.3**	**-0.7**
	8.6nm,1.0s						
T49A	**Edmonton**	**24.05**	**13**	P	**P**	**13 33 31.3**	**-0.7**
	baz=196						
T50A	**Nancy**	**24.14**	**15**	P	**P**	**13 33 32.1**	**-0.7**
	baz=198						
U53A	**Fall Branch**	**24.18**	**20**	P	**P**	**13 33 32.3**	**-0.9**
	baz=203						
V55A	**Taylorsville**	**24.19**	**23**	P	**P**	**13 33 32.8**	**-0.5**
	baz=207						
S46A	**Don Dixon Farm**	**24.20**	**9**	P	**P**	**13 33 33.0**	**-0.3**
	baz=191						
CCM	**Cathedral Cave**	**24.23**	**2**	P	**P**	**13 33 33.3**	**-0.4**
	baz=182						
S47A	**Hartford**	**24.25**	**11**	P	**P**	**13 33 33.3**	**-0.5**
	baz=193						
W58A	**Raeford**	**24.28**	**27**	P	**P**	**13 33 33.2**	**-0.8**
	baz=212						
T51A	**Gray**	**24.32**	**17**	P	**P**	**13 33 33.9**	**-0.5**
	baz=200,SNR=7.1						
V56A	**Mocksville**	**24.43**	**24**	eP	**P**	**13 33 34.9**	**-0.5**
	9.5nm,1.0s						
V56A	**Mocksville**	**24.43**	**24**	P	**P**	**13 33 35.8**	**+0.4**
	baz=208						
U54A	**Nelsons Funny**	**24.57**	**21**	P	**P**	**13 33 36.1**	**-0.7**
	baz=205						
ANMO	**Albuquerque**	**24.65**	**331**	P	**P**	**13 33 38.5**	**+0.8**
	baz=145						
TASM	**ASL Pad, Albuq**	**24.65**	**331**	P	**P**	**13 33 38.5**	**+0.7**
	baz=145						
R45A	**Skylar, Fairfi**	**24.72**	**8**	P	**P**	**13 33 38.0**	**0.0**
	baz=189						
T52A	**Hallie**	**24.73**	**18**	P	**P**	**13 33 37.7**	**-0.5**
	baz=202						
T53A	**Wise**	**24.75**	**19**	P	**P**	**13 33 38.2**	**-0.3**
	baz=203						
S49A	**Springfield**	**24.76**	**13**	P	**P**	**13 33 38.4**	**0.0**
	baz=196,SNR=5.5						
V57A	**Coltrane Farms**	**24.78**	**25**	P	**P**	**13 33 38.1**	**-0.5**
	baz=210						
U55A	**TA2, Sparta**	**24.83**	**22**	P	**P**	**13 33 38.4**	**-0.7**
	baz=207						
S50A	**Richmond**	**24.87**	**15**	P	**P**	**13 33 39.2**	**-0.2**
	baz=198						
WCI	**Wyandotte Cave**	**24.98**	**11**	eP	**P**	**13 33 39.6**	**-0.8**
	16nm,0.8s						
WCI	**Wyandotte Cave**	**24.98**	**11**	P	**P**	**13 33 39.8**	**-0.6**
	baz=194						
V58A	**Windy Hill, Pi**	**24.98**	**26**	P	**P**	**13 33 38.8**	**-1.6**
	baz=212						
R47A	**Woolly Knot Far**	**25.00**	**11**	P	**P**	**13 33 40.7**	**+0.1**
	baz=193						
S51A	**Beattyville**	**25.05**	**17**	eP	**P**	**13 33 40.0**	**-1.0**
	12nm,1.1s						
S51A	**Beattyville**	**25.05**	**17**	P	**P**	**13 33 40.3**	**-0.7**
	baz=200						
OLIL	**Olney**	**25.18**	**8**	eP	**P**	**13 33 41.8**	**-0.3**
	15nm,0.8s						
R48A	**Northridge Ran**	**25.22**	**12**	P	**P**	**13 33 42.5**	**-0.1**
	baz=195						
S52A	**Salyersville**	**25.23**	**17**	P	**P**	**13 33 42.0**	**-0.7**
	baz=201						
R49A	**Shelbyville**	**25.27**	**13**	eP	**P**	**13 33 42.6**	**-0.4**
	8.8nm,0.9s						
R49A	**Shelbyville**	**25.27**	**13**	P	**P**	**13 33 42.9**	**-0.2**
	baz=196						
Q45A	**Warren Harvey,**	**25.33**	**8**	P	**P**	**13 33 43.5**	**0.0**
	baz=189						
V59A	**Middlesex**	**25.34**	**28**	P	**P**	**13 33 42.7**	**-1.0**
	baz=213						
U57A	**Blanch**	**25.43**	**25**	P	**P**	**13 33 44.3**	**-0.3**
	baz=210						
S53A	**Williamson**	**25.52**	**19**	P	**P**	**13 33 45.7**	**+0.3**
	baz=203						
SJG	**San Juan**	**25.57**	**77**	LR	LR	13 43 49.3	
	comp=Z,27nm,18.5s,baz=92,slow=36						
T56A	**Rocky Mt**	**25.68**	**23**	P	**P**	**13 33 46.7**	**0.0**
	baz=208						
Q48A	**North Vernon**	**25.76**	**12**	P	**P**	**13 33 47.3**	**-0.2**
	baz=195						
P45A	**Graceland, Par**	**26.00**	**8**	P	**P**	**13 33 49.2**	**-0.5**
	baz=190						
Q49A	**Aurora**	**26.01**	**13**	P	**P**	**13 33 49.1**	**-0.7**
	baz=196						
P48A	**Milroy**	**26.34**	**12**	P	**P**	**13 33 52.1**	**-0.6**
	baz=195						
Q51A	**Peebles**	**26.41**	**16**	P	**P**	**13 33 53.2**	**-0.2**
	baz=200						
Q52A	**Bidwell**	**26.66**	**18**	P	**P**	**13 33 54.7**	**-0.9**
	baz=202						
P50A	**Jamestown**	**26.85**	**15**	P	**P**	**13 33 57.3**	**0.0**
	baz=198						
Q54A	**Coxs Mills**	**27.13**	**20**	P	**P**	**13 33 59.5**	**-0.4**
	baz=205						
S22A	**4UR Ranch, Cre**	**27.15**	**334**	P	**P**	**13 34 02.4**	**+1.9**
	baz=148						
O51A	**Pataskala**	**27.66**	**16**	P	**P**	**13 34 03.9**	**-0.7**
	baz=200						
O52A	**Adamsville**	**27.85**	**17**	P	**P**	**13 34 05.6**	**-0.7**
	baz=202						
ECSD	**EROS Data Cent**	**30.11**	**354**	P	**P**	**13 34 26.1**	**-0.3**
	baz=172						
I51A	**Listowel**	**31.50**	**16**	P	**P**	**13 34 37.9**	**-0.7**
	baz=201						
PDAR	**Pinedale Array**	**32.51**	**336**	P	**P**	**13 34 49.0**	**+1.3**
	0.2nm,0.3s,baz=146,slow=9.8,SNR=4.1						
DELO	**Deloro Mine**	**33.15**	**19**	P	**P**	**13 34 52.2**	**-0.8**
	baz=207						
BUKO	**Buck Lake**	**33.45**	**17**	P	**P**	**13 34 54.5**	**-1.2**
	baz=203						
SNOW	**Snow King Moun**	**33.57**	**335**	eP	**P**	**13 34 56.8**	**-0.2**
	5.5nm,0.8s						
NVAR	**Mina Array Bea**	**33.65**	**322**	P	**P**	**13 34 58.2**	**+0.4**
	0.4nm,0.6s,baz=127,slow=9.4,SNR=4.5						
ALGO	**Algonquin Park**	**34.31**	**18**	P	**P**	**13 35 01.4**	**-1.7**
	baz=205						
PTGA	**Pitinga**	**35.17**	**112**	eP	**P**	**13 35 12.4**	**+1.4**
	7.4nm,0.8s						
D53A	**Lac Vacive, Po**	**35.43**	**17**	P	**P**	**13 35 11.9**	**-0.9**
	baz=205						
J08A	**Circle Bar Ran**	**37.07**	**328**	eP	**P**	**13 35 26.7**	**-0.3**
	5.3nm,0.6s						
YKA	**Yellowknife Ar**	**51.19**	**347**	P	**P**	**13 37 20.6**	**+0.9**
	2.8nm,0.9s,baz=148,slow=7.7,SNR=27						
YKW3	**Yellowknife Ar**	**51.26**	**347**	eP	**P**	**13 37 20.4**	**+0.3**
	3.6nm,1.0s						
WMQ	**Urumqi**	**122.72**	**360**	eP	**PKPdf**	**13 47 11.8**	**-0.8**
LZH	**Lanzhou**	**128.13**	**343**	ePKP	**PKPdf**	**13 47 22.8**	**-0.5**
LZH				pPKP	sPKPdf	13 47 37.3	+0.6
LZH				sPKP		13 47 44.8	
CD2	**Chengdu**	**132.98**	**341**	PKP	**PKPdf**	**13 47 29.4**	**-3.1**
CMAR	**Chiang Mai Arr**	**146.12**	**341**	PKPbc	**PKPdf**	**13 47 56.7**	**+0.1**
	0.6nm,0.3s,baz=327,slow=3.5,SNR=4.7						

IDC ***16*** *13:31:33.7±0.5, 58°.34S×158°.15E, h0km, mb4.8/15, mb1 4.8/17, mb1mx4.7/25, mbtmp4.7/17, ML4.1/2, MS5.1/17, Ms1 5.2/17, ms1mx5.0/19, Error ellipse: s-maj=20.1km s-min=13.2km az=76.0*
ISCJB ***16*** *13:31:33.8±0.2, 58°.35S±0°.03×158°.12E±0°.08, h10km, mb5.1/42, MS5.4/627, Error ellipse: s-maj=5.8km s-min=4.5km az=15.1*
MOS ***16*** *13:31:35.2±2.2, 58°.27S×158°.33E, h10km, mb5.5/9, MS5.2/30, Error ellipse: s-maj=33.7km s-min=8.6km az=98.9*
NEIC ***16*** *13:31:35.1±1.7, 58°.35S×158°.16E, h10km±1km, mb5.3/41, MS5.4/630, MW5.7, MW5.7, Error ellipse: s-maj=15.5km s-min=11.4km az=85.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^17 Nm; Mrr=0.84; Mθθ=1.97; Mφφ=2.81; Mrθ=0.44; Mθφ=3.31; Mφr=0.02; Best double couple: M0=4.20000×10^17 NP1:φs=342.00000°, δ83.00000°, λ-176.00000°. NP2:φs=252.00000°, δ86.00000°, λ-7.00000°. Principal axes: T 4.5100, Plg2.0000°, Azm297.0000°; N -0.7900, Plg82.0000°, Azm41.0000°; P -3.7200, Plg8.0000°, Azm207.0000°;*
NEIC ***16*** *13:31:35.0±0.0, 58°.36S×158°.00E, h19km, Moment Tensor Solution. s23 Moment tensor: Scale 10^17 Nm; Mrr=0.05; Mθθ=3.51; Mφφ=3.55; Mrθ=1.64; Mφφ=2.24; Mφr=0.59; Best double couple: M0=4.50000×10^17 NP1:φs=153.00000°, δ77.00000°, λ-164.00000°. NP2:φs=59.00000°, δ75.00000°, λ-13.00000°. Principal axes: T 4.2100, Plg1.0000°, Azm285.0000°; N 0.5900, Plg69.0000°, Azm191.0000°; P -4.7900, Plg20.0000°, Azm16.0000°;*
GCMT ***16*** *13:31:40.1±0.1, 58°.33S×158°.00E, h12km, MW5.7/122, Moment Tensor Solution. s119, c234; s122, c361; Duration: 1s8 Moment tensor: Scale 10^17 Nm; Mrr=0.25±.04; Mθθ=-3.54±.04; Mφφ=3.29±.04; Mrθ=0.04±.10; Mφθ=3.51±.03; Mφr=0.70±.10; Best double couple: M0=4.95000×10^17 NP1:φs=158.00000°, δ87.00000°, λ172.00000°. NP2:φs=248.00000°, δ82.00000°, λ3.00000°. Principal axes: T 4.8590, Plg8.0000°, Azm113.0000°; N 0.1830, Plg81.0000°, Azm316.0000°; P -5.0400, Plg3.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 16 13:31:35.5±0.2, 58°.37S±0°.05×158°.42E±0°.06, h10km, n918, σ1s88/359, mb5.2/42, MS5.4/627, 31C-16D, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**3.89**	**5**	ePn	**Pn**	**13 32 30.7**	**-4.5**
MCQ	**Macquarie Isla**	**3.89**	**5**	P	**Pn**	**13 32 30.7**	**-4.5**
	baz=3.6,SNR=176						
MCQ	**Macquarie Isla**	**3.89**	**5**	eP	**Pn**	**13 32 30.7**	**-4.5**
PYZ	**Puysegur Point**	**13.21**	**26**	ePn	**Pn**	**13 34 42.6**	**-0.4**
WHZ	**Wether Hill Ro**	**13.78**	**29**	ePn	**Pn**	**13 34 49.9**	**-0.7**
DCZ	**Deep Cove**	**13.98**	**26**	ePn	**Pn**	**13 34 54.0**	**+0.5**
MLZ	**Mavora Lakes**	**14.31**	**29**	ePn	**Pn**	**13 34 58.8**	**+0.8**
ODZ	**Otahua Downs**	**15.31**	**35**	ePn	**P**	**13 35 13.7**	**-2.5**
	317nm,1.4s						
LBZ	**Lake Benmore**	**15.77**	**33**	ePn	**Pn**	**13 35 18.8**	**+1.3**
	574nm,1.9s						
FOZ	**Fox Glacier**	**16.46**	**30**	ePn	**Pn**	**13 35 26.4**	**+0.1**
	850nm,1.9s						
RPZ	**Rata Peaks**	**16.64**	**34**	Pn	**Pn**	**13 35 28.8**	**+0.2**
	1.1nm,0.3s,baz=246,slow=11,SNR=2.8						
RPZ				LR	LR	13 41 00.2	
	comp=Z,15μm,20.8s,baz=188,slow=34						
RPZ	**Rata Peaks**	**16.64**	**34**	ePn	**Pn**	**13 35 28.6**	**0.0**
	307nm,1.3s						
TAU	**Tasmania Unive**	**16.96**	**331**	ePn	**Pn**	**13 35 30.4**	**-2.3**
	127nm,1.1s						
TAU	**Tasmania Unive**	**16.96**	**331**	eP	**Pn**	**13 35 30.4**	**-2.3**
TAU				pmax	pmax		
	comp=Z,127nm,1.1s						
MQZ	**McQueen's Vall**	**17.14**	**37**	eP	**P**	**13 35 35.8**	**-0.7**
	comp=Z,249nm,1.3s						
CRLZ	**Canterbury Las**	**17.24**	**37**	ePn	**P**	**13 35 36.5**	**-1.1**
	comp=Z,717nm,1.7s						
OXZ	**Oxford**	**17.29**	**35**	eP	**P**	**13 35 37.9**	**-0.2**
	comp=Z,109nm,1.0s						
MOO	**Moorlands**	**17.44**	**331**	P	**Pn**	**13 35 38.0**	**-0.6**
	baz=17,SNR=7.6						
LTZ	**Lake Taylor**	**17.85**	**35**	eP	**P**	**13 35 46.4**	**+1.9**
	comp=Z,284nm,1.5s						
KHZ	**Kahutara**	**18.58**	**37**	eP	**Pn**	**13 35 55.3**	**+2.7**
	comp=Z,280nm,1.5s						
THZ	**Tophouse**	**18.97**	**35**	eP	**Pn**	**13 35 58.8**	**+1.3**
	comp=Z,656nm,1.7s						
VNDA	**Vanda**	**19.27**	**178**	P	**Pn**	**13 36 00.1**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=350,slow=10,SNR=30						
VNDA				LR	LR	13 41 58.7	
	comp=Z,9μm,21.0s,baz=360,slow=32						
VNDA	**Vanda**	**19.27**	**178**	eP	**P**	**13 35 59.9**	**+0.1**
	comp=Z,59nm,1.1s						
VNDA	**Vanda**	**19.27**	**178**	eP	**P**	**13 35 59.9**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,59nm,1.1s						
SBA	**Scott Base**	**19.77**	**175**	eP	**Pn**	**13 36 07.3**	**+0.5**
	comp=Z,537nm,1.9s						
SBA	**Scott Base**	**19.77**	**175**	eP	**Pn**	**13 36 07.3**	**+0.5**
SBA				pmax	pmax		
	comp=Z,537nm,1.9s						
SNZO	**South Karori**	**19.95**	**38**	PFAKE		13 36 20.0	+11
SNZO				LR	LR		
	comp=Z,16μm,18.0s						
BFZ	**Birch Farm**	**21.03**	**40**	PFAKE		13 36 30.0	+11
BFZ				LR	LR		
	comp=Z,17μm,18.0s						
TOO	**Toolangi**	**22.46**	**332**	eP	**P**	**13 36 33.8**	**-0.7**
	comp=Z,66nm,1.3s						
TOO				LR	LR		
	comp=Z,4μm,21.0s						
TOO	**Toolangi**	**22.46**	**332**	P	**P**	**13 36 33.3**	**-1.3**
	baz=22,SNR=4.5						
TOO	**Toolangi**	**22.46**	**332**	eP	**P**	**13 36 33.8**	**-0.7**
TOO				pmax	pmax		
	comp=Z,66nm,1.3s						
TOO				MLR	MLR		
	comp=Z,4μm,21.0s						
BKZ	**Black Stump Fm**	**22.47**	**39**	eP	**P**	**13 36 36.7**	**+2.0**
	comp=Z,321nm,1.4s						
BKZ				LR	LR		
	comp=Z,7μm,18.0s						
HIZ	**Hauiti**	**22.55**	**35**	PFAKE		13 36 50.0	+15
HIZ				LR	LR		
	comp=Z,13μm,21.0s						
CASY	**Casey**	**23.05**	**230**	eP	**P**	**13 36 39.8**	**-0.6**
	comp=Z,56nm,1.3s						
CASY				LR	LR		
	comp=Z,11μm,20.0s						
URZ	**Urewera**	**23.50**	**39**	P	**P**	**13 36 46.1**	**+0.9**
	comp=Z,13nm,0.7s,baz=217,slow=20,SNR=2.0						
URZ				LR	LR	13 45 02.3	
	comp=Z,4μm,21.2s,baz=210,slow=34						
URZ	**Urewera**	**23.50**	**39**	PFAKE		13 37 00.0	+15
URZ				LR	LR		
	comp=Z,10μm,18.0s						
CAN	**Canberra**	**23.89**	**341**	PFAKE		13 37 00.0	+11
CAN				LR	LR		
	comp=Z,8μm,20.0s						
MXZ	**Matakaoa Point**	**24.53**	**41**	PFAKE		13 37 10.

comp=Z,49nm,1.3s
QSPA LR LR
comp=Z,5μm,18.0s
RMQ Roma 32.58 344 P **P 13 38 06.6 -0.2**
baz=32,SNR=8.8
EIDS Eidsvold 33.38 348 *e*P **P 13 38 13.3 -0.5**
comp=Z,50nm,1.4s
EIDS LR LR
comp=Z,7μm,19.0s
EIDS Eidsvold 33.38 348 P **P 13 38 13.4 -0.5**
baz=33,SNR=5.8
RAO Raoul Island 33.39 40 PFAKE 13 38 30.0 +16
RAO LR LR
comp=Z,7μm,18.0s
FORT Forrest 34.50 310 *e*P **P 13 38 22.0 -1.5**
comp=Z,53nm,0.9s
FORT LR LR
comp=Z,4μm,20.0s
FORT Forrest 34.50 310 P **P 13 38 22.7 -0.8**
baz=34,SNR=8.5
PINNC Pines Island, 36.31 14 PFAKE 13 38 50.0 +11
PINNC LR LR
comp=Z,4μm,18.0s
ONTNC Ouen Toro 36.49 13 *e*P **P 13 38 40.8 +0.2**
KMBL Kambalda 36.64 301 P **P 13 38 41.4 -0.5**
baz=36,SNR=4.9
DZM Mont Dzumac 36.72 13 P **P 13 38 41.8 -0.9**
comp=Z,47nm,1.2s,baz=183,slow=10,SNR=8.6
DZM Mont Dzumac 36.72 13 *e*P **P 13 38 42.2 -0.5**
comp=Z,165nm,1.4s
DZM *e*S **S 13 44 27.3 +1.1**
comp=Z,2μm,26.1s
DZM *e*LQ LQ 13 47 08.8
comp=Z,5μm,26.7s
DZM *e*LR LR 13 48 45.0
comp=Z,9μm,22.4s
DZM Mont Dzumac 36.72 13 *e*P **P 13 38 42.0 -0.7**
comp=Z,111nm,1.4s
DZM LR LR
comp=Z,6μm,21.0s
H01W1 Cape Leeuwin H 37.42 289 T T 14 18 39.7
baz=142,slow=76,SNR=53
H01W2 Cape Leeuwin H 37.43 289 T T 14 18 36.0
baz=142,slow=76,SNR=90
H01W3 Cape Leeuwin H 37.44 289 T T 14 18 35.9
baz=142,slow=76,SNR=67
MARNC Mare, Loyalty 37.50 15 PFAKE 13 39 00.0 +11
MARNC LR LR
comp=Z,2μm,18.0s
NWAO Narrogin (SRO) 37.50 295 P **P 13 38 46.1 -3.1**
comp=Z,6.2nm,0.9s,baz=309,slow=22,SNR=1.8
NWAO Narrogin (SRO) 37.50 295 *e*P **P 13 38 46.1 -3.1**
NWAO LR LR
comp=Z,4μm,21.0s
NWAO Narrogin (SRO) 37.50 295 *e*P **P 13 38 46.1 -3.1**
NWAO MLR MLR
comp=Z,4μm,21.0s
MUN Mundaring 38.77 294 P **P 13 38 60.0 +0.1**
baz=39,SNR=3.5
ASAR Alice Springs 38.84 323 P **P 13 38 59.3 -1.3**
comp=Z,17nm,1.1s,baz=161,slow=8.0,SNR=31
ASAR PcP **PcP 13 41 11.9 +0.3**
comp=Z,2.3nm,0.9s,baz=156,slow=4.9,SNR=3.3
ASAR LR LR 13 52 24.0
comp=Z,3μm,21.7s,baz=156,slow=32
AS31 Alice Springs 38.84 323 *e*PcP **PcP 13 41 11.9 +0.3**
CTA Charters Tower 39.25 342 P **P 13 39 03.3 -0.7**
comp=Z,12nm,0.7s,baz=169,slow=11,SNR=18
CTAO Charters Tower 39.25 342 *e*P **P 13 39 03.5 -0.5**
comp=Z,71nm,1.4s
CTAO LR LR
comp=Z,3μm,22.0s
CTAO Charters Tower 39.25 342 *e*P **P 13 39 03.5 -0.5**
CTAO pmax pmax
comp=Z,71nm,1.4s
CTAO MLR MLR
comp=Z,3μm,22.0s
WRKA Warakurna 39.54 314 P **P 13 39 04.7 -1.7**
baz=39,SNR=27
BLDU Ballidu 39.66 296 P **P 13 39 09.7 +2.4**
baz=40,SNR=5.2
MAW Mawson 40.05 216 P **P 13 39 09.8 -0.3**
comp=Z,6.5nm,0.8s,baz=118,slow=8.9,SNR=9.6
MAW LR LR 13 55 24.6
comp=Z,6μm,18.2s,baz=107,slow=36
MAW Mawson 40.05 216 *e*P **P 13 39 10.1 0.0**
comp=Z,3.7nm,1.0s
MAW LR LR
comp=Z,1μm,19.0s
MAW Mawson 40.05 216 P **P 13 39 11.1 +0.9**
baz=40,SNR=8.9
MAW Mawson 40.05 216 *e*P **P 13 39 10.1 0.0**
MAW pmax pmax
comp=Z,4.0nm,1.0s
MAW MLR MLR
comp=Z,1μm,19.0s
QIS Mount Isa 40.17 332 P **P 13 39 10.8 -0.8**
baz=40,SNR=4.2
MORW Morawa 41.27 297 *e*P **P 13 39 19.6 -1.1**
comp=Z,151nm,1.9s
MORW LR LR
comp=Z,7μm,18.0s
MORW Morawa 41.27 297 P **P 13 39 19.7 -0.9**
baz=41,SNR=3.4
WC3 Warramunga Arr 42.18 325 PFAKE 13 39 40.0 +12
WC3 LR LR
comp=Z,5μm,19.0s
WB2 Warramunga Arr 42.20 325 *e*P **P 13 39 26.6 -1.8**
comp=Z,50nm,1.5s
WB2 LR LR
comp=Z,4μm,18.0s
WR1 Warramunga Arr 42.20 325 *e*PcP **PcP 13 41 21.5 -0.9**
WRA Warramunga Arr 42.20 325 P **P 13 39 26.2 -2.1**
comp=Z,10nm,0.9s,baz=159,slow=7.2,SNR=16
WRA PcP **PcP 13 41 21.5 -0.9**
comp=Z,3.6nm,1.0s,baz=178,slow=3.8,SNR=3.6
WRAB Tennant Creek 42.21 325 *e*P **P 13 39 26.6 -1.8**
comp=Z,52nm,1.5s
WRAB LR LR
comp=Z,4μm,18.0s
WRAB Tennant Creek 42.21 325 *ce*P **P 13 39 26.9 -1.5**
WRAB pmax pmax
comp=Z,42nm,1.7s
WC2 Warramunga Arr 42.21 325 PFAKE 13 39 40.0 +12
WC2 LR LR
comp=Z,4μm,18.0s
WC1 Warramunga Arr 42.22 325 PFAKE 13 39 40.0 +11
WC1 LR LR
comp=Z,2μm,18.0s
SYO Syowa Base 45.48 206⇑ *e*P **P 13 39 52.4 -1.7**
SYO Syowa Base 45.48 206⇓ *ep*P pP 13 39 54.6 -1.6
COEN Coen 45.79 339 *e*P **P 13 39 56.6 -0.5**
comp=Z,59nm,1.4s
COEN LR LR
comp=Z,6μm,18.0s
COEN Coen 45.79 339 P **P 13 39 56.8 -0.3**
baz=46,SNR=4.4
PSAC3 Pilbara Seismi 46.00 306 PFAKE 13 40 10.0 +11
PSAC3 LR LR
comp=Z,5μm,20.0s
PSAD3 Pilbara Seismi 46.01 306 PFAKE 13 40 10.0 +11
PSAD3 LR LR
comp=Z,6μm,18.0s
PSAB3 Pilbara Seismi 46.02 306 PFAKE 13 40 10.0 +11
PSAB3 LR LR
comp=Z,6μm,20.0s
PSAC2 Pilbara Seismi 46.02 306 PFAKE 13 40 10.0 +11
PSAC2 LR LR
comp=Z,7μm,20.0s
PSAA3 Pilbara Seismi 46.03 306 PFAKE 13 40 10.0 +11
PSAA3 LR LR
comp=Z,6μm,20.0s
PSA00 Pilbara Seismi 46.04 306 PFAKE 13 40 10.0 +11
PSA00 LR LR
comp=Z,5μm,20.0s
PSAA1 Pilbara Seismi 46.04 306 PFAKE 13 40 10.0 +11
PSAA1 LR LR
comp=Z,6μm,20.0s
PSAA2 Pilbara Seismi 46.05 306 PFAKE 13 40 10.0 +11
PSAA2 LR LR
comp=Z,5μm,20.0s
PSAB2 Pilbara Seismi 46.05 306 PFAKE 13 40 10.0 +11
PSAB2 LR LR
comp=Z,6μm,20.0s
PSAB1 Pilbara Seismi 46.05 306 PFAKE 13 40 10.0 +11
PSAB1 LR LR
comp=Z,5μm,20.0s
PSAC1 Pilbara Seismi 46.09 306 PFAKE 13 40 10.0 +10
PSAC1 LR LR
comp=Z,6μm,18.0s
PSAD1 Pilbara Seismi 46.15 306 PFAKE 13 40 10.0 +10
PSAD1 LR LR
comp=Z,6μm,19.0s
MBWA Marble Bar 46.45 306 PFAKE 13 40 10.0 +7.6
MBWA LR LR
comp=Z,5μm,19.0s
FITZ Fitzroy Crossi 46.86 315 P **P 13 40 04.1 -1.4**
comp=Z,10nm,0.8s,baz=171,slow=6.9,SNR=14
FITZ Fitzroy Crossi 46.86 315 *e*P **P 13 40 03.8 -1.7**
GIRL Giralia 47.59 299 PFAKE 13 40 20.0 +8.8
GIRL LR LR
comp=Z,6μm,18.0s
KNRA Kununurra 47.98 320 P **P 13 40 13.6 -0.7**
baz=48,SNR=5.7
HNR Honiara 48.84 2 PFAKE 13 40 30.0 +9.1
HNR LR LR
comp=Z,3μm,20.0s
SNAA Sanae 49.59 188 P **P 13 40 26.0 -0.1**
SNAA Sanae 49.59 188 *e*P **P 13 40 25.8 -0.3**
comp=Z,19nm,0.9s
SNAA LR LR
comp=Z,8μm,18.0s
SNAA Sanae 49.59 188⇓ *i*P **P 13 40 26.2 +0.1**
SNAA pmax pmax
comp=Z,442nm,0.9s
PMG Port Moresby 49.61 345 P **P 13 40 27.1 +0.3**
comp=Z,27nm,0.8s,baz=175,slow=5.4,SNR=7.4
PMG Port Moresby 49.61 345 *e*P **P 13 40 25.8 -1.0**
comp=Z,125nm,1.6s
PMG LR LR
comp=Z,4μm,20.0s
PMG Port Moresby 49.61 345 *i*P **P 13 40 26.8 0.0**
PMG pmax pmax
comp=Z,124nm,0.9s
MTN Manton Dam 49.87 324 PFAKE 13 40 40.0 +11
MTN LR LR
comp=Z,2μm,19.0s
VNA3 Neumayer Olymp 50.41 185 P **P 13 40 32.0 -0.3**
VNA2 Neumayer-Watz 50.61 186 P **P 13 40 33.5 -0.3**
baz=159,slow=5.7
TBI Tubuai 50.78 69 *e*S **S 13 47 51.4 +0.3**
comp=Z,714nm,27.2s
TBI *e*LQ LQ 13 52 23.5
comp=Z,7μm,27.2s
TBI *e*LR LR 13 55 07.3
comp=Z,2μm,23.8s,baz=213
TBI Tubuai 50.78 69 *e*T T 14 34 56.6
comp=Z,35nm,0.4s
VNA1 Neumayer-Stat 50.93 186 P **P 13 40 36.2 +0.1**
RABL Rabaul 54.26 352 PFAKE 13 41 10.0 +8.6
RABL LR LR
comp=Z,1μm,18.0s
SAUI Saumlaki 54.42 326 PFAKE 13 41 10.0 +7.3
SAUI LR LR
comp=Z,4μm,20.0s
SOEI Soe 55.04 318 PFAKE 13 41 20.0 +13
SOEI LR LR
comp=Z,3μm,20.0s
PAE Paea 55.55 66 *e*T T 14 41 05.5
comp=Z,4.8nm,0.3s
TVO Taravao 55.61 66 *e*T T 14 41 10.6
comp=Z,5.3nm,0.3s
PPT2 Papeete2 55.62 66 *e*S **S 13 48 57.5 +0.3**
comp=Z,2μm,29.0s
PPT2 *e*LQ LQ 13 54 29.6
comp=Z,3μm,24.8s
PPT2 *e*LR LR 13 57 16.0
comp=Z,4μm,31.0s,baz=208
PPT2 Papeete2 55.62 66 *e*T T 14 41 17.2
comp=Z,8.6nm,0.3s
PPT Papeete 55.63 66 LR LR 14 00 06.7
comp=Z,1μm,20.7s,baz=214,slow=31
TIAR Tiarei 55.76 66 *e*T T 14 41 15.8
comp=Z,2.7nm,0.3s
MMRI Maumere 56.81 316 PFAKE 13 41 30.0 +10
MMRI LR LR
comp=Z,3μm,21.0s
EDFI Ende, Flores 56.91 315 P **P 13 41 22.0 +1.3**
comp=Z,22nm,1.4s
RKT Rikitea 58.37 83 *e*S **S 13 49 35.3 +2.0**
comp=Z,2μm,28.2s
RKT *e*LQ LQ 13 56 11.3
comp=Z,3μm,26.0s
RKT *e*LR LR 13 58 33.2
comp=Z,3μm,28.2s
RKT Rikitea 58.37 83 *e*T T 14 44 25.0
comp=Z,43nm,0.2s
VAH Vaihoa 58.58 66 *e*T T 14 44 53.7
comp=Z,45nm,0.3s
FAKI Fak Fak 58.98 329 PFAKE 13 41 50.0 +15
FAKI LR LR
comp=Z,3μm,18.0s
JAGI Jajag, Banyuwa 60.15 307 PFAKE 13 41 50.0 +6.8
JAGI LR LR
comp=Z,2μm,18.0s
BNSI Bone 61.51 315 P **P 13 41 51.2 -1.1**
SPSI Sidrap Palu 62.03 315 P **P 13 41 52.1 -3.8**
UGM Wanagama 62.21 304 PFAKE 13 42 10.0 +13
UGM LR LR
comp=Z,3μm,19.0s
TTSI Tana Toraja 62.86 316 P **P 13 41 59.8 -1.6**
GO09 Cerro Castillo 63.14 147 *e*P **P 13 42 02.6 -0.3**
comp=Z,107nm,1.1s
LUWI Luwuk 63.67 319 PFAKE 13 42 20.0 +13
LUWI LR LR
comp=Z,1μm,21.0s
CISI Cisompet, Garu 63.73 301 PFAKE 13 42 20.0 +13
CISI LR LR
comp=Z,1μm,20.0s
TNTI Ternate 63.89 325 PFAKE 13 42 20.0 +12
TNTI LR LR
comp=Z,600nm,18.0s
APSI Ampana 64.18 318 P P 13 42 18.7 +8.6
CGJI Cibinong 65.53 300 P **P 13 42 20.5 +1.6**
MPSI Mapaga 65.96 317 P **P 13 42 20.2 -1.5**
comp=Z,22nm,1.5s,comp=Z,361nm
EFI East Falkland 66.35 156 *i*P **P 13 42 24.5 +0.7**
EFI pmax pmax
comp=Z,79nm,1.2s
MDSI Maura Dua 68.10 299 P **P 13 42 37.0 +1.7**
DAV Davao City (W) 70.39 325 PFAKE 13 43 00.0 +11
DAV LR LR
comp=Z,1μm,20.0s
KSM Kuching 70.73 308 *e*P **P 13 42 49.7 -1.9**
comp=Z,22nm,1.2s
KSM LR LR
comp=Z,1μm,19.0s
SBUM Sibu 70.83 310 PFAKE 13 43 00.0 +7.8
SBUM LR LR
comp=Z,900nm,20.0s
SDSI Sungai Dareh 72.50 298 P **P 13 42 58.8 -3.4**
GUMO Guam 72.56 346 PFAKE 13 43 10.0 +7.6
GUMO LR LR
comp=Z,800nm,20.0s
KKM Kota Kinabalu 72.58 316 PFAKE 13 43 10.0 +7.2
KKM LR LR
comp=Z,1μm,19.0s
PLCA Paso Flores 73.17 143 P **P 13 43 06.7 +0.5**
comp=Z,12nm,0.9s,baz=230,slow=5.2,SNR=17
PLCA LR LR 14 09 22.5
comp=Z,858nm,18.9s,baz=230,slow=31
PLCA Paso Flores 73.17 143 *e*P **P 13 43 05.8 -0.3**
comp=Z,16nm,0.9s
BKNI Bangkinang 73.78 299 PFAKE 13 43 20.0 +10
BKNI LR LR
comp=Z,2μm,21.0s
MYKOM Kota Tinggi 73.80 302 PFAKE 13 43 20.0 +10
MYKOM LR LR
comp=Z,2μm,20.0s
PSI Prapat 76.94 298 PFAKE 13 43 40.0 +12
PSI LR LR
comp=Z,2μm,21.0s
KCSI Kotacane, Aceh 78.11 297 P **P 13 43 34.7 +0.1**
TRQA Tornquist 78.18 148 *e*P **P 13 43 34.4 -0.3**
comp=Z,49nm,1.3s
TRQA Tornquist 78.18 148 *e*P **P 13 43 34.4 -0.3**
TRQA pmax pmax
comp=Z,49nm,1.3s
KULM Kulim 78.34 301 *e*P **P 13 43 35.1 -0.7**
comp=Z,79nm,1.5s
KULM LR LR
comp=Z,1μm,21.0s
DLV T Lat 80.95 311 PFAKE 13 44 00.0 +10
DLV LR LR
comp=Z,2μm,21.0s
H08S2 Diego Garcia H 81.41 269 T T 15 13 34.0
baz=148,slow=76,SNR=16
H08S1 Diego Carcia H 81.42 269 T T 15 13 32.0
baz=148,slow=76,SNR=16
H08S3 Diego Garcia H 81.43 269 T T 15 13 34.6
baz=148,slow=76,SNR=16
SUR Sutherland 82.90 215 PFAKE 13 44 10.0 +10
SUR LR LR
comp=Z,2μm,21.0s
H08N1 Diego Carcia H 83.28 269 T T 15 15 58.0
baz=137,slow=76
H08N3 Diego Garcia H 83.29 269 T T 15 15 49.9
baz=137,slow=76
H08N2 Diego Garcia H 83.31 269 T T 15 15 57.3
baz=137,slow=76
LCO Las Campanas 83.80 138 *ce*P **P 13 44 06.0 +0.8**
ABPO Ambohimpanom 84.55 242 PFAKE 13 44 20.0 +11
ABPO LR LR
comp=Z,1μm,19.0s
BOSA Boshof 84.96 220 P **P 13 44 10.0 -0.9**
comp=Z,5.2nm,0.9s,baz=167,slow=5.2,SNR=6.4
BOSA LR LR 14 18 20.2
comp=Z,1μm,19.0s,baz=153,slow=33
QIZ Qiongzhong 86.88 315 P **P 13 44 20.6 +0.5**
QIZ PP **PP 13 47 42.3 -0.9**
QIZ S **S 13 54 58.3 +0.2**
QIZ SS **SS 14 00 38.0 -2.9**
QIZ pmax pmax
comp=Z,230nm,8.8s
QIZ LR LR
comp=Z,380nm,29.4s
QIZ LR LR
comp=Z,390nm,24.0s
QIZ LR LR
comp=Z,800nm,32.4s
PBA Port Blair 87.59 297 PFAKE 13 44 30.0 +6.4
PBA LR LR
comp=Z,2μm,20.0s
GO02 Mina Guanaco 87.72 138 *e*P **P 13 44 24.3 -0.4**
comp=Z,25nm,0.8s
HKPS Hong Kong Po S 88.33 320 PFAKE 13 44 40.0 +13
HKPS LR LR
comp=Z,800nm,18.0s
QZH Quanzhou 89.37 324⇑ *i*P P 13 44 36.8 +5.0
QZH PP **PP 13 48 05.8 +2.6**
QZH S **S 13 55 25.6 +4.1**
QZH LR LR
comp=Z,540nm,24.2s
QZH LR LR
comp=Z,630nm,23.4s
PALK Pallekele 89.75 284 LR LR 14 18 09.1
comp=Z,2μm,19.4s,baz=119,slow=31
PALK Pallekele 89.75 284 PFAKE 13 44 40.0 +6.0
PALK LR LR
comp=Z,2μm,20.0s
LVC Limon Verde 90.30 137 *e*P **P 13 44 36.2 -0.7**
comp=Z,24nm,0.9s
LVC LR LR
comp=Z,1μm,22.0s
LVC Limon Verde 90.30 137 *e*P **P 13 44 36.2 -0.7**
LVC pmax pmax
comp=Z,24nm,0.9s
LVC MLR MLR
comp=Z,1μm,22.0s
CPUP Villa Florida 90.51 148 P **P 13 44 37.8 +0.4**
comp=Z,13nm,0.9s,baz=186,slow=5.4,SNR=23
CPUP LR LR 14 21 37.6
comp=Z,538nm,19.3s,baz=185,slow=33
CM31 Chiang Mai Arr 90.77 305 *e*P **P 13 44 38.0 -0.5**
comp=Z,5.8nm,0.9s
CMAR Chiang Mai Arr 90.77 305 P **P 13 44 38.0 -0.5**
comp=Z,1.1nm,0.9s,baz=172,slow=4.8,SNR=8.7
CMAR LR LR 14 23 11.0
comp=Z,2μm,19.7s,baz=170,slow=34
CMAR Chiang Mai Arr 90.77 305 *e*P **P 13 44 39.3 +0.8**
CMAR pmax pmax
comp=Z,2.0nm,1.0s
CHTO Chiang Mai 91.08 305 PFAKE 13 44 50.0 +10
CHTO LR LR
comp=Z,2μm,22.0s
SLVN Son La 91.27 311 PFAKE 13 44 50.0 +9.2
SLVN LR LR
comp=Z,1μm,21.0s
PB01 IPOC Station P 91.53 136 PFAKE 13 44 50.0 +7.7
PB01 LR LR
comp=Z,1μm,21.0s
PB11 IPOC Station P 92.64 135 *e*P **P 13 44 47.5 -0.1**
comp=Z,24nm,1.0s
MSEY Mahe Island 92.80 257 PFAKE 13 45 00.0 +12
MSEY LR LR
comp=Z,2μm,20.0s
JNU Nakatsue 94.02 337 LR LR 14 24 54.8
comp=Z,1μm,21.0s,baz=144,slow=34
JNU Nakatsue 94.02 337 PFAKE 13 45 00.0 +6.8
JNU LR LR
comp=Z,1μm,22.0s
SSE Sheshan 94.41 329 P **P 13 44 56.4 +1.4**
SSE S **S 13 56 09.1 +2.5**
SSE pmax pmax
comp=Z,10.0nm,0.7s
SSE pmax pmax
comp=Z,73nm,9.6s
SSE LR LR
comp=Z,120nm,21.0s
SSE LR LR
comp=Z,150nm,19.2s
GYA Guiyang 94.83 315 P **P 13 45 00.9 +3.7**
GYA PP **PP 13 48 50.8 +4.4**
GYA SKS **SKSac 13 55 35.5 +3.0**
GYA S **ScS 13 56 15.8 +3.9**
GYA SS **SS 14 02 37.1 +1.2**
GYA pmax pmax
comp=Z,30nm,0.9s
GYA pmax pmax
comp=Z,120nm,6.2s
GYA LR LR
comp=Z,520nm,20.5s
GYA LR LR
comp=Z,380nm,22.3s
GYA LR LR
comp=Z,780nm,20.5s
INU Inuyama 95.07 343 PFAKE 13 45 10.0 +12
INU LR LR
comp=Z,600nm,22.0s
KMI Kunming 95.14 311 P **P 13 45 00.9 +2.1**
KMI pP pwP 13 45 03.3 -1.9
KMI sP sP 13 45 04.8 +2.9
KMI PP **PP 13 48 49.8 +0.9**
KMI S **S 13 56 12.9 -0.8**
KMI SS **SS 14 02 37.4 -3.0**
KMI pmax pmax
comp=Z,9.0nm,0.5s
KMI pmax pmax
comp=Z,110nm,5.4s
KMI LR LR
comp=Z,930nm,19.2s
KMI LR LR
comp=Z,620nm,19.5s
KMI LR LR
comp=Z,1μm,20.0s
KMI Kunming 95.14 311 PFAKE 13 45 10.0 +11
KMI LR LR
comp=Z,1μm,19.0s
NJ2 Nanjing 95.96 327 *e*P **P 13 45 02.8 +0.7**
NJ2 SKS **SKSac 13 55 39.6 +1.7**
NJ2 S **ScS 13 56 27.5 +6.8**
NJ2 SS **SS 14 02 51.8 +0.2**
NJ2 pmax pmax
comp=Z,13nm,0.7s
NJ2 pmax pmax
comp=Z,280nm,11.6s
NJ2 LR LR
comp=Z,640nm,19.0s
NJ2 LR LR
comp=Z,400nm,16.8s
NJ2 LR LR
comp=Z,700nm,17.9s
MJAR Matsushiro Arr 96.06 344 LR LR 14 27 01.6
comp=Z,340nm,19.1s,baz=195,slow=35
MAJO Matsushiro 96.06 344 PFAKE 13 45 10.0 +7.6
MAJO LR LR
comp=Z,700nm,21.0s
MJB9 Matsu-Tunnel 96.06 344 PFAKE 13 45 10.0 +7.5
MJB9 LR LR

comp=Z,700nm,21.0s
LSZ Lusaka 96.08 228 PFAKE 13 45 10.0 +6.6
LSZ LR LR
comp=Z,1μm,20.0s
TSUM Tsumeb 96.22 217 PFAKE 13 45 10.0 +6.0
TSUM LR LR
comp=Z,2μm,20.0s
LPAZ La Paz 96.38 135 P **P 13 45 05.5 +0.2**
comp=Z,3.4nm,0.8s,baz=163,slow=4.7,SNR=16
LPAZ LR LR 14 18 15.3
comp=Z,958nm,21.7s,baz=180,slow=29
LPAZ La Paz 96.38 135 *e*P **P 13 45 04.9 -0.4**
comp=Z,4.7nm,0.9s
NNA Nana 96.80 126 PFAKE 13 45 20.0 +13
NNA LR LR
comp=Z,800nm,20.0s
ENH Enshi 97.28 319 PFAKE 13 45 20.0 +12
ENH LR LR
comp=Z,700nm,22.0s
BRDH Bariadhala 97.69 301 LR LR 14 32 08.1
comp=Z,759nm,18.2s,baz=136,slow=37
KSRS Korea Array 98.82 336 LR LR 14 27 51.3
comp=Z,314nm,21.0s,baz=174,slow=34
CD2 Chengdu 99.93 315 P **Pdif 13 45 22.1 +2.1**
CD2 PP **PP 13 49 30.0 +4.5**
CD2 SKS **SKSac 13 56 01.6 +3.2**
CD2 S **ScS 13 56 54.6 +0.5**
CD2 sS sS 13 57 03.0 +5.1
CD2 SS **SS 14 03 50.9 +3.3**
CD2 LR LR
comp=Z,2μm,19.8s
CD2 LR LR
comp=Z,1μm,20.6s
CD2 LR LR
comp=Z,2μm,25.1s
SHL Shillong 100.09 303 PFAKE 13 45 30.0 +8.9
SHL LR LR
comp=Z,800nm,22.0s
ERM Erimo 100.83 348 PFAKE 13 45 30.0 +6.4
ERM LR LR
comp=Z,800nm,19.0s
XAN Xi'an 100.91 320 PFAKE 13 45 30.0 +5.7
XAN LR LR
comp=Z,700nm,21.0s
DL2 Dalian 101.67 331 *e*P **Pdif 13 45 18.9 -8.6**
DL2 PP PP 13 49 28.0 -11
DL2 Dalian 101.67 331 SS SS 14 03 55.5 -16
DL2 pmax pmax
comp=Z,17nm,0.8s
DL2 pmax pmax
comp=Z,140nm,5.2s
DL2 LR LR
comp=N,430nm,18.9s
DL2 LR LR
comp=E,520nm,20.1s
DL2 LR LR
comp=Z,730nm,22.3s
YUK Yuzh-Kuril'sk 102.57 351 *d i*P **Pdif 13 45 27.4 -3.9**
YUK *e* 13 49 44.3
YUK *e*PPP PPP 13 51 54.2
YUK *i* S **SKSac 13 56 06.9 -3.3**
YUK *i* SS **SS 14 04 21.3 -2.6**
SNY Shenyang 103.97 334 P **Pdif 13 45 44.6 +7.0**
SNY PP **PP 13 49 54.8 -0.9**
SNY SS SS 14 04 38.1 -5.1
SNY LR LR
comp=Z,490nm,19.6s
SNY LR LR
comp=Z,430nm,19.8s
SNY LR LR
comp=Z,910nm,24.5s
LSA Lhasa 103.99 304 PFAKE 13 45 50.0 +11
LSA LR LR
comp=Z,800nm,20.0s
BJT Baijiatuau 104.17 328 PFAKE 13 45 50.0 +11
BJT LR LR
comp=Z,600nm,22.0s
KMBO Kilima Mbogo 104.84 242 PFAKE 13 45 50.0 +7.4
KMBO LR LR
comp=Z,700nm,18.0s
NAI Nairobi 104.92 242 PFAKE 13 45 50.0 +7.0
NAI LR LR
comp=Z,700nm,21.0s
CN2 Changchun 105.43 336 Pdif **Pdif 13 45 49.1 +5.0**
CN2 *e*PP PP 13 50 14.6 +8.1
CN2 *e*S **Sdif 13 57 43.8 +4.6**
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,510nm,20.0s
CN2 LR LR
comp=Z,270nm,20.0s
CN2 LR LR
comp=Z,550nm,22.0s
HHC Hu-ho-hao-te 106.28 325 Pdif **Pdif 13 45 50.4 +2.3**
HHC PP **PP 13 50 16.8 +3.8**
HHC S **Sdif 13 57 51.4 +4.7**
HHC SS **SS 14 05 17.6 +2.5**
HHC AMB AMB
comp=Z,190nm,9.8s
HHC LR LR
comp=Z,460nm,17.7s
HHC LR LR
comp=Z,480nm,18.4s
HHC LR LR
comp=Z,490nm,18.0s
OTAV Otavalo 106.95 119 PFAKE 13 50 10.0 +8.0
OTAV LR LR
comp=Z,400nm,20.0s
MBAR Mbarara 108.26 236 PFAKE 13 50 10.0 +5.9
MBAR LR LR
comp=Z,600nm,22.0s
PET Petropavlovsk 111.03 0 PFAKE 13 50 20.0 +12
PET LR LR
comp=Z,600nm,20.0s
PEA0B Petropavlovsk- 111.12 360 PFAKE 13 50 20.0 +12
PEA0B LR LR
comp=Z,1μm,22.0s
SMY Shemya 111.47 10 PFAKE 13 50 20.0 +11
SMY LR LR
comp=Z,900nm,22.0s
TLIG Tlapa 111.60 92 PFAKE 13 50 20.0 +10
TLIG LR LR
comp=Z,1μm,18.0s
ADK Adak 111.75 16 PFAKE 13 50 20.0 +11
ADK LR LR
comp=Z,900nm,21.0s
HIA Hailar 111.88 334 PFAKE 13 50 20.0 +11
HIA LR LR
comp=Z,600nm,22.0s
ATKA Atka Island 112.45 18 PFAKE 13 50 20.0 +10
ATKA LR LR
comp=Z,1μm,21.0s
SRIG Santa Rosalia 112.49 74 PFAKE 13 50 20.0 +8.7
SRIG LR LR
comp=Z,900nm,18.0s
JTS Las Juntas de 112.54 108 PFAKE 13 50 20.0 +8.1
JTS LR LR
comp=Z,600nm,20.0s
HDC Heredia 112.71 109 PFAKE 13 50 20.0 +7.7
HDC LR LR
comp=Z,2μm,22.0s
FURI Furi 112.89 249 PFAKE 13 50 20.0 +7.1
FURI LR LR
comp=Z,700nm,22.0s
PTGA Pitinga 113.72 137 PFAKE 13 50 30.0 +16
PTGA LR LR
comp=Z,900nm,21.0s
SNCC San Nicolas Is 113.75 65 PFAKE 13 50 30.0 +16
SNCC LR LR
comp=Z,2μm,22.0s
ZAIG Zacatecas 113.78 85 PFAKE 13 50 30.0 +16
ZAIG LR LR
comp=Z,1μm,19.0s
CCIG Comitan 113.91 98 PFAKE 13 50 30.0 +15
CCIG LR LR
comp=Z,800nm,21.0s
BCIP Isla Barro Col 114.10 113 PFAKE 13 50 30.0 +15
BCIP LR LR
comp=Z,800nm,21.0s
NIKH Nikolski High 114.12 21 PFAKE 13 50 30.0 +16
NIKH LR LR
comp=Z,2μm,22.0s
ESPN Las Esperanzas 114.49 107 PFAKE 13 50 30.0 +14
ESPN LR LR
comp=Z,400nm,18.0s
LVIG Laguna Verde 114.52 92 PFAKE 13 50 30.0 +15
LVIG LR LR
comp=Z,800nm,19.0s
HSIG 114.53 74 PFAKE 13 50 30.0 +15
HSIG LR LR
comp=Z,700nm,18.0s
TGUH Tegucigalpa,Un 114.56 103 PFAKE 13 50 30.0 +14
TGUH LR LR
comp=Z,500nm,18.0s
CPE Camp Elliot 114.62 67 PFAKE 13 50 30.0 +15
CPE LR LR
comp=Z,1μm,20.0s
BAR Barrett 114.66 68 PFAKE 13 50 30.0 +15
BAR LR LR
comp=Z,1μm,20.0s
DAMY Dhamar 114.85 257 PFAKE 13 50 30.0 +13
DAMY LR LR
comp=Z,900nm,20.0s
RCBR Riachuelo 114.98 164 PFAKE 13 50 30.0 +13
RCBR LR LR
comp=Z,600nm,19.0s
PASC Pasadena Art C 115.14 65 PFAKE 13 50 30.0 +14
PASC LR LR
comp=Z,1μm,18.0s
MWC Mount Wilson 115.25 66 PFAKE 13 50 30.0 +13
MWC LR LR
comp=Z,2μm,22.0s
OSI Osito Audit: C 115.25 65 PFAKE 13 50 30.0 +14
OSI LR LR
comp=Z,2μm,21.0s
PAGB Antelope Grade 115.43 63 PFAKE 13 50 30.0 +13
PAGB LR LR
comp=Z,2μm,20.0s
PFO Pinyon Flats O 115.52 67 PFAKE 13 50 30.0 +13
PFO LR LR
comp=Z,1μm,19.0s
HPIG 115.56 80 PFAKE 13 50 30.0 +13
HPIG LR LR
comp=Z,900nm,18.0s
NIL Nilore 115.58 293 PFAKE 13 50 30.0 +13
NIL LR LR
comp=Z,300nm,18.0s
SAO San Andreas Ge 115.72 61 PFAKE 13 50 30.0 +13
SAO LR LR
comp=Z,1μm,18.0s
GLA Glamis 115.86 69 PFAKE 13 50 30.0 +12
GLA LR LR
comp=Z,2μm,21.0s
BC3 Big Chuckawall 116.05 68 P **PKiKP 13 50 19.2 +1.1**
baz=216
113A Mohawk Valley, 116.16 70 PFAKE 13 50 30.0 +12
113A LR LR
comp=Z,1μm,21.0s
MCCM Marconi Confer 116.19 59 PFAKE 13 50 30.0 +12
MCCM LR LR
comp=Z,1μm,19.0s
ISA Isabella, Lake 116.22 64 PFAKE 13 50 30.0 +12
ISA LR LR
comp=Z,2μm,21.0s
Y12C Blythe 116.58 68 PFAKE 13 50 30.0 +11
Y12C LR LR
comp=Z,1μm,19.0s
GSC Goldstone, Bar 116.72 66 PFAKE 13 50 30.0 +11
GSC LR LR
comp=Z,1μm,19.0s
GDXM Geysers 116.77 59 PFAKE 13 50 30.0 +11
GDXM LR LR
comp=Z,2μm,20.0s
HOPS Hopland Field 116.79 59 PFAKE 13 50 30.0 +11
HOPS LR LR
comp=Z,2μm,18.0s
CWC Cottonwood Cre 117.03 64 P **PKiKP 13 50 21.3 +1.3**
baz=216
KCPM Cahto Peak 117.13 58 PFAKE 13 50 30.0 +10
KCPM LR LR
comp=Z,2μm,18.0s
DAC Darwin (Calif) 117.13 65 PFAKE 13 50 30.0 +10
DAC LR LR
comp=Z,2μm,21.0s
LNIG Linares 117.15 86 PFAKE 13 50 30.0 +10
LNIG LR LR
comp=Z,1μm,18.0s
UOSS Minazif 117.24 274 PFAKE 13 50 30.0 +9.4
UOSS LR LR
comp=Z,900nm,20.0s
CMB Columbia Colle 117.24 61 PFAKE 13 50 30.0 +10
CMB LR LR
comp=Z,1μm,19.0s
TUC Tucson 117.27 72 PFAKE 13 50 30.0 +9.5
TUC LR LR
comp=Z,800nm,19.0s
319A Douglas 117.28 74 PFAKE 13 50 30.0 +9.4
319A LR LR
comp=Z,500nm,19.0s
LDFC Landfair 117.36 67 PFAKE 13 50 30.0 +9.4
LDFC LR LR
comp=Z,1μm,18.0s
WMQ Urumqi 117.42 310 *e*PKP **PKiKP 13 50 20.9 +0.5**
WMQ PP **PP 13 51 36.6 +3.8**
WMQ SKKS 13 58 28.1
WMQ SS **SS 14 07 42.5 -0.8**
WMQ AMB AMB
comp=Z,140nm,7.3s
WMQ LR LR
comp=Z,210nm,18.1s
WMQ LR LR
comp=Z,270nm,19.9s
WMQ LR LR
comp=Z,320nm,19.5s
WMQ Urumqi 117.42 310 PFAKE 13 50 30.0 +10
WMQ LR LR
comp=Z,400nm,20.0s
Y14A Wickenburg 117.48 70 PFAKE 13 50 30.0 +9.2
Y14A LR LR
comp=Z,1μm,22.0s
KMRM Mail Ridge 117.51 58 PFAKE 13 50 30.0 +9.3
KMRM LR LR
comp=Z,2μm,19.0s
MDPB Devils Postpil 117.52 63 PFAKE 13 50 30.0 +8.9
MDPB LR LR
comp=Z,1μm,20.0s
AFDM Forest Hills D 117.71 60 PFAKE 13 50 30.0 +8.9
AFDM LR LR
comp=Z,1μm,19.0s
JCC Jacoby Creek, 117.85 57 PFAKE 13 50 30.0 +8.8
JCC LR LR
comp=Z,2μm,18.0s
SPIA Saint Paul Isl 117.88 19 PFAKE 13 50 30.0 +9.3
SPIA LR LR
comp=Z,1μm,20.0s
O02D Mt. Diablo Mer 117.88 58 P **PKiKP 13 50 22.3 +0.9**
baz=216
ORV Oroville 117.96 60 PFAKE 13 50 30.0 +8.5
ORV LR LR
comp=Z,900nm,20.0s
W13A Hualapai Mount 117.97 68 PFAKE 13 50 30.0 +8.0
W13A LR LR
comp=Z,1μm,19.0s
KHMM Horse Mountain 118.03 57 PFAKE 13 50 30.0 +8.2
KHMM LR LR
comp=Z,1μm,20.0s
WAKR Walker 118.06 62 PFAKE 13 50 30.0 +8.0
WAKR LR LR
comp=Z,1μm,20.0s
SDV Santo Domingo 118.14 122 PFAKE 13 50 30.0 +7.1
SDV LR LR
comp=Z,800nm,20.0s
RUBR Rubicon Trail 118.17 61 PFAKE 13 50 30.0 +7.8
RUBR LR LR
comp=Z,1μm,20.0s
TPNV Topopah Spring 118.31 65 PFAKE 13 50 30.0 +7.5
TPNV LR LR
comp=Z,2μm,22.0s
WDC Whiskeytown Da 118.32 58 PFAKE 13 50 30.0 +7.9
WDC LR LR
comp=Z,1μm,18.0s
KBL Kabul 118.36 290 PFAKE 13 50 30.0 +7.3
KBL LR LR
comp=Z,2μm,22.0s
TLY Talaya 118.41 325 PFAKE 13 50 30.0 +8.0
TLY LR LR
comp=Z,500nm,19.0s
PNTR Pine Nut 118.45 61 PFAKE 13 50 30.0 +7.2
PNTR LR LR
comp=Z,1μm,20.0s
SHPR Sheep Range 118.48 66 PFAKE 13 50 30.0 +7.2
SHPR LR LR
comp=Z,1μm,19.0s
NVAR Mina Array Bea 118.53 63 PKP **PKiKP 13 50 23.7 +0.7**
comp=Z,1.2nm,1.1s,baz=204,slow=5.2,SNR=4.3
YERR Yerington 118.54 62 PFAKE 13 50 30.0 +7.1
YERR LR LR
comp=Z,1μm,19.0s
RYN Ryan 118.58 62 PFAKE 13 50 30.0 +7.1
RYN LR LR
comp=Z,1μm,20.0s
VCNR Virginia City 118.60 61 PFAKE 13 50 30.0 +7.0
VCNR LR LR
comp=Z,1μm,20.0s
NV11 Mina Array Sit 118.60 63 PFAKE 13 50 30.0 +7.0
NV11 LR LR
comp=Z,100nm,20.0s
X16A Lo Mia Camp, P 118.63 70 PFAKE 13 50 30.0 +6.8
X16A LR LR
comp=Z,1μm,22.0s
BEKR Beckworth 118.73 60 PFAKE 13 50 30.0 +6.8
BEKR LR LR
comp=Z,1μm,20.0s
M02C Callahan 118.83 57 P **PKiKP 13 50 24.0 +0.8**
baz=216
EPT El Paso 119.01 76 PFAKE 13 50 40.0 +16
EPT LR LR
comp=Z,700nm,19.0s
KSH Kashi 119.01 299 PKP **PKiKP 13 50 27.3 +3.6**
KSH PP **PP 13 51 50.6 +6.6**
KSH AMB AMB
comp=Z,230nm,5.1s
KSH LR LR
comp=Z,680nm,13.2s
KSH LR LR
comp=Z,990nm,18.4s
KSH LR LR
comp=Z,2μm,21.5s
MYIG Mrida 119.04 97 PFAKE 13 50 40.0 +16
MYIG LR LR
comp=Z,500nm,19.0s
PAHR Pah Rah Range 119.05 61 PFAKE 13 50 40.0 +16
PAHR LR LR
comp=Z,2μm,18.0s
KVN Kaiserville 119.12 62 *e*PKPdf **PKiKP 13 50 25.2 +1.3**
KVN LR LR
comp=Z,1μm,19.0s
KVN Kaiserville 119.12 62 *e*PKIKP **PKiKP 13 50 25.3 +1.3**
KVN MLR MLR
comp=Z,1μm,19.0s
L02E Cave Junction 119.12 56 P **PKiKP 13 50 25.0 +1.3**
baz=216
YBH Yreka Blue Hor 119.17 57 PFAKE 13 50 40.0 +16
YBH LR LR
comp=Z,1μm,19.0s
TEIG Tepich 119.20 99 PFAKE 13 50 40.0 +16
TEIG LR LR
comp=Z,600nm,19.0s
KEBM Edson Butte 119.38 55 PFAKE 13 50 40.0 +16
KEBM LR LR
comp=Z,1μm,18.0s
CHGN Chignik 119.43 26 PFAKE 13 50 30.0 +6.3
CHGN LR LR
comp=Z,700nm,22.0s
X18A Snowflake 119.47 71 PFAKE 13 50 40.0 +15
X18A LR LR
comp=Z,700nm,21.0s
MNTX Cornudas Mount 119.53 77 PFAKE 13 50 40.0 +15
MNTX LR LR
comp=Z,500nm,19.0s
WUAZ Wupatki 119.54 70 PFAKE 13 50 40.0 +15
WUAZ LR LR
comp=Z,1μm,22.0s
R11A Troy Canyon, C 119.75 65 PFAKE 13 50 40.0 +15
R11A LR LR
comp=Z,2μm,21.0s
HUMO Hull Mountain 119.77 56 *e*PKPdf **PKiKP 13 50 25.3 +0.3**
HUMO LR LR
comp=Z,1μm,18.0s
U15A North Rim 119.81 68 PFAKE 13 50 40.0 +14
U15A LR LR
comp=Z,900nm,20.0s
833A Chaparral WMA, 119.95 84 PFAKE 13 50 40.0 +14
833A LR LR
comp=Z,700nm,20.0s
W18A Petrified Fore 120.04 71 PFAKE 13 50 40.0 +14
W18A LR LR
comp=Z,800nm,22.0s
KVTX Kingsville 120.11 86 PFAKE 13 50 40.0 +14
KVTX LR LR
comp=Z,1μm,18.0s
MOD Modoc Plateau 120.39 59 PFAKE 13 50 40.0 +14
MOD LR LR
comp=Z,1μm,20.0s
BMN Battle Mountai 120.63 62 PFAKE 13 50 40.0 +13
BMN LR LR
comp=Z,1μm,18.0s
Y22D IRIS PASSCAL I 120.63 74 PFAKE 13 50 40.0 +13
Y22D LR LR
comp=Z,800nm,18.0s
SII Sitkinak Islan 120.68 28 PFAKE 13 50 40.0 +14
SII LR LR
comp=Z,800nm,21.0s
K05A Summer Lake 120.78 58 PFAKE 13 50 40.0 +13
K05A LR LR
comp=Z,2μm,18.0s
COR Corvallis 121.20 55 PFAKE 13 50 40.0 +12
COR LR LR
comp=Z,1μm,21.0s
GAR Garm 121.27 294 PFAKE 13 50 40.0 +12
GAR LR LR
comp=Z,2μm,21.0s
BOOM Boomskoye usch 121.39 301 PFAKE 13 50 40.0 +12
BOOM LR LR
comp=Z,800nm,20.0s
JCT Junction City 121.45 82 PFAKE 13 50 40.0 +11
JCT LR LR
comp=Z,500nm,19.0s
OHAK Old Harbor 121.49 28 PFAKE 13 50 40.0 +12
OHAK LR LR
comp=Z,600nm,19.0s
ANMO Albuquerque 121.55 74 PFAKE 13 50 40.0 +11
ANMO LR LR
comp=Z,800nm,20.0s
WVOR Wild Horse Val 121.56 60 PFAKE 13 50 40.0 +11
WVOR LR LR
comp=Z,1μm,20.0s
PINE Pine Mountain 121.60 57 PFAKE 13 50 40.0 +11
PINE LR LR
comp=Z,1μm,18.0s
RAYN Ar Rayn 121.71 264 PFAKE 13 50 40.0 +11
RAYN LR LR
comp=Z,800nm,20.0s
H04A Detroit Lake 121.76 56 PFAKE 13 50 40.0 +11
H04A LR LR
comp=Z,600nm,21.0s
ELK Elko 121.80 63 PFAKE 13 50 40.0 +11
ELK LR LR
comp=Z,1μm,20.0s
MK31 Makanchi Array 122.05 308 *e*PKPdf **PKiKP 13 50 29.3 0.0**
MK31 Makanchi Array 122.05 308 *e*PKIKP **PKiKP 13 50 29.3 0.0**
MKAR Makanchi Array 122.05 308 PKP **PKPdf 13 50 28.2 -0.9**
comp=Z,0.6nm,0.5s,baz=164,slow=2.1,SNR=8.3
MKAR Makanchi Array 122.05 308 *e*PKIKP **PKPdf 13 50 27.3 -1.8**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
YAK Yakutsk 122.12 344 PFAKE 13 50 40.0 +11
YAK LR LR
comp=Z,301nm,22.0s
KDAK Kodiak Island 122.17 29 PFAKE 13 50 40.0 +11
KDAK LR LR
comp=Z,500nm,20.0s
AAK Ala-Archa 122.17 300 PKP **PKiKP 13 50 30.7 +0.9**
comp=Z,0.7nm,0.3s,baz=90,slow=2.0,SNR=2.9
AAK Ala-Archa 122.17 300 PFAKE 13 50 40.0 +10
AAK LR LR
comp=Z,800nm,20.0s
MAKZ Makanchi 122.19 308 *e*PKPdf **PKiKP 13 50 29.4 -0.1**
MAKZ LR LR
comp=Z,400nm,20.0s
MAKZ Makanchi 122.19 308 *e*PKIKP **PKiKP 13 50 29.4 -0.1**
MAKZ MLR MLR
comp=Z,400nm,20.0s
MVCO Mesa Verde 122.30 71 PFAKE 13 50 40.0 +10

MVCO LR LR
comp=Z,1μm,22.0s
DGZ Jazzator, Alta 122.33 313 *i* PKIKP **PKiKP 13 50 30.7 +0.8**
J08A Circle Bar Ran 122.36 59 PFAKE 13 50 40.0 +10
J08A LR LR
comp=Z,1μm,20.0s
I07A Izee 122.47 58 PFAKE 13 50 40.0 +10
I07A LR LR
comp=Z,2μm,18.0s
DUG Dugway, Tooele 122.52 65 PFAKE 13 50 40.0 +9.4
DUG LR LR
comp=Z,1μm,22.0s
MSTX Muleshoe 122.67 77 PFAKE 13 50 40.0 +9.0
MSTX LR LR
comp=Z,700nm,20.0s
G06A Carlson Farm, 122.87 56 PFAKE 13 50 40.0 +9.0
G06A LR LR
comp=Z,600nm,20.0s
PV13 Radium Mtn., P 122.88 70 PFAKE 13 50 40.0 +8.5
PV13 LR LR
comp=Z,1μm,21.0s
PV18 Skein Mesa, Pa 122.91 70 PFAKE 13 50 40.0 +8.5
PV18 LR LR
comp=Z,2μm,22.0s
PV19 Morning Glory 122.92 69 PFAKE 13 50 40.0 +8.5
PV19 LR LR
comp=Z,1μm,20.0s
PV16 Nyswonger Mesa 122.95 69 PFAKE 13 50 40.0 +8.4
PV16 LR LR
comp=Z,1μm,21.0s
PV01 Paradox Valley 122.99 70 PFAKE 13 50 40.0 +8.3
PV01 LR LR
comp=Z,2μm,22.0s
MTDJ Mount Denham 123.00 110 PFAKE 13 50 40.0 +7.9
MTDJ LR LR
comp=Z,1μm,22.0s
PV12 Saucer Basin, 123.01 70 PFAKE 13 50 40.0 +8.3
PV12 LR LR
comp=Z,2μm,20.0s
PV23 Carpenter Ridg 123.02 69 PFAKE 13 50 40.0 +8.2
PV23 LR LR
comp=Z,1μm,22.0s
PV04 Paradox Valley 123.02 69 PFAKE 13 50 40.0 +8.3
PV04 LR LR
comp=Z,2μm,22.0s
HKT Hockley 123.11 86 PFAKE 13 50 40.0 +8.2
HKT LR LR
comp=Z,700nm,18.0s
PV07 Paradox Valley 123.18 70 PFAKE 13 50 40.0 +7.9
PV07 LR LR
comp=Z,1μm,21.0s
NLWA Neilton Lookou 123.19 52 PFAKE 13 50 40.0 +8.5
NLWA LR LR
comp=Z,1μm,20.0s
PV22 Blue Mesa, Par 123.19 69 PFAKE 13 50 40.0 +8.0
PV22 LR LR
comp=Z,1μm,21.0s
ABTX Abilene, Hawle 123.23 81 PFAKE 13 50 40.0 +7.9
ABTX LR LR
comp=Z,1μm,18.0s
S22A 4UR Ranch, Cre 123.55 71 PFAKE 13 50 40.0 +7.1
S22A LR LR
comp=Z,700nm,19.0s
LON Longmire 123.55 54 PFAKE 13 50 40.0 +7.7
LON LR LR
comp=Z,1μm,19.0s
G08A Pilot Rock 123.65 57 PFAKE 13 50 40.0 +7.4
G08A LR LR
comp=Z,700nm,18.0s
F07A Phinny Hill Vi 123.70 56 PFAKE 13 50 40.0 +7.5
F07A LR LR
comp=Z,700nm,20.0s
D05A Enumclaw 123.82 54 PFAKE 13 50 40.0 +7.3
D05A LR LR
comp=Z,1μm,20.0s
WHTX Lake Whitney, 123.87 83 PFAKE 13 50 40.0 +6.7
WHTX LR LR
comp=Z,600nm,19.0s
AMTX Amarillo 123.94 77 PFAKE 13 50 40.0 +6.5
AMTX LR LR
comp=Z,700nm,20.0s
CNPM China Poot 124.04 28 PFAKE 13 50 40.0 +7.2
CNPM LR LR
comp=Z,800nm,20.0s
BMO Blue Mountains 124.05 59 PFAKE 13 50 40.0 +6.6
BMO LR LR
comp=Z,2μm,18.0s
HOM Homer 124.05 28 PFAKE 13 50 40.0 +7.3
HOM LR LR
comp=Z,500nm,20.0s
HWUT Hardware Ranch 124.22 65 PFAKE 13 50 50.0 +16
HWUT LR LR
comp=Z,1μm,20.0s
SDCO Great Sand Dun 124.22 72 PFAKE 13 50 50.0 +16
SDCO LR LR
comp=Z,500nm,18.0s
HAWA Hanford 124.26 56 PFAKE 13 50 40.0 +6.4
HAWA LR LR
comp=Z,900nm,20.0s
T25A Trinidad 124.30 74 PFAKE 13 50 50.0 +16
T25A LR LR
comp=Z,800nm,19.0s
BRLK Bradley Lake 124.33 28 PFAKE 13 50 40.0 +6.6
BRLK LR LR
comp=Z,700nm,20.0s
KK31 Karatay Array 124.37 298 *e*PKPdf **PKPdf 13 50 33.0 -0.7**
KK31 Karatay Array 124.37 298 *e*PKIKP **PKPdf 13 50 33.0 -0.7**
KKAR Karatay Array 124.37 298 *e*PKPdf **PKPdf 13 50 33.1 -0.6**
KKAR Karatay Array 124.37 298 *e*PKIKP **PKPdf 13 50 33.1 -0.6**
HLID Hailey 124.38 62 PFAKE 13 50 50.0 +16
HLID LR LR
comp=Z,700nm,20.0s
SVW2 Sparrevohn 124.40 25 PFAKE 13 50 40.0 +6.6
SVW2 LR LR
comp=Z,400nm,22.0s
DIB Dawson Inlet, 124.46 43 PFAKE 13 50 40.0 +6.3
DIB LR LR
comp=Z,600nm,19.0s
E08A Dider Farm, El 124.54 56 PFAKE 13 50 50.0 +16
E08A LR LR
comp=Z,800nm,20.0s
O20A White River Ci 124.69 69 PFAKE 13 50 50.0 +15
O20A LR LR
comp=Z,1μm,21.0s
PLID Pearl Lake 124.82 59 PFAKE 13 50 50.0 +15
PLID LR LR
comp=Z,2μm,20.0s
F10A Beach Ranch, E 124.95 58 PFAKE 13 50 50.0 +15
F10A LR LR
comp=Z,1μm,19.0s
E09A Wood Farm, Sta 124.96 57 PFAKE 13 50 50.0 +15
E09A LR LR
comp=Z,800nm,20.0s
SEW Seward 124.99 29 PFAKE 13 50 50.0 +15
SEW LR LR
comp=Z,700nm,19.0s
D08A Wollman Farm, 125.04 56 PFAKE 13 50 50.0 +15
D08A LR LR
comp=Z,1μm,20.0s
B06A Marblemount 125.07 53 PFAKE 13 50 50.0 +15
B06A LR LR
comp=Z,1μm,20.0s
NATX Nacogdoches 125.16 85 PFAKE 13 50 50.0 +14
NATX LR LR
comp=Z,700nm,20.0s
MID Middleton Isla 125.23 31 PFAKE 13 50 50.0 +15
MID LR LR
comp=Z,600nm,18.0s
BBB Bella Bella 125.26 46 PFAKE 13 50 50.0 +15
BBB LR LR
comp=Z,900nm,22.0s
AHID Auburn Hatcher 125.32 64 PFAKE 13 50 50.0 +14
AHID LR LR
comp=Z,2μm,21.0s
WMOK Wichita Mounta 125.33 80 *e*PKPdf **PKiKP 13 50 35.5 -0.7**
WMOK LR LR
comp=Z,900nm,18.0s
WMOK Wichita Mounta 125.33 80 *e*PKIKP **PKiKP 13 50 35.5 -0.7**
WMOK MLR MLR
comp=Z,900nm,18.0s
Q24A Divide 125.33 72 PFAKE 13 50 50.0 +14
Q24A LR LR
comp=Z,1μm,22.0s
ETX06 Route 59 and C 125.35 86 PFAKE 13 50 50.0 +14
ETX06 LR LR
comp=Z,400nm,20.0s
GTBY Guantanamo Bay 125.64 111 PFAKE 13 50 50.0 +13
GTBY LR LR
comp=Z,800nm,20.0s
ANM Nome 125.65 18 PFAKE 13 50 50.0 +14
ANM LR LR
comp=Z,900nm,21.0s
ISCO Idaho Springs 125.73 71 PFAKE 13 50 50.0 +13
ISCO LR LR
comp=Z,1μm,22.0s
RC01 Rabbit Creek A 125.77 28 PFAKE 13 50 50.0 +14
RC01 LR LR
comp=Z,500nm,20.0s
C09A Chrisman Ranch 125.89 56 PFAKE 13 50 50.0 +13
C09A LR LR
comp=Z,1μm,19.0s
TPAW Teton Pass 125.95 64 PFAKE 13 50 50.0 +13
TPAW LR LR
comp=Z,1μm,20.0s
SNOW Snow King Moun 126.02 64 PFAKE 13 50 50.0 +12
SNOW LR LR
comp=Z,1μm,20.0s
CRAG Craig 126.04 41 PFAKE 13 50 50.0 +13
CRAG LR LR
comp=Z,1μm,20.0s
BW06 Boulder Array 126.06 66 PFAKE 13 50 50.0 +12
BW06 LR LR
comp=Z,1μm,20.0s
PDAR Pinedale Array 126.06 66 PKP **PKPdf 13 50 36.3 -1.0**
comp=Z,0.1nm,0.4s,baz=208,slow=3.7,SNR=2.5
LOHW Long Hollow 126.20 64 PFAKE 13 50 50.0 +12
LOHW LR LR
comp=Z,1μm,20.0s
BILL Bilibino 126.23 4 *e*PKIKP **PKiKP 13 50 39.0 +2.1**
BILL *e* 13 52 36.0
BILL *e* 13 57 48.9
BILL *e*SS SS 14 09 39.3 +4.4
BILL pmax pmax
comp=Z,2.0nm,1.2s
BILL MLR MLR
comp=Z,354nm,19.0s
MOOW Moose Ponds 126.24 64 PFAKE 13 50 50.0 +12
MOOW LR LR
comp=Z,1μm,20.0s
IMW Indian Meadow 126.26 64 PFAKE 13 50 50.0 +12
IMW LR LR
comp=Z,1μm,20.0s
EYAK Cordova Ski Ar 126.34 31 PFAKE 13 50 50.0 +13
EYAK LR LR
comp=Z,800nm,20.0s
PMR Palmer 126.35 28 PFAKE 13 50 50.0 +13
PMR LR LR
comp=Z,400nm,20.0s
KNK Knik Glacier 126.37 29 PFAKE 13 50 50.0 +13
KNK LR LR
comp=Z,500nm,21.0s
RWWY Rawlins 126.38 68 PFAKE 13 50 50.0 +12
RWWY LR LR
comp=Z,900nm,20.0s
N23A Red Feather La 126.40 70 PFAKE 13 50 50.0 +12
N23A LR LR
comp=Z,900nm,21.0s
U32A Winter Ranch, 126.48 78 PFAKE 13 50 50.0 +12
U32A LR LR
comp=Z,900nm,19.0s
GEYT Alibeck 126.50 285 PKP **PKiKP 13 50 38.0 -0.4**
comp=Z,1.0nm,0.6s,baz=169,slow=3.0,SNR=3.8
GYA0B ALIBECK ARRAY 126.50 285 PFAKE 13 50 50.0 +12
GYA0B LR LR
comp=Z,1μm,19.0s
LLLB Lillooet 126.51 51 PFAKE 13 50 50.0 +12
LLLB LR LR
comp=Z,1μm,20.0s
FLWY Flagg Ranch 126.51 64 PFAKE 13 50 50.0 +12
FLWY LR LR
comp=Z,1μm,20.0s
HMT Hamilton 126.56 31 PFAKE 13 50 50.0 +12
HMT LR LR
comp=Z,800nm,20.0s
DLMT Dillon 126.59 61 *e*PKPdf **PKiKP 13 50 38.7 +0.2**
DLMT LR LR
comp=Z,800nm,21.0s
KURK Kurchatov 126.63 309 PFAKE 13 50 50.0 +12
KURK LR LR
comp=Z,500nm,19.0s
KURK Kurchatov 126.63 309 *c i*PKIKP **PKiKP 13 50 37.9 -0.3**
KURK pmax pmax
comp=Z,68nm,1.7s
SDDR Presa de Saban 126.67 116 PFAKE 13 50 50.0 +11
SDDR LR LR
comp=Z,400nm,19.0s
ZAA0 Zalesovo Array 126.69 315 PFAKE 13 50 50.0 +12
ZAA0 LR LR
comp=Z,300nm,19.0s
ZALV Zalesovo Beam 126.69 315 PKP **PKPdf 13 50 36.6 -1.1**
comp=Z,0.5nm,0.4s,baz=149,slow=3.0,SNR=2.5
SML Sawmill 126.74 28 PFAKE 13 50 50.0 +12
SML LR LR
comp=Z,600nm,20.0s
NEW Newport 126.75 56 PFAKE 13 50 50.0 +11
NEW LR LR
comp=Z,1μm,20.0s
DIV Divide 126.82 30 PFAKE 13 50 50.0 +12
DIV LR LR
comp=Z,800nm,22.0s
DBIC Dimbokro 126.83 201 PKP **PKPdf 13 50 38.9 -0.4**
comp=Z,6.8nm,1.0s,baz=224,slow=3.9,SNR=3.2
SDD Santo Domingo 126.87 118 PFAKE 13 50 50.0 +10
SDD LR LR
comp=Z,2μm,21.0s
PHWY Pilot Hill 126.95 70 PFAKE 13 50 50.0 +10
PHWY LR LR
comp=Z,900nm,20.0s
X37A Clayton 126.99 83 PFAKE 13 50 50.0 +11
X37A LR LR
comp=Z,700nm,20.0s
SCM Sheep Creek Mo 127.01 29 PFAKE 13 50 50.0 +11
SCM LR LR
comp=Z,600nm,20.0s
WRAK Wrangell Islan 127.06 41 PFAKE 13 50 50.0 +11
WRAK LR LR
comp=Z,1μm,20.0s
MSO Missoula 127.08 59 PFAKE 13 50 50.0 +11
MSO LR LR
comp=Z,2μm,18.0s
MSO Missoula 127.08 59 P **PKiKP 13 50 40.1 +0.8**
baz=221
BOZ Bozeman (W) 127.22 62 PFAKE 13 50 50.0 +10
BOZ LR LR
comp=Z,1μm,19.0s
BOZ Bozeman (W) 127.22 62 P **PKiKP 13 50 41.3 +1.6**
baz=222
CRQM Cirque 127.22 32 PFAKE 13 50 50.0 +11
CRQM LR LR
comp=Z,700nm,22.0s
Z41A Richland Creek 127.30 86 PFAKE 13 50 50.0 +10
Z41A LR LR
comp=Z,500nm,19.0s
K22A Casper 127.44 68 PFAKE 13 50 50.0 +10
K22A LR LR
comp=Z,1μm,21.0s
WLAR White Oak Lake 127.47 85 PFAKE 13 50 50.0 +10
WLAR LR LR
comp=Z,700nm,18.0s
PCA Pinnacle 127.50 34 PFAKE 13 50 50.0 +10
PCA LR LR
comp=Z,700nm,19.0s
BCPM Bancas Point 127.57 34 PFAKE 13 50 50.0 +10
BCPM LR LR
comp=Z,500nm,18.0s
KTH Kantishna Hill 127.61 26 PFAKE 13 50 50.0 +10
KTH LR LR
comp=Z,1μm,22.0s
TRF Thorofare Moun 127.67 26 *e*PKPdf **PKiKP 13 50 40.7 +0.6**
TRF LR LR
comp=Z,200nm,20.0s
BALM Baldy 127.67 32 PFAKE 13 50 50.0 +10
BALM LR LR
comp=Z,1μm,22.0s
VBMS Vicksburg 127.69 88 PFAKE 13 50 50.0 +9.1
VBMS LR LR
comp=Z,500nm,18.0s
TUL1 Leonard 127.78 81 PFAKE 13 50 50.0 +9.0
TUL1 LR LR
comp=Z,700nm,19.0s
JIS Juneau Island 127.85 38 PFAKE 13 50 50.0 +10
JIS LR LR
comp=Z,800nm,20.0s
MIAR Mount Ida 127.89 84 PFAKE 13 50 50.0 +8.8
MIAR LR LR
comp=Z,500nm,18.0s
CTGM Chitina Glacie 127.90 32 PFAKE 13 50 50.0 +9.4
CTGM LR LR
comp=Z,600nm,20.0s
BESE Bessie Mountai 127.94 38 PFAKE 13 50 50.0 +9.4
BESE LR LR
comp=Z,900nm,19.0s
CBKS Cedar Bluff 127.95 76 PFAKE 13 50 50.0 +8.7
CBKS LR LR
comp=Z,700nm,22.0s
RLMT Red Lodge 127.97 64 PFAKE 13 50 50.0 +8.6
RLMT LR LR
comp=Z,1μm,20.0s
RND Reindeer 127.97 27 PFAKE 13 50 50.0 +9.4
RND LR LR
comp=Z,600nm,22.0s
DHY Denali Highway 128.05 28 PFAKE 13 50 50.0 +9.1
DHY LR LR
comp=Z,400nm,20.0s
BPAW Bear Paw Mtn. 128.07 26 PFAKE 13 50 50.0 +9.3
BPAW LR LR
comp=Z,1μm,22.0s
MCK McKinley 128.23 27 PFAKE 13 50 50.0 +9.0
MCK LR LR
comp=Z,600nm,22.0s
X40A Basin Creek Fa 128.24 85 PFAKE 13 50 50.0 +8.1
X40A LR LR
comp=Z,700nm,18.0s
W39A Magazine 128.28 83 PFAKE 13 50 50.0 +8.0
W39A LR LR
comp=Z,700nm,19.0s
SJG San Juan 128.29 122 PFAKE 13 50 50.0 +7.5
SJG LR LR
comp=Z,300nm,20.0s
OGNE Ogallala 128.39 72 PFAKE 13 50 50.0 +7.8
OGNE LR LR
comp=Z,800nm,20.0s
957A Wimauma 128.44 99 *e*PKPdf **PKiKP 13 50 42.5 0.0**
PAX Paxson 128.44 29 PFAKE 13 50 50.0 +8.4
PAX LR LR
comp=Z,700nm,22.0s
BWN Browne 128.48 26 PFAKE 13 50 50.0 +8.5
BWN LR LR
comp=Z,900nm,20.0s
SKAG Skagway 128.48 37 PFAKE 13 50 50.0 +8.4
SKAG LR LR
comp=Z,500nm,19.0s
UALR University of 128.72 85 PFAKE 13 50 50.0 +7.1
UALR LR LR
comp=Z,500nm,20.0s
MENT Mentasta 128.87 30 PFAKE 13 50 50.0 +7.7
MENT LR LR
comp=Z,500nm,20.0s
HYT Haines Junctio 128.90 34 PFAKE 13 50 50.0 +7.4
HYT LR LR
comp=Z,800nm,20.0s
MLY Manley 128.92 25 PFAKE 13 50 50.0 +7.6
MLY LR LR
comp=Z,500nm,22.0s
WRH Wood River Hil 129.05 27 PFAKE 13 50 50.0 +7.4
WRH LR LR
comp=Z,800nm,21.0s
W41B Gary Mavity, V 129.07 85 PFAKE 13 50 50.0 +6.4
W41B LR LR
comp=Z,400nm,18.0s
WHAR Wooly Hollow 129.14 85 PFAKE 13 50 50.0 +6.3
WHAR LR LR
comp=Z,600nm,18.0s
DWPF Disney Wildern 129.21 100 PFAKE 13 50 50.0 +5.9
DWPF LR LR
comp=Z,700nm,20.0s
RDOG Red Dog Mine 129.26 18 PFAKE 13 50 50.0 +7.1
RDOG LR LR
comp=Z,1μm,21.0s
CCB Clear Creek Bu 129.27 27 *e*PKPdf **PKiKP 13 50 42.5 -0.5**
CCB LR LR
comp=Z,700nm,20.0s
HDA Harding Lake 129.27 27 PFAKE 13 50 50.0 +6.9
HDA LR LR
comp=Z,700nm,20.0s
X43A Marvell 129.29 86 PFAKE 13 50 50.0 +6.0
X43A LR LR
comp=Z,700nm,18.0s
DOT Dot Lake 129.36 29 PFAKE 13 50 50.0 +6.7
DOT LR LR
comp=Z,600nm,20.0s
DLBC Dease Lake 129.43 40 PFAKE 13 50 50.0 +6.4
DLBC LR LR
comp=Z,1μm,20.0s
MDM Murphy Dome 129.43 26 PFAKE 13 50 50.0 +6.6
MDM LR LR
comp=Z,600nm,21.0s
COLA College 129.45 26 PFAKE 13 50 50.0 +6.7
COLA LR LR
comp=Z,600nm,20.0s
WHY Whitehorse 129.57 36 PFAKE 13 50 50.0 +6.1
WHY LR LR
comp=Z,1μm,22.0s
SMRT St. Maarten 129.59 125 PFAKE 13 51 00.0 +15
SMRT LR LR
comp=Z,700nm,21.0s
ILAR Eielson Array 129.59 27 PKP **PKPdf 13 50 42.2 -0.7**
comp=Z,0.5nm,0.9s,baz=242,slow=1.9,SNR=5.4
ILAR Eielson Array 129.59 27 *e*PKIKP **PKiKP 13 50 47.1 +3.4**
ILAR pmax pmax
comp=Z,4.0nm,1.1s
656A Willston 129.64 98 PFAKE 13 51 00.0 +15
656A LR LR
comp=Z,500nm,19.0s
FCAR Ozark Folk Cen 129.68 84 PFAKE 13 51 00.0 +15
FCAR LR LR
comp=Z,600nm,18.0s
250A Grady 129.75 92 PFAKE 13 51 00.0 +15
250A LR LR
comp=Z,400nm,19.0s
RSSD Black Hills 129.75 68 PFAKE 13 51 00.0 +15
RSSD LR LR
comp=Z,1μm,20.0s
KSU1 Kansas State U 129.77 78 PFAKE 13 51 00.0 +15
KSU1 LR LR
comp=Z,800nm,21.0s
EGMT Eagleton 129.88 61 PFAKE 13 51 00.0 +15
EGMT LR LR
comp=Z,700nm,20.0s
OXF Oxford 130.06 88 PFAKE 13 51 00.0 +14
OXF LR LR
comp=Z,400nm,18.0s
LRAL Lakeview Retre 130.19 91 PFAKE 13 51 00.0 +14
LRAL LR LR
comp=Z,400nm,20.0s
HBAR Harrisburg 130.20 86 PFAKE 13 51 00.0 +14
HBAR LR LR
comp=Z,2μm,18.0s
MET Memphis--Engin 130.25 87 PFAKE 13 51 00.0 +14
MET LR LR
comp=Z,500nm,19.0s
PRP Porcupine Dome 130.54 27 PFAKE 13 51 00.0 +14
PRP LR LR
comp=Z,800nm,22.0s
LAO LASA Array 130.56 64 PFAKE 13 51 00.0 +14
LAO LR LR
comp=Z,1μm,21.0s
BGNE Belgrade 130.70 75 PFAKE 13 51 00.0 +13
BGNE LR LR
comp=Z,800nm,20.0s
GNAR Gosnell 130.85 86 PFAKE 13 51 00.0 +13
GNAR LR LR
comp=Z,600nm,18.0s
Z50A Ashland 130.92 92 PFAKE 13 51 00.0 +13
Z50A LR LR
comp=Z,500nm,20.0s
DAWY Dawson 130.93 31 PFAKE 13 51 00.0 +14
DAWY LR LR
comp=Z,800nm,22.0s
EGAK Eagle 131.03 30 PFAKE 13 51 00.0 +13
EGAK LR LR
comp=Z,600nm,20.0s
152A Waverly Hall 131.10 93 PFAKE 13 51 00.0 +12
152A LR LR
comp=Z,400nm,19.0s

Y49A	**Blount Mountai**	**131.13**	**91**	PFAKE		13 51 00.0	+12
Y49A				LR	LR		
comp=Z,600nm,18.0s							
HALT	**Halls**	**131.16**	**86**	PFAKE		13 51 00.0	+12
HALT				LR	LR		
comp=Z,500nm,18.0s							
X48A	**Hartselle**	**131.25**	**90**	PFAKE		13 51 00.0	+12
X48A				LR	LR		
comp=Z,300nm,19.0s							
PVMO	**Portageville**	**131.35**	**86**	PFAKE		13 51 00.0	+12
PVMO				LR	LR		
comp=Z,600nm,19.0s							
GLAT	**Glass**	**131.46**	**86**	PFAKE		13 51 00.0	+12
GLAT				LR	LR		
comp=Z,600nm,19.0s							
FYU	**Fort Yukon**	**131.46**	**26**	PFAKE		13 51 00.0	+13
FYU				LR	LR		
comp=Z,700nm,22.0s							
PARMO	**Parma**	**131.51**	**85**	PFAKE		13 51 00.0	+12
PARMO				LR	LR		
comp=Z,500nm,19.0s							
TOC4	**Torodi Ar. Sit**	**131.56**	**211**	PFAKE		13 51 00.0	+11
TOC4				LR	LR		
comp=Z,900nm,20.0s							
TOC3	**Torodi Ar. Sit**	**131.56**	**211**	PFAKE		13 51 00.0	+11
TOC3				LR	LR		
comp=Z,1μm,20.0s							
TOC5	**Torodi Ar. Sit**	**131.57**	**211**	PFAKE		13 51 00.0	+11
TOC5				LR	LR		
comp=Z,1μm,20.0s							
TOB3	**Torodi Ar. Sit**	**131.57**	**211**	PFAKE		13 51 00.0	+11
TOB3				LR	LR		
comp=Z,1μm,20.0s							
TOA3	**Torodi Ar. Sit**	**131.58**	**211**	PFAKE		13 51 00.0	+11
TOA3				LR	LR		
comp=Z,900nm,20.0s							
TOB4	**Torodi Ar. Sit**	**131.58**	**211**	PFAKE		13 51 00.0	+11
TOB4				LR	LR		
comp=Z,900nm,20.0s							
TOA2	**Torodi Ar. Sit**	**131.58**	**211**	PFAKE		13 51 00.0	+11
TOA2				LR	LR		
comp=Z,900nm,20.0s							
TOA0	**Torodi Ar. Sit**	**131.58**	**211**	PFAKE		13 51 00.0	+11
TOA0				LR	LR		
comp=Z,1μm,21.0s							
TORD	**Torodi Ar. Bea**	**131.58**	**211**	PKP	**PKPdf**	**13 50 47.0**	**-1.2**
comp=Z,1.2nm,0.8s,baz=4.9,slow=1.0,SNR=5.6							
TOB2	**Torodi Ar. Sit**	**131.58**	**211**	PFAKE		13 51 00.0	+11
TOB2				LR	LR		
comp=Z,1μm,21.0s							
TOC2	**Torodi Ar. Sit**	**131.58**	**211**	PFAKE		13 51 00.0	+11
TOC2				LR	LR		
comp=Z,1μm,21.0s							
TOA1	**Torodi Ar. Sit**	**131.59**	**211**	*e*PKPdf	**PKPdf**	**13 50 47.0**	**-1.3**
TOA1				LR	LR		
comp=Z,1μm,21.0s							
TOB5	**Torodi Ar. Sit**	**131.59**	**211**	PFAKE		13 51 00.0	+11
TOB5				LR	LR		
comp=Z,1μm,21.0s							
TOC7	**Torodi Ar. Sit**	**131.60**	**211**	PFAKE		13 51 00.0	+11
TOC7				LR	LR		
comp=Z,900nm,20.0s							
TOC1	**Torodi Ar. Sit**	**131.60**	**211**	PFAKE		13 51 00.0	+11
TOC1				LR	LR		
comp=Z,1μm,20.0s							
CCM	**Cathedral Cave**	**131.78**	**83**	PFAKE		13 51 00.0	+11
CCM				LR	LR		
comp=Z,600nm,20.0s							
BVAR	**Borovoye Array**	**131.79**	**306**	PKP	**PKiKP**	**13 50 47.4**	**-1.0**
comp=Z,0.4nm,0.5s,baz=141,slow=0.9,SNR=5.1							
BRVK	**Borovoye**	**131.86**	**306**	PFAKE		13 51 00.0	+11
BRVK				LR	LR		
comp=Z,1μm,22.0s							
154A	**Montrose**	**131.91**	**95**	PFAKE		13 51 00.0	+11
154A				LR	LR		
comp=Z,500nm,19.0s							
WVT	**Waverly**	**132.12**	**88**	PFAKE		13 51 00.0	+10
WVT				LR	LR		
comp=Z,400nm,19.0s							
FVM	**French Village**	**132.15**	**84**	PFAKE		13 51 00.0	+10
FVM				LR	LR		
comp=Z,700nm,18.0s							
TOLK	**Toolik Lake Re**	**132.22**	**23**	PFAKE		13 51 00.0	+11
TOLK				LR	LR		
comp=Z,2μm,22.0s							
155A	**Kite**	**132.25**	**95**	P	**PKiKP**	**13 50 50.6**	**+0.6**
baz=218							
GOGA	**Godfrey**	**132.34**	**94**	PFAKE		13 51 00.0	+10
GOGA				LR	LR		
comp=Z,400nm,19.0s							
V48A	**Smith Brothers**	**132.36**	**89**	PFAKE		13 51 00.0	+10
V48A				LR	LR		
comp=Z,500nm,18.0s							
V48A	**Smith Brothers**	**132.36**	**89**	P	**PKiKP**	**13 50 50.5**	**+0.3**
baz=220							
T45A	**Paducah**	**132.37**	**86**	PFAKE		13 51 00.0	+10
T45A				LR	LR		
comp=Z,400nm,18.0s							
Y52A	**Lilburn**	**132.37**	**93**	PFAKE		13 51 00.0	+10
Y52A				LR	LR		
comp=Z,500nm,18.0s							
SWET	**Sewanee**	**132.43**	**90**	PFAKE		13 51 00.0	+10
SWET				LR	LR		
comp=Z,400nm,19.0s							
SIUC	**Southern Illin**	**132.59**	**85**	PFAKE		13 51 00.0	+9.4
SIUC				LR	LR		
comp=Z,700nm,18.0s							
W50A	**Signal Mountai**	**132.74**	**90**	PFAKE		13 51 00.0	+8.9
W50A				LR	LR		
comp=Z,500nm,21.0s							
T46A	**Princeton**	**132.78**	**87**	P	**PKiKP**	**13 50 52.2**	**+1.2**
baz=221							
DGMT	**Dagmar**	**132.80**	**64**	PFAKE		13 51 00.0	+9.3
DGMT				LR	LR		
comp=Z,1μm,20.0s							
DGMT	**Dagmar**	**132.80**	**64**	P	**PKiKP**	**13 50 52.3**	**+1.6**
baz=225							
V49A	**McMinnville**	**132.86**	**89**	P	**PKiKP**	**13 50 52.6**	**+1.4**
baz=220							
CLTN	**Cedars of Leba**	**132.88**	**89**	PFAKE		13 51 00.0	+8.8
CLTN				LR	LR		
comp=Z,300nm,20.0s							
W51A	**Cleveland**	**133.00**	**91**	P	**PKiKP**	**13 50 52.7**	**+1.2**
baz=220							
157A	**Early Branch**	**133.06**	**96**	P	**PKiKP**	**13 50 52.7**	**+1.0**
baz=218							
T47A	**Sharon Grove**	**133.15**	**87**	PFAKE		13 51 00.0	+8.2
T47A				LR	LR		
comp=Z,500nm,19.0s							
ECSD	**EROS Data Cent**	**133.16**	**74**	PFAKE		13 51 00.0	+8.4
ECSD				LR	LR		
comp=Z,700nm,20.0s							
ECSD	**EROS Data Cent**	**133.16**	**74**	P	**PKiKP**	**13 50 53.4**	**+1.8**
baz=224							
CPCT	**Cooper Cave**	**133.35**	**91**	PFAKE		13 51 00.0	+7.8
CPCT				LR	LR		
comp=Z,500nm,19.0s							
Z56A	**Williston**	**133.37**	**96**	PFAKE		13 51 00.0	+7.7
Z56A				LR	LR		
comp=Z,500nm,18.0s							
EPYK	**Eagle Plains**	**133.43**	**30**	PFAKE		13 51 00.0	+8.6
EPYK				LR	LR		
comp=Z,900nm,22.0s							
EPYK	**Eagle Plains**	**133.43**	**30**	P	**PKiKP**	**13 50 53.6**	**+2.1**
baz=221							
SCIA	**State Center**	**133.59**	**78**	PFAKE		13 51 00.0	+7.5
SCIA				LR	LR		
comp=Z,600nm,18.0s							
USIN	**University of**	**133.59**	**86**	PFAKE		13 51 00.0	+7.4
USIN				LR	LR		
comp=Z,500nm,20.0s							
Y55A	**Saluda**	**133.59**	**95**	P	**PKiKP**	**13 50 54.1**	**+1.4**
baz=219							
HODGE	**Hodges**	**133.61**	**94**	PFAKE		13 51 00.0	+7.2
HODGE				LR	LR		
comp=Z,500nm,18.0s							
V51A	**Loudon**	**133.71**	**91**	PFAKE		13 51 00.0	+7.1
V51A				LR	LR		
comp=Z,400nm,20.0s							
V51A	**Loudon**	**133.71**	**91**	P	**PKiKP**	**13 50 53.9**	**+1.0**
baz=220							
X54A	**Belton**	**133.79**	**94**	P	**PKiKP**	**13 50 54.5**	**+1.3**
baz=220							
NHSC	**New Hope**	**133.83**	**97**	P	**PKiKP**	**13 50 54.4**	**+1.2**
baz=218							
OLIL	**Olney**	**133.93**	**85**	PFAKE		13 51 00.0	+6.7
OLIL				LR	LR		
comp=Z,400nm,18.0s							
N41A	**Harden Midland**	**133.94**	**81**	PFAKE		13 51 00.0	+6.8
N41A				LR	LR		
comp=Z,900nm,22.0s							
T49A	**Edmonton**	**134.07**	**89**	PFAKE		13 51 00.0	+6.4
T49A				LR	LR		
comp=Z,500nm,18.0s							
T49A	**Edmonton**	**134.07**	**89**	P	**PKiKP**	**13 50 54.6**	**+1.0**
baz=221							
V52A	**Sevierville**	**134.13**	**91**	PFAKE		13 51 00.0	+6.2
V52A				LR	LR		
comp=Z,400nm,18.0s							
JSC	**Jenkinsville**	**134.17**	**95**	PFAKE		13 51 00.0	+6.1
JSC				LR	LR		
comp=Z,500nm,18.0s							
PAULI	**Pauline**	**134.29**	**94**	PFAKE		13 51 00.0	+5.9
PAULI				LR	LR		
comp=Z,400nm,19.0s							
V53A	**Saluda**	**134.42**	**92**	PFAKE		13 51 00.0	+5.6
V53A				LR	LR		
comp=Z,400nm,19.0s							
Y57A	**Sumter**	**134.42**	**96**	PFAKE		13 51 00.0	+5.6
Y57A				LR	LR		
comp=Z,500nm,18.0s							
WCI	**Wyandotte Cave**	**134.51**	**87**	*e*PKPdf	**PKPdf**	**13 50 52.3**	**-0.7**
WCI				LR	LR		
comp=Z,600nm,20.0s							
WCI	**Wyandotte Cave**	**134.51**	**87**	*e*PKIKP	**PKPdf**	**13 50 52.3**	**-0.7**
WCI				MLR	MLR		
comp=Z,600nm,20.0s							
MDND	**Maddock**	**134.57**	**68**	PFAKE		13 51 00.0	+5.7
MDND				LR	LR		
comp=Z,1μm,19.0s							
HDIL	**Hopedale**	**134.64**	**82**	PFAKE		13 51 00.0	+5.3
HDIL				LR	LR		
comp=Z,800nm,20.0s							
TZTN	**Tazewell**	**134.69**	**91**	PFAKE		13 51 10.0	+15
TZTN				LR	LR		
comp=Z,500nm,21.0s							
P45A	**Graceland, Par**	**134.70**	**84**	PFAKE		13 51 00.0	+5.2
P45A				LR	LR		
comp=Z,600nm,18.0s							
Y58A	**Scranton**	**134.72**	**97**	PFAKE		13 51 10.0	+15
Y58A				LR	LR		
comp=Z,600nm,21.0s							
L40A	**Anamosa**	**134.73**	**79**	PFAKE		13 51 00.0	+5.2
L40A				LR	LR		
comp=Z,1μm,19.0s							
BIRD	**Birdtown, Kers**	**134.87**	**95**	PFAKE		13 51 10.0	+15
BIRD				LR	LR		
comp=Z,500nm,20.0s							
GNI	**Garni**	**135.08**	**276**	PFAKE		13 51 10.0	+14
GNI				LR	LR		
comp=Z,800nm,19.0s							
BLO	**Bloomington**	**135.08**	**86**	PFAKE		13 51 10.0	+14
BLO				LR	LR		
comp=Z,700nm,18.0s							
R49A	**Shelbyville**	**135.14**	**88**	PFAKE		13 51 10.0	+14
R49A				LR	LR		
comp=Z,500nm,22.0s							
T52A	**Hallie**	**135.41**	**91**	PFAKE		13 51 10.0	+14
T52A				LR	LR		
comp=Z,600nm,19.0s							
S51A	**Beattyville**	**135.49**	**90**	PFAKE		13 51 10.0	+14
S51A				LR	LR		
comp=Z,600nm,22.0s							
L42A	**Oliver, Polo**	**135.49**	**81**	PFAKE		13 51 10.0	+14
L42A				LR	LR		
comp=Z,1μm,22.0s							
W57A	**Gilead**	**135.50**	**95**	PFAKE		13 51 10.0	+13
W57A				LR	LR		
comp=Z,500nm,20.0s							
Y60A	**Bolivia**	**135.55**	**98**	PFAKE		13 51 10.0	+13
Y60A				LR	LR		
comp=Z,500nm,18.0s							
AKTO	**Aktyubinsk**	**135.58**	**296**	PKP	**PKPdf**	**13 50 54.1**	**-0.6**
comp=Z,0.5nm,0.3s,baz=108,slow=6.4,SNR=2.1							
R50A	**Paris**	**135.58**	**88**	PFAKE		13 51 10.0	+13
R50A				LR	LR		
comp=Z,600nm,18.0s							
U54A	**Nelsons Funny**	**135.59**	**92**	PFAKE		13 51 10.0	+13
U54A				LR	LR		
comp=Z,600nm,18.0s							
SFIN	**Lafayette**	**135.66**	**84**	PFAKE		13 51 10.0	+13
SFIN				LR	LR		
comp=Z,700nm,19.0s							
INK	**Inuvik**	**135.70**	**30**	PFAKE		13 51 10.0	+14
INK				LR	LR		
comp=Z,1μm,22.0s							
V56A	**Mocksville**	**135.74**	**94**	PFAKE		13 51 10.0	+13
V56A				LR	LR		
comp=Z,600nm,20.0s							
JFWS	**Jewell Farm**	**135.84**	**79**	PFAKE		13 51 10.0	+13
JFWS				LR	LR		
comp=Z,1μm,20.0s							
P48A	**Milroy**	**135.87**	**86**	PFAKE		13 51 10.0	+13
P48A				LR	LR		
comp=Z,500nm,20.0s							
M44A	**Midewin, Midew**	**135.90**	**82**	PFAKE		13 51 10.0	+13
M44A				LR	LR		
comp=Z,700nm,19.0s							
SPMN	**Marine on St.**	**136.15**	**75**	PFAKE		13 51 10.0	+12
SPMN				LR	LR		
comp=Z,800nm,22.0s							
AKH	**Akhalkalaki**	**136.64**	**277**	PFAKE		13 51 10.0	+11
AKH				LR	LR		
comp=Z,700nm,19.0s							
Q51A	**Peebles**	**136.65**	**89**	PFAKE		13 51 10.0	+11
Q51A				LR	LR		
comp=Z,500nm,22.0s							
CNNC	**Cliffs of the**	**136.67**	**97**	PFAKE		13 51 10.0	+11
CNNC				LR	LR		
comp=Z,900nm,18.0s							
K43A	**Burlington**	**136.69**	**81**	PFAKE		13 51 10.0	+11
K43A				LR	LR		
comp=Z,1μm,20.0s							
AGMN	**Agassiz Nation**	**136.72**	**70**	PFAKE		13 51 10.0	+11
AGMN				LR	LR		
comp=Z,900nm,22.0s							
M46A	**Old House Fiel**	**136.80**	**84**	PFAKE		13 51 10.0	+11
M46A				LR	LR		
comp=Z,500nm,20.0s							
S54A	**Dingess, Beckl**	**136.81**	**91**	P	**PKiKP**	**13 50 59.8**	**+0.5**
baz=222							
BLA	**Blacksburg**	**136.84**	**93**	PFAKE		13 51 10.0	+11
BLA				LR	LR		
comp=Z,500nm,19.0s							
I41A	**Arkdale**	**136.84**	**78**	PFAKE		13 51 10.0	+11
I41A				LR	LR		
comp=Z,900nm,20.0s							
R53A	**Hurricane**	**136.87**	**90**	PFAKE		13 51 10.0	+11
R53A				LR	LR		
comp=Z,500nm,20.0s							
O49A	**Covington**	**136.98**	**87**	PFAKE		13 51 10.0	+11
O49A				LR	LR		
comp=Z,500nm,19.0s							
O49A	**Covington**	**136.98**	**87**	P	**PKiKP**	**13 51 00.8**	**+1.4**
baz=223							
P51A	**Williamsport**	**137.13**	**88**	PFAKE		13 51 10.0	+10
P51A				LR	LR		
comp=Z,600nm,19.0s							
NRIK	**Noril'sk**	**137.16**	**330**	*e*PKIKP	**PKiKP**	**13 51 04.0**	**+5.1**
I42A	**Draeger Farm,**	**137.22**	**79**	PFAKE		13 51 10.0	+10
I42A				LR	LR		
comp=Z,1μm,19.0s							
L46A	**Eue Claire**	**137.26**	**83**	PFAKE		13 51 10.0	+10
L46A				LR	LR		
comp=Z,700nm,19.0s							
T57A	**Hurt**	**137.29**	**94**	PFAKE		13 51 10.0	+10
T57A				LR	LR		
comp=Z,500nm,20.0s							
V60A	**Jim Taylor Roa**	**137.40**	**97**	PFAKE		13 51 10.0	+10
V60A				LR	LR		
comp=Z,700nm,19.0s							
Q53A	**Leroy**	**137.49**	**90**	P	**PKiKP**	**13 51 01.9**	**+1.4**
baz=222							
G40A	**Rib Lake**	**137.51**	**77**	PFAKE		13 51 10.0	+10
G40A				LR	LR		
comp=Z,600nm,19.0s							
N49A	**Columbus Grove**	**137.59**	**86**	PFAKE		13 51 10.0	+9.4
N49A				LR	LR		
comp=Z,400nm,18.0s							
M48A	**Edgerton**	**137.71**	**85**	PFAKE		13 51 10.0	+9.1
M48A				LR	LR		
comp=Z,500nm,21.0s							
YKA	**Yellowknife Ar**	**137.71**	**44**	PKP	**PKPdf**	**13 50 56.5**	**-1.8**
comp=Z,0.7nm,0.8s,baz=234,slow=2.5,SNR=5.8							
ACSO	**Alum Creek Sta**	**137.72**	**88**	PFAKE		13 51 10.0	+9.1
ACSO				LR	LR		
comp=Z,500nm,18.0s							
E38A	**The Farm, Brul**	**137.73**	**74**	PFAKE		13 51 10.0	+9.2
E38A				LR	LR		
comp=Z,1μm,18.0s							
YKW3	**Yellowknife Ar**	**137.75**	**43**	PFAKE		13 51 10.0	+10
YKW3				LR	LR		
comp=Z,700nm,19.0s							
V61A	**Roper**	**137.78**	**98**	PFAKE		13 51 10.0	+8.8
V61A				LR	LR		
comp=Z,600nm,20.0s							
Q54A	**Coxs Mills**	**137.94**	**91**	PFAKE		13 51 10.0	+8.6
Q54A				LR	LR		
comp=Z,700nm,20.0s							
ULM	**Lac du Bonnet**	**138.00**	**67**	PFAKE		13 51 10.0	+8.8
ULM				LR	LR		
comp=Z,1μm,19.0s							
FFC	**Flin Flon**	**138.01**	**59**	PFAKE		13 51 10.0	+9.0
FFC				LR	LR		
comp=Z,800nm,19.0s							
FFC	**Flin Flon**	**138.01**	**59***c*	*i*PKIKP	**PKiKP**	**13 51 06.1**	**+5.1**
FFC				pmax	pmax		
comp=Z,12nm,1.7s							
P53A	**Whipple**	**138.02**	**90**	PFAKE		13 51 10.0	+8.4
P53A				LR	LR		
comp=Z,600nm,20.0s							
S57A	**Dark Hollow, R**	**138.02**	**94**	PFAKE		13 51 10.0	+8.4
S57A				LR	LR		
comp=Z,500nm,20.0s							
T59A	**Double "B" Far**	**138.17**	**96**	PFAKE		13 51 10.0	+8.1
T59A				LR	LR		
comp=Z,600nm,19.0s							
H43A	**Windswept, Lux**	**138.21**	**79**	PFAKE		13 51 10.0	+8.2
H43A				LR	LR		
comp=Z,1μm,20.0s							
J45A	**Montague**	**138.21**	**82**	PFAKE		13 51 10.0	+8.2
J45A				LR	LR		
comp=Z,800nm,19.0s							
O52A	**Adamsville**	**138.24**	**89**	PFAKE		13 51 10.0	+8.0
O52A				LR	LR		
comp=Z,500nm,20.0s							
S58A	**Poland Farm, P**	**138.39**	**95**	PFAKE		13 51 10.0	+7.6
S58A				LR	LR		
comp=Z,600nm,19.0s							
M50A	**Fremont**	**138.53**	**86**	PFAKE		13 51 10.0	+7.5
M50A				LR	LR		
comp=Z,500nm,20.0s							
N51A	**Ashland**	**138.54**	**87**	PFAKE		13 51 10.0	+7.4
N51A				LR	LR		
comp=Z,500nm,20.0s							
COWI	**Conover**	**138.62**	**77**	PFAKE		13 51 10.0	+7.4
COWI				LR	LR		
comp=Z,700nm,20.0s							
EYMN	**Ely**	**138.66**	**73**	PFAKE		13 51 10.0	+7.4
EYMN				LR	LR		
comp=Z,900nm,21.0s							
I45A	**Fountain**	**138.71**	**81**	PFAKE		13 51 10.0	+7.2
I45A				LR	LR		
comp=Z,900nm,20.0s							
T60A	**Surry**	**138.72**	**96**	PFAKE		13 51 10.0	+6.9
T60A				LR	LR		
comp=Z,500nm,22.0s							
R58B	**Mineral**	**138.74**	**94**	PFAKE		13 51 10.0	+6.9
R58B				LR	LR		
comp=Z,600nm,19.0s							
AAM	**Ann Arbor**	**138.85**	**85**	PFAKE		13 51 10.0	+6.8
AAM				LR	LR		
comp=Z,500nm,18.0s							
KIV	**Kislovodsk**	**138.86**	**279**	PFAKE		13 51 10.0	+6.7
KIV				LR	LR		
comp=Z,400nm,18.0s							
KIV	**Kislovodsk**	**138.86**	**279**	*i* PKIKP	**PKiKP**	**13 51 02.0**	**-1.3**
KIV				*e*		13 53 51.4	
KIV				*e*		14 12 08.2	
KIV				pmax	pmax		
comp=Z,18nm,1.1s							
J47A	**Sunmer**	**138.89**	**83**	PFAKE		13 51 10.0	+6.8
J47A				LR	LR		
comp=Z,800nm,20.0s							
MCWV	**Mont Chateau**	**138.96**	**91**	PFAKE		13 51 10.0	+6.5
MCWV				LR	LR		
comp=Z,400nm,19.0s							
ARU	**Arti**	**139.18**	**303**	PFAKE		13 51 10.0	+6.6
ARU				LR	LR		
comp=Z,900nm,20.0s							
ARU	**Arti**	**139.18**	**303**	*i* PKIKP	**PKiKP**	**13 51 02.1**	**-1.3**
ARU						13 53 53.9	
ARU				MLR	MLR		
comp=Z,878nm,21.0s							
CBN	**Corbin Frederi**	**139.19**	**95**	PFAKE		13 51 10.0	+6.0
CBN				LR	LR		
comp=Z,600nm,20.0s							
N53A	**Lisbon**	**139.26**	**89**	PFAKE		13 51 10.0	+5.9
N53A				LR	LR		
comp=Z,500nm,18.0s							
P56A	**Dayton Farm, R**	**139.37**	**92**	P	**PKiKP**	**13 51 05.3**	**+1.0**
baz=223							
J48A	**Bridge Port**	**139.48**	**84**	PFAKE		13 51 10.0	+5.6
J48A				LR	LR		
comp=Z,700nm,18.0s							
TAM	**Tamanrasset**	**139.49**	**220**	PFAKE		13 51 10.0	+4.7
TAM				LR	LR		
comp=Z,700nm,20.0s							
M52A	**Chesterland**	**139.52**	**88**	PFAKE		13 51 10.0	+5.4
M52A				LR	LR		
comp=Z,600nm,20.0s							
D41A	**Chassel**	**139.56**	**76**	PFAKE		13 51 10.0	+5.5
D41A				LR	LR		
comp=Z,1μm,20.0s							
H46A	**Fife Lake**	**139.59**	**81**	P	**PKiKP**	**13 51 06.6**	**+1.9**
baz=227							
I47A	**Gladwin**	**139.60**	**82**	PFAKE		13 51 10.0	+5.4
I47A				LR	LR		
comp=Z,1μm,20.0s							
G45A	**Suttons Bay**	**139.70**	**80**	PFAKE		13 51 10.0	+5.2
G45A				LR	LR		
comp=Z,1μm,19.0s							
K50A	**Casco**	**139.72**	**85**	PFAKE		13 51 10.0	+5.1
K50A				LR	LR		
comp=Z,700nm,18.0s							
N54A	**Moraine State**	**139.82**	**89**	PFAKE		13 51 10.0	+4.8
N54A				LR	LR		
comp=Z,600nm,21.0s							
C40A	**Isle Royale Na**	**139.82**	**75**	PFAKE		13 51 10.0	+5.0
C40A				LR	LR		
comp=Z,900nm,21.0s							
E43A	**Lone Tree Farm**	**139.91**	**78**	PFAKE		13 51 10.0	+4.8
E43A				LR	LR		
comp=Z,900nm,18.0s							
O56A	**Blue Knob Stat**	**140.07**	**91**	PFAKE		13 51 20.0	+14
O56A				LR	LR		
comp=Z,500nm,18.0s							
GLMI	**Grayling**	**140.09**	**81**	PFAKE		13 51 10.0	+4.3
GLMI				LR	LR		
comp=Z,800nm,21.0s							
N55A	**Marion Center**	**140.22**	**90**	PFAKE		13 51 20.0	+14
N55A				LR	LR		
comp=Z,500nm,20.0s							
SDMD	**Soldier's Deli**	**140.36**	**94**	PFAKE		13 51 20.0	+14
SDMD				LR	LR		
comp=Z,400nm,21.0s							
M54A	**Oil Creek Stat**	**140.38**	**89**	PFAKE		13 51 20.0	+14
M54A				LR	LR		
comp=Z,600nm,20.0s							
I49A	**Point Hope**	**140.43**	**84**	PFAKE		13 51 20.0	+14
I49A				LR	LR		
comp=Z,700nm,18.0s							
BRTR	**Keskin Array B**	**140.61**	**267**	*e*PKIKP	**PKiKP**	**13 51 09.2**	**+2.1**
E44A	**Grand Marais A**	**140.62**	**78**	PFAKE		13 51 20.0	+13
E44A				LR	LR		
comp=Z,900nm,20.0s							
ERPA	**Erie**	**140.65**	**88**	PFAKE		13 51 20.0	+13
ERPA				LR	LR		
comp=Z,600nm,20.0s							
H48A	**Harrisville**	**140.69**	**83**	PFAKE		13 51 20.0	+13
H48A				LR	LR		
comp=Z,600nm,19.0s							
SSPA	**Standing Stone**	**140.70**	**92**	PFAKE		13 51 20.0	+13
SSPA				LR	LR		
comp=Z,600nm,19.0s							
ISP	**Isparta**	**140.84**	**262**	PFAKE		13 51 20.0	+12

ISP LR LR
comp=Z,400nm,20.0s
ANTO Ankara 141.16 266 PFAKE 13 51 20.0 +12
ANTO LR LR
comp=Z,500nm,20.0s
E46A Sault Ste Mari 141.29 80 PFAKE 13 51 20.0 +12
E46A LR LR
comp=Z,1µm,18.0s
PSUB Penn St. - Bra 141.47 94 PFAKE 13 51 20.0 +11
PSUB LR LR
comp=Z,600nm,19.0s
ILGA Ilgaz 141.53 268 PFAKE 13 51 20.0 +11
ILGA LR LR
comp=Z,600nm,19.0s
LUPA Lehigh Univers 141.99 94 PFAKE 13 51 20.0 +10
LUPA LR LR
comp=Z,100nm,19.0s
N59A State Game Lan 142.01 93 PFAKE 13 51 20.0 +10
N59A LR LR
comp=Z,600nm,20.0s
J54A Appleton 142.16 88 PFAKE 13 51 20.0 +10
J54A LR LR
comp=Z,500nm,19.0s
MMNY Mt. Morris Dam 142.18 89 PFAKE 13 51 20.0 +10
MMNY LR LR
comp=Z,600nm,19.0s
MEDO Medina 142.19 88 PFAKE 13 51 20.0 +10
MEDO LR LR
comp=Z,500nm,20.0s
SANT Santorini 142.34 255 PFAKE 13 51 20.0 +9.4
SANT LR LR
comp=Z,400nm,20.0s
KSPA Keystone Colle 142.47 92 PFAKE 13 51 20.0 +9.4
KSPA LR LR
comp=Z,600nm,21.0s
BRNJ Basking Ridge 142.48 94 PFAKE 13 51 20.0 +9.4
BRNJ LR LR
comp=Z,600nm,20.0s
J55A Hilton 142.59 89 PFAKE 13 51 20.0 +9.2
J55A LR LR
comp=Z,600nm,20.0s
ODNJ Ogdensburg 142.75 94 PFAKE 13 51 20.0 +8.8
ODNJ LR LR
comp=Z,500nm,20.0s
BINY Binghamton 142.81 91 PFAKE 13 51 20.0 +8.7
BINY LR LR
comp=Z,600nm,21.0s
CPNY Central Park 142.88 95 PFAKE 13 51 20.0 +8.6
CPNY LR LR
comp=Z,900nm,19.0s
SADO Sadowa 142.92 86 PFAKE 13 51 20.0 +8.6
SADO LR LR
comp=Z,600nm,18.0s
PAL Palisades 143.06 95 PFAKE 13 51 20.0 +8.2
PAL LR LR
comp=Z,700nm,19.0s
F51A Arnstein 143.29 84 P PKPbc 13 51 06.4 +0.4
baz=229
PECO Prince Edward 143.49 88 PFAKE 13 51 20.0 +7.4
PECO LR LR
comp=Z,700nm,21.0s
DELO Deloro Mine 143.56 87 PFAKE 13 51 20.0 +7.3
DELO LR LR
comp=Z,500nm,19.0s
BANO Bancroft 143.73 86 P PKPbc 13 51 07.0 -0.3
baz=228
YLE Yale 143.79 95 PFAKE 13 51 20.0 +6.7
YLE LR LR
comp=Z,700nm,18.0s
KSCT Kent School, K 143.79 94 PFAKE 13 51 20.0 +6.7
KSCT LR LR
comp=Z,600nm,18.0s
FCC Fort Churchill 143.89 57 *e*PKPdf PKPbc 13 51 06.7 -0.6
FCC LR LR
comp=Z,900nm,21.0s
FCC Fort Churchill 143.89 57 *e*PKIKP PKPbc 13 51 06.7 -0.6
FCC MLR MLR
comp=Z,900nm,21.0s
E51A G1948 Merrick 143.91 83 P PKPbc 13 51 07.2 -0.6
baz=229
SIM Simferopol' 144.03 273 *i* PKIKP **PKiKP 13 51 14.1 +0.4**
SIM pmax pmax
comp=Z,20nm,10.8s
SIM pmax pmax
comp=Z,50nm,12.2s
D50A G1974 Best Tow 144.14 82 P PKPbc 13 51 08.0 -0.5
baz=230
E52A Mattawa 144.19 84 P PKPbc 13 51 08.1 -0.5
baz=229,SNR=12
PLVO Plevna 144.19 87 PFAKE 13 51 20.0 +6.0
PLVO LR LR
comp=Z,600nm,20.0s
PLVO Plevna 144.19 87 P PKPbc 13 51 08.8 +0.1
baz=228
ALGO Algonquin Park 144.29 85 P **PKPab 13 51 07.5 -1.1**
baz=229
H56A Elgin 144.32 88 P **PKPab 13 51 07.6 -1.1**
baz=227
D51A Lot 18 Range I 144.34 83 P **PKPab 13 51 07.5 -1.3**
baz=230
KIRV Kirov 144.47 302 PKP **PKPdf 13 51 09.1 -1.3**
comp=Z,8.2nm,0.9s,baz=139,slow=4.4,SNR=9.5
EZN Ezine 144.51 260 ⇑*iP* **PKiKP 13 51 14.0 -0.8**
EZN Ezine 144.51 260 ⇑PKIKP **PKiKP 13 51 14.0 -0.8**
G55A Calabogie 144.52 87 P **PKPab 13 51 08.6 -0.8**
baz=228
PEMO Pembroke 144.53 86 P **PKPab 13 51 09.1 -0.4**
baz=228
D52A ZEK Kipawa Sen 144.76 83 P **PKPab 13 51 09.7 -0.7**
baz=230,SNR=8.8
E53A Dumoine, Ponti 144.77 85 P PKPbc 13 51 10.1 -0.3
baz=229,SNR=15
QUA2 Belchertown 144.78 95 *e*PKPdf PKPbc 13 51 10.5 -0.2
QUA2 LR LR
comp=Z,700nm,21.0s
BRYW Bryant College 144.95 96 *e*PKPbc **PKPdf 13 51 11.3 -0.6**
BRYW LR LR
comp=Z,700nm,18.0s
NCB Newcomb 144.97 91 *e*PKPbc **PKPbc 13 51 10.4 -0.8**
NCB LR LR
comp=Z,500nm,18.0s
E54A Lac Daplat, Po 145.06 85 P **PKPbc 13 51 11.0 -0.4**
baz=229,SNR=7.4
F55A Otter Lake 145.10 87 P **PKPbc 13 51 10.8 -0.8**
baz=229
VORD Divnogorie 145.14 285 *e*PKP2 **PKPbc 13 51 09.5 -2.0**
VORD pmax pmax
comp=Z,10.0nm,1.0s
D53A Lac Vacive, Po 145.20 84 *e*PKPbc **PKPbc 13 51 11.3 -0.6**
D53A LR LR
comp=Z,700nm,20.0s
D53A Lac Vacive, Po 145.20 84 P **PKPbc 13 51 11.2 -0.6**
baz=230,SNR=10
LONY Lake Ozonia 145.22 90 *e*PKPbc **PKPbc 13 51 11.3 -0.7**
LONY LR LR
comp=Z,600nm,19.0s
LONY Lake Ozonia 145.22 90 P **PKPbc 13 51 11.0 -1.0**
baz=228,SNR=7.0
ORIO Orleans, Innes 145.29 88 P **PKPbc 13 51 11.2 -0.9**
baz=228,SNR=5.0
VSR Storozhevoye 145.36 285 *e*PKP2 **PKPbc 13 51 10.4 -1.8**
VSR pmax pmax
comp=Z,30nm,1.4s
HRV Adam Dziewonsk 145.36 95 PFAKE 13 51 20.0 +3.5
HRV LR LR
comp=Z,700nm,21.0s
HRV Adam Dziewonsk 145.36 95 P **PKPbc 13 51 11.8 -0.7**
baz=225
WES Weston 145.40 95 PFAKE 13 51 20.0 +3.4
WES LR LR
comp=Z,600nm,19.0s
ALN Alexandroupoli 145.44 261 *e*PKPbc **PKPbc 13 51 11.6 -1.2**
ALN LR LR
comp=Z,200nm,20.0s
ALN Alexandroupoli 145.44 261 *e*PKP2 **PKPbc 13 51 11.6 -1.2**
ALN MLR MLR
comp=Z,200nm,20.0s
D54A Lac Fusel, La 145.80 85 P **PKPdf 13 51 12.6 -0.6**
baz=230,SNR=9.1
HNH Hanover 145.81 93 PFAKE 13 51 20.0 +2.6
HNH LR LR
comp=Z,600nm,19.0s
FRNY Flat Rock 145.89 90 PFAKE 13 51 20.0 +2.5
FRNY LR LR
comp=Z,800nm,20.0s
FFD Franklin Falls 145.98 94 PFAKE 13 51 30.0 +12
FFD LR LR
comp=Z,600nm,19.0s
VLDQ Val d'Or 145.99 83 *e*PKPdf **PKPdf 13 51 12.7 -0.7**
VLDQ LR LR
comp=Z,1µm,20.0s
VT1 Waterbury 145.99 92 PFAKE 13 51 30.0 +12
VT1 LR LR
comp=Z,600nm,19.0s
LPSR Galich'ya Gora 146.28 287 *e*PKIKP **PKPbc 13 51 13.8 -1.2**
LPSR pmax pmax
comp=Z,70nm,1.0s
TRQ Mont Tremblant 146.30 88 *e*PKPdf **PKPbc 13 51 14.5 -0.9**
LBNH Lisbon 146.37 92 PFAKE 13 51 30.0 +11
LBNH LR LR
comp=Z,500nm,20.0s
LIT Litokhoron 146.69 256 PFAKE 13 51 30.0 +11
LIT LR LR
comp=Z,500nm,19.0s
TIRR Tirgusor 146.70 268 *e*PKPbc **PKPab 13 51 16.4 -1.3**
TIRR LR LR
comp=Z,1µm,22.0s
TIRR Tirgusor 146.70 268 ⇑*iP* **PKPab 13 51 17.3 -0.4**
TIRR Tirgusor 146.70 268 ⇑PKP2 **PKPab 13 51 17.3 -0.4**
LSQQ Lebel-sur-Quev 146.82 82 P **PKPbc 13 51 15.8 -0.9**
baz=232
MATQ Matagami 146.90 80 P **PKPbc 13 51 15.8 -1.1**
baz=233
HARR Harsova 147.11 267 ⇓*iP* **PKPdf 13 51 11.6 -3.8**
WDD Wied Dalam 147.28 242 PFAKE 13 51 30.0 +9.3
WDD LR LR
comp=Z,700nm,20.0s
CFR Carcaliu 147.33 268 ⇑*iP* **PKiKP 13 51 20.1 -0.4**
CFR Carcaliu 147.33 268 ⇑PKP2 **PKiKP 13 51 20.1 -0.4**
VAY Valandovo 147.55 258 *i* PKP **PKiKP 13 51 21.2 +0.1**
PRGR Permogore 147.59 305 *e*PKIKP **PKPdf 13 51 14.8 -0.9**
PRGR pmax pmax
comp=Z,44nm,1.5s
WVL Waterville 147.78 94 PFAKE 13 51 30.0 +8.1
WVL LR LR
comp=Z,700nm,18.0s
STIP Stip 148.02 258 *i* PKP **PKiKP 13 51 20.7 -1.4**
VTS Vitosha 148.14 260 *e*PKPbc **PKPbc 13 51 19.1 -1.6**
VTS LR LR
comp=Z,400nm,20.0s
VTS Vitosha 148.14 260 ⇑*iP* **PKPbc 13 51 19.4 -1.3**
VTS Vitosha 148.14 260 ⇑PKIKP **PKPbc 13 51 19.4 -1.3**
KRUS Krusevo 148.26 257 *i* PKP **PKPbc 13 51 19.3 -1.7**
OHR Ohrid 148.30 256 *i* PKP **PKPab 13 51 23.9 -0.4**
BISRR Bisoca 148.33 268 ⇓*iP* **PKPbc 13 51 21.0 0.0**
PKME Peaks-Kenny Pk 148.44 93 PFAKE 13 51 30.0 +5.4
PKME LR LR
comp=Z,800nm,19.0s
VRI Vrincioaia 148.53 268 ⇓*iP* **PKPbc 13 51 20.7 -0.8**
VRI Vrincioaia 148.53 268 ⇓PKP2 **PKPbc 13 51 20.7 -0.8**
PLOR Plostina 148.56 268 ⇑*iP* **PKPbc 13 51 20.5 -1.1**
PLOR Plostina 148.56 268 ⇑PKIKP **PKPbc 13 51 20.5 -1.1**
CEL Celeste 148.58 247 PFAKE 13 51 30.0 +4.6
CEL LR LR
comp=Z,700nm,21.0s
MOS Moscow 148.59 291 *e*PKIKP **PKPbc 13 51 19.5 -1.7**
MOS MLR MLR
comp=Z,900nm,19.0s
SKO Skopje 148.60 258 *i* PKP **PKPab 13 51 24.1 -1.3**
CHGQ Chibougamau 148.69 82 P **PKPbc 13 51 20.5 -1.2**
baz=234
MLR Muntele Rosu 148.69 267 PKPbc **PKPbc 13 51 20.6 -1.5**
comp=Z,5.0nm,0.7s,baz=1.8,slow=6.0,SNR=8.3
MLR Muntele Rosu 148.69 267 *e*PKPbc **PKPbc 13 51 20.6 -1.5**
MLR LR LR
comp=Z,600nm,21.0s
MLR Muntele Rosu 148.69 267 ⇓*iP* **PKPbc 13 51 21.2 -0.8**
MLR Muntele Rosu 148.69 267 ⇓PKP2 **PKPbc 13 51 21.2 -0.8**
OBN Obninsk 148.80 290 PKPbc **PKPbc 13 51 20.9 -0.8**
comp=Z,5.1nm,0.4s,baz=26,slow=1.4,SNR=7.0
OBN Obninsk 148.80 290 *e*PKPbc **PKiKP 13 51 21.9 -1.3**
OBN LR LR
comp=Z,800nm,21.0s
OBN Obninsk 148.80 290 ⇓*iP* **PKiKP 13 51 23.5 +0.4**
OBN Obninsk 148.80 290 *i* PKIKP **PKPbc 13 51 19.4 -2.4**
OBN *e* 13 54 57.8
OBN *i* SS SS 14 14 05.1 +1.9
OBN pmax pmax
comp=Z,48nm,1.1s
TIP Timpagrande 148.87 249 PFAKE 13 51 30.0 +3.4
TIP LR LR
comp=Z,600nm,19.0s
TIP Timpagrande 148.87 249 ⇑*iP* **PKPbc 13 51 20.1 -2.5**
TIR Tirane 148.95 255 PFAKE 13 51 30.0 +3.2
TIR LR LR
comp=Z,600nm,19.0s
EMMW East Machias 149.03 96 PFAKE 13 51 30.0 +3.0
EMMW LR LR
comp=Z,700nm,19.0s
VOIR 149.13 266 ⇑*iP* **PKPdf 13 51 20.1 +1.2**
VOIR 149.13 266 ⇑PKIKP **PKPdf 13 51 20.1 +1.2**
RES Resolute Bay 149.26 30 *e*PKPdf **PKPbc 13 51 20.2 -2.2**
RES LR LR
comp=Z,800nm,21.0s
RES Resolute Bay 149.26 30 *e*PKIKP **PKPbc 13 51 20.2 -2.2**
RES MLR MLR
comp=Z,800nm,21.0s
DOPR Dopca 149.30 267 ⇑*iP* **PKPbc 13 51 22.7 -0.7**
CLTB Caltabellotta 149.31 243 PFAKE 13 51 30.0 +1.5
CLTB LR LR
comp=Z,700nm,20.0s
KEST Kesra 149.53 236 PKPbc **PKPbc 13 51 23.1 -1.3**
comp=Z,4.6nm,0.9s,baz=275,slow=5.4,SNR=6.5
KEST Kesra 149.53 236 *e*PKPbc **PKPbc 13 51 23.8 -0.6**
KEST LR LR
comp=Z,900nm,19.0s
GGN Saint George 149.63 96 PFAKE 13 51 30.0 +0.6
GGN LR LR
comp=Z,700nm,19.0s
LOT Lotru 149.81 265 ⇓*iP* **PKPbc 13 51 23.8 -1.0**
KLMR Klimovskoe 149.97 301 *e*PKPdf **PKPbc 13 51 22.8 -1.7**
KLMR AMP 13 51 30.1
comp=Z,88nm,1.3s
MATE Matera 150.02 251 ⇑*iP* **PKiKP 13 51 27.5 +1.3**
PQI Presque Isle 150.04 92 PFAKE 13 51 30.0 -1.1
PQI LR LR
comp=Z,1µm,22.0s
PDG Podgorica 150.05 256 ⇑*iP* **PKPbc 13 51 24.3 -1.0**
TTG Podgorica 150.05 256 PFAKE 13 51 30.0 -1.2
TTG LR LR
comp=Z,400nm,22.0s
AKASG Malin Array Be 150.19 278 PKPbc **PKPbc 13 51 24.6 -0.7**
comp=Z,3.9nm,0.7s,baz=76,slow=2.2,SNR=11
AKBB Malin Array Si 150.19 278 *e*PKPbc **PKiKP 13 51 26.0 -0.2**
AKBB LR LR
comp=Z,500nm,20.0s
AKBB Malin Array Si 150.19 278 *e*PKIKP **PKiKP 13 51 26.0 -0.2**
AKBB MLR MLR
comp=Z,500nm,20.0s
MDVR Moldovita 150.44 262 ⇑*iP* **PKPbc 13 51 25.4 -0.8**
BURAR Bucovina Array 150.45 269 ⇑*iP* **PKiKP 13 51 26.4 -0.6**
BURAR Bucovina Array 150.45 269 ⇑PKIKP **PKiKP 13 51 26.4 -0.6**
ARCR ARCALIA 150.57 268 ⇓*iP* **PKiKP 13 51 26.8 -0.3**
BZS Buzias 151.05 263 ⇓*iP* **PKPbc 13 51 26.9 -0.7**
BZS Buzias 151.05 263 ⇓PKIKP **PKPbc 13 51 26.9 -0.7**
LMN Caledonia Moun 151.19 97 PFAKE 13 51 30.0 +1.6
LMN LR LR
comp=Z,1µm,21.0s
DRGR 151.25 266 ⇑*iP* **PKPbc 13 51 27.5 -0.6**
DRGR 151.25 266 ⇑PKIKP **PKPbc 13 51 27.6 -0.6**
SIRR Siria 151.46 264 ⇑*iP* **PKiKP 13 51 28.1 -0.9**
TRPA Tarpa 152.18 268 ⇑*iP* **PKPbc 13 51 29.4 -0.7**
LVV L'vov 152.41 272 *e*PKIKP **PKiKP 13 51 34.5 +3.7**
UZH Uzhgorod 152.62 268 *e*PKIKP **PKPdf 13 51 22.3 -1.7**
UZH *i* 13 51 28.4
BLY Banja Luka 152.76 257 PFAKE 13 51 30.0 -1.5
BLY LR LR
comp=Z,400nm,20.0s
KOLS Kolonicke sedl 152.81 269 *e*PKIKP **PKPbc 13 51 30.6 -0.9**
KOLS Kolonicke sedl 152.81 269 *e*PKP **PKPbc 13 51 30.6 -0.9**
AQU L'Aquila 152.94 249 PFAKE 13 51 40.0 -3.4
AQU LR LR
comp=Z,800nm,22.0s
KWP Kalwaria Pacla 153.00 271 *e*PKPbc **PKiKP 13 51 31.3 -0.8**
KWP LR LR
comp=Z,6µm,21.0s
KWP Kalwaria Pacla 153.00 271 *e*PKIKP **PKiKP 13 51 31.3 -0.8**
KWP MLR MLR
comp=Z,6µm,21.0s
LVZ Lovozero 153.83 314 PFAKE 13 51 40.0 -6.4
LVZ LR LR
comp=Z,1µm,20.0s
APA Apatity 154.27 314 ⇓*iP*KIKP **PKPdf 13 51 26.5 +0.7**
APA pmax pmax
comp=Z,2.0nm,1.0s
VYHS Vyhne 154.35 265 *e*PKIKP **PKiKP 13 51 35.0 +0.1**
VYHS *e* 13 51 49.6
VYHS Vyhne 154.35 265 *e*PKP **PKiKP 13 51 35.0 +0.1**
VYHS *e* 13 51 49.6
SUW Suwalki 155.08 279 PFAKE 13 51 40.0 -12
SUW LR LR
comp=Z,600nm,22.0s
TRI Trieste 155.17 255 PFAKE 13 51 40.0 +12
TRI LR LR
comp=Z,400nm,18.0s
SOKA Soboth 155.18 258 *e*pPKPdf **PKPdf 13 51 30.8 +2.9**
comp=Z,6.0nm,1.3s
SCHQ Schefferville 155.21 78 PFAKE 13 51 40.0 +12
SCHQ LR LR
comp=Z,2µm,22.0s
ARSA Arzberg 155.30 260 *e*pPKPdf **PKPdf 13 51 31.8 +3.9**
comp=Z,3.3nm,1.4s
OBKA Obir 155.31 257 *e*pPKPdf **PKPdf 13 51 31.0 +3.0**
comp=Z,4.4nm,1.4s
TULEG Thule 155.51 25 PFAKE 13 51 40.0 +13
TULEG LR LR
comp=Z,800nm,19.0s
OKC Ostrava-Krasne 155.52 267 AMS AMS 15 09 50.0
comp=Z,600nm,18.3s
CONA Conrad Observa 155.56 261 P **PKPdf 13 51 33.5 +5.1**
comp=Z,2.1nm,1.1s
VLC Villacollemand 155.76 248 PFAKE 13 51 40.0 +11
VLC LR LR
comp=Z,500nm,22.0s
MORC Moravsky Berou 155.80 266 PFAKE 13 51 40.0 +11
MORC LR LR
comp=Z,500nm,19.0s
MORC Moravsky Berou 155.80 266 ⇑*iP* PKPdf 13 51 36.3 +7.8
MORC Moravsky Berou 155.80 266 ⇑PKIKP PKPdf 13 51 36.3 +7.8
MYKA Terra Mystica 155.86 256 *e*PKPdf **PKPdf 13 51 30.0 +1.3**
comp=Z,1.2nm,0.5s
KBA Koelnbreinsper 156.31 257 *e*pPKPdf **PKPdf 13 51 32.7 +3.2**
comp=Z,4.8nm,1.2s
FIA0 FINESS Array S 156.33 298 *e*PKPdif PKPdf 13 51 39.3 +11
FIA0 FINESS Array S 156.33 298 ⇓*e*PKIKP PKPdf 13 51 39.3 +11
FINES FINESS Array B 156.33 298 PKPbc PKPdf 13 51 39.3 +11
comp=Z,2.5nm,0.9s,baz=99,slow=6.2,SNR=4.5
MOA Molln 156.33 259 pPKPdf **PKPdf 13 51 32.6 +3.3**
comp=Z,4.1nm,1.7s
ABTA Abfaltersbach 156.51 255 pPKPdf **PKPdf 13 51 31.4 +1.7**
comp=Z,3.8nm,1.4s
TREC Trest 156.59 263 AMS AMS 15 09 30.0
comp=Z,700nm,36.5s
KBS Kingsbay 156.75 344 PFAKE 13 51 40.0 +11
KBS LR LR
comp=Z,700nm,21.0s
DPC Dobruska-Polom 156.78 266 *e*PKP2 **PKPab 13 51 57.2 -2.3**
DPC MLR MLR
comp=Z,500nm,20.7s
DPC Dobruska-Polom 156.78 266 *e*PKPAB **PKPab 13 51 57.2 -2.3**
DPC AMS AMS 15 15 00.0
comp=Z,500nm,20.7s
OSTC Ostas 156.95 267 AMS AMS 15 14 50.0
comp=Z,500nm,21.4s
UPC Upice 157.03 266 AMS AMS 15 07 20.0
comp=Z,500nm,22.0s
CHVC Chvalec 157.05 267 AMS AMS 15 15 10.0
comp=Z,500nm,18.2s
PVAQ Vaqueiros 157.15 209 PFAKE 13 51 40.0 +9.4
PVAQ LR LR
comp=Z,800nm,20.0s
PFVI Vila Bisbo 157.16 207 PFAKE 13 51 40.0 +9.3
PFVI LR LR
comp=Z,1µm,22.0s
ARA0 ARCESS Array S 157.19 318 *e*PKPab **PKPab 13 51 59.8 -0.9**
ARCES ARCESS Array B 157.19 318 PKPab **PKPab 13 51 59.8 -0.9**
comp=Z,1.5nm,0.8s,baz=101,slow=3.8,SNR=2.7
ARE0 ARCESS Array S 157.19 318 PFAKE 13 51 40.0 +10
ARE0 LR LR
comp=Z,100nm,20.0s
GEC2 GERESS Array S 157.25 261 PFAKE 13 51 40.0 +9.5
GEC2 LR LR
comp=Z,700nm,21.0s
GERES GERESS Array B 157.25 261 PKP **PKPdf 13 51 29.7 -0.8**
comp=Z,0.3nm,0.7s,baz=116,slow=2.3,SNR=2.6
GERES PKPab **PKPab 13 52 01.5 -0.2**
comp=Z,0.8nm,0.7s,baz=134,slow=4.2,SNR=4.2
WTTA Wattenberg 157.30 255 pPKPdf **PKPdf 13 51 33.3 +2.6**
comp=Z,1.5nm,0.5s
GOPC GO Pecny, Ondr 157.33 264 *e*PKP2 **PKPab 13 52 03.0 +1.1**
GOPC MLR MLR
comp=Z,600nm,24.8s
GOPC GO Pecny, Ondr 157.33 264 *e*PKPAB **PKPab 13 52 03.0 +1.1**
GOPC AMS AMS 15 10 50.0
comp=Z,600nm,24.8s
KHC Kasperske Hory 157.49 261 PFAKE 13 51 40.0 +9.3
KHC LR LR
comp=Z,300nm,20.0s
KHC Kasperske Hory 157.49 261 *e*PKP2 **PKPab 13 52 02.8 +0.1**
KHC MLR MLR
comp=Z,800nm,23.3s
KHC Kasperske Hory 157.49 261 *e*PKPAB **PKPab 13 52 02.8 +0.1**
KHC AMS AMS 15 04 50.0
comp=Z,800nm,23.3s
SQTA Sankt Quirin 157.49 255 *e*pPKPdf **PKPdf 13 51 33.4 +2.5**
comp=Z,1.0nm,0.4s
PRU Pruhonice 157.50 264 *e*PKP2 **PKPab 13 52 00.0 -2.6**
PRU MLR MLR
comp=Z,600nm,19.3s
PRU Pruhonice 157.50 264 *e*PKPAB **PKPab 13 52 00.0 -2.6**
PRU AMS AMS 15 10 50.0
comp=Z,600nm,19.3s
FETA Feichten 157.60 254 *e*P **PKPdf 13 51 35.1 +3.9**
comp=Z,3.4nm,1.0s
MOTA Moosalm 157.63 255 P **PKPdf 13 51 35.7 +4.6**
comp=Z,1.2nm,0.6s
PVCC Panska Ves 157.80 265 AMS AMS 15 10 20.0
comp=Z,500nm,20.9s
TUE Stuetta 157.92 251 PFAKE 13 51 40.0 +8.4
TUE LR LR
comp=Z,700nm,20.0s
ESDC Sonseca Array 158.14 219 PKPab **PKPab 13 52 04.6 -1.1**
comp=Z,2.5nm,0.9s,baz=154,slow=4.9,SNR=4.2
ESLA Sonseca Array 158.14 219 PFAKE 13 51 40.0 +8.1
ESLA LR LR
comp=Z,700nm,20.0s
PAB San Pablo 158.15 218 PFAKE 13 51 40.0 +8.1
PAB LR LR
comp=Z,900nm,20.0s
BNI Bardonecchia 158.20 245 PFAKE 13 51 40.0 +8.1
BNI LR LR
comp=Z,800nm,21.0s
SENIN Lac Senin/Sane 158.85 248 PFAKE 13 51 40.0 +7.3
SENIN LR LR
comp=Z,800nm,22.0s
CLL Collm 159.06 265 PFAKE 13 51 40.0 +7.5
CLL LR LR
comp=Z,700nm,20.0s
CLL Collm 159.06 265 *e*PKPdf **PKPdf 13 51 29.0 -3.5**
CLL *e*PKPdiff sPKPdf 13 51 46.0 +10
CLL *e*pPKPab **PKPab 13 52 13.0 +3.7**
comp=Z,9.0nm,1.1s
CLL *e*PP **PP 13 55 49.0 -2.0**
CLL *e*PPPrev 14 04 20.0
CLL *e*PSKS 14 06 12.0
CLL *e*PPS PPS 14 09 06.0
CLL *e* 14 11 00.0
CLL *e*SS SS 14 15 56.0 +0.9
CLL *e*PSPS 14 17 21.0
CLL *e*SSS SSS 14 22 00.0
CLL *e*SSSS 14 26 00.0
CLL *e* 14 28 30.0
CLL LmH 15 10 00.0
comp=N,400nm,19.9s
CLL LmH 15 10 00.0
comp=E,300nm,21.5s
CLL LmV 15 12 00.0
comp=Z,600nm,21.4s
CLL Collm 159.06 265 *e*PKP2 **PKPab 13 52 13.0 +3.7**
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL MLR MLR
comp=Z,600nm,21.4s
GRA1 Grafenberg Arr 159.06 260 PFAKE 13 51 40.0 +7.4
GRA1 LR LR
comp=Z,600nm,22.0s

GRF	**Grafenberg Arr**	**159.06 260**	PKIKP	PKPdf	13 51 40.0	+7.4
GRF			MLR	MLR		
comp=Z,600nm,22.0s						
GRFO	**Grafenberg**	**159.06 260**	PFAKE		13 51 40.0	+7.4
GRFO			LR	LR		
comp=Z,501nm,22.0s						
SSB	**Saint Sauveur**	**159.38 242**	PFAKE		13 51 40.0	+6.9
SSB			LR	LR		
comp=Z,700nm,21.0s						
STU	**Stuttgart**	**159.53 255**	PFAKE		13 51 40.0	+6.9
STU			LR	LR		
comp=Z,600nm,20.0s						
BFO	**Black Forest**	**159.69 253**	PFAKE		13 51 40.0	+6.6
BFO			LR	LR		
comp=Z,500nm,21.0s						
MTE	**Manteigas**	**159.90 213**	PFAKE		13 51 40.0	+6.1
MTE			LR	LR		
comp=Z,900nm,20.0s						
COI	**Coimbra**	**159.97 211**	PFAKE		13 51 40.0	+6.1
COI			LR	LR		
comp=Z,1μm,20.0s						
HFS	**Hagfors**	**162.01 291**	PKPab	**PKPab**	**13 52 21.5**	**-0.5**
comp=Z,2.8nm,0.8s,baz=147,slow=8.3,SNR=4.9						
NOA	**NORSAR Array B**	**163.34 293**	PKPab	**PKPab**	**13 52 26.8**	**-1.0**
comp=Z,0.8nm,0.9s,baz=101,slow=4.6,SNR=2.4						

SJA 16 13:42:43.6±0.5, 31°.70S×69°.20W, h111km±4km, ML2.8, MW4.4, 1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.13**	**221**	*i* P	Pn	13 43 00.7	+1.3
RTLS				IAML		13 43 01.1	
comp=Z,188nm,0.4s							
AUSP	**Uspallata**	**0.55**	**197**	*i* P	Pn	13 43 02.4	+1.1
AUSP				*i* S	Sn	13 43 15.8	+1.3
RTCV	**Cerro Valdivia**	**0.58**	**107**	*i* P	Pn	13 43 01.8	+0.6
RTCV				⇓*i* S	Sn	13 43 15.4	+0.9
RTLL	**Cerro Villicun**	**0.72**	**59**	*i* P	Pn	13 43 02.9	+0.7
RTLL				*i* S	Sn	13 43 17.2	+0.9
ASAL	**Salagasta**	**0.94**	**161**	*i* P	Pn	13 43 05.0	+0.6
ASAL				*i* S	Sn	13 43 21.4	+1.3
AMOG	**MOGNA**	**0.97**	**39**	*i* P	Pn	13 43 05.4	+0.8
ARCO	**CERRO ARCO**	**1.16**	**169**	*i* P	Pn	13 43 07.4	+0.6
ARCO				*i* S	Sn	13 43 25.6	+1.2
ARCO				IAML		13 43 26.5	
comp=Z,177nm,0.7s							

JMA 16 13:45:37.5±0.1, 24°.22N×123°.83E, h15km±1km, M0.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.15**	**321**	P	Pg	13 45 41.2	-0.2
IRIF				*e*S	Sg	13 45 44.0	+0.1
HATJ	**Hateruma jima**	**0.16**	**188**	P	Pg	13 45 41.4	-0.2
HATJ				S	Sg	13 45 44.5	+0.2
JKRS	**Kuro-shima**	**0.16**	**84**	P	Pg	13 45 41.5	-0.1
JKRS				S	Sb	13 45 44.9	-0.5
JIJ	**Ishigaki jima**	**0.32**	**63**	P	Pg	13 45 43.9	-0.3
JIJ				S	Sg	13 45 48.2	-0.5
JISG	**Ishigakijimahi**	**0.57**	**50**	P	Pg	13 45 48.5	-0.3
JISG				S	Sg	13 45 56.6	+0.2
YOJ	**Yonaguni jima**	**0.79**	**288**	P	Pg	13 45 52.8	0.0
JTJ	**Tarama**	**0.90**	**62**	P	Pb	13 45 54.7	-0.1
JTJ				S	Sg	13 46 06.8	+0.1

WEL 16 13:46:28.2±1.2, 46°S±7°×16°.6E±°, h12km, M3.7/9, ML3.9/11, MLv3.7/9, Error ellipse: s-maj=0.0km s-min=0.0km az=42.9, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.73**	**97**	P	Pb	13 46 43.6	+0.7
PYZ				S	Sn	13 46 55.2	-0.3
DCZ	**Deep Cove**	**1.23**	**60**	P	Pn	13 46 49.9	-1.3
DCZ				S	Sb	13 47 05.3	-1.8
WHZ	**Wether Hill Ro**	**1.62**	**84**	P	Pn	13 46 57.1	+0.5
WHZ				S	Sb	13 47 18.9	+0.5
APZ	**The Paps**	**1.79**	**116**	P	Pn	13 46 58.3	-0.7
APZ				S	Sn	13 47 20.7	-0.9
MLZ	**Mavora Lakes**	**1.88**	**69**	P	Pn	13 47 01.0	+0.8
MLZ				S	Sb	13 47 26.9	+1.0
MSZ	**Milford Sound**	**2.14**	**50**	P	Pn	13 47 03.1	-0.6
SYZ	**Scrubby Hill**	**2.47**	**102**	P	Pn	13 47 08.4	+0.1
SYZ				S	Sn	13 47 37.9	-0.3
EAZ	**Earnscleugh**	**2.71**	**73**	P	Pn	13 47 13.0	+1.4
EAZ				S	Sn	13 47 45.2	+0.9
TUZ	**Tuapeka**	**2.79**	**89**	P	Pn	13 47 13.0	+0.4
TUZ				S	Sn	13 47 46.3	+0.2
HHSZ	**Highcliff Hill**	**3.46**	**89**	P	Pn	13 47 21.6	-0.3
LBZ	**Lake Benmore**	**3.63**	**64**	P	Pn	13 47 24.7	+0.4
ODZ	**Otahua Downs**	**3.67**	**75**	P	Pn	13 47 24.3	-0.4
ODZ				S	Sn	13 48 06.5	-1.4
FOZ	**Fox Glacier**	**3.92**	**51**	P	Pn	13 47 27.6	-0.6
RPZ	**Rata Peaks**	**4.52**	**60**	P	Pn	13 47 35.3	-1.1
INZ	**Inchbonnie**	**5.34**	**53**	P	Pn	13 47 46.7	-1.1
DSZ	**Denniston Nort**	**6.21**	**48**	P	Pn	13 47 58.9	-0.9
KHZ	**Kahutara**	**6.75**	**60**	P	Pn	13 48 07.9	+0.8

TAP 16 13:46:36.8, 24°.41N×121°.82E, h15km, ML1.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.07**	**287**	*e*P	Pg	13 46 40.4	+0.6
NANB	baz=286			*e*S	Sg	13 46 42.5	+0.7
ENA	**Nanau**	**0.07**	**285**	P	Pg	13 46 40.4	+0.5
ENA	baz=285			S	Sg	13 46 42.6	+0.7
TWC	**Suao**	**0.20**	**8**	*e*P	Pb	13 46 42.0	-0.3
NACB	**Ninganchiao**	**0.31**	**221**	*e*S	Sb	13 46 48.5	-0.4
EOS1	**EOS1**	**0.31**	**63**	*e*S	Sb	13 46 48.7	-0.3
ENTT	**Nioudou**	**0.33**	**315**	*e*S	Sb	13 46 49.7	+0.3
NDT	**Datong Townshi**	**0.34**	**305**	*e*S	Sb	13 46 50.3	+0.4
ETLH	**Xiulin Townshi**	**0.37**	**237**	*e*P	Pb	13 46 44.9	-0.2
SLBB	**Yuanshan**	**0.38**	**334**	*e*P	Pb	13 46 46.0	+0.7

ISCJB ***16*** *14:00:04.6±1.2, 55°.19N±0°.07×15°.40E±0°.10, h0km, Error ellipse: s-maj=12.2km s-min=5.2km az=145.4*
IDC ***16*** *14:00:05.4±0.9, 54°.94N×15°.11E, h0km, mb1 3.1/5, mb1mx2.9/41, mbtmp2.9/5, ML2.4/5, Error ellipse: s-maj=19.6km s-min=8.1km az=92.0*
NAO ***16*** *14:00:06.5±2.8, 55°.10N×14°.78E, ML2.0*
UPP ***16*** *14:00:06.3±1.0, 55°.08N×15°.14E, h0km, ML2.3, Suspected explosion*
BER ***16*** *14:00:07.1±3.2, 55°.05N×15°.19E, h0km, ML2.2, ML2.6(DNK), Suspected explosion*

ISC 16 14:00:04.9±1.0, 55°.17N±0°.04×15°.26E±0°.04, h0km, n41, σ2°59/59, 1C, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSD	**Bornholm Skovb**	**0.21**	**255**	*e*	**Pg**	**14 00 09.6**	**+0.8**
BSD	baz=120,slow=16			⇑*i*P	**Pg**	**14 00 10.2**	**+1.4**
BSD				*i* S	**Sg**	**14 00 14.1**	**+2.7**
BSD				IAML		14 00 17.2	
comp=Z,780nm,0.4s							
LUNU	**Lund**	**1.14**	**295**	P	**Pg**	**14 00 27.5**	**+0.9**
LUNU				S	**Sn**	**14 00 45.0**	**+0.7**
BLEU	**Blekinge**	**1.18**	**15**	P	**Pn**	**14 00 30.4**	**+1.8**
BLEU				S	**Sn**	**14 00 49.8**	**+4.4**
DEL	**Delary**	**1.52**	**330**	P	**Pb**	**14 00 34.9**	**+0.9**
DEL	**Delary**	**1.52**	**330**	*i* P	**Pg**	**14 00 35.2**	**+1.1**
BJUU	**Bjuv**	**1.56**	**306**	P	**Pn**	**14 00 34.4**	**+0.6**
COP	**Copenhagen**	**1.69**	**289**	*i* P	**Pn**	**14 00 36.6**	**+1.0**
COP	**Copenhagen**	**1.69**	**289**	*i* P	**Pn**	**14 00 36.6**	**+1.0**
COP				IAML		14 01 05.0	
comp=Z,11nm,0.4s							

FABU	**Falkenberg**	**2.33**	**323**	*i* P	**Pn**	**14 00 46.5**	**+2.2**
VSTU	**Vaestervik**	**2.60**	**15**	P	**Pn**	**14 00 50.8**	**+2.7**
BORU	**Boraas**	**2.83**	**332**	*i* P	**Pn**	**14 00 53.7**	**+2.4**
ONAU	**Onsala**	**2.91**	**322**	*i* P	**Pn**	**14 00 54.3**	**+1.9**
LNKU	**Linkoeping**	**3.07**	**2**	P	**Pn**	**14 00 57.5**	**+3.0**
FKPU	**Falk**	**3.12**	**345**	P	**Pn**	**14 00 58.4**	**+3.1**
GOTU	**Gotland**	**3.12**	**35**	P	**Pn**	**14 00 58.4**	**+3.1**
VIKU	**Vikbolandet**	**3.44**	**13**	P	**Pn**	**14 01 02.3**	**+2.8**
BRG	**Berggiesshubel**	**4.38**	**191**	SG	**Sn**	**14 01 55.9**	**-8.3**
comp=Z,1.3nm,0.4s							
STRU	**Stroemstad**	**4.47**	**332**	*i* P	**Pn**	**14 01 15.4**	**+1.7**
HFS	**Hagfors**	**5.05**	**351**	Pn	**Pn**	**14 01 23.9**	**+2.2**
comp=Z,0.1nm,0.3s,baz=175,slow=13,SNR=9.2							
HFS				Lg	Lg	14 02 49.4	
comp=Z,0.7nm,0.3s,baz=166,slow=30,SNR=7.7							
HFS	**Hagfors**	**5.05**	**351**	Pn	**Pn**	**14 01 24.0**	**+2.2**
HFS	baz=174,slow=14			Lg	Lg	14 02 46.5	
HFS	**Hagfors**	**5.05**	**351**	Pn	**Pn**	**14 01 24.0**	**+2.2**
HFS	baz=174,slow=14			Sg	**Sg**	**14 02 46.5**	**-0.4**
KON	**Kongsberg**	**5.44**	**328**	Pn	**Pn**	**14 01 27.3**	**+0.3**
KON				Sn	**Sn**	**14 02 28.4**	**-1.9**
KON				Lg	Lg	14 02 57.2	
KONO	**Kongsberg**	**5.44**	**328**	Pn	**Pn**	**14 01 27.3**	**+0.3**
KONO				Sn	**Sn**	**14 02 28.4**	**-1.9**
KONO				Sg	**Sg**	**14 02 57.2**	**-2.1**
NC602	**NORSAR Array S**	**5.92**	**342**	*e*P	**Pn**	**14 01 35.0**	**+1.3**
NC602				IAML		14 02 46.6	
comp=Z,17nm,0.5s							
NRA0	**NORESS Array S**	**5.92**	**342**	Pn	**Pn**	**14 01 34.7**	**+1.0**
NRA0	baz=160,slow=12			Sn	**Sn**	**14 02 44.6**	**+2.3**
NRA0	baz=150,slow=22			Lg	Lg	14 03 14.3	
NRA0	**NORESS Array S**	**5.92**	**342**	Pn	**Pn**	**14 01 34.7**	**+1.0**
NRA0	baz=160,slow=12			Sn	**Sn**	**14 02 44.6**	**+2.3**
NRA0	baz=150,slow=22			Sg	**Sg**	**14 03 14.3**	**-0.6**
VRAC	**Vranov**	**5.93**	**172**	Pn	**Pn**	**14 01 32.0**	**-1.8**
comp=Z,0.2nm,0.3s,baz=350,slow=17,SNR=2.5							
NAO01	**NORSAR Array S**	**6.15**	**340**	*e*P	**Pn**	**14 01 38.0**	**+1.2**
NB201	**NORSAR Array S**	**6.26**	**342**	*e*P	**Pn**	**14 01 39.6**	**+1.2**
NB2	**NORSAR Subarra**	**6.27**	**342**	Pn	**Pn**	**14 01 39.5**	**+1.1**
NB2	baz=160,slow=14			Lg	Lg	14 03 25.9	
NB2	**NORSAR Subarra**	**6.27**	**342**	Pn	**Pn**	**14 01 39.5**	**+1.1**
NB2	baz=160,slow=14			Sg	**Sg**	**14 03 25.9**	**-0.1**
NOA	**NORSAR Array B**	**6.27**	**342**	Pn	**Pn**	**14 01 39.8**	**+1.3**
comp=Z,0.0nm,0.3s,baz=157,slow=19,SNR=5.3							
NOA				Lg	Lg	14 03 26.1	
comp=Z,0.1nm,0.3s,baz=211,slow=13,SNR=5.0							
NBO00	**NORSAR Array S**	**6.34**	**340**	*e*S	**Sn**	**14 02 45.9**	**-6.7**
GERES	**GERESS Array B**	**6.41**	**189**	Pn	**Pn**	**14 01 37.7**	**-2.8**
comp=Z,0.1nm,0.3s,baz=4.8,slow=13,SNR=2.9							
NC303	**NORSAR Array S**	**6.41**	**343**	*e*P	**Pn**	**14 01 41.7**	**+1.2**
NC204	**NORSAR Array S**	**6.57**	**341**	*e*P	**Pn**	**14 01 43.4**	**+0.8**
NC204				*e*S	**Sn**	**14 02 50.9**	**-7.4**
SKAR	**Skarslia**	**6.65**	**329**	*e*P	**Pn**	**14 01 44.5**	**+0.7**
SKAR				*e*S	**Sn**	**14 02 58.2**	**-2.1**
FIA0	**FINESS Array S**	**8.48**	**38**	Pn	**Pn**	**14 02 10.2**	**+1.5**
FIA0	baz=216,slow=14			Sn	**Sn**	**14 03 44.5**	**-0.4**
FIA0	baz=222,slow=22			Lg	Lg	14 04 30.6	
FIA0	**FINESS Array S**	**8.48**	**38**	Pn	**Pn**	**14 02 10.2**	**+1.5**
FIA0	baz=216,slow=14			Sn	**Sn**	**14 03 44.5**	**-0.4**
FIA0	baz=222,slow=22			Sg	**Sg**	**14 04 30.6**	**-6.2**
FINES	**FINESS Array B**	**8.48**	**38**	Pn	**Pn**	**14 02 10.3**	**+1.5**
comp=Z,0.1nm,0.3s,baz=223,slow=12,SNR=4.9							
FINES				Sn	**Sn**	**14 03 44.4**	**-0.6**
comp=Z,0.1nm,0.3s,baz=238,slow=26,SNR=3.4							
FINES				Lg	Lg	14 04 30.9	
comp=Z,0.1nm,0.3s,baz=229,slow=23,SNR=2.9							
ARCES	**ARCESS Array B**	**15.14**	**14**	Pn	**P**	**14 03 45.5**	**+0.4**
comp=Z,0.1nm,0.3s,baz=202,slow=12,SNR=6.2							

PRU 16 14:00:11.5±0.0, 47°.71N×12°.96E, h0km, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRG	**Berggiesshubel**	**3.23**	**11**	SG	Pg	14 01 09.6	-3.8
5.7nm,0.3s							
UPC	**Upice**	**3.44**	**34**	*e*PG	Pb	14 01 13.5	+0.2
DPC	**Dobruska-Polom**	**3.45**	**39**	*e*PG	Pb	14 01 13.9	+0.5
CHVC	**Chvalec**	**3.52**	**34**	*e*PG	Pb	14 01 14.0	-0.7
CHVC				*e*SG	Sg	14 02 03.2	-1.5
OSTC	**Ostas**	**3.56**	**36**	*e*PG	Pb	14 01 15.0	-0.4
OSTC				*e*SG	Sg	14 02 04.5	-1.4

IDC ***16*** *14:01:37.7±1.1, 34°.20N×25°.15E, h0km, mb3.7/5, mb1 3.7/8, mb1mx3.4/36, mbtmp3.5/8, ML3.7/3, MS2.8/2, Ms1 2.8/2, ms1mx2.6/35, Error ellipse: s-maj=31.0km s-min=22.9km az=123.0*
ISCJB ***16*** *14:01:38.8±1.3, 34°.15N±0°.06×25°.16E±0°.06, h20km±9km, mb3.7/5, Error ellipse: s-maj=10.8km s-min=8.3km az=20.3*
ATH ***16*** *14:01:40.3, 34°.27N×25°.04E, h24km±3km, ML2.8/4, Error ellipse: s-maj=5.3km s-min=1.7km az=351.0*
THE ***16*** *14:01:41.3, 34°.31N×25°.09E, h3km±1km, ML3.1/3, Error ellipse: s-maj=2.2km s-min=1.0km az=152.0*

ISC 16 14:01:39.5±1.7, 34°.22N±0°.06×25°.15E±0°.05, h14km±10km, n24, σ0°82/33, mb3.5/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.84**	**341**	P	**Pg**	**14 01 55.6**	**-0.2**
SIVA				S	**Sg**	**14 02 06.8**	**0.0**
SIVA	**Sivas**	**0.84**	**341**	P	**Pg**	**14 01 55.5**	**-0.2**
SIVA				S	**Sg**	**14 02 06.2**	**-0.6**
SIVA				AML	AML	14 02 11.3	
comp=E,6282μm,0.5s							
SIVA				AML	AML	14 02 17.0	
comp=N,4462μm,0.6s							
TMBK	**Timbaki Herakl**	**0.90**	**340**	P	**Pb**	**14 01 57.1**	**+0.2**
TMBK				S	**Sg**	**14 02 08.8**	**0.0**
LAST	**Lasithi**	**0.97**	**16**	P	**Pn**	**14 01 58.7**	**-0.2**
LAST				S	**Sn**	**14 02 12.1**	**-0.4**
LAST	**Lasithi**	**0.97**	**16**	P	**Pn**	**14 01 58.6**	**-0.2**
LAST				S	**Sn**	**14 02 12.9**	**+0.4**
LAST				AML	AML	14 02 17.0	
comp=N,438μm,0.5s							
LAST				AML	AML	14 02 18.2	
comp=E,464μm,0.6s							
GVD	**Gavdhos**	**1.07**	**305**	P	**Pb**	**14 01 59.5**	**-0.2**
GVD				S	**Sn**	**14 02 15.0**	**+0.3**
GVD	**Gavdhos**	**1.07**	**305**	P	**Pb**	**14 01 59.4**	**-0.4**
GVD				S	**Sb**	**14 02 12.5**	**-1.1**
GVD				AML	AML	14 02 16.6	
comp=E,1641μm,0.4s							
GVD				AML	AML	14 02 18.3	
comp=N,1987μm,0.3s							
KSTL	**Kastelli Herak**	**1.08**	**357**	P	**Pb**	**14 01 59.4**	**-0.5**
KSTL				S	**Sb**	**14 02 12.9**	**-1.0**
NPS	**Neapolis**	**1.11**	**20**	P	**Pg**	**14 02 01.0**	**+0.2**
ZKR	**Zakros**	**1.25**	**45**	P	**Pg**	**14 02 04.8**	**+1.1**
ZKR				AML	AML	14 02 32.9	
comp=N,254μm,0.7s							
ZKR				AML	AML	14 02 33.1	
comp=E,429μm,0.4s							
PRNS	**Prines Rethymn**	**1.26**	**335**	P	**Pn**	**14 02 02.8**	**+0.2**
VAM	**Vamos**	**1.41**	**327**	P	**Pn**	**14 02 05.2**	**+0.4**
VAM				S	**Sn**	**14 02 23.5**	**+0.3**
VAM	**Vamos**	**1.41**	**327**	P	**Pn**	**14 02 05.2**	**+0.4**
IMMV	**Iera Moni Meta**	**1.56**	**323**	P	**Pb**	**14 02 07.7**	**-0.5**
IMMV	**Iera Moni Meta**	**1.56**	**323**	P	**Pb**	**14 02 07.7**	**-0.5**
MMAI	**Mount Meron Ar**	**8.64**	**95**	Pn	**Pn**	**14 03 44.1**	**-0.1**
comp=E,0.6nm,0.3s,baz=294,slow=11,SNR=2.1							
MMAI				Sn	**Sn**	**14 05 18.2**	**-3.2**
comp=E,2.0nm,0.3s,baz=309,slow=21,SNR=3.2							
MMAI				LR	LR	14 08 14.1	
comp=E,45nm,19.9s,baz=60,slow=46							
GNI	**Garni**	**16.69**	**64**	LR	LR	14 13 23.1	
comp=E,47nm,20.1s,baz=118,slow=42							
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**Pn**	**14 05 33.4**	**0.0**
comp=E,0.4nm,0.3s,baz=200,slow=10.0,SNR=3.3							
GERES	**GERESS Array B**	**16.91**	**333**	Pn	**Pn**	**14 05 36.6**	**+1.0**
comp=E,0.1nm,0.3s,baz=152,slow=11,SNR=5.1							
TORD	**Torodi Ar. Bea**	**29.89**	**231**	P	**P**	**14 07 47.1**	**+0.3**
comp=E,0.4nm,0.5s,baz=29,slow=8.6,SNR=5.1							
MKAR	**Makanchi Array**	**44.30**	**56**	P	**P**	**14 09 49.6**	**+0.8**
comp=E,0.4nm,0.5s,baz=270,slow=8.5,SNR=4.4							
ZALV	**Zalesovo Beam**	**45.66**	**46**	P	**P**	**14 09 59.0**	**-0.5**
comp=E,1.0nm,0.4s,baz=266,slow=10,SNR=3.4							
BOSA	**Boshof**	**62.50**	**180**	P	**P**	**14 12 02.7**	**+0.1**
comp=E,1.4nm,0.7s,baz=180,slow=9.1,SNR=2.9							
YKA	**Yellowknife Ar**	**78.33**	**342**	P	**P**	**14 13 40.1**	**+1.2**
comp=E,0.3nm,0.8s,baz=277,slow=34,SNR=2.9							

IDC ***16*** *14:09:51.8±2.0, 13°.80N×121°.20E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.3/40, mbtmp3.4/4, Error ellipse: s-maj=83.8km s-min=23.0km az=52.0*
ISCJB ***16*** *14:10:00.5±0.4, 13°.43N±0°.03×120°.58E±0°.04, h69km±5km, mb3.4/4, Error ellipse: s-maj=7.1km s-min=4.4km az=173.9*
MAN ***16*** *14:10:00.8, 13°.45N×120°.57E, h45km, MS2.9*

ISC 16 14:10:01.3±0.9, 13°.45N±0°.03×120°.60E±0°.04, h62km±8km, n17, σ1°18/29, mb3.4/4, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.34**	**81**	⇑*i*P	**Pn**	**14 10 12.3**	**+0.3**
PGP				*i* S	**Sn**	**14 10 20.1**	**+0.3**
LUBP	**Lubang**	**0.45**	**309**	*e*P	**Pn**	**14 10 12.8**	**-0.1**
LUBP				*e*S	**Sn**	**14 10 20.9**	**-0.4**
TGY	**Tagaytay City**	**0.72**	**26**	⇑*e*P	**Pn**	**14 10 16.4**	**+0.4**
SJMP	**San Jose**	**1.10**	**153**	*e*P	**Pn**	**14 10 20.7**	**-0.1**
SJMP				*e*S	**Sn**	**14 10 35.8**	**+0.5**
BOAC	**Boac**	**1.21**	**89**	*e*P	**Pn**	**14 10 22.8**	**+0.7**
BOAC				*e*S	**Sn**	**14 10 38.4**	**+0.7**
BUSP	**Coron**	**1.49**	**195**	*e*P	**Pn**	**14 10 26.7**	**+0.8**
BUSP				*e*S	**Sn**	**14 10 43.4**	**-1.0**
OTRP	**Odiongan**	**1.75**	**128**	*e*P	**Pn**	**14 10 30.9**	**+1.4**
OTRP				*e*S	**Sn**	**14 10 51.1**	**+0.3**
POLP	**Polilio Island**	**1.81**	**45**	*e*P	**Pn**	**14 10 30.1**	**-0.1**
POLP				*e*S	**Sn**	**14 10 48.8**	**-3.5**
SCZP	**Santa Cruz**	**2.41**	**344**	*e*P	**Pn**	**14 10 39.1**	**+0.8**
SCZP				*e*S	**Sn**	**14 11 05.5**	**-1.2**
BALP	**Baler**	**2.46**	**22**	*e*P	**Pn**	**14 10 39.5**	**+0.4**
BALP				*e*S	**Sn**	**14 11 09.1**	**+1.0**
ENPP	**El Nido**	**2.51**	**207**	*e*P	**Pn**	**14 10 40.3**	**+0.6**
ENPP				*e*S	**Sn**	**14 11 08.7**	**-0.5**
CUYO	**Cuyo Island**	**2.62**	**171**	*e*P	**Pn**	**14 10 41.9**	**+0.7**
CUYO				*e*S	**Sn**	**14 11 10.5**	**-1.3**
BOLP	**Bolinao**	**2.99**	**347**	*e*P	**Pn**	**14 10 46.5**	**+0.2**
BOLP				*e*S	**Sn**	**14 11 23.4**	**+2.4**
CMAR	**Chiang Mai Arr**	**21.41**	**286**	P	**P**	**14 14 46.0**	**+1.8**
0.4nm,0.4s,baz=82,slow=6.6,SNR=4.1							
WRA	**Warramunga Arr**	**35.83**	**158**	P	**P**	**14 16 54.1**	**-1.0**
0.6nm,0.3s,baz=340,slow=12,SNR=15							
ASAR	**Alice Springs**	**39.11**	**160**	P	**P**	**14 17 22.4**	**-0.5**
0.3nm,0.6s,baz=345,slow=7.0,SNR=3.6							
MKAR	**Makanchi Array**	**46.18**	**324**	P	**P**	**14 18 19.1**	**-0.8**
0.3nm,0.5s,baz=139,slow=7.7,SNR=4.3							

ISCJB ***16*** *14:16:31.7±0.7, 5°.4S±0°.4×151°.1E±0°.4, h65km, mb4.0/7, Error ellipse: s-maj=83.0km s-min=8.0km az=43.8*
IDC ***16*** *14:16:32.3±5.1, 5°.52S×151°.22E, h60km±46km, mb3.9/5, mb1 4.2/6, mb1mx3.5/42, mbtmp4.1/6, ML2.1/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/25, Error ellipse: s-maj=99.6km s-min=27.7km az=136.0*
NEIC ***16*** *14:16:33.0±0.8, 5°.41S×151°.15E, h68km±8km, mb4.4/3, Error ellipse: s-maj=49.7km s-min=6.8km az=133.0*

ISC 16 14:16:32.7±1.1, 5°.5S±0°.4×151°.2E±0°.5, h65km, n18, σ0°65/18, mb4.4/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.58**	**38**	*e*Pn	**Pn**	**14 16 58.6**	**0.0**
PMG	**Port Moresby**	**5.61**	**225**	P	**Pn**	**14 17 53.7**	**+0.1**
3.7nm,0.3s,baz=42,slow=14,SNR=16							
PMG				S	**Sn**	**14 18 55.6**	**-1.2**
6.6nm,0.3s,baz=177,slow=20,SNR=10							
PMG	**Port Moresby**	**5.61**	**225**	*e*Pn	**Pn**	**14 17 54.6**	**+1.0**
SIJI	**Sorong**	**20.41**	**282**	LR	LR	14 29 38.2	
comp=Z,109nm,21.0s,baz=334,slow=38							
WRAB	**Tennant Creek**	**21.81**	**227**	*e*P	**P**	**14 21 19.5**	**-0.2**
10nm,0.6s							
WB2	**Warramunga Arr**	**21.82**	**227**	*e*P	**P**	**14 21 19.6**	**-0.1**
9.8nm,0.6s							
WR1	**Warramunga Arr**	**21.83**	**227**	*e*P	**P**	**14 21 19.2**	**-0.6**
WRA	**Warramunga Arr**	**21.83**	**227**	P	**P**	**14 21 19.2**	**-0.6**
6.5nm,0.4s,baz=54,slow=10,SNR=69							
AS31	**Alice Springs**	**24.60**	**221**	*e*P	**P**	**14 21 47.0**	**-0.1**
ASAR	**Alice Springs**	**24.61**	**221**	P	**P**	**14 21 47.0**	**-0.1**
2.5nm,0.6s,baz=57,slow=8.7,SNR=58							
FITZ	**Fitzroy Crossi**	**27.95**	**241**	P	**P**	**14 22 17.9**	**+0.6**
6.2nm,0.6s,baz=64,slow=7.4,SNR=30							
FITZ	**Fitzroy Crossi**	**27.95**	**241**	*e*P	**P**	**14 22 17.7**	**+0.4**
5.8nm,0.6s							
ILAR	**Eielson Array**	**83.36**	**22**	P	**P**	**14 28 52.6**	**+0.2**
0.6nm,0.7s,baz=244,slow=4.8,SNR=9.9							
NV01	**Mina Array Sit**	**93.74**	**52**	*e*P	**P**	**14 29 43.2**	**+0.2**
NVAR	**Mina Array Bea**	**93.74**	**52**	P	**P**	**14 29 43.2**	**+0.2**
0.2nm,0.5s,baz=252,slow=7.5,SNR=3.0							
GERES	**GERESS Array B**	**123.76**	**328**	PKP	**PKiKP**	**14 35 24.3**	**+0.5**
0.1nm,0.3s,baz=67,slow=3.3,SNR=4.4							
TORD	**Torodi Ar. Bea**	**148.97**	**286**	PKPbc	**PKPbc**	**14 36 13.5**	**-1.0**
2.0nm,0.4s,baz=78,slow=2.4,SNR=25

-1.5600, Plg8.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 16 14:20:02.1±0.4, 58°38S±0°06×158°50E±0°08, h10km, n106, σ1°85/88, mb4.8/22, MS4.7/19, 1C-1D, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**3.90**	**4**	*e*Pn	Pn	14 20 55.2	-6.7
MCQ	**Macquarie Isla**	**3.90**	**4**	P	Pn	14 20 55.6	-6.3
	baz=3.3,SNR=61						
PYZ	**Puysegur Point**	**13.20**	**26**	*e*Pn	**Pn**	**14 23 07.2**	**-2.2**
WHZ	**Wether Hill Ro**	**13.76**	**29**	*e*Pn	**Pn**	**14 23 15.8**	**-1.3**
DCZ	**Deep Cove**	**13.97**	**26**	*e*Pn	**Pn**	**14 23 19.3**	**-0.6**
MLZ	**Mavora Lakes**	**14.30**	**28**	*e*Pn	**Pn**	**14 23 23.9**	**-0.5**
ODZ	**Otahua Downs**	**15.29**	**34**	*e*Pn	**Pn**	**14 23 37.6**	**-0.2**
	228nm,1.6s						
LBZ	**Lake Benmore**	**15.76**	**32**	*e*Pn	**Pn**	**14 23 42.8**	**-1.1**
	254nm,1.7s						
FOZ	**Fox Glacier**	**16.45**	**30**	*e*Pn	**P**	**14 23 56.1**	**+0.6**
	134nm,1.4s						
RPZ	**Rata Peaks**	**16.62**	**33**	Pn	**Pn**	**14 23 55.6**	**+0.7**
	1.3nm,0.3s,baz=44,slow=6.7,SNR=4.2						
RPZ				LR	LR	14 29 22.3	
	comp=Z,6μm,20.3s,baz=189,slow=34						
RPZ	**Rata Peaks**	**16.62**	**33**	*e*Pn	**Pn**	**14 23 55.5**	**+0.5**
	294nm,1.9s						
TAU	**Tasmania Unive**	**16.99**	**331**	*e*Pn	**Pn**	**14 23 56.6**	**-3.0**
	147nm,1.4s						
MQZ	**McQueen's Vall**	**17.12**	**37**	*e*Pn	**Pn**	**14 24 01.2**	**+0.1**
	294nm,1.8s						
CRLZ	**Canterbury Las**	**17.23**	**37**	*e*Pn	**P**	**14 24 04.0**	**0.0**
	586nm,1.9s						
OXZ	**Oxford**	**17.27**	**35**	*e*Pn	**P**	**14 24 03.8**	**-0.8**
	178nm,1.7s						
MOO	**Moorlands**	**17.46**	**331**	P	**Pn**	**14 24 03.3**	**-2.3**
	baz=17,SNR=6.9						
KHZ	**Kahutara**	**18.56**	**37**	*e*P	**Pn**	**14 24 18.9**	**-0.1**
	166nm,1.4s						
THZ	**Tophouse**	**18.96**	**35**	*e*P	**Pn**	**14 24 24.2**	**+0.4**
	231nm,1.6s						
VNDA	**Vanda**	**19.27**	**178**	P	**P**	**14 24 25.9**	**-0.4**
	0.1nm,0.3s,baz=347,slow=13,SNR=6.4						
VNDA				LR	LR	14 30 27.9	
	comp=Z,3μm,21.4s,baz=358,slow=33						
VNDA	**Vanda**	**19.27**	**178**	*e*P	**P**	**14 24 25.8**	**-0.6**
	12nm,1.0s						
TOO	**Toolangi**	**22.49**	**332**	*e*P	**P**	**14 25 00.2**	**-1.3**
	106nm,1.5s						
TOO	**Toolangi**	**22.49**	**332**	P	**P**	**14 25 00.0**	**-1.4**
	baz=22,SNR=3.6						
CASY	**Casey**	**23.07**	**230**	*e*P	**P**	**14 25 08.2**	**+0.9**
	18nm,1.2s						
URZ	**Urewera**	**23.48**	**39**	LR	LR	14 33 15.0	
	comp=Z,2μm,21.7s,baz=206,slow=34						
HTT	**Hallett**	**28.21**	**324**	P	**P**	**14 25 54.9**	**+0.1**
	baz=28,SNR=3.9						
STKA	**Stephens Creek**	**28.89**	**329**	P	P	14 26 07.2	+6.4
	3.3nm,1.0s,baz=164,slow=9.6,SNR=3.3						
STKA				LR	LR	14 35 15.4	
	comp=Z,3μm,21.2s,baz=166,slow=32						
QSPA	**South Pole Qui**	**31.73**	**180**	*e*P	**P**	**14 26 27.4**	**+1.6**
	14nm,1.3s						
RMQ	**Roma**	**32.60**	**344**	P	**P**	**14 26 32.9**	**-0.7**
	baz=32,SNR=4.4						
FORT	**Forrest**	**34.54**	**310**	*e*P	**P**	**14 26 49.4**	**-1.0**
	25nm,0.8s						
DZM	**Mont Dzumac**	**36.72**	**12**	P	**P**	**14 27 11.1**	**+1.7**
	5.3nm,0.9s,baz=79,slow=16,SNR=4.4						
DZM	**Mont Dzumac**	**36.72**	**12**	*e*S	**S**	**14 32 54.7**	**+1.9**
	554nm,25.0s						
DZM				*e*LQ	LQ	14 35 31.6	
	1μm,26.1s						
DZM				*e*LR	LR	14 37 09.2	
	comp=Z,4μm,22.4s						
DZM	**Mont Dzumac**	**36.72**	**12**	*e*P	**P**	**14 27 11.1**	**+1.7**
	59nm,1.6s						
H01W1	**Cape Leeuwin H**	**37.46**	**289**	T	T	15 06 53.4	
	baz=142,slow=76,SNR=37						
H01W2	**Cape Leeuwin H**	**37.47**	**289**	T	T	15 06 48.1	
	baz=142,slow=76,SNR=35						
H01W3	**Cape Leeuwin H**	**37.48**	**289**	T	T	15 06 53.8	
	baz=142,slow=76,SNR=44						
ASAR	**Alice Springs**	**38.87**	**323**	P	**P**	**14 27 23.9**	**-3.6**
	3.8nm,0.8s,baz=162,slow=8.0,SNR=25						
ASAR				PcP	**PcP**	**14 29 36.9**	**-1.4**
	0.4nm,0.8s,baz=157,slow=5.0,SNR=2.0						
ASAR				LR	LR	14 40 46.3	
	comp=Z,1μm,21.3s,baz=159,slow=32						
AS31	**Alice Springs**	**38.88**	**323**	*e*P	**P**	**14 27 23.9**	**-3.6**
AS31				*e*PcP	**PcP**	**14 29 36.9**	**-1.4**
CTA	**Charters Tower**	**39.27**	**342**	P	**P**	**14 27 30.1**	**-0.6**
	4.0nm,0.9s,baz=141,slow=10,SNR=5.2						
WRKA	**Warakurna**	**39.58**	**314**	P	**P**	**14 27 33.1**	**-0.2**
	baz=39,SNR=8.1						
MAW	**Mawson**	**40.07**	**216**	P	**P**	**14 27 35.3**	**-1.6**
	2.3nm,0.8s,baz=300,slow=20,SNR=2.4						
MAW				LR	LR	14 43 51.2	
	comp=Z,3μm,18.4s,baz=100,slow=36						
MAW	**Mawson**	**40.07**	**216**	*e*P	**P**	**14 27 35.3**	**-1.6**
	3.3nm,1.4s						
WB2	**Warramunga Arr**	**42.23**	**325**	*e*P	**P**	**14 27 53.5**	**-1.7**
	30nm,1.3s						
WR1	**Warramunga Arr**	**42.23**	**325**	*e*P	**P**	**14 27 53.2**	**-2.0**
WRA	**Warramunga Arr**	**42.23**	**325**	P	**P**	**14 27 53.2**	**-2.0**
	5.6nm,1.0s,baz=162,slow=8.3,SNR=9.2						
SYO	**Syowa Base**	**45.49**	**206**	*e*P	**P**	**14 28 19.0**	**-1.8**
SYO	**Syowa Base**	**45.49**	**206**	*e*pP	pP	14 28 22.6	-0.3
FITZ	**Fitzroy Crossi**	**46.89**	**315**	P	**P**	**14 28 31.4**	**-1.0**
	4.3nm,0.8s,baz=185,slow=9.2,SNR=8.1						
FITZ	**Fitzroy Crossi**	**46.89**	**315**	*e*P	**P**	**14 28 32.1**	**-0.3**
	27nm,1.3s						
FITZ	**Fitzroy Crossi**	**46.89**	**315**	P	**P**	**14 28 32.4**	**0.0**
	baz=46,SNR=7.9						
RAR	**Rarotonga**	**47.73**	**57**	P	**P**	**14 28 39.6**	**+0.6**
	11nm,0.4s,baz=113,slow=7.7,SNR=4.1						
RAR	**Rarotonga**	**47.73**	**57**	*e*P	**P**	**14 28 39.5**	**+0.6**
	333nm,2.0s						
SNAA	**Sanae**	**49.58**	**188**	P	**P**	**14 28 51.0**	**-1.7**
SNAA	**Sanae**	**49.58**	**188**	*e*P	**P**	**14 28 52.1**	**-0.6**
	19nm,1.5s						
PMG	**Port Moresby**	**49.63**	**345**	P	**P**	**14 28 53.0**	**-0.5**
	9.6nm,0.8s,baz=315,slow=10.0,SNR=3.0						
MTN	**Manton Dam**	**49.90**	**324**	P	**P**	**14 28 53.6**	**-2.0**
	baz=50,SNR=5.4						
VNA3	**Neumayer Olymp**	**50.40**	**185**	P	**P**	**14 29 01.5**	**+2.7**
VNA2	**Neumayer--Watz**	**50.60**	**186**	P	**P**	**14 29 02.6**	**+2.3**
TBI	**Tubuai**	**50.74**	**69**	*e*S	**S**	**14 36 18.3**	**+1.1**
	556nm,29.8s						
TBI				*e*LQ	LQ	14 40 48.7	
	2μm,27.2s						
TBI				*e*LR	LR	14 43 29.4	
	comp=Z,739nm,28.5s,baz=209						
TBI	**Tubuai**	**50.74**	**69**	*e*T	T	15 23 26.0	
	12nm,0.3s						
VNA1	**Neumayer--Stat**	**50.92**	**186**	P	**P**	**14 29 01.9**	**-0.9**
PPT2	**Papeete2**	**55.58**	**66**	*e*S	**S**	**14 37 22.5**	**-0.9**
	727nm,29.5s						
PPT2				*e*LQ	LQ	14 42 54.7	
	984nm,24.8s						
PPT2				*e*LR	LR	14 45 43.0	
	comp=Z,2μm,29.5s,baz=201						
PPT	**Papeete**	**55.60**	**66**	LR	LR	14 50 32.7	
	comp=Z,354nm,18.0s,baz=210,slow=33						
RKT	**Rikitea**	**58.33**	**83**	*e*LR	LR	14 47 01.4	
	comp=Z,1μm,23.8s						
RKT	**Rikitea**	**58.33**	**83**	*e*T	T	15 32 39.8	
	20nm,0.3s						
VAH	**Vaihoa**	**58.55**	**66**	*e*T	T	15 33 10.9	
	13nm,0.3s						
SIJI	**Sorong**	**61.23**	**329**	P	**P**	**14 30 18.5**	**+1.4**
	6.7nm,0.9s,baz=131,slow=7.2,SNR=4.6						
TAOE	**Nuku Hiva Isla**	**67.69**	**70**	*e*LR	LR	14 51 26.6	
	comp=Z,530nm,23.0s						
PLCA	**Paso Flores**	**73.14**	**143**	P	**P**	**14 31 32.9**	**+0.4**
	3.6nm,0.9s,baz=242,slow=11,SNR=4.9						
PLCA				LR	LR	14 57 48.1	
	comp=Z,294nm,18.2s,baz=230,slow=31						
PLCA	**Paso Flores**	**73.14**	**143**	*e*P	**P**	**14 31 32.9**	**+0.4**
	30nm,1.6s						
H08S2	**Diego Garcia H**	**81.45**	**269**	T	T	16 01 58.6	
	baz=147,slow=76,SNR=13						
H08S1	**Diego Garcia H**	**81.46**	**269**	T	T	16 01 52.4	
	baz=147,slow=76,SNR=18						
H08S3	**Diego Garcia H**	**81.47**	**269**	T	T	16 01 52.5	
	baz=147,slow=76,SNR=16						
H08N1	**Diego Garcia H**	**83.32**	**269**	T	T	16 04 12.8	
	baz=152,slow=75,SNR=5.1						
H08N3	**Diego Garcia H**	**83.33**	**269**	T	T	16 04 11.7	
	baz=152,slow=75,SNR=4.8						
H08N2	**Diego Garcia H**	**83.34**	**269**	T	T	16 04 11.2	
	baz=152,slow=75,SNR=5.2						
BOSA	**Boshof**	**84.98**	**220**	P	**P**	**14 32 35.1**	**-2.4**
	3.0nm,0.9s,baz=180,slow=6.1,SNR=2.2						
BOSA				LR	LR	15 06 45.8	
	comp=Z,539nm,18.7s,baz=154,slow=33						
QIZ	**Qiongzhong**	**86.92**	**315**	P	**P**	**14 32 49.3**	**+2.4**
QIZ				S	**S**	**14 43 30.1**	**+5.1**
QIZ				SS	**SS**	**14 49 12.6**	**+4.6**
QIZ				LR	LR		
	comp=N,210nm,27.5s						
QIZ				LR	LR		
	comp=E,230nm,28.4s						
QIZ				LR	LR		
	comp=Z,290nm,33.3s						
CPUP	**Villa Florida**	**90.48**	**148**	P	**P**	**14 33 03.9**	**0.0**
	3.0nm,0.9s,baz=189,slow=5.2,SNR=5.6						
CPUP	**Villa Florida**	**90.48**	**148**	*e*P	**P**	**14 33 03.9**	**0.0**
	23nm,1.8s						
CM31	**Chiang Mai Arr**	**90.81**	**305**	*e*P	**P**	**14 33 06.0**	**+0.8**
	24nm,1.9s						
CMAR	**Chiang Mai Arr**	**90.81**	**305**	P	**P**	**14 33 06.0**	**+0.8**
	0.3nm,0.5s,baz=186,slow=0.9,SNR=2.7						
CMAR				LR	LR	15 11 43.5	
	comp=Z,527nm,19.4s,baz=170,slow=34						
KMI	**Kunming**	**95.17**	**311**	P	**P**	**14 33 27.5**	**+2.0**
NJ2	**Nanjing**	**95.99**	**327**	*e*P	**P**	**14 33 31.8**	**+3.0**
MJAR	**Matsushiro Arr**	**96.08**	**344**	LR	LR	15 14 25.4	
	comp=Z,148nm,20.9s,baz=190,slow=34						
LPAZ	**La Paz**	**96.35**	**135**	P	**P**	**14 33 32.6**	**+0.8**
	1.2nm,1.0s,baz=231,slow=7.6,SNR=4.0						
LPAZ				LR	LR	15 06 42.6	
	comp=Z,289nm,21.7s,baz=174,slow=29						
KSRS	**Korea Array**	**98.84**	**336**	LR	LR	15 15 42.2	
	comp=Z,155nm,21.0s,baz=168,slow=34						
CD2	**Chengdu**	**99.96**	**315**	P	**Pdif**	**14 33 49.3**	**+2.5**
CD2				LR	LR		
	comp=N,980nm,23.5s						
CD2				LR	LR		
	comp=E,660nm,17.6s						
CD2				LR	LR		
	comp=Z,920nm,18.6s						
WMQ	**Urumqi**	**117.45**	**310**	*e*PKP	**PKiKP**	**14 38 48.0**	**+0.9**
WMQ				LR	LR		
	comp=N,91nm,17.7s						
WMQ				LR	LR		
	comp=E,120nm,16.9s						
WMQ				LR	LR		
	comp=Z,180nm,18.3s						
NV01	**Mina Array Sit**	**118.50**	**63**	*e*PKPdf	**PKiKP**	**14 38 49.3**	**-0.2**
NVAR	**Mina Array Bea**	**118.50**	**63**	PKP	**PKiKP**	**14 38 49.3**	**-0.2**
	0.2nm,0.6s,baz=185,slow=4.5,SNR=2.2						
MK32	**Makanchi Array**	**122.09**	**308**	*e*PKPdf	**PKPdf**	**14 38 53.4**	**-2.4**
MKAR	**Makanchi Array**	**122.09**	**308**	PKP	**PKPdf**	**14 38 53.4**	**-2.4**
	0.2nm,0.4s,baz=204,slow=3.2,SNR=2.9						
PDAR	**Pinedale Array**	**126.03**	**66**	PKP	**PKPdf**	**14 39 02.7**	**-1.1**
	0.1nm,0.3s,baz=250,slow=10,SNR=2.5						
GEYT	**Alibeck**	**126.54**	**285**	PKP	**PKPdf**	**14 39 04.5**	**-0.2**
	0.5nm,0.4s,baz=12,slow=34,SNR=2.4						
ILAR	**Eielson Array**	**129.58**	**27**	PKP	**PKiKP**	**14 39 09.8**	**-0.5**
	0.4nm,1.0s,baz=237,slow=4.2,SNR=2.9						
BVAR	**Borovoye Array**	**131.82**	**306**	PKP	**PKPdf**	**14 39 12.8**	**-1.3**
	0.1nm,0.3s,baz=182,slow=4.3,SNR=2.7						
YKA	**Yellowknife Ar**	**137.69**	**44**	PKP	**PKPdf**	**14 39 22.5**	**-2.2**
	0.2nm,0.6s,baz=239,slow=3.5,SNR=3.6						
YKB5	**Yellowknife Ar**	**137.69**	**44**	*e*PKPdf	**PKPdf**	**14 39 22.5**	**-2.3**
KEST	**Kesra**	**149.56**	**235**	PKPbc	**PKPbc**	**14 39 51.2**	**+0.2**
	3.5nm,0.8s,baz=209,slow=2.6,SNR=4.8						
KLMR	**Klimovskoe**	**150.01**	**301**	*e*	**PKPbc**	**14 39 49.5**	**-1.7**
KLMR				AMP		14 40 04.4	
	comp=Z,17nm,1.1s						
AKASG	**Malin Array Be**	**150.23**	**277**	PKPbc	**PKPbc**	**14 39 49.8**	**-2.3**
	comp=Z,1.0nm,0.5s,baz=85,slow=2.6,SNR=5.9						
AKBB	**Malin Array Si**	**150.23**	**277**	*e*PKPbc	**PKiKP**	**14 39 52.4**	**-0.5**
VYHS	**Vyhne**	**154.39**	**265**	*e*PKP	**PKiKP**	**14 40 04.9**	**+3.3**
VYHS				*e*		14 40 16.6	
ESDC	**Sonseca Array**	**158.16**	**219**	PKPab	**PKPab**	**14 40 32.0**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=145,slow=3.1,SNR=3.4						
ESDC	**Sonseca Array**	**158.16**	**219**	*e*PKPab	**PKPab**	**14 40 32.0**	**-0.3**
CLL	**Collm**	**159.10**	**265**	*e*(sPKPab)	**sPKPab**	**14 40 46.0**	**+6.8**
CLL				LmV		16 00 00.0	
	comp=Z,200nm,21.3s						

*IDC **16** 14:42:57.7±1.5, 34°11N×25°62E, h0km, mb3.7/3, mb1 3.6/5, mb1mx3.3/27, mbtmp3.5/5, ML3.8/2, Error ellipse: s-maj=49.2km s-min=25.0km az=136.0*
*ISCJB **16** 14:43:00.8±1.6, 34°16N±0°07×25°20E±0°06, h19km±10km, mb3.6/3, Error ellipse: s-maj=12.2km s-min=8.9km az=174.4*
*THE **16** 14:43:02.6, 34°29N×25°09E, h2km±2km, ML2.8/4, Error ellipse: s-maj=2.3km s-min=0.9km az=157.0*
*ATH **16** 14:43:03.0, 34°34N×25°13E, h21km±5km, ML2.8/5, Error ellipse: s-maj=6.8km s-min=2.2km az=3.0*

ISC 16 14:43:00.8±1.4, 34°21N±0°07×25°20E±0°06, h18km±4km, n19, σ0°87/30, mb3.8/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.87**	**338**	P	**Pb**	**14 43 17.3**	**0.0**
SIVA				S	**Sg**	**14 43 29.0**	**-0.2**
SIVA	**Sivas**	**0.87**	**338**	P	**Pb**	**14 43 17.1**	**-0.2**
SIVA				S	**Sb**	**14 43 27.5**	**-1.1**
SIVA				AML	AML	14 43 35.6	
	comp=E,4008μm,0.5s						
SIVA				AML	AML	14 43 36.1	
	comp=N,3504μm,0.6s						
TMBK	**Timbaki Herakl**	**0.93**	**337**	P	**Pn**	**14 43 18.8**	**-0.1**
TMBK				S	**Sg**	**14 43 31.3**	**0.0**
LAST	**Lasithi**	**0.98**	**13**	P	**Pg**	**14 43 20.3**	**+0.5**
LAST				S	**Sn**	**14 43 33.9**	**+0.9**
LAST	**Lasithi**	**0.98**	**13**	P	**Pg**	**14 43 20.3**	**+0.5**
LAST				S	**Sb**	**14 43 32.6**	**+0.9**
LAST				AML	AML	14 43 40.2	
	comp=N,814μm,0.5s						
LAST				AML	AML	14 43 41.7	
	comp=E,610μm,0.8s						
NPS	**Neapolis**	**1.10**	**18**	P	**Pg**	**14 43 23.0**	**+0.8**
NPS	**Neapolis**	**1.10**	**18**	P	**Pg**	**14 43 23.0**	**+0.8**
NPS				S	**Sb**	**14 43 35.3**	**0.0**
NPS				AML	AML	14 43 49.6	
	comp=N,594μm,0.8s						
NPS				AML	AML	14 43 52.7	
	comp=E,658μm,0.8s						
GVD	**Gavdhos**	**1.11**	**305**	P	**Pn**	**14 43 21.2**	**-0.2**
GVD				S	**Sg**	**14 43 36.1**	**-0.9**
GVD	**Gavdhos**	**1.11**	**305**	P	**Pn**	**14 43 21.1**	**-0.4**
GVD				S	**Sg**	**14 43 36.6**	**-0.4**
GVD				AML	AML	14 43 50.5	
	comp=N,1384μm,0.7s						
GVD				AML	AML	14 43 54.7	
	comp=E,1142μm,0.6s						
ZKR	**Zakros**	**1.23**	**43**	P	**Pg**	**14 43 25.3**	**+0.7**
PRNS	**Prines Rethymn**	**1.29**	**334**	P	**Pb**	**14 43 24.5**	**0.0**
PRNS				S	**Sb**	**14 43 41.3**	**+0.6**
VAM	**Vamos**	**1.45**	**326**	P	**Pb**	**14 43 27.2**	**-0.1**
VAM				S	**Sb**	**14 43 46.1**	**+0.7**
VAM	**Vamos**	**1.45**	**326**	P	**Pb**	**14 43 26.9**	**-0.3**
VAM				S	**Sg**	**14 43 47.2**	**-0.5**
VAM				AML	AML	14 43 57.2	
	comp=N,471μm,0.5s						
VAM				AML	AML	14 43 59.2	
	comp=E,819μm,0.5s						
IMMV	**Iera Moni Meta**	**1.60**	**322**	P	**Pb**	**14 43 30.3**	**+0.5**
AKASG	**Malin Array Be**	**16.74**	**9**	Pn	**Pn**	**14 46 54.0**	**-0.2**
	comp=E,0.1nm,0.3s,baz=199,slow=10,SNR=3.5						
GERES	**GERESS Array B**	**16.94**	**333**	P	**P**	**14 46 59.3**	**+0.6**
	comp=E,0.2nm,0.3s,baz=153,slow=12,SNR=4.6						
TORD	**Torodi Ar. Bea**	**29.91**	**231**	P	**P**	**14 49 09.3**	**+1.6**
	comp=E,0.9nm,0.6s,baz=30,slow=8.6,SNR=7.2						
MKAR	**Makanchi Array**	**44.27**	**56**	P	**P**	**14 51 07.6**	**-1.6**
	comp=E,0.2nm,0.5s,baz=283,slow=7.2,SNR=3.7						
ZALV	**Zalesovo Beam**	**45.64**	**45**	P	**P**	**14 51 17.4**	**-2.5**
	comp=E,0.6nm,0.4s,baz=271,slow=8.4,SNR=2.4						

IDC 16 14:48:17.9±1.8, 1°00N×123°71E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/25, mbtmp3.4/4, Error ellipse: s-maj=129.7km s-min=21.3km az=57.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.28**	**154**	P	P	14 53 28.5	+1.1
	0.8nm,0.9s,baz=333,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**26.45**	**159**	P	P	14 53 55.8	-1.0
	0.1nm,0.5s,baz=327,slow=8.6,SNR=6.2						
CMAR	**Chiang Mai Arr**	**29.86**	**307**	P	P	14 54 27.4	0.0
	0.3nm,0.4s,baz=124,slow=7.7,SNR=3.7						
MKAR	**Makanchi Array**	**58.15**	**328**	P	P	14 58 13.5	0.0
	0.3nm,0.4s,baz=114,slow=8.9,SNR=5.4						

ISC 16 15:10:26.9±1.2, 47°98N±0°05×19°27E±0°03, h12km±10km, n11, σ0°47/19, 1C, Hungary

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSZ	**Piszkesteto**	**0.42**	**98**	⇑EPg	**Pg**	**15 10 35.1**	**-0.3**
PSZ				ESg	**Sg**	**15 10 41.1**	**+0.1**
VYHS	**Vyhne**	**0.59**	**331**	*e*PG	**Pg**	**15 10 38.7**	**+0.2**
VYHS				*e*SG	**Sg**	**15 10 46.1**	**-0.2**
SRO	**Srobarova**	**0.67**	**256**	*e*PG	**Pg**	**15 10 40.0**	**+0.2**
SRO				*e*SG	**Sb**	**15 10 49.4**	**-0.2**
KOLL	**Kolacno**	**0.83**	**316**	*e*PG	**Pg**	**15 10 43.1**	**+0.1**
KOLL				*e*SG	**Sg**	**15 10 53.7**	**-0.3**
KECS	**Kecovo**	**0.96**	**58**	*e*PG	**Pg**	**15 10 45.1**	**-0.2**
KECS				*e*SG	**Sb**	**15 10 58.4**	**+0.4**
KECS				*e*LG	Lg	15 11 00.8	
LANS	**Liptovska Anna**	**1.18**	**6**	*e*PG	**Pg**	**15 10 49.9**	**+0.3**
LANS				*e*SG	**Sn**	**15 11 05.5**	**+0.2**
JAVC	**Velka Javorina**	**1.38**	**310**	*e*PG	**Pg**	**15 10 53.7**	**+0.2**
JAVC				*e*SG	**Sb**	**15 11 09.0**	**-1.4**
MODS	**Modra-Piesok**	**1.39**	**287**	*e*PG	**Pn**	**15 10 52.4**	**+0.2**
MODS				*e*SG	**Sb**	**15 11 10.8**	**+0.2**
MODS				*e*LG	Lg	15 11 12.7	
MORC	**Moravsky Berou**	**2.13**	**328**	*e*SN	**Sn**	**15 11 28.1**	**-0.6**
KRUC	**Moravsky**	**2.20**	**301**	*e*PN	**Pn**	**15 11 03.5**	**+0.3**
VRAC	**Vranov**	**2.22**	**308**	*e*PN	**Pn**	**15 11 04.0**	**+0.5**

MEX 16 15:13:17.1±0.6, 16°19N×97°32W, h20km±30km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.80**	**284**	*e*P	Pb	15 13 30.1	-2.3
VHO	**Vista Hermosa**	**1.04**	**33**	*i* P	Pb	15 13 33.6	-2.9

*ATH **16** 15:31:24.0, 35°28N×22°47E, h16km±6km, ML3.1/7, Error ellipse: s-maj=7.7km s-min=1.8km az=64.0*
*IDC **16** 15:31:25.9±5.5, 35°98N×23°08E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.5/35, mbtmp3.8/7, Error ellipse: s-maj=114.0km s-min=28.4km az=27.0*
*THE **16** 15:31:26.4, 35°30N×22°59E, h6km±1km, ML3.1/5, Error ellipse: s-maj=1.7km s-min=0.9km az=47.0*
*ISCJB **16** 15:31:27.1±1.2, 35°28N±0°09×22°58E±0°09, h68km±8km, mb3.5/8, Error ellipse: s-maj=18.1km s-min=7.5km az=39.7*

ISC 16 15:31:28.1±2.1, 35°3N±0°1×22°6E±0°1, h53km±15km, n35, σ1°68/46, mb3.5/8, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.79**	**46**	P	**Pn**	**15 31 41.9**	**-1.2**
ANKY				S	**Sn**	**15 31 53.1**	**-1.0**
ANKY	**Antikythira Is**	**0.79**	**46**	P	**Pn**	**15 31 41.5**	**-1.6**
ANKY				S	**Sn**	**15 31 52.5**	**-1.6**
ANKY				AML	AML	15 31 55.3	
	comp=E,4433μm,0.5s						
ANKY				AML	AML	15 31 55.7	
	comp=N,3475μm,0.4s						
KTHR	**Kythira**	**0.99**	**19**	P	**Pn**	**15 31 45.2**	**-0.6**
KTHR				S	**Sn**	**15 31 59.1**	**+0.2**
KYTH	**Kithira**	**1.01**	**21**	P	**Pn**	**15 31 46.0**	**-0.1**
KYTH				S	**Sn**	**15 32 00.9**	**+1.6**
KYTH	**Kithira**	**1.01**	**21**	P	**Pn**	**15 31 46.0**	**-0.1**
KYTH				S	**Sn**	**15 32 00.3**	**+1.0**
KYTH				AML	AML	15 32 08.9	
	comp=N,2236μm,0.6s						
KYTH				AML	AML	15 32 09.6	
	comp=E,1935μm,0.9s						
IMMV	**Iera Moni Meta**	**1.13**	**83**	P	**Pn**	**15 31 47.7**	**0.0**
IMMV				S	**Sn**	**15 32 04.9**	**+2.6**
IMMV	**Iera Moni Meta**	**1.13**	**83**	P	**Pn**	**15 31 47.7**	**0.0**
IMMV				S	**Sn**	**15 32 05.3**	**+3.0**
IMMV				AML	AML	15 32 15.4	
	comp=E,2027μm,0.9s						
IMMV				AML	AML	15 32 17.6	
	comp=N,2065μm,0.5s						
VAM	**Vamos**	**1.31**	**86**	P	**Pn**	**15 31 50.1**	**0.0**
VAM				S	**Sn**	**15 32 09.5**	**+3.0**
VAM	**Vamos**	**1.31**	**86**	P	**Pn**	**15 31 50.1**	**0.0**
VAM				S	**Sn**	**15 32 10.6**	**+4.1**
VAM				AML	AML	15 32 22.9	
	comp=E,1273μm,0.7s						
VAM				AML	AML	15 32 23.4	
	comp=N,1626μm,0.6s						
GVD	**Gavdhos**	**1.31**	**111**	P	**Pn**	**15 31 49.8**	**-0.3**
GVD	**Gavdhos**	**1.31**	**111**	P	**Pn**	**15 31 49.7**	**-0.4**
G

ATAH	**Atahualpa**	**3.91**	**283**	P	**Pn**	**15 33 35.4**	**+0.2**
	32nm,0.3s,baz=101,slow=2.4,SNR=485						
ATAH				S	**Sn**	**15 34 22.2**	**+0.9**
	26nm,0.3s,baz=101,slow=4.8,SNR=10						
ATAH				LR	LR	15 34 41.0	
	comp=Z,46nm,21.6s,baz=359,slow=32						
NNA	**Nana**	**4.51**	**210**	P	**Pn**	**15 33 43.8**	**+1.1**
	8.6nm,0.3s,baz=352,slow=4.2,SNR=23						
NNA				S	**Sn**	**15 34 34.2**	**-0.7**
	22nm,0.3s,baz=144,slow=22,SNR=14						
LPAZ	**La Paz**	**10.32**	**143**	P	**Pn**	**15 34 59.5**	**-1.0**
	0.3nm,0.3s,baz=338,slow=7.4,SNR=6.4						
SIV	**San Ignacio**	**15.37**	**122**	P	**Pn**	**15 36 04.4**	**-0.3**
	0.7nm,0.3s,baz=301,slow=12,SNR=20						
PTGA	**Pitinga**	**16.26**	**64**	P	**P**	**15 36 16.4**	**+0.5**
	2.4nm,0.3s,baz=259,slow=18,SNR=14						
CFA	**Coronel Fontan**	**24.16**	**167**	P	**P**	**15 37 38.3**	**+0.3**
	1.5nm,0.7s,baz=302,slow=11,SNR=4.1						
CPUP	**Villa Florida**	**24.47**	**140**	P	**P**	**15 37 40.2**	**-0.6**
	1.1nm,0.7s,baz=196,slow=16,SNR=2.6						
MDP	**Montagnes des**	**25.47**	**60**	P	**P**	**15 37 49.9**	**-0.1**
	14nm,1.0s,baz=48,slow=15,SNR=4.0						
BDFB	**Brasilia**	**27.03**	**109**	P	**P**	**15 38 05.1**	**+1.0**
	0.8nm,0.3s,baz=252,slow=9.6,SNR=2.6						
PLCA	**Paso Flores**	**32.74**	**174**	P	**P**	**15 38 54.1**	**-0.1**
	2.0nm,1.0s,baz=26,slow=9.9,SNR=4.4						
TXAR	**Lajitas Array**	**46.55**	**324**	P	**P**	**15 40 48.7**	**+0.2**
	0.1nm,0.5s,baz=150,slow=9.4,SNR=3.1						
NVAR	**Mina Array Bea**	**61.59**	**322**	P	**P**	**15 42 37.6**	**+0.1**
	0.1nm,0.4s,baz=126,slow=9.1,SNR=2.8						
DBIC	**Dimbokro**	**71.03**	**80**	P	**P**	**15 43 39.5**	**+1.7**
	baz=231,slow=3.4,SNR=14						
YKA	**Yellowknife Ar**	**76.78**	**342**	P	**P**	**15 44 09.1**	**-1.1**
	0.2nm,0.4s,baz=141,slow=6.1,SNR=5.5						
YKA				pP	**pP**	**15 44 46.9**	**-0.6**
	0.6nm,0.7s,baz=127,slow=7.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**78.60**	**75**	P	**P**	**15 44 22.0**	**+0.7**
	0.3nm,0.3s,baz=235,slow=4.1,SNR=7.7						
TORD				pP	**pP**	**15 44 57.3**	**-1.5**
	0.6nm,0.8s,baz=297,slow=6.3,SNR=2.1						
TORD				LR	LR	16 19 55.0	
	comp=Z,87nm,19.5s,baz=325,slow=36						
INK	**Inuvik**	**86.52**	**341**	P	**P**	**15 45 00.3**	**-0.8**
	0.5nm,0.6s,baz=113,slow=2.7,SNR=2.8						
ILAR	**Eielson Array**	**89.82**	**336**	P	**P**	**15 45 16.3**	**-0.6**
	0.3nm,0.5s,baz=143,slow=4.5,SNR=5.8						
STKA	**Stephens Creek**	**127.38**	**219**	PKP	**PKPdf**	**15 51 23.0**	**-0.1**
	2.0nm,0.9s,baz=25,slow=19,SNR=2.9						
ZALV	**Zalesovo Beam**	**131.31**	**16**	PKP	**PKPdf**	**15 51 30.2**	**+0.3**
	0.7nm,0.6s,baz=298,slow=3.1,SNR=3.0						
MKAR	**Makanchi Array**	**136.61**	**23**	PKP	**PKPdf**	**15 51 39.7**	**-0.4**
	0.1nm,0.4s,baz=307,slow=0.7,SNR=2.5						
MKAR				pPKP	**pPKPdf**	**15 52 20.8**	**+0.6**
	0.3nm,0.7s,baz=25,slow=3.8,SNR=3.4						
ASAR	**Alice Springs**	**137.96**	**221**	PKhKP	PKPpre	15 51 35.5	
	0.5nm,1.1s,baz=135,slow=2.5,SNR=4.6						
ASAR				PKP	**PKPdf**	**15 51 43.0**	**-0.4**
	0.6nm,0.5s,baz=126,slow=2.1,SNR=9.8						
WRA	**Warramunga Arr**	**140.21**	**225**	PKhKP	PKPpre	15 51 40.6	
	1.5nm,1.1s,baz=353,slow=21,SNR=6.0						
WRA				PKP	**PKPdf**	**15 51 47.5**	**0.0**
	0.9nm,0.4s,baz=161,slow=2.2,SNR=8.9						

MEX 16 15:36:38.1±0.7, 15°.90N×97°.29W, h7km±19km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.94**	**302**	*eP*	Pg	15 36 53.9	-2.4
PNIG				*eS*	Sg	15 37 05.8	-2.7
VHO	**Vista Hermosa**	**1.29**	**25**	*i* P	Pn	15 36 59.3	-3.4
VHO				*eS*	Sg	15 37 14.5	-5.1
TLIG	**Tlapa**	**2.06**	**324**	*i* P	Pn	15 37 13.2	0.0

*ISCJB **16** 15:40:12.7±0.6, 18°.0S×0°.2×178°.1W±0°.1, h350km, mb3.3/8, Error ellipse: s-maj=24.9km s-min=16.8km az=150.6*
*IDC **16** 15:40:15.1±7.2, 17°.57S×178°.23W, h349km±69km, mb3.1/8, mb1 3.5/8, mb1mx3.1/33, mbtmp3.8/8, Error ellipse: s-maj=47.4km s-min=21.5km az=153.0*
ISC 16 15:40:13.7±0.8, 17°.9S±0°.2×178°.2W±0°.1, h350km, n16, σ1§64/18, mb3.3/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.62**	**261**	P	**P**	**15 46 25.4**	**+2.7**
	0.5nm,0.3s,baz=98,slow=7.8,SNR=4.3						
WRA	**Warramunga Arr**	**44.80**	**260**	P	**P**	**15 47 55.6**	**+1.2**
	0.5nm,0.4s,baz=90,slow=8.5,SNR=7.8						
ASAR	**Alice Springs**	**44.96**	**254**	P	**P**	**15 47 57.5**	**+1.9**
	1.8nm,0.5s,baz=91,slow=8.3,SNR=112						
ASAR				PcP	**PcP**	**15 49 31.1**	**+0.9**
	0.3nm,0.4s,baz=103,slow=3.6,SNR=6.4						
ASAR				S	**S**	**15 54 02.5**	**-4.7**
	0.8nm,0.9s,baz=89,slow=16,SNR=6.4						
MJAR	**Matsushiro Arr**	**68.01**	**323**	P	**P**	**15 50 35.6**	**-0.6**
	0.3nm,0.4s,baz=163,slow=6.6,SNR=4.0						
NVAR	**Mina Array Bea**	**79.31**	**44**	P	**P**	**15 51 42.1**	**+0.5**
	0.7nm,0.6s,baz=224,slow=9.3,SNR=8.3						
ILAR	**Eielson Array**	**85.85**	**13**	P	**P**	**15 52 13.2**	**-1.0**
	0.1nm,0.3s,baz=219,slow=5.5,SNR=4.7						
TXAR	**Lajitas Array**	**85.85**	**58**	P	**P**	**15 52 15.7**	**+0.6**
	0.8nm,0.7s,baz=230,slow=5.4,SNR=12						
PDAR	**Pinedale Array**	**87.23**	**43**	P	**P**	**15 52 21.5**	**-0.1**
	0.2nm,0.5s,baz=255,slow=1.8,SNR=2.4						
VNA3	**Neumayer Olymp**	**90.73**	**176**	P	**P**	**15 52 35.9**	**-1.3**
VNA2	**Neumayer--Watz**	**91.17**	**177**	P	**P**	**15 52 38.2**	**-0.9**
	baz=176,slow=3.0						
VNA1	**Neumayer--Stat**	**91.39**	**177**	P	**P**	**15 52 39.7**	**-0.5**
BRTR	**Keskin Array B**	**144.91**	**315**	PKP	**PKPdf**	**15 59 09.7**	**-0.2**
	0.7nm,0.5s,baz=158,slow=6.2,SNR=4.3						
MLR	**Muntele Rosu**	**145.92**	**329**	PKPbc	**PKPab**	**15 59 13.6**	**-0.4**
	0.8nm,0.3s,baz=135,slow=14,SNR=2.5						
MMAI	**Mount Meron Ar**	**146.29**	**303**	PKPbc	**PKPab**	**15 59 15.3**	**-0.5**
	0.5nm,0.3s,baz=65,slow=6.8,SNR=4.1						
GERES	**GERESS Array B**	**147.66**	**345**	PKPbc	**PKPbc**	**15 59 17.3**	**-0.2**
	0.7nm,0.6s,baz=114,slow=1.6,SNR=6.1						
DAVOX	**Davos/Dischmat**	**150.44**	**349**	PKPbc	**PKPbc**	**15 59 24.2**	**-0.3**
	1.3nm,0.4s,baz=184,slow=17,SNR=3.3						

*JMA **16** 15:51:10.4, 24°.04N×121°.55E, h40km±1km, M2.0*
*ISCJB **16** 15:51:11.6±0.2, 24°.12N±0°.01×121°.64E±0°.01, h35km±3km, Error ellipse: s-maj=2.6km s-min=1.7km az=41.3*
*TAP **16** 15:51:11.5, 24°.14N×121°.59E, h34km, ML2.8, B*
ISC 16 15:51:12.0±0.9, 24°.12N±0°.02×121°.61E±0°.02, h33km±2km, n86, σ0§80/159, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**194**	*i* P	**Pb**	**15 51 17.6**	**0.0**
	baz=168						
TWD				*i* S	**Sb**	**15 51 21.9**	**+0.5**
	baz=168						
NACB	**Ninganchiao**	**0.06**	**349**	*i* P	**Pb**	**15 51 17.4**	**-0.2**
	baz=3.0						
NACB				*i* S	**Sb**	**15 51 21.8**	**+0.3**
	baz=3.0						
HWA	**Hwalien**	**0.14**	**180**	*i* P	**Pb**	**15 51 18.3**	**+0.3**
	baz=173						
HWA				S	**Sb**	**15 51 23.4**	**+1.2**
	baz=173						
ETLH	**Xiulin Townshi**	**0.14**	**308**	*i* P	**Pb**	**15 51 18.1**	**-0.1**
	baz=304						
ETLH				S	**Sb**	**15 51 22.5**	**0.0**
	baz=304						
ENLB	**Shoufeng**	**0.21**	**181**	P	**Pn**	**15 51 17.4**	**-0.7**
	baz=177						
ENLB				S	**Sb**	**15 51 24.1**	**+0.8**
	baz=177						
WHF	**Hehuan Shan**	**0.31**	**275**	P	**Pn**	**15 51 19.9**	**-0.4**
	baz=271						
WHF				S	**Sn**	**15 51 26.0**	**+0.5**
	baz=271						
ENA	**Nanau**	**0.33**	**22**	*e*P	**Pb**	**15 51 19.9**	**-0.3**
	baz=26						
ENA				*e*S	**Sb**	**15 51 26.5**	**+0.8**
	baz=26						
NANB	**Nanao**	**0.33**	**23**	P	**Pb**	**15 51 19.9**	**-0.3**
	baz=26						
NANB				S	**Sn**	**15 51 25.9**	**+0.2**
	baz=26						
ESL	**Shilin**	**0.34**	**208**	*e*P	**Pb**	**15 51 18.8**	**-1.5**
	baz=203						
ESL				*e*S	**Sn**	**15 51 24.9**	**-1.1**
	baz=203						
NNSB	**Datong**	**0.37**	**327**	*i* P	**Pb**	**15 51 20.4**	**-0.4**
	baz=326						
NNSB				*i* S	**Sn**	**15 51 26.8**	**-0.1**
	baz=326						
NNS	**Nan Shan**	**0.38**	**326**	P	**Pb**	**15 51 20.9**	**-0.1**
	baz=327						
NNS				S	**Sb**	**15 51 27.2**	**0.0**
	baz=327						
CHGB	**Renai**	**0.40**	**262**	*i* P	**Pb**	**15 51 20.8**	**-0.4**
	baz=258						
CHGB				*i* S	**Sb**	**15 51 27.1**	**-0.5**
	baz=258						
TWT	**Tachien**	**0.41**	**289**	*e*P	**Pb**	**15 51 21.4**	**-0.1**
	baz=285						
TWT				*e*S	**Sb**	**15 51 27.7**	**-0.2**
	baz=285						
OWD	**Renai**	**0.43**	**248**	P	**Pb**	**15 51 21.0**	**-0.6**
	baz=244						
OWD				S	**Sb**	**15 51 27.1**	**-1.0**
	baz=244						
TDCB	**Techi**	**0.43**	**288**	P	**Pb**	**15 51 21.4**	**-0.2**
	baz=286						
TDCB				S	**Sb**	**15 51 27.8**	**-0.5**
	baz=286						
NDT	**Datong Townshi**	**0.49**	**350**	*e*P	**Pb**	**15 51 22.1**	**-0.3**
	baz=351						
NDT				*e*S	**Sb**	**15 51 29.4**	**-0.3**
	baz=351						
ENTT	**Nioudou**	**0.52**	**356**	*e*P	**Pb**	**15 51 22.6**	**-0.4**
	baz=358						
ENTT				*e*S	**Sb**	**15 51 29.9**	**-0.6**
	baz=358						
TWC	**Suao**	**0.54**	**24**	*e*P	**Pn**	**15 51 22.8**	**-0.4**
	baz=27						
TWC				*e*S	**Sb**	**15 51 30.7**	**-0.2**
	baz=27						
VWDT	**VWDT**	**0.56**	**230**	P	**Pn**	**15 51 22.7**	**-0.8**
	baz=227						
VWDT				S	**Sb**	**15 51 30.5**	**-1.0**
	baz=227						
YHNB	**Yeheng**	**0.59**	**339**	P	**Pn**	**15 51 23.6**	**-0.4**
	baz=339						
YHNB				S	**Sb**	**15 51 31.8**	**-0.5**
	baz=339						
NSK	**Sanguang**	**0.60**	**338**	P	**Pn**	**15 51 23.6**	**-0.6**
	baz=338						
NSK				S	**Sn**	**15 51 31.8**	**-1.0**
	baz=338						
TWE	**Neicheng**	**0.60**	**5**	P	**Pn**	**15 51 23.5**	**-0.6**
	baz=8.0						
TWE				S	**Sn**	**15 51 32.0**	**-0.7**
	baz=8.0						
WHP	**Taichung City**	**0.62**	**285**	*e*P	**Pn**	**15 51 24.4**	**0.0**
	baz=283						
DPDB	**Guoxing**	**0.63**	**262**	*e*P	**Pn**	**15 51 23.8**	**-0.7**
	baz=260						
DPDB				*e*S	**Sn**	**15 51 33.3**	**-0.1**
	baz=260						
SLBB	**Yuanshan**	**0.63**	**2**	P	**Pn**	**15 51 24.1**	**-0.5**
	baz=3.0						
SLBB				*e*S	**Sn**	**15 51 32.8**	**-0.7**
	baz=3.0						
EOS1	**EOS1**	**0.64**	**48**	*e*P	**Pb**	**15 51 25.8**	**+1.0**
	baz=49						
EOS1				*e*S	**Sb**	**15 51 35.9**	**+2.3**
	baz=49						
HGSD	**Ruisui**	**0.65**	**195**	*e*P	**Pn**	**15 51 23.2**	**-1.6**
	baz=193						
NWLT	**Wulai**	**0.66**	**352**	*e*P	**Pn**	**15 51 24.5**	**-0.5**
	baz=352						
NWLT				*e*S	**Sn**	**15 51 33.4**	**-0.9**
	baz=352						
SSLB	**Suanglung**	**0.68**	**241**	*e*P	**Pn**	**15 51 24.2**	**-1.1**
	baz=239						
SSLB				*e*S	**Sn**	**15 51 33.1**	**-1.7**
	baz=239						
SMLT	**Sun Moon Lake**	**0.69**	**250**	*e*P	**Pn**	**15 51 24.6**	**-0.8**
	baz=247						
SMLT				*e*S	**Sn**	**15 51 33.5**	**-1.5**
	baz=247						
NSTT	**Nanjuang**	**0.75**	**313**	*e*P	**Pn**	**15 51 26.6**	**+0.4**
	baz=312						
NSTT				*e*S	**Sn**	**15 51 36.8**	**+0.3**
	baz=312						
LIOB	**Emei**	**0.75**	**314**	*e*P	**Pn**	**15 51 26.6**	**+0.3**
	baz=314						
LIOB				*e*S	**Sn**	**15 51 36.9**	**+0.4**
	baz=314						
NTC	**Toucheng**	**0.76**	**15**	*e*P	**Pn**	**15 51 24.3**	**-2.0**
	baz=16						
TWQ1	**Liyutan**	**0.79**	**287**	*e*P	**Pn**	**15 51 26.7**	**-0.2**
	baz=285						
TWQ1				*e*S	**Sn**	**15 51 38.2**	**+0.7**
	baz=285						
WLTB	**Daxi**	**0.80**	**336**	*e*P	**Pn**	**15 51 27.3**	**+0.4**
	baz=336						
WLTB				*e*S	**Sb**	**15 51 39.1**	**+1.1**
	baz=336						
WHYT	**Xinyi Township**	**0.81**	**239**	*e*P	**Pn**	**15 51 26.7**	**-0.3**
	baz=237						
WHYT				*e*S	**Sn**	**15 51 38.3**	**+0.4**
	baz=237						
NSY	**Sanyi**	**0.83**	**291**	*e*P	**Pn**	**15 51 27.4**	**+0.1**
	baz=290						
NSY				*e*S	**Sb**	**15 51 39.7**	**+0.9**
	baz=290						
NHDH	**Xindian Distri**	**0.84**	**355**	*e*P	**Pn**	**15 51 27.4**	**-0.1**
	baz=355						
NHDH				*e*S	**Sn**	**15 51 38.4**	**-0.3**
	baz=355						
TCU	**Taichung**	**0.85**	**272**	*e*P	**Pn**	**15 51 27.6**	**0.0**
	baz=270						
TCU				*e*S	**Sn**	**15 51 40.1**	**+1.2**
	baz=270						
NMLH	**Miaoli**	**0.85**	**299**	*e*P	**Pn**	**15 51 27.4**	**-0.2**
	baz=298						
NMLH				*e*S	**Sn**	**15 51 39.1**	**+0.2**
	baz=298						
WJS	**Zhushan**	**0.86**	**250**	*e*P	**Pn**	**15 51 27.8**	**+0.2**
	baz=248						
WJS				*e*S	**Sn**	**15 51 39.0**	**0.0**
	baz=248						
TWA	**Mucha**	**0.86**	**359**	*e*P	**Pn**	**15 51 27.4**	**-0.3**
	baz=359						
TWA				*e*S	**Sn**	**15 51 39.0**	**-0.1**
	baz=359						
TATO	**Taipei**	**0.86**	**353**	*e*P	**Pn**	**15 51 27.2**	**-0.5**
	baz=354						
TATO				*e*S	**Sn**	**15 51 39.1**	**0.0**
	baz=354						
YUS	**Yu-Shan**	**0.87**	**224**	P	**Pn**	**15 51 27.3**	**-0.9**
	baz=222						
YUS				*e*S	**Sn**	**15 51 38.1**	**-1.8**
	baz=222						
TIPB	**Shuangxi**	**0.87**	**13**	*e*P	**Pn**	**15 51 27.8**	**-0.2**
	baz=14						
TIPB				*e*S	**Sn**	**15 51 40.0**	**+0.5**
	baz=14						
WNT	**Mingjian**	**0.88**	**254**	*e*P	**Pn**	**15 51 28.3**	**+0.3**
	baz=252						
WNT				*e*S	**Sn**	**15 51 40.6**	**+1.1**
	baz=252						
WDJ	**Dajia District**	**0.91**	**285**	*e*P	**Pn**	**15 51 28.4**	**0.0**
	baz=283						
TWB1	**Santiao Chiao**	**0.95**	**21**	*e*P	**Pn**	**15 51 29.7**	**+0.8**
	baz=23						
WCHH	**Zhanghua**	**0.96**	**268**	*e*P	**Pn**	**15 51 29.3**	**+0.3**
	baz=266						
NWF	**Wu-fen Shan**	**0.96**	**9**	*e*P	**Pn**	**15 51 29.0**	**-0.2**
	baz=10.0						
WFSB	**Wu-fen Shan**	**0.96**	**9**	*e*P	**Pn**	**15 51 29.0**	**-0.1**
	baz=10.0						
TWS1	**Kuangyinshan**	**0.99**	**350**	*e*P	**Pn**	**15 51 29.4**	**-0.1**
	baz=350						
YM01	**YM01**	**1.02**	**358**	*e*P	**Pn**	**15 51 29.3**	**-0.7**
	baz=358						
YM01				*e*S	**Sn**	**15 51 43.0**	**-0.3**
	baz=358						
YM04	**YM04**	**1.03**	**356**	*e*P	**Pn**	**15 51 29.5**	**-0.6**
	baz=357						
YM04				*e*S	**Sn**	**15 51 42.8**	**-0.6**
	baz=357						
WGK	**Gukeng**	**1.05**	**246**	*e*P	**Pn**	**15 51 30.6**	**+0.3**
	baz=244						
WGK				*e*S	**Sn**	**15 51 44.6**	**+0.8**
	baz=244						
YM07	**YM07**	**1.05**	**1**	*e*P	**Pn**	**15 51 29.5**	**-0.9**
	baz=1.0						
YM07				*e*S	**Sn**	**15 51 43.2**	**-0.8**
	baz=1.0						
YM03	**YM03**	**1.06**	**357**	*e*P	**Pn**	**15 51 28.3**	**-2.2**
	baz=357						
YM03				*e*S	**Sn**	**15 51 45.0**	**+0.8**
	baz=357						
YM08	**YM08**	**1.06**	**359**	*e*P	**Pn**	**15 51 29.7**	**-0.9**
	baz=359						
YM08				*e*S	**Sn**	**15 51 42.9**	**-1.4**
	baz=359						
ANP	**Anpu**	**1.07**	**356**	*e*P	**Pn**	**15 51 29.7**	**-0.9**
	baz=356						
ANP				*e*S	**Sn**	**15 51 45.4**	**+1.1**
	baz=356						
WDLH	**Douliu**	**1.07**	**247**	*e*P	**Pn**	**15 51 31.0**	**+0.5**
	baz=245						
WDLH				*e*S	**Sn**	**15 51 45.3**	**+1.0**
	baz=245						
ELDTW	**Lidau**	**1.07**	**210**	*e*P	**Pn**	**15 51 28.6**	**-2.2**
	baz=208						
RLNB	**Erlin**	**1.16**	**259**	*e*P	**Pn**	**15 51 31.7**	**-0.2**
	baz=257						
RLNB				*e*S	**Sn**	**15 51 47.8**	**+1.2**
	baz=257						
CHN2	**Minshiung**	**1.19**	**241**	*e*P	**Pn**	**15 51 32.2**	**0.0**
	baz=239						
CHN2				*e*S	**Sb**	**15 51 49.2**	**+0.1**
	baz=239						
STYT	**Tauyuan**	**1.23**	**219**	*e*P	**Pn**	**15 51 32.7**	**-0.1**
	baz=217						
STYT				*e*S	**Sn**	**15 51 48.6**	**+0.3**
	baz=217						
WTCT	**Ta-ch'eng**	**1.24**	**258**	*e*P	**Pn**	**15 51 33.0**	**+0.1**
	baz=257						
WTCT				*e*S	**Sn**	**15 51 49.3**	**+0.8**
	baz=257						
CHY	**Chiayi**	**1.25**	**241**	*e*P	**Pn**	**15 51 33.1**	**+0.1**
	baz=239						
CHY				*e*S	**Sn**	**15 51 49.9**	**+1.2**
	baz=239						
WTP	**Ta-pu**	**1.26**	**227**	*e*P	**Pn**	**15 51 33.3**	**+0.1**
	baz=225						
WTP				*e*S	**Sn**	**15 51 50.5**	**+1.5**
	baz=225						
JYNG	**Yonagunijimaku**	**1.27**	**75**	P	**Pn**	**15 51 33.2**	**-0.1**
JYNG				*e*S	**Sn**	**15 51 49.8**	**+0.7**
YOJ	**Yonaguni jima**	**1.33**	**75**	P	**Pn**	**15 51 34.1**	**0.0**
YOJ				*e*S	**Sn**	**15 51 50.9**	**+0.3**
TWK	**Hsinying**	**1.33**	**231**	*e*P	**Pn**	**15 51 34.2**	**-0.1**
	baz=229						
TWK				*e*S	**Sn**	**15 51 52.1**	**+1.2**
	baz=229						
SNST	**Tainan City**	**1.35**	**229**	*e*P	**Pn**	**15 51 35.5**	**+1.0**
	baz=227						
SNST				*e*S	**Sn**	**15 51 52.5**	**+1.1**
	baz=227						
WSF	**Szhu**	**1.35**	**250**	*e*P	**Pn**	**15 51 34.2**	**-0.3**
	baz=248						
WSF				*e*S	**Sn**	**15 51 52.8**	**+1.5**
	baz=248						
WLGB	**Puzi**	**1.36**	**242**	*e*P	**Pn**	**15 51 34.8**	**+0.3**
	baz=240						
WLGB				*e*S	**Sn**	**15 51 53.2**	**+1.9**
	baz=240						
CHN1	**Nanshi**	**1.36**	**227**	*e*P	**Pn**	**15 51 35.1**	**+0.5**
	baz=225						
CHN1				*e*S	**Sn**	**15 51 52.6**	**+1.1**
	baz=225						
SGST	**Jiashian**	**1.40**	**222**	*e*P	**Pn**	**15 51 35.5**	**+0.4**
	baz=221						
SGST				*e*S	**Sn**	**15 51 53.2**	**+0.9**
	baz=221						
SLGT	**Liugui**	**1.43**	**218**	*e*P	**Pn**	**15 51 36.0**	**+0.5**
	baz=217						
SLGT				*e*S	**Sn**	**15 51 53.9**	**+0.8**
	baz=217						
CHN8	**Yiju**	**1.49**	**239**	*e*P	**Pn**	**15 51 36.8**	**+0.4**
	baz=237						
CHN8				*e*S	**Sn**	**15 51 56.7**	**+2.0**
	baz=237						
SSD	**Sandimen**	**1.63**	**213**	*e*P	**Pn**	**15 51 38.9**	**+0.5**
	baz=212						
MASBT	**Mashibuluo**	**1.75**	**211**	*e*P	**Pn**	**15 51 38.8**	**-1.1**
	baz=210						
MASBT				*e*S	**Sn**	**15 52 02.6**	**+1.6**
	baz=210						
EAST	**Anshuo**	**1.86**	**202**	*e*P	**Pn**	**15 51 41.7**	**+0.1**
	baz=201						
IRIF	**Iriomote-Funau**	**1.95**	**83**	P	**Pn**	**15 51 42.5**	**-0.2**
IRIF				*e*S	**Sn**	**15 52 05.9**	**-0.1**
JKRS	**Kuro-shima**	**2.20**	**86**	P	**Pn**	**15 51 46.7**	**+0.6**
JKRS				*e*S	**Sn**	**15 52 12.6**	**+0.5**
JIJ	**Ishigaki jima**	**2.33**	**83**	P	**Pn**	**15 51 47.7**	**-0.2**
JIJ				*e*S	**Sn**	**15 52 14.5**	**-0.9**
JISG	**Ishigakijimahi**	**2.51**	**79**	P	**Pn**	**15 51 49.9**	**-0.5**
JISG				S	**Sn**	**15 52 18.8**	**-1.1**
JTJ	**Tarama**	**2.87**	**79**	P	**Pn**	**15 51 55.6**	**+0.2**
JTJ				*e*S	**Sn**	**15 52 28.8**	**+0.1**
JIRB	**Irabujima**	**3.33**	**77**	*e*S	**Sn**	**15 52 39.6**	**-0.4**

*NIED **16** 15:52:00, 38°.80N×142°.60E, h32km, Mw4.0 Best double couple: M0 1.04000×10^15 NP1:φ0 297.00000°, δ27.00000°, λ-155.00000°. NP2:φ0 184.00000°, δ79.00000°, λ-65.00000°.*
*BJI **16** 15:52:01.8±0.0, 38°.73N×143°.45E, h41km, mb4.5/27, mB4.6/18, Ms3.8/7, Ms7 3.6/6*
*ISCJB **16** 15:52:04.9±1.2, 38°.81N±0°.03×142°.70E±0°.06, h20km±6km, mb4.2/31, MS3.6/5, Error ellipse: s-maj=8.9km s-min=5.1km az=23.1*
*NEIC **16** 15:52:04.9±1.1, 38°.47N×143°.37E, h46km±8km, mb4.5/12, Error ellipse: s-maj=19.5km s-min=7.6km az=121.0*
NEIC Recorded [1 JMA] in Iwate and Miyagi.
*JMA **16** 15:52:06.9±0.1, 38°.82N×142°.58E, h32km±2km, M4.2*
JMA Felt I J1.
*IDC **16** 15:52:09.6±2.0, 38°.78N×142°.73E, h48km±18km, mb3.6/13, mb1 3.8/19, mb1mx3.6/48, mbtmp3.9/19, ML3.3/6, MS3.3/3, Ms1 3.4/3, ms1mx2.8/38, Error ellipse: s-maj=23.2km s-min=14.4km az=99.0*
ISC 16 15:52:03.3±2.0, 38°.75N±0°.04×142°.69E±0°.06, h1km±10km, n68, σ1§99/69, mb4.4/31, MS3.6/6, 7C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.86**	**293**	⇑P	**Pg**	**15 52 21.3**	**+1.4**
OFUJ				S	**Sg**	**15 52 31.4**	**+0.4**
JKMT	**Kesennumamotoy**	**0.95**	**274**	P	**Pb**	**15 52 22.7**	**+0.1**
JKMT				S	**Sg**	**15 52 33.7**	**-0.2**
MIYJ	**Miyakonagasawa**	**1.07**	**321**	⇓P	**Pb**	**15 52 23.8**	**-0.8**
MIYJ				S	**Sb**	**15 52 36.0**	**-3.1**
JIO	**Ouri**	**1.09**	**255**	⇑P	**Pb**	**15 52 25.1**	**+0.1**
JIO				S

25nm,0.3s,baz=280,slow=24,SNR=12
YSS Yuzh-Sakhalins 8.20 0 *e*Pn **Pn 15 54 06.1 +2.7**
USRK Ussuriysk Ar. 9.70 308 P **Pn 15 54 27.9 +4.0**
0.3nm,0.3s,baz=109,slow=14,SNR=13
JNU Nakatsue 11.10 243 P **Pn 15 54 45.9 +2.7**
0.3nm,0.3s,baz=40,slow=0.6,SNR=4.6
KSRS Korea Array 11.71 268 P Pn 15 54 56.4 +4.9
0.2nm,0.3s,baz=81,slow=14,SNR=16
KSRS LR LR 15 59 00.6
comp=Z,160nm,20.1s,baz=22,slow=35
KS15 Wonju Array Si 11.74 268 *e*Pn Pn 15 54 56.8 +4.8
KLR Kul'dur 13.09 327 P **P 15 55 19.9 -1.0**
0.6nm,0.3s,baz=142,slow=11,SNR=11
TIA Tai'an 20.43 271 P Pn 15 56 44.3 +0.3
TIA pmax pmax
comp=Z,8.0nm,1.0s
NJ2 Nanjing 20.52 258 *e*P Pn 15 56 44.6 -0.5
NJ2 pmax pmax
comp=Z,11nm,0.5s
MA2 Magadan 21.47 11 P **P 15 56 53.7 +0.7**
3.9nm,0.8s,baz=203,slow=21,SNR=4.3
HHC Hu-ho-hao-te 23.95 285 *e*P **P 15 57 20.3 +1.2**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,120nm,6.5s
WHN Wuhan 24.64 259 ||P **P 15 57 25.6 +0.2**
YAK Yakutsk 24.64 345 *e*P **P 15 57 24.8 -0.4**
8.7nm,0.7s
XAN Xi'an 27.49 271 P **P 15 57 52.0 +0.8**
XAN pP sP 15 58 03.3 +12
XAN pmax pmax
comp=Z,9.0nm,0.6s
XAN LR LR
comp=N,170nm,19.5s
XAN LR LR
comp=Z,120nm,21.7s
SONM Songino Array 27.72 301 P **P 15 57 53.5 +0.3**
0.9nm,0.4s,baz=79,slow=8,8,SNR=5.1
H11N2 WAKE ISLAND Hy 28.23 125 T T 16 28 27.8
baz=318,slow=75,SNR=520
H11N1 WAKE ISLAND Hy 28.24 125 T T 16 28 27.4
baz=318,slow=75,SNR=457
H11N3 WAKE ISLAND Hy 28.25 125 T T 16 28 27.9
baz=318,slow=75,SNR=386
ENH Enshi 28.52 263 *e*P **P 15 57 60.0 -0.4**
7.2nm,0.6s
H11S1 WAKE ISLAND Hy 29.02 127 T T 16 29 23.8
baz=319,slow=76,SNR=50
H11S3 WAKE ISLAND Hy 29.02 127 T T 16 29 29.2
baz=319,slow=76,SNR=53
H11S2 WAKE ISLAND Hy 29.03 127 T T 16 29 28.4
baz=319,slow=76,SNR=41
LZH Lanzhou 30.81 277 *e*P **P 15 58 21.5 +0.6**
LZH pP sP 15 58 32.3 +12
LZH sP pP 15 58 37.4 +17
LZH *e*PP **PP 15 59 25.6 -4.6**
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,63nm,4.9s
LZH LR LR
comp=N,280nm,13.0s
LZH LR LR
comp=E,290nm,13.2s
LZH LR LR
comp=Z,400nm,16.4s
CD2 Chengdu 32.71 268 *e*P **P 15 58 36.0 -1.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
WMQ Urumqi 40.99 295 *e*P **P 15 59 49.8 +1.9**
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ pmax pmax
comp=Z,47nm,5.3s
WMQ LR LR
comp=N,61nm,21.9s
WMQ LR LR
comp=Z,60nm,17.9s
ZAA0 Zalesovo Array 41.53 311 *e*P **P 15 59 51.7 -0.4**
4.3nm,0.9s
ZALV Zalesovo Beam 41.53 311 P **P 15 59 51.8 -0.2**
3.0nm,0.6s,baz=85,slow=7.5,SNR=12
CMAR Chiang Mai Arr 42.92 255 P **P 16 00 02.8 -0.9**
0.4nm,0.4s,baz=41,slow=8.4,SNR=4.1
MK31 Makanchi Array 44.09 301 *e*P **P 16 00 12.4 -0.5**
6.1nm,0.8s
MKAR Makanchi Array 44.09 301 P **P 16 00 12.7 -0.3**
3.0nm,0.8s,baz=83,slow=9.2,SNR=23
MAKZ Makanchi 44.29 301 *e*P **P 16 00 13.7 -0.9**
5.4nm,0.8s
SHL Shillong 44.45 268 *e*P **P 16 00 16.8 +0.5**
5.0nm,0.9s
KURK Kurchatov 45.69 307 *e*P **P 16 00 24.9 -0.7**
8.0nm,0.8s
ILAR Eielson Array 47.51 33 P **P 16 00 38.6 -1.0**
0.4nm,0.9s,baz=270,slow=5.5,SNR=4.0
MENT Mentasta 49.05 36 *e*P P 16 00 47.1 -4.5
2.7nm,0.6s
BRVK Borovoye 50.23 312 *e*P **P 16 01 00.3 -0.4**
3.9nm,1.0s
KSH Kashi 50.64 293 *e*P P 16 01 09.4 +5.2
KSH S **S 16 08 25.1 +5.1**
KSH pmax pmax
comp=Z,9.0nm,0.6s
KSH LR LR
comp=N,190nm,11.4s
KSH LR LR
comp=Z,170nm,18.6s
ARU Arti 55.75 318 *e*P **P 16 01 40.5 -1.0**
5.2nm,0.8s
CHGR Chuyangaron 55.85 295 *e*P **P 16 01 43.5 +1.0**
16nm,0.7s
ABKAR Akbulak array 57.61 310 *e*P **P 16 01 53.7 -1.1**
3.8nm,0.6s
WRA Warramunga Arr 58.91 189 P **P 16 02 04.2 +0.1**
0.9nm,0.8s,baz=4.1,slow=6.8,SNR=6.9
RES Resolute Bay 60.69 15 P **P 16 02 15.3 -0.3**
0.8nm,0.8s,baz=137,slow=14,SNR=2.7
ASAR Alice Springs 62.63 189 P **P 16 02 29.7 +0.3**
0.5nm,0.7s,baz=3.7,slow=6.5,SNR=9.0
GEYT Alibeck 63.89 299 P **P 16 02 36.8 -1.0**
0.9nm,0.7s,baz=64,slow=5.0,SNR=3.6
HFS Hagfors 72.94 336 P **P 16 03 33.8 -0.1**
2.0nm,0.8s,baz=82,slow=10,SNR=3.5
NOA NORSAR Array B 72.99 338 P **P 16 03 33.8 -0.5**
0.3nm,0.6s,baz=29,slow=6.6,SNR=3.4
NOA LR LR 16 39 58.7
comp=Z,15nm,18.5s,baz=255,slow=39
AKASG Malin Array Be 73.56 323 P **P 16 03 37.1 -0.6**
1.2nm,0.4s,baz=44,slow=6.4,SNR=12
AKASG LR LR 16 38 35.6
comp=Z,23nm,18.2s,baz=340,slow=38
CLL Collm 80.11 331 *e*P **P 16 04 15.0 +0.3**

SJA 16 15:56:59.5±0.6, 31°58S×69°89W, h109km±4km, ML2.2, MW3.6, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.55**	**114**	*i* P	Pn	15 57 18.4	+1.4
RTLS				IAML		15 57 18.5	
RTLS	comp=Z,78nm,0.1s			*i* S	Sn	15 57 31.7	+1.6
AUSP	**Uspallata**	**0.77**	**147**	*i* P	Pn	15 57 19.7	+1.0
AUSP				*i* S	Sn	15 57 34.9	+1.6
RTCV	**Cerro Valdivia**	**1.18**	**104**	*i* P	Pn	15 57 23.7	+1.1
RTCV				*i* S	Sn	15 57 41.0	+0.9
ASAL	**Salagasta**	**1.34**	**139**	*i* P	Pn	15 57 25.2	+0.7
ASAL				*i* S	Sn	15 57 45.0	+1.5
ARCO	**CERRO ARCO**	**1.49**	**148**	*i* P	Pn	15 57 27.2	+0.8
ARCO				*i* S	Sn	15 57 48.0	+1.2
ARCO				IAML		15 57 49.9	
	comp=Z,18nm,0.4s						

*ISCJB **16** 15:58:58.6±1.1, 53°7S±0°1×3°3E±0°4, h10km, mb3.7/3, Error ellipse: s-maj=31.0km s-min=15.1km az=177.4*
*IDC **16** 15:58:58.8±1.2, 53°78S×3°10E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.6/17, mbtmp3.7/3, Error ellipse: s-maj=57.5km s-min=32.9km az=83.0*
ISC 16 15:59:00.3±1.2, 53°8S±0°1×3°2E±0°3, h10km, n19, σ0°74/9, mb3.8/3, 1C, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.73**	**193**	P	**P**	**16 03 08.4**	**+0.8**
VNA2	**Neumayer--Watz**	**17.87**	**191**	P	**P**	**16 03 09.2**	**-0.1**
	baz=11,slow=15						
SNAA	**Sanae**	**18.18**	**186**	P	**P**	**16 03 11.9**	**-0.9**
VNA3	**Neumayer Olymp**	**18.46**	**193**	P	**Pn**	**16 03 16.4**	**+0.6**
SYO	**Syowa Base**	**22.66**	**146**‖	*e*P	**P**	**16 04 00.8**	**-0.4**
H10S2	**ASCENSION HYDR**	**46.93**	**335**	T	T	16 58 08.9	
	baz=165,slow=75,SNR=6.8						
H10S3	**ASCENSION HYDR**	**46.94**	**335**	T	T	16 58 09.7	
	baz=165,slow=75,SNR=8.4						
H10S1	**ASCENSION HYDR**	**46.95**	**335**	T	T	16 58 10.3	
	baz=165,slow=75,SNR=10						
VNDA	**Vanda**	**48.32**	**174**	P	**P**	**16 07 41.4**	**+0.2**
	0.6nm,0.7s,baz=209,slow=6.7,SNR=4.9						
LPAZ	**La Paz**	**66.01**	**275**	P	**P**	**16 09 47.3**	**-0.3**
	0.8nm,0.7s,baz=268,slow=6.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**66.64**	**358**	P	**P**	**16 09 51.5**	**+0.7**
	0.4nm,0.7s,baz=193,slow=5.8,SNR=2.9						
H08N3	**Diego Garcia H**	**71.84**	**76**	T	T	17 29 09.2	
	baz=216,slow=76,SNR=16						
H08N1	**Diego Carcia H**	**71.86**	**76**	T	T	17 29 10.4	
	baz=216,slow=76,SNR=15						
H08N2	**Diego Garcia H**	**71.86**	**76**	T	T	17 29 10.8	
	baz=216,slow=76,SNR=17						
H01W2	**Cape Leeuwin H**	**73.50**	**127**	T	T	17 31 27.4	
	baz=215,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**73.52**	**127**	T	T	17 31 28.6	
	baz=215,slow=75,SNR=18						
H01W3	**Cape Leeuwin H**	**73.52**	**127**	T	T	17 31 28.5	
	baz=215,slow=75,SNR=21						
MJAR	**Matsushiro Arr**	**144.60**	**101**	PKP	PKPbc	16 18 35.0	-0.2
	1.2nm,0.8s,baz=207,slow=1.4,SNR=7.8						
YKA	**Yellowknife Ar**	**147.28**	**311**	PKPbc	**PKPbc**	**16 18 41.5**	**-0.9**
	1.4nm,0.9s,baz=101,slow=3.7,SNR=12						

*ISCJB **16** 16:26:11.3±0.3, 15°65S±0°04×71°75W±0°08, h10km, mb4.6/27, MS4.0/7, Error ellipse: s-maj=11.6km s-min=4.6km az=156.7*
*IDC **16** 16:26:12.3±0.7, 15°68S×71°67W, h0km, mb4.1/7, mb1 4.2/11, mb1mx4.0/30, mbtmp4.0/11, ML3.8/4, MS3.6/11, Ms1 3.5/11, ms1mx3.3/29, Error ellipse: s-maj=25.5km s-min=17.0km az=58.0*
*NEIC **16** 16:26:13.2±1.6, 15°72S×71°87W, h10km±1km, mb4.9/28, Error ellipse: s-maj=10.7km s-min=10.0km az=203.0*
*BJI **16** 16:26:14.9±0.0, 15°80S×72°10W, h10km, Ms5.2/1, Ms7 4.9/3*
ISC 16 16:26:13.1±0.4, 15°72S±0°06×71°75W±0°08, h10km, n85, σ1°18/82, mb4.8/27, MS3.8/7, 1C, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.53**	**100**	Pn	**Pb**	**16 27 15.0**	**-1.0**
	0.7nm,0.3s,baz=281,slow=12,SNR=22						
LPAZ				LR	LR	16 28 45.8	
	comp=Z,362nm,21.4s,baz=77,slow=44						
LPAZ	**La Paz**	**3.53**	**100**	*e*Pn	**Pb**	**16 27 14.5**	**-1.5**
MNMC	**Minye Minye**	**3.97**	**149**	*e*Pn	**Pn**	**16 27 17.6**	**+3.3**
PB11	**IPOC Station P**	**4.49**	**154**	*e*Pn	**Pn**	**16 27 22.5**	**+1.1**
GO01	**Chusmiza**	**4.62**	**149**	*e*Pn	**Pn**	**16 27 24.5**	**+1.0**
PB01	**IPOC Station P**	**5.71**	**158**	*e*Pn	**Pn**	**16 27 39.4**	**+1.2**
NNA	**Nana**	**6.18**	**306**	Pn	Pn	16 27 51.1	+6.6
	0.7nm,0.3s,baz=148,slow=6.7,SNR=8.8						
NNA				Sn	**Sn**	**16 28 58.7**	**+3.4**
	1.1nm,0.3s,baz=212,slow=15,SNR=2.0						
NNA				LR	LR	16 30 21.3	
	comp=Z,316nm,18.7s,baz=135,slow=40						
NNA	**Nana**	**6.18**	**306**	*e*Pn	**Pn**	**16 27 42.8**	**-1.7**
PB04	**IPOC Station P**	**6.75**	**167**	*e*Pn	**Pn**	**16 27 51.2**	**-1.3**
PB04				*e*Sn	**Sn**	**16 29 07.5**	**-2.0**
LVC	**Limon Verde**	**7.36**	**159**	Pn	**Pn**	**16 28 02.4**	**+1.4**
	2.6nm,0.3s,baz=329,slow=6.2,SNR=14						
LVC				Sn	**Sn**	**16 29 26.5**	**+1.6**
	1.7nm,0.3s,baz=27,slow=22,SNR=6.7						
LVC	**Limon Verde**	**7.36**	**159**	*e*Pn	**Pn**	**16 28 00.6**	**-0.4**
PB10	**IPOC Station P**	**7.83**	**172**	*e*Pn	**Pn**	**16 28 04.6**	**-2.6**
GO02	**Mina Guanaco**	**9.61**	**168**	*e*Pn	**Pn**	**16 28 30.1**	**-1.8**
SIV	**San Ignacio**	**10.28**	**93**	Pn	**Pn**	**16 28 42.4**	**+1.5**
	0.6nm,0.3s,baz=283,slow=13,SNR=18						
SIV				LR	LR	16 32 37.5	
	comp=Z,136nm,20.3s,baz=282,slow=38						
ATAH	**Atahualpa**	**10.73**	**322**	LR	LR	16 32 54.9	
	comp=Z,277nm,19.8s,baz=159,slow=38						
GO04	**Tololo Observa**	**14.41**	**177**	*e*Pn	**Pn**	**16 29 37.6**	**+0.2**
CPUP	**Villa Florida**	**17.09**	**130**	Pn	**Pn**	**16 30 12.8**	**+0.6**
	0.1nm,0.3s,baz=253,slow=11,SNR=2.3						
CPUP				LR	LR	16 38 24.1	
	comp=Z,106nm,20.9s,baz=318,slow=43						
PTGA	**Pitinga**	**18.90**	**39**	P	**P**	**16 30 33.8**	**-0.1**
	0.4nm,0.3s,baz=311,slow=19,SNR=5.8						
PTGA				LR	LR	16 38 26.9	
	comp=Z,394nm,19.0s,baz=215,slow=39						
PTGA	**Pitinga**	**18.90**	**39**	*e*P	**P**	**16 30 34.2**	**+0.2**
	6.6nm,0.9s						
BDFB	**Brasília**	**22.86**	**93**	P	**P**	**16 31 16.2**	**-0.7**
	1.9nm,0.6s,baz=318,slow=6.1,SNR=4.2						
PLCA	**Paso Flores**	**24.94**	**178**	P	**P**	**16 31 37.3**	**+0.6**
	5.3nm,0.9s,baz=8.5,slow=12,SNR=8.1						
PLCA				LR	LR	16 41 43.7	
	comp=Z,113nm,19.9s,baz=10,slow=37						
PLCA	**Paso Flores**	**24.94**	**178**	*e*P	**P**	**16 31 37.3**	**+0.6**
	18nm,1.3s						
MDP	**Montagnes des**	**28.04**	**44**	LR	LR	16 43 49.3	
	comp=Z,301nm,18.9s,baz=224,slow=38						
Z50A	**Ashland**	**50.54**	**345**	*e*P	**P**	**16 35 10.7**	**-1.1**
	10nm,1.1s						
LRAL	**Lakeview Retre**	**50.62**	**343**	*e*P	**P**	**16 35 11.9**	**-0.4**
	4.3nm,0.9s						
W57A	**Gilead**	**51.19**	**351**	*e*P	**P**	**16 35 16.4**	**-0.2**
	9.0nm,1.0s						
T57A	**Hurt**	**52.91**	**352**	*e*P	**P**	**16 35 28.8**	**-0.6**
	23nm,1.1s						
WLAR	**White Oak Lake**	**53.19**	**338**	*e*P	**P**	**16 35 31.3**	**-0.2**
	25nm,1.1s						
S57A	**Dark Hollow, R**	**53.62**	**353**	*e*P	**P**	**16 35 35.4**	**+0.7**
	21nm,1.2s						
T49A	**Edmonton**	**54.12**	**346**	*e*P	**P**	**16 35 37.6**	**-0.7**
	11nm,1.2s						
MIAR	**Mount Ida**	**54.13**	**338**	*e*P	**P**	**16 35 37.7**	**-0.7**
TXAR	**Lajitas Array**	**54.37**	**325**	P	**P**	**16 35 39.9**	**-0.4**
	0.5nm,0.8s,baz=142,slow=9.2,SNR=5.3						
W39A	**Magazine**	**54.78**	**338**	*e*P	**P**	**16 35 43.4**	**+0.2**
	12nm,1.3s						
CCM	**Cathedral Cave**	**56.54**	**342**	*e*P	**P**	**16 35 54.5**	**-1.1**
	5.5nm,0.9s						
N55A	**Marion Center**	**56.61**	**353**	*e*P	**P**	**16 35 56.0**	**-0.2**
	24nm,1.0s						
M54A	**Oil Creek Stat**	**57.41**	**353**	*e*P	**P**	**16 36 01.4**	**-0.4**
	24nm,1.2s						
MSTX	**Muleshoe**	**57.58**	**330**	*e*P	**P**	**16 36 02.9**	**-0.4**
	13nm,1.4s						
SADO	**Sadowa**	**60.57**	**354**	*e*P	**P**	**16 36 21.8**	**-1.9**
	14nm,1.0s						
SDCO	**Great Sand Dun**	**61.92**	**330**	*e*P	**P**	**16 36 33.9**	**+0.5**
	11nm,1.5s						
ECSD	**EROS Data Cent**	**63.39**	**340**	*e*P	**P**	**16 36 42.7**	**0.0**
	7.8nm,1.3s						
VNA3	**Neumayer Olymp**	**66.38**	**162**	P	**P**	**16 37 03.8**	**+1.9**
VNA1	**Neumayer--Stat**	**66.60**	**161**	P	**P**	**16 37 04.5**	**+1.3**
VNA2	**Neumayer--Watz**	**66.97**	**161**	P	**P**	**16 37 07.3**	**+1.7**
	baz=296,slow=4.7						
AGMN	**Agassiz Nation**	**67.26**	**343**	*e*P	**P**	**16 37 07.6**	**-0.1**
	9.0nm,1.0s						
PD31	**Pinedale Array**	**67.78**	**331**	*e*P	**P**	**16 37 12.0**	**+0.6**
	2.8nm,1.2s						
PDAR	**Pinedale Array**	**67.78**	**331**	P	**P**	**16 37 12.0**	**+0.6**
	1.4nm,1.1s,baz=134,slow=6.4,SNR=5.6						
SNAA	**Sanae**	**68.59**	**162**	P	**P**	**16 37 17.5**	**+1.6**
SNAA	**Sanae**	**68.59**	**162**	*e*P	**P**	**16 37 17.3**	**+1.4**
	31nm,2.0s						
DBIC	**Dimbokro**	**69.86**	**77**	LR	LR	17 07 16.1	
	comp=Z,36nm,18.3s,baz=210,slow=35						
TOA1	**Torodi Ar. Sit**	**78.09**	**73**	*e*P	**P**	**16 38 12.0**	**-0.9**
TORD	**Torodi Ar. Bea**	**78.09**	**73**	P	**P**	**16 38 12.0**	**-0.9**
	1.7nm,0.7s,baz=241,slow=5.8,SNR=7.8						
TORD				LR	LR	17 11 19.1	
	comp=Z,42nm,18.7s,baz=305,slow=35						
SYO	**Syowa Base**	**82.83**	**160**‖	*e*P	**P**	**16 38 36.2**	**-1.1**
YKA	**Yellowknife Ar**	**84.87**	**342**	P	**P**	**16 38 48.2**	**+0.5**
	1.9nm,0.8s,baz=135,slow=4.9,SNR=21						
YKB5	**Yellowknife Ar**	**84.87**	**342**	*e*P	**P**	**16 38 48.2**	**+0.5**
YKW3	**Yellowknife Ar**	**84.93**	**342**	*e*P	**P**	**16 38 48.2**	**+0.2**
	4.3nm,1.0s						
DLBC	**Dease Lake**	**87.86**	**333**	*e*P	**P**	**16 39 02.1**	**-0.5**
	8.0nm,1.1s						
MAW	**Mawson**	**90.60**	**164**	P	**P**	**16 39 17.0**	**+1.6**
	2.8nm,1.0s,baz=209,slow=11,SNR=4.7						
SUMG	**Summit**	**90.82**	**10**	*e*P	**P**	**16 39 17.0**	**+0.4**
	12nm,1.0s						
DAVOX	**Davos/Dischmat**	**95.70**	**43**	LR	LR	17 21 49.6	
	comp=Z,27nm,18.6s,baz=259,slow=35						
ABKAR	**Akbulak array**	**128.55**	**39**	*e*PKPdf	**PKiKP**	**16 45 21.7**	**+0.7**
AS31	**Alice Springs**	**133.51**	**213**	*e*PKPdf	**PKPdf**	**16 45 29.6**	**-1.1**
ASAR	**Alice Springs**	**133.51**	**213**	PKP	**PKPdf**	**16 45 29.6**	**-1.1**
	0.2nm,0.7s,baz=132,slow=1.8,SNR=4.2						
WR1	**Warramunga Arr**	**136.25**	**217**	*e*PKPdf	**PKPdf**	**16 45 35.2**	**-0.6**
WRA	**Warramunga Arr**	**136.25**	**217**	PKP	**PKPdf**	**16 45 35.2**	**-0.6**
	1.3nm,0.9s,baz=187,slow=4.2,SNR=4.0						
ZAA1	**Zalesovo Array**	**137.69**	**20**	*e*PKPdf	**PKiKP**	**16 45 38.7**	**-0.6**
ZAA0	**Zalesovo Array**	**137.69**	**20**	*e*PKPdf	**PKPdf**	**16 45 38.4**	**+1.0**
ZALV	**Zalesovo Beam**	**137.69**	**20**	PKP	**PKiKP**	**16 45 38.7**	**-0.6**
	3.9nm,0.9s,baz=302,slow=3.3,SNR=10.0						
KURK	**Kurchatov**	**137.74**	**28**	*e*PKPdf	**PKPdf**	**16 45 38.3**	**+0.7**
MK32	**Makanchi Array**	**142.24**	**29**	*e*PKPpre	PKPpre	16 45 42.6	
MKAR	**Makanchi Array**	**142.24**	**29**	PKhKP	PKPpre	16 45 42.6	
	0.8nm,0.8s,baz=248,slow=1.3,SNR=5.1						
KSH	**Kashi**	**143.18**	**44**	*e*PKP	**PKiKP**	**16 45 50.1**	**-1.1**
USRK	**Ussuriysk Ar.**	**145.20**	**330**	PKPbc	**PKPdf**	**16 45 52.7**	**+1.5**
	5.2nm,1.0s,baz=67,slow=2.5,SNR=8.9						
MJAR	**Matsushiro Arr**	**146.26**	**314**	PKPbc	**PKPab**	**16 45 55.4**	**+0.3**
	8.8nm,1.1s,baz=55,slow=0.3,SNR=26						
MAJO	**Matsushiro**	**146.26**	**314**	*e*PKPbc	**PKPbc**	**16 45 54.5**	**+0.2**
MAT	**Matsushiro**	**146.26**	**314**	PKP	**PKPbc**	**16 45 53.9**	**-0.4**
MJB9	**Matsu-Tunnel**	**146.26**	**314**	*e*PKPbc	**PKPab**	**16 45 54.6**	**-0.5**
WMQ	**Urumqi**	**146.98**	**28**	*e*PKPbc	**PKPdf**	**16 45 54.1**	**-0.2**
WMQ				LR	LR		
	comp=Z,45nm,20.3s						
SONA0	**Songino Array**	**147.94**	**2**	*e*PKPbc	**PKiKP**	**16 46 00.1**	**-0.7**
SONM	**Songino Array**	**147.94**	**2**	PKPbc	**PKiKP**	**16 46 00.1**	**-0.7**
	6.7nm,0.8s,baz=312,slow=1.4,SNR=25						
KSRS	**Korea Array**	**152.22**	**325**	PKPbc	**PKiKP**	**16 46 10.9**	**+1.2**
	4.9nm,1.0s,baz=40,slow=1.5,SNR=26						
KS15	**Wonju Array Si**	**152.25**	**325**	*e*PKPbc	**PKiKP**	**16 46 10.9**	**+1.1**
HHC	**Hu-ho-hao-te**	**154.80**	**354**	*e*PKPbc	**PKPdf**	**16 46 07.3**	**+0.8**
LZH	**Lanzhou**	**159.34**	**10**	*e*PKP	**PKPdf**	**16 46 11.3**	**-1.2**
LZH				pPKP	pPKPdf	16 46 14.3	-3.2
LZH				sPKP		16 46 15.8	
LZH				PKPab	**PKPab**	**16 46 50.8**	**+1.1**
LZH				LR	LR		
	comp=N,140nm,18.0s						
LZH				LR	LR		
	comp=E,140nm,18.3s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
NJ2	**Nanjing**	**161.09**	**331**	*e*PKP	**PKPdf**	**16 46 15.3**	**+1.0**
CD2	**Chengdu**	**164.33**	**14**	PKP	**PKPdf**	**16 46 15.3**	**-2.3**

GCG 16 16:28:31.7±0.4, 14°19N×91°37W, h48km±30km, MD3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.56**	**339**	*e*P	Pn	16 28 44.0	+0.3
FUG	**Fuego 3**	**0.57**	**63**	*e*P	Pn	16 28 44.4	+0.5
PCG	**Pacaya**	**0.77**	**74**	*e*P	Pn	16 28 47.0	+0.5
PCG				*e*S	Sn	16 28 59.0	+1.8
IXG	**Ixpaco**	**0.90**	**91**	*e*P	Pn	16 28 48.6	+0.4
IXG				*e*S	Sn	16 29 01.7	+1.4

*IDC **16** 16:31:49.1±0.9, 2°65S×100°97E, h0km, mb4.0/16, mb1 4.1/16, mb1mx3.9/35, mbtmp4.0/16, MS3.1/2, Ms1 3.1/2, ms1mx2.6/39, Error ellipse: s-maj=30.7km s-min=14.2km az=52.0*
*ISCJB **16** 16:31:54.0±0.4, 2°83S±0°04×100°90E±0°05, h50km, mb4.2/22, MS3.6/1, Error ellipse: s-maj=8.0km s-min=4.6km az=141.7*
*DJA **16** 16:31:57.5±0.4, 3°S±2°×10°1E±°, h28km±3km, M4.3/18, mb4.3/3, mB4.7/1, MLv4.3/18, Mw(mB)3.9/1*
*NEIC **16** 16:31:58.3±0.8, 2°71S×101°03E, h74km±6km, mb4.4/5, Error ellipse: s-maj=14.4km s-min=5.0km az=51.0*
*KLM **16** 16:32:00.0, 2°68S×101°19E, h30km, mb4.2*
ISC 16 16:31:56.4±0.5, 2°68S±0°06×101°00E±0°05, h50km, n67, σ1°77/66, mb4.2/22, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.75**	**39**	P	**Pn**	**16 32 12.2**	**+1.3**
KRJI				S	**Sn**	**16 32 22.9**	**+1.5**
PPSI	**Pulau Pagai**	**0.99**	**265**	P	**Pn**	**16 32 16.0**	**+2.1**
PPSI				S	**Sn**	**16 32 29.8**	**+2.9**
SDSI	**Sungai Dareh**	**1.79**	**14**	P	**Pn**	**16 32 26.9**	**+2.0**
PDSI	**Padang**	**1.84**	**343**	P	**Pn**	**16 32 26.7**	**+1.2**
PDSI				S	**Sn**	**16 32 49.9**	**+2.3**
PPI	**Padang Panjang**	**2.29**	**345**	P	**Pn**	**16 32 30.8**	**-0.9**
SISI	**Saibi**	**2.33**	**305**	P	**Pn**	**16 32 34.0**	**+1.7**
SISI				S	**Sn**	**16 33 01.9**	**+2.2**
MNAI	**Manna**	**2.57**	**131**	*e*Pn	**Pn**	**16 32 36.8**	**+1.2**
MNAI	**Manna**	**2.57**	**131**	P	**Pn**	**16 32 37.2**	**+1.6**
LHSI	**Lahat**	**2.77**	**114**	P	**Pn**	**16 32 41.7**	**+3.4**
JMBI	**JAMBI**	**2.84**	**69**	P	**Pn**	**16 32 41.7**	**+2.4**
BKNI	**Bangkinang**	**2.99**	**1**	*e*Pn	**Pn**	**16 32 44.3**	**+3.0**
BKNI	**Bangkinang**	**2.99**	**1**	P	**Pn**	**16 32 44.8**	**+3.5**
MDSI	**Maura Dua**	**3.65**	**120**	P	**Pn**	**16 32 54.2**	**+3.8**
LWLI	**Liwa**	**3.84**	**127**	P	**Pn**	**16 32 56.8**	**+3.7**
DSRI	**Dabo**	**4.20**	**59**	P	**Pn**	**16 32 59.4**	**+1.5**
KASI	**Kota Agung**	**4.49**	**129**	P	**Pn**	**16 33 03.8**	**+1.9**
GSI	**Gunungsitoli**	**5.23**	**319**	*e*Pn	**Pn**	**16 33 13.8**	**+1.8**
GSI	**Gunungsitoli**	**5.23**	**319**	P	**Pn**	**16 33 13.9**	**+1.8**
MYKOM	**Kota Tinggi**	**5.28**	**33**	*e*Pn	**Pn**	**16 33 14.7**	**+1.9**
MYKOM	**Kota Tinggi**	**5.28**	**33**	P	**Pn**	**16 33 16.0**	**+3.3**
PSI	**Prapat**	**5.83**	**339**	LR	LR	16 35 34.7	
	comp=Z,74nm,20.8s,baz=88,slow=40						
PSI	**Prapat**	**5.83**	**339**	*e*Pn	**Pn**	**16 33 22.2**	**+1.9**
CGJI	**Cibinong**	**6.10**	**130**	P	**Pn**	**16 33 24.3**	**+0.3**
KULM	**Kulim**	**7.92**	**358**	*e*Pn	**Pn**	**16 33 52.7**	**+3.7**
CISI	**Cisompet, Garu**	**8.34**	**126**	*e*Pn	**Pn**	**16 33 54.2**	**-0.6**
CISI	**Cisompet, Garu**	**8.34**	**126**	P	**Pn**	**16 33 54.4**	**-0.4**
LHMI	**Lhok Sumawe**	**8.84**	**333**	*e*Pn	**Pn**	**16 34 04.0**	**+2.5**
UGM	**Wanagama**	**10.82**	**119**	*e*Pn	**Pn**	**16 34 32.1**	**+3.4**
KRAB	**Krabi**	**10.98**	**351**	P	Pn	16 34 24.4	-6.5
JAGI	**Jajag, Banyuwa**	**14.30**	**114**

ZAA0	Zalesovo Array	58.02	349	eP	P	16 41 42.9	-1.1
	comp=Z,4.9nm,0.6s						
ZALV	Zalesovo Beam	58.02	349	P	P	16 41 43.3	-0.7
	comp=Z,4.5nm,0.5s,baz=175,slow=4.8,SNR=20						
ZAA1	Zalesovo Array	58.02	349	eP	P	16 41 43.3	-0.7
ABKAR	Akbulak array	62.71	331	eP	P	16 42 15.1	-1.0
	comp=Z,2.1nm,0.8s						
PETK	Petropavlovsk-	72.93	32	P	P	16 43 19.5	-0.9
	comp=Z,1.5nm,0.8s,baz=264,slow=4.1,SNR=3.3						
PEA1	Petropavlovsk-	72.93	32	eP	P	16 43 19.5	-0.9
BR101	Keskin Array S	74.51	312	eP	P	16 43 28.0	-2.1
BRTR	Keskin Array B	74.51	312	P	P	16 43 28.0	-2.1
	comp=Z,0.5nm,0.6s,baz=148,slow=5.6,SNR=3.4						
FIA0	FINESS Array S	85.17	332	eP	P	16 44 27.5	+0.4
FINES	FINESS Array B	85.17	332	P	P	16 44 27.5	+0.4
	comp=Z,1.3nm,0.8s,baz=117,slow=6.8,SNR=3.6						
FINES				LR	LR	17 25 23.2	
	comp=Z,25nm,19.4s,baz=138,slow=38						
ARA0	ARCESS Array S	87.45	340	eP	P	16 44 37.9	-0.2
ARCES	ARCESS Array B	87.45	340	P	P	16 44 37.9	-0.2
	comp=Z,7.7nm,0.3s,baz=100,slow=6.5,SNR=9.5						
GERES	GERESS Array B	90.21	319	P	P	16 44 52.7	+0.9
	comp=Z,0.2nm,0.4s,baz=131,slow=4.4,SNR=3.6						
TXAR	Lajitas Array	144.62	39	PKP	PKPab	16 51 27.2	+0.2
	comp=Z,1.5nm,0.5s,baz=220,slow=1.0,SNR=46						

DDA ***16*** *17:10:00.9, 41°.23N×43°.79E, h7km±4km, ML2.8*
TIF ***16*** *17:10:00.9, 41°.23N×43°.80E, h16km*
ISCJB ***16*** *17:10:01.3±0.4, 41°.24N±0°.02×43°.80E±0°.03, h0km±4km, Error ellipse: s-maj=3.3km s-min=2.8km az=23.4*
ISK ***16*** *17:10:01.2, 41°.24N×43°.81E, h6km, ML2.6/9*
NORS ***16*** *17:10:02.1±0.0, 41°.36N×43°.89E, h4km, MPVA3.6*

ISC 16 17:10:01.7±0.9, 41°.22N±0°.02×43°.81E±0°.02, h10km±7km, n40, σ0s86/68, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.16	286	P	Pg	17 10 05.7	+0.2
BGD				S	Sg	17 10 08.3	+0.2
AKH	Akhalkalaki	0.30	309	PG	Pg	17 10 07.8	-0.1
AKH				SG	Sg	17 10 11.9	-0.2
AKH	Akhalkalaki	0.30	309	P	Pg	17 10 07.8	-0.1
AKH				S	Sg	17 10 11.9	-0.2
KZRT	Kazreti	0.48	69	P	Pb	17 10 11.4	-0.8
KZRT				S	Sb	17 10 17.8	-1.6
EAK	Akyaka	0.55	196	iP	Pb	17 10 13.0	-0.6
EAK				iS	Sg	17 10 20.6	+0.8
KARS	Kars	0.81	223	PG	Pg	17 10 17.1	-0.2
EPOS	Posof	0.86	290	iP	Pb	17 10 18.6	-0.2
EPOS				iS	Sg	17 10 29.1	-0.5
TBLG	Delisi	0.87	54	PG	Pb	17 10 18.3	-0.6
TBLG				SG	Sb	17 10 29.9	-0.6
TBLG	Delisi	0.87	54	P	Pb	17 10 18.2	-0.7
TBLG				S	Sb	17 10 30.3	-0.2
TBLG	Delisi	0.87	54	iP	Pb	17 10 18.1	-0.7
TBLG				iS	Sb	17 10 30.1	-0.4
TBLG				IAML_P			
	comp=Z,3μm,0.1s						
DIGO	Kars	0.87	202	iP	Pg	17 10 18.2	-0.3
DIGO				iS	Sb	17 10 30.7	-0.1
BTNK	Botanikuri	0.88	58	P	Pb	17 10 18.3	-0.8
BTNK				S	Sb	17 10 30.5	-0.3
BTNK	Botanikuri	0.88	58	iP	Pb	17 10 18.7	-0.4
BTNK				iS	Sb	17 10 30.7	-0.1
BTNK				IAML_P			
	comp=Z,3μm,0.1s						
TASB	TASBURUN-IGDIR	1.28	165	PN	Pg	17 10 26.0	-0.3
GNI	Garni	1.28	146	PN	Pg	17 10 26.8	+0.4
SENK	Senkaya-Erzuru	1.28	240	PN	Pg	17 10 26.4	0.0
TKB	Tkibuli	1.28	332	P	Pb	17 10 25.5	-0.5
TKB				S	Sn	17 10 42.7	-0.3
IGDI	IGDIR	1.36	171	iP	Pg	17 10 27.7	-0.3
IGDI				iS	Sn	17 10 45.5	+0.5
ONI	Oni	1.40	349	PN	Pg	17 10 27.8	-0.7
DAGI	Agillar	1.44	265	iP	Pg	17 10 28.7	-0.6
DAGI				iS	Sg	17 10 47.8	-0.2
DAGI				IAML_P			
	comp=Z,374nm,0.3s						
ZEI	Tsey	1.57	3	ePg	Pg	17 10 31.4	-0.5
ZEI				eSg	Sg	17 10 53.2	+0.9
DDEM	Demirkent	1.59	259	iP	Pg	17 10 40.9	+8.7
DDEM				iS	Sg	17 11 05.3	+13
DDEM				IAML_P			
	comp=Z,532nm,0.1s						
DBAD	Bademkaya	1.61	264	iP	Pb	17 10 31.2	-0.3
DBAD				iS	Sn	17 10 50.7	-0.3
DBAD				IAML_P			
	comp=Z,912nm,0.2s						
DBOC	Borcka	1.62	275	iP	Pg	17 10 31.9	-0.8
DBOC				iS	Sn	17 10 51.6	+0.4
DBOC				IAML_P			
	comp=Z,788nm,0.1s						
BATM	Batumi	1.64	284	PN	Pb	17 10 31.5	-0.5
BATM	Batumi	1.64	284	P	Pb	17 10 31.4	-0.5
BATM				S	Sb	17 10 52.1	-0.5
LACR	Lac	1.65	13	ePg	Pb	17 10 32.0	-0.3
LACR				eSg	Sg	17 10 54.2	-0.6
BCA	Borcka	1.66	279	PN	Pb	17 10 31.8	-0.6
DIGR	Digorskoe uzhe	1.69	354	ePg	Pg	17 10 34.1	0.0
DIGR				eSg	Sg	17 10 56.7	+0.6
AGRB	Hanur-Agry	1.75	201	PN	Pn	17 10 33.3	+0.9
KORR	Kora	1.88	6	ePg	Pg	17 10 37.8	+0.1
KORR				eSg	Sg	17 11 03.0	+1.0
KOPR	Koprukoy-ERZUR	1.93	231	PN	Pn	17 10 35.7	+1.0
TUTA	Tutak	1.97	203	iP	Pg	17 10 40.3	+0.9
ARNR	Ardon	1.99	10	ePg	Pg	17 10 40.4	+0.5
ARNR				eSg	Sg	17 11 07.9	+2.2
LSNR	Lesken	2.06	0	ePg	Pg	17 10 40.0	-1.2
LSNR				eSg	Sg	17 11 07.8	-0.1
STDR	Stavd-Durt	2.16	5	ePg	Pg	17 10 45.3	+2.3
STDR				eSg	Sg	17 11 14.0	+3.0
NEY	Neytrino	2.18	339	ePg	Pb	17 10 41.6	+0.2
NEY				eSg	Sg	17 11 09.8	-2.1
BTLR	Botlikh	2.31	51	ePg	Pn	17 10 40.6	+0.7
BTLR				eSg	Sb	17 11 11.9	-0.2
GNBR	Gunib	2.63	63	ePn	Pb	17 10 49.1	0.0
GNBR				eSn	Sg	17 11 24.4	-1.9
AKT	Akhty	2.96	84	ePn	Pb	17 10 53.6	-1.1
AKT				eSn	Sb	17 11 30.5	-0.5

IDC ***16*** *17:10:32.8±1.3, 34°.18N×25°.07E, h0km, mb3.8/4, mb1 3.7/9, mb1mx3.4/46, mbtmp3.6/9, ML3.8/5, MS3.4/1, Ms1 3.4/1, ms1mx2.2/42, Error ellipse: s-maj=24.0km s-min=21.6km az=67.0*
ISCJB ***16*** *17:10:35.7±0.6, 34°.13N±0°.04×25°.11E±0°.04, h34km±9km, mb3.9/5, MS3.5/1, Error ellipse: s-maj=7.5km s-min=4.3km az=36.7*
ATH ***16*** *17:10:36.2, 34°.30N×25°.05E, h17km±6km, ML3.1/7, Error ellipse: s-maj=7.0km s-min=1.3km az=1.0*
THE ***16*** *17:10:36.4, 34°.29N×25°.04E, h2km±2km, ML3.2/4, Error ellipse: s-maj=2.8km s-min=0.9km az=167.0*
GII ***16*** *17:10:59.8±0.0, 33°.28N×27°.15E, h1km*

ISC 16 17:10:34.8±1.5, 34°.21N±0°.06×25°.07E±0°.03, h17km±9km, n50, σ1s92/67, mb3.9/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.83	345	P	Pg	17 10 50.8	-0.3
SIVA				S	Sn	17 11 02.7	-1.0
SIVA	Sivas	0.83	345	P	Pg	17 10 50.7	-0.4
SIVA				S	Sg	17 11 00.7	-1.4
SIVA				AML	AML	17 11 08.4	
	comp=N,8081μm,0.4s						
SIVA				AML	AML	17 11 11.0	
	comp=E,7832μm,0.7s						
TMBK	Timbaki Herakl	0.90	344	P	Pg	17 10 52.1	-0.2
TMBK				S	Sn	17 11 04.4	-0.8
LAST	Lasithi	1.01	20	P	Pb	17 10 54.0	+0.1
LAST				S	Sg	17 11 08.2	+0.5
LAST	Lasithi	1.01	20	P	Pb	17 10 54.0	+0.1
LAST				S	Sb	17 11 06.9	0.0
LAST				AML	AML	17 11 08.7	
	comp=E,1077μm,0.7s						
LAST				AML	AML	17 11 14.3	
	comp=N,989μm,0.8s						
GVD	Gavdhos	1.02	308	P	Pn	17 10 54.4	0.0
GVD				S	Sn	17 11 08.9	+0.5
GVD	Gavdhos	1.02	308	P	Pn	17 10 54.3	-0.2
GVD				S	Sn	17 11 08.6	+0.2
GVD				AML	AML	17 11 15.8	
	comp=E,6433μm,0.5s						
GVD				AML	AML	17 11 15.9	
	comp=N,6044μm,0.4s						
IDI	Anoyia	1.08	352	Pn	Pb	17 10 54.8	-0.4
	comp=N,24nm,0.3s,baz=209,slow=12,SNR=82						
IDI				Sn	Sb	17 11 09.0	-0.1
	comp=N,56nm,0.3s,baz=171,slow=19,SNR=17						
IDI				LR	LR	17 11 39.3	
	comp=N,68nm,18.8s,baz=82,slow=59						
KSTL	Kastelli Herak	1.09	0	P	Pb	17 10 54.6	-0.7
KSTL				S	Sb	17 11 08.2	-1.0
NPS	Neapolis	1.14	23	P	Pb	17 10 56.6	+0.4
NPS	Neapolis	1.14	23	P	Pb	17 10 56.8	+0.6
NPS				S	Sb	17 11 11.2	+0.5
NPS				AML	AML	17 11 20.8	
	comp=N,783μm,0.6s						
NPS				AML	AML	17 11 21.8	
	comp=E,1154μm,0.4s						
PRNS	Prines Rethymn	1.24	338	P	Pg	17 10 58.1	-0.7
ZKR	Zakros	1.31	46	P	Pg	17 11 00.2	+0.1
ZKR	Zakros	1.31	46	P	Pg	17 11 00.3	+0.2
ZKR				S	Sb	17 11 16.9	+1.3
ZKR				AML	AML	17 11 24.6	
	comp=N,595μm,0.5s						
ZKR				AML	AML	17 11 31.9	
	comp=E,1039μm,0.8s						
VAM	Vamos	1.39	329	P	Pb	17 11 00.4	0.0
VAM	Vamos	1.39	329	P	Pb	17 11 00.1	-0.3
VAM				S	Sg	17 11 19.0	-0.8
VAM				AML	AML	17 11 32.7	
	comp=E,1421μm,0.4s						
VAM				AML	AML	17 11 33.5	
	comp=N,1506μm,0.5s						
IMMV	Iera Moni Meta	1.53	325	P	Pg	17 11 03.2	-1.2
IMMV	Iera Moni Meta	1.53	325	P	Pg	17 11 03.6	-0.8
IMMV				S	Sg	17 11 23.9	-0.4
IMMV				AML	AML	17 11 38.9	
	comp=N,831μm,0.7s						
IMMV				AML	AML	17 11 41.5	
	comp=E,1092μm,0.5s						
ANKY	Antikythira Is	2.20	319	P	Pb	17 11 13.2	-0.9
KYTH	Kithira	2.63	322	P	Pb	17 11 20.0	-1.6
DAT	Datca	3.24	38	iP	Pn	17 11 27.9	+2.8
DAT				iS	Sn	17 12 04.0	+0.6
DAT				IAML_P			
	comp=Z,108nm,0.1s						
DALY	Dalyan (Mula)	3.92	47	iP	Pn	17 11 36.5	+2.3
DALY				IAML_P			
	comp=Z,283nm,0.2s						
TURN	Turunc	3.92	46	iP	Pn	17 11 32.2	-2.1
TURN				iS	Sn	17 12 13.2	-6.7
TURN				IAML_P			
	comp=Z,711nm,0.2s						
AYDN	Tasoluk	4.13	33	iP	Pn	17 11 40.6	+3.4
AYDN				IAML_P			
	comp=Z,316nm,0.1s						
AKAS	Kas	4.23	60	iP	Pn	17 11 40.9	+2.3
AKAS				IAML_P			
	comp=Z,583nm,0.2s						
AKUM	Antalya-Kumluc	4.80	62	iP	Pn	17 11 47.4	+1.0
AKUM				IAML_P			
	comp=Z,976nm,0.2s						
KORT	Korkueli	5.13	56	iP	Pn	17 11 55.4	+4.4
KORT				IAML_P			
	comp=Z,168nm,0.2s						
KHAL	Karahalli	5.48	39	iP	Pn	17 11 57.3	+1.5
KHAL				IAML_P			
	comp=Z,86nm,0.2s						
KEPZ	Antalya-Kepez	5.97	61	iP	Pn	17 12 04.3	+1.8
KEPZ				iS	Sn	17 13 05.1	-5.3
KEPZ				IAML_P			
	comp=Z,120nm,0.2s						
KZIT	Kziot	8.54	110	Pn	Pn	17 12 37.5	-0.2
AMAZ	Amatzia	8.70	105	Pn	Pn	17 12 41.5	+1.5
MMAI	Mount Meron Ar	8.71	95	Pn	Pn	17 12 40.3	+0.3
	comp=Z,1.1nm,0.3s,baz=275,slow=11,SNR=4.0						
MMAI				Sn	Sn	17 14 12.1	-5.7
	comp=Z,0.9nm,0.3s,baz=307,slow=25,SNR=3.6						
YTIR	Yattir	8.93	106	Pn	Pn	17 12 44.1	+1.0
HMDT	Nahal Hemdat	8.98	100	Pn	Pn	17 12 45.5	+1.8
DSI	Dead Sea	9.06	104	Pn	Pn	17 12 47.0	+2.1
MZDA	Masada	9.14	106	Pn	Pn	17 12 46.5	+0.6
PRNI	Paran	9.25	112	Pn	Pn	17 12 48.5	+1.0
HRFI	Mount Harif	9.42	113	Pn	Pn	17 12 50.5	+0.6
MBRI	Mt Berech	9.45	115	Pn	Pn	17 12 51.2	+0.9
EIL	Elat	9.54	116	Pn	Pn	17 12 52.2	+0.7
	comp=Z,1.0nm,0.3s,baz=192,slow=3.4,SNR=9.3						
EIL				Sn	Sn	17 14 32.8	-5.5
	comp=Z,0.5nm,0.3s,baz=45,slow=13,SNR=3.2						
EIL	Elat	9.54	116	Pn	Pn	17 12 51.9	+0.5
AKASG	Malin Array Be	16.76	9	Pn	P	17 14 31.0	+0.2
	comp=Z,0.6nm,0.3s,baz=200,slow=11,SNR=4.7						
KBZ	Khabaz	16.78	50	Pn	P	17 14 31.5	+0.4
	comp=Z,0.1nm,0.3s,baz=135,slow=5.7,SNR=2.8						
GERES	GERESS Array B	16.89	333	Pn	P	17 14 33.2	+0.8
	comp=Z,0.2nm,0.3s,baz=141,slow=11,SNR=4.9						
HFS	Hagfors	26.98	347	P	P	17 16 16.8	+1.4
	comp=Z,0.9nm,0.6s,baz=163,slow=10,SNR=2.5						
TORD	Torodi Ar. Bea	29.82	231	P	P	17 16 41.3	+0.1
	comp=Z,1.0nm,0.5s,baz=38,slow=8.8,SNR=5.9						
ARCES	ARCESS Array B	35.38	0	P	P	17 17 30.9	+1.7
	comp=Z,5.1nm,0.3s,baz=161,slow=8.6,SNR=2.6						
MKAR	Makanchi Array	44.37	56	P	P	17 18 45.1	+0.8
	comp=Z,0.2nm,0.4s,baz=271,slow=6.7,SNR=3.6						
ZALV	Zalesovo Beam	45.72	45	P	P	17 18 54.4	-0.4
	comp=Z,0.7nm,0.4s,baz=266,slow=9.5,SNR=2.6						
JHJ	Hachijo jima 2	89.22	50	LR	LR	18 07 24.4	
	comp=Z,19nm,18.8s,baz=101,slow=38						

ISCJB ***16*** *17:14:08.6±1.0, 53°.7S±0°.1×3°.2E±0°.4, h10km, mb3.9/4, MS3.2/5, Error ellipse: s-maj=37.4km s-min=14.9km az=2.6*
IDC ***16*** *17:14:08.7±1.0, 53°.81S×3°.02E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.8/24, mbtmp3.9/5, ML3.9/1, MS3.3/6, Ms1 3.2/6, ms1mx3.1/17, Error ellipse: s-maj=46.1km s-min=26.0km az=79.0*

ISC 16 17:14:10.0±1.0, 53°.7S±0°.1×3°.2E±0°.3, h10km, n18, σ0s94/11, mb3.9/4, MS3.2/5, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.73	193	P	P	17 18 18.4	+0.9
VNA2	Neumayer--Watz	17.89	191	P	P	17 18 20.2	+1.0
	baz=15,slow=15						
SNAA	Sanae	18.19	186	P	P	17 18 22.4	-0.3
SNAA	Sanae	18.19	186	P	P	17 18 22.2	-0.4
	0.4nm,0.3s,baz=4.1,slow=17,SNR=17						
SNAA				S	Sn	17 21 21.2	-24
	0.1nm,0.3s,baz=31,slow=18,SNR=5.0						
SNAA				LR	LR	17 23 36.5	
	comp=Z,100nm,20.4s,baz=296,slow=31						
VNA3	Neumayer Olymp	18.47	193	P	P	17 18 26.9	+1.3
SUR	Sutherland	24.79	38	LR	LR	17 26 29.9	
	comp=Z,75nm,20.2s,baz=176,slow=30						
BOSA	Boshof	29.85	42	LR	LR	17 29 01.3	
	comp=Z,61nm,22.0s,baz=190,slow=30						
MAW	Mawson	30.91	140	LR	LR	17 32 31.5	
	comp=Z,33nm,19.0s,baz=236,slow=36						
VNDA	Vanda	48.33	174	P	P	17 22 51.1	+0.2
	0.6nm,0.6s,baz=205,slow=6.7,SNR=5.6						
VNDA				LR	LR	17 42 22.2	
	comp=Z,35nm,18.8s,baz=258,slow=35						
LPAZ	La Paz	66.00	275	P	P	17 24 56.6	-0.8
	1.5nm,0.7s,baz=179,slow=4.8,SNR=6.2						
TORD	Torodi Ar. Bea	66.63	358	P	P	17 25 01.8	+1.3
	0.5nm,0.7s,baz=184,slow=4.3,SNR=2.9						
H01W2	Cape Leeuwin H	73.52	127	T	T	18 47 23.4	
	baz=216						
H01W1	Cape Leeuwin H	73.53	127	T	T	18 47 27.3	
	baz=216						
H01W3	Cape Leeuwin H	73.53	127	T	T	18 47 30.2	
	baz=216						
ASAR	Alice Springs	91.95	136	P	P	17 27 18.4	-0.5
	0.6nm,0.9s,baz=210,slow=7.3,SNR=4.6						
BRTR	Keskin Array B	96.72	23	LR	LR	18 13 42.8	
	comp=Z,7.8nm,18.2s,baz=162,slow=37						
MJAR	Matsushiro Arr	144.60	101	PKP	PKPdf	17 33 45.5	-0.7
	1.4nm,0.8s,baz=197,slow=3.5,SNR=10						
YKA	Yellowknife Ar	147.26	311	PKPbc	PKPbc	17 33 51.5	-0.6
	1.1nm,0.8s,baz=98,slow=3.3,SNR=9.1						

TAP 16 17:18:51.9, 24°.47N×121°.93E, h9km±1km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.16	333	P	Pg	17 18 55.1	-0.2
	baz=336						
TWC				S	Sg	17 18 57.5	-0.1
	baz=336						
NANB	Nanao	0.17	256	P	Pg	17 18 55.2	-0.2
	baz=255						
NANB				eS	Sg	17 18 58.1	+0.3
	baz=255						
ENA	Nanau	0.17	256	P	Pg	17 18 55.4	-0.2
	baz=255						
ENA				eS	Sg	17 18 58.4	+0.3
	baz=255						
EOS1	EOS1	0.20	66	eS	Sg	17 18 59.1	+0.3
	baz=66						
ENTT	Nioudou	0.37	297	eP	Pg	17 18 59.3	+0.1
	baz=297						
ENTT				eS	Sg	17 19 04.5	+0.4
	baz=297						
NDT	Datong Townshi	0.40	289	eS	Sg	17 19 05.5	+0.5
	baz=289						
ETLH	Xiulin Townshi	0.48	237	eS	Sg	17 19 08.7	+1.0
	baz=237						
NWLT	Wulai	0.49	309	eS	Sg	17 19 08.4	+0.4
	baz=308						
NNSB	Datong	0.50	265	eS	Sg	17 19 08.2	+0.1
	baz=265						
TIPB	Shuangxi	0.51	350	eP	Pg	17 19 02.1	+0.3
	baz=349						
YHNB	Yeheng	0.54	292	eP	Pb	17 19 03.5	-0.2
	baz=291						
YHNB				eS	Sg	17 19 09.5	-0.1
	baz=291						
NSK	Sanguang	0.56	292	eS	Sg	17 19 10.1	+0.1
	baz=291						
WHF	Hehuan Shan	0.69	242	eS	Sb	17 19 15.5	-0.6
	baz=241						

JMA 16 17:19:01.0±0.2, 25°.30N×123°.42E, h172km±3km, M2.4, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.95	207	eS	Sn	17 19 47.6	-0.3
IRIF	Iriomote-Funau	1.00	164	P	Pn	17 19 27.9	0.0
IRIF				S	Sn	17 19 49.2	+0.5
JISG	Ishigakijimahi	1.08	131	P	Pn	17 19 28.5	0.0
JISG				eS	Sn	17 19 50.1	+0.5
JIJ	Ishigaki jima	1.14	145	P	Pn	17 19 29.0	0.0
JIJ				S	Sn	17 19 50.4	-0.2
JKRS	Kuro-shima	1.19	153	P	Pn	17 19 29.8	+0.4
JKRS				S	Sn	17 19 51.6	+0.3
JTJ	Tarama	1.34	119	P	Pn	17 19 31.2	+0.5
JTJ				S	Sn	17 19 54.0	+0.4
JIRB	Irabujima	1.66	106	P	Pn	17 19 33.9	+0.1
JIRB				S	Sn	17 19 58.4	-0.8
JIKM	Ikemajima	1.70	102	eS	Sn	17 19 59.9	0.0
JMJ2	Miyako jima3	1.82	107	P	Pn	17 19 36.0	+0.5
JMJ2				S	Sn	17 20 02.5	+0.3
JOGS	Gusukube	1.88	106	eS	Sn	17 20 03.8	+0.4

MEX 16 17:25:26.5±0.3, 18°.15N×99°.24W, h57km±3km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	Platanillo	0.34	314	iP	Pn	17 25 35.2	-1.6
PLIG				iS	Sn	17 25 42.5	-1.8
MEIG	Mezcala	0.42	238	iP	Pn	17 25 35.9	-1.7
MEIG				iS	Sn	17 25 43.9	-1.7
YAIG	Yautepec	0.73	13	iP	Pn	17 25 39.6	-1.5
YAIG				iS	Sn	17 25 49.8	-1.9
HMTT	Tlapaneco	0.74	118	iP	Pn	17 25 39.6	-1.6
HMTT				iS	Sn	17 25 49.9	-2.0
TLIG	Tlapa	0.87	132	iP	Pn	17 25 41.5	-1.4
TLIG				iS	Sn	17 25 52.8	-2.1
ARIG	Puente Sto Nin	1.06	277	eP	Pn	17 25 43.8	-1.4
ARIG				iS	Sn	17 25 57.3	-1.8
PPM	Popocatepetl	1.08	33	eP	Pn	17 25 44.7	-1.3
PPM				eS	Sn	17 25 58.5	-1.9
CAIG	El Cayaco	1.47	222	eP	Pn	17 25 48.8	-2.0
CAIG				eS	Sn	17 26 07.0	-2.0

MEX 16 17:39:44.7±0.3, 16°.29N×98°.27W, h12km±2km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.17	52	iP	Pg	17 39 48.0	-0.6
PNIG				iS	Sg	17 39 50.9	-0.5

SOME ***16*** *17:42:40.4, 41°.90N×79°.20E, h5km*
KRNET ***16*** *17:42:41.2±0.1, 41°.87N×79°.51E, mb3.1*
NNC ***16*** *17:42:41.8±0.8, 41°.94N×79°.24E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=5.7km s-min=2.9km az=150.0*

ISC 16 17:42:44.8±1.4, 42°.08N±0°.06×79°.23E±0°.04, h10km, n50, σ1s39/85, 28C-14D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	Uzynbulak	1.08	352	P	Pg	17 43 04.7	-1.0
	18nm,0.1s						
UZB				S	Sn	17 43 21.9	+0.6
	52nm,0.1s						
UZB	Uzynbulak	1.08	352	eP	Pb	17 43 05.2	-0.5
	23nm,0.2s						
UZB				eS	Sn	17 43 22.8	+1.5
	62nm,0.1s						
PDGK	Podgornoye	1.27	9	P	Pn	17 43 07.8	-0.9
	9.9nm,0.2s						
PDGK				S	Sn	17 43 27.1	+1.1
	40nm,0.3s						
PDGK	Podgornoye	1.27	9	⇓P	Pn	17 43 07.7	-1.1
	15nm,0.2s						
PDGK				⇑S	Sn	17 43 27.1	+1.1
	196nm,0.5s						
PDGK	Podgornoye	1.27	9	⇑iP	Pn	17 43 07.8	-0.9
	baz=59						
PDGK				⇑iS	Sn	17 43 27.0	+1.1
	baz=59						
KPKS	Kokpek	1.45	344	eP	Pb	17 43 11.2	-0.7
	190nm,0.2s						
KPKS				eS	Sg	17 43 33.0	+1.7
	218nm,0.3s						
KTMS	Ketmen	1.60	31	P	Pb	17 43 13.1	-1.4
	99nm,0.3s						
KTMS				S	Sg	17 43 36.6	+0.3
	87nm,0.2s						
KTMS	Ketmen	1.60	31	eP	Pb	17 43 13.3	-1.3
	99nm,0.3s						
KTMS				eS	Sg	17 43 36.9	+0.6
	87nm,0.2s						
TNSS	Tian-Shan	1.94	300	Pg	Pb	17

49nm,0.4s
MNBS Baschi 2.09 343 *e*P **Pb 17 43 22.4 -0.5**
41nm,0.2s
MNBS *e*S **Sg 17 43 53.0 +1.0**
318nm,0.2s
IZV Izvestkoviy 2.16 297 Pg **Pb 17 43 22.4 -1.7**
9.7nm,0.1s
IZV Lg Lg 17 43 52.7
118nm,0.2s
IZV Izvestkoviy 2.16 297 *e*P **Pb 17 43 22.4 -1.7**
9.7nm,0.1s
IZV *e*S **Sg 17 43 52.7 -1.4**
118nm,0.2s
ULHL Ulahol 2.23 275⇑*i*P **Pn 17 43 22.2 +0.2**
baz=80
ULHL ⇑*i*S **Sb 17 43 52.1 -0.9**
baz=80
DJR Jarkent 2.29 10 Pg **Pb 17 43 25.2 -1.1**
15nm,0.1s
DJR Lg Lg 17 43 57.7
117nm,0.3s
DJR Jarkent 2.29 10 *e*P **Pb 17 43 25.2 -1.1**
26nm,0.3s
DJR *e*S **Sg 17 43 57.7 -0.8**
117nm,0.3s
ARXS Arharly 2.37 335 Pg **Pb 17 43 26.6 -1.1**
11nm,0.4s
ARXS Lg Lg 17 43 60.0
93nm,0.4s
ARXS Arharly 2.37 335 *e*P **Pb 17 43 26.6 -1.1**
11nm,0.4s
ARXS *e*S **Sg 17 43 60.0 -1.0**
93nm,0.4s
CHKK Chushkaly 2.42 318 *e*P **Pb 17 43 27.8 -0.7**
17nm,0.3s
CHKK *e*S **Sg 17 44 01.9 -0.7**
225nm,0.4s
BOOM Boomskoye usch 2.47 281⇑*i*P **Pn 17 43 25.0 -0.3**
baz=84
BOOM ⇑*i*S **Sb 17 43 58.2 -1.9**
baz=84
KTBS Karatobe 2.48 312 Pg **Pb 17 43 28.3 -1.3**
5.2nm,0.4s
KTBS Lg Lg 17 44 02.7
325nm,0.5s
KTBS Karatobe 2.48 312 *e*P **Pb 17 43 28.9 -0.6**
16nm,0.2s
KTBS *e*S **Sg 17 44 03.7 -1.0**
325nm,0.5s
KST Kastek 2.60 293 Pg **Pb 17 43 28.9 -2.7**
11nm,0.3s
KST Lg Lg 17 44 04.3
64nm,0.3s
KST Kastek 2.60 293 *e*P **Pb 17 43 29.3 -2.3**
13nm,0.3s
KST *e*S **Sb 17 44 04.6 +1.0**
69nm,0.6s
KUU Kurty 2.79 312 Pg **Pb 17 43 33.7 -1.0**
1.3nm,0.2s
KUU Lg Lg 17 44 12.0
67nm,0.4s
KUU Kurty 2.79 312 *e*P **Pb 17 43 34.0 -0.8**
2.8nm,0.2s
KUU *e*S **Sg 17 44 12.3 -2.2**
77nm,0.4s
DGS Degeres 2.80 296 Pg **Pb 17 43 32.8 -2.3**
6.8nm,0.3s
DGS Lg Lg 17 44 10.3
66nm,0.6s
DGS Degeres 2.80 296 *e*P **Pb 17 43 32.6 -2.4**
10nm,0.5s
DGS *e*S **Sb 17 44 10.3 +0.9**
66nm,0.6s
TKM2 Tokmak 2 2.81 289⇓Pn **Pn 17 43 30.5 +0.4**
3.8nm,0.3s
TKM2 ⇑Lg Lg 17 44 13.5
23nm,0.5s
TKM2 Tokmak 2 2.81 289⇓*i*P **Pn 17 43 30.6 +0.5**
baz=91
TKM2 ⇓*i*S **Sn 17 44 06.7 +2.5**
baz=91
KZA Kyzart 2.96 271⇓*i*P **Pn 17 43 32.2 -0.1**
baz=75
KZA ⇓*i*S **Sn 17 44 09.7 +1.7**
baz=75
KAPS Kapalarasan 3.21 2 Pg **Pb 17 43 41.5 -0.4**
2.8nm,0.3s
KAPS Lg Lg 17 44 26.1
31nm,0.3s
KAPS Kapalarasan 3.21 2 *e*P **Pb 17 43 42.5 +0.5**
7.9nm,0.2s
KAPS *e*S **Sg 17 44 26.7 -1.1**
31nm,0.3s
KBK Karagaybulak 3.22 282⇑*i*P **Pn 17 43 36.0 +0.3**
baz=85
KBK ⇑*i*S **Sn 17 44 16.0 +1.8**
baz=85
CHMS Chumysh 3.43 287⇑*i*P **Pn 17 43 39.2 +0.8**
baz=89
CHMS ⇑*i*S **Sn 17 44 21.4 +2.2**
baz=89
FRU1 Bishkek 3.48 284⇑*i*P **Pn 17 43 39.5 +0.4**
baz=86
FRU1 ⇑*i*S **Sn 17 44 22.2 +1.8**
baz=86
UCH Uchtor 3.51 274⇑*i*P **Pn 17 43 39.9 +0.1**
baz=77
UCH ⇑*i*S **Sn 17 44 23.1 +1.5**
baz=77
AAK Ala-Archa 3.55 281⇓Pg **Pb 17 43 46.2 -1.7**
3.6nm,0.5s
AAK ⇓Lg Lg 17 44 35.7
8.1nm,0.5s
AAK Ala-Archa 3.55 281⇓*i*P **Pn 17 43 40.6 +0.4**
baz=83
AAK ⇓*i*S **Sn 17 44 24.0 +1.7**
baz=83
ARLS Aral 3.66 268⇑*e*P **Pn 17 43 41.4 -0.3**
baz=72
ARLS ⇑*i*S **Sn 17 44 25.3 +0.3**
baz=72
USP Ospenovka 3.68 290⇑*i*P **Pn 17 43 42.9 +1.0**
baz=92
USP ⇑*i*S **Sn 17 44 27.6 +2.2**
baz=92
EKS2 Erkin-Say 4.08 280⇑*e*P **Pn 17 43 48.0 +0.6**
baz=82
EKS2 ⇑*i*S **Sn 17 44 36.4 +1.1**
baz=82
MAKZ Makanchi 5.12 22⇓Pn **Pn 17 44 00.5 -1.2**
4.7nm,1.4s
MAKZ ⇓Sn **Sn 17 45 02.5 +1.7**
1.7nm,0.4s
MAKZ ⇑Lg Lg 17 45 28.2
2.5nm,0.5s
MK31 Makanchi Array 5.20 24⇑Pn **Pn 17 44 03.6 +0.9**
2.5nm,0.7s,baz=208,slow=14,SNR=34
MK31 ⇑Sn **Sn 17 45 06.6 +3.8**
0.9nm,0.3s,baz=209,slow=28,SNR=4.5
MK31 ⇓Lg Lg 17 45 29.6
3.4nm,0.6s,baz=204,slow=26,SNR=4.9
KK31 Karatay Array 6.51 282⇑Pg **Pb 17 44 42.0 +3.8**
2.4nm,0.9s,baz=98,slow=17,SNR=5.2
KK31 ⇑Lg Lg 17 46 10.8
0.5nm,0.3s,baz=98,slow=28,SNR=4.6

*ISCJB **16** 17:52:42.3±0.8, 24°.75N±0°.05×122°.79E±0°.02, h10km±5km, Error ellipse: s-maj=8.8km s-min=2.8km az=7.8*
*JMA **16** 17:52:42.8±0.1, 24°.73N×122°.79E, h15km±1km, M1.9*
*TAP **16** 17:52:42.4, 24°.74N×122°.80E, h12km, ML2.7, C*
ISC 16 17:52:42.0±1.2, 24°.76N±0°.06×122°.82E±0°.02, h19km±3km, n29, σ0$32/47, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.33**	**160**	P	**Pg**	**17 52 49.2**	**0.0**
JYNG				S	**Sg**	**17 52 53.7**	**-0.3**
YOJ	**Yonaguni jima**	**0.35**	**150**	P	**Pb**	**17 52 49.6**	**0.0**
baz=145							
YOJ				S	**Sg**	**17 52 54.4**	**-0.1**
baz=145							
YOJ	**Yonaguni jima**	**0.35**	**150**	P	**Pb**	**17 52 49.6**	**0.0**
YOJ				S	**Sg**	**17 52 54.3**	**-0.1**
EOS1	**EOS1**	**0.67**	**251**	P	**Pg**	**17 52 55.4**	**+0.2**
baz=252							
EOS1				*e*S	**Sg**	**17 53 04.2**	**+0.1**
baz=252							
TWB1	**Santiao Chiao**	**0.80**	**288**	*e*P	**Pb**	**17 52 57.1**	**-0.1**
baz=290							
TWC	**Suao**	**0.90**	**260**	*e*P	**Pb**	**17 52 58.9**	**0.0**
baz=260							
TWC				*e*S	**Sb**	**17 53 10.0**	**-0.5**
baz=260							
NTC	**Toucheng**	**0.91**	**276**	*e*P	**Pb**	**17 52 59.0**	**-0.1**
baz=277							
TIPB	**Shuangxi**	**0.93**	**283**	P	**Pb**	**17 52 59.6**	**+0.1**
baz=285							
TIPB	**Shuangxi**	**0.93**	**283**	*e*P	**Pn**	**17 52 59.9**	**-0.2**
baz=176							
IRIF	**Iriomote-Funau**	**0.93**	**117**	P	**Pg**	**17 53 00.3**	**+0.1**
IRIF				*e*S	**Sn**	**17 53 13.5**	**+0.7**
ILA	**Ilan**	**0.97**	**270**	*e*P	**Pb**	**17 53 00.2**	**-0.1**
baz=272							
NANB	**Nanao**	**1.03**	**251**	P	**Pb**	**17 53 01.1**	**-0.2**
baz=251							
NANB				*e*S	**Sb**	**17 53 13.7**	**-0.6**
baz=251							
ENA	**Nanau**	**1.04**	**251**	*e*P	**Pb**	**17 53 01.3**	**-0.1**
baz=251							
ENA				*e*S	**Sb**	**17 53 14.3**	**-0.2**
baz=251							
TWE	**Neicheng**	**1.05**	**268**	P	**Pb**	**17 53 01.6**	**0.0**
baz=268							
TWE				*e*S	**Sb**	**17 53 14.9**	**0.0**
baz=268							
HATJ	**Hateruma jima**	**1.14**	**128**	S	**Sg**	**17 53 18.8**	**-0.3**
ENTT	**Nioudou**	**1.15**	**264**	P	**Pb**	**17 53 03.2**	**0.0**
baz=264							
ENTT				*e*S	**Sb**	**17 53 17.9**	**+0.1**
baz=264							
NWLT	**Wulai**	**1.20**	**271**	*e*P	**Pb**	**17 53 04.6**	**+0.5**
baz=272							
NDT	**Datong Townshi**	**1.20**	**263**	*e*P	**Pb**	**17 53 04.5**	**+0.4**
baz=263							
NDT				*e*S	**Sn**	**17 53 19.6**	**+0.1**
baz=263							
JKRS	**Kuro-shima**	**1.20**	**116**	P	**Pb**	**17 53 04.6**	**+0.4**
JKRS				*e*S	**Sg**	**17 53 20.5**	**-0.6**
NACB	**Ninganchiao**	**1.26**	**243**	P	**Pb**	**17 53 05.4**	**+0.2**
baz=242							
NACB				*e*S	**Sb**	**17 53 20.4**	**-0.6**
baz=242							
JIJ	**Ishigaki jima**	**1.27**	**108**	P	**Pg**	**17 53 06.2**	**-0.4**
JIJ				*e*S	**Sg**	**17 53 22.5**	**-0.7**
YHNB	**Yeheng**	**1.32**	**266**	P	**Pb**	**17 53 06.2**	**0.0**
baz=267							
YHNB				*e*S	**Sn**	**17 53 22.3**	**-0.2**
baz=267							
NSK	**Sanguang**	**1.33**	**267**	*e*P	**Pb**	**17 53 06.3**	**-0.1**
baz=279							
ETLH	**Xiulin Townshi**	**1.34**	**246**	*e*P	**Pb**	**17 53 06.8**	**+0.2**
baz=246							
ETLH				*e*S	**Sb**	**17 53 23.5**	**+0.1**
baz=246							
NNSB	**Datong**	**1.35**	**256**	*e*P	**Pb**	**17 53 07.3**	**+0.5**
baz=256							
NNSB				*e*S	**Sb**	**17 53 23.6**	**-0.1**
baz=256							
NNS	**Nan Shan**	**1.36**	**257**	*e*P	**Pb**	**17 53 07.3**	**+0.4**
baz=256							
NNS				*e*S	**Sb**	**17 53 24.1**	**+0.2**
baz=256							
JISG	**Ishigakijimahi**	**1.37**	**97**	P	**Pb**	**17 53 07.4**	**+0.4**
WHF	**Hehuan Shan**	**1.55**	**247**	*e*P	**Pn**	**17 53 09.2**	**+0.3**
baz=248							
JTJ	**Tarama**	**1.71**	**94**	P	**Pb**	**17 53 13.2**	**+0.3**

TAP 16 17:52:57.2, 25°.06N×121°.82E, h1km, ML0.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWF	**Wu-fen Shan**	**0.04**	**293**	P	Pg	17 52 58.5	+0.5
baz=293							
NWF				S	Sg	17 52 59.4	+0.8
baz=293							
WFSB	**Wu-fen Shan**	**0.04**	**293**	*e*P	Pg	17 52 58.5	+0.5
baz=293							
WFSB				*e*S	Sg	17 52 59.5	+0.9
baz=293							

MEX 16 17:58:41.0±0.7, 15°.92N×97°.30W, h8km±10km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.93**	**301**	*e*P	Pg	17 58 56.6	-2.3
PNIG				*e*S	Sg	17 59 08.4	-2.5
HUIG	**Huatulco**	**1.15**	**97**	*e*P	Pg	17 58 58.0	-5.1
HUIG				*e*S	Sg	17 59 12.3	-5.8
VHO	**Vista Hermosa**	**1.27**	**25**	*e*P	Pn	17 59 01.7	-3.6
VHO				*e*S	Sg	17 59 17.4	-4.4
TLIG	**Tlapa**	**2.04**	**323**	*e*P	Pn	17 59 16.5	+0.6
TLIG				*e*S	Sn	17 59 41.7	+0.1

*JMA **16** 18:03:03.9±0.3, 29°.96N×139°.29E, h485km±4km, M3.4*
*ISCJB **16** 18:03:06.8±0.7, 29°.95N±0°.06×138°.96E±0°.09, h421km, mb2.9/4, Error ellipse: s-maj=10.5km s-min=8.2km az=162.4*
*IDC **16** 18:03:07.3±1.3, 29°.96N×139°.00E, h466km±23km, mb2.7/4, mb1 2.8/9, mb1mx2.6/56, mbtmp3.6/9, Error ellipse: s-maj=50.6km s-min=16.4km az=66.0*
ISC 16 18:03:05.3±0.9, 29°.90N±0°.07×138°.9E±0°.1, h421km, n18, σ2$65/23, mb3.0/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.30**	**13**	P	**P**	**18 04 15.6**	**+3.3**
JHJ	**Hachijo jima 2**	**3.30**	**13**	P	**P**	**18 04 16.1**	**+3.8**
12nm,0.3s,baz=107,slow=23,SNR=9.7							
JHJ				S	**S**	**18 05 05.5**	**-1.4**
5.6nm,0.3s,baz=39,slow=14,SNR=2.3							
CBIJ	**Chichi jima**	**4.01**	**133**	P	**P**	**18 04 20.4**	**+1.7**
CBIJ				S	**S**	**18 05 19.0**	**+0.5**
JTNC	**Tanabenakahech**	**4.81**	**325**	P	**P**	**18 04 30.4**	**+4.2**
BSO1	**Boso 1**	**5.05**	**20**	P	**P**	**18 04 30.0**	**+2.0**
BSO1				*e*S	**S**	**18 05 38.0**	**+2.3**
BSO3	**Boso 3**	**5.07**	**15**	*e*S	**S**	**18 05 37.8**	**+1.2**
JYT	**Yasato**	**6.40**	**9**	P	**P**	**18 04 43.4**	**+0.8**
JYT				*e*S	**S**	**18 05 58.8**	**-3.7**
JAG	**Ashikaga**	**6.53**	**4**	P	**P**	**18 04 44.7**	**+0.3**
JAG				*e*S	**S**	**18 06 01.0**	**-3.9**
MJAR	**Matsushiro Arr**	**6.65**	**355**	P	**P**	**18 04 49.2**	**+3.4**
0.1nm,0.3s,baz=170,slow=9.4,SNR=3.8							
JHS	**Saijyo**	**7.06**	**318**	P	**P**	**18 04 53.3**	**+3.0**
JNU	**Nakatsue**	**7.57**	**297**	P	**P**	**18 04 59.4**	**+3.4**
0.3nm,0.3s,baz=30,slow=7.1,SNR=4.1							
JSJ	**Shimokoshiki**	**8.11**	**285**	P	**P**	**18 05 04.5**	**+2.8**
KSRS	**Korea Array**	**11.85**	**312**	P	**P**	**18 05 44.4**	**+1.7**
0.1nm,0.3s,baz=126,slow=12,SNR=11							
USRK	**Ussuriysk Ar.**	**15.30**	**341**	P	**P**	**18 06 21.1**	**+1.0**
0.6nm,0.3s,baz=146,slow=9.9,SNR=13							
MKAR	**Makanchi Array**	**46.48**	**308**	P	**P**	**18 10 51.0**	**-1.6**
0.1nm,0.3s,baz=86,slow=9.4,SNR=3.5							
WRA	**Warramunga Arr**	**49.75**	**186**	P	**P**	**18 11 16.2**	**-1.3**
1.2nm,0.8s,baz=0.5,slow=7.3,SNR=6.8							
ASAR	**Alice Springs**	**53.47**	**186**	P	**P**	**18 11 43.6**	**-1.0**
0.3nm,0.5s,baz=358,slow=5.4,SNR=8.5							
BVAR	**Borovoye Array**	**54.04**	**316**	P	**P**	**18 11 46.4**	**-1.8**
0.4nm,0.5s,baz=99,slow=9.2,SNR=4.7							

*BJI **16** 18:03:16.0±0.0, 37°.89N×82°.25E, h6km, ML3.4/8*
*NNC **16** 18:03:21.6±2.0, 38°.30N×82°.36E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=20.6km s-min=14.8km az=99.0*
ISC 16 18:03:20.8±3.2, 38°.2N±0°.2×82°.4E±0°.1, h10km, n6, σ0$43/9, 4C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.18**	**287**	Pn	Pg	18 05 00.1	+0.1
KSH				Sn	**Sn**	**18 05 38.4**	**0.0**
KSH				smax	smax		
comp=N,99nm,0.6s							
KSH				smax	smax		
comp=E,47nm,0.5s							
PDGK	**Podgornoye**	**5.62**	**338**	⇑P	**Pn**	**18 04 44.5**	**0.0**
comp=E,3.3nm,0.7s							
PDGK				⇑S	**Sn**	**18 05 49.9**	**+0.6**
comp=E,7.3nm,0.6s							
WMQ	**Urumqi**	**6.95**	**34**	*e*Pn	**Pn**	**18 05 02.8**	**0.0**
WMQ				smax	smax		
comp=E,11nm,0.7s							
WMQ				smax	smax		
comp=E,16nm,0.7s							
TKM2 Tokmak 2 7.03 315⇓P **Pn 18 05 03.7 -0.2**
comp=E,4.6nm,0.5s
MK31 Makanchi Array 8.64 360⇑P **Pn 18 05 26.1 +0.1**
comp=E,1.9nm,0.4s,baz=187,slow=13,SNR=96
MK31 ⇑S **Sn 18 07 03.0 -0.4**
comp=E,2.0nm,0.6s,baz=182,slow=24,SNR=4.7
MAKZ Makanchi 8.66 358⇓P **Pn 18 05 26.6 +0.4**
comp=E,3.2nm,0.3s
MAKZ ⇓S **Sn 18 07 03.3 -0.6**
comp=E,6.3nm,1.2s

MEX 16 18:05:51.5±0.7, 15°.87N×97°.27W, h10km±6km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.97**	**302**	*e*P	Pg	18 06 07.2	-3.1
PNIG				*i* S	Sg	18 06 19.5	-3.5
VHO	**Vista Hermosa**	**1.30**	**23**	*i* P	Pn	18 06 12.4	-3.5
VHO				*e*S	Sb	18 06 28.1	-4.9
TLIG	**Tlapa**	**2.09**	**324**	*e*P	Pn	18 06 19.3	-7.5
TLIG				*e*S	Sn	18 06 51.8	-1.2

*ISCJB **16** 18:06:17.2±0.4, 35°.59N±0°.04×97°.27W±0°.03, h7km±3km, Error ellipse: s-maj=6.7km s-min=3.6km az=168.4*
*NEIC **16** 18:06:17.6±0.0, 35°.57N×97°.31W, h7km, ML3.6(TUL), After TUL.*
NEIC Felt [IV] at Jones and [III] at Choctaw, Oklahoma City and Spencer. Also felt at Arcadia, Edmond, Harrah, Luther and McLoud.
*TUL **16** 18:06:17.6, 35°.57N×97°.31W, h7km, ML3.6*
*ANF **16** 18:06:17.1±0.7, 35°.57N×97°.27W, h5km, ML4.1/8, Error ellipse: s-maj=9.5km s-min=4.8km az=148.0*
ISC 16 18:06:17.3±0.8, 35°.56N±0°.03×97°.31W±0°.03, h11km±5km, n32, σ1$69/45, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK001	**Jones High Sch**	**0.01**	**80**	*e*Pg	**Pg**	**18 06 18.8**	**-0.4**
OK001				*e*Sg	**Sg**	**18 06 19.0**	**-1.5**
OK009	**Oakdale Elemen**	**0.10**	**283**	*e*Pg	**Pg**	**18 06 20.1**	**+0.2**
OK009				*e*Sg	**Sg**	**18 06 22.2**	**+0.4**
OK005	**Luther M Schoo**	**0.13**	**44**	*e*Pg	**Pg**	**18 06 20.6**	**+0.1**
TUL1	**Leonard**	**1.28**	**74**	*e*Pg	**Pn**	**18 06 40.2**	**-0.9**
TUL1				*e*Sn	**Sb**	**18 06 57.8**	**-0.2**
TUL1	**Leonard**	**1.28**	**74**	P	**Pn**	**18 06 40.4**	**-0.8**
baz=254							
TUL1				S	**Sb**	**18 06 57.7**	**-0.2**
baz=254							
WMOK	**Wichita Mounta**	**1.46**	**236**	*e*Pn	**Pn**	**18 06 44.0**	**+0.3**
WMOK				*e*Sn	**Sg**	**18 07 04.5**	**+0.3**
WMOK	**Wichita Mounta**	**1.46**	**236**	P	**Pn**	**18 06 44.1**	**+0.5**
baz=56							
WMOK				S	**Sb**	**18 07 03.6**	**+0.6**
baz=56							
U32A	**Winter Ranch,**	**1.60**	**301**	*e*Pn	**Pb**	**18 06 46.6**	**-0.3**
U32A				*e*Sn	**Sg**	**18 07 08.8**	**0.0**
X37A	**Clayton**	**1.86**	**121**	*e*Pn	**Pb**	**18 06 50.5**	**-0.8**
HHAR	**Hobbs**	**2.83**	**74**	*e*Pn	**Pn**	**18 07 04.1**	**+1.7**
W39A	**Magazine**	**2.90**	**96**	*e*Pn	**Pn**	**18 07 04.5**	**+1.0**
W39A	**Magazine**	**2.90**	**96**	P	**Pn**	**18 07 04.3**	**+0.9**
baz=279							
W39A				S	**Sn**	**18 07 38.9**	**+0.6**
baz=279							
MIAR	**Mount Ida**	**3.22**	**107**	*e*Pn	**Pn**	**18 07 09.4**	**+1.5**
MIAR	**Mount Ida**	**3.22**	**107**	P	**Pn**	**18 07 09.4**	**+1.5**
baz=290							
MIAR				S	**Sn**	**18 07 47.5**	**+1.2**
baz=290							
ABTX	**Abilene, Hawle**	**3.51**	**214**	*e*Pn	**Pn**	**18 07 14.7**	**+2.8**
ABTX	**Abilene, Hawle**	**3.51**	**214**	P	**Pn**	**18 07 14.1**	**+2.2**
baz=34							
ABTX				Sb	**Sg**	**18 08 07.3**	**-2.7**
baz=34							
WHTX	**Lake Whitney,**	**3.56**	**182**	*e*Pn	**Pn**	**18 07 14.4**	**+1.9**
WHTX	**Lake Whitney,**	**3.56**	**182**	P	**Pn**	**18 07 14.3**	**+1.8**
baz=3.1							
WHTX				Sb	**Sb**	**18 08 07.0**	**+3.4**
baz=3.1							
KSU1	**Kansas State U**	**3.58**	**9**	P	**Pn**	**18 07 13.6**	**+0.8**
baz=188							
KSU1				Sb	**Sg**	**18 08 08.6**	**-3.6**
baz=188							
AMTX	**Amarillo**	**3.64**	**261**	*e*Pn	**Pn**	**18 07 16.1**	**+2.3**
U40A	**Yellville**	**3.70**	**76**	P	**Pn**	**18 07 15.0**	**+0.6**
baz=259							
U40A				Sb	**Sb**	**18 08 10.5**	**+3.0**
baz=259							
CBKS	**Cedar Bluff**	**3.79**	**330**	*e*Pn	**Pn**	**18 07 17.0**	**+1.3**
X40A	**Basin Creek Fa**	**3.82**	**105**	*e*Pn	**Pn**	**18 07 17.9**	**+1.8**
WHAR	**Wooly Hollow**	**4.11**	**92**	*e*Sn	**Sn**	**18 08 08.5**	**+0.5**
UALR	**University of**	**4.14**	**99**	*e*Pn	**Pn**	**18 07 22.4**	**+2.0**
W41B	**Gary Mavity, V**	**4.15**	**94**	*e*Pn	**Pn**	**18 07 21.6**	**+1.0**
MSTX	**Muleshoe**	**4.77**	**252**	*e*Pn	**Pn**	**18 07 30.6**	**+1.3**
CCM	**Cathedral Cave**	**5.46**	**61**	*e*Pn	**Pn**	**18 07 39.8**	**+1.1**
JCT	**Junction City**	**5.48**	**203**	*e*Pg	**Pg**	**18 07 58.5**	**-3.8**
ANMO	**Albuquerque**	**7.51**	**268**	Pn	Pb	18 08 34.5	+6.8
0.6nm,0.3s,baz=86,slow=17,SNR=14							
ANMO				Sn	Sb	18 10 07.0	+10
0.5nm,0.3s,baz=272,slow=18,SNR=2.7							
ANMO	**Albuquerque**	**7.51**	**268**	*e*Pn	**Pn**	**18 08 05.7**	**-1.3**
MNTX	**Cornudas Mount**	**7.76**	**243**	*e*Pn	**Pn**	**18 08 11.6**	**+1.4**
MNTX				*e*Sn	**Sn**	**18 09 36.4**	**-1.6**

*IDC **16** 18:06:35.6±1.4, 43°.04N×104°.92W, h0km, mb3.8/5, mb1 3.9/9, mb1mx3.6/50, mbtmp3.8/9, ML3.6/4, Error ellipse: s-maj=36.6km s-min=10.7km az=150.0*
*ISCJB **16** 18:06:38.2±0.3, 43°.82N±0°.03×105°.17W±0°.04, h0km, mb4.0/7, Error ellipse: s-maj=4.7km s-min=3.7km az=38.5*
*ANF **16** 18:06:39.9±0.8, 43°.79N×105°.28W, ML3.8/12, Error ellipse: s-maj=9.1km s-min=8.5km az=58.0*
*NEIC **16** 18:06:40.0±0.3, 43°.81N×105°.25W, h0km, ML3.5, Error ellipse: s-maj=4.7km s-min=3.7km az=136.0, Suspected Mining explosion.*
NEIC 56 km [35 miles] SSE of Gillette.
ISC 16 18:06:39.7±0.6, 43°.82N±0°.04×105°.18W±0°.04, h0km, n57, σ1$00/64, mb4.1/7, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.88**	**69**	*e*Pg	**Pb**	**18 06 58.1**	**+0.1**
RSSD	**Black Hills**	**0.88**	**69**	P	**Pb**	**18 06 58.4**	**+0.4**
baz=251							
K22A	**Casper**	**1.53**	**221**	*e*Pn	**Pn**	**18 07 05.9**	**-2.5**
K22A	**Casper**	**1.53**	**221**	P	**Pn**	**18 07 06.3**	**-2.1**
baz=38							
K22A				S	**Sg**	**18 07 28.6**	**-0.1**
baz=38							
RWWY	**Rawlins**	**2.60**	**216**	*e*Pn	**Pn**	**18 07 23.9**	**+0.6**
LAO	**LASA Array**	**2.96**	**346**	*e*Pn	**Pn**	**18 07 28.3**	**+0.2**
LAO	**LASA Array**	**2.96**	**346**	P	**Pn**	**18 07 28.0**	**-0.1**
baz=166							
LAO				S	**Sn**	**18 08 05.3**	**+1.0**
baz=166							
N23A	**Red Feather La**	**2.98**	**191**	*e*Pn	**Pn**	**18 07 28.8**	**+0.3**
N23A	**Red Feather La**	**2.98**	**191**	P	**Pn**	**18 07 28.4**	**-0.1**
baz=9.7							
N23A				S	**Sn**	**18 08 04.9**	**-0.1**
baz=9.7							
RLMT	**Red Lodge**	**3.20**	**295**	*e*Pn	**Pn**	**18 07 31.5**	**0.0**
RLMT	**Red Lodge**	**3.20**	**295**	P	**Pn**	**18 07 31.2**	**-0.3**
baz=113							
RLMT				Sb	**Sb**	**18 08 18.3**	**+1.0**
baz=113							
PD31	**Pinedale Array**	**3.37**	**253**	*e*Pn	**Pn**	**18 07 32.9**	**-0.8**
PD31				*e*Sn	**Sn**	**18 08 17.3**	**+2.7**
PDAR	**Pinedale Array**	**3.37**	**253**	Pn	**Pn**	**18 07 33.1**	**-0.7**
5.7nm,0.3s,baz=65,slow=16,SNR=67							
PDAR				Lg	Lg	18 08 17.3	
16nm,0.3s,baz=67,slow=31,SNR=10							
BW06	**Boulder Array**	**3.37**	**253**	*e*Pn	**Pn**	**18 07 32.8**	**-1.0**
BW06	**Boulder Array**	**3.37**	**253**	P	**Pn**	**18 07 32.8**	**-1.0**
baz=70							
BW06				Sb	**Sb**	**18 08 22.5**	**+0.6**
baz=70							
OGNE	**Ogallala**	**3.70**	**140**	*e*Pn	**Pn**	**18 07 38.5**	**+0.3**

OGNE Ogallala 3.70 140 P **Pn 18 07 38.5 +0.3**
baz=321
OGNE Sb **Sg 18 08 38.4 0.0**
baz=321
GCMT Greycliff 3.75 303 *e*Pn **Pn 18 07 39.1 0.0**
LKWY Lake 3.83 283 *e*Pn **Pn 18 07 38.1 -2.0**
H17A Grant Village 3.93 280 *e*Pn **Pn 18 07 40.3 -1.2**
H17A Grant Village 3.93 280 P **Pn 18 07 41.3 -0.3**
baz=97
H17A Sb **Sb 18 08 39.1 +0.9**
baz=97
ISCO Idaho Springs 4.03 185 *e*Pn **Pn 18 07 43.4 +0.5**
ISCO Idaho Springs 4.03 185 P **Pn 18 07 43.2 +0.3**
baz=3.7
YPP Pitchstone Pla 4.08 278 *e*Pn **Pn 18 07 43.8 +0.1**
YHH Holmes Hill 4.18 285 *e*Pn **Pn 18 07 44.6 -0.5**
TPAW Teton Pass 4.20 268 *e*Pn **Pn 18 07 45.6 +0.3**
O20A White River Ci 4.33 213 *e*Pn **Pn 18 07 46.9 -0.1**
O20A White River Ci 4.33 213 P **Pn 18 07 46.9 -0.1**
baz=30
SUSD Miller 4.52 80 P **Pn 18 07 50.3 +0.9**
baz=264
DGMT Dagmar 4.70 8 *e*Pn **Pn 18 07 52.8 +0.8**
DGMT Dagmar 4.70 8 P **Pn 18 07 53.2 +1.3**
baz=189
HWUT Hardware Ranch 5.20 247 *e*Pn **Pn 18 07 58.8 -0.1**
EGMT Eagleton 5.28 324 *e*Pn **Pn 18 08 00.0 +0.1**
TCUT Toone Canyon 5.34 242 *e*Pn **Pn 18 08 01.0 +0.1**
MCMT McKenzie Canyo 5.59 283 *e*Pn **Pn 18 08 04.5 +0.1**
JLU Jordanelle 5.66 238 *e*Pn **Pn 18 08 03.7 -1.5**
SPUT South Promonto 5.92 247 *e*Pn **Pn 18 08 09.2 +0.3**
P17A Butcher Ranch, 6.02 226 *e*Pn **Pn 18 08 10.4 +0.2**
SRU San Rafael Swe 6.18 222 *e*Pn **Pn 18 08 11.5 -0.9**
ECSD EROS Data Cent 6.20 88 *e*Pn **Pn 18 08 14.2 +1.7**
DUG Dugway, Tooele 6.74 240 *e*Pn **Pn 18 08 19.4 -0.6**
ELK Elko 8.07 251 Pn **Pn 18 08 37.0 -1.3**
0.4nm,0.3s,baz=63,slow=4.1,SNR=5.9
ELK Lg Lg 18 10 48.4
0.1nm,0.3s,baz=176,slow=16,SNR=1.9
ULM Lac du Bonnet 9.04 41 Pn **Pn 18 08 52.2 +0.9**
2.3nm,0.3s,baz=230,slow=11,SNR=9.7
ULM Pg 18 09 22.9
0.8nm,0.3s,baz=229,slow=17,SNR=3.1
ULM Lg Lg 18 11 19.1
0.6nm,0.3s,baz=310,slow=19,SNR=1.9
ULM Lac du Bonnet 9.04 41 *e*Pn **Pn 18 08 51.8 +0.4**
I56US NEWPORT INFRAS 9.42 302 *i* 19 01 40.0
baz=116,slow=301,SNR=4.0
FFC Flin Flon 11.11 10 *e*Pn **Pn 18 09 18.9 -0.8**
NV01 Mina Array Sit 11.26 246 *e*Pn **Pn 18 09 21.9 -0.2**
NVAR Mina Array Bea 11.26 246 Pn **Pn 18 09 21.9 -0.2**
0.2nm,0.3s,baz=48,slow=12,SNR=5.5
YKA Yellowknife Ar 19.50 347 P **P 18 11 07.9 -0.2**
0.6nm,0.6s,baz=155,slow=8.7,SNR=4.9
YKB5 Yellowknife Ar 19.50 347 *e*P **P 18 11 08.0 -0.2**
ILAR Eielson Array 31.24 327 P **P 18 13 02.2 +1.5**
0.2nm,0.6s,baz=122,slow=8.6,SNR=3.5
ARCES ARCESS Array B 61.32 18 P **P 18 16 55.6 -0.9**
1.1nm,0.6s,baz=337,slow=6.1,SNR=11
FINES FINESS Array B 67.93 23 P **P 18 17 36.4 -3.4**
1.3nm,0.8s,baz=347,slow=5.7,SNR=2.7
ZALV Zalesovo Beam 82.23 354 P **P 18 19 01.6 -0.9**
0.8nm,0.5s,baz=347,slow=6.9,SNR=4.3
BVAR Borovoye Array 83.46 3 P **P 18 19 08.6 -0.2**
0.5nm,0.6s,baz=337,slow=6.3,SNR=6.9
SONM Songino Array 84.59 339 P **P 18 19 14.9 +0.1**
0.4nm,0.5s,baz=15,slow=5.0,SNR=2.3
MKAR Makanchi Array 89.53 355 P **P 18 19 38.4 -0.4**
0.7nm,0.6s,baz=23,slow=5.1,SNR=5.4

KRSC 16 18:10:47.7±1.5, 51°.78N×160°.28E, h61km±20km, ML3.6,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.27**	**302**	*e*P	Pn	18 11 10.5	+1.2
SPN	**Mys Shipunski**	**1.33**	**353**	*e*P	Pn	18 11 11.3	+1.2
SPN				*e*S	Sn	18 11 27.8	+0.9
KDTR	**Khodutka, Kamc**	**1.37**	**272**	*e*P	Pn	18 11 12.0	+1.5
KDTR				*e*S	Sn	18 11 28.7	+1.0
MTVR	**Mutnovka**	**1.47**	**300**	*e*P	Pn	18 11 14.1	+2.0
MTVR				*e*S	Sn	18 11 32.1	+1.6
DALK	**Dalny**	**1.56**	**324**	*e*P	Pn	18 11 15.0	+1.8
ASAK	**Asacha**	**1.59**	**293**	*e*P	Pn	18 11 15.9	+2.3
PET	**Petropavlovsk**	**1.59**	**322**	*e*P	Pn	18 11 15.6	+2.0
UGLR	**Uglovaya**	**1.69**	**329**	*e*P	Pn	18 11 17.5	+2.5
KRMR	**Karymshinskiy**	**1.69**	**310**	*e*P	Pn	18 11 17.4	+2.5
KRMR				*e*S	Sn	18 11 37.8	+2.4
SDLR	**Sedlovina**	**1.73**	**331**	*e*P	Pn	18 11 17.6	+2.1
SMAR	**Somma**	**1.74**	**329**	*e*P	Pn	18 11 17.4	+1.6
AVH	**Avacha**	**1.76**	**328**	*e*P	Pn	18 11 18.4	+2.4
KRER	**Koryakskii**	**1.79**	**329**	*e*P	Pn	18 11 19.0	+2.5
KOK	**Koryaka**	**1.82**	**327**	*e*P	Pn	18 11 19.4	+2.6
KRX	**Arik**	**1.87**	**329**	*e*P	Pn	18 11 19.6	+2.1
APC	**Apacha**	**2.23**	**302**	*e*P	Pn	18 11 24.9	+2.7
GNL	**Ganaly**	**2.39**	**324**	*e*P	Pn	18 11 27.8	+3.3
SKR	**Severo-Kuril's**	**2.83**	**249**	*e*P	Pn	18 11 33.3	+2.8
SKR				*e*S	Sn	18 12 05.4	+2.0
MKZ	**Mys Kozlova**	**2.92**	**17**	*e*S	Sn	18 12 05.7	+0.3

IDC ***16*** *18:50:26.1±1.4, 34°.24N×25°.09E, h0km, mb3.6/3, mb1 3.6/6, mb1mx3.3/45, mbtmp3.5/6, ML3.8/3, Error ellipse: s-maj=23.6km s-min=20.5km az=92.0*
ATH ***16*** *18:50:29.1, 34°.29N×25°.11E, h28km±2km, ML2.7/7, Error ellipse: s-maj=5.2km s-min=1.8km az=349.0*
THE ***16*** *18:50:29.9, 34°.32N×25°.14E, h0km±2km, ML2.6/5, Error ellipse: s-maj=3.3km s-min=0.9km az=155.0*
ISC 16 18:50:28.2±1.8, 34°.22N±0°.07×25°.14E±0°.04, h13km±11km, n35, σ1§07/45, mb3.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.84**	**341**	P	**Pg**	**18 50 44.4**	**-0.1**
SIVA				S	**Sb**	**18 50 55.9**	**-0.2**
SIVA	**Sivas**	**0.84**	**341**	P	**Pg**	**18 50 44.5**	**-0.1**
SIVA				S	**Sb**	**18 50 55.9**	**-0.2**
SIVA				AML	AML	18 51 01.9	
	comp=E,3941μm,0.4s						
SIVA				AML	AML	18 51 07.4	
	comp=N,2712μm,0.4s						
TMBK	**Timbaki Herakl**	**0.91**	**340**	P	**Pb**	**18 50 45.8**	**0.0**
TMBK				S	**Sb**	**18 50 58.8**	**+0.9**
LAST	**Lasithi**	**0.98**	**16**	P	**Pg**	**18 50 47.1**	**-0.1**
LAST				S	**Sb**	**18 51 00.8**	**+0.7**
LAST	**Lasithi**	**0.98**	**16**	P	**Pg**	**18 50 47.2**	**0.0**
LAST				S	**Sg**	**18 50 59.6**	**-0.5**
LAST				AML	AML	18 51 08.2	
	comp=E,776μm,0.6s						
LAST				AML	AML	18 51 11.3	
	comp=N,594μm,0.8s						
GVD	**Gavdhos**	**1.07**	**306**	P	**Pb**	**18 50 49.0**	**+0.4**
GVD				S	**Sn**	**18 51 04.6**	**+0.9**
GVD	**Gavdhos**	**1.07**	**306**	P	**Pg**	**18 50 48.2**	**-0.6**
GVD				S	**Sb**	**18 51 03.3**	**+0.8**
GVD				AML	AML	18 51 16.4	
	comp=N,959μm,0.3s						
GVD				AML	AML	18 51 23.3	
	comp=E,1129μm,0.7s						
IDI	**Anoyia**	**1.09**	**349**	Pn	**Pg**	**18 50 48.4**	**-0.8**
	comp=E,13nm,0.3s,baz=176,slow=17,SNR=58						
IDI				Sn	**Sb**	**18 51 03.1**	**0.0**
	comp=E,20nm,0.3s,baz=325,slow=22,SNR=14						
IDI	**Anoyia**	**1.09**	**349**	P	**Pg**	**18 50 47.9**	**-1.3**
NPS	**Neapolis**	**1.11**	**20**	P	**Pg**	**18 50 49.6**	**-0.1**
NPS	**Neapolis**	**1.11**	**20**	P	**Pg**	**18 50 49.4**	**-0.3**
NPS				S	**Sb**	**18 51 05.1**	**+1.3**
NPS				AML	AML	18 51 12.4	
	comp=N,391μm,0.8s						
NPS				AML	AML	18 51 17.1	
	comp=E,625μm,0.7s						
PRNS	**Prines Rethymn**	**1.26**	**336**	P	**Pg**	**18 50 51.8**	**-0.7**
ZKR	**Zakros**	**1.26**	**44**	P	**Pg**	**18 50 53.0**	**+0.5**
ZKR				AML	AML	18 51 18.2	
	comp=E,428μm,0.5s						
ZKR				AML	AML	18 51 19.0	
	comp=N,249μm,0.4s						
VAM	**Vamos**	**1.42**	**327**	P	**Pg**	**18 50 54.3**	**-1.2**
VAM	**Vamos**	**1.42**	**327**	P	**Pg**	**18 50 53.8**	**-1.6**
VAM				AML	AML	18 51 22.5	
	comp=N,342μm,0.4s						
VAM				AML	AML	18 51 27.7	
	comp=E,600μm,0.4s						

IMMV Iera Moni Meta 1.57 323 P **Pn 18 50 57.1 +1.3**
IMMV Iera Moni Meta 1.57 323 P **Pn 18 50 55.4 -0.4**
IMMV AML AML 18 51 33.5
comp=N,344μm,0.5s
IMMV AML AML 18 51 36.6
comp=E,404μm,0.6s
KARP Karpathos 2.13 51 P **Pn 18 51 06.3 +2.8**
THR3 Thira Island, 2.20 5 P **Pn 18 51 05.0 +0.5**
THR5 Thira Island, 2.20 4 P **Pn 18 51 05.0 +0.4**
ANKY Antikythira Is 2.23 318 P **Pn 18 51 06.5 +1.5**
IOSP Ios island 2.50 3 P **Pn 18 51 08.3 -0.4**
MHLO Agia Marina, M 2.54 346 P **Pn 18 51 09.2 0.0**
MHLA Plaka, Milos I 2.59 347 P **Pn 18 51 11.0 +1.1**
KYTH Kithira 2.67 321 P **Pn 18 51 12.9 +2.0**
AMGA Amorgos Island 2.68 13 P **Pn 18 51 11.4 +0.3**
APE Apeiranthos 2.86 6 P **Pn 18 51 13.8 +0.1**
SERI Serifos 2.99 350 P **Pn 18 51 15.5 +0.1**
VLI Veliai 3.08 325 P **Pn 18 51 17.3 +0.7**
MMAI Mount Meron Ar 8.64 95 Pn **Pn 18 52 32.7 -0.4**
comp=E,0.7nm,0.3s,baz=292,slow=12,SNR=4.0
MMAI Sn **Sn 18 54 06.7 -3.8**
comp=E,1.2nm,0.3s,baz=264,slow=24,SNR=2.7
AKASG Malin Array Be 16.74 9 Pn **Pn 18 54 22.6 +0.2**
comp=E,0.6nm,0.3s,baz=199,slow=10,SNR=4.4
GERES GERESS Array B 16.91 333 Pn **Pn 18 54 25.6 +0.9**
comp=E,0.1nm,0.3s,baz=147,slow=11,SNR=7.6
TORD Torodi Ar. Bea 29.88 231 P **P 18 56 35.4 -0.3**
comp=E,0.6nm,0.5s,baz=36,slow=8.2,SNR=7.0
MKAR Makanchi Array 44.31 56 P **P 18 58 37.4 -0.4**
comp=E,0.6nm,0.9s,baz=268,slow=7.2,SNR=3.0
ZALV Zalesovo Beam 45.67 46 P **P 18 58 48.2 -0.3**
comp=E,0.5nm,0.4s,baz=257,slow=9.0,SNR=3.2

NSSC ***16*** *19:03:50.3±0.5, 33°.61N×36°.33E, h21km±3km, ML2.3*
ISCJB ***16*** *19:03:52.7±0.7, 33°.44N±0°.10×36°.24E±0°.04, h15km±10km, Error ellipse: s-maj=16.5km s-min=5.7km az=173.7*
GRAL ***16*** *19:03:55.8±0.3, 33°.47N×36°.11E, h0km±84km, MD2.7*
ISC 16 19:03:52.1±1.2, 33°.51N±0°.08×36°.26E±0°.05, h16km±8km, n7, σ0§77/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QASN	**Qassioun**	**0.03**	**43**	*e*P	**Pg**	**19 03 54.9**	**-0.2**
QASN				*e*S	**Sg**	**19 03 57.4**	**+0.3**
QASN				AML	AML	19 03 58.2	
	comp=E,3μm,0.5s						
QASN				AML	AML	19 03 58.4	
	comp=N,6μm,0.5s						
TOTH	**TOTAH**	**0.21**	**136**	*e*P	**Pg**	**19 03 56.6**	**-0.4**
TOTH				*e*S	**Sg**	**19 04 00.8**	**+0.5**
TOTH				AML	AML	19 04 06.2	
	comp=N,80nm,0.6s						
TOTH				AML	AML	19 04 08.5	
	comp=E,61nm,0.3s						
BRBR	**Barbar**	**0.27**	**248**	*e*P	**Pg**	**19 03 58.3**	**+0.2**
BRBR				*e*S	**Sb**	**19 04 04.0**	**+0.7**
BRBR				AML	AML	19 04 06.3	
	comp=E,97nm,0.4s						
BRBR				AML	AML	19 04 10.6	
	comp=N,118nm,0.5s						
RCY	**Rachaya**	**0.35**	**267**	*e*P	**Pg**	**19 03 59.8**	**+0.4**
SHBL	**Chebaa**	**0.46**	**249**	*e*P	**Pg**	**19 04 01.6**	**+0.3**
SHBL				*e*S	**Sg**	**19 04 05.9**	**-1.7**
DQRL	**Deir Qamar**	**0.60**	**289**	*e*P	**Pb**	**19 04 04.8**	**+0.5**
DQRL				*e*S	**Sg**	**19 04 11.6**	**-0.5**
BHL	**Bhannes**	**0.63**	**308**	*e*P	**Pn**	**19 04 06.1**	**-0.5**

MOS ***16*** *19:07:12.9±1.1, 4°.32S×102°.90E, h38km, mb5.0/31, Error ellipse: s-maj=15.4km s-min=6.9km az=111.5*
BJI ***16*** *19:07:14.0±0.0, 4°.70S×102°.70E, h59km, mb4.9/51, mB4.9/30, Ms4.4/9, Ms7 4.1/7*
ISCJB ***16*** *19:07:15.9±0.4, 4°.63S±0°.04×102°.75E±0°.03, h75km±3km, mb4.6/97, Error ellipse: s-maj=7.9km s-min=3.2km az=41.1*
NEIC ***16*** *19:07:15.7±1.7, 4°.65S×102°.70E, h61km±5km, mb4.8/46, Error ellipse: s-maj=14.0km s-min=12.5km az=59.0*
IDC ***16*** *19:07:16.9±3.4, 4°.44S×102°.82E, h63km±30km, mb4.3/30, mb1 4.4/32, mb1mx4.2/54, mbtmp4.6/32, ML4.2/2, MS3.3/9, Ms1 3.4/9, ms1mx3.0/41, Error ellipse: s-maj=21.0km s-min=11.0km az=47.0*
DJA ***16*** *19:07:16.8±0.2, 5°.5S±3°.×10°.3E±°., h55km±3km, M4.6/25, mB5.0/7, mb4.6/25, MLv4.8/22, Mw(mB)4.3/7*
KLM ***16*** *19:07:19.0, 4°.68S×102°.30E, h111km, mb4.6*
ISC 16 19:07:15.6±0.6, 4°.69S±0°.05×102°.71E±0°.05, h61km±14km, n457, σ1§17/466, mb4.8/97, 17C-14D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.40**	**37**	*e*Pn	**Pn**	**19 07 27.2**	**+0.5**
MNAI				*e*Sn	**Sn**	**19 07 34.1**	**-0.7**
MNAI	**Manna**	**0.40**	**37**	P	**Pn**	**19 07 27.2**	**+0.5**
MNAI				S	**Sn**	**19 07 35.3**	**+0.5**
LHSI	**Lahat**	**1.18**	**44**	P	**Pn**	**19 07 37.1**	**+1.1**
LWLI	**Liwa**	**1.38**	**104**	P	**Pn**	**19 07 39.7**	**+0.9**
LWLI				S	**Sn**	**19 07 56.6**	**+0.3**
MDSI	**Maura Dua**	**1.47**	**82**	P	**Pn**	**19 07 41.0**	**+1.1**
MDSI				S	**Sn**	**19 07 59.0**	**+0.7**
KASI	**Kota Agung**	**1.96**	**115**	P	**Pn**	**19 07 47.6**	**+1.0**
KASI				S	**Sn**	**19 08 10.1**	**0.0**
KLI	**Kotabumi**	**2.14**	**95**	P	**Pn**	**19 07 50.5**	**+1.5**
BLSI	**Bandar Lampung**	**2.61**	**105**	P	**Pn**	**19 07 57.6**	**+2.2**
PMBI	**Palembang**	**2.70**	**50**	P	**Pn**	**19 07 57.3**	**+0.7**
KRJI	**Kerinci**	**2.86**	**334**	P	**Pn**	**19 08 01.5**	**+2.5**
JMBI	**JAMBI**	**3.17**	**17**	P	**Pn**	**19 08 04.6**	**+1.5**
PPSI	**Pulau Pagai**	**3.31**	**305**	P	**Pn**	**19 08 07.6**	**+2.7**
CGJI	**Cibinong**	**3.53**	**123**	P	**Pn**	**19 08 09.3**	**+1.3**
CGJI				S	**Sn**	**19 08 48.1**	**-0.4**
SDSI	**Sungai Dareh**	**3.94**	**341**	P	**Pn**	**19 08 15.2**	**+1.6**
PDSI	**Padang**	**4.37**	**329**	P	**Pn**	**19 08 21.1**	**+1.6**
CBJI	**Citeko**	**4.46**	**113**	P	**Pn**	19 08 27.0	+6.2
SISI	**Saibi**	**4.92**	**313**	P	**Pn**	**19 08 29.0**	**+2.0**
BKNI	**Bangkinang**	**5.25**	**341**	P	**Pn**	**19 08 33.2**	**+1.6**
TPI	**Tanjungpandan**	**5.29**	**69**	P	**Pn**	**19 08 33.0**	**+0.9**
LEM	**Lembang**	**5.32**	**114**	P	**Pn**	**19 08 36.0**	**+3.4**
	6.4nm,0.3s,baz=177,slow=22,SNR=6.4						
LEM				S	**Sn**	**19 09 33.3**	**+0.5**
	4.7nm,0.3s,baz=322,slow=19,SNR=3.8						
LEM				LR	LR	19 10 59.0	
	comp=Z,174nm,18.2s,baz=299,slow=42						
CISI	**Cisompet, Garu**	**5.82**	**120**	*e*Pn	**Pn**	**19 08 40.3**	**+0.9**
CISI	**Cisompet, Garu**	**5.82**	**120**	P	**Pn**	**19 08 40.1**	**+0.7**
TPRI	**Tanjung Pinang**	**5.85**	**18**	P	**Pn**	**19 08 42.3**	**+2.5**
XMIS	**Christmas Isla**	**6.45**	**153**	*e*Pn	**Pn**	**19 08 43.4**	**-4.7**
MYKOM	**Kota Tinggi**	**6.53**	**10**	*e*Pn	**Pn**	**19 08 51.1**	**+2.0**
GSI	**Gunungsitoli**	**7.86**	**319**	*e*Pn	**Pn**	**19 09 07.3**	**0.0**
GSI	**Gunungsitoli**	**7.86**	**319**	P	**Pn**	**19 09 07.3**	**0.0**
PSI	**Prapat**	**8.34**	**333**	LR	LR	19 12 38.9	
	comp=Z,148nm,20.6s,baz=172,slow=40						
COCO	**West Island**	**9.45**	**218**	*e*Pn	**Pn**	**19 09 27.5**	**-1.6**
COCO	**West Island**	**9.45**	**218**	*e*P	**Pn**	**19 09 29.9**	**+0.8**
KCSI	**Kotacane, Aceh**	**9.53**	**329**	P	**Pn**	**19 09 29.9**	**-0.3**
KSM	**Kuching**	**9.75**	**51**	*e*Pn	**Pn**	**19 09 35.0**	**+1.9**
KULM	**Kulim**	**10.12**	**348**	P	**Pn**	**19 09 41.0**	**+2.8**
SBUM	**Sibu**	**11.85**	**53**	P	Pn	19 10 09.0	+7.1
JAGI	**Jajag, Banyuwa**	**11.97**	**109**	*e*Pn	**Pn**	**19 10 04.6**	**+1.1**
PLAI	**Plampang**	**15.51**	**106**	P	**P**	**19 10 53.0**	**-1.0**
KAPI	**Kappang**	**16.98**	**92**	P	**P**	**19 11 10.2**	**0.0**
	1.2nm,0.3s,baz=298,slow=6.3,SNR=4.9						
SPSI	**Sidrap Palu**	**17.02**	**88**	P	**P**	**19 11 11.8**	**+1.1**
TTSI	**Tana Toraja**	**17.14**	**85**	P	**P**	**19 11 13.7**	**+1.7**
CHBT	**CHBT**	**17.33**	**359**	P	**P**	**19 11 16.1**	**+2.1**
	21nm,0.6s						
BNSI	**Bone**	**17.34**	**90**	P	**P**	**19 11 16.1**	**+1.9**
BKSI	**Bulukumba**	**17.36**	**93**	P	**P**	**19 11 16.9**	**+2.5**
MPSI	**Mapaga**	**17.88**	**74**	P	**Pn**	**19 11 22.8**	**+2.6**
SRAK	**Srakaew**	**18.59**	**358**	P	**Pn**	**19 11 32.4**	**+3.6**
	158μm,0.6s						
EDFI	**Ende, Flores**	**19.27**	**103**	P	**P**	**19 11 34.7**	**-0.9**
APSI	**Ampana**	**19.28**	**79**	P	**Pn**	**19 11 38.2**	**+1.1**
MMRI	**Maumere**	**19.78**	**102**	*e*P	**P**	**19 11 40.0**	**-1.0**
	20nm,0.6s						
MMRI	**Maumere**	**19.78**	**102**	P	**P**	**19 11 40.6**	**-0.4**
LUWI	**Luwuk**	**20.36**	**80**	*e*P	**P**	**19 11 47.8**	**+0.5**
	68nm,1.2s						
CHAI	**Chaiyaphum**	**20.47**	**358**	P	**P**	**19 11 49.1**	**+0.7**
	23μm,0.7s,405μm						
KHON	**Khomkaen**	**20.89**	**0**	P	Pn	19 11 57.8	+1.8
PBKT	**Sadao Pong**	**21.19**	**355**	P	**P**	**19 11 57.8**	**+1.7**
	4.4nm,0.8s						

BATI Baumata 21.48 106 P **P 19 12 00.1 +0.8**
23nm,0.3s,baz=297,slow=6.1,SNR=11
BATI S **S 19 15 50.2 -4.3**
17nm,0.6s,baz=108,slow=16,SNR=6.7
BATI Baumata 21.48 106 P **P 19 11 59.8 +0.4**
PANO Nakornpanom 21.77 5 P **P 19 12 04.3 +1.9**
0.4nm,0.8s
SOEI Soe 21.96 104 *e*P **P 19 12 05.2 +0.6**
26nm,0.8s
SOEI Soe 21.96 104 P **P 19 12 05.4 +0.8**
UTTA Uttaradit 22.39 355 P **P 19 12 09.8 +0.8**
19μm,0.8s,180μm
NONG Nongkai 22.61 1 P **P 19 12 12.8 +1.4**
0.2nm,0.8s
LAMP Lampang 23.26 353 P **P 19 12 21.0 +3.0**
16μm,0.7s
CM31 Chiang Mai Arr 23.30 351 *e*P **P 19 12 17.6 -0.7**
14nm,1.0s
CM31 *e*PcP **PcP 19 16 02.1 -2.0**
CMAR Chiang Mai Arr 23.30 351 P **P 19 12 17.2 -1.0**
6.2nm,0.8s,baz=183,slow=8.6,SNR=46
CMAR PcP **PcP 19 16 05.7 +1.6**
1.0nm,0.8s,baz=198,slow=2.8,SNR=6.2
CMAR LR LR 19 20 38.5
comp=Z,60nm,21.6s,baz=190,slow=35
CMMT Chiang Mai 23.64 351 P **P 19 12 20.8 -0.7**
6.5nm,1.0s
CHTO Chiang Mai 23.64 351 *e*P **P 19 12 20.4 -1.1**
8.2nm,0.8s
CHTO Chiang Mai 23.64 351 *e*P **P 19 12 20.4 -1.1**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
FITZ Fitzroy Crossi 26.08 123 P **P 19 12 44.4 +0.7**
comp=Z,5.5nm,0.6s,baz=279,slow=4.7,SNR=16
FITZ Fitzroy Crossi 26.08 123 *e*P **P 19 12 44.6 +0.9**
comp=Z,5.8nm,0.6s
FITZ Fitzroy Crossi 26.08 123 P **P 19 12 44.6 +0.9**
baz=26,SNR=12
KNRA Kununurra 27.83 115 P **P 19 12 59.4 0.0**
baz=28,SNR=3.8
SIJI Sorong 28.77 83 P **P 19 13 09.1 +1.3**
comp=Z,8.6nm,0.9s,baz=287,slow=11,SNR=4.0
KMI Kunming 29.63 0 P **P 19 13 19.3 +3.7**
KMI pmax pmax
comp=Z,11nm,0.6s
KMI pmax pmax
comp=Z,110nm,4.4s
H08S2 Diego Garcia H 30.18 263 T T 19 44 37.3
baz=86,slow=75,SNR=56
H08S3 Diego Garcia H 30.19 263 T T 19 44 38.0
baz=86,slow=75,SNR=30
H08S1 Diego Carcia H 30.20 263 T T 19 44 38.3
baz=86,slow=75,SNR=30
GYA Guiyang 31.20 7 *e*P **P 19 13 29.9 +0.6**
GYA pmax pmax
comp=Z,10.0nm,0.8s
WRKA Warakurna 31.83 132 P **P 19 13 36.4 +1.6**
baz=32,SNR=10
H01W3 Cape Leeuwin H 31.86 142 T T 19 47 20.5
baz=339,slow=76,SNR=73
SHL Shillong 31.86 341 *e*P **P 19 13 34.1 -1.1**
comp=Z,12nm,0.5s
SHL Shillong 31.86 341 *e*P **P 19 13 34.1 -1.1**
SHL pmax pmax
comp=Z,12nm,0.5s
H01W2 Cape Leeuwin H 31.87 162 T T 19 47 32.9
baz=339,slow=76,SNR=87
H01W1 Cape Leeuwin H 31.87 162 T T 19 47 19.1
baz=339,slow=76,SNR=83
WRA Warramunga Arr 34.32 119 P **P 19 13 57.0 +0.4**
comp=Z,4.4nm,0.3s,baz=292,slow=11,SNR=69
WRA S **S 19 19 14.7 -5.2**
comp=Z,0.9nm,0.9s,baz=290,slow=20,SNR=2.4
WRAB Tennant Creek 34.33 119 *e*P **P 19 13 56.1 -0.6**
comp=Z,10nm,0.9s
WRAB Tennant Creek 34.33 119 *ce*P **P 19 13 57.5 +0.9**
WRAB pmax pmax
comp=Z,9.0nm,0.8s
WB2 Warramunga Arr 34.33 119 *e*P **P 19 13 57.4 +0.7**
comp=Z,9.3nm,0.9s
RAMN Ramite 35.10 334 *e*P **P 19 14 04.3 +0.8**
comp=Z,15nm,0.4s
ENH Enshi 35.36 10 *e*P **P 19 14 05.1 -0.3**
comp=Z,9.1nm,0.6s
CD2 Chengdu 35.41 2 *e*P **P 19 14 06.8 +1.0**
CD2 pmax pmax
comp=Z,30nm,0.5s
ASAR Alice Springs 35.50 125 P **P 19 14 07.9 +1.2**
comp=Z,2.4nm,0.3s,baz=299,slow=7.9,SNR=190
ASAR PcP **PcP 19 16 36.4 +1.3**
comp=Z,1.5nm,0.7s,baz=280,slow=2.9,SNR=7.2
ASAR S **S 19 19 37.1 -0.9**
comp=Z,0.4nm,0.8s,baz=298,slow=17,SNR=4.7
ASAR LR LR 19 30 10.4
comp=Z,25nm,18.3s,baz=275,slow=39
AS31 Alice Springs 35.50 125 *e*P **P 19 14 07.9 +1.2**
AS31 *e*PcP **PcP 19 16 36.4 +1.2**
JIRN Jiri 35.90 335 *e*P **P 19 14 11.3 +0.9**
comp=Z,38nm,0.6s
PKI Pulchoki 36.16 333 *e*P **P 19 14 12.9 +0.3**
comp=Z,8.9nm,0.3s
PKIN Phulchoki 36.17 333 *e*P **P 19 14 12.8 +0.1**
comp=Z,9.8nm,0.4s
DMN Daman 36.33 333 *e*P **P 19 14 14.2 +0.2**
comp=Z,9.1nm,0.4s
KKN Kakani 36.41 333 *e*P **P 19 14 14.8 +0.2**
comp=Z,30nm,0.4s
KOLN Koldanda 37.16 331 *e*P **P 19 14 21.7 +0.7**
comp=Z,84nm,0.7s
DANN Dangsing 37.58 332 *e*P **P 19 14 25.2 +0.6**
comp=Z,79nm,0.6s
PYUN Piuthan 37.73 331 *e*P **P 19 14 26.5 +0.6**
comp=Z,36nm,0.5s
XAN Xi'an 38.96 8 P **P 19 14 35.1 -0.8**
XAN pP pP 19 14 53.6 +2.3
XAN pmax pmax
comp=Z,19nm,0.9s
XAN pmax pmax
comp=Z,89nm,5.5s
XAN Xi'an 38.96 8 *e*P **P 19 14 35.8 -0.1**
comp=Z,15nm,0.8s
XAN Xi'an 38.96 8 *e*P **P 19 14 35.8 -0.1**
XAN pmax pmax
comp=Z,15nm,0.8s
QIS Mount Isa 39.17 117 P **P 19 14 38.6 +0.7**
baz=39,SNR=7.9
NJ2 Nanjing 39.63 22 *e*P **P 19 14 43.6 +2.2**
NJ2 pmax pmax
comp=Z,11nm,0.5s
JOW Kunigami 39.91 37 *e*P **P 19 14 43.5 -0.4**
comp=Z,37nm,1.3s
LZH Lanzhou 40.57 1 *e*P **P 19 14 50.0 +0.6**
LZH pP pP 19 15 04.9 0.0
LZH sP sP 19 15 12.0 0.0
LZH *e*PP **PnPn 19 16 28.3 0.0**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,92nm,5.4s
LZH LR LR
comp=Z,390nm,13.2s
LZH LR LR
comp=Z,400nm,13.6s
LZH LR LR
comp=Z,530nm,17.0s
COEN Coen 40.92 106 *e*P **P 19 14 51.9 -0.5**
comp=Z,16nm,1.3s
COEN Coen 40.92 106 P **P 19 14 52.0 -0.4**
baz=41,SNR=6.8
BBOO Buckleboo 41.85 136 P **P 19 15 01.3 +1.6**
baz=42,SNR=7.7
GTA Gaotai 43.96 357 *e*P **P 19 15 17.1 +0.3**
GTA pmax pmax
comp=Z,6.0nm,0.6s
HTT Hallett 44.19 135 P **P 19 15 20.8 +2.0**
baz=44,SNR=5.7
PMG Port Moresby 44.33 99 *i* P **P 19 15 21.0 +0.9**
PMG pmax pmax
comp=Z,63nm,0.9s
**CTAO Charters Tower 45

comp=Z,3.7nm,0.6s
STKA Stephens Creek 45.35 131 P P 19 15 29.8 +1.8
baz=46,SNR=32
STKA Stephens Creek 45.35 131 eP P 19 15 29.9 +1.9
STKA pmax pmax
comp=Z,4.0nm,0.6s
HHC Hu-ho-hao-te 46.03 9 eP P 19 15 35.9 +2.6
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,89nm,6.0s
JNU Nakatsue 46.11 33 eP P 19 15 31.6 -2.3
BJT Baijiatuau 46.18 14 eP P 19 15 33.0 -1.2
comp=Z,8.0nm,0.6s
BJT Baijiatuau 46.18 14 eP P 19 15 33.0 -1.2
BJT pmax pmax
comp=Z,8.0nm,0.6s
BJI Beijing 46.20 14⇑ eP P 19 15 34.3 -0.1
BJI pP **pP 19 15 47.1 -3.1**
BJI sP **sP 19 15 55.3 -1.9**
BJI pmax pmax
comp=Z,5.0nm,0.6s
NIL Nilore 47.22 326 eP P 19 15 42.1 -0.5
comp=Z,21nm,0.6s
NIL Nilore 47.22 326 eP P 19 15 42.1 -0.5
NIL pmax pmax
comp=Z,21nm,0.6s
KS15 Wonju Array Si 48.02 27 eP P 19 15 49.2 +0.6
comp=Z,2.4nm,0.6s
KSRS Korea Array 48.05 27 P P 19 15 48.6 -0.3
comp=Z,1.9nm,0.6s,baz=227,slow=7.1,SNR=14
KSRS PcP **PcP 19 17 15.7 -0.3**
comp=Z,1.5nm,0.9s,baz=216,slow=2.8,SNR=5.8
CMSA Cobar Meteorol 48.33 129 P P 19 15 53.0 +1.8
baz=48,SNR=20
WMQ Urumqi 50.15 346 P P 19 16 06.1 +1.2
WMQ sP sP 19 16 29.0 +1.2
WMQ pmax pmax
comp=Z,21nm,1.1s
WMQ pmax pmax
comp=Z,90nm,3.9s
KSH Kashi 50.42 333 P P 19 16 05.8 -1.4
KSH pP pP 19 16 21.8 -1.3
KSH PP **PP 19 18 01.1 -2.3**
KSH S **S 19 23 08.8 -7.5**
KSH pmax pmax
comp=Z,23nm,0.6s
KSH pmax pmax
comp=Z,230nm,4.6s
KSH LR LR
comp=Z,110nm,8.0s
KSH LR LR
comp=Z,110nm,10.4s
KSH LR LR
comp=Z,130nm,14.4s
PDGK Podgornoye 52.20 339 P P 19 16 20.2 -0.2
PDGK pmax pmax
comp=Z,12nm,0.7s
SONA0 Songino Array 52.40 3 ePcP PcP 19 17 32.1 +0.2
SONM Songino Array 52.40 3 P P 19 16 22.3 +0.6
comp=Z,22nm,0.6s,baz=184,slow=9.2,SNR=160
SONM PcP **PcP 19 17 32.1 +0.2**
comp=Z,3.0nm,0.6s,baz=172,slow=3.8,SNR=5.8
CN2 Changchun 52.44 21 eP P 19 16 21.1 -0.9
CN2 pmax pmax
comp=Z,10.0nm,0.6s
ARMA Armidale 52.65 125 eP P 19 16 22.1 -1.9
comp=Z,11nm,1.2s
MAJO Matsushiro 52.74 36 eP P 19 16 22.7 -1.7
MAJO ePcP **PcP 19 17 33.4 0.0**
MAJO Matsushiro 52.74 36 eP P 19 16 22.7 -1.7
MAJO e 19 17 33.4
MJAR Matsushiro Arr 52.74 36 P P 19 16 22.7 -1.7
comp=Z,3.8nm,0.8s,baz=220,slow=7.8,SNR=21
MJAR PcP **PcP 19 17 33.4 0.0**
comp=Z,1.2nm,0.8s,baz=196,slow=5.7,SNR=4.8
BOOM Boomskoye usch 52.87 335 eP P 19 16 25.8 +0.3
comp=Z,6.0nm,0.7s
BOOM Boomskoye usch 52.87 335 eP P 19 16 25.8 +0.3
BOOM pmax pmax
comp=Z,6.0nm,0.7s
ARSB Arslanbob 53.24 332 eP P 19 16 29.2 +1.1
comp=Z,12nm,0.9s
TKM2 Tokmak 2 53.37 335 i P P 19 16 28.7 -0.5
TKM2 pmax pmax
comp=Z,9.0nm,0.5s
AAK Ala-Archa 53.61 334 i P P 19 16 29.3 -1.5
AAK pmax pmax
comp=Z,2.0nm,0.9s
MK31 Makanchi Array 54.35 343 eP P 19 16 35.5 -0.5
MK31 pmax pmax
comp=Z,9.0nm,0.6s
MKAR Makanchi Array 54.35 343 P P 19 16 35.7 -0.3
comp=Z,17nm,0.7s,baz=154,slow=9.0,SNR=99
MAKZ Makanchi 54.46 343 P P 19 16 35.0 -1.8
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
ZAK Zakamensk 54.85 0 eP P 19 16 38.6 -1.0
ZAK pmax pmax
comp=Z,4.0nm,0.8s
USRK Ussuriysk Ar. 55.32 25 P P 19 16 42.5 -0.5
comp=Z,8.7nm,0.7s,baz=214,slow=5.3,SNR=21
DGZ Jazzator, Alta 55.77 348 i P P 19 16 46.3 0.0
DGZ pmax pmax
comp=Z,15nm,0.8s
KK31 Karatay Array 55.77 332 eP P 19 16 46.3 0.0
KK31 pmax pmax
comp=Z,1.0nm,0.4s
TLY Talaya 56.15 1 eP P 19 16 49.9 +1.0
comp=Z,9.3nm,0.7s
TLY Talaya 56.15 1 ceP P 19 16 50.1 +1.2
TLY pmax pmax
comp=Z,24nm,0.8s
KURK Kurchatov 58.95 342 eP P 19 17 08.1 -0.4
comp=Z,13nm,0.8s
KURK Kurchatov 58.95 342 ceP P 19 17 08.3 -0.2
KURK pmax pmax
comp=Z,14nm,0.8s
GEYT Alibeck 59.23 320 P P 19 17 10.4 -0.3
comp=Z,4.1nm,0.5s,baz=146,slow=9.0,SNR=6.8
GYA0B ALIBECK ARRAY 59.23 320 eP P 19 17 10.2 -0.6
comp=Z,6.0nm,0.8s
ERM Erimo 59.26 34 eP P 19 17 10.2 -0.6
comp=Z,9.7nm,1.0s
ERM Erimo 59.26 34 eP P 19 17 10.2 -0.6
ERM pmax pmax
comp=Z,10.0nm,1.0s
KLR Kul'dur 59.34 22 i P P 19 17 09.9 -1.3
KLR pmax pmax
comp=Z,6.0nm,0.9s
ZAA0 Zalesovo Array 60.32 348 eP P 19 17 17.2 -0.6
comp=Z,28nm,0.8s
ZALV Zalesovo Beam 60.32 348 P P 19 17 17.2 -0.6
comp=Z,19nm,0.5s,baz=165,slow=4.9,SNR=91
ZALV LR LR 19 46 07.0
comp=Z,32nm,20.6s,baz=68,slow=39
ZALV Zalesovo Beam 60.32 348 i P P 19 17 17.2 -0.6
ZALV pmax pmax
comp=Z,20nm,0.5s
NVS Novosibirsk 61.49 347 eP P 19 17 22.1 -3.7
NVS pmax pmax
comp=Z,6.0nm,1.0s
NVS pmax pmax
comp=N,6.0nm,1.0s
NVS pmax pmax
comp=E,3.0nm,1.0s
ZEA Zeya 61.75 16 eP P 19 17 27.2 -0.3
ZEA pmax pmax
comp=Z,20nm,0.8s
BVAR Borovoye Array 63.63 339 P P 19 17 39.4 -0.8
comp=Z,6.8nm,0.5s,baz=144,slow=9.4,SNR=45
BRVK Borovoye 63.70 339 eP P 19 17 39.8 -0.7
comp=Z,6.9nm,0.4s
BRVK Borovoye 63.70 339 i P P 19 17 39.6 -1.0
BRVK pmax pmax
comp=Z,4.0nm,0.8s
DZM Mont Dzumac 63.93 112 eP P 19 17 43.5 +0.6
comp=Z,23nm,1.4s
AB31 Akbulak array 65.29 331 i P P 19 17 50.1 -0.9
AB31 pmax pmax
comp=Z,6.0nm,0.6s
AKTO Aktyubinsk 67.00 331 P P 19 18 01.0 -1.0
comp=Z,0.9nm,0.4s,baz=311,slow=7.2,SNR=4.2
MAW Mawson 68.39 195 LR LR 19 41 34.4
comp=Z,37nm,21.7s,baz=48,slow=30
YAK Yakutsk 69.68 13 i P P 19 18 16.9 -1.5

SVE Sverdlovsk 70.19 337 eP P 19 18 21.2 -0.5
SVE pmax pmax
comp=Z,13nm,1.3s
ARU Arti 70.74 336 P P 19 18 24.3 -0.8
comp=Z,1.0nm,0.4s,baz=130,slow=11,SNR=6.2
ARU Arti 70.74 336 eP P 19 18 24.5 -0.5
comp=Z,4.4nm,0.9s
ARU Arti 70.74 336 c iP P 19 18 24.6 -0.5
ARU 19 20 56.7
ARU S **S 19 27 37.6 +2.8**
ARU pmax pmax
comp=Z,4.0nm,0.8s
KBZ Khabaz 72.10 319 P P 19 18 34.2 +0.8
comp=Z,5.6nm,1.0s,baz=158,slow=5.1,SNR=8.3
KIV Kislovodsk 72.33 319 eP P 19 18 34.8 -0.3
KIV pmax pmax
comp=Z,12nm,1.0s
ASF Jabal al Asfar 72.34 306 P P 19 18 37.6 +2.2
comp=Z,3.5nm,0.6s,baz=65,slow=5.9,SNR=8.7
EIL Elat 73.24 303 P P 19 18 42.7 +2.1
comp=Z,6.3nm,0.6s,baz=66,slow=6.1,SNR=4.6
PETK Petropavlovsk- 73.74 31 P P 19 18 42.3 -0.8
comp=Z,1.5nm,0.7s,baz=160,slow=4.6,SNR=3.6
PEA1 Petropavlovsk- 73.74 31 eP P 19 18 42.2 -0.8
MMAI Mount Meron Ar 73.80 306 P P 19 18 46.4 +2.5
comp=Z,3.0nm,0.6s,baz=96,slow=7.6,SNR=7.9
BKZ Black Stump Fm 74.49 129 eP P 19 18 48.5 +0.7
comp=Z,46nm,1.3s
NRIK Noril'sk 74.60 354 P P 19 18 46.1 -1.6
comp=Z,3.7nm,0.5s,baz=158,slow=4.0,SNR=5.6
NRIK LR LR 19 52 44.8
comp=Z,28nm,20.6s,baz=52,slow=37
BOSA Boshof 76.76 242 LR LR 19 45 00.4
comp=Z,30nm,20.8s,baz=168,slow=29
BRTR Keskin Array B 77.12 312 P P 19 19 03.1 +0.2
comp=Z,3.6nm,0.7s,baz=135,slow=7.2,SNR=27
VSR Storozhevoye 77.52 325 i P P 19 19 04.1 -0.6
VSR pmax pmax
comp=Z,12nm,0.9s
VNDA Vanda 79.02 169 LR LR 19 50 58.5
comp=Z,37nm,18.1s,baz=309,slow=33
PRGR Permogore 79.20 336 eP P 19 19 10.3 -3.4
PRGR e*PP **PcP 19 19 22.7 +0.9**
PRGR pmax pmax
comp=Z,9.0nm,0.7s
OBN Obninsk 80.49 328 eP P 19 19 21.1 +0.3
OBN pmax pmax
comp=Z,4.0nm,1.0s
ALN Alexandroupoli 83.03 312 eP P 19 19 34.5 0.0
comp=Z,2.2nm,0.8s
ALN Alexandroupoli 83.03 312 eP P 19 19 34.5 0.0
ALN pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 83.25 322 P P 19 19 35.1 -0.4
comp=Z,2.5nm,0.7s,baz=87,slow=4.7,SNR=9.0
AKASG Malin Array Be 83.25 322 ceP P 19 19 35.4 -0.1
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 83.25 322 eP P 19 19 34.9 -0.6
comp=Z,3.6nm,0.8s
AKBB Malin Array Si 83.25 322 eP P 19 19 34.9 -0.6
AKBB pmax pmax
comp=Z,4.0nm,0.8s
VRI Vrincioaia 83.65 317⇑ iP P 19 19 39.8 +2.1
VRI Vrincioaia 83.65 317 ⇑P P 19 19 39.9 +2.2
PLOR Plostina 83.70 317⇓ iP P 19 19 41.0 +3.0
PLOR Plostina 83.70 317 ⇓P P 19 19 41.0 +3.0
TESR Tescani 83.85 318⇑ iP P 19 19 39.7 +1.0
MLR Muntele Rosu 84.10 316 P P 19 19 41.1 +1.0
comp=Z,6.7nm,0.9s,baz=189,slow=2.5,SNR=12
MLR Muntele Rosu 84.10 316 eP P 19 19 38.8 -1.4
comp=Z,11nm,1.1s
MLR Muntele Rosu 84.10 316⇑ iP P 19 19 41.5 +1.4
MLR Muntele Rosu 84.10 316 ⇑P P 19 19 41.5 +1.4
BIZ Bicaz 84.31 318⇑ iP P 19 19 42.4 +1.4
PRAR RASCA 84.33 318⇓ iP P 19 19 42.8 +1.7
BILL Bilibino 84.73 20 eP P 19 19 43.1 +0.4
BILL pmax pmax
comp=Z,1.0nm,0.8s
BURAR Bucovina Array 85.05 318⇓ iP P 19 19 47.1 +2.3
BURAR Bucovina Array 85.05 318 ⇓P P 19 19 47.1 +2.3
BUR08 Bucovina Ar. S 85.07 318 eP P 19 19 44.4 -0.6
comp=Z,5.2nm,0.8s
VTS Vitosha 85.43 313 eP P 19 19 47.1 +0.1
comp=Z,3.1nm,0.8s
VTS Vitosha 85.43 313⇓ iP P 19 19 48.2 +1.3
VTS Vitosha 85.43 313 ⇓P P 19 19 48.2 +1.3
ITM Ithomi 85.49 308 eP P 19 19 46.6 -0.6
comp=Z,22nm,1.4s
DEV Deva 86.27 316⇓ iP P 19 19 53.0 +2.2
DEV Deva 86.27 316 ⇓P P 19 19 53.0 +2.2
TRPA Tarpa 86.92 319⇓ iP P 19 19 55.2 +1.3
BZS Buzias 87.11 316⇓ iP P 19 19 56.1 +1.2
BZS Buzias 87.11 316 ⇓P P 19 19 56.1 +1.2
KOLS Kolonicke sedl 87.24 319 eP P 19 19 57.5 +2.0
KOLS pmax pmax
comp=Z,7.0nm,0.9s
KOLS Kolonicke sedl 87.24 319 eP P 19 19 57.5 +2.0
FIA1 FINESS Array S 87.73 332 eP P 19 19 57.9 +0.4
comp=Z,8.2nm,1.1s
FINES FINESS Array B 87.73 332 P P 19 19 57.8 +0.3
comp=Z,1.9nm,0.5s,baz=123,slow=6.0,SNR=21
FINES FINESS Array B 87.73 332 ceP P 19 19 58.0 +0.5
FINES pmax pmax
comp=Z,2.0nm,0.4s
PDG Podgorica 88.31 313⇑ iP P 19 20 01.1 +0.4
ARCES ARCESS Array B 89.90 340 P P 19 20 07.9 +0.3
comp=Z,9.5nm,0.4s,baz=91,slow=4.9,SNR=6.7
MATE Matera 89.99 311⇑ iP P 19 20 10.5 +1.9
BLY Banja Luka 90.09 315⇑ iP P 19 20 10.9 +1.9
MORC Moravsky Berou 90.42 320⇓ iP P 19 20 11.8 +1.3
MORC Moravsky Berou 90.42 320 ⇓P P 19 20 11.8 +1.3
GERES GERESS Array B 92.84 319 P P 19 20 21.3 -0.5
comp=Z,0.5nm,0.6s,baz=106,slow=4.3,SNR=5.4
HFS Hagfors 93.54 330 P P 19 20 23.5 -1.1
comp=Z,3.6nm,0.9s,baz=141,slow=9.6,SNR=4.0
J01E Myrtle Point 123.78 40 P PKPdf 19 26 06.9 +0.1
baz=299
H04D Lebanon 123.84 38 P PKPdf 19 26 07.1 +0.2
baz=301
I03D Drain, OR 123.88 39 P PKiKP 19 26 07.4 +0.1
baz=300
K02D Willamette Mer 124.18 40 P PKPdf 19 26 07.5 -0.3
baz=299
L02E Cave Junction 124.48 41 P PKiKP 19 26 08.5 0.0
baz=299
NEW Newport 124.87 31 P PKiKP 19 26 10.0 +0.8
baz=309
J04D Umpqua Nationa 124.89 39 P PKiKP 19 26 09.7 +0.1
baz=301
L04D Klamath Falls 125.29 40 P PKiKP 19 26 10.6 +0.3
baz=300
M02C Callahan 125.34 41 P PKPdf 19 26 09.9 -0.2
baz=299
J05D Fort Rock, OR 125.41 38 P PKPdf 19 26 09.3 -0.9
baz=302
N02D Trinity Center 125.64 42 P PKPdf 19 26 10.4 -0.2
baz=299
M04C Macdoel 125.81 40 P PKiKP 19 26 11.4 0.0
baz=301
O02D Mt. Diablo Mer 125.97 42 P PKiKP 19 26 11.7 0.0
baz=299
O03E Paynes Creek 126.58 42 P PKPdf 19 26 12.6 +0.2
baz=300
MSO Missoula 127.45 31 P PKPdf 19 26 14.2 +0.3
baz=312
HLID Hailey 129.30 35 P PKPdf 19 26 18.0 +0.3
baz=309
BOZ Bozeman (W) 129.46 31 P PKPdf 19 26 18.1 +0.2
baz=313
NV01 Mina Array Sit 129.86 42 ePKPdf PKiKP 19 26 20.6 +1.0
NVAR Mina Array Bea 129.86 42 PKP PKiKP 19 26 20.6 +1.0
comp=Z,0.5nm,0.5s,baz=329,slow=1.8,SNR=7.7
SNCC San Nicolas Is 131.50 49 P PKPdf 19 26 22.1 +0.2
baz=297
MPMC Manual Prospec 131.64 44 P PKPdf 19 26 22.9 +0.5
baz=301
R11A Troy Canyon, C 131.69 41 P PKPdf 19 26 22.9 +0.5
baz=304
BW06 Boulder Array 132.49 32 P PKPdf 19 26 23.8 0.0
baz=314
HEC Hector,Ludlow 133.07 45 P PKiKP 19 26 25.8 -0.3
baz=301
GMRC Granite Mounta 133.57 45 P PKiKP 19 26 27.4 +0.2
baz=302
PFO Pinyon Flats O 133.59 47 P PKiKP 19 26 26.9 -0.4

baz=300
BELC Belle Mtn. Jos 133.73 46 P PKiKP 19 26 27.6 0.0
baz=301
RSSD Black Hills 134.21 27 P PKiKP 19 26 28.1 -0.2
baz=321
IRM Iron Mountain 134.26 45 P PKiKP 19 26 28.5 0.0
baz=302
O20A White River Ci 135.02 34 P PKiKP 19 26 29.6 -0.4
baz=314
D47A Chapleau 137.49 6 P PKPdf 19 26 32.3 -0.4
baz=352
ECSD EROS Data Cent 137.53 21 P PKPdf 19 26 33.8 +0.9
baz=331
D52A ZEK Kipawa Sen 137.86 1 P PKPdf 19 26 34.1 +0.8
baz=358
E47A Iron Bridge 138.07 6 P PKPdf 19 26 34.3 +0.6
baz=351
T25A Trinidad 139.26 34 P PKPdf 19 26 37.0 +0.5
baz=316
KLBO Killbear Provi 139.41 3 P PKiKP 19 26 37.5 -1.0
baz=356
TASM ASL Pad, Albuq 139.57 38 P PKPdf 19 26 38.4 +1.2
baz=312
TASM ASL Pad, Albuq 139.57 38 P PKPdf 19 26 38.1 +1.0
baz=312
ANMO Albuquerque 139.57 38 P PKPdf 19 26 38.3 +1.1
baz=312
H46A Fife Lake 139.70 9 P PKiKP 19 26 38.2 -1.0
baz=348
BANO Bancroft 139.82 1 P PKiKP 19 26 38.5 -0.9
baz=359
121A Cookes Peak, D 140.25 42 P PKiKP 19 26 40.2 -0.7
baz=308
DELO Deloro Mine 140.33 0 P PKPdf 19 26 38.8 +0.9
baz=360
N46A Monticello 142.96 12 P PKiKP 19 26 44.7 -1.2
baz=344
M52A Chesterland 143.12 5 P PKiKP 19 26 44.9 -1.4
baz=353
N48A Decatur 143.32 10 P PKPbc 19 26 40.7 +0.1
baz=347
N49A Columbus Grove 143.39 9 P PKPab 19 26 40.3 +0.7
baz=348
CPUP Villa Florida 143.61 211 PKP **PKPdf 19 26 43.5 -0.8**
comp=Z,0.9nm,0.5s,baz=140,slow=2.8,SNR=4.8
O48A Farmland 143.88 10 P PKPab 19 26 42.0 +0.4
baz=347
N55A Marion Center 144.03 2 P PKPab 19 26 42.1 0.0
baz=357
P45A Graceland, Par 144.05 14 P PKPab 19 26 42.3 +0.1
baz=342
WMOK Wichita Mounta 144.07 31 P PKPab 19 26 42.2 -0.3
baz=322
O49A Covington 144.09 9 P PKPab 19 26 42.6 +0.2
baz=348
O51A Pataskala 144.37 7 P PKPab 19 26 43.0 -0.4
baz=351
P47A Martinsville 144.41 12 P PKPab 19 26 43.0 -0.6
baz=345
O53A New Philadelph 144.42 5 P PKPab 19 26 43.3 -0.3
baz=353
CCM Cathedral Cave 144.43 19 P PKPab 19 26 43.2 -0.5
baz=336
O52A Adamsville 144.49 6 P PKPab 19 26 42.8 -1.1
baz=352
Q45A Warren Harvey, 144.54 15 P PKPab 19 26 43.3 -0.7
baz=341
O54A Avella 144.55 4 P PKPab 19 26 43.3 -0.7
baz=355
TUL1 Leonard 144.56 26 P PKPab 19 26 43.7 -0.5
baz=327
O56A Blue Knob Stat 144.56 2 P PKPab 19 26 43.4 -0.8
baz=358
O55A Ligonier 144.59 3 P PKPab 19 26 43.2 -1.0
baz=357
P48A Milroy 144.61 11 P PKPab 19 26 43.8 -0.5
baz=346
O57A Amberson 144.63 0 P PKPab 19 26 43.8 -0.6
baz=359
P49A Miami Univ. Ec 144.66 10 P PKPab 19 26 42.9 -1.6
baz=347
BDFB Brasilia 144.68 235 PKP **PKPdf 19 26 47.9 +1.3**
comp=Z,3.2nm,0.5s,baz=81,slow=5.5,SNR=6.2
P50A Jamestown 144.74 9 P PKPab 19 26 43.8 -0.9
baz=349,SNR=6.8
Q47A Bedord North L 144.91 12 P PKPab 19 26 44.6 -0.8
baz=344,SNR=5.3
P52A Corning 144.93 7 P PKPab 19 26 44.5 -1.0
baz=352,SNR=5.5
P51A Williamsport 144.97 8 P PKPbc 19 26 44.5 -1.2
baz=350
P60A Greenville 145.00 358 P PKPbc 19 26 44.5 -1.2
baz=2.9
TX31 Lajitas Ar. Si 145.01 43 ePKPbc PKPdf 19 26 47.1 +0.2
TXAR Lajitas Array 145.01 43 PKP **PKPdf 19 26 47.0 +0.1**
comp=Z,6.4nm,0.6s,baz=277,slow=1.3,SNR=103
Q48A North Vernon 145.06 12 P PKPbc 19 26 45.1 -0.8
baz=345,SNR=13
R45A Skylar, Fairfi 145.08 15 P PKPbc 19 26 45.5 -0.6
baz=341,SNR=7.5
MCWV Mont Chateau 145.11 3 P PKPbc 19 26 45.8 -0.3
baz=356
P54A Burton 145.12 4 P PKPbc 19 26 45.9 -0.3
baz=354,SNR=6.7
Q49A Aurora 145.15 10 P PKPbc 19 26 45.5 -0.7
baz=347,SNR=5.8
P53A Whipple 145.16 6 P PKPbc 19 26 45.7 -0.5
baz=353,SNR=7.5
P59A Jarrettsville 145.22 359 P PKPbc 19 26 46.0 -0.5
baz=1.5
ABTX Abilene, Hawle 145.22 34 P PKPbc 19 26 46.5 -0.2
baz=318
P55A Reedsville 145.26 3 P PKPbc 19 26 46.1 -0.5
baz=356,SNR=6.2
P56A Dayton Farm, R 145.31 2 P PKPbc 19 26 46.3 -0.4
baz=357,SNR=7.0
R46A Gibon Southern 145.35 14 P PKPbc 19 26 46.1 -0.8
baz=342
P57A Homestead Farm 145.35 1 P PKPbc 19 26 46.3 -0.6
baz=359,SNR=7.1
S44A Carbondale 145.37 17 P PKPbc 19 26 46.7 -0.3
baz=339,SNR=6.8
Q51A Peebles 145.38 8 P PKPbc 19 26 46.1 -0.8
baz=349,SNR=8.4
U40A Yellville 145.38 22 P PKPdf 19 26 46.6 -0.6
baz=332
Q50A Georgetown 145.46 9 P PKPdf 19 26 46.4 -0.8
baz=348
R47A Wooly Knot Far 145.50 13 P PKPdf 19 26 46.9 -0.4
baz=344,SNR=14
R48A Northridge Ran 145.54 12 P PKPdf 19 26 47.2 -0.2
baz=345,SNR=9.2
Q52A Bidwell 145.58 7 P PKPdf 19 26 46.9 -0.5
baz=351,SNR=7.8
WCI Wyandotte Cave 145.62 13 ePKPdf PKPdf 19 26 47.5 0.0
WCI Wyandotte Cave 145.62 13 ePKIKP PKPdf 19 26 47.5 0.0
WCI Wyandotte Cave 145.62 13 P PKPdf 19 26 47.5 0.0
baz=344
Q54A Coxs Mills 145.71 5 P PKPdf 19 26 47.5 -0.1
baz=354,SNR=11
Q55A Buckhannon 145.75 4 P PKPdf 19 26 47.6 -0.2
baz=355,SNR=12
Q56A Snyder Ridge, 145.76 3 P PKPdf 19 26 47.8 +0.1
baz=357
Q53A Leroy 145.77 6 P PKPdf 19 26 47.7 0.0
baz=352
R49A Shelbyville 145.79 11 P PKPdf 19 26 47.8 0.0
baz=346,SNR=10.0
Q57A Strasburg 145.79 2 P PKPdf 19 26 48.0 +0.3
baz=358,SNR=9.6
S46A Don Dixon Farm 145.80 15 P PKPdf 19 26 47.6 -0.2
baz=341
R50A Paris 145.95 10 P PKPdf 19 26 47.9 -0.1
baz=348,SNR=5.2
Q59A Harwood 145.97 359 P PKPbc 19 26 48.5 -0.2
baz=1.1
W39A Magazine 146.02 25 P PKPbc 19 26 48.9 -0.2
baz=330
R51A Hillsboro 146.05 9 P PKPbc 19 26 49.0 -0.1
baz=349
S47A Hartford 146.09 14 P PKPdf 19 26 48.5 +0.2
baz=343
R52A Catlettsburg 146.15 8 P PKPdf 19 26 48.7 +0.3
baz=350
S48A Wiedeman Farm, 146.22 13 P PKPbc 19 26 49.2 -0.4
baz=344,SNR=12
R53A Hurricane 146.24 7 P PKPbc 19 26 49.3 -0.3
baz=352,SNR=8.8

S49A	Springfield	146.25	11	P	PKPbc	19 26 49.2	-0.5
	baz=346,SNR=6.9						
T46A	Princeton	146.36	15	P	PKPbc	19 26 49.8	-0.2
	baz=341,SNR=6.0						
R54A	Victor	146.49	5	P	PKPbc	19 26 50.2	-0.3
	baz=353						
S50A	Richmond	146.52	10	P	PKPbc	19 26 50.3	-0.2
	baz=347						
R57A	Stanardsville	146.53	2	P	PKPbc	19 26 50.4	-0.1
	baz=358						
R58A	Rapidan	146.54	1	P	PKPbc	19 26 50.3	-0.2
	baz=359						
R60A	Leonardtown, M	146.57	359	P	PKPbc	19 26 50.3	-0.2
	baz=1.3						
T47A	Sharon Grove	146.61	14	P	PKPbc	19 26 50.3	-0.5
	baz=342						
W41B	Gary Mavity, V	146.66	23	P	PKPbc	19 26 50.8	-0.1
	baz=332						
T48A	Bowling Green	146.67	13	P	PKPbc	19 26 50.3	-0.6
	baz=343						
MIAR	Mount Ida	146.67	25	*e*PKPdf	PKPbc	19 26 51.2	+0.2
MIAR	Mount Ida	146.67	25	*e*PKP2	PKPbc	19 26 51.2	+0.2
MIAR	Mount Ida	146.67	25	P	PKPbc	19 26 50.7	-0.3
	baz=330						
S51A	Beattyville	146.70	9	P	PKPbc	19 26 51.0	-0.1
	baz=349,SNR=8.9						
JCT	Junction City	146.70	37	P	PKPbc	19 26 51.4	+0.1
	baz=316,SNR=15						
S52A	Salyersville	146.74	8	P	PKPbc	19 26 51.1	0.0
	baz=350,SNR=6.1						
S54A	Dingess, Beckl	146.84	6	P	PKPbc	19 26 51.1	-0.4
	baz=353						
T49A	Edmonton	146.86	12	P	PKPbc	19 26 51.9	+0.4
	baz=345						
S53A	Williamson	146.86	7	P	PKPbc	19 26 51.3	-0.2
	baz=351						
R58B	Mineral	146.87	1	P	PKPbc	19 26 51.5	+0.1
	baz=359						
S55A	Lewisburg	146.94	5	P	PKPbc	19 26 51.2	-0.5
	baz=354						
X40A	Basin Creek Fa	147.03	24	P	PKPbc	19 26 52.3	+0.2
	baz=331						
S57A	Dark Hollow, R	147.04	2	P	PKPbc	19 26 51.8	-0.2
	baz=357						
T50A	Nancy	147.08	11	P	PKPbc	19 26 52.3	+0.1
	baz=346						
U47A	Clarksville	147.09	15	P	PKPbc	19 26 52.8	+0.7
	baz=342						
S56A	Natural Bridge	147.10	3	P	PKPbc	19 26 52.7	+0.5
	baz=356						
S61A	Accomac	147.13	358	P	PKPbc	19 26 52.6	+0.4
	baz=3.0						
U48A	Cassie Pea, Po	147.21	14	P	PKPbc	19 26 52.5	0.0
	baz=343						
S58A	Poland Farm, P	147.22	1	P	PKPbc	19 26 52.6	+0.1
	baz=359						
WVT	Waverly	147.24	16	P	PKPbc	19 26 52.7	+0.2
	baz=340						
T51A	Gray	147.30	10	P	PKPbc	19 26 53.4	+0.6
	baz=348,SNR=9.2						
T52A	Hallie	147.31	8	P	PKPbc	19 26 53.7	+0.9
	baz=350						
U49A	Red Boiling Sp	147.38	13	P	PKPbc	19 26 53.7	+0.7
	baz=344,SNR=6.0						
V46A	Holladay	147.46	16	P	PKPbc	19 26 52.3	-0.9
	baz=340						
T53A	Wise	147.50	8	P	PKPbc	19 26 53.1	-0.3
	baz=350						
BLA	Blacksburg	147.50	5	P	PKPbc	19 26 53.7	+0.4
	baz=354						
T54A	Tazewell	147.54	6	P	PKPbc	19 26 53.7	+0.2
	baz=352						
T55A	Pulaski	147.56	5	P	PKPbc	19 26 53.1	-0.5
	baz=354						
V47A	Nunnelly	147.60	16	P	PKPbc	19 26 53.7	+0.1
	baz=341						
T60A	Surry	147.69	359	P	PKPbc	19 26 53.7	-0.1
	baz=1.1						
T56A	Rocky Mt	147.71	4	P	PKPbc	19 26 53.5	-0.4
	baz=355						
TZTN	Tazewell	147.78	9	P	PKPbc	19 26 53.8	-0.2
	baz=348						
U51A	La Follette	147.86	10	P	PKPbc	19 26 54.7	+0.4
	baz=347						
T59A	Double "B" Far	147.87	0	P	PKPbc	19 26 54.0	-0.2
	baz=360						
V48A	Smith Brothers	147.87	15	P	PKPbc	19 26 54.4	+0.1
	baz=342						
T58A	Grand View Acr	147.87	2	P	PKPbc	19 26 54.6	+0.3
	baz=358						
U52A	Thorn Hill	147.95	9	P	PKPbc	19 26 55.0	+0.4
	baz=349						
U54A	Nelsons Funny	148.04	7	P	PKPbc	19 26 55.1	+0.2
	baz=352						
V49A	McMinnville	148.06	13	P	PKPbc	19 26 54.4	-0.4
	baz=344						
U53A	Fall Branch	148.10	8	P	PKPbc	19 26 55.0	0.0
	baz=350						
W47A	Westpoint	148.13	16	P	PKPbc	19 26 54.7	-0.3
	baz=340,SNR=5.5						
U55A	TA2, Sparta	148.15	6	P	PKPbc	19 26 54.8	-0.4
	baz=353						
OXF	Oxford	148.26	19	P	PKPbc	19 26 54.8	-0.6
	baz=337						
V50A	Pikevile	148.33	12	P	PKPbc	19 26 55.5	0.0
	baz=345						
U57A	Blanch	148.35	3	P	PKPbc	19 26 55.2	-0.4
	baz=356						
V51A	Loudon	148.35	11	P	PKPbc	19 26 55.1	-0.5
	baz=347						
U60A	Pendleton	148.37	360	P	PKPbc	19 26 55.1	-0.5
	baz=0.3						
W48A	Pulaski	148.41	15	P	PKPbc	19 26 55.2	-0.6
	baz=342,SNR=5.2						
U58A	Oxford	148.42	2	P	PKPbc	19 26 55.5	-0.3
	baz=358						
V52A	Sevierville	148.45	10	P	PKPbc	19 26 55.3	-0.6
	baz=348						
833A	Chaparral WMA,	148.47	39	P	PKPbc	19 26 56.2	+0.1
	baz=314						
X46A	Booneville	148.48	18	P	PKPbc	19 26 55.3	-0.6
	baz=338						
X47A	Russelville	148.74	17	P	PKPbc	19 26 56.1	-0.6
	baz=340,SNR=7.2						
W50A	Signal Mountai	148.74	13	P	PKPbc	19 26 56.4	-0.3
	baz=345						
V53A	Saluda	148.75	9	P	PKPbc	19 26 56.4	-0.3
	baz=349						
V55A	Taylorsville	148.77	6	P	PKPbc	19 26 56.1	-0.5
	baz=352						
V57A	Coltrane Farms	148.86	4	P	PKPbc	19 26 56.0	-0.9
	baz=355						
V56A	Mocksville	148.89	5	P	PKPbc	19 26 56.4	-0.6
	baz=354						
W51A	Cleveland	148.90	12	P	PKPbc	19 26 56.5	-0.5
	baz=346						
V58A	Windy Hill, Pi	149.00	3	P	PKPbc	19 26 56.6	-0.6
	baz=356						
X48A	Hartselle	149.03	16	P	PKPbc	19 26 56.5	-0.8
	baz=341						
V61A	Roper	149.04	359	P	PKPbc	19 26 55.9	-1.5
	baz=1.4						
V59A	Middlesex	149.06	2	P	PKPbc	19 26 57.0	-0.4
	baz=358						
X49A	Woodville	149.16	15	P	PKPbc	19 26 57.1	-0.6
	baz=342						
W53A	Cullowhee	149.18	9	P	PKPbc	19 26 57.6	-0.3
	baz=349						
V62A	Hyde County Ai	149.25	358	P	PKPbc	19 26 57.1	-0.8
	baz=2.6						
Y48A	Jasper	149.50	16	P	PKPbc	19 26 57.6	-0.9
	baz=340						
W56A	Indian Trail	149.55	5	P	PKPbc	19 26 57.9	-0.7
	baz=354						
W57A	Gilead	149.58	4	P	PKPbc	19 26 58.2	-0.5
	baz=355						
X52A	Dahlonega	149.61	11	P	PKPbc	19 26 58.4	-0.5
	baz=347						
W61A	Ground Anchor	149.66	360	P	PKPbc	19 26 57.9	-0.9
	baz=0.6						
Y49A	Blount Mountai	149.76	15	P	PKPbc	19 26 58.5	-0.7
	baz=342,SNR=6.4						
W60A	Pink Hill	149.78	1	P	PKPbc	19 26 58.5	-0.7
	baz=359						
X53A	Estanollee	149.81	10	P	PKPbc	19 26 58.9	-0.4
	baz=348						
Y50A	Piedmont	149.90	14	P	PKPbc	19 26 58.6	-1.0
	baz=343						
X54A	Belton	149.91	8	P	PKPbc	19 26 59.2	-0.4
	baz=350						
X55A	Gracelyn & Ava	150.09	7	P	PKPbc	19 26 59.6	-0.4
	baz=351						
X56A	White Oak	150.14	6	P	PKPbc	19 26 59.9	-0.2
	baz=353						
X60A	Albert Glenn T	150.25	1	P	PKPbc	19 27 00.4	+0.1
	baz=359						
Y52A	Lilburn	150.29	11	P	PKPbc	19 27 00.6	+0.1
	baz=346						
Z49A	Columbiana	150.35	16	P	PKPbc	19 27 00.2	-0.4
	baz=341						
LRAL	Lakeview Retre	150.37	17	P	PKPbc	19 27 00.8	+0.1
	baz=340						
Y53A	Monroe	150.39	11	P	PKPbc	19 27 00.4	-0.3
	baz=347						
Z50A	Ashland	150.46	15	*e*PKPbc	PKPbc	19 27 00.7	-0.3
Z50A	Ashland	150.46	15	P	PKPbc	19 27 00.5	-0.4
	baz=342						
Y54A	Tignall	150.54	9	P	PKPbc	19 27 01.0	0.0
	baz=349						
Y55A	Saluda	150.59	8	P	PKPbc	19 27 00.9	-0.3
	baz=351						
LNIG	Linares	150.71	44	*e*PKPbc	PKPbc	19 27 02.0	+0.3
149A	Jones	150.84	17	P	PKPbc	19 27 01.7	-0.1
	baz=340						
Y58A	Scranton	150.84	4	P	PKPbc	19 27 01.7	-0.1
	baz=355						
GOGA	Godfrey	150.84	11	P	PKPbc	19 27 01.8	0.0
	baz=347						
Z52A	Williamson	150.87	12	P	PKPbc	19 27 01.8	-0.1
	baz=345						
Z53A	Monticello	150.95	11	P	PKPbc	19 27 01.8	-0.3
	baz=347						
150A	Eclectic	151.04	15	P	PKPbc	19 27 02.1	-0.2
	baz=342						
Z54A	Sparta	151.12	10	P	PKPbc	19 27 02.4	0.0
	baz=349						
152A	Waverly Hall	151.31	13	P	PKPbc	19 27 02.7	-0.2
	baz=345						
249A	Camden	151.33	18	P	PKPbc	19 27 02.7	-0.2
	baz=339						
Z57A	Bowman	151.35	6	P	PKPbc	19 27 02.8	-0.2
	baz=353						
250A	Grady	151.57	16	P	PKPbc	19 27 03.5	0.0
	baz=341						
251A	Midway	151.69	15	P	PKiKP	19 27 04.2	0.0
	baz=343						
252A	Lumpkin	151.95	14	P	PKPbc	19 27 04.5	+0.1
	baz=344						
254A	Abbeville	152.30	11	P	PKPbc	19 27 05.0	-0.1
	baz=347						
351A	Pinckard	152.42	16	P	PKPbc	19 27 04.3	-1.1
	baz=342						

*MAN **16** 19:35:14.5, 9.°41N×124.°36E, h33km, MS3.8*
*IDC **16** 19:35:22.7±2.0, 9.°55N×124.°43E, h97km±22km, mb3.4/10, mb1 3.6/12, mb1mx3.4/54, mbtmp3.9/12, MS2.6/2, Ms1 2.6/2, ms1mx2.4/19, Error ellipse: s-maj=34.9km s-min=13.8km az=75.0*
ISC 16 19:35:13.2±1.1, 9.°46N±0.°02×124.°35E±0.°03, h13km±8km, n35, σ1°38/53, mb3.6/10, 6C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.54	296⇑	*e*P	Pg	19 35 23.7	0.0
MSLP	Maasin	0.84	37	*e*P	Pn	19 35 30.5	-0.1
MSLP				*e*S	Sn	19 35 44.4	+1.5
LLP	Lapu-Lapu	0.94	336⇓	*e*P	Pn	19 35 31.3	-0.7
LLP				*e*S	Sn	19 35 44.5	-0.8
CGP	Cagayan de Oro	1.05	161⇑	*i*P	Pb	19 35 31.7	-1.5
CGP				*i*S	Sb	19 35 45.3	-1.6
SNPH	Sibulan	1.10	264⇓	*i*P	Pb	19 35 34.1	0.0
SNPH				*i*S	Sb	19 35 49.0	+0.6
SCPH	Surigao	1.17	74⇑	*i*P	Pg	19 35 42.4	+6.6
SCPH				*i*S	Sn	19 35 52.0	+1.0
DCPH	Dipolog City	1.31	229⇑	*e*P	Pg	19 35 39.6	+1.2
DCPH				*e*S	Sg	19 35 56.2	+0.7
BUTP	Butuan	1.34	111	*e*P	Pb	19 35 37.0	-1.2
BUTP				*e*S	Sb	19 35 53.6	-1.7
OCLP	Ormoc	1.61	9	*e*P	Pb	19 35 42.0	-0.7
OCLP				*e*S	Sg	19 36 05.6	+0.7
BUKP	Musuan	1.72	156	*e*P	Pn	19 35 42.6	-0.2
BUKP				*e*S	Sb	19 36 06.5	+0.4
PLP	Palo	1.81	20⇑	*e*P	Pb	19 35 44.9	-1.2
PLP				*e*S	Sg	19 36 10.9	-0.5
PAGZ	Pagadian	1.86	211	*e*P	Pn	19 35 43.8	-0.9
PAGZ				*e*S	Sn	19 36 05.6	-2.5
QUIM	Jordan	2.09	304	*e*P	Pn	19 35 48.4	+0.5
QUIM				*e*S	Sn	19 36 13.0	-0.7
BESP	Borongan	2.39	27	*e*P	Pn	19 35 51.7	-0.2
BESP				*e*S	Sn	19 36 20.8	-0.3
IPIL	Ipil	2.42	227	*e*P	Pn	19 35 52.9	+0.6
IPIL				*e*S	Sn	19 36 22.4	+0.7
DMPH	Davao City--Mi	2.62	154⇑	*e*P	Pb	19 35 57.9	-2.1
DMPH				*e*S	Sg	19 36 36.6	-0.9
DAV	Davao City (W)	2.66	153	P	Pg	19 36 04.9	+0.6
	59nm,0.3s,baz=24,slow=7.6,SNR=5.3						
DAV				S	Sg	19 36 37.2	-1.6
	28nm,0.3s,baz=298,slow=20,SNR=4.0						
SKMP	Bagumbayan, Su	2.92	176	*e*P	Pn	19 35 58.6	-0.7
CNP	Catarman	3.05	6	*e*P	Pn	19 36 02.8	+1.7
CNP				*e*S	Sn	19 36 38.5	+1.0
MATI	Mati	3.13	143	*e*P	Pn	19 36 02.9	+0.7
MATI				*e*S	Sb	19 36 48.2	+1.5
CUYO	Cuyo Island	3.56	293	*e*P	Pn	19 36 06.4	-1.7
DDMP	Don Marcelino,	3.59	158	*e*P	Pn	19 36 08.4	-0.1
DDMP				*e*S	Sn	19 36 54.6	+3.8
BUSP	Coron	4.80	302	*e*P	Pn	19 36 26.4	+1.2
BUSP				*e*S	Sn	19 37 18.6	-2.1
TGY	Tagaytay City	5.70	324	LR	LR	19 38 43.7	
	comp=Z,48nm,21.0s,baz=106,slow=36						
BATI	Baumata	19.54	182	P	Pn	19 39 45.5	+3.5
	1.1nm,0.3s,baz=151,slow=2.6,SNR=4.7						
CMAR	Chiang Mai Arr	26.20	293	P	P	19 40 48.4	+0.5
	0.8nm,0.9s,baz=119,slow=6.3,SNR=5.3						
KSRS	Korea Array	28.06	6	P	P	19 41 04.6	+0.3
	0.6nm,0.7s,baz=179,slow=9.9,SNR=4.3						
KSRS				LR	LR	19 51 38.4	
	comp=Z,19nm,20.5s,baz=132,slow=35						
WRA	Warramunga Arr	30.82	161	P	P	19 41 31.7	+2.7
	1.1nm,0.9s,baz=333,slow=9.7,SNR=4.1						
ASAR	Alice Springs	34.22	164	P	P	19 41 57.8	-0.9
	0.4nm,0.7s,baz=350,slow=8.1,SNR=7.5						
USRK	Ussuriysk Ar.	35.24	10	P	P	19 42 06.8	-0.6
	3.4nm,0.9s,baz=193,slow=7.7,SNR=5.1						
SONM	Songino Array	41.15	342	P	P	19 42 55.3	-2.0
	0.8nm,0.9s,baz=108,slow=4.7,SNR=5.6						
STKA	Stephens Creek	44.29	159	P	P	19 43 23.0	+0.3
	1.0nm,0.7s,baz=11,slow=13,SNR=3.0						
MKAR	Makanchi Array	51.55	324	P	P	19 44 19.8	+0.9
	0.3nm,0.5s,baz=146,slow=8.2,SNR=3.8						
ZALV	Zalesovo Beam	54.45	332	P	P	19 44 39.7	-0.4
	1.3nm,0.6s,baz=120,slow=5.8,SNR=5.2						
FINES	FINESS Array B	85.70	332	P	P	19 47 50.2	-1.4
	1.1nm,0.7s,baz=90,slow=5.6,SNR=4.1						

*JMA **16** 20:00:51.7±0.1, 24.°62N×122.°49E, h108km±2km, M3.0*
*ISCJB **16** 20:00:52.0±0.3, 24.°67N±0.°02×122.°53E±0.°01, h105km±3km, Error ellipse: s-maj=2.9km s-min=2.0km az=164.0*
*TAP **16** 20:00:52.1, 24.°70N×122.°53E, h104km, ML4.0, B*
ISC 16 20:00:52.5±1.3, 24.°67N±0.°03×122.°52E±0.°02, h104km±6km, n120, σ0°60/236, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.38	252	P	Pn	20 01 08.2	+0.4
	baz=248						
EOS1				*e*S	Sn	20 01 20.0	+0.7
	baz=248						
JYNG	Yonagunijimaku	0.44	119	P	Pn	20 01 08.2	0.0
JYNG				S	Sn	20 01 20.2	+0.2
YOJ	Yonaguni jima	0.49	115	P	Pn	20 01 08.6	0.0
	baz=118						
YOJ				S	Sn	20 01 20.4	-0.1
	baz=118						
YOJ	Yonaguni jima	0.49	115	P	Pn	20 01 08.6	0.0
YOJ				*e*S	Sn	20 01 20.5	-0.1
TWB1	Santiao Chiao	0.59	305	*e*P	Pn	20 01 09.4	+0.1
	baz=302						
TWB1				*e*S	Sn	20 01 21.9	-0.1
	baz=302						
TWC	Suao	0.62	265	*i*P	Pn	20 01 09.2	-0.3
	baz=261						
TWC				*i*S	Sn	20 01 21.8	-0.5
	baz=261						
NTC	Toucheng	0.66	286	P	Pn	20 01 09.7	-0.1
	baz=283						
NTC				*e*S	Sn	20 01 21.4	-1.5
	baz=283						
TIPB	Shuangxi	0.70	296	*i*P	Pn	20 01 10.4	+0.1
	baz=293						
TIPB				S	Sn	20 01 23.5	-0.2
	baz=293						
ILA	Ilan	0.71	278	*i*P	Pn	20 01 10.6	+0.3
	baz=275						
ILA				*i*S	Sn	20 01 24.2	+0.5
	baz=275						
NANB	Nanao	0.74	251	*i*P	Pn	20 01 10.8	+0.2
	baz=249						
NANB				S	Sn	20 01 25.0	+0.7
	baz=249						
ENA	Nanau	0.75	252	P	Pn	20 01 10.8	+0.1
	baz=249						
ENA				S	Sn	20 01 25.0	+0.6
	baz=249						
TWE	Neicheng	0.78	274	*i*P	Pn	20 01 11.1	+0.2
	baz=271						
TWE				*e*S	Sn	20 01 24.5	-0.3
	baz=271						
NWF	Wu-fen Shan	0.79	301	*e*P	Pn	20 01 11.2	+0.1
	baz=298						
NWF				*e*S	Sn	20 01 25.0	-0.1
	baz=298						
WFSB	Wu-fen Shan	0.79	301	P	Pn	20 01 11.3	+0.3
	baz=298						
WFSB				S	Sn	20 01 25.1	+0.2
	baz=298						
ENTT	Nioudou	0.87	268	*e*P	Pn	20 01 12.3	+0.4
	baz=266						
ENTT				*e*S	Sn	20 01 27.2	+0.7
	baz=266						
NDT	Datong Townshi	0.92	266	P	Pn	20 01 13.0	+0.6
	baz=264						
NDT				*e*S	Sn	20 01 27.9	+0.5
	baz=264						
NWLT	Wulai	0.94	277	*e*P	Pn	20 01 12.6	+0.1
	baz=274						
NWLT				*e*S	Sn	20 01 26.7	-0.9
	baz=274						
NHDH	Xindian Distri	0.95	288	*e*P	Pn	20 01 12.7	+0.1
	baz=286						
NHDH				*e*S	Sn	20 01 27.2	-0.7
	baz=286						
YM07	YM07	0.96	302	*e*P	Pn	20 01 12.9	+0.1
	baz=299						
YM07				*e*S	Sn	20 01 27.9	-0.3
	baz=299						
NACB	Ninganchiao	0.98	240	P	Pn	20 01 12.3	-0.6
	baz=238						
NACB				*e*S	Sn	20 01 28.7	+0.3
	baz=238						
YM01	YM01	0.99	299	P	Pn	20 01 13.2	+0.1
	baz=297						
YM01				S	Sn	20 01 28.2	-0.4
	baz=297						
TATO	Taipei	0.99	288	P	Pn	20 01 12.8	-0.3
	baz=286						
TATO				*e*S	Sn	20 01 28.1	-0.5
	baz=286						
YM08	YM08	0.99	302	P	Pn	20 01 12.9	-0.2
	baz=299						
YM08				S	Sn	20 01 27.8	-0.9
	baz=299						
YM11	YM11	0.99	300	P	Pn	20 01 13.1	-0.1
	baz=298						
YM11				*e*S	Sn	20 01 28.3	-0.5
	baz=298						
TAP	Taipei	1.00	292	*e*P	Pn	20 01 12.4	-0.7
	baz=290						
TAP				*e*S	Sn	20 01 28.2	-0.4
	baz=290						
YM10	YM10	1.00	299	P	Pn	20 01 13.3	+0.1
	baz=297						
YM10				S	Sn	20 01 28.3	-0.5
	baz=297						
YM04	YM04	1.02	298	P	Pn	20 01 13.2	-0.2
	baz=296						
YM04				S	Sn	20 01 28.3	-0.9
	baz=296						
YM03	YM03	1.03	300	*e*P	Pn	20 01 13.5	-0.1
	baz=297						
YM03				*e*S	Sn	20 01 29.8	+0.3
	baz=297						
TWD	Chiawan	1.03	235	*e*P	Pn	20 01 13.0	-0.4
	baz=234						
TWD				*e*S	Sn	20 01 29.5	+0.2
	baz=234						
TWY	Chenhua	1.03	306	*e*P	Pn	20 01 13.8	+0.3
	baz=304						
TWY				*e*S	Sn	20 01 29.9	+0.5
	baz=304						
PCYT	Pengchaiyu	1.04	337	*e*P	Pn	20 01 14.2	+0.5
	baz=336						
YHNB	Yeheng	1.04	270	*i*P	Pn	20 01 14.2	+0.4
	baz=268						
YHNB				S	Sn	20 01 29.9	+0.1
	baz=268						
ANP	Anpu	1.05	300	*e*P	Pn	20 01 13.3	-0.5
	baz=297						
ANP				*e*S	Sn	20 01 29.6	-0.2
	baz=297						
ETLH	Xiulin Townshi	1.06	244	P	Pn	20 01 13.6	-0.2
	baz=243						
ETLH				S	Sn	20 01 29.7	-0.3
	baz=243						
NSK	Sanguang	1.06	271	P	Pn	20 01 14.2	+0.3
	baz=268						
NSK				S	Sn	20 01 29.9	-0.2
	baz=268						
NNSB	Datong	1.07	257	*i*P	Pn	20 01 14.0	0.0
	baz=255						
NNSB				*e*S	Sn	20 01 30.2	-0.1
	baz=255						
NNS	Nan Shan	1.07	258	P	Pn	20 01 14.2	+0.1
	baz=256						
NNS				S	Sn	20 01 30.6	+0.2
	baz=256						
HWA	Hwalien	1.09	231	P	Pn	20 01 14.1	0.0
	baz=229						
HWA				*e*S	Sn	20 01 31.6	+1.2
	baz=229						
TWS1	Kuangyinshan	1.09	293	P	Pn	20 01 14.3	+0.1
	baz=291						
TWS1				S	Sn	20 01 30.2	-0.4
	baz=291						
NTST	Danshui	1.09	297	*e*P	Pn	20 01 14.2	+0.1
	baz=295						
NTST				S	Sn	20 01 30.2	-0.3
	baz=295						
ENLB	Shoufeng	1.14	228	*e*P	Pn	20 01 13.5	-1.1
	baz=227						
ENLB				*e*S	Sn	20 01 31.6	+0.2
	baz=227						
IRIF	Iriomote-Funau	1.15	107	P	Pn	20 01 14.6	-0.2
IRIF				*e*S	Sn	20 01 30.9	-0.7
NCU	National Centr	1.25	284	*e*P	Pn	20 01 16.4	+0.4
	baz=282						
NCU				S	Sn	20 01 34.6	+0.9
	baz=282						
NCUH	Zhongli	1.25	284	*e*P	Pn	20 01 16.5	+0.5
	baz=282						
NCUH				S	Sn	20 01 34.5	+0.8
	baz=282						
WHF	Hehuan Shan	1.26	246	*i*P	Pn	20 01 16.6	+0.1
	baz=244						
WHF				S	Sn	20 01 34.3	-0.3
	baz=244						
ESL	Shilin	1.31	230	*e*P	Pn	20 01 16.4	-0.2
	baz=228						
ESL				*e*S	Sn	20 01 34.4	-0.6
	baz=228						
TDCB	Techi	1.31	252	P	Pn	20 01 17.5	+0.7
	baz=250						
TDCB				S	Sn	20 01 35.2	0.0
	baz=250						
HATJ	Hateruma jima	1.32	117	P	Pn	20 01 16.9	+0.2
HATJ				*e*S	Sn	20 01 35.3	+0.2
CHGB	Renai	1.37	244	P	Pn	20 01 17.8	+0.2

CHGB	baz=242			eS	Sn	20 01 36.7	+0.1
LIOB	baz=242 **Emei**	1.37	269	P	Pn	20 01 17.8	+0.4
LIOB	baz=267			eS	Sn	20 01 35.8	-0.5
NSTT	baz=267 **Nanjuang**	1.39	269	eP	Pn	20 01 17.9	+0.3
NSTT	baz=267			S	Sn	20 01 36.5	-0.1
SBCB	baz=273 **Hsinchu**	1.41	275	eP	Pn	20 01 18.1	+0.3
SBCB	baz=273			S	Sn	20 01 37.2	+0.2
EGFH	baz=224 **Guangfu**	1.41	225	eP	Pn	20 01 17.7	-0.1
EGFH	baz=224			eS	Sn	20 01 36.8	-0.4
HSN	baz=275 **Hsinchu**	1.42	276	eP	Pn	20 01 17.9	0.0
HSN	baz=275			eS	Sn	20 01 37.1	-0.2
JKRS	baz=239 **Kuro-shima**	1.42	107	P	Pn	20 01 18.2	+0.3
JKRS				eS	Sn	20 01 37.3	+0.1
OWD	baz=239 **Renai**	1.42	240	eP	Pn	20 01 18.1	0.0
OWD	baz=239			eS	Sn	20 01 36.7	-0.8
WHP	baz=253 **Taichung City**	1.49	255	eP	Pn	20 01 19.8	+0.9
WHP	baz=253			eS	Sn	20 01 39.6	+0.6
JIJ	baz=233 **Ishigaki jima**	1.50	101	P	Pn	20 01 18.8	-0.2
JIJ				S	Sn	20 01 38.2	-0.9
HGSD	baz=220 **Ruisui**	1.54	221	eP	Pn	20 01 19.7	+0.2
HGSD	baz=220			eS	Sn	20 01 39.8	-0.1
VWDT	baz=233 **VWDT**	1.56	234	P	Pn	20 01 19.8	+0.2
VWDT	baz=233			S	Sn	20 01 40.0	-0.2
NMLH	baz=264 **Miaoli**	1.58	266	eP	Pn	20 01 20.2	+0.2
NMLH	baz=264			eS	Sn	20 01 40.8	-0.1
DPDB	baz=245 **Guoxing**	1.59	247	P	Pn	20 01 21.0	+0.9
DPDB	baz=245			eS	Sn	20 01 41.9	+0.9
EHY	baz=222 **Hungye**	1.60	224	eP	Pn	20 01 19.7	-0.4
EHY	baz=222			eS	Sn	20 01 41.3	+0.2
NSY	baz=260 **Sanyi**	1.63	261	eP	Pn	20 01 21.2	+0.7
NSY	baz=260			S	Sn	20 01 42.8	+1.0
TWQ1	baz=257 **Liyutan**	1.63	259	P	Pn	20 01 20.9	+0.4
TWQ1	baz=257			S	Sn	20 01 42.2	+0.4
JISG	baz=219 **Ishigakijimahi**	1.63	93	P	Pn	20 01 20.4	-0.1
JISG				eS	Sn	20 01 41.0	-0.8
PTSB	baz=261 **Yuanli**	1.67	263	P	Pn	20 01 21.6	+0.6
PTSB	baz=261			S	Sn	20 01 43.6	+0.9
SMLT	baz=241 **Sun Moon Lake**	1.68	242	eP	Pn	20 01 21.9	+0.7
SMLT	baz=241			eS	Sn	20 01 43.9	+0.8
SSLB	baz=237 **Suanglung**	1.68	239	eP	Pn	20 01 22.1	+0.9
SSLB	baz=237			eS	Sn	20 01 44.0	+1.0
YULB	baz=221 **Yu-li**	1.69	222	eP	Pn	20 01 20.3	-1.1
YULB	baz=221			eS	Sn	20 01 42.7	-0.6
TYC	baz=242 **Yuchr**	1.70	244	eP	Pn	20 01 22.1	+0.7
TYC	baz=242			eS	Sn	20 01 45.0	+1.6
TWF1	baz=219 **Yuli**	1.73	221	eP	Pn	20 01 21.4	-0.3
TWF1	baz=219			eS	Sn	20 01 43.9	-0.1
WDJ	baz=258 **Dajia District**	1.75	260	eP	Pn	20 01 22.6	+0.6
WDJ	baz=258			eS	Sn	20 01 45.2	+0.8
TCU	baz=251 **Taichung**	1.76	253	eP	Pn	20 01 22.6	+0.5
TCU	baz=251			eS	Sn	20 01 45.5	+0.7
WHYT	baz=237 **Xinyi Township**	1.81	238	eP	Pn	20 01 23.9	+1.1
WHYT	baz=237			eS	Sn	20 01 46.8	+0.9
WJS	baz=242 **Zhushan**	1.84	243	eP	Pn	20 01 24.0	+0.8
WJS	baz=242			eS	Sn	20 01 47.6	+0.9
WNT	baz=244 **Mingjian**	1.85	245	eP	Pn	20 01 24.3	+0.9
WNT	baz=244			eS	Sn	20 01 47.7	+0.9
YUS	baz=230 **Yu-Shan**	1.86	231	P	Pn	20 01 24.1	+0.3
YUS	baz=230			S	Sn	20 01 47.3	-0.3
WCHH	baz=251 **Zhanghua**	1.89	252	eP	Pn	20 01 23.5	-0.2
WCHH	baz=251			eS	Sn	20 01 47.6	0.0
CHKT	baz=213 **Chengkung**	1.89	214	eP	Pn	20 01 23.1	-0.7
CHKT	baz=213			eS	Sn	20 01 46.2	-1.4
ALS	baz=233 **Alishan**	1.95	234	P	Pn	20 01 25.5	+0.7
ALS	baz=233			eS	Sn	20 01 49.7	+0.2
JTJ	baz=222 **Tarama**	1.98	90	P	Pn	20 01 25.1	+0.2
JTJ				S	Sn	20 01 49.4	-0.3
CHN5	baz=237 **Tsauling**	2.00	238	P	Pn	20 01 25.9	+0.7
CHN5	baz=237			eS	Sn	20 01 50.8	+0.6
ELDTW	baz=222 **Lidau**	2.02	223	eP	Pn	20 01 25.0	-0.6
ELDTW	baz=222			eS	Sn	20 01 50.9	+0.1
WGK	baz=240 **Gukeng**	2.04	242	eP	Pn	20 01 26.6	+0.8
WGK	baz=240			eS	Sn	20 01 52.1	+1.0
WDLH	baz=241 **Douliu**	2.06	242	eP	Pn	20 01 26.6	+0.6
WDLH	baz=241			eS	Sn	20 01 51.9	+0.4
RLNB	baz=247 **Erlin**	2.12	249	eP	Pn	20 01 26.7	0.0
RLNB	baz=247			S	Sn	20 01 53.5	+0.6
STYT	baz=226 **Tauyuan**	2.21	228	eP	Pn	20 01 28.6	+0.7
STYT	baz=226			eS	Sn	20 01 55.9	+0.8
CHY	baz=238 **Chiayi**	2.25	239	eP	Pn	20 01 28.9	+0.6
CHY	baz=238			eS	Sn	20 01 56.6	+0.8
WTP	baz=230 **Ta-pu**	2.25	231	eP	Pn	20 01 29.3	+0.8
WTP	baz=230			eS	Sn	20 01 56.3	+0.2
TWGBT	baz=215 **Beinan**	2.27	216	eP	Pn	20 01 28.3	-0.4
TWGBT	baz=215			eS	Sn	20 01 55.5	-0.9
TWG	baz=215 **Pinlang**	2.27	216	eP	Pn	20 01 28.3	-0.4
TWG	baz=215			eS	Sn	20 01 55.5	-1.0
TTN	**Taitung**	2.29	214	eS	Sn	20 01 57.4	+0.6
TWK	baz=213 **Hsinying**	2.33	234	eP	Pn	20 01 30.0	+0.5
TWK	baz=232			eS	Sn	20 01 58.2	+0.3
WSF	baz=232 **Szhu**	2.34	244	eP	Pn	20 01 29.7	+0.2
WSF	baz=243			eS	Sn	20 01 58.0	0.0
CHN1	baz=243 **Nanshi**	2.35	231	eP	Pn	20 01 30.6	+0.9
CHN1	baz=230			eS	Sn	20 01 59.1	+0.8
SNST	baz=230 **Tainan City**	2.35	233	eP	Pn	20 01 30.3	+0.6
SNST	baz=231			eS	Sn	20 01 59.2	+0.9
SGST	baz=231 **Jiashian**	2.38	229	eP	Pn	20 01 31.1	+1.0
SGST	baz=227			eS	Sn	20 01 59.3	+0.3
SLGT	baz=227 **Liugui**	2.40	226	eP	Pn	20 01 31.1	+0.8
SLGT	baz=225			eS	Sn	20 02 00.7	+1.3
JIRB	baz=225 **Irabujima**	2.41	86	P	Pn	20 01 31.1	+0.6
JIRB				S	Sn	20 02 00.4	+0.7
JIKM	**Ikemajima**	2.49	84	P	Pn	20 01 32.2	+0.7
JIKM				eS	Sn	20 02 01.5	0.0
CHN8	**Yiju**	2.49	239	eP	Pn	20 01 31.7	+0.1
CHN8	baz=237			eS	Sn	20 02 01.4	-0.2
ECL	baz=237 **Taimali**	2.52	215	eP	Pn	20 01 31.4	-0.6
ECL	baz=214			eS	Sn	20 02 01.1	-1.1
JMJ	baz=214 **Miyako jima 2**	2.52	86	eP	Pn	20 01 32.4	+0.5
JMJ	baz=87			eS	Sn	20 02 02.4	+0.1
JMJ2	baz=87 **Miyako jima3**	2.55	88	P	Pn	20 01 32.8	+0.5
JMJ2				eS	Sn	20 02 03.0	0.0
SSD	**Sandimen**	2.58	223	eP	Pn	20 01 33.7	+0.9
SSD	baz=221			eS	Sn	20 02 04.0	+0.2
SCLT	baz=221 **Jiali**	2.60	236	eP	Pn	20 01 33.2	+0.2
SCLT	baz=234			eS	Sn	20 02 04.0	-0.1
JOGS	baz=234 **Gusukube**	2.62	87	P	Pn	20 01 33.8	+0.5
JOGS				eS	Sn	20 02 05.2	+0.5
PTTC	**Pingtan**	2.63	289	eP	Pn	20 01 33.9	+0.5
PTTC	baz=287			eS	Sn	20 02 03.7	-1.1
MASBT	baz=287 **Mashibuluo**	2.68	221	eP	Pn	20 01 34.4	+0.2
MASBT	baz=220			eS	Sn	20 02 06.5	+0.3
SGLT	baz=220 **Jiouru**	2.69	224	eS	Sn	20 02 05.5	-0.7
EAST	baz=223 **Anshuo**	2.75	214	eP	Pn	20 01 35.0	0.0
EAST	baz=213			eS	Sn	20 02 07.3	-0.5
MATB	baz=213 **Ma-tsu**	2.76	303	eP	Pn	20 01 35.0	-0.1
LAY	baz=301 **Lan-yu**	2.77	199	eP	Pn	20 01 35.0	-0.3
LAY	baz=198			eS	Sn	20 02 07.3	-0.9
SCZT	baz=198 **Fangliau**	2.88	218	eP	Pn	20 01 37.3	+0.6
SCZT	baz=217			eS	Sn	20 02 10.6	-0.1
PNG	baz=217 **Penghu**	2.93	249	eP	Pn	20 01 36.9	-0.4
PNG	baz=247			eS	Sn	20 02 10.1	-1.8
PHUB	baz=247 **P'eng-hu**	2.93	248	eP	Pn	20 01 37.2	-0.2
PHUB	baz=246			eS	Sn	20 02 11.3	-0.7
WDGT	baz=246 **Dungji**	2.97	242	eP	Pn	20 01 37.4	-0.5
WDGT	baz=241			eS	Sn	20 02 11.4	-1.5
TWKBT	baz=241 **Hengchun**	3.14	210	eP	Pn	20 01 41.5	+1.3
TWKBT	baz=209			eS	Sn	20 02 17.2	+0.3
KNMB	baz=209 **Chin-men Tao**	3.77	268	eP	Pn	20 01 47.5	-1.1
KNMB	baz=266			eS	Sn	20 02 30.2	-1.9
	baz=266						

UCR 16 20:04:09.2±2.6, 8°.59N×83°.56W, h18km±9km, ML4.4, 2C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTJ1	**Puerto Jimnez**	0.26	101	eP	Pg	20 04 14.2	-0.8
PTJ1				eS	Sb	20 04 20.5	+1.0
EDBA	**Buenos Aires**	0.64	26	eP	Pb	20 04 22.6	+0.7
EDBA				eS	Sb	20 04 31.3	+0.8
EDLM	**Las Mercedes**	0.69	357	eP	Pb	20 04 22.0	-0.7
EDDO	**Dominical**	0.73	335	eP	Pb	20 04 22.1	-1.3
EDDO				eS	Sb	20 04 33.0	-0.1
DRK0	**Durika**	0.74	25	↑iP	Pb	20 04 22.4	-1.3
DRK0				AMP		20 04 22.8	
DRK0	comp=Z,14μm,0.2s			iS	Sg	20 04 34.0	+0.4
BRU2	**Volcan**	0.88	76	↑eP	Pb	20 04 25.0	-1.1
BRU2				iS	Sg	20 04 37.9	-0.2
DVD	**David**	1.10	98	iP	Pb	20 04 27.1	-2.7
DVD				iS	Sb	20 04 42.3	-1.7
LCR2	**La Lucha 2**	1.23	339	eP	Pn	20 04 30.2	-1.5
LCR2				eS	Sg	20 04 49.0	-0.2
CVTR	**Volcan Turrial**	1.44	352	⇓eP	Pn	20 04 34.5	-0.4
CVTR				eS	Sg	20 04 55.2	-0.7
HDC	**Heredia**	1.51	339	eP	Pn	20 04 34.2	-1.4
HDC				eS	Sb	20 04 55.8	+0.1
JTS	**Las Juntas de**	2.18	321	eP	Pn	20 04 45.7	+1.0
JTS				iS	Sb	20 05 13.4	-1.6
ARE1	**Arenal 1**	2.19	328	eP	Pb	20 04 47.5	-0.8
MESS	**Mesas**	2.68	323	eP	Pb	20 04 56.8	+0.1

*IDC **16** 20:04:57.1±1.0, 45°.70N×15°.24E, h0km, mb3.7/5, mb1 3.6/11, mb1mx3.5/40, mbtmp3.5/11, ML3.7/7, MS3.0/7, Ms1 3.0/7, ms1mx2.6/56, Error ellipse: s-maj=17.1km s-min=14.3km az=56.0*

*LJU **16** 20:04:58.8, 45°.75N×14°.86E, h3km, ML3.6*

*SAR **16** 20:04:58.9±0.2, 45°.76N×14°.87E, h7km±2km, ML4.1/2*

*NEIC **16** 20:04:59.8±2.2, 45°.81N×14°.87E, h10km, mb4.0/3, ML3.5(LJU), ML4.0(PDG), Error ellipse: s-maj=12.4km s-min=3.7km az=173.0*

NEIC Felt at Domzale, Kocevje, Ljubljana and Ribnica. Also felt at Karlovac and Zagreb, Croatia.

*VIE **16** 20:04:59.0±0.3, 45°.76N×14°.86E, h4km, mb3.9/15, ml4.2/18, Error ellipse: s-maj=3.6km s-min=1.7km az=162.0*

*LDG **16** 20:04:59.9±0.1, 45°.79N×14°.98E, h10km, Ml4.0/22, Error ellipse: s-maj=3.8km s-min=3.0km az=27.0*

*PRU **16** 20:05:00.4±0.0, 45°.74N×14°.88E, h19km, M4.0*

*ROM **16** 20:05:00.0, 45°.78N×14°.83E, h10km, ML4.2*

*MED_RC **16** 20:05:00.0±0.9, 45°.78N×14°.83E, h10km, MW3.9/9, Moment Tensor Solution.Mantle waves: s9,c10; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.88±.10; $M_{\theta\theta}$-0.77±.09; $M_{\phi\phi}$-0.11±.14; $M_{r\theta}$0.12±.29; $M_{\theta\phi}$-0.02±.08; $M_{\phi r}$-0.02±.27; Best double couple: $M_0$0.83000×10^{15} NP1:ϕ_s90.00000°, δ49.00000°, λ92.00000°. NP2: ϕ_s267.00000°, δ41.00000°, λ88.00000°. Principal axes: T 0.8900, Plg86.0000°, Azm17.0000°; N -0.1100, Plg1.0000°, Azm268.0000°; P -0.7800, Plg4.0000°, Azm178.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

ISC 16 20:04:58.5±0.7, 45°.76N±0°.01×14°.86E±0°.01, h9km±5km, n277, σ1§65/462, mb3.8/9, 31C-31D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	**Visnje**	0.04	340	⇓iPg	Pg	20 05 00.1	-0.4
VISS				iSg	Sg	20 05 00.7	-1.1
GBRS	comp=Z,45μm,0.1s **Gornja Briga**	0.23	189	iPg	Pg	20 05 03.1	-0.2
GBRS				i		20 05 03.6	
GBRS				iSg	Sg	20 05 07.0	+0.4
CEY	comp=Z,15μm,0.3s **Cerknica**	0.30	266	↑ePg	Pg	20 05 05.0	+0.3
CEY				eSg	Sg	20 05 09.5	+0.8
CEY	**Cerknica**	0.30	266	↑iPg	Pg	20 05 04.9	+0.3
CEY				iSg	Sg	20 05 09.5	+0.8
CEY	comp=Z,5μm,0.3s **Cerknica**	0.30	266	↑iPg	Pg	20 05 04.9	+0.3
CEY				eSg	Sg	20 05 09.5	+0.8
PDKS	**Podkum**	0.31	18	⇓iPg	Pg	20 05 05.2	+0.4
PDKS				iSg	Sg	20 05 10.3	+1.3
GBAS	comp=Z,10μm,0.3s **Gorenja Brezov**	0.34	301	↑iPg	Pg	20 05 05.6	+0.4
GBAS				iSg	Sg	20 05 10.5	+0.7
VNDS	comp=Z,9μm,0.3s **Vrh nad Dolski**	0.36	342	⇓iPg	Pg	20 05 06.0	+0.4
VNDS				eSg	Sg	20 05 11.4	+1.1
LJU	comp=Z,7μm,0.4s **Ljubljana**	0.36	321	iPg	Pg	20 05 06.4	+0.6
LJU				eSg	Sg	20 05 11.2	+0.7
LJU	comp=Z,2μm,0.1s **Ljubljana**	0.36	321	⇓iPg	Pg	20 05 06.1	+0.4
LJU				eSg	Sg	20 05 11.6	+1.0
LEGS	**Legarje**	0.37	60	⇓iPg	Pg	20 05 06.1	+0.3
LEGS				iSg	Sg	20 05 11.8	+1.1
BOJS	**Bojanci**	0.38	133	iPg	Pg	20 05 06.1	+0.2
BOJS				iSg	Sg	20 05 11.3	+0.3
KNDS	comp=Z,10μm,0.5s **Knezji Dol**	0.41	235	⇓ePg	Pg	20 05 06.9	+0.3
KNDS				eSg	Sg	20 05 12.7	+0.7
KNDS	**Knezji Dol**	0.41	235	⇓iPg	Pg	20 05 06.9	+0.3
KNDS				i		20 05 07.4	
KNDS				iSg	Sg	20 05 12.4	+0.4
CRES	comp=Z,4μm,0.3s **Cresnjev**	0.42	81	↑iPg	Pg	20 05 06.7	-0.2
CRES				i		20 05 07.7	
CRES				iSg	Sg	20 05 13.4	+1.0
CRES	comp=Z,7μm,0.3s **Cresnjev**	0.42	81	↑iPg	Pg	20 05 06.6	-0.2
CRES				eSg	Sg	20 05 13.3	+1.0
OZLJ	**Ozalj**	0.45	109	iPg	Pg	20 05 07.3	0.0
OZLJ				Sg	Sg	20 05 13.8	+0.6
CESS	**Cesta pri Krsk**	0.47	63	iPg	Pg	20 05 08.1	+0.4
CESS				eSg	Sg	20 05 14.8	+0.9
RIY	comp=Z,2μm,0.2s **Rijeka**	0.51	211	⇓iPg	Pg	20 05 08.2	-0.3
RIY				eSg	Sg	20 05 15.8	+0.6
CRNS	**Crni Vrh**	0.53	307	↑iPg	Pg	20 05 09.4	+0.7
CRNS				eSg	Sg	20 05 16.2	+0.5
GCIS	comp=Z,5μm,0.3s **Gornji Cirnik**	0.55	79	ePg	Pg	20 05 09.3	+0.1
GCIS				i		20 05 10.1	
GCIS				iSg	Sg	20 05 17.3	+1.0
JAVS	comp=Z,2μm,0.4s **Javornik**	0.57	283	↑ePg	Pg	20 05 09.8	+0.1
JAVS				eSg	Sg	20 05 17.8	+0.6
JAVS	**Javornik**	0.57	283	↑iPg	Pg	20 05 09.7	+0.1
JAVS				iSg	Sb	20 05 18.4	-0.7
DOBS	comp=Z,1μm,0.2s **Dobrina**	0.57	48	⇓iPg	Pg	20 05 10.1	+0.4
DOBS				eSg	Sb	20 05 18.6	-0.5
GOLS	comp=Z,2μm,0.2s **Golise**	0.59	65	iPg	Pg	20 05 10.5	+0.6
GOLS				eSg	Sg	20 05 18.3	+0.6
MOZS	comp=Z,4μm,0.3s **Mozjanca**	0.60	331	⇓iPg	Pg	20 05 11.0	+0.7
MOZS				eSg	Sg	20 05 19.4	+1.1
SKDS	comp=Z,1μm,0.2s **Skadanscina**	0.63	250	↑ePg	Pg	20 05 10.5	-0.3
SKDS				eSg	Sg	20 05 19.8	+0.7
SKDS	**Skadanscina**	0.63	250	↑iPg	Pg	20 05 10.4	-0.3
SKDS				iSg	Sg	20 05 19.5	+0.5
VOJS	comp=Z,2μm,0.2s **Vojsko**	0.73	292	↑iPg	Pg	20 05 12.5	-0.2
VOJS				eSg	Sb	20 05 24.3	+0.6
TRI	comp=Z,1μm,0.3s **Trieste**	0.77	266	ePg	Pg	20 05 13.0	-0.3
TRI				eSg	Sb	20 05 24.9	+0.3
TRI	**Trieste**	0.77	266	⇓ePg	Pg	20 05 12.9	-0.3
TRI				eSg	Sb	20 05 24.2	-0.4
OBKA	**Obir**	0.78	344	ePg	Pg	20 05 14.0	+0.5
OBKA	comp=Z,121nm,0.3s,SNR=800			Sg	Sb	20 05 25.6	+0.6
GORS	comp=Z,712nm,0.2s **Gorjuse**	0.82	313	↑ePg	Pg	20 05 14.6	+0.3
GORS				eSg	Sb	20 05 26.6	+0.4
GORS	**Gorjuse**	0.82	313	iPg	Pg	20 05 14.5	+0.2
GORS				eSg	Sb	20 05 26.4	+0.3
GROS	comp=Z,1μm,0.2s **Grobnik**	0.83	32	⇓iPg	Pg	20 05 14.8	+0.3
GROS				eSg	Sg	20 05 26.1	+0.8
PERS	comp=Z,4μm,0.3s **Pernice**	0.89	11	iPg	Pg	20 05 15.9	+0.2
PERS				eSg	Sg	20 05 27.6	+0.3
BISS	comp=Z,2μm,0.2s **Bistriski jare**	0.90	12	⇓iPg	Pg	20 05 16.2	+0.3
SABO	**M.te Sabotino**	0.91	284	↑ePg	Pg	20 05 15.2	-0.8
CADS	**Cadrg**	0.91	301	↑ePg	Pg	20 05 15.7	-0.4
CADS	**Cadrg**	0.91	301	↑iPg	Pg	20 05 15.7	-0.4
CADS				eSg	Sn	20 05 30.0	-0.8
SOKA	comp=Z,1μm,0.2s **Soboth**	0.92	7	ePg	Pg	20 05 16.5	+0.2
SOKA	comp=Z,228nm,0.4s,SNR=560			Sg	Sb	20 05 29.6	+0.5
DRE	comp=Z,167nm,0.2s **Drenchia**	0.94	296	↑ePg	Pg	20 05 16.2	-0.5
DRE				eSg	Sn	20 05 31.3	-0.3
ROBS	**Robic**	1.06	298	↑ePg	Pg	20 05 18.1	-0.8
ROBS	**Robic**	1.06	298	↑iPg	Pg	20 05 18.0	-0.8
ROBS				eSg	Sn	20 05 34.5	+0.2
COLI	comp=Z,490nm,0.2s **Coloredo**	1.10	290	↑ePg	Pb	20 05 19.0	-0.6
PRED	**Cave del Predi**	1.13	308	↑ePg	Pb	20 05 19.6	-0.6
LSR	**Lussari**	1.17	308	⇓ePg	Pb	20 05 20.6	-0.4
KOGS	**Kog**	1.19	54	iPg	Pb	20 05 21.4	+0.2
KOGS				iSg	Sn	20 05 38.2	+0.7
NVLJ	comp=Z,2μm,0.4s **Novalja**	1.20	180	iPg	Pb	20 05 20.1	-1.3
NVLJ				Sg	Sn	20 05 39.1	+1.4
VINO	**Villanova**	1.21	295	↑ePg	Pb	20 05 20.6	-0.9
MYKA	**Terra Mystica**	1.21	316	↑ePg	Pb	20 05 21.9	+0.2
MYKA	**Terra Mystica**	1.21	316	ePg	Pn	20 05 21.8	+0.1
MYKA	comp=Z,581nm,0.4s,SNR=579			Sg	Sn	20 05 39.1	+0.9
ACOM	comp=Z,404nm,0.2s **Acomizza, Ital**	1.22	310	ePg	Pn	20 05 21.9	0.0
BAD	**Bernadia**	1.22	293	↑ePg	Pn	20 05 21.5	-0.3
PTCC	**Patocco-Chiusa**	1.23	302	ePg	Pn	20 05 20.9	-1.0
TLI	**Talmassons**	1.24	278	ePg	Pn	20 05 21.6	-0.4
BUA	**Buia**	1.29	291	⇓ePg	Pn	20 05 22.5	-0.3
BOO	**Bordano**	1.35	295	⇓ePg	Pn	20 05 23.1	-0.4
MPRI	**Monte Prat**	1.39	291	↑ePg	Pb	20 05 24.7	0.0
UDBI	**Udbina**	1.39	152	iPn	Pn	20 05 23.8	-0.3
UDBI				Sg	Sg	20 05 43.6	+0.3
BEHE	**Becsehely**	1.51	61	↑iPn	Pn	20 05 25.9	+0.2
BEHE				eSn	Sn	20 05 45.8	+0.4
BEHE	**Becsehely**	1.51	61	EPn	Pn	20 05 26.1	+0.4
BEHE				Sn	Sg	20 05 48.1	+1.0
ARSA	**Arzberg**	1.56	17	ePn	Pb	20 05 27.3	-0.2
ARSA	comp=Z,190nm,0.4s,SNR=376			Sn	Sg	20 05 48.5	-0.1
MRAK	comp=Z,992nm,0.5s **Mrakovica**	1.62	117	ePn	Pn	20 05 27.4	+0.1
MRAK				eSn	Sb	20 05 49.4	+0.2
KBA	**Koelnbreinsper**	1.68	322	Pn	Pb	20 05 29.8	+0.1
KBA	comp=Z,45nm,0.3s,SNR=416			Sn	Sg	20 05 53.3	+0.7
ABTA	comp=Z,487nm,0.3s **Abfaltersbach**	1.90	302	Pn	Pb	20 05 33.0	-0.5
ABTA	comp=Z,210nm,0.3s,SNR=286			Sn	Sg	20 05 59.6	0.0
BLY	comp=Z,262nm,0.3s **Banja Luka**	1.93	121	ePn	Pn	20 05 32.3	+0.9
BLY				eSn	Sn	20 05 55.6	-0.3

BLY	Banja Luka	1.93	121	⇓	iPN	Pn	20 05 32.4 +0.9
BLY					S	Sn	20 05 56.5 +0.7
BLY	Banja Luka	1.93	121	⇓	iPn	Pn	20 05 32.1 +0.6
BLY					eSn	Sn	20 05 55.5 -0.3
MGRS	Mrkonjic Grad	2.07	130		ePn	Pn	20 05 34.3 +0.8
MGRS					eSn	Sn	20 06 00.1 +0.7
MOA	Molln	2.13	349		ePn	Pb	20 05 36.0 -1.2
	comp=Z,28nm,0.3s,SNR=82						
MOA					Sn	Sb	20 06 02.8 -0.9
	comp=Z,33nm,0.2s						
SOP	Sopron	2.25	31		EPn	Pn	20 05 37.1 +1.2
SOP					Sn	Sb	20 06 06.0 -1.1
CONA	Conrad Observa	2.27	17		ePn	Pn	20 05 37.5 +1.2
	comp=Z,25nm,0.3s,SNR=73						
CONA					Sn	Sn	20 06 05.8 +1.4
	comp=Z,274nm,0.6s						
TIH	Tihany	2.39	60		EPn	Pb	20 05 40.1 -1.6
TIH					Sn	Sb	20 06 10.0 -1.2
DOB	Doboj	2.51	113		ePn	Pn	20 05 40.1 +0.7
DOB					eSn	Sn	20 06 10.6 +0.5
MORH	Mrgy, Hungar	2.68	79		ePn	Pn	20 05 41.3 -0.4
MORH					eSn	Sn	20 06 15.0 +0.8
MORH	Mrgy, Hungar	2.68	79		EPn	Pn	20 05 41.1 -0.7
MORH					Sn	Sn	20 06 12.1 -2.1
WTTA	Wattenberg	2.69	305		Pn	Pn	20 05 44.1 +2.1
	comp=Z,42nm,0.2s,SNR=66						
WTTA					Sn	Sb	20 06 18.4 -1.5
	comp=Z,152nm,0.6s						
WATA	Walderalm	2.76	306		ePn	Pn	20 05 45.5 +2.5
	comp=Z,46nm,0.4s,SNR=99						
CSKK	Cskako	2.84	54		EPn	Pg	20 05 52.1 -0.8
CSKK					Sn	Sn	20 06 19.0 +0.7
ZST	Bratislava	2.88	31		ePN	Pn	20 05 44.7 +0.2
ZST					eSN	Sn	20 06 17.0 -2.2
ZST					eSG	Sg	20 06 30.8 -0.1
SQTA	Sankt Quirin	2.91	301		Pn	Pn	20 05 47.7 +2.6
	comp=Z,20nm,0.4s,SNR=64						
SQTA					Sn	Sb	20 06 26.8 +0.4
	comp=Z,91nm,0.5s						
MOTA	Moosalm	3.04	303		ePn	Pn	20 05 49.5 +2.7
	comp=Z,10nm,0.2s,SNR=62						
MODS	Modra-Piesok	3.09	31		ePN	Pn	20 05 47.3 -0.2
MODS					eSN	Sn	20 06 22.1 -2.4
MODS					eSG	Sg	20 06 37.2 -0.5
MODS					eLG	Lg	20 06 48.4
FETA	Feichten	3.12	295		i Pn	Pn	20 05 51.2 +3.2
	comp=Z,17nm,0.4s,SNR=29						
FETA					Pg	Pg	20 05 57.2 -1.1
	comp=Z,38nm,0.4s						
FETA					Sn	Sb	20 06 32.1 -0.4
	comp=Z,33nm,0.4s						
FETA					Sg	Sg	20 06 39.4 +0.6
	comp=Z,50nm,0.4s						
SRO	Srobarova	3.14	48		ePN	Pn	20 05 48.7 +0.7
SRO					eSN	Sn	20 06 25.0 -0.6
SRO2	Moca	3.15	49		eSN	Sn	20 06 24.5 -1.3
GEC2	GERESS Array S	3.18	346		ePn	Pn	20 05 50.0 +1.2
GERES	GERESS Array B	3.18	346		Pn	Pn	20 05 50.0 +1.2
	comp=Z,4.7nm,0.3s,baz=166,slow=13,SNR=131						
GERES					Lg	Lg	20 06 36.1
	comp=Z,14nm,0.3s,baz=167,slow=32,SNR=5.8						
GERES					LR	LR	20 07 24.2
	comp=Z,298nm,19.0s,baz=154,slow=44						
FUORN	Ofenpass-Fuorn	3.31	287		ePn	Pn	20 05 52.6 +1.9
RETA	Reutte	3.31	303		ePn	Pn	20 05 52.6 +2.1
	comp=Z,5.6nm,0.2s,SNR=15						
RETA					Pg	Pg	20 06 04.2 +2.3
	comp=Z,41nm,0.3s						
RETA					eSn	Sb	20 06 37.9 +0.2
	comp=Z,48nm,0.5s						
RETA					Sg	Sg	20 06 51.0 +6.3
	comp=Z,118nm,0.7s						
HAPS	Han Pijesak,BI	3.35	119		ePn	Pn	20 05 51.7 +0.5
HAPS					eSn	Sn	20 06 31.6 +0.5
KRUC	Moravsky	3.46	17		ePN	Pn	20 05 53.6 +1.1
KRUC					ePG	Pg	20 06 03.1 -1.7
KRUC					eSN	Sn	20 06 33.4 -0.2
KRUC					eSG	Sg	20 06 48.3 -1.3
KHC	Kasperske Hory	3.48	346		ePn	Pn	20 05 54.3 +1.5
KHC	Kasperske Hory	3.48	346		ePN	Pn	20 05 54.0 +1.2
KHC					ePG	Pg	20 06 05.0 -0.2
KHC					eSN	Sn	20 06 34.6 +0.5
KHC					eSG	Sg	20 06 51.3 +1.1
KHC					AMS	AMS	20 07 00.0
	comp=Z,800nm,9.3s						
FRGS	Fruska Gora	3.54	98	⇓	iPn	Pn	20 05 54.1 +0.5
FRGS					eSn	Sn	20 06 35.4 -0.1
STON	Ston	3.54	144		i Pn	Pn	20 05 56.0 +2.5
STON	Ston	3.54	144		ePn	Pn	20 05 54.7 +1.2
STON					eSn	Sn	20 06 34.7 -0.7
VLC	Villacollemand	3.56	245		ePn	Pn	20 05 55.3 +1.4
VLC					eSn	Sn	20 06 39.1 +3.1
TREC	Trest	3.56	7		ePN	Pn	20 05 55.0 +1.1
TREC					eSG	Sg	20 06 53.6 +0.8
TREC					AMS	AMS	20 07 00.0
	comp=Z,900nm,7.8s						
AQU	L'Aquila	3.57	198		ePn	Pn	20 05 57.2 +3.1
AQU	L'Aquila	3.57	198		ePn	Pn	20 05 55.3 +1.3
AQU					eSn	Sn	20 06 35.3 -1.0
DAVOX	Davos/Dischmat	3.60	288		Pn	Pn	20 05 57.5 +2.9
	comp=Z,26nm,0.3s,baz=119,slow=12,SNR=138						
DAVOX					Sn	Sb	20 06 43.2 -3.0
	comp=Z,14nm,0.3s,baz=290,slow=22,SNR=9.1						
JAVC	Velka Javorina	3.64	31		ePN	Pn	20 05 56.8 +1.8
JAVC					eSG	Sg	20 07 00.0 +4.6
KOLL	Kolacno	3.71	39		ePN	Pn	20 05 56.9 +1.0
KOLL					eSN	Sn	20 06 37.9 -1.8
VRAC	Vranov	3.74	18		Pn	Pn	20 05 57.5 +1.2
	comp=Z,3.7nm,0.3s,baz=204,slow=16,SNR=26						
VRAC					Lg	Lg	20 06 50.3
	comp=Z,5.8nm,0.3s,baz=116,slow=21,SNR=4.9						
VRAC					LR	LR	20 07 41.6
	comp=Z,226nm,19.6s,baz=225,slow=44						
VRAC	Vranov	3.74	18	⇑	iPN	Pn	20 05 57.3 +1.0
VRAC	Vranov	3.74	18		ePN	Pn	20 05 57.4 +1.1
VRAC					eSN	Sn	20 06 39.4 -1.0
VRAC					eSG	Sg	20 06 56.8 -1.7
BBLS	Lazići	3.75	119	⇓	iPn	Pn	20 05 57.5 +0.9
BBLS					eSn	Sn	20 06 40.3 -0.5
DAVA	Damuels	3.76	296		ePn	Pn	20 05 59.4 +2.6
	comp=Z,21nm,0.4s,SNR=14						
DAVA					Pg	Pg	20 06 10.6 +0.1
	comp=Z,66nm,0.6s						
DAVA					eSn	Sn	20 06 46.0 +4.8
	comp=Z,20nm,0.3s						
DAVA					Sg	Sg	20 07 04.3 +5.1
	comp=Z,78nm,0.4s						
VYHS	Vyhne	3.85	43		ePN	Pn	20 05 58.7 +0.8
VYHS					eSN	Sn	20 06 41.3 -1.9
TUE	Stuetta	3.90	282		ePn	Pn	20 06 01.3 +2.6
TREB	Trebinje	3.94	139		ePn	Pn	20 06 00.4 +1.2
TREB					eSn	Sn	20 06 44.9 -0.6
DIVS	Divibare	4.01	113		ePn	Pn	20 06 00.8 +0.7
DIVS					eSn	Sn	20 06 46.2 -1.0
PSZ	Piszkesteto	4.07	56		ePn	Pn	20 06 02.5 +1.5
PSZ					eSn	Sn	20 06 48.9 +0.1
PSZ	Piszkesteto	4.07	56	⇓	iPN	Pn	20 06 01.7 +0.7
PSZ	Piszkesteto	4.07	56		EPn	Pn	20 06 02.0 +1.0
PSZ					Sn	Sn	20 06 50.0 +1.2
GOPC	GO Pecny, Ondr	4.15	359		ePN	Pn	20 06 02.9 +0.8
GOPC					eSN	Sn	20 06 50.3 -0.4
GOPC					eSG	Sg	20 07 13.7 +1.9
GOPC					AMS	AMS	20 07 20.0
	comp=Z,600nm,14.4s						
PRU	Pruhonice	4.23	357		ePN	Pn	20 06 04.0 +0.9
PRU					eSN	Sn	20 06 51.8 -0.8
PRU					eSG	Sg	20 07 15.0 +0.6
PRU					AMS	AMS	20 07 30.0
	comp=Z,700nm,14.1s						
MORC	Moravsky Berou	4.40	23		ePn	Pn	20 06 06.8 +1.2
MORC					eSn	Sn	20 06 55.4 -1.5
MORC	Moravsky Berou	4.40	23	⇓	iPN	Pn	20 06 06.7 +1.2
MORC	Moravsky Berou	4.40	23	S		Sn	20 06 56.1 -0.8
MORC	Moravsky Berou	4.40	23		ePN	Pn	20 06 06.7 +1.2
PDG	Podgorica	4.60	135	⇓	iPN	Pn	20 06 09.8 +1.7
PDG	Podgorica	4.60	135		ePn	Pn	20 06 08.5 +0.4
PDG					eSn	Sn	20 07 00.4 -1.1
TTG	Podgorica	4.60	135		ePn	Pn	20 06 11.1 +3.0
LANS	Liptovska Anna	4.61	41		ePN	Pn	20 06 09.7 +1.4
LANS					eSN	Sn	20 07 00.9 -1.1
GRA1	Grafenberg Arr	4.63	329		ePn	Pn	20 06 09.9 +1.2
GRFO	Grafenberg	4.63	329		ePn	Pn	20 06 09.5 +0.9
OKC	Ostrava-Krasne	4.64	27		ePN	Pn	20 06 08.9 +0.2
OKC					eSN	Sn	20 07 01.4 -1.2
OKC					AMS	AMS	20 08 10.0
	comp=Z,300nm,17.2s						
DPC	Dobruska-Polom	4.69	12		ePN	Pn	20 06 10.4 +0.9
DPC					eSG	Sg	20 07 30.3 +1.1
DPC					AMS	AMS	20 07 40.0
	comp=Z,400nm,13.6s						
KECS	Kecovo	4.71	53		ePN	Pn	20 06 10.9 +1.3
KECS					eSN	Sn	20 07 03.0 -1.3
BZS	Buzias	4.74	89	⇑	iP	Pn	20 06 11.0 +1.0
DRME	Dracevica, Mon	4.75	137		ePn	Pn	20 06 10.5 +0.3
DRME					eSn	Sn	20 07 04.0 -1.3
NKC	Novy Kostel	4.76	341		ePN	Pn	20 06 11.3 +1.0
NKC					eSN	Sn	20 07 04.8 -0.8
NKC					eSG	Sg	20 07 32.7 +1.5
NKC					AMS	AMS	20 07 40.0
	comp=Z,400nm,16.5s						
SIRR	Siria	4.76	81	⇑	iP	Pn	20 06 10.4 0.0
PVCC	Panska Ves	4.77	358		ePN	Pn	20 06 11.6 +1.1
PVCC					eSG	Sg	20 07 33.0 +1.3
PVCC					AMS	AMS	20 07 40.0
	comp=Z,500nm,8.4s						
UPC	Upice	4.81	9		ePN	Pn	20 06 12.5 +1.4
UPC					eSG	Sg	20 07 33.1 +0.2
UPC					AMS	AMS	20 07 50.0
	comp=Z,500nm,11.2s						
BAI	Bari	4.88	162		ePn	Pn	20 06 13.6 +1.6
BAI					Sn	Sn	20 07 03.8 -4.8
OSTC	Ostas	4.88	10		ePN	Pn	20 06 13.5 +1.4
OSTC					eSG	Sg	20 07 36.0 +0.8
OSTC					AMS	AMS	20 07 50.0
	comp=Z,500nm,14.7s						
STU	Stuttgart	4.89	310		ePn	Pn	20 06 13.0 +0.8
CHVC	Chvalec	4.89	9		ePN	Pn	20 06 13.5 +1.3
CHVC					eSG	Sg	20 07 37.5 +1.9
CHVC					AMS	AMS	20 07 50.0
	comp=Z,600nm,6.7s						
MDVR	Moldovita	4.94	99	⇓	iP	Pn	20 06 13.8 +1.0
MDVR	Moldovita	4.94	99	S		Sn	20 07 09.3 -0.7
SG1	Sgolgore (BA)	5.10	164		ePn	Pn	20 06 15.5 +0.5
SG1					Sn	Sn	20 07 13.3 -0.7
BFO	Black Forest	5.15	302		ePn	Pn	20 06 16.0 +0.3
BRG	Berggiesshubel	5.15	354		PN	Pn	20 06 16.2 +0.4
BRG					PG	Pg	20 06 36.6 -0.5
BRG					SN	Sn	20 07 13.9 -1.3
BRG					SG	Sg	20 07 45.4 +1.6
	comp=Z,123nm,0.8s						
FASA	Fasano	5.27	159		ePn	Pn	20 06 17.8 +0.4
FASA					Sn	Sn	20 07 18.6 +0.4
MATE	Matera	5.29	165	⇓	iP	Pn	20 06 18.3 +0.7
MATE	Matera	5.29	165	S		Sn	20 07 17.6 -1.0
SENIN	Lac Senin/Sane	5.30	279		ePn	Pn	20 06 21.0 +3.1
PGF	Pioggiola	5.30	235		ePn	Pn	20 06 18.2 +0.3
PGF					eSn	Sn	20 07 16.4 -2.7
	comp=Z,47nm,0.4s						
PGF	Pioggiola	5.30	235		ePn	Pn	20 06 18.2 +0.3
PGF					eSn	Sn	20 07 16.4 -2.7
MASS	Massafra	5.39	161	⇓	iPn	Pn	20 06 19.4 +0.3
MASS					Sn	Sn	20 07 21.7 +0.5
HERR	Herculane	5.40	97	⇓	iP	Pn	20 06 20.0 +0.8
CGL1	Ceglie Messapi	5.45	159		ePn	Pn	20 06 20.2 +0.3
CGL1					Sn	Sn	20 07 21.9 -0.8
TAR1	Taranto	5.53	160	⇓	iPn	Pn	20 06 21.5 +0.6
TAR1					Sn	Sn	20 07 25.4 +0.9
DRGR		5.54	76	⇓	iP	Pn	20 06 21.4 +0.3
DRGR		5.54	76	S		Sn	20 07 21.9 -3.0
OJC	Ojcow	5.55	35		ePn	Pn	20 06 21.0 -0.3
SBF	Sospel	5.61	253		ePn	Pn	20 06 22.6 +0.4
SBF					eSn	Sn	20 07 22.7 -4.0
	comp=Z,74nm,0.4s						
SBF	Sospel	5.61	253		ePn	Pn	20 06 22.6 +0.4
SBF					eSn	Sn	20 07 22.7 -4.0
STHS	Stebnicka Huta	5.66	47		eSN	Sn	20 07 28.4 +0.7
CLL	Collm	5.68	348		ePn	Pn	20 06 24.0 +1.0
CLL					i Sn	Sn	20 07 27.1 -1.2
CLL					e		20 07 39.0
CLL					i Sg	Sg	20 08 00.0 -0.9
	comp=Z,670nm,1.7s						
CLL					Lm	MLR	20 08 00.0
	comp=Z,200nm,18.4s						
CLL					eLmax		20 08 06.0
LPG	La Plagne	5.69	270		ePn	Pn	20 06 24.8 +1.3
LPG					eSn	Sn	20 07 30.3 +1.3
LPG	La Plagne	5.69	270		ePn	Pn	20 06 24.8 +1.3
LPG					eSn	Sn	20 07 30.3 +1.3
LPL	La Plagne	5.71	270		ePn	Pn	20 06 25.2 +1.6
LPL					eSn	Sn	20 07 28.9 -0.3
	comp=Z,34nm,0.5s						
LPL	La Plagne	5.71	270		ePn	Pn	20 06 25.2 +1.6
LPL					eSn	Sn	20 07 28.9 -0.3
TIR	Tirane	5.72	139		ePn	Pn	20 06 26.8 +3.2
TRPA	Tarpa	5.77	63	⇓	iP	Pn	20 06 24.4 +0.2
TRPA	Tarpa	5.77	63		EPg	Pg	20 06 52.1 +3.2
TRPA					Sn	Sn	20 07 30.1 -0.3
TRPA					ESg	Sg	20 08 22.1 +19
BNI	Bardonecchia	5.80	266		ePn	Pn	20 06 25.2 +0.4
MBDF	Montbardon	5.80	263		ePn	Pn	20 06 24.5 -0.4
MBDF					eSn	Sn	20 07 28.8 -2.8
	comp=Z,37nm,0.4s						
MBDF	Montbardon	5.80	263		ePn	Pn	20 06 24.5 -0.4
MBDF					eSn	Sn	20 07 28.8 -2.8
ECH	Echery	5.81	298		eSn	Sn	20 07 27.9 -3.6
CDF	Champ du Feu	5.82	300		ePn	Pn	20 06 25.5 +0.5
CDF					eSn	Sn	20 07 28.6 -3.2
CDF					eSg	Sg	20 08 08.2 +3.0
	comp=Z,87nm,0.8s						
CDF	Champ du Feu	5.82	300		ePn	Pn	20 06 25.5 +0.5
CDF					eSn	Sn	20 07 28.6 -3.2
CDF					eLg	Lg	20 08 08.2
HINF	Hinteralfeld	5.87	293		ePn	Pn	20 06 26.4 +0.8
HINF					eSn	Sn	20 07 30.7 -2.3
	comp=Z,40nm,0.5s						
HINF	Hinteralfeld	5.87	293		ePn	Pn	20 06 26.4 +0.8
HINF					eSn	Sn	20 07 30.7 -2.3
KOLS	Kolonicke sedl	5.95	55		ePG	Pg	20 06 50.4 -2.0
CABF	La Chapelle	6.15	281		ePn	Pn	20 06 31.1 +1.6
CABF					eSg	Sg	20 08 19.7 +3.8
	comp=Z,149nm,1.2s						
CABF	La Chapelle	6.15	281		ePn	Pn	20 06 31.1 +1.6
CABF					eLg	Lg	20 08 19.7
HAU	Haudompre	6.25	294		ePn	Pn	20 06 31.8 +0.9
HAU					eSn	Sn	20 07 41.7 -0.7
	comp=Z,40nm,0.4s						
HAU	Haudompre	6.25	294		ePn	Pn	20 06 31.8 +0.9
HAU					eSn	Sn	20 07 41.7 -0.7
FRF	La Foret Royal	6.26	252		ePn	Pn	20 06 31.4 +0.5
FRF					eSn	Sn	20 07 38.8 -3.7
	comp=Z,32nm,0.4s						
FRF	La Foret Royal	6.26	252		ePn	Pn	20 06 31.4 +0.5
FRF					eSn	Sn	20 07 38.8 -3.7
LOT	Lotru	6.26	90	⇓	iP	Pn	20 06 32.8 +1.7
LOT	Lotru	6.26	90	S		Sn	20 07 42.8 +0.1
ORIF	Oris-en-Rattie	6.39	266		ePn	Pn	20 06 34.9 +2.1
ORIF					eSn	Sn	20 07 44.5 -1.3
	comp=Z,36nm,0.5s						
ORIF	Oris-en-Rattie	6.39	266		ePn	Pn	20 06 34.9 +2.1
ORIF					eSn	Sn	20 07 44.5 -1.3
KRUS	Krusevo	6.39	131		ePn	Pn	20 06 35.3 +2.5
LMR	La Mourre	6.44	251		ePn	Pn	20 06 33.3 -0.2
LMR					eSn	Sn	20 07 42.8 -4.2
	comp=Z,26nm,0.3s						
LMR	La Mourre	6.44	251		ePn	Pn	20 06 33.3 -0.2
LMR					eSn	Sn	20 07 42.8 -4.2
TIP	Timpagrande	6.73	167		ePn	Pn	20 06 39.2 +1.8
PAGF	Fort de Pagny	6.83	297		ePn	Pn	20 06 39.9 +1.2
PAGF	Fort de Pagny	6.83	297		ePg	Pg	20 07 05.8 -3.3
PAGF					eSg	Sg	20 08 35.7 -1.8
	comp=Z,206nm,1.3s						
PAGF	Fort de Pagny	6.83	297		ePn	Pn	20 06 39.9 +1.2
PAGF					ePg	Pg	20 07 05.8 -3.3
PAGF					eSg	Sg	20 08 35.7 -1.8
SMRF	Simiane la Rot	6.83	258		ePn	Pn	20 06 39.2 +0.3
SMRF					eSn	Sn	20 07 53.9 -2.9
	comp=Z,11nm,0.4s						
SMRF	Simiane la Rot	6.83	258		ePn	Pn	20 06 39.2 +0.3
SMRF					eSn	Sn	20 07 53.9 -2.9
FNA	Florina	6.88	134		ePn	Pn	20 06 42.0 +2.4
FNA					eSn	Sn	20 07 58.3 +0.3
SFTF	Sexfontaines	7.15	294		ePn	Pn	20 06 43.9 +0.7
	baz=119						
SFTF					eSg	Sg	20 08 53.9 +6.1
	comp=Z,64nm,1.1s						
SFTF	Sexfontaines	7.15	294		ePn	Pn	20 06 43.9 +0.7
SFTF					eLg	Lg	20 08 53.9
VOIR		7.16	89	⇑	iP	Pn	20 06 43.0 -0.3
MEZF	Maizieres J'vi	7.23	296		ePn	Pn	20 06 46.3 +2.1
	baz=106						
MEZF	Maizieres J'vi	7.23	296		ePn	Pn	20 06 46.3 +2.1
VIVF	Saint-Julien-l	7.24	266		ePn	Pn	20 06 44.3 -0.2
VIVF					eSn	Sn	20 08 04.1 -2.7
	comp=Z,5.2nm,0.3s						
VIVF	Saint-Julien-l	7.24	266		ePn	Pn	20 06 44.3 -0.2
VIVF					eSn	Sn	20 08 04.1 -2.7
BURAR	Bucovina Array	7.36	72	⇑	iP	Pn	20 06 46.0 -0.2
MEM	Membach	7.65	313		sP	Pn	20 06 51.8 +1.8
SMF	Signal de Mont	7.70	281		ePn	Pn	20 06 51.6 +0.9
SMF					eSn	Sn	20 08 13.6 -4.3
	comp=Z,20nm,0.5s						
SMF	Signal de Mont	7.70	281		ePn	Pn	20 06 51.6 +0.9
SMF					eSn	Sn	20 08 13.6 -4.3
LOR	Lormes	7.74	285		ePn	Pn	20 06 52.0 +0.7
	baz=92						
LOR					eSn	Sn	20 08 16.8 -2.2
	comp=Z,13nm,0.3s						
LOR	Lormes	7.74	285		ePn	Pn	20 06 52.0 +0.7
LOR					eSn	Sn	20 08 16.8 -2.2
MLR	Muntele Rosu	7.78	88		Pn	Pn	20 06 47.3 -4.6
	comp=Z,0.1nm,0.3s,baz=263,slow=17,SNR=2.2						
MLR					Lg	Lg	20 08 55.3
	comp=Z,0.1nm,0.3s,baz=183,slow=17,SNR=3.3						
BCLA	Clavier	7.91	310		sP	Pn	20 06 55.6 +2.0
BCLA					PnPn	PnPn	20 07 00.3 -0.7
BCLA					S	Sn	20 08 20.4 -2.8
BCLA					sS	Sn	20 08 24.4 +1.2
SSF	Saint Saulge	7.96	283		ePn	Pn	20 06 55.1 +0.9
SSF					eSn	Sn	20 08 21.5 -2.8
	comp=Z,6.2nm,0.4s						
SSF	Saint Saulge	7.96	283		ePn	Pn	20 06 55.1 +0.9
SSF					eSn	Sn	20 08 21.5 -2.8
LIT	Litokhoron	7.96	133		ePn	Pn	20 06 55.6 +1.3
LASF	Ste Croix	7.99	262		ePn	Pn	20 06 55.0 +0.3
LASF					eSn	Sn	20 08 20.1 -5.1
	comp=Z,12nm,0.4s						
LASF	Ste Croix	7.99	262		ePn	Pn	20 06 55.0 +0.3
LASF					eSn	Sn	20 08 20.1 -5.1
BGES	Gesves	8.01	309		sP	Pn	20 06 57.3 +2.3
BGES					PnPn	PnPn	20 07 02.2 -0.2
GIVF	Givet	8.02	306		ePn	Pn	20 06 57.0 +2.0
GIVF					eSn	Sn	20 08 21.8 -3.9
	comp=Z,4.8nm,0.3s						
GIVF					eSg	Sg	20 09 13.0 -2.6
GIVF	Givet	8.02	306		ePn	Pn	20 06 57.0 +2.0
GIVF					eSn	Sn	20 08 21.8 -3.9
GIVF					eSg	Sg	20 09 13.0 -2.6
AVF	Avril sur Loir	8.04	281		ePn	Pn	20 06 56.1 +0.7
AVF					eSn	Sn	20 08 24.3 -2.0
AVF	Avril sur Loir	8.04	281		ePn	Pn	20 06 56.1 +0.7
AVF					eSn	Sn	20 08 24.3 -2.0
DOU	Dourbes	8.14	306		sP	Pn	20 06 59.0 +2.3
DOU					Pb	Pb	20 07 18.5 -1.1
BMRD	Maredsous	8.14	308		sP	Pn	20 06 59.0 +2.2
BMRD					PnPn	PnPn	20 07 03.9 -0.3
BAIF	Baives	8.35	305		ePn	Pn	20 07 01.7 +2.2
BAIF	Baives	8.35	305		ePn	Pn	20 07 01.7 +2.2
BGF	Bois d'Agland	8.38	280		ePn	Pn	20 07 01.5 +1.4
BGF					eSn	Sn	20 08 31.8 -2.9
	comp=Z,21nm,0.4s						
BGF	Bois d'Agland	8.38	280		ePn	Pn	20 07 01.5 +1.4
BGF					eSn	Sn	20 08 31.8 -2.9
HYF	Humbligny	8.56	285		ePn	Pn	20 07 04.9 +2.3
HYF	Humbligny	8.56	285		ePn	Pn	20 07 04.9 +2.3
AGG	Agios Georgios	8.71	138		ePn	Pn	20 07 06.5 +1.8
TCF	Toulx Ste Croi	8.82	278		ePn	Pn	20 07 07.2 +1.1
TCF					eSn	Sn	20 08 41.4 -4.2
	comp=Z,16nm,0.6s						
TCF	Toulx Ste Croi	8.82	278		ePn	Pn	20 07 07.2 +1.1
TCF					eSn	Sn	20 08 41.4 -4.2
CLF	Chambon-Foret	8.92	289		ePn	Pn	20 07 09.1 +1.6
CAF	Calviac	9.05	269		ePn	Pn	20 07 10.2 +0.9
CAF					eSn	Sn	20 08 49.0 -2.3
CAF	Calviac	9.05	269		ePn	Pn	20 07 10.2 +0.9
CAF					eSn	Sn	20 08 49.0 -2.3
MTLF	Montolieu	9.35	259		ePn	Pn	20 07 13.3 0.0
MTLF	Montolieu	9.35	259		ePn	Pn	20 07 13.3 0.0
RJF	Les Rejaudoux	9.38	272		ePn	Pn	20 07 15.2 +1.4
RJF	Les Rejaudoux	9.38	272		ePn	Pn	20 07 15.2 +1.4
LFF	La Frestale	9.98	270		ePn	Pn	20 07 23.3 +1.4
LFF	La Frestale	9.98	270		ePn	Pn	20 07 23.3 +1.4
MFF	Saint Martin d	10.44	280		ePn	Pn	20 07 29.4 +1.1
MFF	Saint Martin d	10.44	280		ePn	Pn	20 07 29.4 +1.1
LDF	La Druitiere	10.59	291		ePn	Pn	20 07 30.2 0.0
LDF	La Druitiere	10.59	291		ePn	Pn	20 07 30.2 0.0
FLN	La Foliniere	10.85	292

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNT	**Kendrikon**	**0.26**	**24**	P	**Pb**	**20 05 32.4**	**-0.5**
KNT				S	**Sg**	**20 05 36.2**	**+0.3**
KNT	**Kendrikon**	**0.26**	**24**	⇓*i*Pg	**Pb**	**20 05 32.5**	**-0.5**
KNT				*i* Sg	**Sg**	**20 05 36.3**	**+0.3**
KNT	**Kendrikon**	**0.26**	**24**	P	**Pb**	**20 05 32.4**	**-0.5**
KNT				S	**Sb**	**20 05 36.4**	**-0.9**
KNT				AML	AML	20 05 36.4	
	comp=E,3804μm,0.2s						
KNT				AML	AML	20 05 36.5	
	comp=N,2616μm,0.2s						
THE	**Thessaloniki**	**0.34**	**152**	P	**Pg**	**20 05 33.2**	**-0.2**
THE				S	**Sb**	**20 05 39.1**	**-0.3**
THE	**Thessaloniki**	**0.34**	**152**	⇑*i*Pg	**Pg**	**20 05 33.3**	**-0.2**
THE				*i* Sg	**Sg**	**20 05 38.3**	**+0.2**
THE	**Thessaloniki**	**0.34**	**152**	P	**Pg**	**20 05 33.2**	**-0.2**
THE				AML	AML	20 05 38.9	
	comp=E,623μm,0.2s						
THE				S	**Sb**	**20 05 39.6**	**+0.2**
THE				AML	AML	20 05 40.3	
	comp=N,914μm,0.2s						
VAY	**Valandovo**	**0.42**	**340**	⇑*i*Pg	**Pg**	**20 05 34.9**	**-0.1**
VAY				*i* Sg	**Sg**	**20 05 40.8**	**+0.1**
VAY				*e*Lg	Lg	20 05 40.9	
	comp=N,193nm,0.2s						
VAY				*e*Lg	Lg	20 05 41.0	
	comp=E,204nm,0.4s						
SOH	**Sokhos**	**0.47**	**103**	P	**Pb**	**20 05 36.0**	**-0.5**
SOH				S	**Sb**	**20 05 42.9**	**-0.3**
SOH	**Sokhos**	**0.47**	**103**	*i* Pg	**Pb**	**20 05 36.1**	**-0.5**
SOH				*i* Sg	**Sb**	**20 05 42.8**	**-0.4**
SOH	**Sokhos**	**0.47**	**103**	P	**Pb**	**20 05 35.9**	**-0.5**
SOH				S	**Sb**	**20 05 42.4**	**-0.8**
SOH				AML	AML	20 05 43.4	
	comp=E,2158μm,0.3s						
SOH				AML	AML	20 05 43.6	
	comp=N,3150μm,0.4s						
SRS	**Serrai**	**0.66**	**73**	P	**Pg**	**20 05 39.3**	**-0.2**
SRS				S	**Sb**	**20 05 49.2**	**+0.4**
SRS	**Serrai**	**0.66**	**73**	*i* Pg	**Pg**	**20 05 39.3**	**-0.2**
SRS				*i* Sg	**Sb**	**20 05 48.4**	**-0.4**
SRS	**Serrai**	**0.66**	**73**	P	**Pg**	**20 05 39.3**	**-0.2**
SRS				S	**Sb**	**20 05 48.6**	**-0.1**
SRS				AML	AML	20 05 49.5	
	comp=N,198μm,0.3s						
SRS				AML	AML	20 05 49.7	
	comp=E,304μm,0.2s						
PLG	**Polygyros**	**0.76**	**136**	P	**Pg**	**20 05 41.0**	**-0.3**
PLG				S	**Sn**	**20 05 52.9**	**-1.2**
PLG	**Polygyros**	**0.76**	**136**	P	**Pg**	**20 05 41.1**	**-0.3**
PLG				S	**Sg**	**20 05 51.0**	**-0.4**
PLG				AML	AML	20 05 55.2	
	comp=E,197μm,0.3s						
PLG				AML	AML	20 05 56.2	
	comp=N,240μm,0.3s						
LIT	**Litokhoron**	**0.85**	**194**	P	**Pb**	**20 05 42.5**	**-0.5**
LIT				S	**Sg**	**20 05 55.1**	**+0.9**
LIT	**Litokhoron**	**0.85**	**194**	*i* Pg	**Pb**	**20 05 42.5**	**-0.5**
LIT	**Litokhoron**	**0.85**	**194**	P	**Pb**	**20 05 42.6**	**-0.5**
STIP	**Stip**	**0.88**	**331**	*e*Pg	**Pb**	**20 05 42.2**	**-1.3**
STIP				*i* Sg	**Sb**	**20 05 54.4**	**-0.7**
STIP				*e*Lg	Lg	20 05 55.5	
	comp=E,28nm,0.4s						
STIP				*e*Lg	Lg	20 05 55.7	
	comp=N,36nm,0.4s						
NVR	**Nevrokopi**	**0.94**	**63**	P	**Pg**	**20 05 44.3**	**-0.4**
NVR				S	**Sn**	**20 05 58.7**	**+0.3**
NVR	**Nevrokopi**	**0.94**	**63**	P	**Pg**	**20 05 44.4**	**-0.2**
NVR				S	**Sn**	**20 05 57.3**	**-1.0**
NVR				AML	AML	20 05 57.7	
	comp=N,163μm,0.2s						
NVR				AML	AML	20 06 00.3	
	comp=E,275μm,0.4s						
KKB	**Krupnik**	**0.97**	**15**	*i* Pg	**Pb**	**20 05 44.3**	**-0.8**
KKB	**Krupnik**	**0.97**	**15**	*i* P	**Pb**	**20 05 44.3**	**-0.8**
KKB	**Krupnik**	**0.97**	**15**	*i* P	**Pb**	**20 05 44.3**	**-0.8**
KZN	**Kozani**	**0.97**	**231**	P	**Pb**	**20 05 45.0**	**-0.2**
KZN				S	**Sb**	**20 05 58.0**	**+0.1**
KZN	**Kozani**	**0.97**	**231**	P	**Pn**	**20 05 45.8**	**0.0**
MMB	**Musomiste**	**0.99**	**48**	*i* Pg	**Pg**	**20 05 45.2**	**-0.4**
MMB				*i* Sg	**Sn**	**20 05 58.9**	**-0.7**
MMB	**Musomiste**	**0.99**	**48**	*i* P	**Pg**	**20 05 45.2**	**-0.4**
MMB	**Musomiste**	**0.99**	**48**	*i* P	**Pb**	**20 05 45.2**	**-0.2**
FNA	**Florina**	**1.06**	**263**	P	**Pb**	**20 05 44.8**	**-1.8**
FNA				S	**Sb**	**20 06 00.6**	**+0.3**
FNA	**Florina**	**1.06**	**263**	P	**Pb**	**20 05 46.3**	**-0.3**
OUR	**Ouranopolis**	**1.10**	**122**	P	**Pb**	**20 05 47.2**	**-0.1**
OUR				S	**Sn**	**20 06 04.3**	**+1.9**
OUR	**Ouranopolis**	**1.10**	**122**	P	**Pn**	**20 05 47.4**	**0.0**
KRUS	**Krusevo**	**1.22**	**292**	*i* Pg	**Pn**	**20 05 49.3**	**+0.1**
KRUS				*i* Sg	**Sb**	**20 06 05.4**	**+0.3**
KRUS				*e*Lg	Lg	20 06 06.6	
	comp=N,8.3nm,0.4s						
KRUS				*e*Lg	Lg	20 06 06.7	
	comp=E,4.6nm,0.5s						
KAVA	**Kavala**	**1.33**	**86**	P	**Pb**	**20 05 51.0**	**-0.2**
KAVA	**Kavala**	**1.33**	**86**	P	**Pn**	**20 05 50.6**	**0.0**
KPRO	**Kipourio**	**1.44**	**228**	P	**Pb**	**20 05 53.1**	**0.0**
THL	**Klokotos Trika**	**1.48**	**203**	P	**Pn**	**20 05 52.6**	**0.0**
THL	**Klokotos Trika**	**1.48**	**203**	P	**Pn**	**20 05 53.1**	**+0.5**
THAS	**Thassos island**	**1.52**	**102**	P	**Pn**	**20 05 53.1**	**-0.1**
THAS				S	**Sg**	**20 06 14.9**	**-0.8**
THAS	**Thassos island**	**1.52**	**102**	P	**Pn**	**20 05 53.4**	**+0.2**
XOR	**Xorichti**	**1.59**	**168**	P	**Pn**	**20 05 54.1**	**-0.2**
NEO	**Neokhori**	**1.66**	**167**	P	**Pn**	**20 05 55.1**	**0.0**
RZN	**Rozhen**	**1.66**	**62**	*i* P	**Pb**	**20 05 56.4**	**-0.5**
RZN	**Rozhen**	**1.66**	**62**	*i* P	**Pb**	**20 05 56.6**	**-0.3**
VTS	**Vitosha**	**1.73**	**12**	P	**Pn**	**20 05 55.6**	**-0.6**
VTS	**Vitosha**	**1.73**	**12**	⇑*i*P	**Pg**	**20 05 59.0**	**-0.7**
VTS	**Vitosha**	**1.73**	**12**	S	**Sg**	**20 06 25.9**	**+3.7**
VTS	**Vitosha**	**1.73**	**12**	*e*P	**Pb**	**20 05 57.2**	**-0.9**
VTS	**Vitosha**	**1.73**	**12**	*i* P	**Pb**	**20 05 58.0**	**-0.1**
PLD	**Plovdiv**	**1.88**	**51**	*e*P	**Pg**	**20 06 02.5**	**-0.1**
AGG	**Agios Georgios**	**1.93**	**190**	P	**Pn**	**20 05 59.3**	**+0.4**
DIM	**Dimitrovgrad**	**2.37**	**61**	*e*P	**Pg**	**20 06 11.2**	**-0.7**
SIGR	**SIGRI**	**2.93**	**125**	P	**Pn**	**20 06 15.2**	**+2.6**
SRE	**Strehaia**	**3.75**	**5**	⇓*i*P	**Pn**	**20 06 26.2**	**+2.4**

*ISCJB **16** 20:16:24.6±0.3,56°.14S±0°.06×27°.4W±0°.1,h112km, mb4.6/29, Error ellipse: s-maj=10.9km s-min=6.5km az=44.2*
*NEIC **16** 20:16:25.4±1.5,56°.11S×27°.33W,h102km±6km,mb4.6/27, Error ellipse: s-maj=18.0km s-min=15.0km az=215.0*
*IDC **16** 20:16:25.7±5.1,56°.10S×27°.38W,h102km±45km,mb4.0/8, mb1 4.1/9,mb1mx3.9/23,mbtmp4.4/9, Error ellipse: s-maj=22.6km s-min=15.8km az=60.0*
ISC 16 20:16:26.4±0.4,56°.15S±0°.08×27°.55W±0°.07,h112km,n68, σ1§27/65,mb4.7/28,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.45**	**286**	*e*Pn	**Pn**	**20 17 44.4**	**-0.7**
HOPE				*e*Sn	**Sn**	**20 18 41.7**	**-4.8**
VNA1	**Neumayer--Stat**	**16.78**	**158**	P	**Pn**	**20 20 14.1**	**-0.1**
VNA3	**Neumayer Olymp**	**16.97**	**160**	P	**Pn**	**20 20 15.1**	**-1.5**
VNA2	**Neumayer--Watz**	**17.18**	**157**	P	**P**	**20 20 17.3**	**-1.7**
	baz=314,slow=13						
SNAA	**Sanae**	**18.74**	**156**	P	**P**	**20 20 35.3**	**-0.7**
SNAA	**Sanae**	**18.74**	**156**	P	**P**	**20 20 35.4**	**-0.7**
	4.4nm,0.3s,baz=303,slow=10,SNR=248						
SNAA	**Sanae**	**18.74**	**156**	*e*P	**P**	**20 20 35.2**	**-0.9**
	27nm,0.6s						
PMSA	**Palmer Station**	**19.68**	**229**	P	**Pn**	**20 20 51.4**	**+2.7**
	1.6nm,0.3s,baz=77,slow=7.6,SNR=6.4						
TRQA	**Tornquist**	**29.17**	**294**	*e*P	**P**	**20 22 16.9**	**0.0**
	7.9nm,1.0s						
QSPA	**South Pole Qui**	**34.10**	**180**	*e*P	**P**	**20 23 00.7**	**+0.7**
	7.1nm,0.9s						
GO05	**Huala**	**36.71**	**286**	*e*P	**P**	**20 23 21.0**	**-1.5**
	9.7nm,0.9s						
CPUP	**Villa Florida**	**36.72**	**312**	P	**P**	**20 23 22.5**	**0.0**
	1.8nm,0.5s,baz=158,slow=6.5,SNR=8.3						
CPUP	**Villa Florida**	**36.72**	**312**	*e*P	**P**	**20 23 22.7**	**+0.2**
	2.3nm,0.6s						
PEL	**Peldehue**	**37.48**	**289**	*e*P	**P**	**20 23 29.0**	**+0.1**
	8.5nm,0.9s						
ROC1	**El Roble**	**37.78**	**289**	*e*P	**P**	**20 23 31.0**	**-0.7**
GO04	**Tololo Observa**	**39.87**	**292**	*e*P	**P**	**20 23 47.1**	**-2.1**
	18nm,1.1s						
MAW	**Mawson**	**40.19**	**144**	P	**P**	**20 23 51.2**	**+0.1**
	2.8nm,0.8s,baz=248,slow=8.6,SNR=6.3						
MAW	**Mawson**	**40.19**	**144**	*e*P	**P**	**20 23 51.2**	**+0.1**
	0.4nm,0.6s						
LCO	**Las Campanas**	**40.76**	**293**	*e*P	**P**	**20 23 56.4**	**-0.1**
	1.2nm,0.6s						
GO02	**Mina Guanaco**	**43.36**	**298**	*e*P	**P**	**20 24 18.1**	**+0.4**
	19nm,0.6s						
LVC	**Limon Verde**	**45.17**	**301**	*e*P	**P**	**20 24 33.3**	**+1.1**
	12nm,0.8s						
PB10	**IPOC Station P**	**45.21**	**298**	*e*P	**P**	**20 24 31.7**	**-0.4**
	39nm,1.1s						
BOSA	**Boshof**	**46.19**	**76**	P	**P**	**20 24 40.0**	**+0.1**
	2.1nm,0.8s,baz=210,slow=8.1,SNR=3.7						
BOSA	**Boshof**	**46.19**	**76**	*e*P	**P**	**20 24 37.3**	**-2.6**
	2.8nm,1.0s						
VNDA	**Vanda**	**46.47**	**183**	P	**P**	**20 24 42.6**	**+1.3**
	2.1nm,0.7s,baz=186,slow=6.7,SNR=20						
VNDA	**Vanda**	**46.47**	**183**	*e*P	**P**	**20 24 43.3**	**+2.0**
	2.3nm,0.7s						
PB01	**IPOC Station P**	**46.78**	**301**	*e*P	**P**	**20 24 45.4**	**+0.8**
	17nm,0.8s						
GO01	**Chusmiza**	**47.82**	**302**	*e*P	**P**	**20 24 54.0**	**+1.0**
	18nm,0.9s						
PB11	**IPOC Station P**	**47.96**	**302**	*e*P	**P**	**20 24 55.0**	**+1.2**
	13nm,0.9s						
MNMC	**Minye Minye**	**48.48**	**302**	*e*P	**P**	**20 24 58.8**	**+1.0**
	33nm,0.4s						
LBTB	**Lobatse**	**49.23**	**73**	*e*P	**P**	**20 25 02.8**	**-0.6**
	3.4nm,0.8s						
TSUM	**Tsumeb**	**49.91**	**61**	*e*P	**P**	**20 25 07.9**	**-0.7**
	4.9nm,1.1s						
LPAZ	**La Paz**	**50.27**	**306**	P	**P**	**20 25 12.8**	**+0.9**
	4.8nm,0.3s,baz=124,slow=5.1,SNR=35						
LPAZ	**La Paz**	**50.27**	**306**	*e*P	**P**	**20 25 12.9**	**+0.9**
	7.7nm,0.5s						
CASY	**Casey**	**53.89**	**160**	*e*P	**P**	**20 25 34.7**	**-2.6**
	3.2nm,1.0s						
LSZ	**Lusaka**	**58.60**	**69**	*e*P	**P**	**20 26 08.9**	**-2.6**
	8.8nm,1.1s						
DBIC	**Dimbokro**	**65.34**	**25**	P	**P**	**20 26 57.4**	**+0.9**
	5.0nm,0.6s,baz=173,slow=5.6,SNR=8.9						
DBIC	**Dimbokro**	**65.34**	**25**	*e*P	**P**	**20 26 57.4**	**+0.9**
	13nm,1.0s						
OTAV	**Otavalo**	**69.54**	**304**	*e*P	**P**	**20 27 25.2**	**+1.7**
	4.7nm,0.8s						
MCQ	**Macquarie Isla**	**69.59**	**184**	*e*P	**P**	**20 27 23.2**	**+0.5**
	55nm,1.0s						
TOA0	**Torodi Ar. Sit**	**73.24**	**30**	*e*P	**P**	**20 27 46.5**	**+1.4**
	13nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.24**	**30**	P	**P**	**20 27 44.1**	**-1.0**
	9.6nm,0.9s,baz=196,slow=6.9,SNR=36						
TOA1	**Torodi Ar. Sit**	**73.24**	**30**	*e*P	**P**	**20 27 44.1**	**-1.0**
MDT	**Midelt**	**90.74**	**19**	P	**P**	**20 29 19.5**	**+3.3**
	3.8nm,0.7s,baz=198,slow=3.6,SNR=8.2						
ASAR	**Alice Springs**	**98.96**	**163**	P	Pdif	20 29 53.5	-0.7
	0.3nm,0.8s,baz=180,slow=4.5,SNR=3.4						
AS31	**Alice Springs**	**98.96**	**163**	*e*P	Pdif	20 29 53.5	-0.7
NV01	**Mina Array Sit**	**121.25**	**293**	*e*PKPdf	**PKiKP**	**20 35 06.2**	**+0.5**
NVAR	**Mina Array Bea**	**121.25**	**293**	PKP	**PKiKP**	**20 35 06.2**	**+0.5**
	0.5nm,0.7s,baz=141,slow=3.3,SNR=4.3						
FIA0	**FINESS Array S**	**124.56**	**28**	*e*PKPdf	**PKPdf**	**20 35 10.9**	**0.0**
FINES	**FINESS Array B**	**124.56**	**28**	PKP	**PKPdf**	**20 35 10.9**	**0.0**
	1.8nm,0.6s,baz=188,slow=1.9,SNR=14						
CMAR	**Chiang Mai Arr**	**125.22**	**111**	PKP	**PKPdf**	**20 35 13.3**	**-0.2**
	0.4nm,0.4s,baz=230,slow=3.4,SNR=4.3						
G08A	**Pilot Rock**	**126.63**	**298**	*e*PKPdf	**PKiKP**	**20 35 16.6**	**+0.5**
AKTO	**Aktyubinsk**	**127.55**	**54**	PKP	**PKPdf**	**20 35 16.9**	**-0.2**
	1.4nm,0.7s,baz=144,slow=3.5,SNR=3.8						
BVAR	**Borovoye Array**	**135.00**	**58**	PKP	**PKPdf**	**20 35 30.9**	**-0.1**
	0.6nm,0.5s,baz=166,slow=0.8,SNR=4.0						
YKA	**Yellowknife Ar**	**136.11**	**318**	PKP	**PKPdf**	**20 35 32.6**	**-0.1**
	2.0nm,0.6s,baz=125,slow=2.4,SNR=15						
YKB5	**Yellowknife Ar**	**136.11**	**318**	*e*PKPdf	**PKPdf**	**20 35 32.6**	**-0.1**
MK32	**Makanchi Array**	**137.11**	**72**	*e*PKPdf	**PKPdf**	**20 35 35.5**	**+0.3**
MKAR	**Makanchi Array**	**137.11**	**72**	PKP	**PKPdf**	**20 35 35.5**	**+0.3**
	0.4nm,0.6s,baz=217,slow=1.9,SNR=5.5						
ZALV	**Zalesovo Beam**	**142.59**	**64**	PKhKP	PKPpre	20 35 41.0	
	1.1nm,0.4s,baz=234,slow=3.0,SNR=4.8						
ZAA1	**Zalesovo Array**	**142.60**	**64**	*e*PKPpre	PKPpre	20 35 41.0	
HYT	**Haines Junctio**	**144.69**	**307**	*e*PKPdf	**PKPdf**	**20 35 48.9**	**+0.4**
INK	**Inuvik**	**145.75**	**321**	PKPbc	**PKPbc**	**20 35 51.1**	**+0.5**
	15nm,0.8s,baz=63,slow=2.7,SNR=16						
INK	**Inuvik**	**145.75**	**321**	*e*PKPdf	**PKPab**	**20 35 51.2**	**0.0**
HMT	**Hamilton**	**147.57**	**304**	*e*PKPbc	**PKPbc**	**20 35 57.0**	**+0.8**
ILAR	**Eielson Array**	**150.03**	**312**	PKPbc	**PKPbc**	**20 36 02.2**	**+0.1**
	11nm,0.8s,baz=132,slow=1.7,SNR=91						
KDAK	**Kodiak Island**	**150.68**	**296**	*e*PKPbc	**PKiKP**	**20 36 04.6**	**+0.1**
SONA0	**Songino Array**	**150.94**	**87**	*e*PKPbc	**PKPbc**	**20 36 05.0**	**-0.1**
SONM	**Songino Array**	**150.94**	**87**	PKPbc	**PKPbc**	**20 36 05.0**	**-0.1**
	4.1nm,0.7s,baz=228,slow=2.9,SNR=17						

*ISCJB **16** 20:19:37.5±0.6,29°.9N±0°.1×41°.94W±0°.09,h10km, mb4.5/20,MS3.4/13,Error ellipse: s-maj=20.7km s-min=11.3km az=174.7*
*IDC **16** 20:19:38.2±3.0,29°.98N×41°.95W,h0km,mb3.9/9, mb1 4.2/9,mb1mx3.8/55,mbtmp3.9/9,MS3.4/13, Ms1 3.4/13,ms1mx3.1/39,Error ellipse: s-maj=105.4km s-min=19.3km az=177.0*
*NEIC **16** 20:19:39.5±1.7,29°.90N×41°.95W,h10km,mb4.4/15,Error ellipse: s-maj=27.7km s-min=6.5km az=128.0*
ISC 16 20:19:39.5±0.9,29°.9N±0°.2×41°.9W±0°.1,h10km,n44, σ0§61/27,mb4.4/20,MS3.4/13,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**25.00**	**248**	LR	LR	20 32 42.7	
	comp=Z,41nm,20.7s,baz=88,slow=31						
MDP	**Montagnes des**	**26.66**	**204**	LR	LR	20 34 07.6	
	comp=Z,19nm,19.8s,baz=200,slow=32						
SCHQ	**Schefferville**	**30.68**	**331**	LR	LR	20 37 48.2	
	comp=Z,65nm,18.0s,baz=228,slow=36						
DBIC	**Dimbokro**	**41.79**	**116**	LR	LR	20 42 26.3	
	comp=Z,48nm,19.5s,baz=278,slow=33						
KEST	**Kesra**	**43.08**	**68**	P	**P**	**20 27 40.1**	**+0.3**
	3.2nm,1.0s,baz=264,slow=9.2,SNR=3.7						
KEST	**Kesra**	**43.08**	**68**	*e*P	**P**	**20 27 40.1**	**+0.3**
	3.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**43.56**	**103**	LR	LR	20 44 26.9	
	comp=Z,45nm,20.5s,baz=320,slow=34						
ULM	**Lac du Bonnet**	**44.91**	**313**	LR	LR	20 45 17.9	
	comp=Z,34nm,19.7s,baz=10.0,slow=34						
H10N2	**ASCENSION HYDR**	**45.84**	**140**	T	T	21 17 11.4	
	baz=326,slow=75,SNR=417						
H10N3	**ASCENSION HYDR**	**45.84**	**141**	T	T	21 17 11.6	
	baz=326,slow=75,SNR=463						
H10N1	**ASCENSION HYDR**	**45.86**	**141**	T	T	21 17 12.8	
	baz=326,slow=75,SNR=442						
GEC2	**GERESS Array S**	**45.88**	**49**	*e*P	**P**	**20 28 01.9**	**-0.2**
	2.1nm,1.1s						
GERES	**GERESS Array B**	**45.88**	**49**	P	**P**	**20 28 01.9**	**-0.2**
	0.6nm,0.6s,baz=261,slow=7.6,SNR=8.7						
H10S1	**ASCENSION HYDR**	**46.67**	**142**	T	T	21 18 14.6	
	baz=327,slow=75,SNR=277						
H10S3	**ASCENSION HYDR**	**46.68**	**142**	T	T	21 18 14.7	
	baz=327,slow=75,SNR=194						
H10S2	**ASCENSION HYDR**	**46.69**	**142**	T	T	21 18 15.8	
	baz=327,slow=75,SNR=233						
VAE	**Valguarnera**	**46.88**	**65**	LR	LR	20 43 41.0	
	comp=Z,66nm,19.8s,baz=357,slow=31						
MSTX	**Muleshoe**	**51.16**	**291**	*e*P	**P**	**20 28 43.8**	**+0.7**
	6.3nm,1.1s						
TXAR	**Lajitas Array**	**53.09**	**286**	P	**P**	**20 28 57.5**	**0.0**
	1.3nm,1.1s,baz=90,slow=6.5,SNR=5.3						
TXAR				LR	LR	20 50 40.4	
	comp=Z,18nm,18.1s,baz=0.0,slow=35						
LENM	**Lemitar**	**54.49**	**293**	*e*P	**P**	**20 29 07.7**	**-0.1**
PD31	**Pinedale Array**	**54.64**	**303**	*e*P	**P**	**20 29 08.4**	**-0.4**
	3.8nm,0.8s						
PDAR	**Pinedale Array**	**54.64**	**303**	P	**P**	**20 29 08.4**	**-0.4**
	2.5nm,0.7s,baz=80,slow=8.1,SNR=20						
BW06	**Boulder Array**	**54.64**	**303**	*e*P	**P**	**20 29 08.5**	**-0.3**
	4.1nm,0.8s						
IMW	**Indian Meadow**	**55.44**	**305**	*e*P	**P**	**20 29 14.9**	**+0.3**
	3.1nm,0.8s						
YHB	**Horse Butte**	**55.47**	**306**	*e*P	**P**	**20 29 15.2**	**+0.5**
	5.8nm,0.9s						
TPAW	**Teton Pass**	**55.52**	**304**	*e*P	**P**	**20 29 15.5**	**+0.3**
	3.8nm,1.1s						
AKASG	**Malin Array Be**	**55.86**	**47**	P	**P**	**20 29 16.4**	**-0.7**
	0.9nm,0.6s,baz=278,slow=6.4,SNR=4.9						
YKA	**Yellowknife Ar**	**56.01**	**328**	LR	LR	20 53 11.4	
	comp=Z,4.6nm,18.0s,slow=36						
BR101	**Keskin Array S**	**61.14**	**59**	*e*P	**P**	**20 29 54.4**	**0.0**
BRTR	**Keskin Array B**	**61.14**	**59**	P	**P**	**20 29 54.4**	**0.0**
	1.5nm,0.8s,baz=254,slow=5.5,SNR=10						
KVN	**Kaiserville**	**61.80**	**301**	*e*P	**P**	**20 29 58.0**	**-0.9**
	3.0nm,1.2s						
NV01	**Mina Array Sit**	**62.13**	**300**	*e*P	**P**	**20 30 00.5**	**-0.8**
NVAR	**Mina Array Bea**	**62.13**	**300**	P	**P**	**20 30 00.5**	**-0.8**
	0.8nm,0.7s,baz=76,slow=7.6,SNR=6.4						
MDPB	**Devils Postpil**	**62.96**	**300**	*e*P	**P**	**20 30 05.8**	**-1.0**
	4.3nm,1.1s						
ISA	**Isabella, Lake**	**63.12**	**297**	*e*P	**P**	**20 30 06.6**	**-1.1**
	148nm,0.3s						
GO03	**Copiap**	**63.25**	**208**	*e*P	**P**	**20 30 07.5**	**-0.9**
	56nm,0.4s						
NLWA	**Neilton Lookou**	**63.49**	**311**	*e*P	**P**	**20 30 10.4**	**+0.5**
	9.8nm,1.0s						
LCO	**Las Campanas**	**64.70**	**208**	*e*P	**P**	**20 30 19.1**	**+1.0**
	21nm,0.4s						
ILAR	**Eielson Array**	**69.40**	**334**	P	**P**	**20 30 47.2**	**-0.1**
	1.0nm,1.0s,baz=51,slow=3.9,SNR=9.6						
ILAR				LR	LR	21 01 07.8	
	comp=Z,44nm,18.5s,baz=86,slow=36						
ILB	**Eielson Array**	**69.40**	**334**	*e*P	**P**	**20 30 47.2**	**-0.1**
	2.9nm,1.1s						
ARU	**Arti**	**71.06**	**35**	LR	LR	21 00 43.5	
	comp=Z,48nm,18.3s,baz=227,slow=35						
PLCA	**Paso Flores**	**75.11**	**202**	LR	LR	21 03 45.3	
	comp=Z,77nm,18.1s,baz=224,slow=35						
BVAR	**Borovoye Array**	**78.69**	**35**	P	**P**	**20 31 42.6**	**+0.8**
	2.1nm,1.2s,baz=323,slow=2.2,SNR=3.6						
KMBO	**Kilima Mbogo**	**81.17**	**96**	LR	LR	21 07 34.6	
	comp=Z,52nm,18.2s,baz=89,slow=35						

*NSSC **16** 20:31:21.1±0.6,39°.37N×38°.73E,h29km±999km,ML3.8*
*NIC **16** 20:31:31.8±0.3,38°.48N×37°.75E,h17km,mb4.4,ML3.9*
*NEIC **16** 20:31:38.6±0.0,38°.09N×37°.11E,h5km,mb3.8/5, ML4.2(ISK),After ISK.*
*ISCJB **16** 20:31:38.8±0.4,38°.08N±0°.01×37°.11E±0°.02,h2km±3km, mb3.8/17,MS3.1/5,Error ellipse: s-maj=2.5km s-min=1.9km az=29.0*
*DDA **16** 20:31:38.0,38°.11N×37°.08E,h13km±1km,mb4.1*
*ISK **16** 20:31:38.4,38°.09N×37°.11E,h5km,ML4.2/23*
*IDC **16** 20:31:39.2±0.7,38°.14N×36°.97E,h0km,mb3.8/13, mb1 3.8/22,mb1mx3.7/50,mbtmp3.7/22,ML3.4/8,MS2.9/13, Ms1 2.9/13,ms1mx2.7/42,Error ellipse: s-maj=13.9km s-min=9.5km az=2.0*
*GII **16** 20:31:40.4±0.0,38°.09N×37°.11E,h5km*
ISC 16 20:31:39.0±1.1,38°.10N±0°.02×37°.09E±0°.02,h1km±8km, n170,σ1§43/190,mb3.8/20,MS2.9/5,3C-7D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELBS	**KAHRAMANMARAS**	**0.22**	**8**	⇓*i*P	**Pg**	**20 31 43.9**	**+0.6**
ELBS				*i* S	**Sg**	**20 31 47.7**	**+1.4**
ELBS				IAML_P			
	comp=Z,260μm,0.3s						
DARE	**Darende-Malaty**	**0.56**	**33**	PG	**Pg**	**20 31 48.9**	**-0.8**
DARE				SG	**Sb**	**20 31 57.9**	**-2.4**
KMRS	**Kahramanmaras**	**0.61**	**194**	PG	**Pg**	**20 31 50.4**	**-0.4**
KMRS				SG	**Sg**	**20 31 59.0**	**+0.3**
CUGUR	**Gurin_SVAS**	**0.64**	**13**	⇓*i*P	**Pg**	**20 31 50.9**	**-0.3**
CUGUR				*i* S	**Sb**	**20 32 00.7**	**-1.8**
HCB	**Kahramanmara**	**0.77**	**191**	⇓*i*P	**Pg**	**20 31 53.6**	**-0.1**
HCB				*i* S	**Sg**	**20 32 03.9**	**+0.2**
HCB				IAML_P			
	comp=Z,4μm,0.1s						
ANDN	**Andirin**	**0.79**	**229**	⇓*i*P	**Pg**	**20 31 53.7**	**-0.4**
ANDN				*i* S	**Sb**	**20 32 06.7**	**-0.1**
ANDN				IAML_P			
	comp=Z,33μm,0.4s						
SAIM	**ADANA**	**0.81**	**261**	⇑*i*P	**Pg**	**20 31 53.4**	**-1.1**
SAIM				*i* S	**Sg**	**20 32 06.3**	**+1.4**
SAIM				IAML_

MAZI Mazidag 2.73 103 PN **Pn 20 32 24.1 0.0**
SULT Sultanhani-AKS 2.82 273 PN **Pn 20 32 25.7 +0.4**
SERE Sereflikochisa 2.89 288 PN **Pn 20 32 26.8 +0.5**
BGOL Bingol 2.94 71 *i* P **Pb 20 32 33.0 +0.7**
ORDU Ordu-Boztepe 2.94 11 *i* P **Pn 20 32 28.6 +1.6**
MARD Mardin 3.03 104 *i* P **Pn 20 32 27.4 -0.8**
SILI Silifke-Mersin 3.06 237 PN **Pn 20 32 29.4 +0.8**
DELI KIRIKKALE 3.11 308 *i* P **Pn 20 32 29.8 +0.5**
BR101 Keskin Array S 3.14 302 *e*Pn **Pn 20 32 29.7 -0.1**
BR101 *e* 20 32 35.8
BR131 Keskin Array S 3.14 302 *e*Pn **Pn 20 32 31.1 +1.3**
BRTR Keskin Array B 3.14 302 Pn **Pn 20 32 29.7 -0.1**
comp=Z,2.1nm,0.3s,baz=136,slow=18,SNR=74
BRTR Pg **Pb 20 32 35.8 +0.1**
comp=Z,12nm,0.3s,baz=128,slow=17,SNR=124
BRTR Lg Lg 20 33 18.5
comp=Z,9.4nm,0.3s,baz=129,slow=21,SNR=6.6
BRTR LR LR 20 33 35.5
comp=Z,69nm,19.8s,baz=82,slow=38
HAVZ Havza 3.15 341 *i* P **Pn 20 32 31.5 +1.7**
KEBE Keben-Mersin 3.16 240 PN **Pn 20 32 30.5 +0.5**
SVAN Silvan-Diyarba 3.24 88 *i* P **Pn 20 32 31.4 +0.4**
KOPT Kop Dagi 3.27 53 *i* P **Pb 20 32 33.9 -4.1**
BNGL BINGOL 3.29 74 *i* P **Pg 20 32 39.9 -2.2**
IKL Isikli 3.30 237 PN **Pn 20 32 32.7 +1.0**
BTMN Batman 3.31 92 *i* P **Pn 20 32 32.8 +0.8**
SAMS Samsun-Alacam 3.33 348 *i* P **Pn 20 32 33.9 +1.7**
ECAT Cat-ERZURUM 3.38 62 *i* P **Pn 20 32 31.8 -1.3**
BBAL Bala 3.42 296 *i* P **Pn 20 32 34.3 +0.7**
GULN MERSIN_Gulnar 3.42 237 *i* P **Pn 20 32 34.2 +0.7**
AKKU Akkuyu-Mersin 3.43 237 PN **Pn 20 32 34.4 +0.8**
KKUL Konya-Kulu 3.44 289 *i* P **Pn 20 32 34.3 +0.4**
EREN Erenkoy 3.48 223 PN **Pn 20 32 34.9 +0.7**
MUSM Mu-Merkez 3.53 78 *i* P **Pn 20 32 36.6 +1.5**
VRTB Varto-Mus 3.58 71 *i* P **Pb 20 32 41.0 -2.1**
ERMK Ermenek 3.63 248 *i* P **Pn 20 32 39.8 +3.2**
KAGI orum-Kargı 3.64 327 *i* P **Pn 20 32 38.1 +1.5**
KRIK Erzurum-spir 3.72 52 *i* P **Pn 20 32 40.1 +2.3**
KONT Konya--Tatoy 3.74 269 *i* P **Pn 20 32 40.0 +2.1**
ANTO Ankara 3.79 299 *e*Pn **Pn 20 32 40.4 +1.9**
BR231 Keskin MP Arra 3.79 299 *e*Pn **Pn 20 32 40.5 +1.9**
SRTM Siirt_Merkez 3.81 90 *i* P **Pn 20 32 39.8 +0.8**
HWQ Hawqa 3.93 194 *e*P **Pn 20 32 41.8 +1.2**
ILGA Ilgaz 3.94 320 *e*Pn **Pn 20 32 42.5 +1.8**
ILGA Ilgaz 3.94 320 *i* P **Pn 20 32 43.0 +2.2**
KDHN Kadinhani 3.94 278 *i* P **Pn 20 32 42.2 +1.6**
PHNC Paralimni 3.95 219 P **Pn 20 32 40.0 -0.8**
baz=39
PHNC S **Sb 20 33 33.6 -4.2**
SINO SINOP_Merkez 4.17 340 *i* P **Pn 20 32 43.9 +0.1**
SIRN Sırnak 4.26 97 *i* P **Pn 20 32 45.7 +0.7**
MAMC Mammari 4.27 228 P **Pn 20 32 44.4 -0.8**
baz=46
DOGA KONYA_Doganhis 4.28 272 *i* P **Pn 20 32 46.9 +1.5**
CMDR Camlidere-ANKA 4.31 305 *i* P **Pn 20 32 48.0 +2.3**
BHL Bhannes 4.35 196 *e*P **Pn 20 32 46.1 -0.2**
CSS Mathiatis 4.36 225 P **Pn 20 32 46.1 -0.3**
baz=44
CSS S **Sb 20 33 43.7 -5.8**
DQRL Deir Qamar 4.56 196 *e*P **Pn 20 32 50.3 +1.2**
QASN Qassioun 4.61 189 *e*P **Pn 20 32 51.8 +2.0**
QASN *e*S **Sb 20 33 56.1 -0.6**
QASN AML AML 20 34 17.6
comp=N,331nm,0.6s
QASN AML AML 20 34 24.6
comp=E,124nm,0.6s
ALFC Alefka 4.66 232 P **Pn 20 32 50.0 -0.5**
baz=49
TOTH TOTAH 4.76 187 *e*P **Pn 20 32 53.3 +1.3**
TOTH *e*S **Sb 20 33 58.9 -2.2**
TOTH AML AML 20 34 20.2
comp=N,203nm,0.7s
TOTH AML AML 20 34 24.3
comp=E,142nm,0.7s
BRBR Barbar 4.77 192 *e*P **Pn 20 32 53.5 +1.3**
BRBR *e*S **Sb 20 34 01.3 -0.3**
BRBR AML AML 20 34 21.0
comp=N,157nm,0.7s
BRBR AML AML 20 34 36.7
comp=E,129nm,0.7s
SHBL Chebaa 4.87 193 *e*P **Pn 20 32 55.0 +1.5**
NATI Neve Ativ 4.95 193 Pn **Pn 20 32 55.5 +1.0**
PPCY Paphos 4.99 231 P **Pn 20 32 55.5 +0.4**
baz=48
GEM Giv'at Ha'Em 5.02 194 Pn **Pn 20 32 56.6 +1.2**
KSDI Kefar Szold 5.04 194 Pn **Pn 20 32 56.3 +0.6**
ISP Isparta 5.20 269 *e*Pn **Pn 20 33 00.7 +2.6**
KSHT Keshet 5.21 192 Pn **Pn 20 32 58.7 +0.5**
MMA0B Mount Meron ar 5.26 196 Pn **Pn 20 33 00.2 +1.4**
MMAI Mount Meron Ar 5.26 196 Pn **Pn 20 32 58.8 -0.1**
comp=E,2.5nm,0.3s,baz=11,slow=14,SNR=19
MMAI Lg Lg 20 34 30.5
comp=E,6.0nm,0.3s,baz=20,slow=30,SNR=3.8
MMLI Mount Malkishu 5.81 194 Pn **Pn 20 33 07.7 +1.3**
ASF Jabal al Asfar 5.92 182 Pn **Pn 20 33 10.6 +2.8**
comp=E,0.4nm,0.3s,baz=327,slow=17,SNR=4.0
ASF Lg Lg 20 34 48.7
comp=E,2.9nm,0.3s,baz=131,slow=22,SNR=6.5
HMDT Nahal Hemdat 5.97 193 Pn **Pn 20 33 10.4 +1.8**
SLTI Sal'it 6.08 197 Pn **Pn 20 33 10.7 +0.6**
GNI Garni 6.29 69 LR LR 20 35 18.8
comp=E,24nm,18.5s,baz=276,slow=34
DSI Dead Sea 6.67 193 Pn **Pn 20 33 19.6 +1.5**
KBZ Khabaz 7.13 36 Pn Pn 20 33 28.8 +4.3
comp=E,0.1nm,0.3s,baz=231,slow=13,SNR=2.1
KBZ LR LR 20 36 48.4
comp=E,118nm,18.5s,baz=234,slow=43
PRNI Paran 7.92 193 Pn **Pn 20 33 35.9 +0.6**
EIL Elat 8.60 193 Pn **Pn 20 33 46.8 +2.3**
baz=0.0,slow=14,SNR=2.4
EIL Lg Lg 20 36 17.9
comp=E,0.3nm,0.3s,baz=30,slow=18,SNR=2.8
IDI Anoyia 10.19 258 Pn **Pn 20 34 07.1 +0.6**
comp=E,1.4nm,0.3s,baz=75,slow=10,SNR=13
IDI LR LR 20 38 42.9
comp=E,40nm,21.6s,baz=96,slow=42
MLR Muntele Rosu 11.12 315 Pn **Pn 20 34 19.9 +0.7**
comp=E,0.1nm,0.3s,baz=138,slow=16,SNR=2.6
MLR LR LR 20 39 40.4
comp=E,157nm,18.2s,baz=120,slow=44
GEYT Alibeck 16.57 84 Pn **P 20 35 33.7 -1.5**
comp=E,0.1nm,0.3s,baz=287,slow=9.8,SNR=10
GEYT LR LR 20 43 17.3
comp=E,16nm,19.0s,baz=235,slow=42
OBN Obninsk 17.02 359 LR LR 20 43 19.1
comp=E,7.9nm,18.9s,baz=177,slow=41
MOA Molln 19.27 308 P **Pn 20 36 10.1 +4.2**
comp=E,1.9nm,0.8s
AKTO Aktyubinsk 19.32 44 LR LR 20 45 31.9
comp=E,55nm,20.5s,baz=240,slow=43
KBA Koelnbreinsper 19.59 305 P **Pn 20 36 11.9 +2.0**
comp=E,2.5nm,0.9s
GEC2 GERESS Array S 20.01 310 *e*P **P 20 36 12.4 -0.7**
comp=E,1.9nm,0.9s
GERES GERESS Array B 20.01 310 P **P 20 36 12.4 -0.7**
comp=E,0.1nm,0.3s,baz=116,slow=11,SNR=8.9
KHC Kasperske Hory 20.20 311 *e*P Pn 20 36 15.3 -1.7
comp=E,1.0nm,1.0s
KHC Kasperske Hory 20.20 311 *e*P Pn 20 36 16.5 -0.4
WTTA Wattenberg 20.76 304 P Pn 20 36 23.5 -0.1
comp=E,1.8nm,0.6s
WATA Walderalm 20.82 304 *e*P Pn 20 36 24.3 0.0
comp=E,0.9nm,0.5s
SQTA Sankt Quirin 21.02 304 *e*pP **P 20 36 27.7 +3.6**
comp=E,7.2nm,1.2s
MOTA Moosalm 21.13 304 *e*pP **P 20 36 25.8 +0.5**
comp=E,1.5nm,0.7s
FETA Feichten 21.29 303 P **P 20 36 29.4 +2.4**
comp=E,3.8nm,0.9s
RETA Reutte 21.39 304 pP **P 20 36 27.6 -0.4**
comp=E,2.4nm,0.6s
CLL Collm 21.50 316 *e*(sP) **P 20 36 33.0 +3.9**
DAVA Damuels 21.91 303 P **P 20 36 34.9 +1.1**
comp=E,6.9nm,1.1s
KIRV Kirov 22.00 17 P **P 20 36 34.3 -0.1**
comp=E,7.6nm,0.8s,baz=211,slow=18,SNR=5.1
KIRV LR LR 20 45 48.8
comp=E,46nm,18.3s,baz=133,slow=39
KEST Kesra 22.28 272 P **P 20 36 38.3 +0.6**
comp=E,5.4nm,0.8s,baz=268,slow=2.8,SNR=8.9
ARU Arti 23.25 31 P **P 20 36 47.7 +0.1**
comp=E,1.2nm,0.7s,baz=209,slow=6.5,SNR=5.4
ARU LR LR 20 47 07.9
comp=E,26nm,21.8s,baz=240,slow=40
ARU Arti 23.25 31 *e*P **P 20 36 47.2 -0.3**
comp=E,2.8nm,0.8s
WSAR Wadi Sarin 23.64 123 LR LR 20 48 24.8
comp=E,36nm,20.2s,baz=5.0,slow=42
ECH Echery 23.92 305 *e*P **P 20 36 54.2 -0.2**
comp=E,7.7nm,1.1s
FIA0 FINESS Array S 24.36 347 *e*P **P 20 36 58.2 0.0**
FINES FINESS Array B 24.36 347 P **P 20 36 58.3 0.0**
comp=E,2.8nm,1.0s,baz=171,slow=9.4,SNR=2.8
HFS Hagfors 26.57 334 P **P 20 37 18.9 +0.5**
comp=E,0.9nm,0.7s,baz=170,slow=10,SNR=3.5
HFS LR LR 20 49 12.2
comp=E,63nm,20.8s,baz=154,slow=40
BVAR Borovoye Array 27.37 46 P **P 20 37 26.1 +0.5**
comp=E,2.0nm,0.6s,baz=257,slow=5.3,SNR=12
ESDC Sonseca Array 31.80 286 P **P 20 38 04.1 -1.0**
comp=E,0.4nm,0.6s,baz=62,slow=8.1,SNR=5.6
MK32 Makanchi Array 34.06 61 *e*P **P 20 38 25.5 +0.8**
MKAR Makanchi Array 34.06 61 P **P 20 38 25.5 +0.8**
comp=E,0.6nm,0.9s,baz=266,slow=9.1,SNR=2.8
ZAA1 Zalesovo Array 35.97 48 *e*P **P 20 38 41.3 +0.3**
ZALV Zalesovo Beam 35.97 48 P **P 20 38 41.3 +0.3**
comp=E,1.9nm,0.6s,baz=270,slow=9.1,SNR=5.6
TOA1 Torodi Ar. Sit 40.06 241 *e*P **P 20 39 14.9 -1.1**
TORD Torodi Ar. Bea 40.06 241 P **P 20 39 14.9 -1.2**
comp=E,1.0nm,0.8s,baz=31,slow=9.5,SNR=5.2
SONA0 Songino Array 50.06 55 *e*P **P 20 40 36.5 +1.1**
SONM Songino Array 50.06 55 P **P 20 40 36.5 +1.1**
comp=E,0.8nm,0.7s,baz=282,slow=7.2,SNR=3.3
SONM LR LR 21 04 29.9
comp=E,105nm,18.8s,baz=17,slow=39
CM31 Chiang Mai Arr 56.86 92 *e*P **P 20 41 25.3 -0.3**
comp=E,3.3nm,1.1s
CMAR Chiang Mai Arr 56.86 92 P **P 20 41 25.3 -0.3**
comp=E,0.8nm,0.8s,baz=298,slow=8.1,SNR=6.5
YKA Yellowknife Ar 77.19 347 P **P 20 43 34.8 +0.7**
comp=E,0.2nm,0.3s,baz=27,slow=5.6,SNR=3.6
YKB5 Yellowknife Ar 77.19 347 *e*P **P 20 43 34.8 +0.7**

IDC 16 20:42:43.0±2.4, 15°.45S×173°.69W, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/31, mbtmp3.7/5, MS3.2/2, Ms1 3.2/2, ms1mx2.8/20, Error ellipse: s-maj=140.5km s-min=25.6km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.40**	**115**	LR		LR	20 49 52.9	
comp=Z,56nm,20.9s,baz=352,slow=30								
DZM	**Mont Dzumac**	**19.91**	**248**	*e*LR		LR	20 52 47.0	
comp=Z,84nm,26.9s								
PPT2	**Papeete2**	**23.22**	**99**	*e*LR		LR	20 52 49.2	
comp=Z,62nm,25.2s								
HNR	**Honiara**	**26.41**	**280**	LR		LR	20 57 34.9	
comp=Z,77nm,20.8s,baz=136,slow=34								
STKA	**Stephens Creek**	**43.76**	**240**	P		P	20 50 51.5	+1.0
1.7nm,0.9s,baz=70,slow=12,SNR=3.8								
WRA	**Warramunga Arr**	**49.55**	**257**	P		P	20 51 35.8	-0.3
0.5nm,0.4s,baz=92,slow=8.2,SNR=5.6								
ASAR	**Alice Springs**	**49.82**	**252**	P		P	20 51 37.4	-0.8
1.1nm,0.6s,baz=86,slow=8.4,SNR=14								
PDAR	**Pinedale Array**	**82.50**	**42**	P		P	20 55 07.4	-0.4
0.2nm,0.5s,baz=216,slow=4.5,SNR=3.1								
ILAR	**Eielson Array**	**82.55**	**11**	P		P	20 55 08.0	+0.7
0.2nm,0.7s,baz=220,slow=3.5,SNR=4.5								

KRSC 16 20:44:50.5±1.4, 50°.33N×156°.85E, h112km±13km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.59**	**307**	*e*P		Pn	20 45 09.3	+1.2
SKR				*e*S		Sn	20 45 22.7	+1.4
ALID	**Alaid**	**0.99**	**304**	*e*P		Pn	20 45 11.9	0.0
PAU	**Pauzhetka**	**1.14**	**359**	*e*P		Pn	20 45 15.0	+1.8
PAU				*e*S		Sn	20 45 32.7	+2.2
KDTR	**Khodutka, Kamc**	**1.67**	**27**	*e*P		Pn	20 45 21.2	+1.8
KDTR				*e*S		Sn	20 45 43.2	+1.8
MTVR	**Mutnovka**	**2.31**	**21**	*e*P		Pn	20 45 29.6	+2.0
MTVR				*e*S		Sn	20 45 58.3	+2.2
RUS	**Russkaya**	**2.35**	**26**	*e*P		Pn	20 45 29.3	+1.3
RUS				*e*S		Sn	20 45 58.0	+1.3
APC	**Apacha**	**2.61**	**4**	*e*P		Pn	20 45 32.0	+0.7
KRMR	**Karymshinskiy**	**2.63**	**17**	*e*P		Pn	20 45 33.3	+1.7
UGLR	**Uglovaya**	**3.13**	**22**	*e*P		Pn	20 45 41.0	+2.7
AVH	**Avacha**	**3.16**	**21**	*e*P		Pn	20 45 41.3	+2.6
KOK	**Koryaka**	**3.17**	**20**	*e*P		Pn	20 45 41.3	+2.5
SMAR	**Somma**	**3.18**	**22**	*e*P		Pn	20 45 41.3	+2.3
KRER	**Koryakskii**	**3.20**	**21**	*e*P		Pn	20 45 41.7	+2.3
SDLR	**Sedlovina**	**3.21**	**22**	*e*P		Pn	20 45 41.3	+1.9
KRX	**Arik**	**3.23**	**20**	*e*P		Pn	20 45 41.9	+2.2
SPN	**Mys Shipunski**	**3.40**	**34**	*e*P		Pn	20 45 43.5	+1.7
SPN				*e*S		Sn	20 46 21.1	-0.4
GNL	**Ganaly**	**3.44**	**11**	*e*P		Pn	20 45 43.7	+1.3

*NNC **16** 20:47:07.1±1.6, 36°.65N×70°.90E, h0km, mb5.5, mpv5.6, Error ellipse: s-maj=15.2km s-min=8.1km az=158.0*
*BJI **16** 20:47:09.4±0.0, 36°.49N×71°.10E, h222km, mb4.6/48, mB4.6/28*
*ISCJB **16** 20:47:09.8±0.2, 36°.40N±0°.02×71°.17E±0°.02, h227km±2km, mb4.4/120, Error ellipse: s-maj=3.0km s-min=2.5km az=138.1*
*MOS **16** 20:47:10.5±0.8, 36°.45N×71°.19E, h233km, mb4.8/34, Error ellipse: s-maj=6.1km s-min=4.1km az=109.4*
*NEIC **16** 20:47:11.3±2.1, 36°.43N×71°.21E, h233km±5km, mb4.7/80, Error ellipse: s-maj=10.9km s-min=7.7km az=88.0*
*IDC **16** 20:47:12.2±0.5, 36°.43N×71°.21E, h238km±4km, mb4.1/36, mb1 4.2/42, mb1mx4.1/50, mbtmp4.7/42, Error ellipse: s-maj=7.8km s-min=6.2km az=174.0*

ISC 16 20:47:11.3±0.3, 36°.37N±0°.03×71°.20E±0°.03, h234km±3km, h233km; pP-P, n381, σ167/453, mb4.6/127, 51C-23D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.54**	**225**	*e*Pn		**Pn**	**20 47 57.6**	**-0.4**
KBL				*e*S		**S**	**20 48 32.6**	**-2.1**
KBL	**Kabul**	**2.54**	**225**	*e*PN		**Pn**	**20 47 57.6**	**-0.4**
KBL				*e*S		**S**	**20 48 32.6**	**-2.1**
CEP	**Cherat**	**2.61**	**167**	⇓P		**Pn**	**20 47 59.1**	**+0.3**
CEP				S		**S**	**20 48 35.0**	**-0.9**
GAR	**Garm**	**2.71**	**345**	*e*Pn		**Pn**	**20 47 58.4**	**-1.3**
GAR				*e*S		**S**	**20 48 32.5**	**-5.4**
GAR	**Garm**	**2.71**	**345**	*e*PN		**Pn**	**20 47 58.4**	**-1.3**
CHCP	**Chirah Chowk**	**3.19**	**147**	⇓P		**Pn**	**20 48 05.7**	**+0.6**
NIL	**Nilore**	**3.20**	**148**	*e*Pn		**Pn**	**20 48 05.8**	**+0.7**
NIL				*e*S		**S**	**20 48 43.6**	**-3.7**
NIL	**Nilore**	**3.20**	**148**	*e*PN		**Pn**	**20 48 05.8**	**+0.7**
BTK	**Batken**	**3.69**	**355**	*e*Pn		**Pn**	**20 48 10.2**	**-0.5**
BTK	**Batken**	**3.69**	**355**	*e*PN		**Pn**	**20 48 10.3**	**-0.5**
SARP	**Sargodha**	**4.60**	**164**	P		**Pn**	**20 48 21.6**	**-0.2**
KSH	**Kashi**	**4.91**	**49**	P		Pn	20 48 19.5	-6.0
KSH				S		S	20 49 09.9	-14
KSH				smax		smax		
comp=N,4μm,0.6s								
KSH				smax		smax		
comp=E,3μm,0.6s								
ARSB	**Arslanbob**	**5.14**	**15**	*e*Pn		**Pn**	**20 48 26.8**	**-1.6**
TAS	**Tashkent**	**5.17**	**344**	PN		**Pn**	**20 48 26.9**	**-1.7**
TAS				pmax		pmax		
comp=Z,2μm,0.7s								
DHRM	**DHARAMSHALA**	**5.89**	**133**	*e*P		**Pn**	**20 48 38.0**	**0.0**
DHRM				*e*S		**S**	**20 49 44.6**	**-2.4**
AML	**Almayashu**	**6.07**	**18**	P		**Pn**	**20 48 38.5**	**-1.8**
SNR=231								
UCH	**Uchtor**	**6.39**	**23**	P		**Pn**	**20 48 43.2**	**-1.1**
SNR=403								
KZA	**Kyzart**	**6.51**	**28**	P		**Pn**	**20 48 44.0**	**-1.9**
SNR=316								
EKS2	**Erkin-Say**	**6.59**	**17**	P		**Pn**	**20 48 45.4**	**-1.2**
SNR=343								
KK31	**Karatay Array**	**6.74**	**356**	*e*Pn		**Pn**	**20 48 46.9**	**-1.6**
KK31				*e*S		**S**	**20 49 59.8**	**-6.3**
KK31	**Karatay Array**	**6.74**	**356**	⇑P		**Pn**	**20 48 43.9**	**-4.5**
comp=Z,70nm,0.4s,baz=178,slow=12,SNR=1228								
KK31				⇓S		**S**	**20 49 59.3**	**-6.8**
comp=Z,119nm,0.5s,baz=184,slow=21,SNR=7.2								
KK31	**Karatay Array**	**6.74**	**356**	*e*PN		**Pn**	**20 48 46.9**	**-1.6**
KKAR	**Karatay Array**	**6.74**	**356**	*e*Pn		**Pn**	**20 48 46.9**	**-1.6**
KKAR				*e*S		**S**	**20 49 59.8**	**-6.4**
KKAR	**Karatay Array**	**6.74**	**356**	*e*PN		**Pn**	**20 48 46.9**	**-1.6**
AAK	**Ala-Archa**	**6.76**	**21**	P		**Pn**	**20 48 47.7**	**-1.0**
comp=Z,94nm,0.3s,baz=187,slow=6.8,SNR=524								
AAK				S		**S**	**20 50 02.9**	**-3.7**
comp=Z,22nm,0.3s,baz=318,slow=23,SNR=17								
AAK	**Ala-Archa**	**6.76**	**21**	P		**Pn**	**20 48 47.8**	**-1.0**
SNR=275								
AAK	**Ala-Archa**	**6.76**	**21**	⇓P		**Pn**	**20 48 47.6**	**-1.0**
comp=Z,176nm,0.5s								
AAK				⇓S		**S**	**20 50 03.2**	**-3.4**
comp=Z,290nm,0.7s								
AAK	**Ala-Archa**	**6.76**	**21**	*i* P		**Pn**	**20 48 47.8**	**-1.0**
SNR=294								
AAK	**Ala-Archa**	**6.76**	**21**	*de*PN		**Pn**	**20 48 47.5**	**-1.2**
AAK				pmax		pmax		
comp=Z,208nm,0.6s								
KBK	**Karagaybulak**	**6.91**	**24**	P		**Pn**	**20 48 50.1**	**-0.6**
SNR=464								
FRU1	**Bishkek**	**6.95**	**21**	*e*Pn		**Pn**	**20 48 50.5**	**-0.7**
FRU1	**Bishkek**	**6.95**	**21**	*e*PN		**Pn**	**20 48 50.5**	**-0.7**
ULHL	**Ulahol**	**7.05**	**32**	P		**Pn**	**20 48 51.0**	**-1.5**
SNR=120								
CHMS	**Chumysh**	**7.16**	**21**	P		**Pn**	**20 48 52.3**	**-1.4**
SNR=233								
SMLA	**Simla**	**7.21**	**135**	*e*P		**Pn**	**20 48 54.4**	**-0.1**
SMLA				*e*S		**S**	**20 50 13.1**	**-4.1**
USP	**Ospenovka**	**7.34**	**19**	P		**Pn**	**20 48 54.2**	**-1.9**
SNR=67								
TKM2	**Tokmak 2**	**7.37**	**26**	P		**Pn**	**20 48 55.6**	**-1.0**
SNR=119								
TKM2	**Tokmak 2**	**7.37**	**26**	⇑P		**Pn**	**20 48 55.3**	**-1.3**
comp=Z,968nm,1.1s								
TKM2				⇑S		**S**	**20 50 16.2**	**-4.7**
comp=Z,188nm,0.9s								
AAA	**Alma-Ata**	**8.12**	**31**	*e*PN		**Pn**	**20 49 05.8**	**-0.3**
AAA				pmax		pmax		
comp=Z,265nm,0.6s								
KNDC	**Almaty**	**8.15**	**31**	⇑P		**Pn**	**20 49 06.1**	**-0.4**
comp=Z,357nm,0.6s								
KNDC				⇓S		**S**	**20 50 38.4**	**-0.5**
comp=Z,85nm,0.7s								
DDI	**Dehra Dun**	**8.32**	**134**	*e*P		**Pn**	**20 49 08.5**	**-0.3**
DDI				*e*S		**S**	**20 50 38.6**	**-4.6**
DDI				IAML			20 50 41.0	
comp=N,752nm,0.3s								
DDI				IAML			20 50 41.2	
comp=E,682nm,0.4s								
JOSI	**Joshimath**	**9.07**	**127**	*e*P		**Pn**	**20 49 18.7**	**+0.1**
JOSI				*e*S		**S**	**20 50 57.3**	**-3.7**
JOSI				IAML			20 51 06.7	
comp=E,830nm,0.7s								
KUDL	**Kundal**	**9.35**	**150**	*e*P		Pn	20 49 11.2	-11
KUDL				*e*S		S	20 50 50.5	-17
KUDL				IAML			20 50 52.2	
comp=E,245nm,0.9s								
KUDL				IAML			20 50 55.2	
comp=N,90nm,0.7s								
PDGK	**Podgornoye**	**9.43**	**40**	⇑P		**Pn**	**20 49 22.9**	**+0.1**
comp=N,46nm,0.7s								
PDGK				⇑S		**S**	**20 51 10.9**	**+2.0**
comp=N,31nm,0.7s								
GEYT	**Alibeck**	**10.56**	**282**	P		**Pn**	**20 49 34.3**	**-2.9**
comp=N,2.4nm,0.3s,baz=105,slow=11,SNR=78								
GEYT				S		**S**	**20 51 35.6**	**+0.2**
baz=72,slow=14,SNR=2.7								
GYA0B	**ALIBECK ARRAY**	**10.56**	**282**	*e*Pn		**Pn**	**20 49 34.7**	**-2.5**
GYA0B	**ALIBECK ARRAY**	**10.56**	**282**	⇑P		**Pn**	**20 49 34.5**	**-2.6**
GYA0B				⇑S		**S**	**20 51 33.9**	**-1.6**
PYUN	**Piuthan**	**12.94**	**126**	*e*P		**Pn**	**20 50 06.0**	**-1.2**
comp=N,142nm,0.3s								
PYUN				*e*S		**S**	**20 52 23.9**	**-6.8**
BHJ	**Bhuj**	**13.14**	**186**	*e*P		**Pn**	**20 50 10.2**	**+0.7**
MAKZ	**Makanchi**	**13.17**	**34**	*e*Pn		**Pn**	**20 50 08.1**	**-1.6**
MAKZ	**Makanchi**	**13.17**	**34**	⇑P		**P**	**20 50 13.4**	**+1.7**
comp=N,54nm,0.5s								
MAKZ	**Makanchi**	**13.17**	**34**	*e*P		**Pn**	**20 50 08.1**	**-1.6**
DANN	**Dangsing**	**13.28**	**123**	*e*P		**Pn**	**20 50 10.7**	**-0.9**
comp=N,303nm,0.6s								
MK31	**Makanchi Array**	**13.30**	**35**	⇓P		**P**	**20 50 14.7**	**+1.6**
comp=N,5.8nm,0.4s,baz=213,slow=13,SNR=265								
MKAR	**Makanchi Array**	**13.30**	**35**	P		**Pn**	**20 50 09.6**	**-1.8**
comp=N,2.4nm,0.3s,baz=212,slow=13,SNR=88								
MKAR				S		**S**	**20 52 42.0**	**+3.5**
baz=225,slow=20,SNR=4.0								
KOLN	**Koldanda**	**13.56**	**126**	*e*P		**Pn**	**20 50 14.9**	**0.0**
comp=N,70nm,0.3s								
KOLN				*e*S		**S**	**20 52 39.5**	**-5.6**
GKN	**Gorkha**	**14.10**	**122**	*e*P		**Pn**	**20 50 21.2**	**-0.2**
comp=N,352nm,0.4s								
GKN				*e*S		**S**	**20 52 49.8**	**-7.7**
BHPL	**Bhopal**	**14.15**	**156**	*e*P		**Pn**	**20 50 22.1**	**+0.1**
BHPL				*ex*		x	20 52 54.0	
WMQ	**Urumqi**	**14.64**	**54**	P		**P**	**20 50 27.9**	**-0.2**
WMQ				S		**S**	**20 53 04.9**	**-4.7**
WMQ				pmax		pmax		
comp=N,18nm,1.5s								
WMQ				pmax		pmax		
comp=N,120nm,3.9s								
DMN	**Daman**	**14.67**	**123**	*e*P		**Pn**	**20 50 28.2**	**-0.3**
comp=N,144nm,0.6s								
KKN	**Kakani**	**14.67**	**122**	*e*P		**Pn**	**20 50 28.2**	**-0.3**
comp=N,388nm,0.5s								
PKIN	**Phulchoki**	**14.89**	**122**	*e*P		**Pn**	**20 50 30.7**	**-0.4**
comp=N,198nm,0.4s								
PKI	**Pulchoki**	**14.90**	**122**	*e*P		**Pn**	**20 50 30.8**	**-0.5**
comp=N,333nm,0.5s								
GUN	**Gumba**	**15.02**	**120**	*e*P		**P**	**20 50 32.5**	**-0.2**
comp=N,193nm,0.5s								
AB31	**Akbulak array**	**15.27**	**331**	⇓P		**Pn**	**20 50 38.4**	**+3.1**
comp=N,48nm,0.8s,baz=142,slow=12,SNR=422								
AB31				⇓S		**S**	**20 53 25.7**	**+2.2**
comp=N,26nm,0.7s,baz=158,slow=24,SNR=6.4								
ABKAR	**Akbulak array**	**15.27**	**331**	*e*P		**P**	**20 50 33.0**	**-1.9**
comp=N,43nm,0.7s								
ABKAR				*e*S		**S**	**20 53 22.3**	**-1.3**
KURK	**Kurchatov**	**15.30**	**18**	*e*P		**P**	**20 50 33.6**	**-1.7**
comp=N,13nm,0.8s								
KURK	**Kurchatov**	**15.30**	**18**	⇑P		**Pn**	**20 50 41.0**	**+5.5**
comp=N,26nm,1.3s								
KURK	**Kurchatov**	**15.30**	**18**	*de*P		**P**	**20 50 33.5**	**-1.7**
KURK				pmax		pmax		
comp=Z,30nm,1.7s								
JIRN	**Jiri**	**15.38**	**120**	*e*P		**

GTK Tadong 17.30 117 *eP* **Pn 20 51 00.1 +0.4**
HATD Hatta, Dubai 17.32 233 P **Pn 20 50 59.0 -0.7**
ASHO Ashiyiah 17.46 232 *i* P **P 20 51 00.2 +1.0**
SNR=24
ASHO Ashiyiah 17.46 232 P **Pn 20 51 00.8 -0.6**
SNR=24
ASHO Ashiyiah 17.46 232 P **Pn 20 51 00.8 -0.6**
SNR=24
FAQ Al Faqa, Dubai 17.72 233 P **P 20 51 02.4 +0.5**
DGZ Jazzator, Alta 17.79 36*c i* P **P 20 51 03.6 +1.0**
DGZ pmax pmax
comp=Z,19nm,0.8s
BOK Bokaro 17.82 131 *eP* **Pn 20 51 04.6 -1.0**
ASUD Al Ashush, Dub 17.97 234 P **P 20 51 05.9 +1.2**
LSA Lhasa 17.99 106 *eP* **Pn 20 51 08.4 +0.4**
comp=Z,31nm,0.6s
LSA Lhasa 17.99 106 *i* P **Pn 20 51 08.2 +0.2**
SNR=37
LSA Lhasa 17.99 106 *eP* **Pn 20 51 08.4 +0.4**
LSA pmax pmax
comp=Z,31nm,0.6s
AKT Akhty 18.94 293⇓*i P* **P 20 51 15.6 +0.5**
AKT *eS* **S 20 54 37.7 +0.1**
AKT pmax pmax
comp=Z,15nm,0.4s
MHTO MHTO 19.20 221 P **Pn 20 51 20.5 -1.3**
SNR=6.7
MHTO MHTO 19.20 221 P **Pn 20 51 20.5 -1.3**
SNR=6.7
TAWA Tawang 19.57 111 *eP* **Pn 20 51 24.6 -2.0**
TAWA lAmb lAmb 20 51 25.5
comp=Z,26nm,0.7s
ZAA0 Zalesovo Array 19.97 24 *eP* **P 20 51 25.2 -0.6**
comp=Z,40nm,1.0s
ZALV Zalesovo Beam 19.97 24 P **P 20 51 25.2 -0.6**
comp=Z,8.3nm,0.3s,baz=215,slow=11,SNR=62
ZALV S **S 20 54 54.8 -2.4**
comp=Z,0.8nm,0.3s,baz=218,slow=18,SNR=5.7
HYB Hyderabad 19.97 159 *i* P **Pn 20 51 30.0 -1.1**
HYB *eS* **S 20 54 55.0 -3.0**
NVS Novosibirsk 20.25 20 *eP* **P 20 51 28.9 +0.2**
NVS *i* 20 52 37.7
NVS *i* S **S 20 55 00.9 -1.4**
NVS pmax pmax
comp=Z,25nm,0.7s
NVS pmax pmax
comp=N,19nm,0.7s
NVS pmax pmax
comp=E,7.0nm,0.8s
NVS smax smax
comp=N,34nm,1.0s
NVS smax smax
comp=E,63nm,1.2s
BWNR Bhubaneshwar 20.50 137 *ex* P 20 51 22.7 -9.1
GROC Groznyy 20.63 297 *eP* **P 20 51 32.6 -0.4**
GROC *eS* **S 20 55 08.5 -1.0**
GROC pmax pmax
comp=Z,39nm,0.8s
SHL Shillong 20.71 116 *eP* **P 20 51 35.0 +0.7**
comp=Z,55nm,0.6s
SHL Shillong 20.71 116 *eP* **P 20 51 35.0 +0.7**
SHL pmax pmax
comp=Z,55nm,0.6s
SHL Shillong 20.71 116 *eP* **P 20 51 34.9 +0.7**
TEZP TEZPUR 20.79 112 *eP* **P 20 51 35.4 +0.5**
TEZP lAmb lAmb 20 51 36.6
comp=Z,34nm,1.4s
GNI Garni 21.09 288 P **P 20 51 37.8 -0.1**
comp=Z,37nm,1.1s,baz=258,slow=3.5,SNR=7.4
ZIRO ZIRO 21.11 108 *eP* **P 20 51 38.9 +0.6**
ZIRO lAmb lAmb 20 51 39.6
comp=Z,40nm,1.1s
SVE Sverdlovsk 21.66 344⇓*eP* **P 20 51 43.2 0.0**
SVE *eS* **S 20 55 28.6 +2.3**
SVE pmax pmax
comp=Z,31nm,0.8s
ARU Arti 21.80 341 P **P 20 51 45.0 +0.4**
comp=Z,10nm,0.4s,baz=161,slow=6.3,SNR=67
ARU Arti 21.80 341 *eP* **P 20 51 45.0 +0.4**
comp=Z,42nm,0.9s
ARU Arti 21.80 341*c i* P **P 20 51 44.7 +0.2**
ARU S **S 20 55 30.5 +1.9**
ARU pmax pmax
comp=Z,99nm,1.9s
ZEI Tsey 21.94 295 *eP* **P 20 51 42.4 -3.8**
ZEI pmax pmax
comp=Z,6.0nm,0.4s
AKH Akhalkalaki 22.10 292 *eP* **P 20 51 50.3 +2.6**
comp=Z,47nm,1.1s
AKH Akhalkalaki 22.10 292 *eP* **P 20 51 50.3 +2.6**
AKH pmax pmax
comp=Z,47nm,1.1s
MOKO MOKOCHONG 22.24 110 *eP* **P 20 51 51.0 +1.9**
MOKO lAmb lAmb 20 51 51.5
comp=Z,56nm,1.4s
KOHI KOHIMA 22.26 112 *eP* **P 20 51 51.0 +1.7**
KOHI lAmb lAmb 20 51 52.9
NCK Nalchik 22.26 297 *i* P **P 20 51 49.1 +0.1**
NCK pmax pmax
comp=Z,29nm,0.8s
GTA Gaotai 22.75 74⇑*P* **P 20 51 56.0 +2.4**
GTA pmax pmax
comp=Z,35nm,0.9s
KBZ Khabaz 22.80 298 P **P 20 51 53.8 0.0**
comp=Z,6.8nm,0.8s,baz=134,slow=7.9,SNR=12
NEY Neytrino 22.86 296 *i* P **P 20 51 56.4 +1.8**
NEY pmax pmax
comp=Z,4.0nm,0.9s
GOF Gofitskoye 22.95 301⇑*eP* **P 20 51 55.5 +0.4**
GOF pmax pmax
comp=Z,77nm,0.9s
SHA1 Shidzhatmaz 22.98 297 *i* P **P 20 51 56.3 +0.6**
KVAR Kislovodsk Arr 22.98 298 P **P 20 51 56.0 +0.4**
comp=Z,2.3nm,0.6s,baz=257,slow=23,SNR=4.8
KIV Kislovodsk 22.99 298 *eP* **P 20 51 55.5 -0.1**
comp=Z,8.2nm,0.7s
KIV Kislovodsk 22.99 298 P **P 20 51 56.0 +0.3**
KIV Kislovodsk 22.99 298 *eP* **P 20 51 55.9 +0.3**
KIV pmax pmax
comp=Z,31nm,1.0s
KIV MLR MLR
comp=Z,79nm,14.0s
DMTO DMTO 23.49 222 P **P 20 52 01.5 +1.2**
MOY Mondy 26.08 45 *eP* **P 20 52 25.6 +2.1**
MOY pmax pmax
comp=Z,15nm,2.2s
LZH Lanzhou 26.27 81⇑*P* **P 20 52 27.3 +1.8**
LZH pP pP 20 53 10.3 -2.4
LZH PP **PnPn 20 53 21.5 +1.5**
LZH sP sP 20 53 35.4 -5.1
LZH pmax pmax
comp=Z,23nm,1.1s
LZH pmax pmax
comp=Z,76nm,5.0s
KIRV Kirov 26.43 334 P **P 20 52 27.0 +0.7**
comp=Z,55nm,0.6s,baz=126,slow=3.8,SNR=32
ZAK Zakamensk 26.95 49 *eP* **P 20 52 32.4 +1.1**
ZAK *e* 20 53 19.9
ZAK *e* 20 53 49.4
ZAK pmax pmax
comp=Z,8.0nm,1.1s
ZAK pmax pmax
comp=Z,6.0nm,1.7s
ZAK pmax pmax
comp=Z,6.0nm,1.3s
VSR Storozhevoye 27.21 313 *i* P **P 20 52 32.9 -0.5**
VSR pmax pmax
comp=Z,42nm,1.3s
CD2 Chengdu 27.57 92 *eP* **P 20 52 36.4 -0.5**
CD2 pmax pmax
comp=Z,20nm,0.6s
TLY Talaya 27.61 46 *eP* **P 20 52 37.7 +0.7**
comp=Z,4.7nm,0.6s
TLY Talaya 27.61 46*ceP* **P 20 52 39.4 +2.4**
TLY pmax pmax
comp=Z,12nm,1.3s
LPSR Galich'ya Gora 27.86 316 *eP* **P 20 52 38.0 -1.1**
LPSR pmax pmax
comp=Z,30nm,0.9s
SONA0 Songino Array 28.28 55 *eP* **P 20 52 44.7 +1.6**
SONA0 *ep*P **pP 20 53 30.7 -0.1**
SONA0 *ep*PcP **PcP 20 55 50.0 +0.1**
SONM Songino Array 28.28 55 P **P 20 52 44.7 +1.6**
comp=Z,13nm,0.8s,baz=257,slow=9.8,SNR=66
SONM pP **pP 20 53 30.7 -0.1**
comp=Z,2.3nm,0.8s,baz=259,slow=7.7,SNR=2.5
SONM PcP **PcP 20 55 50.0 +0.1**
comp=Z,1.9nm,0.8s,baz=258,slow=2.7,SNR=3.8
KMI Kunming 29.21 104 P **P 20 52 54.0 +2.3**
KMI pmax pmax
comp=Z,11nm,0.5s
KMI pmax pmax
comp=Z,69nm,4.0s
MMAI Mount Meron Ar 29.52 274 P **P 20 52 56.2 +2.0**
comp=Z,0.6nm,0.5s,baz=47,slow=14,SNR=2.8
MMAI PcP **PcP 20 55 53.6 +0.4**
comp=Z,2.6nm,0.5s,baz=58,slow=5.6,SNR=9.4
BR101 Keskin Array S 29.62 288 *e*PcP **PcP 20 55 53.0 -0.5**
BR131 Keskin Array S 29.62 288 *eP* **P 20 52 55.8 +0.7**
comp=Z,7.6nm,0.8s
BR131 Keskin Array S 29.62 288 *eP* **P 20 52 55.8 +0.7**
BR131 pmax pmax
comp=Z,8.0nm,0.8s
BRTR Keskin Array B 29.62 288 P **P 20 52 55.5 +0.4**
comp=Z,4.9nm,0.7s,baz=99,slow=8.9,SNR=35
BRTR PcP **PcP 20 55 53.0 -0.5**
comp=Z,1.7nm,0.6s,baz=146,slow=3.3,SNR=7.7
MOS Moscow 29.86 321 *eP* **P 20 52 56.2 -0.6**
MOS *e* 20 53 41.7
MOS pmax pmax
comp=Z,41nm,1.0s
PRGR Permogore 29.95 336 *eP* **P 20 52 55.4 -2.1**
PRGR pmax pmax
comp=Z,29nm,0.4s
OBN Obninsk 30.14 319 P **P 20 52 59.2 0.0**
comp=Z,8.0nm,0.5s,baz=116,slow=5.1,SNR=10
OBN Obninsk 30.14 319 *eP* **P 20 52 59.5 +0.4**
comp=Z,35nm,0.6s
OBN *e*PcP **PcP 20 55 53.5 -0.8**
OBN Obninsk 30.14 319⇑*iP* **P 20 52 59.6 +0.4**
OBN Obninsk 30.14 319*ceP* **P 20 52 59.3 +0.1**
OBN *i* *PP **pP 20 53 49.7 +3.7**
OBN *i* 20 54 07.3
OBN *eS* **S 20 57 32.8 -7.5**
OBN pmax pmax
comp=Z,24nm,0.5s
CM31 Chiang Mai Arr 30.25 119 *ep*P pP 20 53 49.0 +0.9
CMAR Chiang Mai Arr 30.25 119 P **P 20 53 02.3 +1.6**
comp=Z,2.3nm,0.9s,baz=297,slow=8.4,SNR=14
CMAR pP **pP 20 53 49.0 +0.9**
comp=Z,2.1nm,0.7s,baz=302,slow=8.9,SNR=3.5
XAN Xi'an 30.79 83 P **P 20 53 06.8 +1.5**
XAN pmax pmax
comp=Z,17nm,0.9s
XAN pmax pmax
comp=Z,86nm,4.4s
XAN LR LR
comp=Z,89nm,18.4s
XAN Xi'an 30.79 83 *eP* **P 20 53 07.0 +1.7**
comp=Z,13nm,0.8s
XAN Xi'an 30.79 83 *eP* **P 20 53 07.0 +1.7**
XAN pmax pmax
comp=Z,13nm,0.8s
HHC Hu-ho-hao-te 31.66 69 *eP* **P 20 53 13.8 +0.9**
HHC pmax pmax
comp=Z,30nm,1.0s
HHC pmax pmax
comp=Z,90nm,5.7s
KLMR Klimovskoe 31.67 331 *eP* **P 20 53 11.5 -1.0**
KLMR pmax pmax
comp=Z,33nm,0.9s
KLMR Klimovskoe 31.67 331 *eP* **P 20 53 11.6 -1.0**
KLMR AMP 20 53 13.3
comp=Z,33nm,0.9s
UTTA Uttaradit 31.87 118 P **P 20 53 17.1 +2.3**
comp=Z,23μm,0.6s,comp=Z,315μm
ENH Enshi 32.42 90 *eP* **P 20 53 21.8 +2.3**
comp=Z,27nm,1.4s
PBKT Sadao Pong 32.95 119 P P 20 53 30.0 +5.9
comp=Z,5.5nm,1.6s
MILM Milestii Mici 33.02 302⇓*iP* **P 20 53 24.6 +0.2**
AKASG Malin Array Be 33.15 309 P **P 20 53 25.1 -0.5**
comp=Z,10nm,0.6s,baz=80,slow=7.3,SNR=41
AKASG pP **pP 20 54 14.4 +1.7**
comp=Z,2.8nm,0.7s,baz=84,slow=6.9,SNR=2.7
AKASG PcP **PcP 20 56 01.5 -1.1**
comp=Z,1.9nm,0.5s,baz=74,slow=3.5,SNR=5.0
AKBB Malin Array Si 33.15 309 *e*PcP **PcP 20 56 01.5 -1.1**
CFR Carcaliu 33.44 299⇑*iP* **P 20 53 28.5 +0.4**
CFR Carcaliu 33.44 299⇑*P* **P 20 53 28.5 +0.4**
NONG Nongkai 33.54 114 P **P 20 53 31.2 +1.9**
comp=Z,0.3nm,1.1s
NRIK Noril'sk 34.22 10 P **P 20 53 35.6 +1.1**
comp=Z,26nm,0.8s,baz=206,slow=5.4,SNR=26
KHON Khomkaen 34.42 117 P P 20 53 43.5 +6.6
comp=Z,27μm,0.5s
VRI Vrincioaia 34.43 300⇑*iP* **P 20 53 37.3 +0.6**
VRI Vrincioaia 34.43 300⇑*P* **P 20 53 37.3 +0.6**
PLOR Plostina 34.48 300⇑*iP* **P 20 53 38.4 +1.2**
PLOR Plostina 34.48 300⇑*P* **P 20 53 38.4 +1.2**
TESR Tescani 34.49 301⇑*iP* **P 20 53 37.3 +0.2**
SKNT Sakolnakorn 34.85 115 P **P 20 53 42.7 +2.2**
comp=Z,15nm,2.3s
BIZ Bicaz 34.87 302⇑*iP* **P 20 53 40.7 +0.3**
MLR Muntele Rosu 34.98 299 P **P 20 53 43.3 +1.7**
comp=Z,19nm,0.9s,baz=96,slow=3.2,SNR=41
MLR Muntele Rosu 34.98 299⇑*iP* **P 20 53 43.2 +1.7**
PANO Nakornpanom 35.20 114 P P 20 53 48.9 +5.4
comp=Z,0.1nm,1.0s
EZN Ezine 35.20 290⇑*iP* **P 20 53 44.6 +1.3**
EZN Ezine 35.20 290⇑*P* **P 20 53 44.6 +1.3**
BJI Beijing 35.25 70⇓*eP* **P 20 53 45.9 +2.2**
BJI pmax pmax
comp=Z,5.0nm,0.7s
DOPR Dopca 35.36 300⇑*iP* **P 20 53 45.7 +1.1**
BURAR Bucovina Array 35.49 303⇑*iP* **P 20 53 46.2 +0.4**
BURAR Bucovina Array 35.49 303⇑*P* **P 20 53 46.2 +0.4**
BUR08 Bucovina Ar. S 35.50 303 *e*PcP **PcP 20 56 10.5 +0.8**
IDID Didziasalis 35.53 316 *eP* **P 20 53 46.2 +0.4**
IDID lAmb lAmb 20 53 47.7
comp=Z,9.9nm,0.8s
VOIR 35.61 299⇓*iP* **P 20 53 47.9 +1.1**
VOIR 35.61 299⇓*P* **P 20 53 47.9 +1.1**
IIGN Ignalina 35.83 316 *eP* **P 20 53 48.9 +0.5**
IIGN lAmb lAmb 20 53 50.2
comp=Z,15nm,0.6s
IZAR Zarasai 35.91 317 *eP* **P 20 53 49.7 +0.6**
IZAR lAmb lAmb 20 53 50.9
comp=Z,11nm,0.7s
ARCR ARCALIA 36.07 302⇓*iP* **P 20 53 52.5 +1.9**
LVV L'vov 36.37 307 *eP* **P 20 53 53.4 +0.4**
LVV *e* 20 54 46.4
VSU Vasula 36.38 322*ceP* **P 20 53 52.9 -0.1**
VSU pmax pmax
comp=Z,51nm,1.0s
VSU Vasula 36.38 322 *eP* **P 20 53 52.6 -0.4**
VSU lAmb lAmb 20 53 53.5
comp=Z,49nm,0.8s
MORS Morshin 36.42 306 P **P 20 53 54.1 +0.6**
TIA Tai'an 36.74 76 P **P 20 53 58.8 +2.4**
TIA pmax pmax
comp=Z,15nm,0.9s
DEV Deva 37.10 300⇑*iP* **P 20 54 00.5 +1.2**
DEV Deva 37.10 300⇑*P* **P 20 54 00.5 +1.2**
PABE Paberze 37.12 316 *eP* **P 20 53 58.3 -0.9**
PABE lAmb lAmb 20 54 00.7
comp=Z,29nm,0.8s
TRPA Tarpa 37.30 304⇓*iP* **P 20 54 02.0 +1.1**
KOLS Kolonicke sedl 37.48 305 *eP* **P 20 54 03.0 +0.6**
KOLS *e* 20 56 16.0
KOLS pmax pmax
comp=Z,5.0nm,1.0s
KOLS Kolonicke sedl 37.48 305 *eP* **P 20 54 03.0 +0.6**
KOLS *e*PCP **PcP 20 56 16.0 +0.5**
LVZ Lovozero 37.64 338 *eP* **P 20 54 03.8 +0.3**
comp=Z,28nm,0.8s
LVZ Lovozero 37.64 338*ceP* **P 20 54 03.6 +0.1**
LVZ pmax pmax
comp=Z,11nm,0.6s
FIA1 FINESS Array S 37.68 326 *eP* **P 20 54 04.2 +0.3**
comp=Z,25nm,0.9s
FINES FINESS Array B 37.68 326 P **P 20 54 04.1 +0.3**
comp=Z,27nm,0.7s,baz=119,slow=9.8,SNR=143
MDVR Moldovita 38.01 298⇑*iP* **P 20 54 07.7 +0.7**
BZS Buzias 38.02 300⇑*iP* **P 20 54 08.2 +1.3**
BZS Buzias 38.02 300⇑*P* **P 20 54 08.2 +1.3**
PBUR Paburg 38.35 317 *eP* **P 20 54 08.3 -1.2**
PBUR lAmb lAmb 20 54 10.8
comp=Z,62nm,0.6s
NJ2 Nanjing 39.33 82 *eP* **P 20 54 17.9 -0.1**
NJ2 pmax pmax
comp=Z,11nm,0.5s
VYHS Vyhne 39.76 305 *eP* **P 20 54 22.0 +0.6**
VYHS pmax pmax
comp=Z,5.0nm,1.4s
VYHS Vyhne 39.76 305 *eP* **P 20 54 22.0 +0.6**
SRO Srobarova 40.15 304 *eP* **P 20 54 25.7 +1.2**
SRO Srobarova 40.15 304 *eP* **P 20 54 25.7 +1.2**
JAVC Velka Javorina 40.52 305 *eP* **P 20 54 28.8 +1.2**
MORC Moravsky Berou 40.57 307⇑*iP* **P 20 54 28.3 +0.3**
MORC Moravsky Berou 40.57 307⇑*P* **P 20 54 28.3 +0.3**
MORC Moravsky Berou 40.57 307 *eP* **P 20 54 28.5 +0.5**
VRAC Vranov 41.20 306⇓*iP* **P 20 54 33.9 +0.8**
VRAC Vranov 41.20 306⇓*P* **P 20 54 33.9 +0.8**
VRAC Vranov 41.20 306 *eP* **P 20 54 33.7 +0.6**
ARCES ARCESS Array B 41.32 338 P **P 20 54 34.2 +0.4**
comp=Z,18nm,0.4s,baz=118,slow=7.4,SNR=223
ARE0 ARCESS Array S 41.32 338 *eP* **P 20 54 34.7 +0.9**
DPC Dobruska-Polom 41.34 308 *eP* **P 20 54 34.8 +0.6**
DPC Dobruska-Polom 41.34 308 *eP* **P 20 54 34.8 +0.6**
DPC *ex* x 20 54 39.8
KRUC Moravsky 41.35 306 *eP* **P 20 54 34.6 +0.3**
HEF Hetta 41.39 336 *eP* **P 20 54 34.7 +0.3**
OSTC Ostas 41.40 308 *eP* **P 20 54 35.8 +1.1**
CHVC Chvalec 41.50 308 *eP* **P 20 54 35.7 +0.2**
UPC Upice 41.53 308 *eP* **P 20 54 36.5 +0.8**
UPC Upice 41.53 308 *eP* **P 20 54 36.5 +0.8**
CONA Conrad Observa 41.78 304 *eP* **P 20 54 38.6 +0.7**
comp=Z,10nm,0.9s,SNR=8.1
CONA *ep*P **pP 20 55 28.7 +1.8**
comp=Z,5.8nm,1.2s
CONA *eS* **sP 20 55 54.2 +0.6**
comp=Z,4.0nm,0.9s
KTK1 Kautokeino 41.80 336 *eP* **P 20 54 38.0 +0.4**
TREC Trest 41.93 306 *eP* **P 20 54 39.8 +0.8**
TREC Trest 41.93 306 *eP* **P 20 54 39.8 +0.8**
ZEA Zeya 42.04 47 *eP* **P 20 54 41.2 +1.4**
ZEA pmax pmax
comp=Z,27nm,0.9s
ARSA Arzberg 42.08 303 *eP* **P 20 54 41.2 +1.0**
comp=Z,1.9nm,0.8s
ARSA *ep*P **pP 20 55 31.0 +1.6**
comp=Z,1.3nm,0.7s
ARSA *eS* **sP 20 55 58.1 +2.3**
comp=Z,2.4nm,0.8s
BSD Bornholm Skovb 42.21 315 *eP* **P 20 54 40.7 -0.4**
BSD Bornholm Skovb 42.21 315 *i* P **P 20 54 40.7 -0.4**
HAMF Hammerfest 42.40 339 *eP* **P 20 54 43.4 +1.0**
SOKA Soboth 42.47 302 *eP* **P 20 54 44.0 +0.5**
comp=Z,10nm,0.8s,SNR=9.3
SOKA pP **pP 20 55 34.3 +1.5**
comp=Z,6.5nm,1.4s
PRU Pruhonice 42.50 307 *eP* **P 20 54 43.9 +0.4**
PRU Pruhonice 42.50 307 *eP* **P 20 54 43.9 +0.4**
TIP Timpagrande 42.58 291⇓*iP* **P 20 54 43.7 -0.8**
OBKA Obir 42.82 302 *eP* **P 20 54 47.2 +0.8**
comp=Z,5.3nm,1.1s
OBKA *eS* **sP 20 56 00.1 -2.0**
comp=Z,1.7nm,0.5s
BRG Berggiesshubel 42.83 308 *eP* **P 20 54 46.6 +0.5**
comp=Z,16nm,1.2s
BRG *e* 20 55 37.9
comp=Z,3.4nm,0.8s
BRG *e* 20 56 02.7
comp=Z,5.8nm,1.0s
MOA Molln 42.86 304 *eP* **P 20 54 46.7 +0.2**
comp=Z,6.6nm,0.9s
MOA *ep*P **pP 20 55 36.7 +0.9**
comp=Z,5.9nm,1.6s
NVLJ Novalja 42.88 299 *e*Pn **P 20 54 45.1 -1.5**
NVLJ Sn **PcP 20 56 35.9 +3.0**
GERES GERESS Array B 43.13 305 P **P 20 54 48.9 +0.1**
comp=Z,1.2nm,0.8s,baz=92,slow=8.0,SNR=12
GERES PcP **PcP 20 56 33.3 -0.7**
comp=Z,2.9nm,1.0s,baz=104,slow=4.1,SNR=8.0
KHC Kasperske Hory 43.19 306 *eP* **P 20 54 49.7 +0.6**
comp=Z,0.9nm,0.7s
KHC Kasperske Hory 43.19 306 *eP* **P 20 54 49.0 -0.2**
KHC *e* 20 55 42.0
KHC *e* 20 56 33.5
KHC Kasperske Hory 43.19 306 *eP* **P 20 54 49.0 -0.2**
KHC *ex* x 20 55 42.0
KHC *e*PP **PcP 20 56 33.5 -0.5**
CLL Collm 43.40 309⇑*iP* **P 20 54 50.5 -0.2**
comp=Z,17nm,1.6s
CLL *es*P **pP 20 55 41.0 +1.0**
CLL *e*PP **PcP 20 56 34.0 -0.6**
CLL *e*PPP PPP 20 57 18.0
CLL *es*S **sS 21 02 29.0 -0.7**
CLL *e* 21 03 36.0
CLL *e*SS **ScS 21 04 24.0 -0.5**
CLL *e*SSS SSS 21 06 12.0
CLL Collm 43.40 309⇑*iP* **P 20 54 50.5 -0.2**
CLL pmax pmax
comp=Z,17nm,1.6s
MYKA Terra Mystica 43.43 302 *eP* **P 20 54 51.2 +0.1**
comp=Z,1.0nm,0.4s
KBA Koelnbreinsper 43.57 303 *eP* **P 20 54 52.5 +0.1**
comp=Z,1.7nm,0.7s
KBA *ep*P **pP 20 55 45.2 +3.4**
comp=Z,2.3nm,0.8s
KBA S **sP 20 56 09.7 +1.4**
comp=Z,2.1nm,0.8s
YAK Yakutsk 43.98 35 *eP* **P 20 54 55.2 +0.1**
comp=Z,29nm,0.8s
YAK Yakutsk 43.98 35 *eP* **P 20 54 55.3 +0.1**
YAK pmax pmax
comp=Z,29nm,0.8s
MOR8 Moi Rana 44.01 331 *eP* **P 20 54 55.0 -0.3**
STEI Steigen 44.16 333 *eP* **P 20 54 56.8 +0.3**
ABTA Abfaltersbach 44.18 303 *eP* **P 20 54 57.4 +0.2**
comp=Z,1.9nm,0.6s
ABTA *e*PcP **PcP 20 56 37.2 -0.4**
comp=Z,3.4nm,0.8s
MOX Moxa 44.32 308 P **P 20 54 59.8 +1.7**
MOX pmax pmax
comp=Z,70nm,1.3s
NC405 NORSAR Array S 44.34 323 *eP* **P 20 54 58.4 +0.3**
comp=Z,64nm,1.0s
NC602 NORSAR Array S 44.39 323 *eP* **P 20 54 58.2 -0.3**
SSLB Suanglung 44.40 92 *eP* **P 20 55 01.4 +2.3**
comp=Z,8.7nm,0.8s
NC303 NORSAR Array S 44.52 323 *eP* **P 20 54 59.8 +0.3**
NB201 NORSAR Array S 44.54 323 *eP* **P 20 54 59.6 -0.1**
NB2 NORSAR Subarra 44.58 323 P **P 20 54 59.3 -0.7**
comp=Z,9.6nm,0.5s,baz=96,slow=7.9
NOA NORSAR Array B 44.58 323 P **P 20 54 59.5 -0.5**
comp=Z,11nm,0.6s,baz=97,slow=7.7,SNR=62
KONS Konsvik 44.60 331 *eP* **P 20 55 00.3 +0.3**
WTTA Wattenberg 44.70 303 *eP* **P 20 55 00.8 -0.5**
comp=Z,9.0nm,1.0s
NAO01 NORSAR Array S 44.72 323 *eP* **P 20 55 00.8 -0.2**
comp=Z,38nm,1.0s
NAO01 NORSAR Array S 44.72 323 *eP* **P 20 55 00.5 -0.5**
WATA Walderalm 44.73 304 *eP* **P 20 55 01.3 -0.2**
comp=Z,3.0nm,0.8s
KSRS Korea Array 44.77 71 P **P 20 55 02.1 +0.4**
comp=Z,1.5nm,0.4s,baz=278,slow=7.0,SNR=11
KSRS PcP **PcP 20 56 38.9 -0.7**
comp=Z,3.5nm,0.9s,baz=285,slow=3.5,SNR=9.7
NBO00 NORSAR Array S 44.79 323 *eP* **P 20 55 01.3 -0.3**
NC204 NORSAR Array S 44.82 323 *eP* **P 20 55 01.9 0.0**
comp=Z,74nm,1.3s
NC204 NORSAR Array S 44.82 323 *eP* **P 20 55 01.9 0.0**
LOF Lofoten 44.83 333 *eP* **P 20 55 01.1 -0.6**
TWG Pinlang 44.96 93 *eP* **P 20 55 03.3 -0.2**
comp=Z,55nm,0.8s
SQTA Sankt Quirin 44.99 303 *eP* **P 20 55 02.8 -0.8**
comp=Z,2.5nm,0.6s
SQTA *ep*P **pP 20 55 53.5 +0.1**
SQTA *e*PcP **PcP 20 56 40.0 -0.4**
comp=Z,2.2nm,0.5s
MOTA Moosalm 45.05 304 *eP* **P 20 55 03.2 -0.8**
comp=Z,2.9nm,0.6s,SNR=5.8
MOTA *ep*P **pP 20 55 54.5 +0.6**
comp=Z,4.1nm,1.1s
MOTA *e*PcP **PcP 20 56 39.7 -0.8**
comp=Z,4.0nm,0.8s
KLR Kul'dur 45.09 54 P **P 20 55 04.2 +0.1**
comp=Z,4.3nm,0.6s,baz=283,slow=9.6,SNR=15
KLR PcP **PcP 20 56 40.1 -0.4**
comp=Z,5.1nm,0.9s,baz=296,slow=5.4,SNR=5.6
KLR Kul'dur 45.09 54*c i* P **P 20 55 04.7 +0.6**
KLR pmax pmax
comp=Z,7.0nm,1.0s

RETA	Reutte	45.25	304	eP	P	20 55 04.9	-0.7
	comp=Z,2.6nm,0.9s						
KONO	Kongsberg	45.28	321	eP	P	20 55 05.3	-0.2
FETA	Feichten	45.35	303	eP	P	20 55 05.6	-0.8
	comp=Z,3.4nm,0.8s						
FETA				ePcP	PcP	20 56 41.6	-0.1
	comp=Z,3.0nm,0.5s						
FUORN	Ofenpass-Fuorn	45.73	303	eP	P	20 55 09.1	-0.4
	comp=Z,3.6nm,0.7s						
DAVA	Damuels	45.88	304	eP	P	20 55 10.2	-0.3
	comp=Z,7.4nm,0.7s,SNR=7.1						
DAVOX	Davos/Dischmat	45.96	303	P	P	20 55 10.7	-0.5
	comp=Z,3.8nm,0.6s,baz=121,slow=9.3,SNR=13						
DAVOX				PcP	PcP	20 56 43.3	-0.5
	comp=Z,4.2nm,0.4s,baz=145,slow=5.3,SNR=5.3						
USRK	Ussuriysk Ar.	46.09	61	PcP	PcP	20 56 43.0	-1.1
	comp=Z,1.4nm,0.5s,baz=320,slow=5.6,SNR=5.1						
SPITS	Spitsbergen Ar	47.65	347	P	P	20 55 24.6	+1.0
	comp=Z,6.0nm,0.4s,baz=122,slow=11,SNR=62						
SENIN	Lac Senin/Sane	47.79	303	eP	P	20 55 25.2	-0.2
	comp=Z,7.7nm,0.8s						
MEM	Membach	47.87	309	P	P	20 55 25.9	+0.2
WLF	Walferdange	47.93	307	P	P	20 55 26.9	+0.8
LPG	La Plagne	48.35	302	P	P	20 55 30.1	+0.3
LPG				pmax	pmax		
	comp=Z,70nm,0.7s						
LPL	La Plagne	48.36	302	P	P	20 55 29.4	-0.4
LPL				pmax	pmax		
	comp=Z,14nm,1.0s						
JNU	Nakatsue	48.47	75	P	P	20 55 32.0	+1.4
	comp=Z,7.9nm,0.7s,baz=325,slow=4.9,SNR=7.9						
JNU	Nakatsue	48.47	75	eP	P	20 55 32.0	+1.4
	comp=Z,10.0nm,0.9s						
BMRD	Maredsous	48.70	309	P	P	20 55 32.5	+0.5
	comp=Z,8.0nm,1.2s						
KMBO	Kilima Mbogo	48.86	228	P	P	20 55 35.8	+1.9
	comp=Z,4.0nm,0.7s,baz=33,slow=12,SNR=12						
KMBO	Kilima Mbogo	48.86	228	P	P	20 55 35.9	+2.0
BSKQ	Steenkerk	49.07	309	P	P	20 55 35.1	+0.3
KEST	Kesra	49.23	289	P	P	20 55 36.1	-0.2
	comp=Z,4.7nm,0.8s,baz=315,slow=4.6,SNR=7.0						
MBAR	Mbarara	52.56	235	eP	P	20 56 02.4	+1.0
	comp=Z,13nm,0.8s						
MBAR	Mbarara	52.56	235	eP	P	20 56 02.4	+1.0
MBAR				pmax	pmax		
	comp=Z,13nm,0.8s						
YSS	Yuzh-Sakhalins	52.77	55	eP	P	20 56 13.0	+11
MAJO	Matsushiro	52.85	68	eP	P	20 56 03.1	0.0
MAJO	Matsushiro	52.85	68	eP	P	20 56 03.1	0.0
MAT	Matsushiro	52.85	68	P	P	20 56 02.8	-0.3
MJAR	Matsushiro Arr	52.85	68	P	P	20 56 03.1	0.0
	comp=Z,2.4nm,0.8s,baz=282,slow=10,SNR=12						
MA2	Magadan	54.37	38	P	P	20 56 14.1	+0.4
	comp=Z,4.1nm,0.3s,baz=15,slow=21,SNR=4.7						
DAG	Danmarks Havn	54.90	344	⇑iP	P	20 56 17.9	+0.7
DAG				pmax	pmax		
	comp=Z,16nm,0.8s						
DAG	Danmarks Havn	54.90	344	⇑iP	P	20 56 17.9	+0.7
	comp=Z,21nm,0.8s						
ESDC	Sonseca Array	57.66	298	P	P	20 56 36.7	-0.6
	comp=Z,3.9nm,0.9s,baz=60,slow=7.1,SNR=19						
BILL	Bilibino	58.65	26	ceP	P	20 56 44.7	+1.0
BILL				i		20 58 58.2	
BILL				eS	S	21 04 39.5	+11
BILL				pmax	pmax		
	comp=Z,13nm,1.0s						
PEA1	Petropavlovsk-	59.95	44	eP	P	20 56 51.5	-1.3
PETK	Petropavlovsk-	59.95	44	P	P	20 56 51.5	-1.3
	comp=Z,1.1nm,0.7s,baz=114,slow=3.6,SNR=4.1						
SUMG	Summit	61.23	341	eP	P	20 57 02.6	+1.1
	comp=Z,22nm,0.8s						
SUMG	Summit	61.23	341	⇑iP	P	20 57 02.7	+1.1
SUMG				pmax	pmax		
	comp=Z,61nm,0.9s						
SUMG	Summit	61.23	341	⇑iP	P	20 57 02.7	+1.1
	comp=Z,61nm,0.9s						
LSZ	Lusaka	65.48	226	eP	P	20 57 30.6	+0.8
	comp=Z,12nm,0.8s						
LSZ	Lusaka	65.48	226	eP	P	20 57 30.6	+0.8
LSZ				pmax	pmax		
	comp=Z,12nm,0.8s						
TOA1	Torodi Ar. Sit	65.87	269	eP	P	20 57 29.1	-3.2
TOA1				epP	pP	20 58 27.9	+1.1
TOA0	Torodi Ar. Sit	65.88	269	eP	P	20 57 30.5	-1.9
	comp=Z,15nm,0.9s						
TORD	Torodi Ar. Bea	65.88	269	P	P	20 57 29.1	-3.2
	comp=Z,12nm,0.8s,baz=51,slow=5.4,SNR=66						
TORD				pP	pP	20 58 27.9	+1.1
	comp=Z,3.2nm,0.6s,baz=52,slow=5.2,SNR=3.6						
INK	Inuvik	74.00	9	P	P	20 58 21.6	+0.8
	comp=Z,15nm,0.9s,baz=344,slow=7.9,SNR=18						
LBTB	Lobatse	74.69	222	eP	P	20 58 26.4	+0.9
	comp=Z,34nm,1.3s						
DBIC	Dimbokro	74.85	267	P	P	20 58 25.4	-1.1
	comp=Z,11nm,1.0s,baz=20,slow=7.4,SNR=10						
DBIC	Dimbokro	74.85	267	eP	P	20 58 25.4	-1.1
	comp=Z,14nm,1.1s						
DBIC	Dimbokro	74.85	267	eP	P	20 58 25.5	-1.1
DBIC				pmax	pmax		
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	74.86	16	P	P	20 58 25.5	-0.3
	comp=Z,6.9nm,0.9s,baz=315,slow=5.0,SNR=61						
ILAR				pP	pP	20 59 21.1	-0.7
	comp=Z,1.8nm,0.9s,baz=313,slow=4.3,SNR=3.9						
ILB	Eielson Array	74.86	16	epP	pP	20 59 21.1	-0.7
KIC	Kosan Boka	74.94	267	eP	P	20 58 25.8	-1.3
	comp=Z,83nm,1.5s						
TSUM	Tsumeb	74.96	232	eP	P	20 58 27.8	+0.6
	comp=Z,10.0nm,0.7s						
TIC	Toumodi	75.00	267	eP	P	20 58 27.0	-0.5
LIC	Lamto	75.25	267	eP	P	20 58 27.4	-1.5
	comp=Z,107nm,1.9s						
BOSA	Boshof	77.75	220	P	P	20 58 42.8	+0.2
	comp=Z,7.3nm,0.8s,baz=9.5,slow=3.4,SNR=12						
BOSA				pP	pP	20 59 39.5	+0.1
	comp=Z,6.7nm,0.8s,baz=49,slow=7.5,SNR=5.0						
BOSA	Boshof	77.75	220	eP	P	20 58 42.9	+0.2
	comp=Z,11nm,0.9s						
BOSA	Boshof	77.75	220	eP	P	20 58 42.9	+0.3
BOSA				pmax	pmax		
	comp=Z,11nm,0.9s						
BALM	Baldy	79.14	16	eP	P	20 58 48.8	-1.1
	comp=Z,7.9nm,0.8s						
BALM	Baldy	79.14	16	eP	P	20 58 48.8	-1.1
BALM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KDAK	Kodiak Island	79.26	22	P	P	20 58 50.8	+0.5
	comp=Z,20nm,0.7s,baz=322,slow=2.2,SNR=23						
KDAK	Kodiak Island	79.26	22	eP	P	20 58 50.9	+0.5
	comp=Z,28nm,0.8s						
KDAK	Kodiak Island	79.26	22	eP	P	20 58 50.9	+0.6
KDAK				pmax	pmax		
	comp=Z,28nm,0.8s						
YKW3	Yellowknife Ar	81.30	3	eP	P	20 59 00.7	-0.4
	comp=Z,13nm,1.0s						
YKA	Yellowknife Ar	81.36	3	P	P	20 59 01.9	+0.4
	comp=Z,8.3nm,0.7s,baz=347,slow=5.1,SNR=68						
YKA				pP	pP	20 59 58.4	-0.2
	comp=Z,4.0nm,0.9s,baz=350,slow=5.9,SNR=4.4						
YKB5	Yellowknife Ar	81.36	3	epP	pP	20 59 58.4	-0.2
WRA	Warramunga Arr	81.79	122	P	P	20 59 03.8	-0.5
	comp=Z,5.9nm,0.3s,baz=304,slow=5.4,SNR=203						
WRA				pP	pP	21 00 00.9	-0.7
	comp=Z,4.0nm,0.7s,baz=306,slow=5.3,SNR=4.4						
WR1	Warramunga Arr	81.79	122	epP	pP	21 00 00.9	-0.7
WRAB	Tennant Creek	81.79	122	eP	P	20 59 03.5	-0.8
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	81.79	122	eP	P	20 59 03.5	-0.8
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
WB2	Warramunga Arr	81.80	122	eP	P	20 59 04.1	-0.3
	comp=Z,16nm,0.9s						
AS31	Alice Springs	84.05	125	epP	pP	21 00 13.0	-0.3
ASAR	Alice Springs	84.05	125	P	P	20 59 15.5	-0.4
	comp=Z,9.0nm,0.6s,baz=311,slow=5.0,SNR=147						
ASAR				pP	pP	21 00 13.0	-0.3
	comp=Z,2.6nm,0.9s,baz=319,slow=5.5,SNR=4.3						
FCC	Fort Churchill	84.43	352	eP	P	20 59 17.7	+0.5
	comp=Z,18nm,1.3s						
FCC	Fort Churchill	84.43	352	eP	P	20 59 17.7	+0.5
FCC				pmax	pmax		
	comp=Z,18nm,1.3s						
FORT	Forrest	85.46	134	eP	P	20 59 22.9	+0.2
	comp=Z,22nm,0.7s						
VNA2	Neumayer--Watz	120.34	202	P	PKPdf	21 05 33.0	-0.5
VNA1	Neumayer--Stat	120.50	202	P	PKPdf	21 05 30.4	-3.4
VNA3	Neumayer Olymp	121.15	202	P	PKPdf	21 05 34.4	-0.7
VNDA	Vanda	125.33	165	PKP	PKPdf	21 05 42.1	-0.8
	comp=Z,0.5nm,0.7s,baz=320,slow=4.7,SNR=5.1						
CPUP	Villa Florida	135.37	268	PKP	PKPdf	21 06 02.6	-0.8
	comp=Z,4.3nm,0.8s,baz=34,slow=1.1,SNR=11						
LPAZ	La Paz	138.80	288	PKP	PKPdf	21 06 10.1	-0.8
	comp=Z,1.4nm,0.7s,baz=32,slow=2.8,SNR=6.5						
LPAZ	La Paz	138.80	288	ePKPdf	PKPdf	21 06 10.7	-0.1
PLCA	Paso Flores	149.93	250	PKPbc	PKPbc	21 06 34.1	+0.3
	comp=Z,15nm,0.9s,baz=136,slow=1.3,SNR=19						
PLCA	Paso Flores	149.93	250	ePKPbc	PKiKP	21 06 34.4	-0.2
PLCA	Paso Flores	149.93	250	ePKP2	PKiKP	21 06 34.4	-0.2

IDC 16 21:12:01.1±584.0, 8°96S×1°43E, $h0^{km}$, Error ellipse: s-maj=265.0km s-min=220.0km az=64.0, South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I17CI	DIMBOKRO INFRA	16.74	338	i		22 57 00.0	
	baz=158,slow=314,SNR=1.8						
I35NA	TSUMEB INFRASO	18.66	125	i		23 05 30.0	
	baz=300,slow=324,SNR=6.8						

*IDC **16** 21:11:60.0±1.0, 55°98S×27°06W, $h0^{km}$, mb3.7/4, mb1 3.8/4, mb1mx3.7/16, mbtmp3.7/4, Error ellipse: s-maj=45.3km s-min=25.4km az=65.0*

*ISCJB **16** 21:12:06.9±1.0, 56°1S±0°1×26°9W±0°5, $h63^{km}$, mb3.6/4, Error ellipse: s-maj=40.4km s-min=15.3km az=157.0*

ISC 16 21:12:08.4±1.0, 56°1S±0°2×27°1W±0°3, $h63^{km}$, n9, σ1s49/9, mb3.7/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.77	158	P	P	21 16 02.3	+2.4
VNA3	Neumayer Olymp	16.97	161	P	P	21 16 01.2	-0.9
VNA2	Neumayer--Watz	17.17	158	P	Pn	21 16 03.3	-0.3
	baz=314,slow=13						
SNAA	Sanae	18.71	156	P	P	21 16 20.2	-1.2
MAW	Mawson	40.11	144	P	P	21 19 36.3	-0.9
	0.5nm,0.3s,baz=237,slow=6.7,SNR=3.5						
VNDA	Vanda	46.58	183	P	P	21 20 30.4	+1.2
	0.4nm,0.7s,baz=158,slow=6.6,SNR=3.4						
LPAZ	La Paz	50.43	305	P	P	21 20 60.0	-0.2
	0.9nm,0.5s,baz=174,slow=6.4,SNR=7.7						
TORD	Torodi Ar. Bea	73.02	29	P	P	21 23 32.1	+0.9
	0.2nm,0.4s,baz=203,slow=5.8,SNR=4.6						
ILAR	Eielson Array	150.17	312	PKPbc	PKPbc	21 31 49.0	-1.4
	1.0nm,0.8s,baz=123,slow=1.5,SNR=11						

*IDC **16** 21:34:59.3±1.1, 34°29N×25°11E, $h0^{km}$, mb3.7/8, mb1 3.6/13, mb1mx3.5/52, mbtmp3.6/13, ML4.0/4, Error ellipse: s-maj=20.7km s-min=17.2km az=58.0*

*ATH **16** 21:35:02.2, 34°27N×25°14E, $h25^{km}$±1^{km}, ML3.1/7, Error ellipse: s-maj=2.9km s-min=1.3km az=358.0*

*THE **16** 21:35:04.1, 34°37N×25°13E, $h1^{km}$±1^{km}, ML3.2/4, Error ellipse: s-maj=2.8km s-min=1.0km az=176.0*

ISC 16 21:34:59.8±1.8, 34°15N±0°06×25°15E±0°03, $h8^{km}$±10^{km}, n60, σ1s27/75, mb3.7/9, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.91	342	P	Pb	21 35 17.7	-0.1
SIVA				S	Sg	21 35 28.4	-0.6
SIVA	Sivas	0.91	342	P	Pb	21 35 17.8	0.0
SIVA				S	Sg	21 35 28.8	-0.2
SIVA				AML	AML	21 35 34.1	
	comp=E,10562μm,0.5s						
SIVA				AML	AML	21 35 37.0	
	comp=N,5935μm,0.6s						
TMBK	Timbaki Herakl	0.97	341	P	Pb	21 35 19.2	+0.3
TMBK				S	Sb	21 35 31.5	-0.3
LAST	Lasithi	1.04	15	P	Pb	21 35 20.3	+0.1
LAST	Lasithi	1.04	15	P	Pb	21 35 20.3	+0.1
LAST				S	Sg	21 35 33.4	+0.1
LAST				AML	AML	21 35 41.5	
	comp=N,1025μm,0.8s						
LAST				AML	AML	21 35 46.9	
	comp=E,1104μm,0.5s						
GVD	Gavdhos	1.11	308	P	Pn	21 35 22.3	+0.6
GVD				S	Sn	21 35 37.5	+0.3
GVD	Gavdhos	1.11	308	P	Pb	21 35 21.9	+0.6
GVD				S	Sn	21 35 37.3	+0.1
GVD				AML	AML	21 35 39.6	
	comp=E,3222μm,0.4s						
GVD				AML	AML	21 35 51.7	
	comp=N,3507μm,0.5s						
KSTL	Kastelli Herak	1.15	357	P	Pg	21 35 20.6	-1.2
IACM	Heraklion	1.15	357	P	Pn	21 35 23.1	+0.9
IDI	Anoyia	1.15	349	Pn	Pg	21 35 21.8	-0.1
	comp=N,32nm,0.3s,baz=204,slow=8.1,SNR=18						
IDI				Sn	Sg	21 35 36.2	-0.6
	comp=N,66nm,0.3s,baz=270,slow=18,SNR=8.4						
IDI				LR	LR	21 36 03.9	
	comp=N,136nm,19.1s,baz=128,slow=64						
NPS	Neapolis	1.17	19	P	Pb	21 35 22.6	+0.2
NPS	Neapolis	1.17	19	P	Pb	21 35 22.5	+0.2
NPS				AML	AML	21 35 50.0	
	comp=E,911μm,0.5s						
NPS				AML	AML	21 35 50.2	
	comp=N,1049μm,0.5s						
STIA	Sitia Lasithi	1.30	36	P	Pn	21 35 26.5	+2.2
ZKR	Zakros	1.30	42	P	Pn	21 35 26.0	+1.6
ZKR				S	Sb	21 35 42.3	+0.8
ZKR	Zakros	1.30	42	P	Pn	21 35 25.8	+1.5
ZKR				S	Sn	21 35 43.1	+1.1
ZKR				AML	AML	21 35 58.4	
	comp=E,1463μm,0.9s						
ZKR				AML	AML	21 36 00.6	
	comp=N,493μm,0.5s						
PRNS	Prines Rethymn	1.32	336	P	Pb	21 35 25.0	+0.2
PRNS				S	Sg	21 35 41.2	-1.0
VAM	Vamos	1.47	328	P	Pg	21 35 27.7	-0.4
VAM	Vamos	1.47	328	P	Pn	21 35 27.4	+0.7
VAM				S	Sn	21 35 47.1	+0.9
VAM				AML	AML	21 35 59.8	
	comp=E,1208μm,0.4s						
VAM				AML	AML	21 36 02.2	
	comp=N,1381μm,0.4s						
IMMV	Iera Moni Meta	1.62	324	P	Pg	21 35 30.8	0.0
IMMV				S	Sn	21 35 50.6	+0.8
IMMV	Iera Moni Meta	1.62	324	P	Pg	21 35 30.5	-0.4
IMMV				S	Sb	21 35 50.7	+0.2
IMMV				AML	AML	21 36 00.2	
	comp=N,1156μm,0.5s						
IMMV				AML	AML	21 36 11.7	
	comp=E,1449μm,0.6s						
KARP	Karpathos	2.16	49	P	Pb	21 35 39.3	+0.1
THR9	Santorini-Faro	2.21	4	P	Pn	21 35 38.1	+1.4
THR6	Thira Island,	2.21	5	P	Pn	21 35 38.1	+1.3
ANAF	Anafi Island	2.26	13	P	Pn	21 35 38.8	+1.4
THR3	Thira Island,	2.26	5	P	Pn	21 35 38.8	+1.4
THR5	Thira Island,	2.26	4	P	Pn	21 35 38.4	+0.9
SAP3	Santorini-Thir	2.28	4	P	Pn	21 35 38.1	+0.3
ANKY	Antikythira Is	2.28	319	P	Pb	21 35 40.4	-0.8
IOSP	Ios island	2.57	3	P	Pn	21 35 42.5	+0.8
MHLO	Agia Marina, M	2.60	347	P	Pn	21 35 43.0	+0.8
MHLA	Plaka, Milos I	2.65	347	P	Pn	21 35 43.8	+0.8
KYTH	Kithira	2.72	321	P	Pn	21 35 46.4	+2.6
AMGA	Amorgos Island	2.74	13	P	Pn	21 35 45.2	+1.1
APE	Apeiranthos	2.92	6	P	Pn	21 35 47.3	+0.6
SERI	Serifos	3.05	350	P	Pn	21 35 48.6	+0.2
VLI	Veliai	3.13	325	P	Pn	21 35 50.3	+0.8
ARG	Arkhangelos	3.19	49	P	Pn	21 35 53.2	+2.9
KRND	KRANIDI	3.61	334	P	Pn	21 35 57.2	+1.1
EPID	Epidavros	3.83	335	P	Pn	21 36 00.0	+1.0
VLY	Voula,Athens	3.85	344	P	Pn	21 35 59.9	+0.5
PTL	Penteli	4.02	345	P	Pn	21 36 02.5	+0.7
TRIP	Tripoli	4.10	326	P	Pn	21 36 05.2	+2.4
KSL	Kastellorizon	4.14	60	P	Pn	21 36 05.4	+2.0
VIL2	Platees	4.33	340	P	Pn	21 36 05.7	-0.2
EREA	Eretria	4.37	347	P	Pn	21 36 07.2	+0.7
KLV	Kalavryta, Ach	4.58	329	P	Pn	21 36 11.1	+1.7
MMAI	Mount Meron Ar	8.63	95	Pn	Pn	21 37 05.2	+0.1
	comp=E,0.8nm,0.3s,baz=288,slow=12,SNR=6.6						
MMAI				Sn	Sn	21 38 39.5	-3.3
	comp=E,3.3nm,0.3s,baz=276,slow=23,SNR=9.8						
BRTR	Keskin Array B	8.78	48	Pn	Pn	21 37 06.7	-0.5
	comp=E,0.1nm,0.3s,baz=230,slow=13,SNR=2.6						
EIL	Elat	9.46	116	Pn	Pn	21 37 18.3	+2.0
	comp=E,0.6nm,0.3s,baz=307,slow=20,SNR=3.8						
EIL				Sn	Sn	21 38 58.5	-4.4
	comp=E,1.1nm,0.3s,baz=270,slow=17,SNR=6.3						
AKASG	Malin Array Be	16.80	9	Pn	Pn	21 38 55.7	+0.4
	comp=E,1.2nm,0.3s,baz=199,slow=10,SNR=5.7						
GERES	GERESS Array B	16.97	333	Pn	P	21 38 59.9	+0.3
	comp=E,0.3nm,0.3s,baz=144,slow=11,SNR=9.5						
HFS	Hagfors	27.05	347	P	P	21 40 41.1	-1.3
	comp=E,1.9nm,0.9s,baz=157,slow=9.2,SNR=5.6						
FINES	FINESS Array B	27.31	1	P	P	21 40 42.6	-2.1
	comp=E,1.1nm,0.7s,baz=148,slow=15,SNR=3.6						
NOA	NORSAR Array B	28.37	346	P	P	21 40 52.9	-1.4
	comp=E,0.1nm,0.5s,baz=154,slow=9.7,SNR=2.6						
EKA	Eskdalemuir Ar	28.86	326	P	P	21 40 59.0	+0.3
	comp=E,0.3nm,0.5s,baz=119,slow=9.6,SNR=3.7						
TORD	Torodi Ar. Bea	29.84	231	P	P	21 41 08.7	+1.0
	comp=E,0.6nm,0.4s,baz=29,slow=8.9,SNR=11						
ARCES	ARCESS Array B	35.43	0	P	P	21 41 54.1	-2.0
	comp=E,7.6nm,0.3s,baz=173,slow=10,SNR=3.4						
MKAR	Makanchi Array	44.34	56	P	P	21 43 11.4	+0.9
	comp=E,0.4nm,0.5s,baz=261,slow=7.5,SNR=4.4						
ZALV	Zalesovo Beam	45.71	45	P	P	21 43 20.9	-0.3
	comp=E,1.1nm,0.4s,baz=266,slow=9.0,SNR=4.7						
SONM	Songino Array	60.13	50	P	P	21 45 09.4	+1.4
	comp=E,0.3nm,0.4s,baz=293,slow=5.4,SNR=2.9						

*GII **16** 21:39:01.2±0.0, 34°37N×24°99E, $h12^{km}$, mb5.6/3, MD5.9/3*

*MOS **16** 21:39:04.3±1.2, 34°49N×25°03E, $h21^{km}$, mb6.2/103, MS5.6/83, Error ellipse: s-maj=4.4km s-min=2.5km az=88.4*

*HLW **16** 21:39:04.5, 34°39N×25°18E, $h16^{km}$±23^{km}, Ml5.8*

*BJI **16** 21:39:04.3±0.0, 34°35N×24°74E, $h39^{km}$, mb5.8/86, mB5.8/66, Ms5.9/98, Ms7 5.8/91*

*MED_RC **16** 21:39:04.0±0.4, 34°30N×25°03E, $h10^{km}$, MW6.1/11, Moment Tensor Solution. Mantle waves: s11,c21; Duration: 2s0 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.14±.05; $M_{\theta\theta}$0.02±.03; $M_{\phi\phi}$0.12±.05; $M_{r\theta}$1.63±.11; $M_{\theta\phi}$-0.28±.03; $M_{\phi r}$-0.91±.12; Best double couple: $M_0$1.89000×10^{18} NP1:ϕ_s299.00000°, δ87.00000°, λ-96.00000°. NP2:ϕ_s180.00000°, δ7.00000°, λ-29.00000°. Principal axes: T 1.9600, Plg42.0000°, Azm34.0000°; N -0.1400, Plg6.0000°, Azm299.0000°; P -1.8200, Plg48.0000°, Azm203.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ATH **16** 21:39:04.7, 34°28N×25°13E, $h28^{km}$, ML5.6/16 Error ellipse: s-maj=1.6km s-min=0.8km az=359.0*

*NEIC **16** 21:39:05.7±0.0, 34°25N×25°04E, $h30^{km}$, Moment Tensor Solution. s19 Moment tensor: Scale 10^{18}Nm; M_{rr}0.21; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$0.11; $M_{r\theta}$1.22; $M_{\theta\phi}$-0.02; $M_{\phi r}$-0.69; Best double couple: $M_0$1.40000×10^{18} NP1:ϕ_s119.00000°, δ86.00000°, λ98.00000°. NP2:ϕ_s237.00000°, δ9.00000°, λ29.00000°. Principal axes: T 1.4300, Plg48.0000°, Azm37.0000°; N 0.0000, Plg7.0000°, Azm298.0000°; P -1.4200, Plg40.0000°, Azm201.0000°;*

*NEIC **16** 21:39:05.8±1.8, 34°35N×25°16E, $h19^{km}$, mb5.9/497, ME6.2, MS5.7/652, MW5.8, MW6.0, ML5.6(ATH), ML5.6(THE) Error ellipse: s-maj=7.0km s-min=5.1km az=203.0, Moment Tensor Solution. s106 Moment tensor: Scale 10^{17}Nm; M_{rr}0.76; $M_{\theta\theta}$-2.07; $M_{\phi\phi}$1.31; $M_{r\theta}$6.33; $M_{\theta\phi}$-2.21; $M_{\phi r}$-1.75; Best double couple: $M_0$7.20000×10^{17} NP1:ϕ_s104.00000°, δ87.00000°, λ113.00000°. NP2:ϕ_s202.00000°, δ23.00000°, λ9.00000°. Principal axes: T 7.1300, Plg44.0000°, Azm37.0000°; N 0.0500, Plg23.0000°, Azm283.0000°; P -7.1900, Plg38.0000°, Azm174.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s100.00000°, δ5.00000°, λ-90.00000°. NP2:ϕ_s280.00000°, δ85.00000°, λ-90.00000°. Principal axes: T Plg40.0000°, Azm10.0000°; N Plg0.0000°, Azm0.0000°; P Plg50.0000°, Azm190.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Irakleio. Also felt at Moires.

*THE **16** 21:39:05.6, 34°29N×25°12E, $h4^{km}$±1^{km}, ML5.7/15 Error ellipse: s-maj=1.5km s-min=0.6km az=177.0*

*ISCJB **16** 21:39:05.2±0.1, 34°384N±0°009×25°160E±0°009, $h25^{km}$, mb5.9/616, MS5.7/660, Error ellipse: s-maj=1.4km s-min=1.1km az=4.9*

*ISK **16** 21:39:06.8, 34°35N×25°10E, $h59^{km}$, ML5.7/28*

*GCMT **16** 21:39:06.8±0.1, 34°22N±0°01×25°19E±0°01, $h20^{km}$, MW6.1/123, Moment Tensor Solution. s123,c248; s105,c203; Duration: 2s8 Moment tensor: Scale 10^{18} Nm; M_{rr}0.16±.01; $M_{\theta\theta}$-0.31±.01; $M_{\phi\phi}$0.15±.01; $M_{r\theta}$1.74±.02; $M_{\theta\phi}$-0.09±.01; $M_{\phi r}$-0.71±.02; Best double couple: $M_0$1.90000×10^{18} NP1:ϕ_s112.00000°, δ87.00000°, λ97.00000°. NP2:ϕ_s222.00000°, δ7.00000°, λ20.00000°. Principal axes: T 1.8880, Plg47.0000°, Azm29.0000°; N 0.0250, Plg7.0000°, Azm292.0000°; P -1.9120, Plg42.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **16** 21:39:07.0±1.3, 34°43N×25°09E, $h31^{km}$±8^{km}, mb5.5/46, mb1 5.6/53, mb1mx5.6/54, mbtmp5.7/53, ML4.5/8, MS5.7/41, Ms1 5.7/41, ms1mx5.6/46 Error ellipse: s-maj=8.5km s-min=8.5km az=152.0*

*NIC **16** 21:39:09.9±0.2, 34°37N×25°67E, $h17^{km}$, mb5.6, ML5.4*

*NSSC **16** 21:39:10.5±1.2

ZKR	Zakros	1.09	51	P	Pb	21 39 28.2 +1.3
ZKR				S	Sb	21 39 45.2 +4.5
ZKR				AML	AML	21 39 57.0
ZKR				AML	AML	21 40 02.1
PRNS	Prines Rethymn	1.09	329	P	Pn	21 39 26.8 +0.5
PRNS				S	Sb	21 39 44.8 +4.1
VAM	Vamos	1.27	321	P	Pn	21 39 29.6 +0.8
VAM				S	Sb	21 39 48.1 +2.3
VAM	Vamos	1.27	321	P	Pn	21 39 29.6 +0.8
VAM				S	Sb	21 39 49.1 +3.3
VAM				AML	AML	21 39 59.9
VAM				AML	AML	21 40 11.4
IMMV	Iera Moni Meta	1.43	317	PN	Pn	21 39 31.8 +0.8
IMMV				SN	Sn	21 39 49.7 +0.7
IMMV	Iera Moni Meta	1.43	317	P	Pn	21 39 32.0 +1.0
IMMV	Iera Moni Meta	1.43	317	P	Pn	21 39 32.1 +1.1
IMMV				S	Sb	21 39 52.3 +1.8
IMMV				AML	AML	21 40 09.0
IMMV				AML	AML	21 40 13.5
CHAN	Chania	1.44	320	P	Pn	21 39 32.4 +1.3
SNT2	Vlychada, Sant	1.92	6	P	Pn	21 39 39.5 +1.8
THR6	Thira Island,	1.94	5	*e*Pn	Pn	21 39 39.9 +2.0
THR6	Thira Island,	1.94	5	P	Pn	21 39 40.0 +2.0
SAP1	Santorini-Akro	1.94	5	P	Pn	21 39 39.9 +2.0
SAP1	Santorini-Akro	1.94	5	P	Pn	21 39 39.9 +2.0
SANT	Santorini	1.96	6	PN	Pn	21 39 39.8 +1.6
SANT				SN	Sn	21 40 04.4 +2.4
SANT	Santorini	1.96	6	*e*Pn	Pn	21 39 39.9 +1.7
SANT				*e*Sn	Sn	21 40 00.8 -1.1
SANT	Santorini	1.96	6	P	Pn	21 39 39.8 +1.6
SANT	Santorini	1.96	6	⇑*i*P	Pn	21 39 39.9 +1.7
SANT	Santorini	1.96	6	P	Pn	21 39 40.1 +1.8
THT1	Athinios (Pele	1.97	6	P	Pn	21 39 40.4 +2.1
KARP	Karpathos	1.97	55	PN	Pn	21 39 39.8 +1.4
KARP	Karpathos	1.97	55	*e*Pn	Pn	21 39 40.1 +1.7
KARP				*e*Pg	Pb	21 39 42.2 +0.4
KARP				*e*Sn	Sn	21 40 03.1 +0.7
KARP				*e*Sg	Sb	21 40 07.0 +1.0
KARP	Karpathos	1.97	55	P	Pn	21 39 41.2 +2.8
KARP	Karpathos	1.97	55	P	Pn	21 39 40.4 +1.9
KARP				S	Sb	21 40 06.3 +0.3
KARP				AML	AML	21 40 31.6
	comp=N,91401µm,1.0s					
KARP				AML	AML	21 40 40.4
ANAF	Anafi Island	1.99	14	P	Pn	21 39 40.8 +2.2
ANAF	Anafi Island	1.99	14	P	Pn	21 39 41.1 +2.4
ANAF				S	Sb	21 40 07.5 +1.1
ANAF				AML	AML	21 40 29.8
ANAF				AML	AML	21 40 30.3
THR3	Thira Island,	1.99	5	P	Pn	21 39 40.7 +2.1
SAP2K	Karterados	1.99	6	P	Pn	21 39 40.5 +1.8
SAP2K	Karterados	1.99	6	P	Pn	21 39 40.9 +2.2
SAP3	Santorini-Thir	2.01	4	P	Pn	21 39 41.1 +2.2
SAP3	Santorini-Thir	2.01	4	P	Pn	21 39 41.1 +2.2
THT2	Imerovigli	2.02	5	P	Pn	21 39 41.0 +2.0
CMBO	Columbo, Santo	2.05	5	P	Pn	21 39 41.1 +1.6
SAP4	Santorini-Oia	2.05	4	P	Pn	21 39 41.7 +2.2
SAP4	Santorini-Oia	2.05	4	P	Pn	21 39 42.5 +3.0
ANKY	Antikythira Is	2.11	314	*e*Pn	Pn	21 39 42.1 +1.8
ANKY	Antikythira Is	2.11	314	P	Pn	21 39 41.6 +1.3
ANKY	Antikythira Is	2.11	314	P	Pn	21 39 41.7 +1.3
ANKY				S	Sn	21 40 08.2 +2.4
IOSP	Ios island	2.30	2	P	Pn	21 39 44.8 +1.9
IOSP	Ios island	2.30	2	P	Pn	21 39 44.8 +1.9
IOSP				AML	AML	21 40 37.5
IOSP				AML	AML	21 40 38.5
MHLO	Agia Marina, M	2.35	344	P	Pn	21 39 45.0 +1.4
MHLO				S	Sb	21 40 15.9 -0.9
MHLO	Agia Marina, M	2.35	344	P	Pn	21 39 45.3 +1.7
MHLO				S	Sn	21 40 14.9 +3.2
MHLO				AML	AML	21 40 35.6
MHLO				AML	AML	21 40 41.5
MHLA	Plaka, Milos I	2.40	345	P	Pn	21 39 46.3 +2.1
MHLA				S	Sn	21 40 16.6 +3.7
MHLA				AML	AML	21 40 48.0
MHLA				AML	AML	21 40 48.1
AMGA	Amorgos Island	2.47	13	P	Pn	21 39 47.3 +2.0
AMGA	Amorgos Island	2.47	13	P	Pn	21 39 47.3 +2.0
AMGA				S	Sn	21 40 18.3 +3.6
AMGA				AML	AML	21 40 48.2
	comp=E,83249µm,1.8s					
AMGA				AML	AML	21 40 49.5
	comp=N,72880µm,1.1s					
KYTH	Kithira	2.54	317	*e*Pn	Pn	21 39 47.3 +1.1
KYTH	Kithira	2.54	317	P	Pn	21 39 47.4 +1.2
KYTH	Kithira	2.54	317	P	Pn	21 39 47.8 +1.6
KYTH				S	Sn	21 40 19.2 +2.9
KYTH				AML	AML	21 40 40.0
	comp=E,76838µm,1.2s					
KYTH				AML	AML	21 40 41.6
	comp=N,43102µm,1.1s					
KTHR	Kythira	2.56	316	P	Pn	21 39 47.8 +1.3
APE	Apeiranthos	2.65	6	PN	Pn	21 39 49.7 +1.8
APE	Apeiranthos	2.65	6	P	Pn	21 39 49.6 +1.8
APE	Apeiranthos	2.65	6	⇑*i*P	Pn	21 39 49.7 +1.8
APE	Apeiranthos	2.65	6	‖*i*P	Pn	21 39 50.3 +2.5
APE	Apeiranthos	2.65	6	P	Pn	21 39 49.7 +1.8
NISR	Nisiros	2.70	35	P	Pn	21 39 50.8 +2.4
NISR	Nisiros	2.70	35	P	Pn	21 39 51.3 +2.9
SERI	Serifos	2.79	348	P	Pn	21 39 51.3 +1.6
SERI				S	Sn	21 40 26.4 +3.8
SERI				AML	AML	21 40 47.7
	comp=N,47128µm,2.2s					
SERI				AML	AML	21 40 47.7
	comp=E,56381µm,2.4s					
SLUM	Salum	2.92	180	P	Pn	21 39 50.3 -1.2
	baz=179					
SLUM				AMP		21 40 00.0
	baz=179					
VLI	Veliai	2.93	322	*e*Pn	Pn	21 39 52.2 +0.6
VLI	Veliai	2.93	322	P	Pn	21 39 52.2 +0.6
VLI	Veliai	2.93	322	P	Pn	21 39 52.8 +1.1
ARG	Arkhangelos	3.00	53	PN	Pn	21 39 55.1 +2.6
ARG	Arkhangelos	3.00	53	*e*Pn	Pn	21 39 55.7 +3.2
ARG	Arkhangelos	3.00	53	P	Pn	21 39 55.3 +2.8
ARG	Arkhangelos	3.00	53	*e*P	Pn	21 39 55.7 +3.2
ARG	Arkhangelos	3.00	53	P	Pn	21 39 55.6 +3.1
DAT	Datca	3.02	40	PN	Pn	21 39 55.3 +2.4
DAT	Datca	3.02	40	*i*P	Pn	21 39 56.1 +3.2
DATC	Datca-Mugla	3.08	40	PN	Pn	21 39 56.2 +2.5
BODT	Bodrum	3.15	33	PN	Pn	21 39 57.1 +2.5
BODT	Bodrum	3.15	33	*e*Pn	Pn	21 39 56.6 +2.0
BODT	Bodrum	3.15	33	P	Pn	21 39 57.2 +2.6
BDRM	Kayabasi	3.21	34	*i*P	Pn	21 39 58.7 +3.2
BBRN	Bozburun-Marma	3.25	45	PN	Pn	21 39 58.6 +2.6
MRSB	Marmaris-Mugla	3.35	46	PN	Pn	21 40 00.1 +2.7
KRND	KRANIDI	3.38	331	P	Pn	21 39 58.8 +1.0
DID	Didima	3.46	333	P	Pn	21 39 59.4 +0.5
DID				S	Sn	21 40 40.9 +1.8
DID	Didima	3.46	333	P	Pn	21 40 00.3 +1.4
SMG	Samos	3.54	22	P	Pn	21 40 02.4 +2.4
SMG	Samos	3.54	22	P	Pn	21 40 02.4 +2.4
VLY	Voula,Athens	3.60	342	P	Pn	21 40 02.2 +1.4
VLY	Voula,Athens	3.60	342	P	Pn	21 40 02.7 +1.9
GCAM	G?zelcaml?	3.67	26	PN	Pn	21 40 04.4 +2.7
GCAM	G?zelcaml?	3.67	26	*i*P	Pn	21 40 04.6 +2.9
YER	Yerkesik	3.69	42	PN	Pn	21 40 04.9 +2.7
YER	Yerkesik	3.69	42	*e*Pn	Pn	21 40 04.8 +2.6
YER	Yerkesik	3.69	42	P	Pn	21 40 05.2 +3.0
YER	Yerkesik	3.69	42	*e*P	Pn	21 40 04.8 +2.6
DALY	Dalyan (Mula)	3.70	49	PN	Pn	21 40 04.9 +2.8
DALY	Dalyan (Mula)	3.70	49	*i*P	Pn	21 40 05.9 +3.8
DALY				IAML_P		
	comp=Z,39µm,0.2s					
TURN	Turunc	3.70	48	PN	Pn	21 40 00.8 -1.4
TURN	Turunc	3.70	48	*i*P	Pn	21 40 01.6 -0.6
TURN				IAML_P		
	comp=Z,42µm,0.2s					
ATHU	Athens Univers	3.71	343	P	Pn	21 40 04.0 +1.6
VLX	Vlachokerasia	3.72	323	P	Pn	21 40 04.1 +1.6
VLX	Vlachokerasia	3.72	323	P	Pn	21 40 04.6 +2.0
PYL	PYLOS	3.73	312	P	Pn	21 40 02.2 -0.4
ATH	Athens Observa	3.73	342	P	Pn	21 40 04.2 +1.6
ATH	Athens Observa	3.73	342	P	Pn	21 40 04.3 +1.6
ATH				S	Sn	21 40 48.8 +3.0
ATH				AML	AML	21 41 28.1
	comp=E,21897µm,1.6s					
ATH				AML	AML	21 41 38.3
	comp=N,19094µm,1.6s					
PTL	Penteli	3.77	344	P	Pn	21 40 04.6 +1.4
PTL	Penteli	3.77	344	P	Pn	21 40 04.8 +1.6

ITM	Ithomi	3.82	317	*e*Pn	Pn	21 40 04.4 +0.6
ITM				*e*Pg	Pb	21 40 05.0 -8.3
ITM				*e*Sn	Sn	21 40 46.1 -1.8
ITM	Ithomi	3.82	317	P	Pn	21 40 04.5 +0.7
ITM	Ithomi	3.82	317	P	Pn	21 40 04.9 +1.1
FETY	Fethiye	3.87	54	PN	Pn	21 40 06.7 +2.2
FETY	Fethiye	3.87	54	*e*Pn	Pn	21 40 07.3 +2.8
FETY	Fethiye	3.87	54	P	Pn	21 40 06.4 +1.9
FETY	Fethiye	3.87	54	*i*P	Pn	21 40 06.8 +2.3
DGB	zmir	3.87	20	*i*P	Pn	21 40 07.2 +2.7
TRIP	Tripoli	3.90	323	P	Pn	21 40 06.8 +1.9
TRIP	Tripoli	3.90	323	P	Pn	21 40 06.8 +1.9
AYDN	Tasoluk	3.90	33	*i*P	Pn	21 40 08.6 +3.6
AYDN				IAML_P		
	comp=Z,34µm,0.3s					
ZEY	zmir	3.95	15	*i*P	Pn	21 40 07.5 +1.9
LOUT	Loutraki	3.98	334	P	Pn	21 40 07.5 +1.5
KSL	Kastellorizon	3.99	63	*e*Pn	Pn	21 40 08.0 +1.9
KSL	Kastellorizon	3.99	63	P	Pn	21 40 07.7 +1.6
KSL	Kastellorizon	3.99	63	P	Pn	21 40 07.7 +1.6
LTK	Loutraki	4.01	334	P	Pn	21 40 07.7 +1.2
LTK	Loutraki	4.01	334	P	Pn	21 40 08.6 +2.1
CHOS	Chios island	4.02	10	PN	Pn	21 40 08.7 +2.1
CHOS	Chios island	4.02	10	P	Pn	21 40 08.7 +2.1
VILL	Villia	4.03	338	P	Pn	21 40 08.2 +1.5
AKAS	Kas	4.04	62	PN	Pn	21 40 09.1 +2.2
AKAS	Kas	4.04	62	*i*P	Pn	21 40 09.7 +2.7
AKAS				*i*S	Sn	21 40 57.0 +3.5
AKAS				IAML_P		
	comp=Z,49µm,0.2s					
URLA	Izmir	4.09	16	PN	Pn	21 40 09.4 +1.8
URLA	Izmir	4.09	16	*i*P	Pn	21 40 10.5 +2.9
EREA	Eretria	4.11	346	P	Pn	21 40 09.6 +1.7
AYDB	Zeytinkoy-Aydi	4.14	31	PN	Pn	21 40 11.1 +2.8
THAL	Thalemo	4.14	331	P	Pn	21 40 09.1 +0.9
AMT	Artemida-Makis	4.19	319	P	Pn	21 40 10.2 +1.2
AMT	Artemida-Makis	4.19	319	P	Pn	21 40 11.0 +2.0
GUR	Goura	4.19	328	P	Pn	21 40 09.9 +0.9
GUR	Goura	4.19	328	P	Pn	21 40 11.6 +2.6
BLCB	Balcova	4.23	20	PN	Pn	21 40 11.9 +2.5
KLV	Kalavryta, Ach	4.37	327	P	Pn	21 40 12.1 +0.7
KLV	Kalavryta, Ach	4.37	327	P	Pn	21 40 14.5 +3.1
MRKA	Markates	4.46	344	P	Pn	21 40 14.1 +1.4
SKY	Skiros Island	4.47	354	P	Pn	21 40 14.5 +1.7
SKY	Skiros Island	4.47	354	P	Pn	21 40 14.8 +2.0
ELL	Elmali	4.49	58	PN	Pn	21 40 16.2 +3.0
DRO	Drossia	4.50	322	P	Pn	21 40 15.2 +1.9
DRO	Drossia	4.50	322	P	Pn	21 40 15.5 +2.2
DSF	Desfina	4.52	332	P	Pn	21 40 14.7 +1.2
DSF	Desfina	4.52	332	P	Pn	21 40 14.8 +1.2
DENT	Denizli	4.55	42	PN	Pn	21 40 17.0 +3.0
ALIK	Aliki, Aigiali	4.56	328	P	Pn	21 40 15.5 +1.5
LKR	Lokris	4.57	338	P	Pn	21 40 15.5 +1.4
ATAL	Atalanti	4.60	338	P	Pn	21 40 15.9 +1.3
LAKA	Lakka	4.61	327	P	Pn	21 40 16.5 +1.9
AKUM	Antalya-Kumluc	4.62	64	*i*P	Pn	21 40 17.2 +2.4
AKUM				*i*S	Sn	21 41 07.0 -0.6
KALE	Kalithea	4.66	329	P	Pn	21 40 15.9 +0.5
KALE				S	Sn	21 41 11.2 +2.5
TRIZ	Trizonia	4.67	328	P	Pn	21 40 16.4 +1.0
RLS	Riolos of Patr	4.71	321	P	Pn	21 40 17.7 +1.7
SERG	Sergoula	4.71	329	P	Pn	21 40 17.1 +1.0
SMIA	Simia	4.72	341	P	Pn	21 40 17.9 +1.7
UPR	University Cam	4.73	326	P	Pn	21 40 18.9 +2.6
VTN	Vitineika	4.76	318	P	Pn	21 40 18.4 +1.7
ZEDA	zmir-Bergama	4.78	18	*i*P	Pn	21 40 19.7 +2.6
EFP	Efpalio	4.79	327	P	Pn	21 40 18.4 +1.3
GOMA	Golmarmara-Man	4.81	26	PN	Pn	21 40 20.0 +2.6
SIGR	SIGRI	4.81	6	PN	Pn	21 40 19.2 +1.8
SIGR	SIGRI	4.81	6	P	Pn	21 40 19.2 +1.8
MANT	Manisa	4.88	33	*e*Pn	Pn	21 40 21.8 +3.1
MANT				*e*Sn	Sn	21 41 14.7 +0.2
MANT	Manisa	4.88	33	*i*P	Pn	21 40 22.7 +4.0
MANT				IAML_P		
	comp=Z,20µm,0.3s					
KEMT	Kemer-ANTALYA	4.89	62	PN	Pn	21 40 21.8 +3.3
PRK	Paraskevi	4.89	10	P	Pn	21 40 21.4 +2.9
AKHS	Akhisar	4.92	25	*i*P	Pn	21 40 22.9 +4.0
ANX	Ano Chora	4.92	329	P	Pn	21 40 19.5 +0.4
KORT	Korkueli	4.92	57	PN	Pn	21 40 28.8 +3.7
KORT	Korkueli	4.92	57	*i*P	Pn	21 40 23.7 +4.5
KORT				*i*S	Sn	21 41 18.6 +3.2
KULA	Kula-Manisa	4.95	33	PN	Pn	21 40 22.2 +2.8
AYVA	Ayvalik	5.02	13	*i*P	Pn	21 40 23.6 +3.3
ANTB	Antalya	5.09	59	PN	Pn	21 40 24.8 +3.5
KFL	Anninata	5.11	317	P	Pn	21 40 21.9 +0.3
PVO	Paravola	5.12	326	P	Pn	21 40 23.6 +2.0
NEO	Neokhori	5.12	343	P	Pn	21 40 23.2 +1.5
BRDR	BURDUR-Merkez	5.12	49	*i*P	Pn	21 40 24.5 +2.7
BRDR				IAML_P		
	comp=Z,4µm,0.2s					
AGG	Agios Georgios	5.13	334	*e*Pn	Pn	21 40 22.6 +0.8
AGG				*e*Sn	Sn	21 41 12.4 -7.9
AGG	Agios Georgios	5.13	334	P	Pn	21 40 23.2 +1.3
AGG	Agios Georgios	5.13	334	*e*P	Pn	21 40 22.6 +0.8
AGG				*e*		21 41 12.4
SWA2		5.17	177	P	Pn	21 40 20.7 -1.7
	baz=177					
XOR	Xorichti	5.18	343	P	Pn	21 40 23.8 +1.2
KHL	Karahalli	5.23	41	PN	Pn	21 40 26.2 +2.9
EVR	Evrytania	5.24	330	P	Pn	21 40 25.3 +1.9
EVR	Evrytania	5.24	330	P	Pn	21 40 25.0 +1.6
KHAL	Karahalli	5.25	40	*i*P	Pn	21 40 26.3 +2.7
KHAL				*i*S	Sn	21 41 25.1 +1.7
PDO	Prodromos	5.27	323	P	Pn	21 40 24.7 +1.0
VLS	Valsamata	5.27	317	P	Pn	21 40 23.8 0.0
USAK	Uak-Merkez	5.28	35	*i*P	Pn	21 40 27.1 +3.2
FYTO	Fytoko, Volos	5.29	341	P	Pn	21 40 25.5 +1.5
BCK	Bucak	5.33	54	PN	Pn	21 40 27.7 +3.1
STEP	BALIKESIR_Sava	5.34	22	*i*P	Pn	21 40 27.8 +3.0
BAYC	CANAKKALE_Bayr	5.42	11	*i*P	Pn	21 40 27.8 +2.0
BOZC	Bozcaada	5.45	7	PN	Pn	21 40 28.5 +2.7
BOZC	Bozcaada	5.45	7	*i*P	Pn	21 40 28.4 +2.2
LIA	Limnos Island	5.46	360	P	Pn	21 40 27.8 +1.4
EZN	Ezine	5.47	9	PN	Pn	21 40 28.5 +2.0
EZN	Ezine	5.47	9	*e*Pn	Pn	21 40 28.4 +2.0
EZN	Ezine	5.47	9	P	Pn	21 40 28.7 +2.3
EZN	Ezine	5.47	9	‖*i*P	Pn	21 40 28.3 +1.9
EZN	Ezine	5.47	9	*e*P	Pn	21 40 28.4 +2.0
FSK	Fiskardo	5.49	319	P	Pn	21 40 26.9 +0.2
ISP	Isparta	5.49	50	PN	Pn	21 40 30.3 +3.4
ISP	Isparta	5.49	50	*e*Pn	Pn	21 40 28.4 +1.6
ISP				*e*Sn	Sn	21 41 30.1 +0.8
ISP	Isparta	5.49	50	P	Pn	21 40 29.0 +2.1
ISP	Isparta	5.49	50	⇑*i*P	Pn	21 40 28.5 +1.6
ISP	Isparta	5.49	50	*e*P	Pn	21 40 28.5 +1.6
ISP				*e*		21 41 30.1
ISP	Isparta	5.49	50	Pn	Pn	21 40 26.8 -0.1
HBRG	Burj al`Arab	5.49	133	P	Pn	21 40 26.3 -0.5
	baz=132					
EVGI	Lefkada island	5.55	320	P	Pn	21 40 28.7 +1.1
BALB	Balikesir	5.63	22	PN	Pn	21 40 31.8 +3.0
BALB	Balikesir	5.63	22	*e*Pn	Pn	21 40 31.7 +3.0
BALB				*e*Sn	Sn	21 41 26.6 -6.0
BALY	Balya	5.65	19	*i*P	Pn	21 40 32.0 +3.0
LKD2	Lefkada island	5.68	321	P	Pn	21 40 29.8 +0.4
TSLK	Tsoukalades, L	5.71	322	P	Pn	21 40 31.1 +1.4
BAGO	Egridir - ISPA	5.76	50	*i*P	Pn	21 40 32.7 +2.1
KEPZ	Antalya-Kepez	5.78	63	*i*P	Pn	21 40 33.6 +2.8
KEPZ				*i*S	Sn	21 41 37.1 +0.8
GADA	Gvkgeada	5.78	5	PN	Pn	21 40 33.0 +2.2
GADA	Gvkgeada	5.78	5	*e*Pn	Pn	21 40 33.0 +2.2
GADA	Gvkgeada	5.78	5	P	Pn	21 40 32.7 +1.9
GDZ	Gediz	5.79	35	*i*P	Pn	21 40 34.6 +3.5
DURS	Dursunbey	5.80	26	*i*P	Pn	21 40 34.6 +3.6
DURS				IAML_P		
	comp=Z,7µm,0.5s					
PPCY	Paphos	5.92	84	P	Pn	21 40 31.7 -0.9
	baz=266					
GONE	Gonen-Balikesi	5.96	19	PN	Pn	21 40 35.8 +2.7
SHUT	Suhut-Afyon	5.97	45	PN	Pn	21 40 36.6 +3.1
OUR	Ouranopolis	5.98	351	P	Pn	21 40 35.1 +1.7
AFYO	Afyonkarahisar	5.99	42	*i*P	Pn	21 40 37.0 +3.3
AFYO				IAML_P		
	comp=Z,10µm,0.4s					
SMTH	Samothraki Isl	6.04	2	P	Pn	21 40 35.9 +1.5
GELI	Tayfur-Gelibol	6.05	9	PN	Pn	21 40 36.9 +2.5
LIT	Litokhoron	6.06	340	*e*Pn	Pn	21 40 35.6 +1.0
LIT				*e*Sn	Sn	21 41 40.0 -3.1
LIT	Litokhoron	6.06	340	P	Pn	21 40 35.7 +1.1

LIT	Litokhoron	6.06	340	*e*P	Pn	21 40 35.6 +1.0
LIT				*e*		21 41 40.0
LPK	Lapseki	6.07	11	PN	Pn	21 40 37.0 +2.3
PLG	Polygyros	6.10	347	P	Pn	21 40 36.6 +1.4
KNL	Balıkesir	6.13	17	*i*P	Pn	21 40 39.4 +3.9
ALFC	Alefka	6.14	81	P	Pn	21 40 34.7 -1.1
	baz=264					
ALFC				S	Sn	21 41 41.1 -4.2
THAS	Thassos island	6.18	357	P	Pn	21 40 37.6 +1.3
KRBG	Karabiga-Canak	6.19	15	PN	Pn	21 40 38.8 +2.4
EDC	Edincik	6.28	19	PN	Pn	21 40 40.4 +2.7
KPRO	Kipourio	6.31	332	P	Pn	21 40 39.8 +1.7
BOLV	Bolvadin	6.31	46	*i*P	Pn	21 40 40.9 +2.7
KCTX	Karacabey (Bur	6.35	22	PN	Pn	21 40 41.3 +2.7
SZAC	Souni	6.36	85	P	Pn	21 40 37.9 -0.8
	baz=268					
SZAC				S	Sn	21 41 46.0 -4.5
LEF	Lefka	6.38	82	⇑*i*P	Pn	21 40 37.7 -1.3
LEF	Lefka	6.38	82	*i*P	Pn	21 40 38.3 -0.7
LEF				*i*S	Sn	21 41 45.7 -5.2
LEF				IAML_P		
	comp=Z,3µm,0.2s					
DOGA	KONYA_Doganhis	6.40	53	*i*P	Pn	21 40 43.1 +3.7
DOGA				*i*S	Sn	21 41 52.7 +1.1
DOGA				IAML_P		
	comp=Z,6µm,0.2s					
IGT	Igoumenitsa	6.41	324	P	Pn	21 40 39.1 -0.3
THE	Thessaloniki	6.44	345	P	Pn	21 40 42.1 +2.3
SART	Tekirdag	6.45	14	*i*P	Pn	21 40 43.9 +3.9
AUKIR	Kırka- Seyitga	6.47	40	*i*P	Pn	21 40 43.9 +3.6
KZN	Kozani	6.47	336	P	Pn	21 40 41.9 +1.6
ALN	Alexandroupoli	6.50	6	*e*Pn	Pn	21 40 42.4 +1.9
ALN				*e*Sn	Sn	21 41 49.5 -4.4
ALN	Alexandroupoli	6.50	6	P	Pn	21 40 42.5 +1.9
ALN	Alexandroupoli	6.50	6	*e*P	Pn	21 40 42.4 +1.9
ALN				*e*		21 41 49.5
ULDT	Uludag	6.52	28	*i*P	Pn	21 40 44.6 +3.5
ULDT				IAML_P		
	comp=Z,4µm,1.1s					
SOH	Sokhos	6.55	348	P	Pn	21 40 43.7 +2.3
SOH	Sokhos	6.55	348	P	Pn	21 40 42.6 +1.2
KAVA	Kavala	6.58	356	P	Pn	21 40 43.5 +1.7
PENT	Pentalofos	6.60	332	P	Pn	21 40 43.4 +1.3
MDNY	Mudanya-Bursa	6.62	25	PN	Pn	21 40 45.3 +3.0
HMYD	Mayadein	6.63	133	P	Pn	21 40 41.3 -1.2
	baz=132					
HNAT	Natroun	6.64	135	P	Pn	21 40 42.1 -0.5
	baz=134					
HNAT				AMP		21 41 00.0
	baz=134					
HNAT				S	Sn	21 41 52.0 -5.5
	baz=134					
MAMC	Mammari	6.65	81	P	Pn	21 40 42.0 -0.7
	baz=264					
ERMK	Ermenek	6.68	68	*i*P	Pn	21 40 46.2 +3.0
ERMK				*i*S	Sn	21 41 59.0 +0.4
KMER	Konya-Meram	6.70	58	*i*P	Pn	21 40 46.3 +2.7
KMER				*i*S	Sn	21 41 52.4 -6.7
KMER				IAML_P		
	comp=Z,962nm,0.3s					
RDO	Rodhopi	6.72	2	P	Pn	21 40 45.7 +2.1
CSS	Mathiatis	6.73	83	P	Pn	21 40 42.8 -1.0
	baz=266					
CSS				S	Sn	21 41 56.3 -3.4
KONT	Konya--Tatoy	6.78	57	*i*P	Pn	21 40 47.3 +2.8
KONT				IAML_P		
	comp=Z,3µm,0.3s					
SRS	Serrai	6.80	350	P	Pn	21 40 46.3 +1.5
KEK	Kerkira	6.81	322	P	Pn	21 40 44.0 -0.9
CIFT	Cifteler, Eski	6.81	42	*i*P	Pn	21 40 47.8 +2.8
SRN	Sarande	6.84	324	P	Pn	21 40 44.7 -0.6
BORA	Eskisehir	6.88	36	*i*P	Pn	21 40 49.2 +3.3
KDHN	Kadinhani	6.92	52	*i*P	Pn	21 40 48.4 +1.9
KNT	Kendrikon	6.97	346	P	Pn	21 40 49.1 +2.1
YLV	Yalova	6.97	27	⇑*i*P	Pn	21 40 49.9 +2.7
NVR	Nevrokopi	6.99	352	P	Pn	21 40 49.1 +1.7
FNA	Florina	7.03	336	*e*Pn	Pn	21 40 47.8 -0.2
FNA				*e*Sn	Sn	21 42 03.6 -3.6
FNA	Florina	7.03	336	P	Pn	21 40 48.6 +0.6
FNA	Florina	7.03	336	*e*P	Pn	21 40 47.8 -0.2
FNA				*e*		21 42 03.6
GULN	MERSIN_Gulnar	7.05	73	*i*P	Pn	21 40 49.6 +1.3
GULN				*i*S	Sn	21 42 03.5

VTS Vitosha 8.32 350⇑ iP Pn 21 41 06.6 +0.8
VTS Vitosha 8.32 350 eP Pn 21 41 06.4 +0.6
VTS e 21 42 39.6
VTS Vitosha 8.32 350 eP Pn 21 41 07.5 +1.7
OFRI `Ofer 8.38 100 Pn Pn 21 41 04.5 -2.0
CMDR Camlidere-ANKA 8.38 42 i P Pn 21 41 09.7 +3.1
BCAM Yenicaga 8.39 39 i P Pn 21 41 10.0 +3.3
CEL Celeste 8.42 300 ePn Pn 21 41 06.4 -0.6
CEL eSn Sn 21 42 31.8 -9.5
HNTI Hanita 8.42 96 Pn Pn 21 41 05.5 -1.6
KIRS Kırehir-Merke 8.43 54 i P Pn 21 41 09.1 +1.9
KZIT Kziot 8.52 112 P Pn 21 41 06.2 -2.2
comp=Z,3µm,1.0s,comp=Z,24nm
SLTI Sal'it 8.53 102 Pn Pn 21 41 06.4 -2.1
BEYL Beirut 8.56 91 eP Pn 21 41 06.4 -2.5
BR101 Keskin Array S 8.58 49 ePn Pn 21 41 10.8 +1.5
BR101 eSn Sn 21 42 45.5 +0.2
BR131 Keskin Array S 8.58 49 ePn Pn 21 41 10.9 +1.5
BR131 Keskin Array S 8.58 49 P Pn 21 41 11.3 +2.0
SNR=289
BRTR Keskin Array B 8.58 49 Pn Pn 21 41 10.8 +1.5
comp=Z,5.1nm,0.3s,baz=225,slow=12,SNR=147
BRTR Sn Sn 21 42 45.5 +0.2
baz=212,slow=24,SNR=2.3
BRTR LR LR 21 45 36.2
comp=Z,57µm,20.3s,baz=228,slow=45
BRTR ScP ScP 21 51 06.3 -1.7
baz=207,slow=1.6,SNR=5.6
MMA0B Mount Meron ar 8.63 97 Pn Pn 21 41 07.9 -2.0
MMAI Mount Meron Ar 8.63 97 Pn Pn 21 41 07.8 -2.2
comp=Z,24nm,0.3s,baz=279,slow=11,SNR=82
MMAI Sn Sn 21 42 39.9 -6.5
comp=Z,398nm,0.3s,baz=294,slow=21,SNR=14
DQRL Deir Qamar 8.65 92 eP Pn 21 41 07.2 -3.0
AMAZ Amatzia 8.67 107 Pn Pn 21 41 09.0 -1.4
AMAZ Amatzia 8.67 107 P Pn 21 41 09.3 -1.1
comp=Z,3µm,1.1s,comp=Z,46nm
BHL Bhannes 8.69 90 eP Pn 21 41 06.1 -4.7
CGL1 Ceglie Messapi 8.72 318 ePn Pn 21 41 08.1 -3.1
CGL1 Sn Sn 21 42 39.6 -9.1
TAR1 Taranto 8.75 316⇓ iPn Pn 21 41 10.1 -1.3
TAR1 Sn Sn 21 42 42.9 -6.3
QRWL Qaraoun 8.76 93 eP Pn 21 41 09.3 -2.4
MMLI Mount Malkishu 8.78 100 Pn Pn 21 41 10.2 -1.8
MMLI Mount Malkishu 8.78 100 P Pn 21 41 10.4 -1.6
comp=Z,508nm,1.4s,comp=Z,5.3nm
GEM Giv'at Ha'Em 8.80 95 Pn Pn 21 41 10.3 -1.9
KSDI Kefar Szold 8.80 95 Pn Pn 21 41 10.0 -2.2
YURE YUREGIR 8.84 71 i P Pn 21 41 13.7 +0.9
SHBL Chebaa 8.84 94 eP Pn 21 41 10.3 -2.6
WDD Wied Dalam 8.85 282 ePn Pn 21 41 11.3 -1.5
WDD eSn Sn 21 42 43.5 -8.2
NATI Neve Ativ 8.85 95 Pn Pn 21 41 10.1 -2.8
AKO Adana 8.85 67 i P Pn 21 41 15.2 +2.2
AKO i S Sn 21 42 44.4 -7.5
YTIR Yattir 8.89 107 Pn Pn 21 41 11.9 -1.6
RCY Rachaya 8.89 93 eP Pn 21 41 11.9 -1.7
MASS Massafra 8.90 316 ePn Pn 21 41 12.0 -1.5
HWQ Hawqa 8.90 88 eP Pn 21 41 12.7 -1.0
FASA Fasano 8.90 318 ePn Pn 21 41 11.5 -2.1
FASA Sn Sn 21 42 48.6 -4.5
AVNS Nevsehir-Avano 8.91 58 i P Pn 21 41 17.3 +3.5
DELI KIRIKKALE 8.91 49 i P Pn 21 41 15.8 +1.9
HMDT Nahal Hemdat 8.92 101 Pn Pn 21 41 12.0 -1.8
KSHT Keshet 8.97 96 Pn Pn 21 41 13.3 -1.3
SHMJ Saham 8.99 98 P Pn 21 41 13.7 -1.1
comp=Z,1µm,0.8s
MPEP Malo Peshtene 8.99 353 P Pn 21 41 15.4 +0.6
CDAG Cicekdag 8.99 52 i P Pn 21 41 17.3 +2.3
YAHY KAYSERI_Yahyal 9.00 63 i P Pn 21 41 17.4 +2.3
BRBR Barbar 9.00 93 eP Pn 21 41 13.9 -1.3
BRBR eS Sn 21 42 44.5 -11
BRBR AML AML 21 42 54.2
comp=N,3µm,0.7s
BRBR AML AML 21 42 54.8
comp=E,2µm,0.6s
DSI Dead Sea 9.02 106 Pn Pn 21 41 13.7 -1.6
DRME Dracevica, Mon 9.07 330⇑ iPn Pn 21 41 12.5 -3.4
YAYL Yayladag 9.08 77 i P Pn 21 41 17.4 +1.2
YAYL i S Sn 21 42 51.8 -5.8
BTIN Bartın 9.10 36 i P Pn 21 41 19.7 +3.4
MZDA Masada 9.11 107 Pn Pn 21 41 14.5 -1.9
KRMI Paran Flat 9.14 115 Pn Pn 21 41 15.5 -1.5
MATE Matera 9.16 315⇑ iP Pn 21 41 14.3 -2.8
LISJ El Lisan 9.22 107 P Pn 21 41 16.8 -1.2
comp=E,482nm,1.0s
PRNI Paran 9.24 113 Pn Pn 21 41 16.8 -1.5
PDG Podgorica 9.25 332⇓ iP Pn 21 41 15.0 -3.3
PDG Podgorica 9.25 332⇑ iPn Pn 21 41 15.2 -3.1
TTG Podgorica 9.25 332 ePn Pn 21 41 15.2 -3.1
TTG eSn Sn 21 42 57.2 -4.2
TTG Podgorica 9.25 332 eP Pn 21 41 15.2 -3.1
TTG e 21 42 57.2
VAE Valguarnera 9.25 292 Pn Pn 21 41 17.9 -0.6
comp=E,12nm,0.3s,baz=160,slow=4.0,SNR=71
VAE Sn Sn 21 42 55.3 -6.5
comp=E,60nm,0.3s,baz=117,slow=18,SNR=3.3
QASN Qassioun 9.25 92 eP Pn 21 41 18.4 -0.2
QASN eS Sn 21 42 48.1 -14
QASN AML AML 21 43 03.0
comp=E,1µm,0.7s
QASN AML AML 21 43 03.1
comp=N,5µm,0.5s
ZFRI Zfri 9.28 112 Pn Pn 21 41 16.8 -2.0
SG1 Sgolgore (BA) 9.30 316 ePn Pn 21 41 17.5 -1.6
SG1 Sn Sn 21 42 54.6 -8.3
SIRC Yozgat 9.36 56 i P Pn 21 41 21.2 +1.1
BAI Bari 9.36 318 ePn Pn 21 41 18.1 -1.8
BAI Sn Sn 21 42 57.4 -7.0
WALJ Wala 9.37 105 P Pn 21 41 18.9 -1.1
comp=N,1µm,0.8s
TOTH TOTAH 9.41 93 eP Pn 21 41 19.6 -1.0
HRFI Mount Harif 9.42 115 Pn Pn 21 41 18.8 -1.9
HRFI Mount Harif 9.42 115 P Pn 21 41 19.3 -1.4
comp=N,985nm,0.6s
ILGA Ilgaz 9.45 43 ePn Pn 21 41 25.3 +4.0
ILGA Ilgaz 9.45 43 i P Pn 21 41 25.7 +4.4
MBRI Mt Berech 9.45 117 Pn Pn 21 41 20.0 -1.2
SAIM ADANA 9.49 65 i P Pn 21 41 23.1 +1.3
GUNE Kayseri 9.50 59 i P Pn 21 41 26.6 +4.6
HSUJ Al Zarqa 9.50 101 P Pn 21 41 21.6 -0.3
comp=N,1µm,1.2s
HKAT Jabal Katrina 9.54 126 S Sn 21 43 01.5 -7.7
baz=125
EIL Elat 9.54 117 Pn Pn 21 41 20.8 -1.7
comp=N,86nm,0.3s,baz=359,slow=6.3,SNR=160
EIL Sn Sn 21 43 00.6 -8.3
comp=N,124nm,0.3s,baz=295,slow=14,SNR=6.8
EIL Elat 9.54 117 Pn Pn 21 41 20.7 -1.7
EIL Elat 9.54 117 P Pn 21 41 22.1 -0.3
comp=N,772nm,0.8s
ANDN Andirin 9.57 68 i P Pn 21 41 24.0 +1.1
ANDN i S Sn 21 43 02.4 -7.4
HCY Herceg Novi 9.57 329 ePn Pn 21 41 19.8 -3.0
JDRJ Daraweish 9.58 110 P Pn 21 41 22.7 -0.3
comp=N,893nm,0.8s
VLAD Vladila 9.58 357⇓ iP Pn 21 41 23.0 +0.1
AQBJ Aqaba 9.59 117 P Pn 21 41 22.6 -0.4
comp=N,2µm,0.6s
KAMA Osmaniye 9.72 70 i P Pn 21 41 24.5 -0.4
KAMA i S Sn 21 43 04.5 -8.9
COAL Corum-Alaca 9.73 50 i P Pn 21 41 26.8 +1.7
MANR Mangalia 9.74 15⇓ iP Pn 21 41 26.6 +1.5
SGRR Singureni 9.80 3⇑ iP Pn 21 41 27.0 +1.1
TREB Trebinje 9.86 329 ePn Pn 21 41 23.3 -3.3
ICOR Ion Corvin 9.89 11⇓ iP Pn 21 41 28.8 +1.7
RASA Rasa 9.89 8⇑ iP Pn 21 41 28.7 +1.6
BRY Bratogost 9.93 330 ePn Pn 21 41 24.4 -3.4
CRAR CRAIOVA 9.95 354⇑ iP Pn 21 41 28.8 +0.9
KAGI orum-Kargı 9.95 45 i P Pn 21 41 31.8 +3.8
HCB Kahramanmara 9.95 70 i P Pn 21 41 28.5 +0.6
HCB i S Sn 21 43 11.4 -7.4
KUZU Kuzuini 9.96 73 i P Pn 21 41 29.3 +1.1
PUNG Punghina 9.99 351⇓ iPn Pn 21 41 28.7 +0.2
EFOR EFORIE 10.00 14⇓ iP Pn 21 41 30.0 +1.4
UPM Unac-Piva 10.04 333⇑ iPn Pn 21 41 26.5 -2.8
ASF Jabal al Asfar 10.05 100 Pn Pn 21 41 27.3 -2.2
comp=N,6.3nm,0.3s,baz=234,slow=7.4,SNR=39
ASF Sn Sn 21 43 16.1 -5.5
comp=N,27nm,0.3s,baz=326,slow=19,SNR=6.1
ASF Jabal al Asfar 10.05 100 P Pn 21 41 28.0 -1.5
comp=N,271nm,1.1s

HUMR Humele 10.09 359⇓ iP Pn 21 41 29.9 0.0
LEHL Lehliu 10.12 7⇑ iP Pn 21 41 31.8 +1.6
CUSAR Sarkisla-SIVAS 10.16 57 i P Pn 21 41 34.1 +3.1
CLTB Caltabellotta 10.20 291 ePn Pn 21 41 29.6 -1.8
CLTB eSn Sn 21 43 12.3 -13
BZK Bozkurt 10.23 40⇑ iP Pn 21 41 34.4 +2.7
STON Ston 10.26 327 ePn Pn 21 41 29.8 -2.4
STON Sn Sn 21 43 15.5 -11
STON Ston 10.26 327 ePn Pn 21 41 27.6 -4.6
SULR 10.27 4⇑ iP Pn 21 41 33.8 +1.5
AMRR Amara 10.31 9⇑ iP Pn 21 41 34.3 +1.5
TIRR Tirgusor 10.32 13 ePn Pn 21 41 34.1 +1.1
TIRR eSn Sn 21 43 27.0 -0.9
TIRR Tirgusor 10.32 13⇑ iP Pn 21 41 33.8 +0.8
TIRR Tirgusor 10.32 13 eP Pn 21 41 34.2 +1.1
TIRR e 21 43 27.0
SRE Strehaia 10.34 352⇑ iP Pn 21 41 34.2 +0.9
TLB Topalu 10.38 11⇑ iP Pn 21 41 34.7 +0.8
ELBS KAHRAMANMARAS 10.39 65 i P Pn 21 41 35.2 +1.1
BBLS Lazići 10.44 336⇑ iPn Pn 21 41 30.9 -3.8
CUALT Altinyayla-SIV 10.45 59 i P Pn 21 41 38.4 +3.4
DIVS Divibare 10.46 339⇑ iPn Pn 21 41 31.4 -3.6
HARR Harsova 10.47 11⇓ iP Pn 21 41 35.8 +0.8
PGOR Pogoanele 10.56 7⇑ iP Pn 21 41 38.1 +1.8
SECR 10.62 3⇑ iP Pn 21 41 38.8 +1.7
CUGUR Gurin_SVAS 10.62 63 i P Pn 21 41 40.7 +3.4
HAVZ Havza 10.65 48 i P Pn 21 41 45.0 +7.4
HERR Herculane 10.66 349⇓ iP Pn 21 41 37.4 -0.2
MDVR Moldovita 10.68 347⇓ iP Pn 21 41 37.4 -0.6
DIKM Dikmen 10.72 45⇑ iP Pn 21 41 40.2 +1.7
ISR Istrita 10.73 5⇑ iP Pn 21 41 40.6 +1.9
HAPS Han Pijesak,BI 10.79 335 ePn Pn 21 41 35.4 -4.1
MTUR Matau 10.79 360⇑ iP Pn 21 41 40.5 +1.0
SINO SINOP_Merkez 10.93 43 i P Pn 21 41 47.0 +5.7
ARR Arges 10.94 358⇑ iP Pn 21 41 41.5 0.0
SCER sogukcermik 10.96 57 i P Pn 21 41 47.7 +5.7
CFR Carcaliu 10.98 11⇑ iP Pn 21 41 42.2 +0.3
CUKAN kangal_SIVAS 10.98 60 i P Pn 21 41 45.6 +3.4
VOIR 11.00 359⇓ iP Pn 21 41 42.5 +0.1
GRER 11.03 7⇑ iP Pn 21 41 44.8 +2.1
LOT Lotru 11.06 355⇑ iP Pn 21 41 43.6 +0.3
MLR Muntele Rosu 11.07 3 Pn Pn 21 41 44.0 +0.6
comp=N,0.6nm,0.3s,baz=185,slow=8.0,SNR=64
MLR LR LR 21 46 49.0
comp=N,72µm,19.2s,baz=186,slow=42
MLR Muntele Rosu 11.07 3 ePn Pn 21 41 44.5 +1.1
MLR Muntele Rosu 11.07 3⇓ iP Pn 21 41 44.8 +1.4
MLR Muntele Rosu 11.07 3 eP Pn 21 41 44.5 +1.1
ERBA Erbaa 11.10 52 i P Pn 21 41 48.9 +5.1
TLCR 11.10 13⇑ iP Pn 21 41 44.3 +0.6
SAMS Samsun-Alacam 11.11 48 i P Pn 21 41 48.0 +4.2
BANR Banloc 11.38 345⇑ iP Pn 21 41 46.5 -0.9
PETR Petresti 11.39 7⇑ iP Pn 21 41 48.6 +0.9
ODBI Odobesti 11.42 7⇓ iP Pn 21 41 50.2 +2.2
PLOR Plostina 11.47 5⇓ iP Pn 21 41 49.5 +0.8
FRGS Fruska Gora 11.49 341⇑ iPn Pn 21 41 46.4 -2.6
VRI Vrincioaia 11.49 5⇑ iP Pn 21 41 49.8 +0.8
BZS Buzias 11.51 347⇑ iP Pn 21 41 47.9 -1.3
DOPR Dopca 11.53 1⇓ iP Pn 21 41 50.3 +0.7
DEV Deva 11.58 352⇑ iP Pn 21 41 50.5 +0.3
DOB Doboj 11.65 334 ePn Pn 21 41 48.5 -2.7
OZUR 11.67 2⇑ iP Pn 21 41 51.9 +0.4
MDB Medias 11.72 357⇑ iP Pn 21 41 57.2 +5.0
MGRS Mrkonjic Grad 11.78 330 ePn Pn 21 41 51.1 -1.8
BIR Birlad 11.97 8⇓ iP Pn 21 41 56.3 +0.7
BLY Banja Luka 12.01 332 ePn Pn 21 41 52.3 -3.8
BLY eSn Sn 21 44 05.1 -4.1
BLY Banja Luka 12.01 332⇑ iP Pn 21 41 53.1 -3.0
BLY Banja Luka 12.01 332⇑ iPn Pn 21 41 51.3 -4.8
SEVA Sevastopol 12.03 30⇑ iP Pn 21 41 57.8 +1.4
TESR Tescani 12.13 5⇑ iP Pn 21 41 57.7 0.0
SIRR Siria 12.13 348⇑ iP Pn 21 41 57.0 -0.8
AQU L'Aquila 12.16 314 ePn Pn 21 41 58.3 0.0
AQU eSn Sn 21 44 06.1 -7.0
AQU L'Aquila 12.16 314 eP Pn 21 41 58.3 0.0
AQU e 21 44 06.1
AQU L'Aquila 12.16 314⇑ iPn Pn 21 41 56.8 -1.5
CJR Cluj-Napoca 12.34 355⇓ iP Pn 21 42 00.9 +0.3
MRAK Mrakovica 12.34 331 ePn Pn 21 41 58.5 -2.2
UDBI Udbina 12.43 327 ePn Pn 21 42 00.8 -1.1
DRGR 12.50 352⇑ iP Pn 21 42 02.9 +0.1
BIZ Bicaz 12.52 3⇑ iP Pn 21 42 03.5 +0.4
SIM Simferopol' 12.55 30c iP Pn 21 42 04.8 +1.3
SIM pmax pmax
comp=Z,940nm,2.1s
SIM MLR MLR
comp=Z,12µm,12.8s
ARCR ARCALIA 12.66 357⇑ iP Pn 21 42 05.2 +0.1
MILM Milestii Mici 12.78 11⇓ iP Pn 21 42 06.2 -0.4
MORH Mrgy, Hungar 12.79 339 ePn Pn 21 42 02.9 -3.8
KIS Kishinev 12.86 11 i P Pn 21 42 06.0 -1.7
comp=Z,670nm,2.0s
KIS Kishinev 12.86 11 i PP P 21 42 15.0 -3.3
KIS i S Sn 21 44 30.0 +0.1
comp=Z,6µm,13.0s
KIS i Li 21 45 30.0
KIS i Lg1 21 45 46.0
KIS i Lg2 21 46 26.0
KIS LRM MLR 21 47 44.0
comp=Z,69µm,14.0s
NVLJ Novalja 12.87 325 i Pn Pn 21 42 05.8 -2.1
PRAR RASCA 12.95 3⇓ iP Pn 21 42 09.5 +0.6
KEST Kesra 13.04 280 Pn Pn 21 42 08.2 -2.2
comp=Z,0.4nm,0.3s,baz=57,slow=2.7,SNR=11
KEST Sn Sn 21 44 24.2 -10
comp=Z,1.5nm,0.3s,baz=120,slow=16,SNR=2.9
KEST LR LR 21 48 14.8
comp=Z,10µm,19.8s,baz=39,slow=42
KEST Kesra 13.04 280 ePn Pn 21 42 10.2 -0.2
KEST eSn Sn 21 44 24.2 -10
I48TN KESRA INFRASON 13.06 281 i 22 50 30.0
baz=87,slow=326,SNR=1.2
BURAR Bucovina Array 13.18 0⇑ iP Pn 21 42 12.3 +0.1
BUR08 Bucovina Ar. S 13.21 0 ePn Pn 21 42 13.4 +0.9
KTUT Trabzon 13.27 56⇓ iP Pn 21 42 15.8 +2.5
BMR Baia Mare 13.30 355⇓ iP Pn 21 42 13.9 +0.2
TAMR Tamra 13.32 286 ePn Pn 21 42 12.3 -1.8
TAMR eSn Sn 21 44 37.3 -3.9
OZLJ Ozalj 13.42 329 ePn Pn 21 42 13.7 -1.6
BOJS Bojanci 13.42 328 i Pn Pn 21 42 12.7 -2.7
BOJS i 21 42 25.0
BOJS i Sn Sn 21 44 33.2 -10
CRES Cresnjev 13.59 330⇑ iPn Pn 21 42 14.3 -3.4
BEHE Becsehely 13.62 335 ePn Pn 21 42 13.6 -4.5
RIY Rijeka 13.63 326 ePn Pn 21 42 14.7 -3.5
TRPA Tarpa 13.84 353⇑ iP Pn 21 42 20.1 -0.9
VISS Visnje 13.84 328 i Pn Pn 21 42 17.9 -3.1
VISS i 21 42 29.3
VISS eSn Sn 21 44 45.1 -8.7
CEY Cerknica 13.97 327⇑ iPn Pn 21 42 18.9 -4.0
ANN Anapa 14.00 39c iP Pn 21 42 22.7 -0.6
ANN eS Sn 21 44 56.3 -1.5
ANN pmax pmax
comp=Z,362nm,1.5s
PSZ Piszkesteto 14.05 345 ePn Pn 21 42 21.7 -2.3
PSZ eSn Sn 21 44 59.2 0.0
PSZ Piszkesteto 14.05 345 eP Pn 21 42 21.7 -2.3
PSZ e 21 44 59.2
LJU Ljubljana 14.16 328⇑ iPn Pn 21 42 20.3 -5.2
TRI Trieste 14.25 326 ePn Pn 21 42 21.8 -4.9
TRI Trieste 14.25 326 eP Pn 21 42 21.8 -4.9
JAVS Javornik 14.25 327 i Pn Pn 21 42 23.1 -3.7
JAVS i 21 42 34.0
JAVS i Sn Sn 21 44 54.2 -10
SRO2 Moca 14.27 341 eP Pn 21 42 24.1 -2.8
SRO2 e 21 45 01.2
SRO2 Moca 14.27 341 ePN Pn 21 42 24.1 -2.8
SRO2 Moca 14.27 341 eP P 21 42 33.9 0.0
SRO2 Moca 14.27 341 eSN Sn 21 45 01.2 -3.0
SRO Srobarova 14.34 341 eP Pn 21 42 25.5 -2.3
SRO Srobarova 14.34 341 ePN Pn 21 42 25.5 -2.3
SRO Srobarova 14.34 341 eP P 21 42 35.1 +0.4
UZH Uzhgorod 14.36 352 eP Pn 21 42 28.0 -0.1
UZH eS Sn 21 45 09.5 +3.0
UZH MLR MLR
comp=N,6µm,14.0s
UZH MLR MLR
comp=E,6µm,14.0s
UZH MLR MLR
comp=Z,9µm,14.0s
PERS Pernice 14.39 331 i Pn Pn 21 42 24.3 -4.3

PERS i 21 42 36.0
PERS i Sn Sn 21 44 58.4 -8.9
SOKA Soboth 14.45 331 ePn Pn 21 42 24.7 -4.8
comp=Z,21nm,0.8s,SNR=75
SOKA eP P 21 42 37.6 +1.5
comp=Z,193nm,0.9s
SOKA Sn Sn 21 44 59.5 -9.4
comp=Z,15nm,0.7s
SOKA eScP ScP 21 51 15.9 -0.1
comp=Z,103nm,1.3s,SNR=9.5
KECS Kecovo 14.48 347 eP Pn 21 42 29.6 -0.2
KECS Kecovo 14.48 347 ePN Pn 21 42 29.5 -0.2
OBKA Obir 14.52 329 ePn Pn 21 42 27.1 -3.4
comp=Z,8.6nm,0.6s,SNR=115
OBKA eP P 21 42 38.0 +1.2
comp=Z,101nm,0.7s
OBKA Sn Sn 21 45 04.2 -6.3
comp=Z,153nm,0.9s
OBKA eScP ScP 21 51 16.2 +0.1
comp=Z,67nm,1.2s
SOC Sochi 14.52 47c iP Pn 21 42 30.3 -0.1
SOC e 21 45 11.4
SOC pmax pmax
comp=Z,277nm,1.5s
SOC MLR MLR
comp=E,28µm,14.0s
SOC MLR MLR
comp=Z,27µm,15.0s
ABSA Djebel Ababsia 14.57 282 P Pn 21 42 34.1 +2.8
CMAH Djebel Manchou 14.64 284 P Pn 21 42 32.1 0.0
KOLS Kolonicke sedl 14.66 352 eP Pn 21 42 31.8 -0.5
KOLS MLR MLR
comp=Z,31µm,12.4s
KOLS Kolonicke sedl 14.66 352 ePN Pn 21 42 31.8 -0.5
KOLS eL L 21 48 59.5
BCA Borcka 14.73 57⇑ iP Pn 21 42 34.8 +1.5
ARSA Arzberg 14.74 333 ePn Pn 21 42 30.0 -3.3
comp=Z,27nm,0.9s,SNR=90
ARSA eP P 21 42 41.1 +1.9
comp=Z,97nm,0.6s
ARSA eScP ScP 21 51 16.3 -0.2
comp=Z,75nm,1.2s,SNR=6.9
VYHS Vyhne 14.83 343 eP Pn 21 42 31.0 -3.6
VYHS MLR MLR
comp=Z,10µm,8.8s
VYHS Vyhne 14.83 343 ePN Pn 21 42 31.0 -3.6
VYHS Vyhne 14.83 343 eP P 21 42 42.0 +1.8
VYHS eL L 21 49 21.9
BATM Batumi 14.84 56⇓ iP Pn 21 42 36.3 +1.5
MYKA Terra Mystica 15.00 328 ePn Pn 21 42 33.8 -3.2
comp=Z,12nm,0.5s,SNR=25
MYKA eP P 21 42 43.4 +1.2
comp=Z,48nm,0.6s
MYKA Sn Sn 21 45 15.5 -6.8
comp=Z,18nm,0.6s
MYKA eScP ScP 21 51 17.1 +0.1
comp=Z,88nm,1.3s,SNR=9.2
VLC Villacollemand 15.01 315 ePn Pn 21 42 35.5 -1.5
comp=Z,149nm,0.9s
VLC eSn Sn 21 45 18.2 -4.1
ZST Bratislava 15.03 339 eP Pn 21 42 33.0 -4.2
ZST Bratislava 15.03 339 ePN Pn 21 42 33.0 -4.2
ZST Bratislava 15.03 339 eP P 21 42 42.3 -0.1
CAEH `Ain El Ouahch 15.10 284 P Pn 21 42 38.2 -0.1
MODS Modra-Piesok 15.13 339 eP Pn 21 42 34.0 -4.7
MODS MLR MLR
comp=Z,16µm,7.7s
MODS Modra-Piesok 15.13 339 ePN Pn 21 42 34.0 -4.7
MODS Modra-Piesok 15.13 339 eP P 21 42 43.6 0.0
MODS eL L 21 49 35.3
CKFL Kef-Lekhel 15.19 283 P Pn 21 42 39.9 +0.3
CONA Conrad Observa 15.19 335 ePn Pn 21 42 35.9 -3.6
comp=Z,9.1nm,0.9s,SNR=25
CONA eScP ScP 21 51 16.5 -0.9
comp=Z,30nm,1.4s
STHS Stebnicka Huta 15.26 350 eP P 21 42 45.4 +0.4
STHS Stebnicka Huta 15.26 350 eP P 21 42 45.4 +0.4
KWP Kalwaria Pacla 15.31 354 eP Pn 21 42 40.5 -0.3
KWP Kalwaria Pacla 15.31 354 ePn Pn 21 42 40.6 -0.3
comp=Z,3µm,1.2s
KWP Kalwaria Pacla 15.31 354 eP Pn 21 42 40.6 -0.3
LANS Liptovska Anna 15.31 346 eP Pn 21 42 41.7 +0.7
LANS Liptovska Anna 15.31 346 ePN Pn 21 42 41.7 +0.7
CASM Aín Smara 15.37 282 P Pn 21 42 41.7 -0.2
LVV L'vov 15.41 357 eP Pn 21 42 43.0 +0.8
LVV eS Sn 21 45 36.0 +4.0
LVV MLR MLR
comp=Z,43µm,14.0s
CTEI Djebel Teioual 15.44 281 P Pn 21 42 43.4 +0.6
JAVC Velka Javorina 15.46 341 ePN Pn 21 42 40.0 -3.0
KBA Koelnbreinsper 15.48 328 ePn Pn 21 42 40.7 -2.6
comp=Z,35nm,0.9s,SNR=39
KBA epP P 21 42 49.2 +1.6
comp=Z,287nm,0.7s
KBA Sn Sn 21 45 25.8 -8.2
comp=Z,44nm,0.9s
KBA eScP ScP 21 51 17.1 -0.9
comp=Z,64nm,1.2s
DOMR Dombai 15.55 50⇓ iP Pn 21 42 46.0 +1.8
DOMR pmax pmax
comp=Z,318nm,1.3s
ABTA Abfaltersbach 15.60 326 ePn Pn 21 42 41.7 -3.1
comp=Z,7.3nm,0.6s,SNR=99
ABTA epP P 21 42 50.9 +2.0
comp=Z,487nm,0.7s
ABTA Sn Sn 21 45 29.2 -7.7
comp=Z,49nm,0.8s
ABTA eScP ScP 21 51 17.7 -0.5
comp=Z,63nm,1.2s
MOA Molln 15.71 332 ePn Pn 21 42 42.4 -3.8
comp=Z,16nm,0.9s,SNR=98
MOA epP P 21 42 51.5 +1.5
comp=Z,223nm,1.0s
MOA Sn Sn 21 45 37.7 -1.7
comp=Z,37nm,0.6s
MOA eScP ScP 21 51 16.0 -2.2
comp=Z,14nm,0.8s
DFRA Djebel Bou Aff 15.87 283 P Pn 21 42 45.2 -3.2
KRUC Moravsky 16.01 339 ePN Pn 21 42 47.3 -2.7
KRUC Moravsky 16.01 339 eP P 21 42 52.8 -0.5
KRUC Moravsky 16.01 339 eSN Sn 21 45 50.4 +3.7
AKH Akhalkalaki 16.03 59 eP Pn 21 42 52.6 +2.2
comp=Z,3µm,1.9s
AKH Akhalkalaki 16.03 59⇓ iP Pn 21 42 52.5 +2.0
CKHR Kef el Ahmar 16.16 281 P Pn 21 42 52.4 +0.3
VRAC Vranov 16.17 339 Pn Pn 21 42 49.7 -2.4
comp=Z,1.6nm,0.3s,baz=158,slow=11,SNR=59
VRAC LR LR 21 50 20.7
comp=Z,19µm,20.1s,baz=168,slow=42
VRAC ScP ScP 21 51 17.0 -2.1
comp=Z,0.3nm,0.3s,baz=140,slow=4.1,SNR=4.2
VRAC Vranov 16.17 339⇑ iP Pn 21 42 50.0 -2.1
VRAC Vranov 16.17 339 ePN Pn 21 42 50.2 -1.9
VRAC Vranov 16.17 339 eSN Sn 21 45 54.9 +4.2
NEY Neytrino 16.23 52⇓ iP P 21 42 56.1 +0.1
NEY pmax pmax
comp=Z,336nm,1.4s
OKC Ostrava-Krasne 16.25 344 eP Pn 21 42 52.7 -0.4
OKC eS Sn 21 45 56.1 +3.6
OKC MLR MLR
comp=Z,18µm,13.7s
OKC Ostrava-Krasne 16.25 344 eP Pn 21 42 52.7 -0.4
OKC ex x 21 43 06.6
OKC eS Sn 21 45 56.1 +3.6
OKC AMS AMS 21 50 20.0
comp=Z,18µm,13.7s
SET Setif 16.25 282 P Pn 21 42 54.0 +0.7
OJC Ojcow 16.27 348 eP Pn 21 42 50.8 -2.5
OJC eS S 21 46 01.4 -4.0
OJC Ojcow 16.27 348 ePn Pn 21 42 52.3 -1.1
comp=Z,304nm,1.3s
OJC Ojcow 16.27 348 eP Pn 21 42 50.8 -2.5
MORC Moravsky Berou 16.34 342 ePn Pn 21 42 51.3 -3.0
comp=Z,708nm,1.6s
MORC Moravsky Berou 16.34 342⇑ iP Pn 21 42 52.5 -1.8
MORC Moravsky Berou 16.34 342 eP Pn 21 42 51.3 -3.0
MORC pmax pmax
comp=Z,708nm,1.6s
MORC Moravsky Berou 16.34 342 ePn Pn 21 42 51.5 -2.8
MORC Moravsky Berou 16.34 342 eSN Sn 21 45 58.9 +4.1
WTTA Wattenberg 16.39 326 ePn Pn 21 42 53.8 -1.2
comp=Z,39nm,0.5s,SNR=256
WTTA epP P 21 43 00.3 +2.6
comp=Z,400nm,0.9s
WTTA Sn Sn 21 45 45.3 -11

comp=Z,70nm,1.0s
WTTA eScP **ScP** **21 51 19.3 -0.5**
comp=Z,112nm,1.3s,SNR=9.3
SHA1 Shidzhatmaz 16.42 50⇓ iP **Pn** **21 42 57.9 +2.4**
WATA Walderalm 16.47 326 ePn **Pn** **21 42 55.1 -0.9**
comp=Z,35nm,0.6s,SNR=177
WATA eScP **ScP** **21 51 19.0 -0.8**
comp=Z,51nm,1.3s,SNR=6.9
RAC Raciborz 16.47 344 eP **Pn** **21 42 54.2 -1.6**
RAC MLR MLR
comp=Z,25μm,19.8s
TREC Trest 16.50 337 eP **Pn** **21 42 54.8 -1.5**
TREC eS **Sn** **21 46 04.4 +5.8**
TREC MLR MLR
comp=Z,20μm,12.3s
TREC Trest 16.50 337 eP **Pn** **21 42 54.8 -1.5**
TREC ex x 21 43 09.3
TREC eS **Sn** **21 46 04.4 +5.8**
TREC AMS AMS 21 50 20.0
comp=Z,20μm,12.3s
TREC eSCP **ScP** **21 51 18.4 -1.3**
AKASG Malin Array Be 16.53 9 Pn **Pn** **21 42 53.5 -3.1**
comp=Z,7.9nm,0.3s,baz=201,slow=11,SNR=121
AKASG ScP **ScP** **21 51 17.8 -1.9**
baz=204,slow=1.6,SNR=15
AKBB Malin Array Si 16.53 9 ePn **Pn** **21 42 53.9 -2.7**
comp=Z,5μm,1.6s
AKBB Malin Array Si 16.53 9 eP **Pn** **21 42 53.9 -2.7**
AKBB pmax pmax
comp=Z,5μm,1.6s
KIV Kislovodsk 16.54 50 eP **Pn** **21 42 57.6 +0.7**
comp=Z,2μm,1.2s
KIV Kislovodsk 16.54 50 i P **Pn** **21 42 58.3 +1.4**
SNR=337
KIV Kislovodsk 16.54 50 eP **Pn** **21 42 58.4 +1.4**
KIV pmax pmax
comp=Z,4μm,1.1s
KIV MLR MLR
comp=Z,38μm,13.0s
KIV Kislovodsk 16.54 50 P **P** **21 42 59.8 +0.5**
SNR=548
KVAR Kislovodsk Arr 16.55 50 Pn **Pn** **21 42 58.5 +1.4**
baz=234,slow=20,SNR=44
SQTA Sankt Quirin 16.56 325 ePn **Pn** **21 42 55.9 -1.2**
comp=Z,18nm,0.5s,SNR=155
SQTA epP **P** **21 43 01.9 +2.4**
comp=Z,203nm,0.7s
SQTA Sn **Sn** **21 45 53.1 -7.1**
comp=Z,80nm,0.7s
SQTA eScP **ScP** **21 51 19.7 -0.3**
comp=Z,90nm,1.2s,SNR=8.1
GNI Garni 16.57 64 Pn **Pn** **21 42 59.0 +1.7**
comp=Z,2.8nm,0.3s,baz=245,slow=6.0,SNR=41
GNI LR LR 21 50 49.2
comp=Z,77μm,18.3s,baz=268,slow=42
GNI Garni 16.57 64 eP **P** **21 42 60.0 +0.2**
comp=Z,2μm,1.5s
GNI Garni 16.57 64 i P **Pn** **21 42 59.4 +2.0**
SNR=50
GNI Garni 16.57 64⇓ iP **P** **21 43 00.1 +0.4**
GNI pmax pmax
comp=Z,4μm,1.6s
GNI Garni 16.57 64 P **P** **21 42 59.9 +0.2**
SNR=46
GNI P **P** **21 42 59.9 +0.2**
SNR=46
KBZ Khabaz 16.57 51 Pn **Pn** **21 42 58.9 +1.8**
comp=Z,4.6nm,0.3s,baz=247,slow=11,SNR=160
KBZ LR LR 21 51 13.0
comp=Z,26μm,20.4s,baz=256,slow=44
FUORN Ofenpass-Fuorn 16.61 322 ePn **Pn** **21 42 57.0 -1.0**
comp=Z,2μm,1.3s
FUORN eSn Sn 21 45 52.0 -10
FETA Feichten 16.65 323 ePn **Pn** **21 42 57.1 -1.3**
comp=Z,12nm,1.0s,SNR=357
FETA Sn **Sn** **21 45 57.1 -5.4**
comp=Z,44nm,0.9s
FETA eScP **ScP** **21 51 19.5 -0.7**
comp=Z,83nm,1.2s,SNR=7.3
MOTA Moosalm 16.70 325 ePn **Pn** **21 42 57.4 -1.5**
comp=Z,16nm,0.7s,SNR=157
MOTA eScP **ScP** **21 51 19.7 -0.6**
comp=Z,36nm,1.2s,SNR=6.7
GEC2 GERESS Array S 16.74 333 ePn **Pn** **21 42 56.8 -2.6**
comp=Z,535nm,0.8s
GEC2 GERESS Array S 16.74 333 eP **Pn** **21 42 56.8 -2.6**
GEC2 pmax pmax
comp=Z,535nm,0.8s
GERES GERESS Array B 16.74 333 Pn **Pn** **21 42 57.1 -2.3**
comp=Z,3.8nm,0.3s,baz=149,slow=9.0,SNR=183
GERES LR LR 21 51 02.9
comp=Z,46μm,18.1s,baz=148,slow=43
GERES ScP **ScP** **21 51 18.0 -2.3**
comp=Z,0.5nm,0.3s,baz=146,slow=1.9,SNR=21
ZEI Tsey 16.82 55 eP **Pn** **21 42 58.5 -2.0**
ZEI eS **S** **21 46 14.9 -2.1**
ZEI pmax pmax
comp=Z,865nm,1.0s
ZEI MLR MLR
comp=Z,10μm,11.0s
NCK Nalchik 16.91 52⇑ iP **P** **21 43 04.3 +0.9**
NCK pmax pmax
comp=Z,544nm,1.1s
DAVOX Davos/Dischmat 16.92 321 Pn **Pn** **21 43 00.3 -1.4**
comp=Z,2.7nm,0.3s,baz=135,slow=14,SNR=39
DAVOX Sn **Sn** **21 46 03.8 -5.2**
comp=Z,3.9nm,0.3s,baz=198,slow=20,SNR=3.9
DAVOX ScP **ScP** **21 51 18.7 -2.1**
comp=Z,0.2nm,0.3s,baz=155,slow=4.1,SNR=3.1
DAVOX LR LR 21 51 42.1
comp=Z,16μm,18.5s,baz=126,slow=45
RETA Reutte 16.96 325 ePn **Pn** **21 43 01.2 -0.9**
comp=Z,21nm,0.5s,SNR=116
RETA Sn **Sn** **21 46 00.7 -9.2**
comp=Z,41nm,0.7s
RETA eScP **ScP** **21 51 20.5 -0.3**
comp=Z,67nm,1.3s,SNR=5.4
TUE Stuetta 17.00 320 ePn **Pn** **21 43 01.7 -1.0**
comp=Z,2μm,1.8s
TUE eSn Sn 21 45 58.5 -12
TBLG Delisi 17.02 59 eP **Pn** **21 43 04.7 +1.9**
comp=Z,1μm,1.5s
KHC Kasperske Hory 17.02 333 ePn **Pn** **21 43 00.0 -2.9**
comp=Z,874nm,1.6s
KHC Kasperske Hory 17.02 333 eP **Pn** **21 43 01.0 -1.9**
KHC eS **Sn** **21 46 15.9 +4.6**
KHC MLR MLR
comp=Z,54μm,14.5s
KHC Kasperske Hory 17.02 333 eP **Pn** **21 43 01.0 -1.9**
KHC ex x 21 43 04.5
KHC ex x 21 43 18.9
KHC eS **Sn** **21 46 15.9 +4.6**
KHC AMS AMS 21 50 30.0
comp=Z,54μm,14.5s
KHC eSCP **ScP** **21 51 19.9 -0.9**
KHC ePCS PcS 21 51 35.0 +11
KHC ex x 21 51 43.0
KHC eSCS **ScS** **21 55 03.5 +3.2**
DPC Dobruska-Polom 17.19 340 eP **Pn** **21 43 03.2 -1.7**
DPC eS **Sn** **21 46 19.8 +4.5**
DPC MLR MLR
comp=Z,30μm,24.6s
DPC Dobruska-Polom 17.19 340 eP **Pn** **21 43 03.2 -1.7**
DPC ex x 21 43 15.8
DPC eS **Sn** **21 46 19.8 +4.5**
DPC AMS AMS 21 50 40.0
comp=Z,30μm,24.6s
DPC eSCP **ScP** **21 51 20.6 -0.5**
DPC ePCS PcS 21 51 36.4 +13
DAVA Damuels 17.25 323 eP **Pn** **21 43 06.0 +0.1**
comp=Z,26nm,0.8s,SNR=321
DAVA Sn **Sn** **21 46 08.0 -9.2**
comp=Z,98nm,0.8s
DAVA eScP **ScP** **21 51 21.0 -0.5**
comp=Z,98nm,1.3s,SNR=8.5
GOPC GO Pecny, Ondr 17.26 337 eP **Pn** **21 43 04.8 -1.1**
GOPC eS **Sn** **21 46 21.2 +4.1**
GOPC MLR MLR
comp=Z,17μm,11.8s
GOPC GO Pecny, Ondr 17.26 337 eP **Pn** **21 43 04.8 -1.1**
GOPC ex x 21 43 16.1
GOPC eS **Sn** **21 46 21.2 +4.1**
GOPC AMS AMS 21 50 50.0
comp=Z,17μm,11.8s
GOPC eSCP **ScP** **21 51 19.1 -2.1**
GOF Gofitskoye 17.32 47⇑ iP **Pn** **21 43 07.5 +0.9**
GOF pmax pmax
comp=Z,2μm,1.5s
OSTC Ostas 17.40 341 eP **Pn** **21 43 06.9 -0.7**
OSTC ex x 21 43 17.4
OSTC eS **S** **21 46 25.8 -2.7**
OSTC AMS AMS 21 50 50.0
comp=Z,30μm,25.0s
PRU Pruhonice 17.41 337 eP **Pn** **21 43 06.5 -1.1**
PRU eS **Sn** **21 46 22.7 +2.1**
PRU MLR MLR
comp=Z,18μm,11.0s
PRU Pruhonice 17.41 337 eP **Pn** **21 43 06.5 -1.1**
PRU ex x 21 43 19.4
PRU eS **Sn** **21 46 22.7 +2.1**
PRU AMS AMS 21 50 40.0
comp=Z,18μm,11.0s
PRU eSCP **ScP** **21 51 19.7 -1.8**
UPC Upice 17.42 340 eP **Pn** **21 43 07.0 -0.7**
UPC eS **Sn** **21 46 22.6 +1.8**
UPC MLR MLR
comp=Z,31μm,12.8s
UPC Upice 17.42 340 eP **Pn** **21 43 07.0 -0.7**
UPC ex x 21 43 20.3
UPC eS **Sn** **21 46 22.6 +1.8**
UPC AMS AMS 21 51 00.0
comp=Z,31μm,12.8s
CHVC Chvalec 17.48 340 eP **Pn** **21 43 07.8 -0.7**
CHVC ex x 21 43 17.4
CHVC eS **S** **21 46 27.5 -2.5**
CHVC AMS AMS 21 51 00.0
comp=Z,27μm,12.6s
KSP Ksiaz 17.64 341 eP **Pn** **21 43 08.4 -2.1**
KSP eS **Sn** **21 46 30.7 +4.5**
KSP Ksiaz 17.64 341 eP **Pn** **21 43 08.4 -2.1**
KSP eS **Sn** **21 46 30.7 +4.5**
BEL Belsk 17.69 351 eP **Pn** **21 43 09.8 -1.3**
BEL eS **S** **21 46 34.8 +0.6**
BEL Belsk 17.69 351 eP **Pn** **21 43 09.8 -1.3**
BNI Bardonecchia 17.71 312 eP **Pn** **21 43 11.7 +0.1**
comp=Z,270nm,1.1s
BNI Bardonecchia 17.71 312 eP **Pn** **21 43 11.7 +0.1**
BNI pmax pmax
comp=Z,270nm,1.1s
PVCC Panska Ves 17.87 337 eP **Pn** **21 43 12.1 -1.2**
PVCC eS **Sn** **21 46 32.1 +0.5**
PVCC MLR MLR
comp=Z,14μm,20.8s
PVCC Panska Ves 17.87 337 eP **Pn** **21 43 12.1 -1.2**
PVCC epP **sP** **21 43 26.0 +2.8**
PVCC eS **Sn** **21 46 32.1 +0.5**
PVCC AMS AMS 21 49 50.0
comp=Z,14μm,20.8s
PVCC eSCP **ScP** **21 51 22.1 -0.3**
LPG La Plagne 17.90 314 P **Pn** **21 43 13.0 -1.1**
SENIN Lac Senin/Sane 18.06 317 eP **Pn** **21 43 14.4 -1.5**
comp=Z,558nm,1.2s
GROC Groznyy 18.26 55 eP **P** **21 43 17.8 -0.4**
GROC eS **Sn** **21 46 37.8 -3.5**
GROC pmax pmax
comp=Z,657nm,1.1s
NKC Novy Kostel 18.35 333 eP **P** **21 43 18.3 -0.9**
NKC eS **Sn** **21 46 43.1 -0.3**
NKC MLR MLR
comp=Z,30μm,15.5s
NKC Novy Kostel 18.35 333 eP **P** **21 43 18.3 -0.9**
NKC epP **sP** **21 43 30.7 +2.1**
NKC eS **Sn** **21 46 43.1 -0.3**
NKC eSCP ScP 21 51 08.0 -16
NKC AMS AMS 21 51 20.0
comp=Z,30μm,15.5s
BTLR Botlikh 18.36 57⇑ iP **Pn** **21 43 20.9 +1.4**
BTLR pmax pmax
comp=Z,310nm,1.0s
BRG Berggiesshubel 18.37 337 i P **P** **21 43 18.2 -1.1**
comp=Z,440nm,1.3s
BRG S **Sn** **21 46 46.0 +2.3**
BRG RSCP 21 51 22.0
comp=Z,100nm,1.6s
BRG eSCS **ScS** **21 55 03.8 -0.4**
comp=Z,39nm,1.9s
comp=N,11μm,10.7s
comp=E,12μm,13.5s
comp=Z,20μm,11.7s
GRA1 Grafenberg Arr 18.40 330 eP **P** **21 43 17.5 -2.2**
comp=Z,3μm,1.3s
GRF Grafenberg Arr 18.40 330 eP **P** **21 43 17.5 -2.2**
GRF pmax pmax
comp=Z,3μm,1.3s
GRFO Grafenberg 18.40 330 eP **P** **21 43 18.9 -0.7**
comp=Z,3μm,1.3s
GRFO Grafenberg 18.40 330 eP **P** **21 43 19.0 -0.7**
GRFO pmax pmax
comp=Z,3μm,1.3s
STU Stuttgart 18.61 325 eP **P** **21 43 21.2 -0.8**
comp=Z,555nm,1.1s
STU Stuttgart 18.61 325 eP **P** **21 43 21.3 -0.8**
STU pmax pmax
comp=Z,555nm,1.1s
BFO Black Forest 18.73 323 eP **P** **21 43 23.1 -0.3**
comp=Z,396nm,1.0s
BFO Black Forest 18.73 323 i P **P** **21 43 23.4 0.0**
GNBR Gunib 18.80 59 i P **Pn** **21 43 26.2 +1.4**
GNBR pmax pmax
comp=Z,565nm,1.1s
MOX Moxa 19.00 333 P **P** **21 43 26.4 +0.2**
CLL Collm 19.05 336 eP **P** **21 43 25.5 -1.2**
comp=Z,1μm,1.5s
CLL Collm 19.05 336 i P **P** **21 43 26.4 -0.4**
comp=Z,785nm,1.3s
CLL epP **pP** **21 43 33.0 -0.2**
CLL ePP **PnPn** **21 43 40.0 -0.4**
CLL ePPP PPP 21 43 46.0
CLL e 21 45 00.0
CLL eS **S** **21 47 02.0 +0.8**
CLL esS **sS** **21 47 12.0 +0.2**
CLL e(SS) 21 47 19.0
CLL eSSS SSS 21 47 30.0
CLL LmV 21 51 00.0
comp=Z,16μm,18.1s
CLL i ScP **ScP** **21 51 23.6 -1.4**
comp=Z,80nm,1.5s
CLL Lmax 21 52 00.0
CLL eScS **ScS** **21 55 03.0 -3.3**
CLL epPKiKP **PKiKP** **21 55 48.0 +7.2**
CLL Collm 19.05 336 i P **P** **21 43 26.4 -0.4**
CLL eS **S** **21 47 02.0 +0.8**
CLL pmax pmax
comp=Z,785nm,1.3s
CLL MLR MLR
comp=Z,16μm,18.1s
AKT Akhty 19.09 62⇑ iP **P** **21 43 28.7 +1.2**
AKT eS **Sn** **21 47 02.1 +0.5**
AKT pmax pmax
comp=Z,126nm,0.7s
SSB Saint Sauveur 19.15 311 eP **P** **21 43 26.4 -1.6**
comp=Z,370nm,1.4s
SSB Saint Sauveur 19.15 311 eP **P** **21 43 26.4 -1.6**
SSB pmax pmax
comp=Z,370nm,1.4s
ECH Echery 19.25 321 eP **P** **21 43 28.9 -0.2**
comp=Z,390nm,1.1s
ECH Echery 19.25 321 eP **P** **21 43 28.9 -0.2**
ECH pmax pmax
comp=Z,390nm,1.1s
MAK Makhachkala 19.35 57 d iP **P** **21 43 31.6 +1.4**
MAK eS **S** **21 47 07.5 -0.1**
MAK pmax pmax
comp=Z,4μm,1.4s
MAK MLR MLR
comp=Z,9μm,19.0s
EBNR Beni Rached 19.38 282 P **Pn** **21 43 33.0 +1.2**
VORD Divnogorie 19.46 28 eP **P** **21 43 31.1 -0.1**
VORD eS **S** **21 47 01.5 -8.1**
VORD pmax pmax
comp=Z,890nm,1.1s
VORD smax smax
comp=N,7μm,9.1s
VORD MLR MLR
comp=Z,12μm,12.0s
ECHA Ech Chlef 19.51 282 P **Pn** **21 43 35.0 +1.7**
ETRT Tiaret 19.61 280 P **Pn** **21 43 36.5 +1.9**
VSR Storozhevoye 19.61 27 eP **P** **21 43 31.8 -1.1**
VSR eS **S** **21 47 04.3 -8.4**
VSR pmax pmax
comp=Z,1μm,2.1s
VSR smax smax
comp=N,8μm,9.4s
VSR MLR MLR
comp=Z,25μm,14.0s
SUW Suwalki 19.64 356 eP **P** **21 43 31.4 -1.8**
SUW eS **S** **21 47 07.8 -5.4**
SUW Suwalki 19.64 356 eP **P** **21 43 31.4 -1.8**
comp=Z,4μm,1.1s
SUW eS **S** **21 47 06.8 -6.4**
SUW Suwalki 19.64 356 eP **P** **21 43 31.4 -1.8**
SUW eS **S** **21 47 07.8 -5.4**
GKP Gorka Klasztor 19.67 346 eP **P** **21 43 32.2 -1.3**
GKP Gorka Klasztor 19.67 346 eP **P** **21 43 32.2 -1.3**
EANR 'Ain N'Sour 19.74 281 P **P** **21 43 36.0 +1.5**
RUE Ruedersdorf 19.81 339 eP **P** **21 43 34.1 -1.0**
RUE IAmb IAmb 21 43 50.1
comp=Z,1μm,1.4s
VORR Voronezh 19.99 26⇑ iP **P** **21 43 38.0 +0.9**
VORR eS **S** **21 47 20.0 -0.6**
VORR pmax pmax
comp=Z,2μm,2.0s
MICGM Minsk 20.16 5⇑ iPn **P** **21 43 35.0 -3.9**
MICGM eP Pn 21 43 36.0 -4.9
MICGM PM 21 43 39.0
comp=Z,3.2nm,1.5s
MICGM PM 21 43 40.0
comp=N,4.8nm,1.5s
MICGM epP sP 21 44 08.0 +20
MICGM ePP PnPn 21 44 30.0 +34
MICGM eSn S 21 47 10.0 -14
MICGM eSS Sn 21 48 00.0 +33
MICGM eLR LR 21 50 00.0
MICGM LRM MLR 21 51 30.0
comp=E,22nm,14.0s
MICGM LRM MLR 21 52 12.0
comp=Z,38nm,12.0s
MICGM LRM MLR 21 52 14.0
comp=N,31nm,14.0s
MICGM LRM MLR 21 52 16.0
comp=Z,51nm,12.0s
MNK Minsk 20.16 5⇑ iP **P** **21 43 35.0 -3.9**
MNK e 21 44 08.0
MNK eS S 21 47 10.0 -14
MNK e 21 48 00.0
MNK pmax pmax
comp=Z,3μm,1.5s
MNK pmax pmax
comp=N,5μm,1.5s
MNK MLR MLR
comp=E,22μm,14.0s
MNK MLR MLR
comp=Z,38μm,12.0s
MNK MLR MLR
comp=N,31μm,14.0s
MNK MLR MLR
comp=Z,51μm,12.0s
OJBR Djebel Berber 20.37 280 P **P** **21 43 43.0 +1.5**
KLNR Kaliningrad 20.48 352 c iP **P** **21 43 39.6 -2.7**
KLNR pmax pmax
comp=Z,552nm,0.9s
NACGM Naroch 20.51 3 eP **P** **21 43 39.0 -3.6**
NACGM eP **P** **21 43 39.0 -3.6**
NACGM PM 21 43 41.0
comp=Z,1.1nm,0.9s
NACGM ePPP PPP 21 44 22.0
NACGM eS **S** **21 47 22.0 -8.8**
NACGM eSS **SnSn** **21 47 50.0 -0.1**
NACGM eSSS SSS 21 48 42.0
NACGM eLQ LQ 21 50 22.0
NACGM eLR LR 21 51 14.0
NACGM LRM MLR 21 52 46.0
comp=Z,57nm,12.0s
SSF Saint Saulge 20.64 314 P **P** **21 43 43.1 -1.0**
LPSR Galich'ya Gora 20.66 24 eP **P** **21 43 43.5 -0.8**
LPSR eS **S** **21 47 31.0 -2.8**
LPSR pmax pmax
comp=Z,930nm,1.2s
LPSR smax smax
comp=N,6μm,9.7s
LPSR MLR MLR
comp=Z,14μm,16.0s
WLF Walferdange 20.69 323 eP **P** **21 43 45.0 +0.3**
WLF LR LR
comp=Z,78μm,20.0s
WLF Walferdange 20.69 323 eP **P** **21 43 45.0 +0.3**
WLF MLR MLR
comp=Z,78μm,20.0s
WLF Walferdange 20.69 323 P **P** **21 43 45.2 +0.5**
comp=Z,859nm,1.5s
TAM Tamanrasset 20.75 241 ePn **P** **21 43 45.7 0.0**
comp=Z,281nm,0.9s
TAM LR LR
comp=Z,10μm,20.0s
ODJA Bouhanifia 20.79 280 P **P** **21 43 48.0 +2.0**
IDID Didziasalis 20.92 2 eP **P** **21 43 45.2 -1.8**
IDID IAmb IAmb 21 43 50.7
comp=Z,144nm,0.8s
LKLB Kalborn 20.99 324 P **P** **21 43 47.5 -0.5**
comp=Z,243nm,1.4s
USTO Oran 21.09 281 P **P** **21 43 53.0 +3.9**
PABE Paberze 21.10 358 eP **P** **21 43 46.7 -2.3**
PABE IAmb IAmb 21 44 00.9
comp=Z,676nm,0.9s
BHOU Houvegnez 21.21 324 P **P** **21 43 50.5 +0.2**
comp=Z,280nm,1.5s
OTSS Djebel Tessala 21.32 280 P **P** **21 43 58.0 +6.2**
IZAR Zarasai 21.34 2 eP **P** **21 43 50.0 -1.6**
IZAR IAmb IAmb 21 44 05.9
comp=Z,323nm,1.2s
MEM Membach 21.38 325 P **P** **21 43 52.8 +0.6**
comp=Z,827nm,1.1s
HGN Heimansgroeve 21.52 325 eP **P** **21 43 54.1 +0.5**
BSTI Sart Tilman 21.57 324 P **P** **21 43 55.0 +0.9**
comp=Z,241nm,1.4s
BCLA Clavier 21.59 324 P **P** **21 43 54.6 +0.2**
comp=Z,328nm,1.5s
BCLA pP **pwP** **21 44 04.0 +0.7**
BEBN Eben Emael 21.66 325 P **P** **21 43 55.7 +0.6**
comp=Z,520nm,1.4s
BEBN pP **pwP** **21 44 04.1 +0.1**
BEBN PnPn **PnPn** **21 44 15.7 -0.5**
BGES Gesves 21.68 323 P **P** **21 43 55.4 +0.1**
BGES sP **sP** **21 44 11.8 +7.1**
BGES PnPn **PnPn** **21 44 15.9 -0.5**
HKB Herkenbosch 21.70 326 P **P** **21 43 56.3 +0.8**
comp=Z,261nm,1.3s
HKB pP **pwP** **21 44 05.1 +0.7**
HKB PnPn **PnPn** **21 44 16.7 +0.1**
PBUR Paburg 21.72 355 eP **P** **21 43 53.0 -2.6**
PBUR IAmb IAmb 21 44 06.1
comp=Z,2μm,1.2s
DOU Dourbes 21.74 322 P **P** **21 43 55.6 -0.4**
comp=Z,357nm,1.4s
DOU x x 21 44 09.1
DOU PnPn **PnPn** **21 44 17.0 -0.3**
RGN Rugen 21.77 341 eP **P** **21 43 55.0 -1.2**
comp=Z,3μm,1.5s
RGN LR LR
comp=Z,20μm,21.0s
RGN Rugen 21.77 341 eP **P** **21 43 54.4 -1.8**
RGN IAmb IAmb 21 43 58.4
comp=Z,2μm,1.4s
BMRD Maredsous 21.79 323 ⇑P **P** **21 43 56.2 -0.3**
comp=Z,200nm,1.5s
BMRD sP **sP** **21 44 12.5 +6.8**
BMRD PnPn **PnPn** **21 44 17.3 -0.6**
OLHC Oulhaca 21.84 280 P **P** **21 43 51.0 -6.2**
CLF Chambon-Foret 21.85 315 eP **P** **21 43 57.2 +0.1**
comp=Z,1μm,1.3s
CLF eS **S** **21 47 53.2 -4.1**
CLF LR LR
comp=Z,15μm,22.0s
BSD Bornholm Skovb 21.89 344⇑ iP **P** **21 43 54.0 -3.5**
BSD Bornholm Skovb 21.89 344⇑ iP **P** **21 43 54.0 -3.5**
WTSB Winterswijk 21.96 329 eP **P** **21 43 58.0 -0.3**
BCES Court-Saint-Et 22.07 323 P **P** **21 43 59.8 +0.3**
comp=Z,334nm,1.6s
BCES PnPn **PnPn** **21 44 20.9 -0.9**
OBN Obninsk 22.15 17 P **P** **21 43 58.1 -2.2**
comp=Z,70nm,1.1s,baz=208,slow=6.3,SNR=57
OBN LR LR 21 53 23.6
comp=Z,7μm,20.5s,baz=207,slow=39
OBN Obninsk 22.15 17 eP **P** **21 43 58.4 -2.0**
comp=Z,5μm,1.8s

OBN LR LR
comp=Z,26μm,20.0s
OBN Obninsk 22.15 17c *i*P **P 21 43 58.3 -2.0**
OBN *i* S **S 21 48 00.7 -2.2**
OBN pmax pmax
comp=Z,219nm,1.2s
OBN MLR MLR
comp=Z,26μm,17.0s
SNF Seneffe 22.16 323 ⇑P **P 21 44 00.0 -0.4**
comp=Z,269nm,1.4s
SNF sP **sP 21 44 17.1 +7.4**
BMOL Mol 22.22 325 P **P 21 44 01.5 +0.4**
comp=Z,529nm,1.3s
BMOL pP **pP 21 44 08.6 +1.2**
BBOU Bougnies 22.25 322 P **P 21 44 00.9 -0.6**
BBOU PnPn **PnPn 21 44 25.6 +1.4**
UCC Uccle 22.30 324 *e*P **P 21 44 01.9 -0.1**
comp=Z,1μm,1.3s
UCC *e*S **S 21 48 03.5 -2.3**
UCC LR LR
comp=Z,35μm,20.0s
UCC Uccle 22.30 324 *e*P **P 21 44 01.9 -0.1**
UCC *e*S **S 21 48 03.5 -2.3**
UCC pmax pmax
comp=Z,1μm,1.3s
UCC MLR MLR
comp=Z,35μm,20.0s
UCC Uccle 22.30 324 P **P 21 44 01.8 -0.1**
comp=Z,361nm,1.4s
MOS Moscow 22.98 18 *e*P **P 21 44 06.3 -2.8**
MOS *i* *PP **pP 21 44 17.5 +1.9**
MOS *e* 21 44 39.7
MOS *e* 21 47 55.8
MOS *e*S **S 21 48 12.8 -5.0**
MOS *e* 21 55 16.4
MOS pmax pmax
comp=Z,2μm,1.8s
MOS pmax pmax
comp=Z,827nm,1.4s
MOS smax smax
comp=E,4μm,4.0s
MOS smax smax
comp=N,2μm,2.6s
MOS MLR MLR
comp=N,21μm,14.0s
MOS MLR MLR
comp=E,21μm,14.0s
MOS MLR MLR
comp=Z,27μm,14.0s
COP Copenhagen 23.02 341⇑ *i*P **P 21 44 07.4 -2.0**
COP pmax pmax
comp=Z,850nm,1.2s
COP Copenhagen 23.02 341⇑ *i*P **P 21 44 07.4 -2.0**
comp=Z,851nm,1.2s
MELI Melilla 23.07 280⇓ *i*P **P 21 44 09.5 -0.6**
MELI *i* S **S 21 48 17.2 -2.4**
UCM Universidad Co 23.29 293⇑ *i*P **P 21 44 11.4 -1.0**
UCM *i* S **S 21 48 20.4 -3.0**
SLIT Slitere, Latvi 23.29 356 *e*P **P 21 44 08.2 -4.0**
SLIT IAmb IAmb 21 44 28.3
comp=Z,2μm,1.0s
ESDC Sonseca Array 23.79 291 P **P 21 44 16.5 -0.9**
comp=Z,70nm,0.7s,baz=83,slow=9.1,SNR=114
ESDC PcP **PcP 21 47 59.9 -0.5**
comp=Z,9.7nm,0.8s,baz=74,slow=3.4,SNR=4.4
ESDC ScP **ScP 21 51 35.8 -1.3**
comp=Z,6.8nm,0.8s,baz=73,slow=1.9,SNR=9.3
ESLA Sonseca Array 23.79 291 *e*P **P 21 44 16.7 -0.7**
comp=Z,352nm,1.1s
ESLA LR LR
comp=Z,5μm,22.0s
VSU Vasula 24.07 2c *i*P **P 21 44 18.3 -1.3**
VSU pmax pmax
comp=Z,415nm,0.9s
VSU Vasula 24.07 2 *e*P **P 21 44 17.8 -1.8**
VSU IAmb IAmb 21 44 23.1
comp=Z,1μm,1.3s
PAB San Pablo 24.08 291 *e*P **P 21 44 19.8 -0.3**
comp=Z,485nm,1.3s
PAB LR LR
comp=Z,4μm,21.0s
PAB San Pablo 24.08 291 *e*P **P 21 44 19.8 -0.3**
PAB pmax pmax
comp=Z,485nm,1.3s
PAB MLR MLR
comp=Z,4μm,21.0s
ELSH Elham, Standar 24.14 321⇑ *i*P **P 21 44 20.6 +0.1**
ELSH IAmb IAmb 21 44 21.8
comp=Z,2μm,1.2s
ELSH IAMs_20 IAMs_20 21 55 35.5
comp=Z,30μm,13.6s
EMAL Malaga-Limoner 24.15 284⇓ *i*P **P 21 44 21.1 +0.4**
EMAL *e*S **S 21 48 40.3 +3.1**
PVLZ Peæn de 24.19 280⇓ *i*P **P 21 44 21.6 +0.6**
PVLZ *e*S **S 21 48 35.3 -2.5**
MUD Monsted U'grnd 24.61 338⇑ *i*P **P 21 44 24.3 -0.3**
MUD pmax pmax
comp=Z,910nm,1.2s
MUD Monsted U'grnd 24.61 338⇑ *i*P **P 21 44 24.3 -0.3**
comp=Z,910nm,1.2s
MDT Midelt 24.82 275 P **P 21 44 27.0 0.0**
comp=Z,48nm,0.6s,baz=90,slow=12,SNR=75
MDT LR LR 21 56 46.1
comp=Z,9μm,20.1s,baz=90,slow=43
JQE Queens East 24.92 315⇑ *e*P **P 21 44 26.5 -1.0**
JDG Jersey Dam (Ga 24.92 315⇑ *e*P **P 21 44 26.9 -0.7**
LIJA Lijar 24.93 285 *e*P **P 21 44 26.5 -1.3**
JRS Jersey 24.95 315⇑ *e*P **P 21 44 26.9 -0.8**
JLP Les Platons 24.98 315⇑ *i*P **P 21 44 27.4 -0.6**
CEU Ceuta 24.98 282⇓ *i*P **P 21 44 26.6 -1.6**
CEU *e*S **S 21 48 53.2 +2.7**
JSA Saint Aubin 24.99 314⇑ *i*P **P 21 44 27.4 -0.8**
JSA IAmb IAmb 21 44 28.6
comp=Z,320nm,0.9s
JSA IAMs_20 IAMs_20 21 56 03.4
comp=Z,16μm,18.0s
JVM Valle D.L. Mar 25.02 315⇑ *i*P **P 21 44 27.9 -0.6**
IFR Ifrane 25.11 277⇓ *i*P **P 21 44 30.7 +1.0**
IFR *e*S **S 21 48 52.0 -1.1**
ALJ Aljibe 25.15 284 *e*P **P 21 44 32.0 +2.2**
WACR West Acre 25.32 324⇑ *e*P **P 21 44 30.5 -0.5**
WACR IAmb IAmb 21 44 32.4
comp=Z,279nm,1.0s
WACR IAMs_20 IAMs_20 21 56 12.4
comp=Z,21μm,17.8s
GIBL Gibalbin 25.38 284 *e*P **P 21 44 31.0 -0.9**
WOL Wolverton 25.48 320⇑ *i*P **P 21 44 31.9 -0.6**
WOL IAmb IAmb 21 44 33.0
comp=Z,383nm,0.8s
WOL IAMs_20 IAMs_20 21 56 49.3
comp=Z,39μm,15.9s
CNIL Conil 25.49 283 *e*P **P 21 44 33.0 +0.2**
PUL Pulkovo 25.58 6⇑ *i*P **P 21 44 32.5 -0.9**
PUL pmax pmax
comp=Z,1μm,1.1s
PUL Pulkovo 25.58 6 *e*P **P 21 44 32.0 -1.4**
PUL IAmb IAmb 21 44 34.2
comp=Z,1μm,1.1s
SFS San Fernando 25.60 284 *e*P **P 21 44 35.6 +1.8**
comp=Z,470nm,1.0s
SFS LR LR
comp=Z,4μm,20.0s
SFS San Fernando 25.60 284 *e*P **P 21 44 35.6 +1.8**
SFS pmax pmax
comp=Z,471nm,1.0s
SFS MLR MLR
comp=Z,4μm,20.0s
SFS San Fernando 25.60 284⇓ *i*P **P 21 44 33.1 -0.8**
SWN1 Swindon 25.89 319⇑ *i*P **P 21 44 36.1 -0.2**
SWN1 IAmb IAmb 21 44 38.5
comp=Z,2μm,1.1s
SWN1 IAMs_20 IAMs_20 21 57 03.2
comp=Z,31μm,15.1s
PBRG Braganca 26.07 296 *e*P **P 21 44 37.6 -0.5**
comp=Z,804nm,1.4s
PBRG *e*S **S 21 49 06.0 -1.9**
LMK Market Rasen 26.21 324 *e*P **P 21 44 38.4 -0.8**
LMK IAmb IAmb 21 44 40.4
comp=Z,573nm,1.2s
STRD Stroud 26.22 320⇑ *e*P **P 21 44 38.9 -0.4**
STRD IAmb IAmb 21 44 40.7
comp=Z,1μm,1.0s
STRD IAMs_20 IAMs_20 21 56 53.7
comp=Z,24μm,15.8s
MVO Moncorvo 26.23 294 *e*P **P 21 44 39.4 -0.2**
comp=Z,835nm,1.4s
MVO *e*S **S 21 49 09.0 -1.4**
CWF Charnwood Fore 26.29 322⇑ *i*P **P 21 44 38.8 -1.1**
CWF IAmb IAmb 21 44 41.4
comp=Z,206nm,1.0s
CWF IAMs_20 IAMs_20 21 57 02.0
comp=Z,17μm,15.0s
DAMY Dhamar 26.29 134 *e*P **P 21 44 43.0 +2.4**
comp=Z,206nm,1.1s
DAMY LR LR
comp=Z,6μm,21.0s
OLDB Oldbury-Upon-S 26.37 319⇑ *i*P **P 21 44 40.0 -0.6**
OLDB IAmb IAmb 21 44 42.5
comp=Z,1μm,1.7s
OLDB IAMs_20 IAMs_20 21 57 26.9
comp=Z,30μm,14.7s
PMRV Marv??o 26.43 290 *e*P **P 21 44 40.7 -0.7**
comp=Z,637nm,1.6s
PMRV *e*S **S 21 49 10.7 -2.8**
PCBR Castelo Branco 26.50 291 *e*P **P 21 44 41.5 -0.5**
comp=Z,415nm,1.3s
MTE Manteigas 26.57 293 *e*P **P 21 44 42.4 -0.3**
comp=Z,495nm,1.6s
MTE *e*S **S 21 49 14.3 -1.6**
MTE Manteigas 26.57 293 *e*P **P 21 44 42.4 -0.3**
comp=Z,243nm,1.0s
MTE LR LR
comp=Z,7μm,22.0s
MONM Monmouth 26.59 319⇑ *i*P **P 21 44 41.9 -0.8**
MONM IAmb IAmb 21 44 44.8
comp=Z,469nm,1.3s
MONM IAMs_20 IAMs_20 21 57 23.6
comp=Z,24μm,19.3s
DESE Dese 26.69 147 *i*P **P 21 44 45.7 +1.5**
DESE *e*S **S 21 49 15.7 -2.7**
DESE Dese 26.69 147 *i*P **P 21 44 45.7 +1.5**
DESE *e*S **S 21 49 15.7 -2.7**
GEYT Alibeck 26.73 73 P **P 21 44 44.4 +0.2**
comp=Z,43nm,0.8s,baz=292,slow=7.8,SNR=72
GYA0B ALIBECK ARRAY 26.73 73 *e*P **P 21 44 44.5 +0.4**
comp=Z,316nm,1.1s
PVAQ Vaqueiros 26.74 286 *e*P **P 21 44 43.6 -0.6**
comp=Z,459nm,1.6s
PVAQ *e*S **S 21 49 14.8 -3.6**
PVAQ Vaqueiros 26.74 286 *e*P **P 21 44 43.5 -0.7**
comp=Z,192nm,0.9s
MCH1 Michaelchurch 26.78 320⇑ *e*P **P 21 44 43.4 -0.9**
MCH1 IAmb IAmb 21 44 46.4
comp=Z,412nm,1.2s
MCH1 IAMs_20 IAMs_20 21 57 19.0
comp=Z,23μm,20.1s
HFS Hagfors 26.80 347 P **P 21 44 42.8 -1.6**
comp=Z,58nm,0.5s,baz=154,slow=9.6,SNR=99
HFS LR LR 21 58 07.4
comp=Z,12μm,18.3s,baz=160,slow=43
POLO Lamas de Olo 26.82 295 *e*P **P 21 44 44.6 -0.4**
comp=Z,195nm,1.3s
POLO *e*S **S 21 49 15.6 -4.2**
PBEJ Beja 26.83 287 *e*P **P 21 44 45.6 +0.7**
comp=Z,548nm,1.4s
PVIS Viseu 26.86 293 *e*P **P 21 44 45.0 -0.2**
comp=Z,384nm,1.4s
LBWR Ladybower, Pea 26.86 323⇑ *e*P **P 21 44 43.6 -1.5**
LBWR IAmb IAmb 21 44 45.3
comp=Z,182nm,0.9s
LBWR IAMs_20 IAMs_20 21 57 10.1
comp=Z,17μm,19.3s
PBDV Barranco-do-Ve 26.92 286 *e*P **P 21 44 45.5 -0.3**
comp=Z,624nm,1.3s
PBDV *e*S **S 21 49 18.4 -2.9**
EVO Evora 26.92 288 *e*P **P 21 44 45.6 -0.2**
comp=Z,533nm,1.3s
EVO Evora 26.92 288⇑ *i*P **P 21 44 45.5 -0.3**
STNC Stoke 26.93 322⇑ *i*P **P 21 44 45.5 -0.2**
STNC IAmb IAmb 21 44 46.6
comp=Z,1μm,1.6s
STNC IAMs_20 IAMs_20 21 57 22.2
comp=Z,15μm,16.8s
HLM1 Long Mynd 26.98 321 IAMs_20 IAMs_20 21 57 13.6
comp=Z,18μm,14.5s
PCVE Castro Verde 26.98 287 *e*P **P 21 44 45.9 -0.4**
comp=Z,448nm,1.5s
PCVE *e*S **S 21 49 18.9 -3.3**
PCAB Cabril 27.02 295 *e*P **P 21 44 46.4 -0.3**
comp=Z,476nm,1.3s
GDLE Glaisdale, N Y 27.02 326⇑ *i*P **P 21 44 45.7 -0.8**
GDLE IAmb IAmb 21 44 46.9
comp=Z,428nm,1.2s
FIA0 FINESS Array S 27.04 1 *e*P **P 21 44 45.1 -1.5**
FIA0 *e*PcP **PcP 21 48 07.7 +0.5**
FIA0 FINESS Array S 27.04 1 *e*P **P 21 44 45.1 -1.5**
FIA0 *e* 21 48 07.7
FINES FINESS Array B 27.04 1 P **P 21 44 45.1 -1.5**
comp=Z,251nm,1.1s,baz=161,slow=8.1,SNR=172
FINES PcP **PcP 21 48 07.7 +0.5**
comp=Z,14nm,0.5s,baz=167,slow=3.0,SNR=4.7
FINES LR LR 21 56 21.3
comp=Z,21μm,20.4s,baz=186,slow=38
FIA1 FINESS Array S 27.04 1 *e*P **P 21 44 45.1 -1.5**
comp=Z,559nm,1.3s
PMTG Montargil 27.08 290 *e*P **P 21 44 46.6 -0.6**
comp=Z,304nm,1.4s
PMTG *e*S **S 21 49 20.4 -3.3**
MESJ Messejana 27.11 287 *e*P **P 21 44 47.0 -0.6**
MESJ AMb AMB 21 44 57.7
comp=Z,240nm,1.7s
MESJ *e*S **S 21 49 23.2 -1.1**
MESJ Messejana 27.11 287 *e*P **P 21 44 46.9 -0.6**
MESJ *e*S **S 21 49 23.2 -1.1**
HTL Hartland 27.12 317⇑ *e*P **P 21 44 47.2 -0.2**
HTL IAmb IAmb 21 44 49.0
comp=Z,533nm,1.3s
HTL IAMs_20 IAMs_20 21 58 00.7
comp=Z,27μm,17.1s
HPK Haverah Park 27.13 324⇑ *i*P **P 21 44 46.6 -0.9**
HPK IAmb IAmb 21 44 48.3
comp=Z,173nm,1.1s
HPK IAMs_20 IAMs_20 21 57 28.4
comp=Z,17μm,16.8s
PTOM Tomar 27.22 291 *e*P **P 21 44 48.1 -0.4**
comp=Z,442nm,1.4s
PGAV Gavieira, Arco 27.22 296 *e*P **P 21 44 49.8 +1.2**
comp=Z,318nm,1.5s
PGAV *e*S **S 21 49 25.1 -1.1**
OSL Oslo 27.23 344 *e*P **P 21 44 47.5 -0.7**
COI Coimbra 27.23 292 *e*P **P 21 44 48.4 -0.1**
comp=Z,469nm,1.5s
COI *e*S **S 21 49 23.9 -2.2**
COI Coimbra 27.23 292 *e*P **P 21 44 48.4 -0.1**
comp=Z,228nm,0.8s
COI LR LR
comp=Z,7μm,22.0s
KONO Kongsberg 27.24 343 *e*P **P 21 44 46.8 -1.5**
comp=Z,986nm,1.5s
KONO Kongsberg 27.24 343c *i*P **P 21 44 46.9 -1.5**
KONO pmax pmax
comp=Z,781nm,1.5s
KONO Kongsberg 27.24 343 *e*P **P 21 44 47.4 -1.0**
PCAS Casmilo, Conde 27.29 292 *e*P **P 21 44 48.8 -0.3**
comp=Z,249nm,1.7s
PCAS *e*S **S 21 49 24.8 -2.3**
FOEL Foel Wylfa 27.34 321⇑ *i*P **P 21 44 49.0 -0.4**
FOEL IAmb IAmb 21 44 50.1
comp=Z,431nm,1.1s
FOEL IAMs_20 IAMs_20 21 58 08.9
comp=Z,14μm,15.1s
PNCL Nicolau / Gran 27.34 288 *e*P **P 21 44 49.7 +0.1**
comp=Z,338nm,1.5s
PNCL *e*S **S 21 49 26.2 -1.7**
PTO Porto 27.41 294 *e*P **P 21 44 50.7 +0.6**
comp=Z,446nm,1.5s
MORF Marmelete 27.49 286 *e*P **P 21 44 50.9 0.0**
MORF AMb AMB 21 44 55.6
comp=Z,67nm,1.4s
MORF *e*S **S 21 49 29.2 -1.1**
MORF Marmelete 27.49 286 *e*P **P 21 44 50.4 -0.6**
comp=Z,230nm,1.2s
MORF *e*S **S 21 49 27.6 -2.7**
MORF Marmelete 27.49 286 *e*P **P 21 44 50.9 0.0**
MORF *e*S **S 21 49 29.2 -1.1**
PTEO Sao Teotonio 27.53 286 *e*P **P 21 44 50.8 -0.4**
comp=Z,475nm,1.7s
LLW Llanuwychllyn 27.56 321⇑ *e*P **P 21 44 49.4 -1.9**
PFVI Vila Bisbo 27.64 286 *e*P **P 21 44 52.0 -0.3**
comp=Z,299nm,1.4s
PFVI *e*S **S 21 49 30.2 -2.4**
PFVI Vila Bisbo 27.64 286 *e*P **P 21 44 51.9 -0.4**
comp=Z,139nm,0.9s
PFVI LR LR
comp=Z,4μm,22.0s
AJN Ajban 27.65 103 *i*P **P 21 44 53.6 +1.2**
SNR=11
AJN Ajban 27.65 103 P **P 21 44 54.2 +1.8**
SNR=18
AJN P **P 21 44 54.2 +1.8**
SNR=18
RSBS Rosebush, Pemb 27.70 318⇑ *i*P **P 21 44 51.8 -0.9**
RSBS IAmb IAmb 21 44 55.3
comp=Z,52nm,0.9s
RSBS IAMs_20 IAMs_20 21 58 18.9
comp=Z,8μm,13.9s
STAV Stavanger 27.71 338 *e*P **P 21 44 52.0 -0.7**
UMQ Umm Al-Quwin 27.77 100 *i*P **P 21 44 55.2 +1.7**
SNR=22
UMQ Umm Al-Quwin 27.77 100 P **P 21 44 55.7 +2.3**
SNR=28
NC602 NORSAR Array S 27.77 346 *e*P **P 21 44 51.7 -1.4**
comp=Z,308nm,0.9s
NC602 NORSAR Array S 27.77 346 *e*P **P 21 44 52.3 -0.8**
EDMD Edmundbyers 27.80 326⇑ *i*P **P 21 44 52.8 -0.8**
EDMD IAmb IAmb 21 44 54.6
comp=Z,530nm,1.4s
EDMD IAMs_20 IAMs_20 21 58 25.5
comp=Z,24μm,14.4s
LIS Lisbon 27.81 289 *e*P **P 21 44 53.7 0.0**
LIS AMb AMB 21 44 56.8
comp=Z,411nm,1.8s
LIS *e*S **S 21 49 34.3 -0.9**
LIS Lisbon 27.81 289 *e*P **P 21 44 53.7 0.0**
LIS *e*S **S 21 49 34.2 -0.9**
ASUD Al Ashush, Dub 27.90 102 *i*P **P 21 44 55.9 +1.3**
SNR=30
ASUD Al Ashush, Dub 27.90 102 P **P 21 44 56.3 +1.6**
SNR=16
ASUD P **P 21 44 56.3 +1.6**
SNR=16
PMAFR Mafra 27.91 289 *e*P **P 21 44 54.5 -0.1**
comp=Z,448nm,1.6s
PMAFR *e*S **S 21 49 34.7 -2.1**
SHME Shamm 27.93 99 *i*P **P 21 44 55.4 +0.3**
SNR=50
YLL Llanberis 27.97 321 *e*P **P 21 44 53.8 -1.2**
NAZ Nazwa, Dubai 28.00 101 *i*P **P 21 44 56.5 +1.0**
SNR=86
NAZ Nazwa, Dubai 28.00 101 P **P 21 44 57.1 +1.5**
SNR=69
NAZ P **P 21 44 57.1 +1.5**
SNR=69
NAO01 NORSAR Array S 28.01 345 *e*P **P 21 44 54.1 -1.2**
comp=Z,638nm,1.0s
NAO01 NORSAR Array S 28.01 345 *e*P **P 21 44 54.4 -0.8**
KLMR Klimovskoe 28.02 15c *i*P **P 21 44 53.6 -1.8**
KLMR *e*S **S 21 49 33.9 -4.1**
KLMR pmax pmax
comp=Z,722nm,1.4s
KLMR Klimovskoe 28.02 15⇑ *i*P **P 21 44 53.6 -1.8**
KLMR ⇓ *i*P **P 21 44 53.6 -1.8**
KLMR ⇓ *i*P **P 21 44 53.6 -1.8**
KLMR AMP 21 44 56.0
comp=Z,722nm,1.4s
KLMR *e*S **S 21 49 34.0 -4.1**
KLMR *e*S **S 21 49 34.0 -4.1**
FAQ Al Faqa, Dubai 28.06 102 *i*P **P 21 44 56.6 +0.6**
SNR=61
FAQ Al Faqa, Dubai 28.06 102 P **P 21 44 57.2 +1.2**
SNR=34
KMY Karmoy 28.08 338 *e*P **P 21 44 55.2 -0.7**
NC405 NORSAR Array S 28.08 346 *e*P **P 21 44 54.5 -1.5**
comp=Z,887nm,1.9s
ANKE Ethiopia-Afar 28.08 148 *e*S **S 21 49 45.5 +4.9**
NB201 NORSAR Array S 28.11 346 *e*P **P 21 44 55.2 -0.9**
comp=Z,1μm,1.6s
NB201 NORSAR Array S 28.11 346 *e*P **P 21 44 55.3 -0.9**
BANOM Banah 28.11 99 *i*P **P 21 44 57.3 +0.7**
SNR=65
BANOM Banah 28.11 99 P **P 21 44 57.8 +1.2**
SNR=70
BANOM P **P 21 44 57.8 +1.2**
SNR=70
NB2 NORSAR Subarra 28.11 346 P **P 21 44 54.8 -1.5**
comp=Z,558nm,1.7s,baz=156,slow=9.3
NB2 NORSAR Subarra 28.11 346 P **P 21 44 54.8 -1.5**
baz=156,slow=9.3
NB2 P **P 21 44 54.8 -1.5**
baz=156,slow=9.3
NB200 NORSAR Array S 28.11 346 *e*P **P 21 44 54.4 -1.9**
NOA NORSAR Array B 28.11 346 P **P 21 44 54.4 -1.9**
comp=Z,58nm,0.9s,baz=159,slow=9.8,SNR=181
NOA LR LR 21 58 03.8
comp=Z,12μm,19.7s,baz=160,slow=40
WLF1 Llynfaes 28.16 321⇑ *e*P **P 21 44 56.0 -0.7**
WLF1 IAmb IAmb 21 44 57.1
comp=Z,150nm,1.0s
WLF1 IAMs_20 IAMs_20 21 58 34.0
comp=Z,29μm,14.9s
WME Myndd Eilian 28.17 321⇑ *i*P **P 21 44 55.9 -0.8**
AAE Adis Abeba 28.18 151 *i*P **P 21 45 00.3 +2.7**
AAE *i* S **S 21 49 44.9 +3.0**
AAE Adis Abeba 28.18 151 *e*P **P 21 45 00.1 +2.6**
AAE *e*S **S 21 49 50.9 +8.9**
NBO00 NORSAR Array S 28.20 345 *e*P **P 21 44 56.0 -1.0**
comp=Z,3μm,1.7s
NBO00 NORSAR Array S 28.20 345 *e*P **P 21 44 56.6 -0.4**
KESW Keswick, Cumbr 28.21 324⇑ *i*P **P 21 44 56.4 -0.7**
KESW IAmb IAmb 21 44 57.8
comp=Z,469nm,1.6s
KESW IAMs_20 IAMs_20 21 58 37.4
comp=Z,15μm,15.1s
YRC Rhoscolyn 28.23 321⇑ *i*P **P 21 44 56.7 -0.6**
MSFE Esma-Masafi 28.24 100 *i*P **P 21 44 58.3 +0.5**
SNR=64
ODD1 Odda 28.25 340 *e*P **P 21 44 57.5 +0.1**
NC303 NORSAR Array S 28.25 346 *e*P **P 21 44 56.2 -1.2**
comp=Z,717nm,1.5s
NC303 NORSAR Array S 28.25 346 *e*P **P 21 44 56.3 -1.2**
FURI Furi 28.27 151 PFAKE 21 45 10.0 +12
FURI LR LR
comp=Z,20μm,21.0s
FURI Furi 28.27 151 *e*P **P 21 45 01.1 +2.8**
FURI *e*S S 21 49 52.5 +9.2
WPS Cemaes, Angles 28.27 321⇑ *e*P **P 21 44 57.0 -0.7**
WPS IAmb IAmb 21 45 01.1
comp=Z,155nm,1.2s
WPS IAMs_20 IAMs_20 21 58 29.2
comp=Z,15μm,16.4s
MDH Madha 28.38 100 *i*P **P 21 44 59.5 +0.5**
SNR=48
MDH Madha 28.38 100 P **P 21 44 60.0 +1.0**
SNR=35
MDH P **P 21 44 60.0 +1.0**
SNR=35
MDH P **P 21 44 60.0 +1.0**
SNR=35
NC204 NORSAR Array S 28.42 345 *e*P **P 21 44 57.9 -1.1**
comp=Z,883nm,1.5s
NC204 NORSAR Array S 28.42 345 *e*P **P 21 44 58.4 -0.7**
HATD Hatta, Dubai 28.46 101 *i*P **P 21 45 00.3 +0.6**
SNR=134
HATD Hatta, Dubai 28.46 101 P **P 21 45 00.6 +0.9**
SNR=94
HATD P **P 21 45 00.6 +0.9**
SNR=94
SKAR Skarslia 28.46 343 *e*P **P 21 44 59.2 -0.1**
ASHO Ashiyiah 28.46 102 *i*P **P 21 45 00.3 +0.5**
SNR=24
ASHO Ashiyiah 28.46 102 P **P 21 45 00.6 +0.9**
SNR=72
ASHO P **P 21 45 00.6 +0.9**
SNR=72
ASHO P **P 21 45 00.6 +0.9**
SNR=72
UOSS Minazif 28.46 101 *e*P **P 21 45 00.2 +0.5**
comp=Z,330nm,1.0s
UOSS LR LR
comp=Z,2μm,19.0s
UOSS Minazif 28.46 101 *i*P **P 21 45 00.1 +0.5**
SNR=40
UOSS Minazif 28.46 101 P **P 21 45 00.5 +0.8**
SNR=104
UOSS P **P 21 45 00.5 +0.8**
SNR=104
UOSS P **P 21 45 00.5 +0.8**

SNR=104
ALNE Al Ain 28.50 103 *i* P **P 21 45 01.0 +0.9**
SNR=84
BHH Howats Hill 28.55 325⇑ *e*P **P 21 44 59.7 -0.4**
EKA Eskdalemuir Ar 28.66 326 P **P 21 45 00.6 -0.5**
comp=Z,178nm,0.9s,baz=124,slow=8.8,SNR=384
EKA ScP **ScP 21 51 49.4 -1.5**
comp=Z,21nm,0.9s,baz=115,slow=4.4,SNR=12
EKA LR LR 21 59 00.1
comp=Z,12μm,18.3s,baz=145,slow=42
ESK Eskdalemuir 28.67 325 *e*P **P 21 45 00.7 -0.5**
comp=Z,362nm,1.1s
ESK Eskdalemuir 28.67 325⇑ *i*P **P 21 45 00.6 -0.6**
ESK IAmb IAmb 21 45 01.9
comp=Z,399nm,1.1s
ESK IAMs_20 IAMs_20 21 59 00.9
comp=Z,99μm,15.6s
ESK Eskdalemuir 28.67 325 *i* P **P 21 45 00.9 -0.3**
AKTO Aktyubinsk 28.74 46 P **P 21 45 02.0 +0.1**
comp=Z,51nm,0.6s,baz=246,slow=8.8,SNR=147
AKTO LR LR 22 00 25.6
comp=Z,16μm,20.3s,baz=248,slow=44
AKTO Aktyubinsk 28.74 46 P **P 21 45 02.0 +0.1**
IOMK Kirk Michael 28.75 323⇑ *i*P **P 21 45 01.4 -0.5**
IOMK IAmb IAmb 21 45 02.5
comp=Z,1μm,1.6s
ESY Stoneypath 28.75 327⇑ *i*P **P 21 45 01.3 -0.6**
EBL Broad Law 28.86 326⇑ *i*P **P 21 45 02.2 -0.7**
BER Bergen 29.00 340 *e*P **P 21 45 03.6 -0.5**
EDI Edinburgh 29.01 327⇑ *e*P **P 21 45 03.7 -0.5**
EDI IAmb IAmb 21 45 05.0
comp=Z,443nm,1.3s
EDI IAMs_20 IAMs_20 21 59 21.5
comp=Z,24μm,15.2s
KIRV Kirov 29.05 26 P **P 21 45 03.6 -0.9**
comp=Z,134nm,0.5s,baz=228,slow=5.1,SNR=147
KIRV LR LR 21 57 56.8
comp=Z,10μm,20.5s,baz=228,slow=39
EAU Auchinoon 29.09 326⇑ *i*P **P 21 45 04.7 -0.2**
SOHO SOHO 29.10 102 P **P 21 45 07.0 +1.6**
SNR=198
SOHO P **P 21 45 07.0 +1.6**
SNR=198
SOHO P **P 21 45 07.0 +1.6**
SNR=198
ASK Askoy 29.12 340 *e*P **P 21 45 05.3 +0.2**
GAL1 Galloway 29.14 324⇑ *e*P **P 21 45 04.5 -0.8**
GAL1 IAmb IAmb 21 45 06.1
comp=Z,109nm,1.0s
GAL1 IAMs_20 IAMs_20 21 58 40.1
comp=Z,8μm,16.9s
DRUM Mains of Drumt 29.30 329⇑ *e*P **P 21 45 04.8 -1.9**
DRUM IAmb IAmb 21 45 06.7
comp=Z,196nm,1.0s
DRUM IAMs_20 IAMs_20 21 59 45.0
comp=Z,19μm,12.3s
EDU Dundee 29.31 328⇑ *i*P **P 21 45 06.1 -0.8**
HYA Hoyanger 29.41 341 *e*P **P 21 45 07.5 -0.2**
GMM Mts of Mourne 29.44 322⇑ *e*P **P 21 45 07.3 -0.7**
ARQ Araqi 29.47 104 P **P 21 45 10.1 +1.4**
SNR=20
DOMB Dombas 29.47 345 *e*P **P 21 45 08.9 +0.6**
ABKAR Akbulak array 29.53 49 *e*P **P 21 45 09.1 +0.2**
comp=Z,152nm,1.1s
PGBU Glenifferbraes 29.55 325⇑ *e*P **P 21 45 08.6 -0.4**
PGBU IAmb IAmb 21 45 10.5
comp=Z,401nm,1.3s
PGBU IAMs_20 IAMs_20 21 59 29.1
comp=Z,19μm,15.1s
ELO Logie Almond 29.57 327⇑ *i*P **P 21 45 08.2 -1.0**
EAB Aberfoyle 29.69 326⇑ *i*P **P 21 45 09.9 -0.4**
INVG Invergeldie, C 29.70 327⇑ *i*P **P 21 45 09.8 -0.5**
INVG IAmb IAmb 21 45 10.9
comp=Z,300nm,1.2s
INVG IAMs_20 IAMs_20 22 00 13.9
comp=Z,24μm,15.4s
SUE Sulen 29.72 340 *e*P **P 21 45 09.8 -0.6**
MME1 Meikle Cairn 29.75 329⇑ *e*P **P 21 45 09.4 -1.4**
CLGH Cloghs, Cushen 29.94 323⇑ *i*P **P 21 45 12.3 -0.2**
CLGH IAmb IAmb 21 45 13.4
comp=Z,882nm,1.6s
CLGH IAMs_20 IAMs_20 21 59 13.2
comp=Z,14μm,16.9s
HOQ Hogain 29.98 103 P **P 21 45 14.1 +0.8**
SNR=27
TOC1 Torodi Ar. Sit 30.02 231 PFAKE 21 45 30.0 +16
TOC1 LR LR
comp=Z,28μm,22.0s
TOC2 Torodi Ar. Sit 30.02 231 PFAKE 21 45 30.0 +16
TOC2 LR LR
comp=Z,23μm,21.0s
TOB2 Torodi Ar. Sit 30.03 231 PFAKE 21 45 30.0 +16
TOB2 LR LR
comp=Z,24μm,22.0s
TOC3 Torodi Ar. Sit 30.03 231 PFAKE 21 45 30.0 +16
TOC3 LR LR
comp=Z,23μm,21.0s
TOA2 Torodi Ar. Sit 30.03 231 PFAKE 21 45 30.0 +16
TOA2 LR LR
comp=Z,22μm,21.0s
TOA1 Torodi Ar. Sit 30.04 231 *e*P **P 21 45 11.2 -2.5**
TOA1 *e*ScP **ScP 21 51 53.3 -2.7**
TOA1 LR LR
comp=Z,23μm,22.0s
TOC7 Torodi Ar. Sit 30.04 231 PFAKE 21 45 30.0 +16
TOC7 LR LR
comp=Z,24μm,22.0s
TOA0 Torodi Ar. Sit 30.04 231 *e*P **P 21 45 12.6 -1.1**
comp=Z,479nm,0.8s
TOA0 LR LR
comp=Z,22μm,21.0s
TOA0 Torodi Ar. Sit 30.04 231 P **P 21 45 13.1 -0.6**
SNR=66
TORD Torodi Ar. Bea 30.04 231 P **P 21 45 11.2 -2.5**
comp=Z,309nm,0.7s,baz=202,slow=19,SNR=530
TORD ScP **ScP 21 51 53.3 -2.7**
comp=Z,6.8nm,1.0s,baz=46,slow=4.2,SNR=3.5
TORD LR LR 22 00 30.9
comp=Z,40μm,19.1s,baz=0.0,slow=43
TOB3 Torodi Ar. Sit 30.04 231 PFAKE 21 45 30.0 +16
TOB3 LR LR
comp=Z,22μm,21.0s
TOB5 Torodi Ar. Sit 30.04 231 PFAKE 21 45 30.0 +16
TOB5 LR LR
comp=Z,24μm,21.0s
MCD Coleburn Disti 30.04 329⇑ *i*P **P 21 45 12.2 -1.1**
TOA3 Torodi Ar. Sit 30.04 231 PFAKE 21 45 30.0 +16
TOA3 LR LR
comp=Z,23μm,22.0s
TOB4 Torodi Ar. Sit 30.05 231 PFAKE 21 45 30.0 +16
TOB4 LR LR
comp=Z,22μm,21.0s
TOC4 Torodi Ar. Sit 30.05 231 PFAKE 21 45 30.0 +16
TOC4 LR LR
comp=Z,23μm,21.0s
TOC5 Torodi Ar. Sit 30.07 231 PFAKE 21 45 30.0 +16
TOC5 LR LR
comp=Z,26μm,22.0s
AKN Aaknes 30.07 343 *e*P **P 21 45 13.6 0.0**
PRGR Permogore 30.20 19⇑ *i*P **P 21 45 13.3 -1.3**
PRGR *i* S S 21 50 03.9 -8.3
PRGR pmax pmax
comp=Z,1μm,1.5s
LAWE Loch Awe, Argy 30.22 326⇑ *e*P **P 21 45 14.6 -0.4**
LAWE IAmb IAmb 21 45 15.7
comp=Z,313nm,1.5s
LAWE IAMs_20 IAMs_20 21 59 58.7
comp=Z,22μm,15.1s
MOL Molde 30.28 344 *e*P **P 21 45 15.7 +0.4**
BSY Bisya 30.30 104 P **P 21 45 18.0 +1.9**
SNR=32
TBLU Trondheim 30.32 347 *e*P **P 21 45 16.5 +0.8**
WHFO Wadi Hawf 30.32 116 P **P 21 45 17.9 +1.7**
ABTO Aybut 30.32 117 P **P 21 45 17.8 +1.5**
MDO Dochfour 30.43 328⇑ *i*P **P 21 45 15.3 -1.5**
MLA1 Latheron 30.54 330⇑ *i*P **P 21 45 16.4 -1.3**
BIDO Bidbid 30.67 102 P **P 21 45 20.1 +0.8**
SNR=14
BIDO P **P 21 45 20.1 +0.8**
SNR=14
SMDO Samad 30.83 103 P **P 21 45 21.9 +1.1**
SNR=33
KAC Achnashellach 30.88 328⇑ *i*P **P 21 45 19.1 -1.6**
RBK Rabkut 30.90 116 P **P 21 45 22.8 +1.4**
LRW Lerwick 30.92 334⇑ *e*P **P 21 45 19.5 -1.6**

LRW IAmb IAmb 21 45 22.5
comp=Z,154nm,1.0s
LRW IAMs_20 IAMs_20 22 01 35.5
comp=Z,9μm,18.6s
KPL Plockton 30.94 327⇑ *i*P **P 21 45 20.2 -1.1**
KPL IAmb IAmb 21 45 21.4
comp=Z,263nm,1.2s
KPL IAMs_20 IAMs_20 22 01 01.6
comp=Z,26μm,14.2s
JMDO Jabal Madar 31.21 104 P **P 21 45 25.1 +1.0**
SNR=18
WSAR Wadi Sarin 31.21 102 ScP **ScP 21 51 58.8 -1.0**
comp=Z,29nm,1.1s,baz=287,slow=1.8,SNR=3.7
WSAR LR LR 22 03 26.4
comp=Z,9μm,19.6s,baz=324,slow=47
WSAR Wadi Sarin 31.21 102 P **P 21 45 25.0 +0.9**
SNR=14
RRR Rubha Reidh 31.31 328 *e*P **P 21 45 23.4 -1.1**
RSC Scourie 31.32 329⇑ *e*P **P 21 45 23.2 -1.3**
DMTO DMTO 31.33 114 P **P 21 45 25.9 +0.8**
SNR=5.8
DMTO P **P 21 45 25.9 +0.8**
SNR=5.8
ARU Arti 31.64 36 P **P 21 45 27.1 -0.3**
comp=Z,44nm,0.6s,baz=234,slow=6.4,SNR=214
ARU LR LR 22 01 29.3
comp=Z,8μm,18.5s,baz=247,slow=42
ARU Arti 31.64 36 *e*P **P 21 45 26.8 -0.6**
comp=Z,1μm,1.6s
ARU LR LR
comp=Z,7μm,19.0s
ARU Arti 31.64 36*c i*P **P 21 45 26.8 -0.6**
ARU 21 46 28.4
ARU 21 48 15.6
ARU S **S 21 50 31.9 -3.0**
ARU pmax pmax
comp=Z,1μm,1.6s
ARU MLR MLR
comp=Z,9μm,15.0s
RRH Rhenigidale 31.73 328⇑ *e*P **P 21 45 27.0 -1.2**
WBK Wadi Bani Khal 31.79 103 P **P 21 45 31.2 +2.0**
SNR=12
MHTO MHTO 31.81 106 P **P 21 45 31.0 +1.7**
SNR=55
MHTO P **P 21 45 31.0 +1.7**
SNR=55
DQM DQM 32.04 108 P **P 21 45 32.2 +0.9**
SNR=18
DQM P **P 21 45 32.2 +0.9**
SNR=18
JLN Jalan Bani Buh 32.37 103 P **P 21 45 35.6 +1.3**
SNR=21
JLN P **P 21 45 35.6 +1.3**
SNR=21
MOR8 Moi Rana 32.42 352 *e*P **P 21 45 34.2 0.0**
SVE Sverdlovsk 32.83 36*d i*P **P 21 45 38.2 +0.3**
SVE *e*S **S 21 50 51.1 -2.4**
SVE *e* 21 56 05.8
SVE pmax pmax
comp=Z,1μm,1.8s
SVE MLR MLR
comp=Z,10μm,15.0s
SVE MLR MLR
comp=E,8μm,15.0s
KONS Konsvik 32.89 351 *e*P **P 21 45 38.2 0.0**
APA Apatity 33.53 6⇓ *i*P **P 21 45 41.3 -2.5**
APA *i* 21 46 55.0
APA *i* S S 21 50 56.0 -8.1
APA *i* SS **SnSn 21 53 01.0 -6.3**
APA pmax pmax
comp=Z,85nm,0.8s
APA MLR MLR
comp=Z,10μm,12.0s
LVZ Lovozero 33.96 6 *e*P **P 21 45 46.2 -1.4**
comp=Z,184nm,0.8s
LVZ LR LR
comp=Z,16μm,21.0s
LVZ Lovozero 33.96 6*c i*P **P 21 45 46.4 -1.2**
LVZ pmax pmax
comp=Z,201nm,1.1s
STEI Steigen 34.03 353 *e*P **P 21 45 47.2 -1.0**
PMPST Porto Santo, M 34.38 280 *e*P **P 21 45 52.5 +0.8**
comp=Z,380nm,1.4s
LOF Lofoten 34.40 352 *e*P **P 21 45 49.8 -1.7**
PMAR Madeira 34.94 279 *e*P **P 21 45 58.0 +1.3**
comp=Z,627nm,1.6s
PMOZ Porto Moniz, M 35.14 280 *e*P **P 21 46 02.1 +3.7**
comp=Z,461nm,1.8s
PMOZ *e*S **S 21 51 29.3 -0.7**
ARA0 ARCESS Array S 35.16 0 *e*P **P 21 45 56.5 -1.5**
ARCES ARCESS Array B 35.16 0 P **P 21 45 56.5 -1.5**
comp=Z,100nm,0.9s,baz=188,slow=7.4,SNR=210
ARCES LR LR 22 01 46.1
comp=Z,18μm,18.1s,baz=182,slow=39
ARE0 ARCESS Array S 35.16 0 *e*P **P 21 45 56.5 -1.5**
comp=Z,15nm,1.2s
ARE0 LR LR
comp=Z,1μm,22.0s
MBAR Mbarara 35.23 170 P **P 21 45 58.6 -0.6**
comp=Z,138nm,1.0s,baz=341,slow=6.8,SNR=64
MBAR ScP **ScP 21 52 12.2 -1.8**
comp=Z,48nm,1.1s,baz=353,slow=4.9,SNR=13
MBAR LR LR 22 01 54.2
comp=Z,4μm,18.3s,baz=358,slow=39
MBAR Mbarara 35.23 170 *e*P **P 21 45 58.8 -0.5**
comp=Z,246nm,1.1s
MBAR *e*ScP **ScP 21 52 12.7 -1.3**
MBAR LR LR
comp=Z,14μm,21.0s
MBAR Mbarara 35.23 170*d i*P **P 21 45 59.6 +0.3**
MBAR pmax pmax
comp=Z,212nm,1.1s
CHGR Chuyangaron 35.33 70 PFAKE 21 46 10.0 +10
CHGR LR LR
comp=Z,23μm,21.0s
CHM Chimkent 35.38 64 *e*P **P 21 46 00.2 0.0**
CHM *e*S **S 21 51 30.8 -2.4**
CHM pmax pmax
comp=Z,381nm,1.8s
CHM smax smax
comp=E,993nm,4.8s
CHM Chimkent 35.38 64 *e*P **P 21 46 00.3 0.0**
comp=E,381nm,1.8s
CHM *e*S **S 21 51 30.9 -2.4**
comp=E,993nm,4.8s
BRLS Borolday 35.53 62 *e*S **S 21 51 31.9 -3.7**
KBL Kabul 35.94 77 *e*P **P 21 46 06.2 +0.9**
comp=E,122nm,1.4s
KBL LR LR
comp=Z,2μm,19.0s
KBL Kabul 35.94 77 *e*P **P 21 46 06.2 +0.9**
KBL pmax pmax
comp=Z,122nm,1.4s
KBL MLR MLR
comp=Z,2μm,19.0s
MACI Morro de la Ar 35.95 272 *e*P **P 21 46 06.9 +1.4**
comp=Z,397nm,1.2s
KK31 Karatay Array 36.02 62 *e*P **P 21 46 06.4 +0.7**
comp=Z,1μm,1.8s
KK31 Karatay Array 36.02 62 *e*P **P 21 46 06.4 +0.7**
KK31 pmax pmax
comp=Z,1μm,1.8s
KKAR Karatay Array 36.02 62 *e*P **P 21 46 06.4 +0.7**
comp=Z,1μm,1.8s
KKAR Karatay Array 36.02 62 *e*P **P 21 46 06.4 +0.7**
KKAR pmax pmax
comp=Z,1μm,1.8s
JBG Jabagly 36.07 63*c i*P **P 21 46 05.7 -0.6**
JBG *e*S **S 21 51 41.9 -2.2**
JBG pmax pmax
comp=Z,109nm,1.3s
JBG smax smax
comp=N,349nm,5.2s
GAR Garm 36.18 69 *e*P **P 21 46 08.8 +1.5**
comp=N,203nm,0.9s
GAR LR LR
comp=Z,6μm,18.0s
GAR Garm 36.18 69 *e*P **P 21 46 08.8 +1.5**
GAR pmax pmax
comp=Z,203nm,0.9s
GAR MLR MLR
comp=Z,6μm,18.0s
BTK Batken 36.45 67 *e*P **P 21 46 09.8 +0.3**
BTK Batken 36.45 67 *e*P **P 21 46 09.8 +0.3**
BRVK Borovoye 36.79 46 *e*P **P 21 46 12.5 +0.4**
comp=Z,249nm,1.3s

BRVK LR LR
comp=Z,7μm,22.0s
BRVK Borovoye 36.79 46*c i*P **P 21 46 12.8 +0.7**
BRVK pmax pmax
comp=Z,131nm,1.1s
BRVK Borovoye 36.79 46 P **P 21 46 13.0 +0.9**
SNR=159
BRVK P **P 21 46 13.0 +0.9**
SNR=159
BRVK P **P 21 46 13.0 +0.9**
SNR=159
BVAR Borovoye Array 36.84 46 P **P 21 46 12.9 +0.4**
comp=Z,60nm,0.8s,baz=256,slow=6.0,SNR=279
BVAR LR LR 22 05 18.3
comp=Z,281nm,19.7s,baz=267,slow=43
KMBO Kilima Mbogo 37.13 160 P **P 21 46 16.9 +1.2**
comp=Z,32nm,1.1s,baz=346,slow=7.9,SNR=24
KMBO ScP **ScP 21 52 20.5 -0.6**
comp=Z,13nm,1.1s,baz=346,slow=5.7,SNR=8.4
KMBO LR LR 22 01 20.5
comp=Z,12μm,20.9s,baz=344,slow=36
KMBO Kilima Mbogo 37.13 160 *e*P **P 21 46 17.2 +1.5**
comp=Z,49nm,1.2s
KMBO *e*ScP **ScP 21 52 20.9 -0.2**
KMBO LR LR
comp=Z,12μm,21.0s
KMBO Kilima Mbogo 37.13 160 *i* P **P 21 46 17.0 +1.3**
SNR=15
KMBO Kilima Mbogo 37.13 160 P **P 21 46 17.5 +1.8**
SNR=12
KMBO P **P 21 46 17.5 +1.8**
SNR=12
KMBO Kilima Mbogo 37.13 160 *e*P **P 21 46 16.9 +1.2**
KMBO *e*S **S 21 51 56.3 -4.6**
NAI Nairobi 37.15 161 PFAKE 21 46 30.0 +14
NAI LR LR
comp=Z,15μm,21.0s
BRZS Berezniki 37.78 51*c i*P **P 21 46 20.8 +0.2**
BRZS *e* 21 47 46.1
BRZS *i* S **S 21 52 07.5 -2.2**
BRZS pmax pmax
comp=Z,310nm,2.1s
BRZS smax smax
comp=N,181nm,4.4s
BRZS Berezniki 37.78 51⇑ *i*P **P 21 46 20.9 +0.2**
comp=N,310nm,2.1s
BRZS *e*PP **PP 21 47 46.1 -0.8**
BRZS *i* S **S 21 52 07.6 -2.2**
comp=N,181nm,4.4s
ARSB Arslanbob 37.96 65 *e*P **P 21 46 23.7 +1.3**
comp=N,417nm,1.2s
AML Almayashu 38.42 64 P **P 21 46 28.0 +1.5**
SNR=20
EKS2 Erkin-Say 38.44 63 P **P 21 46 27.6 +1.2**
SNR=98
BTLS Baital 38.52 59*c i*P **P 21 46 27.6 +0.8**
BTLS *e* 21 47 54.1
BTLS *e*S **S 21 52 20.7 -0.2**
BTLS pmax pmax
comp=Z,146nm,1.5s
BTLS smax smax
comp=E,365nm,5.4s
BTLS Baital 38.52 59⇑ *i*P **P 21 46 27.7 +0.8**
comp=E,146nm,1.5s
BTLS *e*PP **PP 21 47 54.2 -0.9**
BTLS *e*S **S 21 52 20.8 -0.2**
comp=E,365nm,5.4s
USP Ospenovka 38.92 62 P **P 21 46 31.1 +0.7**
SNR=36
AAK Ala-Archa 38.97 63 P **P 21 46 32.2 +1.3**
comp=E,94nm,0.7s,baz=251,slow=9.6,SNR=126
AAK LR LR 22 06 23.9
comp=E,7μm,18.6s,baz=277,slow=42
AAK Ala-Archa 38.97 63 P **P 21 46 32.1 +1.3**
SNR=122
AAK Ala-Archa 38.97 63 *e*P **P 21 46 32.3 +1.5**
comp=E,335nm,1.1s
AAK LR LR
comp=Z,3μm,20.0s
AAK Ala-Archa 38.97 63 *i* P **P 21 46 32.2 +1.3**
SNR=159
AAK Ala-Archa 38.97 63 *i* P **P 21 46 31.9 +1.0**
AAK pmax pmax
comp=Z,501nm,1.4s
AAK Ala-Archa 38.97 63 P **P 21 46 32.4 +1.5**
SNR=153
AAK P **P 21 46 32.4 +1.5**
SNR=153
UCH Uchtor 39.02 63 P **P 21 46 32.7 +1.1**
SNR=65
FRU1 Bishkek 39.05 63 *e*P **P 21 46 32.9 +1.4**
comp=Z,255nm,0.8s
FRU1 LR LR
comp=Z,2μm,20.0s
FRU1 Bishkek 39.05 63 *e*P **P 21 46 32.9 +1.4**
FRU1 pmax pmax
comp=Z,255nm,0.8s
FRU1 MLR MLR
comp=Z,2μm,20.0s
CHMS Chumysh 39.13 62 P **P 21 46 33.1 +1.1**
SNR=212
DBIC Dimbokro 39.13 232 P **P 21 46 30.7 -1.5**
comp=Z,188nm,0.9s,baz=21,slow=9.4,SNR=58
DBIC LR LR 22 05 56.7
comp=Z,27μm,18.3s,baz=18,slow=41
DBIC Dimbokro 39.13 232 *e*P **P 21 46 30.8 -1.4**
comp=Z,305nm,1.0s
DBIC Dimbokro 39.13 232 *e*P **P 21 46 30.8 -1.4**
DBIC pmax pmax
comp=Z,305nm,1.0s
TIC Toumodi 39.25 232 *e*P **P 21 46 31.2 -2.1**
KIC Kosan Boka 39.29 232 *e*P **P 21 46 31.3 -2.3**
comp=Z,1μm,1.3s
KBK Karagaybulak 39.30 63 P **P 21 46 35.2 +1.6**
SNR=216
NIL Nilore 39.54 77 *e*P **P 21 46 37.1 +1.5**
comp=Z,243nm,0.9s
NIL LR LR
comp=Z,1μm,20.0s
NIL Nilore 39.54 77 *e*P **P 21 46 37.1 +1.5**
NIL pmax pmax
comp=Z,243nm,0.9s
NIL MLR MLR
comp=Z,1μm,20.0s
LIC Lamto 39.58 232 *e*P **P 21 46 33.8 -2.2**
comp=Z,1μm,1.4s
KZA Kyzart 39.58 64 P **P 21 46 38.0 +1.7**
SNR=137
TKM2 Tokmak 2 39.75 62 P **P 21 46 38.6 +1.2**
SNR=73
TKM2 Tokmak 2 39.75 62 *i* P **P 21 46 38.1 +0.6**
TKM2 pmax pmax
comp=Z,96nm,1.0s
KUU Kurty 40.21 61*c i*P **P 21 46 42.2 +1.2**
KUU *e*S **S 21 52 45.3 -1.2**
KUU pmax pmax
comp=Z,700nm,1.7s
KUU smax smax
comp=E,2μm,4.0s
KUU Kurty 40.21 61⇑ *i*P **P 21 46 42.2 +1.2**
comp=E,700nm,1.7s
KUU *e*S **S 21 52 45.4 -1.2**
comp=E,2μm,4.0s
BHJ Bhuj 40.23 94 *e*P **P 21 46 42.3 +1.0**
BHJ IAmb IAmb 21 46 46.2
comp=Z,132nm,1.0s
ULHL Ulahol 40.29 63 P **P 21 46 43.8 +1.8**
SNR=23
BART Pico Bartolome 40.43 290 *e*P **P 21 46 42.1 -0.9**
comp=Z,208nm,1.1s
KSH Kashi 40.46 67 P **P 21 46 42.1 -1.1**
KSH PP **PP 21 48 18.6 +2.1**
KSH S **S 21 52 43.8 -6.7**
KSH SS **SS 21 55 41.0 -9.0**
KSH pmax pmax
comp=Z,410nm,1.3s
KSH pmax pmax
comp=Z,2μm,5.2s
KSH LR LR
comp=Z,5μm,13.2s
KSH LR LR
comp=Z,5μm,13.6s
KSH LR LR
comp=Z,10μm,21.3s
PSMN Pico do Norte, 40.50 289 *e*P **P 21 46 41.9 -1.6**
comp=Z,184nm,1.7s
PSMA Santa Maria 40.55 289 *e*P **P 21 46 43.7 -0.2**

comp=Z,251nm,1.5s
CHKK Chushkaly 40.68 61⇑ *i*P P 21 46 46.0 +1.1
CHKK Chushkaly 40.68 61⇑ *i*P P 21 46 46.0 +1.1
AAA Alma-Ata 40.69 62*c* *i*P P 21 46 46.2 +1.2
AAA *e*S **S 21 52 53.7 -0.1**
AAA pmax pmax
comp=Z,382nm,1.5s
AAA Alma-Ata 40.69 62⇑ *i*P P 21 46 46.3 +1.2
comp=Z,382nm,1.5s
AAA *e*S **S 21 52 53.7 -0.1**
CMLA Cha da Macela 40.71 290 *e*P **P 21 46 44.6 -0.6**
comp=Z,326nm,1.4s
CMLA Cha da Macela 40.71 290 PFAKE 21 47 00.0 +15
CMLA LR LR
comp=Z,6μm,20.0s
TNSS Tian-Shan 40.73 62 *e*P **P 21 46 46.2 +0.4**
TNSS Tian-Shan 40.73 62 *e*P **P 21 46 46.2 +0.4**
MDOK Medeo 40.79 62 *i* P **P 21 46 46.5 +0.5**
MDOK *i* S **S 21 52 56.0 +0.6**
MDOK pmax pmax
comp=Z,2μm,1.7s
MDOK Medeo 40.79 62 *i* P **P 21 46 46.5 +0.5**
comp=Z,2μm,1.7s
MDOK *i* S **S 21 52 56.0 +0.6**
comp=Z,2μm,5.7s
JMIC Jan Mayen 40.79 344 P **P 21 46 46.0 +0.6**
comp=Z,420nm,0.8s,baz=123,slow=3.9,SNR=38
JMIC LR LR 22 04 40.6
comp=Z,5μm,21.8s,baz=138,slow=38
JMIC Jan Mayen 40.79 344⇑ *i*P P 21 46 45.7 +0.3
PDA Ponta Delgada 40.82 290 *e*P **P 21 46 44.8 -1.3**
comp=Z,167nm,1.3s
PSET Sete Cidades 40.85 290 *e*P **P 21 46 45.8 -0.6**
comp=Z,223nm,0.9s
BORG Borgarnes 41.20 332 P **P 21 46 50.5 +1.6**
comp=Z,59nm,0.9s,baz=124,slow=6.3,SNR=27
BORG LR LR 22 06 37.2
comp=Z,6μm,19.2s,baz=118,slow=40
BORG Borgarnes 41.20 332 *e*P **P 21 46 50.8 +1.9**
comp=Z,390nm,1.5s
BORG LR LR
comp=Z,6μm,20.0s
BORG Borgarnes 41.20 332 *e*P **P 21 46 50.8 +1.9**
BORG pmax pmax
comp=Z,391nm,1.5s
BORG MLR MLR
comp=Z,6μm,20.0s
TDK Taldyqorghan 41.61 59 *i* P **P 21 46 52.9 +0.4**
TDK *e*S **S 21 53 05.0 -2.2**
TDK pmax pmax
comp=Z,472nm,1.8s
TDK smax smax
comp=E,957nm,4.7s
TDK Taldyqorghan 41.61 59 *i* P **P 21 46 53.0 +0.4**
comp=E,472nm,1.8s
TDK *e*S **S 21 53 05.1 -2.2**
comp=E,957nm,4.7s
KURK Kurchatov 41.63 50 *e*P **P 21 46 53.1 +0.6**
comp=E,722nm,1.6s
KURK LR LR
comp=Z,6μm,21.0s
KURK Kurchatov 41.63 50 *e*P **P 21 46 53.1 +0.6**
KURK pmax pmax
comp=Z,722nm,1.6s
KURK MLR MLR
comp=Z,6μm,21.0s
KURK Kurchatov 41.63 50 P **P 21 46 53.6 +1.0**
SNR=184
KURK P **P 21 46 53.6 +1.0**
SNR=184
KURK P **P 21 46 53.6 +1.0**
SNR=184
PSCM Serra do Cume 41.76 292 *e*P **P 21 46 51.0 -2.8**
comp=Z,176nm,1.1s
ADH Angra Heroismo 41.86 292 *e*P **P 21 46 54.0 -0.6**
comp=Z,225nm,1.6s
KPKS Kokpek 41.95 61 *e*P **P 21 46 55.2 -0.2**
KPKS *e* 21 48 38.6
KPKS *e*S **S 21 53 11.5 -0.9**
KPKS pmax pmax
comp=Z,213nm,2.0s
KPKS smax smax
comp=N,282nm,3.6s
KPKS Kokpek 41.95 61 *e*P **P 21 46 55.3 -0.2**
comp=N,213nm,2.0s
KPKS *e*PP **PnPn 21 48 38.6 +0.9**
KPKS *e*S **S 21 53 11.5 -0.9**
comp=N,282nm,3.6s
UZB Uzynbulak 42.23 62*c* *i*P **P 21 46 58.2 +0.5**
UZB *i* S **S 21 53 16.5 -0.2**
UZB pmax pmax
comp=Z,99nm,1.5s
UZB smax smax
comp=N,217nm,3.7s
UZB Uzynbulak 42.23 62⇑ *i*P **P 21 46 58.2 +0.5**
comp=N,99nm,1.5s
UZB *i* S **S 21 53 16.6 -0.2**
comp=N,217nm,3.7s
PGRA Graciosa 42.36 292 *e*P P 21 46 51.3 -7.4
comp=N,124nm,1.4s
DHRM DHARAMSHALA 42.39 78 *e*P **P 21 47 00.1 +0.8**
DHRM IAMs_20 IAMs_20 22 11 28.7
comp=Z,10μm,19.4s
PMAN Manadas 42.52 292 *e*P **P 21 46 59.3 -0.7**
comp=Z,154nm,1.4s
PDGK Podgornoye 42.55 61 *i* P **P 21 46 59.9 -0.4**
PDGK pmax pmax
comp=Z,142nm,1.0s
ROSA Rosais 42.62 292 *e*P **P 21 47 00.9 +0.1**
comp=Z,225nm,2.0s
SEM Semipalatinsk 42.66 51*c* *i*P **P 21 47 01.8 +0.5**
SEM pmax pmax
comp=Z,214nm,1.5s
SEM Semipalatinsk 42.66 51⇑ *i*P **P 21 47 01.8 +0.5**
comp=Z,214nm,1.5s
PPNO Prainha do Nor 42.69 292 *e*P **P 21 47 00.3 -1.1**
comp=Z,158nm,1.6s
HSPB Hornsund (broa 42.90 357 *e*P **P 21 47 02.5 +0.1**
HSPB *e*S **S 21 53 22.6 -2.8**
HSPB LMZ LR 22 04 45.3
comp=Z,149μm,26.3s
HSPB Hornsund (broa 42.90 357 *e*P **P 21 47 02.6 +0.1**
PCED Cedros 42.99 292 *e*P **P 21 47 03.0 -0.8**
comp=Z,100nm,1.3s
SMLA Simla 43.44 79 *e*P **P 21 47 08.4 +0.9**
SMLA IAmb IAmb 21 47 10.3
MAKZ Makanchi 43.95 56 *e*P **P 21 47 12.6 +1.1**
comp=Z,757nm,1.9s
MAKZ Makanchi 43.95 56 *e*P **P 21 47 12.6 +1.1**
MAKZ pmax pmax
comp=Z,757nm,1.9s
SPA0 Spitsbergen Ar 44.02 357 *e*P **P 21 47 11.4 -0.2**
comp=Z,383nm,1.3s
SPA0 Spitsbergen Ar 44.02 357⇑ *i*P **P 21 47 11.0 -0.6**
SPITS Spitsbergen Ar 44.02 357 P **P 21 47 11.3 -0.3**
comp=Z,78nm,0.7s,baz=146,slow=11,SNR=68
SPITS LR LR 22 07 18.6
comp=Z,11μm,21.1s,baz=165,slow=38
SCO Scoresbysund 44.03 339 *e*P **P 21 47 13.1 +1.4**
comp=Z,1μm,1.7s
SCO LR LR
comp=Z,6μm,19.0s
SCO Scoresbysund 44.03 339⇑ *i*P **P 21 47 13.2 +1.5**
SCO Scoresbysund 44.03 339⇑ *i*P **P 21 47 13.2 +1.5**
MK31 Makanchi Array 44.16 56 *e*P **P 21 47 13.9 +0.7**
comp=Z,157nm,0.9s
MK31 Makanchi Array 44.16 56 *e*P **P 21 47 13.9 +0.7**
MK31 pmax pmax
comp=Z,157nm,0.9s
MK32 Makanchi Array 44.16 56 *e*P **P 21 47 13.9 +0.7**
MKAR Makanchi Array 44.16 56 P **P 21 47 13.9 +0.7**
comp=Z,122nm,0.7s,baz=277,slow=6.0,SNR=402
MKAR LR LR 22 09 37.2
comp=Z,4μm,18.4s,baz=270,slow=41
MKAR Makanchi Array 44.16 56 *i* P **P 21 47 13.8 +0.6**
MKAR pmax pmax
comp=Z,122nm,0.7s
NDI New Delhi 44.31 83 *e*P **P 21 47 16.0 +1.4**
DDI Dehra Dun 44.43 80 *e*P **P 21 47 15.9 +0.4**
NVS Novosibirsk 44.59 44⇓ *i*P **P 21 47 18.1 +1.6**
NVS *i* 21 47 29.1
NVS *i* 21 48 59.7
NVS *i* 21 49 09.2
NVS *i* S **S 21 53 52.2 +1.5**
NVS *e* 21 57 07.8
NVS pmax pmax
comp=N,281nm,1.5s
NVS pmax pmax
comp=E,329nm,1.5s
NVS pmax pmax
comp=Z,722nm,1.5s
NVS pmax pmax
comp=Z,587nm,1.6s
NVS pmax pmax
comp=N,207nm,1.9s
NVS pmax pmax
comp=E,272nm,1.6s
NVS smax smax
comp=N,114nm,1.8s
NVS smax smax
comp=E,122nm,1.8s
KBS Kingsbay 44.95 356 *e*P **P 21 47 19.3 +0.2**
comp=E,205nm,0.8s
KBS LR LR
comp=Z,18μm,21.0s
KBS Kingsbay 44.95 356*c* *i*P **P 21 47 18.7 -0.3**
KBS Kingsbay 44.95 356⇑ *i*P **P 21 47 18.6 -0.5**
ZAA0 Zalesovo Array 45.50 46 *e*P **P 21 47 23.6 -0.1**
ZAA0 LR LR
comp=Z,4μm,22.0s
ZAA1 Zalesovo Array 45.50 46 *e*P **P 21 47 23.6 0.0**
ZALV Zalesovo Beam 45.50 46 P **P 21 47 23.6 -0.1**
comp=Z,122nm,0.5s,baz=267,slow=9.5,SNR=278
ZALV LR LR 22 10 53.2
comp=Z,5μm,18.7s,baz=286,slow=42
ZSN Zaisan 45.85 55*c* *i*P **P 21 47 27.6 +1.0**
ZSN *e*S **S 21 54 09.9 +0.8**
ZSN pmax pmax
comp=Z,90nm,2.1s
ZSN smax smax
comp=E,231nm,5.0s
ZSN Zaisan 45.85 55⇑ *i*P **P 21 47 27.7 +1.0**
comp=E,90nm,2.1s
ZSN *e*S **S 21 54 09.9 +0.8**
comp=E,231nm,5.0s
POO Poona 45.91 97 *e*P **P 21 47 28.1 +0.6**
POO IAmb IAmb 21 47 30.4
comp=Z,179nm,1.2s
BHPL Bhopal 46.65 89 *e*P **P 21 47 33.7 +0.5**
BHPL IAMs_20 IAMs_20 22 11 57.9
comp=Z,10μm,20.4s
DAG Danmarks Havn 46.77 347⇑ *i*P **P 21 47 33.4 0.0**
DAG pmax pmax
comp=Z,240nm,0.9s
DAG Danmarks Havn 46.77 347⇑ *i*P **P 21 47 33.4 0.0**
comp=Z,288nm,0.9s
DGZ Jazzator, Alta 47.32 51*c* *i*P **P 21 47 39.2 +1.0**
DGZ pmax pmax
comp=Z,89nm,1.1s
GOA Goa 47.47 101 *e*P **P 21 47 40.7 +1.1**
SACV Santiago Islan 47.87 259 *e*P **P 21 47 44.1 +1.3**
comp=Z,220nm,0.9s
SACV LR LR
comp=Z,5μm,20.0s
ANGG Ammassalik, Gr 48.03 330 *e*P **P 21 47 43.3 0.0**
comp=Z,89nm,1.3s
ANGG LR LR
comp=Z,4μm,22.0s
MSEY Mahe Island 48.25 138 PFAKE 21 48 00.0 +14
MSEY LR LR
comp=Z,3μm,21.0s
MSEY Mahe Island 48.25 138 *i* P **P 21 47 48.5 +2.8**
MSEY Mahe Island 48.25 138 P **P 21 47 47.9 +2.3**
MSEY P **P 21 47 47.9 +2.3**
WMQ Urumqi 48.36 59 P **P 21 47 48.3 +2.0**
WMQ pP sP 21 48 01.1 +4.8
WMQ PP **PP 21 49 41.6 +2.9**
WMQ PcS **PcS 21 53 10.3 +1.8**
WMQ S **S 21 54 46.1 +1.0**
WMQ ScS **ScS 21 57 36.0 -1.5**
WMQ SS **SS 21 58 11.0 -3.5**
WMQ pmax pmax
comp=Z,210nm,1.7s
WMQ pmax pmax
comp=Z,900nm,4.9s
WMQ LR LR
comp=Z,2μm,19.7s
WMQ LR LR
comp=Z,5μm,17.3s
WMQ LR LR
comp=Z,9μm,17.9s
WMQ Urumqi 48.36 59 PFAKE 21 48 00.0 +14
WMQ LR LR
comp=Z,4μm,18.0s
NRIK Noril'sk 48.53 25 P **P 21 47 48.0 +0.8**
comp=Z,212nm,0.9s,baz=255,slow=6.0,SNR=219
NRIK LR LR 22 10 42.8
comp=Z,7μm,19.3s,baz=258,slow=39
NRIK Noril'sk 48.53 25 P **P 21 47 48.0 +0.8**
JBP Jabalpur 48.80 88 *e*P **P 21 47 49.6 -0.2**
JBP AMB AMB 21 47 52.1
comp=Z,199nm,1.3s
JBP *e*x x 21 54 49.6
NGP Nagpur 48.94 91⇑ *e*P **P 21 47 51.6 +0.7**
NGP *e*S **S 21 54 53.7 0.0**
NGP IAMs_20 IAMs_20 22 14 30.3
comp=Z,7μm,14.0s
PYUN Piuthan 49.25 81 *e*P **P 21 47 54.0 +0.5**
comp=Z,2μm,1.2s
PYUN Piuthan 49.25 81 *e*P **S 21 54 53.7 -4.6**
comp=Z,354nm,1.3s
MONG Mongu 49.34 183 *i* P **P 21 47 54.3 +0.3**
MONG *i* 21 47 56.8
baz=13,slow=5.6
LSZ Lusaka 49.51 176 *e*P **P 21 47 55.3 0.0**
comp=Z,86nm,1.0s
LSZ LR LR
comp=Z,11μm,18.0s
LSZ Lusaka 49.51 176 *e*P **P 21 47 55.3 0.0**
LSZ pmax pmax
comp=Z,86nm,1.0s
LSZ MLR MLR
comp=Z,11μm,18.0s
LSZ Lusaka 49.51 176 P **P 21 47 55.1 -0.2**
LSZ P **P 21 47 55.1 -0.2**
SUMG Summit 49.67 339 *e*P **P 21 47 55.7 -0.6**
comp=Z,271nm,1.1s
SUMG LR LR
comp=Z,6μm,20.0s
SUMG Summit 49.67 339⇑ *i*P **P 21 47 56.5 +0.2**
SUMG Summit 49.67 339⇑ *i*P **P 21 47 56.5 +0.2**
DANN Dangsing 49.78 80 *e*P **P 21 47 58.5 +0.8**
comp=Z,1μm,0.9s
DANN Dangsing 49.78 80 *e*P **S 21 55 00.3 -5.6**
comp=Z,627nm,1.4s
KOLN Koldanda 49.87 81 *e*P **P 21 47 58.6 +0.3**
comp=Z,1μm,1.3s
ITZ Itezhi-Tezhi 49.90 179⇓ *i*P **P 21 47 58.4 +0.1**
HYB Hyderabad 50.33 96 *i* P **P 21 48 01.0 -0.6**
comp=Z,160nm,1.0s
HYB *e*PcP **PcP 21 49 21.0 +0.8**
HYB *e*PP **PP 21 50 01.0 +3.8**
HYB *e*S **S 21 55 12.0 -1.3**
GKN Gorkha 50.63 80 *e*P **P 21 48 04.3 +0.4**
comp=Z,602nm,0.8s
GKN Gorkha 50.63 80 *e*P **S 21 55 10.5 -6.9**
DMN Daman 51.16 80 *e*P **P 21 48 08.4 +0.3**
comp=Z,1μm,1.3s
DMN Daman 51.16 80 *e*P **S 21 55 17.6 -7.5**
comp=Z,329nm,1.5s
KKN Kakani 51.23 80 *e*P **P 21 48 08.7 +0.1**
comp=Z,478nm,0.8s
KKN Kakani 51.23 80 *e*P **S 21 55 18.5 -7.5**
comp=Z,313nm,1.6s
NRS Narsarsuaq 51.30 324 PFAKE 21 48 20.0 +12
NRS LR LR
comp=Z,7μm,19.0s
NRS Narsarsuaq 51.30 324 *i* P **P 21 48 08.6 +0.4**
NRS Narsarsuaq 51.30 324 *i* P **P 21 48 08.6 +0.4**
PKIN Phulchoki 51.41 80 *e*P **P 21 48 09.8 -0.2**
comp=Z,1μm,1.3s
PKIN Phulchoki 51.41 80 *e*P S 21 55 20.6 -7.9
comp=Z,195nm,1.3s
PKI Pulchoki 51.43 80 *e*P **P 21 48 10.0 -0.1**
comp=Z,1μm,1.3s
PKI Pulchoki 51.43 80 *e*P S 21 55 20.8 -8.0
comp=Z,366nm,1.4s
GUN Gumba 51.67 80 *e*P **P 21 48 12.3 +0.3**
comp=Z,2μm,1.2s
GUN Gumba 51.67 80 *e*P S 21 55 24.3 -8.0
comp=Z,443nm,1.6s
JIRN Jiri 52.03 80 *e*P **P 21 48 14.7 0.0**
comp=Z,2μm,1.4s
JIRN Jiri 52.03 80 *e*P S 21 55 28.9 -8.3
IVI Ivigtut 52.63 324 *e*P **P 21 48 18.8 +0.7**
comp=Z,472nm,1.3s
IVI LR LR
comp=Z,7μm,20.0s
RAMN Ramite 52.65 80 *e*P **P 21 48 18.6 -0.5**
comp=Z,858nm,1.3s
SFJD Kangerlussuaq 53.34 332 *e*P **P 21 48 23.3 0.0**
comp=Z,654nm,1.8s
SFJD LR LR
comp=Z,6μm,22.0s
SFJD Kangerlussuaq 53.34 332⇑ *i*P **P 21 48 22.8 -0.5**
SFJD Kangerlussuaq 53.34 332⇑ *i*P **P 21 48 22.8 -0.5**
BOK Bokaro 53.39 84 *e*P **P 21 48 23.5 -0.8**
BOK IAmb IAmb 21 48 25.2
comp=Z,275nm,1.2s
ILULI Ilulissat 53.45 334 *e*P **P 21 48 23.7 -0.3**
comp=Z,121nm,0.8s
ILULI LR LR
comp=Z,6μm,20.0s
ILULI Ilulissat 53.45 334⇑ *i*P **P 21 48 23.7 -0.3**
ILULI Ilulissat 53.45 334⇑ *i*P **P 21 48 23.7 -0.3**
TSUM Tsumeb 53.82 189 *e*P **P 21 48 26.8 -0.6**
comp=Z,143nm,1.0s
TSUM LR LR
comp=Z,48μm,18.0s
TRD Trivandrum 53.94 106 *e*P **P 21 48 29.3 +0.9**
TRD IAmb IAmb 21 48 30.2
comp=Z,118nm,0.8s
GTK Tadong 54.12 79 *e*P **P 21 48 27.2 -2.6**
GTK IAmb IAmb 21 48 31.8
comp=Z,168nm,1.4s
BWNR Bhubaneshwar 54.92 88 *ex* P 21 48 27.0 -8.5
KULLO Kullorsuaq 55.15 341⇑ *i*P **P 21 48 36.3 -0.1**
KULLO Kullorsuaq 55.15 341⇑ *i*P **P 21 48 36.3 -0.1**
LSA Lhasa 55.23 75 P **P 21 48 38.8 +0.6**
LSA S **S 21 56 14.9 -5.8**
LSA pmax pmax
comp=Z,390nm,0.8s
LSA LR LR
comp=Z,8μm,25.6s
LSA LR LR
comp=Z,15μm,25.3s
LSA LR LR
comp=Z,30μm,25.3s
LSA Lhasa 55.23 75 *e*P **P 21 48 38.7 +0.6**
comp=Z,345nm,1.6s
LSA LR LR
comp=Z,1μm,18.0s
LSA Lhasa 55.23 75 *i* P **P 21 48 38.8 +0.6**
SNR=70
LSA Lhasa 55.23 75 *e*P **P 21 48 38.7 +0.6**
LSA pmax pmax
comp=Z,345nm,1.6s
LSA MLR MLR
comp=Z,1μm,18.0s
MOY Mondy 55.49 47 *e*P **P 21 48 40.7 +1.3**
MOY pmax pmax
comp=Z,438nm,1.7s
ASCN Ascension 56.34 229 PFAKE 21 49 00.0 +14
ASCN LR LR
comp=Z,11μm,19.0s
TAWA Tawang 56.65 77 *e*P **P 21 48 47.1 -1.2**
TAWA IAmb IAmb 21 48 49.9
comp=Z,33μm,5.5s
TLY Talaya 57.09 47 *e*P **P 21 48 52.4 +1.7**
comp=Z,334nm,1.2s
TLY LR LR
comp=Z,4μm,18.0s
TLY Talaya 57.09 47*c* *i*P **P 21 48 51.8 +1.2**
TLY *e* 21 50 59.0
TLY *e*PPP PPP 21 52 18.5
TLY *e*S **S 21 56 45.4 +1.4**
TLY *e* 21 58 39.8
TLY *e*SS **SS 22 00 37.9 +5.5**
TLY pmax pmax
comp=Z,1μm,1.5s
TLY MLR MLR
comp=Z,14μm,21.0s
TLY Talaya 57.09 47 P **P 21 48 52.5 +1.9**
SNR=229
TLY P **P 21 48 52.5 +1.9**
SNR=229
ABPO Ambohimpanom 57.14 155 *e*P **P 21 48 52.8 +1.4**
comp=Z,35nm,0.9s
ABPO LR LR
comp=Z,6μm,21.0s
ABPO Ambohimpanom 57.14 155 *i* P **P 21 48 52.9 +1.5**
ZAK Zakamensk 57.22 48 *e*P **P 21 48 52.5 +0.8**
ZAK pmax pmax
comp=Z,278nm,1.3s
IRK Irkutsk 57.31 46 *e*P P 21 48 58.6 +6.4
IRK pmax pmax
comp=Z,750nm,1.9s
SHL Shillong 57.53 80 *e*P **P 21 48 53.5 -0.8**
comp=Z,385nm,1.5s
SHL Shillong 57.53 80 *e*P **P 21 48 53.5 -0.8**
SHL pmax pmax
comp=Z,385nm,1.5s
SHL Shillong 57.53 80 *e*P **P 21 48 53.1 -1.2**
SHL IAmb IAmb 21 48 55.0
comp=Z,174nm,1.2s
PALK Pallekele 57.65 105 P **P 21 48 54.6 -0.5**
comp=Z,140nm,1.2s,baz=296,slow=7.1,SNR=18
PALK Pallekele 57.65 105 *e*P **P 21 48 55.7 +0.6**
comp=Z,303nm,1.4s
PALK LR LR
comp=Z,7μm,21.0s
PALK Pallekele 57.65 105 *i* P **P 21 48 55.5 +0.4**
SNR=18
PALK Pallekele 57.65 105 *e*P **P 21 48 55.7 +0.6**
PALK pmax pmax
comp=Z,303nm,1.4s
PALK MLR MLR
comp=Z,7μm,21.0s
PALK Pallekele 57.65 105 P **P 21 48 55.0 -0.1**
TULEG Thule 57.76 344 *e*P **P 21 48 53.5 -1.4**
comp=Z,172nm,1.0s
TULEG LR LR
comp=Z,4μm,19.0s
TEZP TEZPUR 57.82 78 *e*P **P 21 48 54.0 -2.1**
TEZP IAmb IAmb 21 48 56.6
comp=Z,133nm,1.3s
SHEL Horse Pasture 58.11 216 PFAKE 21 49 10.0 +12
SHEL LR LR
comp=Z,6μm,21.0s
SHEL Horse Pasture 58.11 216 *i* P **P 21 49 00.9 +2.8**
BELO BELONIA 58.20 82 *e*P **P 21 48 59.2 +0.4**
ZIRO ZIRO 58.28 77 *e*P **P 21 48 59.8 +0.2**
GTA Gaotai 58.29 61 ⇑P **P 21 49 00.1 +0.7**
GTA pP pP 21 49 08.0 +1.3
GTA sP sP 21 49 11.0 +1.5
GTA S **S 21 57 00.4 +0.1**
GTA SS **SS 22 00 52.3 +0.3**
GTA pmax pmax
comp=Z,160nm,1.2s
GTA pmax pmax
comp=Z,820nm,6.9s
GTA LR LR
comp=Z,3μm,17.9s
GTA LR LR
comp=Z,3μm,18.5s
GTA LR LR
comp=Z,7μm,18.9s
BRDH Bariadhala 58.62 83 P **P 21 49 02.1 +0.3**
comp=Z,84nm,0.4s,baz=268,slow=3.9,SNR=12
JORH JORHAT 58.94 77 *e*P **P 21 49 02.5 -1.4**
LBTB Lobatse 59.11 180 *e*P **P 21 49 05.4 +0.3**
comp=Z,224nm,1.0s
LBTB Lobatse 59.11 180 *e*P **P 21 49 05.4 +0.3**
LBTB pmax pmax
comp=Z,224nm,1.0s
KOHI KOHIMA 59.27 78 *ex* **P 21 49 04.9 -1.5**
MOKO MOKOCHONG 59.33 77 *e*P **P 21 49 06.9 0.0**
SONA0 Songino Array 59.94 50 *e*P **P 21 49 11.6 +0.9**
SONA0 ⇑*e* 22 18 46.5
SONM Songino Array 59.94 50 P **P 21 49 11.6 +0.9**
comp=Z,79nm,0.7s,baz=279,slow=7.6,SNR=456
SONM LR LR 22 18 22.9
comp=Z,6μm,20.5s,baz=292,slow=39
SONM PKP2bc 22 18 46.5
comp=Z,0.8nm,0.8s,baz=169,slow=1.5,SNR=4.1
DRLN Deer Lake 60.39 312 *e*P **P 21 49 13.7 0.0**
comp=Z,174nm,1.0s
DRLN LR LR

comp=Z,5μm,20.0s
RER Riviere de l'E 62.45 148 *e*P **P 21 49 29.2 +1.4**
comp=Z,89nm,0.8s
MRIV Mauritius Mete 62.50 146 *e*P **P 21 49 29.9 +1.8**
comp=Z,38nm,1.1s
MRIV LR LR
comp=Z,900nm,19.0s
LZH Lanzhou 62.50 64 ⇑P **P 21 49 29.4 +1.1**
LZH pP sP 21 49 40.3 +1.8
LZH sP pwP 21 49 44.3 +6.5
LZH PP **PP 21 51 50.8 +5.1**
LZH S **S 21 57 52.4 -2.0**
LZH sS sS 21 58 09.4 +2.5
LZH SS **SS 22 01 58.4 +0.2**
LZH pmax pmax
comp=Z,280nm,1.3s
LZH pmax pmax
comp=Z,940nm,6.1s
LZH LR LR
comp=Z,5μm,17.3s
LZH LR LR
comp=Z,6μm,17.4s
LZH LR LR
comp=Z,8μm,18.2s
BOSA Boshof 62.70 180 P **P 21 49 29.1 -0.2**
comp=Z,179nm,0.9s,baz=356,slow=6.7,SNR=81
BOSA LR LR 22 19 57.9
comp=Z,14μm,18.1s,baz=356,slow=39
BOSA Boshof 62.70 180 *e*P **P 21 49 29.2 -0.2**
comp=Z,274nm,1.1s
CIT Chita 62.81 44 *e*P **P 21 49 30.1 +0.2**
CIT *e* 21 49 38.6
CIT *e* 21 50 06.6
CIT pmax pmax
comp=Z,235nm,1.2s
SCHQ Schefferville 63.76 320 P **P 21 49 35.0 -1.2**
comp=Z,88nm,0.9s,baz=68,slow=6.1,SNR=46
SCHQ Schefferville 63.76 320 *e*P **P 21 49 36.0 -0.1**
comp=Z,131nm,1.0s
SCHQ LR LR
comp=Z,3μm,20.0s
GBN Guysborough 64.35 309 *e*P **P 21 49 40.4 +0.3**
comp=Z,372nm,1.4s
RES Resolute Bay 64.38 345 *e*P **P 21 49 40.0 +0.1**
comp=Z,64nm,1.1s
RES LR LR
comp=Z,4μm,19.0s
RES Resolute Bay 64.38 345 *e*P **P 21 49 40.0 +0.1**
RES pmax pmax
comp=Z,64nm,1.1s
RES MLR MLR
comp=Z,4μm,19.0s
CD2 Chengdu 64.63 69⇑*i*P **P 21 49 43.1 +0.8**
CD2 sP sP 21 49 59.5 +7.0
CD2 PP **PP 21 52 04.4 0.0**
CD2 S **S 21 58 20.8 -0.1**
CD2 ScS **SKSac 21 59 33.8 -1.6**
CD2 SS **SS 22 02 34.8 +3.4**
CD2 LR LR
comp=Z,12μm,34.7s
CD2 LR LR
comp=Z,8μm,31.4s
CD2 LR LR
comp=Z,9μm,31.4s
PBA Port Blair 65.03 93 PFAKE 21 50 00.0 +15
PBA LR LR
comp=Z,5μm,20.0s
BTO Baotou 65.07 57 *e*P **P 21 49 44.3 -0.8**
BTO S S 21 58 17.0 -9.1
HHC Hu-ho-hao-te 66.03 56 *e*P **P 21 49 52.4 +1.1**
HHC pP sP 21 50 03.8 +2.3
HHC sP pwP 21 50 11.3 +10
HHC S **S 21 58 37.1 -0.7**
HHC sS sS 21 59 00.9 +11
HHC SS **SS 22 02 49.5 -3.3**
HHC pmax pmax
comp=Z,430nm,1.2s
HHC pmax pmax
comp=Z,1μm,4.6s
HHC LR LR
comp=Z,2μm,16.5s
HHC LR LR
comp=Z,7μm,21.0s
HHC LR LR
comp=Z,8μm,19.9s
LMN Caledonia Moun 66.26 310 *e*P **P 21 49 52.5 -0.1**
comp=Z,152nm,1.0s
LMN LR LR
comp=Z,5μm,18.0s
BATG Bathurst New B 66.43 312 *e*P **P 21 49 54.4 +0.8**
comp=Z,116nm,1.0s
BATG LR LR
comp=Z,4μm,20.0s
CHTO Chiang Mai 66.46 83 *e*P **P 21 49 54.0 -0.2**
comp=Z,91nm,1.0s
CHTO Chiang Mai 66.46 83 P **P 21 49 54.4 +0.1**
SNR=43
CHTO P **P 21 49 54.4 +0.1**
SNR=43
CMMT Chiang Mai 66.46 83 P **P 21 49 53.9 -0.4**
comp=Z,50nm,1.4s,comp=Z,615nm
KMI Kunming 66.48 75 P **P 21 49 54.6 +0.1**
KMI pP sP 21 50 07.8 +3.1
KMI sP pP 21 50 12.8 +11
KMI PP **PP 21 52 23.8 +2.9**
KMI S **S 21 58 41.8 -2.1**
KMI pmax pmax
comp=Z,83nm,1.4s
KMI pmax pmax
comp=Z,490nm,4.3s
KMI LR LR
comp=Z,1μm,26.4s
KMI LR LR
comp=Z,2μm,25.2s
KMI LR LR
comp=Z,4μm,26.4s
KMI Kunming 66.48 75 *e*P **P 21 49 55.0 +0.5**
comp=Z,220nm,1.5s
KMI LR LR
comp=Z,700nm,20.0s
YAK Yakutsk 66.50 30 *e*P **P 21 49 53.1 -0.6**
comp=Z,161nm,0.9s
YAK LR LR
comp=Z,5μm,18.0s
YAK Yakutsk 66.50 30*c i*P **P 21 49 53.1 -0.6**
YAK *e*S **S 21 58 36.9 -5.7**
SUR Sutherland 66.58 184 *e*P **P 21 49 54.9 +0.1**
comp=Z,62nm,0.9s
SUR LR LR
comp=Z,16μm,20.0s
SUR Sutherland 66.58 184 P **P 21 49 54.9 +0.1**
CM31 Chiang Mai Arr 66.64 83 *e*P **P 21 49 55.9 +0.5**
comp=Z,250nm,1.5s
CM31 *e*S **S 21 58 41.5 -4.0**
CM31 ⇑*e* 22 18 29.8
CM31 Chiang Mai Arr 66.64 83 P **P 21 49 55.7 +0.4**
SNR=34
CMAR Chiang Mai Arr 66.64 83 P **P 21 49 55.2 -0.1**
comp=Z,42nm,1.1s,baz=300,slow=7.2,SNR=120
CMAR S **S 21 58 41.5 -4.0**
comp=Z,0.9nm,0.3s,baz=294,slow=9.7,SNR=3.7
CMAR PKP2ab 22 18 29.8
comp=Z,0.5nm,0.3s,baz=132,slow=1.3,SNR=3.6
CMAR Chiang Mai Arr 66.64 83 *i* P **P 21 49 55.2 -0.1**
CMAR pmax pmax
comp=Z,29nm,1.0s
XAN Xi'an 67.14 64 P **P 21 49 58.8 +0.4**
XAN pP pwP 21 50 08.9 +0.9
XAN sP sP 21 50 13.4 +4.8
XAN PP **PP 21 52 27.9 +1.7**
XAN ScP 21 54 26.1
XAN S **S 21 58 49.9 -1.5**
XAN ScS **SKSac 21 59 48.4 -6.0**
XAN pmax pmax
comp=Z,170nm,1.7s
XAN pmax pmax
comp=Z,710nm,4.6s
XAN LR LR
comp=Z,5μm,19.6s
XAN LR LR
comp=Z,2μm,22.4s
XAN LR LR
comp=Z,3μm,18.1s
XAN Xi'an 67.14 64 *e*P **P 21 49 58.9 +0.5**
comp=Z,634nm,1.8s
XAN LR LR
comp=Z,4μm,21.0s
XAN Xi'an 67.14 64 *e*P **P 21 49 58.9 +0.5**
XAN pmax pmax
XAN comp=Z,633nm,1.8s MLR MLR
comp=Z,4μm,21.0s
LAMP Lampang 67.17 83 P **P 21 49 59.0 +0.3**
comp=Z,215μm,1.5s
HIA Hailar 67.53 45 *e*P **P 21 50 01.8 +1.2**
comp=Z,582nm,1.4s
HIA LR LR
comp=Z,5μm,20.0s
HIA Hailar 67.53 45 *e*P **P 21 50 01.8 +1.2**
HIA pmax pmax
comp=Z,582nm,1.4s
HIA MLR MLR
comp=Z,5μm,20.0s
UMPA Umpang Tak 67.71 85 P **P 21 50 03.2 +1.0**
comp=Z,138μm,1.1s
GGN Saint George 67.87 310 *e*P **P 21 50 02.8 +0.1**
comp=Z,187nm,1.3s
GGN LR LR
comp=Z,4μm,18.0s
PQI Presque Isle 67.90 312 *e*P **P 21 50 03.3 +0.4**
comp=Z,325nm,1.7s
PQI LR LR
comp=Z,4μm,21.0s
NANT Nan 67.91 82 P **P 21 50 03.4 0.0**
comp=Z,103μm,0.9s,comp=Z,944μm
TIY Taiyuan 68.02 59 *e*P **P 21 50 05.3 +1.3**
TIY S **S 21 59 02.1 +0.2**
TIY sS **sS 21 59 20.4 +6.1**
TIY ScS **SKiKP 21 59 58.9 +0.8**
TIY pmax pmax
comp=Z,200nm,1.1s
TIY pmax pmax
comp=Z,640nm,4.5s
TIY LR LR
comp=Z,2μm,17.3s
TIY LR LR
comp=Z,2μm,15.6s
TIY LR LR
comp=Z,6μm,22.7s
UTTA Uttaradit 68.32 83 P **P 21 50 05.8 -0.2**
comp=Z,87μm,1.4s,comp=Z,922μm
EMMW East Machias 68.45 310 *e*P **P 21 50 07.2 +0.9**
comp=Z,114nm,0.9s
EMMW LR LR
comp=Z,4μm,20.0s
SRDT SRDT 68.88 87 P **P 21 50 09.8 +0.3**
comp=Z,57nm,1.4s,comp=Z,862nm
GYA Guiyang 68.95 72⇑*i*P **P 21 50 10.1 +0.1**
GYA pP sP 21 50 20.6 +0.4
GYA sP pP 21 50 26.3 +8.9
GYA PP **PP 21 52 42.8 +0.6**
GYA ScP 21 54 35.6
GYA S **S 21 59 10.4 -2.9**
GYA pmax pmax
comp=Z,180nm,1.1s
GYA pmax pmax
comp=Z,370nm,6.5s
GYA LR LR
comp=Z,3μm,26.9s
GYA LR LR
comp=Z,2μm,26.2s
GYA LR LR
comp=Z,4μm,27.5s
SLVN Son La 69.25 78 *e*P **P 21 50 11.2 -0.7**
comp=Z,182nm,1.5s
PBKT Sadao Pong 69.26 84 P **P 21 50 11.6 -0.2**
comp=Z,50nm,1.4s,comp=Z,601nm
ENH Enshi 69.31 67 *e*P **P 21 50 12.3 +0.2**
comp=Z,162nm,0.8s
ENH LR LR
comp=Z,2μm,20.0s
PKME Peaks-Kenny Pk 69.34 311 *e*P **P 21 50 12.7 +0.8**
comp=Z,126nm,1.4s
PKME LR LR
comp=Z,4μm,20.0s
PKME Peaks-Kenny Pk 69.34 311 P **P 21 50 12.7 +0.8**
baz=62,SNR=14
ZEA Zeya 69.51 38 *e*P **P 21 50 13.6 +0.8**
ZEA *e* 21 52 49.0
ZEA *e*PPP PPP 21 54 28.0
ZEA *e*S **S 21 59 21.0 +2.2**
ZEA *e* 22 00 14.0
ZEA pmax pmax
comp=E,86nm,1.2s
ZEA pmax pmax
comp=Z,170nm,1.2s
ZEA pmax pmax
comp=E,500nm,6.0s
ZEA pmax pmax
comp=Z,1μm,6.0s
ZEA pmax pmax
comp=E,400nm,7.0s
ZEA pmax pmax
comp=Z,500nm,7.0s
ZEA smax smax
comp=N,1μm,14.0s
ZEA smax smax
comp=E,1μm,14.0s
BJT Baijiatuau 69.54 55 *e*P **P 21 50 14.1 +0.8**
comp=E,366nm,1.4s
BJT LR LR
comp=Z,10μm,20.0s
BJT Baijiatuau 69.54 55 *e*P **P 21 50 14.1 +0.8**
BJT pmax pmax
comp=Z,366nm,1.4s
BJT MLR MLR
comp=Z,10μm,20.0s
WVL Waterville 69.90 311 *e*P **P 21 50 15.8 +0.4**
comp=Z,31nm,0.9s
WVL LR LR
comp=Z,3μm,19.0s
PHET Kaeng Krachan 70.06 88 P **P 21 50 16.9 +0.1**
comp=Z,144μm,1.2s
RCBR Riachuelo 70.07 248 *e*P **P 21 50 17.6 +0.7**
comp=Z,80nm,1.0s
RCBR LR LR
comp=Z,9μm,20.0s
RCBR Riachuelo 70.07 248 *e*P **P 21 50 17.6 +0.7**
RCBR pmax pmax
comp=Z,80nm,1.0s
RCBR MLR MLR
comp=Z,9μm,20.0s
RCBR Riachuelo 70.07 248 *e*P **P 21 50 18.1 +1.2**
CHGQ Chibougamau 70.09 317 P **P 21 50 16.9 +0.4**
baz=60,SNR=36
NONG Nongkai 70.28 81 P **P 21 50 17.5 -0.6**
comp=Z,1.9nm,1.4s
LATQ La Tuque 70.43 314 P **P 21 50 19.1 +0.6**
baz=60,SNR=11
CHAI Chaiyaphum 70.44 84 P **P 21 50 18.8 -0.3**
comp=Z,198μm,1.2s
KHON Khomkaen 70.90 83 P **P 21 50 21.7 -0.2**
comp=Z,221μm,0.9s
NBPA Parau_RN 70.95 249 *e*P **P 21 50 23.5 +1.3**
MOQ Mont Orford 71.14 312 *e*P **P 21 50 23.6 +0.6**
LBNH Lisbon 71.48 311 *e*P **P 21 50 26.2 +1.1**
comp=Z,82nm,1.0s
LBNH LR LR
comp=Z,4μm,20.0s
LBNH Lisbon 71.48 311 *e*P **P 21 50 26.2 +1.1**
LBNH pmax pmax
comp=Z,82nm,1.0s
LBNH MLR MLR
comp=Z,4μm,20.0s
LBNH Lisbon 71.48 311 P **P 21 50 26.1 +1.1**
baz=60,SNR=19
SKNT Sakolnakorn 71.52 82 P **P 21 50 25.4 -0.3**
comp=Z,147nm,1.3s
FFD Franklin Falls 71.69 310 PFAKE 21 50 40.0 +14
FFD LR LR
comp=Z,5μm,19.0s
NBMO Morrinhos-CE 71.73 253 *e*P **P 21 50 27.6 +0.7**
VT1 Waterbury 71.94 312 PFAKE 21 50 40.0 +12
VT1 LR LR
comp=Z,3μm,20.0s
PANO Nakornpanom 71.94 81 P **P 21 50 28.1 -0.1**
comp=Z,3.0nm,1.4s
BCX Boston College 71.96 309 PFAKE 21 50 40.0 +12
BCX LR LR
comp=Z,4μm,19.0s
HNH Hanover 71.97 311 *e*P **P 21 50 29.4 +1.5**
comp=Z,106nm,1.0s
HNH LR LR
comp=Z,4μm,19.0s
MATQ Matagami 71.98 318 P **P 21 50 28.2 +0.3**
baz=58,SNR=39
LSQQ Lebel-sur-Quev 71.99 317 P **P 21 50 28.5 +0.6**
baz=58
M65A Busby, Falmout 72.01 308 P **P 21 50 28.8 +0.6**
baz=60
LHMI Lhok Sumawe 72.03 96 PFAKE 21 50 40.0 +11
LHMI LR LR
comp=Z,5μm,22.0s
WES Weston 72.03 309 PFAKE 21 50 40.0 +12
WES LR LR
comp=Z,5μm,19.0s
TIA Tai'an 72.04 58 P **P 21 50 28.9 +0.4**
TIA S **S 21 59 47.8 -1.0**
TIA pmax pmax
comp=Z,120nm,0.9s
TIA LR LR
comp=Z,740nm,18.0s
TIA LR LR
comp=Z,1μm,17.5s
TRQ Mont Tremblant 72.07 314 *e*P **P 21 50 29.1 +0.5**
HRV Adam Dziewonsk 72.12 310 PFAKE 21 50 40.0 +11
HRV LR LR
comp=Z,5μm,20.0s
HRV Adam Dziewonsk 72.12 310 P **P 21 50 29.6 +0.7**
baz=60
MLSI Meulaboh, Aceh 72.12 97 P **P 21 50 28.0 -1.3**
comp=Z,287nm,1.1s,comp=Z,4μm
FRNY Flat Rock 72.20 312 *e*P **P 21 50 29.8 +0.5**
comp=Z,208nm,1.6s
FRNY LR LR
comp=Z,4μm,20.0s
CHBT CHBT 72.37 86 P **P 21 50 33.4 +2.6**
comp=Z,38nm,0.5s,comp=Z,507nm
BRYW Bryant College 72.41 309 *e*P **P 21 50 32.0 +1.3**
comp=Z,129nm,1.2s
BRYW LR LR
comp=Z,4μm,19.0s
BBSR BB Station 72.47 297 *e*P **P 21 50 32.7 +1.6**
comp=Z,253nm,1.7s
QUA2 Belchertown 72.74 310 PFAKE 21 50 40.0 +7.4
QUA2 LR LR
comp=Z,5μm,20.0s
VLDQ Val d'Or 72.76 317 *e*P **P 21 50 33.8 +1.2**
comp=Z,104nm,1.0s
VLDQ LR LR
comp=Z,6μm,19.0s
D54A Lac Fusel, La 72.81 316 P **P 21 50 33.4 +0.4**
baz=58,SNR=34
TRTT Trang 72.84 92 P **P 21 50 33.8 +0.2**
comp=Z,84nm,1.1s,comp=Z,2μm
WHN Wuhan 72.84 65 ⇑P **P 21 50 34.0 +0.6**
WHN S **S 21 59 57.4 -0.8**
WHN pmax pmax
comp=Z,950nm,1.7s
WHN LR LR
comp=Z,4μm,15.5s
WHN LR LR
comp=Z,3μm,15.1s
WHN LR LR
comp=Z,7μm,17.3s
LONY Lake Ozonia 72.92 313 *e*P **P 21 50 34.3 +0.7**
comp=Z,86nm,0.9s
LONY LR LR
comp=Z,3μm,20.0s
LONY Lake Ozonia 72.92 313 P **P 21 50 34.3 +0.7**
baz=58,SNR=43
ACCN Adirondack Com 73.00 311 *e*P **P 21 50 35.2 +1.1**
comp=Z,75nm,0.9s
ACCN LR LR
comp=Z,3μm,21.0s
NCB Newcomb 73.04 312 *e*P **P 21 50 35.6 +1.2**
comp=Z,73nm,1.4s
NCB LR LR
comp=Z,3μm,20.0s
ORIO Orleans, Innes 73.04 314 P **P 21 50 35.0 +0.7**
baz=58,SNR=31
F55A Otter Lake 73.34 314 P **P 21 50 36.6 +0.5**
baz=58,SNR=18
TRY Troy 73.34 311 *e*P **P 21 50 37.9 +1.7**
comp=Z,90nm,1.3s
TRY LR LR
comp=Z,5μm,18.0s
D53A Lac Vacive, Po 73.45 316 *e*P **P 21 50 37.7 +0.9**
comp=Z,139nm,0.9s
D53A LR LR
comp=Z,6μm,20.0s
D53A Lac Vacive, Po 73.45 316 P **P 21 50 37.5 +0.7**
baz=57,SNR=70
E54A Lac Daplat, Po 73.50 315 P **P 21 50 37.6 +0.5**
baz=57,SNR=31
SNY Shenyang 73.52 50 ⇑P **P 21 50 37.3 +0.1**
SNY S **S 21 59 58.3 -7.1**
SNY SS **SS 22 04 55.9 +8.3**
SNY pmax pmax
comp=Z,160nm,1.3s
SNY pmax pmax
comp=Z,570nm,3.5s
SNY LR LR
comp=Z,4μm,23.0s
SNY LR LR
comp=Z,2μm,17.7s
SNY LR LR
comp=Z,9μm,22.4s
YLE Yale 73.61 309 *e*P **P 21 50 38.8 +1.0**
comp=Z,127nm,1.1s
YLE LR LR
comp=Z,5μm,19.0s
CN2 Changchun 73.65 48 *e*P **P 21 50 38.3 +0.3**
CN2 *es*P PcP 21 50 56.6 +2.9
CN2 *e*S **SKiKP 22 00 02.8 -3.3**
CN2 *e*SS **SS 22 04 47.9 -1.7**
CN2 pmax pmax
comp=Z,180nm,1.2s
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=Z,1μm,23.0s
CN2 LR LR
comp=Z,1μm,23.0s
CN2 LR LR
comp=Z,860nm,25.0s
KCSI Kotacane, Aceh 73.66 97 P **P 21 50 36.8 -1.7**
comp=Z,115nm,1.1s,comp=Z,2μm
KSCT Kent School, K 73.75 310 PFAKE 21 50 50.0 +11
KSCT LR LR
comp=Z,3μm,20.0s
DL2 Dalian 73.76 54⇑*i*P **P 21 50 38.8 +0.1**
DL2 S **SKiKP 22 00 05.9 -0.5**
DL2 SS **SS 22 04 53.3 +1.8**
DL2 pmax pmax
comp=Z,140nm,1.3s
DL2 pmax pmax
comp=Z,420nm,5.5s
DL2 LR LR
comp=Z,4μm,20.0s
DL2 LR LR
comp=Z,3μm,18.0s
DL2 LR LR
comp=Z,4μm,19.8s
BILL Bilibino 73.77 14 *e*P **P 21 50 38.0 -0.2**
comp=Z,209nm,1.5s
BILL LR LR
comp=Z,6μm,18.0s
BILL Bilibino 73.77 14*c i*P **P 21 50 38.0 -0.2**
BILL *i* 21 53 18.2
BILL *i* S **SKiKP 22 00 03.8 -1.9**
BILL *e*SS **SS 22 04 51.8 +1.6**
BILL pmax pmax
comp=Z,88nm,1.4s
BILL MLR MLR
comp=Z,7μm,23.0s
E53A Dumoine, Ponti 73.81 315 P **P 21 50 39.5 +0.6**
baz=57,SNR=42
G55A Calabogie 73.87 314 P **P 21 50 40.0 +0.8**
baz=57,SNR=16
D52A ZEK Kipawa Sen 73.92 316 P **P 21 50 39.7 +0.2**
baz=57,SNR=32
D52A S **S 22 00 10.5 +0.7**
baz=57
H56A Elgin 73.95 313 P **P 21 50 40.4 +0.7**
baz=58,SNR=14
PEMO Pembroke 73.95 315 P **P 21 50 40.1 +0.4**
baz=57,SNR=38
SKLT Songkhla 73.97 92 P **P 21 50 40.6 +0.3**
comp=Z,43nm,1.4s

M61A	**Granite Spring**	**74.15 309**	P	**P**		**21 50 41.2 +0.3**
	baz=58,SNR=6.1					
PLVO	**Plevna**	**74.19 314**	*e*P	**P**		**21 50 42.3 +1.1**
	comp=Z,252nm,1.4s					
PLVO			LR	LR		
	comp=Z,4μm,20.0s					
PLVO	**Plevna**	**74.19 314**	P	**P**		**21 50 42.2 +1.1**
	baz=57,SNR=34					
ALGO	**Algonquin Park**	**74.27 315**	P	**P**		**21 50 42.0 +0.5**
	baz=57,SNR=34					
KLR	**Kul'dur**	**74.31 41**	P	**P**		**21 50 41.9 +0.2**
	comp=Z,105nm,1.0s,baz=304,slow=6.1,SNR=182					
TSI	**Tuntungan**	**74.33 97**	P	**P**		**21 50 41.5 -0.8**
FCC	**Fort Churchill**	**74.36 332**	*e*P	**P**		**21 50 41.8 0.0**
	comp=Z,64nm,1.0s					
FCC			LR	LR		
	comp=Z,6μm,20.0s					
FCC	**Fort Churchill**	**74.36 332**	*e*P	**P**		**21 50 41.8 0.0**
FCC			pmax	pmax		
	comp=Z,64nm,1.0s					
FCC			MLR	MLR		
	comp=Z,6μm,20.0s					
PAL	**Palisades**	**74.40 309**	*e*P	**P**		**21 50 43.3 +0.9**
	comp=Z,71nm,1.3s					
PAL			LR	LR		
	comp=Z,4μm,19.0s					
PAL	**Palisades**	**74.40 309**	*e*P	**P**		**21 50 43.3 +0.9**
PAL			pmax	pmax		
	comp=Z,71nm,1.3s					
PAL			MLR	MLR		
	comp=Z,4μm,19.0s					
PAL	**Palisades**	**74.40 309**	P	**P**		**21 50 42.7 +0.4**
	baz=58,SNR=5.4					
D51A	**Lot 18 Range I**	**74.40 317**	P	**P**		**21 50 43.0 +0.7**
	baz=56,SNR=33					
E52A	**Mattawa**	**74.44 316**	P	**P**		**21 50 43.0 +0.5**
	baz=56,SNR=46					
H55A	**Tweed**	**74.53 314**	P	**P**		**21 50 43.8 +0.8**
	baz=57,SNR=22					
BANO	**Bancroft**	**74.71 314**	P	**P**		**21 50 44.9 +0.8**
	baz=57,SNR=18					
PECO	**Prince Edward**	**74.75 313**	*e*P	**P**		**21 50 45.7 +1.4**
	comp=Z,90nm,1.1s					
PECO			LR	LR		
	comp=Z,3μm,20.0s					
PECO	**Prince Edward**	**74.75 313**	P	**P**		**21 50 45.3 +0.9**
	baz=57,SNR=13					
GSI	**Gunungsitoli**	**74.77 99**	*e*P	**P**		**21 50 45.8 +0.9**
	comp=Z,449nm,1.8s					
GSI			LR	LR		
	comp=Z,5μm,18.0s					
GSI	**Gunungsitoli**	**74.77 99**	P	**P**		**21 50 45.2 +0.3**
E51A	**G1948 Merrick**	**74.78 316**	P	**P**		**21 50 45.0 +0.5**
	baz=56,SNR=33					
DELO	**Deloro Mine**	**74.80 314**	*e*P	**P**		**21 50 45.5 +0.8**
	comp=Z,145nm,1.3s					
DELO			LR	LR		
	comp=Z,4μm,20.0s					
DELO	**Deloro Mine**	**74.80 314**	P	**P**		**21 50 45.5 +0.8**
	baz=57,SNR=25					
ODNJ	**Ogdensburg**	**74.81 309**	PFAKE			21 51 00.0 +15
ODNJ			LR	LR		
	comp=Z,3μm,18.0s					
BRNJ	**Basking Ridge**	**74.99 309**	PFAKE			21 51 00.0 +14
BRNJ			LR	LR		
	comp=Z,4μm,20.0s					
I55A	**Frankford**	**75.01 313**	P	**P**		**21 50 46.6 +0.8**
	baz=56,SNR=20					
PSI	**Prapat**	**75.02 97**	P	**P**		**21 50 46.0 -0.5**
	comp=Z,80nm,0.9s,baz=317,slow=6.0,SNR=30					
PSI			S	**S**		**22 00 19.4 -3.9**
	comp=Z,10nm,0.9s,baz=220,slow=22,SNR=8.4					
PSI	**Prapat**	**75.02 97**	*e*P	**P**		**21 50 46.3 -0.2**
	comp=Z,173nm,1.1s					
PSI			LR	LR		
	comp=Z,4μm,21.0s					
PSI	**Prapat**	**75.02 97**	P	**P**		**21 50 46.0 -0.5**
KULM	**Kulim**	**75.04 94**	*e*P	**P**		**21 50 44.6 -1.9**
	comp=Z,131nm,1.1s					
KULM			LR	LR		
	comp=Z,2μm,19.0s					
KULM	**Kulim**	**75.04 94**	P	**P**		**21 50 47.0 +0.5**
G53A	**Haliburton**	**75.06 315**	P	**P**		**21 50 47.0 +0.8**
	baz=56,SNR=17					
BINY	**Binghamton**	**75.07 311**	*e*P	**P**		**21 50 47.6 +1.3**
	comp=Z,158nm,1.2s					
BINY	**Binghamton**	**75.07 311**	P	**P**		**21 50 46.9 +0.6**
	baz=57,SNR=26					
F52A	**Sundridge**	**75.10 316**	P	**P**		**21 50 47.1 +0.8**
	baz=56,SNR=41					
QIZ	**Qiongzhong**	**75.21 77**	P	**P**		**21 50 48.3 +0.9**
QIZ			sP	**PcP**		**21 51 02.1 +1.2**
QIZ			PP	**PP**		**21 53 39.5 +3.6**
QIZ			S	**S**		**22 00 25.3 +0.1**
QIZ			ScS	**ScS**		**22 00 59.0 0.0**
QIZ			SS	**SS**		**22 05 17.3 +2.6**
QIZ			pmax	pmax		
	comp=Z,110nm,1.2s					
QIZ			pmax	pmax		
	comp=Z,210nm,4.3s					
QIZ			LR	LR		
	comp=Z,2μm,27.0s					
QIZ			LR	LR		
	comp=Z,1μm,20.1s					
QIZ			LR	LR		
	comp=Z,2μm,25.1s					
QIZ	**Qiongzhong**	**75.21 77**	*e*P	**P**		**21 50 48.1 +0.7**
	comp=Z,213nm,1.3s					
KSPA	**Keystone Colle**	**75.29 310**	*e*P	**P**		**21 50 48.6 +1.0**
	comp=Z,160nm,1.2s					
KSPA			LR	LR		
	comp=Z,4μm,19.0s					
O61A	**Allentown**	**75.30 309**	P	**P**		**21 50 48.2 +0.6**
	baz=57					
BUKO	**Buck Lake**	**75.34 315**	P	**P**		**21 50 48.2 +0.5**
	baz=56,SNR=19					
F51A	**Arnstein**	**75.36 316**	P	**P**		**21 50 48.7 +0.8**
	baz=56,SNR=30					
NJ2	**Nanjing**	**75.39 61⇑**	*i*P	**P**		**21 50 48.4 +0.2**
NJ2			pP	**pP**		**21 50 56.1 +0.4**
NJ2			sP	**PcP**		**21 51 02.5 +1.1**
NJ2			S	**S**		**22 00 24.8 -1.9**
NJ2			SS	**SS**		**22 05 19.3 +2.7**
NJ2			pmax	pmax		
	comp=Z,110nm,1.2s					
NJ2			pmax	pmax		
	comp=Z,560nm,3.5s					
NJ2			LR	LR		
	comp=Z,3μm,23.9s					
NJ2			LR	LR		
	comp=Z,3μm,21.7s					
NJ2			LR	LR		
	comp=Z,3μm,21.7s					
D49A	**Beulah Townshi**	**75.42 318**	P	**P**		**21 50 48.5 +0.3**
	baz=55,SNR=19					
E50A	**Wahnapitae**	**75.55 317**	P	**P**		**21 50 49.8 +0.8**
	baz=55,SNR=32					
LUPA	**Lehigh Univers**	**75.56 309**	*e*P	**P**		**21 50 49.8 +0.8**
	comp=Z,7.6nm,1.4s					
LUPA			LR	LR		
	comp=Z,300nm,20.0s					
SADO	**Sadowa**	**75.57 315**	*e*P	**P**		**21 50 49.8 +0.7**
	comp=Z,115nm,1.0s					
SADO			LR	LR		
	comp=Z,4μm,21.0s					
WLVO	**Wesleyville**	**75.60 314**	P	**P**		**21 50 49.9 +0.7**
	baz=56,SNR=8.5					
J55A	**Hilton**	**75.61 313**	*e*P	**P**		**21 50 50.5 +1.2**
	comp=Z,163nm,1.4s					
J55A			LR	LR		
	comp=Z,4μm,21.0s					
J55A	**Hilton**	**75.61 313**	P	**P**		**21 50 50.1 +0.8**
	baz=56,SNR=9.6					
N59A	**State Game Lan**	**75.64 310**	*e*P	**P**		**21 50 50.3 +0.7**
	comp=Z,104nm,1.3s					
N59A			LR	LR		
	comp=Z,4μm,20.0s					
N59A	**State Game Lan**	**75.64 310**	P	**P**		**21 50 50.3 +0.7**
	baz=57,SNR=20					
P61A	**Hammonton**	**75.68 308**	P	**P**		**21 50 50.3 +0.5**
	baz=57					
MDJ	**Mudanjiang**	**75.70 46**	P	**P**		**21 50 49.8 0.0**
MDJ			pP	sP		21 51 01.3 +1.2
MDJ			sP	PcP		21 51 05.9 +3.4
MDJ			PP	**PP**		**21 53 37.5 -1.7**
MDJ			S	**S**		**22 00 27.4 -2.4**
MDJ			sS	sS		22 00 47.4 +5.1
MDJ			SS	**SS**		**22 05 19.3 -1.3**
MDJ			pmax	pmax		
	comp=Z,45nm,0.9s					
MDJ			pmax	pmax		
	comp=Z,530nm,3.2s					
MDJ			LR	LR		
	comp=Z,4μm,18.5s					
MDJ			LR	LR		
	comp=Z,4μm,18.5s					
MDJ			LR	LR		
	comp=Z,7μm,14.2s					
MDJ	**Mudanjiang**	**75.70 46**	*e*P	**P**		**21 50 50.1 +0.3**
	comp=Z,96nm,1.1s					
MDJ			LR	LR		
	comp=Z,4μm,20.0s					
D48A	**Paudash Townsh**	**75.72 318**	P	**P**		**21 50 50.1 +0.1**
	baz=55,SNR=18					
O60A	**Telford**	**75.73 309**	P	**P**		**21 50 50.9 +0.8**
	baz=57,SNR=13					
DRCO	**St. Marys Ceme**	**75.81 314**	P	**P**		**21 50 51.1 +0.6**
	baz=56					
DRWO	**Darlington Wes**	**75.83 314**	P	**P**		**21 50 50.9 +0.4**
	baz=56,SNR=8.8					
GRNR	**Gornyy**	**75.84 38⇑**	*i*P	**P**		**21 50 51.0 +0.5**
KLBO	**Killbear Provi**	**75.86 315**	P	**P**		**21 50 51.2 +0.5**
	baz=55,SNR=14					
GZH	**Guangzhou**	**75.88 72**	P	**P**		**21 50 50.9 -0.3**
GZH			S	**S**		**22 00 33.4 +1.0**
GZH			LR	LR		
	comp=Z,2μm,29.8s					
GZH			LR	LR		
	comp=Z,2μm,31.8s					
MMNY	**Mt. Morris Dam**	**75.97 312**	*e*P	**P**		**21 50 52.3 +0.9**
	comp=Z,114nm,0.9s					
MMNY			LR	LR		
	comp=Z,5μm,20.0s					
PSUB	**Penn St. - Bra**	**75.97 309**	*e*P	**P**		**21 50 52.1 +0.7**
	comp=Z,93nm,1.3s					
PSUB			LR	LR		
	comp=Z,4μm,20.0s					
PKRO	**Pickering**	**75.98 314**	P	**P**		**21 50 52.1 +0.6**
	baz=56,SNR=14					
MEDO	**Medina**	**76.06 313**	*e*P	**P**		**21 50 53.0 +1.1**
	comp=Z,109nm,0.9s					
MEDO			LR	LR		
	comp=Z,4μm,22.0s					
MEDO	**Medina**	**76.06 313**	P	**P**		**21 50 52.5 +0.6**
	baz=56,SNR=12					
K55A	**Perry**	**76.07 312**	P	**P**		**21 50 52.5 +0.5**
	baz=56,SNR=29					
H52A	**Wyevale**	**76.08 315**	P	**P**		**21 50 52.2 +0.2**
	baz=55,SNR=9.8					
J54A	**Appleton**	**76.11 313**	*e*P	**P**		**21 50 53.3 +1.1**
	comp=Z,138nm,1.1s					
J54A			LR	LR		
	comp=Z,4μm,22.0s					
J54A	**Appleton**	**76.11 313**	P	**P**		**21 50 52.5 +0.3**
	baz=56,SNR=11					
MA2	**Magadan**	**76.14 25**	*e*P	**P**		**21 50 52.6 +0.6**
	comp=Z,223nm,0.9s					
MA2			LR	LR		
	comp=Z,5μm,22.0s					
P60A	**Greenville**	**76.15 309**	P	**P**		**21 50 52.7 +0.3**
	baz=57,SNR=11					
O59A	**Robesonia**	**76.23 309**	P	**P**		**21 50 53.5 +0.5**
	baz=56					
E48A	**Lockeyer**	**76.33 317**	P	**P**		**21 50 53.7 +0.4**
	baz=54,SNR=22					
TORO	**Toronto--Lesli**	**76.34 314**	P	**P**		**21 50 54.1 +0.6**
	baz=55					
INK	**Inuvik**	**76.35 352**	P	**P**		**21 50 52.1 -0.9**
	comp=Z,71nm,1.0s,baz=10.0,slow=8.9,SNR=80					
INK			S	**S**		**22 00 32.6 -3.4**
	comp=Z,5.0nm,1.0s,baz=66,slow=20,SNR=22					
INK			LR	LR		22 27 36.2
	comp=Z,2μm,21.5s,baz=26,slow=38					
INK	**Inuvik**	**76.35 352**	*e*P	**P**		**21 50 52.6 -0.4**
	comp=Z,189nm,1.3s					
INK			LR	LR		
	comp=Z,4μm,21.0s					
INK	**Inuvik**	**76.35 352**	*e*P	**P**		**21 50 52.6 -0.4**
INK			pmax	pmax		
	comp=Z,189nm,1.3s					
INK			MLR	MLR		
	comp=Z,4μm,21.0s					
I53A	**Kortright Cn E**	**76.37 314**	P	**P**		**21 50 54.0 +0.4**
	baz=55,SNR=14					
NKL	**Nikolayevsk**	**76.41 34**	*i* P	**P**		**21 50 54.0 +0.3**
NKL			*e*S	**S**		**22 00 37.0 -0.3**
NKL			pmax	pmax		
	comp=N,34nm,1.0s					
NKL			pmax	pmax		
	comp=E,47nm,1.0s					
NKL			pmax	pmax		
	comp=Z,290nm,1.0s					
NKL			smax	smax		
	comp=N,1μm,14.0s					
NKL			smax	smax		
	comp=E,1μm,14.0s					
Q61A	**Milford**	**76.46 308**	P	**P**		**21 50 55.0 +0.8**
	baz=57					
STCO	**Saint Catharin**	**76.47 313**	P	**P**		**21 50 54.5 +0.3**
	baz=55					
D47A	**Chapleau**	**76.51 318**	P	**P**		**21 50 54.9 +0.5**
	baz=54,SNR=23					
K54A	**Basiliko Farm,**	**76.51 313**	P	**P**		**21 50 55.2 +0.7**
	baz=56,SNR=14					
I52A	**Shelburne**	**76.58 314**	P	**P**		**21 50 55.5 +0.6**
	baz=55,SNR=21					
L55A	**Hinsdale**	**76.60 312**	P	**P**		**21 50 55.7 +0.7**
	baz=56,SNR=38					
PAGS	**Pennsylvania G**	**76.62 310**	*e*P	**P**		**21 50 55.8 +0.7**
	comp=E,101nm,1.4s					
PAGS			LR	LR		
	comp=Z,4μm,18.0s					
F49A	**Sandfield**	**76.68 317**	P	**P**		**21 50 56.0 +0.7**
	baz=54,SNR=16					
TOBO	**Tobermory, Bru**	**76.69 316**	P	**P**		**21 50 56.0 +0.6**
	baz=54,SNR=8.1					
Q60A	**Greensboro**	**76.73 308**	P	**P**		**21 50 56.4 +0.6**
	baz=56					
ACTO	**Acton**	**76.77 314**	P	**P**		**21 50 56.5 +0.5**
	baz=55,SNR=17					
R61A	**Willards**	**76.77 307**	P	**P**		**21 50 56.9 +0.9**
	baz=57					
P59A	**Jarrettsville**	**76.78 309**	P	**P**		**21 50 56.5 +0.5**
	baz=56,SNR=7.5					
M56A	**Emporium**	**76.84 311**	P	**P**		**21 50 56.9 +0.6**
	baz=56,SNR=57					
N57A	**Milroy**	**76.85 310**	P	**P**		**21 50 57.1 +0.6**
	baz=56,SNR=50					
BMRO	**Meriville Lake**	**76.88 315**	P	**P**		**21 50 57.3 +0.8**
	baz=54,SNR=12					
HKPS	**Hong Kong Po S**	**76.93 72**	*e*P	**P**		**21 50 58.4 +1.2**
	comp=Z,187nm,1.4s					
HKPS			LR	LR		
	comp=Z,2μm,22.0s					
TYNO	**Tyneside**	**76.95 313**	P	**P**		**21 50 57.4 +0.5**
	baz=55,SNR=12					
E47A	**Iron Bridge**	**76.96 318**	P	**P**		**21 50 57.5 +0.5**
	baz=54,SNR=15					
F48A	**Evansville**	**76.96 317**	P	**P**		**21 50 57.5 +0.5**
	baz=54,SNR=11					
L54A	**Sinclairville**	**77.11 312**	P	**P**		**21 50 58.3 +0.4**
	baz=55,SNR=18					
BWLO	**Walkerton**	**77.11 315**	P	**P**		**21 50 58.7 +0.9**
	baz=54,SNR=35					
D46A	**Sault St. Mari**	**77.12 318**	P	**P**		**21 50 58.6 +0.7**
	baz=53,SNR=28					
SSPA	**Standing Stone**	**77.13 311**	*e*P	**P**		**21 50 58.6 +0.7**
	comp=Z,142nm,1.1s					
SSPA			LR	LR		
	comp=Z,4μm,19.0s					
SSPA	**Standing Stone**	**77.13 311**	P	**P**		**21 50 58.7 +0.7**
	baz=56					
SDMD	**Soldier's Deli**	**77.15 309**	*e*P	**P**		**21 50 59.0 +0.9**
	comp=Z,81nm,1.2s					
SDMD			LR	LR		
	comp=Z,2μm,20.0s					
TOLK	**Toolik Lake Re**	**77.17 358**	*e*P	**P**		**21 50 59.0 +1.3**
	comp=Z,172nm,1.3s					
TOLK			LR	LR		
	comp=Z,4μm,22.0s					
TOLK	**Toolik Lake Re**	**77.17 358**	P	**P**		**21 50 58.9 +1.1**
	baz=4.5,SNR=10					
M55A	**Ridgway**	**77.20 312**	P	**P**		**21 50 59.2 +0.7**
	baz=55,SNR=45					
O57A	**Amberson**	**77.21 310**	P	**P**		**21 50 59.0 +0.5**
	baz=56,SNR=26					
BRCO	**Bruce Peninsul**	**77.22 315**	P	**P**		**21 50 59.2 +0.7**
	baz=54					
N56A	**West Decatur**	**77.23 311**	P	**P**		**21 50 59.2 +0.6**
	baz=56,SNR=48					
I51A	**Listowel**	**77.23 315**	P	**P**		**21 50 59.1 +0.6**
	baz=54,SNR=28					
J52A	**Paris**	**77.23 314**	P	**P**		**21 50 59.0 +0.5**
	baz=55,SNR=17					
Q59A	**Harwood**	**77.34 308**	P	**P**		**21 50 59.5 +0.4**
	baz=56					
USRK	**Ussuriysk Ar.**	**77.34 45**	P	**P**		**21 50 59.1 0.0**
	comp=Z,125nm,0.8s,baz=292,slow=4.9,SNR=289					
USRK			LR	LR		22 29 02.2
	comp=Z,2μm,21.1s,baz=303,slow=39					
S61A	**Accomac**	**77.35 307**	PFAKE			21 51 10.0 +11
S61A			LR	LR		
	comp=Z,4μm,20.0s					
S61A	**Accomac**	**77.35 307**	P	**P**		**21 50 59.3 0.0**
	baz=56					
BASO	**Ashfield**	**77.48 315**	P	**P**		**21 51 00.8 +0.9**
	baz=54,SNR=13					
SSE	**Sheshan**	**77.58 61**	P	**P**		**21 51 00.6 -0.1**
SSE			S	**S**		**22 00 48.4 -2.3**
SSE			pmax	pmax		
	comp=Z,53nm,1.2s					
SSE			pmax	pmax		
	comp=Z,370nm,10.3s					
SSE			LR	LR		
	comp=Z,740nm,21.3s					
SSE			LR	LR		
	comp=Z,1μm,22.0s					
SSE	**Sheshan**	**77.58 61**	PFAKE			21 51 10.0 +9.3
SSE			LR	LR		
	comp=Z,3μm,21.0s					
ERPA	**Erie**	**77.58 313**	*e*P	**P**		**21 51 01.6 +1.0**
	comp=Z,410nm,1.4s					
ERPA			LR	LR		
	comp=Z,4μm,19.0s					
ERPA	**Erie**	**77.58 313**	P	**P**		**21 51 00.9 +0.4**
	baz=55,SNR=17					
E46A	**Sault Ste Mari**	**77.59 318**	*e*P	**P**		**21 51 01.1 +0.6**
	comp=Z,143nm,1.0s					
E46A			LR	LR		
	comp=Z,4μm,19.0s					
E46A	**Sault Ste Mari**	**77.59 318**	P	**P**		**21 51 01.0 +0.6**
	baz=53,SNR=29					
R60A	**Leonardtown, M**	**77.62 308**	P	**P**		**21 51 01.4 +0.6**
	baz=56					
K52A	**Tillsonburg**	**77.64 314**	P	**P**		**21 51 01.1 +0.3**
	baz=54,SNR=6.5					
RDOG	**Red Dog Mine**	**77.65 3**	*e*P	**P**		**21 51 00.7 +0.2**
	comp=Z,229nm,1.3s					
RDOG			LR	LR		
	comp=Z,3μm,21.0s					
N55A	**Marion Center**	**77.73 311**	*e*P	**P**		**21 51 02.1 +0.7**
	comp=Z,126nm,0.9s					
N55A			LR	LR		
	comp=Z,4μm,20.0s					
N55A	**Marion Center**	**77.73 311**	P	**P**		**21 51 02.2 +0.8**
	baz=55,SNR=46					
M54A	**Oil Creek Stat**	**77.74 312**	*e*P	**P**		**21 51 02.1 +0.6**
	comp=Z,210nm,1.3s					
M54A			LR	LR		
	comp=Z,3μm,19.0s					
M54A	**Oil Creek Stat**	**77.74 312**	P	**P**		**21 51 02.0 +0.6**
	baz=55,SNR=32					
O56A	**Blue Knob Stat**	**77.76 310**	*e*P	**P**		**21 51 02.1 +0.4**
	comp=Z,139nm,1.3s					
O56A			LR	LR		
	comp=Z,4μm,19.0s					
O56A	**Blue Knob Stat**	**77.76 310**	P	**P**		**21 51 02.1 +0.4**
	baz=55,SNR=34					
ANWB	**Willy Bob**	**77.80 283**	PFAKE			21 51 10.0 +7.9
ANWB			LR	LR		
	comp=Z,2μm,22.0s					
MSHR	**Mys Shultsa**	**77.80 47**	*c i*P	**P**		**21 51 01.5 -0.2**
L53A	**Girard**	**77.84 313**	P	**P**		**21 51 02.5 +0.5**
	baz=55,SNR=11					
P57A	**Homestead Farm**	**77.86 310**	P	**P**		**21 51 02.7 +0.6**
	baz=55,SNR=29					
DLV	**T Lat**	**77.87 84**	*e*P	**P**		**21 51 02.7 -0.1**
	comp=Z,149nm,1.4s					
ALLY	**Alegheny Colle**	**77.95 312**	*e*P	**P**		**21 51 03.4 +0.8**
	comp=Z,88nm,0.9s					
ALLY			LR	LR		
	comp=Z,5μm,21.0s					
S60A	**Water View**	**77.98 307**	P	**P**		**21 51 03.2 +0.4**
	baz=56					
R59A	**King George, V**	**78.01 308**	P	**P**		**21 51 03.5 +0.5**
	baz=56,SNR=12					
H48A	**Harrisville**	**78.03 316**	*e*P	**P**		**21 51 04.2 +1.2**
	comp=Z,321nm,1.6s					
H48A			LR	LR		
	comp=Z,5μm,20.0s					
H48A	**Harrisville**	**78.03 316**	P	**P**		**21 51 03.5 +0.5**
	baz=53,SNR=5.3					
G47A	**Hillman**	**78.05 317**	P	**P**		**21 51 03.8 +0.7**
	baz=53,SNR=15					
YKW3	**Yellowknife Ar**	**78.10 342**	*e*P	**P**		**21 51 02.8 -0.2**
	comp=Z,88nm,1.1s					
YKW3			LR	LR		
	comp=Z,3μm,20.0s					
K51A	**Iona Station**	**78.15 314**	P	**P**		**21 51 03.6 0.0**
	baz=54,SNR=5.9					
YKA	**Yellowknife Ar**	**78.15 342**	P	**P**		**21 51 03.0 -0.2**
	comp=Z,9.3nm,0.6s,baz=34,slow=5.2,SNR=84					
YKA			PP	**PP**		**21 54 01.3 +2.1**
	comp=Z,6.9nm,1.0s,baz=29,slow=8.4,SNR=5.6					
YKA			S	**S**		**22 00 52.0 -3.8**
	comp=Z,1.7nm,0.9s,baz=37,slow=10,SNR=4.3					
YKA			PKPPKP	**P'P'df**		**22 18 05.7 -5.4**
	comp=Z,0.1nm,0.3s,baz=203,slow=2.3,SNR=2.8					
YKA			LR	LR		22 27 24.1
	comp=Z,228nm,20.0s,slow=37					
YKB5	**Yellowknife Ar**	**78.15 342**	*e*P	**P**		**21 51 03.0 -0.2**
YKB5			*e*PP	**PP**		**21 54 01.3 +2.1**
YKB5			*e*P'P'df	**P'P'df**		**22 18 05.7 -5.4**
BKNI	**Bangkinang**	**78.16 98**	*e*P	**P**		**21 51 03.3 -0.9**
	comp=Z,333nm,1.2s					
BKNI			LR	LR		
	comp=Z,4μm,20.0s					
BKNI	**Bangkinang**	**78.16 98**	P	**P**		**21 51 03.8 -0.3**
CBN	**Corbin Frederi**	**78.17 308**	PFAKE			21 51 20.0 +16
CBN			LR	LR		
	comp=Z,4μm,19.0s					
CBN	**Corbin Frederi**	**78.17 308**	P	**P**		**21 51 04.1 +0.2**
	baz=56,SNR=10					
I49A	**Point Hope**	**78.20 315**	*e*P	**P**		**21 51 04.8 +0.8**
	comp=Z,161nm,1.4s					
I49A			LR	LR		
	comp=Z,5μm,20.0s					
I49A	**Point Hope**	**78.20 315**	P	**P**		**21 51 04.0 +0.1**
	baz=53,SNR=5.3					
N54A	**Moraine State**	**78.25 312**	*e*P	**P**		**21 51 04.8 +0.6**
	comp=Z,183nm,1.3s					
N54A			LR	LR		
	comp=Z,3μm,20.0s					
N54A	**Moraine State**	**78.25 312**	P	**P**		**21 51 04.6 +0.4**
	baz=54,SNR=32					
O55A	**Ligonier**	**78.26 311**	P	**P**		**21 51 04.9 +0.5**
	baz=55,SNR=70					
E44A	**Grand Marais A**	**78.32 319**	*e*P	**P**		**21 51 05.6 +1.1**
	comp=Z,226nm,1.0s					
E44A			LR	LR		
	comp=Z,3μm,18.0s					
E44A	**Grand Marais A**	**78.32 319**	P	**P**		**21 51 05.5 +0.9**
	baz=52,SNR=23					
T60A	**Surry**	**78.36 307**	PFAKE			21 51 20.0 +15
T60A			LR	LR		
	comp=Z,4μm,20.0s					
T60A	**Surry**	**78.36 307**	P	**P**		**21 51 05.3 +0.5**
	baz=56					
Q57A	**Strasburg**	**78.37 309**	P	**P**		**21 51 05.3 +0.3**
	baz=55,SNR=16					
S59A	**Mechanicsville**	**78.37 308**	P	**P**		**21 51 05.3 +0.3**
	baz=56,SNR=11					
P56A	**Dayton Farm, R**	**78.37 310**	P	**P**		**21 51 05.3 +0.3**
	baz=55,SNR=36					
PDSI	**Padang**	**78.39 99**	P	**P**		**21 51 05.3 -0.2**
M53A	**Wi Miller and**	**78.39 312**	P	**P**		**21 51 05.0 0.0**
	baz=54,SNR=15					
R58A	**Rapidan**	**78.53 309**	P	**P**		**21 51 05.9 +0.1**
	baz=55,SNR=9.4					
G46A	**Petoskey**	**78.53 317**	P	**P**		**21 51 05.9 +0.2**
	baz=52,SNR=5.2					
I48A	**Sherman Twp**	**78.56 316**	P	**P**		**21 51 06.3 +0.4**
	baz=53,SNR=6.8					

EPYK	**Eagle Plains**	**78.56 353**	*e*P	**P**	**21 51 05.4**	**-0.2**
	comp=Z,132nm,1.0s					
EPYK			LR	LR		
	comp=Z,3μm,22.0s					
EPYK	**Eagle Plains**	**78.56 353**	P	**P**	**21 51 05.5**	**0.0**
	baz=15					
H47A	**Mio**	**78.60 317**	P	**P**	**21 51 06.6**	**+0.4**
	baz=53					
COLD	**Coldfoot**	**78.60 358**	*e*P	**P**	**21 51 06.5**	**+0.8**
	comp=Z,168nm,1.2s					
COLD			LR	LR		
	comp=Z,3μm,22.0s					
U61A	**Possum Corner**	**78.62 306**	PFAKE		21 51 20.0	+14
U61A			LR	LR		
	comp=Z,4μm,18.0s					
U61A	**Possum Corner**	**78.62 306**	P	**P**	**21 51 07.5**	**+1.1**
	baz=56,SNR=5.1					
SMRT	**St. Maarten**	**78.63 284**	PFAKE		21 51 20.0	+13
SMRT			LR	LR		
	comp=Z,1μm,21.0s					
R58B	**Mineral**	**78.64 308**	*e*P	**P**	**21 51 06.9**	**+0.4**
	comp=Z,84nm,1.1s					
R58B			LR	LR		
	comp=Z,4μm,19.0s					
R58B	**Mineral**	**78.64 308**	P	**P**	**21 51 06.7**	**+0.3**
	baz=55,SNR=11					
F45A	**CMU Biological**	**78.67 318**	P	**P**	**21 51 06.9**	**+0.4**
	baz=52,SNR=6.0					
GLMI	**Grayling**	**78.69 317**	PFAKE		21 51 20.0	+13
GLMI			LR	LR		
	comp=Z,2μm,19.0s					
GLMI	**Grayling**	**78.69 317**	P	**P**	**21 51 06.9**	**+0.3**
	baz=52					
KS15	**Wonju Array Si**	**78.69 52**	*e*P	**P**	**21 51 07.1**	**+0.4**
	comp=Z,372nm,1.3s					
KSRS	**Korea Array**	**78.71 52**	P	**P**	**21 51 07.3**	**+0.5**
	comp=Z,124nm,1.0s,baz=301,slow=4.8,SNR=326					
KSRS			LR	LR	22 31 19.7	
	comp=Z,5μm,18.5s,baz=314,slow=40					
V62A	**Hyde County Ai**	**78.72 305**	PFAKE		21 51 20.0	+13
V62A			LR	LR		
	comp=Z,2μm,21.0s					
J49A	**Marlette**	**78.73 315**	P	**P**	**21 51 07.2**	**+0.4**
	baz=53,SNR=13					
M52A	**Chesterland**	**78.75 313**	*e*P	**P**	**21 51 07.6**	**+0.6**
	comp=Z,161nm,1.1s					
M52A			LR	LR		
	comp=Z,3μm,19.0s					
M52A	**Chesterland**	**78.75 313**	P	**P**	**21 51 07.3**	**+0.3**
	baz=54,SNR=16					
K50A	**Casco**	**78.78 314**	PFAKE		21 51 20.0	+13
K50A			LR	LR		
	comp=Z,5μm,21.0s					
K50A	**Casco**	**78.78 314**	P	**P**	**21 51 07.5**	**+0.4**
	baz=53,SNR=9.4					
SEUS	**St. Eustatius**	**78.85 284**	PFAKE		21 51 20.0	+12
SEUS			LR	LR		
	comp=Z,2μm,21.0s					
FDF	**Fort de France**	**78.85 280**	PFAKE		21 51 20.0	+12
FDF			LR	LR		
	comp=Z,1μm,22.0s					
Q56A	**Snyder Ridge,**	**78.86 310**	P	**P**	**21 51 08.0**	**+0.4**
	baz=55,SNR=35					
R57A	**Stanardsville**	**78.86 309**	P	**P**	**21 51 07.8**	**+0.1**
	baz=55,SNR=34					
N53A	**Lisbon**	**78.86 312**	PFAKE		21 51 20.0	+12
N53A			LR	LR		
	comp=Z,3μm,21.0s					
N53A	**Lisbon**	**78.86 312**	P	**P**	**21 51 08.0**	**+0.3**
	baz=54,SNR=16					
MCWV	**Mont Chateau**	**78.92 311**	*e*P	**P**	**21 51 08.8**	**+0.8**
	comp=Z,64nm,0.8s					
MCWV			LR	LR		
	comp=Z,2μm,19.0s					
MCWV	**Mont Chateau**	**78.92 311**	P	**P**	**21 51 08.4**	**+0.5**
	baz=54,SNR=24					
O54A	**Avella**	**78.95 311**	P	**P**	**21 51 08.3**	**+0.2**
	baz=54,SNR=22					
S58A	**Poland Farm, P**	**78.95 308**	*e*P	**P**	**21 51 08.7**	**+0.5**
	comp=Z,98nm,1.0s					
S58A			LR	LR		
	comp=Z,4μm,20.0s					
S58A	**Poland Farm, P**	**78.95 308**	P	**P**	**21 51 08.5**	**+0.3**
	baz=55,SNR=21					
TJN	**Taejon**	**78.95 53**	*ce*P	**P**	**21 51 08.3**	**+0.1**
QZH	**Quanzhou**	**78.96 67**	⇓*i*P	**P**	**21 51 06.8**	**-1.6**
QZH			S	**S**	**22 01 01.8**	**-4.0**
QZH			pmax	pmax		
	comp=Z,42nm,1.2s					
QZH			pmax	pmax		
	comp=Z,520nm,4.0s					
QZH			LR	LR		
	comp=Z,2μm,17.5s					
QZH			LR	LR		
	comp=Z,1μm,14.7s					
QZH			LR	LR		
	comp=Z,2μm,17.1s					
T59A	**Double "B" Far**	**78.99 307**	*e*P	**P**	**21 51 08.8**	**+0.4**
	comp=Z,84nm,1.2s					
T59A			LR	LR		
	comp=Z,3μm,20.0s					
T59A	**Double "B" Far**	**78.99 307**	P	**P**	**21 51 08.5**	**+0.2**
	baz=55,SNR=17					
P55A	**Reedsville**	**78.99 310**	P	**P**	**21 51 08.8**	**+0.4**
	baz=54,SNR=32					
V61A	**Roper**	**79.01 306**	PFAKE		21 51 20.0	+11
V61A			LR	LR		
	comp=Z,3μm,18.0s					
V61A	**Roper**	**79.01 306**	P	**P**	**21 51 08.7**	**+0.2**
	baz=56					
U60A	**Pendleton**	**79.01 307**	P	**P**	**21 51 08.8**	**+0.3**
	baz=55,SNR=6.4					
E43A	**Lone Tree Farm**	**79.05 319**	*e*P	**P**	**21 51 08.8**	**+0.3**
	comp=Z,104nm,0.9s					
E43A			LR	LR		
	comp=Z,4μm,18.0s					
E43A	**Lone Tree Farm**	**79.05 319**	P	**P**	**21 51 08.9**	**+0.3**
	baz=51,SNR=26					
FYU	**Fort Yukon**	**79.06 356**	*e*P	**P**	**21 51 10.1**	**+1.9**
	comp=Z,619nm,1.5s					
FYU			LR	LR		
	comp=Z,4μm,22.0s					
KNMB	**Chin-men Tao**	**79.07 68**	PFAKE		21 51 20.0	+11
KNMB			LR	LR		
	comp=Z,1μm,18.0s					
I47A	**Gladwin**	**79.12 316**	PFAKE		21 51 20.0	+11
I47A			LR	LR		
	comp=Z,5μm,20.0s					
I47A	**Gladwin**	**79.12 316**	P	**P**	**21 51 09.5**	**+0.5**
	baz=52,SNR=12					
J48A	**Bridge Port**	**79.14 315**	PFAKE		21 51 20.0	+11
J48A			LR	LR		
	comp=Z,4μm,20.0s					
J48A	**Bridge Port**	**79.14 315**	P	**P**	**21 51 06.9**	**-2.2**
	baz=53,SNR=10.0					
G45A	**Suttons Bay**	**79.14 318**	*e*P	**P**	**21 51 09.8**	**+0.6**
	comp=Z,178nm,0.9s					
G45A			LR	LR		
	comp=Z,4μm,20.0s					
G45A	**Suttons Bay**	**79.14 318**	P	**P**	**21 51 09.5**	**+0.4**
	baz=52,SNR=11					
SDSI	**Sungai Dareh**	**79.19 99**	P	**P**	**21 51 09.1**	**-0.7**
H46A	**Fife Lake**	**79.20 317**	P	**P**	**21 51 09.8**	**+0.4**
	baz=52,SNR=11					
C40A	**Isle Royale Na**	**79.21 321**	*e*P	**P**	**21 51 09.9**	**+0.5**
	comp=Z,176nm,1.4s					
C40A			LR	LR		
	comp=Z,2μm,18.0s					
C40A	**Isle Royale Na**	**79.21 321**	P	**P**	**21 51 09.3**	**-0.1**
	baz=50,SNR=5.5					
K49A	**Clarkson**	**79.26 315**	P	**P**	**21 51 09.8**	**0.0**
	baz=53,SNR=5.6					
L50A	**Kingsville**	**79.33 314**	P	**P**	**21 51 10.4**	**+0.2**
	baz=53,SNR=10					
P54A	**Burton**	**79.35 311**	P	**P**	**21 51 10.9**	**+0.6**
	baz=54,SNR=30					
M51A	**Elyria**	**79.38 313**	P	**P**	**21 51 10.3**	**-0.1**
	baz=53,SNR=8.4					
N52A	**McGinn's Farm,**	**79.38 312**	P	**P**	**21 51 10.6**	**+0.1**
	baz=54,SNR=11					
PLIO	**Pelee Island,**	**79.39 314**	P	**P**	**21 51 10.7**	**+0.2**
	baz=53,SNR=13					
O53A	**New Philadelph**	**79.42 312**	P	**P**	**21 51 11.2**	**+0.5**
	baz=54,SNR=24					
S57A	**Dark Hollow, R**	**79.45 309**	*e*P	**P**	**21 51 11.2**	**+0.3**
	comp=Z,67nm,1.1s					
S57A			LR	LR		
	comp=Z,3μm,20.0s					
S57A	**Dark Hollow, R**	**79.45 309**	P	**P**	**21 51 11.0**	**+0.1**
	baz=55,SNR=22					
D41A	**Chassel**	**79.45 320**	*e*P	**P**	**21 51 11.6**	**+0.9**
	comp=Z,144nm,1.0s					
D41A			LR	LR		
	comp=Z,2μm,21.0s					
D41A	**Chassel**	**79.45 320**	P	**P**	**21 51 11.1**	**+0.4**
	baz=50,SNR=9.5					
Q55A	**Buckhannon**	**79.45 310**	P	**P**	**21 51 11.3**	**+0.4**
	baz=54,SNR=35					
TEY	**Ternei**	**79.47 42**	⇓*i*P	**P**	**21 51 10.9**	**+0.1**
TEY			pmax	pmax		
	comp=E,20nm,1.4s					
TEY			pmax	pmax		
	comp=N,20nm,1.3s					
TEY			pmax	pmax		
	comp=Z,70nm,1.3s					
V60A	**Jim Taylor Roa**	**79.48 306**	PFAKE		21 51 20.0	+8.9
V60A			LR	LR		
	comp=Z,3μm,18.0s					
V60A	**Jim Taylor Roa**	**79.48 306**	P	**P**	**21 51 11.3**	**+0.2**
	baz=55					
U59A	**Littleton**	**79.50 307**	*e*P	**P**	**21 51 11.8**	**+0.6**
	comp=Z,101nm,1.2s					
U59A			LR	LR		
	comp=Z,4μm,20.0s					
U59A	**Littleton**	**79.50 307**	P	**P**	**21 51 11.6**	**+0.4**
	baz=55,SNR=17					
RGRI	**Rengat**	**79.60 98**	P	**P**	**21 51 11.4**	**-0.6**
H45A	**Beulah**	**79.62 317**	P	**P**	**21 51 11.5**	**-0.2**
	baz=52					
W61A	**Ground Anchor**	**79.64 306**	P	**P**	**21 51 12.0**	**+0.1**
	baz=55					
MYKOM	**Kota Tinggi**	**79.64 95**	*e*P	**P**	**21 51 12.2**	**-0.1**
	comp=Z,68nm,1.0s					
MYKOM			LR	LR		
	comp=Z,2μm,21.0s					
MYKOM	**Kota Tinggi**	**79.64 95**	P	**P**	**21 51 12.0**	**-0.2**
K48A	**Perry**	**79.64 315**	P	**P**	**21 51 11.8**	**0.0**
	baz=52,SNR=17					
T58A	**Grand View Acr**	**79.65 308**	P	**P**	**21 51 12.2**	**+0.2**
	baz=55,SNR=21					
AAM	**Ann Arbor**	**79.67 314**	*e*P	**P**	**21 51 12.6**	**+0.6**
	comp=Z,129nm,1.4s					
AAM			LR	LR		
	comp=Z,5μm,20.0s					
AAM	**Ann Arbor**	**79.67 314**	*e*P	**P**	**21 51 12.6**	**+0.6**
AAM			pmax	pmax		
	comp=Z,129nm,1.4s					
AAM			MLR	MLR		
	comp=Z,5μm,20.0s					
AAM	**Ann Arbor**	**79.67 314**	P	**P**	**21 51 11.8**	**-0.2**
	baz=53					
I46A	**Reed City**	**79.71 317**	P	**P**	**21 51 12.5**	**+0.3**
	baz=52,SNR=10					
N51A	**Ashland**	**79.74 313**	*e*P	**P**	**21 51 13.0**	**+0.5**
	comp=Z,163nm,1.3s					
N51A			LR	LR		
	comp=Z,3μm,22.0s					
N51A	**Ashland**	**79.74 313**	P	**P**	**21 51 12.4**	**0.0**
	baz=53,SNR=17					
J47A	**Sunmer**	**79.78 316**	*e*P	**P**	**21 51 13.4**	**+0.8**
	comp=Z,114nm,1.1s					
J47A			LR	LR		
	comp=Z,5μm,20.0s					
J47A	**Sunmer**	**79.78 316**	P	**P**	**21 51 12.7**	**+0.1**
	baz=52,SNR=9.0					
M50A	**Fremont**	**79.85 313**	*e*P	**P**	**21 51 13.3**	**+0.3**
	comp=Z,46nm,0.9s					
M50A			LR	LR		
	comp=Z,3μm,22.0s					
M50A	**Fremont**	**79.85 313**	P	**P**	**21 51 12.7**	**-0.3**
	baz=53					
L49A	**Milan**	**79.86 314**	P	**P**	**21 51 13.0**	**0.0**
	baz=52,SNR=6.5					
KRJI	**Kerinci**	**79.89 100**	P	**P**	**21 51 13.7**	**0.0**
	comp=Z,383nm,1.2s,comp=Z,6μm					
O52A	**Adamsville**	**79.89 312**	*e*P	**P**	**21 51 13.6**	**+0.4**
	comp=Z,264nm,1.4s					
O52A			LR	LR		
	comp=Z,4μm,21.0s					
O52A	**Adamsville**	**79.89 312**	P	**P**	**21 51 13.4**	**+0.1**
	baz=53,SNR=38					
S56A	**Natural Bridge**	**79.89 309**	P	**P**	**21 51 13.7**	**+0.4**
	baz=54,SNR=6.6					
Q54A	**Coxs Mills**	**79.94 310**	*e*P	**P**	**21 51 13.7**	**+0.1**
	comp=Z,141nm,1.3s					
Q54A			LR	LR		
	comp=Z,3μm,20.0s					
Q54A	**Coxs Mills**	**79.94 310**	P	**P**	**21 51 13.5**	**0.0**
	baz=54,SNR=38					
U58A	**Oxford**	**79.98 307**	P	**P**	**21 51 14.0**	**+0.2**
	baz=55,SNR=27					
P53A	**Whipple**	**79.98 311**	*e*P	**P**	**21 51 14.5**	**+0.7**
	comp=Z,185nm,1.3s					
P53A			LR	LR		
	comp=Z,4μm,20.0s					
P53A	**Whipple**	**79.98 311**	P	**P**	**21 51 14.3**	**+0.5**
	baz=54,SNR=35					
F42A	**Maple Grove Fa**	**80.05 319**	P	**P**	**21 51 14.3**	**+0.2**
	baz=50					
T57A	**Hurt**	**80.09 308**	*e*P	**P**	**21 51 14.6**	**+0.2**
	comp=Z,120nm,1.4s					
T57A			LR	LR		
	comp=Z,4μm,20.0s					
T57A	**Hurt**	**80.09 308**	P	**P**	**21 51 14.9**	**+0.5**
	baz=54,SNR=22					
I45A	**Fountain**	**80.09 317**	PFAKE		21 51 30.0	+16
I45A			LR	LR		
	comp=Z,3μm,19.0s					
I45A	**Fountain**	**80.09 317**	P	**P**	**21 51 14.8**	**+0.6**
	baz=51,SNR=7.2					
PRP	**Porcupine Dome**	**80.12 356**	*e*P	**P**	**21 51 15.5**	**+1.3**
	comp=Z,194nm,1.4s					
PRP			LR	LR		
	comp=Z,4μm,22.0s					
V59A	**Middlesex**	**80.13 307**	P	**P**	**21 51 14.8**	**+0.2**
	baz=55,SNR=19					
J46A	**Howard City**	**80.19 316**	P	**P**	**21 51 14.6**	**-0.2**
	baz=52					
W60A	**Pink Hill**	**80.19 306**	P	**P**	**21 51 14.7**	**-0.2**
	baz=55					
CNNC	**Cliffs of the**	**80.20 306**	PFAKE		21 51 30.0	+15
CNNC			LR	LR		
	comp=Z,3μm,21.0s					
CNNC	**Cliffs of the**	**80.20 306**	P	**P**	**21 51 14.9**	**-0.1**
	baz=55					
K47A	**Vermontville**	**80.23 315**	P	**P**	**21 51 15.0**	**0.0**
	baz=52,SNR=19					
FFC	**Flin Flon**	**80.29 332**	*e*P	**P**	**21 51 15.1**	**0.0**
	comp=Z,99nm,1.2s					
FFC			LR	LR		
	comp=Z,6μm,20.0s					
FFC	**Flin Flon**	**80.29 332**	*e*P	**P**	**21 51 15.1**	**0.0**
FFC			pmax	pmax		
	comp=Z,99nm,1.2s					
FFC			MLR	MLR		
	comp=Z,6μm,20.0s					
N50A	**Nevada**	**80.30 313**	P	**P**	**21 51 15.4**	**-0.1**
	baz=53,SNR=12					
O51A	**Pataskala**	**80.34 312**	P	**P**	**21 51 15.7**	**0.0**
	baz=53,SNR=37					
L48A	**N Adams**	**80.35 315**	P	**P**	**21 51 15.5**	**-0.2**
	baz=52,SNR=16					
P52A	**Corning**	**80.36 312**	P	**P**	**21 51 15.6**	**-0.2**
	baz=53,SNR=32					
M49A	**Liberty Center**	**80.36 314**	P	**P**	**21 51 15.7**	**-0.1**
	baz=52,SNR=8.6					
COWI	**Conover**	**80.37 320**	*e*P	**P**	**21 51 15.8**	**0.0**
	comp=Z,149nm,0.9s					
COWI			LR	LR		
	comp=Z,2μm,19.0s					
EYMN	**Ely**	**80.39 322**	*e*P	**P**	**21 51 16.1**	**+0.3**
	comp=Z,144nm,1.6s					
EYMN			LR	LR		
	comp=Z,2μm,18.0s					
EYMN	**Ely**	**80.39 322**	P	**P**	**21 51 15.5**	**-0.3**
	baz=48,SNR=7.5					
S55A	**Lewisburg**	**80.44 309**	P	**P**	**21 51 16.6**	**+0.3**
	baz=54,SNR=41					
Q53A	**Leroy**	**80.44 311**	P	**P**	**21 51 16.2**	**-0.1**
	baz=53,SNR=21					
U57A	**Blanch**	**80.47 308**	P	**P**	**21 51 16.7**	**+0.3**
	baz=54,SNR=25					
R54A	**Victor**	**80.51 310**	P	**P**	**21 51 16.5**	**-0.1**
	baz=54,SNR=27					
ACSO	**Alum Creek Sta**	**80.52 312**	*e*P	**P**	**21 51 16.9**	**+0.2**
	comp=Z,112nm,1.0s					
ACSO			LR	LR		
	comp=Z,3μm,20.0s					
ACSO	**Alum Creek Sta**	**80.52 312**	P	**P**	**21 51 16.7**	**+0.1**
	baz=53,SNR=26					
EGAK	**Eagle**	**80.55 354**	*e*P	**P**	**21 51 16.4**	**+0.1**
	comp=Z,395nm,1.8s					
EGAK			LR	LR		
	comp=Z,2μm,22.0s					
J45A	**Montague**	**80.56 317**	*e*P	**P**	**21 51 17.9**	**+1.1**
	comp=Z,168nm,0.9s					
J45A			LR	LR		
	comp=Z,4μm,20.0s					
J45A	**Montague**	**80.56 317**	P	**P**	**21 51 16.9**	**+0.1**
	baz=51					
T56A	**Rocky Mt**	**80.57 308**	P	**P**	**21 51 17.4**	**+0.4**
	baz=54,SNR=34					
MTP	**Monte Pirata**	**80.58 285**	*e*P	**P**	**21 51 19.3**	**+1.9**
	comp=Z,45nm,0.9s					
W59A	**Clinton**	**80.61 306**	P	**P**	**21 51 17.6**	**+0.4**
	baz=54					
POKR	**Poker Plat Res**	**80.62 357**	P	**P**	**21 51 17.4**	**+0.7**
	baz=6.2,SNR=45					
X60A	**Albert Glenn T**	**80.64 305**	P	**P**	**21 51 17.4**	**0.0**
	baz=55					
H43A	**Windswept, Lux**	**80.68 318**	*e*P	**P**	**21 51 18.3**	**+0.9**
	comp=Z,141nm,1.0s					
H43A			LR	LR		
	comp=Z,4μm,19.0s					
H43A	**Windswept, Lux**	**80.68 318**	P	**P**	**21 51 17.8**	**+0.4**
	baz=50,SNR=12					
K46A	**Dorr**	**80.68 316**	P	**P**	**21 51 17.2**	**-0.2**
	baz=51,SNR=7.4					
TPRI	**Tanjung Pinang**	**80.69 95**	P	**P**	**21 51 18.1**	**+0.2**
V58A	**Windy Hill, Pi**	**80.70 307**	P	**P**	**21 51 17.9**	**+0.3**
	baz=54,SNR=18					
BLA	**Blacksburg**	**80.72 309**	*e*P	**P**	**21 51 18.3**	**+0.5**
	comp=Z,80nm,1.3s					
BLA			LR	LR		
	comp=Z,4μm,19.0s					
BLA	**Blacksburg**	**80.72 309**	P	**P**	**21 51 17.7**	**-0.2**
	baz=54,SNR=9.3					
CBYP	**Canovanas**	**80.73 286**	*e*P	**P**	**21 51 18.9**	**+0.7**
	comp=Z,62nm,1.1s					
L47A	**Sherwood**	**80.78 315**	P	**P**	**21 51 17.5**	**-0.6**
	baz=52,SNR=20					
HUMP	**Col San Antoni**	**80.80 286**	*e*P	**P**	**21 51 19.6**	**+1.1**
	comp=Z,108nm,1.1s					
M48A	**Edgerton**	**80.80 314**	*e*P	**P**	**21 51 18.4**	**+0.3**
	comp=Z,55nm,0.8s					
M48A			LR	LR		
	comp=Z,6μm,21.0s					
M48A	**Edgerton**	**80.80 314**	P	**P**	**21 51 17.6**	**-0.5**
	baz=52,SNR=6.6					
MDM	**Murphy Dome**	**80.81 357**	*e*P	**P**	**21 51 18.6**	**+0.9**
	comp=Z,206nm,1.2s					
MDM			LR	LR		
	comp=Z,2μm,22.0s					
MLY	**Manley**	**80.82 358**	PFAKE		21 51 30.0	+12
MLY			LR	LR		
	comp=Z,2μm,20.0s					
N49A	**Columbus Grove**	**80.83 314**	*e*P	**P**	**21 51 18.2**	**0.0**
	comp=Z,131nm,1.3s					
N49A			LR	LR		
	comp=Z,4μm,20.0s					
N49A	**Columbus Grove**	**80.83 314**	P	**P**	**21 51 18.1**	**-0.1**
	baz=52,SNR=22					
Q52A	**Bidwell**	**80.84 311**	P	**P**	**21 51 18.5**	**+0.1**
	baz=53,SNR=23					
COLA	**College**	**80.88 357**	*e*P	**P**	**21 51 19.1**	**+1.0**
	comp=Z,138nm,1.1s					
COLA			LR	LR		
	comp=Z,3μm,22.0s					
COLA	**College**	**80.88 357**	*c i*P	**P**	**21 51 18.5**	**+0.5**
COLA			pmax	pmax		
	comp=Z,107nm,1.2s					
TCOL	**CIGO, UAF Yank**	**80.88 357**	P	**P**	**21 51 18.3**	**+0.2**
	baz=5.8					
ULM	**Lac du Bonnet**	**80.93 326**	P	**P**	**21 51 17.8**	**-0.9**
	comp=Z,28nm,1.0s,baz=46,slow=5.7,SNR=27					
ULM			LR	LR	22 27 14.0	
	comp=Z,6μm,21.3s,baz=44,slow=36					
ULM	**Lac du Bonnet**	**80.93 326**	*e*P	**P**	**21 51 18.1**	**-0.5**
	comp=Z,177nm,1.5s					
ULM			LR	LR		
	comp=Z,6μm,21.0s					
ILAR	**Eielson Array**	**80.94 357**	P	**P**	**21 51 18.2**	**-0.1**
	comp=Z,31nm,0.9s,baz=353,slow=2.9,SNR=195					
ILAR			PKKPbc	**PKKPbc**	**22 09 54.6**	**-1.6**
	comp=Z,2.7nm,0.7s,baz=221,slow=2.4,SNR=22					
ILAR			PKPPKP	**P'P'df**	**22 17 59.2**	**-6.8**
	comp=Z,1.7nm,0.9s,baz=205,slow=3.2,SNR=6.7					
ILAR			LR	LR	22 26 52.1	
	comp=Z,2μm,21.9s,baz=12,slow=35					
ILB	**Eielson Array**	**80.94 357**	*e*P	**P**	**21 51 18.3**	**-0.1**
	comp=Z,72nm,1.0s					
ILB			*e*PKKPdf	**PKKPbc**	**22 09 55.0**	**-1.3**
ILB			*e*P'P'df	**P'P'df**	**22 17 59.2**	**-6.8**
S54A	**Dingess, Beckl**	**80.94 310**	P	**P**	**21 51 18.8**	**-0.2**
	baz=53,SNR=14					
O50A	**Cable**	**80.96 313**	P	**P**	**21 51 18.8**	**-0.2**
	baz=52,SNR=20					
ANM	**Nome**	**80.99 5**	*e*P	**P**	**21 51 19.0**	**+0.3**
	comp=Z,326nm,1.4s					
ANM			LR	LR		
	comp=Z,5μm,22.0s					
ANM	**Nome**	**80.99 5**	*e*P	**P**	**21 51 19.0**	**+0.3**
ANM			pmax	pmax		
	comp=Z,326nm,1.4s					
ANM			MLR	MLR		
	comp=Z,5μm,22.0s					
T55A	**Pulaski**	**81.01 309**	P	**P**	**21 51 19.6**	**+0.2**
	baz=54,SNR=17					
F40A	**Park Falls**	**81.01 320**	P	**P**	**21 51 18.9**	**-0.3**
	baz=49,SNR=41					
P51A	**Williamsport**	**81.02 312**	*e*P	**P**	**21 51 19.1**	**-0.2**
	comp=Z,83nm,1.1s					
P51A			LR	LR		
	comp=Z,3μm,19.0s					
P51A	**Williamsport**	**81.02 312**	P	**P**	**21 51 19.0**	**-0.4**
	baz=53,SNR=13					
R53A	**Hurricane**	**81.03 310**	*e*P	**P**	**21 51 19.9**	**+0.5**
	comp=Z,135nm,1.1s					
R53A			LR	LR		
	comp=Z,4μm,20.0s					
R53A	**Hurricane**	**81.03 310**	P	**P**	**21 51 19.6**	**+0.2**
	baz=53,SNR=29					
SJG	**San Juan**	**81.05 286**	*e*P	**P**	**21 51 21.6**	**+1.8**
	comp=Z,302nm,1.9s					
SJG			LR	LR		
	comp=Z,1μm,20.0s					
SJG	**San Juan**	**81.05 286**	*e*P	P	21 51 24.9	+5.1
X59A	**McDuffie Farm,**	**81.07 306**	P	**P**	**21 51 20.0**	**+0.3**
	baz=54					
V57A	**Coltrane Farms**	**81.08 307**	P	**P**	**21 51 19.7**	**0.0**
	baz=54,SNR=30					
DAWY	**Dawson**	**81.08 353**	*e*P	**P**	**21 51 19.1**	**-0.2**
	comp=Z,141nm,1.0s					
DAWY			LR	LR		
	comp=Z,2μm,21.0s					
CCB	**Clear Creek Bu**	**81.10 357**	*e*P	**P**	**21 51 19.2**	**-0.1**
	comp=Z,147nm,1.0s					
CCB			LR	LR		
	comp=Z,3μm,21.0s					
Y60A	**Bolivia**	**81.14 305**	PFAKE		21 51 30.0	+10
Y60A			LR	LR		
	comp=Z,3μm,20.0s					
Y60A	**Bolivia**	**81.14 305**	P	**P**	**21 51 20.0**	**0.0**
	baz=54					
TATO	**Taipei**	**81.14 66**	*e*P	**P**	**21 51 21.9**	**+1.6**
	comp=Z,295nm,1.4s					
TATO			LR	LR		
	comp=Z,2μm,21.0s					
U56A	**King**	**81.20 308**	P	**P**	**21 51 20.8**	**+0.4**
	baz=54,SNR=16					
W58A	**Raeford**	**81.23 306**	P	**P**	**21 51 21.0**	**+0.5**
	baz=54,SNR=23					
YHNB	**Yeheng**	**81.23 66**	*e*P	**P**	**21 51 21.9**	**+1.1**
	comp=Z,179nm,1.2s					
YHNB			LR	LR		
	comp=Z,2μm,22.0s					
WRH	**Wood River Hil**	**81.29 357**	*e*P	**P**	**21 51 20.3**	**0.0**
	comp=Z,236nm,0.9s					
WRH			LR	LR		
	comp=Z,3μm,21.0s					
E38A	**The Farm, Brul**	**81.31 321**	*e*P	**P**	**21 51 20.8**	**+0.1**
	comp=Z,65nm,1.0s					
E38A			LR	LR		
	comp=Z,2μm,19.0s					

E38A	**The Farm, Brul**	**81.31 321**	P	**P**	**21 51 20.3 -0.5**
	baz=48				
N48A	**Decatur**	**81.37 314**	P	**P**	**21 51 20.9 -0.3**
	baz=52,SNR=33				
O49A	**Covington**	**81.37 313**	*e*P	**P**	**21 51 21.1 -0.1**
	comp=Z,92nm,0.9s				
O49A			LR	LR	
	comp=Z,3μm,21.0s				
O49A	**Covington**	**81.37 313**	P	**P**	**21 51 20.9 -0.3**
	baz=52,SNR=27				
L46A	**Eue Claire**	**81.39 315**	PFAKE		21 51 30.0 +8.7
L46A			LR	LR	
	comp=Z,4μm,19.0s				
L46A	**Eue Claire**	**81.39 315**	P	**P**	**21 51 20.9 -0.4**
	baz=51				
SSLB	**Suanglung**	**81.40 67**	*e*P	**P**	**21 51 22.2 +0.6**
	comp=Z,76nm,1.2s				
SSLB			LR	LR	
	comp=Z,2μm,18.0s				
P50A	**Jamestown**	**81.40 312**	P	**P**	**21 51 20.9 -0.4**
	baz=52,SNR=13				
AOPR	**Arecibo Observ**	**81.40 286**	*e*P	**P**	**21 51 21.9 +0.2**
	comp=Z,88nm,1.0s				
JMBI	**JAMBI**	**81.41 98**	P	**P**	**21 51 21.3 -0.4**
M47A	**Cromwell**	**81.41 315**	P	**P**	**21 51 21.0 -0.3**
	baz=51,SNR=9.7				
F39A	**Loretta**	**81.43 321**	P	**P**	**21 51 21.2 -0.3**
	baz=49,SNR=34				
OBIP	**Obispado Ponce**	**81.45 286**	*e*P	**P**	**21 51 22.6 +0.6**
	comp=Z,258nm,1.4s				
R52A	**Catlettsburg**	**81.46 311**	P	**P**	**21 51 21.9 +0.2**
	baz=53,SNR=8.2				
ICMP	**Isla Caja de M**	**81.47 286**	PFAKE		21 51 30.0 +8.0
ICMP			LR	LR	
	comp=Z,1μm,22.0s				
Q51A	**Peebles**	**81.47 312**	*e*P	**P**	**21 51 21.8 0.0**
	comp=Z,120nm,1.0s				
Q51A			LR	LR	
	comp=Z,4μm,18.0s				
Q51A	**Peebles**	**81.47 312**	P	**P**	**21 51 21.7 0.0**
	baz=52,SNR=34				
G40A	**Rib Lake**	**81.48 320**	*e*P	**P**	**21 51 21.8 +0.1**
	comp=Z,204nm,1.4s				
G40A			LR	LR	
	comp=Z,2μm,19.0s				
G40A	**Rib Lake**	**81.48 320**	P	**P**	**21 51 21.7 +0.1**
	baz=49,SNR=43				
YSS	**Yuzh-Sakhalins**	**81.50 38**	*e*P	**P**	**21 51 22.8 +1.0**
	comp=Z,409nm,1.2s				
YSS			LR	LR	
	comp=Z,3μm,18.0s				
YSS	**Yuzh-Sakhalins**	**81.50 38**α	*i*P	**P**	**21 51 22.7 +1.0**
YSS			*e**SP	**pP**	**21 51 29.8 +0.6**
YSS			*e*		21 54 31.4
YSS			*e*S	**S**	**22 01 30.7 -1.0**
YSS			*e*PPS	PPS	22 02 22.5
YSS			pmax	pmax	
	comp=Z,900nm,1.7s				
YSS			pmax	pmax	
	comp=Z,270nm,1.2s				
S53A	**Williamson**	**81.53 310**	P	**P**	**21 51 22.1 0.0**
	baz=53,SNR=14				
U55A	**TA2, Sparta**	**81.54 309**	P	**P**	**21 51 22.5 +0.2**
	baz=53,SNR=47				
T54A	**Tazewell**	**81.55 309**	P	**P**	**21 51 22.2 -0.1**
	baz=53,SNR=41				
X58A	**Rowland**	**81.57 306**	*e*P	**P**	**21 51 23.4 +1.0**
	comp=Z,109nm,1.3s				
X58A			LR	LR	
	comp=Z,4μm,19.0s				
X58A	**Rowland**	**81.57 306**	P	**P**	**21 51 22.6 +0.3**
	baz=54,SNR=7.3				
V56A	**Mocksville**	**81.59 308**	*e*P	**P**	**21 51 22.7 +0.2**
	comp=Z,112nm,1.4s				
V56A			LR	LR	
	comp=Z,2μm,20.0s				
V56A	**Mocksville**	**81.59 308**	P	**P**	**21 51 22.5 +0.1**
	baz=54,SNR=15				
BWN	**Browne**	**81.64 358**	*e*P	**P**	**21 51 22.5 +0.4**
	comp=Z,341nm,1.5s				
BWN			LR	LR	
	comp=Z,2μm,22.0s				
W57A	**Gilead**	**81.65 307**	*e*P	**P**	**21 51 22.9 +0.2**
	comp=Z,102nm,1.4s				
W57A			LR	LR	
	comp=Z,3μm,22.0s				
W57A	**Gilead**	**81.65 307**	P	**P**	**21 51 22.8 0.0**
	baz=54,SNR=15				
NACB	**Ninganchiao**	**81.67 67**	*e*P	**P**	**21 51 25.0 +1.9**
	comp=Z,189nm,1.6s				
NACB			LR	LR	
	comp=Z,2μm,21.0s				
I42A	**Draeger Farm,**	**81.68 318**	*e*P	**P**	**21 51 22.9 +0.2**
	comp=Z,94nm,1.0s				
I42A			LR	LR	
	comp=Z,3μm,20.0s				
I42A	**Draeger Farm,**	**81.68 318**	P	**P**	**21 51 22.8 0.0**
	baz=50,SNR=18				
N47A	**Urbana**	**81.75 314**	P	**P**	**21 51 22.8 -0.3**
	baz=51,SNR=39				
BPAW	**Bear Paw Mtn.**	**81.76 358**	*e*P	**P**	**21 51 22.6 -0.2**
	comp=Z,158nm,1.0s				
BPAW			LR	LR	
	comp=Z,2μm,21.0s				
M46A	**Old House Fiel**	**81.81 315**	PFAKE		21 51 40.0 +17
M46A			LR	LR	
	comp=Z,3μm,19.0s				
M46A	**Old House Fiel**	**81.81 315**	P	**P**	**21 51 23.2 -0.2**
	baz=51,SNR=6.5				
O48A	**Farmland**	**81.82 314**	P	**P**	**21 51 23.1 -0.5**
	baz=52,SNR=24				
CRPR	**Cabo Rojo, PR**	**81.87 286**	*e*P	**P**	**21 51 24.5 +0.4**
	comp=Z,184nm,1.4s				
YULB	**Yu-li**	**81.88 67**	*e*P	**P**	**21 51 24.1 0.0**
	comp=Z,196nm,1.6s				
YULB			LR	LR	
	comp=Z,800nm,19.0s				
DOT	**Dot Lake**	**81.89 355**	*e*P	**P**	**21 51 24.3 +0.8**
	comp=Z,180nm,1.1s				
DOT			LR	LR	
	comp=Z,3μm,22.0s				
F38A	**Pierce - Schro**	**81.90 321**	P	**P**	**21 51 24.1 +0.2**
	baz=48,SNR=20				
Q50A	**Georgetown**	**81.98 312**	P	**P**	**21 51 24.0 -0.4**
	baz=52				
G39A	**Holcombe**	**81.98 320**	P	**P**	**21 51 24.2 -0.1**
	baz=48,SNR=64				
P49A	**Miami Univ. Ec**	**82.00 313**	P	**P**	**21 51 24.1 -0.4**
	baz=52,SNR=16				
TWG	**Pinlang**	**82.02 68**	*e*P	**P**	**21 51 25.9 +1.0**
	comp=Z,1μm,1.7s				
TWG			LR	LR	
	comp=Z,6μm,20.0s				
U54A	**Nelsons Funny**	**82.03 309**	*e*P	**P**	**21 51 25.1 +0.2**
	comp=Z,181nm,1.3s				
U54A			LR	LR	
	comp=Z,4μm,20.0s				
U54A	**Nelsons Funny**	**82.03 309**	P	**P**	**21 51 25.1 +0.2**
	baz=53,SNR=32				
V55A	**Taylorsville**	**82.04 308**	P	**P**	**21 51 25.0 +0.2**
	baz=53,SNR=21				
W56A	**Indian Trail**	**82.05 307**	P	**P**	**21 51 25.0 +0.1**
	baz=53,SNR=16				
MCK	**McKinley**	**82.06 357**	*e*P	**P**	**21 51 24.4 -0.1**
	comp=Z,291nm,1.2s				
MCK			LR	LR	
	comp=Z,3μm,22.0s				
MCK	**McKinley**	**82.06 357**	*e*P	**P**	**21 51 24.4 -0.1**
MCK			pmax	pmax	
	comp=Z,291nm,1.2s				
MCK			MLR	MLR	
	comp=Z,3μm,22.0s				
R51A	**Hillsboro**	**82.06 311**	P	**P**	**21 51 24.8 -0.1**
	baz=52,SNR=22				
RIB01	**Linhares ES**	**82.08 240**	*e*P	**P**	**21 51 25.6 +0.5**
I41A	**Arkdale**	**82.09 319**	*e*P	**P**	**21 51 24.7 -0.2**
	comp=Z,156nm,1.3s				
I41A			LR	LR	
	comp=Z,4μm,18.0s				
I41A	**Arkdale**	**82.09 319**	P	**P**	**21 51 24.8 -0.2**
	baz=49,SNR=14				
BSFB	**Barra de Sao F**	**82.10 241**	*e*P	**P**	**21 51 25.9 +0.7**
K43A	**Burlington**	**82.12 317**	*e*P	**P**	**21 51 25.6 +0.5**
	comp=Z,286nm,1.4s				
K43A			LR	LR	
	comp=Z,4μm,20.0s				
K43A	**Burlington**	**82.12 317**	P	**P**	**21 51 25.0 -0.1**
	baz=50,SNR=14				
X57A	**Johnson Farm,**	**82.13 306**	P	**P**	**21 51 25.2 0.0**
	baz=54,SNR=6.5				
S52A	**Salyersville**	**82.13 310**	P	**P**	**21 51 25.4 +0.1**
	baz=52,SNR=44				
Y58A	**Scranton**	**82.17 306**	PFAKE		21 51 40.0 +15
Y58A			LR	LR	
	comp=Z,4μm,19.0s				
Y58A	**Scranton**	**82.17 306**	P	**P**	**21 51 25.7 +0.2**
	baz=54,SNR=5.2				
T53A	**Wise**	**82.21 310**	P	**P**	**21 51 25.7 0.0**
	baz=53,SNR=14				
L44A	**Lake County Fo**	**82.22 316**	P	**P**	**21 51 25.4 -0.2**
	baz=50,SNR=13				
BIRD	**Birdtown, Kers**	**82.26 307**	*e*P	**P**	**21 51 26.7 +0.7**
	comp=Z,265nm,1.9s				
BIRD			LR	LR	
	comp=Z,3μm,20.0s				
AGMN	**Agassiz Nation**	**82.29 325**	*e*P	**P**	**21 51 25.5 -0.3**
	comp=Z,168nm,1.8s				
AGMN			LR	LR	
	comp=Z,4μm,19.0s				
AGMN	**Agassiz Nation**	**82.29 325**	P	**P**	**21 51 25.3 -0.6**
	baz=46,SNR=14				
Z59A	**Georgetown, SC**	**82.30 305**	P	**P**	**21 51 25.9 -0.3**
	baz=54				
KTH	**Kantishna Hill**	**82.31 358**	*e*P	**P**	**21 51 25.7 -0.1**
	comp=Z,324nm,1.4s				
KTH			LR	LR	
	comp=Z,2μm,22.0s				
M45A	**Boilermakers S**	**82.34 315**	P	**P**	**21 51 26.1 -0.1**
	baz=50,SNR=9.2				
N46A	**Monticello**	**82.36 315**	P	**P**	**21 51 26.3 -0.1**
	baz=51,SNR=48				
RND	**Reindeer**	**82.39 357**	*e*P	**P**	**21 51 25.6 -0.6**
	comp=Z,63nm,0.8s				
RND			LR	LR	
	comp=Z,3μm,22.0s				
RND	**Reindeer**	**82.39 357**	*e*P	**P**	**21 51 25.6 -0.6**
RND			pmax	pmax	
	comp=Z,63nm,0.8s				
RND			MLR	MLR	
	comp=Z,3μm,22.0s				
TRF	**Thorofare Moun**	**82.39 358**	PFAKE		21 51 40.0 +14
TRF			LR	LR	
	comp=Z,700nm,22.0s				
T52A	**Hallie**	**82.42 310**	*e*P	**P**	**21 51 27.5 +0.7**
	comp=Z,123nm,1.4s				
T52A			LR	LR	
	comp=Z,4μm,19.0s				
T52A	**Hallie**	**82.42 310**	P	**P**	**21 51 27.0 +0.2**
	baz=52,SNR=27				
Q49A	**Aurora**	**82.44 312**	P	**P**	**21 51 26.5 -0.3**
	baz=52,SNR=29				
O47A	**Sheridan**	**82.44 314**	P	**P**	**21 51 26.5 -0.3**
	baz=51,SNR=36				
F37A	**Hinrichs Farm,**	**82.45 321**	P	**P**	**21 51 26.6 -0.2**
	baz=48				
CAST	**Castle Rocks**	**82.47 359**	PFAKE		21 51 40.0 +13
CAST			LR	LR	
	comp=Z,2μm,22.0s				
S51A	**Beattyville**	**82.48 311**	*e*P	**P**	**21 51 27.6 +0.5**
	comp=Z,40nm,0.9s				
S51A			LR	LR	
	comp=Z,5μm,20.0s				
S51A	**Beattyville**	**82.48 311**	P	**P**	**21 51 27.1 +0.1**
	baz=52,SNR=13				
P48A	**Milroy**	**82.48 313**	*e*P	**P**	**21 51 26.6 -0.5**
	comp=Z,140nm,1.3s				
P48A			LR	LR	
	comp=Z,4μm,21.0s				
P48A	**Milroy**	**82.48 313**	P	**P**	**21 51 26.5 -0.5**
	baz=51,SNR=23				
R50A	**Paris**	**82.54 312**	*e*P	**P**	**21 51 27.6 +0.2**
	comp=Z,214nm,1.6s				
R50A			LR	LR	
	comp=Z,4μm,19.0s				
R50A	**Paris**	**82.54 312**	P	**P**	**21 51 27.3 -0.1**
	baz=52,SNR=20				
KMSC	**Kings Mountain**	**82.54 308**	*e*P	**P**	**21 51 28.2 +0.7**
	comp=Z,201nm,1.8s				
KMSC			LR	LR	
	comp=Z,2μm,20.0s				
KMSC	**Kings Mountain**	**82.54 308**	P	**P**	**21 51 27.7 +0.2**
	baz=53,SNR=15				
V54A	**Nebo**	**82.56 308**	P	**P**	**21 51 27.7 +0.1**
	baz=53,SNR=37				
LHSI	**Lahat**	**82.56 100**	P	**P**	**21 51 27.4 -0.4**
MENT	**Mentasta**	**82.56 355**	*e*P	**P**	**21 51 28.1 +1.0**
	comp=Z,95nm,1.0s				
MENT			LR	LR	
	comp=Z,4μm,22.0s				
Y57A	**Sumter**	**82.59 306**	PFAKE		21 51 40.0 +12
Y57A			LR	LR	
	comp=Z,3μm,20.0s				
Y57A	**Sumter**	**82.59 306**	P	**P**	**21 51 27.8 +0.1**
	baz=53				
Z58A	**St. Stephen**	**82.61 305**	P	**P**	**21 51 28.4 +0.6**
	baz=54,SNR=15				
U53A	**Fall Branch**	**82.61 309**	P	**P**	**21 51 27.5 -0.3**
	baz=52,SNR=17				
PAX	**Paxson**	**82.65 356**	*e*P	**P**	**21 51 28.1 +0.5**
	comp=Z,89nm,1.4s				
PAX			LR	LR	
	comp=Z,2μm,21.0s				
PAX	**Paxson**	**82.65 356**	*e*P	**P**	**21 51 28.1 +0.5**
PAX			pmax	pmax	
	comp=Z,89nm,1.4s				
PAX			MLR	MLR	
	comp=Z,2μm,21.0s				
DHY	**Denali Highway**	**82.65 357**	*e*P	**P**	**21 51 27.8 +0.1**
X56A	**White Oak**	**82.73 307**	P	**P**	**21 51 28.7 +0.3**
	baz=53,SNR=21				
M44A	**Midewin, Midew**	**82.80 316**	*e*P	**P**	**21 51 28.9 +0.3**
	comp=Z,197nm,1.3s				
M44A			LR	LR	
	comp=Z,4μm,19.0s				
M44A	**Midewin, Midew**	**82.80 316**	P	**P**	**21 51 28.4 -0.2**
	baz=50,SNR=18				
N45A	**Kentland**	**82.84 315**	P	**P**	**21 51 28.5 -0.4**
	baz=50,SNR=10				
SPMN	**Marine on St.**	**82.88 321**	*e*P	**P**	**21 51 29.1 +0.1**
	comp=Z,107nm,1.1s				
SPMN			LR	LR	
	comp=Z,3μm,19.0s				
SPMN	**Marine on St.**	**82.88 321**	P	**P**	**21 51 28.8 -0.2**
	baz=47,SNR=18				
SFIN	**Lafayette**	**82.89 315**	*e*P	**P**	**21 51 29.1 0.0**
	comp=Z,164nm,1.4s				
SFIN			LR	LR	
	comp=Z,5μm,19.0s				
SFIN	**Lafayette**	**82.89 315**	P	**P**	**21 51 28.9 -0.2**
	baz=50,SNR=13				
S50A	**Richmond**	**82.95 311**	P	**P**	**21 51 29.6 +0.1**
	baz=52,SNR=27				
P47A	**Martinsville**	**82.97 313**	P	**P**	**21 51 29.3 -0.2**
	baz=51,SNR=32				
TTA	**Tatalina**	**82.98 1**	*e*P	**P**	**21 51 29.9 +0.6**
	comp=Z,289nm,1.6s				
TTA			LR	LR	
	comp=Z,2μm,22.0s				
NHSC	**New Hope**	**82.99 305**	*e*P	**P**	**21 51 31.0 +1.3**
NHSC			LR	LR	
	comp=Z,4μm,19.0s				
NHSC	**New Hope**	**82.99 305**	P	**P**	**21 51 30.4 +0.7**
	baz=53,SNR=6.4				
Q48A	**North Vernon**	**82.99 313**	P	**P**	**21 51 29.9 +0.2**
	baz=51,SNR=54				
JSC	**Jenkinsville**	**83.01 307**	*e*P	**P**	**21 51 30.1 +0.2**
	comp=Z,34nm,1.0s				
JSC			LR	LR	
	comp=Z,2μm,19.0s				
PAULI	**Pauline**	**83.05 308**	*e*P	**P**	**21 51 30.8 +0.8**
	comp=Z,89nm,1.3s				
PAULI			LR	LR	
	comp=Z,2μm,22.0s				
JFWS	**Jewell Farm**	**83.05 318**	*e*P	**P**	**21 51 29.8 -0.2**
	comp=Z,103nm,1.0s				
JFWS			LR	LR	
	comp=Z,3μm,19.0s				
JFWS	**Jewell Farm**	**83.05 318**	*e*P	**P**	**21 51 29.8 -0.2**
JFWS			pmax	pmax	
	comp=Z,103nm,1.0s				
JFWS			MLR	MLR	
	comp=Z,3μm,19.0s				
JFWS	**Jewell Farm**	**83.05 318**	P	**P**	**21 51 29.6 -0.3**
	baz=49,SNR=27				
R49A	**Shelbyville**	**83.05 312**	*e*P	**P**	**21 51 30.2 +0.1**
	comp=Z,318nm,1.5s				
R49A			LR	LR	
	comp=Z,4μm,20.0s				
R49A	**Shelbyville**	**83.05 312**	P	**P**	**21 51 30.1 +0.1**
	baz=51,SNR=47				
PMBI	**Palembang**	**83.07 98**	P	**P**	**21 51 29.1 -1.3**
U52A	**Thorn Hill**	**83.10 310**	P	**P**	**21 51 30.5 +0.1**
	baz=52,SNR=19				
T51A	**Gray**	**83.11 310**	P	**P**	**21 51 30.6 +0.2**
	baz=52,SNR=20				
TZTN	**Tazewell**	**83.12 310**	*e*P	**P**	**21 51 30.7 +0.2**
	comp=Z,93nm,1.3s				
TZTN			LR	LR	
	comp=Z,4μm,19.0s				
TZTN	**Tazewell**	**83.12 310**	P	**P**	**21 51 30.6 +0.2**
	baz=52,SNR=22				
W54A	**Cherokee Point**	**83.13 308**	P	**P**	**21 51 30.7 +0.2**
	baz=53,SNR=16				
X55A	**Gracelyn & Ava**	**83.14 307**	P	**P**	**21 51 30.7 +0.1**
	baz=53,SNR=15				
ALF01	**Guarapari-ES**	**83.16 239**	*e*P	**P**	**21 51 31.1 +0.5**
V53A	**Saluda**	**83.18 309**	*e*P	**P**	**21 51 31.1 +0.2**
	comp=Z,58nm,1.3s				
V53A			LR	LR	
	comp=Z,3μm,20.0s				
V53A	**Saluda**	**83.18 309**	P	**P**	**21 51 30.9 0.0**
	baz=52,SNR=18				
JNU	**Nakatsue**	**83.20 54**	P	**P**	**21 51 31.0 +0.1**
	comp=Z,232nm,1.2s,baz=5.0,slow=3.1,SNR=70				
JNU	**Nakatsue**	**83.20 54**	*e*P	**P**	**21 51 30.7 -0.2**
	comp=Z,553nm,1.4s				
JNU			LR	LR	
	comp=Z,5μm,20.0s				
158A	**Hollywood**	**83.22 305**	P	**P**	**21 51 31.5 +0.6**
	baz=53				
Z57A	**Bowman**	**83.23 306**	P	**P**	**21 51 31.4 +0.4**
	baz=53,SNR=22				
N44A	**Piper City**	**83.23 315**	P	**P**	**21 51 30.7 -0.2**
	baz=50,SNR=12				
M43A	**Waltham Townsh**	**83.29 316**	P	**P**	**21 51 31.3 +0.1**
	baz=49,SNR=18				
BLO	**Bloomington**	**83.32 313**	*e*P	**P**	**21 51 31.5 +0.1**
	comp=Z,138nm,1.0s				
BLO			LR	LR	
	comp=Z,5μm,20.0s				
BLO	**Bloomington**	**83.32 313**	*e*P	**P**	**21 51 31.5 +0.1**
BLO			pmax	pmax	
	comp=Z,139nm,1.0s				
BLO			MLR	MLR	
	comp=Z,5μm,20.0s				
L42A	**Oliver, Polo**	**83.33 317**	*e*P	**P**	**21 51 31.6 +0.2**
	comp=Z,201nm,1.2s				
L42A			LR	LR	
	comp=Z,4μm,20.0s				
L42A	**Oliver, Polo**	**83.33 317**	P	**P**	**21 51 31.3 0.0**
	baz=49,SNR=36				
Y56A	**Pelion**	**83.33 306**	P	**P**	**21 51 31.8 +0.2**
	baz=53				
O45A	**Potomac**	**83.35 315**	P	**P**	**21 51 31.1 -0.4**
	baz=50,SNR=8.1				
Q47A	**Bedord North L**	**83.41 313**	P	**P**	**21 51 31.7 -0.1**
	baz=51,SNR=21				
R48A	**Northridge Ran**	**83.41 312**	P	**P**	**21 51 32.0 +0.1**
	baz=51,SNR=18				
S49A	**Springfield**	**83.44 312**	P	**P**	**21 51 32.0 0.0**
	baz=51,SNR=26				
P46A	**Rosedale**	**83.44 314**	P	**P**	**21 51 31.6 -0.4**
	baz=50,SNR=12				
MDSI	**Maura Dua**	**83.47 100**	P	**P**	**21 51 31.2 -1.3**
U51A	**La Follette**	**83.52 310**	P	**P**	**21 51 32.8 +0.3**
	baz=52,SNR=46				
PEA1	**Petropavlovsk-**	**83.55 27**	*e*P	**P**	**21 51 31.1 -1.3**
PEA1			*e*PP	**PP**	**21 54 46.3 +2.2**
PEA1			*e*P'P'df	P'P'df	22 17 56.3 -4.8
PEA0B	**Petropavlovsk-**	**83.56 27**	*e*P	**P**	**21 51 31.6 -0.8**
	comp=Z,300nm,1.6s				
PEA0B			LR	LR	
	comp=Z,4μm,20.0s				
PETK	**Petropavlovsk-**	**83.56 27**	P	**P**	**21 51 31.1 -1.3**
	comp=Z,30nm,0.9s,baz=29,slow=3.4,SNR=51				
PETK			PP	**PP**	**21 54 46.3 +2.2**
	comp=Z,43nm,1.2s,baz=318,slow=7.0,SNR=5.7				
PETK			PKPPKP		22 17 56.3
	comp=Z,1.6nm,0.9s,baz=174,slow=5.8,SNR=2.6				
PETK			LR	LR	22 33 21.6
	comp=Z,4μm,20.4s,baz=304,slow=39				
V52A	**Sevierville**	**83.58 309**	*e*P	**P**	**21 51 32.9 +0.1**
	comp=Z,56nm,1.1s				
V52A			LR	LR	
	comp=Z,4μm,19.0s				
V52A	**Sevierville**	**83.58 309**	P	**P**	**21 51 32.9 +0.1**
	baz=52,SNR=20				
X54A	**Belton**	**83.58 308**	P	**P**	**21 51 32.7 -0.1**
	baz=52,SNR=18				
Y55A	**Saluda**	**83.61 307**	P	**P**	**21 51 33.1 +0.1**
	baz=53,SNR=15				
T50A	**Nancy**	**83.64 311**	P	**P**	**21 51 33.5 +0.4**
	baz=51,SNR=58				
Z56A	**Williston**	**83.66 306**	P	**P**	**21 51 33.6 +0.4**
	baz=53				
LWLI	**Liwa**	**83.68 100**	P	**P**	**21 51 33.5 -0.2**
	comp=Z,81nm,1.2s				
HODGE	**Hodges**	**83.70 307**	*e*P	**P**	**21 51 34.0 +0.6**
	comp=Z,165nm,2.0s				
HODGE			LR	LR	
	comp=Z,2μm,18.0s				
W53A	**Cullowhee**	**83.72 309**	P	**P**	**21 51 33.7 +0.1**
	baz=52,SNR=15				
N43A	**Stutzman Famil**	**83.74 316**	P	**P**	**21 51 33.6 +0.1**
	baz=49,SNR=8.4				
WCI	**Wyandotte Cave**	**83.78 313**	*e*P	**P**	**21 51 34.0 +0.3**
	comp=Z,160nm,1.0s				
WCI			LR	LR	
	comp=Z,3μm,19.0s				
WCI	**Wyandotte Cave**	**83.78 313**	P	**P**	**21 51 34.0 +0.3**
	baz=51				
157A	**Early Branch**	**83.80 305**	P	**P**	**21 51 34.4 +0.4**
	baz=53,SNR=12				
P45A	**Graceland, Par**	**83.82 314**	PFAKE		21 51 50.0 +16
P45A			LR	LR	
	comp=Z,5μm,20.0s				
P45A	**Graceland, Par**	**83.82 314**	P	**P**	**21 51 33.7 -0.2**
	baz=50,SNR=26				
O44A	**Mansfield**	**83.84 315**	P	**P**	**21 51 34.2 +0.1**
	baz=50,SNR=17				
WHY	**Whitehorse**	**83.86 350**	*e*P	**P**	**21 51 33.8 -0.1**
	comp=Z,66nm,1.2s				
WHY			LR	LR	
	comp=Z,4μm,20.0s				
R47A	**Wooly Knot Far**	**83.88 313**	P	**P**	**21 51 34.1 -0.1**
	baz=50,SNR=32				
SCM	**Sheep Creek Mo**	**83.89 356**	*e*P	**P**	**21 51 34.7 +0.7**
	comp=Z,485nm,1.4s				
SCM			LR	LR	
	comp=Z,2μm,22.0s				
SKT	**Skwentna**	**83.90 358**	*e*P	**P**	**21 51 33.5 -0.5**
Q46A	**CEJHS Indians,**	**83.92 314**	P	**P**	**21 51 34.1 -0.3**
	baz=50				
SML	**Sawmill**	**83.96 357**	*e*P	**P**	**21 51 34.7 +0.3**
	comp=Z,482nm,1.6s				
SML			LR	LR	
	comp=Z,2μm,22.0s				
PET	**Petropavlovsk**	**83.98 26**	*e*P	**P**	**21 51 33.5 -1.0**
	comp=Z,137nm,1.3s				
PET			LR	LR	
	comp=Z,3μm,22.0s				
PET	**Petropavlovsk**	**83.98 26**c	*i*P	**P**	**21 51 33.1 -1.3**
PET			*e*		21 54 50.5
PET			*e*S	**S**	**22 01 52.4 -4.3**
PET			*e*PS	**PnS**	**22 02 47.8 -3.0**
PET			*e*SS	**SS**	**22 07 27.6 +3.9**
PET			pmax	pmax	
	comp=Z,600nm,8.0s				
PET			pmax	pmax	
	comp=Z,94nm,1.3s				
PET			pmax	pmax	
	comp=Z,600nm,18.3s				
PET			MLR	MLR	
	comp=Z,4μm,21.0s				
S48A	**Wiedeman Farm,**	**83.99 312**	P	**P**	**21 51 34.8 -0.1**
	baz=51,SNR=36				
U50A	**Jamestown**	**84.02 310**	P	**P**	**21 51 35.3 +0.3**
	baz=51,SNR=49				
T49A	**Edmonton**	**84.02 311**	*e*P	**P**	**21 51 35.2 +0.2**
	comp=Z,199nm,1.5s				
T49A			LR	LR	
	comp=Z,4μm,22.0s				
T49A	**Edmonton**	**84.02 311**	P	**P**	**21 51 35.1 +0.1**
	baz=51,SNR=40				

GHO	Glory Hole Cre	84.02 357	PFAKE			21 51 50.0 +15
GHO			LR	LR		
	comp=Z,2μm,22.0s					
HYT	Haines Junctio	84.04 352	eP	P		21 51 35.8 +0.9
	comp=Z,178nm,1.1s					
HYT			LR	LR		
	comp=Z,4μm,21.0s					
HDIL	Hopedale	84.06 316	eP	P		21 51 35.5 +0.3
	comp=Z,134nm,1.0s					
HDIL			LR	LR		
	comp=Z,4μm,19.0s					
HDIL	Hopedale	84.06 316	P	P		21 51 35.2 0.0
	baz=49,SNR=21					
V51A	Loudon	84.09 310	eP	P		21 51 36.0 +0.5
	comp=Z,127nm,1.3s					
V51A			LR	LR		
	comp=Z,4μm,20.0s					
V51A	Loudon	84.09 310	P	P		21 51 35.9 +0.5
	baz=52,SNR=23					
156A	Sylvania	84.14 306	P	P		21 51 35.7 0.0
	baz=53					
L40A	Anamosa	84.16 318	eP	P		21 51 35.5 -0.1
	comp=Z,229nm,1.0s					
L40A			LR	LR		
	comp=Z,2μm,19.0s					
L40A	Anamosa	84.16 318	P	P		21 51 35.4 -0.3
	baz=48,SNR=72					
Y54A	Tignall	84.20 307	P	P		21 51 36.5 +0.4
	baz=52,SNR=39					
PMR	Palmer	84.21 357	eP	P		21 51 35.9 +0.4
	comp=Z,272nm,1.2s					
PMR			LR	LR		
	comp=Z,2μm,22.0s					
PMR	Palmer	84.21 357	eP	P		21 51 35.9 +0.4
PMR			pmax	pmax		
	comp=Z,272nm,1.2s					
PMR			MLR	MLR		
	comp=Z,2μm,22.0s					
X53A	Estanollee	84.21 308	P	P		21 51 36.2 +0.2
	baz=52,SNR=18					
Z55A	Blythe	84.23 306	P	P		21 51 36.2 +0.1
	baz=52					
M41A	Milan	84.23 317	P	P		21 51 35.8 -0.2
	baz=48,SNR=19					
257A	Skidaway Islan	84.24 305	PFAKE			21 51 50.0 +14
257A			LR	LR		
	comp=Z,2μm,20.0s					
257A	Skidaway Islan	84.24 305	P	P		21 51 36.5 +0.3
	baz=53					
KLI	Kotabumi	84.24 100	P	P		21 51 35.0 -1.4
	comp=Z,119nm,1.0s,comp=Z,5μm					
W52A	Murphy	84.25 309	eP	P		21 51 37.0 +0.7
	comp=Z,82nm,1.2s					
W52A			LR	LR		
	comp=Z,4μm,19.0s					
W52A	Murphy	84.25 309	P	P		21 51 36.3 0.0
	baz=52,SNR=5.3					
CTGM	Chitina Glacie	84.31 353	PFAKE			21 51 50.0 +14
CTGM			LR	LR		
	comp=Z,2μm,21.0s					
KASI	Kota Agung	84.33 101	P	P		21 51 36.0 -0.9
	comp=Z,86nm,1.1s					
BALM	Baldy	84.34 354	eP	P		21 51 37.1 +0.8
	comp=Z,169nm,1.1s					
BALM			LR	LR		
	comp=Z,2μm,22.0s					
BALM	Baldy	84.34 354	eP	P		21 51 37.1 +0.8
BALM			pmax	pmax		
	comp=Z,169nm,1.1s					
BALM			MLR	MLR		
	comp=Z,2μm,22.0s					
MDND	Maddock	84.36 326	eP	P		21 51 36.9 +0.3
	comp=Z,193nm,1.1s					
MDND			LR	LR		
	comp=Z,5μm,21.0s					
MDND	Maddock	84.36 326	P	P		21 51 36.2 -0.3
	baz=43					
KNK	Knik Glacier	84.36 357	eP	P		21 51 37.0 +0.7
	comp=Z,172nm,1.0s					
KNK			LR	LR		
	comp=Z,3μm,22.0s					
SUA	Susitna One	84.40 358	eP	P		21 51 37.0 +0.4
	comp=Z,835nm,1.8s					
SUA			LR	LR		
	comp=Z,3μm,22.0s					
CPCT	Cooper Cave	84.42 309	eP	P		21 51 37.6 +0.6
	comp=Z,123nm,1.2s					
CPCT			LR	LR		
	comp=Z,4μm,21.0s					
Q45A	Warren Harvey,	84.47 314	P	P		21 51 37.0 -0.3
	baz=50,SNR=31					
DIV	Divide	84.50 356	PFAKE			21 51 50.0 +13
DIV			LR	LR		
	comp=Z,3μm,22.0s					
R46A	Gibon Southern	84.53 313	P	P		21 51 37.1 -0.5
	baz=50,SNR=9.5					
X52A	Dahlonega	84.54 308	P	P		21 51 37.9 +0.2
	baz=52,SNR=36					
S47A	Hartford	84.54 312	P	P		21 51 37.5 -0.2
	baz=50,SNR=57					
OLIL	Olney	84.54 314	eP	P		21 51 37.6 0.0
	comp=Z,103nm,0.8s					
OLIL			LR	LR		
	comp=Z,4μm,21.0s					
U49A	Red Boiling Sp	84.54 311	P	P		21 51 37.8 +0.1
	baz=51,SNR=58					
T48A	Bowling Green	84.55 312	P	P		21 51 38.1 +0.4
	baz=50,SNR=71					
SDDR	Presa de Saban	84.62 289	eP	P		21 51 39.9 +1.5
	comp=Z,329nm,1.8s					
SDDR			LR	LR		
	comp=Z,2μm,22.0s					
V50A	Pikevile	84.64 310	P	P		21 51 38.7 +0.5
	baz=51,SNR=48					
CRQM	Cirque	84.68 354	eP	P		21 51 36.4 -1.8
	comp=Z,282nm,1.4s					
CRQM			LR	LR		
	comp=Z,3μm,22.0s					
Z54A	Sparta	84.69 307	P	P		21 51 38.8 +0.3
	baz=52,SNR=22					
RC01	Rabbit Creek A	84.74 358	eP	P		21 51 38.4 +0.2
	comp=Z,198nm,1.0s					
RC01			LR	LR		
	comp=Z,2μm,22.0s					
W51A	Cleveland	84.75 309	P	P		21 51 39.1 +0.3
	baz=51,SNR=24					
USIN	University of	84.78 313	eP	P		21 51 38.1 -0.8
	comp=Z,225nm,1.4s					
USIN			LR	LR		
	comp=Z,3μm,20.0s					
P43A	Skaggs, Pawnee	84.79 315	P	P		21 51 39.0 +0.1
	baz=49,SNR=22					
Y53A	Monroe	84.80 308	P	P		21 51 39.2 +0.2
	baz=52,SNR=35					
155A	Kite	84.81 306	P	P		21 51 39.4 +0.3
	baz=52,SNR=6.8					
256A	Glennville	84.82 305	P	P		21 51 39.5 +0.4
	baz=52,SNR=5.6					
SVW2	Sparrevohn	84.82 0	eP	P		21 51 39.7 +1.1
	comp=Z,83nm,1.1s					
GLI	Glacier Island	84.83 356	PFAKE			21 51 50.0 +11
GLI			LR	LR		
	comp=Z,2μm,22.0s					
BLSI	Bandar Lampung	84.85 100	P	P		21 51 38.5 -1.0
N41A	Harden Midland	84.85 317	eP	P		21 51 39.5 +0.3
	comp=Z,137nm,1.1s					
N41A			LR	LR		
	comp=Z,5μm,20.0s					
N41A	Harden Midland	84.85 317	P	P		21 51 39.0 -0.1
	baz=48,SNR=6.8					
SKR	Severo-Kuril's	84.86 29	eP	P		21 51 34.2 -4.7
SKR			eS	S		22 01 51.5 -14
SKR			eSSS	SSS		22 11 09.4
SKR			pmax	pmax		
	comp=Z,27nm,1.0s					
SKR			pmax	pmax		
	comp=Z,200nm,10.8s					
SKR			pmax	pmax		
	comp=Z,600nm,7.7s					
SKR			MLR	MLR		
	comp=Z,2μm,20.0s					
R45A	Skylar, Fairfi	84.94 314	P	P		21 51 39.5 -0.1
	baz=50,SNR=54					
S46A	Don Dixon Farm	84.99 313	P	P		21 51 39.6 -0.3
	baz=50,SNR=18					
GOGA	Godfrey	84.99 307	eP	P		21 51 40.9 +0.9
	comp=Z,71nm,1.1s					
GOGA			LR	LR		
	comp=Z,2μm,19.0s					
GOGA	Godfrey	84.99 307	eP	P		21 51 40.9 +0.9
GOGA			pmax	pmax		
	comp=Z,71nm,1.1s					
GOGA			MLR	MLR		
	comp=Z,2μm,19.0s					
GOGA	Godfrey	84.99 307	P	P		21 51 40.2 +0.2
	baz=52,SNR=22					
U48A	Cassie Pea, Po	85.02 311	P	P		21 51 40.2 +0.1
	baz=50,SNR=29					
ERM	Erimo	85.05 41	eP	P		21 51 41.4 +1.3
	comp=Z,454nm,1.3s					
ERM			LR	LR		
	comp=Z,4μm,20.0s					
ERM	Erimo	85.05 41	c iP	P		21 51 40.9 +0.8
ERM			pmax	pmax		
	comp=Z,310nm,1.6s					
PCA	Pinnacle	85.06 353	eP	P		21 51 41.2 +1.2
	comp=Z,231nm,1.1s					
T47A	Sharon Grove	85.06 312	eP	P		21 51 40.3 0.0
	comp=Z,296nm,1.3s					
T47A			LR	LR		
	comp=Z,2μm,18.0s					
T47A	Sharon Grove	85.06 312	P	P		21 51 40.1 -0.2
	baz=50,SNR=61					
SKAG	Skagway	85.08 350	eP	P		21 51 41.1 +1.2
	comp=Z,131nm,1.4s					
SKAG			LR	LR		
	comp=Z,2μm,19.0s					
W50A	Signal Mountai	85.08 310	eP	P		21 51 41.0 +0.6
	comp=Z,156nm,1.4s					
W50A			LR	LR		
	comp=Z,6μm,19.0s					
W50A	Signal Mountai	85.08 310	P	P		21 51 40.9 +0.4
	baz=51,SNR=30					
EYAK	Cordova Ski Ar	85.08 356	eP	P		21 51 40.9 +1.0
EYAK			LR	LR		
	comp=Z,4μm,22.0s					
YUK	Yuzh-Kuril'sk	85.09 39	c iP	P		21 51 40.7 +0.5
YUK			i *PP	sP		21 51 53.2 +2.6
YUK			i			21 54 59.2
YUK			ePPP	PPP		21 56 49.8
YUK			i S	S		22 02 01.1 -7.1
YUK			eSS	SS		22 07 40.4 -0.2
YUK			eSSS	SSS		22 11 11.4
YUK			pmax	pmax		
	comp=Z,931nm,1.3s					
YUK			pmax	pmax		
	comp=N,220nm,1.1s					
YUK			pmax	pmax		
	comp=E,176nm,1.0s					
YUK			pmax	pmax		
	comp=Z,1μm,1.4s					
V49A	McMinnville	85.09 310	P	P		21 51 40.5 0.0
	baz=51,SNR=35					
JOW	Kunigami	85.10 61	P	P		21 51 40.8 +0.2
	comp=Z,12nm,1.1s,baz=150,slow=13,SNR=15					
JOW	Kunigami	85.10 61	eP	P		21 51 41.2 +0.6
	comp=Z,153nm,1.3s					
JOW			LR	LR		
	comp=Z,2μm,20.0s					
Y52A	Lilburn	85.10 308	eP	P		21 51 41.1 +0.6
	comp=Z,99nm,1.1s					
Y52A			LR	LR		
	comp=Z,2μm,18.0s					
Y52A	Lilburn	85.10 308	P	P		21 51 40.8 +0.3
	baz=52,SNR=25					
BCPM	Bancas Point	85.14 352	PFAKE			21 51 50.0 +10
BCPM			LR	LR		
	comp=Z,2μm,20.0s					
Z53A	Monticello	85.14 307	P	P		21 51 41.0 +0.3
	baz=52,SNR=20					
KSM	Kuching	85.14 92	eP	P		21 51 42.4 +1.3
	comp=Z,139nm,1.3s					
KSM			LR	LR		
	comp=Z,2μm,19.0s					
N40A	Mertquake, Sal	85.15 317	P	P		21 51 40.2 -0.4
	baz=48,SNR=22					
CLTN	Cedars of Leba	85.16 311	eP	P		21 51 41.0 +0.2
	comp=Z,81nm,1.2s					
CLTN			LR	LR		
	comp=Z,2μm,22.0s					
X51A	Calhoun	85.18 309	eP	P		21 51 41.4 +0.5
	comp=Z,126nm,1.4s					
X51A			LR	LR		
	comp=Z,3μm,20.0s					
X51A	Calhoun	85.18 309	P	P		21 51 41.1 +0.2
	baz=51,SNR=9.9					
HMT	Hamilton	85.19 355	eP	P		21 51 41.6 +1.1
	comp=Z,97nm,1.2s					
HMT			LR	LR		
	comp=Z,2μm,21.0s					
DLBC	Dease Lake	85.19 347	eP	P		21 51 42.0 +1.4
	comp=Z,242nm,1.9s					
DLBC			LR	LR		
	comp=Z,4μm,19.0s					
255A	Hazlehurst	85.25 306	PFAKE			21 51 50.0 +8.7
255A			LR	LR		
	comp=Z,3μm,19.0s					
255A	Hazlehurst	85.25 306	P	P		21 51 41.8 +0.5
	baz=52,SNR=10					
154A	Montrose	85.25 306	PFAKE			21 51 50.0 +8.7
154A			LR	LR		
	comp=Z,2μm,20.0s					
154A	Montrose	85.25 306	P	P		21 51 41.7 +0.4
	baz=52,SNR=5.4					
KUR	Kuril'sk	85.25 37	i P	P		21 51 40.8 -0.2
KUR			e			21 54 57.7
KUR			i S	S		22 02 03.6 -6.1
KUR			eSS	SS		22 07 44.7 +1.8
KUR			eSSS	SSS		22 11 11.8
KUR			pmax	pmax		
	comp=Z,413nm,1.4s					
KUR			pmax	pmax		
	comp=Z,932nm,5.2s					
DUB01	Friburgo-RJ	85.28 239	eP	P		21 51 41.6 +0.1
TPI	Tanjungpandan	85.33 97	P	P		21 51 40.8 -1.1
SCIA	State Center	85.36 319	eP	P		21 51 42.1 +0.4
	comp=Z,414nm,1.9s					
SCIA			LR	LR		
	comp=Z,5μm,20.0s					
SCIA	State Center	85.36 319	P	P		21 51 41.6 -0.1
	baz=47,SNR=7.8					
356A	Blackshear	85.38 305	P	P		21 51 42.4 +0.5
	baz=52					
457A	Yulee	85.42 304	P	P		21 51 41.7 -0.4
	baz=52					
RSO	Redoubt South	85.44 359	eP	P		21 51 41.7 -0.3
BDFB	Brasilia	85.45 248	P	P		21 51 42.3 -0.2
	comp=Z,23nm,0.7s,baz=51,slow=7.1,SNR=44					
BDFB			LR	LR		22 32 31.6
	comp=Z,5μm,18.2s,baz=56,slow=38					
BDFB	Brasilia	85.45 248	eP	P		21 51 42.3 -0.2
BDFB			eP	PcP		21 51 43.5 -2.0
BDFB			LR	LR		
	comp=Z,7μm,21.0s					
SWET	Sewanee	85.46 310	eP	P		21 51 42.6 +0.3
	comp=Z,129nm,1.6s					
SWET			LR	LR		
	comp=Z,6μm,20.0s					
T46A	Princeton	85.51 312	P	P		21 51 41.9 -0.6
	baz=50,SNR=28					
U47A	Clarksville	85.53 312	P	P		21 51 42.4 -0.2
	baz=50,SNR=74					
YKU2	Yakutat	85.57 352	PFAKE			21 51 50.0 +7.7
YKU2			LR	LR		
	comp=Z,2μm,20.0s					
456A	Hilliard	85.67 304	PFAKE			21 51 50.0 +6.6
456A			LR	LR		
	comp=Z,3μm,20.0s					
456A	Hilliard	85.67 304	P	P		21 51 44.0 +0.6
	baz=52					
V48A	Smith Brothers	85.69 311	eP	P		21 51 43.3 -0.1
	comp=Z,129nm,1.3s					
V48A			LR	LR		
	comp=Z,4μm,22.0s					
V48A	Smith Brothers	85.69 311	P	P		21 51 43.1 -0.3
	baz=50,SNR=38					
153A	Fort Valley	85.70 307	P	P		21 51 43.6 0.0
	baz=52					
SEW	Seward	85.71 357	eP	P		21 51 43.7 +0.7
	comp=Z,300nm,1.3s					
SEW			LR	LR		
	comp=Z,2μm,22.0s					
W49A	Belvidere	85.73 310	P	P		21 51 43.5 -0.1
	baz=50,SNR=35					
Y51A	Rockmart	85.73 309	P	P		21 51 43.9 +0.1
	baz=51,SNR=43					
Z52A	Williamson	85.75 308	P	P		21 51 44.0 +0.2
	baz=51,SNR=15					
X50B	Fort Payne	85.76 309	P	P		21 51 43.8 0.0
	baz=51,SNR=28					
254A	Abbeville	85.78 306	P	P		21 51 44.1 +0.2
	baz=52,SNR=14					
MJB9	Matsu-Tunnel	85.79 48	eP	P		21 51 44.3 +0.3
	comp=Z,365nm,1.3s					
MJB9			LR	LR		
	comp=Z,5μm,19.0s					
MAJO	Matsushiro	85.80 48	eP	P		21 51 44.2 +0.1
	comp=Z,373nm,1.3s					
MAJO			LR	LR		
	comp=Z,5μm,19.0s					
MAJO	Matsushiro	85.80 48	c iP	P		21 51 44.1 +0.1
MAJO			pmax	pmax		
	comp=Z,253nm,1.3s					
MAT	Matsushiro	85.80 48	P	P		21 51 43.7 -0.3
MAT			S	S		22 02 08.8 -6.7
MJAR	Matsushiro Arr	85.80 48	P	P		21 51 44.4 +0.4
	comp=Z,185nm,1.1s,baz=300,slow=5.3,SNR=359					
INU	Inuyama	85.82 50	eP	P		21 51 44.1 0.0
	comp=Z,185nm,1.3s					
INU			LR	LR		
	comp=Z,3μm,20.0s					
BESE	Bessie Mountai	85.85 350	eP	P		21 51 45.3 +1.4
	comp=Z,131nm,1.2s					
BESE			LR	LR		
	comp=Z,2μm,21.0s					
355A	Pearson	85.86 305	P	P		21 51 44.2 -0.2
	baz=52					
SLM	Saint Louis	85.87 315	eP	P		21 51 45.1 +0.8
	comp=Z,202nm,1.1s					
SIUC	Southern Illin	85.88 314	eP	P		21 51 44.4 +0.1
	comp=Z,322nm,1.3s					
SIUC			LR	LR		
	comp=Z,5μm,20.0s					
ECSD	EROS Data Cent	85.88 322	eP	P		21 51 44.1 -0.1
	comp=Z,123nm,1.0s					
ECSD			LR	LR		
	comp=Z,3μm,19.0s					
ECSD	EROS Data Cent	85.88 322	P	P		21 51 44.3 +0.1
	baz=45,SNR=103					
557A	Orange Park	85.90 304	P	P		21 51 44.5 0.0
	baz=52					
S44A	Carbondale	85.91 314	P	P		21 51 44.3 -0.2
	baz=49,SNR=44					
CGJI	Cibinong	85.92 101	P	P		21 51 44.0 -0.9
DGMT	Dagmar	85.93 329	eP	P		21 51 45.1 +0.7
	comp=Z,253nm,1.4s					
DGMT			LR	LR		
	comp=Z,4μm,20.0s					
DGMT	Dagmar	85.93 329	P	P		21 51 44.6 +0.2
	baz=40,SNR=9.5					
658A	Bunnell	85.94 303	PFAKE			21 52 00.0 +15
658A			LR	LR		
	comp=Z,2μm,20.0s					
658A	Bunnell	85.94 303	P	P		21 51 44.9 +0.1
	baz=53					
T45A	Paducah	85.98 313	PFAKE			21 52 00.0 +15
T45A			LR	LR		
	comp=Z,4μm,21.0s					
T45A	Paducah	85.98 313	P	P		21 51 44.3 -0.5
	baz=49					
PMNB	Patos De Minas	86.02 244	eP	P		21 51 45.8 +0.5
WVT	Waverly	86.06 312	eP	P		21 51 44.7 -0.6
	comp=Z,68nm,0.8s					
WVT			LR	LR		
	comp=Z,3μm,18.0s					
WVT	Waverly	86.06 312	eP	P		21 51 44.7 -0.6
WVT			pmax	pmax		
	comp=Z,68nm,0.8s					
WVT			MLR	MLR		
	comp=Z,3μm,18.0s					
WVT	Waverly	86.06 312	P	P		21 51 44.7 -0.6
	baz=50					
V47A	Nunnelly	86.06 311	P	P		21 51 44.7 -0.6
	baz=50,SNR=43					
JIS	Juneau Island	86.08 349	eP	P		21 51 46.3 +1.5
	comp=Z,158nm,1.3s					
JIS			LR	LR		
	comp=Z,3μm,20.0s					
BRLK	Bradley Lake	86.10 358	eP	P		21 51 45.4 +0.3
	comp=Z,392nm,1.6s					
BRLK			LR	LR		
	comp=Z,2μm,22.0s					
U46A	Springville	86.13 312	P	P		21 51 45.0 -0.6
	baz=50,SNR=11					
W48A	Pulaski	86.14 310	P	P		21 51 45.6 -0.1
	baz=50,SNR=47					
X49A	Woodville	86.16 310	P	P		21 51 46.1 +0.4
	baz=50,SNR=39					
VAS01	Vassouras-RJ	86.17 240	eP	P		21 51 46.3 +0.5
Z51A	Franklin	86.17 308	P	P		21 51 46.1 +0.2
	baz=51,SNR=13					
Y50A	Piedmont	86.17 309	P	P		21 51 46.3 +0.4
	baz=51,SNR=36					
SBUM	Sibu	86.18 90	eP	P		21 51 47.7 +1.5
	comp=Z,107nm,1.4s					
SBUM			LR	LR		
	comp=Z,900nm,19.0s					
SBUM	Sibu	86.18 90	P	P		21 51 48.0 +1.8
HOM	Homer	86.23 358	eP	P		21 51 46.5 +0.9
	comp=Z,516nm,1.2s					
HOM			LR	LR		
	comp=Z,3μm,22.0s					
MID	Middleton Isla	86.23 356	eP	P		21 51 47.2 +1.6
	comp=Z,263nm,1.2s					
MID			LR	LR		
	comp=Z,2μm,21.0s					
657A	Interlachen	86.26 303	P	P		21 51 46.5 +0.2
	baz=52					
253A	Americus	86.27 307	eP	P		21 51 47.0 +0.7
	comp=Z,544nm,1.9s					
253A			LR	LR		
	comp=Z,2μm,21.0s					
253A	Americus	86.27 307	P	P		21 51 46.1 -0.2
	baz=51,SNR=7.2					
152A	Waverly Hall	86.28 307	eP	P		21 51 46.5 +0.1
	comp=Z,97nm,1.3s					
152A			LR	LR		
	comp=Z,1μm,20.0s					
152A	Waverly Hall	86.28 307	P	P		21 51 46.4 0.0
	baz=51,SNR=26					
TIGA	Tifton	86.29 306	PFAKE			21 52 00.0 +14
TIGA			LR	LR		
	comp=Z,3μm,20.0s					
TIGA	Tifton	86.29 306	P	P		21 51 46.8 +0.3
	baz=52,SNR=7.1					
455A	Stateville	86.34 305	P	P		21 51 47.3 +0.5
	baz=52,SNR=5.6					
CNPM	China Poot	86.35 358	eP	P		21 51 46.6 +0.3
	comp=Z,261nm,1.3s					
CNPM			LR	LR		
	comp=Z,3μm,22.0s					
556A	Lake Butler	86.38 304	P	P		21 51 47.2 +0.3
	baz=52,SNR=7.5					
PTGA	Pitinga	86.41 267	eP	P		21 51 48.4 +1.1
	comp=Z,80nm,1.1s					
PTGA			LR	LR		
	comp=Z,2μm,22.0s					
PTGA	Pitinga	86.41 267	eP	P		21 51 48.0 +0.7
FVM	French Village	86.42 314	eP	P		21 51 47.0 0.0
	comp=Z,145nm,0.9s					
FVM			LR	LR		
	comp=Z,4μm,19.0s					
FVM	French Village	86.42 314	eP	P		21 51 47.0 0.0
FVM			pmax	pmax		
	comp=Z,145nm,0.9s					
FVM			MLR	MLR		
	comp=Z,4μm,19.0s					
V46A	Holladay	86.45 312	P	P		21 51 46.4 -0.8
	baz=50,SNR=73					
W47A	Westpoint	86.48 311	P	P		21 51 46.7 -0.7
	baz=50,SNR=11					
SUSD	Miller	86.54 324	P	P		21 51 47.3 -0.2
	baz=43,SNR=14					
Y49A	Blount Mountai	86.63 309	eP	P		21 51 48.4 +0.2
	comp=Z,150nm,1.4s					
Y49A			LR	LR		
	comp=Z,4μm,20.0s					
Y49A	Blount Mountai	86.63 309	P	P		21 51 48.0 -0.1
	baz=50,SNR=31					
X48A	Hartselle	86.65 310	eP	P		21 51 48.2 -0.1
	comp=Z,137nm,1.0s					
X48A			LR	LR		
	comp=Z,6μm,20.0s					

X48A	Hartselle	86.65 310	P	P	21 51 48.1	-0.1
	baz=50,SNR=54					
555A	McAlpin	86.68 304	PFAKE		21 52 00.0	+12
555A			LR	LR		
	comp=Z,2μm,20.0s					
555A	McAlpin	86.68 304	P	P	21 51 47.9	-0.5
	baz=52					
Z50A	Ashland	86.69 308	eP	P	21 51 48.7	+0.2
	comp=Z,100nm,1.1s					
Z50A			LR	LR		
	comp=Z,3μm,19.0s					
Z50A	Ashland	86.69 308	P	P	21 51 48.6	+0.1
	baz=50,SNR=44					
252A	Lumpkin	86.71 307	P	P	21 51 48.5	-0.1
	baz=51,SNR=6.5					
858A	St. Cloud	86.74 302	P	P	21 51 49.1	+0.3
	baz=52					
060A	Indiantown	86.74 301	PFAKE		21 52 00.0	+11
060A			LR	LR		
	comp=Z,2μm,20.0s					
060A	Indiantown	86.74 301	P	P	21 51 48.2	-0.6
	baz=53					
151A	Opelika	86.77 308	P	P	21 51 48.7	-0.1
	baz=51,SNR=17					
454A	Quitman	86.77 305	P	P	21 51 48.6	-0.3
	baz=52,SNR=6.8					
353A	Camilla	86.77 306	P	P	21 51 48.7	-0.2
	baz=51					
757A	Oxford	86.79 303	P	P	21 51 49.4	+0.5
	baz=52					
TGY	Tagaytay City	86.80 75	P	P	21 51 50.0	+0.7
	comp=Z,115nm,0.4s,baz=292,slow=16,SNR=3.7					
CCM	Cathedral Cave	86.85 315	eP	P	21 51 49.4	+0.2
	comp=Z,130nm,0.9s					
CCM			LR	LR		
	comp=Z,5μm,20.0s					
CCM	Cathedral Cave	86.85 315	eP	P	21 51 49.4	+0.2
CCM			pmax	pmax		
	comp=Z,130nm,0.9s					
CCM			MLR	MLR		
	comp=Z,5μm,20.0s					
CCM	Cathedral Cave	86.85 315	P	P	21 51 49.3	+0.2
	baz=48					
656A	Willston	86.85 304	eP	P	21 51 50.4	+1.1
	comp=Z,109nm,1.2s					
656A			LR	LR		
	comp=Z,2μm,19.0s					
656A	Willston	86.85 304	P	P	21 51 49.7	+0.4
	baz=52					
DWPF	Disney Wildern	86.85 302	eP	P	21 51 50.8	+1.5
	comp=Z,119nm,1.3s					
DWPF			LR	LR		
	comp=Z,1μm,21.0s					
DWPF	Disney Wildern	86.85 302	P	P	21 51 49.5	+0.3
	baz=52					
GLAT	Glass	86.86 313	PFAKE		21 52 00.0	+11
GLAT			LR	LR		
	comp=Z,3μm,20.0s					
PARMO	Parma	86.89 313	eP	P	21 51 50.3	+1.0
	comp=Z,540nm,1.4s					
PARMO			LR	LR		
	comp=Z,4μm,21.0s					
PLAL	Pickwick Lake	86.96 311	eP	P	21 51 49.0	-0.7
	comp=Z,108nm,0.9s					
PLAL			LR	LR		
	comp=Z,3μm,20.0s					
PVMO	Portageville	87.02 313	PFAKE		21 52 00.0	+10
PVMO			LR	LR		
	comp=Z,4μm,22.0s					
GTBY	Guantanamo Bay	87.04 292	PFAKE		21 52 00.0	+10
GTBY			LR	LR		
	comp=Z,2μm,21.0s					
W46A	Michie	87.05 311	P	P	21 51 49.2	-1.0
	baz=49,SNR=11					
Y48A	Jasper	87.07 310	P	P	21 51 50.1	-0.2
	baz=50,SNR=30					
251A	Midway	87.09 307	P	P	21 51 50.6	+0.2
	baz=51,SNR=20					
X47A	Russelville	87.12 310	P	P	21 51 49.5	-1.0
	baz=50,SNR=23					
Z49A	Columbiana	87.12 309	P	P	21 51 50.8	+0.2
	baz=50,SNR=56					
HALT	Halls	87.13 312	PFAKE		21 52 00.0	+9.5
HALT			LR	LR		
	comp=Z,4μm,19.0s					
453A	Whigham	87.15 306	eP	P	21 51 51.5	+0.8
	comp=Z,101nm,1.1s					
453A			LR	LR		
	comp=Z,3μm,20.0s					
453A	Whigham	87.15 306	P	P	21 51 50.7	+0.1
	baz=51					
352A	Blakely	87.16 307	eP	P	21 51 51.7	+0.9
	comp=Z,99nm,1.3s					
352A			LR	LR		
	comp=Z,2μm,20.0s					
352A	Blakely	87.16 307	P	P	21 51 50.4	-0.3
	baz=51					
150A	Eclectic	87.17 308	P	P	21 51 51.1	+0.3
	baz=50,SNR=51					
554A	Perry	87.19 305	P	P	21 51 51.0	+0.1
	baz=52					
PBMO	Poplar Bluff	87.22 314	eP	P	21 51 50.9	0.0
	comp=Z,86nm,1.0s					
PBMO			LR	LR		
	comp=Z,4μm,20.0s					
655A	Horseshoe Beac	87.26 304	P	P	21 51 51.5	+0.3
	baz=52					
060Z	West Palm Beac	87.26 300	P	P	21 51 50.9	-0.4
	baz=53					
857A	Zephyrhills	87.31 303	P	P	21 51 51.9	+0.4
	baz=52,SNR=5.9					
059A	Moore Haven	87.34 301	PFAKE		21 52 00.0	+8.3
059A			LR	LR		
	comp=Z,2μm,19.0s					
059A	Moore Haven	87.34 301	P	P	21 51 52.1	+0.4
	baz=52					
SIT	Sitka	87.39 349	eP	P	21 51 52.6	+1.3
	comp=Z,140nm,1.3s					
SIT			LR	LR		
	comp=Z,2μm,18.0s					
958A	Wauchula	87.40 302	P	P	21 51 52.2	+0.3
	baz=52					
KKM	Kota Kinabalu	87.47 84	eP	P	21 51 53.6	+1.0
	comp=Z,119nm,1.2s					
KKM			LR	LR		
	comp=Z,1μm,22.0s					
KKM	Kota Kinabalu	87.47 84	P	P	21 51 54.0	+1.4
GNAR	Gosnell	87.51 313	eP	P	21 51 53.3	+1.0
	comp=Z,326nm,1.1s					
GNAR			LR	LR		
	comp=Z,3μm,20.0s					
WRAK	Wrangell Islan	87.52 348	eP	P	21 51 53.5	+1.5
	comp=Z,64nm,1.0s					
WRAK			LR	LR		
	comp=Z,2μm,20.0s					
LRAL	Lakeview Retre	87.53 309	eP	P	21 51 52.7	+0.2
	comp=Z,270nm,1.2s					
LRAL			LR	LR		
	comp=Z,4μm,19.0s					
LRAL	Lakeview Retre	87.53 309	P	P	21 51 52.8	+0.3
	baz=50,SNR=94					
X46A	Booneville	87.55 311	P	P	21 51 51.9	-0.6
	baz=49,SNR=14					
LEM	Lembang	87.61 100	P	P	21 51 52.5	-0.8
	comp=Z,48nm,1.1s,baz=253,slow=4.2,SNR=16					
LEM	Lembang	87.61 100	P	P	21 51 52.2	-1.1
553A	Crawfordville	87.64 305	P	P	21 51 53.4	+0.4
	baz=51					
149A	Jones	87.67 308	P	P	21 51 53.3	+0.1
	baz=50,SNR=58					
957A	Wimauma	87.68 302	PFAKE		21 52 00.0	+6.7
957A			LR	LR		
	comp=Z,1μm,20.0s					
957A	Wimauma	87.68 302	P	P	21 51 53.8	+0.5
	baz=52					
452A	Marianna	87.73 306	P	P	21 51 53.4	-0.1
	baz=51					
250A	Grady	87.73 308	eP	P	21 51 54.0	+0.5
	comp=Z,394nm,1.4s					
250A			LR	LR		
	comp=Z,3μm,19.0s					
250A	Grady	87.73 308	P	P	21 51 53.8	+0.3
	baz=50,SNR=20					
058A	Arcadia	87.75 301	P	P	21 51 53.9	+0.2
	baz=52					
SPIA	Saint Paul Isl	87.82 8	PFAKE		21 52 10.0	+17
SPIA			LR	LR		
	comp=Z,4μm,20.0s					
061Z	Ochoppi	87.84 300	PFAKE		21 52 10.0	+16
061Z			LR	LR		
	comp=Z,2μm,20.0s					
061Z	Ochoppi	87.84 300	P	P	21 51 54.7	+0.6
	baz=53					
059Z	Ave Maria	87.94 301	P	P	21 51 55.3	+0.7
	baz=52					
MET	Memphis--Engin	88.02 312	PFAKE		21 52 10.0	+15
MET			LR	LR		
	comp=Z,4μm,18.0s					
OXF	Oxford	88.09 311	eP	P	21 51 54.5	-0.6
	comp=Z,312nm,1.3s					
OXF			LR	LR		
	comp=Z,3μm,22.0s					
OXF	Oxford	88.09 311	eP	P	21 51 54.5	-0.6
OXF			pmax	pmax		
	comp=Z,312nm,1.3s					
OXF			MLR	MLR		
	comp=Z,3μm,22.0s					
OXF	Oxford	88.09 311	P	P	21 51 54.0	-1.1
	baz=49,SNR=9.5					
KDAK	Kodiak Island	88.13 359	eP	P	21 51 55.7	+0.9
	comp=Z,332nm,1.3s					
KDAK			LR	LR		
	comp=Z,2μm,21.0s					
KDAK	Kodiak Island	88.13 359	i P	P	21 51 55.7	+0.9
350A	Dozier	88.13 307	P	P	21 51 55.7	+0.3
	baz=50					
148A	Greensboro	88.15 309	P	P	21 51 55.4	0.0
	baz=50,SNR=8.1					
HBAR	Harrisburg	88.17 313	PFAKE		21 52 10.0	+15
HBAR			LR	LR		
	comp=Z,3μm,20.0s					
LAO	LASA Array	88.18 329	eP	P	21 51 56.4	+1.0
	comp=Z,213nm,1.0s					
LAO			LR	LR		
	comp=Z,4μm,20.0s					
LAO	LASA Array	88.18 329	P	P	21 51 56.2	+0.8
	baz=38,SNR=32					
CISI	Cisompet, Garu	88.19 100	eP	P	21 51 54.5	-1.5
CISI			LR	LR		
	comp=Z,1μm,21.0s					
CISI	Cisompet, Garu	88.19 100	P	P	21 51 55.3	-0.6
552A	Lynn Haven	88.25 306	P	P	21 51 55.4	-0.6
	baz=51					
249A	Camden	88.29 308	P	P	21 51 56.5	+0.4
	baz=50,SNR=39					
BGNE	Belgrade	88.33 321	eP	P	21 51 56.6	+0.3
	comp=Z,364nm,1.2s					
BGNE			LR	LR		
	comp=Z,3μm,20.0s					
BGNE	Belgrade	88.33 321	P	P	21 51 56.4	+0.1
	baz=44,SNR=19					
CRAG	Craig	88.56 348	eP	P	21 51 58.1	+1.2
	comp=Z,50nm,1.4s					
EGMT	Eagleton	88.56 332	eP	P	21 51 58.1	+0.8
	comp=Z,375nm,1.7s					
EGMT			LR	LR		
	comp=Z,4μm,19.0s					
EGMT	Eagleton	88.56 332	P	P	21 51 57.4	+0.1
	baz=36,SNR=26					
450A	Crestview	88.69 307	P	P	21 51 58.6	+0.5
	baz=50					
OHAK	Old Harbor	88.70 359	eP	P	21 51 58.5	+1.0
	comp=Z,228nm,1.0s					
OHAK			LR	LR		
	comp=Z,3μm,21.0s					
349A	Repton	88.73 308	P	P	21 51 59.0	+0.8
	baz=50,SNR=13					
CLDB	Colider	88.75 256	eP	P	21 51 58.2	-0.3
BRAL	Brewton	88.76 307	PFAKE		21 52 10.0	+12
BRAL			LR	LR		
	comp=Z,3μm,19.0s					
BRAL	Brewton	88.76 307	P	P	21 51 58.8	+0.5
	baz=50,SNR=7.3					
FCAR	Ozark Folk Cen	88.83 314	eP	P	21 51 58.5	-0.1
	comp=Z,73nm,1.4s					
FCAR			LR	LR		
	comp=Z,3μm,18.0s					
U40A	Yellville	88.94 315	P	P	21 51 59.0	-0.1
	baz=47,SNR=17					
X43A	Marvell	89.00 312	PFAKE		21 52 10.0	+11
X43A			LR	LR		
	comp=Z,4μm,18.0s					
X43A	Marvell	89.00 312	P	P	21 51 59.4	0.0
	baz=48					
JHJ2	Mitsune	89.04 50	PFAKE		21 52 10.0	+10
JHJ2			LR	LR		
	comp=Z,2μm,19.0s					
SMY	Shemya	89.07 18	eP	P	21 51 58.9	-0.5
	comp=Z,130nm,1.2s					
SMY			LR	LR		
	comp=Z,4μm,22.0s					
SMY	Shemya	89.07 18	eP	P	21 51 58.9	-0.5
SMY			pmax	pmax		
	comp=Z,130nm,1.2s					
SMY			MLR	MLR		
	comp=Z,4μm,22.0s					
BB19B	Bebedouro	89.12 244	eP	P	21 52 01.6	+1.5
449A	Pace	89.13 307	P	P	21 52 01.2	+1.1
	baz=50					
KSU1	Kansas State U	89.17 319	PFAKE		21 52 10.0	+10
KSU1			LR	LR		
	comp=Z,4μm,19.0s					
KSU1	Kansas State U	89.17 319	P	P	21 51 59.9	-0.3
	baz=45,SNR=7.1					
RSSD	Black Hills	89.20 326	eP	P	21 52 00.7	+0.2
	comp=Z,120nm,1.3s					
RSSD			LR	LR		
	comp=Z,5μm,21.0s					
RSSD	Black Hills	89.20 326	eP	P	21 52 00.7	+0.2
RSSD			pmax	pmax		
	comp=Z,120nm,1.3s					
RSSD			MLR	MLR		
	comp=Z,5μm,21.0s					
RSSD	Black Hills	89.20 326	P	P	21 52 00.9	+0.4
	baz=40					
RCLB	Rio Claro- Sao	89.21 242	eP	P	21 52 01.6	+1.0
WALA	Waterton Lakes	89.26 334	eP	P	21 52 00.1	-0.4
	comp=Z,72nm,1.1s					
WALA			LR	LR		
	comp=Z,4μm,20.0s					
URIC	Uribia, Colomb	89.30 284	eP	P	21 52 00.8	-0.3
WHAR	Wooly Hollow	89.33 313	eP	P	21 52 01.2	+0.2
	comp=Z,69nm,1.3s					
WHAR			LR	LR		
	comp=Z,4μm,21.0s					
SII	Sitkinak Islan	89.37 360	eP	P	21 52 02.3	+1.5
	comp=Z,293nm,1.2s					
SII			LR	LR		
	comp=Z,3μm,22.0s					
W41B	Gary Mavity, V	89.39 313	PFAKE		21 52 10.0	+8.8
W41B			LR	LR		
	comp=Z,4μm,21.0s					
W41B	Gary Mavity, V	89.39 313	P	P	21 52 01.1	-0.1
	baz=47,SNR=16					
CHGN	Chignik	89.58 2	eP	P	21 52 01.5	-0.2
	comp=Z,272nm,1.2s					
HHAR	Hobbs	89.63 315	eP	P	21 52 02.4	0.0
	comp=Z,73nm,1.4s					
HHAR			LR	LR		
	comp=Z,3μm,20.0s					
ITRB	Iturama	89.67 246	eP	P	21 52 04.6	+1.9
UALR	University of	89.71 313	eP	P	21 52 03.0	+0.3
	comp=Z,26nm,0.8s					
UALR			LR	LR		
	comp=Z,4μm,19.0s					
SDV	Santo Domingo	89.80 281	eP	P	21 52 03.9	+0.2
	comp=Z,59nm,0.9s					
SDV			LR	LR		
	comp=Z,1μm,22.0s					
SDV	Santo Domingo	89.80 281	eP	P	21 52 04.8	+1.1
SDV	Santo Domingo	89.80 281	eP	P	21 52 04.0	+0.3
SPB	Sao Paulo	89.85 241	eP	P	21 52 05.4	+2.0
	comp=Z,59nm,1.2s					
SPB			LR	LR		
	comp=Z,4μm,20.0s					
MTDJ	Mount Denham	89.89 292	PFAKE		21 52 20.0	+16
MTDJ			LR	LR		
	comp=Z,1μm,21.0s					
CCAR	Cane Creek	89.95 312	PFAKE		21 52 20.0	+16
CCAR			LR	LR		
	comp=Z,4μm,18.0s					
X40A	Basin Creek Fa	90.21 313	eP	P	21 52 05.4	+0.3
	comp=Z,27nm,1.0s					
X40A			LR	LR		
	comp=Z,3μm,20.0s					
X40A	Basin Creek Fa	90.21 313	P	P	21 52 04.8	-0.3
	baz=47,SNR=11					
W39A	Magazine	90.29 314	eP	P	21 52 05.8	+0.3
	comp=Z,69nm,1.4s					
W39A			LR	LR		
	comp=Z,4μm,18.0s					
W39A	Magazine	90.29 314	P	P	21 52 05.2	-0.2
	baz=46,SNR=8.3					
VBMS	Vicksburg	90.31 310	PFAKE		21 52 20.0	+14
VBMS			LR	LR		
	comp=Z,4μm,20.0s					
VBMS	Vicksburg	90.31 310	P	P	21 52 05.8	+0.3
	baz=48					
GCMT	Greycliff	90.34 330	eP	P	21 52 06.6	+0.9
HRY	Holter Researc	90.45 332	eP	P	21 52 03.5	-2.6
SDPT	Sand Point	90.45 3	eP	P	21 52 05.9	+0.1
	comp=Z,216nm,1.0s					
LLLB	Lillooet	90.48 340	eP	P	21 52 06.3	+0.2
	comp=Z,39nm,1.4s					
LLLB			LR	LR		
	comp=Z,3μm,18.0s					
MOBC	Moresby Island	90.56 346	eP	P	21 52 07.5	+1.0
	comp=Z,101nm,1.3s					
UGM	Wanagama	90.59 99	PFAKE		21 52 20.0	+13
UGM			LR	LR		
	comp=Z,2μm,20.0s					
DIB	Dawson Inlet,	90.60 347	eP	P	21 52 07.4	+0.9
	comp=Z,49nm,1.1s					
DIB			LR	LR		
	comp=Z,2μm,22.0s					
MIAR	Mount Ida	90.61 314	eP	P	21 52 07.2	+0.2
	comp=Z,100nm,1.4s					
MIAR			LR	LR		
	comp=Z,4μm,20.0s					
MIAR	Mount Ida	90.61 314	eP	P	21 52 07.2	+0.2
MIAR			pmax	pmax		
	comp=Z,100nm,1.4s					
MIAR			MLR	MLR		
	comp=Z,4μm,20.0s					
MIAR	Mount Ida	90.61 314	P	P	21 52 07.5	+0.5
	baz=46,SNR=21					
BBB	Bella Bella	90.64 344	PFAKE		21 52 20.0	+13
BBB			LR	LR		
	comp=Z,2μm,18.0s					
OGNE	Ogallala	90.65 323	eP	P	21 52 07.6	+0.4
	comp=Z,68nm,1.2s					
OGNE			LR	LR		
	comp=Z,3μm,20.0s					
OGNE	Ogallala	90.65 323	P	P	21 52 07.0	-0.2
	baz=41					
RLMT	Red Lodge	90.71 330	eP	P	21 52 08.1	+0.5
	comp=Z,53nm,1.1s					
RLMT			LR	LR		
	comp=Z,6μm,20.0s					
RLMT	Red Lodge	90.71 330	P	P	21 52 08.0	+0.5
	baz=36,SNR=36					
WOJI	Wonogiri, Jawa	90.88 99	P	P	21 52 07.5	-0.9
	comp=Z,58nm,1.4s					
WLAR	White Oak Lake	90.92 313	eP	P	21 52 09.4	+1.0
	comp=Z,163nm,1.7s					
WLAR			LR	LR		
	comp=Z,3μm,20.0s					
TUL1	Leonard	90.96 316	eP	P	21 52 08.7	+0.1
TUL1			LR	LR		
	comp=Z,3μm,20.0s					
TUL1	Leonard	90.96 316	P	P	21 52 08.5	-0.1
	baz=45,SNR=11					
Z41A	Richland Creek	91.03 312	PFAKE		21 52 20.0	+11
Z41A			LR	LR		
	comp=Z,4μm,19.0s					
Z41A	Richland Creek	91.03 312	P	P	21 52 09.0	+0.1
	baz=47					
NEW	Newport	91.06 336	eP	P	21 52 08.4	-0.5
	comp=Z,116nm,1.4s					
NEW			LR	LR		
	comp=Z,3μm,20.0s					
NEW	Newport	91.06 336	eP	P	21 52 08.4	-0.5
NEW			pmax	pmax		
	comp=Z,116nm,1.4s					
NEW			MLR	MLR		
	comp=Z,3μm,20.0s					
NEW	Newport	91.06 336	P	P	21 52 09.0	+0.2
	baz=30					
CBKS	Cedar Bluff	91.06 320	eP	P	21 52 08.9	-0.1
	comp=Z,154nm,1.3s					
CBKS			LR	LR		
	comp=Z,3μm,18.0s					
CBKS	Cedar Bluff	91.06 320	P	P	21 52 08.7	-0.4
	baz=43,SNR=8.6					
MSO	Missoula	91.15 333	eP	P	21 52 09.3	-0.1
	comp=Z,48nm,1.3s					
MSO			LR	LR		
	comp=Z,5μm,18.0s					
MSO	Missoula	91.15 333	P	P	21 52 09.1	-0.3
	baz=33,SNR=21					
BOZ	Bozeman (W)	91.29 331	eP	P	21 52 09.9	-0.2
	comp=Z,62nm,1.4s					
BOZ			LR	LR		
	comp=Z,4μm,19.0s					
BOZ	Bozeman (W)	91.29 331	eP	P	21 52 09.9	-0.2
BOZ			pmax	pmax		
	comp=Z,61nm,1.4s					
BOZ			MLR	MLR		
	comp=Z,4μm,19.0s					
BOZ	Bozeman (W)	91.29 331	P	P	21 52 10.5	+0.4
	baz=34,SNR=43					
K22A	Casper	91.48 327	eP	P	21 52 10.4	-0.6
	comp=Z,178nm,1.3s					
K22A			LR	LR		
	comp=Z,6μm,22.0s					
K22A	Casper	91.48 327	P	P	21 52 10.5	-0.6
	baz=38,SNR=46					
UNV	Unalaska Valle	91.51 7	PFAKE		21 52 20.0	+9.3
UNV			LR	LR		
	comp=Z,4μm,22.0s					
LKWY	Lake	91.64 330	PFAKE		21 52 20.0	+8.1
LKWY			LR	LR		
	comp=Z,7μm,19.0s					
YHH	Holmes Hill	91.64 330	eP	P	21 52 13.0	+1.0
	comp=Z,30nm,1.2s					
X37A	Clayton	91.65 315	eP	P	21 52 12.3	+0.5
	comp=Z,81nm,1.3s					
X37A			LR	LR		
	comp=Z,4μm,20.0s					
PWJI	Pagerwojo	91.70 98	P	P	21 52 11.4	-0.9
	comp=Z,34nm,0.9s					
YMR	Madison River	91.78 330	eP	P	21 52 14.0	+1.5
	comp=Z,48nm,1.1s					
YHB	Horse Butte	91.81 331	eP	P	21 52 14.0	+1.4
	comp=Z,44nm,1.2s					
QLMT	Earthquake Lak	91.84 331	eP	P	21 52 14.0	+1.2
C09A	Chrisman Ranch	91.84 336	eP	P	21 52 12.9	+0.4
	comp=Z,156nm,1.6s					
C09A			LR	LR		
	comp=Z,6μm,19.0s					
H17A	Grant Village	91.85 330	eP	P	21 52 15.3	+2.4
	comp=Z,55nm,1.1s					
H17A			LR	LR		
	comp=Z,7μm,20.0s					
H17A	Grant Village	91.85 330	P	P	21 52 14.6	+1.7
	baz=35,SNR=14					
DLMT	Dillon	91.86 332	eP	P	21 52 13.5	+0.7
	comp=Z,72nm,1.5s					
DLMT			LR	LR		
	comp=Z,6μm,18.0s					
KIWB	Kanaga Island	91.88 14	eP	P	21 52 15.9	+3.4
YFT	Old Faithful	91.91 330	eP	P	21 52 15.8	+2.7
	comp=Z,99nm,1.4s					
ADK	Adak	91.94 13	PFAKE		21 52 20.0	+7.2
ADK			LR	LR		
	comp=Z,2μm,19.0s					
YPP	Pitchstone Pla	92.04 330	eP	P	21 52 16.0	+2.2
	comp=Z,98nm,1.4s					
PHWY	Pilot Hill	92.04 325	eP	P	21 52 13.9	0.0
	comp=Z,102nm,1.0s					
PHWY			LR	LR		
	comp=Z,3μm,18.0s					
NIKH	Nikolski High	92.11 8	PFAKE		21 52 30.0	+16
NIKH			LR	LR		
	comp=Z,2μm,18.0s					
FLWY	Flagg Ranch	92.15 330	eP	P	21 52 15.7	+1.4
	comp=Z,80nm,1.3s					
FLWY			LR	LR		
	comp=Z,4μm,20.0s					
B06A	Marblemount	92.23 339	PFAKE		21 52 30.0	+16
B06A			LR	LR		
	comp=Z,3μm,20.0s					

IMW	Indian Meadow	92.41 330	eP	P	21 52 16.0	+0.5
	comp=Z,51nm,1.1s					
IMW			LR	LR		
	comp=Z,5μm,20.0s					
MCMT	McKenzie Canyo	92.41 332	eP	P	21 52 15.8	+0.4
A04D	Lummi Island	92.41 339	P	P	21 52 14.2	-0.8
	baz=26					
U32A	Winter Ranch,	92.44 318	PFAKE		21 52 30.0	+15
U32A			LR	LR		
	comp=Z,3μm,20.0s					
MOOW	Moose Ponds	92.45 330	eP	P	21 52 16.0	+0.4
	comp=Z,20nm,1.0s					
MOOW			LR	LR		
	comp=Z,4μm,20.0s					
LOHW	Long Hollow	92.50 330	eP	P	21 52 15.9	+0.1
	comp=Z,23nm,1.1s					
LOHW			LR	LR		
	comp=Z,4μm,20.0s					
RWWY	Rawlins	92.56 326	eP	P	21 52 15.3	-0.9
	comp=Z,90nm,1.3s					
RWWY			LR	LR		
	comp=Z,6μm,21.0s					
C06D	Leavenworth	92.58 338	P	P	21 52 15.4	-0.5
	baz=28					
N23A	Red Feather La	92.59 325	PFAKE		21 52 30.0	+14
N23A			LR	LR		
	comp=Z,3μm,19.0s					
N23A	Red Feather La	92.59 325	P	P	21 52 16.4	0.0
	baz=38,SNR=47					
SMLC	San Martn de	92.63 282	eP	P	21 52 14.8	-1.9
B05A	Bryant	92.64 339	P	P	21 52 15.3	-0.8
	baz=27,SNR=11					
FXWY	Fox Creek	92.65 330	eP	P	21 52 16.9	+0.3
	comp=Z,35nm,1.1s					
SNOW	Snow King Moun	92.68 330	eP	P	21 52 17.5	+0.8
	comp=Z,20nm,1.0s					
SNOW			LR	LR		
	comp=Z,4μm,20.0s					
PGC	Sidney	92.69 340	eP	P	21 52 16.6	+0.3
	comp=Z,86nm,1.4s					
D08A	Wollman Farm,	92.71 336	eP	P	21 52 16.9	+0.5
	comp=Z,95nm,1.9s					
D08A			LR	LR		
	comp=Z,5μm,18.0s					
BW06	Boulder Array	92.74 328	eP	P	21 52 16.5	-0.5
	comp=Z,21nm,1.0s					
BW06			LR	LR		
	comp=Z,6μm,21.0s					
BW06	Boulder Array	92.74 328	P	P	21 52 16.0	-1.0
	baz=36,SNR=7.0					
PD31	Pinedale Array	92.74 328	eP	P	21 52 16.5	-0.5
	comp=Z,21nm,1.1s					
PD31			ePP	PP	21 55 58.5	+0.4
PDAR	Pinedale Array	92.74 328	P	P	21 52 15.9	-1.1
	comp=Z,10nm,0.9s,baz=54,slow=3.8,SNR=68					
PDAR			PP	PP	21 55 58.5	+0.4
	comp=Z,4.2nm,0.8s,baz=60,slow=7.2,SNR=4.5					
TPAW	Teton Pass	92.74 330	eP	P	21 52 17.6	+0.6
	comp=Z,31nm,0.9s					
TPAW			LR	LR		
	comp=Z,4μm,21.0s					
E09A	Wood Farm, Sta	92.92 336	eP	P	21 52 17.6	+0.2
	comp=Z,57nm,1.5s					
E09A			LR	LR		
	comp=Z,3μm,20.0s					
F10A	Beach Ranch, E	93.07 335	eP	P	21 52 18.1	-0.2
	comp=Z,50nm,1.4s					
F10A			LR	LR		
	comp=Z,3μm,20.0s					
LTY	Liberty	93.10 337	eP	P	21 52 17.7	-0.6
	comp=Z,59nm,1.5s					
LTY			LR	LR		
	comp=Z,4μm,19.0s					
NATX	Nacogdoches	93.19 312	PFAKE		21 52 30.0	+11
NATX			LR	LR		
	comp=Z,3μm,20.0s					
NATX	Nacogdoches	93.19 312	P	P	21 52 19.1	+0.1
	baz=46					
E08A	Dider Farm, El	93.25 336	eP	P	21 52 19.8	+0.8
	comp=Z,38nm,1.3s					
E08A			LR	LR		
	comp=Z,4μm,19.0s					
ISCO	Idaho Springs	93.29 324	PFAKE		21 52 30.0	+10
ISCO			LR	LR		
	comp=Z,4μm,19.0s					
ISCO	Idaho Springs	93.29 324	P	P	21 52 19.5	-0.2
	baz=39,SNR=37					
AHID	Auburn Hatcher	93.40 329	eP	P	21 52 19.9	-0.1
	comp=Z,27nm,0.9s					
AHID			LR	LR		
	comp=Z,6μm,21.0s					
RUSC	La Rusia	93.49 280⇑	eP	P	21 52 22.1	+0.9
HAWA	Hanford	93.49 336	eP	P	21 52 21.0	+0.9
	comp=Z,58nm,1.3s					
HAWA			LR	LR		
	comp=Z,3μm,18.0s					
WMOK	Wichita Mounta	93.51 317	eP	P	21 52 20.4	0.0
	comp=Z,103nm,1.9s					
WMOK			LR	LR		
	comp=Z,3μm,19.0s					
WMOK	Wichita Mounta	93.51 317	eP	P	21 52 20.4	0.0
WMOK			pmax	pmax		
	comp=Z,103nm,1.9s					
WMOK			MLR	MLR		
	comp=Z,3μm,19.0s					
WMOK	Wichita Mounta	93.51 317	P	P	21 52 20.4	0.0
	baz=43,SNR=22					
D05A	Enumclaw	93.57 338	eP	P	21 52 20.9	+0.6
	comp=Z,93nm,1.3s					
D05A			LR	LR		
	comp=Z,3μm,22.0s					
D03D	Eldon	93.59 339	P	P	21 52 21.2	+0.7
	baz=26,SNR=18					
MPSI	Mapaga	93.70 87	P	P	21 52 21.2	-0.4
	comp=Z,25nm,1.0s,comp=Z,333nm					
Q24A	Divide	93.71 323	PFAKE		21 52 30.0	+8.4
Q24A			LR	LR		
	comp=Z,3μm,21.0s					
Q24A	Divide	93.71 323	P	P	21 52 21.3	-0.3
	baz=39					
D04E	Lakebay	93.81 339	P	P	21 52 22.1	+0.6
	baz=26					
JAGI	Jajag, Banyuwa	93.88 98	PFAKE		21 52 30.0	+7.7
JAGI			LR	LR		
	comp=Z,2μm,22.0s					
LON	Longmire	93.91 338	eP	P	21 52 21.7	-0.3
	comp=Z,27nm,1.1s					
LON			LR	LR		
	comp=Z,4μm,19.0s					
LON	Longmire	93.91 338	eP	P	21 52 21.7	-0.3
LON			pmax	pmax		
	comp=Z,27nm,1.1s					
LON			MLR	MLR		
	comp=Z,4μm,19.0s					
NLWA	Neilton Lookou	93.95 340	eP	P	21 52 22.8	+0.6
	comp=Z,50nm,1.3s					
NLWA			LR	LR		
	comp=Z,4μm,20.0s					
ZARC	Zaragoza, Cauc	94.02 282	eP	P	21 52 22.1	-1.0
F07A	Phinny Hill Vi	94.06 336	eP	P	21 52 24.0	+1.3
	comp=Z,62nm,1.5s					
F07A			LR	LR		
	comp=Z,3μm,18.0s					
BMO	Blue Mountains	94.06 334	eP	P	21 52 21.8	-1.1
	comp=Z,65nm,1.7s					
BMO			LR	LR		
	comp=Z,4μm,20.0s					
BMO	Blue Mountains	94.06 334	eP	P	21 52 21.8	-1.1
BMO			pmax	pmax		
	comp=Z,65nm,1.7s					
BMO			MLR	MLR		
	comp=Z,4μm,20.0s					
HLID	Hailey	94.08 332	eP	P	21 52 23.2	+0.2
	comp=Z,14nm,1.4s					
HLID			LR	LR		
	comp=Z,7μm,19.0s					
HLID	Hailey	94.08 332	P	P	21 52 22.8	-0.3
	baz=32,SNR=9.1					
PTBC	PUERTO BERRIO,	94.24 281	eP	P	21 52 22.1	-2.0
G08A	Pilot Rock	94.26 336	eP	P	21 52 23.6	-0.2
	comp=Z,20nm,1.5s					
G08A			LR	LR		
	comp=Z,4μm,19.0s					
O20A	White River Ci	94.27 326	eP	P	21 52 23.8	-0.3
	comp=Z,74nm,1.4s					
O20A			LR	LR		
	comp=Z,3μm,21.0s					
O20A	White River Ci	94.27 326	P	P	21 52 23.3	-0.7
	baz=37,SNR=19					
E04D	Cinebar	94.31 338	P	P	21 52 23.7	-0.1
	baz=26,SNR=9.4					
SMCO	Snowmass	94.43 325	eP	P	21 52 23.8	-1.2
	comp=Z,55nm,1.6s					
SMCO			LR	LR		
	comp=Z,4μm,22.0s					
HWUT	Hardware Ranch	94.55 329	eP	P	21 52 25.3	0.0
	comp=Z,34nm,0.9s					
F05D	White Salmon	94.57 337	P	P	21 52 25.2	+0.2
	baz=27,SNR=7.3					
WHTX	Lake Whitney,	94.71 314	PFAKE		21 52 40.0	+14
WHTX			LR	LR		
	comp=Z,5μm,20.0s					
WHTX	Lake Whitney,	94.71 314	P	P	21 52 25.5	-0.4
	baz=44					
T25A	Trinidad	94.75 322	PFAKE		21 52 40.0	+14
T25A			LR	LR		
	comp=Z,4μm,18.0s					
T25A	Trinidad	94.75 322	P	P	21 52 25.9	-0.4
	baz=40,SNR=17					
SDCO	Great Sand Dun	94.83 323	eP	P	21 52 26.0	-0.8
SDCO			LR	LR		
	comp=Z,3μm,19.0s					
SDCO	Great Sand Dun	94.83 323	P	P	21 52 26.2	-0.5
	baz=39,SNR=45					
F04D	Rainier, OR	94.87 338	P	P	21 52 26.7	+0.3
	baz=26					
G06A	Carlson Farm,	94.88 337	eP	P	21 52 27.5	+1.0
	comp=Z,46nm,1.3s					
G06A			LR	LR		
	comp=Z,3μm,18.0s					
TCUT	Toone Canyon	94.88 329	eP	P	21 52 26.9	0.0
	comp=Z,29nm,0.9s					
HVU	Hansel Valley	94.91 330	eP	P	21 52 27.2	+0.3
	comp=Z,34nm,1.1s					
HVU	Hansel Valley	94.91 330	eP	P	21 52 27.2	+0.3
HVU			pmax	pmax		
	comp=Z,34nm,1.1s					
AMTX	Amarillo	95.01 319	PFAKE		21 52 40.0	+13
AMTX			LR	LR		
	comp=Z,3μm,18.0s					
AMTX	Amarillo	95.01 319	P	P	21 52 26.7	-0.7
	baz=42					
G05D	Wamic, OR	95.09 337	P	P	21 52 27.6	+0.2
	baz=27					
ROSC	El Rosal	95.10 279	P	P	21 52 28.0	-0.5
	comp=Z,2.6nm,0.4s,baz=90,slow=20,SNR=2.8					
ROSC	El Rosal	95.10 279	eP	P	21 52 28.0	-0.5
	comp=Z,7.6nm,0.9s					
SPUT	South Promonto	95.17 329	eP	P	21 52 28.1	0.0
	comp=Z,25nm,1.4s					
F03A	Seaside	95.17 339	eP	P	21 52 28.8	+1.0
	comp=Z,86nm,1.2s					
F03A			LR	LR		
	comp=Z,3μm,22.0s					
HKT	Hockley	95.17 312	eP	P	21 52 28.8	+0.8
	comp=Z,89nm,2.0s					
HKT			LR	LR		
	comp=Z,4μm,21.0s					
HKT	Hockley	95.17 312	eP	P	21 52 28.8	+0.8
HKT			pmax	pmax		
	comp=Z,89nm,2.0s					
HKT			MLR	MLR		
	comp=Z,4μm,21.0s					
JLU	Jordanelle	95.32 328	eP	P	21 52 29.1	+0.2
	comp=Z,32nm,1.2s					
CTU	Camp Tracy	95.38 329	eP	P	21 52 29.6	+0.5
	comp=Z,20nm,1.2s					
S22A	4UR Ranch, Cre	95.48 324	PFAKE		21 52 40.0	+10
S22A			LR	LR		
	comp=Z,3μm,20.0s					
S22A	4UR Ranch, Cre	95.48 324	P	P	21 52 29.5	-0.3
	baz=38,SNR=18					
I07A	Izee	95.51 335	eP	P	21 52 30.6	+1.0
	comp=Z,42nm,1.5s					
I07A			LR	LR		
	comp=Z,5μm,19.0s					
TTSI	Tana Toraja	95.53 90	P	P	21 52 31.0	+1.1
ABTX	Abilene, Hawle	95.54 316	eP	P	21 52 30.3	+0.6
	comp=Z,28nm,1.0s					
ABTX			LR	LR		
	comp=Z,4μm,20.0s					
ABTX	Abilene, Hawle	95.54 316	P	P	21 52 30.0	+0.2
	baz=43,SNR=8.6					
P18A	Preston Nutter	95.59 327	eP	P	21 52 29.9	-0.3
	comp=Z,24nm,1.3s					
BGU	Big Grassy Mou	95.73 330	eP	P	21 52 30.7	0.0
	comp=Z,32nm,1.3s					
G03D	McMinnville, O	95.73 338	P	P	21 52 31.1	+0.7
	baz=26,SNR=18					
J08A	Circle Bar Ran	95.78 334	eP	P	21 52 30.9	+0.2
	comp=Z,13nm,1.1s					
J08A			LR	LR		
	comp=Z,3μm,18.0s					
PV22	Blue Mesa, Par	95.80 325	eP	P	21 52 30.8	-0.3
	comp=Z,66nm,1.4s					
PV22			LR	LR		
	comp=Z,3μm,20.0s					
PV07	Paradox Valley	95.81 325	eP	P	21 52 31.1	0.0
	comp=Z,83nm,1.5s					
PV07			LR	LR		
	comp=Z,4μm,20.0s					
PV21	Cone Mtn., Par	95.86 326	eP	P	21 52 31.6	+0.1
H04A	Detroit Lake	95.87 337	eP	P	21 52 31.4	+0.3
	comp=Z,27nm,0.9s					
H04A			LR	LR		
	comp=Z,3μm,19.0s					
I05D	Terrebonne, OR	95.90 337	P	P	21 52 31.7	+0.4
	baz=27,SNR=10					
P17A	Butcher Ranch,	95.93 327	eP	P	21 52 31.7	+0.1
	comp=Z,17nm,1.4s					
PV04	Paradox Valley	95.97 325	eP	P	21 52 31.8	0.0
	comp=Z,46nm,1.2s					
PV23	Carpenter Ridg	95.97 326	eP	P	21 52 32.0	+0.1
	comp=Z,52nm,1.2s					
PV23			LR	LR		
	comp=Z,3μm,19.0s					
PV12	Saucer Basin,	95.98 325	eP	P	21 52 32.1	+0.2
	comp=Z,85nm,1.4s					
PV12			LR	LR		
	comp=Z,4μm,20.0s					
PV09	Paradox Valley	95.99 326	eP	P	21 52 32.2	+0.1
SPSI	Sidrap Palu	96.00 91	P	P	21 52 31.7	-0.4
	comp=Z,12nm,1.5s					
PV01	Paradox Valley	96.01 325	eP	P	21 52 31.9	-0.2
	comp=Z,33nm,1.1s					
PV01			LR	LR		
	comp=Z,4μm,20.0s					
PV11	David Mesa, Pa	96.03 325	eP	P	21 52 32.2	+0.1
	comp=Z,54nm,1.1s					
PV11			LR	LR		
	comp=Z,4μm,20.0s					
PV02	Paradox Valley	96.03 325	eP	P	21 52 32.3	+0.1
	comp=Z,54nm,1.4s					
PV02			LR	LR		
	comp=Z,3μm,18.0s					
PV16	Nyswonger Mesa	96.04 325	eP	P	21 52 32.3	+0.1
	comp=Z,72nm,1.3s					
PV16			LR	LR		
	comp=Z,3μm,19.0s					
PV20	West Nyswonger	96.04 325	eP	P	21 52 32.2	+0.1
	comp=Z,68nm,1.5s					
PV14	Lion Creek, Pa	96.04 325	eP	P	21 52 32.5	+0.3
	comp=Z,40nm,1.0s					
PV14			LR	LR		
	comp=Z,4μm,19.0s					
PV10	Paradox Valley	96.04 326	eP	P	21 52 32.6	+0.4
	comp=Z,62nm,1.2s					
PV10			LR	LR		
	comp=Z,4μm,20.0s					
PV03	Paradox Valley	96.05 325	eP	P	21 52 32.2	-0.1
	comp=Z,57nm,1.4s					
PV03			LR	LR		
	comp=Z,3μm,20.0s					
PV19	Morning Glory	96.07 325	eP	P	21 52 32.5	+0.2
	comp=Z,33nm,1.0s					
PV19			LR	LR		
	comp=Z,3μm,20.0s					
PV18	Skein Mesa, Pa	96.08 325	eP	P	21 52 32.5	+0.1
	comp=Z,62nm,1.5s					
PV18			LR	LR		
	comp=Z,3μm,20.0s					
PV13	Radium Mtn., P	96.11 325	eP	P	21 52 32.6	0.0
	comp=Z,44nm,1.4s					
PV13			LR	LR		
	comp=Z,3μm,20.0s					
SRU	San Rafael Swe	96.13 327	eP	P	21 52 31.9	-0.6
	comp=Z,24nm,1.2s					
SRU	San Rafael Swe	96.13 327	eP	P	21 52 31.9	-0.6
SRU			pmax	pmax		
	comp=Z,24nm,1.2s					
H04D	Lebanon	96.19 338	P	P	21 52 32.8	+0.3
	baz=26,SNR=14					
PRAC	Prado	96.20 279	eP	P	21 52 32.1	-1.0
DUG	Dugway, Tooele	96.25 329	eP	P	21 52 33.2	+0.2
	comp=Z,12nm,0.9s					
DUG			LR	LR		
	comp=Z,5μm,21.0s					
DUG	Dugway, Tooele	96.25 329	eP	P	21 52 33.2	+0.2
DUG			pmax	pmax		
	comp=Z,12nm,0.9s					
DUG			MLR	MLR		
	comp=Z,5μm,21.0s					
DUG	Dugway, Tooele	96.25 329	P	P	21 52 32.8	-0.2
	baz=34,SNR=12					
PINE	Pine Mountain	96.25 336	eP	P	21 52 34.0	+1.0
	comp=Z,33nm,1.1s					
PINE			LR	LR		
	comp=Z,3μm,20.0s					
TMUT	Trail Mountain	96.29 327	eP	P	21 52 33.1	-0.3
	comp=Z,19nm,1.4s					
MSTX	Muleshoe	96.29 319	eP	P	21 52 33.0	-0.3
	comp=Z,23nm,1.4s					
MSTX			LR	LR		
	comp=Z,4μm,19.0s					
MSTX	Muleshoe	96.29 319	P	P	21 52 32.4	-0.9
	baz=41					
COR	Corvallis	96.31 338	eP	P	21 52 35.0	+2.0
	comp=Z,88nm,1.3s					
COR			LR	LR		
	comp=Z,4μm,19.0s					
KAPI	Kappang	96.57 92	P	P	21 52 34.1	-0.6
	comp=Z,8.0nm,0.3s,baz=241,slow=7.9,SNR=6.4					
KAPI			PP	PP	21 56 30.8	+1.6
	comp=Z,8.9nm,1.0s,baz=294,slow=7.3,SNR=3.6					
Q16A	Castle Valley	96.58 327	eP	P	21 52 34.3	-0.3
	comp=Z,26nm,1.4s					
TEIG	Tepich	96.64 300	PFAKE		21 52 50.0	+15
TEIG			LR	LR		
	comp=Z,1μm,20.0s					
WVOR	Wild Horse Val	96.64 334	eP	P	21 52 35.3	+0.6
	comp=Z,35nm,1.6s					
WVOR			LR	LR		
	comp=Z,3μm,20.0s					
WVOR	Wild Horse Val	96.64 334	eP	P	21 52 35.3	+0.6
WVOR			pmax	pmax		
	comp=Z,35nm,1.6s					
WVOR			MLR	MLR		
	comp=Z,3μm,20.0s					
MVCO	Mesa Verde	96.72 324	eP	P	21 52 35.3	0.0
	comp=Z,31nm,1.4s					
MVCO			LR	LR		
	comp=Z,5μm,19.0s					
MVCO	Mesa Verde	96.72 324	P	P	21 52 34.7	-0.6
	baz=37,SNR=6.0					
I04A	Tendick Farm,	96.74 337	P	P	21 52 34.4	-0.6
	baz=26,SNR=19					
ELK	Elko	96.79 331	eP	P	21 52 36.3	+0.7
	comp=Z,17nm,1.4s					
ELK			LR	LR		
	comp=Z,4μm,18.0s					
ELK	Elko	96.79 331	eP	P	21 52 36.3	+0.7
ELK			pmax	pmax		
	comp=Z,17nm,1.4s					
ELK			MLR	MLR		
	comp=Z,4μm,18.0s					
J05D	Fort Rock, OR	96.80 336	P	P	21 52 36.1	+0.6
	baz=27,SNR=12					
LUWI	Luwuk	96.85 87	PFAKE		21 52 50.0	+14
LUWI			LR	LR		
	comp=Z,1μm,20.0s					
I02D	Swisshome	96.91 338	P	P	21 52 36.4	+0.7
	baz=25,SNR=5.9					
I03D	Drain, OR	97.12 338	P	P	21 52 37.0	+0.3
	baz=26,SNR=11					
K05A	Summer Lake	97.18 336	PFAKE		21 52 50.0	+13
K05A			LR	LR		
	comp=Z,4μm,20.0s					
JCT	Junction City	97.19 315	PFAKE		21 52 50.0	+13
JCT			LR	LR		
	comp=Z,4μm,20.0s					
JCT	Junction City	97.19 315	P	P	21 52 37.1	-0.2
	baz=43					
MYIG	Mrida	97.21 301	PFAKE		21 52 50.0	+12
MYIG			LR	LR		
	comp=Z,3μm,20.0s					
YOTC	Yotoco, Valle	97.24 280	eP	P	21 52 36.7	-1.2
MSU	Marysvale	97.36 328	eP	P	21 52 38.6	+0.4
MSU	Marysvale	97.36 328	eP	P	21 52 38.6	+0.4
ANMO	Albuquerque	97.49 322	LR	LR	22 39 15.4	
	comp=Z,3μm,18.7s,baz=36,slow=37					
ANMO	Albuquerque	97.49 322	eP	P	21 52 39.0	+0.2
	comp=Z,9.1nm,1.2s					
ANMO			LR	LR		
	comp=Z,4μm,19.0s					
ANMO	Albuquerque	97.49 322	c iP	P	21 52 38.5	-0.3
ANMO			pmax	pmax		
	comp=Z,6.0nm,1.1s					
ANMO	Albuquerque	97.49 322	P	P	21 52 38.5	-0.3
	baz=38					
TASM	ASL Pad, Albuq	97.49 322	P	P	21 52 38.4	-0.4
	baz=38,SNR=7.6					
TASM	ASL Pad, Albuq	97.49 322	P	P	21 52 38.4	-0.4
	baz=38,SNR=7.6					
K04D	Chiloquin, OR	97.56 336	P	P	21 52 39.0	+0.1
	baz=27					
MOD	Modoc Plateau	97.70 335	eP	Pdif	21 52 40.7	+1.0
	comp=Z,27nm,1.4s					
MOD			LR	LR		
	comp=Z,4μm,20.0s					
MTPU	Mount Pierson	97.75 327	eP	P	21 52 40.9	+0.8
	comp=Z,32nm,1.5s					
J01E	Myrtle Point	97.79 338	P	P	21 52 40.1	+0.4
	baz=25,SNR=6.2					
BMN	Battle Mountai	97.84 332	eP	P	21 52 40.8	+0.6
	comp=Z,14nm,1.3s					
BMN			LR	LR		
	comp=Z,4μm,20.0s					
BMN	Battle Mountai	97.84 332	eP	P	21 52 40.8	+0.6
BMN			pmax	pmax		
	comp=Z,14nm,1.3s					
BMN			MLR	MLR		
	comp=Z,4μm,20.0s					
HUMO	Hull Mountain	97.98 337	eP	P	21 52 40.5	-0.1
	comp=Z,54nm,1.8s					
HUMO			LR	LR		
	comp=Z,2μm,19.0s					
PSUT	Pine Spring	98.08 329	eP	P	21 52 41.9	+0.5
	comp=Z,13nm,1.1s					
LPM	Los Pinos Moun	98.08 321	eP	P	21 52 42.1	+0.7
L04D	Klamath Falls	98.11 336	P	P	21 52 41.1	-0.2
	baz=27,SNR=11					
K02D	Willamette Mer	98.13 337	P	P	21 52 41.2	-0.2
	baz=26,SNR=7.5					
KVTX	Kingsville	98.15 311	PFAKE		21 52 50.0	+8.4
KVTX			LR	LR		
	comp=Z,2μm,19.0s					
KEBM	Edson Butte	98.18 338	eP	P	21 52 42.4	+0.9
	comp=Z,50nm,1.2s					
KEBM			LR	LR		
	comp=Z,3μm,18.0s					
BNM	Barren Site	98.20 321	eP	P	21 52 42.3	+0.3
LAZ	Ladron	98.27 322	eP	P	21 52 42.6	+0.4
PKCU	Pink Cliffs	98.30 327	eP	P	21 52 42.8	+0.2
	comp=Z,17nm,1.0s					
M04C	Macdoel	98.34 336	P	P	21 52 42.4	0.0
	baz=27					
KDI	Kendari	98.35 89	P	P	21 52 43.3	+0.6
	comp=Z,48nm,1.5s					
LENM	Lemitar	98.37 322	eP	P	21 52 42.6	-0.1
Y22D	IRIS PASSCAL I	98.41 322	PFAKE		21 52 50.0	+7.1
Y22D			LR	LR		
	comp=Z,3μm,21.0s					
Y22D	IRIS PASSCAL I	98.41 322	P	P	21 52 42.5	-0.4
	baz=38					
833A	Chaparral WMA,	98.51 313	PFAKE		21 52 50.0	+6.7
833A			LR	LR		
	comp=Z,3μm,19.0s					
833A	Chaparral WMA,	98.51 313	P	P	21 52 43.2	0.0
	baz=43					
L02E	Cave Junction	98.59 337	P	P	21 52 43.5	+0.1
	baz=26,SNR=6.9					
CCUT	Cedar City	98.68 328	eP	P	21 52 45.0	+0.9
	comp=Z,9.3nm,1.1s					

YBH Yreka Blue Hor 98.68 336 *e*P **P 21 52 43.6 -0.3**
comp=Z,19nm,1.8s
YBH LR LR
comp=Z,3μm,21.0s
YBH Yreka Blue Hor 98.68 336 *e*P **P 21 52 43.6 -0.3**
YBH pmax pmax
comp=Z,19nm,1.8s
YBH MLR MLR
comp=Z,3μm,21.0s
ESPN Las Esperanzas 98.71 291 PFAKE 21 53 00.0 +16
ESPN LR LR
comp=Z,1μm,20.0s
CPUP Villa Florida 98.72 244 P **P 21 52 44.0 0.0**
comp=Z,3.4nm,1.0s,baz=84,slow=5.6,SNR=4.6
CPUP PP **PP 21 56 42.6 -3.1**
comp=Z,2.9nm,0.8s,baz=56,slow=8.3,SNR=3.4
WBSI Waikabubak, Su 98.82 96 P **P 21 52 44.0 -0.8**
R11A Troy Canyon, C 98.96 330 *e*P **P 21 52 45.6 +0.3**
comp=Z,9.3nm,1.3s
R11A LR LR
comp=Z,4μm,19.0s
R11A Troy Canyon, C 98.96 330 P **P 21 52 45.3 -0.1**
baz=32,SNR=14
W18A Petrified Fore 98.99 324 PFAKE 21 53 00.0 +14
W18A LR LR
comp=Z,4μm,19.0s
W18A Petrified Fore 98.99 324 P **P 21 52 45.0 -0.5**
baz=36
M02C Callahan 99.03 336 P **Pdif 21 52 45.3 -0.2**
baz=26,SNR=6.7
U15A North Rim 99.13 326 *e*P **Pdif 21 52 46.0 -0.2**
comp=Z,28nm,1.6s
U15A LR LR
comp=Z,4μm,20.0s
KRMB Red Mountain 99.26 337 *e*P **Pdif 21 52 47.6 +1.1**
comp=Z,27nm,1.3s
KRMB LR LR
comp=Z,3μm,19.0s
PAHR Pah Rah Range 99.30 333 *e*P **Pdif 21 52 47.6 +0.9**
comp=Z,10nm,1.1s
PAHR LR LR
comp=Z,4μm,18.0s
N02D Trinity Center 99.36 336 P **Pdif 21 52 46.7 -0.2**
baz=26
KVN Kaiserville 99.38 332 *e*P **Pdif 21 52 47.3 +0.1**
comp=Z,10nm,1.4s
KVN LR LR
comp=Z,6μm,20.0s
KVN Kaiserville 99.38 332 *e*P **Pdif 21 52 47.3 +0.1**
KVN pmax pmax
comp=Z,10.0nm,1.4s
KVN MLR MLR
comp=Z,6μm,20.0s
MNTX Cornudas Mount 99.44 319 *e*P **Pdif 21 52 47.0 -0.4**
comp=Z,20nm,1.4s
MNTX LR LR
comp=Z,3μm,21.0s
MNTX Cornudas Mount 99.44 319 P **Pdif 21 52 46.8 -0.6**
baz=40
WUAZ Wupatki 99.45 325 *e*P **Pdif 21 52 48.1 +0.6**
comp=Z,22nm,1.4s
WUAZ LR LR
comp=Z,2μm,18.0s
WUAZ Wupatki 99.45 325 P **Pdif 21 52 47.2 -0.4**
baz=35,SNR=5.5
BEKR Beckworth 99.52 334 PFAKE 21 53 00.0 +12
BEKR LR LR
comp=Z,3μm,20.0s
X18A Snowflake 99.57 324 PFAKE 21 53 00.0 +12
X18A LR LR
comp=Z,4μm,19.0s
TNTI Ternate 99.61 82 PFAKE 21 53 00.0 +12
TNTI LR LR
comp=Z,200nm,22.0s
O03E Paynes Creek 99.65 335 P **Pdif 21 52 47.8 -0.4**
baz=27
WDC Whiskeytown Da 99.66 336 PFAKE 21 53 00.0 +12
WDC LR LR
comp=Z,3μm,22.0s
ESTN Estel 99.74 293 PFAKE 21 53 00.0 +11
ESTN LR LR
comp=Z,1μm,20.0s
VCNR Virginia City 99.75 333 PFAKE 21 53 00.0 +11
VCNR LR LR
comp=Z,4μm,18.0s
KHMM Horse Mountain 99.79 337 *e*Pdif **Pdif 21 52 50.0 +1.1**
comp=Z,26nm,1.3s
KHMM LR LR
comp=Z,3μm,20.0s
TGUH Tegucigalpa,Un 99.83 294 PFAKE 21 53 00.0 +11
TGUH LR LR
comp=Z,2μm,22.0s
YERR Yerington 99.87 333 *e*Pdif **Pdif 21 52 50.5 +1.1**
comp=Z,23nm,1.2s
YERR LR LR
comp=Z,3μm,19.0s
RYN Ryan 99.91 332 *e*Pdif **Pdif 21 52 50.1 +0.6**
RYN LR LR
comp=Z,5μm,20.0s
HDC Heredia 99.91 289 PFAKE 21 53 00.0 +10
HDC LR LR
comp=Z,2μm,22.0s
PNTR Pine Nut 99.92 333 PFAKE 21 53 00.0 +10
PNTR LR LR
comp=Z,4μm,19.0s
NV11 Mina Array Sit 99.93 332 *e*Pdif **Pdif 21 52 49.9 +0.3**
NV11 LR LR
comp=Z,500nm,20.0s
JCC Jacoby Creek, 99.94 337 PFAKE 21 53 00.0 +11
JCC LR LR
comp=Z,2μm,20.0s
EPT El Paso 99.99 320 PFAKE 21 53 00.0 +10
EPT LR LR
comp=Z,3μm,18.0s
NV01 Mina Array Sit 99.99 332 *e*Pdif **Pdif 21 52 49.4 -0.6**
NV01 *e*PP **PP 21 56 56.2 +2.0**
NV01 *e*PKKPdf **PKKPbc 22 09 08.8 +0.5**
NVAR Mina Array Bea 99.99 332 P **Pdif 21 52 49.4 -0.6**
comp=Z,1.9nm,0.8s,baz=52,slow=4.6,SNR=10
NVAR PP **PP 21 56 56.2 +2.0**
comp=Z,1.5nm,0.8s,baz=28,slow=8.3,SNR=3.8
NVAR PKKP **PKKPbc 22 09 08.8 +0.5**
comp=Z,1.8nm,0.8s,baz=205,slow=3.6,SNR=8.7
NVAR LR LR 22 41 26.4
comp=Z,6μm,20.4s,baz=25,slow=37
121A Cookes Peak, D 100.07 321 P **Pdif 21 52 50.4 +0.1**
baz=38,SNR=5.3
O02D Mt. Diablo Mer 100.10 336 P **Pdif 21 52 49.9 -0.3**
baz=26
RUBR Rubicon Trail 100.16 333 PFAKE 21 53 00.0 +9.3
RUBR LR LR
comp=Z,4μm,21.0s
ORV Oroville 100.20 334 *e*Pdif **Pdif 21 52 51.3 +0.7**
ORV LR LR
comp=Z,4μm,19.0s
ORV Oroville 100.20 334 *e*P **Pdif 21 52 51.3 +0.7**
ORV MLR MLR
comp=Z,4μm,19.0s
TXAR Lajitas Array 100.28 316 P **Pdif 21 52 50.3 -1.0**
comp=Z,4.9nm,1.1s,baz=69,slow=4.2,SNR=27
TXAR PP **PP 21 56 55.2 -1.4**
comp=Z,3.6nm,1.1s,baz=74,slow=5.3,SNR=3.8
TXAR PKKPbc **PKKPbc 22 09 06.6 -0.5**
comp=Z,1.0nm,0.9s,baz=193,slow=5.1,SNR=6.1
TXAR PKPPKP 22 17 24.4
comp=Z,0.4nm,0.8s,baz=197,slow=1.9,SNR=2.8
TX31 Lajitas Ar. Si 100.28 316 *e*Pdif **Pdif 21 52 51.6 +0.4**
SHPR Sheep Range 100.34 328 *e*Pdif **Pdif 21 52 52.7 +1.2**
SHPR LR LR
comp=Z,5μm,20.0s
WAKR Walker 100.36 332 *e*Pdif **Pdif 21 52 53.4 +1.9**
WAKR LR LR
comp=Z,3μm,20.0s
KMRM Mail Ridge 100.37 336 *e*Pdif **Pdif 21 52 53.2 +1.8**
KMRM LR LR
comp=Z,4μm,20.0s
X16A Lo Mia Camp, P 100.38 325 *e*Pdif **Pdif 21 52 52.5 +0.8**
X16A LR LR
comp=Z,4μm,19.0s
JTS Las Juntas de 100.38 290 PFAKE 21 53 00.0 +8.2
JTS LR LR
comp=Z,1μm,21.0s
TPNV Topopah Spring 100.43 329 PFAKE 21 53 00.0 +8.2
TPNV LR LR
comp=Z,4μm,22.0s
TPNV Topopah Spring 100.43 329 P **Pdif 21 52 51.4 -0.5**
baz=32

AFDM Forest Hills D 100.55 334 *e*Pdif **Pdif 21 52 53.1 +0.9**
AFDM LR LR
comp=Z,2μm,20.0s
MMRI Maumere 100.62 93 PFAKE 21 53 00.0 +7.2
MMRI LR LR
comp=Z,2μm,22.0s
KCPM Cahto Peak 100.81 336 PFAKE 21 53 00.0 +6.6
KCPM LR LR
comp=Z,4μm,18.0s
W13A Hualapai Mount 100.95 327 PFAKE 21 53 10.0 +16
W13A LR LR
comp=Z,3μm,20.0s
OMMB Old Mammoth Mi 100.97 332 PFAKE 21 53 10.0 +16
OMMB LR LR
comp=Z,8μm,20.0s
MDPB Devils Postpil 100.99 332 PFAKE 21 53 10.0 +16
MDPB LR LR
comp=Z,6μm,20.0s
LNIG Linares 101.03 310 PFAKE 21 53 10.0 +15
LNIG LR LR
comp=Z,1μm,20.0s
FURC Furnace Creek, 101.09 330 P **Pdif 21 52 55.2 +0.6**
baz=31
OTAV Otavalo 101.10 278 PFAKE 21 53 10.0 +14
OTAV LR LR
comp=Z,1μm,22.0s
CMB Columbia Colle 101.14 333 PFAKE 21 53 10.0 +15
CMB LR LR
comp=Z,4μm,19.0s
HOPS Hopland Field 101.25 335 PFAKE 21 53 10.0 +15
HOPS LR LR
comp=Z,2μm,18.0s
GDXM Geysers 101.33 335 PFAKE 21 53 10.0 +14
GDXM LR LR
comp=Z,4μm,18.0s
Y14A Wickenburg 101.51 326 PFAKE 21 53 10.0 +13
Y14A LR LR
comp=Z,2μm,19.0s
LDFC Landfair 101.52 328 PFAKE 21 53 10.0 +13
LDFC LR LR
comp=Z,7μm,21.0s
DAC Darwin (Calif) 101.56 330 PFAKE 21 53 10.0 +13
DAC LR LR
comp=Z,4μm,19.0s
CWC Cottonwood Cre 101.62 331 P **Pdif 21 52 56.5 -0.6**
baz=30
LPAZ La Paz 101.70 258 PP **PP 21 57 10.4 +1.3**
comp=Z,6.5nm,1.1s,baz=37,slow=9.2,SNR=4.0
LPAZ La Paz 101.70 258 *e*PP **PP 21 57 13.8 +4.6**
MPMC Manual Prospec 101.70 330 P **Pdif 21 52 57.7 +0.1**
baz=31
PDMCI Parker Dam,Lak 101.73 327 P **Pdif 21 52 57.8 +0.4**
baz=33
319A Douglas 101.75 321 PFAKE 21 53 10.0 +12
319A LR LR
comp=Z,4μm,19.0s
TUC Tucson 101.77 323 *e*Pdif **Pdif 21 52 58.6 +0.8**
TUC LR LR
comp=Z,5μm,18.0s
TUC Tucson 101.77 323 *e*P **Pdif 21 52 58.6 +0.8**
TUC MLR MLR
comp=Z,5μm,18.0s
TUC Tucson 101.77 323 P **Pdif 21 52 58.1 +0.3**
baz=36
MCCM Marconi Confer 101.95 335 PFAKE 21 53 10.0 +12
MCCM LR LR
comp=Z,2μm,20.0s
CCIG Comitan 101.98 299 PFAKE 21 53 10.0 +11
CCIG LR LR
comp=Z,2μm,22.0s
GMRC Granite Mounta 102.01 328 P **Pdif 21 52 59.4 +0.5**
baz=32
GSC Goldstone, Bar 102.06 329 PFAKE 21 53 10.0 +11
GSC LR LR
comp=Z,4μm,20.0s
GSC Goldstone, Bar 102.06 329 P **Pdif 21 52 59.5 +0.4**
baz=31
VOG Valley Oaks Go 102.25 331 P **Pdif 21 52 60.0 +0.3**
baz=29
HEC Hector,Ludlow 102.26 328 P **Pdif 21 53 00.4 +0.5**
baz=32
LRMC Laurel Mtn Rad 102.28 330 P **Pdif 21 53 00.0 -0.1**
baz=31
IRM Iron Mountain 102.31 327 P **Pdif 21 53 00.7 +0.6**
baz=33
Y12C Blythe 102.37 327 PFAKE 21 53 10.0 +10
Y12C LR LR
comp=Z,3μm,19.0s
Y12C Blythe 102.37 327 P **Pdif 21 53 00.9 +0.6**
baz=33
ISA Isabella, Lake 102.45 330 PFAKE 21 53 10.0 +9.2
ISA LR LR
comp=Z,4μm,19.0s
ISA Isabella, Lake 102.45 330 P **Pdif 21 53 01.6 +0.8**
baz=30
RRX Edison Barstow 102.51 329 P **Pdif 21 53 01.1 +0.1**
baz=31
VES Vestal, Richgr 102.54 331 P **Pdif 21 53 00.5 -0.5**
baz=30
SAO San Andreas Ge 102.65 333 PFAKE 21 53 10.0 +8.5
SAO LR LR
comp=Z,3μm,18.0s
LVIG Laguna Verde 102.67 305 PFAKE 21 53 10.0 +8.1
LVIG LR LR
comp=Z,700nm,22.0s
BELC Belle Mtn. Jos 102.82 328 P **Pdif 21 53 03.1 +0.6**
baz=32
113A Mohawk Valley, 102.83 325 PFAKE 21 53 10.0 +7.6
113A LR LR
comp=Z,2μm,21.0s
BC3 Big Chuckawall 102.87 327 P **Pdif 21 53 03.5 +0.8**
baz=32
SOEI Soe 102.91 93 PFAKE 21 53 10.0 +6.9
SOEI LR LR
comp=Z,3μm,22.0s
EDW2 Edwards Air Fo 102.93 330 P **Pdif 21 53 03.6 +0.7**
baz=30
214A Organ Pipe Nat 103.05 324 P **Pdif 21 53 03.5 +0.1**
baz=34
HOPE Hope Point 103.05 212 PFAKE 21 53 10.0 +7.5
HOPE LR LR
comp=Z,4μm,18.0s
ARVC Arvin 103.06 330 P **Pdif 21 53 03.9 +0.5**
baz=30
GLA Glamis 103.09 326 PFAKE 21 53 20.0 +16
GLA LR LR
comp=Z,2μm,19.0s
GLA Glamis 103.09 326 P **Pdif 21 53 03.5 -0.1**
baz=33
PAGB Antelope Grade 103.10 332 PFAKE 21 53 20.0 +16
PAGB LR LR
comp=Z,4μm,20.0s
HPIG 103.25 316 PFAKE 21 53 20.0 +15
HPIG LR LR
comp=Z,3μm,19.0s
BFSC Mount Baldy Ra 103.33 329 P **Pdif 21 53 04.3 -0.5**
baz=31
PFO Pinyon Flats O 103.35 328 *e*Pdif **Pdif 21 53 06.1 +1.2**
PFO LR LR
comp=Z,4μm,21.0s
PFO Pinyon Flats O 103.35 328 *e*P **Pdif 21 53 06.1 +1.2**
PFO MLR MLR
comp=Z,4μm,21.0s
PFO Pinyon Flats O 103.35 328 P **Pdif 21 53 05.6 +0.7**
baz=32
SMMC Simmler 103.37 331 P **Pdif 21 53 05.0 +0.2**
baz=29
OSI Osito Audit: C 103.46 330 PFAKE 21 53 20.0 +15
OSI LR LR
comp=Z,4μm,19.0s
MWC Mount Wilson 103.52 329 PFAKE 21 53 20.0 +14
MWC LR LR
comp=Z,4μm,18.0s
PASC Pasadena Art C 103.62 329 PFAKE 21 53 20.0 +14
PASC LR LR
comp=Z,4μm,19.0s
SWSC Sam W. Stewart 103.62 327 P **Pdif 21 53 07.0 +1.1**
baz=32
SYO Syowa Base 103.68 175 *e*P **Pdif 21 53 08.2 +3.2**
MURC Murrieta 103.68 328 P **Pdif 21 53 06.1 -0.1**
baz=31
SIJI Sorong 103.73 82 PP **PKiKP 21 57 24.9 0.0**
comp=Z,2.3nm,0.5s,baz=335,slow=14,SNR=3.9
MONP2 Monument Peak 103.94 327 P **Pdif 21 53 08.2 +0.6**
baz=32
SARN Sarigan 104.03 58 PFAKE 21 53 20.0 +12

SARN LR LR
comp=Z,1μm,21.0s
BLG Laguna Peak, P 104.04 330 P **Pdif 21 53 08.2 +0.5**
baz=30
ANA2 Anatahan 104.23 59 PFAKE 21 53 20.0 +11
ANA2 LR LR
comp=Z,2μm,18.0s
BAR Barrett 104.23 327 PFAKE 21 53 20.0 +11
BAR LR LR
comp=Z,4μm,22.0s
CPE Camp Elliot 104.25 328 PFAKE 21 53 20.0 +11
CPE LR LR
comp=Z,4μm,22.0s
GO01 Chusmiza 104.35 256 PFAKE 21 53 20.0 +10
GO01 LR LR
comp=Z,3μm,22.0s
MNMC Minye Minye 104.39 257 PFAKE 21 53 20.0 +10
MNMC LR LR
comp=Z,3μm,22.0s
HSIG 104.50 321 PFAKE 21 53 20.0 +10
HSIG LR LR
comp=Z,2μm,18.0s
ZAIG Zacatecas 104.51 311 PFAKE 21 53 20.0 +10
ZAIG LR LR
comp=Z,2μm,20.0s
PB11 IPOC Station P 104.77 256 PFAKE 21 53 20.0 +8.7
PB11 LR LR
comp=Z,2μm,20.0s
SNCC San Nicolas Is 104.97 330 PFAKE 21 57 40.0 +13
SNCC LR LR
comp=Z,3μm,22.0s
MBWA Marble Bar 105.25 105 PFAKE 21 57 40.0 +13
MBWA LR LR
comp=Z,3μm,19.0s
PB01 IPOC Station P 105.30 255 PFAKE 21 57 40.0 +12
PB01 LR LR
comp=Z,3μm,21.0s
MAW Mawson 105.61 166 PP **PP 21 57 39.1 +2.5**
comp=Z,4.9nm,0.9s,baz=282,slow=7.1,SNR=4.8
MAW Mawson 105.61 166 *e*PP **PP 21 57 39.1 +2.5**
MAW LR LR
comp=Z,900nm,20.0s
TLIG Tlapa 105.63 305 PFAKE 21 57 40.0 +12
TLIG LR LR
comp=Z,1μm,22.0s
LVC Limon Verde 105.64 253 PFAKE 21 57 40.0 +11
LVC LR LR
comp=Z,3μm,18.0s
PB04 IPOC Station P 106.49 254 PFAKE 21 57 40.0 +10
PB04 LR LR
comp=Z,3μm,21.0s
NNA Nana 106.54 267 PFAKE 21 57 40.0 +10
NNA LR LR
comp=Z,3μm,19.0s
SRIG Santa Rosalia 106.54 321 PFAKE 21 57 40.0 +10
SRIG LR LR
comp=Z,2μm,21.0s
PB10 IPOC Station P 107.41 253 PFAKE 21 57 40.0 +8.7
PB10 LR LR
comp=Z,3μm,20.0s
GO02 Mina Guanaco 107.48 251 PFAKE 21 57 40.0 +8.2
GO02 LR LR
comp=Z,3μm,20.0s
VNA1 Neumayer--Stat 107.50 191 PKiKP **PKiKP 21 57 36.4 +6.4**
VNA1 Neumayer--Stat 107.50 191 Pdiff **Pdif 21 53 29.3 +7.3**
VNA2 Neumayer--Watz 107.60 191 PKiKP **PKiKP 21 57 36.2 +5.9**
VNA2 Neumayer--Watz 107.60 191 Pdiff **Pdif 21 53 27.8 +5.4**
baz=15,slow=4.9
SNAA Sanae 107.64 189 PKiKP **PKiKP 21 57 35.8 +5.4**
SNAA Sanae 107.64 189 Pdiff **Pdif 21 53 29.9 +7.2**
SNAA Sanae 107.64 189 PFAKE 21 57 40.0 +10
SNAA LR LR
comp=Z,8μm,20.0s
VNA3 Neumayer Olymp 108.24 191 PKiKP **PKiKP 21 57 38.0 +6.5**
VNA3 Neumayer Olymp 108.24 191 Pdiff **Pdif 21 53 31.4 +6.1**
TRQA Tornquist 108.25 236 PFAKE 21 57 40.0 +7.5
TRQA LR LR
comp=Z,5μm,20.0s
GO03 Copiap 109.18 249 PFAKE 21 57 50.0 +15
GO03 LR LR
comp=Z,4μm,21.0s
LCO Las Campanas 110.23 248 PFAKE 21 57 50.0 +13
LCO LR LR
comp=Z,3μm,21.0s
GO04 Tololo Observa 110.86 247 PFAKE 21 57 50.0 +12
GO04 LR LR
comp=Z,4μm,20.0s
PEL Peldehue 112.16 244 PFAKE 21 57 50.0 +10
PEL LR LR
comp=Z,5μm,21.0s
MIDW Midway 114.14 22 PFAKE 21 58 00.0 +16
MIDW LR LR
comp=Z,2μm,22.0s
WAKE Wake Island 115.22 41 PFAKE 21 58 00.0 +14
WAKE LR LR
comp=Z,2μm,22.0s
WR1 Warramunga Arr 116.48 97 *e*PKPdf **PKPdf 21 57 47.7 -0.9**
WRA Warramunga Arr 116.48 97 PKP **PKPdf 21 57 47.7 -0.9**
comp=Z,5.8nm,0.5s,baz=293,slow=1.6,SNR=26
WB2 Warramunga Arr 116.49 97 *e*PKPdf **PKPdf 21 57 48.2 -0.4**
WB2 LR LR
comp=Z,2μm,22.0s
ASAR Alice Springs 117.89 101 Pdiff **Pdif 21 54 09.4 0.0**
comp=Z,0.6nm,1.0s,baz=286,slow=4.5,SNR=3.9
ASAR PKP **PKPdf 21 57 50.0 -1.3**
comp=Z,5.8nm,0.8s,baz=320,slow=1.7,SNR=28
ASAR PP **PP 21 59 09.8 +4.1**
comp=Z,9.4nm,1.2s,baz=304,slow=6.9,SNR=5.2
ASAR SKP 22 01 23.5
comp=Z,2.6nm,0.9s,baz=314,slow=2.1,SNR=3.7
ASAR PKKPab **PKKPbc 22 08 11.8 +1.0**
comp=Z,1.1nm,0.4s,baz=121,slow=3.9,SNR=10
ASAR SKKP 22 12 12.0
comp=Z,1.9nm,1.1s,baz=132,slow=2.6,SNR=3.0
AS31 Alice Springs 117.89 101 *e*Pdif **Pdif 21 54 09.4 0.0**
AS31 *e*PKPdf **PKPdf 21 57 50.0 -1.3**
AS31 *e*PP **PP 21 59 09.8 +4.1**
AS31 *e*SKPdf **SKPdf 22 01 23.5 -1.6**
AS31 *e*PKIKPab **PKKPbc 22 08 11.8 +1.0**
AS31 *e*PKKSdf PKKSdf 22 12 12.0 -4.1
CASY Casey 119.18 152 *e*PKPdf **PKPdf 21 57 53.0 +0.6**
CASY LR LR
comp=Z,3μm,22.0s
RABL Rabaul 122.46 71 PFAKE 21 58 10.0 +9.4
RABL LR LR
comp=Z,700nm,22.0s
BBOO Buckleboo 123.47 109 *e*PKPdf **PKPdf 21 58 02.0 +0.3**
QSPA South Pole Qui 124.28 180 *e*PKPdf **PKPdf 21 58 01.9 -0.4**
QSPA LR LR
comp=Z,7μm,19.0s
CTA Charters Tower 126.38 91 PKP **PKPdf 21 58 07.5 -0.1**
comp=Z,9.5nm,1.0s,baz=303,slow=4.6,SNR=5.9
CTAO Charters Tower 126.38 91 *e*PKPdf **PKPdf 21 58 08.5 +0.8**
CTAO Charters Tower 126.38 91 *e*PKIKP **PKPdf 21 58 08.5 +0.8**
JOHN Johnston Islan 127.23 18 PFAKE 21 58 20.0 +10
JOHN LR LR
comp=Z,3μm,19.0s
STKA Stephens Creek 127.48 106 PKP **PKPdf 21 58 09.2 -0.2**
comp=Z,12nm,0.9s,baz=325,slow=3.7,SNR=15
STKA Stephens Creek 127.48 106 *e*PKPdf **PKPdf 21 58 09.8 +0.4**
HNR Honiara 131.75 70 PFAKE 21 58 30.0 +11
HNR LR LR
comp=Z,1μm,22.0s
EIDS Eidsvold 132.71 94 PFAKE 21 58 30.0 +9.3
EIDS LR LR
comp=Z,1μm,20.0s
VNDA Vanda 132.85 168 PKP **PKPdf 21 58 17.6 -0.7**
comp=Z,1.4nm,0.9s,baz=277,slow=6.2,SNR=7.1
VNDA PP **PP 22 00 44.3 +0.3**
comp=Z,5.0nm,1.2s,baz=209,slow=7.1,SNR=3.2
VNDA SKPbc **SKPbc 22 01 41.2 -2.8**
comp=Z,39nm,1.1s,baz=275,slow=6.4,SNR=17
VNDA SKKPbc **SKKPbc 22 11 04.3 -4.4**
comp=Z,2.6nm,1.1s,baz=49,slow=3.0,SNR=4.5
SBA Scott Base 133.40 170 *e*PKPdf **PKPdf 21 58 19.1 -0.2**
SBA LR LR
comp=Z,7μm,21.0s
SBA Scott Base 133.40 170 *e*PKIKP **PKPdf 21 58 19.1 -0.2**
SBA MLR MLR
comp=Z,7μm,21.0s
ARMA Armidale 135.05 100 PFAKE 21 58 40.0 +15
ARMA LR LR
comp=Z,2μm,21.0s
LHI Lord Howe Isla 141.45 99 PFAKE 21 58 50.0 +12
LHI LR LR

comp=Z,2μm,22.0s
DZM Mont Dzumac 143.93 80 PKP PKPbc 21 58 39.0 +0.9
comp=Z,33nm,1.0s,baz=37,slow=3.1
DZM Mont Dzumac 143.93 80 *e*PKiKP PKPab 21 58 38.2 +0.7
comp=Z,233nm,1.4s
DZM Mont Dzumac 143.93 80 *e*PP PP 22 01 52.5 -1.8
comp=Z,953nm,26.8s
DZM Mont Dzumac 143.93 80 *e*SS SS 22 20 41.3 +4.1
comp=Z,3μm,31.3s
DZM Mont Dzumac 143.93 80 *e*LR LR 22 45 46.6
comp=Z,3μm,32.6s
DZM Mont Dzumac 143.93 80 *e*PKPdf PKPbc 21 58 39.4 +1.3
DZM LR LR
comp=Z,2μm,21.0s
ONTNC Ouen Toro 144.05 81 *e*PKPdf PKPbc 21 58 39.4 +1.1
OUENC Ouen Island, N 144.42 81 *e*PKPdf PKPbc 21 58 40.8 +1.3
KNTN Kanton 144.79 30 *e*PKPbc **PKPdf 21 58 43.2 +1.2**
FUNA Funafuti 144.87 49 *e*PKPbc **PKPdf 21 58 43.1 +1.0**
MARNC Mare, Loyalty 144.93 78 *e*PKPbc **PKPab 21 58 41.7 +0.6**
PINNC Pines Island, 145.00 80 *e*PKPbc **PKPdf 21 58 42.8 +0.8**
DCZ Deep Cove 149.09 122 *e*PKPab **PKPbc 21 58 53.0 +0.7**
WHZ Wether Hill Ro 149.58 123 *e*PKPbc **PKPbc 21 58 54.4 +0.8**
TAOE Nuku Hiva Isla 151.21 329 *e*PKPbc **PKiKP 21 58 59.9 +0.9**
FOZ Fox Glacier 151.22 119 *e*PKPbc **PKPbc 21 58 58.5 +1.0**
LBZ Lake Benmore 151.37 121 *e*PKPbc **PKiKP 21 58 59.5 +1.2**
ODZ Otahua Downs 151.59 122 *e*PKPbc **PKiKP 21 58 60.0 +1.2**
RPZ Rata Peaks 152.09 120 PKPbc **PKPbc 21 58 53.0 +0.7**
comp=Z,61nm,1.1s,baz=260,slow=1.4,SNR=4.7
RPZ Rata Peaks 152.09 120 *e*PKPbc **PKPbc 21 59 00.6 +1.0**
OXZ Oxford 152.85 119 PFAKE 21 59 10.0 -2.4
OXZ LR LR
comp=Z,4μm,22.0s
MOZ McQueen's Vall 153.24 120 *e*PKPab **PKPab 21 59 12.6 -1.3**
THZ Tophouse 153.67 116 PFAKE 21 59 10.0 -6.0
THZ LR LR
comp=Z,4μm,21.0s
KHZ Kahutara 154.06 117 PFAKE 21 59 10.0 +6.1
KHZ LR LR
comp=Z,5μm,18.0s
OUZ Omahuta 154.11 101 PFAKE 21 59 10.0 +5.8
OUZ LR LR
comp=Z,4μm,20.0s
SNZO South Karori 155.06 115 PFAKE 21 59 10.0 -12
SNZO LR LR
comp=Z,4μm,20.0s
BKZ Black Stump Fm 156.59 110 *e*PKPab **PKPab 21 59 27.7 -0.8**
BKZ LR LR
comp=Z,3μm,21.0s
URZ Urewera 157.10 108 PKPab **PKPab 21 59 28.5 -2.1**
comp=Z,38nm,1.0s,baz=300,slow=2.9,SNR=4.4
URZ Urewera 157.10 108 PFAKE 21 59 10.0 +10
URZ LR LR
comp=Z,4μm,19.0s
RKT Rikitea 159.32 298 *e*LR LR 22 52 40.2
comp=Z,5μm,38.2s
PPT2 Papeete2 162.59 343 *e*PKIKP **PKPdf 21 59 00.2 -6.7**
comp=Z,48nm,1.3s
PPT2 Papeete2 162.59 343 *e*PP PP 22 03 35.0 -3.2
comp=Z,876nm,26.5s
PPT2 Papeete2 162.59 343 *e*SS SS 22 23 58.9 +0.4
comp=Z,3μm,28.5s
PPT2 Papeete2 162.59 343 *e*LR LR 22 54 24.2
comp=Z,4μm,26.2s
TVO Taravao 162.70 342 *e*PKIKP **PKPdf 21 59 00.3 -6.7**
comp=Z,36nm,1.2s
TBI Tubuai 168.01 336 *e*PP PP 22 04 05.6 -0.9
comp=Z,633nm,28.2s
TBI Tubuai 168.01 336 *e*SS SS 22 24 47.3 -6.6
comp=Z,4μm,30.8s
TBI Tubuai 168.01 336 *e*LR LR 22 56 52.9
comp=Z,3μm,24.5s

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*IDC **16** 21:42:37.5±1.4, 34°.29N×25°.11E, h0km, mb4.9/2, mb1 5.1/5, mb1mx4.3/53, mbtmp4.9/5, ML4.7/1, Error ellipse: s-maj=25.4km s-min=19.6km az=74.0*
*ISCJB **16** 21:42:39.1±1.0, 34°.20N±0°.09×25°.2E±0°.1, h25km, mb4.8/2, Error ellipse: s-maj=17.5km s-min=8.9km az=143.9*
ISC 16 21:42:40.4±1.1, 34°.26N±0°.10×25°.27E±0°.09, h25km, n14, σ2§15/16, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.07**	**343**	Pn	**Pb**	**21 42 59.9**	**-0.4**
	295nm,0.3s,baz=162,slow=20,SNR=3.6						
IDI				Sn	**Sb**	**21 43 13.1**	**-0.9**
	522nm,0.3s,baz=130,slow=17,SNR=8.2						
SLTI	**Sal'it**	**8.43**	**101**	Pn	**Sn**	**21 46 15.7**	**+0.4**
MMAI	**Mount Meron Ar**	**8.54**	**96**	Pn	**Pn**	**21 44 45.1**	**+2.5**
	baz=278,slow=12,SNR=1.4						
MMAI				Sn	**Sn**	**21 46 17.2**	**-0.9**
	8.9nm,0.3s,baz=274,slow=24,SNR=2.2						
AMAZ	**Amatzia**	**8.55**	**106**	Pn	**Sn**	**21 46 19.3**	**+0.8**
MMLI	**Mount Malkishu**	**8.69**	**99**	Pn	**Sn**	**21 46 19.9**	**-1.8**
NATI	**Neve Ativ**	**8.77**	**94**	Pn	**Sn**	**21 46 22.3**	**-1.4**
YTIR	**Yattir**	**8.78**	**107**	Pn	**Sn**	**21 46 21.4**	**-2.6**
HMDT	**Nahal Hemdat**	**8.82**	**100**	Pn	**Sn**	**21 46 22.9**	**-2.0**
DSI	**Dead Sea**	**8.91**	**105**	Pn	**Sn**	**21 46 24.1**	**-3.1**
KRMI	**Paran Flat**	**9.01**	**115**	Pn	**Sn**	**21 46 25.4**	**-4.4**
EIL	**Elat**	**9.41**	**116**	Pn	**Pn**	**21 44 56.7**	**+2.3**
	baz=261,slow=19,SNR=1.4						
GERES	**GERESS Array B**	**16.92**	**333**	Pn	**P**	**21 46 37.2**	**-0.1**
	1.1nm,0.3s,baz=141,slow=13,SNR=3.4						
TORD	**Torodi Ar. Bea**	**29.99**	**231**	P	**P**	**21 48 46.7**	**-0.5**
	9.7nm,0.6s,baz=34,slow=8.9,SNR=6.7						
ZALV	**Zalesovo Beam**	**45.56**	**46**	P	**P**	**21 50 58.8**	**+0.7**
	8.6nm,0.6s,baz=264,slow=8.6,SNR=3.5						

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*IDC **16** 21:43:13.6±0.5, 34°.35N×25°.07E, h0km, mb4.9/33, mb1 4.9/39, mb1mx4.8/56, mbtmp4.9/39, ML4.9/4, Error ellipse: s-maj=11.1km s-min=10.5km az=96.0*
*NEIC **16** 21:43:15.2±2.4, 34°.33N×25°.00E, h10km, mb5.1/63, ML4.9(ISK), Error ellipse: s-maj=9.6km s-min=8.7km az=243.0*
*MOS **16** 21:43:15.1±1.2, 34°.36N×24°.96E, h24km, mb5.3/24, Error ellipse: s-maj=10.0km s-min=5.4km az=87.0*
*ISCJB **16** 21:43:16.0±0.2, 34°.33N±0°.03×25°.07E±0°.03, h25km, mb5.0/84, Error ellipse: s-maj=4.2km s-min=2.9km az=163.5*
ISC 16 21:43:17.2±0.3, 34°.35N±0°.05×25°.05E±0°.04, h25km, n369, σ1§32/381, mb5.0/84, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.93**	**302**	*e*P	**Pn**	**21 43 36.9**	**+2.1**
IDI	**Anoyia**	**0.94**	**352**	Pn	**Pn**	**21 43 35.6**	**+0.6**
	434nm,0.3s,baz=166,slow=19,SNR=2.8						
IDI				Sn	**Sn**	**21 43 48.9**	**+1.2**
	753nm,0.3s,baz=107,slow=20,SNR=4.1						
IMMV	**Iera Moni Meta**	**1.41**	**322**	*e*P	**Pn**	**21 43 38.1**	**-3.3**
KARP	**Karpathos**	**2.10**	**55**	*e*P	**Pb**	**21 43 53.6**	**-1.1**
KARP	**Karpathos**	**2.10**	**55**	*e*Pn	**Pb**	**21 43 54.3**	**-0.4**
APE	**Apeiranthos**	**2.74**	**8**	*e*P	**Pn**	**21 43 57.7**	**-1.9**
ARG	**Arkhangelos**	**3.13**	**53**	*e*P	**Pn**	**21 44 07.1**	**+2.2**
DAT	**Datca**	**3.14**	**40**	*e*P	**Pn**	**21 44 06.3**	**+1.1**
DATC	**Datca-Mugla**	**3.21**	**41**	*e*P	**Pn**	**21 44 07.6**	**+1.6**
BODT	**Bodrum**	**3.27**	**34**	*e*P	**Pn**	**21 44 07.4**	**+0.5**
BODT	**Bodrum**	**3.27**	**34**	*e*Pn	**Pn**	**21 44 07.4**	**+0.5**
BBRN	**Bozburun-Marma**	**3.38**	**46**	*e*P	**Pn**	**21 44 10.5**	**+2.1**
MRSB	**Marmaris-Mugla**	**3.48**	**46**	*e*P	**Pn**	**21 44 11.8**	**+1.9**
GCAM	**G?zelcaml?**	**3.78**	**27**	*e*P	**Pn**	**21 44 14.3**	**+0.4**
ITM	**Ithomi**	**3.80**	**319**	*e*Pn	**Pn**	**21 44 17.2**	**+3.0**
YER	**Yerkesik**	**3.82**	**42**	*e*P	**Pn**	**21 44 16.8**	**+2.3**
YER	**Yerkesik**	**3.82**	**42**	*e*Pn	**Pn**	**21 44 16.8**	**+2.3**
YER	**Yerkesik**	**3.82**	**42**	*e*P	**Pn**	**21 44 16.8**	**+2.3**
DALY	**Dalyan (Mula)**	**3.83**	**49**	*e*P	**Pn**	**21 44 16.7**	**+2.1**
TURN	**Turunc**	**3.83**	**48**	*e*P	**Pn**	**21 44 12.3**	**-2.3**
AKAS	**Kas**	**4.17**	**62**	*e*P	**Pn**	**21 44 22.6**	**+3.2**
AYDB	**Zeytinkoy-Aydi**	**4.26**	**32**	*e*P	**Pn**	**21 44 20.4**	**-0.2**
BLCB	**Balcova**	**4.33**	**21**	*e*P	**Pn**	**21 44 20.9**	**-0.6**
MANT	**Manisa**	**5.00**	**33**	*e*Pn	**Pn**	**21 44 32.4**	**+1.5**
KORT	**Korkueli**	**5.06**	**57**	*e*P	**Pn**	**21 44 35.1**	**+3.5**
KULA	**Kula-Manisa**	**5.07**	**34**	*e*P	**Pn**	**21 44 33.1**	**+1.4**
AGG	**Agios Georgios**	**5.15**	**336**	*e*Pn	**Pn**	**21 44 30.0**	**-2.7**
AGG	**Agios Georgios**	**5.15**	**336**	*e*P	**Pn**	**21 44 30.0**	**-2.7**
ANTB	**Antalya**	**5.22**	**59**	*e*P	**Pn**	**21 44 37.7**	**+4.0**
BCK	**Bucak**	**5.46**	**54**	*e*P	**Pn**	**21 44 40.4**	**+3.3**
ISP	**Isparta**	**5.62**	**50**	*e*Pn	**Pn**	**21 44 41.6**	**+2.4**
ISP	**Isparta**	**5.62**	**50**	*e*P	**Pn**	**21 44 41.7**	**+2.4**
BALB	**Balikesir**	**5.74**	**22**	*e*Pn	**Pn**	**21 44 43.8**	**+3.0**
LIT	**Litokhoron**	**6.09**	**341**	*e*Pn	**Pn**	**21 44 45.1**	**-0.6**
LIT	**Litokhoron**	**6.09**	**341**	*e*P	**Pn**	**21 44 45.1**	**-0.6**
ALN	**Alexandroupoli**	**6.58**	**7**	*e*Pn	**Pn**	**21 44 53.1**	**+0.7**
ALN	**Alexandroupoli**	**6.58**	**7**	*e*P	**Pn**	**21 44 53.1**	**+0.7**
FNA	**Florina**	**7.05**	**337**	*e*Pn	**Pn**	**21 44 59.9**	**+1.0**
FNA	**Florina**	**7.05**	**337**	*e*P	**Pn**	**21 44 59.9**	**+1.0**
TIP	**Timpagrande**	**8.21**	**308**	*e*Pn	**Pn**	**21 45 14.4**	**-0.5**
BR231	**Keskin MP Arra**	**8.25**	**46**	*e*Pn	**Pn**	**21 45 17.6**	**+2.2**
ANTO	**Ankara**	**8.28**	**46**	*e*Pn	**Pn**	**21 45 18.8**	**+3.0**
CEL	**Celeste**	**8.36**	**300**	*e*Pn	**Pn**	**21 45 18.1**	**+1.3**
CEL				*e*Sn	**Sn**	**21 46 45.8**	**-4.6**
VTS	**Vitosha**	**8.37**	**351**	*e*Pn	**Pn**	**21 45 18.5**	**+1.4**
VTS	**Vitosha**	**8.37**	**351**	*e*P	**Pn**	**21 45 18.5**	**+1.4**
BR101	**Keskin Array S**	**8.71**	**50**	*e*Pn	**Pn**	**21 45 23.6**	**+1.9**
BR101				*e*Sn	**Sn**	**21 46 56.6**	**-2.5**
BR131	**Keskin Array S**	**8.71**	**50**	*e*Pn	**Pn**	**21 45 24.5**	**+2.8**
BRTR	**Keskin Array B**	**8.71**	**50**	Pn	**Pn**	**21 45 23.6**	**+1.9**
	0.6nm,0.3s,baz=215,slow=15,SNR=2.9						
BRTR				Sn	**Sn**	**21 46 56.6**	**-2.5**
	0.3nm,0.3s,baz=231,slow=25,SNR=2.1						
MMAI	**Mount Meron Ar**	**8.73**	**96**	Pn	**Pn**	**21 45 21.4**	**-0.5**
	baz=277,slow=12,SNR=2.6						
MMAI				Sn	**Sn**	**21 46 53.9**	**-5.7**
	27nm,0.3s,baz=274,slow=24,SNR=4.3						
WDD	**Wied Dalam**	**8.76**	**283**	*e*Pn	**Pn**	**21 45 23.0**	**+0.8**
WDD				*e*Sn	**Sn**	**21 46 57.0**	**-3.1**
VAE	**Valguarnera**	**9.18**	**293**	Sn	**Sn**	**21 47 04.5**	**-6.0**
	6.0nm,0.3s,baz=221,slow=20,SNR=1.9						
EIL	**Elat**	**9.61**	**116**	Pn	**Pn**	**21 45 32.4**	**-1.6**
	13nm,0.3s,baz=288,slow=3.2,SNR=4.6						
EIL				Sn	**Sn**	**21 47 14.4**	**-6.7**
	9.6nm,0.3s,baz=286,slow=20,SNR=2.8						
CLTB	**Caltabellotta**	**10.12**	**292**	*e*Pn	**Pn**	**21 45 44.5**	**+3.5**
ASF	**Jabal al Asfar**	**10.15**	**99**	Sn	**Sn**	**21 47 28.3**	**-6.3**
	3.6nm,0.3s,baz=300,slow=20,SNR=3.0						
BLY	**Banja Luka**	**12.02**	**332**	*e*Pn	**Pn**	**21 46 06.9**	**0.0**
KEST	**Kesra**	**12.95**	**281**	*e*Pn	**Pn**	**21 46 17.3**	**-2.4**
TAMR	**Tamra**	**13.24**	**286**	*e*Pn	**Pn**	**21 46 23.1**	**-0.4**
VRAC	**Vranov**	**16.20**	**340**	Pn	**P**	**21 47 04.6**	**-1.4**
	1.1nm,0.3s,baz=170,slow=6.1,SNR=5.4						
AKASG	**Malin Array Be**	**16.62**	**9**	Pn	**Pn**	**21 47 09.4**	**+1.1**
	20nm,0.3s,baz=198,slow=10,SNR=7.7						
AKBB	**Malin Array Si**	**16.62**	**9**	*e*Pn	**Pn**	**21 47 08.2**	**-0.2**
	163nm,0.8s						
AKBB	**Malin Array Si**	**16.62**	**9**	*e*P	**Pn**	**21 47 08.2**	**-0.2**
AKBB				pmax	pmax		
	comp=Z,163nm,0.8s						
KBZ	**Khabaz**	**16.70**	**51**	Pn	**P**	**21 47 13.6**	**+2.0**
	comp=Z,1.5nm,0.3s,baz=270,slow=3.0,SNR=2.5						
GEC2	**GERESS Array S**	**16.76**	**333**	*e*Pn	**Pn**	**21 47 10.2**	**0.0**
	comp=Z,53nm,1.0s						
GEC2	**GERESS Array S**	**16.76**	**333**	*e*P	**Pn**	**21 47 10.3**	**0.0**
GEC2				pmax	pmax		
	comp=Z,53nm,1.0s						
GERES	**GERESS Array B**	**16.76**	**333**	Pn	**P**	**21 47 13.4**	**+1.1**
	comp=Z,3.0nm,0.3s,baz=147,slow=11,SNR=4.8						
CLL	**Collm**	**19.07**	**336**	*e*P	**P**	**21 47 37.0**	**-0.6**
	comp=Z,143nm,1.3s						
CLL	**Collm**	**19.07**	**336**	*e*P	**P**	**21 47 37.0**	**-0.6**
CLL				pmax	pmax		
	comp=Z,143nm,1.3s						
WLF	**Walferdange**	**20.68**	**323**	*e*P	**P**	**21 47 54.3**	**-0.9**
	comp=Z,236nm,1.0s						
WLF	**Walferdange**	**20.68**	**323**	*e*P	**P**	**21 47 54.3**	**-0.9**
WLF				pmax	pmax		
	comp=Z,236nm,1.0s						
ESDC	**Sonseca Array**	**23.71**	**291**	P	**P**	**21 48 27.5**	**+0.2**
	comp=Z,14nm,0.7s,baz=88,slow=9.3,SNR=6.3						
ESLA	**Sonseca Array**	**23.71**	**291**	*e*P	**P**	**21 48 26.1**	**-1.1**
	comp=Z,42nm,1.1s						
PAB	**San Pablo**	**24.00**	**291**	*e*P	**P**	**21 48 30.5**	**+0.5**
	comp=Z,72nm,1.5s						
PAB	**San Pablo**	**24.00**	**291**	*e*P	**P**	**21 48 30.5**	**+0.5**
PAB				pmax	pmax		
	comp=Z,72nm,1.5s						
MDT	**Midelt**	**24.72**	**275**	P	**P**	**21 48 38.1**	**+1.4**
	comp=Z,7.5nm,0.6s,baz=97,slow=7.1,SNR=5.3						
MTE	**Manteigas**	**26.50**	**293**	*e*P	**P**	**21 48 52.7**	**0.0**
	comp=Z,31nm,1.0s						
PVAQ	**Vaqueiros**	**26.65**	**286**	*e*P	**P**	**21 48 52.2**	**-1.8**
	comp=Z,29nm,0.9s						
HFS	**Hagfors**	**26.84**	**347**	P	**P**	**21 48 55.8**	**+0.4**
	comp=Z,10nm,0.5s,baz=152,slow=9.4,SNR=5.1						
GEYT	**Alibeck**	**26.86**	**73**	P	**P**	**21 48 56.1**	**+0.1**
	comp=Z,5.0nm,0.8s,baz=284,slow=8.6,SNR=1.8						
FIA0	**FINESS Array S**	**27.12**	**1**	*e*P	**P**	**21 48 56.5**	**-1.4**
FIA0				*e*PcP	**PcP**	**21 52 18.6**	**+0.5**
FIA0	**FINESS Array S**	**27.12**	**1**	*e*P	**P**	**21 48 56.5**	**-1.4**
FIA0				*e*		21 52 18.6	
FINES	**FINESS Array B**	**27.12**	**1**	P	**P**	**21 48 56.5**	**-1.4**
	comp=Z,23nm,0.9s,baz=166,slow=12,SNR=4.8						
FINES				PcP	**PcP**	**21 52 18.6**	**+0.5**
	comp=Z,7.3nm,0.7s,baz=132,slow=2.1,SNR=3.4						
KONO	**Kongsberg**	**27.27**	**343**	*e*P	**P**	**21 48 57.2**	**-2.0**
	comp=Z,46nm,1.3s						
KONO	**Kongsberg**	**27.27**	**343**	*e*P	**P**	**21 48 57.3**	**-2.0**
KONO				pmax	pmax		
	comp=Z,46nm,1.3s						
NAO01	**NORSAR Array S**	**28.05**	**345**	*e*P	**P**	**21 49 04.5**	**-1.8**
	comp=Z,52nm,0.8s						
NC405	**NORSAR Array S**	**28.12**	**346**	*e*P	**P**	**21 49 07.2**	**+0.3**
	comp=Z,90nm,1.2s						
NB201	**NORSAR Array S**	**28.15**	**346**	*e*P	**P**	**21 49 07.6**	**+0.4**
	comp=Z,63nm,0.9s						
NB200	**NORSAR Array S**	**28.16**	**346**	*e*P	**P**	**21 49 06.8**	**-0.5**
NOA	**NORSAR Array B**	**28.16**	**346**	P	**P**	**21 49 06.8**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=172,slow=10,SNR=3.7						
NBO00	**NORSAR Array S**	**28.24**	**345**	*e*P	**P**	**21 49 07.7**	**-0.3**
	comp=Z,154nm,1.4s						
EKA	**Eskdalemuir Ar**	**28.65**	**326**	P	**P**	**21 49 12.0**	**+0.3**
	comp=Z,13nm,0.8s,baz=126,slow=8.7,SNR=6.4						
EKA	**Eskdalemuir Ar**	**28.65**	**326**	P	**P**	**21 49 12.0**	**+0.3**
ESK	**Eskdalemuir**	**28.66**	**326**	*e*P	**P**	**21 49 10.7**	**-1.1**
	comp=Z,29nm,1.0s						
ESK	**Eskdalemuir**	**28.66**	**326**	*e*P	**P**	**21 49 10.7**	**-1.1**
ESK				pmax	pmax		
	comp=Z,29nm,1.0s						
AKTO	**Aktyubinsk**	**28.87**	**46**	P	**P**	**21 49 13.1**	**-0.6**
	comp=Z,16nm,0.8s,baz=236,slow=11,SNR=4.0						
KIRV	**Kirov**	**29.16**	**26**	P	**P**	**21 49 15.8**	**-0.4**
	comp=Z,17nm,0.4s,baz=229,slow=11,SNR=3.4						
TOA1	**Torodi Ar. Sit**	**29.91**	**231**	*e*P	**P**	**21 49 22.2**	**-0.9**
TOA0	**Torodi Ar. Sit**	**29.91**	**231**	*e*P	**P**	**21 49 23.9**	**+0.7**
	comp=Z,77nm,0.6s						
TORD	**Torodi Ar. Bea**	**29.91**	**231**	P	**P**	**21 49 22.2**	**-0.9**
	comp=Z,45nm,0.5s,baz=30,slow=9.3,SNR=18						
WSAR	**Wadi Sarin**	**31.31**	**102**	P	**P**	**21 49 37.3**	**+1.8**
	comp=Z,14nm,0.9s,baz=296,slow=12,SNR=2.5						
ARU	**Arti**	**31.76**	**36**	P	**P**	**21 49 38.9**	**-0.2**
	comp=Z,6.4nm,0.5s,baz=243,slow=11,SNR=5.9						
ARU	**Arti**	**31.76**	**36**	*e*P	**P**	**21 49 38.9**	**-0.2**
	comp=Z,253nm,1.5s						
MBAR	**Mbarara**	**35.18**	**170**	P	**P**	**21 50 09.6**	**+0.2**
	comp=Z,7.6nm,0.6s,baz=17,slow=6.8,SNR=3.1						
MBAR	**Mbarara**	**35.18**	**170**	*e*P	**P**	**21 50 09.6**	**+0.2**
	comp=Z,12nm,0.9s						
ARA0	**ARCESS Array S**	**35.24**	**0**	*e*P	**P**	**21 50 07.7**	**-1.6**
ARA0				*e*PcP	**PcP**	**21 52 39.6**	**+0.1**
ARCES	**ARCESS Array B**	**35.24**	**0**	P	**P**	**21 50 07.7**	**-1.5**
	comp=Z,4.1nm,0.4s,baz=197,slow=9.6,SNR=5.6						
ARCES				PcP	**PcP**	**21 52 39.6**	**+0.1**
	comp=Z,8.2nm,0.9s,baz=186,slow=4.0,SNR=5.1						
ARE0	**ARCESS Array S**	**35.24**	**0**	*e*P	**P**	**21 50 08.2**	**-1.1**
	comp=Z,2.1nm,1.1s						
KK31	**Karatay Array**	**36.15**	**62**	*e*P	**P**	**21 50 17.8**	**+0.3**
	comp=Z,42nm,1.3s						
KK31	**Karatay Array**	**36.15**	**62**	*e*P	**P**	**21 50 17.8**	**+0.3**
KK31				pmax	pmax		
	comp=Z,42nm,1.3s						
KKAR	**Karatay Array**	**36.15**	**62**	*e*P	**P**	**21 50 18.3**	**+0.8**
	comp=Z,42nm,1.3s						
KKAR	**Karatay Array**	**36.15**	**62**	*e*P	**P**	**21 50 18.3**	**+0.8**
KKAR				pmax	pmax		
	comp=Z,42nm,1.3s						
GAR	**Garm**	**36.31**	**69**	*e*P	**P**	**21 50 19.2**	**+0.2**
	comp=Z,92nm,1.3s						
GAR	**Garm**	**36.31**	**69**	*e*P	**P**	**21 50 19.2**	**+0.2**
GAR				pmax	pmax		
	comp=Z,92nm,1.3s						
ARSB	**Arslanbob**	**38.09**	**65**	*e*P	**P**	**21 50 33.5**	**-0.7**
	comp=Z,49nm,1.3s						
DBIC	**Dimbokro**	**39.00**	**232**	P	**P**	**21 50 41.5**	**-0.2**
	comp=Z,22nm,0.8s,baz=34,slow=15,SNR=3.5						
DBIC	**Dimbokro**	**39.00**	**232**	*e*P	**P**	**21 50 41.5**	**-0.2**
	comp=Z,50nm,1.2s						
AAK	**Ala-Archa**	**39.10**	**63**	P	**P**	**21 50 43.2**	**+0.6**
	comp=Z,5.9nm,0.6s,baz=231,slow=6.5,SNR=3.1						
AAK	**Ala-Archa**	**39.10**	**63**	*e*P	**P**	**21 50 42.7**	**+0.1**
	comp=Z,14nm,1.0s						
AAK	**Ala-Archa**	**39.10**	**63**	*e*P	**P**	**21 50 42.7**	**+0.1**
AAK				pmax	pmax		
	comp=Z,15nm,1.0s						
TIC	**Toumodi**	**39.12**	**232**	*e*P	**P**	**21 50 42.9**	**0.0**
KIC	**Kosan Boka**	**39.16**	**231**	*e*P	**P**	**21 50 43.2**	**+0.1**
	comp=Z,64nm,0.7s						
FRU1	**Bishkek**	**39.19**	**62**	*e*P	**P**	**21 50 42.8**	**-0.4**
	comp=Z,43nm,1.0s						
FRU1	**Bishkek**	**39.19**	**62**	*e*P	**P**	**21 50 42.8**	**-0.4**
FRU1				pmax	pmax		
	comp=Z,43nm,1.0s						
LIC	**Lamto**	**39.44**	**232**	*e*P	**P**	**21 50 45.6**	**+0.1**
	comp=Z,91nm,0.9s						
NIL	**Nilore**	**39.66**	**77**	*e*P	**P**	**21 50 47.8**	**+0.5**
	comp=Z,29nm,1.0s						
NIL	**Nilore**	**39.66**	**77**	*e*P	**P**	**21 50 47.8**	**+0.5**
NIL				pmax	pmax		
	comp=Z,29nm,1.0s						
JMIC	**Jan Mayen**	**40.83**	**344**	P	**P**	**21 50 57.1**	**+0.7**
	comp=Z,56nm,0.8s,baz=171,slow=2.8,SNR=3.9						
BORG	**Borgarnes**	**41.22**	**332**	P	**P**	**21 51 00.9**	**+1.3**
	comp=Z,2.6nm,0.6s,baz=104,slow=6.2,SNR=3.8						
BORG	**Borgarnes**	**41.22**	**332**	*e*P	**P**	**21 51 00.9**	**+1.3**
	comp=Z,27nm,1.4s						
KURK	**Kurchatov**	**41.76**	**50**	*e*P	**P**	**21 51 04.8**	**+0.5**
	comp=Z,67nm,1.2s						
KURK	**Kurchatov**	**41.76**	**50**	*e*P	**P**	**21 51 04.8**	**+0.5**
KURK				pmax	pmax		
	comp=Z,67nm,1.2s						
SCO	**Scoresbysund**	**44.06**	**339**	*e*P	**P**	**21 51 22.4**	**-0.1**
	comp=Z,22nm,1.0s						
MAKZ	**Makanchi**	**44.08**	**56**	*e*P	**P**	**21 51 21.5**	**-1.7**
	comp=Z,20nm,1.0s						
MAKZ	**Makanchi**	**44.08**	**56**	*e*P	**P**	**21 51 21.5**	**-1.7**
MAKZ				pmax	pmax		
	comp=Z,20nm,1.0s						
SPA0	**Spitsbergen Ar**	**44.09**	**357**	*e*P	**P**	**21 51 22.4**	**-0.4**
	comp=Z,82nm,1.4s						
SPA0				*e*PcP	**PcP**	**21 53 08.5**	**+0.9**
SPITS	**Spitsbergen Ar**	**44.09**	**357**	P	**P**	**21 51 22.4**	**-0.4**
	comp=Z,2.6nm,0.3s,baz=148,slow=11,SNR=5.8						
SPITS				PcP	**PcP**	**21 53 08.5**	**+0.9**
	comp=Z,6.8nm,0.6s,baz=148,slow=2.6,SNR=3.6						
MK31	**Makanchi Array**	**44.30**	**56**	*e*P	**P**	**21 51 25.4**	**+0.6**
	comp=Z,17nm,1.0s						
MK31	**Makanchi Array**	**44.30**	**56**	*e*P	**P**	**21 51 25.5**	**+0.6**
MK31				pmax	pmax		
	comp=Z,17nm,1.0s						
MK32	**Makanchi Array**	**44.30**	**56**	*e*P	**P**	**21 51 25.4**	**+0.5**
MKAR	**Makanchi Array**	**44.30**	**56**	P	**P**	**21 51 25.4**	**+0.5**
	comp=Z,12nm,0.6s,baz=276,slow=6.4,SNR=5.7						
KBS	**Kingsbay**	**45.02**	**356**	*e*P	**P**	**21 51 30.1**	**-0.1**
	comp=Z,29nm,0.9s						
KBS	**Kingsbay**	**45.02**	**356**	*e*P	**P**	**21 51 30.1**	**-0.1**
KBS				pmax	pmax		
	comp=Z,29nm,0.9s						
ZAA0	**Zalesovo Array**	**45.63**	**46**	*e*P	**P**	**21 51 34.8**	**-0.5**
	comp=Z,22nm,0.8s						
ZALV	**Zalesovo Beam**	**45.63**	**46**	P	**P**	**21 51 35.0**	**-0.3**
	comp=Z,22nm,0.5s,baz=266,slow=8.6,SNR=11						
ZAA1	**Zalesovo Array**	**45.63**	**46**	*e*P	**P**	**21 51 35.0**	**-0.3**
SACV	**Santiago Islan**	**47.75**	**259**	*e*P	**P**	**21 51 52.5**	**0.0**
	comp=Z,37nm,0.9s						
NRIK	**Noril'sk**	**48.65**	**25**	P	**P**	**21 51 59.0**	**+0.3**
	comp=Z,11nm,0.6s,baz=245,slow=7.4,SNR=4.9						
NRIK	**Noril'sk**	**48.65**	**25**	P	**P**	**21 51 59.0**	**+0.3**
PYUN	**Piuthan**	**49.37**	**81**	*e*P	**P**	**21 52 05.6**	**+0.5**
	comp=Z,65nm,0.8s						
**LSZ

comp=Z,16nm,0.8s
HRV Adam Dziewonsk 72.08 309 P P 21 54 40.4 +1.1
baz=60
FRNY Flat Rock 72.17 312 eP P 21 54 39.9 +0.1
comp=Z,13nm,1.1s
VLDQ Val d'Or 72.73 317 eP P 21 54 42.8 -0.2
comp=Z,14nm,1.0s
D54A Lac Fusel, La 72.79 316 P P 21 54 44.5 +1.0
baz=58
LONY Lake Ozonia 72.89 313 P P 21 54 45.0 +0.9
baz=59
ORIO Orleans, Innes 73.01 314 P P 21 54 45.7 +0.9
baz=58
F55A Otter Lake 73.31 314 P P 21 54 46.9 +0.3
baz=58
D53A Lac Vacive, Po 73.43 316 eP P 21 54 48.6 +1.4
comp=Z,14nm,0.7s
D53A Lac Vacive, Po 73.43 316 P P 21 54 48.3 +1.1
baz=57
E54A Lac Daplat, Po 73.48 315 P P 21 54 48.4 +0.9
baz=58
E53A Dumoine, Ponti 73.79 315 P P 21 54 50.3 +0.9
baz=57
D52A ZEK Kipawa Sen 73.89 316 P P 21 54 51.2 +1.2
baz=57
PEMO Pembroke 73.92 315 P P 21 54 50.9 +0.7
baz=57
PLVO Plevna 74.16 314 eP P 21 54 52.7 +1.1
comp=Z,25nm,1.5s
PLVO Plevna 74.16 314 P P 21 54 52.5 +0.9
baz=57
ALGO Algonquin Park 74.24 315 P P 21 54 53.1 +1.1
baz=57
D51A Lot 18 Range I 74.38 317 P P 21 54 54.1 +1.3
baz=56
E52A Mattawa 74.41 316 P P 21 54 53.7 +0.7
baz=56
KLR Kul'dur 74.43 41 P P 21 54 53.5 +0.4
comp=Z,7.3nm,0.8s,baz=312,slow=11,SNR=3.9
H55A Tweed 74.49 314 P P 21 54 54.2 +0.7
baz=57
BANO Bancroft 74.68 314 P P 21 54 55.5 +0.9
baz=57
PECO Prince Edward 74.72 313 P P 21 54 56.1 +1.3
baz=57
E51A G1948 Merrick 74.76 316 P P 21 54 56.3 +1.2
baz=56
BINY Binghamton 75.04 311 P P 21 54 58.1 +1.4
baz=57
F52A Sundridge 75.07 315 P P 21 54 58.3 +1.4
baz=56
PSI Prapat 75.12 97 P P 21 54 57.3 -0.5
comp=Z,7.3nm,0.6s,baz=264,slow=9.2,SNR=4.3
PSI Prapat 75.12 97 eP P 21 54 57.3 -0.5
comp=Z,26nm,1.2s
N60A Cedar Hill Far 75.19 309 P P 21 54 59.4 +1.8
baz=57
BUKO Buck Lake 75.31 315 P P 21 54 59.5 +1.2
baz=56
F51A Arnstein 75.34 316 P P 21 54 59.3 +0.9
baz=56
D49A Beulah Townshi 75.39 318 P P 21 54 59.0 +0.4
baz=55
E50A Wahnapitae 75.53 317 P P 21 55 01.1 +1.6
baz=55
N59A State Game Lan 75.60 310 P P 21 55 01.4 +1.4
baz=57
KLBO Killbear Provi 75.83 315 P P 21 55 00.7 -0.5
baz=55
MEDO Medina 76.03 313 P P 21 55 02.7 +0.4
baz=56
K55A Perry 76.03 312 P P 21 55 03.3 +0.9
baz=56
P60A Greenville 76.11 309 P P 21 55 04.0 +1.1
baz=57
O59A Robesonia 76.19 309 P P 21 55 04.4 +1.1
baz=57
K54A Basiliko Farm, 76.48 312 P P 21 55 05.5 +0.5
baz=56
D47A Chapleau 76.49 318 P P 21 55 05.7 +0.7
baz=54
I52A Shelburne 76.55 314 P P 21 55 06.2 +0.9
baz=55
F49A Sandfield 76.65 317 P P 21 55 06.8 +0.9
baz=54
ACTO Acton 76.74 314 P P 21 55 07.5 +1.1
baz=55
M56A Emporium 76.80 311 P P 21 55 08.2 +1.4
baz=56
N57A Milroy 76.81 310 P P 21 55 07.2 +0.3
baz=56
BMRO Meriville Lake 76.86 315 P P 21 55 08.1 +1.1
baz=55
E47A Iron Bridge 76.94 318 P P 21 55 08.2 +0.7
baz=54
BWLO Walkerton 77.08 315 P P 21 55 09.4 +1.1
baz=55
SSPA Standing Stone 77.09 310 P P 21 55 09.2 +0.7
baz=56
D46A Sault St. Mari 77.10 318 P P 21 55 09.6 +1.3
baz=53
M55A Ridgway 77.17 312 P P 21 55 09.8 +0.8
baz=55
I51A Listowel 77.20 314 P P 21 55 10.1 +1.1
baz=55
J52A Paris 77.20 314 P P 21 55 10.2 +1.2
baz=55
USRK Ussuriysk Ar. 77.47 45 P P 21 55 10.4 -0.1
comp=Z,18nm,0.6s,baz=292,slow=4.7,SNR=13
E46A Sault Ste Mari 77.56 318 P P 21 55 11.2 +0.2
baz=53
N55A Marion Center 77.70 311 P P 21 55 12.5 +0.7
baz=55
P57A Homestead Farm 77.82 310 P P 21 55 13.4 +0.9
baz=56
YKA Yellowknife Ar 78.19 342 P P 21 55 14.1 0.0
comp=Z,1.9nm,0.7s,baz=33,slow=5.2,SNR=3.2
YKB5 Yellowknife Ar 78.19 342 eP P 21 55 14.1 0.0
N54A Moraine State 78.22 312 P P 21 55 15.4 +0.7
baz=55
O55A Ligonier 78.22 311 P P 21 55 16.2 +1.4
baz=55
P56A Dayton Farm, R 78.33 310 P P 21 55 16.5 +1.1
baz=55
R58B Mineral 78.59 308 P P 21 55 17.9 +1.1
baz=55
EPYK Eagle Plains 78.62 353 P P 21 55 16.9 +0.3
baz=15
J49A Marlette 78.70 315 P P 21 55 18.1 +0.7
baz=53
Q56A Snyder Ridge, 78.82 310 P P 21 55 19.3 +1.2
baz=55
R57A Stanardsville 78.82 309 P P 21 55 19.2 +1.1
baz=55
KS15 Wonju Array Si 78.83 52 eP P 21 55 18.6 +0.5
comp=Z,10nm,0.8s
KSRS Korea Array 78.84 52 P P 21 55 18.6 +0.4
comp=Z,8.5nm,0.8s,baz=304,slow=4.9,SNR=4.2
S58A Poland Farm, P 78.91 308 P P 21 55 19.6 +1.1
baz=55
T59A Double "B" Far 78.94 307 P P 21 55 19.7 +0.9
baz=55
P54A Burton 79.31 311 P P 21 55 22.0 +1.2
baz=54
S57A Dark Hollow, R 79.41 309 P P 21 55 22.2 +0.9
baz=55
Q55A Buckhannon 79.42 310 P P 21 55 22.6 +1.2
baz=54
T58A Grand View Acr 79.60 308 P P 21 55 23.1 +0.7
baz=55
I46A Reed City 79.68 317 P P 21 55 23.0 +0.3
baz=52
O52A Adamsville 79.85 312 P P 21 55 24.9 +1.2
baz=54
P53A Whipple 79.95 311 P P 21 55 25.1 +0.9
baz=54
K47A Vermontville 80.21 315 P P 21 55 27.0 +1.4
baz=52
O51A Pataskala 80.31 312 P P 21 55 26.7 +0.5
baz=53
S55A Lewisburg 80.40 309 P P 21 55 27.6 +0.8
baz=54
U57A Blanch 80.43 308 P P 21 55 27.7 +0.9
baz=54
X60A Albert Glenn T 80.59 305 P P 21 55 30.3 +2.5
baz=55
V58A Windy Hill, Pi 80.65 307 P P 21 55 29.7 +1.6
baz=54

H43A Windswept, Lux 80.66 318 P P 21 55 28.8 +0.9
baz=51
BLA Blacksburg 80.68 309 P P 21 55 29.1 +0.8
baz=54
POKR Poker Plat Res 80.68 357 P P 21 55 28.8 +1.1
baz=6.3
O50A Cable 80.93 313 P P 21 55 30.2 +0.7
baz=52
R53A Hurricane 80.99 310 P P 21 55 30.4 +0.5
baz=53
F40A Park Falls 81.00 320 P P 21 55 30.3 +0.5
baz=49
ILAR Eielson Array 81.00 357 P P 21 55 29.7 +0.3
comp=Z,3.6nm,0.8s,baz=343,slow=3.4,SNR=5.0
ILB Eielson Array 81.00 357 eP P 21 55 29.7 +0.3
comp=Z,8.9nm,1.0s
V57A Coltrane Farms 81.03 307 P P 21 55 30.8 +0.7
baz=54
W58A Raeford 81.18 306 P P 21 55 32.0 +1.1
baz=54
Q51A Peebles 81.44 312 P P 21 55 32.7 +0.5
baz=52
G40A Rib Lake 81.46 320 P P 21 55 32.6 +0.3
baz=49
U55A TA2, Sparta 81.50 308 P P 21 55 33.1 +0.4
baz=53
T54A Tazewell 81.51 309 P P 21 55 33.1 +0.4
baz=53
V56A Mocksville 81.55 308 P P 21 55 33.6 +0.7
baz=54
I42A Draeger Farm, 81.66 318 P P 21 55 33.4 +0.2
baz=50
N47A Urbana 81.72 314 P P 21 55 34.0 +0.3
baz=51
G39A Holcombe 81.97 320 P P 21 55 35.0 +0.2
baz=48
U54A Nelsons Funny 81.99 309 P P 21 55 35.7 +0.4
baz=53
V55A Taylorsville 82.00 308 P P 21 55 36.8 +1.6
baz=53
R51A Hillsboro 82.03 311 P P 21 55 36.2 +0.9
baz=52
S52A Salyersville 82.09 310 P P 21 55 36.4 +0.7
baz=52
N46A Monticello 82.33 315 P P 21 55 37.0 +0.2
baz=51
V54A Nebo 82.52 308 P P 21 55 38.5 +0.5
baz=53
Y57A Sumter 82.54 306 eP P 21 55 37.8 -0.3
comp=Z,119nm,0.3s
DHY Denali Highway 82.72 357 eP P 21 55 39.5 +0.8
comp=Z,20nm,0.8s
M44A Midewin, Midew 82.78 316 P P 21 55 39.5 +0.3
baz=50
Z57A Bowman 83.18 306 P P 21 55 42.3 +0.9
baz=53
U51A La Follette 83.48 310 P P 21 55 43.3 +0.3
baz=52
Y55A Saluda 83.57 307 P P 21 55 44.1 +0.7
baz=53
T50A Nancy 83.60 311 P P 21 55 44.6 +1.0
baz=52
WCI Wyandotte Cave 83.75 312 P P 21 55 44.6 +0.3
baz=51
157A Early Branch 83.75 305 P P 21 55 45.6 +1.3
baz=53
R47A Wooly Knot Far 83.84 313 P P 21 55 45.3 +0.5
baz=51
S48A Wiedeman Farm, 83.96 312 P P 21 55 45.5 +0.2
baz=51
U50A Jamestown 83.98 310 P P 21 55 46.2 +0.7
baz=51
T49A Edmnton 83.98 311 P P 21 55 46.5 +1.0
baz=51
V51A Loudon 84.05 310 P P 21 55 47.1 +1.2
baz=52
L40A Anamosa 84.14 318 P P 21 55 46.5 +0.3
baz=48
Y54A Tignall 84.16 307 P P 21 55 47.7 +1.2
baz=52
X53A Estanollee 84.17 308 P P 21 55 47.5 +1.0
baz=52
Q45A Warren Harvey, 84.44 314 P P 21 55 48.5 +0.7
baz=50
X52A Dahlonega 84.49 308 P P 21 55 49.3 +1.2
baz=52
S47A Hartford 84.50 312 P P 21 55 48.6 +0.5
baz=50
U49A Red Boiling Sp 84.51 311 P P 21 55 49.0 +0.9
baz=51
T48A Bowling Green 84.51 312 P P 21 55 48.9 +0.7
baz=51
V50A Pikevile 84.61 310 P P 21 55 49.0 +0.3
baz=51
Y53A Monroe 84.75 308 P P 21 55 50.0 +0.5
baz=52
R45A Skylar, Fairfi 84.91 314 P P 21 55 49.9 -0.2
baz=50
GOGA Godfrey 84.95 307 P P 21 55 51.3 +0.9
baz=52
T47A Sharon Grove 85.03 312 P P 21 55 50.6 -0.2
baz=50
W50A Signal Mountai 85.03 310 P P 21 55 52.2 +1.3
baz=51
V49A McMinnville 85.06 310 P P 21 55 50.4 -0.6
baz=51
Y52A Lilburn 85.06 308 P P 21 55 51.3 +0.3
baz=52
Z53A Monticello 85.10 307 P P 21 55 51.7 +0.5
baz=52
BDFB Brasilia 85.32 248 P P 21 55 53.9 +1.3
comp=Z,7.0nm,0.7s,baz=34,slow=6.8,SNR=3.7
U47A Clarksville 85.49 312 P P 21 55 53.2 +0.2
baz=50
V48A Smith Brothers 85.65 311 P P 21 55 53.9 0.0
baz=50
Y51A Rockmart 85.69 308 P P 21 55 54.5 +0.3
baz=51
W49A Belvidere 85.69 310 P P 21 55 53.9 -0.2
baz=50
MAJO Matsushiro 85.93 48 eP P 21 55 55.8 +0.5
MAJO Matsushiro 85.93 48 eP P 21 55 55.8 +0.5
MAT Matsushiro 85.93 48 P P 21 55 55.1 -0.2
MJAR Matsushiro Arr 85.93 48 P P 21 55 55.8 +0.5
comp=Z,9.8nm,0.9s,baz=328,slow=2.7,SNR=6.0
WVT Waverly 86.03 312 P P 21 55 55.2 -0.6
baz=50
V47A Nunnelly 86.03 311 P P 21 55 56.1 +0.3
baz=50
W48A Pulaski 86.10 310 P P 21 55 56.8 +0.7
baz=50
X49A Woodville 86.11 310 P P 21 55 57.4 +1.2
baz=50
Z51A Franklin 86.13 308 P P 21 55 58.2 +1.9
baz=51
Y50A Piedmont 86.13 309 P P 21 55 57.0 +0.7
baz=51
V46A Holladay 86.42 312 P P 21 55 57.8 +0.2
baz=50
SUSD Miller 86.53 323 P P 21 55 59.1 +1.0
baz=43
Y49A Blount Mountai 86.58 309 P P 21 55 59.1 +0.5
baz=50
X48A Hartselle 86.61 310 P P 21 55 59.2 +0.5
baz=50
CCM Cathedral Cave 86.82 315 P P 21 56 00.5 +0.8
baz=48
Y48A Jasper 87.03 310 P P 21 56 00.7 0.0
baz=50
251A Midway 87.05 307 P P 21 56 01.7 +0.9
baz=51
Z49A Columbiana 87.08 309 P P 21 56 02.0 +1.1
baz=50
150A Eclectic 87.13 308 P P 21 56 02.1 +0.9
baz=50
LRAL Lakeview Retre 87.49 309 P P 21 56 02.8 -0.2
baz=50
X46A Booneville 87.51 311 P P 21 56 02.5 -0.5
baz=49
149A Jones 87.63 308 P P 21 56 04.2 +0.5
baz=50
250A Grady 87.69 308 P P 21 56 05.0 +1.1
baz=50
249A Camden 88.25 308 P P 21 56 07.8 +1.2
baz=50
NEW Newport 91.08 336 P P 21 56 20.5 +0.9
baz=30
TPNV Topopah Spring 100.43 329 ePdif Pdif 21 57 03.4 +0.9

TPNV Topopah Spring 100.43 329 eP Pdif 21 57 03.4 +0.9
DAC Darwin (Calif) 101.57 330 ePdif Pdif 21 57 06.4 -1.2
DAC Darwin (Calif) 101.57 330 eP Pdif 21 57 06.4 -1.2
ASAR Alice Springs 117.99 101 PKP PKPdf 22 02 01.6 -0.5
comp=Z,1.6nm,0.7s,baz=322,slow=1.4,SNR=4.3
AS31 Alice Springs 117.99 101 ePKPdf PKPdf 22 02 01.6 -0.5

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*SJA **16** 21:45:10.9±0.7, 21°.31S×68°.57W, h172km±9km, ML2.4, MW3.5*
*ISCJB **16** 21:45:13.6±0.8, 21°.30S±0°.03×68°.57W±0°.06, h142km±9km, Error ellipse: s-maj=8.9km s-min=5.0km az=168.1*
*GUC **16** 21:45:14.6±0.5, 21°.29S×68°.52W, h135km±3km, ML3.2*
ISC 16 21:45:13.8±1.7, **21°.30S**±0°.04×**68°.56W**±0°.06, **h143**km±14km, **n25**, σ0°**53**/39, **9C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.81**	**232**	*i* P	**Pn**	**21 45 36.6**	**+0.1**
PB09	**IPOC Station P**	**0.81**	**232**	⇑*i* P	**Pn**	**21 45 36.7**	**+0.1**
PB09				*e* S	**Sn**	**21 45 53.1**	**-0.6**
PB09				IAML		21 45 54.2	
comp=N,511nm,0.4s							
PB01	**IPOC Station P**	**0.91**	**286**	⇑*e* P	**Pn**	**21 45 36.8**	**-0.4**
PB01				*e* S	**Sn**	**21 45 53.8**	**-1.1**
PB01				IAML		21 45 55.9	
comp=E,438nm,0.2s							
PB02	**IPOC Station P**	**1.25**	**269**	*i* P	**Pn**	**21 45 40.2**	**0.0**
PB02				*i* S	**Sn**	**21 46 02.5**	**+2.0**
PB02	**IPOC Station P**	**1.25**	**269**	⇑*i* P	**Pn**	**21 45 40.6**	**+0.3**
PB02				*e* S	**Sn**	**21 46 00.3**	**-0.2**
PB08	**IPOC Station P**	**1.28**	**334**	*i* P	**Pn**	**21 45 41.1**	**+0.2**
PB08	**IPOC Station P**	**1.28**	**334**	⇑*i* P	**Pn**	**21 45 41.4**	**+0.4**
PB08				*e* S	**Sn**	**21 46 01.5**	**-0.1**
PB08				IAML		21 46 02.8	
comp=E,299nm,0.3s							
PB07	**IPOC Station P**	**1.31**	**251**	*i* P	**Pn**	**21 45 41.1**	**+0.1**
PB07	**IPOC Station P**	**1.31**	**251**	⇑*i* P	**Pn**	**21 45 41.3**	**+0.3**
PB07				*e* S	**Sn**	**21 46 01.5**	**-0.2**
PB07				IAML		21 46 02.1	
comp=N,530nm,0.2s							
LVC	**Limon Verde**	**1.35**	**194**	*i* P	**Pn**	**21 45 41.5**	**0.0**
LVC	**Limon Verde**	**1.35**	**194**	⇓*i* P	**Pn**	**21 45 41.5**	**0.0**
LVC				*e* S	**Sn**	**21 46 02.4**	**-0.4**
PB06	**IPOC Station P**	**1.69**	**214**	*i* P	**Pn**	**21 45 45.2**	**+0.2**
PB06	**IPOC Station P**	**1.69**	**214**	⇑*i* P	**Pn**	**21 45 45.4**	**+0.3**
PB06				*e* S	**Sn**	**21 46 09.0**	**0.0**
PB06				IAML		21 46 09.6	
comp=E,219nm,0.3s							
GO01	**Chusmiza**	**1.73**	**340**	*e* P	**Pn**	**21 45 46.1**	**+0.3**
GO01				*e* S	**Sn**	**21 46 10.1**	**-0.2**
PB04	**IPOC Station P**	**1.80**	**235**	*e* P	**Pn**	**21 45 46.2**	**-0.2**
PB04				IAML		21 46 19.1	
comp=N,226nm,0.4s							
PB11	**IPOC Station P**	**1.84**	**326**	*i* P	**Pn**	**21 45 46.7**	**-0.2**
PB11	**IPOC Station P**	**1.84**	**326**	⇓*i* P	**Pn**	**21 45 47.0**	**+0.2**
PB11				*i* S	**Sn**	**21 46 12.1**	**-0.1**
PB15	**IPOC Station P**	**2.08**	**204**	*i* P	**Pn**	**21 45 49.0**	**-0.7**
PB15	**IPOC Station P**	**2.08**	**204**	⇑*i* P	**Pn**	**21 45 50.1**	**+0.4**
PB15				*e* S	**Sn**	**21 46 17.9**	**+0.7**
PSGC	**Pisagua**	**2.24**	**319**	*e* P	**Pn**	**21 45 51.2**	**-0.3**
PSGC				*e* S	**Sn**	**21 46 20.1**	**-0.3**
MNMC	**Minye Minye**	**2.37**	**335**	⇑*i* P	**Pn**	**21 45 53.9**	**+0.7**
MNMC				*e* S	**Sn**	**21 46 23.9**	**+0.4**
YJA	**Yavi**	**2.96**	**108**	*i* P	**Pn**	**21 46 00.4**	**-0.3**
YJA				IAML		21 46 04.3	
comp=Z,6.7nm,0.6s							
YJA				*i* S	**Sn**	**21 46 37.6**	**+0.6**
PB12	**IPOC Station P**	**3.15**	**328**	*e* P	**Pn**	**21 46 02.1**	**-0.7**
HJA	**Humahuaca**	**3.48**	**124**	*i* P	**Pn**	**21 46 07.3**	**-0.1**
HJA				IAML		21 46 09.4	
comp=Z,8.2nm,0.4s							
GO02	**Mina Guanaco**	**3.96**	**194**	⇑*i* P	**Pn**	**21 46 13.5**	**-0.1**

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*ISCJB **16** 21:46:30.6±0.9, 34°.12N±0°.08×25°.0E±0°.1, h20km, mb4.1/7, Error ellipse: s-maj=16.7km s-min=9.5km az=156.1*
*IDC **16** 21:46:30.0±1.2, 34°.24N×24°.91E, h0km, mb4.3/7, mb1 4.3/10, mb1mx3.9/55, mbtmp4.3/10, ML4.5/1, Error ellipse: s-maj=23.7km s-min=18.7km az=81.0*
ISC 16 21:46:32.8±1.1, **34°.19N**±0°.09×**24°.9E**±0°.1, **h20**km, **n11**, σ1°**07**/12, **mb4.2/7, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.09**	**359**	Pn	**Pb**	**21 46 53.1**	**+0.1**
39nm,0.3s,baz=164,slow=15,SNR=3.0							
IDI				Sn	**Sn**	**21 47 08.2**	**+0.6**
111nm,0.3s,baz=130,slow=17,SNR=4.9							
MMAI	**Mount Meron Ar**	**8.82**	**95**	Pn	**Pn**	**21 48 40.7**	**+1.5**
baz=268,slow=13,SNR=1.8							
EIL	**Elat**	**9.64**	**115**	Pn	**Pn**	**21 48 49.2**	**-1.2**
baz=326,slow=15,SNR=2.3							
AKASG	**Malin Array Be**	**16.79**	**10**	Pn	**Pn**	**21 50 25.8**	**-0.9**
1.6nm,0.3s,baz=197,slow=11,SNR=3.1							
HFS	**Hagfors**	**26.97**	**348**	P	**P**	**21 52 13.1**	**+0.3**
4.3nm,0.6s,baz=134,slow=10,SNR=2.5							
FINES	**FINESS Array B**	**27.28**	**1**	P	**P**	**21 52 13.7**	**-1.8**
9.8nm,0.9s,baz=173,slow=9.8,SNR=2.1							
TORD	**Torodi Ar. Bea**	**29.72**	**231**	P	**P**	**21 52 38.5**	**+0.8**
2.3nm,0.5s,baz=34,slow=9.3,SNR=8.3							
SPITS	**Spitsbergen Ar**	**44.24**	**357**	P	**P**	**21 54 39.9**	**-0.4**
3.4nm,0.8s,baz=133,slow=11,SNR=3.4							
MKAR	**Makanchi Array**	**44.48**	**56**	P	**P**	**21 54 42.6**	**0.0**
2.1nm,0.7s,baz=273,slow=7.9,SNR=3.6							
ZALV	**Zalesovo Beam**	**45.82**	**45**	P	**P**	**21 54 52.3**	**-0.7**
1.0nm,0.4s,baz=274,slow=9.0,SNR=2.7							
SONM	**Songino Array**	**60.25**	**50**	P	**P**	**21 56 40.7**	**+0.9**
0.9nm,0.6s,baz=278,slow=5.7,SNR=2.2							

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*IDC **16** 21:47:31.7±0.6, 34°.30N×25°.04E, h0km, mb4.5/27, mb1 4.6/34, mb1mx4.5/60, mbtmp4.6/34, ML4.6/6, Error ellipse: s-maj=12.8km s-min=11.1km az=128.0*
*NEIC **16** 21:47:33.1±2.1, 34°.25N×25°.08E, h10km, mb4.9/34, ML4.6(ISK), Error ellipse: s-maj=10.1km s-min=9.3km az=192.0*
*ISCJB **16** 21:47:35.3±0.5, 34°.22N±0°.03×25°.16E±0°.03, h44km±4km, mb4.7/46, Error ellipse: s-maj=5.5km s-min=3.2km az=26.3*
*MOS **16** 21:47:36.1±1.0, 34°.44N×24°.99E, h33km, mb5.1/8, Error ellipse: s-maj=9.4km s-min=4.7km az=88.4*
*THE **16** 21:47:39.4, 34°.46N×25°.07E, h4km±2km, ML4.1/8, Error ellipse: s-maj=2.2km s-min=0.8km az=63.0*
*GII **16** 21:47:51.2±0.0, 33°.86N×26°.76E, h1km*
ISC 16 21:47:36.2±1.3, **34°.34N**±0°.05×**25°.15E**±0°.03, **h32**km±9km, **n236**, σ1°**90**/254, **mb4.7**/46, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.73**	**338**	P	**Pn**	**21 47 50.9**	**+0.6**
SIVA				S	**Sn**	**21 48 00.7**	**+0.3**
TMBK	**Timbaki Herakl**	**0.80**	**337**	P	**Pn**	**21 47 51.8**	**+0.6**
TMBK				S	**Sn**	**21 48 02.3**	**+0.4**
LAST	**Lasithi**	**0.86**	**18**	P	**Pn**	**21 47 54.5**	**+2.3**
LAST				S	**Sn**	**21 48 06.2**	**+2.5**
KSTL	**Kastelli Herak**	**0.96**	**356**	P	**Pn**	**21 47 54.4**	**+0.9**
KSTL				S	**Sn**	**21 48 05.9**	**-0.2**
IACM	**Heraklion**	**0.97**	**356**	P	**Pn**	**21 47 56.9**	**+3.4**
IDI	**Anoyia**	**0.97**	**347**	Pn	**Pn**	**21 47 54.8**	**+1.1**
149nm,0.3s,baz=164,slow=18,SNR=6.5							
IDI				Sn	**Sn**	**21 48 08.6**	**+2.2**
470nm,0.3s,baz=318,slow=20,SNR=10							
NPS	**Neapolis**	**1.00**	**22**	P	**Pn**	**21 47 57.2**	**+3.2**
NPS				S	**Sn**	**21 48 11.1**	**+4.2**
GVD	**Gavdhos**	**1.01**	**300**	*e* P	**Pn**	**21 47 55.0**	**+0.9**
GVD	**Gavdhos**	**1.01**	**300**	P	**Pn**	**21 47 56.6**	**+2.5**
GVD				S	**Sn**	**21 48 09.3**	**+2.1**
PRNS	**Prines Rethymn**	**1.16**	**333**	P	**Pb**	**21 47 58.7**	**+1.1**
PRNS				S	**Sn**	**21 48 12.7**	**+1.9**
STIA	**Sitia Lasithi**	**1.16**	**42**	P	Pb	21 48 00.9	+3.2
ZKR	**Zakros**	**1.17**	**48**	*e* P	**Pb**	**21 47 58.1**	**+0.2**
ZKR	**Zakros**	**1.17**	**48**	P	**Pb**	**21 48 00.0**	**+2.1**
ZKR				S	**Sn**	**21 48 17.0**	**+5.8**
VAM	**Vamos**	**1.32**	**324**	P	**Pb**	**21 48 01.5**	**+1.0**
VAM				S	**Sb**	**21 48 18.5**	**+1.4**
IMMV	**Iera Moni Meta**	**1.48**	**320**	*e* P	**Pb**	**21 48 02.9**	**-0.1**
IMMV	**Iera Moni Meta**	**1.48**	**320**	P	**Pb**	**21 48 03.6**	**+0.6**
IMMV				S	**Sb**	**21 48 22.7**	**+1.3**
CHAN	**Chania**	**1.49**	**323**	P	**Pb**	**21 48 04.5**	**+1.2**

SANT	Santorini	2.04	7	eP	Pb	21 48 10.5	-2.2
KARP	Karpathos	2.04	53	ePn	Pb	21 48 12.0	-0.7
THR5	Thira Island,	2.08	4	P	Pb	21 48 12.6	-0.7
THT2	Imerovigli	2.10	6	P	Pb	21 48 11.9	-1.8
CMBO	Columbo, Santo	2.14	6	P	Pb	21 48 12.6	-1.7
IOSP	Ios island	2.38	3	P	Pb	21 48 14.9	-3.5
IOSP				S	Sb	21 48 44.2	-3.2
MHLO	Agia Marina, M	2.42	346	P	Pb	21 48 15.8	-3.3
APE	Apeiranthos	2.74	6	eP	Pn	21 48 19.5	+1.5
ARG	Arkhangelos	3.07	52	eP	Pn	21 48 25.0	+2.6
DAT	Datca	3.10	39	eP	Pn	21 48 25.2	+2.3
DAT	Datca	3.10	39	i P	Pb	21 48 25.9	-4.8
DAT				IAML_P			
	comp=Z,1µm,0.2s						
DATC	Datca-Mugla	3.17	40	eP	Pn	21 48 26.4	+2.7
BODT	Bodrum	3.24	32	eP	Pn	21 48 27.6	+2.9
BODT	Bodrum	3.24	32	ePn	Pn	21 48 26.2	+1.5
BDRM	Kayabasi	3.30	34	i P	Pn	21 48 28.4	+2.8
BDRM				IAML_P			
	comp=Z,1µm,0.3s						
BBRN	Bozburun-Marma	3.33	45	eP	Pn	21 48 27.9	+1.9
MRSB	Marmaris-Mugla	3.43	45	eP	Pn	21 48 29.3	+1.8
DID	Didima	3.52	334	P	Pn	21 48 30.3	+1.6
GCAM	G?zelcaml?	3.75	26	eP	Pn	21 48 34.4	+2.6
GCAM	G?zelcaml?	3.75	26	i P	Pb	21 48 39.4	-2.3
GCAM				IAML_P			
	comp=Z,606nm,0.2s						
DALY	Dalyan (Mula)	3.78	48	eP	Pn	21 48 33.6	+1.5
DALY	Dalyan (Mula)	3.78	48	i P	Pn	21 48 35.3	+3.2
DALY				IAML_P			
	comp=Z,3µm,0.3s						
YER	Yerkesik	3.78	42	eP	Pn	21 48 33.6	+1.4
YER	Yerkesik	3.78	42	ePn	Pn	21 48 33.6	+1.4
YER	Yerkesik	3.78	42	eP	Pn	21 48 33.6	+1.4
TURN	Turunc	3.78	47	eP	Pn	21 48 30.1	-2.1
TURN	Turunc	3.78	47	i P	Pn	21 48 31.2	-1.0
TURN				IAML_P			
	comp=Z,5µm,0.2s						
FETY	Fethiye	3.94	53	eP	Pn	21 48 35.8	+1.3
FETY	Fethiye	3.94	53	ePn	Pn	21 48 34.8	+0.3
DGB	zmir	3.96	20	i P	Pn	21 48 36.5	+1.8
DGB				IAML_P			
	comp=Z,950nm,0.3s						
AYDN	Tasoluk	3.98	33	i P	Pn	21 48 38.9	+3.9
AYDN				IAML_P			
	comp=Z,2µm,0.3s						
AKAS	Kas	4.10	61	eP	Pn	21 48 36.6	-0.2
AKAS	Kas	4.10	61	i P	Pn	21 48 39.1	+2.3
AKAS				IAML_P			
	comp=Z,17µm,0.1s						
CHOS	Chios island	4.11	10	eP	Pn	21 48 39.3	+2.6
URLA	Izmir	4.18	16	eP	Pn	21 48 38.2	+0.5
URLA	Izmir	4.18	16	i P	Pb	21 48 53.4	+4.4
URLA				IAML_P			
	comp=Z,1µm,0.5s						
AYDB	Zeytinkoy-Aydi	4.23	31	eP	Pn	21 48 41.3	+2.8
BLCB	Balcova	4.32	20	eP	Pn	21 48 42.1	+2.5
ELL	Elmali	4.56	57	eP	Pn	21 48 37.9	-5.2
AKUM	Antalya-Kumluc	4.68	64	i P	Pn	21 48 46.2	+1.6
AKUM				IAML_P			
	comp=Z,9µm,0.2s						
ZEDA	zmir-Bergama	4.87	18	i P	Pn	21 48 49.1	+2.0
ZEDA				IAML_P			
	comp=Z,1µm,0.7s						
SIGR	SIGRI	4.90	6	eP	Pn	21 48 49.3	+1.8
MANT	Manisa	4.97	33	ePn	Pn	21 48 48.3	-0.5
MANT	Manisa	4.97	33	i P	Pn	21 48 52.5	+3.7
MANT				IAML_P			
	comp=Z,682nm,0.3s						
KORT	Korkueli	5.00	56	eP	Pn	21 48 46.6	-2.4
KORT	Korkueli	5.00	56	i P	Pn	21 48 45.4	-3.6
KORT				IAML_P			
	comp=Z,730nm,0.5s						
AKHS	Akhisar	5.01	25	i P	Pn	21 48 51.4	+2.3
AKHS				IAML_P			
	comp=Z,1µm,0.4s						
KULA	Kula-Manisa	5.04	33	eP	Pn	21 48 51.7	+2.2
AYVA	Ayvalik	5.11	14	i P	Pn	21 48 52.3	+1.8
AYVA				IAML_P			
	comp=Z,199nm,0.5s						
ANTB	Antalya	5.16	59	eP	Pn	21 48 52.6	+1.5
AGG	Agios Georgios	5.20	335	ePn	Pn	21 48 50.6	-1.1
AGG				eSn	Sn	21 49 47.2	-3.3
AGG	Agios Georgios	5.20	335	eP	Pn	21 48 50.6	-1.1
AGG				e		21 49 47.2	
BRDR	BURDUR-Merkez	5.20	48	i P	Pn	21 48 54.5	+2.7
BRDR				IAML_P			
	comp=Z,743nm,0.3s						
KHAL	Karahalli	5.33	40	i P	Pn	21 48 55.9	+2.2
KHAL				IAML_P			
	comp=Z,531nm,0.2s						
USAK	Uak-Merkez	5.36	34	i P	Pn	21 48 57.0	+3.0
USAK				IAML_P			
	comp=Z,2µm,0.4s						
BCK	Bucak	5.40	53	eP	Pn	21 48 55.3	+0.7
STEP	BALIKESIR_Sava	5.43	22	i P	Pn	21 48 57.1	+2.2
STEP				IAML_P			
	comp=Z,56nm,0.3s						
BAYC	CANAKKALE_Bayr	5.51	11	i P	Pn	21 48 55.9	0.0
BAYC				IAML_P			
	comp=Z,152nm,0.2s						
BOZC	Bozcaada	5.54	7	eP	Pn	21 48 58.7	+2.3
EZN	Ezine	5.56	9	eP	Pn	21 48 59.1	+2.5
EZN	Ezine	5.56	9	ePn	Pn	21 48 59.1	+2.5
ISP	Isparta	5.57	50	eP	Pn	21 48 58.1	+1.2
ISP	Isparta	5.57	50	ePn	Pn	21 48 56.9	+0.1
ISP				ePn	Pn	21 48 58.3	+1.4
ISP	Isparta	5.57	50	eP	Pn	21 48 56.9	+0.1
BALB	Balikesir	5.72	22	ePn	Pn	21 49 00.1	+1.3
GEDZ	Gediz	5.81	35	eP	Pn	21 49 01.9	+1.7
BAGO	Egridir - ISPA	5.84	50	i P	Pn	21 49 03.7	+3.2
BAGO				IAML_P			
	comp=Z,430nm,0.2s						
KEPZ	Antalya-Kepez	5.84	62	i P	Pn	21 49 02.1	+1.5
KEPZ				i S	Sn	21 50 06.7	+0.2
KEPZ				IAML_P			
	comp=Z,1µm,0.2s						
GADA	Gvkgeada	5.87	6	i P	Pn	21 49 03.6	+2.7
GADA	Gvkgeada	5.87	6	ePn	Pn	21 49 05.0	+4.1
GDZ	Gediz	5.88	35	i P	Pn	21 49 03.8	+2.7
GDZ				IAML_P			
	comp=Z,634nm,0.5s						
DURS	Dursunbey	5.89	26	i P	Pn	21 49 04.1	+2.9
DURS				IAML_P			
	comp=Z,484nm,0.5s						
SHUT	Suhut-Afyon	6.05	44	eP	Pn	21 49 04.7	+1.2
AFYO	Afyonkarahisar	6.07	42	i P	Pn	21 49 06.0	+2.2
AFYO				IAML_P			
	comp=Z,1µm,0.5s						
LIT	Litokhoron	6.13	341	ePn	Pn	21 49 03.1	-1.4
LIT				eSn	Sn	21 50 12.3	-1.2
LIT	Litokhoron	6.13	341	eP	Pn	21 49 03.1	-1.4
LIT				e		21 50 12.3	
LPK	Lapseki	6.16	12	eP	Pn	21 49 07.4	+2.5
KNL	Balıkesir	6.22	17	i P	Pn	21 49 08.5	+2.9
KNL				IAML_P			
	comp=Z,1µm,0.5s						
KRBG	Karabiga-Canak	6.28	15	eP	Pn	21 49 09.1	+2.6
EDC	Edincik	6.37	19	eP	Pn	21 49 09.8	+2.0
BOLV	Bolvadin	6.39	45	i P	Pn	21 49 09.5	+1.3
BOLV				IAML_P			
	comp=Z,700nm,0.3s						
LEF	Lefka	6.42	81	i P	Pn	21 49 02.0	-6.4
LEF				IAML_P			
	comp=Z,389nm,0.5s						
KCTX	Karacabey (Bur	6.44	22	eP	Pn	21 49 10.7	+1.9
DOGA	KONYA_Doganhis	6.47	53	i P	Pn	21 49 11.8	+2.5
DOGA				IAML_P			
	comp=Z,492nm,0.1s						
SART	Tekirdag	6.54	14	i P	Pn	21 49 10.2	+0.1
SART				IAML_P			
	comp=Z,412nm,0.4s						
ALN	Alexandroupoli	6.58	6	ePn	Pn	21 49 12.8	+2.1
ALN	Alexandroupoli	6.58	6	eP	Pn	21 49 12.8	+2.1
ERMK	Ermenek	6.74	68	i P	Pn	21 49 15.6	+2.6
ERMK				i S	Sn	21 50 30.1	+1.4
ERMK				IAML_P			
	comp=Z,4µm,0.3s						
KMER	Konya-Meram	6.77	58	i P	Pn	21 49 17.1	+3.6
KMER				IAML_P			
	comp=Z,350nm,0.2s						
KONT	Konya--Tatoy	6.85	56	i P	Pn	21 49 18.0	+3.6
KONT				IAML_P			
	comp=Z,513nm,0.2s						
KDHN	Kadinhani	7.00	51	i P	Pn	21 49 17.6	+1.1
KDHN				IAML_P			
	comp=Z,341nm,0.3s						
FNA	Florina	7.10	336	ePn	Pn	21 49 18.8	+1.0
FNA				eSn	Sn	21 50 35.4	-2.0
FNA	Florina	7.10	336	eP	Pn	21 49 18.8	+1.0
FNA				e		21 50 35.4	
GULN	MERSIN_Gulnar	7.11	73	i P	Pn	21 49 18.8	+0.8
GULN				i S	Sn	21 50 32.5	-5.1
GULN				IAML_P			
	comp=Z,1µm,0.3s						
KRUS	Krusevo	7.67	337	ePn	Pn	21 49 26.9	+1.3
KRUS				eSn	Sn	21 50 48.7	-2.7
STIP	Stip	7.71	343	ePn	Pn	21 49 28.2	+2.0
BR231	Keskin MP Arra	8.20	46	ePn	Pn	21 49 34.2	+1.2
VTS	Vitosha	8.40	350	ePn	Pn	21 49 34.8	-1.0
VTS	Vitosha	8.40	350	eP	Pn	21 49 34.8	-1.0
KZIT	Kziot	8.52	111	Pn	Pn	21 49 36.8	-0.5
MMAI	Mount Meron Ar	8.65	96	Sn	Sn	21 51 12.2	-3.3
	comp=Z,4.7nm,0.3s,baz=290,slow=23,SNR=2.2						
BRTR	Keskin Array B	8.65	49	Pn	Pn	21 49 40.9	+1.6
	comp=Z,0.3nm,0.3s,baz=231,slow=15,SNR=4.3						
BR101	Keskin Array S	8.66	49	ePn	Pn	21 49 40.9	+1.6
BR131	Keskin Array S	8.66	49	ePn	Pn	21 49 41.0	+1.7
AMAZ	Amatzia	8.67	106	Pn	Pn	21 49 39.0	-0.4
YTIR	Yattir	8.89	107	Pn	Pn	21 49 42.5	0.0
MZDA	Masada	9.11	107	Pn	Pn	21 49 44.8	-0.5
KRMI	Paran Flat	9.13	115	Pn	Pn	21 49 45.9	+0.1
PRNI	Paran	9.23	113	Pn	Pn	21 49 47.2	+0.1
VAE	Valguarnera	9.26	293	Pn	Pn	21 49 48.9	+1.4
	comp=Z,4.6nm,0.3s,baz=154,slow=12,SNR=6.6						
VAE				Sn	Sn	21 51 23.1	-7.4
	comp=Z,3.6nm,0.3s,baz=162,slow=20,SNR=2.9						
ZFRI	Zfri	9.27	111	Pn	Pn	21 49 47.1	-0.5
TTG	Podgorica	9.31	332	ePn	Pn	21 49 46.2	-1.8
TTG	Podgorica	9.31	332	eP	Pn	21 49 46.2	-1.8
HRFI	Mount Harif	9.41	114	Pn	Pn	21 49 49.6	+0.1
MBRI	Mt Berech	9.44	116	Pn	Pn	21 49 49.5	-0.5
EIL	Elat	9.53	117	Pn	Pn	21 49 50.6	-0.6
	comp=Z,3.7nm,0.3s,baz=304,slow=3.6,SNR=6.4						
EIL				Sn	Sn	21 51 30.4	-6.8
	comp=Z,3.3nm,0.3s,baz=309,slow=18,SNR=2.8						
ASF	Jabal al Asfar	10.07	99	Sn	Sn	21 51 49.1	-1.4
	comp=Z,0.8nm,0.3s,baz=344,slow=18,SNR=1.6						
BLY	Banja Luka	12.07	332	ePn	Pn	21 50 24.3	-1.6
KWP	Kalwaria Pacla	15.39	354	ePn	Pn	21 51 09.9	-0.9
	comp=Z,1µm,1.5s						
KWP	Kalwaria Pacla	15.39	354	eP	Pn	21 51 09.9	-0.9
KWP				pmax	pmax		
	comp=Z,1µm,1.5s						
AKH	Akhalkalaki	16.10	59	ePn	Pn	21 51 20.3	+0.1
	comp=Z,42nm,1.2s						
AKH	Akhalkalaki	16.10	59	eP	Pn	21 51 20.3	+0.1
AKH				pmax	pmax		
	comp=Z,42nm,1.2s						
VRAC	Vranov	16.24	340	Pn	P	21 51 24.5	-0.1
	comp=Z,0.5nm,0.3s,baz=134,slow=12,SNR=4.9						
MORC	Moravsky Berou	16.41	342	ePn	Pn	21 51 24.4	+0.4
	comp=Z,33nm,1.3s						
MORC	Moravsky Berou	16.41	342	eP	Pn	21 51 24.4	+0.4
MORC				pmax	pmax		
	comp=Z,33nm,1.3s						
AKASG	Malin Array Be	16.62	9	Pn	P	21 51 27.9	-0.8
	comp=Z,4.9nm,0.3s,baz=200,slow=10,SNR=15						
AKBB	Malin Array Si	16.62	9	ePn	Pn	21 51 25.3	-1.3
	comp=Z,53nm,0.7s						
AKBB	Malin Array Si	16.62	9	eP	Pn	21 51 25.3	-1.3
AKBB				pmax	pmax		
	comp=Z,53nm,0.7s						
KIV	Kislovodsk	16.62	50	ePn	P	21 51 28.0	-0.9
	comp=Z,84nm,1.1s						
KIV	Kislovodsk	16.62	50	eP	P	21 51 30.9	+2.0
KIV				pmax	pmax		
	comp=Z,221nm,1.0s						
KVAR	Kislovodsk Arr	16.63	50	Pn	P	21 51 32.1	+3.1
	baz=259,slow=19,SNR=4.7						
GNI	Garni	16.63	64	Pn	P	21 51 31.0	+1.9
	comp=Z,0.5nm,0.3s,baz=315,slow=11,SNR=4.0						
KBZ	Khabaz	16.65	50	Pn	P	21 51 32.2	+3.1
	comp=Z,0.8nm,0.3s,baz=273,slow=5.3,SNR=5.1						
GERES	GERESS Array B	16.80	333	Pn	P	21 51 29.2	+0.1
	comp=Z,4.5nm,0.3s,baz=145,slow=12,SNR=37						
KHC	Kasperske Hory	17.09	333	ePn	Pn	21 51 32.2	-0.3
	comp=Z,9.0nm,0.9s						
KHC	Kasperske Hory	17.09	333	eP	Pn	21 51 32.2	-0.3
KHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GRA1	Grafenberg Arr	18.46	330	eP	Pn	21 51 49.3	0.0
	comp=Z,47nm,1.0s						
GRF	Grafenberg Arr	18.46	330	eP	Pn	21 51 49.3	0.0
GRF				pmax	pmax		
	comp=Z,47nm,1.0s						
CLL	Collm	19.11	336	eP	Pn	21 51 56.4	-0.8
	comp=Z,20nm,0.9s						
CLL	Collm	19.11	336	eP	Pn	21 51 56.4	-0.8
CLL				pmax	pmax		
	comp=Z,20nm,0.9s						
SUW	Suwalki	19.72	357	eP	P	21 52 02.7	-0.1
	comp=Z,123nm,0.9s						
SUW	Suwalki	19.72	357	eP	P	21 52 02.7	-0.1
SUW				pmax	pmax		
	comp=Z,123nm,0.9s						
WLF	Walferdange	20.74	323	eP	P	21 52 13.7	-0.2
	comp=Z,152nm,1.1s						
WLF	Walferdange	20.74	323	eP	P	21 52 13.7	-0.2
WLF				pmax	pmax		
	comp=Z,152nm,1.1s						
BSD	Bornholm Skovb	21.96	344	eP	P	21 52 25.0	-2.0
BSD	Bornholm Skovb	21.96	344	i P	P	21 52 25.0	-2.0
ESDC	Sonseca Array	23.80	291	P	P	21 52 45.8	-0.3
	comp=Z,5.3nm,0.9s,baz=75,slow=8.5,SNR=6.3						
MDT	Midelt	24.80	275	P	P	21 52 56.3	+0.9
	comp=Z,4.0nm,0.8s,baz=58,slow=9.5,SNR=2.7						
GEYT	Alibeck	26.79	73	P	P	21 53 14.1	+0.8
	comp=Z,3.2nm,0.8s,baz=268,slow=10,SNR=4.0						
HFS	Hagfors	26.87	347	P	P	21 53 14.5	+0.8
	comp=Z,7.4nm,0.7s,baz=165,slow=12,SNR=6.4						
FIA0	FINESS Array S	27.13	1	eP	P	21 53 14.9	-1.1
FIA0	FINESS Array S	27.13	1	eP	P	21 53 14.9	-1.1
FINES	FINESS Array B	27.13	1	P	P	21 53 14.9	-1.1
	comp=Z,12nm,0.9s,baz=163,slow=10,SNR=5.0						
KONO	Kongsberg	27.31	343	eP	P	21 53 17.2	-0.4
	comp=Z,57nm,1.4s						
KONO	Kongsberg	27.31	343	eP	P	21 53 17.2	-0.4
KONO				pmax	pmax		
	comp=Z,57nm,1.4s						
NC602	NORSAR Array S	27.85	346	eP	P	21 53 22.3	-0.1
	comp=Z,120nm,1.5s						
NAO01	NORSAR Array S	28.08	345	eP	P	21 53 24.8	+0.3
	comp=Z,64nm,1.0s						
NB200	NORSAR Array S	28.19	346	eP	P	21 53 25.4	-0.2
NOA	NORSAR Array B	28.19	346	P	P	21 53 25.4	-0.2
	comp=Z,2.0nm,0.8s,baz=156,slow=10,SNR=3.3						
NBO00	NORSAR Array S	28.27	345	eP	P	21 53 26.2	-0.1
	comp=Z,215nm,1.4s						
NC303	NORSAR Array S	28.33	346	eP	P	21 53 26.0	-0.7
	comp=Z,90nm,1.4s						
EKA	Eskdalemuir Ar	28.71	326	P	P	21 53 29.3	-0.9
	comp=Z,3.7nm,0.8s,baz=123,slow=8.5,SNR=5.4						
AKTO	Aktyubinsk	28.82	46	P	P	21 53 31.6	+0.4
	comp=Z,4.2nm,0.8s,baz=243,slow=9.0,SNR=3.4						
TOA1	Torodi Ar. Sit	29.96	231	eP	P	21 53 40.1	-1.5
TOA0	Torodi Ar. Sit	29.96	231	eP	P	21 53 41.7	+0.1
	comp=Z,24nm,0.6s						
TORD	Torodi Ar. Bea	29.96	231	P	P	21 53 40.1	-1.6
	comp=Z,11nm,0.5s,baz=34,slow=8.6,SNR=21						
ARU	Arti	31.72	36	P	P	21 53 57.3	+0.5
	comp=Z,4.1nm,0.8s,baz=247,slow=13,SNR=5.6						
ARU	Arti	31.72	36	eP	P	21 53 57.3	+0.5
	comp=Z,61nm,1.4s						
ARA0	ARCESS Array S	35.25	0	eP	P	21 54 26.2	-1.1
ARCES	ARCESS Array B	35.25	0	P	P	21 54 26.2	-1.1
	comp=Z,7.5nm,0.8s,baz=177,slow=9.7,SNR=4.6						
KK31	Karatay Array	36.09	62	eP	P	21 54 36.1	+1.2
	comp=Z,11nm,0.8s						
KK31	Karatay Array	36.09	62	eP	P	21 54 36.1	+1.2
KK31				pmax	pmax		
	comp=Z,11nm,0.8s						
KKAR	Karatay Array	36.09	62	eP	P	21 54 36.1	+1.2
	comp=Z,11nm,0.8s						
KKAR	Karatay Array	36.09	62	eP	P	21 54 36.1	+1.2
KKAR				pmax	pmax		
	comp=Z,11nm,0.8s						
BVAR	Borovoye Array	36.92	46	P	P	21 54 43.5	+1.6
	comp=Z,2.9nm,0.8s,baz=279,slow=10,SNR=2.8						
ARSB	Arslanbob	38.02	65	eP	P	21 54 52.7	+1.2
	comp=Z,49nm,1.4s						
AAK	Ala-Archa	39.03	63	P	P	21 55 02.0	+2.0
	comp=Z,3.0nm,0.4s,baz=226,slow=7.3,SNR=4.0						
AAK	Ala-Archa	39.03	63	eP	P	21 55 01.6	+1.6
	comp=Z,9.3nm,1.0s						
DBIC	Dimbokro	39.05	232	P	P	21 54 59.4	-0.8
	comp=Z,18nm,1.0s,baz=38,slow=12,SNR=3.7						
DBIC	Dimbokro	39.05	232	eP	P	21 54 59.4	-0.8
	comp=Z,22nm,1.0s						
FRU1	Bishkek	39.12	62	eP	P	21 55 02.7	+2.1
	comp=Z,19nm,1.0s						
FRU1	Bishkek	39.12	62	eP	P	21 55 02.7	+2.1
FRU1				pmax	pmax		
	comp=Z,19nm,1.0s						
KURK	Kurchatov	41.71	50	eP	P	21 55 22.4	+0.6
	comp=Z,14nm,0.9s						
KURK	Kurchatov	41.71	50	eP	P	21 55 22.4	+0.6
KURK				pmax	pmax		
	comp=Z,14nm,0.9s						
SPA0	Spitsbergen Ar	44.11	357	eP	P	21 55 40.6	-0.3
	comp=Z,37nm,1.2s						
SPITS	Spitsbergen Ar	44.11	357	P	P	21 55 40.6	-0.3
	comp=Z,5.1nm,0.6s,baz=153,slow=9.7,SNR=4.9						
MK31	Makanchi Array	44.24	56	eP	P	21 55 43.8	+1.4
	comp=Z,19nm,1.4s						
MK31	Makanchi Array	44.24	56	eP	P	21 55 43.8	+1.4
MK31				pmax	pmax		
	comp=Z,19nm,1.4s						
MK32	Makanchi Array	44.24	56	eP	P	21 55 43.8	+1.4
MKAR	Makanchi Array	44.24	56	P	P	21 55 43.8	+1.4
	comp=Z,7.4nm,0.7s,baz=271,slow=8.3,SNR=12						
KBS	Kingsbay	45.04	356	eP	P	21 55 48.4	+0.1
	comp=Z,32nm,1.1s						
KBS	Kingsbay	45.04	356	eP	P	21 55 48.4	+0.1
KBS				pmax	pmax		
	comp=Z,32nm,1.1s						
ZAA0	Zalesovo Array	45.58	46	eP	P	21 55 53.3	+0.4
	comp=Z,11nm,0.3s						
ZALV	Zalesovo Beam	45.58	46	P	P	21 55 53.5	+0.6
	comp=Z,9.1nm,0.5s,baz=267,slow=8.8,SNR=11						
ZAA1	Zalesovo Array	45.58	46	eP	P	21 55 53.5	+0.6
NRIK	Noril'sk	48.62	25	P	P	21 56 17.2	+0.7
	comp=Z,6.7nm,0.8s,baz=263,slow=16,SNR=2.7						
LSZ	Lusaka	49.42	176	P	P	21 56 24.0	+0.8
	comp=Z,5.6nm,1.1s,baz=38,slow=12,SNR=2.6						
LSZ	Lusaka	49.42	176	eP	P	21 56 24.0	+0.8
	comp=Z,14nm,1.3s						
SUMG	Summit	49.74	339	eP	P	21 56 24.9	-0.4
	comp=Z,7.7nm,0.9s						
SUMG	Summit	49.74	339	eP	P	21 56 25.0	-0.4
SUMG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAK	Zakamensk	57.30	48	eP	P	21 57 18.2	-2.6
ZAK				pmax	pmax		
	comp=Z,11µm,1.2s						
SONA0	Songino Array	60.01	50	eP	P	21 57 41.3	+1.5
SONM	Songino Array	60.01	50	P	P	21 57 41.3	+1.5
	comp=Z,3.8nm,0.6s,baz=286,slow=8.0,SNR=7.5						
BOSA	Boshof	62.61	180	P	P	21 57 57.9	+0.6
	comp=Z,6.4nm,0.9s,baz=359,slow=9.1,SNR=4.1						
KLR	Kul'dur	74.39	41	P	P	21 59 11.7	+1.0
	comp=Z,3.1nm,0.9s,baz=315,slow=15,SNR=3.5						
USRK	Ussuriysk Ar.	77.42	45	P	P	21 59 28.6	+0.5
	comp=Z,5.4nm,0.6s,baz=292,slow=4.7,SNR=14						
YKA	Yellowknife Ar	78.23	342	P	P	21 59 33.5	+1.3
	comp=Z,0.2nm,0.3s,baz=32,slow=5.2,SNR=3.5						
YKB5	Yellowknife Ar	78.23	342	eP	P	21 59 33.5	+1.3
KS15	Wonju Array Si	78.77	52	eP	P	21 59 37.0	+1.3
	comp=Z,17nm,1.5s						
KSRS	Korea Array	78.79	52	P	P	21 59 37.0	+1.2
	comp=Z,2.9nm,1.0s,baz=305,slow=5.0,SNR=6.3						
KSRS	Korea Array	78.79	52	P	P	21 59 37.0	+1.2
ILAR	Eielson Array	81.02	357	P	P	21 59 48.5	+1.1
	comp=Z,1.4nm,0.9s,baz=340,slow=3.0,SNR=4.1						
ILB	Eielson Array	81.02	357	eP	P	21 59 48.5	+1.1
	comp=Z,5.5nm,1.3s						
WRH	Wood River Hil	81.38	357	eP	P	21 59 50.4	+1.2
	comp=Z,5.6nm,0.7s						
SUA	Susitna One	84.48	358	eP	P	22 00 07.1	+1.5
	comp=Z,6.0nm,0.8s						
MAJO	Matsushiro	85.88	48	eP	P	22 00 13.2	+0.3
MAJO	Matsushiro	85.88	48	P	P	22 00 13.2	+0.3
MJAR	Matsushiro Arr	85.88	48	P	P	22 00 13.2	+0.3
	comp=Z,2.2nm,0.8s,baz=299,slow=5.6,SNR=6.3						
LPM	Los Pinos Moun	98.12	321	eP	P	22 01 07.8	-2.4

IDC ***16*** *21:51:00.6±1.0, 34°.23N×25°.05E, h0km, mb4.2/9, mb1 4.3/14, mb1mx3.9/59, mbtmp4.2/14, ML4.2/5, Error ellipse: s-maj=18.3km s-min=17.0km az=16.0*
ISCJB ***16*** *21:51:01.0±0.4, 34°.12N±0°.04×24°.99E±0°.04, h20km, mb4.3/17, Error ellipse: s-maj=6.4km s-min=4.7km az=3.6*
NEIC ***16*** *21:51:01.5±2.6, 34°.21N×25°.07E, h10km, mb4.6/18, Error ellipse: s-maj=11.3km s-min=8.6km az=223.0*
ISC 16 21:51:02.9±0.7, 34°.18N±0°.07×25°.05E±0°.06, h20km, n69, σ1°88/70, mb4.5/17, Crete

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

comp=Z,24nm,1.0s
MOA Molln 15.88 333 P **P 21 54 55.0 +6.3**
comp=Z,8.0nm,0.8s
WTTA Wattenberg 16.53 326 *e*P **P 21 54 56.4 +0.3**
comp=Z,67nm,1.1s,SNR=5.8
WATA Walderalm 16.61 326 *e*Pn **Pn 21 54 55.2 +0.6**
comp=Z,9.2nm,0.9s
SQTA Sankt Quirin 16.69 325 *e*Pn **Pn 21 54 56.3 +0.6**
comp=Z,27nm,1.3s
FUORN Ofenpass-Fuorn 16.73 322 *e*P **P 21 54 57.7 -0.8**
comp=Z,152nm,1.5s
FETA Feichten 16.78 324 Pn **Pn 21 54 56.4 -0.5**
comp=Z,41nm,1.3s
KIV Kislovodsk 16.79 49 *e*P **Pn 21 54 58.3 +1.4**
comp=Z,22nm,1.2s
AKASG Malin Array Be 16.80 9 Pn **Pn 21 54 56.7 0.0**
comp=Z,1.3nm,0.3s,baz=198,slow=11,SNR=6.4
AKBB Malin Array Si 16.80 9 *e*Pn **Pn 21 54 56.7 0.0**
comp=Z,15nm,0.9s
KVAR Kislovodsk Arr 16.80 49 Pn **Pn 21 54 58.3 +1.3**
baz=239,slow=5.9,SNR=7.1
MOTA Moosalm 16.83 326 Pn **Pn 21 54 56.7 -0.8**
comp=Z,15nm,1.3s
GEC2 GERESS Array S 16.91 333 *e*Pn **Pn 21 54 58.0 -0.4**
comp=Z,5.5nm,0.6s
GERES GERESS Array B 16.91 333 Pn **P 21 55 00.9 +0.6**
comp=Z,0.7nm,0.3s,baz=144,slow=11,SNR=9.2
RETA Reutte 17.10 325 Pn **Pn 21 54 57.8 -2.9**
comp=Z,72nm,1.3s,SNR=7.6
TUE Stuetta 17.11 321 *e*Pn **Pn 21 54 58.3 -2.7**
comp=Z,56nm,1.1s
DAVA Damuels 17.38 323 Pn **Pn 21 54 58.9 -5.5**
comp=Z,76nm,1.9s
BNI Bardonecchia 17.80 313 *e*P **Pn 21 55 07.8 -1.7**
comp=Z,43nm,1.4s
BFO Black Forest 18.86 324 *e*P **P 21 55 19.3 -2.4**
comp=Z,26nm,1.4s
SUW Suwalki 19.88 357 *e*P **P 21 55 31.5 -1.1**
comp=Z,49nm,1.1s
ESDC Sonseca Array 23.77 292 P **P 21 56 14.7 +0.5**
comp=Z,0.7nm,0.7s,baz=93,slow=8.0,SNR=3.8
ESLA Sonseca Array 23.77 292 *e*P **P 21 56 11.4 -2.8**
comp=Z,7.3nm,1.3s
HFS Hagfors 27.01 347 P **P 21 56 43.0 -0.3**
comp=Z,2.5nm,0.8s,baz=141,slow=9.3,SNR=4.1
NAO01 NORSAR Array S 28.21 345 *e*P **P 21 56 53.6 -0.5**
comp=Z,60nm,1.4s
NBO00 NORSAR Array S 28.41 345 *e*P **P 21 56 54.5 -1.3**
comp=Z,88nm,1.5s
EKA Eskdalemuir Ar 28.79 326 P **P 21 57 00.7 +1.4**
comp=Z,0.9nm,0.6s,baz=121,slow=9.3,SNR=3.7
TOA1 Torodi Ar. Sit 29.79 231 *e*P **P 21 57 08.9 +0.4**
TOA0 Torodi Ar. Sit 29.79 231 *e*P **P 21 57 10.6 +2.1**
comp=Z,22nm,1.4s
TORD Torodi Ar. Bea 29.79 231 P **P 21 57 08.9 +0.4**
comp=Z,2.8nm,0.4s,baz=30,slow=8.5,SNR=11
ARA0 ARCESS Array S 35.41 0 *e*P **P 21 57 56.2 -1.0**
ARCES ARCESS Array B 35.41 0 P **P 21 57 56.2 -1.0**
comp=Z,3.3nm,1.0s,baz=174,slow=9.7,SNR=2.7
KURK Kurchatov 41.88 50 *e*P **P 21 58 52.2 +0.7**
comp=Z,18nm,1.5s
SPA0 Spitsbergen Ar 44.26 357 *e*P **P 21 59 10.6 0.0**
comp=Z,33nm,1.4s
SPITS Spitsbergen Ar 44.26 357 P **P 21 59 10.6 0.0**
comp=Z,7.3nm,1.1s,baz=188,slow=4.4,SNR=2.6
MK31 Makanchi Array 44.40 56 *e*P **P 21 59 11.5 -0.6**
comp=Z,15nm,1.4s
MK32 Makanchi Array 44.40 56 *e*P **P 21 59 12.9 +0.8**
MKAR Makanchi Array 44.40 56 P **P 21 59 12.9 +0.8**
comp=Z,1.2nm,0.6s,baz=264,slow=8.1,SNR=5.4
ZAA0 Zalesovo Array 45.76 45 *e*P **P 21 59 22.4 -0.3**
comp=Z,13nm,1.4s
ZAA1 Zalesovo Array 45.76 45 *e*P **P 21 59 22.6 -0.1**
ZALV Zalesovo Beam 45.76 45 P **P 21 59 22.6 -0.1**
comp=Z,2.4nm,0.4s,baz=264,slow=8.7,SNR=4.3
SONA0 Songino Array 60.18 50 *e*P **P 22 01 10.7 +1.2**
SONM Songino Array 60.18 50 P **P 22 01 10.7 +1.2**
comp=Z,0.2nm,0.4s,baz=239,slow=38,SNR=3.3
BOSA Boshof 62.45 180 *e*P **P 22 01 24.7 -0.1**
comp=Z,9.7nm,1.3s

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*ISCJB **16** 21:52:29.8±0.6, 34°.16N±0°.06×25°.05E±0°.07, h20km, mb4.2/16, Error ellipse: s-maj=9.3km s-min=7.8km az=43.5*
*IDC **16** 21:52:29.4±1.1, 34°.24N×25°.08E, h0km, mb3.9/9, mb1 4.0/12, mb1mx3.7/56, mbtmp3.9/12, ML4.3/3, Error ellipse: s-maj=20.0km s-min=18.6km az=61.0*
*NEIC **16** 21:52:30.0±2.0, 34°.18N×25°.18E, h10km, mb4.4/11, Error ellipse: s-maj=13.1km s-min=8.9km az=210.0*
ISC 16 21:52:31.9±0.8, 34°.24N±0°.09×25°.18E±0°.07, h20km, n38, σ1§18/39, mb4.2/16, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.07**	**347**	Pn	**Pb**	**21 52 52.6**	**+0.8**
IDI	53nm,0.3s,baz=170,slow=19,SNR=2.1			Sn	**Sn**	**21 53 07.0**	**+0.8**
KARP	**Karpathos**	**2.08**	**51**	*e*Pn	**Pn**	**21 53 06.1**	**+0.4**
MDUB	**Mudurnu**	**7.84**	**36**	*e*Pn	**Pn**	**21 54 24.0**	**-0.9**
TIP	**Timpagrande**	**8.37**	**308**	*e*Pn	**Pn**	**21 54 29.9**	**-2.2**
MMAI	**Mount Meron Ar**	**8.61**	**95**	Sn	**Sn**	**21 56 08.5**	**-3.5**
	1.1nm,0.3s,baz=280,slow=26,SNR=2.4						
TTG	**Podgorica**	**9.40**	**332**	*e*Pn	**Pn**	**21 54 45.6**	**-0.5**
EIL	**Elat**	**9.47**	**116**	Pn	**Pn**	**21 54 48.4**	**+1.3**
	0.9nm,0.3s,baz=297,slow=2.3,SNR=3.6						
AKASG	**Malin Array Be**	**16.71**	**9**	Pn	**P**	**21 56 26.2**	**-0.6**
	1.5nm,0.3s,baz=199,slow=10,SNR=4.8						
AKBB	**Malin Array Si**	**16.71**	**9**	*e*P	**P**	**21 56 26.2**	**-0.6**
	8.9nm,0.9s						
GEC2	**GERESS Array S**	**16.90**	**333**	*e*P	**P**	**21 56 30.1**	**+1.0**
	4.7nm,0.6s						
GERES	**GERESS Array B**	**16.90**	**333**	Pn	**P**	**21 56 30.1**	**+1.0**
	0.7nm,0.3s,baz=144,slow=11,SNR=9.4						
KHC	**Kasperske Hory**	**17.18**	**333**	*e*Pn	**P**	**21 56 31.0**	**-1.2**
	2.2nm,1.1s						
CLL	**Collm**	**19.21**	**336**	*e*P	**P**	**21 56 52.0**	**-2.4**
ECH	**Echery**	**19.39**	**321**	*e*P	**P**	**21 56 55.4**	**-1.1**
	6.0nm,1.3s						
WLF	**Walferdange**	**20.83**	**323**	*e*P	**P**	**21 57 12.1**	**+0.1**
	64nm,1.4s						
ESDC	**Sonseca Array**	**23.85**	**292**	P	**P**	**21 57 44.0**	**+0.1**
	0.7nm,0.8s,baz=88,slow=9.5,SNR=3.5						
HFS	**Hagfors**	**26.97**	**347**	P	**P**	**21 58 12.5**	**+0.6**
	5.5nm,1.0s,baz=164,slow=12,SNR=3.9						
FIA0	**FINESS Array S**	**27.22**	**1**	*e*P	**P**	**21 58 13.4**	**-0.7**
FINES	**FINESS Array B**	**27.22**	**1**	P	**P**	**21 58 13.4**	**-0.7**
	3.6nm,0.9s,baz=176,slow=11,SNR=4.1						
NC602	**NORSAR Array S**	**27.94**	**346**	*e*P	**P**	**21 58 20.7**	**+0.1**
	26nm,1.4s						
NAO01	**NORSAR Array S**	**28.18**	**345**	*e*P	**P**	**21 58 23.0**	**+0.3**
	31nm,1.4s						
NB200	**NORSAR Array S**	**28.29**	**346**	*e*P	**P**	**21 58 24.0**	**+0.3**
NOA	**NORSAR Array B**	**28.29**	**346**	P	**P**	**21 58 24.0**	**+0.3**
	0.4nm,0.7s,baz=153,slow=9.0,SNR=2.4						
NBO00	**NORSAR Array S**	**28.37**	**345**	*e*P	**P**	**21 58 24.5**	**+0.1**
	48nm,1.4s						
EKA	**Eskdalemuir Ar**	**28.80**	**326**	P	**P**	**21 58 28.5**	**+0.2**
	0.5nm,0.6s,baz=137,slow=8.4,SNR=2.6						
TOA1	**Torodi Ar. Sit**	**29.92**	**231**	*e*P	**P**	**21 58 38.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**29.92**	**231**	P	**P**	**21 58 38.4**	**-0.2**
	1.8nm,0.5s,baz=31,slow=9.0,SNR=7.5						
ARA0	**ARCESS Array S**	**35.34**	**0**	*e*P	**P**	**21 59 24.7**	**-0.8**
ARCES	**ARCESS Array B**	**35.34**	**0**	P	**P**	**21 59 24.7**	**-0.8**
	8.2nm,0.3s,baz=173,slow=9.8,SNR=3.4						
KURK	**Kurchatov**	**41.75**	**50**	*e*P	**P**	**22 00 18.9**	**-0.6**
	12nm,1.4s						
MK31	**Makanchi Array**	**44.27**	**56**	*e*P	**P**	**22 00 41.7**	**+1.7**
	7.4nm,1.4s						
MK32	**Makanchi Array**	**44.27**	**56**	*e*P	**P**	**22 00 41.8**	**+1.8**
MKAR	**Makanchi Array**	**44.27**	**56**	P	**P**	**22 00 41.8**	**+1.8**
	0.8nm,0.6s,baz=285,slow=6.3,SNR=4.0						
ZAA1	**Zalesovo Array**	**45.63**	**46**	*e*P	**P**	**22 00 51.8**	**+1.1**
ZALV	**Zalesovo Beam**	**45.63**	**46**	P	**P**	**22 00 51.8**	**+1.2**
	0.8nm,0.4s,baz=277,slow=8.6,SNR=2.4						
IVI	**Ivigtut**	**52.77**	**324**	*e*P	**P**	**22 01 45.8**	**+0.6**
	102nm,1.5s						
SONA0	**Songino Array**	**60.05**	**50**	*e*P	**P**	**22 02 38.3**	**+0.8**
SONM	**Songino Array**	**60.05**	**50**	P	**P**	**22 02 38.3**	**+0.8**
	0.8nm,0.6s,baz=286,slow=7.0,SNR=3.5						

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*ISCJB **16** 21:53:55.9±0.9, 34°.12N±0°.08×25°.37E±0°.09, h20km, mb3.8/4, Error ellipse: s-maj=15.1km s-min=6.6km az=40.9*
*IDC **16** 21:53:55.3±1.3, 34°.23N×25°.10E, h0km, mb4.0/4, mb1 4.0/7, mb1mx3.5/58, mbtmp3.9/7, ML4.0/3, Error ellipse: s-maj=26.1km s-min=19.4km az=87.0*
ISC 16 21:53:57.9±1.1, 34°.2N±0°.1×25°.3E±0°.1, h20km, n9, σ1§34/11, mb4.0/4, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.11**	**344**	Pn	**Pn**	**21 54 18.3**	**0.0**
IDI	baz=165,slow=20,SNR=1.4			Sn	**Sn**	**21 54 32.9**	**-0.3**
MMAI	**Mount Meron Ar**	**8.55**	**95**	Sn	**Sn**	**21 57 35.4**	**-1.0**
	1.7nm,0.3s,baz=275,slow=26,SNR=3.0						
EIL	**Elat**	**9.40**	**116**	Pn	**Pn**	**21 56 13.5**	**+1.4**
	0.5nm,0.3s,baz=358,slow=7.5,SNR=5.2						
EIL	0.9nm,0.3s,baz=19,slow=14,SNR=2.0			Sn	**Sn**	**21 57 55.0**	**-2.3**
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**P**	**21 57 52.3**	**-0.7**
	0.5nm,0.3s,baz=199,slow=10,SNR=4.0						
GERES	**GERESS Array B**	**16.95**	**333**	Pn	**P**	**21 57 55.8**	**+0.1**
	0.3nm,0.3s,baz=142,slow=12,SNR=5.5						
FINES	**FINESS Array B**	**27.25**	**1**	P	**P**	**21 59 39.3**	**-1.1**
	2.5nm,0.9s,baz=170,slow=9.9,SNR=2.3						
TORD	**Torodi Ar. Bea**	**29.95**	**231**	P	**P**	**22 00 04.5**	**-0.4**
	1.8nm,0.4s,baz=32,slow=8.7,SNR=8.8						
MKAR	**Makanchi Array**	**44.23**	**56**	P	**P**	**22 02 07.7**	**+2.0**
	0.2nm,0.4s,baz=268,slow=6.6,SNR=2.4						
ZALV	**Zalesovo Beam**	**45.60**	**46**	P	**P**	**22 02 17.0**	**+0.6**
	1.1nm,0.4s,baz=277,slow=9.3,SNR=3.9						

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*ISCJB **16** 21:54:24.7±1.1, 34°.1N±0°.1×25°.36E±0°.10, h20km, mb3.9/7, Error ellipse: s-maj=18.7km s-min=10.6km az=17.4*
*IDC **16** 21:54:24.2±1.3, 34°.20N×25°.14E, h0km, mb3.9/6, mb1 3.9/8, mb1mx3.5/56, mbtmp3.9/8, ML4.3/2, Error ellipse: s-maj=31.6km s-min=24.0km az=132.0*
ISC 16 21:54:26.9±1.2, 34°.2N±0°.2×25°.3E±0°.1, h20km, n10, σ1§14/10, mb3.7/7, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMAI	**Mount Meron Ar**	**8.53**	**95**	Sn	**Sn**	**21 58 03.8**	**-1.3**
	1.5nm,0.3s,baz=281,slow=26,SNR=2.6						
AKASG	**Malin Array Be**	**16.75**	**9**	Pn	**P**	**21 58 21.2**	**-1.1**
	1.1nm,0.3s,baz=197,slow=10,SNR=4.4						
GERES	**GERESS Array B**	**16.98**	**333**	Pn	**P**	**21 58 24.6**	**-0.4**
	0.4nm,0.3s,baz=144,slow=12,SNR=7.0						
HFS	**Hagfors**	**27.04**	**347**	P	**P**	**22 00 08.3**	**+0.8**
	1.6nm,0.8s,baz=150,slow=12,SNR=3.7						
FINES	**FINESS Array B**	**27.27**	**1**	P	**P**	**22 00 09.2**	**-0.4**
	0.7nm,0.4s,baz=174,slow=10,SNR=3.3						
TORD	**Torodi Ar. Bea**	**29.95**	**231**	P	**P**	**22 00 33.5**	**-0.3**
	1.6nm,0.5s,baz=29,slow=9.4,SNR=7.5						
ARCES	**ARCES Array B**	**35.40**	**0**	P	**P**	**22 01 20.0**	**-1.0**
	7.6nm,0.3s,baz=156,slow=8.9,SNR=4.4						
MKAR	**Makanchi Array**	**44.23**	**56**	P	**P**	**22 02 36.0**	**+1.2**
	0.9nm,0.8s,baz=268,slow=6.9,SNR=2.7						
ZALV	**Zalesovo Beam**	**45.61**	**45**	P	**P**	**22 02 46.8**	**+1.2**
	0.9nm,0.4s,baz=269,slow=9.9,SNR=2.9						
SONM	**Songino Array**	**60.03**	**50**	P	**P**	**22 04 33.4**	**+1.0**
	0.3nm,0.5s,baz=276,slow=6.3,SNR=2.2						

IDC 16 21:55:53.3±4.7, 34°.19N×25°.39E, h0km, mb4.0/1, mb1 3.9/3, mb1mx3.3/55, mbtmp3.7/3, ML4.2/2, Error ellipse: s-maj=119.4km s-min=31.4km az=109.0, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKASG	**Malin Array Be**	**16.74**	**9**	Pn	Pn	21 59 48.8	-0.3
	0.6nm,0.3s,baz=198,slow=11,SNR=4.1						
GERES	**GERESS Array B**	**17.02**	**333**	Pn	P	21 59 54.2	-0.6
	0.4nm,0.3s,baz=144,slow=12,SNR=7.1						
TORD	**Torodi Ar. Bea**	**30.02**	**231**	P	P	22 02 04.0	0.0
	1.0nm,0.5s,baz=30,slow=9.4,SNR=5.2						

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*IDC **16** 21:57:07.3±1.5, 34°.28N×24°.93E, h0km, mb4.1/1, mb1 3.7/5, mb1mx3.3/56, mbtmp3.6/5, ML3.8/3, Error ellipse: s-maj=28.2km s-min=19.3km az=89.0*
*ISCJB **16** 21:57:08.4±1.1, 34°.18N±0°.08×25°.1E±0°.2, h25km, mb3.9/1, Error ellipse: s-maj=19.7km s-min=10.2km az=157.0*
ISC 16 21:57:09.8±1.1, 34°.3N±0°.1×25°.3E±0°.1, h25km, n6, σ1§51/7, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.02**	**343**	Pn	**Pn**	**21 57 28.7**	**+0.1**
	4.2nm,0.3s,baz=173,slow=17,SNR=2.0						
IDI	38nm,0.3s,baz=270,slow=20,SNR=4.4			Sn	**Sn**	**21 57 42.8**	**+0.5**
MMAI	**Mount Meron Ar**	**8.56**	**96**	Pn	Pn	21 59 18.0	+5.7
	baz=282,slow=13,SNR=2.5						
MMAI	2.6nm,0.3s,baz=270,slow=23,SNR=5.2			Sn	**Sn**	**22 00 46.2**	**-1.8**
EIL	**Elat**	**9.45**	**117**	Pn	**Pn**	**21 59 26.1**	**+1.9**
	0.5nm,0.3s,baz=333,slow=9.0,SNR=3.3						
AKASG	**Malin Array Be**	**16.64**	**9**	Pn	**P**	**22 01 02.5**	**-1.0**
	0.8nm,0.3s,baz=199,slow=10,SNR=3.5						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**P**	**22 01 06.6**	**+0.5**
	0.1nm,0.3s,baz=149,slow=12,SNR=3.6						
TORD	**Torodi Ar. Bea**	**30.00**	**231**	P	**P**	**22 03 15.7**	**-0.9**
	0.9nm,0.4s,baz=38,slow=8.7,SNR=7.3						

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*IDC **16** 21:58:10.4±0.7, 3°.79S×131°.44E, h0km, mb4.0/6, mb1 4.2/10, mb1mx3.9/54, mbtmp4.1/10, ML3.5/4, MS3.1/1, Ms1 3.1/1, ms1mx2.8/46, Error ellipse: s-maj=33.0km s-min=16.4km az=58.0*
*ISCJB **16** 21:58:11.6±0.3, 3°.97S±0°.03×131°.53E±0°.04, h29km, mb4.4/13, Error ellipse: s-maj=5.7km s-min=4.3km az=16.3*
*NEIC **16** 21:58:13.2±1.3, 3°.86S×131°.54E, h25km±2km, mb4.5/13, Error ellipse: s-maj=12.0km s-min=6.5km az=127.0*
*DJA **16** 21:58:14.0±3.0, 4°S±4°×13°2E±°, h22km±30km, M4.4/9, mb4.8/5, MLv4.2/9*
ISC 16 21:58:13.4±0.5, 3°.92S±0°.05×131°.54E±0°.05, h29km, n49, σ2§71/57, mb4.5/13, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.22**	**35**	*e*Pn	**Pn**	**21 58 34.1**	**-0.5**
FAKI				*e*Sn	**Sn**	**21 58 48.4**	**-1.7**
FAKI	**Fak Fak**	**1.22**	**35**	P	**Pn**	**21 58 33.8**	**-0.8**
FAKI				S	**Sn**	**21 58 48.5**	**-1.7**
BNDI	**Bandanaira**	**1.74**	**250**	P	**Pb**	**21 58 44.9**	**+0.2**
MSAI	**Masohi**	**2.67**	**282**	P	**Pn**	**21 58 56.9**	**+2.4**
SIJI	**Sorong**	**3.05**	**355**	Pn	**Pn**	**21 58 56.6**	**-3.1**
	11nm,0.3s,baz=169,slow=7.4,SNR=38						
SIJI	25nm,0.3s,baz=113,slow=9.6,SNR=6.9			Sn	**Sn**	**21 59 28.8**	**-6.4**
SIJI				LR	LR	22 00 41.0	
	comp=Z,309nm,21.2s,baz=252,slow=52						
AAI	**Ambon**	**3.35**	**274**	P	**Pn**	**21 59 05.3**	**+1.5**
RKPI	**Ransiki, Papua**	**3.56**	**48**	P	**Pn**	**21 59 07.4**	**+0.6**
NLAI	**Namlea**	**4.48**	**279**	P	**Pn**	**21 59 21.5**	**+2.0**
BAKI	**Biak**	**5.31**	**59**	P	**Pn**	**21 59 30.9**	**+0.1**
MTN	**Manton Dam**	**8.87**	**183**	*e*Pn	**Pn**	**22 00 20.5**	**+0.7**
MTN				*e*Sn	**Sn**	**22 01 57.9**	**-1.0**
LUWI	**Luwuk**	**9.21**	**288**	*e*Pn	**Pn**	**22 00 24.0**	**-0.5**
SOEI	**Soe**	**9.26**	**231**	*e*Pn	**Pn**	**22 00 26.8**	**+1.6**
SOEI				*e*Sn	**Sn**	**22 02 08.8**	**+0.4**
SOEI	**Soe**	**9.26**	**231**	P	**Pn**	**22 00 27.7**	**+2.5**
JAY	**Jayapura**	**9.26**	**82**	Pn	**Pn**	**22 00 26.7**	**+1.6**
	0.6nm,0.3s,baz=246,slow=18,SNR=3.4						
BATI	**Baumata**	**10.00**	**231**	Pn	**Pn**	**22 00 38.8**	**+3.5**
	5.3nm,0.3s,baz=143,slow=0.3,SNR=8.1						
BATI	**Baumata**	**10.00**	**231**	P	**Pn**	**22 00 38.5**	**+3.2**
COEN	**Coen**	**15.21**	**132**	*e*Pn	**Pn**	**22 01 47.2**	**+0.9**
	8.8nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.23**	**202**	Pn	**Pn**	**22 01 42.1**	**-4.4**
	0.6nm,0.3s,baz=25,slow=13,SNR=20						
FITZ				Sn	Sn	22 04 22.9	-12
	0.1nm,0.3s,baz=45,slow=20,SNR=2.3						
FITZ	**Fitzroy Crossi**	**15.23**	**202**	*e*Pn	**Pn**	**22 01 43.6**	**-2.9**
	17nm,1.4s						
FITZ				*e*Sn	Sn	22 04 22.9	-12
WR1	**Warramunga Arr**	**16.16**	**170**	*e*Sn	**Sn**	**22 04 49.8**	**-7.2**
WRA	**Warramunga Arr**	**16.16**	**170**	Pn	**Pn**	**22 01 56.1**	**-2.5**
	0.4nm,0.3s,baz=341,slow=12,SNR=9.6						
WRA	0.3nm,0.3s,baz=359,slow=23,SNR=6.4			Sn	**Sn**	**22 04 49.8**	**-7.2**
WB2	**Warramunga Arr**	**16.16**	**170**	*e*Pn	**Pn**	**22 01 57.8**	**-0.8**
	7.4nm,0.7s						
PMG	**Port Moresby**	**16.44**	**110**	Pn	**P**	**22 02 05.7**	**+1.0**
	0.7nm,0.3s,baz=251,slow=8.3,SNR=3.1						
JAGI	**Jajag, Banyuwa**	**17.86**	**255**	*e*P	**Pn**	**22 02 20.0**	**0.0**
	35nm,0.8s						
AS31	**Alice Springs**	**19.76**	**174**	*e*Pn	**P**	**22 02 44.0**	**+2.7**
AS31				*e*S	**S**	**22 06 15.6**	**-7.0**
ASAR	**Alice Springs**	**19.76**	**174**	P	**P**	**22 02 44.0**	**+2.7**
	1.2nm,0.3s,baz=353,slow=10,SNR=66						
ASAR	0.1nm,0.3s,baz=357,slow=28,SNR=3.8			S	**S**	**22 06 15.6**	**-7.0**
SBUM	**Sibu**	**20.32**	**288**	*e*P	**P**	**22 02 46.3**	**-1.1**
	6.9nm,1.1s						
PSA00	**Pilbara Seismi**	**20.90**	**212**	*e*P	**P**	**22 02 53.4**	**-0.2**
	15nm,0.6s						
CTA	**Charters Tower**	**21.54**	**139**	P	**P**	**22 03 03.5**	**+3.0**
	5.6nm,0.9s,baz=334,slow=12,SNR=4.3						
CISI	**Cisoppet, Garu**	**23.88**	**260**	*e*P	**P**	**22 03 21.9**	**-2.9**
	26nm,0.8s						
FORT	**Forrest**	**26.91**	**187**	*e*P	**P**	**22 03 53.4**	**+1.2**
	15nm,0.8s						
NWAO	**Narrogin (SRO)**	**31.81**	**203**	*e*P	**P**	**22 04 36.4**	**+0.8**
	21nm,1.1s						
KULM	**Kulim**	**32.18**	**286**	*e*P	**P**	**22 04 39.0**	**-0.2**
	36nm,1.4s						
GSI	**Gunungsitoli**	**34.34**	**278**	*e*P	**P**	**22 04 57.0**	**-1.0**
	52nm,1.4s						
CMAR	**Chiang Mai Arr**	**39.06**	**306**	P	**P**	**22 05 38.7**	**+0.5**
	1.5nm,0.5s,baz=139,slow=7.0,SNR=17						
CHTO	**Chiang Mai**	**39.25**	**306**	*e*P	**P**	**22 05 39.3**	**-0.5**
	4.1nm,0.8s						
SONA0	**Songino Array**	**56.06**	**340**	*e*P	**P**	**22 07 50.4**	**+0.5**
SONM	**Songino Array**	**56.06**	**340**	P	**P**	**22 07 50.4**	**+0.5**
	1.1nm,0.9s,baz=166,slow=7.5,SNR=4.7						
MK32	**Makanchi Array**	**66.54**	**325**	*e*P	**P**	**22 09 01.1**	**+0.3**
MKAR	**Makanchi Array**	**66.54**	**325**	P	**P**	**22 09 01.1**	**+0.3**
	0.3nm,0.4s,baz=113,slow=7.3,SNR=6.4						
KURK	**Kurchatov**	**70.73**	**328**	*e*P	**P**	**22 09 27.2**	**+0.4**
	3.8nm,1.0s						
VNDA	**Vanda**	**75.30**	**173**	P	**P**	**22 09 55.3**	**+1.9**
	8.3nm,1.3s,baz=320,slow=7.1,SNR=12						
GEYT	**Alibeck**	**79.43**	**310**	P	**P**	**22 10 18.6**	**+1.3**
	1.2nm,0.7s,baz=132,slow=3.3,SNR=4.3						
SPU	**Mount Spurr**	**86.89**	**28**	*e*P	**P**	**22 10 55.7**	**+0.3**
TXAR	**Lajitas Array**	**122.02**	**58**	PKP	**PKiKP**	**22 17 08.0**	**+1.8**
	0.5nm,1.0s,baz=300,slow=1.8,SNR=2.7						
TORD	**Torodi Ar. Bea**	**129.65**	**284**	PKP	**PKPdf**	**22 17 21.4**	**+0.6**
	4.8nm,1.2s,baz=124,slow=1.6,SNR=6.8						
TOA1	**Torodi Ar. Sit**	**129.65**	**284**	*e*PKPdf	**PKPdf**	**22 17 21.4**	**+0.6**
CPUP	**Villa Florida**	**148.72**	**165**	PKPbc	**PKPbc**	**22 18 00.0**	**+1.2**
	1.8nm,0.8s,baz=225,slow=4.3,SNR=4.3						
LPAZ	**La Paz**	**152.04**	**136**	PKPbc	**PKiKP**	**22 18 10.4**	**+2.2**
	0.5nm,0.4s,baz=214,slow=1.8,SNR=3.5						

IDC 16 21:58:51.4±1.7, 34°.13N×24°.53E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.2/55, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=53.7km s-min=29.7km az=139.0, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GERES	**GERESS Array B**	**16.76**	**335**	Pn	P	22 02 49.5	-0.4
	0.1nm,0.3s,baz=143,slow=12,SNR=4.3						
TORD	**Torodi Ar. Bea**	**29.43**	**230**	P	P	22 04 56.8	-0.1
	0.8nm,0.4s,baz=29,slow=9.2,SNR=5.9						
MKAR	**Makanchi Array**	**44.78**	**56**	P	P	22 07 06.7	-0.1
	0.4nm,0.6s,baz=270,slow=8.4,SNR=2.8						

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*IDC **16** 22:01:29.5±1.5, 34°.30N×24°.96E, h0km, mb4.2/1, mb1 3.6/5, mb1mx3.3/54, mbtmp3.5/5, ML3.6/4, Error ellipse: s-maj=28.3km s-min=18.8km az=90.0*
*ISCJB **16** 22:01:32.0±0.8, 34°.14N±0°.07×25°.13E±0°.07, h25km, mb3.9/1, Error ellipse: s-maj=10.6km s-min=7.4km az=21.4*
ISC 16 22:01:32.5±1.0, 34°.22N±0°.08×25°.21E±0°.05, h25km, n21, σ2§59/24, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.10**	**346**	Pn	**Pn**	**22 01 50.2**	**-2.1**
	24nm,0.3s,baz=168,slow=14,SNR=3.5						
IDI	32nm,0.3s,baz=101,slow=18,SNR=4.5			Sn	**Sb**	**22 02 05.3**	**-1.5**
GVD	**Gavdhos**	**1.11**	**304**	P	**Pb**	**22 01 53.9**	**+0.9**
ZKR	**Zakros**	**1.22**	**43**	*e*P	**Pb**	**22 01 55.8**	**+0.9**
IMMV	**Iera Moni Meta**	**1.60**	**321**	*e*P	**Pb**	**22 02 00.4**	**-0.9**
KARP	**Karpathos**	**2.08**	**50**	*e*P	**Pn**	**22 02 08.4**	**+2.6**
SANT	**Santorini**	**2.16**	**5**	*e*P	**Pn**	**22 02 07.8**	**+0.9**
APE	**Apeiranthos**	**2.85**	**5**	*e*P	**Pn**	**22 02 17.8**	**+1.3**
ARG	**Arkhangelos**	**3.11**	**49**	*e*P	**Pn**	**22 02 22

*IDC **16** 22:04:47.0±2.5, 31°.75N×141°.21E, h45km±20km, mb3.6/14, mb1 3.7/18, mb1mx3.5/67, mbtmp3.8/18, ML3.3/4, Error ellipse: s-maj=27.0km s-min=16.9km az=87.0*
*ISCJB **16** 22:04:49.0±1.2, 31°.75N±0°.07×140°.9E±0°.1, h70km±8km, mb3.7/14, Error ellipse: s-maj=15.8km s-min=11.8km az=1.8*
*JMA **16** 22:04:50.2±0.3, 32°.12N×140°.94E, h2km, M4.2*
ISC 16 22:04:47.7±2.4, 31°.7N±0°.1×141°.0E±0°.1, h49km±18km, n42, σ2§37/47, mb3.7/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.30**	**305**	P	**Pn**	**22 05 10.8**	**+1.2**
JAOM				*e*S	**Sn**	**22 05 25.7**	**-0.2**
JHCJ	**Hachijojimakas**	**1.70**	**322**	P	**Pn**	**22 05 15.6**	**+0.6**
JHCJ				*e*S	**Sn**	**22 05 33.2**	**-2.3**
JHJ2	**Mitsune**	**1.72**	**324**	P	**Pn**	**22 05 16.4**	**+1.2**
JHJ	**Hachijo jima 2**	**1.74**	**323**	P	**Pn**	**22 05 16.1**	**+0.5**
	61nm,0.3s,baz=74,slow=22,SNR=63						
JHJ				S	**Sn**	**22 05 29.5**	**-7.1**
	187nm,0.3s,baz=75,slow=20,SNR=18						
JMKN	**Mikurajimanish**	**2.48**	**331**	P	**Pn**	**22 05 27.0**	**+1.4**
JMKN				*e*S	**Sn**	**22 05 53.1**	**-1.5**
BSO1	**Boso 1**	**2.92**	**359**	P	**Pn**	**22 05 32.7**	**+1.5**
JKO	**Kozu shima**	**2.92**	**327**	P	**Pn**	**22 05 33.7**	**+2.0**
JKO				*e*S	**Sn**	**22 06 05.4**	**-0.2**
JTHY	**Toshimahigashi**	**3.15**	**333**	P	**Pn**	**22 05 37.0**	**+2.2**
TK02	**Tokai 2**	**3.54**	**310**	P	**Pn**	**22 05 43.9**	**+4.0**
JOD2	**Odawara 2**	**3.88**	**336**	P	**Pn**	**22 05 47.6**	**+2.7**
JYN	**Shimob**	**4.29**	**332**	P	**Pn**	**22 05 54.0**	**+3.4**
JIE	**Ise**	**4.50**	**307**	P	**Pn**	**22 05 56.1**	**+2.8**
JRY	**Ryogami san**	**4.63**	**338**	P	**Pn**	**22 05 58.7**	**+3.5**
JAG	**Ashikaga**	**4.87**	**345**	P	**Pn**	**22 06 00.9**	**+2.5**
MJAR	**Matsushiro Arr**	**5.34**	**335**	P	**Pn**	**22 06 06.0**	**+1.1**
	1.0nm,0.3s,baz=156,slow=12,SNR=45						
MJAR				S	**Sn**	**22 06 59.5**	**-5.7**
	baz=142,slow=12,SNR=1.9						
MAT	**Matsushiro**	**5.34**	**335**	P	**Pn**	**22 06 09.1**	**+4.2**
MAT				S	**Sn**	**22 07 07.1**	**+1.9**
MAT	**Matsushiro**	**5.34**	**335**	P	**Pn**	**22 06 09.3**	**+4.3**
MAT				*e*S	**Sn**	**22 07 07.3**	**+2.1**
JFT	**Otama**	**5.80**	**355**	P	**Pn**	**22 06 12.7**	**+1.4**
JFT				*e*S	**Sn**	**22 07 14.4**	**-2.1**
JNU	**Nakatsue**	**8.70**	**282**	P	**Pn**	**22 06 51.1**	**+0.1**
	0.1nm,0.3s,baz=114,slow=20,SNR=2.0						
KSRS	**Korea Array**	**12.21**	**301**	P	**Pn**	**22 07 40.5**	**+1.5**
	0.3nm,0.3s,baz=123,slow=13,SNR=2.8						
ASAJ	**Asahikawa**	**12.43**	**5**	P	**Pn**	**22 07 39.6**	**-2.3**
	0.7nm,0.3s,baz=204,slow=20,SNR=3.2						
H11N2	**WAKE ISLAND Hy 26.11**	**111**		T	T	22 38 24.0	
	baz=298						
H11N1	**WAKE ISLAND Hy 26.12**	**111**		T	T	22 38 23.4	
	baz=298						
H11N3	**WAKE ISLAND Hy 26.13**	**111**		T	T	22 38 24.0	
	baz=298						
H11S3	**WAKE ISLAND Hy 26.63**	**114**		T	T	22 38 58.8	
	baz=304,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy 26.63**	**113**		T	T	22 38 57.7	
	baz=304,slow=76,SNR=8.2						
H11S2	**WAKE ISLAND Hy 26.64**	**114**		T	T	22 38 59.2	
	baz=304,slow=76,SNR=7.9						
SONM	**Songino Array**	**30.79**	**312**	P	**P**	**22 10 59.3**	**+0.5**
	0.5nm,0.6s,baz=111,slow=7.9,SNR=2.9						
CMAR	**Chiang Mai Arr**	**40.10**	**261**	P	**P**	**22 12 18.6**	**-0.2**
	0.4nm,0.3s,baz=56,slow=6.5,SNR=5.1						
ZALV	**Zalesovo Beam**	**45.39**	**316**	P	**P**	**22 13 00.1**	**-1.2**
	0.4nm,0.3s,baz=101,slow=7.5,SNR=3.0						
ZALV				PcP	**PcP**	**22 14 40.8**	**+1.0**
	0.7nm,0.5s,baz=90,slow=1.6,SNR=2.5						
MKAR	**Makanchi Array**	**46.84**	**306**	P	**P**	**22 13 12.2**	**-0.6**
	0.5nm,0.6s,baz=83,slow=10.0,SNR=4.2						
WRA	**Warramunga Arr**	**51.77**	**188**	P	**P**	**22 13 49.9**	**-0.6**
	0.7nm,0.4s,baz=354,slow=6.4,SNR=9.1						
WRA				PcP	**PcP**	**22 15 04.2**	**+1.0**
	1.1nm,0.6s,baz=359,slow=3.4,SNR=6.2						
ILAR	**Eielson Array**	**54.18**	**30**	P	**P**	**22 14 05.5**	**-2.3**
	0.6nm,0.8s,baz=226,slow=2.9,SNR=7.0						
ASAR	**Alice Springs**	**55.50**	**188**	P	**P**	**22 14 17.6**	**-0.3**
	0.3nm,0.5s,baz=19,slow=14,SNR=6.1						
ARU	**Arti**	**60.19**	**321**	P	**P**	**22 14 50.3**	**-0.1**
	0.5nm,0.4s,baz=191,slow=12,SNR=4.4						
FINES	**FINESS Array B**	**73.37**	**333**	P	**P**	**22 16 14.8**	**+0.6**
	2.1nm,0.8s,baz=162,slow=1.8,SNR=5.8						
KBZ	**Khabaz**	**74.15**	**312**	P	**P**	**22 16 19.6**	**+0.6**
	2.1nm,0.8s,baz=87,slow=5.3,SNR=2.6						
AKASG	**Malin Array Be**	**78.31**	**323**	P	**P**	**22 16 43.2**	**+0.6**
	0.3nm,0.3s,baz=51,slow=6.0,SNR=3.2						
HFS	**Hagfors**	**78.79**	**336**	P	**P**	**22 16 45.4**	**+0.4**
	1.6nm,0.8s,baz=49,slow=6.5,SNR=3.8						
NB2	**NORSAR Subarra**	**78.95**	**338**	P	**P**	**22 16 46.7**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=42,slow=5.3						
NOA	**NORSAR Array B**	**78.95**	**338**	P	**P**	**22 16 44.8**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=56,slow=4.8,SNR=2.9						
BRTR	**Keskin Array B**	**82.14**	**312**	P	**P**	**22 17 04.1**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=110,slow=5.0,SNR=6.9						

*ISCJB **16** 22:06:02.4±1.0, 34°.2N±0°.1×25°.1E±0°.1, h25km, mb3.5/4, Error ellipse: s-maj=16.6km s-min=13.8km az=21.3*
*IDC **16** 22:06:06.3±3.0, 34°.34N×25°.08E, h40km±29km, mb3.5/4, mb1 3.5/8, mb1mx3.2/48, mbtmp3.5/8, ML4.0/3, Error ellipse: s-maj=27.4km s-min=22.8km az=172.0*
ISC 16 22:06:04.3±1.1, 34°.3N±0°.1×25°.0E±0°.1, h25km, n9, σ1§46/9, mb3.5/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.02**	**356**	Pn	**Pn**	**22 06 22.5**	**-0.6**
	35nm,0.3s,baz=168,slow=20,SNR=5.6						
MMAI	**Mount Meron Ar**	**8.79**	**95**	Pn	**Pn**	**22 08 09.6**	**-0.2**
	1.3nm,0.3s,baz=237,slow=10,SNR=4.4						
BRTR	**Keskin Array B**	**8.82**	**49**	Pn	**Pn**	**22 08 13.0**	**+2.7**
	0.1nm,0.3s,baz=219,slow=15,SNR=2.7						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**22 09 56.9**	**+0.2**
	0.7nm,0.3s,baz=197,slow=12,SNR=4.9						
GERES	**GERESS Array B**	**16.81**	**333**	Pn	**P**	**22 10 00.4**	**+0.5**
	0.3nm,0.3s,baz=145,slow=12,SNR=13						
EKA	**Eskdalemuir Ar**	**28.69**	**326**	P	**P**	**22 11 59.3**	**+0.2**
	0.4nm,0.6s,baz=122,slow=9.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**29.80**	**231**	P	**P**	**22 12 10.6**	**+1.3**
	0.5nm,0.4s,baz=34,slow=8.1,SNR=7.5						
MKAR	**Makanchi Array**	**44.40**	**56**	P	**P**	**22 14 11.5**	**-1.3**
	0.3nm,0.5s,baz=263,slow=8.1,SNR=2.5						
ZALV	**Zalesovo Beam**	**45.74**	**46**	P	**P**	**22 14 22.2**	**-1.1**
	0.5nm,0.4s,baz=273,slow=7.8,SNR=2.6						

LJU 16 22:08:45.4, 45°.75N×14°.86E, h3km, ML0.7, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.06**	**344**	||*i*Pg	Pg	22 08 46.5	-0.1
VISS				*i* Sg	Sg	22 08 47.5	0.0
	comp=Z,105nm,0.1s						
GBRS	**Gornja Briga**	**0.22**	**190**	*i* Pg	Pg	22 08 50.1	+0.5
	comp=Z,6.0nm,0.1s						
GBAS	**Gorenja Brezov**	**0.35**	**303**	*i* Pg	Pg	22 08 52.4	+0.3
GBAS				*i* Sg	Sg	22 08 57.0	+0.4
	comp=Z,4.0nm,0.1s						
BOJS	**Bojanci**	**0.37**	**132**	*i* Pg	Pg	22 08 52.6	+0.2
BOJS				*i* Sg	Sg	22 08 57.7	+0.5
	comp=Z,2.0nm,0.1s						
LEGS	**Legarje**	**0.38**	**58**	*i* Sg	Sg	22 08 58.1	+0.6
CRES	**Cresnjev**	**0.42**	**79**	*i* Pg	Pg	22 08 54.1	+0.5
CRES				*i* Sg	Sg	22 08 59.7	+0.7
	comp=Z,2.0nm,0.1s						
OZLJ	**Ozalj**	**0.45**	**107**	*e*Pg	Pg	22 08 54.4	+0.4
OZLJ				Sg	Sg	22 09 00.4	+0.7
NVLJ	**Novalja**	**1.19**	**180**	*e*Pg	Pg	22 09 04.3	-3.8
NVLJ				Sg	Sg	22 09 20.6	-2.8

*ISCJB **16** 22:14:04.0±0.2, 39°.34N±0°.04×140°.24E±0°.06, h150km±2km, mb3.9/24, Error ellipse: s-maj=8.1km s-min=4.7km az=32.9*
*IDC **16** 22:14:04.8±1.4, 39°.33N×140°.17E, h142km±13km, mb3.7/23, mb1 3.7/31, mb1mx3.6/58, mbtmp4.0/31, Error ellipse: s-maj=12.3km s-min=11.4km az=122.0*
*JMA **16** 22:14:05.2±0.1, 39°.33N×140°.27E, h144km±1km, M3.6*
ISC 16 22:14:05.0±0.6, 39°.32N±0°.04×140°.23E±0°.06, h145km±5km, n64, σ1§34/75, mb3.9/24, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYW	**Yuwa**	**0.22**	**356**	P	**Pn**	**22 14 25.1**	**+0.5**
JYW				S	**Sn**	**22 14 40.5**	**+0.9**
JRG	**Rokugo**	**0.32**	**76**	P	**Pn**	**22 14 25.1**	**+0.2**
JRG				S	**Sn**	**22 14 40.4**	**+0.3**
JYYZ	**Yamagatayuza**	**0.38**	**218**	P	**Pn**	**22 14 26.0**	**+0.9**
JYYZ				*e*S	**Sn**	**22 14 42.0**	**+1.6**
JYK	**Kaneyama**	**0.41**	**166**	P	**Pn**	**22 14 25.4**	**+0.1**
JYK				S	**Sn**	**22 14 41.0**	**+0.3**
JYA	**Atsumi**	**0.83**	**209**	P	**Pn**	**22 14 28.2**	**+0.4**
JYA				S	**Sn**	**22 14 45.4**	**+0.2**
JOM	**Ohasama**	**0.84**	**79**	P	**Pn**	**22 14 28.1**	**+0.2**
JOM				S	**Sn**	**22 14 45.5**	**+0.2**
JMK	**Ichinoseki**	**0.85**	**115**	P	**Pn**	**22 14 27.9**	**-0.1**
JMK				*e*S	**Sn**	**22 14 45.5**	**+0.1**
JAH	**Hinai**	**0.92**	**20**	P	**Pn**	**22 14 29.0**	**+0.5**
JAH				S	**Sn**	**22 14 46.9**	**+0.3**
JOU	**Okura**	**1.01**	**160**	P	**Pn**	**22 14 29.6**	**+0.2**
JOU				*e*S	**Sn**	**22 14 48.4**	**+0.5**
JYS	**Shiratake**	**1.10**	**187**	P	**Pn**	**22 14 30.6**	**+0.4**
JYS				*e*S	**Sn**	**22 14 50.2**	**+0.8**
JAW	**Awa shima**	**1.15**	**222**	P	**Pn**	**22 14 30.9**	**+0.3**
JAW				*e*S	**Sn**	**22 14 50.9**	**+0.8**
JANG	**Nango**	**1.45**	**43**	P	**Pn**	**22 14 33.6**	**+0.1**
JNS	**Sasagawa**	**1.66**	**206**	P	**Pn**	**22 14 36.3**	**+0.4**
JNS				*e*S	**Sn**	**22 14 59.7**	**+0.2**
JFT	**Otama**	**1.80**	**177**	P	**Pn**	**22 14 37.8**	**+0.3**
JFT				*e*S	**Sn**	**22 15 03.3**	**+0.9**
JSD	**Sado**	**2.00**	**231**	P	**Pn**	**22 14 40.2**	**+0.4**
JSD				*e*S	**Sn**	**22 15 07.0**	**+0.5**
JOT	**Ohata**	**2.15**	**17**	P	**Pn**	**22 14 42.0**	**+0.5**
MAT	**Matsushiro**	**3.20**	**211**	P	**Pn**	**22 14 55.3**	**+0.6**
MAT				S	**Sn**	**22 15 33.9**	**+0.7**
MJAR	**Matsushiro Arr**	**3.20**	**211**	P	**Pn**	**22 14 55.9**	**+1.2**
	0.3nm,0.3s,baz=20,slow=16,SNR=25						
ASAJ	**Asahikawa**	**5.11**	**20**	P	**Pn**	**22 15 19.9**	**+0.3**
	2.4nm,0.3s,baz=249,slow=8.9,SNR=11						
ASAJ				S	**Sn**	**22 16 11.9**	**-6.0**
	1.5nm,0.3s,baz=183,slow=18,SNR=2.2						
JHJ	**Hachijo jima 2**	**6.20**	**183**	P	**Pn**	**22 15 32.2**	**-2.0**
	12nm,0.3s,baz=322,slow=19,SNR=17						
JHJ				S	**Sn**	**22 16 36.6**	**-7.5**
	24nm,0.3s,baz=80,slow=23,SNR=9.3						
USRK	**Ussuriysk Ar.**	**7.85**	**311**	P	**Pn**	**22 15 54.1**	**-2.2**
	0.7nm,0.3s,baz=116,slow=15,SNR=12						
JNU	**Nakatsue**	**9.76**	**234**	P	**Pn**	**22 16 22.3**	**+0.4**
	0.4nm,0.3s,baz=119,slow=9.5,SNR=3.5						
KSRS	**Korea Array**	**9.84**	**263**	P	**Pn**	**22 16 23.4**	**+0.6**
	0.1nm,0.3s,baz=70,slow=14,SNR=4.4						
KLR	**Kul'dur**	**11.62**	**331**	P	**Pn**	**22 16 44.7**	**-1.5**
	0.3nm,0.3s,baz=175,slow=12,SNR=4.6						
PETK	**Petropavlovsk-**	**18.27**	**35**	P	**P**	**22 18 07.7**	**+0.4**
	baz=216,slow=6.8,SNR=3.6						
SONM	**Songino Array**	**25.78**	**300**	P	**P**	**22 19 22.1**	**-0.3**
	1.6nm,0.6s,baz=102,slow=9.6,SNR=8.7						
H11N2	**WAKE ISLAND Hy 30.14**	**123**		T	T	22 51 06.2	
	baz=317,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy 30.15**	**123**		T	T	22 50 59.0	
	baz=317,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy 30.16**	**123**		T	T	22 51 02.4	
	baz=317,slow=75,SNR=9.4						
H11S1	**WAKE ISLAND Hy 30.90**	**125**		T	T	22 51 49.2	
	baz=321						
H11S3	**WAKE ISLAND Hy 30.90**	**125**		T	T	22 51 44.0	
	baz=321,slow=74,SNR=3.9						
H11S2	**WAKE ISLAND Hy 30.92**	**125**		T	T	22 51 45.3	
	baz=321,slow=74,SNR=3.2						
ZALV	**Zalesovo Beam**	**39.71**	**310**	P	**P**	**22 21 22.8**	**0.0**
	3.9nm,0.5s,baz=82,slow=7.9,SNR=18						
CMAR	**Chiang Mai Arr**	**41.25**	**252**	P	**P**	**22 21 36.6**	**+0.7**
	1.0nm,0.3s,baz=50,slow=7.1,SNR=5.1						
MKAR	**Makanchi Array**	**42.15**	**300**	P	**P**	**22 21 42.4**	**-0.6**
	1.0nm,0.5s,baz=81,slow=10.0,SNR=12						
RAMN	**Ramite**	**45.97**	**271**	*e*P	**P**	**22 22 14.3**	**+0.4**
	12nm,0.4s						
KDAK	**Kodiak Island**	**46.05**	**43**	P	**P**	**22 22 13.6**	**-0.2**
	2.0nm,0.5s,baz=124,slow=0.8,SNR=4.4						
GUN	**Gumba**	**46.06**	**273**	*e*P	**P**	**22 22 15.3**	**+0.6**
	43nm,0.6s						
KKN	**Kakani**	**46.58**	**273**	*e*P	**P**	**22 22 19.2**	**+0.6**
	41nm,0.6s						
PKI	**Pulchoki**	**46.59**	**273**	*e*P	**P**	**22 22 19.0**	**+0.2**
	9.2nm,0.6s						
PKIN	**Phulchoki**	**46.59**	**273**	*e*P	**P**	**22 22 18.9**	**+0.1**
	7.4nm,0.5s						
GKN	**Gorkha**	**46.97**	**274**	*e*P	**P**	**22 22 22.0**	**+0.4**
	21nm,0.4s						
DANN	**Dangsing**	**47.48**	**275**	*e*P	**P**	**22 22 26.7**	**+1.0**
	80nm,0.5s						
ILAR	**Eielson Array**	**48.08**	**33**	P	**P**	**22 22 29.6**	**+0.1**
	1.1nm,0.8s,baz=272,slow=5.7,SNR=10						
PYUN	**Piuthan**	**48.20**	**275**	*e*P	**P**	**22 22 31.6**	**+0.5**
	20nm,0.3s						
BVAR	**Borovoye Array**	**48.36**	**311**	P	**P**	**22 22 31.6**	**-0.2**
	2.7nm,0.4s,baz=75,slow=8.6,SNR=15						
INK	**Inuvik**	**52.79**	**28**	P	**P**	**22 23 04.0**	**-0.7**
	2.2nm,0.6s,baz=263,slow=6.2,SNR=4.1						
ARU	**Arti**	**54.04**	**317**	P	**P**	**22 23 13.5**	**-0.6**
	1.9nm,0.6s,baz=70,slow=5.4,SNR=14						
AKTO	**Aktyubinsk**	**56.47**	**311**	P	**P**	**22 23 31.5**	**0.0**
	2.2nm,0.6s,baz=71,slow=12,SNR=6.3						
WRA	**Warramunga Arr**	**59.21**	**186**	P	**P**	**22 23 50.2**	**-0.7**
	0.8nm,0.6s,baz=355,slow=8.8,SNR=6.9						
ARCES	**ARCESS Array B**	**61.53**	**339**	P	**P**	**22 24 04.2**	**-1.9**
	8.1nm,0.3s,baz=70,slow=7.9,SNR=3.5						
YKA	**Yellowknife Ar**	**62.31**	**30**	P	**P**	**22 24 12.1**	**+0.8**
	0.2nm,0.4s,baz=309,slow=7.9,SNR=3.8						
ASAR	**Alice Springs**	**62.94**	**187**	P	**P**	**22 24 15.6**	**-0.4**
	0.7nm,0.7s,baz=26,slow=6.0,SNR=6.4						
FINES	**FINESS Array B**	**66.36**	**331**	P	**P**	**22 24 37.5**	**-0.2**
	2.4nm,0.7s,baz=38,slow=9.6,SNR=7.5						
KBZ	**Khabaz**	**68.72**	**310**	P	**P**	**22 24 53.0**	**+0.2**
	1.5nm,0.6s,baz=56,slow=6.1,SNR=3.9						
HFS	**Hagfors**	**71.62**	**335**	P	**P**	**22 25 09.9**	**-0.4**
	1.3nm,0.5s,baz=51,slow=7.8,SNR=11						
NB2	**NORSAR Subarra**	**71.72**	**337**	P	**P**	**22 25 10.7**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=38,slow=6.5						
NOA	**NORSAR Array B**	**71.72**	**337**	P	**P**	**22 25 10.7**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=40,slow=6.1,SNR=3.6						
AKASG	**Malin Array Be**	**71.93**	**321**	P	**P**	**22 25 11.9**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=45,slow=6.4,SNR=14						
NVAR	**Mina Array Bea**	**74.36**	**53**	P	**P**	**22 25 28.2**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=298,slow=4.7,SNR=12						
PDAR	**Pinedale Array**	**76.73**	**45**	P	**P**	**22 25 40.9**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=270,slow=2.1,SNR=5.0						
MLR	**Mumtele Rosu**	**77.05**	**319**	P	**P**	**22 25 42.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=352,slow=14,SNR=3.2						
EKA	**Eskdalemuir Ar**	**80.67**	**340**	P	**P**	**22 26 02.2**	**+0.8**
	comp=Z,1.0nm,0.9s,baz=40,slow=5.6,SNR=3.5						
TXAR	**Lajitas Array**	**89.45**	**52**	P	**P**	**22 26 46.6**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=303,slow=3.5,SNR=3.7						

*IDC **16** 22:15:21.9±1.0, 34°.11N×25°.19E, h0km, mb3.9/5, mb1 3.8/8, mb1mx3.5/43, mbtmp3.7/8, ML3.9/3, Error ellipse: s-maj=22.9km s-min=16.6km az=82.0*
*THE **16** 22:15:27.6, 34°.34N×25°.15E, h1km±1km, ML2.9/4, Error ellipse: s-maj=2.8km s-min=1.0km az=172.0*
*ATH **16** 22:15:27.8, 34°.37N×25°.16E, h31km±2km, ML2.9/6, Error ellipse: s-maj=5.3km s-min=2.0km az=352.0*
ISC 16 22:15:26.7±1.8, 34°.38N±0°.07×25°.20E±0°.03, h14km±11km, n67, σ1§73/80, mb4.0/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.71**	**333**	P	**Pn**	**22 15 42.2**	**-0.2**
SIVA				S	**Sn**	**22 15 52.5**	**-0.6**
SIVA	**Sivas**	**0.71**	**333**	P	**Pn**	**22 15 42.4**	**0.0**
SIVA				S	**Sn**	**22 15 51.9**	**-1.2**
SIVA				AML	AML	22 15 57.7	
	comp=N,4652μm,0.3s						
SIVA				AML	AML	22 15 58.4	
	comp=E,7118μm,0.4s						
TMBK	**Timbaki Herakl**	**0.78**	**333**	P	**Pn**	**22 15 43.2**	**-0.1**
TMBK				S	**Sn**	**22 15 55.8**	**+1.1**
LAST	**Lasithi**	**0.81**	**16**	P	**Pn**	**22 15 44.2**	**+0.4**
LAST				S	**Sn**	**22 15 57.6**	**+1.9**
LAST	**Lasithi**	**0.81**	**16**	P	**Pn**	**22 15 44.1**	**+0.2**
LAST				S	**Sn**	**22 15 56.9**	**+1.2**
LAST				AML	AML	22 16 04.0	
	comp=E,890μm,0.6s						
LAST				AML	AML	22 16 07.7	
	comp=N,806μm,0.6s						
KSTL	**Kastelli Herak**	**0.93**	**353**	P	**Pn**	**22 15 45.4**	**+0.1**
KSTL				S	**Sn**	**22 15 58.9**	**+0.5**
IDI	**Anoyia**	**0.94**	**344**	Pn	**Pn**	**22 15 45.8**	**+0.2**
	comp=N,28nm,0.3s,baz=172,slow=19,SNR=6.2						
IDI				Sn	**Sn**	**22 16 02.3**	**+3.5**
	comp=N,53nm,0.3s,baz=125,slow=12,SNR=7.3						
NPS	**Neapolis**	**0.94**	**21**	P	**Pn**	**22 15 46.1**	**+0.5**
NPS				AML	AML	22 16 07.6	
	comp=N,600μm,0.7s						
NPS				AML	AML	22 16 11.6	
	comp=E,1074μm,0.6s						
GVD	**Gavdhos**	**1.02**	**297**	P	**Pn**	**22 15 47.6**	**+0.9**
GVD	**Gavdhos**	**1.02**	**297**	P	**Pb**	**22 15 46.5**	**+0.2**
GVD				S	**Sn**	**22 16 02.3**	**+1.4**
GVD	**Gavdhos**	**1.02**	**297**	P	**Pb**	**22 15 46.5**	**+0.2**
GVD				S	**Sn**	**22 16 01.6**	**+0.7**
GVD				AML	AML	22 16 06.9	
	comp=E,2099μm,0.3s						
GVD				AML	AML	22 16 09.2	
	comp=N,2526μm,0.4s						
ZKR	**Zakros**	**1.11**	**49**	P	**Pn**	**22 15 49.3**	**+1.4**
ZKR	**Zakros**	**1.11**	**49**	P	**Pn**	**22 15 49.5**	**+1.6**
ZKR				S	**Sn**	**22 16 06.3**	**+3.3**
ZKR	**Zakros**	**1.11**	**49**	P	**Pn**	**22 15 49.2**	**+1.3**
ZKR				AML	AML	22 16 13.7	
	comp=E,975μm,0.7s						
ZKR				AML	AML	22 16 13.8	
	comp=N,414μm,0.5s						
VAM	**Vamos**	**1.31**	**321**	P	**Pg**	**22 15 51.9**	**-0.1**
VAM	**Vamos**	**1.31**	**321**	P	**Pg**	**22 15 51.9**	**-0.1**
VAM				AML	AML	22 16 14.2	
	comp=E,811μm,0.4s						
VAM				AML	AML	22 16 19.4	
	comp=N,868μm,0.5s						
IMMV	**Iera Moni Meta**	**1.47**	**317**	P	**Pn**	**22 15 52.9**	**+0.1**
IMMV	**Iera Moni Meta**	**1.47**	**317**	P	**Pg**	**22 15 54.8**	**-0.2**
IMMV	**Iera Moni Meta**	**1.47**	**317**	P	**Pg**	**22 15 54.2**	**-0.8**
THR6	**Thira Island,**	**1.98**	**5**	P	**Pb**	**22 16 01.6**	**-0.9**
KARP	**Karpathos**	**1.99**	**54**	*e*P	**Pn**	**22 16 01.4**	**+1.5**
SANT	**Santorini**	**2.00**	**6**	*e*P	**Pn**	**22 15 59.6**	**-0.5**
THR3	**Thira Island,**	**2.03**	**5**	P	**Pb**	**22 16 02.8**	**-0.6**
THR8	**Santorini-Mono**	**2.03**	**6**	P	**Pn**	**22 16 01.7**	**+1.2**
IOSP	**Ios island**	**2.34**	**2**	P	**Pn**	**22 16 06.2**	**+1.5**
IOSP	**Ios island**	**2.34**	**2**	P	**Pn**	**22 16 05.6**	**+0.9**
MHLO	**Agia Marina, M**	**2.39**	**344**	P	**Pn**	**22 16 06.5**	**+1.0**
MHLO	**Agia Marina, M**	**2.39**	**344**	P	**Pn**	**22 16 06.5**	**+1.0**
MHLA	**Plaka, Milos I**	**2.44**	**345**	P	**Pn**	**22 16 07.8**	**+1.6**
AMGA	**Amorgos Island**	**2.51**	**13**	P	**Pn**	**22 16 09.0**	**+1.9**
APE	**Apeiranthos**	**2.69**	**6**	*e*P	**Pn**	**22 16 09.9**	**+0.2**
APE	**Apeiranthos**	**2.69**	**6**	P	**Pn**	**22 16 10.9**	**+1.2**
ARG	**Arkhangelos**	**3.01**	**52**	*e*P	**Pn**	**22 16 16.1**	**+2.1**
ARG	**Arkhangelos**	**3.01**	**52**	P	**Pn**	**22 16 17.0**	**+3.0**
DAT	**Datca**	**3.04**	**39**	*e*P	**Pn**	**22 16 15.7**	**+1.2**
DAT	**Datca**	**3.04**	**39**	*i* P	**Pn**	**22 16 17.9**	**+3.4**
DAT				*i* S	**Sn**	**22 16 52.5**	**+1.7**
DAT				IAML_P			
	comp=Z,318nm,0.2s						
BBRN	**Bozburun-Marma**	**3.27**	**45**	*e*P	**Pn**	**22 16 19.1**	**+1.6**
DALY	**Dalyan (Mula)**	**3.72**	**48**	*e*P	**Pn**	**22 16 26.2**	**+2.5**
DALY	**Dalyan (Mula)**	**3.72**	**48**	*i* P	**Pn**	**22 16 27.2**	**+3.5**
YER	**Yerkesik**	**3.72**	**41**	*e*P	**Pn**	**22 16 25.4**	**+1.6**
TURN	**Turunc**	**3.72**	**47**	*e*P	**Pn**	**22 16 21.7**	**-2.1**
TURN	**Turunc**	**3.72**	**47**	*i* P	**Pn**	**22 16 22.4**	**-1.4**

EIL LR LR 22 28 12.1
comp=Z,2μm,18.8s,baz=237,slow=41
AKASG Malin Array Be 16.80 9 Pn **Pn 22 25 41.2 +1.0**
0.7nm,0.3s,baz=199,slow=11,SNR=5.5
GERES GERESS Array B 16.95 333 Pn **P 22 25 44.2 +0.1**
0.2nm,0.3s,baz=144,slow=12,SNR=6.8
HFS Hagfors 27.04 347 P **P 22 27 27.1 +0.2**
3.1nm,1.0s,baz=157,slow=16,SNR=2.3
EKA Eskdalemuir Ar 28.84 326 P **P 22 27 43.1 -0.1**
0.5nm,0.7s,baz=120,slow=9.9,SNR=2.9
TORD Torodi Ar. Bea 29.84 231 P **P 22 27 52.0 -0.3**
0.3nm,0.5s,baz=31,slow=9.5,SNR=3.7
ARU Arti 31.88 35 LR LR 22 41 29.3
comp=Z,411nm,20.4s,baz=266,slow=37
MKAR Makanchi Array 44.35 56 P **P 22 29 56.0 +0.9**
0.4nm,0.6s,baz=276,slow=6.1,SNR=2.6
ZALV Zalesovo Beam 45.72 45 P **P 22 30 06.3 +0.5**
0.6nm,0.4s,baz=278,slow=8.7,SNR=2.4

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*IDC **16** 22:23:45.9±1.3, 34°.15N×25°.19E, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.4/44, mbtmp3.6/7, ML3.9/3, Error ellipse: s-maj=23.2km s-min=21.9km az=139.0*
*ISCJB **16** 22:23:48.3±0.8, 34°.03N±0°.07×25°.18E±0°.05, h25km, mb3.4/4, Error ellipse: s-maj=10.3km s-min=6.1km az=178.7*
*DDA **16** 22:24:29.3, 34°.23N×24°.97E, h12km, ML3.7*
ISC 16 22:23:49.9±1.0, 34°.22N±0°.08×25°.14E±0°.05, h25km, n40, σ2°33/46, mb3.5/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**1.07**	**306**	P	**Pn**	**22 24 09.7**	**+0.4**
IDI	**Anoyia**	**1.09**	**349**	Pn	**Pn**	**22 24 09.7**	**+0.1**
	18nm,0.3s,baz=170,slow=19,SNR=8.9						
IDI				Sn	**Sb**	**22 24 21.5**	**-2.4**
	59nm,0.3s,baz=101,slow=18,SNR=8.9						
ZKR	**Zakros**	**1.26**	**44**	P	**Pb**	**22 24 13.2**	**+0.3**
IMMV	**Iera Moni Meta**	**1.56**	**323**	P	**Pb**	**22 24 18.3**	**+0.2**
KARP	**Karpathos**	**2.12**	**51**	P	**Pn**	**22 24 26.2**	**+2.4**
SANT	**Santorini**	**2.16**	**7**	P	**Pn**	**22 24 25.6**	**+1.2**
APE	**Apeiranthos**	**2.86**	**6**	P	**Pn**	**22 24 35.6**	**+1.6**
ARG	**Arkhangelos**	**3.15**	**50**	P	**Pn**	**22 24 40.7**	**+2.8**
DAT	**Datca**	**3.20**	**38**	P	**Pn**	**22 24 40.6**	**+2.0**
DAT	**Datca**	**3.20**	**38**	*i* P	**Pn**	**22 24 40.7**	**+2.0**
DAT				*i* S	**Sn**	**22 25 12.6**	**-3.4**
DAT				IAML_P			
	comp=Z,266nm,0.1s						
BODT	**Bodrum**	**3.34**	**31**	P	**Pn**	**22 24 43.3**	**+2.8**
BDRM	**Kayabasi**	**3.40**	**33**	*i* P	**Pn**	**22 24 43.2**	**+1.8**
BDRM				IAML_P			
	comp=Z,156nm,0.2s						
BBRN	**Bozburun-Marma**	**3.42**	**43**	*e*P	**Pn**	**22 24 44.5**	**+2.9**
DALY	**Dalyan (Mula)**	**3.86**	**47**	*e*P	**Pn**	**22 24 50.6**	**+2.9**
DALY	**Dalyan (Mula)**	**3.86**	**47**	*i* P	**Pn**	**22 24 50.5**	**+2.8**
DALY				IAML_P			
	comp=Z,666nm,0.2s						
TURN	**Turunc**	**3.87**	**46**	*e*P	**Pn**	**22 24 46.1**	**-1.7**
TURN	**Turunc**	**3.87**	**46**	*i* P	**Pn**	**22 24 46.5**	**-1.3**
TURN				IAML_P			
	comp=Z,835nm,0.2s						
YER	**Yerkesik**	**3.87**	**40**	*e*P	**Pn**	**22 24 50.6**	**+2.7**
ITM	**Ithomi**	**3.95**	**319**	*e*P	**Pn**	**22 24 51.3**	**+2.4**
FETY	**Fethiye**	**4.02**	**52**	*e*P	**Pn**	**22 24 52.7**	**+2.8**
FETY	**Fethiye**	**4.02**	**52**	*i* P	**Pn**	**22 24 51.6**	**+1.7**
FETY				*i* S	**Sn**	**22 25 34.8**	**-1.4**
FETY				IAML_P			
	comp=Z,482nm,0.3s						
AYDN	**Tasoluk**	**4.09**	**32**	*i* P	**Pn**	**22 24 53.9**	**+3.0**
AYDN				IAML_P			
	comp=Z,217nm,0.2s						
AKAS	**Kas**	**4.17**	**60**	*e*P	**Pn**	**22 24 54.9**	**+2.8**
AKAS	**Kas**	**4.17**	**60**	*i* P	**Pn**	**22 24 54.9**	**+2.8**
AKAS				*i* S	**Sn**	**22 25 39.4**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**4.33**	**30**	*e*P	**Pn**	**22 24 56.5**	**+2.2**
ELL	**Elmali**	**4.64**	**56**	*e*P	**Pn**	**22 25 01.6**	**+3.2**
AKUM	**Antalya-Kumluc**	**4.75**	**62**	*i* P	**Pn**	**22 25 02.3**	**+2.5**
KORT	**Korkueli**	**5.07**	**55**	*i* P	**Pn**	**22 25 08.6**	**+4.2**
KORT				*i* S	**Sn**	**22 26 03.3**	**+1.1**
KORT				IAML_P			
	comp=Z,240nm,0.2s						
AGG	**Agios Georgios**	**5.30**	**336**	*e*P	**Pn**	**22 25 10.6**	**+3.1**
KHAL	**Karahalli**	**5.43**	**39**	*i* P	**Pn**	**22 25 10.6**	**+1.2**
KHAL				*i* S	**Sn**	**22 26 09.6**	**-1.5**
KHAL				IAML_P			
	comp=Z,163nm,0.2s						
USAK	**Uak-Merkez**	**5.47**	**34**	*i* P	**Pn**	**22 25 12.3**	**+2.6**
USAK				IAML_P			
	comp=Z,485nm,0.2s						
MMAI	**Mount Meron Ar**	**8.64**	**95**	Sn	**Sn**	**22 27 24.4**	**-5.8**
	comp=Z,1.2nm,0.3s,baz=294,slow=23,SNR=4.8						
BRTR	**Keskin Array B**	**8.74**	**49**	Pn	**Pn**	**22 25 55.4**	**+0.6**
	comp=Z,0.0nm,0.3s,baz=234,slow=11,SNR=2.4						
EIL	**Elat**	**9.49**	**116**	Pn	**Pn**	**22 26 03.9**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=26,slow=4.5,SNR=8.0						
EIL				Sn	Sn	22 27 45.4	-5.3
	comp=Z,0.5nm,0.3s,baz=342,slow=13,SNR=2.7						
AKASG Malin Array Be 16.74 9 Pn **Pn 22 27 43.2 +0.7**
comp=Z,0.4nm,0.3s,baz=199,slow=10,SNR=4.7
GERES GERESS Array B 16.91 333 Pn **P 22 27 47.8 +1.2**
comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=9.6
EKA Eskdalemuir Ar 28.80 326 P **P 22 29 45.2 -0.5**
comp=Z,0.2nm,0.6s,baz=124,slow=8.7,SNR=3.1
TORD Torodi Ar. Bea 29.88 231 P **P 22 29 55.4 -0.1**
comp=Z,0.6nm,0.5s,baz=30,slow=8.9,SNR=10
MKAR Makanchi Array 44.31 56 P **P 22 31 56.6 -1.1**
comp=Z,0.2nm,0.5s,baz=269,slow=8.7,SNR=3.2
ZALV Zalesovo Beam 45.67 46 P **P 22 32 08.6 +0.3**
comp=Z,0.8nm,0.5s,baz=278,slow=9.1,SNR=3.4

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*ISCJB **16** 22:28:00.4±1.7, 12°.03N±0°.06×88°.46W±0°.04, h32km±15km, mb3.8/7, Error ellipse: s-maj=10.8km s-min=4.8km az=35.2*
*IDC **16** 22:28:01.3±1.9, 13°.08N×87°.74W, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.5/42, mbtmp3.5/5, ML2.8/3, Error ellipse: s-maj=78.6km s-min=18.7km az=36.0*
*SNET **16** 22:28:01.7±1.0, 12°.21N×88°.49W, h17km±5km, ML3.2*
*UCR **16** 22:28:01.7±1.7, 12°.20N×88°.36W, h107km±38km, MD4.1, mb4.1(NEIC)*
*NEIC **16** 22:28:03.1±1.3, 12°.11N×88°.28W, h35km, mb4.1/8, Error ellipse: s-maj=15.2km s-min=11.4km az=103.0*
ISC 16 22:28:00.3±1.8, 12°.17N±0°.06×88°.39W±0°.05, h16km±10km, n37, σ1°49/46, mb3.7/7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**1.14**	**45**	*e*Pn	**Pg**	**22 28 22.8**	**+0.4**
CSGN				*e*Sn	**Sb**	**22 28 32.7**	**-3.5**
CSGN	**Cosiguina Volc**	**1.14**	**45**	*e*P	**Pg**	**22 28 23.4**	**+1.1**
CSGN				*e*S	**Sn**	**22 28 42.0**	**+5.0**
LCND	**La Caada**	**1.23**	**23**	*e*P	**Pb**	**22 28 23.2**	**0.0**
LCND				IAML		22 28 51.4	
	comp=Z,365nm,0.4s						
LCY	**Lacayo**	**1.25**	**4**	*e*P	**Pg**	**22 28 23.9**	**-0.6**
LCY				*e*S	**Sb**	**22 28 39.9**	**+0.4**
VSM	**San Miguel**	**1.26**	**5**	*e*P	**Pg**	**22 28 24.3**	**-0.4**
TECA	**Tecapa**	**1.32**	**355**	*e*P	**Pb**	**22 28 24.7**	**-0.1**
TECA				*e*S	**Sg**	**22 28 43.3**	**+0.1**
PAVA	**Las Pavas**	**1.63**	**341**	*e*P	**Pn**	**22 28 28.6**	**+0.2**
LOMA	**San Marcos**	**1.66**	**333**	*e*P	**Pn**	**22 28 28.6**	**-0.2**
LOMA				*e*S	**Sn**	**22 28 50.4**	**+0.6**
LOMA				IAML		22 28 54.3	
	comp=Z,357nm,0.3s						
CNGN	**Cerro Negro**	**1.68**	**78**	*e*P	**Pb**	**22 28 30.3**	**-0.5**
LFU	**La Fuente**	**1.73**	**336**	*e*P	**Pn**	**22 28 29.2**	**-0.5**
VICT	**Victoria**	**1.80**	**352**	*e*P	**Pb**	**22 28 32.2**	**-0.7**
MOMN	**Momotombo**	**1.82**	**82**	*e*P	**Pn**	**22 28 31.5**	**+0.5**
SBLS	**San Blas**	**2.05**	**324**	*e*P	**Pn**	**22 28 34.7**	**+0.3**
SBLS				*e*S	**Sn**	**22 29 00.3**	**+0.5**
SNJE	**San Jose**	**2.07**	**325**	*e*P	**Pn**	**22 28 34.4**	**-0.1**
MGAN	**Managua**	**2.09**	**90**	*e*P	**Pn**	**22 28 35.0**	**+0.4**
MGAN				*e*S	**Sn**	**22 29 01.9**	**+1.5**
RTR	**El Retiro**	**2.11**	**325**	*e*P	**Pn**	**22 28 35.8**	**+0.7**
TGUH	**Tegucigalpa,Un**	**2.17**	**30**	*e*Pn	**Pb**	**22 28 37.8**	**-1.4**
ESTN	**Estel**	**2.18**	**65**	*e*Pn	**Pn**	**22 28 36.0**	**+0.1**
ESTN	**Estel**	**2.18**	**65**	*e*P	**Pn**	**22 28 37.2**	**+1.3**
MTO3	**Montecristo**	**2.41**	**337**	*e*P	**Pn**	**22 28 40.4**	**+1.1**
MATN	**Matagalpa**	**2.52**	**72**	*e*P	**Pn**	**22 28 41.6**	**+0.9**
ACON	**Acoyapa**	**3.15**	**93**	*e*Pn	**Pn**	**22 28 47.9**	**-1.3**
MESS	**Mesas**	**3.44**	**114**	*e*P	**Pn**	**22 28 53.5**	**+0.3**
APG	**El Apazote**	**3.47**	**325**	Pn	**Pn**	**22 28 53.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=97,slow=16,SNR=2.1						
APG				Pg	**Pb**	**22 29 01.8**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=128,slow=9.4,SNR=4.9						
APG				Lg	Lg	22 29 45.1	
	comp=Z,0.6nm,0.3s,baz=204,slow=21,SNR=2.6						
JTS	**Las Juntas de 3.85 119**			Pn	**Pn**	**22 29 02.9**	**+4.0**
	comp=Z,1.3nm,0.3s,baz=359,slow=24,SNR=7.0						
JTS				Sn	**Sn**	**22 29 43.6**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=2.5,slow=19,SNR=2.7						
JTS	**Las Juntas de 3.85 119**			*e*Pn	**Pn**	**22 28 59.5**	**+0.7**
CMIG	**Matias Romero 7.97 309**			Pn	**Pn**	**22 29 57.3**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=132,slow=12,SNR=2.9						
LNIG	**Linares 16.44 322**			*e*P	**P**	**22 31 55.0**	**+1.9**
	comp=Z,7.8nm,0.9s						
833A	**Chaparral WMA, 19.09 329**			*e*P	**Pn**	**22 32 24.1**	**+1.0**
	comp=Z,12nm,0.8s						
TXAR	**Lajitas Array 22.23 323**			P	**P**	**22 32 57.2**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=144,slow=12,SNR=14						
TX31	**Lajitas Ar. Si 22.23 323**			*e*P	**P**	**22 32 58.1**	**+1.7**
	comp=Z,2.3nm,0.9s						
WHAR	**Wooly Hollow 23.29 352**			*e*P	**P**	**22 33 08.3**	**+1.0**
	comp=Z,6.6nm,1.0s						
AMTX	**Amarillo 25.64 334**			*e*P	**P**	**22 33 30.6**	**+1.3**
	comp=Z,10.0nm,1.2s						
BEKR	**Beckworth 39.46 320**			*e*P	**P**	**22 35 27.7**	**-2.3**
	comp=Z,3.8nm,0.6s						
YKA	**Yellowknife Ar 53.65 345**			P	**P**	**22 37 18.6**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=140,slow=7.6,SNR=5.0						
ILAR	**Eielson Array 65.91 336**			P	**P**	**22 38 45.4**	**+0.3**
	comp=Z,0.7nm,1.1s,baz=120,slow=5.3,SNR=3.8						
CMAR	**Chiang Mai Arr 148.72 347**			PKPbc	**PKiKP**	**22 47 48.5**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=348,slow=3.6,SNR=4.5						

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*IDC **16** 22:30:22.7±1.6, 34°.27N×25°.09E, h0km, mb3.4/2, mb1 3.5/3, mb1mx3.2/42, mbtmp3.4/3, ML3.7/1, Error ellipse: s-maj=34.0km s-min=21.4km az=99.0*
*ATH **16** 22:30:25.0, 34°.27N×25°.09E, h23km±5km, ML2.8/3, Error ellipse: s-maj=6.5km s-min=2.3km az=3.0*
*ISCJB **16** 22:30:25.0±1.0, 34°.21N±0°.06×25°.13E±0°.07, h25km, mb3.2/2, Error ellipse: s-maj=8.8km s-min=8.5km az=150.3*
ISC 16 22:30:26.5±1.3, 34°.32N±0°.09×25°.07E±0°.06, h25km, n11, σ0°88/15, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.72**	**343**	P	**Pb**	**22 30 39.5**	**-0.9**
SIVA				S	**Sn**	**22 30 51.7**	**+0.3**
SIVA				AML	AML	22 30 59.4	
	comp=E,2838μm,0.6s						
SIVA				AML	AML	22 31 01.7	
	comp=N,2287μm,0.8s						
LAST	**Lasithi**	**0.90**	**22**	P	**Pn**	**22 30 42.9**	**-0.8**
LAST				S	**Sn**	**22 30 55.7**	**-0.3**
LAST				AML	AML	22 31 03.5	
	comp=N,402μm,0.4s						
LAST				AML	AML	22 31 10.3	
	comp=E,374μm,0.7s						
GVD	**Gavdhos**	**0.96**	**303**	P	**Pb**	**22 30 44.3**	**-0.1**
GVD				S	**Sn**	**22 30 59.0**	**+1.8**
GVD				AML	AML	22 31 05.3	
	comp=E,1553μm,0.3s						
GVD				AML	AML	22 31 06.7	
	comp=N,1116μm,0.4s						
IDI	**Anoyia**	**0.97**	**352**	Pn	**Pb**	**22 30 44.5**	**-0.2**
	comp=N,10nm,0.3s,baz=178,slow=13,SNR=4.8						
IDI				Sn	**Sn**	**22 30 59.5**	**+1.8**
	comp=N,21nm,0.3s,baz=326,slow=16,SNR=6.7						
NPS	**Neapolis**	**1.04**	**26**	P	**Pb**	**22 30 45.7**	**-0.1**
ZKR	**Zakros**	**1.23**	**50**	P	**Pb**	**22 30 49.9**	**+0.7**
VAM	**Vamos**	**1.29**	**327**	P	**Pb**	**22 30 49.9**	**-0.2**
IMMV	**Iera Moni Meta**	**1.44**	**322**	P	**Pb**	**22 30 52.6**	**-0.1**
GERES	**GERESS Array B**	**16.79**	**333**	Pn	**P**	**22 34 22.6**	**+0.7**
	comp=N,0.1nm,0.3s,baz=151,slow=12,SNR=5.6						
TORD	**Torodi Ar. Bea**	**29.90**	**231**	P	**P**	**22 36 31.9**	**-0.5**
	comp=N,0.2nm,0.4s,baz=35,slow=9.8,SNR=2.4						
MKAR	**Makanchi Array**	**44.30**	**56**	P	**P**	**22 38 34.2**	**-0.1**
	comp=N,0.3nm,0.6s,baz=262,slow=8.4,SNR=2.6						

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*IDC **16** 22:31:05.3±1.2, 34°.15N×25°.12E, h0km, mb3.7/5, mb1 3.7/10, mb1mx3.4/45, mbtmp3.6/10, ML3.9/4, Error ellipse: s-maj=21.6km s-min=20.4km az=21.0*
*ATH **16** 22:31:07.7, 34°.13N×25°.16E, h15km±4km, ML3.1/6, Error ellipse: s-maj=5.5km s-min=1.6km az=351.0*
ISC 16 22:31:06.4±1.8, 34°.10N±0°.07×25°.13E±0°.04, h11km±10km, n34, σ1°76/42, mb3.7/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.95**	**344**	P	**Pb**	**22 31 25.1**	**+0.2**
SIVA				S	**Sb**	**22 31 37.1**	**-0.5**
SIVA				AML	AML	22 31 45.4	
	comp=E,7090μm,0.5s						
SIVA				AML	AML	22 31 52.1	
	comp=N,4564μm,0.7s						
LAST	**Lasithi**	**1.10**	**15**	P	**Pb**	**22 31 27.2**	**-0.2**
LAST				S	**Sn**	**22 31 42.5**	**-0.5**
LAST				AML	AML	22 31 51.6	
	comp=N,944μm,0.6s						
LAST				AML	AML	22 31 54.2	
	comp=E,916μm,0.7s						
GVD	**Gavdhos**	**1.13**	**311**	P	**Pn**	**22 31 28.9**	**+0.7**
GVD	**Gavdhos**	**1.13**	**311**	P	**Pn**	**22 31 29.3**	**+1.1**
GVD				S	**Sn**	**22 31 45.0**	**+1.2**
GVD				AML	AML	22 31 46.7	
	comp=N,3084μm,0.4s						
GVD				AML	AML	22 31 49.1	
	comp=E,3645μm,0.4s						
IDI	**Anoyia**	**1.20**	**351**	Pn	**Pn**	**22 31 29.7**	**+0.5**
	comp=E,25nm,0.3s,baz=177,slow=18,SNR=6.7						
IDI				Sn	**Sg**	**22 31 41.7**	**-3.5**
	comp=E,33nm,0.3s,baz=100,slow=18,SNR=5.2						
NPS	**Neapolis**	**1.23**	**19**	P	**Pn**	**22 31 30.2**	**+0.7**
NPS				S	**Sn**	**22 31 46.8**	**+0.7**
NPS				AML	AML	22 31 51.1	
	comp=E,767μm,0.5s						
NPS				AML	AML	22 31 52.3	
	comp=N,651μm,0.7s						
ZKR	**Zakros**	**1.35**	**41**	P	**Pg**	**22 31 33.4**	**+1.0**
ZKR	**Zakros**	**1.35**	**41**	P	**Pg**	**22 31 33.4**	**+1.0**
VAM	**Vamos**	**1.51**	**330**	P	**Pg**	**22 31 35.1**	**-0.3**
VAM				S	**Sg**	**22 31 56.2**	**+1.1**
VAM				AML	AML	22 32 02.2	
	comp=E,1502μm,0.6s						
VAM				AML	AML	22 32 05.9	
	comp=N,1066μm,0.4s						
IMMV	**Iera Moni Meta**	**1.65**	**325**	P	**Pn**	**22 31 36.0**	**+0.7**
IMMV	**Iera Moni Meta**	**1.65**	**325**	P	**Pg**	**22 31 37.6**	**-0.5**
IMMV				AML	AML	22 32 10.2	
	comp=N,908μm,0.4s						
IMMV				AML	AML	22 32 14.8	
	comp=E,1057μm,0.5s						
KARP	**Karpathos**	**2.21**	**49**	*e*P	**Pb**	**22 31 45.1**	**-1.3**
SANT	**Santorini**	**2.28**	**7**	*e*P	**Pn**	**22 31 44.9**	**+0.9**
KYTH	**Kithira**	**2.75**	**322**	P	**Pb**	**22 31 54.1**	**-1.5**
APE	**Apeiranthos**	**2.98**	**6**	*e*P	**Pn**	**22 31 55.3**	**+1.7**
ARG	**Arkhangelos**	**3.24**	**48**	*e*P	**Pn**	**22 31 59.8**	**+2.7**
DAT	**Datca**	**3.30**	**37**	*e*P	**Pn**	**22 31 59.9**	**+1.8**
DALY	**Dalyan (Mula)**	**3.95**	**46**	*e*P	**Pn**	**22 32 09.9**	**+3.0**
TURN	**Turunc**	**3.96**	**45**	*e*P	**Pn**	**22 32 05.7**	**-1.3**
YER	**Yerkesik**	**3.97**	**39**	*e*P	**Pn**	**22 32 09.3**	**+2.0**
ITM	**Ithomi**	**4.03**	**321**	*e*P	**Pn**	**22 32 10.8**	**+2.8**
FETY	**Fethiye**	**4.10**	**51**	*e*P	**Pn**	**22 32 11.7**	**+2.6**
AKAS	**Kas**	**4.24**	**59**	*e*P	**Pn**	**22 32 13.7**	**+2.7**
AGG	**Agios Georgios**	**5.40**	**336**	*e*P	**Pn**	**22 32 29.6**	**+2.7**
MMAI	**Mount Meron Ar**	**8.64**	**94**	Pn	**Pn**	**22 33 13.6**	**+2.1**
	comp=E,0.6nm,0.3s,baz=270,slow=12,SNR=3.5						
MMAI				Sn	**Sn**	**22 34 45.4**	**-3.6**
	comp=E,0.9nm,0.3s,baz=260,slow=40,SNR=3.1						
BRTR	**Keskin Array B**	**8.83**	**48**	Pn	**Pn**	**22 33 14.7**	**+0.7**
	comp=E,0.0nm,0.3s,baz=230,slow=15,SNR=2.6						
EIL	**Elat**	**9.45**	**115**	Pn	**Pn**	**22 33 24.0**	**+1.6**
	comp=E,0.5nm,0.3s,baz=330,slow=20,SNR=9.9						
EIL				Sn	**Sn**	**22 35 05.0**	**-3.6**
	comp=E,0.3nm,0.3s,baz=281,slow=16,SNR=2.5						
AKASG Malin Array Be 16.86 9 Pn **Pn 22 35 02.1 -0.1**
comp=E,0.7nm,0.3s,baz=197,slow=11,SNR=5.6
GERES GERESS Array B 17.01 333 Pn **P 22 35 05.9 -0.2**
comp=E,0.4nm,0.3s,baz=147,slow=12,SNR=17
HFS Hagfors 27.10 347 P **P 22 36 48.0 -0.9**
comp=E,1.0nm,0.6s,baz=160,slow=13,SNR=3.3
EKA Eskdalemuir Ar 28.89 326 P **P 22 37 05.7 +0.6**
comp=E,0.2nm,0.4s,baz=123,slow=9.4,SNR=4.4
TORD Torodi Ar. Bea 29.80 231 P **P 22 37 14.1 +0.7**
comp=E,0.8nm,0.4s,baz=32,slow=8.5,SNR=12
MKAR Makanchi Array 44.39 56 P **P 22 39 16.6 -0.3**
comp=E,0.2nm,0.5s,baz=290,slow=4.3,SNR=3.4
ZALV Zalesovo Beam 45.76 45 P **P 22 39 27.6 0.0**
comp=E,0.7nm,0.3s,baz=266,slow=8.6,SNR=3.0

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*IDC **16** 22:34:04.7±1.3, 34°.34N×25°.13E, h0km, mb3.7/4, mb1 3.6/8, mb1mx3.4/45, mbtmp3.6/8, ML3.8/3, Error ellipse: s-maj=23.6km s-min=19.1km az=67.0*
ISC 16 22:34:08.3±1.0, 34°.29N±0°.08×25°.15E±0°.05, h25km, n26, σ2°15/28, mb3.5/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.02**	**348**	Pn	**Pn**	**22 34 24.5**	**-2.7**
	9.8nm,0.3s,baz=180,slow=20,SNR=2.6						
IDI				Sn	**Sb**	**22 34 39.5**	**-1.0**
	20nm,0.3s,baz=158,slow=14,SNR=3.4						
GVD	**Gavdhos**	**1.03**	**303**	*e*P	**Pb**	**22 34 27.4**	**-0.2**
ZKR	**Zakros**	**1.21**	**47**	*e*P	**Pb**	**22 34 31.3**	**+0.7**
IMMV	**Iera Moni Meta**	**1.51**	**321**	*e*P	**Pb**	**22 34 34.6**	**-1.2**
KARP	**Karpathos**	**2.08**	**52**	*e*P	**Pb**	**22 34 43.9**	**-1.5**
SANT	**Santorini**	**2.10**	**7**	*e*P	**Pn**	**22 34 43.5**	**+1.6**
APE	**Apeiranthos**	**2.79**	**6**	*e*P	**Pn**	**22 34 53.8**	**+2.3**
ARG	**Arkhangelos**	**3.11**	**51**	*e*P	**Pn**	**22 34 58.3**	**+2.5**
DAT	**Datca**	**3.14**	**38**	*e*P	**Pn**	**22 34 59.1**	**+2.7**
DALY	**Dalyan (Mula)**	**3.81**	**48**	*e*P	**Pn**	**22 35 08.1**	**+2.6**
YER	**Yerkesik**	**3.82**	**41**	*e*P	**Pn**	**22 35 08.7**	**+3.1**
TURN	**Turunc**	**3.82**	**47**	*e*P	**Pn**	**22 35 04.4**	**-1.2**
ITM	**Ithomi**	**3.90**	**319**	*e*P	**Pn**	**22 35 08.5**	**+1.8**
FETY	**Fethiye**	**3.98**	**53**	*e*P	**Pn**	**22 35 10.5**	**+2.7**
AKAS	**Kas**	**4.13**	**61**	*e*P	**Pn**	**22 35 12.9**	**+2.9**
AYDB	**Zeytinkoy-Aydi**	**4.28**	**31**	*e*P	**Pn**	**22 35 15.2**	**+3.2**
ELL	**Elmali**	**4.60**	**56**	*e*P	**Pn**	**22 35 19.7**	**+3.3**
AGG	**Agios Georgios**	**5.24**	**335**	*e*P	**Pn**	**22 35 28.2**	**+3.1**
MMAI	**Mount Meron Ar**	**8.64**	**96**	Pn	**Pn**	**22 36 10.6**	**-1.3**
	baz=278,slow=14,SNR=2.1						
MMAI				Sn	**Sn**	**22 37 45.7**	**-2.9**
	1.0nm,0.3s,baz=282,slow=22,SNR=4.5						
EIL	**Elat**	**9.51**	**116**	Pn	**Pn**	**22 36 23.6**	**-0.1**
	0.4nm,0.3s,baz=276,slow=2.3,SNR=2.8						
EIL				Sn	Sn	22 38 00.8	-9.0
	0.3nm,0.3s,baz=12,slow=19,SNR=2.1						
AKASG Malin Array Be 16.67 9 Pn **Pn 22 38 00.2 0.0**
0.4nm,0.3s,baz=199,slow=10,SNR=4.8
GERES GERESS Array B 16.85 333 Pn **P 22 38 04.0 -0.5**
0.2nm,0.3s,baz=144,slow=12,SNR=11
EKA Eskdalemuir Ar 28.75 326 P **P 22 40 04.2 +0.5**
0.7nm,0.9s,baz=120,slow=9.9,SNR=2.4
TORD Torodi Ar. Bea 29.93 231 P **P 22 40 14.3 -0.2**
0.5nm,0.4s,baz=32,slow=9.0,SNR=8.5
MKAR Makanchi Array 44.27 56 P **P 22 42 16.6 +0.8**
0.3nm,0.5s,baz=259,slow=7.8,SNR=4.3
ZALV Zalesovo Beam 45.62 46 P **P 22 42 25.0 -1.4**
0.8nm,0.3s,baz=256,slow=8.9,SNR=3.5

NEIC 16 22:35:04.0±0.0, 35°.57N×97°.29W, h6km, ML3.2(TUL), After TUL., Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK001	**Jones High Sch**	**0.01**	**157**	*e*Pg	Pg	22 35 05.1	-0.1
OK009	**Oakdale Elemen**	**0.11**	**278**	*e*Pg	Pg	22 35 06.6	+0.3
OK005	**Luther M Schoo**	**0.12**	**43**	*e*Pg	Pg	22 35 06.9	+0.4
TUL1	**Leonard**	**1.27**	**74**	*e*Pn	Pn	22 35 26.7	-1.6
TUL1				*e*Sg	Sb	22 35 45.1	+0.3
WMOK	**Wichita Mounta**	**1.47**	**236**	*e*Pn	Pn	22 35 30.5	-0.6
WMOK				*e*Sn	Sn	22 35 49.5	-1.2
U32A	**Winter Ranch,**	**1.61**	**301**	*e*Pn	Pn	22 35 32.8	-0.1
U32A				*e*Sn	Sb	22 35 55.0	+0.3
X37A	**Clayton**	**1.85**	**121**	*e*Pn	Pn	22 35 37.1	+0.8
X37A				*e*Sn	Sn	22 35 59.9	-0.1
HHAR	**Hobbs**	**2.81**	**74**	*e*Pn	Pn	22 35 50.9	+1.3
HHAR				*e*Sn	Sn	22 36 24.0	+0.3
W39A	**Magazine**	**2.89**	**96**	*e*Pn	Pn	22 35 51.3	+0.8
W39A				*e*Sn	Sn	22 36 24.9	-0.7
MIAR	**Mount Ida**	**3.21**	**107**	*e*Pn	Pn	22 35 56.5	+1.5
MIAR				*e*Sn	Sn	22 36 33.8	+0.2
ABTX	**Abilene, Hawle**	**3.52**	**214**	*e*Pn	Pn	22 36 00.3	+1.0

SNR=17
ASHO Ashiyiah 2.52 219 *e*Pn **Pn 22 40 24.0 -0.3**
NAZ Nazwa, Dubai 2.55 230 *e*P **Pn 22 40 25.1 +0.5**
SNR=29
NAZ Nazwa, Dubai 2.55 230 P **Pn 22 40 27.0 +2.4**
NAZ Nazwa, Dubai 2.55 230 *e*Pn **Pn 22 40 26.7 +2.1**
CHBR Chabahar 2.63 113 *e*Pn **Pg 22 40 34.1 +0.5**
FAQ Al Faqa, Dubai 2.76 227 *e*P **Pn 22 40 28.9 +1.4**
SNR=12
FAQ Al Faqa, Dubai 2.76 227 P **Pn 22 40 30.0 +2.5**
FAQ Al Faqa, Dubai 2.76 227 *e*Pn **Pn 22 40 29.7 +2.2**
ASUD Al Ashush, Dub 3.02 228 *i*P **Pn 22 40 31.4 +0.3**
SNR=12
ASUD Al Ashush, Dub 3.02 228 P **Pn 22 40 33.5 +2.4**
SNR=12
ASUD Al Ashush, Dub 3.02 228 *e*Pn **Pn 22 40 33.3 +2.3**
HOQ Hoqain 3.10 188 *e*Pn **Pn 22 40 34.0 +1.8**
NGRK Negar Kerman 3.12 343 *e*Pn **Pb 22 40 36.0 -3.0**
NGRK IAMB IAmb 22 40 41.8
comp=Z,0.0nm,0.3s
BIDO Bidbid 3.14 175 P **Pn 22 40 33.4 +0.6**
BIDO Bidbid 3.14 175 *e*Pn **Pn 22 40 34.8 +2.1**
ALNE Al Ain 3.19 216 *i*P **Pn 22 40 33.6 +0.1**
SNR=6.2
ALNE Al Ain 3.19 216 *e*Pn **Pn 22 40 34.9 +1.4**
CHMN Cheshme madani 3.20 356 *e*Pn **Pb 22 40 38.7 -1.6**
CHMN IAMB IAmb 22 41 37.3
comp=Z,0.0nm,0.7s
KRBR Kerman 3.43 345 *e*Pn **Pn 22 40 36.5 -0.6**
TVBK TV Kerman 3.44 345 *e*Pn **Pb 22 40 40.9 -3.5**
TVBK IAMB IAmb 22 41 40.9
comp=Z,0.0nm,0.5s
WSAR Wadi Sarin 3.49 167 Pn **Pn 22 40 38.0 +0.5**
comp=Z,3.5nm,0.3s,baz=340,slow=5.7,SNR=59
WSAR Sn **Sn 22 41 16.1 -2.9**
comp=Z,10nm,0.3s,baz=59,slow=21,SNR=12
WSAR Wadi Sarin 3.49 167 P **Pn 22 40 37.8 +0.3**
ARQ Araqi 3.51 200 P **Pn 22 40 42.1 +4.3**
ARQ S **Sn 22 41 21.9 +2.4**
KHGB Koh Gabri 3.88 343 *e*Pn **Pn 22 40 46.3 +3.2**
KHGB IAMB IAmb 22 41 56.1
comp=Z,0.0nm,0.8s
ZHSF Zahedan 3.94 41 *e*Pn **Pn 22 40 46.5 +2.6**
GHIR Ghir-Karzin 4.58 292 *e*Pn **Pn 22 40 53.9 +1.3**
IBAF Bafgh 5.29 339 *e*Pn **Pn 22 41 05.2 +2.8**
IMEH Mehriz 5.48 330 *e*Pn **Pn 22 41 06.9 +1.8**
ISAD Sadrabad 6.35 326 *e*Pn **Pn 22 41 19.3 +2.2**
IRAM Ramesheh 6.98 319 *e*Pn **Pn 22 41 27.0 +1.2**
IPIR Pirpir 8.49 317 *e*Pn **Pn 22 41 47.9 +1.3**
ASF Jabal al Asfar 19.01 292 P **P 22 44 05.7 +0.4**
comp=Z,0.2nm,0.3s,baz=141,slow=14,SNR=2.5
EIL Elat 20.36 284 P **P 22 44 19.0 -1.0**
comp=Z,2.6nm,0.7s,baz=104,slow=12,SNR=2.7
MMAI Mount Meron Ar 20.42 293 P Pn 22 44 22.1 -0.7
comp=Z,5.0nm,0.5s,baz=110,slow=12,SNR=3.1
AKTO Aktyubinsk 23.74 0 P **P 22 44 56.8 +1.3**
comp=Z,0.7nm,0.4s,baz=162,slow=19,SNR=2.7
BRTR Keskin Array B 23.37 309 P **P 22 44 57.3 -0.6**
comp=Z,1.3nm,0.8s,baz=127,slow=10,SNR=8.3
BVAR Borovoye Array 27.96 16 P **P 22 45 34.3 +0.5**
comp=Z,0.5nm,0.7s,baz=194,slow=6.1,SNR=2.5
AKASG Malin Array Be 32.42 325 P **P 22 46 12.4 -0.8**
comp=Z,0.2nm,0.3s,baz=133,slow=7.7,SNR=2.8
GERES GERESS Array B 40.57 315 P **P 22 47 22.1 -0.8**
comp=Z,0.4nm,0.7s,baz=106,slow=8.5,SNR=3.8
KHC Kasperske Hory 40.73 315 *e*P **P 22 47 24.0 -0.2**
FINES FINESS Array B 40.79 337 P **P 22 47 23.9 -0.4**
comp=Z,2.0nm,0.8s,baz=135,slow=9.4,SNR=3.0
ESDC Sonseca Array 52.37 301 P **P 22 48 55.6 -0.1**
comp=Z,0.1nm,0.4s,baz=59,slow=6.8,SNR=2.8
TORD Torodi Ar. Bea 54.06 267 P **P 22 49 08.3 0.0**
comp=Z,0.6nm,0.5s,baz=67,slow=7.7,SNR=7.5

*IDC **16** 22:44:25.9±2.2, 0°.74N×126°.86E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/36, mbtmp3.5/3, Error ellipse: s-maj=198.8km s-min=24.9km az=66.0*
*ISCJB **16** 22:44:32.9±1.2, 0°.0N±0°.1×125°.2E±0°.1, h53km, mb3.5/3, Error ellipse: s-maj=20.8km s-min=10.3km az=34.7*
*DJA **16** 22:44:34.5±0.3, 0°S±2°×12°5E±°, h10km, M4.1/9, mb4.2/1, MLv4.0/9*
ISC 16 22:44:34.4±1.3**, 0°.0N**±0°.1×**125°.2E**±0°.1**, h53**km**, n10,**
σ1**9**25/**9, mb3.3**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.29**	**294**	P	**Pn**	**22 44 55.3**	**-0.8**
SANI	**Sanana**	**2.24**	**158**	P	**Pn**	**22 45 08.2**	**-0.8**
LUWI	**Luwuk**	**2.62**	**246**	P	**Pn**	**22 45 15.6**	**+1.4**
APSI	**Ampana**	**3.64**	**255**	P	**Pn**	**22 45 27.8**	**-0.4**
NLAI	**Namlea**	**3.79**	**149**	P	**Pn**	**22 45 31.4**	**+1.1**
MPSI	**Mapaga**	**5.27**	**273**	P	Pn	22 45 57.4	+6.8
SPSI	**Sidrap Palu**	**6.70**	**233**	P	**Pn**	**22 46 09.9**	**-0.3**
WRA	**Warramunga Arr**	**21.80**	**156**	P	**P**	**22 49 20.8**	**-1.4**
	1.2nm,0.9s,baz=341,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**25.05**	**161**	P	**P**	**22 49 52.8**	**-1.1**
	0.4nm,0.4s,baz=331,slow=10.0,SNR=5.6						
MKAR	**Makanchi Array**	**59.73**	**327**	P	**P**	**22 54 35.0**	**+1.3**
	0.4nm,0.4s,baz=122,slow=8.3,SNR=9.9						

*IDC **16** 22:46:49.2±1.3, 34°.12N×25°.10E, h0km, mb3.9/2, mb1 3.8/5, mb1mx3.4/36, mbtmp3.7/5, ML3.7/3, Error ellipse: s-maj=24.7km s-min=24.0km az=97.0*
*ISCJB **16** 22:46:50.1±0.8, 34°.03N±0°.07×25°.13E±0°.06, h20km, mb3.7/2, Error ellipse: s-maj=10.9km s-min=6.7km az=12.6*
ISC 16 22:46:51.7±1.1**, 34°.16N**±0°.07×**25°.19E**±0°.06**, h20**km**, n31,**
σ2**9**25/**37, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**1.14**	**307**	*e*P	**Pn**	**22 47 12.4**	**-0.1**
IDI	**Anoyia**	**1.15**	**348**	Pn	**Pb**	**22 47 13.2**	**+0.2**
	17nm,0.3s,baz=160,slow=17,SNR=7.0						
IDI				Sn	**Sb**	**22 47 25.3**	**-2.3**
	30nm,0.3s,baz=90,slow=8.1,SNR=7.7						
ZKR	**Zakros**	**1.27**	**41**	*e*P	**Pb**	**22 47 16.1**	**+1.1**
IMMV	**Iera Moni Meta**	**1.64**	**323**	*e*P	**Pn**	**22 47 18.9**	**-0.5**
APE	**Apeiranthos**	**2.92**	**5**	*e*P	**Pn**	**22 47 35.3**	**-1.7**
ARG	**Arkhangelos**	**3.16**	**49**	*e*P	**Pn**	**22 47 43.0**	**+2.7**
DAT	**Datca**	**3.22**	**37**	*e*P	**Pn**	**22 47 42.1**	**+0.8**
DAT	**Datca**	**3.22**	**37**	*i*P	**Pn**	**22 47 43.2**	**+2.0**
DAT				IAML_P			
	comp=Z,158nm,0.1s						
DALY	**Dalyan (Mula)**	**3.87**	**46**	*e*P	**Pn**	**22 47 52.3**	**+2.2**
DALY	**Dalyan (Mula)**	**3.87**	**46**	*i*P	**Pn**	**22 47 52.6**	**+2.5**
DALY				IAML_P			
	comp=Z,301nm,0.2s						
TURN	**Turunc**	**3.88**	**45**	*e*P	**Pn**	**22 47 47.9**	**-2.3**
TURN	**Turunc**	**3.88**	**45**	*i*P	**Pn**	**22 47 48.2**	**-2.0**
TURN				IAML_P			
	comp=Z,483nm,0.2s						
YER	**Yerkesik**	**3.89**	**39**	*e*P	**Pn**	**22 47 51.9**	**+1.4**
ITM	**Ithomi**	**4.02**	**320**	*e*P	**Pn**	**22 47 52.9**	**+0.7**
FETY	**Fethiye**	**4.03**	**51**	*e*P	**Pn**	**22 47 55.0**	**+2.7**
FETY	**Fethiye**	**4.03**	**51**	*i*P	**Pn**	**22 47 54.7**	**+2.5**
FETY				IAML_P			
	comp=Z,288nm,0.3s						
AYDN	**Tasoluk**	**4.12**	**31**	*i*P	**Pn**	**22 47 55.4**	**+1.9**
AYDN				IAML_P			
	comp=Z,271nm,0.2s						
AKAS	**Kas**	**4.16**	**59**	*e*P	**Pn**	**22 47 57.4**	**+3.1**
AKAS	**Kas**	**4.16**	**59**	*i*P	**Pn**	**22 47 55.5**	**+1.3**
AKAS				*i*S	**Sn**	**22 48 40.9**	**-1.5**
AKAS				IAML_P			
	comp=Z,2μm,0.1s						
AYDB	**Zeytinkoy-Aydi**	**4.37**	**29**	*e*P	**Pn**	**22 47 57.6**	**+0.6**
ELL	**Elmali**	**4.63**	**55**	*e*P	**Pn**	**22 48 05.0**	**+4.3**
AKUM	**Antalya-Kumluc**	**4.74**	**61**	*i*P	**Pn**	**22 48 03.6**	**+1.7**
AKUM				*i*S	**Sn**	**22 48 55.4**	**-0.9**
AKUM				IAML_P			
	comp=Z,868nm,0.2s						
KORT	**Korkueli**	**5.07**	**55**	*i*P	**Pn**	**22 48 09.2**	**+2.5**
KORT				*i*S	**Sn**	**22 49 03.0**	**-1.7**
KORT				IAML_P			
	comp=Z,196nm,0.2s						
USAK	**Uak-Merkez**	**5.49**	**33**	*i*P	**Pn**	**22 48 14.3**	**+1.9**
USAK				IAML_P			
	comp=Z,221nm,0.3s						
KEPZ	**Antalya-Kepez**	**5.90**	**61**	*i*P	**Pn**	**22 48 20.6**	**+2.6**
KEPZ				IAML_P			
	comp=Z,252nm,0.2s						
ERMK	**Ermenek**	**6.77**	**66**	*i*P	**Pn**	**22 48 33.1**	**+3.0**
ERMK				IAML_P			
	comp=Z,405nm,0.3s						
MMAI	**Mount Meron Ar**	**8.60**	**95**	Pn	**Pn**	**22 48 55.7**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=284,slow=20,SNR=5.6						
MMAI				Sn	**Sn**	**22 50 27.9**	**-3.5**
	comp=Z,0.6nm,0.3s,baz=277,slow=24,SNR=3.5						
EIL	**Elat**	**9.42**	**116**	Pn	**Pn**	**22 49 07.3**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=35,slow=7.7,SNR=6.3						
EIL				Sn	**Sn**	**22 50 46.1**	**-5.6**
	comp=Z,0.2nm,0.3s,baz=288,slow=9.6,SNR=2.4						
GERES	**GERESS Array B**	**16.98**	**333**	Pn	**P**	**22 50 49.5**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=148,slow=13,SNR=8.7						
TORD	**Torodi Ar. Bea**	**29.88**	**231**	P	**P**	**22 52 57.8**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=33,slow=9.2,SNR=17						
MKAR	**Makanchi Array**	**44.31**	**56**	P	**P**	**22 55 01.4**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=258,slow=9.3,SNR=2.8						

*IDC **16** 22:59:55.2±1.0, 34°.22N×25°.09E, h0km, mb3.6/7, mb1 3.8/12, mb1mx3.5/49, mbtmp3.7/12, ML3.8/5, Error ellipse: s-maj=18.0km s-min=17.1km az=12.0*
*ISCJB **16** 22:59:58.5±0.8, 34°.25N±0°.05×25°.17E±0°.03, h34km±8km, mb3.7/8, Error ellipse: s-maj=9.2km s-min=4.6km az=2.6*
*THE **16** 23:00:00.8, 34°.50N×25°.06E, h0km±2km, ML3.2/3, Error ellipse: s-maj=3.8km s-min=1.0km az=192.0*
*ATH **16** 23:00:00.6, 34°.50N×25°.03E, h36km±3km, ML3.4/3, Error ellipse: s-maj=7.0km s-min=2.2km az=356.0*
ISC 16 22:59:57.2±1.5**, 34°.24N**±0°.06×**25°.11E**±0°.03**, h17**km±8**km,**
n80, σ1**9**94/**97, mb3.8**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.81**	**342**	P	**Pb**	**23 00 12.3**	**-0.6**
SIVA	**Sivas**	**0.81**	**342**	P	**Pb**	**23 00 12.5**	**-0.4**
SIVA				S	**Sg**	**23 00 21.0**	**-2.8**
SIVA				AML	AML	23 00 29.1	
	comp=N,11803μm,0.8s						
SIVA				AML	AML	23 00 30.2	
	comp=E,17439μm,0.6s						
TMBK	**Timbaki Herakl**	**0.87**	**341**	P	**Pb**	**23 00 13.8**	**-0.1**
LAST	**Lasithi**	**0.96**	**18**	P	**Pb**	**23 00 14.9**	**-0.6**
LAST				S	**Sn**	**23 00 27.6**	**-1.8**
LAST	**Lasithi**	**0.96**	**18**	P	**Pb**	**23 00 15.0**	**-0.6**
GVD	**Gavdhos**	**1.03**	**305**	*e*P	**Pg**	**23 00 17.0**	**-0.3**
GVD	**Gavdhos**	**1.03**	**305**	P	**Pn**	**23 00 17.3**	**+0.4**
GVD	**Gavdhos**	**1.03**	**305**	P	**Pn**	**23 00 17.2**	**+0.3**
GVD				S	**Sg**	**23 00 30.4**	**-0.4**
GVD				AML	AML	23 00 38.9	
	comp=N,4175μm,0.7s						
GVD				AML	AML	23 00 41.2	
	comp=E,5210μm,0.3s						
IDI	**Anoyia**	**1.06**	**350**	Pn	**Pg**	**23 00 16.6**	**-1.1**
	comp=E,23nm,0.3s,baz=251,slow=10.0,SNR=14						
IDI				Sn	**Sn**	**23 00 33.9**	**+2.2**
	comp=E,116nm,0.3s,baz=27,slow=6.8,SNR=22						
KSTL	**Kastelli Herak**	**1.06**	**358**	P	**Pb**	**23 00 16.0**	**-1.1**
NPS	**Neapolis**	**1.10**	**22**	P	**Pn**	**23 00 17.6**	**-0.2**
NPS				S	**Sg**	**23 00 30.9**	**-2.0**
NPS	**Neapolis**	**1.10**	**22**	P	**Pn**	**23 00 18.4**	**+0.6**
PRNS	**Prines Rethymn**	**1.23**	**336**	P	**Pg**	**23 00 20.0**	**-0.9**
STIA	**Sitia Lasithi**	**1.25**	**40**	P	**Pg**	**23 00 22.1**	**+0.7**
ZKR	**Zakros**	**1.26**	**46**	*e*P	**Pg**	**23 00 20.9**	**-0.7**
ZKR	**Zakros**	**1.26**	**46**	P	**Pg**	**23 00 22.5**	**+0.9**
ZKR				S	**Sg**	**23 00 39.9**	**+1.8**
ZKR	**Zakros**	**1.26**	**46**	P	**Pg**	**23 00 21.9**	**+0.3**
ZKR				S	**Sg**	**23 00 39.1**	**+1.0**
ZKR				AML	AML	23 00 51.9	
	comp=N,899μm,1.0s						
ZKR				AML	AML	23 00 52.9	
	comp=E,2343μm,0.8s						
VAM	**Vamos**	**1.38**	**327**	P	**Pb**	**23 00 22.5**	**-0.1**
VAM	**Vamos**	**1.38**	**327**	P	**Pb**	**23 00 22.4**	**-0.1**
IMMV	**Iera Moni Meta**	**1.53**	**323**	*e*P	**Pb**	**23 00 24.7**	**-0.4**
IMMV	**Iera Moni Meta**	**1.53**	**323**	P	**Pg**	**23 00 26.1**	**-0.6**
IMMV	**Iera Moni Meta**	**1.53**	**323**	P	**Pn**	**23 00 22.8**	**-0.9**
KARP	**Karpathos**	**2.13**	**52**	*e*P	**Pb**	**23 00 33.4**	**-2.0**
KARP	**Karpathos**	**2.13**	**52**	P	**Pb**	**23 00 34.5**	**-0.9**
KARP	**Karpathos**	**2.13**	**52**	P	**Pb**	**23 00 34.7**	**-0.7**
SANT	**Santorini**	**2.14**	**8**	*e*P	**Pn**	**23 00 30.9**	**-1.3**
IOSP	**Ios island**	**2.48**	**3**	P	**Pn**	**23 00 37.1**	**+0.3**
IOSP	**Ios island**	**2.48**	**3**	P	**Pn**	**23 00 37.1**	**+0.3**
MHLO	**Agia Marina, M**	**2.51**	**347**	P	**Pn**	**23 00 37.9**	**+0.7**
APE	**Apeiranthos**	**2.84**	**7**	*e*P	**Pn**	**23 00 41.6**	**-0.2**
APE	**Apeiranthos**	**2.84**	**7**	P	**Pn**	**23 00 41.8**	**0.0**
VLI	**Veliai**	**3.04**	**325**	P	**Pn**	**23 00 45.9**	**+1.4**
ARG	**Arkhangelos**	**3.16**	**51**	*e*P	**Pn**	**23 00 47.2**	**+1.1**
DAT	**Datca**	**3.19**	**38**	*e*P	**Pn**	**23 00 47.3**	**+0.5**
DAT	**Datca**	**3.19**	**38**	*i*P	**Pn**	**23 00 47.7**	**+1.0**
DAT				*i*S	**Sn**	**23 01 27.1**	**+2.6**
DAT				IAML_P			
	comp=Z,91nm,0.1s						
BODT	**Bodrum**	**3.33**	**32**	*e*P	**Pn**	**23 00 49.3**	**+0.7**
BBRN	**Bozburun-Marma**	**3.42**	**44**	*e*P	**Pn**	**23 00 51.1**	**+1.3**
KRND	**KRANIDI**	**3.51**	**334**	P	**Pn**	**23 00 52.1**	**+1.1**
VLY	**Voula,Athens**	**3.76**	**344**	P	**Pn**	**23 00 54.4**	**0.0**
VLX	**Vlachokerasia**	**3.83**	**325**	P	**Pn**	**23 00 57.5**	**+2.0**
GCAM	**G?zelcami?**	**3.86**	**26**	*e*P	**Pn**	**23 00 56.8**	**+1.1**
DALY	**Dalyan (Mula)**	**3.87**	**47**	*e*P	**Pn**	**23 00 57.4**	**+1.5**
DALY	**Dalyan (Mula)**	**3.87**	**47**	*i*P	**Pn**	**23 00 55.8**	**0.0**
DALY				*i*S	**Sn**	**23 01 38.4**	**-2.5**
DALY				IAML_P			
	comp=Z,272nm,0.6s						
TURN	**Turunc**	**3.87**	**46**	*e*P	**Pn**	**23 00 52.9**	**-3.0**
TURN	**Turunc**	**3.87**	**46**	*i*P	**Pn**	**23 00 54.0**	**-2.0**
TURN				*i*S	**Sn**	**23 01 35.0**	**-6.0**
TURN				IAML_P			
	comp=Z,436nm,0.1s						
YER	**Yerkesik**	**3.87**	**41**	*e*P	**Pn**	**23 00 57.4**	**+1.4**
ITM	**Ithomi**	**3.91**	**319**	*e*P	**Pn**	**23 00 58.2**	**+1.7**
FETY	**Fethiye**	**4.03**	**53**	*e*P	**Pn**	**23 00 59.9**	**+1.8**
FETY	**Fethiye**	**4.03**	**53**	*i*P	**Pn**	**23 00 59.3**	**+1.2**
FETY				IAML_P			
	comp=Z,821nm,0.2s						
AYDN	**Tasoluk**	**4.08**	**33**	*i*P	**Pn**	**23 01 01.7**	**+2.7**
AYDN				IAML_P			
	comp=Z,450nm,0.1s						
AKAS	**Kas**	**4.18**	**60**	*e*P	**Pn**	**23 01 01.2**	**+0.9**
AKAS	**Kas**	**4.18**	**60**	*i*P	**Pn**	**23 01 01.4**	**+1.1**
AKAS				*i*S	**Sn**	**23 01 43.8**	**-5.1**
AKAS				IAML_P			
	comp=Z,522nm,0.1s						
CHOS	**Chios island**	**4.21**	**10**	*e*P	**Pn**	**23 01 00.8**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**4.33**	**31**	*e*P	**Pn**	**23 01 03.5**	**+1.2**
ELL	**Elmali**	**4.64**	**56**	*e*P	**Pn**	**23 01 08.3**	**+1.6**
AKUM	**Antalya-Kumluc**	**4.76**	**63**	*i*P	**Pn**	**23 01 08.9**	**+0.8**
AKUM				*i*S	**Sn**	**23 02 01.5**	**-1.3**
AKUM				IAML_P			
	comp=Z,474nm,0.1s						
KORT	**Korkueli**	**5.08**	**56**	*i*P	**Pn**	**23 01 13.1**	**+0.4**
KORT				*i*S	**Sn**	**23 02 10.1**	**-0.8**
KORT				IAML_P			
	comp=Z,62nm,0.2s						
AGG	**Agios Georgios**	**5.27**	**336**	*e*P	**Pn**	**23 01 16.1**	**+0.9**
KHAL	**Karahalli**	**5.43**	**39**	*i*P	**Pn**	**23 01 18.4**	**+0.9**
KHAL				*i*S	**Sn**	**23 02 18.3**	**-1.3**
KHAL				IAML_P			
	comp=Z,92nm,0.2s						
USAK	**Uak-Merkez**	**5.46**	**34**	*i*P	**Pn**	**23 01 19.2**	**+1.4**
USAK				IAML_P			
	comp=Z,180nm,0.3s						
KEPZ	**Antalya-Kepez**	**5.92**	**62**	*i*P	**Pn**	**23 01 25.3**	**+1.1**
KEPZ				*i*S	**Sn**	**23 02 26.9**	**-4.7**
KEPZ				IAML_P			
	comp=Z,158nm,0.2s						
LEF	**Lefka**	**6.47**	**80**	*i*P	Pn	23 01 22.9	-8.8
LEF				*i*S	Sn	23 02 34.3	-11
LEF				IAML_P			
	comp=Z,44nm,0.3s						
ERMK	**Ermenek**	**6.80**	**67**	*i*P	**Pn**	**23 01 38.8**	**+2.4**
ERMK				*i*S	**Sn**	**23 02 50.6**	**-2.9**
ERMK				IAML_P			
	comp=Z,106nm,0.1s						
GULN	**MERSIN_Gulnar**	**7.17**	**72**	*i*P	Pn	23 01 35.2	-6.0
GULN				*i*S	**Sn**	**23 02 55.9**	**-6.4**
GULN				IAML_P			
	comp=Z,25nm,0.3s						
MMAI	**Mount Meron Ar**	**8.67**	**95**	Pn	**Pn**	**23 02 03.0**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=277,slow=12,SNR=5.5						
MMAI				Sn	**Sn**	**23 03 34.8**	**-4.6**
	comp=Z,3.7nm,0.3s,baz=308,slow=18,SNR=8.5						
BRTR	**Keskin Array B**	**8.74**	**49**	Pn	**Pn**	**23 02 06.0**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=262,slow=10,SNR=2.5						
VAE	**Valguarnera**	**9.26**	**293**	Sn	**Sn**	**23 03 50.5**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=284,slow=19,SNR=2.4						
EIL	**Elat**	**9.52**	**116**	Pn	**Pn**	**23 02 13.4**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=329,slow=5.1,SNR=8.2						
EIL				Sn	**Sn**	**23 03 55.0**	**-5.2**
	comp=Z,0.6nm,0.3s,baz=41,slow=18,SNR=3.5						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**23 03 50.7**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=202,slow=12,SNR=4.0						
KBZ	**Khabaz**	**16.73**	**50**	Pn	**P**	**23 03 53.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=242,slow=11,SNR=2.0						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**P**	**23 03 54.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=15						
KHC	**Kasperske Hory**	**17.16**	**334**	*e*P	**P**	**23 04 02.0**	**+4.4**
ESDC	**Sonseca Array**	**23.80**	**292**	P	**P**	**23 05 10.7**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=85,slow=9.5,SNR=3.8						
FINES	**FINESS Array B**	**27.22**	**1**	P	**P**	**23 05 40.8**	**+0.9**
	comp=Z,2.7nm,1.0s,baz=180,slow=11,SNR=2.8						
EKA	**Eskdalemuir Ar**	**28.77**	**326**	P	**P**	**23 05 55.5**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=121,slow=9.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**29.88**	**231**	P	**P**	**23 06 03.6**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=28,slow=9.3,SNR=24						
ARCES	**ARCESS Array B**	**35.34**	**0**	P	**P**	**23 06 51.7**	**+0.4**
	comp=Z,7.4nm,0.3s,baz=178,slow=13,SNR=2.7						
MKAR	**Makanchi Array**	**44.32**	**56**	P	**P**	**23 08 07.3**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=277,slow=7.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**45.67**	**46**	P	**P**	**23 08 17.7**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=294,slow=7.1,SNR=4.1						
SONM	**Songino Array**	**60.10**	**50**	P	**P**	**23 10 04.5**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=276,slow=5.7,SNR=2.5						

*ISCJB **16** 23:03:44.4±1.0, 6°.88S±0°.07×148°.0E±0°.2, h54km, mb4.0/6, MS3.9/2, Error ellipse: s-maj=21.8km s-min=10.3km az=6.6*
*IDC **16** 23:03:48.1±2.2, 7°.03S×148°.04E, h77km±17km, mb3.7/6, mb1 3.9/9, mb1mx3.6/35, mbtmp4.0/9, MS4.1/2, Ms1 4.1/2, ms1mx3.5/31, Error ellipse: s-maj=30.6km s-min=14.5km az=115.0*
ISC 16 23:03:45.1±1.0**, 7°.00S**±0°.10×**148°.2E**±0°.2**, h54**km**, n13,**
σ1**9**57/**14, mb3.8**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.59**	**203**	P	**Pn**	**23 04 26.5**	**+1.8**
	13nm,0.3s,baz=14,slow=8.8,SNR=16						
PMG				S	**Sn**	**23 04 57.6**	**+2.5**
	10nm,0.3s,baz=14,slow=12,SNR=7.2						
CTA	**Charters Tower**	**13.15**	**188**	P	**P**	**23 06 54.2**	**-3.5**
	0.2nm,0.3s,baz=13,slow=14,SNR=2.1						
SIJI	**Sorong**	**17.92**	**289**	P	**Pn**	**23 07 49.6**	**-1.1**
	0.2nm,0.3s,baz=179,slow=24,SNR=7.8						
WRA	**Warramunga Arr**	**18.59**	**225**	P	**P**	**23 07 57.7**	**-0.3**
	0.4nm,0.3s,baz=56,slow=12,SNR=22						
ASAR	**Alice Springs**	**21.51**	**218**	P	**P**	**23 08 29.9**	**+0.2**
	6.5nm,0.6s,baz=54,slow=9.8,SNR=49						
ASAR				S	**S**	**23 12 24.1**	**-1.3**
	0.2nm,0.5s,baz=30,slow=20,SNR=2.6						
FITZ	**Fitzroy Crossi**	**24.57**	**241**	P	**P**	**23 09 00.1**	**-0.1**
	10nm,0.4s,baz=56,slow=10,SNR=33						
FITZ				LR	LR	23 19 16.9	
	comp=Z,571nm,20.2s,baz=72,slow=38						
STKA	**Stephens Creek**	**25.50**	**193**	P	**P**	**23 09 08.2**	**-0.3**
	2.2nm,0.7s,baz=23,slow=14,SNR=4.6						
DAV	**Davao City (W)**	**26.51**	**301**	LR	LR	23 19 56.1	
	comp=Z,271nm,20.8s,baz=54,slow=37						
VNDA	**Vanda**	**70.86**	**177**	P	**P**	**23 14 56.0**	**+0.1**
	0.5nm,0.7s,baz=284,slow=5.8,SNR=4.2						
ILAR	**Eielson Array**	**85.94**	**23**	P	**P**	**23 16 20.2**	**+1.1**
	0.6nm,0.9s,baz=252,slow=4.6,SNR=5.6						
BVAR	**Borovoye Array**	**88.25**	**324**	P	**P**	**23 16 31.4**	**+0.8**
	0.6nm,0.8s,baz=147,slow=6.2,SNR=3.6						
GERES	**GERESS Array B**	**123.38**	**326**	PKP	**PKPdf**	**23 22 36.3**	**-0.1**
	0.3nm,0.8s,baz=24,slow=2.7,SNR=2.7						
TORD	**Torodi Ar. Bea**	**146.45**	**283**	PKPbc	**PKPdf**	**23 23 19.9**	**-0.1**
	1.9nm,0.9s,baz=38,slow=3.1,SNR=13						

*IDC **16** 23:05:17.4±1.2, 34°.18N×25°.17E, h0km, mb3.6/4, mb1 3.7/8, mb1mx3.4/46, mbtmp3.6/8, ML3.9/4, MS3.8/1, Ms1 3.8/1, ms1mx2.9/45, Error ellipse: s-maj=22.4km s-min=21.2km az=23.0*
*ISCJB **16** 23:05:18.0±0.8, 34°.11N±0°.07×25°.06E±0°.08, h20km, mb3

comp=Z,0.2nm,0.4s,baz=284,slow=5.8,SNR=2.3

*IDC **16** 23:14:55.6±1.2,34°.23N×25°.17E,h0km,mb3.9/5, mb1 3.7/9,mb1mx3.5/39,mbtmp3.7/9,ML3.7/4,MS3.6/1, Ms1 3.6/1,ms1mx2.9/48,Error ellipse: s-maj=23.0km s-min=19.9km az=101.0*

*ISCJB **16** 23:14:56.3±0.9,34°.11N±0°.07×24°.96E±0°.08,h20km, mb3.7/6,Error ellipse: s-maj=10.9km s-min=9.3km az=25.4*

ISC 16 23:14:58.7±1.1,34°.24N±0°.09×25°.10E±0°.07,h20km,n31, σ2§14/34,mb3.8/6,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.06**	**351**	Pn	**Pn**	**23 15 18.8**	**+0.3**
	19nm,0.3s,baz=168,slow=20,SNR=2.3						
IDI				Sn	**Sb**	**23 15 33.9**	**+2.0**
	48nm,0.3s,baz=126,slow=12,SNR=4.6						
ZKR	**Zakros**	**1.27**	**46**	*eP*	**Pb**	**23 15 23.2**	**+1.2**
KARP	**Karpathos**	**2.14**	**52**	*eP*	**Pn**	**23 15 35.7**	**+2.4**
SANT	**Santorini**	**2.15**	**8**	*eP*	**Pn**	**23 15 32.1**	**-1.3**
APE	**Apeiranthos**	**2.85**	**7**	*eP*	**Pn**	**23 15 41.8**	**-1.2**
ARG	**Arkhangelos**	**3.17**	**51**	*eP*	**Pn**	**23 15 50.1**	**+2.7**
DAT	**Datca**	**3.21**	**38**	*eP*	**Pn**	**23 15 48.9**	**+0.9**
DAT	**Datca**	**3.21**	**38**	*i P*	**Pn**	**23 15 48.6**	**+0.6**
DAT				IAML_P			
	comp=Z,133nm,0.3s						
BBRN	**Bozburun-Marma**	**3.43**	**44**	*eP*	**Pn**	**23 15 52.8**	**+1.8**
DALY	**Dalyan (Mula)**	**3.88**	**47**	*eP*	**Pn**	**23 15 59.5**	**+2.4**
DALY	**Dalyan (Mula)**	**3.88**	**47**	*i P*	**Pn**	**23 16 00.3**	**+3.2**
DALY				IAML_P			
	comp=Z,543nm,0.2s						
TURN	**Turunc**	**3.88**	**46**	*eP*	**Pn**	**23 15 55.3**	**-1.9**
YER	**Yerkesik**	**3.88**	**41**	*eP*	**Pn**	**23 15 59.1**	**+1.8**
FETY	**Fethiye**	**4.04**	**53**	*eP*	**Pn**	**23 16 02.4**	**+3.0**
FETY	**Fethiye**	**4.04**	**53**	*i P*	**Pn**	**23 15 58.0**	**-1.5**
FETY				IAML_P			
	comp=Z,332nm,0.2s						
AKAS	**Kas**	**4.19**	**60**	*eP*	**Pn**	**23 16 03.5**	**+1.9**
AKAS	**Kas**	**4.19**	**60**	*i P*	**Pn**	**23 16 02.9**	**+1.3**
AKAS				*i S*	**Sn**	**23 16 46.1**	**-3.9**
AKAS				IAML_P			
	comp=Z,2μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**4.34**	**31**	*eP*	**Pn**	**23 16 04.1**	**+0.5**
ELL	**Elmali**	**4.66**	**56**	*eP*	**Pn**	**23 16 11.4**	**+3.4**
KORT	**Korkueli**	**5.09**	**56**	*eP*	**Pn**	**23 16 17.5**	**+3.6**
BCK	**Bucak**	**5.50**	**53**	*eP*	**Pn**	**23 16 22.9**	**+3.4**
MMAI	**Mount Meron Ar**	**8.68**	**95**	Pn	**Pn**	**23 17 02.3**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=248,slow=7.6,SNR=2.8						
MMAI				Sn	**Sn**	**23 18 35.9**	**-4.6**
	comp=Z,1.0nm,0.3s,baz=269,slow=23,SNR=3.6						
BRTR	**Keskin Array B**	**8.76**	**49**	Pn	**Pn**	**23 17 04.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=218,slow=17,SNR=3.6						
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**Pn**	**23 18 51.6**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=198,slow=10,SNR=4.2						
AKASG				LR	LR	23 25 32.4	
	comp=Z,213nm,19.3s,baz=225,slow=38						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**P**	**23 18 56.5**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=146,slow=12,SNR=12						
HFS	**Hagfors**	**26.96**	**347**	P	**P**	**23 20 38.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=154,slow=10,SNR=3.0						
FINES	**FINESS Array B**	**27.23**	**1**	P	**P**	**23 20 40.2**	**-0.8**
	comp=Z,2.3nm,0.9s,baz=168,slow=7.1,SNR=3.4						
TORD	**Torodi Ar. Bea**	**29.86**	**231**	P	**P**	**23 21 05.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=33,slow=9.0,SNR=22						
ARCES	**ARCESS Array B**	**35.35**	**0**	P	**P**	**23 21 51.4**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=192,slow=8.3,SNR=2.9						
MKAR	**Makanchi Array**	**44.33**	**56**	P	**P**	**23 23 07.2**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=271,slow=5.7,SNR=3.7						
ZALV	**Zalesovo Beam**	**45.68**	**46**	P	**P**	**23 23 17.5**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=271,slow=8.5,SNR=2.8						

*IDC **16** 23:22:16.8±1.5,34°.27N×25°.10E,h0km,mb3.9/2, mb1 3.7/4,mb1mx3.3/36,mbtmp3.6/4,ML3.2/2,MS3.9/1, Ms1 3.9/1,ms1mx3.0/40,Error ellipse: s-maj=28.5km s-min=20.8km az=98.0*

*ISCJB **16** 23:22:19.4±0.9,34°.19N±0°.07×25°.19E±0°.05,h20km, mb3.8/2,MS3.9/1,Error ellipse: s-maj=10.8km s-min=6.1km az=1.8*

ISC 16 23:22:20.2±1.1,34°.21N±0°.08×25°.21E±0°.06,h20km,n25, σ1§70/30,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.11**	**346**	Pn	**Pn**	**23 22 38.4**	**-2.3**
	14nm,0.3s,baz=172,slow=17,SNR=6.3						
IDI				Sn	**Sb**	**23 22 54.0**	**-0.8**
	29nm,0.3s,baz=153,slow=21,SNR=4.7						
GVD	**Gavdhos**	**1.12**	**304**	*eP*	**Pn**	**23 22 40.3**	**-0.4**
ZKR	**Zakros**	**1.22**	**42**	*eP*	**Pb**	**23 22 43.5**	**+0.8**
IMMV	**Iera Moni Meta**	**1.61**	**321**	*eP*	**Pn**	**23 22 48.1**	**+0.7**
KARP	**Karpathos**	**2.08**	**50**	*eP*	**Pb**	**23 22 56.3**	**-1.1**
SANT	**Santorini**	**2.17**	**5**	*eP*	**Pn**	**23 22 55.2**	**0.0**
APE	**Apeiranthos**	**2.86**	**5**	*eP*	**Pn**	**23 23 04.6**	**-0.2**
ARG	**Arkhangelos**	**3.11**	**49**	*eP*	**Pn**	**23 23 10.6**	**+2.4**
DAT	**Datca**	**3.17**	**37**	*eP*	**Pn**	**23 23 10.8**	**+1.8**
DAT	**Datca**	**3.17**	**37**	*i P*	**Pn**	**23 23 11.2**	**+2.2**
DAT				*i S*	**Sn**	**23 23 45.2**	**-1.1**
DAT				IAML_P			
	comp=Z,127nm,0.1s						
BBRN	**Bozburun-Marma**	**3.39**	**43**	*eP*	**Pn**	**23 23 13.6**	**+1.7**
DALY	**Dalyan (Mula)**	**3.83**	**46**	*eP*	**Pn**	**23 23 20.6**	**+2.6**
DALY	**Dalyan (Mula)**	**3.83**	**46**	*i P*	**Pn**	**23 23 20.5**	**+2.6**
DALY				IAML_P			
	comp=Z,378nm,0.2s						
TURN	**Turunc**	**3.83**	**45**	*eP*	**Pn**	**23 23 15.7**	**-2.3**
YER	**Yerkesik**	**3.84**	**40**	*eP*	**Pn**	**23 23 19.9**	**+1.7**
ITM	**Ithomi**	**3.99**	**319**	*eP*	**Pn**	**23 23 22.1**	**+1.9**
AYDN	**Tasoluk**	**4.07**	**31**	*i P*	**Pn**	**23 23 23.2**	**+1.9**
AYDN				IAML_P			
	comp=Z,196nm,0.2s						
AKAS	**Kas**	**4.12**	**59**	*i P*	**Pn**	**23 23 24.3**	**+2.2**
AKAS				*i S*	**Sn**	**23 24 10.3**	**+0.4**
AKAS				IAML_P			
	comp=Z,596nm,0.2s						
AKUM	**Antalya-Kumluc**	**4.70**	**62**	*i P*	**Pn**	**23 23 31.1**	**+1.2**
AKUM				*i S*	**Sn**	**23 24 22.7**	**-1.1**
AKUM				IAML_P			
	comp=Z,582nm,0.2s						
AGG	**Agios Georgios**	**5.33**	**335**	*eP*	**Pn**	**23 23 39.7**	**+1.0**
USAK	**Uak-Merkez**	**5.44**	**33**	*i P*	**Pn**	**23 23 42.7**	**+2.5**
USAK				IAML_P			
	comp=Z,241nm,0.3s						
MMAI	**Mount Meron Ar**	**8.58**	**95**	Pn	**Pn**	**23 24 22.6**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=311,slow=9.3,SNR=2.6						
MMAI				Sn	**Sn**	**23 25 57.2**	**-2.5**
	comp=Z,1.2nm,0.3s,baz=346,slow=17,SNR=5.1						
GERES	**GERESS Array B**	**16.94**	**333**	Pn	**Pn**	**23 26 16.3**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=146,slow=10,SNR=5.2						
TORD	**Torodi Ar. Bea**	**29.92**	**231**	P	**P**	**23 28 26.1**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=35,slow=8.7,SNR=14						
ZALV	**Zalesovo Beam**	**45.63**	**45**	P	**P**	**23 30 39.4**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=260,slow=8.3,SNR=2.3						
ZALV				LR	LR	23 51 40.6	
	comp=Z,133nm,19.0s,baz=72,slow=39						

SJA 16 23:23:28.8±0.7,22°.26S×69°.00W,h108km±4km,ML1.8, MW3.7,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.36**	**167**	*i P*	Pn	23 23 46.0	+0.9
LVC				*i S*	Sn	23 23 58.0	+0.7
PB09	**IPOC Station P**	**0.51**	**334**	*i P*	Pn	23 23 46.8	+1.0
PB09				*i S*	Sn	23 23 59.4	+0.9
PB06	**IPOC Station P**	**0.69**	**230**	*i P*	Pn	23 23 47.5	+0.4
PB06				*i S*	Sn	23 24 01.9	+1.0
PB07	**IPOC Station P**	**0.98**	**303**	*i P*	Pn	23 23 50.4	+0.5
PB15	**IPOC Station P**	**1.04**	**205**	*i P*	Pn	23 23 51.6	+1.1
PB02	**IPOC Station P**	**1.25**	**318**	*i P*	Pn	23 23 53.5	+0.8
HJA	**Humahuaca**	**3.45**	**107**	*i P*	Pn	23 24 22.8	+1.7
HJA				IAML		23 24 28.1	
	comp=Z,1.9nm,0.4s						

*IDC **16** 23:35:23.0±1.1,34°.26N×25°.10E,h0km,mb3.9/6, mb1 3.8/10,mb1mx3.5/38,mbtmp3.8/10,ML3.9/4,MS3.6/2, Ms1 3.6/2,ms1mx2.9/47,Error ellipse: s-maj=21.8km s-min=17.8km az=69.0*

*ISCJB **16** 23:35:27.0±1.2,34°.19N±0°.05×25°.17E±0°.04,h33km±9km, mb3.7/6,MS3.4/1,Error ellipse: s-maj=8.4km s-min=4.5km az=22.4*

*ATH **16** 23:35:27.7,34°.37N×25°.22E,h30km±2km,ML3.3/3,Error ellipse: s-maj=7.0km s-min=1.9km az=349.0*

*THE **16** 23:35:28.4,34°.38N×25°.11E,h0km±1km,ML3.1/6,Error ellipse: s-maj=2.7km s-min=0.9km az=171.0*

ISC 16 23:35:27.4±1.6,34°.28N±0°.07×25°.14E±0°.03,h27km±11km, n86,σ1§65/100,mb3.7/6,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.79**	**340**	P	**Pb**	**23 35 41.8**	**-0.7**
SIVA				S	**Sb**	**23 35 53.2**	**+0.4**
SIVA	**Sivas**	**0.79**	**340**	P	**Pb**	**23 35 42.1**	**-0.4**
SIVA				S	**Sb**	**23 35 52.3**	**-0.5**
SIVA				AML	AML	23 35 58.4	
	comp=N,9909μm,0.4s						
SIVA				AML	AML	23 36 01.2	
	comp=E,11635μm,0.4s						
TMBK	**Timbaki Herakl**	**0.85**	**339**	P	**Pn**	**23 35 43.4**	**-0.2**
LAST	**Lasithi**	**0.92**	**18**	P	**Pb**	**23 35 44.3**	**-0.6**
LAST				S	**Sb**	**23 35 56.7**	**-0.1**
LAST	**Lasithi**	**0.92**	**18**	P	**Pb**	**23 35 44.2**	**-0.6**
LAST				S	**Sb**	**23 35 56.8**	**-0.1**
LAST				AML	AML	23 36 04.2	
	comp=E,1752μm,0.7s						
LAST				AML	AML	23 36 04.8	
	comp=N,1220μm,0.5s						
KSTL	**Kastelli Herak**	**1.02**	**357**	P	**Pb**	**23 35 45.0**	**-1.5**
KSTL				S	**Sb**	**23 35 58.9**	**-0.7**
IDI	**Anoyia**	**1.03**	**349**	Pn	**Pb**	**23 35 46.0**	**-0.6**
	comp=N,22nm,0.3s,baz=244,slow=8.6,SNR=20						
IDI				Sn	**Sn**	**23 36 00.9**	**+1.2**
	comp=N,131nm,0.3s,baz=53,slow=5.1,SNR=26						
GVD	**Gavdhos**	**1.03**	**303**	P	**Pn**	**23 35 48.4**	**+2.3**
GVD	**Gavdhos**	**1.03**	**303**	P	**Pn**	**23 35 47.8**	**+1.7**
GVD				S	**Sn**	**23 36 00.8**	**+1.1**
GVD	**Gavdhos**	**1.03**	**303**	P	**Pn**	**23 35 47.8**	**+1.7**
GVD				S	**Sn**	**23 36 02.9**	**+3.3**
GVD				AML	AML	23 36 10.6	
	comp=E,3873μm,0.6s						
GVD				AML	AML	23 36 10.8	
	comp=N,3700μm,0.3s						
NPS	**Neapolis**	**1.06**	**22**	P	**Pn**	**23 35 46.1**	**-0.4**
NPS	**Neapolis**	**1.06**	**22**	P	**Pn**	**23 35 45.8**	**-0.7**
PRNS	**Prines Rethymn**	**1.20**	**334**	P	**Pb**	**23 35 49.4**	**-0.2**
STIA	**Sitia Lasithi**	**1.21**	**40**	P	**Pb**	**23 35 50.4**	**+0.7**
ZKR	**Zakros**	**1.22**	**47**	P	**Pb**	**23 35 50.0**	**+0.2**
ZKR	**Zakros**	**1.22**	**47**	P	**Pb**	**23 35 49.8**	**0.0**
ZKR				S	**Sn**	**23 36 08.0**	**+3.7**
VAM	**Vamos**	**1.36**	**326**	P	**Pb**	**23 35 51.5**	**-0.8**
VAM				S	**Sb**	**23 36 09.4**	**+0.1**
VAM	**Vamos**	**1.36**	**326**	P	**Pb**	**23 35 51.6**	**-0.8**
IMMV	**Iera Moni Meta**	**1.52**	**321**	P	**Pb**	**23 35 54.1**	**-0.8**
IMMV	**Iera Moni Meta**	**1.52**	**321**	P	**Pb**	**23 35 54.4**	**-0.5**
IMMV				S	**Sb**	**23 36 14.4**	**+0.7**
IMMV	**Iera Moni Meta**	**1.52**	**321**	P	**Pb**	**23 35 54.8**	**-0.1**
CHAN	**Chania**	**1.53**	**324**	P	**Pb**	**23 35 56.0**	**+0.9**
THR6	**Thira Island,**	**2.08**	**6**	P	**Pn**	**23 36 01.9**	**+1.3**
KARP	**Karpathos**	**2.09**	**52**	*eP*	**Pb**	**23 36 02.8**	**-1.9**
KARP	**Karpathos**	**2.09**	**52**	P	**Pb**	**23 36 04.2**	**-0.5**
SANT	**Santorini**	**2.10**	**7**	*eP*	**Pn**	**23 35 59.7**	**-1.2**
THR3	**Thira Island,**	**2.14**	**6**	P	**Pn**	**23 36 03.0**	**+1.7**
THR5	**Thira Island,**	**2.14**	**5**	P	**Pn**	**23 36 03.0**	**+1.7**
THR8	**Santorini-Mono**	**2.14**	**7**	P	**Pn**	**23 36 02.1**	**+0.8**
THR2	**Thira island,**	**2.18**	**6**	P	**Pn**	**23 36 03.2**	**+1.4**
ANKY	**Antikythira Is**	**2.19**	**317**	P	**Pb**	**23 36 04.7**	**-1.6**
ANKY	**Antikythira Is**	**2.19**	**317**	P	**Pb**	**23 36 05.3**	**-1.0**
IOSP	**Ios island**	**2.44**	**3**	P	**Pn**	**23 36 06.6**	**+1.1**
IOSP	**Ios island**	**2.44**	**3**	P	**Pn**	**23 36 06.5**	**+1.0**
MHLO	**Agia Marina, M**	**2.48**	**346**	P	**Pn**	**23 36 07.0**	**+1.0**
APE	**Apeiranthos**	**2.80**	**6**	*eP*	**Pn**	**23 36 09.2**	**-1.3**
APE	**Apeiranthos**	**2.80**	**6**	P	**Pn**	**23 36 11.1**	**+0.6**
VLI	**Veliai**	**3.02**	**324**	P	**Pn**	**23 36 14.9**	**+1.4**
ARG	**Arkhangelos**	**3.12**	**51**	*eP*	**Pn**	**23 36 16.9**	**+2.1**
ARG	**Arkhangelos**	**3.12**	**51**	P	**Pn**	**23 36 16.9**	**+2.1**
DAT	**Datca**	**3.15**	**38**	*eP*	**Pn**	**23 36 16.3**	**+0.9**
DAT	**Datca**	**3.15**	**38**	*i P*	**Pn**	**23 36 16.7**	**+1.4**
DAT				IAML_P			
	comp=Z,122nm,0.2s						
BODT	**Bodrum**	**3.29**	**32**	*eP*	**Pn**	**23 36 17.4**	**+0.2**
BDRM	**Kayabasi**	**3.35**	**33**	*i P*	**Pn**	**23 36 18.4**	**+0.4**
BDRM				IAML_P			
	comp=Z,62nm,0.1s						
BBRN	**Bozburun-Marma**	**3.38**	**44**	*eP*	**Pn**	**23 36 20.1**	**+1.7**
KRND	**KRANIDI**	**3.49**	**333**	P	**Pn**	**23 36 21.1**	**+1.2**
KRND				S	**Sn**	**23 37 01.2**	**+0.8**
DID	**Didima**	**3.57**	**335**	P	**Pn**	**23 36 21.8**	**+0.7**
VLY	**Voula,Athens**	**3.73**	**343**	P	**Pn**	**23 36 24.1**	**+0.9**
VLX	**Vlachokerasia**	**3.81**	**325**	P	**Pn**	**23 36 26.6**	**+2.2**
DALY	**Dalyan (Mula)**	**3.82**	**48**	*eP*	**Pn**	**23 36 26.6**	**+2.1**
DALY	**Dalyan (Mula)**	**3.82**	**48**	*i P*	**Pn**	**23 36 24.6**	**+0.2**
DALY				IAML_P			
	comp=Z,226nm,0.7s						
YER	**Yerkesik**	**3.83**	**41**	*eP*	**Pn**	**23 36 26.6**	**+2.0**
YER	**Yerkesik**	**3.83**	**41**	P	**Pn**	**23 36 26.9**	**+2.3**
TURN	**Turunc**	**3.83**	**47**	*eP*	**Pn**	**23 36 23.2**	**-1.4**
TURN	**Turunc**	**3.83**	**47**	*i P*	**Pn**	**23 36 22.7**	**-1.9**
TURN				IAML_P			
	comp=Z,478nm,0.2s						
ITM	**Ithomi**	**3.90**	**319**	*eP*	**Pn**	**23 36 26.8**	**+1.3**
PTL	**Penteli**	**3.90**	**345**	P	**Pn**	**23 36 26.4**	**+0.8**
AYDN	**Tasoluk**	**4.04**	**33**	*i P*	**Pn**	**23 36 30.2**	**+2.7**
AYDN				IAML_P			
	comp=Z,262nm,0.3s						
KSL	**Kastellorizon**	**4.09**	**62**	P	**Pn**	**23 36 30.3**	**+2.2**
AKAS	**Kas**	**4.14**	**61**	*eP*	**Pn**	**23 36 31.7**	**+2.7**
AKAS	**Kas**	**4.14**	**61**	*i P*	**Pn**	**23 36 30.5**	**+1.5**
AKAS				IAML_P			
	comp=Z,831nm,0.1s						
CHOS	**Chios island**	**4.17**	**10**	*eP*	**Pn**	**23 36 29.3**	**0.0**
URLA	**Izmir**	**4.24**	**16**	*eP*	**Pn**	**23 36 30.3**	**+0.1**
KLV	**Kalavryta, Ach**	**4.47**	**328**	P	**Pn**	**23 36 34.8**	**+1.4**
DRO	**Drossia**	**4.60**	**324**	P	**Pn**	**23 36 37.8**	**+2.7**
ELL	**Elmali**	**4.61**	**56**	*eP*	**Pn**	**23 36 38.4**	**+3.1**
LKR	**Lokris**	**4.69**	**339**	P	**Pn**	**23 36 37.5**	**+1.1**
EFP	**Efpalio**	**4.89**	**329**	P	**Pn**	**23 36 42.0**	**+2.8**
ANX	**Ano Chora**	**5.03**	**330**	P	**Pn**	**23 36 42.0**	**+0.9**
KORT	**Korkueli**	**5.04**	**56**	*i P*	**Pn**	**23 36 44.9**	**+3.6**
KORT				IAML_P			
	comp=Z,154nm,0.2s						
KULA	**Kula-Manisa**	**5.09**	**33**	*eP*	**Pn**	**23 36 43.2**	**+1.2**
AGG	**Agios Georgios**	**5.24**	**335**	*eP*	**Pn**	**23 36 44.8**	**+0.8**
LKD2	**Lefkada island**	**5.77**	**323**	P	**Pn**	**23 36 53.6**	**+2.4**
MMAI	**Mount Meron Ar**	**8.65**	**96**	Pn	**Pn**	**23 37 30.4**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=293,slow=12,SNR=4.3						
MMAI				Sn	**Sn**	**23 39 06.1**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=241,slow=20,SNR=3.5						
VAE	**Valguarnera**	**9.27**	**293**	Sn	**Sn**	**23 39 16.4**	**-6.3**
	comp=Z,0.7nm,0.3s,baz=117,slow=14,SNR=3.4						
EIL	**Elat**	**9.52**	**116**	Pn	**Pn**	**23 37 40.8**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=346,slow=6.3,SNR=8.7						
EIL				Sn	**Sn**	**23 39 25.4**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=68,slow=19,SNR=2.4						
ASF	**Jabal al Asfar**	**10.07**	**99**	Sn	**Sn**	**23 39 41.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=300,slow=20,SNR=2.6						
AKASG	**Malin Array Be**	**16.68**	**9**	Pn	**Pn**	**23 39 18.8**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=200,slow=11,SNR=8.6						
KBZ	**Khabaz**	**16.69**	**50**	Pn	**P**	**23 39 24.7**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=265,slow=6.3,SNR=3.5						
GERES	**GERESS Array B**	**16.85**	**333**	Pn	**Pn**	**23 39 21.7**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=145,slow=12,SNR=14						
GERES				LR	LR	23 46 38.6	
	comp=Z,210nm,19.0s,baz=28,slow=40						
HFS	**Hagfors**	**26.93**	**347**	P	**P**	**23 41 05.4**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=165,slow=12,SNR=3.4						
FINES	**FINESS Array B**	**27.19**	**1**	P	**P**	**23 41 07.0**	**-1.5**
	comp=Z,3.5nm,1.0s,baz=158,slow=11,SNR=3.1						
FINES				LR	LR	23 53 46.5	
	comp=Z,123nm,21.8s,baz=143,slow=40						
EKA	**Eskdalemuir Ar**	**28.75**	**326**	P	**P**	**23 41 22.0**	**-0.4**
	comp=Z,1.4nm,1.1s,baz=119,slow=8.5,SNR=3.1						
TORD	**Torodi Ar. Bea**	**29.92**	**231**	P	**P**	**23 41 32.6**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=31,slow=7.9,SNR=40						
MKAR	**Makanchi Array**	**44.28**	**56**	P	**P**	**23 43 35.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=264,slow=10,SNR=2.6						
ZALV	**Zalesovo Beam**	**45.63**	**46**	P	**P**	**23 43 45.0**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=272,slow=8.7,SNR=2.3						

*IDC **16** 23:43:32.5±0.8,34°.32N×25°.08E,h0km,mb4.2/13, mb1 4.1/22,mb1mx3.9/46,mbtmp4.0/22,ML3.9/9,Error ellipse: s-maj=15.2km s-min=14.0km az=150.0*

*HLW **16** 23:43:33.9,34°.40N×25°.12E,h10km±23km,Md4.2,Ml4.4*

*THE **16** 23:43:33.8,34°.16N×25°.03E,h0km±1km,ML3.7/1,Error ellipse: s-maj=4.4km s-min=1.3km az=195.0*

*NEIC **16** 23:43:33.8±0.0,34°.16N×25°.03E,h1km,mb4.0/10, ML3.7(THE),After THE.*

*ATH **16** 23:43:35.4,34°.31N×25°.09E,h28km±1km,ML3.5/10,Error ellipse: s-maj=3.1km s-min=1.2km az=357.0*

*DDA **16** 23:43:58.6,34°.27N×24°.98E,h11km±1km,ML3.6*

ISC 16 23:43:35.6±1.3,34°.23N±0°.03×25°.11E±0°.03,h23km±10km, n202,σ1§33/216,mb4.1/19,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.83**	**342**	P	**Pb**	**23 43 50.7**	**-0.7**
SIVA				S	**Sn**	**23 44 04.8**	**+1.4**
SIVA	**Sivas**	**0.83**	**342**	P	**Pb**	**23 43 49.5**	**-1.8**
SIVA				S	**Sb**	**23 44 00.7**	**-1.4**
SIVA				AML	AML	23 44 11.2	
	comp=E,29265μm,0.6s						
SIVA				AML	AML	23 44 13.1	
	comp=N,28167μm,0.7s						
TMBK	**Timbaki Herakl**	**0.89**	**341**	P	**Pb**	**23 43 51.9**	**-0.5**
TMBK				S	**Sn**	**23 44 06.4**	**+1.5**
LAST	**Lasithi**	**0.98**	**18**	P	**Pb**	**23 43 53.2**	**-0.8**
LAST	**Lasithi**	**0.98**	**18**	P	**Pb**	**23 43 53.4**	**-0.6**
LAST				AML	AML	23 44 14.3	
	comp=N,2674μm,0.5s						
LAST				AML	AML	23 44 17.2	
	comp=E,2533μm,0.8s						
GVD	**Gavdhos**	**1.04**	**306**	P	**Pb**	**23 43 55.1**	**0.0**
GVD				S	**Sn**	**23 44 08.5**	**-0.2**
GVD				AML	AML	23 44 19.9	
	comp=E,10049μm,0.6s						
GVD				AML	AML	23 44 20.0	
	comp=N,10520μm,0.4s						
IDI	**Anoyia**	**1.07**	**350**	Pn	**Pn**	**23 43 54.4**	**-1.0**
	comp=N,98nm,0.3s,baz=158,slow=19,SNR=23						
IDI				Sn	**Sb**	**23 44 09.1**	**-0.1**
	comp=N,95nm,0.3s,baz=274,slow=17,SNR=14						
IDI	**Anoyia**	**1.07**	**350**	P	**Pn**	**23 43 54.2**	**-1.1**
KSTL	**Kastelli Herak**	**1.07**	**358**	P	**Pn**	**23 43 53.5**	**-1.8**
IACM	**Heraklion**	**1.08**	**358**	P	**Pn**	**23 43 55.1**	**-0.2**
NPS	**Neapolis**	**1.11**	**22**	P	**Pn**	**23 43 55.5**	**-0.3**
NPS	**Neapolis**	**1.11**	**22**	P	**Pn**	**23 43 55.6**	**-0.3**
NPS				S	**Sn**	**23 44 10.6**	**+0.2**
NPS				AML	AML	23 44 22.4	
	comp=N,2824μm,0.5s						
NPS				AML	AML	23 44 25.6	
	comp=E,4409μm,0.8s						
PRNS	**Prines Rethymn**	**1.24**	**336**	P	**Pb**	**23 43 58.3**	**-0.1**
STIA	**Sitia Lasithi**	**1.26**	**39**	P	**Pb**	**23 43 59.9**	**+1.2**
STIA				S	**Sb**	**23 44 18.5**	**+3.9**
ZKR	**Zakros**	**1.27**	**45**	*eP*	**Pn**	**23 43 57.1**	**-0.8**
ZKR	**Zakros**	**1.27**	**45**	P	**Pb**	**23 43 58.8**	**-0.1**
ZKR				AML	AML	23 44 24.4	
	comp=N,1366μm,0.4s						
ZKR				AML	AML	23 44 29.5	
	comp=E,3353μm,0.7s						
VAM	**Vamos**	**1.40**	**328**	P	**Pn**	**23 44 00.0**	**+0.3**
VAM				S	**Sb**	**23 44 19.5**	**+1.0**
VAM	**Vamos**	**1.40**	**328**	P	**Pb**	**23 44 00.4**	**-0.6**
VAM				S	**Sb**	**23 44 19.0**	**+0.5**
VAM				AML	AML	23 44 32.5	
	comp=N,3792μm,0.8s						
VAM				AML	AML	23 44 34.9	
	comp=E,4807μm,0.8s						
IMMV	**Iera Moni Meta**	**1.54**	**323**	*eP*	**Pn**	**23 44 01.7**	**0.0**
IMMV	**Iera Moni Meta**	**1.54**	**323**	P	**Pn**	**23 44 01.2**	**-0.5**
IMMV				AML	AML	23 44 35.7	
	comp=N,2517μm,0.5s						
IMMV				AML	AML	23 44 39.2	
	comp

comp=Z,90nm,0.2s
ACOR Acrocorinthos 4.08 334 P **Pn 23 44 37.0 +0.3**
AYDN Tasoluk 4.09 32 *i* P **Pn 23 44 39.5 +2.6**
KSL Kastellorizon 4.13 61 P **Pn 23 44 38.4 +1.1**
KSL Kastellorizon 4.13 61 P **Pn 23 44 38.3 +1.1**
LTK Loutraki 4.17 336 P **Pn 23 44 38.3 +0.5**
AKAS Kas 4.18 60 *i* P **Pn 23 44 39.9 +1.8**
VILL Villia 4.19 340 P **Pn 23 44 38.2 0.0**
CHOS Chios island 4.22 10 *e*P **Pn 23 44 38.6 0.0**
VIL2 Platees 4.25 340 P **Pn 23 44 38.1 -0.8**
THAL Thalero 4.29 333 P **Pn 23 44 39.5 0.0**
EREA Eretria 4.29 347 P **Pn 23 44 40.1 +0.6**
URLA Izmir 4.29 16 *e*P **Pn 23 44 39.6 0.0**
AYDB Zeytinkoy-Aydi 4.34 30 *e*P **Pn 23 44 41.6 +1.3**
BLCB Balcova 4.43 20 *e*P **Pn 23 44 42.3 +0.9**
KLV Kalavryta, Ach 4.50 329 P **Pn 23 44 42.7 +0.3**
ELL Elmali 4.65 56 *e*P **Pn 23 44 48.4 +3.9**
AKUM Antalya-Kumluc 4.76 62 *i* P **Pn 23 44 47.9 +1.9**
ATAL Atalanti 4.76 340 P **Pn 23 44 46.1 +0.1**
KALE Kalithea 4.80 331 P **Pn 23 44 46.4 -0.2**
TRIZ Trizonia 4.80 330 P **Pn 23 44 46.6 0.0**
AXAR Agios Charalam 4.94 337 P **Pn 23 44 50.9 +2.4**
SWA2 4.98 177 P **Pn 23 44 51.4 +2.5**
baz=176
SWA2 AMP 23 45 00.0
baz=176
SWA2 S **Sn 23 45 46.9 +1.1**
baz=176
ZEDA zmir-Bergama 4.99 18 *i* P **Pn 23 44 50.5 +1.5**
ZEDA IAML_P
comp=Z,314nm,0.5s
SIGR SIGRI 5.01 7 *e*P **Pn 23 44 50.2 +0.8**
MANT Manisa 5.08 32 *i* P **Pn 23 44 52.2 +1.7**
MANT IAML_P
comp=Z,352nm,0.3s
KORT Korkueli 5.08 56 *i* P **Pn 23 44 52.5 +2.0**
AKHS Akhisar 5.13 24 *i* P **Pn 23 44 52.6 +1.6**
AKHS IAML_P
comp=Z,597nm,0.4s
KULA Kula-Manisa 5.15 33 *e*P **Pn 23 44 53.0 +1.7**
AGG Agios Georgios 5.28 336 *e*P **Pn 23 44 54.2 +1.0**
AGG Agios Georgios 5.28 336 *e*Pn **Pn 23 44 53.0 -0.1**
BRDR BURDUR-Merkez 5.30 48 *i* P **Pn 23 44 55.2 +1.8**
BRDR IAML_P
comp=Z,250nm,0.2s
KHAL Karahalli 5.44 39 *i* P **Pn 23 44 56.4 +1.0**
KHAL IAML_P
comp=Z,311nm,0.2s
USAK Uak-Merkez 5.47 34 *i* P **Pn 23 44 57.2 +1.4**
USAK IAML_P
comp=Z,2μm,0.3s
STEP BALIKESIR_Sava 5.55 21 *i* P **Pn 23 44 57.6 +0.9**
STEP IAML_P
comp=Z,252nm,0.4s
BAYC CANAKKALE_Bayr 5.62 11 *i* P **Pn 23 44 57.0 -0.8**
BAYC IAML_P
comp=Z,172nm,0.4s
ISP Isparta 5.66 49 *e*Pn **Pn 23 44 58.2 -0.2**
BALB Balikesir 5.84 21 *e*Pn **Pn 23 45 00.4 -0.4**
BALY Balya 5.86 19 *i* P **Pn 23 45 01.6 +0.6**
BALY IAML_P
comp=Z,213nm,0.4s
KEPZ Antalya-Kepez 5.92 61 *i* P **Pn 23 45 03.7 +1.8**
KEPZ IAML_P
comp=Z,574nm,0.2s
GDZ Gediz 5.99 35 *i* P **Pn 23 45 04.9 +2.0**
GDZ IAML_P
comp=Z,257nm,0.3s
DURS Dursunbey 6.00 26 *i* P **Pn 23 45 04.8 +1.7**
DURS IAML_P
comp=Z,270nm,0.6s
LIT Litokhoron 6.23 341 *e*Pn **Pn 23 45 06.4 +0.3**
LEF Lefka 6.47 80 *i* P **Pn 23 45 09.4 0.0**
LEF IAML_P
comp=Z,780nm,0.2s
HNAT Natroun 6.54 133 S **Sn 23 46 24.2 -0.2**
baz=134
DOGA KONYA_Doganhis 6.56 52 *i* P **Pn 23 45 12.1 +1.2**
DOGA IAML_P
comp=Z,320nm,0.2s
ALN Alexandroupoli 6.70 6 *e*Pn **Pn 23 45 13.7 +1.2**
ULDT Uludag 6.72 27 *i* P **Pn 23 45 14.6 +1.5**
ERMK Ermenek 6.81 67 *i* P **Pn 23 45 16.3 +2.0**
KONT Konya--Tatoy 6.94 56 *i* P **Pn 23 45 16.7 +0.7**
KDHN Kadinhani 7.09 51 *i* P **Pn 23 45 18.6 +0.6**
KOT Kottamia 7.13 125 S **Sn 23 46 37.1 -1.7**
baz=126
GULN MERSIN_Gulnar 7.17 72 *i* P **Pn 23 45 20.0 +1.0**
FNA Florina 7.19 337 *e*Pn **Pn 23 45 20.6 +1.3**
GLL Jalalah 7.27 128 P **Pn 23 45 21.5 +1.0**
baz=128
HFRF Wahat Farafira 7.57 158 P **Pn 23 45 25.9 +1.3**
baz=158
TIP Timpagrande 8.33 309 *e*Pn **Pn 23 45 35.8 +0.8**
VTS Vitosha 8.51 351 *e*Pn **Pn 23 45 36.6 -0.9**
MMAI Mount Meron Ar 8.67 95 Pn **Pn 23 45 39.8 +0.1**
comp=Z,2.6nm,0.3s,baz=279,slow=12,SNR=15
MMAI Sn **Sn 23 47 13.1 -3.6**
comp=Z,5.1nm,0.3s,baz=258,slow=20,SNR=7.1
BR101 Keskin Array S 8.75 49 *e*Pn **Pn 23 45 41.7 +0.9**
BR131 Keskin Array S 8.75 49 *e*Pn **Pn 23 45 39.8 -1.1**
BRTR Keskin Array B 8.75 49 Pn **Pn 23 45 41.7 +0.9**
comp=Z,0.2nm,0.3s,baz=235,slow=14,SNR=6.3
EIL Elat 9.51 116 Pn **Pn 23 45 52.0 +0.8**
comp=Z,0.8nm,0.3s,baz=252,slow=1.9,SNR=15
EIL Sn **Sn 23 47 33.0 -4.4**
comp=Z,2.1nm,0.3s,baz=358,slow=13,SNR=4.8
ASF Jabal al Asfar 10.08 98 Sn **Sn 23 47 47.4 -4.1**
comp=Z,0.4nm,0.3s,baz=292,slow=19,SNR=2.5
STON Ston 10.40 328 *e*Pn **Pn 23 46 01.1 -2.1**
STON Sn Sn 23 47 44.6 -14
UDBI Udbina 12.56 328 *i* Pn **Pn 23 46 31.6 -1.3**
VYHS Vyhne 15.01 344 *e*PN **Pn 23 47 03.8 -2.3**
KOLL Kolacno 15.19 343 *e*P **P 23 47 14.4 +1.0**
MODS Modra-Piesok 15.30 340 *e*P **P 23 47 13.6 -1.1**
ABTA Abfaltersbach 15.73 326 *e*P **P 23 47 20.8 +1.2**
comp=Z,5.6nm,0.9s
VRAC Vranov 16.34 340 Pn **Pn 23 47 23.6 +0.2**
comp=Z,0.1nm,0.3s,baz=145,slow=9.7,SNR=4.1
WTTA Wattenberg 16.52 326 P **P 23 47 29.6 +1.3**
comp=Z,8.6nm,1.3s
WATA Walderalm 16.60 326 P **P 23 47 30.5 +1.3**
comp=Z,2.7nm,0.7s
KIV Kislovodsk 16.72 49 *e*Pn **Pn 23 47 28.1 -0.3**
comp=Z,16nm,1.2s
KVAR Kislovodsk Arr 16.72 49 Pn **P 23 47 30.6 0.0**
baz=270,slow=20,SNR=2.8
AKASG Malin Array Be 16.74 9 Pn **Pn 23 47 27.4 -1.0**
comp=Z,2.8nm,0.3s,baz=200,slow=10,SNR=17
AKBB Malin Array Si 16.74 9 *e*P **Pn 23 47 28.4 0.0**
comp=Z,10nm,0.7s
KBZ Khabaz 16.74 50 Pn **P 23 47 30.9 +0.2**
comp=Z,0.3nm,0.3s,baz=266,slow=7.2,SNR=8.6
FETA Feichten 16.77 324 pP **P 23 47 33.7 +2.5**
comp=Z,7.9nm,1.3s
MOTA Moosalm 16.82 325 *e*pP **P 23 47 33.6 +1.9**
comp=Z,0.7nm,0.6s
GEC2 GERESS Array S 16.89 333 *e*Pn **Pn 23 47 30.1 -0.4**
comp=Z,3.7nm,0.9s
GERES GERESS Array B 16.89 333 Pn **Pn 23 47 30.2 -0.3**
comp=Z,0.6nm,0.3s,baz=148,slow=11,SNR=21
DAVOX Davos/Dischmat 17.03 322 Pn **Pn 23 47 33.1 +0.7**
comp=Z,0.1nm,0.3s,baz=248,slow=19,SNR=1.7
KHC Kasperske Hory 17.17 334 *e*P **Pn 23 47 34.1 +0.1**
comp=Z,2.2nm,1.3s
KHC Kasperske Hory 17.17 334 *e*P **P 23 47 35.5 0.0**
DAVA Damuels 17.38 323 P **P 23 47 40.1 +2.3**
comp=Z,5.7nm,1.0s
CLL Collm 19.20 336 *e*P **P 23 47 58.0 +0.3**
comp=Z,5.0nm,1.1s
SUW Suwalki 19.83 357 *e*P **P 23 48 02.9 -1.6**
comp=Z,27nm,1.1s
ESDC Sonseca Array 23.81 292 P **P 23 48 46.8 0.0**
comp=Z,1.3nm,0.9s,baz=80,slow=11,SNR=8.2
HFS Hagfors 26.98 347 P **P 23 49 14.7 -0.5**
comp=Z,0.7nm,0.4s,baz=148,slow=8.7,SNR=6.0
FIA0 FINESS Array S 27.24 1 *e*P **P 23 49 15.5 -2.1**
FINES FINESS Array B 27.24 1 P **P 23 49 15.5 -2.1**
comp=Z,2.5nm,0.8s,baz=160,slow=12,SNR=8.2
EKA Eskdalemuir Ar 28.78 326 P **P 23 49 30.9 -0.5**
comp=Z,0.3nm,0.4s,baz=124,slow=9.9,SNR=6.1
AKTO Aktyubinsk 28.92 46 P **P 23 49 32.4 -0.4**
comp=Z,0.9nm,0.6s,baz=258,slow=9.3,SNR=2.5
TOA1 Torodi Ar. Sit 29.86 231 *e*P **P 23 49 41.7 +0.3**
TOA0 Torodi Ar. Sit 29.87 231 *e*P **P 23 49 42.8 +1.3**
comp=Z,7.3nm,0.6s
TORD Torodi Ar. Bea 29.87 231 P **P 23 49 41.7 +0.2**
comp=Z,4.7nm,0.6s,baz=19,slow=9.4,SNR=12
ARA0 ARCESS Array S 35.36 0 *e*P **P 23 50 26.8 -2.2**
ARCES ARCESS Array B 35.36 0 P **P 23 50 26.8 -2.2**
comp=Z,2.3nm,1.0s,baz=172,slow=9.7,SNR=6.6
KK31 Karatay Array 36.16 62 *e*P **P 23 50 37.1 +0.9**
comp=Z,2.1nm,0.9s
KKAR Karatay Array 36.16 62 *e*P **P 23 50 36.6 +0.4**
DBIC Dimbokro 38.96 232 P **P 23 51 00.8 +0.7**
comp=Z,6.2nm,1.0s,baz=37,slow=5.1,SNR=4.0
DBIC Dimbokro 38.96 232 *e*P **P 23 51 00.8 +0.7**
comp=Z,47nm,1.6s
MK31 Makanchi Array 44.32 56 *e*P **P 23 51 44.0 +0.2**
comp=Z,3.9nm,1.0s
MK32 Makanchi Array 44.32 56 *e*P **P 23 51 44.1 +0.3**
MKAR Makanchi Array 44.32 56 P **P 23 51 44.1 +0.3**
comp=Z,1.7nm,0.8s,baz=263,slow=8.2,SNR=11
ZAA0 Zalesovo Array 45.68 46 *e*P **P 23 51 53.2 -1.2**
comp=Z,3.2nm,0.4s
ZALV Zalesovo Beam 45.68 46 P **P 23 51 54.1 -0.2**
comp=Z,3.1nm,0.3s,baz=265,slow=9.1,SNR=14
ZAA1 Zalesovo Array 45.68 46 *e*P **P 23 51 54.1 -0.2**
WMQ Urumqi 48.51 59 *e*P **P 23 52 18.1 +1.4**
NRIK Noril'sk 48.74 25 P **P 23 52 17.4 -0.6**
comp=Z,1.8nm,0.7s,baz=212,slow=7.3,SNR=3.7
SONA0 Songino Array 60.11 50 *e*P **P 23 53 41.7 +0.5**
SONM Songino Array 60.11 50 P **P 23 53 41.7 +0.5**
comp=Z,0.8nm,0.5s,baz=289,slow=9.7,SNR=5.6
LZH Lanzhou 62.65 63 *e*P **P 23 53 58.8 +0.3**
LZH pP pwP 23 54 13.8 +5.5
LZH sP sP 23 54 20.3 +13
LZH *e*PP **PP 23 56 18.5 +2.3**
LZH pmax pmax
comp=Z,15nm,1.3s
LZH pmax pmax
comp=Z,56nm,4.8s
CD2 Chengdu 64.76 69 *e*P **P 23 54 11.1 -1.3**
HHC Hu-ho-hao-te 66.19 56 *e*P **P 23 54 21.8 +0.2**
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,120nm,7.2s
KSRS Korea Array 78.88 52 P **P 23 55 38.3 +1.3**
comp=Z,0.8nm,0.5s,baz=324,slow=6.4,SNR=3.9

*IDC **16** 23:50:56.5±6.2, 23°.67S×179°.72W, h552km±68km, mb3.6/6, mb1 3.7/7, mb1mx3.3/29, mbtmp4.5/7, Error ellipse: s-maj=46.1km s-min=36.1km az=22.0*
ISC 16 23:50:54.9±1.3, **23°.6S**±0°.1×**179.7W**±0°.2, **h536**km, **n11**, σ0**84/11**, **mb4.0/6**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.86**	**190**	P	**P**	**23 54 04.1**	**+1.1**
	0.9nm,0.3s,baz=31,slow=5.9,SNR=3.2						
URZ				S	**S**	**23 56 37.0**	**-0.9**
	0.5nm,0.3s,baz=13,slow=19,SNR=2.9						
CTA	**Charters Tower**	**31.77**	**270**	P	**P**	**23 56 36.0**	**+0.6**
	11nm,0.3s,baz=95,slow=11,SNR=20						
STKA	**Stephens Creek**	**35.10**	**248**	P	**P**	**23 57 02.8**	**-0.7**
	1.4nm,0.4s,baz=118,slow=16,SNR=3.3						
ASAR	**Alice Springs**	**42.37**	**260**	P	**P**	**23 58 02.3**	**-0.1**
	2.5nm,0.4s,baz=96,slow=8.1,SNR=28						
WRA	**Warramunga Arr**	**42.72**	**266**	P	**P**	**23 58 04.6**	**-0.5**
	6.1nm,0.5s,baz=93,slow=8.7,SNR=32						
PETK	**Petropavlovsk-**	**78.89**	**346**	P	**P**	**00 02 02.4**	**+0.1**
	1.4nm,0.6s,baz=138,slow=7.6,SNR=3.5						
CMAR	**Chiang Mai Arr**	**89.70**	**290**	P	**P**	**00 02 57.5**	**+1.1**
	0.6nm,0.3s,baz=145,slow=3.3,SNR=4.1						
HFS	**Hagfors**	**142.32**	**349**	PKhKP	PKPpre	00 09 21.7	
	1.5nm,0.3s,baz=56,slow=3.2,SNR=29						
AKASG	**Malin Array Be**	**144.88**	**328**	PKP	**PKPdf**	**00 09 30.1**	**-0.6**
	0.5nm,0.4s,baz=45,slow=4.3,SNR=8.2						
BRTR	**Keskin Array B**	**147.63**	**308**	PKPbc	**PKPbc**	**00 09 38.9**	**-0.6**
	0.4nm,0.6s,baz=146,slow=5.3,SNR=5.2						
EKA	**Eskdalemuir Ar**	**148.21**	**4**	PKPbc	**PKPbc**	**00 09 39.5**	**-0.7**
	0.2nm,0.4s,baz=357,slow=2.4,SNR=5.4						

*HLW **16** 23:53:30.9, 34°.58N×25°.01E, h23km±24km, Md4.1, Ml4.2*
*IDC **16** 23:53:31.6±0.8, 34°.29N×25°.08E, h0km, mb3.7/11, mb1 3.9/19, mb1mx3.7/44, mbtmp3.8/19, ML4.2/6, MS3.4/1, Ms1 3.4/1, ms1mx2.6/45, Error ellipse: s-maj=14.8km s-min=13.5km az=167.0*
*ATH **16** 23:53:32.5, 34°.19N×25°.17E, h22km±1km, ML3.7/6, Error ellipse: s-maj=4.1km s-min=1.6km az=358.0*
*ISCJB **16** 23:53:33.0±0.6, 34°.13N±0°.02×25°.17E±0°.03, h23km±5km, mb3.5/12, MS3.3/1, Error ellipse: s-maj=4.8km s-min=2.5km az=43.5*
*GII **16** 23:53:33.2±0.0, 34°.55N×25°.31E, h8km*
*THE **16** 23:53:35.0, 34°.31N×25°.13E, h0km±1km, ML3.6/7, Error ellipse: s-maj=2.4km s-min=0.8km az=174.0*
*DDA **16** 23:53:57.8, 34°.11N×25°.08E, h11km, ML3.6*
ISC 16 23:53:35.2±1.3, **34°.24N**±0°.04×**25°.14E**±0°.03, **h26**km±10km, **n164**, σ1**51/190**, **mb3.7/12**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.82**	**341**	P	**Pb**	**23 53 50.1**	**-0.8**
SIVA				S	**Sb**	**23 54 01.2**	**-0.3**
SIVA	**Sivas**	**0.82**	**341**	P	**Pb**	**23 53 49.6**	**-1.2**
SIVA				S	**Sb**	**23 54 01.5**	**-0.1**
SIVA				AML	AML	23 54 07.5	
	comp=N,29885μm,0.6s						
SIVA				AML	AML	23 54 09.3	
	comp=E,42845μm,0.4s						
TMBK	**Timbaki Herakl**	**0.88**	**340**	P	**Pb**	**23 53 51.1**	**-0.8**
TMBK				S	**Sb**	**23 54 03.2**	**-0.1**
LAST	**Lasithi**	**0.96**	**17**	P	**Pn**	**23 53 52.4**	**-0.8**
LAST				S	**Sn**	**23 54 06.5**	**+0.5**
LAST	**Lasithi**	**0.96**	**17**	P	**Pn**	**23 53 51.9**	**-1.2**
LAST				S	**Sb**	**23 54 05.3**	**-0.3**
LAST				AML	AML	23 54 12.0	
	comp=N,3793μm,0.7s						
LAST				AML	AML	23 54 13.5	
	comp=E,4680μm,0.5s						
GVD	**Gavdhos**	**1.05**	**305**	P	**Pn**	**23 53 53.7**	**-0.6**
GVD				S	**Sb**	**23 54 08.8**	**+0.6**
GVD	**Gavdhos**	**1.05**	**305**	P	**Pn**	**23 53 53.8**	**-0.6**
GVD				S	**Sb**	**23 54 08.5**	**+0.4**
GVD				AML	AML	23 54 16.9	
	comp=N,11277μm,0.5s						
GVD				AML	AML	23 54 21.7	
	comp=E,13694μm,0.4s						
IACM	**Heraklion**	**1.06**	**357**	P	**Pn**	**23 53 53.7**	**-0.8**
IDI	**Anoyia**	**1.06**	**349**	Pn	**Pn**	**23 53 53.5**	**-1.1**
	comp=E,169nm,0.3s,baz=339,slow=23,SNR=29						
IDI				Sn	**Sn**	**23 54 08.4**	**-0.2**
	comp=E,289nm,0.3s,baz=270,slow=20,SNR=18						
NPS	**Neapolis**	**1.09**	**21**	P	**Pn**	**23 53 54.7**	**-0.2**
NPS				S	**Sb**	**23 54 09.9**	**+0.6**
NPS	**Neapolis**	**1.09**	**21**	P	**Pn**	**23 53 54.4**	**-0.5**
PRNS	**Prines Rethymn**	**1.24**	**335**	P	**Pn**	**23 53 56.7**	**-0.2**
PRNS				S	**Sb**	**23 54 14.5**	**+1.0**
STIA	**Sitia Lasithi**	**1.24**	**39**	P	**Pb**	**23 53 57.8**	**-0.2**
STIA				S	**Sb**	**23 54 13.9**	**+0.3**
ZKR	**Zakros**	**1.25**	**45**	P	**Pn**	**23 53 55.5**	**-1.5**
ZKR	**Zakros**	**1.25**	**45**	P	**Pn**	**23 53 57.3**	**+0.3**
ZKR				S	**Sb**	**23 54 14.9**	**+1.1**
ZKR	**Zakros**	**1.25**	**45**	P	**Pn**	**23 53 55.5**	**-1.5**
ZKR				S	**Sb**	**23 54 14.6**	**+0.9**
ZKR				AML	AML	23 54 26.1	
	comp=E,4472μm,0.5s						
ZKR				AML	AML	23 54 28.3	
	comp=N,2119μm,0.5s						
VAM	**Vamos**	**1.40**	**327**	P	**Pn**	**23 53 59.6**	**+0.5**
VAM				S	**Sb**	**23 54 19.3**	**+1.3**
VAM	**Vamos**	**1.40**	**327**	P	**Pn**	**23 53 59.5**	**+0.5**
VAM				S	**Sb**	**23 54 19.6**	**+1.6**
VAM				AML	AML	23 54 29.0	
	comp=E,4979μm,0.5s						
VAM				AML	AML	23 54 29.6	
	comp=N,5300μm,0.7s						
IMMV	**Iera Moni Meta**	**1.54**	**322**	P	**Pn**	**23 54 01.9**	**+0.8**
IMMV	**Iera Moni Meta**	**1.54**	**322**	P	**Pn**	**23 54 01.7**	**+0.6**
IMMV				S	**Sb**	**23 54 23.0**	**+0.7**
IMMV	**Iera Moni Meta**	**1.54**	**322**	P	**Pn**	**23 54 02.0**	**+0.9**
IMMV				S	**Sb**	**23 54 22.3**	**0.0**
IMMV				AML	AML	23 54 34.7	
	comp=E,3655μm,0.6s						
IMMV				AML	AML	23 54 36.6	
	comp=N,3879μm,0.4s						
CHAN	**Chania 1.56 325**			P	**Pb**	**23 54 02.6**	**-0.8**
CHAN				S	**Sb**	**23 54 22.7**	**-0.1**
KARP	**Karpathos 2.11 51**			P	**Pn**	**23 54 10.5**	**+1.5**
KARP	**Karpathos 2.11 51**			P	**Pn**	**23 54 09.1**	**+0.1**
THR9	**Santorini-Faro 2.12 5**			P	**Pn**	**23 54 10.4**	**+1.4**
THR6	**Thira Island, 2.12 6**			P	**Pn**	**23 54 09.9**	**+0.9**
SAP1	**Santorini-Akro 2.12 6**			P	**Pn**	**23 54 10.3**	**+1.2**
SANT	**Santorini 2.14 7**			*e*P	**Pn**	**23 54 08.7**	**-0.7**
SANT	**Santorini 2.14 7**			P	**Pn**	**23 54 09.8**	**+0.4**
THR5	**Thira Island, 2.18 4**			P	**Pn**	**23 54 10.9**	**+1.1**
THR8	**Santorini-Mono 2.18 7**			P	**Pn**	**23 54 10.0**	**+0.2**
SAP2K	**Karterados 2.18 7**			P	**Pn**	**23 54 10.4**	**+0.6**
THR7	**Fira-Santorini 2.19 6**			P	**Pn**	**23 54 10.3**	**+0.3**
SAP3	**Santorini-Thir 2.20 4**			P	**Pn**	**23 54 10.6**	**+0.6**
ANKY	**Antikythira Is 2.21 318**			P	**Pn**	**23 54 10.1**	**-0.2**
THR2	**Thira Island, 2.21 6**			P	**Pn**	**23 54 10.5**	**+0.2**
CMBO	**Columbo, Santo 2.24 6**			P	**Pn**	**23 54 11.5**	**+0.9**
IOSP	**Ios island 2.48 3**			P	**Pn**	**23 54 14.3**	**+0.3**
MHLO	**Agia Marina, M 2.52 346**			P	**Pn**	**23 54 14.6**	**+0.2**
MHLA	**Plaka, Milos I 2.57 347**			P	**Pn**	**23 54 16.1**	**+1.0**
KYTH	**Kithira 2.65 320**			P	**Pn**	**23 54 18.4**	**+2.1**
SLUM	**Salum 2.74 179**			P	**Pn**	**23 54 19.5**	**+1.9**
	baz=176						
SLUM				S	**Sn**	**23 54 51.5**	**+1.6**
	baz=176						
APE	**Apeiranthos 2.84 6**			P	**Pn**	**23 54 19.0**	**0.0**
APE	**Apeiranthos 2.84 6**			P	**Pn**	**23 54 18.9**	**0.0**
VLI	**Velias 3.06 325**			P	**Pn**	**23 54 21.9**	**0.0**
ARG	**Arkhangelos 3.14 50**			P	**Pn**	**23 54 25.4**	**+2.3**
ARG	**Arkhangelos 3.14 50**			P	**Pn**	**23 54 23.9**	**+0.8**
DAT	**Datca 3.18 38**			P	**Pn**	**23 54 25.3**	**+1.6**
DAT	**Datca 3.18 38**			*i* P	**Pn**	**23 54 25.1**	**+1.4**
DAT				IAML_P			
	comp=Z,255nm,0.1s						
BODT	**Bodrum 3.33 32**			*e*P	**Pn**	**23 54 25.9**	**+0.3**
BDRM	**Kayabasi 3.39 33**			*i* P	**Pn**	**23 54 28.7**	**+2.2**
BDRM				IAML_P			
	comp=Z,16nm,0.1s						
BBRN	**Bozburun-Marma 3.41 44**			*e*P	**Pn**	**23 54 28.8**	**+2.1**
GCAM	**G?zelcaml? 3.85 26**			*e*P	**Pn**	**23 54 33.9**	**+1.1**
GCAM	**G?zelcaml? 3.85 26**			*i* P	**Pn**	**23 54 34.7**	**+1.9**
GCAM				IAML_P			
	comp=Z,87nm,0.2s						
DALY	**Dalyan (Mula) 3.85 47**			*e*P	**Pn**	**23 54 34.8**	**+2.0**
DALY	**Dalyan (Mula) 3.85 47**			*i* P	**Pn**	**23 54 35.5**	**+2.7**
DALY				IAML_P			
	comp=Z,711nm,0.2s						
TURN	**Turunc 3.86 46**			*e*P	**Pn**	**23 54 31.2**	**-1.7**
TURN	**Turunc 3.86 46**			*i* P	**Pn**	**23 54 30.1**	**-2.7**
YER	**Yerkesik 3.86 41**			*e*P	**Pn**	**23 54 34.7**	**+1.7**
ITM	**Ithomi 3.93 319**			*e*P	**Pn**	**23 54 34.8**	**+0.9**
ITM	**Ithomi 3.93 319**			P	**Pn**	**23 54 34.4**	**+0.5**
FETY	**Fethiye 4.01 52**			*e*P	**Pn**	**23 54 37.1**	**+2.0**
FETY	**Fethiye 4.01 52**			*i* P	**Pn**	**23 54 35.6**	**+0.5**
FETY				IAML_P			
	comp=Z,705nm,0.2s						
AYDN	**Tasoluk 4.07 32**			*i* P	**Pn**	**23 54 38.1**	**+2.1**
AYDN				IAML_P			
	comp=Z,614nm,0.2s						
KSL	**Kastellorizon 4.11 61**			P	**Pn**	**23 54 37.2**	**+0.8**
AKAS	**Kas 4.16 60**			*e*P	**Pn**	**23 54 40.2**	**+3.0**
AKAS	**Kas 4.16 60**			*i* P	**Pn**	**23 54 38.2**	**+1.0**
CHOS	**Chios island 4.20 10**			*e*P	**Pn**	**23 54 37.8**	**+0.1**
URLA	**Izmir 4.28 16**			*e*P	**Pn**	**23 54 39.0**	**+0.3**
AYDB	**Zeytinkoy-Aydi 4.32 30**			*e*P	**Pn**	**23 54 40.5**	**+1.1**
BLCB	**Balcova 4.41 20**			*e*P	**Pn**	**23 54 40.4**	**-0.1**
KLV	**Kalavryta, Ach 4.50 328**			P	**Pn**	**23 54 41.9**	**+0.1**
ELL	**Elmali 4.63 56**			*e*P	**Pn**	**23 54 46.1**	**+2.5**
AKUM	**Antalya-Kumluc 4.74 63**			*i* P	**Pn**	**23 54 46.0**	**+1.1**
SWA2	**4.99 177**			P	**Pn**	**23 54 50.2**	**+1.7**
	baz=175						
SIGR	**SIGRI 4.99 6**			*e*P	**Pn**	**23 54 48.6**	**+0.1**
MANT	**Manisa 5.06 32**			*i* P	**Pn**	**23 54 51.4**	**+1.7**
MANT				IAML_P			
	comp=Z,255nm,0.2s						
KORT	**Korkueli 5.06 56**			*i* P	**Pn**	**23 54 52.8**	**+3.3**
AKHS	**Akhisar 5.11 24**			*i* P	**Pn**	**23 54 49.7**	**-0.4**
KULA	**Kula-Manisa 5.12 33**			*e*P	**Pn**	**23 54 52.4**	**+2.0**
BRDR	**BURDUR-Merkez 5.28 48**			*i* P	**Pn**	**23 54 54.0**	**+1.5**
BRDR				IAML_P			
	comp=Z,215nm,0.3s						
AGG	**Agios Georgios 5.28 336**			*e*P	**Pn**	**23 54 53.1**	**+0.6**
HBRG	**Burj al `Arab 5.40 131**			P	**Pn**	**23 54 55.9**	**+1.8**
	baz=133						
HBRG				S	**Sn**	**23 55 55.4**	**-0.1**
	baz=133						
KHAL	**Karahalli 5.42 39**			*i* P	**Pn**	**23 54 55.9**	**+1.4**
KHAL				IAML_P			
	comp=Z,254nm,0.2s						
USAK	**Uak-Merkez 5.45 34**			*i* P	**Pn**	**23 54 57.7**	**+2.8**
USAK				IAML_P			
	comp=Z,602nm,0.3s						
BAYC	**CANAKKALE_Bayr 5.61 11**			*i* P	**Pn**	**23 54 57.7**	**+0.8**
BAYC				IAML_P			
	comp=Z,188nm,0.3s						
KEPZ	**Antalya-Kepez 5.90 61**			*i* P	**Pn**	**23 55 02.4**	**+1.4**
KEPZ				IAML_P			
	comp=Z,282nm,0.2s						
GDZ	**Gediz 5.97 35**			*i* P	**Pn**	**23 55 02.2**	**+0.2**
GDZ				IAML_P			
	comp=Z,122nm,0.3s						
LEF	**Lefka 6.45 80**			*i* P	**Pn**	**23 55 07.3**	**-1.2**
LEF				IAML_P			
	comp=Z,454nm,0.2s						
DOGA	**KONYA_Doganhis 6.54 52**			*i* P	**Pn**	**23 55 12.2**	**+2.3**
DOGA				IAML_P			
	comp=Z,234nm,0.2s						
HNAT	**Natroun 6.54 133**			P	**Pn**	**23 55 10.8**	**+0.9**
	baz=134						
HNAT				AMP		23 56 00.0	
	baz=134						
HNAT				S	**Sn**	**23 56 23.1**	**-0.5**
	baz=134						
ERMK	**Ermenek 6.78 67**			*i* P	**Pn**	**23 55 15.3**	**+2.0**
ERMK				IAML_P			
	comp=Z,852nm,0.2s						
KONT	**Konya--Tatoy 6.92 56**			*i* P	**Pn**	**23 55 17.6**	**+2.7**
KONT				IAML_P			
	comp=Z,153nm,0.2s						
KDHN	**Kadinhani 7.07 51**			*i* P	**Pn**	**23 55 17.8**	**+0.7**
KDHN				IAML_P			
	comp=Z,61nm,0.2s						
GULN	**MERSIN_Gulnar 7.15 72**			*i* P	**Pn**	**23 55 18.7**	**+0.6**
GULN				IAML_P			
	comp=Z,421nm,0.2s						
GLL	**Jalalah 7.27 128**			P	**Pn**	**23 55 19.6**	**-0.2**
	baz=129						
EREN	**Erenkoy 7.53 78**			*i* P	**Pn**	**23 55 24.6**	**+1.2**
EREN				IAML_P			
	comp=Z,2μm,0.3s

KSHT	Keshet	8.99	95	Pn	Pn	23 55 43.3	-0.2
SHMJ	Saham	9.01	97	P	Pn	23 55 42.9	-0.7
	comp=Z,16nm,0.4s,comp=Z,0.1nm						
DSI	Dead Sea	9.02	104	Pn	Pn	23 55 43.6	-0.1
MZDA	Masada	9.09	106	Pn	Pn	23 55 44.3	-0.5
KRMI	Paran Flat	9.11	114	Pn	Pn	23 55 45.0	0.0
PRNI	Paran	9.21	112	Pn	Pn	23 55 46.8	+0.4
LISJ	El Lisan	9.21	106	P	Pn	23 55 45.9	-0.5
VAE	Valguarnera	9.28	293	Pn	Pn	23 55 47.9	+0.4
	comp=Z,0.2nm,0.3s,baz=79,slow=16,SNR=1.6						
VAE				Sn	Sn	23 57 27.1	-4.0
	comp=Z,0.9nm,0.3s,baz=274,slow=19,SNR=3.3						
WALJ	Wala	9.36	104	P	Pn	23 55 48.1	-0.4
HRFI	Mount Harif	9.38	114	Pn	Pn	23 55 49.1	+0.3
HRFI	Mount Harif	9.38	114	P	Pn	23 55 49.5	+0.7
	comp=Z,38nm,0.5s						
MBRI	Mt Berech	9.41	115	Pn	Pn	23 55 49.0	-0.2
HDK1	Dakhla	9.42	156	P	Pn	23 55 50.7	+1.2
	baz=156						
EIL	Elat	9.50	116	Pn	Pn	23 55 50.2	-0.2
	comp=Z,4.4nm,0.3s,baz=356,slow=4.8,SNR=30						
EIL				Sn	Sn	23 57 31.1	-5.3
	comp=Z,1.3nm,0.3s,baz=16,slow=13,SNR=4.0						
EIL	Elat	9.50	116	Pn	Pn	23 55 49.8	-0.6
AQBJ	Aqaba	9.54	115	P	Pn	23 55 51.3	+0.3
ASF	Jabal al Asfar	10.07	99	Pn	Pn	23 55 57.7	-0.5
	comp=Z,0.6nm,0.3s,baz=278,slow=7.1,SNR=4.9						
ASF				Sn	Sn	23 57 48.0	-2.4
	comp=Z,0.6nm,0.3s,baz=356,slow=15,SNR=3.2						
STON	Ston	10.39	328	*e*Pn	Pn	23 55 58.0	-4.6
STON				Sn	Sn	23 57 44.9	-13
MLR	Muntele Rosu	11.25	3	Pn	Pn	23 56 17.1	+2.6
	comp=Z,0.0nm,0.3s,baz=169,slow=16,SNR=1.6						
SOKA	Soboth	14.59	331	*e*P	P	23 57 04.6	-1.7
	comp=Z,0.7nm,0.4s						
ARSA	Arzberg	14.88	334	P	P	23 57 09.7	+0.4
	comp=Z,0.9nm,0.4s						
MYKA	Terra Mystica	15.13	328	*e*P	P	23 57 13.0	+0.8
	comp=Z,0.8nm,0.5s						
KBA	Koelnbreinsper	15.61	329	*e*P	P	23 57 18.8	+1.2
	comp=Z,1.5nm,0.5s						
ABTA	Abfaltersbach	15.73	326	P	P	23 57 20.0	+1.2
	comp=Z,3.3nm,0.7s						
MOA	Molln	15.85	332	Pn	P	23 57 18.7	-1.5
	comp=Z,1.0nm,0.6s						
WTTA	Wattenberg	16.52	326	P	P	23 57 30.5	+2.9
	comp=Z,3.4nm,1.0s						
WATA	Walderalm	16.60	326	*e*P	P	23 57 30.7	+2.1
	comp=Z,4.4nm,1.0s						
KBZ	Khabaz	16.72	50	Pn	P	23 57 32.6	+2.9
	comp=Z,0.2nm,0.3s,baz=231,slow=14,SNR=2.7						
AKASG	Malin Array Be	16.72	9	Pn	Pn	23 57 27.0	-0.5
	comp=Z,2.2nm,0.3s,baz=200,slow=11,SNR=12						
MOTA	Moosalm	16.82	325	P	P	23 57 34.4	+3.4
	comp=Z,0.3nm,0.3s						
GERES	GERESS Array B	16.89	333	Pn	Pn	23 57 30.5	+0.8
	comp=Z,0.5nm,0.3s,baz=145,slow=12,SNR=22						
RETA	Reutte	17.09	325	pP	P	23 57 40.2	+6.4
	comp=Z,2.1nm,0.7s						
KHC	Kasperske Hory	17.17	334	*e*P	P	23 57 35.0	+0.3
DAVA	Damuels	17.38	323	*e*Pn	P	23 57 37.0	-0.1
	comp=Z,1.9nm,0.6s						
CLL	Collm	19.20	336	*e*P	Pn	23 58 03.0	+5.0
ESDC	Sonseca Array	23.82	292	P	P	23 58 46.0	-0.2
	comp=Z,0.4nm,0.6s,baz=87,slow=10,SNR=3.4						
GEYT	Alibeck	26.83	73	P	P	23 59 15.3	+1.8
	comp=Z,0.5nm,0.5s,baz=270,slow=10,SNR=2.8						
GEYT				LR	LR	00 11 58.2	
	comp=Z,85nm,20.9s,baz=250,slow=41						
HFS	Hagfors	26.96	347	P	P	23 59 13.9	-0.5
	comp=Z,0.8nm,0.6s,baz=156,slow=9.2,SNR=5.9						
FINES	FINESS Array B	27.23	1	P	P	23 59 15.0	-1.8
	comp=Z,0.6nm,0.4s,baz=165,slow=12,SNR=6.3						
NOA	NORSAR Array B	28.28	346	P	P	23 59 25.6	-0.7
	comp=Z,0.1nm,0.4s,baz=154,slow=9.9,SNR=3.7						
EKA	Eskdalemuir Ar	28.78	326	P	P	23 59 31.0	+0.2
	comp=Z,0.5nm,0.5s,baz=133,slow=7.8,SNR=4.7						
TORD	Torodi Ar. Bea	29.89	231	P	P	23 59 40.8	-0.2
	comp=Z,0.7nm,0.4s,baz=32,slow=7.9,SNR=22						
ARCES	ARCESS Array B	35.35	0	P	P	00 00 26.8	-1.4
	comp=Z,0.4nm,0.4s,baz=172,slow=9.6,SNR=6.3						
DBIC	Dimbokro	38.98	232	P	P	00 00 59.5	-0.1
	comp=Z,2.8nm,0.8s,baz=34,slow=8.2,SNR=2.7						
MKAR	Makanchi Array	44.30	56	P	P	00 01 43.3	+0.4
	comp=Z,0.6nm,0.4s,baz=266,slow=7.4,SNR=6.3						
ZALV	Zalesovo Beam	45.66	46	P	P	00 01 53.4	-0.1
	comp=Z,1.2nm,0.3s,baz=274,slow=9.7,SNR=5.7						
SONM	Songino Array	60.09	50	P	P	00 03 40.6	+0.3
	comp=Z,0.5nm,0.7s,baz=280,slow=8.1,SNR=2.5						

*IDC **17** 00:13:35.8±1.2, 34°.21N×25°.10E, h0km, mb3.6/5, mb1 3.6/0, mb1mx3.4/44, mbtmp3.5/10, ML3.8/4, Error ellipse: s-maj=21.2km s-min=20.2km az=7.0*
*THE **17** 00:13:40.1, 34°.36N×25°.13E, h0km±1km, ML3.0/7, Error ellipse: s-maj=2.3km s-min=0.8km az=171.0*
*ATH **17** 00:13:41.0, 34°.43N×25°.11E, h28km±1km, ML3.1/5, Error ellipse: s-maj=5.6km s-min=1.7km az=356.0*

ISC 17 00:13:38.9±1.7, 34°.28N±0°.07×25°.11E±0°.03, h9km±10km, n62, σ1s28/74, mb3.7/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.78	341	P	Pg	00 13 54.0	+0.2
SIVA				S	Sb	00 14 04.8	-0.4
SIVA	Sivas	0.78	341	P	Pg	00 13 54.1	+0.3
SIVA				S	Sg	00 14 03.7	-0.2
SIVA				AML	AML	00 14 06.0	
	comp=N,8717μm,0.6s						
SIVA				AML	AML	00 14 07.0	
	comp=E,10002μm,0.8s						
TMBK	Timbaki Herakl	0.84	340	P	Pg	00 13 55.4	+0.4
TMBK				S	Sb	00 14 07.3	+0.3
LAST	Lasithi	0.93	19	P	Pg	00 13 56.5	-0.2
LAST				S	Sb	00 14 09.7	0.0
LAST	Lasithi	0.93	19	P	Pg	00 13 56.7	-0.1
LAST				AML	AML	00 14 14.3	
	comp=N,1181μm,0.8s						
LAST				AML	AML	00 14 15.6	
	comp=E,1549μm,0.6s						
GVD	Gavdhos	1.01	304	P	Pg	00 13 58.2	-0.1
GVD				S	Sn	00 14 14.6	+0.9
GVD	Gavdhos	1.01	304	P	Pg	00 13 58.5	+0.2
GVD				S	Sb	00 14 14.2	+2.2
GVD	Gavdhos	1.01	304	P	Pg	00 13 58.6	+0.2
GVD				S	Sb	00 14 13.4	+1.4
GVD				AML	AML	00 14 15.8	
	comp=N,2391μm,0.4s						
GVD				AML	AML	00 14 19.6	
	comp=E,2466μm,0.4s						
IDI	Anoyia	1.02	350	Pn	Pg	00 13 58.1	-0.4
	comp=E,17nm,0.3s,baz=231,slow=7.7,SNR=19						
IDI				Sn	Sb	00 14 11.6	-0.7
	comp=E,80nm,0.3s,baz=298,slow=21,SNR=19						
KSTL	Kastelli Herak	1.02	358	P	Pg	00 13 57.4	-1.1
KSTL				S	Sg	00 14 10.3	-1.5
NPS	Neapolis	1.06	23	P	Pg	00 13 59.0	-0.3
NPS				S	Sb	00 14 14.5	+1.0
NPS	Neapolis	1.06	23	P	Pg	00 13 58.9	-0.3
PRNS	Prines Rethymn	1.19	335	P	Pg	00 14 01.4	-0.4
PRNS				S	Sn	00 14 18.8	+0.7
ZKR	Zakros	1.23	47	P	Pb	00 14 03.5	+1.1
ZKR	Zakros	1.23	47	P	Pg	00 14 02.7	+0.2
ZKR				S	Sb	00 14 19.4	+1.0
ZKR	Zakros	1.23	47	P	Pg	00 14 02.6	0.0
ZKR				AML	AML	00 14 29.4	
	comp=N,507μm,0.4s						
ZKR				AML	AML	00 14 30.7	
	comp=E,1595μm,0.7s						
VAM	Vamos	1.35	326	P	Pg	00 14 03.9	-0.9
VAM				S	Sn	00 14 23.4	+1.4
VAM	Vamos	1.35	326	P	Pg	00 14 04.0	-0.9
VAM				AML	AML	00 14 24.8	
	comp=E,1343μm,0.5s						
VAM				AML	AML	00 14 24.8	
	comp=N,1221μm,0.4s						
IMMV	Iera Moni Meta	1.50	322	P	Pn	00 14 06.0	0.0
IMMV	Iera Moni Meta	1.50	322	P	Pn	00 14 07.0	+1.0
IMMV				S	Sn	00 14 27.3	+1.6
IMMV	Iera Moni Meta	1.50	322	P	Pn	00 14 06.5	+0.5
THR6	Thira Island,	2.08	6	P	Pn	00 14 15.1	+1.1
SANT	Santorini	2.10	8	*e*P	Pn	00 14 16.3	+2.0
KARP	Karpathos	2.10	53	P	Pn	00 14 15.2	+0.9
KARP	Karpathos	2.10	53	P	Pn	00 14 16.0	+1.7
THR3	Thira Island,	2.13	6	P	Pn	00 14 14.2	-0.5
THR5	Thira Island,	2.14	5	P	Pn	00 14 15.6	+0.8
THR8	Santorini-Mono	2.14	8	P	Pn	00 14 15.1	+0.3
ANKY	Antikythira Is	2.17	317	P	Pn	00 14 16.9	+1.7
IOSP	Ios island	2.44	3	P	Pn	00 14 18.8	-0.1
IOSP	Ios island	2.44	3	P	Pn	00 14 18.9	0.0
MHLO	Agia Marina, M	2.47	347	P	Pn	00 14 19.3	-0.1
MHLA	Plaka, Milos I	2.52	347	P	Pn	00 14 20.8	+0.8
KYTH	Kithira	2.60	320	P	Pn	00 14 23.0	+1.8
APE	Apeiranthos	2.80	7	*e*P	Pn	00 14 25.6	+1.7
APE	Apeiranthos	2.80	7	P	Pn	00 14 23.6	-0.4
VLI	Veliai	3.01	324	P	Pn	00 14 27.5	+0.8
ARG	Arkhangelos	3.13	51	*e*P	Pn	00 14 30.0	+1.6
ARG	Arkhangelos	3.13	51	P	Pn	00 14 30.0	+1.6
DAT	Datca	3.16	39	*e*P	Pn	00 14 30.8	+1.8
BBRN	Bozburun-Marma	3.39	44	*e*P	Pn	00 14 34.1	+2.1
DID	Didima	3.56	335	P	Pn	00 14 34.3	-0.1
DALY	Dalyan (Mula)	3.84	48	*e*P	Pn	00 14 39.9	+1.8
YER	Yerkesik	3.84	41	*e*P	Pn	00 14 39.3	+1.0
TURN	Turunc	3.84	47	*e*P	Pn	00 14 35.9	-2.3
ITM	Ithomi	3.88	319	*e*P	Pn	00 14 39.7	+0.9
AKAS	Kas	4.16	61	*e*P	Pn	00 14 43.8	+1.1
CHOS	Chios island	4.17	10	*e*P	Pn	00 14 45.6	+2.9
URLA	Izmir	4.24	16	*e*P	Pn	00 14 46.9	+3.2
AYDB	Zeytinkoy-Aydi	4.29	31	*e*P	Pn	00 14 46.5	+2.0
ELL	Elmali	4.62	56	*e*P	Pn	00 14 50.9	+1.9
AGG	Agios Georgios	5.23	336	*e*P	Pn	00 14 59.9	+2.6
MMAI	Mount Meron Ar	8.67	96	Pn	Pn	00 15 42.0	-2.7
	comp=N,0.4nm,0.3s,baz=284,slow=12,SNR=4.3						
MMAI				Sn	Sn	00 17 13.5	-9.1
	comp=N,2.1nm,0.3s,baz=305,slow=22,SNR=6.6						
BRTR	Keskin Array B	8.72	49	Pn	Pn	00 15 45.4	+0.1
	comp=N,0.0nm,0.3s,baz=230,slow=13,SNR=2.6						
EIL	Elat	9.54	116	Pn	Pn	00 15 55.1	-1.3
	comp=N,1.2nm,0.3s,baz=328,slow=6.9,SNR=8.5						
EIL				Sn	Sn	00 17 34.0	-10
	comp=N,0.4nm,0.3s,baz=219,slow=6.0,SNR=1.3						
AKASG	Malin Array Be	16.68	9	Pn	Pn	00 17 32.3	-0.5
	comp=N,0.7nm,0.3s,baz=200,slow=10,SNR=4.8						
GERES	GERESS Array B	16.84	333	Pn	Pn	00 17 36.6	+1.7
	comp=N,0.1nm,0.3s,baz=146,slow=12,SNR=7.5						
EKA	Eskdalemuir Ar	28.74	326	P	P	00 19 35.0	-1.4
	comp=N,0.3nm,0.6s,baz=125,slow=9.4,SNR=2.8						
TORD	Torodi Ar. Bea	29.90	231	P	P	00 19 44.9	-2.3
	comp=N,0.7nm,0.4s,baz=37,slow=7.9,SNR=24						
MKAR	Makanchi Array	44.30	56	P	P	00 21 47.3	-1.6
	comp=N,0.4nm,0.6s,baz=269,slow=7.3,SNR=4.2						
ZALV	Zalesovo Beam	45.64	46	P	P	00 21 57.5	-2.0
	comp=N,0.8nm,0.4s,baz=288,slow=9.7,SNR=4.0						
SONM	Songino Array	60.07	50	P	P	00 23 45.8	-0.6
	comp=N,0.3nm,0.5s,baz=261,slow=6.6,SNR=2.5						

*IDC **17** 00:16:55.9±1.3, 34°.23N×25°.13E, h0km, mb3.8/4, mb1 3.6/8, mb1mx3.4/47, mbtmp3.6/8, ML3.5/4, Error ellipse: s-maj=21.6km s-min=20.3km az=162.0*
*ISCJB **17** 00:16:56.8±0.7, 34°.21N±0°.06×25°.24E±0°.07, h20km, mb3.6/4, Error ellipse: s-maj=10.1km s-min=5.4km az=44.2*
*ATH **17** 00:17:00.1, 34°.44N×25°.08E, h22km±5km, ML2.6/3, Error ellipse: s-maj=9.9km s-min=3.4km az=351.0*

ISC 17 00:16:58.4±0.8, 34°.33N±0°.06×25°.27E±0°.04, h20km, n32, σ1s71/36, mb3.8/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.78	331	P	Pb	00 17 11.3	-2.0
SIVA	Sivas	0.78	331	P	Pb	00 17 11.9	-1.4
SIVA				S	Sb	00 17 22.8	-1.2
LAST	Lasithi	0.84	12	P	Pb	00 17 12.2	-2.2
LAST	Lasithi	0.84	12	P	Pn	00 17 16.5	+1.3
LAST				AML	AML	00 17 34.1	
	comp=N,668μm,0.9s						
LAST				AML	AML	00 17 35.4	
	comp=E,769μm,0.6s						
NPS	Neapolis	0.97	17	P	Pb	00 17 17.4	+0.9
NPS	Neapolis	0.97	17	P	Pb	00 17 17.4	+0.9
NPS				AML	AML	00 17 41.7	
	comp=N,605μm,0.5s						
NPS				AML	AML	00 17 46.6	
	comp=E,805μm,0.9s						
KSTL	Kastelli Herak	0.98	350	P	Pb	00 17 15.9	-0.8
IDI	Anoyia	1.00	342	Pn	Pn	00 17 17.8	+0.4
	comp=E,7.3nm,0.3s,baz=167,slow=20,SNR=11						
IDI				Sn	Sn	00 17 31.6	+0.6
	comp=E,45nm,0.3s,baz=304,slow=19,SNR=12						
GVD	Gavdhos	1.10	298	P	Pb	00 17 18.3	-0.4
GVD	Gavdhos	1.10	298	P	Pb	00 17 17.7	-1.0
GVD	Gavdhos	1.10	298	P	Pb	00 17 18.0	-0.7
GVD				AML	AML	00 17 39.3	
	comp=E,1341μm,0.4s						
GVD				AML	AML	00 17 42.0	
	comp=N,1097μm,0.4s						
ZKR	Zakros	1.10	45	P	Pn	00 17 18.2	-0.5
VAM	Vamos	1.39	321	P	Pn	00 17 20.2	-2.4
VAM	Vamos	1.39	321	P	Pb	00 17 22.7	-0.9
IMMV	Iera Moni Meta	1.55	317	P	Pb	00 17 26.6	+0.3
IMMV	Iera Moni Meta	1.55	317	P	Pb	00 17 27.4	+1.1
IMMV	Iera Moni Meta	1.55	317	P	Pb	00 17 26.2	-0.1
KARP	Karpathos	1.97	52	*e*P	Pb	00 17 36.2	+2.6
ARG	Arkhangelos	3.00	50	*e*P	Pb	00 17 50.2	-0.9
DAT	Datca	3.04	38	*e*P	Pb	00 17 50.4	-1.5
DALY	Dalyan (Mula)	3.71	47	*e*P	Pb	00 17 59.8	-3.3
TURN	Turunc	3.71	46	*e*P	Pn	00 17 55.6	+1.0
YER	Yerkesik	3.72	40	*e*P	Pb	00 17 59.4	-4.0
AKAS	Kas	4.02	61	*e*P	Pb	00 18 04.7	-3.9
MMAI	Mount Meron Ar	8.55	96	Pn	Pn	00 19 03.2	+2.1
	comp=N,0.7nm,0.3s,baz=286,slow=10,SNR=4.3						
MMAI				Sn	Sn	00 20 36.4	-0.5
	comp=N,1.2nm,0.3s,baz=260,slow=18,SNR=5.0						
EIL	Elat	9.44	117	Pn	Pn	00 19 14.2	+1.0
	comp=N,0.6nm,0.3s,baz=148,slow=15,SNR=2.0						
EIL				Sn	Sn	00 20 58.9	0.0
	comp=N,0.5nm,0.3s,baz=308,slow=18,SNR=2.2						
AKASG	Malin Array Be	16.61	9	Pn	P	00 20 51.1	-1.1
	comp=N,0.5nm,0.3s,baz=199,slow=10,SNR=3.7						
GERES	GERESS Array B	16.86	333	Pn	P	00 20 56.3	+1.2
	comp=N,0.0nm,0.3s,baz=150,slow=12,SNR=4.6						
HFS	Hagfors	26.90	347	P	P	00 22 39.1	+1.4
	comp=N,1.9nm,0.9s,baz=170,slow=8.8,SNR=2.6						
TORD	Torodi Ar. Bea	30.04	231	P	P	00 23 05.1	-1.0
	comp=N,0.8nm,0.5s,baz=36,slow=8.2,SNR=18						
MKAR	Makanchi Array	44.16	56	P	P	00 25 07.3	+1.7
	comp=N,0.5nm,0.8s,baz=269,slow=9.7,SNR=2.5						
ZALV	Zalesovo Beam	45.51	46	P	P	00 25 17.9	+1.7
	comp=N,0.8nm,0.5s,baz=278,slow=11,SNR=2.9						

*ISK **17** 00:20:17.2, 36°.69N×26°.20E, h8km, ML2.5/13*
*THE **17** 00:20:18.5, 36°.69N×26°.15E, h7km±2km, ML2.5/7, Error ellipse: s-maj=2.4km s-min=0.4km az=293.0*
*DDA **17** 00:20:18.0, 36°.70N×26°.15E, h10km±2km, ML2.8*
*ATH **17** 00:20:18.5, 36°.70N×26°.14E, h15km±6km, ML2.6/5, Error ellipse: s-maj=6.7km s-min=1.1km az=304.0*

ISC 17 00:20:18.3±1.0, 36°.67N±0°.02×26°.17E±0°.02, h11km±8km, n56, σ0s75/80, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMGA	Amorgos Island	0.27	306	P	Pg	00 20 23.4	-0.4
AMGA				S	Sg	00 20 27.9	+0.4
AMGA	Amorgos Island	0.27	306	P	Pg	00 20 23.6	-0.3
AMGA				S	Sg	00 20 28.0	+0.5
AMGA				AML	AML	00 20 28.6	
	comp=E,4176μm,0.2s						
AMGA				AML	AML	00 20 28.9	
	comp=N,3862μm,0.1s						
ANAF	Anafi Island	0.45	225	P	Pg	00 20 27.1	0.0
ANAF				S	Sg	00 20 33.8	+0.8
ANAF	Anafi Island	0.45	225	P	Pg	00 20 27.0	0.0
ANAF				S	Sg	00 20 33.6	+0.5
ANAF				AML	AML	00 20 36.1	
	comp=N,6368μm,0.3s						
ANAF				AML	AML	00 20 36.5	
	comp=E,4310μm,0.2s						
THR2	Thira island,	0.63	249	P	Pg	00 20 30.4	-0.2
THR2	Thira island,	0.63	249	P	Pg	00 20 30.4	-0.2
APE	Apeiranthos	0.65	308	PG	Pg	00 20 30.4	-0.4
APE				SG	Sb	00 20 39.9	-0.8
APE	Apeiranthos	0.65	308	P	Pg	00 20 30.3	-0.6
APE				S	Sb	00 20 40.2	-0.5
APE	Apeiranthos	0.65	308	P	Pg	00 20 30.3	-0.6
APE				S	Sg	00 20 39.4	0.0
APE				AML	AML	00 20 40.7	
	comp=N,1242μm,0.3s						
APE				AML	AML	00 20 42.1	
	comp=E,726μm,0.1s						
CMBO	Columbo, Santo	0.65	252	P	Pg	00 20 31.1	+0.3
CMBO				S	Sb	00 20 40.7	+0.1
SANT	Santorini	0.65	242	PG	Pg	00 20 30.8	0.0
SANT				SG	Sb	00 20 40.8	+0.1
SANT	Santorini	0.65	242	P	Pg	00 20 31.3	+0.4
THR7	Fira-Santorini	0.65	247	P	Pg	00 20 30.9	+0.1
THR7	Fira-Santorini	0.65	247	P	Pg	00 20 30.9	+0.1
THT2	Imerovigli	0.65	249	P	Pg	00 20 30.8	0.0
THT2				S	Sb	00 20 40.4	-0.3
THT2	Imerovigli	0.65	249	P	Pg	00 20 30.8	0.0
THT1	Athinios (Pele	0.66	244	P	Pg	00 20 31.0	-0.1
THT1				S	Sb	00 20 40.9	-0.1
THR3	Thira Island,	0.67	247	P	Pg	00 20 31.5	+0.2
THR3	Thira Island,	0.67	247	P	Pg	00 20 31.4	+0.1
SNT2	Vlychada, Sant	0.68	241	P	Pg	00 20 32.0	+0.6
THR6	Thira Island,	0.70	243	P	Pg	00 20 31.7	-0.1
THR6	Thira Island,	0.70	243	P	Pg	00 20 31.7	-0.1
SAP3	Santorini-Thir	0.70	251	P	Pg	00 20 31.7	-0.2
IOSP	Ios island	0.71	274	P	Pg	00 20 32.0	0.0
IOSP				S	Sb	00 20 41.9	-0.6
IOSP	Ios island	0.71	274	P	Pg	00 20 31.5	-0.5
IOSP				S	Sg	00 20 41.2	-0.1
IOSP				AML	AML	00 20 42.4	
	comp=E,992μm,0.2s						
IOSP				AML	AML	00 20 43.1	
	comp=N,1002μm,0.2s						
THR5	Thira Island,	0.71	249	P	Pg	00 20 32.0	+0.1
THR9	Santorini-Faro	0.73	244	P	Pb	00 20 32.8	-0.2
NISR	Nisiros	0.78	94	P	Pb	00 20 34.5	+0.7
BODT	Bodrum	0.99	67	PG	Pg	00 20 35.9	-1.5
BODT				SG	Sg	00 20 50.0	-0.4
BODT	Bodrum	0.99	67	P	Pg	00 20 37.0	-0.4
BODT				S	Sb	00 20 51.7	+1.0
BDRM	Kayabasi	1.09	69	*i* P	Pb	00 20 39.0	-0.2
BDRM				*i* S	Sn	00 20 55.2	+0.4
BDRM				IAML_P			
	comp=Z,352nm,0.1s						
DAT	Datca	1.13	87	PN	Pb	00 20 38.8	-1.2
DAT	Datca	1.13	87	*i* P	Pb	00 20 40.1	+0.1
DAT				IAML_P			
	comp=Z,96nm,0.2s						
SMG	Samos	1.16	27	P	Pb	00 20 40.1	-0.4
SMG				S	Sn	00 20 56.7	+0.2
SMG	Samos	1.16	27	P	Pb	00 20 40.0	-0.5
SMG				S	Sg	00 20 55.5	-0.2
SMG				AML	AML	00 20 59.8	
	comp=N,366μm,0.2s						
SMG				AML	AML	00 21 00.8	
	comp=E,606μm,0.5s						
TNSA	Tinos	1.18	317	P	Pn	00 20 40.8	0.0
GCAM	G?zelcaml?	1.33	39	PN	Pn	00 20 42.4	-0.5
GCAM				SN	Sg	00 21 01.1	-0.1
GCAM	G?zelcaml?	1.33	39	*i* P	Pg	00 20 43.7	-0.2
GCAM				*i* S	Sg	00 21 03.7	+2.5
KARP	Karpathos	1.38	144	PN	Pn	00 20 42.9	-0.7
KARP	Karpathos	1.38	144	P	Pn	00 20 42.5	-1.1
KARP				S	Sn	00 21 02.8	+0.9
MHLA	Plaka, Milos I	1.41	273	P	Pb	00 20 44.5	0.0
SERI	Serifos	1.43	290	P	Pn	00 20 44.3	0.0
DGB	zmir	1.49	22	*i* P	Pg	00 20 46.8	-0.1
DGB				*i* S	Sg	00 21 08.6	+2.4
DGB				IAML_P			
	comp=Z,1μm,0.2s						
ZEY	zmir	1.58	10	*i* P	Pb	00 20 47.7	+0.1
ZEY				*i* S	Sg	00 21 10.6	+1.3
ZEY				IAML_P			
	comp=Z,1μm,0.3s						
ARG	Arkhangelos	1.64	106	PN	Pn	00 20 46.6	-0.6
AYDN	Tasoluk	1.69	54	*i* P	Pb	00 20 49.6	+0.2
AYDN				IAML_P			
	comp=Z,264nm,0.1s						
CHOS	Chios island	1.71	357	PN	Pn	00 20 47.4	-0.8
CHOS	Chios island	1.71	357	P	Pn	00 20 46.4	-1.8
URLA	Izmir	1.72	11	PN	Pn	00 20 47.9	-0.3
URLA	Izmir	1.72	11	*i* P	Pb	00 20 50.2	+0.3
URLA				*i* S	Sg	00 21 15.9	+2.3
URLA				IAML_P			
	comp=Z,2μm,0.4s						
YER	Yerkesik	1.76	74	PN	Pn	00 20 47.9	-0.9
BLCB	Balcova	1.84	22	PN	Pn	00 20 49.4	-0.5
AYDB	Zeytinkoy-Aydi	1.87	47	PN	Pn	00 20 50.2	-0.2
TURN	Turunc	1.96	83	PN	Pn	00 20 46.9	-4.7
ZEDA	zmir-Bergama	2.40	17	*i* P	Pg	00 21 03.4	-0.8
ZEDA				*i* S	Sg	00 21 37.3	+1.9
ZEDA				IAML_

PASC	Pasadena Art C	1.90	311	eSn		Sn	00 24 00.4	+1.1
GMRC	Granite Mounta	1.96	20	Sg		Sb	00 24 04.6	+1.5
	baz=200							
DECC	Green Verdugo	2.04	311	Sb		Sb	00 24 05.1	-0.3
	baz=130							
EDW2	Edwards Air Fo	2.32	327	Sb		Sb	00 24 13.6	+0.2
	baz=147							
GSC	Goldstone, Bar	2.38	353	ePn		Pb	00 23 46.3	+0.9
GSC	Goldstone, Bar	2.38	353	Sg		Sg	00 24 18.7	+0.1
	baz=173							
BLG	Laguna Peak, P	2.47	299	S		Sn	00 24 13.1	-0.4
	baz=118							
TUQ	Turquoise Moun	2.53	10	Sg		Sg	00 24 23.6	+0.1
	baz=190							
ARVC	Arvin	2.94	319	Sb		Sb	00 24 32.4	+1.3
	baz=138							
W13A	Hualapai Mount	3.04	44	ePn		Pn	00 23 51.7	+0.8
W13A				eSn		Sb	00 24 37.5	+3.4
Y14A	Wickenburg	3.06	70	ePn		Pb	00 23 56.1	-0.9

ISCJB ***17*** *00:28:38.1±0.5, 15°.56N±0°.03×119°.82E±0°.05, h56km±5km, mb3.9/14, MS3.3/1, Error ellipse: s-maj=7.9km s-min=4.4km az=174.2*
MAN ***17*** *00:28:38.3, 15°.55N×119°.83E, h34km, MS3.3*
IDC ***17*** *00:28:42.9±1.7, 15°.39N×120°.04E, h98km±16km, mb3.5/14, mb1 3.6/16, mb1mx3.4/51, mbtmp3.9/16, MS3.5/1, Ms1 3.7/1, ms1mx2.8/34, Error ellipse: s-maj=23.5km s-min=11.8km az=66.0*

ISC 17 00:28:38.0±0.9, 15°.54N±0°.03×119°.84E±0°.06, h49km±7km, n34, σ1§75/47, mb3.9/14, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.25	17	eP	Pn	00 28 46.7	+0.2
SCZP				eS	Sn	00 28 52.7	+0.1
BOLP	Bolinao	0.84	5	eP	Pn	00 28 53.6	0.0
BOLP				eS	Sn	00 29 06.1	+1.2
SMPP	San Manuel, Pa	1.01	53	eP	Pn	00 28 56.4	+0.5
SMPP				eS	Sn	00 29 09.0	-0.1
BALP	Baler	1.69	83	eP	Pn	00 29 06.0	+1.0
BALP				eS	Sn	00 29 26.3	+0.8
TGY	Tagaytay City	1.78	143	P	Pn	00 29 09.8	+3.4
	280nm,0.3s,baz=309,slow=2.8,SNR=18						
TGY				S	Sn	00 29 32.8	+4.9
	615nm,0.3s,baz=357,slow=11,SNR=5.2						
TGY	Tagaytay City	1.78	143	⇑eP	Pn	00 29 09.5	+3.1
TGY				eS	Sn	00 29 22.1	-5.7
LUBP	Lubang	1.84	168	eP	Pn	00 29 08.9	+1.8
LUBP				eS	Sn	00 29 29.9	+0.7
POLP	Polilio Island	2.18	111	eP	Pn	00 29 13.6	+1.8
POLP				eS	Sn	00 29 39.6	+1.9
ABRA	Dolores	2.26	22	eP	Pn	00 29 14.4	+1.5
ABRA				eS	Sn	00 29 40.2	+0.7
PGP	Puerto Galera	2.29	152	⇓eP	Pn	00 29 15.5	+2.0
PGP				eS	Sn	00 29 42.2	+1.7
CAUP	Cauayan	2.36	54	eP	Pn	00 29 16.0	+1.7
CAUP				eS	Sn	00 29 43.7	+1.6
APYP	Conner	2.67	30	eP	Pn	00 29 20.2	+1.6
APYP				eS	Sn	00 29 50.4	+0.7
CVP	Callao Caves	2.87	41	⇑iP	Pn	00 29 21.8	+0.5
CVP				iS	Sn	00 30 03.3	+8.7
PALP	Palanan	2.91	58	eP	Pn	00 29 22.7	+0.9
SJMP	San Jose	3.30	158	eP	Pn	00 29 29.9	+2.7
SJMP				eS	Sn	00 30 06.9	+1.6
JOW	Kunigami	13.71	34	P	P	00 31 53.6	-3.5
	0.3nm,0.3s,baz=231,slow=19,SNR=2.5						
SIJI	Sorong	19.83	144	P	P	00 33 03.9	-1.0
	1.7nm,0.3s,baz=253,slow=19,SNR=3.0						
CMAR	Chiang Mai Arr	20.19	281	P	Pn	00 33 13.7	+2.7
	2.1nm,0.7s,baz=96,slow=8.3,SNR=9.3						
CMAR				LR	LR	00 40 56.2	
	comp=Z,118nm,18.4s,baz=70,slow=36						
KSRS	Korea Array	22.98	17	P	P	00 33 39.9	+1.6
	0.5nm,0.3s,baz=203,slow=9.7,SNR=2.8						
SONM	Songino Array	34.07	344	P	P	00 35 18.7	+0.9
	0.8nm,0.5s,baz=160,slow=9.4,SNR=6.0						
WRA	Warramunga Arr	38.03	158	P	P	00 35 48.8	-3.0
	1.0nm,0.3s,baz=338,slow=11,SNR=14						
ASAR	Alice Springs	41.32	160	P	P	00 36 17.3	-1.8
	0.8nm,0.3s,baz=335,slow=7.4,SNR=15						
ASAR				PcP	PcP	00 38 15.3	-1.7
	0.2nm,0.3s,baz=344,slow=3.3,SNR=4.3						
MKAR	Makanchi Array	44.07	323	P	P	00 36 42.7	+1.5
	0.5nm,0.6s,baz=150,slow=9.2,SNR=3.4						
MKAR				PcP	PcP	00 38 26.6	+0.7
	0.9nm,0.9s,baz=119,slow=3.7,SNR=4.0						
ZALV	Zalesovo Beam	47.05	332	P	P	00 37 05.2	+0.6
	0.3nm,0.3s,baz=120,slow=6.5,SNR=1.8						
ZALV				PcP	PcP	00 38 35.4	-0.6
	0.6nm,0.5s,baz=137,slow=6.8,SNR=2.7						
PETK	Petropavlovsk-	47.84	30	P	P	00 37 10.9	+0.2
	3.4nm,0.7s,baz=209,slow=4.4,SNR=8.5						
KURBB	Kurchatov Arra	48.21	326	P	P	00 37 15.1	+1.5
	0.8nm,0.6s,baz=123,slow=8.4,SNR=8.8						
KURBB				PcP	PcP	00 38 40.8	+0.6
	0.2nm,0.3s,baz=120,slow=3.5,SNR=4.6						
BVAR	Borovoye Array	53.79	325	P	P	00 37 56.4	+0.9
	0.5nm,0.5s,baz=112,slow=9.8,SNR=4.6						
BVAR				PcP	PcP	00 39 01.4	+0.5
	1.0nm,0.7s,baz=126,slow=4.6,SNR=7.1						
AKTO	Aktyubinsk	60.28	320	P	P	00 38 42.2	+0.7
	1.0nm,0.7s,baz=98,slow=14,SNR=3.2						
ARCES	ARCESS Array B	77.08	339	P	P	00 40 26.3	+0.5
	1.6nm,0.7s,baz=81,slow=7.5,SNR=7.7						
FINES	FINESS Array B	78.28	331	P	P	00 40 32.7	+0.1
	1.7nm,0.8s,baz=60,slow=7.7,SNR=7.3						
NB2	NORSAR Subarra	85.25	332	P	P	00 41 09.5	+0.2
	comp=Z,0.4nm,0.5s,baz=66,slow=4.8						
NOA	NORSAR Array B	85.25	332	P	P	00 41 09.6	+0.2
	comp=Z,1.0nm,0.8s,baz=67,slow=5.0,SNR=5.6						
YKA	Yellowknife Ar	91.40	22	P	P	00 41 39.0	+0.4
	comp=Z,0.2nm,0.5s,baz=308,slow=4.5,SNR=3.6						
PLCA	Paso Flores	153.32	162	PKPbc	PKPbc	00 48 29.2	-1.9
	comp=Z,1.5nm,0.9s,baz=194,slow=4.2,SNR=2.2						

NNC ***17*** *00:37:37.0±0.7, 46°.22N×75°.13E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=5.3km s-min=4.9km az=108.0*
SOME ***17*** *00:37:38.8, 46°.08N×75°.20E, h0km*

ISC 17 00:37:38.2±1.2, 46°.12N±0°.02×75°.17E±0°.03, h1km±13km, n64, σ1§68/88, 7C-12D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLS	Baital	1.33	217	P	Pg	00 38 03.6	-0.1
	51nm,0.2s						
BTLS				S	Sg	00 38 21.3	+0.3
	490nm,0.1s						
BTLS	Baital	1.33	217	eP	Pg	00 38 03.5	-0.3
	51nm,0.2s						
BTLS				eS	Sg	00 38 21.3	+0.3
	490nm,0.1s						
KUU	Kurty	2.37	159	Pg	Pb	00 38 22.2	+0.5
	132nm,0.3s						
KUU				Lg	Lg	00 38 53.8	
	441nm,0.3s						
KUU	Kurty	2.37	159	eP	Pb	00 38 22.1	+0.4
	88nm,0.2s						
KUU				eS	Sb	00 38 53.6	+2.1
	215nm,0.2s						
TDK	Taldyqorghan	2.53	115	Pg	Pb	00 38 24.1	-0.4
	124nm,0.2s						
TDK				Lg	Lg	00 38 56.5	
	462nm,0.3s						
TDK	Taldyqorghan	2.53	115	eP	Pg	00 38 27.1	+0.4
	57nm,0.1s						
TDK				eS	Sg	00 39 01.5	+2.1
	295nm,0.2s						
KTBS	Karatobe	2.63	155	Pg	Pg	00 38 28.3	-0.4
	70nm,0.2s						
KTBS				Lg	Lg	00 39 03.5	
	779nm,0.4s						
KTBS	Karatobe	2.63	155	eP	Pb	00 38 26.8	+0.6
	70nm,0.2s						
KTBS				eS	Sb	00 39 00.5	+1.5
	417nm,0.3s						
ARXS	Arharly	2.67	134	Pg	Pb	00 38 28.2	+1.3
	41nm,0.3s						
ARXS				Lg	Lg	00 39 04.0	
	907nm,0.5s						
ARXS	Arharly	2.67	134	eP	Pg	00 38 30.2	+0.8
	37nm,0.3s						
ARXS				eS	Sg	00 39 07.7	+3.6
	907nm,0.5s						
USP	Ospenovka	2.89	190	P	Pn	00 38 25.7	+0.3
	SNR=6.8						
DGS	Degeres	2.90	171	Pg	Pg	00 38 33.4	-0.5
	175nm,0.3s						
DGS				Lg	Lg	00 39 12.4	
	297nm,0.4s						
DGS	Degeres	2.90	171	eP	Pb	00 38 31.9	+1.1
	175nm,0.3s						
DGS				eS	Sg	00 39 10.3	-1.2
	297nm,0.4s						
KAPS	Kapalarasan	3.05	104	Pg	Pb	00 38 34.9	+1.6
	71nm,0.3s						
KAPS				Lg	Lg	00 39 15.6	
	151nm,0.9s						
KAPS	Kapalarasan	3.05	104	eP	Pg	00 38 35.3	-1.3
	71nm,0.3s						
KAPS				eS	Sg	00 39 16.3	+0.2
	132nm,0.3s						
MNBS	Baschi	3.06	131	Pg	Pb	00 38 35.3	+1.7
	28nm,0.2s						
MNBS				Lg	Lg	00 39 15.6	
	436nm,0.3s						
MNBS	Baschi	3.06	131	eP	Pb	00 38 35.1	+1.6
	28nm,0.2s						
MNBS				eS	Sg	00 39 15.5	-1.0
	436nm,0.3s						
KST	Kastek	3.12	169	Pg	Pg	00 38 38.4	+0.4
	96nm,0.5s						
KST				Lg	Lg	00 39 21.7	
	230nm,0.4s						
KST	Kastek	3.12	169	eP	Pg	00 38 37.0	-1.0
	67nm,0.2s						
KST				eS	Sg	00 39 19.4	+0.9
	230nm,0.4s						
CHMS	Chumysh	3.13	186	P	Pn	00 38 28.8	+0.1
	SNR=75						
AAA	Alma-Ata	3.16	156	Pg	Pb	00 38 36.1	+0.9
	29nm,0.3s						
AAA				Lg	Lg	00 39 17.4	
	91nm,0.4s						
AAA	Alma-Ata	3.16	156	eP	Pb	00 38 36.1	+0.9
	21nm,0.2s						
AAA				eS	Sb	00 39 17.7	+3.4
	90nm,0.2s						
KNDC	Almaty	3.17	156	⇓Pg	Pg	00 38 37.8	-1.1
	5.7nm,0.2s						
KNDC				⇑Lg	Lg	00 39 20.9	
	76nm,0.3s						
KOTS	Kotyrbulak	3.19	154	Pg	Pb	00 38 37.8	+2.0
	26nm,0.4s						
KOTS				Lg	Lg	00 39 20.2	
	297nm,0.6s						
KOTS	Kotyrbulak	3.19	154	eP	Pb	00 38 37.8	+2.0
	26nm,0.4s						
KOTS				eS	Sg	00 39 20.2	-0.6
	297nm,0.6s						
TKM2	Tokmak 2	3.21	174	P	Pn	00 38 29.6	-0.3
	SNR=15						
TKM2	Tokmak 2	3.21	174	⇓Pn	Pn	00 38 29.6	-0.3
	0.5nm,0.1s						
TKM2				⇑Pg	Pg	00 38 39.2	-0.5
	13nm,0.3s						
TKM2				⇓Lg	Lg	00 39 23.9	
	41nm,0.3s						
MDOK	Medeo	3.24	155	Pg	Pb	00 38 37.6	+1.0
	16nm,0.2s						
MDOK				Lg	Lg	00 39 20.0	
	190nm,1.1s						
MDOK	Medeo	3.24	155	eP	Pb	00 38 38.2	+1.5
	19nm,0.3s						
MDOK				eS	Sg	00 39 21.4	-0.9
	166nm,0.6s						
IZV	Izvestkoviy	3.25	161	Pg	Pb	00 38 38.9	+2.1
	25nm,0.2s						
IZV				Lg	Lg	00 39 21.8	
	180nm,0.4s						
IZV	Izvestkoviy	3.25	161	eP	Pg	00 38 39.0	-1.4
	25nm,0.2s						
IZV				eS	Sg	00 39 21.9	-0.6
	170nm,0.3s						
TNSS	Tian-Shan	3.33	157	Pg	Pb	00 38 39.9	+1.6
	17nm,0.2s						
TNSS				Lg	Lg	00 39 23.9	
	152nm,0.4s						
TNSS	Tian-Shan	3.33	157	eP	Pb	00 38 39.9	+1.6
	17nm,0.2s						
TNSS				eS	Sg	00 39 23.9	-1.3
	152nm,0.4s						
KBK	Karagaybulak	3.46	183	P	Pn	00 38 33.6	+0.2
	SNR=8.1						
AAK	Ala-Archa	3.51	188	P	Pn	00 38 33.9	-0.1
	SNR=15						
AAK	Ala-Archa	3.51	188	⇓Pn	Pn	00 38 34.1	0.0
	8.8nm,0.4s						
AAK				⇑Pg	Pb	00 38 42.7	+1.4
	7.3nm,0.5s						
AAK				⇓Lg	Lg	00 39 32.2	
	6.0nm,0.3s						
EKS2	Erkin-Say	3.59	197	P	Pn	00 38 35.2	0.0
	SNR=131						
KPKS	Kokpek	3.64	135	eP	Pb	00 38 44.9	+1.4
	19nm,0.2s						
KPKS				eS	Sb	00 39 31.8	+3.7
	189nm,0.4s						
MRKS	Merke	3.65	203	Pg	Pb	00 38 45.9	+2.3
	16nm,0.2s						
MRKS				Lg	Lg	00 39 34.2	
	97nm,0.3s						
MRKS	Merke	3.65	203	eP	Pg	00 38 46.1	-2.0
	16nm,0.2s						
MRKS				eS	Sg	00 39 34.2	-1.2
	97nm,0.2s						
DJR	Jarkent	3.72	117	Pg	Pb	00 38 47.0	+2.3
	12nm,0.2s						
DJR				Lg	Lg	00 39 36.2	
	46nm,0.3s						
DJR	Jarkent	3.72	117	eP	Pb	00 38 47.0	+2.3
	12nm,0.2s						
DJR				eS	Sg	00 39 36.2	-1.5
	46nm,0.3s						
UCH	Uchtor	3.92	187	P	Pn	00 38 40.2	+0.3
	SNR=13						
ULHL	Ulahol	3.94	168	P	Pn	00 38 40.7	+0.6
	SNR=14						
KZA	Kyzart	4.04	179	P	Pn	00 38 42.3	+0.8
	SNR=31						
UZB	Uzynbulak	4.04	136	Pg	Pb	00 38 52.8	+2.5
	9.0nm,0.2s						
UZB				Lg	Lg	00 39 45.7	
	52nm,0.3s						
UZB	Uzynbulak	4.04	136	eP	Pb	00 38 52.8	+2.5
	9.0nm,0.2s						
UZB				eS	Sg	00 39 45.7	-2.4
	52nm,0.3s						
AML	Almayashu	4.12	195	P	Pn	00 38 43.1	+0.4
	SNR=8.0						
PDGK	Podgornoye	4.15	131	Pg	Pg	00 38 55.5	-2.3
	11nm,0.3s						
PDGK				Lg	Lg	00 39 50.5	
	34nm,0.7s						
PDGK	Podgornoye	4.15	131	⇓Pn	Pn	00 38 42.0	-0.9
	1.0nm,0.2s						
PDGK				⇓Pg	Pg	00 38 57.7	0.0
	12nm,0.5s						
PDGK				⇑Lg	Lg	00 39 54.0	
	96nm,0.9s						
BRZS	Berezniki	4.22	338	eP	Pg	00 38 59.1	+0.1
	11nm,0.1s						
BRZS				eS	Sg	00 39 56.9	+3.3
	88nm,0.4s						
KK31	Karatay Array	4.49	230	Pn	Pn	00 38 47.2	-0.2
	0.2nm,0.1s,baz=48,slow=13,SNR=101						
KK31				⇓Lg	Lg	00 40 01.5	
	16nm,0.4s,baz=42,slow=27,SNR=6.8						
KTMS	Ketmen	4.55	124	Pg	Pg	00 39 02.7	-2.8
	6.0nm,0.3s						
KTMS				Lg	Lg	00 40 02.7	
	39nm,0.5s						
KTMS	Ketmen	4.55	124	eP	Pg	00 39 05.3	-0.2
KTMS				eS	Sg	00 40 07.3	+2.9
MAKZ	Makanchi	4.75	79	⇓Pn	Pn	00 38 50.6	-0.4
	1.7nm,0.2s						
MAKZ				⇓Lg	Lg	00 40 10.7	
	16nm,0.3s						
MK31	Makanchi Array	4.97	80	Pn	Pn	00 38 52.6	-1.3
	2.1nm,0.3s,baz=258,slow=12,SNR=165						
MK31				⇑Lg	Lg	00 40 14.5	
	7.1nm,0.3s,baz=263,slow=28,SNR=7.5						
KURK	Kurchatov	5.14	25	⇓Pn	Pn	00 38 52.3	-4.0
	2.1nm,0.5s						
KURK				⇑Lg	Lg	00 40 18.9	
	38nm,0.6s						
IUG	Iuzhnay	5.42	225	Pg	Pg	00 39 21.5	-0.6
	3.9nm,0.3s						
SEM	Semipalatinsk	5.47	36	Pg	Pb	00 39 17.8	+3.1
	9.6nm,0.1s						
SEM				Lg	Lg	00 40 28.8	
	54nm,0.5s						
SEM	Semipalatinsk	5.47	36	eP	Pg	00 39 20.1	-3.0
	9.6nm,0.1s						
SEM				eS	Sg	00 40 33.9	0.0
	15nm,0.3s						
ZSN	Zaisan	6.79	75	Pg	Pb	00 39 37.7	+0.7
	1.7nm,0.4s						
ZSN				Lg	Lg	00 41 03.3	
	6.0nm,0.4s						
BVA2	Borovoye Array	7.58	338	⇓Sn	Sn	00 40 45.7	-11
	3.5nm,0.5s						
BVA3	Borovoye Array	7.59	338	⇑Pn	Pn	00 39 27.2	-2.7
	3.6nm,0.3s						
AB31	Akbulak array	10.74	293	P	Pn	00 40 09.2	-3.9
	0.4nm,0.3s,baz=106,slow=8.8,SNR=21						

IDC ***17*** *00:48:56.3±1.0, 41°.41N×45°.78E, h0km, mb3.4/2, mb1 3.4/6, mb1mx3.2/40, mbtmp3.2/6, ML2.7/4, Error ellipse: s-maj=13.4km s-min=11.1km az=93.0*
DRS ***17*** *00:48:57.2±0.0, 41°.10N×45°.48E, h16km, ML3.6/4*
MOS ***17*** *00:48:59.9±0.0, 41°.31N×45°.75E, h23km, MPVA4.3*
NSSP ***17*** *00:48:59.3, 41°.28N×45°.67E, h10km, Ms3.4*
TIF ***17*** *00:49:00.6, 41°.33N×45°.74E, h22km±1km*
NORS ***17*** *00:49:00.4±0.0, 41°.30N×45°.85E, h19km, MPVA4.3*
AZER ***17*** *00:49:00.2±0.0, 41°.27N×45°.85E, h13km, ml3.6/25, Error ellipse: s-maj=0.7km s-min=0.3km az=29.0*
ISK ***17*** *00:49:01.4, 41°.35N×45°.69E, h10km, ML3.1/9*
DDA ***17*** *00:49:01.4, 41°.24N×45°.59E, h2km±2km, ML3.3*

ISC 17 00:49:00.2±1.1, 41°.30N±0°.01×45°.72E±0°.01, h0km±8km, n146, σ1§03/237, mb3.2/3, 9C-12D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDFL	Dedoflistskaro	0.33	64	P	Pg	00 49 06.4	-0.2
DDFL				S	Sg	00 49 12.5	+1.6
QZX	Qazax, Azerbai	0.36	228	P	Pb	00 49 10.0	+0.5
	SNR=4049						
QZX				S	Sb	00 49 16.2	+0.5
GDB	GEDABAY	0.58	178	P	Pb	00 49 12.9	-0.5
	SNR=500						
GDB				S	Sb	00 49 21.4	-0.8
ZKTA	Zakatala	0.75	63	PG	Pg	00 49 14.9	+0.2
ZKTA	Zakatala	0.75	63	P	Pg	00 49 15.1	+0.4
	SNR=660						
ZKTA				S	Sg	00 49 25.9	+1.4
BTNK	Botanikuri	0.79	299	P	Pg	00 49 16.2	+0.7
BTNK				S	Sg	00 49 27.2	+1.4
BTNK	Botanikuri	0.79	299	PG	Pg	00 49 16.4	+0.9
BTNK				S	Sb	00 49 27.5	-0.7
BTNK	Botanikuri	0.79	299	iP	Pb	00 49 16.8	-0.1
BTNK				iS	Sb	00 49 28.0	-0.2
BTNK				IAML_P			
	comp=Z,31μm,0.1s						
GANJ	Ganja	0.80	145	PG	Pg	00 49 15.9	+0.4
GANJ	Ganja	0.80	145	P	Pg	00 49 15.9	+0.4
	SNR=314						
GANJ				S	Sg	00 49 26.9	+1.1
SEAG	Tbilisi Sea	0.83	304	P	Pg	00 49 17.0	+0.8
SEAG				S	Sb	00 49 28.9	-0.5
SEAG	Tbilisi Sea	0.83	304	PG	Pb	00 49 18.3	+0.7
TBLG	Delisi	0.86	300	PG	Pg	00 49 17.2	+0.5
TBLG				SG	Sb	00 49 29.2	-0.8
TBLG	Delisi	0.86	300	P	Pg	00 49 17.1	+0.4
TBLG				S	Sg	00 49 28.9	+1.2
TBLG	Delisi	0.86	300	ePG	Pg	00 49 17.1	+0.4
TBLG				eS	Sg	00 49 28.9	+1.2
TBLG	Delisi	0.86	300	iP	Pg	00 49 17.4	+0.7
TBLG				iS	Sg	00 49 29.1	+1.3
TBLG				IAML_P			
	comp=Z,12μm,0.1s						
TBLG	Delisi	0.86	300	ePg	Pg	00 49 17.1	+0.4
TBLG				eSg	Sg	00 49 28.9	+1.2
KZRT	Kazreti	1.00	275	P	Pg	00 49 19.1	-0.3
KZRT				S	Sg	00 49 32.9	+0.5
STEZ	Stepenevan	1.04	254	⇑eP	Pg	00 49 18.6	-1.7
STEZ				⇑S	Sg	00 49 33.4	-0.4
SEKA	Sheki	1.11	94	PG	Pg	00 49 20.9	-0.7
SEKA	Sheki	1.11	94	P	Pg	00 49 21.1	-0.6
	SNR=1380						
SEKA				S	Sg	00 49 37.0	+0.9
MNGR	Mingechevir, A	1.16	117	PG	Pg	00 49 22.9	+0.5
MNGR	Mingechevir, A	1.16	117	P	Pg	00 49 22.9	+0.5
	SNR=7.3						
MNGR				S	Sn	00 49 40.1	0.0
KAPZ	Kaputan	1.25	219	⇓iP	Pg	00 49 20.5	-3.7
KAPZ				⇑iS	Sg	00 49 37.9	-2.5
KMKR	Kumukh	1.32	51	ePG	Pg	00 49 25.0	-0.6
KMKR				eS	Sb	00 49 44.0	+0.4
KMKR				pmax	pmax		
	comp=Z,147nm,0.2s						
KMKR	Kumukh	1.32	51	ePg	Pg	00 49 25.0	-0.6
	comp=Z,147nm,0.2s						
KMKR				eSg	Sb	00 49 44.0	+0.4
	comp=Z,1μm,0.4s						
GNI	Garni	1.37	213	PN	Pb	00 49 27.0	+0.1
GNI	Garni	1.37	213	Pg	Pb	00 49 26.9	0.0
	comp=Z,140nm,0.3s,baz=15,slow=6.3,SNR=792						
GNI				Lg	Lg	00 49 46.2	
	comp=Z,79nm,0.3s,baz=34,slow=23,SNR=8.5						
GNI	Garni	1.37	213	⇓iP	Pb	00 49 26.8	0.0
GNI				⇓iS	Sn	00 49 45.2	-0.5
BTLR	Botlikh	1.41	15	⇓iPG	Pn	00 49 26.7	-0.6
BTLR				eS	Sg	00 49 45.7	0.0
BTLR	Botlikh	1.41	15	iPg	Pn	00 49 26.5	-0.7
	comp=Z,287nm,0.6s						
BTLR				⇑eSg	Sg	00 49 45.6	0.0
	comp=Z,765nm,0.8s						
GNBR	Gunib	1.43	40	ePG	Pn	00 49 26.7	-0.8
GNBR				eS	Sg	00 49 45.8	-0.4
GNBR	Gunib	1.43	40	iPg	Pn	00 49 26.6	-0.9
	comp=Z,180nm,0.7s						
GNBR				⇓eSg	Sg	00 49 45.7	-0.5
	comp=Z,997nm,0.5s						
XNZR	Khunzakh	1.44	30	ePG	Pn	00 49 27.3	-0.4
XNZR				eS	Sg	00 49 46.2	-0.3
XNZR	Khunzakh	1.44	30	ePg	Pn	00 49 27.3	-0.4
XNZR				eSg	Sg	00 49 46.2	-0.3
GUDG	Gudauri	1.49	322	P	Pn	00 49 28.2	-0.3
GUDG				S	Sg	00 49 47.1	-1.1
GUDG	Gudauri	1.49	322	PG	Pn	00 49 28.2	-0.3
BRDA	Brd	1.52	133	Pn	Pn	00 49 28.6	+0.1
	SNR=10						
BRDA				Sn	Sg	00 49 50.2	+1.3
AKT	Akhty	1.52	83	⇓iPG	Pn	00 49 27.3	-1.4
AKT				e		00 49 47.9	
AKT				pmax	pmax		
	comp=Z,294nm,0.2s						
AKT				smax	smax		
	comp=N,880nm,0.4s						
AKT	Akhty	1.52	83	iPg	Pn	00 49 27.4	-1.4
	comp=N,294nm,0.2s						
AKT				⇑eSg	Sn	00 49 47.7	-1.6
	comp=N,1μm,0.3

QBL	**Gabala**	**1.64**	**102**	Pn	**Pn**	**00 49 30.2**	**-0.1**
	SNR=32						
QBL				Sn	**Sb**	**00 49 52.2**	**-0.3**
URKR	**Urkarakh**	**1.67**	**58**	*e*PN	**Pn**	**00 49 31.0**	**+0.1**
URKR				*e*		00 49 53.5	
URKR	**Urkarakh**	**1.67**	**58**	*e*Pg	**Pn**	**00 49 30.9**	**0.0**
URKR				*e*Sg	**Sn**	**00 49 52.6**	**-0.5**
AKH	**Akhalkalaki**	**1.68**	**274**	PN	**Pn**	**00 49 31.0**	**0.0**
AKH				SN	**Sn**	**00 49 52.9**	**-0.5**
AKH	**Akhalkalaki**	**1.68**	**274**	P	**Pn**	**00 49 31.1**	**0.0**
AKH				S	**Sn**	**00 49 53.0**	**-0.5**
AKH	**Akhalkalaki**	**1.68**	**274**	*e*PN	**Pn**	**00 49 31.1**	**0.0**
AKH	**Akhalkalaki**	**1.68**	**274**	*e*Pg	**Pn**	**00 49 31.1**	**0.0**
AKH				*e*Sg	**Sn**	**00 49 53.0**	**-0.5**
HYR	**Heyderabad**	**1.71**	**203**	Pn	**Pb**	**00 49 32.9**	**+0.3**
	SNR=48						
HYR				Sn	**Sg**	**00 49 56.3**	**+1.0**
EAK	**Akyaka**	**1.72**	**250**	*i* P	**Pb**	**00 49 32.2**	**-0.5**
EAK				*i* S	**Sg**	**00 49 55.4**	**0.0**
EAK				IAML_P			
	comp=Z,4μm,0.3s						
TASB	**TASBURUN-IGDIR**	**1.73**	**221**	PN	**Pb**	**00 49 32.8**	**-0.2**
KRNR	**Karanay**	**1.76**	**30**	*e*PN	**Pb**	**00 49 33.0**	**-0.5**
KRNR				*e*S	**Sb**	**00 49 56.0**	**-0.2**
KRNR				pmax	pmax		
	comp=Z,53nm,0.1s						
KRNR	**Karanay**	**1.76**	**30**	*e*Pg	**Pb**	**00 49 33.0**	**-0.5**
	comp=Z,53nm,0.1s						
KRNR				*e*Sg	**Sb**	**00 49 56.0**	**-0.2**
	comp=Z,121nm,0.3s						
ZRD	**Zardab**	**1.81**	**124**	Pn	**Pn**	**00 49 32.5**	**-0.1**
	SNR=4.5						
ZRD				Sn	**Sb**	**00 49 56.7**	**-0.6**
BUJR	**Buynaksk**	**1.84**	**34**	*e*PN	**Pb**	**00 49 34.1**	**-0.6**
BUJR				*e*S	**Sb**	**00 49 58.1**	**-0.2**
BUJR	**Buynaksk**	**1.84**	**34**	*e*Pg	**Pb**	**00 49 34.1**	**-0.6**
BUJR				*e*Sg	**Sb**	**00 49 58.1**	**-0.2**
LACR	**Lac**	**1.86**	**326**	*i* PN	**Pn**	**00 49 32.7**	**-0.7**
LACR				pmax	pmax		
	comp=Z,161nm,0.2s						
LACR	**Lac**	**1.86**	**326**	*i* Pg	**Pn**	**00 49 32.8**	**-0.7**
LACR				*e*Sg	**Sn**	**00 49 57.1**	**-0.6**
KMGR	**Komgaron**	**1.87**	**340**	*e*Pg	**Pn**	**00 49 34.4**	**+0.8**
KMGR				*e*Sg	**Sg**	**00 50 00.2**	**0.0**
DLMR	**Dylym**	**1.89**	**21**	*e*PN	**Pb**	**00 49 35.0**	**-0.7**
DLMR				pmax	pmax		
	comp=Z,82nm,0.3s						
DLMR	**Dylym**	**1.89**	**21**	*e*Pg	**Pb**	**00 49 35.0**	**-0.7**
DLMR				*e*Sg	**Sb**	**00 50 00.0**	**+0.2**
GROC	**Groznyy**	**1.90**	**2**	*e*PN	**Pb**	**00 49 35.1**	**-0.7**
GROC				*e*		00 50 02.9	
GROC				pmax	pmax		
	comp=Z,83nm,0.2s						
GROC				smax	smax		
	comp=E,389nm,0.5s						
GROC				smax	smax		
	comp=E,613nm,1.1s						
GROC				smax	smax		
	comp=N,738nm,1.2s						
GROC	**Groznyy**	**1.90**	**2**	*e*Pg	**Pb**	**00 49 35.4**	**-0.4**
GROC				*e*Sg	**Sg**	**00 50 01.1**	**-0.2**
IGDI	**IGDIR**	**1.90**	**222**	*i* P	**Pn**	**00 49 34.2**	**+0.2**
IGDI				IAML_P			
	comp=Z,437nm,0.3s						
DBC	**Dubki**	**1.91**	**25⇓**	*e*PN	**Pn**	**00 49 34.9**	**+0.9**
DBC	**Dubki**	**1.91**	**25**	*e*Pg	**Pn**	**00 49 34.7**	**+0.7**
DBC				*e*Sg	**Sn**	**00 49 59.5**	**+0.7**
SBZ	**Shahbuz**	**1.91**	**184**	Pn	**Pb**	**00 49 36.0**	**0.0**
	SNR=22						
SBZ				Sn	**Sg**	**00 50 02.1**	**+0.6**
VLKR	**Vladikavkaz**	**1.91**	**336**	*e*PN	**Pb**	**00 49 36.3**	**+0.3**
VLKR				*e*S	**Sg**	**00 50 03.4**	**+1.8**
VLKR	**Vladikavkaz**	**1.91**	**336**	*i* Pg	**Pb**	**00 49 35.7**	**-0.3**
VLKR				*e*Sg	**Sg**	**00 50 03.5**	**+1.8**
QSAR	**Qusar**	**1.92**	**83**	Pn	**Pn**	**00 49 34.9**	**+0.7**
	SNR=5.2						
QSAR				Sn	**Sb**	**00 50 00.1**	**-0.6**
IML	**Ismayilli**	**1.93**	**104**	Pn	**Pn**	**00 49 33.5**	**-0.8**
	SNR=22						
IML				Sn	**Sn**	**00 49 58.6**	**-0.7**
DIGO	**Kars**	**1.99**	**244**	*i* P	**Pb**	**00 49 37.8**	**+0.3**
DIGO				*i* S	**Sb**	**00 50 03.2**	**+0.3**
DIGO				IAML_P			
	comp=Z,7μm,0.2s						
ZEI	**Tsey**	**2.01**	**318**	*e*PN	**Pb**	**00 49 37.0**	**-0.8**
ZEI	**Tsey**	**2.01**	**318**	*e*Pg	**Pn**	**00 49 35.7**	**+0.1**
ZEI				*e*Sg	**Sn**	**00 50 02.0**	**+0.4**
KDMR	**Kurdemir**	**2.08**	**116**	Pn	**Pb**	**00 49 37.9**	**-0.9**
KDMR				Sn	**Sn**	**00 50 02.7**	**-0.3**
DRN	**Derbent**	**2.08**	**69**	*e*PN	**Pn**	**00 49 37.6**	**+1.2**
DRN	**Derbent**	**2.08**	**69**	*e*Pg	**Pn**	**00 49 37.3**	**+0.9**
	comp=Z,144nm,0.5s						
DRN				⇓*e*Sg	**Sn**	**00 50 03.8**	**+0.8**
	comp=Z,348nm,0.5s						
QUBA	**Quba, Azerbaij**	**2.09**	**88**	Pn	**Pn**	**00 49 36.8**	**+0.3**
	SNR=5.0						
QUBA				Sn	**Sn**	**00 50 03.3**	**+0.1**
KARS	**Kars**	**2.11**	**252**	PN	**Pn**	**00 49 37.9**	**+0.9**
KARS	**Kars**	**2.11**	**252**	PN	**Pn**	**00 49 37.9**	**+0.9**
MAK	**Makhachkala**	**2.12**	**38**	*e*PN	**Pn**	**00 49 35.6**	**-1.3**
MAK				*e*		00 50 11.6	
MAK				pmax	pmax		
	comp=Z,50nm,0.9s						
MAK	**Makhachkala**	**2.12**	**38**	*e*Pg	**Pn**	**00 49 37.5**	**+0.5**
MAK				*e*Sg	**Sn**	**00 50 03.7**	**-0.3**
ONI	**Oni**	**2.13**	**308**	PN	**Pn**	**00 49 37.6**	**+0.5**
ONI	**Oni**	**2.13**	**308**	P	**Pn**	**00 49 36.6**	**-0.5**
ONI				S	**Sn**	**00 50 04.3**	**0.0**
ONI	**Oni**	**2.13**	**308**	*e*PN	**Pn**	**00 49 36.6**	**-0.5**
ONI	**Oni**	**2.13**	**308**	*e*Pg	**Pn**	**00 49 36.6**	**-0.5**
ONI				*e*Sg	**Sn**	**00 50 04.3**	**0.0**
NAX	**Nakhchivan**	**2.13**	**185**	PN	**Pb**	**00 49 39.9**	**+0.1**
NAX	**Nakhchivan**	**2.13**	**185**	Pn	**Pb**	**00 49 40.2**	**+0.4**
	SNR=28						
NAX				Sn	**Sg**	**00 50 09.6**	**+0.9**
KORR	**Kora**	**2.17**	**326**	*e*PN	**Pn**	**00 49 37.8**	**+0.2**
KORR				*e*S	**Sb**	**00 50 07.3**	**-0.5**
KORR	**Kora**	**2.17**	**326**	*e*Pg	**Pn**	**00 49 37.8**	**+0.2**
KORR				*e*Sg	**Sb**	**00 50 07.9**	**+0.1**
PQL	**Pirkuli**	**2.23**	**102**	Pn	**Pn**	**00 49 38.6**	**0.0**
	SNR=9.5						
PQL				Sn	**Sn**	**00 50 06.4**	**-0.4**
BTKR	**Batakoyurt**	**2.25**	**337**	*e*PN	**Pn**	**00 49 39.7**	**+1.0**
BTKR				*e*S	**Sb**	**00 50 09.4**	**-0.7**
BTKR	**Batakoyurt**	**2.25**	**337**	*e*Pg	**Pn**	**00 49 39.3**	**+0.6**
BTKR				*e*Sg	**Sn**	**00 50 06.2**	**-1.0**
DIGR	**Digorskoe uzhe**	**2.26**	**316**	*e*PN	**Pb**	**00 49 42.2**	**+0.2**
DIGR				*e*S	**Sb**	**00 50 10.3**	**-0.2**
DIGR	**Digorskoe uzhe**	**2.26**	**316**	*e*Pn	**Pn**	**00 49 40.1**	**+1.1**
DIGR				*e*Sn	**Sn**	**00 50 08.6**	**+1.0**
EPOS	**Posof**	**2.26**	**276**	*i* P	**Pb**	**00 49 41.5**	**-0.6**
TKB	**Tkibuli**	**2.29**	**298**	P	**Pn**	**00 49 39.2**	**-0.1**
TKB				S	**Sn**	**00 50 08.9**	**+0.6**
ORD	**Ordubad**	**2.38**	**175**	Pn	**Pb**	**00 49 43.7**	**-0.3**
	SNR=38						
ORD				Sn	**Sg**	**00 50 15.3**	**-1.4**
STDR	**Stavd-Durt**	**2.41**	**330**	*e*PN	**Pn**	**00 49 41.5**	**+0.7**
STDR				*e*Sn	**Sn**	**00 50 11.8**	**+0.8**
SIZA	**Siyzn**	**2.41**	**94**	Pn	**Pn**	**00 49 41.3**	**+0.3**
	SNR=10						
SIZA				Sn	**Sn**	**00 50 11.7**	**+0.6**
LSNR	**Lesken**	**2.43**	**325**	*e*PN	**Pb**	**00 49 44.8**	**0.0**
LSNR				*e*S	**Sb**	**00 50 16.5**	**+1.3**
LSNR	**Lesken**	**2.43**	**325**	*e*Pn	**Pn**	**00 49 41.3**	**+0.1**
LSNR				*e*Pn	**Sb**	**00 50 13.6**	**-1.7**
ATGJ	**Altiaghaj**	**2.47**	**99**	Pn	**Pn**	**00 49 42.0**	**+0.1**
	SNR=25						
ATGJ				Sn	**Sn**	**00 50 12.0**	**-0.7**
GBS	**Qobustan**	**2.56**	**106**	Pn	**Pn**	**00 49 44.2**	**+1.3**
	SNR=7.9						
GBS				Sn	**Sn**	**00 50 15.8**	**+0.9**
CLDR	**Caldiran**	**2.56**	**213**	PN	**Pn**	**00 49 44.7**	**+1.5**
CLDR	**Caldiran**	**2.56**	**213**	*i* P	**Pn**	**00 49 45.1**	**+1.9**
CLDR				IAML_P			
	comp=Z,332nm,0.2s						
SENK	**Senkaya-Erzuru**	**2.66**	**255**	PN	**Pn**	**00 49 45.9**	**+1.3**
AGRB	**Hanur-Agry**	**2.71**	**231**	PN	**Pn**	**00 49 46.6**	**+1.4**
ALIB	**Äli-Bayra**	**2.83**	**117**	Pn	**Pn**	**00 49 47.8**	**+1.0**
ALIB				Sn	**Sn**	**00 50 21.9**	**+0.3**
EATA	**Eleskirt**	**2.85**	**241**	*i* P	**Pn**	**00 49 48.8**	**+1.5**
EATA				IAML_P			
	comp=Z,114nm,0.2s						
DAGI	**Agillar**	**2.88**	**267**	*i* P	**Pb**	**00 49 52.1**	**-0.5**
DAGI				*i* S	**Sb**	**00 50 28.9**	**+0.5**
GLBA	**Clilabad**	**2.90**	**134**	Pn	**Pn**	**00 49 48.6**	**+1.0**
GLBA				Sn	**Sn**	**00 50 23.7**	**+0.6**
TUTA	**Tutak**	**2.92**	**230**	*i* P	**Pn**	**00 49 49.1**	**+0.9**
TUTA				IAML_P			
	comp=Z,239nm,0.1s						
NEY	**Neytrino**	**2.96**	**312**	*i* PN	**Pn**	**00 49 49.2**	**+0.6**
NEY	**Neytrino**	**2.96**	**312**	*e*Pn	**Pn**	**00 49 49.2**	**+0.6**
DDEM	**Demirkent**	**3.03**	**264**	*i* P	Pg	00 50 10.7	+12
BATM	**Batumi**	**3.04**	**277**	PN	**Pn**	**00 49 50.8**	**+1.2**
BATM	**Batumi**	**3.04**	**277**	P	**Pn**	**00 49 50.7**	**+1.0**
BATM				S	**Sb**	**00 50 34.0**	**+1.0**
DBAD	**Bademkaya**	**3.06**	**266**	*i* P	**Pb**	**00 49 56.7**	**+1.1**
DBAD				*i* S	**Sg**	**00 50 36.2**	**-2.1**
DBAD				IAML_P			
	comp=Z,307nm,0.2s						
DBOC	**Borcka**	**3.06**	**272**	*i* P	**Pb**	**00 49 54.0**	**-1.5**
DBOC				*i* S	**Sb**	**00 50 32.9**	**-0.4**
DBOC				IAML_P			
	comp=Z,262nm,0.2s						
BCA	**Borcka**	**3.09**	**274**	PN	**Pn**	**00 49 51.5**	**+1.2**
KBZ	**Khabaz**	**3.20**	**320**	Pn	**Pn**	**00 49 48.7**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=310,slow=4.4,SNR=2.0						
KBZ				Pg	**Pb**	**00 49 55.1**	**-2.8**
	comp=Z,0.7nm,0.3s,baz=199,slow=4.6,SNR=7.8						
KBZ				Lg	Lg	00 50 38.2	
	comp=Z,2.5nm,0.3s,baz=90,slow=16,SNR=7.0						
MLAZ	**Malazgirt-MUS**	**3.25**	**229**	PN	**Pn**	**00 49 54.1**	**+1.5**
SHA1	**Shidzhatmaz**	**3.33**	**318**	*i* PN	**Pn**	**00 49 54.0**	**+0.3**
SHA1	**Shidzhatmaz**	**3.33**	**318**	*e*Pn	**Pn**	**00 49 53.1**	**-0.6**
SHA1				*e*Sn	**Sn**	**00 50 33.1**	**-1.0**
LRK	**Lerik**	**3.33**	**142**	Pn	**Pn**	**00 49 53.7**	**0.0**
	SNR=22						
KVAR	**Kislovodsk Arr**	**3.47**	**321**	Pn	**Pn**	**00 49 54.7**	**-0.9**
	baz=93,slow=23,SNR=1.6						
KVAR				Lg	Lg	00 50 46.7	
	baz=254,slow=21,SNR=2.8						
KIV	**Kislovodsk**	**3.47**	**321**	*i* PN	**Pn**	**00 49 56.1**	**+0.5**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.1s						
KIV	**Kislovodsk**	**3.47**	**321**	*e*Pn	**Pn**	**00 49 56.1**	**+0.5**
ASTR	**Astara**	**3.61**	**138**	Pn	**Pn**	**00 49 57.4**	**0.0**
	SNR=15						
ASTR				Sn	**Sn**	**00 50 41.7**	**+1.0**
KRIK	**Erzurum-spir**	**3.77**	**257**	*i* P	**Pb**	**00 50 09.1**	**+1.4**
GEYT	**Alibeck**	**10.14**	**105**	Pn	**Pn**	**00 51 22.6**	**-4.5**
	comp=Z,0.3nm,0.3s,baz=290,slow=16,SNR=5.2						
GEYT				Sn	Sn	00 53 11.8	-10
	comp=Z,0.3nm,0.3s,baz=331,slow=42,SNR=2.3						
AKTO	**Aktyubinsk**	**12.51**	**39**	Pn	Pn	00 51 52.0	-7.4
	comp=Z,0.1nm,0.3s,baz=221,slow=11,SNR=1.9						
AKTO				Sn	Sn	00 54 05.5	-14
	comp=Z,0.1nm,0.3s,baz=208,slow=23,SNR=1.1						
AKTO	**Aktyubinsk**	**12.51**	**39**	⇓Pn	**Pn**	**00 52 01.5**	**+2.2**
	comp=Z,1.2nm,0.9s						
AKTO				⇑Sn	Sn	00 54 05.8	-14
	comp=Z,1.5nm,0.6s						
AB31	**Akbulak array**	**12.77**	**47**	Pn	**Pn**	**00 52 06.5**	**+3.5**
	comp=Z,0.1nm,0.2s,baz=245,slow=12,SNR=9.6						
AB31				⇑Sn	Sn	00 54 14.0	-12
	comp=Z,0.3nm,0.3s,baz=243,slow=23,SNR=7.7						
ARU	**Arti**	**17.29**	**25***d*	*i* P	**P**	**00 53 04.4**	**0.0**
ARU				S	**Sn**	**00 56 18.7**	**+3.1**
ARU				pmax	pmax		
	comp=Z,8.0nm,2.3s						
BRVK	**Borovoye**	**20.30**	**46**	*i* P	**P**	**00 53 37.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**23.71**	**299**	P	**P**	**00 54 10.6**	**-3.1**
	comp=Z,0.4nm,0.6s,baz=106,slow=9.6,SNR=4.2						
KURK	**Kurchatov**	**24.53**	**56**	*i* P	**P**	**00 54 18.9**	**-2.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MKAR	**Makanchi Array**	**26.68**	**66**	P	**P**	**00 54 36.2**	**-4.6**
	comp=Z,0.3nm,0.6s,baz=283,slow=8.7,SNR=2.4						
COCO	**West Island**	**71.06**	**126**	*i* P	**P**	**01 00 21.8**	**+1.6**

IDC 17 00:49:24.3±5.6, 22°00N×143°22E, h264km±56km, mb3.2/6, mb1 3.3/7, mb1mx3.0/45, mbtmp3.8/7, Error ellipse: s-maj=43.3km s-min=15.5km az=85.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.13**	**344**	P	P	00 52 44.4	-0.3
	0.2nm,0.3s,baz=174,slow=11,SNR=4.3						
KSRS	**Korea Array**	**20.29**	**323**	P	P	00 53 40.1	-0.3
	0.9nm,0.7s,baz=146,slow=8.8,SNR=4.0						
WRA	**Warramunga Arr**	**42.58**	**192**	P	P	00 56 54.7	-0.2
	1.7nm,0.6s,baz=2.3,slow=8.3,SNR=7.4						
ASAR	**Alice Springs**	**46.29**	**192**	P	P	00 57 23.9	-0.1
	0.3nm,0.5s,baz=19,slow=11,SNR=5.5						
ILAR	**Eielson Array**	**61.76**	**27**	P	P	00 59 15.3	+0.5
	0.2nm,0.6s,baz=261,slow=4.5,SNR=3.7						
BVAR	**Borovoye Array**	**62.46**	**319**	P	P	00 59 20.6	+0.9
	1.4nm,0.4s,baz=104,slow=7.1,SNR=18						
FINES	**FINESS Array B**	**82.92**	**334**	P	P	01 01 18.0	-1.4
	1.7nm,0.8s,baz=70,slow=5.2,SNR=9.6						

MEX 17 01:05:53.1±0.7, 16°93N×100°01W, h5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.28**	**295**	*i* P	Pg	01 05 58.0	-0.5
CAIG				*e*S	Sg	01 06 02.2	+0.1
MEIG	**Mezcala**	**1.06**	**20**	*e*P	Pg	01 06 10.4	-3.0
MEIG				*e*S	Sg	01 06 23.9	-3.2
ARIG	**Puente Sto Nin**	**1.38**	**346**	*e*P	Pn	01 06 15.7	-3.4
ARIG				*e*P	Pb	01 06 15.8	-3.7
ARIG				*e*S	Sb	01 06 33.4	-4.1
PLIG	**Platanillo**	**1.53**	**18**	*e*P	Pn	01 06 15.6	-5.7
PLIG				*e*S	Sn	01 06 38.3	-3.3
YAIG	**Yautepec**	**2.12**	**25**	*e*P	Pg	01 06 33.9	+0.2
YAIG				*i* S	Sn	01 06 56.5	+0.3

*IDC **17** 01:07:49.7±1.1, 34°20N×25°13E, h0km, mb3.9/5, mb1 3.8/13, mb1mx3.6/40, mbtmp3.7/13, ML3.9/6, MS3.7/1, Ms1 3.7/1, ms1mx2.6/42, Error ellipse: s-maj=20.5km s-min=17.7km az=18.0*

*ISCJB **17** 01:07:51.4±1.0, 34°10N±0°04×25°16E±0°03, h23km±6km, mb3.8/6, MS3.8/1, Error ellipse: s-maj=7.2km s-min=4.3km az=17.2*

*ATH **17** 01:07:52.5, 34°23N×25°19E, h25km±1km, ML3.2/2, Error ellipse: s-maj=4.8km s-min=1.6km az=353.0*

*THE **17** 01:07:53.8, 34°30N×25°16E, h0km, ML3.2/8, Error ellipse: s-maj=1.7km s-min=0.6km az=174.0*

*ISK **17** 01:07:57.4, 34°76N×25°10E, h12km, ML3.3/10*

*DDA **17** 01:08:35.5, 34°25N×24°98E, h11km±1km, ML3.4*

ISC 17 01:07:52.6±1.3, 34°22N±0°05×25°19E±0°03, h18km±4km, n76, σ1°47/95, mb3.8/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**339**	P	**Pg**	**01 08 08.7**	**-0.6**
SIVA				S	**Sn**	**01 08 21.3**	**-0.5**
SIVA	**Sivas**	**0.86**	**339**	P	**Pg**	**01 08 08.7**	**-0.6**
SIVA				S	**Sb**	**01 08 20.5**	**+0.5**
TMBK	**Timbaki Herakl**	**0.92**	**338**	P	**Pb**	**01 08 10.1**	**+0.1**
TMBK				S	**Sn**	**01 08 22.8**	**-0.5**
LAST	**Lasithi**	**0.97**	**14**	P	**Pb**	**01 08 11.1**	**+0.2**
LAST				S	**Sn**	**01 08 25.2**	**+0.4**
LAST	**Lasithi**	**0.97**	**14**	P	**Pb**	**01 08 11.0**	**+0.1**
LAST				S	**Sn**	**01 08 24.8**	**0.0**
LAST				AML	AML	01 08 33.5	
	comp=E,1924μm,0.6s						
LAST				AML	AML	01 08 35.1	
	comp=N,1566μm,0.7s						
KSTL	**Kastelli Herak**	**1.09**	**355**	P	**Pb**	**01 08 11.6**	**-1.2**
KSTL				S	**Sb**	**01 08 25.4**	**-1.3**
IACM	**Heraklion**	**1.09**	**355**	P	**Pb**	**01 08 12.9**	**0.0**
IACM				S	**Sn**	**01 08 28.6**	**+1.1**
IDI	**Anoyia**	**1.09**	**347**	Pn	**Pb**	**01 08 12.9**	**-0.1**
	comp=N,20nm,0.3s,baz=168,slow=17,SNR=34						
IDI				Sn	**Sg**	**01 08 27.4**	**-0.8**
	comp=N,86nm,0.3s,baz=29,slow=14,SNR=16						
IDI				LR	LR	01 08 57.1	
	comp=N,167nm,18.7s,baz=163,slow=61						
GVD	**Gavdhos**	**1.10**	**305**	PG	**Pb**	**01 08 14.0**	**+1.0**
GVD	**Gavdhos**	**1.10**	**305**	P	**Pb**	**01 08 13.2**	**+0.2**
GVD				S	**Sn**	**01 08 29.6**	**+1.9**
GVD	**Gavdhos**	**1.10**	**305**	P	**Pb**	**01 08 13.4**	**+0.4**
GVD				S	**Sn**	**01 08 29.0**	**+1.2**
GVD				AML	AML	01 08 39.3	
	comp=N,3005μm,0.4s						
GVD				AML	AML	01 08 42.0	
	comp=E,2888μm,0.3s						
NPS	**Neapolis**	**1.10**	**19**	P	**Pb**	**01 08 13.3**	**+0.2**
NPS				S	**Sn**	**01 08 28.6**	**+0.8**
NPS	**Neapolis**	**1.10**	**19**	P	**Pb**	**01 08 13.3**	**+0.2**
ZKR	**Zakros**	**1.23**	**43**	PG	**Pg**	**01 08 16.5**	**+0.1**
ZKR				SG	**Sb**	**01 08 31.1**	**+0.2**
ZKR	**Zakros**	**1.23**	**43**	P	**Pg**	**01 08 16.3**	**-0.1**
ZKR				S	**Sg**	**01 08 33.8**	**+1.2**
ZKR	**Zakros**	**1.23**	**43**	P	**Pg**	**01 08 16.3**	**-0.1**
PRNS	**Prines Rethymn**	**1.28**	**334**	P	**Pn**	**01 08 16.0**	**+0.5**
VAM	**Vamos**	**1.44**	**326**	P	**Pn**	**01 08 18.5**	**+0.8**
VAM				S	**Sg**	**01 08 37.7**	**-1.3**
VAM	**Vamos**	**1.44**	**326**	P	**Pn**	**01 08 18.6**	**+0.9**
IMMV	**Iera Moni Meta**	**1.59**	**322**	PN	**Pn**	**01 08 20.2**	**+0.4**
IMMV	**Iera Moni Meta**	**1.59**	**322**	P	**Pn**	**01 08 21.2**	**+1.4**
IMMV				S	**Sb**	**01 08 41.3**	**+0.2**
IMMV	**Iera Moni Meta**	**1.59**	**322**	P	**Pn**	**01 08 21.1**	**+1.3**
KARP	**Karpathos**	**2.10**	**50**	PN	**Pb**	**01 08 30.3**	**+0.2**
KARP	**Karpathos**	**2.10**	**50**	P	**Pn**	**01 08 29.1**	**+2.3**
KARP				S	**Sb**	**01 08 55.4**	**-0.4**
KARP	**Karpathos**	**2.10**	**50**	P	**Pn**	**01 08 27.6**	**+0.8**
THR6	**Thira Island,**	**2.14**	**5**	P	**Pn**	**01 08 28.7**	**+1.3**
THR3	**Thira Island,**	**2.19**	**5**	P	**Pn**	**01 08 29.5**	**+1.4**
THR8	**Santorini-Mono**	**2.20**	**6**	P	**Pn**	**01 08 29.3**	**+1.1**
THR5	**Thira Island,**	**2.20**	**3**	P	**Pn**	**01 08 30.0**	**+1.9**
ANKY	**Antikythira Is**	**2.26**	**317**	P	**Pn**	**01 08 30.7**	**+1.7**
ANKY	**Antikythira Is**	**2.26**	**317**	P	**Pn**	**01 08 30.6**	**+1.7**
IOSP	**Ios island**	**2.50**	**2**	P	**Pn**	**01 08 33.2**	**+0.8**
IOSP	**Ios island**	**2.50**	**2**	P	**Pn**	**01 08 33.2**	**+0.8**
MHLO	**Agia Marina, M**	**2.55**	**346**	P	**Pn**	**01 08 34.0**	**+1.0**
MHLO				S	**Sn**	**01 09 05.0**	**+1.5**
MHLO	**Agia Marina, M**	**2.55**	**346**	P	**Pn**	**01 08 32.3**	**-0.7**
MHLA	**Plaka, Milos I**	**2.60**	**346**	P	**Pn**	**01 08 34.8**	**+1.1**
KYTH	**Kithira**	**2.69**	**320**	P	**Pn**	**01 08 37.2**	**+2.2**
KYTH				S	**Sn**	**01 09 08.7**	**+1.6**
KTHR	**Kythira**	**2.71**	**319**	P	**Pn**	**01 08 37.4**	**+2.2**
APE	**Apeiranthos**	**2.86**	**6**	PN	**Pn**	**01 08 36.7**	**-0.6**
VLI	**Veliai**	**3.10**	**324**	P	**Pn**	**01 08 41.5**	**+1.0**
DAT	**Datca**	**3.18**	**37**	PN	**Pn**	**01 08 43.8**	**+2.1**
DAT	**Datca**	**3.18**	**37**	*i* P	**Pn**	**01 08 44.5**	**+2.8**
DAT				IAML_P			
	comp=Z,163nm,0.1s						
BDRM	**Kayabasi**	**3.38**	**32**	*i* P	**Pn**	**01 08 46.5**	**+2.0**
BDRM				IAML_P			
	comp=Z,20nm,0.2s						
DALY	**Dalyan (Mula)**	**3.84**	**46**	PN	**Pn**	**01 08 53.3**	**+2.6**
DALY	**Dalyan (Mula)**	**3.84**	**46**	*i* P	**Pn**	**01 08 53.1**	**+2.4**
DALY				IAML_P			
	comp=Z,276nm,0.3s						
TURN	**Turunc**	**3.84**	**45**	*i* P	**Pn**	**01 08 49.6**	**-1.2**
TURN				IAML_P			
	comp=Z,413nm,0.3s						
YER	**Yerkesik**	**3.85**	**40**	PN	**Pn**	**01 08 53.4**	**+2.5**
ITM	**Ithomi**	**3.97**	**319**	PN	**Pn**	**01 08 53.1**	**+0.6**
AYDN	**Tasoluk**	**4.07**	**32**	*i* P	**Pn**	**01 08 56.0**	**+2.0**
AYDN				IAML_P			
	comp=Z,388nm,0.3s						
AKAS	**Kas**	**4.14**	**60**	*i* P	**Pn**	**01 08 56.3**	**+1.3**
AKAS				IAML_P			
	comp=Z,869nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**4.32**	**30**	PN	**Pn**	**01 08 59.4**	**+2.0**
AKUM	**Antalya-Kumluc**	**4.71**	**62**	*i* P	**Pn**	**01 09 04.5**	**+1.8**
KORT	**Korkueli**	**5.04**	**55**	*i* P	**Pn**	**01 09 10.7**	**+3.3**
KORT				IAML_P			
	comp=Z,182nm,0.2s						
KULA	**Kula-Manisa**	**5.12**	**32**	PN	**Pn**	**01 09 10.6**	**+2.2**
AGG	**Agios Georgios**	**5.32**	**335**	PN	**Pn**	**01 09 11.7**	**+0.7**
KHAL	**Karahalli**	**5.41**	**39**	*i* P	**Pn**	**01 09 11.9**	**-0.5**
**

comp=Z,99nm,0.4s
PRAC Prado 3.63 269 *e*P Pn 01 42 15.1 -0.7
PRAC *i* Pg Pb 01 42 22.4 -1.5
PRAC *e*S Sn 01 42 57.5 -1.1
PRAC *i* 01 43 18.7
comp=Z,90nm,0.7s
NORC Norcasia 4.02 296 *e*P Pn 01 42 19.8 -1.4
NORC *e*S Sn 01 43 04.2 -4.1
NORC *i* 01 43 28.6
comp=Z,34nm,0.6s
BRRC Barranca, Sant 4.12 324 *e*P Pb 01 42 30.7 -1.5
BRRC *e*S Sn 01 43 08.3 -2.2
OCAC Ocana 4.89 335 *e*P Pn 01 42 31.2 -2.0
FLOC Florencia 4.91 244 *e*P Pn 01 42 32.5 -0.9
FLOC *i* Pg Pb 01 42 43.2 -2.6
FLOC *e*S Sb 01 43 44.1 -0.7
FLOC *i* 01 43 52.5
comp=Z,66nm,0.4s
YOTC Yotoco, Valle 5.09 272 *e*P Pn 01 42 33.7 -2.2
YOTC *e*S Sn 01 43 28.2 -6.5
ZARC Zaragoza, Cauc 5.15 316 *e*P Pn 01 42 35.6 -1.1
ZARC *e*S Sn 01 43 33.1 -2.9
PCON Cinco Dias 5.34 255 *e*P Pb 01 42 52.0 -1.5
PCON *e*S Sb 01 43 59.9 +2.2
PCON *i* 01 44 12.4
comp=Z,61nm,0.6s
POPC Popayan, Colom 5.56 257 *e*S Sb 01 44 02.4 -1.3
SMLC San Martn de 5.73 331 *e*P Pn 01 42 41.2 -3.3
SMLC *i* 01 44 29.7
comp=Z,10.0nm,0.4s
GCUF Volcan Galeras 6.60 248 *e*P Pb 01 43 12.7 -2.2
GCUF *e*S Sb 01 44 39.3 +5.5
GCUF *i* 01 44 52.1
comp=Z,18nm,0.3s

MAN 17 01:42:40.1, 11°76N×124°76E, h34km, mb3.6, ML2.3, MS1.7, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.62**	**160⇑**	*i* P	Pb	01 42 53.2	+0.5
PLP				*i* S	Sb	01 43 01.8	+0.4
BESP	**Borongan**	**0.68**	**103**	*e*P	Pb	01 42 54.0	+0.5
BESP				*e*S	Sb	01 43 03.9	+1.1
CNP	**Catarman**	**0.76**	**353**	*e*P	Pb	01 42 54.8	-0.1
CNP				*e*S	Sb	01 43 05.6	+0.6

*IDC **17** 01:50:07.7±2.1, 51°.94N×160°.57E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/57, mbtmp3.6/8, ML2.1/1, MS2.9/4, Ms1 3.0/4, ms1mx2.7/40, Error ellipse: s-maj=68.9km s-min=20.3km az=12.0*
*KRSC **17** 01:50:09.9±1.6, 52°.01N×160°.67E, h59km±21km, ML4.1*
*ISCJB **17** 01:50:10.8±0.6, 52°.00N±0°.05×160°.70E±0°.06, h30km, mb3.7/7, MS3.0/2, Error ellipse: s-maj=7.1km s-min=4.9km az=164.4*
ISC 17 01:50:12.6±0.9, 52°.08N±0°.06×160°.56E±0°.05, h30km, n36, σ0°77/42, mb3.6/7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.07**	**342**	*e*P	**Pn**	**01 50 30.4**	**-1.2**
SPN				*e*S	**Sn**	**01 50 44.7**	**-0.7**
RUS	**Russkaya**	**1.31**	**287**	*e*P	**Pn**	**01 50 34.7**	**-0.1**
RUS				*e*S	**Sb**	**01 50 52.0**	**-0.9**
NLC	**Nalytchevo**	**1.32**	**326**	*e*P	**Pn**	**01 50 34.6**	**-0.4**
NLC				*e*S	**Sb**	**01 50 52.4**	**-0.9**
DALK	**Dalny**	**1.46**	**312**	*e*P	**Pn**	**01 50 36.7**	**-0.2**
DALK				*e*S	**Sn**	**01 50 55.4**	**+0.5**
PET	**Petropavlovsk**	**1.50**	**310**	*e*P	**Pn**	**01 50 37.9**	**+0.5**
MTVR	**Mutnovka**	**1.52**	**286**	*e*P	**Pn**	**01 50 38.5**	**+0.7**
MTVR				*e*S	**Sb**	**01 50 58.6**	**-0.4**
UGLR	**Uglovaya**	**1.55**	**318**	*e*P	**Pn**	**01 50 39.1**	**+0.9**
KDTR	**Khodutka, Kamc**	**1.56**	**261**	*e*P	**Pn**	**01 50 37.7**	**-0.5**
KDTR				*e*S	**Sn**	**01 50 57.4**	**0.0**
SDLR	**Sedlovina**	**1.58**	**320**	*e*P	**Pn**	**01 50 39.0**	**+0.4**
SMAR	**Somma**	**1.60**	**319**	*e*P	**Pn**	**01 50 39.4**	**+0.4**
AVH	**Avacha**	**1.63**	**318**	*e*P	**Pn**	**01 50 40.0**	**+0.7**
KRER	**Koryakskii**	**1.65**	**319**	*e*P	**Pn**	**01 50 40.3**	**+0.6**
ASAK	**Asacha**	**1.67**	**282**	*e*P	**Pn**	**01 50 40.5**	**+0.7**
KRMR	**Karymshinskiy**	**1.67**	**298**	*e*P	**Pn**	**01 50 40.0**	**+0.3**
KOK	**Koryaka**	**1.69**	**317**	*e*P	**Pb**	**01 50 42.3**	**-0.7**
KRX	**Arik**	**1.73**	**319**	*e*P	**Pn**	**01 50 41.4**	**+0.6**
PETK	**Petropavlovsk-**	**2.03**	**302**	Pn	**Pn**	**01 50 45.3**	**+0.6**
	3.1nm,0.3s,baz=107,slow=18,SNR=46						
PETK				Sn	**Sb**	**01 51 12.7**	**-0.8**
	10nm,0.3s,baz=119,slow=17,SNR=4.9						
PETK				LR	LR	01 51 18.9	
	comp=Z,85nm,18.2s,baz=93,slow=34						
APC	**Apacha**	**2.25**	**294**	*e*P	**Pn**	**01 50 48.8**	**+1.1**
GNL	**Ganaly**	**2.27**	**317**	*e*P	**Pn**	**01 50 49.5**	**+1.4**
KZV	**Kizimen**	**3.05**	**357**	*e*P	**Pn**	**01 50 59.1**	**+0.3**
SKR	**Severo-Kuril's**	**3.12**	**245**	*e*S	**Sn**	**01 51 35.7**	**0.0**
TUMD	**Tumrok D**	**3.13**	**358**	*e*P	**Pn**	**01 51 01.4**	**+1.5**
TUMR	**Tumrok**	**3.22**	**356**	*e*P	**Pn**	**01 51 02.2**	**+1.0**
ALID	**Alaid**	**3.36**	**251**	*e*P	**Pn**	**01 51 03.6**	**+0.5**
KBTR	**Krutoberegovo**	**4.35**	**17**	*e*P	**Pn**	**01 51 18.2**	**+1.7**
BKI	**Bering**	**4.49**	**44**	*e*P	**Pn**	**01 51 17.3**	**-1.2**
BDR	**Baidarnaya**	**4.52**	**5**	*e*P	**Pn**	**01 51 19.9**	**+1.0**
ASAJ	**Asahikawa**	**14.38**	**243**	LR	LR	01 59 51.2	
	comp=Z,54nm,18.6s,baz=348,slow=41						
ILAR	**Eielson Array**	**29.34**	**44**	LR	LR	02 09 05.1	
	comp=Z,30nm,19.5s,baz=316,slow=39						
MKAR	**Makanchi Array**	**48.86**	**297**	P	**P**	**01 58 54.8**	**-0.3**
	0.3nm,0.6s,baz=59,slow=6.1,SNR=2.5						
MKAR				PcP	**PcP**	**02 00 19.5**	**+0.3**
	0.6nm,0.8s,baz=58,slow=5.4,SNR=3.5						
NVAR	**Mina Array Bea**	**55.82**	**70**	P	**P**	**01 59 46.9**	**-0.2**
	0.3nm,0.5s,baz=316,slow=6.3,SNR=3.0						
PDAR	**Pinedale Array**	**57.77**	**61**	P	**P**	**02 00 01.7**	**+0.8**
	0.3nm,0.3s,baz=335,slow=6.0,SNR=4.2						
FINES	**FINESS Array B**	**61.17**	**337**	P	**P**	**02 00 24.3**	**+0.6**
	2.0nm,0.9s,baz=38,slow=9.2,SNR=4.9						
NOA	**NORSAR Array B**	**64.60**	**344**	P	**P**	**02 00 47.1**	**+0.5**
	0.3nm,0.6s,baz=21,slow=6.7,SNR=2.5						
NOA				LR	LR	02 31 22.4	
	comp=Z,16nm,20.8s,baz=80,slow=38						
HFS	**Hagfors**	**65.01**	**342**	P	**P**	**02 00 49.3**	**+0.1**
	2.1nm,0.9s,baz=24,slow=3.9,SNR=3.6						
TXAR	**Lajitas Array**	**70.77**	**67**	P	**P**	**02 01 26.0**	**0.0**
	0.2nm,0.6s,baz=302,slow=5.2,SNR=3.3						

*SNET **17** 01:51:58.5±0.9, 14°.52N×92°.63W, h15km, ML3.7*
*MEX **17** 01:51:58.6±0.4, 14°.81N×92°.40W, h98km±5km, MD3.9*
*ISCJB **17** 01:51:59.6±0.6, 14°.84N±0°.08×92°.58W±0°.05, h76km±9km, Error ellipse: s-maj=14.2km s-min=4.9km az=27.8*
*UCR **17** 01:51:59.8±1.5, 14°.80N×92°.60W, h35km±999km, MD3.9, ML3.3*
*GCG **17** 01:52:02.8±0.4, 15°.13N×92°.22W, h32km±3km, MD4.2*
ISC 17 01:52:00.9±1.3, 14°.85N±0°.08×92°.56W±0°.05, h67km±11km, n26, σ1°01/32, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.29**	**79**	*e*P	**Pn**	**01 52 11.0**	**-0.6**
THIG				*e*S	**Sn**	**01 52 21.1**	**+1.7**
STG3	**Santiaguito 3,**	**0.97**	**98⇓**	*e*P	**Pn**	**01 52 17.7**	**-1.3**
ERG	**Entre ros, C**	**1.04**	**113**	*e*P	**Pn**	**01 52 19.5**	**-0.2**
CCIG	**Comitan**	**1.48**	**16**	*i* P	**Pn**	**01 52 26.4**	**+0.7**
CCIG				*i* S	**Sn**	**01 52 43.0**	**-1.3**
FUG	**Fuego 3**	**1.71**	**103**	*e*P	**Pn**	**01 52 28.2**	**-0.6**
FUG	**Fuego 3**	**1.71**	**103**	*e*P	**Pn**	**01 52 28.2**	**-0.6**
PCG	**Pacaya**	**1.94**	**103**	*e*P	**Pn**	**01 52 31.3**	**-0.7**
PCG				*e*S	**Sn**	**01 52 55.3**	**-0.2**
PCG	**Pacaya**	**1.94**	**103**	*e*P	**Pn**	**01 52 31.3**	**-0.7**
PCG				*e*S	**Sn**	**01 52 55.3**	**-0.2**
IXG	**Ixpaco**	**2.16**	**108**	*e*P	**Pn**	**01 52 34.6**	**-0.2**
IXG				*e*S	**Sn**	**01 52 59.4**	**-1.3**
IXG	**Ixpaco**	**2.16**	**108**	*e*P	**Pn**	**01 52 34.6**	**-0.2**
IXG				*e*S	**Sn**	**01 52 59.4**	**-1.3**
RTR	**El Retiro**	**2.98**	**108**	*e*P	**Pn**	**01 52 44.8**	**-1.2**
RTR	**El Retiro**	**2.98**	**108**	*e*P	**Pn**	**01 52 44.8**	**-1.2**
SBLS	**San Blas**	**3.02**	**109**	*e*P	**Pn**	**01 52 46.1**	**-0.5**
SBLS	**San Blas**	**3.02**	**109**	*e*P	**Pn**	**01 52 46.1**	**-0.5**
SNJE	**San Jose**	**3.03**	**108**	*e*P	**Pn**	**01 52 46.6**	**0.0**
SNJE	**San Jose**	**3.03**	**108**	*e*P	**Pn**	**01 52 46.6**	**0.0**
CMIG	**Matias Romero**	**3.15**	**315**	*e*P	**Pn**	**01 52 47.6**	**-0.6**
CMIG				*e*S	**Sn**	**01 53 25.5**	**+0.8**
BOQS	**Boqueron**	**3.37**	**109**	*e*P	**Pn**	**01 52 51.3**	**0.0**
HUIG	**Huatulco**	**3.54**	**285**	*i* P	**Pn**	**01 52 53.0**	**-0.4**
HUIG				*i* S	**Sn**	**01 53 34.4**	**+0.2**
LFRS	**El Faro**	**3.61**	**109**	*e*P	**Pn**	**01 52 54.0**	**-0.5**
PAVA	**Las Pavas**	**3.69**	**107**	*e*S	**Sn**	**01 53 39.3**	**+1.4**
PAVA	**Las Pavas**	**3.69**	**107**	*e*S	**Sn**	**01 53 39.3**	**+1.4**
LCND	**La Caada**	**4.78**	**108**	IAML		01 54 22.3	
	comp=Z,74nm,0.3s						
LCND	**La Caada**	**4.78**	**108**	IAML		01 54 22.3	
	comp=Z,74nm,0.3s						
CNCH	**Conchagua**	**4.85**	**108**	*e*S	**Sn**	**01 54 08.3**	**+2.0**
CNCH	**Conchagua**	**4.85**	**108**	*e*S	**Sn**	**01 54 08.3**	**+2.0**

*IDC **17** 01:53:30.8±2.2, 6°.69S×148°.74E, h0km, mb4.1/3, mb1 4.1/5, mb1mx3.7/33, mbtmp4.0/5, ML3.9/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/29, Error ellipse: s-maj=61.9km s-min=25.6km az=118.0*
ISC 17 01:53:34.4±2.2, 6°.6S±0°.3×148°.9E±0°.4, h46km, n9, σ2°24/8, mb3.9/3, MS3.0/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.30**	**211**	Pn	**Pn**	**01 54 21.7**	**-2.0**
	8.7nm,0.3s,baz=347,slow=6.2,SNR=8.6						
PMG				Sn	**Sn**	**01 55 01.7**	**-0.1**
	19nm,0.3s,baz=155,slow=22,SNR=8.8						
SIJI	**Sorong**	**18.48**	**287**	LR	LR	02 06 44.9	
	comp=Z,135nm,21.0s,baz=102,slow=43						
WRA	**Warramunga Arr**	**19.41**	**225**	P	**P**	**01 57 55.5**	**-1.4**
	0.4nm,0.3s,baz=53,slow=10,SNR=12						
GUMO	**Guam**	**20.42**	**349**	LR	LR	02 03 44.9	
	comp=Z,27nm,21.7s,baz=132,slow=30						
ASAR	**Alice Springs**	**22.29**	**219**	P	**P**	**01 58 27.2**	**-0.8**
	2.0nm,0.4s,baz=53,slow=9.5,SNR=33						
ASAR				S	**S**	**02 02 34.6**	**+4.0**
	1.2nm,0.9s,baz=40,slow=24,SNR=5.4						
FITZ	**Fitzroy Crossi**	**25.41**	**241**	P	**P**	**01 58 57.8**	**-0.1**
	4.4nm,0.6s,baz=49,slow=11,SNR=23						
FITZ				LR	LR	02 09 57.1	
	comp=Z,62nm,21.9s,baz=66,slow=39						
STKA	**Stephens Creek**	**26.09**	**194**	P	**P**	**01 59 05.4**	**+1.5**
	1.9nm,0.6s,baz=11,slow=14,SNR=3.8						
STKA				LR	LR	02 08 28.8	
	comp=Z,43nm,18.6s,baz=214,slow=35						
PETK	**Petropavlovsk-**	**59.92**	**6**	LR	LR	02 25 35.0	
	comp=Z,17nm,21.2s,baz=218,slow=32						
TORD	**Torodi Ar. Bea**	**147.06**	**284**	PKPbc	**PKiKP**	**02 13 16.4**	**+0.6**
	1.0nm,0.7s,baz=59,slow=2.8,SNR=12						

*IDC **17** 01:53:38.7±1.2, 34°.19N×24°.99E, h0km, mb3.8/6, mb1 3.7/11, mb1mx3.5/44, mbtmp3.7/11, ML4.0/4, Error ellipse: s-maj=21.4km s-min=20.0km az=18.0*
*THE **17** 01:53:44.6, 34°.40N×25°.07E, h0km±1km, ML3.1/7, Error ellipse: s-maj=2.2km s-min=0.8km az=175.0*
*DDA **17** 01:54:11.3, 34°.05N×25°.07E, h3km±16km, ML3.7*
ISC 17 01:53:41.9±1.7, 34°.20N±0°.07×25°.07E±0°.03, h17km±10km, n45, σ1°26/56, mb3.6/6, 1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.84**	**345**	P	**Pb**	**01 53 57.4**	**-0.7**
SIVA				S	**Sb**	**01 54 07.6**	**-1.5**
TMBK	**Timbaki Herakl**	**0.91**	**344**	P	**Pb**	**01 53 58.9**	**-0.2**
LAST	**Lasithi**	**1.01**	**19**	P	**Pb**	**01 54 00.4**	**-0.7**
LAST				S	**Sb**	**01 54 13.8**	**-0.4**
GVD	**Gavdhos**	**1.03**	**308**	*e*P	**Pg**	**01 54 01.9**	**0.0**
GVD	**Gavdhos**	**1.03**	**308**	P	**Pg**	**01 54 02.2**	**+0.3**
GVD				S	**Sn**	**01 54 16.7**	**+1.0**
IDI	**Anoyia**	**1.09**	**352**	Pn	**Pb**	**01 54 01.7**	**-0.8**
	34nm,0.3s,baz=344,slow=23,SNR=10						
IDI				Sn	**Sb**	**01 54 16.0**	**-0.5**
	44nm,0.3s,baz=333,slow=18,SNR=8.7						
IDI				LR	LR	01 54 46.7	
	comp=Z,119nm,18.7s,baz=167,slow=62						
KSTL	**Kastelli Herak**	**1.10**	**360**	P	**Pb**	**01 54 01.2**	**-1.3**
KSTL				S	**Sb**	**01 54 14.0**	**-2.5**
IACM	**Heraklion**	**1.10**	**360**	P	**Pn**	**01 54 03.0**	**+0.4**
IACM				S	**Sb**	**01 54 16.4**	**-0.2**
NPS	**Neapolis**	**1.15**	**23**	P	**Pn**	**01 54 02.9**	**-0.3**
NPS				S	**Sb**	**01 54 17.9**	**-0.1**
PRNS	**Prines Rethymn**	**1.25**	**338**	P	**Pn**	**01 54 05.0**	**+0.4**
PRNS				S	**Sb**	**01 54 21.1**	**+0.2**
ZKR	**Zakros**	**1.31**	**46**	*e*P	**Pb**	**01 54 06.2**	**+0.1**
ZKR	**Zakros**	**1.31**	**46**	P	**Pg**	**01 54 07.3**	**+0.1**
ZKR				S	**Sg**	**01 54 24.4**	**+0.1**
VAM	**Vamos**	**1.40**	**329**	P	**Pb**	**01 54 07.6**	**0.0**
VAM				S	**Sb**	**01 54 25.4**	**+0.2**
KARP	**Karpathos**	**2.18**	**51**	*e*P	**Pb**	**01 54 19.8**	**-1.1**
KARP	**Karpathos**	**2.18**	**51**	P	**Pb**	**01 54 19.9**	**-1.0**
ANKY	**Antikythira Is**	**2.21**	**319**	P	**Pb**	**01 54 19.7**	**-1.7**
IOSP	**Ios island**	**2.52**	**4**	P	**Pn**	**01 54 21.9**	**-0.2**
KTHR	**Kythira**	**2.66**	**321**	P	**Pn**	**01 54 25.9**	**+1.8**
APE	**Apeiranthos**	**2.88**	**7**	*e*P	**Pn**	**01 54 26.5**	**-0.7**
ARG	**Arkhangelos**	**3.21**	**50**	*e*P	**Pn**	**01 54 32.8**	**+1.3**
DAT	**Datca**	**3.25**	**38**	*e*P	**Pn**	**01 54 32.7**	**+0.5**
DAT	**Datca**	**3.25**	**38**	*i* P	**Pn**	**01 54 32.2**	**0.0**
DAT				IAML_P			
	comp=Z,132nm,0.2s						
DALY	**Dalyan (Mula)**	**3.92**	**47**	*e*P	**Pn**	**01 54 42.6**	**+1.3**
DALY	**Dalyan (Mula)**	**3.92**	**47**	*i* P	**Pn**	**01 54 42.9**	**+1.6**
DALY				IAML_P			
	comp=Z,324nm,0.2s						
YER	**Yerkesik**	**3.92**	**41**	*e*P	**Pn**	**01 54 42.6**	**+1.2**
AYDN	**Tasoluk**	**4.13**	**33**	*i* P	**Pn**	**01 54 45.7**	**+1.4**
AYDN				IAML_P			
	comp=Z,400nm,0.3s						
AKAS	**Kas**	**4.23**	**60**	*e*P	**Pn**	**01 54 46.0**	**+0.3**
AKAS	**Kas**	**4.23**	**60**	*i* P	**Pn**	**01 54 46.9**	**+1.2**
AKAS				IAML_P			
	comp=Z,1μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**4.38**	**31**	*e*P	**Pn**	**01 54 48.9**	**+1.1**
AKUM	**Antalya-Kumluc**	**4.80**	**62**	*i* P	**Pn**	**01 54 54.1**	**+0.7**
KORT	**Korkueli**	**5.13**	**55**	*i* P	**Pn**	**01 54 59.6**	**+1.6**
KORT				IAML_P			
	comp=Z,168nm,0.3s						
KHAL	**Karahalli**	**5.48**	**39**	*i* P	**Pn**	**01 55 01.3**	**-1.6**
KEPZ	**Antalya-Kepez**	**5.97**	**61**	*i* P	**Pn**	**01 55 09.7**	**+0.2**
KEPZ				IAML_P			
	comp=Z,136nm,0.2s						
MMAI	**Mount Meron Ar**	**8.70**	**95**	Pn	**Pn**	**01 55 46.2**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=274,slow=9.5,SNR=4.5						
MMAI				Sn	**Sn**	**01 57 21.6**	**-3.1**
	comp=Z,1.2nm,0.3s,baz=300,slow=24,SNR=1.8						
BRTR	**Keskin Array B**	**8.79**	**49**	Pn	**Pn**	**01 55 51.3**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=223,slow=14,SNR=4.4						
EIL	**Elat**	**9.53**	**116**	Pn	**Pn**	**01 55 58.0**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=169,slow=22,SNR=2.5						
EIL				Sn	Sn	01 57 36.4	-8.7
	comp=Z,0.3nm,0.3s,baz=300,slow=17,SNR=2.0						
AKASG	**Malin Array Be**	**16.77**	**9**	Pn	**Pn**	**01 57 35.1**	**-0.7**
	comp=Z,8.8nm,0.3s,baz=200,slow=10,SNR=9.0						
GERES	**GERESS Array B**	**16.90**	**333**	Pn	**Pn**	**01 57 38.6**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=144,slow=12,SNR=21						
HFS	**Hagfors**	**26.99**	**347**	P	**P**	**01 59 21.0**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=142,slow=7.3,SNR=3.0						
EKA	**Eskdalemuir Ar**	**28.79**	**326**	P	**P**	**01 59 37.5**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=124,slow=8.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**29.82**	**231**	P	**P**	**01 59 47.4**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=31,slow=9.1,SNR=9.9						
MKAR	**Makanchi Array**	**44.37**	**56**	P	**P**	**02 01 51.3**	**0.0**
	comp=Z,0.6nm,0.6s,baz=282,slow=6.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**45.72**	**45**	P	**P**	**02 02 00.9**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=251,slow=4.4,SNR=3.6						
SONM	**Songino Array**	**60.15**	**50**	P	**P**	**02 03 48.9**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=286,slow=10,SNR=2.4						
PGP	**Puerto Galera**	**87.29**	**76⇓**	*e*P	**P**	**02 06 32.1**	**+3.9**

*ISCJB **17** 01:55:36.6±0.4, 24°.79N±0°.02×122°.07E±0°.02, h1km±5km, Error ellipse: s-maj=3.4km s-min=3.1km az=17.0*
*JMA **17** 01:55:36.7±0.1, 24°.84N×121°.96E, h47km, M2.4*
*TAP **17** 01:55:36.7, 24°.79N×121°.98E, h4km, ML2.6, C*
ISC 17 01:55:36.3±0.9, 24°.80N±0°.02×122°.05E±0°.03, h14km±7km, n39, σ0°77/61, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.21**	**284**	P	**Pb**	**01 55 41.1**	**-0.8**
	baz=296						
NTC				*e*S	**Sg**	**01 55 43.5**	**-0.6**
	baz=296						
TWB1	**Santiao Chiao**	**0.21**	**345**	*e*P	**Pg**	**01 55 41.4**	**+0.2**
	baz=3.0						
TWB1				*e*S	**Sg**	**01 55 44.4**	**+0.1**
	baz=3.0						
EOS1	**EOS1**	**0.26**	**164**	P	**Pb**	**01 55 42.9**	**+0.1**
	baz=150						
TIPB	**Shuangxi**	**0.26**	**310**	*i* P	**Pb**	**01 55 42.3**	**-0.6**
	baz=322						
TIPB				*e*S	**Sg**	**01 55 45.8**	**-0.1**
	baz=322						
TWC	**Suao**	**0.27**	**223**	P	**Pb**	**01 55 41.9**	**-1.0**
	baz=212						
TWC				*e*S	**Sg**	**01 55 44.9**	**-0.9**
	baz=212						
TWE	**Neicheng**	**0.36**	**257**	P	**Pb**	**01 55 43.5**	**-1.0**
	baz=256						
TWE				*e*S	**Sg**	**01 55 48.1**	**-0.4**
	baz=256						
NWF	**Wu-fen Shan**	**0.36**	**318**	P	**Pb**	**01 55 44.5**	**-0.1**
	baz=327						
NWF				*e*S	**Sb**	**01 55 49.7**	**-0.4**
	baz=327						
WFSB	**Wu-fen Shan**	**0.36**	**318**	*i* P	**Pb**	**01 55 44.6**	**+0.1**
	baz=327						
WFSB				*e*S	**Sb**	**01 55 49.7**	**-0.4**
	baz=327						
SLBB	**Yuanshan**	**0.38**	**263**	P	**Pb**	**01 55 44.0**	**-0.9**
	baz=264						
NANB	**Nanao**	**0.46**	**216**	P	**Pb**	**01 55 46.0**	**-0.2**
	baz=210						
NANB				*e*S	**Sb**	**01 55 52.4**	**-0.5**
	baz=210						
ENA	**Nanau**	**0.47**	**217**	*e*P	**Pb**	**01 55 46.1**	**-0.2**
	baz=210						
ENA				S	**Sb**	**01 55 53.1**	**0.0**
	baz=210						
ENTT	**Nioudou**	**0.47**	**250**	P	**Pb**	**01 55 46.3**	**-0.1**
	baz=248						
ENTT				*e*S	**Sb**	**01 55 52.4**	**-0.7**
	baz=248						
NWLT	**Wulai**	**0.50**	**267**	P	**Pb**	**01 55 46.5**	**-0.4**
	baz=269						
NWLT				*e*S	**Sb**	**01 55 53.6**	**-0.4**
	baz=269						
NHDH	**Xindian Distri**	**0.50**	**289**	P	**Pb**	**01 55 46.8**	**-0.1**
	baz=293						
NHDH				*e*S	**Sb**	**01 55 54.1**	**0.0**
	baz=293						
NDT	**Datong Townshi**	**0.53**	**248**	P	**Pb**	**01 55 47.0**	**-0.3**
	baz=247						
NDT				*e*S	**Sb**	**01 55 54.6**	**-0.3**
	baz=247						
YM07	**YM07**	**0.54**	**314**	P	**Pb**	**01 55 47.9**	**+0.3**
	baz=319						
YM01	**YM01**	**0.55**	**308**	P	**Pn**	**01 55 48.5**	**-1.4**
	baz=313						
YM11	**YM11**	**0.56**	**310**	*e*P	**Pb**	**01 55 48.4**	**+0.3**
	baz=315						
YM10	**YM10**	**0.57**	**308**	P	**Pb**	**01 55 48.6**	**+0.6**
	baz=318						
YM08	**YM08**	**0.57**	**313**	P	**Pb**	**01 55 48.3**	**+0.2**
	baz=318						
YM05	**YM05**	**0.57**	**309**	P	**Pb**	**01 55 48.4**	**+0.3**
	baz=314						
YM04	**YM04**	**0.58**	**307**	P	**Pb**	**01 55 48.6**	**+0.3**
	baz=312						
TWY	**Chenhua**	**0.62**	**319**	P	**Pn**	**01 55 50.0**	**-0.7**
	baz=324						
TWY				*e*S	**Sn**	**01 55 58.8**	**-1.7**
	baz=324						
YHNB	**Yeheng**	**0.63**	**258**	P	**Pb**	**01 55 48.8**	**-0.3**
	baz=258						
NACB	**Ninganchiao**	**0.75**	**214**	P	**Pn**	**01 55 51.4**	**-1.0**
	baz=210						
NACB				*e*S	**Sb**	**01 56 01.4**	**+0.1**
	baz=210						
ETLH	**Xiulin Townshi**	**0.79**	**221**	P	**Pn**	**01 55 52.5**	**-0.6**
	baz=218						
ETLH				*e*S	**Sn**	**01 56 03.2**	**-1.4**
	baz=218						
PCYT	**Pengchaiyu**	**0.82**	**1**	P	**Pn**	**01 55 53.8**	**+0.3**
	baz=5.0						
JYNG	**Yonagunijimaku**	**0.89**	**113**	P	**Pn**	**01 55 54.2**	**-0.1**
JYNG				*e*S	**Sn**	**01 56 06.7**	**-0.3**
YOJ	**Yonaguni jima**	**0.94**	**111**	*e*P	**Pn**	**01 55 55.6**	**+0.6**
	baz=108						
YOJ				*e*S	**Sn**	**01 56 08.6**	**+0.3**
	baz=108						
YOJ	**Yonaguni jima**	**0.94**	**111**	P	**Pn**	**01 55 55.2**	**+0.1**
YOJ				*e*S	**Sn**	**01 56 08.2**	**-0.1**
LIOB	**Emei**	**0.95**	**261**	*e*P	**Pn**	**01 55 56.7**	**+1.4**
	baz=261						
LIOB				*e*S	**Sn**	**01 56 10.7**	**+2.0**
	baz=261						
WHF	**Hehuan Shan**	**0.97**	**228**	P	**Pn**	**01 55 55.8**	**-0.1**
	baz=225						
TDCB	**Techi**	**0.98**	**236**	P	**Pn**	**01 55 56.7**	**+1.0**
	baz=234						
CHGB	**Renai**	**1.09**	**227**	*e*P	**Pg**	**01 55 58.2**	**+0.9**
	baz=225						
CHGB				*e*S	**Sn**	**01 56 13.4**	**+1.1**
	baz=225						
WHP	**Taichung City**	**1.13**	**243**	*e*P	**Pg**	**01 56 00.9**	**+2.7**
	baz=241

CPUP	**Villa Florida**	**9.10**	**144**	Pn	**Pn**	**02 14 03.0**	**-1.3**
	0.7nm,0.3s,baz=321,slow=12,SNR=13						
CPUP				Lg	Lg	02 16 27.3	
	1.0nm,0.3s,baz=355,slow=14,SNR=1.9						
CPUP				LR	LR	02 17 43.6	
	comp=Z,97nm,21.0s,baz=330,slow=39						
CFA	**Coronel Fontan**	**13.27**	**199**	Pn	**Pn**	**02 14 58.8**	**-2.6**
	0.2nm,0.3s,baz=24,slow=10.0,SNR=2.6						
CFA				Lg	Lg	02 18 44.1	
	0.2nm,0.3s,baz=25,slow=3.3,SNR=1.4						
NNA	**Nana**	**14.81**	**296**	LR	LR	02 21 14.8	
	comp=Z,150nm,18.8s,baz=132,slow=38						
BDFB	**Brasilia**	**14.98**	**79**	Pn	**Pn**	**02 15 24.3**	**-0.5**
	0.2nm,0.3s,baz=229,slow=9.3,SNR=2.6						
BDFB				Lg	Lg	02 19 52.0	
	0.3nm,0.3s,baz=155,slow=24,SNR=1.6						
BDFB				LR	LR	02 22 06.6	
	comp=Z,222nm,18.8s,baz=112,slow=41						
BDFB	**Brasilia**	**14.98**	**79**	*e*Pn	**Pn**	**02 15 24.3**	**-0.5**
BDFB				*e*Pn	**P**	**02 15 26.6**	**-3.3**
PTGA	**Pitinga**	**18.50**	**11**	P	**Pn**	**02 16 09.5**	**+0.4**
	0.3nm,0.3s,baz=165,slow=18,SNR=4.1						
PTGA				Lg	Lg	02 21 37.5	
	0.7nm,0.3s,baz=109,slow=16,SNR=5.2						
PTGA				LR	LR	02 22 54.1	
	comp=Z,57nm,20.6s,baz=190,slow=36						
TRQA	**Tornquist**	**18.97**	**177**	*e*P	**P**	**02 16 10.2**	**-3.6**
	3.6nm,0.9s						
PLCA	**Paso Flores**	**22.48**	**195**	P	**P**	**02 16 52.0**	**+0.2**
	1.8nm,0.8s,baz=356,slow=15,SNR=4.2						
PLCA	**Paso Flores**	**22.48**	**195**	*e*P	**P**	**02 16 52.0**	**+0.2**
	2.8nm,1.0s						
OTAV	**Otavalo**	**24.26**	**321**	*e*P	**P**	**02 17 08.7**	**-1.3**
	4.0nm,0.9s						
ROSC	**El Rosal**	**26.11**	**334**	P	**P**	**02 17 27.5**	**+0.9**
	3.6nm,0.5s,baz=144,slow=19,SNR=2.7						
ROSC	**El Rosal**	**26.11**	**334**	*e*P	**P**	**02 17 24.0**	**-2.6**
	6.9nm,1.0s						
MDP	**Montagnes des**	**26.20**	**25**	LR	LR	02 27 36.0	
	comp=Z,61nm,21.5s,baz=301,slow=36						
SDV	**Santo Domingo**	**28.69**	**345**	P	**P**	**02 17 50.2**	**+0.7**
	5.4nm,0.8s,baz=175,slow=2.1,SNR=4.4						
SDV	**Santo Domingo**	**28.69**	**345**	*e*P	**P**	**02 17 47.3**	**-2.2**
	13nm,1.1s						
RCBR	**Riachuelo**	**29.75**	**67**	*e*P	**P**	**02 17 56.7**	**-2.2**
	9.9nm,1.1s						
WVT	**Waverly**	**59.59**	**337**	*e*P	**P**	**02 21 53.5**	**-2.2**
	4.4nm,0.9s						
VNA3	**Neumayer Olymp**	**60.76**	**163**	P	**P**	**02 22 05.1**	**+1.7**
VNA1	**Neumayer--Stat**	**60.88**	**162**	P	**P**	**02 22 05.8**	**+1.7**
VNA2	**Neumayer--Watz**	**61.26**	**162**	P	**P**	**02 22 08.6**	**+1.9**
	baz=297,slow=8.1						
TXAR	**Lajitas Array**	**61.89**	**320**	P	**P**	**02 22 11.5**	**-0.2**
	0.2nm,0.5s,baz=134,slow=6.5,SNR=4.3						
SNAA	**Sanae**	**62.91**	**162**	P	**P**	**02 22 19.2**	**+1.4**
TOA1	**Torodi Ar. Sit**	**71.57**	**69**	*e*P	**P**	**02 23 14.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**71.57**	**69**	P	**P**	**02 23 14.0**	**+0.5**
	2.8nm,0.5s,baz=254,slow=5.4,SNR=52						
PD31	**Pinedale Array**	**74.81**	**327**	*e*P	**P**	**02 23 31.5**	**-0.9**
	1.2nm,1.0s						
PDAR	**Pinedale Array**	**74.81**	**327**	P	**P**	**02 23 32.5**	**+0.1**
	0.4nm,0.7s,baz=122,slow=7.7,SNR=3.8						
ESDC	**Sonseca Array**	**80.45**	**42**	P	**P**	**02 24 05.6**	**+1.9**
	0.2nm,0.4s,baz=249,slow=4.0,SNR=3.2						
K05A	**Summer Lake**	**81.13**	**321**	*e*P	**P**	**02 24 07.5**	**0.0**
	7.3nm,1.0s						
YKA	**Yellowknife Ar**	**90.74**	**339**	P	**P**	**02 24 55.3**	**+1.0**
	0.7nm,0.6s,baz=122,slow=4.6,SNR=11						
YKB5	**Yellowknife Ar**	**90.74**	**339**	*e*P	**P**	**02 24 55.3**	**+1.1**
ASAR	**Alice Springs**	**134.34**	**202**	PKP	**PKPdf**	**02 31 11.2**	**+0.7**
	0.2nm,0.4s,baz=135,slow=2.0,SNR=2.8						
AS31	**Alice Springs**	**134.34**	**202**	*e*PKPdf	**PKPdf**	**02 31 11.2**	**+0.7**
SONA0	**Songino Array**	**150.09**	**14**	*e*PKPbc	**PKiKP**	**02 31 44.0**	**+0.5**
SONA0				*e*PKPab	**PKPab**	**02 31 49.3**	**+0.9**
SONM	**Songino Array**	**150.09**	**14**	PKPbc	**PKiKP**	**02 31 44.0**	**+0.5**
	1.3nm,0.5s,baz=6.8,slow=1.0,SNR=7.8						
SONM				PKPab	**PKPab**	**02 31 49.3**	**+0.9**
	1.1nm,0.6s,baz=324,slow=2.0,SNR=5.2						
USRK	**Ussuriysk Ar.**	**151.85**	**336**	PKPbc	**PKiKP**	**02 31 48.3**	**+1.3**
	2.7nm,0.8s,baz=328,slow=3.6,SNR=4.4						
USRK				PKPab	**PKPab**	**02 31 55.7**	**0.0**
	0.9nm,0.6s,baz=29,slow=0.6,SNR=3.7						

*BJI **17** 02:13:04.3±0.0, 33°.71N×91°.66E, h10km, mb4.2/8, mB4.4/4, Ms3.9/8, Ms7 3.6/8*
*ISCJB **17** 02:13:09.5±0.6, 33°.65N±0°.07×91°.90E±0°.09, h33km, mb3.7/8, MS3.3/6, Error ellipse: s-maj=11.7km s-min=10.1km az=148.3*
*IDC **17** 02:13:09.8±1.4, 33°.43N×91°.84E, h29km±8km, mb3.5/8, mb1 3.6/13, mb1mx3.4/51, mbtmp3.7/13, ML3.6/5, MS3.3/9, Ms1 3.3/9, ms1mx3.0/35, Error ellipse: s-maj=31.2km s-min=18.8km az=53.0*
ISC 17 02:13:10.4±0.8, 33°.5N±0°.1×91°.9E±0°.1, h35km, n23, σ1§43/20, mb3.8/9, MS3.3/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**7.94**	**180**	*e*P	Pn	02 15 09.0	+5.5
GTA	**Gaotai**	**8.69**	**45**	*e*P	**Pn**	**02 15 15.3**	**+1.6**
GTA				pP		02 15 19.4	
GTA				sP		02 15 22.8	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=N,180nm,10.7s						
GTA				LR	LR		
	comp=E,300nm,12.4s						
GTA				LR	LR		
	comp=Z,270nm,14.8s						
LZH	**Lanzhou**	**10.19**	**72**	*e*P	**Pn**	**02 15 33.3**	**-1.0**
LZH				pP		02 15 37.5	
LZH				sP		02 15 40.3	
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				LR	LR		
	comp=N,1μm,10.8s						
LZH				LR	LR		
	comp=E,570nm,10.8s						
LZH				LR	LR		
	comp=Z,460nm,13.0s						
WMQ	**Urumqi**	**10.77**	**344**	*e*P	**Pn**	**02 15 39.1**	**-3.1**
WMQ				LR	LR		
	comp=N,74nm,6.1s						
WMQ				LR	LR		
	comp=E,140nm,6.7s						
WMQ				LR	LR		
	comp=Z,100nm,7.5s						
BRDH	**Bariadhala**	**10.82**	**181**	LR	LR	02 21 04.4	
	comp=Z,162nm,18.6s,baz=37,slow=44						
MKAR	**Makanchi Array**	**15.11**	**334**	Pn	**Pn**	**02 16 39.8**	**-1.4**
	0.1nm,0.3s,baz=138,slow=13,SNR=2.3						
MKAR				LR	LR	02 22 11.9	
	comp=Z,47nm,20.1s,baz=134,slow=36						
CMAR	**Chiang Mai Arr**	**16.30**	**155**	Pn	**Pn**	**02 16 55.9**	**-0.8**
	0.4nm,0.3s,baz=334,slow=10.0,SNR=3.1						
AAK	**Ala-Archa**	**16.39**	**309**	Pn	**Pn**	**02 16 58.0**	**+0.2**
	0.2nm,0.3s,baz=117,slow=17,SNR=1.9						
SONM	**Songino Array**	**18.01**	**33**	P	**P**	**02 17 18.7**	**+0.6**
	0.3nm,0.3s,baz=212,slow=12,SNR=7.6						
SONM				LR	LR	02 24 59.4	
	comp=Z,130nm,21.7s,baz=252,slow=39						
KURBB	**Kurchatov Arra**	**19.68**	**334**	P	**P**	**02 17 36.1**	**-0.2**
	0.0nm,0.3s,baz=140,slow=12,SNR=10						
KURBB				pP	**pP**	**02 17 44.3**	**-2.6**
	0.0nm,0.3s,baz=142,slow=12,SNR=5.7						
ZALV	**Zalesovo Beam**	**21.01**	**348**	P	**P**	**02 17 51.5**	**+0.8**
	37nm,0.2s,baz=163,slow=11,SNR=9.0						
ZALV				pP	**pP**	**02 18 00.9**	**-0.4**
	3.4nm,0.7s,baz=183,slow=12,SNR=3.7						
BVAR	**Borovoye Array**	**24.80**	**328**	P	**P**	**02 18 29.9**	**+0.9**
	1.7nm,0.8s,baz=140,slow=9.1,SNR=9.1						
BVAR				pP	**pP**	**02 18 38.4**	**-2.0**
	0.8nm,0.6s,baz=133,slow=11,SNR=4.8						
GEYT	**Alibeck**	**27.64**	**289**	LR	LR	02 31 23.9	
	comp=Z,51nm,20.9s,baz=175,slow=40						
PALK	**Pallekele**	**28.09**	**204**	LR	LR	02 32 00.4	
	comp=Z,69nm,18.3s,baz=118,slow=40						
KSRS	**Korea Array**	**29.52**	**72**	LR	LR	02 30 49.4	
	comp=Z,34nm,19.8s,baz=155,slow=36						
AKTO	**Aktyubinsk**	**29.95**	**315**	LR	LR	02 32 52.5	
	comp=Z,76nm,18.2s,baz=119,slow=39						
BRTR	**Keskin Array B**	**46.42**	**295**	P	**P**	**02 21 34.0**	**+0.2**
	0.9nm,0.9s,baz=96,slow=7.0,SNR=3.9						
AKASG	**Malin Array Be**	**48.04**	**311**	P	**P**	**02 21 46.5**	**+0.5**
	0.8nm,0.7s,baz=75,slow=6.8,SNR=3.1						
AKASG				LR	LR	02 45 33.3	
	comp=Z,48nm,19.1s,baz=90,slow=40						
FINES	**FINESS Array B**	**49.69**	**325**	P	**P**	**02 22 00.4**	**+1.8**
	0.8nm,0.5s,baz=99,slow=12,SNR=5.6						
NOA	**NORSAR Array B**	**56.87**	**325**	P	**P**	**02 22 52.4**	**+1.0**
	0.3nm,0.5s,baz=80,slow=6.9,SNR=3.1						
NOA				LR	LR	02 49 12.4	
	comp=Z,44nm,19.8s,baz=235,slow=38						
ASAR	**Alice Springs**	**69.56**	**139**	P	**P**	**02 24 15.4**	**-0.5**
	0.8nm,0.8s,baz=326,slow=6.5,SNR=5.0						
ILAR	**Eielson Array**	**71.88**	**23**	P	**P**	**02 24 30.7**	**+1.3**
	0.5nm,0.7s,baz=310,slow=4.7,SNR=5.6						
TORD	**Torodi Ar. Bea**	**82.99**	**281**	P	**P**	**02 25 33.0**	**+0.6**
	1.4nm,1.3s,baz=40,slow=4.8,SNR=4.3						

*IDC **17** 02:18:02.4±1.3, 34°.12N×25°.07E, h0km, mb3.6/3, mb1 3.6/9, mb1mx3.4/42, mbtmp3.5/9, ML3.8/5, MS2.6/1, Ms1 2.6/1, ms1mx2.0/42, Error ellipse: s-maj=22.4km s-min=21.2km az=127.0*
*THE **17** 02:18:07.7, 34°.34N×25°.16E, h0km±1km, ML2.9/8, Error ellipse: s-maj=2.3km s-min=0.8km az=173.0*
*ATH **17** 02:18:08.7, 34°.47N×25°.12E, h26km±2km, ML3.2/2, Error ellipse: s-maj=5.2km s-min=1.9km az=358.0*
*ISK **17** 02:18:09.8, 34°.59N×25°.19E, h16km, ML3.3/11*
*DDA **17** 02:18:59.0, 33°.96N×24°.95E, h11km, ML3.5*
ISC 17 02:18:06.7±1.6, 34°.38N±0°.07×25°.20E±0°.04, h9km±10km, n59, σ1§48/74, mb3.7/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.72**	**334**	P	**Pb**	**02 18 21.9**	**+0.6**
SIVA				S	**Sn**	**02 18 33.6**	**-0.5**
SIVA	**Sivas**	**0.72**	**334**	P	**Pb**	**02 18 21.9**	**+0.6**
SIVA				S	**Sg**	**02 18 28.7**	**-1.1**
SIVA				AML	AML	02 18 39.3	
	comp=E,7499μm,0.6s						
SIVA				AML	AML	02 18 40.6	
	comp=N,6696μm,0.5s						
TMBK	**Timbaki Herakl**	**0.78**	**333**	P	**Pn**	**02 18 23.2**	**-0.7**
TMBK				S	**Sn**	**02 18 36.2**	**+0.5**
LAST	**Lasithi**	**0.82**	**16**	P	**Pn**	**02 18 24.0**	**-0.5**
LAST				S	**Sn**	**02 18 37.9**	**+1.2**
LAST	**Lasithi**	**0.82**	**16**	P	**Pn**	**02 18 24.0**	**-0.5**
LAST				S	**Sb**	**02 18 33.9**	**-0.3**
KSTL	**Kastelli Herak**	**0.93**	**354**	P	**Pb**	**02 18 24.9**	**-0.1**
KSTL				S	**Sn**	**02 18 37.9**	**-1.5**
IACM	**Heraklion**	**0.93**	**354**	P	**Pn**	**02 18 26.9**	**+0.9**
IACM				S	**Sn**	**02 18 41.1**	**+1.6**
IDI	**Anoyia**	**0.94**	**344**	Pn	**Pn**	**02 18 25.7**	**-0.5**
	comp=N,26nm,0.3s,baz=246,slow=10,SNR=16						
IDI				Sn	**Sn**	**02 18 40.2**	**+0.3**
	comp=N,74nm,0.3s,baz=96,slow=14,SNR=20						
IDI				LR	LR	02 19 11.4	
	comp=N,104nm,18.4s,baz=134,slow=59						
NPS	**Neapolis**	**0.95**	**21**	P	**Pn**	**02 18 26.3**	**+0.1**
NPS				S	**Sn**	**02 18 41.3**	**+1.4**
NPS	**Neapolis**	**0.95**	**21**	P	**Pn**	**02 18 26.2**	**0.0**
GVD	**Gavdhos**	**1.03**	**297**	PG	**Pn**	**02 18 28.1**	**+0.8**
GVD				SG	**Sn**	**02 18 42.1**	**+0.3**
GVD	**Gavdhos**	**1.03**	**297**	P	**Pg**	**02 18 26.5**	**+0.1**
GVD				S	**Sn**	**02 18 42.2**	**+0.4**
GVD	**Gavdhos**	**1.03**	**297**	P	**Pg**	**02 18 26.6**	**+0.1**
GVD				S	**Sg**	**02 18 38.6**	**-1.2**
GVD				AML	AML	02 18 47.2	
	comp=E,2051μm,0.6s						
GVD				AML	AML	02 18 47.6	
	comp=N,1925μm,0.4s						
ZKR	**Zakros**	**1.12**	**48**	PG	**Pn**	**02 18 29.6**	**+1.0**
ZKR	**Zakros**	**1.12**	**48**	P	**Pn**	**02 18 29.5**	**+1.0**
ZKR				S	**Sn**	**02 18 46.6**	**+2.6**
ZKR	**Zakros**	**1.12**	**48**	P	**Pn**	**02 18 29.4**	**+0.9**
VAM	**Vamos**	**1.32**	**322**	P	**Pn**	**02 18 31.7**	**+0.4**
VAM				S	**Sn**	**02 18 51.2**	**+2.2**
VAM	**Vamos**	**1.32**	**322**	P	**Pb**	**02 18 31.4**	**-0.2**
VAM				S	**Sn**	**02 18 49.8**	**+0.8**
IMMV	**Iera Moni Meta**	**1.47**	**318**	PN	**Pb**	**02 18 34.3**	**0.0**
IMMV	**Iera Moni Meta**	**1.47**	**318**	P	**Pg**	**02 18 34.6**	**-0.3**
IMMV				S	**Sg**	**02 18 55.4**	**+1.3**
IMMV	**Iera Moni Meta**	**1.47**	**318**	P	**Pg**	**02 18 34.6**	**-0.3**
THR6	**Thira Island,**	**1.98**	**5**	P	**Pb**	**02 18 42.6**	**-0.3**
KARP	**Karpathos**	**1.99**	**53**	P	**Pb**	**02 18 43.6**	**+0.5**
KARP	**Karpathos**	**1.99**	**53**	P	**Pb**	**02 18 43.5**	**+0.4**
SANT	**Santorini**	**2.00**	**6**	PN	**Pn**	**02 18 40.7**	**0.0**
ANKY	**Antikythira Is**	**2.15**	**314**	P	**Pn**	**02 18 43.5**	**+0.7**
IOSP	**Ios island**	**2.34**	**2**	P	**Pn**	**02 18 46.3**	**+0.9**
IOSP	**Ios island**	**2.34**	**2**	P	**Pn**	**02 18 46.2**	**+0.9**
MHLO	**Agia Marina, M**	**2.40**	**344**	P	**Pn**	**02 18 46.8**	**+0.7**
MHLO	**Agia Marina, M**	**2.40**	**344**	P	**Pn**	**02 18 46.5**	**+0.4**
KYTH	**Kithira**	**2.58**	**318**	P	**Pn**	**02 18 50.1**	**+1.5**
KYTH	**Kithira**	**2.58**	**318**	P	**Pn**	**02 18 50.3**	**+1.7**
APE	**Apeiranthos**	**2.70**	**6**	PN	**Pn**	**02 18 50.7**	**+0.4**
ARG	**Arkhangelos**	**3.02**	**52**	PN	**Pn**	**02 18 56.9**	**+2.3**
DAT	**Datca**	**3.04**	**39**	PN	**Pn**	**02 18 56.6**	**+1.5**
DAT	**Datca**	**3.04**	**39**	*i* P	**Pn**	**02 18 57.8**	**+2.7**
DAT				IAML_P			
	comp=Z,217nm,0.3s						
BDRM	**Kayabasi**	**3.25**	**34**	*i* P	**Pn**	**02 18 59.3**	**+1.5**
BDRM				IAML_P			
	comp=Z,108nm,0.5s						
DID	**Didima**	**3.51**	**334**	P	**Pn**	**02 19 02.0**	**+0.6**
DALY	**Dalyan (Mula)**	**3.72**	**48**	PN	**Pn**	**02 19 06.4**	**+2.1**
DALY	**Dalyan (Mula)**	**3.72**	**48**	*i* P	**Pn**	**02 19 07.1**	**+2.8**
DALY				IAML_P			
	comp=Z,339nm,0.2s						
YER	**Yerkesik**	**3.72**	**41**	PN	**Pn**	**02 19 06.5**	**+2.1**
TURN	**Turunc**	**3.73**	**47**	PN	**Pn**	**02 19 02.1**	**-2.3**
TURN	**Turunc**	**3.73**	**47**	*i* P	**Pn**	**02 19 02.2**	**-2.2**
TURN				IAML_P			
	comp=Z,267nm,0.2s						
AYDN	**Tasoluk**	**3.93**	**33**	*i* P	**Pn**	**02 19 09.8**	**+2.5**
AYDN				IAML_P			
	comp=Z,309nm,0.2s						
AKAS	**Kas**	**4.05**	**62**	*i* P	**Pn**	**02 19 10.2**	**+1.2**
AKAS				IAML_P			
	comp=Z,401nm,0.2s						
ELL	**Elmali**	**4.51**	**57**	PN	**Pn**	**02 19 18.1**	**+2.8**
AKUM	**Antalya-Kumluc**	**4.63**	**64**	*i* P	**Pn**	**02 19 17.5**	**+0.7**
AGG	**Agios Georgios**	**5.18**	**334**	PN	**Pn**	**02 19 25.6**	**+1.2**
KHAL	**Karahalli**	**5.28**	**40**	*i* P	**Pn**	**02 19 27.3**	**+1.5**
KHAL				IAML_P			
	comp=Z,101nm,0.2s						
BRTR	**Keskin Array B**	**8.60**	**49**	Pn	**Pn**	**02 20 14.0**	**+2.5**
	comp=Z,0.0nm,0.3s,baz=215,slow=12,SNR=2.4						
MMAI	**Mount Meron Ar**	**8.61**	**96**	Pn	**Pn**	**02 20 09.7**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=267,slow=9.7,SNR=5.1						
MMAI				Sn	**Sn**	**02 21 43.2**	**-5.7**
	comp=Z,2.4nm,0.3s,baz=277,slow=21,SNR=3.8						
EIL	**Elat**	**9.51**	**117**	Pn	Pn	02 20 20.8	-3.1
	comp=Z,0.5nm,0.3s,baz=169,slow=19,SNR=1.6						
EIL				Sn	Sn	02 22 02.1	-8.8
	comp=Z,0.4nm,0.3s,baz=328,slow=18,SNR=1.9						
AKASG	**Malin Array Be**	**16.58**	**9**	Pn	**Pn**	**02 21 59.9**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=201,slow=10,SNR=4.3						
KBZ	**Khabaz**	**16.59**	**51**	Pn	**P**	**02 22 03.2**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=292,slow=10,SNR=2.6						
GERES	**GERESS Array B**	**16.79**	**333**	Pn	**P**	**02 22 03.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=145,slow=12,SNR=11						
GERES				LR	LR	02 29 15.5	
	comp=Z,24nm,21.7s,baz=88,slow=40						
TORD	**Torodi Ar. Bea**	**30.02**	**231**	P	P	02 24 10.9	-5.0
	comp=Z,0.6nm,0.5s,baz=34,slow=9.3,SNR=9.5						
ARCES	**ARCESS Array B**	**35.21**	**0**	P	**P**	**02 24 60.0**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=185,slow=9.1,SNR=3.7						
KURBB	**Kurchatov Arra**	**41.59**	**50**	P	**P**	**02 25 54.0**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=283,slow=8.5,SNR=4.5						
MKAR	**Makanchi Array**	**44.18**	**56**	P	**P**	**02 26 14.1**	**-1.7**
	comp=Z,1.2nm,1.0s,baz=280,slow=8.8,SNR=3.3						

*JMA **17** 02:40:58.7±0.2, 43°.64N×146°.47E, h78km±2km, M2.9*
*SKHL **17** 02:40:58.7±0.5, 43°.69N×146°.59E, h72km±3km, mb4.3/2*
ISC 17 02:40:58.8±1.5, 43°.65N±0°.08×146°.59E±0°.08, h64km±11km, n17, σ0§94/28, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.65**	**306**	*i* P	**Pn**	**02 41 12.8**	**+0.2**
YUK				AMB	AMB	02 41 15.0	
	295nm,0.4s						
YUK				*i* S	**Sn**	**02 41 23.0**	**+0.2**
YUK				A	A	02 41 26.0	
	1μm,0.4s						
YUK				A	A	02 41 26.0	
	926nm,0.4s						
NEM2	**Nemuro 2**	**0.68**	**245**	P	**Pn**	**02 41 13.3**	**+0.4**
NEM2				*e*S	**Sn**	**02 41 24.1**	**+0.7**
GRPR	**Tuman**	**0.68**	**300**	*e*P	**Pn**	**02 41 12.0**	**-1.0**
GRPR				*i* S	**Sn**	**02 41 22.0**	**-1.5**
GRPR				A	A	02 41 23.0	
	1μm,0.3s						
GRPR				A	A	02 41 23.0	
	838nm,0.3s						
LAGR	**Lagunnoye**	**0.71**	**305**	*e*P	**Pn**	**02 41 13.0**	**-0.3**
LAGR				*i* S	**Sn**	**02 41 24.0**	**0.0**
LAGR				A	A	02 41 26.0	
	993nm,0.2s						
LAGR				A	A	02 41 26.0	
	483nm,0.2s						
GLVR	**Golovnino**	**0.78**	**277**	*e*P	**Pn**	**02 41 14.0**	**-0.2**
GLVR				*i* S	**Sn**	**02 41 26.0**	**+0.5**
GLVR				A	A	02 41 27.0	
	707nm,0.2s						
GLVR				A	A	02 41 27.0	
	472nm,0.2s						
JRA	**Rausu**	**1.10**	**286**	P	**Pn**	**02 41 18.1**	**-0.1**
JRA				*e*S	**Sn**	**02 41 32.8**	**+0.1**
JKHN	**Kushirohamanak**	**1.19**	**242**	P	**Pn**	**02 41 19.3**	**0.0**
JKHN				*e*S	**Sn**	**02 41 34.1**	**-0.6**
JNK	**Nakash**	**1.36**	**268**	P	**Pn**	**02 41 21.1**	**-0.5**
JNK				*e*S	**Sn**	**02 41 37.5**	**-1.3**
JAK	**Akkeshi**	**1.53**	**245**	P	**Pn**	**02 41 23.4**	**-0.5**
JAK				*e*S	**Sn**	**02 41 42.1**	**-0.7**
KUR	**Kuril'sk**	**1.83**	**30**	*i* P	**Pn**	**02 41 27.5**	**-0.4**
KUR				AMB	AMB	02 41 29.0	
	47nm,0.2s						
KUR				*i* S	**Sn**	**02 41 48.7**	**-1.3**
KUR				A	A	02 41 53.0	
	169nm,0.3s						
KUR				A	A	02 41 53.0	
	213nm,0.3s						
JTKR	**Abashiri--Toko**	**1.97**	**280**	P	**Pn**	**02 41 29.3**	**-0.5**
JAR	**Ashorobuto**	**2.08**	**261**	P	**Pn**	**02 41 31.5**	**+0.1**
JAR				*e*S	**Sn**	**02 41 55.7**	**-0.5**
JOB	**Onbets**	**2.15**	**251**	*e*S	**Sn**	**02 41 56.6**	**-1.1**
JMP	**Maruseppu**	**2.36**	**280**	P	**Pn**	**02 41 35.0**	**-0.2**
JCH	**Churui**	**2.58**	**247**	P	**Pn**	**02 41 37.6**	**-0.5**
JCH				*e*S	**Sn**	**02 42 05.6**	**-2.7**
YAK	**Yakutsk**	**20.93**	**337**	*e*P	Pn	02 45 37.2	-1.8
KURK	**Kurchatov**	**45.25**	**304**	*e*P	**P**	**02 49 11.0**	**+1.5**

*IDC **17** 02:44:33.2±4.4, 34°.43N×24°.53E, h0km, mb3.7/1, mb1 3.5/3, mb1mx3.2/30, mbtmp3.4/3, ML3.8/2, Error ellipse: s-maj=118.8km s-min=29.5km az=109.0*
*THE **17** 02:44:34.9, 34°.32N×25°.11E, h0km±2km, ML3.1/6, Error ellipse: s-maj=4.8km s-min=1.6km az=178.0*
*ATH **17** 02:44:35.6, 34°.42N×25°.08E, h22km±2km, ML3.1/4, Error ellipse: s-maj=4.9km s-min=1.6km az=355.0*
*DDA **17** 02:44:57.2, 34°.30N×24°.95E, h11km±1km, ML3.6*
ISC 17 02:44:34.9±1.8, 34°.43N±0°.07×25°.10E±0°.03, h3km±13km, n56, σ1§19/69, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.63**	**338**	P	**Pb**	**02 44 48.6**	**0.0**
SIVA				S	**Sn**	**02 45 03.1**	**+1.6**
SIVA	**Sivas**	**0.63**	**338**	P	**Pb**	**02 44 48.7**	**0.0**
SIVA				S	**Sb**	**02 44 57.0**	**-0.9**
SIVA				AML	AML	02 45 06.5	
	comp=E,14183μm,0.6s						
SIVA				AML	AML	02 45 07.8	
	comp=N,9962μm,0.6s						
TMBK	**Timbaki Herakl**	**0.70**	**337**	P	**Pb**	**02 44 50.2**	**+0.5**
TMBK				S	**Sn**	**02 45 01.9**	**-1.1**
LAST	**Lasithi**	**0.79**	**23**	P	**Pb**	**02 44 51.3**	**-0.1**
LAST				S	**Sn**	**02 45 07.0**	**+1.5**
LAST	**Lasithi**	**0.79**	**23**	P	**Pb**	**02 44 51.3**	**-0.1**
LAST				S	**Sn**	**02 45 03.9**	**-1.6**
LAST				AML	AML	02 45 11.6	
	comp=N,1133μm,0.8s						
LAST				AML	AML	02 45 11.9	
	comp=E,1304μm,0.6s						
KSTL	**Kastelli Herak**	**0.87**	**358**	P	**Pg**	**02 44 51.8**	**+0.2**
KSTL				S	**Sb**	**02 45 05.3**	**+0.5**
IACM	**Heraklion**	**0.87**	**358**	P	**Pb**	**02 44 53.4**	**+0.7**
NPS	**Neapolis**	**0.93**	**27**	P	**Pb**	**02 44 53.7**	**0.0**
NPS				S	**Sn**	**02 45 09.7**	**+0.9**
NPS	**Neapolis**	**0.93**	**27**	P	**Pb**	**02 44 53.5**	**-0.2**
NPS				S	**Sb**	**02 45 07.3**	**+0.8**
NPS				AML	AML	02 45 19.0	
	comp=N,914μ

comp=Z,0.8nm,0.3s,baz=198,slow=10,SNR=5.6
GERES **GERESS Array B 16.71 333** Pn **Pn** 02 48 27.7 -2.3
comp=Z,0.1nm,0.3s,baz=151,slow=12,SNR=2.5
TORD **Torodi Ar. Bea 29.99 231** P P 02 50 40.4 -4.5
comp=Z,0.3nm,0.4s,baz=28,slow=9.5,SNR=16

IDC ***17*** *02:54:58.0±0.7, 34°.31N×25°.11E, h0km, mb4.0/15, mb1 4.2/23, mb1mx4.1/44, mbtmp4.1/23, ML4.2/7, MS3.1/6, Ms1 3.1/6, ms1mx2.7/50, Error ellipse: s-maj=13.4km s-min=12.7km az=116.0*
PDG ***17*** *02:55:01.4±0.3, 34°.34N×24°.33E, h7km±2km, ML4.3/10, Error ellipse: s-maj=14.3km s-min=7.4km az=90.0*
ATH ***17*** *02:55:01.3, 34°.29N×25°.14E, h28km±1km, ML3.6/14, Error ellipse: s-maj=2.9km s-min=0.9km az=346.0*
HLW ***17*** *02:55:01.9, 34°.19N×25°.42E, h5km±17km, Md4.1, Ml3.9*
ISCJB ***17*** *02:55:01.4±0.3, 34°.18N±0°.02×25°.12E±0°.02, h44km±4km, mb4.2/23, MS3.2/4, Error ellipse: s-maj=4.4km s-min=2.6km az=30.5*
THE ***17*** *02:55:02.6, 34°.34N×25°.12E, h0km±1km, ML3.6/7, Error ellipse: s-maj=2.4km s-min=0.8km az=175.0*
NEIC ***17*** *02:55:03.8±0.0, 34°.40N×25°.10E, h10km, mb4.2/16, ML3.6(THE), ML3.6(ATH), After ATH.*
ISK ***17*** *02:55:03.3, 34°.53N×25°.11E, h14km, ML3.7/16*
GII ***17*** *02:55:09.6±0.0, 33°.73N×25°.96E, h1km, mb4.0/2, MD3.8/3*
DDA ***17*** *02:55:50.4, 34°.10N×24°.97E, h11km, ML3.9*
ISC 17 02:55:02.0±1.0, 34°.28N±0°.04×25°.13E±0°.03, h30km±7km, n284, σ2°36/331, mb4.4/23, MS3.2/4, 5C-8D, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**340**	P	**Pb**		**02 55 16.7**		**-0.4**
SIVA				S	**Sn**		**02 55 28.0**		**+0.2**
SIVA	**Sivas**	**0.78**	**340**	P	**Pb**		**02 55 16.8**		**-0.4**
SIVA				S	**Sn**		**02 55 27.9**		**+0.2**
SIVA				AML	AML		02 55 29.6		
	comp=E,41375μm,0.4s								
SIVA				AML	AML		02 55 34.0		
	comp=N,29715μm,0.6s								
TMBK	**Timbaki Herakl**	**0.85**	**339**	P	**Pn**		**02 55 18.2**		**+0.3**
TMBK				S	**Sn**		**02 55 30.6**		**+1.2**
LAST	**Lasithi**	**0.93**	**18**	P	**Pn**		**02 55 19.0**		**-0.1**
LAST				S	**Sn**		**02 55 32.7**		**+1.2**
LAST	**Lasithi**	**0.93**	**18**	P	**Pn**		**02 55 19.1**		**-0.1**
LAST				S	**Sn**		**02 55 32.4**		**+1.0**
LAST				AML	AML		02 55 41.5		
	comp=N,5296μm,0.7s								
LAST				AML	AML		02 55 44.5		
	comp=E,5879μm,0.7s								
KSTL	**Kastelli Herak**	**1.02**	**357**	P	**Pn**		**02 55 19.6**		**-0.8**
KSTL				S	**Sb**		**02 55 34.0**		**-0.3**
IACM	**Heraklion**	**1.02**	**357**	P	**Pb**		**02 55 22.0**		**+0.8**
IACM				S	**Sn**		**02 55 35.6**		**+1.8**
IACM	**Heraklion**	**1.02**	**357**	P	**Pb**		**02 55 22.0**		**+0.8**
GVD	**Gavdhos**	**1.03**	**303**	PG	**Pb**		**02 55 21.3**		**+0.1**
GVD				SG	**Sn**		**02 55 34.2**		**+0.4**
GVD	**Gavdhos**	**1.03**	**303**	P	**Pb**		**02 55 20.9**		**-0.3**
GVD				S	**Sn**		**02 55 36.8**		**+3.0**
GVD	**Gavdhos**	**1.03**	**303**	P	**Pb**		**02 55 21.1**		**-0.1**
GVD				S	**Sn**		**02 55 36.2**		**+2.4**
GVD				AML	AML		02 55 48.4		
	comp=E,12948μm,0.5s								
GVD				AML	AML		02 55 56.1		
	comp=N,9545μm,0.6s								
IDI	**Anoyia**	**1.03**	**349**	Pn	**Pn**		**02 55 20.6**		**+0.1**
	comp=N,144nm,0.3s,baz=179,slow=15,SNR=204								
IDI				Sn	**Sn**		**02 55 35.6**		**+1.6**
	comp=N,264nm,0.3s,baz=340,slow=23,SNR=21								
IDI	**Anoyia**	**1.03**	**349**	P	**Pn**		**02 55 19.7**		**-0.8**
IDI				AML	AML		02 55 38.1		
	comp=N,3202μm,0.4s								
IDI				AML	AML		02 55 38.2		
	comp=E,4487μm,0.4s								
NPS	**Neapolis**	**1.06**	**22**	P	**Pb**		**02 55 21.4**		**-0.4**
NPS				S	**Sn**		**02 55 37.8**		**+3.1**
NPS	**Neapolis**	**1.06**	**22**	P	**Pb**		**02 55 21.3**		**-0.4**
NPS				S	**Sn**		**02 55 35.6**		**+0.9**
NPS				AML	AML		02 55 41.7		
	comp=E,5679μm,0.5s								
NPS				AML	AML		02 55 44.2		
	comp=N,4819μm,0.6s								
STIA	**Sitia Lasithi**	**1.21**	**40**	P	**Pb**		**02 55 25.5**		**+1.1**
STIA				S	**Sb**		**02 55 41.1**		**+1.4**
ZKR	**Zakros**	**1.22**	**47**	PN	**Pb**		**02 55 24.5**		**-0.1**
ZKR				SN	**Sb**		**02 55 40.6**		**+0.6**
ZKR	**Zakros**	**1.22**	**47**	P	**Pb**		**02 55 24.3**		**-0.3**
ZKR				S	**Sb**		**02 55 42.1**		**+2.1**
ZKR	**Zakros**	**1.22**	**47**	P	**Pb**		**02 55 24.2**		**-0.4**
ZKR				S	**Sb**		**02 55 41.9**		**+1.9**
ZKR				AML	AML		02 55 48.3		
	comp=E,6194μm,0.6s								
ZKR				AML	AML		02 55 55.2		
	comp=N,2741μm,0.5s								
VAM	**Vamos**	**1.36**	**326**	P	**Pb**		**02 55 26.1**		**-0.8**
VAM				S	**Sb**		**02 55 45.9**		**+2.0**
VAM	**Vamos**	**1.36**	**326**	P	**Pb**		**02 55 26.4**		**-0.5**
VAM				AML	AML		02 55 55.8		
	comp=E,4473μm,0.5s								
VAM				AML	AML		02 55 57.6		
	comp=N,4410μm,0.4s								
IMMV	**Iera Moni Meta**	**1.51**	**322**	P	**Pb**		**02 55 29.0**		**-0.4**
IMMV	**Iera Moni Meta**	**1.51**	**322**	P	**Pb**		**02 55 28.7**		**-0.8**
IMMV				AML	AML		02 56 03.1		
	comp=E,4234μm,0.7s								
IMMV				AML	AML		02 56 05.7		
	comp=N,4402μm,0.5s								
CHAN	**Chania**	**1.53**	**324**	P	**Pb**		**02 55 29.9**		**+0.2**
CHAN				S	**Sb**		**02 55 49.1**		**+0.5**
THR6	**Thira Island,**	**2.08**	**6**	P	**Pb**		**02 55 37.2**		**-2.0**
THR6	**Thira Island,**	**2.08**	**6**	P	**Pn**		**02 55 36.5**		**+1.5**
SAP1	**Santorini-Akro**	**2.08**	**6**	P	**Pb**		**02 55 37.3**		**-1.9**
SAP1	**Santorini-Akro**	**2.08**	**6**	P	**Pn**		**02 55 36.6**		**+1.6**
KARP	**Karpathos**	**2.09**	**52**	*e*Pn	**Pb**		**02 55 38.9**		**-0.5**
KARP	**Karpathos**	**2.09**	**52**	P	**Pb**		**02 55 38.7**		**-0.7**
KARP	**Karpathos**	**2.09**	**52**	P	**Pb**		**02 55 38.3**		**-1.1**
KARP				AML	AML		02 56 26.9		
	comp=N,1242μm,1.0s								
KARP				AML	AML		02 56 36.9		
	comp=E,1561μm,1.0s								
SANT	**Santorini**	**2.10**	**7**	*e*Pn	**Pb**		**02 55 37.1**		**-2.4**
SANT				*e*Sn	**Sn**		**02 55 54.2**		**-6.3**
SANT	**Santorini**	**2.10**	**7**	P	**Pb**		**02 55 37.3**		**-2.3**
THT1	**Athinios (Pele**	**2.12**	**7**	P	**Pb**		**02 55 38.0**		**-1.7**
THR3	**Thira Island,**	**2.14**	**6**	P	**Pb**		**02 55 38.2**		**-1.9**
THR3	**Thira Island,**	**2.14**	**6**	P	**Pb**		**02 55 37.9**		**-2.2**
ANAF	**Anafi Island**	**2.14**	**14**	P	**Pb**		**02 55 38.3**		**-1.8**
ANAF	**Anafi Island**	**2.14**	**14**	P	**Pb**		**02 55 38.0**		**-2.1**
ANAF				AML	AML		02 56 17.5		
	comp=E,3707μm,0.4s								
ANAF				AML	AML		02 56 20.0		
	comp=N,3900μm,0.5s								
THR5	**Thira Island,**	**2.14**	**5**	P	**Pb**		**02 55 38.0**		**-2.1**
THR5	**Thira Island,**	**2.14**	**5**	P	**Pb**		**02 55 37.7**		**-2.4**
SAP3	**Santorini-Thir**	**2.16**	**5**	P	**Pn**		**02 55 37.9**		**+1.9**
THT2	**Imerovigli**	**2.16**	**6**	P	**Pn**		**02 55 37.8**		**+1.7**
THR2	**Thira island,**	**2.18**	**6**	P	**Pn**		**02 55 37.6**		**+1.3**
THR2	**Thira island,**	**2.18**	**6**	P	**Pn**		**02 55 37.4**		**+1.1**
ANKY	**Antikythira Is**	**2.18**	**317**	P	**Pb**		**02 55 39.0**		**-1.8**
ANKY	**Antikythira Is**	**2.18**	**317**	P	**Pb**		**02 55 38.8**		**-2.1**
ANKY				AML	AML		02 56 29.6		
	comp=N,912μm,0.7s								
ANKY				AML	AML		02 56 30.0		
	comp=E,1077μm,0.9s								
IOSP	**Ios island**	**2.44**	**3**	P	**Pn**		**02 55 40.9**		**+1.0**
IOSP	**Ios island**	**2.44**	**3**	P	**Pn**		**02 55 41.1**		**+1.2**
IOSP				AML	AML		02 56 30.4		
	comp=N,983μm,0.5s								
IOSP				AML	AML		02 56 35.3		
	comp=E,1085μm,0.8s								
MHLO	**Agia Marina, M**	**2.48**	**346**	P	**Pn**		**02 55 41.5**		**+1.1**
MHLO	**Agia Marina, M**	**2.48**	**346**	P	**Pn**		**02 55 41.5**		**+1.1**
MHLA	**Plaka, Milos I**	**2.53**	**347**	P	**Pn**		**02 55 43.1**		**+2.1**
KYTH	**Kithira**	**2.61**	**320**	P	**Pn**		**02 55 44.9**		**+2.6**
KYTH	**Kithira**	**2.61**	**320**	P	**Pn**		**02 55 44.4**		**+2.1**
KYTH				AML	AML		02 56 41.5		
	comp=E,645μm,1.0s								
KYTH				AML	AML		02 56 56.9		
	comp=N,448μm,0.9s								
AMGA	**Amorgos Island**	**2.62**	**14**	P	**Pn**		**02 55 43.5**		**+1.2**
KTHR	**Kythira**	**2.63**	**319**	P	**Pn**		**02 55 44.8**		**+2.3**
SLUM	**Salum**	**2.78**	**179**	P	**Pn**		**02 55 46.0**		**+1.4**
	baz=184								
SLUM				AMP			02 56 00.0		
	baz=184								
APE	**Apeiranthos**	**2.80**	**7**	PN	**Pn**		**02 55 45.4**		**+0.5**
APE	**Apeiranthos**	**2.80**	**7**	P	**Pn**		**02 55 46.0**		**+1.1**
SERI	**Serifos**	**2.92**	**350**	P	**Pn**		**02 55 47.5**		**+1.0**
SERI	**Serifos**	**2.92**	**350**	P	**Pn**		**02 55 47.2**		**+0.6**
VLI	**Veliai**	**3.02**	**324**	P	**Pn**		**02 55 49.0**		**+1.1**
VLI	**Veliai**	**3.02**	**324**	P	**Pn**		**02 55 48.9**		**+1.0**
ARG	**Arkhangelos**	**3.12**	**51**	PN	**Pn**		**02 55 51.7**		**+2.4**
ARG	**Arkhangelos**	**3.12**	**51**	P	**Pn**		**02 55 51.7**		**+2.4**
DAT	**Datca**	**3.16**	**39**	PN	**Pn**		**02 55 51.5**		**+1.7**
DAT	**Datca**	**3.16**	**39**	*i* P	**Pn**		**02 55 52.1**		**+2.3**
DAT				IAML_P					
	comp=Z,520nm,0.2s								
DATC	**Datca-Mugla**	**3.22**	**39**	PN	**Pn**		**02 55 52.5**		**+1.9**
BODT	**Bodrum**	**3.29**	**32**	PN	**Pn**		**02 55 53.3**		**+1.6**
BDRM	**Kayabasi**	**3.36**	**33**	*i* P	**Pn**		**02 55 55.0**		**+2.5**
BDRM				IAML_P					
	comp=Z,298nm,0.2s								
KRND	**KRANIDI**	**3.49**	**333**	P	**Pn**		**02 55 55.5**		**+1.2**
KRND				S	**Sn**		**02 56 37.1**		**+2.5**
KRND	**KRANIDI**	**3.49**	**333**	P	**Pn**		**02 55 55.3**		**+1.0**
DID	**Didima**	**3.57**	**335**	P	**Pn**		**02 55 56.1**		**+0.7**
SMO	**Samos**	**3.69**	**22**	P	**Pn**		**02 55 58.3**		**+1.2**
EPID	**Epidavros**	**3.71**	**334**	P	**Pn**		**02 55 59.0**		**+1.7**
VLY	**Voula,Athens**	**3.73**	**344**	P	**Pn**		**02 55 58.5**		**+0.9**
VLY	**Voula,Athens**	**3.73**	**344**	P	**Pn**		**02 55 58.7**		**+1.1**
VLX	**Vlachokerasia**	**3.81**	**325**	P	**Pn**		**02 56 00.5**		**+1.7**
GCAM	**G?zelcaml?**	**3.82**	**26**	PN	**Pn**		**02 56 00.4**		**+1.6**
GCAM	**G?zelcaml?**	**3.82**	**26**	*i* P	**Pn**		**02 56 02.0**		**+3.2**
GCAM				IAML_P					
	comp=Z,103nm,0.2s								
DALY	**Dalyan (Mula)**	**3.83**	**48**	PN	**Pn**		**02 56 01.4**		**+2.5**
DALY	**Dalyan (Mula)**	**3.83**	**48**	*i* P	**Pn**		**02 56 02.0**		**+3.0**
DALY				IAML_P					
	comp=Z,566nm,0.2s								
YER	**Yerkesik**	**3.83**	**41**	PN	**Pn**		**02 56 01.5**		**+2.4**
YER	**Yerkesik**	**3.83**	**41**	P	**Pn**		**02 56 01.5**		**+2.4**
TURN	**Turunc**	**3.83**	**47**	PN	**Pn**		**02 55 57.1**		**-1.9**
TURN	**Turunc**	**3.83**	**47**	*i* P	**Pn**		**02 55 57.1**		**-1.9**
TURN				IAML_P					
	comp=Z,2μm,0.3s								
ATHU	**Athens Univers**	**3.84**	**344**	P	**Pn**		**02 56 00.0**		**+0.9**
ATHU	**Athens Univers**	**3.84**	**344**	P	**Pn**		**02 56 00.0**		**+0.9**
ATH	**Athens Observa**	**3.86**	**343**	P	**Pn**		**02 56 00.5**		**+1.1**
ITM	**Ithomi**	**3.89**	**319**	PN	**Pn**		**02 56 01.6**		**+1.7**
ITM	**Ithomi**	**3.89**	**319**	*e*Pn	**Pn**		**02 56 00.9**		**+1.0**
ITM	**Ithomi**	**3.89**	**319**	P	**Pn**		**02 56 01.0**		**+1.0**
ITM	**Ithomi**	**3.89**	**319**	P	**Pn**		**02 56 00.8**		**+1.0**
PTL	**Penteli**	**3.90**	**345**	P	**Pn**		**02 56 01.0**		**+1.1**
PTL	**Penteli**	**3.90**	**345**	P	**Pn**		**02 56 01.1**		**+1.1**
TRIP	**Tripoli**	**3.99**	**325**	P	**Pn**		**02 56 03.5**		**+2.3**
ACOR	**Acrocorinthos**	**4.04**	**334**	P	**Pn**		**02 56 02.9**		**+0.9**
AYDN	**Tasoluk**	**4.04**	**33**	*i* P	**Pn**		**02 56 04.6**		**+2.6**
AYDN				IAML_P					
	comp=Z,796nm,0.3s								
KSL	**Kastellorizon**	**4.09**	**62**	P	**Pn**		**02 56 03.9**		**+1.3**
KSL	**Kastellorizon**	**4.09**	**62**	P	**Pn**		**02 56 03.8**		**+1.3**
KSL				AML	AML		02 56 56.1		
	comp=N,208μm,0.5s								
KSL				AML	AML		02 56 59.3		
	comp=E,411μm,0.5s								
LTK	**Loutraki**	**4.13**	**336**	P	**Pn**		**02 56 03.9**		**+0.8**
VILL	**Villia**	**4.15**	**340**	P	**Pn**		**02 56 04.4**		**+1.0**
AKAS	**Kas**	**4.15**	**61**	*i* P	**Pn**		**02 56 05.6**		**+2.1**
AKAS				IAML_P					
	comp=Z,2μm,0.2s								
CHOS	**Chios island**	**4.17**	**10**	PN	**Pn**		**02 56 05.3**		**+1.6**
VIL2	**Platees**	**4.20**	**340**	P	**Pn**		**02 56 04.4**		**+0.3**
URLA	**Izmir**	**4.24**	**16**	PN	**Pn**		**02 56 06.1**		**+1.4**
URLA	**Izmir**	**4.24**	**16**	*i* P	**Pn**		**02 56 06.5**		**+1.8**
URLA				IAML_P					
	comp=Z,549nm,0.3s								
AMT	**Artemida-Makis**	**4.27**	**320**	P	**Pn**		**02 56 07.0**		**+1.9**
AYDB	**Zeytinkoy-Aydi**	**4.29**	**31**	PN	**Pn**		**02 56 07.0**		**+1.6**
GUR	**Goura**	**4.29**	**329**	P	**Pn**		**02 56 06.5**		**+1.1**
KLV	**Kalavryta, Ach**	**4.46**	**328**	P	**Pn**		**02 56 08.9**		**+1.2**
KLV	**Kalavryta, Ach**	**4.46**	**328**	P	**Pn**		**02 56 08.9**		**+1.2**
MRKA	**Markates**	**4.59**	**345**	P	**Pn**		**02 56 10.7**		**+1.2**
DRO	**Drossia**	**4.59**	**324**	P	**Pn**		**02 56 11.5**		**+2.0**
ELL	**Elmali**	**4.61**	**56**	PN	**Pn**		**02 56 12.5**		**+2.7**
DSF	**Desfina**	**4.63**	**334**	P	**Pn**		**02 56 11.3**		**+1.3**
LKR	**Lokris**	**4.69**	**339**	P	**Pn**		**02 56 12.5**		**+1.8**
LAKA	**Lakka**	**4.70**	**328**	P	**Pn**		**02 56 12.2**		**+1.2**
ATAL	**Atalanti**	**4.72**	**340**	P	**Pn**		**02 56 12.9**		**+1.7**
AKUM	**Antalya-Kumluc**	**4.72**	**63**	*i* P	**Pn**		**02 56 13.1**		**+1.8**
KALE	**Kalithea**	**4.76**	**330**	P	**Pn**		**02 56 13.3**		**+1.5**
KALE	**Kalithea**	**4.76**	**330**	P	**Pn**		**02 56 12.9**		**+1.1**
TRIZ	**Trizonia**	**4.77**	**330**	P	**Pn**		**02 56 13.3**		**+1.5**
SIGR	**SIGRI**	**4.96**	**7**	PN	**Pn**		**02 56 15.7**		**+1.3**
ANX	**Ano Chora**	**5.02**	**330**	P	**Pn**		**02 56 16.6**		**+1.1**
SWA2		**5.03**	**177**	P	**Pn**		**02 56 16.4**		**+0.9**
	baz=179								
MANT	**Manisa**	**5.03**	**32**	*i* P	**Pn**		**02 56 18.6**		**+2.9**
MANT				IAML_P					
	comp=Z,341nm,0.1s								
KORT	**Korkueli**	**5.04**	**56**	*i* P	**Pn**		**02 56 14.4**		**-1.4**
AGG	**Agios Georgios**	**5.24**	**335**	PN	**Pn**		**02 56 20.1**		**+1.7**
AGG	**Agios Georgios**	**5.24**	**335**	*e*Pn	**Pn**		**02 56 18.9**		**+0.5**
AGG	**Agios Georgios**	**5.24**	**335**	P	**Pn**		**02 56 19.2**		**+0.8**
NEO	**Neokhori**	**5.25**	**344**	P	**Pn**		**02 56 19.6**		**+1.1**
BRDR	**BURDUR-Merkez**	**5.25**	**48**	*i* P	**Pn**		**02 56 21.9**		**+3.2**
BRDR				IAML_P					
	comp=Z,206nm,0.2s								
VLS	**Valsamata**	**5.35**	**318**	P	**Pn**		**02 56 22.2**		**+2.4**
PDO	**Prodromos**	**5.36**	**325**	P	**Pn**		**02 56 23.5**		**+3.5**
USAK	**Uak-Merkez**	**5.42**	**34**	*i* P	**Pn**		**02 56 23.1**		**+2.2**
USAK				IAML_P					
	comp=Z,1μm,0.3s								
STEP	**BALIKESIR_Sava**	**5.49**	**21**	*i* P	Pn		02 56 27.3		+5.5
EZN	**Ezine**	**5.62**	**9**	PN	**Pn**		**02 56 25.3**		**+1.8**
ISP	**Isparta**	**5.62**	**49**	*e*Pn	**Pn**		**02 56 26.4**		**+2.7**
ISP				*e*Sn	Sn		02 57 17.1		-10
EVGI	**Lefkada island**	**5.64**	**322**	P	**Pn**		**02 56 26.5**		**+2.7**
LKD2	**Lefkada island**	**5.76**	**323**	P	**Pn**		**02 56 28.0**		**+2.4**
BALB	**Balikesir**	**5.79**	**22**	*e*Pn	**Pn**		**02 56 25.6**		**-0.3**
KEPZ	**Antalya-Kepez**	**5.89**	**62**	*i* P	**Pn**		**02 56 29.7**		**+2.4**
KEPZ				IAML_P					
	comp=Z,417nm,0.3s								
DURS	**Dursunbey**	**5.95**	**26**	*i* P	**Pn**		**02 56 29.5**		**+1.3**
DURS				IAML_P					
	comp=Z,140nm,0.3s								
LIT	**Litokhoron**	**6.18**	**341**	*e*Pn	**Pn**		**02 56 32.0**		**+0.7**
LIT	**Litokhoron**	**6.18**	**341**	P	**Pn**		**02 56 32.0**		**+0.7**
LEF	**Lefka**	**6.45**	**80**	*i* P	**Pn**		**02 56 35.0**		**0.0**
LEF				IAML_P					
	comp=Z,350nm,0.3s								
DOGA	**KONYA_Doganhis**	**6.52**	**52**	*i* P	**Pn**		**02 56 39.8**		**+3.7**
DOGA				IAML_P					
	comp=Z,228nm,0.2s								
ALN	**Alexandroupoli**	**6.65**	**6**	*e*Pn	**Pn**		**02 56 37.4**		**-0.3**
ERMK	**Ermenek**	**6.77**	**67**	*i* P	**Pn**		**02 56 42.4**		**+2.8**
ERMK				IAML_P					
	comp=Z,935nm,0.4s								
KMER	**Konya-Meram**	**6.82**	**57**	*i* P	**Pn**		**02 56 44.3**		**+4.2**
KMER				IAML_P					
	comp=Z,101nm,0.1s								
KONT	**Konya--Tatoy**	**6.90**	**56**	*i* P	Pn		02 56 45.9		+4.7
KONT				IAML_P					
	comp=Z,261nm,0.2s								
KDHN	**Kadinhani**	**7.04**	**51**	*i* P	**Pn**		**02 56 43.5**		**+0.3**
KDHN				IAML_P					
	comp=Z,59nm,0.3s								
GULN	**MERSIN_Gulnar**	**7.14**	**72**	*i* P	**Pn**		**02 56 46.8**		**+2.3**
GULN				IAML_P					
	comp=Z,383nm,0.3s								
FNA	**Florina**	**7.14**	**336**	*e*Pn	**Pn**		**02 56 45.1**		**+0.6**
FNA				*e*Sn	**Sn**		**02 58 03.3**		**-1.5**
KDZ	**Kurdzhali**	**7.36**	**2**	*e*P	Pn		02 56 52.3		+4.8
MMB	**Musomiste**	**7.38**	**352**	*e*P	**Pn**		**02 56 50.4**		**+2.6**
RZN	**Rozhen**	**7.40**	**358**	*e*P	Pn		02 56 54.3		+6.1
EREN	**Erenkoy**	**7.53**	**78**	*i* P	**Pn**		**02 56 52.3**		**+2.5**
EREN				IAML_P					
	comp=Z,2μm,0.3s								
HFRF	**Wahat Farafira**	**7.62**	**158**	P	**Pn**		**02 56 50.9**		**-0.1**
	baz=159								
HFRF				S	**Sn**		**02 58 11.6**		**-4.7**
	baz=159								
SUZ	**Suez**	**7.89**	**122**	P	**Pn**		**02 56 54.4**		**-0.4**
	baz=122								
KERG	**Konya-Eregli**	**7.95**	**64**	*i* P	**Pn**		**02 56 58.8**		**+3.2**
KERG				IAML_P					
	comp=Z,165nm,0.2s								
TIR	**Tirane**	**8.19**	**331**	*e*Pn	**Pn**		**02 56 59.5**		**+0.7**
ZNM	**Zenema**	**8.20**	**124**	P	**Pn**		**02 56 58.9**		**-0.1**
	baz=125								
TIP	**Timpagrande**	**8.31**	**308**	*e*Pn	**Pn**		**02 57 00.9**		**+0.4**
TIP				*e*Sn	**Sn**		**02 58 25.0**		**-8.4**
VTS	**Vitosha**	**8.46**	**350**	*e*Pn	**Pn**		**02 57 01.2**		**-1.4**
VTS	**Vitosha**	**8.46**	**350**	*e*P	**Pn**		**02 57 04.6**		**+2.0**
SLTI	**Sal'it**	**8.54**	**101**	Sn	**Sn**		**02 58 33.5**		**-5.7**
MMAOB	**Mount Meron ar**	**8.66**	**96**	Pn	**Pn**		**02 57 06.6**		**+1.2**
MMAI	**Mount Meron Ar**	**8.66**	**96**	Pn	**Pn**		**02 57 05.2**		**-0.2**
	comp=Z,2.5nm,0.3s,baz=270,slow=10,SNR=13								
MMAI				Sn	**Sn**		**02 58 37.9**		**-4.2**
	comp=Z,5.9nm,0.3s,baz=283,slow=22,SNR=8.5								
AMAZ	**Amatzia**	**8.67**	**106**	Pn	**Pn**		**02 57 04.9**		**-0.6**
BRTR	**Keskin Array B**	**8.71**	**49**	Pn	**Pn**		**02 57 06.4**		**+0.3**
	comp=Z,0.1nm,0.3s,baz=224,slow=12,SNR=4.6								
BRTR				Sn	**Sn**		**02 58 39.4**		**-3.9**
	baz=20,slow=36,SNR=1.4								
BR101	**Keskin Array S**	**8.71**	**49**	*e*Pn	**Pn**		**02 57 06.4**		**+0.3**
BR131	**Keskin Array S**	**8.71**	**49**	*e*Pn	**Pn**		**02 57 07.5**		**+1.4**
BR131				*e*Sn	**Sn**		**02 58 43.5**		**+0.2**
MMLI	**Mount Malkishu**	**8.80**	**99**	Pn	**Pn**		**02 57 07.7**		**+0.4**
GRB	**Gharib**	**8.87**	**130**	P	**Pn**		**02 57 08.5**		**+0.2**
	baz=131								
NATI	**Neve Ativ**	**8.89**	**94**	Pn	**Pn**		**02 57 10.5**		**+2.1**
NATI				Sn	**Sn**		**02 58 44.4**		**-3.2**
YTIR	**Yattir**	**8.89**	**106**	Pn	**Pn**		**02 57 08.7**		**+0.1**
YTIR				Sn	**Sn**		**02 58 41.6**		**-6.2**
HMDT	**Nahal Hemdat**	**8.94**	**100**	Pn	**Pn**		**02 57 10.3**		**+1.2**
HMDT				Sn	**Sn**		**02 58 43.0**		**-5.8**
ULC	**Ulcinj**	**8.96**	**331**	⇓*i*Pn	**Pn**		**02 57 07.8**		**-1.6**
ULC				*e*Sn	**Sn**		**02 58 43.1**		**-6.3**
KSHT	**Keshet**	**9.00**	**95**	Pn	**Pn**		**02 57 11.3**		**+1.2**
DSI	**Dead Sea**	**9.03**	**105**	Pn	**Pn**		**02 57 10.8**		**+0.4**
DSI				Sn	**Sn**		**02 58 45.1**		**-6.0**
MZDA	**Masada**	**9.11**	**106**	Pn	**Pn**		**02 57 11.7**		**+0.3**
MZDA				Sn	**Sn**		**02 58 46.4**		**-6.5**
DRME	**Dracevica, Mon**	**9.17**	**331**	⇓*i*Pn	**Pn**		**02 57 11.6**		**-0.7**
DRME				*e*Sn	**Sn**		**02 58 48.9**		**-5.6**
PRNI	**Paran**	**9.23**	**112**	Pn	**Pn**		**02 57 13.1**		**0.0**
PVY	**Plav**	**9.24**	**336**	⇓*i*Pn	**Pn**		**02 57 13.6**		**+0.3**
PVY				*e*Sn	**Sn**		**02 58 51.3**		**-5.0**
VAE	**Valguarnera**	**9.27**	**293**	Pn	**Pn**		**02 57 14.1**		**+0.5**
	comp=Z,0.6nm,0.3s,baz=97,slow=18,SNR=4.1								
VAE				Sn	**Sn**		**02 58 50.2**		**-6.6**
	comp=Z,1.3nm,0.3s,baz=332,slow=18,SNR=1.5								
TTG	**Podgorica**	**9.35**	**332**	⇑*i*Pn	**Pn**		**02 57 13.2**		**-1.5**
TTG				*e*Sn	**Sn**		**02 58 53.0**		**-5.9**

DOU	**Dourbes**	**21.83**	**323**	P	**P**	**02 59 51.7**	**-0.1**
ESDC	**Sonseca Array**	**23.80**	**292**	P	**P**	**03 00 11.8**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=80,slow=9.3,SNR=8.4						
ESLA	**Sonseca Array**	**23.80**	**292**	*e*P	**P**	**03 00 13.4**	**+1.1**
	comp=Z,23nm,1.8s						
MDT	**Midelt**	**24.79**	**275**	P	**P**	**03 00 22.1**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=79,slow=9.2,SNR=2.8						
MTE	**Manteigas**	**26.59**	**293**	*e*P	**P**	**03 00 40.3**	**+2.6**
	comp=Z,47nm,1.6s						
HFS	**Hagfors**	**26.93**	**347**	P	**P**	**03 00 39.9**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=153,slow=10.0,SNR=6.7						
FIA0	**FINESS Array S**	**27.19**	**1**	*e*P	**P**	**03 00 41.7**	**-1.0**
FINES	**FINESS Array B**	**27.19**	**1**	P	**P**	**03 00 41.7**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=168,slow=10,SNR=7.5						
NC602	**NORSAR Array S**	**27.90**	**346**	*e*P	**P**	**03 00 50.9**	**+1.7**
	comp=Z,162nm,1.9s						
KLMR	**Klimovskoe**	**28.17**	**15**	*e*P	**P**	**03 00 54.1**	**+2.6**
KLMR				AMP		03 00 56.4	
	comp=Z,9.0nm,1.3s						
NB2	**NORSAR Subarra**	**28.24**	**346**	P	**P**	**03 00 51.9**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=158,slow=11						
NB200	**NORSAR Array S**	**28.24**	**346**	*e*P	**P**	**03 00 52.3**	**0.0**
NOA	**NORSAR Array B**	**28.24**	**346**	P	**P**	**03 00 52.3**	**0.0**
	comp=Z,0.3nm,0.6s,baz=162,slow=8.9,SNR=4.4						
NOA				LR	LR	03 13 28.6	
	comp=Z,20nm,20.4s,baz=70,slow=39						
EKA	**Eskdalemuir Ar**	**28.75**	**326**	P	**P**	**03 00 57.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=125,slow=9.8,SNR=10						
AKTO	**Aktyubinsk**	**28.87**	**46**	P	**P**	**03 00 57.8**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=238,slow=6.3,SNR=5.7						
TOA1	**Torodi Ar. Sit**	**29.91**	**231**	*e*P	**P**	**03 01 07.1**	**-0.3**
TOA0	**Torodi Ar. Sit**	**29.91**	**231**	*e*P	**P**	**03 01 08.4**	**+1.0**
	comp=Z,5.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**29.91**	**231**	P	**P**	**03 01 07.1**	**-0.3**
	comp=Z,3.7nm,0.5s,baz=32,slow=9.1,SNR=88						
ARA0	**ARCESS Array S**	**35.31**	**0**	*e*P	**P**	**03 01 53.2**	**-0.9**
ARCES	**ARCESS Array B**	**35.31**	**0**	P	**P**	**03 01 53.2**	**-0.9**
	comp=Z,6.8nm,0.3s,baz=172,slow=9.8,SNR=7.8						
DBIC	**Dimbokro**	**39.00**	**232**	P	**P**	**03 02 26.3**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=45,slow=5.7,SNR=4.9						
DBIC				LR	LR	03 21 50.6	
	comp=Z,52nm,19.4s,baz=80,slow=41						
DBIC	**Dimbokro**	**39.00**	**232**	*e*P	**P**	**03 02 26.3**	**+0.3**
	comp=Z,51nm,1.5s						
SPITS	**Spitsbergen Ar**	**44.16**	**357**	LR	LR	03 23 24.7	
	comp=Z,21nm,19.3s,baz=30,slow=39						
MK32	**Makanchi Array**	**44.28**	**56**	*e*P	**P**	**03 03 10.0**	**+1.0**
MKAR	**Makanchi Array**	**44.28**	**56**	P	**P**	**03 03 10.0**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=285,slow=6.3,SNR=6.3						
ZAA1	**Zalesovo Array**	**45.63**	**46**	*e*P	**P**	**03 03 19.6**	**0.0**
ZALV	**Zalesovo Beam**	**45.63**	**46**	P	**P**	**03 03 19.6**	**0.0**
	comp=Z,20nm,0.3s,baz=276,slow=7.9,SNR=22						
WMQ	**Urumqi**	**48.47**	**59**	*e*P	P	03 03 47.8	+5.8
SONA0	**Songino Array**	**60.06**	**50**	*e*P	**P**	**03 05 07.0**	**+0.6**
SONM	**Songino Array**	**60.06**	**50**	P	**P**	**03 05 07.0**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=295,slow=6.6,SNR=7.1						
BOSA	**Boshof**	**62.55**	**180**	P	**P**	**03 05 24.6**	**+1.4**
	comp=Z,2.7nm,0.8s,baz=34,slow=7.3,SNR=3.4						
BOSA				LR	LR	03 36 10.2	
	comp=Z,44nm,18.4s,baz=176,slow=40						
LZH	**Lanzhou**	**62.61**	**63**	*e*P	**P**	**03 05 28.3**	**+4.5**
LZH				pP	sP	03 05 31.5	-3.9
LZH				sP	pwP	03 05 33.1	-2.4
LZH				*e*PP	**PP**	**03 07 48.0**	**+6.5**
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,45nm,7.6s						
CD2	**Chengdu**	**64.73**	**69**	*e*P	**P**	**03 05 40.3**	**+2.6**
HHC	**Hu-ho-hao-te**	**66.15**	**56**	*e*P	**P**	**03 05 50.8**	**+4.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,83nm,5.8s						
YKA	**Yellowknife Ar**	**78.28**	**342**	P	**P**	**03 06 58.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=35,slow=5.6,SNR=2.4						
YKB5	**Yellowknife Ar**	**78.28**	**342**	*e*P	**P**	**03 06 58.8**	**+0.1**
ILAR	**Eielson Array**	**81.08**	**357**	P	**P**	**03 07 15.1**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=359,slow=3.8,SNR=4.4						
ILB	**Eielson Array**	**81.08**	**357**	*e*P	**P**	**03 07 15.1**	**+1.2**
	comp=Z,7.9nm,1.8s						

MEX 17 03:08:06.9±0.4, 13°.97N×92°.59W, h69km±24km, MD3.9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.98**	**19**	*i* P	Pn	03 08 23.8	-1.3
THIG				*e*S	Sn	03 08 36.6	-2.0
CCIG	**Comitan**	**2.34**	**11**	*e*P	Pn	03 08 45.4	+2.1
CCIG				*e*S	Sn	03 09 14.3	+3.2

IDC 17 03:12:44.1±8.0, 14°.15S×174°.48W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/33, mbtmp3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/26, Error ellipse: s-maj=357.1km s-min=35.0km az=138.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**25.15**	**196**	LR	LR	03 26 00.8	
	comp=Z,47nm,18.5s,baz=242,slow=32						
WRA	**Warramunga Arr**	**49.13**	**256**	P	P	03 21 34.5	+0.5
	0.5nm,0.5s,baz=90,slow=7.6,SNR=6.5						
ASAR	**Alice Springs**	**49.52**	**251**	P	P	03 21 36.4	-0.6
	0.9nm,0.5s,baz=87,slow=8.3,SNR=12						
ILAR	**Eielson Array**	**81.43**	**12**	P	P	03 25 02.5	0.0
	0.2nm,0.7s,baz=228,slow=6.1,SNR=6.7						

*ATH **17** 03:18:02.0, 34°.23N×25°.23E, h23km±2km, ML2.8/4, Error ellipse: s-maj=4.7km s-min=1.9km az=347.0*
*IDC **17** 03:18:11.9±3.4, 34°.23N×25°.06E, h0km, mb3.9/1, mb1 3.7/3, mb1mx3.2/40, mbtmp3.5/3, ML3.9/2, Error ellipse: s-maj=82.3km s-min=20.0km az=103.0*

ISC 17 03:18:04.4±3.3, 34°.3N±0°.2×25°.26E±0°.09, h30km, n16, σ0s78/16, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.82**	**333**	P	**Pn**	**03 18 18.9**	**-1.0**
SIVA	**Sivas**	**0.82**	**333**	P	**Pn**	**03 18 18.5**	**-1.5**
SIVA				S	**Sb**	**03 18 30.4**	**-0.5**
SIVA				AML	AML	03 18 48.1	
	comp=E,3207μm,0.4s						
SIVA				AML	AML	03 18 49.4	
	comp=N,2793μm,0.5s						
LAST	**Lasithi**	**0.90**	**12**	P	**Pn**	**03 18 21.0**	**0.0**
LAST	**Lasithi**	**0.90**	**12**	P	**Pn**	**03 18 20.8**	**-0.3**
LAST				S	**Sn**	**03 18 33.4**	**+0.4**
LAST				AML	AML	03 18 53.0	
	comp=E,403μm,0.4s						
LAST				AML	AML	03 18 54.6	
	comp=N,497μm,0.7s						
NPS	**Neapolis**	**1.02**	**16**	P	**Pn**	**03 18 22.9**	**+0.2**
NPS	**Neapolis**	**1.02**	**16**	P	**Pn**	**03 18 22.4**	**-0.3**
IDI	**Anoyia**	**1.05**	**343**	Pn	Pb	03 18 34.3	+10
	comp=N,7.3nm,0.3s,baz=165,slow=15,SNR=20						
IDI				Sn	Sb	03 18 49.5	+12
	comp=N,24nm,0.3s,baz=350,slow=21,SNR=8.5						
GVD	**Gavdhos**	**1.12**	**300**	P	**Pn**	**03 18 23.3**	**-0.7**
GVD	**Gavdhos**	**1.12**	**300**	P	**Pn**	**03 18 23.3**	**-0.7**
GVD				S	**Sb**	**03 18 39.7**	**+0.4**
GVD				AML	AML	03 18 56.0	
	comp=E,1169μm,0.4s						
GVD				AML	AML	03 18 57.7	
	comp=N,1100μm,0.4s						
VAM	**Vamos**	**1.42**	**322**	P	**Pn**	**03 18 28.6**	**+0.4**
VAM	**Vamos**	**1.42**	**322**	P	**Pn**	**03 18 28.8**	**+0.6**
IMMV	**Iera Moni Meta**	**1.58**	**319**	P	**Pn**	**03 18 31.7**	**+1.4**
IMMV	**Iera Moni Meta**	**1.58**	**319**	P	**Pn**	**03 18 30.9**	**+0.6**
IMMV				S	**Sb**	**03 18 52.5**	**0.0**
IMMV				AML	AML	03 19 20.2	
	comp=N,283μm,0.4s						
IMMV				AML	AML	03 19 21.6	
	comp=E,419μm,0.6s						
AKASG	**Malin Array Be**	**16.66**	**9**	Pn	P	03 22 07.7	+10
	comp=E,0.5nm,0.3s,baz=199,slow=12,SNR=4.5						
GERES	**GERESS Array B**	**16.90**	**333**	Pn	P	03 22 11.5	+11
	comp=E,0.2nm,0.3s,baz=143,slow=12,SNR=8.2						
TORD	**Torodi Ar. Bea**	**30.00**	**231**	P	P	03 24 20.8	+10
	comp=E,0.6nm,0.4s,baz=34,slow=8.0,SNR=19						

MEX 17 03:41:55.9±0.3, 18°.03N×101°.83W, h6km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.55**	**140**	*e*P	Pg	03 42 06.0	-0.4
ZIIG				*e*S	Sg	03 42 13.9	+0.3
ARIG	**Puente Sto Nin**	**1.43**	**80**	*e*P	Pn	03 42 18.7	-3.7
ARIG				*e*S	Sb	03 42 36.5	-5.0
CAIG	**El Cayaco**	**1.78**	**123**	*e*P	Pn	03 42 24.8	-2.5
CAIG				*i* S	Sn	03 42 45.7	-4.6
MEIG	**Mezcala**	**2.11**	**93**	*e*P	Pn	03 42 27.9	-3.9
PLIG	**Platanillo**	**2.24**	**80**	*i* P	Pn	03 42 33.1	-0.6
YAIG	**Yautepec**	**2.75**	**72**	*e*P	Pb	03 42 43.2	-2.4

TEH 17 03:57:01.8, 29°.23N×58°.44E, h10km, ML3.8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMN	**Cheshme madani**	**1.00**	**309**	*e*Pg	Pg	03 57 20.8	-0.4
CHMN				*e*Sg	Sb	03 57 34.8	-0.1
CHMN				IAMB	IAmb	03 57 37.6	
	comp=Z,0.0nm,0.2s						
NGRK	**Negar Kerman**	**1.54**	**286**	*e*Pn	Pn	03 57 29.8	0.0
NGRK				IAMB	IAmb	03 57 53.2	
	comp=Z,0.0nm,0.2s						
TVBK	**TV Kerman**	**1.64**	**298**	*e*Pn	Pn	03 57 31.6	+0.5
TVBK				IAMB	IAmb	03 57 57.5	
	comp=Z,0.0nm,0.2s						
KHGB	**Koh Gabri**	**2.05**	**304**	*e*Pg	Pb	03 57 38.5	-0.8
KHGB				IAMB	IAmb	03 58 09.0	
	comp=Z,0.0nm,0.4s						
ZHSF	**Zahedan**	**2.08**	**79**	*e*Pn	Pb	03 57 38.3	-1.4
NIAN	**Nian**	**2.18**	**221**	*e*Pn	Pb	03 57 39.8	-1.6
NIAN				IAMB	IAmb	03 58 13.7	
	comp=Z,0.0nm,0.4s						
GENO	**Geno**	**2.70**	**228**	*e*Pn	Pn	03 57 47.3	+1.8
GENO				IAMB	IAmb	03 58 42.6	
	comp=Z,0.0nm,0.4s						
BSRN	**Basiran**	**2.79**	**12**	*e*Pn	Pn	03 57 48.3	+1.6
IKOO	**Kooshah**	**3.22**	**9**	*e*Pn	Pn	03 57 54.5	+1.8
IBAF	**Bafgh**	**3.42**	**314**	*e*Pn	Pn	03 57 57.0	+1.7
SHME	**Shamm**	**3.77**	**213**	*e*Pn	Pn	03 58 00.8	+0.8
IMEH	**Mehriz**	**3.95**	**304**	*e*Pn	Pn	03 58 04.6	+1.9
TPRV	**Parvadeh(Tabas**	**4.07**	**339**	*e*Pn	Pn	03 58 06.0	+1.7
MSFE	**Esma-Masafi**	**4.36**	**208**	*e*Pn	Pn	03 58 10.1	+2.0
TKDS	**Koohdasht(Taba**	**4.51**	**346**	*e*Pn	Pn	03 58 12.0	+1.7
TABS	**Tabas**	**4.55**	**346**	*e*Pn	Pn	03 58 11.4	+0.6
YZKH	**Yazd**	**4.57**	**315**	*e*Pn	Pn	03 58 12.0	+0.9
SHRT	**Shahrakht**	**4.68**	**19**	*e*Pn	Pn	03 58 14.7	+2.1
GHIR	**Ghir-Karzin**	**4.88**	**260**	*e*Pn	Pn	03 58 13.6	-1.7
ASHO	**Ashiyiah**	**5.00**	**206**	*e*Pn	Pn	03 58 18.7	+1.7

*IDC **17** 03:58:26.9±0.7, 34°.25N×25°.10E, h0km, mb4.0/14, mb1 4.1/20, mb1mx3.9/58, mbtmp4.0/20, ML4.5/5, MS2.9/5, Ms1 2.9/5, ms1mx2.6/38, Error ellipse: s-maj=15.2km s-min=13.0km az=118.0*
*HLW **17** 03:58:28.4, 34°.46N×25°.13E, h16km±16km, Md4.0, Ml4.1*
*ATH **17** 03:58:30.1, 34°.27N×25°.12E, h25km±1km, ML3.6/12, Error ellipse: s-maj=2.7km s-min=1.2km az=355.0*
*ISCJB **17** 03:58:31.1±0.3, 34°.21N±0°.02×25°.19E±0°.02, h55km±4km, mb3.9/15, MS2.9/2, Error ellipse: s-maj=3.6km s-min=2.5km az=33.3*
*THE **17** 03:58:31.1, 34°.30N×25°.08E, h0km±1km, ML3.5/11, Error ellipse: s-maj=1.8km s-min=0.6km az=174.0*
*PDG **17** 03:58:31.4±0.2, 34°.55N×24°.72E, h12km±1km, ML4.3/9, Error ellipse: s-maj=37.4km s-min=33.0km az=90.0*
*NEIC **17** 03:58:33.1±0.0, 34°.42N×25°.10E, h10km, mb4.0/8, ML3.5(THE), ML3.5(ATH), After ATH.*
*GII **17** 03:58:38.2±0.0, 33°.97N×25°.68E, h30km, mb4.1/4, MD3.9/5*
*NIC **17** 03:58:39.3±0.2, 34°.85N×25°.74E, h25km, mb4.6, ML4.2*
*DDA **17** 03:58:49.4, 34°.13N×25°.08E, h11km±1km, ML3.9*

ISC 17 03:58:32.1±0.7, 34°.20N±0°.04×25°.22E±0°.04, h36km±2km, n228, σ1s85/271, mb3.9/15, 7C-7D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.88**	**338**	P	**Pn**	**03 58 45.7**	**-2.3**
SIVA				S	**Sn**	**03 58 57.4**	**-2.3**
SIVA	**Sivas**	**0.88**	**338**	P	**Pn**	**03 58 45.8**	**-2.2**
SIVA				S	**Sn**	**03 58 56.5**	**-3.2**
SIVA				AML	AML	03 59 00.3	
	comp=E,33844μm,0.7s						
SIVA				AML	AML	03 59 08.1	
	comp=N,23428μm,0.5s						
TMBK	**Timbaki Herakl**	**0.95**	**337**	P	**Pn**	**03 58 47.2**	**-1.7**
TMBK				S	**Sn**	**03 58 59.9**	**-1.3**
LAST	**Lasithi**	**0.99**	**13**	P	**Pn**	**03 58 48.7**	**-0.8**
LAST				S	**Sn**	**03 59 02.9**	**+0.6**
LAST	**Lasithi**	**0.99**	**13**	P	**Pn**	**03 58 48.7**	**-0.8**
LAST				AML	AML	03 59 09.4	
	comp=E,4725μm,0.6s						
LAST				AML	AML	03 59 15.3	
	comp=N,3607μm,0.7s						
KSTL	**Kastelli Herak**	**1.11**	**354**	P	**Pn**	**03 58 49.0**	**-2.1**
KSTL				S	**Sn**	**03 59 03.9**	**-1.3**
IACM	**Heraklion**	**1.11**	**354**	P	**Pn**	**03 58 50.6**	**-0.6**
IACM				S	**Sn**	**03 59 05.7**	**+0.5**
IACM	**Heraklion**	**1.11**	**354**	P	**Pn**	**03 58 50.5**	**-0.6**
NPS	**Neapolis**	**1.11**	**17**	P	**Pn**	**03 58 51.0**	**-0.2**
NPS				S	**Sn**	**03 59 06.7**	**+1.4**
NPS	**Neapolis**	**1.11**	**17**	P	**Pn**	**03 58 50.9**	**-0.2**
NPS				S	**Sn**	**03 59 06.1**	**+0.8**
NPS				AML	AML	03 59 10.3	
	comp=E,4290μm,0.4s						
NPS				AML	AML	03 59 17.2	
	comp=N,3325μm,0.6s						
IDI	**Anoyia**	**1.12**	**346**	Pn	**Pn**	**03 58 49.6**	**-1.8**
	comp=N,175nm,0.3s,baz=300,slow=21,SNR=74						
IDI				Sn	**Sn**	**03 59 05.2**	**-0.4**
	comp=N,204nm,0.3s,baz=71,slow=8.9,SNR=13						
IDI				LR	LR	03 59 07.8	
	comp=N,61nm,18.7s,baz=164,slow=39						
IDI	**Anoyia**	**1.12**	**346**	P	**Pn**	**03 58 49.3**	**-2.1**
GVD	**Gavdhos**	**1.13**	**305**	P	**Pn**	**03 58 49.4**	**-2.0**
GVD	**Gavdhos**	**1.13**	**305**	P	**Pn**	**03 58 49.6**	**-1.8**
GVD				S	**Sn**	**03 59 04.6**	**-1.1**
GVD	**Gavdhos**	**1.13**	**305**	P	**Pn**	**03 58 49.7**	**-1.8**
GVD				AML	AML	03 59 16.3	
	comp=E,8570μm,0.4s						
GVD				AML	AML	03 59 17.4	
	comp=N,8103μm,0.5s						
ZKR	**Zakros**	**1.23**	**42**	P	**Pn**	**03 58 53.9**	**+1.1**
ZKR	**Zakros**	**1.23**	**42**	P	**Pn**	**03 58 54.2**	**+1.4**
ZKR				S	**Sn**	**03 59 12.4**	**+4.2**
ZKR	**Zakros**	**1.23**	**42**	P	**Pn**	**03 58 54.0**	**+1.1**
ZKR				S	**Sn**	**03 59 09.9**	**+1.7**
ZKR				AML	AML	03 59 22.9	
	comp=E,5090μm,0.6s						
ZKR				AML	AML	03 59 23.0	
	comp=N,1630μm,0.5s						
VAM	**Vamos**	**1.47**	**326**	P	**Pn**	**03 58 55.4**	**-0.7**
VAM				S	**Sn**	**03 59 14.9**	**+0.9**
VAM	**Vamos**	**1.47**	**326**	P	**Pn**	**03 58 55.7**	**-0.3**
VAM				S	**Sn**	**03 59 14.8**	**+0.7**
VAM				AML	AML	03 59 21.2	
	comp=E,4471μm,0.8s						
VAM				AML	AML	03 59 23.3	
	comp=N,5191μm,0.5s						
IMMV	**Iera Moni Meta**	**1.62**	**321**	P	**Pn**	**03 58 58.3**	**+0.2**
IMMV	**Iera Moni Meta**	**1.62**	**321**	P	**Pn**	**03 58 58.0**	**-0.1**
IMMV				S	**Sn**	**03 59 18.0**	**+0.2**
IMMV	**Iera Moni Meta**	**1.62**	**321**	P	**Pn**	**03 58 58.0**	**-0.1**
IMMV				S	**Sn**	**03 59 18.3**	**+0.5**
IMMV				AML	AML	03 59 34.3	
	comp=N,3304μm,0.6s						
IMMV				AML	AML	03 59 38.3	
	comp=E,4136μm,0.6s						
CHAN	**Chania**	**1.63**	**324**	P	**Pn**	**03 58 58.3**	**0.0**
KARP	**Karpathos**	**2.09**	**49**	P	**Pn**	**03 59 08.0**	**+3.3**
KARP	**Karpathos**	**2.09**	**49**	*e*Pn	**Pn**	**03 59 08.2**	**+3.5**
KARP	**Karpathos**	**2.09**	**49**	P	**Pn**	**03 59 08.0**	**+3.3**
KARP	**Karpathos**	**2.09**	**49**	P	**Pn**	**03 59 07.8**	**+3.2**
THR6	**Thira Island,**	**2.16**	**4**	P	**Pn**	**03 59 06.2**	**+0.6**
THR6	**Thira Island,**	**2.16**	**4**	P	**Pn**	**03 59 05.6**	**+0.1**
THR9	**Santorini-Faro**	**2.16**	**3**	P	**Pn**	**03 59 06.1**	**+0.6**
THR9	**Santorini-Faro**	**2.16**	**3**	P	**Pn**	**03 59 05.7**	**+0.2**
SAP1	**Santorini-Akro**	**2.16**	**4**	P	**Pn**	**03 59 06.4**	**+0.8**
SANT	**Santorini**	**2.18**	**5**	P	**Pn**	**03 59 06.1**	**+0.2**
SANT	**Santorini**	**2.18**	**5**	*e*Pn	**Pn**	**03 59 05.8**	**-0.1**
SANT	**Santorini**	**2.18**	**5**	P	**Pn**	**03 59 06.4**	**+0.5**
SANT				S	**Sn**	**03 59 33.4**	**+1.8**
SANT	**Santorini**	**2.18**	**5**	P	**Pn**	**03 59 06.0**	**+0.1**
THR3	**Thira Island,**	**2.21**	**4**	P	**Pn**	**03 59 06.8**	**+0.5**
THR3	**Thira Island,**	**2.21**	**4**	P	**Pn**	**03 59 07.0**	**+0.7**
THR5	**Thira Island,**	**2.22**	**3**	P	**Pn**	**03 59 06.3**	**-0.1**
THR5	**Thira Island,**	**2.22**	**3**	P	**Pn**	**03 59 06.4**	**0.0**
SAP3	**Santorini-Thir**	**2.24**	**3**	P	**Pn**	**03 59 07.5**	**+0.9**
CMBO	**Columbo, Santo**	**2.27**	**4**	P	**Pn**	**03 59 07.8**	**+0.7**
ANKY	**Antikythira Is**	**2.29**	**317**	P	**Pn**	**03 59 07.2**	**-0.1**
ANKY				S	**Sn**	**03 59 34.5**	**+0.2**
ANKY	**Antikythira Is**	**2.29**	**317**	P	**Pn**	**03 59 07.4**	**0.0**
ANKY				AML	AML	03 59 53.3	
	comp=N,855μm,1.0s						
ANKY				AML	AML	03 59 56.6	
	comp=E,1079μm,0.7s						
IOSP	**Ios island**	**2.52**	**1**	P	**Pn**	**03 59 10.5**	**-0.1**
IOSP				AML	AML	03 59 43.6	
	comp=E,870μm,0.6s						
IOSP				AML	AML	03 59 54.4	
	comp=N,1193μm,0.7s						
MHLO	**Agia Marina, M**	**2.57**	**345**	P	**Pn**	**03 59 10.6**	**-0.7**
MHLO	**Agia Marina, M**	**2.57**	**345**	P	**Pn**	**03 59 10.9**	**-0.4**
MHLA	**Plaka, Milos I**	**2.62**	**346**	P	**Pn**	**03 59 11.7**	**-0.3**
MHLA				AML	AML	04 00 05.8	
	comp=E,1639μm,1.0s						
MHLA				AML	AML	04 00 17.4	
	comp=N,1224μm,0.9s						
AMGA	**Amorgos Island**	**2.69**	**12**	P	**Pn**	**03 59 12.7**	**-0.1**
SLUM	**Salum**	**2.70**	**180**	P	**Pn**	**03 59 14.8**	**+1.9**
	baz=178						
SLUM				AMP		03 59 00.0	
	baz=178						
SLUM				S	**Sn**	**03 59 47.4**	**+3.0**
	baz=178						
KYTH	**Kithira**	**2.72**	**320**	P	**Pn**	**03 59 13.2**	**-0.1**
KYTH				S	**Sn**	**03 59 45.2**	**+0.2**
KYTH	**Kithira**	**2.72**	**320**	P	**Pn**	**03 59 14.0**	**+0.7**
KTHR	**Kythira**	**2.74**	**319**	P	**Pn**	**03 59 13.6**	**0.0**
APE	**Apeiranthos**	**2.88**	**5**	P	**Pn**	**03 59 15.2**	**-0.2**
APE	**Apeiranthos**	**2.88**	**5**	P	**Pn**	**03 59 15.3**	**-0.2**
SERI	**Serifos**	**3.02**	**349**	P	**Pn**	**03 59 16.9**	**-0.5**
ARG	**Arkhangelos**	**3.12**	**49**	P	**Pn**	**03 59 20.6**	**+1.8**
ARG	**Arkhangelos**	**3.12**	**49**	P	**Pn**	**03 59 21.2**	**+2.4**
ARG				AML	AML	04 00 11.5	
	comp=N,320μm,0.4s						
ARG				AML	AML	04 00 13.7	
	comp=E,386μm,0.6s						
VLI	**Veliai**	**3.13**	**324**	P	**Pn**	**03 59 18.3**	**-0.6**
VLI	**Veliai**	**3.13**	**324**	P	**Pn**	**03 59 18.1**	**-0.7**
DAT	**Datca**	**3.18**	**37**	P	**Pn**	**03 59 21.4**	**+1.7**
DAT	**Datca**	**3.18**	**37**	*i* P	**Pn**	**03 59 20.8**	**+1.2**
DAT				*i* S	**Sn**	**03 59 58.5**	**+2.1**
DAT				IAML_P			
	comp=Z,531nm,0.2s						
DATC	**Datca-Mugla**	**3.24**	**37**	P	**Pn**	**03 59 22.1**	**+1.7**
BODT	**Bodrum**	**3.33**	**30**	P	**Pn**	**03 59 22.7**	**+1.0**
BDRM	**Kayabasi**	**3.39**	**32**	*i* P	**Pn**	**03 59 23.7**	**+1.2**
BDRM				IAML_P			
	comp=Z,588nm,0.2s						
BBRN	**Bozburun-Marma**	**3.39**	**42**	P	**Pn**	**03 59 24.2**	**+1.7**
KRND	**KRANIDI**	**3.59**	**333**	P	**Pn**	**03 59 24.2**	**-1.1**
SMG	**Samos**	**3.74**	**20**	P	**Pn**	**03 59 27.9**	**+0.6**
EPID	**Epidavros**	**3.81**	**334**	P	**Pn**	**03 59 27.7**	**-0.6**
VLY	**Voula,Athens**	**3.83**	**343**	P	**Pn**	**03 59 27.7**	**-0.7**
DALY	**Dalyan (Mula)**	**3.83**	**46**	P	**Pn**	**03 59 30.5**	**+2.0**
DALY	**Dalyan (Mula)**	**3.83**	**46**	*i* P	**Pn**	**03 59 31.1**	**+2.6**
DALY				*i* S	**Sn**	**04 00 11.4**	**-0.9**
TURN	**Turunc**	**3.84**	**45**	P	**Pn**	**03 59 26.4**	**-2.3**
TURN	**Turunc**	**3.84**	**45**	*i* P	**Pn**	**03 59 27.2**	**-1.5**
TURN				*i* S	**Sn**	**04 00 07.5**	**-5.1**
YER	**Yerkesik**	**3.85**	**40**	P	**Pn**	**03 59 30.6**	**+1.7**
YER	**Yerkesik**	**3.85**	**40**	P	**Pn**	**03 59 30.9**	**+2.0**
GCAM	**G?zelcaml?**	**3.86**	**25**	P	**Pn**	**03 59 30.6**	**+1.7**
PTL	**Penteli**	**4.00**	**345**	P	**Pn**	**03 59 30.3**	**-0.5**
ITM	**Ithomi**	**4.00**	**319**	P	**Pn**	**03 59 29.8**	**-1.1**
ITM	**Ithomi**	**4.00**	**319**	*e*Pn	**Pn**	**03 59 29.8**	**-1.1**
KSL	**Kastellorizon**	**4.07**	**60**	P	**Pn**	**03 59 33.5**	**+1.7**
KSL				AML	AML	04 00 23.2	
	comp=E,614μm,0.5s						
KSL				AML	AML	04 00 26.4	
	comp=N,388μm,0.5s						
AYDN	**Tasoluk**	**4.08**	**31**	*i* P	**Pn**	**03 59 34.2**	**+2.3**
AYDN				IAML_P		

DOGA KONYA_Doganhis 6.51 51 *i* P **Pn 04 00 07.7 +2.2**
DOGA IAML_P
comp=Z,316nm,0.2s
MAMC Mammari 6.66 79 P **Pn 04 00 08.2 +0.7**
baz=269
CSS Mathiatis 6.74 81 P **Pn 04 00 08.8 +0.3**
baz=271
CSS S **Sn 04 01 20.0 -4.0**
ERMK Ermenek 6.74 67 *i* P **Pn 04 00 11.9 +3.2**
ERMK *i* S **Sn 04 01 22.4 -2.0**
ERMK IAML_P
comp=Z,2μm,0.3s
KMER Konya-Meram 6.80 56 *i* P **Pn 04 00 12.7 +3.1**
KMER IAML_P
comp=Z,161nm,0.2s
KONT Konya--Tatoy 6.89 55 *i* P **Pn 04 00 14.2 +3.6**
KONT IAML_P
comp=Z,324nm,0.2s
KDHN Kadinhani 7.04 50 *i* P **Pn 04 00 14.2 +1.5**
KDHN *i* S **Sn 04 01 29.7 -1.9**
KDHN IAML_P
comp=Z,224nm,0.3s
GULN MERSIN_Gulnar 7.10 71 *i* P **Pn 04 00 11.6 -1.8**
GULN *i* S **Sn 04 01 30.8 -2.1**
FNA Florina 7.25 336 *e*Pn **Pn 04 00 15.8 +0.3**
EREN Erenkoy 7.48 77 *i* P **Pn 04 00 21.4 +2.8**
EREN *i* S Sn 04 01 29.2 -13
EREN IAML_P
comp=Z,4μm,0.3s
HFRF Wahat Farafira 7.51 158 S **Sn 04 01 43.7 +0.6**
baz=158
NBNS Bani Suef 7.61 135 P **Pn 04 00 21.7 +1.3**
baz=136
SUZ Suez 7.79 122 P **Pn 04 00 24.2 +1.3**
baz=123
KERG Konya-Eregli 7.92 64 *i* P **Pn 04 00 27.1 +2.3**
KERG *i* S **Sn 04 01 50.0 -3.2**
KERG IAML_P
comp=Z,233nm,0.2s
ZAF Zafarana 7.94 126 P **Pn 04 00 26.3 +1.4**
baz=127
KZIT Kziot 8.41 110 Pn **Pn 04 00 32.2 +0.7**
KZIT Kziot 8.41 110 P **Pn 04 00 32.9 +1.4**
comp=Z,43nm,0.7s,comp=Z,0.2nm
TIP Timpagrande 8.42 309 *e*Pn **Pn 04 00 30.6 -1.0**
TIP *e*Sn Sn 04 01 48.5 -17
VTS Vitosha 8.55 350 *e*Pn **Pn 04 00 32.8 -0.7**
MMAI Mount Meron Ar 8.58 95 Pn **Pn 04 00 34.5 +0.7**
comp=Z,4.6nm,0.3s,baz=277,slow=12,SNR=6.6
MMAI Sn **Sn 04 02 06.5 -2.9**
comp=Z,3.7nm,0.3s,baz=278,slow=22,SNR=2.6
MMAI LR LR 04 05 33.1
comp=Z,38nm,18.0s,baz=195,slow=49
BR131 Keskin Array S 8.71 48 *e*Pn **Pn 04 00 35.0 -0.6**
BRTR Keskin Array B 8.71 48 Pn **Pn 04 00 36.8 +1.2**
comp=Z,0.2nm,0.3s,baz=227,slow=15,SNR=6.3
BRTR Sn **Sn 04 02 13.0 +0.4**
comp=Z,0.2nm,0.3s,baz=214,slow=25,SNR=6.2
BR101 Keskin Array S 8.71 48 *e*Pn **Pn 04 00 36.8 +1.2**
MMLI Mount Malkishu 8.72 99 Pn **Pn 04 00 36.3 +0.6**
YTIR Yattir 8.80 106 Pn **Pn 04 00 38.0 +1.1**
NATI Neve Ativ 8.81 93 Pn **Pn 04 00 39.0 +2.1**
HMDT Nahal Hemdat 8.85 100 Pn **Pn 04 00 39.2 +1.7**
HMDT Sn **Sn 04 02 13.3 -2.7**
KSHT Keshet 8.92 95 Pn **Pn 04 00 40.2 +1.7**
SHMJ Saham 8.93 97 P **Pn 04 00 40.5 +1.9**
comp=Z,25nm,0.9s,comp=Z,0.2nm
DSI Dead Sea 8.94 104 Pn **Pn 04 00 40.1 +1.4**
DSI Sn **Sn 04 02 15.7 -2.4**
MZDA Masada 9.02 106 Pn **Pn 04 00 40.5 +0.8**
MZDA Sn **Sn 04 02 16.9 -3.1**
KRMI Paran Flat 9.03 114 Pn **Pn 04 00 40.4 +0.5**
KRMI Sn **Sn 04 02 16.1 -4.3**
ULC Ulcinj 9.07 331 ⇓ *i*Pn **Pn 04 00 37.3 -3.1**
ULC *e*Sn Sn 04 02 11.4 -10
PRNI Paran 9.13 112 Pn **Pn 04 00 42.6 +1.3**
PRNI Sn **Sn 04 02 19.7 -3.2**
ZFRI Zfri 9.17 111 Pn **Pn 04 00 42.6 +0.7**
DRME Dracevica, Mon 9.28 331 ⇑ *i*Pn **Pn 04 00 39.8 -3.5**
DRME *e*Sn Sn 04 02 16.5 -10
WALJ Wala 9.29 104 P **Pn 04 00 45.6 +2.1**
HRFI Mount Harif 9.30 114 Pn **Pn 04 00 44.7 +1.0**
HRFI Mount Harif 9.30 114 P **Pn 04 00 41.5 -2.2**
MBRI Mt Berech 9.33 115 Pn **Pn 04 00 44.9 +0.8**
PVY Plav 9.34 335 ⇑ *i*Pn **Pn 04 00 41.8 -2.5**
PVY *e*Sn Sn 04 02 18.6 -10
HDK1 Dakhla 9.36 156 P **Pn 04 00 46.9 +2.4**
baz=156
EIL Elat 9.42 116 Pn **Pn 04 00 46.0 +0.7**
comp=Z,5.0nm,0.3s,baz=275,slow=2.0,SNR=33
EIL Sn **Sn 04 02 30.2 +0.2**
comp=Z,2.0nm,0.3s,baz=139,slow=20,SNR=4.6
EIL Elat 9.42 116 Pn **Pn 04 00 46.0 +0.7**
TTG Podgorica 9.46 332 ⇑ *i*Pn **Pn 04 00 43.3 -2.4**
TTG *e*Sn Sn 04 02 20.7 -10
TTG Podgorica 9.46 332 *e*Pn **Pn 04 00 42.2 -3.5**
TTG *e*Sn Sn 04 02 20.4 -10
BUM Brajici-Budva 9.49 330 ⇓ *i*Pn **Pn 04 00 43.5 -2.8**
BUM *e*Sn Sn 04 02 21.6 -10
IVA Berane 9.61 336 ⇑ *i*Pn **Pn 04 00 45.6 -2.3**
IVA *e*Sn Sn 04 02 24.9 -10
CEME Cevo 9.69 331 ⇓ *i*Pn **Pn 04 00 45.9 -3.1**
CEME *e*Sn Sn 04 02 25.9 -11
KOME Kolasin 9.72 334 ⇓ *i*Pn **Pn 04 00 46.5 -3.0**
KOME *e*Sn Sn 04 02 27.4 -10
HCY Herceg Novi 9.78 329 ⇑ *i*Pn **Pn 04 00 47.6 -2.6**
HCY *e*Sn Sn 04 02 28.7 -10
NKME Niksic 9.86 332 ⇓ *i*Pn **Pn 04 00 48.0 -3.3**
NKME *e*Sn Sn 04 02 30.7 -10
NKY Niksic 9.88 332 ⇑ *i*Pn **Pn 04 00 48.4 -3.3**
BRY Bratogost 10.14 331 ⇓ *i*Pn **Pn 04 00 52.1 -3.1**
BRY *e*Sn Sn 04 02 37.2 -10
PLE Pljevlja 10.19 335 ⇑ *i*Pn **Pn 04 00 52.9 -3.0**
PLE *e*Sn Sn 04 02 38.6 -10
UPM Unac-Piva 10.25 333 ⇓ *i*Pn **Pn 04 00 54.2 -2.6**
UPM *e*Sn Sn 04 02 39.8 -11
MLR Muntele Rosu 11.29 3 LR LR 04 05 53.5
comp=Z,69nm,20.0s,baz=119,slow=40
SOKA Soboth 14.66 331 P **P 04 02 03.7 +1.0**
comp=Z,0.6nm,0.5s
KOLS Kolonicke sedl 14.89 352 *e*PN **Pn 04 01 55.9 -3.9**
ARSA Arzberg 14.95 334 *e*P **P 04 02 06.2 +0.3**
comp=Z,0.9nm,0.5s
KBA Koelnbreinsper 15.68 329 P **P 04 02 14.9 +0.7**
comp=Z,2.3nm,0.7s
ABTA Abfaltersbach 15.80 326 P **P 04 02 15.6 +0.2**
comp=Z,2.2nm,0.8s
MOA Molln 15.92 332 P **P 04 02 16.6 0.0**
comp=Z,5.0nm,0.9s
WTTA Wattenberg 16.59 326 Pn **Pn 04 02 22.3 +0.3**
comp=Z,6.0nm,0.5s
KBZ Khabaz 16.70 50 Pn **P 04 02 27.4 +2.2**
comp=Z,0.3nm,0.3s,baz=249,slow=9.7,SNR=5.1
AKASG Malin Array Be 16.75 9 Pn **Pn 04 02 21.8 -2.0**
comp=Z,2.3nm,0.3s,baz=200,slow=10,SNR=22
AKBB Malin Array Si 16.75 9 *e*Pn **Pn 04 02 23.5 -0.3**
comp=Z,10nm,0.7s
SQTA Sankt Quirin 16.76 325 P **P 04 02 27.8 +1.8**
comp=Z,1.0nm,0.4s
FUORN Ofenpass-Fuorn 16.80 322 *e*Pn **P 04 02 26.3 -0.4**
comp=Z,3.3nm,0.6s
FETA Feichten 16.85 324 Pn **P 04 02 27.2 +0.1**
comp=Z,2.0nm,0.7s
GEC2 GERESS Array S 16.95 333 *e*Pn **P 04 02 27.3 -0.8**
comp=Z,6.1nm,0.6s
GERES GERESS Array B 16.95 333 Pn **P 04 02 27.0 -1.2**
comp=Z,1.1nm,0.3s,baz=147,slow=12,SNR=33
GERES LR LR 04 11 00.1
comp=Z,29nm,20.4s,baz=323,slow=45
KHC Kasperske Hory 17.24 333 *e*Pn **Pn 04 02 25.6 -4.3**
comp=Z,1.4nm,1.0s
KHC Kasperske Hory 17.24 333 *e*P **P 04 02 30.5 -0.7**
KHC *es*P **sP 04 02 46.0 +1.3**
DAVA Damuels 17.45 323 P **P 04 02 34.8 +1.1**
comp=Z,3.6nm,0.9s
CLL Collm 19.26 336 *es*P **Pn 04 03 00.0 +5.4**
SUW Suwalki 19.86 356 *e*P **P 04 02 56.8 -3.1**
comp=Z,17nm,0.7s
ESDC Sonseca Array 23.90 292 P **P 04 03 42.0 -0.5**
comp=Z,0.3nm,0.4s,baz=80,slow=9.4,SNR=5.9
MDT Midelt 24.87 275 P **P 04 03 49.4 -2.1**
comp=Z,1.7nm,0.9s,baz=135,slow=20,SNR=2.9
HFS Hagfors 27.02 347 P **P 04 04 09.1 -1.5**
comp=Z,2.8nm,0.9s,baz=159,slow=13,SNR=6.7

FIA0 FINESS Array S 27.27 1 *e*P **P 04 04 10.8 -2.0**
FINES FINESS Array B 27.27 1 P **P 04 04 10.8 -2.0**
comp=Z,2.4nm,0.7s,baz=167,slow=13,SNR=6.6
NB2 NORSAR Subarra 28.34 346 P **P 04 04 21.2 -1.2**
comp=Z,0.3nm,0.5s,baz=156,slow=9.3
NB200 NORSAR Array S 28.34 346 *e*P **P 04 04 21.4 -1.0**
NOA NORSAR Array B 28.34 346 P **P 04 04 21.4 -1.0**
comp=Z,0.3nm,0.6s,baz=146,slow=9.4,SNR=3.3
NOA LR LR 04 17 10.0
comp=Z,13nm,18.9s,baz=315,slow=40
EKA Eskdalemuir Ar 28.86 326 P **P 04 04 27.4 +0.4**
comp=Z,0.4nm,0.4s,baz=124,slow=10.0,SNR=7.5
TOA1 Torodi Ar. Sit 29.91 231 *e*P **P 04 04 36.0 -0.8**
TOA0 Torodi Ar. Sit 29.91 231 *e*P **P 04 04 37.5 +0.8**
comp=Z,7.5nm,0.6s
TORD Torodi Ar. Bea 29.91 231 P **P 04 04 36.0 -0.8**
comp=Z,5.3nm,0.5s,baz=33,slow=8.8,SNR=95
ARA0 ARCESS Array S 35.39 0 *e*P **P 04 05 22.2 -1.9**
ARCES ARCESS Array B 35.39 0 P **P 04 05 22.2 -1.9**
comp=Z,8.2nm,0.4s,baz=172,slow=9.8,SNR=6.5
DBIC Dimbokro 39.01 232 P **P 04 05 54.6 -0.7**
comp=Z,3.4nm,0.9s,baz=41,slow=9.2,SNR=4.6
DBIC Dimbokro 39.01 232 *e*P **P 04 05 54.6 -0.7**
comp=Z,4.7nm,0.9s
MK32 Makanchi Array 44.27 56 *e*P **P 04 06 39.5 +1.4**
MKAR Makanchi Array 44.27 56 P **P 04 06 39.5 +1.4**
comp=Z,1.1nm,0.6s,baz=274,slow=7.9,SNR=5.5
MKAR LR LR 04 30 12.6
comp=Z,35nm,18.2s,baz=329,slow=43
ZAA1 Zalesovo Array 45.64 45 *e*P **P 04 06 49.3 +0.4**
ZALV Zalesovo Beam 45.64 45 P **P 04 06 49.3 +0.4**
comp=Z,2.7nm,0.4s,baz=270,slow=8.4,SNR=7.6
SONA0 Songino Array 60.06 50 *e*P **P 04 08 34.2 -1.4**
SONM Songino Array 60.06 50 P **P 04 08 34.2 -1.4**
comp=Z,0.6nm,0.6s,baz=280,slow=8.6,SNR=3.3
BOSA Boshof 62.47 180 P **P 04 08 52.8 +0.8**
comp=Z,1.8nm,0.6s,baz=359,slow=3.2,SNR=5.1
ILAR Eielson Array 81.16 357 P **P 04 10 45.0 +1.4**
comp=Z,0.1nm,0.6s,baz=15,slow=4.7,SNR=2.6
ILB Eielson Array 81.16 357 *e*P **P 04 10 45.0 +1.4**
comp=Z,0.8nm,0.8s

WEL 17 04:01:55.7±0.9, 34°.S±12°.×17°.9W±2°.8, h33km, M4.1/12, mB4.9/3, ML4.4/16, MLv4.1/12, Mw(mB)4.2/3, Error ellipse: s-maj=0.0km s-min=0.0km az=111.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.07**	**206**	P	Pn	04 02 55.2	-0.4
WMGZ				S	Sn	04 03 41.3	-0.8
PKGZ	**Pakihiroa**	**4.26**	**209**	P	Pn	04 02 57.9	-0.4
PKGZ				S	Sn	04 03 45.2	-1.7
HAZ	**Te Kaha**	**4.28**	**213**	P	Pn	04 02 59.8	+1.4
PUZ	**Puketiti**	**4.35**	**206**	P	Pn	04 03 00.3	+0.8
PUZ				S	Sn	04 03 48.6	-0.5
RUGZ	**Raukumara Rang**	**4.50**	**212**	P	Pn	04 03 02.9	+1.3
TWGZ	**Tauwhareparae**	**4.55**	**208**	P	Pn	04 03 03.6	+1.3
TWGZ				S	Sn	04 03 54.2	+0.1
CNGZ	**Carnagh Statio**	**4.74**	**204**	P	Pn	04 03 05.9	+1.1
MWZ	**Matawai**	**4.87**	**211**	P	Pn	04 03 07.5	+0.9
OPRZ	**Ohinepanea**	**4.96**	**221**	P	Pn	04 03 10.4	+2.6
URZ	**Urewera**	**4.99**	**214**	P	Pn	04 03 08.7	+0.4
URZ				S	Sn	04 04 04.6	-0.2
GLKZ	**Green Lake**	**5.04**	**14**	S	Sn	04 04 04.3	-1.8
RIGZ	**Rimuhau**	**5.10**	**207**	P	Pn	04 03 09.6	-0.2
RIGZ				S	Sn	04 04 05.5	-1.9
LIRZ	**Lichensteins R**	**5.17**	**221**	P	Pn	04 03 12.5	+1.8
SNGZ	**Shannon Statio**	**5.33**	**209**	P	Pn	04 03 13.1	+0.2
KNZ	**Kokohu**	**5.41**	**206**	P	Pn	04 03 12.9	-1.1
MHGZ	**Mahia Peninsul**	**5.44**	**203**	P	Pn	04 03 15.7	+1.2
RAHZ	**Arahi**	**5.54**	**210**	P	Pn	04 03 16.1	+0.2
MTHZ	**Maungataniwha**	**5.60**	**213**	P	Pn	04 03 17.6	+1.0
NMHZ	**Naumai**	**5.82**	**211**	P	Pn	04 03 20.4	+0.7
BKZ	**Black Stump Fm**	**6.01**	**213**	P	Pn	04 03 21.9	-0.4
KWHZ	**Kaweka Forest**	**6.25**	**212**	P	Pn	04 03 25.5	-0.2

MOS 17 04:18:54.3±1.6, 47°.54N×131°.00E, h22km, mb3.9/3, Error ellipse: s-maj=14.4km s-min=9.2km az=100.3, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**1.77**	**16**	*e*P	Pb	04 19 26.2	+0.2
KLR				*e*S	Sb	04 19 49.1	+1.4
VLA	**Vladivostok**	**4.46**	**172**	*e*P	Pn	04 20 03.3	+2.8
TEY	**Ternei**	**4.62**	**121**	*e*P	Pn	04 20 04.2	+1.5
TEY				*e*S	Sn	04 20 57.2	+1.6
MSHR	**Mys Shultsa**	**4.96**	**179**	*e*P	Pn	04 20 08.5	+1.1
MSHR				*e*S	Sn	04 21 05.3	+1.3
HIA	**Hailar**	**7.69**	**287**	*e*P	Pn	04 20 45.8	+0.9
YSS	**Yuzh-Sakhalins**	**8.02**	**90**	*e*P	Pn	04 20 51.8	+2.4
ERM	**Erimo**	**10.25**	**118**	*i* P	Pn	04 21 25.2	+5.2
MAJO	**Matsushiro**	**12.21**	**151**	*i* P	Pn	04 21 49.3	+2.4
SKR	**Severo-Kuril's**	**16.72**	**70**	*e*P	P	04 22 49.0	-0.1
TLY	**Talaya**	**18.16**	**293**	*e*P	P	04 23 08.3	+3.3
TLY				pmax	pmax		
comp=Z,2.0nm,0.9s
SEY Seymchan 19.51 30 *e*P P 04 23 20.0 +0.3
BILL Bilibino 27.19 28 *e*P P 04 24 36.0 +0.2
BILL pmax pmax
comp=Z,1.0nm,0.9s
DGZ Jazzator, Alta 28.59 291 *e*P P 04 24 49.5 +0.8
DGZ pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 33.83 295 *e*P P 04 25 38.3 +3.6
AKASG Malin Array Be 61.34 315 *e*P P 04 29 12.1 +4.2
AKASG pmax pmax
comp=Z,1.0nm,0.4s

*ISCJB **17** 04:27:40.4±0.4, 42°.63S±0°.07×83°.9E±0°.1, h10km, mb4.5/24, MS4.0/18, Error ellipse: s-maj=12.5km s-min=10.3km az=19.7*
*NEIC **17** 04:27:41.9±2.7, 42°.68S×83°.83E, h10km±2km, mb4.7/14, Error ellipse: s-maj=21.4km s-min=16.2km az=100.0*
*IDC **17** 04:27:41.0±0.7, 42°.62S×83°.87E, h0km, mb4.2/13, mb1 4.3/13, mb1mx4.1/38, mbtmp4.2/13, MS3.9/18, Ms1 3.9/18, ms1mx3.8/29, Error ellipse: s-maj=23.3km s-min=18.6km az=103.0*
*GCMT **17** 04:27:42.9±0.4, 42°.60S±0°.02×83°.81E±0°.03, h15km±2km, MW4.8/65, Moment Tensor Solution. s18,c23; s65,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.34±. 10; $M_{\theta\theta}$2.19±. 12; $M_{\phi\phi}$-1.85±. 10; $M_{r\theta}$-0.90±.36; $M_{\theta\phi}$-0.06±.08; $M_{\phi r}$0.62±.31; Best double couple: $M_0$2.29200×10^{16} NP1:ϕ_s134.00000°, δ88.00000°, λ-29.00000°. NP2: ϕ_s225.00000°, δ61.00000°, λ-178.00000°. Principal axes: T 2.4920, Plg18.0000°, Azm184.0000°; N -0.4030, Plg61.0000°, Azm311.0000°; P -2.0910, Plg21.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 04:27:41.9±0.5, 42°.66S±0°.09×83°.9E±0°.1, h10km, n60, σ1§22/47, mb4.6/24, MS4.0/18, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**24.72**	**82**	T	T	04 58 37.8	
baz=242,slow=74,SNR=129
H01W3 Cape Leeuwin H 24.72 82 T T 04 58 38.5
baz=242,slow=74,SNR=204
H01W1 Cape Leeuwin H 24.73 82 T T 04 58 39.1
baz=242,slow=74,SNR=131
MAW Mawson 27.44 197 P **P 04 33 29.5 +1.9**
3.2nm,0.9s,baz=11,slow=12,SNR=6.2
MAW LR LR 04 41 50.3
comp=Z,273nm,21.5s,baz=39,slow=31
MAW Mawson 27.44 197 *e*P **P 04 33 24.9 -2.6**
1.2nm,0.9s
CASY Casey 27.84 157 *e*P **P 04 33 28.9 -2.3**
3.1nm,0.8s
NWAO Narrogin (SRO) 27.92 81 LR LR 04 42 02.1
comp=Z,410nm,21.4s,baz=248,slow=31
NWAO Narrogin (SRO) 27.92 81 *e*P **P 04 33 29.6 -2.6**
24nm,1.1s
H08S2 Diego Garcia H 36.30 341 T T 05 12 47.7
baz=166,slow=76,SNR=450
H08S1 Diego Garcia H 36.30 341 T T 05 12 47.9
baz=166,slow=76,SNR=482
H08S3 Diego Garcia H 36.32 341 T T 05 12 49.1
baz=166,slow=76,SNR=540
ASAR Alice Springs 45.23 82 P **P 04 36 00.0 +0.5**
5.8nm,0.8s,baz=230,slow=7.3,SNR=37
ASAR PcP **PcP 04 37 41.0 +1.6**
0.6nm,0.6s,baz=237,slow=2.0,SNR=4.1
ASAR LR LR 04 52 39.2
comp=Z,486nm,20.2s,baz=246,slow=33
AS31 Alice Springs 45.24 82 *e*P **P 04 36 00.0 +0.5**
AS31 *e*PcP **PcP 04 37 41.0 +1.5**
VNDA Vanda 46.17 163 P **P 04 36 06.9 +0.8**
2.0nm,0.8s,baz=284,slow=7.8,SNR=10
VNDA LR LR 04 53 48.0
comp=Z,294nm,19.8s,baz=276,slow=34
VNDA Vanda 46.17 163 *e*P **P 04 36 06.9 +0.8**
VNDA *e*PcP **PcP 04 37 39.5 -2.3**
STKA Stephens Creek 46.35 96 P **P 04 36 08.3 +0.1**
5.2nm,1.0s,baz=253,slow=3.5,SNR=6.5
STKA LR LR 04 53 09.4
comp=Z,267nm,18.1s,baz=210,slow=33
STKA Stephens Creek 46.35 96 *e*P **P 04 36 07.2 -1.0**
1.2nm,1.0s
QSPA South Pole Qui 47.49 180 *e*P **P 04 36 17.5 +0.6**
25nm,1.1s
WR1 Warramunga Arr 47.86 78 *e*P **P 04 36 20.9 +0.8**
WRA Warramunga Arr 47.86 78 P **P 04 36 20.9 +0.8**
12nm,0.9s,baz=225,slow=8.1,SNR=26
WB2 Warramunga Arr 47.87 78 *e*P **P 04 36 19.6 -0.6**
15nm,0.9s
BOSA Boshof 48.77 267 LR LR 04 52 40.2
comp=Z,245nm,20.4s,baz=148,slow=31
SNAA Sanae 49.17 205 P **P 04 36 31.4 +1.7**
SNAA Sanae 49.17 205 P **P 04 36 29.6 0.0**
2.6nm,1.1s,baz=150,slow=12,SNR=5.1
SNAA Sanae 49.17 205 *e*P **P 04 36 28.1 -1.5**
2.1nm,1.1s
VNA2 Neumayer--Watz 50.79 205 P **P 04 36 42.2 +0.4**
baz=104,slow=8.6
VNA3 Neumayer Olymp 51.39 204 P **P 04 36 47.0 +0.6**
CTAO Charters Tower 56.48 87 *e*P **P 04 37 25.4 +1.1**
11nm,1.1s
CM31 Chiang Mai Arr 62.38 16 *e*P **P 04 38 05.0 +0.2**
10nm,0.9s
CMAR Chiang Mai Arr 62.38 16 P **P 04 38 05.0 +0.2**
6.0nm,0.9s,baz=211,slow=6.9,SNR=17
CMAR LR LR 05 01 44.2
comp=Z,81nm,19.7s,baz=193,slow=33
SHL Shillong 68.29 8 *e*P **P 04 38 43.0 -0.2**
11nm,1.0s
KBL Kabul 78.03 348 *e*P **P 04 39 40.0 -0.6**
XAN Xi'an 79.70 21 *e*P **P 04 39 48.4 -1.2**
9.6nm,1.0s
GAR Garm 82.21 349 *e*P **P 04 40 01.8 -1.2**
12nm,1.1s
GEYT Alibeck 83.58 340 LR LR 05 11 41.1
comp=Z,56nm,21.9s,baz=70,slow=32
KK31 Karatay Array 86.23 350 *e*P **P 04 40 21.1 -2.0**
5.0nm,1.1s
KKAR Karatay Array 86.23 350 *e*P **P 04 40 20.9 -2.3**
5.0nm,1.1s
MMAI Mount Meron Ar 87.45 321 LR LR 05 15 24.7
comp=Z,46nm,18.4s,baz=145,slow=33
MKAR Makanchi Array 89.08 359 P **P 04 40 37.2 +0.4**
0.2nm,0.3s,baz=188,slow=4.1,SNR=2.8
MKAR LR LR 05 18 54.2
comp=Z,64nm,18.5s,baz=196,slow=34
KSRS Korea Array 89.24 34 P **P 04 40 38.5 +0.8**
1.1nm,0.7s,baz=214,slow=5.1,SNR=5.0
GNI Garni 89.73 331 LR LR 05 18 49.3
comp=Z,28nm,18.1s,baz=154,slow=34
SONA0 Songino Array 92.28 15 *e*P **P 04 40 53.1 +1.3**
SONM Songino Array 92.28 15 P **P 04 40 53.1 +1.3**
0.7nm,0.8s,baz=198,slow=4.2,SNR=3.5
SONM LR LR 05 21 30.9
comp=Z,63nm,18.3s,baz=80,slow=35
KURBB Kurchatov Arra 93.02 357 P **P 04 40 55.6 +0.7**
1.4nm,0.8s,baz=188,slow=3.9,SNR=8.5
TORD Torodi Ar. Bea 93.16 285 P **P 04 40 56.8 +0.3**
0.7nm,0.8s,baz=89,slow=2.9,SNR=4.4
TORD LR LR 05 19 38.5
comp=Z,99nm,20.8s,baz=340,slow=34
TOA1 Torodi Ar. Sit 93.17 285 *e*P **P 04 40 56.8 +0.3**
KBZ Khabaz 93.53 332 LR LR 05 20 00.2
comp=Z,24nm,18.3s,baz=166,slow=34
DBIC Dimbokro 93.56 276 LR LR 05 18 34.4
comp=Z,30nm,18.8s,baz=120,slow=33
BRTR Keskin Array B 93.79 324 P **P 04 40 58.3 -0.7**
0.9nm,1.0s,baz=143,slow=4.3,SNR=3.5
BRTR LR LR 05 19 10.1
comp=Z,29nm,18.8s,baz=98,slow=33
PLCA Paso Flores 93.83 199 LR LR 05 22 46.8
comp=Z,127nm,18.7s,baz=214,slow=35
AKTO Aktyubinsk 95.44 344 LR LR 05 23 32.3
comp=Z,24nm,18.1s,baz=153,slow=35
ILAR Eielson Array 144.09 34 PKP PKPbc 04 47 14.8 +0.1
0.6nm,0.8s,baz=278,slow=2.7,SNR=6.4
PRP Porcupine Dome 144.46 33 *e*PKPdf **PKPdf 04 47 18.1 +0.6**
EPYK Eagle Plains 147.52 29 *e*PKPbc **PKPbc 04 47 25.9 +0.7**
RES Resolute Bay 147.88 359 PKPbc **PKiKP 04 47 27.0 -0.7**
3.6nm,0.8s,baz=6.7,slow=4.2,SNR=11
YKA Yellowknife Ar 157.34 22 PKPab **PKPab 04 48 08.2 -0.2**
0.5nm,0.7s,baz=325,slow=4.9,SNR=5.4
YKB5 Yellowknife Ar 157.34 22 *e*PKPab **PKPab 04 48 08.2 -0.2**
YERR Yerington 162.12 94 *e*PKPdf **PKPdf 04 47 44.2 +0.7**
NV01 Mina Array Sit 162.61 97 *e*PKPab **PKPab 04 48 33.2 +0.7**
NVAR Mina Array Bea 162.61 97 PKPab **PKPab 04 48 33.2 +0.7**
0.8nm,0.7s,baz=228,slow=5.5,SNR=4.6

LJU 17 04:29:42.7, 45°.77N×14°.87E, h4km, ML0.6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.04**	**330**	*i* Pg	Pg	04 29 43.8	-0.1
VISS				*i* Sg	Sg	04 29 44.8	+0.1
comp=Z,33nm,0.1s
GBRS Gornja Briga 0.24 190 *i* Pg Pg 04 29 47.5 +0.1
GBRS *i* Sg Sg 04 29 50.9 +0.4
comp=Z,2.0nm,0.1s
GBAS Gorenja Brezov 0.34 300 *i* Sg Sg 04 29 54.3 +0.5
comp=Z,2.0nm,0.2s
CRES Cresnjev 0.42 82 *e*Sg Sg 04 29 56.8 +0.7

*IDC **17** 04:37:05.2±2.8, 34°.26N×25°.06E, h0km, mb3.9/1, mb1 3.8/3, mb1mx3.3/47, mbtmp3.6/3, ML3.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.0/41, Error ellipse: s-maj=60.5km s-min=19.9km az=104.0*
*ISCJB **17** 04:37:08.7±1.2, 34°.24N±0°.05×25°.18E±0°.04, h29km±7km, mb3.8/1, MS2.7/1, Error ellipse: s-maj=8.8km s-min=5.2km az=11.3*
*ATH **17** 04:37:09.7, 34°.39N×25°.09E, h23km±2km, ML2.9/3, Error ellipse: s-maj=4.8km s-min=1.6km az=359.0*
*THE **17** 04:37:09.2, 34°.35N×25°.12E, h0km±1km, ML2.9/7, Error ellipse: s-maj=2.3km s-min=0.9km az=157.0*

ISC 17 04:37:09.9±1.6, 34°.32N±0°.07×25°.13E±0°.03, h31km±11km, n44, σ1§42/63, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.74**	**339**	P	**Pb**	**04 37 23.2**	**-1.2**
SIVA				S	**Sb**	**04 37 34.4**	**+0.2**
SIVA	**Sivas**	**0.74**	**339**	P	**Pb**	**04 37 23.1**	**-1.2**
SIVA				S	**Sb**	**04 37 31.7**	**-2.6**
SIVA				AML	AML	04 37 38.6	
comp=N,2826μm,0.3s
SIVA AML AML 04 37 39.3
comp=E,5408μm,0.4s
TMBK Timbaki Herakl 0.81 338 P **Pn 04 37 24.6 -0.5**
TMBK S **Sb 04 37 37.3 +1.3**
LAST Lasithi 0.88 19 P **Pn 04 37 25.6 -0.6**
LAST S **Sb 04 37 38.9 +0.6**
LAST Lasithi 0.88 19 P **Pn 04 37 25.6 -0.6**
LAST S **Sb 04 37 37.8 -0.5**
KSTL Kastelli Herak 0.98 357 P **Pn 04 37 26.2 -1.3**
KSTL S **Sn 04 37 39.8 -0.5**
IACM Heraklion 0.98 357 P **Pn 04 37 27.7 +0.2**
IACM S **Sn 04 37 41.8 +1.5**
IDI Anoyia 0.98 348 Pn **Pn 04 37 27.0 -0.6**
comp=E,17nm,0.3s,baz=170,slow=19,SNR=7.4
IDI Sn **Sn 04 37 41.6 +1.2**
comp=E,30nm,0.3s,baz=127,slow=22,SNR=9.7
GVD Gavdhos 1.00 301 P **Pn 04 37 27.7 -0.1**
GVD S **Sn 04 37 41.6 +0.7**
GVD Gavdhos 1.00 301 P **Pn 04 37 27.7 -0.1**

GVD				S	Sb	04 37 42.6	+0.9
GVD	**Gavdhos**	**1.00**	**301**	P	Pn	04 37 27.7	-0.1
GVD				S	Sn	04 37 40.2	-0.7
GVD				AML	AML	04 37 48.0	
	comp=E,1455μm,0.4s						
GVD				AML	AML	04 37 48.4	
	comp=N,1377μm,0.4s						
NPS	**Neapolis**	**1.02**	**23**	P	Pn	04 37 28.2	+0.2
NPS				S	Sb	04 37 43.5	+1.5
ZKR	**Zakros**	**1.19**	**48**	P	Pn	04 37 31.3	+0.9
ZKR				S	Sn	04 37 47.2	+1.7
ZKR	**Zakros**	**1.19**	**48**	P	Pb	04 37 32.2	+0.3
ZKR				S	Sb	04 37 48.4	+1.4
ZKR	**Zakros**	**1.19**	**48**	P	Pb	04 37 32.2	+0.3
VAM	**Vamos**	**1.33**	**325**	P	Pn	04 37 33.2	+1.0
VAM				S	Sb	04 37 52.1	+1.3
VAM	**Vamos**	**1.33**	**325**	P	Pn	04 37 33.0	+0.8
VAM				S	Sb	04 37 51.7	+0.9
VAM				AML	AML	04 37 58.4	
	comp=E,794μm,0.3s						
VAM				AML	AML	04 38 00.2	
	comp=N,596μm,0.3s						
IMMV	**Iera Moni Meta**	**1.48**	**320**	P	Pn	04 37 34.7	+0.4
IMMV	**Iera Moni Meta**	**1.48**	**320**	P	Pn	04 37 36.0	+1.7
IMMV				S	Sb	04 37 55.8	+0.6
IMMV	**Iera Moni Meta**	**1.48**	**320**	P	Pn	04 37 36.2	+1.8
KARP	**Karpathos**	**2.06**	**53**	P	Pb	04 37 45.4	-1.3
KARP	**Karpathos**	**2.06**	**53**	P	Pn	04 37 44.8	+2.4
ANKY	**Antikythira Is**	**2.15**	**316**	P	Pn	04 37 45.5	+1.9
KYTH	**Kithira**	**2.58**	**319**	P	Pn	04 37 52.0	+2.5
APE	**Apeiranthos**	**2.76**	**7**	*eP*	Pn	04 37 52.7	+0.7
APE	**Apeiranthos**	**2.76**	**7**	P	Pn	04 37 52.7	+0.7
ARG	**Arkhangelos**	**3.09**	**52**	*eP*	Pn	04 37 58.3	+1.8
DAT	**Datca**	**3.12**	**39**	*eP*	Pn	04 37 58.2	+1.2
DAT	**Datca**	**3.12**	**39**	*i P*	Pn	04 37 59.1	+2.1
DAT				IAML_P			
	comp=Z,162nm,0.1s						
DALY	**Dalyan (Mula)**	**3.80**	**48**	*eP*	Pn	04 38 08.1	+1.9
DALY	**Dalyan (Mula)**	**3.80**	**48**	*i P*	Pn	04 38 08.8	+2.6
DALY				*i* S	Sn	04 38 48.9	-0.8
DALY				IAML_P			
	comp=Z,295nm,0.2s						
YER	**Yerkesik**	**3.80**	**42**	*eP*	Pn	04 38 08.1	+1.8
TURN	**Turunc**	**3.80**	**47**	*eP*	Pn	04 38 03.8	-2.5
TURN	**Turunc**	**3.80**	**47**	*i P*	Pn	04 38 03.7	-2.5
TURN				*i* S	Sn	04 38 36.5	-13
AKAS	**Kas**	**4.12**	**61**	*eP*	Pn	04 38 11.6	+0.8
AKAS	**Kas**	**4.12**	**61**	*i P*	Pn	04 38 11.7	+0.8
AKAS				*i* S	Sn	04 38 56.8	-1.3
ELL	**Elmali**	**4.58**	**57**	*eP*	Pn	04 38 18.7	+1.6
AKUM	**Antalya-Kumluc**	**4.70**	**63**	*i P*	Pn	04 38 18.6	0.0
AKUM				*i* S	Sn	04 39 08.6	-3.5
AKUM				IAML_P			
	comp=Z,473nm,0.2s						
KORT	**Korkueli**	**5.02**	**56**	*i P*	Pn	04 38 25.2	+2.1
KHAL	**Karahalli**	**5.36**	**40**	*i P*	Pn	04 38 26.3	-1.4
KHAL				IAML_P			
	comp=Z,76nm,0.2s						
AKASG	**Malin Array Be**	**16.64**	**9**	Pn	Pn	04 41 00.8	+0.2
	comp=Z,0.6nm,0.3s,baz=198,slow=10,SNR=7.5						
GERES	**GERESS Array B**	**16.81**	**333**	Pn	**P**	04 41 05.5	+0.7
	comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=4.5						
MDT	**Midelt**	**24.79**	**275**	LR	LR	04 53 40.6	
	comp=Z,24nm,18.4s,baz=314,slow=40						
TORD	**Torodi Ar. Bea**	**29.94**	**231**	P	**P**	04 43 14.1	-1.2
	comp=Z,0.7nm,0.4s,baz=31,slow=9.1,SNR=20						

*IDC **17** 04:39:29.6±1.5, 34°.25N×24°.98E, h0km, mb3.8/3, mb1 3.7/5, mb1mx3.4/49, mbtmp3.7/5, ML4.0/2, MS2.9/1, Ms1 2.9/1, ms1mx2.0/40, Error ellipse: s-maj=35.3km s-min=19.5km az=104.0*
*ISCJB **17** 04:39:32.1±1.2, 34°.17N±0°.05×25°.17E±0°.04, h30km±9km, mb3.6/3, MS2.8/1, Error ellipse: s-maj=8.0km s-min=5.8km az=9.2*
*THE **17** 04:39:33.0, 34°.28N×25°.13E, h0km±1km, ML3.1/8, Error ellipse: s-maj=2.7km s-min=0.9km az=172.0*
*ATH **17** 04:39:34.9, 34°.44N×25°.08E, h32km±2km, ML3.0/4, Error ellipse: s-maj=5.0km s-min=1.8km az=353.0*
ISC 17 04:39:33.1±1.7, 34°.27N±0°.07×25°.15E±0°.03, h23km±12km, n49, σ1°37/68, mb3.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.80**	**340**	P	**Pb**	**04 39 47.7**	**-0.6**
SIVA				S	**Sn**	**04 40 00.5**	**+0.4**
SIVA	**Sivas**	**0.80**	**340**	P	**Pb**	**04 39 47.8**	**-0.5**
SIVA				S	**Sb**	**04 39 56.5**	**-2.2**
SIVA				AML	AML	04 40 05.6	
	comp=E,9303μm,0.6s						
SIVA				AML	AML	04 40 07.0	
	comp=N,6976μm,0.8s						
TMBK	**Timbaki Herakl**	**0.86**	**339**	P	**Pb**	**04 39 49.3**	**-0.1**
TMBK				S	**Sn**	**04 40 02.4**	**+0.7**
LAST	**Lasithi**	**0.93**	**17**	P	**Pb**	**04 39 50.4**	**-0.3**
LAST				S	**Sn**	**04 40 05.2**	**+1.6**
LAST	**Lasithi**	**0.93**	**17**	P	**Pb**	**04 39 50.3**	**-0.3**
LAST				S	**Sb**	**04 40 02.4**	**-0.3**
LAST				AML	AML	04 40 16.7	
	comp=N,1142μm,0.7s						
LAST				AML	AML	04 40 19.0	
	comp=E,957μm,0.9s						
KSTL	**Kastelli Herak**	**1.04**	**356**	P	**Pn**	**04 39 51.0**	**-1.2**
KSTL				S	**Sb**	**04 40 05.3**	**-0.3**
IACM	**Heraklion**	**1.04**	**356**	P	**Pb**	**04 39 52.7**	**+0.3**
IACM				S	**Sn**	**04 40 08.3**	**+2.3**
IDI	**Anoyia**	**1.04**	**348**	Pn	**Pn**	**04 39 51.9**	**-0.5**
	comp=E,31nm,0.3s,baz=160,slow=16,SNR=13						
IDI				Sn	**Sn**	**04 40 06.4**	**+0.2**
	comp=E,58nm,0.3s,baz=81,slow=22,SNR=7.4						
GVD	**Gavdhos**	**1.05**	**303**	P	**Pb**	**04 39 52.8**	**+0.3**
GVD				S	**Sn**	**04 40 07.4**	**+1.2**
GVD	**Gavdhos**	**1.05**	**303**	P	**Pn**	**04 39 52.1**	**-0.2**
GVD				S	**Sn**	**04 40 08.3**	**+2.1**
GVD	**Gavdhos**	**1.05**	**303**	P	**Pn**	**04 39 52.2**	**-0.1**
GVD				S	**Sb**	**04 40 04.3**	**-1.5**
GVD				AML	AML	04 40 15.0	
	comp=N,4061μm,0.4s						
GVD				AML	AML	04 40 15.2	
	comp=E,3047μm,0.5s						
NPS	**Neapolis**	**1.06**	**21**	P	**Pn**	**04 39 52.8**	**+0.2**
NPS				S	**Sn**	**04 40 08.8**	**+2.1**
NPS	**Neapolis**	**1.06**	**21**	P	**Pn**	**04 39 52.7**	**0.0**
NPS				S	**Sb**	**04 40 06.1**	**-0.3**
NPS				AML	AML	04 40 10.2	
	comp=N,698μm,0.4s						
NPS				AML	AML	04 40 15.4	
	comp=E,744μm,0.5s						
ZKR	**Zakros**	**1.22**	**46**	P	**Pn**	**04 39 55.2**	**+0.5**
ZKR				S	**Sn**	**04 40 10.9**	**+0.4**
ZKR	**Zakros**	**1.22**	**46**	P	**Pb**	**04 39 56.0**	**+0.5**
ZKR				S	**Sb**	**04 40 13.0**	**+2.2**
ZKR	**Zakros**	**1.22**	**46**	P	**Pb**	**04 39 56.1**	**+0.6**
VAM	**Vamos**	**1.38**	**326**	P	**Pb**	**04 39 58.1**	**-0.1**
VAM				S	**Sb**	**04 40 17.6**	**+2.2**
VAM	**Vamos**	**1.38**	**326**	P	**Pb**	**04 39 58.3**	**+0.1**
IMMV	**Iera Moni Meta**	**1.53**	**321**	P	**Pb**	**04 40 00.2**	**-0.6**
IMMV	**Iera Moni Meta**	**1.53**	**321**	P	**Pb**	**04 40 00.1**	**-0.6**
IMMV				S	**Sb**	**04 40 21.1**	**+1.3**
IMMV	**Iera Moni Meta**	**1.53**	**321**	P	**Pb**	**04 40 00.1**	**-0.6**
KARP	**Karpathos**	**2.09**	**52**	*eP*	**Pb**	**04 40 09.9**	**-0.4**
KARP	**Karpathos**	**2.09**	**52**	P	**Pb**	**04 40 09.9**	**-0.4**
KARP	**Karpathos**	**2.09**	**52**	P	**Pb**	**04 40 09.8**	**-0.4**
ANKY	**Antikythira Is**	**2.20**	**317**	P	**Pn**	**04 40 09.1**	**+0.9**
IOSP	**Ios island**	**2.46**	**3**	P	**Pn**	**04 40 12.0**	**+0.3**
KYTH	**Kithira**	**2.63**	**320**	P	**Pn**	**04 40 15.6**	**+1.4**
APE	**Apeiranthos**	**2.81**	**6**	*eP*	**Pn**	**04 40 16.8**	**+0.1**
VLI	**Veliai**	**3.04**	**324**	P	**Pn**	**04 40 19.8**	**+0.1**
ARG	**Arkhangelos**	**3.12**	**51**	*eP*	**Pn**	**04 40 22.3**	**+1.5**
ARG	**Arkhangelos**	**3.12**	**51**	P	**Pn**	**04 40 22.9**	**+2.1**
DAT	**Datca**	**3.16**	**38**	*eP*	**Pn**	**04 40 22.7**	**+1.3**
DAT	**Datca**	**3.16**	**38**	*i P*	**Pn**	**04 40 22.6**	**+1.1**
DAT				*i* S	**Sn**	**04 40 58.0**	**-0.4**
DAT				IAML_P			
	comp=Z,144nm,0.2s						
DALY	**Dalyan (Mula)**	**3.83**	**47**	*eP*	**Pn**	**04 40 32.5**	**+2.0**
DALY	**Dalyan (Mula)**	**3.83**	**47**	*i P*	**Pn**	**04 40 31.1**	**+0.6**
DALY				IAML_P			
	comp=Z,190nm,0.2s						
TURN	**Turunc**	**3.83**	**46**	*eP*	**Pn**	**04 40 28.2**	**-2.4**
TURN	**Turunc**	**3.83**	**46**	*i P*	**Pn**	**04 40 28.5**	**-2.1**
TURN				IAML_P			
	comp=Z,496nm,0.2s						
YER	**Yerkesik**	**3.83**	**41**	*eP*	**Pn**	**04 40 32.6**	**+1.9**
ITM	**Ithomi**	**3.92**	**319**	*eP*	**Pn**	**04 40 31.5**	**-0.3**
AKAS	**Kas**	**4.14**	**60**	*eP*	**Pn**	**04 40 36.0**	**+1.0**
AKAS	**Kas**	**4.14**	**60**	*i P*	**Pn**	**04 40 35.7**	**+0.7**
AKAS				*i* S	**Sn**	**04 41 18.8**	**-4.0**
AKUM	**Antalya-Kumluc**	**4.72**	**63**	*i P*	**Pn**	**04 40 44.9**	**+2.1**
AKUM				IAML_P			
	comp=Z,585nm,0.1s						
KHAL	**Karahalli**	**5.39**	**39**	*i P*	**Pn**	**04 40 52.5**	**+0.4**
KHAL				*i* S	**Sn**	**04 41 49.0**	**-4.6**
KHAL				IAML_P			
	comp=Z,89nm,0.1s						
AKASG	**Malin Array Be**	**16.69**	**9**	Pn	**Pn**	**04 43 24.6**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=200,slow=10,SNR=5.5						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**Pn**	**04 43 28.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=148,slow=13,SNR=7.9						
HFS	**Hagfors**	**26.94**	**347**	P	**P**	**04 45 12.1**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=155,slow=14,SNR=2.9						
FINES	**FINESS Array B**	**27.20**	**1**	LR	LR	04 56 24.9	
	comp=Z,25nm,21.3s,baz=98,slow=37						
TORD	**Torodi Ar. Bea**	**29.91**	**231**	P	**P**	**04 45 38.1**	**-1.2**
	comp=Z,1.1nm,0.4s,baz=35,slow=8.7,SNR=25						
MKAR	**Makanchi Array**	**44.28**	**56**	P	**P**	**04 47 41.7**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=278,slow=7.0,SNR=2.1						

*IDC **17** 04:51:43.1±1.1, 12°.57N×86°.13W, h0km, mb3.5/4, mb1 3.8/7, mb1mx3.6/41, mbtmp3.5/7, ML3.0/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/23, Error ellipse: s-maj=52.6km s-min=14.0km az=58.0*
*SNET **17** 04:51:46.0±0.8, 11°.62N×87°.21W, h17km±5km, ML3.7*
*UCR **17** 04:51:46.6±1.2, 11°.61N×87°.11W, h32km±7km, ML3.6*
ISC 17 04:51:44.4±1.5, 11°.63N±0°.06×87°.08W±0°.05, h17km±4km, n37, σ1°89/50, mb3.6/4, 3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.73**	**41**	*eP*	**Pn**	**04 52 01.1**	**+1.2**
XAVN	**Gruta Xavier**	**0.90**	**55**	*eP*	**Pn**	**04 52 03.6**	**+1.4**
APYN	**Apoyeque**	**0.94**	**50**	*eP*	**Pn**	**04 52 04.2**	**+1.4**
MOMN	**Momotombo**	**0.94**	**34**	*eP*	**Pn**	**04 52 03.8**	**+0.9**
CNGN	**Cerro Negro**	**0.95**	**23**	*eP*	**Pn**	**04 52 03.8**	**+0.9**
CNGN			⇓	*eP*	**Pn**	**04 52 03.8**	**+0.9**
CNGN				*eS*	**Sn**	**04 52 17.9**	**+1.9**
CNGN	**Cerro Negro**	**0.95**	**23**	⇓*eP*	**Pn**	**04 52 03.8**	**+0.9**
CNGN				*eS*	**Sn**	**04 52 17.9**	**+1.9**
MGAN	**Managua**	**0.97**	**57**	*eP*	**Pn**	**04 52 04.5**	**+1.4**
MGAN				*eS*	**Sn**	**04 52 18.4**	**+1.9**
MASN	**Masaya**	**0.98**	**68**	*eP*	**Pn**	**04 52 04.9**	**+1.5**
TELN	**Telica**	**1.00**	**14**	*eP*	**Pg**	**04 52 04.2**	**+0.3**
CRIN	**San Cristobal**	**1.07**	**2**	*eP*	**Pg**	**04 52 05.3**	**+0.2**
BRAN	**Las Pilas**	**1.30**	**33**	*eP*	Pn	04 52 03.9	-3.9
CSGN	**Cosiguina Volc**	**1.42**	**341**	*eP*	**Pb**	**04 52 10.9**	**+0.5**
CSGN				*eS*	**Sb**	**04 52 29.5**	**+1.2**
CSGN	**Cosiguina Volc**	**1.42**	**341**	*eP*	**Pb**	**04 52 10.9**	**+0.5**
CSGN				*eS*	**Sb**	**04 52 29.5**	**+1.2**
ESTN	**Estel**	**1.62**	**25**	*eP*	**Pn**	**04 52 13.5**	**+1.2**
MATN	**Matagalpa**	**1.72**	**41**	*eP*	**Pn**	**04 52 15.0**	**+1.4**
MATN				*eS*	**Sn**	**04 52 35.8**	**+0.6**
CNCH	**Conchagua**	**1.80**	**336**	*eP*	**Pn**	**04 52 15.5**	**+0.8**
CNCH				*eS*	**Sn**	**04 52 39.1**	**+1.9**
CNCH	**Conchagua**	**1.80**	**336**	⇓*eP*	**Pn**	**04 52 15.5**	**+0.8**
CNCH				*eS*	**Sn**	**04 52 39.1**	**+1.9**
LCND	**La Caada**	**1.85**	**335**	*eP*	**Pn**	**04 52 16.1**	**+0.8**
LCND				*eS*	**Sn**	**04 52 39.8**	**+1.4**
LCND				IAML		04 52 42.3	
	comp=Z,1μm,0.4s						
LCND	**La Caada**	**1.85**	**335**	*eP*	**Pn**	**04 52 16.1**	**+0.8**
LCND				*eS*	**Sn**	**04 52 39.8**	**+1.4**
LCND				IAML		04 52 42.3	
	comp=Z,1μm,0.4s						
ACON	**Acoyapa**	**1.90**	**79**	*eP*	**Pn**	**04 52 16.8**	**+0.8**
ACON				*eS*	**Sn**	**04 52 40.8**	**+1.3**
LCY	**Lacayo**	**2.14**	**327**	*eP*	**Pn**	**04 52 20.5**	**+1.0**
LCY	**Lacayo**	**2.14**	**327**	*eP*	**Pn**	**04 52 20.5**	**+1.0**
TECA	**Tecapa**	**2.32**	**323**	*eP*	**Pn**	**04 52 22.6**	**+0.7**
TECA	**Tecapa**	**2.32**	**323**	*eP*	**Pn**	**04 52 22.6**	**+0.7**
TGUH	**Tegucigalpa,Un**	**2.42**	**356**	*eP*	**Pn**	**04 52 24.9**	**+1.7**
TGUH	**Tegucigalpa,Un**	**2.42**	**356**	*eP*	**Pn**	**04 52 25.0**	**+1.7**
JTS	**Las Juntas de**	**2.48**	**122**	Pn	**Pn**	**04 52 26.0**	**+2.1**
	comp=Z,3.8nm,0.3s,baz=7.9,slow=18,SNR=31						
JTS				Lg	Lg	04 53 03.5	
	comp=Z,12nm,0.3s,baz=145,slow=20,SNR=12						
JTS				LR	LR	04 53 42.1	
	comp=Z,118nm,20.8s,baz=6.5,slow=47						
JTS	**Las Juntas de**	**2.48**	**122**	*eP*	**Pn**	**04 52 25.9**	**+1.9**
LFRS	**El Faro**	**2.77**	**316**	*eP*	**Pn**	**04 52 29.0**	**+0.9**
LFRS				*eS*	**Sn**	**04 53 01.6**	**+0.4**
ESPN	**Las Esperanzas**	**2.78**	**78**	*eP*	**Pn**	**04 52 29.4**	**+1.4**
APG	**El Apazote**	**4.70**	**316**	Pn	**Pn**	**04 52 58.3**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=142,slow=19,SNR=1.7						
APG				Sn	**Sn**	**04 53 56.9**	**+7.9**
	comp=Z,0.3nm,0.3s,baz=73,slow=17,SNR=1.7						
CMIG	**Matias Romero**	**9.31**	**307**	Pn	**Pn**	**04 54 00.6**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=156,slow=10.0,SNR=9.8						
CMIG				Sn	**Sn**	**04 55 42.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=25,slow=14,SNR=2.2						
ATAH	**Atahualpa**	**20.54**	**155**	LR	LR	05 03 17.6	
	comp=Z,45nm,18.4s,baz=274,slow=33						
TXAR	**Lajitas Array**	**23.44**	**321**	P	**P**	**04 56 53.3**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=132,slow=11,SNR=18						
PDAR	**Pinedale Array**	**36.67**	**332**	P	**P**	**04 58 49.6**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=120,slow=8.8,SNR=4.1						
YKA	**Yellowknife Ar**	**54.50**	**345**	P	**P**	**05 01 07.8**	**-3.1**
	comp=Z,0.7nm,0.7s,baz=138,slow=8.0,SNR=9.5						
ILAR	**Eielson Array**	**66.92**	**336**	P	**P**	**05 02 33.3**	**-2.2**
	comp=Z,0.3nm,0.8s,baz=141,slow=4.6,SNR=3.9						

*DSN **17** 05:00:26.0±1.5, 27°.34N×63°.51E, h10km, ML4.0/8, Error ellipse: s-maj=41.7km s-min=12.0km az=167.0*
OMAN 17 05:00:28.3±6.0, 27°.84N×63°.17E, h10km, Error ellipse: s-maj=66.0km s-min=50.9km az=101.0, Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**6.15**	**223**	P	Pn	05 01 57.2	-2.1
	SNR=7.7						
WSAR				S	Sn	05 03 10.8	+1.2
BANOM	**Banah**	**6.43**	**254**	*i P*	Pn	05 02 02.7	-0.3
	SNR=14						
BANOM	**Banah**	**6.43**	**254**	P	Pn	05 02 02.1	-1.0
	SNR=56						
BANOM				S	Sn	05 03 18.5	+2.0
SHME	**Shamm**	**6.52**	**256**	*i P*	Pn	05 02 04.3	-0.1
	SNR=18						
SHME				S	Sn	05 03 22.3	+3.4
MDH	**Madha**	**6.65**	**249**	*i P*	Pn	05 02 04.5	-1.6
	SNR=16						
MDH	**Madha**	**6.65**	**249**	P	Pn	05 02 04.7	-1.4
MDH				S	Sn	05 03 22.8	+0.7
MSFE	**Esma-Masafi**	**6.74**	**250**	*i P*	Pn	05 02 06.6	-0.9
	SNR=26						
HOQ	**Hoqain**	**6.78**	**233**	P	Pn	05 02 06.5	-1.4
	SNR=13						
UOSS	**Minazif**	**6.88**	**247**	*i P*	Pn	05 02 07.3	-2.0
	SNR=19						
UOSS	**Minazif**	**6.88**	**247**	P	Pn	05 02 07.4	-1.9
HATD	**Hatta, Dubai**	**6.99**	**246**	*i P*	Pn	05 02 08.7	-2.1
	SNR=7.3						
SOHO	**SOHO**	**7.02**	**240**	P	Pn	05 02 10.0	-1.1
	SNR=25						
SOHO				S	Sn	05 03 31.9	+0.8
ASHO	**Ashiyiah**	**7.12**	**245**	*i P*	Pn	05 02 11.8	-0.8
	SNR=10.0						
ASHO				S	Sn	05 03 34.2	+0.7
ASHO	**Ashiyiah**	**7.12**	**245**	P	Pn	05 02 12.7	+0.1
	SNR=9.1						
NAZ	**Nazwa, Dubai**	**7.31**	**249**	*i P*	Pn	05 02 16.3	+1.1
	SNR=7.3						
BSY	**Bisya**	**7.41**	**228**	P	Pn	05 02 19.0	+2.4
	SNR=6.3						
FAQ	**Al Faqa, Dubai**	**7.47**	**247**	*i P*	Pn	05 02 18.2	+0.9
	SNR=6.8						
FAQ	**Al Faqa, Dubai**	**7.47**	**247**	P	Pn	05 02 19.3	+2.0
	SNR=6.8						
ASUD	**Al Ashush, Dub**	**7.73**	**247**	P	Pn	05 02 23.2	+2.2
	SNR=18						

*IDC **17** 05:02:07.4±1.3, 34°.24N×25°.08E, h0km, mb3.8/5, mb1 3.8/7, mb1mx3.5/46, mbtmp3.7/7, ML4.0/2, Error ellipse: s-maj=26.8km s-min=19.7km az=104.0*
*THE **17** 05:02:11.9, 34°.31N×25°.15E, h0km±1km, ML2.8/4, Error ellipse: s-maj=3.1km s-min=1.1km az=172.0*
*ATH **17** 05:02:15.2, 34°.57N×25°.14E, h33km±3km, ML2.8/2, Error ellipse: s-maj=9.2km s-min=2.5km az=4.0*
ISC 17 05:02:11.9±1.6, 34°.32N±0°.07×25°.16E±0°.03, h18km±5km, n54, σ1°49/66, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.75**	**337**	P	**Pg**	**05 02 26.2**	**-0.5**
SIVA				S	**Sn**	**05 02 38.3**	**-0.2**
SIVA	**Sivas**	**0.75**	**337**	P	**Pg**	**05 02 26.5**	**-0.2**
SIVA				AML	AML	05 02 43.6	
	comp=N,3773μm,0.4s						
SIVA				AML	AML	05 02 43.8	
	comp=E,6304μm,0.9s						
TMBK	**Timbaki Herakl**	**0.82**	**337**	P	**Pg**	**05 02 27.8**	**-0.1**
TMBK				S	**Sn**	**05 02 41.5**	**+1.4**
LAST	**Lasithi**	**0.88**	**17**	P	**Pg**	**05 02 28.9**	**-0.2**
LAST				S	**Sn**	**05 02 42.4**	**+0.6**
	comp=E,398nm,0.6s						
LAST	**Lasithi**	**0.88**	**17**	P	**Pg**	**05 02 28.8**	**-0.2**
LAST				AML	AML	05 02 48.0	
	comp=N,820μm,0.3s						
LAST				AML	AML	05 02 49.5	
	comp=E,766μm,0.5s						
KSTL	**Kastelli Herak**	**0.98**	**356**	P	**Pb**	**05 02 29.7**	**-0.7**
KSTL				S	**Sb**	**05 02 44.1**	**+1.1**
IDI	**Anoyia**	**0.99**	**347**	Pn	**Pb**	**05 02 30.3**	**-0.3**
	comp=E,9.5nm,0.3s,baz=160,slow=12,SNR=31						
IDI				Sn	**Sb**	**05 02 44.0**	**+0.7**
	comp=E,48nm,0.3s,baz=329,slow=19,SNR=18						
NPS	**Neapolis**	**1.01**	**21**	P	**Pb**	**05 02 31.2**	**+0.3**
NPS	**Neapolis**	**1.01**	**21**	P	**Pb**	**05 02 31.1**	**+0.3**
GVD	**Gavdhos**	**1.03**	**301**	P	**Pb**	**05 02 30.6**	**-0.5**
GVD				S	**Sn**	**05 02 47.3**	**+2.0**
GVD	**Gavdhos**	**1.03**	**301**	P	**Pb**	**05 02 30.6**	**-0.5**
GVD				S	**Sn**	**05 02 47.8**	**+2.5**
	comp=E,1μm,0.5s						
ZKR	**Zakros**	**1.18**	**47**	P	**Pb**	**05 02 34.4**	**+0.7**
ZKR	**Zakros**	**1.18**	**47**	P	**Pb**	**05 02 34.4**	**+0.7**
ZKR				S	**Sn**	**05 02 52.3**	**+3.3**
	comp=E,352nm,0.4s						
ZKR	**Zakros**	**1.18**	**47**	P	**Pb**	**05 02 34.3**	**+0.6**
VAM	**Vamos**	**1.34**	**324**	P	**Pn**	**05 02 36.8**	**+1.1**
VAM				S	**Sg**	**05 02 56.2**	**+0.8**
	comp=E,408nm,0.8s						
VAM	**Vamos**	**1.34**	**324**	P	**Pn**	**05 02 36.3**	**+0.6**
IMMV	**Iera Moni Meta**	**1.50**	**320**	P	**Pn**	**05 02 39.1**	**+1.2**
IMMV	**Iera Moni Meta**	**1.50**	**320**	P	**Pn**	**05 02 39.0**	**+1.2**
IMMV	**Iera Moni Meta**	**1.50**	**320**	P	**Pn**	**05 02 39.0**	**+1.2**
THR6	**Thira Island,**	**2.04**	**5**	P	**Pn**	**05 02 46.5**	**+1.2**
KARP	**Karpathos**	**2.05**	**53**	P	**Pn**	**05 02 48.2**	**+2.8**
KARP	**Karpathos**	**2.05**	**53**	P	**Pn**	**05 02 48.0**	**+2.6**
KARP	**Karpathos**	**2.05**	**53**	P	**Pn**	**05 02 48.3**	**+2.8**
THR3	**Thira Island,**	**2.09**	**5**	P	**Pn**	**05 02 47.1**	**+1.1**
THR3	**Thira Island,**	**2.09**	**5**	P	**Pn**	**05 02 46.7**	**+0.6**
THR5	**Thira Island,**	**2.10**	**4**	P	**Pn**	**05 02 47.3**	**+1.2**
THR5	**Thira Island,**	**2.10**	**4**	P	**Pn**	**05 02 46.5**	**+0.4**
THR8	**Santorini-Mono**	**2.10**	**7**	P	**Pn**	**05 02 45.8**	**-0.3**
IOSP	**Ios island**	**2.40**	**2**	P	**Pn**	**05 02 50.9**	**+0.6**
MHLO	**Agia Marina, M**	**2.44**	**346**	P	**Pn**	**05 02 51.7**	**+0.8**
KYTH	**Kithira**	**2.60**	**319**	P	**Pn**	**05 02 55.2**	**+2.2**
ARG	**Arkhangelos**	**3.08**	**51**	P	**Pn**	**05 03 01.5**	**+2.0**
DAT	**Datca**	**3.11**	**39**	P	**Pn**	**05 03 01.3**	**+1.2**
DAT	**Datca**	**3.11**	**39**	*i P*	**Pn**	**05 03 02.1**	**+2.0**
DAT				*i* S	**Sn**	**05 03 37.1**	**+0.3**
DAT				IAML_P			
	comp=Z,316nm,0.1s						
DID	**Didima**	**3.54**	**334**	P	**Pn**	**05 03 06.2**	**+0.2**
DALY	**Dalyan (Mula)**	**3.78**	**48**	P	**Pn**	**05 03 11.2**	**+2.0**
DALY	**Dalyan (Mula)**	**3.78**	**48**	*i P*	**Pn**	**05 03 11.3**	**+2.0**
YER	**Yerkesik**	**3.79**	**41**	P	**Pn**	**05 03 11.3**	**+1.9**
TURN	**Turunc**	**3.79**	**47**

YSS				smax	smax		
	comp=N,930nm,0.7s						
YSS				smax	smax		
	comp=E,620nm,0.7s						
YSS	**Yuzh-Sakhalins**	**1.61**	**168**	⇑ *i*Pg	**Pg**	**05 39 51.3**	**-0.1**
YSS				AMB	AMB	05 39 51.7	
	comp=E,500nm,1.0s						
YSS				*e*Sg	**Sg**	**05 40 14.1**	**+1.9**
YSS				A	A	05 40 17.4	
	comp=E,730nm,0.7s						
YSS				AMS	AMS	05 40 34.0	
	comp=E,900nm,15.0s						
TYV	**Tymovskoe**	**2.35**	**6**	*e*PN	**Pn**	**05 40 01.5**	**+2.2**
TYV				*e*S	**Sb**	**05 40 34.3**	**+2.1**
TYV				pmax	pmax		
	comp=Z,41nm,0.8s						
TYV				smax	smax		
	comp=E,254nm,1.2s						
TYV				smax	smax		
	comp=E,500nm,2.1s						
TYV	**Tymovskoe**	**2.35**	**6**	*e*Pg	**Pn**	**05 40 01.9**	**+2.6**
TYV				AMB	AMB	05 40 02.6	
	comp=E,400nm,0.5s						
TYV				*e*Sg	**Sb**	**05 40 33.9**	**+1.7**
TYV				A	A	05 40 36.0	
	comp=E,500nm,2.1s						
TYV				A	A	05 40 40.0	
	comp=E,200nm,0.8s						
TYV				A	A	05 40 40.0	
	comp=E,300nm,0.8s						
GRNR	**Gornyy**	**4.41**	**303**	*e*PN	**Pb**	**05 40 37.8**	**-0.4**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GRNR				pmax	pmax		
	comp=Z,19nm,0.5s						
GRNR	**Gornyy**	**4.41**	**303**	*e*Pg	**Pg**	**05 40 42.5**	**-2.5**
GRNR				AMB	AMB	05 40 43.0	
	comp=Z,19nm,0.5s						
GRNR				*e*Sg	**Sg**	**05 41 41.2**	**-0.9**
GRNR				A	A	05 41 42.0	
	comp=Z,82nm,0.5s						
ASAJ	**Asahikawa**	**4.42**	**177**	Pn	**Pn**	**05 40 29.3**	**+1.4**
	comp=Z,1.8nm,0.3s,baz=355,slow=12,SNR=8.0						
ASAJ				Sn	**Sn**	**05 41 21.7**	**+2.2**
	baz=252,slow=19,SNR=2.2						
NKL	**Nikolayevsk**	**4.73**	**348**	*e*PN	**Pn**	**05 40 31.2**	**-0.9**
NKL	**Nikolayevsk**	**4.73**	**348**	*e*P	**Pn**	**05 40 31.0**	**-1.1**
NKL				AMB	AMB	05 40 31.1	
	comp=Z,20nm,0.6s						
NKL				*e*Pg	**Pg**	**05 40 52.0**	**+0.9**
NKL				AMB	AMB	05 40 53.0	
	comp=Z,90nm,1.0s						
NKL				*e*Sg	**Sg**	**05 41 54.0**	**+1.6**
NKL				A	A	05 41 54.2	
	comp=Z,30nm,0.8s						
TEY	**Ternei**	**5.23**	**230**	‖ *e*PN	**Pn**	**05 40 41.3**	**+2.4**
TEY				*e*S	**Sn**	**05 41 43.8**	**+4.4**
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,20nm,0.8s						
TEY				smax	smax		
	comp=E,30nm,0.7s						
TEY				smax	smax		
	comp=N,60nm,0.5s						
TEY	**Ternei**	**5.23**	**230**	*e*P	**Pn**	**05 40 41.5**	**+2.6**
TEY				AMB	AMB	05 40 41.7	
	comp=N,20nm,0.4s						
TEY				*e*S	**Sn**	**05 41 43.6**	**+4.2**
TEY				A	A	05 41 44.5	
	comp=N,60nm,0.5s						
TEY				A	A	05 41 44.5	
	comp=N,30nm,0.5s						
ERM	**Erimo**	**6.54**	**174**	*e*Pn	**Pn**	**05 40 56.4**	**-0.6**
ERM	**Erimo**	**6.54**	**174**	*e*PN	**Pn**	**05 40 56.4**	**-0.6**
KLR	**Kul'dur**	**6.97**	**280**	Pn	**Pn**	**05 41 03.5**	**+0.6**
	comp=N,0.2nm,0.3s,baz=96,slow=18,SNR=2.7						
KLR				Lg	Lg	05 43 00.1	
	comp=N,1.5nm,0.3s,baz=146,slow=22,SNR=7.3						
EKMR	**Ekimchan**	**7.45**	**311**	*e*P	**Pn**	**05 41 12.8**	**+3.4**
EKMR				AMB	AMB	05 41 13.0	
	comp=N,4.0nm,0.8s						
EKMR				*e*Pg	**Pg**	**05 41 41.8**	**-1.3**
EKMR				AMB	AMB	05 41 42.1	
	comp=N,6.0nm,0.8s						
EKMR				*e*Sg	**Sg**	**05 43 24.5**	**+5.0**
EKMR				A	A	05 43 25.8	
	comp=N,110nm,0.8s						
EKMR				A	A	05 43 25.8	
	comp=N,18nm,0.8s						
EKMR				A	A	05 43 25.8	
	comp=N,37nm,0.8s						
USA0B	**Ussuriysk Arra**	**8.32**	**242**	*e*Lg	Lg	05 43 52.8	
USRK	**Ussuriysk Ar.**	**8.32**	**242**	Pn	**Pn**	**05 41 20.4**	**-0.9**
	comp=N,0.3nm,0.3s,baz=60,slow=13,SNR=4.1						
USRK				Lg	Lg	05 43 45.3	
	comp=N,0.7nm,0.3s,baz=52,slow=28,SNR=6.9						
USRK				LR	LR	05 44 49.6	
	comp=N,113nm,20.8s,baz=85,slow=40						
BMKR	**Bomnak**	**10.38**	**312**	*e*P	**Pn**	**05 41 49.6**	**0.0**
BMKR				AMB	AMB	05 41 50.0	
	comp=N,2.0nm,0.8s						
BMKR				*e*Sg		05 44 51.8	
BMKR				A	A	05 45 04.5	
	comp=N,10.0nm,0.5s						
ZEA	**Zeya**	**10.78**	**305**	*e*Sg		05 45 05.5	
PETK	**Petropavlovsk-**	**10.78**	**59**	LR	LR	05 45 54.7	
	comp=N,62nm,21.1s,baz=226,slow=37						
KROS	**Kirovskiy**	**11.21**	**308**	*e*Sg		05 45 20.0	
KROS				A	A	05 45 21.2	
	comp=N,7.0nm,0.5s						
KSRS	**Korea Array**	**15.23**	**229**	Pn	**P**	**05 43 00.1**	**-0.7**
	comp=N,0.3nm,0.3s,baz=38,slow=12,SNR=5.6						
KSRS				LR	LR	05 48 20.6	
	comp=N,10nm,21.7s,baz=20,slow=36						
JHJ2	**Mitsune**	**15.51**	**188**	*e*Pn	**Pn**	**05 42 59.7**	**+0.3**
	comp=N,149nm,0.9s						
SONA0	**Songino Array**	**23.80**	**282**	*e*P	**P**	**05 44 33.2**	**-0.5**
SONM	**Songino Array**	**23.80**	**282**	P	**P**	**05 44 33.2**	**-0.5**
	comp=N,0.8nm,0.6s,baz=62,slow=8.0,SNR=4.3						
COLD	**Coldfoot**	**38.09**	**36**	*e*P	**P**	**05 46 41.5**	**+2.2**
	comp=N,4.2nm,1.5s						
MLY	**Manley**	**38.12**	**39**	*e*P	**P**	**05 46 40.7**	**+1.1**
	comp=N,2.7nm,1.3s						
BPAW	**Bear Paw Mtn.**	**38.14**	**41**	*e*P	**P**	**05 46 41.8**	**+2.0**
	comp=N,3.0nm,1.2s						
OHAK	**Old Harbor**	**38.47**	**52**	*e*P	**P**	**05 46 42.6**	**0.0**
	comp=N,9.5nm,1.1s						
TRF	**Thorofare Moun**	**38.55**	**42**	*e*P	**P**	**05 46 44.7**	**+1.3**
	comp=N,2.6nm,0.9s						
KDAK	**Kodiak Island**	**38.69**	**51**	*e*P	**P**	**05 46 43.7**	**-0.7**
	comp=N,28nm,1.6s						
KDAK	**Kodiak Island**	**38.69**	**51**	*e*P	**P**	**05 46 43.7**	**-0.7**
KDAK				pmax	pmax		
	comp=Z,28nm,1.6s						
SUA	**Susitna One**	**38.73**	**45**	*e*P	**P**	**05 46 44.4**	**-0.4**
	comp=Z,1.9nm,0.9s						
CNPM	**China Poot**	**38.93**	**48**	*e*P	**P**	**05 46 46.3**	**-0.1**
	comp=Z,20nm,1.7s						
RND	**Reindeer**	**39.20**	**42**	*e*P	**P**	**05 46 49.7**	**+1.0**
	comp=Z,2.3nm,0.9s						
RC01	**Rabbit Creek A**	**39.29**	**45**	*e*P	**P**	**05 46 50.0**	**+0.6**
	comp=Z,9.6nm,1.6s						
WRH	**Wood River Hil**	**39.33**	**40**	*e*P	**P**	**05 46 50.0**	**+0.3**
	comp=Z,4.1nm,0.8s						
COLA	**College**	**39.36**	**39**	*e*P	**P**	**05 46 48.8**	**-1.0**
	comp=Z,6.0nm,0.5s						
COLA	**College**	**39.36**	**39**	*e*P	**P**	**05 46 48.8**	**-1.0**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CCB	**Clear Creek Bu**	**39.42**	**40**	*e*P	**P**	**05 46 50.6**	**+0.3**
	comp=Z,7.7nm,1.5s						
GHO	**Glory Hole Cre**	**39.51**	**44**	*e*P	**P**	**05 46 53.0**	**+1.7**
	comp=Z,3.4nm,0.8s						
MK32	**Makanchi Array**	**39.53**	**291**	*e*P	**P**	**05 46 51.4**	**-0.2**
MKAR	**Makanchi Array**	**39.53**	**291**	P	**P**	**05 46 51.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=61,slow=8.9,SNR=3.0						
ILAR	**Eielson Array**	**39.78**	**39**	P	**P**	**05 46 53.3**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=280,slow=8.8,SNR=24						
ILB	**Eielson Array**	**39.78**	**39**	*e*P	**P**	**05 46 53.5**	**0.0**
	comp=Z,2.4nm,0.7s						
DHY	**Denali Highway**	**39.92**	**42**	*e*P	**P**	**05 46 53.6**	**-1.2**
	comp=Z,2.6nm,0.7s						
PRP	**Porcupine Dome**	**40.20**	**38**	*e*P	**P**	**05 46 57.2**	**+0.1**
	comp=Z,7.7nm,0.8s						
SCM	**Sheep Creek Mo**	**40.23**	**44**	*e*P	**P**	**05 46 57.4**	**+0.1**
	comp=Z,15nm,1.8s						
SCM	**Sheep Creek Mo**	**40.23**	**44**	*e*P	**P**	**05 46 57.4**	**+0.1**
SCM				pmax	pmax		
	comp=Z,15nm,1.8s						
GLI	**Glacier Island**	**40.59**	**45**	*e*P	**P**	**05 46 58.9**	**-1.2**
	comp=Z,4.1nm,0.9s						
SLVN	**Son La**	**40.88**	**242**	*e*P	**P**	**05 47 02.0**	**-1.1**
	comp=Z,13nm,2.0s						
EGAK	**Eagle**	**42.17**	**38**	*e*P	**P**	**05 47 12.6**	**-0.5**
	comp=Z,4.6nm,0.7s						
BCPM	**Bancas Point**	**44.39**	**45**	*e*P	**P**	**05 47 29.2**	**-1.9**
	comp=Z,86nm,0.6s						
HYT	**Haines Junctio**	**45.04**	**43**	*e*P	**P**	**05 47 36.6**	**+0.2**
	comp=Z,7.7nm,1.4s						
CMAR	**Chiang Mai Arr**	**46.05**	**245**	LR	LR	06 09 32.9	
	comp=Z,16nm,18.2s,baz=170,slow=39						
RES	**Resolute Bay**	**51.36**	**17**	*e*P	**P**	**05 48 22.9**	**-1.9**
	comp=Z,8.7nm,1.4s						
RES	**Resolute Bay**	**51.36**	**17**	*e*P	**P**	**05 48 22.9**	**-1.9**
RES				pmax	pmax		
	comp=Z,9.0nm,1.4s						
YKA	**Yellowknife Ar**	**53.73**	**34**	P	**P**	**05 48 41.2**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=307,slow=7.0,SNR=8.4						
YKB5	**Yellowknife Ar**	**53.73**	**34**	*e*P	**P**	**05 48 41.2**	**-1.3**
FIA0	**FINESS Array S**	**59.06**	**330**	*e*P	**P**	**05 49 20.6**	**+0.1**
FIA0	**FINESS Array S**	**59.06**	**330**	*e*P	**P**	**05 49 20.6**	**+0.1**
FINES	**FINESS Array B**	**59.06**	**330**	P	**P**	**05 49 20.6**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=49,slow=7.5,SNR=16						
HNR	**Honiara**	**59.78**	**160**	*e*P	**P**	**05 49 26.4**	**+0.4**
	comp=Z,246nm,0.8s						
HNR	**Honiara**	**59.78**	**160**	*e*P	**P**	**05 49 26.4**	**+0.4**
HNR				pmax	pmax		
	comp=Z,246nm,0.8s						
JCC	**Jacoby Creek,**	**63.01**	**58**	*e*P	**P**	**05 49 47.4**	**-0.2**
	comp=Z,24nm,1.7s						
YBH	**Yreka Blue Hor**	**63.13**	**57**	*e*P	**P**	**05 49 48.2**	**-0.4**
	comp=Z,2.2nm,0.9s						
YBH	**Yreka Blue Hor**	**63.13**	**57**	*e*P	**P**	**05 49 48.3**	**-0.4**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
F10A	**Beach Ranch, E**	**63.20**	**50**	*e*P	**P**	**05 49 49.1**	**+0.1**
	comp=Z,8.2nm,1.5s						
I07A	**Izee**	**63.29**	**53**	*e*P	**P**	**05 49 50.1**	**+0.4**
	comp=Z,1.7nm,0.9s						
FCC	**Fort Churchill**	**63.53**	**29**	*e*P	**P**	**05 49 51.0**	**+0.2**
	comp=Z,10nm,1.5s						
FCC	**Fort Churchill**	**63.53**	**29**	*e*P	**P**	**05 49 51.0**	**+0.2**
FCC				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KMRM	**Mail Ridge**	**63.59**	**59**	*e*P	**P**	**05 49 50.1**	**-1.5**
	comp=Z,19nm,1.7s						
FFC	**Flin Flon**	**63.83**	**36**	*e*P	**P**	**05 49 52.9**	**0.0**
	comp=Z,176nm,2.0s						
FFC	**Flin Flon**	**63.83**	**36**	*e*P	**P**	**05 49 52.9**	**0.0**
FFC				pmax	pmax		
	comp=Z,176nm,2.0s						
NB201	**NORSAR Array S**	**63.86**	**336**	*e*P	**P**	**05 49 52.3**	**-0.8**
	comp=Z,109nm,1.8s						
NB200	**NORSAR Array S**	**63.89**	**336**	*e*P	**P**	**05 49 52.8**	**-0.4**
NOA	**NORSAR Array B**	**63.89**	**336**	P	**P**	**05 49 52.8**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=34,slow=6.5,SNR=3.0						
NAO01	**NORSAR Array S**	**64.14**	**336**	*e*P	**P**	**05 49 52.9**	**-1.9**
	comp=Z,125nm,2.0s						
HRY	**Holter Researc**	**65.37**	**47**	*e*P	**P**	**05 50 04.1**	**+0.8**
EGMT	**Eagleton**	**65.42**	**45**	*e*P	**P**	**05 50 03.6**	**+0.1**
	comp=Z,10nm,1.4s						
BEKR	**Beckworth**	**65.71**	**57**	*e*P	**P**	**05 50 05.9**	**+0.3**
	comp=Z,10nm,1.8s						
DLMT	**Dillon**	**65.95**	**48**	*e*P	**P**	**05 50 07.6**	**+0.5**
	comp=Z,2.6nm,0.9s						
PNTR	**Pine Nut**	**66.67**	**57**	*e*P	**P**	**05 50 12.1**	**+0.2**
	comp=Z,7.4nm,1.4s						
YERR	**Yerington**	**66.94**	**57**	*e*P	**P**	**05 50 12.5**	**-1.0**
	comp=Z,2.5nm,0.7s						
KVN	**Kaiserville**	**67.53**	**56**	*e*P	**P**	**05 50 16.1**	**-1.2**
	comp=Z,1.7nm,0.7s						
KVN	**Kaiserville**	**67.53**	**56**	*e*P	**P**	**05 50 16.1**	**-1.2**
KVN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RLMT	**Red Lodge**	**67.75**	**47**	*e*P	**P**	**05 50 19.4**	**+0.7**
	comp=Z,17nm,2.0s						
NV01	**Mina Array Sit**	**67.86**	**57**	*e*P	**P**	**05 50 20.2**	**+0.8**
NVAR	**Mina Array Bea**	**67.86**	**57**	P	**P**	**05 50 20.2**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=300,slow=6.2,SNR=4.5						
NV11	**Mina Array Sit**	**67.94**	**57**	*e*P	**P**	**05 50 18.2**	**-1.6**
	comp=Z,0.4nm,1.5s						
WR1	**Warramunga Arr**	**68.53**	**188**	*e*P	**P**	**05 50 21.9**	**-1.4**
WRA	**Warramunga Arr**	**68.53**	**188**	P	**P**	**05 50 21.9**	**-1.4**
	comp=Z,1.2nm,0.8s,baz=359,slow=7.0,SNR=2.7						
BW06	**Boulder Array**	**69.34**	**48**	*e*P	P	05 50 22.2	-6.4
	comp=Z,3.2nm,1.0s						
PD31	**Pinedale Array**	**69.34**	**48**	*e*P	**P**	**05 50 27.3**	**-1.3**
	comp=Z,2.1nm,0.9s						
PDAR	**Pinedale Array**	**69.34**	**48**	P	**P**	**05 50 28.8**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=329,slow=1.7,SNR=13						
TPNV	**Topopah Spring**	**70.05**	**57**	*e*P	**P**	**05 50 33.0**	**0.0**
	comp=Z,10.0nm,1.6s						
TPNV	**Topopah Spring**	**70.05**	**57**	*e*P	**P**	**05 50 33.0**	**0.0**
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.6s						
CLL	**Collm**	**71.49**	**329**	*e*P	**P**	**05 50 42.0**	**+0.7**
AS31	**Alice Springs**	**72.25**	**188**	*e*P	**P**	**05 50 47.0**	**+0.9**
ASAR	**Alice Springs**	**72.25**	**188**	P	**P**	**05 50 47.0**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=0.7,slow=5.1,SNR=9.0						
PSAC1	**Pilbara Seismi**	**72.58**	**202**	*e*P	**P**	**05 50 47.0**	**-1.1**
	comp=Z,54nm,1.7s						
PSAB2	**Pilbara Seismi**	**72.59**	**202**	*e*P	**P**	**05 50 47.9**	**-0.2**
	comp=Z,48nm,1.6s						
PSAD2	**Pilbara Seismi**	**72.63**	**202**	*e*P	**P**	**05 50 47.6**	**-0.7**
	comp=Z,83nm,1.8s						
SMCO	**Snowmass**	**73.32**	**49**	*e*P	**P**	**05 50 52.2**	**-0.8**
	comp=Z,10nm,1.9s						
ECSD	**EROS Data Cent**	**74.59**	**40**	*e*P	**P**	**05 50 59.5**	**-0.3**
	comp=Z,8.2nm,1.5s						
LTX	**Lajitas**	**82.68**	**54**	*e*P	**P**	**05 51 45.4**	**+0.7**
LTX	**Lajitas**	**82.68**	**54**	*e*P	**P**	**05 51 45.4**	**+0.7**
TXAR	**Lajitas Array**	**82.68**	**54**	P	**P**	**05 51 45.4**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=276,slow=2.9,SNR=8.0						

TAP 17 05:40:43.0,24.77N×121.81E,h77km,ML2.4,A,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWE	**Neicheng**	**0.14**	**251**	P	Pn	05 40 54.6	+0.4
	baz=247						
TWC	**Suao**	**0.16**	**168**	P	Pn	05 40 54.6	+0.2
	baz=164						
TWC				S	Sn	05 41 03.0	+0.4
	baz=164						
TIPB	**Shuangxi**	**0.20**	**3**	P	Pn	05 40 54.6	0.0
	baz=3.0						
TIPB				S	Sn	05 41 03.0	-0.1
	baz=3.0						
ENTT	**Nioudou**	**0.26**	**240**	*i* P	Pn	05 40 55.3	+0.5
	baz=239						
ENTT				S	Sn	05 41 04.4	+0.9
	baz=239						
NWLT	**Wulai**	**0.28**	**272**	P	Pn	05 40 55.0	+0.1
	baz=271						
NWLT				S	Sn	05 41 03.8	+0.1
	baz=271						
TWB1	**Santiao Chiao**	**0.29**	**34**	*e*S	Sn	05 41 03.5	-0.2
	baz=35						
TWA	**Mucha**	**0.30**	**316**	*e*S	Sn	05 41 04.5	+0.7
	baz=316						
NWF	**Wu-fen Shan**	**0.30**	**355**	*e*S	Sn	05 41 03.9	-0.2
	baz=354						
WFSB	**Wu-fen Shan**	**0.30**	**355**	*e*S	Sn	05 41 04.0	+0.1
	baz=354						
NDT	**Datong Townshi**	**0.32**	**239**	P	Pn	05 40 55.6	+0.5
	baz=238						
NDT				S	Sn	05 41 04.9	+0.8
	baz=238						
NANB	**Nanao**	**0.34**	**189**	*e*P	Pn	05 40 55.6	+0.3
	baz=189						
NANB				*e*S	Sn	05 41 04.8	+0.5
	baz=189						
ENA	**Nanau**	**0.34**	**191**	P	Pn	05 40 55.9	+0.5
	baz=189						
TATO	**Taipei**	**0.36**	**305**	*e*S	Sn	05 41 04.9	+0.4
	baz=305						
EOS1	**EOS1**	**0.36**	**127**	*e*P	Pn	05 40 55.3	0.0
	baz=127						
EOS1				*e*S	Sn	05 41 05.1	+0.7
	baz=127						
YHNB	**Yeheng**	**0.41**	**256**	*e*P	Pn	05 40 55.9	0.0
	baz=256						
YHNB				*e*S	Sn	05 41 05.2	-0.1
	baz=256						
NSK	**Sanguang**	**0.42**	**258**	P	Pn	05 40 55.9	0.0
	baz=256						
NSK				S	Sn	05 41 05.4	-0.1
	baz=256						
YM01	**YM01**	**0.44**	**330**	*e*P	Pn	05 40 56.4	+0.3
	baz=329						
YM01				*e*S	Sn	05 41 06.4	+0.8
	baz=329						
YM10	**YM10**	**0.45**	**329**	*e*S	Sn	05 41 06.3	+0.5
	baz=329						
YM05	**YM05**	**0.45**	**330**	*e*S	Sn	05 41 06.6	+0.7
	baz=330						
YM04	**YM04**	**0.46**	**327**	*e*P	Pn	05 40 56.9	+0.6
	baz=326						
TWS1	**Kuangyinshan**	**0.49**	**313**	*e*P	Pn	05 40 56.9	+0.5
	baz=313						
NNS	**Nan Shan**	**0.52**	**231**	*e*S	Sn	05 41 06.1	-0.9
	baz=230						
NNSB	**Datong**	**0.52**	**229**	*e*P	Pn	05 40 57.0	+0.2
	baz=229						
NNSB				*e*S	Sn	05 41 07.4	+0.4
	baz=229						
NACB	**Ninganchiao**	**0.62**	**199**	*e*P	Pn	05 40 57.5	-0.3
	baz=198						
ETLH	**Xiulin Townshi**	**0.64**	**208**	*e*P	Pn	05 40 57.1	-0.9
	baz=208						
ETLH				*e*S	Sn	05 41 08.6	-0.3
	baz=208						
LIOB	**Emei**	**0.73**	**261**	*e*P	Pn	05 41 00.4	+1.6
	baz=260						
LIOB				*e*S	Sn	05 41 10.9	+0.2
	baz=260						
TDCB	**Techi**	**0.79**	**229**	*e*S	Sn	05 41 13.3	+1.5
	baz=229						
WHF	**Hehuan Shan**	**0.80**	**219**	*e*P	Pn	05 40 59.9	-0.1
	baz=218						
WHF				*e*S	Sn	05 41 13.3	+0.7
	baz=218						
CHGB	**Renai**	**0.91**	**220**	*e*P	Pn	05 41 01.5	+0.4
	baz=219						
CHGB				*e*S	Sn	05 41 15.4	+0.8
	baz=219						
WHP	**Taichung City**	**0.93**	**238**	P	Pn	05 41 01.9	+0.8
	baz=238						
WHP				*e*S	Sn	05 41 15.8	+1.1
	baz=238						
OWD	**Renai**	**1.00**	**216**	P	Pn	05 41 02.2	+0.1
	baz=215						
OWD				*e*S	Sn	05 41 16.0	-0.2
	baz=215						
VWDT	**VWDT**	**1.18**	**211**	*e*P	Pn	05 41 04.5	+0.3
	baz=211						
SSLB	**Suanglung**	**1.25**	**219**	*e*S	Sn	05 41 22.8	+1.1
	baz=218						
EHY	**Hungye**	**1.33**	**200**	*e*P	Pn	05 41 06.9	+0.8
	baz=199						
YULB	**Yu-li**	**1.45**	**199**	*e*P	Pn	05 41 09.4	+1.8
	baz=198						
YUS	**Yu-Shan**	**1.50**	**212**	*e*P	Pn	05 41 10.3	+1.6
	baz=211						

JMA 17 05:41:13.3±0.1,24.64N×123.37E,h16km±4km,M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**242**	P	Pg	05 41 20.8	-0.1
YOJ				*e*S	Sg	05 41 26.2	+0.1
IRIF	**Iriomote-Funau**	**0.45**	**133**	P	Pg	05 41 21.9	-0.4
IRIF				*e*S	Sg	05 41 28.4	0.0
HATJ	**Hateruma jima**	**0.70**	**146**	*e*S	Sg	05 41 35.2	-1.2
JKRS	**Kuro-shima**	**0.71**	**124**	P	Pg	05 41 26.8	-0.3
JKRS				S	Sg	05 41 36.3	-0.2
JIJ	**Ishigaki jima**	**0.76**	**111**	P	Pg	05 41 27.5	-0.6
JIJ				S	Sg	05 41 37.1	-1.0
JISG	**Ishigakijimahi**	**0.86**	**93**	S	Sb	05 41 40.9	-0.2
JTJ	**Tarama**	**1.21**	**90**	S	Sb	05 41 50.8	-0.5

JMA 17 05:58:22.4±0.1,24.25N×121.95E,h0km,M2.2
TAP 17 05:58:23.0,24.29N×121.92E,h14km,ML3.1,C
ISC 17 05:58:23.2±1.0,24.28N±0.02×121.94E±0.02,h9km±8km, n82,σ0.73/131,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.23**	**311**	P	**Pg**	**05 58 28.0**	**+0.1**
	baz=313						
NANB				S	**Sg**	**05 58 31.4**	**+0.4**
	baz=313						
ENA	**Nanau**	**0.23**	**310**	*i* P	**Pg**	**05 58 28.0**	**0.0**
	baz=312						
ENA				*i* S	**Sg**	**05 58 31.6**	**+0.4**
	baz=312						
EOS1	**EOS1**	**0.32**	**33**	P	**Pb**	**05 58 30.7**	**-0.5**
	baz=26						
EOS1				S	**Sb**	**05 58 36.7**	**+0.2**
	baz=26						
NACB	**Ninganchiao**	**0.33**	**252**	*e*P	**Pg**	**05 58 29.5**	**-0.3**
	baz=251						
NACB				*e*S	**Sb**	**05 58 35.5**	**-1.2**
	baz=251						
TWC	**Suao**	**0.34**	**346**	*i* P	**Pg**	**05 58 30.1**	**+0.1**
	baz=358						
TWC				*i* S	**Sg**	**05 58 34.7**	**+0.1**
	baz=358						
TWD	**Chiawan**	**0.37**	**238**	P	**Pg**	**05 58 30.4**	**-0.1**
	baz=240						
TWD				*e*S	**Sb**	**05 58 38.4**	**+0.6**
	baz=240						
ETLH	**Xiulin Townshi**	**0.42**	**260**	*e*P	**Pg**	**05 58 31.3**	**-0.3**
	baz=267						
ETLH				*e*S	**Sb**	**05 58 38.3**	**-1.1**
	baz=267						
HWA	**Hwalien**	**0.43**	**225**	*e*P	**Pb**	**05 58 32.9**	**-0.1**
	baz=232						
ENLB	**Shoufeng**	**0.48**	**220**	*e*P	**Pb**	**05 58 32.8**	**-1.1**
	baz=217						
ENTT	**Nioudou**	**0.49**	**317**	*i* P	**Pg**	**05 58 33.1**	**+0.2**
	baz=318						
ENTT				S	**Sg**	**05 58 39.8**	**+0.4**
	baz=318						
NDT	**Datong Townshi**	**0.50**	**310**	P	**Pb**	**05 58 33.4**	**-0.9**
	baz=311						
NDT				S	**Sg**	**05 58 40.0**	**+0.3**
	baz=311						
**TW

TIPB	Shuangxi	0.70 352	P	Pb	05 58 37.0	-0.7
	baz=352					
TIPB			eS	Sg	05 58 46.1	+0.2
	baz=352					
TDCB	Techi	0.71 268	eP	Pb	05 58 37.4	-0.5
	baz=269					
TDCB			eS	Sb	05 58 47.8	-0.1
	baz=269					
TWB1	Santiao Chiao	0.73 4	eP	Pb	05 58 37.7	-0.4
	baz=356					
TWB1			eS	Sb	05 58 47.5	-0.8
	baz=356					
CHGB	Renai	0.73 253	eP	Pb	05 58 37.3	-1.0
	baz=253					
CHGB			eS	Sb	05 58 48.5	0.0
	baz=253					
EGFH	Guangfu	0.77 218	eP	Pb	05 58 38.6	-0.2
	baz=230					
OWD	Renai	0.77 245	P	Pb	05 58 38.1	-0.7
	baz=252					
OWD			S	Sb	05 58 49.0	-0.4
	baz=252					
TWA	Mucha	0.77 335	eP	Pn	05 58 39.7	-0.6
	baz=324					
NWF	Wu-fen Shan	0.80 350	eP	Pb	05 58 39.3	-0.2
	baz=341					
NWF			eS	Sb	05 58 49.9	-0.6
	baz=341					
WFSB	Wu-fen Shan	0.80 350	eP	Pb	05 58 39.3	-0.1
	baz=341					
WFSB			eS	Sb	05 58 50.2	-0.2
	baz=341					
TATO	Taipei	0.81 330	eP	Pb	05 58 39.2	-0.3
	baz=330					
TATO			eS	Sb	05 58 49.7	-0.8
	baz=330					
WLTB	Daxi	0.85 313	eP	Pn	05 58 41.2	-0.2
	baz=313					
WLTB			eS	Sb	05 58 52.2	+0.6
	baz=313					
VWDT	VWDT	0.90 235	eP	Pb	05 58 40.5	-0.4
	baz=235					
VWDT			eS	Sn	05 58 55.0	-0.1
	baz=235					
WHP	Taichung City	0.91 270	eP	Pb	05 58 41.2	0.0
	baz=271					
WHP			eS	Sb	05 58 53.4	0.0
	baz=271					
HGSD	Ruisui	0.91 211	eP	Pb	05 58 40.9	-0.3
	baz=210					
LIOB	Emei	0.92 294	eP	Pn	05 58 42.2	-0.1
	baz=295					
LIOB			eS	Sb	05 58 54.0	+0.3
	baz=295					
NSTT	Nanjuang	0.92 293	eP	Pn	05 58 42.1	-0.3
	baz=294					
NSTT			eS	Sn	05 58 55.2	-0.6
	baz=294					
YM01	YM01	0.93 339	eP	Pn	05 58 41.8	-0.7
	baz=340					
JYNG	Yonaguni jima	0.94 79	P	Pg	05 58 40.8	-0.5
JYNG			eS	Sb	05 58 53.7	-0.5
YM10	YM10	0.94 339	eP	Pb	05 58 41.9	+0.2
	baz=331					
YM10			eS	Sb	05 58 54.9	+0.5
	baz=331					
YM04	YM04	0.94 337	eP	Pn	05 58 42.1	-0.7
	baz=339					
YM05	YM05	0.94 339	eP	Pn	05 58 42.2	-0.6
	baz=340					
EHY	Hungye	0.95 216	eP	Pb	05 58 41.7	-0.2
	baz=214					
DPDB	Guoxing	0.95 255	eP	Pn	05 58 43.0	+0.1
	baz=256					
YM08	YM08	0.96 341	eP	Pb	05 58 41.9	-0.2
	baz=342					
YM03	YM03	0.97 338	eP	Pn	05 58 43.8	+0.7
	baz=339					
NCUH	Zhongli	0.97 315	eP	Pn	05 58 43.0	-0.1
	baz=317					
YOJ	Yonaguni jima	1.00 79	eP	Pb	05 58 42.5	-0.2
	baz=67					
YOJ			eS	Sb	05 58 55.9	0.0
	baz=67					
YOJ	Yonaguni jima	1.00 79	P	Pb	05 58 42.3	-0.4
YOJ			eS	Sb	05 58 55.8	-0.1
SSLB	Suanglung	1.02 242	eP	Pg	05 58 42.4	-0.6
	baz=252					
SSLB			eS	Sn	05 58 57.5	-0.8
	baz=252					
SMLT	Sun Moon Lake	1.03 248	eP	Pb	05 58 43.1	-0.1
	baz=248					
SMLT			eS	Sn	05 58 59.2	+0.7
	baz=248					
TWY	Chenhua	1.04 343	eP	Pb	05 58 43.1	-0.3
	baz=345					
TYC	Yuchr	1.05 250	eP	Pn	05 58 43.7	-0.5
	baz=250					
TYC			eS	Sn	05 58 58.5	-0.5
	baz=250					
YULB	Yu-li	1.06 214	eP	Pg	05 58 42.3	-1.3
	baz=214					
YULB			eS	Sn	05 58 59.7	+0.5
	baz=214					
NMLH	Miaoli	1.08 284	eP	Pn	05 58 44.6	+0.1
	baz=285					
NSY	Sanyi	1.08 278	eP	Pn	05 58 45.5	+0.8
	baz=278					
TWF1	Yuli	1.09 213	P	Pg	05 58 43.1	-1.1
	baz=228					
PTSB	Yuanli	1.14 279	eP	Pn	05 58 46.2	+0.8
	baz=280					
TCU	Taichung	1.16 264	eS	Sn	05 59 03.1	+1.5
	baz=265					
WJS	Zhushan	1.20 248	eP	Pn	05 58 46.1	0.0
	baz=241					
YUS	Yu-Shan	1.20 229	P	Pg	05 58 45.4	-0.9
	baz=230					
YUS			eS	Sn	05 59 03.9	+0.6
	baz=230					
ALS	Alishan	1.29 234	eP	Pb	05 58 48.1	+0.3
	baz=234					
ALS			eS	Sn	05 59 07.6	+2.4
	baz=234					
CHN5	Tsauling	1.34 240	P	Pg	05 58 48.7	-0.2
	baz=241					
CHN5			eS	Sn	05 59 08.4	+2.2
	baz=241					
PCYT	Pengchaiyu	1.35 5	eP	Pn	05 58 48.1	-0.2
	baz=7.0					
ELDTW	Lidau	1.37 218	eP	Pn	05 58 48.3	-0.4
	baz=217					
WDLH	Douliu	1.41 246	eP	Pg	05 58 50.3	+0.1
	baz=248					
CHN4	Tsaushan	1.54 233	eP	Pg	05 58 52.7	-0.1
	baz=235					
CHN4			eS	Sg	05 59 15.5	+2.8
	baz=235					
TPUB	Ta-pu	1.54 231	eP	Pb	05 58 51.2	-0.9
	baz=220					
TPUB			eS	Sg	05 59 13.4	+0.5
	baz=220					
STYT	Tauyuan	1.55 225	eP	Pb	05 58 51.5	-0.7
	baz=208					
WTP	Ta-pu	1.59 230	eP	Pg	05 58 53.0	-0.7
	baz=231					
WTP			eS	Sg	05 59 16.5	+2.1
	baz=231					
IRIF	Iriomote-Funau	1.64 88	eS	Sb	05 59 14.0	-0.4
TWK	Hsinying	1.67 233	eP	Pg	05 58 54.1	-1.2
	baz=234					
TWK			eS	Sg	05 59 17.7	+0.9
	baz=234					
SLGT	Liugui	1.74 223	eP	Pb	05 58 54.8	-0.7
	baz=225					
SLGT			eS	Sg	05 59 18.9	-0.4
	baz=225					
JKRS	Kuro-shima	1.89 91	eS	Sn	05 59 20.0	+0.3
SSD	Sandimen	1.94 218	eP	Pg	05 58 59.0	-1.4
	baz=218					
JIJ	Ishigaki jima	2.01 87	P	Pb	05 58 59.0	-1.0
JIJ			eS	Sb	05 59 24.1	-1.1
MASBT	Mashibuluo	2.04 216	eP	Pn	05 58 58.4	+0.5
	baz=218					
MASBT			eS	Sb	05 59 26.4	+0.3
	baz=218					
JISG	Ishigakijimahi	2.19 81	P	Pn	05 59 01.0	+1.2
WDGT	Dungji	2.32 245	eP	Pn	05 59 01.5	-0.1
	baz=247					
JTJ	Tarama	2.54 81	P	Pn	05 59 06.4	+1.7
PTMZ	Houxiangcun	2.67 287	eP	Pn	05 59 05.6	-0.9
	baz=287					

NNC 17 06:14:03.7±2.2, 54°.03N×86°.42E, h0km, mb3.7, mpv3.4, 5C-4D, Error ellipse: s-maj=16.6km s-min=14.6km az=172.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	5.82	238	⇓Pn	Pn	06 15 31.4	+0.3
	1.5nm,0.7s						
KURK				⇑Sn	Sn	06 16 38.9	+0.5
	0.9nm,0.6s						
KURK				⇓Lg	Lg	06 17 10.9	
	4.7nm,0.7s						
KURBB	Kurchatov Arra	5.92	238	⇑Pn	Pn	06 15 32.4	-0.1
	3.7nm,0.6s						
KURBB				⇓Sn	Sn	06 16 42.0	+1.0
	6.5nm,0.7s						
KURBB				⇑Lg	Lg	06 17 13.8	
	8.3nm,0.7s						
MK31	Makanchi Array	7.71	202	⇑Pn	Pn	06 15 57.7	+0.6
	1.7nm,0.8s,baz=0.0,slow=0.1,SNR=6.9						
MK31				⇓Sn	Sn	06 17 26.3	+1.2
	0.7nm,0.5s						
MK31				⇑Lg	Lg	06 18 07.8	
	0.7nm,0.5s,baz=27,slow=30,SNR=3.6						

ISCJB 17 06:21:00.3±0.5, 42°.55S±0°.09×41°.9E±0°.1, h10km, mb4.1/10, MS3.6/11, Error ellipse: s-maj=17.0km s-min=9.9km az=139.5
IDC 17 06:21:00.6±0.8, 42°.58S×41°.98E, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.9/36, mbtmp4.1/9, ML4.2/2, MS3.6/13, Ms1 3.6/13, ms1mx3.4/29, Error ellipse: s-maj=34.8km s-min=17.5km az=41.0
NEIC 17 06:21:01.8±0.8, 42°.56S×41°.89E, h10km, mb4.2/8, Error ellipse: s-maj=28.6km s-min=9.4km az=21.0

ISC 17 06:21:01.8±0.7, 42°.55S±0°.1×41°.9E±0°.2, h10km, n36, σ1§03/25, mb4.1/10, MS3.5/11, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	19.36	310	P	Pn	06 25 28.8	-0.1
	0.8nm,0.3s,baz=150,slow=12,SNR=9.9						
BOSA				LR	LR	06 31 23.8	
	comp=Z,133nm,21.9s,baz=166,slow=32						
BOSA	Boshof	19.36	310	eP	P	06 25 27.8	+0.1
	6.0nm,0.8s						
SUR	Sutherland	19.54	294	P	P	06 25 30.0	+0.3
	0.4nm,0.3s,baz=125,slow=15,SNR=7.8						
SUR				LR	LR	06 30 54.3	
	comp=Z,131nm,20.5s,baz=130,slow=30						
SUR	Sutherland	19.54	294	eP	P	06 25 29.7	0.0
	32nm,1.3s						
LBTB	Lobatse	22.06	317	P	P	06 25 57.4	+0.5
	3.5nm,0.8s,baz=163,slow=10,SNR=5.0						
LBTB				LR	LR	06 33 16.7	
	comp=Z,173nm,18.1s,baz=145,slow=33						
LBTB	Lobatse	22.06	317	eP	P	06 25 56.9	-0.1
	8.8nm,1.1s						
MATP	Matopo	24.78	329	P	P	06 26 24.2	+0.3
	3.7nm,0.8s,baz=151,slow=8.1,SNR=7.1						
MATP				LR	LR	06 34 38.7	
	comp=Z,128nm,20.6s,baz=118,slow=33						
MAW	Mawson	27.54	163	LR	LR	06 34 41.5	
	comp=Z,83nm,21.9s,baz=310,slow=30						
LSZ	Lusaka	29.63	332	LR	LR	06 37 49.5	
	comp=Z,71nm,18.2s,baz=134,slow=34						
TSUM	Tsumeb	31.06	311	LR	LR	06 38 41.0	
	comp=Z,95nm,20.2s,baz=152,slow=34						
SNAA	Sanae	36.38	202	P	P	06 28 05.9	+0.1
SNAA	Sanae	36.38	202	P	P	06 28 05.7	-0.2
	1.5nm,0.8s,baz=100,slow=7.7,SNR=7.7						
SNAA				LR	LR	06 41 47.8	
	comp=Z,66nm,18.5s,baz=40,slow=34						
SNAA	Sanae	36.38	202	eP	P	06 28 05.5	-0.3
	5.5nm,1.3s						
VNA2	Neumayer--Watz	37.38	204	P	P	06 28 15.2	+0.9
	baz=59,slow=8.4						
VNA3	Neumayer Olymp	38.19	204	P	P	06 28 21.7	+0.5
QSPA	South Pole Qui	47.67	180	eP	P	06 29 37.6	-0.5
	5.5nm,1.0s						
VNDA	Vanda	54.74	167	LR	LR	06 51 35.2	
	comp=Z,50nm,19.3s,baz=170,slow=34						
VNDA	Vanda	54.74	167	eP	P	06 30 30.7	-0.1
H01W2	Cape Leeuwin H	55.30	108	T	T	07 30 35.0	
	baz=239,slow=75,SNR=384						
H01W3	Cape Leeuwin H	55.31	108	T	T	07 30 35.2	
	baz=239,slow=75,SNR=418						
H01W1	Cape Leeuwin H	55.32	108	T	T	07 30 36.2	
	baz=239,slow=75,SNR=404						
DBIC	Dimbokro	64.85	307	LR	LR	06 58 50.5	
	comp=Z,38nm,18.1s,baz=128,slow=35						
TOA0	Torodi Ar. Sit	66.58	317	eP	P	06 31 49.3	-3.0
	4.7nm,1.0s						
TORD	Torodi Ar. Bea	66.58	317	P	P	06 31 53.5	+1.2
	1.1nm,0.7s,baz=146,slow=6.1,SNR=6.3						
TOA1	Torodi Ar. Sit	66.59	317	eP	P	06 31 53.5	+1.2
FITZ	Fitzroy Crossi	73.44	99	eP	P	06 32 32.3	-2.2
	1.6nm,1.0s						
STKA	Stephens Creek	75.62	120	P	P	06 32 46.7	-0.3
	1.6nm,0.8s,baz=174,slow=9.2,SNR=3.7						
STKA	Stephens Creek	75.62	120	eP	P	06 32 48.8	+1.8
	1.7nm,1.5s						
ASAR	Alice Springs	75.79	109	P	P	06 32 48.0	-0.1
	1.7nm,1.1s,baz=211,slow=5.0,SNR=6.2						
AS31	Alice Springs	75.79	109	eP	P	06 32 48.0	-0.1
PLCA	Paso Flores	77.10	226	LR	LR	07 04 32.4	
	comp=Z,109nm,18.1s,baz=220,slow=34						
WR1	Warramunga Arr	78.52	106	eP	P	06 33 04.1	+0.6
WRA	Warramunga Arr	78.52	106	P	P	06 33 04.1	+0.6
	1.9nm,0.8s,baz=213,slow=6.0,SNR=4.7						
KEST	Kesra	83.39	334	LR	LR	07 13 26.0	
	comp=Z,48nm,18.1s,baz=244,slow=38						
LPAZ	La Paz	93.19	245	LR	LR	07 13 40.5	
	comp=Z,39nm,18.7s,baz=146,slow=34						
TXAR	Lajitas Array	149.40	256	PKPbc	PKiKP	06 40 51.6	-0.7
	1.0nm,0.8s,baz=144,slow=4.5,SNR=9.7						

IDC 17 06:27:29.1±0.9, 57°.80S×25°.24W, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.8/25, mbtmp4.0/6, ML4.0/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/18, Error ellipse: s-maj=43.2km s-min=23.8km az=71.0
ISCJB 17 06:27:32.9±0.5, 57°.79S±0°.08×25°.4W±0°.2, h40km, mb4.2/12, Error ellipse: s-maj=17.8km s-min=8.2km az=150.8
NEIC 17 06:27:34.0±1.5, 57°.87S×25°.20W, h35km, mb4.2/10, Error ellipse: s-maj=23.6km s-min=9.7km az=115.0

ISC 17 06:27:34.4±0.6, 57°.86S±0°.10×25°.1W±0°.1, h40km, n37, σ1§52/32, mb4.2/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.68	158	P	Pn	06 31 00.8	+1.9
VNA3	Neumayer Olymp	14.89	160	P	Pn	06 31 03.2	+1.4
VNA2	Neumayer--Watz	15.07	157	P	Pn	06 31 05.9	+1.8
	baz=320,slow=14						
SNAA	Sanae	16.61	155	P	P	06 31 26.9	+0.9
SNAA	Sanae	16.61	155	Pn	P	06 31 26.3	+0.3
	0.6nm,0.3s,baz=324,slow=16,SNR=24						
SNAA				Sn	Sn	06 34 21.6	-5.5
	0.1nm,0.3s,baz=304,slow=18,SNR=3.8						
SNAA	Sanae	16.61	155	ePn	P	06 31 26.5	+0.5
	6.5nm,1.4s						
PMSA	Palmer Station	19.65	233	LR	LR	06 37 47.4	
	comp=Z,210nm,19.4s,baz=11,slow=32						
QSPA	South Pole Qui	32.38	180	eP	P	06 34 00.1	+0.2
	7.5nm,1.4s						
PLCA	Paso Flores	33.46	281	eP	P	06 34 08.8	-0.7
VNDA	Vanda	44.81	182	P	P	06 35 45.0	+1.5
	1.1nm,0.8s,baz=135,slow=6.1,SNR=5.6						
VNDA	Vanda	44.81	182	eP	P	06 35 44.3	+0.8
BDFB	Brasilia	45.51	328	P	P	06 35 51.1	+1.2
	1.4nm,0.5s,baz=167,slow=4.8,SNR=3.6						
BDFB	Brasilia	45.51	328	eP	P	06 35 50.4	+0.5
	2.3nm,0.8s						
BDFB				eP	P	06 35 51.1	+1.2
LVC	Limon Verde	47.20	299	eP	P	06 36 01.1	-2.3
	2.6nm,0.9s						
PB10	IPOC Station P	47.20	297	eP	P	06 36 01.6	-1.4
	18nm,1.0s						
PB01	IPOC Station P	48.82	300	eP	P	06 36 13.2	-2.4
	5.5nm,1.2s						
H10S2	ASCENSION HYDR	49.45	14	T	T	07 30 56.2	
	baz=188,slow=75,SNR=8.5						
H10S3	ASCENSION HYDR	49.46	14	T	T	07 30 56.2	
	baz=188,slow=75,SNR=10						
H10S1	ASCENSION HYDR	49.47	14	T	T	07 30 57.6	
	baz=188,slow=75,SNR=12						
TSUM	Tsumeb	49.63	57	eP	P	06 36 20.2	-1.7
	3.1nm,1.0s						
GO01	Chusmiza	49.87	301	eP	P	06 36 23.8	-0.3
	1.0nm,0.8s						
H10N1	ASCENSION HYDR	50.57	14	T	T	07 32 21.1	
	baz=188						
H10N3	ASCENSION HYDR	50.57	14	T	T	07 32 20.1	
	baz=188,slow=74						
H10N2	ASCENSION HYDR	50.59	14	T	T	07 32 21.0	
	baz=188,slow=74						
LPAZ	La Paz	52.35	304	P	P	06 36 41.9	-1.0
	0.6nm,0.5s,baz=108,slow=5.9,SNR=5.8						
LPAZ	La Paz	52.35	304	eP	P	06 36 41.4	-1.6
	1.5nm,1.0s						
TOA0	Torodi Ar. Sit	74.11	27	eP	P	06 39 06.7	+0.5
	7.5nm,1.4s						
TORD	Torodi Ar. Bea	74.11	27	P	P	06 39 07.1	+0.9
	1.5nm,0.8s,baz=203,slow=5.7,SNR=9.4						
TOA1	Torodi Ar. Sit	74.11	27	eP	P	06 39 07.1	+0.9
ASAR	Alice Springs	96.90	161	P	P	06 41 01.3	0.0
	0.3nm,0.5s,baz=174,slow=3.5,SNR=4.6						
AS31	Alice Springs	96.90	161	eP	P	06 41 01.3	-0.1
YKA	Yellowknife Ar	138.28	316	PKP	PKPdf	06 46 54.0	+0.5
	0.4nm,0.4s,baz=132,slow=2.8,SNR=6.5						
YKB5	Yellowknife Ar	138.28	316	ePKPdf	PKPdf	06 46 54.0	+0.5
SONA0	Songino Array	149.67	88	ePKPbc	PKPbc	06 47 18.8	0.0
SONM	Songino Array	149.67	88	PKPbc	PKPbc	06 47 18.8	0.0
	1.0nm,0.5s,baz=196,slow=3.8,SNR=4.2						
ILAR	Eielson Array	152.17	309	PKPbc	PKiKP	06 47 24.1	0.0
	4.1nm,0.9s,baz=134,slow=2.1,SNR=31						
ILB	Eielson Array	152.17	309	ePKPbc	PKiKP	06 47 24.2	0.0

IDC 17 06:36:25.8±0.7, 10°.09N×126°.61E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.8/53, mbtmp4.0/11, MS2.5/1, Ms1 2.5/1, ms1mx2.2/38, Error ellipse: s-maj=55.9km s-min=15.6km az=71.0
ISCJB 17 06:36:26.9±0.4, 10°.25N±0°.04×127°.01E±0°.04, h20km, mb4.2/21, Error ellipse: s-maj=6.3km s-min=5.8km az=20.9
NEIC 17 06:36:27.0±1.8, 10°.01N×126°.55E, h10km±1km, mb4.6/10, Error ellipse: s-maj=23.3km s-min=15.6km az=92.0
MAN 17 06:36:29.1, 10°.34N×126°.97E, h34km, mb4.6, ML3.4, MS3.3

ISC 17 06:36:29.1±0.5, 10°.32N±0°.05×127°.00E±0°.06, h20km, n42, σ1§51/49, mb4.2/21, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.58	250	⇓iP	Pb	06 37 01.2	+3.6
SCPH				i S	Sb	06 37 18.7	+1.6
BUTP	Butuan	1.91	226	eP	Pn	06 36 59.4	-1.1
BUTP				eS	Sn	06 37 21.9	-2.1
MSLP	Maasin	2.11	265	eP	Pn	06 37 02.3	-1.0
MSLP				eS	Sn	06 37 27.9	-1.1
PLP	Palo	2.16	293	⇓iP	Pn	06 37 03.6	-0.2
PLP				i S	Sn	06 37 27.9	-2.2
LLP	Lapu-Lapu	2.98	270	eP	Pn	06 37 15.5	+0.2
LLP				eS	Sn	06 37 46.7	-3.8
BUKP	Musuan	3.09	218	eP	Pn	06 37 17.2	+0.5
BUKP				eS	Sn	06 37 52.6	-0.5
CNP	Catarman	3.16	314	eP	Pn	06 37 17.2	-0.5
PVCP	Virac	4.29	320	eP	Pn	06 37 32.2	-1.0
PVCP				eS	Sn	06 38 19.5	-3.2
GUMO	Guam	17.78	78	LR	LR	06 47 43.2	
	comp=Z,13nm,18.5s,baz=109,slow=37						
FITZ	Fitzroy Crossi	28.27	183	eP	P	06 42 15.8	-5.3
	7.6nm,1.4s						
WRA	Warramunga Arr	30.93	166	P	P	06 42 42.5	-2.3
	0.7nm,0.5s,baz=351,slow=10,SNR=2.9						
WR1	Warramunga Arr	30.93	166	eP	P	06 42 42.5	-2.3
PSAC1	Pilbara Seismi	32.43	193	eP	P	06 42 53.6	-4.4
	8.4nm,1.0s						
PSAD3	Pilbara Seismi	32.54	193	eP	P	06 42 54.3	-4.7
	14nm,1.4s						
AS31	Alice Springs	34.44	169	eP	P	06 43 13.5	-2.0
AS31				ePcP	PcP	06 45 50.9	0.0
ASAR	Alice Springs	34.44	169	P	P	06 43 13.5	-2.0
	0.3nm,0.5s,baz=350,slow=6.5,SNR=6.2						
ASAR				PcP	PcP	06 45 50.9	0.0
	0.3nm,0.5s,baz=356,slow=2.8,SNR=5.1						
KLR	Kul'dur	38.99	5	P	P	06 43 56.0	+2.0
	0.8nm,0.5s,baz=306,slow=5.1,SNR=4.3						
FORT	Forrest	40.87	179	eP	P	06 44 06.6	-3.2
	27nm,1.4s						
BBOO	Buckleboo	43.75	169	eP	P	06 44 32.5	-0.8
	7.8nm,0.7s						
STKA	Stephens Creek	44.22	162	P	P	06 44 36.2	-0.8
	1.6nm,0.5s,baz=342,slow=7.0,SNR=6.0						
MA2	Magadan	52.30	15	eP	P	06 45 41.4	+2.4
	10.0nm,1.1s						
MK32	Makanchi Array	52.43	322	eP	P	06 45 40.4	+0.1
MK32				ePcP	PcP	06 46 50.8	-0.1
MKAR	Makanchi Array	52.43	322	P	P	06 45 40.4	+0.1
	1.3nm,0.7s,baz=111,slow=8.4,SNR=7.4						
MKAR				PcP	PcP	06 46 50.8	-0.1
	0.7nm,0.5s,baz=106,slow=4.7,SNR=4.9						
ZALV	Zalesovo Beam	54.93	331	P	P	06 45 58.8	+0.3
	1.6nm,0.6s,baz=117,slow=7.4,SNR=6.0						
ZAA1	Zalesovo Array	54.93	331	eP	P	06 45 58.8	+0.3
KURK	Kurchatov	56.44	325	eP	P	06 46 09.4	+0.2
	5.0nm,1.1s						
BRVK	Borovoye	62.11	325	eP	P	06 46 49.2	+0.7
	3.3nm,0.9s						
ARU	Arti	69.58	327	eP	P	06 47 36.5	-0.1
	6.6nm,0.6s						
ARA0	ARCESS Array S	84.40	340	eP	P	06 49 00.1	+0.3
ARCES	ARCESS Array B	84.40	340	P	P	06 49 00.1	+0.3
	1.9nm,0.7s,baz=83,slow=6.8,SNR=6.8						
BR101	Keskin Array S	86.06	309	eP	P	06 49 07.4	-1.5
BRTR	Keskin Array B	86.06	309	P	P	06 49 07.4	-1.5
	1.2nm,0.8s,baz=96,slow=5.0,SNR=5.5						
FIA0	FINESS Array S	86.19	332	eP	P	06 49 08.4	-0.5
FINES	FINESS Array B	86.19	332	P	P	06 49 08.4	-0.5
	2.1nm,0.9s,baz=46,slow=4.0,SNR=5.0						
AKASG	Malin Array Be	86.98	321	P	P	06 49 12.7	-0.3
	0.5nm,0.4s,baz=59,slow=4.8,SNR=3.6						
VNDA	Vanda	89.89	173	P	P	06 49 26.1	+0.1
	1.6nm,1.0s,baz=313,slow=7.5,SNR=5.6						
VNDA	Vanda	89.89	173	eP	P	06 49 26.0	-0.1
YKA	Yellowknife Ar	93.42	24	P	P	06 49 44.1	+1.3
	0.3nm,0.6s,baz=304,slow=4.7,SNR=3.6						
YKB5	Yellowknife Ar	93.42	24	eP	P	06 49 44.1	+1.3
TOA1	Torodi Ar. Sit	120.92	292	ePKPdf	PKPdf	06 55 20.4	-0.7
TORD	Torodi Ar. Bea	120.92	292	PKP	PKPdf	06 55 20.4	-0.7
	0.2nm,0.3s,baz=78,slow=1.6,SNR=4.0						
PLCA	Paso Flores	145.96	156	PKPbc	PKPdf	06 56 08.2	+1.2
	2.0nm,0.7s,baz=298,slow=5.3,SNR=4.7						

IDC 17 06:37:44.0±7.1, 6°.55S×146°.78E, h138km±77km, mb2.9/1, mb1 3.3/3, mb1mx3.0/38, mbtmp3.6/3, Error ellipse: s-maj=108.3km s-min=50.2km az=124.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.86	172	P	Pn	06 38 28.7	-0.4
	6.6nm,0.3s,baz=51,slow=5.0,SNR=10						
PMG				S	Sn	06 39 04.7	+0.7
	23nm,0.3s,baz=177,slow=21,SNR=19						
WRA	Warramunga Arr

After TUL.
NEIC Felt [III] at Harrah and [II] at McLoud. Also felt at Choctaw, Edmond, Hominy, Oklahoma City, Shawnee and Stroud.
ISC 17 06:39:00.4±1.1,35°.47N±0°.03×97°.11W±0.02,h3km±10km, n52,σ1§31/89,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK001	**Jones High Sch**	**0.17**	**303**	*e*Pg	**Pg**	**06 39 05.1**	**+1.3**
OK001				*e*Sg	**Sg**	06 39 06.9	+0.8
OK005	**Luther M Schoo**	**0.20**	**341**	*e*Pg	**Pg**	06 39 05.7	+1.4
OK005				*e*Sg	**Sg**	06 39 07.8	+0.9
OK009	**Oakdale Elemen**	**0.28**	**294**	*e*Pg	**Pg**	06 39 07.1	+1.3
OK009				*e*Sg	**Sg**	06 39 10.0	+0.5
TUL1	**Leonard**	**1.16**	**67**	*e*Pg	**Pb**	06 39 22.3	-0.8
TUL1				*e*Sg	**Sg**	06 39 38.7	+0.9
TUL1	**Leonard** baz=248	**1.16**	**67**	P	**Pb**	06 39 22.6	-0.5
TUL1	baz=248			S	**Sb**	06 39 38.5	0.0
WMOK	**Wichita Mounta**	**1.55**	**243**	*e*Pn	**Pn**	06 39 28.9	+0.1
WMOK				*e*Sn	**Sb**	06 39 49.8	0.0
WMOK	**Wichita Mounta** baz=62	**1.55**	**243**	P	**Pn**	06 39 28.8	-0.1
WMOK	baz=62			S	**Sb**	06 39 49.8	0.0
X37A	**Clayton**	**1.68**	**121**	*e*Pn	**Pb**	06 39 31.6	-0.3
X37A				*e*Sn	**Sg**	06 39 54.1	-0.1
U32A	**Winter Ranch,**	**1.78**	**301**	*e*Pn	**Pb**	06 39 33.1	-0.6
U32A				*e*Sn	**Sg**	06 39 57.5	-0.3
HHAR	**Hobbs**	**2.70**	**72**	*e*Pn	**Pn**	06 39 45.6	+0.9
HHAR				*e*Sn	**Sb**	06 40 24.7	+1.8
W39A	**Magazine**	**2.73**	**95**	*e*Pn	**Pn**	06 39 46.0	+0.9
W39A				*e*Sn	**Sg**	06 40 27.8	-0.5
W39A	**Magazine** baz=277	**2.73**	**95**	P	**Pn**	06 39 46.2	+1.0
W39A	baz=277			S	**Sn**	06 40 19.0	+0.4
MIAR	**Mount Ida**	**3.04**	**107**	*e*Pn	**Pn**	06 39 50.8	+1.4
MIAR				*e*Sg	**Sg**	06 40 37.9	-0.3
MIAR	**Mount Ida** baz=289	**3.04**	**107**	P	**Pn**	06 39 51.0	+1.6
MIAR	baz=289			S	**Sn**	06 40 27.7	+1.4
WHTX	**Lake Whitney,**	**3.48**	**185**	*e*Pn	**Pn**	06 39 56.5	+1.2
WHTX				*e*Sg	**Sg**	06 40 49.7	-2.4
WHTX	**Lake Whitney,** baz=4.6	**3.48**	**185**	P	**Pn**	06 39 56.7	+1.3
WHTX	baz=4.6			S	**Sn**	06 40 38.2	+1.2
ABTX	**Abilene, Hawle**	**3.53**	**217**	*e*Pn	**Pn**	06 39 57.1	+1.0
ABTX				*e*Sg	**Sg**	06 40 53.7	-0.1
ABTX	**Abilene, Hawle** baz=36	**3.53**	**217**	P	**Pn**	06 39 56.4	+0.3
ABTX	baz=36			S	**Sn**	06 40 39.5	+1.1
U40A	**Yellville** baz=257	**3.57**	**74**	P	**Pn**	06 39 57.2	+0.6
U40A	baz=257			S	**Sn**	06 40 40.0	+0.7
X40A	**Basin Creek Fa**	**3.65**	**104**	*e*Pn	**Pn**	06 39 58.1	+0.4
X40A				*e*Sg	**Sg**	06 40 57.0	-0.5
X40A	**Basin Creek Fa** baz=287	**3.65**	**104**	P	**Pn**	06 39 58.6	+1.0
KSU1	**Kansas State U**	**3.65**	**6**	*e*Sg	**Sg**	06 40 56.7	-0.9
WLAR	**White Oak Lake**	**3.75**	**117**	*e*Pn	**Pn**	06 39 58.1	-1.0
WLAR				*e*Sg	**Sg**	06 40 59.2	-1.6
AMTX	**Amarillo**	**3.79**	**262**	*e*Pn	**Pn**	06 39 59.7	0.0
AMTX				*e*Sg	**Sg**	06 41 00.2	-1.9
WHAR	**Wooly Hollow**	**3.94**	**91**	*e*Pn	**Pn**	06 40 02.6	+0.9
WHAR				*e*Sg	**Sg**	06 41 05.3	-1.9
CBKS	**Cedar Bluff**	**3.94**	**329**	*e*Pn	**Pn**	06 40 02.6	+0.7
CBKS				*e*Sg	**Sg**	06 41 05.3	-1.8
UALR	**University of**	**3.97**	**99**	*e*Pn	**Pn**	06 40 03.8	+1.7
UALR				*e*Sg	**Sg**	06 41 06.0	-1.9
W41B	**Gary Mavity, V**	**3.99**	**93**	*e*Pn	**Pn**	06 40 03.5	+1.2
W41B				*e*Sg	**Sg**	06 41 05.5	-3.0
Z41A	**Richland Creek**	**4.19**	**121**	*e*Pn	**Pn**	06 40 02.9	-2.2
Z41A				*e*Sg	**Sg**	06 41 14.7	-0.3
CCAR	**Cane Creek**	**4.66**	**108**	*e*Pn	**Pn**	06 40 12.0	+0.4
MSTX	**Muleshoe**	**4.90**	**254**	*e*Pn	**Pn**	06 40 14.3	-0.7
MSTX				*e*Sg	**Sg**	06 41 37.2	-0.5
CCM	**Cathedral Cave**	**5.37**	**60**	*e*Pn	**Pn**	06 40 22.2	+0.9
CCM				*e*Sg	**Sg**	06 41 51.3	-1.6
JCT	**Junction City**	**5.46**	**205**	*e*Pn	**Pn**	06 40 22.9	+0.2
PBMO	**Poplar Bluff**	**5.56**	**74**	*e*Pn	**Pn**	06 40 23.9	-0.1
PBMO				*e*Sg	**Sg**	06 41 54.3	-4.8
KSCO	**Kaye Shedlock'**	**5.65**	**310**	*e*Pn	**Pn**	06 40 24.9	-0.4
BGNE	**Belgrade**	**5.99**	**352**	*e*Pn	**Pn**	06 40 29.6	-0.3
T25A	**Trinidad**	**6.13**	**288**	*e*Pn	**Pn**	06 40 31.2	-0.8
T25A				*e*Sg	**Sg**	06 42 14.1	-3.1
OXF	**Oxford**	**6.39**	**96**	*e*Pn	**Pn**	06 40 36.3	+0.9
OXF				*e*Sg	**Sg**	06 42 26.9	+1.2
OGNE	**Ogallala**	**6.70**	**326**	*e*Pn	**Pn**	06 40 41.0	+1.2
SIUC	**Southern Illin**	**6.74**	**68**	*e*Pn	**Pn**	06 40 40.6	+0.5
SIUC				*e*Sg	**Sg**	06 42 32.7	-3.9
T45A	**Paducah**	**7.01**	**75**	*e*Pn	**Pn**	06 40 44.0	+0.1
SCIA	**State Center**	**7.12**	**24**	*e*Pn	**Pn**	06 40 46.3	+1.0
SCIA				*e*Sg	**Sg**	06 42 48.2	-0.6
SDCO	**Great Sand Dun**	**7.12**	**291**	*e*Pn	**Pn**	06 40 47.1	+1.4
PLAL	**Pickwick Lake**	**7.41**	**91**	*e*Pn	**Pn**	06 40 48.9	-0.5
PLAL				*e*Sg	**Sg**	06 42 58.3	0.0
WVT	**Waverly**	**7.57**	**82**	*e*Pn	**Pn**	06 40 50.5	-1.1
WVT				*e*Sg	**Sg**	06 43 03.3	-0.1
ANMO	**Albuquerque**	**7.67**	**269**	*e*Pn	**Pn**	06 40 52.6	-0.6
MNTX	**Cornudas Mount**	**7.86**	**244**	*e*Pn	**Pn**	06 40 56.0	+0.4
MNTX				*e*Sg	**Sg**	06 43 10.9	-1.8
HDIL	**Hopedale**	**7.99**	**48**	*e*Pn	**Pn**	06 40 56.9	-0.5
L40A	**Anamosa**	**8.03**	**33**	*e*Pn	**Pn**	06 40 57.8	-0.1
ECSD	**EROS Data Cent**	**8.27**	**3**	*e*Pn	**Pn**	06 40 59.8	-1.3
CCUT	**Cedar City**	**13.24**	**284**	*e*Pn	**Pn**	06 42 08.9	-0.6
PSUT	**Pine Spring**	**13.73**	**288**	*e*Pn	**Pn**	06 42 14.1	-2.0

*IDC **17** 06:46:41.2±1.3,34°.22N×25°.10E,h0km,mb3.9/3, mb1 3.7/7,mb1mx3.4/38,mbtmp3.6/7,ML3.6/3,Error ellipse: s-maj=24.1km s-min=19.0km az=96.0*
*ISCJB **17** 06:46:42.3±1.2,34°.15N±0°.05×25°.10E±0°.05,h16km±8km, mb3.8/3,Error ellipse: s-maj=9.3km s-min=6.3km az=20.9*
*ATH **17** 06:46:45.6,34°.40N×25°.07E,h29km±3km,ML3.1/2,Error ellipse: s-maj=5.5km s-min=2.6km az=169.0*
*THE **17** 06:46:45.6,34°.38N×25°.06E,h0km,ML3.0/5,Error ellipse: s-maj=1.2km s-min=0.4km az=168.0*
ISC 17 06:46:44.7±1.0,34°.27N±0°.08×25°.09E±0°.04,h22km±6km, n25,σ1§14/38,mb4.0/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**343**	P	**Pb**	**06 46 59.1**	**-0.4**
SIVA				S	**Sb**	06 47 09.4	-0.3
SIVA	**Sivas**	**0.78**	**343**	P	**Pb**	**06 46 59.0**	**-0.6**
SIVA				S	**Sb**	06 47 09.3	-0.3
SIVA	comp=E,6314μm,0.8s			AML	AML	06 47 21.9	
SIVA	comp=N,5582μm,0.6s			AML	AML	06 47 26.2	
TMBK	**Timbaki Herakl**	**0.84**	**341**	P	**Pb**	06 47 00.1	-0.5
TMBK				S	**Sn**	06 47 11.7	-1.2
LAST	**Lasithi**	**0.94**	**20**	P	**Pb**	06 47 02.0	-0.4
LAST				S	**Sn**	06 47 15.4	-0.1
LAST	**Lasithi**	**0.94**	**20**	P	**Pb**	06 47 01.7	-0.7
GVD	**Gavdhos**	**1.00**	**305**	P	**Pb**	06 47 03.6	+0.2
GVD				S	**Sn**	06 47 17.5	+0.6
GVD	**Gavdhos**	**1.00**	**305**	P	**Pb**	06 47 03.6	+0.2
GVD				S	**Sn**	06 47 15.8	-1.2
IDI	**Anoyia** comp=N,21nm,0.3s,baz=344,slow=20,SNR=86	**1.03**	**351**	Pn	**Pn**	06 47 03.1	-0.7
IDI	comp=N,36nm,0.3s,baz=250,slow=15,SNR=14			Sn	**Sn**	06 47 21.4	+3.8
IDI	comp=N,110nm,19.9s,baz=80,slow=60			LR	LR	06 47 46.2	
KSTL	**Kastelli Herak**	**1.03**	**359**	P	**Pn**	06 47 02.5	-1.3
KSTL				S	**Sb**	06 47 15.5	-1.4
STIA	**Sitia Lasithi**	**1.24**	**41**	P	**Pb**	06 47 07.9	+0.5
STIA				S	**Sb**	06 47 25.2	+2.3
VAM	**Vamos**	**1.35**	**327**	P	**Pb**	06 47 08.8	-0.5
VAM				S	**Sb**	06 47 27.0	+0.9
VAM	**Vamos**	**1.35**	**327**	P	**Pb**	06 47 08.9	-0.3
VAM				S	**Sb**	06 47 25.1	-1.0
VAM	comp=E,1139μm,0.7s			AML	AML	06 47 32.5	
VAM	comp=N,741μm,0.5s			AML	AML	06 47 38.8	
IMMV	**Iera Moni Meta**	**1.50**	**323**	P	**Pb**	**06 47 11.3**	**-0.5**
IMMV				S	**Sb**	06 47 31.0	+0.7
KARP	**Karpathos**	**2.12**	**53**	P	**Pb**	06 47 21.5	-1.0
ANKY	**Antikythira Is**	**2.17**	**318**	P	**Pn**	06 47 20.5	+1.1
KYTH	**Kithira**	**2.60**	**320**	P	**Pn**	06 47 26.7	+1.3
KYTH				S	**Sn**	06 47 57.9	+1.6
VLI	**Veliai**	**3.01**	**325**	P	**Pn**	06 47 32.1	+1.1
DID	**Didima**	**3.56**	**336**	P	**Pn**	06 47 38.9	+0.2
BRTR	**Keskin Array B** baz=225,slow=11,SNR=2.4	**8.73**	**49**	Pn	**Pn**	06 48 51.9	+2.1
EIL	**Elat** comp=N,0.6nm,0.3s,baz=180,slow=1.0,SNR=5.4	**9.55**	**116**	Pn	**Pn**	06 49 00.7	-0.1
AKASG	**Malin Array Be** comp=N,0.5nm,0.3s,baz=198,slow=9.9,SNR=5.3	**16.69**	**9**	Pn	**Pn**	06 50 37.0	-0.1
GERES	**GERESS Array B** comp=N,0.1nm,0.3s,baz=141,slow=12,SNR=5.5	**16.84**	**333**	Pn	**P**	06 50 40.9	-0.1
TORD	**Torodi Ar. Bea** comp=N,1.0nm,0.4s,baz=34,slow=8.3,SNR=17	**29.88**	**231**	P	**P**	06 52 50.5	-0.4
MKAR	**Makanchi Array** comp=N,0.3nm,0.4s,baz=266,slow=7.9,SNR=5.2	**44.31**	**56**	P	**P**	06 54 52.9	0.0
ZALV	**Zalesovo Beam** comp=N,1.0nm,0.4s,baz=269,slow=10.0,SNR=3.1	**45.66**	**46**	P	**P**	06 55 02.6	-0.8

*TAP **17** 07:13:45.1,22°.41N×122°.06E,h41km±1km,ML3.0,D*
*JMA **17** 07:13:46.8±0.2,22°.61N×122°.02E,h42km,M2.7*
ISC 17 07:13:38.5±1.3,22°.43N±0°.04×122°.29E±0°.03,h7km±10km, n64,σ1§26/81,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu** baz=238	**0.79**	**241**	*i* P	**Pn**	**07 13 56.6**	**+0.5**
CHKT	**Chengkung** baz=324	**1.09**	**308**	P	**Pb**	**07 14 00.8**	**+1.1**
CHKT	baz=324			*e*S	**Sg**	07 14 11.3	-2.2
TTN	**Taitung** baz=298	**1.11**	**287**	*e*P	**Pg**	07 14 00.2	+0.4
TTN	baz=298			*e*S	**Sg**	07 14 13.2	-1.0
TWGBT	**Beinan** baz=299	**1.19**	**289**	*e*P	**Pb**	07 14 03.0	+1.6
TWGBT	baz=299			*e*S	**Sg**	07 14 14.7	-2.0
TWG	**Pinlang** baz=299	**1.19**	**289**	P	**Pb**	07 14 03.0	+1.4
TWG	baz=299			S	**Sg**	07 14 15.1	-1.9
ECL	**Taimali** baz=281	**1.25**	**278**	P	**Pg**	07 14 03.6	+1.0
ECL	baz=281			S	**Sg**	07 14 16.1	-2.6
TWF1	**Yuli** baz=327	**1.30**	**315**	*i* P	**Pg**	07 14 04.6	+1.1
TWF1	baz=327			S	**Sb**	07 14 19.6	-0.7
HGSD	**Ruisui** baz=331	**1.33**	**323**	*e*P	**Pb**	07 14 04.7	+0.8
YULB	**Yu-li** baz=324	**1.33**	**316**	P	**Pg**	07 14 05.1	+1.1
YULB	baz=324			*e*S	**Sb**	07 14 19.6	-1.5
EAST	**Anshuo** baz=277	**1.34**	**268**	*i* P	**Pg**	07 14 04.7	+0.5
TSEB	**Hengchuen, Pin** baz=257	**1.39**	**248**	*e*S	**Sb**	07 14 21.2	-1.8
EHY	**Hungye** baz=333	**1.40**	**320**	P	**Pg**	07 14 06.4	+1.0
EHY	baz=333			*e*S	**Sn**	07 14 21.8	-1.5
ELDTW	**Lidau** baz=309	**1.40**	**303**	*e*P	**Pn**	07 14 05.5	+0.9
TWKBT	**Hengchun** baz=255	**1.46**	**251**	*e*P	**Pb**	07 14 06.3	+0.3
TWK1	**Hengchun** baz=256	**1.46**	**251**	*e*P	**Pg**	07 14 08.0	+1.4
EGFH	**Guangfu** baz=340	**1.47**	**327**	*e*P	**Pg**	07 14 07.5	+0.7
HEN	**Hengchun** baz=258	**1.50**	**254**	*e*S	**Sn**	07 14 23.1	-2.7
MASBT	**Mashibuluo** baz=274	**1.55**	**277**	*e*P	**Pb**	07 14 08.0	+0.5
SCZT	**Fangliau** baz=259	**1.55**	**268**	*e*P	**Pg**	07 14 09.0	+0.7
SSD	**Sandimen** baz=285	**1.57**	**282**	*e*P	**Pb**	07 14 08.8	+0.9
ESL	**Shilin** baz=344	**1.59**	**330**	P	**Pb**	07 14 09.5	+1.2
ESL	baz=344			S	**Sn**	07 14 26.4	-1.6
STYT	**Tauyuan** baz=309	**1.59**	**298**	P	**Pb**	07 14 09.2	+0.8
SSPT	**Xinbi** baz=278	**1.60**	**272**	*e*P	**Pg**	07 14 11.7	+2.5
ENLB	**Shoufeng** baz=344	**1.60**	**337**	*e*P	**Pb**	07 14 09.3	+0.9
SLGT	**Liugui** baz=300	**1.62**	**291**	*e*P	**Pg**	07 14 10.7	+1.0
VWDT	**VWDT** baz=334	**1.69**	**321**	*e*P	**Pb**	07 14 11.4	+1.4
SGST	**Jiashian** baz=297	**1.71**	**293**	*e*S	**Sn**	07 14 30.9	-0.1
ALS	**Alishan** baz=321	**1.74**	**308**	P	**Pb**	07 14 12.5	+1.4
TPUB	**Ta-pu** baz=311	**1.76**	**300**	*e*P	**Pn**	07 14 10.4	+0.8
WLCH	**Liuqiu** baz=257	**1.77**	**268**	*e*P	**Pg**	07 14 15.6	+3.0
CHN1	**Nanshi** baz=305	**1.79**	**295**	*e*P	**Pg**	07 14 14.3	+1.3
CHN4	**Tsaushan** baz=311	**1.82**	**301**	P	**Pg**	07 14 13.9	+0.5
SSLB	**Suanglung** baz=329	**1.83**	**318**	*e*P	**Pb**	07 14 13.4	+1.0
WHYT	**Xinyi Township** baz=323	**1.83**	**314**	*e*P	**Pg**	07 14 14.1	+0.4
OWD	**Renai** baz=340	**1.83**	**326**	P	**Pb**	07 14 13.3	+0.7
OWD	baz=340			*e*S	**Sn**	07 14 32.0	-2.2
SNST	**Tainan City** baz=287	**1.83**	**296**	*e*S	**Sn**	07 14 34.8	+0.8
NACB	**Ninganchiao** baz=352	**1.85**	**340**	*e*P	**Pb**	07 14 13.2	+0.4
TWK	**Hsinying** baz=287	**1.86**	**297**	*e*P	**Pg**	07 14 14.6	+0.3
TWK	baz=287			*e*S	**Sn**	07 14 35.9	+1.1
CHN5	**Tsauling** baz=320	**1.89**	**308**	P	**Pg**	07 14 15.6	+0.8
ETLH	**Xiulin Townshi** baz=343	**1.92**	**337**	*e*P	**Pb**	07 14 14.8	+0.8
CHGB	**Renai** baz=341	**1.92**	**328**	*e*P	**Pb**	07 14 15.1	+0.9
SMLT	**Sun Moon Lake** baz=329	**1.93**	**319**	P	**Pb**	07 14 15.3	+1.1
WHF	**Hehuan Shan** baz=337	**1.95**	**331**	*e*P	**Pb**	07 14 14.9	+0.1
TYC	**Yuchr** baz=328	**1.98**	**318**	*e*P	**Pg**	07 14 16.7	+0.3
WDLH	**Douliu** baz=313	**2.05**	**308**	*e*S	**Sn**	07 14 41.9	+2.7
NANB	**Nanao** baz=351	**2.05**	**346**	*e*P	**Pb**	07 14 17.2	+1.0
ENA	**Nanau** baz=351	**2.05**	**346**	*e*P	**Pb**	07 14 17.1	+0.9
TDCB	**Techi** baz=341	**2.09**	**330**	*e*P	**Pb**	07 14 18.6	+1.6
EOS1	**EOS1** baz=1.0	**2.12**	**356**	*e*P	**Pg**	07 14 19.4	+0.3
YOJ	**Yonaguni jima** baz=22	**2.13**	**18**	*e*S	**Sb**	07 14 44.5	+0.4
YOJ	**Yonaguni jima**	**2.13**	**18**	P	**Pg**	07 14 20.5	+1.1
YOJ				*e*S	**Sg**	07 14 46.3	-0.7
HATJ	**Hateruma jima**	**2.14**	**40**	*e*S	**Sg**	07 14 46.8	-0.4
NNSB	**Datong** baz=342	**2.16**	**337**	*e*P	**Pb**	07 14 17.5	-0.6
WHP	**Taichung City** baz=337	**2.22**	**326**	*e*P	**Pg**	07 14 22.2	+1.1
NDT	**Datong Townshi** baz=347	**2.28**	**342**	*e*P	**Pb**	07 14 19.9	-0.2
IRIF	**Iriomote-Funau**	**2.31**	**35**	P	**Pg**	07 14 23.5	+0.6
IRIF				*e*S	**Sg**	07 14 51.8	-1.1
JKRS	**Kuro-shima**	**2.39**	**41**	P	**Pg**	07 14 25.3	+0.8
JKRS				*e*S	**Sb**	07 14 52.8	+1.0
NWLT	**Wulai** baz=347	**2.45**	**343**	*e*P	**Pb**	07 14 23.9	+1.0
LIOB	**Emei** baz=344	**2.50**	**332**	*e*P	**Pb**	07 14 25.1	+1.2
WDGT	**Dungji** baz=279	**2.57**	**289**	*e*P	**Pb**	07 14 23.9	-1.0
TIPB	**Shuangxi** baz=3.0	**2.57**	**350**	*e*P	**Pb**	07 14 26.3	+1.3
JIJ	**Ishigaki jima**	**2.57**	**41**	P	**Pg**	07 14 27.3	-0.5
JIJ				S	**Sb**	07 14 57.0	+0.2
JISG	**Ishigakijimahi**	**2.84**	**40**	P	**Pg**	07 14 31.0	-1.9
JISG				*e*S	**Sb**	07 15 04.2	-0.3
JTJ	**Tarama**	**3.12**	**45**	P	**Pb**	07 14 35.3	+0.9
JTJ				S	**Sb**	07 15 11.5	-1.2

IDC 17 07:24:03.3±1.3,51°.72N×82°.54E,h0km,mb1 2.4/3, mb1mx2.4/51,mbtmp2.4/3,ML1.0/2,Error ellipse: s-maj=15.1km s-min=11.4km az=142.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=214,slow=14,SNR=4.7	**2.63**	**31**	Pn	**Pn**	07 24 45.9	-1.0
ZALV	0.3nm,0.3s,baz=217,slow=28,SNR=5.3			Lg	Lg	07 25 26.9	
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=69,slow=19,SNR=3.6	**2.75**	**248**	Pn	Pn	07 24 48.0	-0.6
KURBB	0.1nm,0.3s,baz=65,slow=16,SNR=6.4			Pg	Pb	07 24 53.3	0.0
KURBB	0.2nm,0.3s,baz=66,slow=32,SNR=14			Sn	Sn	07 25 21.2	-1.4
KURBB	0.2nm,0.3s,baz=67,slow=26,SNR=14			Lg	Lg	07 25 31.5	
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=358,slow=11,SNR=31	**4.93**	**182**	Pn	Pn	07 25 20.0	+1.4
MKAR	0.1nm,0.3s,baz=8.1,slow=22,SNR=5.4			Lg	Lg	07 26 37.9	
I31KZ	**AKTYUBINSK INF** baz=75,slow=320,SNR=0.4	**15.45**	**275**	*i*		09 00 30.0	

*IDC **17** 07:24:33.7±2.9,36°.28N×71°.01E,h180km±26km,mb3.6/10, mb1 3.6/16,mb1mx3.4/52,mbtmp4.1/16,MS3.1/2, Ms1 3.1/2,ms1mx2.4/34,Error ellipse: s-maj=21.4km s-min=14.6km az=11.0*
*ISCJB **17** 07:24:37.6±0.3,36°.69N±0°.02×70°.97E±0°.05,h200km, mb3.8/14,Error ellipse: s-maj=5.4km s-min=3.2km az=178.6*
*NEIC **17** 07:24:38.9±1.6,36°.66N×71°.07E,h206km±19km,mb4.1/6, Error ellipse: s-maj=31.5km s-min=16.7km az=117.0*
*NNC **17** 07:24:44.2±3.1,37°.13N×71°.09E,h237km±43km,mb3.0, mpv4.0,Error ellipse: s-maj=32.1km s-min=15.8km az=4.0*
ISC 17 07:24:37.7±0.5,36°.67N±0°.05×71°.02E±0°.06,h200km,n60, σ1§51/71,mb3.8/14,6C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.39**	**347**	*e*Pn	**Pn**	**07 25 23.1**	**+2.6**
GAR				*e*Sn	**Sn**	07 25 54.9	+1.0
KBL	**Kabul**	**2.67**	**218**	*e*Pn	**Pn**	07 25 25.4	+1.7
KBL				*e*Sn	**Sn**	07 26 00.2	+0.5
CEP	**Cherat**	**2.94**	**165**	P	**Pn**	07 25 28.3	+1.5
CEP				S	**Sn**	07 26 05.0	-0.1
BTK	**Batken**	**3.38**	**357**	*e*Pn	**Pn**	07 25 35.3	+3.3
BTK				*e*Sn	**Sn**	07 26 16.9	+2.3
CHCP	**Chirah Chowk**	**3.53**	**148**	P	**Pn**	07 25 35.2	+1.5
NIL	**Nilore**	**3.53**	**148**	*e*Pn	**Pn**	07 25 35.2	+1.4
NIL				*e*Sn	**Sn**	07 26 17.4	-0.2
THW	**Thamme Wali**	**3.92**	**171**	P	**Pn**	07 25 39.5	+1.0
ARSB	**Arslanbob**	**4.89**	**18**	*e*Pn	**Pn**	07 25 52.4	+1.6
ARSB				*e*Sn	**Sn**	07 26 48.5	+0.1
SARP	**Sargodha**	**4.93**	**163**	P	**Pn**	07 25 51.5	+0.2
AML	**Almayashu** SNR=44	**5.83**	**20**	P	**Pn**	07 26 04.7	+1.6
UCH	**Uchtor** SNR=44	**6.17**	**25**	P	**Pn**	07 26 08.9	+1.4
KZA	**Kyzart** SNR=26	**6.31**	**30**	P	**Pn**	07 26 10.2	+0.9
EKS2	**Erkin-Say** SNR=14	**6.35**	**19**	P	**Pn**	07 26 11.8	+2.3
KK31	**Karatay Array** 2.5nm,0.3s,baz=179,slow=12,SNR=79	**6.43**	**357**	⇑P	**Pn**	07 26 11.7	+1.2
KK31	21nm,0.6s,baz=176,slow=22,SNR=19			⇓S	**Sn**	07 27 21.4	-2.7
KKAR	**Karatay Array**	**6.43**	**357**	*e*Pn	**Pn**	07 26 11.9	+1.4
KKAR				*e*Sn	**Sn**	07 27 21.9	-2.2
AAK	**Ala-Archa** 4.0nm,0.3s,baz=169,slow=3.5,SNR=14	**6.53**	**23**	P	**Pn**	07 26 13.4	+1.5
AAK	2.8nm,0.3s,baz=142,slow=19,SNR=15			S	**Sn**	07 27 25.5	-1.1
AAK	**Ala-Archa** SNR=10	**6.53**	**23**	P	**Pn**	07 26 13.7	+1.8
AAK	**Ala-Archa**	**6.53**	**23**	*e*Pn	**Pn**	07 26 13.8	+2.0
AAK				*e*Sn	**Sn**	07 27 27.7	+1.1
AAK	**Ala-Archa** 4.5nm,0.3s	**6.53**	**23**	⇓P	**Pn**	07 26 13.6	+1.7
AAK	22nm,0.6s			⇓S	**Sn**	07 27 26.2	-0.4
KBK	**Karagaybulak** SNR=10	**6.70**	**26**	P	**Pn**	07 26 15.6	+1.5
ULHL	**Ulahol** SNR=14	**6.88**	**34**	P	**Pn**	07 26 17.8	+1.4
BOOM	**Boomskoye usch**	**6.94**	**32**	*e*Pn	**Pn**	07 26 18.5	+1.3
BOOM				*e*Sn	**Sn**	07 27 37.5	+1.2
TKM2	**Tokmak 2** SNR=7.4	**7.16**	**28**	P	**Pn**	07 26 21.8	+1.6
TKM2	**Tokmak 2** 15nm,0.6s	**7.16**	**28**	⇑P	**Pn**	07 26 21.6	+1.4
TKM2	11nm,0.8s			⇑S	**Sn**	07 27 39.7	-1.8
PDGK	**Podgornoye** 4.8nm,0.7s	**9.29**	**42**	⇑P	**Pn**	07 26 48.4	+0.6
PDGK	9.4nm,1.0s			⇑S	**Sn**	07 28 28.8	-3.0
GEYT	**Alibeck** 0.4nm,0.3s,baz=116,slow=20,SNR=4.4	**10.36**	**281**	P	**Pn**	07 26 59.6	-1.9
GEYT	0.5nm,0.3s,baz=120,slow=14,SNR=3.0			S	Sn	07 28 50.1	-7.0
MAKZ	**Makanchi**	**13.00**	**35**	*e*Pn	**Pn**	07 27 35.6	+0.5
MK31	**Makanchi Array**	**13.14**	**36**	*e*Pn	**Pn**	07 27 37.7	+0.9
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=210,slow=11,SNR=12	**13.14**	**36**	P	**Pn**	07 27 36.9	+0.1
PYUN	**Piuthan** 17nm,0.4s	**13.23**	**127**	*e*P	**Pn**	07 27 38.0	-0.4
PYUN				*e*S	S	07 29 55.7	-10
AB31	**Akbulak array** 1.4nm,0.3s,baz=135,slow=13,SNR=83	**14.94**	**331**	P	**Pn**	07 27 59.0	0.0
ABKAR	**Akbulak array**	**14.94**	**331**	*e*Pn	**Pn**	07 27 59.2	+0.3
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=204,slow=11,SNR=4.3	**14.95**	**19**	P	**Pn**	07

NC303	NORSAR Array S	44.19	323	eP	P	07 32 28.4	+1.9
NB201	NORSAR Array S	44.21	323	eP	P	07 32 28.0	+1.4
	3.3nm,0.9s						
NB2	NORSAR Subarra	44.25	323	P	P	07 32 27.5	+0.5
	comp=Z,1.1nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.25	323	P	P	07 32 27.6	+0.7
	comp=Z,1.4nm,0.5s,baz=96,slow=7.7,SNR=11						
NBO00	NORSAR Array S	44.46	323	eP	P	07 32 29.9	+1.3
	comp=Z,25nm,1.4s						
NC204	NORSAR Array S	44.49	323	eP	P	07 32 27.5	-1.4
	comp=Z,14nm,1.3s						
KSRS	Korea Array	44.81	71	LR	LR	07 56 02.5	
	comp=Z,21nm,18.3s,baz=206,slow=42						
TOA0	Torodi Ar. Sit	65.74	269	eP	P	07 35 00.2	-1.1
	comp=Z,4.5nm,1.4s						
TORD	Torodi Ar. Bea	65.74	269	P	P	07 34 58.0	-3.3
	comp=Z,0.7nm,0.3s,baz=56,slow=5.7,SNR=12						
YKA	Yellowknife Ar	81.07	3	P	P	07 36 30.1	+0.1
	comp=Z,0.3nm,0.4s,baz=351,slow=5.5,SNR=7.2						
WRA	Warramunga Arr	82.07	122	P	P	07 36 33.2	-2.7
	comp=Z,1.1nm,0.8s,baz=294,slow=6.0,SNR=3.7						
ASAR	Alice Springs	84.34	125	P	P	07 36 45.6	-1.8
	comp=Z,0.5nm,0.9s,baz=309,slow=4.7,SNR=4.0						

MDD ***17*** *07:34:13.0±3.4, 37°.00N×10°.39W, h0km, mbLg2.0/1, Error ellipse: s-maj=26.9km s-min=15.6km az=30.0, PRXIMO*
INMG ***17*** *07:34:21.6±0.5, 36°.62N×7°.80W, h10km, ML1.5, Error ellipse: s-maj=8.2km s-min=3.9km az=171.0*
ISC 17 07:34:11.7±3.5, 37°.0N±0°.1×10°.4W±0°.1, h10km, n13, σ0±55/16, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.29	82	eS	Sb	07 34 52.1	-0.5
PFVI				A	A	07 34 53.3	
	3.6nm,0.1s						
PFVI	Vila Bisbo	1.29	82	P	Pn	07 34 36.2	+0.5
	1.0nm,0.1s,SNR=7.9						
PFVI				S	Sb	07 34 52.4	-0.2
	5.0nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	1.47	67	eS	Sb	07 34 58.3	+0.4
PTEO				A	A	07 35 05.3	
	5.9nm,0.5s						
PTEO	Sao Teotonio	1.47	67	S	Sb	07 34 58.3	+0.4
	3.0nm,0.5s						
PNCL	Nicolau / Gran	1.89	52	eS	Sn	07 35 08.4	+0.6
PNCL				A	A	07 35 11.0	
	2.8nm,0.5s						
PNCL	Nicolau / Gran	1.89	52	S	Sn	07 35 08.4	+0.6
	2.8nm,0.5s						
PMAFR	Mafra	2.17	24	P	Pn	07 34 48.2	+0.2
	SNR=7.9						
PMTG	Montargil	2.72	39	ePn	Pb	07 35 00.0	-0.4
PMTG				eSn	Sn	07 35 28.7	+0.4
PMTG				A	A	07 35 34.6	
	2.2nm,1.0s						
PMTG	Montargil	2.72	39	P	Pb	07 35 00.0	-0.4
PMTG				S	Sn	07 35 28.7	+0.4
	2.2nm,1.0s						
EMIN	Mina Concepcio	3.09	74	S	Sn	07 35 37.2	-0.4
	0.3nm,0.3s,SNR=7.9						
EBAD	Badajoz	3.23	56	S	Sn	07 35 40.6	-0.4
	0.6nm,0.1s,SNR=7.9						
PMRV	Marv??o	3.42	43	eSg	Sn	07 35 44.9	-0.8
PMRV				A	A	07 35 46.9	
	1.8nm,0.7s						
PMRV	Marv??o	3.42	43	S	Sn	07 35 44.9	-0.8
	1.8nm,0.7s						

IDC ***17*** *07:34:38.7±0.7, 34°.27N×25°.09E, h0km, mb4.1/15, mb1 4.2/21, mb1mx4.1/40, mbtmp4.2/21, ML4.3/6, MS3.0/4, Ms1 3.1/4, ms1mx2.6/34, Error ellipse: s-maj=16.1km s-min=13.4km az=103.0*
NEIC ***17*** *07:34:42.5±0.0, 34°.28N×25°.17E, h26km, mb4.0/20, ML3.5(ATH), After ATH.*
ATH ***17*** *07:34:42.6, 34°.28N×25°.17E, h26km, ML3.5/10, Error ellipse: s-maj=3.2km s-min=1.2km az=359.0*
ISCJB ***17*** *07:34:43.2±0.3, 34°.20N±0°.02×25°.18E±0°.02, h44km±3km, mb4.1/28, Error ellipse: s-maj=4.0km s-min=2.9km az=35.2*
THE ***17*** *07:34:43.7, 34°.33N×25°.14E, h0km, ML3.5/7, Error ellipse: s-maj=1.3km s-min=0.4km az=167.0*
HLW ***17*** *07:34:44.0, 34°.29N×25°.43E, h23km±10km, Ml3.8*
GII ***17*** *07:34:52.2±0.0, 33°.56N×25°.84E, h10km, mb4.2/2, MD4.0/2*
DDA ***17*** *07:35:31.6, 34°.81N×26°.10E, h40km, ML3.8*
ISC 17 07:34:43.5±1.1, 34°.26N±0°.04×25°.18E±0°.03, h30km±8km, n178, σ1±99/218, mb4.1/28, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.81	338	P	Pb	07 34 58.2	-1.0
SIVA				S	Sb	07 35 09.8	0.0
SIVA	Sivas	0.81	338	P	Pb	07 34 58.2	-1.0
SIVA				S	Sb	07 35 10.0	+0.2
SIVA				AML	AML	07 35 16.3	
	comp=E,30230μm,0.7s						
SIVA				AML	AML	07 35 18.4	
	comp=N,22378μm,0.6s						
TMBK	Timbaki Herakl	0.88	337	P	Pn	07 34 59.6	-0.2
TMBK				S	Sn	07 35 11.8	+0.2
LAST	Lasithi	0.93	15	P	Pn	07 35 00.6	-0.1
LAST				S	Sn	07 35 14.6	+1.5
LAST	Lasithi	0.93	15	P	Pn	07 35 00.6	-0.1
LAST				AML	AML	07 35 23.4	
	comp=N,4801μm,0.6s						
LAST				AML	AML	07 35 28.7	
	comp=E,4460μm,0.6s						
KSTL	Kastelli Herak	1.05	355	P	Pn	07 35 01.3	-0.8
KSTL				S	Sn	07 35 14.8	-0.9
IACM	Heraklion	1.05	355	P	Pb	07 35 02.7	-0.3
IDI	Anoyia	1.05	347	Pn	Pn	07 35 02.0	-0.3
	comp=E,135nm,0.3s,baz=172,slow=17,SNR=62						
IDI				Sn	Sb	07 35 17.6	+0.9
	comp=E,219nm,0.3s,baz=108,slow=20,SNR=24						
IDI	Anoyia	1.05	347	P	Pn	07 35 01.9	-0.5
NPS	Neapolis	1.06	20	P	Pb	07 35 03.0	-0.4
NPS				S	Sb	07 35 18.2	+1.3
NPS	Neapolis	1.06	20	P	Pb	07 35 03.0	-0.4
NPS				AML	AML	07 35 23.9	
	comp=N,3452μm,0.6s						
NPS				AML	AML	07 35 34.5	
	comp=E,5099μm,0.8s						
GVD	Gavdhos	1.07	303	P	Pn	07 35 02.8	+0.3
GVD				S	Sb	07 35 18.2	+1.1
GVD	Gavdhos	1.07	303	P	Pn	07 35 02.8	+0.3
GVD				S	Sb	07 35 16.8	-0.3
GVD				AML	AML	07 35 20.8	
	comp=E,7314μm,0.7s						
GVD				AML	AML	07 35 22.2	
	comp=N,10717μm,0.4s						
STIA	Sitia Lasithi	1.21	38	P	Pb	07 35 06.0	+0.3
STIA				S	Sb	07 35 22.9	+2.0
ZKR	Zakros	1.21	45	P	Pb	07 35 05.2	-0.6
ZKR				eS	Sn	07 35 19.5	-0.3
ZKR	Zakros	1.21	45	P	Pb	07 35 05.3	-0.5
ZKR				S	Sb	07 35 21.0	0.0
ZKR				AML	AML	07 35 36.4	
	comp=N,2594μm,1.1s						
ZKR				AML	AML	07 35 39.1	
	comp=E,5252μm,0.6s						
VAM	Vamos	1.40	325	P	Pb	07 35 08.0	-1.0
VAM				S	Sb	07 35 27.1	+0.6
VAM	Vamos	1.40	325	P	Pb	07 35 08.1	-1.0
VAM				S	Sb	07 35 27.3	+0.9
VAM				AML	AML	07 35 38.1	
	comp=E,3575μm,0.4s						
VAM				AML	AML	07 35 46.2	
	comp=N,4171μm,0.9s						
IMMV	Iera Moni Meta	1.55	321	P	Pn	07 35 10.1	+1.0
IMMV				S	Sb	07 35 31.0	+0.2
IMMV	Iera Moni Meta	1.55	321	P	Pb	07 35 10.9	-0.7
IMMV				S	Sb	07 35 30.5	-0.3
IMMV				AML	AML	07 35 45.5	
	comp=E,3623μm,0.7s						
IMMV				AML	AML	07 35 46.5	
	comp=N,3211μm,0.7s						
KARP	Karpathos	2.08	51	P	Pb	07 35 19.9	-0.6
KARP	Karpathos	2.08	51	ePn	Pb	07 35 20.1	-0.4
KARP	Karpathos	2.08	51	P	Pb	07 35 19.0	-1.5
KARP	Karpathos	2.08	51	P	Pb	07 35 19.8	-0.8
KARP				AML	AML	07 35 47.6	
	comp=N,1494μm,0.9s						
KARP				AML	AML	07 35 50.0	
	comp=E,1680μm,0.6s						
THR9	Santorini-Faro	2.10	4	P	Pn	07 35 18.5	+1.9
SANT	Santorini	2.12	6	ePn	Pn	07 35 16.4	-0.5
ANAF	Anafi Island	2.15	13	P	Pb	07 35 19.6	-2.2
THR5	Thira Island,	2.16	4	P	Pn	07 35 18.8	+1.4
THR5	Thira Island,	2.16	4	P	Pn	07 35 19.4	+2.0
SAP3	Santorini-Thir	2.18	4	P	Pn	07 35 18.7	+1.1
ANKY	Antikythira Is	2.22	317	P	Pn	07 35 19.9	+1.6
ANKY				S	Sn	07 35 47.5	+2.7
ANKY	Antikythira Is	2.22	317	P	Pn	07 35 20.3	+1.9
ANKY				AML	AML	07 35 49.7	
	comp=E,1058μm,0.8s						
ANKY				AML	AML	07 36 03.6	
	comp=N,743μm,1.0s						
IOSP	Ios island	2.46	2	P	Pn	07 35 22.7	+1.1
IOSP	Ios island	2.46	2	P	Pn	07 35 22.7	+1.1
MHLO	Agia Marina, M	2.51	346	P	Pn	07 35 23.2	+0.9
MHLO	Agia Marina, M	2.51	346	P	Pn	07 35 23.1	+0.9
KYTH	Kithira	2.66	320	P	Pn	07 35 26.7	+2.4
KYTH				AML	AML	07 36 28.2	
	comp=N,418μm,0.6s						
KYTH				AML	AML	07 36 35.6	
	comp=E,601μm,1.3s						
KTHR	Kythira	2.67	319	P	Pn	07 35 25.9	+1.4
SLUM	Salum	2.76	179	P	Pn	07 35 27.0	+1.3
	baz=184						
SLUM				S	Sn	07 35 58.2	+0.2
	baz=184						
SLUM				AMP		07 36 00.0	
	baz=184						
APE	Apeiranthos	2.82	6	P	Pn	07 35 27.2	+0.6
APE	Apeiranthos	2.82	6	P	Pn	07 35 27.1	+0.6
VLI	Veliai	3.06	324	P	Pn	07 35 31.1	+1.3
ARG	Arkhangelos	3.10	50	P	Pn	07 35 33.4	+3.0
DAT	Datca	3.15	38	iP	Pn	07 35 33.7	+2.5
DAT				iS	Sn	07 36 07.7	-0.1
DAT				IAML_P			
	comp=Z,947nm,0.1s						
BODT	Bodrum	3.29	31	eP	Pn	07 35 34.9	+1.9
DID	Didima	3.60	335	P	Pn	07 35 37.5	+0.2
SMG	Samos	3.70	21	P	Pn	07 35 40.0	+1.4
VLY	Voula,Athens	3.76	343	P	Pn	07 35 40.2	+0.8
DALY	Dalyan (Mula)	3.81	47	eP	Pn	07 35 42.7	+2.5
DALY	Dalyan (Mula)	3.81	47	iP	Pn	07 35 43.4	+3.2
DALY				iS	Sn	07 36 23.5	-0.5
DALY				IAML_P			
	comp=Z,740nm,0.2s						
TURN	Turunc	3.82	46	eP	Pn	07 35 38.2	-2.1
TURN	Turunc	3.82	46	iP	Pn	07 35 38.7	-1.6
TURN				iS	Sn	07 36 15.0	-9.1
YER	Yerkesik	3.82	40	eP	Pn	07 35 42.9	+2.5
YER	Yerkesik	3.82	40	P	Pn	07 35 42.6	+2.2
PTL	Penteli	3.93	345	P	Pn	07 35 42.7	+0.9
ITM	Ithomi	3.94	319	ePn	Pn	07 35 41.6	-0.3
ITM	Ithomi	3.94	319	P	Pn	07 35 44.1	+2.2
FETY	Fethiye	3.97	52	eP	Pn	07 35 44.8	+2.4
FETY	Fethiye	3.97	52	iP	Pn	07 35 45.0	+2.6
FETY				iS	Sn	07 36 21.7	-6.3
TRIP	Tripoli	4.03	325	P	Pn	07 35 45.7	+2.5
AYDN	Tasoluk	4.04	32	iP	Pn	07 35 46.4	+3.0
KSL	Kastellorizon	4.07	61	P	Pn	07 35 45.3	+1.6
AKAS	Kas	4.12	60	eP	Pn	07 35 46.4	+1.8
AKAS	Kas	4.12	60	iP	Pn	07 35 46.3	+1.8
AKAS				iS	Sn	07 36 27.6	-4.2
MES3	Kyparissia	4.13	317	P	Pn	07 35 45.6	+1.1
LTK	Loutraki	4.16	335	P	Pn	07 35 45.6	+0.6
CHOS	Chios island	4.18	10	eP	Pn	07 35 47.0	+1.7
VIL2	Platees	4.24	339	P	Pn	07 35 46.0	0.0
URLA	Izmir	4.25	15	eP	Pn	07 35 47.8	+1.6
AYDB	Zeytinkoy-Aydi	4.29	30	eP	Pn	07 35 49.2	+2.4
GUR	Goura	4.33	329	P	Pn	07 35 48.8	+1.4
KLV	Kalavryta, Ach	4.50	328	P	Pn	07 35 50.6	+1.0
ELL	Elmali	4.59	56	eP	Pn	07 35 53.3	+2.3
MRKA	Markates	4.62	344	P	Pn	07 35 52.1	+0.9
MRKA	Markates	4.62	344	P	Pn	07 35 52.2	+0.9
AKUM	Antalya-Kumluc	4.70	63	iP	Pn	07 35 55.0	+2.6
AKUM				iS	Sn	07 36 45.8	0.0
LAKA	Lakka	4.74	328	P	Pn	07 35 56.2	+3.2
KALE	Kalithea	4.80	330	P	Pn	07 35 55.7	+2.0
TRIZ	Trizonia	4.80	329	P	Pn	07 35 55.3	+1.5
SWA2		5.01	177	P	Pn	07 35 57.4	+0.9
	baz=179						
KORT	Korkueli	5.02	56	eP	Pn	07 36 00.0	+3.1
KORT	Korkueli	5.02	56	iP	Pn	07 35 58.1	+1.2
KORT				iS	Sn	07 36 56.1	+2.1
KORT				IAML_P			
	comp=Z,190nm,0.1s						
MANT	Manisa	5.03	32	iP	Pn	07 36 00.0	+2.9
MANT				IAML_P			
	comp=Z,677nm,0.4s						
AGG	Agios Georgios	5.28	335	ePn	Pn	07 35 58.3	-2.0
KHAL	Karahalli	5.38	39	iP	Pn	07 36 03.8	+2.0
KHAL				iS	Sn	07 36 58.8	-4.1
KHAL				IAML_P			
	comp=Z,389nm,0.2s						
KEPZ	Antalya-Kepez	5.86	61	iP	Pn	07 36 10.2	+1.9
KEPZ				iS	Sn	07 37 12.4	-2.2
HNAT	Natroun	6.53	133	P	Pn	07 36 17.8	+0.3
	baz=135						
ALN	Alexandroupoli	6.66	6	ePn	Pn	07 36 18.1	-1.2
FNA	Florina	7.18	336	ePn	Pn	07 36 24.9	-1.6
HFRF	Wahat Farafira	7.58	158	P	Pn	07 36 32.1	+0.2
	baz=160						
NBNS	Bani Suef	7.67	135	P	Pn	07 36 33.1	-0.1
	baz=136						
SUZ	Suez	7.85	122	P	Pn	07 36 35.1	-0.5
	baz=123						
TIP	Timpagrande	8.35	308	ePn	Pn	07 36 42.0	-0.5
TIP				eSn	Sn	07 38 11.9	-4.0
AMAZ	Amatzia	8.63	106	Pn	Pn	07 36 48.0	+1.7
BRTR	Keskin Array B	8.69	49	Pn	Pn	07 36 46.9	-0.4
	comp=Z,0.1nm,0.3s,baz=224,slow=21,SNR=3.2						
BRTR				Sn	Sn	07 38 20.3	-4.1
	comp=Z,0.1nm,0.3s,baz=268,slow=39,SNR=2.3						
BR101	Keskin Array S	8.69	49	ePn	Pn	07 36 46.9	-0.5
BR101				eSn	Sn	07 38 20.3	-4.1
BR131	Keskin Array S	8.69	49	ePn	Pn	07 36 46.4	-0.9
GEM	Giv'at Ha'Em	8.80	94	Pn	Pn	07 36 50.8	+2.2
NATI	Neve Ativ	8.85	94	Pn	Pn	07 36 52.5	+3.2
YTIR	Yattir	8.85	106	Pn	Pn	07 36 50.5	+1.1
YTIR				Sn	Sn	07 38 23.2	-5.0
WDD	Wied Dalam	8.88	283	ePn	Pn	07 36 48.4	-1.3
HMDT	Nahal Hemdat	8.89	100	Pn	Pn	07 36 52.2	+2.2
HMDT				Sn	Sn	07 38 25.1	-4.0
DSI	Dead Sea	8.99	105	Pn	Pn	07 36 52.6	+1.4
DSI				Sn	Sn	07 38 26.6	-4.8
KRMI	Paran Flat	9.08	114	Pn	Pn	07 36 53.0	+0.4
KRMI				Sn	Sn	07 38 27.6	-6.2
PRNI	Paran	9.18	112	Pn	Pn	07 36 55.0	+1.0
PRNI				Sn	Sn	07 38 29.7	-6.6
VAE	Valguarnera	9.31	293	Pn	Pn	07 36 53.3	-2.4
	comp=Z,4.6nm,0.3s,baz=67,slow=15,SNR=2.4						
VAE				Sn	Sn	07 38 38.8	-0.6
	comp=Z,4.3nm,0.3s,baz=115,slow=7.2,SNR=5.4						
HRFI	Mount Harif	9.36	114	Pn	Pn	07 36 56.7	+0.3
HRFI				Sn	Sn	07 38 33.9	-6.7
MBRI	Mt Berech	9.39	116	Pn	Pn	07 36 57.3	+0.5
TTG	Podgorica	9.39	332	ePn	Pn	07 36 57.1	+0.4
TTG				eSn	Sn	07 38 35.0	-6.2
EIL	Elat	9.48	116	Pn	Pn	07 36 56.4	-1.5
	comp=Z,1.4nm,0.3s,baz=270,slow=3.0,SNR=10						
EIL				Sn	Sn	07 38 37.5	-6.0
	comp=Z,0.8nm,0.3s,baz=310,slow=17,SNR=3.9						
EIL	Elat	9.48	116	Pn	Pn	07 36 58.1	+0.1
ASF	Jabal al Asfar	10.04	99	Sn	Sn	07 38 52.5	-4.9
	comp=Z,0.3nm,0.3s,baz=283,slow=4.2,SNR=2.4						
MLR	Muntele Rosu	11.23	3	LR	LR	07 42 26.6	
	comp=Z,95nm,21.1s,baz=112,slow=42						
SOKA	Soboth	14.59	331	eP	P	07 38 15.1	+1.1
	comp=Z,5.0nm,0.8s						
OBKA	Obir	14.65	330	eP	P	07 38 15.8	+1.1
	comp=Z,5.9nm,1.2s						
ARSA	Arzberg	14.88	334	eP	P	07 38 19.0	+1.9
	comp=Z,4.6nm,0.8s						
MODS	Modra-Piesok	15.29	340	ePN	Pn	07 38 10.9	-6.2
KBA	Koelnbreinsper	15.61	329	eP	P	07 38 26.7	+1.3
	comp=Z,2.4nm,0.7s						
JAVC	Velka Javorina	15.62	341	ePN	P	07 38 26.9	+1.6
KRUC	Moravsky	16.16	339	ePN	P	07 38 31.1	-0.2
VRAC	Vranov	16.32	340	Pn	Pn	07 38 30.6	+0.2
	comp=Z,0.7nm,0.3s,baz=172,slow=8.3,SNR=6.2						
VRAC	Vranov	16.32	340	ePN	P	07 38 32.9	-0.2
MORC	Moravsky Berou	16.50	342	ePN	Pn	07 38 33.2	+0.6
KIV	Kislovodsk	16.66	49	ePn	Pn	07 38 33.9	-0.9
	comp=Z,9.8nm,1.1s						
KBZ	Khabaz	16.68	50	Pn	P	07 38 37.4	+0.4
	comp=Z,0.4nm,0.3s,baz=246,slow=10,SNR=13						
AKASG	Malin Array Be	16.70	9	Pn	Pn	07 38 34.9	-0.2
	comp=Z,1.6nm,0.3s,baz=200,slow=10,SNR=23						
AKBB	Malin Array Si	16.70	9	ePn	Pn	07 38 34.6	-0.5
	comp=Z,14nm,0.7s						
FUORN	Ofenpass-Fuorn	16.74	322	ePn	Pn	07 38 35.3	-0.6
	comp=Z,5.7nm,0.7s						
GEC2	GERESS Array S	16.89	333	ePn	P	07 38 40.6	+1.2
	comp=Z,7.6nm,0.7s						
GERES	GERESS Array B	16.89	333	Pn	Pn	07 38 38.0	+0.4
	comp=Z,0.7nm,0.3s,baz=148,slow=13,SNR=24						
TBLG	Delisi	17.11	58	ePn	Pn	07 38 40.7	+0.3
	comp=Z,7.7nm,0.5s						
TUE	Stuetta	17.12	320	ePn	Pn	07 38 40.8	+0.1
	comp=Z,3.3nm,0.7s						
SENIN	Lac Senin/Sane	18.17	317	ePn	Pn	07 38 53.9	+0.1
	comp=Z,2.6nm,0.9s						
GRA1	Grafenberg Arr	18.54	330	eP	P	07 38 55.0	-2.5
	comp=Z,10nm,0.5s						
GRA1				eSn	Sn	07 42 23.6	-0.5
GRFO	Grafenberg	18.54	330	eP	P	07 38 57.8	+0.2
	comp=Z,17nm,0.6s						
BFO	Black Forest	18.86	323	eP	P	07 38 59.7	-1.4
	comp=Z,5.1nm,0.9s						
CLL	Collm	19.19	336	eP	P	07 39 02.8	-1.9
	comp=Z,4.0nm,0.8s						
CLL	Collm	19.19	336	eP	Pn	07 39 07.0	+1.2
DAMY	Dhamar	26.18	134	eP	P	07 40 17.3	+1.4
	comp=Z,7.8nm,0.9s						
HFS	Hagfors	26.95	347	P	P	07 40 20.8	-1.3
	comp=Z,1.3nm,0.7s,baz=156,slow=8.1,SNR=4.4						
FIA0	FINESS Array S	27.21	1	eP	P	07 40 22.6	-1.7
FINES	FINESS Array B	27.21	1	P	P	07 40 22.6	-1.7
	comp=Z,2.9nm,0.8s,baz=165,slow=9.9,SNR=5.5						
NC602	NORSAR Array S	27.93	346	eP	P	07 40 31.9	+1.1
NAO01	NORSAR Array S	28.16	345	eP	P	07 40 33.9	+1.0
	comp=Z,12nm,1.1s						
NB2	NORSAR Subarra	28.27	346	P	P	07 40 34.0	+0.1
	comp=Z,0.5nm,0.6s,baz=156,slow=9.3						
NB200	NORSAR Array S	28.27	346	eP	P	07 40 32.5	-1.4
NOA	NORSAR Array B	28.27	346	P	P	07 40 32.5	-1.4
	comp=Z,0.5nm,0.7s,baz=152,slow=8.6,SNR=4.4						
NOA				LR	LR	07 53 01.0	
	comp=Z,13nm,19.5s,baz=235,slow=39						
EKA	Eskdalemuir Ar	28.79	326	P	P	07 40 37.5	-1.0
	comp=Z,0.9nm,0.7s,baz=122,slow=9.0,SNR=6.7						
AKTO	Aktyubinsk	28.86	46	P	P	07 40 38.8	-0.4
	comp=Z,0.7nm,0.5s,baz=255,slow=12,SNR=3.6						
TOA1	Torodi Ar. Sit	29.93	231	eP	P	07 40 48.3	-0.6
TOA0	Torodi Ar. Sit	29.93	231	eP	P	07 40 50.1	+1.2
	comp=Z,10nm,0.6s						
TORD	Torodi Ar. Bea	29.93	231	P	P	07 40 48.3	-0.7
	comp=Z,7.6nm,0.5s,baz=32,slow=8.7,SNR=75						
ARA0	ARCESS Array S	35.33	0	eP	P	07 41 34.4	-1.3
ARCES	ARCESS Array B	35.33	0	P	P	07 41 34.4	-1.3
	comp=Z,1.6nm,0.6s,baz=179,slow=9.2,SNR=8.4						
KK31	Karatay Array	36.10	62	eP	P	07 41 43.4	+0.8
	comp=Z,2.9nm,1.1s						
KKAR	Karatay Array	36.10	62	eP	P	07 41 43.6	+0.9
	comp=Z,2.9nm,1.1s						
DBIC	Dimbokro	39.02	232	P	P	07 42 06.2	-1.3
	comp=Z,2.5nm,0.5s,baz=35,slow=7.4,SNR=7.0						
DBIC				LR	LR	08 02 00.5	
	comp=Z,54nm,19.1s,baz=60,slow=42						
AAK	Ala-Archa	39.05	63	eP	P	07 42 09.3	+1.5
	comp=Z,2.6nm,0.9s						
KSH	Kashi	40.53	67	eP	P	07 42 22.6	+2.5
KSH				S	S	07 48 28.4	+1.1
KSH				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,240nm,6.3s						
KSH				LR	LR		
	comp=N,240nm,8.7s						
KSH				LR	LR		
	comp=E,330nm,13.0s						
KSH				LR	LR		
	comp=Z,220nm,12.3s						
KURK	Kurchatov	41.74	50	eP	P	07 42 29.1	-0.6
	comp=Z,2.8nm,0.8s						
MK31	Makanchi Array	44.26	56	eP	P	07 42 51.3	+1.1
	comp=Z,1.8nm,0.7s						
MK32	Makanchi Array	44.26	56	eP	P	07 42 51.2	+1.0
MKAR	Makanchi Array	44.26	56	P	P	07 42 51.2	+1.0
	comp=Z,2.1nm,0.6s,baz=280,slow=6.1,SNR=14						
ZAA1	Zalesovo Array	45.62	46	eP	P	07 43 01.3	+0.4
ZALV	Zalesovo Beam	45.62	46	P	P	07 43 01.3	+0.4
	comp=Z,2.7nm,0.4s,baz=264,slow=9.1,SNR=7.2						
WMQ	Urumqi	48.45	59	eP	P	07 43 26.9	+3.7
SONA0	Songino Array	60.05	50	eP	P	07 44 48.6	+0.9
SONM	Songino Array	60.05	50	P	P	07 44 48.6	+0.9
	comp=Z,1.7nm,0.7s,baz=282,slow=8.7,SNR=7.2						
BOSA	Boshof	62.53	180	P	P	07 45 05.6	+1.1
	comp=Z,2.8nm,1.0s,baz=315,slow=7.1,SNR=3.7						
LZH	Lanzhou	62.58	63	eP	P	07 45 06.5	+1.4
LZH				pP	pP	07 45 09.8	-3.5
LZH				sP	sP	07 45 11.4	-5.1
LZH				ePP	PP	07 47 26.1	+3.4
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pm

PLIG				*i* S	Sn	07 46 13.5	-5.2
YAIG	**Yautepec**	**2.22**	**25**	*e*P	Pn	07 46 01.6	-4.5
YAIG				*e*S	Sn	07 46 28.4	-5.0

IDC ***17*** *07:57:30.4±1.3,34°.27N×25°.20E,h0km,mb4.0/4, mb1 4.0/8,mb1mx3.6/50,mbtmp3.9/8,ML3.9/4,MS2.4/1, Ms1 2.4/1,ms1mx2.1/34,Error ellipse: s-maj=24.1km s-min=18.9km az=86.0*
ATH ***17*** *07:57:34.4,34°.26N×25°.18E,h19km±4km,ML3.3/5,Error ellipse: s-maj=5.5km s-min=1.9km az=350.0*
ISCJB ***17*** *07:57:35.5±1.0,34°.24N±0°.02×25°.23E±0°.03,h33km±9km, mb3.9/4,Error ellipse: s-maj=4.9km s-min=3.8km az=149.8*
THE ***17*** *07:57:36.3,34°.37N×25°.08E,h0km±1km,ML3.2/5,Error ellipse: s-maj=3.4km s-min=1.1km az=167.0*
HLW ***17*** *07:57:36.5,34°.19N×25°.33E,h9km±11km,Ml3.5*
DDA ***17*** *07:58:11.3,34°.62N×26°.04E,h26km±1km,ML3.5*
ISC 17 07:57:35.4±1.2,34°.28N±0°.04×25°.17E±0°.03,h31km±10km, n51,σ1°92/73,mb4.0/4,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.80**	**338**	P	**Pb**	**07 57 49.8**	**-1.0**
SIVA				S	**Sb**	**07 58 00.9**	**-0.4**
SIVA	**Sivas**	**0.80**	**338**	P	**Pb**	**07 57 49.8**	**-1.0**
SIVA				S	**Sb**	**07 58 01.1**	**-0.2**
SIVA				AML	AML	07 58 05.5	
	comp=N,10014μm,0.4s						
SIVA				AML	AML	07 58 07.3	
	comp=E,12143μm,0.7s						
TMBK	**Timbaki Herakl**	**0.86**	**337**	P	**Pn**	**07 57 51.4**	**-0.1**
TMBK				S	**Sn**	**07 58 03.3**	**+0.3**
LAST	**Lasithi**	**0.92**	**16**	P	**Pb**	**07 57 52.3**	**-0.6**
LAST				S	**Sn**	**07 58 05.9**	**+1.4**
LAST	**Lasithi**	**0.92**	**16**	P	**Pb**	**07 57 52.1**	**-0.8**
LAST				S	**Sn**	**07 58 05.2**	**+0.7**
LAST				AML	AML	07 58 12.7	
	comp=E,2104μm,0.6s						
LAST				AML	AML	07 58 14.4	
	comp=N,1689μm,0.6s						
KSTL	**Kastelli Herak**	**1.03**	**355**	P	**Pb**	**07 57 52.8**	**-1.9**
KSTL				S	**Sb**	**07 58 06.6**	**-1.3**
IDI	**Anoyia**	**1.04**	**347**	Pn	**Pb**	**07 57 53.7**	**-1.1**
	comp=N,37nm,0.3s,baz=167,slow=16,SNR=63						
IDI				Sn	**Sn**	**07 58 08.5**	**+1.0**
	comp=N,82nm,0.3s,baz=94,slow=14,SNR=22						
NPS	**Neapolis**	**1.05**	**20**	P	**Pn**	**07 57 54.5**	**+0.5**
NPS				S	**Sn**	**07 58 10.3**	**+2.7**
NPS	**Neapolis**	**1.05**	**20**	P	**Pn**	**07 57 54.6**	**+0.6**
NPS				S	**Sn**	**07 58 09.8**	**+2.2**
NPS				AML	AML	07 58 16.4	
	comp=E,1845μm,0.4s						
NPS				AML	AML	07 58 20.2	
	comp=N,1081μm,0.4s						
GVD	**Gavdhos**	**1.06**	**302**	P	**Pn**	**07 57 54.5**	**+0.4**
GVD				S	**Sn**	**07 58 08.4**	**+0.5**
GVD	**Gavdhos**	**1.06**	**302**	P	**Pn**	**07 57 54.5**	**+0.4**
GVD				S	**Sn**	**07 58 10.8**	**+2.9**
GVD				AML	AML	07 58 15.6	
	comp=N,3905μm,0.3s						
GVD				AML	AML	07 58 18.7	
	comp=E,4765μm,0.4s						
GVDS	**Gavdos**	**1.06**	**303**	P	**Pn**	**07 57 55.0**	**+0.8**
GVDS				S	**Sn**	**07 58 09.6**	**+1.7**
STIA	**Sitia Lasithi**	**1.19**	**39**	P	**Pb**	**07 57 58.8**	**+1.3**
STIA				S	**Sn**	**07 58 16.3**	**+5.1**
PRNS	**Prines Rethymn**	**1.22**	**333**	P	**Pn**	**07 57 56.7**	**+0.3**
PRNS				S	**Sn**	**07 58 14.7**	**+2.9**
VAM	**Vamos**	**1.39**	**325**	P	**Pb**	**07 58 00.2**	**-0.5**
VAM				S	**Sb**	**07 58 18.5**	**+0.5**
VAM	**Vamos**	**1.39**	**325**	P	**Pb**	**07 58 01.3**	**+0.6**
VAM				S	**Sb**	**07 58 19.6**	**+1.6**
VAM				AML	AML	07 58 26.4	
	comp=N,1464μm,0.4s						
VAM				AML	AML	07 58 33.7	
	comp=E,1439μm,0.5s						
IMMV	**Iera Moni Meta**	**1.54**	**321**	P	**Pb**	**07 58 03.0**	**-0.3**
IMMV	**Iera Moni Meta**	**1.54**	**321**	P	**Pb**	**07 58 03.2**	**-0.1**
KARP	**Karpathos**	**2.07**	**52**	P	**Pb**	**07 58 11.9**	**-0.4**
KARP	**Karpathos**	**2.07**	**52**	P	**Pb**	**07 58 12.1**	**-0.2**
SANT	**Santorini**	**2.10**	**6**	P	**Pn**	**07 58 10.5**	**+1.9**
SLUM	**Salum**	**2.78**	**179**	P	**Pn**	**07 58 19.8**	**+2.1**
	baz=183						
SLUM				AMP		07 58 00.0	
	baz=183						
SLUM				S	**Sn**	**07 58 50.6**	**+0.3**
	baz=183						
APE	**Apeiranthos**	**2.80**	**6**	P	**Pn**	**07 58 20.5**	**+2.3**
ARG	**Arkhangelos**	**3.10**	**50**	*e*P	**Pn**	**07 58 25.4**	**+3.2**
DAT	**Datca**	**3.14**	**38**	*e*P	**Pn**	**07 58 24.8**	**+2.0**
DAT	**Datca**	**3.14**	**38**	*i* P	**Pn**	**07 58 25.3**	**+2.4**
DAT				*i* S	**Sn**	**07 58 58.7**	**-0.6**
DAT				IAML_P			
	comp=Z,380nm,0.1s						
DALY	**Dalyan (Mula)**	**3.81**	**47**	*e*P	**Pn**	**07 58 34.7**	**+2.8**
DALY	**Dalyan (Mula)**	**3.81**	**47**	*i* P	**Pn**	**07 58 35.7**	**+3.8**
DALY				*i* S	**Sn**	**07 59 14.3**	**-1.3**
DALY				IAML_P			
	comp=Z,742nm,0.2s						
TURN	**Turunc**	**3.81**	**46**	*e*P	**Pn**	**07 58 30.3**	**-1.7**
TURN	**Turunc**	**3.81**	**46**	*i* P	**Pn**	**07 58 31.1**	**-0.9**
TURN				*i* S	Sn	07 59 05.6	-10
TURN				IAML_P			
	comp=Z,324nm,0.2s						
YER	**Yerkesik**	**3.81**	**41**	*e*P	**Pn**	**07 58 34.7**	**+2.6**
FETY	**Fethiye**	**3.96**	**52**	*i* P	**Pn**	**07 58 33.8**	**-0.4**
FETY				*i* S	**Sn**	**07 59 17.1**	**-2.5**
AYDN	**Tasoluk**	**4.03**	**32**	*i* P	**Pn**	**07 58 38.1**	**+3.1**
AYDN				IAML_P			
	comp=Z,452nm,0.3s						
AKAS	**Kas**	**4.12**	**60**	*i* P	**Pn**	**07 58 38.8**	**+2.5**
AKAS				*i* S	**Sn**	**07 59 24.7**	**+1.2**
AKUM	**Antalya-Kumluc**	**4.69**	**63**	*i* P	**Pn**	**07 58 45.7**	**+1.6**
AKUM				*i* S	**Sn**	**07 59 36.8**	**-0.7**
SWA2		**5.02**	**177**	P	**Pn**	**07 58 50.2**	**+1.6**
	baz=178						
KHAL	**Karahalli**	**5.37**	**39**	*i* P	**Pn**	**07 58 55.8**	**+2.2**
KHAL				IAML_P			
	comp=Z,182nm,0.2s						
HNAT	**Natroun**	**6.54**	**134**	P	**Pn**	**07 59 10.7**	**+1.2**
	baz=133						
HSAF	**As Saff**	**7.14**	**129**	P	**Pn**	**07 59 19.6**	**+1.9**
	baz=129						
HFRF	**Wahat Farafira**	**7.60**	**158**	P	**Pn**	**07 59 25.4**	**+1.3**
	baz=159						
MMAI	**Mount Meron Ar**	**8.62**	**96**	LR	LR	08 03 27.1	
	comp=Z,25nm,20.4s,baz=155,slow=42						
BRTR	**Keskin Array B**	**8.68**	**49**	Pn	**Pn**	**07 59 43.2**	**+4.2**
	comp=Z,0.1nm,0.3s,baz=227,slow=13,SNR=2.7						
HDK1	**Dakhla**	**9.44**	**156**	P	**Pn**	**07 59 51.1**	**+1.7**
	baz=156						
EIL	**Elat**	**9.49**	**116**	Pn	**Pn**	**07 59 49.1**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=9.6,slow=4.7,SNR=9.0						
EIL				Sn	**Sn**	**08 01 29.7**	**-5.8**
	comp=Z,0.8nm,0.3s,baz=346,slow=17,SNR=3.2						
KBZ	**Khabaz**	**16.67**	**50**	Pn	**P**	**08 01 29.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=268,slow=11,SNR=3.8						
AKASG	**Malin Array Be**	**16.68**	**9**	Pn	**Pn**	**08 01 24.9**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=203,slow=9.7,SNR=5.1						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**Pn**	**08 01 29.5**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=146,slow=12,SNR=5.2						
FINES	**FINESS Array B**	**27.19**	**1**	P	**P**	**08 03 13.5**	**-2.4**
	comp=Z,1.8nm,0.9s,baz=170,slow=8.5,SNR=2.8						
TORD	**Torodi Ar. Bea**	**29.94**	**231**	P	**P**	**08 03 40.5**	**-0.3**
	comp=Z,1.9nm,0.4s,baz=33,slow=8.7,SNR=27						
MKAR	**Makanchi Array**	**44.26**	**56**	P	**P**	**08 05 41.6**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=287,slow=6.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**45.61**	**46**	P	**P**	**08 05 51.3**	**-1.3**
	comp=Z,1.5nm,0.4s,baz=260,slow=8.9,SNR=3.7						

IDC ***17*** *08:00:08.2±1.0,52°.43N×171°.74W,h0km,mb3.8/8, mb1 4.1/11,mb1mx3.7/42,mbtmp3.9/11,ML3.3/2,MS2.6/3, Ms1 2.7/3,ms1mx2.5/41,Error ellipse: s-maj=33.6km s-min=15.5km az=4.0*
AEIC ***17*** *08:00:10.0,52°.09N×171°.70W,h14km,ML3.8, MB4.2(NEIC)*
NEIC ***17*** *08:00:10.0±0.0,52°.09N×171°.70W,h14km,mb4.2/110, ML3.8(AEIC),After AEIC.*
ISCJB ***17*** *08:00:11.3±1.0,52°.61N±0°.04×171°.95W±0°.03,h15km±6km, mb4.3/85,MS3.1/2,Error ellipse: s-maj=6.3km s-min=2.3km az=165.8*
ISC 17 08:00:11.8±4.0,52°.48N±0°.08×171°.88W±0°.03, h12km±25km,n309,σ1°77/311,mb4.3/85,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**1.34**	**265**	*e*Pn	**Pn**	**08 00 35.4**	**-0.9**
KOSE				*e*Sn	**Sn**	**08 00 55.2**	**+1.2**
KOFP	**Korovin Flat P**	**1.38**	**262**	*e*Pn	**Pn**	**08 00 35.8**	**-1.1**
KONE	**Korovin Northe**	**1.38**	**267**	*e*Pn	**Pn**	**08 00 36.1**	**-0.7**
KONE				*e*Sn	**Sn**	**08 00 56.1**	**+1.2**
KOKL	**Mount Kliuchef**	**1.43**	**265**	*e*Pn	**Pn**	**08 00 37.0**	**-0.7**
ATKA	**Atka Island**	**1.45**	**260**	*e*Pn	**Pn**	**08 00 36.2**	**-1.6**
ATKA				*e*Sn	**Sb**	**08 00 55.9**	**-1.1**
KOWE	**Korovin West**	**1.46**	**267**	*e*Pn	**Pn**	**08 00 37.2**	**-0.8**
NIKH	**Nikolski High**	**1.90**	**74**	*e*Pn	**Pn**	**08 00 40.7**	**-3.3**
NIKH				*e*Sn	**Sn**	**08 01 07.7**	**-0.2**
OKAK	**Okmok**	**2.39**	**61**	*e*Pn	**Pn**	**08 00 49.1**	**-1.7**
OKTU	**Okmok Mt. Tuli**	**2.49**	**67**	*e*Pn	**Pn**	**08 00 51.8**	**-0.4**
GSTR	**Great Sitkin T**	**2.60**	**263**	*e*Pn	**Pn**	**08 00 53.5**	**-0.1**
GSTR				*e*Sn	**Sn**	**08 01 24.6**	**-0.5**
GSMY	**Great Sitkin M**	**2.61**	**262**	*e*Pn	**Pn**	**08 00 52.7**	**-1.0**
GSTD	**Great Sitkin T**	**2.66**	**263**	*e*Pn	**Pn**	**08 00 53.5**	**-0.9**
GSTD				*e*Sn	**Sn**	**08 01 28.4**	**+1.8**
ETKA	**Kagalaska Isla**	**2.86**	**259**	*e*Pn	**Pn**	**08 00 56.7**	**-0.5**
ADAG	**Mount Adagdak**	**2.95**	**262**	*e*Pn	**Pn**	**08 00 58.1**	**-0.3**
ADK	**Adak**	**3.02**	**261**	*e*Pn	**Pn**	**08 00 58.1**	**-1.3**
ADK				*e*Sn	**Sn**	**08 01 33.8**	**-1.6**
KIRH	**Kanaga Island**	**3.26**	**262**	*e*Pn	**Pn**	**08 01 02.8**	**+0.1**
KIWB	**Kanaga Island**	**3.31**	**261**	*e*Pn	**Pn**	**08 01 03.3**	**0.0**
KIWB				*e*Sn	**Sn**	**08 01 41.4**	**-1.1**
KIKV	**Kanaga Island**	**3.31**	**262**	*e*Pn	**Pn**	**08 01 03.0**	**-0.4**
MCIR	**Makushin Cirqu**	**3.34**	**62**	*e*Pn	**Pn**	**08 01 03.9**	**0.0**
MREP	**Makushin Rep't**	**3.37**	**65**	*e*Pn	**Pn**	**08 01 03.6**	**-0.6**
KIMD	**Kanaga Island**	**3.38**	**260**	*e*Pn	**Pn**	**08 01 04.5**	**+0.2**
MSW	**Makushin Switc**	**3.38**	**63**	*e*Pn	**Pn**	**08 01 04.3**	**-0.1**
UNV	**Unalaska Valle**	**3.51**	**65**	*e*Pn	**Pn**	**08 01 06.0**	**-0.1**
UNV				*e*Sn	**Sn**	**08 01 46.9**	**-0.7**
TAFP	**Tanaga Falls P**	**3.80**	**264**	*e*Pn	**Pn**	**08 01 10.1**	**0.0**
TAFP				*e*Sn	**Sn**	**08 01 55.8**	**+1.1**
TASE	**Tanaga Southea**	**3.85**	**263**	*e*Pn	**Pn**	**08 01 11.0**	**+0.2**
AKRB	**Akutan Reef Bi**	**3.86**	**62**	*e*Pn	**Pn**	**08 01 11.1**	**+0.2**
AKUT	**Akutan**	**4.02**	**63**	*e*Pn	**Pn**	**08 01 13.3**	**+0.3**
AKUT				*e*Sn	**Sn**	**08 02 01.5**	**+1.5**
AKSA	**Akutan Strait**	**4.06**	**63**	*e*Pn	**Pn**	**08 01 13.6**	**0.0**
SPIA	**Saint Paul Isl**	**4.80**	**11**	*e*Pn	**Pn**	**08 01 23.5**	**-0.4**
SPIA				*e*Sn	**Sn**	**08 02 16.3**	**-3.1**
SDPT	**Sand Point**	**7.32**	**62**	*e*Pn	**Pn**	**08 01 58.1**	**-0.2**
SMY	**Shemya**	**8.54**	**277**	*e*Pn	**Pn**	**08 02 14.0**	**-1.2**
CHGN	**Chignik**	**8.74**	**59**	*e*Pn	**Pn**	**08 02 17.2**	**-0.6**
SII	**Sitkinak Islan**	**11.06**	**61**	*e*Pn	**Pn**	**08 02 48.8**	**-0.8**
GAMB	**Gambell**	**11.33**	**0**	*e*Pn	**Pn**	**08 02 55.2**	**+1.9**
OHAK	**Old Harbor**	**11.71**	**59**	*e*Pn	**Pn**	**08 02 55.6**	**-2.8**
KDAK	**Kodiak Island**	**12.23**	**57**	Pn	**Pn**	**08 03 04.6**	**-0.9**
	1.0nm,0.3s,baz=206,slow=6.5,SNR=9.7						
KDAK	**Kodiak Island**	**12.23**	**57**	*e*Pn	**Pn**	**08 03 04.3**	**-1.3**
TTA	**Tatalina**	**13.43**	**33**	*e*Pn	**Pn**	**08 03 22.9**	**+0.9**
CNPM	**China Poot**	**13.49**	**50**	*e*Pn	**Pn**	**08 03 24.6**	**+1.8**
BRLK	**Bradley Lake**	**13.75**	**50**	*e*Pn	**Pn**	**08 03 28.1**	**+1.7**
SEW	**Seward**	**14.55**	**50**	*e*Pn	**Pn**	**08 03 37.4**	**+0.2**
SUA	**Susitna One**	**14.56**	**44**	*e*Pn	**Pn**	**08 03 39.3**	**+1.9**
RC01	**Rabbit Creek A**	**14.82**	**46**	*e*Pn	**Pn**	**08 03 42.5**	**+1.6**
	3.6nm,0.6s						
PMR	**Palmer**	**15.30**	**44**	*e*Pn	**Pn**	**08 03 49.3**	**+2.0**
	2.6nm,0.8s						
GHO	**Glory Hole Cre**	**15.47**	**44**	*e*Pn	**Pn**	**08 03 51.5**	**+1.9**
	4.3nm,1.0s						
KNK	**Knik Glacier**	**15.51**	**46**	*e*Pn	**Pn**	**08 03 50.6**	**+0.5**
	5.0nm,0.6s						
KTH	**Kantishna Hill**	**15.60**	**37**	*e*Pn	**Pn**	**08 03 52.3**	**+1.0**
	9.6nm,0.8s						
SML	**Sawmill**	**15.74**	**44**	*e*Pn	**Pn**	**08 03 54.7**	**+1.7**
	3.9nm,1.0s						
TRF	**Thorofare Moun**	**15.78**	**37**	*e*Pn	**Pn**	**08 03 54.4**	**+0.7**
	3.3nm,0.9s						
BPAW	**Bear Paw Mtn.**	**15.90**	**35**	*e*Pn	**Pn**	**08 03 56.5**	**+1.3**
	10nm,1.0s						
SCM	**Sheep Creek Mo**	**16.18**	**45**	*e*Pn	**Pn**	**08 03 58.6**	**-0.2**
	5.8nm,0.6s						
RND	**Reindeer**	**16.30**	**39**	*e*Pn	**Pn**	**08 04 00.5**	**+0.2**
	4.9nm,1.0s						
EYAK	**Cordova Ski Ar**	**16.43**	**50**	*e*Pn	**Pn**	**08 04 01.9**	**0.0**
	6.0nm,1.3s						
MCK	**McKinley**	**16.44**	**38**	*e*Pn	**Pn**	**08 04 02.9**	**+0.9**
	3.6nm,0.6s						
BWN	**Browne**	**16.49**	**36**	*e*Pn	**Pn**	**08 04 02.9**	**+0.3**
	17nm,1.0s						
MLY	**Manley**	**16.57**	**32**	*e*Pn	**Pn**	**08 04 04.3**	**+0.6**
	5.0nm,0.8s						
DHY	**Denali Highway**	**16.71**	**41**	*e*Pn	**Pn**	**08 04 06.5**	**+0.9**
	2.8nm,0.7s						
WRH	**Wood River Hil**	**17.15**	**36**	*e*Pn	**Pn**	**08 04 10.6**	**-0.4**
	2.7nm,0.9s						
CCB	**Clear Creek Bu**	**17.35**	**36**	*e*Pn	**Pn**	**08 04 12.2**	**-1.3**
	2.6nm,0.9s						
PAX	**Paxson**	**17.44**	**43**	*e*Pn	**Pn**	**08 04 11.4**	**-3.3**
	5.3nm,0.7s						
CRQM	**Cirque**	**17.72**	**51**	*e*Pn	**Pn**	**08 04 15.9**	**-2.4**
	3.7nm,0.7s						
ILAR	**Eielson Array**	**17.75**	**36**	P	**Pn**	**08 04 17.1**	**-1.4**
	baz=236,slow=9.7,SNR=3.1						
ILAR				LR	LR	08 11 25.7	
	comp=Z,33nm,20.7s,baz=304,slow=38						
ILB	**Eielson Array**	**17.75**	**36**	*e*Pn	**Pn**	**08 04 14.3**	**-4.1**
	3.4nm,1.2s						
COLD	**Coldfoot**	**18.20**	**27**	*e*P	**P**	**08 04 25.2**	**+1.1**
	1.7nm,0.8s						
DOT	**Dot Lake**	**18.30**	**42**	*e*P	**P**	**08 04 26.9**	**+1.6**
	4.1nm,0.6s						
PEA1	**Petropavlovsk-**	**18.35**	**284**	*e*P	**Pn**	**08 04 23.5**	**-2.4**
PETK	**Petropavlovsk-**	**18.35**	**284**	P	**Pn**	**08 04 23.5**	**-2.4**
	0.1nm,0.3s,baz=102,slow=18,SNR=2.2						
PETK				LR	LR	08 11 04.7	
	comp=Z,27nm,18.8s,baz=104,slow=36						
BILL	**Bilibino**	**18.82**	**334**	*e*P	**P**	**08 04 31.9**	**+1.0**
	6.6nm,1.1s						
FYU	**Fort Yukon**	**19.31**	**33**	*e*P	**P**	**08 04 36.3**	**0.0**
	8.2nm,0.8s						
TOLK	**Toolik Lake Re**	**19.36**	**25**	*e*P	**P**	**08 04 36.7**	**-0.3**
	8.7nm,1.0s						
TOLK	**Toolik Lake Re**	**19.36**	**25**	P	**P**	**08 04 37.0**	**0.0**
	baz=224,SNR=7.7						
EGAK	**Eagle**	**19.93**	**40**	*e*P	**P**	**08 04 40.0**	**-3.0**
	3.4nm,0.8s						
DAWY	**Dawson**	**20.38**	**43**	*e*P	**P**	**08 04 45.6**	**-2.5**
	1.4nm,0.9s						
HYT	**Haines Junctio**	**20.44**	**52**	*e*P	**P**	**08 04 46.3**	**-2.5**
	4.6nm,1.0s						
SEY	**Seymchan**	**21.47**	**313**	P	**P**	**08 04 59.4**	**-0.4**
	2.3nm,0.7s,baz=115,slow=14,SNR=6.7						
WHY	**Whitehorse**	**21.70**	**53**	*e*P	**P**	**08 04 59.4**	**-3.0**
	2.7nm,0.8s						
MA2	**Magadan**	**21.81**	**304**	P	**P**	**08 05 03.2**	**-0.2**
	3.0nm,0.5s,baz=52,slow=18,SNR=2.5						
EPYK	**Eagle Plains**	**22.24**	**38**	P	**P**	**08 05 08.4**	**+0.3**
	baz=248						
INK	**Inuvik**	**24.11**	**34**	*e*P	**P**	**08 05 25.2**	**-1.7**
	3.7nm,0.8s						
DLBC	**Dease Lake**	**24.15**	**59**	P	**P**	**08 05 26.1**	**-1.4**
	1.3nm,0.7s,baz=278,slow=12,SNR=3.4						
DLBC	**Dease Lake**	**24.15**	**59**	*e*P	**P**	**08 05 24.0**	**-3.4**
	4.9nm,1.1s						
YKA	**Yellowknife Ar**	**31.32**	**49**	LR	LR	08 18 53.0	
	comp=Z,5.9nm,21.9s,baz=282,slow=36						
B05A	**Bryant**	**31.52**	**77**	P	**P**	**08 06 35.3**	**+2.0**
	baz=296						
E04D	**Cinebar**	**32.03**	**81**	P	**P**	**08 06 40.1**	**+2.3**
	baz=298						
D05A	**Enumclaw**	**32.08**	**79**	*e*P	**P**	**08 06 36.6**	**-1.6**
	20nm,1.3s						
I02D	**Swisshome**	**32.50**	**85**	P	**P**	**08 06 44.8**	**+2.8**
	baz=302						
H04A	**Detroit Lake**	**33.21**	**83**	*e*P	**P**	**08 06 44.9**	**-3.3**
	6.5nm,0.7s						
K02D	**Willamette Mer**	**33.38**	**87**	P	**P**	**08 06 52.5**	**+2.6**
	baz=303						
G05D	**Wamic, OR**	**33.44**	**82**	P	**P**	**08 06 53.1**	**+2.8**
	baz=300						
I04A	**Tendick Farm,**	**33.54**	**85**	P	**P**	**08 06 53.2**	**+2.0**
	baz=302						
L02E	**Cave Junction**	**33.72**	**88**	P	**P**	**08 06 54.7**	**+1.9**
	baz=304						
I05D	**Terrebonne, OR**	**33.90**	**83**	P	**P**	**08 06 56.3**	**+2.0**
	baz=302						
C09A	**Chrisman Ranch**	**34.00**	**76**	*e*P	**P**	**08 06 52.9**	**-2.3**
	7.1nm,1.0s						
J04D	**Umpqua Nationa**	**34.03**	**85**	P	**P**	**08 06 57.2**	**+1.6**
	baz=303						
PINE	**Pine Mountain**	**34.44**	**84**	*e*P	**P**	08 06 53.3	-5.9
	4.9nm,1.1s						
NEW	**Newport**	**34.47**	**75**	*e*P	**P**	**08 07 00.1**	**+0.9**
	11nm,1.3s						
NEW	**Newport**	**34.47**	**75**	P	**P**	**08 07 00.5**	**+1.3**
	baz=297,SNR=6.5						
L04D	**Klamath Falls**	**34.48**	**87**	P	**P**	**08 07 00.5**	**+1.0**
	baz=304						
YBH	**Yreka Blue Hor**	**34.51**	**88**	*e*P	**P**	**08 07 03.0**	**+3.3**
	2.7nm,0.9s						
J05D	**Fort Rock, OR**	**34.54**	**85**	P	**P**	**08 07 01.6**	**+1.6**
	baz=303,SNR=5.5						
K04D	**Chiloquin, OR**	**34.59**	**86**	P	**P**	**08 07 02.2**	**+1.8**
	baz=304						
M02C	**Callahan**	**34.62**	**89**	P	**P**	**08 07 02.9**	**+2.3**
	baz=305						
N02D	**Trinity Center**	**34.96**	**89**	P	**P**	**08 07 06.1**	**+2.5**
	baz=306						
M04C	**Macdoel**	**35.02**	**87**	P	**P**	**08 07 06.4**	**+2.3**
	baz=305						
I07A	**Izee**	**35.16**	**82**	*e*P	**P**	**08 07 08.0**	**+2.8**
	6.1nm,1.3s						
O02D	**Mt. Diablo Mer**	**35.38**	**90**	P	**P**	**08 07 09.3**	**+2.1**
	baz=306						
F10A	**Beach Ranch, E**	**35.53**	**78**	*e*P	**P**	**08 07 04.7**	**-3.8**
	1.9nm,0.7s						
MOD	**Modoc Plateau**	**35.88**	**86**	*e*P	**P**	**08 07 13.5**	**+1.9**
	4.7nm,0.6s						
O03E	**Paynes Creek**	**35.91**	**89**	P	**P**	**08 07 14.0**	**+2.3**
	baz=306						
J08A	**Circle Bar Ran**	**36.18**	**83**	*e*P	P	08 07 08.3	-5.7
	3.5nm,0.5s						
WVOR	**Wild Horse Val**	**36.60**	**84**	*e*P	**P**	**08 07 19.1**	**+1.5**
	3.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**36.62**	**215**	T	T	08 45 37.5	
	baz=17,slow=76						
H11N3	**WAKE ISLAND Hy**	**36.63**	**215**	T	T	08 45 39.3	
	baz=17,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**36.64**	**215**	T	T	08 45 37.7	
	baz=17,slow=76						
MSO	**Missoula**	**37.05**	**75**	*e*P	**P**	**08 07 18.5**	**-2.9**
	4.9nm,1.3s						
MSO	**Missoula**	**37.05**	**75**	P	**P**	**08 07 23.4**	**+2.0**
	baz=300						
BEKR	**Beckworth**	**37.05**	**89**	*e*P	P	08 07 16.7	-4.9
	2.1nm,0.7s						
PAHR	**Pah Rah Range**	**37.75**	**88**	*e*P	**P**	**08 07 23.5**	**-4.0**
	6.3nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**37.82**	**214**	T	T	08 48 15.4	
	baz=22,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**37.84**	**214**	T	T	08 48 09.4	
	baz=22,slow=76,SNR=4.7						
VCNR	**Virginia City**	**37.84**	**89**	*e*P	**P**	**08 07 23.6**	**-4.7**
	6.6nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**37.84**	**214**	T	T	08 48 03.2	
	baz=22,slow=76,SNR=7.3						
PNTR	**Pine Nut**	**37.99**	**89**	*e*P	**P**	**08 07 24.9**	**-4.7**
	12nm,0.7s						
MJB9	**Matsu-Tunnel**	**38.17**	**266**	*e*P	**P**	**08 07 29.7**	**-1.2**
	4.1nm,0.8s						
CMB	**Columbia Colle**	**38.17**	**91**	*e*P	**P**	**08 07 28.1**	**-2.9**
	2.0nm,0.8s						
YERR	**Yerington**	**38.28**	**89**	*e*P	**P**	**08 07 29.1**	**-2.9**
	6.4nm,0.7s						
HRY	**Holter Researc**	**38.35**	**74**	*e*P	**P**	**08 07 30.6**	**-1.9**
WAKR	**Walker**	**38.46**	**90**	*e*P	**P**	**08 07 31.5**	**-2.0**
	6.7nm,0.6s						
HLID	**Hailey**	**38.52**	**80**	*e*P	**P**	**08 07 33.5**	**-0.4**
	1.8nm,0.9s						
HLID	**Hailey**	**38.52**	**80**	P	**P**	**08 07 35.3**	**+1.3**
	baz=304						
BMN	**Battle Mountai**	**38.63**	**86**	*e*P	**P**	**08 07 31.6**	**-3.4**
	3.2nm,0.6s						
MCMT	**McKenzie Canyo**	**38.75**	**77**	*

TMUT	Trail Mountain 8.5nm,1.2s	42.98	83	eP	P	08 08 10.2	-0.8
MURC	Murrieta baz=313	43.04	94	P	P	08 08 13.6	+2.5
P17A	Butcher Ranch, 6.1nm,1.3s	43.16	82	eP	P	08 08 12.6	+0.4
GMRC	Granite Mounta baz=312	43.18	91	P	P	08 08 14.3	+1.9
MTPU	Mount Pierson 1.2nm,1.0s	43.18	85	eP	P	08 08 15.2	+2.6
LCMT	Little Creek M 3.4nm,0.8s	43.19	87	eP	P	08 08 11.6	-0.9
Q16A	Castle Valley 4.4nm,0.8s	43.24	83	eP	P	08 08 07.9	-5.0
PFO	Pinyon Flats O baz=312	43.48	93	P	P	08 08 16.9	+2.1
BELC	Belle Mtn. Jos baz=312	43.50	92	P	P	08 08 16.8	+1.8
SRU	San Rafael Swe 4.8nm,0.9s	43.52	83	eP	P	08 08 14.8	-0.3
109C	Camp Elliot, M baz=313	43.58	94	P	P	08 08 17.4	+1.9
K22A	Casper 3.0nm,0.6s	43.76	76	eP	P	08 08 17.4	+0.4
K22A	Casper baz=306	43.76	76	P	P	08 08 18.6	+1.6
RWWY	Rawlins 5.9nm,1.1s	43.93	77	eP	P	08 08 18.0	-0.5
MONP2	Monument Peak baz=313	43.99	94	P	P	08 08 21.7	+2.6
W13A	Hualapai Mount 3.7nm,0.6s	44.05	89	eP	P	08 08 17.4	-2.1
BC3	Big Chuckawall baz=312	44.06	92	P	P	08 08 21.6	+2.1
U15A	North Rim 8.3nm,1.1s	44.15	87	eP	P	08 08 19.7	-0.7
O20A	White River Ci 7.7nm,0.6s	44.26	80	eP	P	08 08 17.8	-3.3
O20A	White River Ci baz=308,SNR=9.3	44.26	80	P	P	08 08 22.4	+1.3
SWSC	Sam W. Stewart baz=313	44.34	93	P	P	08 08 24.0	+2.4
IKP	In-Ko-Pah, Jac baz=313	44.35	94	P	P	08 08 23.8	+2.0
PDMCI	Parker Dam,Lak baz=312	44.43	91	P	P	08 08 24.4	+2.1
Y12C	Blythe 4.1nm,0.7s	44.57	91	eP	P	08 08 22.1	-1.3
Y12C	Blythe baz=312	44.57	91	P	P	08 08 25.5	+2.1
PV22	Blue Mesa, Par 7.8nm,1.3s	44.93	82	eP	P	08 08 26.9	+0.4
PV17	East Wray Mesa 15nm,1.3s	44.99	82	eP	P	08 08 27.9	+0.9
PV11	David Mesa, Pa 8.5nm,0.6s	45.03	82	eP	P	08 08 26.0	-1.3
PV05	Paradox Valley 12nm,1.5s	45.03	83	eP	P	08 08 25.2	-2.1
N23A	Red Feather La baz=308	45.17	77	P	P	08 08 29.9	+1.5
PV02	Paradox Valley 5.9nm,0.6s	45.17	82	eP	P	08 08 27.9	-0.5
WUAZ	Wupatki 5.6nm,0.6s	45.31	87	eP	P	08 08 29.2	-0.3
WUAZ	Wupatki baz=311,SNR=6.5	45.31	87	P	P	08 08 31.5	+1.9
PV01	Paradox Valley 5.2nm,0.6s	45.32	82	eP	P	08 08 27.2	-2.4
Y14A	Wickenburg 2.3nm,0.7s	45.37	90	eP	P	08 08 30.6	+0.7
SMCO	Snowmass 3.2nm,1.3s	45.62	80	eP	P	08 08 34.2	+2.0
MVCO	Mesa Verde 4.9nm,1.4s	45.95	83	eP	P	08 08 36.3	+1.6
MVCO	Mesa Verde baz=310	45.95	83	P	P	08 08 36.3	+1.6
X16A	Lo Mia Camp, P 3.0nm,0.8s	46.00	88	eP	P	08 08 37.8	+2.7
W18A	Petrified Fore baz=312	46.58	86	P	P	08 08 42.3	+2.8
S22A	4UR Ranch, Cre 3.0nm,1.3s	46.62	81	eP	P	08 08 40.4	+0.4
S22A	4UR Ranch, Cre baz=310	46.62	81	P	P	08 08 42.0	+2.0
214A	Organ Pipe Nat baz=314	46.84	92	P	P	08 08 43.0	+1.5
SDCO	Great Sand Dun 2.6nm,0.9s	47.42	81	eP	P	08 08 46.9	+0.6
SDCO	Great Sand Dun baz=310,SNR=6.0	47.42	81	P	P	08 08 47.8	+1.5
TUC	Tucson 3.7nm,0.8s	47.84	90	eP	P	08 08 51.5	+2.2
TUC	Tucson baz=313	47.84	90	P	P	08 08 51.2	+1.9
KSCO	Kaye Shedlock' baz=310	48.33	77	P	P	08 08 54.6	+1.5
T25A	Trinidad 16nm,1.4s	48.48	80	eP	P	08 08 54.3	0.0
T25A	Trinidad baz=311,SNR=6.5	48.48	80	P	P	08 08 55.8	+1.5
LAZ	Ladron	48.64	85	eP	P	08 08 56.2	+0.6
TASM	ASL Pad, Albuq baz=312	48.69	84	P	P	08 08 57.9	+1.9
TASM	ASL Pad, Albuq baz=312	48.69	84	P	P	08 08 57.9	+1.9
ANMO	Albuquerque baz=312	48.69	84	P	P	08 08 57.2	+1.2
ECSD	EROS Data Cent baz=308	48.87	69	P	P	08 08 57.6	+0.6
LENM	Lemitar	48.90	85	eP	P	08 08 55.3	-2.3
121A	Cookes Peak, D baz=313	49.52	87	P	P	08 09 04.6	+2.3
SPMN	Marine on St. baz=308	50.08	65	P	P	08 09 07.4	+1.2
F38A	Pierce - Schro baz=308	50.14	64	P	P	08 09 07.6	+1.0
F40A	Park Falls baz=309	51.12	63	P	P	08 09 14.8	+0.7
ILULI	Ilulissat 85nm,0.3s	51.15	23	eP	P	08 09 16.9	+3.0
HHC	Hu-ho-hao-te	51.44	289	eP	P	08 09 16.1	-0.6
HHC	comp=Z,11nm,0.8s			pmax	pmax		
HHC	comp=Z,44nm,5.3s			pmax	pmax		
MNTX	Cornudas Mount comp=Z,3.2nm,0.8s	51.56	86	eP	P	08 09 19.0	+1.4
MNTX	Cornudas Mount baz=314,SNR=6.9	51.56	86	P	P	08 09 19.4	+1.9
MSTX	Muleshoe baz=313	51.59	82	P	P	08 09 19.2	+1.4
AMTX	Amarillo baz=312	51.63	81	P	P	08 09 19.3	+1.2
E43A	Lone Tree Farm baz=309	52.51	60	P	P	08 09 24.9	+0.6
WMOK	Wichita Mounta baz=313	53.47	79	P	P	08 09 32.9	+1.3
M41A	Milan baz=311	53.82	67	P	P	08 09 35.1	+1.0
D47A	Chapleau baz=311	54.11	58	P	P	08 09 36.4	+0.2
TX31	Lajitas Ar. Si comp=Z,4.3nm,0.8s	54.28	87	eP	P	08 09 35.9	-1.9
TXAR	Lajitas Array comp=Z,3.4nm,0.7s,baz=300,slow=5.4,SNR=44	54.28	87	P	P	08 09 36.1	-1.6
JCT	Junction City baz=315	55.82	83	P	P	08 09 49.7	+1.0
U40A	Yellville baz=313	55.88	73	P	P	08 09 48.9	-0.2
W39A	Magazine baz=314	56.13	75	P	P	08 09 52.1	+1.2
SFIN	Lafayette baz=313	56.42	66	P	P	08 09 54.0	+1.1
MIAR	Mount Ida baz=314	56.70	75	P	P	08 09 55.9	+1.0
Q45A	Warren Harvey, baz=313	56.84	68	P	P	08 09 57.3	+1.4
F52A	Sundridge baz=313	56.89	57	P	P	08 09 56.8	+0.7
S44A	Carbondale baz=313	57.04	70	P	P	08 09 57.8	+0.4
W41B	Gary Mavity, V baz=314	57.05	74	P	P	08 09 58.2	+0.8
BUKO	Buck Lake baz=313	57.10	57	P	P	08 09 57.7	+0.1
D54A	Lac Fusel, La baz=313	57.30	54	P	P	08 09 59.4	+0.3
833A	Chaparral WMA, baz=316	57.61	85	P	P	08 10 03.2	+1.8
G53A	Haliburton baz=313	57.71	57	P	P	08 10 03.1	+1.1
Q47A	Bedord North L baz=314	57.79	67	P	P	08 10 02.5	-0.1
J52A	Paris baz=314	58.05	59	P	P	08 10 05.5	+1.1
BANO	Bancroft baz=314	58.14	56	P	P	08 10 05.6	+0.7
T46A	Princeton baz=314	58.27	69	P	P	08 10 07.2	+1.2
T47A	Sharon Grove baz=314	58.76	69	P	P	08 10 10.9	+1.4
H55A	Tweed baz=314	58.85	56	P	P	08 10 10.3	+0.5
S48A	Wiedeman Farm, baz=314	58.89	68	P	P	08 10 11.7	+1.4
J54A	Appleton baz=314	58.99	58	P	P	08 10 11.3	+0.4
V46A	Holladay baz=314	59.02	70	P	P	08 10 12.7	+1.5
LZH	Lanzhou	59.12	290	eP	P	08 10 12.3	+0.2
LZH				pP	sP	08 10 15.5	-1.9
LZH				sP	pP	08 10 17.3	+1.4
LZH				ePP	PP	08 12 24.3	+1.9
LZH	comp=Z,18nm,1.3s			pmax	pmax		
LZH	comp=Z,49nm,7.2s			pmax	pmax		
LZH	comp=N,52nm,15.6s			LR	LR		
LZH	comp=E,61nm,16.0s			LR	LR		
LZH	comp=Z,83nm,17.4s			LR	LR		
W46A	Michie baz=315	59.34	71	P	P	08 10 14.7	+1.3
U48A	Cassie Pea, Po baz=315	59.42	69	P	P	08 10 15.0	+1.0
Q51A	Peebles baz=314	59.45	65	P	P	08 10 15.2	+1.0
O52A	Adamsville baz=314	59.51	63	P	P	08 10 15.0	+0.4
T49A	Edmonton baz=315	59.57	68	P	P	08 10 15.5	+0.5
O53A	New Philadelph baz=315	59.75	62	P	P	08 10 17.1	+0.9
R51A	Hillsboro baz=315	59.83	65	P	P	08 10 17.4	+0.6
T50A	Nancy baz=315	60.03	67	P	P	08 10 19.0	+0.8
W48A	Pulaski baz=315	60.17	70	P	P	08 10 20.2	+1.0
M55A	Ridgway baz=315	60.20	60	P	P	08 10 20.1	+0.7
M56A	Emporium baz=315	60.50	59	P	P	08 10 22.2	+0.9
N55A	Marion Center baz=315	60.57	61	P	P	08 10 22.7	+0.8
X48A	Hartselle baz=315	60.59	71	P	P	08 10 23.2	+1.2
N56A	West Decatur baz=315	60.84	60	P	P	08 10 23.9	+0.2
R54A	Victor baz=316	61.34	64	P	P	08 10 28.1	+0.9
S54A	Dingess, Beckl baz=316	61.44	64	P	P	08 10 29.0	+1.1
Y50A	Piedmont baz=316	61.75	70	P	P	08 10 29.9	0.0
Z49A	Columbiana baz=316	61.79	72	P	P	08 10 30.6	+0.4
T54A	Tazewell baz=316	61.82	65	P	P	08 10 30.8	+0.3
149A	Jones baz=316	62.07	72	P	P	08 10 32.7	+0.7
Z50A	Ashland baz=316	62.10	71	P	P	08 10 32.9	+0.6
Y51A	Rockmart baz=316	62.13	70	P	P	08 10 33.4	+0.9
PKME	Peaks-Kenny Pk baz=317	62.23	51	P	P	08 10 33.0	+0.1
WMQ	Urumqi	62.24	306	eP	P	08 10 36.4	+3.2
249A	Camden baz=316	62.33	73	P	P	08 10 34.8	+1.1
MK32	Makanchi Array	62.60	312	eP	P	08 10 34.0	-1.6
MKAR	Makanchi Array comp=Z,0.5nm,0.8s,baz=50,slow=7.8,SNR=3.6	62.60	312	P	P	08 10 34.0	-1.5
CD2	Chengdu	62.87	286	eP	P	08 10 36.0	-1.6
251A	Midway baz=317	63.24	72	P	P	08 10 41.5	+1.6
V56A	Mocksville baz=316	63.33	65	P	P	08 10 41.6	+1.1
KMSC	Kings Mountain baz=316	63.35	66	P	P	08 10 41.4	+0.8
Y54A	Tignall baz=317	63.51	68	P	P	08 10 41.6	-0.1
Z54A	Sparta baz=317	63.88	69	P	P	08 10 44.6	+0.5
KSH	Kashi	71.16	311	eP	P	08 11 31.9	+1.7
AS31	Alice Springs	89.30	228	eP	P	08 13 06.5	-1.2
ASAR	Alice Springs comp=Z,0.6nm,0.6s,baz=30,slow=4.5,SNR=9.9	89.31	228	P	P	08 13 06.5	-1.3

*JMA **17** 08:18:56.5±0.2, 24°.27N×121°.44E, h2km±3km, M3.2*
*TAP **17** 08:18:56.6, 24°.28N×121°.49E, h6km, ML3.6, C*
*ISCJB **17** 08:18:57.1±0.2, 24°.279N±0°.009×121°.51E±0°.01, h2km±2km, Error ellipse: s-maj=2.0km s-min=1.3km az=28.4*

ISC 17 08:18:57.2±0.8, 24°.28N±0°.01×121°.49E±0°.01, h6km±6km, n104, σ0.9/71/166, 37C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi baz=184	0.07	185	⇓P	Pg	08 18 59.3	+0.2
ETLH				S	Sg	08 19 00.6	+0.2
NACB	Ninganchiao baz=138	0.14	138	⇑P	Pg	08 19 00.5	+0.3
NACB				S	Sg	08 19 02.5	+0.4
NNSB	Datong baz=326	0.17	326	⇓P	Pg	08 19 00.7	-0.1
NNSB				S	Sg	08 19 03.2	0.0
NNS	Nan Shan baz=327	0.19	326	P	Pg	08 19 01.0	-0.1
NNS				S	Sg	08 19 03.7	+0.1
TWD	Chiawan baz=152	0.22	154	⇑P	Pg	08 19 01.9	+0.3
TWD				S	Sg	08 19 05.0	+0.5
WHF	Hehuan Shan baz=235	0.25	236	⇑iP	Pg	08 19 02.1	0.0
WHF				iS	Sg	08 19 05.3	-0.2
ENA	Nanau baz=59	0.27	58	⇑iP	Pg	08 19 02.4	-0.2
ENA				eS	Sg	08 19 05.9	-0.3
NANB	Nanao baz=46	0.28	59	⇑P	Pg	08 19 02.3	-0.3
NANB				eS	Sg	08 19 05.7	-0.7
TDCB	Techi baz=255	0.30	265	⇑P	Pg	08 19 03.4	+0.2
TDCB				S	Sg	08 19 07.1	-0.1
NDT	Datong Townshi baz=4.0	0.32	4	⇑iP	Pg	08 19 03.5	+0.1
NDT				S	Sg	08 19 07.4	-0.3
HWA	Hwalien baz=160	0.32	161	eP	Pg	08 19 04.1	+0.6
HWA				eS	Sb	08 19 09.3	-1.4
CHGB	Renai baz=233	0.36	233	⇑P	Pg	08 19 04.3	0.0
CHGB				S	Sg	08 19 09.1	-0.1
ENTT	Nioudou baz=12	0.36	11	⇑iP	Pg	08 19 04.4	+0.1
ENTT				iS	Sg	08 19 09.1	-0.1
ENLB	Shoufeng baz=164	0.39	165	⇑eP	Pg	08 19 04.0	-0.8
YHNB	Yeheng baz=345	0.40	345	⇑P	Pg	08 19 05.2	+0.1
YHNB				S	Sg	08 19 10.2	-0.1
NSK	Sanguang baz=344	0.41	343	⇑iP	Pg	08 19 05.4	+0.2
NSK				S	Sg	08 19 10.4	-0.2
OWD	Renai baz=221	0.43	221	⇑P	Pg	08 19 05.4	-0.2
OWD				eS	Sg	08 19 10.6	-0.8
TWC	Suao baz=37	0.46	45	⇑iP	Pg	08 19 05.9	-0.2
TWC				iS	Sg	08 19 11.7	-0.5
TWE	Neicheng baz=34	0.47	20	⇑iP	Pg	08 19 06.3	+0.1
TWE				S	Sg	08 19 12.2	-0.1
ESL	Shilin baz=173	0.47	186	⇑iP	Pg	08 19 06.2	-0.1
NWLT	Wulai baz=355	0.49	1	⇑P	Pg	08 19 06.9	+0.1
NWLT				eS	Sg	08 19 12.8	-0.5
WHP	Taichung City baz=269	0.50	270	⇑iP	Pb	08 19 07.5	-0.9
WHP				S	Sg	08 19 14.0	+0.7
ILA	Ilan baz=27	0.54	26	P	Pg	08 19 08.1	+0.5
ILA				S	Sg	08 19 15.6	+1.0
LIOB	Emei baz=310	0.56	310	eP	Pb	08 19 08.9	-0.6
LIOB				S	Sb	08 19 16.4	-1.4
NSTT	Nanjuang baz=308	0.56	308	eP	Pg	08 19 08.6	+0.4
NSTT				eS	Sg	08 19 16.0	+0.5
DPDB	Guoxing baz=244	0.57	244	⇑iP	Pg	08 19 08.6	+0.4
DPDB				eS	Sg	08 19 15.2	-0.4
WLTB	Daxi baz=339	0.61	339	eP	Pb	08 19 09.7	-0.5
WLTB				eS	Sb	08 19 18.7	-0.4
EGFH	Guangfu baz=186	0.61	185	P	Pg	08 19 09.0	0.0
EGFH				eS	Sg	08 19 17.2	+0.3
VWDT	VWDT baz=216	0.61	211	⇑P	Pg	08 19 08.7	-0.4
EOS1	EOS1 baz=56	0.64	65	⇑P	Pg	08 19 09.9	+0.4
EOS1				S	Sb	08 19 19.4	-0.5
NTC	Toucheng baz=29	0.65	28	⇑P	Pg	08 19 09.5	-0.2
NTC				eS	Sg	08 19 18.2	+0.1
TWQ1	Liyutan baz=275	0.66	276	⇑iP	Pb	08 19 10.9	-0.2
TWQ1				S	Sb	08 19 19.4	-1.1
SMLT	Sun Moon Lake baz=233	0.67	234	⇑iP	Pg	08 19 10.2	+0.1
SMLT				iS	Sg	08 19 19.4	+0.6
NSY	Sanyi baz=281	0.68	282	eP	Pb	08 19 11.6	+0.1
NSY				eS	Sb	08 19 20.5	-0.6
NHDH	Xindian Distri baz=2.0	0.68	3	eP	Pg	08 19 10.2	-0.1
NHDH				S	Sg	08 19 19.4	+0.2
SBCB	Hsinchu baz=318	0.69	318	eP	Pn	08 19 12.4	-1.0
NMLH	Miaoli baz=291	0.69	292	eP	Pb	08 19 11.4	-0.1
NMLH				S	Sb	08 19 21.4	+0.1
TATO	Taipei baz=11	0.69	360	⇑P	Pg	08 19 11.0	+0.5
TATO				S	Sg	08 19 19.2	-0.3
SSLB	Suanglung baz=234	0.69	225	⇑P	Pg	08 19 10.1	-0.5
SSLB				S	Sg	08 19 18.5	-1.1
TWA	Mucha baz=7.0	0.70	7	P	Pg	08 19 11.0	+0.3
TWA				S	Sg	08 19 19.7	-0.1
HSN	Hsinchu baz=322	0.70	318	eP	Pn	08 19 12.6	-1.1
PTSB	Yuanli baz=283	0.73	283	P	Pb	08 19 12.8	+0.5
PTSB				S	Sb	08 19 22.9	+0.2
NCUH	Zhongli baz=344	0.74	338	eP	Pn	08 19 13.2	-1.0
NCUH				eS	Sn	08 19 25.3	-0.4
NCU	National Centr baz=345	0.74	338	eP	Pb	08 19 12.7	+0.3
NCU				eS	Sn	08 19 24.4	-1.3
TIPB	Shuangxi baz=12	0.75	24	⇑iP	Pg	08 19 11.4	-0.2
TIPB				iS	Sg	08 19 20.7	-0.8
TCU	Taichung baz=259	0.76	260	eP	Pb	08 19 13.0	+0.2
WDJ	Dajia District baz=275	0.78	275	eP	Pn	08 19 13.6	-1.0
EHY	Hungye baz=183	0.79	191	eP	Pg	08 19 11.7	-0.7
HGSD	Ruisui baz=192	0.79	184	⇑P	Pg	08 19 12.3	0.0
TWS1	Kuangyinshan baz=10.0	0.82	355	eP	Pb	08 19 13.8	0.0
WHYT	Xinyi Township baz=234	0.82	225	eP	Pg	08 19 12.5	-0.5
NWF	Wu-fen Shan baz=18	0.83	19	⇑P	Pg	08 19 13.2	0.0
NWF				eS	Sb	08 19 25.2	-0.3
WFSB	Wu-fen Shan baz=18	0.83	19	P	Pg	08 19 13.3	+0.2
WFSB				eS	Sb	08 19 25.4	0.0
WJS	Zhushan baz=229	0.83	237	eP	Pb	08 19 13.7	-0.3
WNT	Mingjian baz=241	0.84	242	eP	Pb	08 19 14.2	+0.1
TWB1	Santiao Chiao baz=33	0.85	32	eP	Pg	08 19 13.1	-0.5
TWB1				eS	Sg	08 19 23.6	-1.1
YM01	YM01 baz=4.0	0.86	5	⇑P	Pb	08 19 14.4	-0.2
YM01				eS	Sg	08 19 25.7	+0.7
YM04	YM04 baz=3.0	0.87	3	⇑P	Pb	08 19 14.5	-0.2
YM10	YM10 baz=5.0	0.87	4	⇑P	Pb	08 19 14.6	-0.2
WCHH	Zhanghua baz=257	0.87	257	eP	Pb	08 19 14.6	-0.2
YM05	YM05 baz=4.0	0.88	4	P	Pb	08 19 14.8	-0.2
YM05				eS	Sb	08 19 28.0	+1.0
YM03	YM03 baz=16	0.90	3	⇑P	Pb	08 19 14.8	-0.3
YM03				eS	Sb	08 19 27.8	+0.4
ANP	Anpu baz=3.0	0.90	2	eP	Pb	08 19 15.1	-0.2
YULB	Yu-li baz=186	0.90	191	P	Pg	08 19 13.9	-0.6
YULB				S	Sg	08 19 26.4	+0.2

YM08	**YM08**	**0.91**	**6**	*eP*		**Pg**	**08 19 14.9**	**+0.2**
	baz=6.0							
TWF1	**Yuli**	**0.94**	**191**	P		**Pg**	**08 19 14.7**	**-0.6**
	baz=191							
TWF1				*eS*		**Sb**	**08 19 28.2**	**-0.5**
	baz=191							
TWY	**Chenhua**	**0.99**	**6**	*eP*		**Pb**	**08 19 16.8**	**-0.1**
	baz=6.0							
TWY				*eS*		**Sg**	**08 19 29.6**	**+0.4**
	baz=6.0							
CHN5	**Tsauling**	**1.01**	**228**	⇑P		**Pb**	**08 19 17.1**	**-0.1**
	baz=229							
CHN5				S		**Sn**	**08 19 32.6**	**+0.1**
	baz=229							
WDLH	**Douliu**	**1.05**	**236**	*eP*		**Pn**	**08 19 18.1**	**-0.4**
	baz=237							
RLNB	**Erlin**	**1.10**	**250**	*eP*		**Pn**	**08 19 18.8**	**-0.4**
	baz=250							
ELDTW	**Lidau**	**1.17**	**202**	*eP*		**Pg**	**08 19 19.0**	**-0.7**
	baz=202							
ELDTW				*eS*		**Sg**	**08 19 34.3**	**-0.6**
	baz=202							
CHKT	**Chengkung**	**1.18**	**186**	*eP*		**Pn**	**08 19 20.1**	**-0.2**
	baz=185							
CHN4	**Tsaushan**	**1.24**	**222**	⇑P		**Pg**	**08 19 21.1**	**+0.2**
	baz=223							
CHN4				*eS*		**Sn**	**08 19 41.2**	**+3.1**
	baz=223							
CHY	**Chiayi**	**1.25**	**232**	⇑P		**Pg**	**08 19 21.1**	**-0.1**
	baz=232							
TPUB	**Ta-pu**	**1.25**	**219**	⇑P		**Pg**	**08 19 21.2**	**-0.1**
	baz=221							
TPUB				S		**Sn**	**08 19 38.7**	**+0.3**
	baz=221							
STYT	**Tauyuan**	**1.30**	**211**	*eP*		**Pg**	**08 19 22.1**	**0.0**
	baz=212							
STYT				*eS*		**Sn**	**08 19 40.1**	**+0.5**
	baz=212							
WSF	**Szhu**	**1.32**	**241**	*eP*		**Pn**	**08 19 21.7**	**-0.5**
	baz=242							
JYNG	**Yonaguni jima**	**1.34**	**82**	P		**Pn**	**08 19 22.3**	**-0.1**
JYNG				*eS*		**Sn**	**08 19 40.3**	**-0.2**
TWK	**Hsinying**	**1.36**	**222**	*eP*		**Pg**	**08 19 23.2**	**-0.2**
	baz=224							
TWK				*eS*		**Sg**	**08 19 44.2**	**+3.1**
	baz=224							
SNST	**Tainan City**	**1.39**	**221**	*eP*		**Pg**	**08 19 23.8**	**-0.1**
	baz=222							
YOJ	**Yonaguni jima**	**1.40**	**82**	*eP*		**Pn**	**08 19 22.9**	**-0.3**
	baz=70							
YOJ				*eS*		**Sb**	**08 19 41.6**	**-0.2**
	baz=70							
YOJ	**Yonaguni jima**	**1.40**	**82**	P		**Pn**	**08 19 23.1**	**-0.1**
YOJ				*eS*		**Sb**	**08 19 41.6**	**-0.2**
CHN1	**Nanshi**	**1.40**	**219**	P		**Pg**	**08 19 24.1**	**-0.1**
	baz=221							
CHN1				*eS*		**Sg**	**08 19 45.6**	**+3.3**
	baz=221							
PCYT	**Pengchaiyu**	**1.44**	**21**	*eP*		**Pn**	**08 19 23.4**	**-0.5**
	baz=22							
SGST	**Jiashian**	**1.46**	**215**	P		**Pg**	**08 19 25.0**	**-0.1**
	baz=215							
SLGT	**Liugui**	**1.50**	**211**	*eP*		**Pg**	**08 19 25.4**	**-0.5**
	baz=212							
TWG	**Pinlang**	**1.50**	**195**	*eP*		**Pb**	**08 19 24.9**	**-0.6**
	baz=178							
TWGBT	**Beinan**	**1.50**	**195**	*eP*		**Pn**	**08 19 23.0**	**-1.7**
	baz=178							
SSD	**Sandimen**	**1.72**	**207**	*eP*		**Pg**	**08 19 29.6**	**-0.6**
	baz=208							
ECL	**Taimali**	**1.75**	**196**	*eP*		**Pb**	**08 19 28.6**	**-1.0**
	baz=180							
MASBT	**Mashibuluo**	**1.84**	**206**	*eP*		**Pb**	**08 19 31.1**	**-0.2**
	baz=206							
PNG	**Penghu**	**1.91**	**248**	*eP*		**Pn**	**08 19 30.5**	**+0.2**
	baz=250							
WDGT	**Dungji**	**1.96**	**239**	*eP*		**Pn**	**08 19 31.4**	**+0.5**
	baz=241							
EAST	**Anshuo**	**1.98**	**197**	*eP*		**Pb**	**08 19 33.2**	**-0.5**
	baz=178							
IRIF	**Iriomote-Funau**	**2.04**	**88**	P		**Pn**	**08 19 32.0**	**-0.1**
IRIF				S		**Sn**	**08 19 58.8**	**+0.9**
SCZT	**Fangliau**	**2.06**	**203**	*eP*		**Pb**	**08 19 34.5**	**-0.6**
	baz=223							
HATJ	**Hateruma jima**	**2.13**	**96**	*eS*		**Sn**	**08 20 01.0**	**+1.1**
VCHM	**Qimei**	**2.17**	**241**	*eP*		**Pn**	**08 19 34.0**	**+0.2**
	baz=242							
PTMZ	**Houxiangcun**	**2.28**	**290**	*eP*		**Pn**	**08 19 34.2**	**-1.2**
	baz=293							
JKRS	**Kuro-shima**	**2.30**	**91**	P		**Pn**	**08 19 36.7**	**+1.1**
JKRS				*eS*		**Sn**	**08 20 05.4**	**+1.2**
MATB	**Ma-tsu**	**2.33**	**323**	*eP*		**Pn**	**08 19 37.1**	**+1.1**
	baz=325							
JIJ	**Ishigaki jima**	**2.42**	**88**	P		**Pn**	**08 19 37.5**	**+0.2**
JIJ				*eS*		**Sn**	**08 20 07.3**	**+0.1**
XPSS	**Dashiqiu**	**2.89**	**336**	*eP*		**Pn**	**08 19 45.4**	**+1.7**
	baz=336							
JTJ	**Tarama**	**2.95**	**82**	P		**Pn**	**08 19 46.2**	**+1.7**

GUC 17 08:26:55.2±0.6, 24°.16S×67°.44W, h221km±11km, ML3.5, 5C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.05**	**318**	*eP*		Pn		08 27 35.9	-0.5
LVC				*eS*		S		08 28 06.8	-1.4
PB15	**IPOC Station P**	**2.09**	**296**	⇑*iP*		Pn		08 27 36.7	+0.2
PB15				*i S*		S		08 28 08.1	-0.5
GO02	**Mina Guanaco**	**2.20**	**243**	⇑*iP*		Pn		08 27 37.6	-0.1
GO02				*i S*		S		08 28 10.5	-0.2
GO02				IAML				08 28 12.8	
	comp=N,121nm,0.1s								
PB06	**IPOC Station P**	**2.44**	**306**	⇑*iP*		Pn		08 27 40.3	+0.3
PB06				*i S*		S		08 28 13.8	-1.0
PB06				IAML				08 28 15.9	
	comp=E,108nm,0.1s								
PB09	**IPOC Station P**	**2.88**	**324**	⇑*iP*		Pn		08 27 45.6	+0.7
PB09				*i S*		S		08 28 23.5	-0.1
PB09				IAML				08 28 25.4	
	comp=N,38nm,0.4s								
PB04	**IPOC Station P**	**3.09**	**306**	⇓*iP*		Pn		08 27 47.7	+0.5
PB04				*i S*		S		08 28 26.6	-1.1
PB04				IAML				08 28 30.8	
	comp=N,65nm,0.1s								
PB07	**IPOC Station P**	**3.31**	**316**	⇓*iP*		Pn		08 27 49.9	+0.1
PB07				*i S*		S		08 28 30.5	-1.9
PB02	**IPOC Station P**	**3.63**	**321**	*eP*		Pn		08 27 53.6	+0.1
PB01	**IPOC Station P**	**3.63**	**328**	⇑*iP*		Pn		08 27 53.5	-0.1
PB08	**IPOC Station P**	**4.30**	**338**	*eP*		Pn		08 28 02.7	+0.7
PB08				IAML				08 28 54.7	
	comp=E,19nm,0.3s								

IDC 17 08:35:55.6±2.6, 53°.55N×86°.85E, h0km, mb1 2.7/2, mb1mx2.7/36, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=24.9km s-min=14.5km az=73.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**289**	*i*				08 42 45.1	
	baz=107,slow=333,SNR=13								
ZALV	**Zalesovo Beam**	**1.27**	**289**			Pg	Pg	08 36 18.2	-1.7
	2.0nm,0.3s,baz=104,slow=17,SNR=6.5								
ZALV						Lg	Lg	08 36 37.0	
	0.9nm,0.3s,baz=112,slow=27,SNR=14								
ZALV						Rg	Rg	08 36 46.8	
	14nm,1.0s,baz=93,slow=30,SNR=5.5								
KURBB	**Kurchatov Arra**	**5.91**	**244**			Pn	Pn	08 37 25.4	+1.2
	0.1nm,0.3s,baz=62,slow=14,SNR=5.3								
MKAR	**Makanchi Array**	**7.37**	**205**			Pn	Pn	08 37 45.5	+1.2
	0.1nm,0.3s,baz=28,slow=15,SNR=5.7								

NNC 17 08:37:30.3±8.5, 54°.14N×86°.50E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=58.5km s-min=57.3km az=84.0, Suspected Mining explosion.

IDC 17 08:37:23.0±2.9, 54°.19N×87°.34E, h0km, mb1 2.9/2, mb1mx2.8/37, mbtmp2.9/2, ML2.4/2, 3C-5D, Error ellipse: s-maj=23.9km s-min=18.8km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**262**	*i*				08 44 56.5	
	baz=84,slow=318,SNR=4.2								
ZALV	**Zalesovo Beam**	**1.50**	**262**			Pn	Pn	08 37 49.9	-1.3
	5.5nm,0.3s,baz=79,slow=16,SNR=19								
ZALV						Lg	Lg	08 38 10.4	
	2.2nm,0.3s,baz=78,slow=25,SNR=9.1								
KURK	**Kurchatov**	**6.36**	**240**	⇓Pn		Pn	Pn	08 39 00.0	+2.1
	2.5nm,0.9s								
KURK				⇑Sn		Sn	Sn	08 40 06.7	-4.5
	2.5nm,1.1s								
KURK				⇑Lg		Lg	Lg	08 40 39.9	
	8.5nm,1.1s								
KURBB	**Kurchatov Arra**	**6.46**	**240**			Pn	Pn	08 39 00.1	+0.8
	0.1nm,0.3s,baz=56,slow=14,SNR=11								
KURBB						Sn	Sn	08 40 13.9	+0.3
	0.1nm,0.3s,baz=56,slow=21,SNR=2.6								
KURBB						Lg	Lg	08 40 48.0	
	0.0nm,0.3s,baz=52,slow=26,SNR=6.1								
KURBB	**Kurchatov Arra**	**6.46**	**240**	⇓Pn		Pn	Pn	08 38 59.2	-0.1
	1.3nm,0.5s,baz=59,slow=14								
KURBB				⇓Sn		Sn	Sn	08 40 11.6	-2.1
	4.1nm,0.7s								
KURBB				⇓Lg		Lg	Lg	08 40 43.7	
	18nm,1.0s,baz=37,slow=34								
MK31	**Makanchi Array**	**8.07**	**206**	⇑Sn		Sn	Sn	08 40 57.7	+4.4
	0.3nm,0.5s								
MK31				⇓Lg		Lg	Lg	08 41 38.5	
	4.3nm,1.1s,baz=222,slow=30,SNR=4.2								
MKAR	**Makanchi Array**	**8.07**	**206**	Pn		Pn	Pn	08 39 22.6	+1.2
	0.1nm,0.3s,baz=24,slow=14,SNR=3.4								
MKAR				Lg		Lg	Lg	08 41 40.4	
	0.1nm,0.3s,baz=27,slow=33,SNR=6.2								

KRSC 17 08:41:25.9±1.6, 49°.73N×156°.61E, h94km±23km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.01**	**342**	P		Pn		08 41 46.4	+0.6
SKR				S		Sn		08 42 01.0	+0.2
ALID	**Alaid**	**1.33**	**330**	P		Pn		08 41 51.1	+1.3
ALID				S		Sn		08 42 09.6	+1.8
PAU	**Pauzhetka**	**1.75**	**4**	P		Pn		08 41 57.0	+2.2
PAU				S		Sn		08 42 19.8	+2.9
KDTR	**Khodutka, Kamc**	**2.28**	**24**	P		Pn		08 42 03.8	+2.0
KDTR				S		Sn		08 42 31.9	+2.5
ASAK	**Asacha**	**2.78**	**17**	P		Pn		08 42 10.9	+2.4
MTVR	**Mutnovka**	**2.93**	**19**	S		Sn		08 42 48.8	+3.7
RUS	**Russkaya**	**2.96**	**23**	P		Pn		08 42 13.1	+2.2
RUS				S		Sn		08 42 48.4	+2.8
UGLR	**Uglovaya**	**3.75**	**21**	P		Pn		08 42 23.8	+2.2
KOK	**Koryaka**	**3.79**	**19**	P		Pn		08 42 25.9	+3.8
SDLR	**Sedlovina**	**3.83**	**21**	P		Pn		08 42 25.0	+2.3
NLC	**Nalytchevo**	**3.85**	**25**	S		Sn		08 43 07.7	+0.8
SPN	**Mys Shipunski**	**4.00**	**31**	P		Pn		08 42 27.8	+3.0
SPN				S		Sn		08 43 13.1	+2.6
MKZ	**Mys Kozlova**	**5.77**	**31**	P		Pn		08 42 50.3	+1.5
MKZ				S		Sn		08 43 54.3	+0.7

ISCJB 17 08:54:17.9±1.1, 6°.3S±0°.2×149°.0E±0°.3, h53km, mb3.9/5, Error ellipse: s-maj=45.1km s-min=10.3km az=28.4
IDC 17 08:54:21.6±2.0, 6°.36S×148°.84E, h67km±19km, mb3.7/5, mb1 4.0/7, mb1mx3.5/34, mbtmp4.1/7, Error ellipse: s-maj=57.2km s-min=11.1km az=122.0

ISC 17 08:54:20.1±1.2, 6°.3S±0°.2×148°.8E±0°.3, h53km, n8, σ0s56/12, mb3.9/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.52**	**207**	P			**Pn**	**08 55 12.5**	**+0.2**
	50nm,0.3s,baz=39,slow=5.0,SNR=100								
PMG				S			**Sn**	**08 55 53.4**	**+0.6**
	27nm,0.3s,baz=2.3,slow=23,SNR=19								
WRA	**Warramunga Arr**	**19.55**	**225**	P			**P**	**08 58 43.5**	**-0.1**
	1.1nm,0.3s,baz=57,slow=9.1,SNR=17								
WRA				S			**S**	**09 02 21.8**	**+0.1**
	0.1nm,0.3s,baz=87,slow=33,SNR=4.4								
ASAR	**Alice Springs**	**22.46**	**218**	P			**P**	**08 59 14.9**	**-0.1**
	1.6nm,0.6s,baz=53,slow=9.1,SNR=37								
ASAR				S			**S**	**09 03 16.8**	**-1.5**
	1.3nm,0.8s,baz=28,slow=22,SNR=7.0								
FITZ	**Fitzroy Crossi**	**25.46**	**240**	P			**P**	**08 59 43.5**	**0.0**
	2.3nm,0.4s,baz=52,slow=8.7,SNR=14								
STKA	**Stephens Creek**	**26.36**	**194**	P			**P**	**08 59 51.1**	**-0.3**
	1.2nm,0.8s,baz=9.6,slow=12,SNR=4.2								
PETK	**Petropavlovsk-**	**59.62**	**6**	P			**P**	**09 04 18.8**	**+0.2**
	2.2nm,0.5s,baz=160,slow=5.4,SNR=6.1								
ILAR	**Eielson Array**	**85.02**	**23**	P			**P**	**09 06 49.5**	**-0.2**
	0.8nm,0.8s,baz=248,slow=5.3,SNR=8.1								
TORD	**Torodi Ar. Bea**	**146.88**	**284**	PKP			**PKPdf**	**09 13 55.8**	**0.0**
	0.6nm,0.4s,baz=60,slow=2.9,SNR=7.8								
TORD				PKPbc			**PKPbc**	**09 13 57.9**	**+0.2**
	0.6nm,0.5s,baz=76,slow=2.9,SNR=8.3								

SJA 17 09:05:11.3±0.7, 24°.00S×66°.81W, h212km±7km, ML2.7, MW3.9
ISCJB 17 09:05:12.1±0.6, 24°.00S±0°.04×66°.90W±0°.05, h200km±7km, Error ellipse: s-maj=9.1km s-min=4.4km az=136.2
GUC 17 09:05:14.3±0.4, 23°.87S×67°.18W, h238km±6km, ML3.7

ISC 17 09:05:12.4±1.1, 23°.99S±0°.05×66°.85W±0°.05, h204km±10km, n24, σ1s07/41, 9C-4D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.43**	**121**	*i P*		**Pn**		**09 05 46.1**	**+0.1**
SLA				*i S*		**S**		**09 06 11.2**	**-0.6**
HJA	**Humahuaca**	**1.54**	**60**	*i P*		**Pn**		**09 05 47.3**	**+0.2**
HJA				IAML				09 05 50.0	
	comp=Z,38nm,0.4s								
AZAP	**Zapla**	**1.65**	**99**	*i P*		**Pn**		**09 05 47.9**	**-0.1**
AZAP				IAML				09 05 49.0	
	comp=Z,94nm,0.4s								
YJA	**Yavi**	**2.18**	**35**	*i P*		**Pn**		**09 05 54.0**	**+0.4**
YJA				*i S*		**S**		**09 06 25.6**	**+0.5**
FSA	**Cafayete**	**2.26**	**160**	*i P*		**Pn**		**09 05 53.6**	**-0.4**
FSA				*i S*		**S**		**09 06 25.9**	**-0.2**
FSA				IAML				09 06 26.6	
	comp=Z,9.1nm,0.5s								
LVC	**Limon Verde**	**2.33**	**306**	*i P*		**Pn**		**09 05 55.6**	**+0.5**
LVC	**Limon Verde**	**2.33**	**306**	⇓*iP*		**Pn**		**09 05 56.0**	**+0.9**
LVC				*i S*		**S**		**09 06 28.0**	**+0.3**
PB15	**IPOC Station P**	**2.52**	**287**	⇑*iP*		**Pn**		**09 05 57.7**	**+0.7**
PB15				*i S*		**S**		**09 06 31.2**	**+0.1**
PB15	**IPOC Station P**	**2.52**	**287**	⇑*iP*		**Pn**		**09 05 57.9**	**+0.9**
PB15				*i S*		**S**		**09 06 30.9**	**-0.2**
PB06	**IPOC Station P**	**2.80**	**296**	*i P*		**Pn**		**09 06 00.4**	**+0.3**
PB06	**IPOC Station P**	**2.80**	**296**	⇑*iP*		**Pn**		**09 06 00.9**	**+0.8**
PB06				*i S*		**S**		**09 06 36.3**	**-0.5**
PB06				IAML				09 06 38.5	
	comp=E,296nm,0.1s								
PB09	**IPOC Station P**	**3.10**	**314**	*i P*		**Pn**		**09 06 04.0**	**+0.4**
PB09	**IPOC Station P**	**3.10**	**314**	⇑*iP*		**Pn**		**09 06 04.7**	**+1.1**
PB09				*eS*		**S**		**09 06 42.5**	**-0.5**
PB09				IAML				09 06 46.9	
	comp=N,57nm,0.2s								
AHML	**Horco Molle**	**3.11**	**154**	*i P*		**Pn**		**09 06 03.0**	**-0.5**
AHML				*i S*		**S**		**09 06 40.7**	**-2.3**
PB10	**IPOC Station P**	**3.42**	**277**	⇑*iP*		**Pn**		**09 06 07.7**	**+0.4**
PB04	**IPOC Station P**	**3.45**	**298**	⇑*iP*		**Pn**		**09 06 08.0**	**+0.2**
PB04				*i S*		**S**		**09 06 48.6**	**-1.9**
PB07	**IPOC Station P**	**3.59**	**308**	⇑*iP*		**Pn**		**09 06 09.7**	**+0.2**
PB07				*i S*		**S**		**09 06 51.5**	**-2.0**
PB01	**IPOC Station P**	**3.81**	**320**	⇑*iP*		**Pn**		**09 06 12.2**	**+0.1**
PB01				*i S*		**S**		**09 06 56.9**	**-1.5**
PB02	**IPOC Station P**	**3.87**	**313**	⇑*iP*		**Pn**		**09 06 12.6**	**-0.2**
PB02				*i S*		**S**		**09 06 57.4**	**-2.2**
PB08	**IPOC Station P**	**4.38**	**330**	⇑*iP*		**Pn**		**09 06 20.2**	**+0.7**
PB08				*i S*		**S**		**09 07 11.6**	**-0.1**
GO01	**Chusmiza**	**4.81**	**333**	*eP*		**Pn**		**09 06 25.7**	**+0.6**
GO01				*eS*		**S**		**09 07 21.1**	**-0.7**
PB11	**IPOC Station P**	**4.95**	**328**	⇓*iP*		**Pn**		**09 06 25.6**	**-0.7**
PB11				*i S*		**S**		**09 07 22.0**	**-2.3**
MNMC	**Minye Minye**	**5.46**	**332**	⇓*eP*		**Pn**		**09 06 32.5**	**-0.7**
MNMC				*i S*		**S**		**09 07 34.0**	**-2.5**
SYO	**Syowa Base**	**73.51**	**159**	⇓*eP*		**P**		**09 16 23.8**	**+1.5**

NEIC 17 09:08:06.9±1.6, 25°.68S×179°.43W, h452km±11km, mb4.2/30, Error ellipse: s-maj=25.0km s-min=17.2km az=156.0
ISCJB 17 09:08:13.3±0.3, 24°.57S±0°.07×179°.93E±0°.06, h507km, mb4.1/36, Error ellipse: s-maj=10.5km s-min=6.7km az=151.7
IDC 17 09:08:16.5±2.0, 24°.61S×179°.93E, h538km±22km, mb3.5/14, mb1 3.7/15, mb1mx3.6/23, mbtmp4.3/15, Error ellipse: s-maj=18.2km s-min=13.2km az=145.0

ISC 17 09:08:13.6±0.5, 24°.62S±0°.10×180°.00W±0°.10, h507km, n63, σ0s99/60, mb4.1/36, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.97**	**159**	*eP*		P		09 09 19.9	-21
NIUE	**Niue**	**10.86**	**61**	*eP*		P		09 10 34.6	-5.5
MARNC	**Mare, Loyalty**	**11.46**	**283**	*eP*		**P**		**09 10 47.7**	**+1.3**
PINNC	**Pines Island,**	**11.69**	**277**	*eP*		**P**		**09 10 50.9**	**+2.1**
OUENC	**Ouen Island, N**	**12.27**	**278**	*eP*		**P**		**09 10 55.5**	**+0.4**
ONTNC	**Ouen Toro**	**12.65**	**278**	*eP*		**P**		**09 11 00.2**	**+1.2**
DZM	**Mont Dzumac**	**12.71**	**279**	P		**P**		**09 11 02.1**	**+2.3**
	1.5nm,0.3s,baz=87,slow=17,SNR=38								
DZM	**Mont Dzumac**	**12.71**	**279**	*eP*		**P**		**09 11 01.8**	**+2.0**
URZ	**Urewera**	**13.81**	**190**	S		**S**		**09 13 37.5**	**+0.1**
	0.6nm,0.3s,baz=65,slow=22,SNR=8.1								
KHZ	**Kahutara**	**18.53**	**195**	*eP*		P		09 11 44.7	-14
	17nm,1.0s								
RPZ	**Rata Peaks**	**20.41**	**199**	P		**P**		**09 12 15.9**	**+0.6**
	7.9nm,0.5s,baz=0.0,slow=10,SNR=4.0								
ARMA	**Armidale**	**25.78**	**251**	*eP*		**P**		**09 13 02.6**	**-1.1**
	9.5nm,1.0s								
EIDS	**Eidsvold**	**26.20**	**262**	*eP*		**P**		**09 13 07.4**	**0.0**
	11nm,1.1s								
CTAO	**Charters Tower**	**31.49**	**271**	*eP*		**P**		**09 13 53.9**	**+0.4**
	11nm,0.6s								
RABL	**Rabaul**	**33.62**	**303**	*eP*		P		09 14 17.4	+5.7
	128nm,0.4s								
STKA	**Stephens Creek**	**34.46**	**249**	P		**P**		**09 14 19.4**	**+0.9**
	3.7nm,0.6s,baz=95,slow=10,SNR=20								
STKA	**Stephens Creek**	**34.46**	**249**	*eP*		**P**		**09 14 19.2**	**+0.6**
	0.8nm,0.7s								
BBOO	**Buckleboo**	**39.17**	**248**	*eP*		**P**		**09 14 56.7**	**-0.6**
	5.8nm,1.0s								
ASAR	**Alice Springs**	**41.92**	**261**	P		**P**		**09 15 19.6**	**+0.1**
	2.3nm,0.6s,baz=92,slow=7.0,SNR=33								
ASAR				PcP		**PcP**		**09 17 03.6**	**+0.2**
	0.5nm,0.7s,baz=94,slow=5.8,SNR=4.2								
ASAR				ScP		**ScP**		**09 20 02.1**	**-3.3**
	0.7nm,1.0s,baz=115,slow=4.2,SNR=2.9								
ASAR				S		**S**		**09 20 58.9**	**-2.2**
	0.3nm,0.8s,baz=104,slow=15,SNR=4.4								
WB2	**Warramunga Arr**	**42.35**	**267**	*eP*		**P**		**09 15 22.5**	**-0.5**
	5.5nm,0.5s								
WRAB	**Tennant Creek**	**42.36**	**267**	*eP*		**P**		**09 15 22.5**	**-0.5**
	5.4nm,0.5s								
WRA	**Warramunga Arr**	**42.37**	**267**	P		**P**		**09 15 22.7**	**-0.3**
	4.4nm,0.4s,baz=94,slow=8.7,SNR=75								
FORT	**Forrest**	**46.07**	**250**	*eP*		**P**		**09 15 50.6**	**-1.0**
	12nm,0.5s								
MTN	**Manton Dam**	**47.52**	**275**	*eP*		**P**		**09 16 02.2**	**-0.5**
	6.6nm,0.4s								
MJAR	**Matsushiro Arr**	**72.50**	**326**	P		**P**		**09 18 48.0**	**-0.5**
	1.7nm,0.7s,baz=177,slow=5.5,SNR=5.8								
MAW	**Mawson**	**77.08**	**200**	P		**P**		**09 19 14.4**	**+0.7**
	1.9nm,0.7s,baz=132,slow=7.9,SNR=6.3								
KSRS	**Korea Array**	**78.80**	**320**	P		**P**		**09 19 23.6**	**+0.1**
	1.0nm,0.6s,baz=129,slow=6.2,SNR=5.4								
PETK	**Petropavlovsk-**	**79.80**	**347**	P		**P**		**09 19 28.3**	**-0.1**
	4.0nm,0.6s,baz=128,slow=6.6,SNR=9.6								
USRK	**Ussuriysk Ar.**	**81.37**	**327**	P		**P**		**09 19 37.3**	**+0.5**
	1.2nm,0.5s,baz=211,slow=3.3,SNR=5.6								
KMRM	**Mail Ridge**	**83.09**	**40**	*eP*		**P**		**09 19 46.5**	**+0.8**
	7.1nm,1.1s								
JCC	**Jacoby Creek,**	**83.29**	**39**	*eP*		**P**		**09 19 47.4**	**+0.9**
	5.9nm,1.1s								
VNA3	**Neumayer Olymp**	**84.16**	**177**	PKPdf		**P**		**09 19 50.8**	**+0.3**
VNA2	**Neumayer--Watz**	**84.57**	**178**	PKPdf		**P**		**09 19 52.9**	**+0.4**
	baz=190,slow=3.9								
NVAR	**Mina Array Bea**	**85.27**	**44**	P		**P**		**09 19 57.0**	**+0.3**
	1.0nm,0.8s,baz=222,slow=9.0,SNR=10								
NV11	**Mina Array Sit**	**85.36**	**44**	*eP*		**P**		**09 19 57.4**	**+0.4**
TPNV	**Topopah Spring**	**85.73**	**46**	*eP*		**P**		**09 19 58.7**	**-0.2**
	1.8nm,0.6s								
KVN	**Kaiserville**	**85.77**	**44**	*eP*		**P**		**09 19 59.3**	**+0.2**
	2.0nm,0.7s								
PINE	**Pine Mountain**	**86.95**	**38**	*eP*		**P**		**09 20 05.3**	**+0.7**
	7.7nm,1.0s								
CNPM	**China Poot**	**87.12**	**14**	*eP*		**P**		**09 20 04.4**	**-0.3**
	4.7nm,0.6s								
HOM	**Homer**	**87.16**	**14**	*eP*		**P**		**09 20 04.7**	**-0.1**
	31nm,0.8s								
**I

SRCK	**Saricakaya, Es**	**1.05**	**68**	PG	**Pb**	**09 27 00.7**	**-0.2**
SRCK				SG	**Sn**	**09 27 15.8**	**-0.6**
SRCK	**Saricakaya, Es**	**1.05**	**68**	*i* P	**Pg**	**09 27 00.3**	**-0.2**
SRCK				*i* S	**Sn**	**09 27 17.7**	**+1.3**
SRCK				IAML_P			
	comp=Z,1μm,0.1s						
BALB	**Balikesir**	**1.14**	**270**	PN	**Pn**	**09 27 03.1**	**+0.3**
GULT	**Gulveren**	**1.18**	**48**	PN	**Pb**	**09 27 03.2**	**+0.1**
BUY	**Buyukada**	**1.21**	**351**	PN	**Pg**	**09 27 03.8**	**+0.2**
KULA	**Kula-Manisa**	**1.26**	**206**	PN	**Pn**	**09 27 03.7**	**-0.9**
KHAL	**Karahalli**	**1.29**	**175**	*i* P	**Pg**	**09 27 05.2**	**+0.1**
KHAL				*i* S	**Sn**	**09 27 23.8**	**+1.3**
KHAL				IAML_P			
	comp=Z,357nm,0.1s						
MANT	**Manisa**	**1.32**	**208**	*i* P	**Pg**	**09 27 05.9**	**+0.1**
MANT				IAML_P			
	comp=Z,302nm,0.1s						

*IDC **17** 10:06:59.5±1.9, 13°.26N×92°.52W, h0km, mb3.7/5, mb1 4.0/9, mb1mx3.8/35, mbtmp3.7/9, ML3.4/4, MS2.1/1, Ms1 2.1/1, ms1mx2.0/22, Error ellipse: s-maj=41.8km s-min=21.8km az=20.0*
*MEX **17** 10:07:02.0±0.3, 13°.36N×92°.30W, h95km±68km, MD4.1*
*ISCJB **17** 10:07:03.1±0.7, 13°.51N±0°.07×92°.34W±0°.05, h32km, mb4.1/20, Error ellipse: s-maj=11.3km s-min=4.1km az=34.2*
*NEIC **17** 10:07:07.1±2.0, 13°.61N×92°.22W, h35km, mb4.2/32, MD4.1(MEX), Error ellipse: s-maj=27.8km s-min=13.1km az=234.0*

ISC 17 10:07:06.0±0.9, **13°.64N**±0°.07×**92°.34W**±0°.06, **h32**km, **n173**, σ0.98/169, **mb4.2**/20, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.26**	**3**	*e*Pn	**Pb**	**10 07 27.3**	**-2.0**
THIG				*e*Sn	**Sb**	**10 07 47.2**	**+2.0**
THIG		**1.26**	**3**	*e*P	**Pb**	**10 07 27.3**	**-2.0**
THIG				*i* S	**Sb**	**10 07 47.2**	**+2.0**
APG	**El Apazote**	**2.27**	**53**	Pn	**Pb**	**10 07 43.7**	**-2.7**
	10.0nm,0.3s,baz=219,slow=7.5,SNR=104						
APG				Sn	**Sb**	**10 08 17.6**	**+3.4**
	11nm,0.3s,baz=346,slow=17,SNR=3.7						
CCIG	**Comitan**	**2.63**	**4**	*e*Pn	**Pb**	**10 07 49.8**	**-2.9**
CCIG				*e*Pn	**Pb**	**10 07 49.8**	**-2.9**
CCIG				*e*Sn	**Sb**	**10 08 25.2**	**+0.5**
CCIG				*e*Sn	**Sb**	**10 08 25.2**	**+0.5**
CCIG	**Comitan**	**2.63**	**4**	*i* P	**Pb**	**10 07 49.8**	**-2.9**
CCIG				*e*S	**Sb**	**10 08 25.2**	**+0.5**
CMIG	**Matias Romero**	**4.22**	**325**	Pn	**Pn**	**10 08 06.2**	**-2.0**
	2.6nm,0.3s,baz=161,slow=13,SNR=43						
CMIG				Sn	**Sn**	**10 08 57.1**	**+0.7**
	3.1nm,0.3s,baz=110,slow=11,SNR=6.6						
CMIG				Lg	Lg	10 09 09.8	
	2.2nm,0.3s,baz=313,slow=13,SNR=4.4						
CMIG				LR	LR	10 09 44.2	
	comp=Z,25nm,21.6s,baz=123,slow=37						
CSGN	**Cosiguina Volc**	**4.70**	**98**	*e*Pn	**Pn**	**10 08 13.7**	**-1.1**
CSGN				*e*Sn	**Sn**	**10 09 07.9**	**-0.4**
TGUH	**Tegucigalpa,Un**	**4.94**	**85**	*e*Pn	**Pn**	**10 08 17.1**	**-0.9**
ESTN	**Estel**	**5.83**	**95**	*e*Pn	**Pn**	**10 08 30.1**	**-0.4**
ESTN				*e*Sn	**Sn**	**10 09 33.5**	**-2.9**
ACON	**Acoyapa**	**7.18**	**103**	*e*Pn	**Pn**	**10 08 48.1**	**-0.8**
TEIG	**Tepich**	**7.62**	**30**	*e*Pn	**Pn**	**10 08 56.0**	**+1.1**
MYIG	**Mrida**	**7.69**	**18**	*e*Pn	**Pn**	**10 08 56.0**	**+0.1**
JTS	**Las Juntas de**	**7.96**	**114**	Pn	**Pn**	**10 08 58.2**	**-1.3**
	0.4nm,0.3s,baz=352,slow=14,SNR=3.5						
JTS				Sn	**Sn**	**10 10 29.4**	**+0.8**
	0.3nm,0.3s,baz=80,slow=7.0,SNR=2.1						
JTS	**Las Juntas de**	**7.96**	**114**	*e*Pn	**Pn**	**10 09 00.2**	**+0.7**
ESPN	**Las Esperanzas**	**7.97**	**99**	*e*Pn	**Pn**	**10 08 58.9**	**-0.8**
TXAR	**Lajitas Array**	**18.82**	**328**	P	**Pn**	**10 11 25.3**	**+1.4**
	0.0nm,0.3s,baz=152,slow=12,SNR=7.2						
249A	**Camden**	**18.87**	**14**	P	**Pn**	**10 11 25.1**	**+0.8**
	baz=195						
148A	**Greensboro**	**19.42**	**12**	P	**Pn**	**10 11 31.3**	**+0.4**
	baz=194						
251A	**Midway**	**19.43**	**18**	P	**Pn**	**10 11 31.8**	**+0.6**
	baz=200,SNR=5.0						
TIGA	**Tifton**	**19.45**	**23**	P	**Pn**	**10 11 31.7**	**+0.3**
	baz=206						
149A	**Jones**	**19.54**	**14**	P	**Pn**	**10 11 32.4**	**0.0**
	baz=196						
252A	**Lumpkin**	**19.55**	**20**	P	**Pn**	**10 11 33.3**	**+0.6**
	baz=202						
150A	**Eclectic**	**19.74**	**16**	P	**Pn**	**10 11 34.9**	**0.0**
	baz=198,SNR=5.6						
151A	**Opelika**	**19.86**	**18**	P	**Pn**	**10 11 36.4**	**0.0**
	baz=200,SNR=9.5						
LRAL	**Lakeview Retre**	**19.91**	**13**	*e*P	**Pn**	**10 11 36.1**	**-0.8**
	7.1nm,0.8s						
LRAL	**Lakeview Retre**	**19.91**	**13**	P	**Pn**	**10 11 36.2**	**-0.6**
	baz=195,SNR=6.5						
ABTX	**Abilene, Hawle**	**20.04**	**342**	*e*P	Pn	10 11 37.4	-1.1
	9.7nm,0.8s						
ABTX	**Abilene, Hawle**	**20.04**	**342**	P	Pn	10 11 37.4	-1.1
	baz=159,SNR=5.5						
Z49A	**Columbiana**	**20.17**	**14**	P	Pn	10 11 39.0	-0.9
	baz=196						
152A	**Waverly Hall**	**20.18**	**19**	*e*P	Pn	10 11 39.2	-0.8
	16nm,0.6s						
152A	**Waverly Hall**	**20.18**	**19**	P	Pn	10 11 41.9	+1.9
	baz=202,SNR=10						
Z50A	**Ashland**	**20.38**	**16**	*e*P	Pn	10 11 41.0	-1.4
	10.0nm,0.7s						
Z50A	**Ashland**	**20.38**	**16**	P	Pn	10 11 41.8	-0.6
	baz=198						
Y48A	**Jasper**	**20.72**	**12**	P	Pn	10 11 44.4	-2.0
	baz=194,SNR=5.5						
Z52A	**Williamson**	**20.76**	**19**	P	Pn	10 11 47.4	+0.7
	baz=202,SNR=5.5						
X43A	**Marvell**	**20.83**	**3**	P	Pn	10 11 48.4	+0.8
	baz=184						
Y49A	**Blount Mountai**	**20.84**	**14**	*e*P	Pn	10 11 45.4	-2.3
	7.8nm,1.1s						
Y49A	**Blount Mountai**	**20.84**	**14**	P	Pn	10 11 45.6	-2.1
	baz=196						
MIAR	**Mount Ida**	**20.84**	**357**	P	Pn	10 11 46.9	-0.9
	baz=176						
155A	**Kite**	**20.94**	**24**	P	Pn	10 11 46.8	-2.0
	baz=207						
X37A	**Clayton**	**21.04**	**353**	*e*P	**P**	**10 11 48.3**	**+1.0**
	5.4nm,0.9s						
X46A	**Booneville**	**21.10**	**9**	P	**P**	**10 11 48.3**	**+0.4**
	baz=190						
X47A	**Russelville**	**21.18**	**10**	P	**P**	**10 11 48.7**	**0.0**
	baz=192						
Y51A	**Rockmart**	**21.22**	**17**	P	**P**	**10 11 50.3**	**+1.0**
	baz=200						
X48A	**Hartselle**	**21.27**	**12**	*e*P	**P**	**10 11 49.4**	**-0.3**
	7.8nm,0.7s						
X48A	**Hartselle**	**21.27**	**12**	P	**P**	**10 11 49.4**	**-0.3**
	baz=194,SNR=6.3						
GOGA	**Godfrey**	**21.28**	**21**	P	**P**	**10 11 50.5**	**+0.7**
	baz=204						
Z54A	**Sparta**	**21.34**	**22**	P	**P**	**10 11 50.2**	**-0.3**
	baz=206						
156A	**Sylvania**	**21.36**	**26**	P	**P**	**10 11 51.3**	**+0.6**
	baz=210						
W41B	**Gary Mavity, V**	**21.44**	**0**	P	**P**	**10 11 52.7**	**+1.1**
	baz=180						
X49A	**Woodville**	**21.48**	**14**	P	**P**	**10 11 52.4**	**+0.3**
	baz=196						
Y52A	**Lilburn**	**21.49**	**19**	*e*P	**P**	**10 11 53.1**	**+0.9**
	9.3nm,0.6s						
Y52A	**Lilburn**	**21.49**	**19**	P	**P**	**10 11 53.1**	**+0.9**
	baz=202						
W39A	**Magazine**	**21.50**	**357**	P	**P**	**10 11 53.7**	**+1.5**
	baz=176						
MNTX	**Cornudas Mount**	**21.59**	**328**	*e*P	**P**	**10 11 55.5**	**+2.2**
	1.9nm,0.8s						
MNTX	**Cornudas Mount**	**21.59**	**328**	P	**P**	**10 11 53.0**	**-0.3**
	baz=143						
PLAL	**Pickwick Lake**	**21.60**	**10**	*e*P	**P**	**10 11 52.6**	**-0.6**
	3.6nm,0.9s						
X50B	**Fort Payne**	**21.60**	**15**	P	**P**	**10 11 53.6**	**+0.3**
	baz=198,SNR=7.6						
Z55A	**Blythe**	**21.60**	**24**	P	**P**	**10 11 54.3**	**+1.1**
	baz=208						
Y53A	**Monroe**	**21.64**	**20**	P	**P**	**10 11 55.4**	**+1.6**
	baz=203						
WMOK	**Wichita Mounta**	**21.80**	**346**	P	**P**	**10 11 56.2**	**+0.7**
	baz=163						
W48A	**Pulaski**	**21.95**	**12**	P	**P**	**10 11 56.9**	**-0.3**
	baz=194						
Y54A	**Tignall**	**21.96**	**22**	P	**P**	**10 11 57.6**	**+0.4**
	baz=205						
W49A	**Belvidere**	**22.08**	**13**	P	**P**	**10 11 58.3**	**-0.1**
	baz=196,SNR=9.8						
X52A	**Dahlonega**	**22.23**	**19**	P	**P**	**10 12 00.9**	**+0.8**
	baz=202,SNR=5.9						
SWET	**Sewanee**	**22.25**	**14**	*e*P	**P**	**10 12 00.1**	**-0.2**
	13nm,0.7s						
Z57A	**Bowman**	**22.25**	**26**	P	**P**	**10 12 01.0**	**+0.7**
	baz=211						
X53A	**Estanollee**	**22.33**	**20**	P	**P**	**10 12 01.7**	**+0.5**
	baz=203						
Y55A	**Saluda**	**22.34**	**23**	P	**P**	**10 12 01.2**	**0.0**
	baz=207						
W50A	**Signal Mountai**	**22.39**	**15**	P	**P**	**10 12 02.0**	**+0.2**
	baz=198						
V46A	**Holladay**	**22.39**	**9**	P	**P**	**10 12 00.3**	**-1.5**
	baz=190,SNR=6.3						
W51A	**Cleveland**	**22.49**	**16**	P	**P**	**10 12 03.2**	**+0.3**
	baz=199						
V47A	**Nunnelly**	**22.52**	**10**	P	**P**	**10 12 02.0**	**-1.1**
	baz=192,SNR=5.2						
W52A	**Murphy**	**22.67**	**18**	P	**P**	**10 12 05.6**	**+0.8**
	baz=201						
X54A	**Belton**	**22.69**	**22**	P	**P**	**10 12 05.1**	**+0.1**
	baz=205						
WVT	**Waverly**	**22.76**	**9**	*e*P	**P**	**10 12 05.1**	**-0.6**
	4.8nm,0.6s						
WVT	**Waverly**	**22.76**	**9**	P	**P**	**10 12 04.9**	**-0.8**
	baz=191						
V49A	**McMinnville**	**22.78**	**14**	P	**P**	**10 12 05.1**	**-0.8**
	baz=196						
V50A	**Pikevile**	**22.89**	**15**	P	**P**	**10 12 06.7**	**-0.3**
	baz=198						
X55A	**Gracelyn & Ava**	**22.89**	**23**	P	**P**	**10 12 06.9**	**-0.2**
	baz=207						
U46A	**Springville**	**22.93**	**9**	P	**P**	**10 12 06.7**	**-0.7**
	baz=190,SNR=5.6						
V51A	**Loudon**	**23.21**	**17**	P	**P**	**10 12 10.3**	**0.0**
	baz=200						
W54A	**Cherokee Point**	**23.24**	**21**	P	**P**	**10 12 11.2**	**+0.5**
	baz=205						
U48A	**Cassie Pea, Po**	**23.36**	**12**	P	**P**	**10 12 10.7**	**-1.1**
	baz=194						
V52A	**Sevierville**	**23.46**	**18**	P	**P**	**10 12 13.6**	**+0.8**
	baz=201						
U49A	**Red Boiling Sp**	**23.52**	**13**	P	**P**	**10 12 13.0**	**-0.4**
	baz=196,SNR=14						
V53A	**Saluda**	**23.55**	**20**	*e*P	**P**	**10 12 13.4**	**-0.4**
	5.7nm,1.1s						
V53A	**Saluda**	**23.55**	**20**	P	**P**	**10 12 13.1**	**-0.7**
	baz=203						
KMSC	**Kings Mountain**	**23.60**	**23**	P	**P**	**10 12 14.9**	**+0.8**
	baz=207						
T46A	**Princeton**	**23.64**	**9**	P	**P**	**10 12 13.4**	**-1.1**
	baz=190						
U50A	**Jamestown**	**23.66**	**15**	P	**P**	**10 12 14.7**	**0.0**
	baz=198						
T47A	**Sharon Grove**	**23.72**	**10**	P	**P**	**10 12 14.4**	**-0.9**
	baz=192						
U51A	**La Follette**	**23.84**	**17**	P	**P**	**10 12 16.4**	**-0.1**
	baz=200,SNR=7.4						
T48A	**Bowling Green**	**23.97**	**12**	P	**P**	**10 12 17.5**	**-0.1**
	baz=194						
U52A	**Thorn Hill**	**24.04**	**18**	P	**P**	**10 12 18.5**	**+0.2**
	baz=202						
S44A	**Carbondale**	**24.11**	**6**	P	**P**	**10 12 18.7**	**-0.2**
	baz=187,SNR=12						
TZTN	**Tazewell**	**24.13**	**18**	P	**P**	**10 12 18.5**	**-0.6**
	baz=201						
SIUC	**Southern Illin**	**24.14**	**6**	*e*P	**P**	**10 12 19.1**	**-0.1**
	28nm,0.8s						
T49A	**Edmonton**	**24.15**	**13**	P	**P**	**10 12 18.5**	**-0.7**
	baz=196,SNR=7.8						
T50A	**Nancy**	**24.23**	**15**	P	**P**	**10 12 19.6**	**-0.4**
	baz=198,SNR=5.6						
U53A	**Fall Branch**	**24.27**	**19**	P	**P**	**10 12 19.7**	**-0.7**
	baz=203						
V55A	**Taylorsville**	**24.28**	**22**	P	**P**	**10 12 20.1**	**-0.4**
	baz=207						
S46A	**Don Dixon Farm**	**24.30**	**9**	P	**P**	**10 12 20.1**	**-0.5**
	baz=191						
CCM	**Cathedral Cave**	**24.34**	**2**	P	**P**	**10 12 20.3**	**-0.7**
	baz=182						
S47A	**Hartford**	**24.35**	**11**	P	**P**	**10 12 20.8**	**-0.3**
	baz=193						
W58A	**Raeford**	**24.36**	**27**	P	**P**	**10 12 20.6**	**-0.6**
	baz=212						
T51A	**Gray**	**24.41**	**16**	P	**P**	**10 12 21.8**	**+0.1**
	baz=200,SNR=7.4						
V56A	**Mocksville**	**24.51**	**24**	P	**P**	**10 12 21.7**	**-0.9**
	baz=208						
U54A	**Nelsons Funny**	**24.66**	**21**	P	**P**	**10 12 23.8**	**-0.2**
	baz=205						
ANMO	**Albuquerque**	**24.75**	**331**	P	**P**	**10 12 25.9**	**+0.9**
	0.3nm,0.3s,baz=147,slow=14,SNR=3.9						
ANMO	**Albuquerque**	**24.75**	**331**	P	**P**	**10 12 25.9**	**+0.9**
	baz=145						
TASM	**ASL Pad, Albuq**	**24.75**	**331**	P	**P**	**10 12 25.7**	**+0.6**
	baz=145						
TASM	**ASL Pad, Albuq**	**24.75**	**331**	P	**P**	**10 12 25.9**	**+0.8**
	baz=145						
R45A	**Skylar, Fairfi**	**24.82**	**8**	P	**P**	**10 12 24.7**	**-0.7**
	baz=189,SNR=6.0						
T52A	**Hallie**	**24.82**	**18**	P	**P**	**10 12 25.1**	**-0.3**
	baz=202						
T53A	**Wise**	**24.84**	**19**	P	**P**	**10 12 24.9**	**-0.8**
	baz=203						
R46A	**Gibon Southern**	**24.85**	**9**	P	**P**	**10 12 26.0**	**+0.4**
	baz=191						
S49A	**Springfield**	**24.85**	**13**	P	**P**	**10 12 25.5**	**-0.2**
	baz=196,SNR=6.5						
V57A	**Coltrane Farms**	**24.87**	**25**	P	**P**	**10 12 25.7**	**-0.1**
	baz=210						
U55A	**TA2, Sparta**	**24.92**	**22**	P	**P**	**10 12 26.3**	**0.0**
	baz=206						
S50A	**Richmond**	**24.96**	**15**	P	**P**	**10 12 26.4**	**-0.3**
	baz=198						
V58A	**Windy Hill, Pi**	**25.06**	**26**	P	**P**	**10 12 26.6**	**-1.0**
	baz=211						
WCI	**Wyandotte Cave**	**25.07**	**11**	*e*P	**P**	**10 12 27.7**	**+0.1**
	22nm,0.7s						
WCI	**Wyandotte Cave**	**25.07**	**11**	P	**P**	**10 12 27.4**	**-0.2**
	baz=194						
R47A	**Wooly Knot Far**	**25.09**	**11**	P	**P**	**10 12 27.4**	**-0.4**
	baz=193						
S51A	**Beattyville**	**25.14**	**17**	P	**P**	**10 12 27.4**	**-0.8**
	baz=200						
R48A	**Northridge Ran**	**25.32**	**12**	P	**P**	**10 12 30.2**	**+0.3**
	baz=194						
R49A	**Shelbyville**	**25.36**	**13**	P	**P**	**10 12 29.7**	**-0.6**
	baz=196						
V59A	**Middlesex**	**25.42**	**27**	P	**P**	**10 12 29.5**	**-1.3**
	baz=213						
Q45A	**Warren Harvey,**	**25.43**	**8**	P	**P**	**10 12 30.5**	**-0.3**
	baz=189						
U57A	**Blanch**	**25.52**	**25**	P	**P**	**10 12 31.5**	**-0.2**
	baz=210						
W61A	**Ground Anchor**	**25.53**	**30**	P	**P**	**10 12 30.5**	**-1.3**
	baz=216						
R50A	**Paris**	**25.55**	**15**	P	**P**	**10 12 32.5**	**+0.5**
	baz=198						
R51A	**Hillsboro**	**25.76**	**16**	P	**P**	**10 12 33.0**	**-0.9**
	baz=200						
P45A	**Graceland, Par**	**26.10**	**8**	P	**P**	**10 12 36.6**	**-0.4**
	baz=190						
P46A	**Rosedale**	**26.27**	**9**	P	**P**	**10 12 37.6**	**-0.9**
	baz=191						
P48A	**Milroy**	**26.43**	**12**	P	**P**	**10 12 39.6**	**-0.4**
	baz=195						
Q51A	**Peebles**	**26.51**	**16**	P	**P**	**10 12 40.3**	**-0.4**
	baz=200						
T59A	**Double "B" Far**	**26.73**	**27**	P	**P**	**10 12 42.1**	**-0.5**
	baz=213						
O45A	**Potomac**	**26.82**	**8**	P	**P**	**10 12 43.3**	**-0.1**
	baz=190						
O47A	**Sheridan**	**27.04**	**10**	P	**P**	**10 12 44.8**	**-0.7**
	baz=193						
Q54A	**Coxs Mills**	**27.22**	**20**	P	**P**	**10 12 46.4**	**-0.7**
	baz=205						
MVCO	**Mesa Verde**	**27.55**	**331**	*e*P	**P**	**10 12 51.4**	**+1.0**
	3.2nm,0.8s						
ACSO	**Alum Creek Sta**	**27.73**	**16**	P	**P**	**10 12 51.2**	**-0.5**
	baz=200						
M43A	**Waltham Townsh**	**27.85**	**5**	P	**P**	**10 12 52.3**	**-0.3**
	baz=187						
N48A	**Decatur**	**27.86**	**12**	P	**P**	**10 12 51.7**	**-1.1**
	baz=195						
P54A	**Burton**	**27.89**	**20**	P	**P**	**10 12 52.4**	**-0.8**
	baz=205						
M44A	**Midewin, Midew**	**27.90**	**7**	P	**P**	**10 12 52.5**	**-0.6**
	baz=189						
L42A	**Oliver, Polo**	**28.36**	**4**	P	**P**	**10 12 57.4**	**+0.2**
	baz=185						
O54A	**Avella**	**28.45**	**19**	P	**P**	**10 12 57.1**	**-1.0**
	baz=205						
P57A	**Homestead Farm**	**28.68**	**24**	P	**P**	**10 12 60.0**	**-0.1**
	baz=210						
M50A	**Fremont**	**28.82**	**15**	P	**P**	**10 13 00.6**	**-0.7**
	baz=199						
N53A	**Lisbon**	**28.87**	**18**	P	**P**	**10 13 01.2**	**-0.6**
	baz=203						
O56A	**Blue Knob Stat**	**29.15**	**22**	P	**P**	**10 13 04.7**	**+0.4**
	baz=208						
Q60A	**Greensboro**	**29.17**	**27**	P	**P**	**10 13 04.8**	**+0.4**
	baz=214						
N54A	**Moraine State**	**29.28**	**19**	P	**P**	**10 13 05.8**	**+0.3**
	baz=205						
P59A	**Jarrettsville**	**29.42**	**26**	P	**P**	**10 13 06.7**	**+0.1**
	baz=212						
SSPA	**Standing Stone**	**29.72**	**23**	P	**P**	**10 13 08.4**	**-0.9**
	baz=209						
M55A	**Ridgway**	**30.14**	**21**	P	**P**	**10 13 13.1**	**0.0**
	baz=207						
ERPA	**Erie**	**30.33**	**18**	P	**P**	**10 13 15.2**	**+0.5**
	baz=204						
J52A	**Paris**	**31.22**	**17**	P	**P**	**10 13 22.1**	**-0.4**
	baz=202						
MEDO	**Medina**	**31.76**	**19**	P	**P**	**10 13 27.1**	**-0.1**
	baz=206						
M61A	**Granite Spring**	**31.97**	**27**	P	**P**	**10 13 28.2**	**-0.9**
	baz=216						
PDAR	**Pinedale Array**	**32.61**	**336**	P	**P**	**10 13 35.3**	**+0.2**
	0.7nm,0.8s,baz=138,slow=5.6,SNR=4.6						
SNOW	**Snow King Moun**	**33.67**	**335**	*e*P	**P**	**10 13 45.5**	**+1.1**
	8.1nm,1.0s						
NVAR	**Mina Array Bea**	**33.75**	**322**	P	**P**	**10 13 46.7**	**+1.7**
	0.7nm,0.7s,baz=140,slow=8.4,SNR=7.2						
PTGA	**Pitinga**	**35.11**	**111**	*e*P	**P**	**10 13 59.5**	**+2.7**
	9.8nm,0.8s						
J08A	**Circle Bar Ran**	**37.17**	**328**	*e*P	P	10 14 18.4	+4.2
	4.6nm,0.6s						
MATQ	**Matagami**	**37.98**	**16**	P	**P**	**10 14 19.9**	**-0.9**
	baz=203						
BATG	**Bathurst New B**	**40.08**	**28**	*e*P	**P**	**10 14 37.8**	**-0.7**
	8.6nm,1.2s						
YKA	**Yellowknife Ar**	**51.30**	**347**	P	**P**	**10 16 07.3**	**+0.5**
	2.9nm,0.8s,baz=146,slow=7.8,SNR=27						
ILAR	**Eielson Array**	**63.04**	**337**	P	**P**	**10 17 29.1**	**-0.7**
	0.7nm,1.0s,baz=103,slow=3.9,SNR=4.7						
CMAR	**Chiang Mai Arr**	**146.22**	**340**	PKPbc	**PKPdf**	**10 26 41.5**	**-1.7**
	0.7nm,0.4s,baz=350,slow=2.1,SNR=5.1						

*DDA **17** 10:10:52.2, 39°.36N×28°.03E, h7km±3km, ML2.7*
*ISK **17** 10:10:52.7, 39°.42N×28°.05E, h10km, ML2.1/9*
*ISCJB **17** 10:10:53.2±0.5, 39°.39N±0°.03×28°.01E±0°.04, h9km±5km, Error ellipse: s-maj=5.4km s-min=4.9km az=35.4*

ISC 17 10:10:52.9±1.0, **39°.39N**±0°.03×**28°.04E**±0°.04, **h14**km±10km, **n16**, σ0.60/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEP	**BALIKESIR_Sava**	**0.25**	**267**	*i* P	**Pg**	**10 10 58.5**	**+0.2**
STEP				*i* S	**Sg**	**10 11 02.5**	**+0.7**
STEP				IAML_P			
	comp=Z,3μm,0.1s						
BALB	**Balikesir**	**0.28**	**335**	PG	**Pb**	**10 10 58.9**	**-0.8**
BALB				SG	**Sb**	**10 11 03.5**	**-0.8**
DURS	**Dursunbey**	**0.40**	**58**	*i* P	**Pb**	**10 11 01.4**	**-0.4**
DURS				*i* S	**Sb**	**10 11 07.5**	**-0.3**
DURS				IAML_P			
	comp=Z,2μm,0.1s						
BALY	**Balya**	**0.48**	**318**	*i* P	**Pb**	**10 11 02.7**	**-0.4**
BALY				*i* S	**Sg**	**10 11 09.1**	**+0.3**
BALY				IAML_P			
	comp=Z,993nm,0.2s						
GONE	**Gonen-Balikesi**	**0.71**	**338**	PG	**Pg**	**10 11 06.2**	**-0.6**
GONE				SG	**Sg**	**10 11 16.2**	**+0.1**
KCTX	**Karacabey (Bur**	**0.91**	**16**	PG	**Pg**	**10 11 10.2**	**-0.3**
EDC	**Edincik**	**0.97**	**352**	PG	**Pg**	**10 11 11.1**	**-0.5**
MANT	**Manisa**	**0.98**	**155**	*i* P	**Pn**	**10 11 12.5**	**0.0**
MANT				*i* S	**Sb**	**10 11 24.9**	**+0.2**
MANT				IAML_P			
	comp=Z,1μm,0.1s						
KULA	**Kula-Manisa**	**1.00**	**151**	PG	**Pn**	**10 11 12.5**	**-0.1**
ULDT	**Uludag**	**1.13**	**48**	*i* P	**Pn**	**10 11 15.4**	**+0.8**
ULDT				*i* S	**Sn**	**10 11 31.7**	**+1.7**
ULDT				IAML_P			
	comp=Z,759nm,0.1s						
GDZ	**Gediz**	**1.16**	**104**	*i* P	**Pn**	**10 11 15.0**	**+0.1**
GDZ				*i* S	**Sn**	**10 11 31.0**	**+0.4**
GDZ				IAML_P			
	comp=Z,796nm,0.2s						
ARMT	**Armutlu**	**1.34**	**28**	PN	**Pn**	**10 11 17.1**	**-0.1**
LPK	**Lapseki**	**1.39**	**315**	PN	**Pn**	**10 11 18.2**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.44**	**185**	PN	**Pg**	**10 11 20.0**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.46**	**333**	PN	**Pb**	**10 11 19.7**	**-0.1**
BOZC	**Bozcaada**	**1.60**	**287**	PN	**Pn**	**10 11 20.9**	**+0.2**

*IDC **17** 10:18:59.1±1.8, 33°.39N×24°.87E, h0km, mb3.7/2, mb1 3.6/4, mb1mx3.4/30, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=58.6km s-min=27.9km az=141.0*
*ATH **17** 10:19:00.9, 34°.47N×23°.52E, h30km±3km, ML3.5/2, Error ellipse: s-maj=6.2km s-min=3.5km az=221.0*
*THE **17** 10:19:01.5, 34°.45N×23°.58E, h0km×3km, ML3.5/3, Error ellipse: s-maj=5.7km s-min=1.3km az=202.0*

ISC 17 10:19:00.6±2.0, **34°.44N**±0°.07×**23°.60E**±0°.06, **h9**km±12km, **n35**, σ0.94/41, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.56**	**45**	P	**Pb**	**10 19 13.1**	**+0.4**
GVD	**Gavdhos**	**0.56**	**45**	P	**Pb**	**10 19 13.3**	**+0.5**
IMMV	**Iera Moni Meta**	**1.06**	**17**	P	**Pg**	**10 19 21.3**	**+0.2**
IM

comp=Z,762nm,0.3s
AKAS Kas 5.22 68 *eP* **Pn 10 20 18.8 -0.3**
AKAS Kas 5.22 68 *i P* **Pn 10 20 18.8 -0.3**
AKAS IAML_P
comp=Z,837nm,0.3s
ELL Elmali 5.63 64 *eP* **Pn 10 20 24.6 -0.1**
BRTR Keskin Array B 9.60 54 Pn **Pn 10 21 19.1 0.0**
comp=Z,0.1nm,0.3s,baz=236,slow=10,SNR=2.0
GERES GERESS Array B 16.16 336 P P 10 23 05.4 +14
comp=Z,0.1nm,0.3s,baz=153,slow=18,SNR=4.9
TORD Torodi Ar. Bea 29.05 228 P **P 10 25 02.3 +1.0**
comp=Z,0.3nm,0.6s,baz=33,slow=8.6,SNR=1.7
MKAR Makanchi Array 45.24 56 P **P 10 27 15.9 -2.3**
comp=Z,0.8nm,0.3s,baz=265,slow=7.9,SNR=8.3

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*ISCJB **17** 10:40:37.0±0.9, 13°.91N±0°.09×91°.39W±0°.06, h73km±10km, mb3.9/2, Error ellipse: s-maj=17.1km s-min=6.0km az=27.7*
*GCG **17** 10:40:38.3±0.8, 14°.00N×91°.32W, h64km±23km, MD4.0*
*UCR **17** 10:40:38.2±1.5, 14°.00N×91°.29W, h73km±33km, MD3.7, ML3.5*
*SNET **17** 10:40:40.0±0.6, 14°.27N×91°.04W, h92km±20km, MD4.2, ML3.6*
*IDC **17** 10:40:42.1±1.9, 14°.42N×91°.17W, h83km±14km, mb3.5/2, mb1 3.7/5, mb1mx3.3/35, mbtmp3.7/5, MS2.2/1, Ms1 2.2/1, ms1mx2.1/28, Error ellipse: s-maj=48.6km s-min=12.9km az=33.0*
ISC 17 10:40:39.3±1.1, 14°.06N±0°.09×91°.32W±0°.06, h71km±10km, n33, σ1.9±55/43, 3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.45**	**327**	*eP*	**Pn**	**10 40 50.9**	**-0.9**
FUG	**Fuego 3**	**0.60**	**50**	*eP*	**Pn**	**10 40 52.7**	**-0.7**
FUG	**Fuego 3**	**0.60**	**50**	*eP*	**Pn**	**10 40 52.7**	**-0.7**
STG3	**Santiaguito 3,**	**0.70**	**339**	*eP*	**Pn**	**10 40 53.5**	**-1.0**
PCG	**Pacaya**	**0.76**	**64**	*eP*	**Pn**	**10 40 54.6**	**-0.7**
PCG	**Pacaya**	**0.76**	**64**	*eP*	**Pn**	**10 40 54.6**	**-0.7**
IXG	**Ixpaco**	**0.85**	**82**	*eP*	**Pn**	**10 40 55.4**	**-0.9**
IXG	**Ixpaco**	**0.85**	**82**	*eP*	**Pn**	**10 40 55.4**	**-0.9**
NBG	**Las Nubes**	**1.08**	**61**	‖*eP*	**Pn**	**10 40 59.4**	**+0.4**
NBG				*eS*	**Sn**	**10 41 16.0**	**+2.2**
NBG	**Las Nubes**	**1.08**	**61**	*eP*	**Pn**	**10 40 59.5**	**+0.4**
APG	**El Apazote**	**1.25**	**41**	P	**Pn**	**10 41 00.5**	**-0.8**
	39nm,0.3s,baz=216,slow=7.0,SNR=172						
APG				S	**Sn**	**10 41 19.6**	**+1.8**
	82nm,0.3s,baz=108,slow=19,SNR=24						
RTR	**El Retiro**	**1.63**	**95**	*eP*	**Pn**	**10 41 05.7**	**-0.5**
RTR				*eS*	**Sn**	**10 41 25.6**	**-0.9**
RTR	**El Retiro**	**1.63**	**95**	*eP*	**Pn**	**10 41 05.7**	**-0.5**
RTR				*eS*	**Sn**	**10 41 25.6**	**-0.9**
SBLS	**San Blas**	**1.66**	**97**	*eP*	**Pn**	**10 41 05.7**	**-0.9**
SBLS				*eS*	**Sn**	**10 41 26.2**	**-1.0**
SBLS	**San Blas**	**1.66**	**97**	*eP*	**Pn**	**10 41 05.7**	**-0.9**
SBLS				*eS*	**Sn**	**10 41 26.2**	**-1.0**
SNJE	**San Jose**	**1.67**	**96**	*eP*	**Pn**	**10 41 06.1**	**-0.7**
SNJE	**San Jose**	**1.67**	**96**	*eP*	**Pn**	**10 41 06.1**	**-0.7**
MRL	**Marmol**	**1.88**	**57**	*eP*	**Pn**	**10 41 09.6**	**0.0**
MTO3	**Montecristo**	**1.93**	**80**	‖*iP*	**Pn**	**10 41 08.5**	**-1.8**
MTO3	**Montecristo**	**1.93**	**80**	‖*iP*	**Pn**	**10 41 08.5**	**-1.8**
BOQS	**Boqueron**	**2.00**	**99**	*eP*	**Pn**	**10 41 10.3**	**-0.9**
BOQS				*eS*	**Sn**	**10 41 34.3**	**-1.3**
SNET	**Serv Nac Est T**	**2.06**	**100**	*eP*	**Pn**	**10 41 11.1**	**-0.7**
SNET				IAML		10 41 42.4	
	comp=Z,439nm,0.3s						
SNET	**Serv Nac Est T**	**2.06**	**100**	*eP*	**Pn**	**10 41 11.1**	**-0.7**
SNET				IAML		10 41 42.4	
	comp=Z,439nm,0.3s						
LFU	**La Fuente**	**2.16**	**98**	*eP*	**Pn**	**10 41 12.0**	**-1.3**
LFU	**La Fuente**	**2.16**	**98**	*eP*	**Pn**	**10 41 12.0**	**-1.3**
LBRS	**Las Brisas**	**2.23**	**98**	*eP*	**Pn**	**10 41 13.0**	**-1.2**
LFRS	**El Faro**	**2.23**	**101**	*eP*	**Pn**	**10 41 13.5**	**-0.7**
CMIG	**Matias Romero**	**4.58**	**312**	P	**Pn**	**10 41 46.2**	**+0.1**
	comp=Z,4.4nm,0.3s,baz=139,slow=8.2,SNR=50						
CMIG				S	**Sn**	**10 42 38.1**	**+0.1**
	comp=Z,3.4nm,0.3s,baz=258,slow=20,SNR=3.5						
CMIG				LR	LR	10 42 57.1	
	comp=Z,31nm,20.8s,baz=120,slow=30						
JTS	**Las Juntas de**	**7.26**	**120**	P	**Pn**	**10 42 27.1**	**+4.2**
	comp=Z,0.5nm,0.3s,baz=357,slow=22,SNR=6.8						
JTS				S	**Sn**	**10 43 49.5**	**+5.7**
	comp=Z,0.5nm,0.3s,baz=298,slow=13,SNR=2.1						
TXAR	**Lajitas Array**	**19.02**	**325**	P	**Pn**	**10 44 57.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=144,slow=11,SNR=14						
NVAR	**Mina Array Bea**	**34.05**	**320**	P	**P**	**10 47 18.7**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=133,slow=7.9,SNR=17						
NVAR				PcP	**PcP**	**10 49 53.4**	**0.0**
	comp=Z,0.2nm,0.6s,baz=127,slow=2.4,SNR=3.5						
YKA	**Yellowknife Ar**	**51.13**	**346**	P	**P**	**10 49 32.9**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=149,slow=7.7,SNR=5.6						
CMAR	**Chiang Mai Arr**	**146.15**	**342**	PKPbc	**PKPdf**	**11 00 10.5**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=339,slow=3.1,SNR=6.7						

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*ISCJB **17** 10:48:20.8±0.9, 38°.50N±0°.04×43°.92E±0°.05, h2km±8km, Error ellipse: s-maj=7.1km s-min=6.0km az=25.0*
*ISK **17** 10:48:20.2, 38°.52N×43°.88E, h4km, ML2.9/6*
*DDA **17** 10:48:21.0, 38°.52N×43°.91E, h7km±4km, ML3.3*
ISC 17 10:48:21.0±1.4, 38°.54N±0°.03×43°.87E±0°.04, h6km±11km, n13, σ0.9±73/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.37**	**268**	*i P*	**Pg**	**10 48 28.8**	**+0.6**
TVAN				*i S*	**Sb**	**10 48 35.8**	**-0.3**
TVAN				IAML_P			
	comp=Z,18μm,0.1s						
VANB	**Van**	**0.38**	**278**	PG	**Pg**	**10 48 28.1**	**-0.4**
VANB				SG	**Sg**	**10 48 34.0**	**+0.5**
BASK	**Baskale_VAN**	**0.50**	**168**	*i P*	**Pb**	**10 48 31.1**	**-1.2**
BASK				*i S*	**Sb**	**10 48 41.8**	**+2.0**
VMUR	**Van-Muradiye**	**0.51**	**332**	*i P*	**Pb**	**10 48 32.2**	**-0.2**
VMUR				*i S*	**Sn**	**10 48 43.4**	**-0.6**
VMUR				IAML_P			
	comp=Z,2μm,0.2s						
CLDR	**Caldiran**	**0.60**	**3**	PG	**Pg**	**10 48 32.8**	**+0.2**
CLDR	**Caldiran**	**0.60**	**3**	*i P*	**Pb**	**10 48 33.5**	**-0.5**
CLDR				*i S*	**Sb**	**10 48 43.1**	**+0.2**
CLDR				IAML_P			
	comp=Z,7μm,0.3s						
GEVA	**Gevas**	**0.68**	**251**	*i P*	**Pb**	**10 48 34.6**	**-0.7**
GEVA				*i S*	**Sb**	**10 48 45.1**	**0.0**
GEVA				IAML_P			
	comp=Z,6μm,0.1s						
AKDM	**Akdamar-Van**	**0.73**	**253**	PG	**Pg**	**10 48 35.1**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.94**	**287**	*i P*	**Pg**	**10 48 39.2**	**+0.2**
ADCV				*i S*	**Sn**	**10 48 54.9**	**+0.2**
ADCV				IAML_P			
	comp=Z,1μm,0.1s						
HAKT	**HAKKARI**	**0.99**	**188**	*i P*	**Pg**	**10 48 39.6**	**-0.4**
HAKT				*i S*	**Sn**	**10 48 56.8**	**+0.8**
AGRB	**Hanur-Agry**	**1.24**	**327**	PN	**Pn**	**10 48 45.1**	**+0.1**
CUKT	**Cukurca**	**1.31**	**189**	PN	**Pb**	**10 48 45.5**	**-0.5**
GNI	**Garni**	**1.74**	**22**	PN	**Pb**	**10 48 52.8**	**-0.6**

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*IDC **17** 11:07:06.5±1.3, 34°.29N×25°.08E, h0km, mb3.8/3, mb1 3.9/7, mb1mx3.6/47, mbtmp3.9/7, ML4.0/4, MS2.6/1, Ms1 2.6/1, ms1mx2.0/55, Error ellipse: s-maj=25.5km s-min=18.9km az=92.0*
*ATH **17** 11:07:09.3, 34°.28N×25°.14E, h19km±3km, ML3.0/3, Error ellipse: s-maj=5.4km s-min=1.9km az=343.0*
*THE **17** 11:07:11.2, 34°.39N×25°.14E, h0km±1km, ML3.2/4, Error ellipse: s-maj=3.4km s-min=1.1km az=166.0*
ISC 17 11:07:08.1±1.7, 34°.22N±0°.06×25°.17E±0°.03, h10km±10km, n34, σ1.9±04/44, mb3.8/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.85**	**340**	P	**Pg**	**11 07 24.5**	**0.0**
SIVA				S	**Sb**	**11 07 35.8**	**-0.6**
SIVA	**Sivas**	**0.85**	**340**	P	**Pg**	**11 07 24.7**	**+0.2**
SIVA				S	**Sg**	**11 07 35.2**	**-0.3**
SIVA				AML	AML	11 07 37.4	
	comp=E,11839μm,0.6s						
SIVA				AML	AML	11 07 38.0	
	comp=N,9548μm,0.6s						
LAST	**Lasithi**	**0.97**	**15**	P	**Pg**	**11 07 26.9**	**+0.1**
LAST				S	**Sb**	**11 07 39.6**	**-0.5**
LAST	**Lasithi**	**0.97**	**15**	P	**Pg**	**11 07 26.9**	**+0.1**
LAST				S	**Sb**	**11 07 40.1**	**0.0**
LAST				AML	AML	11 07 49.9	
	comp=E,858μm,0.7s						
LAST				AML	AML	11 07 56.0	
	comp=N,1093μm,0.5s						
GVD	**Gavdhos**	**1.09**	**305**	P	**Pg**	**11 07 29.4**	**+0.4**
GVD				S	**Sn**	**11 07 45.3**	**+0.8**
GVD	**Gavdhos**	**1.09**	**305**	P	**Pg**	**11 07 29.2**	**+0.2**
GVDS	**Gavdos**	**1.09**	**305**	P	**Pb**	**11 07 29.6**	**+0.6**
GVDS				S	**Sn**	**11 07 46.1**	**+1.5**
IDI	**Anoyia**	**1.09**	**348**	Pn	**Pg**	**11 07 28.7**	**-0.4**
	comp=N,43nm,0.3s,baz=161,slow=24,SNR=40						
IDI				Sn	**Sb**	**11 07 43.0**	**-0.4**
	comp=N,76nm,0.3s,baz=141,slow=14,SNR=20						
IDI				LR	LR	11 07 56.6	
	comp=N,60nm,20.3s,baz=102,slow=49						
NPS	**Neapolis**	**1.10**	**19**	P	**Pg**	**11 07 29.2**	**-0.1**
NPS				S	**Sb**	**11 07 44.5**	**+0.8**
NPS				AML	AML	11 07 50.4	
	comp=E,1371μm,0.6s						
NPS				AML	AML	11 07 51.2	
	comp=N,1064μm,0.5s						
STIA	**Sitia Lasithi**	**1.24**	**38**	P	**Pg**	**11 07 32.6**	**+0.7**
STIA				S	**Sn**	**11 07 49.0**	**+0.7**
ZKR	**Zakros**	**1.24**	**44**	*eP*	**Pg**	**11 07 30.4**	**-1.6**
VAM	**Vamos**	**1.43**	**326**	P	**Pn**	**11 07 34.9**	**+0.8**
VAM				S	**Sn**	**11 07 53.5**	**+0.5**
VAM	**Vamos**	**1.43**	**326**	P	**Pn**	**11 07 35.1**	**+0.9**
IMMV	**Iera Moni Meta**	**1.58**	**322**	P	**Pb**	**11 07 37.6**	**+0.2**
IMMV	**Iera Moni Meta**	**1.58**	**322**	P	**Pb**	**11 07 37.7**	**+0.3**
KARP	**Karpathos**	**2.10**	**51**	*eP*	**Pb**	**11 07 47.1**	**+0.7**
KARP	**Karpathos**	**2.10**	**51**	P	**Pb**	**11 07 46.9**	**+0.5**
SANT	**Santorini**	**2.16**	**6**	P	**Pn**	**11 07 44.9**	**+0.7**
APE	**Apeiranthos**	**2.86**	**6**	*eP*	**Pn**	**11 07 54.9**	**+1.1**
VLI	**Veliai**	**3.09**	**324**	P	**Pn**	**11 07 57.2**	**+0.2**
ARG	**Arkhangelos**	**3.13**	**50**	*eP*	**Pn**	**11 08 00.2**	**+2.6**
DAT	**Datca**	**3.18**	**37**	*eP*	**Pn**	**11 07 58.9**	**+0.5**
DALY	**Dalyan (Mula)**	**3.84**	**47**	*eP*	**Pn**	**11 08 09.7**	**+2.4**
TURN	**Turunc**	**3.85**	**46**	*eP*	**Pn**	**11 08 05.2**	**-2.2**
AKAS	**Kas**	**4.15**	**60**	*eP*	**Pn**	**11 08 13.5**	**+1.8**
MMAI	**Mount Meron Ar**	**8.62**	**95**	Sn	**Sn**	**11 10 49.9**	**-0.5**
	comp=N,4.1nm,0.3s,baz=328,slow=46,SNR=3.1						
VAE	**Valguarnera**	**9.32**	**293**	Pn	**Pn**	**11 09 20.6**	**-2.0**
	comp=N,4.0nm,0.3s,baz=128,slow=17,SNR=3.5						
EIL	**Elat**	**9.47**	**116**	Pn	**Pn**	**11 09 25.1**	**+0.5**
	comp=N,0.8nm,0.3s,baz=220,slow=1.7,SNR=7.5						
EIL				Sn	Sn	11 11 00.9	-10
	comp=N,0.3nm,0.3s,baz=245,slow=19,SNR=1.8						
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**Pn**	**11 11 01.3**	**-1.3**
	comp=N,1.0nm,0.3s,baz=201,slow=11,SNR=5.4						
GERES	**GERESS Array B**	**16.92**	**333**	Pn	**Pn**	**11 11 05.6**	**+0.6**
	comp=N,0.3nm,0.3s,baz=142,slow=11,SNR=4.2						
GERES				LR	LR	11 19 27.8	
	comp=N,20nm,20.1s,baz=44,slow=44						
FINES	**FINESS Array B**	**27.25**	**1**	P	**P**	**11 12 50.6**	**-1.6**
	comp=N,1.3nm,0.7s,baz=152,slow=10,SNR=3.4						
TORD	**Torodi Ar. Bea**	**29.90**	**231**	P	**P**	**11 13 16.1**	**-0.1**
	comp=N,0.6nm,0.4s,baz=43,slow=7.6,SNR=11						
ARCES	**ARCESS Array B**	**35.37**	**0**	P	**P**	**11 14 02.8**	**-0.7**
	comp=N,6.6nm,0.3s,baz=199,slow=8.1,SNR=3.1						
KURBB	**Kurchatov Arra**	**41.71**	**50**	P	**P**	**11 14 57.1**	**+0.1**
	comp=N,0.3nm,0.3s,baz=287,slow=8.4,SNR=2.9						

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*BJI **17** 11:21:38.0±0.0, 37°.01S×51°.77E, h10km, mb4.9/26, mB5.1/21, Ms5.1/16, Ms7 4.8/16*
*ISCJB **17** 11:21:40.4±0.2, 36°.54S±0°.04×52°.44E±0°.06, h10km, mb4.8/80, MS5.0/171, Error ellipse: s-maj=7.1km s-min=5.5km az=163.1*
*IDC **17** 11:21:40.2±0.4, 36°.44S×52°.44E, h0km, mb4.6/31, mb1 4.7/32, mb1mx4.5/55, mbtmp4.6/32, ML3.6/1, MS4.7/22, Ms1 4.7/22, ms1mx4.6/27, Error ellipse: s-maj=14.8km s-min=10.5km az=65.0*
*NEIC **17** 11:21:42.0±1.4, 36°.53S×52°.41E, h9km±3km, mb5.0/63, MS5.0/141, MW5.6, Error ellipse: s-maj=15.4km s-min=10.8km az=73.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M_{rr}0.22; $M_{\theta\theta}$0.42; $M_{\phi\phi}$-0.63; $M_{r\theta}$-0.33; $M_{\theta\phi}$2.96; $M_{\phi r}$0.66; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s185.00000°, δ85.00000°, λ-169.00000°. NP2:ϕ_s94.00000°, δ79.00000°, λ-6.00000°. Principal axes: T 2.9100, Plg4.0000°, Azm320.0000°; N 0.3500, Plg78.0000°, Azm211.0000°; P -3.2700, Plg12.0000°, Azm50.0000°;*
*GCMT **17** 11:21:46.0±0.1, 36°.49S±0°.01×52°.42E±0°.01, h20km, MW5.6/118, Moment Tensor Solution. s98, c175; s118, c308; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.24±.03; $M_{\theta\theta}$0.58±.04; $M_{\phi\phi}$-0.33±.03; $M_{r\theta}$0.33±.07; $M_{\theta\phi}$3.11±.03; $M_{\phi r}$-0.13±.07; Best double couple: $M_0$3.16500×10^{17} NP1:ϕ_s274.00000°, δ87.00000°, λ-6.00000°. NP2:ϕ_s4.00000°, δ84.00000°, λ-177.00000°. Principal axes: T 3.2730, Plg3.0000°, Azm319.0000°; N -0.2170, Plg83.0000°, Azm72.0000°; P -3.0560, Plg6.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 17 11:21:42.1±0.3, 36°.55S±0°.05×52°.39E±0°.07, h10km, n295, σ1.9±75/157, mb4.9/80, MS4.9/173, 2C-2D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**9.88**	**182**	*e*Pn	**Pn**	**11 24 01.8**	**-2.3**
RER	**Riviere de l'E**	**15.61**	**12**	*e*Pn	**Pn**	**11 25 18.8**	**-3.5**
	82nm,1.2s						
MRIV	**Mauritius Mete**	**16.80**	**17**	*e*Pn	**Pn**	**11 25 37.3**	**-0.2**
	35nm,1.1s						
ABPO	**Ambohimpanom**	**18.05**	**344**	*e*Pn	**P**	**11 25 54.7**	**+1.0**
	58nm,0.4s						
OPO	**Ambohidratompo**	**18.49**	**344**	P	**P**	**11 25 58.2**	**-0.3**
	0.2nm,0.3s,baz=201,slow=17,SNR=4.8						
OPO				S	**Sn**	**11 29 23.9**	**-1.5**
	0.7nm,0.3s,baz=274,slow=19,SNR=3.2						
OPO				LR	LR	11 31 51.4	
	comp=Z,2μm,18.6s,baz=4.0,slow=33						
BOSA	**Boshof**	**24.14**	**281**	P	**P**	**11 26 57.9**	**-0.5**
	8.0nm,0.9s,baz=117,slow=11,SNR=8.9						
BOSA				LR	LR	11 34 03.4	
	comp=Z,3μm,20.9s,baz=117,slow=31						
BOSA	**Boshof**	**24.14**	**281**	*e*P	**P**	**11 26 58.3**	**-0.1**
	26nm,1.0s						
LBTB	**Lobatse**	**25.64**	**289**	P	**P**	**11 27 11.1**	**-1.0**
	8.0nm,0.9s,baz=136,slow=8.1,SNR=6.0						
LBTB				LR	LR	11 35 56.1	
	comp=Z,2μm,18.1s,baz=121,slow=33						
LBTB	**Lobatse**	**25.64**	**289**	*e*P	**P**	**11 27 12.0**	**-0.1**
	22nm,1.0s						
SUR	**Sutherland**	**26.30**	**270**	P	**P**	**11 27 18.0**	**-0.2**
	8.8nm,0.8s,baz=113,slow=4.0,SNR=4.2						
SUR				LR	LR	11 35 28.6	
	comp=Z,3μm,19.1s,baz=117,slow=31						
SUR	**Sutherland**	**26.30**	**270**	*e*P	**P**	**11 27 17.8**	**-0.3**
	45nm,1.3s						
SUR				LR	LR		
	comp=Z,3μm,18.0s						
MATP	**Matopo**	**26.33**	**301**	P	**P**	**11 27 17.4**	**-1.0**
	comp=Z,20nm,1.0s,baz=124,slow=8.4,SNR=8.3						
MATP				LR	LR	11 36 03.2	
	comp=Z,5μm,21.2s,baz=136,slow=33						
LSZ	**Lusaka**	**30.22**	**308**	*e*P	**P**	**11 27 52.8**	**-0.3**
	comp=Z,43nm,1.3s						
LSZ				LR	LR		
	comp=Z,3μm,18.0s						
MAW	**Mawson**	**31.67**	**172**	P	**P**	**11 28 04.8**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=356,slow=8.9,SNR=5.8						
MAW				LR	LR	11 37 53.9	
	comp=Z,2μm,18.9s,baz=340,slow=31						
MAW	**Mawson**	**31.67**	**172**	*e*P	**P**	**11 28 05.2**	**0.0**
	comp=Z,3.0nm,1.3s						
MAW				LR	LR		
	comp=Z,500nm,19.0s						
SYO	**Syowa Base**	**33.27**	**188**	‖*iP*	**P**	**11 28 19.6**	**+0.4**
SYO	**Syowa Base**	**33.27**	**188**	‖*ep*P	pP	11 28 21.8	+1.1
SYO	**Syowa Base**	**33.27**	**188**	‖*e*PnPn	PnPn	11 29 31.2	+1.8
H08S1	**Diego Carcia H**	**34.11**	**37**	T	T	12 04 27.2	
	baz=209,slow=76,SNR=81						
H08S2	**Diego Garcia H**	**34.12**	**37**	T	T	12 04 30.0	
	baz=209,slow=76,SNR=43						
H08S3	**Diego Garcia H**	**34.13**	**37**	T	T	12 04 35.4	
	baz=209,slow=76,SNR=71						
TSUM	**Tsumeb**	**35.05**	**290**	*e*P	**P**	**11 28 35.5**	**+0.2**
	comp=Z,8.8nm,0.8s						
TSUM				LR	LR		
	comp=Z,1μm,22.0s						
KMBO	**Kilima Mbogo**	**37.93**	**335**	LR	LR	11 42 35.2	
	comp=Z,2μm,21.6s,baz=132,slow=33						
KMBO	**Kilima Mbogo**	**37.93**	**335**	*e*P	**P**	**11 29 00.1**	**-0.1**
	comp=Z,28nm,1.8s						
KMBO				LR	LR		
	comp=Z,2μm,22.0s						
NAI	**Nairobi**	**37.95**	**334**	PFAKE		11 29 10.0	+10
NAI				LR	LR		
	comp=Z,3μm,20.0s						
MBAR	**Mbarara**	**41.01**	**326**	LR	LR	11 46 20.0	
	comp=Z,818nm,18.5s,baz=149,slow=36						
MBAR	**Mbarara**	**41.01**	**326**	PFAKE		11 29 40.0	+14
MBAR				LR	LR		
	comp=Z,1μm,22.0s						
CASY	**Casey**	**44.42**	**151**	*e*P	**P**	**11 29 53.6**	**+0.9**
CASY				LR	LR		
	comp=Z,2μm,22.0s						
SNAA	**Sanae**	**44.94**	**202**	P	**P**	**11 29 57.8**	**+1.0**
SNAA	**Sanae**	**44.94**	**202**	P	**P**	**11 29 57.8**	**+1.0**
	comp=Z,25nm,0.9s,baz=86,slow=6.9,SNR=66						
SNAA	**Sanae**	**44.94**	**202**	*e*P	**P**	**11 29 57.6**	**+0.7**
	comp=Z,57nm,1.3s						
SNAA				LR	LR		
	comp=Z,2μm,20.0s						
VNA2	**Neumayer--Watz**	**46.11**	**203**	P	**P**	**11 30 07.4**	**+1.3**
	baz=65,slow=7.5						
VNA1	**Neumayer--Stat**	**46.32**	**204**	P	**P**	**11 30 08.9**	**+1.3**
COCO	**West Island**	**46.65**	**70**	*e*P	**P**	**11 30 11.0**	**+0.1**
VNA3	**Neumayer Olymp**	**46.91**	**203**	P	**P**	**11 30 13.2**	**+0.9**
FURI	**Furi**	**47.01**	**341**	*e*P	**P**	**11 30 14.2**	**+0.2**
	comp=Z,51nm,0.4s						
FURI				LR	LR		
	comp=Z,900nm,19.0s						
ATD	**Arta Tunnel**	**48.66**	**348**	PFAKE		11 30 40.0	+14
ATD				LR	LR		
	comp=Z,500nm,19.0s						
H01W2	**Cape Leeuwin H**	**49.38**	**107**	T	T	12 23 37.2	
	baz=247,slow=75,SNR=564						
H01W3	**Cape Leeuwin H**	**49.39**	**107**	T	T	12 23 40.8	
	baz=247,slow=75,SNR=776						
H01W1	**Cape Leeuwin H**	**49.40**	**107**	T	T	12 23 41.4	
	baz=247,slow=75,SNR=562						
DAMY	**Dhamar**	**51.40**	**350**	PFAKE		11 31 00.0	+12
DAMY				LR	LR		
	comp=Z,800nm,19.0s						
QSPA	**South Pole Qui**	**53.64**	**180**	*e*P	**P**	**11 31 03.3**	**-0.2**
	comp=Z,35nm,1.0s						
QSPA				LR	LR		
	comp=Z,2μm,21.0s						
PDSI	**Padang**	**56.81**	**63**	P	P	11 31 35.9	+9.0
SDSI	**Sungai Dareh**	**57.49**	**64**	P	P	11 31 44.5	+13
BKNI	**Bangkinang**	**58.09**	**62**	*e*P	**P**	**11 31 36.2**	**+0.4**
	comp=Z,52nm,0.5s						
KCSI	**Kotacane, Aceh**	**58.11**	**57**	P	P	11 31 44.5	+8.5
PSI	**Prapat**	**58.37**	**58**	*e*P	**P**	**11 31 36.9**	**-1.0**
	comp=Z,15nm,1.0s						
VNDA	**Vanda**	**58.64**	**166**	P	**P**	**11 31 39.2**	**+0.3**
	comp=Z,5.4nm,1.0s,baz=257,slow=7.2,SNR=15						
VNDA				LR	LR	11 53 51.2	
	comp=Z,1μm,21.4s,baz=240,slow=33						
VNDA	**Vanda**	**58.64**	**166**	*e*P	**P**	**11 31 39.1**	**+0.2**
	comp=Z,18nm,1.3s						
SBA	**Scott Base**	**59.39**	**167**	*e*P	**P**	**11 31 45.6**	**+1.5**
	comp=Z,27nm,1.4s						
RAYN	**Ar Rayn**	**60.10**	**353**	*e*P	**P**	**11 31 49.5**	**-0.1**
	comp=Z,12nm,1.1s						
IPM	**Ipoh**	**61.02**	**59**	*e*P	**P**	**11 31 56.3**	**+0.2**
	comp=Z,19nm,1.0s						
UOSS	**Minazif**	**61.27**	**4**	PFAKE		11 32 10.0	+13
UOSS				LR	LR		
	comp=Z,600nm,20.0s						
KULM	**Kulim**	**61.35**	**58**	PFAKE		11 32 10.0	+12
KULM				LR	LR		
	comp=Z,300nm,21.0s						
FORT	**Forrest**	**61.74**	**109**	*e*P	**P**	**11 32 01.2**	**+0.4**
	comp=Z,17nm,1.0s						
BBOO	**Buckleboo**	**66.76**	**114**	*e*P	**P**	**11 32 33.6**	**-0.2**
	comp=Z,8.3nm,0.9s						
EDFI	**Ende, Flores**	**68.22**	**85**	P	P	11 33 00.0	+17
DBIC	**Dimbokro**	**68.63**	**296**	P	**P**	**11 32 46.4**	**+0.7**
	comp=Z,10nm,1.0s,baz=156,slow=7.7,SNR=4.1						
DBIC	**Dimbokro**	**68.63**	**296**	*e*P	**P**	**11 32 46.1**	**+0.4**
	comp=Z,50nm,1.5s						
TOC3	**Torodi Ar. Sit**	**68.70**	**306**	PFAKE		11 33 00.0	+14
TOC3				LR	LR		
	comp=Z,700nm,19.0s						
TOB3	**Torodi Ar. Sit**	**68.71**	**306**	PFAKE		11 33 00.0	+14
TOB3				LR	LR		
	comp=Z,900nm,18.0s						
TOC2	**Torodi Ar. Sit**	**68.71**	**306**	PFAKE		11 33 00.0	+14
TOC2				LR	LR		
	comp=Z,700nm,20.0s						
TOA2	**Torodi Ar. Sit**	**68.72**	**306**	PFAKE		11 33 00.0	+14
TOA2				LR	LR		
	comp=Z,1μm,22.0s						
TOB2	**Torodi Ar. Sit**	**68.72**	**306**	PFAKE		11 33 00.0	+14
TOB2				LR	LR		
	comp=Z,900nm,18.0s		

comp=Z,22nm,1.3s
LSA LR LR
comp=Z,600nm,22.0s
SLVN Son La 75.36 49 *e*P P 11 33 25.9 0.0
comp=Z,5.4nm,0.9s
SLVN LR LR
comp=Z,300nm,21.0s
KARP Karpathos 75.47 339 PFAKE 11 33 40.0 +14
KARP LR LR
comp=Z,800nm,22.0s
ISP Isparta 76.72 342 PFAKE 11 33 50.0 +17
ISP LR LR
comp=Z,300nm,20.0s
GAR Garm 76.98 14 *e*P P 11 33 34.8 -0.1
comp=Z,18nm,1.2s
QIZ Qiongzhong 77.43 55 P **P 11 33 39.4 +1.7**
QIZ S **S 11 43 30.1 +1.6**
QIZ ScS **ScS 11 43 57.6 +1.6**
QIZ pmax pmax
comp=Z,6.0nm,1.8s
QIZ LR LR
comp=Z,270nm,20.0s
QIZ LR LR
comp=Z,290nm,18.6s
QIZ LR LR
comp=Z,470nm,18.8s
QIZ Qiongzhong 77.43 55 PFAKE 11 33 50.0 +12
QIZ LR LR
comp=Z,500nm,20.0s
KMI Kunming 77.56 46 P **P 11 33 41.5 +2.9**
KMI pmax pmax
comp=Z,16nm,0.5s
KMI pmax pmax
comp=Z,68nm,4.0s
KMI LR LR
comp=Z,250nm,16.7s
KMI LR LR
comp=Z,290nm,21.7s
KMI LR LR
comp=Z,280nm,21.0s
KMI Kunming 77.56 46 PFAKE 11 33 50.0 +11
KMI LR LR
comp=Z,600nm,21.0s
BRTR Keskin Array B 77.84 345 P **P 11 33 38.8 -0.9**
comp=Z,2.9nm,1.1s,baz=184,slow=8.3,SNR=7.9
BRTR LR LR 12 06 37.3
comp=Z,162nm,20.0s,baz=157,slow=35
BR101 Keskin Array S 77.84 345 *e*P **P 11 33 38.8 -0.9**
AKH Akhalkalaki 78.01 353 *e*P **P 11 33 41.0 +0.4**
comp=Z,8.1nm,1.0s
BTK Batken 78.10 14 *e*P **P 11 33 41.5 +0.4**
comp=Z,7.8nm,1.0s
TBLG Delisi 78.22 354 *e*P **P 11 33 41.7 +0.1**
comp=Z,52nm,1.6s
KSH Kashi 78.75 18 P **P 11 33 42.1 -2.6**
KSH sP sP 11 33 49.3 +2.7
KSH PP **PP 11 36 42.8 -0.7**
KSH S **S 11 43 34.0 -8.2**
KSH pmax pmax
comp=Z,27nm,1.0s
KSH pmax pmax
comp=Z,150nm,5.4s
KSH LR LR
comp=Z,420nm,10.6s
KSH LR LR
comp=Z,320nm,12.8s
KSH LR LR
comp=Z,980nm,19.7s
MDUB Mudurnu 79.08 344 PFAKE 11 34 00.0 +14
MDUB LR LR
comp=Z,1μm,21.0s
BALB Balikesir 79.11 341 PFAKE 11 34 00.0 +14
BALB LR LR
comp=Z,700nm,20.0s
FAKI Fak Fak 80.12 86 *e*P **P 11 33 52.4 -0.3**
comp=Z,15nm,1.1s
WDD Wied Dalam 80.16 330 PFAKE 11 34 00.0 +7.7
WDD LR LR
comp=Z,700nm,18.0s
KBZ Khabaz 80.37 353 P **P 11 33 52.3 -0.9**
comp=Z,2.6nm,0.7s,baz=128,slow=3.3,SNR=5.8
KBZ LR LR 12 09 16.0
comp=Z,141nm,20.1s,baz=173,slow=36
KIV Kislovodsk 80.61 353 *e*P **P 11 33 54.6 -0.1**
comp=Z,24nm,1.3s
ALN Alexandroupoli 80.78 340 PFAKE 11 34 10.0 +15
ALN LR LR
comp=Z,200nm,21.0s
KK31 Karatay Array 80.98 13 *e*P **P 11 33 56.9 +0.3**
comp=Z,12nm,1.0s
LIT Litokhoron 81.08 337 PFAKE 11 34 10.0 +13
LIT LR LR
comp=Z,300nm,19.0s
CTAO Charters Tower 81.29 108 *e*P **P 11 33 59.1 +0.2**
comp=Z,15nm,0.9s
AAK Ala-Archa 81.35 16 P **P 11 33 57.7 -1.0**
comp=Z,5.7nm,0.8s,baz=207,slow=7.4,SNR=6.7
AAK Ala-Archa 81.35 16 *e*P **P 11 33 59.0 +0.3**
comp=Z,16nm,1.2s
CEL Celeste 81.72 332 PFAKE 11 34 10.0 +9.3
CEL LR LR
comp=Z,500nm,21.0s
EIDS Eidsvold 81.80 115 *e*P **P 11 34 01.0 -0.5**
comp=Z,12nm,1.0s
FNA Florina 82.06 337 *e*P **P 11 34 02.1 -0.3**
comp=Z,3.9nm,0.8s
FNA LR LR
comp=Z,600nm,22.0s
CLTB Caltabellotta 82.19 330 PFAKE 11 34 10.0 +6.8
CLTB LR LR
comp=Z,800nm,18.0s
TIP Timpagrande 82.21 333 PFAKE 11 34 10.0 +6.8
TIP LR LR
comp=Z,500nm,20.0s
KEST Kesra 82.30 326 P **P 11 34 04.1 +0.4**
comp=Z,8.0nm,1.0s,baz=235,slow=2.4,SNR=6.3
KEST Kesra 82.30 326 *e*P **P 11 34 04.7 +1.0**
comp=Z,9.8nm,1.0s
KEST LR LR
comp=Z,1μm,18.0s
CD2 Chengdu 82.59 43 P P 11 34 16.6 +11
CD2 Chengdu 82.59 43 S S 11 44 31.8 +9.2
CD2 Chengdu 82.59 43 SS SS 11 49 47.6 +2.6
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,320nm,7.3s
CD2 LR LR
comp=N,910nm,28.4s
CD2 LR LR
comp=E,750nm,20.6s
CD2 LR LR
comp=Z,800nm,22.6s
VTS Vitosha 83.16 339 *e*P **P 11 34 07.9 -0.3**
comp=Z,7.6nm,1.3s
VTS LR LR
comp=Z,300nm,20.0s
LHI Lord Howe Isla 83.62 125 PFAKE 11 34 20.0 +9.1
LHI LR LR
comp=Z,1μm,20.0s
TRQA Tornquist 84.16 226 *e*P **P 11 34 13.3 -0.3**
comp=Z,18nm,1.1s
TTG Podgorica 84.22 336 PFAKE 11 34 20.0 +6.6
TTG LR LR
comp=Z,300nm,20.0s
MLR Muntele Rosu 85.08 342 P **P 11 34 17.1 -0.8**
comp=Z,7.1nm,1.1s,baz=219,slow=3.4,SNR=5.1
MLR Muntele Rosu 85.08 342 *e*P **P 11 34 17.8 -0.1**
comp=Z,27nm,1.6s
ENH Enshi 85.35 47 *e*P **P 11 34 19.3 -0.2**
comp=Z,23nm,1.1s
ABKAR Akbulak array 85.70 5 *e*P **P 11 34 20.1 -0.6**
comp=Z,20nm,1.4s
WMQ Urumqi 86.19 25 *e*P **P 11 34 25.9 +2.6**
WMQ LR LR
comp=Z,150nm,22.7s
WMQ LR LR
comp=Z,260nm,21.1s
WMQ LR LR
comp=Z,230nm,18.1s
AQU L'Aquila 86.22 332 PFAKE 11 34 30.0 +6.5
AQU LR LR
comp=Z,500nm,22.0s
LZH Lanzhou 86.63 39 *e*P **P 11 34 26.8 +0.9**
LZH pP PcP 11 34 30.1 +1.9
LZH sP pwP 11 34 31.8 -3.1
LZH *e*PP **PP 11 37 52.5 +4.1**
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,87nm,9.0s
LZH LR LR
comp=Z,220nm,17.3s
LZH LR LR
comp=Z,220nm,17.5s
LZH LR LR
comp=Z,360nm,19.2s
AKTO Aktyubinsk 86.75 4 P **P 11 34 25.6 -0.3**
comp=Z,1.8nm,0.6s,baz=169,slow=1.4,SNR=4.7
BLY Banja Luka 86.97 336 PFAKE 11 34 40.0 +13
BLY LR LR
comp=Z,300nm,22.0s
PLCA Paso Flores 86.98 220 P **P 11 34 28.0 +0.3**
comp=Z,3.0nm,0.8s,baz=94,slow=7.7,SNR=4.1
PLCA LR LR 12 09 49.0
comp=Z,214nm,18.0s,baz=154,slow=33
PLCA Paso Flores 86.98 220 *e*P **P 11 34 27.7 0.0**
comp=Z,24nm,1.4s
MK32 Makanchi Array 87.20 20 *e*P **P 11 34 28.0 -0.2**
MKAR Makanchi Array 87.20 20 P **P 11 34 28.0 -0.2**
comp=Z,0.4nm,0.4s,baz=205,slow=6.4,SNR=3.0
MKAR LR LR 12 09 22.6
comp=Z,281nm,21.8s,baz=196,slow=33
BUR08 Bucovina Ar. S 87.28 342 *e*P **P 11 34 28.7 +0.1**
comp=Z,15nm,1.6s
GTA Gaotai 87.30 35 *e*P P 11 34 42.3 +13
GTA pP pwP 11 34 46.4 +8.4
GTA sP PcP 11 34 49.4 +18
GTA pmax pmax
comp=Z,3.0nm,0.6s
XAN Xi'an 87.80 44 P P 11 34 42.8 +11
XAN sP pwP 11 34 54.5 +14
XAN Xi'an 87.80 44 SKS **SKSac 11 44 59.8 +0.2**
XAN Xi'an 87.80 44 S S 11 45 25.4 +11
XAN Xi'an 87.80 44 SS SS 11 51 14.5 +13
XAN pmax pmax
comp=Z,8.0nm,1.0s
XAN pmax pmax
comp=Z,110nm,9.3s
XAN LR LR
comp=E,240nm,19.5s
XAN LR LR
comp=Z,270nm,23.8s
PMG Port Moresby 88.27 100 PFAKE 11 34 50.0 +16
PMG LR LR
comp=Z,1μm,18.0s
WHN Wuhan 88.47 50 ⇑P **P 11 34 30.3 -4.3**
WHN Wuhan 88.47 50 S S 11 45 06.0 -14
WHN Wuhan 88.47 50 SS SS 11 51 20.8 +9.4
WHN pmax pmax
comp=Z,46nm,0.2s
WHN LR LR
comp=N,950nm,19.3s
WHN LR LR
comp=E,250nm,12.3s
WHN LR LR
comp=Z,2μm,44.6s
VLC Villacollemand 88.91 331 PFAKE 11 34 50.0 +14
VLC LR LR
comp=Z,300nm,20.0s
BDFB Brasilia 88.92 251 P **P 11 34 38.3 +0.9**
comp=Z,1.5nm,0.3s,baz=29,slow=4.0,SNR=3.2
PSZ Piszkesteto 88.96 339 PFAKE 11 34 50.0 +13
PSZ LR LR
comp=Z,300nm,20.0s
CPUP Villa Florida 88.98 238 P **P 11 34 37.1 -0.2**
comp=Z,5.8nm,1.1s,baz=90,slow=3.6,SNR=5.5
CPUP LR LR 12 09 13.7
comp=Z,295nm,18.6s,baz=138,slow=32
TRI Trieste 88.98 334 PFAKE 11 34 50.0 +13
TRI LR LR
comp=Z,300nm,21.0s
AKASG Malin Array Be 89.25 346 P **P 11 34 36.6 -1.1**
comp=Z,1.4nm,0.6s,baz=171,slow=3.9,SNR=8.8
AKASG LR LR 12 13 39.4
comp=Z,90nm,20.9s,baz=180,slow=35
AKBB Malin Array Si 89.25 346 *e*P **P 11 34 37.1 -0.6**
comp=Z,13nm,1.4s
RTC Rabat Centre 89.30 314 PFAKE 11 34 50.0 +12
RTC LR LR
comp=Z,4μm,18.0s
KWP Kalwaria Pacla 89.75 341 PFAKE 11 34 50.0 +10
KWP LR LR
comp=Z,2μm,22.0s
KURBB Kurchatov Arra 89.81 16 P **P 11 34 39.7 -0.6**
comp=Z,2.0nm,0.2s,baz=212,slow=5.2,SNR=5.9
KURK Kurchatov 89.92 16 *e*P **P 11 34 41.0 +0.1**
comp=Z,9.9nm,1.3s
BVAR Borovoye Array 90.57 11 P **P 11 34 43.2 -0.7**
comp=Z,1.3nm,0.6s,baz=193,slow=5.8,SNR=7.2
SFS San Fernando 90.72 317 PFAKE 11 35 00.0 +15
SFS LR LR
comp=Z,1μm,20.0s
FUORN Ofenpass-Fuorn 91.03 332 PFAKE 11 35 00.0 +13
FUORN LR LR
comp=Z,500nm,19.0s
BNI Bardonecchia 91.13 330 PFAKE 11 35 00.0 +13
BNI LR LR
comp=Z,600nm,21.0s
VRAC Vranov 91.19 337 P **P 11 34 47.4 +0.5**
comp=Z,2.4nm,0.5s,baz=249,slow=8.6,SNR=2.6
OKC Ostrava-Krasne 91.20 339 *e*SKS **SKSac 11 45 26.3 +7.7**
OKC AMS AMS 12 19 20.0
comp=Z,300nm,15.2s
TUE Stuetta 91.25 332 PFAKE 11 35 00.0 +13
TUE LR LR
comp=Z,300nm,21.0s
MORC Moravsky Berou 91.32 338 PFAKE 11 35 00.0 +12
MORC LR LR
comp=Z,200nm,18.0s
TREC Trest 91.53 337 AMS AMS 12 22 50.0
comp=Z,300nm,14.4s
GEC2 GERESS Array S 91.72 336 PFAKE 11 35 00.0 +11
GEC2 LR LR
comp=Z,300nm,19.0s
GERES GERESS Array B 91.72 336 LR LR 12 19 59.5
comp=Z,114nm,18.4s,baz=186,slow=38
ESDC Sonseca Array 91.87 320 P **P 11 34 50.5 +0.1**
comp=Z,0.8nm,0.7s,baz=120,slow=2.4,SNR=4.8
ESDC LR LR 12 17 50.4
comp=Z,535nm,18.7s,baz=130,slow=37
ESLA Sonseca Array 91.87 320 PFAKE 11 35 00.0 +10
ESLA LR LR
comp=Z,600nm,20.0s
SENIN Lac Senin/Sane 91.95 331 PFAKE 11 35 00.0 +9.2
SENIN LR LR
comp=Z,500nm,22.0s
PAB San Pablo 91.98 320 PFAKE 11 35 00.0 +9.1
PAB LR LR
comp=Z,900nm,19.0s
KHC Kasperske Hory 92.00 336 PFAKE 11 35 00.0 +9.3
KHC LR LR
comp=Z,100nm,20.0s
KHC Kasperske Hory 92.00 336 *e*S **S 11 45 53.2 +0.9**
KHC AMS AMS 12 22 10.0
comp=Z,400nm,14.6s
DPC Dobruska-Polom 92.20 338 *e*SKS **SKSac 11 45 25.0 +0.6**
DPC AMS AMS 12 22 50.0
comp=Z,200nm,16.0s
SSB Saint Sauveur 92.20 328 PFAKE 11 35 00.0 +8.3
SSB LR LR
comp=Z,400nm,18.0s
PVAQ Vaqueiros 92.24 316 PFAKE 11 35 00.0 +8.0
PVAQ LR LR
comp=Z,800nm,20.0s
GOPC GO Pecny, Ondr 92.29 337 AMS AMS 12 17 20.0
comp=Z,200nm,23.1s
NJ2 Nanjing 92.30 51 *e*P **P 11 34 53.8 +1.4**
NJ2 pmax pmax
comp=Z,16nm,0.9s
PRU Pruhonice 92.43 337 *e*SKS **SKSac 11 45 21.7 -3.9**
PRU AMS AMS 12 22 40.0
comp=Z,200nm,16.0s
CHVC Chvalec 92.49 338 AMS AMS 12 23 30.0
comp=Z,300nm,14.9s
PFVI Vila Bisbo 92.67 315 PFAKE 11 35 10.0 +16
PFVI LR LR
comp=Z,500nm,21.0s
ARU Arti 92.77 3 P **P 11 34 52.5 -1.4**
comp=Z,0.6nm,0.3s,baz=73,slow=19,SNR=2.8
ARU Arti 92.77 3 *e*P **P 11 34 53.7 -0.2**
comp=Z,13nm,1.5s
PVCC Panska Ves 92.89 337 AMS AMS 12 22 40.0
comp=Z,300nm,15.0s
SSE Sheshan 93.15 53 PFAKE 11 35 10.0 +14
SSE LR LR
comp=Z,200nm,19.0s
BFO Black Forest 93.18 332 PFAKE 11 35 10.0 +14
BFO LR LR
comp=Z,300nm,21.0s
STU Stuttgart 93.23 333 PFAKE 11 35 10.0 +14
STU LR LR
comp=Z,300nm,18.0s
GRA1 Grafenberg Arr 93.28 335 PFAKE 11 35 10.0 +13
GRA1 LR LR
comp=Z,300nm,19.0s
ECH Echery 93.53 332 PFAKE 11 35 10.0 +12
ECH LR LR
comp=Z,300nm,20.0s
CLL Collm 94.07 336 PFAKE 11 35 10.0 +10
CLL LR LR
comp=Z,300nm,18.0s
CLL Collm 94.07 336 *e*PP **PP 11 38 48.0 +1.0**
CLL *e*S **S 11 46 12.0 +1.7**
CLL *e*PS PS 11 47 30.0 +3.5
CLL *e*SS **SS 11 52 36.0 +4.5**
CLL *e*SSSS 11 59 42.0
CLL LmV 12 23 00.0
comp=Z,300nm,19.3s
HHC Hu-ho-hao-te 94.21 41 *e*P **P 11 35 03.0 +1.8**
HHC PP **PP 11 38 53.4 +5.0**
HHC S **S 11 46 11.8 -0.5**
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,96nm,5.8s
HHC LR LR
comp=Z,260nm,15.8s
HHC LR LR
comp=Z,180nm,15.2s
HHC LR LR
comp=Z,530nm,12.3s
MTE Manteigas 94.28 318 PFAKE 11 35 10.0 +8.5
MTE LR LR
comp=Z,900nm,19.0s
ZALV Zalesovo Beam 94.39 19 P **P 11 34 58.8 -2.7**
comp=Z,1.6nm,0.6s,baz=202,slow=7.2,SNR=4.2
ZAA1 Zalesovo Array 94.39 19 *e*P **P 11 34 58.8 -2.7**
COI Coimbra 94.61 318 PFAKE 11 35 10.0 +7.1
COI LR LR
comp=Z,600nm,20.0s
DZM Mont Dzumac 94.76 122 *e*SS SS 11 52 38.2 -3.0
comp=Z,424nm,23.1s
DZM Mont Dzumac 94.76 122 *e*LR LR 12 05 27.4
comp=Z,2μm,31.0s
WLF Walferdange 95.09 332 PFAKE 11 35 20.0 +15
WLF LR LR
comp=Z,2μm,20.0s
JOW Kunigami 95.21 60 PFAKE 11 35 20.0 +14
JOW LR LR
comp=Z,300nm,20.0s
CLF Chambon-Foret 95.34 329 PFAKE 11 35 20.0 +14
CLF LR LR
comp=Z,500nm,19.0s
BJT Baijiatuau 96.12 44 PFAKE 11 35 20.0 +10
BJT LR LR
comp=Z,300nm,22.0s
RGN Rugen 96.76 338 PFAKE 11 35 20.0 +7.8
RGN LR LR
comp=Z,300nm,20.0s
ULN Ulaanbaatar 97.17 34 PFAKE 11 35 30.0 +15
ULN LR LR
comp=Z,400nm,21.0s
TLY Talaya 98.64 29 PFAKE 11 35 30.0 +9.1
TLY LR LR
comp=Z,300nm,22.0s
JNU Nakatsue 100.81 57 PFAKE 11 35 40.0 +8.9
JNU LR LR
comp=Z,300nm,22.0s
ANA2 Anatahan 102.16 79 PFAKE 11 35 50.0 +13
ANA2 LR LR
comp=Z,2μm,21.0s
KONO Kongsberg 102.17 339 PFAKE 11 35 50.0 +14
KONO LR LR
comp=Z,300nm,18.0s
MDJ Mudanjiang 106.72 47 PFAKE 11 40 20.0 +13
MDJ LR LR
comp=Z,200nm,19.0s
PTGA Pitinga 107.38 256 PFAKE 11 40 20.0 +11
PTGA LR LR
comp=Z,800nm,20.0s
YAK Yakutsk 116.07 31 PFAKE 11 40 40.0 +16
YAK LR LR
comp=Z,200nm,22.0s
TBI Tubuai 116.95 157 *e*SP SP 11 51 14.8 -3.0
comp=Z,143nm,30.2s
TBI *e*SS **SS 11 57 40.8 -1.4**
comp=Z,567nm,25.2s
TBI Tubuai 116.95 157 *e*LR LR 12 15 46.3
comp=Z,696nm,23.8s
SKI Saint Kitts 120.14 270 PFAKE 11 40 50.0 +16
SKI LR LR
comp=Z,600nm,20.0s
SEUS St. Eustatius 120.42 270 PFAKE 11 40 50.0 +16
SEUS LR LR
comp=Z,400nm,19.0s
SMRT St. Maarten 120.80 270 PFAKE 11 40 50.0 +15
SMRT LR LR
comp=Z,300nm,18.0s
SDV Santo Domingo 121.64 257 PFAKE 11 40 50.0 +13
SDV LR LR
comp=Z,900nm,20.0s
OTAV Otavalo 121.94 243 PFAKE 11 40 50.0 +12
OTAV LR LR
comp=Z,300nm,20.0s
PPT2 Papeete2 122.29 155 *e*SP SP 11 52 02.7 -3.2
comp=Z,370nm,24.8s
PPT2 *e*SS **SS 11 58 50.4 -0.9**
comp=Z,537nm,26.5s
PPT2 Papeete2 122.29 155 *e*LR LR 12 18 19.9
comp=Z,878nm,34.5s
CUPR Culebra, Puert 122.71 269 PFAKE 11 40 50.0 +11
CUPR LR LR
comp=Z,500nm,22.0s
OCAC Ocana 123.34 254 *e*P **Pdif 11 37 03.6 -8.2**
OCAC *i* 11 37 18.7
comp=Z,34nm,0.4s
ICMP Isla Caja de M 123.49 268 PFAKE 11 40 50.0 +10
ICMP LR LR
comp=Z,300nm,19.0s
MPR Mayaguez 124.16 268 PFAKE 11 40 50.0 +8.4
MPR LR LR
comp=Z,500nm,20.0s
MA2 Magadan 124.76 38 PFAKE 11 40 50.0 +8.5
MA2 LR LR
comp=Z,200nm,22.0s
SDD Santo Domingo 126.52 267 PFAKE 11 41 00.0 +14
SDD LR LR
comp=Z,1μm,18.0s
GBN Guysborough 130.59 302 PFAKE 11 41 00.0 +6.4
GBN LR LR
comp=Z,600nm,20.0s
WVL Waterville 136.06 299 PFAKE 11 41 10.0 +5.3
WVL LR LR
comp=Z,700nm,21.0s
BCX Boston College 136.71 296 PFAKE 11 41 20.0 +14
BCX LR LR
comp=Z,700nm,19.0s
YLE Yale 137.79 294 PFAKE 11 41 20.0 +12
YLE LR LR
comp=Z,600nm,19.0s
U61A Possum Corner 139.25 286 PFAKE 11 41 20.0 +8.5
U61A LR LR
comp=Z,500nm,21.0s
T60A Surry 139.69 287 PFAKE 11 41 20.0 +7.6
T60A LR LR
comp=Z,400nm,20.0s
V60A Jim Taylor Roa 139.72 284 PFAKE 11 41 20.0 +7.5
V60A LR LR
comp=Z,500nm,21.0s
U59A Littleton 140.30 285 PFAKE 11 41 20.0 +6.3
U59A LR LR
comp=Z,500nm,20.0s
TEIG Tepich 142.06 256 PFAKE 11 41 30.0 +12
TEIG LR LR
comp=Z,600nm,19.0s
KMSC Kings Mountain 142.74 282 PFAKE 11 41 30.0 +11
KMSC LR LR
comp=Z,400nm,19.0s

V53A	**Saluda**	**144.04**	**282**	PFAKE		11 41 30.0	+8.5
V53A				LR	LR		
comp=Z,400nm,21.0s							
ANM	**Nome**	**144.07**	**27**	PFAKE		11 41 30.0	+9.5
ANM				LR	LR		
comp=Z,200nm,20.0s							
TOLK	**Toolik Lake Re**	**145.62**	**14**	*e*PKPdf	**PKPab**	**11 41 20.5**	**+0.3**
T49A	**Edmonton**	**146.51**	**284**	PFAKE		11 41 30.0	+3.6
T49A				LR	LR		
comp=Z,500nm,20.0s							
INK	**Inuvik**	**148.02**	**4**	PKPbc	**PKPbc**	**11 41 25.5**	**-1.2**
comp=Z,8.1nm,1.1s,baz=94,slow=2.7,SNR=5.0							
WVT	**Waverly**	**148.11**	**281**	PFAKE		11 41 40.0	+9.1
WVT				LR	LR		
comp=Z,400nm,20.0s							
FYU	**Fort Yukon**	**148.26**	**13**	*e*PKPdf	**PKPbc**	**11 41 25.8**	**-1.5**
FYU				LR	LR		
comp=Z,200nm,19.0s							
MLY	**Manley**	**148.34**	**19**	PFAKE		11 41 40.0	+9.0
MLY				LR	LR		
comp=Z,300nm,21.0s							
TTA	**Tatalina**	**148.36**	**25**	*e*PKPdf	**PKPbc**	**11 41 26.3**	**-1.5**
FCC	**Fort Churchill**	**148.86**	**326**	*e*PKPdf	**PKPbc**	**11 41 27.3**	**-1.9**
PRP	**Porcupine Dome**	**149.13**	**14**	*e*PKPdf	**PKPdf**	**11 41 27.5**	**+1.8**
PRP				LR	LR		
comp=Z,200nm,20.0s							
CCB	**Clear Creek Bu**	**149.38**	**17**	*e*PKPdf	**PKPdf**	**11 41 27.0**	**+1.1**
WRH	**Wood River Hil**	**149.46**	**17**	*e*PKPdf	**PKPdf**	**11 41 26.6**	**+0.6**
KTH	**Kantishna Hill**	**149.47**	**20**	*e*PKPdf	**PKPdf**	**11 41 27.4**	**+1.2**
KTH				LR	LR		
comp=Z,300nm,21.0s							
ILAR	**Eielson Array**	**149.49**	**16**	PKPbc	**PKPbc**	**11 41 29.4**	**-1.2**
comp=Z,5.9nm,1.1s,baz=322,slow=3.6,SNR=14							
ILB	**Eielson Array**	**149.49**	**16**	*e*PKPdf	**PKPbc**	**11 41 28.5**	**-2.1**
SIUC	**Southern Illin**	**149.51**	**284**	PFAKE		11 41 40.0	+3.5
SIUC				LR	LR		
comp=Z,300nm,18.0s							
EPYK	**Eagle Plains**	**149.67**	**7**	*e*PKPdf	**PKPbc**	**11 41 29.0**	**-2.1**
EPYK				LR	LR		
comp=Z,400nm,20.0s							
TRF	**Thorofare Moun**	**149.72**	**20**	*e*PKPdf	**PKPbc**	**11 41 29.4**	**-2.1**
TRF				LR	LR		
comp=Z,300nm,21.0s							
SVW2	**Sparrevohn**	**149.74**	**27**	PFAKE		11 41 40.0	+3.3
SVW2				LR	LR		
comp=Z,300nm,19.0s							
MCK	**McKinley**	**149.86**	**19**	PFAKE		11 41 40.0	+2.9
MCK				LR	LR		
comp=Z,200nm,22.0s							
RND	**Reindeer**	**150.15**	**19**	*e*PKPdf	**PKPbc**	**11 41 30.6**	**-1.7**
SLM	**Saint Louis**	**150.44**	**285**	PFAKE		11 41 40.0	-0.3
SLM				LR	LR		
comp=Z,700nm,21.0s							
DHY	**Denali Highway**	**150.80**	**18**	*e*PKPdf	**PKPdf**	**11 41 30.6**	**+2.2**
DHY				LR	LR		
comp=Z,200nm,21.0s							
DOT	**Dot Lake**	**151.08**	**15**	*e*PKPbc	**PKPbc**	**11 41 33.7**	**-0.8**
SUA	**Susitna One**	**151.13**	**23**	*e*PKPbc	**PKPbc**	**11 41 33.5**	**-1.3**
CCM	**Cathedral Cave**	**151.15**	**284**	*e*PKPdf	**PKPdf**	**11 41 31.1**	**+1.6**
EYMN	**Ely**	**151.20**	**305**	*e*PKPbc	**PKPbc**	**11 41 34.1**	**-1.2**
PMR	**Palmer**	**151.52**	**22**	*e*PKPdf	**PKPdf**	**11 41 31.3**	**+2.0**
DAWY	**Dawson**	**151.54**	**11**	*e*PKPdf	**PKPbc**	**11 41 32.8**	**-2.8**
DAWY				LR	LR		
comp=Z,32μm,18.0s							
SML	**Sawmill**	**151.58**	**21**	*e*PKPdf	**PKPdf**	**11 41 31.3**	**+1.8**
SML				LR	LR		
comp=Z,200nm,18.0s							
RC01	**Rabbit Creek A**	**151.73**	**23**	*e*PKPdf	**PKPdf**	**11 41 32.1**	**+2.4**
RC01				LR	LR		
comp=Z,200nm,21.0s							
MENT	**Mentasta**	**151.78**	**16**	PFAKE		11 41 40.0	+3.5
MENT				LR	LR		
comp=Z,200nm,20.0s							
ETX06	**Route 59 and C**	**152.26**	**270**	PFAKE		11 41 40.0	+1.6
ETX06				LR	LR		
comp=Z,200nm,20.0s							
GLI	**Glacier Island**	**152.69**	**21**	PFAKE		11 41 40.0	+1.6
GLI				LR	LR		
comp=Z,300nm,19.0s							
YKA	**Yellowknife Ar**	**152.80**	**347**	PKPbc	**PKPbc**	**11 41 37.8**	**-0.6**
comp=Z,0.8nm,0.7s,baz=12,slow=2.2,SNR=6.9							
YKA				PKPab	**PKPab**	**11 41 48.1**	**-1.2**
comp=Z,1.6nm,0.7s,baz=16,slow=2.8,SNR=6.0							
YKB5	**Yellowknife Ar**	**152.80**	**347**	*e*PKPbc	**PKPbc**	**11 41 37.8**	**-0.6**
YKB5				*e*PKPab	**PKPab**	**11 41 48.1**	**-1.2**
ULM	**Lac du Bonnet**	**153.42**	**311**	PFAKE		11 41 40.0	-0.1
ULM				LR	LR		
comp=Z,500nm,19.0s							
CRQM	**Cirque**	**153.83**	**17**	PFAKE		11 41 40.0	-0.9
CRQM				LR	LR		
comp=Z,400nm,18.0s							
HMT	**Hamilton**	**153.91**	**19**	PFAKE		11 41 40.0	-0.9
HMT				LR	LR		
comp=Z,300nm,20.0s							
AGMN	**Agassiz Nation**	**153.98**	**307**	PFAKE		11 41 40.0	-1.4
AGMN				LR	LR		
comp=Z,500nm,20.0s							
HYT	**Haines Junctio**	**154.90**	**11**	PFAKE		11 41 50.0	+6.9
HYT				LR	LR		
comp=Z,300nm,19.0s							
SKAG	**Skagway**	**156.53**	**10**	PFAKE		11 41 50.0	+14
SKAG				LR	LR		
comp=Z,300nm,22.0s							
JIS	**Juneau Island**	**157.81**	**9**	PFAKE		11 41 50.0	+12
JIS				LR	LR		
comp=Z,300nm,19.0s							
CBKS	**Cedar Bluff**	**157.86**	**284**	PFAKE		11 41 50.0	+11
CBKS				LR	LR		
comp=Z,500nm,21.0s							
DLBC	**Dease Lake**	**158.04**	**3**	PFAKE		11 41 50.0	+11
DLBC				LR	LR		
comp=Z,400nm,21.0s							
TXAR	**Lajitas Array**	**158.69**	**257**	PKPab	**PKPab**	**11 42 16.0**	**+0.2**
comp=Z,1.3nm,1.0s,baz=130,slow=5.1,SNR=3.6							
WRAK	**Wrangell Islan**	**159.87**	**8**	PFAKE		11 41 50.0	+9.4
WRAK				LR	LR		
comp=Z,400nm,20.0s							
PDAR	**Pinedale Array**	**164.78**	**300**	PP	PP	11 46 28.8	-0.2
comp=Z,0.4nm,0.8s,baz=113,slow=2.1,SNR=3.8							
NV01	**Mina Array Sit**	**172.37**	**287**	*e*PKPdf	**PKPdf**	**11 41 52.3**	**+0.9**
NVAR	**Mina Array Bea**	**172.37**	**287**	PKP	**PKPdf**	**11 41 52.3**	**+0.9**
comp=Z,0.2nm,0.8s,baz=27,slow=4.2,SNR=1.7							

TAP ***17*** *11:32:19.7,23°.69N×120°.96E,h13km,ML3.6,B*
ISCJB ***17*** *11:32:20.4±0.2,23°.691N±0°.009×120°.98E±0°.01,*
h12km±1km,Error ellipse: s-maj=1.7km s-min=1.3km
az=36.8
JMA ***17*** *11:32:20.5±0.1,23°.67N×121°.04E,h7km±3km,M3.1*
ISC 17 11:32:20.2±0.8,23°.69N±0°.01×120°.97E±0°.01,h13km±5km,
n130,σ0°65/207,10C-44D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.10**	**352**	⇑P	**Pg**	**11 32 23.1**	**-0.1**
baz=360							
SSLB				S	**Sg**	**11 32 25.0**	**-0.4**
baz=360							
WHYT	**Xinyi Township**	**0.11**	**275**	⇑*iP*	**Pg**	**11 32 23.2**	**-0.1**
baz=275							
WHYT				*i* S	**Sg**	**11 32 25.5**	**0.0**
baz=275							
VWDT	**VWDT**	**0.17**	**67**	⇓P	**Pb**	**11 32 24.9**	**-0.3**
baz=69							
VWDT				S	**Sb**	**11 32 28.0**	**-0.6**
baz=69							
YUS	**Yu-Shan**	**0.20**	**184**	⇑*iP*	**Pg**	**11 32 25.1**	**+0.2**
baz=173							
YUS				S	**Sg**	**11 32 28.2**	**0.0**
baz=173							
SMLT	**Sun Moon Lake**	**0.20**	**342**	⇑*iP*	**Pg**	**11 32 24.9**	**+0.1**
baz=354							
SMLT				*i* S	**Sg**	**11 32 28.3**	**+0.3**
baz=354							
ALS	**Alishan**	**0.23**	**221**	⇑*iP*	**Pg**	**11 32 25.3**	**0.0**
baz=209							
ALS				*i* S	**Sg**	**11 32 29.1**	**+0.3**
baz=209							
TYC	**Yuchr**	**0.24**	**335**	⇑*iP*	**Pg**	**11 32 25.3**	**0.0**
baz=346							
TYC				*i* S	**Sg**	**11 32 28.8**	**0.0**
baz=346							
WJS	**Zhushan**	**0.26**	**301**	⇑*iP*	**Pg**	**11 32 26.2**	**+0.6**
baz=303							
WJS				S	**Sb**	**11 32 31.2**	**+0.1**
baz=303							
CHN5	**Tsauling**	**0.28**	**252**	⇓*iP*	**Pg**	**11 32 26.2**	**+0.2**
baz=245							
CHN5				*i* S	**Sg**	**11 32 30.8**	**+0.8**
baz=245							
WNT	**Mingjian**	**0.32**	**306**	⇓*iP*	**Pg**	**11 32 27.5**	**+0.7**
baz=308							
WNT				S	**Sb**	**11 32 33.1**	**+0.1**
baz=308							
OWD	**Renai**	**0.33**	**35**	⇓P	**Pg**	**11 32 27.1**	**+0.2**
baz=30							
OWD				S	**Sg**	**11 32 31.4**	**0.0**
baz=30							
DPDB	**Guoxing**	**0.35**	**354**	⇑*iP*	**Pg**	**11 32 27.3**	**0.0**
baz=4.0							
DPDB				S	**Sg**	**11 32 32.0**	**0.0**
baz=4.0							
EHY	**Hungye**	**0.37**	**119**	⇓*iP*	**Pb**	**11 32 28.1**	**-0.5**
baz=119							
EHY				S	**Sb**	**11 32 33.8**	**-0.5**
baz=119							
WGK	**Gukeng**	**0.37**	**270**	⇓*iP*	**Pg**	**11 32 28.1**	**+0.5**
baz=269							
WDLH	**Douliu**	**0.40**	**270**	P	**Pg**	**11 32 28.5**	**+0.4**
baz=269							
CHGB	**Renai**	**0.42**	**27**	⇓P	**Pg**	**11 32 28.5**	**-0.1**
baz=29							
CHGB				S	**Sg**	**11 32 33.8**	**-0.4**
baz=29							
YULB	**Yu-li**	**0.42**	**134**	⇓P	**Pg**	**11 32 28.8**	**+0.3**
baz=124							
YULB				S	**Sg**	**11 32 34.6**	**+0.4**
baz=124							
EGFH	**Guangfu**	**0.42**	**92**	⇓P	**Pb**	**11 32 29.1**	**-0.4**
baz=93							
EGFH				*e*S	**Sb**	**11 32 35.0**	**-0.8**
baz=93							
ESL	**Shilin**	**0.44**	**73**	⇓*iP*	**Pb**	**11 32 29.4**	**-0.5**
baz=81							
ESL				S	**Sb**	**11 32 35.6**	**-0.9**
baz=81							
TWF1	**Yuli**	**0.45**	**138**	⇓*iP*	**Pb**	**11 32 29.5**	**-0.5**
baz=128							
TWF1				*i* S	**Sb**	**11 32 36.0**	**-0.6**
baz=128							
HGSD	**Ruisui**	**0.46**	**115**	⇓P	**Pb**	**11 32 30.1**	**-0.1**
baz=115							
HGSD				*e*S	**Sb**	**11 32 37.0**	**+0.1**
baz=115							
CHN2	**Minshiung**	**0.48**	**251**	⇓P	**Pg**	**11 32 30.2**	**+0.6**
baz=250							
CHN2				*e*S	**Sb**	**11 32 38.6**	**+1.2**
baz=250							
CHN4	**Tsaushan**	**0.48**	**226**	⇓*iP*	**Pg**	**11 32 30.1**	**+0.4**
baz=217							
CHN4				S	**Sb**	**11 32 38.0**	**+0.5**
baz=217							
TPUB	**Ta-pu**	**0.49**	**219**	⇓P	**Pg**	**11 32 29.9**	**0.0**
baz=213							
TPUB				*e*S	**Sb**	**11 32 37.6**	**-0.3**
baz=213							
ELDTW	**Lidau**	**0.50**	**175**	⇓*iP*	**Pg**	**11 32 29.8**	**-0.2**
baz=172							
ELDTW				S	**Sg**	**11 32 36.1**	**-0.6**
baz=172							
TCU	**Taichung**	**0.53**	**330**	⇓P	**Pb**	**11 32 31.3**	**-0.1**
baz=319							
TCU				S	**Sb**	**11 32 39.5**	**+0.5**
baz=319							
WHF	**Hehuan Shan**	**0.53**	**31**	⇓*iP*	**Pg**	**11 32 30.9**	**+0.2**
baz=33							
WHF				*i* S	**Sg**	**11 32 37.9**	**0.0**
baz=33							
CHY	**Chiayi**	**0.53**	**249**	⇓P	**Pg**	**11 32 31.1**	**+0.4**
baz=247							
CHY				*e*S	**Sb**	**11 32 39.7**	**+0.6**
baz=247							
WCHH	**Zhanghua**	**0.54**	**316**	⇓P	**Pb**	**11 32 31.4**	**-0.2**
baz=317							
WCHH				S	**Sb**	**11 32 40.0**	**+0.7**
baz=317							
STYT	**Tauyuan**	**0.56**	**200**	⇓*iP*	**Pg**	**11 32 31.1**	**0.0**
baz=198							
WHP	**Taichung City**	**0.59**	**358**	*e*P	**Pg**	**11 32 31.7**	**-0.1**
baz=2.0							
TDCB	**Techi**	**0.59**	**17**	⇓*e*P	**Pg**	**11 32 31.4**	**-0.4**
baz=19							
TDCB				S	**Sg**	**11 32 38.6**	**-1.1**
baz=19							
RLNB	**Erlin**	**0.59**	**290**	⇓P	**Pg**	**11 32 31.8**	**0.0**
baz=290							
RLNB				S	**Sb**	**11 32 40.7**	**-0.1**
baz=290							
TWT	**Tachien**	**0.59**	**19**	*e*P	**Pg**	**11 32 31.5**	**-0.4**
baz=20							
TWT				*e*S	**Sg**	**11 32 38.6**	**-1.2**
baz=20							
TWK	**Hsinying**	**0.61**	**227**	⇓*iP*	**Pg**	**11 32 32.2**	**+0.2**
baz=224							
TWK				*i* S	**Sb**	**11 32 41.2**	**0.0**
baz=224							
ENLB	**Shoufeng**	**0.62**	**69**	⇓*e*P	**Pg**	**11 32 31.5**	**-0.8**
baz=70							
ENLB				*e*S	**Sg**	**11 32 40.3**	**-0.2**
baz=70							
SNST	**Tainan City**	**0.64**	**223**	P	**Pg**	**11 32 32.7**	**+0.1**
baz=221							
SNST				S	**Sb**	**11 32 42.2**	**+0.2**
baz=221							
CHN1	**Nanshi**	**0.64**	**219**	⇓*iP*	**Pg**	**11 32 32.9**	**+0.1**
baz=217							
CHN1				*i* S	**Sb**	**11 32 42.5**	**+0.3**
baz=217							
WLGB	**Puzi**	**0.65**	**251**	P	**Pg**	**11 32 32.6**	**-0.2**
baz=250							
WLGB				S	**Sb**	**11 32 42.7**	**+0.4**
baz=250							
HWA	**Hwalien**	**0.65**	**63**	P	**Pb**	**11 32 33.2**	**-0.2**
baz=65							
HWA				S	**Sb**	**11 32 42.9**	**+0.5**
baz=65							
WTCT	**Ta-ch'eng**	**0.65**	**286**	⇓*iP*	**Pg**	**11 32 32.5**	**-0.4**
baz=286							
WTCT				S	**Sb**	**11 32 42.4**	**-0.1**
baz=286							
TWQ1	**Liyutan**	**0.68**	**345**	⇓*iP*	**Pb**	**11 32 34.1**	**+0.1**
baz=332							
TWQ1				S	**Sb**	**11 32 43.9**	**+0.5**
baz=332							
WSF	**Szhu**	**0.69**	**266**	⇓P	**Pg**	**11 32 33.0**	**-0.6**
baz=265							
WSF				S	**Sg**	**11 32 43.2**	**+0.6**
baz=265							
CHKT	**Chengkung**	**0.69**	**148**	⇓P	**Pb**	**11 32 34.6**	**+0.6**
baz=147							
TWD	**Chiawan**	**0.69**	**56**	P	**Pg**	**11 32 33.5**	**-0.2**
baz=57							
TWD				*e*S	**Sg**	**11 32 42.8**	**-0.1**
baz=57							
SGST	**Jiashian**	**0.70**	**211**	⇓*iP*	**Pg**	**11 32 34.0**	**+0.3**
baz=208							
SGST				S	**Sb**	**11 32 44.5**	**+0.7**
baz=208							
ETLH	**Xiulin Townshi**	**0.70**	**42**	⇓P	**Pg**	**11 32 33.5**	**-0.3**
baz=37							
ETLH				*e*S	**Sb**	**11 32 44.0**	**+0.1**
baz=37							
WDJ	**Dajia District**	**0.72**	**336**	P	**Pb**	**11 32 34.9**	**+0.2**
baz=337							
WDJ				S	**Sb**	**11 32 46.0**	**+1.5**
baz=337							
NACB	**Ninganchiao**	**0.75**	**50**	⇓P	**Pg**	**11 32 34.5**	**-0.3**
baz=51							
NACB				S	**Sb**	**11 32 45.3**	**0.0**
baz=51							
NSY	**Sanyi**	**0.75**	**345**	⇓*iP*	**Pb**	**11 32 35.5**	**+0.4**
baz=336							
NSY				S	**Sb**	**11 32 46.7**	**+1.4**
baz=336							
SLGT	**Liugui**	**0.75**	**203**	*e*P	**Pb**	**11 32 35.3**	**+0.2**
baz=193							
SLGT				*e*S	**Sb**	**11 32 46.0**	**+0.7**
baz=193							
CHN8	**Yiju**	**0.77**	**244**	⇓*iP*	**Pg**	**11 32 34.9**	**-0.3**
baz=242							
CHN8				S	**Sb**	**11 32 46.5**	**+0.6**
baz=242							
PTSB	**Yuanli**	**0.79**	**342**	P	**Pb**	**11 32 36.3**	**+0.4**
baz=344							
PTSB				S	**Sn**	**11 32 48.1**	**-0.8**
baz=344							
CHN3	**Shinhua**	**0.82**	**223**	*e*P	**Pb**	**11 32 36.5**	**+0.1**
baz=235							
CHN3				*e*S	**Sn**	**11 32 50.4**	**+0.8**
baz=235							
NNSB	**Datong**	**0.83**	**27**	⇓P	**Pg**	**11 32 35.6**	**-0.7**
baz=29							
NNSB				*e*S	**Sg**	**11 32 46.4**	**-0.8**
baz=29							
NNS	**Nan Shan**	**0.84**	**26**	⇓P	**Pg**	**11 32 35.8**	**-0.7**
baz=28							
NMLH	**Miaoli**	**0.86**	**349**	P	**Pb**	**11 32 37.5**	**+0.5**
baz=351							
NMLH				*e*S	**Sn**	**11 32 49.9**	**-0.7**
baz=351							
TWG	**Pinlang**	**0.87**	**174**	P	**Pg**	**11 32 36.9**	**0.0**
baz=167							
TWG				S	**Sn**	**11 32 49.6**	**-1.0**
baz=167							
TWGBT	**Beinan**	**0.87**	**173**	P	**Pg**	**11 32 36.9**	**-0.2**
baz=167							
TWGBT				*e*S	**Sn**	**11 32 49.8**	**-1.0**
baz=167							
SCLT	**Jiali**	**0.88**	**235**	*e*P	**Pg**	**11 32 36.9**	**-0.2**
baz=233							
SCLT				*e*S	**Sn**	**11 32 50.4**	**-0.4**
baz=233							
NSTT	**Nanjuang**	**0.94**	**2**	P	**Pb**	**11 32 38.6**	**+0.3**
baz=351							
NSTT				S	**Sb**	**11 32 51.3**	**+0.5**
baz=351							
TTN	**Taitung**	**0.94**	**170**	*e*P	**Pn**	**11 32 39.0**	**-0.2**
baz=169							
LIOB	**Emei**	**0.96**	**3**	⇑*iP*	**Pg**	**11 32 39.0**	**+0.3**
baz=352							
LIOB				S	**Sn**	**11 32 52.7**	**-0.2**
baz=352							
SSD	**Sandimen**	**0.99**	**198**	*e*P	**Pn**	**11 32 39.5**	**-0.2**
baz=190							
SSD				S	**Sn**	**11 32 54.0**	**+0.4**
baz=190							
TWM1	**Shoushan**	**0.99**	**210**	*e*P	**Pn**	**11 32 40.7**	**+0.8**
baz=210							
ENA	**Nanau**	**1.02**	**44**	⇓P	**Pb**	**11 32 39.2**	**-0.5**
baz=51							
NANB	**Nanao**	**1.03**	**44**	⇓P	**Pb**	**11 32 39.1**	**-0.7**
baz=45							
NANB				S	**Sg**	**11 32 53.5**	**+0.1**
baz=45							
NDT	**Datong Townshi**	**1.04**	**28**	*e*P	**Pb**	**11 32 39.6**	**-0.5**
baz=22							
NSK	**Sanguang**	**1.05**	**20**	⇑P	**Pb**	**11 32 39.8**	**-0.5**
baz=21							
YHNB	**Yeheng**	**1.05**	**21**	P	**Pb**	**11 32 39.7**	**-0.5**
baz=23							
YHNB				S	**Sg**	**11 32 54.6**	**+0.5**
baz=23							
ECL	**Taimali**	**1.08**	**181**	P	**Pb**	**11 32 40.8**	**0.0**
baz=179							
ECL				S	**Sn**	**11 32 55.5**	**-0.5**
baz=179							
ENTT	**Nioudou**	**1.09**	**30**	⇓P	**Pb**	**11 32 40.5**	**-0.6**
baz=24							
SNJT	**Kaohsiung City**	**1.10**	**212**	*e*P	**Pg**	**11 32 42.0**	**+0.7**
baz=232							
SBCB	**Hsinchu**	**1.10**	**1**	*e*P	**Pg**	**11 32 43.3**	**+1.9**
baz=2.0							
SBCB				*e*S	**Sn**	**11 32 56.6**	**+0.2**
baz=2.0							
MASBT	**Mashibuluo**	**1.11**	**196**	P	**Pn**	**11 32 41.4**	**-0.1**
baz=194							
MASBT				S	**Sn**	**11 32 57.0**	**+0.3**
baz=194							
NWLT	**Wulai**	**1.19**	**24**	*e*P	**Pn**	**11 32 41.9**	**-0.7**
baz=18							
TWE	**Neicheng**	**1.21**	**32**	P	**Pn**	**11 32 42.6**	**-0.2**
baz=42							
TWC	**Suao**	**1.22**	**41**	⇓*iP*	**Pn**	**11 32 43.0**	**0.0**
baz=42							
TWC				S	**Sg**	**11 33 00.2**	**+0.6**
baz=42							
SSPT	**Xinbi**	**1.25**	**197**	*e*P	**Pg**	**11 32 44.6**	**+0.4**
baz=184							
WDGT	**Dungji**	**1.27**	**251**	P	**Pn**	**11 32 42.3**	**-1.4**
baz=249							
WDGT				*e*S	**Sb**	**11 32 58.2**	**-2.2**
baz=249							
NCUH	**Zhongli**	**1.29**	**9**	*e*P	**Pg**	**11 32 44.9**	**-0.2**
baz=8.0							
PHUB	**P'eng-hu**	**1.29**	**263**	⇓P	**Pn**	**11 32 42.2**	**-1.8**
baz=262							
EAST	**Anshuo**	**1.30**	**185**	*e*P	**Pb**	**11 32 44.7**	**+0.1**
baz=177							
EAST				S	**Sg**	**11 33 02.7**	**+0.5**
baz=177							
PNG	**Penghu**	**1.30**	**265**	⇓P	**Pn**	**11 32 42.4**	**-1.7**
baz=264							
PNG				*e*S	**Sb**	**11 32 59.7**	**-1.5**
baz=264							
TAW	**Tawu**	**1.32**	**183**	*e*P	**Pb**	**11 32 45.0**	**+0.1**
baz=172							
SCZT	**Fangliau**	**1.35**	**194**	*e*P	**Pn**	**11 32 44.7**	**0.0**
baz=181							
EOS1	**EOS1**	**1.36**	**51**	*e*P	**Pg**	**11 32 46.2**	**-0.3**
baz=66							
NHDH	**Xindian Distri**	**1.37**	**22**	*e*P	**Pg**	**11 32 46.5**	**0.0**
baz=21							
TATO	**Taipei**	**1.37**	**20**	*e*P	**Pn**	**11 32 45.1**	**+0.1**
baz=22							
TATO				*e*S	**Sg**	**11 33 05.6**	**+1.3**
baz=22							
NTC	**Toucheng**	**1.40**	**34**	*e*P	**Pb**	**11 32 46.3**	**0.0**
baz=20							
TWA	**Mucha**	**1.41**	**23**	*e*P	**Pb**	**11 32 46.5**	**+0.2**
baz=25							
TWA				*e*S	**Sg**	**11 33 07.4**	**+1.9**
baz=25							
TWS1	**Kuangyinshan**	**1.47**	**16**	*e*P	**Pb**	**11 32 47.5**	**+0.1**
baz=358							
VCHM	**Qimei**	**1.49**	**252**	*e*P	**Pn**	**11 32 44.9**	**-1.8**
baz=251							
TIPB	**Shuangxi**	**1.50**	**31**	*e*P	**Pb**	**11 32 48.0**	**+0.1**
baz=18							
YM04	**YM04**	**1.55**	**19**	*e*P	**Pn**	**11 32 47.2**	**-0.4**
baz=359							
YM01	**YM01**	**1.55**	**21**	*e*P	**Pn**	**11 32 47.7**	**+0.1**
baz=19							
YM10	**YM10**	**1.56**	**20**	*e*P	**Pn**	**11 32 47.4**	**-0.3**
baz=359							
NWF	**Wu-fen Shan**	**1.56**	**28**	*e*P	**Pg**	**11 32 49.9**	**-0.4**
baz=7.0							
WFSB	**Wu-fen Shan**	**1.56**	**28**	*e*P	**Pg**	**11 32 50.0**	**-0.2**
baz=15							
WFSB				*e*S	**Sb**	**11 33 09.6**	**+0.8**
baz=15							
YM05	**YM05**	**1.57**	**20**	*e*P	**Pn**	**11 32 47.8**	**-0.1**
baz=359							
YM03	**YM03**	**1.57**	**19**	*e*P	**Pn**	**11 32 47.6**	**-0.4**
baz=359							
ANP	**Anpu**	**1.58**	**18**	*e*P	**Pn**	**11 32 47.8**	**-0.2**
baz=359							
YM08	**YM08**	**1.60**	**21**	*e*P	**Pb**	**11 32 49.8**	**+0.2**
baz=19							
TWB1	**Santiao Chiao**	**1.61**	**35**	*e*P	**Pb**	**11 32 50.2**	**+0.4**
baz=51							
LAY	**Lan-yu**	**1.73**	**162**	*e*P	**Pn**	**11 32 49.5**	**-0.5**
baz=149							
TWK1	**Hengchun**	**1.74**	**185**	*e*P	**Pg**	**11 32 52.8**	**-0.8**
baz=203							
TWKBT	**Hengchun**	**1.74**	**185**	*e*P	**Pn**	**11 32 50.7**	**+0.5**
baz=203							

HATJ	Hateruma jima	2.62	81	P	Pn	11 33 03.5 +1.2
HATJ				eS	Sn	11 33 33.9 -0.1
MATB	Ma-tsu	2.62	339	eP	Pn	11 33 00.9 -1.4
	baz=338					
JKRS	Kuro-shima	2.83	78	P	Pn	11 33 06.5 +1.3
JKRS				S	Sn	11 33 40.3 +1.1
ZPLA	Ao Xicun	2.96	275⇓	eP	Pn	11 33 05.8 -1.1
	baz=276					
MHZQ	Yeshan	2.98	324	eP	Pn	11 33 06.3 -0.8
	baz=323					
JIJ	Ishigaki jima	2.98	76	P	Pn	11 33 07.6 +0.4
JIJ				eS	Sn	11 33 42.3 -0.5
AXDP	Jialang	2.99	294	eP	Pn	11 33 06.4 -0.9
	baz=294					
LYJJ	Jianjiangzhen	3.05	339	eP	Pn	11 33 07.4 -0.8
	baz=337					
ZZJH	Jiuhuzhen	3.15	285	eP	Pn	11 33 08.4 -1.1
	baz=285					
JISG	Ishigakijimahi	3.18	73	P	Pn	11 33 10.4 +0.5
JISG				eS	Sn	11 33 47.4 -0.4
XPSS	Dashiqiu	3.31	348	eP	Pn	11 33 10.9 -0.7
	baz=345					
JTJ	Tarama	3.54	74	P	Pn	11 33 15.9 +1.0
JTJ				eS	Sn	11 33 57.8 +1.2
JIRB	Irabujima	4.00	73	eS	Sn	11 34 07.7 -0.3
JMJ2	Miyako jima3	4.12	74	P	Pn	11 33 23.9 +1.1
JOGS	Gusukube	4.19	74	P	Pn	11 33 25.6 +1.8

*IDC **17** 11:33:46.9±1.0, 18°.86N×64°.09W, h0km, mb4.2/12, mb1 4.4/16, mb1mx4.1/48, mbtmp4.3/16, ML3.7/4, MS3.5/6, Ms1 3.5/6, ms1mx3.1/39, Error ellipse: s-maj=27.1km s-min=14.8km az=76.0*

*TRN **17** 11:33:51.5, 18°.89N×64°.32W, h25km, MD4.6*

*RSPR **17** 11:33:54.0, 18°.88N×64°.32W, h5km±1km, MD4.0/17*

*ISCJB **17** 11:33:54.3±0.3, 18°.77N±0°.03×64°.34W±0°.02, h57km±4km, mb4.4/70, MS3.5/3, Error ellipse: s-maj=4.6km s-min=2.1km az=19.7*

*NEIC **17** 11:33:54.6±1.4, 18°.81N×64°.32W, h44km±7km, mb4.5/80, ML4.1(RSPR), Error ellipse: s-maj=12.0km s-min=8.9km az=198.0*

NEIC Felt [IV] at Road Town, Tortola. Also felt on Saint John and at Charlotte Amalie, Saint Thomas.

ISC 17 11:33:54.3±1.0, 18°.76N±0°.05×64°.34W±0°.02, h44km±10km, n432, σ1°18/471, mb4.4/70, MS3.2/3, 12C-30D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.01	243⇓	eP	Pn	11 34 11.9	-0.2
CUPR	Culebra, Puert	1.01	243	eS	Sn	11 34 26.6	+1.6
CUPR	Culebra, Puert	1.01	243	ePn	Pn	11 34 11.8	-0.2
CUPR				eSn	Sn	11 34 25.8	+0.8
CDVI	St. Croix	1.09	202⇓	eP	Pn	11 34 14.5	+1.4
CDVI				eS	Sn	11 34 30.0	+3.0
CDVI	St. Croix	1.09	202	ePn	Pn	11 34 14.5	+1.4
CDVI				eSn	Sn	11 34 30.0	+3.0
CDVI	St. Croix	1.09	202⇓	eP	Pn	11 34 14.5	+1.4
CDVI				eS	Sn	11 34 30.0	+3.0
MTP	Monte Pirata	1.33	240⇓	eP	Pn	11 34 16.7	+0.2
MTP	Monte Pirata	1.33	240	ePn	Pn	11 34 16.5	0.0
MTP				eSn	Sn	11 34 34.3	+1.3
MTP	Monte Pirata	1.33	240⇓	eP	Pn	11 34 16.7	+0.2
MTP				eS	Sn	11 34 34.3	+1.3
SMRT	St. Maarten	1.39	120⇑	eP	Pn	11 34 17.5	+0.2
SMRT	St. Maarten	1.39	120	ePn	Pn	11 34 17.5	+0.2
SMRT				eSn	Sn	11 34 35.6	+1.1
SMRT	St. Maarten	1.39	120	eP	Pn	11 34 17.4	+0.2
SMRT				eS	Sn	11 34 35.7	+1.1
CBYP	Canovanas	1.52	252⇑	eP	Pn	11 34 19.0	-0.2
CBYP	Canovanas	1.52	252⇑	eP	Pn	11 34 19.2	0.0
CBYP	Canovanas	1.52	252	ePn	Pn	11 34 19.2	0.0
CBYP				eSn	Sn	11 34 38.5	+0.6
CBYP	Canovanas	1.52	252⇑	eP	Pn	11 34 19.0	-0.2
HUMP	Col San Antoni	1.56	247⇓	eP	Pn	11 34 19.8	+0.1
HUMP				eS	Sn	11 34 40.4	+1.6
HUMP	Col San Antoni	1.56	247⇓	eP	Pn	11 34 19.8	+0.1
HUMP	Col San Antoni	1.56	247	ePn	Pn	11 34 19.4	-0.3
HUMP				eSn	Sn	11 34 39.5	+0.8
HUMP	Col San Antoni	1.56	247⇓	eP	Pn	11 34 19.8	+0.1
HUMP				eS	Sn	11 34 40.4	+1.6
PDPR	Patillas Dam,	1.77	245⇑	eP	Pn	11 34 23.1	+0.7
PDPR	Patillas Dam,	1.77	245⇓	eP	Pn	11 34 23.5	+1.1
PDPR	Patillas Dam,	1.77	245	eS	Sn	11 34 45.6	+2.0
SEUS	St. Eustatius	1.80	134⇑	eP	Pn	11 34 23.7	+0.8
SEUS	St. Eustatius	1.80	134	ePn	Pn	11 34 23.5	+0.5
SEUS				eSn	Sn	11 34 44.7	0.0
SEUS	St. Eustatius	1.80	134	eP	Pn	11 34 23.9	+1.0
SEUS				eS	Sn	11 34 48.0	+3.3
SJG	San Juan	1.84	250⇓	eP	Pn	11 34 23.5	0.0
SJG	San Juan	1.84	250	Pn	Pn	11 34 23.5	0.0
	139nm,0.3s,baz=72,slow=11,SNR=71					
SJG				Sn	Sn	11 34 47.1	+1.6
	439nm,0.3s,baz=353,slow=18,SNR=10					
SJG				LR	LR	11 35 17.8
	comp=Z,912nm,19.0s,baz=360,slow=43					
SJG	San Juan	1.84	250	ePn	Pn	11 34 23.4	0.0
SJG	San Juan	1.84	250⇓	eP	Pn	11 34 23.5	0.0
SJG				eS	Sn	11 34 47.6	+2.1
IGPR	InterUniversit	1.86	245⇓	eP	Pn	11 34 24.5	+0.8
IGPR				eS	Sn	11 34 48.3	+2.3
IGPR	InterUniversit	1.86	245⇓	eP	Pn	11 34 24.2	+0.5
SKDB	Saint Kitts 2	1.99	133	eP	Pn	11 34 26.4	+0.9
SKDB				eS	Sn	11 34 52.0	+2.9
BSK	Brimstone Hill	2.00	134	eP	Pn	11 34 28.1	+2.4
SKI	Saint Kitts	2.08	133	ePn	Pn	11 34 27.1	+0.4
SKI	Saint Kitts	2.08	133	eP	Pn	11 34 27.2	+0.4
SKI				eS	Sn	11 34 53.7	+2.2
EMPR	Esperanza - Ma	2.10	263⇓	eP	Pn	11 34 27.4	+0.4
EMPR	Esperanza - Ma	2.10	263	eS	Sn	11 34 52.7	+0.8
EMPR	Esperanza - Ma	2.10	263	ePn	Pn	11 34 26.3	-0.7
EMPR				ePn	Pn	11 34 27.4	+0.4
EMPR				eSn	Sn	11 34 52.7	+0.8
SKOC	St. Kitts, UWI	2.11	134	eP	Pn	11 34 28.3	+1.1
SKOC				eS	Sn	11 34 54.7	+2.5
CELP	Cerrillos	2.24	253⇓	eP	Pn	11 34 29.2	+0.3
CELP				eS	Sn	11 34 57.0	+1.7
CELP	Cerrillos	2.24	253	ePn	Pn	11 34 29.2	+0.3
CELP				eSn	Sn	11 34 57.0	+1.7
CELP	Cerrillos	2.24	253⇓	eP	Pn	11 34 29.2	+0.3
CELP				eS	Sn	11 34 57.0	+1.7
SKTB	Turtle Beach	2.25	133	eP	Pn	11 34 30.0	+0.9
ICMP	Isla Caja de M	2.26	248⇓	eP	Pn	11 34 30.4	+1.2
ICMP	Isla Caja de M	2.26	248	ePn	Pn	11 34 30.4	+1.2
OBIP	Obispado Ponce	2.27	252⇑	eP	Pn	11 34 30.3	+0.9
OBIP	Obispado Ponce	2.27	252	ePn	Pn	11 34 29.7	+0.3
OBIP	Obispado Ponce	2.27	252⇑	eP	Pn	11 34 30.3	+0.9
OBIP				eS	Sn	11 34 57.6	+1.4
NVRH	Round Hill, Ne	2.28	133	eP	Pn	11 34 29.9	+0.4
NVRH				eS	Sn	11 35 01.5	+5.1
NVBH	Bath Hotel, Ne	2.31	135	eP	Pn	11 34 32.7	+2.7
NVBH				eS	Sn	11 35 00.7	+3.5
AOPR	Arecibo Observ	2.33	260⇓	eP	Pn	11 34 30.6	+0.4
AOPR	Arecibo Observ	2.33	260⇑	eP	Pn	11 34 30.9	+0.7
AOPR				eS	Sn	11 34 59.6	+1.9
AOPR	Arecibo Observ	2.33	260	ePn	Pn	11 34 30.5	+0.2
AOPR				eSn	Sn	11 34 59.4	+1.7
AOPR	Arecibo Observ	2.33	260⇓	eP	Pn	11 34 30.6	+0.4
AOPR				eS	Sn	11 34 59.6	+1.9
NEV	Hard Times	2.33	134	eP	Pn	11 34 32.5	+2.3
NEV				eS	Sn	11 34 59.6	+2.0
GBPR	Guanica, Bosqu	2.54	252⇓	eP	Pn	11 34 34.9	+1.9
GBPR	Guanica, Bosqu	2.54	252	ePn	Pn	11 34 34.9	+1.9
GBPR	Guanica, Bosqu	2.54	252⇓	eP	Pn	11 34 34.9	+1.9
AGPR	Aguadilla, PR	2.65	264⇑	eP	Pn	11 34 34.9	+0.3
AGPR	Aguadilla, PR	2.65	264⇑	eP	Pn	11 34 34.9	+0.3
AGPR				eS	Sn	11 35 06.4	+0.9
ANWB	Willy Bob	2.66	114	ePn	Pn	11 34 33.8	-0.9
ANWB	Willy Bob	2.66	114	eP	Pn	11 34 33.8	-0.9
ANWB				eS	Sn	11 35 06.5	+0.9
LSP	Las Mesas	2.67	258⇓	eP	Pn	11 34 35.8	+0.9
LSP	Las Mesas	2.67	258	ePn	Pn	11 34 35.8	+0.9
LSP	Las Mesas	2.67	258⇓	eP	Pn	11 34 35.8	+0.9
AGP	Aguadilla	2.68	263	ePn	Pn	11 34 34.8	-0.3
MLPR	Magueyes Islan	2.69	253⇑	eP	Pn	11 34 36.2	+1.1
MLPR	Magueyes Islan	2.69	253	eS	Sn	11 35 08.3	+1.9
MPR	Mayaguez	2.72	259⇓	eP	Pn	11 34 36.6	+1.1
MPR	Mayaguez	2.72	259	ePn	Pn	11 34 36.1	+0.6
MPR				eSn	Sn	11 35 08.0	+0.9
MPR	Mayaguez	2.72	259⇓	eP	Pn	11 34 36.6	+1.1
MPR				eS	Sn	11 35 09.4	+2.2
CRPR	Cabo Rojo, PR	2.74	254⇓	eP	Pn	11 34 36.6	+0.8
CRPR	Cabo Rojo, PR	2.74	254	ePn	Pn	11 34 36.5	+0.7
CRPR	Cabo Rojo, PR	2.74	254⇓	eP	Pn	11 34 36.6	+0.8
CRPR				eS	Sn	11 35 10.2	+2.5
MLYT	Lee's Yard	2.88	134	eP	Pn	11 34 38.9	+1.1
MLYT				eS	Sn	11 35 13.6	+2.4
BPA	Boggy Peak	2.91	126	eP	Pn	11 34 39.3	+1.1
BPA				eS	Sn	11 35 13.5	+1.5
PCDR	Punta Cana, DR	3.84	267⇓	eP	Pn	11 34 51.5	+0.5
PCDR	Punta Cana, DR	3.84	267	eS	Sn	11 35 37.3	+2.4
PCDR	Punta Cana, DR	3.84	267	ePn	Pn	11 34 51.4	+0.4
PCDR	Punta Cana, DR	3.84	267⇓	eP	Pn	11 34 51.5	+0.5
PCDR	Punta Cana, DR	3.84	267	eS	Sn	11 35 37.3	+2.4
H05N1	Guadeloupe/Mar	3.96	127	Pn	Pn	11 34 52.5	-0.1
H05N1				Sn	Sn	11 35 34.0	-3.9
MDPO	Dominica; Chan	4.20	139	eP	Pn	11 34 56.8	+0.9
MDPO	Dominica; Chan	4.20	139	eS	Sn	11 35 46.2	+2.5
DWS	Wesley	4.29	137	eP	Pn	11 34 59.0	+1.8
DWS	Wesley	4.29	137	eS	Sn	11 35 47.5	+1.4
DLPL	La Plaine	4.51	139	eP	Pn	11 35 02.5	+2.3
DLPL	La Plaine	4.51	139	eS	Sn	11 35 52.6	+1.1
DR12	Loma Pena Alta	4.78	271⇓	eP	Pn	11 35 03.5	-0.4
FDF	Fort de France	5.04	142	ePn	Pn	11 35 08.2	+0.8
FDF	Fort de France	5.04	142	eP	Pn	11 35 10.1	+2.7
FDF	Fort de France	5.04	142	eS	Sn	11 36 06.4	+2.0
SDD	Santo Domingo	5.30	268	ePn	Pn	11 35 11.6	+0.6
H05S1	Guadeloupe/Mar	5.46	142	Pn	Pn	11 35 15.5	+2.2
H05S1				Sn	Sn	11 36 13.1	-1.7
SLBI	Saint Lucia, B	5.71	145	eP	Pn	11 35 16.7	+0.1
SLBI	Saint Lucia, B	5.71	145	eS	Sn	11 36 15.4	-5.6
BANI	BANI	5.72	267	ePn	Pn	11 35 18.6	+1.7
MCLT	Moule a Chique	5.99	147	eP	Pn	11 35 22.0	+1.5
MCLT	Moule a Chique	5.99	147	eS	Sn	11 36 21.1	-6.7
SVB	Belmont	6.21	151	ePn	Pn	11 35 24.3	+0.8
SVB	Belmont	6.21	151	eP	Pn	11 35 23.6	+0.1
SVB	Belmont	6.21	151	eS	Sn	11 36 28.3	-5.1
SDDR	Presa de Saban	6.59	273	ePn	Pn	11 35 29.6	+0.9
SDDR				eSn	Sn	11 36 43.7	+1.1
GRTK	Grand Turk	6.95	294	ePn	Pn	11 35 31.4	-2.2
TOSP	Speyside	8.28	153	eP	Pn	11 35 55.5	+3.6
GTBY	Guantanamo Bay	10.24	278	ePn	Pn	11 36 15.7	-3.0
SDV	Santo Domingo	11.56	213	Pn	Pn	11 36 37.3	+0.2
	3.8nm,0.3s,baz=7.0,slow=5.6,SNR=2.1					
SDV				Sn	Sn	11 38 39.9	-5.1
	2.8nm,0.3s,baz=350,slow=19,SNR=3.9					
MTDJ	Mount Denham	12.53	270	ePn	Pn	11 36 48.1	-2.1
BBSR	BB Station	13.55	359	ePn	Pn	11 36 58.1	-5.9
SMLC	San Martn de	13.69	225	eP	Pn	11 37 03.8	-2.1
BRRC	Barranca, Sant	14.75	219	eP	Pn	11 37 19.8	-0.4
BARC	Barichara	14.85	217	eP	Pn	11 37 22.8	+1.0
ZARC	Zaragoza, Cauc	15.17	224	eP	Pn	11 37 25.4	-0.4
DBBC	Dabeiba	16.43	226	eP	P	11 37 43.3	-0.8
HELC	Santa Helena	16.59	223	eP	P	11 37 46.0	-0.2
NORC	Norcasia	16.66	219	eP	P	11 37 46.2	-0.6
CHIC	Chingaza	16.78	214	eP	P	11 37 49.6	+1.2
060Z	West Palm Beac	16.79	300	P	Pn	11 37 45.6	-0.7
	baz=114					
061Z	Ochoppi	16.88	298	ePn	Pn	11 37 46.2	-1.2
	161nm,1.0s					
061Z	Ochoppi	16.88	298	P	Pn	11 37 46.9	-0.5
	baz=111					
060A	Indiantown	16.89	302	P	Pn	11 37 47.3	-0.3
	baz=116					
ROSC	El Rosal	16.93	216	Pn	Pn	11 37 48.4	-0.1
	1.1nm,0.3s,baz=72,slow=20,SNR=2.4					
ROSC				LR	LR	11 44 59.5
	comp=Z,160nm,19.7s,baz=66,slow=39					
ROSC	El Rosal	16.93	216	ePn	Pn	11 37 49.2	+0.8
	13nm,0.6s					
059A	Moore Haven	17.50	301	ePn	Pn	11 37 55.0	-0.1
	56nm,0.7s					
059A	Moore Haven	17.50	301	P	Pn	11 37 55.0	-0.1
	baz=114					
959A	Okeechobee	17.52	303	P	Pn	11 37 55.7	+0.3
	baz=116					
MDP	Montagnes des	17.74	138	LR	LR	11 45 05.1
	comp=Z,986nm,20.6s,baz=348,slow=38					
BCIP	Isla Barro Col	17.80	240	ePn	P	11 37 59.6	+0.3
	40nm,1.1s					
058A	Arcadia	18.07	300	P	Pn	11 38 02.4	+0.3
	baz=114					
PRAC	Prado	18.17	216	eP	Pn	11 38 03.6	+0.1
DWPF	Disney Wildern	18.22	304	eP	Pn	11 38 03.9	-0.1
	67nm,1.1s					
DWPF	Disney Wildern	18.22	304	P	Pn	11 38 04.1	+0.1
	baz=117					
958A	Wauchula	18.25	302	P	Pn	11 38 04.4	+0.1
	baz=115					
758A	Lake Helen	18.44	307	P	Pn	11 38 06.8	+0.1
	baz=120					
658A	Bunnell	18.72	308	eP	Pn	11 38 10.4	+0.4
	71nm,0.9s					
658A	Bunnell	18.72	308	P	Pn	11 38 09.7	-0.3
	baz=121					
857A	Zephyrhills	18.92	303	P	P	11 38 11.9	+0.4
	baz=116					
757A	Oxford	19.10	305	P	P	11 38 14.0	+0.5
	baz=118,SNR=10					
657A	Interlachen	19.26	307	P	P	11 38 15.6	+0.5
	baz=120,SNR=8.1					
MARP	Paez Belalcaza	19.49	217	eP	P	11 38 18.9	+0.8
656A	Willston	19.66	306	eP	Pn	11 38 20.7	-0.6
	58nm,0.5s					
656A	Willston	19.66	306	P	P	11 38 19.7	+0.1
	baz=118,SNR=7.6					
PTGA	Pitinga	19.84	167	P	P	11 38 21.3	-0.3
	0.6nm,0.3s,baz=348,slow=15,SNR=7.2					
PTGA	Pitinga	19.84	167	eP	P	11 38 21.3	-0.3
	10nm,1.3s					
556A	Lake Butler	19.87	308	P	P	11 38 22.7	+0.8
	baz=120					
X60A	Albert Glenn T	19.88	325	P	Pn	11 38 23.0	-0.8
	baz=139					
456A	Hilliard	19.96	310	eP	Pn	11 38 24.2	-0.7
	172nm,0.5s					
456A	Hilliard	19.96	310	P	P	11 38 23.5	+0.6
	baz=122,SNR=5.5					
RGRS	Roger Stewart	20.02	318	eP	Pn	11 38 24.8	-0.6
	2μm,0.6s					
Z58A	St. Stephen	20.06	319	P	P	11 38 23.9	0.0
	baz=132,SNR=6.6					
PCON	Cinco Dias	20.16	217	eP	Pn	11 38 27.1	-0.7
555A	McAlpin	20.35	307	P	P	11 38 27.6	+0.5
	baz=120,SNR=6.2					
356A	Blackshear	20.37	311	P	Pn	11 38 28.5	-1.0
	baz=124					
157A	Early Branch	20.39	316	P	P	11 38 27.9	+0.5
	baz=129,SNR=6.3					
256A	Glennville	20.57	313	P	P	11 38 30.2	+0.8
	baz=126					
X58A	Rowland	20.63	323	eP	Pn	11 38 31.9	-0.8
	26nm,0.4s					
455A	Stateville	20.71	309	P	P	11 38 31.1	+0.1
	baz=121					
Y57A	Sumter	20.88	320	eP	P	11 38 33.7	+1.0
	30nm,0.5s					
554A	Perry	20.88	306	P	P	11 38 32.4	-0.4
	baz=118					
W58A	Raeford	20.90	324	P	P	11 38 34.1	+1.1
	baz=137					
454A	Quitman	21.14	308	P	P	11 38 36.0	+0.4
	baz=120					
155A	Kite	21.34	314	P	P	11 38 38.0	+0.2
	baz=126					
V58A	Windy Hill, Pi	21.41	325	P	P	11 38 39.1	+0.7
	baz=138					
Z55A	Blythe	21.48	316	P	P	11 38 40.2	+1.1
	baz=128					
TIGA	Tifton	21.48	310	eP	P	11 38 39.3	+0.1
	48nm,0.7s					
TIGA	Tifton	21.48	310	P	P	11 38 39.6	+0.4
	baz=121					
553A	Crawfordville	21.50	306	P	P	11 38 40.1	+0.7
	baz=117					
254A	Abbeville	21.54	311	P	P	11 38 40.4	+0.6
	baz=123					
T59A	Double "B" Far	21.54	330	P	P	11 38 40.5	+0.7
	baz=144					
U58A	Oxford	21.57	327	P	P	11 38 39.9	-0.2
	baz=141					
JSC	Jenkinsville	21.59	319	eP	P	11 38 41.1	+0.8
	12nm,0.7s					
X56A	White Oak	21.59	320	P	P	11 38 40.6	+0.3
	baz=132,SNR=6.0					
JTS	Las Juntas de	21.64	250	P	P	11 38 40.6	-0.5
	4.3nm,0.6s,baz=109,slow=6.2,SNR=5.3					
JTS				LR	LR	11 45 55.2
	comp=Z,51nm,21.7s,baz=134,slow=33					
JTS	Las Juntas de	21.64	250	eP	P	11 38 41.8	+0.7
	11nm,0.8s					
453A	Whigham	21.73	307	P	P	11 38 42.2	+0.4
	baz=119					
Y55A	Saluda	21.74	317	P	P	11 38 42.0	0.0
	baz=130					
W56A	Indian Trail	21.76	322	P	P	11 38 42.2	+0.1
	baz=134					
154A	Montrose	21.78	313	eP	P	11 38 42.9	+0.5
	86nm,0.4s					
154A	Montrose	21.78	313	P	P	11 38 41.9	-0.5
	baz=125					
V57A	Coltrane Farms	21.84	324	P	P	11 38 42.5	-0.5
	baz=137					
353A	Camilla	21.90	309	P	P	11 38 43.4	-0.3
	baz=120					
X55A	Gracelyn & Ava	21.94	319	P	P	11 38 43.8	-0.4
	baz=131					
Z54A	Sparta	21.96	315	P	P	11 38 44.4	+0.1
	baz=126					
U57A	Blanch	22.01	326	P	P	11 38 45.5	+0.7
	baz=139					
552A	Lynn Haven	22.14	305	P	P	11 38 46.5	+0.2
	baz=116					
V56A	Mocksville	22.18	323	eP	P	11 38 47.2	+0.4
	15nm,0.9s					
KMSC	Kings Mountain	22.21	321	P	P	11 38 47.6	+0.5
	baz=133					
Y54A	Tignall	22.23	316	P	P	11 38 46.7	-0.6
	baz=128					
S58A	Poland Farm, P	22.29	330	P	P	11 38 48.1	+0.3
	baz=144,SNR=16					
452A	Marianna	22.38	307	P	P	11 38 49.8	+1.0
	baz=118					
T57A	Hurt	22.39	327	P	P	11 38 50.1	+1.1
	baz=140,SNR=6.2					
X54A	Belton	22.46	318	P	P	11 38 50.2	+0.5
	baz=130					
Z53A	Monticello	22.48	314	P	P	11 38 50.3	+0.3
	baz=125					
GOGA	Godfrey	22.48	314	eP	P	11 38 50.0	+0.1
	11nm,0.8s					
GOGA	Godfrey	22.48	314	P	P	11 38 49.9	-0.1
	baz=126					
R58B	Mineral	22.49	331	P	P	11 38 49.7	-0.3
	baz=145,SNR=7.8					
252A	Lumpkin	22.61	310	P	P	11 38 51.9	+0.6
	baz=121					
W54A	Cherokee Point	22.69	319	P	P	11 38 52.4	+0.2
	baz=131,SNR=9.1					
T56A	Rocky Mt	22.82	326	P	P	11 38 53.4	-0.2
	baz=139					
Y53A	Monroe	22.82	315	P	P	11 38 53.6	+0.1
	baz=126,SNR=5.9					
S57A	Dark Hollow, R	22.84	329	P	P	11 38 54.3	+0.7
	baz=142					
351A	Pinckard	22.90	307	P	P	11 38 53.7	-0.6
	baz=118					
152A	Waverly Hall	22.94	311	eP	P	11 38 56.1	+1.3
	13nm,1.1s					
152A	Waverly Hall	22.94	311	P	P	11 38 55.1	+0.2
	baz=122					
U55A	TA2, Sparta	22.99	324	P	P	11 38 55.7	+0.4
	baz=136					
V54A	Nebo	23.01	321	P	P	11 38 55.8	+0.4
	baz=133					
Z52A	Williamson	23.01	313	P	P	11 38 55.9	+0.4
	baz=124					
X53A	Estanollee	23.03	317	P	P	11 38 55.8	+0.2
	baz=128					
OTAV	Otavalo	23.04	219	eP	P	11 38 57.0	+0.5
	24nm,1.4s					
R57A	Stanardsville	23.06	331	P	P	11 38 56.4	+0.4
	baz=144					
S56A	Natural Bridge	23.07	328	P	P	11 38 56.4	+0.3
	baz=141,SNR=12					
251A	Midway	23.15	309	P	P	11 38 57.0	+0.1
	baz=120,SNR=6.9					
Y52A	Lilburn	23.15	314	eP	P	11 38 57.1	+0.2
	43nm,0.3s					
Y52A	Lilburn	23.15	314	P	P	11 38 57.4	+0.5
	baz=126,SNR=9.9					
BLA	Blacksburg	23.16	326	P	P	11 38 57.2	+0.1
	baz=138					
151A	Opelika	23.31	310	P	P	11 38 59.0	+0.6
	baz=121					
W53A	Cullowhee	23.36	318	P	P	11 38 59.2	+0.1
	baz=130					
V53A	Saluda	23.46	320	P	P	11 39 00.1	+0.2
	baz=131					
Q57A	Strasburg	23.60	332	P	P	11 39 01.5	+0.3
	baz=145					
Z51A	Franklin	23.61	312	P	P	11 39 02.2	+0.9
	baz=123					
T54A	Tazewell	23.69	324	P	P	11 39 02.0	-0.1
	baz=136					
250A	Grady	23.73	308	P	P	11 39 03.0	+0.6
	baz=118					
W52A	Murphy	23.80	317	P	P	11 39 03.7	+0.6
	baz=128					
150A	Eclectic	23.85	310	P	P	11 39 04.2	+0.6
	baz=120					
Y51A	Rockmart	23.86	313	P	P	11 39 04.1	+0.5
	baz=124					
Q56A	Snyder Ridge,	23.96	331	P	P	11 39 04.9	+0.3
	baz=143					
Z50A	Ashland	24.11	311	eP	P	11 39 06.6	+0.6
	7.2nm,0.9s					
N59A	State Game Lan	24.16	338	P	P	11 39 06.7	+0.3
	baz=153					
P56A	Dayton Farm, R	24.18	332	P	P	11 39 07.0	+0.5
	baz=145					
R54A	Victor	24.19	327	P	P	11 39 06.9	+0.2
	baz=138					
O57A	Amberson	24.25	335	P	P	11 39 07.9	+0.7
	baz=148					

X49A	**Woodville**	25.07 313	P	P	11 39 15.5 +0.8
	baz=123				
SWET	**Sewanee**	25.19 315	*e*P	P	11 39 16.5 +0.7
	7.3nm,0.9s				
U50A	**Jamestown**	25.20 318	P	P	11 39 16.5 +0.6
	baz=129				
S51A	**Beattyville**	25.24 322	P	P	11 39 17.1 +0.9
	baz=133				
APG	**El Apazote**	25.27 265	P	P	11 39 18.3 +1.4
	8.6nm,0.8s,baz=350,slow=5.5,SNR=5.4				
APG			LR	LR	11 49 35.4
	comp=Z,63nm,18.7s,baz=66,slow=37				
W49A	**Belvidere**	25.36 314	P	P	11 39 17.8 +0.5
	baz=124				
O54A	**Avella**	25.43 330	P	P	11 39 19.6 +1.7
	baz=142				
Q52A	**Bidwell**	25.44 326	P	P	11 39 18.7 +0.7
	baz=137				
X48A	**Hartselle**	25.53 312	*e*P	P	11 39 19.5 +0.6
	4.4nm,0.7s				
X48A	**Hartselle**	25.53 312	P	P	11 39 19.8 +0.9
	baz=122				
M56A	**Emporium**	25.55 335	P	P	11 39 20.3 +1.3
	baz=148				
147A	**Livingston**	25.55 308	*e*P	P	11 39 20.4 +1.4
	19nm,0.6s				
147A	**Livingston**	25.55 308	P	P	11 39 20.0 +1.0
	baz=117				
T50A	**Nancy**	25.58 320	P	P	11 39 20.3 +1.1
	baz=130				
W48A	**Pulaski**	25.82 314	P	P	11 39 22.1 +0.6
	baz=123				
U49A	**Red Boiling Sp**	25.85 318	P	P	11 39 22.0 +0.3
	baz=127,SNR=5.2				
P52A	**Corning**	25.87 327	P	P	11 39 22.6 +0.7
	baz=138				
V48A	**Smith Brothers**	26.08 315	P	P	11 39 24.9 +1.1
	baz=124				
X47A	**Russelville**	26.14 312	P	P	11 39 24.8 +0.4
	baz=121,SNR=8.7				
U48A	**Cassie Pea, Po**	26.34 317	P	P	11 39 27.4 +1.2
	baz=126				
PLAL	**Pickwick Lake**	26.53 312	*e*P	P	11 39 29.1 +1.2
	6.9nm,0.6s				
T48A	**Bowling Green**	26.61 318	P	P	11 39 29.5 +0.9
	baz=127				
P50A	**Jamestown**	26.73 325	P	P	11 39 30.6 +0.9
	baz=135				
S48A	**Wiedeman Farm,**	26.73 319	P	P	11 39 30.9 +1.2
	baz=129				
WVT	**Waverly**	26.98 315	P	P	11 39 32.2 +0.3
	baz=124				
V46A	**Holladay**	27.00 314	P	P	11 39 32.1 0.0
	baz=123				
OXF	**Oxford**	27.25 310	P	P	11 39 34.8 +0.4
	baz=119				
T46A	**Princeton**	27.54 316	P	P	11 39 37.7 +0.8
	baz=125				
R45A	**Skylar, Fairfi**	28.51 318	P	P	11 39 46.0 +0.4
	baz=126,SNR=6.5				
N47A	**Urbana**	28.65 325	P	P	11 39 47.3 +0.5
	baz=134				
Q45A	**Warren Harvey,**	28.80 319	P	P	11 39 49.6 +1.5
	baz=127				
S44A	**Carbondale**	28.80 316	P	P	11 39 49.0 +0.9
	baz=124				
PEMO	**Pembroke**	28.90 341	P	P	11 39 50.2 +1.2
	baz=154				
P45A	**Graceland, Par**	28.93 321	P	P	11 39 50.6 +1.3
	baz=129				
W41B	**Gary Mavity, V**	29.62 309	*e*P	P	11 39 56.3 +0.8
	21nm,1.5s				
W41B	**Gary Mavity, V**	29.62 309	P	P	11 39 55.9 +0.4
	baz=116				
N45A	**Kentland**	29.65 323	P	P	11 39 56.4 +0.8
	baz=131				
WHAR	**Wooly Hollow**	29.71 309	*e*P	P	11 39 57.1 +0.8
	12nm,1.5s				
X40A	**Basin Creek Fa**	29.77 307	*e*P	P	11 39 57.6 +0.8
	11nm,0.7s				
X40A	**Basin Creek Fa**	29.77 307	P	P	11 39 57.4 +0.6
	baz=114,SNR=6.2				
FCAR	**Ozark Folk Cen**	29.86 310	*e*P	P	11 39 57.7 +0.2
	6.8nm,0.6s				
TOBO	**Tobermory, Bru**	30.01 335	P	P	11 39 58.8 0.0
	baz=146				
P43A	**Skaggs, Pawnee**	30.09 319	P	P	11 39 59.8 +0.2
	baz=126				
CCM	**Cathedral Cave**	30.32 315	*e*P	P	11 40 01.9 +0.3
	7.2nm,1.0s				
CCM	**Cathedral Cave**	30.32 315	P	P	11 40 01.6 0.0
	baz=122				
MIAR	**Mount Ida**	30.35 307	P	P	11 40 02.0 0.0
	baz=114				
U40A	**Yellville**	30.60 311	P	P	11 40 04.1 0.0
	baz=117,SNR=5.4				
N43A	**Stutzman Famil**	30.67 321	P	P	11 40 05.0 +0.3
	baz=129,SNR=6.2				
W39A	**Magazine**	30.77 308	*e*P	P	11 40 06.8 +1.2
	10nm,0.8s				
W39A	**Magazine**	30.77 308	P	P	11 40 06.5 +0.8
	baz=114,SNR=5.3				
HHAR	**Hobbs**	31.35 310	*e*P	P	11 40 11.1 +0.3
	3.9nm,0.7s				
TUL1	**Leonard**	32.56 308	*e*P	P	11 40 22.0 +0.6
	14nm,0.7s				
TUL1	**Leonard**	32.56 308	P	P	11 40 21.6 +0.2
	baz=113,SNR=5.2				
833A	**Chaparral WMA,**	33.42 293	P	P	11 40 29.0 0.0
	baz=99				
JCT	**Junction City**	34.15 297	*e*P	P	11 40 35.2 -0.2
	7.3nm,0.8s				
JCT	**Junction City**	34.15 297	P	P	11 40 35.0 -0.4
	baz=102				
WMOK	**Wichita Mounta**	34.42 305	*e*P	P	11 40 37.3 -0.4
	2.9nm,0.6s				
WMOK	**Wichita Mounta**	34.42 305	P	P	11 40 37.2 -0.5
	baz=108,SNR=6.7				
ABTX	**Abilene, Hawle**	34.51 301	P	P	11 40 38.4 -0.1
	baz=105				
G39A	**Holcombe**	34.58 326	P	P	11 40 38.9 0.0
	baz=131				
F39A	**Loretta**	34.87 327	P	P	11 40 41.4 0.0
	baz=132				
LPAZ	**La Paz**	35.03 186	P	P	11 40 42.6 -1.1
	1.1nm,0.6s,baz=30,slow=1.4,SNR=5.2				
LPAZ	**La Paz**	35.03 186	*e*P	P	11 40 44.5 +0.9
	3.9nm,0.9s				
U32A	**Winter Ranch,**	35.14 307	*e*P	P	11 40 44.4 +0.6
	18nm,0.9s				
H07S1	**FLORES T-PHASE**	35.21 47	T	T	12 17 47.3
	SNR=9.5				
F38A	**Pierce - Schro**	35.40 326	P	P	11 40 46.4 +0.5
	baz=131				
CBKS	**Cedar Bluff**	36.59 311	*e*P	P	11 40 56.5 +0.3
	22nm,0.8s				
CBKS	**Cedar Bluff**	36.59 311	P	P	11 40 55.9 -0.3
	baz=113				
BGNE	**Belgrade**	36.60 315	P	P	11 40 56.2 -0.1
	baz=118				
AMTX	**Amarillo**	36.75 304	P	P	11 40 57.8 +0.1
	baz=106				
ECSD	**EROS Data Cent**	36.78 320	*e*P	P	11 40 57.8 0.0
	4.4nm,0.6s				
ECSD	**EROS Data Cent**	36.78 320	P	P	11 40 57.4 -0.4
	baz=122,SNR=6.2				
LTX	**Lajitas**	37.27 294	*e*P	P	11 41 02.2 0.0
TXAR	**Lajitas Array**	37.27 294	P	P	11 41 02.2 0.0
	2.9nm,0.6s,baz=115,slow=10.0,SNR=44				
TX31	**Lajitas Ar. Si**	37.27 294	*e*P	P	11 41 03.1 +0.9
	4.4nm,1.0s				
GO01	**Chusmiza**	38.49 187	*e*P	P	11 41 11.3 -1.6
	6.1nm,0.6s				
PB11	**IPOC Station P**	38.64 188	*e*P	P	11 41 11.7 -2.1
	8.9nm,0.7s				
KSCO	**Kaye Shedlock'**	38.76 310	*e*P	P	11 41 14.6 -0.1
	17nm,0.6s				
KSCO	**Kaye Shedlock'**	38.76 310	P	P	11 41 14.8 +0.1
	baz=110				
AGMN	**Agassiz Nation**	38.98 326	P	P	11 41 15.2 -1.1
	baz=128				
OGNE	**Ogallala**	39.05 313	*e*P	P	11 41 17.0 0.0
	13nm,0.6s				
OGNE	**Ogallala**	39.05 313	P	P	11 41 16.8 -0.2
	baz=113				
MNTX	**Cornudas Mount**	39.08 297	*e*P	P	11 41 17.4 +0.1
	5.0nm,0.9s				
MNTX	**Cornudas Mount**	39.08 297	P	P	11 41 17.4 +0.1
	baz=99,SNR=9.4				
T25A	**Trinidad**	39.50 306	*e*P	P	11 41 21.4 +0.4
	14nm,1.4s				
T25A	**Trinidad**	39.50 306	P	P	11 41 21.4 +0.4
	baz=106				
PB01	**IPOC Station P**	39.88 188	*e*P	P	11 41 23.2 -0.9
	17nm,1.4s				
ULM	**Lac du Bonnet**	40.22 329	P	P	11 41 24.2 -2.3
	3.3nm,0.6s,baz=114,slow=10,SNR=3.2				
ULM	**Lac du Bonnet**	40.22 329	*e*P	P	11 41 25.1 -1.5
	3.7nm,0.6s				
SDCO	**Great Sand Dun**	40.51 307	*e*P	P	11 41 29.6 +0.2
	11nm,1.4s				
SDCO	**Great Sand Dun**	40.51 307	P	P	11 41 29.8 +0.3
	baz=106,SNR=13				
BNM	**Barren Site**	40.54 301	*e*P	P	11 41 30.2 +0.5
ANMO	**Albuquerque**	40.57 302	P	P	11 41 29.5 -0.4
	2.0nm,0.8s,baz=112,slow=8.2,SNR=10				
ANMO	**Albuquerque**	40.57 302	*e*P	P	11 41 29.8 0.0
	1.9nm,0.8s				
ANMO	**Albuquerque**	40.57 302	P	P	11 41 30.3 +0.4
	baz=102				
TASM	**ASL Pad, Albuq**	40.57 302	P	P	11 41 30.3 +0.4
	baz=102				
TASM	**ASL Pad, Albuq**	40.57 302	P	P	11 41 30.5 +0.7
	baz=102				
Q24A	**Divide**	40.60 308	P	P	11 41 31.0 +0.7
	baz=108				
ISCO	**Idaho Springs**	41.20 310	*e*P	P	11 41 35.8 +0.7
	4.7nm,0.8s				
ISCO	**Idaho Springs**	41.20 310	P	P	11 41 35.6 +0.4
	baz=108,SNR=6.2				
121A	**Cookes Peak, D**	41.22 298	P	P	11 41 35.2 -0.1
	baz=98				
S22A	**4UR Ranch, Cre**	41.52 306	P	P	11 41 37.8 0.0
	baz=105				
PHWY	**Pilot Hill**	41.58 312	*e*P	P	11 41 38.5 +0.2
	7.8nm,0.8s				
RSSD	**Black Hills**	41.68 316	*e*P	P	11 41 39.1 +0.1
	3.3nm,0.7s				
RSSD	**Black Hills**	41.68 316	P	P	11 41 39.0 +0.1
	baz=114				
N23A	**Red Feather La**	41.79 311	P	P	11 41 40.0 0.0
	baz=109				
K22A	**Casper**	42.80 313	*e*P	P	11 41 48.2 +0.2
	6.8nm,0.6s				
K22A	**Casper**	42.80 313	P	P	11 41 48.2 +0.2
	baz=110,SNR=8.0				
PV01	**Paradox Valley**	42.95 306	*e*P	P	11 41 50.3 +1.0
	6.8nm,1.5s				
W18A	**Petrified Fore**	43.24 302	P	P	11 41 52.4 +0.7
	baz=100				
TUC	**Tucson**	43.71 297	*e*P	P	11 41 56.6 +1.2
	4.7nm,1.0s				
TUC	**Tucson**	43.71 297	P	P	11 41 56.5 +1.2
	baz=96				
LAO	**LASA Array**	44.15 319	P	P	11 41 59.6 +0.9
	baz=115				
WUAZ	**Wupatki**	44.63 302	*e*P	P	11 42 03.6 +0.8
	5.5nm,1.2s				
WUAZ	**Wupatki**	44.63 302	P	P	11 42 02.6 -0.2
	baz=99				
PD31	**Pinedale Array**	44.95 312	*e*P	P	11 42 05.2 -0.1
	8.4nm,0.7s				
PDAR	**Pinedale Array**	44.95 312	P	P	11 42 05.3 0.0
	8.4nm,0.7s,baz=113,slow=8.9,SNR=61				
PDAR			PcP	PcP	11 43 46.0 -0.2
	1.6nm,0.7s,baz=113,slow=5.9,SNR=4.8				
BW06	**Boulder Array**	44.95 312	P	P	11 42 05.4 +0.1
	baz=108,SNR=11				
CPUP	**Villa Florida**	45.34 171	P	P	11 42 06.6 -1.6
	1.3nm,0.5s,baz=349,slow=7.5,SNR=4.4				
214A	**Organ Pipe Nat**	45.38 297	P	P	11 42 09.3 +0.6
	baz=95				
RLMT	**Red Lodge**	45.52 316	*e*P	P	11 42 09.9 +0.1
	6.6nm,0.8s				
RLMT	**Red Lodge**	45.52 316	P	P	11 42 10.2 +0.4
	baz=110,SNR=8.2				
Y14A	**Wickenburg**	45.74 299	*e*P	P	11 42 12.9 +1.4
	3.1nm,0.8s				
H17A	**Grant Village**	46.16 314	*e*P	P	11 42 17.3 +2.4
	4.1nm,0.7s				
DUG	**Dugway, Tooele**	46.63 308	P	P	11 42 19.1 +0.5
	baz=103				
YHB	**Horse Butte**	46.69 314	*e*P	P	11 42 20.4 +1.4
	17nm,0.8s				
QLMT	**Earthquake Lak**	46.87 314	*e*P	P	11 42 21.8 +1.4
EGMT	**Eagleton**	46.89 319	P	P	11 42 21.3 +0.9
	baz=112				
HVU	**Hansel Valley**	46.97 310	*e*P	P	11 42 21.5 +0.3
	3.6nm,0.8s				
BOZ	**Bozeman (W)**	47.24 315	*e*P	P	11 42 23.5 +0.2
	3.6nm,0.7s				
BOZ	**Bozeman (W)**	47.24 315	P	P	11 42 24.1 +0.9
	baz=108				
HRY	**Holter Researc**	47.74 317	*e*P	P	11 42 27.4 +0.4
BC3	**Big Chuckawall**	47.74 299	P	P	11 42 28.4 +1.2
	baz=95				
MCMT	**McKenzie Canyo**	47.83 314	*e*P	P	11 42 29.0 +1.1
SWSC	**Sam W. Stewart**	47.98 298	P	P	11 42 30.1 +1.2
	baz=94				
GMRC	**Grnite Mounta**	48.02 300	P	P	11 42 30.0 +0.6
	baz=96				
MONP2	**Monument Peak**	48.50 298	P	P	11 42 34.4 +1.2
	baz=93,SNR=6.9				
HLID	**Hailey**	48.58 312	*e*P	P	11 42 34.4 +0.7
	3.4nm,0.7s				
HLID	**Hailey**	48.58 312	P	P	11 42 34.2 +0.6
	baz=104,SNR=7.3				
TPNV	**Topopah Spring**	48.73 303	*e*P	P	11 42 36.3 +1.4
	3.9nm,0.9s				
TPNV	**Topopah Spring**	48.73 303	P	P	11 42 36.1 +1.2
	baz=97				
MSO	**Missoula**	49.15 316	P	P	11 42 38.0 +0.1
	baz=107				
CIS	**Catalina Islan**	50.19 298	P	P	11 42 47.0 +1.0
	baz=93				
NV11	**Mina Array Sit**	50.42 305	*e*P	P	11 42 48.5 +0.8
	0.3nm,1.0s				
NV01	**Mina Array Sit**	50.53 305	*e*P	P	11 42 49.0 +0.3
NV01			*e*PcP	PcP	11 44 07.1 +0.9
NVAR	**Mina Array Bea**	50.53 305	P	P	11 42 48.9 +0.3
	0.9nm,0.6s,baz=96,slow=15,SNR=5.0				
NVAR			PcP	PcP	11 44 07.1 +0.9
	0.4nm,0.5s,baz=111,slow=4.9,SNR=3.5				
NEW	**Newport**	51.63 317	P	P	11 42 56.2 -0.3
	baz=106,SNR=9.1				
I07A	**Izee**	52.29 312	*e*P	P	11 43 01.9 +0.3
	4.3nm,0.8s				
J05D	**Fort Rock, OR**	53.40 310	P	P	11 43 10.3 +0.5
	baz=99				
O03E	**Paynes Creek**	53.44 307	P	P	11 43 10.6 +0.5
	baz=96				
M04C	**Macdoel**	53.63 308	P	P	11 43 12.0 +0.4
	baz=97				
I05D	**Terrebonne, OR**	53.63 312	P	P	11 43 12.4 +0.9
	baz=99				
G05D	**Wamic, OR**	53.77 313	P	P	11 43 13.1 +0.8
	baz=100				
F05D	**White Salmon**	53.98 314	P	P	11 43 14.5 +0.6
	baz=100				
C06D	**Leavenworth**	54.00 316	P	P	11 43 14.9 +1.0
	baz=102				
J04D	**Umpqua Nationa**	54.02 310	P	P	11 43 15.0 +0.5
	baz=98				
L04D	**Klamath Falls**	54.03 309	P	P	11 43 14.9 +0.4
	baz=97				
O02D	**Mt. Diablo Mer**	54.18 306	P	P	11 43 15.5 0.0
	baz=95				
M02C	**Callahan**	54.34 308	P	P	11 43 15.9 -0.8
	baz=96				
L02E	**Cave Junction**	54.98 309	P	P	11 43 21.8 +0.6
	baz=96				
J01E	**Myrtle Point**	55.33 310	P	P	11 43 24.1 +0.4
	baz=96				
YKA	**Yellowknife Ar**	55.64 334	P	P	11 43 24.0 -1.6
	1.3nm,0.8s,baz=114,slow=7.7,SNR=4.5				
YKB5	**Yellowknife Ar**	55.64 334	*e*P	P	11 43 24.0 -1.6
PLCA	**Paso Flores**	59.47 185	P	P	11 43 52.8 0.0
	0.8nm,0.5s,baz=19,slow=12,SNR=3.2				
ILAR	**Eielson Array**	70.03 333	P	P	11 45 00.3 -0.9
	1.8nm,0.6s,baz=104,slow=4.3,SNR=16				
ILB	**Eielson Array**	70.03 333	*e*P	P	11 45 00.7 -0.6
	2.6nm,0.6s				
POKR	**Poker Plat Res**	70.25 333	P	P	11 45 02.6 -0.1
	baz=88				
TRF	**Thornlare Moun**	71.60 332	*e*P	P	11 45 10.8 -0.2
	6.0nm,0.8s				
BPAW	**Bear Paw Mtn.**	71.85 333	*e*P	P	11 45 11.6 -0.7
	4.4nm,0.8s				
KTH	**Kantishna Hill**	71.87 332	*e*P	P	11 45 12.0 -0.6
	8.8nm,1.0s				
PETK	**Petropavlovsk-**	99.74 336	LR	LR	12 36 38.3
	comp=Z,107nm,18.5s,baz=265,slow=38				
LZH	**Lanzhou**	124.31 12	*e*PKP	PKiKP	11 52 53.8 +4.5
LZH			pPKP	PKPdf	11 52 55.5 +6.5
LZH			sPKP		11 52 56.3
CD2	**Chengdu**	129.30 13	PKP	PKPdf	11 52 58.1 -0.5
STKA	**Stephens Creek**	153.25 236	PKPab	PKPab	11 54 00.8 +0.9
	0.9nm,0.5s,baz=333,slow=11,SNR=3.2				
ASAR	**Alice Springs**	162.31 251	PKPab	PKPab	11 54 38.5 -0.9
	1.8nm,0.6s,baz=109,slow=4.3,SNR=29				
WRA	**Warramunga Arr**	162.34 263	PKPab	PKPab	11 54 38.1 -1.5
	1.1nm,0.6s,baz=73,slow=6.5,SNR=7.2				

HLW ***17*** *11:35:55.5, 34.83N×24.99E, h11km±30km, MI4.1*
IDC ***17*** *11:35:58.9±1.0, 34.31N×24.90E, h0km, mb4.1/13, mb1 4.2/21, mb1mx4.0/54, mbtmp4.1/21, ML4.2/7, MS3.7/4, Ms1 3.7/4, ms1mx3.0/45, Error ellipse: s-maj=17.3km s-min=14.9km az=24.0*
ISCJB ***17*** *11:36:02.7±0.4, 34.23N±0.03×25.03E±0.03, h42km±4km, mb4.1/22, MS4.4/3, Error ellipse: s-maj=4.6km s-min=3.4km az=31.1*
ATH ***17*** *11:36:03.9, 34.41N×25.05E, h30km±1km, ML3.6/9, Error ellipse: s-maj=3.2km s-min=1.1km az=346.0*
THE ***17*** *11:36:04.1, 34.41N×25.02E, h0km±1km, ML3.4/4, Error ellipse: s-maj=2.5km s-min=0.7km az=176.0*
NEIC ***17*** *11:36:04.1±0.0, 34.41N×25.02E, h0km, mb4.0/17, ML3.4(THE), After THE:*
ISC 17 11:36:03.4±1.3, 34.27N±0.05×25.09E±0.03, h31km±9km, n189, σ1°46/203, mb4.2/22, MS4.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**343**	P	**Pn**	**11 36 17.2**	**-1.1**
SIVA	**Sivas**	**0.78**	**343**	P	**Pn**	**11 36 16.9**	**-1.4**
SIVA				S	**Sb**	**11 36 27.4**	**-1.4**
SIVA				AML	AML	11 36 36.4	
	comp=N,31247µm,0.6s						
SIVA				AML	AML	11 36 36.8	
	comp=E,43180µm,0.8s						
TMBK	**Timbaki Herakl**	**0.84**	**342**	P	**Pn**	**11 36 18.0**	**-1.1**
LAST	**Lasithi**	**0.95**	**20**	P	**Pn**	**11 36 20.3**	**-0.3**
LAST				S	**Sb**	**11 36 33.7**	**+0.1**
LAST	**Lasithi**	**0.95**	**20**	P	**Pn**	**11 36 20.1**	**-0.6**
LAST				S	**Sn**	**11 36 31.5**	**-1.7**
LAST				AML	AML	11 36 44.5	
	comp=E,4358µm,0.8s						
LAST				AML	AML	11 36 49.4	
	comp=N,3577µm,0.8s						
GVD	**Gavdhos**	**1.00**	**305**	P	**Pn**	**11 36 21.2**	**-0.1**
GVD	**Gavdhos**	**1.00**	**305**	P	**Pn**	**11 36 21.4**	**+0.2**
GVD				S	**Sn**	**11 36 34.3**	**-0.1**
GVD	**Gavdhos**	**1.00**	**305**	P	**Pn**	**11 36 21.5**	**+0.2**
GVD				S	**Sn**	**11 36 34.2**	**-0.2**
GVD				AML	AML	11 36 42.6	
	comp=N,10576µm,0.6s						
GVD				AML	AML	11 36 44.3	
	comp=E,15821µm,0.4s						
GVDS	**Gavdos**	**1.00**	**305**	P	**Pn**	**11 36 21.7**	**+0.4**
IDI	**Anoyia**	**1.03**	**351**	Pn	**Pn**	**11 36 20.9**	**-0.9**
	comp=E,74nm,0.3s,baz=172,slow=17,SNR=175						
IDI				Sn	**Sb**	**11 36 36.4**	**+0.5**
	comp=E,129nm,0.3s,baz=258,slow=19,SNR=9.9						
IDI	**Anoyia**	**1.03**	**351**	P	**Pn**	**11 36 20.4**	**-1.4**
KSTL	**Kastelli Herak**	**1.03**	**359**	P	**Pn**	**11 36 20.4**	**-1.3**
IACM	**Heraklion**	**1.04**	**359**	P	**Pn**	**11 36 21.7**	**0.0**
NPS	**Neapolis**	**1.08**	**23**	P	**Pn**	**11 36 22.4**	**0.0**
NPS				S	**Sb**	**11 36 37.5**	**+0.1**
NPS	**Neapolis**	**1.08**	**23**	P	**Pn**	**11 36 22.6**	**+0.1**
NPS				S	**Sb**	**11 36 37.5**	**+0.1**
NPS				AML	AML	11 36 54.4	
	comp=E,4459µm,0.8s						
NPS				AML	AML	11 36 56.4	
	comp=N,3732µm,1.2s						
PRNS	**Prines Rethymn**	**1.20**	**336**	P	**Pn**	**11 36 24.1**	**+0.2**
PRNS				S	**Sb**	**11 36 40.3**	**-0.2**
STIA	**Sitia Lasithi**	**1.25**	**41**	P	**Pb**	**11 36 26.7**	**+0.4**
ZKR	**Zakros**	**1.26**	**47**	P	**Pb**	**11 36 26.1**	**-0.4**
ZKR	**Zakros**	**1.26**	**47**	P	**Pb**	**11 36 26.4**	**-0.1**
ZKR				S	**Sb**	**11 36 44.4**	**+2.0**
ZKR	**Zakros**	**1.26**	**47**	P	**Pb**	**11 36 26.0**	**-0.4**
ZKR				S	**Sb**	**11 36 42.6**	**+0.3**
ZKR				AML	AML	11 36 48.6	
	comp=E,4655µm,0.7s						
ZKR				AML	AML	11 36 48.9	
	comp=N,1842µm,0.5s						
VAM	**Vamos**	**1.35**	**328**	P	**Pn**	**11 36 26.2**	**+0.1**
VAM	**Vamos**	**1.35**	**328**	P	**Pn**	**11 36 26.6**	**+0.5**
VAM				AML	AML	11 36 60.0	
	comp=E,6317µm,0.9s						
VAM				AML	AML	11 37 02.9	
	comp=N,4552µm,0.5s						
IMMV	**Iera Moni Meta**	**1.50**	**323**	P	**Pb**	**11 36 29.6**	**-1.0**
IMMV	**Iera Moni Meta**	**1.50**	**323**	P	**Pb**	**11 36 29.5**	**-1.0**
IMMV	**Iera Moni Meta**	**1.50**	**323**	P	**Pb**	**11 36 29.6**	**-1.0**
IMMV				AML	AML	11 37 00.8	
	comp=N,5502µm,0.6s						
IMMV				AML	AML	11 37 08.1	
	comp=E,7328µm,0.8s						
THR9	**Santorini-Faro**	**2.10**	**6**	P	**Pn**	**11 36 37.1**	**+0.7**
THR6	**Thira Island,**	**2.10**	**7**	P	**Pn**	**11 36 37.2**	**+0.8**
SANT	**Santorini**	**2.12**	**8**	P	**Pn**	**11 36 38.1**	**+1.4**
SANT	**Santorini**	**2.12**	**8**	*e*Pn	**Pn**	**11 36 37.9**	**+1.2**
SANT	**Santorini**	**2.12**	**8**	P	**Pn**	**11 36 38.1**	**+1.4**
KARP	**Karpathos**	**2.13**	**53**	P	**Pb**	**11 36 39.9**	**-1.4**
KARP	**Karpathos**	**2.13**	**53**	*e*Pn	**Pb**	**11 36 39.6**	**-1.7**
KARP	**Karpathos**	**2.13**	**53**	P	**Pb**	**11 36 40.0**	**-1.4**
KARP	**Karpathos**	**2.13**	**53**	P	**Pb**	**11 36 39.9**	**-1.4**
KARP				AML	AML	11 37 33.1	
	comp=N,1724µm,0.8s						
KARP				AML	AML	11 37 36.7	
	comp=E,1462µm,0.8s						
ANAF	**Anafi Island**	**2.16**	**15**	P	**Pn**	**11 36 38.6**	**+1.3**
THR8	**Santorini-Mono**	**2.16**	**8**	P	**Pn**	**11 36 37.2**	**0.0**
ANKY	**Antikythira Is**	**2.17**	**318**	P	**Pn**	**11 36 38.3**	**+1.0**
ANKY	**Antikythira Is**	**2.17**	**318**	P	**Pn**	**11 36 38.6**	**+1.3**
ANKY				AML	AML	11 37 26.7	
	comp=N,1618µm,1.3s						
ANKY				AML	AML	11 37 26.9	
	comp=E,2514µm,0.9s						
SAP3	**Santorini-Thir**	**2.17**	**6**	P	**Pn**	**11 36 38.1**	**+0.7**
THR2	**Thira island,**	**2.19**	**7**	P	**Pn**	**11 36 37.7**	**+0.1**
IOSP	**Ios island**	**2.46**	**4**	P	**Pn**	**11 36 41.5**	**+0.2**
MHLO	**Agia Marina, M**	**2.48**	**347**	P	**Pn**	**11 36 41.9**	**+0.3**
MHLA	**Plaka, Milos I**	**2.53**	**348**	P	**Pn**	**11 36 43.3**	**+1.0**
KYTH	**Kithira**	**2.60**	**321**	P	**Pn**	**11 36 44.5**	**+1.2**
KYTH	**Kithira**	**2.60**	**321**	P	**Pn**	**11 36 45.3**	**+2.0**
KTHR	**Kythira**	**2.62**	**320**	P	**Pn**	**11 36 45.4**	**+1.9**
AMGA	**Amorgos Island**	**2.64**	**14**	P	**Pn**	**11 36 45.2**	**+1.4**
SLUM	**Salum**	**2.77**	**178**	P	**Pn**	**11 36 47.4**	**+1.8**
	baz=176						
SLUM				AMP		11 37 00.0	
	baz=176						
APE	**Apeiranthos**	**2.82**	**7**	P	**Pn**	**11 36 46.3**	**0.0**
APE	**Apeiranthos**	**2.82**	**7**	P	**Pn**	**11 36 46.5**	**+0.2**
SERI	**Serifos**	**2.93**	**351**	P	**Pn**	**11 36 47.8**	**0.0**
VLI	**Veliai**	**3.01**	**325**	P	**Pn**	**11 36 49.1**	**+0.2**
VLI	**Veliai**	**3.01**	**325**	P	**Pn**	**11 36 49.0**	**+0.1**
ARG	**Arkhangelos**	**3.16**	**51**	P	**Pn**	**11 36 52.9**	**+2.0**
ARG

CHOS	**Chios island**	**4.18**	**10**	*e*P	**Pn**	**11 37 06.1 +1.0**
CHOS	**Chios island**	**4.18**	**10**	P	**Pn**	**11 37 05.9 +0.8**
AKAS	**Kas**	**4.19**	**61**	*e*P	**Pn**	**11 37 07.1 +1.9**
AKAS	**Kas**	**4.19**	**61**	*i* P	**Pn**	**11 37 07.0 +1.9**
AKAS				IAML_P		
	comp=Z,2μm,0.2s					
VIL2	**Platees**	**4.20**	**340**	P	**Pn**	**11 37 04.8 -0.5**
URLA	**Izmir**	**4.26**	**16**	*e*P	**Pn**	**11 37 07.2 +1.0**
GUR	**Goura**	**4.28**	**330**	P	**Pn**	**11 37 06.5 0.0**
AYDB	**Zeytinkoy-Aydi**	**4.32**	**31**	*e*P	**Pn**	**11 37 08.9 +1.9**
PROD	**Prodromos**	**4.36**	**337**	P	**Pn**	**11 37 08.0 +0.6**
KLV	**Kalavryta, Ach**	**4.45**	**329**	P	**Pn**	**11 37 08.8 0.0**
KLV	**Kalavryta, Ach**	**4.45**	**329**	P	**Pn**	**11 37 09.4 +0.6**
MRKA	**Markates**	**4.59**	**345**	P	**Pn**	**11 37 10.9 +0.3**
ELL	**Elmali**	**4.65**	**56**	*e*P	**Pn**	**11 37 13.2 +1.7**
LAKA	**Lakka**	**4.69**	**329**	P	**Pn**	**11 37 12.5 +0.4**
ATAL	**Atalanti**	**4.72**	**340**	P	**Pn**	**11 37 12.9 +0.5**
KALE	**Kalithea**	**4.75**	**331**	P	**Pn**	**11 37 13.4 +0.5**
TRIZ	**Trizonia**	**4.76**	**330**	P	**Pn**	**11 37 13.4 +0.5**
AKUM	**Antalya-Kumluc**	**4.76**	**63**	*i* P	**Pn**	**11 37 14.7 +1.7**
AKUM				IAML_P		
	comp=Z,2μm,0.1s					
SWA2		**5.02**	**176**	P	**Pn**	**11 37 18.0 +1.5**
	baz=175					
SWA2				S	**Sn**	**11 38 12.3 -1.2**
	baz=175					
KORT	**Korkueli**	**5.08**	**56**	*e*P	**Pn**	**11 37 19.8 +2.3**
KORT	**Korkueli**	**5.08**	**56**	*i* P	**Pn**	**11 37 20.2 +2.7**
KORT				IAML_P		
	comp=Z,318nm,0.2s					
KULA	**Kula-Manisa**	**5.13**	**33**	*e*P	**Pn**	**11 37 19.7 +1.6**
AGG	**Agios Georgios**	**5.24**	**336**	*e*Pn	**Pn**	**11 37 20.7 +1.2**
VLS	**Valsamata**	**5.33**	**318**	P	**Pn**	**11 37 21.9 +1.0**
ISP	**Isparta**	**5.66**	**50**	*e*Pn	**Pn**	**11 37 27.1 +1.8**
BALB	**Balikesir**	**5.81**	**22**	*e*Pn	**Pn**	**11 37 27.6 +0.3**
LIT	**Litokhoron**	**6.18**	**341**	*e*Pn	**Pn**	**11 37 33.9 +1.4**
HMYD	**Mayadein**	**6.59**	**131**	P	**Pn**	**11 37 38.9 +0.8**
	baz=134					
ALN	**Alexandroupoli**	**6.66**	**6**	*e*Pn	**Pn**	**11 37 39.4 +0.3**
FNA	**Florina**	**7.14**	**337**	*e*Pn	**Pn**	**11 37 46.1 +0.4**
FNA				*e*Sn	**Sn**	**11 39 03.6 -2.2**
HHAG	**Hagoal**	**7.34**	**124**	P	**Pn**	**11 37 49.1 +0.6**
	baz=127					
NBNS	**Bani Suef**	**7.73**	**135**	P	**Pn**	**11 37 55.6 +1.7**
	baz=137					
SUZ	**Suez**	**7.92**	**122**	P	**Pn**	**11 37 56.5 +0.2**
	baz=124					
TIR	**Tirane**	**8.19**	**331**	*e*Pn	**Pn**	**11 38 00.7 +0.8**
TIP	**Timpagrande**	**8.29**	**309**	*e*Pn	**Pn**	**11 38 01.5 0.0**
CEL	**Celeste**	**8.42**	**301**	*e*Pn	**Pn**	**11 38 03.4 +0.1**
VTS	**Vitosha**	**8.46**	**351**	*e*Pn	**Pn**	**11 38 04.3 +0.4**
MMAI	**Mount Meron Ar**	**8.69**	**95**	Pn	**Pn**	**11 38 11.1 +4.0**
	comp=Z,4.6nm,0.3s,baz=260,slow=16,SNR=4.4					
MMAI				Sn	**Sn**	**11 39 38.8 -5.3**
	comp=Z,4.7nm,0.3s,baz=267,slow=20,SNR=3.5					
BR131	**Keskin Array S**	**8.74**	**49**	*e*Pn	**Pn**	**11 38 10.0 +2.2**
BRTR	**Keskin Array B**	**8.74**	**49**	Pn	**Pn**	**11 38 09.2 +1.4**
	comp=Z,0.0nm,0.3s,baz=240,slow=16,SNR=2.4					
BR101	**Keskin Array S**	**8.74**	**49**	*e*Pn	**Pn**	**11 38 09.2 +1.4**
WDD	**Wied Dalam**	**8.80**	**283**	*e*Pn	**Pn**	**11 38 09.7 +1.3**
VAE	**Valguarnera**	**9.23**	**293**	Pn	**Pn**	**11 38 13.6 -0.9**
	baz=42,slow=14,SNR=2.5					
VAE				Sn	**Sn**	**11 39 55.4 -1.9**
	comp=Z,1.8nm,0.3s,baz=101,slow=10,SNR=2.8					
TTG	**Podgorica**	**9.35**	**332**	*e*Pn	**Pn**	**11 38 15.6 -0.3**
EIL	**Elat**	**9.55**	**116**	Pn	**Pn**	**11 38 19.1 +0.3**
	comp=Z,1.9nm,0.3s,baz=340,slow=6.4,SNR=26					
EIL				Sn	**Sn**	**11 39 59.0 -6.0**
	comp=Z,1.0nm,0.3s,baz=229,slow=19,SNR=4.7					
EIL				LR	LR	11 42 36.3
	comp=Z,250nm,21.5s,baz=68,slow=41					
HBST	**Basata**	**9.63**	**119**	P	**Pn**	**11 38 19.7 -0.2**
	baz=121					
ASF	**Jabal al Asfar**	**10.11**	**99**	Pn	**Pn**	**11 38 29.2 +2.7**
	comp=Z,0.3nm,0.3s,baz=130,slow=19,SNR=2.4					
ASF				Sn	**Sn**	**11 40 14.1 -4.9**
	comp=Z,0.4nm,0.3s,baz=326,slow=15,SNR=3.1					
STON	**Ston**	**10.35**	**328**	*e*Pn	**Pn**	**11 38 28.0 -1.6**
MLR	**Muntele Rosu**	**11.23**	**3**	LR	LR	11 43 19.4
	comp=Z,94nm,21.3s,baz=122,slow=39					
NVLJ	**Novalja**	**12.95**	**326**	*e*Pn	**Pn**	**11 39 02.0 -3.1**
SOKA	**Soboth**	**14.55**	**331**	*e*P	**P**	**11 39 34.2 +1.0**
	comp=Z,10nm,1.1s					
OBKA	**Obir**	**14.61**	**330**	*e*Pn	**Pn**	**11 39 30.2 +2.4**
	comp=Z,2.0nm,0.4s					
KOLS	**Kolonicke sedl**	**14.80**	**353**	*e*PN	**Pn**	**11 39 26.3 -4.1**
ARSA	**Arzberg**	**14.84**	**334**	*e*P	**P**	**11 39 37.5 +1.1**
	comp=Z,4.3nm,0.7s					
VYHS	**Vyhne**	**14.96**	**344**	*e*PN	**P**	**11 39 35.9 -1.8**
MYKA	**Terra Mystica**	**15.09**	**328**	*e*P	**P**	**11 39 41.1 +1.8**
	comp=Z,1.3nm,0.4s					
KBA	**Koelnbreinsper**	**15.57**	**329**	*e*P	**P**	**11 39 45.6 +1.0**
	comp=Z,8.8nm,0.8s,SNR=5.8					
ABTA	**Abfaltersbach**	**15.69**	**326**	*e*P	**P**	**11 39 46.9 +1.1**
	comp=Z,9.3nm,0.8s,SNR=6.5					
MOA	**Molln**	**15.81**	**332**	*e*Pn	**P**	**11 39 45.6 -1.6**
	comp=Z,6.6nm,0.9s					
KRUC	**Moravsky**	**16.13**	**339**	*e*PN	**Pn**	**11 39 49.2 +1.5**
AKH	**Akhalkalaki**	**16.18**	**58**	*e*Pn	**P**	**11 39 51.8 +0.3**
	comp=Z,8.5nm,1.0s					
VRAC	**Vranov**	**16.29**	**340**	Pn	**Pn**	**11 39 49.4 -0.4**
	comp=Z,0.4nm,0.3s,baz=161,slow=10,0,SNR=7.9					
VRAC	**Vranov**	**16.29**	**340**	*e*PN	**P**	**11 39 52.2 -0.3**
MORC	**Moravsky Berou**	**16.46**	**343**	*e*PN	**P**	**11 39 54.0 -0.4**
WTTA	**Wattenberg**	**16.47**	**326**	*e*P	**P**	**11 39 56.4 +1.8**
	comp=Z,20nm,1.2s,SNR=7.7					
WATA	**Walderalm**	**16.55**	**326**	*e*P	**P**	**11 39 57.6 +2.1**
	comp=Z,2.7nm,0.4s					
SQTA	**Sankt Quirin**	**16.64**	**325**	*e*P	**P**	**11 39 58.3 +1.8**
	comp=Z,6.1nm,0.5s					
FUORN	**Ofenpass-Fuorn**	**16.68**	**322**	*e*P	**P**	**11 39 56.5 -0.7**
	comp=Z,12nm,0.9s					
AKASG	**Malin Array Be**	**16.70**	**9**	Pn	**Pn**	**11 39 53.5 -1.4**
	comp=Z,1.8nm,0.3s,baz=201,slow=10,SNR=18					
AKBB	**Malin Array Si**	**16.70**	**9**	*e*Pn	**Pn**	**11 39 55.1 +0.2**
	comp=Z,13nm,0.8s					
KIV	**Kislovodsk**	**16.71**	**49**	*e*Pn	**P**	**11 39 58.0 +0.7**
	comp=Z,12nm,0.9s					
FETA	**Feichten**	**16.73**	**324**	*e*Pn	**P**	**11 39 58.6 +1.1**
	comp=Z,17nm,1.2s,SNR=8.2					
KBZ	**Khabaz**	**16.73**	**50**	Pn	**P**	**11 39 59.5 +2.1**
	comp=Z,0.2nm,0.3s,baz=279,slow=8.7,SNR=7.7					
GEC2	**GERESS Array S**	**16.84**	**333**	*e*Pn	**P**	**11 39 58.5 -0.2**
	comp=Z,8.7nm,0.6s					
GERES	**GERESS Array B**	**16.84**	**333**	Pn	**Pn**	**11 39 56.4 -0.4**
	comp=Z,1.0nm,0.3s,baz=146,slow=12,SNR=34					
DAVOX	**Davos/Dischmat**	**16.99**	**322**	Pn	**Pn**	**11 39 56.8 -1.9**
	comp=Z,0.4nm,0.3s,baz=357,slow=19,SNR=2.0					
RETA	**Reutte**	**17.04**	**325**	*e*P	**P**	**11 40 02.1 +1.2**
	comp=Z,2.7nm,0.6s					
TUE	**Stuetta**	**17.06**	**320**	*e*Pn	**P**	**11 40 01.2 0.0**
	comp=Z,6.6nm,1.1s					
KHC	**Kasperske Hory**	**17.13**	**334**	*e*Pn	**P**	**11 40 01.6 -0.1**
	comp=Z,1.6nm,0.9s					
KHC	**Kasperske Hory**	**17.13**	**334**	*e*P	**P**	**11 40 01.5 -0.3**
DAVA	**Damuels**	**17.33**	**323**	*e*P	**P**	**11 40 05.9 +1.8**
	comp=Z,4.9nm,0.7s					
BRG	**Berggiesshubel**	**18.48**	**337**	*e*P	**P**	**11 40 16.7 +0.2**
	comp=Z,4.8nm,0.8s					
	comp=N,311nm,14.1s					
	comp=E,290nm,13.1s					
	comp=Z,411nm,15.6s					
CLL	**Collm**	**19.16**	**336**	*e*P	**P**	**11 40 23.4 -0.6**
	comp=Z,4.1nm,0.7s					
SUW	**Suwalki**	**19.79**	**357**	*e*P	**P**	**11 40 30.2 -0.6**
	comp=Z,63nm,1.1s					
TAM	**Tamanrasset**	**20.60**	**241**	*e*P	Pn	11 40 42.9 +0.4
	comp=Z,5.7nm,1.1s					
WLF	**Walferdange**	**20.76**	**324**	*e*P	Pn	11 40 44.6 +0.5
	comp=Z,63nm,0.9s					
MEM	**Membach**	**21.46**	**325**	P	**P**	**11 40 48.4 -0.6**
	comp=Z,13nm,1.1s					
MEM				PnPn	**PnPn**	**11 41 09.0 -0.6**
HFS	**Hagfors**	**26.93**	**347**	P	**P**	**11 41 41.4 -0.2**
	comp=Z,1.4nm,0.5s,baz=169,slow=8.8,SNR=6.3					
FIA0	**FINESS Array S**	**27.20**	**1**	*e*P	**P**	**11 41 42.0 -2.0**
FINES	**FINESS Array B**	**27.20**	**1**	P	**P**	**11 41 42.0 -2.0**
	comp=Z,3.4nm,0.8s,baz=153,slow=21,SNR=5.3					
NC602	**NORSAR Array S**	**27.90**	**346**	*e*P	**P**	**11 41 53.8 +3.5**
	comp=Z,3.7nm,0.8s					
NB2	**NORSAR Subarra**	**28.25**	**346**	P	**P**	**11 41 52.0 -1.4**
	comp=Z,1.6nm,0.7s,baz=147,slow=11					
NOA	**NORSAR Array B**	**28.25**	**346**	P	**P**	**11 41 52.6 -0.8**
	comp=Z,0.6nm,0.7s,baz=159,slow=9.9,SNR=3.5					
EKA	**Eskdalemuir Ar**	**28.74**	**326**	P	**P**	**11 41 56.1 -1.6**
	comp=Z,0.3nm,0.3s,baz=121,slow=8.3,SNR=3.7					
TOA0	**Torodi Ar. Sit**	**29.87**	**231**	*e*P	**P**	**11 42 09.5 +1.2**
	comp=Z,6.3nm,0.6s					
TORD	**Torodi Ar. Bea**	**29.87**	**231**	P	**P**	**11 42 07.9 -0.4**
	comp=Z,4.0nm,0.6s,baz=29,slow=9.3,SNR=26					
ARU	**Arti**	**31.81**	**36**	P	**P**	**11 42 25.6 +0.7**
	comp=Z,1.0nm,0.3s,baz=269,slow=18,SNR=4.0					
ARU	**Arti**	**31.81**	**36**	*e*P	**P**	**11 42 25.9 +1.0**
ARA0	**ARCESS Array S**	**35.32**	**0**	*e*P	**P**	**11 42 53.9 -1.5**
ARCES	**ARCESS Array B**	**35.32**	**0**	P	**P**	**11 42 53.9 -1.5**
	comp=Z,1.0nm,0.6s,baz=164,slow=10,SNR=4.8					
KK31	**Karatay Array**	**36.17**	**62**	*e*P	**P**	**11 43 05.6 +2.6**
	comp=Z,3.7nm,1.1s					
BVAR	**Borovoye Array**	**37.01**	**46**	P	**P**	**11 43 12.1 +2.2**
	comp=Z,0.9nm,0.8s,baz=266,slow=10,SNR=5.7					
KURBB	**Kurchatov Arra**	**41.73**	**50**	P	**P**	**11 43 49.8 +0.5**
	comp=Z,2.3nm,0.3s,baz=279,slow=8.7,SNR=9.6					
MK31	**Makanchi Array**	**44.32**	**56**	*e*P	**P**	**11 44 10.9 +0.5**
	comp=Z,4.4nm,1.1s					
MK32	**Makanchi Array**	**44.32**	**56**	*e*P	**P**	**11 44 11.1 +0.7**
MKAR	**Makanchi Array**	**44.32**	**56**	P	**P**	**11 44 11.1 +0.7**
	comp=Z,1.3nm,0.8s,baz=280,slow=5.4,SNR=9.8					
ZAA1	**Zalesovo Array**	**45.67**	**46**	*e*P	**P**	**11 44 21.0 0.0**
ZALV	**Zalesovo Beam**	**45.67**	**46**	P	**P**	**11 44 21.0 0.0**
	comp=Z,1.8nm,0.3s,baz=269,slow=9.6,SNR=7.3					
WMQ	**Urumqi**	**48.51**	**59**	*e*P	**P**	**11 44 45.6 +2.2**
WMQ				LR	LR	
	comp=N,150nm,23.3s					
WMQ				LR	LR	
	comp=E,410nm,22.1s					
WMQ				LR	LR	
	comp=Z,1μm,26.1s					
SONA0	**Songino Array**	**60.10**	**50**	*e*P	**P**	**11 46 09.1 +1.3**
SONM	**Songino Array**	**60.10**	**50**	P	**P**	**11 46 09.1 +1.3**
	comp=Z,1.1nm,0.7s,baz=280,slow=8.6,SNR=4.2					
ULN	**Ulaanbaatar**	**60.51**	**50**	*e*P	**P**	**11 46 11.5 +0.9**
	comp=Z,2.2nm,0.8s					
LZH	**Lanzhou**	**62.65**	**63**	*e*P	**P**	**11 46 25.1 -0.1**
LZH				pP	pP	11 46 33.3 -0.6
LZH				sP	sP	11 46 36.5 -0.6
LZH				*e*PP	**PP**	**11 48 44.8 +1.8**
LZH				pmax	pmax	
	comp=Z,14nm,1.1s					
LZH				pmax	pmax	
	comp=Z,43nm,7.8s					
CD2	**Chengdu**	**64.77**	**69**	*e*P	**P**	**11 46 37.1 -2.0**
HHC	**Hu-ho-hao-te**	**66.19**	**56**	*e*P	**P**	**11 46 48.5 +0.3**
HHC				pmax	pmax	
	comp=Z,25nm,0.6s					
HHC				pmax	pmax	
	comp=Z,46nm,5.7s					
SEY	**Seymchan**	**74.41**	**22**	LR	LR	12 25 07.2
	comp=Z,74nm,18.9s,baz=320,slow=40					
KSRS	**Korea Array**	**78.88**	**52**	P	**P**	**11 48 04.5 +0.9**
	comp=Z,0.8nm,0.7s,baz=319,slow=4.4,SNR=5.0					
ILAR	**Eielson Array**	**81.09**	**357**	P	**P**	**11 48 14.4 -0.7**
	comp=Z,0.4nm,0.8s,baz=353,slow=4.7,SNR=4.3					
ROSC	**El Rosal**	**95.04**	**279**	LR	LR	12 27 37.2
	comp=Z,272nm,21.1s,baz=156,slow=33					

MAN 17 11:39:18.7, 8°.55N×125°.90E, h1km, mb3.6, ML2.3, MS1.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.50**	**326**	*e*P		Pg	11 39 28.6	+0.3
BUTP				*e*S		Sb	11 39 41.9	+3.9
BUKP	**Musuan**	**1.07**	**231**	*e*P		Pg	11 39 39.6	+0.4
BUKP				*e*S		Sn	11 39 56.2	-0.2
SCPH	**Surigao**	**1.29**	**342**	↓*i*P		Pg	11 39 42.8	-0.6
SCPH				*i* S		Sb	11 40 01.1	+0.3

DJA 17 11:39:59.1±1.0, 3°S±9°×12°9E±°, h11km±9km, M2.8/5, MLv2.8/5, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.53**	**133**	P		Pg	11 40 09.2	-0.3
MSAI				S		Sb	11 40 18.9	+0.7
AAI	**Ambon**	**0.78**	**206**	P		Pg	11 40 14.0	-0.3
AAI				S		Sb	11 40 25.3	-0.1
NLAI	**Namlea**	**1.46**	**260**	P		Pb	11 40 26.0	-0.3

MAN 17 11:41:40.0, 6°.53N×125°.65E, h108km, mb4.1, ML2.9, MS2.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.43**	**172**	*e*P		Pn	11 41 57.1	+0.8
DDMP				*e*S		Sn	11 42 11.5	+3.0
DMPH	**Davao City--Mi**	**0.56**	**345**	*e*P		Pn	11 42 11.4	+14
DMPH				*e*S		Sn	11 42 16.5	+6.5
MATI	**Mati**	**0.73**	**56**	*e*P		Pn	11 41 59.0	+0.6
MATI				*e*S		Sn	11 42 15.4	+3.1
SKMP	**Bagumbayan, Su**	**1.10**	**269**	*e*P		Pn	11 42 03.5	+1.4
SKMP				*e*S		Sn	11 42 19.7	+0.8
BUKP	**Musuan**	**1.46**	**336**	*e*P		Pn	11 42 07.8	+1.5
BUKP				*e*S		Sn	11 42 26.5	+0.3

DJA 17 11:43:52.0±0.4, 3°S±3°×12°9E±°, h10km, M3.5/6, MLv3.5/6, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.68**	**148**	P		Pb	11 44 05.6	-0.3
MSAI				S		Sg	11 44 05.3	-8.7
AAI	**Ambon**	**0.98**	**202**	P		Pg	11 44 10.9	-0.1
AAI				S		Sb	11 44 24.5	+0.2
NLAI	**Namlea**	**1.54**	**252**	P		Pb	11 44 20.3	-0.4
BNDI	**Bandanaira**	**2.19**	**143**	P		Pb	11 44 31.3	-0.5
SANI	**Sanana**	**2.68**	**285**	P		Pn	11 44 34.2	-1.0
FAKI	**Fak Fak**	**3.68**	**92**	P		Pn	11 44 49.0	0.0

MEX 17 11:51:48.0±0.6, 16°.49N×98°.47W, h13km±8km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.35**	**106**	*e*P		Pg	11 51 54.6	-0.4
PNIG				*e*S		Sg	11 51 59.7	0.0
TLIG	**Tlapa**	**1.07**	**355**	*e*P		Pb	11 52 04.8	-3.7
VHO	**Vista Hermosa**	**1.77**	**70**	*i* P		Pn	11 52 14.7	-3.8

*IDC **17** 11:52:29.7±1.1, 34°.23N×25°.05E, h0km, mb3.8/6, mb1 3.9/12, mb1mx3.7/51, mbtmp3.8/12, ML3.9/5, Error ellipse: s-maj=19.2km s-min=18.3km az=102.0*
*ISCJB **17** 11:52:31.9±1.1, 34°.14N±0°.05×25°.14E±0°.04, h24km±7km, mb3.6/6, Error ellipse: s-maj=8.6km s-min=5.3km az=18.1*
*ATH **17** 11:52:34.7, 34°.36N×25°.10E, h21km±1km, ML3.4/7, Error ellipse: s-maj=2.5km s-min=0.9km az=3.0*
*THE **17** 11:52:35.5, 34°.34N×25°.14E, h21km±5km, ML3.6/3, Error ellipse: s-maj=6.4km s-min=1.4km az=125.0*
*ISK **17** 11:53:04.2, 35°.75N×27°.47E, h3km, ML2.6/5*
ISC 17 11:52:33.0±1.6, 34°.21N±0°.07×25°.14E±0°.03, h27km±11km, n37, σ1§71/52, mb3.8/6, Crete

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.85**	**342**	P		**Pb**	**11 52 48.2**	**-1.0**
SIVA				S		**Sb**	**11 52 59.8**	**-0.4**
SIVA	**Sivas**	**0.85**	**342**	P		**Pb**	**11 52 48.3**	**-0.8**
SIVA				S		**Sb**	**11 52 58.8**	**-1.5**
SIVA				AML		AML	11 53 01.8	
	comp=E,16502μm,0.6s							
SIVA				AML		AML	11 53 04.6	
	comp=N,10093μm,0.7s							
LAST	**Lasithi**	**0.99**	**16**	P		**Pb**	**11 52 50.5**	**-1.1**
LAST				S		**Sb**	**11 53 03.4**	**-0.9**
LAST	**Lasithi**	**0.99**	**16**	P		**Pb**	**11 52 50.7**	**-0.9**
LAST				S		**Sb**	**11 53 03.5**	**-0.9**
LAST				AML		AML	11 53 13.1	
	comp=E,1418μm,0.7s							
LAST				AML		AML	11 53 16.8	
	comp=N,1521μm,1.0s							
GVD	**Gavdhos**	**1.07**	**306**	P		**Pb**	**11 52 52.9**	**0.0**
GVD				S		**Sn**	**11 53 06.5**	**+0.2**
GVD	**Gavdhos**	**1.07**	**306**	P		**Pb**	**11 52 52.4**	**-0.5**
GVD				S		**Sn**	**11 53 07.7**	**+1.4**
GVD				AML		AML	11 53 15.0	
	comp=N,9224μm,0.4s							
GVD				AML		AML	11 53 17.4	
	comp=E,8313μm,0.4s							
GVDS	**Gavdos**	**1.07**	**307**	P		**Pb**	**11 52 53.4**	**+0.5**
GVDS				S		**Sn**	**11 53 07.0**	**+0.7**
IDI	**Anoyia**	**1.10**	**349**	Pn		**Pn**	**11 52 52.4**	**-0.3**
	comp=E,27nm,0.3s,baz=162,slow=23,SNR=8.2							
IDI				Sn		**Sn**	**11 53 07.2**	**+0.1**
	comp=E,49nm,0.3s,baz=111,slow=5.3,SNR=26							
NPS	**Neapolis**	**1.12**	**20**	P		**Pb**	**11 52 54.2**	**+0.4**
NPS				AML		AML	11 53 23.1	
	comp=N,1576μm,0.8s							
NPS				AML		AML	11 53 23.4	
	comp=E,2394μm,0.7s							
PRNS	**Prines Rethymn**	**1.27**	**336**	P		**Pb**	**11 52 55.9**	**-0.3**
PRNS				S		**Sn**	**11 53 10.3**	**-0.8**
ZKR	**Zakros**	**1.27**	**44**	P		**Pb**	**11 52 57.6**	**+1.3**
ZKR				S		**Sb**	**11 53 13.8**	**+1.6**
ZKR				AML		AML	11 53 22.4	
	comp=E,2089μm,0.6s							
ZKR				AML		AML	11 53 29.8	
	comp=N,913μm,0.9s							
VAM	**Vamos**	**1.42**	**328**	P		**Pb**	**11 52 57.8**	**-1.1**
VAM				S		**Sn**	**11 53 14.1**	**-0.9**
VAM	**Vamos**	**1.42**	**328**	P		**Pb**	**11 52 58.9**	**0.0**
VAM				S		**Sb**	**11 53 16.7**	**+0.1**
VAM				AML		AML	11 53 24.6	
	comp=E,2652μm,0.5s							
VAM				AML		AML	11 53 28.2	
	comp=N,2314μm,0.4s							
IMMV	**Iera Moni Meta**	**1.57**	**323**	P		**Pb**	**11 53 01.5**	**+0.1**
IMMV				S		**Sb**	**11 53 21.8**	**+1.0**
IMMV				AML		AML	11 53 40.8	
	comp=E,1942μm,0.7s							
IMMV				AML		AML	11 53 48.2	
	comp=N,1795μm,1.3s							
KARP	**Karpathos**	**2.14**	**51**	PG		**Pb**	**11 53 11.4**	**+0.4**
KARP	**Karpathos**	**2.14**	**51**	P		**Pb**	**11 53 10.8**	**-0.3**
DAT	**Datca**	**3.21**	**38**	PG		**Pn**	**11 53 23.9**	**+2.1**
DALY	**Dalyan (Mula)**	**3.88**	**47**	PN		**Pn**	**11 53 31.9**	**+1.1**
TURN	**Turunc**	**3.88**	**46**	PN		**Pn**	**11 53 27.9**	**-3.0**
YER	**Yerkesik**	**3.89**	**40**	PN		**Pn**	**11 53 33.0**	**+2.0**
FETY	**Fethiye**	**4.03**	**52**	PN		**Pn**	**11 53 34.2**	**+1.2**
AKAS	**Kas**	**4.18**	**60**	PN		**Pn**	**11 53 36.6**	**+1.5**
ELL	**Elmali**	**4.65**	**56**	PN		**Pn**	**11 53 43.1**	**+1.5**
KORT	**Korkueli**	**5.08**	**55**	PN		**Pn**	**11 53 49.4**	**+1.9**
MMAI	**Mount Meron Ar**	**8.65**	**95**	Pn		**Pn**	**11 54 38.7**	**+2.2**
	comp=N,2.0nm,0.3s,baz=297,slow=13,SNR=2.3							
MMAI				Sn		**Sn**	**11 56 10.8**	**-2.3**
	comp=N,2.9nm,0.3s,baz=303,slow=24,SNR=3.0							
BRTR	**Keskin Array B**	**8.75**	**49**	Pn		**Pn**	**11 54 42.0**	**+4.1**
	comp=N,0.1nm,0.3s,baz=255,slow=12,SNR=3.0							
EIL	**Elat**	**9.49**	**116**	Pn		**Pn**	**11 54 47.4**	**-0.5**
	comp=N,1.6nm,0.3s,baz=308,slow=1.2,SNR=17							
EIL				Sn		**Sn**	**11 56 27.1**	**-6.5**
	comp=N,0.7nm,0.3s,baz=36,slow=17,SNR=2.6							
ASF	**Jabal al Asfar**	**10.06**	**98**	Sn		**Sn**	**11 56 44.6**	**-3.3**
	comp=N,0.3nm,0.3s,baz=321,slow=18,SNR=2.5							
KBZ	**Khabaz**	**16.74**	**50**	Pn		**P**	**11 56 30.4**	**+2.9**
	comp=N,0.1nm,0.3s,baz=230,slow=17,SNR=2.5							
AKASG	**Malin Array Be**	**16.75**	**9**	Pn		**P**	**11 56 26.8**	**-0.8**
	comp=N,0.8nm,0.3s,baz=200,slow=10,SNR=6.3							
GERES	**GERESS Array B**	**16.92**	**333**	Pn		**P**	**11 56 30.4**	**+0.7**
	comp=N,0.2nm,0.3s,baz=138,slow=10,SNR=6.9							
ESDC	**Sonseca Array**	**23.83**	**292**	P		**P**	**11 57 43.9**	**0.0**
	comp=N,0.2nm,0.4s,baz=87,slow=9.3,SNR=5.6							
HFS	**Hagfors**	**27.00**	**347**	P		**P**	**11 58 11.2**	**-1.2**
	comp=N,1.4nm,0.8s,baz=131,slow=20,SNR=2.4							
FINES	**FINESS Array B**	**27.26**	**1**	P		**P**	**11 58 14.2**	**-0.5**
	comp=N,2.0nm,0.8s,baz=164,slow=16,SNR=2.8							
TORD	**Torodi Ar. Bea**	**29.87**	**231**	P		**P**	**11 58 39.1**	**+0.7**
	comp=N,0.9nm,0.4s,baz=33,slow=9.0,SNR=13							
MKAR	**Makanchi Array**	**44.32**	**56**	P		**P**	**12 00 40.8**	**+0.1**
	comp=N,0.7nm,0.5s,baz=281,slow=7.9,SNR=3.7							
ZALV	**Zalesovo Beam**	**45.68**	**45**	P		**P**	**12 00 51.8**	**+0.5**
	comp=N,0.7nm,0.4s,baz=260

SOME 17 12:08:20.0, 44.°65N×82.°08E, h10km
NNC 17 12:08:21.6±1.2, 44.°70N×82.°02E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=13.3km s-min=6.0km az=129.0
ISC 17 12:08:18.5±1.2, 44.°67N±0.°04×82.°25E±0.°05, h10km, n36, σ1°69/52, 2C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.80**	**260**	P	**Pg**	**12 08 52.1**	**-0.8**
	19nm,0.4s						
DJR				S	**Sg**	**12 09 15.7**	**-0.6**
	30nm,0.4s						
DJR	**Jarkent**	**1.80**	**260**	*e*P	**Pg**	**12 08 52.1**	**-0.8**
	20nm,0.2s						
DJR				*e*S	**Sg**	**12 09 15.7**	**-0.6**
	32nm,0.5s						
KTMS	**Ketmen**	**1.84**	**229**	P	**Pg**	**12 08 53.5**	**-0.4**
	10nm,0.3s						
KTMS	**Ketmen**	**1.84**	**229**	*e*P	**Pg**	**12 08 53.4**	**-0.4**
	8.8nm,0.2s						
KTMS				*e*S	**Sg**	**12 09 17.0**	**-0.7**
	69nm,0.4s						
MK31	**Makanchi Array**	**2.12**	**1**	Pn	**Pg**	**12 08 58.0**	**-1.2**
	13nm,0.2s,baz=181,slow=14,SNR=236						
MK31				Sn	**Sg**	**12 09 26.6**	**0.0**
	9.5nm,0.3s,baz=188,slow=26,SNR=28						
KAPS	**Kapalarasan**	**2.14**	**288**	Pg	**Pg**	**12 08 58.2**	**-1.5**
	7.2nm,0.2s						
KAPS				Lg	Lg	12 09 26.3	
	28nm,0.3s						
KAPS	**Kapalarasan**	**2.14**	**288**	*e*P	**Pg**	**12 08 58.2**	**-1.5**
	5.0nm,0.2s						
KAPS				*e*S	**Sg**	**12 09 26.3**	**-1.1**
	28nm,0.6s						
PDGK	**Podgornoye**	**2.41**	**237**	Pg	**Pb**	**12 09 02.8**	**+0.8**
	3.4nm,0.3s						
PDGK	**Podgornoye**	**2.41**	**237**	⇓Pn	**Pb**	**12 09 01.9**	**-0.1**
	3.4nm,0.4s						
PDGK				⇑Sn	**Sg**	**12 09 34.1**	**-1.7**
	37nm,0.6s						
TDK	**Taldyqorghan**	**2.76**	**278**	Pg	**Pb**	**12 09 08.0**	**+0.1**
	33nm,0.2s						
TDK				Lg	Lg	12 09 42.9	
	94nm,0.5s						
TDK	**Taldyqorghan**	**2.76**	**278**	*e*P	**Pb**	**12 09 08.0**	**+0.1**
	23nm,0.2s						
TDK				*e*S	**Sb**	**12 09 42.9**	**+1.1**
	139nm,0.3s						
UZB	**Uzynbulak**	**2.79**	**238**	Pg	**Pb**	**12 09 08.2**	**-0.4**
	4.4nm,0.3s						
UZB				Lg	Lg	12 09 43.2	
	16nm,0.2s						
UZB	**Uzynbulak**	**2.79**	**238**	*e*P	**Pb**	**12 09 08.2**	**-0.4**
	4.4nm,0.3s						
UZB				*e*S	**Sb**	**12 09 43.2**	**+0.3**
	16nm,0.2s						
MNBS	**Baschi**	**2.83**	**259**	Pg	**Pb**	**12 09 09.4**	**+0.2**
	5.5nm,0.1s						
MNBS				Lg	Lg	12 09 45.2	
	38nm,0.4s						
MNBS	**Baschi**	**2.83**	**259**	*e*P	**Pb**	**12 09 09.3**	**+0.2**
	4.1nm,0.2s						
MNBS				*e*S	**Sb**	**12 09 45.2**	**+1.4**
	38nm,0.4s						
KPKS	**Kokpek**	**2.84**	**246**	*e*P	**Pb**	**12 09 09.8**	**+0.4**
	18nm,0.3s						
KPKS				*e*S	**Sb**	**12 09 46.1**	**+1.8**
	75nm,0.5s						
ARXS	**Arharly**	**3.20**	**263**	Pg	**Pb**	**12 09 16.3**	**+0.7**
	4.0nm,0.5s						
ARXS				Lg	Lg	12 09 57.0	
	28nm,0.5s						
ARXS	**Arharly**	**3.20**	**263**	*e*P	**Pb**	**12 09 16.3**	**+0.7**
	4.0nm,0.5s						
ARXS				*e*S	**Sb**	**12 09 57.0**	**+2.3**
	28nm,0.5s						
SATY	**Saty**	**3.22**	**241**	Pg	**Pb**	**12 09 16.2**	**+0.3**
	52nm,0.9s						
SATY				Lg	Lg	12 09 57.2	
	52nm,0.5s						
SATY	**Saty**	**3.22**	**241**	*e*P	**Pb**	**12 09 16.2**	**+0.3**
	52nm,0.9s						
SATY				*e*S	**Sb**	**12 09 57.2**	**+2.1**
	52nm,0.5s						
ZSN	**Zaisan**	**3.32**	**32**	Pg	**Pg**	**12 09 19.8**	**-2.3**
	3.1nm,0.3s						
ZSN				Lg	Lg	12 10 03.9	
	6.0nm,0.5s						
ZSN	**Zaisan**	**3.32**	**32**	*e*P	**Pg**	**12 09 21.0**	**-1.1**
	1.8nm,0.2s						
ZSN				*e*S	**Sg**	**12 10 05.2**	**+0.1**
	6.0nm,0.5s						
CHKK	**Chushkaly**	**3.87**	**260**	Pg	**Pb**	**12 09 27.0**	**+0.1**
	2.7nm,0.6s						
CHKK	**Chushkaly**	**3.87**	**260**	*e*P	**Pb**	**12 09 27.0**	**+0.1**
	0.8nm,0.2s						
CHKK				*e*S	**Sb**	**12 10 15.9**	**+2.1**
	12nm,0.3s						
KOTS	**Kotyrbulak**	**3.98**	**251**	Pg	**Pb**	**12 09 30.4**	**+1.5**
	3.9nm,0.3s						
KOTS	**Kotyrbulak**	**3.98**	**251**	*e*P	**Pb**	**12 09 29.5**	**+0.6**
	1.6nm,0.2s						
KOTS				*e*S	**Sb**	**12 10 20.0**	**+2.8**
	17nm,0.6s						
MDOK	**Medeo**	**4.05**	**250**	Pg	**Pg**	**12 09 33.1**	**-3.1**
	6.0nm,0.4s						
MDOK	**Medeo**	**4.05**	**250**	*e*P	**Pb**	**12 09 30.8**	**+0.7**
	2.8nm,0.4s						
MDOK				*e*S	**Sb**	**12 10 22.6**	**+3.4**
	11nm,0.5s						
KTBS	**Karatobe**	**4.12**	**258**	Pg	**Pb**	**12 09 31.9**	**+0.7**
	2.6nm,0.5s						
KTBS	**Karatobe**	**4.12**	**258**	*e*P	**Pb**	**12 09 31.9**	**+0.7**
	1.6nm,0.5s						
KTBS				*e*S	**Sb**	**12 10 23.9**	**+2.9**
	11nm,0.8s						
KUU	**Kurty**	**4.32**	**262**	*e*P	**Pb**	**12 09 35.5**	**+1.0**
	3.2nm,0.2s						
KUU				⇑*i*S	**Sb**	**12 10 30.3**	**+3.6**
	9.5nm,0.3s						
KST	**Kastek**	**4.83**	**252**	Pg	**Pb**	**12 09 46.1**	**+2.7**
	3.2nm,0.3s						
KST	**Kastek**	**4.83**	**252**	*e*P	**Pb**	**12 09 46.1**	**+2.7**
	3.2nm,0.3s						
KST				⇓*i*S	**Sg**	**12 10 48.5**	**-5.2**
	6.3nm,0.9s						
TKM2	**Tokmak 2**	**5.13**	**252**	⇓Lg	Lg	12 10 56.2	
	4.4nm,0.5s						
KURBB	**Kurchatov Arra**	**6.46**	**338**	Lg	Lg	12 11 42.6	
KURK	**Kurchatov**	**6.52**	**339**	Lg	Lg	12 11 42.1	

ISCJB 17 12:11:35.0±0.4, 45.°53N±0.°04×147.°52E±0.°08, h187km±4km, mb3.5/11, Error ellipse: s-maj=9.2km s-min=6.8km az=17.1
MOS 17 12:11:35.1±1.1, 45.°62N×147.°63E, h169km, mb4.0/3, Error ellipse: s-maj=18.8km s-min=10.0km az=63.1
SKHL 17 12:11:35.1±0.7, 45.°54N×147.°51E, h173km±7km, mb4.1/7, msh5.0/5
IDC 17 12:11:37.7±2.0, 45.°77N×147.°09E, h198km±19km, mb3.2/9, mb1 3.4/12, mb1mx3.2/37, mbtmp3.6/12, Error ellipse: s-maj=27.0km s-min=12.6km az=123.0
JMA 17 12:11:38.0±0.5, 45.°08N×147.°67E, h179km, M4.0
ISC 17 12:11:36.3±0.7, 45.°48N±0.°05×147.°53E±0.°06, h181km±6km, n49, σ2°09/68, mb3.5/11, 4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.34**	**136**	*d*iPN	**Pn**	**12 12 00.1**	**-0.6**
KUR				*i*S	**Sn**	**12 12 18.9**	**-0.4**
KUR				pmax	pmax		
	comp=Z,243nm,0.5s						
KUR				pmax	pmax		
	comp=N,39nm,0.3s						
KUR				pmax	pmax		
	comp=E,39nm,0.3s						
KUR				smax	smax		
	comp=N,148nm,0.7s						
KUR				smax	smax		
	comp=E,108nm,0.6s						
KUR	**Kuril'sk**	**0.34**	**136**	*i*P	**Pn**	**12 12 00.0**	**-0.6**
KUR				AMB	AMB	12 12 00.0	
	comp=E,39nm,0.3s						
KUR				AMB	AMB	12 12 00.0	
	comp=E,243nm,0.3s						
KUR				*i*S	**Sn**	**12 12 19.0**	**-0.4**
KUR				A	A	12 12 19.0	
	comp=E,195nm,0.4s						
KUR				A	A	12 12 19.0	
	comp=E,135nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.87**	**220**	*d*iPN	**Pn**	**12 12 12.5**	**+0.5**
YUK				*i*S	**Sn**	**12 12 42.1**	**+2.4**
YUK				pmax	pmax		
	comp=Z,121nm,0.2s						
YUK				pmax	pmax		
	comp=N,27nm,0.1s						
YUK				pmax	pmax		
	comp=E,34nm,0.2s						
YUK				smax	smax		
	comp=N,179nm,0.4s						
YUK				smax	smax		
	comp=E,308nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.87**	**220**	*i*P	**Pn**	**12 12 12.0**	**0.0**
YUK				AMB	AMB	12 12 13.1	
	comp=E,27nm,0.3s						
YUK				AMB	AMB	12 12 13.1	
	comp=E,34nm,0.3s						
YUK				AMB	AMB	12 12 13.1	
	comp=E,126nm,0.3s						
YUK				*i*S	**Sn**	**12 12 41.2**	**+1.5**
YUK				A	A	12 12 44.0	
	comp=E,179nm,0.4s						
YUK				A	A	12 12 44.0	
	comp=E,300nm,0.4s						
LAGR	**Lagunnoye**	**1.89**	**222**	*e*PN	**Pn**	**12 12 13.4**	**+1.2**
LAGR				*e*S	**Sn**	**12 12 42.8**	**+2.8**
LAGR				pmax	pmax		
	comp=N,49nm,0.1s						
LAGR				pmax	pmax		
	comp=E,72nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,88nm,0.1s						
LAGR				smax	smax		
	comp=N,370nm,0.5s						
LAGR				smax	smax		
	comp=E,184nm,0.2s						
LAGR	**Lagunnoye**	**1.89**	**222**	*e*P	**Pn**	**12 12 13.0**	**+0.8**
LAGR				AMB	AMB	12 12 14.0	
	comp=E,49nm,0.3s						
LAGR				AMB	AMB	12 12 14.0	
	comp=E,72nm,0.3s						
LAGR				AMB	AMB	12 12 14.0	
	comp=E,88nm,0.3s						
LAGR				*e*S	**Sn**	**12 12 42.0**	**+2.0**
LAGR				A	A	12 12 52.0	
	comp=E,370nm,0.5s						
GRPR	**Tuman**	**1.94**	**221**	*e*PN	**Pn**	**12 12 13.6**	**+0.8**
GRPR				*e*S	**Sn**	**12 12 43.2**	**+2.1**
GRPR				pmax	pmax		
	comp=N,34nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,147nm,0.3s						
GRPR				pmax	pmax		
	comp=E,32nm,0.2s						
GRPR				smax	smax		
	comp=N,139nm,0.2s						
GRPR				smax	smax		
	comp=E,233nm,0.2s						
GRPR	**Tuman**	**1.94**	**221**	*e*P	**Pn**	**12 12 13.0**	**+0.2**
GRPR				AMB	AMB	12 12 14.0	
	comp=E,15nm,0.2s						
GRPR				*e*S	**Sn**	**12 12 43.0**	**+1.9**
GRPR				A	A	12 12 45.0	
	comp=E,139nm,0.3s						
GRPR				A	A	12 12 45.0	
	comp=E,233nm,0.3s						
GLVR	**Golovnino**	**2.25**	**220**	*e*PN	**Pn**	**12 12 16.9**	**+0.7**
GLVR				*e*S	**Sn**	**12 12 48.9**	**+1.7**
GLVR				pmax	pmax		
	comp=N,63nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,141nm,0.1s						
GLVR				pmax	pmax		
	comp=E,61nm,0.2s						
GLVR				smax	smax		
	comp=E,345nm,0.1s						
GLVR				smax	smax		
	comp=N,689nm,0.2s						
GLVR	**Golovnino**	**2.25**	**220**	*e*P	**Pn**	**12 12 16.0**	**-0.2**
GLVR				AMB	AMB	12 12 20.0	
	comp=N,14nm,0.3s						
GLVR				*e*S	**Sn**	**12 12 48.0**	**+0.8**
GLVR				A	A	12 12 54.0	
	comp=N,340nm,0.4s						
GLVR				A	A	12 12 54.0	
	comp=N,170nm,0.4s						
JRA	**Rausu**	**2.31**	**229**	P	**Pn**	**12 12 17.0**	**+0.2**
NEM2	**Nemuro 2**	**2.47**	**212**	P	**Pn**	**12 12 17.4**	**-1.3**
NEM2				*e*S	**Sn**	**12 12 47.7**	**-3.9**
JNK	**Nakash**	**2.76**	**228**	P	**Pn**	**12 12 22.3**	**+0.2**
JTKR	**Abashiri--Toko**	**2.99**	**241**	P	**Pn**	**12 12 25.0**	**+0.2**
JAK	**Akkeshi**	**3.21**	**220**	P	**Pn**	**12 12 26.7**	**-0.8**
JAK				*e*S	**Sn**	**12 13 04.9**	**-2.5**
JAR	**Ashorobuto**	**3.47**	**232**	P	**Pn**	**12 12 31.6**	**+0.9**
YSS	**Yuzh-Sakhalins**	**3.62**	**296**	⇓*i*PN	**Pn**	**12 12 32.3**	**-0.3**
YSS				*e*S	**Sn**	**12 13 16.4**	**-0.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				smax	smax		
	comp=N,10.0nm,0.7s						
YSS	**Yuzh-Sakhalins**	**3.62**	**296**	*e*P	**Pn**	**12 12 32.0**	**-0.6**
YSS				AMB	AMB	12 12 32.8	
	comp=N,10.0nm,1.0s						
YSS				*e*S	**Sn**	**12 13 16.0**	**-0.7**
ASAJ	**Asahikawa**	**3.76**	**251**	P	**Pn**	**12 12 35.3**	**+0.9**
	comp=N,1.7nm,0.3s,baz=65,slow=14,SNR=18						
JCH	**Churui**	**4.15**	**228**	P	**Pn**	**12 12 38.8**	**-0.5**
JCH				*e*S	**Sn**	**12 13 24.9**	**-3.7**
JFR	**Furan**	**4.23**	**239**	P	**Pn**	**12 12 41.4**	**+1.1**
ERM	**Erimo**	**4.69**	**224**	*d*iPN	**Pn**	**12 12 46.2**	**0.0**
JNBK	**Urakawa-nobuka**	**4.70**	**229**	P	**Pn**	**12 12 45.0**	**-1.4**
UGL	**Uglegorsk**	**5.17**	**316**	*e*P	**Pn**	**12 12 51.2**	**-1.2**
JKB	**Kayabe**	**5.92**	**235**	P	**Pn**	**12 13 00.6**	**-1.6**
JKB				*e*S	**Sn**	**12 14 04.4**	**-5.4**
JOT	**Ohata**	**6.25**	**231**	P	**Pn**	**12 13 04.2**	**-2.3**
JOT				*e*S	**Sn**	**12 14 10.0**	**-7.5**
TYV	**Tymovskoe**	**6.29**	**331**	*e*PN	**Pn**	**12 13 04.3**	**-2.7**
TYV				*e*S	**Sn**	**12 14 14.2**	**-4.4**
TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
TYV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TYV				smax	smax		
	comp=E,4.0nm,1.0s						
TYV	**Tymovskoe**	**6.29**	**331**	*e*P	**Pn**	**12 13 05.5**	**-1.5**
TYV				AMB	AMB	12 13 06.2	
	comp=E,9.0nm,0.9s						
TYV				*e*S	**Sn**	**12 14 18.3**	**-0.3**
JANG	**Nango**	**6.74**	**223**	P	**Pn**	**12 13 09.9**	**-3.1**
JMK	**Ichinoseki**	**8.03**	**218**	P	**Pn**	**12 13 28.1**	**-1.8**
PETK	**Petropavlovsk-**	**10.11**	**37**	P	**Pn**	**12 13 56.0**	**-1.1**
	comp=E,0.2nm,0.3s,baz=185,slow=9.5,SNR=4.9						
PETK	**Petropavlovsk-**	**10.11**	**37**	PN	**Pn**	**12 13 56.0**	**-1.1**
KSRS	**Korea Array**	**16.71**	**248**	P	**P**	**12 15 17.6**	**-1.5**
	comp=E,0.2nm,0.3s,baz=57,slow=11,SNR=4.8						
KSRS	**Korea Array**	**16.71**	**248**	*e*P	**Pn**	**12 15 21.5**	**+1.6**
KSRS	**Korea Array**	**16.71**	**248**	*e*P	**Pn**	**12 15 21.5**	**+1.6**
ILAR	**Eielson Array**	**39.94**	**37**	P	**P**	**12 18 51.9**	**-0.5**
	comp=E,0.3nm,0.4s,baz=277,slow=9.5,SNR=6.5						
ILAR	**Eielson Array**	**39.94**	**37**	*e*P	**P**	**12 18 52.7**	**+0.3**
KURK	**Kurchatov**	**44.80**	**303**	*i*P	**P**	**12 19 32.7**	**+1.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**44.80**	**303**	*e*P	**P**	**12 19 32.7**	**+1.0**
YKA	**Yellowknife Ar**	**54.22**	**35**	P	**P**	**12 20 41.5**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=301,slow=7.2,SNR=3.3						
KLMR	**Klimovskoe**	**59.12**	**327**	*e*P	**P**	**12 21 21.1**	**+3.9**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLMR	**Klimovskoe**	**59.12**	**327**	*e*P	**P**	**12 21 21.1**	**+3.9**
KLMR				AMP		12 21 22.8	
	comp=Z,10.0nm,1.1s						
FINES	**FINESS Array B**	**63.46**	**333**	P	**P**	**12 21 42.9**	**-3.4**
	comp=Z,0.8nm,0.5s,baz=44,slow=8.3,SNR=4.2						
WRA	**Warramunga Arr**	**66.20**	**194**	P	**P**	**12 22 04.7**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=3.0,slow=7.9,SNR=7.5						
NVAR	**Mina Array Bea**	**66.44**	**59**	P	**P**	**12 22 06.9**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=299,slow=6.1,SNR=7.1						
NOA	**NORSAR Array B**	**68.09**	**339**	P	**P**	**12 22 13.4**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=28,slow=7.7,SNR=4.2						
PDAR	**Pinedale Array**	**68.59**	**50**	P	**P**	**12 22 19.8**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=237,slow=0.3,SNR=7.0						
ASAR	**Alice Springs**	**69.92**	**193**	P	**P**	**12 22 28.8**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=10,slow=6.1,SNR=17						
TXAR	**Lajitas Array**	**81.47**	**57**	P	**P**	**12 23 33.8**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=288,slow=3.6,SNR=10						

JMA 17 12:15:12.1, 37.°04N×140.°84E, h12km±1km, M0.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.07**	**332**	P	Pg	12 15 14.6	-0.1
ONAJ				*e*S	Sg	12 15 16.7	+0.1
JFFD	**Fukushimafurud**	**0.23**	**283**	P	Pg	12 15 17.0	0.0
JFFD				*e*S	Sg	12 15 20.6	+0.3

JMA 17 12:15:46.8±0.2, 36.°67N×138.°45E, h2km±2km, M1.1, 1C, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.23**	**237**	⇑P	Pg	12 15 51.4	+0.1
MAT				S	Sg	12 15 54.4	+0.1
MAT	**Matsushiro**	**0.23**	**237**	P	Pg	12 15 51.4	+0.1
MAT				*e*S	Sg	12 15 54.4	+0.1
JNG	**Nsakai**	**0.39**	**227**	P	Pg	12 15 54.2	0.0
JNG				*e*S	Sg	12 15 59.2	0.0

ISC 17 12:52:05.6±1.2, 48.°60N±0.°07×17.°54E±0.°05, h7km, n5, σ0°69/9, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAVC	**Velka Javorina**	**0.27**	**18**	*e*PG	**Pb**	**12 52 12.4**	**-0.5**
JAVC				*e*SG	**Sb**	**12 52 18.0**	**+0.3**
MODS	**Modra-Piesok**	**0.29**	**218**	*e*PG	**Pg**	**12 52 11.9**	**+0.6**
MODS				*e*SG	**Sb**	**12 52 17.2**	**-1.0**
MODS				*e*LG	Lg	12 52 19.1	
ZST	**Bratislava**	**0.50**	**216**	*e*PG	**Pg**	**12 52 15.6**	**+0.3**
KOLL	**Kolacno**	**0.57**	**92**	*e*PG	**Pg**	**12 52 16.9**	**+0.2**
KOLL				*e*SG	**Sg**	**12 52 24.9**	**+0.8**
VYHS	**Vyhne**	**0.87**	**97**	*e*PG	**Pg**	**12 52 21.9**	**-0.4**
VYHS				*e*SG	**Sg**	**12 52 34.1**	**+0.6**

NEIC 17 12:55:16.7±0.0, 51.°02N×179.°87W, h25km, mb3.9/5, ML3.6(AEIC), After AEIC.
IDC 17 12:55:38.8±7.0, 51.°64N×179.°87W, h212km±61km, mb2.8/4, mb1 3.0/5, mb1mx2.7/41, mbtmp3.4/5, MS3.8/1, Ms1 3.8/1, ms1mx3.0/7, Error ellipse: s-maj=85.8km s-min=22.6km az=177.0
ISC 17 12:55:18.5±2.9, 51.°2N±0.°2×179.°79W±0.°07, h24km±17km, n41, σ1°29/40, mb3.7/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	**Gareloi Lava P**	**0.87**	**47**	*e*Pn	**Pb**	**12 55 34.6**	**-0.3**
GAEA	**Gareloi East**	**0.90**	**46**	*e*Pn	**Pb**	**12 55 34.8**	**-0.5**
TASE	**Tanaga Southea**	**1.28**	**58**	*e*Pn	**Pn**	**12 55 40.5**	**-0.4**
TANO	**Tanaga North**	**1.28**	**54**	*e*Pn	**Pn**	**12 55 41.1**	**+0.2**
TAFP	**Tanaga Falls P**	**1.34**	**56**	*e*Pn	**Pn**	**12 55 41.6**	**-0.2**
TAFP				*e*Sn	**Sb**	**12 55 60.0**	**+0.2**
TAPA	**Tanaga Point A**	**1.40**	**62**	*e*Pn	**Pn**	**12 55 42.3**	**-0.2**
TAPA				*e*Sn	**Sb**	**12 56 02.0**	**+0.7**
KIMD	**Kanaga Island**	**1.70**	**69**	*e*Pn	**Pn**	**12 55 46.1**	**-0.5**
KIKV	**Kanaga Island**	**1.78**	**65**	*e*Pn	**Pn**	**12 55 47.5**	**-0.2**
KIWB	**Kanaga Island**	**1.79**	**66**	*e*Pn	**Pn**	**12 55 47.4**	**-0.4**
KIWB				*e*Sn	**Sb**	**12 56 12.3**	**0.0**
KIRH	**Kanaga Island**	**1.84**	**65**	*e*Pn	**Pn**	**12 55 48.5**	**0.0**
ADK	**Adak**	**2.07**	**69**	*e*Pn	**Pn**	**12 55 51.1**	**-0.5**
ADK				*e*Sn	**Sn**	**12 56 17.8**	**+1.2**
ADAG	**Mount Adagdak**	**2.15**	**67**	*e*Pn	**Pn**	**12 55 53.3**	**+0.5**
ETKA	**Kagalaska Isla**	**2.23**	**71**	*e*Pn	**Pn**	**12 55 53.8**	**0.0**
GSTD	**Great Sitkin T**	**2.44**	**67**	*e*Pn	**Pn**	**12 55 56.9**	**+0.1**
GSTD				*e*Sn	**Sb**	**12 56 30.5**	**-0.8**
GSMY	**Great Sitkin M**	**2.49**	**68**	*e*Pn	**Pn**	**12 55 57.6**	**+0.2**
GSTR	**Great Sitkin T**	**2.50**	**67**	*e*Pn	**Pn**	**12 55 57.9**	**+0.3**
ATKA	**Atka Island**	**3.63**	**71**	*e*Pn	**Pn**	**12 56 12.7**	**-0.4**
ATKA				*e*Sn	**Sn**	**12 56 55.2**	**0.0**
KOFP	**Korovin Flat P**	**3.71**	**70**	*e*Pn	**Pn**	**12 56 15.1**	**+0.8**
SMY	**Shemya**	**4.09**	**295**	*e*Pn	**Pn**	**12 56 17.7**	**-1.7**
NIKH	**Nikolski High**	**6.98**	**71**	*e*Pn	**Pn**	**12 56 59.5**	**+0.5**
OKTU	**Okmok Mt. Tuli**	**7.54**	**68**	*e*Pn	**Pn**	**12 57 08.4**	**+1.6**
SPIA	**Saint Paul Isl**	**8.21**	**39**	*e*Pn	**Pn**	**12 57 17.5**	**+1.5**
MREP	**Makushin Rep't**	**8.39**	**67**	*e*Pn	**Pn**	**12 57 19.6**	**+1.1**
UNV	**Unalaska Valle**	**8.54**	**67**	*e*Pn	**Pn**	**12 57 20.6**	**+0.2**
PETK	**Petropavlovsk-**	**13.95**	**287**	P	**P**	**12 58 46.6**	**+4.3**
	0.3nm,0.3s,baz=108,slow=23,SNR=5.5						
SII	**Sitkinak Islan**	**15.99**	**60**	*e*Pn	**Pn**	**12 59 00.0**	**-1.5**
	20nm,1.1s						
OHAK	**Old Harbor**	**16.58**	**58**	*e*Pn	**Pn**	**12 59 07.6**	**-1.5**
	19nm,1.5s						
KDAK	**Kodiak Island**	**17.06**	**57**	*e*Pn	**Pn**	**12 59 13.9**	**-1.1**
	19nm,1.5s						
SUA	**Susitna One**	**18.95**	**46**	*e*P	**P**	**12 59 37.1**	**-0.6**
	6.1nm,1.1s						
SEW	**Seward**	**19.16**	**50**	*e*P	**P**	**12 59 39.7**	**-0.1**
	3.0nm,1.0s						
ILAR	**Eielson Array**	**21.80**	**39**	P	**P**	**13 00 10.7**	**+2.4**
	0.2nm,0.8s,baz=247,slow=12,SNR=2.3						
INK	**Inuvik**	**27.99**	**35**	LR	LR	13 13 52.9	
	comp=Z,183nm,18.9s,baz=154,slow=40						
H11N2	**WAKE ISLAND Hy**	**33.08**	**203**	T	T	13 37 16.0	
	baz=18,slow=76,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**33.09**	**203**	T	T	13 37 19.0	
	baz=18,slow=76,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**33.10**	**203**	T	T	13 37 19.1	
	baz=18,slow=76,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**34.31**	**203**	T	T	13 38 48.1	
	baz=18,slow=76,SNR=4.3						
H11S2	**WAKE ISLAND Hy**	**34.32**	**203**	T	T	13 38 47.3	
	baz=18,slow=76,SNR=5.4						
H11S3	**WAKE ISLAND Hy**	**34.32**	**203**	T	T	13 38 50.4	
	baz=18,slow=76,SNR=3.7						
PDAR	**Pinedale Array**	**46.97**	**71**	P	**P**	**13 03 47.6**	**+0.1**
	0.3nm,0.5s,baz=317,slow=6.1,SNR=3.1						
KURBB	**Kurchatov Arra**	**58.82**	**313**	P	**P**	**13 05 12.3**	**-2.2**
	0.4nm,0.4s,baz=42,slow=6.9,SNR=4.9						
MKAR	**Makanchi Array**	**59.67**	**308**	P	**P**	**13 05 17.3**	**-3.3**
	0.3nm,0.4s,baz=48,slow=6.8,SNR=2.1						

*IDC 17 13:25:03.0±1.2, 4.°66S×139.°56E, h0km, mb3.8/1, mb1 4.3/7, mb1mx3.

0.3nm,0.3s,baz=23,slow=22,SNR=3.6
WRA Lg Lg 13 33 24.4
baz=21,slow=30,SNR=3.3
CTA Charters Tower 16.65 157 Pn **Pn 13 28 59.6 +1.5**
0.1nm,0.3s,baz=338,slow=13,SNR=7.9
CTA Lg Lg 13 33 50.3
0.1nm,0.3s,baz=258,slow=22,SNR=8.0
CTAO Charters Tower 16.65 157 *eP* **Pn 13 29 00.5 +2.4**
4.9nm,0.9s
GUMO Guam 18.94 16 LR LR 13 35 17.3
comp=Z,49nm,21.9s,baz=51,slow=32
FITZ Fitzroy Crossi 19.00 224 P **P 13 29 26.9 +0.7**
0.2nm,0.3s,baz=58,slow=9.5,SNR=5.5
FITZ S Sn 13 32 45.6 -14
0.1nm,0.3s,baz=150,slow=20,SNR=2.2
FITZ Fitzroy Crossi 19.00 224 *eP* **P 13 29 26.7 +0.4**
20nm,1.8s
AS31 Alice Springs 19.61 195 *eP* **P 13 29 32.8 -0.2**
3.4nm,0.8s
ASAR Alice Springs 19.61 195 P **P 13 29 33.6 +0.7**
0.9nm,0.3s,baz=15,slow=8.9,SNR=72
ASAR S **S 13 33 09.4 -3.6**
0.1nm,0.3s,baz=18,slow=22,SNR=11
ASAR Lg Lg 13 35 18.6
0.0nm,0.3s,baz=16,slow=29,SNR=3.3
ILAR Eielson Array 87.31 24 P **P 13 37 49.8 -0.9**
0.6nm,0.9s,baz=253,slow=4.9,SNR=5.5
LPAZ La Paz 145.62 128 PKPbc **PKPdf 13 44 45.0 +0.8**
2.9nm,0.7s,baz=245,slow=3.6,SNR=10

*IDC **17** 13:26:11.1±1.6, 51°.65N×160°.69E, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.5/56, mbtmp3.8/8, ML3.3/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/34, Error ellipse: s-maj=35.1km s-min=26.3km az=150.0*
*NEIC **17** 13:26:12.1±0.5, 51°.69N×160°.77E, h10km, mb4.6/5, Error ellipse: s-maj=10.3km s-min=9.2km az=161.0*
*KRSC **17** 13:26:15.7±0.9, 51°.78N×160°.30E, h64km±17km, ML4.2*
*MOS **17** 13:26:16.8±0.5, 51°.75N×160°.33E, h47km, mb4.5/2, Error ellipse: s-maj=11.5km s-min=5.6km az=106.7*
ISC 17 13:26:13.0±3.0,**51°.65N**±0°.05×**160°.39E**±0°.05,**h15**km±19km, **n74**,σ1♀**47**/93,**mb4.2**/9,**1C**,**Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.40**	**305**	*eP*	**Pb**	**13 26 38.6**	**-0.2**
RUS	**Russkaya**	**1.40**	**305**	PN	**Pb**	**13 26 38.6**	**-0.2**
KDTR	**Khodutka, Kamc**	**1.45**	**277**	*eP*	**Pb**	**13 26 40.1**	**+0.5**
KDTR				*eS*	**Sn**	**13 26 56.8**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.45**	**277**	PN	**Pb**	**13 26 40.1**	**+0.5**
KDTR				S	**Sn**	**13 26 56.8**	**-0.5**
SPN	**Mys Shipunski**	**1.47**	**351**	*eP*	**Pn**	**13 26 39.6**	**+0.7**
SPN				*eS*	**Sn**	**13 26 57.3**	**-0.6**
SPN	**Mys Shipunski**	**1.47**	**351**	PN	**Pn**	**13 26 39.6**	**+0.7**
SPN				S	**Sn**	**13 26 57.3**	**-0.6**
MTVR	**Mutnovka**	**1.60**	**302**	*eP*	**Pb**	**13 26 42.1**	**-0.2**
MTVR				*eS*	**Sn**	**13 27 00.4**	**-0.9**
MTVR	**Mutnovka**	**1.60**	**302**	PN	**Pb**	**13 26 42.1**	**-0.2**
MTVR				S	**Sn**	**13 27 00.4**	**-0.9**
NLC	**Nalytchevo**	**1.65**	**338**	*eP*	**Pb**	**13 26 42.7**	**-0.5**
NLC	**Nalytchevo**	**1.65**	**338**	PN	**Pb**	**13 26 42.7**	**-0.5**
ASAK	**Asacha**	**1.71**	**297**	*eP*	**Pb**	**13 26 44.1**	**0.0**
ASAK				*eS*	**Sn**	**13 27 04.2**	**+0.4**
ASAK	**Asacha**	**1.71**	**297**	PN	**Pb**	**13 26 44.1**	**0.0**
ASAK				S	**Sn**	**13 27 04.2**	**+0.4**
DALK	**Dalny**	**1.71**	**325**	*eP*	**Pn**	**13 26 43.2**	**+1.0**
DALK				*eS*	**Sn**	**13 27 03.0**	**-0.8**
DALK	**Dalny**	**1.71**	**325**	PN	**Pn**	**13 26 43.2**	**+1.0**
DALK				S	**Sn**	**13 27 03.0**	**-0.8**
PET	**Petropavlovsk**	**1.74**	**323**	*e*Pn	**Pn**	**13 26 43.4**	**+0.8**
PET	**Petropavlovsk**	**1.74**	**323**	*e*P	**Pn**	**13 26 43.6**	**+0.9**
PET				*eS*	**Sn**	**13 27 04.2**	**-0.4**
PET	**Petropavlovsk**	**1.74**	**323**	⇑*i*PN	**Pn**	**13 26 43.7**	**+1.0**
PET				*eS*	**Sn**	**13 27 04.1**	**-0.5**
PET				pmax	pmax		
	comp=Z,177nm,0.5s						
PET				smax	smax		
	comp=N,700nm,0.4s						
PET				smax	smax		
	comp=N,954nm,0.4s						
PET				smax	smax		
	comp=E,398nm,0.4s						
KRMR	**Karymshinskiy**	**1.83**	**311**	*eP*	**Pn**	**13 26 44.8**	**+1.0**
KRMR				*eS*	**Sn**	**13 27 06.5**	**-0.1**
KRMR	**Karymshinskiy**	**1.83**	**311**	PN	**Pn**	**13 26 44.8**	**+1.0**
KRMR				S	**Sn**	**13 27 06.5**	**-0.1**
UGLR	**Uglovaya**	**1.83**	**329**	*eP*	**Pb**	**13 26 45.5**	**-0.8**
SDLR	**Sedlovina**	**1.88**	**331**	*eP*	**Pn**	**13 26 45.9**	**+1.3**
SDLR	**Sedlovina**	**1.88**	**331**	PN	**Pn**	**13 26 45.9**	**+1.3**
SMAR	**Somma**	**1.89**	**330**	*eP*	**Pn**	**13 26 45.7**	**+0.8**
SMAR	**Somma**	**1.89**	**330**	PN	**Pn**	**13 26 45.7**	**+0.8**
AVH	**Avacha**	**1.91**	**329**	*eP*	**Pb**	**13 26 46.6**	**-1.0**
AVH				*eS*	**Sn**	**13 27 08.7**	**-0.1**
AVH	**Avacha**	**1.91**	**329**	PN	**Pb**	**13 26 46.6**	**-1.0**
AVH				S	**Sn**	**13 27 08.7**	**-0.1**
KRER	**Koryakskii**	**1.94**	**329**	*eP*	**Pn**	**13 26 46.5**	**+0.9**
KRER	**Koryakskii**	**1.94**	**329**	PN	**Pn**	**13 26 46.5**	**+0.9**
KRX	**Arik**	**2.02**	**329**	*eP*	**Pn**	**13 26 47.8**	**+1.2**
KRX	**Arik**	**2.02**	**329**	PN	**Pn**	**13 26 47.8**	**+1.2**
PEA0B	**Petropavlovsk-**	**2.21**	**313**	*e*Pn	**Pn**	**13 26 50.7**	**+1.7**
PETK	**Petropavlovsk-**	**2.21**	**313**	Pn	**Pn**	**13 26 50.8**	**+1.7**
	comp=E,15nm,0.3s,baz=116,slow=19,SNR=407						
PETK				Sn	**Sn**	**13 27 17.3**	**+1.3**
	comp=E,29nm,0.3s,baz=113,slow=30,SNR=9.4						
PETK				LR	LR	13 27 48.9	
	comp=E,171nm,18.8s,baz=110,slow=42						
PEA1	**Petropavlovsk-**	**2.21**	**313**	*e*Pn	**Pn**	**13 26 50.8**	**+1.7**
PEA1				*e*Sn	**Sn**	**13 27 17.3**	**+1.2**
PAU	**Pauzhetka**	**2.24**	**267**	*eP*	**Pb**	**13 26 52.9**	**-0.3**
PAU	**Pauzhetka**	**2.24**	**267**	PN	**Pb**	**13 26 52.9**	**-0.3**
APC	**Apacha**	**2.36**	**304**	*eP*	**Pb**	**13 26 53.6**	**-1.6**
APC	**Apacha**	**2.36**	**304**	PN	**Pb**	**13 26 53.6**	**-1.6**
GNL	**Ganaly**	**2.54**	**325**	*eP*	**Pn**	**13 26 55.7**	**+2.0**
GNL	**Ganaly**	**2.54**	**325**	PN	**Pn**	**13 26 55.7**	**+2.0**
SKR	**Severo-Kuril's**	**2.86**	**252**	*eP*	**Pb**	**13 27 01.3**	**-2.4**
SKR	**Severo-Kuril's**	**2.86**	**252**	*e*PN	**Pb**	**13 27 01.3**	**-2.4**
SKR				*eS*	**Sn**	**13 27 32.9**	**+0.8**
SKR				pmax	pmax		
	comp=Z,42nm,0.7s						
SKR				smax	smax		
	comp=E,240nm,0.5s						
SKR				smax	smax		
	comp=N,225nm,0.4s						
SKR				MLR	MLR		
	comp=Z,200nm,13.0s						
MKZ	**Mys Kozlova**	**3.02**	**15**	*eP*	**Pn**	**13 27 01.8**	**+1.6**
MKZ				*eS*	**Sn**	**13 27 35.1**	**-1.0**
MKZ	**Mys Kozlova**	**3.02**	**15**	PN	**Pn**	**13 27 01.8**	**+1.6**
MKZ				S	**Sn**	**13 27 35.1**	**-1.0**
TUMD	**Tumrok D**	**3.56**	**0**	*eP*	**Pn**	**13 27 09.9**	**+2.2**
TUMD				*eS*	**Sn**	**13 27 48.5**	**-1.0**
TUMR	**Tumrok**	**3.64**	**358**	*eP*	**Pn**	**13 27 11.9**	**+3.0**
TUMR	**Tumrok**	**3.64**	**358**	PN	**Pn**	**13 27 09.9**	**+1.0**
TUMR				S	**Sn**	**13 27 48.5**	**-3.1**
KBTR	**Krutoberegovo**	**4.79**	**16**	*eP*	**Pn**	**13 27 27.5**	**+3.0**
KBTR	**Krutoberegovo**	**4.79**	**16**	PN	**Pn**	**13 27 27.5**	**+3.0**
BKI	**Bering**	**4.88**	**41**	*eP*	**Pn**	**13 27 29.1**	**+3.4**
BKI	**Bering**	**4.88**	**41**	PN	**Pn**	**13 27 29.1**	**+3.4**
ASAJ	**Asahikawa**	**14.10**	**245**	Pn	**P**	**13 29 35.9**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=69,slow=14,SNR=5.9						
KLR	**Kul'dur**	**18.35**	**274**	LR	LR	13 38 46.5	
	comp=Z,92nm,18.7s,baz=23,slow=41						
MAJO	**Matsushiro**	**21.83**	**235**	*eP*	**P**	**13 31 06.4**	**+1.8**
MAJO	**Matsushiro**	**21.83**	**235**	*eP*	**P**	**13 31 06.4**	**+1.8**
MJAR	**Matsushiro Arr**	**21.83**	**235**	P	**P**	**13 31 06.4**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=14,slow=10,SNR=2.3						
TIXI	**Tiksi**	**24.48**	**336**	P	**P**	**13 31 31.8**	**+0.8**
	comp=Z,3.7nm,0.5s,baz=122,slow=9.0,SNR=21						
TIXI	**Tiksi**	**24.48**	**336**	*eP*	**P**	**13 31 30.6**	**-0.4**
	comp=Z,4.3nm,0.6s						
TIXI	**Tiksi**	**24.48**	**336**	*eP*	**P**	**13 31 30.6**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**32.26**	**168**	T	T	14 07 02.1	
	baz=352						
H11N3	**WAKE ISLAND Hy**	**32.27**	**168**	T	T	14 07 05.8	
	baz=352,slow=74						
H11N1	**WAKE ISLAND Hy**	**32.28**	**168**	T	T	14 07 11.0	
	baz=352,slow=74						
LON	**Longmire**	**48.82**	**63**	*eP*	**P**	**13 34 55.2**	**-2.2**
	comp=Z,4.4nm,0.6s						
LON	**Longmire**	**48.82**	**63**	*eP*	**P**	**13 34 55.2**	**-2.2**
LON				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK32	**Makanchi Array**	**48.96**	**297**	*eP*	**P**	**13 34 58.8**	**+0.3**
MKAR	**Makanchi Array**	**48.96**	**297**	P	**P**	**13 34 58.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=62,slow=6.3,SNR=5.0						
PD31	**Pinedale Array**	**58.08**	**60**	*eP*	**P**	**13 36 02.7**	**-2.9**
	comp=Z,5.2nm,1.7s						
PDAR	**Pinedale Array**	**58.08**	**60**	P	**P**	**13 36 04.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=33,slow=11,SNR=4.4						
FAKI	**Fak Fak**	**59.40**	**213**	*eP*	**P**	**13 36 15.5**	**+0.7**
	comp=Z,17nm,0.5s						
FIA0	**FINESS Array S**	**61.52**	**337**	*eP*	**P**	**13 36 30.4**	**+1.7**
FIA0	**FINESS Array S**	**61.52**	**337**	*eP*	**P**	**13 36 30.4**	**+1.7**
FINES	**FINESS Array B**	**61.52**	**337**	P	**P**	**13 36 30.4**	**+1.7**
	comp=Z,1.2nm,0.6s,baz=46,slow=8.2,SNR=7.0						
AKASG	**Malin Array Be**	**69.95**	**329**	P	**P**	**13 37 24.5**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=28,slow=6.5,SNR=3.9						
AKBB	**Malin Array Si**	**69.95**	**329**	*eP*	**P**	**13 37 24.0**	**+0.8**
	comp=Z,12nm,1.7s						
AKBB	**Malin Array Si**	**69.95**	**329**	*eP*	**P**	**13 37 24.0**	**+0.8**

MAN 17 13:28:27.9, 9°.24N×125°.50E, h1km, mb4.3, ML3.2, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.30**	**156**	*eP*	**Pg**	13 28 33.6	-0.1
BUTP				*eS*	Sb	13 28 46.3	+4.7
SCPH	**Surigao**	**0.54**	**359**	⇓*i*P	Pn	13 28 48.3	+5.6
SCPH				*i* S	Sn	13 28 58.3	+5.9
MSLP	**Maasin**	**1.08**	**325**	*eP*	Pg	13 28 48.5	-0.2
MSLP				*eS*	Sn	13 29 06.1	+0.1
BUKP	**Musuan**	**1.42**	**198**	*eP*	Pn	13 28 55.0	0.0
BUKP				*eS*	Sn	13 29 14.8	+0.4
DCPH	**Dipolog City**	**2.22**	**253**	⇑*e*P	Pn	13 29 06.0	+0.1
DCPH				*eS*	Sg	13 29 40.4	+1.1
PAGZ	**Pagadian**	**2.51**	**237**	*eP*	Pn	13 29 10.4	+0.5
PAGZ				*eS*	Sn	13 29 42.6	+1.5

*IDC **17** 14:07:09.3±1.2, 56°.95S×26°.60W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/23, mbtmp3.9/3, Error ellipse: s-maj=55.2km s-min=31.3km az=51.0*
ISC 17 14:07:21.2±1.2,**57°.1S**±0°.3×**26°.8W**±0°.3,**h100**km,**n5**, σ1♀**89**/4,**mb3.9**/3,**1C**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**30.64**	**140**	⇑*e*P	P	14 13 30.8	+5.4
MAW	**Mawson**	**39.18**	**143**	P	**P**	**14 14 38.3**	**-0.3**
	2.9nm,0.8s,baz=249,slow=17,SNR=5.9						
LPAZ	**La Paz**	**51.16**	**305**	P	**P**	**14 16 14.0**	**-0.6**
	0.8nm,0.7s,baz=146,slow=9.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**73.85**	**29**	P	**P**	**14 18 44.6**	**-0.2**
	0.5nm,0.5s,baz=193,slow=6.3,SNR=7.8						
ILAR	**Eielson Array**	**150.97**	**310**	PKPbc	**PKiKP**	**14 27 02.9**	**+1.7**
	0.4nm,0.9s,baz=126,slow=1.2,SNR=3.2						

MAN 17 14:15:11.5, 10°.76N×122°.23E, h23km, mb3.9, ML2.7, MS2.3, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.28**	**267**	⇑*e*P	Pn	14 15 19.4	-0.9
GUIM	**Jordan**	**0.38**	**111**	*eP*	Pn	14 15 20.9	-0.7
GUIM				*eS*	Sn	14 15 29.8	+1.6
CUYO	**Cuyo Island**	**1.19**	**274**	*eP*	Pn	14 15 32.4	-0.4
CUYO				*eS*	Sn	14 15 48.1	-0.2
OTRP	**Odiongan**	**1.60**	**353**	*eP*	Pn	14 15 37.6	-0.9
OTRP				*eS*	Sn	14 15 59.3	+0.9
BUSP	**Coron**	**2.34**	**302**	*eP*	Pn	14 15 49.4	+0.8
BUSP				*eS*	Sn	14 16 18.7	+2.0

*HLW **17** 14:23:37.1, 31°.20N×35°.37E, h10km±10km, Md2.5*
*ISCJB **17** 14:23:41.6±0.7, 30°.91N±0°.05×34°.99E±0°.07, h8km, Error ellipse: s-maj=9.3km s-min=6.4km az=40.3*
*JSO **17** 14:23:41.4±0.4, 31°N±4°×3°5E±°, h10km, M2.6/7, Mjma2.6/7, ML2.6/1, MLv2.5/7*
ISC 17 14:23:39.9±1.1,**30°.92N**±0°.05×**35°.08E**±0°.05,**h8**km,**n11**, σ0♀**84**/12,**Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LISJ	**El Lisan**	**0.47**	**47**	P	**Pn**	**14 23 52.5**	**-0.5**
JDRJ	**Daraweish**	**0.54**	**110**	P	**Pn**	**14 23 54.8**	**+0.7**
KZIT	**Kziot**	**0.58**	**269**	P	**Pb**	**14 23 52.6**	**+0.2**
HRFI	**Mount Harif**	**0.88**	**182**	P	**Pg**	**14 23 55.6**	**-1.2**
WALJ	**Wala**	**0.90**	**44**	P	**Pn**	**14 24 00.2**	**+1.3**
RSH		**1.16**	**273**	P	**Pn**	**14 24 02.4**	**-0.1**
	baz=261						
EIL	**Elat**	**1.25**	**185**	P	**Pg**	**14 24 04.2**	**+0.4**
HBST	**Basata**	**1.72**	**190**	P	**Pg**	**14 24 12.2**	**-0.7**
	baz=196						
HBST				S	**Sg**	**14 24 35.8**	**+0.6**
	baz=196						
NUB		**1.92**	**191**	P	**Pb**	**14 24 14.4**	**-0.7**
	baz=197						
ASF	**Jabal al Asfar**	**2.00**	**51**	P	**Pb**	**14 24 16.2**	**-0.3**
HKAT	**Jabal Katrina**	**2.56**	**202**	P	**Pn**	**14 24 22.9**	**+1.0**
	baz=205						

*DDA **17** 14:40:33.9, 38°.68N×34°.63E, h7km±3km, ML2.7*
*ISK **17** 14:40:34.1, 38°.70N×34°.81E, h3km, ML2.1/5*
ISC 17 14:40:34.4±1.2,**38°.68N**±0°.03×**34°.74E**±0°.04,**h7**km±12km, **n12**,σ1♀**30**/19,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVNS	**Nevsehir-Avano**	**0.15**	**34**	*i* P	**Pg**	**14 40 39.2**	**+1.7**
SIRC	**Yozgat**	**0.73**	**26**	*i* P	**Pb**	**14 40 49.6**	**+0.1**
SIRC				*i* S	**Sg**	**14 40 54.2**	**-3.7**
SIRC				IAML_P			
	comp=Z,3μm,0.2s						
YAHY	**KAYSERI_Yahyal**	**0.76**	**140**	*i* P	**Pg**	**14 40 48.2**	**-0.8**
YAHY				*i* S	**Sb**	**14 41 00.7**	**+0.1**
YAYX	**Yaylak**	**0.77**	**290**	PG	**Pb**	**14 40 50.2**	**0.0**
YAYX				SG	**Sn**	**14 41 02.7**	**-1.0**
KIRS	**Kırehir-Merke**	**0.79**	**305**	*i* P	**Pg**	**14 40 49.3**	**-0.1**
KIRS				*i* S	**Sg**	**14 40 58.9**	**-0.8**
KIRS				IAML_P			
	comp=Z,394nm,0.1s						
YOZ	**Yozgat**	**1.06**	**25**	PG	**Pb**	**14 40 54.7**	**-0.4**
YOZ				SG	**Sg**	**14 41 08.5**	**0.0**
SULT	**Sultanhani-AKS**	**1.07**	**244**	PN	**Pn**	**14 40 56.2**	**+0.3**
SULT				SN	**Sn**	**14 41 13.2**	**+2.1**
AKO	**Adana**	**1.34**	**155**	*i* P	**Pg**	**14 41 00.4**	**+0.4**
AKO				IAML_P			
	comp=Z,380nm,0.2s						
DELI	**KIRIKKALE**	**1.46**	**334**	*i* P	**Pb**	**14 41 01.2**	**-0.7**
DELI				IAML_P			
	comp=Z,352nm,0.2s						
KOZT	**Kozan**	**1.47**	**144**	PN	**Pb**	**14 41 02.1**	**0.0**
CORM	**Corum**	**1.50**	**357**	PN	**Pg**	**14 41 03.2**	**+0.1**
COAL	**Corum-Alaca**	**1.58**	**7**	*i* P	**Pg**	**14 41 05.2**	**+0.5**
COAL				*i* S	**Sg**	**14 41 26.4**	**+1.1**
COAL				IAML_P			
	comp=Z,109nm,0.2s						

*ISCJB **17** 14:52:46.1±1.3, 13°.4N±0°.1×89°.77W±0°.06, h66km±14km, Error ellipse: s-maj=22.0km s-min=6.5km az=19.1*
*SNET **17** 14:52:46.0±0.7, 13°.50N×89°.78W, h63km±4km, ML3.2*
*GCG **17** 14:52:46.5±0.3, 13°.45N×89°.81W, h26km±2km, MD3.7*
ISC 17 14:52:47.7±2.0,**13°.5N**±0°.1×**89°.74W**±0°.06,**h60**km±14km, **n15**,σ0♀**84**/22,**2D**,**El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.35**	**19**	*eP*	**Pn**	**14 52 57.7**	**-0.8**
SNJE	**San Jose**	**0.39**	**20**	*eP*	**Pn**	**14 52 58.1**	**-0.7**
SNJE				*eS*	**Sn**	**14 53 07.5**	**+0.8**
RTR	**El Retiro**	**0.40**	**14**	⇓*i*P	**Pn**	**14 52 58.3**	**-0.6**
RTR				*eS*	**Sn**	**14 53 07.2**	**+0.3**
SNET	**Serv Nac Est T**	**0.53**	**70**	*eP*	**Pn**	**14 52 59.4**	**-0.6**
SNET				*eS*	**Sn**	**14 53 09.8**	**+0.8**
SNET				IAML		14 53 15.5	
	comp=Z,1μm,0.3s						
UEES	**San Salvador**	**0.54**	**65**	*eP*	**Pn**	**14 52 59.3**	**-0.8**
UEES				*eS*	**Sn**	**14 53 09.8**	**+0.7**
UEES				IAML		14 53 17.1	
	comp=Z,843nm,0.4s						
LFU	**La Fuente**	**0.66**	**68**	*eP*	**Pn**	**14 53 00.8**	**-0.7**
PAVA	**Las Pavas**	**0.81**	**75**	*eP*	**Pn**	**14 53 03.3**	**-0.1**
PAVA				*eS*	**Sn**	**14 53 16.3**	**+1.3**
PAVA				IAML		14 53 18.3	
	comp=Z,279nm,0.3s						
SNVI	**San Vicente**	**0.89**	**83**	*eS*	**Sn**	**14 53 17.3**	**+0.6**
IXG	**Ixpaco**	**0.95**	**315**	*eP*	**Pn**	**14 53 04.3**	**-0.9**
IXG				*eS*	**Sn**	**14 53 18.0**	**-0.1**
MTO3	**Montecristo**	**0.96**	**23**	⇓*i*P	**Pn**	**14 53 04.7**	**-0.8**
MTO3				*eS*	**Sn**	**14 53 19.3**	**+0.7**
VICT	**Victoria**	**1.17**	**67**	*eP*	**Pn**	**14 53 06.9**	**-1.1**
PCG	**Pacaya**	**1.22**	**317**	*eP*	**Pn**	**14 53 08.5**	**-0.4**
PCG				*eS*	**Sn**	**14 53 26.0**	**+1.4**
FUG	**Fuego 3**	**1.42**	**312**	*eS*	**Sn**	**14 53 30.1**	**+0.8**
CNCH	**Conchagua**	**1.87**	**97**	IAML		14 53 52.0	
	comp=Z,567nm,0.4s						
STG3	**Santiaguito 3,**	**2.14**	**304**	*eP*	**Pn**	**14 53 21.0**	**-0.2**

NNC 17 15:08:32.4±2.2, 36°.84N×71°.37E, h168km±50km, mb2.6, mpv3.5, 2C-4D, Error ellipse: s-maj=22.7km s-min=12.8km az=12.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.27**	**22**	⇑P	Pn	15 10 03.3	+0.4
	3.1nm,0.8s						
AAK				⇓S	Sn	15 11 14.3	+0.3
	0.9nm,0.4s						
KK31	**Karatay Array**	**6.29**	**354**	P	Pn	15 10 02.6	-0.4
	1.9nm,0.3s,baz=178,slow=12,SNR=36						
KK31				⇓S	Sn	15 11 14.9	+0.7
	1.7nm,0.6s						
TKM2	**Tokmak 2**	**6.88**	**27**	⇑P	Pn	15 10 11.0	-0.1
	2.3nm,0.6s						
TKM2				⇓S	Sn	15 11 29.3	+0.5
	1.5nm,0.7s						
AB31	**Akbulak array**	**14.93**	**330**	⇓P	Pn	15 11 55.0	+0.1
	0.2nm,0.3s,baz=162,slow=9.3,SNR=11						

*SNET **17** 15:12:54.4±1.1, 11°.75N×87°.16W, h26km±7km, ML5.3*
*NEIC **17** 15:12:54.1±1.9, 11°.84N×87°.01W, h35km, mb5.0/330, MD5.3(SNET), Error ellipse: s-maj=13.1km s-min=7.6km az=235.0*
NEIC Felt at Managua and Nagarote. Felt [II] at San Salvador, El Salvador.
*UCR **17** 15:12:55.3±2.6, 11°.82N×87°.13W, h27km±6km, MD4.5, ML5.1, mb5.0(NEIC)*
*MOS **17** 15:12:56.0±0.9, 11°.88N×86°.98W, h71km, mb5.1/40, Error ellipse: s-maj=15.8km s-min=5.3km az=114.0*
*ISCJB **17** 15:12:56.3±0.2, 11°.90N±0°.02×87°.04W±0°.02, h69km±1km, mb4.9/311, Error ellipse: s-maj=3.6km s-min=2.4km az=23.6*
*GCMT **17** 15:12:58.1±0.2, 11°.63N±0°.01×87°.42W±0°.01, h42km, MW5.2/95, Moment Tensor Solution. s87,c134; s95,c152; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.48±.17; M_{tt}-5.00±.13; M_{pp}-1.48±.15; M_{rt}2.90±.11; M_{rp}3.49±.10; M_{tp}-1.58±.14; Best double couple: $M_0$7.57300×10^{16} NP1:φs120.00000°, δ58.00000°, λ88.00000°. NP2:φs303.00000°, δ32.00000°, λ93.00000°. Principal axes: T 7.2400, Plg77.0000°, Azm25.0000°; N 0.6640, Plg1.0000°, Azm121.0000°; P -7.9050, Plg13.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **17** 15:12:59.6±1.6, 12°.22N×86°.56W, h79km±15km, mb4.3/17, mb1 4.5/18, mb1mx4.2/43, mbtmp4.6/18, MS4.5/32, Ms1 4.5/32, ms1mx4.4/38 Error ellipse: s-maj=24.1km s-min=9.8km az=62.0*
*GCG **17** 15:13:02.4±2.7, 11°.58N×88°.09W, h0km±802km, MD4.8*
ISC 17 15:12:56.3±0.6,**11°.88N**±0°.04×**87°.08W**±0°.03,**h52**km±4km, **n1080**,σ1♀**13**/1091,**mb5.0**/311,**MS4.7**/53,**7C-3D**,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.72**	**31**	*eP*	**Pn**	**15 13 10.2**	**-0.3**
CNGN				*eP*		15 13 10.2	
CNGN				*eS*	**Sn**	**15 13 22.9**	**+2.1**
CNGN				IAML		15 13 28.2	
	comp=E,25μm,0.3s						
CNGN	**Cerro Negro**	**0.72**	**31**	*eP*	**Pn**	**15 13 10.2**	**-0.3**
CNGN				*eS*	**Sn**	**15 13 22.9**	**+2.1**
MOMN	**Momotombo**	**0.74**	**45**	*eP*	**Pn**	**15 13 10.3**	**-0.5**
TELN	**Telica**	**0.76**	**19**	*eP*	**Pn**	**15 13 10.8**	**-0.2**
XAVN	**Gruta Xavier**	**0.79**	**70**	*eP*	**Pn**	**15 13 10.8**	**-0.4**
APYN	**Apoyeque**	**0.80**	**64**	*eP*	**Pn**	**15 13 11.2**	**-0.3**
CRIN	**San Cristobal**	**0.81**	**2**	⇓*e*P	**Pn**	**15 13 11.5**	**-0.2**
CRIN				*eS*	**Sn**	**15 13 25.5**	**+2.6**
CRIN				IAML		15 13 36.6	
	comp=N,60μm,0.5s						
MGAN	**Managua**	**0.86**	**72**	*eP*	**Pn**	**15 13 11.9**	**-0.4**
MASN	**Masaya**	**0.92**	**83**	*eP*	**Pn**	**15 13 13.2**	**+0.2**
MASN				*eS*	**Sn**	**15 13 29.0**	**+3.6**
CSGN	**Cosiguina Volc**	**1.18**	**337**	*e*Pn	**Pn**	**15 13 17.1**	**+0.5**
CSGN	**Cosiguina Volc**	**1.18**	**337**	*eP*	**Pn**	**15 13 17.2**	**+0.5**
CSGN				*eS*	**Sn**	**15 13 33.9**	**+2.2**
CSGN				IAML		15 13 36.3	
	comp=N,820μm,0.4s						
**

PAVA IAML 15 14 17.7
comp=Z,9µm,0.5s
LFRS El Faro 2.59 312 *eP* **Pn 15 13 35.3 -0.7**
JTS Las Juntas de 2.62 127 P **Pn 15 13 36.4 +0.2**
comp=Z,52nm,0.3s,baz=30,slow=10,SNR=83
JTS S **Sn 15 14 08.5 +1.5**
comp=Z,254nm,0.3s,baz=286,slow=19,SNR=7.5
JTS LR LR 15 14 22.4
comp=Z,4µm,18.4s,baz=9.5,slow=33
JTS Las Juntas de 2.62 127 *ePn* **Pn 15 13 35.4 -0.9**
JTS Las Juntas de 2.62 127 *eP* **Pn 15 13 35.4 -0.9**
JTS Las Juntas de 2.62 127 *eP* **Pn 15 13 36.1 -0.2**
LBRS Las Brisas 2.66 314 *eP* **Pn 15 13 37.2 +0.4**
LFU La Fuente 2.71 313 *eP* **Pn 15 13 37.3 -0.3**
LFU La Fuente 2.71 313 *eP* **Pn 15 13 37.3 -0.3**
ARE1 Arenal 1 2.72 121 *eP* **Pn 15 13 37.6 +0.1**
ESPN Las Esperanzas 2.74 83 *ePn* **Pn 15 13 37.8 -0.1**
ESPN Las Esperanzas 2.74 83 *eP* **Pn 15 13 37.9 +0.1**
OPAM San Salvador 2.75 312 *eS* **Sn 15 14 11.5 +1.3**
OPAM IAML 15 14 16.7
comp=Z,7µm,0.2s
OPAM San Salvador 2.75 312 *eS* **Sn 15 14 11.5 +1.3**
OPAM IAML 15 14 16.7
comp=Z,7µm,0.2s
SNET Serv Nac Est T 2.76 311 *eP* **Pn 15 13 38.4 +0.3**
SNET *eS* **Sn 15 14 09.3 -1.0**
UEES San Salvador 2.79 311 IAML 15 14 25.1
comp=Z,6µm,0.6s
UEES San Salvador 2.79 311 IAML 15 14 25.1
comp=Z,6µm,0.6s
BOQS Boqueron 2.83 311 *eP* **Pn 15 13 39.1 -0.1**
BOQS *eS* **Sn 15 14 12.7 +0.5**
HDC Heredia 3.46 122 *ePn* **Pn 15 13 47.2 -0.7**
HDC Heredia 3.46 122 *eP* **Pn 15 13 48.9 +1.0**
LCR2 La Lucha 2 3.70 125 *eP* **Pn 15 13 52.2 +1.0**
CVTR Volcan Turrial 3.75 119 *eP* **Pn 15 13 53.5 +1.4**
IXG Ixpaco 3.99 305 *eP* **Pn 15 13 57.7 +2.6**
IXG Ixpaco 3.99 305 *eP* **Pn 15 13 57.7 +2.6**
MRL Marmol 4.06 322 *eP* Pn 15 14 03.2 +7.0
MRL Marmol 4.06 322 *eP* Pn 15 14 03.2 +7.0
MRL *eS* Sn 15 14 54.4 +12
NBG Las Nubes 4.16 311 *eP* **Pn 15 14 01.4 +3.8**
NBG Las Nubes 4.16 311 *eP* **Pn 15 14 01.4 +3.8**
PCG Pacaya 4.24 306 *eS* **Sn 15 14 48.0 +0.9**
PCG Pacaya 4.24 306 *eS* **Sn 15 14 47.7 +0.6**
FUG Fuego 3 4.46 305 *eP* **Pn 15 14 04.9 +3.3**
FUG Fuego 3 4.46 305 *eP* **Pn 15 14 04.4 +2.7**
FUG *eS* **Sn 15 14 51.7 -0.7**
APG El Apazote 4.52 314 P **Pn 15 14 02.1 -0.4**
comp=Z,2.4nm,0.3s,baz=87,slow=13,SNR=9.3
EDPN Palmar Norte 4.60 129 *eP* **Pn 15 14 05.6 +2.3**
ERG Entre ros, C 5.05 301 *eS* **Sn 15 15 04.6 -2.1**
STG3 Santiaguito 3, 5.19 303 *eP* **Pn 15 14 13.5 +1.8**
BRU2 Volcan 5.30 125 *eP* **Pn 15 14 14.7 +1.5**
CCIG Comitan 6.57 312 *ePn* **Pn 15 14 33.0 +2.5**
BCIP Isla Barro Col 7.62 110 *ePn* **Pn 15 14 44.6 -0.1**
BCIP Isla Barro Col 7.62 110 *eP* **Pn 15 14 44.7 -0.1**
TEIG Tepich 8.38 352 *ePn* **Pn 15 14 58.2 +3.1**
CMIG Matias Romero 9.16 305 P **Pn 15 15 06.7 +0.8**
comp=Z,2.5nm,0.3s,baz=111,slow=10,SNR=20
CMIG S **Sn 15 16 45.7 -1.9**
comp=Z,1.2nm,0.3s,baz=151,slow=19,SNR=3.0
CMIG LR LR 15 19 21.5
comp=Z,5µm,20.9s,baz=128,slow=41
FSCY Frank Sound, G 9.32 37 *ePn* **Pn 15 15 09.3 +1.2**
MTDJ Mount Denham 11.17 54 *ePn* **Pn 15 15 35.1 +1.6**
DBBC Dabeiba 11.76 113 *eP* Pn 15 15 57.7 +16
LVIG Laguna Verde 11.89 312 *ePn* **Pn 15 15 45.6 +2.4**
TLIG Tlapa 12.46 298 *ePn* **Pn 15 15 53.5 +2.4**
ZARC Zaragoza, Cauc 12.81 109 *eP* **Pn 15 15 57.6 +1.7**
PAYG Puerto Ayora 12.87 195 *ePn* **Pn 15 16 00.2 +3.5**
SMLC San Martn de 13.16 102 *eP* **P 15 16 10.6 +1.4**
GUY2C Guyana, Caldas 13.34 119 *eP* **P 15 16 12.2 +0.5**
BBAC Balboa, Cauca 13.82 134 *eP* **P 15 16 17.1 +0.3**
POPC Popayan, Colom 13.88 131 *eP* **P 15 16 14.3 -3.1**
GTBY Guantanamo Bay 14.01 54 *ePn* **Pn 15 16 13.3 +1.2**
MARP Paez Belalcaza 14.22 128 *eP* **P 15 16 23.2 +1.9**
CRUC La Cruz 14.35 135 *eP* **P 15 16 26.0 +3.1**
ROSC El Rosal 14.43 118 P **Pn 15 16 19.3 +1.2**
comp=Z,1.2nm,0.3s,baz=329,slow=19,SNR=2.3
ROSC LR LR 15 21 55.9
comp=Z,1µm,21.6s,baz=326,slow=38
PRAC Prado 14.55 123 *eP* **P 15 16 24.1 -0.7**
BARC Barichara 14.69 110 *eP* **P 15 16 27.0 +0.5**
CHIC Chingaza 15.04 118 *eP* **P 15 16 28.9 -1.7**
RUSC La Rusia 15.05 112 *eP* **P 15 16 31.9 +1.1**
061Z Ochoppi 15.08 22 *ePn* **Pn 15 16 27.3 +1.1**
comp=Z,162nm,1.3s
061Z Ochoppi 15.08 22 P **Pn 15 16 27.6 +1.4**
baz=203
FLOC Florencia 15.27 131 *eP* **P 15 16 35.0 +2.3**
059Z Ave Maria 15.33 19 P **Pn 15 16 30.1 +0.7**
baz=201
058A Arcadia 15.89 17 P **Pn 15 16 37.0 +0.4**
baz=199
059A Moore Haven 16.01 20 P **Pn 15 16 38.8 +0.7**
baz=201
060A Indiantown 16.34 22 P **Pn 15 16 43.0 +0.6**
baz=204
957A Wimauma 16.35 15 *eP* **P 15 16 44.8 +0.2**
comp=Z,176nm,1.3s
957A Wimauma 16.35 15 P **P 15 16 43.7 -0.9**
baz=197
958A Wauchula 16.40 17 P **Pn 15 16 43.3 +0.2**
baz=198
SDV Santo Domingo 16.45 99 P **Pn 15 16 44.0 0.0**
comp=Z,0.6nm,0.3s,baz=286,slow=9.4,SNR=8.7
SDV LR LR 15 24 51.1
comp=Z,706nm,18.4s,baz=300,slow=44
SDV Santo Domingo 16.45 99 *eP* **Pn 15 16 43.4 -0.6**
comp=Z,42nm,1.3s
SDV Santo Domingo 16.45 99 *eP* P 15 17 01.7 +16
959A Okeechobee 16.61 20 P **P 15 16 47.1 -0.4**
baz=201
857A Zephyrhills 16.92 15 P **P 15 16 50.7 -0.2**
baz=196
DWPF Disney Wildern 16.99 17 P **Pn 15 16 51.0 +0.6**
baz=199
858A St. Cloud 17.11 17 P **Pn 15 16 51.5 -0.3**
baz=199
LNIG Linares 17.46 320 *eP* **P 15 16 57.2 +0.2**
comp=Z,147nm,1.0s
757A Oxford 17.61 15 P **P 15 16 58.8 +0.4**
baz=196
758A Lake Helen 17.86 17 P **Pn 15 17 01.0 -0.1**
baz=199
655A Horseshoe Beac 17.90 11 P **Pn 15 17 01.3 -0.3**
baz=192
656A Willston 17.91 13 P **Pn 15 17 01.4 -0.3**
baz=194,SNR=5.9
552A Lynn Haven 18.24 5 P **P 15 17 05.5 +0.1**
baz=185
657A Interlachen 18.27 15 P **Pn 15 17 06.0 -0.2**
baz=196
658A Bunnell 18.28 16 P **P 15 17 05.8 -0.1**
baz=198
ZAIG Zacatecas 18.30 308 *eP* **Pn 15 17 08.2 +1.3**
comp=Z,35nm,1.2s
553A Crawfordville 18.38 7 P **P 15 17 06.2 -0.7**
baz=188
554A Perry 18.39 9 P **P 15 17 07.0 0.0**
baz=190
556A Lake Butler 18.55 13 P **P 15 17 08.6 -0.2**
baz=194
555A McAlpin 18.55 11 *eP* **Pn 15 17 10.3 +0.8**
comp=Z,238nm,1.4s
555A McAlpin 18.55 11 P **P 15 17 08.8 0.0**
baz=192
KVTX Kingsville 18.59 329 *eP* **Pn 15 17 11.7 +1.7**
comp=Z,113nm,0.8s
557A Orange Park 18.72 15 P **P 15 17 11.1 +0.5**
baz=196
449A Pace 18.79 360 P **Pn 15 17 12.2 -0.1**
baz=179
450A Crestview 18.84 1 P **Pn 15 17 13.1 +0.1**
baz=181
452A Marianna 18.96 5 P **Pn 15 17 14.3 -0.1**
baz=186
454A Quitman 19.01 9 P **Pn 15 17 15.5 +0.4**
baz=190,SNR=13
453A Whigham 19.05 7 P **P 15 17 14.4 +0.1**
baz=188
455A Stateville 19.14 11 P **P 15 17 15.1 -0.2**
baz=192
BRAL Brewton 19.19 0 P **P 15 17 16.1 +0.2**
baz=180
456A Hilliard 19.33 13 P **P 15 17 17.9 +0.6**
baz=195
457A Yulee 19.34 15 P **P 15 17 17.8 +0.4**
baz=196
351A Pinckard 19.35 4 P **P 15 17 17.9 +0.4**
baz=184
349A Repton 19.37 360 P **Pn 15 17 18.7 -0.7**
baz=180
350A Dozier 19.46 2 P **P 15 17 19.3 +0.5**
baz=182
353A Camilla 19.55 7 P **Pn 15 17 21.5 +0.1**
baz=188,SNR=12
352A Blakely 19.60 5 P **Pn 15 17 21.4 -0.7**
baz=186
TIGA Tifton 19.73 9 *ePn* **Pn 15 17 24.5 +0.9**
comp=Z,541nm,1.6s
TIGA Tifton 19.73 9 P **P 15 17 22.4 +0.7**
baz=190
HKT Hockley 19.73 337 *eP* **Pn 15 17 23.9 +0.4**
comp=Z,84nm,1.3s
HKT Hockley 19.73 337 *eP* **Pn 15 17 23.9 +0.4**
HKT pmax pmax
comp=Z,84nm,1.3s
355A Pearson 19.76 11 P **P 15 17 22.5 +0.5**
baz=192
356A Blackshear 19.88 13 P **P 15 17 23.8 +0.4**
baz=194
249A Camden 20.00 360 P **P 15 17 24.1 -0.5**
baz=180
833A Chaparral WMA, 20.00 327 *eP* **P 15 17 25.6 +0.8**
comp=Z,160nm,1.0s
833A Chaparral WMA, 20.00 327 P **P 15 17 25.4 +0.7**
baz=142,SNR=18
250A Grady 20.01 2 P **P 15 17 24.6 -0.3**
baz=182
357A Townsend 20.12 14 P **P 15 17 25.9 -0.1**
baz=196
252A Lumpkin 20.14 6 P **P 15 17 26.9 +0.8**
baz=186
251A Midway 20.17 4 P **P 15 17 27.3 +0.7**
baz=184
253A Americus 20.27 7 P **P 15 17 27.8 +0.2**
baz=188
254A Abbeville 20.27 9 P **P 15 17 28.3 +0.7**
baz=190,SNR=9.8
255A Hazlehurst 20.39 11 P **P 15 17 29.5 +0.6**
baz=193
VBMS Vicksburg 20.48 352 P Pn 15 17 31.5 -1.0
baz=170
256A Glennville 20.57 13 P **P 15 17 31.8 +1.0**
baz=194
151A Opelika 20.61 4 P Pn 15 17 33.6 -0.4
baz=185,SNR=7.7
149A Jones 20.62 1 P **P 15 17 32.4 +1.1**
baz=181,SNR=11
150A Eclectic 20.65 3 P Pn 15 17 33.8 -0.6
baz=183,SNR=42
148A Greensboro 20.67 359 P **P 15 17 33.1 +1.2**
baz=178,SNR=5.5
147A Livingston 20.72 357 *ePn* Pn 15 17 35.4 +0.1
comp=Z,131nm,0.6s
147A Livingston 20.72 357 P **P 15 17 33.9 +1.4**
baz=176,SNR=17
ATAH Atahualpa 20.78 155 P Pn 15 17 36.1 -0.4
comp=Z,7.1nm,0.7s,baz=322,slow=5.0,SNR=3.7
ATAH LR LR 15 24 44.3
comp=Z,3µm,21.2s,baz=341,slow=34
152A Waverly Hall 20.80 6 *eP* **P 15 17 34.0 +0.7**
comp=Z,75nm,0.6s
152A Waverly Hall 20.80 6 P Pn 15 17 35.1 -1.1
baz=186,SNR=31
153A Fort Valley 20.89 8 P **P 15 17 35.5 +1.2**
baz=189
154A Montrose 20.95 9 *eP* **P 15 17 35.0 0.0**
comp=Z,131nm,0.8s
154A Montrose 20.95 9 P **P 15 17 36.2 +1.2**
baz=191,SNR=7.7
NATX Nacogdoches 20.98 342 *eP* **P 15 17 36.5 +1.2**
NATX Nacogdoches 20.98 342 P **P 15 17 36.4 +1.1**
baz=159
ETX06 Route 59 and C 21.02 342 *eP* **P 15 17 37.2 +1.6**
comp=Z,73nm,0.7s
LRAL Lakeview Retre 21.05 0 *eP* **P 15 17 36.2 +0.2**
comp=Z,35nm,0.7s
LRAL Lakeview Retre 21.05 0 P **P 15 17 38.0 +2.0**
baz=180,SNR=24
155A Kite 21.07 11 P **P 15 17 38.1 +1.8**
baz=192,SNR=5.1
SJG San Juan 21.14 70 P **P 15 17 36.5 -0.6**
comp=Z,5.8nm,0.2s,baz=284,slow=7.6,SNR=2.6
SJG LR LR 15 26 31.2
comp=Z,1µm,18.6s,baz=244,slow=40
Z49A Columbiana 21.22 1 P **P 15 17 39.4 +1.6**
baz=181,SNR=21
Z50A Ashland 21.30 3 *eP* **P 15 17 40.7 +1.9**
comp=Z,62nm,1.0s
Z50A Ashland 21.30 3 P **P 15 17 40.6 +1.9**
baz=183,SNR=22
Z52A Williamson 21.35 6 P **P 15 17 40.5 +1.3**
baz=187,SNR=23
Z51A Franklin 21.41 4 P **P 15 17 41.2 +1.4**
baz=185,SNR=17
157A Early Branch 21.44 14 P **P 15 17 41.6 +1.4**
baz=196
Z53A Monticello 21.54 8 P **P 15 17 42.9 +1.7**
baz=189,SNR=41
Z54A Sparta 21.61 10 P **P 15 17 42.9 +1.0**
baz=191
GOGA Godfrey 21.68 8 *eP* **P 15 17 44.5 +1.7**
comp=Z,68nm,0.6s
GOGA Godfrey 21.68 8 *eP* **P 15 17 44.5 +1.7**
GOGA pmax pmax
comp=Z,68nm,0.6s
GOGA Godfrey 21.68 8 P **P 15 17 43.9 +1.1**
baz=189,SNR=45
158A Hollywood 21.70 16 P **P 15 17 43.7 +0.8**
baz=198
Z55A Blythe 21.72 11 P **P 15 17 44.4 +1.3**
baz=193
Y49A Blount Mountai 21.88 1 *eP* **P 15 17 46.6 +1.7**
comp=Z,59nm,0.6s
Y49A Blount Mountai 21.88 1 P **P 15 17 45.8 +0.8**
baz=182,SNR=19
Z41A Richland Creek 21.91 347 *eP* **P 15 17 46.1 +0.8**
comp=Z,66nm,0.6s
Z41A Richland Creek 21.91 347 P **P 15 17 45.9 +0.7**
baz=165
Y48A Jasper 21.93 360 P **P 15 17 46.5 +1.1**
baz=180,SNR=33
Y50A Piedmont 21.94 3 P **P 15 17 46.9 +1.4**
baz=183,SNR=6.6
JCT Junction City 21.94 329 *eP* **P 15 17 45.6 -0.1**
comp=Z,56nm,0.9s
JCT Junction City 21.94 329 *eP* **P 15 17 45.6 -0.1**
JCT pmax pmax
comp=Z,56nm,0.9s
JCT Junction City 21.94 329 P **P 15 17 45.6 -0.1**
baz=145,SNR=8.4
Y51A Rockmart 21.99 4 P **P 15 17 48.4 +2.2**
baz=185,SNR=30
NHSC New Hope 22.05 16 P **P 15 17 46.7 0.0**
baz=198
Y52A Lilburn 22.05 7 *eP* **P 15 17 47.3 +0.5**
comp=Z,75nm,0.8s
Y52A Lilburn 22.05 7 P **P 15 17 48.3 +1.5**
baz=188,SNR=25
Z57A Bowman 22.10 14 P **P 15 17 48.2 +0.9**
baz=196
Y53A Monroe 22.11 8 P **P 15 17 49.0 +1.7**
baz=189,SNR=44
WHTX Lake Whitney, 22.18 336 *eP* **P 15 17 48.1 0.0**
comp=Z,110nm,0.8s
WHTX Lake Whitney, 22.18 336 P **P 15 17 48.6 +0.5**
baz=152,SNR=23
Y54A Tignall 22.24 10 P **P 15 17 50.4 +1.5**
baz=191,SNR=36
Z58A St. Stephen 22.37 16 P **P 15 17 50.3 +0.2**
baz=199
WLAR White Oak Lake 22.39 347 *eP* **P 15 17 51.7 +1.2**
comp=Z,67nm,0.9s
Z59A Georgetown, SC 22.43 17 P **P 15 17 51.4 +0.6**
baz=200
Y56A Pelion 22.44 13 P **P 15 17 51.8 +0.9**
baz=195
X48A Hartselle 22.47 0 *eP* **P 15 17 51.8 +0.6**
comp=Z,32nm,1.0s
X48A Hartselle 22.47 0 P **P 15 17 51.8 +0.6**
baz=180
Y55A Saluda 22.47 11 P **P 15 17 52.1 +0.9**
baz=193,SNR=13
X50B Fort Payne 22.51 3 P **P 15 17 52.7 +1.0**
baz=183,SNR=12
X49A Woodville 22.54 2 P **P 15 17 53.2 +1.2**
baz=182,SNR=19
X47A Russelville 22.54 358 P **P 15 17 52.6 +0.6**
baz=178,SNR=11
X46A Booneville 22.61 357 P **P 15 17 53.3 +0.5**
baz=176,SNR=10
OXF Oxford 22.63 355 *eP* **P 15 17 52.1 -0.8**
comp=Z,59nm,0.7s
OXF Oxford 22.63 355 *eP* **P 15 17 52.1 -0.8**
OXF pmax pmax
comp=Z,59nm,0.7s
OXF Oxford 22.63 355 P **P 15 17 52.9 0.0**
baz=174
X51A Calhoun 22.67 5 P **P 15 17 54.2 +0.8**
baz=185,SNR=6.4
HODGE Hodges 22.68 10 *eP* **P 15 17 54.2 +0.8**
comp=Z,107nm,1.7s
X53A Estanollee 22.78 8 P **P 15 17 55.6 +1.1**
baz=189,SNR=9.2
X43A Marvell 22.80 352 P **P 15 17 54.4 -0.2**
baz=170
X52A Dahlonega 22.80 7 P **P 15 17 55.6 +0.8**
baz=188,SNR=20
JSC Jenkinsville 22.92 12 *eP* **P 15 17 55.4 -0.6**
comp=Z,32nm,0.7s
JSC Jenkinsville 22.92 12 *eP* **P 15 17 55.4 -0.6**
JSC pmax pmax
comp=Z,33nm,0.7s
Y58A Scranton 22.95 16 P **P 15 17 55.9 -0.3**
baz=199
X54A Belton 22.97 10 P **P 15 17 57.4 +1.0**
baz=192,SNR=12
HPIG 23.00 313 *eP* **P 15 17 57.0 -0.2**
comp=Z,39nm,1.0s
PLAL Pickwick Lake 23.01 358 *eP* **P 15 17 57.1 +0.2**
comp=Z,21nm,0.6s
X55A Gracelyn & Ava 23.03 12 P **P 15 17 57.0 0.0**
baz=194,SNR=16
X40A Basin Creek Fa 23.10 348 *eP* **P 15 17 57.4 -0.4**
comp=Z,84nm,1.7s
X40A Basin Creek Fa 23.10 348 P **P 15 17 58.0 +0.2**
baz=165,SNR=6.5
W49A Belvidere 23.14 2 P **P 15 17 58.5 +0.3**
baz=182,SNR=34
W48A Pulaski 23.15 0 P **P 15 17 58.4 +0.1**
baz=180,SNR=21
X56A White Oak 23.17 13 P **P 15 17 59.1 +0.6**
baz=195,SNR=19
W46A Michie 23.18 357 P **P 15 17 57.5 -1.0**
baz=177
TXAR Lajitas Array 23.24 321 P **P 15 18 00.0 +0.7**
comp=Z,64nm,0.6s,baz=139,slow=9.4,SNR=640
TXAR PcP **PcP 15 21 47.1 +1.2**
comp=Z,1.9nm,0.6s,baz=158,slow=4.4,SNR=7.7
TXAR ScP **ScP 15 25 26.7 +7.0**
comp=Z,5.3nm,1.2s,baz=139,slow=1.9,SNR=12
TX31 Lajitas Ar. Si 23.24 321 *eP* **P 15 17 59.3 0.0**
comp=Z,76nm,0.6s
SWET Sewanee 23.25 2 *eP* **P 15 17 59.3 0.0**
comp=Z,31nm,0.7s
W47A Westpoint 23.27 359 P **P 15 17 59.9 +0.4**
baz=179,SNR=21
W50A Signal Mountai 23.27 4 *eP* **P 15 17 59.6 +0.1**
comp=Z,87nm,0.6s
W50A Signal Mountai 23.27 4 P **P 15 17 59.8 +0.3**
baz=184,SNR=47
W51A Cleveland 23.27 5 P **P 15 18 00.1 +0.7**
baz=186,SNR=20
W52A Murphy 23.28 7 *eP* **P 15 17 59.7 +0.1**
comp=Z,51nm,0.9s
W52A Murphy 23.28 7 P **P 15 18 00.1 +0.5**
baz=188,SNR=14
UALR University of 23.29 349 *eP* **P 15 17 59.0 -0.6**
comp=Z,145nm,2.0s
MIAR Mount Ida 23.32 346 *eP* **P 15 17 59.7 -0.2**
comp=Z,60nm,0.8s
MIAR Mount Ida 23.32 346 *eP* **P 15 17 59.7 -0.2**
MIAR pmax pmax
comp=Z,60nm,0.8s
MIAR Mount Ida 23.32 346 P **P 15 17 59.9 -0.1**
baz=164,SNR=35
PAULI Pauline 23.33 11 *eP* **P 15 18 00.3 +0.3**
comp=Z,38nm,0.7s
X57A Johnson Farm, 23.36 15 P **P 15 18 00.4 +0.1**
baz=197
BIRD Birdtown, Kers 23.45 14 *eP* **P 15 18 01.1 0.0**
comp=Z,38nm,0.8s
W53A Cullowhee 23.45 8 P **P 15 18 02.0 +0.7**
baz=189,SNR=7.8
Y60A Bolivia 23.46 19 P **P 15 18 00.7 -0.5**
baz=202
W54A Cherokee Point 23.52 10 P **P 15 18 02.5 +0.7**
baz=192,SNR=23
CPCT Cooper Cave 23.58 5 *eP* **P 15 18 02.4 +0.1**
comp=Z,134nm,1.5s
X58A Rowland 23.65 16 P **P 15 18 02.7 -0.2**
baz=199
ABTX Abilene, Hawle 23.65 333 *eP* **P 15 18 03.4 +0.3**
comp=Z,68nm,0.7s
ABTX Abilene, Hawle 23.65 333 P **P 15 18 03.1 +0.1**
baz=148,SNR=23
W41B Gary Mavity, V 23.66 349 *eP* **P 15 18 03.0 0.0**
comp=Z,74nm,1.5s
W41B Gary Mavity, V 23.66 349 P **P 15 18 02.8 -0.2**
baz=167,SNR=12
KMSC Kings Mountain 23.74 12 *eP* **P 15 18 04.1 +0.3**
comp=Z,34nm,0.6s
KMSC Kings Mountain 23.74 12 P **P 15 18 04.1 +0.3**
baz=194,SNR=14
V50A Pikevile 23.75 4 P **P 15 18 04.1 +0.1**
baz=185,SNR=20
V48A Smith Brothers 23.75 1 *eP* **P 15 18 04.2 +0.2**
comp=Z,21nm,0.7s
V48A Smith Brothers 23.75 1 P **P 15 18 04.0 0.0**
baz=180,SNR=12
WHAR Wooly Hollow 23.78 349 *eP* **P 15 18 04.2 0.0**
comp=Z,26nm,0.7s
V49A McMinnville 23.80 2 P **P 15 18 04.5 +0.1**
baz=183,SNR=15
X37A Clayton 23.83 343 *eP* **P 15 18 04.8 +0.1**
comp=Z,166nm,1.4s
V46A Holladay 23.83 358 P **P 15 18 04.0 -0.7**
baz=177
V47A Nunnelly 23.84 359 P **P 15 18 04.8 +0.1**
baz=179,SNR=16
X59A McDuffie Farm, 23.87 18 P **P 15 18 04.6 -0.4**
baz=201
W56A Indian Trail 23.89 13 P **P 15 18 05.4 +0.2**
baz=196,SNR=7.9
V51A Loudon 23.94 5 *eP* **P 15 18 06.1 +0.4**
comp=Z,34nm,0.8s
V51A Loudon 23.94 5 P **P 15 18 06.7 +1.0**
baz=186,SNR=13
W39A Magazine 23.99 346 *eP* **P 15 18 06.4 +0.3**
comp=Z,32nm,0.8s
W39A Magazine 23.99 346 P **P 15 18 06.5 +0.3**
baz=164,SNR=15
V53A Saluda 24.00 9 *eP* **P 15 18 06.3 +0.1**
comp=Z,32nm,0.8s
V53A Saluda 24.00 9 P **P 15 18 07.2 +0.9**
baz=190,SNR=19
W57A Gilead 24.04 14 *eP* **P 15 18 06.5 -0.1**
comp=Z,30nm,0.7s
W57A Gilead 24.04 14 P **P 15 18 06.5 -0.1**
baz=197
V52A Sevierville 24.06 7 *eP* **P 15 18 07.6 +0.8**
comp=Z,26nm,0.7s
V52A Sevierville 24.06 7 P **P 15 18 07.8 +1.0**
baz=188,SNR=14
X60A Albert Glenn T 24.07 19 P **P 15 18 07.0 +0.2**
baz=202
CLTN Cedars of Leba 24.11 1 *eP* **P 15 18 07.9 +0.7**
comp=Z,47nm,0.7s
W58A Raeford 24.11 16 P **P 15 18 07.9 +0.6**
baz=199
WVT Waverly 24.15 359 *eP* **P 15 18 07.0 -0.5**
comp=Z,17nm,0.6s
WVT Waverly 24.15 359 *eP* **P 15 18 07.1 -0.5**
WVT pmax pmax
comp=Z,17nm,0.6s
WVT Waverly 24.15 359 P **P 15 18 07.5 -0.1**
baz=178
V54A Nebo 24.24 10 P **P 15 18 08.6 +0.2**

baz=192,SNR=15
FCAR Ozark Folk Cen 24.33 350 eP P 15 18 08.7 -0.6
comp=Z,36nm,0.6s
U46A Springville 24.39 358 P P 15 18 09.9 +0.2
baz=177,SNR=12
V55A Taylorsville 24.45 12 P P 15 18 10.8 +0.5
baz=194
U47A Clarksville 24.45 360 P P 15 18 10.0 -0.3
baz=179,SNR=15
W59A Clinton 24.47 17 P P 15 18 10.9 +0.4
baz=200
U50A Jamestown 24.51 4 P P 15 18 10.8 -0.1
baz=185,SNR=27
U48A Cassie Pea, Po 24.53 1 P P 15 18 10.9 -0.2
baz=181,SNR=11
U51A La Follette 24.55 6 P P 15 18 12.0 +0.7
baz=187,SNR=18
U49A Red Boiling Sp 24.55 3 P P 15 18 11.4 +0.2
baz=183,SNR=25
V56A Mocksville 24.56 13 eP P 15 18 11.8 +0.5
comp=Z,25nm,0.6s
V56A Mocksville 24.56 13 P P 15 18 11.8 +0.5
baz=195,SNR=13
W60A Pink Hill 24.59 19 P P 15 18 11.7 +0.1
baz=202
U52A Thorn Hill 24.63 7 P P 15 18 12.5 +0.5
baz=188,SNR=13
CNNC Cliffs of the 24.70 18 P P 15 18 13.6 +0.9
baz=202
U53A Fall Branch 24.71 9 P P 15 18 13.4 +0.7
baz=190,SNR=12
TZTN Tazewell 24.76 7 eP P 15 18 13.0 -0.1
comp=Z,49nm,1.2s
TZTN Tazewell 24.76 7 P P 15 18 13.1 -0.1
baz=188,SNR=11
V57A Coltrane Farms 24.80 14 P P 15 18 13.8 +0.3
baz=197,SNR=15
V58A Windy Hill, Pi 24.87 16 P P 15 18 14.8 +0.6
baz=199,SNR=29
U40A Yellville 24.92 349 P P 15 18 14.3 -0.3
baz=166,SNR=32
W61A Ground Anchor 24.93 20 P P 15 18 15.1 +0.3
baz=204
PBMO Poplar Bluff 24.97 354 eP P 15 18 14.8 -0.2
comp=Z,50nm,0.6s
U54A Nelsons Funny 24.99 10 eP P 15 18 15.6 +0.4
comp=Z,44nm,0.8s
U54A Nelsons Funny 24.99 10 P P 15 18 15.6 +0.4
baz=192
T47A Sharon Grove 25.00 360 eP P 15 18 14.8 -0.5
comp=Z,38nm,0.6s
T47A Sharon Grove 25.00 360 P P 15 18 14.7 -0.5
baz=180,SNR=16
HHAR Hobbs 25.07 347 eP P 15 18 15.3 -0.7
comp=Z,22nm,0.7s
T45A Paducah 25.07 357 eP P 15 18 15.2 -0.8
comp=Z,182nm,0.5s
T45A Paducah 25.07 357 P P 15 18 15.4 -0.5
baz=176
V59A Middlesex 25.09 17 P P 15 18 16.5 +0.3
baz=200,SNR=7.9
U56A King 25.10 13 P P 15 18 16.9 +0.7
baz=195
U55A TA2, Sparta 25.11 12 P P 15 18 16.3 -0.1
baz=194,SNR=8.9
T50A Nancy 25.11 4 P P 15 18 16.6 +0.2
baz=185,SNR=8.3
WMOK Wichita Mounta 25.12 337 eP P 15 18 15.9 -0.6
comp=Z,75nm,0.9s
WMOK Wichita Mounta 25.12 337 eP P 15 18 15.9 -0.6
WMOK pmax pmax
comp=Z,75nm,0.9s
WMOK Wichita Mounta 25.12 337 P P 15 18 15.9 -0.6
baz=152,SNR=82
T48A Bowling Green 25.13 1 P P 15 18 15.7 -0.7
baz=181
T51A Gray 25.13 6 P P 15 18 17.2 +0.7
baz=187,SNR=16
T49A Edmonton 25.15 3 eP P 15 18 16.3 -0.4
comp=Z,36nm,1.1s
T49A Edmonton 25.15 3 P P 15 18 16.6 -0.1
baz=183,SNR=9.5
LPIG La Paz 25.16 302 LR LR 15 28 58.0
comp=Z,831nm,20.1s,baz=130,slow=38
TUL1 Leonard 25.18 343 eP P 15 18 16.2 -0.8
comp=Z,65nm,0.7s
TUL1 Leonard 25.18 343 P P 15 18 16.5 -0.5
baz=160,SNR=14
T53A Wise 25.32 9 P P 15 18 18.3 0.0
baz=190,SNR=5.8
V60A Jim Taylor Roa 25.38 19 P P 15 18 18.0 -0.8
baz=203
T52A Hallie 25.39 8 P P 15 18 18.4 -0.4
baz=189
U57A Blanch 25.42 15 P P 15 18 18.9 -0.2
baz=198,SNR=12
CLNB Carlsbad 25.50 325 eP P 15 18 20.7 +0.7
T54A Tazewell 25.55 10 P P 15 18 20.9 +0.5
baz=192,SNR=7.4
U58A Oxford 25.59 16 P P 15 18 21.0 +0.4
baz=199,SNR=8.7
S47A Hartford 25.60 0 P P 15 18 19.7 -1.0
baz=180
V62A Hyde County Ai 25.64 21 P P 15 18 19.1 -2.0
baz=206
S48A Wiedeman Farm, 25.68 2 P P 15 18 21.3 -0.2
baz=182,SNR=5.5
S46A Don Dixon Farm 25.70 359 P P 15 18 21.2 -0.4
baz=178
T55A Pulaski 25.76 12 P P 15 18 22.6 +0.3
baz=194,SNR=9.5
U59A Littleton 25.77 17 P P 15 18 22.5 +0.3
baz=201
S44A Carbondale 25.78 356 P P 15 18 21.9 -0.4
baz=175,SNR=5.5
SIUC Southern Illin 25.79 356 eP P 15 18 22.3 -0.2
comp=Z,23nm,0.6s
S50A Richmond 25.80 5 P P 15 18 23.1 +0.5
baz=186,SNR=8.0
NNA Nana 25.80 156 LR LR 15 27 32.4
comp=Z,584nm,21.9s,baz=302,slow=34
T56A Rocky Mt 25.83 13 P P 15 18 23.9 +1.1
baz=196,SNR=5.2
S51A Beattyville 25.84 6 eP P 15 18 22.8 -0.1
comp=Z,41nm,0.6s
S51A Beattyville 25.84 6 P P 15 18 23.2 +0.3
baz=188,SNR=16
S49A Springfield 25.84 3 P P 15 18 23.0 0.0
baz=184,SNR=8.7
BLA Blacksburg 25.92 12 P P 15 18 23.4 -0.3
baz=195
S52A Salyersville 25.94 7 P P 15 18 23.9 0.0
baz=189
MNTX Cornudas Mount 25.95 322 eP P 15 18 24.5 +0.4
comp=Z,30nm,0.8s
MNTX Cornudas Mount 25.95 322 P P 15 18 23.8 -0.2
baz=135,SNR=69
T57A Hurt 25.98 14 P P 15 18 24.8 +0.6
baz=198,SNR=11
U60A Pendleton 26.07 18 P P 15 18 25.2 +0.3
baz=202
S53A Williamson 26.07 9 P P 15 18 25.3 +0.2
baz=191
CPRX Cap Rock 26.07 327 eP P 15 18 25.7 +0.4
T58A Grand View Acr 26.11 16 P P 15 18 26.1 +0.7
baz=199
U61A Possum Corner 26.17 20 P P 15 18 25.8 -0.1
baz=204
R46A Gibon Southern 26.22 359 P P 15 18 26.0 -0.4
baz=179,SNR=5.2
MSTX Muleshoe 26.24 329 eP P 15 18 25.9 -0.8
comp=Z,102nm,0.8s
MSTX Muleshoe 26.24 329 P P 15 18 26.9 +0.2
baz=143,SNR=36
WCI Wyandotte Cave 26.25 1 eP P 15 18 26.6 0.0
comp=Z,32nm,0.6s
WCI Wyandotte Cave 26.25 1 eP P 15 18 26.6 0.0
WCI pmax pmax
comp=Z,32nm,0.6s
WCI Wyandotte Cave 26.25 1 P P 15 18 26.7 0.0
baz=182
R47A Wooly Knot Far 26.31 1 P P 15 18 26.8 -0.4
baz=181,SNR=7.7
S54A Dingess, Beckl 26.32 10 P P 15 18 27.0 -0.3
baz=193
R45A Skylar, Fairfi 26.32 358 P P 15 18 26.8 -0.4
baz=177
CCM Cathedral Cave 26.33 353 eP P 15 18 26.9 -0.4
comp=Z,23nm,0.9s
CCM Cathedral Cave 26.33 353 eP P 15 18 26.9 -0.4
CCM pmax pmax
comp=Z,23nm,0.9s
CCM Cathedral Cave 26.33 353 P P 15 18 26.9 -0.4
baz=171
R49A Shelbyville 26.36 3 eP P 15 18 26.7 -0.9
comp=Z,64nm,1.8s
R49A Shelbyville 26.36 3 P P 15 18 26.9 -0.6
baz=184
R50A Paris 26.40 5 eP P 15 18 27.2 -0.8
comp=Z,20nm,0.6s
R50A Paris 26.40 5 P P 15 18 28.1 +0.1
baz=186,SNR=9.1
T59A Double "B" Far 26.41 17 eP P 15 18 28.0 -0.1
comp=Z,28nm,1.0s
T59A Double "B" Far 26.41 17 P P 15 18 27.8 -0.3
baz=201
R48A Northridge Ran 26.43 2 P P 15 18 27.9 -0.4
baz=182
S55A Lewisburg 26.45 12 P P 15 18 28.4 -0.1
baz=194
AMTX Amarillo 26.46 332 eP P 15 18 28.7 0.0
comp=Z,58nm,0.9s
AMTX Amarillo 26.46 332 P P 15 18 29.6 +0.9
baz=146
R51A Hillsboro 26.49 6 P P 15 18 29.6 +0.8
baz=188,SNR=16
S56A Natural Bridge 26.55 13 P P 15 18 29.4 0.0
baz=196
R52A Catlettsburg 26.64 8 P P 15 18 30.1 -0.1
baz=190
U32A Winter Ranch, 26.66 338 eP P 15 18 30.2 -0.2
comp=Z,83nm,0.8s
R53A Hurricane 26.73 9 eP P 15 18 30.2 -0.8
comp=Z,21nm,0.6s
R53A Hurricane 26.73 9 P P 15 18 31.4 +0.4
baz=191,SNR=6.6
R54A Victor 26.75 11 P P 15 18 31.2 +0.1
baz=193
S57A Dark Hollow, R 26.78 14 P P 15 18 31.5 +0.1
baz=198
T60A Surry 26.81 19 P P 15 18 32.1 +0.4
baz=203
S58A Poland Farm, P 26.87 16 eP P 15 18 31.9 -0.3
comp=Z,12nm,0.7s
S58A Poland Farm, P 26.87 16 P P 15 18 32.3 +0.1
baz=200
Q45A Warren Harvey, 26.92 358 P P 15 18 32.3 -0.3
baz=178,SNR=9.2
Q47A Bedord North L 26.95 1 P P 15 18 32.8 -0.1
baz=181,SNR=11
Q48A North Vernon 26.96 2 P P 15 18 32.8 -0.2
baz=183,SNR=6.5
Q50A Gegetown 26.99 5 P P 15 18 32.9 -0.5
baz=186
Q46A CEJHS Indians, 27.03 360 P P 15 18 32.7 -0.9
baz=179
Q49A Aurora 27.08 4 P P 15 18 34.0 -0.1
baz=184,SNR=11
Q51A Peebles 27.24 6 eP P 15 18 35.4 -0.1
comp=Z,124nm,0.6s
Q51A Peebles 27.24 6 P P 15 18 36.1 +0.6
baz=188,SNR=32
R58B Mineral 27.25 16 P P 15 18 35.7 +0.1
baz=200
Q52A Bidwell 27.31 8 P P 15 18 36.0 -0.2
baz=190,SNR=9.0
Q53A Leroy 27.32 9 P P 15 18 36.4 +0.1
baz=192
R57A Stanardsville 27.39 15 P P 15 18 36.9 -0.1
baz=198,SNR=12
P47A Martinsville 27.50 1 P P 15 18 37.7 -0.2
baz=182,SNR=7.2
P48A Milroy 27.51 3 eP P 15 18 36.9 -1.0
comp=Z,22nm,0.6s
P48A Milroy 27.51 3 P P 15 18 37.6 -0.3
baz=183,SNR=6.8
R58A Rapidan 27.53 16 P P 15 18 37.7 -0.5
baz=199
P45A Graceland, Par 27.54 359 eP P 15 18 37.1 -1.1
comp=Z,12nm,0.8s
P45A Graceland, Par 27.54 359 P P 15 18 38.0 -0.2
baz=178
Q54A Coxs Mills 27.56 11 eP P 15 18 37.7 -0.7
comp=Z,28nm,0.6s
Q54A Coxs Mills 27.56 11 P P 15 18 38.3 0.0
baz=193,SNR=7.9
CBN Corbin Frederi 27.61 17 P P 15 18 38.8 0.0
baz=201
P49A Miami Univ. Ec 27.62 4 P P 15 18 38.3 -0.6
baz=185,SNR=5.3
P46A Rosedale 27.62 360 P P 15 18 39.1 +0.1
baz=180
R59A King George, V 27.68 17 P P 15 18 38.5 -0.9
baz=201
Q55A Buckhannon 27.71 12 P P 15 18 40.0 +0.2
baz=195,SNR=8.4
P51A Williamsport 27.72 7 eP P 15 18 39.0 -0.8
comp=Z,26nm,0.8s
P51A Williamsport 27.72 7 P P 15 18 39.9 +0.1
baz=188,SNR=6.0
P43A Skaggs, Pawnee 27.73 356 P P 15 18 39.6 -0.3
baz=175
P50A Jamestown 27.77 5 P P 15 18 40.8 +0.6
baz=187
R60A Leonardtown, M 27.90 18 P P 15 18 41.8 +0.4
baz=202
Q56A Snyder Ridge, 27.94 13 P P 15 18 42.7 +0.9
baz=196,SNR=12
P53A Whipple 27.95 9 eP P 15 18 41.5 -0.4
comp=Z,31nm,0.6s
P53A Whipple 27.95 9 P P 15 18 42.3 +0.4
baz=192,SNR=10
P52A Corning 27.99 8 P P 15 18 42.5 +0.3
baz=190,SNR=9.8
121A Cookes Peak, D 28.00 320 P P 15 18 43.8 +1.2
baz=133,SNR=26
Q57A Strasburg 28.12 14 P P 15 18 44.4 +1.0
baz=198,SNR=5.2
O44A Mansfield 28.18 358 P P 15 18 43.3 -0.6
baz=177,SNR=5.4
319A Douglas 28.21 317 eP P 15 18 45.0 +0.5
comp=Z,21nm,0.9s
P54A Burton 28.22 11 P P 15 18 44.5 +0.1
baz=194
O47A Sheridan 28.25 1 P P 15 18 43.7 -0.9
baz=182,SNR=6.1
P55A Reedsville 28.26 12 P P 15 18 45.2 +0.5
baz=195
O45A Potomac 28.26 359 P P 15 18 43.9 -0.7
baz=178,SNR=13
O49A Covington 28.30 4 eP P 15 18 43.6 -1.3
comp=Z,23nm,0.6s
O49A Covington 28.30 4 P P 15 18 44.6 -0.4
baz=186,SNR=8.2
O48A Farmland 28.31 3 P P 15 18 44.2 -0.9
baz=184,SNR=6.9
O50A Cable 28.32 6 P P 15 18 44.6 -0.6
baz=187,SNR=51
R61A Willards 28.35 20 P P 15 18 44.2 -1.2
baz=204
SFIN Lafayette 28.38 360 eP P 15 18 44.6 -1.1
comp=Z,22nm,0.7s
SFIN Lafayette 28.38 360 P P 15 18 44.9 -0.8
baz=180,SNR=8.5
MCWV Mont Chateau 28.40 12 P P 15 18 44.8 -1.0
baz=195
KSU1 Kansas State U 28.40 344 P P 15 18 45.3 -0.6
baz=160,SNR=5.4
O51A Pataskala 28.43 7 P P 15 18 45.6 -0.5
baz=189,SNR=9.0
Q59A Harwood 28.43 17 P P 15 18 45.7 -0.5
baz=202
BNM Barren Site 28.44 324 eP P 15 18 46.7 +0.1
ACSO Alum Creek Sta 28.47 7 eP P 15 18 45.7 -0.8
comp=Z,54nm,0.6s
ACSO Alum Creek Sta 28.47 7 P P 15 18 46.2 -0.3
baz=188,SNR=21
O52A Adamsville 28.50 8 eP P 15 18 45.9 -0.9
comp=Z,30nm,0.6s
O52A Adamsville 28.50 8 P P 15 18 47.0 +0.2
baz=191,SNR=6.2
LPM Los Pinos Moun 28.56 325 eP P 15 18 48.5 +0.8
HDIL Hopedale 28.63 356 eP P 15 18 47.9 0.0
comp=Z,31nm,0.6s
HDIL Hopedale 28.63 356 P P 15 18 48.4 +0.5
baz=175
P57A Homestead Farm 28.64 15 P P 15 18 48.8 +0.8
baz=198,SNR=16
LENM Lemitar 28.65 324 eP P 15 18 49.3 +0.9
O53A New Philadelph 28.73 9 P P 15 18 49.1 +0.4
baz=192,SNR=8.5
O54A Avella 28.80 11 P P 15 18 49.8 +0.3
baz=194,SNR=6.0
N44A Piper City 28.81 358 P P 15 18 49.6 0.0
baz=178
N45A Kentland 28.86 359 P P 15 18 49.5 -0.4
baz=179
N46A Monticello 28.90 1 P P 15 18 50.1 -0.2
baz=181
N41A Harden Midland 28.90 354 P P 15 18 49.6 -0.7
baz=172
N47A Urbana 28.91 2 P P 15 18 49.9 -0.5
baz=183
LAZ Ladron 28.91 324 eP P 15 18 51.4 +0.6
N48A Decatur 28.92 3 P P 15 18 50.1 -0.4
baz=184
ANMO Albuquerque 28.93 326 P P 15 18 52.0 +1.1
comp=Z,5.8nm,0.7s,baz=145,slow=8.3,SNR=16
ANMO PcP PcP 15 21 59.3 +0.3
comp=Z,2.9nm,0.7s,baz=140,slow=9.2,SNR=3.9
ANMO ScP ScP 15 25 43.6 +7.3
comp=Z,1.8nm,0.8s,baz=135,slow=1.4,SNR=3.1
ANMO LR LR 15 31 59.5
comp=Z,374nm,22.0s,baz=117,slow=39
ANMO Albuquerque 28.93 326 eP P 15 18 50.8 -0.1
comp=Z,11nm,1.0s
ANMO Albuquerque 28.93 326 ceP P 15 18 52.6 +1.7
ANMO pmax pmax
comp=Z,13nm,1.0s
ANMO Albuquerque 28.93 326 P P 15 18 51.7 +0.8
baz=138
TASM ASL Pad, Albuq 28.93 326 P P 15 18 51.1 +0.2
baz=138,SNR=12
TASM ASL Pad, Albuq 28.93 326 P P 15 18 51.4 +0.5
baz=138,SNR=12
N50A Nevada 28.98 6 P P 15 18 50.7 -0.4
baz=188,SNR=7.0
N43A Stutzman Famil 29.00 357 P P 15 18 50.3 -0.9
baz=176,SNR=12
O55A Ligonier 29.04 12 P P 15 18 51.3 -0.3
baz=196
N49A Columbus Grove 29.04 5 eP P 15 18 50.6 -0.9
comp=Z,39nm,0.6s
N49A Columbus Grove 29.04 5 P P 15 18 50.6 -0.9
baz=186,SNR=12
CBKS Cedar Bluff 29.09 339 eP P 15 18 51.8 -0.3
comp=Z,29nm,0.7s
CBKS Cedar Bluff 29.09 339 eP P 15 18 51.8 -0.3
CBKS pmax pmax
comp=Z,29nm,0.7s
CBKS Cedar Bluff 29.09 339 P P 15 18 51.9 -0.3
baz=154
N40A Mertquake, Sal 29.16 353 P P 15 18 52.6 0.0
baz=171
P59A Jarrettsville 29.18 17 P P 15 18 52.7 -0.2
baz=202,SNR=5.1
N51A Ashland 29.22 7 eP P 15 18 52.5 -0.6
comp=Z,41nm,1.4s
O56A Blue Knob Stat 29.26 13 eP P 15 18 53.8 +0.2
comp=Z,10nm,0.6s
O56A Blue Knob Stat 29.26 13 P P 15 18 53.7 +0.1
baz=197,SNR=5.3
N53A Lisbon 29.33 10 eP P 15 18 53.8 -0.4
comp=Z,20nm,0.6s
N53A Lisbon 29.33 10 P P 15 18 54.2 +0.1
baz=192,SNR=7.4
M47A Cromwell 29.39 2 P P 15 18 55.0 +0.3
baz=183
M46A Old House Fiel 29.42 1 eP P 15 18 54.1 -0.8
comp=Z,19nm,0.6s
M46A Old House Fiel 29.42 1 P P 15 18 54.6 -0.3
baz=181
O57A Amberson 29.42 15 P P 15 18 55.1 +0.1
baz=199,SNR=7.1
M43A Waltham Townsh 29.49 357 P P 15 18 55.7 +0.2
baz=176,SNR=5.4
M41A Milan 29.54 355 P P 15 18 55.9 0.0
baz=173
M48A Edgerton 29.56 4 P P 15 18 56.1 -0.1
baz=184
T25A Trinidad 29.57 331 eP P 15 18 56.4 -0.2
comp=Z,16nm,0.8s
T25A Trinidad 29.57 331 P P 15 18 57.2 +0.5
baz=144,SNR=15
M49A Liberty Center 29.60 5 P P 15 18 56.4 -0.2
baz=186,SNR=7.2
M50A Fremont 29.62 6 eP P 15 18 56.7 0.0
comp=Z,39nm,0.7s
N54A Moraine State 29.63 11 eP P 15 18 56.3 -0.5
comp=Z,21nm,0.6s
N54A Moraine State 29.63 11 P P 15 18 56.8 -0.1
baz=194,SNR=6.5
N55A Marion Center 29.66 12 P P 15 18 57.7 +0.6
baz=196
PAGS Pennsylvania G 29.68 16 eP P 15 18 55.9 -1.4
comp=Z,25nm,0.7s
PTGA Pitinga 29.70 113 LR LR 15 32 02.0
comp=Z,787nm,19.4s,baz=296,slow=39
SSPA Standing Stone 29.77 14 eP P 15 18 57.3 -0.7
comp=Z,29nm,0.6s
SSPA Standing Stone 29.77 14 P P 15 18 57.2 -0.7
baz=198
N56A West Decatur 29.94 13 P P 15 18 59.3 -0.2
baz=197,SNR=6.5
N57A Milroy 29.96 15 P P 15 18 59.9 +0.1
baz=199,SNR=8.1
M52A Chesterland 29.97 9 P P 15 18 59.6 -0.2
baz=191
PLIO Pelee Island, 30.01 7 P P 15 18 59.9 -0.2
baz=189,SNR=8.2
L48A N Adams 30.04 4 P P 15 19 00.7 +0.3
baz=185
L42A Oliver, Polo 30.09 356 P P 15 19 00.2 -0.7
baz=175,SNR=5.8
L44A Lake County Fo 30.19 359 P P 15 19 01.1 -0.6
baz=178
M54A Oil Creek Stat 30.22 11 eP P 15 19 01.2 -0.8
comp=Z,24nm,0.6s
M54A Oil Creek Stat 30.22 11 P P 15 19 01.4 -0.6
baz=194,SNR=6.9
L49A Milan 30.25 5 P P 15 19 02.5 +0.3
baz=186
L50A Kingsville 30.28 6 P P 15 19 02.7 +0.2
baz=188
L40A Anamosa 30.28 354 eP P 15 19 02.1 -0.4
comp=Z,18nm,0.6s
L40A Anamosa 30.28 354 P P 15 19 02.2 -0.4
baz=172,SNR=7.1
KSCO Kaye Shedlock' 30.35 336 eP P 15 19 03.8 +0.4
comp=Z,39nm,0.9s
M55A Ridgway 30.36 12 P P 15 19 03.6 +0.3
baz=196
SCIA State Center 30.39 351 P P 15 19 03.9 +0.5
baz=168
LUPA Lehigh Univers 30.41 18 eP P 15 19 03.2 -0.4
comp=Z,1.5nm,0.8s
AAM Ann Arbor 30.45 5 P P 15 19 04.5 +0.5
baz=186
M56A Emporium 30.50 13 P P 15 19 04.2 -0.3
baz=197,SNR=6.4
L53A Girard 30.55 10 P P 15 19 04.9 0.0
baz=193,SNR=7.1
SDCO Great Sand Dun 30.58 331 eP P 15 19 06.2 +0.7
comp=Z,22nm,1.0s
SDCO Great Sand Dun 30.58 331 P P 15 19 06.3 +0.7
baz=143,SNR=48
N59A State Game Lan 30.59 17 eP P 15 19 04.8 -0.5
comp=Z,29nm,0.6s
N59A State Game Lan 30.59 17 P P 15 19 05.6 +0.3
baz=202,SNR=10.0
X18A Snowflake 30.68 321 eP P 15 19 06.0 -0.3
comp=Z,10nm,0.9s
K47A Vermontville 30.73 3 P P 15 19 05.8 -0.6
baz=184
ERPA Erie 30.75 10 eP P 15 19 06.7 0.0
comp=Z,66nm,0.6s
ERPA Erie 30.75 10 P P 15 19 07.0 +0.3
baz=194,SNR=11
K48A Perry 30.91 4 P P 15 19 06.9 -1.2
baz=186,SNR=15
W18A Petrified Fore 30.94 322 eP P 15 19 10.1 +1.4
comp=Z,24nm,0.8s
W18A Petrified Fore 30.94 322 P P 15 19 09.8 +1.1
baz=133,SNR=19

K49A	Clarkson	30.95	5	P	P	15 19 07.3	-1.1
	baz=187						
BGNE	Belgrade	30.97	344	eP	P	15 19 08.1	-0.6
	comp=Z,133nm,0.5s						
BGNE	Belgrade	30.97	344	P	P	15 19 07.9	-0.8
	baz=158,SNR=8.2						
214A	Organ Pipe Nat	30.98	314	P	P	15 19 10.3	+1.4
	baz=124,SNR=5.0						
L54A	Sinclairville	30.99	11	P	P	15 19 08.8	0.0
	baz=195						
JFWS	Jewell Farm	31.04	355	eP	P	15 19 08.0	-1.2
	comp=Z,15nm,0.8s						
JFWS	Jewell Farm	31.04	355	eP	P	15 19 08.0	-1.2
JFWS				pmax	pmax		
	comp=Z,15nm,0.8s						
JFWS	Jewell Farm	31.04	355	P	P	15 19 08.7	-0.5
	baz=174						
S22A	4UR Ranch, Cre	31.24	329	eP	P	15 19 12.1	+0.6
	comp=Z,15nm,0.8s						
S22A	4UR Ranch, Cre	31.24	329	P	P	15 19 12.0	+0.6
	baz=140,SNR=14						
J47A	Sunmer	31.30	3	P	P	15 19 10.8	-0.7
	baz=184						
Q24A	Divide	31.39	332	P	P	15 19 13.1	+0.3
	baz=144						
J48A	Bridge Port	31.43	5	eP	P	15 19 12.6	-0.1
	comp=Z,17nm,0.6s						
J48A	Bridge Port	31.43	5	P	P	15 19 13.0	+0.4
	baz=186						
J45A	Montague	31.44	1	P	P	15 19 13.0	+0.2
	baz=181						
K54A	Basiliko Farm,	31.47	12	P	P	15 19 13.1	+0.1
	baz=196						
X16A	Lo Mia Camp, P	31.54	319	eP	P	15 19 15.4	+1.4
	comp=Z,19nm,0.8s						
J49A	Marlette	31.55	6	P	P	15 19 12.9	-0.8
	baz=187						
M61A	Granite Spring	31.56	19	P	P	15 19 13.1	-0.7
	baz=205						
MVCO	Mesa Verde	31.71	326	eP	P	15 19 16.1	+0.6
	comp=Z,16nm,0.7s						
MVCO	Mesa Verde	31.71	326	P	P	15 19 16.2	+0.7
	baz=137,SNR=12						
K55A	Perry	31.71	13	P	P	15 19 15.0	-0.2
	baz=197						
BINY	Binghamton	31.72	16	eP	P	15 19 14.6	-0.6
	comp=Z,18nm,0.6s						
BINY	Binghamton	31.72	16	P	P	15 19 15.2	0.0
	baz=201						
TYNO	Tyneside	31.72	10	P	P	15 19 15.5	+0.3
	baz=193						
J52A	Paris	31.76	9	P	P	15 19 15.7	+0.2
	baz=192						
OGNE	Ogallala	31.79	338	eP	P	15 19 16.6	+0.6
	comp=Z,44nm,0.9s						
OGNE	Ogallala	31.79	338	P	P	15 19 17.0	+1.0
	baz=151						
I42A	Draeger Farm,	31.93	357	eP	P	15 19 15.4	-1.6
	comp=Z,34nm,1.0s						
I42A	Draeger Farm,	31.93	357	P	P	15 19 15.9	-1.2
	baz=176,SNR=9.2						
I45A	Fountain	32.05	1	P	P	15 19 18.0	0.0
	baz=181						
MEDO	Medina	32.05	12	P	P	15 19 17.6	-0.5
	baz=196						
I47A	Gladwin	32.10	3	eP	P	15 19 17.5	-1.0
	comp=Z,28nm,0.6s						
I47A	Gladwin	32.10	3	P	P	15 19 18.0	-0.5
	baz=185						
J54A	Appleton	32.12	12	eP	P	15 19 17.1	-1.6
	comp=Z,21nm,0.6s						
J54A	Appleton	32.12	12	P	P	15 19 18.4	-0.3
	baz=196						
I41A	Arkdale	32.15	356	P	P	15 19 18.6	-0.4
	baz=175						
I49A	Point Hope	32.15	6	eP	P	15 19 17.6	-1.4
	comp=Z,26nm,0.6s						
I49A	Point Hope	32.15	6	P	P	15 19 17.9	-1.1
	baz=188						
ACTO	Acton	32.19	10	P	P	15 19 19.0	-0.3
	baz=193						
WUAZ	Wupatki	32.20	321	eP	P	15 19 21.2	+1.4
	comp=Z,17nm,0.8s						
WUAZ				ePcP	PcP	15 22 09.1	+1.5
WUAZ	Wupatki	32.20	321	P	P	15 19 21.2	+1.4
	baz=131,SNR=16						
I51A	Listowel	32.23	8	P	P	15 19 19.3	-0.4
	baz=191						
Y14A	Wickenburg	32.26	317	eP	P	15 19 20.7	+0.5
	comp=Z,6.2nm,0.7s						
ISCO	Idaho Springs	32.28	333	eP	P	15 19 21.2	+0.7
	comp=Z,44nm,1.8s						
ISCO	Idaho Springs	32.28	333	eP	P	15 19 21.2	+0.7
ISCO				pmax	pmax		
	comp=Z,44nm,1.8s						
ISCO	Idaho Springs	32.28	333	P	P	15 19 20.8	+0.2
	baz=144,SNR=11						
J55A	Hilton	32.28	13	P	P	15 19 19.2	-0.9
	baz=197						
I48A	Sherman Twp	32.32	5	P	P	15 19 20.0	-0.4
	baz=186						
BASO	Ashfield	32.35	7	P	P	15 19 20.8	+0.1
	baz=190						
SMCO	Snowmass	32.42	330	eP	P	15 19 22.6	+0.7
	comp=Z,17nm,0.9s						
PV01	Paradox Valley	32.43	327	eP	P	15 19 22.8	+1.0
	comp=Z,7.6nm,0.6s						
H43A	Windswept, Lux	32.48	359	eP	P	15 19 20.8	-1.1
	comp=Z,19nm,0.6s						
H43A	Windswept, Lux	32.48	359	P	P	15 19 21.0	-0.8
	baz=179						
BWLO	Walkerton	32.53	8	P	P	15 19 20.6	-1.6
	baz=191,SNR=6.6						
PV02	Paradox Valley	32.57	327	eP	P	15 19 24.3	+1.2
	comp=Z,50nm,1.4s						
PV13	Radium Mtn., P	32.58	327	eP	P	15 19 24.3	+1.2
	comp=Z,27nm,0.6s						
BRCO	Bruce Peninsul	32.61	8	P	P	15 19 23.1	+0.1
	baz=190						
I52A	Shelburne	32.62	9	P	P	15 19 23.3	+0.2
	baz=192						
H45A	Beulah	32.64	1	P	P	15 19 23.4	+0.2
	baz=182						
PV03	Paradox Valley	32.66	327	eP	P	15 19 24.3	+0.4
	comp=Z,43nm,0.6s						
PV05	Paradox Valley	32.67	327	eP	P	15 19 24.2	+0.3
	comp=Z,42nm,0.6s						
DRWO	Darlington Wes	32.68	11	P	P	15 19 23.7	+0.1
	baz=195						
PV12	Saucer Basin,	32.69	327	eP	P	15 19 24.8	+0.8
	comp=Z,80nm,0.6s						
DRCO	St. Marys Ceme	32.69	11	P	P	15 19 24.0	+0.3
	baz=195						
PV18	Skein Mesa, Pa	32.69	327	eP	P	15 19 24.6	+0.6
	comp=Z,76nm,0.6s						
H47A	Mio	32.70	4	P	P	15 19 24.3	+0.6
	baz=185						
PV07	Paradox Valley	32.70	328	eP	P	15 19 25.2	+1.1
	comp=Z,51nm,1.4s						
PV11	David Mesa, Pa	32.71	327	eP	P	15 19 25.0	+0.8
	comp=Z,87nm,0.7s						
PV16	Nyswonger Mesa	32.74	327	eP	P	15 19 25.1	+0.6
	comp=Z,45nm,0.6s						
PV17	East Wray Mesa	32.74	327	eP	P	15 19 25.2	+0.7
	comp=Z,99nm,0.6s						
PV19	Morning Glory	32.78	327	eP	P	15 19 25.4	+0.5
	comp=Z,59nm,0.6s						
ECSD	EROS Data Cent	32.79	347	eP	P	15 19 23.1	-1.5
	comp=Z,68nm,1.3s						
ECSD	EROS Data Cent	32.79	347	P	P	15 19 23.6	-1.0
	baz=162,SNR=30						
PV20	West Nyswonger	32.79	327	eP	P	15 19 25.5	+0.6
	comp=Z,40nm,0.6s						
PV20				ePcP	PcP	15 22 09.0	-0.2
WLVO	Wesleyville	32.79	12	P	P	15 19 23.1	-1.5
	baz=196,SNR=9.4						
PV04	Paradox Valley	32.80	327	eP	P	15 19 25.8	+0.9
	comp=Z,38nm,0.8s						
PV22	Blue Mesa, Par	32.84	328	eP	P	15 19 26.1	+0.8
	comp=Z,95nm,1.7s						
PV22				ePcP	PcP	15 22 09.7	+0.3
PV14	Lion Creek, Pa	32.84	327	eP	P	15 19 26.0	+0.6
	comp=Z,40nm,0.7s						
PV14				ePcP	PcP	15 22 08.6	-0.8
PV10	Paradox Valley	32.86	327	eP	P	15 19 25.8	+0.3
	comp=Z,49nm,0.7s						
H48A	Harrisville	32.86	5	eP	P	15 19 24.1	-1.1
	comp=Z,125nm,0.6s						
H48A	Harrisville	32.86	5	P	P	15 19 24.2	-0.9
	baz=187,SNR=16						
PV23	Carpenter Ridg	32.90	327	eP	P	15 19 26.5	+0.6
	comp=Z,30nm,0.7s						
PV21	Cone Mtn., Par	32.96	328	eP	P	15 19 27.0	+0.5
	comp=Z,10nm,0.7s						
BMRO	Meriville Lake	32.98	8	P	P	15 19 25.4	-0.8
	baz=190,SNR=6.7						
PV09	Paradox Valley	33.00	327	eP	P	15 19 27.7	+0.9
GLA	Glamis	33.00	314	eP	P	15 19 27.4	+0.7
	comp=Z,15nm,1.1s						
GLA	Glamis	33.00	314	eP	P	15 19 27.4	+0.7
GLA				pmax	pmax		
	comp=Z,15nm,1.1s						
GLA	Glamis	33.00	314	P	P	15 19 27.2	+0.5
	baz=123						
G45A	Suttons Bay	33.06	2	eP	P	15 19 25.9	-1.1
	comp=Z,44nm,0.7s						
G45A	Suttons Bay	33.06	2	P	P	15 19 26.6	-0.4
	baz=182						
PECO	Prince Edward	33.10	13	P	P	15 19 27.1	-0.2
	baz=198						
I55A	Frankford	33.22	12	P	P	15 19 28.2	-0.2
	baz=197						
H52A	Wyevale	33.22	9	P	P	15 19 28.0	-0.3
	baz=193,SNR=6.6						
PDMCI	Parker Dam,Lak	33.24	317	P	P	15 19 29.5	+0.8
	baz=126,SNR=11						
G47A	Hillman	33.29	4	P	P	15 19 28.7	-0.2
	baz=186						
N23A	Red Feather La	33.32	334	eP	P	15 19 30.2	+0.6
	comp=Z,34nm,1.6s						
N23A	Red Feather La	33.32	334	P	P	15 19 30.0	+0.4
	baz=145,SNR=6.2						
U15A	North Rim	33.36	321	eP	P	15 19 30.9	+0.8
	comp=Z,9.7nm,0.7s						
G40A	Rib Lake	33.38	356	eP	P	15 19 28.7	-1.1
	comp=Z,12nm,1.0s						
G40A	Rib Lake	33.38	356	P	P	15 19 28.6	-1.1
	baz=174,SNR=7.9						
PHWY	Pilot Hill	33.44	334	eP	P	15 19 30.9	+0.2
	comp=Z,73nm,1.8s						
G39A	Holcombe	33.47	355	P	P	15 19 29.0	-1.5
	baz=173,SNR=21						
SADO	Sadowa	33.47	10	P	P	15 19 29.1	-1.5
	comp=Z,24nm,0.6s,baz=243,slow=5.6,SNR=28						
SADO	Sadowa	33.47	10	eP	P	15 19 29.8	-0.7
	comp=Z,27nm,0.6s						
DELO	Deloro Mine	33.52	12	P	P	15 19 31.1	+0.2
	baz=197						
W13A	Hualapai Mount	33.54	318	eP	P	15 19 32.7	+1.2
	comp=Z,8.7nm,0.8s						
TOBO	Tobermory, Bru	33.57	7	P	P	15 19 30.2	-1.1
	baz=190						
SPMN	Marine on St.	33.59	353	eP	P	15 19 30.2	-1.2
	comp=Z,53nm,0.5s						
SPMN	Marine on St.	33.59	353	P	P	15 19 30.3	-1.2
	baz=170,SNR=11						
H55A	Tweed	33.65	13	P	P	15 19 31.7	-0.3
	baz=198						
LPAZ	La Paz	33.69	146	P	P	15 19 35.3	+1.9
	comp=Z,0.5nm,0.4s,baz=333,slow=6.8,SNR=3.1						
LPAZ				LR	LR	15 33 26.9	
	comp=Z,1μm,21.2s,baz=312,slow=36						
LPAZ	La Paz	33.69	146	eP	P	15 19 33.6	+0.2
LPAZ	La Paz	33.69	146	eP	P	15 19 33.6	+0.2
F45A	CMU Biological	33.71	2	P	P	15 19 32.1	-0.5
	baz=183						
BC3	Big Chuckawall	33.77	315	P	P	15 19 35.2	+1.7
	baz=123,SNR=12						
F42A	Maple Grove Fa	33.77	359	P	P	15 19 32.5	-0.6
	baz=178						
O20A	White River Ci	33.78	330	eP	P	15 19 33.7	+0.2
	comp=Z,98nm,1.3s						
O20A	White River Ci	33.78	330	P	P	15 19 33.9	+0.4
	baz=141,SNR=26						
NEE2	Needles Airpor	33.83	317	P	P	15 19 35.3	+1.6
	baz=126						
IRM	Iron Mountain	33.84	316	P	P	15 19 35.3	+1.4
	baz=124,SNR=9.0						
NCB	Newcomb	33.84	17	eP	P	15 19 33.4	-0.4
	comp=Z,7.8nm,0.6s						
KLBO	Killbear Provi	33.87	9	P	P	15 19 34.1	+0.1
	baz=192						
H56A	Elgin	33.90	14	P	P	15 19 33.9	-0.3
	baz=199,SNR=10						
G53A	Haliburton	33.91	11	P	P	15 19 33.2	-1.1
	baz=195,SNR=7.4						
BANO	Bancroft	33.94	12	P	P	15 19 33.8	-0.8
	baz=196						
SUSD	Miller	34.01	345	P	P	15 19 34.1	-1.1
	baz=159,SNR=7.0						
F40A	Park Falls	34.02	356	P	P	15 19 34.1	-1.2
	baz=175,SNR=9.8						
F49A	Sandfield	34.04	6	P	P	15 19 34.0	-1.3
	baz=189,SNR=6.3						
PKCU	Pink Cliffs	34.04	323	eP	P	15 19 37.2	+1.2
	comp=Z,150nm,1.5s						
F48A	Evansville	34.04	6	P	P	15 19 34.1	-1.3
	baz=188,SNR=8.5						
MONP2	Monument Peak	34.05	313	P	P	15 19 35.0	-1.0
	baz=121						
KNB	Kanab	34.07	322	eP	P	15 19 37.8	+1.7
	comp=Z,18nm,0.8s						
F39A	Loretta	34.07	355	P	P	15 19 34.4	-1.4
	baz=173,SNR=14						
BUKO	Buck Lake	34.08	10	P	P	15 19 35.3	-0.5
	baz=193,SNR=7.3						
PLVO	Plevna	34.13	13	eP	P	15 19 35.9	-0.3
	comp=Z,11nm,0.9s						
PLVO	Plevna	34.13	13	P	P	15 19 35.5	-0.8
	baz=197						
COWI	Conover	34.15	357	eP	P	15 19 35.3	-1.1
	comp=Z,19nm,0.6s						
SRU	San Rafael Swe	34.19	327	eP	P	15 19 37.4	+0.4
	comp=Z,42nm,0.7s						
SRU	San Rafael Swe	34.19	327	eP	P	15 19 37.4	+0.4
SRU				pmax	pmax		
	comp=Z,42nm,0.7s						
F38A	Pierce - Schro	34.20	354	P	P	15 19 35.7	-1.2
	baz=172,SNR=9.8						
LCMT	Little Creek M	34.32	321	eP	P	15 19 39.4	+1.2
	comp=Z,8.8nm,0.8s						
LDFC	Landfair	34.34	317	eP	P	15 19 40.7	+2.3
	comp=Z,18nm,0.6s						
LDFC				ePcP	PcP	15 22 15.6	+2.0
BELC	Belle Mtn. Jos	34.34	315	P	P	15 19 38.9	+0.5
	baz=123,SNR=9.0						
LONY	Lake Ozonia	34.34	16	eP	P	15 19 37.7	-0.4
	comp=Z,25nm,0.7s						
LONY	Lake Ozonia	34.34	16	P	P	15 19 38.4	+0.3
	baz=202,SNR=15						
MTPU	Mount Pierson	34.37	324	eP	P	15 19 39.6	+0.8
	comp=Z,21nm,0.8s						
E43A	Lone Tree Farm	34.38	0	eP	P	15 19 37.4	-0.9
	comp=Z,29nm,0.6s						
E43A	Lone Tree Farm	34.38	0	P	P	15 19 37.6	-0.8
	baz=180,SNR=13						
P18A	Preston Nutter	34.41	327	eP	P	15 19 39.2	+0.1
	comp=Z,26nm,0.9s						
P18A				ePcP	PcP	15 22 14.7	+0.8
G55A	Calabogie	34.42	13	P	P	15 19 39.1	+0.4
	baz=198,SNR=6.1						
F52A	Sundridge	34.44	10	P	P	15 19 38.7	-0.2
	baz=193,SNR=5.8						
PFO	Pinyon Flats O	34.46	314	i P	P	15 19 42.8	+3.4
PFO	Pinyon Flats O	34.46	314	P	P	15 19 41.2	+1.8
	baz=122,SNR=5.3						
F51A	Arnstein	34.48	9	P	P	15 19 39.3	+0.1
	baz=192						
RWWY	Rawlins	34.52	333	eP	P	15 19 39.9	-0.1
	comp=Z,30nm,0.8s						
GMRC	Granite Mounta	34.54	316	P	P	15 19 40.3	+0.1
	baz=124,SNR=9.6						
P17A	Butcher Ranch,	34.56	327	eP	P	15 19 40.9	+0.6
	comp=Z,48nm,0.7s						
SZCU	Shurtz Canyon	34.60	322	eP	P	15 19 42.1	+1.4
	comp=Z,18nm,0.9s						
E47A	Iron Bridge	34.61	5	P	P	15 19 39.6	-0.7
	baz=186,SNR=15						
E44A	Grand Marais A	34.64	1	P	P	15 19 39.7	-0.9
	baz=182						
MSU	Marysvale	34.68	324	eP	P	15 19 42.6	+1.2
MSU	Marysvale	34.68	324	eP	P	15 19 42.6	+1.2
TMUT	Trail Mountain	34.69	326	eP	P	15 19 42.8	+1.3
	comp=Z,16nm,0.8s						
TMUT				ePcP	PcP	15 22 14.9	+0.2
PEMO	Pembroke	34.71	12	P	P	15 19 40.9	-0.3
	baz=197						
E48A	Lockeyer	34.73	6	P	P	15 19 40.4	-1.0
	baz=188,SNR=8.4						
CCUT	Cedar City	34.74	322	eP	P	15 19 43.9	+1.9
	comp=Z,10nm,0.8s						
LBNH	Lisbon	34.78	19	eP	P	15 19 42.6	+0.7
	comp=Z,13nm,0.7s						
LBNH	Lisbon	34.78	19	eP	P	15 19 42.6	+0.7
LBNH				pmax	pmax		
	comp=Z,13nm,0.7s						
LBNH	Lisbon	34.78	19	P	P	15 19 41.6	-0.3
	baz=206,SNR=5.6						
E38A	The Farm, Brul	34.81	355	eP	P	15 19 40.6	-1.5
	comp=Z,19nm,0.8s						
E38A	The Farm, Brul	34.81	355	P	P	15 19 40.6	-1.5
	baz=172,SNR=5.7						
ALGO	Algonquin Park	34.82	11	P	P	15 19 41.9	-0.2
	baz=195,SNR=13						
FRNY	Flat Rock	34.82	17	eP	P	15 19 42.1	-0.1
	comp=Z,25nm,1.3s						
E50A	Wahnapitae	34.84	8	P	P	15 19 41.8	-0.6
	baz=191,SNR=5.6						
ORIO	Orleans, Innes	34.88	14	P	P	15 19 41.8	-0.9
	baz=200						
TCRU	Three Creeks R	34.91	324	eP	P	15 19 43.9	+0.6
	comp=Z,31nm,0.9s						
MURC	Murrieta	34.97	313	P	P	15 19 44.7	+1.0
	baz=121						
D46A	Sault St. Mari	34.99	4	P	P	15 19 43.1	-0.5
	baz=185,SNR=5.8						
K22A	Casper	35.01	335	eP	P	15 19 44.6	+0.6
	comp=Z,20nm,0.9s						
K22A	Casper	35.01	335	P	P	15 19 44.7	+0.6
	baz=145						
E52A	Mattawa	35.03	10	P	P	15 19 43.5	-0.4
	baz=194,SNR=6.9						
HEC	Hector,Ludlow	35.03	316	P	P	15 19 45.7	+1.4
	baz=124						
F55A	Otter Lake	35.05	13	P	P	15 19 43.6	-0.6
	baz=198						
D41A	Chassel	35.09	358	P	P	15 19 43.4	-1.1
	baz=177						
BBRC	Big Bear Solar	35.13	314	P	P	15 19 46.4	+1.1
	baz=122						
E51A	G1948 Merrick	35.13	9	P	P	15 19 44.1	-0.7
	baz=193,SNR=14						
ALFO	Alfred	35.20	15	P	P	15 19 44.8	-0.6
	baz=201,SNR=11						
D47A	Chapleau	35.22	5	P	P	15 19 44.3	-1.3
	baz=187,SNR=7.7						
RSSD	Black Hills	35.29	339	eP	P	15 19 47.2	+0.7
	comp=Z,58nm,1.5s						
RSSD	Black Hills	35.29	339	eP	P	15 19 47.2	+0.7
RSSD				pmax	pmax		
	comp=Z,58nm,1.5s						
RSSD	Black Hills	35.29	339	P	P	15 19 47.4	+0.9
	baz=150						
E53A	Dumoine, Ponti	35.30	11	P	P	15 19 45.9	-0.4
	baz=196						
MPU	Maple Canyon	35.43	327	eP	P	15 19 48.6	+0.8
	comp=Z,28nm,0.7s						
E54A	Lac Daplat, Po	35.44	12	P	P	15 19 46.6	-1.0
	baz=197,SNR=9.8						
D48A	Paudash Townsh	35.46	6	P	P	15 19 46.1	-1.6
	baz=189,SNR=16						
D49A	Beulah Townshi	35.60	7	P	P	15 19 48.2	-0.8
	baz=190,SNR=6.1						
NLU	North Lily Min	35.63	326	eP	P	15 19 50.1	+0.6
	comp=Z,46nm,1.7s						
BFSC	Mount Baldy Ra	35.63	314	P	P	15 19 50.5	+1.0
	baz=121						
PSUT	Pine Spring	35.68	323	eP	P	15 19 50.7	+0.8
	comp=Z,16nm,0.7s						
D52A	ZEK Kipawa Sen	35.74	10	P	P	15 19 50.2	+0.2
	baz=194						
JLU	Jordanelle	35.75	327	eP	P	15 19 51.3	+0.7
	comp=Z,23nm,0.7s						
CIS	Catalina Islan	35.76	312	P	P	15 19 50.6	+0.2
	baz=120						
TRQ	Mont Tremblant	35.84	15	eP	P	15 19 50.5	-0.5
C40A	Isle Royale Na	35.96	358	eP	P	15 19 50.1	-1.8
	comp=Z,37nm,0.6s						
C40A	Isle Royale Na	35.96	358	P	P	15 19 50.1	-1.8
	baz=176,SNR=10						
GO01	Chusmiza	35.96	150	eP	P	15 19 53.1	+0.3
	comp=Z,8.1nm,0.8s						
D53A	Lac Vacive, Po	35.97	11	eP	P	15 19 51.5	-0.6
	comp=Z,13nm,0.7s						
D53A	Lac Vacive, Po	35.97	11	P	P	15 19 52.0	0.0
	baz=196,SNR=7.9						
CTU	Camp Tracy	35.98	327	eP	P	15 19 53.1	+0.7
	comp=Z,26nm,0.7s						
TCUT	Toone Canyon	36.11	328	eP	P	15 19 54.8	+1.2
	comp=Z,47nm,0.7s						
TCUT				ePcP	PcP	15 22 19.6	+0.8
EYMN	Ely	36.14	355	eP	P	15 19 51.4	-2.1
	comp=Z,9.7nm,0.7s						
EYMN	Ely	36.14	355	P	P	15 19 51.6	-1.9
	baz=173,SNR=7.0						
TPNV	Topopah Spring	36.18	319	eP	P	15 19 56.0	+1.8
	comp=Z,10nm,0.8s						
TPNV	Topopah Spring	36.18	319	P	P	15 19 55.9	+1.8
	baz=126,SNR=18						
DUG	Dugway, Tooele	36.20	326	eP	P	15 19 53.8	-0.5
	comp=Z,12nm,0.8s						
DUG	Dugway, Tooele	36.20	326	eP	P	15 19 53.8	-0.5
DUG				pmax	pmax		
	comp=Z,12nm,0.8s						
DUG	Dugway, Tooele	36.20	326	P	P	15 19 54.9	+0.6
	baz=134,SNR=20						
EDW2	Edwards Air Fo	36.20	314	P	P	15 19 55.7	+1.4
	baz=122						
D54A	Lac Fusel, La	36.24	12	P	P	15 19 53.4	-0.9
	baz=197,SNR=9.3						
FURC	Furnace Creek,	36.30	317	P	P	15 19 56.0	+1.0
	baz=125,SNR=5.4						
LRMC	Laurel Mtn Rad	36.31	315	P	P	15 19 56.8	+1.5
	baz=123						
BW06	Boulder Array	36.44	332	eP	P	15 19 55.7	-0.7
	comp=Z,17nm,0.6s						
BW06	Boulder Array	36.44	332	P	P	15 19 56.3	-0.1
	baz=141,SNR=42						
PD31	Pinedale Array	36.44	332	eP	P	15 19 56.0	-0.4
	comp=Z,16nm,0.7s						
PD31				ePcP	PcP	15 22 20.5	+0.8
PDAR	Pinedale Array	36.44	332	P	P	15 19 56.6	+0.2
	comp=Z,16nm,0.6s,baz=131,slow=10.0,SNR=185						
PDAR				PcP	PcP	15 22 20.5	+0.8
	comp=Z,1.2nm,0.6s,baz=147,slow=5.2,SNR=5.7						
PDAR				ScP	ScP	15 26 06.7	+4.6
	comp=Z,1.2nm,0.9s,baz=132,slow=6.2,SNR=6.7						
PDAR				LR	LR	15 39 42.6	
	comp=Z,473nm,18.8s,baz=130,slow=44						
MPMC	Manual Prospec	36.49	316	P	P	15 19 58.0	+1.1
	baz=124,SNR=14						
SNCC	San Nicolas Is	36.50	311	P	P	15 19 57.5	+0.7
	baz=118						
HWUT	Hardware Ranch	36.54	329	eP	P	15 19 57.3	0.0
	comp=Z,43nm,0.7s						
HWUT				ePcP	PcP	15 22 21.2	+1.3
PKME	Peaks-Kenny Pk	36.58	21	eP	P	15 19 57.6	+0.4
	comp=Z,24nm,0.8s						
PKME	Peaks-Kenny Pk	36.58	21	P	P	15 19 57.9	+0.7
	baz=210,SNR=6.6						
OSI	Osito Audit: C	36.58	313	P	P	15 19 58.5	+0.9
	baz=121						
R11A	Troy Canyon, C	36.60	321	eP	P	15 19 57.4	-0.5
	comp=Z,6.3nm,0.9s						
R

comp=Z,21nm,0.9s
HVU Hansel Valley 37.29 328 *e*P **P 15 20 03.6 0.0**
HVU pmax pmax
comp=Z,21nm,0.9s
MDND Maddock 37.36 346 *e*P **P 15 20 03.1 -0.8**
comp=Z,188nm,0.6s
MDND Maddock 37.36 346 P **P 15 20 03.4 -0.5**
baz=160,SNR=9.3
PKM Mcpherson Peak 37.49 313 P **P 15 20 06.5 +1.1**
baz=120
SNOW Snow King Moun 37.53 331 *e*P **P 15 20 06.1 +0.3**
comp=Z,82nm,0.7s
LOHW Long Hollow 37.58 332 *e*P **P 15 20 06.0 0.0**
comp=Z,98nm,1.6s
TPAW Teton Pass 37.65 331 *e*P **P 15 20 06.8 0.0**
comp=Z,48nm,0.6s
MOOW Moose Ponds 37.75 332 *e*P **P 15 20 07.1 -0.4**
comp=Z,19nm,0.6s
FXWY Fox Creek 37.80 331 *e*P **P 15 20 08.0 0.0**
comp=Z,11nm,0.8s
ELK Elko 37.93 324 *e*P **P 15 20 09.3 +0.2**
ELK *e*PcP **PcP 15 22 26.0 +1.7**
ELK Elko 37.93 324 *e*P **P 15 20 09.3 +0.2**
ELK *e* 15 22 26.0
ELK pmax pmax
comp=Z,16nm,0.8s
IMW Indian Meadow 37.95 332 *e*P **P 15 20 08.8 -0.4**
comp=Z,17nm,0.6s
FLWY Flagg Ranch 37.98 332 *e*P **P 15 20 09.4 0.0**
comp=Z,29nm,0.7s
LSQQ Lebel-sur-Quev 38.00 11 P **P 15 20 08.6 -0.7**
baz=196
H17A Grant Village 38.17 332 *e*P **P 15 20 11.3 +0.2**
comp=Z,62nm,1.9s
H17A Grant Village 38.17 332 P **P 15 20 12.2 +1.1**
baz=141
RLMT Red Lodge 38.17 334 *e*P **P 15 20 10.6 -0.4**
comp=Z,22nm,0.6s
RLMT Red Lodge 38.17 334 P **P 15 20 10.9 -0.1**
baz=143,SNR=22
YPP Pitchstone Pla 38.18 332 *e*P **P 15 20 10.9 -0.3**
comp=Z,9.6nm,0.8s
LKWY Lake 38.22 333 *e*P **P 15 20 12.0 +0.5**
comp=Z,27nm,1.3s
LKWY Lake 38.22 333 *e*P **P 15 20 12.0 +0.5**
LKWY pmax pmax
comp=Z,27nm,1.3s
NV11 Mina Array Sit 38.27 319 *e*P **P 15 20 11.7 -0.2**
comp=Z,0.7nm,0.8s
NV11 *e*PcP **PcP 15 22 26.7 +1.4**
LAO LASA Array 38.28 339 *e*P **P 15 20 11.6 -0.1**
comp=Z,92nm,1.8s
LAO LASA Array 38.28 339 P **P 15 20 11.7 -0.1**
baz=149,SNR=9.4
OMMB Old Mammoth Mi 38.36 317 *e*P **P 15 20 13.0 +0.1**
comp=Z,28nm,1.9s
NV01 Mina Array Sit 38.36 319 *e*P **P 15 20 14.9 +2.2**
NV01 *e*PcP **PcP 15 22 27.3 +1.6**
NVAR Mina Array Bea 38.36 319 P **P 15 20 14.9 +2.2**
comp=Z,10nm,0.8s,baz=132,slow=7.7,SNR=54
NVAR PcP **PcP 15 22 27.3 +1.6**
comp=Z,6.8nm,0.7s,baz=135,slow=4.2,SNR=19
NVAR ScP **ScP 15 26 15.5 +6.1**
comp=Z,2.2nm,1.0s,baz=107,slow=3.7,SNR=6.8
NVAR LR LR 15 37 27.7
comp=Z,698nm,21.6s,baz=136,slow=38
MDPB Devils Postpil 38.42 317 *e*P **P 15 20 13.5 +0.2**
comp=Z,9.0nm,0.7s
YMR Madison River 38.56 332 *e*P **P 15 20 15.2 +0.9**
comp=Z,38nm,1.1s
MATQ Matagami 38.56 10 P **P 15 20 13.5 -0.5**
baz=195,SNR=19
KVN Kaiserville 38.59 320 *e*P **P 15 20 14.7 0.0**
comp=Z,12nm,0.8s
YHH Holmes Hill 38.60 333 *e*P **P 15 20 14.7 0.0**
comp=Z,12nm,1.0s
RYN Ryan 38.62 319 *e*P **P 15 20 15.3 +0.5**
comp=Z,7.8nm,1.0s
YHB Horse Butte 38.73 332 *e*P **P 15 20 16.8 +1.0**
comp=Z,19nm,0.7s
LMN Caledonia Moun 38.80 25 *e*P **P 15 20 15.6 -0.4**
comp=Z,31nm,1.1s
GCMT Greycliff 38.87 335 *e*P **P 15 20 16.0 -0.8**
BMN Battle Mountai 38.89 322 *e*P **P 15 20 17.1 0.0**
comp=Z,22nm,0.9s
QLMT Earthquake Lak 38.89 332 *e*P **P 15 20 18.1 +1.0**
ULM Lac du Bonnet 38.93 351 P **P 15 20 14.9 -2.1**
comp=Z,30nm,0.5s,baz=163,slow=8.7,SNR=31
ULM PcP **PcP 15 22 24.9 -1.9**
comp=Z,5.6nm,0.6s,baz=147,slow=6.1,SNR=3.4
ULM LR LR 15 38 38.6
comp=Z,396nm,19.8s,baz=158,slow=40
ULM Lac du Bonnet 38.93 351 *e*P **P 15 20 14.6 -2.5**
ULM Lac du Bonnet 38.93 351 *e*P **P 15 20 14.6 -2.5**
DGMT Dagmar 39.17 342 *e*P **P 15 20 18.6 -0.4**
comp=Z,62nm,0.6s
DGMT Dagmar 39.17 342 P **P 15 20 18.7 -0.4**
baz=153,SNR=13
YERR Yerington 39.28 319 *e*P **P 15 20 21.0 +0.6**
comp=Z,47nm,1.6s
CHGQ Chibougamau 39.34 13 P **P 15 20 19.9 -0.5**
baz=200
HLID Hailey 39.41 328 *e*P **P 15 20 21.6 +0.2**
comp=Z,12nm,0.6s
HLID Hailey 39.41 328 P **P 15 20 22.1 +0.7**
baz=135,SNR=30
CMB Columbia Colle 39.51 317 *e*P **P 15 20 23.0 +0.9**
comp=Z,6.3nm,1.0s
CMB Columbia Colle 39.51 317 *e*P **P 15 20 23.0 +0.9**
CMB pmax pmax
comp=Z,6.0nm,1.0s
MCMT McKenzie Canyo 39.55 331 *e*P **P 15 20 23.3 +0.6**
PNTR Pine Nut 39.57 319 *e*P **P 15 20 23.9 +1.1**
comp=Z,10nm,0.8s
BOZ Bozeman (W) 39.57 333 *e*P **P 15 20 23.2 +0.5**
comp=Z,22nm,0.6s
BOZ Bozeman (W) 39.57 333 *e*P **P 15 20 23.2 +0.5**
BOZ pmax pmax
comp=Z,23nm,0.6s
BOZ Bozeman (W) 39.57 333 P **P 15 20 23.6 +0.9**
baz=140,SNR=49
PAHR Pah Rah Range 39.78 320 *e*P **P 15 20 25.0 +0.5**
comp=Z,5.1nm,0.8s
DLMT Dillon 39.84 332 *e*P **P 15 20 25.2 +0.3**
comp=Z,21nm,0.8s
BEKR Beckworth 40.49 319 *e*P **P 15 20 31.1 +0.7**
comp=Z,10nm,0.9s
HRY Holter Researc 40.52 334 *e*P **P 15 20 30.3 -0.2**
EGMT Eagleton 40.72 337 *e*P **P 15 20 31.3 -0.7**
comp=Z,22nm,0.6s
EGMT Eagleton 40.72 337 P **P 15 20 31.9 -0.2**
baz=145,SNR=11
WVOR Wild Horse Val 40.97 324 *e*P **P 15 20 34.0 -0.3**
comp=Z,18nm,0.9s
WVOR Wild Horse Val 40.97 324 *e*P **P 15 20 34.0 -0.3**
WVOR pmax pmax
comp=Z,18nm,0.9s
PLID Pearl Lake 41.29 329 *e*P **P 15 20 36.6 -0.4**
comp=Z,19nm,0.8s
J08A Circle Bar Ran 41.46 325 *e*P **P 15 20 38.7 +0.4**
comp=Z,15nm,1.0s
MSO Missoula 41.55 332 *e*P **P 15 20 39.0 0.0**
comp=Z,35nm,1.4s
MSO Missoula 41.55 332 P **P 15 20 39.2 +0.2**
baz=138,SNR=15
MOD Modoc Plateau 41.63 322 *e*P **P 15 20 39.9 +0.1**
comp=Z,8.7nm,1.0s
O03E Paynes Creek 41.65 319 P **P 15 20 39.5 -0.3**
baz=123
BMO Blue Mountains 41.80 328 *e*P **P 15 20 40.3 -0.8**
comp=Z,13nm,0.8s
BMO Blue Mountains 41.80 328 *e*P **P 15 20 40.3 -0.8**
BMO pmax pmax
comp=Z,13nm,0.8s
O02D Mt. Diablo Mer 42.23 318 P **P 15 20 44.3 -0.3**
baz=122,SNR=8.4
I07A Izee 42.50 325 *e*P **P 15 20 46.0 -0.7**
comp=Z,11nm,1.2s
KCPM Cahto Peak 42.50 317 *e*P **P 15 20 48.0 +1.2**
comp=Z,16nm,0.9s
M04C Macdoel 42.50 321 P **P 15 20 46.4 -0.4**
baz=124,SNR=5.9
F10A Beach Ranch, E 42.53 329 *e*P **P 15 20 46.8 -0.1**
comp=Z,22nm,0.9s
N02D Trinity Center 42.60 319 P **P 15 20 47.2 -0.3**
baz=123
KMRM Mail Ridge 42.85 318 *e*P **P 15 20 50.8 +1.1**
comp=Z,23nm,1.0s
M02C Callahan 42.92 320 P **P 15 20 50.0 -0.1**
baz=123
G08A Pilot Rock 42.97 327 *e*P **P 15 20 49.1 -1.4**
comp=Z,3.3nm,0.7s
J05D Fort Rock, OR 43.00 323 P **P 15 20 50.2 -0.6**
baz=126
YBH Yreka Blue Hor 43.01 320 *e*P **P 15 20 48.1 -2.8**
comp=Z,3.0nm,0.9s
YBH Yreka Blue Hor 43.01 320 *e*P **P 15 20 48.1 -2.8**
YBH pmax pmax
comp=Z,3.0nm,0.9s
L04D Klamath Falls 43.03 321 P **P 15 20 51.7 +0.6**
baz=124,SNR=11
PINE Pine Mountain 43.13 324 *e*P **P 15 20 50.9 -1.1**
comp=Z,7.7nm,0.7s
KHMM Horse Mountain 43.20 319 *e*P **P 15 20 52.7 +0.2**
comp=Z,11nm,0.9s
WALA Waterton Lakes 43.23 334 *e*P **P 15 20 52.0 -0.6**
comp=Z,12nm,0.8s
E09A Wood Farm, Sta 43.36 329 *e*P **P 15 20 53.2 -0.3**
comp=Z,20nm,1.0s
JCC Jacoby Creek, 43.37 318 *e*P **P 15 20 54.1 +0.5**
comp=Z,14nm,1.0s
J04D Umpqua Nationa 43.50 322 P **P 15 20 55.1 +0.2**
baz=125,SNR=5.8
HUMO Hull Mountain 43.65 321 *e*P **P 15 20 56.2 +0.2**
comp=Z,8.0nm,1.4s
L02E Cave Junction 43.80 320 P **P 15 20 57.5 +0.3**
baz=123
I04A Tendick Farm, 43.99 323 P **P 15 20 58.4 -0.3**
baz=126,SNR=7.5
HAWA Hanford 44.00 328 *e*P **P 15 20 58.3 -0.4**
comp=Z,16nm,0.8s
NEW Newport 44.08 331 *e*P **P 15 20 58.2 -1.0**
comp=Z,8.9nm,0.6s
NEW Newport 44.08 331 *e*P **P 15 20 58.3 -1.0**
NEW pmax pmax
comp=Z,9.0nm,0.6s
NEW Newport 44.08 331 P **P 15 20 58.8 -0.5**
baz=135,SNR=11
D08A Wollman Farm, 44.12 329 *e*P **P 15 20 59.5 -0.1**
comp=Z,31nm,0.8s
K02D Willamette Mer 44.13 321 P **P 15 20 59.2 -0.7**
baz=123
G05D Wamic, OR 44.23 325 P **P 15 21 02.0 +1.4**
baz=128,SNR=5.8
FFC Flin Flon 44.33 348 *e*P **P 15 21 00.3 -0.8**
comp=Z,285nm,0.7s
FFC Flin Flon 44.33 348 *i* P **P 15 21 00.8 -0.3**
H04A Detroit Lake 44.39 324 *e*P **P 15 21 01.3 -0.5**
comp=Z,40nm,1.4s
I03D Drain, OR 44.50 322 P **P 15 21 02.3 -0.3**
baz=124
J01E Myrtle Point 44.55 321 P **P 15 21 03.5 +0.4**
baz=123
H04D Lebanon 44.61 324 P **P 15 21 03.1 -0.5**
baz=126
F05D White Salmon 44.71 326 P **P 15 21 05.1 +0.8**
baz=128
I02D Swisshome 45.02 322 P **P 15 21 07.6 +0.8**
baz=124
G03D McMinnville, O 45.31 324 P **P 15 21 09.0 -0.1**
baz=126
LON Longmire 45.43 327 *e*P **P 15 21 10.1 -0.1**
comp=Z,6.7nm,0.8s
LON Longmire 45.43 327 *e*P **P 15 21 10.1 -0.1**
LON pmax pmax
comp=Z,7.0nm,0.8s
F04D Rainier, OR 45.69 325 P **P 15 21 12.8 +0.8**
baz=127
C06D Leavenworth 45.70 328 P **P 15 21 11.7 -0.5**
baz=130
SCHQ Schefferville 45.72 16 P **P 15 21 10.1 -2.1**
comp=Z,7.5nm,0.5s,baz=236,slow=7.1,SNR=8.4
SCHQ LR LR 15 42 04.8
comp=Z,1μm,18.4s,baz=208,slow=39
SCHQ Schefferville 45.72 16 *e*P **P 15 21 10.3 -1.9**
comp=Z,78nm,1.9s
E04D Cinebar 45.73 326 P **P 15 21 11.6 -0.8**
baz=128
D05A Enumclaw 45.80 327 *e*P **P 15 21 12.6 -0.3**
comp=Z,26nm,1.1s
D04E Lakebay 46.22 327 P **P 15 21 15.8 -0.4**
baz=128
B06A Marblemount 46.38 329 *e*P **P 15 21 17.0 -0.5**
comp=Z,38nm,0.8s
B05A Bryant 46.54 328 P **P 15 21 18.1 -0.6**
baz=129
D03D Eldon 46.60 327 P **P 15 21 19.0 -0.2**
baz=128,SNR=6.3
NLWA Neiltona Lookou 46.94 326 *e*P **P 15 21 21.9 0.0**
comp=Z,44nm,1.5s
FCC Fort Churchill 47.08 355 *e*P **P 15 21 21.0 -1.8**
comp=Z,19nm,0.6s
FCC Fort Churchill 47.08 355 *e*P **P 15 21 21.0 -1.8**
FCC pmax pmax
comp=Z,19nm,0.6s
A04D Lummi Island 47.14 328 P **P 15 21 23.2 -0.2**
baz=129
BDFB Brasilia 47.36 124 LR LR 15 42 48.7
comp=Z,998nm,18.3s,baz=280,slow=38
CPUP Villa Florida 47.75 143 P **P 15 21 26.8 -1.6**
comp=Z,3.8nm,0.6s,baz=338,slow=9.1,SNR=15
CPUP PcP **PcP 15 22 57.5 +0.6**
comp=Z,2.2nm,0.7s,baz=336,slow=4.1,SNR=3.2
CPUP LR LR 15 42 35.0
comp=Z,297nm,20.5s,baz=318,slow=37
LLLB Lillooet 47.95 331 *e*P **P 15 21 29.5 -0.2**
comp=Z,26nm,0.7s
YKA Yellowknife Ar 54.25 345 P **P 15 22 15.2 -1.5**
comp=Z,16nm,0.7s,baz=138,slow=7.7,SNR=114
YKA PcP **PcP 15 23 19.6 -0.8**
comp=Z,2.1nm,0.6s,baz=143,slow=3.8,SNR=10.0
YKA ScP **ScP 15 27 17.3 +2.9**
comp=Z,1.1nm,0.8s,baz=144,slow=4.3,SNR=5.6
YKA LR LR 15 47 46.2
comp=Z,42nm,21.1s,baz=150,slow=38
YKB5 Yellowknife Ar 54.25 345 *e*P **P 15 22 15.2 -1.5**
YKB5 *e*PcP **PcP 15 23 19.6 -0.8**
YKB5 *e*ScP **ScP 15 27 17.3 +2.9**
YKW3 Yellowknife Ar 54.31 345 *e*P **P 15 22 15.3 -1.9**
comp=Z,20nm,0.7s
PLCA Paso Flores 54.54 165 P **P 15 22 19.9 +0.7**
comp=Z,2.5nm,0.9s,baz=354,slow=10,SNR=2.7
PLCA LR LR 15 40 04.4
comp=Z,281nm,21.0s,baz=24,slow=30
PLCA Paso Flores 54.54 165 *e*P **P 15 22 19.7 +0.5**
comp=Z,36nm,1.4s
PLCA Paso Flores 54.54 165 *e*P **P 15 22 19.7 +0.5**
PLCA pmax pmax
comp=Z,36nm,1.4s
DLBC Dease Lake 56.57 335 *e*P **P 15 22 34.2 +0.6**
comp=Z,19nm,0.8s
TAOE Nuku Hiva Isla 56.63 251 *e*S **S 15 30 22.6 -1.1**
comp=Z,318nm,25.8s
TAOE *e*LR LR 15 38 57.0
comp=Z,1μm,25.6s
RKT Rikitea 58.37 233 *e*T T 16 25 23.5
comp=Z,4.3nm,0.2s
CTGM Chitina Glacie 62.77 334 *e*P **P 15 23 16.3 0.0**
comp=Z,7.8nm,0.8s
BALM Baldy 63.24 333 *e*P **P 15 23 19.4 0.0**
comp=Z,8.3nm,0.9s
BALM Baldy 63.24 333 *e*P **P 15 23 19.4 0.0**
BALM pmax pmax
comp=Z,8.0nm,0.9s
DAWY Dawson 63.45 337 *e*P **P 15 23 19.6 -1.1**
comp=Z,6.0nm,1.1s
EPYK Eagle Plains 63.72 340 *e*P **P 15 23 21.7 -0.6**
comp=Z,10nm,0.8s
EPYK Eagle Plains 63.72 340 P **P 15 23 21.3 -1.1**
baz=124,SNR=8.0
INK Inuvik 63.85 343 *e*P **P 15 23 22.3 -0.8**
comp=Z,15nm,1.0s
INK Inuvik 63.85 343 *e*P **P 15 23 22.3 -0.8**
INK pmax pmax
comp=Z,15nm,1.0s
EGAK Eagle 64.47 337 *e*P **P 15 23 26.4 -0.9**
comp=Z,8.7nm,1.1s
EYAK Cordova Ski Ar 64.57 332 *e*P **P 15 23 28.1 +0.2**
comp=Z,14nm,0.8s
MENT Mentasta 64.65 335 *e*P **P 15 23 27.9 -0.6**
comp=Z,4.6nm,0.6s
DOT Dot Lake 65.09 336 *e*P **P 15 23 30.2 -1.2**
comp=Z,14nm,0.8s
PAX Paxson 65.39 335 *e*P **P 15 23 31.9 -1.5**
comp=Z,7.7nm,0.8s
PAX Paxson 65.39 335 *e*P **P 15 23 31.9 -1.5**
PAX pmax pmax
comp=Z,8.0nm,0.8s
RIDG Independent Ri 65.45 336 *e*P **P 15 23 33.0 -0.6**
comp=Z,16nm,0.9s
SCM Sheep Creek Mo 65.76 333 *e*P **P 15 23 34.8 -1.0**
comp=Z,9.9nm,0.8s
SCM Sheep Creek Mo 65.76 333 *e*P **P 15 23 34.8 -1.0**
SCM pmax pmax
comp=Z,10.0nm,0.8s
PMOR Pomariorio Ree 65.88 248 *e*T T 16 34 44.2
comp=Z,3.0nm,0.2s
KNK Knik Glacier 66.11 333 *e*P **P 15 23 37.1 -0.8**
comp=Z,16nm,0.9s
SEW Seward 66.14 331 *e*P **P 15 23 37.0 -1.1**
comp=Z,12nm,0.9s
SML Sawmill 66.19 333 *e*P **P 15 23 37.4 -1.1**
comp=Z,31nm,1.5s
SML Sawmill 66.19 333 *e*P **P 15 23 37.4 -1.1**
SML pmax pmax
comp=Z,31nm,1.5s
DHY Denali Highway 66.23 334 *e*P **P 15 23 38.2 -0.7**
comp=Z,6.9nm,1.3s
GHO Glory Hole Cre 66.45 333 *e*P **P 15 23 39.3 -0.9**
comp=Z,20nm,0.9s
PMR Palmer 66.48 333 *e*P **P 15 23 39.6 -0.6**
comp=Z,5.0nm,0.8s
PMR Palmer 66.48 333 *e*P **P 15 23 39.6 -0.6**
PMR pmax pmax
comp=Z,5.0nm,0.8s
HDA Harding Lake 66.56 336 *e*P **P 15 23 39.9 -0.9**
comp=Z,17nm,0.8s
RC01 Rabbit Creek A 66.59 332 *e*P **P 15 23 40.0 -0.9**
comp=Z,17nm,0.9s
ILAR Eielson Array 66.68 336 P **P 15 23 40.5 -1.0**
comp=Z,5.6nm,0.6s,baz=127,slow=4.2,SNR=80
ILAR LR LR 15 56 56.9
comp=Z,385nm,20.5s,baz=114,slow=40
ILB Eielson Array 66.68 336 *e*P **P 15 23 40.3 -1.2**
comp=Z,12nm,0.9s
BRLK Bradley Lake 66.72 330 *e*P **P 15 23 41.4 -0.5**
comp=Z,16nm,0.9s
CNPM China Poot 66.83 330 *e*P **P 15 23 41.9 -0.7**
comp=Z,12nm,0.9s
RND Reindeer 66.98 334 *e*P **P 15 23 42.5 -1.0**
comp=Z,34nm,0.7s
RND Reindeer 66.98 334 *e*P **P 15 23 42.5 -1.0**
RND pmax pmax
comp=Z,34nm,0.7s
CCB Clear Creek Bu 67.00 336 *e*P **P 15 23 42.1 -1.4**
comp=Z,5.2nm,0.6s
POKR Poker Plat Res 67.03 336 P **P 15 23 43.0 -0.8**
baz=112
KDAK Kodiak Island 67.03 328 *e*P **P 15 23 43.5 -0.4**
comp=Z,11nm,0.6s
KDAK Kodiak Island 67.03 328 *e*P **P 15 23 43.5 -0.4**
KDAK pmax pmax
comp=Z,11nm,0.6s
WRH Wood River Hil 67.05 336 *e*P **P 15 23 42.6 -1.2**
comp=Z,6.9nm,0.9s
COLA College 67.10 336 *i* P **P 15 23 43.9 -0.2**
COLA pmax pmax
comp=Z,20nm,1.9s
TCOL CIGO, UAF Yank 67.11 336 P **P 15 23 43.8 -0.4**
baz=112
MCK McKinley 67.13 335 *e*P **P 15 23 43.8 -0.6**
comp=Z,15nm,0.9s
MCK McKinley 67.13 335 *e*P **P 15 23 43.8 -0.6**
MCK pmax pmax
comp=Z,15nm,0.9s
SUA Susitna One 67.17 332 *e*P **P 15 23 43.9 -0.9**
comp=Z,8.3nm,0.8s
BWN Browne 67.50 335 *e*P **P 15 23 45.7 -1.0**
comp=Z,43nm,0.8s
TRF Thorofare Moun 67.60 334 *e*P **P 15 23 46.5 -1.1**
comp=Z,14nm,1.0s
SKT Skwentna 67.68 333 *e*P **P 15 23 47.1 -0.8**
comp=Z,9.2nm,0.9s
SPU Mount Spurr 67.69 332 *e*P **P 15 23 47.1 -1.0**
RSO Redoubt South 67.82 331 *e*P **P 15 23 47.3 -1.7**
KTH Kantishna Hill 67.90 334 *e*P **P 15 23 48.0 -1.4**
comp=Z,11nm,0.8s
BPAW Bear Paw Mtn. 68.11 335 *e*P **P 15 23 48.9 -1.6**
comp=Z,18nm,1.0s
PPT Papeete 68.29 246 LR LR 15 45 19.1
comp=Z,574nm,18.8s,baz=58,slow=28
PPT2 Papeete2 68.30 246 *e*S **S 15 32 48.7 -1.4**
comp=Z,171nm,24.5s
PPT2 Papeete2 68.30 246 *e*LR LR 15 44 27.2
comp=Z,818nm,23.8s,baz=58
COLD Coldfoot 68.85 338 *e*P **P 15 23 54.8 -0.4**
comp=Z,10nm,1.0s
TOLK Toolik Lake Re 69.14 340 *e*P **P 15 23 56.4 -0.6**
comp=Z,18nm,1.6s
TOLK Toolik Lake Re 69.14 340 P **P 15 23 56.1 -0.9**
baz=112,SNR=6.5
CHGN Chignik 69.85 326 *e*P **P 15 24 00.4 -1.1**
comp=Z,38nm,0.7s
TTA Tatalina 69.94 333 *e*P **P 15 24 00.2 -1.9**
comp=Z,6.3nm,0.9s
TTA Tatalina 69.94 333 *e*P **P 15 24 00.2 -1.9**
TTA pmax pmax
comp=Z,6.0nm,0.9s
TBI Tubuai 70.34 240 *e*S **S 15 33 13.9 +0.1**
comp=Z,174nm,28.8s
TBI Tubuai 70.34 240 *e*LR LR 15 45 22.0
comp=Z,830nm,24.5s,baz=66
TBI Tubuai 70.34 240 *e*T T 16 40 18.8
comp=Z,6.4nm,0.3s
RDOG Red Dog Mine 73.76 338 *e*P **P 15 24 23.1 -1.6**
comp=Z,6.7nm,1.0s
ESDC Sonseca Array 77.26 52 P **P 15 24 42.7 -2.7**
comp=Z,0.7nm,0.6s,baz=292,slow=5.3,SNR=7.7
ESDC LR LR 15 53 02.5
comp=Z,296nm,21.6s,baz=275,slow=31
ATKA Atka Island 78.95 321 *e*P **P 15 24 53.4 -1.0**
comp=Z,18nm,0.7s
ADK Adak 80.52 321 *e*P **P 15 25 02.9 0.0**
comp=Z,35nm,0.6s
ADK Adak 80.52 321 *e*P **P 15 25 02.9 0.0**
ADK pmax pmax
comp=Z,35nm,0.6s
DBIC Dimbokro 81.08 85 LR LR 15 59 39.1
comp=Z,216nm,19.1s,baz=261,slow=35
SPA0 Spitsbergen Ar 81.19 12 *e*P **P 15 25 03.4 -2.7**
comp=Z,63nm,1.4s
SPITS Spitsbergen Ar 81.19 12 P **P 15 25 03.4 -2.7**
comp=Z,7.2nm,0.9s,baz=327,slow=2.4,SNR=2.8
NOA NORSAR Array B 83.69 29 P **P 15 25 16.1 -3.3**
comp=Z,0.3nm,0.6s,baz=285,slow=5.1,SNR=2.2
NOA LR LR 16 00 08.2
comp=Z,359nm,20.2s,baz=270,slow=34
HFS Hagfors 85.09 30 P **P 15 25 23.4 -3.1**
comp=Z,1.3nm,0.7s,baz=224,slow=5.8,SNR=3.0
BILL Bilibino 85.18 339 *e*P **P 15 25 25.9 -0.9**
comp=Z,11nm,0.8s
BILL Bilibino 85.18 339 *c i*P **P 15 25 25.9 -0.9**
BILL *i* 15 25 54.5
BILL pmax pmax
comp=Z,8.0nm,0.9s
BILL MLR MLR
comp=Z,478nm,23.0s
TORD Torodi Ar. Bea 86.18 77 LR LR 16 01 51.1
comp=Z,258nm,19.6s,baz=310,slow=34
ARCES ARCESS Array B 86.60 19 LR LR 16 01 52.2
comp=Z,183nm,21.9s,baz=264,slow=34
CLL Collm 87.04 38 *e*P **P 15 25 35.0 -1.3**
CLL *e*PP **PP 15 28 59.0 -0.8**
CLL *e*S **sS 15 36 34.0 -2.6**
CLL *e*PS PS 15 37 15.0 -3.8
CLL *e*SS **SS 15 42 00.0 +5.3**
CLL *e*(SSS) 15 45 42.0
CLL *e*SSSS 15 48 24.0
CLL Lm MLR 16 04 00.0
comp=N,200nm,19.1s
CLL Lm MLR 16 04 00.0
comp=E,300nm,19.7s
CLL Lm MLR 16 04 00.0
comp=Z,400nm,19.3s
CLL Collm 87.04 38 *e*P **P 15 25 35.0 -1.3**
CLL MLR MLR
comp=Z,400nm,19.3s
KHC Kasperske Hory 87.98 40 AMS AMS 16 02 30.0
comp=Z,600nm,17.7s
GERES GERESS Array B 88.13 40 LR LR 16 00 16.8
comp=Z,445nm,21.5s,slow=32

PVCC	Panska Ves	88.20	39	AMS	AMS	16 00 20.0		
	comp=Z,300nm,20.0s							
KEST	Kesra	88.29	54	LR	LR	16 00 30.7		
	comp=Z,260nm,21.9s,baz=235,slow=32							
PRU	Pruhonice	88.34	39	AMS	AMS	16 01 00.0		
	comp=Z,800nm,18.9s							
GOPC	GO Pecny, Ondr	88.51	39	AMS	AMS	16 01 30.0		
	comp=Z,800nm,21.6s							
UPC	Upice	89.09	38	AMS	AMS	16 01 10.0		
	comp=Z,300nm,20.8s							
CHVC	Chvalec	89.09	38	AMS	AMS	16 05 20.0		
	comp=Z,300nm,17.3s							
TREC	Trest	89.13	40	AMS	AMS	16 02 00.0		
	comp=Z,500nm,17.9s							
OSTC	Ostas	89.20	38	AMS	AMS	16 05 30.0		
	comp=Z,300nm,19.3s							
DPC	Dobruska-Polom	89.33	39	AMS	AMS	16 02 00.0		
	comp=Z,400nm,22.3s							
FINES	FINESS Array B	90.32	26	LR	LR	16 03 29.8		
	comp=Z,382nm,20.9s,baz=291,slow=34							
OKC	Ostrava-Krasne	90.61	39	AMS	AMS	16 02 20.0		
	comp=Z,500nm,19.8s							
TIXI	Tiksi	93.26	349	P	P	15 26 03.3	-1.7	
	comp=Z,3.0nm,0.6s,baz=55,slow=6.0							
TIXI	Tiksi	93.26	349	eP	P	15 26 02.6	-2.4	
	comp=Z,3.0nm,0.6s							
TIXI	Tiksi	93.26	349	ceP	P	15 26 03.0	-2.0	
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.8s							
PET	Petropavlovsk	94.58	326	eP	P	15 26 14.4	+3.0	
PET				e		15 29 59.9		
PET				eS	S	15 37 19.4	-0.8	
PET				ePS	PS	15 39 22.6	+40	
PET				pmax	pmax			
	comp=Z,100nm,10.6s							
PET				MLR	MLR			
	comp=Z,100nm,19.0s							
PET				MLR	MLR			
	comp=Z,100nm,20.0s							
PEA1	Petropavlovsk-	95.06	327	eP	P	15 26 13.4	-0.2	
PETK	Petropavlovsk-	95.06	327	P	P	15 26 13.5	-0.2	
	comp=Z,2.0nm,0.7s,baz=56,slow=11,SNR=5.8							
PETK				LR	LR	16 10 42.0		
	comp=Z,98nm,21.2s,baz=54,slow=36							
AKASG	Malin Array Be	96.78	35	LR	LR	16 08 21.6		
	comp=Z,361nm,19.7s,baz=295,slow=34							
OBN	Obninsk	98.29	29	LR	LR	16 10 50.4		
	comp=Z,50nm,18.8s,baz=336,slow=36							
NRIK	Noril'sk	98.89	2	LR	LR	16 12 20.3		
	comp=Z,388nm,21.3s,baz=20,slow=36							
DZM	Mont Dzumac	109.50	251	eSS	SS	15 47 10.6	-1.8	
	comp=Z,81nm,24.6s							
DZM	Mont Dzumac	109.50	251	eLR	LR	16 03 28.6		
	comp=Z,263nm,23.2s							
SYO	Syowa Base	113.67	162⇓	ePdiff	Pdif	15 27 33.4	-2.8	
SYO	Syowa Base	113.67	162⇑	ePdiff	pPdif	15 27 52.6	+1.3	
ZAA1	Zalesovo Array	114.06	5	ePKiKP	PKiKP	15 31 28.4	-1.4	
ZALV	Zalesovo Beam	114.07	5	PKiKP	PKiKP	15 31 28.4	-1.4	
	comp=Z,1.5nm,0.6s,baz=312,slow=1.7,SNR=5.3							
BOSA	Boshof	115.12	116	PKP	PKPdf	15 31 32.1	-0.5	
	comp=Z,2.0nm,0.8s,baz=64,slow=3.2,SNR=3.3							
KURBB	Kurchatov Arra	116.50	10	PKP	PKPdf	15 31 33.1	-1.4	
	comp=Z,0.3nm,0.4s,baz=343,slow=1.9,SNR=5.9							
ULN	Ulaanbaatar	119.20	349	c iPKIKP	PKiKP	15 31 41.5	+1.4	
ULN				pmax	pmax			
	comp=Z,5.0nm,2.5s							
SONA0	Songino Array	119.35	350	ePKPdf	PKPdf	15 31 39.2	-1.1	
SONM	Songino Array	119.35	350	PKP	PKPdf	15 31 39.2	-1.1	
	comp=Z,1.8nm,0.6s,baz=352,slow=1.8,SNR=11							
GEYT	Alibeck	120.69	32	PKP	PKPdf	15 31 42.6	-0.4	
	comp=Z,1.7nm,0.7s,baz=343,slow=1.5,SNR=4.4							
MK32	Makanchi Array	120.82	8	ePKPdf	PKPdf	15 31 41.1	-1.9	
MKAR	Makanchi Array	120.82	8	PKP	PKPdf	15 31 41.1	-1.9	
	comp=Z,0.4nm,0.5s,baz=15,slow=3.8,SNR=4.6							
KSRS	Korea Array	120.94	328	PKP	PKiKP	15 31 43.7	+0.1	
	comp=Z,7.2nm,0.6s,baz=12,slow=1.8,SNR=42							
KS15	Wonju Array Si	120.97	328	ePKPdf	PKPdf	15 31 41.1	-2.4	
KMBO	Kilima Mbogo	123.78	83	c iPKIKP	PKiKP	15 31 51.7	+1.6	
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.4s							
WMQ	Urumqi	124.36	5	ePKP	PKPdf	15 31 48.9	-1.1	
WMQ				AMB	AMB			
	comp=Z,80nm,4.9s							
WMQ				LR	LR			
	comp=Z,89nm,26.3s							
WMQ				LR	LR			
	comp=Z,140nm,23.1s							
WMQ				LR	LR			
	comp=Z,190nm,17.5s							
HHC	Hu-ho-hao-te	124.77	343	ePKP	PKiKP	15 31 54.0	+2.8	
HHC				PP	PP	15 33 45.4	+7.9	
HHC				AMB	AMB			
	comp=Z,140nm,5.6s							
HHC				LR	LR			
	comp=Z,230nm,17.5s							
HHC				LR	LR			
	comp=Z,140nm,16.2s							
HHC				LR	LR			
	comp=Z,450nm,18.0s							
KSH	Kashi	126.49	16	ePKP	PKiKP	15 31 56.9	+2.2	
GTA	Gaotai	128.57	353	ePKP	PKiKP	15 31 59.0	+0.1	
GTA				LR	LR			
	comp=Z,98nm,17.5s							
GTA				LR	LR			
	comp=Z,130nm,19.2s							
GTA				LR	LR			
	comp=Z,130nm,19.6s							
NJ2	Nanjing	129.75	331	ePKP	PKPdf	15 31 58.8	-1.7	
STKA	Stephens Creek	131.10	238	PKP	PKiKP	15 32 05.7	+1.7	
	comp=Z,2.3nm,0.8s,baz=14,slow=3.2,SNR=7.5							
LZH	Lanzhou	131.19	348	ePKP	PKPdf	15 32 02.8	-0.5	
LZH				sPKP		15 32 31.3		
LZH				LR	LR			
	comp=Z,150nm,18.0s							
LZH				LR	LR			
	comp=Z,150nm,18.1s							
LZH				LR	LR			
	comp=Z,200nm,20.2s							
XAN	Xi'an	131.86	342	PKP	PKiKP	15 32 05.8	+0.3	
XAN				LR	LR			
	comp=Z,210nm,20.6s							
XAN				LR	LR			
	comp=Z,250nm,24.9s							
XAN	Xi'an	131.86	342	ePKPdf	PKPdf	15 32 04.3	-0.2	
XAN	Xi'an	131.86	342	ePKIKP	PKPdf	15 32 04.3	-0.2	
WHN	Wuhan	133.05	334	⇓PKP	PKiKP	15 32 20.3	+12	
WHN				PP	PP	15 34 32.1	+0.3	
WHN				AMB	AMB			
	comp=Z,200nm,19.9s							
WHN				LR	LR			
	comp=Z,480nm,22.2s							
ENH	Enshi	135.16	340	ePKPdf	PKPdf	15 32 10.6	-0.1	
CD2	Chengdu	136.20	346	PKP	PKPdf	15 32 09.9	-2.8	
AS31	Alice Springs	139.39	248	ePKPdf	PKPdf	15 32 18.6	-0.1	
ASAR	Alice Springs	139.39	247	PKhKP	PKPpre	15 32 11.8		
	comp=Z,0.6nm,0.6s,baz=105,slow=3.7,SNR=16							
ASAR				PKP	PKPdf	15 32 18.7	-0.1	
	comp=Z,1.6nm,0.7s,baz=93,slow=2.1,SNR=20							
ASAR				SKPab	SKPab	15 35 56.8	-3.6	
	comp=Z,0.7nm,0.7s,baz=97,slow=2.8,SNR=5.0							
WB2	Warramunga Arr	139.44	253	ePKPdf	PKPdf	15 32 18.0	-0.9	
WRAB	Tennant Creek	139.44	253	c iPKIKP	PKiKP	15 32 27.1	+5.9	
WRAB				pmax	pmax			
	comp=Z,6.0nm,1.0s							
WR1	Warramunga Arr	139.45	253	ePKPdf	PKPdf	15 32 19.5	+0.6	
WRA	Warramunga Arr	139.45	253	PKP	PKPdf	15 32 19.5	+0.6	
	comp=Z,4.9nm,0.6s,baz=118,slow=1.3,SNR=32							
GYA	Guiyang	139.61	341	ePKP	PKiKP	15 32 22.8	+1.2	
GYA				AMB	AMB			
	comp=Z,120nm,7.8s							
QIZ	Qiongzhong	145.04	331	PKPbc	PKPbc	15 32 27.5	-0.8	
QIZ				LR	LR			
	comp=Z,170nm,20.6s							
QIZ				LR	LR			
	comp=Z,120nm,13.7s							
QIZ				LR	LR			
	comp=Z,200nm,17.2s							
QIZ	Qiongzhong	145.04	331	ePKPbc	PKPbc	15 32 27.7	-0.5	
FITZ	Fitzroy Crossi	147.82	255	ePKPbc	PKPbc	15 32 35.7	-0.8	
NONG	Nongkai	148.58	341	P	PKiKP	15 32 39.6	-0.4	
CHTO	Chiang Mai	148.92	349	ePKPbc	PKPbc	15 32 39.1	-0.3	
CHTO	Chiang Mai	148.92	349	ePKP2	PKPbc	15 32 39.1	-0.3	
CMMT	Chiang Mai	148.92	349	P	PKPbc	15 32 39.5	+0.1	
LAMP	Lampang	149.07	348	P	PKPbc	15 32 40.0	+0.3	
	comp=Z,57μm,0.6s,comp=Z,540μm							
CMAR	Chiang Mai Arr	149.27	349	PKPbc	PKPdf	15 32 37.1	+1.2	

comp=Z,7.8nm,0.6s,baz=309,slow=2.0,SNR=36

*IDC **17** 15:21:26.4±15.0, 30°.58S×177°.38E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/19, mbtmp4.1/4, ML4.5/1, Error ellipse: s-maj=298.4km s-min=42.1km az=61.0*
*ISCJB **17** 15:21:49.4±0.7, 32°.69S±0°.06×179°.4E±0°.1, h372km, mb3.3/3, Error ellipse: s-maj=17.5km s-min=7.4km az=12.9*
*WEL **17** 15:21:55.7±0.8, 33°S±7°×18°0E±1°6, h254km±19km, M4.2/15, mB4.8/10, MLv4.4/15, Mw(mB)4.0/10, Error ellipse: s-maj=0.0km s-min=0.0km az=110.8*

ISC 17 15:21:48.5±1.0, 32°.71S±0°.08×179°.5E±0°.1, h372km, n39, σ2°38/48, mb3.4/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.07	33	P	Pn	15 23 00.6	+1.0
GLKZ				S	S	15 23 54.6	-2.5
MXZ	Matakaoa Point	4.94	191	P	Pn	15 23 11.2	+2.8
WMGZ	Waiomatatini S	5.18	190	P	Pn	15 23 14.0	+3.1
WMGZ				S	S	15 24 16.5	-1.3
HAZ	Te Kaha	5.23	195	P	Pn	15 23 14.1	+2.6
HAZ				S	S	15 24 15.5	-3.4
PKGZ	Pakihiroa	5.30	193	P	Pn	15 23 15.8	+3.5
PUZ	Puketiti	5.45	191	P	Pn	15 23 15.9	+2.1
PUZ				S	S	15 24 20.1	-3.2
RUGZ	Raukumara Rang	5.46	196	P	Pn	15 23 16.2	+2.1
RUGZ				S	S	15 24 18.7	-4.9
OUZ	Omahuta	5.54	242	P	Pn	15 23 17.7	+2.8
TWGZ	Tauwhareparae	5.60	193	P	Pn	15 23 17.0	+1.4
TWGZ				S	S	15 24 25.7	-0.6
OPRZ	Ohinepanea	5.67	205	P	Pn	15 23 19.1	+2.8
MWZ	Matawai	5.84	196	P	Pn	15 23 20.1	+1.8
MWZ				S	S	15 24 27.0	-4.2
CNGZ	Carnagh Statio	5.86	190	P	Pn	15 23 21.7	+3.3
LIRZ	Lichensteins R	5.88	205	P	Pn	15 23 23.8	+5.2
TKGZ	Te Karaka	5.88	193	P	Pn	15 23 20.1	+1.5
TKGZ				S	S	15 24 29.0	-2.8
URZ	Urewera	5.88	199	Pn	Pn	15 23 19.3	+0.7
	6.5nm,0.3s,baz=34,slow=7.3,SNR=100						
URZ				Sn	S	15 24 29.1	-2.7
	2.6nm,0.3s,baz=87,slow=22,SNR=10						
URZ	Urewera	5.88	199	P	Pn	15 23 19.4	+0.8
URZ				S	S	15 24 28.8	-3.0
KARZ	Kaharoa	5.94	206	P	Pn	15 23 22.0	+2.7
RAGZ	Rawiri	6.02	196	P	Pn	15 23 22.8	+2.5
RIGZ	Rimuhau	6.15	193	P	Pn	15 23 23.8	+2.1
MUGZ	Murupara	6.18	201	P	Pn	15 23 23.8	+1.8
SNGZ	Shannon Statio	6.32	196	P	Pn	15 23 25.8	+2.3
PRGZ	Paritu Road	6.34	192	P	Pn	15 23 26.4	+2.6
KNZ	Kokohu	6.48	193	P	Pn	15 23 27.2	+1.9
RAHZ	Arahi	6.50	197	P	Pn	15 23 27.5	+1.8
MTHZ	Maungataniwha	6.51	199	P	Pn	15 23 27.5	+1.8
MHGZ	Mahia Peninsul	6.56	191	P	P	15 23 29.7	+2.4
WHHZ	Waihua	6.62	196	P	Pn	15 23 28.7	+1.8
NMHZ	Naumai	6.75	198	P	Pn	15 23 30.4	+2.0
ARHZ	Aropaoanui	6.85	197	P	Pn	15 23 31.0	+1.4
HIZ	Hauiti	6.93	212	P	P	15 23 34.3	+2.7
MCHZ	McNeill Hill	7.10	198	P	Pn	15 23 34.0	+1.5
KWHZ	Kaweka Forest	7.16	200	P	Pn	15 23 33.7	+0.5
BHHZ	Black Hill Sta	7.32	202	P	Pn	15 23 35.1	0.0
KRHZ	Kereru	7.38	199	P	Pn	15 23 36.2	+0.6
KAHZ	Kahuranaki	7.39	196	P	Pn	15 23 37.1	+1.3
PNHZ	Pukenui	7.67	200	P	Pn	15 23 39.1	0.0
STKA	Stephens Creek	31.98	261	P	P	15 27 41.8	+0.3
	1.6nm,0.8s,baz=101,slow=10,SNR=3.1						
ASAR	Alice Springs	40.96	271	P	P	15 28 55.5	-1.2
	0.5nm,0.5s,baz=108,slow=7.8,SNR=18						
WRA	Warramunga Arr	42.17	276	P	P	15 29 04.2	-2.2
	1.5nm,0.3s,baz=110,slow=8.4,SNR=29						

*ISCJB **17** 15:22:28.9±0.3, 22°.81N±0°.01×121°.36E±0°.02, h21km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=18.1*
*TAP **17** 15:22:28.3, 22°.82N×121°.33E, h17km, ML3.4, C*
*JMA **17** 15:22:28.4±0.1, 22°.84N×121°.38E, h16km±3km, M3.2*

ISC 17 15:22:28.4±1.0, 22°.83N±0°.02×121°.33E±0°.02, h15km±8km, n78, σ0°88/134, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	Taitung	0.18	246	⇑i P	Pb	15 22 34.1	+0.6
	baz=246						
TTN				i S	Sb	15 22 38.0	+1.1
	baz=246						
TWGBT	Beinan	0.23	267	eP	Pb	15 22 34.2	-0.1
	baz=269						
TWGBT				eS	Sb	15 22 38.6	+0.3
	baz=269						
TWG	Pinlang	0.24	268	⇓i P	Pb	15 22 34.6	+0.1
	baz=269						
TWG				i S	Sb	15 22 38.5	0.0
	baz=269						
CHKT	Chengkung	0.27	7	P	Pb	15 22 35.5	+0.5
	baz=9.0						
CHKT				S	Sb	15 22 40.3	+0.8
	baz=9.0						
ECL	Taimali	0.42	236	P	Pb	15 22 37.1	-0.4
	baz=236						
ECL				i S	Sb	15 22 43.3	-0.4
	baz=236						
ELDTW	Lidau	0.46	321	i P	Pg	15 22 37.5	-0.1
	baz=322						
ELDTW				i S	Sb	15 22 44.6	-0.4
	baz=322						
TWF1	Yuli	0.52	357	P	Pg	15 22 38.6	-0.1
	baz=357						
TWF1				i S	Sb	15 22 47.5	+0.8
	baz=357						
YULB	Yu-li	0.56	357	eP	Pg	15 22 39.2	-0.3
	baz=357						
YULB				eS	Sb	15 22 48.2	+0.4
	baz=357						
TAW	Tawu	0.62	221	i P	Pb	15 22 40.8	-0.1
	baz=220						
TAW				i S	Sb	15 22 49.3	-0.1
	baz=220						
STYT	Tauyuan	0.62	302	i P	Pg	15 22 40.5	-0.2
	baz=303						
STYT				S	Sg	15 22 49.0	0.0
	baz=303						
EAST	Anshuo	0.63	225	P	Pb	15 22 41.1	0.0
	baz=224						
EAST				S	Sb	15 22 49.8	0.0
	baz=224						
SSD	Sandimen	0.65	263	i P	Pg	15 22 40.7	-0.4
	baz=263						
SSD				i S	Sg	15 22 48.1	-1.6
	baz=263						
SLGT	Liugui	0.65	285	eP	Pg	15 22 41.1	-0.1
	baz=285						
SLGT				eS	Sb	15 22 50.2	-0.2
	baz=285						
HGSD	Ruisui	0.67	8	eP	Pb	15 22 41.8	0.0
	baz=7.0						
HGSD				eS	Sb	15 22 51.8	+0.9
	baz=7.0						
EHY	Hungye	0.67	359	P	Pb	15 22 41.6	-0.3
EHY				eS	Sg	15 22 50.6	0.0
MASBT	Mashibuluo	0.68	252	eP	Pg	15 22 41.4	-0.3
	baz=252						
MASBT				eS	Sb	15 22 51.3	+0.2
	baz=252						
SGST	Jiashian	0.73	290	P	Pg	15 22 43.0	+0.3
	baz=290						
SGST				S	Sn	15 22 53.9	-1.3
	baz=290						
YUS	Yu-Shan	0.74	332	i P	Pg	15 22 42.7	-0.3
	baz=332						
YUS				i S	Sg	15 22 52.0	-1.0
	baz=332						
SGLT	Jiouru	0.78	263	eP	Pn	15 22 44.2	-0.7
	baz=262						
SGLT				S	Sn	15 22 54.8	-1.6
	baz=262						
SSPT	Xinbi	0.78	244	eP	Pn	15 22 44.1	-0.8
	baz=244						
SSPT				eS	Sn	15 22 54.8	-1.6
	baz=244						
TPUB	Ta-pu	0.80	306	eP	Pg	15 22 44.0	+0.1
	baz=306						
TPUB				eS	Sg	15 22 55.0	+0.6
	baz=306						
SCZT	Fangliau	0.80	235	P	Pg	15 22 44.1	+0.1
	baz=235						
SCZT				S	Sn	15 22 55.3	-1.5
	baz=235						
LAY	Lan-yu	0.81	165	P	Pg	15 22 44.4	+0.2
	baz=164						
LAY				S	Sn	15 22 55.8	-1.4
	baz=164						
CHN1	Nanshi	0.82	296	P	Pn	15 22 45.0	-0.4
	baz=296						
CHN1				eS	Sn	15 22 56.7	-0.7
	baz=296						
ALS	Alishan	0.83	325	i P	Pb	15 22 44.6	-0.2
	baz=325						
ALS				S	Sn	15 22 56.8	-1.3
	baz=325						
TWM1	Shoushan	0.84	270	P	Pn	15 22 46.1	+0.4
	baz=270						
EGFH	Guangfu	0.84	6	eP	Pn	15 22 45.8	0.0
	baz=6.0						
EGFH				eS	Sn	15 22 57.2	-0.7
	baz=6.0						
CHN4	Tsaushan	0.85	308	P	Pg	15 22 45.1	+0.1
	baz=308						
CHN4				i S	Sn	15 22 57.8	-0.4
	baz=308						
SNST	Tainan City	0.86	297	eP	Pn	15 22 46.2	+0.2
	baz=297						
SNST				eS	Sn	15 22 57.6	-0.7
	baz=297						
TWK	Hsinying	0.89	299	P	Pn	15 22 46.2	-0.3
	baz=300						
TWK				eS	Sn	15 22 58.9	-0.2
	baz=300						
SNJT	Kaohsiung City	0.92	265	eP	Pn	15 22 48.4	+1.6
	baz=265						
SNJT				eS	Sn	15 23 03.8	+4.0
	baz=265						
CHN3	Shinhua	0.92	286	eP	Pn	15 22 48.6	+1.8
	baz=285						
CHN3				eS	Sn	15 23 03.7	+3.9
	baz=285						
VWDT	VWDT	0.94	349	eP	Pb	15 22 46.0	-0.4
	baz=349						
VWDT				eS	Sn	15 22 59.6	-0.6
	baz=349						
WHYT	Xinyi Township	0.97	333	eP	Pg	15 22 47.4	+0.2
	baz=333						
WHYT				eS	Sn	15 23 00.9	-0.1
	baz=333						
CHN5	Tsauling	0.97	322	P	Pn	15 22 47.2	-0.4
	baz=322						
CHN5				S	Sn	15 23 00.8	-0.4
	baz=322						
ESL	Shilin	0.98	6	P	Pn	15 22 47.5	-0.3
	baz=6.0						
ESL				S	Sn	15 23 00.9	-0.5
	baz=6.0						
HEN	Hengchun	0.99	214	eP	Pg	15 22 49.1	+1.6
	baz=213						
HEN				S	Sn	15 23 00.7	-0.7
	baz=213						
WLCH	Liuqiu	1.00	242	P	Pn	15 22 47.4	-0.5
	baz=241						
TWKBT	Hengchun	1.00	208	eP	Pb	15 22 47.1	-0.4
	baz=208						
TWK1	Hengchun	1.01	209	eP	Pn	15 22 47.5	-0.6
	baz=208						
TWK1				S	Sn	15 23 01.2	-0.7
	baz=208						
TSEB	Hengchuen, Pin	1.01	203	eP	Pg	15 22 48.6	+0.7
	baz=205						
SSLB	Suanglung	1.01	340	eP	Pb	15 22 47.2	-0.5
	baz=340						
SSLB				eS	Sn	15 23 02.6	+0.4
	baz=340						
CHN2	Minshiung	1.05	312	P	Pg	15 22 49.6	+0.8
	baz=312						
CHN2				S	Sg	15 23 04.6	+2.0
	baz=312						
CHY	Chiayi	1.07	309	eP	Pg	15 22 49.0	0.0
	baz=309						
CHY				eS	Sg	15 23 04.2	+1.2
	baz=309						
WGK	Gukeng	1.11	321	eP	Pg	15 22 50.1	+0.3
	baz=321						
WGK				eS	Sg	15 23 04.9	+0.6
	baz=321						
SMLT	Sun Moon Lake	1.12	339	eP	Pg	15 22 50.4	+0.3
	baz=340						
SMLT				S	Sn	15 23 04.6	-0.3
	baz=340						
WDLH	Douliu	1.12	320	eP	Pg	15 22 50.4	+0.2
	baz=320						
WDLH				eS	Sg	15 23 06.0	+1.2
	baz=320						
OWD	Renai	1.13	353	eP	Pn	15 22 49.0	-0.8
	baz=353						
WJS	Zhushan	1.13	331	eP	Pg	15 22 50.4	+0.1
	baz=331						
WJS				eS	Sg	15 23 06.3	+1.2
	baz=331						
WLGB	Puzi	1.15	304	P	Pg	15 22 50.8	+0.2
	baz=304						
WLGB				eS	Sg	15 23 06.6	+1.0
	baz=304						
CHN8	Yiju	1.15	297	eS	Sg	15 23 06.3	+0.7
	baz=297						
TYC	Yuchr	1.15	338	P	Pg	15 22 51.5	+0.7
	baz=338						
TYC				S	Sg	15 23 06.8	+1.0
	baz=338						
CHGB	Renai	1.23	353	eP	Pn	15 22 51.1	-0.2
	baz=353						
DPDB	Guoxing	1.25	343	eP	Pg	15 22 52.3	-0.4
	baz=343						
DPDB				eS	Sg	15 23 08.6	-0.4
	baz=343						
TWD	Chiawan	1.27	11	eP	Pb	15 22 52.0	0.0
	baz=11						
WSF	Szhu	1.30	309	eP	Pb	15 22 52.5	-0.1
	baz=308						
WSF				S	Sg	15 23 09.9	-0.5
	baz=308						
WHF	Hehuan Shan	1.31	357	eP	Pn	15 22 52.2	-0.4
	baz=357						
WHF				eS	Sn	15 23 10.0	0.0
	baz=357						
NACB	Ninganchiao	1.36	10	eP	Pn	15 22 51.7	-1.2
	baz=10.0						
TDCB	Techi	1.43	354	eP	Pn	15 22 53.6	-0.3
	baz=353						
NNSB	Datong	1.59	2	eP	Pn	15 22 56.3	+0.1
	baz=1.0						
WDGT	Dungji	1.60	286	eP	Pn	15 22 55.8	-0.3
	baz=285						
NANB	Nanao	1.64	14	eP	Pn	15 22 56.3	-0.4
	baz=13						
PHUB	P'eng-hu	1.75	293	eP	Pn	15 22 58.4	+0.1
	baz=293						
PNG	Penghu	1.79	295	P	Pn	15 22 58.5	-0.3
	baz=294						
PNG				S	Sb	15 23 21.8	-1.4
	baz=294						
VCHM	Qimei	1.79	283	eP	Pn	15 22 58.9	+0.1
	baz=282						
ENTT	Nioudou	1.81	7	eP	Pb	15 23 00.1	-1.3
	baz=7.0						
LIOB	Emei	1.83	351	eP	Pb	15 23 00.7	-1.0
	baz=351						
YHNB	Yeheng	1.83	1	eP	Pn	15 22 59.3	-0.2
	baz=1.0						
TWC	Suao	1.83	15	eS	Sb	15 23 23.7	-0.8
	baz=15						
NWLT	Wulai	1.95	5	eP	Pb	15 23 02.8	-0.8
	baz=4.0						
JYNG	Yonagunijimaku	2.19	42	P	Pb	15 23 05.9	-1.9
JYNG				S	Sn	15 23 32.2	+1.0
YOJ	Yonaguni jima	2.24	43	P	Pn	15 23 06.2	+1.2
YOJ				eS	Sn

JISG *e*S **Sn** **15 23 56.4 -0.8**
JTJ Tarama 3.58 59 *e*S **Sn** **15 24 05.8 +0.4**

IDC ***17*** *15:27:04.4±0.7, 34°.28N×25°.09E, h0km, mb4.0/22, mb1 4.1/31, mb1mx4.0/58, mbtmp4.0/31, ML4.4/7, MS2.9/5, Ms1 2.9/5, ms1mx2.6/47, Error ellipse: s-maj=14.7km s-min=13.0km az=55.0*
NEIC ***17*** *15:27:06.4±1.9, 34°.29N×25°.08E, h10km±1km, mb4.3/16, ML3.7(THE), Error ellipse: s-maj=11.3km s-min=6.3km az=192.0*
ISCJB ***17*** *15:27:06.5±0.6, 34°.20N±0°.02×25°.17E±0°.03, h24km±4km, mb4.1/33, MS3.3/2, Error ellipse: s-maj=4.4km s-min=2.9km az=39.1*
ATH ***17*** *15:27:06.5, 34°.26N×25°.14E, h14km±2km, ML3.8/11, Error ellipse: s-maj=4.0km s-min=1.3km az=349.0*
THE ***17*** *15:27:07.5, 34°.32N×25°.15E, h0km±1km, ML3.7/7, Error ellipse: s-maj=2.0km s-min=0.7km az=171.0*
HLW ***17*** *15:27:08.8, 34°.23N×25°.24E, h10km±20km, Md3.4*
ISK ***17*** *15:27:09.2, 34°.57N×25°.10E, h15km, ML4.0/16*
GII ***17*** *15:27:17.2±0.0, 33°.84N×26°.00E, h10km, mb4.0/2, MD3.8/3*
DDA ***17*** *15:28:00.8, 34°.00N×24°.88E, h18km±1km, ML4.3*
ISC 17 15:27:06.9±0.9, 34°.24N±0°.04×25°.19E±0°.02, h16km±5km, n193, σ1977/228, mb4.2/33, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.84**	**338**	P	**Pb**	**15 27 22.2**	**-1.0**
SIVA				S	**Sg**	**15 27 33.6**	**-0.8**
SIVA	**Sivas**	**0.84**	**338**	P	**Pb**	**15 27 21.9**	**-1.3**
SIVA				S	**Sg**	**15 27 32.3**	**-2.1**
SIVA				AML	AML	15 27 40.9	
	comp=N,40111µm,0.5s						
SIVA				AML	AML	15 27 44.0	
	comp=E,39081µm,0.7s						
TMBK	**Timbaki Herakl**	**0.91**	**337**	P	**Pb**	**15 27 23.6**	**-0.7**
TMBK				S	**Sg**	**15 27 36.8**	**+0.4**
LAST	**Lasithi**	**0.95**	**14**	P	**Pb**	**15 27 24.5**	**-0.7**
LAST				S	**Sg**	**15 27 38.2**	**+0.2**
LAST	**Lasithi**	**0.95**	**14**	P	**Pb**	**15 27 24.4**	**-0.8**
LAST				S	**Sg**	**15 27 38.2**	**+0.2**
LAST				AML	AML	15 27 45.0	
	comp=E,9958µm,0.5s						
LAST				AML	AML	15 27 48.2	
	comp=N,6184µm,0.9s						
KSTL	**Kastelli Herak**	**1.07**	**355**	P	**Pb**	**15 27 25.3**	**-1.8**
KSTL				S	**Sb**	**15 27 39.3**	**-1.6**
IDI	**Anoyia**	**1.08**	**347**	Pn	**Pb**	**15 27 26.2**	**-1.1**
	comp=N,88nm,0.3s,baz=161,slow=21,SNR=113						
IDI				Sn	**Sb**	**15 27 40.2**	**-1.0**
	comp=N,621nm,0.3s,baz=80,slow=10.0,SNR=36						
NPS	**Neapolis**	**1.08**	**18**	P	**Pb**	**15 27 26.9**	**-0.4**
NPS				S	**Sn**	**15 27 42.6**	**+0.4**
NPS	**Neapolis**	**1.08**	**18**	P	**Pb**	**15 27 26.9**	**-0.4**
NPS				S	**Sn**	**15 27 42.7**	**+0.4**
NPS				AML	AML	15 27 52.1	
	comp=N,6066µm,0.4s						
NPS				AML	AML	15 27 58.6	
	comp=E,7273µm,0.5s						
GVD	**Gavdhos**	**1.09**	**304**	PG	**Pb**	**15 27 26.5**	**-1.0**
GVD				SG	**Sb**	**15 27 39.6**	**-2.0**
GVD	**Gavdhos**	**1.09**	**304**	P	**Pb**	**15 27 26.7**	**-0.8**
GVD				S	**Sb**	**15 27 42.2**	**+0.6**
GVD	**Gavdhos**	**1.09**	**304**	P	**Pb**	**15 27 26.6**	**-1.0**
GVD				S	**Sb**	**15 27 41.6**	**+0.1**
GVD				AML	AML	15 27 51.2	
	comp=E,12977µm,0.5s						
GVD				AML	AML	15 28 00.5	
	comp=N,13408µm,0.6s						
GVDS	**Gavdos**	**1.09**	**304**	P	**Pb**	**15 27 27.3**	**-0.2**
STIA	**Sitia Lasithi**	**1.22**	**37**	P	**Pb**	**15 27 30.0**	**+0.4**
ZKR	**Zakros**	**1.22**	**44**	PG	**Pb**	**15 27 29.7**	**+0.1**
ZKR				SG	**Sn**	**15 27 45.9**	**+0.4**
ZKR	**Zakros**	**1.22**	**44**	P	**Pb**	**15 27 29.9**	**+0.3**
ZKR				S	**Sg**	**15 27 46.8**	**+0.5**
ZKR	**Zakros**	**1.22**	**44**	P	**Pn**	**15 27 29.4**	**0.0**
ZKR				S	**Sg**	**15 27 46.8**	**+0.5**
ZKR				AML	AML	15 27 55.5	
	comp=N,4522µm,0.4s						
ZKR				AML	AML	15 27 57.8	
	comp=E,7282µm,0.5s						
PRNS	**Prines Rethymn**	**1.26**	**333**	P	**Pn**	**15 27 29.6**	**-0.3**
VAM	**Vamos**	**1.43**	**325**	P	**Pn**	**15 27 31.8**	**-0.4**
VAM				S	**Sb**	**15 27 51.9**	**+0.8**
VAM	**Vamos**	**1.43**	**325**	P	**Pn**	**15 27 32.0**	**-0.2**
VAM				S	**Sb**	**15 27 51.8**	**+0.6**
VAM				AML	AML	15 28 02.8	
	comp=E,5698µm,0.6s						
VAM				AML	AML	15 28 13.0	
	comp=N,6023µm,0.8s						
IMMV	**Iera Moni Meta**	**1.58**	**321**	PN	**Pn**	**15 27 34.9**	**+0.6**
IMMV	**Iera Moni Meta**	**1.58**	**321**	P	**Pn**	**15 27 35.1**	**+0.8**
IMMV				S	**Sg**	**15 27 58.8**	**+1.0**
IMMV	**Iera Moni Meta**	**1.58**	**321**	P	**Pn**	**15 27 35.1**	**+0.8**
IMMV				S	**Sb**	**15 27 56.4**	**+1.0**
IMMV				AML	AML	15 28 11.4	
	comp=N,5139µm,0.5s						
IMMV				AML	AML	15 28 12.8	
	comp=E,5443µm,0.8s						
KARP	**Karpathos**	**2.08**	**50**	PN	**Pb**	**15 27 43.1**	**-1.2**
KARP	**Karpathos**	**2.08**	**50**	*e*Pn	**Pb**	**15 27 43.9**	**-0.5**
KARP	**Karpathos**	**2.08**	**50**	P	**Pb**	**15 27 44.3**	**-0.1**
KARP				S	**Sb**	**15 28 10.1**	**+0.1**
KARP				AML	AML	15 28 29.2	
	comp=N,1931µm,0.7s						
KARP				AML	AML	15 28 33.4	
	comp=E,2131µm,1.1s						
SANT	**Santorini**	**2.14**	**6**	PN	**Pn**	**15 27 41.0**	**-1.1**
SANT	**Santorini**	**2.14**	**6**	*e*Pn	**Pn**	**15 27 42.0**	**-0.1**
SAP3	**Santorini-Thir**	**2.20**	**3**	P	**Pn**	**15 27 43.9**	**+1.1**
ANKY	**Antikythira Is**	**2.25**	**317**	P	**Pn**	**15 27 44.4**	**+0.9**
ANKY	**Antikythira Is**	**2.25**	**317**	P	**Pb**	**15 27 45.9**	**-1.3**
ANKY				AML	AML	15 28 34.3	
	comp=E,1660µm,0.9s						
ANKY				AML	AML	15 28 40.3	
	comp=N,1606µm,0.7s						
IOSP	**Ios island**	**2.48**	**2**	P	**Pn**	**15 27 47.0**	**+0.2**
MHLO	**Agia Marina, M**	**2.53**	**345**	P	**Pn**	**15 27 47.4**	**0.0**
MHLO	**Agia Marina, M**	**2.53**	**345**	P	**Pn**	**15 27 47.1**	**-0.3**
MHLO				AML	AML	15 28 35.4	
	comp=E,4308µm,0.5s						
MHLO				AML	AML	15 28 39.6	
	comp=N,3337µm,0.7s						
KYTH	**Kithira**	**2.68**	**320**	P	**Pn**	**15 27 50.6**	**+1.1**
KYTH	**Kithira**	**2.68**	**320**	P	**Pn**	**15 27 50.6**	**+1.1**
KYTH				AML	AML	15 28 52.7	
	comp=E,1065µm,1.2s						
KYTH				AML	AML	15 28 54.2	
	comp=N,829µm,1.1s						
KTHR	**Kythira**	**2.70**	**319**	P	**Pn**	**15 27 51.2**	**+1.5**
SLUM	**Salum**	**2.74**	**180**	P	**Pn**	**15 27 52.4**	**+2.2**
	baz=181						
SLUM				S	**Sn**	**15 28 23.6**	**+0.7**
	baz=181						
APE	**Apeiranthos**	**2.84**	**5**	PN	**Pn**	**15 27 50.7**	**-1.0**
APE	**Apeiranthos**	**2.84**	**5**	P	**Pn**	**15 27 51.8**	**+0.1**
SERI	**Serifos**	**2.98**	**349**	P	**Pn**	**15 27 53.9**	**+0.4**
VLI	**Veliai**	**3.09**	**324**	P	**Pn**	**15 27 55.3**	**+0.2**
ARG	**Arkhangelos**	**3.11**	**50**	PN	**Pn**	**15 27 56.9**	**+1.6**
DAT	**Datca**	**3.16**	**37**	PN	**Pn**	**15 27 57.3**	**+1.2**
DAT	**Datca**	**3.16**	**37**	*i* P	**Pn**	**15 27 57.9**	**+1.8**
DAT				IAML_P			
	comp=Z,1µm,0.1s						
DATC	**Datca-Mugla**	**3.22**	**38**	PN	**Pn**	**15 27 57.7**	**+0.8**
BODT	**Bodrum**	**3.31**	**31**	PN	**Pn**	**15 27 58.7**	**+0.6**
MATC	**Matruh**	**3.35**	**149**	P	**Pn**	**15 28 00.6**	**+1.9**
	baz=149						
BDRM	**Kayabasi**	**3.37**	**32**	*i* P	**Pn**	**15 28 00.6**	**+1.7**
BBRN	**Bozburun-Marma**	**3.38**	**43**	PN	**Pn**	**15 28 00.4**	**+1.3**
MRSB	**Marmaris-Mugla**	**3.48**	**44**	PN	**Pn**	**15 28 01.8**	**+1.3**
DID	**Didima**	**3.63**	**335**	P	**Pn**	**15 28 01.9**	**-0.6**
VLY	**Voula,Athens**	**3.78**	**343**	P	**Pn**	**15 28 04.5**	**-0.1**
DALY	**Dalyan (Mula)**	**3.82**	**47**	PN	**Pn**	**15 28 07.2**	**+2.1**
DALY	**Dalyan (Mula)**	**3.82**	**47**	*i* P	**Pn**	**15 28 07.4**	**+2.3**
DALY				IAML_P			
	comp=Z,1µm,0.2s						
TURN	**Turunc**	**3.83**	**46**	PN	**Pn**	**15 28 02.6**	**-2.6**
YER	**Yerkesik**	**3.83**	**40**	PN	**Pn**	**15 28 07.3**	**+1.9**
PYL	**PYLOS**	**3.87**	**314**	P	**Pn**	**15 28 07.2**	**+1.4**
ITM	**Ithomi**	**3.96**	**319**	PN	**Pn**	**15 28 07.5**	**+0.4**
ITM	**Ithomi**	**3.96**	**319**	*e*Pn	**Pn**	**15 28 06.5**	**-0.6**
FETY	**Fethiye**	**3.98**	**52**	PN	**Pn**	**15 28 09.8**	**+2.5**
FETY	**Fethiye**	**3.98**	**52**	P	**Pn**	**15 28 08.4**	**+1.1**
FETY	**Fethiye**	**3.98**	**52**	*i* P	**Pn**	**15 28 08.9**	**+1.6**
FETY				IAML_P			
	comp=Z,1µm,0.2s						
DGB	**zmir**	**4.05**	**19**	*i* P	**Pn**	**15 28 09.3**	**+1.1**
AYDN	**Tasoluk**	**4.05**	**32**	*i* P	**Pn**	**15 28 11.0**	**+2.6**
AYDN				IAML_P			
	comp=Z,2µm,0.3s						
AKAS	**Kas**	**4.12**	**60**	PN	**Pn**	**15 28 12.5**	**+3.1**
AKAS	**Kas**	**4.12**	**60**	*i* P	**Pn**	**15 28 10.6**	**+1.2**
AKAS				*i* S	**Sn**	**15 28 52.1**	**-5.3**
AKAS				IAML_P			
	comp=Z,2µm,0.2s						
CHOS	**Chios island**	**4.20**	**9**	PN	**Pn**	**15 28 09.8**	**-0.6**
URLA	**Izmir**	**4.27**	**15**	PN	**Pn**	**15 28 11.0**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**4.30**	**30**	PN	**Pn**	**15 28 12.9**	**+1.1**
GUR	**Goura**	**4.36**	**329**	P	**Pn**	**15 28 12.7**	**+0.1**
BLCB	**Balcova**	**4.40**	**19**	PN	**Pn**	**15 28 13.5**	**+0.4**
ELL	**Elmali**	**4.59**	**56**	PN	**Pn**	**15 28 18.7**	**+2.9**
DSF	**Desfina**	**4.69**	**333**	P	**Pn**	**15 28 17.2**	**+0.1**
AKUM	**Antalya-Kumluc**	**4.70**	**62**	*i* P	**Pn**	**15 28 18.9**	**+1.7**
SWA2		**4.98**	**177**	P	**Pn**	**15 28 22.8**	**+1.7**
	baz=177						
SIGR	**SIGRI**	**5.00**	**6**	PN	**Pn**	**15 28 21.3**	**+0.1**
AGG	**Agios Georgios**	**5.30**	**335**	PN	**Pn**	**15 28 25.7**	**+0.2**
AGG	**Agios Georgios**	**5.30**	**335**	*e*Pn	**Pn**	**15 28 25.5**	**-0.1**
KHAL	**Karahalli**	**5.39**	**39**	*i* P	**Pn**	**15 28 28.0**	**+1.1**
KHAL				IAML_P			
	comp=Z,528nm,0.2s						
KEPZ	**Antalya-Kepez**	**5.86**	**61**	*i* P	**Pn**	**15 28 35.5**	**+2.2**
KEPZ				IAML_P			
	comp=Z,412nm,0.2s						
LIT	**Litokhoron**	**6.24**	**341**	*e*Pn	**Pn**	**15 28 37.3**	**-1.0**
HMYD	**Mayadein**	**6.50**	**131**	P	**Pn**	**15 28 43.5**	**+1.6**
	baz=131						
HNAT	**Natroun**	**6.50**	**133**	P	**Pn**	**15 28 43.5**	**+1.5**
	baz=133						
ALN	**Alexandroupoli**	**6.69**	**6**	*e*Pn	**Pn**	**15 28 45.2**	**+0.7**
FNA	**Florina**	**7.21**	**336**	*e*Pn	**Pn**	**15 28 50.5**	**-1.1**
NBNS	**Bani Suef**	**7.64**	**135**	P	**Pn**	**15 28 59.2**	**+1.5**
	baz=135						
TIP	**Timpagrande**	**8.38**	**309**	*e*Pn	**Pn**	**15 29 07.7**	**-0.1**
KZIT	**Kziot**	**8.45**	**111**	Pn	**Pn**	**15 29 09.6**	**+0.9**
KZIT	**Kziot**	**8.45**	**111**	P	Pn	15 28 58.6	-10
	comp=Z,31nm,0.8s,comp=Z,1µmcomp=Z,0.3nm						
SLTI	**Sal'it**	**8.48**	**101**	Pn	**Pn**	**15 29 10.6**	**+1.4**
SLTI				Sn	**Sn**	**15 30 38.8**	**-5.9**
VTS	**Vitosha**	**8.51**	**350**	*e*Pn	**Pn**	**15 29 09.7**	**+0.1**
MMA0B	**Mount Meron ar**	**8.60**	**95**	Pn	**Pn**	**15 29 13.2**	**+2.3**
MMAI	**Mount Meron Ar**	**8.60**	**95**	Pn	**Pn**	**15 29 12.4**	**+1.5**
	comp=Z,3.6nm,0.3s,baz=284,slow=11,SNR=10						
MMAI				Sn	**Sn**	**15 30 42.1**	**-5.5**
	comp=Z,7.4nm,0.3s,baz=280,slow=26,SNR=10						
MMAI				LR	LR	15 34 19.0	
	comp=Z,42nm,19.7s,baz=135,slow=50						
AMAZ	**Amatzia**	**8.61**	**106**	Pn	**Pn**	**15 29 11.8**	**+0.9**
AMAZ				Sn	**Sn**	**15 30 41.8**	**-5.9**
BR101	**Keskin Array S**	**8.70**	**49**	*e*Pn	**Pn**	**15 29 13.2**	**+0.9**
BR131	**Keskin Array S**	**8.70**	**49**	*e*Pn	**Pn**	**15 29 14.0**	**+1.8**
BRTR	**Keskin Array B**	**8.70**	**49**	Pn	**Pn**	**15 29 13.2**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=221,slow=13,SNR=4.6						
BRTR				LR	LR	15 33 27.1	
	comp=Z,130nm,18.7s,baz=236,slow=44						
MMLI	**Mount Malkishu**	**8.74**	**99**	Pn	**Pn**	**15 29 14.4**	**+1.6**
YTIR	**Yattir**	**8.83**	**106**	Pn	**Pn**	**15 29 14.9**	**+0.9**
YTIR				Sn	**Sn**	**15 30 47.2**	**-6.1**
NATI	**Neve Ativ**	**8.83**	**93**	Pn	**Pn**	**15 29 16.1**	**+2.1**
NATI				Sn	**Sn**	**15 30 47.8**	**-5.4**
HMDT	**Nahal Hemdat**	**8.88**	**100**	Pn	**Pn**	**15 29 16.0**	**+1.4**
HMDT				Sn	**Sn**	**15 30 47.6**	**-6.7**
DSI	**Dead Sea**	**8.97**	**104**	Pn	**Pn**	**15 29 17.0**	**+1.2**
MZDA	**Masada**	**9.04**	**106**	Pn	**Pn**	**15 29 17.7**	**+0.9**
MZDA				Sn	**Sn**	**15 30 51.9**	**-6.4**
KRMI	**Paran Flat**	**9.06**	**114**	Pn	**Pn**	**15 29 17.5**	**+0.4**
KRMI				Sn	Sn	15 30 51.7	-7.2
PRNI	**Paran**	**9.16**	**112**	Pn	**Pn**	**15 29 19.0**	**+0.5**
PRNI				Sn	**Sn**	**15 30 54.3**	**-7.0**
VAE	**Valguarnera**	**9.33**	**293**	Sn	**Sn**	**15 31 03.4**	**-2.1**
	comp=Z,6.6nm,0.3s,baz=37,slow=20,SNR=3.0						
HRFI	**Mount Harif**	**9.34**	**114**	Pn	**Pn**	**15 29 21.7**	**+0.8**
HRFI				Sn	Sn	15 30 58.4	-7.2
HRFI	**Mount Harif**	**9.34**	**114**	P	Pn	15 29 08.6	-12
	comp=Z,37nm,0.5s						
MBRI	**Mt Berech**	**9.36**	**116**	Pn	**Pn**	**15 29 22.1**	**+0.8**
EIL	**Elat**	**9.46**	**116**	Pn	**Pn**	**15 29 22.9**	**+0.4**
	comp=Z,3.9nm,0.3s,baz=335,slow=5.2,SNR=24						
EIL				Sn	**Sn**	**15 31 05.1**	**-3.4**
	comp=Z,2.0nm,0.3s,baz=304,slow=7.3,SNR=5.2						
EIL	**Elat**	**9.46**	**116**	Pn	**Pn**	**15 29 23.1**	**+0.6**
EIL				Sn	Sn	15 31 00.7	-7.8
ASF	**Jabal al Asfar**	**10.02**	**99**	Pn	**Pn**	**15 29 31.5**	**+1.2**
	baz=288,slow=3.2,SNR=1.4						
ASF				Sn	Sn	15 31 08.9	-14
	comp=Z,0.7nm,0.3s,baz=34,slow=18,SNR=3.9						
MLR	**Muntele Rosu**	**11.26**	**3**	Pn	**Pn**	**15 29 47.7**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=190,slow=12,SNR=1.9						
MLR				LR	LR	15 34 49.7	
	comp=Z,129nm,19.0s,baz=120,slow=42						
SOKA	**Soboth**	**14.62**	**331**	*e*Pn	**Pn**	**15 30 28.8**	**-4.4**
	comp=Z,1.9nm,0.6s						
OBKA	**Obir**	**14.68**	**330**	*e*Pn	**Pn**	**15 30 33.7**	**-0.4**
	comp=Z,2.4nm,0.6s						
MODS	**Modra-Piesok**	**15.31**	**340**	*e*P	**P**	**15 30 45.8**	**-1.3**
KBA	**Koelnbreinsper**	**15.64**	**329**	*e*P	**P**	**15 30 50.9**	**0.0**
	comp=Z,7.0nm,0.7s						
ABTA	**Abfaltersbach**	**15.76**	**326**	*e*P	**P**	**15 30 52.1**	**0.0**
	comp=Z,11nm,0.6s						
MOA	**Molln**	**15.88**	**332**	*e*P	**P**	**15 30 51.9**	**-1.5**
	comp=Z,4.7nm,0.7s						
KRUC	**Moravsky**	**16.19**	**339**	*e*PN	**Pn**	**15 30 54.6**	**+0.9**
VRAC	**Vranov**	**16.35**	**340**	Pn	**Pn**	**15 30 56.5**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=160,slow=16,SNR=3.4						
VRAC	**Vranov**	**16.35**	**340**	*e*PN	**P**	**15 30 57.6**	**-1.0**
MORC	**Moravsky Berou**	**16.52**	**342**	*e*PN	**Pn**	**15 30 59.1**	**+1.1**
WTTA	**Wattenberg**	**16.55**	**326**	*e*P	**P**	**15 31 00.6**	**-0.4**
	comp=Z,11nm,1.1s						
WATA	**Walderalm**	**16.63**	**326**	*i* P	**P**	**15 31 02.1**	**+0.3**
	comp=Z,7.3nm,0.5s						
KBZ	**Khabaz**	**16.68**	**50**	Pn	**P**	**15 31 02.7**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=252,slow=8.9,SNR=10.0						
KBZ				LR	LR	15 39 23.1	
	comp=Z,40nm,19.5s,baz=202,slow=44						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**15 30 60.0**	**-0.4**
	comp=Z,4.1nm,0.3s,baz=200,slow=10,SNR=31						
AKBB	**Malin Array Si**	**16.72**	**9**	*e*Pn	**Pn**	**15 30 59.5**	**-0.9**
	comp=Z,14nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**16.76**	**322**	*e*Pn	**Pn**	**15 30 59.7**	**-1.6**
	comp=Z,11nm,1.0s						
FETA	**Feichten**	**16.81**	**324**	*i* Pn	**Pn**	**15 31 01.2**	**-0.6**
	comp=Z,7.7nm,1.0s						
GEC2	**GERESS Array S**	**16.91**	**333**	*e*Pn	**Pn**	**15 31 01.5**	**-1.5**
	comp=Z,5.7nm,0.6s						
GERES	**GERESS Array B**	**16.91**	**333**	Pn	**Pn**	**15 31 01.5**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=145,slow=12,SNR=32						
DAVOX	**Davos/Dischmat**	**17.07**	**322**	Pn	**P**	**15 31 06.9**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=134,slow=18,SNR=2.4						
RETA	**Reutte**	**17.12**	**325**	*e*Pn	**Pn**	**15 31 05.8**	**+0.2**
	comp=Z,2.7nm,0.5s						
KHC	**Kasperske Hory**	**17.20**	**333**	*e*Pn	**Pn**	**15 31 06.8**	**+0.4**
	comp=Z,1.8nm,0.9s						
KHC	**Kasperske Hory**	**17.20**	**333**	*e*P	**Pn**	**15 31 07.4**	**+1.0**
KHC				*ex*	x	15 31 14.5	
DPC	**Dobruska-Polom**	**17.37**	**341**	*e*P	**Pn**	**15 31 09.1**	**+0.5**
DAVA	**Damuels**	**17.41**	**323**	*e*P	**Pn**	**15 31 09.9**	**+0.6**
	comp=Z,4.4nm,0.6s						
GRA1	**Grafenberg Arr**	**18.57**	**330**	*e*P	**P**	**15 31 22.0**	**-1.0**
	comp=Z,12nm,0.9s						
GRFO	**Grafenberg**	**18.57**	**330**	*e*P	**Pn**	**15 31 23.5**	**+0.2**
	comp=Z,16nm,0.6s						
CLL	**Collm**	**19.22**	**336**	*e*P	**P**	**15 31 29.0**	**-1.2**
	comp=Z,4.1nm,0.8s						
CLL	**Collm**	**19.22**	**336**	*i* P	**P**	**15 31 30.9**	**+0.7**
	comp=Z,5.0nm,0.7s						
CLL				*i* sP	**sP**	**15 31 35.6**	**0.0**
CLL				*i*		15 31 39.9	
CLL				*i* PP	**PnPn**	**15 31 45.4**	**+1.3**
OBN	**Obninsk**	**22.33**	**17**	P	**P**	**15 32 05.3**	**+1.5**
	comp=Z,4.4nm,0.4s,baz=214,slow=7.3,SNR=3.6						
OBN	**Obninsk**	**22.33**	**17**	*e*P	**P**	**15 32 05.3**	**+1.5**
	comp=Z,31nm,0.4s						
ESDC	**Sonseca Array**	**23.87**	**292**	P	**P**	**15 32 20.1**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=77,slow=8.9,SNR=4.2						
GEYT	**Alibeck**	**26.78**	**73**	P	**P**	**15 32 47.2**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=278,slow=9.9,SNR=2.3						
HFS	**Hagfors**	**26.98**	**347**	P	**P**	**15 32 45.7**	**-2.0**
	comp=Z,0.9nm,0.4s,baz=156,slow=11,SNR=6.5						
FIA0	**FINESS Array S**	**27.23**	**1**	*e*P	**P**	**15 32 47.2**	**-2.8**
FIA0				*e*PcP	**PcP**	**15 36 10.5**	**+1.0**
FINES	**FINESS Array B**	**27.23**	**1**	P	**P**	**15 32 47.2**	**-2.8**
	comp=Z,1.8nm,0.5s,baz=153,slow=13,SNR=5.5						
FINES				PcP	**PcP**	**15 36 10.5**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=222,slow=1.9,SNR=3.5						
NB2	**NORSAR Subarra**	**28.30**	**346**	*e*P	**P**	**15 32 57.4**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=148,slow=10						
NB200	**NORSAR Array S**	**28.30**	**346**	*e*P	**P**	**15 32 58.3**	**-1.3**
NOA	**NORSAR Array B**	**28.30**	**346**	P	**P**	**15 32 58.3**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=148,slow=9.4,SNR=3.2						
NOA				LR	LR	15 46 12.3	
	comp=Z,17nm,18.0s,baz=280,slow=41						
EKA	**Eskdalemuir Ar**	**28.81**	**326**	P	**P**	**15 33 03.6**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=118,slow=10,SNR=4.0						
AKTO	**Aktyubinsk**	**28.86**	**46**	P	**P**	**15 33 03.9**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=243,slow=4.5,SNR=4.6						
TOA1	**Torodi Ar. Sit**	**29.92**	**231**	*e*P	**P**	**15 33 13.3**	**-1.0**
TOA0	**Torodi Ar. Sit**	**29.92**	**231**	*e*P	**P**	**15 33 14.8**	**+0.4**
	comp=Z,11nm,0.5s						
TORD	**Torodi Ar. Bea**	**29.92**	**231**	P	**P**	**15 33 13.3**	**-1.0**
	comp=Z,2.0nm,0.5s,baz=270,slow=12,SNR=52						
ARA0	**ARCESS Array S**	**35.35**	**0**	*e*P	**P**	**15 33 58.6**	**-2.7**
ARCES	**ARCESS Array B**	**35.35**	**0**	P	**P**	**15 33 58.6**	**-2.7**
	comp=Z,5.6nm,0.3s,baz=196,slow=8.6,SNR=10						
BVAR	**Borovoye Array**	**36.97**	**45**	P	**P**	**15 34 15.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=263,slow=8.6,SNR=3.4						
KSH	**Kashi**	**40.52**	**67**	P	**P**	**15 34 47.3**	**+1.8**
KSH				S	**S**	**15 40 55.3**	**+1.3**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,210nm,7.6s						
KSH				LR	LR		
	comp=N,270nm,8.4s						
KSH				LR	LR		
	comp=E,210nm,6.5s						
KSH				LR	LR		
	comp=Z,120nm,16.3s						
KURBB	**Kurchatov Arra**	**41.69**	**50**	P	**P**	**15 34 54.5**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=278,slow=8.6,SNR=12						
KURK	**Kurchatov**	**41.75**	**50**	*e*P	**P**	**15 34 55.4**	**+0.2**
	comp=Z,3.0nm,1.0s						
SPA0	**Spitsbergen Ar**	**44.21**	**357**	*e*P	**P**	**15 35 14.8**	**0.0**
	comp=Z,58nm,1.3s						
SPITS	**Spitsbergen Ar**	**44.21**	**357**	P	**P**	**15 35 14.8**	**0.0**
	comp=Z,8.9nm,0.9s,baz=134,slow=10,SNR=4.1						
MK31	**Makanchi Array**	**44.27**	**56**	*e*P	**P**	**15 35 15.6**	**-0.1**
	comp=Z,3.7nm,1.1s						
MK32	**Makanchi Array**	**44.27**	**56**	*e*P	**P**	**15 35 16.1**	**+0.4**
MKAR	**Makanchi Array**	**44.27**	**56**	P	**P**	**15 35 16.1**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=268,slow=8.4,SNR=11						
ZAA1	**Zalesovo Array**	**45.63**	**46**	*e*P	**P**	**15 35 25.7**	**-0.7**
ZALV	**Zalesovo Beam**	**45.63**	**46**	P	**P**	**15 35 25.7**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=268,slow=8.6,SNR=8.3						
WMQ	**Urumqi**	**48.45**	**59**	*e*P	**P**	**15 35 52.9**	**+4.2**
NRIK	**Noril'sk**	**48.70**	**25**	P	**P**	**15 35 51.5**	**+1.4**
	comp=Z,2.1nm,0.4s,baz=247,slow=9.2,SNR=4.1						
SONA0	**Songino Array**	**60.05**	**50**	*e*P	**P**	**15 37 13.6**	**+0.4**
SONM	**Songino Array**	**60.05**	**50**	P	**P**	**15 37 13.6**	**+0.4**

IDI				Sn	Sb	16 00 51.8	-0.3		
	comp=N,56nm,0.3s,baz=68,slow=10,SNR=23								
IDI	**Anoyia**	**1.04**	**347**	P	**Pg**	16 00 37.0	-1.0		
NPS	**Neapolis**	**1.05**	**20**	P	**Pg**	16 00 38.5	+0.4		
NPS	**Neapolis**	**1.05**	**20**	P	**Pg**	16 00 38.1	-0.1		
NPS				S	**Sg**	16 00 51.7	-0.1		
NPS				AML	AML	16 00 59.9			
	comp=E,743μm,0.4s								
NPS				AML	AML	16 01 04.9			
	comp=N,710μm,0.9s								
GVD	**Gavdhos**	**1.07**	**302**	P	**Pg**	16 00 38.9	+0.5		
GVD	**Gavdhos**	**1.07**	**302**	P	**Pg**	16 00 38.9	+0.5		
GVD				S	**Sn**	16 00 55.1	+1.0		
GVD	**Gavdhos**	**1.07**	**302**	P	**Pg**	16 00 38.4	0.0		
GVD				S	**Sb**	16 00 53.2	+0.5		
GVD				AML	AML	16 01 02.3			
	comp=E,2026μm,0.4s								
GVD				AML	AML	16 01 03.2			
	comp=N,1856μm,0.4s								
GVDS	**Gavdos**	**1.07**	**303**	P	**Pn**	16 00 39.9	+0.8		
GVDS				S	**Sn**	16 00 55.2	+1.1		
ZKR	**Zakros**	**1.20**	**45**	P	**Pg**	16 00 41.5	+0.6		
ZKR	**Zakros**	**1.20**	**45**	P	**Pg**	16 00 41.4	+0.4		
ZKR				S	**Sg**	16 00 56.4	-0.1		
ZKR				AML	AML	16 01 06.7			
	comp=N,378μm,0.4s								
ZKR				AML	AML	16 01 12.2			
	comp=E,789μm,0.6s								
PRNS	**Prines Rethymn**	**1.23**	**333**	P	**Pg**	16 00 41.5	0.0		
PRNS				S	**Sn**	16 00 58.6	+0.6		
VAM	**Vamos**	**1.39**	**325**	P	**Pg**	16 00 43.8	-0.9		
VAM	**Vamos**	**1.39**	**325**	P	**Pg**	16 00 43.3	-1.3		
VAM				S	**Sn**	16 01 03.2	+1.0		
VAM				AML	AML	16 01 09.9			
	comp=N,776μm,0.3s								
VAM				AML	AML	16 01 10.3			
	comp=E,771μm,0.3s								
IMMV	**Iera Moni Meta**	**1.54**	**321**	P	**Pn**	16 00 46.0	+0.3		
IMMV	**Iera Moni Meta**	**1.54**	**321**	P	**Pn**	16 00 46.7	+1.0		
IMMV	**Iera Moni Meta**	**1.54**	**321**	P	**Pn**	16 00 46.4	+0.8		
IMMV				S	**Sn**	16 01 07.2	+1.3		
IMMV				AML	AML	16 01 21.6			
	comp=N,594μm,0.4s								
IMMV				AML	AML	16 01 24.0			
	comp=E,650μm,0.9s								
KARP	**Karpathos**	**2.07**	**51**	P	**Pb**	16 00 55.8	+0.2		
ANKY	**Antikythira Is**	**2.22**	**316**	P	**Pn**	16 00 56.1	+1.1		
APE	**Apeiranthos**	**2.81**	**6**	*eP*	**Pn**	16 01 02.8	-0.3		
ARG	**Arkhangelos**	**3.10**	**50**	*eP*	**Pn**	16 01 08.5	+1.5		
DAT	**Datca**	**3.14**	**38**	*eP*	**Pn**	16 01 08.8	+1.1		
DALY	**Dalyan (Mula)**	**3.80**	**47**	*eP*	**Pn**	16 01 18.3	+1.6		
TURN	**Turunc**	**3.81**	**46**	*eP*	**Pn**	16 01 13.7	-3.1		
YER	**Yerkesik**	**3.81**	**41**	*eP*	**Pn**	16 01 18.5	+1.6		
ITM	**Ithomi**	**3.93**	**319**	*eP*	**Pn**	16 01 16.5	-2.0		
MMAI	**Mount Meron Ar**	**8.61**	**96**	Pn	**Pn**	16 02 22.3	-0.6		
	comp=E,1.0nm,0.3s,baz=275,slow=16,SNR=3.5								
AKASG	**Malin Array Be**	**16.68**	**9**	Pn	**Pn**	16 04 11.3	-0.6		
	comp=E,0.6nm,0.3s,baz=199,slow=10,SNR=4.5								
GERES	**GERESS Array B**	**16.88**	**333**	Pn	**Pn**	16 04 15.5	+1.0		
	comp=E,0.1nm,0.3s,baz=143,slow=13,SNR=4.9								
TORD	**Torodi Ar. Bea**	**29.94**	**231**	P	**P**	16 06 25.6	-1.0		
	comp=E,0.7nm,0.4s,baz=30,slow=9.5,SNR=8.6								
ZALV	**Zalesovo Beam**	**45.61**	**46**	P	**P**	16 08 36.9	-1.4		
	comp=E,0.5nm,0.3s,baz=276,slow=7.9,SNR=2.7								

IGQ 17 16:00:44.7±0.6, 1°S±3°×8°1W±°, h4km, MLv4.4, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.95**	**194**	P	Pg	16 01 03.1	+0.2
MORR	**Playas El Morr**	**1.43**	**163**	P	Pn	16 01 11.2	-0.3
MAG1	**Magdalena**	**1.54**	**40**	P	Pn	16 01 10.1	-2.9
MILO	**Milagro-Astudi**	**1.57**	**130**	P	Pn	16 01 10.1	-3.3
MILO				S	Sn	16 01 27.9	-6.4
COHC	**Cochancay**	**1.92**	**129**	P	Pn	16 01 15.7	-2.6
COHC				S	Sn	16 01 40.0	-3.0
ILLI	**Illinizas Sur**	**2.10**	**75**	P	Pn	16 01 18.9	-2.3
ILLI				S	Sn	16 01 46.5	-1.6
BMAS	**Trigal station**	**2.29**	**96**	P	Pn	16 01 22.9	-0.8
ARRY	**Arrayan**	**2.32**	**96**	P	Pn	16 01 23.4	-0.7
RETU	**Refugio**	**2.32**	**95**	P	Pn	16 01 25.5	+1.2
BPAT	**Tungurahua Vol**	**2.34**	**96**	P	Pn	16 01 23.8	-0.6
BRUN	**Tungurahua Vol**	**2.35**	**94**	P	Pn	16 01 24.4	-0.2
BULB	**Ulba Tungurahu**	**2.35**	**94**	P	Pn	16 01 23.6	-1.0
PISA	**Pisayambo**	**2.38**	**85**	P	Pn	16 01 24.5	-0.6
BREF	**Cotopaxi Volca**	**2.39**	**76**	P	Pn	16 01 23.7	-1.6
PINO	**Pino**	**2.42**	**63**	P	Pn	16 01 23.1	-2.5
BVC2	**Cotopaxi Volca**	**2.42**	**76**	P	Pn	16 01 25.4	-0.3
PITA	**Cotopaxi Volc**	**2.43**	**73**	P	Pn	16 01 24.6	-1.1
BTAM	**Cotopaxi Volca**	**2.43**	**76**	P	Pn	16 01 25.2	-0.7
VC1	**Cotopaxi 1**	**2.44**	**75**	P	Pn	16 01 25.4	-0.4
YANA	**Yana**	**2.46**	**63**	P	Pn	16 01 23.6	-2.6
PAC1	**Pacto, Paraso**	**2.48**	**52**	P	Pn	16 01 23.5	-2.7
PAC1				S	Sn	16 01 53.5	-3.6
PULU	**Pululahua**	**2.59**	**61**	P	Pn	16 01 25.7	-2.2
ANTS	**Antisana-Sarah**	**2.70**	**74**	P	Pn	16 01 27.0	-2.5
ANTI	**Antisana**	**2.72**	**73**	P	Pn	16 01 29.4	-0.4
CUIC	**Cuicocha-Domo**	**2.86**	**57**	P	Pn	16 01 29.7	-1.9
CUIC				S	Sn	16 02 03.9	-2.8
ARDO	**Archidona, Ten**	**2.97**	**85**	P	Pn	16 01 33.7	+0.9
IMBA	**Imbabura, San**	**2.98**	**59**	P	Pn	16 01 33.3	+0.1
URCU	**Urcuqui**	**3.02**	**56**	P	Pn	16 01 32.5	-1.3
YAHU	**Yahuarcocha**	**3.14**	**59**	P	Pn	16 01 35.9	+0.5
MCRA	**Macar, Loja**	**3.19**	**165**	P	Pn	16 01 31.7	-4.1

MAN 17 16:07:16.8, 13°47N×120°88E, h33km, mb3.5, ML2.1, MS1.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.08**	**65**	↑*eP*	Pb	16 07 23.1	+0.6
PGP				*eS*	Pb	16 07 23.1	+0.6
LUBP	**Lubang**	**0.67**	**294**	*eP*	Pb	16 07 30.9	+0.8
LUBP				*eS*	Sn	16 07 39.6	+0.4
SJMP	**San Jose**	**1.03**	**167**	*eP*	Pn	16 07 34.5	-0.3
SJMP				*eS*	Sn	16 07 48.4	+0.3

MAN 17 16:11:33.2, 7°31N×124°79E, h1km, mb4.5, ML3.4, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.63**	**26**	*eP*	Pg	16 11 46.0	+0.8
BUKP				*eS*	Sn	16 11 58.8	-1.2
DMPH	**Davao City--Mi**	**0.75**	**107**	↑*eP*	Pn	16 11 54.3	+3.4
DMPH				*eS*	Sn	16 12 03.8	+0.8
SKMP	**Bagumbayan, Su**	**0.82**	**197**	*eP*	Pg	16 11 49.5	+0.6
SKMP				*eS*	Sn	16 12 04.0	-0.7
PAGZ	**Pagadian**	**1.49**	**291**	*eP*	Pn	16 12 00.7	-0.5
PAGZ				*eS*	Sn	16 12 21.3	0.0
MATI	**Mati**	**1.50**	**104**	*eP*	Pn	16 12 00.8	-0.5
MATI				*eS*	Sn	16 12 22.9	+1.3
DDMP	**Don Marcelino,**	**1.51**	**142**	*eP*	Pn	16 12 01.5	+0.1
DDMP				*eS*	Sg	16 12 22.0	+0.2
IPIL	**Ipil**	**2.25**	**282**	*eP*	Pn	16 12 12.9	+1.4
IPIL				*eS*	Sb	16 12 42.4	-0.6

*NEIC **17** 16:16:06.3±0.0, 61°57N×141°10W, h1km, ML3.0(OTT), ML3.0(AEIC), After AEIC.*
*PGC **17** 16:16:07.3±0.0, 61°57N×141°07W, h1km, ML3.0/12, 210km Wnw of Haines Jct., Yt Southern Alaska*
ISC 17 16:16:06.3±1.1, 61°56N±0°02×141°06W±0°02, h2km±10km, n74, σ1§37/97, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK2	**White River**	**0.25**	**24**	P	**Pg**	16 16 11.3	+0.2
YUK2				S	**Sg**	16 16 15.0	+0.6
YUK3	**Moose Creek**	**0.36**	**53**	P	**Pg**	16 16 13.3	+0.1
YUK3				S	**Sg**	16 16 18.4	+0.5
CTGM	**Chitina Glacie**	**0.61**	**193**	P	**Pg**	16 16 18.0	-0.1
CTGM				S	**Sg**	16 16 26.4	+0.5
YUK1	**Sand Pete Hill**	**0.65**	**23**	P	**Pg**	16 16 18.3	-0.4
YUK1				S	**Sg**	16 16 27.8	+0.7
PTPK	**Patty Peak**	**0.77**	**242**	P	**Pg**	16 16 21.1	-0.1
PTPK				S	**Sg**	16 16 32.0	+0.8
BALM	**Baldy**	**0.81**	**230**	P	**Pg**	16 16 21.3	-0.6
BALM				S	**Sg**	16 16 32.4	-0.1
BVCY	**Beaver Creek**	**0.86**	**6**	P	**Pg**	16 16 22.4	-0.4
GRNC	**Granite Creek**	**0.90**	**202**	P	**Pg**	16 16 23.1	-0.5
GRNC				S	**Sg**	16 16 35.6	+0.5
KIAG	**Kiagna River**	**0.90**	**225**	P	**Pg**	16 16 22.7	-0.8
KIAG				S	**Sg**	16 16 35.3	+0.2
YUK4	**Talbot Arm**	**1.18**	**100**	P	**Pg**	16 16 28.5	-0.4
YUK4				S	**Sg**	16 16 45.0	+0.8
RKAV	**Rock Avalanche**	**1.27**	**186**	P	**Pg**	16 16 30.0	-0.7
RKAV				S	**Sg**	16 16 47.0	-0.1
CRQM	**Cirque**	**1.29**	**232**	*e*Pg	**Pg**	16 16 29.2	-1.9
CRQM				*e*Pg	**Pb**	16 16 29.6	-1.8
SAMH	**Samovar Hills**	**1.44**	**174**	Pn	**Pn**	16 16 33.6	0.0
SAMH				Sg	**Sg**	16 16 53.2	+0.6
YUK6	**Outpost Mounta**	**1.44**	**114**	*e*Pn	**Pn**	16 16 33.1	-0.6
YUK6	**Outpost Mounta**	**1.44**	**114**	Pn	**Pn**	16 16 33.0	-0.6
YUK6				Sg	**Sg**	16 16 53.5	+0.8
MESA	**MESA**	**1.45**	**198**	Pn	**Pn**	16 16 33.9	+0.1
MESA				Sg	**Sg**	16 16 53.6	+0.7
CHX	**Chaix Hills**	**1.50**	**181**	*e*Pn	**Pn**	16 16 34.9	+0.5
PCA	**Pinnacle**	**1.52**	**165**	*e*Pn	**Pn**	16 16 34.9	+0.2
BCA3	**Beaver Creek A**	**1.55**	**348**	*e*Pn	**Pn**	16 16 34.1	-0.9
YUK5	**Granite Creek**	**1.60**	**104**	Pn	**Pn**	16 16 36.1	+0.3
SNH	**Sunshine Point**	**1.64**	**213**	*e*Pn	**Pn**	16 16 37.0	+0.8
YUK7	**Dusty Glacier**	**1.76**	**125**	*e*Pn	**Pn**	16 16 38.9	+0.9
YUK7	**Dusty Glacier**	**1.76**	**125**	Pn	**Pn**	16 16 38.9	+0.9
YUK7				Sg	**Sn**	16 17 02.5	+1.5
MENT	**Mentasta**	**1.86**	**319**	*e*Pn	**Pn**	16 16 39.9	+0.6
HYT	**Haines Junctio**	**1.87**	**112**	*e*Pn	**Pn**	16 16 39.5	0.0
HYT	**Haines Junctio**	**1.87**	**112**	Sg	**Sn**	16 17 05.2	+1.4
HMT	**Hamilton**	**1.99**	**233**	*e*Pn	**Pb**	16 16 43.1	-0.2
PNL	**Peninsula**	**2.07**	**156**	*e*Pn	**Pn**	16 16 42.7	+0.6
PNL	**Peninsula**	**2.07**	**156**	Pn	**Pn**	16 16 42.9	+0.8
PNL				Sg	**Sb**	16 17 12.5	+1.8
DIV	**Divide**	**2.31**	**261**	*e*Pn	**Pn**	16 16 45.0	-0.5
DIV	**Divide**	**2.31**	**261**	Pn	**Pn**	16 16 45.7	+0.2
EYAK	**Cordova Ski Ar**	**2.50**	**248**	*e*Pn	**Pn**	16 16 48.1	+0.2
PAX	**Paxson**	**2.50**	**306**	*e*Pn	**Pn**	16 16 49.0	+0.8
PAX	**Paxson**	**2.50**	**306**	Pn	**Pn**	16 16 49.6	+1.5
DOT	**Dot Lake**	**2.51**	**328**	*e*Pn	**Pn**	16 16 47.6	-0.6
DOT	**Dot Lake**	**2.51**	**328**	Pn	**Pn**	16 16 47.7	-0.5
DOT				Sg	**Sb**	16 17 25.0	+1.4
DAWY	**Dawson**	**2.63**	**16**	*e*Pn	**Pn**	16 16 49.7	-0.1
DAWY	**Dawson**	**2.63**	**16**	Pn	**Pn**	16 16 49.5	-0.3
DAWY				Sg	**Sb**	16 17 27.9	+1.1
RIDG	**Independent Ri**	**2.80**	**323**	*e*Pn	**Pn**	16 16 51.9	-0.3
GLI	**Glacier Island**	**3.00**	**259**	*e*Pn	**Pn**	16 16 56.0	+1.2
SCM	**Sheep Creek Mo**	**3.00**	**278**	*e*Pn	**Pn**	16 16 57.2	+2.2
WHY	**Whitehorse**	**3.13**	**104**	*e*Pn	**Pn**	16 16 56.7	-0.1
WHY	**Whitehorse**	**3.13**	**104**	Pn	**Pn**	16 16 56.7	-0.1
WHY				Sn	**Sn**	16 17 35.5	+0.7
WHY				Sg	**Sb**	16 17 44.9	+3.5
PLBC	**Pleasant Camp**	**3.14**	**130**	Pn	**Pn**	16 16 58.0	+1.2
PLBC				Pg	**Pb**	16 17 04.4	+1.6
PLBC				Sg	**Sg**	16 17 45.6	-1.4
EGAK	**Eagle**	**3.23**	**359**	*e*Pn	**Pn**	16 16 57.7	-0.3
DHY	**Denali Highway**	**3.32**	**300**	*e*Pn	**Pn**	16 16 58.7	-0.6
SML	**Sawmill**	**3.48**	**277**	*e*Pn	**Pn**	16 17 00.9	-0.5
SKAG	**Skagway**	**3.53**	**124**	*e*Pn	**Pn**	16 17 01.8	-0.3
GHO	**Glory Hole Cre**	**3.76**	**277**	*e*Pn	**Pn**	16 17 05.5	+0.1
HDA	**Harding Lake**	**3.92**	**319**	*e*Pn	**Pn**	16 17 07.3	-0.2
RND	**Reindeer**	**4.06**	**301**	*e*Pn	**Pn**	16 17 12.6	+3.1
ILB	**Eielson Array**	**4.17**	**323**	*e*Pn	**Pn**	16 17 09.3	-1.6
RC01	**Rabbit Creek A**	**4.21**	**267**	*e*Pn	**Pn**	16 17 08.4	-3.1
MCK	**McKinley**	**4.24**	**304**	*e*Pn	**Pn**	16 17 12.8	+0.9
BESE	**Bessie Mountai**	**4.31**	**131**	*e*Pn	**Pn**	16 17 13.0	+0.1
CCB	**Clear Creek Bu**	**4.36**	**318**	*e*Pn	**Pn**	16 17 11.9	-1.5
SEW	**Seward**	**4.36**	**254**	*e*Pn	**Pn**	16 17 14.0	+0.5
PRP	**Porcupine Dome**	**4.45**	**335**	*e*Pn	**Pn**	16 17 14.6	-0.3
TRF	**Thorofare Moun**	**4.68**	**298**	*e*Pn	**Pn**	16 17 19.9	+1.8
KTH	**Kantishna Hill**	**4.98**	**298**	*e*Pn	**Pn**	16 17 20.6	-1.5
SKT	**Skwentna**	**4.99**	**279**	*e*Pn	**Pn**	16 17 21.1	-1.1
BRLK	**Bradley Lake**	**5.16**	**254**	*e*Pn	**Pn**	16 17 24.6	+0.1
EPYK	**Eagle Plains**	**5.19**	**20**	*e*Pn	**Pn**	16 17 25.2	+0.2
BPAW	**Bear Paw Mtn.**	**5.21**	**304**	*e*Pn	**Pn**	16 17 26.3	+1.0
FYU	**Fort Yukon**	**5.35**	**342**	*e*Pn	**Pn**	16 17 27.3	+0.2
CNPM	**China Poot**	**5.42**	**252**	*e*Pn	**Pn**	16 17 29.0	+0.9
BM3	**Burnt Mountain**	**6.08**	**347**	*e*Pn	**Pn**	16 17 37.2	+0.1
DLBC	**Dease Lake**	**6.36**	**115**	Sg	**Sg**	16 19 24.0	-6.3
COLD	**Coldfoot**	**6.92**	**329**	Pn	**Pn**	16 17 48.7	0.0
KDAK	**Kodiak Island**	**6.96**	**242**	*e*Pn	**Pn**	16 17 50.0	+0.9
TTA	**Tatalina**	**7.12**	**288**	*e*Pn	**Pn**	16 17 51.7	+0.2
OHAK	**Old Harbor**	**7.60**	**241**	*e*Pn	**Pn**	16 17 58.5	+0.5
TOLK	**Toolik Lake Re**	**7.96**	**337**	*e*Pn	**Pn**	16 18 03.5	+0.6
FNBB	**Fort Nelson**	**9.36**	**99**	Pn	**Pn**	16 18 21.8	-0.4
FNBB				Sn	**Sn**	16 20 01.6	-6.4
FNBB				Sg		16 20 56.1	

*IDC **17** 16:16:47.9±0.8, 8°31S×127°96E, h0km, mb4.0/7, mb1 4.3/9, mb1mx4. 1/27, mbtmp4.2/9, ML4.8/3, MS3.7/6, Ms1 3.7/6, ms1mx3.2/30, Error ellipse: s-maj=44.3km s-min=15.8km az=64.0*
*ISCJB **17** 16:16:51.0±0.3, 8°53S±0°03×128°16E±0°03, h33km, mb4.5/20, MS3.9/5, Error ellipse: s-maj=4.4km s-min=4.0km az=16.8*
*BJI **17** 16:16:52.2±0.0, 8°86S×128°36E, h69km, mb4.5/21, mB4.9/16, Ms4.5/6, Ms7 4.3/3*
*NEIC **17** 16:16:54.7±0.7, 8°53S×127°99E, h60km±8km, mb4.6/18, Error ellipse: s-maj=9.3km s-min=6.6km az=222.0*
*DJA **17** 16:16:54.5±1.1, 9°S±2°×12°8E±°, h27km±11km, M4.4/18, mB5.0/7, mb4.6/18, MLv4.5/8, Mw(mB)4.3/7*
ISC 17 16:16:52.9±0.4, 8°56S±0°04×128°08E±0°05, h35km, n71, σ2§28/82, mb4.7/20, MS4.0/5, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.24**	**80**	*e*Pn	**Pn**	16 17 45.2	+3.9
SOEI	**Soe**	**3.95**	**252**	*e*Pn	**Pn**	16 17 52.7	+1.6
SOEI	**Soe**	**3.95**	**252**	P	**Pn**	16 17 53.5	+2.4
SOEI				S	**Sn**	16 18 41.0	+4.7
BATI	**Baumata**	**4.65**	**249**	Pn	**Pn**	16 18 03.5	+2.7
	16nm,0.3s,baz=77,slow=7.1,SNR=17						
BATI				Sn	**Sn**	16 18 57.6	+3.9
	28nm,0.3s,baz=41,slow=20,SNR=4.2						
BATI	**Baumata**	**4.65**	**249**	P	**Pn**	16 18 03.1	+2.3
BATI				S	**Sn**	16 18 58.6	+4.9
AAI	**Ambon**	**4.84**	**1**	P	**Pn**	16 18 03.1	-0.2
AAI				S	**Sn**	16 18 58.6	+0.5
MTN	**Manton Dam**	**5.21**	**145**	*e*Pn	**Pn**	16 18 13.0	+4.6
NLAI	**Namlea**	**5.37**	**350**	P	**Pn**	16 18 11.7	+1.1
MMRI	**Maumere**	**5.78**	**269**	*e*Pn	**Pn**	16 18 16.9	+0.7
MMRI	**Maumere**	**5.78**	**269**	P	**Pn**	16 18 18.2	+2.0
EDFI	**Ende, Flores**	**6.32**	**268**	P	**Pn**	16 18 25.3	+1.6
	25nm,0.7s						
FAKI	**Fak Fak**	**6.97**	**37**	*e*Pn	**Pn**	16 18 34.1	+1.5
FAKI	**Fak Fak**	**6.97**	**37**	P	**Pn**	16 18 34.7	+2.1
	75nm,0.7s,736nm						
SIJI	**Sorong**	**8.27**	**23**	Pn	**Pn**	16 18 50.4	-0.1
	2.7nm,0.3s,baz=203,slow=7.6,SNR=16						
SIJI				Sn	**Sn**	16 20 26.2	+3.5
	1.0nm,0.3s,baz=287,slow=19,SNR=2.5						
SIJI				LR	LR	16 22 34.9	
	comp=Z,400nm,19.4s,baz=154,slow=43						
BKSI	**Bulukumba**	**8.53**	**292**	P	**Pn**	16 18 56.2	+2.2
BNSI	**Bone**	**8.93**	**297**	P	**Pn**	16 19 02.1	+2.6
	41nm,1.0s						
KAPI	**Kappang**	**8.98**	**293**	Pn	**Pn**	16 19 03.4	+3.2
	4.6nm,0.3s,baz=125,slow=12,SNR=3.9						
KAPI				LR	LR	16 22 29.4	
	comp=Z,562nm,18.6s,baz=116,slow=39						
LUWI	**Luwuk**	**9.14**	**324**	*e*Pn	**Pn**	16 19 02.6	+0.1
LUWI	**Luwuk**	**9.14**	**324**	P	**Pn**	16 19 04.4	+1.9
	56nm,1.0s,1μm						
SPSI	**Sidrap Palu**	**9.43**	**298**	P	**Pn**	16 19 08.9	+2.5
FITZ	**Fitzroy Crossi**	**9.78**	**194**	Pn	**Pn**	16 19 11.6	+0.5
	3.3nm,0.3s,baz=16,slow=10,SNR=127						
FITZ				Sn	**Sn**	16 20 57.9	-1.9
	6.4nm,0.3s,baz=158,slow=6.0,SNR=5.8						
FITZ				LR	LR	16 23 55.9	
	comp=Z,414nm,18.5s,baz=20,slow=43						
TTSI	**Tana Toraja**	**9.87**	**303**	P	**Pn**	16 19 14.6	+2.2
BAKI	**Biak**	**10.84**	**48**	P	**Pn**	16 19 27.9	+2.2
MPSI	**Mapaga**	**12.02**	**317**	P	**Pn**	16 19 45.1	+3.2
WRAB	**Tennant Creek**	**12.84**	**152**	*e*Pn	**Pn**	16 19 52.1	-0.9
WR1	**Warramunga Arr**	**12.84**	**153**	*e*Pn	**Pn**	16 19 53.5	+0.4
WR1				*e*Sn	**Sn**	16 22 11.4	-3.4
WRA	**Warramunga Arr**	**12.84**	**153**	Pn	**Pn**	16 19 53.5	+0.4
	9.4nm,0.3s,baz=323,slow=14,SNR=299						
WRA				Sn	**Sn**	16 22 11.4	-3.4
	10nm,0.3s,baz=332,slow=23,SNR=14						
WB2	**Warramunga Arr**	**12.85**	**152**	*e*Pn	**Pn**	16 19 52.3	-0.9
PSA00	**Pilbara Seismi**	**15.18**	**211**	*e*Pn	**Pn**	16 20 23.6	-1.3
	28nm,0.7s						
COEN	**Coen**	**15.75**	**111**	*e*Pn	**Pn**	16 20 33.0	+0.7
	19nm,0.7s						
AS31	**Alice Springs**	**16.03**	**160**	*e*Pn	**Pn**	16 20 35.2	-0.7
	11nm,0.8s						
ASAR	**Alice Springs**	**16.03**	**160**	Pn	**Pn**	16 20 36.4	+0.5
	4.1nm,0.3s,baz=330,slow=9.2,SNR=376						
ASAR				Sn	**Sn**	16 23 26.4	-6.2
	1.9nm,0.3s,baz=350,slow=26,SNR=5.2						
UGM	**Wanagama**	**17.39**	**271**	*e*Pn	**Pn**	16 20 49.1	-3.8
	399nm,1.8s						
PMG	**Port Moresby**	**18.87**	**94**	*e*P	**Pn**	16 21 12.7	+1.6
	23nm,1.0s						
SBUM	**Sibu**	**19.22**	**304**	*e*P	**P**	16 21 12.4	-1.8
	14nm,1.5s						
CISI	**Cisompet, Garu**	**20.09**	**271**	*e*P	**P**	16 21 21.2	-2.6
	166nm,1.6s						
KSM	**Kuching**	**20.32**	**299**	*e*P	**P**	16 21 25.0	-1.2
	15nm,0.9s						
CTA	**Charters Tower**	**20.99**	**125**	P	**P**	16 21 35.5	+2.1
	3.0nm,0.9s,baz=280,slow=12,SNR=3.0						
CTAO	**Charters Tower**	**20.99**	**125**	*e*P	**P**	16 21 34.7	+1.3
	49nm,1.6s						
FORT	**Forrest**	**22.11**	**180**	*e*P	**P**	16 21 44.8	-0.5
	34nm,0.7s						
BBOO	**Buckleboo**	**25.24**	**164**	*e*P	**P**	16 22 17.9	+2.1
	14nm,0.6s						
STKA	**Stephens Creek**	**26.39**	**153**	P	**P**	16 22 29.3	+3.2
	3.6nm,0.6s,baz=330,slow=10,SNR=13						
STKA				LR	LR	16 34 19.7	
	comp=Z,213nm,19.9s,baz=23,slow=40						
STKA	**Stephens Creek**	**26.39**	**153**	*e*P	**P**	16 22 28.5	+2.3
	4.1nm,0.8s						
CM31	**Chiang Mai Arr**	**39.33**	**313**	*e*P	**P**	16 24 18.2	-0.9
	10nm,0.4s						
CMAR	**Chiang Mai Arr**	**39.33**	**313**	P	**P**	16 24 18.2	-0.9
	1.3nm,0.4s,baz=142,slow=7.1,SNR=11						
NJ2	**Nanjing**	**41.33**	**348**	*e*P	**P**	16 24 34.9	-0.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CD2	**Chengdu**	**45.65**	**330**	*e*P	**P**	16 25 09.3	-1.0
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
KS15	**Wonju Array Si**	**45.76**	**360**	*e*P	**P**	16 25 09.7	-1.3
	33nm,1.7s						
KSAR	**Wonju Array Be**	**45.76**	**360**	P	**P**	16 25 09.7	-1.3
KSRS	**Korea Array**	**45.77**	**360**	P	**P**	16 25 09.7	-1.3
	1.7nm,1.0s,baz=176,slow=10,SNR=6.2						
KSRS				LR	LR	16 42 16.2	
	comp=Z,27nm,21.8s,baz=345,slow=34						
LZH	**Lanzhou**	**49.92**	**334**	*e*P	**P**	16 25 44.5	+1.0
LZH				pP	sP	16 26 01.3	+4.1
LZH				sP	pwP	16 26 06.8	+11
LZH				*e*PP	**PP**	16 27 41.6	+2.9
LZH				pmax	pmax		

	3.0nm,0.3s						
AAK					Lg	Lg	16 45 07.2
	5.1nm,0.5s						
AAK	**Ala-Archa**	**3.99**	**33**	⇓*e*P		**Pn**	**16 44 05.5 +0.7**
	baz=29						
AAK				⇓*i*S		**Sn**	**16 44 53.6 +1.9**
	baz=29						
FRU1	**Bishkek**	**4.18**	**32**	⇑*i*P		**Pn**	**16 44 08.1 +0.7**
	baz=29						
FRU1				⇑*i*S		**Sn**	**16 44 58.2 +1.8**
	baz=29						
KBK	**Karagaybulak**	**4.20**	**36**	⇑*i*P		**Pn**	**16 44 08.0 +0.3**
	baz=33						
KBK				⇑*i*S		**Sn**	**16 44 58.0 +1.0**
	baz=33						
CHMS	**Chumysh**	**4.39**	**32**	⇑*i*P		**Pn**	**16 44 10.8 +0.6**
	baz=29						
CHMS				⇑*i*S		**Sn**	**16 45 03.3 +1.9**
	baz=29						
TKM2	**Tokmak 2**	**4.71**	**39**	⇓Pn		**Pn**	**16 44 16.2 +1.4**
	1.1nm,0.4s						
TKM2				⇓Lg		Lg	16 45 29.6
	3.5nm,0.5s						
TKM2	**Tokmak 2**	**4.71**	**39**	⇓*i*P		**Pn**	**16 44 15.2 +0.4**
	baz=36						
TKM2				⇓*i*S		**Sn**	**16 45 10.2 +0.6**
	baz=36						
AB31	**Akbulak array**	**12.96**	**324**	P		**Pn**	**16 46 08.2 +0.6**
	0.2nm,0.4s,baz=133,slow=14,SNR=9.8						
AKTO	**Aktyubinsk**	**14.68**	**324**	⇓P		**P**	**16 46 38.0 +0.7**
	1.5nm,0.6s						

WEL 17 17:02:59.2±1.5, 35°S±10°×17°9E±3°6, h33km, M3.1/6, ML3.6/8, MLv3.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=96.5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.69**	**185**	P	Pn	17 03 41.0	+0.8
WMGZ				S	Sn	17 04 13.5	+1.7
HAZ	**Te Kaha**	**2.72**	**195**	P	Pn	17 03 42.0	+1.4
HAZ				S	Sn	17 04 13.0	+0.7
PKGZ	**Pakihiroa**	**2.80**	**190**	P	Pn	17 03 42.1	+0.4
PKGZ				S	Sn	17 04 12.5	-1.9
PUZ	**Puketiti**	**2.96**	**187**	P	Pn	17 03 43.7	-0.2
PUZ				S	Sn	17 04 18.5	+0.3
TWGZ	**Tauwhareparae**	**3.10**	**190**	P	Pn	17 03 46.3	+0.5
TWGZ				S	Sn	17 04 23.8	+2.1
CNGZ	**Carnagh Statio**	**3.37**	**186**	P	Pn	17 03 48.9	-0.6
URZ	**Urewera**	**3.37**	**202**	P	Pn	17 03 50.4	+0.9
TKGZ	**Te Karaka**	**3.37**	**191**	P	Pn	17 03 48.6	-0.9
RIGZ	**Rimuhau**	**3.65**	**191**	P	Pn	17 03 52.2	-1.2
SNGZ	**Shannon Statio**	**3.80**	**196**	P	Pn	17 03 54.6	-0.9

KRSC 17 17:34:54.8±1.7, 49°10N×156°32E, h6km±27km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.59**	**355**	*e*P	Pn	17 35 23.4	0.0
SKR				*e*S	Sn	17 35 43.9	-0.3
ALID	**Alaid**	**1.84**	**345**	*e*P	Pn	17 35 26.3	-0.7
PAU	**Pauzhetka**	**2.39**	**7**	*e*S	Sb	17 36 07.7	-0.2
KDTR	**Khodutka, Kamc**	**2.94**	**22**	*e*P	Pb	17 35 44.8	-2.6
KDTR				*e*S	Sb	17 36 20.6	-2.9
ASAK	**Asacha**	**3.44**	**16**	*e*P	Pb	17 35 52.6	-3.5
RUS	**Russkaya**	**3.62**	**22**	*e*P	Pn	17 35 54.4	+3.2
DALK	**Dalny**	**4.22**	**20**	*e*P	Pn	17 36 03.3	+3.7
UGLR	**Uglovaya**	**4.41**	**20**	*e*P	Pn	17 36 07.0	+4.8
AVH	**Avacha**	**4.44**	**19**	*e*P	Pn	17 36 07.6	+5.0
KOK	**Koryaka**	**4.44**	**18**	*e*P	Pb	17 36 08.1	-5.1
SDLR	**Sedlovina**	**4.48**	**20**	*e*P	Pn	17 36 06.9	+3.6
SPN	**Mys Shipunski**	**4.63**	**29**	*e*P	Pn	17 36 09.2	+4.0

*IDC **17** 18:05:25.8±1.3, 34°25N×25°14E, h0km, mb3.7/3, mb1 3.6/7, mb1mx3.3/43, mbtmp3.5/7, ML3.8/4, Error ellipse: s-maj=22.0km s-min=18.7km az=78.0*
*THE **17** 18:05:30.7, 34°31N×25°20E, h0km±2km, ML3.3/3, Error ellipse: s-maj=4.5km s-min=1.3km az=160.0*
*ATH **17** 18:05:31.1, 34°34N×25°14E, h17km±5km, ML3.1/7, Error ellipse: s-maj=6.4km s-min=1.6km az=5.0*
ISC 17 18:05:30.1±1.7, 34°28N±0°07×25°18E±0°03, h12km±9km, n44, σ1s65/56, mb3.9/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.80**	**338**	P	**Pg**	**18 05 45.2**	**-0.3**
SIVA				S	**Sb**	**18 05 56.8**	**+0.3**
SIVA	**Sivas**	**0.80**	**338**	P	**Pg**	**18 05 45.1**	**-0.4**
SIVA				S	**Sg**	**18 05 56.3**	**+0.4**
SIVA				AML	AML	18 06 02.0	
	comp=N,7597μm,0.3s						
SIVA				AML	AML	18 06 08.1	
	comp=E,10156μm,0.5s						
TMBK	**Timbaki Herakl**	**0.86**	**337**	P	**Pg**	**18 05 46.9**	**+0.2**
TMBK				S	**Sb**	**18 06 00.3**	**+1.9**
LAST	**Lasithi**	**0.91**	**16**	P	**Pg**	**18 05 47.6**	**-0.1**
LAST	**Lasithi**	**0.91**	**16**	P	**Pg**	**18 05 47.7**	**-0.1**
LAST				S	**Sg**	**18 05 59.1**	**-0.6**
LAST				AML	AML	18 06 07.2	
	comp=E,1338μm,0.7s						
LAST				AML	AML	18 06 11.0	
	comp=N,1713μm,0.7s						
KSTL	**Kastelli Herak**	**1.02**	**355**	P	**Pg**	**18 05 48.4**	**-1.4**
KSTL				S	**Sg**	**18 06 02.2**	**-1.0**
IDI	**Anoyia**	**1.03**	**347**	Pn	**Pg**	**18 05 49.4**	**-0.6**
	comp=N,32nm,0.3s,baz=167,slow=17,SNR=195						
IDI				Sn	**Sg**	**18 06 02.4**	**-1.1**
	comp=N,70nm,0.3s,baz=71,slow=18,SNR=23						
NPS	**Neapolis**	**1.04**	**20**	P	**Pg**	**18 05 50.0**	**-0.2**
NPS				S	**Sb**	**18 06 05.5**	**+1.8**
NPS	**Neapolis**	**1.04**	**20**	P	**Pg**	**18 05 49.8**	**-0.3**
NPS				S	**Sg**	**18 06 04.4**	**+0.6**
NPS				AML	AML	18 06 16.0	
	comp=N,1358μm,0.6s						
NPS				AML	AML	18 06 21.6	
	comp=E,1399μm,0.7s						
GVD	**Gavdhos**	**1.06**	**302**	P	**Pg**	**18 05 50.4**	**-0.1**
GVD	**Gavdhos**	**1.06**	**302**	P	**Pg**	**18 05 50.0**	**-0.5**
GVD				S	**Sn**	**18 06 07.5**	**+2.1**
GVD	**Gavdhos**	**1.06**	**302**	P	**Pg**	**18 05 50.3**	**-0.2**
GVD				S	**Sb**	**18 06 05.6**	**+1.5**
GVD				AML	AML	18 06 16.5	
	comp=E,4541μm,0.4s						
GVD				AML	AML	18 06 16.9	
	comp=N,4162μm,0.4s						
GVDS	**Gavdos**	**1.06**	**302**	P	**Pn**	**18 05 51.8**	**+1.1**
ZKR	**Zakros**	**1.19**	**45**	P	**Pg**	**18 05 53.9**	**+0.9**
ZKR	**Zakros**	**1.19**	**45**	P	**Pg**	**18 05 53.2**	**+0.2**
ZKR	**Zakros**	**1.19**	**45**	P	**Pb**	**18 05 54.1**	**+1.6**
ZKR				S	**Sg**	**18 06 08.9**	**+0.3**
ZKR				AML	AML	18 06 16.3	
	comp=N,662μm,0.6s						
ZKR				AML	AML	18 06 21.6	
	comp=E,1420μm,0.8s						
PRNS	**Prines Rethymn**	**1.22**	**333**	P	**Pg**	**18 05 52.7**	**-0.8**
VAM	**Vamos**	**1.38**	**325**	P	**Pg**	**18 05 55.4**	**-1.2**
VAM				S	**Sn**	**18 06 15.2**	**+1.9**
VAM	**Vamos**	**1.38**	**325**	P	**Pg**	**18 05 55.0**	**-1.6**
VAM				S	**Sg**	**18 06 14.0**	**-0.6**
VAM				AML	AML	18 06 22.1	
	comp=E,1245μm,0.5s						
VAM				AML	AML	18 06 25.6	
	comp=N,1263μm,0.6s						
IMMV	**Iera Moni Meta**	**1.54**	**320**	P	**Pn**	**18 05 58.6**	**+1.3**
IMMV	**Iera Moni Meta**	**1.54**	**320**	P	**Pn**	**18 05 58.6**	**+1.3**
IMMV	**Iera Moni Meta**	**1.54**	**320**	P	**Pn**	**18 05 58.6**	**+1.3**
IMMV				AML	AML	18 06 33.7	
	comp=N,855μm,0.4s						
IMMV				AML	AML	18 06 39.6	
	comp=E,1310μm,0.7s						
KARP	**Karpathos**	**2.06**	**52**	P	**Pn**	**18 06 07.7**	**+3.2**
ANKY	**Antikythira Is**	**2.21**	**316**	P	**Pn**	**18 06 08.6**	**+2.1**
ARG	**Arkhangelos**	**3.09**	**50**	*e*P	**Pn**	**18 06 21.1**	**+2.5**
DAT	**Datca**	**3.13**	**38**	*e*P	**Pn**	**18 06 20.6**	**+1.3**
DAT	**Datca**	**3.13**	**38**	*i*P	**Pn**	**18 06 21.6**	**+2.4**
DAT				*i*S	**Sn**	**18 06 54.4**	**-2.2**
DAT				IAML_P			
	comp=Z,328nm,0.1s						
DALY	**Dalyan (Mula)**	**3.80**	**47**	*e*P	**Pn**	**18 06 30.8**	**+2.5**
DALY	**Dalyan (Mula)**	**3.80**	**47**	*i*P	**Pn**	**18 06 30.6**	**+2.2**
TURN	**Turunc**	**3.80**	**46**	*e*P	**Pn**	**18 06 25.9**	**-2.5**
TURN	**Turunc**	**3.80**	**46**	*i*P	**Pn**	**18 06 26.0**	**-2.5**
TURN				IAML_P			
	comp=Z,848nm,0.2s						
YER	**Yerkesik**	**3.81**	**41**	*e*P	**Pn**	**18 06 30.4**	**+1.9**
ITM	**Ithomi**	**3.92**	**318**	*e*P	**Pn**	**18 06 31.7**	**+1.6**
AYDN	**Tasoluk**	**4.02**	**32**	*i*P	**Pn**	**18 06 34.1**	**+2.7**
AKAS	**Kas**	**4.11**	**60**	*e*P	**Pn**	**18 06 34.7**	**+1.9**
AKAS	**Kas**	**4.11**	**60**	*i*P	**Pn**	**18 06 35.5**	**+2.7**
AKAS				*i*S	Sn	18 07 08.1	-13
AKUM	**Antalya-Kumluc**	**4.69**	**63**	*i*P	**Pn**	**18 06 41.7**	**+1.1**
MMAI	**Mount Meron Ar**	**8.62**	**96**	Pn	**Pn**	**18 07 33.2**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=308,slow=14,SNR=2.4						
MMAI				Sn	Sn	18 09 06.1	-5.7
	comp=Z,1.8nm,0.3s,baz=269,slow=22,SNR=5.0						
EIL	**Elat**	**9.48**	**116**	Pn	**Pn**	**18 07 44.5**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=343,slow=2.7,SNR=8.6						
EIL				Sn	Sn	18 09 24.2	-8.8
	comp=Z,0.3nm,0.3s,baz=216,slow=18,SNR=3.2						
AKASG	**Malin Array Be**	**16.68**	**9**	Pn	**Pn**	**18 09 20.5**	**-2.9**
	comp=Z,0.4nm,0.3s,baz=199,slow=11,SNR=3.2						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**Pn**	**18 09 24.0**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=142,slow=9.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**29.94**	**231**	P	P	18 11 35.3	-2.9
	comp=Z,1.0nm,0.4s,baz=33,slow=8.3,SNR=17						
MKAR	**Makanchi Array**	**44.25**	**56**	P	P	18 13 35.8	-3.5
	comp=Z,0.3nm,0.6s,baz=275,slow=7.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**45.60**	**46**	P	**P**	**18 13 48.1**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=270,slow=6.7,SNR=2.9						

TAP 17 18:55:03.2, 22°08N×121°07E, h29km, ML1.9, 1C, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.24**	**223**	P	Pn	18 55 10.5	-0.4
	baz=233						
TSEB				S	Sb	18 55 16.0	+1.9
	baz=233						
TWKBT	**Hengchun**	**0.28**	**241**	P	Pb	18 55 10.6	+0.3
	baz=240						
TWKBT				S	Sb	18 55 15.6	+0.6
	baz=240						
TWK1	**Hengchun**	**0.28**	**242**	*i*P	Pb	18 55 10.5	+0.2
	baz=239						
TWK1				*i*S	Sb	18 55 15.5	+0.4
	baz=239						
HEN	**Hengchun**	**0.32**	**257**	*e*P	Pb	18 55 11.0	+0.2
	baz=256						
HEN				S	Sn	18 55 17.1	-0.5
	baz=256						
TAW	**Tawu**	**0.33**	**330**	*i*P	Pb	18 55 11.1	+0.2
	baz=340						
TAW				*i*S	Sb	18 55 16.7	+0.6
	baz=340						
EAST	**Anshuo**	**0.37**	**326**	⇑*i*P	Pb	18 55 11.8	+0.2
	baz=335						
EAST				*i*S	Sb	18 55 17.7	+0.4
	baz=335						
LAY	**Lan-yu**	**0.45**	**95**	P	Pb	18 55 12.8	0.0
	baz=85						
LAY				S	Sb	18 55 19.6	+0.4
	baz=85						
SCZT	**Fangliau**	**0.51**	**305**	P	Pb	18 55 14.2	+0.4
	baz=313						
SCZT				S	Sn	18 55 22.1	-0.4
	baz=313						
ECL	**Taimali**	**0.53**	**348**	*e*S	Sb	18 55 20.7	-0.9
	baz=360						
SSPT	**Xinbi**	**0.62**	**311**	*e*P	Pn	18 55 16.4	+0.3
	baz=321						
MASBT	**Mashibuluo**	**0.67**	**323**	*e*P	Pb	18 55 16.5	0.0
	baz=330						
SSD	**Sandimen**	**0.78**	**329**	*e*P	Pb	18 55 18.1	-0.2
	baz=336						
CHN1	**Nanshi**	**1.21**	**336**	*e*P	Pb	18 55 25.9	+0.3
	baz=337						
TPUB	**Ta-pu**	**1.29**	**342**	*e*P	Pb	18 55 26.9	+0.1
	baz=342						
TWF1	**Yuli**	**1.29**	**9**	*e*P	Pn	18 55 24.3	-1.1
	baz=11						

TAP 17 18:55:08.3, 22°48N×121°16E, h8km, ML1.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECL	**Taimali**	**0.22**	**301**	*e*P	Pg	18 55 13.4	+0.6
	baz=297						
ECL	**Taimali**	**0.22**	**301**	P	Pg	18 55 13.4	+0.6
	baz=360						
TTN	**Taitung**	**0.27**	**357**	*e*P	Pb	18 55 15.6	+0.2
	baz=360						
EAST	**Anshuo**	**0.31**	**251**	*e*P	Pg	18 55 14.6	+0.2
	baz=260						
TWGBT	**Beinan**	**0.34**	**347**	P	Pb	18 55 16.3	-0.3
	baz=330						
TWGBT				*e*S	Sb	18 55 22.2	-0.1
	baz=330						
TWG	**Pinlang**	**0.35**	**346**	P	Pb	18 55 16.1	-0.6
	baz=330						
TWG				S	Sb	18 55 22.1	-0.3
	baz=330						
MASBT	**Mashibuluo**	**0.51**	**285**	*e*P	Pg	18 55 18.1	0.0
	baz=285						
SSD	**Sandimen**	**0.56**	**298**	*e*P	Pb	18 55 19.7	-0.6
	baz=299						
SSD				*e*S	Sg	18 55 27.2	+0.9
	baz=299						
CHKT	**Chengkung**	**0.64**	**17**	*e*P	Pg	18 55 20.9	+0.2
	baz=28						
SLGT	**Liugui**	**0.70**	**317**	*e*P	Pb	18 55 23.1	+0.4
	baz=341						
SLGT	**Liugui**	**0.70**	**317**	*e*P	Pb	18 55 23.2	+0.5
	baz=318						
ELDTW	**Lidau**	**0.72**	**349**	*e*P	Pg	18 55 21.9	-0.3
	baz=12						
ELDTW	**Lidau**	**0.72**	**349**	*e*P	Pg	18 55 21.8	-0.3
	baz=351						
TWM1	**Shoushan**	**0.76**	**297**	*e*P	Pb	18 55 23.9	+0.1
	baz=307						
SGST	**Jiashian**	**0.80**	**318**	*e*P	Pb	18 55 24.9	+0.5
	baz=319						
TWF1	**Yuli**	**0.88**	**8**	*e*P	Pg	18 55 25.1	-0.1
	baz=9.0						
CHN1	**Nanshi**	**0.91**	**320**	*e*P	Pb	18 55 26.7	+0.4
	baz=336						
YULB	**Yu-li**	**0.92**	**8**	*e*P	Pg	18 55 25.2	-0.8
	baz=8.0						
TPUB	**Ta-pu**	**0.95**	**329**	*e*P	Pn	18 55 27.6	-0.3
	baz=330						
TWK	**Hsinying**	**1.00**	**322**	*e*P	Pn	18 55 28.9	+0.3
	baz=336						
CHN4	**Tsaushan**	**1.01**	**329**	*e*P	Pn	18 55 28.8	0.0
	baz=329						
YUS	**Yu-Shan**	**1.02**	**349**	*e*P	Pg	18 55 28.1	+0.1
	baz=350						
HGSD	**Ruisui**	**1.03**	**13**	*e*P	Pg	18 55 27.7	-0.5
	baz=26						
CHN5	**Tsauling**	**1.20**	**338**	*e*P	Pb	18 55 30.9	-0.3
	baz=339						
EGFH	**Guangfu**	**1.21**	**12**	*e*P	Pb	18 55 30.2	-1.2
	baz=12						
WHYT	**Xinyi Township**	**1.24**	**347**	*e*P	Pg	18 55 32.6	+0.4
	baz=348						
SSLB	**Suanglung**	**1.31**	**352**	*e*P	Pn	18 55 32.3	-0.7
	baz=352						
SMLT	**Sun Moon Lake**	**1.42**	**350**	*e*P	Pn	18 55 34.5	+0.1
	baz=351						
TYC	**Yuchr**	**1.44**	**349**	*e*P	Pb	18 55 35.7	+0.3
	baz=350						
OWD	**Renai**	**1.47**	**1**	*e*P	Pn	18 55 33.8	-1.4
	baz=16						

*TAP **17** 18:56:11.2, 24°80N×122°25E, h5km, ML3.2, C*
*JMA **17** 18:56:13.3, 24°75N×122°27E, h28km±4km, M2.3*
ISC 17 18:56:12.0±1.0, 24°77N±0°02×122°27E±0°02, h13km±7km, n90, σ0s84/164, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.25**	**211**	P	**Pg**	**18 56 17.7**	**+0.4**
	baz=209						
EOS1				S	**Sb**	**18 56 22.2**	**-0.3**
	baz=209						
TWB1	**Santiao Chiao**	**0.35**	**313**	*i*P	**Pg**	**18 56 18.6**	**-0.5**
	baz=312						
TWB1				*i*S	**Sg**	**18 56 23.0**	**-0.9**
	baz=312						
NTC	**Toucheng**	**0.41**	**282**	P	**Pg**	**18 56 19.7**	**-0.4**
	baz=278						
NTC				*e*S	**Sg**	**18 56 26.3**	**+0.6**
	baz=278						
TWC	**Suao**	**0.41**	**248**	*i*P	**Pg**	**18 56 19.3**	**-1.0**
	baz=242						
TWC				*i*S	**Sb**	**18 56 27.2**	**-0.1**
	baz=242						
TIPB	**Shuangxi**	**0.45**	**297**	*i*P	**Pg**	**18 56 20.7**	**-0.3**
	baz=293						
TIPB				S	**Sg**	**18 56 26.5**	**-0.5**
	baz=293						
ILA	**Ilan**	**0.47**	**270**	*e*S	**Sb**	**18 56 29.0**	**0.0**
	baz=253						
TWE	**Neicheng**	**0.55**	**265**	P	**Pg**	**18 56 22.0**	**-0.7**
	baz=250						
TWE				*e*S	**Sg**	**18 56 30.2**	**+0.1**
	baz=250						
NANB	**Nanao**	**0.58**	**235**	*e*P	**Pg**	**18 56 22.7**	**-0.7**
	baz=231						
NANB				*e*S	**Sb**	**18 56 32.8**	**+0.6**
	baz=231						
ENA	**Nanau**	**0.59**	**235**	*i*P	**Pg**	**18 56 23.2**	**-0.3**
	baz=231						
ENA				*e*S	**Sg**	**18 56 31.7**	**+0.4**
	baz=231						
ENTT	**Nioudou**	**0.65**	**259**	P	**Pg**	**18 56 24.3**	**-0.4**
	baz=255						
ENTT				*e*S	**Sb**	**18 56 33.9**	**-0.3**
	baz=255						
JYNG	**Yonagunijimaku**	**0.69**	**117**	P	**Pb**	**18 56 26.5**	**+0.7**
JYNG				*e*S	**Sb**	**18 56 36.3**	**+1.0**
NWLT	**Wulai**	**0.70**	**271**	*i*P	**Pg**	**18 56 25.4**	**-0.2**
	baz=268						
NWLT				*e*S	**Sg**	**18 56 34.4**	**-0.4**
	baz=268						
NHDH	**Xindian Distri**	**0.70**	**286**	*e*P	**Pb**	**18 56 26.5**	**+0.4**
	baz=274						
NHDH				*e*S	**Sb**	**18 56 35.7**	**+0.1**
	baz=274						
NDT	**Datong Townshi**	**0.71**	**257**	P	**Pg**	**18 56 25.1**	**-0.7**
	baz=254						
NDT				*e*S	**Sg**	**18 56 35.2**	**+0.2**
	baz=254						
YM01	**YM01**	**0.74**	**301**	*i*P	**Pn**	**18 56 27.3**	**-0.8**
	baz=298						
YM01				S	**Sn**	**18 56 37.6**	**-1.6**
	baz=298						
TATO	**Taipei**	**0.74**	**286**	*e*P	**Pb**	**18 56 26.6**	**-0.1**
	baz=275						
TATO				*e*S	**Sb**	**18 56 36.8**	**+0.1**
	baz=275						
YOJ	**Yonaguni jima**	**0.74**	**114**	P	**Pb**	**18 56 26.8**	**+0.1**
	baz=116						
YOJ				S	**Sn**	**18 56 38.3**	**-0.8**
	baz=116						
YOJ	**Yonaguni jima**	**0.74**	**114**	P	**Pb**	**18 56 26.9**	**+0.2**
TAP	**Taipei**	**0.74**	**291**	*e*P	**Pb**	**18 56 26.9**	**+0.2**
	baz=289						
TAP				S	**Sb**	**18 56 37.6**	**+0.8**
	baz=289						
YM08	**YM08**	**0.74**	**304**	P	**Pb**	**18 56 26.9**	**+0.1**
	baz=302						
YM08				S	**Sb**	**18 56 36.9**	**0.0**
	baz=302						
YM10	**YM10**	**0.75**	**301**	P	**Pb**	**18 56 27.1**	**+0.2**
	baz=299						
YM10				*e*S	**Sn**	**18 56 37.9**	**-1.6**
	baz=299						
YM05	**YM05**	**0.75**	**302**	P	**Pb**	**18 56 27.2**	**+0.3**
	baz=299						
YM05				S	**Sn**	**18 56 38.0**	**-1.6**
	baz=299						
YM04	**YM04**	**0.77**	**300**	P	**Pg**	**18 56 27.5**	**+0.6**
	baz=298						
YM04				S	**Sb**	**18 56 38.2**	**+0.6**
	baz=298						
YM03	**YM03**	**0.78**	**302**	*e*P	**Pn**	**18 56 27.9**	**-0.8**
	baz=299						
YM03				*e*S	**Sb**	**18 56 38.5**	**+0.6**
	baz=299						
TWY	**Chenhua**	**0.79**	**310**	*i*P	**Pg**	**18 56 27.9**	**+0.6**
	baz=308						
TWY				*i*S	**Sn**	**18 56 39.3**	**-1.1**
	baz=308						
ANP	**Anpu**	**0.80**	**302**	*e*P	**Pg**	**18 56 28.1**	**+0.6**
	baz=299						
YHNB	**Yeheng**	**0.82**	**263**	P	**Pb**	**18 56 27.1**	**-0.9**
	baz=253						
YHNB				*e*S	**Sb**	**18 56 37.9**	**-1.1**
	baz=253						
NSK	**Sanguang**	**0.83**	**264**	P	**Pb**	**18 56 27.6**	**-0.7**
	baz=253						
NSK				*e*S	**Sb**	**18 56 38.5**	**-0.9**
	baz=253						
TWS1	**Kuangyinshan**	**0.84**	**293**	P	**Pn**	**18 56 29.2**	**-0.3**
	baz=306						
TWS1				S	**Sn**	**18 56 41.2**	**-0.5**
	baz=306						
NTST	**Danshui**	**0.84**	**298**	*e*S	**Sn**	**18 56 41.0**	**-0.7**
	baz=311						
NACB	**Ninganchiao**	**0.85**	**226**	*e*P	**Pb**	**18 56 27.8**	**-0.9**
	baz=224						
NACB				*e*S	**Sg**	**18 56 40.2**	**+0.5**
	baz=224						
NNSB	**Datong**	**0.87**	**247**	P	**Pb**	**18 56 28.5**	**-0.5**
	baz=233						
NNSB				*e*S	**Sg**	**18 56 40.8**	**+0.4**
	baz=233						
PCYT	**Pengchaiyu**	**0.88**	**348**	*e*P	**Pb**	**18 56 28.7**	**-0.3**
	baz=348						
PCYT				*e*S	**Sn**	**18 56 42.4**	**-0.2**
	baz=348						
NNS	**Nan Shan**	**0.88**	**248**	P	**Pb**	**18 56 28.7**	**-0.4**
	baz=233						
NNS				*e*S	**Sg**	**18 56 40.9**	**+0.3**
	baz=233						
ETLH	**Xiulin Townshi**	**0.91**	**232**	*e*P	**Pb**	**18 56 29.0**	**-0.6**
	baz=230						
ETLH				*e*S	**Sg**	**18 56 42.4**	**+0.9**
	baz=230						
TWD	**Chiawan**	**0.92**	**222**	*e*P	**Pb**	**18 56 29.2**	**-0.5**
	baz=231						
TWD				*e*S	**Sg**	**18 56 42.4**	**+0.6**
	baz=231						
WLTB	**Daxi**	**0.93**	**275**	*e*P	**Pg**	**18 56 30.2**	**+0.2**
	baz=273						
WLTB				S	**Sg**	**18 56 42.6**	**+0.5**
	baz=273						
NCU	**National Centr**	**1.00**	**282**	*e*S	**Sn**	**18 56 46.6**	**+0.9**
	baz=279						
NCUH	**Zhongli**	**1.00**	**282**	*e*S	**Sn**	**18 56 47.1**	**+1.4**
	baz=279						
ENLB	**Shoufeng**	**1.05**	**215**	*e*P	**Pg**	**18 56 32.9**	**+0.6**
	baz=192						
ENLB				*e*S	**Sn**	**18 56 49.5**	**+2.6**
	baz=192						
WHF	**Hehuan Shan**	**1.10**	**236**	P	**Pb**	**18 56 32.7**	**-0.5**
	baz=234						
WHF				S	**Sn**	**18 56 48.5**	**-0.3**
	baz=234						
TWT	**Tachien**	**1.12**	**243**	P	**Pg**	**18 56 34.0**	**+0.4**
	baz=232						
TWT				*e*S	**Sg**	**18 56 49.0**	**+0.8**
	baz=232						
TDCB	**Tech

	baz=197						
CHGB	**Renai**	**1.22 235**	P		**Pb**	**18 56 34.9**	**-0.1**
	baz=233						
CHGB			*e*S		**Sg**	**18 56 52.1**	**+0.6**
	baz=233						
OWD	**Renai**	**1.28 231**	P		**Pb**	**18 56 36.1**	**+0.1**
	baz=230						
OWD			*e*S		**Sg**	**18 56 53.9**	**+0.4**
	baz=230						
WHP	**Taichung City**	**1.30 248**	*e*P		**Pg**	**18 56 36.9**	**-0.1**
	baz=246						
WHP			S		**Sg**	**18 56 53.9**	**-0.1**
	baz=246						
EGFH	**Guangfu**	**1.34 215**	*e*P		**Pb**	**18 56 36.9**	**+0.1**
	baz=195						
EGFH			*e*S		**Sg**	**18 56 56.1**	**+1.0**
	baz=195						
NMLH	**Miaoli**	**1.36 261**	*e*P		**Pg**	**18 56 38.5**	**+0.3**
	baz=258						
NMLH			*e*S		**Sg**	**18 56 57.4**	**+1.4**
	baz=258						
IRIF	**Iriomote-Funau**	**1.40 108**	P		**Pb**	**18 56 37.9**	**0.0**
IRIF			S		**Sn**	**18 56 55.4**	**0.0**
NSY	**Sanyi**	**1.42 256**	*e*P		**Pg**	**18 56 39.2**	**0.0**
	baz=244						
NSY			*e*S		**Sg**	**18 56 59.0**	**+1.4**
	baz=244						
TWQ1	**Liyutan**	**1.43 253**	*e*P		**Pg**	**18 56 40.5**	**+1.1**
	baz=242						
TWQ1			*e*S		**Sg**	**18 56 58.4**	**+0.5**
	baz=242						
DPDB	**Guoxing**	**1.43 239**	*e*P		**Pb**	**18 56 38.5**	**+0.1**
	baz=238						
DPDB			*e*S		**Sg**	**18 56 58.2**	**+0.3**
	baz=238						
VWDT	**VWDT**	**1.44 226**	*e*P		**Pb**	**18 56 38.9**	**+0.2**
	baz=233						
VWDT			*e*S		**Sg**	**18 56 58.1**	**-0.4**
	baz=233						
PTSB	**Yuanli**	**1.46 258**	*e*S		**Sg**	**18 57 00.0**	**+1.0**
	baz=275						
HGSD	**Ruisui**	**1.49 211**	*e*P		**Pb**	**18 56 39.5**	**+0.1**
	baz=195						
HGSD			*e*S		**Sg**	**18 57 00.3**	**+0.5**
	baz=195						
EHY	**Hungye**	**1.52 215**	*e*P		**Pb**	**18 56 39.5**	**-0.6**
	baz=233						
EHY			S		**Sg**	**18 57 01.3**	**+0.2**
	baz=233						
SMLT	**Sun Moon Lake**	**1.53 235**	*e*P		**Pg**	**18 56 41.3**	**-0.1**
	baz=234						
SMLT			*e*S		**Sg**	**18 57 01.4**	**+0.2**
	baz=234						
WDJ	**Dajia District**	**1.54 255**	*e*S		**Sg**	**18 57 02.4**	**+0.8**
	baz=271						
SSLB	**Suanglung**	**1.55 231**	*e*P		**Pb**	**18 56 40.0**	**-0.4**
	baz=231						
SSLB			*e*S		**Sb**	**18 57 00.2**	**+0.2**
	baz=231						
TYC	**Yuchr**	**1.55 237**	P		**Pb**	**18 56 40.8**	**+0.3**
	baz=228						
TYC			S		**Sg**	**18 57 01.1**	**-0.7**
	baz=228						
HATJ	**Hateruma jima**	**1.57 116**	*e*S		**Sn**	**18 56 59.4**	**-0.2**
TCU	**Taichung**	**1.58 247**	*e*S		**Sg**	**18 57 04.2**	**+1.4**
	baz=246						
YULB	**Yu-li**	**1.63 213**	*e*P		**Pn**	**18 56 40.8**	**+0.4**
	baz=215						
YULB			*e*S		**Sg**	**18 57 03.7**	**-0.8**
	baz=215						
TWF1	**Yuli**	**1.67 212**	*e*P		**Pb**	**18 56 41.9**	**-0.6**
	baz=231						
TWF1			*e*S		**Sg**	**18 57 04.8**	**-0.8**
	baz=231						
JKRS	**Kuro-shima**	**1.67 108**	P		**Pn**	**18 56 40.7**	**-0.2**
JKRS			S		**Sn**	**18 57 01.7**	**-0.4**
WHYT	**Xinyi Township**	**1.68 231**	*e*P		**Pg**	**18 56 43.7**	**-0.5**
	baz=239						
WHYT			*e*S		**Sg**	**18 57 06.1**	**+0.2**
	baz=239						
WJS	**Zhushan**	**1.69 237**	*e*P		**Pg**	**18 56 44.2**	**-0.3**
	baz=238						
WJS			*e*S		**Sg**	**18 57 09.3**	**+2.9**
	baz=238						
WNT	**Mingjian**	**1.69 239**	*e*P		**Pg**	**18 56 44.5**	**0.0**
	baz=240						
WNT			*e*S		**Sg**	**18 57 08.4**	**+1.8**
	baz=240						
JIJ	**Ishigaki jima**	**1.75 103**	P		**Pb**	**18 56 43.5**	**-0.5**
JIJ			*e*S		**Sb**	**18 57 05.2**	**-0.7**
CHN5	**Tsauling**	**1.86 232**	P		**Pb**	**18 56 46.7**	**+0.8**
	baz=233						
CHN5			S		**Sg**	**18 57 12.7**	**+0.8**
	baz=233						
WGK	**Gukeng**	**1.89 236**	*e*P		**Pb**	**18 56 46.9**	**+0.6**
	baz=237						
WGK			*e*S		**Sg**	**18 57 13.9**	**+0.9**
	baz=237						
WDLH	**Douliu**	**1.91 236**	*e*S		**Sg**	**18 57 13.9**	**+0.4**
	baz=237						
CHN4	**Tsaushan**	**2.08 228**	*e*P		**Pb**	**18 56 50.2**	**+0.6**
	baz=229						
CHN4			*e*S		**Sg**	**18 57 19.4**	**+0.4**
	baz=229						
TPUB	**Ta-pu**	**2.09 226**	*e*P		**Pb**	**18 56 49.7**	**-0.1**
	baz=229						
TPUB			S		**Sg**	**18 57 18.4**	**-0.9**
	baz=229						
STYT	**Tauyuan**	**2.11 221**	*e*P		**Pb**	**18 56 49.2**	**-1.0**
	baz=222						
STYT			*e*S		**Sb**	**18 57 18.1**	**+1.8**
	baz=222						
TWK	**Hsinying**	**2.21 228**	*e*P		**Pb**	**18 56 52.1**	**+0.3**
	baz=230						
TWK			*e*S		**Sg**	**18 57 21.9**	**-1.1**
	baz=230						
SNST	**Tainan City**	**2.24 227**	*e*P		**Pb**	**18 56 51.6**	**-0.6**
	baz=230						
SNST			S		**Sg**	**18 57 22.2**	**-1.6**
	baz=230						
CHN1	**Nanshi**	**2.24 226**	*e*P		**Pb**	**18 56 51.9**	**-0.4**
	baz=229						
CHN1			S		**Sg**	**18 57 22.9**	**-1.1**
	baz=229						
SGST	**Jiashian**	**2.28 223**	*e*P		**Pb**	**18 56 52.1**	**-0.9**
	baz=211						
SGST			*e*S		**Sg**	**18 57 23.4**	**-1.9**
	baz=211						
SLGT	**Liugui**	**2.31 220**	*e*P		**Pb**	**18 56 52.9**	**-0.5**
	baz=223						
SLGT			S		**Sg**	**18 57 24.5**	**-1.7**
	baz=223						
MATB	**Ma-tsu**	**2.51 304**	*e*P		**Pn**	**18 56 53.7**	**+1.2**
	baz=298						
MASBT	**Mashibuluo**	**2.62 215**	*e*P		**Pb**	**18 56 57.6**	**-1.2**
	baz=205						
MASBT			*e*S		**Sb**	**18 57 30.6**	**-0.1**
	baz=205						
EAST	**Anshuo**	**2.71 209**	*e*P		**Pn**	**18 56 55.3**	**+0.1**
	baz=200						
EAST			*e*S		**Sn**	**18 57 29.2**	**+1.4**
	baz=200						
PHUB	**P'eng-hu**	**2.76 244**	*e*S		**Sb**	**18 57 31.8**	**-3.2**
	baz=244						
LYJJ	**Jianjiangzhen**	**2.88 309**	*e*P		**Pn**	**18 56 58.4**	**+0.9**
	baz=303						

IDC 17 18:59:52.8±4.0, 10°.24S×66°.09E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/65, mbtmp3.7/6, MS3.4/2, Ms1 3.4/2, ms1mx2.7/49, Error ellipse: s-maj=115.0km s-min=29.3km az=65.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**6.20**	**52**	T	T	19 07 09.5	
	baz=228,slow=75,SNR=3601						
H08N2	**Diego Garcia H**	**6.22**	**52**	T	T	19 07 11.0	
	baz=228,slow=75,SNR=2558						
H08N1	**Diego Garcia H**	**6.22**	**52**	T	T	19 07 12.4	
	baz=228,slow=75,SNR=2981						
H08S1	**Diego Garcia H**	**6.81**	**68**	T	T	19 07 55.9	
	baz=246,slow=75,SNR=203						
H08S3	**Diego Garcia H**	**6.83**	**68**	T	T	19 07 58.2	
	baz=246,slow=75,SNR=139						
H08S2	**Diego Garcia H**	**6.83**	**68**	T	T	19 07 57.3	
	baz=246,slow=75,SNR=228						
LSZ	**Lusaka**	**37.27**	**258**	LR	LR	19 20 07.2	
	comp=Z,66nm,19.6s,baz=74,slow=33						
CMAR	**Chiang Mai Arr**	**43.17**	**49**	P	P	19 07 55.5	-0.3
	0.3nm,0.5s,baz=238,slow=11,SNR=4.6						
KBZ	**Khabaz**	**57.71**	**340**	LR	LR	19 35 05.7	
	comp=Z,29nm,19.4s,baz=64,slow=37						
MKAR	**Makanchi Array**	**58.60**	**13**	P	P	19 09 51.4	-0.1
	0.5nm,0.7s,baz=198,slow=7.0,SNR=3.0						
ASAR	**Alice Springs**	**65.71**	**111**	P	P	19 10 38.9	-0.9
	0.7nm,0.9s,baz=272,slow=5.5,SNR=3.0						
ZALV	**Zalesovo Beam**	**65.89**	**12**	P	P	19 10 40.3	+0.1
	0.6nm,0.6s,baz=191,slow=1.5,SNR=4.0						
WRA	**Warramunga Arr**	**66.23**	**107**	P	P	19 10 44.2	+1.0
	2.1nm,1.0s,baz=276,slow=7.5,SNR=2.9						
SONM	**Songino Array**	**67.96**	**28**	P	P	19 10 53.8	+0.1
	0.4nm,0.6s,baz=235,slow=6.5,SNR=3.3						

*IDC **17** 19:08:48.4±0.8, 34°.30N×25°.04E, h0km, mb4.0/15, mb1 4.1/21, mb1mx3.9/57, mbtmp4.0/21, ML4.4/5, MS2.9/4, Ms1 2.9/4, ms1mx2.5/49, Error ellipse: s-maj=15.1km s-min=13.9km az=50.0*

*NEIC **17** 19:08:53.4±0.0, 34°.29N×25°.11E, h0km, mb4.1/12, ML3.7(THE), ML3.8(ISK), After THE.*

*THE **17** 19:08:53.4, 34°.29N×25°.11E, h0km±1km, ML3.7/5, Error ellipse: s-maj=1.8km s-min=0.6km az=169.0*

*PDG **17** 19:08:54.7±0.2, 34°.45N×24°.28E, h10km±1km, ML4.2/10, Error ellipse: s-maj=34.8km s-min=28.4km az=90.0*

*ATH **17** 19:08:54.7, 34°.42N×25°.06E, h28km±1km, ML3.7/4, Error ellipse: s-maj=5.2km s-min=1.6km az=353.0*

*HLW **17** 19:08:55.1, 34°.13N×25°.30E, h10km±15km, Md3.3*

*GII **17** 19:08:58.8±0.0, 34°.10N×25°.84E, h2km, mb4.1/1, MD3.9/4*

*DDA **17** 19:09:46.7, 34°.57N×25°.69E, h55km, ML3.9*

ISC 17 19:08:53.7±1.2, 34°26N±0°.04×25°.11E±0°.03, h31km±8km, n172, o2°56/215, mb3.9/21, 11C-10D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.79**	**342**	P	**Pn**	**19 09 08.1**	**-0.7**
SIVA				S	**Sb**	**19 09 20.0**	**+0.5**
SIVA	**Sivas**	**0.79**	**342**	P	**Pn**	**19 09 08.1**	**-0.7**
SIVA				S	**Sn**	**19 09 16.6**	**-3.0**
SIVA				AML	AML	19 09 24.7	
	comp=E,36354μm,0.7s						
SIVA				AML	AML	19 09 26.8	
	comp=N,30815μm,0.6s						
TMBK	**Timbaki Herakl**	**0.86**	**341**	P	**Pn**	**19 09 09.5**	**-0.2**
TMBK				S	**Sb**	**19 09 22.4**	**+1.2**
LAST	**Lasithi**	**0.95**	**19**	P	**Pn**	**19 09 10.9**	**-0.1**
LAST				S	**Sb**	**19 09 25.9**	**+2.0**
LAST	**Lasithi**	**0.95**	**19**	P	**Pn**	**19 09 10.9**	**-0.1**
LAST				S	**Sn**	**19 09 22.9**	**-0.7**
LAST				AML	AML	19 09 32.2	
	comp=E,5523μm,0.8s						
LAST				AML	AML	19 09 37.5	
	comp=N,6109μm,0.8s						
GVD	**Gavdhos**	**1.02**	**305**	P	**Pn**	**19 09 12.3**	**+0.3**
GVD				S	**Sb**	**19 09 26.3**	**+0.4**
GVD	**Gavdhos**	**1.02**	**305**	P	**Pn**	**19 09 12.3**	**+0.3**
GVD				S	**Sb**	**19 09 27.9**	**+2.0**
GVD	**Gavdhos**	**1.02**	**305**	P	**Pn**	**19 09 12.3**	**+0.3**
GVD				S	**Sn**	**19 09 25.2**	**0.0**
GVD				AML	AML	19 09 32.3	
	comp=E,11089μm,0.4s						
GVD				AML	AML	19 09 33.5	
	comp=N,13236μm,0.5s						
GVDS	**Gavdos**	**1.02**	**305**	P	**Pb**	**19 09 13.2**	**+0.3**
GVDS				S	**Sb**	**19 09 28.4**	**+2.4**
IDI	**Anoyia**	**1.04**	**350**	Pn	**Pn**	**19 09 11.3**	**-1.0**
	comp=N,171nm,0.3s,baz=165,slow=17,SNR=521						
IDI				Sn	**Sb**	**19 09 26.5**	**-0.1**
	comp=N,215nm,0.3s,baz=346,slow=12,SNR=23						
IDI				LR	LR	19 09 30.0	
	comp=N,67nm,21.6s,baz=197,slow=42						
IDI	**Anoyia**	**1.04**	**350**	P	**Pn**	**19 09 11.5**	**-0.8**
KSTL	**Kastelli Herak**	**1.04**	**358**	P	**Pn**	**19 09 11.5**	**-0.7**
KSTL				S	**Sn**	**19 09 25.5**	**-0.2**
IACM	**Heraklion**	**1.04**	**358**	P	**Pb**	**19 09 13.0**	**-0.2**
IACM				S	**Sb**	**19 09 28.3**	**+1.8**
NPS	**Neapolis**	**1.08**	**22**	P	**Pn**	**19 09 13.2**	**+0.4**
NPS				S	**Sb**	**19 09 31.1**	**+3.4**
NPS	**Neapolis**	**1.08**	**22**	P	**Pn**	**19 09 13.1**	**+0.2**
PRNS	**Prines Rethymn**	**1.21**	**336**	P	**Pn**	**19 09 15.3**	**+0.8**
PRNS				S	**Sb**	**19 09 33.3**	**+2.0**
STIA	**Sitia Lasithi**	**1.24**	**41**	P	**Pb**	**19 09 16.7**	**+0.2**
ZKR	**Zakros**	**1.25**	**47**	P	**Pb**	**19 09 16.4**	**-0.3**
ZKR				S	**Sb**	**19 09 32.1**	**-0.3**
ZKR	**Zakros**	**1.25**	**47**	P	**Pb**	**19 09 16.4**	**-0.3**
ZKR				S	**Sb**	**19 09 34.4**	**+2.0**
ZKR	**Zakros**	**1.25**	**47**	P	**Pb**	**19 09 16.5**	**-0.3**
ZKR				S	**Sb**	**19 09 33.5**	**+1.1**
ZKR				AML	AML	19 09 43.8	
	comp=N,2061μm,0.7s						
ZKR				AML	AML	19 09 49.6	
	comp=E,5002μm,0.7s						
VAM	**Vamos**	**1.36**	**327**	P	**Pn**	**19 09 17.8**	**+1.1**
VAM				S	**Sb**	**19 09 37.5**	**+1.7**
VAM	**Vamos**	**1.36**	**327**	P	**Pn**	**19 09 17.7**	**+1.0**
IMMV	**Iera Moni Meta**	**1.51**	**322**	P	**Pb**	**19 09 20.3**	**-0.9**
IMMV				S	**Sn**	**19 09 37.7**	**+0.3**
IMMV	**Iera Moni Meta**	**1.51**	**322**	P	**Pb**	**19 09 20.2**	**-0.9**
IMMV	**Iera Moni Meta**	**1.51**	**322**	P	**Pn**	**19 09 20.1**	**+1.4**
CHAN	**Chania**	**1.53**	**325**	P	**Pb**	**19 09 20.7**	**-0.8**
THR6	**Thira Island,**	**2.10**	**6**	P	**Pn**	**19 09 28.2**	**+1.4**
KARP	**Karpathos**	**2.12**	**52**	P	**Pb**	**19 09 30.1**	**-1.4**
KARP	**Karpathos**	**2.12**	**52**	*e*Pn	**Pb**	**19 09 30.1**	**-1.4**
KARP	**Karpathos**	**2.12**	**52**	P	**Pb**	**19 09 30.4**	**-1.1**
SANT	**Santorini**	**2.12**	**8**	P	**Pn**	**19 09 27.5**	**+0.3**
SANT	**Santorini**	**2.12**	**8**	*e*Pn	**Pn**	**19 09 27.3**	**+0.1**
SANT	**Santorini**	**2.12**	**8**	⇑*i*P	**Pn**	**19 09 27.0**	**-0.2**
SANT	**Santorini**	**2.12**	**8**	S	**Sn**	**19 09 53.0**	**+0.5**
ANKY	**Antikythira Is**	**2.18**	**318**	P	**Pn**	**19 09 30.0**	**+2.1**
IOSP	**Ios island**	**2.46**	**3**	P	**Pn**	**19 09 32.9**	**+1.1**
MHLO	**Agia Marina, M**	**2.49**	**347**	P	**Pn**	**19 09 33.6**	**+1.4**
MHLO	**Agia Marina, M**	**2.49**	**347**	P	**Pn**	**19 09 33.4**	**+1.2**
KYTH	**Kithira**	**2.62**	**320**	P	**Pn**	**19 09 36.6**	**+2.7**
KTHR	**Kythira**	**2.63**	**320**	P	**Pn**	**19 09 36.4**	**+2.2**
SLUM	**Salum**	**2.77**	**178**	P	**Pn**	**19 09 37.3**	**+1.4**
	baz=182						
SLUM				S	**Sn**	**19 10 07.7**	**-0.6**
	baz=182						
APE	**Apeiranthos**	**2.82**	**7**	P	**Pn**	**19 09 37.7**	**+0.9**
APE	**Apeiranthos**	**2.82**	**7**	⇑*i*P	**Pn**	**19 09 36.4**	**-0.4**
VLI	**Veliai**	**3.02**	**325**	P	**Pn**	**19 09 40.4**	**+0.9**
VLI	**Veliai**	**3.02**	**325**	P	**Pn**	**19 09 40.2**	**+0.7**
ARG	**Arkhangelos**	**3.15**	**51**	P	**Pn**	**19 09 43.6**	**+2.4**
DAT	**Datca**	**3.18**	**39**	P	**Pn**	**19 09 43.5**	**+1.7**
DAT	**Datca**	**3.18**	**39**	*i* P	**Pn**	**19 09 44.2**	**+2.4**
DATC	**Datca-Mugla**	**3.25**	**39**	P	**Pn**	**19 09 44.2**	**+1.7**
BODT	**Bodrum**	**3.32**	**32**	P	**Pn**	**19 09 45.1**	**+1.5**
BODT	**Bodrum**	**3.32**	**32**	*e*Pn	**Pn**	**19 09 45.1**	**+1.5**
BDRM	**Kayabasi**	**3.38**	**34**	*i* P	**Pn**	**19 09 46.4**	**+1.9**
MATC	**Matruh**	**3.41**	**148**	P	**Pn**	**19 09 45.3**	**+0.4**
	baz=149						
DID	**Didima**	**3.58**	**335**	P	**Pn**	**19 09 47.6**	**+0.5**
VLY	**Voula,Athens**	**3.74**	**344**	P	**Pn**	**19 09 50.5**	**+1.2**
DALY	**Dalyan (Mula)**	**3.85**	**48**	P	**Pn**	**19 09 53.1**	**+2.2**
DALY	**Dalyan (Mula)**	**3.85**	**48**	*i* P	**Pn**	**19 09 53.4**	**+2.5**
YER	**Yerkesik**	**3.86**	**41**	P	**Pn**	**19 09 53.3**	**+2.3**
TURN	**Turunc**	**3.86**	**47**	P	**Pn**	**19 09 48.7**	**-2.3**
TURN	**Turunc**	**3.86**	**47**	*i* P	**Pn**	**19 09 49.7**	**-1.3**
ITM	**Ithomi**	**3.90**	**319**	P	**Pn**	**19 09 52.1**	**+0.6**
ITM	**Ithomi**	**3.90**	**319**	*e*Pn	**Pn**	**19 09 51.9**	**+0.4**
FETY	**Fethiye**	**4.02**	**53**	P	**Pn**	**19 09 54.5**	**+1.3**
FETY	**Fethiye**	**4.02**	**53**	*i* P	**Pn**	**19 09 54.7**	**+1.5**
FETY				IAML_P			
	comp=Z,1μm,0.2s						
AYDN	**Tasoluk**	**4.07**	**33**	*i* P	**Pn**	**19 09 57.0**	**+3.1**
AYDN				IAML_P			
	comp=Z,976nm,0.2s						
AKAS	**Kas**	**4.17**	**61**	P	**Pn**	**19 09 56.8**	**+1.4**
AKAS	**Kas**	**4.17**	**61**	*i* P	**Pn**	**19 09 57.6**	**+2.2**
CHOS	**Chios island**	**4.19**	**10**	P	**Pn**	**19 09 56.5**	**+0.9**
ELL	**Elmali**	**4.63**	**56**	*e*P	**Pn**	**19 10 04.4**	**+2.6**
AKUM	**Antalya-Kumluc**	**4.75**	**63**	*i* P	**Pn**	**19 10 04.6**	**+1.4**
SIGR	**SIGRI**	**4.97**	**7**	*e*P	**Pn**	**19 10 07.2**	**+0.9**
SWA2		**5.01**	**177**	P	**Pn**	**19 10 07.8**	**+0.9**
	baz=178						
SWA2				S	**Sn**	**19 11 01.4**	**-2.3**
	baz=178						
AGG	**Agios Georgios**	**5.25**	**336**	*e*P	**Pn**	**19 10 11.1**	**+1.0**
AGG	**Agios Georgios**	**5.25**	**336**	*e*Pn	**Pn**	**19 10 10.9**	**+0.8**
EZN	**Ezine**	**5.64**	**10**	⇑*i*P	**Pn**	**19 10 14.9**	**-0.5**
LIT	**Litokhoron**	**6.19**	**341**	*e*Pn	**Pn**	**19 10 22.6**	**-0.4**
LEF	**Lefka**	**6.47**	**80**	⇑*i*P	**Pn**	**19 10 26.1**	**-0.7**
ALN	**Alexandroupoli**	**6.66**	**6**	*e*Pn	**Pn**	**19 10 30.9**	**+1.4**
FNA	**Florina**	**7.15**	**337**	*e*Pn	**Pn**	**19 10 35.7**	**-0.6**
KOT	**Kottamia**	**7.15**	**125**	P	**Pn**	**19 10 36.7**	**+0.3**
	baz=125						
NBNS	**Bani Suef**	**7.71**	**135**	P	**Pn**	**19 10 44.5**	**+0.5**
	baz=135						
TIP	**Timpagrande**	**8.31**	**309**	*e*Pn	**Pn**	**19 10 53.2**	**+1.0**
TIP	**Timpagrande**	**8.31**	**309**	⇓*i*P	**Pn**	**19 10 52.2**	**+0.1**
VTS	**Vitosha**	**8.47**	**351**	⇑*i*P	**Pn**	**19 10 53.5**	**-0.9**
KZIT	**Kziot**	**8.52**	**111**	Pn	**Pn**	**19 10 55.1**	**+0.1**
KZIT				Sn	**Sn**	**19 12 25.6**	**-4.6**
KZIT	**Kziot**	**8.52**	**111**	P	**Pn**	**19 10 53.6**	**-1.4**
	comp=Z,34nm,0.7s,comp=Z,0.2nm						
SLTI	**Sal'it**	**8.56**	**101**	Pn	**Pn**	**19 10 56.3**	**+0.7**
SLTI				Sn	**Sn**	**19 12 26.5**	**-4.6**
MMA0	**Mount Meron ar**	**8.67**	**95**	Pn	**Pn**	**19 10 56.7**	**-0.5**
MMAI	**Mount Meron Ar**	**8.67**	**95**	Pn	**Pn**	**19 10 56.4**	**-0.8**
	comp=Z,4.2nm,0.3s,baz=262,slow=12,SNR=18						
AMAZ	**Amatzia**	**8.68**	**106**	Pn	**Pn**	**19 10 57.2**	**-0.1**
AMAZ				Sn	**Sn**	**19 12 28.9**	**-5.3**
BR101	**Keskin Array S**	**8.73**	**49**	*e*Pn	**Pn**	**19 10 59.7**	**+1.7**
BRTR	**Keskin Array B**	**8.73**	**49**	Pn	**Pn**	**19 10 59.7**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=222,slow=16,SNR=4.9						
MMLI	**Mount Malkishu**	**8.82**	**99**	Pn	**Pn**	**19 10 59.2**	**+0.1**
YTIR	**Yattir**	**8.90**	**106**	Pn	**Pn**	**19 11 00.2**	**-0.2**
YTIR				Sn	**Sn**	**19 12 34.3**	**-5.4**
NATI	**Neve Ativ**	**8.90**	**93**	Pn	**Pn**	**19 11 00.2**	**-0.1**
NATI				Sn	**Sn**	**19 12 35.3**	**-4.2**
HMDT	**Nahal Hemdat**	**8.95**	**100**	Pn	**Pn**	**19 11 01.2**	**+0.3**
HMDT				Sn	**Sn**	**19 12 35.9**	**-4.8**
ULC	**Ulcinj**	**8.97**	**331**	⇑*i*Pn	**Pn**	**19 10 59.7**	**-1.4**
ULC				*e*Sn	**Sn**	**19 12 33.3**	**-7.8**
KSHT	**Keshet**	**9.02**	**95**	Pn	**Pn**	**19 11 01.8**	**-0.1**
SHMJ	**Saham**	**9.03**	**97**	P	**Pn**	**19 11 04.6**	**+2.6**
	comp=Z,28nm,0.5s						
DSI	**Dead Sea**	**9.04**	**104**	Pn	**Pn**	**19 11 02.5**	**+0.3**
DSI				Sn	**Sn**	**19 12 37.5**	**-5.4**
MZDA	**Masada**	**9.12**	**106**	Pn	**Pn**	**19 11 03.2**	**0.0**
MZDA				Sn	**Sn**	**19 12 39.9**	**-4.9**
KRMI	**Paran Flat**	**9.13**	**114**	Pn	**Pn**	**19 11 03.3**	**-0.2**
DRME	**Dracevica, Mon**	**9.18**	**331**	*e*Pn	**Pn**	**19 11 02.4**	**-1.6**
DRME				*e*Sn	**Sn**	**19 12 38.1**	**-8.1**
PRNI	**Paran**	**9.24**	**112**	Pn	**Pn**	**19 11 05.0**	**+0.1**
PRNI				Sn	**Sn**	**19 12 43.4**	**-4.4**
PVY	**Plav**	**9.25**	**336**	⇑*i*Pn	**Pn**	**19 11 04.3**	**-0.7**
PVY				*e*Sn	**Sn**	**19 12 40.4**	**-7.6**
VAE	**Valguarnera**	**9.26**	**293**	Pn	**Pn**	**19 11 02.6**	**-2.5**
	baz=77,slow=15,SNR=2.2						
PDG	**Podgorica**	**9.36**	**332**	⇓*i*P	**Pn**	**19 11 05.9**	**-0.5**
TTG	**Podgorica**	**9.36**	**332**	⇑*i*Pn	**Pn**	**19 11 05.8**	**-0.6**
TTG				*e*Sn	**Sn**	**19 12 43.2**	**-7.4**
TTG	**Podgorica**	**9.36**	**332**	*e*Pn	**Pn**	**19 11 06.1**	**-0.3**
WALJ	**Wala**	**9.39**	**104**	P	**Pn**	**19 11 07.4**	**+0.5**
	comp=Z,28nm,0.4s						
BUM	**Brajici-Budva**	**9.39**	**331**	⇑*i*Pn	**Pn**	**19 11 05.4**	**-1.6**
BUM				*e*Sn	**Sn**	**19 12 43.1**	**-8.5**
HRFI	**Mount Harif**	**9.41**	**114**	Pn	**Pn**	**19 11 07.4**	**+0.1**
HRFI				Sn	**Sn**	**19 12 48.1**	**-4.0**
MBRI	**Mt Berech**	**9.44**	**115**	Pn	**Pn**	**19 11 07.6**	**-0.1**
IVA	**Berane**	**9.51**	**336**	⇑*i*Pn	**Pn**	**19 11 08.2**	**-0.5**
IVA				*e*Sn	**Sn**	**19 12 47.3**	**-7.3**
EIL	**Elat**	**9.53**	**116**	Pn	**Pn**	**19 11 08.2**	**-0.7**
	comp=Z,3.5nm,0.3s,baz=295,slow=3.0,SNR=24						
EIL	**Elat**	**9.53**	**116**	Pn	**Pn**	**19 11 08.6**	**-0.3**
EIL	**Elat**	**9.53**	**116**	P	**Pn**	**19 11 11.6**	**+2.7**
	comp=Z,15nm,0.5s						
AQBJ	**Aqaba**	**9.57**	**115**	P	**Pn**	**19 11 09.9**	**+0.4**
CEME	**Cevo**	**9.59**	**331**	⇑*i*Pn	**Pn**	**19 11 08.0**	**-1.7**
CEME				*e*Sn	**Sn**	**19 12 48.2**	**-8.2**
KOME	**Kolasin**	**9.63**	**335**	⇓*i*Pn	**Pn**	**19 11 09.3**	**-0.9**
KOME				*e*Sn	**Sn**	**19 12 49.7**	**-7.6**
HCY	**Herceg Novi**	**9.68**	**330**	⇓*i*Pn	**Pn**	**19 11 09.0**	**-1.9**
HCY				*e*Sn	**Sn**	**19 12 50.0**	**-8.5**
NKME	**Niksic**	**9.76**	**332**	⇓*i*Pn	**Pn**	**19 11 10.5**	**-1.5**
NKME				*e*Sn	**Sn**	**19 12 52.2**	**-8.4**
NKY	**Niksic**	**9.79**	**333**	⇓*i*Pn	**Pn**	**19 11 11.2**	**-1.2**
NKY				*e*Sn	**Sn**	**19 12 52.8**	**-8.5**
BRY	**Bratogost**	**10.04**	**331**	⇓*i*Pn	**Pn**	**19 11 14.7**	**-1.2**
BRY				*e*Sn	Sn	19 12 58.7	-8.8
PLE	**Pljevlja**	**10.09**	**335**	⇓*i*Pn	**Pn**	**19

ZALV	Zalesovo Beam	45.66	46	P		P	19 17 10.4	-0.9
	comp=Z,2.0nm,0.4s,baz=266,slow=8.7,SNR=7.7							
SONA0	Songino Array	60.09	50	*e*P		P	19 18 58.3	+0.2
SONM	Songino Array	60.09	50	P		P	19 18 58.3	+0.2
	comp=Z,0.6nm,0.5s,baz=276,slow=7.4,SNR=6.3							
BOSA	Boshof	62.54	180	P		P	19 19 15.2	+0.6
	comp=Z,1.9nm,0.6s,baz=359,slow=7.8,SNR=4.9							
USRK	Ussuriysk Ar.	77.50	45	P		P	19 20 44.6	-1.8
	comp=Z,1.4nm,0.6s,baz=294,slow=5.7,SNR=4.3							
KSRS	Korea Array	78.86	52	P		P	19 20 52.2	-1.8
	comp=Z,0.6nm,0.4s,baz=306,slow=4.5,SNR=6.3							
ILAR	Eielson Array	81.09	357	P		P	19 21 05.5	-0.1
	comp=Z,0.2nm,0.7s,baz=352,slow=4.6,SNR=4.1							

ISCJB ***17*** *19:13:11.1±0.5,51°.93N±0°.08×153°.51E±0°.08, h450km, mb3.3/10, Error ellipse: s-maj=10.4km s-min=6.4km az=163.0*

MOS ***17*** *19:13:11.0±0.8,51°.98N×153°.21E, h439km, mb4.0/1, Error ellipse: s-maj=15.5km s-min=7.2km az=58.8*

IDC ***17*** *19:13:12.4±1.2,52°.00N×153°.17E, h439km±15km, mb2.9/9, mb1 3.1/14, mb1mx2.8/67, mbtmp3.8/14, Error ellipse: s-maj=21.4km s-min=13.4km az=136.0*

KRSC ***17*** *19:13:12.1±1.7,51°.60N×154°.29E, h455km±20km, ML4.4*

ISC 17 19:13:11.8±0.8,51°.9N±0°.1×153°.67E±0°.08, h450km, n70, σ19 94/83, mb3.4/10, 1C, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	1.99	100	*e*P	P	19 14 12.2	0.0
PAU	Pauzhetka	1.99	100	PN	P	19 14 12.2	0.0
APC	Apacha	2.39	62	*e*P	P	19 14 13.7	-0.7
APC	Apacha	2.39	62	PN	P	19 14 13.7	-0.7
KDTR	Khodutka, Kamc	2.73	89	*e*P	P	19 14 16.2	-0.6
KDTR				*e*S	S	19 15 05.4	-4.3
KDTR	Khodutka, Kamc	2.73	89	PN	P	19 14 16.2	-0.6
PETK	Petropavlovsk-	2.77	61	P	P	19 14 16.7	-0.3
	5.0nm,0.3s,baz=224,slow=3.6,SNR=154						
MTVR	Mutnovka	2.85	75	*e*P	P	19 14 18.7	+0.9
MTVR	Mutnovka	2.85	75	PN	P	19 14 18.7	+0.9
KRMR	Karymshinskiy	2.91	69	*e*P	P	19 14 18.5	+0.6
KRMR	Karymshinskiy	2.91	69	PN	P	19 14 18.5	+0.6
RUS	Russkaya	3.04	77	*e*P	P	19 14 19.1	+0.2
RUS				*e*S	S	19 15 10.6	-3.1
RUS	Russkaya	3.04	77	PN	P	19 14 19.1	+0.2
RUS				S	S	19 15 10.6	-3.1
GNL	Ganaly	3.18	53	*e*P	P	19 14 19.9	-0.3
GNL	Ganaly	3.18	53	PN	P	19 14 19.9	-0.3
PET	Petropavlovsk	3.27	67	*e*P	P	19 14 21.6	+0.9
PET				*e*S	S	19 15 15.3	-1.5
PET	Petropavlovsk	3.27	67	↑*i*PN	P	19 14 21.3	+0.6
PET				*e*S	S	19 15 14.0	-2.8
PET				pmax	pmax		
	comp=Z,92nm,0.7s						
PET				smax	smax		
	comp=E,38nm,0.5s						
PET				smax	smax		
	comp=N,47nm,0.5s						
DALK	Dalny	3.33	67	*e*P	P	19 14 21.8	+0.7
DALK	Dalny	3.33	67	PN	P	19 14 21.8	+0.7
KOK	Koryaka	3.35	63	*e*P	P	19 14 23.8	+2.3
KOK	Koryaka	3.35	63	PN	P	19 14 23.8	+2.3
KRX	Arik	3.39	62	*e*P	P	19 14 22.6	+0.8
KRX	Arik	3.39	62	PN	P	19 14 22.6	+0.8
AVH	Avacha	3.40	63	*e*P	P	19 14 23.1	+1.3
AVH				*e*S	S	19 15 17.5	-1.5
AVH	Avacha	3.40	63	PN	P	19 14 23.1	+1.3
AVH				S	S	19 15 17.5	-1.5
KRER	Koryakskii	3.42	63	*e*P	P	19 14 23.0	+0.8
KRER	Koryakskii	3.42	63	PN	P	19 14 23.0	+0.8
UGLR	Uglovaya	3.43	65	*e*P	P	19 14 23.2	+1.1
SMAR	Somma	3.44	64	*e*P	P	19 14 23.2	+0.9
SMAR	Somma	3.44	64	PN	P	19 14 23.2	+0.9
SDLR	Sedlovina	3.49	64	*e*P	P	19 14 23.2	+0.6
SDLR				*e*S	S	19 15 18.0	-2.3
SDLR	Sedlovina	3.49	64	PN	P	19 14 23.2	+0.6
SDLR				S	S	19 15 18.0	-2.3
NLC	Nalytchevo	3.71	67	*e*S	S	19 15 21.7	-1.7
SPN	Mys Shipunski	4.08	70	*e*P	P	19 14 27.0	-0.4
SPN				*e*S	S	19 15 24.4	-4.8
SPN	Mys Shipunski	4.08	70	PN	P	19 14 27.0	-0.4
SPN				S	S	19 15 24.4	-4.8
ESO	Esso	5.05	34	*e*P	P	19 14 37.7	+1.3
ESO	Esso	5.05	34	PN	P	19 14 37.7	+1.3
KZV	Kizimen	5.13	48	*e*P	P	19 14 39.0	+1.6
KZV	Kizimen	5.13	48	PN	P	19 14 39.0	+1.6
TUMR	Tumrok	5.17	46	*e*P	P	19 14 40.5	+2.8
TUMR	Tumrok	5.17	46	PN	P	19 14 40.5	+2.8
MKZ	Mys Kozlova	5.55	58	*e*P	P	19 14 41.2	-0.1
MKZ				*e*S	S	19 15 49.5	-5.0
MKZ	Mys Kozlova	5.55	58	PN	P	19 14 41.2	-0.1
MKZ				S	S	19 15 49.5	-5.0
KRSR	Krestovskiy	5.97	40	*e*P	P	19 14 47.3	+1.7
KRSR	Krestovskiy	5.97	40	PN	P	19 14 47.3	+1.7
CIRR	Tsirk	5.97	42	*e*P	P	19 14 48.6	+2.9
CIRR	Tsirk	5.97	42	PN	P	19 14 48.6	+2.9
BDR	Baidarnaya	6.47	40	*e*P	P	19 14 53.3	+2.5
BDR	Baidarnaya	6.47	40	PN	P	19 14 53.3	+2.5
KBG	Krutoberegovo	6.91	47	*e*P	P	19 14 56.4	+1.2
KBG	Krutoberegovo	6.91	47	PN	P	19 14 56.4	+1.2
KBTR	Krutoberegovo	6.93	47	*e*P	P	19 14 55.5	0.0
KBTR	Krutoberegovo	6.93	47	PN	P	19 14 55.5	0.0
MA2	Magadan	7.92	349	P	P	19 15 04.7	-1.2
	comp=N,0.9nm,0.3s,baz=144,slow=9.7,SNR=10						
BKI	Bering	8.06	61	*e*P	P	19 15 10.6	+3.0
BKI	Bering	8.06	61	PN	P	19 15 10.6	+3.0
ASAJ	Asahikawa	10.71	228	P	P	19 15 37.5	+0.9
	comp=N,0.7nm,0.3s,baz=161,slow=5.4,SNR=7.5						
SEY	Seymchan	11.13	357	P	P	19 15 41.2	+0.3
	comp=N,1.2nm,0.3s,baz=187,slow=13,SNR=19						
BILL	Bilibino	17.36	16	*i*P	P	19 16 45.3	-2.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	Matsushiro Arr	18.84	222	P	P	19 17 02.6	+0.1
	comp=Z,0.1nm,0.3s,baz=17,slow=9.4,SNR=6.5						
TIXI	Tiksi	22.73	340	P	P	19 17 36.6	-0.7
	comp=Z,0.8nm,0.3s,baz=131,slow=7.4,SNR=5.6						
KSRS	Korea Array	23.13	242	P	P	19 17 41.4	0.0
	comp=Z,0.9nm,0.7s,baz=39,slow=11,SNR=4.8						
ILAR	Eielson Array	32.45	43	P	P	19 19 05.4	+2.6
	comp=Z,0.4nm,0.8s,baz=266,slow=9.3,SNR=6.9						
MKAR	Makanchi Array	45.09	293	P	P	19 20 44.6	-1.4
	comp=Z,0.1nm,0.3s,baz=68,slow=8.3,SNR=4.5						
YKA	Yellowknife Ar	46.68	40	P	P	19 21 01.2	+3.4
	comp=Z,1.2nm,0.6s,baz=304,slow=7.0,SNR=6.6						
ARCES	ARCESS Array B	53.17	340	P	P	19 21 45.2	-0.5
	comp=Z,1.4nm,0.6s,baz=42,slow=7.7,SNR=9.0						
FINES	FINESS Array B	59.60	334	P	P	19 22 29.7	-0.6
	comp=Z,0.6nm,0.4s,baz=38,slow=7.2,SNR=6.4						
PDAR	Pinedale Array	61.52	56	P	P	19 22 45.5	+1.8
	comp=Z,0.4nm,0.6s,baz=323,slow=12,SNR=4.2						
NOA	NORSAR Array B	63.52	341	P	P	19 22 55.3	-0.9
	comp=Z,0.4nm,0.6s,baz=25,slow=6.6,SNR=3.4						
HFS	Hagfors	63.81	339	P	P	19 22 56.9	-1.1
	comp=Z,0.8nm,0.3s,baz=40,slow=7.8,SNR=7.5						

GCMT ***17*** *19:17:57.8±0.4,8°.08S±0°.02×115°.79E±0°.03, h261km±3km, MW5.0/62, Moment Tensor Solution. s31,c33; s62,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.51±.15; $M_{\theta\theta}$0.58±.15; $M_{\phi\phi}$0.92±.21; $M_{r\theta}$2.37±.12; $M_{\theta\phi}$0.99±.13; $M_{r\phi}$2.12±.16; Best double couple: $M_0$3.57700×10^{16} NP1:ϕ_s228.00000°, δ77.00000°, λ-86.00000°. NP2: ϕ_s30.00000°, δ14.00000°, λ-107.00000°. Principal axes: T 3.6860, Plg31.0000°, Azm314.0000°; N -0.2200, Plg4.0000°, Azm47.0000°; P -3.4680, Plg58.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***17*** *19:17:57.7±0.0,7°.80S×115°.80E, h258km, mb5.0/76, mB4.6/48*

ISCJB ***17*** *19:17:58.7±0.2,7°.87S±0°.02×115°.82E±0°.02, h275km±2km, mb5.0/160, Error ellipse: s-maj=3.4km s-min=2.5km az=32.2*

NEIC ***17*** *19:17:58.8±1.7,7°.76S×115°.86E, h260km±4km, mb5.0/101, Error ellipse: s-maj=12.3km s-min=10.7km az=54.0*

NEIC Felt [III] at Denpasar.

IDC ***17*** *19:17:59.6±0.5,7°.75S×115°.86E, h264km±4km, mb4.7/33, mb1 4.7/39, mb1mx4.7/40, mbtmp5.3/39, Error ellipse: s-maj=8.3km s-min=6.0km az=51.0*

MOS ***17*** *19:17:59.5±0.9,7°.71S×115°.84E, h279km, mb4.9/46, Error ellipse: s-maj=8.3km s-min=5.3km az=120.5*

DJA ***17*** *19:17:59.2±0.1,8°S±2°×11°6E±°, h253km±1km, M4.9/69, mB5.4/52, mb5.3/69, MLv5.4/25, Mw(mB)4.8/52*

KLM ***17*** *19:18:04.0,7°.87S×115°.69E, h316km, mb5.2*

ISC 17 19:17:58.9±0.3,7°.86S±0°.03×115°.84E±0°.03, h263km±2km, h264km: pP-n,n688, σ1 21/735, mb4.9/160, 26C-11D, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBI	Singaraja	0.67	250	P	Pn	19 18 33.8	-0.1
SRBI				S	S	19 19 00.6	-0.8
DNP	Denpasar	1.03	217	P	Pn	19 18 34.2	-1.4
DNP				S	S	19 19 01.2	-3.3
JAGI	Jajag, Banyuwa	1.78	250	*e*Pn	Pn	19 18 39.6	-1.1
JAGI	Jajag, Banyuwa	1.78	250	P	Pn	19 18 39.5	-1.2
JAGI				S	S	19 19 09.0	-4.7
KMMI	Kalianget	2.03	293	P	Pn	19 18 44.7	+1.9
KMMI				S	S	19 19 19.9	+2.5
PLAI	Plampang	2.14	117	P	Pn	19 18 42.6	-1.2
PLAI				S	S	19 19 15.9	-3.4
GMJI	Gumukmas	2.41	260	P	Pn	19 18 46.0	-0.3
GMJI				S	S	19 19 21.2	-2.6
GRJI	Gresik	3.46	285	P	Pn	19 18 58.3	+1.0
GRJI				S	S	19 19 44.4	+0.7
WBSI	Waikabubak, Su	3.93	117	P	Pn	19 18 59.5	-3.1
WBSI				S	S	19 19 47.2	-6.1
PWJI	Pagerwojo	4.00	267	P	Pn	19 19 02.9	-0.5
PWJI				S	S	19 19 54.4	-0.4
NGJI	Ngawi	4.37	276	P	Pn	19 19 09.9	+2.2
NGJI				S	S	19 20 03.5	+1.0
WSI	Waingapu	4.76	113	P	Pn	19 19 10.0	-2.3
KAPI	Kappang	4.80	54	P	Pn	19 19 13.7	+0.9
	14nm,0.3s,baz=226,slow=12,SNR=55						
WOJI	Wonogiri, Jawa	4.88	270	P	Pn	19 19 14.1	+0.4
WOJI				S	S	19 20 10.6	-2.8
BSSI	Bau Bau, Buton	4.92	70	P	Pn	19 19 17.7	+3.5
BSSI				S	S	19 20 15.5	+1.2
BKSI	Bulukumba	4.94	60	P	Pn	19 19 16.6	+2.1
	374nm,0.6s,3μm1.2nm						
BKSI				S	S	19 20 16.6	+1.8
	374nm,0.6s,3μm1.2nm						
UGM	Wanagama	5.27	269	*e*Pn	Pn	19 19 18.4	-0.2
UGM	Wanagama	5.27	269	P	Pn	19 19 18.7	+0.2
	324nm,0.6s,9μm5.2nm						
SMRI	Semarang	5.42	278	*e*Pn	Pn	19 19 21.8	+1.6
SMRI	Semarang	5.42	278	P	Pn	19 19 22.8	+2.5
	515nm,0.7s,1.9nm						
SMRI				S	S	19 20 26.0	+0.6
	515nm,0.7s,1.9nm						
BNSI	Bone	5.45	51	P	Pn	19 19 23.5	+2.8
BNSI				S	S	19 20 30.4	+4.2
SPSI	Sidrap Palu	5.49	46	P	Pn	19 19 22.8	+1.6
SPSI				S	S	19 20 29.9	+2.8
EDFI	Ende, Flores	5.85	99	P	Pn	19 19 24.1	-1.6
	900nm,0.5s,23μm4.5nm						
TTSI	Tana Toraja	6.20	40	P	Pn	19 19 34.0	+4.0
	528nm,0.9s,4μm1.7nm						
MMRI	Maumere	6.38	97	*e*Pn	Pn	19 19 31.2	-0.9
MMRI	Maumere	6.38	97	P	Pn	19 19 31.6	-0.5
	2μm,0.4s,31μm9.8nm						
MTKI	Muara Teweh, K	6.93	352	P	Pn	19 19 42.7	+3.7
SGKI	Sangatta, Kali	7.49	14	P	Pn	19 19 51.5	+5.5
CISI	Cisompet, Garu	7.96	272	*e*Pn	Pn	19 19 50.3	-1.7
CISI	Cisompet, Garu	7.96	272	P	Pn	19 19 50.7	-1.3
BATI	Baumata	8.07	107	P	Pn	19 19 52.5	-0.8
	226nm,0.3s,baz=311,slow=2.1,SNR=348						
BATI				S	S	19 21 19.2	-6.4
	172nm,0.3s,baz=304,slow=23,SNR=9.1						
BATI	Baumata	8.07	107	P	Pn	19 19 52.8	-0.5
	668nm,0.7s,8μm2.6nm						
LEM	Lembang	8.22	277	P	Pn	19 19 55.4	0.0
	21nm,0.3s,baz=43,slow=8.6,SNR=41						
LEM	Lembang	8.22	277	P	Pn	19 19 56.0	+0.7
SOEI	Soe	8.54	103	*e*Pn	Pn	19 19 57.8	-1.4
SOEI	Soe	8.54	103	P	Pn	19 19 58.0	-1.2
APSI	Ampana	9.00	40	P	Pn	19 20 07.9	+2.9
	49nm,1.0s,521nm						
CBJI	Citeko	9.04	279	P	Pn	19 19 59.8	-5.6
MPSI	Mapaga	9.09	27	P	Pn	19 20 09.2	+3.2
	44nm,0.6s,721nm						
LUWI	Luwuk	9.67	46	*e*Pn	Pn	19 20 13.2	-0.1
LUWI	Luwuk	9.67	46	P	Pn	19 20 16.0	+2.7
SBJI	Serang	9.79	280	P	P	19 20 24.2	+3.8
CGJI	Cibinong	10.15	276	P	Pn	19 20 18.6	-0.7
XMIS	Christmas Isla	10.39	255	*e*Pn	Pn	19 20 24.3	+1.9
KSM	Kuching	10.79	329	*e*Pn	Pn	19 20 28.6	+1.3
BLSI	Bandar Lampung	10.81	283	P	P	19 20 30.6	-1.1
	865nm,0.8s,6μm						
SBUM	Sibu	10.86	340	*e*P	P	19 20 31.1	-1.1
KLI	Kotabumi	11.32	285	P	Pn	19 20 34.5	+0.6
KASI	Kota Agung	11.51	281	P	P	19 20 39.5	+0.1
	2μm,0.9s,15μm						
SANI	Sanana	11.63	61	P	P	19 20 40.9	+0.1
KMSI	Cibinong	11.66	44	P	P	19 20 43.3	+2.2
LWLI	Liwa	12.04	283	P	P	19 20 44.8	-0.7
PMBI	Palembang	12.06	293	P	P	19 20 49.1	+3.5
MDSI	Maura Dua	12.07	285	P	P	19 20 44.8	-0.9
	142nm,1.0s,1μm						
NLAI	Namlea	12.10	68	P	P	19 20 48.1	+2.0
LHSI	Lahat	12.89	287	P	P	19 20 55.1	+0.3
AAI	Ambon	12.96	72	P	P	19 20 58.3	+2.7
MNAI	Manna	13.28	284	*e*Pn	Pn	19 20 58.2	+0.2
MNAI	Manna	13.28	284	P	P	19 20 59.3	+0.2
DSRI	Dabo	13.41	303	P	P	19 21 01.2	+0.7
JMBI	JAMBI	13.64	296	P	P	19 21 05.9	+2.8
MSAI	Masohi	13.77	72	P	P	19 21 05.7	+1.2
KKM	Kota Kinabalu	13.81	2	*e*Pn	Pn	19 21 03.5	-1.1
FITZ	Fitzroy Crossi	13.95	138	P	P	19 21 07.0	+0.6
	10nm,0.3s,baz=328,slow=8.3,SNR=155						
FITZ				S	S	19 23 40.3	-0.2
	3.5nm,0.3s,baz=180,slow=20,SNR=5.1						
FITZ				ScP	ScP	19 29 14.7	-0.7
	0.8nm,0.3s,baz=337,slow=3.2,SNR=3.5						
FITZ	Fitzroy Crossi	13.95	138	*e*Pn	P	19 21 06.6	+0.2
FITZ	Fitzroy Crossi	13.95	138	P	P	19 21 07.0	+0.6
	baz=14,SNR=8.9						
PSAD1	Pilbara Seismi	14.06	165	*e*Pn	Pn	19 21 07.5	+0.1
PSAC1	Pilbara Seismi	14.13	165	*e*Pn	P	19 21 08.5	+0.1
PSAB2	Pilbara Seismi	14.16	165	*e*Pn	Pn	19 21 08.6	0.0
PSAB1	Pilbara Seismi	14.16	165	*e*Pn	Pn	19 21 08.7	0.0
PSAA2	Pilbara Seismi	14.16	165	*e*Pn	Pn	19 21 08.7	0.0
PSA00	Pilbara Seismi	14.17	165	*e*Pn	Pn	19 21 08.6	-0.3
PSAA1	Pilbara Seismi	14.18	165	*e*Pn	Pn	19 21 08.7	-0.1
PSAC2	Pilbara Seismi	14.18	164	*e*Pn	Pn	19 21 08.3	-0.6
PSAA3	Pilbara Seismi	14.18	165	*e*Pn	Pn	19 21 08.7	-0.2
PSAB3	Pilbara Seismi	14.20	165	*e*Pn	Pn	19 21 08.8	-0.3
PSAC3	Pilbara Seismi	14.22	165	*e*Pn	Pn	19 21 08.7	-0.7
PSAD3	Pilbara Seismi	14.22	165	*e*Pn	Pn	19 21 09.4	-0.1
PSAD2	Pilbara Seismi	14.25	164	*e*Pn	Pn	19 21 09.6	-0.1
TPRI	Tanjung Pinang	14.26	307	P	P	19 21 13.1	+3.1
	58nm,0.9s,3μm						
TNTI	Ternate	14.34	54	*e*Pn	P	19 21 10.7	-0.1
TNTI	Ternate	14.34	54	P	Pn	19 21 13.5	+2.7
GIRL	Giralia	14.78	186	*e*P	Pn	19 21 16.5	+0.4
GIRL	Giralia	14.78	186	P	Pn	19 21 16.9	+0.7
	baz=15,SNR=27						
KNRA	Kununurra	14.84	123	P	Pn	19 21 17.3	+0.5
	baz=15,SNR=140						
SGSI	Sangihe	14.99	40	P	Pn	19 21 23.5	+4.8
SAUI	Saumlaki	15.31	92	*e*P	Pn	19 21 22.1	-0.4
	367nm,1.0s						
MYKOM	Kota Tinggi	15.33	308	*e*P	Pn	19 21 23.0	+0.3
	74nm,0.8s						
MYKOM	Kota Tinggi	15.33	308	P	Pn	19 21 25.0	+2.3
RGRI	Rengat	15.39	298	P	Pn	19 21 25.3	+1.8
KRJI	Kerinci	15.42	291	P	Pn	19 21 25.6	+1.6
	3μm,0.8s,20μm						
MTN	Manton Dam	15.83	110	*e*P	Pn	19 21 28.4	-0.2
	133nm,0.6s						
MTN	Manton Dam	15.83	110	P	Pn	19 21 28.7	+0.1
	baz=16,SNR=65						
SDSI	Sungai Dareh	15.93	295	P	Pn	19 21 29.4	-0.4
	264nm,1.0s,3μm						
PDSI	Padang	16.81	293	P	P	19 21 36.9	-1.1
	126nm,0.6s,2μm						
BKNI	Bangkinang	16.85	298	*e*P	P	19 21 38.2	-0.2
	1μm,1.0s						
BKNI	Bangkinang	16.85	298	P	Pn	19 21 40.4	-0.2
SWI	Sorong	16.86	66	P	Pn	19 21 40.2	-0.5
SIJI	Sorong	16.86	66	P	Pn	19 21 40.2	-0.6
	15nm,0.3s,baz=237,slow=8.3,SNR=42						
SIJI				S	S	19 24 39.7	-1.4
	0.7nm,0.3s,baz=117,slow=22,SNR=10						
SIJI				ScP	ScP	19 29 19.8	-1.1
	0.4nm,0.3s,baz=1.3,slow=4.6,SNR=6.0						
FAKI	Fak Fak	17.05	74	*e*P	P	19 21 39.4	-1.2
	58nm,0.5s						
FAKI	Fak Fak	17.05	74	P	P	19 21 39.8	-0.8
	74nm,0.7s,1000nm						
KDU	Kakadu	17.05	108	P	P	19 21 41.2	+0.7
	baz=17,SNR=132						
SISI	Saibi	17.91	290	P	P	19 21 48.4	-1.5
MNSI	Mandailing Nat	18.35	297	P	P	19 21 54.5	-0.2
IPM	Ipoh	19.20	309	*e*P	P	19 22 04.9	+1.1
	73nm,0.7s						
PSI	Prapat	19.92	301	P	P	19 22 11.9	+0.3
	25nm,0.3s,baz=140,slow=8.6,SNR=71						
PSI	Prapat	19.92	301	*e*P	P	19 22 11.6	-0.1
	1μm,1.2s						
PSI	Prapat	19.92	301	*e*P	P	19 22 11.6	-0.1
PSI				pmax	pmax		
	comp=Z,1μm,1.2s						
KULM	Kulim	20.01	310	*e*P	P	19 22 11.6	-0.8
	comp=Z,53nm,0.9s						
KULM	Kulim	20.01	310	P	P	19 22 13.0	+0.6
GSI	Gunungsitoli	20.36	296	*e*P	P	19 22 14.2	-2.1
	comp=Z,136nm,0.7s						
GSI	Gunungsitoli	20.36	296	P	P	19 22 15.3	-0.9
TSI	Tuntungan	20.60	303	P	P	19 22 19.3	+0.6
WRKA	Warakuna	20.82	147	P	P	19 22 21.4	+0.6
	baz=21,SNR=1000						
DLV	T Lat	20.99	340	*e*P	P	19 22 24.3	+1.6
	comp=Z,66nm,0.8s						
MORW	Morawa	21.10	180	*e*P	P	19 22 24.3	+0.7
	comp=Z,98nm,0.7s						
MORW	Morawa	21.10	180	P	P	19 22 24.7	+1.2
	baz=21,SNR=61						
SRPI	Serui, Papua	21.17	75	P	P	19 22 25.1	+0.7
KCSI	Kotacane, Aceh	21.28	301	P	P	19 22 24.7	-0.8
SKLT	Songkhla	21.29	314	P	P	19 22 26.2	+0.7
	comp=Z,83nm,1.0s,comp=Z,986nm						
WRA	Warramunga Arr	21.57	126	P	P	19 22 28.1	0.0
	comp=Z,70nm,0.5s,baz=297,slow=12,SNR=495						
WRA				S	S	19 26 09.1	+0.4
	comp=Z,8.5nm,0.6s,baz=291,slow=19,SNR=8.8						
WRA				ScP	ScP	19 29 30.9	-0.7
	comp=Z,10nm,0.7s,baz=336,slow=2.6,SNR=6.9						
WR1	Warramunga Arr	21.57	126	*e*P	P	19 22 28.1	0.0
WR1				*e*S	S	19 26 09.1	+0.4
WR1				*e*ScP	ScP	19 29 30.9	-0.7
WRAB	Tennant Creek	21.58	126	*e*P	P	19 22 28.3	+0.1
	comp=Z,221nm,1.3s						
WRAB	Tennant Creek	21.58	126	*d*iP	P	19 22 28.7	+0.5
WRAB				pmax	pmax		
	comp=Z,182nm,1.3s						
WB2	Warramunga Arr	21.58	126	*e*P	P	19 22 28.6	+0.4
	comp=Z,194nm,1.3s						
WC3	Warramunga Arr	21.61	126	*e*P	P	19 22 28.7	+0.3
	comp=Z,192nm,1.2s						
SNSI	Sinabang, Aceh	21.98	297	P	P	19 22 33.4	+1.5
	comp=Z,585nm,1.1s,comp=Z,6μm						
TGY	Tagaytay City	22.39	13	P	P	19 22 38.9	+3.2
	comp=Z,684nm,0.7s,baz=241,slow=2.9,SNR=11						
BLDU	Ballidu	22.66	178	P	P	19 22 38.3	+0.5
	baz=23,SNR=100						
MLSI	Meulaboh, Aceh	22.83	301	P	P	19 22 39.7	+0.1
LHMI	Lhok Sumawe	22.90	304	*e*P	P	19 22 40.5	+0.3
	comp=Z,655nm,0.8s						
LHMI	Lhok Sumawe	22.90	304	P	P	19 22 40.8	+0.6
AS31	Alice Springs	23.39	134	*e*P	P	19 22 45.4	+0.7
	comp=Z,74nm,0.6s						
ASAR	Alice Springs	23.39	134	P	P	19 22 45.6	+1.0
	comp=Z,171nm,0.6s,baz=308,slow=8.6,SNR=1206						
ASAR				PcP	PcP	19 26 23.9	+0.5
	comp=Z,7.3nm,0.6s,baz=336,slow=1.1,SNR=5.9						
ASAR				S	S	19 26 46.6	+8.7
	comp=Z,31nm,1.0s,baz=324,slow=22,SNR=10						
ASAR				ScP	ScP	19 29 35.6	-0.6
	comp=Z,8.3nm,0.5s,baz=315,slow=2.4,SNR=8.0						
PKDT	Phuket	23.44	311	P	P	19 22 46.1	+1.0
	comp=Z,156nm,0.8s						
MUN	Mundaring	24.00	179	P	P	19 22 50.8	+0.7
	baz=24,SNR=6.7						
KMBL	Kambalda	24.06	167	P	P	19 22 51.1	+0.5
	baz=24,SNR=19						
NWA

CTAO	Charters Tower	31.85	116	eP	P	19 24 00.8	+0.9
	comp=Z,53nm,0.9s						
CTAO	Charters Tower	31.85	116	eP	P	19 24 00.8	+0.9
CTAO				pmax	pmax		
	comp=Z,53nm,0.9s						
NACB	Ninganchiao	32.33	10	eP	P	19 24 03.3	-0.6
	comp=Z,32nm,0.7s						
YHNB	Yeheng	32.77	9	eP	P	19 24 08.9	+1.1
	comp=Z,36nm,0.7s						
TATO	Taipei	33.09	9	eP	P	19 24 10.0	-0.5
	comp=Z,111nm,1.4s						
HTT	Hallett	33.21	143	P	P	19 24 13.3	+1.7
	baz=33,SNR=167						
STKA	Stephens Creek	33.85	138	P	P	19 24 18.4	+1.5
	comp=Z,157nm,0.6s,baz=312,slow=9.2,SNR=658						
STKA				PcP	PcP	19 26 49.4	0.0
	comp=Z,11nm,0.5s,baz=311,slow=4.5,SNR=2.9						
STKA				ScP	ScP	19 30 08.4	-0.5
	comp=Z,16nm,0.8s,baz=316,slow=6.6,SNR=7.2						
STKA	Stephens Creek	33.85	138	eP	P	19 24 18.3	+1.4
	comp=Z,37nm,0.6s						
STKA	Stephens Creek	33.85	138	P	P	19 24 18.5	+1.5
	baz=34,SNR=614						
KMI	Kunming	35.18	339	P	P	19 24 31.5	+2.9
KMI				pP	pP	19 25 24.9	+3.6
KMI				sP	sP	19 25 52.6	+1.0
KMI				pmax	pmax		
	comp=Z,97nm,0.8s						
KMI				pmax	pmax		
	comp=Z,160nm,4.1s						
GYA	Guiyang	35.25	346⇑	iP	P	19 24 30.8	+1.7
GYA				pP	pP	19 25 21.6	-0.3
GYA				sP	sP	19 25 50.8	-1.3
GYA				PcP	PcP	19 26 54.3	+0.6
GYA				S	S	19 29 47.3	+4.2
GYA				sS	sS	19 31 18.6	+1.5
GYA				ScS	ScS	19 34 17.8	-1.4
GYA				pmax	pmax		
	comp=Z,40nm,0.5s						
GYA				pmax	pmax		
	comp=Z,100nm,5.3s						
GUMO	Guam	35.84	54	P	P	19 24 34.4	+0.3
	comp=Z,63nm,0.5s,baz=172,slow=19,SNR=9.6						
GUMO	Guam	35.84	54	eP	P	19 24 34.1	0.0
	comp=Z,81nm,0.6s						
RMQ	Roma	36.33	125	P	P	19 24 40.6	+2.4
	baz=36,SNR=14						
CMSA	Cobar Meteorol	36.45	134	P	P	19 24 40.9	+1.9
	baz=36,SNR=45						
JOW	Kunigami	36.53	19	eP	P	19 24 40.6	+0.8
	comp=Z,24nm,1.1s						
EIDS	Eidsvold	37.82	122	eP	P	19 24 51.9	+1.1
	comp=Z,28nm,1.4s						
PALK	Pallekele	38.13	292	P	P	19 24 53.2	-0.2
	comp=Z,23nm,0.6s,baz=116,slow=9.7						
PALK	Pallekele	38.13	292	eP	P	19 24 52.9	-0.5
	comp=Z,28nm,0.6s						
PALK	Pallekele	38.13	292	P	P	19 24 53.1	-0.4
PALK	Pallekele	38.13	292	eP	P	19 24 52.9	-0.5
PALK				pmax	pmax		
	comp=Z,29nm,0.6s						
WHN	Wuhan	38.21	358	P	P	19 24 55.4	+1.7
WHN				S	S	19 30 25.8	-1.5
WHN				pmax	pmax		
	comp=Z,100nm,0.9s						
WHN				LR	LR		
	comp=Z,360nm,10.0s						
WHN				LR	LR		
	comp=Z,380nm,8.2s						
WHN				LR	LR		
	comp=Z,220nm,15.1s						
ENH	Enshi	38.40	351	eP	P	19 24 56.5	+1.1
	comp=Z,103nm,0.7s						
NJ2	Nanjing	39.79	4⇑	iP	P	19 25 08.6	+1.9
NJ2				pmax	pmax		
	comp=Z,26nm,0.7s						
TOO	Toolangi	39.95	142	eP	P	19 25 10.4	+2.2
	comp=Z,74nm,0.9s						
TOO	Toolangi	39.95	142	eP	P	19 25 10.4	+2.2
TOO				pmax	pmax		
	comp=Z,75nm,0.9s						
CD2	Chengdu	40.25	344⇑	iP	P	19 25 11.6	+1.0
CD2				S	S	19 30 58.0	+0.2
CD2				pmax	pmax		
	comp=Z,170nm,2.4s						
CD2				pmax	pmax		
	comp=Z,230nm,4.7s						
CD2				LR	LR		
	comp=Z,270nm,12.6s						
CD2				LR	LR		
	comp=Z,200nm,8.9s						
CD2				LR	LR		
	comp=Z,300nm,12.8s						
ARMA	Armidale	40.30	129	eP	P	19 25 14.2	+2.9
	comp=Z,71nm,0.8s						
SHL	Shillong	40.58	326	eP	P	19 25 13.7	+0.1
	comp=Z,131nm,0.8s						
SHL	Shillong	40.58	326	eP	P	19 25 13.7	+0.1
SHL				pmax	pmax		
	comp=Z,131nm,0.8s						
SHL	Shillong	40.58	326⇑	iP	P	19 25 15.0	+1.4
SHL				eS	ScP	19 30 35.0	+0.5
CAN	Canberra	40.85	137	eP	P	19 25 17.1	+1.6
	comp=Z,79nm,0.7s						
CAN	Canberra	40.85	137	eP	P	19 25 17.1	+1.6
CAN				pmax	pmax		
	comp=Z,79nm,0.7s						
XAN	Xi'an	42.18	351	P	P	19 25 26.5	+0.3
XAN				S	S	19 31 24.5	-1.6
XAN				pmax	pmax		
	comp=Z,77nm,0.6s						
XAN				pmax	pmax		
	comp=Z,170nm,3.6s						
XAN				LR	LR		
	comp=Z,140nm,17.3s						
XAN				LR	LR		
	comp=Z,150nm,18.4s						
XAN				LR	LR		
	comp=Z,140nm,21.7s						
XAN	Xi'an	42.18	351	eP	P	19 25 26.5	+0.3
	comp=Z,64nm,0.6s						
XAN	Xi'an	42.18	351	eP	P	19 25 26.5	+0.3
XAN				pmax	pmax		
	comp=Z,64nm,0.6s						
JNU	Nakatsue	43.19	19	P	P	19 25 33.1	-1.2
	comp=Z,8.4nm,0.7s,baz=199,slow=2.4,SNR=9.5						
JNU	Nakatsue	43.19	19	eP	P	19 25 34.4	0.0
	comp=Z,13nm,0.9s						
HNR	Honiara	43.61	95	eP	P	19 25 38.0	0.0
HNR	Honiara	43.61	95	P	P	19 25 37.3	-0.7
	comp=Z,167nm,0.7s,baz=207,slow=2.8,SNR=17						
HNR	Honiara	43.61	95	eP	P	19 25 37.6	-0.4
	comp=Z,165nm,0.8s						
HNR	Honiara	43.61	95	eP	P	19 25 37.6	-0.4
HNR				pmax	pmax		
	comp=Z,165nm,0.8s						
TIA	Tai'an	43.85	1	P	P	19 25 39.6	+0.1
TIA				pmax	pmax		
	comp=Z,30nm,0.8s						
LSA	Lhasa	44.26	329	eP	P	19 25 44.3	+1.0
	comp=Z,54nm,0.8s						
LSA	Lhasa	44.26	329	i P	P	19 25 44.4	+1.0
	SNR=39						
LSA	Lhasa	44.26	329	eP	P	19 25 44.3	+1.0
LSA				pmax	pmax		
	comp=Z,54nm,0.8s						
RAMN	Ramite	44.73	322	eP	P	19 25 47.0	+0.1
	comp=Z,121nm,0.8s						
LZH	Lanzhou	45.14	346	⇑P	P	19 25 51.6	+1.7
LZH				pP	pP	19 26 47.3	+2.2
LZH				sP	sP	19 27 16.8	+2.1
LZH				SS	SS	19 35 33.0	-3.4
LZH				pmax	pmax		
	comp=Z,95nm,1.1s						
LZH				pmax	pmax		
	comp=Z,240nm,4.8s						
TJN	Taejon	45.31	13	ceP	P	19 25 51.7	+0.8
TIY	Taiyuan	45.44	356	eP	P	19 25 52.5	+0.4
TIY				S	S	19 32 13.1	-0.1
TIY				pmax	pmax		
	comp=Z,40nm,0.6s						
TIY				pmax	pmax		
	comp=Z,100nm,4.6s						
TIY				LR	LR		
	comp=Z,150nm,12.3s						
TIY				LR	LR		
	comp=Z,95nm,7.5s						
TIY				LR	LR		
	comp=Z,100nm,18.5s						
JIRN	Jiri	45.49	322	eP	P	19 25 53.2	+0.2
	comp=Z,286nm,0.6s						
GUN	Gumba	45.86	322	eP	P	19 25 55.9	0.0
	comp=Z,201nm,0.7s						
PKI	Pulchoki	45.91	321	eP	P	19 25 55.7	-0.5
	comp=Z,67nm,0.7s						
PKIN	Phulchoki	45.92	321	eP	P	19 25 55.6	-0.6
	comp=Z,60nm,0.7s						
DMN	Daman	46.12	321	eP	P	19 25 57.4	-0.4
	comp=Z,137nm,0.7s						
KKN	Kakani	46.15	321	eP	P	19 25 57.4	-0.5
	comp=Z,59nm,0.7s						
KSRS	Korea Array	46.47	13	P	P	19 26 01.0	+1.1
	comp=Z,53nm,0.9s,baz=192,slow=7.5,SNR=197						
KSRS				pP	pP	19 26 55.3	-0.1
	comp=Z,6.8nm,0.9s,baz=189,slow=9.0,SNR=2.8						
KSRS				ScP	ScP	19 30 57.5	-0.5
	comp=Z,3.2nm,0.9s,baz=190,slow=3.6,SNR=11						
GKN	Gorkha	46.70	321	eP	P	19 26 01.8	-0.3
	comp=Z,64nm,0.2s						
DL2	Dalian	46.83	6	P	P	19 26 02.6	-0.1
DL2				pmax	pmax		
	comp=Z,39nm,0.6s						
KOLN	Koldanda	47.19	320	eP	P	19 26 05.5	-0.5
	comp=Z,204nm,0.8s						
INU	Inuyama	47.39	24	eP	P	19 26 06.1	-1.0
	comp=Z,22nm,0.9s						
DANN	Dangsing	47.49	321	eP	P	19 26 07.9	-0.5
	comp=Z,289nm,0.6s						
BJI	Beijing	47.66	0⇑	iP	P	19 26 09.3	+0.3
BJI				pmax	pmax		
	comp=Z,14nm,0.9s						
PYUN	Piuthan	47.81	320	eP	P	19 26 10.0	-0.7
	comp=Z,188nm,0.8s						
BTO	Baotou	48.52	354	eP	P	19 26 17.1	+1.3
HHC	Hu-ho-hao-te	48.62	356	eP	P	19 26 19.3	+2.7
HHC				pmax	pmax		
	comp=Z,24nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.0s						
MAJO	Matsushiro	48.90	24	eP	P	19 26 17.9	-0.7
	comp=Z,16nm,0.8s						
MAJO				eScP	ScP	19 31 07.0	-1.3
MAJO	Matsushiro	48.90	24	ciP	P	19 26 18.2	-0.4
MAJO				pmax	pmax		
	comp=Z,17nm,0.7s						
MAT	Matsushiro	48.90	24	P	P	19 26 17.7	-0.9
MAT				S	S	19 32 57.6	-4.3
MJAR	Matsushiro Arr	48.90	24	P	P	19 26 18.2	-0.4
	comp=Z,22nm,0.8s,baz=202,slow=8.4,SNR=55						
MJAR				ScP	ScP	19 31 07.0	-1.3
	comp=Z,1.3nm,0.6s,baz=214,slow=6.1,SNR=5.3						
MJB9	Matsu-Tunnel	48.90	24	eP	P	19 26 17.7	-0.9
	comp=Z,17nm,0.8s						
GTA	Gaotai	49.32	344	⇑P	P	19 26 23.3	+1.4
GTA				pP	pP	19 27 21.0	+2.9
GTA				sP	sP	19 27 48.3	+0.9
GTA				ScP	ScP	19 31 09.8	-0.4
GTA				S	S	19 33 08.3	+0.5
GTA				ScS	ScS	19 35 43.9	-1.8
GTA				pmax	pmax		
	comp=Z,30nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,8.6s						
GTA				LR	LR		
	comp=Z,85nm,14.1s						
GTA				LR	LR		
	comp=Z,100nm,13.4s						
GTA				LR	LR		
	comp=Z,81nm,15.8s						
SNY	Shenyang	49.95	8	⇑P	P	19 26 25.8	-0.5
SNY				pmax	pmax		
	comp=Z,37nm,0.7s						
DZM	Mont Dzumac	50.65	112	eP	P	19 26 32.8	+0.6
	comp=Z,57nm,1.5s						
ONTNC	Ouen Toro	50.69	112	eP	P	19 26 33.0	+0.6
	comp=Z,48nm,1.2s						
MSHR	Mys Shultsa	52.10	14	i P	P	19 26 42.9	+0.6
CN2	Changchun	52.15	9	eP	P	19 26 41.8	-0.8
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
MDJ	Mudanjiang	53.68	12	P	P	19 26 54.3	+0.5
MDJ				pmax	pmax		
	comp=Z,120nm,0.9s						
MDJ	Mudanjiang	53.68	12	eP	P	19 26 53.5	-0.3
	comp=Z,77nm,0.7s						
USA0B	Ussuriysk Arra	53.83	14	eP	P	19 26 55.0	+0.1
	comp=Z,41nm,1.0s						
USRK	Ussuriysk Ar.	53.83	14	P	P	19 26 55.3	+0.4
	comp=Z,25nm,0.8s,baz=194,slow=6.3,SNR=54						
TEY	Ternei	55.87	18⇑	iP	P	19 27 09.7	+0.3
TEY				pmax	pmax		
	comp=Z,30nm,1.2s						
ULN	Ulaanbaatar	56.02	353	eP	P	19 27 11.0	+0.4
	comp=Z,43nm,0.7s						
ULN	Ulaanbaatar	56.02	353	eP	P	19 27 11.0	+0.4
ULN				pmax	pmax		
	comp=Z,43nm,0.7s						
SONA0	Songino Array	56.07	352	eP	P	19 27 11.4	+0.4
SONA0				eScP	ScP	19 31 37.6	-1.8
SONM	Songino Array	56.07	352	P	P	19 27 11.4	+0.4
	comp=Z,64nm,0.7s,baz=171,slow=8.9,SNR=359						
SONM				ScP	ScP	19 31 37.6	-1.8
	comp=Z,2.5nm,1.0s,baz=174,slow=4.2,SNR=5.9						
WMQ	Urumqi	57.41	336	eP	P	19 27 21.3	+0.9
WMQ				pP	pP	19 28 20.6	+2.2
WMQ				pmax	pmax		
	comp=Z,78nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.7s						
WMQ				LR	LR		
	comp=Z,55nm,19.9s						
WMQ				LR	LR		
	comp=Z,78nm,21.5s						
NIL	Nilore	57.76	318	eP	P	19 27 21.1	-1.9
	comp=Z,12nm,0.8s						
NIL	Nilore	57.76	318	eP	P	19 27 21.1	-1.9
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
DCZ	Deep Cove	57.84	140	eP	P	19 27 24.2	+1.0
	comp=Z,58nm,1.1s						
MLZ	Mavora Lakes	58.42	139	eP	P	19 27 28.1	+0.7
	comp=Z,235nm,2.0s						
CASY	Casey	58.45	183	eP	P	19 27 27.8	+0.7
	comp=Z,24nm,0.8s						
WHZ	Wether Hill Ro	58.52	140	eP	P	19 27 28.7	+0.7
	comp=Z,245nm,1.8s						
ZAK	Zakamensk	59.02	351	eP	P	19 27 30.8	-0.6
ZAK				e		19 28 31.8	
ZAK				pmax	pmax		
	comp=Z,12nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
YSS	Yuzh-Sakhalins	59.58	21	eP	P	19 27 34.8	-0.3
	comp=Z,13nm,0.6s						
YSS	Yuzh-Sakhalins	59.58	21⇑	eP	P	19 27 35.3	+0.2
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
RPZ	Rata Peaks	59.77	136	P	P	19 27 37.5	+0.8
	comp=Z,105nm,0.6s,baz=262,slow=2.9,SNR=46						
RPZ	Rata Peaks	59.77	136	eP	P	19 27 37.7	+1.0
	comp=Z,117nm,0.7s						
KSH	Kashi	59.86	325	P	P	19 27 35.4	-2.0
KSH				pP	pP	19 28 32.5	-3.4
KSH				PP	PP	19 29 52.8	-0.2
KSH				S	S	19 35 17.8	-10
KSH				pmax	pmax		
	comp=Z,49nm,0.9s						
KSH				pmax	pmax		
	comp=Z,340nm,6.1s						
KSH				LR	LR		
	comp=Z,250nm,6.3s						
KSH				LR	LR		
	comp=Z,240nm,7.2s						
KSH				LR	LR		
	comp=Z,150nm,16.8s						
TLY	Talaya	60.22	351	eP	P	19 27 39.6	+0.2
	comp=Z,12nm,0.7s						
TLY	Talaya	60.22	351	ciP	P	19 27 40.0	+0.6
TLY				pmax	pmax		
	comp=Z,30nm,0.8s						
OXZ	Oxford	60.32	136	eP	P	19 27 40.8	+0.4
	comp=Z,58nm,0.7s						
THZ	Tophouse	60.45	134	eP	P	19 27 42.6	+1.2
	comp=Z,110nm,0.8s						
MOY	Mondy	60.65	349	eP	P	19 27 42.9	+0.5
MOY				pmax	pmax		
	comp=Z,23nm,1.4s						
GRNR	Gornyy	61.05	15	eP	P	19 27 44.7	-0.3
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
KBL	Kabul	61.10	317	eP	P	19 27 44.3	-1.7
	comp=Z,18nm,0.7s						
KBL	Kabul	61.10	317	eP	P	19 27 44.3	-1.7
KBL				pmax	pmax		
	comp=Z,18nm,0.7s						
SNZO	South Karori	61.62	133	eP	P	19 27 48.4	-0.7
	comp=Z,188nm,1.4s						
BOOM	Boomskoye usch	61.92	327	eP	P	19 27 51.0	-0.1
BOOM	Boomskoye usch	61.92	327	eP	P	19 27 51.1	-0.1
KZA	Kyzart	62.00	327	P	P	19 27 52.2	+0.1
	SNR=19						
MK31	Makanchi Array	62.05	335	eP	P	19 27 51.3	-0.5
	comp=Z,25nm,0.8s						
MK31	Makanchi Array	62.05	335	eP	P	19 27 51.3	-0.5
MK31				pmax	pmax		
	comp=Z,25nm,0.8s						
MK32	Makanchi Array	62.05	335	eP	P	19 27 51.5	-0.3
MKAR	Makanchi Array	62.05	335	P	P	19 27 51.5	-0.3
	comp=Z,28nm,0.6s,baz=152,slow=7.1,SNR=171						
ZEA	Zeya	62.11	8	eP	P	19 27 52.2	+0.2
ZEA				e		19 28 52.8	
ZEA				pmax	pmax		
	comp=Z,52nm,1.0s						
MAKZ	Makanchi	62.20	334	eP	P	19 27 52.0	-0.8
	comp=Z,14nm,0.8s						
MAKZ	Makanchi	62.20	334	eP	P	19 27 52.0	-0.8
MAKZ				pmax	pmax		
	comp=Z,14nm,0.8s						
TKM2	Tokmak 2	62.40	328	P	P	19 27 54.1	-0.3
	SNR=15						
BKZ	Black Stump Fm	62.42	130	eP	P	19 27 54.8	+0.3
	comp=Z,72nm,0.6s						
DGZ	Jazzator, Alta	62.45	340	ciP	P	19 27 55.0	+0.5
DGZ				pmax	pmax		
	comp=Z,34nm,0.9s						
UCH	Uchtor	62.51	326	P	P	19 27 55.3	-0.1
	SNR=9.4						
KBK	Karagaybulak	62.56	327	P	P	19 27 55.4	0.0
	SNR=26						
URZ	Urewera	62.70	129	P	P	19 27 56.2	-0.1
	comp=Z,21nm,0.7s,baz=63,slow=11,SNR=3.0						
URZ	Urewera	62.70	129	eP	P	19 27 56.2	-0.1
	comp=Z,29nm,0.7s						
ARSB	Arslanbob	62.76	325	eP	P	19 27 56.2	-0.5
	comp=Z,62nm,1.3s						
AAK	Ala-Archa	62.79	327	P	P	19 27 56.8	-0.1
	SNR=12						
AAK	Ala-Archa	62.79	327	eP	P	19 27 56.6	-0.3
	comp=Z,28nm,1.2s						
AAK	Ala-Archa	62.79	327	i P	P	19 27 56.7	-0.3
	SNR=14						
AAK	Ala-Archa	62.79	327	ceP	P	19 27 56.8	-0.1
AAK				pmax	pmax		
	comp=Z,38nm,1.7s						
GAR	Garm	62.89	321	eP	P	19 27 56.4	-1.2
	comp=Z,65nm,0.9s						
GAR	Garm	62.89	321	eP	P	19 27 56.4	-1.2
GAR				pmax	pmax		
	comp=Z,65nm,0.9s						
AML	Almayashu	62.89	326	P	P	19 27 57.8	-0.1
	SNR=14						
EKS2	Erkin-Say	63.20	326	P	P	19 27 59.7	+0.1
	SNR=21						
USP	Ospenovka	63.22	327	P	P	19 27 59.0	-0.5
	SNR=11						
WSAR	Wadi Sarin	63.88	301	P	P	19 28 03.5	-0.8
	comp=Z,18nm,0.8s,baz=136,slow=5.3,SNR=16						
KK31	Karatay Array	65.31	325	eP	P	19 28 11.8	-1.3
	comp=Z,6.1nm,1.0s						
KK31	Karatay Array	65.31	325	eP	P	19 28 11.8	-1.3
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	Karatay Array	65.31	325	eP	P	19 28 11.7	-1.4
	comp=Z,6.1nm,1.0s						
KKAR	Karatay Array	65.31	325	eP	P	19 28 11.7	-1.4
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOD	Bodaibo	65.47	359	eP	P	19 28 13.3	-0.4
BOD				pmax	pmax		
	comp=Z,24nm,1.1s						
UOSS	Minazif	66.57	301	eP	P	19 28 19.8	-1.6
	comp=Z,33nm,1.4s						
UOSS	Minazif	66.57	301	i P	P	19 28 20.0	-1.4
	SNR=6.0						
HATD	Hatta, Dubai	66.59	301	i P	P	19 28 20.7	-0.9
	SNR=6.6						
ASHO	Ashiyiah	66.60	301	i P	P	19 28 20.8	-0.9
	SNR=7.6						
KURK	Kurchatov	66.63	335	eP	P	19 28 20.7	-0.6
	comp=Z,43nm,1.3s						
KURK	Kurchatov	66.63	335	ceP	P	19 28 20.6	-0.6
KURK				pmax	pmax		
	comp=Z,51nm,1.7s						
ALNE	Al Ain	66.64	300	P	P	19 28 20.6	-1.3
MSFE	Esma-Masafi	66.76	302	P	P	19 28 21.5	-1.1
BANOM	Banah	66.85	302	P	P	19 28 22.0	-1.2
ZAA0	Zalesovo Array	66.90	341	eP	P	19 28 21.7	-1.1
	comp=Z,14nm,0.8s						
ZALV	Zalesovo Beam	66.90	341	P	P	19 28 21.8	-1.1
	comp=Z,8.4nm,0.4s,baz=146,slow=4.1,SNR=44						
ZALV				pP	pP	19 29 21.3	-1.5
	comp=Z,5.3nm,0.7s,baz=149,slow=4.8,SNR=2.5						
ZAA1	Zalesovo Array	66.90	341	eP	P	19 28 21.8	-1.1
ZAA1				epP	pP	19 29 21.3	-1.5
FAQ	Al Faqa, Dubai	67.02	301	i P	P	19 28 23.2	-1.1
	SNR=19						
SHME	Shamm	67.03	302	i P	P	19 28 23.7	-0.6
	SNR=5.2						
ASUD	Al Ashush, Dub	67.20	301	P	P	19 28 24.5	-0.8
NVS	Novosibirsk	68.16	340	eP	P	19 28 29.4	-1.3
NVS				pmax	pmax		
	comp=N,6.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,15nm,1.3s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
MAW	Mawson	69.27	199	P	P	19 28 39.3	+2.0
	comp=E,67nm,0.7s,baz=60,slow=6.8,SNR=193						
MAW	Mawson	69.27	199	eP	P	19 28 38.8	+1.5
	comp=E,15nm,0.8s						
MAW	Mawson	69.27	199	eP	P	19 28 38.8	+1.5
MAW				pmax	pmax		
	comp=Z,15nm,0.8s						
PEA0B	Petropavlovsk-	70.33	25	eP	P	19 28 44.6	+0.6
	comp=Z,20nm,1.1s						
PETK	Petropavlovsk-	70.33	25	P	P	19 28 44.9	+0.9
	comp=Z,11nm,0.9s,baz=196,slow=4.3,SNR=21						
PETK				pP	pP	19 29 43.7	-0.8
	comp=Z,9.9nm,0.9s,baz=217,slow=4.7,SNR=4.7						
PEA1	Petropavlovsk-	70.34	25	eP	P	19 28 44.9	+0.9
PEA1				epP	pP	19 29 43.7	-0.8
GEYT	Alibeck	70.41	315	P	P	19 28 44.9	0.0
	comp=Z,15nm,0.6s,baz=152,slow=6.7,SNR=51						
GYA0B	ALIBECK ARRAY	70.41	315	eP	P	19 28 44.9	0.0
	comp=Z,27nm,0.8s						
YAK	Yakutsk	70.50	7	eP	P	19 28 44.0	-0.8
	comp=Z,26nm,1.1s						
YAK	Yakutsk	70.50	7	i P	P	19 28 44.0	-0.8
YAK				pmax	pmax		
	comp=Z,69nm,0.8s						
PET	Petropavlovsk	70.68	26⇑	eP	P	19 28 47.4	+1.3
PET				pmax	pmax		
	comp=Z,26nm,2.5s						
BRVK	Borovoye	71.92	333	eP	P	19 28 52.7	-0.8
	comp=Z,49nm,1.4s						
BRVK	Borovoye	71.92	333	ciP	P	19 28 52.9	-0.6
BRVK				pmax	pmax		
	comp=Z,37nm,1.4s						
VNDA	Vanda	73.61	171	P	P	19 29 04.7	+1.6
	comp=Z,6.7nm,0.5s,baz=299,slow=7.0,SNR=10						
VNDA	Vanda	73.61	171	eP	P	19 29 03.9	+0.8
	comp=Z,10nm,0.8s						
VNDA	Vanda	73.61	171	eP	P	19 29 03.9	+0.8
VNDA				pmax	pmax		
	comp=Z,11nm,0.8s						
DAMY	Dhamar	74.26	288	eP	P	19 29 09.1	+0.7
	comp=Z,40nm,0.8s						
ABKAR	Akbulak array	74.85	326	eP	P	19 29 10.0	-0.7

comp=Z,33nm,0.8s
RAYN **Ar Rayn** 75.40 297 P P 19 29 13.5 -1.0
SYO **Syowa Base** 77.79 201⇑ *i*P P 19 29 27.0 +0.2
SYO **Syowa Base** 77.79 201⇑ *e*PcP PcP 19 29 36.7 +1.0
KMBO **Kilima Mbogo** 78.55 270 P P 19 29 33.5 +1.2
comp=Z,5.7nm,0.8s,baz=55,slow=10.0,SNR=13
KMBO **Kilima Mbogo** 78.55 270 *e*P P 19 29 32.4 0.0
comp=Z,7.1nm,0.8s
KMBO **Kilima Mbogo** 78.55 270 P P 19 29 33.3 +0.9
SVE **Sverdlovsk** 78.62 333 *de*P P 19 29 30.8 -0.7
SVE pmax pmax
comp=Z,25nm,0.9s
FURI **Furi** 78.66 281 *e*P P 19 29 34.4 +1.4
comp=Z,43nm,0.9s
AKT **Akhty** 79.17 315 *e*P P 19 29 34.7 -0.3
AKT *e* 19 29 42.3
AKT *e**PP pP 19 30 35.4 -1.6
AKT pmax pmax
comp=Z,17nm,0.8s
ARU **Arti** 79.36 332 *e*P P 19 29 34.3 -1.2
comp=Z,65nm,1.8s
ARU **Arti** 79.36 332 *c i*P P 19 29 34.3 -1.2
ARU *PP pP 19 30 37.1 -0.5
ARU S S 19 39 15.2 +1.5
ARU SS SS 19 44 22.5 -4.9
ARU pmax pmax
comp=Z,33nm,1.8s
NRIK **Noril'sk** 79.47 350 P P 19 29 35.3 -0.6
comp=Z,4.9nm,0.5s,baz=140,slow=6.3,SNR=7.1
NRIK PP PP 19 32 41.2 +0.9
comp=Z,3.1nm,0.5s,baz=140,slow=7.6,SNR=7.4
TIXI **Tiksi** 79.81 4 *e*P P 19 29 35.8 -1.8
comp=Z,10nm,0.8s
TIXI **Tiksi** 79.81 4 *ce*P P 19 29 36.4 -1.2
TIXI pmax pmax
comp=Z,11nm,0.8s
GNI **Garni** 80.87 313 *ce*P P 19 29 45.3 +1.1
GNI pmax pmax
comp=Z,101nm,1.3s
TBLG **Delisi** 81.37 314 *e*P P 19 29 46.0 -0.5
comp=Z,32nm,1.4s
TBLG **Delisi** 81.37 314 *e*P P 19 29 46.1 -0.5
TBLG pmax pmax
comp=Z,32nm,1.4s
QSPA **South Pole Qui** 82.13 180 *e*P P 19 29 51.1 +0.9
comp=Z,47nm,1.3s
AKH **Akhalkalaki** 82.16 314 *e*P P 19 29 51.0 +0.1
comp=Z,12nm,0.8s
AKH **Akhalkalaki** 82.16 314⇑ *i*P P 19 29 51.5 +0.6
AKH **Akhalkalaki** 82.16 314 *e*P P 19 29 51.0 +0.1
AKH pmax pmax
comp=Z,13nm,0.8s
ZEI **Tsey** 82.29 315 *e*P P 19 29 46.1 -5.5
ZEI pmax pmax
comp=Z,11nm,0.6s
NEY **Neytrino** 83.25 315 *i*P P 19 29 57.5 +1.0
NEY pmax pmax
comp=Z,2.0nm,0.9s
KBZ **Khabaz** 83.28 316 P P 19 29 56.2 -0.1
comp=Z,6.4nm,0.7s,baz=110,slow=5.2,SNR=15
KIV **Kislovodsk** 83.49 316 *e*P P 19 29 56.7 -0.8
comp=Z,6.3nm,0.8s
KIV **Kislovodsk** 83.49 316 P P 19 29 57.5 -0.1
KIV **Kislovodsk** 83.49 316 *e*P P 19 29 57.0 -0.5
KIV pmax pmax
comp=Z,26nm,1.1s
BILL **Bilibino** 83.59 17 *i*P P 19 29 54.1 -3.3
BILL *i**PP pP 19 30 59.9 -0.1
BILL pmax pmax
comp=Z,1.0nm,0.9s
MBAR **Mbarara** 85.07 270 *e*P P 19 30 05.1 -1.1
comp=Z,14nm,0.8s
MBAR **Mbarara** 85.07 270 *e*P P 19 30 05.1 -1.1
MBAR pmax pmax
comp=Z,14nm,0.8s
LSZ **Lusaka** 85.72 255 *e*P P 19 30 10.3 +1.0
comp=Z,8.4nm,0.6s
LSZ **Lusaka** 85.72 255 *e*P P 19 30 10.3 +1.0
LSZ pmax pmax
comp=Z,8.0nm,0.6s
BOSA **Boshof** 86.80 242 P P 19 30 14.6 +0.2
comp=Z,7.3nm,0.8s,baz=98,slow=4.3,SNR=14
BOSA **Boshof** 86.80 242 *e*P P 19 30 15.1 +0.8
comp=Z,22nm,1.2s
BOSA **Boshof** 86.80 242 *e*P P 19 30 15.1 +0.8
BOSA pmax pmax
comp=Z,22nm,1.2s
LBTB **Lobatse** 86.95 245 *e*P P 19 30 16.5 +1.4
comp=Z,34nm,1.6s
LBTB **Lobatse** 86.95 245 *e*P P 19 30 16.5 +1.4
LBTB pmax pmax
comp=Z,34nm,1.6s
ANN **Anapa** 87.34 316 *e*P P 19 30 15.4 -0.9
ANN *e**PP pP 19 31 17.9 -1.5
ANN *e* 19 40 18.5
ANN pmax pmax
comp=Z,30nm,0.7s
VORD **Divnogorie** 87.68 322 *e*P P 19 30 16.3 -1.4
VORD pmax pmax
comp=Z,20nm,0.8s
VSR **Storozhevoye** 87.82 322 *e*P P 19 30 16.6 -1.8
VSR pmax pmax
comp=Z,40nm,0.6s
LPSR **Galich'ya Gora** 88.33 324 *e*P P 19 30 19.8 -1.0
LPSR pmax pmax
comp=Z,10.0nm,0.6s
BR101 **Keskin Array S** 89.01 310 *e*P P 19 30 23.7 -0.8
BR101 *e*pP pP 19 31 27.2 -0.7
BR101 *e*PP PP 19 33 57.5 -1.1
BR131 **Keskin Array S** 89.01 310 *e*P P 19 30 23.8 -0.8
comp=Z,8.2nm,0.8s
BRTR **Keskin Array B** 89.01 310 P P 19 30 23.7 -0.8
comp=Z,7.3nm,0.8s,baz=128,slow=5.8,SNR=38
BRTR pP pP 19 31 27.2 -0.7
comp=Z,2.1nm,1.0s,baz=126,slow=6.3,SNR=2.4
BRTR PP PP 19 33 57.5 -1.1
comp=Z,1.7nm,0.8s,baz=94,slow=7.4,SNR=4.5
OBN **Obninsk** 90.30 326 *i*P P 19 30 28.4 -1.5
OBN pmax pmax
comp=Z,7.0nm,0.7s
SNAA **Sanae** 91.24 196 P P 19 30 35.8 +1.6
SNAA **Sanae** 91.24 196 *e*P P 19 30 35.6 +1.4
comp=Z,23nm,0.8s
SNAA **Sanae** 91.24 196 *e*P P 19 30 35.6 +1.4
SNAA pmax pmax
comp=Z,23nm,0.8s
VNA2 **Neumayer--Watz** 92.88 196 P P 19 30 43.2 +1.5
baz=101,slow=3.2
VNA1 **Neumayer--Stat** 93.28 196 P P 19 30 44.6 +1.2
VNA3 **Neumayer Olymp** 93.31 195 P P 19 30 44.8 +1.2
AKASG **Malin Array Be** 93.88 320 P P 19 30 44.8 -1.8
comp=Z,2.9nm,0.6s,baz=81,slow=4.6,SNR=10
TLB **Topalu** 93.89 314⇓ *i*P P 19 30 46.0 -0.7
TLB **Topalu** 93.89 314 ⇓P P 19 30 46.0 -0.7
VRI **Vrincioaia** 94.96 315⇓ *i*P P 19 30 51.4 -0.3
VRI **Vrincioaia** 94.96 315 ⇓P P 19 30 51.4 -0.3
PLOR **Plostina** 95.01 315⇑ *i*P P 19 30 51.5 -0.4
PLOR **Plostina** 95.01 315 ⇑P P 19 30 51.5 -0.4
TESR **Tescani** 95.08 316⇓ *i*P P 19 30 51.3 -0.9
MLR **Muntele Rosu** 95.47 315⇓ *i*P P 19 30 52.6 -1.5
MLR **Muntele Rosu** 95.47 315 ⇓P P 19 30 52.6 -1.5
BURAR **Bucovina Array** 96.16 317⇓ *i*P P 19 30 56.9 -0.3
BURAR **Bucovina Array** 96.16 317 ⇓P P 19 30 56.9 -0.3
BUR08 **Bucovina Ar. S** 96.17 317 *e*P P 19 30 56.7 -0.5
comp=Z,3.3nm,0.8s
FIA0 **FINESS Array S** 96.73 331 *e*P P 19 30 58.1 -1.1
FIA0 **FINESS Array S** 96.73 331 *e*P P 19 30 58.1 -1.1
FINES **FINESS Array B** 96.73 331 P P 19 30 58.1 -1.1
comp=Z,2.6nm,0.7s,baz=106,slow=6.9,SNR=7.9
ARA0 **ARCESS Array S** 97.42 339 *e*P P 19 31 00.7 -1.6
ARCES **ARCESS Array B** 97.42 339 P P 19 31 00.7 -1.6
comp=Z,1.8nm,0.8s,baz=7.7,slow=30,SNR=4.3
LIT **Litokhoron** 97.56 309 *e*P P 19 31 01.8 -1.8
comp=Z,5.0nm,0.6s
LIT **Litokhoron** 97.56 309 *e*P P 19 31 01.8 -1.8
LIT pmax pmax
comp=Z,5.0nm,0.6s
KOLS **Kolonicke sedl** 98.21 318 *e*P P 19 31 06.2 0.0
KOLS **Kolonicke sedl** 98.21 318 *e*PDIF P 19 31 06.2 0.0
ILAR **Eielson Array** 100.16 26 PKKPbc PKKPbc 19 47 31.8 -2.7
comp=Z,0.7nm,0.5s,baz=105,slow=1.5,SNR=9.0
CRES **Cresnjev** 102.82 315 *i*PP PKiKP 19 35 41.4 -4.6
BOJS **Bojanci** 102.98 315 *i*PP PKiKP 19 35 42.3 -3.9
CLL **Collm** 104.12 321 *e*Pdif Pdif 19 31 31.0 -1.4
CLL *ep*Pdif pPdif 19 32 35.0 -1.1
CLL **Collm** 104.12 321 *e*P Pdif 19 31 31.0 -1.4
YKA **Yellowknife Ar** 114.40 23 PKP PKPdf 19 36 06.9 -0.2
comp=Z,1.4nm,0.6s,baz=315,slow=1.8,SNR=11
YKA SKP 19 39 15.9
comp=Z,0.9nm,0.5s,baz=310,slow=1.9,SNR=8.3
YKB5 **Yellowknife Ar** 114.40 23 *e*PKiKP PKPdf 19 36 06.9 -0.2
TORD **Torodi Ar. Bea** 115.18 281 PKP PKPdf 19 36 09.4 -0.6
comp=Z,1.2nm,0.5s,baz=68,slow=1.5,SNR=7.8
TORD SKP 19 39 18.9
comp=Z,1.7nm,0.5s,baz=106,slow=2.0,SNR=8.4
TOA1 **Torodi Ar. Sit** 115.19 281 *e*PKPdf PKPdf 19 36 09.4 -0.6
ESDC **Sonseca Array** 117.80 311 PKP PKiKP 19 36 15.0 +0.6
comp=Z,0.6nm,0.5s,baz=34,slow=2.0,SNR=4.4
ESDC SKP 19 39 24.4
comp=Z,0.9nm,0.6s,baz=46,slow=3.1,SNR=4.5
I04A **Tendick Farm,** 118.11 44 P PKiKP 19 36 15.0 +0.1
baz=287
BMO **Blue Mountains** 121.20 42 *e*PKPdf PKPdf 19 36 21.0 +0.1
BMO **Blue Mountains** 121.20 42 *e*PKiKP PKPdf 19 36 21.0 +0.1
DBIC **Dimbokro** 121.20 273 PKP PKiKP 19 36 21.8 +0.1
comp=Z,2.1nm,0.5s,baz=66,slow=6.9,SNR=5.9
MSO **Missoula** 122.54 38 *e*PKPdf PKPdf 19 36 23.3 -0.1
NV01 **Mina Array Sit** 122.67 49 *e*PKPdf PKiKP 19 36 25.2 +0.9
NVAR **Mina Array Bea** 122.67 49 PKP PKiKP 19 36 25.2 +0.9
comp=Z,0.4nm,0.7s,baz=276,slow=0.6,SNR=3.8
NVAR SKP 19 39 34.8
comp=Z,0.9nm,0.6s,baz=263,slow=3.4,SNR=7.0
FRB **Frobisher Bay** 124.12 2 PKP PKPdf 19 36 24.2 -1.5
comp=Z,11nm,0.9s,baz=253,slow=17,SNR=3.8
PDAR **Pinedale Array** 127.17 41 PKP PKiKP 19 36 33.4 +0.3
comp=Z,0.3nm,0.5s,baz=106,slow=2.0,SNR=3.1
PDAR SKPbc SKPbc 19 39 21.3
comp=Z,0.5nm,0.5s,baz=232,slow=0.5,SNR=4.4
ULM **Lac du Bonnet** 130.18 26 SKPbc SKPbc 19 39 34.9 -0.8
comp=Z,5.3nm,0.5s,baz=324,slow=3.8,SNR=8.7
PLCA **Paso Flores** 131.30 174 PKP PKiKP 19 36 41.3 0.0
comp=Z,2.9nm,0.7s,baz=323,slow=4.2,SNR=5.1
PLCA SKPbc SKPab 19 39 41.2 +0.3
comp=Z,15nm,1.1s,baz=190,slow=2.1,SNR=8.1
SCHQ **Schefferville** 133.10 2 SKPbc SKPbc 19 39 45.3 -0.7
comp=Z,11nm,1.0s,baz=28,slow=2.2,SNR=5.0
TXAR **Lajitas Array** 137.19 55 PKP PKPdf 19 36 52.5 +0.8
comp=Z,0.3nm,0.5s,baz=245,slow=2.1,SNR=5.9
TXAR SKPbc SKPbc 19 39 59.1 -0.7
comp=Z,1.4nm,0.5s,baz=290,slow=1.8,SNR=12
D46A **Sault St. Mari** 137.54 20 P PKPdf 19 36 52.1 +0.4
baz=330
D47A **Chapleau** 137.71 19 P PKPdf 19 36 52.7 +0.7
baz=332
E46A **Sault Ste Mari** 137.90 21 P PKPdf 19 36 53.2 +0.9
baz=330
D48A **Paudash Townsh** 138.02 18 P PKPdf 19 36 53.6 +1.0
baz=333
F45A **CMU Biological** 138.04 22 P PKPdf 19 36 53.5 +0.9
baz=328
E48A **Lockeyer** 138.52 19 P PKPdf 19 36 54.4 +0.9
baz=333
E50A **Wahnapitae** 139.02 18 P PKiKP 19 36 56.2 -0.5
baz=335
D52A **ZEK Kipawa Sen** 139.15 15 P PKiKP 19 36 56.0 -1.0
baz=338
F49A **Sandfield** 139.20 19 P PKiKP 19 36 57.1 +0.1
baz=332
D53A **Lac Vacive, Po** 139.24 14 P PKiKP 19 36 56.7 -0.4
baz=339
E54A **Lac Daplat, Po** 139.96 14 P PKiKP 19 36 57.8 -0.7
baz=340
ALGO **Algonquin Park** 140.19 15 P PKiKP 19 36 58.4 -0.7
baz=338
BUKO **Buck Lake** 140.30 17 P PKiKP 19 36 58.8 -0.5
baz=336
CFA **Coronel Fontan** 140.57 175 PKhKP PKPpre 19 36 50.7
comp=Z,3.7nm,0.4s,baz=178,slow=2.3,SNR=9.2
CFA SKPbc SKPbc 19 40 08.2 -0.8
comp=Z,4.9nm,0.4s,baz=216,slow=2.5,SNR=8.1
PEMO **Pembroke** 140.66 15 P PKiKP 19 36 59.4 -0.7
baz=339
K47A **Vermontville** 140.77 25 P PKiKP 19 36 59.3 -1.0
baz=326
G53A **Haliburton** 140.81 16 P PKiKP 19 36 60.0 -0.4
baz=337
K55A **Perry** 143.17 17 P PKPbc 19 36 59.1 -0.6
baz=337
P49A **Miami Univ. Ec** 143.46 27 P PKPbc 19 37 00.0 -0.5
baz=324
M53A **Wi Miller and** 143.48 21 P PKPab 19 36 60.0 +0.5
baz=332
L55A **Hinsdale** 143.56 18 P PKPab 19 36 59.9 +0.1
baz=336
ACSO **Alum Creek Sta** 143.63 25 P PKPab 19 37 00.3 +0.2
baz=328
N52A **McGinn's Farm,** 143.66 23 P PKPab 19 37 00.6 +0.4
baz=330
M54A **Oil Creek Stat** 143.77 20 P PKPab 19 37 00.7 +0.1
baz=334
P50A **Jamestown** 143.81 26 P PKPab 19 37 01.0 +0.2
baz=326
O51A **Pataskala** 143.86 24 P PKPab 19 37 01.2 +0.2
baz=328
N53A **Lisbon** 143.98 22 *e*PKPdf PKPab 19 37 01.3 -0.1
N53A **Lisbon** 143.98 22 P PKPab 19 37 01.7 +0.2
baz=331
M55A **Ridgway** 144.10 19 P PKPab 19 37 01.9 0.0
baz=335,SNR=5.6
N54A **Moraine State** 144.15 21 *e*PKPdf PKPab 19 37 01.8 -0.3
N54A **Moraine State** 144.15 21 P PKPbc 19 37 02.4 -0.1
baz=333
U46A **Springville** 144.16 34 P PKPab 19 37 01.8 -0.4
baz=317
O52A **Adamsville** 144.20 23 *e*PKPdf PKPab 19 37 02.2 -0.1
O52A **Adamsville** 144.20 23 P PKPab 19 37 02.1 -0.2
baz=329
P51A **Williamsport** 144.23 25 *e*PKPdf PKPab 19 37 02.0 -0.4
P51A **Williamsport** 144.23 25 P PKPab 19 37 01.8 -0.7
baz=327
BINY **Binghamton** 144.23 15 *e*PKPdf PKPab 19 37 02.2 -0.2
BINY **Binghamton** 144.23 15 P PKPab 19 37 02.1 -0.3
baz=340
R49A **Shelbyville** 144.25 29 *e*PKPdf PKPab 19 37 02.4 -0.1
R49A **Shelbyville** 144.25 29 P PKPab 19 37 02.4 -0.1
baz=323,SNR=5.7
M56A **Emporium** 144.27 18 P PKPab 19 37 02.3 -0.3
baz=336,SNR=6.0
GO03 **Copiap** 144.27 171 *e*PKPbc PKPdf 19 37 04.3 -0.1
T47A **Sharon Grove** 144.28 32 *e*PKPdf PKPab 19 37 02.6 -0.1
T47A **Sharon Grove** 144.28 32 P PKPab 19 37 02.8 +0.1
baz=319
S48A **Wiedeman Farm,** 144.31 30 P PKPab 19 37 02.5 -0.3
baz=321,SNR=5.0
O53A **New Philadelph** 144.32 23 P PKPab 19 37 02.6 -0.2
baz=330
Q50A **Georgetown** 144.36 27 P PKPab 19 37 02.4 -0.5
baz=325
Q51A **Peebles** 144.49 26 *e*PKPbc PKPab 19 37 02.9 -0.5
Q51A **Peebles** 144.49 26 P PKPab 19 37 03.0 -0.5
baz=326,SNR=9.3
P52A **Corning** 144.49 24 P PKPab 19 37 02.8 -0.6
baz=328,SNR=6.3
WVT **Waverly** 144.52 34 *e*PKPbc PKPab 19 37 03.4 -0.3
WVT **Waverly** 144.52 34 *e*PKiKP PKPab 19 37 03.4 -0.3
WVT **Waverly** 144.52 34 P PKPab 19 37 03.5 -0.2
baz=317
T48A **Bowling Green** 144.56 31 P PKPab 19 37 03.7 -0.1
baz=320
U47A **Clarksville** 144.58 33 P PKPab 19 37 03.7 -0.2
baz=318,SNR=6.8
S49A **Springfield** 144.59 30 P PKPab 19 37 03.3 -0.5
baz=322,SNR=12
V46A **Holladay** 144.59 35 P PKPab 19 37 03.2 -0.7
baz=316,SNR=6.5
N55A **Marion Center** 144.65 20 *e*PKPbc PKPab 19 37 03.4 -0.6
N55A **Marion Center** 144.65 20 P PKPab 19 37 03.6 -0.5
baz=334
R50A **Paris** 144.65 28 *e*PKPbc PKPab 19 37 03.6 -0.5
R50A **Paris** 144.65 28 P PKPab 19 37 03.5 -0.6
baz=324
O54A **Avella** 144.69 22 P PKPab 19 37 03.9 -0.3
baz=332,SNR=5.3
OXF **Oxford** 144.74 38 *e*PKPbc PKPbc 19 37 04.0 -0.5
OXF **Oxford** 144.74 38 *e*PKiKP PKPbc 19 37 04.0 -0.5
OXF **Oxford** 144.74 38 P PKPbc 19 37 04.2 -0.2
baz=313
N56A **West Decatur** 144.75 19 P PKPbc 19 37 03.9 -0.5
baz=335
HRV **Adam Dziewonsk** 144.88 10 *e*PKPbc PKPab 19 37 04.8 +0.1
HRV **Adam Dziewonsk** 144.88 10 *e*PKiKP PKPab 19 37 04.8 +0.1
HRV **Adam Dziewonsk** 144.88 10 P PKPbc 19 37 04.7 0.0
baz=347
KSPA **Keystone Colle** 144.89 15 *e*PKPbc PKPbc 19 37 04.5 -0.2
V47A **Nunnelly** 144.91 34 P PKPbc 19 37 04.7 -0.3
baz=317,SNR=5.1
P53A **Whipple** 144.91 24 *e*PKPbc PKPbc 19 37 04.6 -0.2
P53A **Whipple** 144.91 24 P PKPbc 19 37 04.8 -0.1
baz=329,SNR=16
U48A **Cassie Pea, Po** 144.93 32 P PKPbc 19 37 04.6 -0.4
baz=319,SNR=9.0
R51A **Hillsboro** 144.98 27 P PKPbc 19 37 04.6 -0.6
baz=325
T49A **Edmonton** 145.00 31 *e*PKPbc PKPbc 19 37 04.8 -0.4
T49A **Edmonton** 145.00 31 P PKPbc 19 37 04.8 -0.4
baz=321,SNR=10
Q52A **Bidwell** 145.00 25 P PKPbc 19 37 04.6 -0.6
baz=328,SNR=5.3
O55A **Ligonier** 145.05 20 P PKPbc 19 37 04.7 -0.6
baz=333
S50A **Richmond** 145.10 29 P PKPdf 19 37 05.0 -0.5
baz=323,SNR=7.2
N57A **Milroy** 145.13 18 P PKPdf 19 37 05.1 -0.3
baz=336,SNR=9.1
SSPA **Standing Stone** 145.14 18 *e*PKPdf PKPdf 19 37 05.3 -0.1
SSPA **Standing Stone** 145.14 18 P PKPdf 19 37 05.1 -0.3
baz=336
X46A **Booneville** 145.20 37 P PKPdf 19 37 05.7 0.0
baz=314
O56A **Blue Knob Stat** 145.25 20 *e*PKPdf PKPdf 19 37 05.8 +0.1
O56A **Blue Knob Stat** 145.25 20 P PKPdf 19 37 05.6 -0.1
baz=334,SNR=6.7
KSCT **Kent School, K** 145.27 12 *e*PKPdf PKPdf 19 37 05.6 0.0
W47A **Westpoint** 145.28 35 P PKPdf 19 37 05.8 -0.1
baz=316
U49A **Red Boiling Sp** 145.33 31 P PKPdf 19 37 06.0 +0.1
baz=320,SNR=16
MCWV **Mont Chateau** 145.35 22 *e*PKPdf PKPbc 19 37 06.3 +0.1
MCWV **Mont Chateau** 145.35 22 P PKPdf 19 37 06.0 +0.2
baz=332
V48A **Smith Brothers** 145.36 33 *e*PKPdf PKPdf 19 37 05.7 -0.3
V48A **Smith Brothers** 145.36 33 P PKPdf 19 37 05.8 -0.2
baz=318,SNR=6.3
CLTN **Cedars of Leba** 145.36 33 *e*PKPdf PKPdf 19 37 06.1 +0.2
R52A **Catlettsburg** 145.36 26 P PKPbc 19 37 06.2 -0.1
baz=327
CPUP **Villa Florida** 145.38 191 PKPbc PKPab 19 37 07.8 +0.7
comp=Z,23nm,0.6s,baz=164,slow=1.8,SNR=94
CPUP SKPbc SKPbc 19 40 20.4 -0.4
comp=Z,1.7nm,0.6s,baz=165,slow=2.7,SNR=3.3
Q53A **Leroy** 145.40 24 P PKPdf 19 37 06.1 +0.2
baz=329
T50A **Nancy** 145.41 30 P PKPdf 19 37 06.0 0.0
baz=322,SNR=10
P55A **Reedsville** 145.49 22 P PKPdf 19 37 06.2 +0.1
baz=332
N59A **State Game Lan** 145.49 16 *e*PKPdf PKPbc 19 37 06.6 0.0
N59A **State Game Lan** 145.49 16 P PKPbc 19 37 06.7 0.0
baz=340,SNR=9.3
S51A **Beattyville** 145.51 28 *e*PKPdf PKPdf 19 37 06.3 +0.1
S51A **Beattyville** 145.51 28 P PKPdf 19 37 06.2 0.0
baz=325
Q54A **Coxs Mills** 145.56 23 *e*PKPdf PKPbc 19 37 06.7 -0.2
Q54A **Coxs Mills** 145.56 23 P PKPbc 19 37 06.7 -0.2
baz=330,SNR=12
O57A **Amberson** 145.60 18 P PKPdf 19 37 06.5 +0.3
baz=336
M61A **Granite Spring** 145.61 13 P PKPdf 19 37 06.5 +0.4
baz=343
ODNJ **Ogdensburg** 145.63 14 *e*PKPdf PKPbc 19 37 06.8 -0.2
X47A **Russelville** 145.66 36 P PKPdf 19 37 06.5 0.0
baz=315
R53A **Hurricane** 145.67 25 P PKPbc 19 37 06.8 -0.4
baz=328
W48A **Pulaski** 145.74 34 P PKPdf 19 37 06.9 +0.3
baz=317
V49A **McMinnville** 145.83 32 P PKPbc 19 37 07.5 -0.3
baz=319
P56A **Dayton Farm, R** 145.84 20 P PKPbc 19 37 07.4 -0.3
baz=334,SNR=14
Q55A **Buckhannon** 145.84 22 P PKPbc 19 37 07.3 -0.4
baz=331
PAL **Palisades** 145.87 13 *e*PKPdf PKPdf 19 37 06.8 +0.2
PAL **Palisades** 145.87 13 *e*PKP2 PKPdf 19 37 06.8 +0.2
PAL **Palisades** 145.87 13 P PKPbc 19 37 07.5 -0.2
baz=343,SNR=6.0
U50A **Jamestown** 145.88 31 P PKPbc 19 37 07.7 -0.2
baz=322,SNR=17
T51A **Gray** 145.89 29 P PKPbc 19 37 07.6 -0.4
baz=323
BRNJ **Basking Ridge** 146.02 14 *e*PKPdf PKPbc 19 37 08.3 +0.2
W49A **Belvidere** 146.12 34 P PKPbc 19 37 08.1 -0.6
baz=318,SNR=6.9
Q56A **Snyder Ridge,** 146.13 21 P PKPbc 19 37 08.2 -0.4
baz=333,SNR=9.3
P57A **Homestead Farm** 146.14 19 P PKPbc 19 37 08.3 -0.3
baz=335,SNR=6.7
O60A **Telford** 146.15 16 P PKPbc 19 37 08.3 -0.2
baz=340
X48A **Hartselle** 146.17 35 P PKPbc 19 37 08.4 -0.4
baz=316
MVL **Millersville** 146.18 17 *e*PKPdf PKPdf 19 37 07.6 +0.4
R54A **Victor** 146.19 24 P PKPbc 19 37 08.2 -0.6
baz=329
T52A **Hallie** 146.22 28 P PKPbc 19 37 08.7 -0.2
baz=325
SWET **Sewanee** 146.23 33 *e*PKPdf PKPdf 19 37 07.8 +0.3
U51A **La Follette** 146.32 30 P PKPbc 19 37 08.7 -0.6
baz=323
V50A **Pikeville** 146.33 32 P PKPbc 19 37 08.8 -0.5
baz=320
S54A **Dingess, Beckl** 146.38 25 P PKPbc 19 37 09.0 -0.4
baz=328
Q57A **Strasburg** 146.41 20 P PKPbc 19 37 09.0 -0.4
baz=334,SNR=5.9
TZTN **Tazewell** 146.42 29 *e*PKPbc PKPbc 19 37 09.5 0.0
TZTN **Tazewell** 146.42 29 P PKPbc 19 37 09.2 -0.3
baz=324
PSUB **Penn St. - Bra** 146.50 16 *e*PKPdf PKPbc 19 37 09.2 -0.4
P59A **Jarrettsville** 146.52 17 P PKPbc 19 37 09.3 -0.4
baz=338
T53A **Wise** 146.53 27 P PKPbc 19 37 09.3 -0.6
baz=326
X49A **Woodville** 146.53 34 P PKPbc 19 37 09.3 -0.5
baz=318,SNR=5.9
P60A **Greenville** 146.56 16 P PKPbc 19 37 09.2 -0.6
baz=339
W50A **Signal Mountai** 146.57 32 *e*PKPdf PKPbc 19 37 09.4 -0.6
W50A **Signal Mountai** 146.57 32 P PKPbc 19 37 09.6 -0.4
baz=320,SNR=6.9
V51A **Loudon** 146.61 31 *e*PKPdf PKPdf 19 37 08.5 +0.5
V51A **Loudon** 146.61 31 P PKPbc 19 37 09.5 -0.6
baz=322
U52A **Thorn Hill** 146.62 29 P PKPbc 19 37 09.7 -0.4
baz=324
GO02 **Mina Guanaco** 146.76 171 *e*PKPbc PKPab 19 37 12.3 -0.5
CPCT **Cooper Cave** 146.80 31 *e*PKPdf PKPdf 19 37 09.5 +1.1
T54A **Tazewell** 146.89 26 P PKPbc 19 37 10.5 -0.4
baz=327,SNR=7.5
W51A **Cleveland** 146.90 32 P PKPbc 19 37 10.5 -0.3
baz=320
X50B **Fort Payne** 146.95 34 P PKPbc 19 37 11.0 -0.1
baz=318
V52A **Sevierville** 146.96 30 *e*PKPdf PKPbc 19 37 11.2 +0.1
V52A **Sevierville** 146.96 30 P PKPbc 19 37 10.9 -0.1
baz=323,SNR=12
Y49A **Blount Mountai** 146.96 35 *e*PKPbc PKPbc 19 37 10.6 -0.5
Y49A **Blount Mountai** 146.96 35 P PKPbc 19 37 10.7 -0.4
baz=317
U53A **Fall Branch** 147.02 28 P PKPbc 19 37 10.5 -0.7
baz=325
R57A **Stanardsville** 147.03 21 P PKPbc 19 37 11.1 -0.1
baz=333
T55A **Pulaski** 147.18 25 P PKPbc 19 37 11.1 -0.5
baz=329
S56A **Natural Bridge** 147.19 23 P PKPbc 19 37 11.3 -0.3
baz=331
LRAL **Lakeview Retre** 147.21 37 *e*PKPbc PKPbc 19 37 11.6 -0.2
LRAL **Lakeview Retre** 147.21 37 P PKPbc 19 37 11.4 -0.4
baz=315
R58A **Rapidan** 147.21 20 P PKPbc 19 37 11.5 -0.1
baz=334
U54A **Nelsons Funny** 147.24 27 P PKPbc 19 37 11.3 -0.6
baz=326
X51A **Calhoun** 147.30 33 P PKPbc 19 37 11.7 -0.3
baz=320
Y50A **Piedmont** 147.32 35 P PKPbc 19 37 11.6 -0.5
baz=318
S57A **Dark Hollow, R** 147.35 22 P PKPbc 19 37 11.6 -0.5

	baz=332							
Z49A	Columbiana	147.37	36	P	PKPbc	19 37 12.0	-0.2
	baz=316							
W52A	Murphy	147.38	31	*e*PKPbc	PKPbc	19 37 11.8	-0.5
W52A	Murphy	147.38	31	P	PKPbc	19 37 12.1	-0.2
	baz=322							
V53A	Saluda	147.47	29	*e*PKPbc	PKPbc	19 37 12.7	+0.2
V53A	Saluda	147.47	29	P	PKPbc	19 37 12.5	0.0
	baz=324,SNR=16							
R58B	Mineral	147.56	20	P	PKPbc	19 37 12.5	-0.1
	baz=334							
U55A	TA2, Sparta	147.59	26	P	PKPbc	19 37 12.4	-0.4
	baz=328,SNR=6.4							
149A	Jones	147.64	37	P	PKPbc	19 37 12.9	0.0
	baz=315,SNR=8.1							
Z50A	Ashland	147.68	36	*e*PKPbc	PKPbc	19 37 12.5	-0.5
Z50A	Ashland	147.68	36	P	PKPbc	19 37 13.2	+0.1
	baz=317,SNR=5.4							
Y51A	Rockmart	147.69	34	P	PKPbc	19 37 13.0	-0.1
	baz=319							
W53A	Cullowhee	147.70	30	P	PKPbc	19 37 13.4	+0.2
	baz=323,SNR=16							
R60A	Leonardtown, M	147.71	18	P	PKPbc	19 37 12.7	-0.2
	baz=337							
X52A	Dahlonega	147.78	31	P	PKPbc	19 37 13.5	+0.1
	baz=321							
V54A	Nebo	147.79	28	P	PKPbc	19 37 13.1	-0.2
	baz=326,SNR=6.5							
S58A	Poland Farm, P	147.81	21	P	PKPbc	19 37 13.1	-0.1
	baz=334							
249A	Camden	147.87	39	P	PKPbc	19 37 13.7	+0.1
	baz=314							
T57A	Hurt	147.90	23	P	PKPbc	19 37 13.1	-0.4
	baz=331							
S59A	Mechanicsville	147.94	20	P	PKPbc	19 37 14.3	+0.7
	baz=335							
U56A	King	148.01	25	P	PKPbc	19 37 13.5	-0.3
	baz=329							
R61A	Willards	148.02	17	P	PKPbc	19 37 13.3	-0.4
	baz=339							
Z51A	Franklin	148.06	35	P	PKPbc	19 37 14.0	-0.1
	baz=318							
V55A	Taylorsville	148.06	27	P	PKPbc	19 37 14.0	0.0
	baz=327							
150A	Eclectic	148.09	36	P	PKPbc	19 37 14.1	-0.1
	baz=316							
X53A	Estanollee	148.16	31	P	PKPbc	19 37 14.3	0.0
	baz=322,SNR=5.3							
T58A	Grand View Acr	148.22	22	P	PKPbc	19 37 14.4	0.0
	baz=332							
W54A	Cherokee Point	148.25	29	P	PKPbc	19 37 14.5	+0.1
	baz=325							
Y52A	Lilburn	148.26	33	*e*PKPbc	PKPbc	19 37 14.5	-0.1
Y52A	Lilburn	148.26	33	P	PKPbc	19 37 14.6	+0.1
	baz=320,SNR=6.9							
U57A	Blanch	148.36	24	P	PKPbc	19 37 14.6	-0.1
	baz=330							
V56A	Mocksville	148.41	26	*e*PKPbc	PKPbc	19 37 14.8	0.0
V56A	Mocksville	148.41	26	P	PKPbc	19 37 14.7	-0.1
	baz=328							
151A	Opelika	148.55	36	P	PKPbc	19 37 15.5	+0.1
	baz=317							
T59A	Double "B" Far	148.56	21	*e*PKPbc	PKPbc	19 37 15.4	+0.2
T59A	Double "B" Far	148.56	21	P	PKPbc	19 37 15.3	+0.2
	baz=334,SNR=7.0							
Z52A	Williamson	148.58	34	P	PKPbc	19 37 15.5	+0.2
	baz=319,SNR=5.1							
X54A	Belton	148.59	30	P	PKPbc	19 37 15.5	+0.1
	baz=324,SNR=5.8							
KMSC	Kings Mountain	148.60	28	*e*PKPbc	PKPbc	19 37 15.1	-0.3
KMSC	Kings Mountain	148.60	28	P	PKPbc	19 37 15.4	+0.1
	baz=326							
PAULI	Pauline	148.64	29	*e*PKPbc	PKPbc	19 37 15.1	-0.4
V57A	Coltrane Farms	148.65	25	P	PKPbc	19 37 15.4	-0.1
	baz=329							
CMIG	Matias Romero	148.67	70	PKPbc	PKPbc	19 37 16.4	+0.4
	comp=Z,1.6nm,0.4s,baz=338,slow=4.1,SNR=4.8							
T60A	Surry	148.69	20	*e*PKPbc	PKPbc	19 37 15.8	+0.4
T60A	Surry	148.69	20	P	PKPbc	19 37 15.7	+0.2
	baz=336							
U58A	Oxford	148.70	23	P	PKPbc	19 37 15.6	0.0
	baz=332,SNR=5.4							
152A	Waverly Hall	148.80	35	*e*PKPbc	PKPbc	19 37 15.9	0.0
152A	Waverly Hall	148.80	35	P	PKPbc	19 37 16.1	+0.2
	baz=318							
251A	Midway	148.82	36	P	PKPbc	19 37 16.2	+0.2
	baz=316							
GOGA	Godfrey	148.92	32	P	PKPbc	19 37 16.4	+0.2
	baz=321							
W56A	Indian Trail	148.94	27	P	PKPbc	19 37 16.4	+0.1
	baz=327							
Z53A	Monticello	148.97	33	P	PKPbc	19 37 16.5	+0.1
	baz=320							
Y54A	Tignall	148.98	31	P	PKPbc	19 37 16.5	+0.2
	baz=322,SNR=7.0							
V58A	Windy Hill, Pi	149.01	24	P	PKPbc	19 37 16.4	+0.1
	baz=330							
X55A	Gracelyn & Ava	149.01	29	P	PKPbc	19 37 16.3	-0.1
	baz=325							
U59A	Littleton	149.03	22	P	PKPbc	19 37 16.6	+0.2
	baz=333							
W57A	Gilead	149.19	26	*e*PKPbc	PKPbc	19 37 16.5	-0.3
W57A	Gilead	149.19	26	P	PKPbc	19 37 16.7	-0.1
	baz=328							
X56A	White Oak	149.27	28	P	PKPbc	19 37 17.0	-0.1
	baz=326							
Y55A	Saluda	149.33	30	P	PKPbc	19 37 17.2	0.0
	baz=324							
LVC	Limon Verde	149.37	171	PKPbc	PKiKP	19 37 20.0	+0.9
	comp=Z,21nm,0.6s,baz=226,slow=1.1,SNR=15							
LVC	Limon Verde	149.37	171	*e*PKPbc	PKiKP	19 37 19.6	+0.4
V59A	Middlesex	149.38	23	P	PKPbc	19 37 17.2	0.0
	baz=332							
Z54A	Sparta	149.39	32	P	PKPbc	19 37 17.5	+0.2
	baz=322							
PB04	IPOC Station P	149.43	169	*e*PKPbc	PKiKP	19 37 19.4	+0.4
155A	Kite	150.06	32	P	PKiKP	19 37 19.4	-0.3
	baz=322							
453A	Whigham	150.35	37	P	PKiKP	19 37 20.2	-0.2
	baz=317							
Z57A	Bowman	150.41	29	P	PKiKP	19 37 20.2	-0.2
	baz=325							
157A	Early Branch	150.77	30	P	PKiKP	19 37 21.4	+0.2
	baz=324							
Z58A	St. Stephen	150.80	28	P	PKiKP	19 37 21.4	+0.2
	baz=327							
PB01	IPOC Station P	150.81	170	*e*PKPbc	PKiKP	19 37 22.0	+0.2
158A	Hollywood	151.12	29	P	PKiKP	19 37 22.2	+0.3
	baz=326							
555A	McAlpin	151.68	36	P	PKiKP	19 37 23.1	0.0
	baz=318							
BDFB	Brasilia	151.70	214	PKPbc	PKiKP	19 37 24.4	+0.7
	comp=Z,21nm,0.5s,baz=155,slow=2.7,SNR=26							
BDFB	Brasilia	151.70	214	*e*PKPbc	PKiKP	19 37 24.4	+0.7
BDFB				*e*PKPbc	PKiKP	19 37 24.4	+0.7
PB11	IPOC Station P	152.03	169	*e*PKPbc	PKiKP	19 37 24.7	+0.3
GO01	Chusmiza	152.20	170	*e*PKPbc	PKiKP	19 37 25.9	+0.7
MNMC	Minye Minye	152.65	169	*e*PKPbc	PKiKP	19 37 26.3	+0.4
658A	Bunnell	153.19	35	P	PKPbc	19 37 25.9	-0.3
	baz=320							
LPAZ	La Paz	155.69	171	PKP	PKPdf	19 37 24.2	+1.1
	comp=Z,1.2nm,0.8s,baz=83,slow=3.6,SNR=4.8							
LPAZ				PKPab	PKPab	19 37 51.5	+0.9
	comp=Z,15nm,0.7s,baz=181,slow=2.7,SNR=29							
LPAZ	La Paz	155.69	171	*e*PKPdf	PKPdf	19 37 23.9	+0.7
LPAZ				*e*PKPab	PKPab	19 37 51.4	+0.8
SIV	San Ignacio	156.11	187	PKP	PKPdf	19 37 24.3	+1.4
	comp=Z,1.5nm,0.8s,baz=336,slow=1.7,SNR=7.7							
SIV				PKPab	PKPab	19 37 53.1	+1.5
	comp=Z,6.9nm,0.6s,baz=174,slow=4.5,SNR=21							

IDC ***17*** *19:37:33.6±1.1,24°.49N×121°.71E,h0km,mb3.7/5, mb1 3.7/6,mb1mx3.4/37,mbtmp3.6/6,ML3.3/1,MS3.1/3, Ms1 3.1/3,ms1mx2.6/43,Error ellipse: s-maj=39.5km s-min=18.4km az=68.0*

TAP ***17*** *19:37:34.1,24°.78N×122°.21E,h9km,ML4.0,C*

JMA ***17*** *19:37:35.1±0.1,24°.73N×122°.26E,h44km,M3.0*

ISC 17 19:37:32.4±1.2,24°.80N±0°.02×122°.31E±0°.02,h6km±8km, n130,d0°91/185,mb3.9/6,13C-11D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.29**	**213**	⇑P	**Pb**	**19 37 39.8**	**-0.2**
	baz=204						
EOS1				S	**Sb**	**19 37 44.1**	**-1.0**
	baz=204						
TWB1	**Santiao Chiao**	**0.36**	**307**	⇑*i*P	**Pb**	**19 37 40.8**	**-0.4**
	baz=319						
TWB1				*i* S	**Sb**	**19 37 45.1**	**-2.0**
	baz=319						
NTC	**Toucheng**	**0.44**	**278**	*e*P	**Pb**	**19 37 41.6**	**-0.9**
	baz=281						
NTC				*e*S	**Sg**	**19 37 47.0**	**+0.5**
	baz=281						
TWC	**Suao**	**0.45**	**246**	⇓*i*P	**Pg**	**19 37 41.4**	**+0.2**
	baz=249						
TWC				*e*S	**Sg**	**19 37 48.0**	**+0.8**
	baz=249						
TIPB	**Shuangxi**	**0.47**	**292**	⇑P	**Pb**	**19 37 42.8**	**-0.4**
	baz=297						
TIPB				S	**Sg**	**19 37 47.9**	**+0.2**
	baz=297						
ILA	**Ilan**	**0.51**	**267**	*e*P	**Pg**	**19 37 42.4**	**+0.2**
	baz=267						
NWF	**Wu-fen Shan**	**0.55**	**300**	*e*P	**Pb**	**19 37 44.6**	**0.0**
	baz=305						
NWF				*e*S	**Sb**	**19 37 52.3**	**-0.4**
	baz=305						
WFSB	**Wu-fen Shan**	**0.55**	**300**	⇑P	**Pb**	**19 37 44.6**	**+0.1**
	baz=297						
WFSB				*e*S	**Sb**	**19 37 52.4**	**-0.2**
	baz=297						
TWE	**Neicheng**	**0.58**	**263**	P	**Pb**	**19 37 44.0**	**-1.1**
	baz=254						
TWE				*e*S	**Sb**	**19 37 52.1**	**-1.5**
	baz=254						
NANB	**Nanao**	**0.62**	**234**	P	**Pg**	**19 37 44.6**	**+0.2**
	baz=231						
ENA	**Nanau**	**0.63**	**235**	P	**Pg**	**19 37 44.7**	**+0.1**
	baz=231						
JYNG	**Yonagunijimaku**	**0.68**	**120**	P	**Pn**	**19 37 48.3**	**-0.2**
JYNG				S	**Sn**	**19 37 59.2**	**-0.2**
TWA	**Mucha**	**0.68**	**286**	*e*P	**Pb**	**19 37 46.9**	**+0.1**
	baz=289						
TWA				S	**Sb**	**19 37 56.2**	**-0.2**
	baz=289						
ENTT	**Nioudou**	**0.69**	**257**	*e*P	**Pb**	**19 37 45.9**	**-1.0**
	baz=256						
YOJ	**Yonaguni jima**	**0.72**	**117**	⇑P	**Pn**	**19 37 49.0**	**-0.2**
	baz=114						
YOJ				*e*S	**Sn**	**19 38 00.3**	**-0.3**
	baz=114						
YOJ	**Yonaguni jima**	**0.72**	**117**	P	**Pn**	**19 37 49.0**	**-0.2**
YOJ				*e*S	**Sn**	**19 38 00.1**	**-0.5**
NHDH	**Xindian Distri**	**0.73**	**283**	*e*P	**Pn**	**19 37 48.4**	**-0.9**
	baz=276						
NHDH				*e*S	**Sb**	**19 37 57.5**	**-0.3**
	baz=276						
NWLT	**Wulai**	**0.73**	**269**	*e*P	**Pb**	**19 37 47.1**	**-0.4**
	baz=260						
NDT	**Datong Townshi**	**0.75**	**255**	*e*P	**Pb**	**19 37 47.2**	**-0.7**
	baz=255						
NDT				*e*S	**Sg**	**19 37 56.6**	**+0.1**
	baz=255						
YM01	**YM01**	**0.75**	**298**	⇑*i*P	**Pn**	**19 37 48.6**	**-1.0**
	baz=301						
YM01				*i* S	**Sn**	**19 37 59.5**	**-1.9**
	baz=301						
YM08	**YM08**	**0.76**	**301**	⇑P	**Pn**	**19 37 48.7**	**-1.0**
	baz=304						
YM08				S	**Sb**	**19 37 58.6**	**-0.1**
	baz=304						
TATO	**Taipei**	**0.76**	**284**	P	**Pn**	**19 37 48.5**	**-1.2**
	baz=279						
TATO				S	**Sb**	**19 37 58.3**	**-0.5**
	baz=279						
YM05	**YM05**	**0.77**	**299**	⇑P	**Pn**	**19 37 48.9**	**-0.9**
	baz=302						
YM05				S	**Sb**	**19 37 59.3**	**+0.4**
	baz=302						
YM10	**YM10**	**0.77**	**298**	*e*P	**Pn**	**19 37 48.7**	**-1.1**
	baz=301						
YM10				*e*S	**Sn**	**19 37 59.8**	**-1.9**
	baz=301						
YM04	**YM04**	**0.78**	**297**	⇑P	**Pn**	**19 37 49.2**	**-0.8**
	baz=300						
YM04				S	**Sb**	**19 37 59.8**	**+0.4**
	baz=300						
YM03	**YM03**	**0.79**	**299**	P	**Pn**	**19 37 49.3**	**-0.9**
	baz=301						
TWY	**Chenhua**	**0.80**	**307**	⇑*i*P	**Pn**	**19 37 49.8**	**-0.5**
	baz=310						
TWY				S	**Sn**	**19 38 01.0**	**-1.5**
	baz=310						
ANP	**Anpu**	**0.81**	**299**	*e*P	**Pn**	**19 37 49.6**	**-1.0**
	baz=301						
YHNB	**Yeheng**	**0.85**	**262**	*e*P	**Pb**	**19 37 49.1**	**-0.6**
	baz=256						
YHNB				*e*S	**Sg**	**19 37 59.4**	**-0.6**
	baz=256						
PCYT	**Pengchaiyu**	**0.86**	**346**	⇑*i*P	**Pn**	**19 37 50.8**	**-0.3**
	baz=349						
NTST	**Danshui**	**0.86**	**296**	*e*P	**Pn**	**19 37 51.2**	**+0.2**
	baz=298						
TWS1	**Kuangyinshan**	**0.86**	**291**	*e*P	**Pn**	**19 37 50.8**	**-0.3**
	baz=293						
TWS1				S	**Sn**	**19 38 03.2**	**-0.8**
	baz=293						
NSK	**Sanguang**	**0.87**	**262**	P	**Pb**	**19 37 49.4**	**-0.6**
	baz=256						
NSK				*e*S	**Sg**	**19 37 59.4**	**-1.1**
	baz=256						
NACB	**Ninganchiao**	**0.90**	**226**	⇓P	**Pg**	**19 37 49.6**	**0.0**
	baz=224						
NACB				S	**Sg**	**19 38 00.9**	**-0.3**
	baz=224						
NNSB	**Datong**	**0.92**	**247**	P	**Pg**	**19 37 50.0**	**-0.1**
	baz=235						
NNSB				S	**Sg**	**19 38 01.9**	**0.0**
	baz=235						
NNS	**Nan Shan**	**0.92**	**248**	P	**Pb**	**19 37 50.9**	**+0.1**
	baz=252						
NNS				S	**Sb**	**19 38 02.7**	**-0.6**
	baz=252						
ETLH	**Xiulin Townshi**	**0.95**	**232**	*e*P	**Pb**	**19 37 50.8**	**-0.6**
	baz=230						
ETLH				*e*S	**Sb**	**19 38 03.3**	**-0.9**
	baz=230						
WLTB	**Daxi**	**0.96**	**274**	*e*P	**Pn**	**19 37 52.0**	**-0.4**
	baz=274						
WLTB				*e*S	**Sn**	**19 38 04.7**	**-1.7**
	baz=274						
TWD	**Chiawan**	**0.96**	**222**	*e*P	**Pb**	**19 37 51.3**	**-0.2**
	baz=228						
TWD				*e*S	**Sn**	**19 38 05.2**	**-1.2**
	baz=228						
NCU	**National Centr**	**1.03**	**280**	*e*P	**Pn**	**19 37 55.5**	**+2.1**
	baz=281						
NCU				S	**Sn**	**19 38 08.4**	**+0.2**
	baz=281						
NCUH	**Zhongli**	**1.03**	**280**	*e*P	**Pn**	**19 37 54.3**	**+0.8**
	baz=281						
NCUH				*e*S	**Sn**	**19 38 08.5**	**+0.2**
	baz=281						
HWA	**Hwalien**	**1.03**	**218**	*e*P	**Pn**	**19 37 54.0**	**+0.5**
	baz=224						
ENLB	**Shoufeng**	**1.09**	**216**	P	**Pn**	**19 37 54.5**	**+0.2**
	baz=223						
ENLB				*e*S	**Sn**	**19 38 10.6**	**+0.8**
	baz=223						
WHF	**Hehuan Shan**	**1.15**	**236**	⇑P	**Pn**	**19 37 54.9**	**-0.5**
	baz=235						
WHF				S	**Sg**	**19 38 09.0**	**-0.4**
	baz=235						
TWT	**Tachien**	**1.16**	**243**	P	**Pn**	**19 37 55.5**	**+0.1**
	baz=234						
TDCB	**Techi**	**1.18**	**243**	*e*P	**Pn**	**19 37 55.1**	**-0.4**
	baz=235						
TDCB				*e*S	**Sg**	**19 38 08.9**	**-1.4**
	baz=235						
LIOB	**Emei**	**1.18**	**263**	⇓*e*P	**Pn**	**19 37 56.0**	**+0.5**
	baz=251						
LIOB				*e*S	**Sn**	**19 38 12.4**	**+0.4**
	baz=251						
NSTT	**Nanjuang**	**1.20**	**262**	P	**Pn**	**19 37 56.7**	**+0.9**
	baz=251						
NSTT				*e*S	**Sn**	**19 38 13.0**	**+0.7**
	baz=251						
SBCB	**Hsinchu**	**1.20**	**270**	*e*P	**Pn**	**19 37 56.9**	**+1.2**
	baz=290						
SBCB				*e*S	**Sn**	**19 38 12.8**	**+0.5**
	baz=290						
HSN	**Hsinchu**	**1.21**	**271**	*e*P	**Pn**	**19 37 57.2**	**+1.2**
	baz=286						
ESL	**Shilin**	**1.26**	**219**	P	**Pg**	**19 37 56.9**	**+0.3**
	baz=227						
CHGB	**Renai**	**1.26**	**235**	⇑P	**Pn**	**19 37 57.1**	**+0.2**
	baz=225						
CHGB				S	**Sb**	**19 38 13.1**	**-0.3**
	baz=225						
OWD	**Renai**	**1.33**	**231**	⇓P	**Pb**	**19 37 57.4**	**-0.4**
	baz=223						
OWD				S	**Sb**	**19 38 14.7**	**-0.5**
	baz=223						
WHP	**Taichung City**	**1.34**	**248**	*e*P	**Pg**	**19 37 58.2**	**+0.1**
	baz=248						
WHP				*e*S	**Sg**	**19 38 15.1**	**-0.5**
	baz=248						
IRIF	**Iriomote-Funau**	**1.38**	**109**	P	**Pn**	**19 37 58.4**	**+0.2**
EGFH	**Guangfu**	**1.38**	**216**	*e*P	**Pg**	**19 37 58.9**	**0.0**
	baz=216						
NMLH	**Miaoli**	**1.40**	**260**	*e*P	**Pg**	**19 38 01.0**	**+1.7**
	baz=277						
NSY	**Sanyi**	**1.46**	**255**	*e*P	**Pg**	**19 38 01.9**	**+1.6**
	baz=255						
NSY				*e*S	**Sg**	**19 38 21.3**	**+2.1**
	baz=255						
TWQ1	**Liyutan**	**1.46**	**253**	*e*P	**Pg**	**19 38 01.6**	**+1.1**
	baz=245						
TWQ1				*e*S	**Sg**	**19 38 19.8**	**+0.3**
	baz=245						
DPDB	**Guoxing**	**1.47**	**239**	⇓P	**Pg**	**19 38 00.2**	**-0.4**
	baz=238						
VWDT	**VWDT**	**1.48**	**226**	⇓P	**Pg**	**19 38 00.9**	**0.0**
	baz=226						
VWDT				*e*S	**Sg**	**19 38 20.3**	**+0.1**
	baz=226						
PTSB	**Yuanli**	**1.50**	**257**	*e*P	**Pg**	**19 38 02.2**	**+1.1**
	baz=274						
HGSD	**Ruisui**	**1.53**	**212**	*e*P	**Pb**	**19 38 00.7**	**-0.4**
	baz=199						
HATJ	**Hateruma jima**	**1.55**	**118**	P	**Pb**	**19 38 01.5**	**-0.1**
EHY	**Hungye**	**1.57**	**215**	*e*P	**Pn**	**19 38 00.6**	**-0.2**
	baz=215						
SMLT	**Sun Moon Lake**	**1.57**	**235**	P	**Pg**	**19 38 02.3**	**-0.3**
	baz=234						
WDJ	**Dajia District**	**1.58**	**254**	*e*P	**Pg**	**19 38 04.1**	**+1.4**
	baz=272						
SSLB	**Suanglung**	**1.59**	**231**	*e*P	**Pb**	**19 38 02.2**	**0.0**
	baz=240						
TYC	**Yuchr**	**1.59**	**236**	*e*P	**Pg**	**19 38 02.5**	**-0.4**
	baz=236						
TCU	**Taichung**	**1.62**	**247**	*e*P	**Pg**	**19 38 04.5**	**+1.0**
	baz=237						
JKRS	**Kuro-shima**	**1.65**	**109**	P	**Pb**	**19 38 02.8**	**-0.4**
YULB	**Yu-li**	**1.67**	**214**	*e*P	**Pn**	**19 38 02.0**	**-0.3**
	baz=217						
TWF1	**Yuli**	**1.71**	**213**	*e*P	**Pn**	**19 38 03.0**	**+0.3**
	baz=217						
WHYT	**Xinyi Township**	**1.72**	**231**	*e*P	**Pg**	**19 38 05.2**	**-0.2**
	baz=230						
JIJ	**Ishigaki jima**	**1.73**	**104**	P	**Pb**	**19 38 04.1**	**-0.5**
JIJ				*e*S	**Sn**	**19 38 24.8**	**-0.6**
WJS	**Zhushan**	**1.73**	**236**	*e*P	**Pg**	**19 38 05.7**	**0.0**
	baz=225						
WNT	**Mingjian**	**1.74**	**239**	*e*P	**Pg**	**19 38 05.8**	**0.0**
	baz=239						
WNT				*e*S	**Sg**	**19 38 30.6**	**+2.3**
	baz=239						
YUS	**Yu-Shan**	**1.79**	**224**	⇓P	**Pb**	**19 38 05.6**	**-0.4**
	baz=225						
YUS				*e*S	**Sb**	**19 38 29.1**	**+0.2**
	baz=225						
JISG	**Ishigakijimahi**	**1.84**	**96**	P	**Pb**	**19 38 05.9**	**-0.5**
ALS	**Alishan**	**1.87**	**227**	⇓P	**Pb**	**19 38 07.5**	**+0.2**
	baz=228						
ALS				S	**Sg**	**19 38 33.5**	**+0.8**
	baz=228						
CHKT	**Chengkung**	**1.89**	**207**	*e*P	**Pn**	**19 38 05.5**	**+0.2**
	baz=196						
CHN5	**Tsauling**	**1.91**	**232**	⇓*i*P	**Pg**	**19 38 08.5**	**-0.4**
	baz=232						
CHN5				S	**Sg**	**19 38 34.6**	**+0.9**
	baz=232						
WGK	**Gukeng**	**1.94**	**236**	P	**Pb**	**19 38 08.4**	**+0.3**
	baz=235						
WDLH	**Douliu**	**1.95**	**236**	*e*P	**Pb**	**19 38 08.8**	**+0.4**
	baz=235						
ELDTW	**Lidau**	**1.99**	**217**	*e*P	**Pn**	**19 38 07.5**	**+0.8**
	baz=207						
RLNB	**Erlin**	**1.99**	**244**	*e*P	**Pb**	**19 38 09.2**	**+0.1**
	baz=243						
CHN2	**Minshiung**	**2.09**	**233**	*e*P	**Pb**	**19 38 10.5**	**-0.3**
	baz=234						
CHN2				*e*S	**Sg**	**19 38 40.1**	**+0.5**
	baz=234						
CHN4	**Tsaushan**	**2.12**	**228**	⇓P	**Pb**	**19 38 11.4**	**0.0**
	baz=229						
CHN4				S	**Sg**	**19 38 39.2**	**-1.5**
	baz=229						
TPUB	**Ta-pu**	**2.13**	**226**	⇓P	**Pb**	**19 38 11.5**	**0.0**
	baz=228						
TPUB				S	**Sb**	**19 38 39.1**	**+0.8**
	baz=228						
CHY	**Chiayi**	**2.15**	**233**	*e*P	**Pb**	**19 38 11.7**	**-0.1**
	baz=248						
STYT	**Tauyuan**	**2.15**	**221**	*e*P	**Pn**	**19 38 10.2**	**+1.2**
	baz=223						
STYT				*e*S	**Sg**	**19 38 40.5**	**-1.2**
	baz=223						
WSF	**Szhu**	**2.22**	**239**	*e*P	**Pb**	**19 38 11.2**	**-1.8**
	baz=239						
TWK	**Hsinying**	**2.25**	**228**	*e*P	**Pb**	**19 38 12.8**	**-0.7**
	baz=228						
TWK				*e*S	**Sg**	**19 38 43.1**	**-1.7**
	baz=228						
WLGB	**Puzi**	**2.25**	**235**	*e*P	**Pb**	**19 38 11.9**	**-1.6**
	baz=235						
TWGBT	**Beinan**	**2.27**	**210**	*e*P	**Pn**	**19 38 10.1**	**-0.3**
	baz=201						
TWG	**Pinlang**	**2.27**	**210**	*e*P	**Pn**	**19 38 11.7**	**+1.3**
	baz=201						
SNST	**Tainan City**	**2.28**	**227**	*e*P	**Pb**	**19 38 14.0**	**0.0**
	baz=227						
CHN1	**Nanshi**	**2.28**	**226**	P	**Pb**	**19 38 13.4**	**-0.7**
	baz=227						
CHN1				S	**Sb**	**19 38 43.3**	**+0.7**
	baz=227						
SGST	**Jiashian**	**2.32**	**223**	*e*P	**Pb**	**19 38 14.0**	**-0.8**
	baz=225						
SGST				*e*S	**Sg**	**19 38 45.2**	**-1.8**
	baz=225						
SLGT	**Liugui**	**2.35**	**221**	*e*P	**Pb**	**19 38 14.3**	**-0.9**
	baz=223						
CHN8	**Yiju**	**2.40**	**233**	*e*P	**Pb**	**19 38 16.2**	**+0.2**
	baz=234						
PTTC	**Pingtan**	**2.40**	**288**	*e*P	**Pn**	**19 38 11.9**	**-0.4**
	baz=286						
ECL	**Taimali**	**2.51**	**210**	*e*P	**Pb**	**19 38 16.5**	**-1.4**
	baz=204						
MATB	**Ma-tsu**	**2.52**	**303**	*e*P	**Pn**	**19 38 13.8**	**-0.2**
	baz=302						
SSD	**Sandimen**	**2.55**	**217**	*e*P	**Pb**	**19 38 17.8**	**-0.8**
	baz=208						
MASBT	**Mashibuluo**	**2.66**	**216**	*e*P	**Pn**	**19 38 17.3**	**+1.4**
	baz=207						
JMJ	**Miyako jima 2**	**

baz=203
KNMB Chin-men Tao 3.58 266 *e*P **Pn 19 38 28.8 +0.3**
baz=260
AXDP Jialang 3.94 272 *e*P **Pn 19 38 33.8 +0.4**
baz=267
ZPLA Ao Xicun 4.24 259 *e*P **Pn 19 38 38.2 +0.6**
baz=253
KSRS Korea Array 13.50 19 Pn **P 19 40 53.7 -0.2**
0.1nm,0.3s,baz=198,slow=11,SNR=2.9
KSRS LR LR 19 46 38.1
comp=Z,66nm,20.6s,baz=164,slow=39
DAV Davao City (W) 17.90 169 LR LR 19 48 58.7
comp=Z,55nm,18.6s,baz=11,slow=39
CMAR Chiang Mai Arr 22.60 258 P **P 19 42 30.2 -3.7**
0.2nm,0.4s,baz=64,slow=8.1,SNR=2.6
SONM Songino Array 26.22 335 P **P 19 43 10.4 +2.2**
3.6nm,0.9s,baz=154,slow=10,SNR=13
SONM LR LR 19 53 48.3
comp=Z,68nm,18.3s,baz=118,slow=37
MKAR Makanchi Array 38.62 315 P **P 19 44 56.1 -0.4**
0.2nm,0.5s,baz=104,slow=12,SNR=2.9
ZALV Zalesovo Beam 40.30 326 P **P 19 45 12.8 +2.5**
0.5nm,0.2s,baz=138,slow=14,SNR=2.3
WRA Warramunga Arr 45.98 164 P **P 19 45 57.2 +0.5**
7.9nm,0.8s,baz=341,slow=7.5,SNR=42
ASAR Alice Springs 49.47 166 P **P 19 46 24.8 +1.1**
2.0nm,0.8s,baz=342,slow=8.6,SNR=26

IDC 17 19:41:56.4±5.4, 7°.47S×150°.12E, h0km, mb3.1/1, mb1 3.6/2, mb1mx3.2/26, mbtmp3.4/2, ML3.1/1, Error ellipse: s-maj=259.7km s-min=48.5km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.69**	**229**	P	P	19 46 26.9	-0.5
0.1nm,0.3s,baz=52,slow=14,SNR=2.6							
ASAR	**Alice Springs**	**22.39**	**222**	P	P	19 46 56.9	+0.2
0.7nm,0.7s,baz=56,slow=9.1,SNR=9.5							
TORD	**Torodi Ar. Bea**	**148.45**	**283**	PKPbc	PKPbc	20 01 45.7	-0.5
0.5nm,0.4s,baz=90,slow=4.9,SNR=3.4							

IDC 17 19:48:42.3±2.2, 2°.76S×134°.13E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.5/22, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=70.9km s-min=23.7km az=65.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.43**	**303**	Pn	Pn	19 49 37.9	+0.9
1.9nm,0.3s,baz=244,slow=21,SNR=31							
SIJI				Sn	Sn	19 50 18.6	+0.2
2.3nm,0.3s,baz=333,slow=22,SNR=5.8							
WRA	**Warramunga Arr**	**17.08**	**179**	P	Pn	19 52 42.5	-0.2
0.1nm,0.3s,baz=356,slow=12,SNR=6.6							
ASAR	**Alice Springs**	**20.79**	**181**	P	P	19 53 25.2	+0.1
2.7nm,0.7s,baz=6.0,slow=11,SNR=27							
MKAR	**Makanchi Array**	**67.09**	**324**	P	P	19 59 37.5	-0.1
0.4nm,0.3s,baz=116,slow=8.1,SNR=9.5							

IDC 17 19:59:36.2±2.4, 6°.02S×153°.34E, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.6/30, mbtmp3.9/4, ML2.1/1, Error ellipse: s-maj=155.0km s-min=28.1km az=132.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.99**	**241**	Pn	Pn	20 01 20.9	+0.9
1.9nm,0.3s,baz=82,slow=6.0,SNR=4.0							
PMG				Sn	Sn	20 02 36.4	-3.9
3.4nm,0.3s,baz=288,slow=20,SNR=5.7							
WRA	**Warramunga Arr**	**23.08**	**231**	P	P	20 04 42.9	-0.9
3.6nm,0.7s,baz=60,slow=11,SNR=13							
ASAR	**Alice Springs**	**25.65**	**225**	P	P	20 05 08.3	+0.4
1.2nm,0.4s,baz=58,slow=9.2,SNR=25							
ILAR	**Eielson Array**	**83.08**	**22**	P	P	20 12 03.5	0.0
0.5nm,0.7s,baz=238,slow=5.2,SNR=4.8							

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*IDC **17** 20:08:38.8±0.5, 10°.52N×141°.70E, h0km, mb4.2/18, mb1 4.3/21, mb1mx4.1/44, mbtmp4.2/21, ML4.3/3, MS3.3/10, Ms1 3.3/10, ms1mx3.0/29, Error ellipse: s-maj=20.3km s-min=11.9km az=85.0*
*ISCJB **17** 20:08:41.5±0.3, 10°.50N±0°.04×141°.70E±0°.07, h33km, mb4.3/26, MS3.4/8, Error ellipse: s-maj=9.7km s-min=5.9km az=15.7*
*NEIC **17** 20:08:43.6±1.6, 10°.52N×141°.65E, h34km±5km, mb4.7/11, Error ellipse: s-maj=24.1km s-min=16.4km az=101.0*
ISC 17 20:08:43.9±0.5, 10°.51N±0°.06×141°.70E±0°.09, h35km, n51, σ0=84/45, mb4.3/26, MS3.4/8, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.35**	**45**	Pn	**Pn**	**20 09 47.5**	**0.0**
46nm,0.3s,baz=236,slow=3.9,SNR=24							
GUMO				Sn	**Sn**	**20 10 36.0**	**-1.0**
56nm,0.3s,baz=140,slow=22,SNR=6.1							
JAY	**Jayapura**	**12.98**	**184**	Pn	**Pn**	**20 11 45.9**	**-0.1**
2.6nm,0.3s,baz=352,slow=7.8,SNR=13							
JAY				LR	LR	20 15 38.3	
comp=Z,109nm,21.3s,baz=335,slow=32							
SIJI	**Sorong**	**15.35**	**223**	Pn	**Pn**	**20 12 18.9**	**+0.8**
0.2nm,0.3s,baz=72,slow=20,SNR=1.9							
SIJI				LR	LR	20 17 36.7	
comp=Z,65nm,18.7s,baz=1.0,slow=35							
PMG	**Port Moresby**	**20.52**	**164**	P	**P**	**20 13 18.9**	**-0.3**
14nm,0.9s,baz=348,slow=4.8,SNR=3.3							
JOW	**Kunigami**	**20.59**	**324**	P	**P**	**20 13 19.7**	**-0.3**
0.4nm,0.3s,baz=141,slow=19,SNR=4.9							
LUWI	**Luwuk**	**22.06**	**240**	*e*P	**P**	**20 13 34.0**	**-1.8**
58nm,0.7s							
H11S3	**WAKE ISLAND Hy**	**25.43**	**69**	T	T	20 41 15.6	
baz=314,slow=74,SNR=38							
H11S2	**WAKE ISLAND Hy**	**25.45**	**69**	T	T	20 41 16.0	
baz=254,slow=74,SNR=35							
MJAR	**Matsushiro Arr**	**26.11**	**354**	P	**P**	**20 14 13.8**	**-0.7**
1.4nm,0.7s,baz=167,slow=10,SNR=5.6							
MAJO	**Matsushiro**	**26.11**	**354**	*e*P	**P**	**20 14 13.8**	**-0.7**
HNR	**Honiara**	**26.87**	**137**	LR	LR	20 23 32.4	
comp=Z,46nm,18.8s,baz=325,slow=33							
BATI	**Baumata**	**27.31**	**222**	P	**P**	**20 14 27.2**	**+1.7**
9.0nm,0.4s,baz=119,slow=4.1,SNR=5.8							
KSRS	**Korea Array**	**29.56**	**337**	PcP	**PcP**	**20 17 50.2**	**+0.4**
0.6nm,0.6s,baz=169,slow=1.3,SNR=4.3							
WB2	**Warramunga Arr**	**31.12**	**193**	*e*P	**P**	**20 14 58.3**	**-0.9**
8.3nm,0.9s							
WR1	**Warramunga Arr**	**31.12**	**193**	*e*P	**P**	**20 14 57.8**	**-1.5**
WRA	**Warramunga Arr**	**31.12**	**193**	P	**P**	**20 14 57.8**	**-1.5**
5.5nm,0.8s,baz=6.2,slow=10.0,SNR=18							
AS31	**Alice Springs**	**34.81**	**193**	*e*P	**P**	**20 15 30.9**	**-0.7**
0.9nm,0.6s							
ASAR	**Alice Springs**	**34.81**	**193**	P	**P**	**20 15 30.4**	**-1.2**
1.9nm,0.7s,baz=19,slow=12,SNR=32							
ASAR				PcP	**PcP**	**20 18 05.0**	**+0.4**
1.0nm,0.7s,baz=29,slow=2.6,SNR=8.8							
KLR	**Kul'dur**	**39.48**	**350**	P	**P**	**20 16 09.8**	**-1.0**
1.4nm,0.5s,baz=158,slow=3.7,SNR=6.4							
DZM	**Mont Dzumac**	**40.47**	**143**	P	**P**	**20 16 19.9**	**+0.4**
4.9nm,1.0s,baz=203,slow=15,SNR=5.3							
CMAR	**Chiang Mai Arr**	**42.06**	**286**	P	**P**	**20 16 33.5**	**+0.8**
2.5nm,0.7s,baz=90,slow=6.9,SNR=15							
STKA	**Stephens Creek**	**42.15**	**180**	P	**P**	**20 16 32.0**	**-1.0**
1.7nm,1.0s,baz=350,slow=7.1,SNR=3.6							
STKA				LR	LR	20 35 08.9	
comp=Z,57nm,18.3s,baz=26,slow=38							
PETK	**Petropavlovsk-**	**44.39**	**14**	LR	LR	20 35 12.3	
comp=Z,18nm,18.8s,baz=211,slow=36							
SONA0	**Songino Array**	**47.57**	**328**	*e*P	**P**	**20 17 16.1**	**-0.1**
SONM	**Songino Array**	**47.57**	**328**	P	**P**	**20 17 16.1**	**-0.1**
1.2nm,0.8s,baz=145,slow=5.2,SNR=7.0							
YAK	**Yakutsk**	**52.17**	**353**	*e*P	**P**	**20 17 50.6**	**-0.2**
9.8nm,0.7s							
TIXI	**Tiksi**	**61.60**	**355**	*e*P	**P**	**20 18 58.1**	**+0.7**
3.5nm,1.1s							
MK31	**Makanchi Array**	**61.61**	**318**	*e*P	**P**	**20 18 57.8**	**-0.2**
2.6nm,0.8s							
MK32	**Makanchi Array**	**61.61**	**318**	*e*P	**P**	**20 18 57.9**	**-0.1**
MKAR	**Makanchi Array**	**61.61**	**318**	P	**P**	**20 18 57.9**	**-0.1**
2.8nm,0.8s,baz=94,slow=8.3,SNR=16							
ZALV	**Zalesovo Beam**	**62.37**	**326**	P	**P**	**20 19 02.1**	**-0.8**
1.9nm,0.5s,baz=104,slow=6.5,SNR=8.7							
ZAA1	**Zalesovo Array**	**62.37**	**326**	*e*P	**P**	**20 19 02.1**	**-0.8**
KURK	**Kurchatov**	**64.98**	**321**	*e*P	**P**	**20 19 19.9**	**-0.3**
12nm,0.7s							
BRVK	**Borovoye**	**70.51**	**323**	*e*P	**P**	**20 19 55.1**	**+0.1**
8.2nm,0.6s							
ILAR	**Eielson Array**	**72.65**	**25**	P	**P**	**20 20 07.2**	**-0.5**
0.7nm,0.6s,baz=249,slow=6.0,SNR=8.7							
ABKAR	**Akbulak array**	**76.75**	**318**	*e*P	**P**	**20 20 31.3**	**-0.4**
1.9nm,1.0s							
ARU	**Arti**	**77.53**	**326**	P	**P**	**20 20 37.3**	**+1.3**
0.6nm,0.5s,baz=16,slow=16,SNR=4.7							
ARU	**Arti**	**77.53**	**326**	*e*P	**P**	**20 20 35.6**	**-0.4**
15nm,1.8s							
AKTO	**Aktyubinsk**	**77.97**	**319**	LR	LR	20 56 00.2	
comp=Z,16nm,19.9s,baz=98,slow=36							
YKA	**Yellowknife Ar**	**86.99**	**27**	P	**P**	**20 21 26.2**	**+0.9**
0.8nm,0.6s,baz=290,slow=5.1,SNR=7.0							
YKB5	**Yellowknife Ar**	**86.99**	**27**	*e*P	**P**	**20 21 26.2**	**+0.9**
VNDA	**Vanda**	**88.63**	**176**	P	**P**	**20 21 33.0**	**+0.3**
0.8nm,0.9s,baz=323,slow=4.8,SNR=4.3							
ARCES	**ARCESS Array B**	**89.03**	**342**	LR	LR	21 03 24.7	
comp=Z,23nm,22.0s,baz=88,slow=37							
NV01	**Mina Array Sit**	**91.25**	**51**	*e*P	**P**	**20 21 47.5**	**+1.2**
NVAR	**Mina Array Bea**	**91.25**	**51**	P	**P**	**20 21 47.5**	**+1.2**
1.8nm,0.9s,baz=269,slow=5.2,SNR=8.9							
FIA0	**FINESS Array S**	**92.60**	**334**	*e*P	**P**	**20 21 52.0**	**+0.4**
FINES	**FINESS Array B**	**92.60**	**334**	P	**P**	**20 21 52.0**	**+0.4**
1.5nm,0.7s,baz=61,slow=5.3,SNR=6.1							
FINES				LR	LR	21 03 54.3	
comp=Z,11nm,21.1s,baz=166,slow=36							
AKASG	**Malin Array Be**	**95.69**	**324**	LR	LR	21 09 14.0	
comp=Z,21nm,18.4s,baz=270,slow=38							
NOA	**NORSAR Array B**	**98.77**	**338**	LR	LR	21 09 52.0	
comp=Z,11nm,18.1s,baz=95,slow=37							
LPAZ	**La Paz**	**150.44**	**104**	PKPbc	**PKiKP**	**20 28 34.8**	**+0.5**
3.9nm,0.6s,baz=289,slow=2.2,SNR=17							
LPAZ	**La Paz**	**150.44**	**104**	*e*PKPbc	**PKiKP**	**20 28 35.0**	**+0.7**

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*IDC **17** 20:13:02.9±1.1, 35°.55N×27°.71E, h0km, mb3.6/8, mb1 3.6/14, mb1mx3.5/43, mbtmp3.5/14, ML3.4/6, MS2.8/2, Ms1 2.8/2, ms1mx2.4/31, Error ellipse: s-maj=21.9km s-min=16.1km az=170.0*
*ISK **17** 20:13:06.6, 35°.63N×27°.66E, h8km, ML3.6/16*
*ATH **17** 20:13:06.7, 35°.63N×27°.68E, h25km±1km, ML3.4/9, Error ellipse: s-maj=2.8km s-min=0.9km az=332.0*
*THE **17** 20:13:07.6, 35°.67N×27°.65E, h2km±1km, ML3.5/4, Error ellipse: s-maj=3.6km s-min=0.7km az=144.0*
*ISCJB **17** 20:13:08.0±0.7, 35°.61N±0°.04×27°.67E±0°.03, h25km±5km, mb3.4/8, MS2.7/2, Error ellipse: s-maj=6.9km s-min=3.2km az=156.0*
*DDA **17** 20:13:38.9, 35°.71N×27°.78E, h66km, ML3.5*
ISC 17 20:13:06.6±1.1, 35°.60N±0°.04×27°.69E±0°.02, h18km±6km, n96, σ1=46/114, mb3.6/8, 5C-3D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.44**	**264**	PG	**Pg**	**20 13 15.6**	**0.0**
KARP				SG	**Sg**	**20 13 21.5**	**-0.1**
KARP	**Karpathos**	**0.44**	**264**	P	**Pg**	**20 13 15.6**	**0.0**
KARP				S	**Sb**	**20 13 22.4**	**+0.3**
5μm,0.6s							
KARP	**Karpathos**	**0.44**	**264**	P	**Pg**	**20 13 15.5**	**0.0**
KARP				S	**Sb**	**20 13 22.6**	**+0.5**
KARP				AML	AML	20 13 24.3	
comp=E,10488μm,0.5s							
KARP				AML	AML	20 13 26.7	
comp=N,10596μm,0.5s							
ARG	**Arkhangelos**	**0.71**	**29**	PG	**Pg**	**20 13 20.3**	**-0.3**
ARG	**Arkhangelos**	**0.71**	**29**	P	**Pg**	**20 13 20.4**	**-0.2**
ARG				S	**Sb**	**20 13 30.9**	**+1.0**
comp=N,3μm,0.2s							
ARG	**Arkhangelos**	**0.71**	**29**	P	**Pg**	**20 13 20.2**	**-0.3**
ARG				S	**Sb**	**20 13 30.5**	**+0.6**
ARG				AML	AML	20 13 31.8	
comp=N,4352μm,0.2s							
ARG				AML	AML	20 13 32.3	
comp=E,8871μm,0.2s							
DAT	**Datca**	**1.13**	**355**	*i* P	**Pn**	**20 13 28.2**	**+0.5**
DAT				*i* S	**Sn**	**20 13 45.0**	**+2.1**
DAT				IAML_P			
comp=Z,5μm,0.2s							
DATC	**Datca-Mugla**	**1.16**	**359**	PN	**Pb**	**20 13 28.5**	**+0.4**
MRSB	**Marmaris-Mugla**	**1.19**	**20**	PN	**Pb**	**20 13 29.1**	**+0.5**
ZKR	**Zakros**	**1.30**	**249**	PN	**Pn**	**20 13 30.7**	**+0.8**
ZKR	**Zakros**	**1.30**	**249**	P	**Pn**	**20 13 30.9**	**+1.0**
ZKR				S	**Sn**	**20 13 48.8**	**+2.0**
comp=Z,2μm,0.7s							
ZKR	**Zakros**	**1.30**	**249**	P	**Pn**	**20 13 30.8**	**+1.0**
ZKR				S	**Sg**	**20 13 48.5**	**-0.1**
ZKR				AML	AML	20 13 56.9	
comp=E,6383μm,0.8s							
ZKR				AML	AML	20 13 58.0	
comp=N,2898μm,0.6s							
STIA	**Sitia Lasithi**	**1.37**	**254**	P	**Pn**	**20 13 31.8**	**+1.0**
DALY	**Dalyan (Mula)**	**1.44**	**32**	PN	**Pn**	**20 13 33.1**	**+1.2**
DALY	**Dalyan (Mula)**	**1.44**	**32**	*i* P	**Pg**	**20 13 33.9**	**-0.5**
TURN	**Turunc**	**1.47**	**30**	PN	**Pn**	**20 13 30.2**	**-2.0**
TURN	**Turunc**	**1.47**	**30**	*i* P	**Pn**	**20 13 30.5**	**-1.7**
TURN				*i* S	**Sn**	**20 13 47.6**	**-3.4**
BDRM	**Kayabasi**	**1.48**	**352**	*i* P	**Pn**	**20 13 33.2**	**+0.8**
BDRM				*i* S	**Sn**	**20 13 52.2**	**+0.9**
BODT	**Bodrum**	**1.50**	**348**	PN	**Pn**	**20 13 33.4**	**+0.8**
BODT	**Bodrum**	**1.50**	**348**	P	**Pn**	**20 13 33.3**	**+0.7**
FETY	**Fethiye**	**1.53**	**47**	PN	**Pg**	**20 13 35.7**	**-0.4**
FETY	**Fethiye**	**1.53**	**47**	P	**Pb**	**20 13 35.1**	**+0.6**
FETY				S	**Sg**	**20 13 55.0**	**-1.0**
FETY	**Fethiye**	**1.53**	**47**	*i* P	**Pg**	**20 13 35.6**	**-0.4**
FETY				IAML_P			
comp=Z,11μm,0.3s							
YER	**Yerkesik**	**1.61**	**17**	PN	**Pb**	**20 13 36.4**	**+0.6**
KSL	**Kastellorizon**	**1.63**	**70**	P	**Pn**	**20 13 36.0**	**+1.5**
KSL				S	**Sb**	**20 13 57.4**	**+1.0**
AKAS	**Kas**	**1.68**	**67**	PN	**Pn**	**20 13 36.6**	**+1.4**
AKAS	**Kas**	**1.68**	**67**	*i* P	**Pn**	**20 13 37.4**	**+0.4**
AKAS				IAML_P			
comp=Z,2μm,0.2s							
NPS	**Neapolis**	**1.73**	**260**	P	**Pn**	**20 13 37.7**	**+1.8**
NPS				S	**Sn**	**20 13 58.9**	**+1.4**
comp=Z,3μm,0.6s							
NPS	**Neapolis**	**1.73**	**260**	P	**Pb**	**20 13 38.1**	**+0.2**
NPS				S	**Sb**	**20 14 00.1**	**+0.7**
NPS				AML	AML	20 14 07.2	
comp=N,3441μm,0.7s							
NPS				AML	AML	20 14 10.0	
comp=E,2734μm,0.6s							
ANAF	**Anafi Island**	**1.73**	**297**	P	**Pn**	**20 13 37.0**	**+1.1**
ANAF				S	**Sn**	**20 13 58.0**	**+0.4**
ANAF	**Anafi Island**	**1.73**	**297**	P	**Pn**	**20 13 37.0**	**+1.1**
ANAF				AML	AML	20 13 58.5	
comp=N,5719μm,0.3s							
ANAF				AML	AML	20 13 59.3	
comp=E,8331μm,0.4s							
LAST	**Lasithi**	**1.86**	**257**	P	**Pn**	**20 13 39.6**	**+1.9**
LAST	**Lasithi**	**1.86**	**257**	P	**Pn**	**20 13 39.6**	**+1.9**
LAST				S	**Sn**	**20 14 02.9**	**+2.1**
LAST				AML	AML	20 14 18.2	
comp=N,1618μm,0.6s							
LAST				AML	AML	20 14 23.2	
comp=E,1404μm,1.0s							
AMGA	**Amorgos Island**	**1.91**	**311**	P	**Pn**	**20 13 38.9**	**+0.7**
AMGA				AML	AML	20 14 09.7	
comp=E,1435μm,0.5s							
AMGA				AML	AML	20 14 13.3	
comp=N,1194μm,0.4s							
SANT	**Santorini**	**1.97**	**294**	PN	**Pn**	**20 13 40.7**	**+1.5**
SANT	**Santorini**	**1.97**	**294**	⇑*i*P	**Pn**	**20 13 40.4**	**+1.2**
SANT	**Santorini**	**1.97**	**294**	S	**Sn**	**20 14 03.3**	**-0.2**
SNT2	**Vlychada, Sant**	**1.98**	**293**	P	**Pn**	**20 13 40.8**	**+1.6**
THR6	**Thira Island,**	**2.01**	**293**	P	**Pn**	**20 13 41.0**	**+1.3**
THR6	**Thira Island,**	**2.01**	**293**	P	**Pn**	**20 13 41.0**	**+1.3**
SAP1	**Santorini-Akro**	**2.01**	**293**	P	**Pn**	**20 13 41.0**	**+1.3**
THR7	**Fira-Santorini**	**2.01**	**295**	P	**Pn**	**20 13 41.1**	**+1.4**
THR7	**Fira-Santorini**	**2.01**	**295**	P	**Pn**	**20 13 41.1**	**+1.4**
THR2	**Thira Island,**	**2.02**	**296**	P	**Pn**	**20 13 40.7**	**+0.9**
THR3	**Thira Island,**	**2.03**	**294**	P	**Pn**	**20 13 40.9**	**+1.0**
THR3	**Thira Island,**	**2.03**	**294**	P	**Pn**	**20 13 41.0**	**+1.0**
AYDN	**Tasoluk**	**2.06**	**4**	*i* P	**Pn**	**20 13 42.4**	**+1.9**
AYDN				IAML_P			
comp=Z,5μm,0.4s							
THR5	**Thira Island,**	**2.07**	**294**	P	**Pn**	**20 13 41.6**	**+1.1**
THR5	**Thira Island,**	**2.07**	**294**	P	**Pn**	**20 13 41.6**	**+1.1**
ELL	**Elmali**	**2.13**	**57**	PN	**Pn**	**20 13 43.9**	**+2.5**
GCAM	**G?zelcaml?**	**2.13**	**350**	PN	**Pn**	**20 13 43.2**	**+1.9**
GCAM	**G?zelcaml?**	**2.13**	**350**	*e*P	**Pb**	**20 13 43.6**	**-1.1**
GCAM				IAML_P			
comp=Z,1μm,0.2s							
KSTL	**Kastelli Herak**	**2.16**	**263**	P	**Pn**	**20 13 40.1**	**-1.6**
SMG	**Samos**	**2.22**	**342**	P	**Pn**	**20 13 42.9**	**+0.4**
SMG				AML	AML	20 14 17.2	
comp=E,479μm,0.5s							
SMG				AML	AML	20 14 28.2	
comp=N,320μm,0.3s							
APE	**Apeiranthos**	**2.28**	**311**	PN	**Pn**	**20 13 44.5**	**+1.0**
APE	**Apeiranthos**	**2.28**	**311**	⇑*i*P	**Pn**	**20 13 44.2**	**+0.7**
APE	**Apeiranthos**	**2.28**	**311**	S	**Sn**	**20 14 09.1**	**-2.1**
APE	**Apeiranthos**	**2.28**	**311**	P	**Pn**	**20 13 44.4**	**+0.9**
APE				AML	AML	20 14 16.8	
comp=E,740μm,0.5s							
APE				AML	AML	20 14 17.8	
comp=N,740μm,0.5s							
IDI	**Anoyia**	**2.31**	**263**	Pn	**Pn**	**20 13 40.6**	**-3.3**
comp=N,3.4nm,0.3s,baz=181,slow=13,SNR=19							
IDI				Sn	**Sb**	**20 14 16.0**	**0.0**
comp=N,22nm,0.3s,baz=23,slow=22,SNR=3.6							
AYDB	**Zeytinkoy-Aydi**	**2.35**	**4**	PN	**Pn**	**20 13 46.4**	**+1.9**
DGB	**zmir**	**2.54**	**345**	*i* P	**Pn**	**20 13 48.1**	**+1.2**
DGB				IAML_P			
comp=Z,1μm,0.2s							
KORT	**Korkueli**	**2.56**	**56**	PN	**Pn**	**20 13 50.0**	**+2.6**
ZEY	**zmir**	**2.81**	**340**	*i* P	**Pb**	**20 13 54.5**	**-1.7**
BLCB	**Balcova**	**2.83**	**350**	PN	**Pn**	**20 13 53.2**	**+2.2**
URLA	**Izmir**	**2.90**	**343**	PN	**Pn**	**20 13 54.0**	**+2.1**
URLA	**Izmir**	**2.90**	**343**	*i* P	**Pn**	**20 13 53.6**	**+1.7**
URLA				IAML_P			
comp=Z,3μm,0.3s							
KULA	**Kula-Manisa**	**3.01**	**15**	PN	**Pn**	**20 13 56.0**	**+2.5**
KHAL	**Karahalli**	**3.12**	**27**	*i* P	**Pn**	**20 13 57.7**	**+2.7**
ISP	**Isparta**	**3.18**	**45**	⇑*i*P	**Pn**	**20 13 59.5**	**+3.7**
AKHS	**Akhisar**	**3.28**	**2**	*i* P	**Pn**	**20 13 59.1**	**+2.0**
AKHS				IAML_P			
comp=Z,1μm,0.3s							
SHUT	**Suhut-Afyon**	**3.73**	**37**	PN	**Pn**	**20 14 05.8**	**+2.4**
SIGR	**SIGRI**	**3.89**	**338**	PN	**Pn**	**20 14 08.2**	**+2.7**
SIGR	**SIGRI**	**3.89**	**338**	P	**Pn**	**20 14 06.9**	**+1.3**
VLI	**Veliai**	**4.01**	**288**	P	**Pn**	**20 14 09.2**	**+2.1**
EZN	**Ezine**	**4.36**	**346**	⇓*i*P	**Pn**	**20 14 12.6**	**+0.7**
BRTR	**Keskin Array B**	**6.26**	**47**	Pn	**Pn**	**20 14 38.6**	**+0.4**
comp=Z,0.1nm,0.3s,baz=219,slow=16,SNR=3.2							
MMAI	**Mount Meron Ar**	**6.88**	**110**	Pn	**Pn**	**20 14 44.9**	**-1.8**
comp=Z,3.1nm,0.3s,baz=306,slow=13,SNR=17							
MMAI				Sn	**Sn**	**20 16 03.9**	**-0.7**
comp=Z,3.4nm,0.3s,baz=312,slow=29,SNR=7.5							
VTS	**Vitosha**	**7.82**	**335**	⇑*i*P	**Pn**	**20 15 00.8**	**+1.2**
EIL	**Elat**	**8.51**	**132**	Sn	**Sn**	**20 16 41.5**	**-3.0**
comp=Z,1.2nm,0.3s,baz=172,slow=5.4,SNR=6.5							
MLR	**Muntele Rosu**	**9.97**	**353**	Pn	**Pn**	**20 15 29.5**	**+0.4**
comp=Z,0.1nm,0.3s,baz=244,slow=6.3,SNR=5.6							
MLR	**Muntele Rosu**	**9.97**	**353**	⇑*i*P	**Pn**	**20 15 30.6**	**+1.5**
VRI	**Vrincioaia**	**10.29**	**356**	⇓*i*P	**Pn**	**20 15 35.1**	**+1.8**
BZS	**Buzias**	**11.02**	**337**	⇓*i*P	**Pn**	**20 15 43.6**	**+0.3**
KOLS	**Kolonicke sedl**	**13.91**	**345**	*e*	**P**	**20 16 32.4**	**+1.5**
VYHS	**Vyhne**	**14.46**	**336**	*e*P	**P**	**20 16 39.2**	**+2.3**
AKASG	**Malin Array Be**	**15.14**	**4**	Pn	**Pn**	**20 16 39.2**	**-0.2**
comp=Z,0.3nm,0.3s,baz=195,slow=12,SNR=2.7							
GERES	**GERESS Array B**	**16.77**	**326**	Pn	**Pn**	**20 17 01.3**	**+0.6**
comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=8.6							
KHC	**Kasperske Hory**	**17.04**	**327**	*e*P	**P**	**20 17 07.0**	**+1.4**
GEYT	**Alibeck**	**24.43**	**75**	P	**P**	**20 18 24.3**	**0.0**
comp=Z,0.6nm,0.4s,baz=283,slow=6.8,SNR=3.5							
ESDC	**Sonseca Array**	**25.33**	**289**	P	**P**	**20 18 32.7**	**+0.3**
comp=Z,0.4nm,0.4s,baz=81,slow=9.1,SNR=4.0							
FINES	**FINESS Array B**	**25.89**	**358**	P	**P**	**20 18 37.2**	**+0.1**
comp=Z,0.7nm,0.5s,baz=163,slow=14,SNR=5.2							
HFS	**Hagfors**	**26.17**	**344**	P	**P**	**20 18 39.2**	**-0.6**
comp=Z,0.9nm,0.6s,baz=150,slow=12,SNR=4.9							
NOA	**NORSAR Array B**	**27.55**	**343**	P	**P**	**20 18 50.7**	**-1.6**
comp=Z,0.3nm,0.6s,baz=141,slow=6.5,SNR=3.0							
NOA				LR	LR	20 30 32.3	
comp=Z,9.0nm,20.0s,baz=200,slow=38							
TORD	**Torodi Ar. Bea**	**32.38**	**233**	P	**P**	**20 19 34.5**	**-0.9**
comp=Z,0.7nm,0.4s,baz=38,slow=7.5,SNR=4.6							
TORD				LR	LR	20 35 22.3	
comp=Z,32nm,18.7s,baz=280,slow=41							
MKAR	**Makanchi Array**	**41.80**	**57**	P	**P**	**20 20 53.8**	**-1.3**
comp=Z,0.4nm,0.5s,baz=268,slow=8.4,SNR=5.2							
ZALV	**Zalesovo

GROC				pmax	pmax		
	comp=Z,139nm,0.6s						
GROC				smax	smax		
	comp=N,677nm,0.8s						
GROC				smax	smax		
	comp=N,1μm,1.1s						
GROC				smax	smax		
	comp=E,851nm,1.0s						
GROC	**Groznyy**	**1.07**	**44**	*i* Pg	**Pn**	**20 29 23.6**	**-0.4**
GROC				*e*Sg	**Sg**	**20 29 39.3**	**+0.6**
STDR	**Stavd-Durt**	**1.07**	**331**	*e*PG	**Pb**	**20 29 23.5**	**-0.4**
STDR				*e*S	**Sg**	**20 29 39.9**	**+1.2**
STDR	**Stavd-Durt**	**1.07**	**331**	*i* Pg	**Pb**	**20 29 23.5**	**-0.4**
STDR				*e*Sg	**Sg**	**20 29 39.7**	**+1.0**
KZRT	**Kazreti**	**1.08**	**195**	P	**Pb**	**20 29 23.0**	**-1.2**
KZRT				S	**Sn**	**20 29 38.0**	**-0.9**
KZRT	**Kazreti**	**1.08**	**195**	PG	**Pb**	**20 29 22.9**	**-1.2**
BTLR	**Botlikh**	**1.09**	**77**⇓	*i*PG	**Pn**	**20 29 22.5**	**-1.8**
BTLR				*e*		20 29 36.5	
BTLR				pmax	pmax		
	comp=Z,60nm,0.5s						
BTLR				smax	smax		
	comp=N,159nm,1.0s						
BTLR	**Botlikh**	**1.09**	**77**	*e*Pg	**Pn**	**20 29 22.6**	**-1.8**
	comp=N,60nm,0.7s						
BTLR			⇓	*e*Sg	**Sb**	**20 29 36.8**	**-1.5**
	comp=N,199nm,0.6s						
LSNR	**Lesken**	**1.10**	**321**⇓	*i*PG	**Pn**	**20 29 23.5**	**-0.9**
LSNR				*e*S	**Sg**	**20 29 39.6**	**+0.2**
LSNR	**Lesken**	**1.10**	**321**	*i* Pg	**Pn**	**20 29 23.5**	**-0.9**
LSNR				*e*Sg	**Sg**	**20 29 39.7**	**+0.2**
TRKR	**Terskaya**	**1.29**	**358**	*e*PG	**Pn**	**20 29 26.2**	**-0.8**
TRKR				*e*S	**Sn**	**20 29 43.1**	**-0.7**
TRKR	**Terskaya**	**1.29**	**358**	*i* Pg	**Pn**	**20 29 26.3**	**-0.8**
TRKR				*e*Sg	**Sg**	**20 29 45.5**	**0.0**
TKB	**Tkibuli**	**1.32**	**267**	P	**Pn**	**20 29 27.0**	**-0.5**
TKB				S	**Sb**	**20 29 44.9**	**0.0**
TKB	**Tkibuli**	**1.32**	**267**	PG	**Pn**	**20 29 27.0**	**-0.5**
NCK	**Nalchik**	**1.37**	**321**	*e*PG	**Pn**	**20 29 28.5**	**+0.3**
NCK				*e*S	**Sb**	**20 29 47.4**	**+1.2**
NCK	**Nalchik**	**1.37**	**321**	*e*Pg	**Pn**	**20 29 28.4**	**+0.3**
NCK				*e*Sg	**Sg**	**20 29 47.7**	**-0.4**
AKH	**Akhalkalaki**	**1.40**	**224**	PN	**Pn**	**20 29 28.7**	**0.0**
AKH	**Akhalkalaki**	**1.40**	**224**	P	**Pn**	**20 29 27.8**	**-1.0**
AKH				S	**Sb**	**20 29 47.4**	**+0.1**
AKH	**Akhalkalaki**	**1.40**	**224**	*e*PG	**Pn**	**20 29 27.8**	**-1.0**
AKH				*e*S	**Sb**	**20 29 47.4**	**+0.1**
AKH	**Akhalkalaki**	**1.40**	**224**	*e*Pg	**Pn**	**20 29 27.8**	**-1.0**
AKH				*e*Sg	**Sb**	**20 29 47.4**	**+0.1**
DDFL	**Dedoflistskaro**	**1.40**	**134**	P	**Pn**	**20 29 26.4**	**-2.3**
DDFL				S	**Sb**	**20 29 47.7**	**+0.5**
DDFL	**Dedoflistskaro**	**1.40**	**134**	PG	**Pn**	**20 29 26.4**	**-2.3**
XNZR	**Khunzakh**	**1.43**	**85**⇑	*e*PG	**Pn**	**20 29 29.4**	**+0.3**
XNZR				*e*		20 29 47.8	
XNZR	**Khunzakh**	**1.43**	**85**	*e*Pg	**Pn**	**20 29 28.5**	**-0.6**
XNZR				*e*Sg	**Sn**	**20 29 47.7**	**+0.2**
QZX	**Qazax, Azerbai**	**1.44**	**162**	P	**Pn**	**20 29 28.5**	**-0.7**
	SNR=172						
QZX				S	**Sb**	**20 29 48.5**	**+0.1**
BGD	**Bogdanovka**	**1.46**	**217**	P	**Pn**	**20 29 29.6**	**0.0**
BGD				S	**Sb**	**20 29 49.3**	**+0.2**
BGD	**Bogdanovka**	**1.46**	**217**	PG	**Pn**	**20 29 29.6**	**0.0**
DLMR	**Dylym**	**1.50**	**64**	*e*PG	**Pn**	**20 29 30.0**	**0.0**
DLMR				*e*S	**Sb**	**20 29 50.0**	**0.0**
DLMR				pmax	pmax		
	comp=Z,82nm,0.3s						
DLMR	**Dylym**	**1.50**	**64**	*e*Pg	**Pn**	**20 29 30.0**	**0.0**
	comp=Z,82nm,0.3s						
DLMR				*e*Sg	**Sb**	**20 29 50.0**	**0.0**
	comp=Z,336nm,0.4s						
ZKTA	**Zakatala**	**1.59**	**119**	P	**Pn**	**20 29 31.0**	**-0.1**
	SNR=82						
ZKTA				S	**Sb**	**20 29 53.0**	**+0.6**
GNBR	**Gunib**	**1.62**	**91**⇑	*e*PN	**Pb**	**20 29 32.9**	**-0.3**
GNBR				*e*		20 29 54.8	
GNBR				pmax	pmax		
	comp=Z,60nm,0.7s						
GNBR				smax	smax		
	comp=N,115nm,0.8s						
GNBR	**Gunib**	**1.62**	**91**	*e*Pg	**Pn**	**20 29 32.4**	**+0.8**
	comp=N,60nm,0.7s						
GNBR			⇓	*e*Sg	**Sb**	**20 29 54.8**	**+1.4**
DBC	**Dubki**	**1.62**	**68**⇑	*i*PN	**Pn**	**20 29 31.8**	**+0.2**
DBC				*i* S	**Sn**	**20 29 52.5**	**+0.4**
DBC				pmax	pmax		
	comp=Z,51nm,0.5s						
DBC	**Dubki**	**1.62**	**68**	*e*Pg	**Pn**	**20 29 31.9**	**+0.2**
	comp=Z,51nm,0.5s						
DBC				*e*Sg	**Sb**	**20 29 53.8**	**+0.4**
	comp=Z,210nm,1.1s						
ARKR	**Arakani**	**1.65**	**83**	PN	**Pn**	**20 29 32.5**	**+0.5**
ARKR				*e*S	**Sb**	**20 29 54.5**	**+0.3**
ARKR	**Arakani**	**1.65**	**83**	*e*Pg	**Pn**	**20 29 32.5**	**+0.5**
ARKR				*e*Sg	**Sb**	**20 29 54.5**	**+0.3**
KBTC	**Kuba-Taba**	**1.71**	**324**	*e*PN	**Pn**	**20 29 32.8**	**0.0**
KBTC				*e*S	**Sb**	**20 29 56.9**	**+0.9**
KBTC	**Kuba-Taba**	**1.71**	**324**	*i* Pg	**Pn**	**20 29 32.8**	**0.0**
KBTC				*e*Sg	**Sb**	**20 29 56.2**	**+0.3**
NEY	**Neytrino**	**1.72**	**299**	*e*PN	**Pn**	**20 29 34.0**	**+0.9**
NEY				*e*S	**Sb**	**20 29 57.2**	**+0.8**
NEY	**Neytrino**	**1.72**	**299**	*e*Pg	**Pn**	**20 29 33.7**	**+0.7**
NEY				*e*Sg	**Sb**	**20 29 57.0**	**+0.6**
KMKR	**Kumukh**	**1.75**	**99**	*e*PN	**Pb**	**20 29 35.0**	**-0.5**
KMKR				*e*S	**Sb**	**20 29 57.5**	**+0.3**
KMKR				pmax	pmax		
	comp=Z,41nm,0.2s						
KMKR	**Kumukh**	**1.75**	**99**	*e*Pg	**Pb**	**20 29 35.0**	**-0.5**
KMKR				*e*Sg	**Sb**	**20 29 57.5**	**+0.3**
BUJR	**Buynaksk**	**1.76**	**76**⇓	*e*PN	**Pg**	**20 29 37.2**	**-0.5**
BUJR				*e*		20 30 01.7	
BUJR	**Buynaksk**	**1.76**	**76**	*e*Pg	**Pg**	**20 29 37.3**	**-0.5**
BUJR				*e*Sg	**Sg**	**20 30 01.8**	**+1.1**
EPOS	**Posof**	**1.79**	**239**	*i* P	**Pn**	**20 29 34.6**	**+0.6**
GDB	**GEDABAY**	**1.86**	**157**	P	**Pn**	**20 29 34.5**	**-0.5**
	SNR=35						
GDB				S	**Sb**	**20 29 59.0**	**-1.4**
EAK	**Akyaka**	**1.96**	**207**	*i* P	**Pb**	**20 29 37.8**	**-1.3**
EAK				IAML_P			
	comp=Z,2μm,0.3s						
SHA1	**Shidzhatmaz**	**2.03**	**311**⇑	*e*PN	**Pn**	**20 29 38.5**	**+1.1**
SHA1	**Shidzhatmaz**	**2.03**	**311**	*e*Pg	**Pn**	**20 29 37.8**	**+0.4**
SHA1				*e*Sg	**Sb**	**20 30 04.5**	**-0.9**
PYA1	**Pyatigorsk**	**2.04**	**324**	*e*Pg	**Pn**	**20 29 37.2**	**-0.2**
PYA1				*e*Pg	**Sb**	**20 30 04.7**	**-0.8**
MAK	**Makhachkala**	**2.08**	**74**	*e*PN	**Pn**	**20 29 36.3**	**-1.5**
MAK				*e*		20 30 08.7	
MAK				pmax	pmax		
	comp=Z,58nm,0.4s						
GANJ	**Ganja**	**2.13**	**147**	PN	**Pn**	**20 29 38.1**	**-0.4**
GANJ	**Ganja**	**2.13**	**147**	P	**Pn**	**20 29 38.2**	**-0.4**
	SNR=34						
GANJ				S	**Sn**	**20 30 05.8**	**+1.2**
URKR	**Urkarakh**	**2.13**	**96**⇑	*e*PN	**Pg**	**20 29 45.0**	**+0.2**
URKR				*e*		20 30 13.5	
URKR	**Urkarakh**	**2.13**	**96**	*e*Pg	**Pb**	**20 29 41.2**	**-0.8**
URKR				*e*Pg	**Sb**	**20 30 07.8**	**-0.4**
KIV0	**Kislovodsk Arr**	**2.15**	**316**	*e*Pg	**Pn**	**20 29 39.9**	**+0.9**
KIV0				*e*Sg	**Sb**	**20 30 08.1**	**-0.7**
KIV	**Kislovodsk**	**2.16**	**316**	PN	**Pn**	**20 29 39.7**	**+0.7**
KIV	**Kislovodsk**	**2.16**	**316**	*i* PN	**Pn**	**20 29 39.0**	**0.0**
SEKA	**Sheki**	**2.18**	**123**	PN	**Pn**	**20 29 40.0**	**+0.7**
SEKA	**Sheki**	**2.18**	**123**	P	**Pn**	**20 29 40.1**	**+0.7**
	SNR=44						
SEKA				S	**Sb**	**20 30 09.0**	**-0.6**
DIGO	**Kars**	**2.28**	**208**	*i* P	**Pb**	**20 29 42.6**	**-2.0**
DIGO				IAML_P			
	comp=Z,2μm,0.2s						
GNI	**Garni**	**2.28**	**181**	PN	**Pn**	**20 29 42.1**	**+1.3**
GNI	**Garni**	**2.28**	**181**	*i* PN	**Pn**	**20 29 42.1**	**+1.3**
GNI	**Garni**	**2.28**	**181**	*i* Pn	**Pb**	**20 29 43.2**	**-1.4**
GNI				*e*Sn	**Sg**	**20 30 14.7**	**-2.5**
MNGR	**Mingechevir, A**	**2.40**	**133**	PN	**Pn**	**20 29 42.0**	**-0.2**
MNGR	**Mingechevir, A**	**2.40**	**133**	P	**Pn**	**20 29 42.1**	**-0.2**
MNGR				S	**Sb**	**20 30 14.0**	**-1.7**
AKT	**Akhty**	**2.40**	**112**	*e*PN	**Pn**	**20 29 44.4**	**+2.1**
AKT				*e*S	**Sb**	**20 30 17.5**	**+1.6**
AKT				pmax	pmax		
	comp=Z,17nm,0.6s						
AKT				smax	smax		
	comp=E,76nm,0.4s						
AKT				smax	smax		
	comp=N,33nm,0.5s						
AKT				smax	smax		
	comp=E,58nm,0.5s						
AKT	**Akhty**	**2.40**	**112**	*e*Pn	**Pn**	**20 29 44.4**	**+2.1**
	comp=E,19nm,0.6s						
AKT				*e*Sn	**Sb**	**20 30 15.0**	**-0.8**
	comp=E,76nm,0.5s						
BATM	**Batumi**	**2.44**	**251**	PN	**Pn**	**20 29 43.7**	**+0.8**
BATM	**Batumi**	**2.44**	**251**	P	**Pn**	**20 29 43.7**	**+0.8**
BATM				S	**Sb**	**20 30 18.0**	**+0.9**
BATM	**Batumi**	**2.44**	**251**	PN	**Pn**	**20 29 43.6**	**+0.7**
TASB	**TASBURUN-IGDIR**	**2.48**	**190**	PN	**Pn**	**20 29 44.8**	**+1.3**
DAGI	**Agillar**	**2.54**	**239**	*i* P	**Pn**	**20 29 45.3**	**+1.0**
DAGI				IAML_P			
	comp=Z,804nm,0.3s						
BCA	**Borcka**	**2.55**	**248**	PN	**Pn**	**20 29 45.4**	**+1.0**
DBOC	**Borcka**	**2.57**	**246**	*i* P	**Pb**	**20 29 47.7**	**-1.6**
DBOC				IAML_P			
	comp=Z,2μm,0.4s						
SENK	**Senkaya-Erzuru**	**2.61**	**225**	PN	**Pn**	**20 29 46.2**	**+0.8**
IGDI	**IGDIR**	**2.62**	**192**	*i* P	**Pb**	**20 29 49.4**	**-0.9**
IGDI				IAML_P			
	comp=Z,214nm,0.2s						
DBAD	**Bademkaya**	**2.71**	**240**	*i* P	**Pn**	**20 29 48.1**	**+1.5**
DBAD				IAML_P			
	comp=Z,2μm,0.5s						
HYR	**Heyderabad**	**2.71**	**179**	S	**Sn**	**20 30 21.2**	**+2.1**
QBL	**Gabala**	**2.73**	**122**	P	**Pn**	**20 29 47.0**	**+0.2**
QBL				S	**Sb**	**20 30 22.5**	**-2.9**
QSAR	**Qusar**	**2.75**	**108**	P	**Pn**	**20 29 47.7**	**+0.5**
QSAR				S	**Sb**	**20 30 23.4**	**-2.7**
BRDA	**Brd**	**2.82**	**139**	S	**Sb**	**20 30 24.9**	**-3.0**
GOF	**Gofitskoye**	**2.91**	**335**⇑	*e*PN	**Pg**	**20 30 00.2**	**+0.6**
GOF				*e*S	**Sg**	**20 30 38.7**	**+1.4**
GOF				pmax	pmax		
	comp=Z,29nm,0.5s						
GOF				smax	smax		
	comp=E,71nm,0.6s						
QUBA	**Quba, Azerbaij**	**2.98**	**110**	S	**Sn**	**20 30 28.1**	**+2.6**
IML	**Ismayilli**	**3.03**	**122**	P	**Pn**	**20 29 51.1**	**+0.1**
IML				S	**Sn**	**20 30 29.5**	**+2.5**
ZRD	**Zardab**	**3.07**	**134**	P	**Pn**	**20 29 51.5**	**0.0**
ZRD				S	**Sn**	**20 30 30.2**	**+2.5**
SBZ	**Shahbuz**	**3.09**	**169**	P	**Pn**	**20 29 51.6**	**-0.2**
SBZ				S	**Sn**	**20 30 31.1**	**+2.7**
EATA	**Eleskirt**	**3.10**	**215**	*i* P	**Pn**	**20 29 54.8**	**+2.6**
EATA				IAML_P			
	comp=Z,340nm,0.3s						
AGRB	**Hanur-Agry**	**3.16**	**206**	PN	**Pn**	**20 29 54.5**	**+1.6**
KDMR	**Kurdemir**	**3.28**	**128**	P	**Pn**	**20 29 54.6**	**+0.2**
KOPR	**Koprukoy-ERZUR**	**3.29**	**223**	PN	**Pn**	**20 29 55.9**	**+1.2**
PQL	**Pirkuli**	**3.30**	**119**	P	**Pn**	**20 29 55.0**	**+0.3**
NAX	**Nakhchivan**	**3.30**	**170**	PN	**Pn**	**20 29 54.8**	**+0.1**
NAX	**Nakhchivan**	**3.30**	**170**	P	**Pn**	**20 29 54.8**	**+0.1**
NAX				S	**Sn**	**20 30 35.7**	**+2.1**
SIZA	**Siyzn**	**3.37**	**112**	P	**Pn**	**20 29 56.2**	**+0.5**
ATGJ	**Altiaghaj**	**3.49**	**115**	P	**Pn**	**20 29 57.6**	**+0.3**
ORD	**Ordubad**	**3.62**	**165**	P	**Pn**	**20 29 59.3**	**+0.1**
GBS	**Qobustan**	**3.66**	**120**	P	**Pn**	**20 30 00.0**	**+0.4**
ARU	**Arti**	**16.58**	**28**	*i* P	**P**	**20 32 57.2**	**-0.5**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRVK	**Borovoye**	**20.07**	**49**	*i* P	**P**	**20 33 35.0**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.4s						

JMA 17 20:46:20.3±0.3, 43°.29N×146°.47E, h47km±2km, M2.9
SKHL 17 20:46:20.8±0.6, 43°.35N×146°.44E, h56km±1km, mb3.6/4
ISC 17 20:46:18.7±3.3, 43°.4N±0°.1×146°.6E±0°.2, h21km±7km, n13, σ0°.66/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
NEM2	**Nemuro 2**	**0.63**	**271**	P	**Pb**		**20 46 31.8**	**+0.8**
NEM2				*e*S	**Sb**		**20 46 40.3**	**+0.9**
YUK	**Yuzh-Kuril'sk**	**0.86**	**322**	*i* P	**Pb**		**20 46 35.0**	**+0.1**
YUK				AMB	AMB		20 46 36.0	
	52nm,0.3s							
YUK				*i* S	**Sb**		**20 46 46.0**	**0.0**
YUK				A	A		20 46 48.0	
	546nm,0.3s							
YUK				A	A		20 46 48.0	
	479nm,0.3s							
GRPR	**Tuman**	**0.87**	**317**	*i* P	**Pb**		**20 46 35.4**	**+0.3**
GRPR				AMB	AMB		20 46 35.9	
	39nm,0.2s							
GRPR				*e*S	**Sb**		**20 46 46.0**	**-0.4**
GRPR				A	A		20 46 47.0	
	375nm,0.2s							
GRPR				A	A		20 46 47.0	
	374nm,0.2s							
GLVR	**Golovnino**	**0.88**	**296**	*e*P	**Pb**		**20 46 35.0**	**-0.1**
GLVR				AMB	AMB		20 46 36.0	
	28nm,0.3s							
GLVR				*e*S	**Sb**		**20 46 46.0**	**-0.4**
GLVR				A	A		20 46 48.0	
	598nm,0.3s							
GLVR				A	A		20 46 48.0	
	332nm,0.3s							
LAGR	**Lagunnoye**	**0.91**	**320**	*e*P	**Pb**		**20 46 36.0**	**+0.2**
LAGR				AMB	AMB		20 46 36.0	
	30nm,0.3s							
LAGR				*e*S	**Sb**		**20 46 47.0**	**-0.5**
LAGR				A	A		20 46 48.0	
	716nm,0.4s							
LAGR				A	A		20 46 48.0	
	673nm,0.4s							
JKHN	**Kushirohamanak**	**1.09**	**256**	P	**Pn**		**20 46 38.2**	**-0.5**
JRA	**Rausu**	**1.22**	**299**	P	**Pn**		**20 46 40.7**	**+0.2**
JNK	**Nakash**	**1.39**	**280**	P	**Pn**		**20 46 42.3**	**-0.5**
JAK	**Akkeshi**	**1.44**	**256**	P	**Pn**		**20 46 42.8**	**-0.7**
JTKR	**Abashiri--Toko**	**2.05**	**288**	P	**Pn**		**20 46 52.8**	**+0.9**
JAR	**Ashorobuto**	**2.07**	**269**	P	**Pn**		**20 46 52.3**	**+0.2**
JAR				*e*S	**Sn**		**20 47 16.2**	**-1.1**
JOB	**Onbets**	**2.08**	**258**	P	**Pn**		**20 46 52.5**	**+0.3**
JMP	**Maruseppu**	**2.44**	**286**	P	**Pn**		**20 46 58.4**	**+1.1**

IDC 17 20:48:42.6±4.3, 9°.62S×154°.28E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.5/3, MS3.7/2, Ms1 3.6/2, ms1mx3.0/10, Error ellipse: s-maj=151.5km s-min=38.6km az=122.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
WRA	**Warramunga Arr**	**21.82**	**240**	P	P		20 53 37.1	+0.4
	2.2nm,0.9s,baz=62,slow=11,SNR=6.7							
ASAR	**Alice Springs**	**23.96**	**232**	P	P		20 53 58.2	-0.6
	0.6nm,0.8s,baz=62,slow=8.8,SNR=5.8							
STKA	**Stephens Creek**	**25.08**	**206**	LR	LR		21 02 48.5	
	comp=Z,52nm,18.3s,baz=211,slow=34							
BRDH	**Bariadhala**	**69.20**	**299**	LR	LR		21 33 26.4	
	comp=Z,116nm,18.1s,baz=152,slow=39							
MKAR	**Makanchi Array**	**84.90**	**319**	P	P		21 01 19.4	-0.1
	0.3nm,0.7s,baz=100,slow=3.9,SNR=2.7							
TORD	**Torodi Ar. Bea**	**152.90**	**280**	PKPbc	PKiKP		21 08 43.2	+0.1
	0.6nm,0.7s,baz=98,slow=2.2,SNR=4.0							

NEIC 17 21:10:19.0±0.0, 12°.45S×77°.19W, h56km, ML4.0(ARE), After ARE., Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
NNA	**Nana**	**0.57**	**37**	*e*Pn	Pn		21 10 33.2	+1.7
NNA				*e*Sn	Sn		21 10 38.2	-2.5
PB11	**IPOC Station P**	**10.26**	**136**	*e*Pn	Pn		21 12 43.7	0.0
GO01	**Chusmiza**	**10.51**	**134**	*e*Pn	Pn		21 12 44.3	-3.2
LRAL	**Lakeview Retre**	**46.19**	**349**	*e*P	P		21 18 36.5	-1.8

IDC 17 21:16:59.3±3.5, 6°.08S×153°.36E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.3/27, mbtmp3.7/2, Error ellipse: s-maj=168.0km s-min=46.7km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
WRA	**Warramunga Arr**	**23.05**	**232**	P	P		21 22 05.2	-1.3
	1.2nm,0.6s,baz=56,slow=9.0,SNR=5.5							
ASAR	**Alice Springs**	**25.61**	**225**	P	P		21 22 31.0	+0.4
	1.7nm,0.7s,baz=58,slow=8.8,SNR=18							
TORD	**Torodi Ar. Bea**	**151.21**	**286**	PKPbc	PKPbc		21 36 56.0	+0.2
	0.7nm,0.9s,baz=66,slow=2.5,SNR=3.8							

ISK 17 21:28:01.7, 39°.47N×27°.68E, h9km, ML1.9/15
DDA 17 21:28:01.9, 39°.49N×27°.60E, h7km±2km, ML2.7
ISCJB 17 21:28:02.7±0.5, 39°.50N±0°.03×27°.64E±0°.05, h10km±5km, Error ellipse: s-maj=6.8km s-min=5.3km az=171.0
ISC 17 21:28:02.2±0.9, 39°.49N±0°.04×27°.63E±0°.03, h14km±8km, n21, σ0°.47/25, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
STEP	**BALIKESIR_Sava**	**0.13**	**149**	*i* P	**Pg**		**21 28 05.7**	**-0.1**
STEP				*i* S	**Sg**		**21 28 08.4**	**+0.4**
BALB	**Balikesir**	**0.24**	**51**	PG	**Pg**		**21 28 07.2**	**-0.3**
BALB				SG	**Sg**		**21 28 10.9**	**-0.2**
BALY	**Balya**	**0.25**	**357**	*i* P	**Pb**		**21 28 08.2**	**-0.5**
BALY				*i* S	**Sb**		**21 28 12.3**	**-0.7**
AKHS	**Akhisar**	**0.62**	**167**	*e*P	**Pn**		**21 28 16.3**	**-0.4**
EDC	**Edincik**	**0.88**	**12**	PG	**Pg**		**21 28 19.0**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.88**	**287**	*i* P	**Pb**		**21 28 19.6**	**+0.4**
BAYC				*i* S	**Sg**		**21 28 30.5**	**-0.2**
BAYC				IAML_P				
	comp=Z,1μm,0.1s							
KCTX	**Karacabey (Bur**	**0.96**	**35**	PG	**Pg**		**21 28 20.4**	**-0.3**
EZN	**Ezine**	**1.07**	**289**	PN	**Pn**		**21 28 23.3**	**+0.5**
LPK	**Lapseki**	**1.11**	**323**	PN	**Pn**		**21 28 23.9**	**+0.5**
BLCB	**Balcova**	**1.19**	**203**	PN	**Pn**		**21 28 24.7**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.25**	**344**	PN	**Pn**		**21 28 25.8**	**+0.4**
BOZC	**Bozcaada**	**1.27**	**287**	PN	**Pg**		**21 28 26.4**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.27**	**316**	PN	**Pg**		**21 28 26.8**	**0.0**
USAK	**Uak-Merkez**	**1.32**	**125**	*i* P	**Pg**		**21 28 28.1**	**+0.4**
ULDT	**Uludag**	**1.33**	**60**	*i* P	**Pg**		**21 28 27.5**	**-0.4**
ULDT				IAML_P				
	comp=Z,386nm,0.2s							
SIGR	**SIGRI**	**1.41**	**259**	PN	**Pg**		**21 28 28.6**	**-0.7**
ARMT	**Armutlu**	**1.43**	**41**	PN	**Pn**		**21 28 28.0**	**+0.1**
ERIK	**Erikli-Kesan**	**1.46**	**324**	PN	**Pb**		**21 28 29.6**	**+0.4**
ENEZ	**Enez**	**1.69**	**318**	PN	**Pb**		**21 28 32.8**	**-0.3**
ALN	**Alexandroupoli**	**1.86**	**320**	PN	**Pb**		**21 28 36.8**	**+0.7**
CTKS	**Kestanelik-??a**	**1.87**	**21**	PN	**Pn**		**21 28 34.8**	**+0.9**

IDC 17 21:31:30.2±7.2, 17°.84N×106°.20W, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.7/34, mbtmp3.5/6, MS3.1/6, Ms1 3.1/6, ms1mx2.8/29, Error ellipse: s-maj=130.5km s-min=81.7km az=136.0, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
H06E1	**SOCORRO T-PHAS**	**4.58**	**283**	T	T		21 37 11.2	
	SNR=59							
LPIG	**La Paz**	**7.32**	**329**	LR	LR		21 35 17.7	
	comp=Z,151nm,18.6s,baz=120,slow=31							
CMIG	**Matias Romero**	**10.82**	**92**	LR	LR		21 38 17.1	
	comp=Z,197nm,19.3s,baz=216,slow=38							
TXAR	**Lajitas Array**	**11.67**	**11**	Pn	Pn		21 34 18.6	+0.4
	baz=190,slow=15,SNR=2.0							
TXAR				LR	LR		21 38 38.6	
	comp=Z,61nm,18.4s,baz=0.0,slow=37							
JTS	**Las Juntas de**	**21.92**	**107**	LR	LR		21 42 57.0	
	comp=Z,56nm,20.3s,baz=307,slow=31							
NVAR	**Mina Array Bea**	**23.08**	**335**	P	P		21 36 37.7	-0.1
	2.0nm,0.9s,baz=146,slow=10,SNR=11							
NVAR				LR	LR		21 45 16.6	
	comp=Z,34nm,18.9s,baz=106,slow=36							
ELK	**Elko**	**24.12**	**343**	P	P		21 36 47.9	-0.1
	1.0nm,0.8s,baz=184,slow=6.1,SNR=4.2							
ELK				LR	LR		21 45 22.3	
	comp=Z,32nm,18.2s,baz=144,slow=34							
PDAR	**Pinedale Array**	**25.01**	**354**	P	P		21 36 57.9	+1.7
	0.2nm,0.4s,baz=186,slow=5.4,SNR=2.8							
INK	**Inuvik**	**53.32**	**348**	P	P		21 40 49.8	-1.0
	1.9nm,0.8s,baz=140,slow=5.9,SNR=4.9							
ILAR	**Eielson Array**	**54.22**	**340**	P	P		21 40 57.1	-0.3
	0.8nm,0.8s,baz=145,slow=7.0,SNR=6.4							

ISCJB 17 21:38:13.6±0.5, 39°.39N±0°.03×28°.04E±0°.04, h8km±5km, Error ellipse: s-maj=5.0km s-min=4.6km az=22.7
ISK 17 21:38:13.4, 39°.40N×28°.02E, h8km, ML2.1/13
DDA 17 21:38:13.1, 39°.36N×28°.03E, h7km±3km, ML2.8
ISC 17 21:38:13.7±1.0, 39°.38N±0°.03×28°.03E±0°.03, h14km±9km, n23, σ0°.49/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
STEP	**BALIKESIR_Sava**	**0.24**	**270**	*i* P	**Pg**		**21 38 19.2**	**+0.2**
STEP				*i* S	**Sg**		**21 38 22.8**	**+0.2**
STEP				IAML_P				
	comp=Z,6μm,0.1s							
BALB	**Balikesir**	**0.29**	**336**	PG	**Pg**		**21 38 19.6**	**-0.2**
BALB				SG	**Sg**		**21 38 24.1**	**+0.3**
DURS	**Dursunbey**	**0.41**	**57**	*i* P	**Pg**		**21 38 21.4**	**-0.6**
DURS				IAML_P				
	comp=Z,2μm,0.1s							
AKHS	**Akhisar**	**0.53**

0.2nm,0.3s,baz=60,slow=18,SNR=4.8
DZM LR LR 21 59 12.4
comp=Z,130nm,19.4s,baz=114,slow=34
DZM Mont Dzumac 18.29 264 *eP* **P 21 53 11.2 -0.7**
4.3nm,0.7s
KNTN Kanton 18.66 7 *eP* **P 21 53 12.6 -3.2**
114nm,1.1s
TBI Tubuai 22.65 99 *eLR* LR 21 58 57.6
comp=Z,120nm,33.0s
THZ Tophouse 23.14 206 *eP* **P 21 54 04.0 0.0**
14nm,1.0s
PPT2 Papeete2 23.21 85 *eLR* LR 21 59 30.7
comp=Z,122nm,28.0s
PPT Papeete 23.22 85 LR LR 22 03 02.1
comp=Z,55nm,18.2s,baz=197,slow=36
KHZ Kahutara 23.45 204 *eP* **P 21 54 05.7 -1.2**
3.7nm,0.6s
HNR Honiara 27.85 291 LR LR 22 03 59.5
comp=Z,56nm,18.4s,baz=123,slow=33
WHZ Wether Hill Ro 28.58 207 *eP* **P 21 54 52.0 -1.5**
STKA Stephens Creek 40.89 246 P **P 21 56 40.6 +0.7**
1.0nm,0.6s,baz=76,slow=9.8,SNR=4.3
AS31 Alice Springs 48.06 257 *eP* **P 21 57 36.9 -0.5**
0.7nm,0.8s
ASAR Alice Springs 48.06 257 P **P 21 57 36.9 -0.5**
2.7nm,0.7s,baz=99,slow=7.4,SNR=24
WR1 Warramunga Arr 48.29 262 *eP* **P 21 57 38.2 -0.9**
WRA Warramunga Arr 48.29 262 P **P 21 57 38.3 -0.9**
2.0nm,0.9s,baz=94,slow=8.9,SNR=4.1
MJAR Matsushiro Arr 73.28 321 P **P 22 00 29.4 +0.5**
2.7nm,0.7s,baz=169,slow=5.7,SNR=10
MAJO Matsushiro 73.28 321 *eP* **P 22 00 29.4 +0.5**
NV01 Mina Array Sit 79.11 41 *eP* **P 22 01 06.3 +4.0**
NVAR Mina Array Bea 79.11 41 P **P 22 01 06.3 +4.0**
0.5nm,0.7s,baz=223,slow=11,SNR=4.9
KSRS Korea Array 80.16 317 P **P 22 01 09.1 +1.4**
1.8nm,1.1s,baz=125,slow=6.3,SNR=4.4
KS15 Wonju Array Si 80.18 317 *eP* **P 22 01 09.1 +1.3**
6.0nm,1.1s
PDAR Pinedale Array 87.04 42 LR LR 22 37 37.2
comp=Z,19nm,19.8s,baz=150,slow=34
GO02 Mina Guanaco 93.14 118 *eP* P 22 02 07.3 -5.1
27nm,1.1s
CMAR Chiang Mai Arr 94.06 288 P **P 22 02 18.9 +2.6**
1.4nm,0.9s,baz=117,slow=3.1,SNR=8.1
AKASG Malin Array Be 145.61 334 PKPbc **PKiKP 22 08 37.7 -1.8**
2.0nm,0.5s,baz=39,slow=4.4,SNR=10.0
CLL Collm 149.69 351 *ePKPab* **PKPab 22 08 51.0 -1.1**
BR101 Keskin Array S 150.28 314 *ePKPbc* **PKiKP 22 08 50.0 +0.2**
BRTR Keskin Array B 150.28 314 PKPbc **PKiKP 22 08 50.0 +0.2**
0.8nm,0.8s,baz=116,slow=2.9,SNR=4.2
GEC2 GERESS Array S 151.98 349 *ePKPbc* **PKiKP 22 08 54.5 +1.6**
GERES GERESS Array B 151.98 349 PKPbc **PKiKP 22 08 54.5 +1.6**
0.4nm,0.6s,baz=358,slow=4.5,SNR=5.1

SNET 17 21:59:37.6±0.8, 11°.09N×87°.15W, h124km±59km, ML4.0
UCR 17 21:59:38.1±1.7, 11°.05N×87°.39W, h10km±69km, ML3.8
ISC 17 21:59:34.7±3.6, 11°.0N±0°.2×87°.8W±0°.1, h29km, n13, σ0ˢ70/17, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**1.85**	**34**	*eP*			**Pn**	**22 00 05.1**	**+0.5**
CNGN				IAML				22 00 33.6	
comp=N,446nm,0.5s									
CNGN	**Cerro Negro**	**1.85**	**34**	*eP*			**Pn**	**22 00 05.1**	**+0.5**
MOMN	**Momotombo**	**1.87**	**40**	*eP*			**Pn**	**22 00 05.2**	**+0.3**
TELN	**Telica**	**1.87**	**29**	*eP*			**Pb**	**22 00 08.3**	**-0.1**
APYN	**Apoyeque**	**1.88**	**47**	*eP*			**Pn**	**22 00 05.3**	**+0.4**
MGAN	**Managua**	**1.90**	**51**	*eP*			**Pn**	**22 00 05.8**	**+0.6**
MGAN				*eS*			**Sn**	**22 00 27.4**	**-0.7**
CSGN	**Cosiguina Volc**	**2.02**	**6**	*eP*			**Pb**	**22 00 10.9**	**+0.1**
CSGN				*eS*			**Sb**	**22 00 35.9**	**+0.4**
CSGN				IAML				22 00 45.2	
comp=N,5μm,0.4s									
CSGN	**Cosiguina Volc**	**2.02**	**6**	*eP*			**Pb**	**22 00 10.9**	**+0.1**
CSGN				*eS*			**Sb**	**22 00 36.3**	**+0.8**
CNCH	**Conchagua**	**2.31**	**358**	*eP*			**Pb**	**22 00 15.9**	**+0.2**
CNCH				IAML				22 00 51.7	
comp=Z,2μm,0.4s									
CNCH	**Conchagua**	**2.31**	**358**	*eP*			**Pb**	**22 00 15.9**	**+0.2**
CNCH				IAML				22 00 51.7	
comp=Z,2μm,0.4s									
LCND	**La Caada**	**2.34**	**357**	*eP*			**Pb**	**22 00 15.1**	**-1.1**
LCND				IAML				22 00 49.9	
comp=Z,302nm,0.4s									
LCND	**La Caada**	**2.34**	**357**	*eP*			**Pb**	**22 00 15.1**	**-1.1**
LCND				IAML				22 00 49.9	
comp=Z,302nm,0.4s									
MATN	**Matagalpa**	**2.66**	**42**	*eP*			**Pn**	**22 00 16.0**	**+0.2**
MATN				*eS*			**Sn**	**22 00 45.8**	**-1.2**

IDC 17 22:35:10.5±5.7, 39°.42N×111°.10E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.4/30, mbtmp3.7/3, ML3.0/1, Error ellipse: s-maj=117.7km s-min=25.5km az=83.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.07**	**339**	Pn			Pn	22 37 23.4	+0.6
SONM				Lg			Lg	22 39 59.7	
0.2nm,0.3s,baz=158,slow=12,SNR=11									
0.2nm,0.3s,baz=150,slow=25,SNR=5.1									
MKAR	**Makanchi Array**	**22.20**	**299**	P			P	22 40 07.8	-0.5
2.3nm,1.0s,baz=96,slow=12,SNR=9.2									
CMAR	**Chiang Mai Arr**	**23.40**	**210**	P			P	22 40 21.2	+0.2
1.4nm,0.3s,baz=13,slow=9.6,SNR=7.4									

MEX 17 22:44:04.5±0.4, 16°.25N×98°.04W, h5km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**331**	*i* P			Pg	22 44 07.3	-0.6
PNIG				*i* S			Sg	22 44 10.1	+0.1
TLIG	**Tlapa**	**1.40**	**339**	*eP*			Pn	22 44 27.5	-3.3
TLIG				*eS*			Sb	22 44 44.0	-5.4

DJA 17 22:50:25.2±0.8, 8°.S±4°.×10°.7E±°, h11km±6km, M4.5/9, mb5.0/1, MLv4.3/9
ISCJB 17 22:50:26.5±1.0, 7°.6S±0°.1×106°.88E±0°.06, h70km±10km, mb3.8/7, Error ellipse: s-maj=18.7km s-min=8.0km az=18.5
IDC 17 22:50:30.1±3.1, 7°.29S×106°.95E, h94km±24km, mb3.6/7, mb1 3.8/7, mb1mx3.4/35, mbtmp4.0/7, MS3.2/1, Ms1 3.4/1, ms1mx2.6/29, Error ellipse: s-maj=66.8km s-min=15.4km az=48.0
ISC 17 22:50:27.0±1.4, 7°.65S±0°.10×106°.88E±0°.06, h61km±13km, n21, σ1ˢ88/19, mb4.0/7, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.94**	**84**	P			**Pn**	**22 50 43.1**	**-1.2**
CISI				S			**Sn**	**22 50 54.6**	**-2.5**
LEM	**Lembang**	**1.10**	**42**	P			**Pn**	**22 50 47.1**	**+0.5**
1μm,0.3s,baz=299,slow=24,SNR=239									
LEM				S			**Sn**	**22 51 03.2**	**+2.1**
226nm,0.3s,baz=336,slow=20,SNR=9.3									
LEM	**Lembang**	**1.10**	**42**	P			**Pn**	**22 50 47.1**	**+0.5**
LEM				S			**Sn**	**22 51 03.8**	**+2.7**
CGJI	**Cibinong**	**1.56**	**311**	P			**Pn**	**22 50 53.0**	**+0.4**
CGJI				S			**Sn**	**22 51 11.2**	**-0.6**
JCJI	**Jatiwangi**	**1.80**	**50**	P			**Pn**	**22 50 55.0**	**-0.8**
JCJI				S			**Sn**	**22 51 16.6**	**-1.0**
MDSI	**Maura Dua**	**4.13**	**319**	P			**Pn**	**22 51 29.2**	**+1.5**
PWJI	**Pagerwojo**	**4.90**	**95**	P			**Pn**	**22 51 40.3**	**+2.2**
TPI	**Tanjungpandan**	**4.92**	**9**	P			**Pn**	**22 51 39.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**27.10**	**343**	P			**P**	**22 56 00.6**	**-3.7**
1.3nm,0.3s,baz=180,slow=8.9,SNR=4.2									
CMAR				LR			LR	23 07 42.9	
comp=Z,47nm,18.8s,baz=180,slow=39									
H01W3	**Cape Leeuwin H**	**27.91**	**167**	T			T	23 25 37.4	
baz=346,slow=76,SNR=6.6									
H01W1	**Cape Leeuwin H**	**27.93**	**167**	T			T	23 25 39.0	
baz=346,slow=76,SNR=6.4									
H01W2	**Cape Leeuwin H**	**27.93**	**167**	T			T	23 25 45.7	
baz=346,slow=76,SNR=8.1									
WRA	**Warramunga Arr**	**29.28**	**117**	P			**P**	**22 56 23.6**	**-0.2**
0.7nm,0.4s,baz=287,slow=12,SNR=6.9									
ASAR	**Alice Springs**	**30.42**	**125**	P			**P**	**22 56 36.2**	**+2.4**
1.1nm,1.2s,baz=303,slow=7.8,SNR=3.9									
H08S2	**Diego Garcia H**	**34.07**	**268**	T			T	23 32 43.5	
baz=91,slow=75,SNR=21									
H08S3	**Diego Garcia H**	**34.08**	**268**	T			T	23 32 44.5	
baz=91,slow=75,SNR=20									
H08S1	**Diego Garcia H**	**34.09**	**268**	T			T	23 32 44.9	
baz=91,slow=75,SNR=22									
STKA	**Stephens Creek**	**40.30**	**131**	P			**P**	**22 57 59.9**	**+1.3**
2.7nm,0.4s,baz=289,slow=5.6,SNR=9.6									
MKAR	**Makanchi Array**	**58.45**	**340**	P			P	23 00 13.0	-3.6
0.7nm,0.5s,baz=159,slow=8.2,SNR=8.0									
GEYT	**Alibeck**	**64.17**	**319**	P			**P**	**23 00 54.6**	**-0.8**
1.1nm,0.5s,baz=142,slow=2.5,SNR=5.2									
BRTR	**Keskin Array B**	**82.17**	**312**	P			**P**	**23 02 41.2**	**-0.6**
0.6nm,0.7s,baz=124,slow=4.6,SNR=3.5									

ISCJB 17 22:59:47.1±0.5, 6°.86N±0°.02×73°.09W±0°.03, h154km±4km, mb3.7/1, Error ellipse: s-maj=5.7km s-min=3.4km az=15.6
RSNC 17 22:59:49.1±0.9, 6°.81N×73°.14W, h146km±4km, ML3.9, Mw3.9
IDC 17 22:59:50.3±6.5, 6°.82N×73°.56W, h172km±33km, mb3.4/1, mb1 3.8/2, mb1mx3.0/25, mbtmp4.1/2, Error ellipse: s-maj=221.9km s-min=37.5km az=94.0
ISC 17 22:59:47.2±1.0, 6°.84N±0°.03×73°.07W±0°.04, h157km±6km, n35, σ1ˢ29/61, 3C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**204**	↑ *eP*			**Pn**	**23 00 09.0**	**+0.1**
BARC				*eS*			**Sn**	**23 00 23.9**	**-1.5**
BARC				*i*				23 00 26.7	
comp=Z,810nm,0.3s									
GIRC	**Giron, Santand**	**0.27**	**334**	*eP*			**Pn**	**23 00 09.2**	**+0.4**
GIRC				*eS*			**Sn**	**23 00 24.0**	**-1.2**
BRRC	**Barranca, Sant**	**0.69**	**293**	↑ *iP*			**Pn**	**23 00 10.9**	**+0.4**
BRRC				*eS*			**Sn**	**23 00 27.2**	**-1.0**
BRRC				*i*				23 00 29.4	
comp=N,1μm,0.2s									
RUSC	**La Rusia**	**0.94**	**181**	↓ *iP*			**Pn**	**23 00 12.8**	**+0.1**
RUSC				*eS*			**Sn**	**23 00 30.9**	**-1.4**
TAMC	**Tame, Arauca**	**1.33**	**107**	↑ *eP*			**Pn**	**23 00 17.1**	**+1.4**
TAMC				*eS*			**Sn**	**23 00 38.6**	**+1.0**
TAMC				*i*				23 00 39.6	
comp=N,1μm,0.4s									
PTBC	**PUERTO BERRIO,**	**1.41**	**258**	↓ *eP*			**Pn**	**23 00 15.5**	**-0.9**
PTBC				*eS*			**Sn**	**23 00 37.2**	**-1.6**
PTBC				*i*				23 00 42.5	
comp=N,1μm,0.3s									
OCAC	**Ocana**	**1.42**	**350**	*eP*			**Pn**	**23 00 17.3**	**+0.6**
OCAC				*eS*			**Sn**	**23 00 39.8**	**+0.4**
OCAC				*i*				23 00 43.9	
comp=Z,647nm,0.3s									
YOPC	**Yopal, Colombi**	**1.61**	**156**	↓ *eP*			**Pn**	**23 00 19.5**	**+0.9**
YOPC				*eS*			**Sn**	**23 00 42.4**	**-0.4**
YOPC				*i*				23 00 46.8	
comp=N,744nm,0.4s									
CTAU	**Tausa, Cundina**	**1.89**	**211**	*eP*			**Pn**	**23 00 24.9**	**+2.9**
AGZ	**La Independenc**	**1.98**	**162**	↓ *eP*			**Pn**	**23 00 22.9**	**+0.3**
NORC	**Norcasia**	**2.19**	**235**	*eP*			**Pn**	**23 00 24.8**	**-0.3**
NORC				*eS*			**Sn**	**23 00 52.9**	**-1.3**
NORC				*i*				23 00 59.4	
comp=N,952nm,0.3s									
SMLC	**San Martn de**	**2.19**	**333**	*eP*			**Pn**	**23 00 25.4**	**+0.3**
SMLC				*eS*			**Sn**	**23 00 53.8**	**-0.4**
SMLC				*i*				23 00 56.3	
comp=N,1μm,0.1s									
CHIC	**Chingaza**	**2.29**	**197**	*eP*			**Pn**	**23 00 27.0**	**+0.4**
CHIC				*eS*			**Sn**	**23 00 56.2**	**-0.8**
CHIC				*i*				23 01 00.3	
comp=N,445nm,0.2s									
ROSC	**El Rosal**	**2.34**	**212**	P			**Pn**	**23 00 28.4**	**+1.2**
comp=N,86nm,0.3s,baz=74,slow=1.1,SNR=104									
ROSC				S			**Sn**	**23 00 58.5**	**+0.5**
comp=N,42nm,0.3s,baz=327,slow=23,SNR=5.7									
ROSC	**El Rosal**	**2.34**	**212**	↓ *iP*			**Pn**	**23 00 28.6**	**+1.4**
ROSC				*eS*			**Sn**	**23 01 00.4**	**+2.4**
HELC	**Santa Helena**	**2.52**	**255**	*eP*			**Pn**	**23 00 29.5**	**+0.1**
HELC				*eS*			**Sn**	**23 01 01.9**	**+0.1**
HELC				*i*				23 01 08.1	
comp=N,232nm,0.3s									
VILC	**Villavicencio,**	**2.77**	**193**	*eP*			**Pn**	**23 00 32.1**	**-0.2**
VILC				*eS*			**Sn**	**23 01 07.2**	**+0.1**
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*eP*			**Pn**	**23 00 33.0**	**+0.3**
GUY2C				*eS*			**Sn**	**23 01 09.9**	**+2.2**
RREF	**El Recreo**	**2.97**	**230**	*eP*			**Pn**	**23 00 36.1**	**+1.0**
RREF				*eS*			**Sn**	**23 01 13.3**	**+1.2**
RREF				*i*				23 01 19.9	
comp=Z,296nm,0.3s									
CODC	**Agustn Codazz**	**3.10**	**353**	*eP*			**Pn**	**23 00 36.9**	**+0.7**
CODC				*eS*			**Sn**	**23 01 13.4**	**-0.8**
CODC				*i*				23 01 20.0	
comp=N,212nm,0.4s									
DBBC	**Dabeiba**	**3.12**	**274**	*eP*			**Pn**	**23 00 36.5**	**0.0**
DBBC				*i*				23 01 15.8	
comp=Z,191nm,0.5s									
SDV	**Santo Domingo**	**3.16**	**50**	*eP*			**Pn**	**23 00 38.2**	**+1.1**
SDV				*eS*			**Sn**	**23 01 14.8**	**-1.0**
ARGC	**Ariguani, Magd**	**3.22**	**339**	*eP*			**Pn**	**23 00 39.1**	**+1.4**
ARGC				*eS*			**Sn**	**23 01 16.8**	**-0.1**
ARGC				*i*				23 01 21.3	
comp=Z,110nm,0.4s									
PRAC	**Prado**	**3.59**	**210**	*eP*			**Pn**	**23 00 41.9**	**-0.6**
PRAC				*eS*			**Sn**	**23 01 25.0**	**-0.4**
PRAC				*i*				23 01 29.1	
comp=N,194nm,0.4s									
CVALL	**Valledupar, Ce**	**3.66**	**357**	*eP*			**Pn**	**23 00 43.2**	**-0.1**
CVALL				*eS*			**Sn**	**23 01 25.7**	**-1.2**
PLMC	**San Jos del P**	**3.73**	**239**	*eP*			**Pn**	**23 00 44.7**	**+0.5**
PLMC				*eS*			**Sn**	**23 01 29.1**	**+0.7**
YOTC	**Yotoco, Valle**	**4.32**	**229**	*eP*			**Pn**	**23 00 51.5**	**-0.5**
YOTC				*eS*			**Sn**	**23 01 42.7**	**+0.3**
SMRC	**Santa Marta, M**	**4.45**	**345**	*eP*			**Pn**	**23 00 54.1**	**+0.6**
SMRC				*eS*			**Sn**	**23 01 42.7**	**-2.6**
SMRC				*i*				23 01 44.6	
comp=E,137nm,0.2s									
MACC	**Macarena, Meta**	**4.72**	**189**	*eP*			**Pn**	**23 00 55.7**	**-1.5**
MACC				*eS*			**Sn**	**23 01 46.3**	**-5.5**
MALC	**Bahia Malaga**	**5.09**	**237**	*eP*			**Pn**	**23 01 02.6**	**+0.7**
PCON	**Cinco Dias**	**5.57**	**217**	*eP*			**Pn**	**23 01 09.5**	**+0.6**
POPC	**Popayan, Colom**	**5.58**	**220**	*eP*			**Pn**	**23 01 08.6**	**0.0**
SOTA	**Rioblanco**	**5.85**	**217**	*eP*			**Pn**	**23 01 14.2**	**+1.7**
YKA	**Yellowknife Ar**	**63.27**	**340**	P			**P**	**23 09 59.3**	**+0.5**
comp=E,0.7nm,0.5s,baz=132,slow=6.3,SNR=9.4									
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc			**PKPbc**	**23 19 17.7**	**-0.3**
comp=E,0.3nm,0.8s,baz=110,slow=4.0,SNR=3.0									

EAF 17 23:07:44.5±0.9, 4°.94S×35°.21E, h38km±558km, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KOND	**Kondoa**	**0.58**	**87**	*i* P			Pn	23 07 56.1	-0.4
KIBA	**Kibaya**	**1.41**	**105**	*i* P			Pn	23 08 08.1	+0.4
KIBA				*i* S			Sn	23 08 23.8	-1.3

ISC 17 23:12:02.1±0.9, 50°.26N±0°.04×18°.73E±0°.02, h0km, n16, σ0ˢ60/29, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.17**	**81**	*ePg*			**Pg**	**23 12 05.8**	**+0.5**
CHZP				*eSg*			**Sg**	**23 12 08.4**	**+0.9**
OKC	**Ostrava-Krasne**	**0.57**	**222**	*ePG*			**Pg**	**23 12 13.8**	**+0.8**
OKC				*eSG*			**Sg**	**23 12 21.9**	**+1.5**
comp=Z,9.0nm,0.7s									
OJC	**Ojcow**	**0.69**	**93**	*ePg*			**Pg**	**23 12 15.2**	**0.0**
OJC				*eSg*			**Sg**	**23 12 24.2**	**+0.1**
MORC	**Moravsky Berou**	**0.91**	**238**	*ePG*			**Pg**	**23 12 19.7**	**+0.2**
MORC				*eSG*			**Sg**	**23 12 31.3**	**0.0**
LANS	**Liptovska Anna**	**1.21**	**157**	*ePG*			**Pg**	**23 12 25.4**	**+0.1**
LANS				*eSG*			**Sb**	**23 12 41.7**	**-0.5**
NIE	**Niedzica**	**1.32**	**129**	*ePg*			**Pg**	**23 12 27.1**	**-0.3**
NIE				*eSg*			**Sb**	**23 12 45.6**	**+0.3**
DPC	**Dobruska-Polom**	**1.55**	**274**	*ePG*			**Pn**	**23 12 30.6**	**-0.4**
DPC				*eSG*			**Sn**	**23 12 51.9**	**+0.1**
JAVC	**Velka Javorina**	**1.57**	**207**	*ePN*			**Pn**	**23 12 31.5**	**+0.3**
OSTC	**Ostas**	**1.64**	**281**	*ePG*			**Pn**	**23 12 32.1**	**-0.1**
OSTC				*eSG*			**Sn**	**23 12 54.2**	**+0.2**
comp=Z,1.2nm,0.2s									
KSP	**Ksiaz**	**1.66**	**291**	*ePg*			**Pg**	**23 12 33.8**	**-0.1**
KSP				*eSg*			**Sg**	**23 12 55.7**	**+0.3**
VRAC	**Vranov**	**1.69**	**236**	*ePN*			**Pn**	**23 12 33.1**	**+0.3**
VRAC				*eSG*			**Sn**	**23 12 55.3**	**+0.2**
CHVC	**Chvalec**	**1.74**	**282**	*ePG*			**Pn**	**23 12 33.1**	**-0.6**
CHVC				*eSG*			**Sn**	**23 12 57.1**	**+0.5**
comp=Z,2.3nm,0.4s									
VYHS	**Vyhne**	**1.77**	**178**	*ePN*			**Pn**	**23 12 33.3**	**-0.7**
VYHS				*eSN*			**Sn**	**23 12 56.1**	**-1.2**
KRUC	**Moravsky**	**1.94**	**233**	*ePN*			**Pn**	**23 12 36.5**	**+0.2**
KRUC				*eSG*			**Sb**	**23 13 03.1**	**+0.1**
PRU	**Pruhonice**	**2.71**	**266**	*eSG*			**Sg**	**23 13 28.2**	**-1.0**
KHC	**Kasperske Hory**	**3.53**	**253**	*eSG*			**Sg**	**23 13 54.5**	**-1.1**
comp=Z,3.0nm,0.5s									

ISCJB 17 23:16:38.6±0.7, 41°.98N±0°.03×46°.11E±0°.05, h9km±12km, Error ellipse: s-maj=7.5km s-min=5.1km az=147.5
TIF 17 23:16:38.0, 41°.99N×46°.06E, h15km±3km
NORS 17 23:16:39.9±0.0, 42°.05N×46°.20E, h32km, MPVA3.0
ISC 17 23:16:38.9±1.1, 41°.97N±0°.03×46°.08E±0°.03, h10km±11km, n11, σ0ˢ86/21, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDFL	**Dedoflistskaro**	**0.52**	**177**	P			**Pg**	**23 16 49.2**	**+0.2**
BTLR	**Botlikh**	**0.71**	**9**	*i* Pg			**Pg**	**23 16 51.9**	**-0.8**
BTLR				*eSg*			**Sg**	**23 17 01.0**	**-0.9**
XNZR	**Khunzakh**	**0.74**	**39**	*ePg*			**Pg**	**23 16 53.2**	**-0.1**
XNZR				*eSg*			**Sg**	**23 17 03.1**	**+0.1**
GNBR	**Gunib**	**0.78**	**57**	*i* Pg			**Pg**	**23 16 54.4**	**+0.4**
GNBR				*eSg*			**Sb**	**23 17 05.2**	**-0.1**
BTNK	**Botanikuri**	**1.00**	**254**	P			**Pg**	**23 16 57.4**	**-0.7**
BTNK				S			**Sb**	**23 17 12.0**	**+0.5**
TBLG	**Delisi**	**1.03**	**257**	P			**Pg**	**23 16 58.0**	**-0.7**
TBLG				S			**Sg**	**23 17 12.3**	**+0.2**
DBC	**Dubki**	**1.19**	**28**	*ePg*			**Pb**	**23 17 00.9**	**-0.7**
DBC				*eSg*			**Sb**	**23 17 17.0**	**-0.1**
GROC	**Groznyy**	**1.25**	**350**	*ePg*			**Pg**	**23 17 02.9**	**-0.1**
GROC				*eSg*			**Sn**	**23 17 20.1**	**+0.7**
GUDG	**Gudauri**	**1.29**	**293**	P			**Pn**	**23 17 02.9**	**-0.3**
GUDG				S			**Sb**	**23 17 19.6**	**-0.5**
AKT	**Akhty**	**1.33**	**111**	*ePg*			**Pg**	**23 17 04.6**	**+0.2**
AKT				*eSg*			**Sg**	**23 17 22.5**	**+0.8**
KMGR	**Komgaron**	**1.41**	**321**	*ePg*			**Pg**	**23 17 07.3**	**+1.3**
KMGR				*eSg*			**Sg**	**23 17 26.9**	**+2.5**

IDC 17 23:17:07.4±0.9, 55°.95S×27°.18W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.9/25, mbtmp4.2/4, Error ellipse: s-maj=35.0km s-min=27.5km az=65.0
ISCJB 17 23:17:14.9±0.7, 55°.85S±0°.10×27°.3W±0°.2, h63km, mb4.2/7, Error ellipse: s-maj=19.1km s-min=9.9km az=141.4
NEIC 17 23:17:17.8±2.0, 55°.99S×27°.35W, h78km±8km, mb4.1/5, Error ellipse: s-maj=20.0km s-min=14.3km az=103.0
ISC 17 23:17:15.8±0.7, 55°.8S±0°.1×27°.1W±0°.1, h63km, n23, σ1ˢ06/23, mb4.2/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.59**	**282**	*ePn*			**Pn**	**23 18 36.2**	**0.0**
VNA3	**Neumayer Olymp**	**17.19**	**161**	P			**P**	**23 21 12.9**	**+0.9**
VNA2	**Neumayer--Watz**	**17.38**	**158**	P			**P**	**23 21 15.3**	**+1.2**
baz=314,slow=13									
SNAA	**Sanae**	**18.93**	**156**	P			**Pn**	**23 21 32.3**	**-0.2**
SNAA	**Sanae**	**18.93**	**156**	*eP*			**Pn**	**23 21 32.2**	**-0.2**
4.6nm,0.5s									
GO09	**Cerro Castillo**	**26.86**	**261**	*eP*			**P**	**23 22 52.1**	**+2.0**
5.8nm,0.8s									
TRQA	**Tornquist**	**29.26**	**293**	*eP*			**P**	**23 23 11.4**	**-0.2**
1.5nm,0.9s									
QSPA	**South Pole Qui**	**34.42**	**180**	*eP*			**P**	**23 23 56.6**	**-0.2**
3.9nm,0.5s									
LVC	**Limon Verde**	**45.22**	**300**	P			**P**	**23 25 26.7**	**-0.2**
3.4nm,0.7s,baz=90,slow=5.1,SNR=4.2									
VNDA	**Vanda**	**46.79**	**183**	P			**P**	**23 25 37.3**	**-0.9**
1.9nm,0.6s,baz=185,slow=6.5,SNR=20									
VNDA	**Vanda**	**46.79**	**183**	*eP*			**P**	**23 25 38.1**	**-0.1**
2.2nm,0.8s									
LPAZ	**La Paz**	**50.27**	**305**	P			**P**	**23 26 06.9**	**+0.5**
1.3nm,0.3s,baz=148,slow=19,SNR=10									
TORD	**Torodi Ar. Bea**	**72.85**	**29**	P			**P**	**23 28 39.1**	**+1.5**
0.6nm,0.5s,baz=199,slow=6.3,SNR=11									
TOA1	**Torodi Ar. Sit**	**72.86**	**29**	*eP*			**P**	**23 28 39.1**	**+1.5**
ARA0	**ARCESS Array S**	**130.73**	**22**	*ePKPdf*			**PKiKP**	**23 36 17.8**	**-1.0**
ARCES	**ARCESS Array B**	**130.73**	**22**	PKP			**PKiKP**	**23 36 17.8**	**-1.0**
8.4nm,0.4s,baz=211,slow=1.1,SNR=4.9									
INK	**Inuvik**	**145.65**	**321**	PKPbc			**PKPab**	**23 36 45.4**	**-0.6**
1.8nm,0.6s,baz=344,slow=6.0,SNR=5.7									
KNK	**Knik Glacier**	**149.87**	**305**

comp=Z,29μm,0.2s
KDMR Kurdemir 1.56 348 *e*Pn **Pb 23 34 34.6 -1.0**
KDMR Kurdemir 1.56 348 Pn **Pn 23 34 34.2 +1.4**
SNR=8.3
KDMR Sn **Sb 23 34 55.7 +0.8**
ZRD Zardab 1.59 334 *e*Pn **Pb 23 34 35.3 -0.9**
ZRD Zardab 1.59 334 Pn **Pb 23 34 35.1 -1.2**
SNR=5.2
ZRD Sn **Sb 23 34 57.6 +1.6**
GBS Qobustan 1.70 9 *e*Pn **Pb 23 34 37.7 -0.4**
GBS Qobustan 1.70 9 Pn **Pb 23 34 37.8 -0.4**
SNR=8.9
GBS Sn **Sb 23 35 00.1 +1.0**
BRDA Brd 1.79 322 *e*Pn **Pn 23 34 37.9 +1.8**
BRDA Brd 1.79 322 Pn **Pn 23 34 38.0 +1.8**
SNR=27
BRDA Sn **Sb 23 35 02.6 +1.0**
PQL Pirkuli 1.93 360 *e*Pn **Pn 23 34 40.1 +1.8**
PQL Pirkuli 1.93 360 Pn **Pn 23 34 40.0 +1.8**
SNR=23
PQL Sn **Sb 23 35 07.0 +1.1**
IML Ismayilli 1.96 351 *e*Pn **Pn 23 34 40.1 +1.5**
IML Ismayilli 1.96 351 Pn **Pn 23 34 40.3 +1.7**
SNR=23
IML Sn **Sb 23 35 06.2 -0.5**
ATGJ Altiaghaj 2.02 7 *e*Pn **Pb 23 34 43.5 -0.1**
ATGJ Altiaghaj 2.02 7 Pn **Pn 23 34 41.4 +2.0**
SNR=15
ATGJ Sn **Sb 23 35 09.4 +1.0**
ITBZ Tabriz 2.03 253 *e*Pn **Pn 23 34 41.4 +1.9**
ITBZ IAMB IAmb 23 35 11.5
comp=Z,4μm,0.4s
ORD Ordubad 2.04 273 *e*Pn **Pn 23 34 41.1 +1.5**
ORD Ordubad 2.04 273 Pn **Pn 23 34 41.3 +1.6**
SNR=35
ORD Sn **Sn 23 35 07.2 +3.1**
QBL Gabala 2.17 344 *e*Pn **Pn 23 34 43.6 +2.1**
QBL Gabala 2.17 344 Pn **Pn 23 34 43.5 +2.1**
SNR=16
QBL Sn **Sb 23 35 10.4 -2.2**
ZNJK Zanjan 2.18 178 *e*Pn **Pn 23 34 43.3 +1.6**
SIZA Siyzn 2.23 6 *e*Pn **Pb 23 34 47.4 +0.2**
SIZA Siyzn 2.23 6 Pn **Pn 23 34 44.3 +2.0**
SNR=17
SIZA Sg **Sb 23 35 17.2 +2.8**
MNGR Mingechevir, A 2.25 329 Pn **Pn 23 34 44.1 +1.7**
MNGR Sg **Sb 23 35 16.0 +1.3**
IMRD Marand 2.27 267 *e*Pn **Pn 23 34 44.8 +1.9**
IMRD IAMB IAmb 23 35 21.0
comp=Z,9μm,0.6s
IAZR Azarshahr 2.38 241 *e*Pn **Pn 23 34 46.7 +2.3**
IAZR IAMB IAmb 23 34 54.3
comp=Z,4μm,0.4s
ISHB Shabestar 2.41 257 *e*Pn **Pn 23 34 47.5 +2.6**
ISHB IAMB IAmb 23 35 24.1
comp=Z,2μm,0.4s
SBZ Shahbuz 2.44 284 *e*Pn **Pn 23 34 48.1 +3.0**
SBZ Shahbuz 2.44 284 Pn **Pn 23 34 46.8 +1.6**
SNR=18
SBZ Sn **Sn 23 35 17.4 +3.6**
NAX Nakhchivan 2.44 278 *e*Pn **Pn 23 34 48.4 +3.2**
NAX Nakhchivan 2.44 278 Pg **Pb 23 34 48.9 -1.9**
SNR=6.0
NAX Sg **Sb 23 35 20.5 -0.1**
QUBA Quba, Azerbaij 2.50 358 Pg **Pb 23 34 51.7 0.0**
SNR=9.9
QUBA Sn **Sb 23 35 18.6 -3.4**
GANJ Ganja 2.51 316 *e*Pn **Pn 23 34 47.5 +1.4**
GANJ Ganja 2.51 316 Pn **Pn 23 34 47.2 +1.2**
SNR=13
GANJ Sn **Sn 23 35 17.6 +1.9**
QUB Quba 2.53 356 *e*Pn **Pb 23 34 50.4 -1.8**
SEKA Sheki 2.59 336 *e*Pn **Pn 23 34 48.4 +1.2**
SEKA Sheki 2.59 336 Pn **Pn 23 34 48.4 +1.2**
SNR=27
SEKA Sn **Sn 23 35 19.9 +2.3**
QSAR Qusar 2.67 354 *e*Pn **Pn 23 34 51.4 +3.1**
QSAR Qusar 2.67 354 Pn **Pn 23 34 50.9 +2.7**
SNR=7.8
QSAR Sn **Sb 23 35 25.0 -2.0**
IGZV Ghazvin 2.78 152 *e*Pn **Pn 23 34 49.7 -0.2**
IGZV IAMB IAmb 23 35 23.9
comp=Z,5μm,0.1s
GDB GEDABAY 2.88 311 *e*Pn **Pn 23 34 52.3 +1.0**
GDB GEDABAY 2.88 311 Pn **Pn 23 34 53.0 +1.7**
SNR=13
GDB Sn **Sn 23 35 28.0 +3.0**
QALM Alamut, Qazvin 2.91 146 *e*Pn **Pn 23 34 52.1 +0.3**
HYR Heyderabad 3.04 288 Pg **Pb 23 34 59.7 -1.1**
HYR Sg **Sb 23 35 39.7 +2.1**
MAKU Maku 3.09 281 *e*Pn **Pn 23 34 57.5 +3.3**
ZKTA Zakatala 3.17 332 Pn **Pn 23 34 57.6 +2.5**
SNR=12
ZKTA Sn **Sn 23 35 34.8 +2.9**
DDFL Dedoflistskaro 3.22 324 P **Pn 23 34 55.3 -0.5**
QABG Abgarm-Qazvin 3.23 166 *e*Pn **Pn 23 34 57.4 +1.2**
QZX Qazax, Azerbai 3.32 313 *e*Pn **Pn 23 34 59.8 +2.6**
QZX Qazax, Azerbai 3.32 313 Pn **Pn 23 34 59.6 +2.4**
SNR=6.5
QZX Sn **Sn 23 35 40.2 +4.6**
CHTH Charan 3.56 145 *e*Pn **Pn 23 35 00.9 +0.2**
IRAZ Razeghan 3.60 163 *e*Pn **Pn 23 35 02.4 +1.2**
TBLG Delisi 4.12 315 P **Pb 23 35 19.4 +0.1**
ILIN Lien 4.14 199 *e*Pn **Pn 23 35 12.4 +3.7**
ILIN IAMB IAmb 23 35 13.3
comp=Z,608nm,0.2s
IDMV Damavand 4.26 139 *e*Pn **Pn 23 35 13.8 +3.4**
IDMV IAMB IAmb 23 36 07.0
comp=Z,280nm,0.4s
IDHR Dehrash 4.51 204 *e*Pn **Pn 23 35 16.9 +3.1**
IDHR IAMB IAmb 23 35 19.2
comp=Z,0.0nm,0.2s
IVIS Veis 4.54 199 *e*Pn **Pn 23 35 18.1 +4.0**
IFIR Firoozkooh 4.61 133 *e*Pn **Pn 23 35 18.1 +3.0**
GUDG Gudauri 4.78 320 P **Pn 23 35 20.9 +3.4**
ISHM Shahmirzad 4.81 128 *e*Pn **Pn 23 35 20.6 +2.6**
ISHM IAMB IAmb 23 36 18.1
comp=Z,1μm,0.2s
IKIA Kiasar 4.82 122 *e*Pn **Pn 23 35 20.2 +2.1**
IANJ Anjilo 5.42 127 *e*Pn **Pn 23 35 29.1 +2.8**
IANJ IAMB IAmb 23 35 40.8
comp=Z,170nm,0.2s
MRVT Maraveh tapeh 6.01 99 *e*Pn **Pn 23 35 33.9 -0.3**
IKLH Kolahrood 6.02 156 *e*Pn **Pn 23 35 37.6 +3.0**
IZEF Zefreh 6.67 152 *e*Pn **Pn 23 35 45.9 +2.5**
GEYT Alibeck 7.53 94 Pn **Pn 23 35 54.3 -0.7**
comp=Z,2.0nm,0.3s,baz=284,slow=15,SNR=41
GEYT Sn Sn 23 37 12.0 -7.2
comp=Z,0.5nm,0.3s,baz=270,slow=14,SNR=2.7
GYA0B ALIBECK ARRAY 7.53 94 ⇑P **Pn 23 35 53.3 -1.7**
GYA0B ⇑S **Sn 23 37 15.5 -3.7**
ISFR Sfrayin 7.64 101 *e*Pn **Pn 23 35 57.6 +0.9**
IKRD Kardeh 8.11 102 *e*Pn Pn 23 36 14.6 +11
IPAY Payeh 8.58 103 *e*Pn **Pn 23 36 11.1 +1.4**
IMYA Miami 9.46 102 *e*Pn **Pn 23 36 22.7 +1.1**
AB31 Akbulak array 13.20 34 ⇑P **Pn 23 37 10.1 -2.3**
comp=Z,0.5nm,0.5s,baz=209,slow=14,SNR=19
AB31 ⇑S Sn 23 39 28.3 -10
comp=Z,0.5nm,0.4s,baz=224,slow=24,SNR=3.8
AKTO Aktyubinsk 13.36 27 ⇓P **Pn 23 37 11.9 -2.9**
comp=Z,0.7nm,0.4s
AKTO ⇑S Sn 23 39 32.9 -9.1
comp=Z,1.0nm,0.5s
KK31 Karatay Array 17.07 69 ⇑P **Pn 23 38 00.8 -2.7**
comp=Z,0.8nm,0.7s,baz=269,slow=13,SNR=7.8
AAK Ala-Archa 19.95 71 ⇑P **P 23 38 33.7 -3.1**
comp=Z,4.1nm,0.6s
BVA3 Borovoye Array 20.62 39 ⇑P **P 23 38 44.5 +0.5**
comp=Z,2.5nm,0.7s
KLMR Klimovskoe 22.75 348 *e*P P 23 39 14.4 +7.8
KLMR AMP 23 39 18.6
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 25.80 61 P **P 23 39 37.9 +2.4**
comp=Z,3.1nm,0.8s,baz=256,slow=9.8,SNR=15
FINES FINESS Array B 26.56 336 P P 23 39 52.4 +10
comp=Z,2.2nm,0.9s,baz=130,slow=13,SNR=3.8

MEX 17 23:36:05.8±0.5, 16°.68N×99°.18W, h16km±20km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.05**	**34**	*e*P			Pb	23 36 22.2	-3.6
TLIG				*i* S			Sb	23 36 34.9	-4.5
CAIG	**El Cayaco**	**1.10**	**289**	*e*P			Pb	23 36 22.6	-3.8
CAIG				*i* S			Sb	23 36 35.8	-4.8
MEIG	**Mezcala**	**1.31**	**341**	*e*P			Pn	23 36 26.2	-3.3
MEIG				*e*S			Sb	23 36 41.1	-5.5
PLIG	**Platanillo**	**1.73**	**350**	*i* P			Pn	23 36 28.2	-7.1
ARIG	**Puente Sto Nin**	**1.94**	**325**	*e*P			Pn	23 36 36.7	-1.5

IDC 17 23:51:29.6±27.0, 16°.52S×173°.05W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.7/32, mbtmp4.2/4, Error ellipse: s-maj=512.3km s-min=178.0km az=72.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.74**	**258**	P			P	23 58 56.3	+0.4
0.8nm,0.4s,baz=102,slow=12,SNR=3.9									
STKA	**Stephens Creek**	**43.79**	**241**	P			P	23 59 36.4	-0.9
0.5nm,0.2s,baz=69,slow=8.6,SNR=2.9									
WRA	**Warramunga Arr**	**49.93**	**258**	P			P	00 00 25.7	+0.1
1.0nm,0.3s,baz=91,slow=7.3,SNR=7.7									
ASAR	**Alice Springs**	**50.10**	**253**	P			P	00 00 26.6	-0.2
2.2nm,0.6s,baz=91,slow=7.5,SNR=22									

*IDC **18** 00:03:55.0±1.3, 5°.21S×145°.58E, h0km, mb3.5/3, mb1 3.9/6, mb1mx3.6/44, mbtmp3.8/6, ML3.5/3, Error ellipse: s-maj=27.1km s-min=22.1km az=49.0*
*ISCJB **18** 00:04:06.5±1.2, 5°.8S×0°.1×145°.9E±0°.1, h100km, mb3.4/3, Error ellipse: s-maj=23.0km s-min=9.9km az=149.3*
ISC 18 00:04:05.9±1.2, 5°.7S±0°.1×145°.9E±0°.2, h100km, n9, σ1°.74/9, mb3.6/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.87**	**161**	Pn			**Pn**	**00 05 04.8**	**+1.5**
23nm,0.3s,baz=3.7,slow=7.5,SNR=20									
PMG				Sn			**Sn**	**00 05 46.8**	**-1.0**
26nm,0.3s,baz=148,slow=19,SNR=11									
JAY	**Jayapura**	**6.06**	**302**	Pg			Pn	00 05 36.0	+2.8
0.8nm,0.3s,baz=53,slow=10,SNR=3.1									
JAY				Lg			Lg	00 06 51.4	
0.8nm,0.3s,baz=122,slow=15,SNR=2.7									
CTA	**Charters Tower**	**14.27**	**179**	Pn			**P**	**00 07 26.6**	**-1.0**
0.4nm,0.3s,baz=0.7,slow=13,SNR=2.1									
WRA	**Warramunga Arr**	**18.03**	**217**	P			**Pn**	**00 08 10.3**	**+0.2**
0.3nm,0.3s,baz=40,slow=11,SNR=2.4									
ASAR	**Alice Springs**	**21.23**	**212**	P			**P**	**00 08 45.5**	**+1.5**
0.4nm,0.5s,baz=47,slow=8.0,SNR=7.4									
FITZ	**Fitzroy Crossi**	**23.26**	**236**	P			**P**	**00 09 05.0**	**+0.1**
2.7nm,0.9s,baz=66,slow=11,SNR=1.6									
ILAR	**Eielson Array**	**85.68**	**23**	P			**P**	**00 16 34.7**	**+1.4**
0.4nm,0.6s,baz=254,slow=4.9,SNR=4.4									
TORD	**Torodi Ar. Bea**	**143.94**	**284**	PKP			**PKiKP**	**00 23 31.4**	**-2.8**
0.3nm,0.7s,baz=66,slow=2.7,SNR=1.8									
SIV	**San Ignacio**	**145.69**	**129**	PKPbc			**PKiKP**	**00 23 36.7**	**-1.2**
baz=264,slow=4.6									

*IDC **18** 00:07:22.5±4.5, 4°.95S×104°.44E, h124km±37km, mb3.5/5, mb1 3.7/6, mb1mx3.3/46, mbtmp3.9/6, Error ellipse: s-maj=65.6km s-min=26.5km az=57.0*
*ISCJB **18** 00:07:25.9±0.6, 5°.05S±0°.07×104°.73E±0°.08, h100km, mb3.8/5, Error ellipse: s-maj=12.8km s-min=6.8km az=140.2*
*DJA **18** 00:07:25.3±0.4, 5°.S±3°.×10°.5E±°, h104km±4km, M3.7/10, mB5.9/1, MLv3.7/10, Mw(mB)5.5/1*
ISC 18 00:07:24.2±0.9, 5°.15S±0°.07×104°.62E±0°.07, h100km, n16, σ2°.87/19, mb3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KLI	**Kotabumi**	**0.37**	**39**	P			**Pn**	**00 07 42.1**	**+2.9**
KLI				S			**Sn**	**00 07 55.3**	**+4.9**
KASI	**Kota Agung**	**0.39**	**198**	P			**Pn**	**00 07 41.9**	**+2.6**
KASI				S			**Sn**	**00 07 55.0**	**+4.5**
LWLI	**Liwa**	**0.57**	**284**	P			**Pn**	**00 07 43.0**	**+2.3**
MDSI	**Maura Dua**	**0.80**	**327**	P			**Pn**	**00 07 44.3**	**+1.8**
MDSI				S			**Sn**	**00 07 59.5**	**+3.2**
LHSI	**Lahat**	**1.71**	**320**	P			**Pn**	**00 07 54.1**	**+1.0**
CGJI	**Cibinong**	**1.80**	**144**	P			**Pn**	**00 07 56.1**	**+1.8**
CGJI				S			**Sn**	**00 08 20.2**	**+3.1**
LEM	**Lembang**	**3.41**	**119**	P			**Pn**	**00 08 17.8**	**+2.1**
5.8nm,0.3s,baz=309,slow=6.1,SNR=8.9									
LEM	**Lembang**	**3.41**	**119**	P			**Pn**	**00 08 18.9**	**+3.2**
TPI	**Tanjungpandan**	**3.85**	**52**	P			**Pn**	**00 08 22.7**	**+1.3**
CISI	**Cisompet, Garu**	**3.97**	**127**	P			**Pn**	**00 08 23.3**	**+0.2**
SDSI	**Sungai Dareh**	**5.27**	**323**	P			**Pn**	**00 08 40.6**	**0.0**
WRA	**Warramunga Arr**	**32.43**	**120**	P			**P**	**00 13 42.6**	**-2.5**
0.7nm,0.3s,baz=294,slow=11,SNR=2.0									
ASAR	**Alice Springs**	**33.68**	**126**	P			**P**	**00 13 54.1**	**-1.9**
0.4nm,0.3s,baz=297,slow=7.9,SNR=5.8									
STKA	**Stephens Creek**	**43.63**	**132**	P			**P**	**00 15 17.5**	**-1.4**
1.8nm,0.4s,baz=293,slow=7.7,SNR=8.5									
MKAR	**Makanchi Array**	**55.38**	**342**	P			P	00 16 42.0	-5.9
0.2nm,0.4s,baz=144,slow=7.3,SNR=2.0									
VNDA	**Vanda**	**78.21**	**169**	P			**P**	**00 19 09.0**	**-3.3**
0.5nm,0.5s,baz=287,slow=7.4,SNR=9.9									

*JMA **18** 00:20:54.0±0.2, 37°.62N×134°.41E, h426km, M3.5*
*ISCJB **18** 00:20:55.1±0.5, 37°.75N±0°.07×134°.39E±0°.07, h400km, mb3.0/1, Error ellipse: s-maj=9.0km s-min=7.8km az=179.7*
*IDC **18** 00:20:55.1±2.0, 37°.64N×134°.49E, h416km±29km, mb2.4/1, mb1 3.0/6, mb1mx2.7/41, mbtmp3.8/6, Error ellipse: s-maj=39.2km s-min=26.8km az=161.0*
ISC 18 00:20:55.7±1.1, 37°.70N±0°.10×134°.45E±0°.08, h400km, n22, σ0°.65/24, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JOI	**OKI**	**1.71**	**215**	P			**Pn**	**00 21 50.0**	**0.0**
JKY	**Yasaka**	**2.14**	**166**	P			**Pn**	**00 21 52.9**	**+0.3**
JSZ	**Suzu**	**2.33**	**95**	P			**Pn**	**00 21 54.8**	**+1.0**
JWT	**Wachi**	**2.54**	**162**	P			**Pn**	**00 21 55.8**	**+0.4**
JHS	**Saijyo**	**2.91**	**202**	P			**Pn**	**00 21 58.5**	**+0.2**
MJAR	**Matsushiro Arr**	**3.22**	**110**	P			**Pn**	**00 22 01.2**	**+0.4**
0.1nm,0.3s,baz=299,slow=12,SNR=5.2									
JIE	**Ise**	**3.78**	**150**	P			**Pn**	**00 22 06.0**	**+0.2**
JAG	**Ashikaga**	**4.20**	**106**	P			**Pn**	**00 22 10.1**	**+0.4**
JAG				S			**S**	**00 23 09.9**	**+0.2**
JOD2	**Odawara 2**	**4.46**	**122**	P			**Pn**	**00 22 12.4**	**+0.1**
JFT	**Otama**	**4.68**	**90**	P			**Pn**	**00 22 15.2**	**+0.8**
JMM	**Marumori**	**5.03**	**86**	P			**Pn**	**00 22 18.1**	**+0.2**
JRG	**Rokugo**	**5.13**	**69**	P			**Pn**	**00 22 19.6**	**+0.6**
JRG				S			**S**	**00 23 26.2**	**-0.6**
KSRS	**Korea Array**	**5.19**	**269**	P			**Pn**	**00 22 20.2**	**+0.6**
1.4nm,0.3s,baz=88,slow=11,SNR=68									
JIW	**Iwasaki**	**5.19**	**55**	P			**Pn**	**00 22 21.4**	**+1.8**
JMK	**Ichinoseki**	**5.47**	**75**	P			**Pn**	**00 22 22.9**	**+0.4**
BSO1	**Boso 1**	**6.09**	**118**	P			**Pn**	**00 22 28.0**	**-0.8**
JOT	**Ohata**	**6.28**	**52**	P			**Pn**	**00 22 31.2**	**-0.1**
JKB	**Kayabe**	**6.57**	**48**	P			**Pn**	**00 22 34.6**	**+0.2**
USRK	**Ussuriysk Ar.**	**6.75**	**345**	P			**P**	**00 22 37.2**	**+0.2**
1.4nm,0.3s,baz=170,slow=10,SNR=21									
ASAJ	**Asahikawa**	**8.89**	**41**	P			**Pn**	**00 23 00.5**	**-0.2**
6.1nm,0.3s,baz=222,slow=14,SNR=14									
KLR	**Kul'dur**	**11.69**	**351**	P			**P**	**00 23 31.5**	**-0.2**
0.7nm,0.3s,baz=171,slow=12,SNR=8.2									
SONM	**Songino Array**	**22.83**	**305**	P			**P**	**00 25 24.8**	**-1.1**
0.2nm,0.3s,baz=138,slow=15,SNR=1.9									

*IDC **18** 00:21:46.6±0.8, 33°.27N×137°.10E, h0km, mb3.9/11, mb1 3.9/16, mb1mx3.8/41, mbtmp3.8/16, ML3.1/5, MS3.0/6, Ms1 3.0/6, ms1mx2.7/44, Error ellipse: s-maj=19.6km s-min=17.3km az=77.0*
*JMA **18** 00:21:47.8±0.1, 33°.27N×137°.11E, h46km±1km, M3.5*
*ISCJB **18** 00:21:48.5±0.7, 33°.34N±0°.04×137°.09E±0°.03, h26km±4km, mb4.0/19, MS3.4/2, Error ellipse: s-maj=6.0km s-min=4.2km az=176.6*
*NEIC **18** 00:21:49.4±2.5, 33°.30N×137°.11E, h20km±7km, mb4.3/9, Error ellipse: s-maj=14.3km s-min=8.1km az=165.0*
ISC 18 00:21:47.6±1.4, 33°.34N±0°.05×137°.08E±0°.03, h9km±8km, n65, σ1°.30/69, mb4.1/19, 12C, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**0.38**	**319**	⇑P			**Pn**	**00 21 58.0**	**-1.0**
TTO1				X				00 22 06.1	
TTO2	**TONANKAI O.B.S**	**0.40**	**354**	⇑P			**Pn**	**00 21 58.4**	**-0.9**
TTO2				X				00 22 07.2	
TTO3	**TONANKAI O.B.S**	**0.59**	**27**	⇑P			**Pb**	**00 22 00.8**	**+0.8**
TK01	**Tokai 1**	**0.60**	**45**	P			**Pb**	**00 22 00.3**	**+0.2**
TK01				X				00 22 09.5	
TTO4	**TONANKAI O.B.S**	**0.77**	**30**	⇑P			**Pb**	**00 22 03.0**	**0.0**
TTO4				X				00 22 14.0	
TK02	**Tokai 2**	**0.83**	**43**	P			**Pg**	**00 22 03.6**	**+0.1**
TK02				X				00 22 15.4	
JMMH	**Miemihama**	**1.00**	**299**	P			**Pg**	**00 22 06.6**	**-0.2**
JMMH				S			**Sg**	**00 22 20.1**	**+0.2**
TTO5	**TONANKAI O.B.S**	**1.05**	**30**	⇑P			**Pg**	**00 22 07.0**	**-0.8**
JIE	**Ise**	**1.09**	**344**	⇑P			**Pb**	**00 22 08.5**	**-0.2**
JIE				S			**Sg**	**00 22 22.9**	**+0.1**
TK03	**Tokai 3**	**1.11**	**42**	P			**Pb**	**00 22 07.7**	**-1.1**
TK03				S			**Sb**	**00 22 22.3**	**-1.0**
JKN2	**Miekihoku**	**1.12**	**323**	⇑P			**Pb**	**00 22 08.4**	**-0.8**
JKN2				S			**Sb**	**00 22 22.5**	**-1.4**
TK04	**Tokai 4**	**1.24**	**32**	P			**Pn**	**00 22 09.8**	**-1.2**
TK04				S			**Sb**	**00 22 25.6**	**-1.5**
JAA	**Atsumi**	**1.29**	**2**	⇑P			**Pn**	**00 22 10.8**	**-1.0**
JAA				S			**Sb**	**00 22 27.2**	**-1.6**
JTNC	**Tanabenakahech**	**1.32**	**292**	P			**Pn**	**00 22 11.0**	**-1.2**
JTNC				S			**Sb**	**00 22 27.1**	**-2.4**
TSUJ	**Tsu 2**	**1.47**	**338**	⇑P			**Pn**	**00 22 13.8**	**-0.5**
TSUJ				S			**Sn**	**00 22 32.1**	**-1.7**
JWY	**Kouya**	**1.52**	**306**	⇑P			**Pn**	**00 22 14.4**	**-0.6**
JWM	**Minabe**	**1.53**	**290**	⇑P			**Pn**	**00 22 14.1**	**-1.0**
JWM				S			**Sn**	**00 22 32.4**	**-2.7**
INU	**Inuyama**	**2.00**	**359**	*e*Pn			**Pn**	**00 22 21.2**	**-0.5**
INU				*e*Sn			**Sn**	**00 22 44.6**	**-2.3**
JHJ	**Hachijo jima 2**	**2.28**	**95**	Pn			**Pn**	**00 22 24.7**	**-0.7**
16nm,0.3s,baz=218,slow=12,SNR=3.6									
JHJ				Sn			**Sn**	**00 22 49.7**	**-3.9**
15nm,0.3s,baz=147,slow=20,SNR=3.6									
JHJ2	**Mitsune**	**2.31**	**95**	*e*Pn			**Pn**	**00 22 24.3**	**-1.5**
MJAR	**Matsushiro Arr**	**3.33**	**16**	Pn			**Pn**	**00 22 40.6**	**+0.7**
0.6nm,0.3s,baz=201,slow=14,SNR=34									
MJAR				LR			LR	00 23 56.9	
comp=Z,87nm,21.2s,baz=195,slow=38									
MAJO	**Matsushiro**	**3.33**	**16**	*e*Pn			**Pn**	**00 22 41.0**	**+1.1**
MAT	**Matsushiro**	**3.33**	**16**	P			**Pn**	**00 22 40.7**	**+0.8**
MAT				*e*S			**Sn**	**00 23 16.9**	**-2.7**
MJB9	**Matsu-Tunnel**	**3.33**	**16**	*e*Pn			**Pn**	**00 22 40.4**	**+0.5**
JNU	**Nakatsue**	**5.20**	**269**	Pn			**Pn**	**00 23 04.3**	**-1.4**
0.5nm,0.3s,baz=158,slow=6.1,SNR=2.1									
KSRS	**Korea Array**	**8.53**	**301**	Pn			**Pn**	**00 23 52.8**	**+1.6**
0.2nm,0.3s,baz=110,slow=14,SNR=5.9									
KSRS				LR			LR	00 26 52.0	
comp=Z,33nm,18.3s,baz=140,slow=36									
ASAJ	**Asahikawa**	**11.59**	**20**	Pn			Pn	00 24 38.3	+5.1
1.2nm,0.3s,baz=289,slow=32,SNR=7.6									
ASAJ				LR			LR	00 29 01.5	
comp=Z,42nm,20.0s,baz=53,slow=37									
CN2	**Changchun**	**13.84**	**322**	*e*P			**P**	**00 25 14.3**	**+1.9**
CN2				*e*S			**S**	**00 27 58.3**	**-1.7**
CN2				pmax			pmax		
comp=Z,20nm,1.1s									
CN2				LR			LR		
comp=N,220nm,11.0s									
CN2				LR			LR		
comp=E,90nm,11.0s									
CN2				LR			LR		
comp=Z,200nm,12.0s									
KLR	**Kul'dur**	**16.37**	**348**	Pn			**P**	**00 25 39.2**	**-1.2**
comp=Z,0.2nm,0.3s,baz=136,slow=12,SNR=8.8									
KLR				LR			LR	00 32 06.9	
comp=Z,63nm,18.4s,baz=184,slow=38									
BJT	**Baijiatuan**	**18.03**	**298**	*e*Pn			**P**	**00 26 00.0**	**+1.1**
comp=Z,12nm,1.0s									
WHN	**Wuhan**	**19.48**	**268**	⇑P			**P**	**00 26 15.5**	**+0.6**
XAN	**Xi'an**	**23.41**	**280**	P			**P**	**00 26 59.3**	**+2.3**
XAN				pP			pwP	00 27 05.5	+3.8
XAN				pmax			pmax		
comp=Z,9.0nm,1.4s									
PETK	**Petropavlovsk-**	**24.66**	**31**	P			**P**	**00 27 10.2**	**+1.6**
comp=Z,0.6nm,0.3s,baz=233,slow=12,SNR=2.9									
PEA1	**Petropavlovsk-**	**24.67**	**31**	*e*P			**P**	**00 27 10.2**	**+1.6**
SONA0	**Songino Array**	**27.22**	**311**	*e*P			**P**	**00 27 32.0**	**+0.1**
SONM	**Songino Array**	**27.22**	**311**	P			**P**	**00 27 32.0**	**+0.1**
comp=Z,0.9nm,0.7s,baz=115,slow=8.5,SNR=5.9									
H11N2	**WAKE ISLAND Hy**	**29.80**	**110**	T			T	00 59 24.6	
baz=303,slow=75,SNR=18									
H11N1	**WAKE ISLAND Hy**	**29.81**	**110**	T			T	00 59 19.0	
baz=303,slow=75,SNR=14									
H11N3	**WAKE ISLAND Hy**	**29.82**	**110**	T			T	00 59 22.2	
baz=303,slow=75,SNR=18									
H11S3	**WAKE ISLAND Hy**	**30.33**	**112**	T			T	00 59 56.2	
baz=305,slow=75,SNR=19									
H11S1	**WAKE ISLAND Hy**	**30.33**	**112**	T			T	00 59 59.6	
baz=305,slow=75,SNR=16									
H11S2	**WAKE ISLAND Hy**	**30.34**	**112**	T			T	00 59 49.0	
baz=305,slow=75,SNR=16									
TIXI	**Tiksi**	**38.62**	**356**	P			**P**	**00 29 10.7**	**-0.1**
comp=Z,1.0nm,0.3s,baz=125,slow=6.0,SNR=7.6									
TIXI	**Tiksi**	**38.62**	**356**	*e*P			**P**	**00 29 11.0**	**+0.2**
comp=Z,3.8nm,0.8s									
ZAA0	**Zalesovo Array**	**41.92**	**316**	*e*P			**P**	**00 29 37.8**	**-0.6**
comp=Z,4.1nm,1.0s									
ZAA1	**Zalesovo Array**	**41.92**	**316**	*e*P			**P**	**00 29 39.4**	**+1.1**
ZALV	**Zalesovo Beam**	**41.92**	**316**	P			**P**	**00 29 39.4**	**+1.1**
comp=Z,0.8nm,0.3s,baz=84,slow=5.9,SNR=3.9									
MK31	**Makanchi Array**	**43.19**	**305**	*e*P			**P**	**00 29 50.5**	**+1.7**
comp=Z,5.8nm,0.9s									
MK32	**Makanchi Array**	**43.19**	**305**	*e*P			**P**	**00 29 50.5**	**+1.7**
MKAR	**Makanchi Array**	**43.19**	**305**	P			**P**	**00 29 50.5**	**+1.7**
comp=Z,4.2nm,0

BRRC Barranca, Sant 3.27 244 *eP* **Pn 00 24 35.3 -0.4**
SMLC San Martn de 3.30 275 *eP* **Pn 00 24 35.7 -0.3**
RUSC La Rusia 3.51 221 *eP* **Pn 00 24 39.2 -0.2**
YOPC Yopal, Colombi 3.58 208 *eP* **Pn 00 24 40.4 +0.3**
ARGC Ariguani, Magd 3.69 291 *eP* **Pn 00 24 41.9 +0.3**
PTBC PUERTO BERRIO, 4.19 242 *eP* **Pn 00 24 47.4 -0.9**
SMRC Santa Marta, M 4.30 307 *eP* **Pn 00 24 49.1 -0.8**
CHIC Chingaza 4.89 217 *eP* **Pn 00 24 57.7 -0.8**
NORC Norcasia 5.05 234 *eP* **Pn 00 24 59.2 -1.1**
ROSC El Rosal 5.12 224 Pn **Pn 00 25 02.5 +1.1**
6.1nm,0.3s,baz=282,slow=19,SNR=9.0
ROSC Sn **Sn 00 26 03.3 +2.3**
3.0nm,0.3s,baz=342,slow=20,SNR=3.2
ROSC El Rosal 5.12 224 *eP* **Pn 00 25 01.6 +0.1**
HELC Santa Helena 5.29 244 *eP* **Pn 00 25 04.5 +0.7**
VILC Villavicencio, 5.29 214 *eP* **Pn 00 25 02.7 -1.0**
GUY2C Guyana, Caldas 5.65 235 *eP* **Pn 00 25 08.5 -0.4**
PRAC Prado 6.33 221 *eP* **Pn 00 25 16.7 -1.0**
MACC Macarena, Meta 7.07 206 *eP* **Pn 00 25 25.8 -2.2**
PTGA Pitinga 14.16 130 Pn **Pn 00 27 02.4 -2.6**
1.0nm,0.3s,baz=305,slow=20,SNR=5.6
PTGA Sn **Sn 00 29 46.9 +4.3**
0.5nm,0.3s,baz=307,slow=20,SNR=2.0
PTGA Lg Lg 00 31 10.2
1.0nm,0.3s,baz=60,slow=20,SNR=3.5
LPAZ La Paz 24.81 174 P **P 00 29 08.3 +0.7**
1.6nm,0.8s,baz=352,slow=8.0,SNR=5.2
LPAZ Lg Lg 00 36 47.3
1.4nm,0.9s,baz=5.2,slow=11,SNR=3.1
LPAZ LR LR 00 39 53.2
comp=Z,44nm,21.7s,baz=246,slow=39
SIV San Ignacio 26.20 159 P **P 00 29 20.2 +0.7**
0.7nm,0.6s,baz=0.9,slow=5.5,SNR=3.3
SIV Lg Lg 00 37 24.5
1.2nm,0.7s,baz=270,slow=20,SNR=2.7
TXAR Lajitas Array 37.16 308 *eP* **P 00 30 55.7 -0.2**
0.3nm,0.6s,baz=130,slow=9.9,SNR=4.8
PDAR Pinedale Array 48.13 322 P **P 00 32 23.9 -1.1**
0.2nm,0.5s,baz=128,slow=12,SNR=2.8
ELK Elko 50.80 317 LR LR 00 56 22.4
comp=Z,20nm,19.4s,baz=347,slow=39
TORD Torodi Ar. Bea 71.09 79 P **P 00 35 03.9 +0.2**
0.3nm,0.7s,baz=294,slow=6.6,SNR=3.6
ASAR Alice Springs 152.02 235 PKPbc **PKPbc 00 43 39.1 -1.8**
0.4nm,0.6s,baz=109,slow=2.0,SNR=4.9

MEX 18 00:24:02.4±0.5, 18°.12N×101°.66W, h16km±12km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.54**	**160**	*i* P	Pg	00 24 11.0	-2.1
ZIIG				*i* S	Sg	00 24 18.3	-2.1
ARIG	**Puente Sto Nin**	**1.26**	**82**	*eP*	Pn	00 24 21.7	-3.7
ARIG				*eS*	Sb	00 24 36.3	-5.5
MMIG	**Aquila**	**1.61**	**276**	*i* P	Pn	00 24 26.5	-3.6
MEIG	**Mezcala**	**1.95**	**95**	*i* P	Pn	00 24 32.1	-2.9
PLIG	**Platanillo**	**2.07**	**82**	*i* P	Pn	00 24 37.2	+0.6
TLIG	**Tlapa**	**3.00**	**100**	*eP*	Pb	00 24 53.1	-2.4

MEX 18 00:28:51.4±0.3, 16°.60N×100°.50W, h38km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.50**	**26**	*i* P	Pn	00 29 00.5	-1.6
CAIG				*i* S	Sn	00 29 07.5	-2.1
ACP2	**Acapulco**	**0.65**	**65**	*i* P	Pn	00 29 02.3	-1.9
ACP2				*i* S	Sn	00 29 11.1	-2.2
ZIIG	**Zihuatanejo**	**1.36**	**318**	*eP*	Pn	00 29 18.2	+4.3
MEIG	**Mezcala**	**1.57**	**32**	*i* P	Pn	00 29 07.6	-9.2
MEIG				*eS*	Sn	00 29 36.5	+0.6
TLIG	**Tlapa**	**2.08**	**62**	*eP*	Pn	00 29 17.6	-6.4

MEX ***18*** *00:36:44.5±0.5, 14°.47N×91°.91W, h120km±29km, MD3.7*
ISCJB ***18*** *00:36:46.6±1.5, 14°.8N±0°.3×91°.5W±0°.3, h82km, Error ellipse: s-maj=52.6km s-min=10.6km az=40.0*
GCG ***18*** *00:36:47.1±0.3, 14°.39N×91°.60W, h63km±14km, MD3.5*
ISC 18 00:36:46.4±2.1, 14°.7N±0°.2×91°.5W±0°.2, h82km, n5, σ0.9 32/7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.03**	**265**	*eP*	**Pn**	**00 36 58.4**	**+0.1**
FUG	**Fuego 3**	**0.72**	**111**	*eP*	**Pn**	**00 37 02.6**	**0.0**
FUG				*eS*	**Sn**	**00 37 14.7**	**-0.1**
PCG	**Pacaya**	**0.96**	**109**	*eP*	**Pn**	**00 37 05.8**	**+0.5**
IXG	**Ixpaco**	**1.19**	**117**	*eP*	**Pn**	**00 37 07.8**	**-0.3**
IXG				*eS*	**Sn**	**00 37 24.2**	**-0.2**
CCIG	**Comitan**	**1.66**	**340**	*eP*	**Pn**	**00 37 14.1**	**0.0**

ISCJB ***18*** *00:41:24.3±0.4, 6°.59S±0°.04×130°.00E±0°.05, h146km, mb4.0/7, Error ellipse: s-maj=7.8km s-min=5.7km az=14.1*
NEIC ***18*** *00:41:25.6±2.5, 6°.47S×129°.95E, h134km±12km, mb4.1/6, Error ellipse: s-maj=26.9km s-min=8.1km az=67.0*
IDC ***18*** *00:41:26.3±2.1, 6°.50S×129°.99E, h146km±21km, mb3.7/5, mb1 3.8/9, mb1mx3.5/32, mbtmp4.3/9, Error ellipse: s-maj=27.3km s-min=17.7km az=79.0*
DJA ***18*** *00:41:27.3±0.5, 6°.S±3°×13°.0E±°, h166km±10km, M4.8/7, mb4.7/2, mB5.0/2, MLv4.8/7, Mw(mB)4.3/2*
ISC 18 00:41:25.4±0.6, 6°.47S±0°.05×130°.00E±0°.06, h146km, n29, σ2.9 75/36, mb4.1/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.98**	**139**	*ePn*	**Pn**	**00 42 02.1**	**+2.1**
SAUI				*eSn*	**Sn**	**00 42 21.8**	**-4.8**
SAUI	**Saumlaki**	**1.98**	**139**	P	**Pn**	**00 42 02.3**	**+2.3**
SAUI				S	**Sn**	**00 42 29.1**	**+2.5**
FAKI	**Fak Fak**	**4.18**	**32**	*ePn*	**Pn**	**00 42 28.3**	**+0.3**
FAKI				*eSn*	**Sn**	**00 43 11.3**	**-5.2**
FAKI	**Fak Fak**	**4.18**	**32**	P	**Pn**	**00 42 28.5**	**+0.6**
FAKI				S	**Sn**	**00 43 14.3**	**-2.3**
SIJI	**Sorong**	**5.71**	**13**	P	**Pn**	**00 42 49.2**	**+1.0**
7.0nm,0.3s,baz=246,slow=23,SNR=28							
SIJI				S	**Sn**	**00 43 48.9**	**-4.0**
15nm,0.3s,baz=332,slow=22,SNR=14							
SANI	**Sanana**	**5.94**	**317**	P	Pn	00 42 56.5	+5.1
81nm,0.7s,0.3nm							
MTN	**Manton Dam**	**6.43**	**170**	*ePn*	**Pn**	**00 42 58.6**	**+0.8**
MTN				*eSn*	**Sn**	**00 44 04.3**	**-5.9**
SOEI	**Soe**	**6.55**	**240**	*ePn*	**Pn**	**00 43 00.9**	**+1.3**
SOEI	**Soe**	**6.55**	**240**	P	**Pn**	**00 43 02.5**	**+2.9**
BATI	**Baumata**	**7.29**	**239**	P	**Pn**	**00 43 10.9**	**+1.5**
12nm,0.3s,baz=60,slow=2.3,SNR=7.8							
BATI				S	**Sn**	**00 44 28.2**	**-2.7**
12nm,0.3s,baz=0.0,slow=19,SNR=2.0							
BAKI	**Biak**	**8.04**	**49**	P	**Pn**	**00 43 20.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**12.31**	**200**	P	**Pn**	**00 44 14.7**	**-1.3**
1.4nm,0.3s,baz=28,slow=10,SNR=28							
FITZ				S	Sn	00 46 21.0	-11
1.4nm,0.3s,baz=87,slow=18,SNR=5.2							
FITZ	**Fitzroy Crossi**	**12.31**	**200**	*ePn*	**Pn**	**00 44 15.6**	**-0.3**
FITZ				*eSn*	Sn	00 46 23.4	-8.7
WRA	**Warramunga Arr**	**14.04**	**163**	P	**Pn**	**00 44 35.1**	**-2.9**
1.0nm,0.3s,baz=353,slow=14,SNR=5.1							
WRA				S	Sn	00 47 00.7	-13
2.3nm,0.3s,baz=334,slow=22,SNR=7.6							
WB2	**Warramunga Arr**	**14.04**	**163**	*ePn*	**Pn**	**00 44 36.8**	**-1.3**
WB2				*eSn*	Sn	00 47 02.5	-11
COEN	**Coen**	**14.94**	**121**	*ePn*	**P**	**00 44 52.4**	**+1.1**
COEN				*eSn*	Sn	00 47 24.6	-11
AS31	**Alice Springs**	**17.50**	**168**	*eP*	**Pn**	**00 45 22.9**	**+2.3**
1.8nm,0.7s							
ASAR	**Alice Springs**	**17.50**	**168**	P	**P**	**00 45 20.9**	**+1.3**
0.7nm,0.3s,baz=344,slow=8.7,SNR=21							
ASAR				S	S	00 48 21.3	-13
0.2nm,0.3s,baz=343,slow=20,SNR=4.4							
PSA00	**Pilbara Seismi**	**17.94**	**212**	*eP*	**P**	**00 45 25.2**	**+0.8**
13nm,1.0s							
PSA00				*eS*	**S**	**00 48 34.6**	**-8.4**
SBUM	**Sibu**	**19.84**	**296**	*eP*	**P**	**00 45 45.6**	**+0.4**
5.3nm,0.7s							
CTA	**Charters Tower**	**20.79**	**132**	P	**P**	**00 45 56.4**	**+1.2**
2.8nm,0.7s,baz=287,slow=11,SNR=4.0							
EIDS	**Eidsvold**	**27.56**	**135**	*eP*	**P**	**00 46 58.9**	**+0.1**
3.9nm,1.0s							
CMAR	**Chiang Mai Arr**	**39.40**	**310**	P	**P**	**00 48 42.3**	**+1.1**
1.3nm,0.3s,baz=130,slow=7.0,SNR=4.7							

SONM Songino Array 57.95 341 P **P 00 51 03.9 +1.4**
0.6nm,0.6s,baz=150,slow=5.2,SNR=3.4
MK31 Makanchi Array 67.79 327 *eP* **P 00 52 08.9 +1.3**
2.9nm,0.6s
MKAR Makanchi Array 67.79 327 P **P 00 52 08.8 +1.2**
3.8nm,0.5s,baz=114,slow=8.9,SNR=42
AAK Ala-Archa 70.14 320 *eP* **P 00 52 24.5 +2.2**
2.5nm,0.7s
ZALV Zalesovo Beam 71.11 334 P **P 00 52 27.9 +0.2**
0.7nm,0.4s,baz=147,slow=6.1,SNR=3.9
TORD Torodi Ar. Bea 128.71 282 PKP **PKPdf 01 00 16.6 +0.2**
0.2nm,0.6s,baz=77,slow=1.2,SNR=1.3

ISCJB ***18*** *00:47:53.6±0.8, 11°.34N±0°.07×87°.41W±0°.05, h37km, mb3.9/15, Error ellipse: s-maj=11.3km s-min=6.0km az=29.6*
IDC ***18*** *00:47:54.0±1.7, 12°.33N×86°.69W, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.5/40, mbtmp3.5/5, ML2.8/2, Error ellipse: s-maj=99.7km s-min=26.2km az=48.0*
UCR ***18*** *00:47:54.3±1.6, 11°.44N×87°.36W, h13km, ML3.7, mb4.1(NEIC)*
NEIC ***18*** *00:47:57.8±2.2, 11°.65N×87°.28W, h35km±3km, mb4.1/21, Error ellipse: s-maj=17.5km s-min=3.2km az=55.0*
ISC 18 00:47:56.4±0.9, 11°.51N±0°.07×87°.30W±0°.08, h37km, n41, σ1.9 05/42, mb4.0/15, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.96**	**46**	*eP*	**Pn**	**00 48 13.7**	**+0.4**
XAVN	**Gruta Xavier**	**1.15**	**56**	*eP*	**Pn**	**00 48 16.7**	**+0.8**
CNGN	**Cerro Negro**	**1.15**	**31**	*eP*	**Pn**	**00 48 16.1**	**+0.2**
MOMN	**Momotombo**	**1.16**	**40**	*eP*	**Pn**	**00 48 16.1**	**-0.1**
CRIN	**San Cristobal**	**1.21**	**12**	*eP*	**Pn**	**00 48 18.3**	**+1.5**
MGAN	**Managua**	**1.21**	**58**	*eP*	**Pn**	**00 48 16.6**	**-0.2**
CSGN	**Cosiguina Volc**	**1.48**	**350**	*ePn*	**Pn**	**00 48 21.2**	**+0.7**
CSGN	**Cosiguina Volc**	**1.48**	**350**	*eP*	**Pn**	**00 48 21.4**	**+0.9**
CSGN				*eS*	**Sn**	**00 48 41.1**	**+2.4**
ESTN	**Estel**	**1.82**	**30**	*ePn*	**Pn**	**00 48 25.5**	**+0.2**
ESTN	**Estel**	**1.82**	**30**	*eP*	**Pn**	**00 48 25.5**	**+0.2**
CNCH	**Conchagua**	**1.83**	**344**	*eP*	**Pn**	**00 48 26.2**	**+0.8**
MATN	**Matagalpa**	**1.95**	**43**	*eP*	**Pn**	**00 48 27.0**	**0.0**
MATN				IAML		00 48 57.3	
comp=E,843nm,0.5s							
ACON	**Acoyapa**	**2.13**	**77**	*ePn*	**Pn**	**00 48 30.9**	**+1.5**
ACON	**Acoyapa**	**2.13**	**77**	*eP*	**Pn**	**00 48 29.3**	**-0.1**
RCON	**San Juan de Ri**	**2.26**	**30**	*eP*	**Pn**	**00 48 32.5**	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.53**	**1**	*ePn*	**Pn**	**00 48 36.0**	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.53**	**1**	*eP*	**Pn**	**00 48 35.5**	**+0.6**
JTS	**Las Juntas de**	**2.61**	**117**	Pn	**Pn**	**00 48 38.0**	**+2.0**
comp=E,0.9nm,0.3s,baz=39,slow=16,SNR=3.8							
JTS				Sn	**Sn**	**00 49 05.4**	**-1.1**
comp=E,3.7nm,0.3s,baz=342,slow=17,SNR=5.7							
JTS	**Las Juntas de**	**2.61**	**117**	*ePn*	**Pn**	**00 48 37.1**	**+1.1**
JTS	**Las Juntas de**	**2.61**	**117**	*eP*	**Pn**	**00 48 36.7**	**+0.7**
HDC	**Heredia**	**3.47**	**115**	*ePn*	Pn	00 48 53.7	+5.6
CMIG	**Matias Romero**	**9.21**	**308**	Pn	**Pn**	**00 50 07.0**	**+0.3**
comp=E,0.2nm,0.3s,baz=105,slow=9.0,SNR=2.2							
LGNH	**Logne**	**15.80**	**62**	*ePn*	**Pn**	**00 51 37.6**	**+1.4**
comp=E,124nm,1.2s							
LNIG	**Linares**	**17.61**	**321**	*eP*	**Pn**	**00 51 59.0**	**0.0**
comp=E,2.1nm,0.6s							
LRAL	**Lakeview Retre**	**21.43**	**1**	*eP*	**P**	**00 52 39.7**	**-1.6**
comp=E,3.7nm,0.7s							
Z50A	**Ashland**	**21.68**	**3**	*eP*	**P**	**00 52 44.1**	**+0.1**
comp=E,4.7nm,0.9s							
Y49A	**Blount Mountai**	**22.26**	**2**	*eP*	**P**	**00 52 49.5**	**-0.7**
comp=E,5.8nm,0.8s							
Y52A	**Lilburn**	**22.45**	**7**	*eP*	**P**	**00 52 51.4**	**-0.8**
comp=E,5.6nm,0.7s							
TXAR	**Lajitas Array**	**23.39**	**322**	P	**P**	**00 53 03.1**	**+1.0**
comp=E,1.1nm,0.7s,baz=131,slow=9.7,SNR=9.6							
TX31	**Lajitas Ar. Si**	**23.39**	**322**	*eP*	**P**	**00 53 03.1**	**+1.0**
comp=E,2.6nm,0.9s							
MIAR	**Mount Ida**	**23.63**	**347**	*eP*	**P**	**00 53 03.5**	**-0.7**
W50A	**Signal Mountai**	**23.65**	**4**	*eP*	**P**	**00 53 05.2**	**+0.7**
comp=E,6.1nm,0.8s							
W52A	**Murphy**	**23.68**	**7**	*eP*	**P**	**00 53 05.7**	**+1.0**
comp=E,5.5nm,0.8s							
V48A	**Smith Brothers**	**24.13**	**1**	*eP*	**P**	**00 53 08.4**	**-0.4**
comp=E,3.2nm,0.8s							
FCAR	**Ozark Folk Cen**	**24.66**	**351**	*eP*	**P**	**00 53 13.5**	**-0.2**
comp=E,3.9nm,0.8s							
PBMO	**Poplar Bluff**	**25.32**	**354**	*eP*	**P**	**00 53 17.2**	**-2.4**
comp=E,3.9nm,0.6s							
TUL1	**Leonard**	**25.48**	**344**	*eP*	**P**	**00 53 21.4**	**+0.2**
comp=E,13nm,0.9s							
SADO	**Sadowa**	**33.88**	**10**	P	**P**	**00 54 35.0**	**-0.5**
comp=E,3.7nm,0.6s,baz=263,slow=4.7,SNR=4.8							
PDAR	**Pinedale Array**	**36.67**	**332**	P	**P**	**00 54 58.8**	**-1.1**
comp=E,0.2nm,0.3s,baz=121,slow=8.6,SNR=2.3							
YKA	**Yellowknife Ar**	**54.55**	**345**	P	**P**	**00 57 18.7**	**-1.8**
comp=E,0.5nm,0.7s,baz=142,slow=7.1,SNR=4.2							
CMAR	**Chiang Mai Arr**	**149.59**	**348**	PKPbc	**PKiKP**	**01 07 44.4**	**+0.4**
comp=E,1.7nm,0.7s,baz=351,slow=4.3,SNR=6.8							

NDI 18 00:57:55.7±2.8, 24°.17N×91°.42E, h19km±13km, ML3.6, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.33**	**209**	*eP*	Pg	00 58 02.5	-0.3
AGT				*eS*	Sb	00 58 08.7	+0.8
AGT				IAML		00 58 09.4	
comp=N,7μm,0.2s							
AGT				IAML		00 58 10.0	
comp=E,10μm,0.5s							
BELO	**BELONIA**	**0.92**	**179**	*eP*	Pb	00 58 12.2	-0.9
BELO				*eS*	Sg	00 58 25.8	0.0
SILR	**SILCHAR**	**1.40**	**64**	*eP*	Pn	00 58 18.4	-1.8
SILR				*eS*	Sn	00 58 38.0	-0.2
SILR				IAML		00 58 46.0	
comp=E,979nm,0.4s							
SILR				IAML		00 58 46.0	
comp=N,3μm,0.9s							
SHL	**Shillong**	**1.45**	**17**	*eP*	Pn	00 58 19.8	-1.4
SHL				*eS*	Sn	00 58 39.4	-0.4
SHL				IAML		00 58 40.1	
comp=E,2μm,0.1s							
SHL				IAML		00 58 40.1	
comp=N,2μm,0.1s							
GUWA	**GUWAHATI**	**2.03**	**7**	*eP*	Pn	00 58 29.0	+0.1
GUWA				*eS*	Sb	00 58 55.5	-1.4
IMP	**Imphal**	**2.39**	**74**	*eP*	Pn	00 58 35.0	+0.9
IMP				*eS*	Sn	00 59 02.2	-0.7
TEZP	**TEZPUR**	**2.73**	**27**	*eP*	Pn	00 58 37.2	-1.4
TEZP				*eS*	Sn	00 59 09.5	-1.7
TEZP				IAML		00 59 11.4	
comp=N,164nm,0.1s							
TEZP				IAML		00 59 11.9	
comp=E,122nm,0.1s							
KOHI	**KOHIMA**	**2.88**	**57**	*eP*	Pb	00 58 46.5	-0.2
KOHI				*ex*	Sn	00 59 15.2	0.0
TAWA	**Tawang**	**3.43**	**7**	*eP*	Pn	00 58 50.2	+1.6
TAWA				*eS*	Sn	00 59 26.8	-2.1
TAWA				IAML		00 59 45.9	
comp=N,230nm,0.6s							
TAWA				IAML		00 59 48.8	
comp=E,350nm,0.3s							
MOKO	**MOKOCHONG**	**3.52**	**52**	*eS*	Sn	00 59 29.2	-1.7
MOKO				IAML		00 59 32.6	
comp=E,98nm,0.2s							
MOKO				IAML		00 59 32.7	
comp=N,100nm,0.2s							
ZIRO	**ZIRO**	**3.99**	**33**	*ex*	Pn	00 58 53.5	-2.6
ZIRO				*eS*	Sn	00 59 41.1	-1.4
ZIRO				IAML		00 59 43.3	
comp=N,320nm,0.2s							
ZIRO				IAML		00 59 43.4	
comp=E,189nm,0.2s							

NNC ***18*** *00:58:09.0±5.0, 49°.02N×84°.88E, h0km, mb3.1, mpv2.5, Error ellipse: s-maj=42.1km s-min=18.8km az=77.0*
SOME ***18*** *00:58:14.7, 48°.68N×84°.22E, h10km*
ISC 18 00:58:09.2±2.6, 49°.06N±0°.09×85°.1E±0°.2, h10km, n4, σ1.9 40/9, 3C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**1.62**	**185**	*eP*	**Pn**	**00 58 37.7**	**-0.1**
3.9nm,0.3s							
ZSN				*eS*	**Sn**	**00 58 57.1**	**-1.5**
31nm,0.5s							
MK31 Makanchi Array 2.94 221 ⇓Pn **Pn 00 58 56.4 +0.4**
0.1nm,0.1s,baz=40,slow=13,SNR=29
MK31 ⇓Sn **Sn 00 59 31.0 -0.5**
1.2nm,0.3s,baz=44,slow=25,SNR=6.5
MAKZ Makanchi 3.07 224 ⇓Pn **Pn 00 58 58.0 +0.1**
0.8nm,0.3s
MAKZ ⇑Sn **Sn 00 59 34.1 -0.5**
1.8nm,0.4s
KURBB Kurchatov Arra 4.52 293 ⇓Pn **Pn 00 59 17.5 -0.2**
2.8nm,1.1s
KURBB ⇑Pg **Pb 00 59 30.1 +1.5**
0.6nm,0.4s
KURBB ⇑Sn **Sn 01 00 07.8 -2.5**
3.3nm,0.5s
KURBB ⇓Lg Lg 01 00 27.9
12nm,0.6s

NNC 18 00:59:47.0±4.4, 37°.42N×71°.07E, h0km, mb3.9, mpv3.5, 3C-1D, Error ellipse: s-maj=39.5km s-min=33.1km az=59.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.12**	**22**	P	Pn	01 01 05.8	+0.5
SNR=28							
UCH	**Uchtor**	**5.48**	**28**	P	Pn	01 01 11.0	+0.7
SNR=7.0							
EKS2	**Erkin-Say**	**5.63**	**21**	P	Pn	01 01 13.1	+1.1
SNR=7.8							
KZA	**Kyzart**	**5.65**	**33**	P	Pn	01 01 12.0	-0.7
SNR=9.1							
KK31	**Karatay Array**	**5.69**	**356**	P	Pn	01 01 13.7	+0.9
0.9nm,0.4s,baz=176,slow=12,SNR=42							
KK31				⇑S	Sn	01 02 19.6	+0.7
0.9nm,0.3s,baz=115,slow=74,SNR=5.5							
AAK	**Ala-Archa**	**5.83**	**26**	P	Pn	01 01 15.3	+0.4
SNR=5.6							
AAK	**Ala-Archa**	**5.83**	**26**	⇑P	Pn	01 01 14.9	0.0
3.1nm,0.4s							
AAK				⇑S	Sn	01 02 24.2	+1.7
3.8nm,0.5s							
CHMS	**Chumysh**	**6.24**	**26**	P	Pn	01 01 20.4	0.0
SNR=7.0							
TKM2	**Tokmak 2**	**6.49**	**31**	P	Pn	01 01 23.9	-0.1
SNR=6.1							
TKM2	**Tokmak 2**	**6.49**	**31**	⇓P	Pn	01 01 23.0	-1.0
3.5nm,0.6s							

ISCJB ***18*** *01:03:56.8±0.3, 39°.59S±0°.06×16°.00W±0°.07, h11km, mb4.7/36, MS4.3/22, Error ellipse: s-maj=8.6km s-min=7.0km az=153.8*
IDC ***18*** *01:03:56.6±0.6, 39°.61S×15°.88W, h0km, mb4.2/15, mb1 4.3/15, mb1mx4.2/27, mbtmp4.2/15, MS4.2/14, Ms1 4.1/14, ms1mx4.1/18, Error ellipse: s-maj=18.3km s-min=15.9km az=176.0*
NEIC ***18*** *01:03:59.3±2.3, 39°.54S×16°.05W, h15km±3km, mb4.9/31, Error ellipse: s-maj=15.5km s-min=13.4km az=208.0*
GCMT ***18*** *01:04:01.3±0.3, 39°.83S±0°.04×15°.70W±0°.02, h12km, MW4.9/77, Moment Tensor Solution. s14,c15; s77,c109; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr~2.17±.10; Mθθ~0.28±.11; Mφφ2.46±.07; Mrθ~0.80±.37; Mθφ~0.37±.07; Mφr~1.03±.28; Best double couple: M0 2.69200×10^16 NP1:φs13.00000°, δ59.00000°, λ~67.00000°. NP2: φs152.00000°, δ38.00000°, λ~124.00000°. Principal axes: T 2.6920, Plg11.0000°, Azm86.0000°; N 0.0100, Plg20.0000°, Azm180.0000°; P -2.6920, Plg67.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 01:03:58.5±0.4, 39°.56S±0°.08×15°.98W±0°.08, h11km, n104, σ1.9 25/89, mb4.7/36, MS4.2/22, 3C-2D, Tristan da Cunha region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**20.22**	**216**	*eP*	**P**	**01 08 34.0**	**+0.8**
68nm,1.1s							
H10S2	**ASCENSION HYDR**	**30.49**	**3**	T	T	01 42 12.4	
baz=182,slow=75,SNR=182							
H10S3	**ASCENSION HYDR**	**30.50**	**3**	T	T	01 42 12.8	
baz=182,slow=75,SNR=228							
H10S1	**ASCENSION HYDR**	**30.51**	**3**	T	T	01 42 17.8	
baz=182,slow=75,SNR=283							
VNA1	**Neumayer--Stat**	**31.42**	**175**	P	**P**	**01 10 20.6**	**+1.4**
H10N1	**ASCENSION HYDR**	**31.60**	**3**	T	T	01 43 42.2	
baz=189,slow=78,SNR=14							
H10N3	**ASCENSION HYDR**	**31.61**	**3**	T	T	01 43 36.3	
baz=189,slow=78,SNR=135							
H10N2	**ASCENSION HYDR**	**31.62**	**3**	T	T	01 43 42.6	
baz=189,slow=78,SNR=36							
VNA2	**Neumayer--Watz**	**31.75**	**175**	P	**P**	**01 10 22.8**	**+0.6**
baz=342,slow=11							
VNA3	**Neumayer Olymp**	**31.92**	**176**	P	**P**	**01 10 24.1**	**+0.4**
SNAA	**Sanae**	**32.87**	**172**	P	**P**	**01 10 32.2**	**+0.1**
SNAA	**Sanae**	**32.87**	**172**	P	**P**	**01 10 30.7**	**-1.4**
1.0nm,0.5s,baz=323,slow=13,SNR=3.7							
SNAA	**Sanae**	**32.87**	**172**	*eP*	**P**	**01 10 32.3**	**+0.1**
32nm,1.8s							
TSUM	**Tsumeb**	**35.30**	**65**	*eP*	**P**	**01 10 53.3**	**-0.4**
27nm,1.6s							
TRQA	**Tornquist**	**35.58**	**257**	*eP*	**P**	**01 10 56.8**	**+0.9**
47nm,1.6s							
BOSA	**Boshof**	**35.58**	**85**	P	**P**	**01 10 54.2**	**-1.9**
3.2nm,1.0s,baz=243,slow=9.0,SNR=2.9							
BOSA				LR	LR	01 22 49.8	
comp=Z,470nm,19.6s,baz=244,slow=32							
BDFB	**Brasilia**	**36.74**	**301**	P	**P**	**01 11 06.8**	**+0.7**
6.4nm,0.7s,baz=140,slow=7.9,SNR=9.9							
BDFB				LR	LR	01 23 27.6	
comp=Z,188nm,21.1s,baz=151,slow=32							
BDFB	**Brasilia**	**36.74**	**301**	*eP*	**P**	**01 11 04.8**	**-1.2**
13nm,1.0s							
CPUP	**Villa Florida**	**36.80**	**278**	P	**P**	**01 11 06.0**	**-0.5**
8.4nm,1.1s,baz=117,slow=5.4,SNR=7.3							
CPUP				LR	LR	01 24 09.6	
comp=Z,597nm,19.4s,baz=133,slow=33							
CPUP	**Villa Florida**	**36.80**	**278**	*eP*	**P**	**01 11 06.9**

comp=Z,180nm,21.2s,baz=242,slow=31
MAW Mawson 49.97 151 *e*P **P 01 12 53.1 +1.0**
3.0nm,1.4s
MNMC Minye Minye 50.19 278 *e*P **P 01 12 54.7 -0.1**
12nm,1.0s
QSPA South Pole Qui 50.70 180 *e*P **P 01 12 59.3 +1.4**
25nm,1.0s
QSPA *e*PcP **PcP 01 14 14.6 -0.4**
LPAZ La Paz 50.77 282 P **P 01 12 57.3 -2.3**
4.4nm,0.8s,baz=90,slow=8.2,SNR=14
LPAZ LR LR 01 33 04.9
comp=Z,226nm,21.2s,baz=127,slow=34
LPAZ La Paz 50.77 282 *e*P **P 01 12 58.8 -0.8**
22nm,1.7s
TOA0 Torodi Ar. Sit 54.96 21 *e*P **P 01 13 29.7 +0.1**
11nm,1.3s
TORD Torodi Ar. Bea 54.96 21 P **P 01 13 28.9 -0.7**
2.8nm,1.1s,baz=191,slow=7.6,SNR=7.2
TOA1 Torodi Ar. Sit 54.96 21 *e*P **P 01 13 28.9 -0.7**
MBAR Mbarara 57.55 60 *e*P **P 01 13 49.1 +0.7**
16nm,1.6s
KMBO Kilima Mbogo 61.64 66 LR LR 01 38 43.8
comp=Z,583nm,18.9s,baz=206,slow=34
SBA Scott Base 62.85 181 *e*P **P 01 14 23.2 -0.5**
19nm,1.4s
VNDA Vanda 63.19 179 P **P 01 14 27.1 +1.1**
5.4nm,1.1s,baz=206,slow=6.4,SNR=14
VNDA LR LR 01 38 02.6
comp=Z,95nm,21.1s,baz=177,slow=32
VNDA Vanda 63.19 179 *e*P **P 01 14 27.7 +1.7**
16nm,1.2s
TAM Tamanrasset 65.20 22 *e*P **P 01 14 41.5 +1.5**
6.3nm,1.3s
ROSC El Rosal 69.44 295 LR LR 01 44 41.3
comp=Z,452nm,18.2s,baz=144,slow=35
KEST Kesra 78.48 21 P **P 01 16 01.1 +1.7**
3.6nm,1.0s,baz=260,slow=11,SNR=3.0
KEST LR LR 01 47 43.0
comp=Z,217nm,19.0s,baz=206,slow=34
KEST Kesra 78.48 21 *e*P **P 01 16 01.1 +1.7**
17nm,1.3s
ESDC Sonseca Array 79.61 9 P **P 01 16 07.1 +1.6**
1.4nm,0.9s,baz=188,slow=5.4,SNR=5.2
ESDC LR LR 01 48 57.3
comp=Z,52nm,18.4s,baz=135,slow=34
VTS Vitosha 89.19 28 *e*P **P 01 16 54.5 +0.5**
3.9nm,1.0s
VTS Vitosha 89.19 28 ‖ *i*P **P 01 16 55.0 +1.0**
BRTR Keskin Array B 91.00 36 P **P 01 17 02.1 -0.5**
0.9nm,1.0s,baz=177,slow=8.4,SNR=4.1
BR101 Keskin Array S 91.00 36 *e*P **P 01 17 02.1 -0.5**
GEC2 GERESS Array S 91.86 19 *e*P **P 01 17 07.2 +0.9**
2.6nm,1.0s
GERES GERESS Array B 91.86 19 P **P 01 17 07.2 +0.9**
0.1nm,0.4s,baz=178,slow=2.8,SNR=3.0
GERES LR LR 01 54 40.5
comp=Z,77nm,21.8s,baz=215,slow=33
KHC Kasperske Hory 92.09 19 *e*P **P 01 17 08.0 +0.7**
KHC *e*pP **pwP 01 17 13.6 -0.6**
KHC AMS AMS 01 54 00.0
comp=Z,200nm,24.1s
MLR Muntele Rosu 92.65 28 *e*P **P 01 17 11.2 +1.1**
13nm,1.2s
MLR Muntele Rosu 92.65 28 ‖ *i*P **P 01 17 11.3 +1.2**
DRGR 92.65 25 ‖ *i*P **P 01 17 11.7 +1.7**
TREC Trest 92.74 20 *e*P **P 01 17 11.4 +1.2**
TREC *e*pP **pwP 01 17 17.0 -0.2**
H01W2 Cape Leeuwin H 92.76 141 T T 03 01 05.8
baz=217,slow=75,SNR=10
H01W3 Cape Leeuwin H 92.78 141 T T 03 01 09.4
baz=217,slow=75,SNR=14
H01W1 Cape Leeuwin H 92.78 141 T T 03 01 09.2
baz=217,slow=75,SNR=12
VYHS Vyhne 92.95 22 *e*P **P 01 17 06.5 -4.7**
VYHS *es*P **pwP 01 17 18.1 0.0**
GOPC GO Pecny, Ondr 93.12 19 AMS AMS 01 56 30.0
comp=Z,100nm,23.2s
PRU Pruhonice 93.13 19 AMS AMS 01 56 20.0
comp=Z,100nm,21.6s
PVCC Panska Ves 93.63 19 AMS AMS 01 56 30.0
comp=Z,100nm,24.7s
DPC Dobruska-Polom 93.92 20 *e*P **P 01 17 17.8 +2.1**
DPC *e*pP **pwP 01 17 22.5 -0.1**
KBZ Khabaz 98.47 39 LR LR 02 00 12.8
comp=Z,44nm,21.4s,baz=198,slow=34
TBI Tubuai 103.82 223 *e*LR LR 01 52 06.0
comp=Z,148nm,25.8s
PPT2 Papeete2 108.54 227 *e*LR LR 01 54 16.6
comp=Z,209nm,31.5s
LENM Lemitar 111.45 297 *e*Pdif **Pdif 01 18 35.3 +0.6**
KSH Kashi 114.98 59 *e*PKP **PKiKP 01 22 39.5 +0.1**
BMO Blue Mountains 123.63 303 *e*PKPdf **PKPdf 01 22 55.6 -0.2**
WMQ Urumqi 124.75 59 *e*PKP **PKPdf 01 22 58.1 +0.2**
WMQ sPKP 01 23 09.0
WMQ AMB AMB
comp=Z,52nm,4.5s
WMQ LR LR
comp=N,130nm,27.1s
WMQ LR LR
comp=E,200nm,29.0s
YKA Yellowknife Ar 127.99 324 PKP **PKPdf 01 23 02.4 -1.0**
0.4nm,0.6s,baz=114,slow=2.5,SNR=2.8
YKB5 Yellowknife Ar 127.99 324 *e*PKPdf **PKPdf 01 23 02.4 -1.1**
CD2 Chengdu 130.83 81 PKP **PKPdf 01 23 09.8 -0.1**
LZH Lanzhou 133.11 74 *e*PKP **PKiKP 01 23 15.6 +0.2**
LZH sPKP 01 23 21.5
LZH LR LR
comp=N,130nm,18.0s
LZH LR LR
comp=E,130nm,17.9s
LZH LR LR
comp=Z,170nm,20.1s
SONA0 Songino Array 138.39 59 *e*PKPdf **PKPdf 01 23 23.9 +0.3**
SONM Songino Array 138.39 59 PKP **PKPdf 01 23 23.9 +0.2**
0.2nm,0.4s,baz=199,slow=3.1,SNR=2.6
HHC Hu-ho-hao-te 140.41 71 *e*PKP **PKPdf 01 23 24.5 -3.0**
HHC AMB AMB
comp=Z,190nm,6.5s
ILAR Eielson Array 142.19 328 PKhKP PKPpre 01 23 26.8
0.9nm,0.8s,baz=105,slow=1.1,SNR=7.3
NJ2 Nanjing 142.93 87 *e*PKP **PKPdf 01 23 32.8 +0.7**
BPAW Bear Paw Mtn. 144.09 328 *e*PKPdf PKPbc 01 23 31.3 0.0
KTH Kantishna Hill 144.26 327 *e*PKPdf **PKPdf 01 23 33.0 -0.6**
RC01 Rabbit Creek A 144.50 323 *e*PKPdf **PKPdf 01 23 35.3 +1.3**
SUA Susitna One 144.86 324 *e*PKPdf **PKPdf 01 23 35.2 +0.4**
CNPM China Poot 145.65 321 *e*PKPdf **PKPdf 01 23 36.1 +0.1**
KS15 Wonju Array Si 151.76 83 *e*PKPbc **PKPbc 01 23 52.5 -0.5**
KSRS Korea Array 151.79 83 PKPbc **PKPbc 01 23 52.5 -0.6**
0.4nm,0.3s,baz=267,slow=2.7,SNR=3.4
MAJO Matsushiro 159.47 90 *e*PKPab **PKPab 01 24 35.4 +0.4**
MJAR Matsushiro Arr 159.47 90 PKPab **PKPab 01 24 35.4 +0.4**
0.5nm,0.3s,baz=225,slow=3.2,SNR=4.7

IDC 18 01:04:24.7±2.1, 10.19°S×124.99°E, h0km, mb3.5/1, mb1 3.8/3, mb1mx3.5/25, mbtmp3.6/3, ML3.5/2, Error ellipse: s-maj=205.6km s-min=33.8km az=55.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.24**	**138**	Pn	Pn	01 07 32.5	-1.7
	0.2nm,0.3s,baz=314,slow=15,SNR=2.6						
WRA				Sn	Sn	01 09 50.0	-12
	0.3nm,0.3s,baz=326,slow=24,SNR=2.5						
ASAR	**Alice Springs**	**15.87**	**149**	Pn	Pn	01 08 11.4	+1.8
	0.3nm,0.3s,baz=321,slow=11,SNR=11						
ASAR				Sn	Sn	01 11 03.0	-3.4
	0.1nm,0.3s,baz=324,slow=23,SNR=2.4						
MKAR	**Makanchi Array**	**68.32**	**330**	P	P	01 15 27.8	0.0
	0.2nm,0.5s,baz=119,slow=5.7,SNR=4.2						

KRSC 18 01:21:23.7±1.0, 49.52°N×156.75°E, h7km±23km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.24**	**341**	*e*P	Pb	01 21 46.4	-1.0
SKR				*e*S	Sg	01 22 03.2	-0.3
PAU	**Pauzhetka**	**1.96**	**1**	*e*S	Sb	01 22 23.7	-0.5
KDTR	**Khodutka, Kamc**	**2.45**	**20**	*e*P	Pb	01 22 06.4	-1.6
KDTR				*e*S	Sb	01 22 37.5	-0.8
MTVR	**Mutnovka**	**3.11**	**16**	*e*P	Pb	01 22 16.4	-2.9
RUS	**Russkaya**	**3.13**	**20**	*e*S	Sb	01 22 54.6	-3.3
KRX	**Arik**	**4.03**	**16**	*e*P	Pn	01 22 30.4	+4.5
SPN	**Mys Shipunski**	**4.13**	**29**	*e*P	Pn	01 22 30.7	+3.5

TAP 18 02:03:06.6, 24.40°N×121.45°E, h4km±1km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.07**	**297**	P	Pg	02 03 08.0	-0.1
	baz=296						
NNSB				S	Sg	02 03 09.0	-0.2
	baz=296						
NNS	**Nan Shan**	**0.08**	**301**	P	Pg	02 03 08.2	-0.2
	baz=302						
NNS				S	Sg	02 03 09.2	-0.3
	baz=302						
ETLH	**Xiulin Townshi**	**0.19**	**171**	*e*P	Pg	02 03 10.6	+0.2
	baz=170						
ETLH				S	Sg	02 03 13.2	+0.2
	baz=170						
NDT	**Datong Townshi**	**0.21**	**16**	*e*P	Pg	02 03 10.7	-0.1
	baz=16						
NDT				*e*S	Sg	02 03 13.9	+0.3
	baz=16						
NACB	**Ninganchiao**	**0.26**	**149**	P	Pg	02 03 11.7	0.0
	baz=148						
NACB				S	Sg	02 03 15.4	+0.3
	baz=148						
ENA	**Nanau**	**0.27**	**84**	*e*S	Sg	02 03 15.9	+0.5
	baz=84						
NANB	**Nanao**	**0.28**	**84**	*e*P	Pg	02 03 11.7	-0.3
	baz=84						
NANB				*e*S	Sg	02 03 15.3	-0.4
	baz=84						
YHNB	**Yeheng**	**0.28**	**346**	*e*P	Pg	02 03 12.2	+0.2
	baz=346						
YHNB				*e*S	Sg	02 03 15.7	0.0
	baz=346						
TWT	**Tachien**	**0.29**	**240**	*e*S	Sg	02 03 16.8	+0.8
	baz=240						
TDCB	**Techi**	**0.30**	**241**	*e*S	Sg	02 03 16.1	-0.4
	baz=241						
WHF	**Hehuan Shan**	**0.30**	**213**	*e*S	Sg	02 03 16.5	-0.1
	baz=211						
NWLT	**Wulai**	**0.38**	**8**	*e*S	Sg	02 03 19.3	+0.4
	baz=7.0						
CHGB	**Renai**	**0.42**	**217**	*e*S	Sg	02 03 20.6	+0.4
	baz=216						
OWD	**Renai**	**0.51**	**209**	*e*P	Pg	02 03 16.5	+0.1
	baz=209						
OWD				*e*S	Sg	02 03 23.5	+0.5
	baz=209						

JMA 18 02:03:13.9±0.2, 24.76°N×123.41°E, h17km, M1.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**231**	P	Pg	02 03 23.0	-0.4
YOJ				S	Sg	02 03 29.3	-0.4
IRIF	**Iriomote-Funau**	**0.51**	**145**	P	Pg	02 03 24.1	-0.1
IRIF				S	Sg	02 03 30.9	-0.2
JYNG	**Yonagunijimaku**	**0.52**	**234**	P	Pb	02 03 24.5	-0.1
JYNG				*e*S	Sg	02 03 31.2	-0.2
JKRS	**Kuro-shima**	**0.75**	**133**	P	Pb	02 03 28.3	-0.3
JKRS				S	Sb	02 03 38.3	-0.3
JIJ	**Ishigaki jima**	**0.78**	**120**	P	Pb	02 03 28.2	-0.7
JIJ				S	Sb	02 03 37.9	-1.3
HATJ	**Hateruma jima**	**0.79**	**153**	P	Pb	02 03 28.9	-0.2
HATJ				S	Sb	02 03 39.0	-0.5
JTJ	**Tarama**	**1.18**	**95**	P	Pn	02 03 35.3	-0.3
JTJ				*e*S	Sb	02 03 50.3	-0.6

MAN 18 02:23:49.3, 8.62°N×125.84°E, h15km, mb4.6, ML3.4, MS3.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.41**	**328**	*e*P	Pg	02 23 57.7	+0.1
BUTP				*e*S	Sn	02 24 09.2	+1.1
BUKP	**Musuan**	**1.07**	**226**	*e*P	Pb	02 24 08.6	-1.0
BUKP				*e*S	Sn	02 24 24.5	+0.1
MATI	**Mati**	**1.71**	**166**	*e*P	Pn	02 24 17.9	-0.8
MATI				*e*S	Sn	02 24 41.1	+0.7
DDMP	**Don Marcelino,**	**2.50**	**183**	*e*P	Pn	02 24 30.5	+1.0
DDMP				*e*S	Sn	02 25 00.6	+0.8

IDC ***18*** *02:25:33.4±0.9, 6.27°N×87.35°E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/35, mbtmp3.9/10, ML4.9/1, MS3.9/29, Ms1 3.9/29, ms1mx3.8/43, Error ellipse: s-maj=26.2km s-min=20.1km az=34.0*
ISCJB ***18*** *02:25:35.8±0.5, 6.20N±0.07×87.39E±0.05, h33km, mb4.2/24, MS3.9/25, Error ellipse: s-maj=10.0km s-min=7.3km az=5.1*
NEIC ***18*** *02:25:35.3±1.6, 6.27N×87.41E, h15km±5km, mb4.3/17, Error ellipse: s-maj=22.2km s-min=16.1km az=180.0*
GCMT ***18*** *02:25:37.3±0.5, 6.39N±0.03×87.47E±0.03, h15km, MW4.8/66, Moment Tensor Solution. s21,c22; s66,c93; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.17±.09; Mθθ -1.18±.07; Mφφ 1.02±.07; Mrθ -0.37±.28; Mφθ -0.95±.07; Mφr -1.81±.28; Best double couple: M=2.33000×10^16 NP1: φs 203.00000°, δ 87.00000°, λ 51.00000°. NP2: φs 109.00000°, δ 39.00000°, λ 175.00000°. Principal axes: T 2.5280, Plg 36.0000°, Azm 80.0000°; N -0.3880, Plg 39.0000°, Azm 206.0000°; P -2.1320, Plg 31.0000°, Azm 324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 02:25:37.6±0.7, 6.3N±0.1×87.27E±0.06, h35km, n74, σ=2.34/56, mb4.1/24, MS4.0/25, Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**6.60**	**279**	Pn	**Pn**	**02 27 12.9**	**+0.6**
	23nm,0.3s,baz=116,slow=13,SNR=63						
PALK				Sn	**Sn**	**02 28 20.6**	**-5.8**
	71nm,0.3s,baz=116,slow=9.9,SNR=9.8						
PALK				LR	LR	02 29 36.8	
	comp=Z,1μm,21.3s,baz=116,slow=36						
PALK	**Pallekele**	**6.60**	**279**	*e*Pn	**Pn**	**02 27 13.4**	**+1.2**
PALK				*e*Sn	**Sn**	**02 28 20.6**	**-5.8**
PBA	**Port Blair**	**7.61**	**45**	*e*Pn	Pn	02 27 21.1	-5.0
PBA				*e*Sn	Sn	02 28 45.6	-5.6
VIS	**Vishakhapatnam**	**12.02**	**342**	*i* P	**Pn**	**02 28 22.6**	**-4.0**
VIS				*i* S	Sn	02 30 24.7	-15
VIS				*i* S	Sn	02 30 28.2	-11
VIS				*ex*	x	02 30 29.7	
	comp=N,160nm,0.6s						
VIS				*ex*	x	02 30 30.0	
	comp=E,247nm,0.9s						
PSI	**Prapat**	**12.11**	**106**	LR	LR	02 33 16.2	
	comp=E,422nm,18.4s,baz=274,slow=38						
HYB	**Hyderabad**	**13.98**	**323**	*i* P	**Pn**	**02 28 50.0**	**-3.4**
HYB				*e*S	**Sn**	**02 31 34.0**	**+6.5**
MNCI	**Minicoy**	**14.24**	**279**	*e*Pn	**Pn**	**02 28 54.6**	**-2.2**
UMPA	**Umpang Tak**	**15.05**	**48**	P	**P**	**02 29 14.8**	**+2.0**
CM31	**Chiang Mai Arr**	**16.63**	**42**	*e*Pn	**Pn**	**02 29 23.9**	**-4.2**
	comp=E,27nm,1.5s						
CMAR	**Chiang Mai Arr**	**16.63**	**42**	Pn	**Pn**	**02 29 23.9**	**-4.2**
	comp=E,0.5nm,0.3s,baz=236,slow=15,SNR=13						
CMAR				LR	LR	02 36 28.1	
	comp=E,499nm,18.4s,baz=226,slow=40						
BRDH	**Bariadhala**	**16.86**	**14**	LR	LR	02 37 26.0	
	comp=E,469nm,18.1s,baz=172,slow=42						
PBKT	**Sadao Pong**	**16.88**	**51**	P	**Pn**	**02 29 29.7**	**-1.5**
CHTO	**Chiang Mai**	**16.88**	**41**	*e*Pn	**Pn**	**02 29 30.4**	**-0.9**
	comp=E,6.3nm,0.8s						
CMMT	**Chiang Mai**	**16.88**	**41**	P	**P**	**02 29 38.5**	**+5.4**
LAMP	**Lampang**	**17.14**	**44**	P	**P**	**02 29 37.4**	**+1.5**
UTTA	**Uttaradit**	**17.28**	**47**	P	**P**	**02 29 37.5**	**+0.1**
CHAI	**Chaiyaphum**	**17.32**	**55**	P	**P**	**02 29 38.0**	**+0.1**
PAYA	**Payao**	**17.88**	**42**	P	**P**	**02 29 45.5**	**+1.4**
NONG	**Nongkai**	**19.43**	**51**	P	**P**	**02 30 00.8**	**-0.3**
	comp=E,0.5nm,1.1s,comp=E,68nmcomp=E,0.0nm						
SKNT	**Sakolnakorn**	**19.50**	**55**	P	**P**	**02 30 01.8**	**-0.2**
SHL	**Shillong**	**19.70**	**12**	*e*P	**P**	**02 30 00.6**	**-3.6**
	comp=E,7.8nm,0.6s						
SHL	**Shillong**	**19.70**	**12**	*e*P	**Pn**	**02 30 06.0**	**+0.2**
H08S3	**Diego Garcia H**	**20.20**	**227**	T	T	02 50 57.4	
	baz=48,slow=74						
H08S2	**Diego Garcia H**	**20.20**	**227**	T	T	02 51 03.4	
	baz=48						
H08S1	**Diego Garcia H**	**20.22**	**227**	T	T	02 51 03.8	
	baz=48,slow=74						
SLVN	**Son La**	**21.99**	**45**	*e*P	**P**	**02 30 29.0**	**0.0**
	comp=E,7.4nm,0.8s						
KK31	**Karatay Array**	**39.56**	**341**	*e*P	**P**	**02 33 07.0**	**+1.6**
	comp=E,3.2nm,0.6s						
KKAR	**Karatay Array**	**39.56**	**341**	*e*P	**P**	**02 33 07.0**	**+1.6**
	comp=E,3.2nm,0.6s						
MK31	**Makanchi Array**	**40.61**	**355**	*e*P	**P**	**02 33 14.3**	**+0.3**
	comp=E,2.9nm,1.3s						
MK32	**Makanchi Array**	**40.61**	**355**	*e*P	**P**	**02 33 14.9**	**+0.8**
MKAR	**Makanchi Array**	**40.61**	**355**	P	**P**	**02 33 14.9**	**+0.8**
	comp=E,1.1nm,0.7s,baz=175,slow=9.0,SNR=7.1						
MKAR				LR	LR	02 51 47.0	
	comp=E,186nm,18.4s,baz=170,slow=39						
GEYT	**Alibeck**	**41.16**	**324**	P	**P**	**02 33 22.3**	**+3.6**
	comp=E,1.4nm,0.5s,baz=147,slow=8.3,SNR=4.0						
GEYT				LR	LR	02 51 40.6	
	comp=E,110nm,21.4s,baz=15,slow=38						
SONA0	**Songino Array**	**44.53**	**18**	*e*P	**P**	**02 33 47.1**	**+1.1**
SONM	**Songino Array**	**44.53**	**18**	P	**P**	**02 33 47.1**	**+1.1**
	comp=E,2.8nm,0.7s,baz=203,slow=8.8,SNR=14						
SONM				LR	LR	02 54 24.3	
	comp=E,187nm,19.9s,baz=236,slow=39						
KURK	**Kurchatov**	**44.89**	**352**	*e*P	**P**	**02 33 48.8**	**+0.1**
	comp=E,2.9nm,1.0s						
ZALV	**Zalesovo Beam**	**47.59**	**358**	P	**P**	**02 34 10.4**	**+0.7**
	comp=E,1.0nm,0.4s,baz=187,slow=5.8,SNR=3.7						
ZALV				LR	LR	02 56 01.0	
	comp=E,154nm,18.5s,baz=244,slow=38						
ZAA1	**Zalesovo Array**	**47.59**	**358**	*e*P	**P**	**02 34 10.4**	**+0.6**
KSRS	**Korea Array**	**48.25**	**44**	LR	LR	02 57 32.0	
	comp=E,154nm,18.1s,baz=238,slow=40						
JNU	**Nakatsue**	**48.47**	**51**	*e*P	**P**	**02 34 15.1**	**-2.0**
	comp=E,29nm,1.5s						
KMBO	**Kilima Mbogo**	**50.47**	**263**	P	**P**	**02 34 34.5**	**+1.6**
	comp=E,2.7nm,0.2s,baz=235,slow=23,SNR=7.1						
KMBO				LR	LR	02 52 01.5	
	comp=E,176nm,21.4s,baz=93,slow=31						
KMBO	**Kilima Mbogo**	**50.47**	**263**	*e*P	**P**	**02 34 34.5**	**+1.6**
	comp=E,7.4nm,1.2s						
GNI	**Garni**	**50.87**	**318**	*e*P	**P**	**02 34 34.9**	**-0.5**
	comp=E,6.9nm,0.8s						
MDJ	**Mudanjiang**	**53.07**	**37**	*e*P	**P**	**02 34 51.4**	**-0.1**
	comp=E,8.6nm,0.4s						
WR1	**Warramunga Arr**	**53.11**	**121**	*e*P	**P**	**02 34 52.1**	**0.0**
WRA	**Warramunga Arr**	**53.11**	**121**	P	**P**	**02 34 52.1**	**0.0**
	comp=E,1.3nm,0.8s,baz=305,slow=10,SNR=4.1						
WB2	**Warramunga Arr**	**53.12**	**121**	*e*P	**P**	**02 34 52.3**	**0.0**
	comp=E,7.4nm,1.2s						
KBZ	**Khabaz**	**53.86**	**321**	LR	LR	03 00 06.5	
	comp=E,52nm,21.9s,baz=131,slow=38						
INU	**Inuyama**	**54.02**	**50**	*e*P	**P**	**02 34 57.0**	**-1.6**
	comp=E,14nm,1.3s						
USRK	**Ussuriysk Ar.**	**54.31**	**39**	LR	LR	03 00 34.6	
	comp=E,111nm,18.2s,baz=199,slow=39						
AS31	**Alice Springs**	**54.36**	**125**	*e*P	**P**	**02 35 00.0**	**-1.3**
	comp=E,1.2nm,1.2s						
ASAR	**Alice Springs**	**54.36**	**125**	P	**P**	**02 35 02.5**	**+1.2**
	comp=E,1.3nm,1.1s,baz=307,slow=6.4,SNR=4.2						
MJAR	**Matsushiro Arr**	**55.34**	**49**	LR	LR	03 01 13.2	
	comp=E,83nm,18.4s,baz=280,slow=39						
KLR	**Kul'dur**	**56.85**	**33**	LR	LR	03 02 14.4	
	comp=E,109nm,18.6s,baz=236,slow=39						
GUMO	**Guam**	**57.09**	**78**	LR	LR	02 59 13.4	
	comp=E,45nm,18.3s,baz=242,slow=35						
BR101	**Keskin Array S**	**58.43**	**313**	*e*P	**P**	**02 35 31.4**	**+1.2**
BRTR	**Keskin Array B**	**58.43**	**313**	P	**P**	**02 35 31.4**	**+1.2**
	comp=E,1.0nm,0.8s,baz=111,slow=6.2,SNR=5.2						
BRTR				LR	LR	03 02 58.7	
	comp=E,50nm,19.6s,baz=92,slow=38						
NRIK	**Noril'sk**	**62.99**	**0**	LR	LR	03 06 20.0	
	comp=E,136nm,19.0s,baz=218,slow=39						
STKA	**Stephens Creek**	**64.13**	**130**	LR	LR	03 04 22.9	
	comp=E,48nm,18.6s,baz=349,slow=36						
AKASG	**Malin Array Be**	**65.28**	**324**	LR	LR	03 07 23.0	
	comp=E,30nm,21.8s,baz=200,slow=38						
BOSA	**Boshof**	**68.99**	**236**	LR	LR	03 02 34.9	
	comp=E,128nm,19.6s,baz=7.5,slow=32						
TIXI	**Tiksi**	**70.23**	**13**	*e*P	**P**	**02 36 45.1**	**-1.6**
	comp=E,3.7nm,0.5s						
FIA0	**FINESS Array S**	**71.02**	**334**	*e*P	**P**	**02 36 52.0**	**+0.3**
FINES	**FINESS Array B**	**71.02**	**334**	P	**P**	**02 36 52.0**	**+0.3**
	comp=E,1.5nm,0.8s,baz=104,slow=15,SNR=3.9						
FINES				LR	LR	03 09 27.1	
	comp=E,60nm,20.8s,baz=114,slow=37						
GEC2	**GERESS Array S**	**74.51**	**319**	*e*P	**P**	**02 37 12.2**	**-0.6**
	comp=E,2.0nm,0.9s						
GERES	**GERESS Array B**	**74.51**	**319**	P	**P**	**02 37 14.7**	**+1.9**
	comp=E,0.3nm,0.6s,baz=100,slow=4.5,SNR=3.5						
GERES				LR	LR	03 14 08.9	
	comp=E,26nm,19.8s,baz=89,slow=39						
ARA0	**ARCESS Array S**	**74.53**	**341**	*e*P	**P**	**02 37 13.8**	**+1.5**
ARCES	**ARCESS Array B**	**74.53**	**341**	P	**P**	**02 37 13.8**	**+1.5**
	comp=E,1.3nm,0.7s,baz=101,slow=6.3,SNR=5.1						
ARCES				LR	LR	03 11 43.8	
	comp=E,89nm,19.9s,baz=140,slow=37						
NOA	**NORSAR Array B**	**77.81**	**331**	LR	LR	03 16 08.8	
	comp=E,46nm,18.8s,baz=95,slow=39						
DZM	**Mont Dzumac**	**82.37**	**113**	LR	LR	03 13 46.3	
	comp=E,29nm,18.9s,baz=250,slow=35						
TORD	**Torodi Ar. Bea**	**84.31**	**283**	P	**P**	**02 38 08.6**	**+1.8**
	comp=E,0.3nm,0.6s,baz=103,slow=4.1,SNR=6.0						
TORD				LR	LR	03 13 48.1	
	comp=E,84nm,19.1s,baz=40,slow=34						
TOA1	**Torodi Ar. Sit**	**84.31**	**283**	*e*P	**P**	**02 38 08.6**	**+1.8**
RPZ	**Rata Peaks**	**89.80**	**134**	LR	LR	03 15 48.6	
	comp=E,66nm,18.9s,baz=282,slow=34						
DBIC	**Dimbokro**	**91.39**	**277**	LR	LR	03 19 11.9	
	comp=E,63nm,19.2s,baz=86,slow=35						
VNDA	**Vanda**	**92.77**	**168**	LR	LR	03 14 32.3	
	comp=E,86nm,19.1s,baz=297,slow=32						

TIR 18 02:26:47.0, 41.15°N×20.22°E, h7km, Md2.6/4, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**307**	*i* PG	Pg	02 26 53.5	0.0
TIR				*i* SG	Sb	02 26 59.9	-1.0
PHP	**Peshkopia**	**0.56**	**17**	*i* PG	Pg	02 26 57.8	-0.1
PHP				*i* SG	Sb	02 27 06.6	-0.9
PUK	**Puka**	**0.93**	**345**	*i* PG	Pg	02 27 04.8	-0.1
PUK				*i* SG	Sn	02 27 19.2	-1.0
FNA	**Florina**	**0.95**	**112**	*i* PG	Pb	02 27 05.8	-0.1
FNA				*i* SG	Sn	02 27 20.4	-0.3

ROM 18 02:28:00.2±0.4, 41.52N±0.02×15.71E±0.01, h27km±4km, ML1.0/3, Error ellipse: s-maj=1.7km s-min=1.3km az=8.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.24**	**7**	P	Pb	02 28 06.7	+0.1
SGRT				S	Sb	02 28 11.1	+0.1
SGRT				AML	AML		
	comp=E,36μm,0.7s						
SGRT				AML	AML		
	comp=N,53μm,0.2s						
SGRT				AML	AML		
	comp=E,36μm,0.7s						
SGRT				AML	AML		
	comp=N,53μm,0.2s						
SGRT				AML	AML		
	comp=E,36μm,0.7s						
SGRT				AML	AML		
	comp=N,53μm,0.2s						
MSAG	**Monte S. Angel**	**0.24**	**39**	P	Pb	02 28 06.9	+0.2
MSAG			

MELA	**Melanico ??? S**	**0.47 293**	P	Pb	02 28 10.5	+0.5
MRVN	**Minervino Murg**	**0.59 141**	P	Pb	02 28 11.8	-0.2
MRVN			AML	AML		
	comp=E,10μm,1.4s					
MRVN			AML	AML		
	comp=N,10μm,0.1s					
MRVN			AML	AML		
	comp=E,10μm,1.4s					
MRVN			AML	AML		
	comp=N,11μm,0.1s					
MRVN			AML	AML		
	comp=E,10μm,1.4s					
MRVN			AML	AML		
	comp=N,11μm,0.1s					
CAFE	**Carife**	**0.61 216**	P	Pb	02 28 12.1	-0.2
PALZ	**Palazzo San Ge**	**0.61 161**	P	Pb	02 28 12.6	+0.3
PALZ			S	Sn	02 28 22.0	0.0
SNAL	**S. Angelo Dei**	**0.70 212**	P	Pb	02 28 13.3	-0.6

*IDC **18** 03:03:24.3±0.5, 51°.94N×176°.65E, h0km, mb4.2/24, mb1 4.3/26, mb1mx4.1/52, mbtmp4.2/26, ML3.8/1, MS3.1/10, Ms1 3.1/10, ms1mx3.0/34, Error ellipse: s-maj=17.6km s-min=11.5km az=153.0*

*NEIC **18** 03:03:27.8±0.0, 52°.38N×176°.77E, h8km, mb4.4/53, After AEIC.*

*ISCJB **18** 03:03:28.3±0.3, 51°.83N±0°.05×176°.58E±0°.03, h40km, mb4.3/59, MS3.1/8, Error ellipse: s-maj=7.6km s-min=2.8km az=3.1*

ISC 18 03:03:30.2±0.4, **51°.94N**±0°.08×**176°.51E**±0°.04, **h40**km, **n136,** σ1$**36**/135, **mb4.4**/59, **MS3.1**/8, **1C, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.68**	**299**	*e*Pn	**Pn**	**03 03 56.6**	**-0.4**
SMY				*e*Sn	**Sn**	**03 04 19.2**	**+1.9**
GALAA	**Gareloi Lava P**	**2.93**	**92**	*e*Pn	**Pn**	**03 04 13.3**	**-1.0**
GAEA	**Gareloi East**	**2.94**	**91**	*e*Pn	**Pn**	**03 04 13.5**	**-0.9**
TANO	**Tanaga North**	**3.32**	**88**	*e*Pn	**Pn**	**03 04 18.7**	**-0.9**
TASE	**Tanaga Southea**	**3.38**	**90**	*e*Pn	**Pn**	**03 04 19.4**	**-1.1**
TAFP	**Tanaga Falls P**	**3.41**	**88**	*e*Pn	**Pn**	**03 04 19.5**	**-1.3**
TAFP				*e*Sn	**Sn**	**03 04 59.1**	**-0.9**
TAPA	**Tanaga Point A**	**3.52**	**90**	*e*Pn	**Pn**	**03 04 21.2**	**-1.2**
TAPA				*e*Sn	**Sn**	**03 05 02.8**	**0.0**
KIMD	**Kanaga Island**	**3.88**	**90**	*e*Pn	**Pn**	**03 04 26.1**	**-1.2**
KICM	**Kanaga Island**	**3.90**	**88**	*e*Pn	**Pn**	**03 04 26.1**	**-1.4**
KIKV	**Kanaga Island**	**3.91**	**88**	*e*Pn	**Pn**	**03 04 26.8**	**-1.0**
KIWB	**Kanaga Island**	**3.93**	**89**	*e*Pn	**Pn**	**03 04 26.7**	**-1.2**
KINC	**Kanaga Island**	**3.94**	**88**	*e*Pn	**Pn**	**03 04 27.0**	**-1.1**
KIRH	**Kanaga Island**	**3.96**	**88**	*e*Pn	**Pn**	**03 04 26.8**	**-1.5**
ADK	**Adak**	**4.21**	**88**	*e*Pn	**Pn**	**03 04 30.4**	**-1.4**
ADK				*e*Sn	**Sn**	**03 05 18.6**	**-1.1**
ADAG	**Mount Adagdak**	**4.26**	**87**	*e*Pn	**Pn**	**03 04 31.5**	**-1.0**
ETKA	**Kagalaska Isla**	**4.39**	**88**	*e*Pn	**Pn**	**03 04 33.0**	**-1.2**
GSTD	**Great Sitkin T**	**4.54**	**86**	*e*Pn	**Pn**	**03 04 35.8**	**-0.7**
GSTD				*e*Sn	**Sn**	**03 05 29.1**	**+1.1**
GSTR	**Great Sitkin T**	**4.59**	**85**	*e*Pn	**Pn**	**03 04 35.8**	**-1.3**
GSMY	**Great Sitkin M**	**4.59**	**86**	*e*Pn	**Pn**	**03 04 36.2**	**-1.0**
KOKL	**Mount Kliuchef**	**5.73**	**82**	*e*Pn	**Pn**	**03 04 51.7**	**-1.1**
ATKA	**Atka Island**	**5.74**	**84**	*e*Pn	**Pn**	**03 04 51.5**	**-1.2**
ATKA				*e*Sn	**Sn**	**03 05 57.5**	**+0.2**
NIKH	**Nikolski High**	**9.00**	**78**	*e*Pn	**Pn**	**03 05 36.1**	**-1.3**
SPIA	**Saint Paul Isl**	**9.31**	**50**	*e*Pn	**Pn**	**03 05 39.5**	**-2.1**
MSW	**Makushin Switc**	**10.28**	**72**	*e*Pn	**Pn**	**03 05 55.2**	**+0.2**
PEA0B	**Petropavlovsk-**	**11.52**	**283**	*e*Sn	**Sn**	**03 08 17.5**	**-1.7**
PEA1	**Petropavlovsk-**	**11.52**	**283**	*e*Pn	**Pn**	**03 06 12.2**	**+0.2**
PEA1				*e*Sn	**Sn**	**03 08 13.6**	**-5.7**
PETK	**Petropavlovsk-**	**11.52**	**283**	Pn	**Pn**	**03 06 12.2**	**+0.2**
	baz=89,slow=20,SNR=5.4						
PETK				Sn	**Sn**	**03 08 13.6**	**-5.7**
	0.5nm,0.3s,baz=78,slow=24,SNR=4.2						
MA2	**Magadan**	**16.30**	**308**	LR	LR	03 13 11.2	
	comp=Z,128nm,18.3s,baz=124,slow=36						
BILL	**Bilibino**	**16.90**	**347**	*e*P	**Pn**	**03 07 23.7**	**+0.3**
	17nm,1.5s						
TTA	**Tatalina**	**18.27**	**42**	*e*P	**Pn**	**03 07 46.2**	**+5.8**
	6.9nm,1.2s						
KDAK	**Kodiak Island**	**18.61**	**60**	P	**P**	**03 07 42.2**	**-1.7**
	0.3nm,0.3s,baz=276,slow=10,SNR=6.8						
KDAK				LR	LR	03 14 55.3	
	comp=Z,44nm,19.7s,baz=290,slow=37						
KDAK	**Kodiak Island**	**18.61**	**60**	*e*P	**P**	**03 07 42.2**	**-1.7**
	20nm,1.3s						
RSO	**Redoubt South**	**18.95**	**51**	*e*P	**Pn**	**03 07 48.5**	**-0.2**
RDOG	**Red Dog Mine**	**18.99**	**24**	*e*P	**Pn**	**03 07 50.9**	**+1.9**
	11nm,0.8s						
SPU	**Mount Spurr**	**19.45**	**49**	*e*P	**Pn**	**03 07 56.3**	**+1.7**
CNPM	**China Poot**	**19.52**	**54**	*e*P	**Pn**	**03 07 56.0**	**+0.6**
	13nm,0.7s						
BRLK	**Bradley Lake**	**19.73**	**54**	*e*P	**Pn**	**03 07 57.9**	**-0.1**
	19nm,0.7s						
SUA	**Susitna One**	**20.13**	**49**	*e*P	Pn	03 08 03.0	+0.3
	9.9nm,0.6s						
SEW	**Seward**	**20.50**	**53**	*e*P	**P**	**03 08 04.4**	**0.0**
	14nm,1.0s						
RC01	**Rabbit Creek A**	**20.53**	**50**	*e*P	Pn	03 08 08.4	+1.2
	13nm,0.7s						
KTH	**Kantishna Hill**	**20.64**	**43**	*e*P	**P**	**03 08 03.3**	**-2.8**
	10nm,0.9s						
BPAW	**Bear Paw Mtn.**	**20.80**	**42**	*e*P	Pn	03 08 10.6	+0.2
	6.9nm,0.8s						
PMR	**Palmer**	**20.92**	**49**	*e*P	Pn	03 08 11.9	+0.3
	4.7nm,0.8s						
GHO	**Glory Hole Cre**	**21.05**	**49**	*e*P	**P**	**03 08 13.2**	**+2.7**
	8.4nm,0.8s						
KNK	**Knik Glacier**	**21.20**	**50**	*e*P	**P**	**03 08 12.2**	**+0.2**
	13nm,0.9s						
SML	**Sawmill**	**21.33**	**49**	*e*Pn	**P**	**03 08 15.3**	**+1.9**
	24nm,0.7s						
RND	**Reindeer**	**21.48**	**44**	*e*Pn	**P**	**03 08 16.1**	**+1.0**
	3.4nm,0.9s						
SCM	**Sheep Creek Mo**	**21.80**	**49**	*e*P	**P**	**03 08 19.5**	**+0.9**
	26nm,0.6s						
DHY	**Denali Highway**	**22.04**	**46**	*e*P	**P**	**03 08 22.1**	**+0.9**
	9.1nm,1.0s						
CCB	**Clear Creek Bu**	**22.29**	**41**	*e*P	**P**	**03 08 23.3**	**-0.3**
	4.4nm,1.0s						
ILAR	**Eielson Array**	**22.70**	**41**	P	**P**	**03 08 26.8**	**-1.2**
	2.1nm,0.8s,baz=246,slow=8.7,SNR=26						
ILAR				LR	LR	03 16 52.7	
	comp=Z,75nm,19.7s,baz=249,slow=36						
ILB	**Eielson Array**	**22.70**	**41**	*e*P	**P**	**03 08 26.9**	**-1.1**
	3.9nm,0.9s						
HMT	**Hamilton**	**23.10**	**53**	*e*P	**P**	**03 08 32.3**	**+0.1**
	13nm,0.7s						
HMT				*e*PcP	**PcP**	**03 12 18.0**	**-1.7**
TOLK	**Toolik Lake Re**	**23.23**	**31**	*e*P	**P**	**03 08 34.0**	**+0.6**
	10nm,0.9s						
DOT	**Dot Lake**	**23.62**	**45**	*e*P	**P**	**03 08 37.3**	**0.0**
	4.1nm,0.6s						
DOT				*e*PcP	**PcP**	**03 12 21.3**	**+0.6**
EGAK	**Eagle**	**25.09**	**43**	*e*P	**P**	**03 08 50.5**	**-0.2**
	16nm,1.0s						
DAWY	**Dawson**	**25.73**	**45**	*e*P	**P**	**03 08 57.3**	**+0.7**
	8.6nm,0.8s						
HYT	**Haines Junctio**	**26.44**	**52**	*e*P	**P**	**03 09 04.5**	**+1.4**
	11nm,0.9s						
EPYK	**Eagle Plains**	**27.18**	**40**	*e*P	**P**	**03 09 09.8**	**+0.3**
	4.9nm,0.9s						
KLR	**Kul'dur**	**28.21**	**282**	P	**P**	**03 09 19.1**	**+0.1**
	1.6nm,0.5s,baz=66,slow=6.3,SNR=5.7						
INK	**Inuvik**	**28.71**	**36**	P	**P**	**03 09 23.8**	**+0.7**
	0.8nm,0.7s,baz=271,slow=11,SNR=4.9						
INK	**Inuvik**	**28.71**	**36**	*e*P	**P**	**03 09 23.8**	**+0.7**
	2.7nm,0.8s						
WRAK	**Wrangell Islan**	**29.69**	**61**	*e*P	**P**	**03 09 33.0**	**+1.1**
	24nm,1.5s						
DLBC	**Dease Lake**	**30.48**	**56**	P	**P**	**03 09 37.2**	**-1.8**
	0.9nm,0.4s,baz=197,slow=17,SNR=2.8						
DLBC	**Dease Lake**	**30.48**	**56**	*e*P	**P**	**03 09 37.2**	**-1.8**
	7.7nm,1.4s						
MJAR	**Matsushiro Arr**	**31.04**	**255**	LR	LR	03 20 28.5	
	comp=Z,24nm,21.8s,baz=185,slow=33						
H11N2	**WAKE ISLAND Hy**	**33.01**	**197**	T	T	03 45 09.1	
	baz=11,slow=76,SNR=1110						
H11N3	**WAKE ISLAND Hy**	**33.02**	**197**	T	T	03 44 58.2	
	baz=11,slow=76,SNR=1348						
H11N1	**WAKE ISLAND Hy**	**33.03**	**197**	T	T	03 45 10.4	
	baz=11,slow=76,SNR=1256						
H11S1	**WAKE ISLAND Hy**	**34.24**	**197**	T	T	03 46 31.3	
	baz=11,slow=76,SNR=296						
H11S3	**WAKE ISLAND Hy**	**34.26**	**197**	T	T	03 46 30.8	
	baz=11,slow=76,SNR=222						
H11S2	**WAKE ISLAND Hy**	**34.26**	**197**	T	T	03 46 41.2	
	baz=11,slow=76,SNR=124						

KSRS	**Korea Array**	**36.73**	**266**	P	**P**	**03 10 34.1**	**+0.7**
	0.3nm,0.3s,baz=46,slow=10,SNR=3.0						
KSRS				LR	LR	03 23 56.1	
	comp=Z,16nm,21.7s,baz=142,slow=33						
KS15	**Wonju Array Si**	**36.77**	**266**	*e*P	**P**	**03 10 34.1**	**+0.4**
	6.6nm,1.2s						
YKA	**Yellowknife Ar**	**36.96**	**46**	P	**P**	**03 10 35.4**	**+0.4**
	0.8nm,0.5s,baz=286,slow=8.3,SNR=7.3						
YKA				LR	LR	03 26 51.3	
	comp=Z,7.2nm,19.4s,baz=303,slow=38						
YKB5	**Yellowknife Ar**	**36.96**	**46**	*e*P	**P**	**03 10 35.4**	**+0.4**
ULN	**Ulaanbaatar**	**43.38**	**293**	*e*P	**P**	**03 11 26.2**	**-2.4**
	1.9nm,0.5s						
SONA0	**Songino Array**	**43.77**	**294**	*e*P	**P**	**03 11 32.5**	**+0.8**
SONM	**Songino Array**	**43.77**	**294**	P	**P**	**03 11 32.5**	**+0.8**
	2.1nm,0.5s,baz=58,slow=7.6,SNR=12						
NV01	**Mina Array Sit**	**46.36**	**80**	*e*P	**P**	**03 11 51.5**	**-0.9**
NV01				*e*PcP	**PcP**	**03 13 27.0**	**0.0**
NVAR	**Mina Array Bea**	**46.36**	**80**	P	**P**	**03 11 51.5**	**-0.9**
	0.8nm,0.7s,baz=283,slow=5.9,SNR=5.7						
NVAR				PcP	**PcP**	**03 13 27.0**	**0.0**
	0.4nm,0.5s,baz=285,slow=3.5,SNR=2.8						
TPNV	**Topopah Spring**	**48.55**	**80**	*e*P	**P**	**03 12 11.0**	**+1.5**
	3.2nm,1.0s						
PD31	**Pinedale Array**	**48.89**	**70**	*e*P	**P**	**03 12 10.1**	**-2.0**
	1.2nm,1.0s						
PDAR	**Pinedale Array**	**48.89**	**70**	P	**P**	**03 12 10.1**	**-2.0**
	0.6nm,0.8s,baz=280,slow=2.6,SNR=3.9						
SPA0	**Spitsbergen Ar**	**49.58**	**355**	*e*P	**P**	**03 12 16.4**	**-0.3**
	20nm,1.2s						
SPITS	**Spitsbergen Ar**	**49.58**	**355**	P	**P**	**03 12 16.4**	**-0.3**
	1.5nm,0.5s,baz=69,slow=9.6,SNR=8.8						
ZALV	**Zalesovo Beam**	**51.49**	**311**	PcP	**PcP**	**03 13 45.5**	**+0.5**
	0.6nm,0.3s,baz=26,slow=3.7,SNR=4.0						
PV13	**Radium Mtn., P**	**52.25**	**74**	*e*P	**P**	**03 12 39.5**	**+2.1**
	3.7nm,0.7s						
KURK	**Kurchatov**	**56.49**	**311**	*e*P	**P**	**03 13 07.9**	**+0.2**
	6.9nm,0.9s						
ARA0	**ARCESS Array S**	**57.00**	**348**	*e*P	**P**	**03 13 10.2**	**-1.0**
ARCES	**ARCESS Array B**	**57.00**	**348**	P	**P**	**03 13 10.2**	**-1.0**
	8.8nm,0.3s,baz=49,slow=9.7,SNR=5.0						
ARCES				LR	LR	03 41 18.5	
	comp=Z,32nm,18.0s,baz=88,slow=40						
MK31	**Makanchi Array**	**57.37**	**306**	*e*P	**P**	**03 13 13.2**	**-0.9**
	2.1nm,0.6s						
MK32	**Makanchi Array**	**57.37**	**306**	*e*P	**P**	**03 13 13.6**	**-0.5**
MKAR	**Makanchi Array**	**57.37**	**306**	P	**P**	**03 13 13.6**	**-0.5**
	2.2nm,0.5s,baz=52,slow=5.8,SNR=32						
BVAR	**Borovoye Array**	**58.53**	**317**	LR	LR	03 39 06.6	
	comp=Z,42nm,21.9s,baz=180,slow=37						
BRVK	**Borovoye**	**58.55**	**317**	*e*P	**P**	**03 13 22.8**	**+0.5**
	5.8nm,0.6s						
LTX	**Lajitas**	**61.42**	**78**	*e*P	**P**	**03 13 41.8**	**-0.7**
TX31	**Lajitas Ar. Si**	**61.42**	**78**	*e*P	**P**	**03 13 43.6**	**+1.1**
TXAR	**Lajitas Array**	**61.43**	**78**	P	**P**	**03 13 41.8**	**-0.7**
	0.5nm,0.6s,baz=303,slow=4.1,SNR=3.0						
JAY	**Jayapura**	**62.14**	**221**	P	**P**	**03 13 47.9**	**+0.7**
	5.8nm,0.7s,baz=308,slow=12,SNR=3.1						
FIA0	**FINESS Array S**	**64.53**	**345**	*e*P	**P**	**03 14 01.9**	**-0.5**
FINES	**FINESS Array B**	**64.53**	**345**	P	**P**	**03 14 01.9**	**-0.5**
	1.3nm,0.6s,baz=28,slow=8.6,SNR=7.3						
FINES				LR	LR	03 45 44.1	
	comp=Z,24nm,19.7s,baz=33,slow=39						
SIJI	**Sorong**	**64.91**	**232**	P	**P**	**03 14 06.5**	**+1.0**
	2.8nm,0.4s,baz=12,slow=10,SNR=5.6						
ABKAR	**Akbulak array**	**65.68**	**320**	*e*P	**P**	**03 14 10.8**	**+0.7**
	1.6nm,0.7s						
KK31	**Karatay Array**	**65.81**	**309**	*e*P	**P**	**03 14 11.5**	**+0.4**
	2.8nm,0.7s						
KKAR	**Karatay Array**	**65.81**	**309**	*e*P	**P**	**03 14 11.5**	**+0.4**
	2.8nm,0.7s						
NB2	**NORSAR Subarra**	**66.76**	**352**	P	**P**	**03 14 16.1**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=9.2,slow=6.5						
NB200	**NORSAR Array S**	**66.76**	**352**	*e*P	**P**	**03 14 16.4**	**-0.4**
NOA	**NORSAR Array B**	**66.76**	**352**	P	**P**	**03 14 16.4**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=10,slow=6.5,SNR=7.7						
NOA				LR	LR	03 43 05.5	
	comp=Z,10nm,21.0s,baz=245,slow=36						
BTK	**Batken**	**67.98**	**307**	*e*P	**P**	**03 14 25.9**	**+0.8**
	comp=Z,7.1nm,0.6s						
CM31	**Chiang Mai Arr**	**68.06**	**272**	*e*P	**P**	**03 14 26.6**	**+1.0**
	comp=Z,5.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**68.06**	**272**	P	**P**	**03 14 26.6**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=27,slow=6.4,SNR=4.2						
GAR	**Garm**	**69.05**	**307**	*e*P	**P**	**03 14 32.5**	**+0.8**
	comp=Z,13nm,0.6s						
CHGR	**Chuyangaron**	**69.88**	**307**	*e*P	**P**	**03 14 39.4**	**+2.6**
	comp=Z,8.8nm,0.6s						
KBL	**Kabul**	**73.15**	**305**	*e*P	**P**	**03 14 56.5**	**-0.3**
	comp=Z,9.6nm,0.8s						
AKASG	**Malin Array Be**	**74.05**	**339**	P	**P**	**03 15 01.4**	**0.0**
	comp=Z,1.6nm,0.4s,baz=21,slow=6.1,SNR=4.9						
AKBB	**Malin Array Si**	**74.05**	**339**	*e*P	**P**	**03 15 01.4**	**0.0**
	comp=Z,6.1nm,1.3s						
GEYT	**Alibeck**	**75.65**	**314**	P	**P**	**03 15 12.1**	**+1.1**
	comp=Z,1.5nm,0.4s,baz=18,slow=5.0,SNR=3.5						
KWP	**Kalwaria Pacla**	**76.38**	**343**	*e*P	**P**	**03 15 15.5**	**+0.5**
	comp=Z,79nm,0.7s						
BUR08	**Bucovina Ar. S**	**77.80**	**341**	*e*P	**P**	**03 15 23.9**	**+0.8**
	comp=Z,2.5nm,0.7s						
VYHS	**Vyhne**	**78.15**	**345**	*e*P	**P**	**03 15 25.7**	**+0.9**
DRGR		**79.11**	**342**	⇑*i*P	**P**	**03 15 30.2**	**-0.1**
WR1	**Warramunga Arr**	**80.48**	**220**	*e*P	**P**	**03 15 37.3**	**-0.4**
WRA	**Warramunga Arr**	**80.48**	**220**	P	**P**	**03 15 37.3**	**-0.4**
	comp=Z,5.5nm,0.9s,baz=27,slow=5.7,SNR=8.5						
BR101	**Keskin Array S**	**83.15**	**332**	*e*P	**P**	**03 15 52.6**	**+0.6**
BRTR	**Keskin Array B**	**83.15**	**332**	P	**P**	**03 15 52.6**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=49,slow=3.7,SNR=3.9						
TTG	**Podgorica**	**83.96**	**343**	*e*P	**P**	**03 15 56.2**	**+0.4**
	comp=Z,2.9nm,0.8s						
AS31	**Alice Springs**	**84.01**	**219**	*e*P	**P**	**03 15 56.6**	**+0.5**
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**84.01**	**219**	P	**P**	**03 15 56.6**	**+0.5**
	comp=Z,3.4nm,0.7s,baz=20,slow=5.4,SNR=26						
STKA	**Stephens Creek**	**88.90**	**209**	P	**P**	**03 16 19.9**	**0.0**
	comp=Z,2.4nm,0.7s,baz=304,slow=23,SNR=3.9						
STKA	**Stephens Creek**	**88.90**	**209**	*e*P	**P**	**03 16 19.9**	**0.0**
	comp=Z,0.9nm,0.9s						
TOA1	**Torodi Ar. Sit**	**115.03**	**354**	*e*PKiKP	**PKiKP**	**03 22 05.8**	**-1.2**
TORD	**Torodi Ar. Bea**	**115.03**	**354**	PKP	**PKiKP**	**03 22 05.8**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=351,slow=2.3,SNR=4.4						
MAW	**Mawson**	**145.13**	**218**	PKPbc	**PKPbc**	**03 23 01.4**	**0.0**
	comp=Z,6.0nm,0.6s,baz=77,slow=4.5,SNR=12						
MAW	**Mawson**	**145.13**	**218**	*e*PKPdf	**PKPab**	**03 23 01.6**	**+0.1**
BOSA	**Boshof**	**148.36**	**306**	PKPbc	**PKPbc**	**03 23 11.5**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=1.7,slow=4.3,SNR=7.0						

*SJA **18** 03:07:34.9±0.8, 28°.91S×67°.45W, h134km±6km, ML3.6, MW3.4*

*GUC **18** 03:07:35.4±0.8, 28°.92S×67°.55W, h133km±5km, ML4.0*

ISC 18 03:07:35.2±1.5, **28°.93S**±0°.05×**67°.48W**±0°.04, **h137**km±12km, **n13,** σ0$**75**/23, **2C-2D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.66**	**286**	*e*P	**Pn**	**03 07 56.8**	**+0.5**
VCA				*e*S	**Sn**	**03 08 12.3**	**+0.1**
VCA	**Vinchina**	**0.66**	**286**	⇓*i*P	**Pn**	**03 07 56.8**	**+0.5**
VCA				*e*S	**Sn**	**03 08 12.1**	**-0.1**
VCA				IAML		03 08 16.1	
	comp=E,2μm,0.7s						
CYA	**Choya**	**1.55**	**72**	*e*P	**Pn**	**03 08 04.8**	**+0.4**
CYA				IAML		03 08 04.9	
	comp=Z,482nm,0.2s						
CYA				*e*S	**Sn**	**03 08 25.6**	**-1.0**
CYA	**Choya**	**1.55**	**72**	⇑*i*P	**Pn**	**03 08 04.9**	**+0.4**
CYA				*e*S	**Sn**	**03 08 25.3**	**-1.4**
RTLL	**Cerro Villicun**	**2.55**	**200**	IAML		03 08 49.5	
	comp=N,919nm,0.4s						
GO03	**Copiap**	**2.77**	**298**	*e*P	**Pn**	**03 08 19.6**	**+0.4**
GO03				*e*S	**Sn**	**03 08 53.2**	**+0.2**
GO03	**Copiap**	**2.77**	**298**	⇓*i*P	**Pn**	**03 08 19.6**	**+0.4**
GO03				*i* S	**Sn**	**03 08 51.9**	**-1.2**
LCO	**Las Campanas**	**2.82**	**267**	*e*P	**Pn**	**03 08 20.2**	**+0.2**
LCO				*i* S	**Sn**	**03 08 54.1**	**-0.5**
LCO				IAML		03 08 58.1	
	comp=E,388nm,0.3s						
GO04	**Tololo Observa**	**3.15**	**246**	⇑*i*P	**Pn**	**03 08 24.8**	**+0.6**
GO04				*e*S	**Sn**	**03 09 02.0**	**0.0**
ACAN	**Cantantal**	**3.35**	**176**	*e*P	**Pn**	**03 08 27.6**	**+1.0**
ACAN				*e*S	**Sn**	**03 09 06.1**	**-0.3**
LSCH	**La Serena**	**3.43**	**252**	*e*P	**Pn**	**03 08 27.3**	**-0.3**
LSCH				*i* S	**Sn**	**03 09 06.6**	**-1.5**
CO02	**Combarbal**	**3.80**	**232**	*e*P	**Pn**	**03 08 32.7**	**+0.1**
GO02	**Mina Guanaco**	**4.19**	**333**	*e*P	**Pn**	**03 08 38.9**	**+0.9**
GO02				*e*S	**Sn**	**03 09 26.5**	**-0.2**

*NEIC **18** 03:10:40.0±0.0, 15°.38N×94°.58W, h16km, MD4.1(MEX), After MEX.*

MEX 18 03:10:40.0±0.4, **15°.38N**×**94°.58W, h16**km±20km, **MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.53**	**285**	*e*Pn	Pn	03 11 03.1	-3.5
HUIG	**Huatulco**	**1.53**	**285**	*e*P	Pn	03 11 03.1	-3.5
CMIG	**Matias Romero**	**1.73**	**350**	*e*Pn	Pn	03 11 05.8	-3.7
CMIG				*e*Sn	Sn	03 11 26.0	-5.3
CMIG	**Matias Romero**	**1.73**	**350**	*e*P	Pn	03 11 05.8	-3.7
CMIG				*e*S	Sn	03 11 26.0	-5.3
TGIG		**1.98**	**45**	*e*Pn	Pn	03 11 09.9	-2.9
TGIG		**1.98**	**45**	*i* P	Pn	03 11 09.9	-2.9
CCIG	**Comitan**	**2.52**	**69**	*e*Pn	Pn	03 11 18.8	-1.6
CCIG				*e*Sn	Sn	03 11 49.2	-1.7
CCIG	**Comitan**	**2.52**	**69**	*e*P	Pn	03 11 18.4	-2.0
TLIG	**Tlapa**	**4.40**	**300**	*e*Pn	Pn	03 11 45.9	-0.4
TLIG				*e*Sn	Sn	03 12 35.7	-1.6
TEIG	**Tepich**	**7.70**	**50**	*e*Pn	Pn	03 12 27.1	-4.4
TEIG				*e*Sn	Sn	03 13 51.3	-7.1
MDPB	**Devils Postpil**	**31.01**	**320**	*e*P	P	03 16 51.5	-5.7
C40A	**Isle Royale Na**	**32.76**	**7**	*e*P	P	03 17 09.9	-2.1

*NNC **18** 04:24:23.4±1.4, 44°.31N×83°.06E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=12.1km s-min=5.0km az=125.0*

*SOME **18** 04:24:23.2, 44°.33N×83°.18E, h20km*

ISC 18 04:24:22.8±1.8, **44°.38N**±0°.08×**83°.14E**±0°.08, **h17**km, **n18,** σ1$**82**/26, **4C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.22**	**246**	Pg	**Pb**	**04 25 03.4**	**+0.8**
	7.7nm,0.4s						
KTMS				Lg	Lg	04 25 32.3	
	20nm,0.3s						
KTMS	**Ketmen**	**2.22**	**246**	*e*P	**Pb**	**04 25 03.4**	**+0.8**
	11nm,0.2s						
KTMS				*e*S	**Sg**	**04 25 32.3**	**-1.9**
	20nm,0.3s						
DJR	**Jarkent**	**2.40**	**270**	Pg	**Pg**	**04 25 07.4**	**-1.5**
	2.7nm,0.2s						
DJR				Lg	Lg	04 25 39.2	
	5.6nm,0.3s						
DJR	**Jarkent**	**2.40**	**270**	*e*P	**Pg**	**04 25 07.4**	**-1.5**
	2.7nm,0.2s						
DJR				*e*S	**Sg**	**04 25 39.2**	**-0.9**
	5.6nm,0.3s						
MK31	**Makanchi Array**	**2.49**	**346**	⇑Pg	**Pg**	**04 25 09.2**	**-1.3**
	0.3nm,0.3s,baz=163,slow=17,SNR=19						
MK31				⇓Lg	Lg	04 25 43.0	
	1.9nm,0.3s,baz=168,slow=27,SNR=20						
MAKZ	**Makanchi**	**2.56**	**342**	⇓Pg	**Pg**	**04 25 11.6**	**-0.3**
	1.7nm,0.6s						
MAKZ				⇑Lg	Lg	04 25 45.1	
	5.1nm,0.5s						
KAPS	**Kapalarasan**	**2.84**	**290**	Pg	**Pg**	**04 25 15.4**	**-1.8**
	0.4nm,0.1s						
KAPS				Lg	Lg	04 25 52.4	
	3.9nm,0.3s						
KAPS	**Kapalarasan**	**2.84**	**290**	*e*P	**Pb**	**04 25 15.1**	**+2.0**
	0.4nm,0.1s						
KAPS				*e*S	**Sg**	**04 25 52.3**	**-1.7

GIRC *i* 06 02 40.7
comp=Z,15µm,0.4s
BRRC Barranca, Sant 0.64 298⇑*i*P Pn 06 02 25.1 +0.3
BRRC AMPN 06 02 25.3
comp=Z,113µm,0.2s
BRRC *e*S **Sn 06 02 41.8 -0.5**
BRRC AMSN 06 02 42.9
comp=Z,1027µm,0.2s
BRRC AMSN 06 02 43.2
comp=Z,271µm,0.1s
BRRC *i* 06 02 43.2
comp=Z,10µm,0.2s
RUSC La Rusia 0.91 176⇑*i*P Pn 06 02 27.3 +0.1
RUSC *e*S **Sn 06 02 45.7 -0.9**
RUSC *i* 06 02 47.3
comp=Z,17µm,0.3s
PTBC PUERTO BERRIO, 1.33 259⇑*i*P Pn 06 02 29.7 -0.7
PTBC *e*S **Sn 06 02 51.0 -1.2**
PTBC *i* 06 02 58.1
comp=Z,14µm,0.5s
TAMC Tame, Arauca 1.39 105⇓*i*P Pn 06 02 31.7 +0.8
TAMC *e*S **Sn 06 02 52.9 -0.3**
OCAC Ocana 1.43 353⇑*i*P Pn 06 02 31.3 -0.2
OCAC *e*S **Sn 06 02 52.6 -1.7**
OCAC *i* 06 02 58.2
comp=Z,10µm,0.4s
YOPC Yopal, Colombi 1.61 154⇓*i*P Pn 06 02 34.0 +0.7
YOPC *e*S **Sn 06 02 58.1 +0.6**
YOPC *i* 06 02 58.8
comp=Z,21µm,0.3s
NORC Norcasia 2.12 234⇑*i*P Pn 06 02 38.9 +0.1
NORC *e*S **Sn 06 03 06.8 -0.6**
NORC *i* 06 03 12.0
comp=Z,8µm,0.3s
SMLC San Martn de 2.18 335⇑*i*P Pn 06 02 39.0 -0.6
SMLC *e*S **Sn 06 03 08.0 -0.7**
SMLC *i* 06 03 12.9
comp=Z,6µm,0.3s
CHIC Chingaza 2.24 195⇑*i*P Pn 06 02 41.2 +0.5
CHIC *e*S **Sn 06 03 10.7 0.0**
CHIC *i* 06 03 14.1
comp=Z,9µm,0.4s
ROSC El Rosal 2.28 211 P Pn 06 02 42.9 +1.8
comp=Z,3µm,0.3s,baz=126,slow=0.8,SNR=5530
ROSC LR LR 06 03 06.2
comp=Z,233nm,18.0s,baz=50,slow=28
ROSC S **Sn 06 03 12.6 +1.2**
comp=Z,3µm,0.3s,baz=17,slow=24,SNR=20
ROSC El Rosal 2.28 211 *e*Pn Pn 06 02 42.7 +1.6
ROSC *e*Sn **Sn 06 03 10.3 -1.1**
ROSC El Rosal 2.28 211⇑*i*P Pn 06 02 42.9 +1.8
ROSC *e*S **Sn 06 03 11.7 +0.3**
HELC Santa Helena 2.45 256⇑*i*P Pn 06 02 43.2 +0.1
HELC *e*S **Sn 06 03 14.4 -0.4**
HELC *i* 06 03 20.9
comp=Z,6µm,0.5s
GUY2C Guyana, Caldas 2.71 235⇑*i*P Pn 06 02 47.0 +0.6
GUY2C *e*S **Sn 06 03 20.5 -0.3**
GUY2C *i* 06 03 33.6
comp=Z,6µm,0.5s
VILC Villavicencio, 2.73 192⇓*i*P Pn 06 02 46.5 +0.2
VILC *e*S **Sn 06 03 21.3 +0.4**
VILC *i* 06 03 24.1
comp=Z,10µm,0.5s
RREF El Recreo 2.90 229⇑*i*P Pn 06 02 49.2 +0.3
RREF *e*S **Sn 06 03 25.8 +0.6**
RREF *i* 06 03 35.5
comp=Z,9µm,0.4s
DBBC Dabeiba 3.05 274⇓*i*P Pn 06 02 50.7 +0.5
DBBC *e*S **Sn 06 03 26.4 -1.4**
DBBC *i* 06 03 31.0
comp=Z,6µm,0.6s
CODC Agustn Codazz 3.12 355⇑*i*P Pn 06 02 50.5 -0.5
CODC *e*S **Sn 06 03 28.3 -1.0**
CODC *i* 06 03 33.5
comp=Z,2µm,0.5s
ARGC Ariguani, Magd 3.22 340⇓*i*P Pn 06 02 53.3 +1.0
ARGC *e*S **Sn 06 03 31.7 +0.2**
ARGC *i* 06 03 43.7
comp=Z,2µm,0.3s
SDV Santo Domingo 3.23 50 P Pn 06 02 52.7 +0.1
comp=Z,224nm,0.3s,baz=233,slow=2.5,SNR=474
SDV S **Sn 06 03 30.6 -1.4**
comp=Z,1µm,0.3s,baz=53,slow=21,SNR=52
SDV Santo Domingo 3.23 50 *e*Pn Pn 06 02 52.9 +0.3
SDV *e*Sn **Sn 06 03 29.9 -2.1**
SDV Santo Domingo 3.23 50⇑*i*P Pn 06 02 52.6 +0.1
SDV *e*S **Sn 06 03 30.1 -1.9**
PRAC Prado 3.53 210⇑*i*P Pn 06 02 56.1 -0.2
PRAC *e*S **Sn 06 03 38.7 +0.1**
PRAC *i* 06 03 43.5
comp=Z,6µm,0.7s
PLMC San Jos del P 3.65 239⇑*i*P Pn 06 02 58.7 +0.9
PLMC *e*S **Sn 06 03 41.2 -0.2**
CVALL Valledupar, Ce 3.68 358 *e*P Pn 06 02 57.2 -1.0
CVALL *e*S **Sn 06 03 38.4 -3.6**
CVALL *i* 06 03 46.0
comp=Z,2µm,0.4s
YOTC Yotoco, Valle 4.25 229⇑*i*P Pn 06 03 05.4 -0.3
YOTC *e*S **Sn 06 03 55.4 0.0**
YOTC *i* 06 04 08.1
comp=Z,498nm,0.6s
GUVC San Jose del G 4.27 173⇑*i*P Pn 06 03 05.0 -0.8
GUVC *e*S **Sn 06 03 53.8 -1.9**
GUVC *i* 06 03 58.3
comp=Z,4µm,0.2s
SOLC Bahia Solano 4.28 262 *e*P Pn 06 03 06.0 0.0
SOLC *e*S **Sn 06 03 50.0 -5.8**
SOLC *i* 06 04 08.2
comp=Z,524nm,0.4s
SMRC Santa Marta, M 4.46 346 *e*P Pn 06 03 07.6 -0.7
SMRC *e*S **Sn 06 03 56.4 -3.7**
SMRC *i* 06 03 59.7
comp=Z,2µm,0.3s
MACC Macarena, Meta 4.69 189⇑*i*P Pn 06 03 10.1 -1.2
MACC *e*S **Sn 06 04 02.1 -3.4**
MACC *i* 06 04 05.7
comp=Z,1µm,0.4s
BETC Betania 4.70 209 *e*P Pn 06 03 10.9 -0.6
BETC *e*S Sn 06 03 53.0 -13
MARP Paez Belalcaza 4.83 216⇑*i*P Pn 06 03 12.9 -0.6
MARP *e*S **Sn 06 04 07.2 -2.2**
MARP *i* 06 04 14.8
comp=Z,477nm,0.6s
URIC Uribia, Colomb 4.99 13⇑*i*P Pn 06 03 13.6 -1.7
URIC *e*S **Sn 06 04 04.6 -8.2**
URIC *i* 06 04 41.6
comp=Z,374nm,0.6s
MALC Bahia Malaga 5.01 237⇑*i*P Pn 06 03 17.4 +1.9
MALC *e*S **Sn 06 04 12.8 -0.4**
PCON Cinco Dias 5.51 216 *e*P Pn 06 03 23.9 +1.3
PCON *e*S **Sn 06 04 23.5 -2.3**
PCON *i* 06 04 50.9
comp=Z,397nm,0.4s
POPC Popayan, Colom 5.51 220⇑*i*P Pn 06 03 22.7 +0.3
POPC *e*S **Sn 06 04 22.8 -2.6**
FLOC Florencia 5.76 206⇑*i*P Pn 06 03 25.1 -0.5
FLOC *e*S **Sn 06 04 30.9 -0.2**
BBAC Balboa, Cauca 6.27 221 *e*P Pn 06 03 32.3 -0.2
BBAC *e*S **Sn 06 04 43.1 -0.4**
BBAC *i* 06 04 51.9
comp=Z,279nm,0.4s
CRUC La Cruz 6.44 216 *e*P Pn 06 03 36.5 +1.6
CPAS2 Pasto 6.90 217 *e*P Pn 06 03 44.4 +3.5
CPAS2 *e*S **Sn 06 04 59.6 +0.9**
GCUF Volcan Galeras 6.95 217 *e*P Pn 06 03 42.8 +1.1
GCUF *e*S **Sn 06 04 54.8 -5.3**
GCUF *i* 06 05 06.1
comp=Z,133nm,0.3s
BCIP Isla Barro Col 7.03 290 *e*Pn Pn 06 03 40.4 -2.0
OTAV Otavalo 8.40 219 *e*Pn Pn 06 04 00.5 -0.6
OTAV *e*Sn **Sn 06 05 33.5 -1.5**
HDC Heredia 11.31 287 *e*Pn Pn 06 04 40.5 +1.4
PCJ Portland Cotta 11.55 341⇓*i*P Pn 06 04 44.9 +2.8
HOJ Hope 11.67 343 *i* P Pn 06 04 46.9 +3.3
GWJ Greenwich 11.73 343 *i* P Pn 06 04 47.3 +2.7
STH Stony Hill 11.76 343 *i* P Pn 06 04 46.7 +1.9
STH *i* S Sn 06 06 28.2 -27
BANI BANI 11.83 13 *e*Pn Pn 06 04 45.2 -0.6
MCJ Malvern 11.91 339 *e*P Pn 06 04 49.1 +2.3
MCJ *i* S Sn 06 06 39.0 -20
CVJ Coleyville 12.13 340 *i* P Pn 06 04 52.8 +3.1
MTDJ Mount Denham 12.13 340 *e*Pn Pn 06 04 51.5 +1.8
MTDJ *e*Sn **Sn 06 07 02.2 -1.9**
JTS Las Juntas de 12.18 287 P Pn 06 04 52.8 +2.4
comp=Z,3.1nm,0.3s,baz=350,slow=5.7,SNR=16
JTS LR LR 06 09 54.0
comp=Z,75nm,18.4s,baz=132,slow=38
JTS Las Juntas de 12.18 287 *e*Pn Pn 06 04 52.3 +2.0
JTS *e*P **P 06 04 52.6 -3.7**
SDDR Presa de Saban 12.23 8 *e*Pn Pn 06 04 51.1 +0.1
ESPN Las Esperanzas 12.24 297 *e*Pn Pn 06 04 51.0 0.0
ESPN *e*Sn **Sn 06 07 03.8 -2.8**
GRGR Grenville 12.50 64 *e*P P 06 04 57.5 -2.4
ACON Acoyapa 12.93 294 *e*Pn Pn 06 05 00.6 +0.7
SJG San Juan 13.14 31 P Pn 06 04 59.3 -3.3
comp=Z,24nm,0.3s,baz=208,slow=14,SNR=58
SJG San Juan 13.14 31 *e*Pn Pn 06 04 59.5 -3.1
GTBY Guantanamo Bay 13.18 352 *e*Pn Pn 06 05 04.9 +1.8
TOSP Speyside 13.22 69 *e*P P 06 05 06.1 -1.8
SVB Belmont 13.35 60 *e*Pn Pn 06 05 03.6 -1.7
SVB Belmont 13.35 60 *e*P Pn 06 05 06.3 +1.0
MCLT Moule a Chique 13.82 59 *e*P P 06 05 15.3 +0.8
SLBI Saint Lucia, B 13.95 58 *e*P Pn 06 05 13.4 +0.6
BIM Bigot 14.12 56 *e*P P 06 05 20.6 +2.8
TRMF Trois Ilets 14.14 56 *e*P P 06 05 18.8 +0.8
PCM Pelee Case Pet 14.16 55 *e*P Pn 06 05 16.6 +1.0
PML Morne Lenard 14.16 55 *e*P P 06 05 20.4 +2.0
FDF Fort de France 14.16 55 *e*Pn Pn 06 05 13.4 -2.2
FDF Fort de France 14.16 55 *e*P Pn 06 05 14.1 -1.5
ZAM Aeronautique 14.18 56 *e*P Pn 06 05 15.3 -0.5
GBMF Grand Be 14.19 55 *e*P P 06 05 20.9 +2.2
BAMF Morne Balai 14.21 55 *e*P P 06 05 20.6 +1.7
LPMF Morne Lapointe 14.23 56 *e*P P 06 05 21.9 +2.9
MPOM Morne Pois Mar 14.25 57 *e*P P 06 05 19.2 -0.1
MVM Montagne Vaucl 14.28 56 *e*P P 06 05 20.8 +1.2
FSCY Frank Sound, G 14.69 329 *e*Pn P 06 05 23.4 -0.6
GRTK Grand Turk 14.75 7 *e*Pn Pn 06 05 22.3 -0.5
BBGH Gun Hill 14.78 64 *e*P P 06 05 26.4 +1.2
ATAH Atahualpa 14.81 201 P P 06 05 25.9 0.0
comp=Z,3.2nm,0.3s,baz=17,slow=8.4,SNR=14
SMRT St. Maarten 14.87 40 *e*Pn Pn 06 05 23.1 -1.3
PTGA Pitinga 15.13 119 P Pn 06 05 25.9 -1.7
comp=Z,1.5nm,0.3s,baz=293,slow=17,SNR=15
PTGA Pitinga 15.13 119 *e*P Pn 06 05 26.6 -1.1
comp=Z,26nm,0.9s
ANWB Willy Bob 15.47 45 *e*P P 06 05 32.2 -0.6
comp=Z,105nm,0.8s
PAYG Puerto Ayora 18.65 247 *e*P P 06 06 08.9 +1.1
comp=Z,28nm,0.5s
APG El Apazote 18.85 297 P P 06 06 10.5 +0.3
comp=Z,2.4nm,0.3s,baz=147,slow=5.9,SNR=30
APG LR LR 06 14 20.4
comp=Z,42nm,21.2s,baz=76,slow=39
NNA Nana 19.03 191 *e*P P 06 06 11.4 -0.5
comp=Z,8.0nm,0.9s
TEIG Tepich 19.84 314 *e*P Pn 06 06 22.8 -1.1
comp=Z,97nm,0.8s
061Z Ochoppi 20.35 340 *e*P P 06 06 26.0 0.0
comp=Z,91nm,1.0s
061Z Ochoppi 20.35 340 P P 06 06 27.9 +1.9
baz=157
MDP Montagnes des 20.46 94 P P 06 06 28.9 +1.6
comp=Z,13nm,0.7s,baz=296,slow=11,SNR=17
CCIG Comitan 20.84 299 *e*P P 06 06 32.6 +1.1
comp=Z,49nm,0.6s
058A Arcadia 21.76 339 P P 06 06 43.5 +2.5
baz=156
LPAZ La Paz 23.48 168 P P 06 06 57.7 -0.4
comp=Z,1.4nm,0.3s,baz=357,slow=5.3,SNR=23
LPAZ pP **pP 06 07 30.0 +1.4**
comp=Z,14nm,0.9s,baz=344,slow=14,SNR=5.7
LPAZ La Paz 23.48 168 *e*P P 06 06 57.7 -0.4
LPAZ *e* 06 06 57.9
CMIG Matias Romero 23.57 298 P P 06 06 56.0 -2.3
comp=Z,4.1nm,0.4s,baz=128,slow=6.2,SNR=21
657A Interlachen 24.10 341 P P 06 07 05.2 +2.2
baz=158
656A Willston 24.13 340 *e*P P 06 07 04.5 +1.3
comp=Z,20nm,0.6s
656A Willston 24.13 340 P P 06 07 04.7 +1.6
baz=157
557A Orange Park 24.46 342 P P 06 07 07.6 +1.5
baz=159
655A Horseshoe Beac 24.51 338 P P 06 07 08.0 +1.3
baz=155
555A McAlpin 24.96 339 *e*P P 06 07 10.3 -0.4
comp=Z,26nm,1.1s
555A McAlpin 24.96 339 P P 06 07 12.9 +2.1
baz=156
457A Yulee 24.97 343 P P 06 07 12.6 +1.8
baz=160
455A Stateville 25.55 340 P P 06 07 17.9 +1.8
baz=157
SIV San Ignacio 25.61 152 P P 06 07 15.6 -1.2
comp=Z,2.1nm,0.8s,baz=341,slow=11,SNR=10
SIV pP **pP 06 07 49.2 -1.1**
comp=Z,3.0nm,0.5s,baz=326,slow=8.2,SNR=5.8
MNMC Minye Minye 26.01 172 *e*P P 06 07 19.2 -1.4
comp=Z,7.2nm,1.1s
353A Camilla 26.52 338 P P 06 07 26.5 +1.7
baz=155
GO01 Chusmiza 26.59 172 *e*P P 06 07 24.3 -1.8
comp=Z,3.4nm,0.7s
PB11 IPOC Station P 26.62 173 *e*P P 06 07 25.2 -0.8
comp=Z,8.8nm,1.1s
254A Abbeville 26.75 341 P P 06 07 28.5 +1.7
baz=157
352A Blakely 26.91 337 *e*P P 06 07 26.8 -1.4
comp=Z,22nm,1.0s
352A Blakely 26.91 337 P P 06 07 29.9 +1.7
baz=153
TLIG Tlapa 27.01 296 *e*P P 06 07 31.3 +1.7
comp=Z,17nm,0.8s
253A Americus 27.14 339 P P 06 07 31.9 +1.6
baz=156
Z57A Bowman 27.28 346 P P 06 07 33.1 +1.6
baz=163
252A Lumpkin 27.30 338 P P 06 07 33.3 +1.6
baz=154
Y58A Scranton 27.63 348 *e*P P 06 07 35.3 +0.7
comp=Z,27nm,1.0s
Y58A Scranton 27.63 348 P P 06 07 36.8 +2.2
baz=166
251A Midway 27.64 337 P P 06 07 36.0 +1.2
baz=153,SNR=7.4
349A Repton 27.73 333 P P 06 07 36.9 +1.3
baz=149
Z54A Sparta 27.80 342 P P 06 07 38.2 +2.1
baz=159
250A Grady 27.88 336 *e*P P 06 07 36.9 0.0
comp=Z,13nm,0.6s
250A Grady 27.88 336 P P 06 07 38.6 +1.7
baz=151
Y57A Sumter 27.89 347 P P 06 07 38.0 +1.1
baz=164
152A Waverly Hall 27.90 339 P P 06 07 38.9 +1.8
baz=155,SNR=7.4
151A Opelika 27.99 338 P P 06 07 39.1 +1.2
baz=154,SNR=7.5
Z53A Monticello 28.06 341 P P 06 07 40.4 +1.8
baz=158
X59A McDuffie Farm, 28.09 350 P P 06 07 39.8 +1.2
baz=168
GOGA Godfrey 28.15 341 *e*P P 06 07 40.5 +1.2
comp=Z,4.2nm,0.5s
GOGA Godfrey 28.15 341 P P 06 07 41.0 +1.7
baz=158
Y55A Saluda 28.18 345 P P 06 07 41.5 +2.0
baz=161,SNR=6.0
X58A Rowland 28.20 349 P P 06 07 42.0 +2.3
baz=167
249A Camden 28.23 334 P P 06 07 42.2 +2.1
baz=150
Z52A Williamson 28.26 340 P P 06 07 42.4 +2.2
baz=156
150A Eclectic 28.33 337 P P 06 07 42.4 +1.5
baz=152
JSC Jenkinsville 28.35 346 *e*P P 06 07 42.7 +1.7
comp=Z,5.2nm,0.6s
X56A White Oak 28.50 346 P P 06 07 44.2 +1.9
baz=163
BIRD Birdtown, Kers 28.51 347 *e*P P 06 07 44.0 +1.5
comp=Z,4.0nm,0.6s
Y53A Monroe 28.60 342 P P 06 07 44.9 +1.6
baz=158
X55A Gracelyn & Ava 28.62 345 P P 06 07 45.7 +2.2
baz=162
149A Jones 28.63 335 P P 06 07 45.2 +1.6
baz=151,SNR=5.5
Z51A Franklin 28.64 339 P P 06 07 45.2 +1.5
baz=154,SNR=6.2
Y52A Lilburn 28.76 341 *e*P P 06 07 46.2 +1.5
comp=Z,6.5nm,0.4s
Y52A Lilburn 28.76 341 P P 06 07 46.8 +2.1
baz=157
Z50A Ashland 28.87 337 *e*P P 06 07 47.8 +2.1
comp=Z,14nm,0.7s
Z50A Ashland 28.87 337 P P 06 07 47.9 +2.3
baz=153,SNR=16
W57A Gilead 28.91 348 *e*P P 06 07 46.2 +0.3
comp=Z,5.4nm,0.6s
W57A Gilead 28.91 348 P P 06 07 47.6 +1.6
baz=166
PAULI Pauline 29.00 345 *e*P P 06 07 47.3 +0.5
comp=Z,4.7nm,0.8s
W56A Indian Trail 29.01 347 P P 06 07 48.6 +1.7
baz=165
Z49A Columbiana 29.05 336 P P 06 07 49.5 +2.2
baz=152,SNR=16
LRAL Lakeview Retre 29.10 336 *e*P P 06 07 48.6 +0.9
comp=Z,6.5nm,0.6s
LRAL Lakeview Retre 29.10 336 P P 06 07 49.8 +2.1
baz=151,SNR=8.1
X53A Estanollee 29.11 343 P P 06 07 49.8 +2.0
baz=159
Y51A Rockmart 29.13 339 P P 06 07 49.9 +1.9
baz=155
KMSC Kings Mountain 29.19 346 *e*P P 06 07 49.4 +0.9
comp=Z,3.8nm,0.7s
KMSC Kings Mountain 29.19 346 P P 06 07 50.2 +1.7
baz=163
V59A Middlesex 29.20 351 P P 06 07 49.7 +1.2
baz=170
147A Livingston 29.34 333 *e*P P 06 07 51.8 +2.0
comp=Z,13nm,0.8s
147A Livingston 29.34 333 P P 06 07 51.2 +1.5
baz=148
W54A Cherokee Point 29.35 345 P P 06 07 51.9 +2.0
baz=161
Y50A Piedmont 29.36 338 P P 06 07 52.0 +2.0
baz=154,SNR=5.2
V58A Windy Hill, Pi 29.36 350 P P 06 07 51.9 +1.9
baz=168
X52A Dahlonega 29.39 342 P P 06 07 52.3 +2.0
baz=158
V57A Coltrane Farms 29.57 349 P P 06 07 53.5 +1.6
baz=166
Y49A Blount Mountai 29.59 337 P P 06 07 54.1 +2.0
baz=152,SNR=11
V56A Mocksville 29.64 348 P P 06 07 53.8 +1.3
baz=165
X51A Calhoun 29.66 340 P P 06 07 54.6 +2.0
baz=156
W53A Cullowhee 29.70 343 P P 06 07 53.7 +0.6
baz=160
U60A Pendleton 29.75 353 P P 06 07 54.7 +1.3
baz=172
V55A Taylorsville 29.84 347 P P 06 07 56.5 +2.3
baz=164
X50B Fort Payne 29.84 339 P P 06 07 56.0 +1.7
baz=154
W52A Murphy 29.85 342 *e*P P 06 07 55.6 +1.2
comp=Z,11nm,0.9s
W52A Murphy 29.85 342 P P 06 07 55.8 +1.5
baz=158,SNR=7.3
Y48A Jasper 29.93 336 P P 06 07 56.8 +1.7
baz=151,SNR=7.5
V54A Nebo 29.94 346 P P 06 07 57.6 +2.4
baz=162
U57A Blanch 30.02 350 P P 06 07 57.3 +1.5
baz=168
VBMS Vicksburg 30.03 330 P P 06 07 57.8 +1.9
baz=144
V53A Saluda 30.07 344 *e*P P 06 07 57.2 +1.0
comp=Z,5.8nm,1.0s
V53A Saluda 30.07 344 P P 06 07 58.2 +1.9
baz=160
X49A Woodville 30.14 338 P P 06 07 58.6 +1.7
baz=153,SNR=6.3
W51A Cleveland 30.18 341 P P 06 07 58.9 +1.7
baz=156
T59A Double "B" Far 30.29 353 P P 06 07 59.3 +1.2
baz=171,SNR=6.3
X48A Hartselle 30.36 337 *e*P P 06 08 00.2 +1.5
comp=Z,17nm,0.8s
X48A Hartselle 30.36 337 P P 06 08 00.5 +1.7
baz=152,SNR=9.6
CPCT Cooper Cave 30.36 341 *e*P P 06 07 58.1 -0.8
comp=Z,8.0nm,1.1s
W50A Signal Mountai 30.39 340 *e*P P 06 08 01.6 +2.3
comp=Z,10nm,0.9s
W50A Signal Mountai 30.39 340 P P 06 08 01.5 +2.3
baz=156,SNR=7.2
T58A Grand View Acr 30.40 351 P P 06 08 00.5 +1.4
baz=169,SNR=6.1
V52A Sevierville 30.45 343 *e*P P 06 08 00.3 +0.7
comp=Z,9.2nm,1.1s
V52A Sevierville 30.45 343 P P 06 08 02.0 +2.4
baz=159
T57A Hurt 30.56 350 *e*P P 06 08 01.5 +0.9
comp=Z,11nm,0.9s
T57A Hurt 30.56 350 P P 06 08 02.7 +2.1
baz=168
U54A Nelsons Funny 30.62 346 *e*P P 06 08 01.3 +0.1
comp=Z,21nm,0.8s
U54A Nelsons Funny 30.62 346 P P 06 08 03.1 +1.9
baz=163,SNR=9.8
V51A Loudon 30.64 342 *e*P P 06 08 01.3 +0.1
comp=Z,15nm,1.1s
V51A Loudon 30.64 342 P P 06 08 03.5 +2.2
baz=158,SNR=6.7
W49A Belvidere 30.66 339 P P 06 08 03.4 +1.9
baz=154
U53A Fall Branch 30.66 345 P P 06 08 03.1 +1.6
baz=161
T56A Rocky Mt 30.73 349 P P 06 08 04.0 +1.9
baz=166
X47A Russelville 30.74 336 P P 06 08 03.9 +1.8
baz=150,SNR=9.8
V50A Pikevile 30.75 341 P P 06 08 04.2 +1.9
baz=156
U52A Thorn Hill 30.90 344 P P 06 08 05.2 +1.6
baz=160
W48A Pulaski 30.92 338 P P 06 08 05.1 +1.4
baz=153,SNR=6.3
T55A Pulaski 30.96 348 P P 06 08 06.6 +2.5
baz=165
BLA Blacksburg 30.98 349 *e*P P 06 08 04.4 0.0
comp=Z,5.1nm,0.6s
BLA Blacksburg 30.98 349 P P 06 08 06.2 +1.9
baz=166
S58A Poland Farm, P 30.99 352 *e*P P 06 08 04.1 -0.2
comp=Z,4.8nm,0.9s
S58A Poland Farm, P 30.99 352 P P 06 08 06.0 +1.7
baz=170
U51A La Follette 31.07 343 P P 06 08 06.7 +1.6
baz=159
X46A Booneville 31.07 335 P P 06 08 06.4 +1.3
baz=149,SNR=5.3
T54A Tazewell 31.08 347 P P 06 08 07.6 +2.4
baz=164,SNR=5.1
TZTN Tazewell 31.09 344 *e*P P 06 08 06.2 +1.0
comp=Z,6.4nm,0.9s
TZTN Tazewell 31.09 344 P P 06 08 07.3 +2.1
baz=160
V49A McMinnville 31.11 340 P P 06 08 06.9 +1.5
baz=155,SNR=5.6
PLAL Pickwick Lake 31.23 336 *e*P P 06 08 05.9 -0.5
comp=Z,11nm,0.6s
T53A Wise 31.23 345 P P 06 08 07.9 +1.3
baz=162
S57A Dark Hollow, R 31.26 351 P P 06 08 08.0 +1.3
baz=169
W47A Westpoint 31.27 337 P P 06 08 07.7 +0.9
baz=152,SNR=11
R58B Mineral 31.31 353 *e*P P 06 08 07.8 +0.7
comp=Z,4.1nm,0.8s
R58B Mineral 31.31 353 P P 06 08 08.6 +1.5
baz=171
U50A Jamestown 31.35 342 P P 06 08 09.4 +1.8
baz=157
HKT Hockley 31.39 320 *e*P P 06 08 08.8 +1.0
comp=Z,5.2nm,0.8s
OXF Oxford 31.39 334 P P 06 08 08.8 +0.9
baz=148
V48A Smith Brothers 31.41 338 P P 06 08 09.8 +1.7
baz=153,SNR=19

R59A	King George, V baz=172	31.46 354	P	P	06 08 09.6 +1.2
T52A	Hallie comp=Z,10nm,0.6s	31.47 345	eP	P	06 08 09.5 +0.9
T52A	Hallie baz=161	31.47 345	P	P	06 08 10.3 +1.7
W46A	Michie baz=150,SNR=6.2	31.48 336	P	P	06 08 10.1 +1.4
CBN	Corbin Frederi baz=172	31.49 354	P	P	06 08 10.3 +1.6
S55A	Lewisburg baz=166,SNR=5.1	31.54 349	P	P	06 08 11.5 +2.3
CLTN	Cedars of Leba comp=Z,3.5nm,0.5s	31.55 339	eP	P	06 08 09.8 +0.5
T51A	Gray baz=159,SNR=8.6	31.59 343	P	P	06 08 11.7 +2.1
R58A	Rapidan baz=171,SNR=5.4	31.66 353	P	P	06 08 12.1 +2.0
R57A	Stanardsville baz=170	31.72 352	P	P	06 08 13.4 +2.6
S54A	Dingess, Beckl baz=164	31.73 348	P	P	06 08 12.6 +1.7
U49A	Red Boiling Sp baz=156	31.75 340	P	P	06 08 12.2 +1.3
V47A	Nunnelly baz=152,SNR=37	31.75 337	P	P	06 08 12.8 +1.8
T50A	Nancy baz=158	31.91 342	P	P	06 08 14.7 +2.3
NATX	Nacogdoches baz=136	31.94 324	P	P	06 08 14.1 +1.4
V46A	Holladay baz=151	31.96 337	P	P	06 08 13.9 +1.0
U48A	Cassie Pea, Po baz=154,SNR=11	32.00 339	P	P	06 08 15.1 +1.9
R54A	Victor baz=165	32.03 348	P	P	06 08 15.1 +1.6
X43A	Marvell baz=145	32.07 332	P	P	06 08 14.8 +1.0
S51A	Beattyville comp=Z,7.1nm,0.9s	32.13 344	eP	P	06 08 15.4 +1.1
WVT	Waverly comp=Z,15nm,0.8s	32.14 337	eP	P	06 08 15.4 +1.0
WVT	Waverly baz=152	32.14 337	P	P	06 08 16.1 +1.7
Q60A	Greensboro baz=175	32.14 356	P	P	06 08 15.9 +1.5
T49A	Edmonton comp=Z,8.3nm,1.1s	32.20 341	eP	P	06 08 15.3 +0.3
T49A	Edmonton baz=156,SNR=6.5	32.20 341	P	P	06 08 16.6 +1.6
U47A	Clarksville baz=153,SNR=5.6	32.21 338	P	P	06 08 16.0 +1.0
S50A	Richmond baz=159	32.39 343	P	P	06 08 18.6 +2.1
Q57A	Strasburg baz=170	32.44 352	P	P	06 08 19.1 +2.2
U46A	Springville baz=151,SNR=9.2	32.47 337	P	P	06 08 18.4 +1.1
T48A	Bowling Green baz=155	32.49 340	P	P	06 08 19.2 +1.7
WLAR	White Oak Lake comp=Z,10nm,0.6s	32.52 328	eP	P	06 08 18.4 +0.7
Q56A	Snyder Ridge, baz=169	32.55 351	P	P	06 08 20.4 +2.4
T47A	Sharon Grove comp=Z,20nm,0.4s	32.63 339	eP	P	06 08 20.4 +1.7
T47A	Sharon Grove baz=154,SNR=9.1	32.63 339	P	P	06 08 19.9 +1.2
Q55A	Buckhannon baz=167	32.65 350	P	P	06 08 21.7 +2.8
R51A	Hillsboro baz=160	32.75 345	P	P	06 08 21.8 +2.1
S49A	Springfield baz=157,SNR=8.0	32.75 342	P	P	06 08 21.0 +1.3
Q54A	Coxs Mills baz=166	32.78 349	P	P	06 08 22.5 +2.5
833A	Chaparral WMA, comp=Z,14nm,0.7s	32.78 314	eP	P	06 08 20.5 +0.4
833A	Chaparral WMA, baz=126	32.78 314	P	P	06 08 20.3 +0.2
P59A	Jarrettsville baz=174	32.79 355	P	P	06 08 22.3 +2.3
Q53A	Leroy baz=164	32.80 348	P	P	06 08 21.9 +1.8
P57A	Homestead Farm baz=171	32.83 353	P	P	06 08 22.7 +2.4
S48A	Wiedeman Farm, baz=156	32.88 341	P	P	06 08 21.7 +0.9
R50A	Paris baz=159	32.93 344	P	P	06 08 22.9 +1.6
P60A	Greenville baz=175	32.94 356	P	P	06 08 22.9 +1.6
P56A	Dayton Farm, R baz=170,SNR=6.6	32.95 352	P	P	06 08 24.1 +2.6
T46A	Princeton baz=152,SNR=8.8	32.96 338	P	P	06 08 22.8 +1.2
X40A	Basin Creek Fa baz=142,SNR=9.0	33.00 329	P	P	06 08 22.5 +0.6
Q52A	Bidwell baz=163	33.05 347	P	P	06 08 24.0 +1.6
S47A	Hartford baz=154,SNR=12	33.09 340	P	P	06 08 23.8 +1.1
O61A	Allentown baz=177	33.16 358	P	P	06 08 24.3 +1.0
R49A	Shelbyville baz=158	33.18 343	P	P	06 08 25.5 +2.1
W41B	Gary Mavity, V comp=Z,7.4nm,0.8s	33.26 331	eP	P	06 08 25.1 +1.0
W41B	Gary Mavity, V baz=144,SNR=7.4	33.26 331	P	P	06 08 25.2 +1.0
P54A	Burton baz=167	33.31 350	P	P	06 08 26.7 +2.1
Q50A	Georgetown baz=160	33.36 345	P	P	06 08 26.5 +1.5
Q51A	Peebles comp=Z,11nm,0.5s	33.37 345	eP	P	06 08 25.3 +0.2
Q51A	Peebles baz=161	33.37 345	P	P	06 08 26.8 +1.7
P53A	Whipple comp=Z,7.1nm,0.7s	33.37 348	eP	P	06 08 25.6 +0.5
P53A	Whipple baz=165	33.37 348	P	P	06 08 26.7 +1.6
BDFB	Brasilia comp=Z,3.1nm,0.4s,baz=296,slow=11,SNR=12	33.42 132	P	P	06 08 25.6 -0.3
BDFB	comp=Z,2.7nm,0.7s,baz=292,slow=11,SNR=2.1		pP	pP	06 09 00.7 +0.7
BDFB	Brasilia comp=Z,2.0nm,0.5s	33.42 132	eP	P	06 08 24.8 -1.1
BDFB			eP	P	06 08 25.6 -0.3
MIAR	Mount Ida baz=141,SNR=7.4	33.43 328	P	P	06 08 26.1 +0.5
O60A	Telford baz=176	33.43 357	P	P	06 08 27.4 +1.9
S46A	Don Dixon Farm baz=153,SNR=9.0	33.47 339	P	P	06 08 26.7 +0.8
O59A	Robesonia baz=174	33.47 356	P	P	06 08 27.9 +2.0
WCI	Wyandotte Cave comp=Z,12nm,0.6s	33.47 341	eP	P	06 08 26.9 +0.9
WCI	Wyandotte Cave baz=156	33.47 341	P	P	06 08 27.4 +1.4
R48A	Northridge Ran baz=157	33.50 342	P	P	06 08 28.2 +2.0
O57A	Amberson baz=172,SNR=8.0	33.50 354	P	P	06 08 28.3 +2.1
R47A	Wooly Knot Far baz=155,SNR=6.0	33.61 341	P	P	06 08 28.7 +1.5
O56A	Blue Knob Stat baz=170	33.67 353	P	P	06 08 29.6 +1.9
P52A	Corning baz=164,SNR=7.4	33.67 347	P	P	06 08 29.4 +1.7
USIN	University of comp=Z,27nm,0.8s	33.70 339	eP	P	06 08 28.3 +0.3
LUPA	Lehigh Univers comp=Z,2.5nm,0.7s	33.70 357	eP	P	06 08 28.7 +0.8
O55A	Ligonier baz=169	33.71 351	P	P	06 08 30.1 +2.0
P51A	Williamsport comp=Z,12nm,0.6s	33.73 346	eP	P	06 08 29.0 +0.8
P51A	Williamsport baz=162	33.73 346	P	P	06 08 30.3 +2.1
BRNJ	Basking Ridge comp=Z,19nm,0.6s	33.75 358	eP	P	06 08 29.5 +1.2
WHTX	Lake Whitney, comp=Z,16nm,0.9s	33.79 321	eP	P	06 08 29.3 +0.4
WHTX	Lake Whitney, baz=133	33.79 321	P	P	06 08 29.9 +1.0
R46A	Gibon Southern baz=154	33.87 339	P	P	06 08 30.4 +1.0
Q48A	North Vernon baz=157	33.94 342	P	P	06 08 31.9 +1.9
N57A	Milroy baz=172,SNR=6.2	34.03 354	P	P	06 08 32.8 +2.0
P50A	Jamestown baz=161	34.04 345	P	P	06 08 32.4 +1.6
W39A	Magazine baz=141,SNR=17	34.04 329	P	P	06 08 32.2 +1.3
N59A	State Game Lan baz=175,SNR=10	34.05 356	P	P	06 08 33.0 +2.1
S44A	Carbondale baz=150,SNR=11	34.05 337	P	P	06 08 32.1 +1.1
PAL	Palisades baz=178,SNR=6.7	34.06 359	P	P	06 08 31.6 +0.6
O52A	Adamsville comp=Z,17nm,0.6s	34.07 348	eP	P	06 08 31.5 +0.4
O52A	Adamsville baz=164,SNR=5.7	34.07 348	P	P	06 08 32.3 +1.1
O53A	New Philadelph baz=166	34.08 349	P	P	06 08 33.2 +2.0
ODNJ	Ogdensburg comp=Z,4.7nm,0.7s	34.16 358	eP	P	06 08 33.2 +1.4
Q47A	Bedord North L baz=156,SNR=9.9	34.16 341	P	P	06 08 33.6 +1.7
R45A	Skylar, Fairfi baz=152,SNR=18	34.21 339	P	P	06 08 33.5 +1.1
N55A	Marion Center baz=170,SNR=6.1	34.23 352	P	P	06 08 34.7 +2.1
O51A	Pataskala baz=163	34.26 347	P	P	06 08 35.0 +2.1
N56A	West Decatur baz=171,SNR=7.3	34.27 353	P	P	06 08 34.9 +1.9
P48A	Milroy baz=158	34.34 343	P	P	06 08 34.8 +1.4
JCT	Junction City baz=128	34.35 317	P	P	06 08 34.4 +0.6
M61A	Granite Spring baz=179	34.36 359	P	P	06 08 35.3 +1.7
U40A	Yellville baz=144,SNR=57	34.50 331	P	P	06 08 35.9 +1.0
O50A	Cable baz=161,SNR=6.5	34.50 346	P	P	06 08 36.3 +1.5
Q46A	CEJHS Indians, baz=154	34.54 340	P	P	06 08 36.3 +1.1
N53A	Lisbon baz=166	34.55 350	P	P	06 08 36.6 +1.4
N54A	Moraine State baz=168	34.55 351	P	P	06 08 37.1 +1.8
P47A	Martinsville baz=157,SNR=8.2	34.62 342	P	P	06 08 37.6 +1.7
Q45A	Warren Harvey, baz=153,SNR=7.5	34.70 339	P	P	06 08 37.7 +1.1
N52A	McGinn's Farm, baz=165	34.71 349	P	P	06 08 38.6 +1.9
M56A	Emporium baz=171,SNR=19	34.82 353	P	P	06 08 39.6 +2.0
M55A	Ridgway baz=170,SNR=7.1	34.88 353	P	P	06 08 39.9 +1.8
N50A	Nevada baz=162	34.98 347	P	P	06 08 40.1 +1.1
P46A	Rosedale baz=155,SNR=11	35.03 341	P	P	06 08 40.7 +1.4
M54A	Oil Creek Stat baz=169	35.04 351	P	P	06 08 40.9 +1.4
P45A	Graceland, Par baz=154,SNR=10	35.13 340	P	P	06 08 41.5 +1.3
CCM	Cathedral Cave comp=Z,37nm,0.6s	35.17 335	eP	P	06 08 41.5 +0.9
CCM	Cathedral Cave baz=148	35.17 335	P	P	06 08 41.2 +0.6
O47A	Sheridan baz=157,SNR=8.4	35.28 343	P	P	06 08 43.0 +1.6
BINY	Binghamton baz=175,SNR=8.2	35.34 356	P	P	06 08 43.8 +1.8
N49A	Columbus Grove baz=161	35.37 345	P	P	06 08 43.4 +1.1
BCX	Boston College comp=Z,26nm,0.8s	35.42 3	eP	P	06 08 43.9 +1.2
N48A	Decatur baz=159	35.53 344	P	P	06 08 44.4 +0.8
L55A	Hinsdale baz=171,SNR=7.3	35.54 353	P	P	06 08 45.6 +1.9
M50A	Fremont baz=163	35.56 347	P	P	06 08 45.1 +1.3
L53A	Girard baz=168	35.57 351	P	P	06 08 45.2 +1.2
HRV	Adam Dziewonsk comp=Z,19nm,0.9s	35.58 2	eP	P	06 08 45.3 +1.3
HRV	Adam Dziewonsk baz=183	35.58 2	P	P	06 08 45.8 +1.8
ABTX	Abilene, Hawle baz=130,SNR=7.8	35.60 320	P	P	06 08 45.3 +0.9
TUL1	Leonard baz=139,SNR=10	35.64 328	P	P	06 08 45.0 +0.4
SFIN	Lafayette baz=156,SNR=17	35.69 342	P	P	06 08 46.3 +1.3
L54A	Sinclairville baz=169	35.70 352	P	P	06 08 47.0 +1.9
N47A	Urbana baz=158	35.73 344	P	P	06 08 47.0 +1.6
O45A	Potomac baz=155	35.77 341	P	P	06 08 46.7 +1.0
P43A	Skaggs, Pawnee baz=151	35.86 338	P	P	06 08 47.6 +1.2
O44A	Mansfield baz=153	35.93 340	P	P	06 08 47.9 +0.8
K54A	Basiliko Farm, baz=170	35.99 353	P	P	06 08 49.1 +1.5
M48A	Edgerton baz=160	36.04 345	P	P	06 08 49.4 +1.5
K55A	Perry baz=172	36.04 354	P	P	06 08 49.7 +1.8
N46A	Monticello baz=157,SNR=14	36.05 342	P	P	06 08 49.3 +1.2
M47A	Cromwell baz=159	36.16 344	P	P	06 08 50.1 +1.1
N45A	Kentland baz=155	36.24 341	P	P	06 08 50.7 +1.0
CPUP	Villa Florida comp=Z,1.6nm,0.9s,baz=354,slow=1.9,SNR=3.5	36.34 156	P	P	06 08 48.3 -2.4
L49A	Milan baz=162	36.40 347	P	P	06 08 53.3 +2.3
L48A	N Adams baz=161	36.40 346	P	P	06 08 53.3 +2.3
N44A	Piper City baz=154	36.40 341	P	P	06 08 52.0 +1.0
M46A	Old House Fiel baz=158	36.41 343	P	P	06 08 52.3 +1.2
TXAR	Lajitas Array comp=Z,12nm,0.6s,baz=128,slow=9.2,SNR=182	36.45 312	P	P	06 08 52.9 +1.0
TXAR	comp=Z,2.6nm,0.8s,baz=145,slow=4.7,SNR=5.8		PcP	PcP	06 11 14.2 +1.7
TXAR	comp=Z,0.5nm,0.9s,baz=124,slow=5.9,SNR=3.4		ScP	ScP	06 14 43.5 -0.9
WMOK	Wichita Mounta baz=134,SNR=21	36.48 323	P	P	06 08 51.9 0.0
MEDO	Medina baz=171	36.51 353	P	P	06 08 53.6 +1.7
K51A	Iona Station baz=166	36.52 350	P	P	06 08 54.1 +2.0
J55A	Hilton baz=172	36.54 354	P	P	06 08 53.3 +1.1
HDIL	Hopedale baz=152,SNR=7.0	36.58 339	P	P	06 08 52.3 -0.3
L47A	Sherwood baz=160	36.62 345	P	P	06 08 53.8 +0.9
J54A	Appleton baz=171	36.64 353	P	P	06 08 54.9 +1.9
STCO	Saint Catharin baz=170	36.64 353	P	P	06 08 55.0 +1.9
M45A	Boilermakers S baz=156	36.66 342	P	P	06 08 55.0 +1.8
K50A	Casco baz=164	36.79 348	P	P	06 08 55.6 +1.4
L46A	Eue Claire baz=158,SNR=5.8	36.95 344	P	P	06 08 56.4 +0.7
K49A	Clarkson baz=163	36.97 347	P	P	06 08 57.9 +2.0
PECO	Prince Edward baz=174	37.13 355	P	P	06 08 59.1 +1.9
ACTO	Acton baz=168	37.16 352	P	P	06 08 59.4 +2.0
K47A	Vermontville baz=160	37.22 345	P	P	06 08 59.3 +1.4
WLVO	Wesleyville baz=171,SNR=7.8	37.26 354	P	P	06 08 59.8 +1.6
LBNH	Lisbon comp=Z,23nm,0.6s	37.30 1	eP	P	06 08 59.9 +1.3
LBNH	Lisbon baz=182,SNR=7.1	37.30 1	P	P	06 09 00.3 +1.7
I53A	Kortright Cn E baz=169	37.30 352	P	P	06 09 00.4 +1.8
PKRO	Pickering baz=170	37.37 353	P	P	06 09 01.3 +2.1
K46A	Dorr baz=159	37.44 345	P	P	06 09 01.1 +1.4
J49A	Marlette baz=164	37.45 348	P	P	06 09 00.9 +1.0
I55A	Frankford baz=172,SNR=6.8	37.47 355	P	P	06 09 01.3 +1.2
I51A	Listowel baz=167,SNR=6.6	37.49 351	P	P	06 09 01.3 +1.1
LONY	Lake Ozonia baz=178	37.69 358	P	P	06 09 03.6 +1.7
J47A	Sunmer baz=161,SNR=5.1	37.71 346	P	P	06 09 03.5 +1.4
N40A	Mertquake, Sal baz=149	37.72 337	P	P	06 09 03.2 +1.1
H56A	Elgin baz=175,SNR=18	37.74 356	P	P	06 09 03.3 +1.1
M41A	Milan baz=151	37.75 338	P	P	06 09 02.7 +0.3
H55A	Tweed baz=173,SNR=23	37.76 355	P	P	06 09 03.7 +1.2
DELO	Deloro Mine baz=173	37.77 355	P	P	06 09 03.7 +1.2
BASO	Ashfield baz=166	37.80 350	P	P	06 09 03.7 +0.9
BWLO	Walkerton baz=167	37.82 351	P	P	06 09 04.3 +1.3
I49A	Point Hope baz=164	37.95 349	P	P	06 09 05.3 +1.2
L42A	Oliver, Polo baz=153,SNR=5.4	37.99 340	P	P	06 09 04.4 -0.1
J46A	Howard City baz=160	38.02 345	P	P	06 09 06.1 +1.5
H52A	Wyevale baz=169,SNR=12	38.15 352	P	P	06 09 07.0 +1.4
SADO	Sadowa comp=Z,14nm,0.5s,baz=206,slow=2.7,SNR=24	38.17 353	P	P	06 09 07.0 +1.0
K43A	Burlington baz=155	38.19 342	P	P	06 09 06.5 +0.4
PLVO	Plevna baz=174,SNR=7.8	38.24 355	P	P	06 09 07.8 +1.3
BMRO	Meriville Lake baz=167	38.30 351	P	P	06 09 08.1 +1.1
J45A	Montague baz=158	38.30 344	P	P	06 09 07.7 +0.8
AMTX	Amarillo baz=130	38.35 321	P	P	06 09 08.5 +0.8
I48A	Sherman Twp baz=163	38.36 348	P	P	06 09 08.4 +0.9
I47A	Gladwin baz=162	38.38 347	P	P	06 09 08.9 +1.2
G55A	Calabogie baz=174,SNR=8.4	38.42 356	P	P	06 09 09.2 +1.2
PKME	Peaks-Kenny Pk baz=186	38.45 4	P	P	06 09 09.6 +1.3
G53A	Haliburton baz=171,SNR=13	38.46 354	P	P	06 09 09.4 +1.1
MSTX	Muleshoe baz=128,SNR=12	38.48 319	P	P	06 09 09.3 +0.5
CFA	Coronel Fontan comp=Z,0.7nm,0.3s,baz=228,slow=1.4,SNR=6.5	38.48 173	P	P	06 09 07.7 -1.1
KSU1	Kansas State U baz=141,SNR=6.8	38.49 330	P	P	06 09 08.4 -0.3
I46A	Reed City baz=160	38.53 346	P	P	06 09 10.2 +1.3
ORIO	Orleans, Innes baz=176	38.55 357	P	P	06 09 10.1 +1.1
L40A	Anamosa baz=150,SNR=6.1	38.60 338	P	P	06 09 09.4 -0.1
ALFO	Alfred baz=177	38.70 358	P	P	06 09 12.2 +1.9
H48A	Harrisville baz=164,SNR=5.2	38.78 348	P	P	06 09 12.4 +1.4
H47A	Mio baz=162,SNR=7.0	38.87 347	P	P	06 09 13.5 +1.8
BUKO	Buck Lake baz=170	38.87 353	P	P	06 09 13.3 +1.5
PEMO	Pembroke baz=173,SNR=14	38.89 355	P	P	06 09 13.0 +1.2
KLBO	Killbear Provi baz=169	38.89 352	P	P	06 09 13.0 +1.1
TOBO	Tobermory, Bru baz=167	38.96 351	P	P	06 09 14.1 +1.7
MNTX	Cornudas Mount baz=123,SNR=54	38.97 314	P	P	06 09 13.6 +0.9
F55A	Otter Lake baz=175,SNR=8.5	38.98 356	P	P	06 09 13.2 +0.6
JFWS	Jewell Farm baz=152,SNR=15	39.00 340	P	P	06 09 13.3 +0.4
H46A	Fife Lake baz=161	39.03 346	P	P	06 09 14.3 +1.2
F52A	Sundridge baz=170,SNR=7.9	39.21 353	P	P	06 09 15.9 +1.4
SCIA	State Center baz=147	39.23 336	P	P	06 09 15.4 +0.6
H45A	Beulah baz=160	39.32 345	P	P	06 09 16.4 +1.0
G47A	Hillman baz=163,SNR=6.1	39.34 348	P	P	06 09 17.0 +1.4
F51A	Arnstein baz=169	39.41 353	P	P	06 09 17.2 +1.0
I42A	Draeger Farm, baz=155,SNR=6.4	39.44 342	P	P	06 09 17.3 +0.8
F49A	Sandfield baz=166,SNR=10	39.57 350	P	P	06 09 18.3 +0.9
G45A	Suttons Bay baz=160	39.61 346	P	P	06 09 19.5 +1.6
E53A	Dumoine, Ponti baz=173,SNR=6.5	39.62 355	P	P	06 09 19.1 +1.2
E52A	Mattawa baz=171,SNR=8.0	39.62 354	P	P	06 09 19.0 +1.1
E54A	Lac Daplat, Po baz=174,SNR=9.7	39.63 356	P	P	06 09 19.1 +1.1
F48A	Evansville baz=165,SNR=9.3	39.73 350	P	P	06 09 20.0 +1.1
I41A	Arkdale baz=154,SNR=7.5	39.89 341	P	P	06 09 20.4 +0.2
CBKS	Cedar Bluff baz=136	39.90 327	P	P	06 09 20.9 +0.5
E51A	G1948 Merrick baz=170,SNR=9.5	39.95 353	P	P	06 09 22.2 +1.5
PQI	Presque Isle comp=Z,32nm,0.7s	39.96 5	eP	P	06 09 21.7 +1.0
E50A	Wahnapitae baz=168	40.01 352	P	P	06 09 22.6 +1.4
F45A	CMU Biological baz=161	40.19 347	P	P	06 09 24.1 +1.5
D52A	ZEK Kipawa Sen baz=172,SNR=11	40.28 354	P	P	06 09 24.9 +1.5
E48A	Lockeyer baz=166,SNR=19	40.28 350	P	P	06 09 24.8 +1.4
D54A	Lac Fusel, La baz=174,SNR=21	40.31 356	P	P	06 09 24.8 +1.2
D53A	Lac Vacive, Po baz=173,SNR=12	40.31 355	P	P	06 09 25.3 +1.6
LATQ	La Tuque baz=180,SNR=11	40.43 0	P	P	06 09 26.3 +1.8
E47A	Iron Bridge baz=164,SNR=6.3	40.45 349	P	P	06 09 26.3 +1.5
E46A	Sault Ste Mari baz=163,SNR=9.7	40.57 348	P	P	06 09 27.4 +1.7
D50A	G1974 Best Tow baz=170	40.62 353	P	P	06 09 28.0 +1.9
D48A	Paudash Townsh baz=167,SNR=20	40.90 351	P	P	06 09 29.9 +1.4
D49A	Beulah Townshi baz=167,SNR=8.8	40.93 351	P	P	06 09 29.8 +1.1
D47A	Chapleau baz=165	41.00 350	P	P	06 09 30.5 +1.2
BGNE	Belgrade baz=140,SNR=5.8	41.02 331	P	P	06 09 29.6 0.0
D46A	Sault St. Mari baz=163	41.02 349	P	P	06 09 30.5 +1.1
G40A	Rib Lake comp=Z,6.3nm,0.9s	41.08 342	eP	P	06 09 30.7 +0.7
G40A	Rib Lake baz=154,SNR=7.0	41.08 342	P	P	06 09 31.0 +1.0
121A	Cookes Peak, D baz=121,SNR=8.2	41.14 313	P	P	06 09 32.6 +1.8
BNM	Barren Site	41.18 316	eP	P	06 09 32.5 +1.2
E43A	Lone Tree Farm baz=159	41.19 345	P	P	06 09 31.5 +0.6
G39A	Holcombe	41.41 341	P	P	06 09 33.3 +0.7

baz=152,SNR=11
LENM Lemitar 41.43 316 *e*PcP **PcP 06 11 29.0 +0.8**
T25A Trinidad 41.49 321 P **P 06 09 35.2 +1.5**
baz=129,SNR=6.7
ANMO Albuquerque 41.51 317 P **P 06 09 35.4 +1.5**
comp=Z,3.4nm,0.5s,baz=144,slow=8.2,SNR=14
ANMO Albuquerque 41.51 317 *e*P **P 06 09 35.1 +1.2**
comp=Z,4.6nm,0.6s
ANMO Albuquerque 41.51 317 P **P 06 09 35.4 +1.5**
baz=125
TASM ASL Pad, Albuq 41.51 317 P **P 06 09 35.4 +1.5**
baz=125
COWI Conover 41.51 343 *e*P **P 06 09 34.3 +0.8**
comp=Z,6.9nm,0.8s
F40A Park Falls 41.64 342 P **P 06 09 35.7 +1.2**
baz=154
KSCO Kaye Shedlock' 41.64 325 P **P 06 09 35.6 +0.7**
baz=133
F39A Loretta 41.89 341 P **P 06 09 37.4 +0.8**
baz=153,SNR=5.5
SPMN Marine on St. 41.91 339 P **P 06 09 37.3 +0.5**
baz=150,SNR=6.8
ECSD EROS Data Cent 42.15 335 P **P 06 09 38.7 0.0**
baz=144,SNR=19
LSQQ Lebel-sur-Quev 42.23 356 P **P 06 09 40.3 +1.0**
baz=174
D41A Chassel 42.23 344 P **P 06 09 40.3 +1.0**
baz=157,SNR=5.4
F38A Pierce - Schro 42.23 341 P **P 06 09 39.8 +0.5**
baz=152,SNR=9.0
F37A Hinrichs Farm, 42.28 340 P **P 06 09 40.9 +1.2**
baz=150
SDCO Great Sand Dun 42.55 321 *e*P **P 06 09 43.5 +1.2**
comp=Z,11nm,0.7s
SDCO Great Sand Dun 42.55 321 P **P 06 09 44.2 +1.9**
baz=128,SNR=19
OGNE Ogallala 42.65 327 P **P 06 09 42.6 -0.3**
baz=135
E38A The Farm, Brul 42.70 341 P **P 06 09 43.9 +0.8**
baz=152
CHGQ Chibougamau 42.97 359 P **P 06 09 47.0 +1.8**
baz=178,SNR=7.7
MATQ Matagami 42.97 356 P **P 06 09 46.5 +1.3**
baz=173
C40A Isle Royale Na 43.18 344 P **P 06 09 47.9 +1.0**
baz=156,SNR=13
TUC Tucson 43.24 311 *e*P **P 06 09 48.9 +1.1**
comp=Z,12nm,0.8s
TUC Tucson 43.24 311 P **P 06 09 48.9 +1.1**
baz=118
S22A 4UR Ranch, Cre 43.38 320 P **P 06 09 50.8 +1.7**
baz=127,SNR=23
SUSD Miller 43.74 333 P **P 06 09 51.5 0.0**
baz=141,SNR=13
W18A Petrified Fore 43.86 315 P **P 06 09 54.8 +2.0**
baz=121,SNR=7.2
EYMN Ely 43.88 342 P **P 06 09 52.9 +0.4**
baz=153,SNR=19
ISCO Idaho Springs 43.90 323 P **P 06 09 54.5 +1.2**
baz=130,SNR=19
MVCO Mesa Verde 44.15 318 P **P 06 09 56.6 +1.4**
baz=124,SNR=13
214A Organ Pipe Nat 44.62 309 P **P 06 10 00.5 +1.7**
baz=116,SNR=14
N23A Red Feather La 44.80 324 P **P 06 10 01.8 +1.5**
baz=130,SNR=9.5
WUAZ Wupatki 45.22 315 P **P 06 10 05.4 +1.8**
baz=120,SNR=24
AGMN Agassiz Nation 45.63 339 P **P 06 10 06.8 +0.5**
baz=148,SNR=7.8
O20A White River Ci 45.69 322 P **P 06 10 08.9 +1.6**
baz=127,SNR=8.9
RSSD Black Hills 45.94 329 *e*P **P 06 10 09.8 +0.7**
comp=Z,6.6nm,1.1s
RSSD Black Hills 45.94 329 P **P 06 10 10.3 +1.1**
baz=135
K22A Casper 46.27 326 P **P 06 10 12.6 +0.9**
baz=131
GLA Glamis 46.63 310 P **P 06 10 15.9 +1.4**
baz=115,SNR=9.3
PDMCI Parker Dam,Lak 46.65 312 P **P 06 10 15.5 +1.0**
baz=116
Y12C Blythe 46.69 311 P **P 06 10 16.1 +1.1**
baz=116
MDND Maddock 46.70 336 P **P 06 10 15.4 +0.7**
baz=143,SNR=9.7
ULM Lac du Bonnet 47.29 340 P **P 06 10 19.2 0.0**
comp=Z,12nm,0.4s,baz=137,slow=7.3,SNR=20
SWSC Sam W. Stewart 47.33 309 P **P 06 10 20.6 +0.8**
baz=114
IRM Iron Mountain 47.33 311 P **P 06 10 21.5 +1.6**
baz=115,SNR=7.9
BC3 Big Chuckawall 47.35 310 P **P 06 10 21.2 +1.0**
baz=115,SNR=6.1
PLCA Paso Flores 47.37 177 P **P 06 10 18.0 -2.0**
comp=Z,4.4nm,1.0s,baz=25,slow=5.8,SNR=3.0
PLCA Paso Flores 47.37 177 *e*P **P 06 10 18.0 -2.0**
comp=Z,6.8nm,1.1s
IKP In-Ko-Pah, Jac 47.45 309 P **P 06 10 22.3 +1.4**
baz=113
MONP2 Monument Peak 47.79 309 P **P 06 10 25.0 +1.4**
baz=113
BELC Belle Mtn. Jos 47.91 310 P **P 06 10 25.8 +1.3**
baz=114,SNR=6.6
GMRC Granite Mounta 47.98 312 P **P 06 10 25.9 +0.9**
baz=116
BW06 Boulder Array 48.08 324 P **P 06 10 26.5 +0.7**
baz=128,SNR=15
PD31 Pinedale Array 48.08 324 *e*PcP **PcP 06 11 51.5 +0.4**
PDAR Pinedale Array 48.08 324 P **P 06 10 26.5 +0.7**
comp=Z,4.1nm,0.5s,baz=127,slow=8.9,SNR=53
PDAR PcP **PcP 06 11 51.4 +0.4**
comp=Z,0.7nm,0.5s,baz=127,slow=6.9,SNR=1.8
PDAR ScP **ScP 06 15 31.3 +0.4**
comp=Z,0.7nm,0.8s,baz=125,slow=7.6,SNR=4.3
PFO Pinyon Flats O 48.10 310 *e*P **P 06 10 27.0 +1.0**
comp=Z,4.7nm,0.9s
PFO Pinyon Flats O 48.10 310 P **P 06 10 27.0 +1.0**
baz=114
SCHQ Schefferville 48.16 5 P **P 06 10 27.1 +1.2**
comp=Z,50nm,0.6s,baz=196,slow=6.3,SNR=30
SCHQ Schefferville 48.16 5 *e*P **P 06 10 26.7 +0.8**
comp=Z,54nm,0.6s
TUQ Turquoise Moun 48.46 312 P **P 06 10 30.0 +1.3**
baz=116,SNR=9.3
HEC Hector,Ludlow 48.51 311 P **P 06 10 30.4 +1.4**
baz=115
DUG Dugway, Tooele 48.61 319 P **P 06 10 31.2 +1.5**
baz=122,SNR=16
MURC Murrieta 48.66 309 P **P 06 10 30.7 +0.6**
baz=113
BBRC Big Bear Solar 48.71 310 P **P 06 10 32.5 +1.8**
baz=114,SNR=5.0
LAO LASA Array 48.84 330 P **P 06 10 31.9 +0.6**
baz=134,SNR=7.3
SHOC Shoshone, Teco 48.92 313 P **P 06 10 33.3 +1.2**
baz=116
GSC Goldstone, Bar 49.05 312 P **P 06 10 34.5 +1.3**
baz=115,SNR=12
DGMT Dagmar 49.15 333 P **P 06 10 35.0 +1.4**
baz=137,SNR=23
BFSC Mount Baldy Ra 49.27 310 P **P 06 10 35.4 +0.6**
baz=113
TPNV Topopah Spring 49.36 314 P **P 06 10 37.5 +1.9**
baz=117,SNR=15
RLMT Red Lodge 49.38 327 P **P 06 10 36.6 +0.9**
baz=130,SNR=8.5
R11A Troy Canyon, C 49.54 316 P **P 06 10 38.1 +1.2**
baz=118,SNR=20
FURC Furnace Creek, 49.59 313 P **P 06 10 38.7 +1.6**
baz=116,SNR=9.1
H17A Grant Village 49.66 325 P **P 06 10 38.8 +1.0**
baz=128
EDW2 Edwards Air Fo 49.77 311 P **P 06 10 39.5 +0.9**
baz=114
LRMC Laurel Mtn Rad 49.78 311 P **P 06 10 39.9 +1.2**
baz=114
DECC Green Verdugo 49.79 310 P **P 06 10 39.8 +1.1**
baz=113
MPMC Manual Prospec 49.88 312 P **P 06 10 40.4 +0.9**
baz=115
GRAC Grapevine Rang 50.19 313 P **P 06 10 43.5 +1.8**
baz=116,SNR=7.2
CWC Cottonwood Cre 50.47 312 P **P 06 10 45.2 +1.3**
baz=115
VES Vestal, Richgr 50.97 311 P **P 06 10 48.8 +1.3**
baz=113
BOZ Bozeman (W) 50.98 326 P **P 06 10 48.8 +1.2**
baz=127,SNR=19
HLID Hailey 51.43 322 P **P 06 10 52.2 +1.1**
baz=123,SNR=17
SMMC Simmler 51.45 310 P **P 06 10 52.4 +1.2**
baz=112
NV01 Mina Array Sit 51.48 315 *e*PcP **PcP 06 12 03.9 +0.2**
NVAR Mina Array Bea 51.48 315 P **P 06 10 53.0 +1.4**
comp=Z,4.6nm,0.7s,baz=123,slow=7.2,SNR=49
NVAR PcP **PcP 06 12 03.9 +0.2**
comp=Z,1.0nm,0.4s,baz=130,slow=5.1,SNR=5.6
EGMT Eagleton 51.51 329 P **P 06 10 52.7 +1.3**
baz=131
MSO Missoula 53.00 326 P **P 06 11 03.3 +0.8**
baz=126,SNR=6.3
FFC Flin Flon 53.09 340 *e*P **P 06 11 03.1 +0.3**
comp=Z,70nm,1.1s
O03E Paynes Creek 54.72 315 P **P 06 11 15.1 0.0**
baz=114,SNR=5.5
M04C Macdoel 55.36 317 P **P 06 11 20.6 +0.9**
baz=115,SNR=14
O02D Mt. Diablo Mer 55.37 315 P **P 06 11 19.2 -0.4**
baz=113,SNR=5.1
NEW Newport 55.59 326 P **P 06 11 21.3 +0.2**
baz=123
J05D Fort Rock, OR 55.61 319 P **P 06 11 22.7 +1.3**
baz=116,SNR=14
KCPM Cahto Peak 55.74 314 *e*P **P 06 11 22.8 +0.4**
comp=Z,20nm,0.9s
L04D Klamath Falls 55.86 317 P **P 06 11 23.8 +0.5**
baz=115,SNR=5.8
M02C Callahan 55.90 316 P **P 06 11 23.2 -0.2**
baz=114
I05D Terrebonne, OR 56.15 320 P **P 06 11 26.5 +1.4**
baz=117
J04D Umpqua Nationa 56.17 318 P **P 06 11 26.5 +1.0**
baz=116,SNR=8.2
G05D Wamic, OR 56.55 321 P **P 06 11 29.6 +1.7**
baz=118
I04A Tendick Farm, 56.60 319 P **P 06 11 29.3 +0.9**
baz=116
L02E Cave Junction 56.72 317 P **P 06 11 29.8 +0.7**
baz=114
K02D Willamette Mer 56.98 317 P **P 06 11 31.6 +0.6**
baz=114,SNR=5.3
I03D Drain, OR 57.18 318 P **P 06 11 32.9 +0.6**
baz=115
J01E Myrtle Point 57.34 318 P **P 06 11 35.0 +1.5**
baz=114
I02D Swisshome 57.67 319 P **P 06 11 37.4 +1.7**
baz=115
D04E Lakebay 58.34 322 P **P 06 11 41.5 +1.2**
baz=117
B05A Bryant 58.44 324 P **P 06 11 41.5 +0.4**
baz=118
D03D Eldon 58.70 323 P **P 06 11 43.6 +0.8**
baz=117
YKA Yellowknife Ar 63.27 340 P **P 06 12 13.6 +0.3**
comp=Z,7.8nm,0.5s,baz=132,slow=6.6,SNR=180
YKA pP **pP 06 12 51.8 +1.0**
comp=Z,1.1nm,0.4s,baz=131,slow=6.5,SNR=1.3
TIC Toumodi 67.60 86 *e*P **P 06 12 41.5 -0.6**
LIC Lamto 67.62 86 *e*P **P 06 12 40.2 -2.1**
comp=Z,43nm,0.8s
DBIC Dimbokro 67.76 86 P **P 06 12 41.7 -1.4**
comp=Z,6.7nm,0.6s,baz=264,slow=5.1,SNR=22
DBIC pP **pP 06 13 21.5 -0.4**
comp=Z,5.9nm,0.6s,baz=262,slow=6.6,SNR=3.5
KIC Kosan Boka 67.90 86 *e*P **P 06 12 42.4 -1.6**
comp=Z,23nm,0.6s
SUMG Summit 69.00 11 *e*P **P 06 12 50.5 +0.3**
comp=Z,43nm,0.7s
SUMG Summit 69.00 11⇑ *i*P **P 06 12 50.7 +0.4**
comp=Z,111nm,0.6s
INK Inuvik 73.03 340 P **P 06 13 14.6 +0.6**
comp=Z,3.4nm,0.6s,baz=94,slow=6.2,SNR=20
INK Inuvik 73.03 340 *e*P **P 06 13 14.8 +0.7**
comp=Z,3.6nm,0.6s
EPYK Eagle Plains 73.39 338 P **P 06 13 16.9 +0.7**
baz=112,SNR=6.4
TOA1 Torodi Ar. Sit 73.76 78 *e*P **P 06 13 17.2 -2.1**
TORD Torodi Ar. Bea 73.76 78 P **P 06 13 17.2 -2.2**
comp=Z,0.5nm,0.3s,baz=285,slow=6.4,SNR=20
TORD pP **pP 06 13 59.2 +0.6**
comp=Z,0.6nm,0.5s,baz=276,slow=5.6,SNR=2.8
EGAK Eagle 74.59 336 *e*P **P 06 13 23.9 +0.7**
comp=Z,2.2nm,0.8s
DAG Danmarks Havn 75.67 11 *i*P **P 06 13 29.1 -0.1**
comp=Z,8.6nm,0.8s
HDA Harding Lake 76.92 335 P **P 06 13 36.9 +0.5**
baz=102
ILAR Eielson Array 76.97 335 P **P 06 13 37.1 +0.4**
comp=Z,1.2nm,0.7s,baz=114,slow=4.8,SNR=14
ILAR pP **pP 06 14 16.6 +1.1**
comp=Z,0.5nm,0.6s,baz=79,slow=4.8,SNR=2.5
RND Reindeer 77.56 333 *e*P **P 06 13 41.4 +1.2**
TTA Tatalina 80.73 333 *e*P **P 06 13 58.0 +0.6**
comp=Z,1.4nm,0.8s
NB2 NORSAR Subarra 81.35 29 P **P 06 14 00.9 +0.3**
comp=Z,2.4nm,0.5s,baz=267,slow=5.3
NOA NORSAR Array B 81.35 29 P **P 06 14 01.0 +0.3**
comp=Z,1.7nm,0.5s,baz=267,slow=5.4,SNR=15
GERES GERESS Array B 82.85 42 P **P 06 14 08.2 -0.6**
comp=Z,0.8nm,0.6s,baz=270,slow=3.6,SNR=6.7
SPITS Spitsbergen Ar 83.28 12 P **P 06 14 11.1 +0.7**
baz=198,slow=0.9
ARA0 ARCESS Array S 86.69 20 *e*P **P 06 14 27.5 0.0**
ARCES ARCESS Array B 86.69 20 P **P 06 14 27.5 0.0**
comp=Z,5.8nm,0.3s,baz=276,slow=4.1,SNR=20
VNA3 Neumayer Olymp 88.16 163 P **P 06 14 33.2 -1.2**
VNA1 Neumayer--Stat 88.31 162 P **P 06 14 34.4 -0.7**
FIA0 FINESS Array S 88.46 28 *e*P **P 06 14 36.2 +0.2**
FINES FINESS Array B 88.46 28 P **P 06 14 36.2 +0.2**
comp=Z,1.7nm,0.9s,baz=253,slow=2.0,SNR=3.8
VNA2 Neumayer--Watz 88.69 163 P **P 06 14 35.7 -1.2**
baz=289,slow=5.4
ZAA1 Zalesovo Array 116.68 14 *e*PKPdf **PKPdf 06 20 27.3 +0.1**
ZALV Zalesovo Beam 116.69 14 PKP **PKPdf 06 20 27.3 +0.1**
comp=Z,1.8nm,0.3s,baz=221,slow=1.6,SNR=5.0
KURBB Kurchatov Arra 117.78 20 PKP **PKiKP 06 20 29.6 +0.1**
comp=Z,0.9nm,0.4s,baz=316,slow=2.5,SNR=7.3
MK32 Makanchi Array 122.34 20 *e*PKPdf **PKPdf 06 20 38.1 -0.3**
MKAR Makanchi Array 122.34 20 PKP **PKPdf 06 20 38.1 -0.3**
comp=Z,1.1nm,0.4s,baz=324,slow=2.3,SNR=16
SONA0 Songino Array 125.59 0 *e*PKPdf **PKiKP 06 20 45.4 +0.2**
SONM Songino Array 125.59 0 PKP **PKiKP 06 20 45.4 +0.2**
comp=Z,1.2nm,0.6s,baz=332,slow=2.1,SNR=5.3
KSH Kashi 125.77 29 *e*PKP **PKPdf 06 20 44.5 -0.9**
KSH PP **PP 06 22 43.8 +5.1**
KSH SKKS 06 29 17.8
KSH AMB AMB
comp=Z,210nm,5.5s
KSH LR LR
comp=Z,600nm,12.3s
KSH LR LR
comp=Z,570nm,13.0s
KSH LR LR
comp=Z,190nm,14.5s
WMQ Urumqi 126.71 17 *e*PKP **PKPdf 06 20 45.0 -2.0**
WMQ sPKP 06 21 37.8
WMQ AMB AMB
comp=Z,84nm,4.9s
WMQ LR LR
comp=Z,270nm,28.9s
WMQ LR LR
comp=Z,340nm,28.9s
WMQ LR LR
comp=Z,210nm,28.9s
HHC Hu-ho-hao-te 132.38 355 *e*PKP **PKPdf 06 20 56.1 -1.8**
HHC AMB AMB
comp=Z,130nm,7.7s
LZH Lanzhou 137.24 4⇓PKP **PKPdf 06 21 06.4 -0.8**
LZH sPKP 06 22 02.9
NJ2 Nanjing 139.70 344 *e*PKP **PKPdf 06 21 11.3 -0.2**
CD2 Chengdu 142.38 4 PKP **PKPdf 06 21 14.6 -1.9**
AS31 Alice Springs 149.09 234 *e*PKPbc **PKPbc 06 21 31.7 -0.7**
ASAR Alice Springs 149.09 234 PKP **PKPdf 06 21 28.1 +0.1**
comp=Z,7.6nm,0.5s,baz=118,slow=3.5,SNR=84
ASAR PKPbc **PKPbc 06 21 31.9 -0.5**
comp=Z,7.6nm,0.5s,baz=124,slow=3.5,SNR=84
WR1 Warramunga Arr 150.31 241 *e*PKPdf **PKPdf 06 21 30.2 +0.1**
WR1 *e*PKPbc **PKPbc 06 21 35.1 -0.2**
WRA Warramunga Arr 150.31 241 PKP **PKPdf 06 21 30.2 +0.1**
comp=Z,11nm,0.4s,baz=103,slow=2.7,SNR=7.1
WRA PKPbc **PKPbc 06 21 35.1 -0.2**
comp=Z,11nm,0.4s,baz=102,slow=2.8,SNR=155
CMAR Chiang Mai Arr 153.71 17 PKPbc **PKiKP 06 21 43.5 +0.4**
comp=Z,3.1nm,0.5s,baz=324,slow=3.1,SNR=10

ISCJB ***18*** *06:43:04.2±0.4,3°.90S±0°.02×79°.08W±0°.06,h105km±4km, mb3.4/5,Error ellipse: s-maj=9.1km s-min=4.1km az=2.2*
IGQ ***18*** *06:43:06.3±0.4,4°.S±2°.×7°.9W±°, h8km,MLv4.5*
IDC ***18*** *06:43:06.0±3.0,4°.01S×79°.09W,h110km±39km, mb3.1/5, mb1 3.6/9,mb1mx3.4/30,mbtmp3.8/9,MS2.8/1,Ms1 2.8/1, ms1mx2.4/14,Error ellipse: s-maj=40.0km s-min=24.3km az=53.0*

ISC 18 06:43:04.4±0.8,3°.89S±0°.04×79°.02W±0°.06,h98km±8km, n68,σ1°.40/76,mb3.3/5,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GONZ	**Gonzanam**	**0.51**	**228**	P	**Pn**	**06 43 21.0**	**+0.6**
GONZ				S	**Sn**	**06 43 33.0**	**+0.6**
ZUMB	**Zumba**	**0.97**	**187**	P	**Pn**	**06 43 25.2**	**+0.7**
ZUMB				P		06 43 25.3	
ZUMB				S	**Sn**	**06 43 40.4**	**+0.8**
MCRA	**Macar, Loja**	**1.04**	**243**	P		06 43 22.3	
MCRA				P	**Pn**	**06 43 22.1**	**-3.0**
MCRA				S	**Sn**	**06 43 38.0**	**-2.9**
MCRA				S		06 43 38.3	
COHC	**Cochancay**	**1.44**	**351**	P	**Pn**	**06 43 30.2**	**+0.4**
COHC				S	**Sn**	**06 43 48.6**	**-0.3**
COHC				S		06 43 49.4	
MILO	**Milagro-Astudi**	**1.69**	**342**	P	**Pn**	**06 43 34.5**	**+1.6**
MILO				S	**Sn**	**06 43 56.6**	**+2.0**
MORR	**Playas El Morr**	**1.81**	**313**	P	**Pn**	**06 43 35.1**	**+0.7**
MORR				S	**Sn**	**06 43 57.1**	**-0.2**
ARIO	**Riobamba**	**2.25**	**8**	P	**Pn**	**06 43 41.5**	**+1.1**
BMAS	**Trigal station**	**2.44**	**13**	P	**Pn**	**06 43 43.9**	**+1.0**
ARRY	**Arrayan**	**2.44**	**13**	P	**Pn**	**06 43 43.4**	**+0.5**
PAT1	**Patacocha**	**2.44**	**14**	P	**Pn**	**06 43 44.0**	**+0.9**
BPAT	**Tungurahua Vol**	**2.45**	**14**	P	**Pn**	**06 43 43.9**	**+0.7**
BBIL	**Ulba Tungurahu**	**2.48**	**12**	P	**Pn**	**06 43 44.7**	**+1.2**
RETU	**Refugio**	**2.49**	**13**	P	**Pn**	**06 43 45.1**	**+1.2**
BULB	**Ulba Tungurahu**	**2.52**	**14**	P	**Pn**	**06 43 44.7**	**+0.7**
BULB				S	**Sn**	**06 44 14.1**	**-0.2**
POND	**Pondoa**	**2.52**	**13**	P	**Pn**	**06 43 44.7**	**+0.6**
BRUN	**Tungurahua Vol**	**2.53**	**14**	P	**Pn**	**06 43 44.7**	**+0.5**
RUN5	**Runtun**	**2.53**	**14**	P	**Pn**	**06 43 48.0**	**+3.8**
SALI	**Salinas**	**2.60**	**311**	P	**Pn**	**06 43 44.8**	**+0.1**
APUY	**Puyo**	**2.63**	**23**	P	**Pn**	**06 43 45.9**	**+0.7**
AQUE	**Quevedo**	**2.87**	**351**	P	**Pn**	**06 43 49.0**	**+0.7**
AQUE				S	**Sn**	**06 44 20.9**	**-1.2**
PIS1	**Pisayambo**	**2.89**	**13**	P	**Pn**	**06 43 50.0**	**+0.9**
PISA	**Pisayambo**	**2.89**	**13**	P	**Pn**	**06 43 50.2**	**+1.2**
ARDO	**Archidona, Ten**	**3.13**	**23**	P	**Pn**	**06 43 51.3**	**-0.5**
ILLI	**Illinizas Sur**	**3.17**	**5**	P	**Pn**	**06 43 54.5**	**+1.6**
BMOR	**Cotopaxi Volca**	**3.19**	**10**	P	**Pn**	**06 43 54.7**	**+1.5**
CAMI	**Rancho Maria**	**3.24**	**9**	P	**Pn**	**06 43 55.4**	**+1.7**
BNAS	**Cotopaxi Volca**	**3.25**	**10**	P	**Pn**	**06 43 55.1**	**+1.3**
BREF	**Cotopaxi Volca**	**3.25**	**10**	P	**Pn**	**06 43 55.6**	**+1.5**
BTAM	**Cotopaxi Volca**	**3.26**	**11**	P	**Pn**	**06 43 55.1**	**+1.1**
BVC2	**Cotopaxi Volca**	**3.27**	**11**	P	**Pn**	**06 43 54.8**	**+0.5**
ATAH	**Atahualpa**	**3.28**	**169**	P	**Pn**	**06 43 56.0**	**+1.7**
	16nm,0.3s,baz=10,slow=9.2,SNR=102						
ATAH				S	**Sn**	**06 44 32.8**	**+0.2**
	19nm,0.3s,baz=22,slow=5.4,SNR=7.7						
COV1	**Cotopaxi Volc**	**3.28**	**12**	P	**Pn**	**06 43 55.8**	**+1.4**
VC1	**Cotopaxi 1**	**3.29**	**11**	P	**Pn**	**06 43 55.8**	**+1.4**
PITA	**Cotopaxi Volc**	**3.37**	**10**	P	**Pn**	**06 43 56.6**	**+1.2**
ANTM	**Antisana-La Mi**	**3.43**	**13**	P	**Pn**	**06 43 58.0**	**+1.6**
ANTG	**Antisana-Guama**	**3.45**	**13**	P	**Pn**	**06 43 57.6**	**+0.9**
ANTS	**Antisana-Sarah**	**3.48**	**14**	P	**Pn**	**06 43 58.2**	**+1.1**
ANTI	**Antisana**	**3.53**	**14**	P	**Pn**	**06 43 58.6**	**+0.9**
TERV	**Terraza Guagua**	**3.72**	**6**	P	**Pn**	**06 44 02.2**	**+1.9**
YANA	**Yana**	**3.78**	**7**	P	**Pn**	**06 44 02.1**	**+1.1**
REVS	**Reventador Sur**	**4.01**	**20**	P	**Pn**	**06 44 03.9**	**-0.1**
PAC1	**Pacto, Paraso**	**4.14**	**3**	P	**Pn**	**06 44 06.5**	**+0.9**
OTAV	**Otavalo**	**4.14**	**8**	*e*P	**Pn**	**06 44 06.7**	**+0.7**
CUSW	**Cuicocha Oeste**	**4.21**	**9**	P	**Pn**	**06 44 08.5**	**+1.7**
IMBA	**Imbabura, San**	**4.22**	**11**	P	**Pn**	**06 44 08.1**	**+1.1**
CASC	**Dorado de Casc**	**4.34**	**23**	P	**Pn**	**06 44 07.5**	**-0.8**
URCU	**Urcuqui**	**4.37**	**10**	P	**Pn**	**06 44 09.9**	**+0.9**
LITE1	**Lita**	**4.70**	**8**	P	**Pn**	**06 44 14.1**	**+0.9**
GCUF	**Volcan Galeras**	**5.35**	**18**	*e*P	**Pn**	**06 44 23.6**	**+1.2**
CRUC	**La Cruz**	**5.81**	**21**	*e*P	**Pn**	**06 44 28.4**	**0.0**
PTLC	**Puerto Leguiza**	**5.84**	**46**	*e*P	Pn	06 44 22.1	-6.5
BBAC	**Balboa, Cauca**	**6.14**	**17**	*e*P	**Pn**	**06 44 32.1**	**-0.6**
FLOC	**Florencia**	**6.40**	**32**	*e*P	**Pn**	**06 44 33.5**	**-2.7**
SOTA	**Rioblanco**	**6.46**	**22**	*e*P	**Pn**	**06 44 37.6**	**+0.2**
POPC	**Popayan, Colom**	**6.81**	**20**	*e*P	**Pn**	**06 44 40.1**	**-1.8**
MARP	**Paez Belalcaza**	**7.36**	**25**	*e*P	**Pn**	**06 44 49.5**	**0.0**
MACC	**Macarena, Meta**	**7.92**	**41**	*e*P	**Pn**	**06 44 53.8**	**-3.0**
YOTC	**Yotoco, Valle**	**8.27**	**19**	*e*P	**Pn**	**06 44 57.8**	**-3.9**
NNA	**Nana**	**8.33**	**165**	P	**Pn**	**06 45 03.0**	**+0.6**
	9.2nm,0.3s,baz=322,slow=11,SNR=20						
NNA				S	**Sn**	**06 46 33.0**	**-1.8**
	16nm,0.3s,baz=242,slow=8.7,SNR=15						
PRAC	**Prado**	**8.61**	**29**	*e*P	**Pn**	**06 45 04.2**	**-2.1**
SDV	**Santo Domingo**	**15.20**	**33**	P	**P**	**06 46 36.0**	**-0.8**
	1.3nm,0.3s,baz=335,slow=12,SNR=6.5						
LPAZ	**La Paz**	**16.32**	**140**	P	**P**	**06 46 50.7**	**+1.0**
	0.1nm,0.3s,baz=29,slow=2.0,SNR=8.5						
SIV	**San Ignacio**	**21.35**	**126**	P	**P**	**06 47 44.8**	**+0.9**
	0.4nm,0.4s,baz=297,slow=10,SNR=6.7						
SJG	**San Juan**	**25.28**	**30**	LR	LR	06 58 47.4	
	comp=Z,23nm,19.9s,baz=80,slow=37						
TXAR	**Lajitas Array**	**40.63**	**326**	P	**P**	**06 50 35.3**	**+0.2**
	0.2nm,0.7s,baz=117,slow=7.3,SNR=3.7						
PDAR	**Pinedale Array**	**54.04**	**332**	P	**P**	**06 52 19.8**	**+0.7**
	0.7nm,0.8s,baz=124,slow=7.9,SNR=5.4						
NVAR	**Mina Array Bea**	**55.61**	**323**	P	**P**	**06 52 32.0**	**+1.6**
	0.5nm,0.7s,baz=112,slow=12,SNR=3.6						
YKA	**Yellowknife Ar**	**71.52**	**343**	P	**P**	**06 54 14.1**	**-0.3**
	0.2nm,0.4s,baz=142,slow=6.1,SNR=4.6						

KRSC 18 06:43:46.5±0.4,59°.48N×164°.23E,h91km±21km,ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSR	**Ossora**	**0.64**	**249**	*e*P	Pn	06 44 03.6	+1.1
OSSR				*e*S	Sn	06 44 15.6	+1.2
TILK	**Tilichiki**	**1.37**	**44**	*e*P	Pn	06 44 11.9	+1.4
TILK				*e*S	Sn	06 44 30.8	+2.1
PALN	**Palana**	**2.22**	**262**	*e*P	Pn	06 44 23.4	+1.9
PALN				*e*S	Sn	06 44 50.7	+2.3

RSNC 18 06:44:09.3±0.7,6°.72N×73°.18W,h149km±7km,ML1.3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.13**	**180**	*e*P	Pn	06 44 28.9	-0.8
BARC				*e*S	Sn	06 44 44.2	-0.9
BARC				*i*		06 44 45.6	
	comp=Z,4.8nm,0.2s						
BRRC	**Barranca, Sant**	**0.65**	**306**	*e*P	Pn	06 44 30.8	-0.6
BRRC				*e*S	Sn	06 44 48.2	0.0
BRRC				*i*		06 44 48.8	
	comp=Z,3.7nm,0.3s						
RUSC	**La Rusia**	**0.83**	**173**	*e*P	Pn	06 44 33.3	+0.1
RUSC				*e*S	Sn	06 44 51.2	-0.1
RUSC				*i*		06 44 52.5	
	comp=Z,2.3nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.28**	**262**	*e*P	Pn	06 44 35.9	-0.7
PTBC				*e*S	Sn	06 44 56.8	-0.6
PTBC				*i*		06 45 01.9	
	comp=Z,2.3nm,0.5s						

ISCJB ***18*** *07:07:15.8±0.5,34°.10N±0°.10×135°.68E±0°.07, h410km±3km,mb3.3/10,Error ellipse: s-maj=15.4km s-min=9.4km az=170.0*
JMA ***18*** *07:07:16.3±0.1,33°.99N×135°.60E,h407km±2km,M3.1*
IDC ***18*** *07:07:17.3±1.3,34°.16N×135°.64E,h407km±13km,mb2.9/9, mb1 3.1/14,mb1mx2.9/39,mbtmp3.6/14,Error ellipse: s-maj=21.1km s-min=18.2km az=164.0*

ISC 18 07:07:16.4±0.8,34°.1N±0°.1×135°.67E±0°.07,h403km±6km, n28,σ0°.91/33,mb3.2/10,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTNC	**Tanabenakahech**	**0.24**	**193**	P	**P**	**07 08 06.7**	**+0.2**
JTNC				*e*S	**S**	**07 08 46.2**	**-0.4**
JWM	**Minabe**	**0.33**	**233**	P	**P**	**07 08 06.6**	**+0.1**
JIE	**Ise**	**0.92**	**68**	P	**P**	**07 08 08.6**	**+0.9**

JIE			S	**S**	**07 08 49.8**	**+0.9**
JAI	**Aioi**	**1.05 256**	P	**P**	**07 08 08.2**	**+0.1**
JAI			S	**S**	**07 08 49.3**	**-0.4**
JWT	**Wachi**	**1.25 350**	P	**P**	**07 08 09.5**	**+0.7**
JWT			*e*S	**S**	**07 08 51.1**	**0.0**
JMN	**Monobe**	**1.53 258**	P	**P**	**07 08 10.2**	**0.0**
TK02	**Tokai 2**	**1.73 93**	P	**P**	**07 08 11.7**	**+0.8**
JYTA	**Yamagatataniai**	**1.77 29**	P	**P**	**07 08 12.3**	**+1.0**
JHS	**Saijyo**	**2.31 295**	P	**P**	**07 08 15.2**	**+0.5**
JNA	**Nagahama**	**2.71 260**	P	**P**	**07 08 17.6**	**+0.1**
JHT	**Toyohira**	**2.76 284**	P	**P**	**07 08 18.2**	**+0.3**
MJAR	**Matsushiro Arr**	**3.24 39**	P	**P**	**07 08 22.8**	**+1.1**
	0.5nm,0.3s,baz=212,slow=8.3,SNR=13					
JRY	**Ryogami san**	**3.29 53**	P	**P**	**07 08 23.5**	**+1.3**
JNU	**Nakatsue**	**4.11 258**	P	**P**	**07 08 29.2**	**-0.4**
	0.8nm,0.3s,baz=19,slow=8.9,SNR=4.2					
BSO1	**Boso 1**	**4.43 81**	P	**P**	**07 08 30.3**	**-1.7**
BSO1			*e*S	**S**	**07 09 32.0**	**-1.9**
KSRS	**Korea Array**	**7.16 301**	P	**P**	**07 09 02.3**	**0.0**
	0.3nm,0.3s,baz=121,slow=12,SNR=8.4					
USRK	**Ussuriysk Ar.**	**10.53 345**	P	**P**	**07 09 39.0**	**-0.5**
	0.1nm,0.3s,baz=158,slow=11,SNR=3.2					
ASAJ	**Asahikawa**	**11.39 26**	P	**P**	**07 09 49.6**	**+0.4**
	0.6nm,0.3s,baz=239,slow=7.7,SNR=3.8					
SONM	**Songino Array**	**25.87 311**	P	**P**	**07 12 15.1**	**+1.6**
	0.8nm,0.5s,baz=121,slow=7.7,SNR=3.3					
MKAR	**Makanchi Array**	**41.82 304**	P	**P**	**07 14 28.2**	**-0.5**
	0.2nm,0.4s,baz=86,slow=9.4,SNR=3.3					
WRA	**Warramunga Arr**	**53.71 182**	P	**P**	**07 16 00.7**	**+1.9**
	0.4nm,0.5s,baz=1.9,slow=7.4,SNR=3.5					
ILAR	**Eielson Array**	**54.48 31**	P	**P**	**07 16 03.9**	**+0.1**
	0.3nm,0.5s,baz=267,slow=6.3,SNR=6.7					
ARCES	**ARCESS Array B**	**65.10 339**	P	**P**	**07 17 14.9**	**-0.2**
	6.9nm,0.3s,baz=72,slow=7.8,SNR=5.7					
YKA	**Yellowknife Ar**	**68.68 28**	P	**P**	**07 17 37.6**	**+0.2**
	0.2nm,0.4s,baz=290,slow=7.8,SNR=3.3					
FINES	**FINESS Array B**	**69.21 331**	P	**P**	**07 17 39.7**	**-0.9**
	0.5nm,0.4s,baz=70,slow=6.3,SNR=6.0					
NVAR	**Mina Array Bea**	**80.50 50**	P	**P**	**07 18 45.8**	**+0.5**
	0.3nm,0.5s,baz=297,slow=6.2,SNR=3.9					
PDAR	**Pinedale Array**	**83.05 42**	P	**P**	**07 18 58.3**	**0.0**
	0.2nm,0.6s,baz=347,slow=3.7,SNR=3.8					
TXAR	**Lajitas Array**	**95.63 49**	P	**P**	**07 19 56.3**	**-1.3**
	0.2nm,0.7s,baz=302,slow=5.2,SNR=2.3					

KRSC 18 07:41:43.2±0.9, 55°.47N×160°.88E, h169km±8km, ML3.8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMD	**Tumrok D**	**0.38**	**227**	*e*P	Pn	07 42 07.0	+0.8
TUMD				*e*S	Sn	07 42 24.8	+1.0
TUMR	**Tumrok**	**0.46**	**247**	*e*P	Pn	07 42 07.7	+1.1
TUMR				*e*S	Sn	07 42 26.0	+1.5
BZGR	**Bezymyannyi-Gr**	**0.49**	**347**	*e*P	Pn	07 42 08.2	+1.5
BZGR				*e*S	Sn	07 42 27.0	+2.1
KZV	**Kizimen**	**0.49**	**224**	*e*P	Pn	07 42 08.0	+1.2
BZMR	**Bezymyannaya**	**0.52**	**335**	*e*P	Pn	07 42 08.0	+1.1
BZMR				*e*S	Sn	07 42 25.5	+0.3
BZWR	**Bezymyannyi-We**	**0.55**	**336**	*e*P	Pn	07 42 08.2	+1.2
BZWR				*e*S	Sn	07 42 25.0	-0.4
LGNR	**Loginova**	**0.63**	**350**	*e*P	Pn	07 42 08.8	+1.2
LGNR				*e*S	Sn	07 42 28.0	+1.6
CIRR	**Tsirk**	**0.66**	**353**	*e*P	Pn	07 42 08.3	+0.8
CIRR				*e*S	Sn	07 42 26.9	+0.5
KRSR	**Krestovskiy**	**0.77**	**347**	*e*P	Pn	07 42 08.7	+0.5
KRSR				*e*S	Sn	07 42 28.0	+0.4
KOZ	**Kozyrevsk**	**0.82**	**316**	*e*P	Pn	07 42 08.7	+0.3
KLY	**Klyuchi**	**0.86**	**351**	*e*S	Sn	07 42 29.2	+0.9
MKZ	**Mys Kozlova**	**1.03**	**152**	*e*P	Pn	07 42 10.9	+1.0
MKZ				*e*S	Sn	07 42 31.7	+1.2
BDR	**Baidarnaya**	**1.12**	**9**	*e*P	Pn	07 42 11.8	+1.1
BDR				*e*S	Sn	07 42 33.4	+1.3
SMKR	**Semkarok**	**1.17**	**16**	*e*P	Pn	07 42 12.2	+1.1
SMKR				*e*S	Sn	07 42 33.7	+0.9
SRKR	**Sorokina**	**1.20**	**8**	*e*P	Pn	07 42 12.0	+0.6
SRKR				*e*S	Sn	07 42 33.4	+0.1
KBG	**Krutoberegovo**	**1.30**	**52**	*e*P	Pn	07 42 13.0	+0.9
KBG				*e*S	Sn	07 42 36.0	+1.5
ESO	**Esso**	**1.32**	**291**	*e*P	Pn	07 42 12.5	+0.1
KBTR	**Krutoberegovo**	**1.32**	**55**	*e*P	Pn	07 42 13.4	+1.0
KBTR				*e*S	Sn	07 42 35.6	+0.6
SPN	**Mys Shipunski**	**2.43**	**192**	*e*P	Pn	07 42 23.8	-0.5
SPN				*e*S	Sn	07 42 54.1	-2.1
GNL	**Ganaly**	**2.47**	**225**	*e*P	Pn	07 42 27.3	+2.4
NLC	**Nalytchevo**	**2.47**	**202**	*e*S	Sn	07 42 57.1	0.0
KRX	**Arik**	**2.48**	**213**	*e*P	Pn	07 42 26.8	+1.7
SDLR	**Sedlovina**	**2.49**	**209**	*e*P	Pn	07 42 26.4	+1.3
SMAR	**Somma**	**2.52**	**210**	*e*P	Pn	07 42 27.0	+1.3
AVH	**Avacha**	**2.54**	**211**	*e*P	Pn	07 42 27.4	+1.7
KOK	**Koryaka**	**2.54**	**212**	*e*P	Pn	07 42 27.9	+2.1
UGLR	**Uglovaya**	**2.56**	**209**	*e*P	Pn	07 42 27.5	+1.4
BKI	**Bering**	**2.92**	**93**	*e*P	Pn	07 42 32.4	+2.2
BKI				*e*S	Sn	07 43 08.3	+1.6

PGC 18 07:44:17.8±0.1, 60°.39N×142°.06W, h1km, ML2.2/10, 188km Wnw of Yakutat, Ak Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MESA	**MESA**	**0.22**	**165**	P	Pg	07 44 21.8	-0.2
MESA				S	Sg	07 44 25.3	+0.5
RKAV	**Rock Avalanche**	**0.37**	**103**	P	Pg	07 44 24.3	-0.6
RKAV				S	Sg	07 44 29.3	-0.3
TABL	**Table Mountain**	**0.46**	**83**	P	Pg	07 44 25.6	-1.0
TABL				S	Sg	07 44 32.2	-0.4
KIAG	**Kiagna River**	**0.56**	**345**	P	Pg	07 44 27.8	-0.7
KIAG				S	Sg	07 44 35.5	-0.2
BALM	**Baldy**	**0.67**	**348**	P	Pg	07 44 29.6	-1.0
BALM				S	Sg	07 44 38.0	-1.3
SAMH	**Samovar Hills**	**0.69**	**111**	P	Pg	07 44 31.6	+0.6
SAMH				S	Sb	07 44 43.7	+1.0
PNL	**Peninsula**	**1.52**	**117**	Pn	Pn	07 44 44.4	-1.8
PNL				Sg	Sb	07 45 05.4	-1.2
YUK2	**White River**	**1.53**	**22**	Pn	Pn	07 44 44.7	-1.6
YUK2				Sg	Sg	07 45 05.2	-1.6
YUK3	**Moose Creek**	**1.60**	**29**	Pn	Pn	07 44 46.0	-1.4
YUK3				Sg	Sn	07 45 07.3	-1.5
YUK6	**Outpost Mounta**	**1.91**	**71**	Pn	Pn	07 44 51.1	-0.6
YUK6				Sg	Sn	07 45 16.4	0.0
YUK4	**Talbot Arm**	**1.93**	**59**	Pg	Pg	07 44 54.5	-0.3
YUK7	**Dusty Glacier**	**1.95**	**84**	Pn	Pn	07 44 52.6	+0.3
YUK7				Sg	Sb	07 45 18.5	-0.6
DIV	**Divide**	**1.97**	**294**	Sg	Sn	07 45 18.1	+0.5
BVCY	**Beaver Creek**	**2.12**	**15**	Pg	Pn	07 44 55.6	+1.2
BVCY				Sg	Sb	07 45 24.1	+0.3
YUK5	**Granite Creek**	**2.19**	**68**	Pg	Pn	07 44 56.8	+1.3
HYT	**Haines Junctio**	**2.29**	**77**	Pn	Pn	07 44 57.1	+0.2
HYT				Sg	Sb	07 45 29.4	+0.5
DOT	**Dot Lake**	**3.41**	**345**	Pn	Pn	07 45 13.3	+1.3
WHY	**Whitehorse**	**3.56**	**82**	Pn	Pn	07 45 14.1	-0.2
WHY				Sn	Sn	07 45 55.7	-1.3
DAWY	**Dawson**	**3.90**	**18**	Pn	Pn	07 45 19.4	+0.6

WEL 18 08:00:34.9±1.1, 35°.S±12°.×17°.9E±1°.3, h188km±18km, M3.8/24, MLv3.8/24, Error ellipse: s-maj=0.0km s-min=0.0km az=47.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.34**	**188**	P	Pn	08 01 15.7	-0.4
MXZ				S	Sn	08 01 47.6	-0.8
WMGZ	**Waiomatatini S**	**2.58**	**185**	P	Pn	08 01 19.2	+0.3
WMGZ				S	Sn	08 01 54.7	+1.2
HAZ	**Te Kaha**	**2.62**	**196**	P	Pn	08 01 19.9	+0.6
HAZ				S	Sn	08 01 54.2	0.0
PKGZ	**Pakihiroa**	**2.69**	**191**	P	Pn	08 01 20.3	+0.1
PKGZ				S	Sn	08 01 56.6	+0.8
GRZ	**Great Barrier**	**2.84**	**248**	P	Pn	08 01 21.8	-0.1
RUGZ	**Raukumara Rang**	**2.84**	**197**	P	Pn	08 01 22.5	+0.4
RUGZ				S	Sn	08 01 58.5	-0.6
PUZ	**Puketiti**	**2.85**	**187**	P	Pn	08 01 21.8	-0.2
PUZ				S	Sn	08 01 58.6	-0.4
KUZ	**Kuaotunu**	**2.86**	**237**	P	Pn	08 01 21.5	-0.6
TWGZ	**Tauwhareparae**	**2.99**	**191**	P	Pn	08 01 24.6	+0.8
TWGZ				S	Sn	08 02 03.2	+1.1
MWZ	**Matawai**	**3.23**	**197**	P	Pn	08 01 27.1	+0.4
MWZ				S	Sn	08 02 07.2	-0.1

TKGZ	**Te Karaka**	**3.27**	**192**	P	Pn	08 01 26.9	-0.1
TKGZ				S	Sn	08 02 08.4	+0.4
URZ	**Urewera**	**3.28**	**203**	P	Pn	08 01 27.4	+0.3
URZ				S	Sn	08 02 08.6	+0.4
RAGZ	**Rawiri**	**3.41**	**197**	P	Pn	08 01 29.3	+0.4
RIGZ	**Rimuhau**	**3.54**	**192**	P	Pn	08 01 31.0	+0.5
MUGZ	**Murupara**	**3.59**	**205**	P	Pn	08 01 31.3	+0.2
WCZ	**Waipu Caves**	**3.63**	**258**	P	Pn	08 01 31.5	0.0
RTZ	**Ruatahuna**	**3.64**	**202**	P	Pn	08 01 30.7	-1.1
SNGZ	**Shannon Statio**	**3.70**	**197**	P	Pn	08 01 32.1	-0.3
PRGZ	**Paritu Road**	**3.73**	**190**	P	Pn	08 01 32.4	-0.4
PRRZ	**Plateau Road**	**3.75**	**209**	P	Pn	08 01 33.6	+0.6
ALRZ	**Allen Road**	**3.82**	**209**	P	Pn	08 01 34.6	+0.7
KNZ	**Kokohu**	**3.86**	**192**	P	Pn	08 01 33.2	-1.2
RAHZ	**Arahi**	**3.89**	**199**	P	Pn	08 01 34.6	-0.3
MTHZ	**Maungataniwha**	**3.90**	**202**	P	Pn	08 01 34.4	-0.6
MHGZ	**Mahia Peninsul**	**3.96**	**189**	P	Pn	08 01 35.3	-0.3
TLZ	**Tolley Road**	**4.00**	**219**	P	Pn	08 01 37.7	+1.5
WHHZ	**Waihua**	**4.01**	**197**	P	Pn	08 01 36.0	-0.2
MRHZ	**Matea Rd**	**4.03**	**206**	P	Pn	08 01 35.9	-0.7
NMHZ	**Naumai**	**4.14**	**201**	P	Pn	08 01 37.7	-0.3
ARHZ	**Aropaoanui**	**4.24**	**198**	P	Pn	08 01 38.1	-1.1
BKZ	**Black Stump Fm**	**4.30**	**204**	P	Pn	08 01 39.5	-0.5
MCHZ	**McNeill Hill**	**4.49**	**200**	P	Pn	08 01 41.4	-1.0
HIZ	**Hauiti**	**4.50**	**222**	P	Pn	08 01 43.7	+1.2
KWHZ	**Kaweka Forest**	**4.56**	**203**	P	Pn	08 01 41.8	-1.6
BHHZ	**Black Hill Sta**	**4.74**	**206**	P	Pn	08 01 44.5	-1.1
KAHZ	**Kahuranaki**	**4.77**	**197**	P	Pn	08 01 44.9	-1.2
KRHZ	**Kereru**	**4.77**	**202**	P	Pn	08 01 44.1	-2.0
PXZ	**Pawanui**	**5.00**	**197**	P	Pn	08 01 47.0	-2.0
TSZ	**Takapari Road**	**5.28**	**204**	P	Pn	08 01 50.2	-2.4
WAZ	**Wanganui**	**5.39**	**212**	P	Pn	08 01 52.7	-1.3
WAZ				S	Sn	08 02 58.0	+1.5
NEZ	**North Egmont**	**5.45**	**221**	P	Pn	08 01 56.5	+1.7
BFZ	**Birch Farm**	**5.77**	**199**	P	Pn	08 01 56.5	-2.4
TIWZ	**Tintock**	**5.96**	**201**	P	Pn	08 01 58.6	-2.8
HOWZ	**Holdsworth Sta**	**6.18**	**203**	P	Pn	08 02 00.9	-3.4
KIW	**Kapiti Island**	**6.36**	**207**	P	Pn	08 02 03.2	-3.4
MTW	**Mount Morrison**	**6.43**	**202**	P	Pn	08 02 04.4	-3.1
CAW	**Cannon Point**	**6.52**	**205**	P	Pn	08 02 04.8	-3.9
PAWZ	**Paruwai Farm**	**6.65**	**202**	P	Pn	08 02 06.7	-3.8
PLWZ	**Palliser**	**6.88**	**202**	P	Pn	08 02 09.3	-4.1
TCW	**Tory Channel**	**6.91**	**209**	P	Pn	08 02 09.9	-3.8
NNZ	**Nelson**	**7.29**	**214**	P	Pn	08 02 15.2	-3.6
QRZ	**Quartz Range**	**7.41**	**219**	P	Pn	08 02 16.3	-4.0
BSWZ	**Blackbirch Sta**	**7.49**	**209**	P	Pn	08 02 17.7	-3.7
THZ	**Tophouse**	**7.94**	**213**	P	Pn	08 02 23.5	-3.8
KHZ	**Kahutara**	**8.22**	**208**	P	Pn	08 02 27.0	-3.9
GVZ	**Greta Valley S**	**8.89**	**208**	P	Pn	08 02 35.1	-4.5
LTZ	**Lake Taylor**	**9.04**	**212**	P	Pn	08 02 37.3	-4.4
OKCZ	**Okains Bay**	**9.53**	**206**	P	Pn	08 02 43.5	-4.5

*IDC **18** 08:01:12.4±1.0, 13°.35N×93°.21E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.6/45, mbtmp3.8/7, Error ellipse: s-maj=35.3km s-min=20.5km az=61.0*
*ISCJB **18** 08:01:13.1±0.9, 13°.6N±0°.1×93°.1E±0°.1, h29km, mb3.8/6, Error ellipse: s-maj=20.5km s-min=15.2km az=9.8*
ISC 18 08:01:16.2±1.0, 13°.5N±0°.2×93°.1E±0°.1, h29km, n11, σ2§10/8, mb3.8/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.50**	**48**	Pn	**Pn**	**08 03 02.2**	**-1.5**
	baz=241,slow=15,SNR=8.3						
VIS	**Vishakhapatnam**	**10.33**	**296**	*i* P	**Pn**	**08 03 40.1**	**-2.4**
VIS				*i* S	Sn	08 05 17.6	-20
VIS				*i* S		08 05 19.4	
VIS				*ex*	x	08 05 22.4	
	comp=N,222nm,0.9s						
VIS				*ex*	x	08 05 24.3	
	comp=E,121nm,0.9s						
H08S3	**Diego Garcia H**	**29.29**	**226**	T	T	08 38 26.5	
	baz=42,slow=76,SNR=6.9						
H08S2	**Diego Garcia H**	**29.30**	**225**	T	T	08 38 35.8	
	baz=42,slow=76,SNR=9.6						
H08S1	**Diego Garcia H**	**29.31**	**226**	T	T	08 38 37.2	
	baz=42,slow=76,SNR=6.9						
MKAR	**Makanchi Array**	**34.46**	**347**	P	**P**	**08 08 02.3**	**+0.9**
	comp=E,0.9nm,0.7s,baz=162,slow=8.9,SNR=7.4						
KURBB	**Kurchatov Arra**	**38.93**	**345**	P	**P**	**08 08 39.9**	**+0.5**
	comp=E,1.2nm,0.8s,baz=163,slow=8.0,SNR=12						
WRA	**Warramunga Arr**	**52.41**	**129**	P	**P**	**08 10 25.8**	**-0.6**
	comp=E,0.8nm,0.6s,baz=300,slow=9.7,SNR=7.6						
ASAR	**Alice Springs**	**54.33**	**132**	P	**P**	**08 10 40.4**	**-0.1**
	comp=E,0.4nm,0.4s,baz=308,slow=7.2,SNR=7.8						
NOA	**NORSAR Array B**	**74.41**	**330**	P	**P**	**08 12 54.9**	**+3.5**
	comp=E,0.4nm,0.7s,baz=91,slow=5.7,SNR=2.5						
BOSA	**Boshof**	**77.74**	**236**	P	**P**	**08 13 10.9**	**-0.1**
	comp=E,2.4nm,0.9s,baz=90,slow=7.1,SNR=3.9						

*GCG **18** 08:02:13.1±0.4, 13°.93N×92°.05W, h21km±24km, MD4.0*
*MEX **18** 08:02:14.5±0.5, 14°.05N×92°.21W, h10km, MD3.7*
ISC 18 08:02:13.1±3.1, 14°.0N±0°.2×92°.2W±0°.1, h54km, n7, σ1§43/9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.90**	**355**	*i* P	**Pn**	**08 02 28.4**	**-1.2**
THIG				*i* S	**Sn**	**08 02 39.6**	**-2.1**
STG3	**Santiaguito 3,**	**0.92**	**41**	*e*P	**Pn**	**08 02 30.1**	**0.0**
FUG	**Fuego 3**	**1.38**	**71**	*e*P	**Pn**	**08 02 36.3**	**+0.1**
FUG				*e*S	**Sn**	**08 02 54.2**	**+0.7**
IXG	**Ixpaco**	**1.71**	**84**	*e*P	**Pn**	**08 02 40.3**	**-0.4**
PCIG		**1.96**	**330**	*e*P	**Pn**	**08 02 44.2**	**+0.3**
CCIG	**Comitan**	**2.26**	**1**	*e*P	**Pn**	**08 02 50.4**	**+2.2**
TGIG		**2.90**	**342**	*e*P	**Pn**	**08 02 57.8**	**+1.0**

*NORS **18** 08:11:37.5±0.0, 43°.12N×45°.72E, h43km, MPVA3.9*
*ISCJB **18** 08:11:38.6±0.5, 43°.29N±0°.05×45°.70E±0°.03, h54km±7km, Error ellipse: s-maj=8.5km s-min=3.1km az=19.6*
*DRS **18** 08:11:40.4±0.0, 43°.36N×45°.63E, h24km, ML2.8/2*
ISC 18 08:11:39.9±1.3, 43°.24N±0°.05×45°.69E±0°.03, h45km±9km, n28, σ1§82/52, 1C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.09**	**116**	*i* Pg	**Pn**	**08 11 46.1**	**-1.0**
GROC				*e*Sg	**Sn**	**08 11 52.4**	**+0.3**
KMGR	**Komgaron**	**0.63**	**253**	*i* Pg	**Pn**	**08 11 52.6**	**0.0**
KMGR				*e*Sg	**Sn**	**08 12 03.2**	**+1.5**
BTLR	**Botlikh**	**0.69**	**146**	*e*Pg	**Pn**	**08 11 52.7**	**-0.8**
	51nm,0.2s						
BTLR			⇑	*e*Sg	**Sn**	**08 12 02.4**	**-0.8**
	595nm,0.7s						
DLMR	**Dylym**	**0.71**	**104**	*e*Pg	**Pn**	**08 11 52.5**	**-1.1**
DLMR				*e*Sg	**Sn**	**08 12 03.0**	**-0.5**
VLKR	**Vladikavkaz**	**0.77**	**256**	*e*Pg	**Pn**	**08 11 54.4**	**0.0**
VLKR				*i* Sg	**Sn**	**08 12 07.4**	**+2.5**
BTKR	**Batakoyurt**	**0.85**	**279**	*e*Pg	**Pn**	**08 11 55.5**	**0.0**
BTKR				*e*Sg	**Sn**	**08 12 10.5**	**+3.6**
TRKR	**Terskaya**	**0.85**	**305**	*i* Pg	**Pn**	**08 11 55.9**	**+0.5**
TRKR				*e*Sg	**Sn**	**08 12 12.1**	**+5.3**
DBC	**Dubki**	**0.86**	**104**	*e*Pg	**Pn**	**08 11 54.6**	**-1.1**
DBC				*e*Sg	**Sn**	**08 12 06.5**	**-0.8**
UNCR	**Uncukul**	**0.96**	**123**	*i* Pg	**Pn**	**08 11 56.0**	**-1.1**
UNCR				*e*Sg	**Sn**	**08 12 09.0**	**-0.7**
XNZR	**Khunzakh**	**1.02**	**133**	*e*Pg	**Pn**	**08 11 57.5**	**-0.4**
XNZR				*e*Sg	**Sn**	**08 12 10.5**	**-0.8**
ARNR	**Ardon**	**1.03**	**267**	*e*Pg	**Pn**	**08 11 57.5**	**-0.4**
ARNR				*e*Sg	**Sn**	**08 12 13.1**	**+1.9**
LACR	**Lac**	**1.10**	**248**	*i* Pg	**Pn**	**08 11 57.2**	**-1.8**
LACR				*e*Sg	**Sn**	**08 12 11.3**	**-1.8**
GUDG	**Gudauri**	**1.18**	**229**	P	**Pn**	**08 11 59.5**	**-0.7**
KORR	**Kora**	**1.20**	**263**	*e*Pg	**Pn**	**08 11 59.7**	**-0.5**
KORR				*e*Sg	**Sn**	**08 12 16.1**	**+0.7**
GNBR	**Gunib**	**1.27**	**132**	*e*Pg	**Pn**	**08 12 01.3**	**+0.1**
	24nm,0.4s						
GNBR			⇓	*e*Sg	**Sn**	**08 12 17.7**	**+0.6**
	228nm,0.4s						
ZEI	**Tsey**	**1.39**	**252**	*e*Pg	**Pn**	**08 12 03.7**	**+0.7**
ZEI				*e*Sg	**Sn**	**08 12 17.9**	**-2.4**
KMKR	**Kumukh**	**1.52**	**136**	*e*Pg	**Pn**	**08 12 04.5**	**-0.3**
	29nm,0.2s						
KMKR				*e*Sg	**Sn**	**08 12 25.0**	**+1.5**
	119nm,0.3s						
DIGR	**Digorskoe uzhe**	**1.58**	**258**	*e*Pg	**Pn**	**08 12 03.7**	**-2.0**
DIGR				*e*Sg	**Sn**	**08 12 22.8**	**-2.2**
KBTC	**Kuba-Taba**	**1.76**	**290**	*e*Pg	**Pn**	**08 12 08.0**	**0.0**
KBTC				*e*Sg	**Sn**	**08 12 32.1**	**+3.0**

ONI	**Oni**	**1.77**	**249**	P	**Pn**	**08 12 08.2**	**+0.1**
ONI	**Oni**	**1.77**	**249**	*e*Pg	**Pn**	**08 12 08.2**	**+0.1**
DDFL	**Dedoflistskaro**	**1.82**	**170**	P	**Pn**	**08 12 07.6**	**-1.2**
DDFL				S	**Sn**	**08 12 34.9**	**+4.2**
KZRT	**Kazreti**	**2.09**	**208**	P	**Pn**	**08 12 12.0**	**-0.4**
NEY	**Neytrino**	**2.17**	**271**	*e*Pg	**Pn**	**08 12 13.4**	**-0.3**
NEY				*e*Sg	**Sn**	**08 12 37.1**	**-2.3**
SHA1	**Shidzhatmaz**	**2.26**	**284**	*e*Pn	**Pn**	**08 12 14.5**	**-0.5**
SHA1				*e*Sn	**Sn**	**08 12 38.7**	**-3.1**
KIV0	**Kislovodsk Arr**	**2.29**	**289**	*e*Pn	**Pn**	**08 12 13.7**	**-1.6**
KIV0				*e*Sn	**Sn**	**08 12 39.2**	**-3.2**
AKT	**Akhty**	**2.32**	**139**	*e*Pn	**Pn**	**08 12 18.5**	**+2.8**
AKT				*e*Sn	**Sn**	**08 12 45.2**	**+2.2**
ALER	**Alexandrovskoy**	**2.52**	**308**	*e*Pn	**Pn**	**08 12 18.6**	**+0.3**
ALER				*e*Sn	**Sn**	**08 12 46.2**	**-1.6**

*ISCJB **18** 08:25:19.4±1.1, 34°.23N±0°.05×25°.15E±0°.05, h16km±15km, Error ellipse: s-maj=9.1km s-min=7.2km az=164.3*
*ATH **18** 08:25:19.7, 34°.30N×25°.07E, h21km±3km, ML2.9/7, Error ellipse: s-maj=4.9km s-min=1.4km az=2.0*
*THE **18** 08:25:20.7, 34°.38N×25°.13E, h0km±1km, ML3.2/4, Error ellipse: s-maj=3.6km s-min=1.0km az=158.0*
*HLW **18** 08:25:21.9, 34°.11N×25°.61E, h10km±10km, Md3.7, Ml3.4*
ISC 18 08:25:20.5±1.4, 34°.30N±0°.04×25°.10E±0°.04, h24km±15km, n20, σ1§26/33, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.76**	**341**	P	**Pb**	**08 25 34.2**	**-0.8**
SIVA				S	**Sn**	**08 25 45.2**	**-1.2**
	3μm,0.6s						
SIVA	**Sivas**	**0.76**	**341**	P	**Pb**	**08 25 34.1**	**-0.8**
SIVA				S	**Sn**	**08 25 45.0**	**-1.4**
SIVA				AML	AML	08 25 54.6	
	comp=E,7056μm,0.6s						
SIVA				AML	AML	08 25 56.7	
	comp=N,6314μm,0.6s						
TMBK	**Timbaki Herakl**	**0.82**	**340**	P	**Pn**	**08 25 35.8**	**-0.8**
LAST	**Lasithi**	**0.91**	**20**	P	**Pb**	**08 25 36.9**	**-0.8**
LAST				S	**Sb**	**08 25 49.6**	**+0.1**
LAST	**Lasithi**	**0.91**	**20**	P	**Pb**	**08 25 37.1**	**-0.6**
LAST				S	**Sn**	**08 25 50.7**	**+0.3**
LAST				AML	AML	08 26 03.4	
	comp=E,684μm,0.6s						
LAST				AML	AML	08 26 04.0	
	comp=N,749μm,0.8s						
GVD	**Gavdhos**	**1.00**	**303**	P	**Pn**	**08 25 38.7**	**-0.3**
GVD				S	**Sn**	**08 25 55.1**	**+2.8**
	comp=N,1μm,0.5s						
GVD	**Gavdhos**	**1.00**	**303**	P	**Pn**	**08 25 38.8**	**-0.3**
GVD				S	**Sn**	**08 25 51.9**	**-0.5**
GVD				AML	AML	08 26 02.4	
	comp=E,2674μm,0.5s						
GVD				AML	AML	08 26 10.1	
	comp=N,2206μm,0.5s						
GVDS	**Gavdos**	**1.00**	**303**	P	**Pn**	**08 25 39.6**	**+0.6**
GVDS				S	**Sn**	**08 25 54.9**	**+2.6**
KSTL	**Kastelli Herak**	**1.00**	**358**	P	**Pb**	**08 25 38.3**	**-0.9**
KSTL				S	**Sb**	**08 25 50.4**	**-1.5**
NPS	**Neapolis**	**1.05**	**23**	P	**Pn**	**08 25 39.6**	**-0.1**
NPS				S	**Sn**	**08 25 54.2**	**+0.6**
	comp=N,675nm,0.8s						
NPS	**Neapolis**	**1.05**	**23**	P	**Pn**	**08 25 39.6**	**-0.1**
NPS				A

BFZ	**Birch Farm**	**6.17 195**	P	Pn	08 34 44.7	-5.7

SOME ***18*** *08:34:34.7, 40°.92N×70°.30E, h0km*
KRNET ***18*** *08:34:36.9±0.1, 39°.18N×72°.05E, mb2.9*
NNC ***18*** *08:34:37.3±2.7, 40°.92N×70°.12E, h0km, mb3.3, mpv3.1, Error ellipse: s-maj=20.1km s-min=13.9km az=35.0*

ISC 18 08:34:39.4±2.7, 41°.04N±0°.05×70°.18E±0°.06, h9km±17km, n17, σ2°62/31, 10C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.10**	**153**	⇑*iP*	**Pn**	**08 35 01.1**	**+0.1**
BTK	baz=13			⇑*iS*	**Sn**	**08 35 18.6**	**+2.3**
IUG	**Iuzhnay**	**1.11**	**354**	P	**Pn**	**08 35 00.7**	**-0.5**
IUG	5.5nm,0.2s			S	**Sn**	**08 35 18.6**	**+1.9**
IUG	**Iuzhnay**	**1.11**	**354**	*eP*	**Pn**	**08 34 58.3**	**-2.9**
IUG	5.5nm,0.2s			*eS*	**Sb**	**08 35 15.4**	**+0.1**
BRLS	**Borolday**	**2.00**	**353**	P	**Pn**	**08 35 11.3**	**-2.0**
BRLS	6.3nm,0.4s			S	**Sn**	**08 35 36.0**	**-2.5**
BRLS	**Borolday**	**2.00**	**353**	*eP*	**Pn**	**08 35 11.1**	**-2.3**
BRLS	6.3nm,0.4s			*eS*	**Sn**	**08 35 37.0**	**-1.6**
KK31	**Karatay Array**	**2.07**	**7**	Pn	**Pn**	**08 35 15.4**	**+1.1**
KK31	2.2nm,0.3s,baz=192,slow=15,SNR=41			Lg	Lg	08 35 45.6	
ARSB	**Arslanbob**	**2.13**	**82**	⇓*iP*	**Pb**	**08 35 16.5**	**-1.8**
ARSB	7.1nm,0.5s,baz=191,slow=25,SNR=7.9 baz=18			⇓*iS*	**Sb**	**08 35 45.5**	**+0.6**
MRKS	**Merke**	**2.84**	**52**	Pg	**Pb**	**08 35 30.3**	**0.0**
MRKS	3.9nm,0.3s			Lg	Lg	08 36 08.0	
MRKS	**Merke**	**2.84**	**52**	*eP*	**Pb**	**08 35 27.5**	**-2.8**
MRKS	3.9nm,0.3s			*eS*	**Sb**	**08 36 05.5**	**+0.3**
AML	**Almayashu**	**2.85**	**66**	⇑*iP*	**Pb**	**08 35 29.3**	**-1.4**
AML	baz=22			⇑*iS*	**Sb**	**08 36 08.0**	**+2.2**
EKS2	**Erkin-Say**	**3.14**	**58**	⇑*eP*	**Pb**	**08 35 36.1**	**+0.7**
EKS2	baz=20			⇑*iS*	**Sg**	**08 36 20.0**	**-0.1**
ARLS	**Aral**	**3.22**	**74**	⇓*eP*	**Pn**	**08 35 29.2**	**-1.1**
ARLS	baz=32			⇓*eS*	**Sn**	**08 36 08.2**	**-0.6**
UCH	**Uchtor**	**3.46**	**69**	⇑*iP*	**Pn**	**08 35 34.5**	**+0.7**
UCH	baz=31			⇑*iS*	**Sn**	**08 36 16.8**	**+1.7**
KZA	**Kyzart**	**3.94**	**73**	⇑*eP*	**Pn**	**08 35 37.1**	**-3.3**
KZA	baz=39			⇑*eS*	**Sn**	**08 36 21.5**	**-5.5**
DGS	**Degeres**	**4.70**	**60**	*eP*	**Pb**	**08 36 00.6**	**-1.4**
DGS	1.8nm,0.6s			*eS*	**Sb**	**08 37 02.1**	**+3.3**
BTLS	**Baital**	**4.90**	**34**	Pg	**Pb**	**08 36 08.7**	**+3.4**
BTLS	1.4nm,0.3s **Baital**	**4.90**	**34**	*eP*	**Pb**	**08 36 06.3**	**+1.0**
BTLS	1.6nm,0.4s			*eS*	**Sb**	**08 37 11.9**	**+7.6**
	1.4nm,0.4s						

ISCJB ***18*** *08:56:09.0±0.9, 29°.36S±0°.05×68°.68W±0°.05, h118km±12km, Error ellipse: s-maj=8.2km s-min=6.6km az=148.1*
SJA ***18*** *08:56:09.8±0.7, 29°.39S×68°.54W, h111km±6km, ML3.0, MW3.2*
GUC ***18*** *08:56:09.1±0.7, 29°.33S×68°.73W, h110km±6km, ML3.3*

ISC 18 08:56:09.7±1.7, 29°.34S±0°.05×68°.69W±0°.05, h115km±15km, n12, σ0°68/20, 6C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.74**	**35**	*eP*	**Pn**	**08 56 29.2**	**+0.1**
VCA				*eS*	**Sn**	**08 56 43.7**	**0.0**
VCA	**Vinchina**	**0.74**	**35**	⇑*iP*	**Pn**	**08 56 29.2**	**+0.1**
VCA				*i* S	**Sn**	**08 56 43.7**	**0.0**
VCA				IAML		08 56 45.8	
LCO	**Las Campanas**	**1.79**	**280**	⇑*iP*	**Pn**	**08 56 40.9**	**+0.3**
LCO	comp=E,2μm,0.2s			*i* S	**Sn**	**08 57 04.3**	**+0.2**
LCO				IAML		08 57 05.8	
GO04	**Tololo Observa**	**2.02**	**245**	⇑*iP*	**Pn**	**08 56 43.7**	**+0.3**
GO04	comp=E,667nm,0.5s			*eS*	**Sn**	**08 57 09.8**	**+0.8**
GO03	**Copiap**	**2.21**	**322**	⇑*iP*	**Pn**	**08 56 45.7**	**0.0**
GO03				*i* S	**Sn**	**08 57 12.6**	**-0.7**
GO03				IAML		08 57 14.1	
LSCH	**La Serena**	**2.30**	**255**	⇓*iP*	**Pn**	**08 56 46.1**	**-0.6**
LSCH	comp=N,129nm,0.5s			*i* S	**Sn**	**08 57 14.2**	**-0.8**
LSCH				IAML		08 57 15.3	
CYA	**Choya**	**2.68**	**71**	*eP*	**Pn**	**08 56 51.7**	**0.0**
CYA	comp=N,94nm,0.2s			IAML		08 57 03.2	
CO02	**Combarbal**	**2.73**	**227**	⇑*iP*	**Pn**	**08 56 52.2**	**-0.2**
CO02				*i* S	**Sn**	**08 57 25.4**	**+0.1**
ACAN	**Cantantal**	**3.19**	**157**	*eP*	**Pn**	**08 56 59.0**	**+0.6**
ACAN				*eS*	**Sn**	**08 57 34.2**	**-1.9**
ASAL	**Salagasta**	**3.24**	**182**	*eP*	**Pn**	**08 56 59.9**	**+0.8**
FSA	**Cafayete**	**4.01**	**37**	*eP*	**Pn**	**08 57 10.2**	**+0.6**
FCH	**Farellones**	**4.20**	**199**	⇑*iP*	**Pn**	**08 57 12.7**	**+0.5**

ISCJB ***18*** *08:57:25.1±0.5, 20°.07S±0°.03×68°.83W±0°.08, h130km±6km, mb4.0/2, Error ellipse: s-maj=12.7km s-min=4.8km az=0.5*
GUC ***18*** *08:57:26.5±0.7, 20°.07S×68°.86W, h123km±3km, ML3.8*
IDC ***18*** *08:57:27.4±1.6, 20°.18S×68°.41W, h123km±14km, mb3.8/3, mb1 3.5/7, mb1mx3.3/25, mbtmp4.0/7, Error ellipse: s-maj=36.1km s-min=12.2km az=115.0*

ISC 18 08:57:25.7±0.8, 20°.05S±0°.04×68°.78W±0°.08, h117km±9km, n20, σ1°34/34, 10C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.37**	**255**	⇑*iP*	**Pn**	**08 57 43.9**	**+0.8**
PB08				*i* S	**Sn**	**08 57 57.1**	**+0.9**
PB08				IAML		08 57 58.0	
GO01	**Chusmiza**	**0.54**	**314**	⇑*iP*	**Pn**	**08 57 44.8**	**+0.6**
GO01	comp=E,10μm,0.1s			*i* S	**Sn**	**08 57 59.1**	**+1.1**
GO01				IAML		08 57 59.8	
PB11	**IPOC Station P**	**0.88**	**289**	⇑*iP*	**Pn**	**08 57 46.9**	**+0.4**
PB11				*i* S	**Sn**	**08 58 02.5**	**+0.4**
PB11				IAML		08 58 03.3	
MNMC	**Minye Minye**	**1.19**	**320**	⇑*iP*	**Pn**	**08 57 50.9**	**+1.1**
MNMC	comp=E,4μm,0.3s			*i* S	**Sn**	**08 58 09.2**	**+1.2**
MNMC				IAML		08 58 10.8	
PB01	**IPOC Station P**	**1.20**	**214**	⇑*iP*	**Pn**	**08 57 49.9**	**+0.2**
PB01	comp=E,4μm,0.1s			*i* S	**Sn**	**08 58 07.7**	**-0.1**
PB01				IAML		08 58 09.8	
PSGC	**Pisagua**	**1.34**	**289**	⇑*iP*	**Pn**	**08 57 51.3**	**+0.1**
PSGC	comp=E,2μm,0.2s			*i* S	**Sn**	**08 58 10.1**	**-0.5**
PSGC				IAML		08 58 11.2	
PB02	**IPOC Station P**	**1.65**	**219**	⇑*iP*	**Pn**	**08 57 54.9**	**+0.1**
PB02	comp=E,3μm,0.3s			*i* S	**Sn**	**08 58 16.6**	**-0.3**
PB02				IAML		08 58 19.1	
PB09	**IPOC Station P**	**1.80**	**194**	*eP*	**Pn**	**08 57 57.3**	**+0.6**
PB09	comp=E,1μm,0.3s			*i* S	**Sn**	**08 58 21.0**	**+0.7**
PB09				IAML		08 58 22.2	
PB16	**IPOC Station P**	**1.84**	**338**	⇓*iP*	**Pn**	**08 57 59.6**	**+2.0**
PB16	comp=N,382nm,0.4s			*i* S	**Sn**	**08 58 24.1**	**+2.3**
PB16				IAML		08 58 25.9	
PB07	**IPOC Station P**	**1.97**	**212**	⇑*iP*	**Pn**	**08 57 58.6**	**-0.3**
PB07	comp=N,342nm,0.7s			*i* S	**Sn**	**08 58 22.6**	**-1.5**
PB07				IAML		08 58 27.2	
PB12	**IPOC Station P**	**2.04**	**314**	⇑*iP*	**Pn**	**08 57 59.6**	**-0.1**
PB12	comp=E,510nm,0.4s			*i* S	**Sn**	**08 58 25.3**	**-0.3**
PB12				IAML		08 58 28.0	
LVC	**Limon Verde**	**2.56**	**183**	P	**Pn**	**08 58 07.9**	**+1.4**
LVC	comp=E,4.8nm,0.3s,baz=29,slow=13,SNR=14			S	**Sn**	**08 58 37.9**	**+0.2**
PB04	**IPOC Station P**	**2.61**	**209**	⇑*iP*	**Pn**	**08 58 06.9**	**-0.1**
PB04	comp=E,29nm,0.3s,baz=17,slow=10,SNR=18			IAML		08 58 43.6	
PB06	**IPOC Station P**	**2.75**	**196**	⇓*iP*	**Pn**	**08 58 09.4**	**+0.6**
PB06	comp=E,296nm,0.5s			IAML		08 58 43.4	
LPAZ	**La Paz**	**3.79**	**9**	P	**Pn**	**08 58 26.0**	**+3.0**
LPAZ	comp=E,255nm,0.4s			S	**Sn**	**08 59 07.2**	**0.0**
SIV	**San Ignacio**	**8.37**	**62**	P	**Pn**	**08 59 22.9**	**-1.4**
SIV	comp=E,1.8nm,0.3s,baz=281,slow=12,SNR=50			S	**Sn**	**09 00 52.7**	**-4.3**
BDFB	**Brasilia**	**20.24**	**81**	P	**P**	**09 01 51.7**	**-0.3**
PLCA	**Paso Flores**	**20.68**	**184**	P	**P**	**09 01 57.5**	**+1.1**
DBIC	**Dimbokro**	**68.21**	**74**	P	**P**	**09 08 13.3**	**-0.9**
TORD	**Torodi Ar. Bea**	**76.75**	**71**	P	**P**	**09 09 03.8**	**-1.0**

comp=E,0.7nm,0.3s,baz=220,slow=7.0,SNR=4.1
comp=E,5.6nm,1.1s,baz=15,slow=9.1,SNR=3.8
comp=E,2.8nm,0.7s,baz=228,slow=9.8,SNR=3.7
comp=E,1.0nm,0.4s,baz=245,slow=5.5,SNR=24

MEX 18 09:16:13.2±0.6, 16°.13N×98°.89W, h20km±72km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.78**	**70**	*i* P	Pb	09 16 25.6	-2.5
PNIG				*i* S	Sb	09 16 35.3	-3.0
TLIG	**Tlapa**	**1.46**	**12**	*eP*	Pn	09 16 35.1	-3.4
TLIG				*i* S	Sn	09 16 53.6	-3.5
VHO	**Vista Hermosa**	**2.27**	**65**	*eP*	Pn	09 16 47.9	-1.9
VHO				*i* S	Sn	09 17 13.7	-3.6

NNC ***18*** *09:38:04.3±4.0, 37°.39N×71°.75E, h150km±70km, mb2.9, mpv3.6, Error ellipse: s-maj=40.8km s-min=25.9km az=28.0*

ISC 18 09:38:00.8±3.6, 37°.2N±0°.2×71°.7E±0°.1, h106km, n10, σ1°19/12, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.21**	**17**	P	**Pn**	**09 39 17.9**	**+1.2**
UCH	SNR=59 **Uchtor**	**5.51**	**22**	P	**Pn**	**09 39 21.6**	**+0.8**
KZA	SNR=23 **Kyzart**	**5.63**	**28**	P	**Pn**	**09 39 22.4**	**0.0**
EKS2	SNR=10 **Erkin-Say**	**5.73**	**15**	P	**Pn**	**09 39 25.4**	**+1.9**
AAK	SNR=7.1 **Ala-Archa**	**5.88**	**20**	P	**Pn**	**09 39 26.9**	**+1.2**
AAK	SNR=12 **Ala-Archa**	**5.88**	**20**	⇑P	**Pn**	**09 39 26.4**	**+0.8**
AAK	4.2nm,0.3s			⇓S	**Sn**	**09 40 31.5**	**-0.3**
KK31	9.7nm,0.7s **Karatay Array**	**6.02**	**352**	P	**Pn**	**09 39 28.6**	**+1.3**
KK31	1.7nm,0.2s,baz=162,slow=11,SNR=25			S	**Sn**	**09 40 33.8**	**-1.0**
TKM2	9.2nm,0.3s,baz=187,slow=24,SNR=32 **Tokmak 2**	**6.49**	**26**	⇓P	**Pn**	**09 39 33.9**	**0.0**
AB31	1.8nm,0.8s **Akbulak array**	**14.81**	**328**	⇑P	**Pn**	**09 41 24.2**	**-0.5**
AKTO	0.6nm,0.4s,baz=156,slow=11,SNR=25 **Aktyubinsk**	**16.52**	**328**	⇑P	**Pn**	**09 41 44.5**	**-1.4**
	1.9nm,0.8s						

NEIC ***18*** *09:42:10.8±0.0, 19°.04N×64°.86W, h81km, mb3.8/6, MD3.4(RSPR), After RSPR.*

RSPR 18 09:42:10.8, 19°.04N×64°.86W, h81km±4km, MD3.4/11, 10C-10D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**0.83**	**209**	⇑*eP*	Pn	09 42 27.6	-0.4
CUPR	**Culebra, Puert**	**0.83**	**209**	*eS*	Sn	09 42 40.6	-0.2
MTP	**Monte Pirata**	**1.15**	**215**	⇓*eP*	Pn	09 42 32.0	+0.2
MTP	**Monte Pirata**	**1.15**	**215**	⇓*eP*	Pn	09 42 32.0	+0.2
MTP				*eS*	Sn	09 42 46.9	-0.5
CBYP	**Canovanas**	**1.22**	**231**	⇑*eP*	Pn	09 42 31.7	-1.0
CBYP	**Canovanas**	**1.22**	**231**	*ePn*	Pn	09 42 31.7	-1.0
CBYP	**Canovanas**	**1.22**	**231**	⇑*eP*	Pn	09 42 31.7	-1.0
HUMP	**Col San Antoni**	**1.30**	**227**	⇓*eP*	Pn	09 42 33.1	-0.5
HUMP	**Col San Antoni**	**1.30**	**227**	*ePn*	Pn	09 42 33.1	-0.5
HUMP				*eSn*	Sn	09 42 50.1	-0.6
HUMP	**Col San Antoni**	**1.30**	**227**	⇓*eP*	Pn	09 42 33.1	-0.5
HUMP				*eS*	Sn	09 42 50.1	-0.6
PDPR	**Patillas Dam,**	**1.50**	**228**	⇑*eP*	Pn	09 42 35.9	-0.3
SJG	**San Juan**	**1.54**	**233**	⇓*eP*	Pn	09 42 35.9	-0.7
SJG	**San Juan**	**1.54**	**233**	*ePn*	Pn	09 42 35.6	-1.1
SJG				*eSn*	Sn	09 42 55.2	-1.0
SJG	**San Juan**	**1.54**	**233**	⇓*eP*	Pn	09 42 35.9	-0.7
SJG				*eS*	Sn	09 42 56.0	-0.2
IGPR	**InterUniversit**	**1.60**	**228**	⇑*eP*	Pn	09 42 37.2	-0.3
IGPR	**InterUniversit**	**1.60**	**228**	*eS*	Sn	09 42 56.7	-0.9
EMPR	**Esperanza - Ma**	**1.68**	**251**	⇑*eP*	Pn	09 42 37.7	-0.9
EMPR	**Esperanza - Ma**	**1.68**	**251**	*eS*	Sn	09 42 59.3	-0.2
EMPR	**Esperanza - Ma**	**1.68**	**251**	*ePn*	Pn	09 42 37.7	-0.9
EMPR				*eSn*	Sn	09 42 59.3	-0.2
CELP	**Cerrillos**	**1.90**	**240**	⇓*eP*	Pn	09 42 40.9	-0.5
CELP	**Cerrillos**	**1.90**	**240**	*ePn*	Pn	09 42 40.9	-0.5
CELP	**Cerrillos**	**1.90**	**240**	⇓*eP*	Pn	09 42 40.9	-0.5
AOPR	**Arecibo Observ**	**1.93**	**249**	⇑*eP*	Pn	09 42 40.9	-1.0
AOPR	**Arecibo Observ**	**1.93**	**249**	*ePn*	Pn	09 42 40.9	-1.0
AOPR				*eSn*	Sn	09 43 05.1	-0.3
AOPR	**Arecibo Observ**	**1.93**	**249**	⇑*eP*	Pn	09 42 40.9	-1.0
AOPR				*eS*	Sn	09 43 05.1	-0.3
OBIP	**Obispado Ponce**	**1.93**	**239**	⇑*eP*	Pn	09 42 41.7	-0.2
OBIP	**Obispado Ponce**	**1.93**	**239**	*ePn*	Pn	09 42 41.7	-0.2
OBIP				*eSn*	Sn	09 43 05.4	-0.1
OBIP	**Obispado Ponce**	**1.93**	**239**	⇑*eP*	Pn	09 42 41.7	-0.2
OBIP				*eS*	Sn	09 43 05.4	-0.1
SMRT	**St. Maarten**	**1.96**	**120**	*ePn*	Pn	09 42 43.3	+1.1
SMRT				*eSn*	Sn	09 43 04.8	-1.4
AGPR	**Aguadilla, PR**	**2.21**	**255**	⇓*eP*	Pn	09 42 45.2	-0.4
AGPR	**Aguadilla, PR**	**2.21**	**255**	⇓*eP*	Pn	09 42 45.2	-0.4
AGP	**Aguadilla**	**2.25**	**254**	*ePn*	Pn	09 42 45.2	-1.0
SKI	**Saint Kitts**	**2.63**	**130**	*ePn*	Pn	09 42 50.3	-1.0
SKI				*eSn*	Sn	09 43 24.6	+2.3
PCDR	**Punta Cana, DR**	**3.38**	**262**	*ePn*	Pn	09 42 59.3	-2.0
BANI	**BANI**	**5.25**	**264**	*ePn*	Pn	09 43 28.7	+1.7
BANI				*eSn*	Sn	09 44 26.6	+0.2
FDF	**Fort de France**	**5.56**	**140**	*ePn*	Pn	09 43 33.6	+2.4
FDF				*eSn*	Sn	09 44 31.1	-2.7
SDDR	**Presa de Saban**	**6.08**	**270**	*ePn*	Pn	09 43 37.7	-0.5
SDDR				*eSn*	Sn	09 44 45.6	-0.9
GRTK	**Grand Turk**	**6.38**	**294**	*ePn*	Pn	09 43 39.0	-3.3
BBSR	**BB Station**	**13.28**	**1**	*ePn*	Pn	09 45 11.4	-4.5
656A	**Willston**	**19.10**	**306**	*eP*	P	09 46 26.1	-1.1
	8.7nm,0.9s						
HODGE	**Hodges**	**21.65**	**318**	*eP*	P	09 46 53.2	-1.5
	3.7nm,1.1s						
V56A	**Mocksville**	**21.67**	**324**	*eP*	P	09 46 54.0	-0.8
	1.7nm,0.8s						
PAULI	**Pauline**	**21.76**	**320**	*eP*	P	09 46 56.3	+0.5
	2.6nm,0.8s						
352A	**Blakely**	**21.93**	**308**	*eP*	P	09 46 58.8	+1.1
	7.8nm,0.9s						
R58B	**Mineral**	**22.01**	**332**	*eP*	P	09 47 00.8	+2.4
	3.9nm,0.9s						

NNC ***18*** *09:42:51.6±1.6, 41°.17N×77°.05E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=11.2km s-min=6.8km az=176.0*
SOME ***18*** *09:42:52.7, 41°.17N×77°.20E, h15km*
KRNET ***18*** *09:42:53.9±0.1, 41°.39N×76°.99E, h6km, mb2.3*

ISC 18 09:42:49.4±2.1, 41°.12N±0°.08×77°.04E±0°.04, h6km±13km, n29, σ0°94/49, 19C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.27**	**332**	⇑*iP*	**Pg**	**09 43 13.1**	**-0.7**
ULHL	baz=27			⇑*iS*	**Sg**	**09 43 28.0**	**-2.3**
BOOM	**Boomskoye usch**	**1.59**	**329**	⇑*eP*	**Pg**	**09 43 19.9**	**-0.1**
BOOM	baz=25			⇑*iS*	**Sn**	**09 43 38.5**	**-0.9**
KZA	**Kyzart**	**1.65**	**306**	⇑*iP*	**Pg**	**09 43 21.6**	**+0.6**
KZA	baz=98			⇑*iS*	**Sg**	**09 43 42.7**	**+0.4**
TNSS	**Tian-Shan**	**1.91**	**358**	P	**Pg**	**09 43 26.4**	**+0.3**
TNSS	2.2nm,0.4s			S	**Sg**	**09 43 51.9**	**+1.0**
TNSS	**Tian-Shan**	**1.91**	**358**	*eP*	**Pg**	**09 43 26.4**	**+0.3**
TNSS	2.2nm,0.4s			*eS*	**Sg**	**09 43 50.9**	**0.0**
MDOK	**Medeo**	**2.04**	**0**	*eP*	**Pg**	**09 43 28.9**	**+0.4**
MDOK	3.2nm,0.2s			*eS*	**Sg**	**09 43 55.3**	**+0.4**
TKM2	**Tokmak 2**	**2.09**	**330**	⇓Pg	**Pg**	**09 43 30.8**	**+1.3**
TKM2	2.9nm,0.7s			⇑Lg	Lg	09 43 56.4	
KOTS	**Kotyrbulak**	**2.11**	**1**	Pg	**Pg**	**09 43 29.9**	**0.0**
KOTS	1.3nm,0.3s			Lg	Lg	09 43 58.2	
KOTS	**Kotyrbulak**	**2.11**	**1**	*eP*	**Pg**	**09 43 29.9**	**0.0**
KOTS	2.7nm,0.1s			*eS*	**Sg**	**09 43 57.1**	**-0.1**
ARLS	**Aral**	**2.17**	**291**	⇓*iP*	**Pg**	**09 43 31.4**	**+0.4**
ARLS	11nm,0.3s baz=84			⇓*iS*	**Sg**	**09 43 59.0**	**-0.1**
SATY	**Saty**	**2.19**	**27**	Pg	**Pg**	**09 43 30.7**	**-0.7**
SATY	3.8nm,0.2s			Lg	Lg	09 43 59.1	
SATY	**Saty**	**2.19**	**27**	*eP*	**Pg**	**09 43 30.7**	**-0.7**
SATY	3.8nm,0.2s			*eS*	**Sg**	**09 43 58.6**	**-1.0**
KBK	**Karagaybulak**	**2.19**	**315**	⇑*iP*	**Pb**	**09 43 30.3**	**+0.8**
KBK	14nm,0.1s baz=10.0			⇑*iS*	**Sb**	**09 43 57.6**	**+0.7**
UCH	**Uchtor**	**2.19**	**301**	⇓*iP*	**Pg**	**09 43 31.3**	**-0.1**
UCH	baz=10.0 baz=95			⇓*iS*	**Sg**	**09 43 59.3**	**-0.5**
DGS	**Degeres**	**2.32**	**336**	Pg	**Pg**	**09 43 33.4**	**-0.4**
DGS	1.9nm,0.6s			Lg	Lg	09 44 03.9	
DGS	**Degeres**	**2.32**	**336**	*eP*	**Pg**	**09 43 34.7**	**+0.9**
DGS	6.2nm,0.5s 1.9nm,0.6s			*eS*	**Sg**	**09 44 04.5**	**+0.6**
AAK	**Ala-Archa**	**2.43**	**309**	⇑Pg	**Pb**	**09 43 34.1**	**+0.5**
AAK	6.2nm,0.5s 1.4nm,0.6s			⇑Lg	Lg	09 44 07.4	
AAK	**Ala-Archa**	**2.43**	**309**	⇑*iP*	**Pb**	**09 43 33.8**	**+0.2**
AAK	3.4nm,0.4s baz=5.0			⇑*iS*	**Sb**	**09 44 03.9**	**0.0**
KTBS	**Karatobe**	**2.60**	**354**	Pg	**Pb**	**09 43 37.3**	**+0.8**
KTBS	baz=5.0 1.3nm,0.4s			Lg	Lg	09 44 10.7	
KTBS	**Karatobe**	**2.60**	**354**	*eP*	**Pg**	**09 43 38.9**	**-0.3**
KTBS	4.8nm,0.4s 1.6nm,0.3s			*eS*	**Sg**	**09 44 12.4**	**-0.5**
KPKS	**Kokpek**	**2.64**	**27**	*eP*	**Pb**	**09 43 38.5**	**+1.3**
KPKS	6.6nm,0.3s 2.8nm,0.1s			*eS*	**Sb**	**09 44 11.6**	**+1.7**
AML	**Almayashu**	**2.70**	**293**	⇑*iP*	**Pb**	**09 43 38.7**	**+0.3**
AML	22nm,0.4s baz=88			⇑*iS*	**Sb**	**09 44 12.3**	**+0.3**
CHKK	**Chushkaly**	**2.73**	**359**	Pg	**Pb**	**09 43 40.2**	**+1.5**
CHKK	2.4nm,0.2s			Lg	Lg	09 44 16.1	
CHKK	**Chushkaly**	**2.73**	**359**	*eP*	**Pg**	**09 43 41.6**	**-0.1**
CHKK	12nm,0.3s 2.8nm,0.2s			*eS*	**Sg**	**09 44 16.9**	**-0.2**
PDGK	**Podgornoye**	**2.86**	**39**	Pg	**Pb**	**09 43 42.5**	**+1.6**
PDGK	12nm,0.3s 0.4nm,0.3s			Lg	Lg	09 44 19.9	
PDGK	**Podgornoye**	**2.86**	**39**	⇑Pg	**Pb**	**09 43 42.7**	**+1.8**
PDGK	2.6nm,0.6s 1.0nm,0.4s			⇑Lg	Lg	09 44 19.3	
PDGK	**Podgornoye**	**2.86**	**39**	⇓*eP*	**Pb**	**09 43 40.9**	**0.0**
PDGK	5.3nm,0.5s baz=43			⇓*iS*	**Sb**	**09 44 14.8**	**-1.4**
EKS2	**Erkin-Say**	**2.88**	**303**	⇑*iP*	**Pb**	**09 43 40.3**	**-1.0**
EKS2	baz=43 baz=99			⇑*iS*	**Sb**	**09 44 15.3**	**-1.5**
ARXS	**Arharly**	**3.14**	**10**	*eP*	**Pg**	**09 43 48.3**	**-1.3**
ARXS	2.1nm,0.4s			*eS*	**Sg**	**09 44 28.4**	**-1.9**
	5.7nm,0.5s						

WEL 18 09:48:56.9±1.4, 36°.S±15°×17°.8E±1°.2, h170km±16km, M4.0/29, MLv4.0/29, Error ellipse: s-maj=0.0km s-min=0.0km az=33.2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.47**	**174**	P	Pn	09 49 28.2	+0.5
MXZ				S	Sn	09 49 52.0	+0.4
WIZ	**White Island**	**1.61**	**207**	P	Pn	09 49 29.2	+0.1
HAZ	**Te Kaha**	**1.68**	**189**	P	Pn	09 49 29.6	-0.2
HAZ				S	Sn	09 49 55.7	+0.4
WMGZ	**Waiomatatini S**	**1.74**	**172**	P	Pn	09 49 30.9	+0.6
WMGZ				S	Sn	09 49 57.9	+1.5
RUGZ	**Raukumara Rang**	**1.90**	**190**	P	Pn	09 49 31.4	-0.9
RUGZ				S	Sn	09 49 58.4	-1.3
PUZ	**Puketiti**	**1.98**	**177**	P	Pn	09 49 32.7	-0.3
PUZ				S	Sn	09 50 01.2	+0.2
WHRZ	**Whale Island**	**1.98**	**207**	P	Pn	09 49 33.7	+0.7
KUZ	**Kuaotunu**	**2.04**	**251**	P	Pn	09 49 33.5	-0.1
TWGZ	**Tauwhareparae**	**2.08**	**183**	P	Pn	09 49 34.5	+0.3
TWGZ				S	Sn	09 50 03.9	+0.8
OPRZ	**Ohinepanea**	**2.15**	**215**	P	Pn	09 49 34.6	-0.2
GRZ	**Great Barrier**	**2.15**	**265**	P	Pn	09 49 34.8	-0.1
TGRZ	**Tauranga**	**2.21**	**222**	P	Pn	09 49 35.5	-0.1
MARZ	**Manawahe**	**2.21**	**211**	P	Pn	09 49 35.5	-0.2
MWZ	**Matawai**	**2.28**	**192**	P	Pn	09 49 35.7	-0.8
EDRZ	**Edgecumbe**	**2.29**	**208**	P	Pn	09 49 36.7	+0.1
URZ	**Urewera**	**2.30**	**200**	P	Pn	09 49 35.7	-0.9
TKGZ	**Te Karaka**	**2.35**	**185**	P	Pn	09 49 36.8	-0.4
CNGZ	**Carnagh Statio**	**2.39**	**178**	P	Pn	09 49 37.6	0.0
KARZ	**Kaharoa**	**2.44**	**217**	P	Pn	09 49 38.3	+0.1
OMRZ	**Omania**	**2.44**	**214**	P	Pn	09 49 39.3	+1.0
RAGZ	**Rawiri**	**2.46**	**193**	P	Pn	09 49 38.2	-

RRRZ	Republican Roa	2.58 209	P	Pn	09 49 40.0	+0.1
MKAZ	Moumakai	2.58 246	P	Pn	09 49 40.0	+0.1
UTU	Utuhina	2.58 216	P	Pn	09 49 40.1	+0.2
MUGZ	Murupara	2.61 204	P	Pn	09 49 39.5	-0.7
RIGZ	Rimuhau	2.62 186	P	Pn	09 49 39.5	-0.9
TOZ	Tahuroa Road	2.66 231	P	Pn	09 49 41.2	+0.4
HSRZ	Hossack Road	2.67 213	P	Pn	09 49 42.0	+1.0
MBAZ	Motutapu North	2.68 255	P	Pn	09 49 41.3	+0.2
ABAZ	Army Bay	2.70 258	P	Pn	09 49 41.6	+0.3
ETAZ	East Tamaki Re	2.71 251	P	Pn	09 49 41.9	+0.5
HRRZ	Handcock Road	2.72 212	P	Pn	09 49 41.7	+0.1
SNGZ	Shannon Statio	2.75 193	P	Pn	09 49 41.0	-1.0
GRRZ	Galatos Road	2.76 215	P	Pn	09 49 42.6	+0.4
PRRZ	Plateau Road	2.76 209	P	Pn	09 49 41.6	-0.5
KBAZ	Karaka Road Bo	2.78 248	P	Pn	09 49 43.4	+1.1
PRGZ	Paritu Road	2.83 184	P	Pn	09 49 41.6	-1.4
ALRZ	Allen Road	2.84 209	P	Pn	09 49 42.4	-0.7
WPRZ	Whakapapatarin	2.88 212	P	Pn	09 49 43.4	-0.1
MTHZ	Maungataniwha	2.93 200	P	Pn	09 49 42.7	-1.5
RAHZ	Arahi	2.93 196	P	Pn	09 49 43.0	-1.2
KNZ	Kokohu	2.94 187	P	Pn	09 49 42.7	-1.6
AWAZ	Awhitu Peninsu	2.96 250	P	Pn	09 49 44.8	+0.4
WTAZ	Waiatarua	2.97 253	P	Pn	09 49 45.1	+0.4
KUTZ	Kaahu Road	3.01 217	P	Pn	09 49 45.5	+0.3
TLZ	Tolley Road	3.03 222	P	Pn	09 49 45.6	+0.2
MRHZ	Matea Rd	3.05 206	P	Pn	09 49 44.1	-1.6
MHGZ	Mahia Peninsul	3.06 183	P	Pn	09 49 44.4	-1.3
WHHZ	Waihua	3.06 193	P	Pn	09 49 44.4	-1.3
WCZ	Waipu Caves	3.06 272	P	Pn	09 49 45.6	-0.1
WHTZ	Whakaora	3.09 213	P	Pn	09 49 46.2	0.0
NMHZ	Naumai	3.17 199	P	Pn	09 49 46.1	-1.2
WATZ	Wairara	3.22 215	P	Pn	09 49 47.6	-0.2
ARHZ	Aropaoanui	3.29 195	P	Pn	09 49 46.9	-1.6
BKZ	Black Stump Fm	3.33 202	P	Pn	09 49 47.0	-2.1
RATZ	Rangitukua	3.33 213	P	Pn	09 49 48.4	-0.8
RITZ	Rihia Road	3.39 211	P	Pn	09 49 48.9	-0.9
KATZ	Kakaramea	3.46 213	P	Pn	09 49 50.1	-0.8
MCHZ	McNeill Hill	3.53 198	P	Pn	09 49 49.8	-1.8
HIZ	Hauiti	3.55 226	P	Pn	09 49 52.3	+0.4
KRVZ	Karewarewa	3.58 213	P	Pn	09 49 51.3	-1.1
KWHZ	Kaweka Forest	3.58 201	P	Pn	09 49 49.9	-2.4
WTVZ	West Tongariro	3.62 213	P	Pn	09 49 51.7	-1.2
CKHZ	Cape Kidnapper	3.65 193	P	Pn	09 49 50.8	-2.3
TWVZ	Taurewa	3.65 215	P	Pn	09 49 51.9	-1.4
NGZ	Ngauruhoe	3.67 212	P	Pn	09 49 52.2	-1.3
TUVZ	Tukino	3.72 211	P	Pn	09 49 52.7	-1.5
FWVZ	Far West T-bar	3.75 212	P	Pn	09 49 52.8	-1.8
BHHZ	Black Hill Sta	3.76 205	P	Pn	09 49 51.8	-2.8
OUZ	Omahuta	3.78 282	P	Pn	09 49 54.5	-0.4
MOWZ	Moawhango	3.80 209	P	Pn	09 49 52.3	-2.8
KRHZ	Kereru	3.80 201	P	Pn	09 49 52.1	-3.0
KAHZ	Kahuranaki	3.82 194	P	Pn	09 49 52.9	-2.4
PKVZ	Pokaka	3.87 214	P	Pn	09 49 54.8	-1.3
MTVZ	Mangateitei	3.90 212	P	Pn	09 49 54.7	-1.7
VRZ	Vera Road	4.03 220	P	Pn	09 49 57.3	-0.7
PXZ	Pawanui	4.05 194	P	Pn	09 49 55.1	-3.1
PNHZ	Pukenui	4.10 201	P	Pn	09 49 55.4	-3.6
WPHZ	Waipukurau	4.18 198	P	Pn	09 49 56.7	-3.1
TSZ	Takapari Road	4.31 203	P	Pn	09 49 57.7	-3.9
PRHZ	Porangahau	4.33 195	P	Pn	09 49 58.4	-3.4
WAZ	Wanganui	4.41 213	P	Pn	09 50 00.4	-2.6
LREZ	Lake Rotokare	4.46 220	P	Pn	09 50 04.1	+0.5
DVHZ	Dannevirke	4.47 199	P	Pn	09 49 59.7	-4.0
PKE	Pukeiti	4.50 225	P	Pn	09 50 04.1	-0.1
PREZ	Palmer Road	4.51 223	P	Pn	09 50 04.3	+0.1
ANWZ	Angora Road	4.54 196	P	Pn	09 50 01.0	-3.6
KHEZ	Kahui Hut	4.56 224	P	Pn	09 50 04.7	-0.2
NBEZ	Newall Road No	4.62 225	P	Pn	09 50 05.7	0.0
OHWZ	Onakea	4.66 207	P	Pn	09 50 03.4	-2.7
POWZ	Post Office Ro	4.67 203	P	Pn	09 50 02.5	-3.8
NMEZ	Namu Road	4.72 224	P	Pn	09 50 06.8	-0.1
PRWZ	Pori Road	4.76 200	P	Pn	09 50 03.7	-3.8
BFZ	Birch Farm	4.81 197	P	Pn	09 50 03.8	-4.3
TIWZ	Tintock	4.99 200	P	Pn	09 50 06.3	-4.2
CPWZ	Castlepoint	5.04 197	P	Pn	09 50 07.4	-3.6
HOWZ	Holdsworth Sta	5.21 202	P	Pn	09 50 08.2	-5.1
OGWZ	Otaki Gorge	5.25 205	P	Pn	09 50 09.1	-4.7
TMWZ	Te Maipa	5.30 199	P	Pn	09 50 09.8	-4.7
KIW	Kapiti Island	5.38 207	P	Pn	09 50 10.8	-4.8
MTW	Mount Morrison	5.45 201	P	Pn	09 50 11.0	-5.5
CAW	Cannon Point	5.54 205	P	Pn	09 50 12.3	-5.4
TRWZ	Traveller	5.62 199	P	Pn	09 50 13.6	-5.1
PAWZ	Paruwai Farm	5.68 201	P	Pn	09 50 13.9	-5.7
DUWZ	D'Urville Isla	5.74 214	P	Pn	09 50 15.1	-5.2
MSWZ	Moikau Station	5.76 202	P	Pn	09 50 15.0	-5.6
BHW	Baring Head	5.88 205	P	Pn	09 50 16.3	-5.8
PLWZ	Palliser	5.90 201	P	Pn	09 50 16.8	-5.7
TCW	Tory Channel	5.92 209	P	Pn	09 50 16.9	-5.8
TUWZ	Tuamarina	6.24 210	P	Pn	09 50 20.9	-6.0
NNZ	Nelson	6.31 214	P	Pn	09 50 22.4	-5.4
CMWZ	Cape Campbell	6.41 207	P	Pn	09 50 24.0	-5.1
QRZ	Quartz Range	6.44 221	P	Pn	09 50 24.2	-5.3
BSWZ	Blackbirch Sta	6.51 209	P	Pn	09 50 24.5	-5.9
THZ	Tophouse	6.96 214	P	Pn	09 50 30.4	-6.1
KHZ	Kahutara	7.24 208	P	Pn	09 50 33.5	-6.5
DSZ	Denniston Nort	7.48 219	P	Pn	09 50 40.0	-3.3
GVZ	Greta Valley S	7.90 208	P	Pn	09 50 41.9	-6.9
LTZ	Lake Taylor	8.06 212	P	Pn	09 50 43.9	-7.1
INZ	Inchbonnie	8.39 216	P	Pn	09 50 49.3	-6.0
OKCZ	Okains Bay	8.55 205	P	Pn	09 50 50.6	-6.8
CRLZ	Canterbury Las	8.58 208	P	Pn	09 50 51.1	-6.6
OXZ	Oxford	8.60 211	P	Pn	09 50 50.2	-7.9
MQZ	McQueen's Vall	8.62 207	P	Pn	09 50 51.1	-8.0
AKCZ	Akaroa Harbour	8.73 206	P	Pn	09 50 53.5	-6.3
WVZ	Waitaha Valley	9.00 217	P	Pn	09 50 57.7	-5.6
RPZ	Rata Peaks	9.34 213	P	Pn	09 51 02.5	-5.3
FOZ	Fox Glacier	9.79 218	P	Pn	09 51 11.0	-2.7
ODZ	Otahua Downs	10.59 210	P	Pn	09 51 17.3	-6.8
JCZ	Jackson Bay	10.70 219	P	Pn	09 51 20.0	-5.7
TUZ	Tuapeka	11.74 210	P	Pn	09 51 34.1	-5.0

IDC 18 09:49:10.6±1.4, 51°.57N×82°.54E, h0km, mb1 2.4/3, mb1mx2.4/43, mbtmp2.4/3, ML1.5/3, Error ellipse: s-maj=15.5km s-min=12.1km az=135.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.70	251	Pn	Pn	09 49 55.2	+0.1
	0.0nm,0.3s,baz=67,slow=17,SNR=3.9						
KURBB				Sn	Sn	09 50 27.9	-0.6
	0.1nm,0.3s,baz=66,slow=32,SNR=8.6						
KURBB				Lg	Lg	09 50 39.3	
	0.1nm,0.3s,baz=68,slow=27,SNR=11						
ZALV	Zalesovo Beam	2.75	29	Pn	Pn	09 49 54.1	-1.8
	0.1nm,0.3s,baz=217,slow=16,SNR=6.8						
ZALV				Sn	Sn	09 50 27.6	-2.2
	0.2nm,0.3s,baz=217,slow=24,SNR=3.8						
ZALV				Lg	Lg	09 50 40.3	
	0.4nm,0.3s,baz=207,slow=24,SNR=4.0						
I46RU	ZALESOVO INFRA	2.75	29	*i*		10 08 40.0	
	baz=216,slow=375,SNR=4.9						
MKAR	Makanchi Array	4.79	182	Pn	Pn	09 50 24.9	+1.0
	0.1nm,0.3s,baz=1.5,slow=12,SNR=9.4						
MKAR				Lg	Lg	09 51 41.5	
	0.1nm,0.3s,baz=5.7,slow=30,SNR=5.5						
I31KZ	AKTYUBINSK INF	15.46	275	*i*		11 21 30.0	
	baz=74,slow=316,SNR=2.6						

*NNC **18** 09:59:17.6±2.5, 43°.49N×69°.71E, h0km, mb3.5, mpv2.8, Error ellipse: s-maj=15.7km s-min=10.0km az=144.0, Suspected Mining explosion.*
*SOME **18** 09:59:17.1, 43°.45N×69°.67E*
ISC 18 09:59:17.2±2.1, 43°.61N±0°.08×69°.8E±0°.1, h0km, n6, σ1°09/9, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	Borolday	0.58	177	P	Pb	09 59 29.9	-0.2
	0.4nm,0.2s						
BRLS				S	Sb	09 59 40.7	+1.8
	6.0nm,0.4s						
KK31	Karatay Array	0.72	134	P	Pg	09 59 30.9	-0.2
	3.4nm,0.4s,baz=291,slow=17,SNR=46						
KK31				S	Sg	09 59 41.1	+0.7
	11nm,0.5s,baz=291,slow=26,SNR=52						
IUG	Iuzhnay	1.47	173	P	Pn	09 59 44.1	-0.9
	3.3nm,0.2s						
IUG				S	Sn	10 00 05.2	+0.2
	19nm,0.4s						
MRKS	Merke	2.65	108	Pg	Pg	10 00 07.9	-0.1
	1.7nm,0.2s						
MRKS				Lg	Lg	10 00 44.9	
	5.0nm,0.6s						
BTLS	Baital	3.37	63	Pg	Pg	10 00 22.6	+0.9
	2.4nm,0.4s						
BTLS				Lg	Lg	10 01 10.4	
	4.1nm,0.6s						
DGS	Degeres	4.37	93	Pg	Pg	10 00 39.6	-1.3
	1.5nm,0.4s						
DGS				Lg	Lg	10 01 39.3	
	8.8nm,0.7s						

*NNC **18** 10:04:11.8±5.2, 37°.60N×71°.62E, h179km±65km, mb3.0, mpv3.8, Error ellipse: s-maj=51.9km s-min=33.1km az=33.0*
ISC 18 10:03:59.6±1.5, 36°.9N±0°.1×71°.4E±0°.1, h109km, n10, σ2°61/13, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.19	22	⇑P	Pn	10 05 31.2	+2.6
	2.9nm,0.3s						
AAK				⇑S	Sn	10 06 36.2	-1.8
	9.8nm,0.8s						
KK31	Karatay Array	6.20	354	P	Pn	10 05 33.0	+4.4
	11nm,0.6s,baz=164,slow=12,SNR=84						
KK31				⇑S	Sn	10 06 37.8	-0.4
	16nm,0.4s,baz=189,slow=21,SNR=23						
PYUN	Piuthan	13.17	129	*e*P	Pn	10 07 00.9	-1.7
	13nm,0.4s						
GKN	Gorkha	14.29	125	*e*P	Pn	10 07 16.4	-0.7
	16nm,0.2s						
AB31	Akbulak array	14.86	330	P	P	10 07 28.3	+1.4
	0.6nm,0.3s,baz=133,slow=14,SNR=27						
AB31				⇓S	Sn	10 10 02.9	-5.0
	0.9nm,0.4s,baz=153,slow=22,SNR=9.9						
PKIN	Phulchoki	15.08	124	*e*P	Pn	10 07 25.6	-1.5
PKI	Pulchoki	15.09	124	*e*P	Pn	10 07 25.8	-1.5
	6.3nm,0.4s						
GUN	Gumba	15.18	122	*e*P	Pn	10 07 27.5	-1.0
	5.4nm,0.3s						
JIRN	Jiri	15.55	122	*e*P	Pn	10 07 31.9	-1.3
	20nm,0.3s						
AKTO	Aktyubinsk	16.56	329	⇓P	P	10 07 50.1	+4.3
	4.3nm,1.1s						
AKTO				⇑S	Sn	10 10 47.8	-1.2
	2.4nm,0.8s						

IDC 18 10:13:02.2±2.0, 9°.08N×92°.41E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.4/43, mbtmp3.6/4, ML3.7/1, MS3.2/3, Ms1 3.3/3, ms1mx2.7/44, Error ellipse: s-maj=70.9km s-min=22.6km az=70.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.27	34	Pn	Pn	10 15 46.9	+2.1
	0.2nm,0.3s,baz=222,slow=14,SNR=4.2						
CMAR				LR	LR	10 19 41.5	
	comp=Z,51nm,18.1s,baz=185,slow=35						
H08S3	Diego Garcia H	25.88	231	T	T	10 46 12.1	
	baz=50,slow=76,SNR=2.2						
H08S2	Diego Garcia H	25.88	231	T	T	10 46 05.1	
	baz=50,slow=76,SNR=3.6						
H08S1	Diego Garcia H	25.90	231	T	T	10 45 59.6	
	baz=50,slow=76,SNR=2.3						
MKAR	Makanchi Array	38.56	349	P	P	10 20 26.9	+0.2
	0.2nm,0.3s,baz=161,slow=9.2,SNR=2.1						
SONM	Songino Array	40.40	15	P	P	10 20 40.7	-1.4
	0.5nm,0.5s,baz=193,slow=5.9,SNR=3.1						
WRA	Warramunga Arr	50.35	125	P	P	10 22 00.9	-0.5
	0.9nm,0.5s,baz=300,slow=9.3,SNR=7.7						
ASAR	Alice Springs	52.00	130	P	P	10 22 13.2	-0.6
	10nm,0.4s,baz=302,slow=7.3,SNR=8.1						
ASAR				PcP	PcP	10 23 27.9	+1.7
	0.3nm,0.6s,baz=321,slow=3.9,SNR=4.6						
KMBO	Kilima Mbogo	55.87	262	LR	LR	10 44 39.1	
	comp=Z,18nm,18.1s,baz=196,slow=34						
VNDA	Vanda	94.45	168	LR	LR	11 09 14.0	
	comp=Z,24nm,18.1s,baz=149,slow=36						

*IDC **18** 10:46:32.8±0.7, 57°.57S×23°.67W, h30km±4km, mb3.8/4, mb1 4.0/5, mb1mx3.7/28, mbtmp4.0/5, ML3.7/1, MS3.6/3, Ms1 3.5/3, ms1mx3.0/18, Error ellipse: s-maj=36.3km s-min=23.8km az=59.0*
*NEIC **18** 10:46:33.3±0.5, 57°.66S×23°.47W, h35km, mb4.3/6, Error ellipse: s-maj=25.2km s-min=14.1km az=206.0*
ISC 18 10:46:32.0±0.8, 57°.7S±0°.1×23°.6W±0°.1, h26km±5km, n28, σ0°90/30, mb4.1/8, MS3.4/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	8.02	290	*e*Pn	Pn	10 48 27.6	+0.9
VNA1	Neumayer--Stat	14.53	160	P	Pn	10 49 54.7	-0.8
VNA1				S	Sn	10 52 24.8	-11
VNA3	Neumayer Olymp	14.79	162	P	Pn	10 49 57.3	-1.8
VNA3				S	Sn	10 52 26.7	-15
VNA2	Neumayer--Watz	14.92	159	P	Pn	10 49 59.0	-1.8
	baz=327,slow=16						
VNA2				S	Sn	10 52 32.3	-13
	baz=342,slow=21						
SNAA	Sanae	16.43	157	P	Pn	10 50 21.2	+0.9
SNAA	Sanae	16.43	157	Pn	P	10 50 23.5	+0.5
	0.3nm,0.3s,baz=318,slow=16,SNR=6.0						
SNAA	Sanae	16.43	157	*e*Pn	Pn	10 50 20.5	+0.2
	12nm,1.2s						
QSPA	South Pole Qui	32.55	180	*e*P	P	10 53 01.1	+0.5
	0.3nm,0.6s						
PLCA	Paso Flores	34.25	279	LR	LR	11 05 51.6	
	comp=Z,66nm,18.1s,baz=190,slow=34						
PLCA	Paso Flores	34.25	279	*e*P	P	10 53 14.9	-0.6
	6.2nm,1.2s						
CPUP	Villa Florida	39.40	308	P	P	10 53 57.8	-1.5
	3.1nm,0.9s,baz=158,slow=7.3,SNR=5.9						
BOSA	Boshof	44.53	71	LR	LR	11 08 49.5	
	comp=Z,35nm,18.9s,baz=207,slow=30						
VNDA	Vanda	45.00	182	P	P	10 54 45.1	+0.8
	1.0nm,0.8s,baz=163,slow=6.7,SNR=7.3						
GO01	Chusmiza	50.51	299	*e*P	P	10 55 28.8	+0.5
	12nm,1.5s						
MNMC	Minye Minye	51.16	299	*e*P	P	10 55 32.3	-0.7
	14nm,1.5s						
LPAZ	La Paz	52.96	302	P	P	10 55 46.3	-0.4
	1.9nm,0.7s,baz=163,slow=5.8,SNR=5.5						
LPAZ	La Paz	52.96	302	*e*P	P	10 55 47.2	+0.5
	2.2nm,0.8s						
TORD	Torodi Ar. Bea	73.59	26	P	P	10 58 02.4	-0.1
	1.1nm,0.8s,baz=201,slow=5.0,SNR=6.7						
TOA1	Torodi Ar. Sit	73.60	26	*e*P	P	10 58 02.4	-0.2
KEST	Kesra	97.10	26	LR	LR	11 40 38.3	
	comp=Z,49nm,19.0s,baz=242,slow=34						
YKA	Yellowknife Ar	138.74	315	PKP	PKPdf	11 05 53.8	-0.2
	0.7nm,0.7s,baz=124,slow=2.3,SNR=9.6						
YKA				pPKP	sPKPdf	11 06 03.4	+0.3
	0.6nm,0.6s,baz=125,slow=1.9,SNR=5.1						
YKB5	Yellowknife Ar	138.74	315	*e*PKPdf	PKPdf	11 05 53.8	-0.1
YKB5				*e*pPKPdf	sPKPdf	11 06 03.4	+0.3
INK	Inuvik	148.36	318	PKPbc	PKPdf	11 06 13.1	+2.5
	2.6nm,0.8s,baz=103,slow=2.7,SNR=11						
INK				pPKPbc	pPKPab	11 06 23.4	-0.7
	1.9nm,0.7s,baz=96,slow=1.7,SNR=5.8						
INK	Inuvik	148.36	318	*e*PKPbc	PKPbc	11 06 14.1	0.0
SONA0	Songino Array	148.83	86	*e*PKPbc	PKPbc	11 06 16.2	0.0
SONA0				*e*		11 06 25.4	
SONM	Songino Array	148.83	86	PKPbc	PKPbc	11 06 16.2	0.0
	1.1nm,0.7s,baz=238,slow=2.6,SNR=5.7						
SONM				pPKPbc	sPKPbc	11 06 25.4	+0.2
	1.2nm,0.5s,baz=230,slow=4.5,SNR=5.5						
ILAR	Eielson Array	152.71	309	PKPbc	PKPbc	11 06 24.5	-0.1
	1.9nm,0.8s,baz=132,slow=2.1,SNR=18						
ILAR				pPKPbc	PKPab	11 06 35.1	-0.5
	1.5nm,0.8s,baz=126,slow=2.1,SNR=7.6						
ILB	Eielson Array	152.71	309	*e*PKPbc	PKPbc	11 06 24.6	-0.1

*ISCJB **18** 10:47:05.3±0.9, 33°.77N±0°.05×35°.70E±0°.09, h14km±7km, Error ellipse: s-maj=13.6km s-min=5.5km az=154.0*
*GRAL **18** 10:47:06.3±0.3, 33°.78N×35°.77E, h0km±36km, MD2.8*
*NSSC **18** 10:47:06.1±0.6, 33°.65N×35°.66E, h25km±13km, ML1.7*
ISC 18 10:47:05.3±1.2, 33°.81N±0°.06×35°.8E±0°.1, h12km±16km, n7, σ0°56/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.13	317	*e*P	Pg	10 47 09.1	+0.3
BHL				*e*S	Sg	10 47 11.1	-0.1
DQRL	Deir Qamar	0.19	238	*e*P	Pg	10 47 09.7	+0.1
RCY	Rachaya	0.32	169	*e*P	Pg	10 47 11.5	-0.2
RCY				*e*S	Sg	10 47 15.4	-0.7
BRBR	Barbar	0.42	158	*e*P	Pg	10 47 13.4	-0.3
BRBR				*e*S	Sg	10 47 19.3	-0.1
BRBR				AML	AML	10 47 23.1	
	comp=N,78nm,0.4s						
BRBR				AML	AML	10 47 24.9	
	comp=E,100nm,0.5s						
HWQ	Hawqa	0.49	18	*e*P	Pb	10 47 15.6	-0.4
QASN	Qassioun	0.51	122	*e*P	Pb	10 47 17.3	+1.1
QASN				*e*S	Sb	10 47 23.9	+0.4
QASN				AML	AML	10 47 28.8	
	comp=N,163nm,0.4s						
QASN				AML	AML	10 47 30.5	
	comp=E,49nm,0.4s						
TOTH	TOTAH	0.71	129	*e*P	Pb	10 47 19.7	+0.1
TOTH				*e*S	Sb	10 47 29.0	-0.3
TOTH				AML	AML	10 47 38.7	
	comp=E,16nm,0.3s						
TOTH				AML	AML	10 47 41.5	
	comp=N,22nm,0.4s						

*ISCJB **18** 11:11:19.3±2.5, 43°.1N±0°.2×76°.9E±0°.2, h16km±26km, Error ellipse: s-maj=35.1km s-min=8.1km az=147.3*
*NNC **18** 11:11:19.7±0.3, 43°.12N×76°.80E, h2km±2km, mpv2.4, Error ellipse: s-maj=1.8km s-min=0.9km az=162.0*
*SOME **18** 11:11:19.5, 43°.13N×76°.80E, h10km*
ISC 18 11:11:18.8±2.8, 43°.1N±0°.2×76°.9E±0°.1, h16km±22km, n7, σ0°19/13, 1C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.07	111	P	Pg	11 11 22.5	+0.1
	21nm,0.1s						
TNSS				S	Sg	11 11 24.9	0.0
	26nm,0.1s						
TNSS	Tian-Shan	0.07	111	⇑*i*P	Pg	11 11 22.6	+0.1
	21nm,0.1s						
TNSS				*e*S	Sg	11 11 24.9	0.0
	26nm,0.1s						
MDOK	Medeo	0.17	54	Pg	Pg	11 11 23.4	+0.1
	7.3nm,0.1s						
MDOK				Lg	Lg	11 11 26.2	
	19nm,0.2s						
MDOK	Medeo	0.17	54	⇓*i*P	Pg	11 11 23.4	+0.1
	7.3nm,0.1s						
MDOK				*e*S	Sg	11 11 26.1	-0.3
	19nm,0.1s						
KOTS	Kotyrbulak	0.25	47	P	Pg	11 11 24.9	+0.3
	1.1nm,0.1s						
KOTS				S	Sg	11 11 28.7	+0.2
	8.9nm,0.2s						
KOTS	Kotyrbulak	0.25	47	*e*P	Pg	11 11 24.6	0.0
	2.2nm,0.1s						
KOTS				*e*S	Sg	11 11 28.2	-0.3
	8.9nm,0.2s						
KST	Kastek	0.66	269	P	Pg	11 11 31.9	+0.1
	1.0nm,0.1s						
KST				S	Sb	11 11 40.8	-0.2
	2.4nm,0.2s						

KRNET 18 11:11:43.2±0.1, 42°.57N×74°.54E, h14km, mb1.6, 16C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	0.07	335	⇑*i*P	Pg	11 11 46.0	-0.2
	baz=35						
AAK				⇑*i*S	Sg	11 11 47.8	-0.5
	baz=35						
FRU1	Bishkek	0.25	16	⇑*i*P	Pg	11 11 48.4	-0.2
	baz=16						
FRU1				⇑*i*S	Sg	11 11 51.9	-0.3
	baz=16						
UCH	Uchtor	0.34	183	⇑*i*P	Pg	11 11 50.3	-0.1
	baz=83						
UCH				⇑*i*S	Sg	11 11 55.2	-0.1
	baz=83						
CHMS	Chumysh	0.46	20	⇑*i*P	Pg	11 11 52.3	+0.1
	baz=20						
CHMS				⇑*i*S	Sg	11 11 58.7	+0.3
	baz=20						
USP	Ospenovka	0.69	358	⇑*i*P	Pg	11 11 56.6	-0.1
	baz=58						
USP				⇑*i*S	Sg	11 12 06.2	+0.3
	baz=58						
KZA	Kyzart	0.72	133	⇓*i*P	Pg	11 11 57.1	-0.2
	baz=33						
KZA				⇓*i*S	Sg	11 12 06.9	0.0
	baz=33						
ARLS	Aral	0.73	193	⇑*i*P	Pg	11 11 56.6	-0.8
	baz=92						
ARLS				⇑*i*S	Sg	11 12 06.8	-0.2
	baz=92						
AML	Almayashu	0.76	235	⇓*i*P	Pg	11 11 57.8	-0.3
	baz=35						
AML				⇓*i*S	Sg	11 12 08.3	+0.1
	baz=35						
TKM2	Tokmak 2	0.85	66	⇑*i*P	Pg	11 11 59.5	-0.3
	baz=66						
TKM2				⇑*i*S	Sg	11 12 10.8	-0.2
	baz=66						
BOOM	Boomskoye usch	1.04	94	⇑*i*P	Pb	11 12 02.8	-0.3
	baz=94						
BOOM				⇑*i*S	Sg	11 12 17.1	+0.2
	baz=94						

*SJA **18** 11:12:40.8±0.8, 22°.67S×67°.79W, h168km±6km, ML2.1, MW2.5*
*ISCJB **18** 11:12:41.7±0.9, 22°.67S±0°.04×67°.84W±0°.04, h166km±10km, Error ellipse: s-maj=7.1km s-min=6.1km az=43.3*
*GUC **18** 11:12:42.7±0.6, 22°.64S×67°.92W, h175km±5km, ML3.4*
ISC 18 11:12:41.2±1.8, 22°.68S±0°.05×67°.82W±0°.05, h171km±15km, n24, σ0°69/44, 5C-8D, Chile-Bolivia border region

YJA			IAML			11 13 52.2
	comp=Z,6.3nm,0.8s					
PB05	**IPOC Station P**	**2.21 265**	⇓*i*P	**Pn**	**11 13 20.6**	**+0.5**
PB05			*i* S	**Sn**	**11 13 49.1**	**-1.1**
PB05			IAML		11 13 55.1	
	comp=E,68nm,0.4s					
PB01	**IPOC Station P**	**2.25 316**	⇓*i*P	**Pn**	**11 13 21.1**	**+0.5**
PB01			*i* S	**Sn**	**11 13 50.4**	**-0.7**
PB01			IAML		11 13 52.1	
	comp=E,150nm,0.3s					
HJA	**Humahuaca**	**2.28 104**	*e*P	**Pn**	**11 13 21.6**	**+0.3**
HJA			IAML		11 13 22.7	
	comp=Z,7.9nm,0.5s					
PB02	**IPOC Station P**	**2.35 305**	*e*P	**Pn**	**11 13 22.4**	**+0.5**
PB02			*e*S	**Sn**	**11 13 52.8**	**-0.5**
PB02	**IPOC Station P**	**2.35 305**	⇑*i*P	**Pn**	**11 13 22.2**	**+0.4**
PB02			*i* S	**Sn**	**11 13 52.0**	**-1.4**
PB02			IAML		11 13 53.7	
	comp=E,262nm,0.4s					
PB08	**IPOC Station P**	**2.82 334**	⇓*i*P	**Pn**	**11 13 28.9**	**+1.3**
PB08			*i* S	**Sn**	**11 14 03.9**	**+0.3**
PB08			IAML		11 14 06.2	
	comp=N,39nm,0.3s					
GO02	**Mina Guanaco**	**2.95 213**	*e*P	**Pn**	**11 13 29.8**	**+0.6**
GO02			*i* S	**Sn**	**11 14 06.0**	**-0.5**
GO02			IAML		11 14 08.0	
	comp=N,107nm,0.1s					
AZAP	**Zapla**	**2.96 122**	*e*P	**Pn**	**11 13 29.0**	**-0.2**
GO01	**Chusmiza**	**3.26 337**	⇑*i*P	**Pn**	**11 13 34.0**	**+0.7**
GO01			*i* S	**Sn**	**11 14 13.9**	**+0.3**
GO01			IAML		11 14 17.0	
	comp=N,77nm,0.1s					
PB11	**IPOC Station P**	**3.37 329**	⇑*i*P	**Pn**	**11 13 33.9**	**-0.4**
PB11			*i* S	**Sn**	**11 14 14.1**	**-1.5**
PB11			IAML		11 14 16.0	
	comp=N,76nm,0.2s					

ATH 18 11:15:35.5, 39°.08N×26°.01E, h33km±11km, ML1.7/1, Error ellipse: s-maj=13.7km s-min=1.7km az=349.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.18**	**317**	P	Pb	11 15 42.0	+0.2
SIGR				S	Sb	11 15 46.6	+0.4
SIGR				AML	AML	11 15 47.0	
	comp=E,520μm,0.4s						
SIGR				AML	AML	11 15 47.0	
	comp=N,208μm,0.3s						
PRK	**Paraskevi**	**0.26**	**51**	P	Pb	11 15 42.7	-0.1
PRK				S	Sb	11 15 48.4	+0.7
CHOS	**Chios island**	**0.69**	**177**	P	Pb	11 15 49.5	+0.2

DDA 18 11:16:16.6, 39°.22N×27°.90E, h7km±4km, ML2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEP	**BALIKESIR_Sava**	**0.21**	**318**	*i* P	Pg	11 16 21.5	+0.7
STEP				*i* S	Sg	11 16 25.9	+2.2
STEP				IAML_P			
	comp=Z,5μm,0.1s						
AKHS	**Akhisar**	**0.35**	**191**	*i* P	Pg	11 16 23.3	-0.1
AKHS				*i* S	Sb	11 16 30.1	-0.7
DURS	**Dursunbey**	**0.58**	**49**	*i* P	Pn	11 16 31.9	+0.5
DURS				*i* S	Sb	11 16 37.6	-0.2
MANT	**Manisa**	**0.89**	**145**	*i* P	Pb	11 16 34.5	0.0
ULDT	**Uludag**	**1.33**	**46**	*i* P	Pg	11 16 43.1	+1.1
ULDT				*i* S	Sn	11 17 00.4	+0.7
ULDT				IAML_P			
	comp=Z,426nm,0.2s						

*IDC **18** 11:26:38.9±0.9, 8°.13S×118°.94E, h0km, mb3.9/6, mb1 4.0/10, mb1mx3.8/40, mbtmp3.9/10, ML3.8/4, MS3.3/4, Ms1 3.3/4, ms1mx2.8/32, Error ellipse: s-maj=31.1km s-min=17.7km az=80.0*

*ISCJB **18** 11:26:41.9±0.3, 8°.20S±0°.03×119°.03E±0°.04, h34km, mb4.3/12, MS3.2/2, Error ellipse: s-maj=5.1km s-min=4.2km az=4.5*

*DJA **18** 11:26:41.0±0.3, 8°.S±2°.×11°.9E±°., h10km, M4.2/9, mb4.5/2, mB5.1/1, MLv4.1/9, Mw(mB)4.4/1*

*NEIC **18** 11:26:43.6±2.5, 8°.16S×119°.03E, h35km±2km, mb4.8/16, Error ellipse: s-maj=11.3km s-min=4.3km az=165.0*

ISC 18 11:26:43.5±0.5, 8°.18S±0°.04×119°.02E±0°.04, h34km, n47, σ1§87/56, mb4.3/12, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.39**	**242**	P	**Pn**	**11 27 04.6**	**-1.8**
PLAI				S	**Sn**	**11 27 21.6**	**-2.0**
WBSI	**Waikabubak, Su**	**1.49**	**166**	P	**Pn**	**11 27 09.3**	**+1.3**
WBSI				S	**Sb**	**11 27 31.3**	**+1.9**
WSI	**Waingapu**	**1.94**	**140**	P	**Pb**	**11 27 17.1**	**-1.2**
BSSI	**Bau Bau, Buton**	**2.50**	**36**	P	**Pn**	**11 27 22.2**	**+0.5**
BSSI				S	**Sn**	**11 27 51.4**	**+0.3**
EDFI	**Ende, Flores**	**2.70**	**102**	P	**Pn**	**11 27 27.4**	**+2.8**
BKSI	**Bulukumba**	**3.05**	**21**	P	**Pn**	**11 27 29.5**	**+0.2**
MMRI	**Maumere**	**3.22**	**98**	*e*Pn	**Pn**	**11 27 32.2**	**+0.6**
MMRI				*e*Sn	**Sn**	**11 28 05.7**	**-3.1**
KAPI	**Kappang**	**3.23**	**13**	Pn	**Pn**	**11 27 31.3**	**-0.5**
	7.4nm,0.3s,baz=199,slow=7.0,SNR=36						
KAPI				Sn	**Sn**	**11 28 07.7**	**-1.5**
	9.0nm,0.3s,baz=1.6,slow=23,SNR=11						
KAPI				LR	LR	11 29 05.7	
	comp=Z,266nm,18.0s,baz=122,slow=46						
SPSI	**Sidrap Palu**	**4.26**	**10**	P	**Pn**	**11 27 45.9**	**0.0**
JAGI	**Jajag, Banyuwa**	**4.82**	**266**	*e*Pn	**Pn**	**11 27 54.2**	**+0.5**
JAGI				*e*Sn	**Sn**	**11 28 46.0**	**-2.5**
BATI	**Baumata**	**5.01**	**114**	Pn	**Pn**	**11 27 56.8**	**+0.5**
	2.6nm,0.3s,baz=232,slow=19,SNR=1.9						
BATI	**Baumata**	**5.01**	**114**	*e*Pn	**Pn**	**11 27 56.8**	**+0.5**
BATI				*e*Pn	**Pn**	**11 27 56.8**	**+0.5**
TTSI	**Tana Toraja**	**5.17**	**9**	P	**Pn**	**11 27 59.7**	**+1.3**
SOEI	**Soe**	**5.42**	**107**	*e*Pn	Pn	11 27 56.0	-6.0
SOEI				*e*Sn	**Sn**	**11 28 56.4**	**-6.9**
LUWI	**Luwuk**	**8.02**	**28**	*e*Pn	**Pn**	**11 28 39.8**	**+2.2**
FITZ	**Fitzroy Crossi**	**11.77**	**147**	Pn	**Pn**	**11 29 30.2**	**+1.1**
	0.3nm,0.3s,baz=331,slow=12,SNR=11						
FITZ				Sn	**Sn**	**11 31 39.2**	**-0.2**
	0.3nm,0.3s,baz=189,slow=19,SNR=4.2						
FITZ	**Fitzroy Crossi**	**11.77**	**147**	*e*Pn	**Pn**	**11 29 30.2**	**+1.1**
FITZ				*e*Sn	**Sn**	**11 31 38.2**	**-1.2**
MTN	**Manton Dam**	**12.78**	**112**	*e*Pn	**Pn**	**11 29 40.0**	**-2.9**
PSA00	**Pilbara Seismi**	**13.34**	**177**	*e*Pn	**Pn**	**11 29 51.2**	**+0.8**
GIRL	**Giralia**	**15.10**	**197**	*e*Pn	**Pn**	**11 30 15.3**	**+0.9**
	742nm,1.6s						
DAV	**Davao City (W)**	**16.50**	**24**	LR	LR	11 36 35.2	
	comp=Z,76nm,20.9s,baz=158,slow=36						
WRA	**Warramunga Arr**	**18.89**	**130**	P	**P**	**11 31 01.0**	**-0.2**
	0.5nm,0.3s,baz=299,slow=14,SNR=20						
WRA				S	**Sn**	**11 34 26.1**	**-6.4**
	0.0nm,0.3s,baz=302,slow=26,SNR=2.5						
WR1	**Warramunga Arr**	**18.89**	**130**	*e*P	**P**	**11 31 01.0**	**-0.2**
WRAB	**Tennant Creek**	**18.89**	**130**	*e*P	**P**	**11 31 01.1**	**-0.1**
	6.0nm,0.6s						
WB2	**Warramunga Arr**	**18.90**	**130**	*e*P	**P**	**11 31 01.1**	**-0.2**
	4.5nm,0.8s						
MORW	**Morawa**	**20.96**	**187**	*e*P	Pn	11 31 25.2	-1.2
	101nm,1.9s						
AS31	**Alice Springs**	**20.99**	**139**	*e*P	**P**	**11 31 23.9**	**-0.2**
	6μm,0.9s						
ASAR	**Alice Springs**	**20.99**	**139**	P	**P**	**11 31 25.2**	**+1.1**
	3.4nm,0.5s,baz=316,slow=9.6,SNR=52						
ASAR				S	**S**	**11 35 12.4**	**-3.8**
	0.3nm,0.9s,baz=316,slow=23,SNR=2.8						
ASAR				PcP	**PcP**	**11 35 30.2**	**-0.6**
	0.1nm,0.5s,baz=326,slow=2.5,SNR=3.9						
TGY	**Tagaytay City**	**22.22**	**5**	LR	LR	11 41 10.8	
	comp=Z,253nm,20.7s,baz=256,slow=39						
JAY	**Jayapura**	**22.31**	**77**	LR	LR	11 42 43.2	
	comp=Z,38nm,19.0s,baz=153,slow=43						
COEN	**Coen**	**24.38**	**106**	*e*P	**P**	**11 32 00.1**	**+1.3**
	33nm,1.6s						
NWAO	**Narrogin (SRO)**	**24.68**	**184**	P	**P**	**11 32 02.0**	**+0.7**
	4.1nm,0.6s,baz=0.0,slow=9.1,SNR=3.3						
NWAO	**Narrogin (SRO)**	**24.68**	**184**	*e*P	**P**	**11 32 02.0**	**+0.7**
NWAO				*e*P	**P**	**11 32 02.7**	**+1.4**
BBOO	**Buckleboo**	**29.15**	**150**	*e*P	**P**	**11 32 40.2**	**-1.4**
	35nm,1.6s						
STKA	**Stephens Creek**	**31.57**	**141**	*e*P	**P**	**11 33 02.7**	**-0.2**
	3.6nm,1.8s						
BKZ	**Black Stump Fm**	**59.82**	**131**	*e*P	**P**	**11 36 47.2**	**+1.5**
	40nm,1.7s						
MK32	**Makanchi Array**	**63.74**	**333**	*e*P	**P**	**11 37 11.7**	**-0.2**
MKAR	**Makanchi Array**	**63.74**	**333**	P	**P**	**11 37 11.7**	**-0.2**
	0.5nm,0.7s,baz=134,slow=6.2,SNR=4.5						
PETK	**Petropavlovsk-**	**69.32**	**24**	P	**P**	**11 37 48.3**	**+0.9**
	1.1nm,0.7s,baz=222,slow=1.9,SNR=3.4						
PEA1	**Petropavlovsk-**	**69.33**	**24**	*e*P	**P**	**11 37 48.3**	**+0.9**
MAW	**Mawson**	**70.00**	**200**	P	**P**	**11 37 52.5**	**+1.1**
	0.9nm,0.5s,baz=46,slow=12,SNR=4.3						
MAW	**Mawson**	**70.00**	**200**	*e*P	**P**	**11 37 52.3**	**+1.0**
	4.4nm,1.8s						
VNDA	**Vanda**	**72.79**	**171**	P	**P**	**11 38 09.7**	**+1.7**
	0.3nm,0.4s,baz=330,slow=4.3,SNR=4.2						
VNDA	**Vanda**	**72.79**	**171**	*e*P	**P**	**11 38 08.4**	**+0.4**
ABKAR	**Akbulak array**	**76.91**	**325**	*e*P	**P**	**11 38 31.2**	**-1.1**
	9.3nm,1.9s						
DAMY	**Dhamar**	**77.36**	**287**	*e*P	**P**	**11 38 36.0**	**0.0**
	75nm,1.8s						
QSPA	**South Pole Qui**	**81.81**	**180**	*e*P	**P**	**11 39 00.0**	**+1.1**
	10nm,1.4s						

ISC 18 11:30:42.8±1.3, 49°.66N±0°.05×17°.71E±0°.05, h4km±14km, n7, σ0§55/13, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**0.16**	**317**	*e*PG	**Pg**	**11 30 45.7**	**-0.3**
MORC				*e*SG	**Sg**	**11 30 47.5**	**-0.6**
JAVC	**Velka Javorina**	**0.80**	**182**	*e*PG	**Pb**	**11 30 59.4**	**0.0**
VRAC	**Vranov**	**0.81**	**244**	*e*PG	**Pb**	**11 30 59.4**	**0.0**
VRAC				*e*SG	**Sg**	**11 31 09.5**	**+0.7**
KRUC	**Moravsky**	**1.05**	**236**	*e*PG	**Pb**	**11 31 03.5**	**0.0**
KRUC				*e*SG	**Sg**	**11 31 16.6**	**+0.1**
LANS	**Liptovska Anna**	**1.26**	**113**	*e*PG	**Pg**	**11 31 07.6**	**+0.7**
LANS				*e*SG	**Sb**	**11 31 23.7**	**+0.1**
VYHS	**Vyhne**	**1.38**	**147**	*e*PG	**Pn**	**11 31 07.9**	**-1.0**
VYHS				*e*SG	**Sb**	**11 31 26.9**	**-0.3**
KSP	**Ksiaz**	**1.49**	**323**	*e*Pg	**Pn**	**11 31 10.7**	**+0.3**
KSP				*e*Sg	**Sb**	**11 31 30.6**	**+0.3**

TAP 18 11:32:48.0, 22°.66N×120°.73E, h18km, ML1.7, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASBT	**Mashibuluo**	**0.10**	**241**	P	Pg	11 32 52.0	+0.3
MASBT	baz=241						
				*e*S	Sg	11 32 55.1	+0.9
	baz=241						
SSD	**Sandimen**	**0.12**	**313**	P	Pg	11 32 52.0	+0.1
SSD	baz=315						
				*e*S	Sg	11 32 55.0	+0.3
	baz=315						
ECL	**Taimali**	**0.22**	**107**	*e*P	Pg	11 32 53.9	+0.7
ECL	baz=106						
				*e*S	Sg	11 32 58.2	+1.5
	baz=106						
SSPT	**Xinbi**	**0.23**	**220**	*e*P	Pg	11 32 53.7	+0.3
SSPT	baz=220						
				*e*S	Sg	11 32 58.7	+1.7
	baz=220						
EAST	**Anshuo**	**0.30**	**158**	*e*P	Pb	11 32 55.2	+0.4
EAST	baz=156						
				*e*S	Sb	11 33 00.9	+1.6
	baz=156						
SCZT	**Fangliau**	**0.30**	**199**	P	Pb	11 32 55.2	+0.3
SCZT	baz=197						
				*e*S	Sb	11 33 00.2	+0.8
	baz=197						
TWM1	**Shoushan**	**0.33**	**300**	*e*P	Pb	11 32 55.8	+0.6
TWM1	baz=300						
				*e*S	Sb	11 33 01.4	+1.2
	baz=300						
SLGT	**Liugui**	**0.34**	**347**	*e*P	Pg	11 32 55.0	-0.2
SLGT	baz=347						
				*e*S	Sg	11 33 00.2	+0.1
	baz=347						
TWG	**Pinlang**	**0.35**	**63**	*e*P	Pb	11 32 56.2	+0.4
	86nm,0.6s						
TWG	**Pinlang**	**0.35**	**63**	P	Pb	11 32 56.2	+0.4
TWG	baz=64						
				*e*S	Sb	11 33 01.8	+0.7
	baz=64						
TWGBT	**Beinan**	**0.36**	**64**	P	Pb	11 32 56.2	+0.3
TWGBT	baz=64						
				*e*S	Sb	11 33 02.1	+0.9
	baz=64						
STYT	**Tauyuan**	**0.50**	**3**	P	Pb	11 32 58.4	+0.1
STYT	baz=3.0						
				*e*S	Sb	11 33 05.6	+0.4
	baz=3.0						
CHN1	**Nanshi**	**0.55**	**340**	P	Pb	11 32 59.7	+0.6
CHN1	baz=340						
				*e*S	Sn	11 33 08.3	-1.4
	baz=340						
ELDTW	**Lidau**	**0.59**	**27**	*e*P	Pg	11 32 59.8	+0.1
ELDTW	baz=27						
				*e*S	Sn	11 33 09.3	-1.4
	baz=27						
WTP	**Ta-pu**	**0.59**	**350**	*e*P	Pg	11 33 00.2	+0.4
WTP	baz=350						
				*e*S	Sn	11 33 09.3	-1.4
	baz=350						
TWK	**Hsinying**	**0.64**	**340**	*e*P	Pg	11 33 01.4	+0.6
TWK	baz=340						
				*e*S	Sg	11 33 10.6	+1.3
	baz=340						
TPUB	**Ta-pu**	**0.64**	**352**	P	Pg	11 33 00.7	0.0
TPUB	baz=351						
				*e*S	Sn	11 33 11.1	-0.9
	baz=351						
CHN4	**Tsaushan**	**0.70**	**350**	P	Pg	11 33 02.1	+0.3
CHN4	baz=349						
				*e*S	Sn	11 33 12.8	-0.5
	baz=349						
YUS	**Yu-Shan**	**0.85**	**14**	*e*P	Pn	11 33 05.2	-0.3
YUS	baz=13						
				*e*S	Sn	11 33 17.4	-0.3
	baz=13						
TWF1	**Yuli**	**0.86**	**37**	P	Pn	11 33 05.2	0.0
TWF1	baz=37						
				*e*S	Sg	11 33 16.6	+0.3
	baz=37						
YULB	**Yu-li**	**0.90**	**36**	*e*P	Pb	11 33 04.7	-0.3
	5.5nm,0.6s						
YULB	**Yu-li**	**0.90**	**36**	*e*P	Pn	11 33 05.6	0.0
YULB	baz=35						
				*e*S	Sg	11 33 17.2	-0.1
	baz=35						
CHN5	**Tsauling**	**0.93**	**357**	*e*P	Pb	11 33 05.6	0.0
CHN5	baz=357						
				*e*S	Sg	11 33 18.7	+0.2
	baz=357						
EHY	**Hungye**	**1.00**	**33**	*e*S	Sn	11 33 21.6	+0.8
	baz=33						
WDGT	**Dungji**	**1.15**	**301**	*e*P	Pn	11 33 08.7	-0.4
WDGT	baz=301						
				*e*S	Sn	11 33 24.2	-0.2
	baz=301						

*ISCJB **18** 12:05:26.4±0.3, 5°.12S±0°.05×152°.02E±0°.06, h70km, mb4.3/35, Error ellipse: s-maj=10.0km s-min=5.1km az=29.2*

*NEIC **18** 12:05:26.0±2.2, 5°.15S×152°.13E, h56km±6km, mb4.5/23, Error ellipse: s-maj=14.3km s-min=6.3km az=98.0*

*IDC **18** 12:05:27.5±0.9, 5°.15S×152°.04E, h65km±7km, mb3.9/18, mb1 4.1/19, mb1mx3.9/42, mbtmp4.2/19, MS3.2/5, Ms1 3.2/5, ms1mx2.9/30, Error ellipse: s-maj=18.1km s-min=11.2km az=113.0*

ISC 18 12:05:27.7±0.5, 5°.11S±0°.06×152°.12E±0°.09, h70km, n59, σ1§20/62, mb4.3/34, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.91**	**3**	*e*Pn	**Pn**	**12 05 43.4**	**-1.7**
RABL				*e*Sn	**Sn**	**12 05 57.1**	**-1.0**
PMG	**Port Moresby**	**6.52**	**229**	P	**Pn**	**12 07 01.5**	**+0.6**
	4.4nm,0.3s,baz=70,slow=6.6,SNR=15						
PMG				S	**Sn**	**12 08 14.1**	**+0.2**
	5.2nm,0.3s,baz=129,slow=18,SNR=7.5						
PMG	**Port Moresby**	**6.52**	**229**	*e*Pn	**Pn**	**12 07 02.8**	**+1.9**
PMG				*e*Sn	**Sn**	**12 08 13.7**	**-0.3**
HNR	**Honiara**	**8.87**	**119**	LR	LR	12 10 53.9	
	comp=Z,101nm,18.6s,baz=174,slow=37						
JAY	**Jayapura**	**11.68**	**282**	LR	LR	12 11 59.0	
	comp=Z,72nm,18.9s,baz=116,slow=34						
FAKI	**Fak Fak**	**19.94**	**275**	*e*P	**P**	**12 09 54.6**	**+0.4**
	14nm,1.1s						
SIJI	**Sorong**	**21.25**	**281**	P	**P**	**12 10 10.8**	**+2.5**
	6.4nm,0.6s,baz=125,slow=6.0,SNR=5.1						
DZM	**Mont Dzumac**	**21.83**	**142**	P	**P**	**12 10 15.8**	**+1.3**
	4.6nm,0.7s,baz=325,slow=19,SNR=2.9						
DZM	**Mont Dzumac**	**21.83**	**142**	*e*P	**P**	**12 10 16.0**	**+1.5**
	28nm,1.4s						
MTN	**Manton Dam**	**22.10**	**248**	*e*P	**P**	**12 10 15.9**	**-1.4**
	13nm,1.1s						
ANA2	**Anatahan**	**22.24**	**344**	*e*P	**P**	**12 10 17.8**	**-1.0**
	64nm,0.6s						
MARNC	**Mare, Loyalty**	**22.42**	**138**	*e*P	**P**	**12 10 19.3**	**-1.5**
	111nm,1.3s						
WRAB	**Tennant Creek**	**22.72**	**228**	*e*P	**P**	**12 10 22.7**	**-1.4**
	17nm,0.8s						
WB2	**Warramunga Arr**	**22.73**	**228**	*e*P	**P**	**12 10 23.2**	**-0.9**
	17nm,0.8s						
WR1	**Warramunga Arr**	**22.74**	**228**	*e*P	**P**	**12 10 22.9**	**-1.2**
WRA	**Warramunga Arr**	**22.74**	**228**	P	**P**	**12 10 23.0**	**-1.2**
	13nm,0.5s,baz=53,slow=10,SNR=124						
ASAR	**Alice Springs**	**25.47**	**222**	P	**P**	**12 10 49.0**	**-0.5**
	6.4nm,0.7s,baz=57,slow=9.3,SNR=71						
ASAR				pP	**pP**	**12 11 03.9**	**-2.2**
	10nm,0.6s,baz=56,slow=9.0,SNR=19						
ASAR				PcP	**PcP**	**12 14 19.3**	**-0.6**
	0.8nm,0.7s,baz=68,slow=2.8,SNR=4.0						
SOEI	**Soe**	**28.00**	**259**	*e*P	**P**	**12 11 10.5**	**-1.8**
	22nm,1.0s						
STKA	**Stephens Creek**	**28.40**	**199**	P	**P**	**12 11 15.3**	**-0.3**
	3.4nm,0.7s,baz=28,slow=12,SNR=11						
STKA				pP	**pP**	**12 11 30.1**	**-2.0**
	1.5nm,0.6s,baz=19,slow=13,SNR=2.0						
STKA	**Stephens Creek**	**28.40**	**199**	*e*P	**P**	**12 11 14.9**	**-0.7**
	0.7nm,0.7s						
BATI	**Baumata**	**28.65**	**258**	LR	LR	12 25 15.1	
	comp=Z,208nm,18.3s,baz=280,slow=42						
FITZ	**Fitzroy Crossi**	**28.92**	**241**	P	**P**	**12 11 18.9**	**-1.4**
	4.1nm,0.4s,baz=49,slow=8.2,SNR=49						
FITZ	**Fitzroy Crossi**	**28.92**	**241**	*e*P	**P**	**12 11 19.4**	**-1.0**
BBOO	**Buckleboo**	**31.38**	**207**	*e*P	**P**	**12 11 40.6**	**-1.3**
	5.2nm,1.4s						
FORT	**Forrest**	**34.13**	**219**	*e*P	**P**	**12 12 05.1**	**-0.8**
	28nm,1.4s						
PSA00	**Pilbara Seismi**	**35.29**	**239**	*e*P	**P**	**12 12 15.1**	**-1.1**
	23nm,1.4s						
MORW	**Morawa**	**41.63**	**231**	*e*P	**P**	**12 13 08.4**	**-0.8**
	17nm,1.3s						
MJAR	**Matsushiro Arr**	**43.43**	**344**	LR	LR	12 30 05.2	
	comp=Z,16nm,21.8s,baz=190,slow=34						
KSRS	**Korea Array**	**47.97**	**334**	P	**P**	**12 14 01.6**	**+2.2**
	0.5nm,0.6s,baz=142,slow=7.1,SNR=3.0						
KLR	**Kul'dur**	**56.95**	**344**	P	**P**	**12 15 06.5**	**+0.8**
	1.4nm,0.6s,baz=153,slow=4.5,SNR=4.7						
CM31	**Chiang Mai Arr**	**57.40**	**296**	*e*P	**P**	**12 15 10.0**	**+0.5**
	10nm,1.4s						
CMAR	**Chiang Mai Arr**	**57.40**	**296**	P	**P**	**12 15 10.1**	**+0.6**
	0.7nm,0.3s,baz=111,slow=4.9,SNR=3.1						
PETK	**Petropavlovsk-**	**58.19**	**4**	P	**P**	**12 15 16.7**	**+2.4**
	1.1nm,0.8s,baz=152,slow=7.8,SNR=4.4						
PETK				LR	LR	12 34 24.4	
	comp=Z,18nm,21.9s,baz=139,slow=30						
PEA1	**Petropavlovsk-**	**58.19**	**4**	*e*P	**P**	**12 15 16.7**	**+2.3**
SONA0	**Songino Array**	**66.23**	**328**	*e*P	**P**	**12 16 08.2**	**-0.2**
SONM	**Songino Array**	**66.23**	**328**	P	**P**	**12 16 08.2**	**-0.2**
	0.7nm,0.5s,baz=138,slow=6.0,SNR=3.1						
VNDA	**Vanda**	**72.55**	**178**	P	**P**	**12 16 47.3**	**+0.6**
	1.4nm,0.7s,baz=335,slow=7.6,SNR=10						
OHAK	**Old Harbor**	**76.13**	**27**	*e*P	**P**	**12 17 08.8**	**+1.0**
	22nm,1.4s						
CNPM	**China Poot**	**78.28**	**26**	*e*P	**P**	**12 17 20.9**	**+1.1**
	12nm,0.6s						
TTA	**Tatalina**	**78.30**	**22**	*e*P	**P**	**12 17 21.0**	**+1.0**
	5.8nm,1.5s						
RC01	**Rabbit Creek A**	**79.74**	**25**	*e*P	**P**	**12 17 28.1**	**+0.4**
	12nm,1.4s						
MK32	**Makanchi Array**	**80.11**	**319**	*e*P	**P**	**12 17 29.8**	**-0.4**
MKAR	**Makanchi Array**	**80.11**	**319**	P	**P**	**12 17 29.8**	**-0.4**
	0.4nm,0.5s,baz=101,slow=6.3,SNR=4.1						
ILAR	**Eielson Array**	**82.70**	**22**	P	**P**	**12 17 42.5**	**-0.9**
	0.9nm,0.8s,baz=242,slow=4.9,SNR=9.1						
ILAR				pP	**pP**	**12 18 02.5**	**-0.3**
	0.7nm,0.6s,baz=243,slow=5.0,SNR=4.9						
ILB	**Eielson Array**	**82.70**	**22**	*e*P	**P**	**12 17 42.9**	**-0.5**
	1.6nm,0.8s						
DOT	**Dot Lake**	**83.28**	**24**	*e*P	**P**	**12 17 46.7**	**+0.2**
	3.2nm,0.9s						
KURBB	**Kurchatov Arra**	**83.62**	**322**	P	**P**	**12 17 47.3**	**-1.2**
	1.0nm,0.2s,baz=105,slow=4.4,SNR=3.2						
MAW	**Mawson**	**85.03**	**203**	P	**P**	**12 17 55.3**	**0.0**
	2.7nm,0.6s,baz=108,slow=5.8,SNR=9.4						
MAW	**Mawson**	**85.03**	**203**	*e*P	**P**	**12 17 55.8**	**+0.6**
	0.8nm,0.8s						
NV01	**Mina Array Sit**	**92.80**	**52**	*e*P	**P**	**12 18 34.7**	**+1.6**
NVAR	**Mina Array Bea**	**92.80**	**52**	P	**P**	**12 18 34.7**	**+1.6**
	1.4nm,0.8s,baz=253,slow=7.0,SNR=11						
YKA	**Yellowknife Ar**	**96.01**	**28**	P	**P**	**12 18 47.2**	**+0.3**
	0.2nm,0.6s,baz=266,slow=4.6,SNR=3.0						
YKB5	**Yellowknife Ar**	**96.01**	**28**	*e*P	**P**	**12 18 47.2**	**+0.3**
PD31	**Pinedale Array**	**99.55**	**48**	*e*Pdif	**Pdif**	**12 19 02.8**	**-0.9**
	0.6nm,0.8s						
PDAR	**Pinedale Array**	**99.55**	**48**	P	**Pdif**	**12 19 03.6**	**0.0**
	0.3nm,0.6s,baz=280,slow=5.4,SNR=4.1						
LPAZ	**La Paz**	**134.86**	**119**	PKP	**PKPdf**	**12 24 41.1**	**+0.7**
	0.7nm,0.6s,baz=180,slow=5.1,SNR=3.4						
LPAZ	**La Paz**	**134.

SONA0	Songino Array	148.87	86	ePKPbc	PKPbc	12 28 42.0	0.0		
SONM	Songino Array	148.87	86	PKPbc	PKPbc	12 28 42.0	0.0		
	0.8nm,0.5s,baz=219,slow=1.8,SNR=3.2								
DOT	Dot Lake	151.16	307	ePKPbc	PKiKP	12 28 47.5	0.0		
ILAR	Eielson Array	152.63	309	PKPbc	PKiKP	12 28 50.5	+0.1		
	1.7nm,0.9s,baz=124,slow=1.5,SNR=12								
ILAR				PKPab	PKPab	12 29 00.2	-0.7		
	1.1nm,0.9s,baz=126,slow=1.9,SNR=4.7								
ILB	Eielson Array	152.63	309	ePKPbc	PKiKP	12 28 50.8	+0.4		

IDC 18 12:14:29.0±4.6, 20°.40S×66°.02E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/42, mbtmp3.9/6, Error ellipse: s-maj=134.9km s-min=31.1km az=59.0, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	14.13	27	T	T	12 31 59.4	
	baz=204,slow=76,SNR=36						
H08S2	Diego Garcia H	14.14	27	T	T	12 32 08.1	
	baz=204,slow=76,SNR=17						
H08S3	Diego Garcia H	14.15	27	T	T	12 32 09.4	
	baz=204,slow=76,SNR=28						
H08N3	Diego Garcia H	14.78	20	T	T	12 33 00.2	
	baz=200,slow=77						
H08N1	Diego Garcia H	14.79	20	T	T	12 33 04.4	
	baz=200,slow=77						
H08N2	Diego Garcia H	14.80	20	T	T	12 33 02.0	
	baz=200,slow=77						
CMAR	Chiang Mai Arr	50.33	42	P	P	12 23 27.6	-0.2
	0.5nm,0.3s,baz=238,slow=8.4,SNR=4.2						
ASAR	Alice Springs	62.48	107	P	P	12 24 54.6	0.0
	0.7nm,0.7s,baz=263,slow=5.9,SNR=13						
WRA	Warramunga Arr	63.67	103	P	P	12 25 02.6	0.0
	0.9nm,0.7s,baz=250,slow=4.9,SNR=4.8						
MKAR	Makanchi Array	68.47	12	P	P	12 25 32.6	-0.2
	0.2nm,0.3s,baz=190,slow=5.9,SNR=4.0						
ZALV	Zalesovo Beam	75.79	11	P	P	12 26 16.4	0.0
	1.3nm,0.5s,baz=194,slow=5.2,SNR=4.4						
SONM	Songino Array	76.97	27	P	P	12 26 23.9	+0.4
	0.4nm,0.4s,baz=218,slow=6.8,SNR=3.5						

*BJI **18** 12:27:10.6±0.0, 23°.62S×179°.43W, h585km, mb4.7/19, mB4.9/12*
*ISCJB **18** 12:27:11.2±0.4, 23°.47S±0°.03×179°.76W±0°.05, h573km±5km, mb4.5/70, Error ellipse: s-maj=6.8km s-min=3.9km az=1.1*
*NEIC **18** 12:27:11.0±2.3, 23°.29S×179°.81W, h558km±5km, mb4.7/62, Error ellipse: s-maj=13.5km s-min=6.9km az=168.0*
*IDC **18** 12:27:12.1±2.1, 23°.33S×179°.77W, h564km±22km, mb3.6/17, mb1 3.8/18, mb1mx3.6/29, mbtmp4.5/18, Error ellipse: s-maj=17.0km s-min=12.8km az=77.0*
ISC 18 12:27:11.8±0.5, 23°.48S±0°.05×179.72W±0°.06, h569km±5km, h570km; pP-P, n237, σ1§71/282, mb4.5/70, 22C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.97	165	P	P	12 28 50.9	0.0
RIZ				S	S	12 30 09.9	-2.2
RAO	Raoul Island	5.97	165	eP	P	12 28 51.4	+0.4
RAO				eS	S	12 30 09.8	-2.4
GLKZ	Green Lake	5.98	165	P	P	12 28 51.1	+0.1
GLKZ				S	S	12 30 12.7	+0.3
NIUE	Niue	10.12	66	eP	P	12 29 30.1	-1.2
NIUE				eS	S	12 31 28.5	+2.6
MARNC	Mare, Loyalty	11.50	278	eP	P	12 29 45.1	-0.2
PINNC	Pines Island,	11.85	272	eP	P	12 29 49.5	+0.6
OUENC	Ouen Island, N	12.43	272	eP	P	12 29 56.2	+1.3
ONTNC	Ouen Toro	12.80	272	eP	P	12 29 58.5	-0.2
DZM	Mont Dzumac	12.84	274	P	P	12 29 59.9	+0.7
	0.4nm,0.3s,baz=136,slow=21,SNR=6.3						
DZM	Mont Dzumac	12.84	274	eP	P	12 29 58.3	-0.9
OUZ	Omahuta	13.07	205	eP	P	12 30 03.4	+2.2
OUZ	Omahuta	13.07	205	P	P	12 30 03.1	+1.9
GRZ	Great Barrier	13.40	197	P	P	12 30 05.7	+1.1
WCZ	Waipu Caves	13.44	201	P	P	12 30 07.1	+2.0
KUZ	Kuaotunu	13.80	196	P	P	12 30 09.6	+0.9
ABAZ	Army Bay	13.90	199	P	P	12 30 11.0	+1.2
WIAZ	Waiheke Island	14.00	197	P	P	12 30 12.1	+1.4
MBAZ	Motutapu North	14.04	198	P	P	12 30 12.6	+1.5
MXZ	Matakaoa Point	14.14	186	eP	P	12 30 11.3	-0.9
MXZ	Matakaoa Point	14.14	186	P	P	12 30 10.3	-1.8
MXZ				S	S	12 32 35.6	-4.7
WMGZ	Waiomatatini S	14.39	186	P	P	12 30 12.3	-2.3
WMGZ				S	S	12 32 42.0	-2.7
HAZ	Te Kaha	14.39	188	P	P	12 30 13.5	-1.2
HAZ				S	S	12 32 41.7	-3.2
TGRZ	Tauranga	14.62	193	P	P	12 30 17.8	+0.9
PUZ	Puketiti	14.65	186	P	P	12 30 15.0	-2.3
PUZ				S	S	12 32 45.4	-4.2
TOZ	Tahuroa Road	14.79	195	P	P	12 30 19.8	+1.2
KMRZ	Kaimai	14.80	194	P	P	12 30 20.0	+1.2
LIRZ	Lichensteins R	14.86	192	P	P	12 30 21.0	+1.7
FUNA	Funafuti	14.90	356	eP	P	12 30 16.3	-3.8
KARZ	Kaharoa	14.90	192	P	P	12 30 21.3	+1.5
OMRZ	Omania	14.96	192	P	P	12 30 21.3	+0.9
URZ	Urewera	14.98	190	P	P	12 30 17.3	-3.2
	9.5nm,0.3s,baz=45,slow=4.3,SNR=49						
URZ				S	S	12 32 49.9	-5.5
	6.7nm,0.3s,baz=28,slow=23,SNR=12						
URZ	Urewera	14.98	190	eP	P	12 30 18.3	-2.2
	54nm,0.5s						
URZ				eS	S	12 32 56.4	+1.0
URZ	Urewera	14.98	190	P	P	12 30 18.1	-2.4
URZ				S	S	12 32 50.5	-4.9
MWZ	Matawai	15.00	188	P	P	12 30 18.6	-2.1
MWZ				S	S	12 32 49.4	-6.3
TKGZ	Te Karaka	15.06	187	P	P	12 30 19.8	-1.5
TARZ	Mount Tarawera	15.06	192	P	P	12 30 21.4	0.0
CNGZ	Carnagh Statio	15.07	186	P	P	12 30 20.6	-0.7
RRRZ	Republican Roa	15.16	191	P	P	12 30 22.1	-0.2
RAGZ	Rawiri	15.17	189	P	P	12 30 20.5	-1.9
HSRZ	Hossack Road	15.19	192	P	P	12 30 23.2	+0.6
MUGZ	Murupara	15.25	191	P	P	12 30 21.6	-1.6
MUGZ				S	S	12 32 52.9	-7.1
HRRZ	Handcock Road	15.26	192	P	P	12 30 23.0	-0.2
RIGZ	Rimuhau	15.33	187	P	P	12 30 22.9	-1.1
RIGZ				S	S	12 32 56.2	-5.2
PRRZ	Plateau Road	15.34	192	P	P	12 30 23.2	-0.8
TLZ	Tolley Road	15.35	194	P	P	12 30 25.5	+1.3
WPRZ	Whakapapatarin	15.40	192	P	P	12 30 24.1	-0.6
ALRZ	Allen Road	15.41	192	P	P	12 30 23.7	-1.1
PRGZ	Paritu Road	15.53	187	P	P	12 30 25.1	-0.9
PRGZ				S	S	12 33 01.4	-3.3
WHTZ	Whakaora	15.59	193	P	P	12 30 26.5	0.0
MTHZ	Maungataniwha	15.61	190	P	P	12 30 24.5	-2.1
MTHZ				S	S	12 33 02.0	-4.0
RAHZ	Arahi	15.63	189	P	P	12 30 24.5	-2.4
RAHZ				S	S	12 33 03.1	-3.3
KNZ	Kokohu	15.66	188	P	P	12 30 25.2	-1.9
KNZ				S	S	12 33 03.5	-3.1
MRHZ	Matea Rd	15.66	191	P	P	12 30 25.6	-1.6
MRHZ				S	S	12 33 03.9	-3.0
HIZ	Hauiti	15.69	196	eP	P	12 30 28.9	+1.4
	41nm,0.7s						
HIZ	Hauiti	15.69	196	P	P	12 30 28.7	+1.2
MHGZ	Mahia Peninsul	15.76	187	P	P	12 30 26.5	-1.6
WHHZ	Waihua	15.77	189	P	P	12 30 27.2	-1.0
WHHZ				S	S	12 33 06.3	-2.2
RATZ	Rangitukua	15.82	193	P	P	12 30 27.6	-1.1
NMHZ	Naumai	15.85	190	P	P	12 30 27.4	-1.7
NMHZ				S	S	12 33 06.5	-3.6
RITZ	Rihia Road	15.91	193	P	P	12 30 28.3	-1.3
KATZ	Kakaramea	15.94	193	P	P	12 30 28.8	-1.2
BKZ	Black Stump Fm	15.97	191	eP	P	12 30 26.8	-3.4
	23nm,0.6s						
BKZ				eS	S	12 33 12.5	+0.5
BKZ	Black Stump Fm	15.97	191	P	P	12 30 27.0	-3.2
ARHZ	Aropaoanui	15.98	189	P	P	12 30 28.9	-1.3
KRVZ	Karewarewa	16.06	193	P	P	12 30 30.0	-1.1
TWVZ	Taurewa	16.08	194	P	P	12 30 31.0	-0.3
WTVZ	West Tongariro	16.09	193	P	P	12 30 29.8	-1.6
NGZ	Ngauruhoe	16.15	193	P	P	12 30 31.2	-0.8
MCHZ	McNeill Hill	16.21	190	P	P	12 30 29.9	-2.4
TUVZ	Tukino	16.23	193	P	P	12 30 31.4	-1.3
KWHZ	Kaweka Forest	16.23	191	P	P	12 30 30.1	-2.6
FWVZ	Far West T-bar	16.24	193	P	P	12 30 32.3	-0.6
VRZ	Vera Road	16.29	195	P	P	12 30 34.2	+1.1
PKVZ	Pokaka	16.31	194	P	P	12 30 32.5	-0.9
MOVZ	Moawhango	16.34	193	P	P	12 30 31.1	-2.5
BHHZ	Black Hill Sta	16.36	192	P	P	12 30 30.6	-3.2
KRHZ	Kereru	16.46	191	P	P	12 30 32.2	-2.4
KAHZ	Kahuranaki	16.52	189	P	P	12 30 34.0	-1.3
PKE	Pukeiti	16.56	197	P	P	12 30 39.4	+3.8
KHEZ	Kahui Hut	16.64	197	P	P	12 30 39.9	+3.5
NBEZ	Newall Road No	16.66	198	P	P	12 30 41.0	+4.6
PNHZ	Pukenui	16.75	191	P	P	12 30 35.2	-2.0
PXZ	Pawanui	16.76	189	P	P	12 30 36.0	-1.2
NMEZ	Namu Road	16.79	197	P	P	12 30 41.3	+3.7
WAZ	Wanganui	16.84	194	P	P	12 30 38.1	+0.1
WPHZ	Waipukurau	16.86	190	P	P	12 30 40.3	+2.2
TSZ	Takapari Road	16.93	191	P	P	12 30 37.5	-1.4
PRHZ	Porangahau	17.02	190	P	P	12 30 38.8	-0.9
DVHZ	Dannevirke	17.13	191	P	P	12 30 39.6	-1.1
OHWZ	Ohakea	17.20	193	P	P	12 30 42.1	+0.9
ANWZ	Angora Road	17.24	190	P	P	12 30 41.5	-0.1
POWZ	Post Office Ro	17.29	192	P	P	12 30 41.8	-0.3
BFZ	Birch Farm	17.49	190	eP	P	12 30 41.9	-2.0
	34nm,0.6s						
BFZ				eS	S	12 33 35.5	-1.1
BFZ	Birch Farm	17.49	190	P	P	12 30 42.1	-1.8
TIWZ	Tintock	17.64	191	P	P	12 30 45.1	-0.2
SNZO	South Karori	18.39	193	eP	P	12 30 50.8	-1.3
	110nm,0.8s						
SNZO				eS	S	12 33 51.8	+0.7
THZ	Tophouse	19.25	197	eP	P	12 31 00.8	+0.7
	77nm,0.7s						
THZ				eS	S	12 34 04.3	-0.8
KHZ	Kahutara	19.70	195	eP	P	12 31 04.0	0.0
	53nm,0.8s						
KHZ				eS	S	12 34 11.1	-1.1
LTZ	Lake Taylor	20.37	197	eP	P	12 31 10.7	+0.5
	72nm,0.7s						
LTZ				eS	S	12 34 20.9	-2.0
OXZ	Oxford	20.94	197	eP	P	12 31 15.4	+0.2
	152nm,0.4s						
OXZ				eS	S	12 34 30.0	-1.8
CRLZ	Canterbury Las	21.02	196	eP	P	12 31 16.1	+0.2
	79nm,1.5s						
MQZ	McQueen's Vall	21.14	195	eP	P	12 31 17.2	+0.2
	23nm,0.5s						
MQZ				eS	S	12 34 34.3	-0.5
RPZ	Rata Peaks	21.57	198	P	P	12 31 21.5	+0.6
	65nm,0.6s,baz=350,slow=1.4,SNR=28						
RPZ				S	S	12 34 45.9	+4.0
	3.7nm,0.6s,baz=24,slow=20,SNR=2.8						
RPZ	Rata Peaks	21.57	198	eP	P	12 31 21.8	+0.8
	56nm,0.7s						
FOZ	Fox Glacier	21.79	201	eP	P	12 31 22.6	-0.2
	28nm,0.5s						
FOZ				eS	S	12 34 43.8	-1.4
LBZ	Lake Benmore	22.44	199	eP	P	12 31 27.6	-1.0
	28nm,1.2s						
ODZ	Otahua Downs	22.91	198	eP	P	12 31 32.9	+0.1
	28nm,1.3s						
MLZ	Mavora Lakes	23.98	201	eP	P	12 31 42.9	+0.6
	18nm,0.9s						
DCZ	Deep Cove	24.40	203	eP	P	12 31 47.3	+1.3
	29nm,1.1s						
WHZ	Wether Hill Ro	24.50	201	eP	P	12 31 47.2	+0.3
	40nm,0.9s						
ARMA	Armidale	26.41	249	eP	P	12 32 03.5	-0.6
	28nm,1.4s						
EIDS	Eidsvold	26.63	260	eP	P	12 32 06.5	+0.5
	10nm,1.2s						
CAN	Canberra	29.58	239	eP	P	12 32 32.2	+0.6
	38nm,1.4s						
CTAO	Charters Tower	31.73	269	eP	P	12 32 50.6	+0.4
	21nm,0.6s						
TOO	Toolangi	32.90	237	eP	P	12 33 00.9	+1.1
	10nm,0.9s						
TAU	Tasmania Unive	33.41	227	eP	P	12 33 05.3	+1.3
	71nm,1.5s						
PMG	Port Moresby	34.60	288	P	P	12 33 13.8	-0.6
	26nm,0.9s,baz=59,slow=7.5,SNR=5.5						
PMG	Port Moresby	34.60	288	eP	P	12 33 13.5	-0.9
	27nm,0.9s						
STKA	Stephens Creek	35.12	248	P	P	12 33 19.6	+1.1
	1.7nm,0.4s,baz=94,slow=12,SNR=7.3						
STKA	Stephens Creek	35.12	248	eP	P	12 33 18.2	-0.3
	3.9nm,1.4s						
COEN	Coen	36.31	278	eP	P	12 33 27.1	-1.4
	22nm,1.3s						
BBOO	Buckleboo	39.85	246	eP	P	12 33 57.1	+0.1
	14nm,0.9s						
ASAR	Alice Springs	42.36	260	P	P	12 34 17.2	+0.2
	15nm,0.7s,baz=106,slow=7.0,SNR=151						
ASAR				PcP	PcP	12 35 57.7	+0.6
	2.7nm,0.8s,baz=101,slow=4.8,SNR=7.1						
ASAR				S	S	12 39 55.5	-2.4
	1.9nm,0.8s,baz=98,slow=15,SNR=9.0						
WB2	Warramunga Arr	42.68	266	eP	P	12 34 19.3	-0.3
	18nm,0.8s						
WB2				eS	S	12 40 00.3	-2.2
WRAB	Tennant Creek	42.69	266	eP	P	12 34 18.6	-1.0
	13nm,0.8s						
WRA	Warramunga Arr	42.70	266	P	P	12 34 19.3	-0.4
	11nm,0.6s,baz=96,slow=8.5,SNR=66						
WRA				S	S	12 39 59.2	-3.6
	3.7nm,1.0s,baz=98,slow=15,SNR=4.4						
FORT	Forrest	46.70	249	eP	P	12 34 50.3	+0.1
	74nm,0.6s						
MTN	Manton Dam	47.68	274	eP	P	12 34 57.2	-0.6
	9.9nm,0.9s						
HPAH	Hawaii Prepara	49.18	30	eP	P	12 35 07.9	-0.9
	97nm,1.2s						
FITZ	Fitzroy Crossi	51.12	265	eP	P	12 35 23.5	+0.5
	17nm,0.7s						
SBA	Scott Base	54.81	183	eP	P	12 35 51.0	+2.7
	15nm,0.9s						
VNDA	Vanda	54.82	185	P	P	12 35 51.0	+2.6
	5.1nm,0.7s,baz=6.1,slow=6.6,SNR=44						
VNDA				PcP	PcP	12 36 43.2	+1.5
	2.6nm,0.6s,baz=337,slow=4.3,SNR=6.6						
VNDA	Vanda	54.82	185	eP	P	12 35 51.1	+2.7
	4.6nm,0.8s						
SOEI	Soe	55.07	274	eP	P	12 35 52.0	+0.7
	42nm,0.8s						
PSA00	Pilbara Seismi	55.49	259	eP	P	12 35 53.4	-0.6
	33nm,1.4s						
NWAO	Narrogin (SRO)	55.65	245	eP	P	12 35 54.9	0.0
	10nm,1.0s						
MORW	Morawa	57.26	250	eP	P	12 36 05.9	-0.1
	14nm,0.8s						
LUWI	Luwuk	59.98	283	eP	P	12 36 23.6	-0.8
	51nm,1.3s						
GIRL	Giralia	60.26	256	eP	P	12 36 27.0	+0.7
	197nm,1.4s						
CASY	Casey	60.60	206	eP	P	12 36 28.5	+0.9
	8.9nm,0.8s						
QSPA	South Pole Qui	66.61	180	eP	P	12 37 08.3	+2.2
	28nm,0.8s						
JHJ2	Mitsune	68.23	324	eP	P	12 37 16.1	-0.1
	164nm,1.2s						
KKM	Kota Kinabalu	69.03	287	eP	P	12 37 21.6	-0.1
	14nm,1.2s						
KSM	Kuching	72.29	280	eP	P	12 37 41.1	+0.3
	13nm,0.8s						
SSLB	Suanglung	74.32	305	eP	P	12 37 50.5	-1.7
	8.2nm,1.0s						
UNV	Unalaska Valle	77.84	8	eP	P	12 38 10.4	-0.3
	16nm,1.2s						
KSRS	Korea Array	78.09	320	P	P	12 38 13.3	+0.9
	1.0nm,0.7s,baz=134,slow=5.1,SNR=6.7						
MAW	Mawson	78.24	200	P	P	12 38 14.4	+1.6
	10.0nm,0.9s,baz=129,slow=6.7,SNR=23						
MAW	Mawson	78.24	200	eP	P	12 38 14.4	+1.6
	5.0nm,1.3s						
PETK	Petropavlovsk-	78.75	346	P	P	12 38 15.8	+0.2
	1.2nm,0.6s,baz=117,slow=6.2,SNR=4.1						
PETK				pP	pwP	12 40 18.9	-0.3
	5.1nm,1.0s,baz=108,slow=9.3,SNR=6.3						
USRK	Ussuriysk Ar.	80.55	327	P	P	12 38 26.4	+1.1
	1.4nm,0.6s,baz=144,slow=5.2,SNR=4.4						
NJ2	Nanjing	80.58	311	eP	P	12 38 26.6	+0.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
IPM	Ipoh	81.96	278	eP	P	12 38 33.2	-0.1
	12nm,0.7s						
KHMM	Horse Mountain	82.46	39	eP	P	12 38 35.9	+0.6
	10nm,1.4s						
KULM	Kulim	82.63	279	eP	P	12 38 37.4	+0.8
	15nm,1.4s						
OHAK	Old Harbor	83.40	14	eP	P	12 38 40.0	+0.6
	19nm,1.4s						
SYO	Syowa Base	83.48	193⇑	eP	P	12 38 39.0	-0.8
NVAR	Mina Array Bea	84.27	44	P	P	12 38 45.2	+0.7
	0.8nm,0.8s,baz=216,slow=5.6,SNR=5.6						
NVAR				pP	pP	12 40 46.7	+0.9
	0.3nm,0.6s,baz=222,slow=6.6,SNR=3.0						
TPNV	Topopah Spring	84.75	46	eP	P	12 38 46.1	-0.7
	1.0nm,0.6s						
SNAA	Sanae	85.08	179	P	P	12 38 48.0	+0.3
VNA3	Neumayer Olymp	85.28	177	P	P	12 38 49.1	+0.5
VNA2	Neumayer--Watz	85.70	177	P	P	12 38 51.4	+0.7
	baz=192,slow=4.0						
VNA1	Neumayer--Stat	85.94	177	P	P	12 38 52.5	+0.8
TUC	Tucson	86.06	52	eP	P	12 38 52.9	-0.2
	2.3nm,0.8s						
RSO	Redoubt South	86.48	13	eP	P	12 38 54.3	-0.2
GYA	Guiyang	86.75	301	eP	P	12 38 53.3	-3.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
U15A	North Rim	87.13	48	eP	P	12 38 58.9	+0.6
	2.9nm,0.8s						
PLCA	Paso Flores	88.37	134	P	P	12 39 03.9	0.0
	8.2nm,1.3s,baz=233,slow=10,SNR=3.7						
SEY	Seymchan	88.91	348	P	P	12 39 05.7	+0.1
	1.7nm,0.6s,baz=78,slow=5.1,SNR=4.5						
KMI	Kunming	89.30	298	P	P	12 39 05.1	-3.5
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
TMUT	Trail Mountain	89.36	46	eP	P	12 39 09.1	+0.4
	4.6nm,0.9s						
CMAR	Chiang Mai Arr	89.62	290	P	P	12 39 10.5	+0.6
	4.3nm,0.8s,baz=134,slow=3.2,SNR=21						
HVU	Hansel Valley	89.65	43	eP	P	12 39 10.2	+0.4
	1.7nm,0.8s						
SRU	San Rafael Swe	89.72	47	eP	P	12 39 09.7	-0.5
	3.5nm,0.8s						
CHTO	Chiang Mai	89.77	291	eP	P	12 39 09.5	-1.2
	8.4nm,0.8s						
TXAR	Lajitas Array	89.99	58	P	P	12 39 13.3	+1.8
	1.5nm,0.7s,baz=217,slow=6.6,SNR=15						
TXAR				pP	pwP	12 41 18.2	-0.1
	0.4nm,0.8s,baz=218,slow=5.7,SNR=3.0						
HHC	Hu-ho-hao-te	90.30	315	eP	P	12 39 12.6	-0.1
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,95nm,6.9s						
CD2	Chengdu	91.06	303	P	P	12 39 15.8	-0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
ILAR	Eielson Array	91.56	13	P	P	12 39 17.3	-0.5
	0.4nm,0.7s,baz=218,slow=5.7,SNR=3.2						
ILAR				pP	pP	12 41 20.9	-0.6
	0.6nm,1.0s,baz=215,slow=7.7,SNR=3.5						
PDAR	Pinedale Array	92.21	44	P	P	12 39 21.8	+0.2
	0.6nm,0.8s,baz=216,slow=4.9,SNR=6.2						
LZH	Lanzhou	93.32	308	⇓P	P	12 39 28.1	+1.3
LZH				PP	PP	12 43 25.3	+4.2
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,85nm,5.3s						
ZALV	Zalesovo Beam	111.79	321	PKiKP	PKiKP	12 44 41.1	-1.0
	0.4nm,0.4s,baz=127,slow=2.0,SNR=2.5						
MKAR	Makanchi Array	112.06	313	PKiKP	PKiKP	12 44 42.1	-0.8
	0.7nm,0.6s,baz=76,slow=1.3,SNR=9.2						
MKAR				PKKPbc	PKKPbc	12 55 37.2	+0.2
	0.7nm,0.9s,baz=270,slow=1.2,SNR=4.0						
MKAR				PKKPab	PKKPab	12 55 47.9	+1.9
	0.5nm,0.6s,baz=262,slow=3.8,SNR=4.2						
KURBB	Kurchatov Arra	115.12	316	PKP	PKPdf	12 44 47.7	-0.9
	1.3nm,0.8s,baz=104,slow=1.9,SNR=12						
KSH	Kashi	115.25	304	ePKP	PKPdf	12 44 48.3	-1.1
KK31	Karatay Array	119.81	307	ePKPdf	PKPdf	12 44 57.6	-0.3
KKAR	Karatay Array	119.81	307	ePKPdf	PKPdf	12 44 57.7	-0.3
BVAR	Borovoye Array	120.29	319	PKP	PKPdf	12 44 58.0	-0.5
	1.2nm,0.5s,baz=98,slow=3.1,SNR=11						
BOSA	Boshof	122.89	206	PKP	PKiKP	12 45 05.3	+0.5
	2.2nm,0.8s,baz=154,slow=2.3,SNR=3.4						
ABKAR	Akbulak array	127.09	315	ePKPdf	PKPdf	12 45 11.4	-0.2
GEYT	Alibeck	128.98	301	PKP	PKiKP	12 45 16.0	-0.4
	1.1nm,0.3s,baz=10.0,slow=3.5,SNR=5.1						
ARCES	ARCESS Array B	131.53	348	PKP	PKPdf	12 45 19.0	-0.5
	12nm,0.5s,baz=66,slow=1.5,SNR=10						
FINES	FINESS Array B	138.13	342	PKhKP	PKPpre	12 45 25.9	
	1.4nm,0.8s,baz=86,slow=2.6,SNR=3.1						
NB2	NORSAR Subarra	141.70	351	PKP	PKPpre	12 45 33.7	
	comp=Z,0.7nm,0.5s,baz=14,slow=3.1						
NOA	NORSAR Array B	141.70	351	PKhKP	PKPpre	12 45 34.1	
	comp=Z,1.5nm,0.7s,baz=16,slow=4.7,SNR=7.2						
KONO	Kongsberg	143.26	352	ePKPdf	PKPbc	12 45 39.8	+0.1
AKASG	Malin Array Be	144.75	328	PKP	PKPdf	12 45 43.9	-0.2
	comp=Z,6.3nm,0.7s,baz=42,slow=3.9,SNR=24						
AKASG				SKPbc	SKiKP	12 48 31.8	+1.2
	comp=Z,0.3nm,0.4s,baz=52,slow=1.8,SNR=4.1						
AKBB	Malin Array Si	144.75	328	ePKPdf	PKPbc	12 45 44.3	-0.3
BR131	Keskin Array S	147.53	308	ePKPbc	PKPbc	12 45 52.7	-0.1
BRTR	Keskin Array B	147.53	308	PKPbc	PKPbc	12 45 52.5	-0.4
	comp=Z,2.3nm,0.7s,baz=140,slow=4.1,SNR=10						
ANTO	Ankara	148.09	309⇑	iP	PKiKP	12 45 55.0	-0.4
KWP	Kalwaria Pacla	148.52	332	ePKP

ARIG	**Puente Sto Nin**	**1.07**	**276**	*i* P	Pn	12 51 33.8	-1.4
ARIG				*e*S	Sn	12 51 47.2	-1.8

MAN 18 12:51:57.8, 6°.22N×125°.80E, h114km, mb4.0, ML2.8, MS2.4, Mindanao

*ISCJB **18** 12:52:11.9±0.6, 20°.1S±0°.1×66°.5E±0°.1, h16km, mb4.2/19, Error ellipse: s-maj=17.8km s-min=13.9km az=155.3*
*IDC **18** 12:52:11.5±0.8, 20°.09S×66°.52E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/44, mbtmp4.0/9, Error ellipse: s-maj=24.2km s-min=22.9km az=96.0*
*NEIC **18** 12:52:12.8±1.6, 20°.06S×66°.37E, h10km, mb4.4/12, Error ellipse: s-maj=35.0km s-min=22.7km az=267.0*
ISC 18 12:52:14.0±0.7, 20°.1S±0°.1×66°.4E±0°.2, h16km, n34, σ0.92/28, mb4.3/19, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**13.65**	**26**	T	T	13 09 47.2	
	baz=204,slow=76,SNR=79						
H08S2	**Diego Garcia H**	**13.66**	**26**	T	T	13 09 24.2	
	baz=204,slow=76,SNR=35						
H08S3	**Diego Garcia H**	**13.67**	**26**	T	T	13 09 28.8	
	baz=204,slow=76,SNR=49						
H08N3	**Diego Garcia H**	**14.33**	**19**	T	T	13 10 49.6	
	baz=197,slow=76,SNR=32						
H08N1	**Diego Carcia H**	**14.34**	**19**	T	T	13 10 25.0	
	baz=197,slow=76,SNR=15						
H08N2	**Diego Garcia H**	**14.35**	**19**	T	T	13 10 52.6	
	baz=197,slow=76,SNR=26						
LBTB	**Lobatse**	**37.94**	**255**	P	**P**	**12 59 31.6**	**+0.5**
	2.7nm,0.9s,baz=84,slow=7.5,SNR=3.4						
MAW	**Mawson**	**47.59**	**182**	P	**P**	**13 00 48.7**	**0.0**
	2.4nm,0.9s,baz=1.9,slow=10,SNR=5.4						
MAW	**Mawson**	**47.59**	**182**	*e*P	**P**	**13 00 48.4**	**-0.3**
	1.2nm,1.1s						
CMAR	**Chiang Mai Arr**	**49.81**	**42**	P	**P**	**13 01 07.5**	**+1.0**
	1.4nm,1.0s,baz=227,slow=8.5,SNR=4.9						
KBL	**Kabul**	**54.35**	**3**	*e*P	**P**	**13 01 36.9**	**-3.3**
	3.0nm,0.6s						
ASAR	**Alice Springs**	**62.20**	**107**	P	**P**	**13 02 34.2**	**-1.1**
	1.5nm,0.8s,baz=262,slow=6.3,SNR=12						
AS31	**Alice Springs**	**62.21**	**107**	*e*P	**P**	**13 02 34.7**	**-0.6**
	1.9nm,1.4s						
AAK	**Ala-Archa**	**62.82**	**7**	*e*P	**P**	**13 02 39.8**	**+0.8**
	3.2nm,1.1s						
KK31	**Karatay Array**	**62.95**	**3**	*e*P	**P**	**13 02 40.6**	**+0.9**
	3.3nm,1.2s						
KKAR	**Karatay Array**	**62.95**	**3**	*e*P	**P**	**13 02 39.6**	**-0.1**
	3.3nm,1.2s						
WR1	**Warramunga Arr**	**63.37**	**103**	*e*P	**P**	**13 02 42.7**	**-0.4**
WRA	**Warramunga Arr**	**63.37**	**103**	P	**P**	**13 02 42.7**	**-0.4**
	1.7nm,0.7s,baz=256,slow=6.8,SNR=3.9						
BR101	**Keskin Array S**	**66.89**	**333**	*e*P	**P**	**13 03 06.2**	**+0.7**
BR131	**Keskin Array S**	**66.89**	**333**	*e*P	**P**	**13 03 04.9**	**-0.7**
	17nm,1.8s						
BRTR	**Keskin Array B**	**66.89**	**333**	P	**P**	**13 03 06.2**	**+0.7**
	1.4nm,0.9s,baz=157,slow=0.9,SNR=3.8						
MK31	**Makanchi Array**	**68.06**	**12**	*e*P	**P**	**13 03 13.2**	**+0.5**
	8.1nm,1.9s						
MK32	**Makanchi Array**	**68.06**	**12**	*e*P	**P**	**13 03 12.4**	**-0.2**
MKAR	**Makanchi Array**	**68.06**	**12**	P	**P**	**13 03 12.4**	**-0.2**
	1.2nm,1.0s,baz=202,slow=9.2,SNR=6.1						
YULB	**Yu-li**	**68.74**	**54**	*e*P	**P**	**13 03 18.4**	**+1.0**
	7.4nm,1.0s						
ABKAR	**Akbulak array**	**69.23**	**355**	*e*P	**P**	**13 03 19.9**	**-0.1**
	3.0nm,0.9s						
KURK	**Kurchatov**	**71.27**	**8**	*e*P	**P**	**13 03 31.6**	**-0.7**
	2.9nm,1.0s						
BRVK	**Borovoye**	**72.88**	**2**	*e*P	**P**	**13 03 41.6**	**-0.4**
	2.7nm,1.0s						
ZALV	**Zalesovo Beam**	**75.38**	**11**	P	**P**	**13 03 55.6**	**-0.9**
	0.5nm,0.3s,baz=214,slow=4.9,SNR=4.6						
ZAA1	**Zalesovo Array**	**75.38**	**11**	*e*P	**P**	**13 03 55.6**	**-1.0**
SONA0	**Songino Array**	**76.49**	**26**	*e*P	**P**	**13 04 03.7**	**+0.5**
SONM	**Songino Array**	**76.49**	**26**	P	**P**	**13 04 03.7**	**+0.5**
	0.4nm,0.4s,baz=215,slow=6.5,SNR=3.5						
NV01	**Mina Array Sit**	**161.23**	**12**	*e*PKPab	**PKPab**	**13 12 58.1**	**+0.2**
NVAR	**Mina Array Bea**	**161.23**	**12**	PKPab	**PKPab**	**13 12 58.1**	**+0.2**
	0.4nm,0.8s,baz=324,slow=4.0,SNR=3.3						

*IDC **18** 13:13:19.6±1.4, 15°.88S×175°.85W, h0km, mb3.9/7, mb1 4.2/7, mb1mx3.9/38, mbtmp3.9/7, MS3.9/19, Ms1 3.9/19, ms1mx3.8/21, Error ellipse: s-maj=105.7km s-min=21.9km az=148.0*
*ISCJB **18** 13:13:22.8±1.2, 15°.6S±0°.6×176°.0W±0°.4, h26km, mb3.8/7, MS3.9/19, Error ellipse: s-maj=95.4km s-min=18.1km az=146.2*
*GCMT **18** 13:13:28.0±0.3, 14°.90S±0°.02×176°.16W±0°.02, h15km, MW4.8/68, Moment Tensor Solution. s16,c16; s68,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.18±.08; $M_{\theta\theta}$=0.33±.08; $M_{\phi\phi}$=-0.15±.07; $M_{r\theta}$=0.94±.24; $M_{\theta\phi}$=1.66±.05; $M_{\phi r}$=0.11±.26; Best double couple: M_0=1.92000×10^{16} NP1:ϕ_s=273.00000°, δ90.00000°, λ-29.00000°. NP2: ϕ_s=3.00000°, δ61.00000°, λ-180.00000°. Principal axes: T 2.0510, Plg20.0000°, Azm322.0000°; N -0.2620, Plg61.0000°, Azm93.0000°; P -1.7880, Plg20.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 18 13:13:24.5±1.4, 15°.63S±0°.6×176°.0W±0°.4, h26km, n28, σ0.99/8, mb3.9/7, MS3.8/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**16.42**	**112**	LR	LR	13 22 04.5	
	comp=Z,299nm,20.6s,baz=302,slow=32						
DZM	**Mont Dzumac**	**17.79**	**246**	LR	LR	13 23 09.0	
	comp=Z,809nm,20.8s,baz=72,slow=33						
DZM	**Mont Dzumac**	**17.79**	**246**	*e*P	P	13 17 39.8	+8.7
	43nm,1.4s						
DZM				*e*LQ	LQ	13 21 17.3	
	670nm,26.6s						
DZM				*e*LR	LR	13 22 02.8	
	comp=Z,1μm,24.9s						
URZ	**Urewera**	**23.40**	**194**	LR	LR	13 26 43.0	
	comp=Z,291nm,19.8s,baz=18,slow=35						
HNR	**Honiara**	**24.21**	**282**	LR	LR	13 26 25.7	
	comp=Z,625nm,21.7s,baz=116,slow=32						
PPT	**Papeete**	**25.44**	**98**	LR	LR	13 28 16.8	
	comp=Z,63nm,18.2s,baz=270,slow=36						
PPT2	**Papeete2**	**25.44**	**98**	*e*LQ	LQ	13 24 02.9	
	1μm,26.5s						
PPT2				*e*LR	LR	13 25 07.4	
	comp=Z,199nm,25.2s,baz=243						
TBI	**Tubuai**	**26.20**	**111**	*e*LQ	LQ	13 24 27.7	
	764nm,27.8s						
TBI				*e*LR	LR	13 25 35.9	
	comp=Z,370nm,26.8s,baz=282						
H11N3	**WAKE ISLAND Hy**	**38.87**	**334**	T	T	14 01 23.9	
	baz=152,slow=76,SNR=5.1						
H11N1	**WAKE ISLAND Hy**	**38.87**	**334**	T	T	14 01 25.3	
	baz=152,slow=76,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**38.88**	**334**	T	T	14 01 23.6	
	baz=152,slow=76,SNR=5.9						
STKA	**Stephens Creek**	**41.76**	**239**	P	**P**	**13 21 12.7**	**+0.9**
	2.0nm,0.7s,baz=72,slow=8.4,SNR=3.4						
STKA				LR	LR	13 36 30.0	
	comp=Z,130nm,20.2s,baz=33,slow=33						
ASAR	**Alice Springs**	**47.64**	**252**	P	**P**	**13 21 58.0**	**-0.9**
	2.5nm,0.7s,baz=84,slow=8.3,SNR=18						
ASAR				LR	LR	13 41 29.0	
	comp=Z,145nm,19.1s,baz=92,slow=35						
MJAR	**Matsushiro Arr**	**67.45**	**321**	LR	LR	13 48 10.5	
	comp=Z,63nm,22.0s,baz=195,slow=31						
PETK	**Petropavlovsk-**	**72.04**	**344**	LR	LR	13 50 44.8	
	comp=Z,65nm,20.9s,baz=153,slow=31						
KSRS	**Korea Array**	**74.51**	**317**	LR	LR	13 54 28.1	
	comp=Z,60nm,19.0s,baz=153,slow=33						
USRK	**Ussuriysk Ar.**	**76.01**	**324**	LR	LR	13 54 10.6	
	comp=Z,147nm,20.1s,baz=134,slow=32						
NVAR	**Mina Array Bea**	**76.17**	**43**	P	**P**	**13 25 10.1**	**-0.7**
	0.8nm,0.8s,baz=224,slow=7.6,SNR=5.8						
NVAR				LR	LR	13 52 23.0	
	comp=Z,57nm,21.7s,baz=223,slow=31						
ELK	**Elko**	**79.41**	**42**	P	**P**	**13 25 28.4**	**-0.3**
	1.4nm,1.0s,baz=252,slow=2.8,SNR=2.3						
TXAR	**Lajitas Array**	**82.83**	**57**	P	**P**	**13 25 47.2**	**+0.2**
	0.5nm,0.9s,baz=201,slow=3.9,SNR=2.9						
TXAR				LR	LR	13 54 46.9	
	comp=Z,135nm,20.4s,baz=0.0,slow=30						
ILAR	**Eielson Array**	**83.12**	**12**	P	**P**	**13 25 48.8**	**+1.2**
	0.6nm,0.9s,baz=233,slow=7.0,SNR=5.4						
PDAR	**Pinedale Array**	**84.10**	**43**	P	**P**	**13 25 52.7**	**-0.8**
	0.5nm,0.6s,baz=242,slow=3.9,SNR=3.3						
PDAR				LR	LR	13 55 13.9	
	comp=Z,44nm,20.0s,baz=162,slow=30						
MAW	**Mawson**	**86.81**	**199**	LR	LR	14 01 31.9	
	comp=Z,77nm,21.7s,baz=84,slow=33						
CMAR	**Chiang Mai Arr**	**90.25**	**289**	LR	LR	14 01 40.3	
	comp=Z,34nm,20.0s,baz=104,slow=32						
YKA	**Yellowknife Ar**	**91.27**	**24**	LR	LR	13 59 37.5	
	comp=Z,10nm,21.3s,baz=174,slow=30						
PLCA	**Paso Flores**	**91.28**	**133**	LR	LR	13 56 57.4	
	comp=Z,75nm,19.9s,baz=294,slow=29						
ULM	**Lac du Bonnet**	**95.67**	**39**	LR	LR	14 02 58.1	
	comp=Z,127nm,21.4s,baz=264,slow=31						
BRTR	**Keskin Array B**	**144.64**	**319**	PKPbc	**PKPab**	**13 32 57.1**	**-0.8**
	1.1nm,0.8s,baz=4.1,slow=6.1,SNR=3.6						

MEX 18 13:15:34.7±0.4, 15°.88N×99°.11W, h8km±42km, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.07**	**62**	*e*P	Pg	13 15 52.1	-3.2
PNIG				*i* S	Sg	13 16 05.8	-3.5
TLIG	**Tlapa**	**1.75**	**17**	*e*P	Pn	13 16 02.0	-3.5
TLIG				*i* S	Sn	13 16 23.3	-4.7
VHO	**Vista Hermosa**	**2.57**	**62**	*i* P	Pn	13 16 14.6	-2.2
VHO				*e*S	Sn	13 16 44.4	-4.0

MEX 18 13:16:19.6±0.5, 18°.39N×103°.73W, h20km±5km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.38**	**105**	*e*P	Pb	13 16 26.2	-1.4
MMIG				*i* S	Sb	13 16 31.6	-1.4
EZ5V		**1.09**	**6**	*e*P	Pb	13 16 37.1	-2.9
EZ5V				*i* S	Sb	13 16 50.5	-3.5

*IDC **18** 13:16:46.2±14.0, 19°.11N×64°.51W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.5/51, mbtmp3.5/4, Error ellipse: s-maj=306.2km s-min=74.5km az=155.0*
*ISCJB **18** 13:16:50.7±0.7, 19°.27N±0°.04×64°.89W±0°.05, h25km, mb3.6/4, Error ellipse: s-maj=8.2km s-min=4.9km az=35.4*
*NEIC **18** 13:16:53.3±0.0, 19°.26N×64°.87W, h40km, mb3.9/1, MD3.6(RSPR). After RSPR.*
*RSPR **18** 13:16:53.3, 19°.26N×64°.87W, h40km±11km, MD3.6/14*
ISC 18 13:16:51.7±0.9, 19°.17N±0°.06×64°.89W±0°.05, h25km, n49, σ1.13/55, mb3.6/4, 7C-10D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**0.93**	**203**	‖*e*P	**Pn**	**13 17 10.1**	**+0.8**
CUPR	**Culebra, Puert**	**0.93**	**203**	*e*S	**Sn**	**13 17 23.5**	**+1.7**
MTP	**Monte Pirata**	**1.23**	**211**	*e*S	**Sb**	**13 17 29.8**	**-0.1**
CBYP	**Canovanas**	**1.28**	**226**	‖*i*P	**Pb**	**13 17 14.5**	**-0.6**
CBYP	**Canovanas**	**1.28**	**226**	‖*e*P	**Pb**	**13 17 14.5**	**-0.6**
CBYP	**Canovanas**	**1.28**	**226**	*e*S	**Sb**	**13 17 31.2**	**0.0**
CBYP	**Canovanas**	**1.28**	**226**	*e*Sn	**Sb**	**13 17 31.2**	**0.0**
HUMP	**Col San Antoni**	**1.36**	**222**	‖*e*P	**Pb**	**13 17 16.0**	**-0.7**
HUMP	**Col San Antoni**	**1.36**	**222**	‖*e*P	**Pb**	**13 17 15.9**	**-0.7**
HUMP	**Col San Antoni**	**1.36**	**222**	*e*S	**Sb**	**13 17 33.2**	**-0.4**
HUMP	**Col San Antoni**	**1.36**	**222**	*e*Pn	**Pb**	**13 17 15.9**	**-0.7**
HUMP				*e*Sn	**Sb**	**13 17 33.2**	**-0.4**
PDPR	**Patillas Dam,**	**1.57**	**223**	‖*e*P	**Pb**	**13 17 18.8**	**-1.2**
PDPR	**Patillas Dam,**	**1.57**	**223**	*e*S	**Sb**	**13 17 38.7**	**-0.7**
SJG	**San Juan**	**1.59**	**229**	‖*e*P	**Pb**	**13 17 19.0**	**-1.4**
SJG	**San Juan**	**1.59**	**229**	*e*S	**Sb**	**13 17 39.3**	**-0.8**
SJG	**San Juan**	**1.59**	**229**	*e*Pn	**Pb**	**13 17 18.8**	**-1.6**
IGPR	**InterUniversit**	**1.66**	**224**	‖*e*P	**Pb**	**13 17 20.1**	**-1.5**
IGPR	**InterUniversit**	**1.66**	**224**	*e*S	**Sb**	**13 17 41.1**	**-1.0**
EMPR	**Esperanza - Ma**	**1.70**	**246**	‖*e*P	**Pb**	**13 17 20.4**	**-1.8**
EMPR	**Esperanza - Ma**	**1.70**	**246**	*e*S	**Sb**	**13 17 41.8**	**-1.3**
EMPR	**Esperanza - Ma**	**1.70**	**246**	*e*Pn	**Pb**	**13 17 20.4**	**-1.8**
EMPR				*e*Sn	**Sb**	**13 17 41.8**	**-1.3**
CELP	**Cerrillos**	**1.93**	**236**	‖*e*P	**Pn**	**13 17 23.8**	**+0.7**
CELP	**Cerrillos**	**1.93**	**236**	*e*Pn	**Pn**	**13 17 23.8**	**+0.7**
AOPR	**Arecibo Observ**	**1.94**	**245**	*e*S	**Sn**	**13 17 46.9**	**+0.1**
OBIP	**Obispado Ponce**	**1.97**	**236**	‖*e*P	**Pn**	**13 17 24.4**	**+0.9**
OBIP	**Obispado Ponce**	**1.97**	**236**	*e*S	**Sb**	**13 17 48.9**	**-2.2**
OBIP	**Obispado Ponce**	**1.97**	**236**	*e*Pn	**Pn**	**13 17 24.4**	**+0.9**
OBIP				*e*Sn	**Sb**	**13 17 48.9**	**-2.2**
ICMP	**Isla Caja de M**	**2.01**	**231**	‖*e*P	**Pn**	**13 17 24.8**	**+0.8**
ICMP	**Isla Caja de M**	**2.01**	**231**	*e*S	**Sb**	**13 17 49.4**	**-2.7**
ICMP	**Isla Caja de M**	**2.01**	**231**	*e*Pn	**Pn**	**13 17 24.8**	**+0.8**
ICMP				*e*Sn	**Sb**	**13 17 49.4**	**-2.7**
SMRT	**St. Maarten**	**2.05**	**123**	*e*Pn	**Pn**	**13 17 24.0**	**-0.6**
LSP	**Las Mesas**	**2.30**	**245**	‖*e*P	**Pn**	**13 17 29.0**	**+0.9**
LSP	**Las Mesas**	**2.30**	**245**	*e*Pn	**Pn**	**13 17 29.0**	**+0.9**
MLPR	**Magueyes Islan**	**2.36**	**240**	‖*e*P	**Pn**	**13 17 30.1**	**+1.2**
MLPR	**Magueyes Islan**	**2.36**	**240**	*e*S	**Sn**	**13 17 57.8**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.40**	**242**	‖*e*P	**Pn**	**13 17 30.5**	**+1.1**
CRPR	**Cabo Rojo, PR**	**2.40**	**242**	*e*S	**Sn**	**13 17 59.0**	**+1.0**
IDE	**Isla Desecheo**	**2.57**	**253**	‖*e*P	**Pn**	**13 17 32.6**	**+0.9**
IDE	**Isla Desecheo**	**2.57**	**253**	*e*S	**Sn**	**13 18 02.5**	**+0.4**
IDE	**Isla Desecheo**	**2.57**	**253**	*e*Pn	**Pn**	**13 17 32.6**	**+0.9**
IDE				*e*Sn	**Sn**	**13 18 02.5**	**+0.4**
IDE				*e*Sn	**Sn**	**13 18 02.5**	**+0.4**
DR12	**Loma Pena Alta**	**4.26**	**266**	‖*e*P	**Pn**	**13 17 55.8**	**+0.7**
SDDR	**Presa de Saban**	**6.05**	**269**	*e*Pn	**Pn**	**13 18 20.6**	**+0.9**
TXAR	**Lajitas Array**	**36.63**	**294**	P	**P**	**13 23 57.9**	**+1.5**
	0.4nm,0.7s,baz=96,slow=8.4,SNR=4.5						
PD31	**Pinedale Array**	**44.29**	**312**	*e*P	**P**	**13 24 59.9**	**+0.1**
	2.2nm,0.9s						
PDAR	**Pinedale Array**	**44.29**	**312**	P	**P**	**13 24 59.9**	**+0.1**
	1.1nm,0.9s,baz=98,slow=9.2,SNR=7.7						
YKA	**Yellowknife Ar**	**55.05**	**334**	P	**P**	**13 26 21.1**	**0.0**
	0.3nm,0.7s,baz=111,slow=6.9,SNR=3.2						
YKB5	**Yellowknife Ar**	**55.05**	**334**	*e*P	**P**	**13 26 21.1**	**0.0**
ILAR	**Eielson Array**	**69.43**	**333**	P	**P**	**13 27 57.3**	**-0.1**
	0.3nm,0.7s,baz=86,slow=4.4,SNR=3.1						
ILB	**Eielson Array**	**69.43**	**333**	*e*P	**P**	**13 27 57.4**	**-0.1**
	14nm,1.8s						

MEX 18 13:17:32.3±0.8, 15°.96N×99°.10W, h10km, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.03**	**65**	*i* P	Pg	13 17 48.4	-3.7
PNIG				*i* S	Sg	13 18 01.8	-3.7
TLIG	**Tlapa**	**1.68**	**18**	*e*P	Pn	13 17 58.2	-3.7
TLIG				*e*S	Sn	13 18 18.9	-4.6
VHO	**Vista Hermosa**	**2.52**	**64**	*i* P	Pn	13 18 10.9	-2.7
VHO				*i* P	Pb	13 18 11.1	-6.8
VHO				*e*S	Sn	13 18 40.1	-4.5

*IDC **18** 13:17:39.7±0.7, 49°.46N×28°.49W, h0km, mb3.7/11, mb1 3.8/12, mb1mx3.6/66, mbtmp3.7/12, ML4.5/1, MS3.4/18, Ms1 3.4/18, ms1mx3.3/40, Error ellipse: s-maj=22.7km s-min=17.6km az=10.0*
*ISCJB **18** 13:17:40.4±0.5, 49°.5N±0°.1×28°.47W±0°.08, h17km, mb4.3/29, MS3.4/16, Error ellipse: s-maj=15.7km s-min=7.7km az=175.8*
*NEIC **18** 13:17:41.2±0.3, 49°.44N×28°.48W, h10km, mb4.7/18, Error ellipse: s-maj=11.4km s-min=6.0km az=175.0*
ISC 18 13:17:42.1±0.7, 49°.4N±0°.1×28°.50W±0°.09, h17km, n65, σ0.79/48, mb4.4/29, MS3.4/16, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**15.83**	**11**	LR	LR	13 25 53.7	
	comp=Z,28nm,18.5s,baz=175,slow=31						
EKA	**Eskdalemuir Ar**	**16.50**	**59**	Pn	**Pn**	**13 21 31.8**	**-0.8**
	baz=253,slow=8.8,SNR=5.8						
ESDC	**Sonseca Array**	**19.94**	**110**	LR	LR	13 28 25.0	
	comp=Z,189nm,19.9s,baz=315,slow=32						
JMIC	**Jan Mayen**	**23.55**	**16**	LR	LR	13 29 25.3	
	comp=Z,61nm,18.2s,baz=262,slow=30						
SCHQ	**Schefferville**	**23.92**	**298**	LR	LR	13 30 52.4	
	comp=Z,113nm,18.5s,baz=86,slow=33						
MDT	**Midelt**	**24.32**	**124**	LR	LR	13 30 46.8	
	comp=Z,49nm,21.8s,baz=346,slow=32						
NOA	**NORSAR Array B**	**25.02**	**47**	LR	LR	13 32 14.4	
	comp=Z,70nm,18.5s,baz=260,slow=35						
DAVOX	**Davos/Dischmat**	**25.58**	**81**	LR	LR	13 32 52.3	
	comp=Z,179nm,18.6s,baz=261,slow=36						
FRB	**Frobisher Bay**	**25.75**	**319**	LR	LR	13 30 45.4	
	comp=Z,102nm,21.1s,baz=69,slow=30						
HFS	**Hagfors**	**26.12**	**50**	LR	LR	13 33 15.2	
	comp=Z,63nm,18.8s,baz=266,slow=36						
CLL	**Collm**	**26.29**	**70**	*e*P	**P**	**13 23 16.0**	**-0.4**
CLL				*e*PP	**PnPn**	**13 23 55.0**	**-0.5**
CLL				*e*PPP	PPP	13 24 05.0	
CLL				*e*PPPP		13 24 15.0	
CLL				LmV		13 32 00.0	
	comp=Z,100nm,20.7s						
BBSR	**BB Station**	**31.85**	**251**	*e*P	**P**	**13 24 04.4**	**-1.6**
	comp=Z,89nm,1.8s						
FIA0	**FINESS Array S**	**32.21**	**47**	*e*P	**P**	**13 24 10.1**	**+1.2**
FINES	**FINESS Array B**	**32.21**	**47**	P	**P**	**13 24 10.1**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=264,slow=9.4,SNR=3.2						
FINES				LR	LR	13 36 09.6	
	comp=Z,74nm,19.2s,baz=254,slow=34						
ARA0	**ARCESS Array S**	**32.43**	**32**	*e*P	**P**	**13 24 10.3**	**-0.5**
ARCES	**ARCESS Array B**	**32.43**	**32**	P	**P**	**13 24 10.3**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=253,slow=9.3,SNR=4.8						
ARCES				LR	LR	13 36 30.7	
	comp=Z,18nm,18.7s,baz=190,slow=35						
SADO	**Sadowa**	**34.26**	**282**	LR	LR	13 37 08.4	
	comp=Z,156nm,18.4s,baz=164,slow=34						
AKASG	**Malin Array Be**	**36.26**	**65**	LR	LR	13 40 03.9	
	comp=Z,98nm,18.4s,baz=320,slow=37						
H05N1	**Guadeloupe/Mar**	**42.28**	**230**	T	T	14 10 28.3	
	SNR=3.7						
TOA1	**Torodi Ar. Sit**	**43.86**	**135**	*e*P	**P**	**13 25 47.5**	**0.0**
TORD	**Torodi Ar. Bea**	**43.87**	**135**	P	**P**	**13 25 47.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=331,slow=9.4,SNR=4.2						
TORD				LR	LR	13 43 03.6	
	comp=Z,109nm,18.3s,baz=320,slow=35						
BRTR	**Keskin Array B**	**44.15**	**78**	LR	LR	13 43 49.0	
	comp=Z,26nm,21.1s,baz=275,slow=36						
CCM	**Cathedral Cave**	**45.50**	**280**	*e*P	**P**	**13 26 01.7**	**+1.4**
	comp=Z,9.2nm,1.2s						
YKA	**Yellowknife Ar**	**46.26**	**320**	P	**P**	**13 26 05.2**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=66,slow=7.7,SNR=5.2						
YKA				PcP	**PcP**	**13 27 40.7**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=68,slow=3.9,SNR=3.9						
YKB5	**Yellowknife Ar**	**46.26**	**320**	*e*P	**P**	**13 26 05.2**	**-0.8**
YKB5				*e*PcP	**PcP**	**13 27 40.7**	**-0.5**
DBIC	**Dimbokro**	**47.04**	**147**	LR	LR	13 44 06.6	
	comp=Z,83nm,19.5s,baz=319,slow=34						
KBZ	**Khabaz**	**47.72**	**68**	LR	LR	13 46 55.9	
	comp=Z,35nm,21.2s,baz=300,slow=37						
INK	**Inuvik**	**50.19**	**332**	P	**P**	**13 26 36.7**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=58,slow=5.7,SNR=2.4						
WALA	**Waterton Lakes**	**52.78**	**305**	*e*P	**P**	**13 26 56.1**	**-0.1**
	comp=Z,6.0nm,1.1s						
N23A	**Red Feather La**	**53.02**	**292**	*e*P	**P**	**13 26 58.1**	**-0.1**
	comp=Z,14nm,1.2s						
BW06	**Boulder Array**	**54.05**	**296**	*e*P	**P**	**13 27 04.3**	**-1.4**
	comp=Z,2.8nm,1.0s						
PD31	**Pinedale Array**	**54.05**	**296**	*e*P	**P**	**13 27 04.5**	**-1.2**
	comp=Z,2.7nm,1.0s						
PDAR	**Pinedale Array**	**54.05**	**296**	P	**P**	**13 27 04.7**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=66,slow=7.2,SNR=5.8						
PV12	**Saucer Basin,**	**56.35**	**291**	*e*P	**P**	**13 27 22.8**	**+0.5**
	comp=Z,15nm,1.0s						
PV04	**Paradox Valley**	**56.36**	**291**	*e*P	**P**	**13 27 22.6**	**+0.2**
	comp=Z,18nm,1.1s						
PV23	**Carpenter Ridg**	**56.39**	**292**	*e*P	**P**	**13 27 23.9**	**+1.2**
	comp=Z,17nm,1.1s						
PV11	**David Mesa, Pa**	**56.40**	**291**	*e*P	**P**	**13 27 24.9**	**+2.3**
	comp=Z,45nm,1.8s						
PV16	**Nyswonger Mesa**	**56.42**	**291**	*e*P	**P**	**13 27 23.0**	**+0.1**
	comp=Z,25nm,1.5s						
ILAR	**Eielson Array**	**56.54**	**333**	P	**P**	**13 27 23.2**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=40,slow=4.7,SNR=3.5						
BVAR	**Borovoye Array**	**57.13**	**45**	P	**P**	**13 27 27.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=305,slow=5.1,SNR=4.2						
DUG	**Dugway, Tooele**	**57.56**	**295**	*e*P	**P**	**13 27 31.4**	**+0.6**
	comp=Z,6.1nm,1.1s						
H10N2	**ASCENSION HYDR**	**58.32**	**164**	T	T	14 30 28.1	
	baz=350,slow=75,SNR

RTLL				AMSG		13 20 52.3	
	comp=E,31μm,0.3s						
RTLL	**Cerro Villicun**	**0.24**	**111**	⇓*i*P	**Pn**	**13 20 40.0**	**-0.2**
RTLL				*i* S	**Sn**	**13 20 51.8**	**+0.4**
ZON	**Zonda**	**0.31**	**171**	*e*P	**Pn**	**13 20 40.3**	**-0.3**
ZON				IAML		13 20 40.5	
	comp=Z,704nm,0.3s						
ZON				*e*S	**Sn**	**13 20 52.0**	**+0.2**
AMOG	**MOGNA**	**0.37**	**35**	*e*P	**Pn**	**13 20 41.1**	**+0.2**
AMOG				*e*S	**Sn**	**13 20 52.8**	**+0.4**
RTCV	**Cerro Valdivia**	**0.64**	**165**	*e*P	**Pn**	**13 20 42.4**	**-0.3**
RTCV				*e*S	**Sn**	**13 20 55.4**	**-0.3**
RTLS	**Leoncito**	**0.73**	**221**	*e*P	**Pn**	**13 20 43.8**	**0.0**
RTLS				IAML		13 20 43.9	
	comp=Z,280nm,0.3s						
RTLS				*e*S	**Sn**	**13 20 57.8**	**+0.2**
AUSP	**Uspallata**	**1.12**	**209**	*e*P	**Pn**	**13 20 47.1**	**-0.7**
AUSP				*e*S	**Sn**	**13 21 04.7**	**+0.1**
ACAN	**Cantantal**	**1.67**	**128**	*e*P	**Pn**	**13 20 54.1**	**+0.1**
ACAN				*e*S	**Sn**	**13 21 15.3**	**-0.5**
AAGR	**Agrelo**	**1.84**	**182**	*e*P	**Pn**	**13 20 55.8**	**-0.4**
AAGR				*e*S	**Sn**	**13 21 18.9**	**-0.7**
CO02	**Combarbal**	**1.94**	**271**	*e*P	**Pn**	**13 20 57.4**	**-0.1**
CO02				*i* S	**Sn**	**13 21 22.0**	**0.0**
GO04	**Tololo Observa**	**2.07**	**300**	⇑*i*P	**Pn**	**13 20 59.2**	**-0.1**
GO04				*i* S	**Sn**	**13 21 25.7**	**+0.5**
FCH	**Farellones**	**2.46**	**212**	⇑*i*P	**Pn**	**13 21 04.9**	**+0.5**
FCH				*i* S	**Sn**	**13 21 35.8**	**+1.5**
FCH				IAML		13 21 44.3	
	comp=E,70nm,0.3s						
PEL	**Peldehue**	**2.52**	**221**	*e*P	**Pn**	**13 21 04.6**	**-0.3**
PEL				*i* S	**Sn**	**13 21 35.1**	**0.0**
VCA	**Vinchina**	**2.54**	**11**	⇑*i*P	**Pn**	**13 21 06.0**	**+0.7**
VCA				*i* S	**Sn**	**13 21 36.4**	**+0.4**
ROCH	**El Roble**	**2.59**	**228**	*e*P	**Pn**	**13 21 05.4**	**-0.6**
ROCH				*i* S	**Sn**	**13 21 36.8**	**-0.3**
ROCH				IAML		13 21 41.4	
	comp=N,88nm,0.2s						
CLCH	**Cerro Calan**	**2.63**	**215**	*e*P	**Pn**	**13 21 06.6**	**+0.1**
CLCH				*i* S	**Sn**	**13 21 38.9**	**+0.9**
CLCH				IAML		13 21 41.5	
	comp=E,108nm,0.4s						
RCDM	**Rinconada Maip**	**2.84**	**217**	*e*P	**Pn**	**13 21 09.4**	**+0.2**
RCDM				*i* S	**Sn**	**13 21 43.3**	**+0.5**
LMEL	**Las Melosas**	**2.88**	**205**	*e*P	**Pn**	**13 21 10.0**	**+0.2**
GO03	**Copiap**	**3.86**	**340**	*e*P	**Pn**	**13 21 22.3**	**-0.6**
GO03				*i* S	**Sn**	**13 22 06.2**	**-1.2**

WEL 18 13:22:33.3±1.1, 37°S±6°×17°7E±°, h88km±10km, M3.2/37, ML4.1/3, MLv3.2/37, Error ellipse: s-maj=0.0km s-min=0.0km az=37.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.41**	**217**	P	Pn	13 22 46.8	-0.4
HAZ	**Te Kaha**	**0.60**	**158**	P	Pn	13 22 49.2	+0.5
HAZ				S	Sn	13 23 02.1	+1.9
MXZ	**Matakaoa Point**	**0.74**	**119**	P	Pn	13 22 50.7	+0.7
MXZ				S	Sn	13 23 05.7	+3.1
WHRZ	**Whale Island**	**0.77**	**212**	P	Pn	13 22 51.0	+0.6
RUGZ	**Raukumara Rang**	**0.78**	**169**	P	Pn	13 22 50.2	-0.4
RUGZ				S	Sn	13 23 04.0	+0.5
PKGZ	**Pakihiroa**	**0.83**	**146**	P	Pn	13 22 51.5	+0.5
PKGZ				S	Sn	13 23 04.9	+0.6
WMGZ	**Waiomatatini S**	**0.96**	**130**	P	Pn	13 22 52.8	+0.4
WMGZ				S	Sn	13 23 09.4	+2.8
OPRZ	**Ohinepanea**	**0.98**	**229**	P	Pn	13 22 53.0	+0.3
MARZ	**Manawahe**	**1.02**	**220**	P	Pn	13 22 53.3	+0.2
TWGZ	**Tauwhareparae**	**1.05**	**159**	P	Pn	13 22 53.9	+0.4
TWGZ				S	Sn	13 23 10.6	+2.0
PUZ	**Puketiti**	**1.06**	**145**	P	Pn	13 22 53.5	-0.1
PUZ				S	Sn	13 23 09.7	+0.9
EDRZ	**Edgecumbe**	**1.08**	**213**	P	Pn	13 22 54.1	+0.2
URZ	**Urewera**	**1.10**	**196**	P	Pn	13 22 54.0	0.0
TGRZ	**Tauranga**	**1.11**	**241**	P	Pn	13 22 54.5	+0.3
MWZ	**Matawai**	**1.13**	**179**	P	Pn	13 22 54.2	-0.2
TKGZ	**Te Karaka**	**1.27**	**167**	P	Pn	13 22 55.7	-0.4
OMRZ	**Omania**	**1.27**	**224**	P	Pn	13 22 56.3	+0.2
KARZ	**Kaharoa**	**1.29**	**230**	P	Pn	13 22 56.5	+0.2
TARZ	**Mount Tarawera**	**1.30**	**217**	P	Pn	13 22 57.2	+0.7
NGRZ	**Ngongotaha**	**1.37**	**229**	P	Pn	13 22 57.9	+0.5
RRRZ	**Republican Roa**	**1.38**	**214**	P	Pn	13 22 57.9	+0.4
HLRZ	**Highlands Stat**	**1.39**	**220**	P	Pn	13 22 57.9	+0.3
KMRZ	**Kaimai**	**1.39**	**242**	P	Pn	13 22 57.8	+0.2
MUGZ	**Murupara**	**1.40**	**204**	P	Pn	13 22 57.7	0.0
CNGZ	**Carnagh Statio**	**1.40**	**156**	P	Pn	13 22 57.5	-0.2
RTZ	**Ruatahuna**	**1.47**	**196**	P	Pn	13 22 58.1	-0.5
HSRZ	**Hossack Road**	**1.49**	**221**	P	Pn	13 22 59.9	+1.1
KUZ	**Kuaotunu**	**1.49**	**287**	P	Pn	13 22 58.9	+0.1
RIGZ	**Rimuhau**	**1.52**	**172**	P	Pn	13 22 58.5	-0.7
HRRZ	**Handcock Road**	**1.53**	**219**	P	Pn	13 22 59.9	+0.6
PRRZ	**Plateau Road**	**1.56**	**214**	P	Pn	13 22 60.0	+0.2
SNGZ	**Shannon Statio**	**1.58**	**184**	P	Pn	13 22 59.4	-0.6
GRRZ	**Galatos Road**	**1.59**	**223**	P	Pn	13 23 00.2	+0.1
ALRZ	**Allen Road**	**1.64**	**213**	P	Pn	13 23 00.8	+0.1
TOZ	**Tahuroa Road**	**1.67**	**251**	P	Pn	13 23 01.4	+0.3
WPRZ	**Whakapapatarin**	**1.69**	**218**	P	Pn	13 23 01.7	+0.3
MTHZ	**Maungataniwha**	**1.73**	**197**	P	Pn	13 23 01.1	-0.9
RAHZ	**Arahi**	**1.74**	**191**	P	Pn	13 23 01.5	-0.6
PRGZ	**Paritu Road**	**1.75**	**170**	P	Pn	13 23 01.3	-0.9
KNZ	**Kokohu**	**1.82**	**176**	P	Pn	13 23 01.7	-1.4
MRHZ	**Matea Rd**	**1.84**	**207**	P	Pn	13 23 02.9	-0.5
KUTZ	**Kaahu Road**	**1.84**	**225**	P	Pn	13 23 03.4	-0.1
MKAZ	**Moumakai**	**1.87**	**272**	P	Pn	13 23 03.9	+0.3
WHHZ	**Waihua**	**1.88**	**186**	P	Pn	13 23 03.0	-1.0
GRZ	**Great Barrier**	**1.89**	**299**	P	Pn	13 23 04.4	+0.4
TLZ	**Tolley Road**	**1.92**	**233**	P	Pn	13 23 04.4	0.0
NMHZ	**Naumai**	**1.97**	**196**	P	Pn	13 23 04.7	-0.5
MHGZ	**Mahia Peninsul**	**1.98**	**171**	P	Pn	13 23 03.9	-1.3
HATZ	**Hinemaiaia**	**2.02**	**213**	P	Pn	13 23 06.7	+1.0
ETAZ	**East Tamaki Re**	**2.07**	**276**	P	Pn	13 23 07.2	+0.9
ARHZ	**Aropaoanui**	**2.10**	**191**	P	Pn	13 23 05.6	-1.1
BKZ	**Black Stump Fm**	**2.12**	**202**	P	Pn	13 23 05.6	-1.4
RATZ	**Rangitukua**	**2.15**	**219**	P	Pn	13 23 07.9	+0.4
RITZ	**Rihia Road**	**2.19**	**216**	P	Pn	13 23 08.4	+0.4
KATZ	**Kakaramea**	**2.27**	**218**	P	Pn	13 23 10.2	+1.0
MCHZ	**McNeill Hill**	**2.33**	**195**	P	Pn	13 23 08.5	-1.3
KWHZ	**Kaweka Forest**	**2.38**	**200**	P	Pn	13 23 08.8	-1.7
KRVZ	**Karewarewa**	**2.39**	**217**	P	Pn	13 23 11.1	+0.4
WTVZ	**West Tongariro**	**2.43**	**218**	P	Pn	13 23 12.5	+1.3
HIZ	**Hauiti**	**2.46**	**237**	P	Pn	13 23 12.5	+0.9
NGZ	**Ngauruhoe**	**2.47**	**217**	P	Pn	13 23 12.1	+0.2
TWVZ	**Taurewa**	**2.47**	**220**	P	Pn	13 23 12.0	+0.2
CKHZ	**Cape Kidnapper**	**2.48**	**187**	P	Pn	13 23 10.7	-1.1
TUVZ	**Tukino**	**2.52**	**215**	P	Pn	13 23 12.3	-0.2
BHHZ	**Black Hill Sta**	**2.55**	**206**	P	Pn	13 23 11.1	-1.7
FWVZ	**Far West T-bar**	**2.56**	**216**	P	Pn	13 23 12.9	-0.2
WHVZ	**Whangaehu Hut**	**2.56**	**215**	P	Pn	13 23 12.8	-0.4
KRHZ	**Kereru**	**2.59**	**200**	P	Pn	13 23 10.9	-2.4
MOVZ	**Moawhango**	**2.59**	**211**	P	Pn	13 23 12.0	-1.4
KAHZ	**Kahuranaki**	**2.63**	**190**	P	Pn	13 23 11.8	-2.1
PKVZ	**Pokaka**	**2.69**	**218**	P	Pn	13 23 15.9	+1.3
MTVZ	**Mangateitei**	**2.70**	**216**	P	Pn	13 23 14.2	-0.6
PXZ	**Pawanui**	**2.87**	**190**	P	Pn	13 23 13.9	-3.1
VRZ	**Vera Road**	**2.89**	**227**	P	Pn	13 23 18.1	+0.9
WPHZ	**Waipukurau**	**2.98**	**196**	P	Pn	13 23 15.7	-2.8
TSZ	**Takapari Road**	**3.10**	**202**	P	Pn	13 23 16.9	-0.2
PRHZ	**Porangahau**	**3.13**	**192**	P	Pn	13 23 17.1	-3.5
WAZ	**Wanganui**	**3.22**	**217**	P	Pn	13 23 20.9	-0.9
PKE	**Pukeiti**	**3.41**	**233**	P	Pn	13 23 25.7	+1.5
KHEZ	**Kahui Hut**	**3.45**	**232**	P	Pn	13 23 24.1	-0.7
OHWZ	**Ohakea**	**3.45**	**209**	P	Pn	13 23 22.9	-2.0
POWZ	**Post Office Ro**	**3.46**	**202**	P	Pn	13 23 21.6	-3.4
PRWZ	**Pori Road**	**3.55**	**199**	P	Pn	13 23 22.9	-3.3
BFZ	**Birch Farm**	**3.61**	**195**	P	Pn	13 23 22.8	-4.2
TIWZ	**Tintock**	**3.78**	**199**	P	Pn	13 23 25.6	-3.7
CPWZ	**Castlepoint**	**3.84**	**195**	P	Pn	13 23 27.6	-2.5
HOWZ	**Holdsworth Sta**	**4.00**	**202**	P	Pn	13 23 27.6	-4.7
OGWZ	**Otaki Gorge**	**4.04**	**206**	P	Pn	13 23 28.8	-4.1
TMWZ	**Te Maipa**	**4.09**	**197**	P	Pn	13 23 29.0	-4.6
KIW	**Kapiti Island**	**4.17**	**208**	P	Pn	13 23 30.5	-4.1
MTW	**Mount Morrison**	**4.24**	**201**	P	Pn	13 23 30.5	-5.1
CAW	**Cannon Point**	**4.33**	**205**	P	Pn	13 23 32.1	-4.7
TRWZ	**Traveller**	**4.42**	**198**	P	Pn	13 23 33.2	-4.8
PAWZ	**Paruwai Farm**	**4.47**	**200**	P	Pn	13 23 33.4	-5.3
DUWZ	**D'Urville Isla**	**4.55**	**217**	P	Pn	13 23 36.8	-2.9
MSWZ	**Moikau Station**	**4.55**	**202**	P	Pn	13 23 34.6	-5.2
BHW	**Baring Head**	**4.67**	**205**	P	Pn	13 23 36.3	-5.1
PLWZ	**Palliser**	**4.70**	**201**	P	Pn	13 23 36.0	-5.8
TCW	**Tory Channel**	**4.72**	**211**	P	Pn	13 23 37.2	-4.9
TUWZ	**Tuamarina**	**5.04**	**212**	P	Pn	13 23 41.2	-5.2
NNZ	**Nelson**	**5.13**	**217**	P	Pn	13 23 43.7	-3.8
QRZ	**Quartz Range**	**5.30**	**225**	P	Pn	13 23 45.9	-4.0
BSWZ	**Blackbirch Sta**	**5.31**	**211**	P	Pn	13 23 45.5	-4.5
THZ	**Tophouse**	**5.78**	**217**	P	Pn	13 23 51.5	-5.0
KHZ	**Kahutara**	**6.03**	**209**	P	Pn	13 23 54.2	-5.7
GVZ	**Greta Valley S**	**6.70**	**209**	P	Pn	13 24 03.2	-5.8
LTZ	**Lake Taylor**	**6.87**	**214**	P	Pn	13 24 06.4	-4.9
INZ	**Inchbonnie**	**7.21**	**218**	P	Pn	13 24 13.1	-2.8
OKCZ	**Okains Bay**	**7.34**	**206**	P	Pn	13 24 11.2	-6.6
OXZ	**Oxford**	**7.40**	**213**	P	Pn	13 24 12.5	-6.1
MQZ	**McQueen's Vall**	**7.47**	**208**	P	Pn	13 24 12.3	-7.2
ODZ	**Otahua Downs**	**9.38**	**211**	P	Pn	13 24 39.8	-5.8
MLZ	**Mavora Lakes**	**10.78**	**218**	P	Pn	13 25 03.4	-1.2

*ISCJB **18** 13:23:21.5±0.5, 16°.25N±0°.06×98°.70W±0°.02, h14km, mb4.3/93, MS3.9/11, Error ellipse: s-maj=8.9km s-min=3.2km az=8.6*
*NEIC **18** 13:23:21.5±0.0, 16°.09N×99°.00W, h5km, mb4.4/105, MD4.6(MEX), After MEX.*
*IDC **18** 13:23:21.5±1.5, 16°.34N×98°.76W, h0km, mb4.1/10, mb1 4.2/14, mb1mx4.0/46, mbtmp4.0/14, ML3.2/4, MS3.7/11, Ms1 3.7/11, ms1mx3.4/27, Error ellipse: s-maj=39.0km s-min=14.9km az=38.0*
*MEX **18** 13:23:21.1±0.3, 16°.10N×99°.01W, h2km, MD4.3*
ISC 18 13:23:22.4±0.8, 16°.16N±0°.08×98°.81W±0°.06, h14km, n362, σ0s87/353, mb4.4/95, MS4.0/11, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.69**	**71**	*e*Pg	**Pg**	**13 23 36.5**	**+0.5**
PNIG				*e*Sg	**Sn**	**13 23 49.0**	**+0.5**
PNIG	**Pinotepa**	**0.69**	**71**	*e*P	**Pg**	**13 23 36.5**	**+0.5**
PNIG				*i* S	**Sn**	**13 23 49.0**	**+0.5**
TLIG	**Tlapa**	**1.41**	**9**	*e*Pn	**Pn**	**13 23 46.4**	**-1.5**
TLIG				*e*Sn	**Sn**	**13 24 08.2**	**+1.9**
CAIG	**El Cayaco**	**1.65**	**302**	*e*Pn	Pn	13 23 46.1	-4.9
CAIG	**El Cayaco**	**1.65**	**302**	*e*P	Pn	13 23 45.8	-5.2
CAIG				*i* S	Sn	13 24 05.0	-7.0
CMIG	**Matias Romero**	**3.88**	**76**	Pn	**Pn**	**13 24 21.4**	**-0.2**
	3.3nm,0.3s,baz=265,slow=12,SNR=28						
CMIG				Pg	**Pb**	**13 24 30.6**	**0.0**
	7.4nm,0.3s,baz=272,slow=16,SNR=16						
CMIG				Sn	**Sn**	**13 25 08.1**	**+1.1**
	19nm,0.3s,baz=319,slow=18,SNR=6.2						
CMIG				LR	LR	13 25 59.9	
	comp=Z,2μm,19.3s,baz=264,slow=42						
LVIG	**Laguna Verde**	**4.21**	**32**	*e*Pn	**Pn**	**13 24 23.5**	**-2.7**
CCIG	**Comitan**	**6.41**	**88**	*e*Pn	**Pn**	**13 24 54.2**	**-2.5**
ZAIG	**Zacatecas**	**7.46**	**332**	*e*Pn	**Pn**	**13 25 13.3**	**+2.1**
APG	**El Apazote**	**8.12**	**97**	Pn	**Pn**	**13 25 21.5**	**+1.2**
	0.2nm,0.3s,baz=353,slow=20,SNR=3.6						
APG				Sn	**Sn**	**13 26 53.6**	**+1.5**
	0.8nm,0.3s,baz=342,slow=16,SNR=2.7						
TEIG	**Tepich**	**10.79**	**66**	*e*Pn	**Pn**	**13 25 56.0**	**-0.6**
H06E1	**SOCORRO T-PHASE**	**11.85**	**284**	T	T	13 38 03.5	
	SNR=128						
LPIG	**La Paz**	**13.37**	**308**	LR	LR	13 30 15.7	
	comp=Z,93nm,21.9s,baz=72,slow=31						
LTX	**Lajitas**	**13.85**	**342**	*e*Pn	**Pn**	**13 26 39.0**	**+0.5**
TXAR	**Lajitas Array**	**13.85**	**342**	Pn	**Pn**	**13 26 39.0**	**+0.5**
	0.0nm,0.3s,baz=157,slow=12,SNR=3.5						
TXAR				Lg	Lg	13 30 33.0	
	0.0nm,0.3s,baz=165,slow=31,SNR=2.6						
TXAR				LR	LR	13 32 38.4	
	comp=Z,164nm,19.0s,baz=0.0,slow=41						
JCT	**Junction City**	**14.28**	**357**	*e*Pn	**Pn**	**13 26 46.9**	**+2.5**
JCT	**Junction City**	**14.28**	**357**	P	**Pn**	**13 26 44.9**	**+0.5**
	baz=176						
JTS	**Las Juntas de**	**14.70**	**112**	Pn	**P**	**13 26 55.9**	**-0.4**
	0.7nm,0.3s,baz=253,slow=19,SNR=3.1						
WHTX	**Lake Whitney,**	**15.80**	**4**	*e*Pn	**Pn**	**13 27 05.3**	**+0.6**
	20nm,0.9s						
WHTX	**Lake Whitney,**	**15.80**	**4**	P	**Pn**	**13 27 04.6**	**0.0**
	baz=184						
ABTX	**Abilene, Hawle**	**16.41**	**358**	*e*Pn	**Pn**	**13 27 14.7**	**+2.3**
	11nm,0.9s						
ABTX	**Abilene, Hawle**	**16.41**	**358**	P	**Pn**	**13 27 12.3**	**-0.1**
	baz=177						
MNTX	**Cornudas Mount**	**16.58**	**340**	*e*Pn	**Pn**	**13 27 15.3**	**+0.7**
	3.6nm,0.9s						
MNTX	**Cornudas Mount**	**16.58**	**340**	P	**Pn**	**13 27 15.5**	**+0.9**
	baz=157						
GDL2	**Guadalupe Moun**	**16.74**	**343**	*e*Pn	**Pn**	**13 27 17.1**	**+0.3**
HSIG		**16.99**	**321**	*e*Pn	**Pn**	**13 27 21.1**	**+1.3**
	12nm,1.1s						
Z41A	**Richland Creek**	**17.86**	**17**	*e*Pn	**Pn**	**13 27 31.8**	**+1.2**
	19nm,0.6s						
319A	**Douglas**	**17.90**	**330**	*e*Pn	**Pn**	**13 27 31.7**	**+0.5**
	72nm,2.0s						
MSTX	**Muleshoe**	**18.09**	**349**	*e*Pn	**Pn**	**13 27 33.7**	**+0.2**
	11nm,0.8s						
MSTX	**Muleshoe**	**18.09**	**349**	P	**Pn**	**13 27 33.8**	**+0.3**
	baz=167						
121A	**Cookes Peak, D**	**18.22**	**335**	P	**Pn**	**13 27 36.2**	**+1.1**
	baz=151						
WMOK	**Wichita Mounta**	**18.50**	**0**	*e*P	**P**	**13 27 38.3**	**+0.1**
	3.2nm,0.8s						
WMOK	**Wichita Mounta**	**18.50**	**0**	P	**P**	**13 27 38.6**	**+0.3**
	baz=180						
AMTX	**Amarillo**	**18.82**	**353**	*e*P	**P**	**13 27 41.6**	**-0.2**
	8.2nm,0.6s						
AMTX	**Amarillo**	**18.82**	**353**	P	**P**	**13 27 42.2**	**+0.3**
	baz=171						
MIAR	**Mount Ida**	**18.90**	**13**	*e*P	**P**	**13 27 43.8**	**+1.1**
	7.7nm,0.6s						
MIAR	**Mount Ida**	**18.90**	**13**	P	**P**	**13 27 43.1**	**+0.5**
	baz=195,SNR=6.4						
249A	**Camden**	**18.99**	**32**	P	**P**	**13 27 44.0**	**+0.3**
	baz=216						
147A	**Livingston**	**19.01**	**28**	P	**P**	**13 27 43.7**	**-0.2**
	baz=212						
BNM	**Barren Site**	**19.24**	**340**	*e*P	**P**	**13 27 48.0**	**+1.3**
TUC	**Tucson**	**19.41**	**328**	*e*P	**P**	**13 27 50.1**	**+1.8**
	7.4nm,1.2s						
TUC	**Tucson**	**19.41**	**328**	P	**P**	**13 27 49.1**	**+0.8**
	baz=143						
W39A	**Magazine**	**19.48**	**12**	*e*P	**P**	**13 27 49.6**	**+0.6**
	9.7nm,0.6s						
W39A	**Magazine**	**19.48**	**12**	P	**P**	**13 27 49.4**	**+0.4**
	baz=194						
LAZ	**Ladron**	**19.64**	**339**	*e*P	**P**	**13 27 51.0**	**0.0**
149A	**Jones**	**19.66**	**31**	P	**P**	**13 27 50.6**	**-0.3**
	baz=216						
352A	**Blakely**	**19.81**	**37**	P	**P**	**13 27 53.0**	**+0.3**
	baz=223						
W41B	**Gary Mavity, V**	**19.82**	**16**	*e*P	**P**	**13 27 51.6**	**-1.1**
	7.1nm,0.9s						
LRAL	**Lakeview Retre**	**19.91**	**30**	P	**P**	**13 27 53.6**	**-0.1**
	baz=215						
ANMO	**Albuquerque**	**19.92**	**341**	P	**P**	**13 27 54.5**	**+0.5**
	0.3nm,0.3s,baz=150,slow=14,SNR=6.5						
ANMO	**Albuquerque**	**19.92**	**341**	*e*P	**P**	**13 27 52.4**	**-1.7**
	3.3nm,0.8s						
ANMO	**Albuquerque**	**19.92**	**341**	P	**P**	**13 27 54.5**	**+0.5**
	baz=158						
TASM	**ASL Pad, Albuq**	**19.92**	**341**	P	**P**	**13 27 54.4**	**+0.3**
	baz=158						
TASM	**ASL Pad, Albuq**	**19.92**	**341**	P	**P**	**13 27 54.5**	**+0.5**
	baz=158						
757A	**Oxford**	**19.99**	**48**	P	**P**	**13 27 53.4**	**-1.2**
	baz=234						
251A	**Midway**	**19.99**	**35**	P	**P**	**13 27 54.8**	**+0.1**
	baz=220						
150A	**Eclectic**	**20.06**	**33**	P	**P**	**13 27 55.8**	**+0.4**
	baz=218						
OXF	**Oxford**	**20.13**	**23**	P	**P**	**13 27 55.1**	**-1.0**
	baz=207						
353A	**Camilla**	**20.14**	**39**	P	**P**	**13 27 54.4**	**-1.7**
	baz=224						
214A	**Organ Pipe Nat**	**20.23**	**324**	P	**P**	**13 27 58.4**	**+1.2**
	baz=137						
Z49A	**Columbiana**	**20.27**	**31**	P	**P**	**13 27 57.4**	**-0.2**
	baz=216						
X46A	**Booneville**	**20.49**	**25**	P	**P**	**13 28 00.7**	**+0.7**
	baz=209						
FCAR	**Ozark Folk Cen**	**20.53**	**16**	*e*P	**P**	**13 27 59.8**	**-0.6**
	7.5nm,1.0s						
Y48A	**Jasper**	**20.55**	**29**	P	**P**	**13 27 59.7**	**-1.0**
	baz=213						
Z50A	**Ashland**	**20.62**	**32**	*e*P	**P**	**13 28 01.0**	**-0.5**
	11nm,0.7s						
Z50A	**Ashland**	**20.62**	**32**	P	**P**	**13 28 00.7**	**-0.7**
	baz=217,SNR=9.1						
U40A	**Yellville**	**20.80**	**14**	P	**P**	**13 28 03.5**	**+0.2**
	baz=196,SNR=6.7						
152A	**Waverly Hall**	**20.81**	**35**	*e*P	**P**	**13 28 02.6**	**-0.8**
	17nm,1.3s						
152A	**Waverly Hall**	**20.81**	**35**	P	**P**	**13 28 02.7**	**-0.8**
	baz=221						
X18A	**Snowflake**	**20.85**	**333**	*e*P	**P**	**13 28 05.0**	**+0.9**
	11nm,1.0s						
Y49A	**Blount Mountai**	**20.86**	**30**	*e*P	**P**	**13 28 03.9**	**-0.2**
	9.9nm,0.8s						
Y49A	**Blount Mountai**	**20.86**	**30**	P	**P**	**13 28 03.6**	**-0.4**
	baz=215						
X48A	**Hartselle**	**21.06**	**28**	*e*P	**P**	**13 28 05.9**	**-0.3**
	35nm,1.6s						
X48A	**Hartselle**	**21.06**	**28**	P	**P**	**13 28 06.4**	**+0.3**
	baz=213						
Z51A	**Franklin**	**21.06**	**33**	P	**P**	**13 28 06.6**	**+0.4**
	baz=219						
PLAL	**Pickwick Lake**	**21.06**	**25**	*e*P	**P**	**13 28 06.0**	**-0.2**
	36nm,1.4s						
Z52A	**Williamson**	**21.37**	**35**	P	**P**	**13 28 09.1**	**-0.4**
	baz=221						
113A	**Mohawk Valley,**	**21.37**	**323**	*e*P	**P**	**13 28 10.9**	**+1.4**
	12nm,1.0s						
X16A	**Lo Mia Camp, P**	**21.43**	**330**	*e*P	**P**	**13 28 11.3**	**+1.0**
	14nm,0.8s						
X49A	**Woodville**	**21.44**	**29**	P	**P**	**13 28 10.1**	**-0.1**
	baz=214,SNR=12						
T25A	**Trinidad**	**21.47**	**348**	*e*P	**P**	**13 28 11.9**	**+1.1**
	11nm,0.9s						
T25A	**Trinidad**	**21.47**	**348**	P	**P**	**13 28 11.9**	**+1.1**
	baz=165						
W47A	**Westpoint**	**21.49**	**26**	P	**P**	**13 28 10.6**	**-0.2**
	baz=210						
Y51A	**Rockmart**	**21.57**	**33**	P	**P**	**13 28 11.1**	**-0.5**
	baz=218						
W48A	**Pulaski**	**21.68**	**27**	P	**P**	**13 28 13.1**	**+0.3**
	baz=212						
X50B	**Fort Payne**	**21.72**	**31**	P	**P**	**13 28 13.1**	**-0.2**
	baz=216,SNR=5.6						
V46A	**Holladay**	**21.76**	**24**	P	**P**	**13 28 13.6**	**-0.1**
	baz=208						
Y14A	**Wickenburg**	**21.83**	**327**	*e*P	**P**	**13 28 14.9**	**+0.3**
	16nm,1.1s						
357A	**Townsend**	**21.91**	**43**	P	**P**	**13 28 14.0**	**-1.3**
	baz=230						
Z53A	**Monticello**	**21.91**	**36**	P	**P**	**13 28 14.2**	**-1.0**
	baz=222						
W49A	**Belvidere**	**21.97**	**28**	P	**P**	**13 28 15.8**	**-0.1**
	baz=214						
V47A	**Nunnelly**	**22.02**	**25**	P	**P**	**13 28 16.0**	**-0.6**
	baz=210						
GOGA	**Godfrey**	**22.06**	**36**	*e*P	**P**	**13 28 16.0**	**-1.0**
	18nm,1.0s						
GOGA	**Godfrey**	**22.06**	**36**	P	**P**	**13 28 16.5**	**-0.4**
	baz=222,SNR=7.8						
Y52A	**Lilburn**	**22.07**	**34**	*e*P	**P**	**13 28 15.9**	**-1.1**
	160nm,0.7s						
Y52A	**Lilburn**	**22.07**	**34**	P	**P**	**13 28 16.6**	**-0.4**
	baz=220,SNR=6.0						
155A	**Kite**	**22.09**	**39**	P	**P**	**13 28 16.4**	**-0.8**
	baz=226						
GLA	**Glamis**	**22.19**	**322**	*e*P	**P**	**13 28 19.2**	**+0.7**
	45nm,1.6s						
GLA	**Glamis**	**22.19**	**322**	P	**P**	**13 28 19.4**	**+0.9**
	baz=135						
X51A	**Calhoun**	**22.20

BELC	Belle Mtn. Jos baz=134	23.55	322	P	P	13 28 33.4	+0.8
PFO	Pinyon Flats O comp=Z,181nm,20.0s,baz=120,slow=38	23.56	321	LR	LR	13 38 09.0	
PFO	Pinyon Flats O baz=133	23.56	321	P	P	13 28 33.0	+0.3
S46A	Don Dixon Farm baz=207	23.57	22	P	P	13 28 31.6	-1.0
T48A	Bowling Green baz=211	23.58	25	P	P	13 28 31.8	-1.0
PV13	Radium Mtn., P 4.8nm,0.9s	23.62	340	eP	P	13 28 33.3	0.0
Z57A	Bowman baz=228	23.63	40	P	P	13 28 32.1	-1.1
PV02	Paradox Valley 7.6nm,1.0s	23.64	340	eP	P	13 28 33.0	-0.6
U50A	Jamestown baz=215	23.69	29	P	P	13 28 33.5	-0.3
PV03	Paradox Valley 10nm,1.2s	23.71	340	eP	P	13 28 34.2	-0.1
PV18	Skein Mesa, Pa 13nm,1.2s	23.73	340	eP	P	13 28 34.3	-0.1
PV12	Saucer Basin, 15nm,1.0s	23.76	340	eP	P	13 28 34.5	-0.1
PV11	David Mesa, Pa 45nm,1.8s	23.76	340	eP	P	13 28 34.5	-0.3
PV17	East Wray Mesa 15nm,1.3s	23.77	340	eP	P	13 28 34.7	-0.1
PV16	Nyswonger Mesa 25nm,1.5s	23.79	340	eP	P	13 28 34.9	-0.1
S47A	Hartford baz=209	23.81	24	P	P	13 28 34.6	-0.4
PV07	Paradox Valley 16nm,1.3s	23.82	341	eP	P	13 28 35.1	-0.2
V52A	Sevierville baz=218	23.84	32	P	P	13 28 35.1	-0.2
NHSC	New Hope baz=229	23.84	42	P	P	13 28 34.3	-0.9
PV04	Paradox Valley 18nm,1.1s	23.86	340	eP	P	13 28 35.6	0.0
PV14	Lion Creek, Pa 10nm,1.0s	23.88	340	eP	P	13 28 34.8	-1.1
X55A	Gracelyn & Ava baz=224	23.88	37	P	P	13 28 35.2	-0.4
R45A	Skylar, Fairfi baz=205	23.91	21	P	P	13 28 35.3	-0.6
GMRC	Granite Mounta baz=136	23.92	324	P	P	13 28 36.6	+0.4
T49A	Edmonton baz=213	23.95	27	P	P	13 28 35.9	-0.3
PV23	Carpenter Ridg 17nm,1.1s	23.95	340	eP	P	13 28 36.3	-0.2
PV22	Blue Mesa, Par 11nm,1.2s	23.95	340	eP	P	13 28 35.4	-1.1
JSC	Jenkinsville 29nm,1.5s	23.96	38	eP	P	13 28 33.9	-2.5
MURC	Murrieta baz=131	24.01	320	P	P	13 28 37.4	+0.5
W54A	Cherokee Point baz=222	24.01	35	P	P	13 28 37.0	+0.1
PV09	Paradox Valley	24.03	340	eP	P	13 28 36.4	-1.0
PV21	Cone Mtn., Par 9.3nm,1.0s	24.03	340	eP	P	13 28 36.9	-0.4
U51A	La Follette baz=217	24.05	30	P	P	13 28 36.8	-0.4
V53A	Saluda 9.5nm,0.7s	24.11	33	eP	P	13 28 36.0	-1.9
V53A	Saluda baz=220	24.11	33	P	P	13 28 37.3	-0.5
R46A	Gibon Southern baz=207	24.11	22	P	P	13 28 37.3	-0.5
T50A	Nancy baz=214	24.18	28	P	P	13 28 38.1	-0.4
S48A	Wiedeman Farm, baz=211	24.19	25	P	P	13 28 37.8	-0.8
Z58A	St. Stephen baz=230	24.22	42	P	P	13 28 38.5	-0.3
X56A	White Oak baz=225	24.25	38	P	P	13 28 38.9	-0.1
BBRC	Big Bear Solar baz=133	24.29	321	P	P	13 28 40.3	+0.6
ISCO	Idaho Springs 9.6nm,1.0s	24.29	347	eP	P	13 28 38.7	-1.0
ISCO	Idaho Springs baz=164,SNR=6.1	24.29	347	P	P	13 28 39.8	+0.1
U52A	Thorn Hill baz=218	24.38	31	P	P	13 28 39.7	-0.6
TZTN	Tazewell baz=218	24.41	31	P	P	13 28 40.5	-0.1
Q45A	Warren Harvey, baz=205	24.50	20	P	P	13 28 40.4	-0.9
KMSC	Kings Mountain baz=224	24.53	36	P	P	13 28 41.4	-0.2
TUQ	Turquoise Moun baz=137	24.54	325	P	P	13 28 42.7	+0.8
R47A	Wooly Knot Far baz=209	24.55	24	P	P	13 28 41.5	-0.3
T51A	Gray baz=216	24.55	30	P	P	13 28 41.5	-0.4
WCI	Wyandotte Cave 75nm,1.5s	24.59	24	eP	P	13 28 41.1	-1.0
WCI	Wyandotte Cave baz=210	24.59	24	P	P	13 28 41.9	-0.3
S49A	Springfield baz=212	24.62	26	P	P	13 28 41.8	-0.7
V54A	Nebo baz=222	24.65	34	P	P	13 28 42.4	-0.4
BFSC	Mount Baldy Ra baz=132	24.72	320	P	P	13 28 44.6	+1.1
P43A	Skaggs, Pawnee baz=202	24.76	17	P	P	13 28 43.5	-0.2
U53A	Fall Branch baz=220	24.76	33	P	P	13 28 43.5	-0.3
MTPU	Mount Pierson 26nm,1.5s	24.78	334	eP	P	13 28 45.4	+1.1
OGNE	Ogallala baz=172	24.85	354	P	P	13 28 45.5	+0.9
S50A	Richmond baz=214	24.92	28	P	P	13 28 45.5	+0.3
SHPR	Sheep Range 7.5nm,1.4s	24.93	327	eP	P	13 28 46.7	+1.3
GSC	Goldstone, Bar baz=135	24.94	323	P	P	13 28 46.8	+1.3
W56A	Indian Trail baz=225	24.96	37	P	P	13 28 45.3	-0.2
SRU	San Rafael Swe 10nm,1.0s	25.06	338	eP	P	13 28 46.3	-0.3
SHOC	Shoshone, Teco baz=137	25.07	325	P	P	13 28 47.2	+0.6
V55A	Taylorsville baz=223	25.11	35	P	P	13 28 46.9	0.0
Q16A	Castle Valley 14nm,1.4s	25.13	337	eP	P	13 28 46.4	-0.9
T52A	Hallie 19nm,0.8s	25.13	31	eP	P	13 28 44.8	-2.3
T52A	Hallie baz=218	25.13	31	P	P	13 28 47.2	+0.1
Q47A	Bedord North L baz=209	25.15	23	P	P	13 28 47.0	-0.2
BGNE	Belgrade baz=181	25.16	1	P	P	13 28 47.4	0.0
MSU	Marysvale	25.17	335	eP	P	13 28 47.9	+0.2
O20A	White River Ci baz=158,SNR=5.9	25.26	343	P	P	13 28 49.7	+1.3
T53A	Wise baz=219	25.26	32	P	P	13 28 48.1	-0.2
S51A	Beattyville 15nm,0.7s	25.26	29	eP	P	13 28 46.8	-1.4
S51A	Beattyville baz=216,SNR=5.6	25.26	29	P	P	13 28 48.3	0.0
U54A	Nelsons Funny 44nm,1.0s	25.28	33	eP	P	13 28 46.5	-2.0
U54A	Nelsons Funny baz=221,SNR=9.2	25.28	33	P	P	13 28 48.5	0.0
N23A	Red Feather La 7.5nm,0.9s	25.41	347	eP	P	13 28 47.8	-2.1
N23A	Red Feather La baz=164,SNR=6.1	25.41	347	P	P	13 28 50.2	+0.4
N41A	Harden Midland 15nm,0.8s	25.41	14	eP	P	13 28 47.1	-2.4
N41A	Harden Midland baz=198	25.41	14	P	P	13 28 49.2	-0.3
Q48A	North Vernon baz=210	25.41	24	P	P	13 28 49.6	0.0
P18A	Preston Nutter 12nm,1.0s	25.42	339	eP	P	13 28 48.8	-1.3
P17A	Butcher Ranch, 4.4nm,0.8s	25.46	338	eP	P	13 28 49.8	-0.4
P46A	Rosedale baz=206	25.47	21	P	P	13 28 49.5	-0.6
TMUT	Trail Mountain 3.8nm,0.8s	25.47	337	eP	P	13 28 49.5	-0.9
V56A	Mocksville baz=224	25.48	36	P	P	13 28 49.9	-0.4
LRMC	Laurel Mtn Rad baz=134	25.58	322	P	P	13 28 53.0	+1.7
HDIL	Hopedale baz=201	25.67	17	P	P	13 28 52.2	+0.3
U55A	TA2, Sparta baz=222,SNR=5.1	25.68	35	P	P	13 28 51.9	-0.2
R51A	Hillsboro baz=215	25.80	28	P	P	13 28 53.2	+0.1
T54A	Tazewell baz=221	25.81	33	P	P	13 28 53.2	-0.1
Q49A	Aurora baz=212	25.82	25	P	P	13 28 52.8	-0.5
TPNV	Topopah Spring 11nm,1.2s	25.84	327	eP	P	13 28 53.0	-0.6
TPNV	Topopah Spring baz=138	25.84	327	P	P	13 28 55.1	+1.5
O45A	Potomac baz=205	25.86	20	P	P	13 28 54.3	+0.7
MPMC	Manual Prospec baz=135	25.87	324	P	P	13 28 55.9	+1.9
PSUT	Pine Spring 3.7nm,0.9s	25.91	332	eP	P	13 28 54.1	-0.3
V57A	Coltrane Farms baz=226	25.95	37	P	P	13 28 55.2	+0.7
P48A	Milroy baz=210	25.99	24	P	P	13 28 54.4	-0.4
N43A	Stutzman Famil baz=201	26.06	17	P	P	13 28 55.1	-0.3
Q50A	Georgetown baz=214	26.07	27	P	P	13 28 54.8	-0.8
ISA	Isabella, Lake baz=132	26.17	322	P	P	13 28 56.9	+0.2
SFIN	Lafayette baz=206	26.19	21	P	P	13 28 55.4	-1.2
N44A	Piper City baz=204	26.23	19	P	P	13 28 56.8	-0.2
P49A	Miami Univ. Ec baz=212	26.34	25	P	P	13 28 57.0	-0.9
RWWY	Rawlins 8.2nm,1.0s	26.45	346	eP	P	13 28 58.8	-0.5
GRAC	Grapevine Rang baz=136	26.47	325	P	P	13 28 59.8	+0.4
BLA	Blacksburg 13nm,0.6s	26.54	34	eP	P	13 28 59.6	-0.3
BLA	Blacksburg baz=223	26.54	34	P	P	13 28 59.3	-0.6
R11A	Troy Canyon, C 5.0nm,1.1s	26.57	330	eP	P	13 28 60.0	-0.4
R11A	Troy Canyon, C baz=141	26.57	330	P	P	13 29 01.1	+0.8
M43A	Waltham Townsh baz=201	26.58	17	P	P	13 28 59.8	-0.4
U57A	Blanch baz=226	26.59	37	P	P	13 28 59.5	-0.8
R53A	Hurricane 22nm,0.8s	26.60	31	eP	P	13 28 58.2	-2.2
R53A	Hurricane baz=218	26.60	31	P	P	13 28 59.4	-1.0
N46A	Monticello baz=206	26.77	21	P	P	13 29 01.6	-0.3
O48A	Farmland baz=210	26.78	24	P	P	13 29 01.3	-0.7
M44A	Midewin, Midew baz=203	26.80	18	P	P	13 29 02.0	-0.1
DUG	Dugway, Tooele baz=149	26.86	336	P	P	13 29 03.8	+0.8
L42A	Oliver, Polo 22nm,0.9s	26.93	15	eP	P	13 29 02.1	-1.1
L42A	Oliver, Polo baz=199	26.93	15	P	P	13 29 02.9	-0.3
Q52A	Bidwell baz=217	26.95	29	P	P	13 29 03.1	-0.3
R54A	Victor baz=220	26.96	32	P	P	13 29 03.0	-0.7
P51A	Williamsport baz=215	27.00	28	P	P	13 29 03.6	-0.4
O49A	Covington baz=212	27.05	25	P	P	13 29 04.5	+0.1
N47A	Urbana baz=208	27.12	22	P	P	13 29 04.9	-0.1
Q53A	Leroy baz=218	27.22	30	P	P	13 29 05.8	-0.2
O50A	Cable baz=213	27.31	26	P	P	13 29 06.2	-0.6
N48A	Decatur baz=210	27.35	23	P	P	13 29 06.9	-0.2
ECSD	EROS Data Cent 4.0nm,0.8s	27.54	3	eP	P	13 29 07.3	-1.5
ECSD	EROS Data Cent baz=184	27.54	3	P	P	13 29 08.8	0.0
P52A	Corning baz=216	27.54	29	P	P	13 29 08.4	-0.4
L44A	Lake County Fo baz=203	27.57	18	P	P	13 29 08.8	-0.2
Q54A	Coxs Mills 7.6nm,0.6s	27.66	31	eP	P	13 29 08.7	-1.2
Q54A	Coxs Mills baz=220	27.66	31	P	P	13 29 09.8	0.0
S57A	Dark Hollow, R baz=224	27.74	35	P	P	13 29 10.4	-0.3
NV11	Mina Array Sit 0.4nm,1.1s	27.95	326	eP	P	13 29 14.1	+1.5
M48A	Edgerton baz=210	28.01	23	P	P	13 29 12.2	-0.8
NV01	Mina Array Sit	28.03	326	eP	P	13 29 13.7	+0.3
NVAR	Mina Array Bea 2.1nm,1.0s,baz=145,slow=8.0,SNR=9.5	28.03	326	P	P	13 29 13.7	+0.2
N50A	Nevada baz=213	28.03	26	P	P	13 29 11.8	-1.3
BW06	Boulder Array 6.4nm,1.1s	28.07	343	eP	P	13 29 13.4	-0.4
BW06	Boulder Array baz=157,SNR=7.1	28.07	343	P	P	13 29 14.1	+0.3
PD31	Pinedale Array 5.8nm,1.1s	28.07	343	eP	P	13 29 12.8	-1.0
PDAR	Pinedale Array 2.8nm,0.9s,baz=138,slow=9.0,SNR=15	28.07	343	P	P	13 29 13.9	+0.1
PDAR				LR	LR	13 41 08.9	
	comp=Z,302nm,18.0s,baz=172,slow=38						
HVU	Hansel Valley 4.1nm,0.9s	28.22	338	eP	P	13 29 13.9	-1.2
ELK	Elko 0.4nm,0.3s,baz=177,slow=8.8,SNR=3.5	28.33	333	P	P	13 29 17.9	+1.7
ELK				LR	LR	13 42 28.9	
	comp=Z,385nm,20.1s,baz=177,slow=41						
SDV	Santo Domingo	28.42	101	LR	LR	13 40 27.2	
	comp=Z,571nm,21.6s,baz=350,slow=36						
LOHW	Long Hollow 4.1nm,0.8s	29.14	342	eP	P	13 29 21.3	-2.0
FXWY	Fox Creek 3.3nm,0.9s	29.29	342	eP	P	13 29 23.8	-0.9
MOOW	Moose Ponds 2.2nm,0.9s	29.31	342	eP	P	13 29 23.7	-1.1
IMW	Indian Meadow 3.7nm,1.0s	29.50	342	eP	P	13 29 25.6	-1.0
HLID	Hailey 2.6nm,1.1s	30.37	337	eP	P	13 29 34.7	+0.6
HLID	Hailey baz=149	30.37	337	P	P	13 29 34.5	+0.3
F40A	Park Falls baz=196	30.54	12	P	P	13 29 35.2	-0.2
N57A	Milroy baz=223	30.65	33	P	P	13 29 36.5	0.0
BOZ	Bozeman (W) 1.7nm,0.8s	31.25	343	eP	P	13 29 41.7	-0.2
BOZ	Bozeman (W) baz=156	31.25	343	P	P	13 29 42.5	+0.6
DLMT	Dillon 4.6nm,0.8s	31.33	341	eP	P	13 29 42.7	+0.1
BASO	Ashfield baz=213	31.34	24	P	P	13 29 41.9	-0.6
MDND	Maddock baz=178	31.60	359	P	P	13 29 45.0	+0.3
E43A	Lone Tree Farm baz=202	31.69	16	P	P	13 29 45.6	0.0
O02D	Mt. Diablo Mer baz=132	31.73	324	P	P	13 29 46.4	+0.3
K55A	Perry baz=220	31.87	30	P	P	13 29 46.5	-0.7
D41A	Chassel baz=199	31.96	13	P	P	13 29 47.9	0.0
AGMN	Agassiz Nation	32.14	4	eP	P	13 29 48.5	-0.9
	12nm,0.8s						
AGMN	Agassiz Nation baz=185,SNR=10	32.14	4	P	P	13 29 48.7	-0.7
M04C	Macdoel baz=135	32.32	327	P	P	13 29 51.0	-0.3
E46A	Sault Ste Mari baz=206	32.45	19	P	P	13 29 52.2	0.0
M02C	Callahan baz=133	32.59	325	P	P	13 29 53.8	+0.2
C40A	Isle Royale Na 24nm,2.0s	32.65	12	eP	P	13 29 52.9	-1.1
C40A	Isle Royale Na baz=197	32.65	12	P	P	13 29 53.3	-0.6
PAL	Palisades baz=228	32.81	36	P	P	13 29 54.2	-1.2
MSO	Missoula baz=152	33.06	341	P	P	13 29 57.9	+0.2
DELO	Deloro Mine baz=219	33.46	28	P	P	13 29 60.0	-1.1
F10A	Beach Ranch, E 10.0nm,0.9s	33.47	336	eP	P	13 30 01.3	0.0
G08A	Pilot Rock 4.4nm,1.1s	33.61	334	eP	P	13 30 02.0	-0.5
H55A	Tweed baz=220	33.68	28	P	P	13 30 02.2	-0.7
ULM	Lac du Bonnet 1.3nm,0.4s,baz=172,slow=12,SNR=3.0	34.08	3	P	P	13 30 05.0	-1.4
J01E	Myrtle Point baz=134	34.39	327	P	P	13 30 09.6	+0.5
E53A	Dumoine, Ponti baz=217	34.90	26	P	P	13 30 12.9	-0.7
HRV	Adam Dziewonsk baz=230	35.12	36	P	P	13 30 15.3	-0.2
E54A	Lac Daplat, Po baz=218	35.15	26	P	P	13 30 15.4	-0.3
FFC	Flin Flon 5.5nm,0.9s	38.56	357	eP	P	13 30 44.2	-0.4
PTGA	Pitinga 1.0nm,0.3s,baz=315,slow=19,SNR=2.0	41.85	110	P	P	13 31 13.9	+1.5
SCHQ	Schefferville 3.3nm,0.6s,baz=218,slow=15,SNR=2.8	45.79	25	P	P	13 31 43.3	-0.3
SCHQ				LR	LR	13 53 24.4	
	comp=Z,70nm,20.7s,baz=194,slow=40						
SCHQ	Schefferville 12nm,1.2s	45.79	25	eP	P	13 31 43.3	-0.3
YKA	Yellowknife Ar 1.2nm,0.8s,baz=159,slow=7.3,SNR=8.6	47.59	350	P	P	13 31 57.1	-0.4
YKB5	Yellowknife Ar	47.59	350	eP	P	13 31 57.1	-0.4
TAOE	Nuku Hiva Isla 20nm,0.2s	47.88	242	eT	T	14 23 00.4	
RKT	Rikitea comp=Z,1μm,33.5s	52.68	223	eLR	LR	13 47 10.8	
RKT	Rikitea 8.7nm,0.3s	52.68	223	eT	T	14 29 01.9	
BCPM	Bancas Point 89nm,1.5s	52.77	336	eP	P	13 32 38.1	+1.3
EGAK	Eagle 3.6nm,0.9s	56.34	340	eP	P	13 33 02.8	+0.1
INK	Inuvik 2.3nm,0.8s,baz=120,slow=7.3,SNR=10	56.60	345	P	P	13 33 04.2	-0.2
INK	Inuvik 3.6nm,1.0s	56.60	345	eP	P	13 33 04.3	-0.2
HDA	Harding Lake baz=122	58.15	338	P	P	13 33 15.5	0.0
ILAR	Eielson Array 1.4nm,1.0s,baz=140,slow=5.7,SNR=8.4	58.32	338	P	P	13 33 16.1	-0.6
ILB	Eielson Array 12nm,1.7s	58.32	338	eP	P	13 33 16.1	-0.6
TRF	Thorofare Moun 10.0nm,1.9s	58.93	336	eP	P	13 33 21.3	+0.1
BDFB	Brasilia 2.1nm,0.4s,baz=265,slow=12,SNR=2.4	59.27	120	P	P	13 33 25.5	+1.3
PPT	Papeete	60.21	238	LR	LR	13 52 03.1	
	comp=Z,64nm,21.9s,baz=30,slow=28						
PPT2	Papeete2 comp=Z,142nm,26.8s	60.22	238	eLR	LR	13 50 45.9	
TOLK	Toolik Lake Re baz=122	61.31	341	P	P	13 33 37.4	+0.1
TBI	Tubuai 14nm,0.3s	63.20	233	eT	T	14 42 09.5	
NOA	NORSAR Array B comp=Z,18nm,21.9s,baz=300,slow=36	85.32	27	LR	LR	14 14 36.6	
KEST	Kesra comp=Z,45nm,18.6s,baz=290,slow=34	94.75	51	LR	LR	14 17 46.5	
DZM	Mont Dzumac comp=Z,63nm,23.4s	100.20	250	eLR	LR	14 09 18.2	
LZH	Lanzhou	123.78	338	ePKP	PKPdf	13 42 18.0	-2.7
LZH				pPKP	sPKPdf	13 42 28.9	+1.9
LZH				sPKP		13 42 32.5	
CD2	Chengdu	128.41	335	PKP	PKPdf	13 42 25.9	-3.6

IDC 18 13:36:09.8±2.2,2.79N×126.57E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.4/24,mbtmp3.6/3,Error ellipse: s-maj=188.8km s-min=25.0km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 1.6nm,0.7s,baz=340,slow=11,SNR=7.9	23.84	162	P	P	13 41 25.0	+0.1
ASAR	Alice Springs 0.3nm,0.9s,baz=348,slow=7.6,SNR=3.2	27.25	165	P	P	13 41 56.1	+0.2
MKAR	Makanchi Array 0.5nm,0.5s,baz=124,slow=7.6,SNR=7.3	58.23	326	P	P	13 46 05.7	-0.3

*ISCJB **18** 14:10:36.7±0.2,19.99S×0.02×69.07W×0.04,h116km±3km, mb4.4/10,Error ellipse: s-maj=6.4km s-min=4.0km az=178.9*
*BJI **18** 14:10:36.8±0.0,19.99S×68.47W,h112km*
*NEIC **18** 14:10:37.0±0.0,20.00S×69.22W,h107km,mb4.5/8, ML4.3(GUC),After GUC.*
NEIC Felt [III] at Camina, Huara, Mamina and Pozo Almonte; [II] at Alto Hospicio and Iquique.
*GUC **18** 14:10:37.9±0.7,20.00S×69.17W,h112km±2km,ML4.3*
*SJA **18** 14:10:38.3±0.4,20.13S×69.23W,h97km±4km,ML3.2, MW3.1*
*IDC **18** 14:10:38.5±0.8,19.94S×68.84W,h114km±6km,mb4.0/9, mb1 4.1/13,mb1mx3.9/35,mbtmp4.4/13,MS2.6/1, Ms1 2.6/1,ms1mx2.3/20,Error ellipse: s-maj=19.3km s-min=14.3km az=101.0*
*VAO **18** 14:10:40.4±0.4,19.99S×68.86W,h119km,mb4.5*
ISC 18 14:10:37.4±0.5,19.99S±0.03×69.13W±0.05,h108km±3km, h108km:pP-P,n114,σ1.24/138,mb4.4/10,6C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.15	189	eP	Pn	14 10 52.9	0.0
PB08	IPOC Station P	0.15	189	↓iP	Pn	14 10 53.7	+0.8
PB08				eS	Sn	14 11 05.5	+1.0
PB08				IAML		14 11 06.3	
	comp=N,30μm,0.2s						
GO01	Chusmiza	0.32	349	ePn	Pn	14 10 54.1	+0.5
GO01				eSn	Sn	14 11 06.1	+0.4
GO01	Chusmiza	0.32	349	↓iP	Pn	14 10 54.2	+0.5
GO01				iS	Sn	14 11 06.5	+0.8
PB11	IPOC Station P	0.55	294	ePn	Pn	14 10 54.9	+0.4
PB11				eSn	Sn	14 11 07.7	+0.3
PB11	IPOC Station P	0.55	294	eP	Pn	14 10 55.1	+0.6
PB11				eS	Sn	14 11 07.3	0.0
PB11	IPOC Station P	0.55	294	eP	Pn	14 10 54.9	+0.4
PB11				eS	Sn	14 11 07.4	+0.1
MNMC	Minye Minye	0.96	333	ePn	Pn	14 10 59.4	+1.0
MNMC				eSn	Sn	14 11 14.3	+0.3
MNMC	Minye Minye	0.96	333	↓iP	Pn	14 10 59.3	+1.0
MNMC				iS	Sn	14 11 15.2	+1.2
PSGC	Pisagua	1.01	292	↑eP	Pn	14 10 58.5	-0.1
PSGC				eS	Sn	14 11 14.5	-0.2
PSGCX	Pisagua	1.01	292	eP	Pn	14 10 59.2	+0.5
PSGCX				eS	Sn	14 11 15.2	+0.5
PB01	IPOC Station P	1.10	198	ePn	Pn	14 11 00.6	+1.0
PB01				eSn	Sn	14 11 17.4	+1.0
PB01	IPOC Station P	1.10	198	eP	Pn	14 11 00.1	+0.5
PB01				eS	Sn	14 11 16.7	+0.3
PB02	IPOC Station P	1.51	208	↑iP	Pn	14 11 04.9	+0.7
PB02				eS	Sn	14 11 24.9	+0.3
PB16	IPOC Station P	1.68	348	eP	Pn	14 11 08.3	+1.4
PB16				eS	Sn	14 11 31.3	+2.1
PB12	IPOC Station P	1.78	320	eP	Pn	14 11 07.7	+0.2
PB12				eS	Sn	14 11 31.0	+0.5
PB12				IAML		14 11 34.7	

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PB09 IPOC Station P   1.80 183 eP      Pn   14 11 09.1 +1.1
PB09                          eS       Sn   14 11 32.3 +1.0
PB09                           IAML        14 11 35.1
     comp=E,2µm,0.2s
PB07 IPOC Station P   1.87 202 eP      Pn   14 11 09.2 +0.4
PB07                          eS       Sn   14 11 33.1 +0.4
PB07                           IAML        14 11 36.3
     comp=E,3µm,0.7s
PB03 IPOC Station P   2.13 196⇑eP      Pn   14 11 12.6 +0.5
PB03                           IAML        14 11 44.1
     comp=E,2µm,0.3s
PB04 IPOC Station P   2.52 202 ePn     Pn   14 11 17.8 +0.6
PB04 IPOC Station P   2.52 202 eP      Pn   14 11 16.8 -0.3
PB04 IPOC Station P   2.52 202 eP      Pn   14 11 17.8 +0.6
PB04                          i S      Sn   14 11 47.6 -0.1
LVC  Limon Verde      2.62 176 P       Pn   14 11 20.3 +1.7
     comp=E,34nm,0.3s,baz=350,slow=8.5,SNR=120
LVC                           S        Sn   14 11 50.5 +0.2
     comp=E,148nm,0.3s,baz=99,slow=19,SNR=27
LVC  Limon Verde      2.62 176 ePn     Pn   14 11 20.4 +1.8
LVC  Limon Verde      2.62 176 eP      Pn   14 11 19.9 +1.2
LVC                           eS       Sn   14 11 51.9 +1.7
LVC  Limon Verde      2.62 176 eP      Pn   14 11 22.0 +3.4
PB06 IPOC Station P   2.74 189 eP      Pn   14 11 20.4 +0.4
PB05 IPOC Station P   3.02 199⇑iP      Pn   14 11 23.5 -0.2
PB05                           IAML        14 12 12.3
     comp=E,796nm,0.6s
PB10 IPOC Station P   3.75 200 ePn     Pn   14 11 32.4 -0.9
LPAZ La Paz           3.80  15 P       Pn   14 11 36.4 +1.8
     comp=E,13nm,0.3s,baz=196,slow=4.6,SNR=171
LPAZ La Paz           3.80  15 ePn     Pn   14 11 37.0 +2.3
LPAZ La Paz           3.80  15⇑iP      Pn   14 11 36.9 +2.3
LPAZ La Paz           3.80  15 eP      Pn   14 11 36.9 +2.3
YJA  Yavi             4.01 123 eP      Pn   14 11 40.2 +2.9
YJA                            IAML        14 12 29.8
     comp=Z,17nm,0.7s
HJA  Humahuaca        4.71 133 eP      Pn   14 11 49.4 +2.7
HJA                            IAML        14 11 49.8
     comp=Z,31nm,0.3s
GO02 Mina Guanaco     5.17 185 ePn     Pn   14 11 52.5 -0.2
GO03 Copiap           7.64 187 ePn     Pn   14 12 23.3 -2.7
SIV  San Ignacio      8.63  64 P       Pn   14 12 37.1 -2.4
     comp=Z,13nm,0.3s,baz=263,slow=10,SNR=371
SIV                           LR       LR   14 15 36.6
     comp=Z,40nm,19.9s,baz=283,slow=36
GO04 Tololo Observa  10.25 188 ePn     Pn   14 12 58.4 -3.3
CFA  Coronel Fontan  11.60 176 P       Pn   14 13 15.9 -3.7
     comp=Z,0.5nm,0.3s,baz=347,slow=13,SNR=4.9
CFA                           S        Sn   14 15 15.6  -12
     comp=Z,0.6nm,0.3s,baz=209,slow=18,SNR=3.6
CPUP Villa Florida   12.55 122 P       Pn   14 13 31.0 -1.1
     comp=Z,0.4nm,0.3s,baz=300,slow=12,SNR=7.6
CPUP Villa Florida   12.55 122 eP      Pn   14 13 31.2 -0.9
AQDB Aquidauana      12.62  95 eP      Pn   14 13 31.5 -1.5
CLDB Colider         15.71  57 eP      Pn   14 14 12.3 -0.6
PTGB Pitanga         16.47 110 eP      Pn   14 14 22.0 -0.2
ITAB Concordia       17.16 118 eP      P    14 14 30.1 -0.3
ITRB Iturama         17.66  92 eP      Pn   14 14 36.1 -0.5
FRTB Fartura         18.49 104 eP      Pn   14 14 45.7 -0.8
CNLB Canela          19.01 123 eP      P    14 14 51.1 +0.3
TIJ01 Guaruva-PR     19.31 110 eP      P    14 14 54.0 -0.2
BB19B Bebedouro      19.32  97 eP      P    14 14 53.6 -0.7
RCLB Rio Claro- Sao  20.28 101 eP      P    14 15 03.4 -1.2
SPB  Sao Paulo       20.46 104 eP      P    14 15 06.2 -0.2
BDFB Brasilia        20.56  81 P       P    14 15 06.8 -0.9
     comp=Z,14nm,0.4s,baz=263,slow=11,SNR=12
BDFB Brasilia        20.56  81 eP      P    14 15 06.8 -0.9
BDFB                          eP       Pn   14 15 06.8 -4.1
PLCA Paso Flores     20.71 183 P       P    14 15 09.4 +0.3
     comp=Z,9.3nm,0.8s,baz=28,slow=12,SNR=14
PLCA Paso Flores     20.71 183 eP      P    14 15 10.3 +1.2
     comp=Z,26nm,1.3s
PLCA Paso Flores     20.71 183 eP      P    14 15 10.5 +1.4
PTGA Pitinga         21.14  26 P       P    14 15 11.1 -2.7
     comp=Z,7.4nm,0.3s,baz=204,slow=16,SNR=19
PTGA Pitinga         21.14  26 eP      P    14 15 11.4 -2.4
     comp=Z,8.6nm,0.8s
PMNB Patos De Minas  21.47  90 eP      P    14 15 15.9 -1.6
PEXB Peixe           21.48  72 eP      P    14 15 16.1 -1.4
PARB Paraibuna       22.09 103 eP      P    14 15 22.8 -1.2
BSCB Bom Sucesso     22.83  97 eP      P    14 15 30.4 -1.2
ESAR Angra dos Reis  23.16 102 eP      P    14 15 33.6 -0.9
SMTB Santa Maria do  23.58  65 eP      P    14 15 38.2 -0.3
MCI6 Montes Claros   24.14  87 eP      P    14 15 42.7 -0.9
MCI8 Montes Claros   24.15  86 eP      P    14 15 42.7 -1.0
MCI9 Montes Claros   24.17  86 eP      P    14 15 42.9 -0.9
DUB01 Friburgo-RJ    25.05 100 eP      P    14 15 52.2 +0.4
CAM01 Campos-RJ      25.71  99 eP      P    14 15 58.2 +0.4
SJMB Sao Joao De Ma  26.39  92 eP      P    14 16 03.8 -0.1
ALF01 Guarapari-ES   26.63  96 eP      P    14 16 06.6 +0.5
BSFB Barra de Sao F  26.69  92 eP      P    14 16 06.3 -0.3
NBMO Morrinhos-CE    32.86  63 eP      P    14 17 00.9 -0.3
NBPA Parau_RN        34.18  70 eP      P    14 17 12.8 +0.2
RCBR Riachuelo       35.21  71 eP      P    14 17 21.3 -0.3
PMSA Palmer Station  44.89 177 eP      P    14 18 41.6 +0.8
HBAR Harrisburg      58.89 340 eP      P    14 20 25.9 +0.9
     comp=Z,97nm,0.6s
VNA3 Neumayer Olymp  61.57 162 P       P    14 20 44.0 +1.2
VNA1 Neumayer--Stat  61.77 161 P       P    14 20 45.2 +1.1
VNA2 Neumayer--Watz  62.14 161 P       P    14 20 48.1 +1.5
     baz=289,slow=7.6
DBIC Dimbokro        68.51  74 P       P    14 21 27.4 -1.3
     comp=Z,7.5nm,0.9s,baz=229,slow=7.7,SNR=4.8
DBIC Dimbokro        68.51  74 eP      P    14 21 27.4 -1.3
     comp=Z,42nm,1.3s
QSPA South Pole Qui  70.19 180 eP      P    14 21 40.1 +1.7
     comp=Z,20nm,1.8s
NV01 Mina Array Sit  74.18 322 eP      P    14 22 04.0 +1.4
NVAR Mina Array Bea  74.18 322 P       P    14 22 04.0 +1.4
     comp=Z,0.5nm,0.6s,baz=163,slow=5.4,SNR=4.5
TOA0 Torodi Ar. Sit  77.05  71 eP      P    14 22 17.9 -1.2
     comp=Z,19nm,1.6s
TOA1 Torodi Ar. Sit  77.05  71 eP      P    14 22 17.2 -1.9
TOA1                          epP      pP   14 22 47.1 -0.9
TORD Torodi Ar. Bea  77.05  71 P       P    14 22 17.2 -1.9
     comp=Z,1.9nm,0.4s,baz=266,slow=5.7,SNR=25
TORD                          pP       pP   14 22 47.1 -0.9
     comp=Z,2.7nm,0.9s,baz=261,slow=5.4,SNR=3.9
SYO  Syowa Base      77.98 160⇑eP      P    14 22 20.4 -3.0
VNDA Vanda           78.30 190 P       P    14 22 26.4 +1.3
     comp=Z,0.6nm,0.7s,baz=171,slow=1.7,SNR=3.8
MAW  Mawson          85.83 163 P       P    14 23 05.8 +1.3
     comp=Z,1.3nm,0.3s,baz=234,slow=6.0,SNR=12
MAW  Mawson          85.83 163 eP      P    14 23 05.8 +1.3
     comp=Z,4.3nm,1.8s
YKA  Yellowknife Ar  89.70 341 P       P    14 23 23.5 +0.7
     comp=Z,2.2nm,0.7s,baz=134,slow=4.7,SNR=24
YKA                           pP       pP   14 23 53.1 +1.0
     comp=Z,0.7nm,0.5s,baz=133,slow=4.8,SNR=2.8
YKA                           sP       sP   14 24 04.5 +0.6
     comp=Z,0.8nm,0.6s,baz=133,slow=4.9,SNR=2.9
YKB5 Yellowknife Ar  89.70 341 eP      P    14 23 23.5 +0.6
YKB5                          epP      pP   14 23 53.1 +1.0
YKB5                          esP      sP   14 24 04.5 +0.6
AS31 Alice Springs  131.15 208 ePKPdf  PKPdf 14 29 37.8 +0.3
ASAR Alice Springs  131.15 208 PKP     PKPdf 14 29 37.8 +0.3
     comp=Z,0.4nm,0.4s,baz=129,slow=1.9,SNR=6.2
WR1  Warramunga Arr 134.14 211 ePKPdf  PKPdf 14 29 43.2 +0.1
WRA  Warramunga Arr 134.14 211 PKP     PKPdf 14 29 43.2 +0.1
     comp=Z,0.8nm,0.4s,baz=169,slow=2.0,SNR=7.6
ZAA1 Zalesovo Array 140.67  24 ePKPdf  PKPdf 14 29 54.4 +0.4
ZALV Zalesovo Beam  140.67  24 PKP     PKPdf 14 29 54.4 +0.4
     comp=Z,0.5nm,0.4s,baz=330,slow=4.6,SNR=2.8
KSH  Kashi          144.29  49 ePKP    PKPdf 14 30 00.8 -0.3
MK32 Makanchi Array 144.52  34 ePKPdf  PKPbc 14 30 00.3 +0.3
MKAR Makanchi Array 144.52  34 PKP     PKPbc 14 30 00.3 +0.3
     comp=Z,0.3nm,0.5s,baz=266,slow=3.4,SNR=4.1
WMQ  Urumqi         149.35  34 ePKPbc  PKPdf 14 30 09.3 -0.1
MJAR Matsushiro Arr 150.96 310 PKPbc   PKiKP 14 30 18.2 -0.2
     comp=Z,1.0nm,0.5s,baz=73,slow=0.4,SNR=5.0
MAJO Matsushiro     150.96 310 ePKPbc  PKiKP 14 30 18.2 -0.2
SONA0 Songino Array 151.99   6 ePKPbc  PKiKP 14 30 20.8 +0.5
SONM Songino Array  151.99   6 PKPbc   PKiKP 14 30 20.8 +0.5
     comp=Z,1.1nm,0.4s,baz=356,slow=2.2,SNR=4.6
HHC  Hu-ho-hao-te   159.20 359 ePKP    PKPdf 14 30 22.5 -0.7
LZH  Lanzhou        162.81  20 ePKP    PKPdf 14 30 26.5 -0.8
LZH                           pPKP     pPKPdf 14 30 56.4 -1.6
LZH                           sPKP        14 31 07.3
NJ2  Nanjing        166.01 331 ePKP    PKPdf 14 30 30.5 +0.5
CD2  Chengdu        167.37  29 PKP     PKPdf 14 30 29.3 -1.9
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ATH 18 14:23:26.4, 38°.43N×21°.93E, h10km±3km, ML1.2/6, Error ellipse: s-maj=3.2km s-min=1.4km az=28.0, Greece

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Code Station Name     Δ°   AZ°   Phase ID          Time      Res
                                Op    ISC         h m s     ISC
EFP  Efpalio        0.02 274    P     Pg          14 23 28.2 -0.1
EFP                             S     Sg          14 23 29.3 -0.4
EFP                             AML   AML         14 23 29.6
     comp=E,2046µm,0.1s
EFP                             AML   AML         14 23 29.7
     comp=N,3898µm,0.2s
EFP  Efpalio        0.02 274    P     Pg          14 23 28.2 -0.1
EFP                             S     Sg          14 23 29.4 -0.2
EFP                             AML   AML         14 23 29.6
     comp=E,2046µm,0.1s
EFP                             AML   AML         14 23 29.7
     comp=N,3898µm,0.2s
SERG Sergoula       0.10  97    P     Pg          14 23 29.1 -0.1
SERG                            S     Sg          14 23 30.8 -0.3
SERG                            AML   AML         14 23 31.4
     comp=E,456µm,0.1s
SERG                            AML   AML         14 23 31.4
     comp=N,1242µm,0.2s
SERG Sergoula       0.10  97    P     Pg          14 23 29.1 -0.1
SERG                            S     Sg          14 23 30.7 -0.4
SERG                            AML   AML         14 23 31.3
     comp=N,1242µm,0.2s
SERG                            AML   AML         14 23 31.4
     comp=E,456µm,0.1s
TRIZ Trizonia       0.13 118    P     Pg          14 23 29.5  0.0
TRIZ                            S     Sg          14 23 31.7 +0.1
TRIZ Trizonia       0.13 118    P     Pg          14 23 29.4 -0.1
TRIZ                            S     Sg          14 23 31.9 +0.2
ANX  Ano Chora      0.17 358    P     Pg          14 23 30.5 +0.2
ANX                             S     Sg          14 23 32.9 +0.1
ANX                             AML   AML         14 23 33.7
     comp=N,315µm,0.5s
ANX                             AML   AML         14 23 34.7
     comp=E,224µm,0.4s
ANX  Ano Chora      0.17 358    P     Pg          14 23 30.5 +0.3
ANX                             S     Sg          14 23 33.7 +0.8
ANX                             AML   AML         14 23 33.7
     comp=N,315µm,0.5s
ANX                             AML   AML         14 23 34.9
     comp=E,224µm,0.4s
KALE Kalithea       0.17 102    P     Pg          14 23 30.1 -0.1
KALE                            S     Sg          14 23 32.8  0.0
KALE                            AML   AML         14 23 33.4
     comp=E,155µm,0.2s
KALE                            AML   AML         14 23 33.4
     comp=N,293µm,0.2s
KALE Kalithea       0.17 102    P     Pg          14 23 30.1 -0.1
KALE                            S     Sg          14 23 32.7 -0.1
KALE                            AML   AML         14 23 33.4
     comp=E,155µm,0.2s
KALE                            AML   AML         14 23 33.4
     comp=N,293µm,0.2s
LAKA Lakka          0.19 168    P     Pb          14 23 31.4 -0.6
LAKA                            S     Sg          14 23 34.4 +1.1
LAKA                            AML   AML         14 23 34.8
     comp=N,81µm,0.2s
LAKA                            AML   AML         14 23 35.8
     comp=E,55µm,0.1s
LAKA Lakka          0.19 168    P     Pb          14 23 31.6 -0.4
LAKA                            S     Sg          14 23 34.1 +0.8
TRAZ Trapeza        0.34 139    P     Pg          14 23 33.3 +0.1
TRAZ                            S     Sg          14 23 38.2 +0.4
PVO  Paravola       0.37 301    P     Pg          14 23 34.1 +0.3
PVO                             S     Sb          14 23 41.0 +0.1
KLV  Kalavryta, Ach 0.42 155    P     Pg          14 23 34.2 -0.5
KLV                             S     Sg          14 23 40.8 +0.6
KLV                             AML   AML         14 23 42.0
     comp=E,80µm,0.1s
KLV                             AML   AML         14 23 42.3
     comp=N,51µm,0.1s
KLV  Kalavryta, Ach 0.42 155    P     Pg          14 23 34.2 -0.5
KLV                             S     Sg          14 23 40.8 +0.5
KLV                             AML   AML         14 23 42.0
     comp=E,80µm,0.1s
KLV                             AML   AML         14 23 42.3
     comp=N,51µm,0.1s
DSF  Desfina        0.47  92    P     Pg          14 23 35.7 +0.1
DSF                             S     Sg          14 23 42.5 +0.6
DRO  Drossia        0.50 200    P     Pg          14 23 35.7 -0.5
DRO  Drossia        0.50 200    P     Pg          14 23 36.0 -0.2
DRO                             S     Sb          14 23 43.8 -0.9
DRO                             AML   AML         14 23 44.7
     comp=E,178µm,0.2s
DRO                             AML   AML         14 23 45.8
     comp=N,103µm,0.2s
GUR  Goura          0.59 146    P     Pg          14 23 37.3 -0.6
GUR                             S     Sg          14 23 45.5 -0.1
PDO  Prodromos      0.61 287    P     Pb          14 23 39.8 +0.6
PDO                             S     Sb          14 23 49.0 +1.3
```

MEX 18 14:28:20.2±8.6, 25°.39N×99°.56W, h2km, MD3.8, Northern Mexico

```
Code Station Name     Δ°   AZ°   Phase ID          Time      Res
                                Op    ISC         h m s     ISC
LNIG Linares        0.50 170    i P   Pg          14 28 30.1 +0.3
     baz=303,slow=12
LNIG                            i S   Sg          14 28 35.6 -0.7
```

IDC 18 14:30:01.1±6.4, 17°.23S×143°.53E, h0km, mb1 4.4/3, mb1mx3.7/19, mbtmp4.2/3, ML4.1/3, Error ellipse: s-maj=53.4km s-min=41.7km az=36.0, Queensland

```
Code Station Name     Δ°   AZ°   Phase ID          Time      Res
                                Op    ISC         h m s     ISC
WRA  Warramunga Arr 9.13 251    Pn    Pn          14 32 15.3 +1.1
     7.4nm,0.3s,baz=73,slow=13,SNR=312
WRA                             Sn    Sn          14 33 53.3 -4.4
     8.9nm,0.3s,baz=76,slow=22,SNR=5.9
WRA                             Lg    Lg          14 34 50.6
     5.4nm,0.3s,baz=72,slow=27,SNR=6.4
ASAR Alice Springs 11.06 233    Pn    Pn          14 32 41.3 +0.5
     1.7nm,0.3s,baz=52,slow=14,SNR=93
ASAR                            Sn    Sn          14 34 39.8 -5.5
     1.6nm,0.3s,baz=52,slow=25,SNR=5.6
ASAR                            Lg    Lg          14 35 51.6
     4.0nm,0.3s,baz=55,slow=31,SNR=9.6
STKA Stephens Creek 14.69 187   Pn    Pn          14 33 28.3 -1.9
     0.2nm,0.3s,baz=3.4,slow=17,SNR=3.0
STKA                            Sn    Sn          14 36 08.5 -5.3
     0.5nm,0.3s,baz=9.0,slow=19,SNR=2.0
STKA                            Lg    Lg          14 37 46.6
     0.7nm,0.3s,baz=90,slow=20,SNR=1.7
```

*ISCJB **18** 14:35:12.9±0.2, 22°.76S±0°.03×66°.86W±0°.02, h217km±2km, mb4.2/49, Error ellipse: s-maj=4.7km s-min=3.0km az=29.7*

*IDC **18** 14:35:13.3±1.2, 22°.76S×66°.61W, h203km±12km, mb3.7/8, mb1 4.0/15, mb1mx3.9/26, mbtmp4.4/15, MS2.5/1, Ms1 2.5/1, ms1mx2.3/17, Error ellipse: s-maj=15.0km s-min=12.9km az=56.0*

*NEIC **18** 14:35:13.4±1.7, 22°.80S×66°.78W, h210km±8km, mb4.4/46, ML4.8(GUC), Error ellipse: s-maj=18.9km s-min=6.4km az=115.0*

*VAO **18** 14:35:14.2±0.3, 22°.77S×66°.93W, h228km±4km, mb4.4*

*SJA **18** 14:35:14.0±0.7, 22°.76S×66°.89W, h213km±5km, ML4.3, MW3.6*

*GUC **18** 14:35:15.1±0.5, 22°.68S×67°.14W, h244km±6km, ML4.9*

ISC 18 14:35:13.5±0.5, 22°.75S±0°.04×66°.85W±0°.04, h213km±5km, n160, σ1°32/191, mb4.3/49, 13C-2D, Jujuy Province

```
Code Station Name     Δ°   AZ°   Phase ID          Time      Res
                                Op    ISC         h m s     ISC
YJA  Yavi           1.36  66    eP    Pn          14 35 49.2 +1.4
YJA                             IAML                14 35 49.5
     comp=Z,848nm,0.3s
HJA  Humahuaca      1.41 109    eP    Pn          14 35 49.7 +1.7
HJA                             IAML                14 35 50.1
     comp=Z,4µm,0.5s
HJA                             eS    S           14 36 16.3 +1.6
LVC  Limon Verde    1.90 274    P     Pn          14 35 53.3 +0.9
     comp=Z,557nm,0.3s,baz=91,slow=7.0,SNR=2554
LVC                             S     S           14 36 22.6 +0.2
     comp=Z,149nm,0.3s,baz=37,slow=20,SNR=14
LVC                             LR    LR          14 37 00.4
     comp=Z,110nm,19.9s,baz=98,slow=50
LVC  Limon Verde    1.90 274    ePn   Pn          14 35 53.5 +1.1
LVC  Limon Verde    1.90 274    eP    Pn          14 35 53.7 +1.2
LVC                             eS    S           14 36 22.1 -0.4
LVC  Limon Verde    1.90 274⇓iP       Pn          14 35 53.7 +1.2
LVC                             i S   S           14 36 23.2 +0.8
LVC  Limon Verde    1.90 274    eP    Pn          14 35 54.0 +1.5
AZAP Zapla          2.20 132    eP    Pn          14 35 56.1 +0.8
AZAP                             AMP                14 35 57.4
AZAP                             IAML               14 35 57.9
     comp=Z,2µm,0.3s
AZAP                            eS    S           14 36 28.1 +0.5
SLA  San Lorenzo    2.32 148    eP    Pn          14 35 58.2 +1.7
SLA                              IAML               14 35 58.4
     comp=Z,474nm,0.3s
SLA                             eS    S           14 36 30.1 +0.3
PB09 IPOC Station P 2.41 293⇑iP       Pn          14 35 59.0 +1.6
PB09                            i S   S           14 36 31.4 +0.1
PB09                             IAML               14 36 36.7
     comp=N,2µm,0.6s
PB15 IPOC Station P 2.46 259    eS    S           14 36 31.6 -0.7
PB15 IPOC Station P 2.46 259⇑iP       Pn          14 35 59.1 +1.1
PB15                            i S   S           14 36 33.1 +0.8
PB06 IPOC Station P 2.51 270    eP    Pn          14 35 59.4 +0.9
PB06 IPOC Station P 2.51 270⇑iP       Pn          14 35 59.4 +0.9
PB06                            i S   S           14 36 33.4 +0.2
PB06                             IAML               14 36 36.4
     comp=N,2µm,0.1s
PB03 IPOC Station P 2.77 284    eP    Pn          14 36 02.2 +0.8
PB03 IPOC Station P 2.77 284⇑iP       Pn          14 36 02.2 +0.8
PB03                            i S   S           14 36 37.8 -0.7
PB03                             IAML               14 36 38.8
     comp=N,3µm,0.5s
PB01 IPOC Station P 2.98 304    ePn   Pn          14 36 04.3 +0.7
PB01 IPOC Station P 2.98 304⇑iP       Pn          14 36 04.4 +0.8
PB01                            i S   S           14 36 42.2 -0.3
PB01                             IAML               14 36 43.7
     comp=N,2µm,0.2s
PB07 IPOC Station P 2.99 289    eP    Pn          14 36 04.7 +0.8
PB07                            eS    S           14 36 42.1 -0.8
PB07 IPOC Station P 2.99 289⇑iP       Pn          14 36 04.7 +0.8
PB07                            i S   S           14 36 41.8 -1.1
PB07                             IAML               14 36 44.1
     comp=E,3µm,0.4s
PB04 IPOC Station P 3.08 277    ePn   Pn          14 36 05.5 +0.6
PB04 IPOC Station P 3.08 277    eP    Pn          14 36 05.5 +0.6
PB04 IPOC Station P 3.08 277⇑iP       Pn          14 36 05.5 +0.6
PB04                            i S   S           14 36 43.5 -1.2
PB04                             IAML               14 36 46.9
     comp=N,3µm,0.4s
PB05 IPOC Station P 3.09 267    eP    Pn          14 36 05.7 +0.6
PB05 IPOC Station P 3.09 267⇑iP       Pn          14 36 05.6 +0.6
PB05                            i S   S           14 36 43.8 -1.2
PB05                             IAML               14 36 46.7
     comp=E,1µm,0.4s
PB02 IPOC Station P 3.16 296    eP    Pn          14 36 06.3 +0.5
PB02                            eS    S           14 36 45.3 -1.1
PB02 IPOC Station P 3.16 296⇑iP       Pn          14 36 06.3 +0.5
PB02                            i S   S           14 36 44.9 -1.5
PB08 IPOC Station P 3.36 320    eP    Pn          14 36 09.8 +1.3
PB08                            eS    S           14 36 50.9 -0.3
PB08 IPOC Station P 3.36 320⇑iP       Pn          14 36 10.1 +1.6
PB08                            i S   S           14 36 52.0 +0.8
PB08                             IAML               14 36 53.2
     comp=E,524nm,0.2s
GO02 Mina Guanaco   3.47 226    ePn   Pn          14 36 10.4 +0.8
GO02 Mina Guanaco   3.47 226⇑iP       Pn          14 36 10.6 +0.9
GO02                            i S   S           14 36 53.8 +0.4
PB10 IPOC Station P 3.49 257    ePn   Pn          14 36 10.1 +0.5
PB10 IPOC Station P 3.49 257    eP    Pn          14 36 10.3 +0.7
PB10                            eS    S           14 36 52.0 -1.2
PB10 IPOC Station P 3.49 257⇑iP       Pn          14 36 10.2 +0.7
PB10                            i S   S           14 36 52.1 -1.2
PB14 IPOC Station P 3.75 239    eS    S           14 36 58.1 -1.4
GO01 Chusmiza       3.76 324    ePn   Pn          14 36 14.1 +0.7
GO01 Chusmiza       3.76 324    eP    Pn          14 36 14.5 +1.1
GO01                            eS    S           14 36 59.6 -0.4
PB11 IPOC Station P 3.96 318    ePn   Pn          14 36 15.5  0.0
PB11 IPOC Station P 3.96 318⇑iP       Pn          14 36 15.5  0.0
PB11                            i S   S           14 37 02.0 -1.8
PSGC Pisagua        4.37 315    eP    Pn          14 36 19.6 -0.9
PSGC                            i S   S           14 37 09.8 -3.2
MNMC Minye Minye    4.42 324    ePn   Pn          14 36 21.6 +0.3
MNMC Minye Minye    4.42 324    eP    Pn          14 36 22.0 +0.8
MNMC                            eS    S           14 37 12.7 -1.6
GO03 Copiap         5.72 212    ePn   Pn          14 36 35.6 -1.7
LPAZ La Paz         6.54 349    P     Pn          14 36 49.6 +1.1
     comp=E,4.7nm,0.3s,baz=162,slow=6.6,SNR=61
LPAZ                            S     S           14 38 01.5 -2.3
     comp=E,0.7nm,0.3s,baz=66,slow=19,SNR=4.1
LPAZ La Paz         6.54 349    ePn   Pn          14 36 49.5 +1.0
LPAZ La Paz         6.54 349    eP    Pn          14 36 49.9 +1.4
LCO  Las Campanas   7.14 208    ePn   Pn          14 36 53.8 -2.0
LCO  Las Campanas   7.14 208    eP    Pn          14 36 53.7 -2.0
GO04 Tololo Observa 8.20 205    ePn   Pn          14 37 07.2 -2.4
SIV  San Ignacio    8.65  40    P     Pn          14 37 13.7 -1.6
     comp=E,11nm,0.3s,baz=228,slow=13,SNR=185
SIV                             S     S           14 38 46.3 -6.7
     comp=E,0.9nm,0.3s,baz=192,slow=20,SNR=4.2
CFA  Coronel Fontan 8.91 188    P     Pn          14 37 17.4 -1.1
     comp=E,2.9nm,0.3s,baz=0.7,slow=13,SNR=49
CFA                             S     S           14 38 50.2 -8.6
     comp=E,15nm,0.3s,baz=213,slow=17,SNR=20
CPUP Villa Florida  9.38 114    P     Pn          14 37 24.1 -0.4
     comp=E,0.2nm,0.3s,baz=292,slow=12,SNR=6.9
CPUP Villa Florida  9.38 114    eP    Pn          14 37 26.9 +2.4
AQDB Aquidauana    10.62  80    eP    Pn          14 37 39.8 -0.7
ROC1 El Roble      10.84 199    ePn   Pn          14 37 42.5 -1.0
PTGB Pitanga       13.69 101    eP    Pn          14 38 19.9 +0.6
ITAB Concordia     14.08 112    eP    P           14 38 26.1 +0.8
NNA  Nana          14.32 317    P     P           14 38 28.8 +0.5
     comp=E,1.8nm,0.3s,baz=163,slow=14,SNR=8.2
NNA  Nana          14.32 317    ePn   P           14 38 28.0 -0.2
ITRB Iturama       15.67  82    eP    Pn          14 38 43.7 +0.2
OGAUY Aigu         15.70 140    eP    Pn          14 38 43.9 +0.3
CNLB Canela        15.79 118    ePn   Pn          14 38 44.7 -0.1
TRQA Tornquist     15.82 166    eP    P           14 38 43.7 -0.9
CLDB Colider       15.84  44    eP    P           14 38 44.9 -0.1
FRTB Fartura       15.93  96    eP    Pn          14 38 47.4 +0.9
TIJ01 Guaruva-PR   16.51 103    eP    Pn          14 38 53.2 -0.2
BB19B Bebedouro    17.09  88    eP    P           14 38 59.3 +0.6
RCLB Rio Claro- Sao 17.85  93    eP    P           14 39 07.4 +0.4
SPB  Sao Paulo     17.88  97    eP    P           14 39 07.1 -0.2
     comp=E,35nm,0.7s
SPB  Sao Paulo     17.88  97    eP    P           14 39 08.2 +0.9
PLCA Paso Flores   18.20 189    P     P           14 39 12.0 +1.3
     comp=E,0.2nm,0.3s,baz=26,slow=11,SNR=8.5
PLCA Paso Flores   18.20 189    eP    P           14 39 10.5 -0.3
     comp=E,35nm,1.6s
PLCA Paso Flores   18.20 189    eP    P           14 39 10.4 -0.3
ATAH Atahualpa     19.09 323    P     Pn          14 39 23.2 -1.0
     comp=E,0.5nm,0.3s,baz=148,slow=18,SNR=3.3
BDFB Brasilia      19.13  72    P     P           14 39 21.1  0.0
     comp=E,5.8nm,0.3s,baz=249,slow=11,SNR=60
BDFB Brasilia      19.13  72    eP    P           14 39 20.6 -0.4
     comp=E,60nm,0.7s
PARB Paraibuna     19.55  96    eP    P           14 39 25.6 +0.2
PMNB Patos De Minas 19.55 81    eP    P           14 39 25.8 +0.3
BSCB Bom Sucesso   20.56  89    eP    P           14 39 36.1 -0.2
PEXB Peixe         20.60  62    eP    P           14 39 36.1 -0.5
ESAR Angra dos Reis 20.65 95    eP    P           14 39 38.1 +1.1
MCI6 Montes Claros 22.39  79    eP    P           14 39 53.7 -0.8
MCI8 Montes Claros 22.41  78    eP    P           14 39 53.9 -0.8
MCI9 Montes Claros 22.42  79    eP    P           14 39 53.9 -0.9
DUB01 Friburgo-RJ  22.64  93    eP    P           14 39 56.7  0.0
JANB Januaria      22.64  74    eP    P           14 39 55.9 -0.8
PTGA Pitinga       22.89  18    P     P           14 39 58.3 -0.5
     comp=E,5.0nm,0.5s,baz=198,slow=12,SNR=11
PTGA Pitinga       22.89  18    eP    P           14 39 58.5 -0.4
     comp=E,7.9nm,0.8s
PTGA Pitinga       22.89  18    eP    P           14 39 59.3 +0.5
SMTB Santa Maria do 23.07  56    eP    P           14 40 00.8 +0.2
CAM01 Campos-RJ    23.33  93    eP    P           14 40 02.6 -0.2
SJMB Sao Joao De Ma 24.33  85    eP    P           14 40 11.7 -0.3
ALF01 Guarapari-ES 24.36  90    eP    P           14 40 12.9 +0.6
BSFB Barra de Sao F 24.61  86    eP    P           14 40 14.3 -0.2
RIB01 Linhares ES  24.92  87    eP    P           14 40 16.8 -0.5
OTAV Otavalo       25.48 332    eP    P           14 40 21.6 -1.3
NBPA Parau_RN      33.30  64    eP    P           14 41 31.2 -0.1
RCBR Riachuelo     34.27  65    eP    P           14 41 39.6 -0.2
VNA3 Neumayer Olymp 58.29 161   P     P           14 44 47.4 +1.7
Z50A Ashland       58.58 341    eP    P           14 44 48.4 +0.4
     comp=E,8.2nm,1.1s
```

VNA2	Neumayer--Watz	58.85	161	P		P	14 44 51.4 +1.9
	baz=282,slow=7.4						
X48A	Hartselle	60.03	341	*e*P		P	14 44 58.4 +0.4
	comp=E,60nm,0.8s						
SWET	Sewanee	60.42	342	*e*P		P	14 45 01.1 +0.4
	comp=E,12nm,0.8s						
V48A	Smith Brothers	61.16	342	*e*P		P	14 45 06.1 +0.5
	comp=E,30nm,0.6s						
JCT	Junction City	61.66	328	*e*P		P	14 45 09.4 +0.4
	comp=E,7.6nm,0.8s						
WVT	Waverly	61.83	341	*e*P		P	14 45 09.8 -0.2
	comp=E,11nm,0.8s						
T47A	Sharon Grove	62.41	342	*e*P		P	14 45 13.9 +0.1
	comp=E,8.7nm,0.9s						
TXAR	Lajitas Array	62.74	324	P		P	14 45 17.5 +1.1
	comp=E,0.9nm,0.7s,baz=154,slow=7.8,SNR=7.3						
O52A	Adamsville	64.08	347	*e*P		P	14 45 24.6 -0.2
	comp=E,34nm,1.6s						
CCM	Cathedral Cave	64.68	339	*e*P		P	14 45 28.8 +0.2
	comp=E,8.2nm,0.6s						
MNTX	Cornudas Mount	65.51	324	*e*P		P	14 45 34.4 +0.2
	comp=E,2.7nm,0.8s						
MSTX	Muleshoe	65.95	328	*e*P		P	14 45 37.1 0.0
	comp=E,16nm,0.9s						
DBIC	Dimbokro	67.28	72	P		P	14 45 45.0 -0.7
	comp=E,5.2nm,0.7s,baz=242,slow=8.7,SNR=4.8						
ANMO	Albuquerque	68.59	326	*e*P		P	14 45 55.1 +1.4
	comp=E,4.2nm,0.9s						
SDCO	Great Sand Dun	70.29	328	*e*P		P	14 46 06.0 +1.8
	comp=E,4.2nm,0.8s						
X16A	Lo Mia Camp, P	70.90	322	*e*P		P	14 46 08.3 +0.5
	comp=E,4.7nm,1.2s						
WUAZ	Wupatki	71.66	323	*e*P		P	14 46 13.1 +0.7
	comp=E,5.0nm,0.9s						
PV01	Paradox Valley	72.12	327	*e*P		P	14 46 14.9 -0.2
	comp=E,12nm,1.4s						
SMCO	Snowmass	72.13	328	*e*P		P	14 46 15.6 +0.3
	comp=E,4.1nm,0.8s						
PV04	Paradox Valley	72.49	327	*e*P		P	14 46 17.3 +0.1
	comp=E,13nm,1.7s						
PV22	Blue Mesa, Par	72.54	327	*e*P		P	14 46 19.1 +1.6
	comp=E,8.6nm,1.2s						
U15A	North Rim	72.83	323	*e*P		P	14 46 20.9 +1.5
	comp=E,4.3nm,0.8s						
N23A	Red Feather La	73.00	330	*e*P		P	14 46 21.8 +1.6
	comp=E,4.1nm,0.8s						
O20A	White River Ci	73.49	328	*e*P		P	14 46 24.3 +1.3
	comp=E,7.3nm,0.8s						
LCMT	Little Creek M	73.78	323	*e*P		P	14 46 24.8 0.0
	comp=E,2.2nm,0.7s						
SRU	San Rafael Swe	73.86	326	*e*P		P	14 46 26.5 +1.3
	comp=E,6.5nm,0.6s						
MTPU	Mount Pierson	73.95	324	*e*P		P	14 46 26.6 +0.7
	comp=E,1.6nm,0.9s						
P18A	Preston Nutter	74.11	327	*e*P		P	14 46 29.2 +2.5
	comp=E,6.6nm,0.6s						
RWWY	Rawlins	74.21	330	*e*P		P	14 46 27.7 +0.4
	comp=E,4.8nm,0.9s						
PSUT	Pine Spring	75.21	324	*e*P		P	14 46 34.1 +1.1
	comp=E,3.7nm,0.8s						
TPNV	Topopah Spring	75.45	321	*e*P		P	14 46 35.0 +0.6
	comp=E,3.3nm,0.8s						
TOA0	Torodi Ar. Sit	76.00	69	*e*P		P	14 46 37.3 -0.4
	comp=E,6.9nm,0.5s						
TORD	Torodi Ar. Bea	76.00	69	P		P	14 46 35.5 -2.2
	comp=E,2.9nm,0.5s,baz=258,slow=5.3,SNR=60						
TORD				pP		pP	14 47 29.8 +0.2
	comp=E,1.5nm,0.7s,baz=255,slow=6.0,SNR=3.3						
PDAR	Pinedale Array	76.14	329	P		P	14 46 39.9 +1.6
	comp=E,0.9nm,0.7s,baz=142,slow=7.4,SNR=5.4						
AHID	Auburn Hatcher	76.89	328	*e*P		P	14 46 42.4 0.0
	comp=E,7.6nm,0.9s						
HVU	Hansel Valley	76.99	327	*e*P		P	14 46 43.7 +0.8
	comp=E,4.9nm,1.1s						
LOHW	Long Hollow	77.28	329	*e*P		P	14 46 45.2 +0.7
	comp=E,2.6nm,0.6s						
NVAR	Mina Array Bea	77.65	321	P		P	14 46 48.5 +1.7
	comp=E,1.6nm,0.9s,baz=153,slow=6.9,SNR=8.2						
RLMT	Red Lodge	77.82	331	*e*P		P	14 46 47.8 +0.4
	comp=E,3.8nm,0.6s						
YHH	Holmes Hill	78.29	330	*e*P		P	14 46 50.2 +0.1
	comp=E,4.7nm,0.7s						
GCMT	Greycliff	78.51	331	*e*P		P	14 46 52.9 +1.7
HLID	Hailey	79.11	327	*e*P		P	14 46 56.5 +1.9
	comp=E,5.9nm,0.8s						
PAHR	Pah Rah Range	79.13	321	*e*P		P	14 46 56.7 +2.0
	comp=E,7.7nm,0.8s						
MCMT	McKenzie Canyo	79.27	329	*e*P		P	14 46 57.5 +2.0
HRY	Holter Researc	80.19	330	*e*P		P	14 47 02.4 +2.2
BOSA	Boshof	81.18	117	P		P	14 47 05.1 -0.9
	comp=E,1.5nm,0.6s,baz=270,slow=4.0,SNR=3.8						
BMO	Blue Mountains	81.50	326	*e*P		P	14 47 09.0 +1.9
	comp=E,2.2nm,0.8s						
F10A	Beach Ranch, E	82.24	327	*e*P		P	14 47 12.1 +1.2
	comp=E,4.7nm,0.8s						
TAM	Tamanrasset	83.69	62	*e*P		P	14 47 19.6 +0.6
	comp=E,4.3nm,0.9s						
C09A	Chrisman Ranch	84.02	328	*e*P		P	14 47 21.3 +1.4
	comp=E,7.4nm,0.6s						
YKA	Yellowknife Ar	93.00	340	P		P	14 48 03.3 +1.1
	comp=E,0.5nm,0.5s,baz=129,slow=4.7,SNR=5.4						
ASAR	Alice Springs	129.65	205	PKP		PKiKP	14 53 58.8 +0.1
	comp=E,0.6nm,0.6s,baz=132,slow=1.6,SNR=12						
WRA	Warramunga Arr	132.80	208	PKP		PKiKP	14 54 05.0 -0.1
	comp=E,0.8nm,0.7s,baz=167,slow=4.2,SNR=6.5						
ZALV	Zalesovo Beam	142.22	27	PKP		PKPdf	14 54 20.7 +0.5
	comp=E,1.8nm,0.7s,baz=308,slow=3.3,SNR=4.9						
MKAR	Makanchi Array	145.47	38	PKPbc		PKPab	14 54 27.9 +0.8
	comp=E,0.9nm,0.6s,baz=313,slow=2.3,SNR=8.9						
WMQ	Urumqi	150.30	39	*e*P		PKPdf	14 54 34.3 +0.1
WMQ				pP		PKPab	14 54 49.3 +2.7
WMQ				pmax		pmax	
	comp=Z,88nm,4.5s						
SONM	Songino Array	154.39	11	PKPab		PKPab	14 55 05.3 +1.6
	comp=Z,0.8nm,0.7s,baz=338,slow=4.4,SNR=3.1						
LZH	Lanzhou	164.44	29	⇓PKP		PKPdf	14 54 50.3 -1.8
LZH				pPKP		PKPab	14 55 45.1 -2.7
LZH				PKP		pPKPdf	14 55 49.0 0.0
LZH				sPKP			14 56 06.5
CMAR	Chiang Mai Arr	166.03	105	PKPab		PKPab	14 55 56.1 +0.9
	comp=Z,0.9nm,0.7s,baz=243,slow=6.7,SNR=6.1						
CD2	Chengdu	168.33	44	PKP		PKPdf	14 54 53.9 -1.2

ISK ***18*** *14:47:41.6, 41°.29N×44°.01E, h5km, ML2.9/8*
DDA ***18*** *14:47:41.6, 41°.29N×44°.00E, h7km±2km, ML3.2*
TIF ***18*** *14:47:41.6, 41°.29N×44°.01E, h12km±1km*
NORS ***18*** *14:47:42.6±0.0, 41°.42N×43°.94E, h5km, MPVA3.8*
MOS ***18*** *14:47:42.1±1.7, 41°.24N×43°.92E, h8km, mb3.8/4, Error ellipse: s-maj=6.2km s-min=4.4km az=83.3*

ISC 18 14:47:41.7±1.1, 41°.26N±0°.02×44°.00E±0°.01, h3km±9km, n83, σ1§14/129, mb3.2/3, 1C, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.30	270	P	Pb	14 47 48.5	-1.4
BGD				S	Sb	14 47 53.4	-2.0
BGD	Bogdanovka	0.30	270	PG	Pb	14 47 48.5	-1.4
KZRT	Kazreti	0.32	68	P	Pg	14 47 48.4	+0.4
KZRT				S	Sg	14 47 52.7	+0.5
KZRT	Kazreti	0.32	68	PG	Pg	14 47 48.3	+0.4
AKH	Akhalkalaki	0.41	291	PG	Pg	14 47 50.2	+0.5
AKH				SG	Sg	14 47 56.0	+0.9
AKH	Akhalkalaki	0.41	291	P	Pg	14 47 50.1	+0.5
AKH				S	Sg	14 47 55.9	+0.9
AKH	Akhalkalaki	0.41	291	⇑*i*PG	Pg	14 47 50.1	+0.5
AKH				*e*S	Sg	14 47 55.9	+0.9
EAK	Akyaka	0.65	208	*i* P	Pb	14 47 55.4	-0.4
EAK				*i* S	Sn	14 48 06.5	-2.2
EAK				IAML_P			
	comp=Z,5μm,0.3s						
TBLG	Delisi	0.72	50	PG	Pg	14 47 55.5	-0.1
TBLG				SG	Sb	14 48 05.8	-1.4
TBLG	Delisi	0.72	50	P	Pg	14 47 55.6	+0.1
TBLG				S	Sg	14 48 05.6	+0.6
TBLG	Delisi	0.72	50	*e*PG	Pg	14 47 55.7	+0.1
TBLG				*i* S	Sg	14 48 05.6	+0.6
TBLG	Delisi	0.72	50	*i* P	Pb	14 47 56.2	-0.7
TBLG				*i* S	Sb	14 48 06.1	-1.1
TBLG				IAML_P			
	comp=Z,5μm,0.1s						
BTNK	Botanikuri	0.73	55	P	Pg	14 47 55.6	-0.1
BTNK				S	Sg	14 48 05.6	+0.4
BTNK	Botanikuri	0.73	55	PG	Pg	14 47 55.6	-0.1
BTNK				S	Sg	14 48 05.5	+0.3
BTNK	Botanikuri	0.73	55	*i* P	Pb	14 47 56.4	-0.7
BTNK				*i* S	Sb	14 48 06.0	-1.4
SEAG	Tbilisi Sea	0.78	50	P	Pb	14 47 57.5	-0.4
SEAG				S	Sb	14 48 07.9	-1.1
KARS	Kars	0.94	228	PG	Pn	14 48 00.7	-1.2
KARS	Kars	0.94	228	PG	Pb	14 48 00.4	-0.4
DIGO	Kars	0.97	210	*i* P	Pn	14 48 01.5	-0.9
DIGO				*i* S	Sb	14 48 14.1	-0.5
EPOS	Posof	0.99	284	*i* P	Pb	14 48 00.9	-0.6
EPOS				*i* S	Sb	14 48 14.7	-0.3
GNI	Garni	1.25	153	PN	Pg	14 48 06.2	+0.6
GNI	Garni	1.25	153	*i* PG	Pg	14 48 06.2	+0.6
GUDG	Gudauri	1.25	16	P	Pg	14 48 05.8	+0.1
GUDG				S	Sn	14 48 22.5	-1.2
GUDG	Gudauri	1.25	16	PG	Pg	14 48 05.7	+0.1
TASB	TASBURUN-IGDIR	1.29	172	PN	Pg	14 48 06.4	0.0
TKB	Tkibuli	1.32	326	P	Pb	14 48 06.4	-0.7
TKB				S	Sg	14 48 24.2	0.0
TKB	Tkibuli	1.32	326	PG	Pb	14 48 06.4	-0.7
ONI	Oni	1.39	343	PN	Pb	14 48 07.6	-0.7
ONI	Oni	1.39	343	P	Pb	14 48 07.4	-0.9
ONI				S	Sg	14 48 26.0	-0.3
ONI	Oni	1.39	343	*e*PG	Pb	14 48 07.4	-0.9
ONI				*e*S	Sg	14 48 26.0	-0.3
IGDI	IGDIR	1.40	178	*i* P	Pg	14 48 08.6	+0.1
IGDI				*i* S	Sg	14 48 27.4	+0.9
SENK	Senkaya-Erzuru	1.44	241	PN	Pg	14 48 09.4	+0.2
ZEI	Tsey	1.52	357	*e*PG	Pg	14 48 10.6	-0.3
ZEI				*e*S	Sg	14 48 31.4	+0.7
ZEI	Tsey	1.52	357	*e*Pg	Pg	14 48 10.6	-0.3
ZEI				*e*Sg	Sg	14 48 31.4	+0.7
LACR	Lac	1.58	8	*e*PG	Pb	14 48 10.7	-0.9
LACR				pmax	pmax		
	comp=Z,73nm,0.3s						
LACR	Lac	1.58	8	*e*Pg	Pb	14 48 10.6	-0.9
LACR				*e*Sg	Sg	14 48 32.0	-0.3
DAGI	Agillar	1.59	264	*i* P	Pg	14 48 11.8	-0.3
DAGI				*i* S	Sg	14 48 32.8	+0.1
DDFL	Dedoflistskaro	1.60	83	P	Pn	14 48 08.8	-2.1
DDFL				S	Sg	14 48 35.5	+2.4
DIGR	Digorskoe uzhe	1.66	349	*e*PN	Pb	14 48 11.7	-1.4
DIGR				pmax	pmax		
	comp=Z,33nm,0.4s						
DIGR	Digorskoe uzhe	1.66	349	*e*Pg	Pg	14 48 13.0	-0.6
DIGR				*e*Sg	Sg	14 48 35.7	+0.5
DBAD	Bademkaya	1.76	263	*i* P	Pg	14 48 15.3	-0.1
DBAD				*i* S	Sg	14 48 37.9	-0.3
DBAD				IAML_P			
	comp=Z,1μm,0.2s						
BATM	Batumi	1.77	282	PN	Pb	14 48 13.9	-0.8
BATM	Batumi	1.77	282	P	Pb	14 48 14.2	-0.5
BATM				S	Sg	14 48 37.6	-0.9
BATM	Batumi	1.77	282	PN	Pb	14 48 13.8	-0.9
LGD	Lagodekhi	1.77	71	P	Pb	14 48 14.3	-0.5
LGD				S	Sg	14 48 38.3	-0.4
LGD	Lagodekhi	1.77	71	*e*PN	Pb	14 48 14.4	-0.5
BCA	Borcka	1.80	277	PN	Pb	14 48 14.3	-1.0
KORR	Kora	1.82	2	*e*PN	Pg	14 48 16.8	+0.2
KORR				*e*S	Sg	14 48 41.3	+1.1
KORR	Kora	1.82	2	*e*Pg	Pg	14 48 16.8	+0.2
KORR				*e*Sg	Sg	14 48 41.4	+1.1
VLKR	Vladikavkaz	1.85	16	*e*PN	Pg	14 48 17.8	+0.6
VLKR				*e*S	Sg	14 48 42.9	+1.7
VLKR	Vladikavkaz	1.85	16	*e*Pg	Pg	14 48 17.8	+0.6
VLKR				*e*Sg	Sg	14 48 42.9	+1.7
GANJ	Ganja	1.86	109	PN	Pb	14 48 15.0	-1.3
LSNR	Lesken	2.02	356	*e*PN	Pb	14 48 17.9	-1.1
LSNR	Lesken	2.02	356	*e*Pg	Pb	14 48 17.9	-1.1
LSNR				*e*Sg	Sb	14 48 44.2	-0.2
KOPR	Koprukoy-ERZUR	2.07	233	PN	Pb	14 48 18.2	-1.8
BTLR	Botlikh	2.17	49	*e*PN	Pg	14 48 22.3	-0.9
BTLR				*e*S	Sg	14 48 50.1	-1.2
BTLR	Botlikh	2.17	49	*e*Pg	Pg	14 48 22.3	-0.9
BTLR				*e*Sg	Sg	14 48 50.1	-1.2
NEY	Neytrino	2.20	335	*e*PN	Pn	14 48 19.9	+0.7
NEY				pmax	pmax		
	comp=Z,26nm,0.4s						
NEY	Neytrino	2.20	335	*e*Pg	Pb	14 48 22.0	-0.1
NEY				*e*Sg	Sb	14 48 50.3	+0.4
NCK	Nalchik	2.25	352	*i* PN	Pb	14 48 20.8	-2.1
GROC	Groznyy	2.35	34	*e*PN	Pn	14 48 19.9	-1.2
GROC				*e*		14 48 56.8	
GROC				pmax	pmax		
	comp=Z,48nm,0.6s						
GROC	Groznyy	2.35	34	*e*Pn	Pb	14 48 24.1	-0.6
GROC				*e*Sn	Sg	14 48 58.6	+1.4
NAX	Nakhchivan	2.38	151	PN	Pn	14 48 21.6	0.0
MNGR	Mingechevir, A	2.38	101	PN	Pb	14 48 23.1	-2.1
XNZR	Khunzakh	2.39	57	*e*PN	Pb	14 48 25.1	-0.2
XNZR				*e*S	Sg	14 48 57.1	-1.3
XNZR	Khunzakh	2.39	57	*e*Pn	Pb	14 48 25.1	-0.2
XNZR				*e*Sn	Sg	14 48 57.1	-1.3
SEKA	Sheki	2.41	90	PN	Pb	14 48 24.5	-1.2
GNBR	Gunib	2.48	62	*i* PN	Pb	14 48 27.3	+0.4
SHA1	Shidzhatmaz	2.67	339	*e*PN	Pb	14 48 30.2	+0.1
SHA1				*e*S	Sg	14 49 05.1	-2.2
SHA1	Shidzhatmaz	2.67	339	*e*Pn	Pb	14 48 30.2	+0.1
SHA1				*e*Sn	Sg	14 49 05.1	-2.2
DOMR	Dombai	2.69	320	*i* PN	Pb	14 48 28.1	-2.4
DBC	Dubki	2.74	49	*e*PN	Pb	14 48 31.7	+0.4
DBC				*e*S	Sg	14 49 07.3	-2.3
DBC	Dubki	2.74	49	*e*Pn	Pb	14 48 31.7	+0.4
DBC				*e*Sn	Sg	14 49 07.3	-2.3
AKT	Akhty	2.81	84	*e*PN	Pb	14 48 32.8	+0.2
AKT				*e*S	Sb	14 49 08.4	+0.9
AKT	Akhty	2.81	84	*e*Pn	Pb	14 48 32.8	+0.2
AKT				*e*Sn	Sb	14 49 08.4	+0.9
KIV	Kislovodsk	2.86	341	*e*PN	Pn	14 48 26.6	-1.6
KIV				*e*		14 49 02.5	
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
MAK	Makhachkala	3.11	56	*i* PN	Pb	14 48 34.1	-3.4
ANN	Anapa	5.97	308	*e*P	Pn	14 49 11.6	+0.8
ANN				*e*S	Sn	14 50 22.5	+2.8
ANN				pmax	pmax		
	comp=Z,20nm,0.8s						
KLNR	Kaliningrad	20.66	318	*i* P	Pn	14 52 23.6	-0.9
KLNR				pmax	pmax		
	comp=Z,26nm,0.9s						
BRVK	Borovoye	21.28	47	*i* P	P	14 52 31.5	+2.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	22.66	76	*i* P	P	14 52 47.1	+3.0
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURK	Kurchatov	25.63	57	*i* P	P	14 53 13.6	+1.4
DGZ	Jazzator, Alta	31.22	59	*i* P	P	14 54 06.0	+3.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						

IDC 18 15:10:35.6±3.7, 5°.44S×153°.09E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/20, mbtmp3.3/2, Error ellipse: s-maj=175.4km s-min=47.2km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.25	230	P	P	15 15 44.1	-0.7
	0.4nm,0.3s,baz=54,slow=9.6,SNR=6.6						
ASAR	Alice Springs	25.88	224	P	P	15 16 09.7	+0.3
	0.2nm,0.5s,baz=58,slow=9.7,SNR=6.7						
TORD	Torodi Ar. Bea	150.78	287	PKPbc	PKPbc	15 30 31.0	-0.1
	0.4nm,0.6s,baz=90,slow=3.0,SNR=3.2						

PAS ***18*** *15:34:56.7±0.0, 32°.15N×115°.16W, h10km*
NEIC ***18*** *15:34:57.8±0.0, 32°.12N×115°.21W, h10km, ML2.8(ECX), ML2.8(PAS), After ECX.*

ECX 18 15:34:57.8±0.5, 32°.12N×115°.21W, h10km, MD2.6, ML2.8, 2C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.30	345	*i* P	Pg	15 35 03.6	-0.4
CPBX				*e*S	Sg	15 35 07.6	-0.5
CPBX				IAML		15 35 09.8	
	comp=E,3μm,0.1s						
CPBX				⇑*e*		15 35 09.8	
CPBX				IAML		15 35 12.7	
	comp=N,4μm,0.2s						
CPBX				⇑*e*		15 35 12.7	
ECBX	El Chinero	0.66	168	*i* P	Pg	15 35 09.3	-1.4
RMX	La Rumorosa	0.88	303	*e*P	Pg	15 35 12.1	-2.7
RMX				⇓*e*		15 35 23.9	
RMX				IAML		15 35 23.9	
	comp=E,278nm,0.2s						
IKP	In-Ko-Pah, Jac	0.92	305	*e*P	Pg	15 35 13.9	-1.8
GLA	Glamis	0.98	19	*e*Pg	Pg	15 35 13.0	-3.7
SPIG	San Pedro Mart	1.10	192	*i* P	Pg	15 35 17.1	-1.8
SPX	San Pedro Mart	1.10	191	*i* P	Pg	15 35 17.1	-1.8
CBX	Cerro Bola	1.25	279	*e*P	Pn	15 35 19.6	-1.8
CBX				*e*S	Sb	15 35 35.9	-1.8
CBX				IAML		15 35 36.9	
	comp=N,166nm,0.3s						
BAR	Barrett	1.35	295	*e*Pn	Pn	15 35 20.4	-2.4
BAR				*e*Sn	Sb	15 35 38.9	-1.8
BAR	Barrett	1.35	295	*i* P	Pn	15 35 21.3	-1.5
113A	Mohawk Valley,	1.38	62	*e*Pn	Pn	15 35 19.2	-3.9
EML	El Monte Cty P	1.58	299	*i* P	Pn	15 35 25.2	-0.7
Y12C	Blythe	1.72	19	*e*Pn	Pn	15 35 26.6	-1.2
CPE	Camp Elliot	1.77	296	*e*Pn	Pn	15 35 25.4	-3.1
PFO	Pinyon Flats O	1.82	325	*e*Pn	Pn	15 35 25.6	-3.7
Y14A	Wickenburg	2.59	45	*e*Pn	Pn	15 35 36.1	-3.8

NNC ***18*** *15:41:06.5±4.7, 40°.74N×72°.14E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=37.9km s-min=14.4km az=177.0*
SOME ***18*** *15:41:07.3, 40°.75N×72°.23E, h10km*
KRNET ***18*** *15:41:08.3±0.1, 40°.97N×72°.17E, h13km, mb2.4*

ISC 18 15:41:08.2±1.2, 40°.96N±0°.05×72°.19E±0°.03, h14km±14km, n21, σ1§22/35, 18C-9D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.70	58	⇑*i*P	Pg	15 41 21.9	0.0
	baz=60						
ARSB				⇑*i*S	Sg	15 41 31.7	+0.5
	baz=60						
ARK	Arkit	0.86	348	⇓*i*P	Pg	15 41 24.0	-0.9
	baz=50						
ARK				⇓*i*S	Sg	15 41 35.7	-0.5
	baz=50						
BTK	Batken	1.38	230	⇑*i*P	Pb	15 41 34.4	+0.6
	baz=29						
BTK				⇑*i*S	Sg	15 41 53.2	+0.4
	baz=29						
AML	Almayashu	1.63	43	⇑*i*P	Pg	15 41 39.1	-0.4
	baz=44						
AML				⇑*i*S	Sg	15 42 00.9	+0.2
	baz=44						
ARLS	Aral	1.84	60	⇑*i*P	Pb	15 41 42.8	+1.1
	baz=60						
ARLS				⇑*i*S	Sg	15 42 08.1	+0.7
	baz=60						
MRKS	Merke	1.95	23	Pg	Pg	15 41 45.9	+0.3
	3.8nm,0.2s						
MRKS				Lg	Lg	15 42 12.1	
	4.7nm,0.4s						
MRKS	Merke	1.95	23	*e*P	Pg	15 41 45.8	+0.2
	4.6nm,0.3s						
MRKS				*e*S	Sg	15 42 13.1	+2.2
	4.4nm,0.3s						
IUG	Iuzhnay	2.01	307	Pg	Pg	15 41 46.6	-0.2
	3.1nm,0.2s						
IUG				Lg	Lg	15 42 13.1	
	14nm,0.2s						
IUG	Iuzhnay	2.01	307	*e*P	Pg	15 41 46.3	-0.5
	3.1nm,0.2s						
IUG				*e*S	Sg	15 42 14.2	+1.3
	14nm,0.2s						
EKS2	Erkin-Say	2.07	34	⇑*i*P	Pb	15 41 46.2	+0.5
	baz=35						
EKS2				⇑*i*S	Sg	15 42 14.3	-0.7
	baz=35						
UCH	Uchtor	2.15	53	⇑*e*P	Pb	15 41 48.0	+0.7
	baz=54						
UCH				⇑*i*S	Sg	15 42 16.9	-0.7
	baz=54						
AAK	Ala-Archa	2.40	45	Pg	Pb	15 41 52.8	+1.5
	3.1nm,0.5s						
AAK				⇑Lg	Lg	15 42 27.7	
	2.3nm,0.5s						
AAK	Ala-Archa	2.40	45	⇓*i*P	Pb	15 41 50.8	-0.5
	baz=45						
AAK				⇓*i*S	Sb	15 42 21.7	+0.8
	baz=45						
KK31	Karatay Array	2.48	330	⇑Pg	Pg	15 41 55.5	-0.4
	0.2nm,0.2s,baz=153,slow=15,SNR=3.2						
KK31				⇑Lg	Lg	15 42 29.8	
	0.6nm,0.2s,baz=162,slow=30,SNR=7.5						
KZA	Kyzart	2.55	63	⇓*i*P	Pb	15 41 53.5	-0.5
	baz=63						
KZA				⇓*i*S	Sb	15 42 26.3	+0.9
	baz=63						
KBK	Karagaybulak	2.67	50	⇑*i*P	Pb	15 41 54.8	-1.1
	baz=50						
KBK				⇑*i*S	Sb	15 42 28.6	+0.1
	baz=50						
BRLS	Borolday	2.72	320	Pg	Pg	15 41 58.7	-1.6
	0.3nm,0.2s						
BRLS				Lg	Lg	15 42 33.7	
	3.6nm,0.5s						
BRLS	Borolday	2.72	320	*e*P	Pb	15 41 58.0	+1.4
	0.3nm,0.2s						
BRLS				*e*S	Sg	15 42 33.9	-1.6
	1.7nm,0.2s						
BOOM	Boomskoye usch	3.19	60	⇓*i*P	Pb	15 42 02.0	-2.8
	baz=60						
BOOM				⇓*i*S	Sb	15 42 40.8	-2.9
	baz=60						
TKM2	Tokmak 2	3.21	51	⇓Pg	Pb	15 42 07.3	+2.2
	0.6nm,0.3s						
TKM2	

IOSP				AML	AML	15 43 27.7
	comp=E,494μm,0.2s					
THR3	**Thira Island,**	**0.45 233**	P	Pg	15 43 19.2	+0.3
THR3	**Thira Island,**	**0.45 233**	P	Pg	15 43 19.3	+0.4
THR3	**Thira Island,**	**0.45 233**	P	Pg	15 43 19.1	+0.2
APE	**Apeiranthos**	**0.46 327**	P	Pg	15 43 18.6	-0.6
APE			S	Sb	15 43 26.8	-0.7
	comp=E,258nm,0.2s					
APE	**Apeiranthos**	**0.46 327**	P	Pg	15 43 18.7	-0.5
APE			S	Sb	15 43 27.6	+0.1
APE			AML	AML	15 43 28.7	
	comp=N,481μm,0.2s					
APE			AML	AML	15 43 29.0	
	comp=E,530μm,0.2s					
APE	**Apeiranthos**	**0.46 327**	P	Pg	15 43 18.4	-0.8
APE			S	Sg	15 43 24.0	-1.2
SNT2	**Vlychada, Sant**	**0.47 224**	P	Pg	15 43 19.3	-0.1
SNT2			S	Sb	15 43 27.1	-0.7
THR6	**Thira Island,**	**0.48 228**	P	Pg	15 43 19.8	+0.2
THR6	**Thira Island,**	**0.48 228**	P	Pg	15 43 20.0	+0.4
THR6	**Thira Island,**	**0.48 228**	P	Pg	15 43 19.7	+0.1

*GUC **18** 15:51:48.3±0.5, 28°.46S×72°.10W, h29km±11km, ML3.2*
*SJA **18** 15:51:49.5±0.7, 28°.28S×71°.98W, h5km±15km, ML3.1, MW3.0*

ISC 18 15:51:48.4±3.5, **28°.46S**±0°.07×**72°.2W**±0°.1, **h9**km±14km, **n9, s34/15, 1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.43**	**113**	*e*P	**Pg**	**15 52 15.1**	**-0.7**
LCO				*e*S	**Sg**	**15 52 34.9**	**+0.6**
LCO	**Las Campanas**	**1.43**	**113**	*e*P	**Pn**	**15 52 13.7**	**-0.9**
LCO				*i* S	**Sb**	**15 52 32.6**	**-1.0**
LCO				IAML		15 52 35.9	
	comp=E,399nm,0.2s						
LSCH	**La Serena**	**1.67**	**150**	*i* S	**Sn**	**15 52 39.0**	**-0.4**
GO03	**Copiap**	**1.94**	**64**	*e*P	**Pn**	**15 52 22.0**	**+0.5**
GO03				*e*S	**Sn**	**15 52 45.3**	**-0.7**
GO03	**Copiap**	**1.94**	**64**	*e*P	**Pn**	**15 52 20.8**	**-0.7**
GO03				*i* S	**Sn**	**15 52 45.3**	**-0.7**
GO03				IAML		15 52 48.0	
	comp=N,529nm,0.3s						
GO04	**Tololo Observa**	**2.10**	**145**	⇑*i*P	**Pn**	**15 52 24.6**	**+0.6**
GO04				*i* S	**Sn**	**15 52 51.1**	**+0.8**
CO02	**Combarbal**	**2.93**	**159**	*e*P	**Pn**	**15 52 35.9**	**+0.7**
CO02				*i* S	**Sn**	**15 53 09.3**	**-1.3**
VCA	**Vinchina**	**3.52**	**96**	*e*P	**Pn**	**15 52 45.8**	**+2.4**
VCA				IAML		15 53 45.2	
	comp=Z,36nm,0.3s						
CYA	**Choya**	**5.63**	**91**	*e*P	**Pn**	**15 53 14.8**	**+2.5**
CYA				IAML		15 53 30.9	
	comp=Z,9.4nm,0.3s						

*ISCJB **18** 15:56:10.3±0.2, 51°.53N±0°.01×16°.21E±0°.02, h0km, Error ellipse: s-maj=2.2km s-min=1.8km az=158.5*
*IDC **18** 15:56:14.4±0.6, 51°.44N×16°.13E, h0km, mb1 3.2/7, mb1mx3.1/42, mbtmp3.1/7, ML3.0/8, Error ellipse: s-maj=10.6km s-min=6.3km az=104.0*
*BGR **18** 15:56:15.4±0.3, 51°.39N×16°.17E, h1km, ML3.2/16, Error ellipse: s-maj=4.4km s-min=2.2km az=17.0*
*UPP **18** 15:56:18.0±2.5, 51°.68N×15°.58E, h0km, ML2.5, Suspected explosion*

ISC 18 15:56:11.8±0.6, **51°.56N**±0°.03×**16°.28E**±0°.02, **h0**km, **n63, s1°55**/138, **1C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**179**	*i* Pg	**Pg**	**15 56 26.2**	**+0.7**
KSP				*e*Sg	**Sg**	**15 56 34.0**	**-0.7**
KSP	**Ksiaz**	**0.71**	**179**	*e*Pg	**Pg**	**15 56 26.2**	**+0.7**
KSP				*e*Sg	**Sg**	**15 56 34.1**	**-0.7**
CHVC	**Chvalec**	**0.98**	**188**	*e*PG	**Pg**	**15 56 31.1**	**+0.6**
CHVC				*e*SG	**Sg**	**15 56 42.1**	**-1.1**
	comp=Z,134nm,0.6s						
OSTC	**Ostas**	**1.00**	**182**	*e*PG	**Pg**	**15 56 31.6**	**+0.6**
OSTC				*e*SG	**Sg**	**15 56 43.5**	**-0.4**
	comp=Z,105nm,0.6s						
UPC	**Upice**	**1.06**	**189**	*e*PG	**Pg**	**15 56 32.5**	**+0.4**
UPC				*e*SG	**Sg**	**15 56 45.1**	**-0.8**
	comp=Z,446nm,0.4s						
DPC	**Dobruska-Polom**	**1.21**	**179**	*e*Pg	**Pg**	**15 56 35.2**	**+0.2**
DPC				*e*Sg	**Sg**	**15 56 49.9**	**-0.7**
DPC	**Dobruska-Polom**	**1.21**	**179**	*e*PG	**Pg**	**15 56 34.9**	**0.0**
DPC				*e*SG	**Sg**	**15 56 49.2**	**-1.4**
	comp=Z,122nm,0.4s						
PVCC	**Panska Ves**	**1.49**	**227**	*e*PG	**Pn**	**15 56 40.5**	**+0.7**
PVCC				*e*SG	**Sg**	**15 56 58.3**	**-1.3**
	comp=Z,371nm,0.2s						
BRG	**Berggiesshubel**	**1.62**	**246**	PN	**Pn**	**15 56 41.8**	**+0.2**
BRG				PG	**Pg**	**15 56 43.4**	**+0.6**
BRG				SG	**Sn**	**15 57 03.8**	**+0.7**
	99nm,0.5s						
BRG	**Berggiesshubel**	**1.62**	**246**	*e*Pn	**Pn**	**15 56 41.8**	**+0.2**
BRG				*e*Pg	**Pg**	**15 56 43.4**	**+0.6**
BRG				*e*Sg	**Sn**	**15 57 02.8**	**-0.3**
GOPC	**GO Pecny, Ondr**	**1.90**	**210**	*e*PG	**Pb**	**15 56 47.3**	**0.0**
GOPC				*e*SG	**Sn**	**15 57 10.6**	**+0.6**
	comp=Z,148nm,1.0s						
RAC	**Raciborz**	**1.91**	**140**	*e*Pg	**Pg**	**15 56 49.1**	**+0.7**
RAC				*e*Sg	**Sg**	**15 57 15.1**	**+1.9**
PRU	**Pruhonice**	**1.92**	**216**	*e*PG	**Pb**	**15 56 47.7**	**+0.1**
PRU				*e*SG	**Sn**	**15 57 11.2**	**+0.7**
	comp=Z,106nm,0.4s						
FBE	**Freiberg**	**1.94**	**252**	*e*Pg	**Pg**	**15 56 49.9**	**+0.9**
FBE				*e*Sg	**Sb**	**15 57 14.1**	**+1.3**
MORC	**Moravsky Berou**	**1.96**	**155**	*e*PN	**Pn**	**15 56 46.7**	**+0.4**
MORC				*e*SG	**Sn**	**15 57 11.9**	**+0.4**
MORC	**Moravsky Berou**	**1.96**	**155**	*e*Pn	**Pn**	**15 56 47.1**	**+0.8**
MORC				*e*Sg	**Sb**	**15 57 13.3**	**+0.1**
CLL	**Collm**	**2.06**	**264**	*e*Pn	**Pn**	**15 56 49.0**	**+1.3**
CLL				*e*Pg	**Pb**	**15 56 51.0**	**+0.9**
CLL				*i* Sg	**Sg**	**15 57 18.6**	**+0.5**
	comp=Z,56nm,0.7s						
CLL	**Collm**	**2.06**	**264**	*e*Pn	**Pn**	**15 56 48.6**	**+0.9**
CLL				*e*Pg	**Pb**	**15 56 51.5**	**+1.4**
CLL				*e*Sg	**Sg**	**15 57 19.6**	**+1.6**
OKC	**Ostrava-Krasne**	**2.09**	**145**	*e*Pn	**Pn**	**15 56 48.7**	**+0.7**
OKC				*e*Pg	**Pg**	**15 56 52.2**	**+0.4**
OKC				*e*Sg	**Sg**	**15 57 19.2**	**+0.2**
OKC	**Ostrava-Krasne**	**2.09**	**145**	*e*PG	**Pg**	**15 56 52.3**	**+0.4**
OKC				*e*SG	**Sg**	**15 57 19.1**	**+0.1**
	comp=Z,75nm,0.6s						
VRAC	**Vranov**	**2.26**	**175**	Pn	**Pn**	**15 56 51.6**	**+1.2**
	comp=Z,5.4nm,0.3s,baz=346,slow=14,SNR=18						
VRAC				Lg	Lg	15 57 21.1	
	comp=Z,13nm,0.3s,baz=75,slow=20,SNR=16						
VRAC	**Vranov**	**2.26**	**175**	*e*PN	**Pn**	**15 56 51.1**	**+0.7**
VRAC				*e*SG	**Sb**	**15 57 22.2**	**+0.3**
KRUC	**Moravsky**	**2.50**	**178**	*e*PN	**Pn**	**15 56 54.7**	**+1.0**
KRUC				*e*SG	**Sb**	**15 57 29.9**	**+1.1**
OJC	**Ojcow**	**2.60**	**120**	*e*Pn	**Pn**	**15 56 56.9**	**+1.8**
OJC				*e*Pg	**Pg**	**15 57 03.6**	**+2.0**
OJC				*e*Sg	**Sg**	**15 57 38.0**	**+2.7**
TANN	**Tannenbergstha**	**2.67**	**246**	*e*Pn	**Pn**	**15 56 57.1**	**+1.1**
TANN				*e*Pg	**Pg**	**15 57 03.3**	**+0.4**
TANN				*e*Sg	**Sb**	**15 57 35.7**	**+2.0**
NKC	**Novy Kostel**	**2.76**	**243**	*e*PN	**Pn**	**15 56 58.6**	**+1.3**
NKC				*e*PG	**Pb**	**15 57 03.6**	**+1.6**
NKC				*e*SG	**Sg**	**15 57 39.2**	**-1.3**
	comp=Z,57nm,0.5s						
JAVC	**Velka Javorina**	**2.84**	**161**	*e*PN	**Pn**	**15 57 00.0**	**+1.5**
JAVC				*e*SG	**Sb**	**15 57 38.9**	**+0.1**
KHC	**Kasperske Hory**	**2.98**	**216**	*e*PN	**Pn**	**15 57 01.1**	**+0.8**
KHC				*e*PG	**Pb**	**15 57 06.9**	**+1.1**
KHC				*e*SN	**Sn**	**15 57 35.5**	**-1.3**
KHC				*e*SG	**Sb**	**15 57 44.3**	**+1.6**
	comp=Z,61nm,1.0s						
MOX	**Moxa**	**3.08**	**255**	*e*Pn	**Pn**	**15 57 03.0**	**+1.4**
MOX				*e*Pg	**Pg**	**15 57 10.2**	**-0.5**
MOX				*e*Sg	**Sg**	**15 57 49.3**	**-1.3**
MANZ	**Manzenberg**	**3.08**	**241**	*e*Pn	**Pn**	**15 57 02.8**	**+1.2**
MANZ				*e*Pg	**Pg**	**15 57 10.9**	**+0.1**
MANZ				*e*Sg	**Sg**	**15 57 49.4**	**-1.2**
ROTZ	**Rotzenmuhle**	**3.15**	**237**	*e*Pn	**Pn**	**15 57 03.7**	**+1.1**
ROTZ				*e*Sg	**Sb**	**15 57 49.8**	**+2.3**
LANS	**Liptovska Anna**	**3.16**	**138**	*e*PN	**Pn**	**15 56 59.7**	**-3.1**
LANS				*e*PG	**Pg**	**15 57 12.8**	**+0.5**
LANS				*e*SG	**Sg**	**15 57 54.8**	**+1.6**
GEC2	**GERESS Array S**	**3.18**	**212**	*e*Pn	**Pn**	**15 57 04.6**	**+1.5**
GEC2				*e*Pg	**Pb**	**15 57 10.5**	**+1.3**
GEC2				*e*Sg	**Sb**	**15 57 50.1**	**+1.7**
GERES	**GERESS Array B**	**3.18**	**212**	Pn	**Pn**	**15 57 03.9**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=31,slow=13,SNR=16						
GERES				Pg	**Pb**	**15 57 10.2**	**+1.0**
	comp=Z,8.7nm,0.3s,baz=31,slow=17,SNR=73						
GERES				Lg	Lg	15 57 49.0	
	comp=Z,3.6nm,0.3s,baz=31,slow=28,SNR=4.2						
WET	**Wettzell**	**3.25**	**223**	*e*Pn	**Pn**	**15 57 05.0**	**+1.0**
WET				*e*Pg	**Pb**	**15 57 11.0**	**+0.6**
WET				*e*Sg	**Sb**	**15 57 52.6**	**+2.2**
MODS	**Modra-Piesok**	**3.25**	**168**	*e*PN	**Pn**	**15 57 02.0**	**-2.0**
MODS				*e*PG	**Pg**	**15 57 13.2**	**-0.9**
MODS				*e*SG	**Sg**	**15 57 55.3**	**-0.9**
KOLL	**Kolacno**	**3.28**	**154**	*e*SG	**Sg**	**15 57 56.5**	**-0.6**
VYHS	**Vyhne**	**3.48**	**151**	*e*PN	**Pn**	**15 57 04.9**	**-2.3**
VYHS				*e*PG	**Pb**	**15 57 15.5**	**+1.2**
VYHS				*e*SG	**Sg**	**15 58 02.2**	**-1.4**
CONA	**Conrad Observa**	**3.64**	**184**	*e*Pn	**Pn**	**15 57 10.5**	**+1.0**
	comp=Z,0.8nm,0.2s						
CONA				Pg	**Pg**	**15 57 20.8**	**-0.7**
	comp=Z,4.8nm,0.3s						
CONA				*e*Sn	**Sn**	**15 57 51.7**	**-1.5**
	comp=Z,6.9nm,0.5s						
CONA				Sg	**Sg**	**15 58 07.0**	**-1.7**
	comp=Z,21nm,0.5s						
BSD	**Bornholm Skovb**	**3.66**	**348**	⇑*i*P	**Pn**	**15 57 11.7**	**+2.1**
BSD				*i* S	**Sn**	**15 57 53.4**	**+0.1**
CLZ	**Clausthal**	**3.68**	**277**	*e*Pn	**Pn**	**15 57 12.4**	**+2.4**
CLZ				*e*Sg	**Sg**	**15 58 11.2**	**+1.1**
GRF	**Grafenberg Arr**	**3.72**	**242**	*e*Pn	**Pn**	**15 57 11.8**	**+1.4**
GRF				*e*Sg	**Sg**	**15 58 10.7**	**-0.5**
MOA	**Molln**	**3.93**	**200**	*e*Pn	**Pn**	**15 57 14.2**	**+0.8**
	comp=Z,1.3nm,0.2s						
MOA				Pg	**Pg**	**15 57 27.3**	**+0.2**
	comp=Z,5.6nm,0.3s						
MOA				Sg	**Sg**	**15 58 17.4**	**-0.7**
	comp=Z,26nm,0.5s						
KECS	**Kecovo**	**4.10**	**137**	*e*PG	**Pg**	**15 57 33.5**	**+3.1**
KECS				*e*SG	**Sg**	**15 58 22.5**	**-1.0**
ARSA	**Arzberg**	**4.34**	**187**	*e*Pn	**Pn**	**15 57 20.7**	**+1.7**
	comp=Z,1.0nm,0.3s						
ARSA				Pg	**Pg**	**15 57 36.1**	**+1.2**
	comp=Z,1.8nm,0.3s						
ARSA				Sg	**Sg**	**15 58 34.2**	**+3.1**
	comp=Z,29nm,0.7s						
LUNU	**Lund**	**4.42**	**339**	P	**Pn**	**15 57 21.5**	**+1.5**
LUNU				S	**Sn**	**15 58 10.7**	**-1.4**
KOLS	**Kolonicke sedl**	**4.66**	**122**	*e*PG	**Pg**	**15 57 42.9**	**+1.9**
BLEU	**Blekinge**	**4.76**	**357**	S	**Sn**	**15 58 20.5**	**-0.2**
KBA	**Koelnbreinsper**	**4.87**	**204**	*e*Pn	**Pn**	**15 57 27.1**	**+0.6**
	comp=Z,1.7nm,0.3s						
KBA				Pg	**Pg**	**15 57 44.0**	**-1.1**
	comp=Z,2.2nm,0.3s						
KBA				Sg	**Sg**	**15 58 49.5**	**+1.2**
	comp=Z,38nm,1.0s						
BJUU	**Bjuv**	**4.92**	**338**	P	**Pn**	**15 57 28.6**	**+1.7**
BJUU				S	**Sn**	**15 58 23.9**	**-0.6**
WTTA	**Wattenberg**	**5.25**	**217**	Pg	**Pn**	**15 57 33.9**	**+2.2**
	comp=Z,1.2nm,0.2s						
WTTA				Sg	**Sg**	**15 59 07.1**	**+6.6**
	comp=Z,9.6nm,0.4s						
VXJU	**Vaexsjoe**	**5.43**	**352**	S	**Sn**	**15 58 36.0**	**-1.1**
OSKU	**Oskarshamn**	**5.65**	**359**	S	**Sn**	**15 58 42.0**	**-0.5**
FABU	**Falkenberg**	**5.84**	**341**	P	**Pn**	**15 57 41.4**	**+1.9**
FABU				S	**Sn**	**15 58 47.0**	**-0.1**
ASPU	**Aespoe**	**5.88**	**2**	P	**Pn**	**15 57 43.3**	**+3.3**
DAVOX	**Davos/Dischmat**	**6.36**	**224**	Pn	**Pn**	**15 57 47.0**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=58,slow=13,SNR=2.3						
DAVOX				Sn	**Sn**	**15 58 57.2**	**-3.0**
	comp=Z,0.4nm,0.3s,baz=41,slow=20,SNR=1.9						
DAVOX				Lg	Lg	15 59 27.9	
	comp=Z,0.5nm,0.3s,baz=24,slow=19,SNR=2.7						
FKPU	**Falk**	**6.78**	**348**	P	**Pn**	**15 57 55.2**	**+2.8**
FKPU				S	**Sn**	**15 59 07.8**	**-2.5**
AKASG	**Malin Array Be**	**8.19**	**91**	Pn	**Pn**	**15 58 12.8**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=275,slow=13,SNR=5.9						
AKASG				Sn	**Sn**	**15 59 41.1**	**-4.0**
	comp=Z,0.8nm,0.3s,baz=279,slow=23,SNR=2.5						
HFS	**Hagfors**	**8.72**	**351**	Pn	**Pn**	**15 58 20.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=171,slow=13,SNR=8.4						
HFS				Sn	**Sn**	**15 59 56.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=167,slow=19,SNR=3.9						
NOA	**NORSAR Array B**	**9.91**	**346**	Pn	**Pn**	**15 58 36.3**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=161,slow=15,SNR=3.9						
FINES	**FINESS Array B**	**11.28**	**25**	Pn	**Pn**	**15 58 54.8**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=205,slow=11,SNR=8.9						
FINES				Sn	**Sn**	**16 00 55.3**	**-5.3**
	comp=Z,0.3nm,0.3s,baz=209,slow=25,SNR=6.2						
EKA	**Eskdalemuir Ar**	**12.18**	**296**	Pn	**Pn**	**15 59 04.4**	**-2.0**
	baz=101,slow=14,SNR=3.8						
ARCES	**ARCESS Array B**	**18.56**	**10**	Pn	**P**	**16 00 28.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=6.3						

*NSSC **18** 15:58:32.7±0.7, 33°.81N×35°.72E, h6km±13km, ML1.6*
*ISCJB **18** 15:58:33.2±2.0, 33°.77N±0°.06×35°.7E±0°.1, h19km±23km, Error ellipse: s-maj=19.5km s-min=7.7km az=158.2*
*GRAL **18** 15:58:34.4±0.3, 33°.78N×35°.78E, h0km±31km, MD3.0*

ISC 18 15:58:33.1±1.2, **33°.79N**±0°.05×**35°.74E**±0°.05, **h16**km±10km, **n7, s0°30**/12, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.14**	**330**	*e*P	**Pg**	**15 58 37.2**	**+0.1**
DQRL	**Deir Qamar**	**0.16**	**240**	*e*P	**Pb**	**15 58 37.8**	**+0.1**
DQRL				*e*S	**Sg**	**15 58 40.2**	**+0.1**
RCY	**Rachaya**	**0.30**	**164**	*e*P	**Pg**	**15 58 39.5**	**-0.1**
RCY				*e*S	**Sg**	**15 58 43.4**	**-0.6**
BRBR	**Barbar**	**0.41**	**154**	*e*P	**Pg**	**15 58 41.4**	**-0.2**
BRBR				*e*S	**Sg**	**15 58 47.7**	**+0.3**
BRBR				AML	AML	15 58 52.8	
	comp=N,48nm,0.3s						
BRBR				AML	AML	15 58 53.2	
	comp=E,64nm,0.3s						
QASN	**Qassioun**	**0.52**	**119**	*e*P	**Pg**	**15 58 43.4**	**0.0**
QASN				*e*S	**Sb**	**15 58 51.1**	**0.0**
QASN				AML	AML	15 58 52.9	
	comp=N,150nm,0.3s						
QASN				AML	AML	15 58 55.8	
	comp=E,40nm,0.5s						
HWQ	**Hawqa**	**0.52**	**20**	*e*P	**Pb**	**15 58 43.8**	**-0.2**
TOTH	**TOTAH**	**0.72**	**126**	*e*P	**Pb**	**15 58 47.5**	**+0.3**
TOTH				*e*S	**Sb**	**15 58 56.7**	**-0.1**
TOTH				AML	AML	15 59 03.5	
	comp=N,21nm,0.4s						
TOTH				AML	AML	15 59 08.1	
	comp=E,12nm,0.7s						

*ISCJB **18** 16:04:05.6±0.3, 42°.45N±0°.02×44°.78E±0°.03, h5km±5km, Error ellipse: s-maj=3.5km s-min=2.6km az=138.2*
*TIF **18** 16:04:05.8, 42°.45N×44°.78E, h25km*
*NORS **18** 16:04:05.6±0.0, 42°.46N×44°.66E, h15km, MPVA3.5*

ISC 18 16:04:05.9±1.0, **42°.43N**±0°.02×**44°.76E**±0°.02, **h13**km±9km, **n27, s0°64**/55, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUDG	**Gudauri**	**0.21**	**279**	P	**Pb**	**16 04 12.2**	**+0.5**
GUDG				S	**Sb**	**16 04 16.6**	**+0.9**
LACR	**Lac**	**0.52**	**319**	*i* Pg	**Pg**	**16 04 15.7**	**-0.5**
LACR				*e*Sg	**Sg**	**16 04 23.2**	**-0.1**
VLKR	**Vladikavkaz**	**0.62**	**354**	*e*Pg	**Pg**	**16 04 18.2**	**+0.2**
VLKR				*e*Pg	**Pb**	**16 04 18.5**	**-0.1**
VLKR				*e*Sg	**Sb**	**16 04 27.2**	**0.0**
VLKR				*e*Sg	**Sg**	**16 04 27.5**	**+1.3**
KMGR	**Komgaron**	**0.63**	**7**	*i* Pg	**Pb**	**16 04 18.5**	**-0.3**
KMGR				*e*Sg	**Sb**	**16 04 28.6**	**+1.0**
SEAG	**Tbilisi Sea**	**0.67**	**177**	P	**Pb**	**16 04 19.8**	**+0.5**
SEAG				S	**Sn**	**16 04 30.3**	**-1.0**
TBLG	**Delisi**	**0.70**	**181**	P	**Pb**	**16 04 20.0**	**+0.1**
TBLG				S	**Sb**	**16 04 30.8**	**+1.3**
ZEI	**Tsey**	**0.73**	**300**	*e*Pg	**Pg**	**16 04 19.1**	**-1.0**
ZEI				*e*Sg	**Sg**	**16 04 29.3**	**-0.3**
BTNK	**Botanikuri**	**0.75**	**178**	P	**Pb**	**16 04 20.8**	**+0.1**
BTNK				S	**Sb**	**16 04 31.8**	**+1.0**
ARNR	**Ardon**	**0.83**	**335**	*e*Pg	**Pb**	**16 04 22.2**	**+0.1**
ARNR				*e*Sg	**Sn**	**16 04 34.3**	**-1.0**
KORR	**Kora**	**0.83**	**322**	*e*Pg	**Pg**	**16 04 21.6**	**-0.4**
KORR				*e*Sg	**Sb**	**16 04 33.3**	**0.0**
BTKR	**Batakoyurt**	**0.95**	**350**	*e*Pg	**Pg**	**16 04 24.6**	**+0.3**
BTKR				*e*Sg	**Sn**	**16 04 38.3**	**-0.3**
ONI	**Oni**	**0.98**	**280**	P	**Pg**	**16 04 24.9**	**+0.1**
ONI				S	**Sn**	**16 04 38.5**	**-0.7**
DIGR	**Digorskoe uzhe**	**0.99**	**299**	*e*Pg	**Pb**	**16 04 24.5**	**-0.4**
DIGR				*e*Sg	**Sb**	**16 04 38.1**	**+0.1**
STDR	**Stavd-Durt**	**1.07**	**332**	*e*Pg	**Pb**	**16 04 26.2**	**-0.1**
STDR				*e*Sg	**Sn**	**16 04 41.7**	**+0.4**
KZRT	**Kazreti**	**1.08**	**195**	P	**Pb**	**16 04 26.2**	**-0.2**
KZRT				S	**Sg**	**16 04 41.2**	**+0.5**
GROC	**Groznyy**	**1.08**	**44**	*e*Pg	**Pg**	**16 04 26.9**	**+0.1**
GROC				*e*Sg	**Sn**	**16 04 42.6**	**+0.9**
LSNR	**Lesken**	**1.09**	**321**	*e*Pg	**Pb**	**16 04 26.5**	**-0.1**
LSNR				*e*Sg	**Sn**	**16 04 42.0**	**+0.1**
LGD	**Lagodekhi**	**1.25**	**118**	P	**Pn**	**16 04 28.9**	**-0.1**
LGD				S	**Sg**	**16 04 46.3**	**+0.1**
TKB	**Tkibuli**	**1.31**	**267**	P	**Pb**	**16 04 30.4**	**0.0**
TKB				S	**Sg**	**16 04 48.2**	**+0.1**
AKH	**Akhalkalaki**	**1.39**	**223**	P	**Pb**	**16 04 31.9**	**+0.1**
AKH				S	**Sg**	**16 04 50.8**	**+0.1**
DDFL	**Dedoflistskaro**	**1.41**	**134**	P	**Pn**	**16 04 29.8**	**-1.6**
DDFL				S	**Sg**	**16 04 52.3**	**+1.0**
BGD	**Bogdanovka**	**1.45**	**217**	P	**Sg**	**16 04 52.8**	**+0.1**
GNBR	**Gunib**	**1.63**	**91**	*e*Pg	**Pb**	**16 04 35.6**	**-0.2**
GNBR				*e*Sg	**Sg**	**16 04 57.7**	**-0.8**
DBC	**Dubki**	**1.64**	**68**	*e*Pg	**Pb**	**16 04 35.7**	**-0.3**
DBC				*e*Sg	**Sg**	**16 04 58.1**	**-0.5**
KBTC	**Kuba-Taba**	**1.70**	**325**	*e*Pg	**Pn**	**16 04 36.0**	**+0.7**
KBTC				*e*Sg	**Sb**	**16 04 59.4**	**+1.0**
NEY	**Neytrino**	**1.71**	**299**	*e*Pg	**Pb**	**16 04 37.1**	**-0.1**
NEY				*e*Sg	**Sb**	**16 04 59.7**	**+1.0**
SHA1	**Shidzhatmaz**	**2.02**	**311**	*e*Pg	**Pb**	**16 04 41.4**	**-1.2**
SHA1				*e*Sg	**Sb**	**16 05 07.8**	**+0.1**

*IDC **18** 16:20:23.1±1.4, 4°.52S×102°.54E, h0km, mb4.0/12, mb1 4.1/12, mb1mx3.9/38, mbtmp4.1/12, Error ellipse: s-maj=50.6km s-min=14.3km az=56.0*
*ISCJB **18** 16:20:30.9±0.7, 4°.53S±0°.07×102°.64E±0°.06, h79km±5km, mb4.1/16, Error ellipse: s-maj=14.4km s-min=5.6km az=42.7*
*NEIC **18** 16:20:31.3±1.0, 4°.47S×102°.66E, h63km±6km, mb4.2/5, Error ellipse: s-maj=27.9km s-min=6.0km az=47.0*
*DJA **18** 16:20:32.2±0.3, 5°.5S±2°×10°.3E±°, h30km±4km, M4.0/12, MLv4.0/12*

ISC 18 16:20:31.1±1.1, **4°.54S**±0°.09×**102°.63E**±0°.08, **h59**km±8km, **n43, s1°03**/44, **mb4.2**/16, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.37**	**61**	*e*Pn	**Pn**	**16 20 42.1**	**+0.5**
MNAI				*e*Sn	**Sn**	**16 20 48.5**	**-0.7**
MNAI	**Manna**	**0.37**	**61**	P	**Pn**	**16 20 42.1**	**+0.5**
MNAI				S	**Sn**	**16 20 49.0**	**-0.2**
LHSI	**Lahat**	**1.13**	**51**	P	**Pn**	**16 20 52.0**	**+1.2**
LHSI				S	**Sn**	**16 21 07.6**	**+2.1**
LWLI	**Liwa**	**1.50**	**109**	P	**Pn**	**16 20 56.9**	**+1.1**
LWLI				S	**Sn**	**16 21 14.8**	**+0.4**
MDSI	**Maura Dua**	**1.54**	**88**	P	**Pn**	**16 20 57.2**	**+0.9**
MDSI				S	**Sn**	**16 21 16.4**	**+1.1**
KASI	**Kota Agung**	**2.10**	**118**	P	**Pn**	**16 21 04.4**	**+0.6**
KASI				S	**Sn**	**16 21 30.4**	**+1.6**
KRJI	**Kerinci**	**2.70**	**334**	P	**Pn**	**16 21 14.3**	**+2.1**
PPSI	**Pulau Pagai**	**3.16**	**304**	P	**Pn**	**16 21 20.2**	**+1.9**
CGJI	**Cibinong**	**3.68**	**124**	P	**Pn**	**16 21 27.0**	**+1.6**
SDSI	**Sungai Dareh**	**3.78**	**341**	P	**Pn**	**16 21 29.2**	**+2.3**
PDSI	**Padang**	**4.21**	**329**	P	**Pn**	**16 21 34.7**	**+2.0**
CISI	**Cisompet, Garu**	**5.96**	**120**	*e*Pn	**Pn**	**16 21 57.1**	**+0.3**
GSI	**Gunungsitoli**	**7.70**	**319**	*e*Pn	**Pn**	**16 22 20.2**	**-0.4**
BATI	**Baumata**	**21.59**	**106**	P	**P**	**16 25 16.1**	**-0.1**
	7.1nm,0.4s,baz=288,slow=6.4,SNR=2.8						
CM31	**Chiang Mai Arr**	**23.14**	**351**	*e*P	**P**	**16 25 31.2**	**-1.3**
	19nm,1.8s						
CMAR	**Chiang Mai Arr**	**23.14**	**351**	P	**P**	**16 25 31.6**	**-0.8**

*ANF **18** 17:00:03.5±0.7, 47.°41N×93.°05W, ML3.4/8, Error ellipse: s-maj=7.4km s-min=5.6km az=43.0*
*IDC **18** 17:00:08.5±3.0, 47.°46N×93.°48W, h0km, mb1 3.3/3, mb1mx3.1/31, mbtmp3.0/3, ML1.0/1, Error ellipse: s-maj=32.8km s-min=16.2km az=95.0*
ISC 18 17:00:03.4±0.7, 47.°38N±0.°03×93.°07W±0.°04, h0km, n40, σ1§08/48, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**1.21**	**61**	*e*Pg	**Pg**	**17 00 25.9**	**-0.7**
EYMN	**Ely**	**1.21**	**61**	P	**Pg**	**17 00 26.0**	**-0.5**
	baz=244						
EYMN				S	**Sg**	**17 00 42.3**	**+0.1**
	baz=244						
E38A	**The Farm, Brul**	**1.29**	**126**	*e*Pn	**Pg**	**17 00 28.7**	**+0.5**
E38A	**The Farm, Brul**	**1.29**	**126**	P	**Pb**	**17 00 28.9**	**+0.3**
	baz=309						
E38A				S	**Sn**	**17 00 46.8**	**+0.1**
	baz=309						
F38A	**Pierce - Schro**	**1.64**	**150**	Pb	**Pb**	**17 00 35.0**	**+0.5**
	baz=332						
F38A				S	**Sb**	**17 00 56.4**	**+0.6**
	baz=332						
F37A	**Hinrichs Farm,**	**1.68**	**169**	Pb	**Pg**	**17 00 36.1**	**+0.4**
	baz=350						
F37A				S	**Sg**	**17 00 57.9**	**+0.4**
	baz=350						
F39A	**Loretta**	**2.08**	**134**	Pb	**Pb**	**17 00 41.8**	**-0.3**
	baz=317						
F39A				Sb	**Sg**	**17 01 10.1**	**-0.2**
	baz=317						
AGMN	**Agassiz Nation**	**2.09**	**297**	*e*Pn	**Pn**	**17 00 39.5**	**-0.3**
AGMN	**Agassiz Nation**	**2.09**	**297**	P	**Pn**	**17 00 39.9**	**+0.1**
	baz=114						
AGMN				S	**Sn**	**17 01 07.4**	**+0.9**
	baz=114						
SPMN	**Marine on St.**	**2.16**	**175**	*e*Pn	**Pn**	**17 00 42.2**	**+1.6**
SPMN	**Marine on St.**	**2.16**	**175**	Pb	**Pb**	**17 00 42.9**	**-0.5**
	baz=356						
SPMN				S	**Sb**	**17 01 10.6**	**-0.2**
	baz=356						
G39A	**Holcombe**	**2.47**	**147**	Pb	**Pb**	**17 00 49.3**	**+0.6**
	baz=329						
G39A				Sb	**Sb**	**17 01 21.7**	**+2.0**
	baz=329						
C40A	**Isle Royale Na**	**2.70**	**77**	*e*Pn	**Pn**	**17 00 49.2**	**+1.0**
G40A	**Rib Lake**	**2.90**	**136**	*e*Pn	**Pn**	**17 00 52.0**	**+1.1**
COWI	**Conover**	**2.99**	**114**	*e*Pn	**Pn**	**17 00 53.4**	**+1.3**
D41A	**Chassel**	**3.09**	**94**	*e*Pn	**Pn**	**17 00 54.7**	**+1.3**
ULM	**Lac du Bonnet**	**3.42**	**328**	Pn	**Pn**	**17 00 59.1**	**+1.2**
	0.3nm,0.3s,baz=156,slow=18,SNR=2.0						
ULM				Pg	**Pb**	**17 01 05.8**	**+0.9**
	0.8nm,0.3s,baz=146,slow=16,SNR=3.9						
ULM				Lg	Lg	17 01 47.2	
	1.8nm,0.3s,baz=70,slow=20,SNR=12						
ULM				Rg	Rg	17 02 04.9	
	22nm,1.0s,baz=213,slow=6.6,SNR=5.7						
ULM	**Lac du Bonnet**	**3.42**	**328**	*e*Pn	**Pn**	**17 00 59.5**	**+1.5**
ULM				Pg	**Pb**	**17 01 05.8**	**+0.9**
ULM				Lg	Lg	17 01 47.2	
ULM				Rg	Rg	17 02 04.9	
I10CA	**LAC DU BONNET**	**3.44**	**326**	*i*		17 20 15.0	
	baz=146,slow=363,SNR=15						
E43A	**Lone Tree Farm**	**4.29**	**101**	*e*Pn	**Pn**	**17 01 10.9**	**+1.0**
ECSD	**EROS Data Cent**	**4.41**	**216**	*e*Pn	**Pn**	**17 01 12.8**	**+1.2**
MDND	**Maddock**	**4.44**	**278**	*e*Pn	**Pn**	**17 01 12.9**	**+0.8**
I42A	**Draeger Farm,**	**4.54**	**139**	*e*Pn	**Pn**	**17 01 13.4**	**0.0**
H43A	**Windswept, Lux**	**4.70**	**126**	*e*Pn	**Pn**	**17 01 16.9**	**+1.2**
JFWS	**Jewell Farm**	**4.89**	**155**	*e*Pn	**Pn**	**17 01 18.2**	**+0.1**
L40A	**Anamosa**	**5.47**	**165**	*e*Pn	**Pn**	**17 01 27.0**	**+0.8**
G45A	**Suttons Bay**	**5.65**	**112**	*e*Pn	**Pn**	**17 01 29.7**	**+1.1**
L42A	**Oliver, Polo**	**5.89**	**154**	*e*Pn	**Pn**	**17 01 32.7**	**+0.8**
E46A	**Sault Ste Mari**	**6.09**	**96**	*e*Pn	**Pn**	**17 01 35.7**	**+1.0**
BGNE	**Belgrade**	**6.99**	**213**	*e*Pn	**Pn**	**17 01 46.5**	**-0.5**
J47A	**Sunmer**	**7.14**	**122**	*e*Pn	**Pn**	**17 01 49.5**	**+0.5**
RSSD	**Black Hills**	**8.33**	**251**	*e*Pn	**Pn**	**17 02 05.4**	**-0.2**
LAO	**LASA Array**	**9.01**	**270**	*e*Pn	**Pn**	**17 02 15.1**	**+0.2**
FFC	**Flin Flon**	**9.24**	**326**	*e*Pn	**Pn**	**17 02 18.2**	**+0.3**
D53A	**Lac Vacive, Po**	**10.46**	**86**	*e*Pn	**Pn**	**17 02 33.7**	**-0.9**
EGMT	**Eagleton**	**11.27**	**279**	*e*Pn	**Pn**	**17 02 42.1**	**-3.6**
Q54A	**Coxs Mills**	**12.24**	**129**	*e*Pn	**Pn**	**17 02 56.6**	**-2.4**
PDAR	**Pinedale Array**	**12.53**	**254**	Pn	**Pn**	**17 03 02.0**	**-1.2**
	0.1nm,0.3s,baz=66,slow=18,SNR=2.9						
PDAR				Lg	Lg	17 06 29.9	
	0.1nm,0.3s,baz=54,slow=35,SNR=4.0						
I56US	**NEWPORT INFRASI**	**16.17**	**282**	*i*		18 36 50.0	
	baz=84,slow=313,SNR=2.9						
YKA	**Yellowknife Ar**	**19.40**	**329**	Pn	**P**	**17 04 29.5**	**-1.3**
	0.1nm,0.3s,baz=120,slow=12,SNR=3.6						

*ISCJB **18** 17:09:38.4±0.6, 66.°95N±0.°03×21.°0E±0.°1, h0km, Error ellipse: s-maj=6.5km s-min=4.5km az=151.9*
*UPP **18** 17:09:39.7±0.1, 67.°01N×20.°91E, h0km, ML1.9, Explosion*
*NAO **18** 17:09:39.9±1.4, 67.°04N×21.°02E, ML2.7*
*BER **18** 17:09:42.7±4.4, 67.°04N×20.°95E, h0km, ML1.6, ML2.7(NAO), Suspected explosion*
ISC 18 17:09:39.4±0.9, 67.°01N±0.°03×20.°91E±0.°04, h0km, n19, σ0§99/30, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.18**	**311**	P	**Pg**	**17 09 43.2**	**+0.4**
DUNU				S	**Sg**	**17 09 45.7**	**+0.6**
ERTU	**Ertsjaerv**	**0.68**	**131**	P	**Pg**	**17 09 52.7**	**+0.2**
PAJU	**Pajala**	**0.86**	**88**	P	**Pg**	**17 09 55.7**	**-0.2**
KUA	**Kurravaara**	**0.98**	**347**	P	**Pg**	**17 09 58.2**	**0.0**
HEF	**Hetta**	**1.75**	**35**	Pg	**Pn**	**17 10 10.1**	**-1.0**
HEF				Lg	Lg	17 10 32.6	
HEF	**Hetta**	**1.75**	**35**	Pg	**Pn**	**17 10 10.1**	**-1.0**
HEF				Sg	**Sn**	**17 10 32.6**	**-1.5**
KIF	**Kilpisjarvi**	**2.01**	**359**	Pn	**Pn**	**17 10 15.2**	**+0.8**
KIF				Sn	**Sb**	**17 10 42.6**	**+0.4**
KIF	**Kilpisjarvi**	**2.01**	**359**	Pn	**Pn**	**17 10 15.2**	**+0.8**
KIF				Sn	**Sb**	**17 10 42.6**	**+0.4**
KTK1	**Kautokeino**	**2.20**	**22**	*e*P	**Pn**	**17 10 18.1**	**+1.0**
KTK1				*e*S	**Sn**	**17 10 45.5**	**+0.5**
KTK1				IAML		17 10 49.1	
	comp=Z,8.5nm,0.2s						
ARA0	**ARCESS Array S**	**3.06**	**32**	Pn	**Pn**	**17 10 29.2**	**+0.2**
	baz=206,slow=16						
ARA0				Sn	**Sn**	**17 11 07.3**	**+1.0**
	baz=204,slow=22						
ARA0	**ARCESS Array S**	**3.06**	**32**	Pn	**Pn**	**17 10 29.2**	**+0.2**
	baz=206,slow=16						
ARA0				Sn	**Sn**	**17 11 07.3**	**+1.0**
	baz=204,slow=22						
APA0	**Apatity Array**	**4.72**	**77**	Pn	**Pn**	**17 10 51.5**	**-0.3**
APA0				Sn	**Sn**	**17 11 47.1**	**+0.1**
	baz=267,slow=28						
APA0	**Apatity Array**	**4.72**	**77**	Pn	**Pn**	**17 10 51.5**	**-0.3**
APA0				Sn	**Sn**	**17 11 47.1**	**+0.1**
	baz=267,slow=28						
FIA0	**FINESS Array S**	**6.02**	**156**	Pn	**Pn**	**17 11 11.2**	**+1.6**
	baz=341,slow=12						
FIA0				Sn	**Sn**	**17 12 19.3**	**+0.2**
	baz=344,slow=28						
FIA0	**FINESS Array S**	**6.02**	**156**	Pn	**Pn**	**17 11 11.2**	**+1.6**
	baz=341,slow=12						
FIA0				Sn	**Sn**	**17 12 19.3**	**+0.2**
	baz=344,slow=28						
NB2	**NORSAR Subarra**	**7.34**	**220**	Pn	**Pn**	**17 11 27.8**	**+0.1**
	baz=24,slow=14						
NB2	**NORSAR Subarra**	**7.34**	**220**	Pn	**Pn**	**17 11 27.8**	**+0.1**
	baz=24,slow=14						
NRA0	**NORESS Array S**	**7.52**	**218**	Sn	**Sn**	**17 12 53.7**	**-2.4**
	baz=29,slow=37						
NRA0	**NORESS Array S**	**7.52**	**218**	Sn	**Sn**	**17 12 53.7**	**-2.4**
	baz=29,slow=37						

KRSC 18 17:16:24.2±2.1, 49.°88N×156.°85E, h63km±24km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.93**	**330**	*e*P	Pn	17 16 42.4	+1.0
SKR				*e*S	Sn	17 16 55.4	+1.3
ALID	**Alaid**	**1.29**	**320**	*e*P	Pn	17 16 46.6	+0.3
ALID				*e*S	Sn	17 17 03.2	+0.4
PAU	**Pauzhetka**	**1.59**	**359**	*e*P	Pn	17 16 52.3	+2.3
PAU				*e*S	Sn	17 17 12.7	+3.1
KDTR	**Khodutka, Kamc**	**2.08**	**21**	*e*P	Pn	17 16 58.9	+2.2
KDTR				*e*S	Sn	17 17 24.3	+2.8
ASAK	**Asacha**	**2.59**	**14**	*e*P	Pn	17 17 06.8	+3.1
MTVR	**Mutnovka**	**2.73**	**17**	*e*P	Pn	17 17 08.7	+2.9
MTVR				*e*S	Sn	17 17 40.5	+2.8
RUS	**Russkaya**	**2.76**	**22**	*e*P	Pn	17 17 08.0	+2.1
RUS				*e*S	Sn	17 17 39.7	+1.6
APC	**Apacha**	**3.05**	**3**	*e*P	Pn	17 17 12.3	+2.4
PET	**Petropavlovsk**	**3.34**	**19**	*e*S	Sn	17 17 55.7	+3.4
DALK	**Dalny**	**3.37**	**20**	*e*P	Pn	17 17 16.9	+2.6
DALK				*e*S	Sn	17 17 55.5	+2.5
UGLR	**Uglovaya**	**3.55**	**20**	*e*P	Pn	17 17 19.9	+3.0
AVH	**Avacha**	**3.58**	**18**	*e*P	Pn	17 17 21.4	+4.1
KOK	**Koryaka**	**3.59**	**17**	*e*P	Pn	17 17 21.4	+4.0
KOK				*e*S	Sn	17 18 04.0	+5.4
SMAR	**Somma**	**3.60**	**19**	*e*S	Sn	17 18 03.1	+4.2
KRER	**Koryakskii**	**3.62**	**18**	*e*S	Sn	17 18 04.4	+4.9
SDLR	**Sedlovina**	**3.63**	**20**	*e*P	Pn	17 17 20.5	+2.6
NLC	**Nalytchevo**	**3.64**	**24**	*e*S	Sn	17 18 00.8	+1.2
KRX	**Arik**	**3.66**	**17**	*e*P	Pn	17 17 21.9	+3.6
SPN	**Mys Shipunski**	**3.78**	**30**	*e*P	Pn	17 17 22.7	+2.8
SPN				*e*S	Sn	17 18 05.3	+2.2

*IDC **18** 17:18:22.8±0.6, 36.°93N×22.°21E, h0km, mb4.2/21, mb1 4.2/28, mb1mx4.1/52, mbtmp4.1/28, ML3.7/7, MS3.2/6, Ms1 3.1/6, ms1mx2.8/36, Error ellipse: s-maj=14.7km s-min=12.2km az=14.0*
*MOS **18** 17:18:24.3±1.2, 36.°94N×22.°08E, h18km, mb4.5/20, Error ellipse: s-maj=6.6km s-min=4.1km az=83.7*
*ATH **18** 17:18:25.6, 36.°91N×22.°11E, h21km±1km, ML4.0/15, Error ellipse: s-maj=1.5km s-min=0.8km az=329.0*
*MED_RC **18** 17:18:25.0±0.6, 36.°87N×22.°07E, h19km±2km, MW4.3/7, Moment Tensor Solution.Mantle waves: s7,c9; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr=2.82±.65; Mθθ0.14±.42; Mφφ2.69±.41; Mrθ1.16±.52; Mθφ-0.65±.33; Mφr0.46±.33; Best double couple: M0=3.07000×10^15 NP1:φs186.00000°, δ50.00000°, λ-63.00000°. NP2: φs327.00000°, δ47.00000°, λ-119.00000°. Principal axes: T 2.8500, Plg2.0000°, Azm257.0000°; N 0.4400, Plg21.0000°, Azm348.0000°; P -3.2900, Plg69.0000°, Azm162.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NEIC **18** 17:18:26.1±0.0, 36.°91N×22.°12E, h6km, mb4.4/31, ML4.0(THE), After THE.*
*PDG **18** 17:18:26.4±0.4, 37.°01N×21.°77E, h5km±2km, ML4.0/10, Error ellipse: s-maj=8.0km s-min=4.5km az=90.0*
*THE **18** 17:18:26.1, 36.°91N×22.°12E, h6km±1km, ML4.0/11, Error ellipse: s-maj=1.3km s-min=0.7km az=358.0*
*DDA **18** 17:18:47.7, 37.°11N×21.°88E, h9km±2km, ML4.2*
*TIR **18** 17:19:36.8, 36.°19N×22.°12E, h7km, Md4.5/7*
ISC 18 17:18:25.3±0.8, 36.°90N±0.°02×22.°10E±0.°02, h16km±5km, n411, σ1§96/453, mb4.5/53, MS3.7/8, 22C-16D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.29**	**269**	*e*Pg	**Pb**	**17 18 32.1**	**-0.1**
PYL				*e*Sg	**Sb**	**17 18 36.5**	**-0.3**
PYL	**PYLOS**	**0.29**	**269**	P	**Pb**	**17 18 32.1**	**-0.1**
PYL				S	**Sb**	**17 18 36.5**	**-0.3**
	70μm,0.3s						
PYL	**PYLOS**	**0.29**	**269**	P	**Pb**	**17 18 32.1**	**-0.1**
PYL				S	**Sb**	**17 18 36.7**	**-0.1**
PYL				AML	AML	17 18 37.2	
PYL				AML	AML	17 18 38.1	
ITM	**Ithomi**	**0.31**	**333**	P	**Pb**	**17 18 32.7**	**+0.1**
ITM	**Ithomi**	**0.31**	**333**	*e*Pg	**Pb**	**17 18 32.4**	**-0.2**
ITM				*e*		17 18 32.5	
ITM				*e*Sg	**Sb**	**17 18 36.9**	**-0.6**
ITM	**Ithomi**	**0.31**	**333**	P	**Pb**	**17 18 32.4**	**-0.2**
ITM				S	**Sb**	**17 18 36.9**	**-0.6**
	30μm,0.2s						
ITM	**Ithomi**	**0.31**	**333**	P	**Pb**	**17 18 32.6**	**0.0**
ITM				S	**Sb**	**17 18 37.2**	**-0.2**
ITM				AML	AML	17 18 38.0	
	comp=E,64643μm,0.3s						
ITM				AML	AML	17 18 38.3	
	comp=N,56041μm,0.2s						
MES3	**Kyparissia**	**0.49**	**315**	P	**Pb**	**17 18 35.7**	**+0.1**
MES3				S	**Sb**	**17 18 43.3**	**+0.7**
VLX	**Vlachokerasia**	**0.52**	**25**	*e*Pg	**Pb**	**17 18 36.0**	**-0.2**
VLX				*e*Sg	**Sb**	**17 18 43.0**	**-0.5**
VLX	**Vlachokerasia**	**0.52**	**25**	P	**Pb**	**17 18 36.0**	**-0.2**
VLX				S	**Sb**	**17 18 43.0**	**-0.5**
	comp=N,29μm,0.6s						
VLX	**Vlachokerasia**	**0.52**	**25**	P	**Pb**	**17 18 36.1**	**-0.1**
VLX				S	**Sb**	**17 18 43.3**	**-0.2**
VLX				AML	AML	17 18 44.9	
	comp=N,51410μm,0.5s						
VLX				AML	AML	17 18 50.5	
	comp=E,65879μm,0.5s						
TRIP	**Tripoli**	**0.64**	**12**	P	**Pb**	**17 18 38.0**	**-0.2**
TRIP				S	**Sb**	**17 18 47.0**	**0.0**
	comp=E,7μm,0.5s						
TRIP	**Tripoli**	**0.64**	**12**	P	**Pb**	**17 18 38.2**	**0.0**
TRIP				S	**Sb**	**17 18 47.2**	**+0.3**
TRIP				AML	AML	17 18 48.1	
	comp=N,14983μm,0.7s						
TRIP				AML	AML	17 18 53.3	
	comp=E,13501μm,0.6s						
VLI	**Veliai**	**0.69**	**105**	*e*Pg	**Pb**	**17 18 39.2**	**+0.1**
VLI				*e*Sg	**Sb**	**17 18 48.4**	**0.0**
VLI	**Veliai**	**0.69**	**105**	P	**Pb**	**17 18 39.2**	**+0.1**
VLI				S	**Sb**	**17 18 48.4**	**0.0**
	comp=E,10μm,0.6s						
VLI	**Veliai**	**0.69**	**105**	P	**Pb**	**17 18 39.3**	**+0.1**
VLI				AML	AML	17 18 52.8	
	comp=N,16373μm,0.6s						
VLI				AML	AML	17 18 53.6	
	comp=E,24393μm,0.7s						
AMT	**Artemida-Makis**	**0.70**	**334**	P	**Pb**	**17 18 39.4**	**+0.1**
AMT				S	**Sb**	**17 18 49.8**	**+1.0**
	comp=E,43μm,0.4s						
AMT	**Artemida-Makis**	**0.70**	**334**	P	**Pb**	**17 18 39.7**	**+0.4**
AMT				AML	AML	17 18 53.8	
	comp=E,94212μm,0.6s						
AMT				AML	AML	17 18 53.9	
	comp=N,69404μm,0.3s						
MNVA	**Monemvasia**	**0.78**	**106**	P	**Pb**	**17 18 40.7**	**+0.1**
KRND	**KRANIDI**	**0.96**	**60**	P	**Pn**	**17 18 44.1**	**-0.2**
KRND				S	**Sn**	**17 18 58.8**	**+1.1**
	comp=N,7μm,0.5s						
GUR	**Goura**	**1.05**	**10**	*e*Pg	**Pb**	**17 18 44.7**	**-0.6**
GUR	**Goura**	**1.05**	**10**	P	**Pb**	**17 18 44.7**	**-0.6**
GUR	**Goura**	**1.05**	**10**	P	**Pb**	**17 18 44.9**	**-0.4**
GUR				AML	AML	17 19 12.6	
	comp=E,25703μm,0.5s						
GUR				AML	AML	17 19 13.5	
	comp=N,18620μm,0.4s						
EPID	**Epidavros**	**1.08**	**48**	P	**Pn**	**17 18 46.2**	**+0.4**
DID	**Didima**	**1.09**	**56**	*e*Pg	**Pn**	**17 18 45.9**	**-0.1**
DID	**Didima**	**1.09**	**56**	P	**Pn**	**17 18 45.9**	**-0.1**
DID	**Didima**	**1.09**	**56**	P	**Pn**	**17 18 46.0**	**0.0**
DID				AML	AML	17 19 08.1	
	comp=N,9778μm,0.6s						
DID				AML	AML	17 19 09.4	
	comp=E,17457μm,0.7s						
DRO	**Drossia**	**1.09**	**344**	P	**Pn**	**17 18 46.6**	**+0.5**
DRO				S	**Sn**	**17 19 02.0**	**+1.1**
	comp=E,10μm,0.5s						
DRO	**Drossia**	**1.09**	**344**	P	**Pn**	**17 18 46.5**	**+0.4**
DRO				AML	AML	17 19 12.9	
	comp=E,24350μm,0.4s						
DRO				AML	AML	17 19 17.4	
	comp=N,25004μm,0.5s						
KLV	**Kalavryta, Ach**	**1.14**	**2**	P	**Pb**	**17 18 46.3**	**-0.5**
KLV	**Kalavryta, Ach**	**1.14**	**2**	P	**Pb**	**17 18 46.3**	**-0.5**
KLV				AML	AML	17 19 11.3	
	comp=N,5264μm,0.8s						
KLV				AML	AML	17 19 15.2	
	comp=E,8222μm,0.9s						
ACOR	**Acrocorinthos**	**1.16**	**32**	P	**Pg**	**17 18 47.3**	**-0.5**
THAL	**Thalero**	**1.22**	**21**	P	**Pg**	**17 18 48.1**	**-0.8**
THAL	**Thalero**	**1.22**	**21**	P	**Pg**	**17 18 48.2**	**-0.6**
VTN	**Vitineika**	**1.25**	**324**	P	**Pg**	**17 18 49.5**	**+0.1**
RLS	**Riolos of Patr**	**1.26**	**337**	P	**Pg**	**17 18 49.4**	**-0.3**
RLS	**Riolos of Patr**	**1.26**	**337**	P	**Pg**	**17 18 49.6**	**-0.1**
RLS				AML	AML	17 19 14.2	
	comp=N,13079μm,1.1s						
RLS				AML	AML	17 19 15.2	
	comp=E,9483μm,0.8s						
TRAZ	**Trapeza**	**1.27**	**4**	P	**Pn**	**17 18 48.5**	**0.0**
TRAZ	**Trapeza**	**1.27**	**4**	P	**Pn**	**17 18 48.4**	**-0.1**
LOUT	**Loutraki**	**1.29**	**32**	P	**Pb**	**17 18 49.1**	**-0.1**
LOUT	**Loutraki**	**1.29**	**32**	P	**Pg**	**17 18 49.6**	**-0.6**
LTK	**Loutraki**	**1.31**	**31**	*e*Pn	**Pb**	**17 18 49.6**	**-0.1**
LTK	**Loutraki**	**1.31**	**31**	P	**Pb**	**17 18 49.6**	**-0.1**
LTK	**Loutraki**	**1.31**	**31**	P	**Pg**	**17 18 50.0**	**-0.7**
LTK				AML	AML	17 19 11.4	
	comp=N,13682μm,0.4s						
LTK				AML	AML	17 19 17.4	
	comp=E,11079μm,0.8s						
AIG2	**Aigio**	**1.34**	**359**	P	**Pb**	**17 18 49.8**	**-0.3**
LAKA	**Lakka**	**1.34**	**356**	*e*Pn	**Pg**	**17 18 50.6**	**-0.6**
LAKA	**Lakka**	**1.34**	**356**	P	**Pg**	**17 18 50.6**	**-0.6**
LAKA				S	**Sg**	**17 19 09.2**	**+0.6**
	comp=E,2μm,1.0s						
LAKA	**Lakka**	**1.34**	**356**	P	**Pg**	**17 18 51.0**	**-0.2**
AIG4	**Aigion**	**1.35**	**359**	P	**Pb**	**17 18 50.1**	**-0.2**
ALIK	**Aliki, Aigiali**	**1.36**	**0**	P	**Pg**	**17 18 51.4**	**-0.1**
ANKY	**Antikythira Is**	**1.42**	**137**	*e*Pn	**Pg**	**17 18 51.8**	**-0.8**
ANKY	**Antikythira Is**	**1.42**	**137**	P	**Pg**	**17 18 51.8**	**-0.8**
ANKY	**Antikythira Is**	**1.42**	**137**	P	**Pg**	**17 18 52.3**	**-0.3**
TRIZ	**Trizonia**	**1.46**	**359**	P	**Pb**	**17 18 52.2**	**0.0**
TRIZ	**Trizonia**	**1.46**	**359**	P	**Pb**	**17 18 52.1**	**-0.1**
KALE	**Kalithea**	**1.49**	**1**	*e*Pn	**Pb**	**17 18 52.2**	**-0.5**
KALE	**Kalithea**	**1.49**	**1**	P	**Pb**	**17 18 52.2**	**-0.5**
KALE	**Kalithea**	**1.49**	**1**	P	**Pb**	**17 18 52.3**	**-0.4**
PROD	**Prodromos**	**1.50**	**25**	P	**Pg**	**17 18 53.4**	**-0.7**
SERG	**Sergoula**	**1.51**	**359**	P	**Pb**	**17 18 52.7**	**-0.3**
SERG	**Sergoula**	**1.51**	**359**	P	**Pb**	**17 18 52.5**	**-0.6**
SERG				AML	AML	17 19 20.4	
	comp=E,3610μm,0.3s						
SERG				AML	AML	17 19 26.6	
	comp=N,6947μm,0.6s						
EFP	**Efpalio**	**1.53**	**354**	P	**Pb**	**17 18 53.4**	**0.0**
DSF	**Desfina**	**1.54**	**12**	P	**Pg**	**17 18 54.7**	**-0.3**
DSF				AML	AML	17 19 20.1	
	comp=E,3422μm,0.8s						
DSF				AML	AML	17 19 20.3	
	comp=N,3222μm,0.4s						
KFL	**Anninata**	**1.60**	**319**	P	**Pb**	**17 18 54.3**	**-0.2**
VIL2	**Platees**	**1.60**	**35**	P	**Pb**	**17 18 54.5**	**-0.1**
DLFA	**Delphi**	**1.60**	**11**	P	**Pg**	**17 18 55.5**	**-0.7**
VLY	**Voula,Athens**	**1.65**	**54**	P	**Pb**	**17 18 55.5**	**+0.2**
ATH	**Athens Observa**	**1.67**	**50**	P	**Pb**	**17 18 55.1**	**-0.6**
ANX	**Ano Chora**	**1.69**	**355**	P	**Pb**	**17 18 56.5**	**+0.2**
ATHU	**Athens Univers**	**1.71**	**51**	P	**Pb**	**17 18 56.3**	**-0.1**
VLS	**Valsamata**	**1.75**	**317**	P	**Pb**	**17 18 56.7**	**-0.4**
PVO	**Paravola**	**1.77**	**345**	P	**Pg**	**17 18 58.5**	**-0.9**
PVO				AML	AML	17 19 36.0	
	comp=N,4999μm,0.6s						
PVO				AML	AML	17 19 36.1	
	comp=E,3996μm,0.4s						
PTL	**Penteli**	**1.81**	**50**	P	**Pb**	**17 18 57.6**	**-0.6**
MHLO	**Agia Marina, M**	**1.86**	**96**	P	**Pb**	**17 18 58.6**	**-0.4**
LKR	**Lokris**	**1.89**	**22**	P	**Pb**	**17 18 59.2**	**-0.2**
SERI	**Serifos**	**1.92**	**82**	P	**Pn**	**17 18 58.6**	**+1.1**
ATAL	**Atalanti**	**1.93**	**22**	P	**Pb**	**17 18 60.0**	**-0.2**
FSK	**Fiskardo**	**1.98**	**322**	P	**Pg**	**17 19 01.9**	**-1.4**
IMMV	**Iera Moni Meta**	**2.09**	**133**	*e*P	**Pb**	**17 19 03.7**	**+0.8**
EREA	**Eretria**	**2.10**	**43**	P	**Pb**	**17 19 01.8**	**-1.3**
MRKA	**Markates**	**2.15**	**33**	P	**Pb**	**17 19 02.6**	**-1.4**
LKD2	**Lefkada island**	**2.20**	**329**	*i* PN	**Pg**	**17 19 08.8**	**+1.1**
LKD2				*i* SN	**Sg**	**17 19 42.5**	**+6.3**
GVD	**Gavdhos**	**2.61**	**141**	*e*P	**Pb**	**17 19 11.5**	**-0.3**
APE	**Apeiranthos**	**2.75**	**85**	*e*P	**Pb**	**17 19 10.6**	**+1.7**
APE	**Apeiranthos**	**2.75**	**85**	⇑*i*P	**Pn**	**17 19 11.1**	**+2.2**
APE	**Apeiranthos**	**2.75**	**85**	*i* P	**Pn**	**17 19 10.8**	**+1.9**
SANT	**Santorini**	**2.75**	**100**	*e*P	**Pn**	**17 19 11.3**	**+2.4**
SANT	**Santorini**	**2.75**	**100**	*e*Pn	**Pn**	**17 19 07.9**	**-1.0**
SANT	**Santorini**	**2.75**	**100**	⇑*i*P	**Pn**	**17 19 10.6**	**+1.7**
IDI	**Anoyia**	**2.77**	**125**	Pn	**Pb**	**17 19 12.2**	**-2.4**
	comp=E,9.8nm,0.3s,baz=304,slow=15,SNR=30						
IDI				Lg	Lg	17 19 49.1	
	comp=E,31nm,0.3s,baz=339,slow=18,SNR=3.5						
IDI				LR	LR	17 20 24.2	
	comp=E,380nm,19.9s,baz=231,slow=45						
SRN	**Sarande**	**3.40**	**332**	*i* PN	**Pn**	**17 19 20.1**	**+2.4**
SRN				*i* SN	**Sn**	**17 19 58.4**	**+0.6**
ZEY	**zmir**	**3.74**	**68**	*i* P	**Pn**	**17 19 23.0**	**+0.5**
TPE	**Tepelena**	**3.76**	**335**	*i* PN	**Pn**	**17 19 25.3**	**+2.5**
TPE				*i* SN	**Sn**	**17 20 01.9**	**-4.8**
ZKR	**Zakros**	**3.78**	**117**	*e*P	**Pn**	**17 19 26.9**	**+3.9**
URLA	**Izmir**	**3.85**	**66**	*e*P	**Pn**	**17 19 25.4**	**+1.4**
URLA	**Izmir**	**3.85**	**66**	*i* P	**Pn**	**

BUM Brajici-Budva 5.93 336⇑ *i*Pn Pn 17 19 53.1 +0.5
BUM *e*Sn **Sn** 17 21 00.2 -0.1
PDG Podgorica 5.94 339 *e*Pn Pn 17 19 53.3 +0.6
TTG Podgorica 5.94 339⇑ *i*Pn Pn 17 19 54.0 +1.3
TTG *e*Sn **Sn** 17 20 59.7 -0.7
TTG Podgorica 5.94 339 *e*Pn Pn 17 19 52.6 -0.1
TTG *e*Sn **Sn** 17 20 59.1 -1.3
TTG Podgorica 5.94 339 *e*P Pn 17 19 52.6 -0.1
TTG *e* 17 20 59.2
CEME Cevo 6.15 337⇓ *i*Pn Pn 17 19 55.9 +0.3
CEME *e*Sn **Sn** 17 21 05.7 +0.1
VAE Valguarnera 6.17 278 Pn Pn 17 19 57.2 +1.4
comp=Z,2.8nm,0.3s,baz=103,slow=14,SNR=19
VAE Sn **Sn** 17 21 10.5 +4.4
comp=Z,5.2nm,0.3s,baz=16,slow=20,SNR=2.3
HCY Herceg Novi 6.20 334⇓ *i*Pn Pn 17 19 56.9 +0.7
HCY *e*Sn **Sn** 17 21 05.4 -1.4
HCY Herceg Novi 6.20 334 *e*Pn Pn 17 19 55.7 -0.5
IVA Berane 6.20 345⇑ *i*Pn Pn 17 19 58.4 +2.1
IVA *e*Sn **Sn** 17 21 06.9 0.0
WDD Wied Dalam 6.21 262 *e*Pn Pn 17 19 55.4 -0.9
WDD *e*Sn **Sn** 17 21 03.5 -3.5
KOME Kolasin 6.27 342⇑ *i*Pn Pn 17 19 58.8 +1.6
KOME *e*Sn **Sn** 17 21 08.0 -0.5
PHSR Pinarhisar 6.32 40⇑ *i*P Pn 17 20 01.3 +3.4
NKME Niksic 6.34 339⇓ *i*Pn Pn 17 19 58.8 +0.6
NKME *e*Sn **Sn** 17 21 09.8 -0.5
NKY Niksic 6.37 339⇓ *i*Pn Pn 17 20 00.1 +1.4
NKY *e*Sn **Sn** 17 21 10.2 -0.9
TREB Trebinje 6.49 335 *e*Pn Pn 17 19 59.7 -0.5
BRY Bratogost 6.59 337⇑ *i*Pn Pn 17 20 02.1 +0.4
BRY *e*Sn **Sn** 17 21 15.5 -1.1
BRY Bratogost 6.59 337 *e*Pn Pn 17 20 01.0 -0.7
UPM Unac-Piva 6.75 340⇑ *i*Pn Pn 17 20 05.4 +1.4
UPM *e*Sn **Sn** 17 21 20.3 -0.4
UPM Unac-Piva 6.75 340 *e*Pn Pn 17 20 05.1 +1.1
YLV Yalova 6.76 55⇑ *i*P Pn 17 20 07.2 +3.2
ISP Isparta 6.77 80 *e*Pn Pn 17 20 03.2 -1.0
ISP Isparta 6.77 80 *e*P Pn 17 20 03.2 -1.0
STON Ston 6.86 332 *e*Pn Pn 17 20 04.6 -0.6
CLTB Caltabellotta 7.12 278 *e*Pn Pn 17 20 10.0 +1.0
BBLS Lazići 7.25 344 *e*Pn Pn 17 20 11.1 +0.3
DIVS Divibare 7.37 348 *e*Pn Pn 17 20 12.5 +0.2
HAPS Han Pijesak,BI 7.57 342 *e*Pn Pn 17 20 13.8 -1.3
SAHE Sakarya_HENDEK 7.88 57 *i* P Pn 17 20 22.8 +3.4
SAHE IAML_P
comp=Z,239nm,0.5s
HUMR Humele 7.92 15⇑ *i*P Pn 17 20 26.6 +6.7
MDUB Mudurnu 7.96 61 *e*Pn Pn 17 20 22.0 +1.6
MGRS Mrkonjic Grad 8.42 335 *e*Pn Pn 17 20 27.4 +0.7
FRGS Fruska Gora 8.43 349 *e*Pn Pn 17 20 26.1 -0.7
AQU L'Aquila 8.64 312 *e*Pn Pn 17 20 31.8 +2.0
AQU *e*Sn **Sn** 17 22 03.9 -3.0
AQU L'Aquila 8.64 312 *e*P Pn 17 20 31.8 +2.0
AQU *e* 17 22 03.9
BLY Banja Luka 8.68 336 *e*Pn Pn 17 20 30.0 -0.3
BLY Banja Luka 8.68 336 *e*Pn Pn 17 20 29.4 -0.8
BZS Buzias 8.71 358⇓ *i*P Pn 17 20 38.7 +8.0
VOIR 8.81 14⇑ *i*P Pn 17 20 36.7 +4.6
TLB Topalu 8.90 29⇓ *i*P Pn 17 20 36.6 +3.4
ANTO Ankara 8.90 67 *e*Pn Pn 17 20 33.9 +0.5
ANTO Ankara 8.90 67 *e*P Pn 17 20 33.9 +0.5
TIRR Tirgusor 8.94 30 *e*Pn Pn 17 20 34.2 +0.4
TIRR Tirgusor 8.94 30 *e*P Pn 17 20 34.2 +0.4
MLR Muntele Rosu 9.05 17 Pn Pn 17 20 41.5 +6.0
comp=Z,0.4nm,0.3s,baz=151,slow=10,SNR=6.1
MLR Muntele Rosu 9.05 17 *e*Pn Pn 17 20 39.8 +4.3
MLR Muntele Rosu 9.05 17⇓ *i*P Pn 17 20 41.6 +6.1
MLR Muntele Rosu 9.05 17 *e*P Pn 17 20 39.8 +4.3
DOPR Dopca 9.39 14⇑ *i*P Pn 17 20 45.0 +5.0
CFR Carcaliu 9.44 27⇑ *i*P Pn 17 20 45.2 +4.6
BR131 Keskin Array S 9.49 69 *e*Pn Pn 17 20 44.6 +3.0
BRTR Keskin Array B 9.49 69 Pn Pn 17 20 46.0 +4.4
comp=Z,0.3nm,0.3s,baz=250,slow=14,SNR=8.2
BRTR LR LR 17 25 17.8
comp=Z,54nm,19.7s,baz=273,slow=44
PLOR Plostina 9.57 19⇑ *i*P Pn 17 20 47.4 +4.9
OZUR 9.59 16⇑ *i*P Pn 17 20 48.2 +5.4
VRI Vrincioaia 9.61 20⇑ *i*P Pn 17 20 48.5 +5.6
MORH Mrgy, Hungar 9.66 346 *e*Pn Pn 17 20 42.4 -1.2
BOJS Bojanci 10.02 331 *i* Pn Pn 17 20 48.8 +0.1
BOJS *i* Sn **Sn** 17 22 37.6 -3.0
RIY Rijeka 10.19 328 *e*Pn Pn 17 20 49.0 -1.9
CRES Cresnjev 10.21 333 *e*Pn Pn 17 20 50.6 -0.7
KEST Kesra 10.36 267 Pn Pn 17 20 54.0 +0.6
comp=Z,0.2nm,0.3s,baz=69,slow=8.6,SNR=3.5
KEST Kesra 10.36 267 *e*Pn Pn 17 20 54.2 +0.8
TAMR Tamra 10.40 275 *e*Pn Pn 17 20 56.4 +2.5
VISS Visnje 10.43 331 *i* Pn Pn 17 20 54.5 +0.2
VISS *i* Sn **Sn** 17 22 45.9 -4.9
BIZ Bicaz 10.46 15⇑ *i*P Pn 17 21 00.4 +5.7
CEY Cerknica 10.54 329 *e*Pn Pn 17 20 55.8 0.0
TRI Trieste 10.80 327 *e*Pn Pn 17 21 00.4 +1.2
TRI Trieste 10.80 327 *e*P Pn 17 21 00.4 +1.2
JAVS Javornik 10.82 329 *i* Pn Pn 17 21 00.1 +0.5
JAVS *i* Sn **Sn** 17 22 56.8 -3.6
BUR08 Bucovina Ar. S 10.98 11 *e*Pn Pn 17 21 00.5 -1.3
PERS Pernice 11.03 334 *i* Pn Pn 17 21 02.3 -0.2
SOKA Soboth 11.10 334 *e*Pn Pn 17 21 02.5 -1.0
comp=Z,0.9nm,0.3s
SOKA Sn **Sn** 17 23 01.1 -6.1
comp=Z,1.8nm,0.5s
OBKA Obir 11.13 332 Pn Pn 17 21 07.6 +3.7
comp=Z,1.3nm,0.2s
OBKA Sn **Sn** 17 23 06.2 -1.9
comp=Z,7.2nm,0.5s
PSZ Piszkesteto 11.13 352 *e*Pn Pn 17 21 02.5 -1.3
PSZ Piszkesteto 11.13 352 *e*P Pn 17 21 02.5 -1.3
KIS Kishinev 11.25 24 *e*P Pn 17 21 18.0 +13
KIS *e*S Sn 17 23 24.0 +13
KIS LRM MLR 17 26 04.0
comp=Z,200nm,10.0s
KIS Kishinev 11.25 24 *e*P Pn 17 21 18.0 +13
KIS MLR MLR
comp=N,200nm,10.0s
MMAI Mount Meron Ar 11.58 106 Pn Pn 17 21 08.7 -1.4
comp=N,2.6nm,0.3s,baz=321,slow=13,SNR=8.9
MMAI Sn **Sn** 17 23 15.1 -4.0
comp=N,2.6nm,0.3s,baz=308,slow=22,SNR=5.6
MYKA Terra Mystica 11.59 330 Sn Sn 17 23 16.5 -2.6
comp=N,4.0nm,0.7s
VYHS Vyhne 11.83 349 *e*P Pn 17 21 12.9 -0.5
VYHS Vyhne 11.83 349 *e*PN Pn 17 21 12.9 -0.5
KOLS Kolonicke sedl 12.03 1 *e*P Pn 17 21 19.1 +3.0
KOLS Kolonicke sedl 12.03 1 *e*PN Pn 17 21 19.1 +3.0
KOLS *e*SN **P** 17 21 27.1 -1.9
KBA Koelnbreinsper 12.07 330 Sn Sn 17 23 27.7 -3.4
comp=N,1.6nm,0.4s
SIM Simferopol' 12.12 45 P Pn 17 21 13.4 -4.0
SIM MLR MLR
comp=Z,130nm,20.0s
ABTA Abfaltersbach 12.15 327 Pn Pn 17 21 22.4 +4.6
comp=Z,0.9nm,0.3s
ABTA Sn **Sn** 17 23 30.9 -2.2
comp=Z,9.7nm,0.8s
KWP Kalwaria Pacla 12.73 2 *e*Pn Pn 17 21 25.9 +0.2
KWP Kalwaria Pacla 12.73 2 *e*P Pn 17 21 25.9 +0.2
WTTA Wattenberg 12.93 326 Sn Sn 17 23 47.1 -5.2
comp=Z,6.8nm,0.6s
EIL Elat 12.94 120 Pn Pn 17 21 27.5 -1.1
comp=Z,0.6nm,0.3s,baz=339,slow=4.8,SNR=6.7
EIL Sn Sn 17 23 43.1 -9.1
comp=Z,0.9nm,0.3s,baz=54,slow=19,SNR=5.3
ASF Jabal al Asfar 13.07 107 Pn Pn 17 21 29.4 -1.1
comp=Z,0.1nm,0.3s,baz=282,slow=7.7,SNR=1.9
ASF Sn **Sn** 17 23 54.8 -1.0
comp=Z,0.1nm,0.3s,baz=288,slow=19,SNR=1.6
SQTA Sankt Quirin 13.09 325 *e*Sn Sn 17 23 53.8 -2.3
comp=Z,2.6nm,0.3s
FUORN Ofenpass-Fuorn 13.12 321 *e*Pn Pn 17 21 32.8 +1.7
FUORN *e*Sn **Sn** 17 23 51.1 -5.7
FETA Feichten 13.17 324 Pn Pn 17 21 35.8 +4.0
comp=Z,2.7nm,0.7s
FETA Sn **Sn** 17 23 55.5 -2.6
comp=Z,2.4nm,0.5s
MORC Moravsky Berou 13.29 347 *e*Pn Pn 17 21 36.4 +3.1
MORC Moravsky Berou 13.29 347 *e*P Pn 17 21 36.4 +3.1
DAVOX Davos/Dischmat 13.42 321 Pn P 17 21 40.1 -4.5
comp=Z,0.2nm,0.3s,baz=250,slow=6.0,SNR=3.2
DAVOX Sn **Sn** 17 23 57.1 -7.0
comp=Z,0.5nm,0.3s,baz=117,slow=20,SNR=2.3
GEC2 GERESS Array S 13.42 335 *e*Pn Pn 17 21 36.5 +1.3
GEC2 GERESS Array S 13.42 335 *e*P Pn 17 21 36.5 +1.3
GERES GERESS Array B 13.42 335 Pn Pn 17 21 35.6 +0.4
comp=Z,0.2nm,0.3s,baz=159,slow=14,SNR=3.5
GERES Sn Sn 17 23 54.0 -10
comp=Z,0.1nm,0.3s,baz=156,slow=24,SNR=2.3
RETA Reutte 13.49 325 *e*Sn Sn 17 24 04.1 -1.8
comp=Z,4.0nm,0.5s
KHC Kasperske Hory 13.71 336 *e*Pn Pn 17 21 39.9 +0.8
KHC Kasperske Hory 13.71 336 *e*P Pn 17 21 39.9 +0.8
KHC Kasperske Hory 13.71 336 *e*P P 17 21 49.5 +1.8
KHC AMS AMS 17 27 50.0
comp=Z,200nm,8.6s
DAVA Damuels 13.77 323 Pn P 17 21 45.3 -3.2
comp=Z,0.8nm,0.2s
DAVA Sn **Sn** 17 24 07.5 -5.1
comp=Z,6.6nm,0.6s
ANN Anapa 14.02 51 *e*P Pn 17 21 34.2 -9.0
ANN pmax pmax
comp=Z,21nm,0.9s
GOPC GO Pecny, Ondr 14.04 340 AMS AMS 17 27 40.0
comp=Z,100nm,14.3s
DPC Dobruska-Polom 14.07 345 *e*P P 17 21 53.5 +1.7
DPC MLR MLR
comp=Z,100nm,23.2s
DPC Dobruska-Polom 14.07 345 *e*P P 17 21 53.5 +1.7
DPC AMS AMS 17 28 10.0
comp=Z,100nm,23.2s
PRU Pruhonice 14.18 340 AMS AMS 17 28 20.0
comp=Z,200nm,9.8s
UPC Upice 14.29 344 *e*P P 17 21 56.1 +2.0
UPC MLR MLR
comp=Z,100nm,20.1s
UPC Upice 14.29 344 *e*P P 17 21 56.1 +2.0
UPC AMS AMS 17 28 20.0
comp=Z,100nm,20.1s
OSTC Ostas 14.29 345 AMS AMS 17 28 20.0
comp=Z,100nm,21.7s
CHVC Chvalec 14.36 344 AMS AMS 17 28 20.0
comp=Z,100nm,14.3s
SENIN Lac Senin/Sane 14.54 315 *e*Pn Pn 17 21 49.1 -1.5
SENIN *e*Sn **Sn** 17 24 26.6 -4.8
PVCC Panska Ves 14.66 341 AMS AMS 17 28 40.0
comp=Z,100nm,12.9s
AKASG Malin Array Be 14.71 18 Pn Pn 17 21 51.5 -1.2
comp=Z,0.5nm,0.3s,baz=213,slow=11,SNR=3.1
GRA1 Grafenberg Arr 15.02 332 *e*Pn Pn 17 21 55.0 -1.9
comp=Z,20nm,1.3s
GRF Grafenberg Arr 15.02 332 *e*P Pn 17 21 55.0 -1.9
GRF pmax pmax
comp=Z,20nm,1.3s
GRFO Grafenberg 15.02 332 *e*Pn Pn 17 21 55.1 -1.7
comp=Z,9.9nm,0.5s
GRFO Grafenberg 15.02 332 *e*P Pn 17 21 55.2 -1.7
GRFO pmax pmax
comp=Z,10.0nm,0.5s
BFO Black Forest 15.24 323 *e*Pn Pn 17 21 59.3 -0.6
comp=Z,4.0nm,1.0s
BFO Black Forest 15.24 323 *e*P Pn 17 21 59.3 -0.6
BFO pmax pmax
comp=Z,4.0nm,1.0s
ECH Echery 15.75 321 *e*Pn Pn 17 22 05.9 -0.6
comp=Z,5.2nm,1.0s
ECH *e*Sn **Sn** 17 24 50.0 -11
ECH Echery 15.75 321 *e*P Pn 17 22 05.9 -0.6
ECH pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 15.80 339 *e*Pn Pn 17 22 08.4 +1.4
comp=Z,6.3nm,0.8s
CLL Collm 15.80 339 *e*(P) P 17 22 12.0 +1.2
comp=Z,7.0nm,0.9s
CLL *e*(PPP) 17 22 25.0
CLL *e*S **S 17 25 12.0 -4.2**
CLL *e* 17 25 42.0
CLL Collm 15.80 339 *e*P P 17 22 12.0 +1.2
CLL pmax pmax
comp=Z,7.0nm,0.9s
NEY Neytrino 16.99 62 *i* P P 17 22 24.8 +0.5
SHA1 Shidzhatmaz 17.08 60 *i* P P 17 22 25.0 -0.3
SUW Suwalki 17.13 2 *e*Pn P 17 22 24.9 -0.7
comp=Z,35nm,1.1s
KIV Kislovodsk 17.16 59 *e*Pn Pn 17 22 24.9 +0.4
comp=Z,7.1nm,0.9s
KIV Kislovodsk 17.16 59 *e*P P 17 22 27.4 +1.3
KIV pmax pmax
comp=Z,20nm,1.1s
KIV MLR MLR
comp=Z,64nm,14.0s
AKH Akhalkalaki 17.18 68 *e*Pn P 17 22 26.5 +0.1
comp=Z,13nm,1.1s
AKH Akhalkalaki 17.18 68 *e*P P 17 22 26.5 +0.1
AKH pmax pmax
comp=Z,13nm,1.1s
KBZ Khabaz 17.24 60 P P 17 22 27.2 +0.4
comp=Z,0.2nm,0.3s,baz=264,slow=9.5,SNR=6.3
KBZ LR LR 17 30 22.3
comp=Z,37nm,18.9s,baz=227,slow=42
NCK Nalchik 17.67 61 *c*eP P 17 22 31.9 +0.3
ZEI Tsey 17.72 64 *e*P P 17 22 33.2 +0.8
ZEI pmax pmax
comp=Z,9.0nm,0.6s
DOU Dourbes 18.25 322 P P 17 22 39.8 +1.9
VSR Storozhevoye 18.78 35 *i* P Pn 17 22 45.7 +1.5
VSR pmax pmax
comp=Z,5.0nm,0.8s
BSD Bornholm Skovb 18.87 347 *i* P P 17 22 44.3 -0.4
BSD pmax pmax
comp=Z,10.0nm,0.6s
BSD Bornholm Skovb 18.87 347 *i* P P 17 22 44.3 -0.4
comp=Z,10.0nm,0.6s
LPSR Galich'ya Gora 19.65 32 *e*P P 17 22 52.3 -1.0
LPSR pmax pmax
comp=Z,10.0nm,0.7s
TAM Tamanrasset 20.07 230 *e*P Pn 17 23 00.5 +0.5
comp=Z,3.8nm,1.1s
TAM Tamanrasset 20.07 230 *e*P Pn 17 23 00.5 +0.4
TAM pmax pmax
comp=Z,4.0nm,1.1s
ESDC Sonseca Array 20.62 286 P P 17 23 04.9 +0.8
comp=Z,4.5nm,0.9s,baz=81,slow=11,SNR=9.0
ESLA Sonseca Array 20.62 286 *e*P Pn 17 23 05.3 -1.1
comp=Z,9.3nm,1.1s
OBN Obninsk 20.73 24 *e*P P 17 23 05.9 +0.9
comp=Z,34nm,0.5s
OBN Obninsk 20.73 24⇑ *e*P Pn 17 23 07.3 0.0
OBN *e* 17 23 25.0
OBN *e*S **S 17 26 46.2 -9.5**
OBN pmax pmax
comp=Z,12nm,1.0s
OBN MLR MLR
comp=Z,39nm,20.0s
PAB San Pablo 20.92 285 *e*P Pn 17 23 09.8 -0.1
comp=Z,33nm,1.8s
PAB San Pablo 20.92 285 *e*P Pn 17 23 09.8 -0.1
PAB pmax pmax
comp=Z,33nm,1.8s
MOS Moscow 21.58 24 *e*P P 17 23 16.1 +1.9
MOS *e* 17 23 22.0
MOS *e* 17 23 38.3
MOS *e*S **S 17 27 16.2 +3.5**
MOS pmax pmax
comp=Z,39nm,0.6s
VSU Vasula 21.79 7 *i* P P 17 23 15.6 -0.7
VSU pmax pmax
comp=Z,26nm,1.0s
MDT Midelt 22.27 267 P P 17 23 22.5 +0.6
comp=Z,1.4nm,0.8s,baz=101,slow=11,SNR=2.0
HFS Hagfors 23.87 350 P P 17 23 37.1 -0.7
comp=Z,12nm,0.5s,baz=156,slow=11,SNR=69
RAYN Ar Rayn 24.14 117 *e*P P 17 23 41.2 +0.4
comp=Z,18nm,1.9s
KONO Kongsberg 24.15 344 *e*P P 17 23 40.1 -0.3
comp=Z,14nm,1.3s
KONO Kongsberg 24.15 344 *e*P P 17 23 40.2 -0.3
KONO pmax pmax
comp=Z,14nm,1.3s
FIA0 FINESS Array S 24.69 5 *e*P P 17 23 44.9 -0.5
FIA0 *e*PcP **PcP 17 27 22.1 0.0**
FIA0 FINESS Array S 24.69 5 *e*P P 17 23 44.9 -0.5
FIA0 *e* 17 27 22.1
FINES FINESS Array B 24.69 5 P P 17 23 44.9 -0.5
comp=Z,4.8nm,0.8s,baz=190,slow=9.1,SNR=11
FINES PcP **PcP 17 27 22.1 0.0**
comp=Z,1.0nm,0.3s,baz=172,slow=1.4,SNR=8.4
NC602 NORSAR Array S 24.78 348 *e*P P 17 23 46.3 +0.1
NAO01 NORSAR Array S 25.00 347 *e*P P 17 23 48.0 -0.2
NB201 NORSAR Array S 25.12 348 *e*P P 17 23 49.3 0.0
NB2 NORSAR Subarra 25.12 347 P P 17 23 48.8 -0.6
comp=Z,2.3nm,0.5s,baz=156,slow=9.3
NB2 NORSAR Subarra 25.12 347 P P 17 23 48.8 -0.6
NB2 pmax pmax
comp=Z,1.0nm,0.4s
NB2 NORSAR Subarra 25.12 347 P P 17 23 48.8 -0.6
baz=156,slow=9.3
NB200 NORSAR Array S 25.12 347 *e*P P 17 23 49.1 -0.3
NOA NORSAR Array B 25.12 347 P P 17 23 49.1 -0.3
comp=Z,3.3nm,0.6s,baz=156,slow=9.0,SNR=34
NOA LR LR 17 36 05.6
comp=Z,32nm,18.3s,baz=170,slow=42
EKA Eskdalemuir Ar 25.19 325 P P 17 23 49.9 -0.1
comp=Z,5.5nm,0.8s,baz=123,slow=8.9,SNR=19
NBO00 NORSAR Array S 25.19 347 *e*P P 17 23 50.3 +0.3
ESK Eskdalemuir 25.20 325 *e*P P 17 23 52.4 +2.3
comp=Z,49nm,1.9s
ESK Eskdalemuir 25.20 325 *e*P P 17 23 52.4 +2.3
ESK pmax pmax
comp=Z,49nm,1.9s
NC303 NORSAR Array S 25.27 348 *e*P P 17 23 50.4 -0.2
NC303 *e*P **pP 17 23 51.6 -3.8**
NC204 NORSAR Array S 25.43 347 *e*P P 17 23 52.4 +0.3
KLMR Klimovskoe 26.39 19 *e*P P 17 24 00.7 -0.1
KLMR pmax pmax
comp=Z,14nm,1.3s
KLMR Klimovskoe 26.39 19 *e*P P 17 24 00.8 -0.1
KLMR AMP 17 24 07.7
comp=Z,14nm,1.2s
NSS Namsos 28.32 351 *e*P P 17 24 19.1 +1.1
GEYT Alibeck 28.52 77 P P 17 24 19.7 -0.4
comp=Z,0.7nm,0.4s,baz=270,slow=7.2,SNR=3.8
PRGR Permogore 28.80 23 *e*P P 17 24 18.7 -3.7
PRGR pmax pmax
comp=Z,5.0nm,0.5s
TOA1 Torodi Ar. Sit 29.89 223 *e*P P 17 24 32.6 +0.2
TORD Torodi Ar. Bea 29.89 223 P P 17 24 32.6 +0.2
comp=Z,1.3nm,0.7s,baz=19,slow=10,SNR=6.8
KONS Konsvik 30.09 353 *e*P P 17 24 33.8 +0.1
SALU Saltoluokta 30.59 357 *e*P P 17 24 38.6 +0.4
ARU Arti 31.21 40 *d* *i*P P 17 24 44.4 +0.7
ARU 17 25 42.4
ARU S **S 17 29 53.3 +4.2**
ARU SS **SnSn 17 31 31.6 +0.1**
ARU pmax pmax
comp=Z,4.0nm,1.0s
STEI Steigen 31.32 355 *e*P P 17 24 44.2 -0.4
HEF Hetta 31.57 1 *e*P P 17 24 46.5 -0.2
KTK1 Kautokeino 32.17 1 *e*P P 17 24 51.7 -0.3
ARA0 ARCESS Array S 32.74 2 *e*P P 17 24 56.9 -0.2
ARA0 *e*PcP **PcP 17 27 41.9 -0.1**
ARCES ARCESS Array B 32.74 2 P P 17 24 56.9 -0.2
comp=Z,6.3nm,0.4s,baz=189,slow=9.8,SNR=41
ARCES PcP **PcP 17 27 41.9 -0.1**
comp=Z,1.6nm,0.8s,baz=339,slow=3.0,SNR=4.5
ARE0 ARCESS Array S 32.74 2 *e*P P 17 24 57.3 +0.2
BRVK Borovoye 36.94 48 *i* P P 17 25 33.5 +0.1
BRVK pmax pmax
comp=Z,2.0nm,0.9s
KK31 Karatay Array 37.18 65 *e*P P 17 25 35.7 +0.1
comp=Z,5.7nm,1.5s
KK31 Karatay Array 37.18 65 *e*P P 17 25 35.7 +0.1
KK31 pmax pmax
comp=Z,6.0nm,1.5s
KKAR Karatay Array 37.18 65 *e*P P 17 25 36.0 +0.4
comp=Z,5.7nm,1.5s
KKAR Karatay Array 37.18 65 *e*P P 17 25 36.0 +0.4
KKAR pmax pmax
comp=Z,6.0nm,1.5s
AAK Ala-Archa 40.14 65 *i* P P 17 25 59.4 -1.3
AAK pmax pmax
comp=Z,1.0nm,0.9s
KSH Kashi 41.88 69 P P 17 26 14.0 -1.1
KSH sP sP 17 26 20.9 -1.4
KSH PP **PnPn 17 27 54.4 -2.5**
KSH S **S 17 32 28.3 -4.3**
KSH SS **SS 17 35 29.3 -10**
KSH pmax pmax
comp=Z,14nm,0.6s
KSH pmax pmax
comp=Z,340nm,5.4s
KSH LR LR
comp=N,210nm,7.9s
KSH LR LR
comp=E,280nm,7.3s
KSH LR LR
comp=Z,160nm,22.7s
KURK Kurchatov 42.04 52 *e*P P 17 26 15.1 -1.0
comp=Z,2.9nm,0.8s
KURK Kurchatov 42.04 52 *d* *i*P P 17 26 14.7 -1.3
KURK pmax pmax
comp=Z,2.0nm,0.8s
NVS Novosibirsk 44.64 46 *i* P P 17 26 37.2 +0.3
MAKZ Makanchi 44.70 58 *e*P P 17 26 37.0 -0.6
comp=Z,7.7nm,1.8s
MAKZ Makanchi 44.70 58 *e*P P 17 26 37.0 -0.6
MAKZ pmax pmax
comp=Z,8.0nm,1.8s
MK31 Makanchi Array 44.91 58 *e*P P 17 26 38.0 -1.3
comp=Z,4.8nm,1.4s
MK31 Makanchi Array 44.91 58 *e*P P 17 26 38.0 -1.3
MK31 pmax pmax
comp=Z,5.0nm,1.4s
MK32 Makanchi Array 44.91 58 *e*PcP PcP 17 28 20.5 0.0
MKAR Makanchi Array 44.91 58 P P 17 26 37.6 -1.6
comp=Z,1.7nm,0.6s,baz=273,slow=7.6,SNR=18
MKAR PcP **PcP 17 28 20.5 0.0**
comp=Z,0.7nm,0.5s,baz=284,slow=3.2,SNR=2.4
MKAR Makanchi Array 44.91 58 *i* P P 17 26 38.2 -1.1
MKAR pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 45.62 47 P P 17 26 43.8 -0.9
comp=Z,3.4nm,0.4s,baz=273,slow=9.2,SNR=14
DGZ Jazzator, Alta 47.78 53 *i* P P 17 27 02.4 +0.5
DGZ pmax pmax
comp=Z,1.0nm,0.8s
WMQ Urumqi 49.29 60 *e*P P 17 27 18.9 +5.4
WMQ sP sP 17 27 24.8 +4.5
WMQ pmax pmax
comp=Z,13nm,0.8s
WMQ pmax pmax
comp=Z,49nm,3.6s
PYUN Piuthan 51.34 81 *e*P P 17 27 29.3 -0.1
comp=Z,24nm,0.7s
DANN Dangsing 51.84 81 *e*P P 17 27 32.9 -0.4
comp=Z,39nm,0.6s
GKN Gorkha 52.69 81 *e*P P 17 27 39.1 -0.3
DMN Daman 53.24 81 *e*P P 17 27 43.3 -0.3
comp=Z,10nm,0.4s
KKN Kakani 53.29 80 *e*P P 17 27 43.7 -0.2
comp=Z,12nm,0.5s
PKIN Phulchoki 53.48 81 *e*P P 17 27 44.7 -0.7
comp=Z,6.9nm,0.7s
PKI Pulchoki 53.49 81 *e*P P 17 27 44.7 -0.9
comp=Z,4.3nm,0.4s
JIRN Jiri 54.07 80 *e*P P 17 27 49.5 -0.3
comp=Z,17nm,0.6s
GTA Gaotai 59.32 62 *e*P P 17 28 26.3 -0.4
GTA pP pP 17 28 30.4 -1.3
GTA sP sP 17 28 33.4 -0.2
GTA pmax pmax
comp=Z,2.0nm,1.1s
GTA pmax pmax
comp=Z,69nm,6.2s
GTA LR LR
comp=N,62nm,16.2s
GTA LR LR
comp=E,68nm,15.6s
GTA LR LR
comp=Z,76nm,15.2s
SONA0 Songino Array 60.30 51 *e*P P 17 28 32.7 -0.6
SONM Songino Array 60.30 51 P P 17 28 32.7 -0.6
comp=Z,2.7nm,1.1s,baz=281,slow=9.3,SNR=5.7
ULN Ulaanbaatar 60.69 50 *i* P P 17 28 35.0 -1.0
ULN pmax pmax
comp=Z,2.0nm,0.8s
RES Resolute Bay 61.34 344 *e*P P 17 28 40.6 +0.9
comp=Z,23nm,1.8s
RES Resolute Bay 61.34 344 *e*P P 17 28 40.6 +0.9
RES pmax pmax
comp=Z,23nm,1.8s
LZH Lanzhou 63.65 63 *e*P P 17 28 57.6 +1.6
LZH pP pP 17 28 59.8 -1.3
LZH sP sP 17 29 01.0 -2.0
LZH *e*PP **PP 17 31 19.3 +3.5**

LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,63nm,7.5s						
LZH				LR	LR		
	comp=N,160nm,16.2s						
LZH				LR	LR		
	comp=E,160nm,16.5s						
LZH				LR	LR		
	comp=Z,200nm,17.6s						
BOSA	**Boshof**	**65.24**	**177**	P	**P**	**17 29 06.4**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=356,slow=7.9,SNR=8.6						
BOSA	**Boshof**	**65.24**	**177**	*e*P	**P**	**17 29 07.1**	**+0.9**
	comp=Z,19nm,1.6s						
BOSA	**Boshof**	**65.24**	**177**	*e*P	**P**	**17 29 07.1**	**+0.9**
BOSA				pmax	pmax		
	comp=Z,19nm,1.6s						
YAK	**Yakutsk**	**65.60**	**30**	*e*P	**P**	**17 29 07.0**	**-1.1**
CD2	**Chengdu**	**66.07**	**68**	P	**P**	**17 29 12.8**	**+1.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC	**Hu-ho-hao-te**	**66.72**	**56**	*e*P	P	17 29 20.6	+4.8
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,86nm,9.6s						
KMI	**Kunming**	**68.24**	**74**	P	**P**	**17 29 29.6**	**+3.7**
KMI				pmax	pmax		
	comp=Z,16nm,1.0s						
CHTO	**Chiang Mai**	**68.62**	**82**	*e*P	**P**	**17 29 27.3**	**-0.7**
	comp=Z,12nm,1.6s						
CHTO	**Chiang Mai**	**68.62**	**82**	*e*P	**P**	**17 29 27.3**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,12nm,1.6s						
CM31	**Chiang Mai Arr**	**68.82**	**82**	*e*P	**P**	**17 29 28.8**	**-0.5**
	comp=Z,3.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**68.82**	**82**	P	**P**	**17 29 28.6**	**-0.6**
	comp=Z,2.8nm,0.7s,baz=303,slow=7.3,SNR=25						
D53A	**Lac Vacive, Po**	**69.93**	**314**	*e*P	**P**	**17 29 36.4**	**+0.7**
	comp=Z,6.9nm,1.3s						
PLVO	**Plevna**	**70.67**	**312**	*e*P	**P**	**17 29 42.0**	**+1.7**
	comp=Z,9.7nm,1.3s						
SLVN	**Son La**	**71.17**	**77**	*e*P	**P**	**17 29 43.4**	**-0.3**
	comp=Z,3.9nm,0.9s						
BILL	**Bilibino**	**71.97**	**13⇑**	*e*P	**P**	**17 29 46.8**	**-0.9**
BILL				*e*		17 30 00.9	
BILL				*e*S	**SKiKP**	**17 39 30.5**	**+6.3**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,32nm,18.0s						
YKA	**Yellowknife Ar**	**75.01**	**341**	P	**P**	**17 30 06.0**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=34,slow=5.6,SNR=4.5						
YKB5	**Yellowknife Ar**	**75.01**	**341**	*e*P	**P**	**17 30 06.0**	**+0.4**
NJ2	**Nanjing**	**76.37**	**60**	*e*P	**P**	**17 30 16.3**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
USRK	**Ussuriysk Ar.**	**77.33**	**44**	P	**P**	**17 30 18.7**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=257,slow=6.5,SNR=6.8						
ILAR	**Eielson Array**	**78.29**	**355**	P	**P**	**17 30 24.6**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=352,slow=3.1,SNR=8.9						
KSRS	**Korea Array**	**79.16**	**51**	P	**P**	**17 30 29.2**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=310,slow=4.7,SNR=23						
DHY	**Denali Highway**	**80.01**	**355**	*e*P	**P**	**17 30 34.6**	**+0.8**
	comp=Z,4.9nm,0.7s						
YSS	**Yuzh-Sakhalins**	**81.05**	**37**	*e*P	**P**	**17 30 39.6**	**+0.1**
PEA1	**Petropavlovsk-**	**82.43**	**25**	*e*P	**P**	**17 30 45.1**	**-1.6**
PETK	**Petropavlovsk-**	**82.43**	**25**	P	**P**	**17 30 45.1**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=351,slow=4.7,SNR=3.1						
BDFB	**Brasília**	**84.12**	**246**	LR	LR	18 08 13.0	
	comp=Z,31nm,18.5s,baz=263,slow=36						
MAJO	**Matsushiro**	**85.96**	**46**	*e*P	**P**	**17 31 05.0**	**0.0**
MAJO	**Matsushiro**	**85.96**	**46**	*e*P	**P**	**17 31 05.0**	**0.0**
MAT	**Matsushiro**	**85.96**	**46**	P	**P**	**17 31 04.7**	**-0.3**
MJAR	**Matsushiro Arr**	**85.97**	**46**	P	**P**	**17 31 05.0**	**0.0**
	comp=Z,4.0nm,0.7s,baz=322,slow=4.1,SNR=13						
PDAR	**Pinedale Array**	**89.31**	**327**	P	**P**	**17 31 21.5**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=10,slow=5.6,SNR=2.4						
PDAR				LR	LR	18 13 33.3	
	comp=Z,21nm,18.5s,baz=258,slow=37						
WR1	**Warramunga Arr**	**119.22**	**94**	*e*PKPdf	**PKPdf**	**17 37 13.5**	**-0.6**
WRA	**Warramunga Arr**	**119.22**	**94**	PKP	**PKPdf**	**17 37 13.5**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=320,slow=1.0,SNR=9.4						
ASAR	**Alice Springs**	**120.77**	**98**	PKP	**PKPdf**	**17 37 16.6**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=309,slow=1.7,SNR=41						

*ISCJB **18** 17:19:20.7±0.3, 24°.54N±0°.02×122°.39E±0°.02, h78km±3km, Error ellipse: s-maj=3.2km s-min=2.4km az=161.7*
*JMA **18** 17:19:20.3±0.1, 24°.48N×122°.38E, h83km±2km, M2.6*
*TAP **18** 17:19:20.9, 24°.55N×122°.34E, h85km, ML3.3, C*
ISC 18 17:19:20.6±1.3, 24°.54N±0°.03×122°.39E±0°.02, h81km±6km, n100, σ0.86/179, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.24**	**272**	P	**Pn**	**17 19 33.1**	**+0.5**
	baz=264						
EOS1				S	**Sn**	**17 19 42.4**	**+0.9**
	baz=264						
TWC	**Suao**	**0.50**	**278**	P	**Pn**	**17 19 34.4**	**0.0**
	baz=281						
TWC				*e*S	**Sn**	**17 19 43.6**	**-1.0**
	baz=281						
JYNG	**Yonagunijimaku**	**0.51**	**100**	P	**Pn**	**17 19 34.6**	**0.0**
JYNG				*e*S	**Sn**	**17 19 45.3**	**+0.4**
EGS		**0.52**	**306**	*e*P	**Pn**	**17 19 34.9**	**+0.3**
	baz=301						
EGS				S	**Sn**	**17 19 44.8**	**-0.1**
	baz=301						
YOJ	**Yonaguni jima**	**0.57**	**98**	P	**Pn**	**17 19 35.1**	**0.0**
	baz=97						
YOJ				S	**Sn**	**17 19 45.5**	**-0.3**
	baz=97						
YOJ	**Yonaguni jima**	**0.57**	**98**	P	**Pn**	**17 19 35.2**	**+0.1**
YOJ				*e*S	**Sn**	**17 19 45.9**	**+0.1**
TWB1	**Santiao Chiao**	**0.59**	**322**	*e*S	**Sn**	**17 19 45.9**	**-0.3**
	baz=321						
NANB	**Nanao**	**0.59**	**259**	P	**Pn**	**17 19 35.6**	**+0.3**
	baz=252						
NANB				*e*S	**Sn**	**17 19 45.6**	**-0.6**
	baz=252						
NTC	**Toucheng**	**0.60**	**302**	*e*P	**Pn**	**17 19 35.8**	**+0.5**
	baz=306						
NTC				S	**Sn**	**17 19 45.9**	**-0.4**
	baz=306						
ENA	**Nanau**	**0.60**	**259**	P	**Pn**	**17 19 35.6**	**+0.2**
	baz=252						
ENA				*e*S	**Sn**	**17 19 46.6**	**+0.3**
	baz=252						
TIPB	**Shuangxi**	**0.67**	**310**	P	**Pn**	**17 19 36.3**	**+0.2**
	baz=312						
TIPB				*e*S	**Sn**	**17 19 47.2**	**-0.4**
	baz=312						
TWE	**Neicheng**	**0.68**	**285**	P	**Pn**	**17 19 36.7**	**+0.6**
	baz=286						
TWE				*e*S	**Sn**	**17 19 47.1**	**-0.6**
	baz=286						
ENTT	**Nioudou**	**0.76**	**278**	P	**Pn**	**17 19 37.3**	**+0.3**
	baz=279						
ENTT				*e*S	**Sn**	**17 19 48.9**	**-0.3**
	baz=279						
NWF	**Wu-fen Shan**	**0.77**	**314**	P	**Pn**	**17 19 37.6**	**+0.4**
	baz=309						
NWF				S	**Sn**	**17 19 49.2**	**-0.2**
	baz=309						
WFSB	**Wu-fen Shan**	**0.77**	**314**	P	**Pn**	**17 19 37.2**	**+0.2**
	baz=309						
WFSB				*e*S	**Sn**	**17 19 49.2**	**-0.1**
	baz=309						
NDT	**Datong Townshi**	**0.80**	**275**	P	**Pn**	**17 19 37.7**	**+0.3**
	baz=276						
NDT				*e*S	**Sn**	**17 19 50.0**	**0.0**
	baz=276						
NACB	**Ninganchiao**	**0.81**	**243**	*e*P	**Pn**	**17 19 37.3**	**-0.3**
	baz=241						
NACB				S	**Sn**	**17 19 49.5**	**-0.7**
	baz=241						
TWD	**Chiawan**	**0.86**	**238**	P	**Pn**	**17 19 38.0**	**-0.1**
	baz=229						
TWD				*e*S	**Sn**	**17 19 50.9**	**-0.2**
	baz=229						
ETLH	**Xiulin Townshi**	**0.89**	**248**	P	**Pn**	**17 19 38.6**	**0.0**
	baz=246						
ETLH				S	**Sn**	**17 19 51.1**	**-0.8**
	baz=246						
NHDH	**Xindian Distri**	**0.89**	**298**	P	**Pn**	**17 19 38.8**	**+0.3**
	baz=299						
NHDH				S	**Sn**	**17 19 51.3**	**-0.5**
	baz=299						
HWA	**Hwalien**	**0.91**	**232**	S	**Sn**	**17 19 51.8**	**-0.3**
	baz=222						
NNSB	**Datong**	**0.92**	**263**	P	**Pn**	**17 19 39.5**	**+0.6**
	baz=256						
NNSB				*e*S	**Sn**	**17 19 52.6**	**0.0**
	baz=256						
NNS	**Nan Shan**	**0.93**	**264**	P	**Pn**	**17 19 39.6**	**+0.5**
	baz=256						
NNS				*e*S	**Sn**	**17 19 52.6**	**-0.2**
	baz=256						
YHNB	**Yeheng**	**0.93**	**278**	P	**Pn**	**17 19 39.7**	**+0.7**
	baz=278						
YHNB				*e*S	**Sn**	**17 19 52.9**	**+0.1**
	baz=278						
NSK	**Sanguang**	**0.95**	**278**	P	**Pn**	**17 19 39.8**	**+0.6**
	baz=278						
NSK				*e*S	**Sn**	**17 19 53.0**	**0.0**
	baz=278						
ENLB	**Shoufeng**	**0.96**	**229**	*e*S	**Sn**	**17 19 52.5**	**-0.7**
	baz=221						
YM01	**YM01**	**0.96**	**309**	P	**Pn**	**17 19 39.5**	**+0.2**
	baz=303						
YM01				*e*S	**Sn**	**17 19 53.4**	**+0.2**
	baz=303						
YM10	**YM10**	**0.97**	**309**	P	**Pn**	**17 19 39.6**	**+0.2**
	baz=304						
YM10				*e*S	**Sn**	**17 19 52.8**	**-0.7**
	baz=304						
YM08	**YM08**	**0.97**	**312**	P	**Pn**	**17 19 39.3**	**-0.1**
	baz=306						
YM08				*e*S	**Sn**	**17 19 52.8**	**-0.7**
	baz=306						
YM05	**YM05**	**0.97**	**310**	P	**Pn**	**17 19 39.6**	**+0.2**
	baz=304						
YM05				*e*S	**Sn**	**17 19 53.2**	**-0.4**
	baz=304						
YM04	**YM04**	**0.99**	**308**	*e*P	**Pn**	**17 19 39.6**	**0.0**
	baz=302						
YM04				S	**Sn**	**17 19 53.6**	**-0.2**
	baz=302						
YM03	**YM03**	**1.00**	**310**	*e*P	**Pn**	**17 19 39.4**	**-0.4**
	baz=304						
YM03				*e*S	**Sn**	**17 19 53.1**	**-1.0**
	baz=304						
ANP	**Anpu**	**1.02**	**309**	*e*P	**Pn**	**17 19 40.2**	**+0.1**
	baz=303						
TWY	**Chenhua**	**1.02**	**316**	*e*P	**Pn**	**17 19 40.6**	**+0.6**
	baz=310						
TWY				*e*S	**Sn**	**17 19 54.8**	**+0.3**
	baz=310						
TWS1	**Kuangyinshan**	**1.04**	**302**	P	**Pn**	**17 19 40.7**	**+0.4**
	baz=308						
TWS1				*e*S	**Sn**	**17 19 55.3**	**+0.3**
	baz=308						
WLTB	**Daxi**	**1.08**	**287**	*e*S	**Sn**	**17 19 56.5**	**+0.7**
	baz=279						
WHF	**Hehuan Shan**	**1.10**	**249**	P	**Pn**	**17 19 41.8**	**+0.5**
	baz=247						
WHF				*e*S	**Sn**	**17 19 56.4**	**-0.4**
	baz=247						
ESL	**Shilin**	**1.13**	**231**	P	**Pn**	**17 19 41.4**	**0.0**
	baz=237						
ESL				*e*S	**Sn**	**17 19 55.8**	**-1.1**
	baz=237						
TWT	**Tachien**	**1.14**	**256**	*e*P	**Pn**	**17 19 42.5**	**+0.8**
	baz=254						
TWT				*e*S	**Sn**	**17 19 57.6**	**+0.3**
	baz=254						
TDCB	**Techi**	**1.16**	**256**	P	**Pn**	**17 19 42.7**	**+0.9**
	baz=254						
TDCB				*e*S	**Sn**	**17 19 58.0**	**+0.3**
	baz=254						
NCU	**National Centr**	**1.17**	**292**	*e*P	**Pn**	**17 19 42.1**	**+0.3**
	baz=292						
NCU				*e*S	**Sn**	**17 19 58.4**	**+0.6**
	baz=292						
NCUH	**Zhongli**	**1.18**	**291**	P	**Pn**	**17 19 42.7**	**+0.8**
	baz=283						
NCUH				*e*S	**Sn**	**17 19 58.4**	**+0.6**
	baz=283						
CHGB	**Renai**	**1.21**	**247**	P	**Pn**	**17 19 43.2**	**+0.7**
	baz=239						
CHGB				*e*S	**Sn**	**17 19 59.1**	**+0.2**
	baz=239						
EGFH	**Guangfu**	**1.23**	**226**	*e*P	**Pn**	**17 19 42.3**	**-0.3**
	baz=217						
EGFH				*e*S	**Sn**	**17 19 57.6**	**-1.5**
	baz=217						
IRIF	**Iriomote-Funau**	**1.24**	**99**	P	**Pn**	**17 19 42.5**	**-0.1**
IRIF				S	**Sn**	**17 19 58.8**	**-0.4**
OWD	**Renai**	**1.25**	**242**	P	**Pn**	**17 19 43.1**	**+0.2**
	baz=235						
OWD				*e*S	**Sn**	**17 19 58.8**	**-0.9**
	baz=235						
LIOB	**Emei**	**1.25**	**275**	P	**Pn**	**17 19 43.6**	**+0.8**
	baz=274						
LIOB				*e*S	**Sn**	**17 20 00.2**	**+0.6**
	baz=274						
NSTT	**Nanjuang**	**1.27**	**274**	P	**Pn**	**17 19 43.8**	**+0.8**
	baz=274						
NSTT				*e*S	**Sn**	**17 20 00.4**	**+0.5**
	baz=274						
WHP	**Taichung City**	**1.34**	**259**	*e*P	**Pn**	**17 19 45.5**	**+1.4**
	baz=256						
WHP				*e*S	**Sn**	**17 20 02.5**	**+0.8**
	baz=256						
HGSD	**Ruisui**	**1.37**	**220**	*e*P	**Pn**	**17 19 44.4**	**+0.1**
	baz=218						
HGSD				S	**Sn**	**17 20 02.1**	**0.0**
	baz=218						
VWDT	**VWDT**	**1.38**	**236**	P	**Pn**	**17 19 45.2**	**+0.7**
	baz=233						
VWDT				S	**Sn**	**17 20 02.4**	**-0.1**
	baz=233						
EHY	**Hungye**	**1.42**	**224**	*e*P	**Pn**	**17 19 44.4**	**-0.6**
	baz=229						
DPDB	**Guoxing**	**1.43**	**250**	*e*P	**Pn**	**17 19 45.8**	**+0.6**
	baz=254						
DPDB				*e*S	**Sn**	**17 20 04.1**	**+0.5**
	baz=254						
NMLH	**Miaoli**	**1.46**	**270**	P	**Pn**	**17 19 46.4**	**+0.9**
	baz=269						
NMLH				*e*S	**Sn**	**17 20 04.9**	**+0.8**
	baz=269						
TWQ1	**Liyutan**	**1.49**	**263**	*e*P	**Pn**	**17 19 47.0**	**+1.1**
	baz=261						
TWQ1				*e*S	**Sn**	**17 20 05.8**	**+0.9**
	baz=261						
JKRS	**Kuro-shima**	**1.51**	**101**	P	**Pn**	**17 19 46.5**	**+0.4**
JKRS				S	**Sn**	**17 20 05.8**	**+0.5**
SMLT	**Sun Moon Lake**	**1.51**	**245**	*e*P	**Pn**	**17 19 47.7**	**+1.5**
	baz=236						
SMLT				*e*S	**Sn**	**17 20 06.0**	**+0.4**
	baz=236						
SSLB	**Suanglung**	**1.51**	**241**	*e*P	**Pn**	**17 19 47.9**	**+1.8**
	baz=235						
SSLB				*e*S	**Sn**	**17 20 06.1**	**+0.7**
	baz=235						
YULB	**Yu-li**	**1.52**	**221**	*e*P	**Pn**	**17 19 45.6**	**-0.6**
	baz=219						
YULB				*e*S	**Sn**	**17 20 02.6**	**-3.0**
	baz=219						
TYC	**Yuchr**	**1.54**	**246**	*e*P	**Pn**	**17 19 48.2**	**+1.8**
	baz=238						
TYC				*e*S	**Sn**	**17 20 06.5**	**+0.5**
	baz=238						
PTSB	**Yuanli**	**1.54**	**267**	*e*P	**Pn**	**17 19 47.1**	**+0.6**
	baz=266						
PTSB				*e*S	**Sn**	**17 20 05.8**	**-0.3**
	baz=266						
TWF1	**Yuli**	**1.55**	**220**	*e*P	**Pn**	**17 19 47.5**	**+0.8**
	baz=225						
TWF1				*e*S	**Sn**	**17 20 06.8**	**+0.5**
	baz=225						
JIJ	**Ishigaki jima**	**1.61**	**96**	P	**Pn**	**17 19 47.4**	**0.0**
JIJ				S	**Sn**	**17 20 06.8**	**-0.8**
WHYT	**Xinyi Township**	**1.64**	**239**	*e*P	**Pn**	**17 19 49.5**	**+1.7**
	baz=232						
WHYT				*e*S	**Sn**	**17 20 09.1**	**+0.7**
	baz=232						
WJS	**Zhushan**	**1.68**	**245**	*e*P	**Pn**	**17 19 49.9**	**+1.6**
	baz=255						
WJS				*e*S	**Sn**	**17 20 11.1**	**+1.8**
	baz=255						
YUS	**Yu-Shan**	**1.68**	**232**	*e*P	**Pn**	**17 19 49.2**	**+0.4**
	baz=223						
YUS				*e*S	**Sn**	**17 20 09.4**	**-0.7**
	baz=223						
WNT	**Mingjian**	**1.69**	**247**	*e*P	**Pn**	**17 19 49.7**	**+1.2**
	baz=245						
WNT				*e*S	**Sn**	**17 20 11.1**	**+1.5**
	baz=245						
JISG	**Ishigakijimahi**	**1.75**	**88**	P	**Pn**	**17 19 49.3**	**+0.1**
JISG				*e*S	**Sn**	**17 20 11.8**	**+0.9**
CHN5	**Tsauling**	**1.82**	**239**	*e*P	**Pn**	**17 19 51.4**	**+1.0**
	baz=229						
CHN5				*e*S	**Sn**	**17 20 13.5**	**+0.7**
	baz=229						
ELDTW	**Lidau**	**1.84**	**223**	*e*P	**Pn**	**17 19 51.5**	**+0.9**
	baz=217						
ELDTW				*e*S	**Sn**	**17 20 11.9**	**-1.3**
	baz=217						
WGK	**Gukeng**	**1.87**	**243**	*e*P	**Pn**	**17 19 52.2**	**+1.4**
	baz=253						
WGK				*e*S	**Sn**	**17 20 15.7**	**+1.8**
	baz=253						
WDLH	**Douliu**	**1.89**	**244**	*e*P	**Pn**	**17 19 51.8**	**+0.7**
	baz=253						
WDLH				*e*S	**Sn**	**17 20 16.3**	**+2.0**
	baz=253						
RLNB	**Erlin**	**1.96**	**251**	*e*S	**Sn**	**17 20 16.2**	**+0.2**
	baz=259						
CHN4	**Tsaushan**	**2.03**	**235**	*e*P	**Pn**	**17 19 54.5**	**+1.6**
	baz=232						
CHN4				*e*S	**Sn**	**17 20 17.7**	**+0.2**
	baz=232						
STYT	**Tauyuan**	**2.03**	**228**	*e*P	**Pn**	**17 19 53.4**	**+0.4**
	baz=225						
STYT				*e*S	**Sn**	**17 20 18.1**	**+0.5**
	baz=225						
TPUB	**Ta-pu**	**2.03**	**233**	*e*P	**Pn**	**17 19 53.4**	**+0.5**
	baz=231						
TPUB				*e*S	**Sn**	**17 20 18.4**	**+0.8**
	baz=231						
WTP	**Ta-pu**	**2.07**	**232**	*e*P	**Pn**	**17 19 54.6**	**+1.0**
	baz=230						
WTP				*e*S	**Sn**	**17 20 19.8**	**+1.0**
	baz=230						
CHY	**Chiayi**	**2.08**	**240**	*e*S	**Sn**	**17 20 18.6**	**-0.1**
	baz=249						
TWGBT	**Beinan**	**2.09**	**215**	*e*S	**Sn**	**17 20 16.8**	**-2.4**
	baz=213						
TWG	**Pinlang**	**2.10**	**215**	*e*S	**Sn**	**17 20 16.9**	**-2.3**
	baz=213						
JTJ	**Tarama**	**2.11**	**87**	P	**Pn**	**17 19 54.7**	**+0.7**
TWK	**Hsinying**	**2.15**	**234**	*e*P	**Pn**	**17 19 55.1**	**+0.4**
	baz=232						
TWK				*e*S	**Sn**	**17 20 22.8**	**+2.2**
	baz=232						
CHN1	**Nanshi**	**2.17**	**232**	*e*P	**Pn**	**17 19 56.0**	**+1.1**
	baz=230						
CHN1				*e*S	**Sn**	**17 20 21.3**	**+0.2**
	baz=230						
SNST	**Tainan City**	**2.17**	**233**	*e*P	**Pn**	**17 19 55.8**	**+0.9**
	baz=231						
SNST				*e*S	**Sn**	**17 20 20.5**	**-0.5**
	baz=231						
WSF	**Szhu**	**2.17**	**246**	*e*S	**Sn**	**17 20 20.8**	**-0.2**
	baz=252						
SGST	**Jiashian**	**2.20**	**229**	*e*S	**Sn**	**17 20 21.9**	**+0.2**
	baz=227						
SLGT	**Liugui**	**2.22**	**226**	*e*P	**Pn**	**17 19 56.6**	**+1.1**
	baz=224						
SLGT				*e*S	**Sn**	**17 20 22.5**	**+0.4**
	baz=224						
SSD	**Sandimen**	**2.41**	**222**	*e*P	**Pn**	**17 19 59.5**	**+1.5**
	baz=220						
SSD				*e*S	**Sn**	**17 20 26.4**	**-0.2**
	baz=220						
MASBT	**Mashibuluo**	**2.51**	**220**	*e*P	**Pn**	**17 19 59.8**	**+0.4**
	baz=218						
MASBT				*e*S	**Sn**	**17 20 29.0**	**-0.1**
	baz=218						
JIRB	**Irabujima**	**2.55**	**83**	S	**Sn**	**17 20 30.7**	**+0.7**
PTTC	**Pingtan**	**2.56**	**292**	*e*P	**Pn**	**17 19 59.3**	**-0.7**
	baz=292						
PTTC				*e*S	**Sn**	**17 20 29.3**	**-1.1**
	baz=292						
EAST	**Anshuo**	**2.57**	**214**	*e*P	**Pn**	**17 20 00.2**	**-0.1**
	baz=207						
SCZT	**Fangliau**	**2.70**	**217**	*e*P	**Pn**	**17 20 02.6**	**+0.6**
	baz=226						
MATB	**Ma-tsu**	**2.73**	**306**	*e*P	**Pn**	**17 20 02.3**	**0.0**
	baz=306						
MATB				*e*S	**Sn**	**17 20 33.3**	**-1.1**
	baz=306						
PNG	**Penghu**	**2.77**	**250**	*e*P	**Pn**	**17 20 01.7**	**-1.1**
	baz=248						
PNG				*e*S	**Sn**	**17 20 32.6**	**-2.7**
	baz=248						
PHUB	**P'eng-hu**	**2.77**	**249**	*e*S	**Sn**	**17 20 32.9**	**-2.5**
	baz=247						
PTMZ	**Houxiangcun**	**3.01**	**280**	*e*P	**Pn**	**17 20 05.6**	**-0.5**
	baz=280						
VCHM	**Qimei**	**3.02**	**245**	*e*S	**Sn**	**17 20 39.5**	**-1.9**
	baz=242						
KNMB	**Chin-men Tao**	**3.65**	**270**	*e*P	**Pn**	**17 20 14.4**	**-0.4**
	baz=267						
AXDP	**Jialang**	**4.04**	**276**	*e*P	**Pn**	**17 20 19.8**	**-0.2**
	baz=274						

*IDC **18** 17:21:53.9±1.6, 25°.02N×109°.26W, h0km, mb1 3.8/3, mb1mx3.5/34, mbtmp3.3/3, ML3.9/2, Error ellipse: s-maj=34.9km s-min=11.3km az=134.0*
*MEX **18** 17:21:55.7±0.3, 25°.18N×109°.76W, h15km, MD3.9*
ISC 18 17:21:53.8±0.9, 25°.13N±0°.08×109°.62W±0°.10, h17km, n6, σ2.95/9, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.20**	**212**	Pg	**Pg**	**17 22 19.2**	**+2.2**
	55nm,0.3s,baz=50,slow=0.8,SNR=22						
LPIG				Lg	Lg	17 22 36.0	
	85nm,0.3s,baz=150,slow=20,SNR=18						
LPIG	**La Paz**	**1.20**	**212**	*e*P	**Pn**	**17 22 14.7**	**-1.1**
LPIG				*i*S	**Sb**	**17 22 28.1**	**-3.1**
GUYB	**Guaymas**	**2.98**	**338**	*e*P	**Pn**	**17 22 38.0**	**-2.2**
TXAR	**Lajitas Array**	**6.75**	**50**	Pn	**Pn**	**17 23 33.1**	**+0.8**
	0.3nm,0.3s,baz=225,slow=13,SNR=19						
TXAR				Pg	**Pb**	**17 23 48.4**	**-2.4**
	0.3nm,0.3s,baz=228,slow=14,SNR=5.3						
TXAR				Sn	**Sn**	**17 24 47.7**	**-1.1**
	0.4nm,0.3s,baz=232,slow=28,SNR=5.4						
TXAR				Lg	Lg	17 25 20.1	
	0.2nm,0.3s,baz=228,slow=31,SNR=2.5						
NVAR	**Mina Array Bea**	**15.17**	**333**	Pn	**P**	**17 25 35.9**	**+3.4**
	baz=157,slow=12,SNR=5.0						
PDAR	**Pinedale Array**	**17.59**	**0**	P	**P**	**17 26 02.9**	**+3.5**
	0.1nm,0.3s,baz=160,slow=9.3,SNR=6.4						

*NNC **18** 17:24:35.6±5.9, 36°.68N×70°.51E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=57.6km s-min=41.5km az=136.0*
ISC 18 17:24:38.0±3.2, 36°.5N±0°.2×71°.4E±0°.1, h200km, n5, σ2.88/8, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.76**	**49**	Pn	**Pn**	**17 25 49.0**	**-0.4**
KSH				Sn	**Sn**	**17 26 42.5**	**-3.2**
KSH				smax	smax		
	comp=N,44nm,0.7s						
KSH				smax	smax		
	comp=E,24nm,0.6s						
AAK	**Ala-Archa**	**6.64**	**20**	⇓P	**Pn**	**17 26 16.1**	**+2.5**
	comp=E,3.3nm,0.5s						
AAK				⇑S	**Sn**	**17 27 32.4**	**+2.9**
	comp=E,6.7n

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.17**	**214**	*eP*	Pb	17 29 08.0	-2.4
LPIG				*i* S	Sb	17 29 20.8	-4.7

*ISCJB **18** 18:40:00.1±0.3, 11°.70S±0°.05×77°.32W±0°.06, h58km, mb4.6/60, MS3.8/8, Error ellipse: s-maj=10.2km s-min=4.6km az=148.2*
*IDC **18** 18:40:02.5±0.6, 11°.66S×77°.21W, h61km±5km, mb4.0/15, mb1 4.3/17, mb1mx4.1/32, mbtmp4.4/17, MS3.5/8, Ms1 3.5/8, ms1mx3.2/19, Error ellipse: s-maj=20.1km s-min=10.5km az=53.0*
*NEIC **18** 18:40:02.8±1.0, 11°.67S×77°.28W, h65km±6km, mb4.6/58, Error ellipse: s-maj=21.0km s-min=13.9km az=68.0*
NEIC Felt [IV] at Callao and Lima. Also felt at Barranca, Matucana and San Isidro.

ISC 18 18:40:01.8±0.5, 11°.74S±0°.06×77°.30W±0°.09, h58km, n115, σ1°.42/101, mb4.6/60, MS3.8/8, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.52**	**119**	P	**Pn**	**18 40 15.8**	**+2.0**
	2μm,0.3s,baz=301,slow=9.7,SNR=2381						
NNA				S	**Sn**	**18 40 25.4**	**+2.8**
	baz=90,slow=20						
NNA	**Nana**	**0.52**	**119**	*e*Pn	**Pn**	**18 40 15.7**	**+1.9**
NNA				*e*Sn	**Sn**	**18 40 25.2**	**+2.7**
ATAH	**Atahualpa**	**4.70**	**347**	P	**Pn**	**18 41 13.8**	**+3.3**
	11nm,0.3s,baz=161,slow=5.1,SNR=37						
ATAH				S	**Sn**	**18 42 03.6**	**-0.4**
	16nm,0.3s,baz=83,slow=18,SNR=2.3						
LPAZ	**La Paz**	**9.98**	**118**	P	**Pn**	**18 42 24.5**	**+1.4**
	1.6nm,0.3s,baz=305,slow=10,SNR=27						
LPAZ				LR	LR	18 46 45.6	
	comp=Z,272nm,20.1s,baz=296,slow=40						
LPAZ	**La Paz**	**9.98**	**118**	*e*Pn	**Pn**	**18 42 24.5**	**+1.4**
LPAZ				*e*		18 42 24.7	
MNMC	**Minye Minye**	**10.45**	**136**	*e*Pn	**Pn**	**18 42 29.3**	**+0.1**
PB11	**IPOC Station P**	**10.85**	**138**	*e*Pn	**Pn**	**18 42 32.8**	**-1.8**
GO01	**Chusmiza**	**11.09**	**136**	*e*Pn	**Pn**	**18 42 37.3**	**-0.8**
PB01	**IPOC Station P**	**11.90**	**142**	*e*Pn	Pn	18 42 43.0	-5.9
OTAV	**Otavalo**	**11.95**	**354**	*e*Pn	**Pn**	**18 42 54.1**	**+4.2**
OTAV	**Otavalo**	**11.95**	**354**	*e*P	Pn	18 42 56.9	+7.0
PTLC	**Puerto Leguiza**	**12.09**	**12**	*e*P	Pn	18 42 45.8	-5.6
PB04	**IPOC Station P**	**12.56**	**148**	*e*Pn	Pn	18 42 49.3	-8.6
FLOC	**Florencia**	**13.34**	**7**	*e*P	**Pn**	**18 43 05.9**	**-2.6**
PB10	**IPOC Station P**	**13.36**	**152**	*e*P	Pn	18 42 57.1	-11
LVC	**Limon Verde**	**13.45**	**145**	P	**Pn**	**18 43 13.3**	**+3.0**
	0.7nm,0.3s,baz=320,slow=12,SNR=3.8						
LVC				S	**Sn**	**18 45 32.3**	**-6.1**
	0.8nm,0.3s,baz=83,slow=19,SNR=3.7						
LVC				LR	LR	18 48 00.3	
	comp=Z,40nm,20.9s,baz=305,slow=36						
LVC	**Limon Verde**	**13.45**	**145**	*e*Pn	**Pn**	**18 43 09.4**	**-0.9**
BBAC	**Balboa, Cauca**	**13.67**	**0**	*e*P	**P**	**18 43 16.7**	**-3.4**
SOTA	**Rioblanco**	**13.80**	**3**	*e*P	**Pn**	**18 43 16.4**	**+1.2**
PCON	**Cinco Dias**	**14.01**	**4**	*e*P	**P**	**18 43 22.0**	**-2.1**
POPC	**Popayan, Colom**	**14.20**	**3**	*e*P	**P**	**18 43 23.9**	**-2.1**
BETC	**Betania**	**14.45**	**7**	*e*P	**Pn**	**18 43 24.7**	**+1.4**
GO02	**Mina Guanaco**	**15.22**	**152**	*e*Pn	**Pn**	**18 43 35.1**	**+1.7**
	38nm,1.4s						
SIV	**San Ignacio**	**16.32**	**107**	P	**Pn**	**18 43 47.6**	**+0.3**
	1.0nm,0.3s,baz=309,slow=9.9,SNR=31						
ROSC	**El Rosal**	**16.74**	**10**	*e*Pn	**P**	**18 43 54.4**	**+0.1**
	6.9nm,0.5s						
PTGA	**Pitinga**	**20.39**	**59**	P	**P**	**18 44 33.5**	**-0.6**
	9.4nm,0.3s,baz=257,slow=19,SNR=22						
PTGA	**Pitinga**	**20.39**	**59**	*e*P	**P**	**18 44 34.0**	**0.0**
	34nm,1.3s						
CFA	**Coronel Fontan**	**21.47**	**158**	P	**P**	**18 44 46.5**	**+1.0**
	4.8nm,0.7s,baz=341,slow=12,SNR=4.9						
SDV	**Santo Domingo**	**21.54**	**18**	P	**P**	**18 44 45.8**	**-0.8**
	7.0nm,0.5s,baz=270,slow=4.0,SNR=2.7						
SDV	**Santo Domingo**	**21.54**	**18**	*e*P	**P**	**18 44 47.1**	**+0.6**
	12nm,0.8s						
CPUP	**Villa Florida**	**23.76**	**130**	P	**P**	**18 45 09.6**	**+0.5**
	5.7nm,0.9s,baz=313,slow=11,SNR=8.5						
CPUP				LR	LR	18 55 45.3	
	comp=Z,120nm,21.2s,baz=328,slow=40						
BDFB	**Brasilia**	**28.71**	**101**	LR	LR	18 58 29.9	
	comp=Z,188nm,19.3s,baz=267,slow=39						
PLCA	**Paso Flores**	**29.49**	**170**	P	**P**	**18 46 01.3**	**+0.8**
	2.1nm,0.8s,baz=355,slow=16,SNR=4.5						
PLCA	**Paso Flores**	**29.49**	**170**	*e*P	**P**	**18 46 01.4**	**+1.0**
	28nm,1.6s						
MDP	**Montagnes des**	**29.70**	**57**	P	**P**	**18 46 01.9**	**-0.7**
	8.2nm,0.4s,baz=241,slow=8.2,SNR=12						
CBYP	**Canovanas**	**31.89**	**21**	*e*P	**P**	**18 46 20.8**	**-1.1**
	62nm,1.8s						
CUPR	**Culebra, Puert**	**32.13**	**22**	*e*P	**P**	**18 46 23.4**	**-0.4**
	45nm,1.2s						
TXAR	**Lajitas Array**	**48.11**	**329**	P	**P**	**18 48 36.6**	**+0.5**
	2.2nm,0.7s,baz=155,slow=8.5,SNR=12						
TXAR				pP	**pP**	**18 48 52.4**	**+1.1**
	0.4nm,0.5s,baz=151,slow=9.8,SNR=2.2						
X37A	**Clayton**	**49.16**	**340**	*e*P	**P**	**18 48 44.3**	**+0.3**
	54nm,1.9s						
T49A	**Edmonton**	**49.20**	**351**	*e*P	**P**	**18 48 45.0**	**+0.9**
	25nm,1.9s						
W39A	**Magazine**	**49.22**	**342**	*e*P	**P**	**18 48 44.6**	**+0.2**
	3.8nm,0.8s						
FCAR	**Ozark Folk Cen**	**49.40**	**344**	*e*P	**P**	**18 48 45.6**	**-0.1**
	5.7nm,1.1s						
R50A	**Paris**	**50.19**	**353**	*e*P	**P**	**18 48 51.2**	**-0.5**
	25nm,1.3s						
HHAR	**Hobbs**	**50.28**	**342**	*e*P	**P**	**18 48 52.1**	**-0.3**
	4.7nm,0.5s						
WMOK	**Wichita Mounta**	**50.52**	**337**	*e*P	**P**	**18 48 53.3**	**-1.0**
	10nm,1.9s						
MNTX	**Cornudas Mount**	**50.89**	**329**	*e*P	**P**	**18 48 57.1**	**0.0**
	3.3nm,1.0s						
CCM	**Cathedral Cave**	**51.23**	**346**	*e*P	**P**	**18 48 59.3**	**-0.2**
	2.9nm,0.8s						
319A	**Douglas**	**52.71**	**325**	*e*P	**P**	**18 49 10.4**	**-0.5**
	15nm,1.1s						
ANMO	**Albuquerque**	**54.03**	**330**	*e*P	**P**	**18 49 21.1**	**+0.6**
	2.9nm,0.9s						
TUC	**Tucson**	**54.26**	**325**	*e*P	**P**	**18 49 22.2**	**+0.1**
	2.5nm,0.8s						
RKT	**Rikitea**	**55.87**	**250**	*e*T	T	19 49 36.3	
	8.2nm,0.3s						
SDCO	**Great Sand Dun**	**55.88**	**333**	*e*P	**P**	**18 49 33.8**	**-0.2**
	2.3nm,0.8s						
X16A	**Lo Mia Camp, P**	**56.19**	**326**	*e*P	**P**	**18 49 36.5**	**+0.3**
	3.9nm,1.0s						
ISCO	**Idaho Springs**	**57.63**	**334**	*e*P	**P**	**18 49 46.2**	**-0.2**
	8.9nm,1.9s						
SMCO	**Snowmass**	**57.71**	**333**	*e*P	**P**	**18 49 46.6**	**-0.4**
	2.5nm,0.8s						
ECSD	**EROS Data Cent**	**57.95**	**344**	*e*P	**P**	**18 49 46.9**	**-1.3**
	5.8nm,1.0s						
PV04	**Paradox Valley**	**57.97**	**331**	*e*P	**P**	**18 49 46.0**	**-2.7**
	20nm,0.8s						
W13A	**Hualapai Mount**	**58.05**	**325**	*e*P	**P**	**18 49 49.7**	**+0.4**
	3.0nm,0.9s						
K22A	**Casper**	**60.39**	**336**	*e*P	**P**	**18 50 05.3**	**0.0**
	3.6nm,0.7s						
PSUT	**Pine Spring**	**60.55**	**328**	*e*P	**P**	**18 50 06.8**	**+0.3**
	3.3nm,1.0s						
DUG	**Dugway, Tooele**	**61.27**	**330**	*e*P	**P**	**18 50 11.4**	**+0.1**
	4.7nm,0.8s						
HWUT	**Hardware Ranch**	**61.75**	**331**	*e*P	**P**	**18 50 14.2**	**-0.3**
	4.7nm,0.8s						
PD31	**Pinedale Array**	**61.76**	**334**	*e*P	**P**	**18 50 13.8**	**-0.9**
	3.8nm,1.4s						
PDAR	**Pinedale Array**	**61.76**	**334**	P	**P**	**18 50 14.3**	**-0.3**
	0.4nm,0.4s,baz=146,slow=8.6,SNR=5.2						
AGMN	**Agassiz Nation**	**62.00**	**346**	*e*P	**P**	**18 50 15.4**	**-0.4**
	8.1nm,0.4s						
HVU	**Hansel Valley**	**62.46**	**331**	*e*P	**P**	**18 50 18.6**	**-0.7**
	4.1nm,0.7s						
OMMB	**Old Mammoth Mi**	**62.75**	**324**	*e*P	**P**	**18 50 20.4**	**-1.1**
	24nm,1.9s						
ELK	**Elko**	**62.91**	**328**	*e*P	**P**	**18 50 21.4**	**-0.9**
	3.5nm,0.7s						
NVAR	**Mina Array Bea**	**62.91**	**325**	P	**P**	**18 50 23.4**	**+0.9**
	1.6nm,0.7s,baz=136,slow=6.5,SNR=15						
FLWY	**Flagg Ranch**	**63.31**	**334**	*e*P	**P**	**18 50 24.6**	**-0.4**
	6.3nm,0.8s						
RLMT	**Red Lodge**	**63.55**	**335**	*e*P	**P**	**18 50 26.2**	**-0.3**
	2.3nm,0.6s						
WAKR	**Walker**	**63.61**	**324**	*e*P	**P**	**18 50 27.6**	**+0.6**
	8.3nm,1.1s						
ULM	**Lac du Bonnet**	**63.83**	**347**	P	**P**	**18 50 27.4**	**-0.6**
	5.2nm,0.6s,baz=171,slow=6.1,SNR=4.9						
YHH	**Holmes Hill**	**63.94**	**334**	*e*P	**P**	**18 50 28.4**	**-0.8**
	2.8nm,0.9s						
YHB	**Horse Butte**	**64.06**	**334**	*e*P	**P**	**18 50 30.3**	**+0.4**
	5.0nm,1.0s						
PAHR	**Pah Rah Range**	**64.40**	**325**	*e*P	**P**	**18 50 32.5**	**+0.4**
	4.7nm,0.7s						
HLID	**Hailey**	**64.60**	**331**	*e*P	**P**	**18 50 34.1**	**+0.7**
	2.6nm,0.6s						
BOZ	**Bozeman (W)**	**64.92**	**334**	*e*P	**P**	**18 50 35.5**	**+0.1**
	3.0nm,0.8s						
MOD	**Modoc Plateau**	**66.41**	**326**	*e*P	**P**	**18 50 45.9**	**+0.8**
	5.0nm,0.7s						
I07A	**Izee**	**67.50**	**328**	*e*P	**P**	**18 50 52.1**	**+0.3**
	4.6nm,0.8s						
F10A	**Beach Ranch, E**	**67.73**	**331**	*e*P	**P**	**18 50 53.8**	**+0.5**
	4.2nm,0.6s						
G08A	**Pilot Rock**	**68.08**	**330**	*e*P	**P**	**18 50 56.1**	**+0.6**
	2.5nm,0.8s						
TBI	**Tubuai**	**69.18**	**249**	*e*T	T	20 06 13.6	
	6.1nm,0.3s						
PPT2	**Papeete2**	**69.81**	**255**	*e*LR	LR	19 12 17.4	
	comp=Z,90nm,28.5s						
DBIC	**Dimbokro**	**74.33**	**80**	P	**P**	**18 51 34.1**	**+0.3**
	5.3nm,0.6s,baz=240,slow=5.8,SNR=9.6						
DBIC				LR	LR	19 21 48.3	
	comp=Z,44nm,20.2s,baz=200,slow=34						
DBIC	**Dimbokro**	**74.33**	**80**	*e*P	**P**	**18 51 34.0**	**+0.1**
	21nm,1.2s						
QSPA	**South Pole Qui**	**78.39**	**180**	*e*P	**P**	**18 51 57.0**	**+0.9**
	23nm,1.5s						
YKA	**Yellowknife Ar**	**79.48**	**343**	P	**P**	**18 52 01.3**	**-0.3**
	1.0nm,0.5s,baz=140,slow=5.6,SNR=10						
TOA1	**Torodi Ar. Sit**	**82.16**	**75**	*e*P	**P**	**18 52 16.9**	**-0.2**
TOA0	**Torodi Ar. Sit**	**82.16**	**75**	*e*P	**P**	**18 52 17.3**	**+0.2**
	11nm,1.0s						
TORD	**Torodi Ar. Bea**	**82.16**	**75**	P	**P**	**18 52 16.9**	**-0.2**
	7.1nm,0.9s,baz=279,slow=5.6,SNR=25						
TORD				pP	**pP**	**18 52 34.1**	**+0.6**
	2.0nm,0.9s,baz=242,slow=4.0,SNR=3.2						
TORD				LR	LR	19 27 31.3	
	comp=Z,44nm,18.7s,baz=305,slow=35						
VNDA	**Vanda**	**84.95**	**191**	P	**P**	**18 52 31.3**	**+1.1**
	1.0nm,0.9s,baz=124,slow=3.9,SNR=5.4						
VNDA	**Vanda**	**84.95**	**191**	*e*P	**P**	**18 52 31.2**	**+1.0**
DAWY	**Dawson**	**88.85**	**337**	*e*P	**P**	**18 52 49.0**	**-0.3**
	7.1nm,1.3s						
INK	**Inuvik**	**89.15**	**342**	*e*P	**P**	**18 52 50.5**	**-0.1**
	7.0nm,1.2s						
EGAK	**Eagle**	**89.87**	**337**	*e*P	**P**	**18 52 53.8**	**-0.2**
	3.6nm,0.9s						
ILAR	**Eielson Array**	**92.08**	**336**	P	**P**	**18 53 04.0**	**-0.2**
	0.8nm,0.8s,baz=145,slow=2.8,SNR=7.9						
ILAR				pP	**pP**	**18 53 22.0**	**+1.2**
	0.6nm,0.8s,baz=147,slow=3.2,SNR=3.8						
BOSA	**Boshof**	**95.22**	**120**	LR	LR	19 35 43.7	
	comp=Z,33nm,18.2s,baz=208,slow=35						
GERES	**GERESS Array B**	**99.39**	**42**	PKKPbc	PKKPbc	19 10 04.2	+1.1
	0.9nm,0.5s,baz=29,slow=2.9,SNR=11						
NOA	**NORSAR Array B**	**99.46**	**30**	LR	LR	19 36 08.8	
	comp=Z,9.4nm,20.1s,baz=255,slow=34						
H11N3	**WAKE ISLAND Hyl**	**17.98**	**286**	T	T	21 07 26.4	
	baz=94,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hyl**	**17.99**	**286**	T	T	21 07 25.5	
	baz=94,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hyl**	**18.00**	**286**	T	T	21 07 12.8	
	baz=94,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hyl**	**18.10**	**285**	T	T	21 07 31.5	
	baz=95,slow=75,SNR=99						
H11S1	**WAKE ISLAND Hyl**	**18.11**	**285**	T	T	21 07 33.3	
	baz=95,slow=75,SNR=122						
H11S3	**WAKE ISLAND Hyl**	**18.12**	**285**	T	T	21 07 34.2	
	baz=95,slow=75,SNR=141						
KSH	**Kashi**	**143.59**	**36**	*e*PKP	PKPbc	18 59 27.9	-0.2
SONA0	**Songino Array**	**143.89**	**356**	*e*PKPdf	PKPbc	18 59 28.9	+0.2
SONM	**Songino Array**	**143.89**	**356**	PKP	PKPbc	18 59 28.8	+0.2
	0.7nm,0.5s,baz=342,slow=1.1,SNR=5.5						
WMQ	**Urumqi**	**145.51**	**19**	*e*PKPbc	**PKPdf**	**18 59 32.6**	**-1.1**
WMQ				LR	LR		
	comp=N,70nm,28.9s						
WMQ				LR	LR		
	comp=E,130nm,29.0s						
WMQ				LR	LR		
	comp=Z,76nm,28.9s						
KSRS	**Korea Array**	**145.84**	**323**	PKPbc	**PKPdf**	**18 59 34.6**	**+0.3**
	2.4nm,0.8s,baz=36,slow=3.1,SNR=8.0						
HHC	**Hu-ho-hao-te**	**149.97**	**346**	*e*PKPbc	**PKPdf**	**18 59 42.3**	**+1.1**
NJ2	**Nanjing**	**154.90**	**326**	*e*PKPbc	**PKPdf**	**18 59 46.8**	**-1.8**
LZH	**Lanzhou**	**155.74**	**358**	*e*PKP	**PKPdf**	**18 59 47.0**	**-2.9**
LZH				pPKP	pPKPdf	19 00 05.1	-2.0
LZH				sPKP		19 00 11.8	
CD2	**Chengdu**	**160.90**	**357**	PKP	**PKPdf**	**18 59 52.8**	**-3.3**

*THE **18** 18:46:35.8, 34°.33N×25°.18E, h0km±2km, ML2.3/2, Error ellipse: s-maj=5.8km s-min=1.0km az=156.0*

ATH 18 18:46:36.2, 34°.35N×25°.13E, h15km±6km, ML2.4/4, Error ellipse: s-maj=10.3km s-min=1.9km az=349.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.72**	**338**	P	Pg	18 46 50.3	0.0
SIVA	**Sivas**	**0.72**	**338**	P	Pb	18 46 50.4	0.0
SIVA				S	Sn	18 47 02.2	-0.5
SIVA				AML	AML	18 47 04.2	
	comp=E,1342μm,0.7s						
SIVA				AML	AML	18 47 07.4	
	comp=N,1258μm,0.4s						
SIVA	**Sivas**	**0.72**	**338**	P	Pg	18 46 50.3	0.0
SIVA				AML	AML	18 47 03.1	
	comp=N,1153μm,0.3s						
SIVA				AML	AML	18 47 04.2	
	comp=E,1342μm,0.7s						
LAST	**Lasithi**	**0.86**	**19**	P	Pb	18 46 52.8	-0.1
LAST				S	Sn	18 47 06.0	-0.2
LAST	**Lasithi**	**0.86**	**19**	P	Pb	18 46 52.7	-0.2
LAST	**Lasithi**	**0.86**	**19**	P	Pb	18 46 52.8	-0.1
LAST				AML	AML	18 47 12.2	
	comp=E,293μm,0.9s						
LAST				AML	AML	18 47 13.4	
	comp=N,214μm,0.4s						
GVD	**Gavdhos**	**0.99**	**300**	P	Pb	18 46 55.2	+0.1
GVD				S	Sn	18 47 11.3	+2.0
GVD	**Gavdhos**	**0.99**	**300**	P	Pb	18 46 55.2	+0.1
GVD				AML	AML	18 47 18.6	
	comp=N,698μm,0.3s						
GVD				AML	AML	18 47 18.8	
	comp=E,607μm,0.5s						
GVD	**Gavdhos**	**0.99**	**300**	P	Pb	18 46 55.2	+0.1
GVD				AML	AML	18 47 18.6	
	comp=N,698μm,0.3s						
GVD				AML	AML	18 47 18.8	
	comp=E,607μm,0.5s						
NPS	**Neapolis**	**1.00**	**23**	P	Pb	18 46 55.1	-0.1
NPS				S	Sn	18 47 10.4	+1.0
NPS	**Neapolis**	**1.00**	**23**	P	Pb	18 46 55.0	-0.1
NPS	**Neapolis**	**1.00**	**23**	P	Pb	18 46 54.9	-0.2
ZKR	**Zakros**	**1.18**	**49**	P	Pb	18 46 58.4	+0.1
ZKR				AML	AML	18 47 23.4	
	comp=E,258μm,0.7s						
ZKR				AML	AML	18 47 30.3	
	comp=N,113μm,0.7s						
VAM	**Vamos**	**1.31**	**324**	P	Pb	18 47 00.7	+0.3
VAM	**Vamos**	**1.31**	**324**	P	Pb	18 47 00.7	+0.2
IMMV	**Iera Moni Meta**	**1.46**	**320**	P	Pb	18 47 03.2	+0.1
IMMV	**Iera Moni Meta**	**1.46**	**320**	P	Pb	18 47 03.2	+0.1
IMMV	**Iera Moni Meta**	**1.46**	**320**	P	Pb	18 47 03.3	+0.2
KARP	**Karpathos**	**2.05**	**54**	P	Pb	18 47 12.5	-0.7

*ISCJB **18** 18:50:26.3±0.7, 17°.15S±0°.1×175°.3W±0°.1, h256km, mb4.0/11, Error ellipse: s-maj=20.5km s-min=13.5km az=31.6*
*IDC **18** 18:50:30.7±3.8, 17°.16S×175°.25W, h288km±36km, mb3.6/10, mb1 3.8/11, mb1mx3.5/26, mbtmp4.2/11, Error ellipse: s-maj=22.4km s-min=13.4km az=115.0*

ISC 18 18:50:27.4±0.8, 17°.2S±0°.1×175°.2W±0°.2, h256km, n12, σ0°.61/13, mb4.1/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**17.98**	**251**	P	**P**	**18 54 19.7**	**0.0**
	0.5nm,0.3s,baz=99,slow=18,SNR=5.5						
URZ	**Urewera**	**22.07**	**196**	P	**P**	**18 55 02.3**	**+0.8**
	4.8nm,0.4s,baz=44,slow=5.9,SNR=6.0						
URZ				S	**S**	**18 58 45.1**	**-0.8**
	7.6nm,0.7s,baz=268,slow=23,SNR=8.6						
PMG	**Port Moresby**	**37.40**	**277**	P	**P**	**18 57 17.1**	**+0.7**
	14nm,0.8s,baz=8.7,slow=13,SNR=3.2						
STKA	**Stephens Creek**	**41.69**	**241**	P	**P**	**18 57 51.4**	**-0.1**
	6.0nm,0.8s,baz=94,slow=12,SNR=12						
WRA	**Warramunga Arr**	**47.80**	**258**	P	**P**	**18 58 38.8**	**-0.9**
	6.2nm,0.5s,baz=87,slow=8.7,SNR=80						
ASAR	**Alice Springs**	**47.96**	**253**	P	**P**	**18 58 40.7**	**-0.2**
	46nm,0.5s,baz=88,slow=8.5,SNR=1010						
VNDA	**Vanda**	**61.45**	**186**	P	**P**	**19 00 17.0**	**+0.5**
	0.6nm,0.5s,baz=6.5,slow=5.5,SNR=11						
PETK	**Petropavlovsk-**	**73.81**	**343**	P	**P**	**19 01 34.0**	**+0.3**
	2.3nm,0.9s,baz=138,slow=9.0,SNR=3.5						
TXAR	**Lajitas Array**	**83.01**	**57**	P	**P**	**19 02 24.9**	**+0.3**
	0.2nm,0.5s,baz=270,slow=7.5,SNR=3.9						
ILAR	**Eielson Array**	**84.51**	**12**	P	**P**	**19 02 30.8**	**-0.5**
	0.5nm,0.6s,baz=220,slow=5.9,SNR=6.8						
PDAR	**Pinedale Array**	**84.72**	**42**	P	**P**	**19 02 32.7**	**-0.4**
	0.4nm,0.4s,baz=190,slow=4.6,SNR=5.1						
MAW	**Mawson**	**85.58**	**199**	P	**P**	**19 02 36.2**	**-0.4**
	1.9nm,0.6s,baz=126,slow=8.9,SNR=4.4						

*NEIC **18** 19:07:53.9±0.0, 16°.01N×99°.01W, h10km, MD4.1(MEX), After MEX.*

MEX 18 19:07:53.9±0.7, 16°.01N×99°.01W, h10km±11km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.93**	**66**	*e*Pg	Pg	19 08 08.8	-3.1
PNIG				*e*Sg	Sg	19 08 20.7	-3.3
PNIG	**Pinotepa**	**0.93**	**66**	*i* P	Pg	19 08 08.8	-3.1
PNIG				*i* S	Sg	19 08 20.7	-3.3
ACP2	**Acapulco**	**1.20**	**316**	*i* P	Pb	19 08 12.4	-4.3
CAIG	**El Cayaco**	**1.58**	**311**	*e*Pn	Pn	19 08 18.1	-3.9
CAIG				*e*Sn	Sn	19 08 37.7	-4.8
CAIG	**El Cayaco**	**1.58**	**311**	*e*P	Pn	19 08 18.1	-3.9
CAIG				*e*S	Sn	19 08 37.7	-4.8
TLIG	**Tlapa**	**1.60**	**15**	*e*Pn	Pn	19 08 18.3	-4.0
TLIG				*e*Sn	Sn	19 08 39.9	-3.2
TLIG	**Tlapa**	**1.60**	**15**	*e*P	Pn	19 08 18.3	-4.0
TLIG				*e*S	Sn	19 08 38.4	-4.7
MEIG	**Mezcala**	**1.99**	**343**	*e*Pn	Pn	19 08 24.7	-3.0
MEIG				*e*Sn	Sn	19 08 48.2	-4.5
MEIG	**Mezcala**	**1.99**	**343**	*i* P	Pn	19 08 24.7	-3.0
MEIG				*e*S	Sn	19 08 48.2	-4.5
PLIG	**Platanillo**	**2.41**	**349**	*e*Pn	Pn	19 08 30.1	-3.4
PLIG				*e*Sn	Sn	19 08 59.0	-4.1
PLIG	**Platanillo**	**2.41**	**349**	*e*P	Pn	19 08 30.1	-3.4
PLIG				*e*S	Sn	19 08 59.0	-4.1
VHO	**Vista Hermosa**	**2.43**	**64**	*e*Pn	Pn	19 08 31.4	-2.3
VHO				*e*Sn	Sn	19 09 00.1	-3.5
VHO	**Vista Hermosa**	**2.43**	**64**	*e*P	Pn	19 08 31.4	-2.3
VHO				*i* S	Sn	19 09 00.1	-3.5
ARIG	**Puente Sto Nin**	**2.59**	**331**	*e*P	Pn	19 08 33.4	-2.5
ARIG				*e*S	Sn	19 09 03.3	-4.1
YAIG	**Yautepec**	**2.83**	**359**	*e*Pn	Pn	19 08 36.6	-2.8
YAIG				*e*Sn	Sn	19 09 10.2	-3.4
YAIG	**Yautepec**	**2.83**	**359**	*e*P	Pn	19 08 36.6	-2.8
YAIG				*i* S	Sn	19 09 10.2	-3.4
ZIIG	**Zihuatanejo**	**2.83**	**304**	*e*Pn	Pn	19 08 36.4	-2.8
ZIIG				*e*Sn	Sn	19 09 10.4	-3.0
ZIIG	**Zihuatanejo**	**2.83**	**304**	*e*P	Pn	19 08 36.4	-2.8
ZIIG				*i* S	Sn	19 09 10.4	-3.0
TPIG	**Tehuac#an**	**2.87**	**33**	*e*Pn	Pn	19 08 37.0	-2.8
TPIG				*e*Sn	Sn	19 09 10.5	-4.0
TPIG	**Tehuac#an**	**2.87**	**33**	*i* P	Pn	19 08 37.0	-2.8
TPIG				*e*S	Sn	19 09 10.5	-4.0
MAVM	**Malinalco, Edo**	**2.96**	**351**	*e*P	Pn	19 08 43.7	+2.5
PPM	**Popocatepetl**	**3.06**	**7**	*e*Pn	Pn	19 08 44.5	+1.7
PPM				*e*Sn	Sb	19 09 27.7	+1.3
PPM	**Popocatepetl**	**3.06**	**7**	*e*P	Pn	19 08 44.5	+1.7
PPM				*e*S	Sb	19 09 27.7	+1.3
TOVM	**TOLUCA**	**3.31**	**349**	*e*P	Pn	19 08 49.5	+3.4
PBVM	**Pinon**	**3.41**	**359**	*e*Pn	Pn	19 08 45.1	-2.0
PBVM	**Pinon**	**3.41**	**359**	*e*P	Pn	19 08 45.1	-2.0
VTVM	**Tizayuca**	**3.74**	**3**	*e*P	Pn	19 08 51.6	-0.4
DEIG	**Demacu**	**4.26**	**360**	*e*Pg	Pb	19 09 08.3	-0.9
DEIG

BSSI				S	Sn	19 48 02.5	0.0
JAGI	**Jajag, Banyuwa**	**3.93**	**276**	*e*Pn	**Pn**	**19 47 24.4**	**+0.9**
JAGI				*e*Sn	**Sn**	**19 48 09.0**	**-0.5**
JAGI	**Jajag, Banyuwa**	**3.93**	**276**	P	Pn	19 47 25.5	+2.1
BKSI	**Bulukumba**	**4.09**	**30**	P	**Pn**	**19 47 26.9**	**+1.4**
MMRI	**Maumere**	**4.10**	**87**	*e*Pn	**Pn**	**19 47 26.9**	**+1.3**
MMRI				*e*Sn	**Sn**	**19 48 14.2**	**+0.7**
MMRI	**Maumere**	**4.10**	**87**	P	**Pn**	**19 47 26.3**	**+0.7**
KAPI	**Kappang**	**4.20**	**23**	P	**Pn**	**19 47 26.9**	**-0.1**
	3.2nm,0.3s,baz=195,slow=8.9,SNR=7.7						
KAPI				S	**Sn**	**19 48 09.8**	**-6.1**
	2.5nm,0.3s,baz=132,slow=14,SNR=2.3						
KMMI	**Kalianget**	**4.49**	**294**	P	Pn	19 47 33.9	+3.1
GMJI	**Gumukmas**	**4.65**	**277**	P	Pn	19 47 34.9	+2.1
SPSI	**Sidrap Palu**	**5.18**	**19**	P	**Pn**	**19 47 40.7**	**+0.8**
BATI	**Baumata**	**5.63**	**104**	P	**Pn**	**19 47 47.6**	**+1.7**
	21nm,0.3s,baz=296,slow=3.7,SNR=30						
BATI				S	**Sn**	**19 48 41.5**	**-8.4**
	11nm,0.3s,baz=264,slow=18,SNR=2.6						
BATI	**Baumata**	**5.63**	**104**	P	**Pn**	**19 47 47.5**	**+1.5**
GRJI	**Gresik**	**5.91**	**289**	P	Pn	19 47 52.5	+2.9
GRJI				S	**Sn**	**19 48 59.9**	**+3.4**
TTSI	**Tana Toraja**	**6.07**	**16**	P	**Pn**	**19 47 52.9**	**+1.2**
TTSI				S	**Sn**	**19 49 01.7**	**+1.3**
SOEI	**Soe**	**6.14**	**98**	*e*Pn	**Pn**	**19 47 54.1**	**+1.2**
SOEI				*e*Sn	Sn	19 48 50.4	-12
SOEI	**Soe**	**6.14**	**98**	P	**Pn**	**19 47 54.2**	**+1.4**
SOEI				S	**Sn**	**19 49 02.5**	**+0.3**
BWJI	**Bawean**	**6.20**	**299**	S	**Sn**	**19 49 06.3**	**+3.0**
PWJI	**Pagerwojo**	**6.29**	**278**	P	**Pn**	**19 47 56.4**	**+1.7**
PWJI				S	**Sn**	**19 49 07.5**	**+1.9**
KDI	**Kendari**	**6.66**	**43**	P	**Pn**	**19 48 00.4**	**+0.8**
	34nm,0.8s,5μm0.1nm						
NGJI	**Ngawi**	**6.75**	**283**	P	Pn	19 48 03.2	+2.4
UGM	**Wanagama**	**7.56**	**277**	*e*Pn	Pn	19 48 13.9	+2.2
UGM				*e*Sn	**Sn**	**19 49 34.4**	**-1.9**
SMRI	**Semarang**	**7.81**	**283**	P	Pn	19 48 17.5	+2.5
CISI	**Cisompet, Garu**	**10.27**	**277**	*e*Pn	**Pn**	**19 48 47.1**	**-0.6**
CISI				*e*Sn	**Sn**	**19 50 34.8**	**-6.7**
FITZ	**Fitzroy Crossi**	**11.71**	**142**	P	P	19 49 08.5	-5.2
	0.5nm,0.3s,baz=335,slow=10,SNR=33						
FITZ				S	**Sn**	**19 51 10.2**	**-5.8**
	1.9nm,0.3s,baz=202,slow=19,SNR=8.2						
FITZ	**Fitzroy Crossi**	**11.71**	**142**	*e*Pn	P	19 49 08.7	-5.1
BNDI	**Bandanaira**	**12.50**	**70**	P	**P**	**19 49 25.0**	**+2.4**
PSAD1	**Pilbara Seismi**	**12.59**	**173**	*e*Pn	**P**	**19 49 21.1**	**-2.3**
PSAC1	**Pilbara Seismi**	**12.66**	**173**	*e*Pn	**P**	**19 49 22.1**	**-2.2**
PSAB2	**Pilbara Seismi**	**12.69**	**173**	*e*Pn	**P**	**19 49 22.4**	**-2.2**
PSAA2	**Pilbara Seismi**	**12.69**	**173**	*e*Pn	**P**	**19 49 22.3**	**-2.4**
PSAB1	**Pilbara Seismi**	**12.70**	**173**	*e*Pn	**P**	**19 49 22.4**	**-2.3**
PSAC2	**Pilbara Seismi**	**12.70**	**172**	*e*Pn	**P**	**19 49 21.9**	**-2.8**
PSA00	**Pilbara Seismi**	**12.70**	**173**	*e*Pn	**P**	**19 49 22.7**	**-2.1**
PSAA1	**Pilbara Seismi**	**12.71**	**173**	*e*Pn	**P**	**19 49 22.5**	**-2.3**
PSAA3	**Pilbara Seismi**	**12.71**	**173**	*e*Pn	**P**	**19 49 22.8**	**-2.1**
SBUM	**Sibu**	**12.72**	**332**	*e*Pn	**Pn**	**19 49 18.8**	**-0.8**
PSAB3	**Pilbara Seismi**	**12.72**	**173**	*e*Pn	**P**	**19 49 22.9**	**-2.1**
PSAC3	**Pilbara Seismi**	**12.75**	**173**	*e*Pn	**P**	**19 49 22.9**	**-2.4**
PSAD2	**Pilbara Seismi**	**12.76**	**172**	*e*Pn	**P**	**19 49 23.1**	**-2.4**
PSAD3	**Pilbara Seismi**	**12.76**	**173**	*e*Pn	**P**	**19 49 23.0**	**-2.5**
KSM	**Kuching**	**12.91**	**323**	*e*Pn	**P**	**19 49 22.9**	**-4.2**
TNTI	**Ternate**	**13.33**	**44**	*e*Pn	**Pn**	**19 49 27.1**	**-0.5**
MTN	**Manton Dam**	**13.38**	**108**	*e*Pn	**Pn**	**19 49 28.2**	**0.0**
MTN				*e*Sn	Sn	19 51 45.4	-11
GIRL	**Giralia**	**14.15**	**195**	*e*Pn	**P**	**19 49 40.8**	**-0.1**
KKM	**Kota Kinabalu**	**14.97**	**353**	*e*Pn	**P**	**19 49 50.3**	**+0.1**
FAKI	**Fak Fak**	**15.27**	**68**	*e*Pn	**Pn**	**19 49 49.7**	**-2.3**
	128nm,1.9s						
FAKI	**Fak Fak**	**15.27**	**68**	P	**P**	**19 49 51.5**	**-1.9**
SWI	**Sorong**	**15.35**	**59**	P	**P**	**19 49 54.6**	**+0.4**
SIJI	**Sorong**	**15.35**	**59**	P	**Pn**	**19 49 51.9**	**-1.1**
	2.5nm,0.3s,baz=28,slow=24,SNR=16						
MNAI	**Manna**	**15.71**	**286**	*e*Pn	**P**	**19 49 58.8**	**+0.6**
	366nm,1.1s						
WRA	**Warramunga Arr**	**19.15**	**127**	P	**Pn**	**19 50 38.7**	**+0.2**
	4.6nm,0.3s,baz=292,slow=13,SNR=89						
WRA				S	**S**	**19 54 03.9**	**-1.4**
	0.2nm,0.3s,baz=291,slow=24,SNR=2.4						
WRAB	**Tennant Creek**	**19.16**	**127**	*e*P	**Pn**	**19 50 38.5**	**0.0**
	12nm,0.6s						
WB2	**Warramunga Arr**	**19.16**	**127**	*e*P	**Pn**	**19 50 38.6**	**0.0**
	20nm,0.3s						
WC3	**Warramunga Arr**	**19.19**	**127**	*e*P	**Pn**	**19 50 39.0**	**+0.1**
	26nm,1.2s						
SRPI	**Serui, Papua**	**19.35**	**70**	P	**Pn**	**19 50 40.3**	**-0.6**
AS31	**Alice Springs**	**21.07**	**136**	*e*P	**P**	**19 50 59.1**	**+2.5**
	2.2nm,0.3s						
ASAR	**Alice Springs**	**21.07**	**136**	P	**P**	**19 50 59.8**	**+3.2**
	2.4nm,0.5s,baz=312,slow=9.2,SNR=60						
ASAR				S	**S**	**19 54 39.9**	**-2.9**
	0.3nm,0.6s,baz=277,slow=37,SNR=3.2						
ASAR				ScP	**ScP**	**19 58 21.8**	**+1.6**
	0.7nm,0.7s,baz=357,slow=2.5,SNR=5.1						
IPM	**Ipoh**	**21.60**	**307**	*e*P	**P**	**19 51 01.4**	**-1.0**
	24nm,1.7s						
PSI	**Prapat**	**22.38**	**300**	P	**P**	**19 51 10.4**	**+0.1**
	6.2nm,0.4s,baz=217,slow=1.0,SNR=5.9						
PSI	**Prapat**	**22.38**	**300**	*e*P	**P**	**19 51 10.3**	**-0.1**
KULM	**Kulim**	**22.40**	**308**	*e*P	**P**	**19 51 09.8**	**-0.6**
	38nm,1.8s						
GSI	**Gunungsitoli**	**22.83**	**295**	*e*P	**P**	**19 51 14.4**	**0.0**
	27nm,1.2s						
JAY	**Jayapura**	**23.36**	**76**	P	**P**	**19 51 18.9**	**-0.4**
	3.3nm,0.6s,baz=235,slow=16,SNR=4.0						
NWAO	**Narrogin (SRO)**	**23.91**	**182**	*e*P	**P**	**19 51 24.4**	**+0.2**
	61nm,1.4s						
COEN	**Coen**	**25.07**	**104**	*e*P	**P**	**19 51 37.0**	**+2.1**
	32nm,1.4s						
PMG	**Port Moresby**	**28.69**	**93**	*e*P	**P**	**19 52 07.7**	**+0.5**
	14nm,1.0s						
BBOO	**Buckleboo**	**29.01**	**148**	*e*P	P	19 52 13.2	+3.3
	29nm,1.8s						
CTA	**Charters Tower**	**29.38**	**115**	P	**P**	**19 52 14.8**	**+1.4**
	3.0nm,0.8s,baz=307,slow=7.1,SNR=3.6						
STKA	**Stephens Creek**	**31.59**	**140**	P	P	19 52 36.0	+3.4
	0.8nm,0.4s,baz=302,slow=10,SNR=3.5						
CMAR	**Chiang Mai Arr**	**33.12**	**325**	P	**P**	**19 52 47.4**	**+1.2**
	0.6nm,0.6s,baz=155,slow=6.6,SNR=12						
CMAR				PcP	**PcP**	**19 55 26.8**	**+0.8**
	0.6nm,0.7s,baz=186,slow=2.9,SNR=4.7						
ENH	**Enshi**	**39.83**	**348**	*e*P	**P**	**19 53 43.5**	**+0.7**
	7.6nm,1.0s						
NJ2	**Nanjing**	**40.73**	**1**	*e*P	**P**	**19 53 52.4**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CD2	**Chengdu**	**41.91**	**341**	P	**P**	**19 54 00.3**	**+0.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
LZH	**Lanzhou**	**46.73**	**344**	⇑P	P	19 54 41.8	+3.5
LZH				pP	sP	19 55 19.3	-9.2
LZH				sP	pP	19 55 37.6	+26
LZH				PP	**PP**	**19 56 34.0**	**+3.9**
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,72nm,6.0s						
KSRS	**Korea Array**	**47.03**	**11**	LR	LR	20 13 52.2	
	comp=Z,68nm,21.9s,baz=166,slow=35						
JIRN	**Jiri**	**47.71**	**321**	*e*P	**P**	**19 54 46.6**	**+0.4**
	28nm,0.4s						
GUN	**Gumba**	**48.08**	**321**	*e*P	**P**	**19 54 49.4**	**+0.3**
	15nm,0.5s						
PKI	**Pulchoki**	**48.14**	**320**	*e*P	**P**	**19 54 49.2**	**-0.3**
	10nm,0.4s						
PKIN	**Phulchoki**	**48.15**	**320**	*e*P	**P**	**19 54 49.1**	**-0.4**
	8.6nm,0.4s						
DMN	**Daman**	**48.36**	**320**	*e*P	**P**	**19 54 51.1**	**0.0**
	9.8nm,0.3s						
KKN	**Kakani**	**48.37**	**320**	*e*P	**P**	**19 54 51.1**	**-0.1**
	4.6nm,0.3s						
GKN	**Gorkha**	**48.93**	**320**	*e*P	**P**	**19 54 55.3**	**-0.1**
	22nm,0.3s						
KOLN	**Koldanda**	**49.44**	**319**	*e*P	**P**	**19 54 59.1**	**-0.2**
	5.4nm,0.3s						
DANN	**Dangsing**	**49.73**	**319**	*e*P	**P**	**19 55 01.4**	**-0.2**
	32nm,0.5s						
HHC	**Hu-ho-hao-te**	**49.88**	**354**	*e*P	**P**	**19 55 04.3**	**+2.1**
HHC				pmax	pmax		
	comp=Z,33nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,9.3s						
PYUN	**Piuthan**	**50.06**	**318**	*e*P	**P**	**19 55 04.3**	**+0.3**
	9.5nm,0.5s						
USRK	**Ussuriysk Ar.**	**54.34**	**12**	P	**P**	**19 55 34.5**	**-0.5**
	2.2nm,0.6s,baz=201,slow=7.8,SNR=6.4						
SONM	**Songino Array**	**57.44**	**351**	P	**P**	**19 55 56.2**	**-1.0**
	0.9nm,0.4s,baz=165,slow=9.3,SNR=9.9						
WMQ	**Urumqi**	**59.29**	**335**	*e*P	**P**	**19 56 12.3**	**+2.3**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH	**Kashi**	**62.01**	**324**	*e*P	**P**	**19 56 30.0**	**+1.4**
KSH				PP	**PP**	**19 58 51.1**	**+4.1**
KSH				S	**S**	**20 04 35.1**	**-6.3**
KSH				SS	**SS**	**20 08 42.4**	**-4.5**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,220nm,4.4s						
KSH				LR	LR		
	comp=N,160nm,8.9s						
KSH				LR	LR		
	comp=E,220nm,8.2s						
KSH				LR	LR		
	comp=Z,200nm,19.3s						
KBL	**Kabul**	**63.41**	**316**	*e*P	**P**	**19 56 37.2**	**-0.8**
	3.8nm,0.9s						
MK31	**Makanchi Array**	**63.98**	**333**	*e*P	**P**	**19 56 41.2**	**-0.2**
	2.4nm,1.1s						
MKAR	**Makanchi Array**	**63.98**	**333**	P	**P**	**19 56 41.4**	**+0.1**
	0.9nm,0.6s,baz=149,slow=6.2,SNR=9.9						
MAKZ	**Makanchi**	**64.12**	**333**	*e*P	**P**	**19 56 42.7**	**+0.4**
	2.9nm,1.2s						
ARSB	**Arslanbob**	**64.92**	**324**	*e*P	**P**	**19 56 48.3**	**+0.6**
	4.6nm,0.6s						
GAR	**Garm**	**65.11**	**320**	*e*P	**P**	**19 56 49.0**	**0.0**
	12nm,0.9s						
KURK	**Kurchatov**	**68.53**	**334**	*e*P	**P**	**19 57 09.8**	**-0.4**
	1.9nm,1.1s						
ZALV	**Zalesovo Beam**	**68.64**	**340**	P	**P**	**19 57 09.9**	**-0.9**
	0.9nm,0.4s,baz=148,slow=5.5,SNR=5.1						
PETK	**Petropavlovsk-**	**70.35**	**24**	P	**P**	**19 57 21.9**	**+0.5**
	0.6nm,0.6s,baz=207,slow=1.0,SNR=3.1						
ABKAR	**Akbulak array**	**76.98**	**325**	*e*P	**P**	**19 57 59.8**	**-0.3**
	2.0nm,0.8s						
ADK	**Adak**	**82.18**	**35**	*e*P	**P**	**19 58 28.4**	**+0.2**
	19nm,1.3s						
TORD	**Torodi Ar. Bea**	**117.57**	**280**	PKP	**PKiKP**	**20 04 53.6**	**+0.3**
	0.4nm,0.8s,baz=48,slow=2.2,SNR=6.0						

SCB 18 19:51:04.3±3.8, 17°.51S×65°.12W, h16km±26km, ML3.5/3, Error ellipse: s-maj=17.0km s-min=13.2km az=0.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BB01	**Montecillos**	**0.57**	**194**	P	Pb	19 51 16.2	0.0
BB01				S	Sn	19 51 26.8	-0.6
BB01				AML	AML	19 51 29.3	
	2μm,0.4s						
BS10	**CO. Tuti**	**0.71**	**274**	P	Pb	19 51 18.5	-0.1
BS10				S	Sb	19 51 29.6	+1.3
BS10				AML	AML	19 51 32.5	
	1μm,0.7s						
BS08	**Valle Grande**	**1.37**	**136**	P	Pn	19 51 27.8	-1.3
BS05	**Cuyupaya**	**1.81**	**286**	P	Pn	19 51 35.9	+0.7
BS05				S	Sb	19 52 00.1	+0.1
BS05				AML	AML	19 52 03.0	
	2μm,0.4s						
BBOE	**La Paz, Chanca**	**2.82**	**284**	P	Pn	19 51 49.6	+0.3
BBOJ	**La Paz, Jacaqu**	**2.98**	**280**	P	Pn	19 51 52.2	+0.7
BBOB	**La Paz, Bander**	**3.19**	**295**	P	Pn	19 51 53.3	-1.0

MEX 18 20:05:03.6±0.6, 17°.99N×100°.85W, h20km±30km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.55**	**59**	*e*P	Pb	20 05 12.4	-2.2
ARIG				*e*S	Sb	20 05 20.4	-1.9
ZIIG	**Zihuatanejo**	**0.70**	**237**	*i* P	Pb	20 05 15.5	-1.7
ZIIG				*i* S	Sb	20 05 23.4	-3.1
CAIG	**El Cayaco**	**1.09**	**149**	*e*P	Pn	20 05 20.2	-3.6
CAIG				*i* S	Sb	20 05 34.2	-3.4
MEIG	**Mezcala**	**1.17**	**93**	*i* P	Pn	20 05 20.9	-4.0
PLIG	**Platanillo**	**1.34**	**73**	*i* P	Pn	20 05 24.5	-2.7
TLIG	**Tlapa**	**2.21**	**101**	*e*P	Pn	20 05 37.3	-2.0

SVSA 18 20:09:44.1±1.2, 38°.15N×26°.54W, h2km±4km, MD3.5, ML3.0, Error ellipse: s-maj=6.2km s-min=1.5km az=34.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.71**	**321**	*e*P	Pg	20 09 55.8	-1.9
PSCM				*e*S	Sg	20 10 05.3	-1.6
PSCM				A	A	20 10 07.2	
	1μm,0.1s						
PSET	**Sete Cidades**	**0.73**	**117**	*e*P	Pg	20 09 56.2	-1.9
PSET				*e*S	Sg	20 10 05.8	-1.7
PSET				A	A	20 10 07.4	
	439nm,0.6s						
ADH	**Angra Heroismo**	**0.74**	**313**	*e*P	Pg	20 09 56.3	-2.0
ADH				*e*S	Sg	20 10 06.1	-1.8
ADH				A	A	20 10 06.8	
	884nm,0.1s						
PDA	**Ponta Delgada**	**0.81**	**120**	*e*P	Pg	20 09 57.1	-2.4
PDA				*e*S	Sg	20 10 07.5	-2.5
PDA				A	A	20 10 08.7	
	158nm,0.2s						
CMLA	**Cha da Macela**	**0.90**	**115**	*e*P	Pg	20 09 59.2	-2.0
CMLA				*e*S	Sg	20 10 10.2	-2.6
CMLA				A	A	20 10 12.6	
	404nm,0.3s						
PCALD	**Caldeiras da R**	**0.91**	**113**	*e*P	Pg	20 09 58.8	-2.7
PCALD				*e*S	Sg	20 10 09.8	-3.4
PCALD				A	A	20 10 11.7	
	184nm,0.2s						
BART	**Pico Bartolome**	**1.15**	**109**	*e*S	Sg	20 10 15.9	-5.1
BART				A	A	20 10 21.5	
	67nm,0.4s						
PMAN	**Manadas**	**1.30**	**292**	*e*S	Sg	20 10 19.8	-6.2
PMAN				A	A	20 10 21.7	
	61nm,0.1s						
PPNO	**Prainha do Nor**	**1.39**	**284**	*e*P	Pn	20 10 05.6	-5.0
PPNO				*e*S	Sg	20 10 21.7	-7.1
PPNO				A	A	20 10 25.0	
	94nm,0.1s						
PGRA	**Graciosa**	**1.43**	**308**	*e*P	Pn	20 10 06.1	-4.9
PGRA				*e*S	Sg	20 10 22.3	-7.6
PGRA				A	A	20 10 25.7	
	80nm,0.2s						
ROSA	**Rosais**	**1.45**	**294**	*e*P	Pn	20 10 06.6	-4.7
ROSA				*e*S	Sg	20 10 23.4	-7.2
ROSA				A	A	20 10 25.2	
	75nm,0.1s						
PICO	**Pico**	**1.52**	**284**	*e*P	Pn	20 10 07.7	-4.7
PICO				*e*S	Sn	20 10 25.0	-7.8
PICO				A	A	20 10 27.9	
	64nm,0.1s						
PCAN	**Candelaria**	**1.56**	**282**	*e*P	Pn	20 10 08.6	-4.2
PCAN				*e*S	Sn	20 10 25.9	-7.7
PCAN				A	A	20 10 29.2	
	54nm,0.2s						
PSMA	**Santa Maria**	**1.61**	**135**	*e*S	Sn	20 10 27.3	-7.6
PSMA				A	A	20 10 28.8	
	27nm,0.1s						
PSMN	**Pico do Norte,**	**1.64**	**134**	*e*S	Sn	20 10 27.4	-8.3
PSMN				A	A	20 10 29.9	
	23nm,0.3s						
CALA	**Caldeira**	**1.75**	**285**	*e*S	Sn	20 10 30.4	-8.0
PCED	**Cedros**	**1.76**	**286**	*e*S	Sn	20 10 30.3	-8.3
PCED				A	A	20 10 34.3	
	47nm,0.3s						

SVSA 18 20:10:49.0±1.1, 38°.13N×26°.56W, h3km±6km, MD3.5, ML2.9, Error ellipse: s-maj=5.0km s-min=3.0km az=32.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.72**	**322**	*e*P	Pg	20 11 01.0	-1.9
PSCM				*e*S	Sg	20 11 10.2	-2.0
PSCM				A	A	20 11 12.0	
	534nm,0.2s						
PSET	**Sete Cidades**	**0.73**	**115**	*e*P	Pg	20 11 01.1	-1.8
PSET				*e*S	Sg	20 11 10.5	-1.8
PSET				A	A	20 11 11.7	
	444nm,0.3s						
ADH	**Angra Heroismo**	**0.75**	**315**	*e*P	Pg	20 11 01.1	-2.3
ADH				*e*S	Sg	20 11 11.0	-2.1
ADH				A	A	20 11 11.6	
	454nm,0.1s						
PDA	**Ponta Delgada**	**0.80**	**118**	*e*P	Pg	20 11 02.1	-2.3
PDA				*e*S	Sg	20 11 11.8	-3.0
PDA				A	A	20 11 13.7	
	203nm,0.1s						
CMLA	**Cha da Macela**	**0.89**	**114**	*e*P	Pg	20 11 03.7	-2.4
CMLA				*e*S	Sg	20 11 14.5	-3.2
CMLA				A	A	20 11 15.7	
	333nm,0.3s						
PCALD	**Caldeiras da R**	**0.91**	**111**	*e*P	Pg	20 11 03.5	-2.9
PCALD				*e*S	Sg	20 11 14.8	-3.3
PCALD				A	A	20 11 16.4	
	132nm,0.2s						
BART	**Pico Bartolome**	**1.15**	**107**	*e*P	Pg	20 11 07.1	-4.0
BART				*e*S	Sg	20 11 20.7	-5.3
BART				A	A	20 11 26.4	
	72nm,0.4s						
PMAN	**Manadas**	**1.31**	**293**	*e*S	Sg	20 11 23.9	-7.1
PMAN				A	A	20 11 28.9	
	38nm,0.2s						
PPNO	**Prainha do Nor**	**1.39**	**285**	*e*P	Pn	20 11 10.4	-4.9
PPNO				*e*S	Sg	20 11 26.7	-6.9
PPNO				A	A	20 11 31.1	
	40nm,0.1s						
PGRA	**Graciosa**	**1.44**	**309**	*e*S	Sb	20 11 27.6	-7.4
ROSA	**Rosais**	**1.45**	**295**	*e*P	Pn	20 11 11.0	-5.1
ROSA				*e*S	Sb	20 11 28.3	-7.2
ROSA				A	A	20 11 29.4	
	43nm,0.1s						
PICO	**Pico**	**1.52**	**285**	*e*P	Pn	20 11 12.6	-4.5
PICO				*e*S	Sn	20 11 29.8	-7.6
PICO				A	A	20 11 32.7	
	33nm,0.1s						
PCAN	**Candelaria**	**1.56**	**283**	*e*P	Pn	20 11 13.4	-4.2
PCAN				*e*S	Sn	20 11 30.5	-7.7
PCAN				A	A	20 11 33.6	
	24nm,0.1s						
PSMA	**Santa Maria**	**1.60**	**135**	*e*S	Sn	20 11 31.8	-7.5
PSMA				A	A	20 11 33.2	
	63nm,0.1s						
PSMN	**Pico do Norte,**	**1.63**	**133**	*e*S	Sn	20 11 31.9	-8.2
PSMN				A	A	20 11 34.8	
	36nm,0.2s						
CALA	**Caldeira**	**1.75**	**286**	*e*S	Sn	20 11 35.1	-8.0
PCED	**Cedros**	**1.76**	**287**	*e*S	Sn	20 11 35.0	-8.2
PCED				A	A	20 11 38.1	
	20nm,0.3s						

NEIC ***18*** *20:18:58.7±1.5, 48°.52N×153°.36E, h118km±10km, mb4.4/23, Error ellipse: s-maj=27.1km s-min=12.7km az=163.0*
ISCJB ***18*** *20:18:58.6±0.4, 48°.46N±0°.06×153°.39E±0°.07, h132km, mb4.1/43, Error ellipse: s-maj=10.1km s-min=3.5km az=143.9*
KRSC ***18*** *20:18:59.8±1.7, 48°.10N×154°.79E, h164km±28km, ML4.6*
SKHL ***18*** *20:19:00.4±0.5, 48°.34N×153°.94E, h148km±4km, mb4.2/2, msh5.4/3*
MOS ***18*** *20:19:00.6±1.0, 48°.54N×153°.46E, h154km, mb4.2/15, Error ellipse: s-maj=10.9km s-min=4.8km az=73.9*
IDC ***18*** *20:19:03.0±2.2, 48°.53N×153°.34E, h161km±19km, mb3.6/21, mb1 3.8/25, mb1mx3.6/42, mbtmp4.0/25, Error ellipse: s-maj=14.7km s-min=10.8km az=148.0*

ISC 18 20:18:59.4±0.6, 48°.40N±0°.08×153°.55E±0°.07, h132km, n155, σ1§48/167, mb4.1/43, 5C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**2.79**	**27**	*e*P	**Pn**	**20 19 45.8**	**+2.3**
ALID	**Alaid**	**2.79**	**27**	PN	**Pn**	**20 19 45.8**	**+2.3**
SKR	**Severo-Kuril's**	**2.83**	**35**	*e*P	**Pn**	**20 19 45.7**	**+1.9**
SKR				*e*S	**Sn**	**20 20 20.5**	**+2.5**
SKR	**Severo-Kuril's**	**2.83**	**35**	*e*PN	**Pn**	**20 19 45.0**	**+1.2**
SKR				*e*S	**Sn**	**20 20 18.9**	**+0.9**
SKR				pmax	pmax		
	comp=Z,34nm,0.2s						
SKR				smax	smax		
	comp=N,267nm,0.3s						
SKR				smax	smax		
	comp=E,308nm,0.4s						
SKR	**Severo-Kuril's**	**2.83**	**35**	*e*P	**Pn**	**20 19 45.0**	**+1.2**
SKR				AMB	AMB	20 19 46.0	
	comp=E,34nm,0.4s						
SKR				*e*S	**Sn**	**20 20 18.0**	**0.0**
SKR				A	A	20 20 26.0	
	comp=E,267nm,0.4s						
SKR				A	A	20 20 26.0	
	comp=E,308nm,0.4s						
PAU	**Pauzhetka**	**3.72**	**33**	*e*P	**Pn**	**20 19 57.0**	**+1.6**
PAU				*e*S	**Sn**	**20 20 39.8**	**+1.0**
PAU	**Pauzhetka**	**3.72**	**33**	PN	**Pn**	**20 19 57.0**	**+1.6**
PAU				S	**Sn**	**20 20 39.8**	**+1.0**
PAU	**Pauzhetka**	**3.72**	**33**	*e*P	**Pn**	**20 19 56.0**	**+0.6**
PAU				AMB	AMB	20 19 56.9	
	comp=E,10.0nm,0.3s						
PAU				*e*S	**Sn**	**20 20 37.7**	**-1.1**
PAU				A	A	20 20 41.8	
	comp=E,300nm,0.4s						
PAU				A	A	20 20 41.8	
	comp=E,250nm,0.4s						
KDTR	**Khodutka, Kamc**	**4.48**	**39**	*e*P	**Pn**	**20 20 05.1**	**-0.4**
KDTR				*e*S	**Sn**	**20 20 53.7**	**-3.2**
KDTR	**Khodutka, Kamc**	**4.48**	**39**	PN	**Pn**	**20 20 05.1**	**-0.4**
KDTR				S	**Sn**	**20 20 53.7**	**-3.2**
ASAK	**Asacha**	**4.86**	**33**	*e*P	**Pn**	**20 20 12.6**	**+2.0**
ASAK	**Asacha**	**4.86**	**33**	PN	**Pn**	**20 20 12.6**	**+2.0**
**

ASAJ	Asahikawa	8.72	245	P	Pn	20 21 05.4 +3.0
	comp=N,0.3nm,0.3s,baz=74,slow=17,SNR=5.9					
ERM	Erimo	9.72	233	*e*Pn	Pn	20 21 14.8 -1.1
ERM				*e*Sn	Sn	20 22 58.1 -5.2
ERM	Erimo	9.72	233	*e*PN	Pn	20 21 14.8 -1.1
MA2	Magadan	11.31	353	*e*Pn	Pn	20 21 30.5 -6.4
MA2	Magadan	11.31	353	*e*PN	Pn	20 21 30.5 -6.4
EKMR	Ekimchan	13.84	297	*e*P	P	20 22 12.0 -1.8
EKMR				AMB	AMB	20 22 17.2
	comp=N,14nm,0.6s					
KLR	Kul'dur	14.38	281	P	P	20 22 18.0 -1.9
	comp=N,0.2nm,0.3s,baz=79,slow=12,SNR=5.7					
KLR	Kul'dur	14.38	281	P	P	20 22 18.0 -1.9
KLR	Kul'dur	14.38	281	*e*P	P	20 22 18.0 -1.9
SEY	Seymchan	14.58	358	P	Pn	20 22 18.7 -0.3
	comp=N,0.2nm,0.3s,baz=150,slow=8.1,SNR=5.1					
KROS	Kirovskiy	17.58	300	*e*P	Pn	20 22 56.7 +0.7
KROS				AMB	AMB	20 23 02.9
	comp=N,5.0nm,0.4s					
YAK	Yakutsk	19.12	324	*e*P	P	20 23 11.2 -0.6
	comp=N,14nm,0.5s					
YAK	Yakutsk	19.12	324	*e*P	P	20 23 11.2 -0.6
YAK				pmax	pmax	
	comp=Z,14nm,0.5s					
YAK	Yakutsk	19.12	324	*e*P	P	20 23 11.2 -0.6
BILL	Biiibino	20.71	14	*e*P	P	20 23 29.4 +0.5
	comp=Z,4.6nm,0.7s					
BILL	Biiibino	20.71	14	*e*P	P	20 23 29.4 +0.5
BILL				pmax	pmax	
	comp=Z,5.0nm,0.7s					
BILL	Biiibino	20.71	14	*e*P	P	20 23 29.4 +0.5
TIK	Tiksi	25.96	342	*e*P	P	20 24 17.8 -1.3
TIXI	Tiksi	25.97	342	P	P	20 24 18.2 -1.0
	comp=Z,1.6nm,0.3s,baz=147,slow=7.6,SNR=8.1					
TIXI	Tiksi	25.97	342	*e*P	P	20 24 17.8 -1.4
	comp=Z,4.7nm,1.1s					
TIXI	Tiksi	25.97	342	*e*P	P	20 24 17.8 -1.4
TIXI				pmax	pmax	
	comp=Z,5.0nm,1.1s					
SDPT	Sand Point	28.77	59	*e*P	P	20 24 45.3 +0.9
	comp=Z,22nm,1.1s					
HHC	Hu-ho-hao-te	30.51	272	*e*P	P	20 25 00.5 +0.5
HHC				pmax	pmax	
	comp=Z,28nm,0.8s					
HHC				pmax	pmax	
	comp=Z,97nm,7.7s					
HHC				LR	LR	
	comp=N,170nm,17.1s					
HHC				LR	LR	
	comp=E,150nm,16.1s					
HHC				LR	LR	
	comp=Z,910nm,17.1s					
H11N2	WAKE ISLAND Hy	30.57	155	T	T	20 57 20.4
	baz=342,slow=76,SNR=37					
H11N1	WAKE ISLAND Hy	30.59	155	T	T	20 57 14.8
	baz=342,slow=76,SNR=45					
H11N3	WAKE ISLAND Hy	30.59	155	T	T	20 57 22.9
	baz=342,slow=76,SNR=30					
SONM	Songino Array	31.10	287	P	P	20 25 04.9 -0.3
	comp=Z,0.8nm,0.8s,baz=75,slow=8.8,SNR=3.6					
SONM				pP	pwP	20 25 39.7 +3.0
	comp=Z,0.6nm,0.7s,baz=72,slow=9.3,SNR=3.0					
H11S1	WAKE ISLAND Hy	31.68	156	T	T	20 58 38.3
	baz=344,slow=76,SNR=123					
H11S3	WAKE ISLAND Hy	31.69	156	T	T	20 58 32.7
	baz=344,slow=76,SNR=115					
H11S2	WAKE ISLAND Hy	31.70	156	T	T	20 58 36.0
	baz=344,slow=76,SNR=98					
TGL	Tana Glacier	37.35	46	*e*S	S	20 31 36.5 0.0
LZH	Lanzhou	38.16	270	⇓P	P	20 26 07.3 +1.3
LZH				pP	pwP	20 26 36.9 -1.5
LZH				sP	sP	20 26 52.0 +3.3
LZH				PP	PnPn	20 27 41.5 +2.7
LZH				pmax	pmax	
	comp=Z,18nm,1.1s					
LZH				pmax	pmax	
	comp=Z,53nm,5.4s					
INK	Inuvik	40.10	33	P	P	20 26 22.6 +1.2
	comp=Z,1.2nm,0.3s,baz=304,slow=5.6,SNR=7.0					
CD2	Chengdu	41.34	264	*e*P	P	20 26 30.3 -1.9
ZALV	Zalesovo Beam	41.90	304	P	P	20 26 35.5 -0.9
	comp=Z,1.1nm,0.3s,baz=66,slow=6.2,SNR=6.2					
WMQ	Urumqi	44.62	290	*e*P	P	20 26 59.3 +0.8
MK31	Makanchi Array	46.46	296	*e*P	P	20 27 12.6 -0.3
	comp=Z,1.4nm,0.6s					
MK31	Makanchi Array	46.46	296	*e*P	P	20 27 12.6 -0.3
MK31				pmax	pmax	
	comp=Z,1.0nm,0.6s					
MKAR	Makanchi Array	46.46	296	P	P	20 27 12.4 -0.4
	comp=Z,1.1nm,0.5s,baz=68,slow=7.3,SNR=18					
MKAR				pP	pwP	20 27 49.5 +3.6
	comp=Z,1.2nm,0.8s,baz=62,slow=7.6,SNR=3.7					
MKAR				PcP	PcP	20 28 43.2 -2.0
	comp=Z,0.4nm,0.7s,baz=61,slow=2.3,SNR=2.1					
MAKZ	Makanchi	46.64	296	*e*P	P	20 27 13.9 -0.4
	comp=Z,3.4nm,1.1s					
KURK	Kurchatov	46.71	303	*e*P	P	20 27 13.8 -0.9
	comp=Z,14nm,0.6s					
KURK	Kurchatov	46.71	303	*e*P	P	20 27 13.8 -0.9
KURK				pmax	pmax	
	comp=Z,14nm,0.6s					
KURK	Kurchatov	46.71	303	*e*P	P	20 27 13.8 -0.9
RES	Resolute Bay	49.17	19	P	P	20 27 34.2 +0.9
	comp=Z,3.9nm,0.6s,baz=129,slow=2.9,SNR=18					
RES	Resolute Bay	49.17	19	*e*P	P	20 27 34.1 +0.9
	comp=Z,5.2nm,0.6s					
RES	Resolute Bay	49.17	19	*e*P	P	20 27 34.1 +0.9
RES				pmax	pmax	
	comp=Z,5.0nm,0.6s					
YKA	Yellowknife Ar	49.42	38	P	P	20 27 36.9 +1.5
	comp=Z,0.4nm,0.6s,baz=298,slow=7.0,SNR=2.8					
BRVK	Borovoye	50.09	309	*e*P	P	20 27 39.3 -1.2
	comp=Z,4.0nm,0.6s					
BRVK	Borovoye	50.09	309	*e*P	P	20 27 39.3 -1.2
BRVK				pmax	pmax	
	comp=Z,4.0nm,0.6s					
BRVK	Borovoye	50.09	309	*e*P	P	20 27 38.9 -1.6
BOOM	Boomskoye usch	52.59	295	*e*P	P	20 28 00.6 +1.0
	comp=Z,4.4nm,1.0s					
BOOM	Boomskoye usch	52.59	295	*e*P	P	20 28 00.6 +1.0
BOOM				pmax	pmax	
	comp=Z,4.0nm,1.0s					
CMAR	Chiang Mai Arr	53.06	255	P	P	20 28 04.5 +1.4
	comp=Z,0.8nm,0.8s,baz=36,slow=6.7,SNR=3.6					
ARU	Arti	54.00	317	*e*P	P	20 28 07.8 -1.5
	comp=Z,17nm,1.9s					
ARU	Arti	54.00	317	*e*P	P	20 28 07.9 -1.5
ARU				pmax	pmax	
	comp=Z,17nm,1.9s					
ARU	Arti	54.00	317	*e*P	P	20 28 07.9 -1.5
KSH	Kashi	54.31	292	*e*P	P	20 28 15.5 +3.4
ARSB	Arslanbob	55.06	295	*e*P	P	20 28 17.7 +0.2
	comp=Z,4.1nm,1.0s					
KK31	Karatay Array	55.47	298	*e*P	P	20 28 19.3 -1.0
	comp=Z,1.7nm,0.8s					
KK31	Karatay Array	55.47	298	*e*P	P	20 28 19.3 -1.0
KK31				pmax	pmax	
	comp=Z,2.0nm,0.8s					
KKAR	Karatay Array	55.47	298	*e*P	P	20 28 19.3 -1.0
	comp=Z,1.7nm,0.8s					
KKAR	Karatay Array	55.47	298	*e*P	P	20 28 19.3 -1.0
KKAR				pmax	pmax	
	comp=Z,2.0nm,0.8s					
ARCES	ARCESS Array B	56.39	341	P	P	20 28 23.7 -2.7
	comp=Z,7.1nm,0.4s,baz=40,slow=9.6,SNR=8.3					
BTK	Batken	57.14	295	*e*P	P	20 28 31.9 -0.3
	comp=Z,3.5nm,0.7s					
BTK	Batken	57.14	295	*e*P	P	20 28 31.9 -0.3
BTK				pmax	pmax	
	comp=Z,4.0nm,0.7s					
ABKAR	Akbulak array	57.60	309	*e*P	P	20 28 34.1 -1.0
	comp=Z,3.3nm,0.6s					
GAR	Garm	58.10	294	*e*P	P	20 28 39.1 +0.1
	comp=Z,5.8nm,0.7s					
GAR	Garm	58.10	294	*e*P	P	20 28 39.1 +0.1
GAR				pmax	pmax	
	comp=Z,6.0nm,0.7s					
SUMG	Summit	59.03	4	*e*P	P	20 28 45.7 +0.5
	comp=Z,4.9nm,1.0s					
SUMG	Summit	59.03	4	*e*P	P	20 28 45.7 +0.5
SUMG				pmax	pmax	
	comp=Z,5.0nm,1.0s					
BEKR	Beckworth	59.27	63	*e*P	P	20 28 48.4 +1.3
	comp=Z,5.9nm,1.1s					
NVAR	Mina Array Bea	61.41	63	P	P	20 29 02.7 +0.9
	comp=Z,0.9nm,0.6s,baz=287,slow=6.5,SNR=3.2					
FINES	FINESS Array B	62.67	335	P	P	20 29 08.7 -0.7
	comp=Z,2.8nm,0.4s,baz=38,slow=7.4,SNR=66					
PDAR	Pinedale Array	63.54	55	P	P	20 29 16.6 +0.7
	comp=Z,0.4nm,0.4s,baz=299,slow=1.5,SNR=5.3					
GEYT	Alibeck	66.02	301	P	P	20 29 31.7 0.0
	comp=Z,1.8nm,0.7s,baz=330,slow=5.1,SNR=6.2					
NB2	NORSAR Subarra	66.76	341	P	P	20 29 35.4 -0.6
	comp=Z,1.0nm,0.5s,baz=26,slow=6.5					
NOA	NORSAR Array B	66.76	341	P	P	20 29 35.5 -0.6
	comp=Z,1.1nm,0.5s,baz=25,slow=6.3,SNR=16					
KBZ	Khabaz	69.93	314	P	P	20 29 54.2 -1.7
	comp=Z,1.4nm,0.7s,baz=45,slow=5.7,SNR=3.2					
WRA	Warramunga Arr	70.17	199	P	P	20 29 57.3 -0.3
	comp=Z,3.5nm,0.9s,baz=16,slow=5.4,SNR=7.7					
AKASG	Malin Array Be	70.34	326	P	P	20 29 56.5 -1.8
	comp=Z,0.5nm,0.3s,baz=34,slow=5.9,SNR=3.6					
ASAR	Alice Springs	73.87	199	P	P	20 30 20.1 +0.5
	comp=Z,0.8nm,0.6s,baz=8,3,slow=5.5,SNR=9.5					
BUR08	Bucovina Ar. S	74.35	327	*e*P	P	20 30 22.2 -0.2
	comp=Z,2.2nm,0.7s					
BURAR	Bucovina Array	74.37	327	⇑*i*P	P	20 30 22.5 0.0
TESR	Tescani	74.76	325	⇓*i*P	P	20 30 24.5 -0.1
LANS	Liptovska Anna	75.05	331	*e*P	P	20 30 27.7 +1.4
LANS	Liptovska Anna	75.05	331	*e*P	P	20 30 27.7 +1.4
CLL	Collm	75.08	336	*i*P	P	20 30 25.3 -1.1
	comp=Z,5.0nm,0.6s					
CLL	Collm	75.08	336	*i*P	P	20 30 25.3 -1.1
CLL				pmax	pmax	
	comp=Z,5.0nm,0.6s					
MORC	Moravsky Berou	75.11	332	⇓*i*P	P	20 30 27.2 +0.5
CFR	Carcaliu	75.29	323	⇑*i*P	P	20 30 27.9 +0.3
OZUR		75.43	325	⇓*i*P	P	20 30 28.9 +0.4
TLB	Topalu	75.81	323	⇑*i*P	P	20 30 30.3 -0.3
VRAC	Vranov	75.82	333	⇑*i*P	P	20 30 30.9 +0.3
VYHS	Vyhne	75.83	331	*e*P	P	20 30 31.2 +0.5
VYHS	Vyhne	75.83	331	*e*P	P	20 30 31.2 +0.5
MLR	Muntele Rosu	75.88	325	*e*P	P	20 30 31.1 -0.1
	comp=Z,4.2nm,0.6s					
MLR	Muntele Rosu	75.88	325	*e*P	P	20 30 31.1 -0.1
MLR				pmax	pmax	
	comp=Z,4.0nm,0.6s					
VOIR		76.27	325	⇓*i*P	P	20 30 33.6 +0.3
TX31	Lajitas Ar. Si	76.42	61	*e*P	P	20 30 35.3 +0.8
	comp=Z,6.4nm,1.6s					
TXAR	Lajitas Array	76.43	61	P	P	20 30 35.2 +0.7
	comp=Z,0.9nm,0.5s,baz=297,slow=4.7,SNR=14					
KHC	Kasperske Hory	76.88	334	*e*P	P	20 30 36.5 -0.1
KHC				*e*		20 30 42.5
KHC	Kasperske Hory	76.88	334	*e*P	P	20 30 36.5 -0.1
KHC				*ex*	x	20 30 42.5
GERES	GERESS Array B	77.10	334	P	P	20 30 37.9 -0.1
	comp=Z,0.7nm,0.5s,baz=19,slow=5.7,SNR=6.2					
BZS	Buzias	77.38	328	⇓*i*P	P	20 30 39.7 +0.3
BRTR	Keskin Array B	77.39	317	P	P	20 30 40.0 +0.2
	comp=Z,0.9nm,0.6s,baz=52,slow=5.4,SNR=5.8					
VTS	Vitosha	79.35	325	*e*P	P	20 30 50.6 0.0
	comp=Z,4.1nm,0.7s					
VTS	Vitosha	79.35	325	⇑*i*P	P	20 30 51.0 +0.4
VTS	Vitosha	79.35	325	*e*P	P	20 30 50.6 0.0
VTS				pmax	pmax	
	comp=Z,4.0nm,0.7s					

IDC ***18*** *21:40:44.1±1.5, 33°.94N×25°.29E, h0km, mb3.5/2, mb1 3.5/8, mb1mx3.3/43, mbtmp3.4/8, ML3.4/6, Error ellipse: s-maj=25.3km s-min=19.4km az=53.0*
ISK ***18*** *20:40:48.9, 34°.10N×25°.15E, h87km, ML3.5/13*
THE ***18*** *20:40:48.8, 34°.03N×25°.19E, h7km±4km, ML3.1/3, Error ellipse: s-maj=4.8km s-min=2.2km az=146.0*
ATH ***18*** *20:40:50.9, 34°.23N×25°.16E, h39km±5km, ML2.9/7, Error ellipse: s-maj=11.2km s-min=2.0km az=359.0*
DDA ***18*** *20:41:28.3, 34°.05N×25°.14E, h88km, ML3.6*
ISC 18 20:40:46.9±0.9, 33°.93N±0°.07×25°.26E±0°.04, h20km±6km, n64, σ1§37/73, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIVA	Sivas	1.14	341	P		Pn	Pn	20 41 07.4	-0.3
SIVA				S		Sn	Sn	20 41 23.2	+0.4
SIVA	Sivas	1.14	341	P		Pn	Pn	20 41 07.5	-0.3
SIVA				AML		AML	AML	20 41 26.7	
	comp=E,4770μm,0.7s								
SIVA				AML		AML	AML	20 41 38.1	
	comp=N,4550μm,0.6s								
LAST	Lasithi	1.24	8	P		Pn	Pn	20 41 09.1	0.0
LAST				S		Sn	Sn	20 41 26.9	+1.6
LAST	Lasithi	1.24	8	P		Pn	Pn	20 41 09.2	+0.1
LAST				AML		AML	AML	20 41 37.4	
	comp=N,711μm,0.9s								
LAST				AML		AML	AML	20 41 43.3	
	comp=E,814μm,0.8s								
GVD	Gavdhos	1.32	313	PN		Pb	Pb	20 41 11.0	0.0
GVD				SN		Sb	Sb	20 41 27.1	-0.5
GVD	Gavdhos	1.32	313	P		Pb	Pb	20 41 10.8	-0.2
GVD				S		Sb	Sb	20 41 27.0	-0.5
GVD	Gavdhos	1.32	313	P		Pb	Pb	20 41 11.1	0.0
GVD				AML		AML	AML	20 41 38.3	
	comp=E,1160μm,0.4s								
GVD				AML		AML	AML	20 41 39.8	
	comp=N,1558μm,0.5s								
GVDS	Gavdos	1.32	314	P		Pb	Pb	20 41 12.0	+1.0
NPS	Neapolis	1.36	12	P		Pn	Pn	20 41 11.1	+0.4
NPS	Neapolis	1.36	12	P		Pb	Pb	20 41 11.3	-0.3
NPS				AML		AML	AML	20 41 41.4	
	comp=N,635μm,0.7s								
NPS				AML		AML	AML	20 41 51.0	
	comp=E,741μm,0.6s								
KSTL	Kastelli Herak	1.38	354	P		Pn	Pn	20 41 09.8	-1.1
KSTL				S		Sn	Sn	20 41 27.0	-1.5
IDI	Anoyia	1.39	348	Pn		Pb	Pb	20 41 11.4	-0.7
	comp=E,17nm,0.3s,baz=178,slow=22,SNR=49								
IDI				Sn		Sb	Sb	20 41 30.3	+0.9
	comp=E,16nm,0.3s,baz=32,slow=16,SNR=8.1								
ZKR	Zakros	1.42	34	PN		Pb	Pb	20 41 13.5	+0.8
ZKR				SN		Sb	Sb	20 41 31.3	+0.9
ZKR	Zakros	1.42	34	P		Pb	Pb	20 41 13.4	+0.8
ZKR	Zakros	1.42	34	P		Pb	Pb	20 41 13.6	+0.8
ZKR				AML		AML	AML	20 41 44.3	
	comp=E,892μm,0.6s								
ZKR				AML		AML	AML	20 41 47.8	
	comp=N,379μm,0.5s								
VAM	Vamos	1.71	330	P		Pb	Pb	20 41 16.5	-1.1
VAM	Vamos	1.71	330	P		Pb	Pb	20 41 16.4	-1.1
VAM				AML		AML	AML	20 41 50.1	
	comp=E,836μm,1.1s								
VAM				AML		AML	AML	20 41 55.0	
	comp=N,714μm,0.8s								
IMMV	Iera Moni Meta	1.85	326	PN		Pn	Pn	20 41 18.3	+0.8
IMMV	Iera Moni Meta	1.85	326	P		Pn	Pn	20 41 18.2	+0.8
IMMV	Iera Moni Meta	1.85	326	P		Pn	Pn	20 41 18.0	+0.6
IMMV				AML		AML	AML	20 41 55.7	
	comp=E,853μm,0.8s								
IMMV				AML		AML	AML	20 42 03.5	
	comp=N,630μm,1.0s								
KARP	Karpathos	2.25	44	PN		Pb	Pb	20 41 25.3	-1.5
KARP	Karpathos	2.25	44	P		Pb	Pb	20 41 25.4	-1.4
ANKY	Antikythira Is	2.51	321	P		Pn	Pn	20 41 26.8	+0.3
MHLO	Agia Marina, M	2.84	346	P		Pn	Pn	20 41 31.0	0.0
KTHR	Kythira	2.97	322	P		Pn	Pn	20 41 34.2	+1.4
APE	Apeiranthos	3.14	4	PN		Pn	Pn	20 41 35.4	+0.2
ARG	Arkhangelos	3.28	45	PN		Pn	Pn	20 41 38.9	+1.9
ARG	Arkhangelos	3.28	45	P		Pn	Pn	20 41 39.7	+2.6
VLI	Veliai	3.36	326	P		Pn	Pn	20 41 38.0	-0.3
DAT	Datca	3.37	34	PN		Pn	Pn	20 41 39.7	+1.2
DAT	Datca	3.37	34	*i* P		Pn	Pn	20 41 39.0	+0.5
DAT				IAML_P					
	comp=Z,143nm,0.2s								
DALY	Dalyan (Mula)	4.00	43	PN		Pn	Pn	20 41 48.6	+1.6
DALY	Dalyan (Mula)	4.00	43	*i* P		Pn	Pn	20 41 49.4	+2.5
DALY				IAML_P					
	comp=Z,403nm,0.2s								
TURN	Turunc	4.01	42	PN		Pn	Pn	20 41 44.7	-2.4
TURN	Turunc	4.01	42	*i* P		Pn	Pn	20 41 45.0	-2.1
TURN				IAML_P					
	comp=Z,398nm,0.2s								
YER	Yerkesik	4.04	37	PN		Pn	Pn	20 41 48.8	+1.2
PYL	PYLOS	4.12	317	P		Pn	Pn	20 41 48.7	+0.1
FETY	Fethiye	4.13	48	PN		Pn	Pn	20 41 50.4	+1.5
FETY	Fethiye	4.13	48	*i* P		Pn	Pn	20 41 50.3	+1.5
FETY				IAML_P					
	comp=Z,378nm,0.2s								
ITM	Ithomi	4.23	321	PN		Pn	Pn	20 41 49.7	-0.4
ITM	Ithomi	4.23	321	P		Pn	Pn	20 41 49.8	-0.3
AKAS	Kas	4.24	56	PN		Pn	Pn	20 41 52.2	+1.8
AKAS	Kas	4.24	56	*i* P		Pn	Pn	20 41 52.9	+2.5
AMT	Artemida-Makis	4.61	322	P		Pn	Pn	20 41 57.7	+2.3
ELL	Elmali	4.73	52	PN		Pn	Pn	20 41 58.8	+1.7
AKUM	Antalya-Kumluc	4.80	59	*i* P		Pn	Pn	20 41 59.7	+1.7
LEF	Lefka	6.41	77	PN		Pn	Pn	20 42 21.9	+1.8
TEKE	Tekeli-Mersin	6.81	69	PN		Pn	Pn	20 42 27.1	+1.5
BERE	Bereket-Mersin	6.96	67	PN		Pn	Pn	20 42 29.2	+1.4
AKKU	Akkuyu-Mersin	7.16	70	PN		Pn	Pn	20 42 31.8	+1.4
IKL	Isikli	7.28	69	PN		Pn	Pn	20 42 33.4	+1.3
KEBE	Keben-Mersin	7.36	68	PN		Pn	Pn	20 42 34.8	+1.5
KIZK	Mersin	7.71	68	PN		Pn	Pn	20 42 39.5	+1.6
KZIT	Kziot	8.29	109	PN		Pn	Pn	20 42 48.7	+2.7
MMAI	Mount Meron Ar	8.53	93	Pn		Pn	Pn	20 42 49.8	+0.6
	comp=Z,0.5nm,0.3s,baz=259,slow=12,SNR=3.9								
MMAI				Sn		Sn	Sn	20 44 22.1	-2.8
	comp=Z,2.8nm,0.3s,baz=264,slow=23,SNR=6.0								
MMLI	Mount Malkishu	8.65	97	PN		Pn	Pn	20 42 52.7	+1.8
BRTR	Keskin Array B	8.86	47	Pn		Pn	Pn	20 42 54.5	+0.6
	comp=Z,0.0nm,0.3s,baz=213,slow=10,SNR=2.4								
HRFI	Mount Harif	9.17	112	PN		Pn	Pn	20 43 00.3	+2.3
EIL	Elat	9.28	115	Pn		Pn	Pn	20 42 58.9	-0.6
	comp=Z,0.6nm,0.3s,baz=316,slow=2.8,SNR=7.5								
EIL				Sn		Sn	Sn	20 44 40.6	-2.7
	comp=Z,0.4nm,0.3s,baz=9.5,slow=18,SNR=3.2								
ASF	Jabal al Asfar	9.93	97	Pn		Pn	Pn	20 43 08.4	0.0
	comp=Z,0.1nm,0.3s,baz=315,slow=8.6,SNR=1.8								
ASF				Sn		Sn	Sn	20 44 54.4	-4.9
	comp=Z,0.2nm,0.3s,baz=342,slow=19,SNR=3.1								
AKASG	Malin Array Be	17.01	9	Pn		Pn	Pn	20 44 43.5	+0.2
	comp=Z,0.4nm,0.3s,baz=199,slow=11,SNR=2.5								
GERES	GERESS Array B	17.21	333	P		Pn	Pn	20 44 46.2	+0.2
	comp=Z,0.1nm,0.3s,baz=156,slow=13,SNR=4.9								
TORD	Torodi Ar. Bea	29.78	232	P		P	P	20 46 52.8	+0.5
	comp=Z,0.3nm,0.6s,baz=40,slow=7.2,SNR=2.3								
MKAR	Makanchi Array	44.39	55	P		P	P	20 48 55.1	-0.9
	comp=Z,0.5nm,0.7s,baz=285,slow=6.4,SNR=2.9								

IDC ***18*** *21:01:34.8±0.7, 5°.83S×150°.11E, h0km, mb4.1/11, mb1 4.4/12, mb1mx4.1/36, mbtmp4.2/12, ML3.2/1, MS3.3/10, Ms1 3.3/10, ms1mx3.0/39, Error ellipse: s-maj=23.3km s-min=16.2km az=106.0*
NEIC ***18*** *21:01:38.6±2.8, 5°.99S×149°.73E, h10km±2km, mb4.2/7, Error ellipse: s-maj=24.5km s-min=9.8km az=133.0*
ISCJB ***18*** *21:01:40.3±0.6, 5°.965±0°.07×149°.9E±0°.1, h52km, mb4.1/12, MS3.4/7, Error ellipse: s-maj=16.2km s-min=8.1km az=28.7*
ISC 18 21:01:42.5±0.6, 6°.07S±0°.09×149°.9E±0°.1, h52km, n39, σ1§72/39, mb4.0/12, MS3.3/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RABL	Rabaul	2.96	51	*e*Pn		Pn	Pn	21 02 29.3	+2.2
RABL				*e*Sn		Sn	Sn	21 02 50.3	-11
PMG	Port Moresby	4.26	219	Pn		Pn	Pn	21 02 46.6	+1.8
	72nm,0.3s,baz=26,slow=5.1,SNR=95								
PMG				Sn		Sn	Sn	21 03 32.9	-0.3
	47nm,0.3s,baz=252,slow=19,SNR=4.8								
PMG	Port Moresby	4.26	219	*e*Pn		Pn	Pn	21 02 46.5	+1.8
PMG				*e*Sn		Sn	Sn	21 03 31.8	-1.4
JAY	Jayapura	9.79	291	LR		LR	LR	21 08 21.2	
	comp=Z,78nm,18.2s,baz=128,slow=41								
COEN	Coen	10.23	220	*e*Pn		Pn	Pn	21 04 07.0	+0.2
COEN				*e*Sn		Sn	Sn	21 05 55.2	-4.9
HNR	Honiara	10.54	109	LR		LR	LR	21 08 10.6	
	comp=Z,57nm,19.4s,baz=303,slow=38								
CTA	Charters Tower	14.37	194	LR		LR	LR	21 09 50.1	
	comp=Z,213nm,20.8s,baz=340,slow=34								
CTAO	Charters Tower	14.37	194	*e*Pn		Pn	Pn	21 05 00.5	-2.6
WC3	Warramunga Arr	20.42	226	*e*P		P	P	21 06 16.2	+0.7
	13nm,0.8s								
WRAB	Tennant Creek	20.42	226	*e*P		P	P	21 06 15.7	+0.2
	18nm,0.7s								
WB2	Warramunga Arr	20.43	226	*e*P		P	P	21 06 16.3	+0.7
	16nm,0.6s								
WR1	Warramunga Arr	20.43	226	*e*P		P	P	21 06 16.9	+1.2
WR1				*e*S		S	S	21 10 01.0	-0.8
WRA	Warramunga Arr	20.43	226	P		P	P	21 06 16.9	+1.2
	17nm,0.6s,baz=51,slow=10.0,SNR=88								
WRA				S		S	S	21 10 01.0	-0.8
	1.0nm,0.7s,baz=45,slow=21,SNR=2.4								
DZM	Mont Dzumac	22.58	136	P		P	P	21 06 38.3	-0.5
	4.5nm,0.6s,baz=118,slow=23,SNR=7.3								
DZM				LR		LR	LR	21 14 01.4	
	comp=Z,155nm,20.3s,baz=274,slow=33								
AS31	Alice Springs	23.27	220	*e*P		P	P	21 06 46.5	+0.8
	2.6nm,0.6s								
ASAR	Alice Springs	23

JYTA			S	Sg	21 19 01.5	-0.4
JKY	**Yasaka**	**0.95 316**	P	Pg	21 18 50.0	-0.3
JKY			S	Sg	21 19 02.4	-0.3
JAJ2	**Tsuna**	**1.00 238**	S	Sg	21 19 03.8	-0.6
MAT	**Matsushiro**	**2.45 49**	P	Pn	21 19 12.9	+1.0
MAT			S	Sb	21 19 48.4	+2.2

MEX 18 21:23:07.7±0.3, 24°.59N×98°.68W, h5km, MD3.8, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	**Linares**	**0.78**	**293**	*eP*	Pg	21 23 21.4	-1.3
	baz=113,slow=11						
LNIG				*i* S	Sg	21 23 31.9	-0.9

*ISCJB **18** 21:23:57.3±0.4, 27°.82N±0°.05×141°.1E±0°.1, h35km, mb4.0/18, Error ellipse: s-maj=15.0km s-min=4.8km az=157.2*
*JMA **18** 21:23:58.8±0.1, 28°.08N×142°.46E, h57km±4km, M4.4*
*IDC **18** 21:23:60.0±2.8, 27°.87N×141°.39E, h49km±24km, mb3.7/17, mb1 3.8/20, mb1mx3.6/60, mbtmp3.9/20, ML3.0/3, Error ellipse: s-maj=26.7km s-min=16.9km az=74.0*
ISC 18 21:23:59.0±0.6, 27°.88N±0°.08×141°.3E±0°.2, h35km, n39, σ1§63/39, mb4.0/18, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.08**	**136**	P	**Pn**	**21 24 17.1**	**-0.5**
JHH2	**Haha-jima-NKT2**	**1.44**	**149**	P	**Pn**	**21 24 23.5**	**+0.9**
JHH2				S	**Sn**	**21 24 41.2**	**+0.9**
JHJ	**Hachijo jima 2**	**5.40**	**346**	P	**Pn**	**21 25 19.0**	**+2.0**
	4.7nm,0.3s,baz=76,slow=19,SNR=3.1						
JHJ				S	**Sn**	**21 26 15.3**	**-2.6**
	5.0nm,0.3s,baz=73,slow=19,SNR=2.3						
BSO4	**Boso 4**	**7.14**	**353**	P	**Pn**	**21 25 43.2**	**+2.3**
JOD2	**Odawara 2**	**7.61**	**346**	P	**Pn**	**21 25 50.6**	**+3.2**
JHU	**Hanno**	**8.14**	**348**	P	**Pn**	**21 25 57.0**	**+2.3**
JHU				S	**Sn**	**21 27 27.6**	**+2.1**
JRY	**Ryogami san**	**8.38**	**346**	P	**Pn**	**21 26 00.7**	**+2.8**
JYT	**Yasato**	**8.38**	**354**	P	**Pn**	**21 26 00.1**	**+2.1**
JAG	**Ashikaga**	**8.67**	**350**	P	**Pn**	**21 26 02.5**	**+0.5**
JHO	**Hitachi**	**8.73**	**356**	P	**Pn**	**21 26 03.4**	**+0.6**
MJAR	**Matsushiro Arr**	**9.04**	**344**	P	**Pn**	**21 26 08.4**	**+1.4**
	0.2nm,0.3s,baz=162,slow=12,SNR=9.9						
MJAR				S	**Sn**	**21 27 49.5**	**+1.9**
	0.1nm,0.3s,baz=135,slow=28,SNR=3.2						
KSRS	**Korea Array**	**14.78**	**314**	P	**P**	**21 27 32.4**	**+1.4**
	0.2nm,0.3s,baz=122,slow=9.4,SNR=3.0						
USRK	**Uesurisk Ar.**	**17.94**	**338**	P	**Pn**	**21 28 04.7**	**-0.9**
	0.1nm,0.3s,baz=140,slow=12,SNR=3.9						
KLR	**Kul'dur**	**22.57**	**343**	P	**P**	**21 28 55.0**	**-1.1**
	1.9nm,0.5s,baz=157,slow=9.0,SNR=7.4						
H11N2	**WAKE ISLAND Hy**	**24.71**	**104**	T	T	21 54 17.1	
	baz=296,slow=75						
H11N1	**WAKE ISLAND Hy**	**24.71**	**104**	T	T	21 54 18.2	
	baz=296,slow=75						
H11N3	**WAKE ISLAND Hy**	**24.73**	**104**	T	T	21 54 12.4	
	baz=296,slow=75						
H11S3	**WAKE ISLAND Hy**	**25.06**	**106**	T	T	21 54 38.9	
	baz=297,slow=75,SNR=56						
H11S1	**WAKE ISLAND Hy**	**25.06**	**106**	T	T	21 54 39.9	
	baz=297,slow=75,SNR=37						
H11S2	**WAKE ISLAND Hy**	**25.07**	**106**	T	T	21 54 42.3	
	baz=297,slow=75,SNR=27						
SONM	**Songino Array**	**33.64**	**316**	P	**P**	**21 30 37.3**	**+0.9**
	0.5nm,0.6s,baz=111,slow=8.2,SNR=2.8						
TIXI	**Tiksi**	**44.36**	**354**	P	**P**	**21 32 02.9**	**-2.6**
	1.1nm,0.3s,baz=161,slow=5.9,SNR=4.5						
WRA	**Warramunga Arr**	**48.02**	**189**	P	**P**	**21 32 34.4**	**-0.4**
	1.7nm,0.3s,baz=9.9,slow=7.8,SNR=40						
ZALV	**Zalesovo Beam**	**48.41**	**319**	P	P	21 32 35.4	-2.2
	0.4nm,0.3s,baz=104,slow=8.1,SNR=2.8						
ZALV				PcP	**PcP**	**21 34 01.2**	**-2.3**
	0.8nm,0.5s,baz=108,slow=4.7,SNR=3.6						
MKAR	**Makanchi Array**	**49.40**	**309**	P	**P**	**21 32 43.7**	**-1.6**
	0.3nm,0.5s,baz=81,slow=11,SNR=4.6						
MKAR				PcP	**PcP**	**21 34 06.6**	**-0.7**
	0.3nm,0.5s,baz=72,slow=4.7,SNR=3.7						
ASAR	**Alice Springs**	**51.74**	**189**	P	**P**	**21 33 02.2**	**-0.9**
	0.4nm,0.9s,baz=0.3,slow=5.3,SNR=5.3						
KURBB	**Kurchatov Arra**	**51.96**	**314**	P	**P**	**21 33 04.2**	**-0.2**
	0.9nm,0.5s,baz=91,slow=7.6,SNR=22						
KURBB				PcP	**PcP**	**21 34 16.4**	**-0.2**
	0.3nm,0.6s,baz=96,slow=4.6,SNR=3.0						
BVAR	**Borovoye Array**	**56.97**	**317**	P	**P**	**21 33 41.0**	**+0.2**
	1.0nm,0.5s,baz=91,slow=7.3,SNR=9.5						
BVAR				PcP	**PcP**	**21 34 36.0**	**+0.2**
	0.6nm,0.5s,baz=76,slow=6.3,SNR=3.6						
ARU	**Arti**	**63.35**	**322**	P	**P**	**21 34 25.1**	**+0.7**
	1.5nm,0.4s,baz=104,slow=6.0,SNR=9.7						
ARCES	**ARCESS Array B**	**72.56**	**341**	P	**P**	**21 35 22.8**	**+0.6**
	7.9nm,0.3s,baz=13,slow=6.5,SNR=9.7						
FINES	**FINESS Array B**	**76.92**	**334**	P	**P**	**21 35 48.5**	**+1.0**
	4.7nm,0.4s,baz=68,slow=4.8,SNR=85						
NVAR	**Mina Array Bea**	**80.62**	**52**	P	**P**	**21 36 08.1**	**-0.4**
	0.6nm,0.6s,baz=297,slow=4.0,SNR=2.6						
AKASG	**Malin Array Be**	**81.55**	**323**	P	**P**	**21 36 12.2**	**-0.8**
	0.6nm,0.4s,baz=47,slow=5.2,SNR=3.1						
NB2	**NORSAR Subarra**	**82.61**	**338**	P	**P**	**21 36 18.5**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=46,slow=5.3						
NOA	**NORSAR Array B**	**82.61**	**338**	P	**P**	**21 36 18.2**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=45,slow=5.1,SNR=6.2						
BRTR	**Keskin Array B**	**84.93**	**312**	P	P	21 36 28.5	-2.3
	comp=Z,0.4nm,0.6s,baz=80,slow=3.1,SNR=2.7						
GERES	**GERESS Array B**	**90.46**	**328**	P	**P**	**21 36 56.1**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=56,slow=6.0,SNR=6.0						
TXAR	**Lajitas Array**	**95.73**	**53**	P	**P**	**21 37 20.8**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=311,slow=4.3,SNR=2.8						
LPAZ	**La Paz**	**150.43**	**73**	PKPbc	**PKPdf**	**21 43 46.6**	**+3.6**
	comp=Z,0.9nm,0.5s,baz=182,slow=5.0,SNR=4.0						

*SNET **18** 21:41:10.9±1.2, 12°.82N×89°.02W, h29km±4km, ML4.0*
*UCR **18** 21:41:11.0±1.1, 12°.81N×89°.03W, h32km±11km, MD3.6, ML4.0*
ISC 18 21:41:10.2±2.0, 12°.78N±0°.08×89°.06W±0°.06, h29km±14km, n33, σ0§40/47, 8C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.84**	**360**	⇑*i* P	**Pn**	**21 41 26.1**	**-0.1**
SNVI	**San Vicente**	**0.86**	**14**	*eP*	**Pb**	**21 41 26.8**	**+0.1**
SNET	**Serv Nac Est T**	**0.92**	**349**	*eP*	**Pn**	**21 41 27.4**	**+0.1**
SNET				*eS*	**Sb**	**21 41 39.5**	**-0.2**
SNET				IAML		21 41 42.4	
	comp=Z,3μm,0.2s						
SNET	**Serv Nac Est T**	**0.92**	**349**	*eP*	**Pn**	**21 41 27.4**	**+0.1**
SNET				*eS*	**Sn**	**21 41 39.4**	**-0.3**
SNET				IAML		21 41 42.4	
	comp=Z,3μm,0.2s						
PAVA	**Las Pavas**	**0.94**	**7**	*eP*	**Pn**	**21 41 27.5**	**0.0**
PAVA				*eS*	**Sb**	**21 41 40.3**	**+0.1**
PAVA				IAML		21 41 41.5	
	comp=Z,7μm,0.0s						
PAVA	**Las Pavas**	**0.94**	**7**	*eP*	**Pn**	**21 41 27.5**	**0.0**
PAVA				*eS*	**Sb**	**21 41 40.3**	**+0.1**
PAVA				IAML		21 41 41.5	
	comp=Z,7μm,0.0s						
LBRS	**Las Brisas**	**0.95**	**1**	⇑*i* P	**Pn**	**21 41 28.1**	**+0.3**
CUSC	**San Salvador**	**0.96**	**352**	⇑*eP*	**Pn**	**21 41 27.9**	**+0.1**
CUSC				*eS*	**Sb**	**21 41 40.5**	**-0.3**
CUSC	**San Salvador**	**0.96**	**352**	⇑*eP*	**Pn**	**21 41 27.9**	**+0.1**
CUSC				*eS*	**Sb**	**21 41 40.5**	**-0.3**
LFU	**La Fuente**	**0.97**	**357**	⇑*i* P	**Pn**	**21 41 28.2**	**+0.2**
LFU	**La Fuente**	**0.97**	**357**	⇑*i* P	**Pn**	**21 41 28.2**	**+0.2**
BOQS	**Boqueron**	**0.98**	**347**	*eP*	**Pn**	**21 41 28.4**	**+0.2**
PACA	**Pacayal**	**0.99**	**46**	*eP*	**Pn**	**21 41 28.4**	**+0.1**
PACA				*eS*	**Sb**	**21 41 42.4**	**+0.7**
PACA				IAML		21 41 45.3	
	comp=Z,10μm,0.1s						
PACA	**Pacayal**	**0.99**	**46**	*eP*	**Pn**	**21 41 28.4**	**+0.1**
PACA				*eS*	**Sb**	**21 41 42.4**	**+0.7**
PACA				IAML		21 41 45.3	
	comp=Z,10μm,0.1s						
VSM	**San Miguel**	**1.00**	**50**	*eP*	**Pn**	**21 41 28.7**	**+0.1**
SBLS	**San Blas**	**1.19**	**332**	*eP*	**Pn**	**21 41 31.7**	**+0.5**
SBLS	**San Blas**	**1.19**	**332**	*eP*	**Pb**	**21 41 32.2**	**-0.2**
LCND	**La Caada**	**1.25**	**65**	*eP*	**Pn**	**21 41 31.9**	**+0.1**
LCND				*eS*	**Sn**	**21 41 47.7**	**+0.1**
LCND				IAML		21 41 50.4	
	comp=Z,2μm,0.4s						
LCND	**La Caada**	**1.25**	**65**	*eP*	**Pn**	**21 41 31.9**	**+0.1**
LCND				*eS*	**Sn**	**21 41 47.7**	**+0.1**
LCND				IAML		21 41 50.4	
	comp=Z,2μm,0.4s						
CAHU	**Cacacuatique**	**1.28**	**40**	*eP*	**Pn**	**21 41 32.5**	**+0.1**
CNCH	**Conchagua**	**1.29**	**67**	⇓*eP*	**Pn**	**21 41 32.4**	**0.0**
CNCH				*eS*	**Sb**	**21 41 49.3**	**-0.9**
CNCH	**Conchagua**	**1.29**	**67**	⇓*eP*	**Pn**	**21 41 32.4**	**0.0**
CNCH				*eS*	**Sb**	**21 41 49.3**	**-0.9**
CSGN	**Cosiguina Volc**	**1.47**	**82**	*eP*	**Pn**	**21 41 35.6**	**+0.8**
CSGN	**Cosiguina Volc**	**1.47**	**82**	*eP*	**Pn**	**21 41 35.6**	**+0.8**
MTO3	**Montecristo**	**1.64**	**350**	⇓*i* P	**Pn**	**21 41 37.8**	**+0.5**
MTO3	**Montecristo**	**1.64**	**350**	⇓*i* P	**Pn**	**21 41 37.8**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.15**	**54**	*eP*	**Pn**	**21 41 44.7**	**+0.6**
CNGN	**Cerro Negro**	**2.32**	**97**	*eP*	**Pn**	**21 41 46.9**	**+0.5**
CNGN				*eS*	**Sn**	**21 42 13.5**	**-0.5**
CNGN	**Cerro Negro**	**2.32**	**97**	*eP*	**Pn**	**21 41 46.9**	**+0.5**
CNGN				*eS*	**Sn**	**21 42 13.5**	**-0.5**
MOMN	**Momotombo**	**2.48**	**98**	*eP*	**Pn**	**21 41 48.9**	**+0.1**
MOMN	**Momotombo**	**2.48**	**98**	*eP*	**Pn**	**21 41 48.9**	**+0.1**
ESTN	**Estel**	**2.64**	**83**	*eP*	**Pn**	**21 41 51.5**	**+0.6**
MATN	**Matagalpa**	**3.06**	**87**	*eP*	**Pn**	**21 41 56.9**	**+0.2**

*DSN **18** 21:50:52.7±2.5, 26°.91N×58°.29E, h10km, ML4.0/10, Error ellipse: s-maj=38.4km s-min=11.9km az=179.0*
*IDC **18** 21:50:54.3±0.9, 26°.74N×57°.77E, h0km, mb3.5/14, mb1 3.6/16, mb1mx3.5/55, mbtmp3.6/16, ML3.4/2, MS3.2/11, Ms1 3.2/11, ms1mx3.0/45, Error ellipse: s-maj=18.8km s-min=16.6km az=151.0*
*TEH **18** 21:50:57.2, 26°.76N×57°.96E, h14km, ML4.1*
*OMAN **18** 21:50:59.7±1.2, 26°.78N×57°.94E, h35km±365km, ml3.8/11, Error ellipse: s-maj=52.5km s-min=15.9km az=7.0*
ISC 18 21:50:54.8±0.6, 26°.41N±0°.04×58°.01E±0°.04, h10km, n80, σ1§74/78, mb3.6/14, MS3.2/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.80**	**196**	*ePg*	Pn	21 51 20.4	+8.2
KHNJ	**Kahnooj**	**1.55**	**350**	*ePg*	**Pn**	**21 51 19.2**	**-3.4**
NIAN	**Nian**	**1.55**	**318**	*ePg*	**Pn**	**21 51 22.8**	**+0.3**
BANOM	**Banah**	**1.62**	**253**	*eP*	**Pg**	**21 51 27.5**	**+1.6**
	SNR=45						
BANOM	**Banah**	**1.62**	**253**	P	**Pg**	**21 51 28.0**	**+2.2**
SHME	**Shamm**	**1.72**	**258**	*eP*	**Pg**	**21 51 28.6**	**+0.7**
	SNR=49						
SHME				S	**Sg**	**21 51 55.4**	**+5.2**
SHME	**Shamm**	**1.72**	**258**	*ePn*	**Pg**	**21 51 29.2**	**+1.3**
MDH	**Madha**	**1.90**	**235**	*eP*	**Pg**	**21 51 30.4**	**-1.0**
	SNR=16						
MDH	**Madha**	**1.90**	**235**	P	**Pg**	**21 51 30.6**	**-0.7**
MDH	**Madha**	**1.90**	**235**	*ePn*	**Pg**	**21 51 30.7**	**-0.7**
GENO	**Geno**	**1.92**	**301**	*ePn*	**Pn**	**21 51 29.0**	**+1.3**
GENO				IAMB	IAmb	21 52 02.2	
	comp=N,0.0nm,0.6s						
MSFE	**Esma-Masafi**	**1.97**	**238**	*eP*	**Pg**	**21 51 31.3**	**-1.4**
	SNR=7.0						
MSFE	**Esma-Masafi**	**1.97**	**238**	*ePn*	**Pg**	**21 51 32.7**	**0.0**
UOSS	**Minazif**	**2.19**	**229**	*eP*	**Pg**	**21 51 36.3**	**-0.6**
	SNR=10						
UOSS	**Minazif**	**2.19**	**229**	*ePn*	**Pg**	**21 51 36.9**	**0.0**
UMQ	**Umm Al-Quwin**	**2.29**	**248**	*ePn*	**Pg**	**21 51 38.6**	**-0.2**
HATD	**Hatta, Dubai**	**2.32**	**227**	P	**Pg**	**21 51 38.4**	**-0.9**
HATD	**Hatta, Dubai**	**2.32**	**227**	P	**Pg**	**21 51 38.6**	**-0.8**
HATD	**Hatta, Dubai**	**2.32**	**227**	*ePn*	**Pg**	**21 51 39.5**	**+0.1**
CHBR	**Chabahar**	**2.37**	**110**	*ePn*	**Pb**	**21 51 40.0**	**+2.4**
ASHO	**Ashiyiah**	**2.47**	**226**	*i* P	**Pg**	**21 51 40.6**	**-1.6**
	SNR=15						
ASHO	**Ashiyiah**	**2.47**	**226**	*ePn*	**Pg**	**21 51 40.8**	**-1.4**
NAZ	**Nazwa, Dubai**	**2.55**	**237**	*i* P	**Pg**	**21 51 41.9**	**-1.9**
	SNR=12						
NAZ	**Nazwa, Dubai**	**2.55**	**237**	*ePn*	**Pg**	**21 51 44.3**	**+0.5**
SOHO	**SOHO**	**2.64**	**211**	P	**Pb**	**21 51 41.2**	**-1.0**
FAQ	**Al Faqa, Dubai**	**2.75**	**233**	P	**Pb**	**21 51 43.9**	**-0.1**
FAQ	**Al Faqa, Dubai**	**2.75**	**233**	*ePn*	**Pg**	**21 51 45.6**	**-1.9**
BIDO	**Bidbid**	**2.88**	**178**	P	**Pb**	**21 51 47.5**	**+1.1**
BIDO	**Bidbid**	**2.88**	**178**	*ePn*	**Pg**	**21 51 48.1**	**-2.0**
HOQ	**Hoqain**	**2.89**	**193**	P	**Pb**	**21 51 46.6**	**+0.1**
HOQ				S	**Sb**	**21 52 22.8**	**+0.9**
HOQ	**Hoqain**	**2.89**	**193**	*ePn*	**Pb**	**21 51 47.8**	**+1.3**
ASUD	**Al Ashush, Dub**	**3.01**	**234**	*i* P	**Pb**	**21 51 48.0**	**-0.5**
	SNR=23						
ASUD	**Al Ashush, Dub**	**3.01**	**234**	*ePn*	**Pb**	**21 51 49.5**	**+1.0**
ALNE	**Al Ain**	**3.12**	**222**	*i* P	**Pb**	**21 51 50.7**	**+0.3**
	SNR=7.2						
ALNE	**Al Ain**	**3.12**	**222**	*ePn*	**Pb**	**21 51 50.6**	**+0.2**
WSAR	**Wadi Sarin**	**3.21**	**170**	Pn	**Pb**	**21 51 51.7**	**-0.3**
	comp=N,8.3nm,0.3s,baz=341,slow=6.7,SNR=224						
WSAR				Sn	**Sb**	**21 52 33.2**	**+2.1**
	comp=N,28nm,0.3s,baz=315,slow=20,SNR=25						
SMDO	**Samad**	**3.34**	**179**	P	**Pb**	**21 51 55.1**	**+0.9**
SMDO				S	**Sb**	**21 52 37.5**	**+2.5**
ARQ	**Araqi**	**3.35**	**204**	P	**Pg**	**21 51 56.9**	**-2.2**
ARQ				S	**Sb**	**21 52 37.0**	**+1.8**
NGRK	**Negar Kerman**	**3.41**	**341**	*ePn*	**Pn**	**21 51 49.9**	**+1.4**
NGRK				IAMB	IAmb	21 52 46.4	
	comp=Z,0.0nm,0.8s						
KRBR	**Kerman**	**3.72**	**343**	*ePn*	**Pn**	**21 51 50.1**	**-2.6**
TVBK	**TV Kerman**	**3.73**	**343**	*ePn*	**Pn**	**21 51 53.6**	**+0.8**
BSY	**Bisya**	**3.73**	**192**	P	**Pb**	**21 52 01.1**	**+0.3**
BSY				S	**Sb**	**21 52 48.3**	**+2.2**
WBK	**Wadi Bani Khal**	**3.89**	**167**	P	**Pb**	**21 52 03.6**	**0.0**
WBK				S	**Sb**	**21 52 49.7**	**-1.0**
ZHSF	**Zahedan**	**4.01**	**37**	*ePn*	**Pn**	**21 51 57.0**	**+0.5**
KHGB	**Koh Gabri**	**4.17**	**341**	*ePn*	**Pn**	**21 52 00.3**	**+1.5**
KHGB				IAMB	IAmb	21 53 12.5	
	comp=Z,0.0nm,1.6s						
GHIR	**Ghir-Karzin**	**4.84**	**294**	*ePn*	**Pn**	**21 52 08.7**	**+0.8**
IBAF	**Bafgh**	**5.58**	**338**	*ePn*	**Pn**	**21 52 20.9**	**+2.8**
BSRN	**Basiran**	**5.62**	**10**	*ePn*	**Pn**	**21 52 18.0**	**-0.6**
IMEH	**Mehriz**	**5.79**	**330**	*ePn*	**Pn**	**21 52 20.7**	**-0.3**
IKOO	**Kooshah**	**6.05**	**8**	*ePn*	**Pn**	**21 52 25.2**	**+0.6**
ITEG	**Tejag**	**6.49**	**5**	*ePn*	**Pn**	**21 52 31.1**	**+0.5**
IDAH	**Dahanechah**	**6.51**	**14**	*ePn*	**Pn**	**21 52 34.3**	**+3.4**
ISAD	**Sadrabad**	**6.66**	**326**	*ePn*	**Pn**	**21 52 33.7**	**+0.7**
YZKH	**Yazd**	**6.66**	**334**	*ePn*	**Pn**	**21 52 32.0**	**-0.9**
TPRV	**Parvadeh(Tabas**	**6.69**	**350**	*ePn*	**Pn**	**21 52 34.6**	**+1.3**
IRAM	**Ramesheh**	**7.29**	**319**	*ePn*	**Pn**	**21 52 42.1**	**+0.5**
GEYT	**Alibeck**	**11.48**	**0**	Pn	Pn	21 53 34.4	-4.5
	comp=Z,0.1nm,0.3s,baz=185,slow=16,SNR=2.2						
GNI	**Garni**	**17.60**	**324**	LR	LR	22 02 53.7	
	comp=Z,69nm,18.8s,baz=111,slow=42						
EIL	**Elat**	**20.61**	**284**	P	**P**	**21 55 30.5**	**-3.7**
	comp=Z,1.4nm,0.4s,baz=63,slow=9.0,SNR=2.7						
MMAI	**Mount Meron Ar**	**20.69**	**294**	P	**P**	**21 55 31.7**	**-3.5**
	comp=Z,0.7nm,0.7s,baz=108,slow=12,SNR=2.4						
MMAI				LR	LR	22 05 40.5	
	comp=Z,87nm,18.6s,baz=195,slow=44						
AAK	**Ala-Archa**	**21.06**	**36**	P	**P**	**21 55 38.6**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=231,slow=13,SNR=2.9						
AKTO	**Aktyubinsk**	**23.98**	**0**	P	**P**	**21 56 07.6**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=193,slow=13,SNR=4.4						
AKTO				LR	LR	22 07 12.4	
	comp=Z,24nm,20.1s,baz=158,slow=41						
BRTR	**Keskin Array B**	**24.27**	**309**	P	**P**	**21 56 09.9**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=100,slow=11,SNR=2.2						
BRTR				LR	LR	22 08 10.4	
	comp=Z,73nm,18.9s,baz=104,slow=43						
MKAR	**Makanchi Array**	**27.97**	**37**	P	**P**	**21 56 45.5**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=211,slow=9.3,SNR=2.2						
MKAR				LR	LR	22 08 52.1	
	comp=Z,34nm,18.1s,baz=210,slow=39						
BVAR	**Borovoye Array**	**28.15**	**16**	P	**P**	**21 56 45.6**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=186,slow=12,SNR=3.9						
KURBB	**Kurchatov Arra**	**28.83**	**28**	P	**P**	**21 56 53.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=225,slow=8.3,SNR=2.9						
OBN	**Obninsk**	**32.68**	**337**	LR	LR	22 11 50.6	
	comp=Z,7.7nm,18.6s,baz=176,slow=39						
KIRV	**Kirov**	**32.72**	**352**	LR	LR	22 13 04.8	
	comp=Z,52nm,20.7s,baz=166,slow=41						
AKASG	**Malin Array Be**	**32.73**	**325**	LR	LR	22 10 41.6	
	comp=Z,45nm,21.2s,baz=55,slow=37						
ZALV	**Zalesovo Beam**	**33.90**	**29**	P	**P**	**21 57 36.2**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=234,slow=9.8,SNR=2.6						
GTA	**Gaotai**	**37.09**	**59**	*eP*	**P**	**21 58 10.1**	**+4.6**
GTA				pP	sP	21 58 14.1	+3.9
GTA				sP	pP	21 58 16.8	+7.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VAE	**Valguarnera**	**38.30**	**298**	P	**P**	**21 58 13.4**	**-2.4**
	comp=Z,2.0nm,0.4s,baz=100,slow=19,SNR=2.6						
CMAR	**Chiang Mai Arr**	**38.52**	**93**	LR	LR	22 17 17.2	
	comp=Z,54nm,18.0s,baz=243,slow=41						
FINES	**FINESS Array B**	**41.09**	**337**	P	**P**	**21 58 35.4**	**-3.0**
	comp=Z,1.5nm,1.1s,baz=131,slow=7.6,SNR=2.5						
SONM	**Songino Array**	**43.26**	**47**	LR	LR	22 17 39.6	
	comp=Z,53nm,18.3s,baz=256,slow=37						
NRIK	**Noril'sk**	**46.33**	**14**	LR	LR	22 21 59.4	
	comp=Z,53nm,18.4s,baz=193,slow=40						
ARCES	**ARCESS Array B**	**47.14**	**345**	P	**P**	**21 59 26.7**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=145,slow=9.6,SNR=2.7						
ESDC	**Sonseca Array**	**52.66**	**301**	P	**P**	**22 00 08.7**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=87,slow=6.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**54.23**	**267**	P	**P**	**22 00 21.7**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=78,slow=7.3,SNR=5.3						
ASAR	**Alice Springs**	**88.63**	**117**	P	**P**	**22 03 50.8**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=309,slow=5.9,SNR=3.0						

*IDC **18** 21:57:37.9±0.8, 34°.27N×24°.99E, h0km, mb4.0/12, mb1 4.1/20, mb1mx3.9/54, mbtmp4.0/20, ML4.0/7, MS2.8/2, Ms1 2.8/2, ms1mx2.3/46, Error ellipse: s-maj=15.3km s-min=13.8km az=50.0*
*ISCJB **18** 21:57:41.6±0.4, 34°.17N±0°.03×25°.12E±0°.03, h51km±5km, mb3.9/14, MS2.6/1, Error ellipse: s-maj=5.7km s-min=3.0km az=35.5*
*THE **18** 21:57:42.2, 34°.30N×25°.07E, h0km±1km, ML3.5/6, Error ellipse: s-maj=2.7km s-min=0.8km az=182.0*
*HLW **18** 21:57:43.6, 34°.21N×25°.33E, h10km±14km, Md3.9, Ml3.9*
*ATH **18** 21:57:44.3, 34°.45N×25°.05E, h37km±2km, ML3.4/8, Error ellipse: s-maj=4.7km s-min=1.4km az=358.0*
*GII **18** 21:57:49.7±0.0, 33°.82N×26°.16E, h1km, MD3.5/5*
*DDA **18** 21:58:13.0, 34°.12N×25°.17E, h10km, ML3.7*
ISC 18 21:57:43.4±0.8, 34°.21N±0°.05×25°.16E±0°.05, h36km±1km, n174, σ2§07/193, mb3.9/14, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**340**	P	**Pn**	**21 57 57.0**	**-2.0**
SIVA				S	**Sn**	**21 58 08.4**	**-2.0**
SIVA	**Sivas**	**0.86**	**340**	P	**Pn**	**21 57 57.0**	**-2.0**
SIVA				AML	AML	21 58 18.2	
	comp=E,20279μm,0.7s						
SIVA				AML	AML	21 58 19.6	
	comp=N,20848μm,0.7s						
LAST	**Lasithi**	**0.99**	**15**	P	**Pn**	**21 57 59.9**	**-0.9**
LAST				S	**Sn**	**21 58 14.1**	**+0.5**
LAST	**Lasithi**	**0.99**	**15**	P	**Pn**	**21 58 00.0**	**-0.8**
LAST				AML	AML	21 58 22.1	
	comp=N,3503μm,0.6s						
LAST				AML	AML	21 58 22.2	
	comp=E,3355μm,0.7s						
GVD	**Gavdhos**	**1.09**	**306**	P	**Pn**	**21 58 00.7**	**-1.5**
GVD	**Gavdhos**	**1.09**	**306**	P	**Pn**	**21 58 01.0**	**-1.1**
GVD	**Gavdhos**	**1.09**	**306**	P	**Pn**	**21 58 01.1**	**-1.1**
GVD				AML	AML	21 58 26.7	
	comp=E,6866μm,0.4s						
GVD				AML	AML	21 58 29.3	
	comp=N,4778μm,0.5s						
IACM	**Heraklion**	**1.10**	**356**	P	**Pn**	**21 58 01.8**	**-0.4**
IDI	**Anoyia**	**1.10**	**348**	Pn	**Pn**	**21 58 00.7**	**-1.6**
	comp=N,46nm,0.3s,baz=172,slow=17,SNR=108						
IDI				Sn	**Sn**	**21 58 15.5**

DSF	Desfina	4.71	334	P		Pn	21 58 50.8	-1.1
AKUM	Antalya-Kumluc	4.73	62	*i* P		Pn	21 58 53.9	+1.7
ATAL	Atalanti	4.80	340	P		Pn	21 58 52.4	-0.8
KALE	Kalithea	4.84	331	P		Pn	21 58 53.0	-0.7
TRIZ	Trizonia	4.84	330	P		Pn	21 58 53.3	-0.4
SWA2		4.95	177	P		Pn	21 58 57.1	+1.8
baz=178								
KORT	Korkueli	5.06	55	*e*P		Pn	21 58 58.5	+1.6
KULA	Kula-Manisa	5.14	32	*e*P		Pn	21 58 59.6	+1.7
ANTB	Antalya	5.22	57	*e*P		Pn	21 59 00.8	+1.9
FSK	Fiskardo	5.64	320	P		Pn	21 59 05.4	+0.7
LKD2	Lefkada island	5.84	323	P		Pn	21 59 07.6	+0.2
KEPZ	Antalya-Kepez	5.90	61	*i* P		Pn	21 59 09.4	+1.2
KEPZ				IAML_P				
comp=Z,423nm,0.2s								
LEF	Lefka	6.43	80	*e*P		Pn	21 59 15.3	-0.3
HNAT	Natroun	6.50	133	P		Pn	21 59 18.4	+1.8
baz=134								
TEKE	Tekeli-Mersin	6.79	71	*e*P		Pn	21 59 20.8	+0.3
KONT	Konya--Tatoy	6.92	55	*e*P		Pn	21 59 23.9	+1.6
BERE	Bereket-Mersin	6.93	70	*e*P		Pn	21 59 23.1	+0.6
LADK	Ladik-KONYA	7.05	54	*e*P		Pn	21 59 25.8	+1.6
TEVE	Tevekalti-Mers	7.12	69	*e*P		Pn	21 59 26.3	+1.2
AKKU	Akkuyu-Mersin	7.14	72	*e*P		Pn	21 59 26.1	+0.8
GLL	Jalalah	7.23	128	P		Pn	21 59 27.8	+1.3
baz=128								
IKL	Isikli	7.26	71	*e*P		Pn	21 59 27.4	+0.4
KEBE	Keben-Mersin	7.34	70	*e*P		Pn	21 59 29.4	+1.4
EREN	Erenkoy	7.52	77	*e*P		Pn	21 59 31.4	+0.9
NBNS	Bani Suef	7.64	135	P		Pn	21 59 33.9	+1.7
baz=135								
KIZK	Mersin	7.68	70	*e*P		Pn	21 59 33.8	+1.1
MERS	Mersin	8.08	68	*e*P		Pn	21 59 39.3	+1.1
OFRI	`Ofer	8.36	98	Pn		Pn	21 59 42.8	+0.7
OFRI				Sn		Sn	22 01 10.6	-4.7
KZIT	Kziot	8.46	110	Pn		Pn	21 59 43.4	0.0
KZIT				Sn		Sn	22 01 12.1	-5.5
KZIT	Kziot	8.46	110	P		Sn	22 01 03.3	-14
SLTI	Sal'it	8.50	101	Pn		Pn	21 59 44.0	0.0
KARA	Karaisali	8.60	66	*e*P		Pn	21 59 46.4	+1.1
MMA0B	Mount Meron ar	8.62	95	Pn		Pn	21 59 46.5	+0.8
MMAI	Mount Meron Ar	8.62	95	Pn		Pn	21 59 45.5	-0.2
comp=Z,2.2nm,0.3s,baz=262,slow=12,SNR=16								
MMAI				Sn		Sn	22 01 16.8	-5.0
comp=Z,6.5nm,0.3s,baz=275,slow=23,SNR=12								
AMAZ	Amatzia	8.62	105	Pn		Pn	21 59 46.2	+0.5
AMAZ				Sn		Sn	22 01 17.1	-4.6
AMAZ	Amatzia	8.62	105	P		Sn	22 01 19.1	-2.6
BRTR	Keskin Array B	8.73	48	Pn		Pn	21 59 47.3	0.0
comp=Z,0.1nm,0.3s,baz=224,slow=13,SNR=3.9								
BRTR				Sn		Sn	22 01 17.4	-7.2
comp=Z,0.0nm,0.3s,baz=204,slow=17,SNR=1.9								
MMLI	Mount Malkishu	8.76	99	*e*P		Pn	21 59 47.7	+0.1
MMLI	Mount Malkishu	8.76	99	Pn		Pn	21 59 48.5	+0.9
YTIR	Yattir	8.84	106	Pn		Pn	21 59 49.4	+0.6
YTIR				Sn		Sn	22 01 22.8	-4.4
NATI	Neve Ativ	8.86	93	Pn		Pn	21 59 50.3	+1.5
HMDT	Nahal Hemdat	8.90	100	Pn		Pn	21 59 50.3	+0.9
HMDT				Sn		Sn	22 01 23.6	-4.7
SHMJ	Saham	8.98	97	P		Sn	22 01 28.9	-1.5
DSI	Dead Sea	8.98	104	Pn		Pn	21 59 51.7	+1.1
BRBR	Barbar	9.01	92	*e*P		Sn	22 01 25.4	-6.1
MZDA	Masada	9.06	106	Pn		Pn	21 59 51.9	+0.3
MZDA				Sn		Sn	22 01 28.0	-4.3
KRMI	Paran Flat	9.07	114	Pn		Pn	21 59 51.8	0.0
PRNI	Paran	9.17	112	Pn		Pn	21 59 53.5	+0.3
PRNI				Sn		Sn	22 01 29.7	-5.5
LISJ	El Lisan	9.18	106	P		Sn	22 01 31.9	-3.3
ZFRI	Zfri	9.22	111	Pn		Pn	21 59 53.4	-0.4
ZFRI				Sn		Sn	22 01 31.2	-5.0
KOZT	Kozan	9.25	66	*e*P		Pn	21 59 54.9	+0.6
QASN	Qassioun	9.27	91	*e*P		Sn	22 01 25.0	-13
VAE	Valguarnera	9.32	294	Sn		Sn	22 01 29.9	-8.9
comp=Z,0.7nm,0.3s,baz=105,slow=19,SNR=2.1								
WALJ	Wala	9.33	103	P		Sn	22 01 36.5	-2.6
HRFI	Mount Harif	9.35	114	*e*P		Pn	21 59 54.8	-0.8
HRFI	Mount Harif	9.35	114	Pn		Pn	21 59 56.1	+0.5
HRFI				Sn		Sn	22 01 34.9	-4.6
HRFI	Mount Harif	9.35	114	P		Sn	22 01 37.6	-1.9
MBRI	Mt Berech	9.37	115	Pn		Pn	21 59 56.1	+0.1
MBRI				Sn		Sn	22 01 35.8	-4.4
HDK1	Dakhla	9.38	156	P		Pn	21 59 57.3	+1.1
baz=156								
TOTH	TOTAH	9.41	92	*e*P		Sn	22 01 36.0	-5.2
EIL	Elat	9.46	116	Pn		Pn	21 59 57.9	+0.7
comp=Z,2.4nm,0.3s,baz=6.6,slow=2.0,SNR=15								
EIL				Sn		Sn	22 01 37.0	-5.3
comp=Z,1.9nm,0.3s,baz=169,slow=6.5,SNR=6.7								
EIL	Elat	9.46	116	Pn		Pn	21 59 57.4	+0.2
JDRJ	Daraweish	9.52	108	P		Sn	22 01 41.3	-2.7
ASF	Jabal al Asfar	10.04	98	Pn		Pn	22 00 06.2	+1.0
comp=Z,0.3nm,0.3s,baz=238,slow=9.5,SNR=2.2								
ASF				Sn		Sn	22 01 50.7	-5.9
comp=Z,0.6nm,0.3s,baz=148,slow=6.1,SNR=3.0								
SOKA	Soboth	14.64	331	*e*P		P	22 01 13.7	0.0
comp=Z,3.4nm,0.9s								
ARSA	Arzberg	14.92	334	*e*P		P	22 01 17.1	+0.3
comp=Z,4.1nm,0.9s								
VYHS	Vyhne	15.04	344	*e*PN		P	22 01 16.7	-1.4
KBA	Koelnbreinsper	15.65	329	*e*P		P	22 01 26.7	+1.6
comp=Z,2.7nm,0.6s								
ABTA	Abfaltersbach	15.77	326	*e*Pn		P	22 01 26.9	+0.6
comp=Z,6.2nm,0.7s								
MOA	Molln	15.89	332	*e*Pn		P	22 01 27.7	+0.1
comp=Z,3.9nm,0.8s								
VRAC	Vranov	16.37	340	Pn		Pn	22 01 29.8	-0.6
baz=146,slow=9.7,SNR=6.7								
WTTA	Wattenberg	16.56	326	*e*Pn		P	22 01 36.3	+1.1
comp=Z,2.9nm,0.6s								
WATA	Walderalm	16.64	326	*e*Pn		P	22 01 37.7	+1.8
comp=Z,3.1nm,0.9s								
KVAR	Kislovodsk Arr	16.70	49	Pn		P	22 01 38.0	+1.3
baz=252,slow=20,SNR=4.9								
KBZ	Khabaz	16.72	50	Pn		P	22 01 36.5	-0.3
comp=Z,0.3nm,0.3s,baz=273,slow=5.8,SNR=10								
SQTA	Sankt Quirin	16.73	325	*e*Pn		P	22 01 38.0	+1.0
comp=Z,3.9nm,1.0s								
AKASG	Malin Array Be	16.75	9	Pn		Pn	22 01 34.3	-0.8
comp=Z,1.5nm,0.3s,baz=201,slow=10,SNR=17								
FETA	Feichten	16.82	324	*e*Pn		P	22 01 40.2	+2.2
comp=Z,3.5nm,0.9s								
GERES	GERESS Array B	16.93	333	Pn		Pn	22 01 36.2	-1.2
comp=Z,0.4nm,0.3s,baz=144,slow=12,SNR=42								
DAVOX	Davos/Dischmat	17.08	322	LR		LR	22 10 18.6	
comp=Z,42nm,18.1s,baz=84,slow=45								
KHC	Kasperske Hory	17.21	334	*e*P		P	22 01 41.7	-0.5
DPC	Dobruska-Polom	17.39	341	*e*P		Pn	22 01 42.2	-0.9
DAVA	Damuels	17.42	323	Pn		P	22 01 48.2	+3.6
comp=Z,4.5nm,1.1s								
ESDC	Sonseca Array	23.85	292	P		P	22 02 53.1	-0.2
comp=Z,0.3nm,0.6s,baz=80,slow=8.9,SNR=3.0								
GEYT	Alibeck	26.82	72	P		P	22 03 22.6	+2.3
comp=Z,0.5nm,0.5s,baz=258,slow=7.2,SNR=2.4								
HFS	Hagfors	27.00	347	P		P	22 03 19.7	-2.0
comp=Z,1.6nm,0.7s,baz=140,slow=9.4,SNR=4.4								
FINES	FINESS Array B	27.26	1	P		P	22 03 21.8	-2.1
comp=Z,2.6nm,0.9s,baz=185,slow=14,SNR=4.9								
FINES				LR		LR	22 16 04.4	
comp=Z,14nm,18.0s,baz=144,slow=41								
NOA	NORSAR Array B	28.32	346	P		P	22 03 31.5	-2.0
comp=Z,0.2nm,0.4s,baz=160,slow=9.8,SNR=2.7								
EKA	Eskdalemuir Ar	28.82	326	P		P	22 03 35.2	-2.8
comp=Z,1.8nm,0.9s,baz=132,slow=7.0,SNR=5.2								
AKTO	Aktyubinsk	28.90	46	P		P	22 03 38.2	-0.6
comp=Z,0.7nm,0.5s,baz=246,slow=5.5,SNR=4.3								
TORD	Torodi Ar. Bea	29.89	231	P		P	22 03 46.5	-1.2
comp=Z,2.3nm,0.6s,baz=27,slow=8.8,SNR=22								
ARCES	ARCESS Array B	35.38	0	P		P	22 04 31.9	-3.3
comp=Z,9.6nm,0.4s,baz=185,slow=10.0,SNR=5.1								
MKAR	Makanchi Array	44.30	56	P		P	22 05 50.3	+0.6
comp=Z,1.5nm,0.6s,baz=275,slow=6.5,SNR=16								
ZALV	Zalesovo Beam	45.66	45	P		P	22 06 00.5	+0.1
comp=Z,3.3nm,0.5s,baz=268,slow=8.6,SNR=17								
NRIK	Noril'sk	48.74	25	P		P	22 06 24.1	0.0
comp=Z,1.1nm,0.5s,baz=290,slow=10,SNR=2.9								
MATP	Matopo	54.42	176	P		P	22 07 07.1	0.0
comp=Z,3.1nm,1.1s,baz=7.3,slow=9.9,SNR=5.2								
SONM	Songino Array	60.09	50	P		P	22 07 46.8	-0.3
comp=Z,0.5nm,0.4s,baz=290,slow=8.0,SNR=4.4								

NIED ***18*** *22:06:00, 43.°60N×147.°40E, h53km, Mw3.7 Best double couple: M0 3.84000×10^14 NP1:φs169.00000°, δ39.00000°, λ3.00000°. NP2:φs77.00000°, δ88.00000°, λ129.00000°.*

JMA ***18*** *22:06:09.8±0.3, 43.°59N×147.°39E, h15km±5km, M3.9*
ISCJB ***18*** *22:06:09.7±0.9, 43.°75N±0.°06×147.°52E±0.°08, h59km±8km, mb3.7/10, MS3.3/1, Error ellipse: s-maj=13.3km s-min=5.6km az=140.1*
SKHL ***18*** *22:06:10.5±0.0, 43.°72N×147.°57E, h69km±7km, mb4.2/4*
MOS ***18*** *22:06:11.9±1.1, 44.°04N×147.°30E, h65km, mb4.0/2, Error ellipse: s-maj=16.0km s-min=10.7km az=54.6*
IDC ***18*** *22:06:15.4±4.0, 44.°50N×147.°24E, h52km±29km, mb3.5/8, mb1 3.6/10, mb1mx3.4/32, mbtmp3.7/10, ML2.6/2, MS2.6/1, Ms1 2.6/1, ms1mx2.1/45, Error ellipse: s-maj=69.5km s-min=21.3km az=166.0*

ISC 18 22:06:10.0±1.4, 43.°72N±0.°07×147.°58E±0.°07, h41km±13km, n48, σ1§26/56, mb3.5/10, 4C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.28**	**285⇑**	*i* PN	**Pn**	**22 06 31.4**	**+0.1**
YUK				*i* S	**Sn**	**22 06 46.7**	**-0.5**
YUK				pmax	pmax		
comp=Z,1μm,0.2s							
YUK				pmax	pmax		
comp=E,430nm,0.1s							
YUK				smax	smax		
comp=N,3μm,0.3s							
YUK				smax	smax		
comp=E,3μm,0.5s							
YUK	**Yuzh-Kuril'sk**	**1.28**	**285**	*i* P	**Pn**	**22 06 31.0**	**-0.3**
YUK				AMB	AMB	22 06 32.0	
comp=E,130nm,0.3s							
YUK				*i* S	**Sn**	**22 06 46.0**	**-1.2**
YUK				A	A	22 06 47.0	
comp=E,294nm,0.4s							
YUK				A	A	22 06 47.0	
comp=E,311nm,0.4s							
GRPR	**Tuman**	**1.33**	**282**	*e*PN	**Pn**	**22 06 32.3**	**+0.2**
GRPR				*i* S	**Sn**	**22 06 48.2**	**-0.4**
GRPR				pmax	pmax		
comp=N,195nm,0.2s							
GRPR				pmax	pmax		
comp=Z,321nm,0.2s							
GRPR				pmax	pmax		
comp=E,172nm,0.1s							
GRPR				smax	smax		
comp=N,3μm,0.4s							
GRPR				smax	smax		
comp=E,1μm,0.4s							
GRPR	**Tuman**	**1.33**	**282**	*e*P	**Pn**	**22 06 32.0**	**-0.1**
GRPR				AMB	AMB	22 06 33.0	
comp=E,32nm,0.2s							
GRPR				*i* S	**Sn**	**22 06 48.0**	**-0.6**
GRPR				A	A	22 06 50.0	
comp=E,294nm,0.4s							
GRPR				A	A	22 06 50.0	
comp=E,1μm,0.4s							
LAGR	**Lagunnoye**	**1.34**	**285⇑**	*i* PN	**Pn**	**22 06 32.2**	**+0.1**
LAGR				*i* S	**Sn**	**22 06 48.3**	**-0.4**
LAGR				pmax	pmax		
comp=Z,293nm,0.1s							
LAGR				smax	smax		
comp=N,1μm,0.2s							
LAGR				smax	smax		
comp=E,1μm,0.2s							
LAGR	**Lagunnoye**	**1.34**	**285**	*i* P	**Pn**	**22 06 32.0**	**-0.1**
LAGR				AMB	AMB	22 06 32.0	
comp=E,29nm,0.2s							
LAGR				*i* S	**Sn**	**22 06 48.0**	**-0.7**
LAGR				A	A	22 06 48.0	
comp=E,145nm,0.5s							
LAGR				A	A	22 06 48.0	
comp=E,1μm,0.5s							
NEM2	**Nemuro 2**	**1.38**	**256**	P	**Pn**	**22 06 32.1**	**-0.6**
NEM2				*e*S	**Sn**	**22 06 48.2**	**-1.5**
KUR	**Kuril'sk**	**1.53**	**8⇑**	*i* PN	**Pn**	**22 06 35.5**	**+0.8**
KUR				*i* S	**Sn**	**22 06 53.3**	**0.0**
KUR				pmax	pmax		
comp=Z,185nm,0.3s							
KUR				pmax	pmax		
comp=N,38nm,0.2s							
KUR				pmax	pmax		
comp=E,91nm,0.2s							
KUR				smax	smax		
comp=E,203nm,0.1s							
KUR				smax	smax		
comp=N,788nm,0.2s							
KUR	**Kuril'sk**	**1.53**	**8**	*i* P	**Pn**	**22 06 35.0**	**+0.3**
KUR				AMB	AMB	22 06 36.0	
comp=N,185nm,0.4s							
KUR				*i* S	**Sn**	**22 06 53.0**	**-0.3**
KUR				A	A	22 06 54.0	
comp=N,380nm,0.2s							
KUR				A	A	22 06 54.0	
comp=N,203nm,0.2s							
JRA	**Rausu**	**1.79**	**278**	P	**Pn**	**22 06 38.9**	**+0.6**
JRA				*e*S	**Sn**	**22 07 00.0**	**+0.2**
JKHN	**Kushirohamanak**	**1.87**	**251**	P	**Pn**	**22 06 39.8**	**+0.3**
JNK	**Nakash**	**2.08**	**267**	P	**Pn**	**22 06 42.5**	**+0.2**
JNK				*e*S	**Sn**	**22 07 06.6**	**-0.4**
JAK	**Akkeshi**	**2.22**	**252**	P	**Pn**	**22 06 44.3**	**0.0**
JAK				*e*S	**Sn**	**22 07 09.6**	**-0.9**
JTKR	**Abashiri--Toko**	**2.67**	**277**	P	**Pn**	**22 06 52.0**	**+1.7**
JAR	**Ashorobuto**	**2.80**	**263**	P	**Pn**	**22 06 53.3**	**+1.1**
JAR				*e*S	**Sn**	**22 07 25.6**	**+0.8**
JOB	**Onbets**	**2.85**	**255**	P	**Pn**	**22 06 53.9**	**+1.0**
JOB				*e*S	**Sn**	**22 07 26.1**	**+0.1**
JCH	**Churui**	**3.28**	**252**	P	**Pn**	**22 06 59.8**	**+1.1**
JCH				*e*S	**Sn**	**22 07 36.9**	**+0.5**
JKA	**Kamikawa-asahi**	**3.62**	**278**	*e*P	**Pn**	**22 07 05.8**	**+2.4**
ASAJ	**Asahikawa**	**3.62**	**278**	P	**Pn**	**22 07 05.8**	**+2.4**
comp=N,0.4nm,0.3s,baz=77,slow=16,SNR=4.7							
ASAJ				S	**Sn**	**22 07 49.8**	**+4.8**
comp=N,1.4nm,0.3s,baz=153,slow=21,SNR=1.6							
ERM	**Erimo**	**3.67**	**244**	*i* PN	**Pn**	**22 07 06.1**	**+2.0**
JEM	**Erimo**	**3.67**	**244**	*e*S	**Sn**	**22 07 44.6**	**-1.5**
JNBK	**Urakawa-nobuka**	**3.82**	**250**	P	**Pn**	**22 07 07.1**	**+0.9**
PETK	**Petropavlovsk-**	**11.54**	**32**	P	**Pn**	**22 08 49.1**	**-2.9**
comp=N,0.4nm,0.3s,baz=207,slow=10,SNR=6.5							
PETK	**Petropavlovsk-**	**11.54**	**32**	*e*PN	**Pn**	**22 08 52.6**	**+0.6**
PET	**Petropavlovsk**	**11.86**	**34**	*i* PN	**Pn**	**22 08 56.9**	**+0.7**
PET	**Petropavlovsk**	**11.86**	**34**	*e*P	**Pn**	**22 08 56.8**	**+0.6**
KLR	**Kul'dur**	**12.21**	**302**	LR	LR	22 13 39.2	
comp=N,28nm,18.4s,baz=115,slow=38							
BILL	**Bilibino**	**26.30**	**16⇑**	*e*P	**P**	**22 11 40.3**	**-1.0**
BILL				*e*		22 12 27.0	
BILL				pmax	pmax		
comp=Z,1.0nm,1.1s							
BILL				MLR	MLR		
comp=Z,99nm,21.0s							
BILL	**Bilibino**	**26.30**	**16**	*e*P	**P**	**22 11 40.3**	**-1.0**
H11N2	**WAKE ISLAND Hy**	**28.88**	**140**	T	T	22 42 47.9	
baz=331,slow=76,SNR=46							
H11N1	**WAKE ISLAND Hy**	**28.89**	**140**	T	T	22 42 52.1	
baz=331,slow=76,SNR=47							
H11N3	**WAKE ISLAND Hy**	**28.89**	**140**	T	T	22 42 44.7	
baz=331,slow=76,SNR=48							
H11S1	**WAKE ISLAND Hy**	**29.85**	**141**	T	T	22 43 54.3	
baz=332,slow=76,SNR=190							
H11S3	**WAKE ISLAND Hy**	**29.86**	**141**	T	T	22 43 57.3	
baz=332,slow=76,SNR=99							
H11S2	**WAKE ISLAND Hy**	**29.87**	**141**	T	T	22 43 54.9	
baz=332,slow=76,SNR=86							
TBP	**Tagbilaran**	**39.68**	**218**	*e*P	P	22 13 34.0	-4.1
ILAR	**Eielson Array**	**41.33**	**36**	P	**P**	**22 13 51.1**	**-0.1**
comp=Z,0.9nm,0.6s,baz=262,slow=7.4,SNR=11							
MKAR	**Makanchi Array**	**44.87**	**298**	P	**P**	**22 14 19.5**	**-0.6**
comp=Z,0.2nm,0.4s,baz=80,slow=8.9,SNR=2.6							
INK	**Inuvik**	**46.27**	**30**	P	**P**	**22 14 31.4**	**+0.6**
comp=Z,1.8nm,0.5s,baz=298,slow=7.5,SNR=8.0							
YKA	**Yellowknife Ar**	**55.65**	**34**	P	**P**	**22 15 42.2**	**+0.8**
comp=Z,0.3nm,0.7s,baz=297,slow=7.5,SNR=3.7							
ARCES	**ARCESS Array B**	**59.38**	**340**	P	**P**	**22 16 06.8**	**-0.8**
comp=Z,10nm,0.5s,baz=30,slow=7.3,SNR=2.4							
FINES	**FINESS Array B**	**65.04**	**333**	P	**P**	**22 16 44.4**	**-1.1**
comp=Z,1.2nm,0.6s,baz=55,slow=7.2,SNR=15							
FINES	**FINESS Array B**	**65.04**	**333**	*e*P	**P**	**22 16 44.6**	**-0.9**
NB2	**NORSAR Subarra**	**69.74**	**339**	P	**P**	**22 17 14.5**	**-0.8**
comp=Z,0.1nm,0.4s,baz=44,slow=5.9							
NOA	**NORSAR Array B**	**69.74**	**339**	P	**P**	**22 17 14.1**	**-1.2**
comp=Z,0.2nm,0.4s,baz=32,slow=6.6,SNR=4.7							
NOA	**NORSAR Array B**	**69.74**	**339**	*e*P	**P**	**22 17 14.5**	**-0.8**
AKASG	**Malin Array Be**	**71.79**	**324**	P	**P**	**22 17 26.7**	**-1.2**
comp=Z,0.8nm,0.4s,baz=43,slow=6.1,SNR=4.1							
TXAR	**Lajitas Array**	**82.41**	**57**	P	**P**	**22 18 30.6**	**+2.6**
comp=Z,0.2nm,0.6s,baz=309,slow=3.0,SNR=1.6							

SVSA 18 22:14:32.1±0.8, 39.°28N×29.°22W, h15km, MD3.5, ML1.8, Error ellipse: s-maj=14.1km s-min=7.4km az=53.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.81**	**150**	*e*P	Pg	22 14 44.9	-3.0
CALA				*e*S	Sg	22 14 53.9	-4.7
ROSA	**Rosais**	**0.95**	**126**	*e*S	Sb	22 14 57.2	-5.5
ROSA				A	A	22 15 02.0	
4.1nm,0.1s							
PICO	**Pico**	**1.00**	**141**	*e*P	Pb	22 14 46.9	-4.2
PICO				*e*S	Sb	22 14 58.8	-5.3
PICO				A	A	22 15 01.0	
32nm,0.1s							
PCAN	**Candelaria**	**1.00**	**145**	*e*P	Pb	22 14 47.5	-3.6
PCAN				*e*S	Sb	22 14 58.7	-5.4
PCAN				A	A	22 15 00.9	
30nm,0.1s							
PPNO	**Prainha do Nor**	**1.10**	**137**	*e*S	Sb	22 15 01.5	-5.6
PPNO				A	A	22 15 05.3	
11nm,0.2s							

ISCJB ***18*** *22:15:37.9±1.2, 8.°0S±0.°2×74.°1W±0.°3, h150km, mb3.6/5, Error ellipse: s-maj=50.8km s-min=11.2km az=148.2*
IDC ***18*** *22:15:38.6±5.9, 8.°09S×74.°15W, h144km±64km, mb3.5/5, mb1 3.6/6, mb1mx3.3/35, mbtmp3.8/6, Error ellipse: s-maj=74.6km s-min=23.9km az=38.0*

ISC 18 22:15:38.9±1.3, 8.°2S±0.°2×74.°2W±0.°3, h150km, n6, σ0§60/7, mb3.8/5, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**10.03**	**144**	P	**Pn**	**22 18 00.0**	**0.0**
baz=330,slow=8.1,SNR=2.2							
LPAZ				S	**Sn**	**22 19 51.1**	**-0.3**
0.2nm,0.3s,baz=140,slow=14,SNR=2.4							
CPUP	**Villa Florida**	**24.17**	**140**	P	**P**	**22 20 41.9**	**+0.5**
2.1nm,0.7s,baz=312,slow=7.6,SNR=5.7							
TXAR	**Lajitas Array**	**46.84**	**324**	P	**P**	**22 23 54.3**	**+0.2**
0.2nm,0.5s,baz=160,slow=8.8,SNR=4.5							
DBIC	**Dimbokro**	**70.71**	**80**	P	**P**	**22 26 39.9**	**+0.6**
1.2nm,0.4s,baz=232,slow=4.9,SNR=4.9							
TORD	**Torodi Ar. Bea**	**78.29**	**75**	P	**P**	**22 27 22.4**	**-0.6**
1.2nm,0.6s,baz=259,slow=3.9,SNR=10							
ILAR	**Eielson Array**	**90.06**	**336**	P	**P**	**22 28 20.9**	**-0.4**
0.3nm,0.5s,baz=97,slow=7.8,SNR=4.3							

BJI ***18*** *22:27:00.4±0.0, 34.°41N×24.°69E, h11km, mb4.9/41, mB4.9/26, Ms4.7/9, Ms7 4.4/8*
IDC ***18*** *22:27:02.3±0.5, 34.°34N×25.°09E, h0km, mb4.5/29, mb1 4.6/41, mb1mx4.5/51, mbtmp4.5/41, ML4.0/9, MS3.7/23, Ms1 3.7/23, ms1mx3.6/50, Error ellipse: s-maj=11.6km s-min=10.9km az=12.0*
MOS ***18*** *22:27:04.1±1.2, 34.°37N×25.°02E, h19km, mb4.9/27, Error ellipse: s-maj=5.5km s-min=3.3km az=82.3*
ISCJB ***18*** *22:27:05.0±0.3, 34.°21N±0.°02×25.°10E±0.°02, h35km±2km, mb4.6/77, MS4.0/23, Error ellipse: s-maj=3.4km s-min=1.9km az=33.4*
MED_RC ***18*** *22:27:05.0±0.7, 34.°21N×25.°01E, h12km±6km, MW4.6/7, Moment Tensor Solution. Mantle waves: s7,c11; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr~0.05±.07; Mθθ 0.10±.05; Mφφ~0.05±.06; Mrθ 0.95±.62; Mφθ~0.32±.06; Mφr~0.25±.19; Best double couple: M0 1.03000×10^16 NP1:φs282.00000°, δ86.00000°, λ~105.00000°. NP2: φs178.00000°, δ15.00000°, λ~15.00000°. Principal axes: T 1.1200, Plg40.0000°, Azm25.0000°; N -0.1900, Plg15.0000°, Azm283.0000°; P -0.9300, Plg47.0000°, Azm176.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
HLW ***18*** *22:27:06.3, 34.°24N×25.°23E, h10km±14km, Md4.4, Ml4.4*
NEIC ***18*** *22:27:07.2±0.0, 34.°38N×25.°05E, h35km, mb4.6/68, ML4.3(THE), ML4.3(ATH), After ATH.*
THE ***18*** *22:27:07.0, 34.°38N×25.°05E, h0km±1km, ML4.3/9, Error ellipse: s-maj=2.0km s-min=0.7km az=173.0*
PDG ***18*** *22:27:07.3±0.3, 34.°50N×24.°35E, h13km±1km, ML4.5/11, Error ellipse: s-maj=37.2km s-min=30.2km az=90.0*
ATH ***18*** *22:27:07.2, 34.°38N×25.°05E, h35km±1km, ML4.3/9, Error ellipse: s-maj=3.1km s-min=1.1km az=352.0*
NIC ***18*** *22:27:12.1±0.2, 34.°01N×25.°65E, h25km, mb4.9, ML4.6*
GII ***18*** *22:27:14.7±0.0, 34.°04N×25.°95E, h20km, mb4.3/3, MD4.2/3*
DDA ***18*** *22:28:04.2, 34.°31N×25.°09E, h45km, ML4.4*

**ISC 18

comp=E,16811µm,0.6s
SNT2 Vlychada, Sant 2.07 9 P Pn 22 27 40.0 +1.1
THR9 Santorini-Faro 2.08 7 P Pb 22 27 41.5 -1.2
THR9 Santorini-Faro 2.08 7 P Pb 22 27 41.8 -0.9
THR6 Thira Island, 2.08 8 ePn Pn 22 27 40.5 +1.5
THR6 Thira Island, 2.08 8 P Pn 22 27 40.5 +1.5
THR6 Thira Island, 2.08 8 P Pn 22 27 40.6 +1.5
SAP1 Santorini-Akro 2.08 8 P Pn 22 27 40.5 +1.4
SAP1 Santorini-Akro 2.08 8 P Pb 22 27 41.5 -1.2
SANT Santorini 2.10 10 eP Pn 22 27 40.5 +1.1
SANT Santorini 2.10 10 ePn Pb 22 27 41.4 -1.8
SANT Santorini 2.10 10 P Pb 22 27 41.4 -1.8
SANT Santorini 2.10 10 P Pb 22 27 41.3 -1.8
ANKY Antikythira Is 2.11 318 ePn Pb 22 27 42.2 -1.1
ANKY Antikythira Is 2.11 318 P Pb 22 27 42.2 -1.1
ANKY S Sb 22 28 09.0 -0.1
ANKY Antikythira Is 2.11 318 P Pb 22 27 42.4 -0.9
THR3 Thira Island, 2.13 8 ePn Pn 22 27 41.1 +1.3
THR3 Thira Island, 2.13 8 P Pn 22 27 41.1 +1.3
THR3 Thira Island, 2.13 8 P Pn 22 27 41.4 +1.7
THR5 Thira Island, 2.13 7 P Pb 22 27 42.0 -1.7
SAP2K Karterados 2.14 9 P Pn 22 27 41.3 +1.4
SAP2K Karterados 2.14 9 P Pn 22 27 41.4 +1.5
ANAF Anafi Island 2.15 16 P Pn 22 27 40.9 +0.9
ANAF Anafi Island 2.15 16 P Pn 22 27 41.2 +1.2
ANAF AML AML 22 28 22.7
comp=E,9644µm,0.5s
ANAF AML AML 22 28 26.9
comp=N,10147µm,0.5s
SAP3 Santorini-Thir 2.15 7 P Pn 22 27 41.9 +1.8
SAP3 Santorini-Thir 2.15 7 P Pb 22 27 42.3 -1.7
KARP Karpathos 2.15 54 eP Pn 22 27 42.2 +2.1
KARP Karpathos 2.15 54 ePn Pb 22 27 42.5 -1.6
KARP Karpathos 2.15 54 P Pb 22 27 42.5 -1.6
KARP Karpathos 2.15 54 P Pb 22 27 42.7 -1.3
THT2 Imerovigli 2.16 9 P Pn 22 27 42.0 +1.8
CMBO Columbo, Santo 2.19 8 P Pn 22 27 42.5 +1.9
CMBO Columbo, Santo 2.19 8 P Pb 22 27 42.7 -2.0
IOSP Ios island 2.43 5 P Pn 22 27 45.0 +1.1
IOSP Ios island 2.43 5 P Pn 22 27 45.2 +1.3
MHLO Agia Marina, M 2.44 348 P Pn 22 27 45.3 +1.2
MHLO Agia Marina, M 2.44 348 P Pn 22 27 45.8 +1.7
MHLO AML AML 22 28 33.0
comp=N,9108µm,0.5s
MHLO AML AML 22 28 44.6
comp=E,13830µm,0.8s
MHLA Plaka, Milos I 2.50 349 P Pn 22 27 46.6 +1.8
KYTH Kithira 2.55 321 ePn Pb 22 27 48.2 -2.5
KYTH Kithira 2.55 321 P Pb 22 27 48.2 -2.5
KYTH Kithira 2.55 321 P Pb 22 27 48.5 -2.3
AMGA Amorgos Island 2.63 15 P Pn 22 27 47.5 +0.9
AMGA Amorgos Island 2.63 15 P Pn 22 27 47.9 +1.3
SLUM Salum 2.80 177 P Pn 22 27 50.0 +1.1
baz=181
SLUM AMP 22 28 00.0
baz=181
SLUM S Sn 22 28 21.4 -0.5
baz=181
APE Apeiranthos 2.80 8 eP Pn 22 27 50.3 +1.3
APE Apeiranthos 2.80 8 ePn Pn 22 27 49.8 +0.8
APE Apeiranthos 2.80 8 P Pn 22 27 49.8 +0.8
APE Apeiranthos 2.80 8 ||iP Pn 22 27 50.5 +1.5
APE Apeiranthos 2.80 8 eP Pn 22 27 49.8 +0.8
APE Apeiranthos 2.80 8 P Pn 22 27 50.2 +1.2
NISR Nisiros 2.88 36 ePn Pn 22 27 51.6 +1.6
NISR Nisiros 2.88 36 P Pn 22 27 51.6 +1.6
NISR Nisiros 2.88 36 P Pn 22 27 52.1 +2.0
SERI Serifos 2.90 351 P Pn 22 27 51.5 +1.2
SERI Serifos 2.90 351 P Pn 22 27 51.7 +1.4
VLI Veliai 2.96 325 ePn Pn 22 27 52.9 +1.7
VLI Veliai 2.96 325 P Pn 22 27 52.9 +1.7
VLI Veliai 2.96 325 P Pn 22 27 52.8 +1.7
ARG Arkhangelos 3.18 52 eP Pn 22 27 55.9 +1.7
ARG Arkhangelos 3.18 52 ePn Pn 22 27 56.1 +1.9
ARG Arkhangelos 3.18 52 P Pn 22 27 56.1 +1.9
ARG Arkhangelos 3.18 52 eP Pn 22 27 56.1 +1.9
ARG Arkhangelos 3.18 52 P Pn 22 27 56.4 +2.2
DAT Datca 3.20 40 eP Pn 22 27 55.6 +1.0
DAT Datca 3.20 40 iP Pn 22 27 56.5 +1.9
DAT IAML_P
comp=Z,2µm,0.2s
DATC Datca-Mugla 3.27 40 eP Pn 22 27 56.3 +0.9
BODT Bodrum 3.33 33 eP Pn 22 27 57.4 +1.1
BBRN Bozburun-Marma 3.43 45 eP Pn 22 27 58.6 +0.9
KRND KRANIDI 3.44 334 P Pn 22 27 59.1 +1.4
MATC Matruh 3.48 147 P Pn 22 27 58.4 +0.2
baz=149
DID Didima 3.52 336 ePn Pn 22 27 59.7 +0.8
DID Didima 3.52 336 P Pn 22 27 59.7 +0.8
DID Didima 3.52 336 P Pn 22 27 60.0 +1.1
MRSB Marmaris-Mugla 3.54 46 eP Pn 22 28 00.1 +0.9
EPID Epidavros 3.66 336 P Pn 22 28 02.4 +1.6
VLY Voula,Athens 3.69 345 ePn Pn 22 28 02.7 +1.5
VLY Voula,Athens 3.69 345 P Pn 22 28 02.7 +1.5
VLY Voula,Athens 3.69 345 P Pn 22 28 02.9 +1.7
SMG Samos 3.71 23 P Pn 22 28 02.8 +1.3
SMG Samos 3.71 23 P Pn 22 28 02.6 +1.1
PYL PYLOS 3.73 315 ePn Pn 22 28 01.9 +0.2
PYL PYLOS 3.73 315 P Pn 22 28 01.9 +0.2
PYL PYLOS 3.73 315 P Pn 22 28 02.0 +0.3
VLX Vlachokerasia 3.75 326 ePn Pn 22 28 04.2 +2.1
VLX Vlachokerasia 3.75 326 P Pn 22 28 04.2 +2.1
ATHU Athens Univers 3.80 345 ePn Pn 22 28 03.3 +0.6
ATHU Athens Univers 3.80 345 P Pn 22 28 03.3 +0.6
ATHU Athens Univers 3.80 345 P Pn 22 28 03.8 +1.1
ATH Athens Observa 3.82 344 P Pn 22 28 04.5 +1.5
ITM Ithomi 3.83 320 eP Pn 22 28 04.9 +1.8
ITM Ithomi 3.83 320 ePn Pn 22 28 04.7 +1.6
ITM Ithomi 3.83 320 P Pn 22 28 04.5 +1.4
ITM Ithomi 3.83 320 P Pn 22 28 04.6 +1.6
GCAM G?zelcaml? 3.84 27 eP Pn 22 28 05.2 +1.9
PTL Penteli 3.86 346 ePn Pn 22 28 04.8 +1.2
PTL Penteli 3.86 346 P Pn 22 28 04.8 +1.2
PTL Penteli 3.86 346 P Pn 22 28 05.1 +1.5
YER Yerkesik 3.88 42 eP Pn 22 28 05.4 +1.5
DALY Dalyan (Mula) 3.88 49 eP Pn 22 28 05.1 +1.3
DALY Dalyan (Mula) 3.88 49 iP Pn 22 28 06.6 +2.8
DALY IAML_P
comp=Z,3µm,0.3s
TURN Turunc 3.89 48 eP Pn 22 28 01.2 -2.7
TURN Turunc 3.89 48 iP Pn 22 28 01.8 -2.1
TURN IAML_P
comp=Z,6µm,0.3s
ACOR Acrocorínthos 3.99 335 P Pn 22 28 06.3 +0.9
MES3 Kyparissia 4.02 318 P Pn 22 28 06.7 +1.1
LOUT Loutraki 4.04 336 P Pn 22 28 07.4 +1.3
LOUT Loutraki 4.04 336 P Pn 22 28 08.2 +2.2
FETY Fethiye 4.05 54 eP Pn 22 28 06.8 +0.6
FETY Fethiye 4.05 54 iP Pn 22 28 07.9 +1.7
FETY IAML_P
comp=Z,4µm,0.3s
LTK Loutraki 4.08 336 ePn Pn 22 28 07.7 +1.2
LTK Loutraki 4.08 336 P Pn 22 28 07.7 +1.2
LTK Loutraki 4.08 336 P Pn 22 28 07.6 +1.0
VILL Villia 4.10 341 P Pn 22 28 07.9 +1.0
VIL2 Platees 4.16 341 P Pn 22 28 08.2 +0.5
KSL Kastellorizon 4.17 62 P Pn 22 28 08.4 +0.7
KSL S Sn 22 28 52.0 -3.6
KSL Kastellorizon 4.17 62 P Pn 22 28 08.5 +0.8
THAL Thalero 4.20 334 P Pn 22 28 09.8 +1.7
AMT Artemida-Makis 4.21 321 P Pn 22 28 10.1 +1.8
AMT Artemida-Makis 4.21 321 P Pn 22 28 10.2 +1.9
EREA Eretria 4.21 348 P Pn 22 28 09.8 +1.4
EREA Eretria 4.21 348 P Pn 22 28 10.1 +1.7
AKAS Kas 4.22 61 eP Pn 22 28 09.3 +0.7
AKAS Kas 4.22 61 iP Pn 22 28 09.7 +1.1
GUR Goura 4.23 330 ePn Pn 22 28 10.0 +1.2
GUR Goura 4.23 330 P Pn 22 28 10.0 +1.2
GUR Goura 4.23 330 P Pn 22 28 10.5 +1.7
URLA Izmir 4.25 17 eP Pn 22 28 10.5 +1.6
PROD Prodromos 4.31 337 P Pn 22 28 11.0 +1.2
PROD Prodromos 4.31 337 P Pn 22 28 10.8 +1.1
AYDB Zeytinkoy-Aydi 4.32 32 eP Pn 22 28 11.6 +1.6
BLCB Balcova 4.40 21 eP Pn 22 28 12.5 +1.6
KLV Kalavryta, Ach 4.41 329 P Pn 22 28 12.3 +1.2
KLV Kalavryta, Ach 4.41 329 P Pn 22 28 12.6 +1.5
TRAZ Trapeza 4.49 330 P Pn 22 28 13.9 +1.7
TRAZ Trapeza 4.49 330 P Pn 22 28 14.7 +2.5
DRO Drossia 4.53 325 P Pn 22 28 14.9 +2.1
DRO Drossia 4.53 325 P Pn 22 28 15.1 +2.3
MRKA Markates 4.55 346 P Pn 22 28 14.5 +1.4
MRKA Markates 4.55 346 P Pn 22 28 14.4 +1.4
DSF Desfina 4.58 335 P Pn 22 28 15.3 +1.8
DSF Desfina 4.58 335 P Pn 22 28 15.3 +1.8
LAKA Lakka 4.64 329 ePn Pn 22 28 17.0 +2.7
LAKA Lakka 4.64 329 P Pn 22 28 17.0 +2.7
LKR Lokris 4.64 340 P Pn 22 28 15.4 +1.1
LKR Lokris 4.64 340 P Pn 22 28 15.5 +1.2
ELL Elmali 4.67 57 eP Pn 22 28 15.9 +1.0
ATAL Atalanti 4.68 340 P Pn 22 28 16.1 +1.3
KALE Kalithea 4.71 331 ePn Pn 22 28 13.1 -2.1
KALE Kalithea 4.71 331 P Pn 22 28 13.1 -2.1
TRIZ Trizonia 4.71 330 P Pn 22 28 17.2 +2.0
TRIZ Trizonia 4.71 330 P Pn 22 28 17.3 +2.1
SERG Sergoula 4.76 331 P Pn 22 28 18.1 +2.2
SERG Sergoula 4.76 331 P Pn 22 28 18.2 +2.2
AKUM Antalya-Kumluc 4.80 64 iP Pn 22 28 18.0 +1.6
SMIA Simia 4.80 343 P Pn 22 28 18.2 +1.7
SMIA Simia 4.80 343 P Pn 22 28 18.2 +1.7
EFP Efpalio 4.83 330 P Pn 22 28 18.2 +1.3
EFP Efpalio 4.83 330 P Pn 22 28 18.7 +1.8
ZEDA zmir-Bergama 4.95 19 iP Pn 22 28 20.3 +1.8
ZEDA IAML_P
comp=Z,1µm,0.5s
ANX Ano Chora 4.97 331 P Pn 22 28 20.4 +1.6
PRK Paraskevi 5.04 11 P Pn 22 28 21.9 +2.1
PRK Paraskevi 5.04 11 P Pn 22 28 22.2 +2.4
SWA2 5.05 176 P Pn 22 28 20.6 +0.7
baz=177
MANT Manisa 5.07 33 ePn Pn 22 28 21.2 +0.9
KORT Korkueli 5.11 57 eP Pn 22 28 22.2 +1.4
KULA Kula-Manisa 5.13 34 eP Pn 22 28 23.1 +2.0
PVO Paravola 5.15 328 P Pn 22 28 24.1 +2.8
PVO Paravola 5.15 328 P Pn 22 28 24.4 +3.1
NEO Neokhori 5.21 344 P Pn 22 28 23.5 +1.4
NEO Neokhori 5.21 344 P Pn 22 28 23.3 +1.2
ANTB Antalya 5.27 59 eP Pn 22 28 24.4 +1.5
XOR Xorichti 5.27 344 P Pn 22 28 24.1 +1.1
VLS Valsamata 5.28 319 P Pn 22 28 23.8 +0.8
EVR Evrytania 5.29 332 P Pn 22 28 27.1 +3.8
PDO Prodromos 5.30 325 P Pn 22 28 26.1 +2.8
PDO Prodromos 5.30 325 P Pn 22 28 26.5 +3.3
FYTO Fytoko, Volos 5.37 342 ePn Pn 22 28 25.8 +1.5
FYTO Fytoko, Volos 5.37 342 P Pn 22 28 25.8 +1.5
FYTO Fytoko, Volos 5.37 342 P Pn 22 28 25.6 +1.3
FSK Fiskardo 5.50 320 P Pn 22 28 28.3 +2.3
BCK Bucak 5.51 53 eP Pn 22 28 27.4 +1.1
EZN Ezine 5.62 10 eP Pn 22 28 28.9 +1.2
EZN Ezine 5.62 10 ||iP Pn 22 28 29.3 +1.6
ISP Isparta 5.68 50 eP Pn 22 28 29.8 +1.1
ISP Isparta 5.68 50 ePn Pn 22 28 29.7 +1.1
ISP eSn Sn 22 29 25.7 -7.4
ISP Isparta 5.68 50 eP Pn 22 28 29.7 +1.1
ISP e 22 29 25.7
BALB Balikesir 5.80 22 eP Pn 22 28 31.8 +1.6
BALB Balikesir 5.80 22 ePn Pn 22 28 32.2 +1.9
BALB eSn Sn 22 29 26.6 -9.5
GADA Gvkgeada 5.93 6 eP Pn 22 28 33.6 +1.7
PPCY Paphos 6.07 82 P Pn 22 28 33.2 -0.6
baz=262
LIT Litokhoron 6.14 342 P Pn 22 28 35.7 +0.8
ALAN Alanya-ANTALYA 6.15 66 eP Pn 22 28 34.8 -0.2
GELI Tayfur-Gelibol 6.20 10 eP Pn 22 28 37.6 +1.9
LPK Lapseki 6.22 12 eP Pn 22 28 37.9 +1.9
ALFC Alefka 6.30 80 P Pn 22 28 36.7 -0.3
baz=260
ALFC S Sn 22 29 42.9 -5.3
KPRO Kipourio 6.36 334 P Pn 22 28 40.6 +2.6
IGT Igoumenitsa 6.44 326 ePn Pn 22 28 39.8 +0.8
IGT Igoumenitsa 6.44 326 P Pn 22 28 39.8 +0.8
IGT Igoumenitsa 6.44 326 eP Pn 22 28 39.8 +0.8
EDC Edincik 6.45 20 eP Pn 22 28 40.8 +1.7
ERIK Erikli-Kesan 6.47 10 eP Pn 22 28 41.3 +1.9
SZAC Souni 6.50 84 P Pn 22 28 39.1 -0.8
baz=264
SZAC S Sn 22 29 47.6 -5.7
LEF Lefka 6.53 81 eP Pn 22 28 39.7 -0.5
KZN Kozani 6.54 338 P Pn 22 28 42.6 +2.2
HMYD Mayadein 6.64 131 P Pn 22 28 42.0 +0.2
baz=131
HNAT Natroun 6.64 133 P Pn 22 28 42.1 +0.2
baz=133
KEK Kerkira 6.84 324 ePn Pn 22 28 43.7 -0.7
KEK ePn Pn 22 28 43.7 -0.7
KEK Kerkira 6.84 324 P Pn 22 28 43.7 -0.7
SRN Sarande 6.87 326 P Pn 22 28 44.8 -0.1
TEKE Tekeli-Mersin 6.87 72 eP Pn 22 28 44.7 -0.2
CSS Mathiatis 6.88 82 P Pn 22 28 44.2 -0.8
baz=263
CSS S Sn 22 29 56.7 -5.9
KONT Konya--Tatoy 6.96 56 eP Pn 22 28 47.1 +0.9
BERE Bereket-Mersin 7.01 71 eP Pn 22 28 46.8 -0.1
LADK Ladik-KONYA 7.10 55 eP Pn 22 28 48.7 +0.6
YLV Yalova 7.15 28 ||iP Pn 22 28 50.5 +1.7
TEVE Tevekalti-Mers 7.20 70 eP Pn 22 28 49.7 +0.2
AKKU Akkuyu-Mersin 7.22 73 eP Pn 22 28 49.5 -0.2
KOT Kottamia 7.23 125 P Pn 22 28 49.2 -0.6
baz=125
VAY Valandovo 7.28 345 ePn Pn 22 28 53.8 +3.3
IKL Isikli 7.34 72 eP Pn 22 28 51.0 -0.4
GLL Jalalah 7.37 128 P Pn 22 28 51.2 -0.6
baz=128
HHAG Hagoal 7.40 124 P Pn 22 28 52.0 -0.2
baz=124
KEBE Keben-Mersin 7.42 71 eP Pn 22 28 52.8 +0.4
SILI Silifke-Mersin 7.56 72 eP Pn 22 28 54.5 +0.1
OHR Ohrid 7.58 335 ePn Pn 22 28 54.4 -0.3
PHSR Pinarhisar 7.59 14 ||iP Pn 22 28 56.4 +1.7
EREN Erenkoy 7.61 78 eP Pn 22 28 55.3 +0.2
KRUS Krusevo 7.67 338 iPn Pn 22 28 56.9 +1.0
KIZK Mersin 7.76 71 eP Pn 22 28 56.9 -0.2
NBNS Bani Suef 7.79 135 P Pn 22 28 57.6 +0.1
baz=135
MDUB Mudurnu 7.88 37 ePn Pn 22 29 00.9 +2.1
SULT Sultanhani-AKS 7.89 58 eP Pn 22 28 59.8 +0.9
SUZ Suez 7.97 122 P Pn 22 28 59.0 -1.1
baz=122
TIR Tirane 8.14 331 ePn Pn 22 29 03.8 +1.5
TIR eSn Sn 22 30 27.4 -6.1
TIR Tirane 8.14 331 eP Pn 22 29 03.8 +1.5
TIR e 22 30 27.4
MERS Mersin 8.15 69 eP Pn 22 29 02.9 +0.4
BR231 Keskin MP Arra 8.31 46 ePn Pn 22 29 06.2 +1.4
ANTO Ankara 8.34 46 ePn Pn 22 29 06.0 +0.9
ANTO Ankara 8.34 46 ||iP Pn 22 29 06.8 +1.8
ANTO Ankara 8.34 46 eP Pn 22 29 06.0 +0.9
VTS Vitosha 8.43 351 ePn Pn 22 29 08.4 +2.0
VTS Vitosha 8.43 351 ||iP Pn 22 29 07.6 +1.2
VTS Vitosha 8.43 351 eP Pn 22 29 08.4 +2.0
OFRI `Ofer 8.49 99 Pn Pn 22 29 05.8 -1.3
KZIT Kziot 8.60 111 Pn Pn 22 29 07.0 -1.6
KZIT Sn Sn 22 30 35.7 -9.1
KZIT Kziot 8.60 111 P Pn 22 29 08.0 -0.6
comp=Z,81nm,0.8s,comp=Z,2.1nm
KZIT Kziot 8.60 111 P Sn 22 30 38.3 -6.5
SLTI Sal'it 8.63 101 Pn Pn 22 29 07.3 -1.8
SLTI Sn Sn 22 30 36.5 -9.2
KARA Karaisali 8.67 67 eP Pn 22 29 10.0 +0.4
MMA0B Mount Meron ar 8.75 95 Pn Pn 22 29 09.5 -1.2
MMAI Mount Meron Ar 8.75 95 Pn Pn 22 29 08.5 -2.2
comp=Z,6.3nm,0.3s,baz=266,slow=12,SNR=40
MMAI Sn Sn 22 30 42.8 -5.7
comp=Z,20nm,0.3s,baz=264,slow=19,SNR=10
WDD Wied Dalam 8.75 283 ePn Pn 22 29 09.9 -0.7
WDD eSn Sn 22 30 41.9 -6.5
KRTS Karatas 8.75 72 eP Pn 22 29 10.5 -0.1
AMAZ Amatzia 8.76 106 Pn Pn 22 29 09.7 -1.1
AMAZ Sn Sn 22 30 39.6 -9.2
AMAZ Amatzia 8.76 106 P Sn 22 30 42.3 -6.5
BR131 Keskin Array S 8.76 49 ePn Pn 22 29 11.9 +0.9
BR131 eSn Sn 22 30 46.7 -2.3
BRTR Keskin Array B 8.76 49 Pn Pn 22 29 11.7 +0.7
comp=Z,0.5nm,0.3s,baz=219,slow=13,SNR=18
BRTR Sn Sn 22 30 43.8 -5.2
comp=Z,0.3nm,0.3s,baz=225,slow=16,SNR=3.1
BRTR LR LR 22 33 35.9
comp=Z,550nm,19.4s,baz=230,slow=45
BRTR Keskin Array B 8.76 49 ceP Pn 22 29 12.3 +1.3
BRTR pmax pmax
comp=Z,4.0nm,0.8s
DQRL Deir Qamar 8.78 91 eP Pn 22 29 09.2 -2.0
BHL Bhannes 8.82 90 eP Pn 22 29 10.8 -1.0
MMLI Mount Malkishu 8.89 99 Pn Pn 22 29 11.5 -1.2
MMLI Sn Sn 22 30 42.9 -9.2
MMLI Mount Malkishu 8.89 99 P Sn 22 30 45.8 -6.3
ULC Ulcinj 8.91 331 ||iPn Pn 22 29 11.8 -1.0
ULC eSn Sn 22 30 44.4 -8.0
KSDI Kefar Szold 8.92 94 Pn Pn 22 29 11.3 -1.8
GEM Giv'at Ha'Em 8.93 94 Pn Pn 22 29 12.2 -0.9
GEM Sn Sn 22 30 43.8 -9.1
SHBL Chebaa 8.97 93 eP Pn 22 29 11.8 -2.0
NATI Neve Ativ 8.98 94 Pn Pn 22 29 12.2 -1.6
NATI Sn Sn 22 30 45.7 -8.4
YTIR Yattir 8.98 106 Pn Pn 22 29 12.8 -1.1
YTIR Sn Sn 22 30 44.6 -10
YURE YUREGIR 9.01 71 eP Pn 22 29 13.9 -0.3
HMDT Nahal Hemdat 9.03 100 Pn Pn 22 29 13.0 -1.5
HMDT Sn Sn 22 30 46.6 -8.7
HWQ Hawqa 9.04 87 eP Pn 22 29 13.2 -1.5
KSHT Keshet 9.09 95 Pn Pn 22 29 14.4 -1.0
SHMJ Saham 9.10 97 P Pn 22 29 15.5 -0.1
comp=Z,72nm,0.8s,comp=Z,1.0nm
DSI Dead Sea 9.12 104 Pn Pn 22 29 14.4 -1.3
DRME Dracevica, Mon 9.12 331 ||iPn Pn 22 29 14.8 -0.9
DRME eSn Sn 22 30 50.6 -7.0
DRME Dracevica, Mon 9.12 331 ePn Pn 22 29 13.7 -2.0
BRBR Barbar 9.13 92 eP Sn 22 30 48.9 -9.3
CEYT Ceyhan 9.14 70 eP Pn 22 29 16.3 +0.3
VAE Valguarnera 9.18 293 Pn Pn 22 29 17.9 +1.3
comp=Z,1.2nm,0.3s,baz=46,slow=6.0,SNR=7.5
VAE Sn Sn 22 30 56.2 -2.9
comp=Z,4.1nm,0.3s,baz=343,slow=21,SNR=2.1
PVY Plav 9.19 336 ||iPn Pn 22 29 15.9 -0.9
PVY eSn Sn 22 30 53.1 -6.4
MZDA Masada 9.20 106 Pn Pn 22 29 15.4 -1.4
KRMI Paran Flat 9.21 114 Pn Pn 22 29 16.8 -0.3
KRMI Sn Sn 22 30 49.9 -10
PDG Podgorica 9.30 333 ePn Pn 22 29 15.8 -2.4
TTG Podgorica 9.30 333 ||iPn Pn 22 29 16.7 -1.5
TTG eSn Sn 22 30 54.6 -7.3
PRNI Paran 9.31 112 Pn Pn 22 29 17.3 -1.1
PRNI Sn Sn 22 30 52.1 -10
LISJ El Lisan 9.31 106 P Pn 22 29 17.9 -0.5
comp=Z,27nm,0.6s
LISJ El Lisan 9.31 106 P Sn 22 30 54.8 -7.6
comp=Z,1.1nmcomp=Z,0.7nmcomp=Z,210nm,1.1s
KOZT Kozan 9.32 67 eP Pn 22 29 18.8 +0.2
BUM Brajici-Budva 9.33 331 ||iPn Pn 22 29 17.1 -1.6
BUM eSn Sn 22 30 54.6 -8.3
TAHT Tahtakopru-Hat 9.35 74 eP Pn 22 29 18.9 0.0
ZFRI Zfri 9.36 111 Pn Pn 22 29 17.9 -1.1
QASN Qassioun 9.38 91 eP Sn 22 30 52.5 -12
IVA Berane 9.46 336 ||iPn Pn 22 29 19.9 -0.5
IVA eSn Sn 22 30 59.1 -6.9
WALJ Wala 9.47 104 P Pn 22 29 19.5 -1.0
comp=Z,128nm,0.6s
WALJ Wala 9.47 104 P Sn 22 31 00.6 -5.5
comp=Z,0.0nmcomp=Z,0.8nmcomp=Z,240nm,0.8s
HRFI Mount Harif 9.49 114 Pn Pn 22 29 20.1 -0.7
HRFI Sn Sn 22 30 56.8 -10
HRFI Mount Harif 9.49 114 P Sn 22 30 57.8 -8.9
comp=Z,0.7nmcomp=Z,219nm,1.1s
MBRI Mt Berech 9.51 115 Pn Pn 22 29 20.6 -0.7
CEME Cevo 9.53 332 ||iPn Pn 22 29 19.5 -1.9
CEME eSn Sn 22 30 59.8 -7.9
TOTH TOTAH 9.53 92 eP Sn 22 30 49.6 -18
KOME Kolasin 9.57 335 ||iPn Pn 22 29 21.0 -1.0
KOME eSn Sn 22 31 00.9 -7.8
EIL Elat 9.61 116 Pn Pn 22 29 21.4 -1.0
comp=Z,2.9nm,0.3s,baz=334,slow=1.8,SNR=35
EIL Sn Sn 22 31 00.5 -9.1
comp=Z,4.5nm,0.3s,baz=261,slow=21,SNR=6.4
EIL Elat 9.61 116 Pn Pn 22 29 22.0 -0.4
EIL Elat 9.61 116 P Sn 22 31 06.7 -2.9
HSUJ Al Zarqa 9.61 100 P Sn 22 31 06.1 -3.6
HCY Herceg Novi 9.62 330 ||iPn Pn 22 29 21.4 -1.2
HCY eSn Sn 22 31 01.7 -8.1
HCY Herceg Novi 9.62 330 ePn Pn 22 29 20.6 -2.0
AQBJ Aqaba 9.65 115 P Pn 22 29 22.9 -0.1
comp=Z,150nm,0.7s
AQBJ Aqaba 9.65 115 P Sn 22 31 00.6 -10
comp=Z,217nm,0.8s,comp=Z,1.8nmcomp=Z,0.7nm
JDRJ Daraweish 9.66 109 P Sn 22 31 02.6 -8.6
NKME Niksic 9.70 332 ||iPn Pn 22 29 23.2 -0.6
NKME eSn Sn 22 31 04.3 -7.7
NKY Niksic 9.73 333 ||iPn Pn 22 29 23.2 -0.9
NKY eSn Sn 22 31 04.7 -7.9
TREB Trebinje 9.90 330 ePn Pn 22 29 23.4 -3.0
BRY Bratogost 9.98 331 ||iPn Pn 22 29 27.0 -0.6
BRY eSn Sn 22 31 10.9 -7.9
BRY Bratogost 9.98 331 ePn Pn 22 29 25.4 -2.2
PLE Pljevlja 10.03 336 ||iPn Pn 22 29 27.4 -1.0
PLE eSn Sn 22 31 12.2 -8.0
UPM Unac-Piva 10.10 334 ||iPn Pn 22 29 28.3 -1.0
UPM eSn Sn 22 31 13.9 -7.9
UPM Unac-Piva 10.10 334 ePn Pn 22 29 27.3 -2.0
CLTB Caltabellotta 10.12 292 ePn Pn 22 29 31.4 +1.9
CLTB eSn Sn 22 31 09.5 -13
ASF Jabal al Asfar 10.17 99 Pn Pn 22 29 28.5 -1.7
comp=Z,0.5nm,0.3s,baz=249,slow=12,SNR=4.1
ASF Sn Sn 22 31 17.4 -6.1
comp=Z,1.1nm,0.3s,baz=135,slow=24,SNR=2.7
ASF Jabal al Asfar 10.17 99 P Pn 22 29 30.7 +0.5
comp=Z,13nm,0.9s
STON Ston 10.30 328 ePn Pn 22 29 28.0 -3.9
STON Sn Sn 22 31 14.1 -12
STON Ston 10.30 328 ePn Pn 22 29 29.4 -2.5
TIRR Tirgusor 10.48 13 ePn Pn 22 29 33.8 -0.6
TIRR Tirgusor 10.48 13 eP Pn 22 29 33.8 -0.6
BBLS Lazići 10.51 337 ePn Pn 22 29 31.6 -3.2
DIVS Divibare 10.54 340 ePn Pn 22 29 33.3 -1.9
TLB Topalu 10.54 12 ||iP Pn 22 29 36.0 +0.9
MDVR Moldovita 10.78 347 ||iP Pn 22 29 38.2 -0.3
HAPS Han Pijesak,Bl 10.85 336 ePn Pn 22 29 35.1 -4.4
ARR Arges 11.06 359 ||iP Pn 22 29 44.0 +1.6
CFR Carcaliu 11.13 11 ||iP Pn 22 29 44.7 +1.5
VOIR 11.13 0 ||iP Pn 22 29 44.9 +1.6
LOT Lotru 11.18 355 ||iP Pn 22 29 45.2 +1.1
MLR Muntele Rosu 11.21 3 Pn Pn 22 29 44.1 -0.3
comp=Z,0.2nm,0.3s,baz=260,slow=16,SNR=3.9
MLR LR LR 22 34 48.6
comp=Z,662nm,19.0s,baz=179,slow=42
MLR Muntele Rosu 11.21 3 ePn Pn 22 29 45.4 +1.0
MLR Muntele Rosu 11.21 3 ||iP Pn 22 29 45.8 +1.4
MLR Muntele Rosu 11.21 3 eP Pn 22 29 45.4 +1.0
BZS Buzias 11.61 348 ||iP Pn 22 29 49.8 +0.1
PLOR Plostina 11.61 6 ||iP Pn 22 29 50.4 +0.5
VRI Vrincioaia 11.63 6 ||iP Pn 22 29 51.7 +1.6
BLY Banja Luka 12.06 332 ePn Pn 22 29 53.5 -2.5
AQU L'Aquila 12.16 315 ePn Pn 22 29 59.1 +1.7
AQU L'Aquila 12.16 315 eP Pn 22 29 59.1 +1.7
AQU L'Aquila 12.16 315 ePn P 22 30 09.7 -0.1
UDBI Udbina 12.47 328 ePn Pn 22 30 01.1 -0.5
SIM Simferopol' 12.73 31 eP P 22 30 18.8 +2.7
SIM S Sn 22 32 36.0 +10
SIM pmax pmax
comp=Z,11nm,0.8s
SIM MLR MLR
comp=Z,170nm,16.0s
MORH Mrgy, Hungar 12.86 340 ePn Pn 22 30 03.3 -3.6
NVLJ Novalja 12.90 326 ePn Pn 22 30 05.4 -2.0
KEST Kesra 12.94 281 LR LR 22 36 25.0
comp=Z,120nm,18.4s,baz=341,slow=43
KIS Kishinev 13.01 12 eP Pn 22 30 09.0 +0.1
KIS eS Sn 22 32 36.0 +3.2
KIS LRM MLR 22 35 40.0
comp=Z,600nm,12.0s
KIS Kishinev 13.01 12 eP Pn 22 30 09.0 +0.1
KIS eS Sn 22 32 36.0 +3.2
KIS MLR MLR
comp=Z,700nm,14.0s
KIS MLR MLR
comp=N,600nm,12.0s
BURAR Bucovina Array 13.31 1 ||iP Pn 22 30 14.8 +1.7
OZLJ Ozalj 13.46 330 ePn Pn 22 30 12.5 -2.6
BOJS Bojanci 13.46 329 iPn Pn 22 30 13.7 -1.4
BOJS iSn Sn 22 32 31.4 -12
CRES Cresnjev 13.64 330 ePn Pn 22 30 14.8 -2.7
BEHE Becsehely 13.68 335 EPn Pn 22 30 16.0 -2.0
BEHE Sn Sn 22 32 49.1 -0.1
TIH Tihany 13.70 339 EPn Pn 22 30 21.1 +2.7
VISS Visnje 13.88 329 iPn Pn 22 30 18.8 -1.9
VISS iSn Sn 22 32 42.0 -12
CEY Cerknica 14.01 328 ePn Pn 22 30 20.0 -2.6

CSKK Cskako 14.02 341 EPn **P 22 30 32.1 +1.7**
CSKK Sn **Sn 22 32 52.1 -5.3**
ANN Anapa 14.19 39 *e*P **Pn 22 30 21.4 -3.6**
ANN *e*S **Sn 22 32 58.4 -3.1**
ANN pmax pmax
comp=Z,44nm,0.9s
TRI Trieste 14.28 326 *e*Pn **Pn 22 30 25.6 -0.7**
TRI Trieste 14.28 326 *e*P **Pn 22 30 25.6 -0.7**
JAVS Javornik 14.29 327 *i* Pn **Pn 22 30 23.9 -2.6**
JAVS *e*Sn Sn 22 32 51.1 -13
PERS Pernice 14.44 332 *i* Pn **Pn 22 30 25.3 -3.1**
PERS *i* Sn Sn 22 32 57.3 -10
UZH Uzhgorod 14.47 353 *e*P **P 22 30 35.3 0.0**
SOKA Soboth 14.50 332 Pn **Pn 22 30 26.1 -3.3**
comp=Z,7.8nm,0.6s,SNR=5.8
SOKA *e*Sn Sn 22 32 58.3 -11
comp=Z,2.2nm,0.6s
SOKA Soboth 14.50 332 Pn **Pn 22 30 26.1 -3.3**
comp=Z,7.8nm,0.6s,SNR=5.8
SOKA *e*Sn Sn 22 32 58.3 -11
comp=Z,2.2nm,0.6s
OBKA Obir 14.56 330 *e*Pn **Pn 22 30 28.8 -1.4**
comp=Z,0.9nm,0.2s
OBKA Sn Sn 22 32 59.8 -11
comp=Z,5.9nm,0.6s
OBKA Obir 14.56 330 *e*Pn **Pn 22 30 28.8 -1.4**
comp=Z,0.9nm,0.2s
OBKA Sn Sn 22 32 59.8 -11
comp=Z,5.9nm,0.6s
SOC Sochi 14.70 47 *e*P **Pn 22 30 31.2 -0.9**
SOC *e* 22 33 11.8
SOC MLR MLR
comp=Z,323nm,17.0s
KOLS Kolonicke sedl 14.77 353 *e*P **Pn 22 30 34.8 +1.9**
KOLS Kolonicke sedl 14.77 353 *e*PN **Pn 22 30 34.8 +1.9**
ARSA Arzberg 14.79 334 *e*Pn **Pn 22 30 34.1 +0.8**
comp=Z,8.9nm,0.4s,SNR=6.7
ARSA Arzberg 14.79 334 *e*Pn **Pn 22 30 34.1 +0.8**
comp=Z,8.9nm,0.4s,SNR=6.7
SOP Sopron 14.81 337 P **P 22 30 39.9 +0.7**
SOP Sopron 14.81 337 EPn **Pn 22 30 36.0 +2.6**
VYHS Vyhne 14.92 344 *e*P **Pn 22 30 35.8 +0.8**
VYHS Vyhne 14.92 344 *e*PN **Pn 22 30 35.8 +0.8**
MYKA Terra Mystica 15.04 328 Pn **Pn 22 30 38.4 +1.7**
comp=Z,1.7nm,0.4s
MYKA Terra Mystica 15.04 328 Pn **Pn 22 30 38.4 +1.7**
comp=Z,1.7nm,0.4s
MODS Modra-Piesok 15.21 340 *e*P **P 22 30 43.4 -0.2**
MODS Modra-Piesok 15.21 340 *e*P **P 22 30 43.4 -0.2**
CONA Conrad Observa 15.26 336 P **P 22 30 45.1 +1.0**
comp=Z,3.3nm,0.7s
CONA Conrad Observa 15.26 336 P **P 22 30 45.1 +1.0**
comp=Z,3.3nm,0.7s
KBA Koelnbreinsper 15.52 329 *e*P **P 22 30 48.4 +1.1**
comp=Z,15nm,0.7s,SNR=13
KBA Koelnbreinsper 15.52 329 *e*P **P 22 30 48.4 +1.1**
comp=Z,15nm,0.7s,SNR=13
KBA Koelnbreinsper 15.52 329 P **P 22 30 48.3 +1.1**
LVV L'vov 15.53 358 *e*P **P 22 30 45.3 -1.8**
LVV *e*S **Sn 22 33 37.8 +3.6**
LVV MLR MLR
comp=N,300nm,11.0s
LVV MLR MLR
comp=Z,300nm,11.0s
JAVC Velka Javorina 15.55 342 *e*P **P 22 30 48.4 +1.0**
ABTA Abfaltersbach 15.63 326 *e*Pn **Pn 22 30 43.0 -1.4**
comp=Z,22nm,0.5s,SNR=13
ABTA Sn **Sn 22 33 28.0 -9.0**
comp=Z,8.1nm,0.8s
ABTA Abfaltersbach 15.63 326 *e*Pn **Pn 22 30 43.0 -1.4**
comp=Z,22nm,0.5s,SNR=13
ABTA Sn **Sn 22 33 28.0 -9.0**
comp=Z,8.1nm,0.8s
KARS Kars 15.66 61 *e*Pn **P 22 30 47.6 -1.2**
comp=Z,163nm,1.1s
KARS Kars 15.66 61 *e*P **P 22 30 47.6 -1.2**
KARS pmax pmax
comp=Z,163nm,1.1s
MOA Molln 15.76 332 *e*Pn **Pn 22 30 45.2 -0.8**
comp=Z,1.0nm,0.3s,SNR=9.6
MOA Sn **Sn 22 33 32.6 -7.3**
comp=Z,2.0nm,0.5s
MOA Molln 15.76 332 *e*Pn **Pn 22 30 45.2 -0.8**
comp=Z,1.0nm,0.3s,SNR=9.6
MOA Sn **Sn 22 33 32.6 -7.3**
comp=Z,2.0nm,0.5s
KRUC Moravsky 16.09 339 *e*P **P 22 30 53.2 -0.1**
VRAC Vranov 16.25 340 Pn **Pn 22 30 52.8 +0.6**
comp=Z,0.8nm,0.3s,baz=152,slow=9.4,SNR=15
VRAC LR LR 22 38 49.4
comp=Z,289nm,18.6s,baz=170,slow=44
VRAC Vranov 16.25 340⇑*i*P **Pn 22 30 53.2 +1.0**
VRAC Vranov 16.25 340 *e*PN **Pn 22 30 52.7 +0.5**
VRAC Vranov 16.25 340 *e*P **P 22 30 55.8 +0.7**
OKC Ostrava-Krasne 16.34 344 *e*P **P 22 30 55.8 -0.3**
OKC MLR MLR
comp=Z,200nm,11.2s
OKC Ostrava-Krasne 16.34 344 *e*P **P 22 30 55.8 -0.3**
OKC *e*x x 22 30 58.2
OKC AMS AMS 22 38 20.0
comp=Z,200nm,11.2s
NEY Neytrino 16.42 52*d i*P **P 22 30 56.4 -0.8**
WTTA Wattenberg 16.42 326 *e*Pn **Pn 22 30 55.4 +0.8**
comp=Z,26nm,1.0s,SNR=14
WTTA Wattenberg 16.42 326 *e*Pn **Pn 22 30 55.4 +0.8**
comp=Z,26nm,1.0s,SNR=14
MORC Moravsky Berou 16.43 343 *e*PN **Pn 22 30 53.8 -0.7**
MORC Moravsky Berou 16.43 343 *e*P **P 22 30 57.5 +0.4**
WATA Walderalm 16.50 326 *e*Pn **Pn 22 30 55.4 -0.2**
comp=Z,6.8nm,0.5s,SNR=9.8
WATA Walderalm 16.50 326 *e*Pn **Pn 22 30 55.4 -0.2**
comp=Z,6.8nm,0.5s,SNR=9.8
SQTA Sankt Quirin 16.59 325 *e*Pn **Pn 22 30 57.4 +0.7**
comp=Z,11nm,0.6s,SNR=7.5
SQTA Sankt Quirin 16.59 325 *e*Pn **Pn 22 30 57.4 +0.7**
comp=Z,11nm,0.6s,SNR=7.5
FETA Feichten 16.68 324 *e*Pn **P 22 30 59.0 -1.0**
comp=Z,6.0nm,0.6s,SNR=14
FETA Sn **Sn 22 34 00.7 -1.6**
comp=Z,2.0nm,0.6s
FETA Feichten 16.68 324 *e*Pn **P 22 30 59.0 -1.0**
comp=Z,6.0nm,0.6s,SNR=14
FETA Sn **Sn 22 34 00.7 -1.6**
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 16.68 9 Pn **Pn 22 30 56.6 -1.0**
comp=Z,11nm,0.3s,baz=200,slow=10,SNR=66
AKBB Malin Array Si 16.68 9 *e*Pn **Pn 22 30 57.0 -0.7**
comp=Z,77nm,1.0s
AKBB Malin Array Si 16.68 9 *e*P **Pn 22 30 57.0 -0.7**
AKBB pmax pmax
comp=Z,77nm,1.0s
MOTA Moosalm 16.73 325 Pn **P 22 30 59.6 -1.0**
comp=Z,2.9nm,0.5s
MOTA Moosalm 16.73 325 Pn **P 22 30 59.6 -1.0**
comp=Z,2.9nm,0.5s
KIV Kislovodsk 16.73 50 *e*Pn **P 22 31 00.1 -0.5**
comp=Z,55nm,1.0s
KIV Kislovodsk 16.73 50⇑*i*P **P 22 31 02.4 +1.8**
KIV Kislovodsk 16.73 50 *e*P **Pn 22 30 59.4 +0.9**
KIV *e* 22 34 05.3
KIV pmax pmax
comp=Z,175nm,1.0s
KIV MLR MLR
comp=Z,365nm,13.0s
GNI Garni 16.75 64 Pn **P 22 31 00.1 -0.8**
comp=Z,0.7nm,0.3s,baz=259,slow=6.2,SNR=9.5
GNI LR LR 22 38 59.4
comp=Z,698nm,19.9s,baz=269,slow=43
GNI Garni 16.75 64 *e*Pn **Pn 22 30 59.0 +0.2**
comp=Z,17nm,0.8s
GNI Garni 16.75 64*ce*P **Pn 22 30 59.8 +1.1**
GNI pmax pmax
comp=Z,246nm,1.7s
KBZ Khabaz 16.75 51 Pn **Pn 22 30 59.7 +1.1**
comp=Z,1.6nm,0.3s,baz=258,slow=7.6,SNR=34
KBZ LR LR 22 39 22.5
comp=Z,234nm,18.7s,baz=253,slow=44
GERES GERESS Array B 16.80 333 Pn **Pn 22 30 58.7 -0.6**
comp=Z,5.3nm,0.3s,baz=148,slow=12,SNR=59
GERES LR LR 22 39 22.4
comp=Z,274nm,18.5s,baz=146,slow=44
DAVOX Davos/Dischmat 16.94 322 Pn **Pn 22 31 01.1 -0.1**
comp=Z,0.1nm,0.3s,baz=139,slow=20,SNR=2.4
DAVOX LR LR 22 40 48.0
comp=Z,152nm,18.5s,baz=90,slow=49
RETA Reutte 16.99 325 Pn **Pn 22 31 01.1 -0.7**
comp=Z,4.0nm,0.4s
RETA Reutte 16.99 325 Pn **Pn 22 31 01.1 -0.7**
comp=Z,4.0nm,0.4s
ZEI Tsey 17.00 55 *e*P **Pn 22 31 02.2 +0.2**
ZEI pmax pmax
comp=Z,41nm,1.0s
KHC Kasperske Hory 17.08 334 *e*Pn **Pn 22 31 03.3 +0.5**
comp=Z,3.7nm,0.6s
KHC Kasperske Hory 17.08 334 *e*P **Pn 22 31 03.3 +0.5**
KHC MLR MLR
comp=Z,600nm,14.6s
KHC Kasperske Hory 17.08 334 *e*P **Pn 22 31 03.3 +0.5**
KHC *e*x x 22 31 05.8
KHC AMS AMS 22 38 30.0
comp=Z,600nm,14.6s
NCK Nalchik 17.10 52 *i* P **Pn 22 31 02.0 -1.0**
NCK pmax pmax
comp=Z,17nm,0.9s
NAX Nakhchivan 17.11 68 P **P 22 31 04.9 +0.1**
TBLG Delisi 17.20 59 *e*Pn **P 22 31 05.9 +0.2**
comp=Z,36nm,1.2s
TBLG Delisi 17.20 59 *e*P **P 22 31 05.9 +0.2**
TBLG pmax pmax
comp=Z,36nm,1.2s
DPC Dobruska-Polom 17.27 341 *e*P **Pn 22 31 05.7 +0.6**
DPC MLR MLR
comp=Z,400nm,10.8s
DPC Dobruska-Polom 17.27 341 *e*P **Pn 22 31 05.7 +0.6**
DPC AMS AMS 22 38 50.0
comp=Z,400nm,10.8s
DAVA Damuels 17.28 323 *e*Pn **P 22 31 07.2 +0.5**
comp=Z,13nm,0.9s,SNR=8.0
DAVA Damuels 17.28 323 *e*Pn **P 22 31 07.2 +0.5**
comp=Z,13nm,0.9s,SNR=8.0
GOPC GO Pecny, Ondr 17.33 337 *e*P **P 22 31 06.8 -0.3**
GOPC MLR MLR
comp=Z,200nm,9.8s
GOPC GO Pecny, Ondr 17.33 337 *e*P **P 22 31 06.8 -0.3**
GOPC *ep*P **pwP 22 31 15.7 -0.3**
GOPC AMS AMS 22 38 50.0
comp=Z,200nm,9.8s
PRU Pruhonice 17.48 337 *e*P **P 22 31 09.1 +0.4**
PRU MLR MLR
comp=Z,200nm,13.2s
PRU Pruhonice 17.48 337 *e*P **P 22 31 09.1 +0.4**
PRU AMS AMS 22 38 40.0
comp=Z,200nm,13.2s
OSTC Ostas 17.48 341 *e*P **Pn 22 31 07.4 -0.3**
OSTC AMS AMS 22 38 50.0
comp=Z,400nm,10.8s
UPC Upice 17.49 341 *e*P **Pn 22 31 07.7 -0.2**
UPC MLR MLR
comp=Z,400nm,10.7s
UPC Upice 17.49 341 *e*P **Pn 22 31 07.7 -0.2**
UPC AMS AMS 22 38 50.0
comp=Z,400nm,10.7s
CHVC Chvalec 17.56 341 *e*P **P 22 31 09.3 -0.3**
CHVC AMS AMS 22 39 00.0
comp=Z,400nm,11.5s
LPL La Plagne 17.92 314 P **P 22 31 17.8 +4.0**
PVCC Panska Ves 17.94 338 *e*P **P 22 31 14.6 +0.8**
PVCC MLR MLR
comp=Z,200nm,11.5s
PVCC Panska Ves 17.94 338 *e*P **P 22 31 14.6 +0.8**
PVCC AMS AMS 22 39 10.0
comp=Z,200nm,11.5s
GANJ Ganja 18.04 63 P **P 22 31 16.1 +1.1**
SENIN Lac Senin/Sane 18.06 317 *e*Pn **P 22 31 18.0 +2.6**
comp=Z,13nm,0.8s
NKC Novy Kostel 18.41 334 *e*P **Pn 22 31 19.5 +0.4**
NKC Novy Kostel 18.41 334 *e*P **Pn 22 31 19.5 +0.4**
BRG Berggiesshubel 18.43 337 *e*P **P 22 31 19.1 -0.1**
comp=Z,6.6nm,0.6s
comp=N,126nm,11.7s
comp=E,146nm,13.8s
comp=Z,246nm,11.7s
BRG Berggiesshubel 18.43 337 *e*P **P 22 31 19.1 -0.1**
BRG pmax pmax
comp=Z,7.0nm,0.6s
BRG MLR MLR
comp=N,126nm,11.7s
BRG MLR MLR
comp=E,146nm,13.8s
BRG MLR MLR
comp=Z,246nm,11.7s
GRFO Grafenberg 18.45 331 *e*P **Pn 22 31 20.2 +0.7**
comp=Z,42nm,1.0s
GRFO Grafenberg 18.45 331 *e*P **Pn 22 31 20.3 +0.7**
GRFO pmax pmax
comp=Z,42nm,1.0s
GROC Groznyy 18.45 55 *e*P **P 22 31 18.3 -1.1**
GROC pmax pmax
comp=Z,30nm,1.3s
MNGR Mingechevir, A 18.63 63 P **Pn 22 31 23.0 +1.2**
BFO Black Forest 18.75 323 *e*P **Pn 22 31 24.2 +0.9**
comp=Z,6.6nm,0.7s
BFO Black Forest 18.75 323 *e*P **Pn 22 31 24.2 +0.9**
BFO pmax pmax
comp=Z,7.0nm,0.7s
SEKA Sheki 18.82 62 P **Pn 22 31 25.6 +1.4**
MOX Moxa 19.05 333 P **Pn 22 31 27.2 +0.3**
CLL Collm 19.11 336 *e*P **P 22 31 26.0 -0.7**
comp=Z,13nm,0.6s
CLL *ep*P **Pn 22 31 30.0 +2.4**
CLL *i* sP **sP 22 31 36.1 +0.5**
CLL *e* 22 33 01.0
CLL *e*S **S 22 35 03.0 +1.3**
CLL LmV 22 39 00.0
comp=Z,200nm,18.2s
CLL Lmax 22 40 00.0
CLL Collm 19.11 336 *e*P **P 22 31 26.0 -0.7**
CLL *e*S **S 22 35 03.0 +1.3**
CLL pmax pmax
comp=Z,13nm,0.6s
AKT Akhty 19.27 61 *e*P **Pn 22 31 33.4 +3.7**
AKT *e*S **S 22 35 08.2 +2.8**
AKT pmax pmax
comp=Z,7.0nm,0.5s
MAK Makhachkala 19.54 57*c i*P **Pn 22 31 33.3 +0.6**
MAK *e*S **Sn 22 35 15.1 +3.9**
MAK pmax pmax
comp=Z,115nm,0.7s
LKRN Lenkeran, Azer 19.58 70 P **Pn 22 31 34.1 +0.8**
VORD Divnogorie 19.63 28 *e*P **P 22 31 31.2 -1.1**
VORD pmax pmax
comp=Z,30nm,1.6s
VSR Storozhevoye 19.79 27 *e*P **P 22 31 32.5 -1.5**
VSR pmax pmax
comp=Z,10.0nm,0.6s
TAM Tamanrasset 20.57 241 *e*P Pn 22 31 47.6 +2.3
comp=Z,5.8nm,0.8s
TAM Tamanrasset 20.57 241 *e*P Pn 22 31 47.6 +2.3
TAM pmax pmax
comp=Z,6.0nm,0.8s
KLNR Kaliningrad 20.59 352 *i* P **P 22 31 41.5 -1.2**
KLNR pmax pmax
comp=Z,34nm,1.1s
SSF Saint Saulge 20.63 315 P **P 22 31 44.2 +0.9**
WLF Walferdange 20.71 324 P **P 22 31 44.1 0.0**
comp=Z,29nm,1.2s
WLF pPn **pP 22 31 49.2 -1.0**
LPSR Galich'ya Gora 20.83 24 *e*P **P 22 31 43.2 -2.1**
LPSR pmax pmax
comp=Z,30nm,0.6s
RAYN Ar Rayn 20.86 116 *e*P Pn 22 31 49.1 +0.6
comp=Z,14nm,1.0s
RAYN Ar Rayn 20.86 116 *e*P Pn 22 31 49.1 +0.6
RAYN pmax pmax
comp=Z,14nm,1.0s
IDID Didziasalis 21.05 3 *e*P **P 22 31 45.6 -2.1**
IDID IAmb IAmb 22 31 48.9
comp=Z,7.3nm,1.0s
IIGN Ignalina 21.07 2 *e*P **P 22 31 46.1 -1.8**
IIGN IAmb IAmb 22 31 51.3
comp=Z,12nm,0.6s
PABE Paberze 21.22 358 IAmb IAmb 22 31 51.4
comp=Z,18nm,0.8s
MEM Membach 21.41 325⇑P **P 22 31 53.1 +1.5**
comp=Z,21nm,1.0s
IZAR Zarasai 21.47 2 *e*P **P 22 31 50.7 -1.5**
IZAR IAmb IAmb 22 31 54.0
comp=Z,6.7nm,0.6s
HGN Heimansgroeve 21.55 326 *e*P **P 22 31 55.3 +2.2**
BSTI Sart Tilman 21.60 325 P **P 22 31 55.3 +1.6**
BSTI sP **sP 22 32 02.6 +0.1**
BSTI PnPn **PnPn 22 32 12.2 -2.3**
BEBN Eben Emael 21.69 325 sP **P 22 31 58.9 +4.3**
BGES Gesves 21.70 324 P **P 22 31 55.7 +1.0**
BGES x x 22 32 03.4
BGES PnPn **PnPn 22 32 13.7 -2.3**
PBUR Paburg 21.84 355 *e*P **P 22 31 53.8 -2.3**
PBUR IAmb IAmb 22 31 56.1
comp=Z,33nm,0.6s
CLF Chambon-Foret 21.85 316 *e*P **P 22 31 57.6 +1.3**
comp=Z,20nm,1.1s
RGN Rugen 21.85 341 *e*P **P 22 31 56.0 -0.3**
RGN IAmb IAmb 22 31 59.5
comp=Z,18nm,0.7s
BSD Bornholm Skovb 21.98 344 *i* P **P 22 31 54.5 -3.1**
BSD pmax pmax
comp=Z,3.0nm,0.5s
BSD MLR MLR
comp=Z,2µm,12.0s
BSD Bornholm Skovb 21.98 344 *i* P **P 22 31 54.5 -3.1**
comp=Z,3.3nm,0.5s
comp=Z,2µm,12.0s
WTSB Winterswijk 22.00 329 *e*P **P 22 31 58.3 +0.3**
SNF Seneffe 22.18 323⇑P **P 22 32 01.5 +1.6**
comp=Z,9.5nm,0.7s
OBN Obninsk 22.32 18 P **P 22 32 00.2 -1.0**
comp=Z,12nm,0.8s,baz=199,slow=23,SNR=19
OBN LR LR 22 41 23.2
comp=Z,62nm,20.8s,baz=184,slow=39
OBN Obninsk 22.32 18 *e*P **P 22 32 01.7 +0.4**
comp=Z,64nm,1.0s
OBN Obninsk 22.32 18*ce*P **P 22 32 03.0 +1.7**
OBN *e* 22 32 23.9
OBN *e*S **S 22 35 58.3 -6.9**
OBN pmax pmax
comp=Z,80nm,1.3s
OBN MLR MLR
comp=Z,258nm,16.0s
UCC Uccle 22.33 324 *e*P **P 22 32 01.6 +0.2**
comp=Z,19nm,0.9s
UCC Uccle 22.33 324 *e*P **P 22 32 01.6 +0.2**
UCC pmax pmax
comp=Z,19nm,0.9s
COP Copenhagen 23.10 342 *i* P **P 22 32 08.1 -1.4**
COP MLR MLR
comp=Z,2µm,15.0s
COP Copenhagen 23.10 342 *i* P **P 22 32 08.1 -1.4**
comp=Z,2µm,15.0s
MOS Moscow 23.15 18 *e*P **P 22 32 07.9 -2.1**
MOS *e* 22 32 32.5
MOS *e*S **S 22 36 14.2 -5.6**
MOS pmax pmax
comp=Z,21nm,0.8s
ESDC Sonseca Array 23.71 292 P **P 22 32 16.6 +0.8**
comp=Z,2.7nm,0.7s,baz=82,slow=9.1,SNR=12
VSU Vasula 24.20 2 *e*P **P 22 32 18.4 -1.6**
VSU IAmb IAmb 22 32 20.9
comp=Z,18nm,0.5s
MUD Monsted U'grnd 24.68 339⇑*i*P **P 22 32 24.4 -0.1**
MUD pmax pmax
comp=Z,13nm,0.8s
MUD MLR MLR
comp=Z,2µm,10.0s
MUD Monsted U'grnd 24.68 339⇑*i*P **P 22 32 24.4 -0.1**
comp=Z,13nm,0.8s
comp=Z,2µm,10.0s
MUD Monsted U'grnd 24.68 339 *e*P **P 22 32 25.3 +0.9**
MDT Midelt 24.70 275 P **P 22 32 27.1 +2.0**
comp=Z,4.6nm,0.8s,baz=119,slow=7.5,SNR=5.3
PBRG Braganca 26.01 296 *e*P **P 22 32 38.0 +1.2**
MVO Moncorvo 26.16 295 *e*P **P 22 32 40.7 +2.5**
STRU Stroemstad 26.40 344 *e*P **P 22 32 39.8 -0.2**
PCBR Castelo Branco 26.43 292 *e*P **P 22 32 42.1 +1.6**
PVAQ Vaqueiros 26.65 286 *e*P **P 22 32 44.3 +1.8**
PBDV Barranco-do-Ve 26.83 286 *e*P **P 22 32 45.9 +1.7**
HFS Hagfors 26.89 347 P **P 22 32 43.2 -1.3**
comp=Z,4.3nm,0.6s,baz=133,slow=10,SNR=28
HFS LR LR 22 43 59.7
comp=Z,140nm,20.6s,baz=156,slow=38
GEYT Alibeck 26.90 73 P **P 22 32 44.7 -0.1**
comp=Z,2.0nm,0.5s,baz=259,slow=11,SNR=5.0
FINES FINESS Array B 27.18 1 P **P 22 32 45.6 -1.4**
comp=Z,6.3nm,0.7s,baz=165,slow=9.6,SNR=19
FINES PcP **PcP 22 36 06.9 +0.1**
comp=Z,0.7nm,0.6s,baz=180,slow=2.6,SNR=3.8
FINES LR LR 22 44 20.9
comp=Z,208nm,20.1s,baz=188,slow=38
FIA1 FINESS Array S 27.18 1 *e*P **P 22 32 45.7 -1.3**
comp=Z,13nm,0.9s
OSL Oslo 27.32 344 *e*P **P 22 32 48.0 -0.2**
NC602 NORSAR Array S 27.86 346 *e*P **P 22 32 52.9 -0.3**
ATD Arta Tunnel 27.89 140 LR LR 22 43 49.7
comp=Z,70nm,20.8s,baz=350,slow=36
BLS5 Blasjo 27.96 340 *e*P **P 22 32 54.7 +0.6**
NAO01 NORSAR Array S 28.10 345 *e*P **P 22 32 55.6 +0.3**
NC405 NORSAR Array S 28.18 346 *e*P **P 22 32 55.7 -0.3**
comp=Z,10nm,1.0s
KLMR Klimovskoe 28.18 15 *e*P **P 22 32 52.9 -3.1**
KLMR pmax pmax
comp=Z,15nm,0.9s
KLMR Klimovskoe 28.18 15 *e*P **P 22 32 52.9 -3.1**
KLMR AMP 22 32 55.8
comp=Z,15nm,0.9s
NB201 NORSAR Array S 28.20 346 *e*P **P 22 32 55.7 -0.5**
comp=Z,11nm,0.8s
NB201 NORSAR Array S 28.20 346 *e*P **P 22 32 56.5 +0.3**
NB2 NORSAR Subarra 28.21 346 P **P 22 32 55.3 -1.0**
comp=Z,2.1nm,0.6s,baz=155,slow=9.3
NB2 NORSAR Subarra 28.21 346 P **P 22 32 55.7 -0.6**
NB2 NORSAR Subarra 28.21 346 P **P 22 32 55.3 -1.0**
baz=155,slow=9.3
NOA NORSAR Array B 28.21 346 P **P 22 32 55.5 -0.8**
comp=Z,1.2nm,0.5s,baz=149,slow=8.7,SNR=26
NOA LR LR 22 46 03.7
comp=Z,139nm,20.3s,baz=165,slow=40
NBO00 NORSAR Array S 28.29 345 *e*P **P 22 32 57.7 +0.7**
NC303 NORSAR Array S 28.35 346 *e*P **P 22 32 57.0 -0.5**
NC204 NORSAR Array S 28.52 346 *e*P **P 22 32 57.6 -1.4**
comp=Z,14nm,1.1s
SKAR Skarslia 28.54 343 *e*P **P 22 32 59.7 +0.5**
EKA Eskdalemuir Ar 28.69 326 P **P 22 33 01.0 +0.4**
comp=Z,1.6nm,0.4s,baz=130,slow=9.0,SNR=20
EKA Eskdalemuir Ar 28.69 326 P **P 22 33 01.0 +0.4**
ESK Eskdalemuir 28.70 326 *e*P **P 22 33 01.2 +0.5**
comp=Z,12nm,0.8s
ESK Eskdalemuir 28.70 326 *e*P **P 22 33 01.2 +0.5**
ESK pmax pmax
comp=Z,12nm,0.8s
AKTO Aktyubinsk 28.93 46 P **P 22 33 02.3 -0.5**
comp=Z,2.3nm,0.4s,baz=254,slow=5.8,SNR=7.2
AKTO LR LR 22 48 25.1
comp=Z,159nm,19.7s,baz=242,slow=44
KIRV Kirov 29.23 26 P **P 22 33 04.3 -0.9**
comp=Z,20nm,0.7s,baz=223,slow=6.2,SNR=10
KIRV LR LR 22 45 45.4
comp=Z,77nm,18.8s,baz=249,slow=38
DOMB Dombas 29.57 345 *e*P **P 22 33 09.2 +0.9**
TOA1 Torodi Ar. Sit 29.85 231 *e*P **P 22 33 11.0 -0.3**
TOA0 Torodi Ar. Sit 29.85 231 *e*P **P 22 33 12.9 +1.7**
comp=Z,6.7nm,0.6s
TORD Torodi Ar. Bea 29.85 231 P **P 22 33 11.0 -0.3**
comp=Z,6.0nm,0.4s,baz=30,slow=9.6,SNR=115
TORD LR LR 22 48 19.6
comp=Z,389nm,19.2s,baz=5.0,slow=43
AKN Aaknes 30.16 343 *e*P **P 22 33 13.6 +0.1**
PRGR Permogore 30.36 19 *e*P **P 22 33 11.4 -3.9**
PRGR pmax pmax
comp=Z,13nm,0.6s
ARU Arti 31.82 36 *e*P **P 22 33 27.6 -0.7**
comp=Z,12nm,0.7s
ARU Arti 31.82 36*c i*P **P 22 33 27.4 -0.8**
ARU S **S 22 38 37.8 +0.8**
ARU pmax pmax
comp=Z,14nm,0.7s
SVE Sverdlovsk 33.02 36⇑*e*P **P 22 33 38.8 +0.1**
SVE pmax pmax
comp=Z,31nm,0.6s
MBAR Mbarara 35.12 170 LR LR 22 49 01.4
comp=Z,93nm,21.1s,baz=352,slow=38
ARCES ARCESS Array B 35.30 0 P **P 22 33 57.0 -1.3**
comp=Z,8.5nm,0.4s,baz=174,slow=9.4,SNR=29
ARCES LR LR 22 49 12.9
comp=Z,187nm,19.7s,baz=163,slow=38
ARCES ARCESS Array B 35.30 0 P **P 22 33 57.0 -1.3**
BRVK Borovoye 36.97 45 *e*P **P 22 34 13.5 +0.6**
comp=Z,5.8nm,0.9s
BRVK Borovoye 36.97 45 *i* P **P 22 34 12.3 -0.6**

BRVK pmax pmax
comp=Z,7.0nm,1.1s
KMBO Kilima Mbogo 37.06 159 LR LR 22 49 08.1
comp=Z,127nm,20.7s,baz=44,slow=36
EKS2 Erkin-Say 38.62 63 P **P** **22 34 28.4 +1.3**
SNR=7.1
DBIC Dimbokro 38.94 232 P **P** **22 34 30.6 +0.8**
comp=Z,1.7nm,0.3s,baz=19,slow=7.6,SNR=6.6
DBIC LR LR 22 54 15.5
comp=Z,203nm,18.4s,baz=24,slow=42
DBIC Dimbokro 38.94 232 *e*P **P** **22 34 30.6 +0.8**
comp=Z,9.1nm,1.1s
AAK Ala-Archa 39.15 63 P **P** **22 34 32.5 +1.0**
SNR=6.2
AAK Ala-Archa 39.15 63 *e*P **P** **22 34 32.8 +1.2**
comp=Z,14nm,1.1s
AAK Ala-Archa 39.15 63 *ce*P **P** **22 34 32.8 +1.2**
AAK pmax pmax
comp=Z,17nm,1.7s
UCH Uchtor 39.20 63 P **P** **22 34 33.3 +1.0**
SNR=7.2
CHMS Chumysh 39.31 62 P **P** **22 34 33.7 +1.0**
SNR=11
KBK Karagaybulak 39.48 63 P **P** **22 34 35.6 +1.2**
SNR=9.4
NIL Nilore 39.70 77 *e*P **P** **22 34 37.4 +1.3**
comp=Z,9.5nm,0.6s
NIL Nilore 39.70 77 *e*P **P** **22 34 37.4 +1.3**
NIL pmax pmax
comp=Z,10.0nm,0.6s
KZA Kyzart 39.76 63 P **P** **22 34 38.5 +1.5**
SNR=9.3
TKM2 Tokmak 2 39.93 62 P **P** **22 34 39.0 +0.8**
SNR=6.3
ULHL Ulahol 40.47 63 P **P** **22 34 43.8 +1.2**
SNR=6.2
KSH Kashi 40.63 67 P **P** **22 34 41.1 -2.8**
KSH S **S** **22 40 46.3 -6.0**
KSH pmax pmax
comp=Z,13nm,0.9s
KSH pmax pmax
comp=Z,230nm,5.6s
KSH LR LR
comp=Z,280nm,10.6s
KSH LR LR
comp=Z,120nm,7.2s
KSH LR LR
comp=Z,190nm,14.2s
KURK Kurchatov 41.81 50 *e*P **P** **22 34 53.7 +0.4**
comp=Z,11nm,0.8s
KURK Kurchatov 41.81 50 *ce*P **P** **22 34 52.0 -1.3**
KURK pmax pmax
comp=Z,20nm,1.3s
MAKZ Makanchi 44.13 56 *e*P **P** **22 35 13.1 +0.9**
comp=Z,8.2nm,1.0s
MAKZ Makanchi 44.13 56 *e*P **P** **22 35 13.1 +0.9**
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
MKAR Makanchi Array 44.35 56 P **P** **22 35 14.2 +0.3**
comp=Z,7.8nm,0.6s,baz=277,slow=6.8,SNR=69
MKAR Makanchi Array 44.35 56 *i* P **P** **22 35 14.5 +0.6**
MKAR pmax pmax
comp=Z,8.0nm,0.6s
NVS Novosibirsk 44.78 44⇓ *i*P **P** **22 35 18.3 +1.2**
NVS *i* 22 35 30.6
NVS pmax pmax
comp=Z,11nm,0.4s
NVS pmax pmax
comp=N,3.0nm,0.4s
NVS pmax pmax
comp=E,5.0nm,0.6s
ZAA0 Zalesovo Array 45.69 46 *e*P **P** **22 35 24.2 -0.1**
comp=E,18nm,0.5s
ZALV Zalesovo Beam 45.69 46 P **P** **22 35 24.1 -0.2**
comp=E,19nm,0.4s,baz=268,slow=8.8,SNR=80
DAG Danmarks Havn 46.87 347 *i* P **P** **22 35 33.5 +0.2**
DAG MLR MLR
comp=Z,2μm,15.0s
DAG Danmarks Havn 46.87 347 *i* P **P** **22 35 33.5 +0.2**
comp=Z,2μm,15.0s
DGZ Jazzator, Alta 47.50 51 *i* P **P** **22 35 37.8 -1.1**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
WMQ Urumqi 48.54 59 *e*P **P** **22 35 48.8 +1.9**
WMQ pP pP 22 35 52.5 -1.3
WMQ pmax pmax
comp=Z,5.0nm,0.7s
WMQ pmax pmax
comp=Z,60nm,4.5s
NRIK Noril'sk 48.71 25 P **P** **22 35 48.1 +0.5**
comp=Z,8.3nm,0.9s,baz=237,slow=5.8,SNR=8.6
PYUN Piuthan 49.40 81 *e*P **P** **22 35 54.4 +0.5**
comp=Z,36nm,0.7s
SUMG Summit 49.75 339 *e*P **P** **22 35 57.0 +0.9**
SUMG MLR MLR
comp=Z,4μm,20.0s
SUMG Summit 49.75 339 *i* P **P** **22 35 57.0 +0.9**
comp=Z,4μm,20.0s
DANN Dangsing 49.94 80 *e*P **P** **22 35 58.9 +0.9**
comp=Z,64nm,0.7s
KOLN Koldanda 50.03 81 *e*P **P** **22 35 59.0 +0.4**
GKN Gorkha 50.78 80 *e*P **P** **22 36 04.5 +0.2**
DMN Daman 51.32 80 *e*P **P** **22 36 08.8 +0.4**
comp=Z,25nm,0.8s
KKN Kakani 51.39 80 *e*P **P** **22 36 09.1 +0.2**
comp=Z,21nm,0.6s
PKIN Phulchoki 51.57 80 *e*P **P** **22 36 10.4 +0.1**
comp=Z,34nm,1.1s
PKI Pulchoki 51.58 80 *e*P **P** **22 36 10.5 0.0**
comp=Z,30nm,0.9s
GUN Gumba 51.83 79 *e*P **P** **22 36 12.6 +0.2**
comp=Z,42nm,0.7s
JIRN Jiri 52.18 80 *e*P **P** **22 36 15.1 +0.1**
comp=Z,35nm,0.7s
MOY Mondy 55.68 47 *e*P **P** **22 36 41.2 +1.3**
MOY pmax pmax
comp=Z,14nm,1.4s
TLY Talaya 57.27 47 *e*P **P** **22 36 53.3 +2.1**
TLY pmax pmax
comp=Z,24nm,1.1s
ZAK Zakamensk 57.40 48 *e*P **P** **22 36 52.4 +0.2**
ZAK pmax pmax
comp=Z,10.0nm,1.1s
GTA Gaotai 58.47 61 ⇑P **P** **22 37 00.6 +0.7**
GTA pP pP 22 37 04.6 -2.4
GTA sP pwP 22 37 07.3 -1.9
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,53nm,6.5s
GTA LR LR
comp=Z,78nm,14.3s
GTA LR LR
comp=Z,69nm,14.9s
SONM Songino Array 60.12 50 P **P** **22 37 11.5 +0.3**
comp=Z,4.9nm,0.5s,baz=283,slow=8.6,SNR=31
ULN Ulaanbaatar 60.53 50 *e*P **P** **22 37 14.7 +0.7**
comp=Z,8.6nm,0.9s
ULN Ulaanbaatar 60.53 50 *ce*P **P** **22 37 14.5 +0.5**
ULN pmax pmax
comp=Z,16nm,1.3s
TIXI Tiksi 62.02 20 *i* P **P** **22 37 23.2 -0.2**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
BOSA Boshof 62.57 180 P **P** **22 37 28.8 +1.1**
comp=Z,5.5nm,1.0s,baz=2.1,slow=4.6,SNR=6.5
BOSA LR LR 23 07 55.6
comp=Z,144nm,18.5s,baz=354,slow=39
LZH Lanzhou 62.68 63 *e*P **P** **22 37 29.3 +0.6**
LZH pP pP 22 37 32.5 -3.1
LZH sP pwP 22 37 34.1 -4.9
LZH *e*PP **PP** **22 39 48.9 +2.4**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,73nm,7.6s
LZH LR LR
comp=Z,210nm,16.2s
LZH LR LR
comp=Z,220nm,16.0s
LZH LR LR
comp=Z,310nm,17.7s
SCHQ Schefferville 63.77 320 P **P** **22 37 35.9 +0.5**
comp=Z,3.1nm,0.5s,baz=42,slow=6.8,SNR=15
SCHQ Schefferville 63.77 320 *e*P **P** **22 37 36.3 +0.9**
comp=Z,9.1nm,0.6s
RES Resolute Bay 64.47 345 P **P** **22 37 40.0 +0.3**
comp=Z,3.1nm,0.9s,baz=35,slow=6.8,SNR=4.1
RES Resolute Bay 64.47 345 P **P** **22 37 40.0 +0.3**
CD2 Chengdu 64.80 69 *e*P **P** **22 37 42.8 +0.2**
CD2 pmax pmax
comp=Z,20nm,0.5s
HHC Hu-ho-hao-te 66.21 56 *e*P **P** **22 37 55.5 +3.8**
HHC pmax pmax
comp=Z,23nm,0.9s
HHC pmax pmax
comp=Z,94nm,6.5s
KMI Kunming 66.64 75 P **P** **22 37 58.0 +3.2**
KMI pmax pmax
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 66.78 83 P **P** **22 37 55.7 +0.2**
comp=Z,1.5nm,0.3s,baz=297,slow=8.3,SNR=4.9
CMAR Chiang Mai Arr 66.78 83 *i* P **P** **22 37 54.9 -0.6**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
XAN Xi'an 67.32 63 P **P** **22 37 59.3 +0.6**
XAN pP pP 22 38 05.8 +0.1
XAN pmax pmax
comp=Z,5.0nm,0.7s
D53A Lac Vacive, Po 73.45 316 *e*P **P** **22 38 37.3 +1.3**
comp=Z,7.6nm,0.9s
BILL Bilibino 73.93 14⇑ *e*P **P** **22 38 38.2 -0.2**
BILL *e* 22 38 56.5
BILL *e*S **S** **22 48 14.9 +6.4**
BILL pmax pmax
comp=Z,5.0nm,1.7s
BILL MLR MLR
comp=Z,126nm,17.0s
SEY Seymchan 74.40 22 P **P** **22 38 41.1 -0.1**
comp=Z,3.1nm,0.7s,baz=293,slow=2.2,SNR=5.5
NJ2 Nanjing 75.57 61 *e*P **P** **22 38 48.4 -0.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
MA2 Magadan 76.31 25 P **P** **22 38 52.7 +0.5**
comp=Z,4.8nm,0.4s,baz=293,slow=18,SNR=3.2
INK Inuvik 76.46 352 *e*P **P** **22 38 53.3 +0.4**
comp=Z,4.3nm,1.1s
INK Inuvik 76.46 352 *e*P **P** **22 38 53.3 +0.4**
INK pmax pmax
comp=Z,4.0nm,1.1s
USA0B Ussuriysk Arra 77.53 45 *e*P **P** **22 38 59.5 +0.2**
comp=Z,9.1nm,0.6s
USRK Ussuriysk Ar. 77.53 45 P **P** **22 38 59.6 +0.3**
comp=Z,7.5nm,0.6s,baz=282,slow=5.6,SNR=22
YKA Yellowknife Ar 78.24 342 P **P** **22 39 03.4 +0.5**
comp=Z,0.5nm,0.5s,baz=31,slow=5.6,SNR=3.8
KSRS Korea Array 78.90 52 P **P** **22 39 07.8 +0.8**
comp=Z,4.1nm,0.8s,baz=301,slow=4.4,SNR=13
ILAR Eielson Array 81.06 356 P **P** **22 39 18.5 +0.2**
comp=Z,0.8nm,0.8s,baz=353,slow=3.8,SNR=7.5
CCB Clear Creek Bu 81.23 357 *e*P **P** **22 39 19.8 +0.7**
comp=Z,4.2nm,1.0s
G40A Rib Lake 81.49 320 *e*P **P** **22 39 23.4 +2.4**
comp=Z,2.6nm,0.7s
BDFB Brasilia 85.27 248 LR LR 23 21 05.1
comp=Z,60nm,18.1s,baz=76,slow=38
ECSD EROS Data Cent 85.90 322 *e*P **P** **22 39 45.1 +1.5**
comp=Z,2.6nm,0.7s
MAJO Matsushiro 85.98 48 *e*P **P** **22 39 44.9 +0.8**
MAJO Matsushiro 85.98 48 *e*P **P** **22 39 44.9 +0.8**
MJAR Matsushiro Arr 85.99 48 P **P** **22 39 44.9 +0.8**
comp=Z,6.4nm,1.0s,baz=303,slow=5.5,SNR=7.9
CCM Cathedral Cave 86.85 315 *e*P **P** **22 39 49.7 +1.4**
comp=Z,4.3nm,0.6s
CCM Cathedral Cave 86.85 315 *e*P **P** **22 39 49.7 +1.4**
CCM pmax pmax
comp=Z,4.0nm,0.6s
LRAL Lakeview Retre 87.51 309 *e*P **P** **22 39 53.0 +1.4**
comp=Z,4.7nm,0.8s
PDAR Pinedale Array 92.78 328 P **P** **22 40 16.1 -0.2**
comp=Z,0.2nm,0.4s,baz=52,slow=5.8,SNR=3.1
ANMO Albuquerque 97.51 322 LR LR 23 27 59.2
comp=Z,60nm,19.2s,baz=76,slow=38
WR1 Warramunga Arr 116.60 97 *e*PKPdf **PKPdf** **22 45 48.1 0.0**
WRA Warramunga Arr 116.60 97 PKP **PKPdf** **22 45 48.1 0.0**
comp=Z,1.1nm,0.9s,baz=309,slow=1.5,SNR=2.7
AS31 Alice Springs 118.00 101 *e*PKPdf **PKiKP** **22 45 52.5 +1.7**
ASAR Alice Springs 118.00 101 PKP **PKPdf** **22 45 50.7 0.0**
comp=Z,0.4nm,0.8s,baz=316,slow=2.6,SNR=3.3

IDC ***18*** *22:33:11.4±0.7,34°.27N×25°.05E,h0km,mb4.1/15,*
mb1 4.2/24,mb1mx4.0/50,mbtmp4.1/24,ML4.2/8,Error
ellipse: s-maj=13.8km s-min=12.9km az=89.0
ISCJB ***18*** *22:33:14.3±0.5,34°.12N×0°.03×25°.15E±0°.03,h39km±5km,*
mb4.0/17,Error ellipse: s-maj=6.2km s-min=2.9km
az=27.4
THE ***18*** *22:33:16.2,34°.35N×25°.08E,h0km,ML3.5/5,Error ellipse:*
s-maj=2.1km s-min=0.7km az=181.0
ATH ***18*** *22:33:17.6,34°.43N×25°.07E,h34km±2km,ML3.5/7,Error*
ellipse: s-maj=3.8km s-min=1.4km az=359.0
NEIC ***18*** *22:33:17.6±0.0,34°.41N×25°.10E,h10km,mb4.1/8,*
ML3.5(THE),ML3.5(ATH),After ATH.
DDA ***18*** *22:33:18.8,34°.05N×25°.11E,h13km,ML3.8*
GII ***18*** *22:33:21.8±0.0,34°.16N×26°.02E,h1km,mb4.1/4,MD3.8/5*
ISC 18 22:33:14.4±1.1,34°.20N±0°.05×25°.14E±0°.03,h23km±8km,
n194,σ1°92/219,mb4.1/17,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**342**	P	**Pb**	**22 33 30.3**	**-0.4**
SIVA				S	**Sb**	**22 33 40.6**	**-1.2**
SIVA	**Sivas**	**0.86**	**342**	P	**Pb**	**22 33 30.4**	**-0.4**
SIVA				S	**Sb**	**22 33 40.6**	**-1.2**
SIVA				AML	AML	22 33 47.5	
	comp=E,33325μm,0.8s						
SIVA				AML	AML	22 33 48.7	
	comp=N,24951μm,0.5s						
TMBK	**Timbaki Herakl**	**0.92**	**341**	P	**Pb**	**22 33 31.5**	**-0.3**
TMBK				S	**Sb**	**22 33 44.1**	**+0.5**
LAST	**Lasithi**	**1.00**	**16**	P	**Pb**	**22 33 33.0**	**-0.1**
LAST	**Lasithi**	**1.00**	**16**	P	**Pn**	**22 33 33.1**	**0.0**
LAST				AML	AML	22 33 54.1	
	comp=E,6014μm,0.7s						
LAST				AML	AML	22 33 57.2	
	comp=N,4466μm,0.9s						
GVD	**Gavdhos**	**1.08**	**307**	P	**Pb**	**22 33 34.7**	**+0.3**
GVD	**Gavdhos**	**1.08**	**307**	P	**Pn**	**22 33 34.4**	**+0.3**
GVD				S	**Sn**	**22 33 48.9**	**+0.6**
GVD	**Gavdhos**	**1.08**	**307**	P	**Pb**	**22 33 35.2**	**+0.8**
GVD				AML	AML	22 33 55.9	
	comp=E,8155μm,0.6s						
GVD				AML	AML	22 33 59.2	
	comp=N,6768μm,0.5s						
KSTL	**Kastelli Herak**	**1.10**	**357**	P	**Pn**	**22 33 33.4**	**-1.0**
IDI	**Anoyia**	**1.11**	**349**	Pn	**Pn**	**22 33 34.3**	**-0.2**
	comp=N,86nm,0.3s,baz=174,slow=16,SNR=40						
IDI				LR	LR	22 33 42.7	
	comp=N,270nm,18.5s,baz=213,slow=30						
IDI				Sn	**Sn**	**22 33 49.5**	**+0.4**
	comp=N,112nm,0.3s,baz=211,slow=18,SNR=12						
IDI	**Anoyia**	**1.11**	**349**	P	**Pn**	**22 33 34.0**	**-0.6**
IACM	**Heraklion**	**1.11**	**357**	P	**Pb**	**22 33 35.2**	**+0.3**
NPS	**Neapolis**	**1.13**	**20**	P	**Pb**	**22 33 35.2**	**-0.1**
NPS	**Neapolis**	**1.13**	**20**	P	**Pb**	**22 33 35.5**	**+0.1**
NPS				AML	AML	22 34 02.0	
	comp=N,3407μm,0.9s						
NPS				AML	AML	22 34 02.9	
	comp=E,4890μm,0.6s						
STIA	**Sitia Lasithi**	**1.27**	**38**	P	**Pb**	**22 33 38.6**	**+0.9**
STIA				S	**Sb**	**22 33 55.9**	**+2.3**
ZKR	**Zakros**	**1.28**	**44**	P	**Pb**	**22 33 38.1**	**+0.3**
ZKR	**Zakros**	**1.28**	**44**	P	**Pb**	**22 33 38.8**	**+1.1**
ZKR				S	**Sb**	**22 33 57.1**	**+3.3**
ZKR	**Zakros**	**1.28**	**44**	P	**Pb**	**22 33 38.8**	**+1.1**
ZKR				S	**Sb**	**22 33 55.8**	**+2.0**
ZKR				AML	AML	22 34 06.5	
	comp=N,2142μm,0.7s						
ZKR				AML	AML	22 34 06.8	
	comp=E,5253μm,0.6s						
VAM	**Vamos**	**1.43**	**328**	P	**Pn**	**22 33 39.7**	**+0.7**
VAM				S	**Sb**	**22 33 58.9**	**+0.7**
VAM	**Vamos**	**1.43**	**328**	P	**Pb**	**22 33 40.5**	**+0.1**
VAM				AML	AML	22 34 14.5	
	comp=N,2976μm,0.7s						
VAM				AML	AML	22 34 21.1	
	comp=E,3380μm,0.7s						
IMMV	**Iera Moni Meta**	**1.58**	**323**	P	**Pn**	**22 33 42.1**	**+1.1**
IMMV	**Iera Moni Meta**	**1.58**	**323**	P	**Pb**	**22 33 42.7**	**-0.2**
IMMV				S	**Sb**	**22 34 02.2**	**-0.2**
IMMV	**Iera Moni Meta**	**1.58**	**323**	P	**Pb**	**22 33 42.8**	**-0.1**
IMMV				AML	AML	22 34 21.5	
	comp=N,2535μm,0.8s						
IMMV				AML	AML	22 34 21.6	
	comp=E,3596μm,0.7s						
KARP	**Karpathos**	**2.14**	**50**	*e*P	**Pb**	**22 33 51.8**	**-0.7**
KARP	**Karpathos**	**2.14**	**50**	*e*Pn	**Pb**	**22 33 52.1**	**-0.4**
KARP	**Karpathos**	**2.14**	**50**	P	**Pb**	**22 33 52.1**	**-0.4**
KARP	**Karpathos**	**2.14**	**50**	P	**Pb**	**22 33 52.7**	**+0.2**
THR9	**Santorini-Faro**	**2.16**	**5**	P	**Pn**	**22 33 50.3**	**+1.4**
THR6	**Thira Island,**	**2.16**	**6**	P	**Pn**	**22 33 50.6**	**+1.6**
THR6	**Thira Island,**	**2.16**	**6**	P	**Pn**	**22 33 50.9**	**+1.9**
SANT	**Santorini**	**2.18**	**7**	*e*P	**Pn**	**22 33 50.0**	**+0.6**
SANT	**Santorini**	**2.18**	**7**	*e*Pn	**Pn**	**22 33 49.9**	**+0.6**
THR3	**Thira Island,**	**2.22**	**6**	P	**Pn**	**22 33 51.3**	**+1.6**
THR3	**Thira Island,**	**2.22**	**6**	P	**Pn**	**22 33 50.6**	**+0.9**
THR5	**Thira Island,**	**2.22**	**4**	P	**Pn**	**22 33 51.3**	**+1.5**
SAP2K	**Karterados**	**2.22**	**6**	P	**Pn**	**22 33 51.3**	**+1.5**
THR8	**Santorini-Mono**	**2.22**	**7**	P	**Pn**	**22 33 50.7**	**+0.9**
THR7	**Fira-Santorini**	**2.23**	**6**	P	**Pn**	**22 33 50.9**	**+0.9**
SAP3	**Santorini-Thir**	**2.24**	**4**	P	**Pn**	**22 33 51.2**	**+1.1**
THT2	**Imerovigli**	**2.24**	**6**	P	**Pn**	**22 33 51.6**	**+1.5**
ANKY	**Antikythira Is**	**2.25**	**318**	P	**Pn**	**22 33 52.4**	**+2.2**
ANKY	**Antikythira Is**	**2.25**	**318**	P	**Pn**	**22 33 52.4**	**+2.2**
THR2	**Thira island,**	**2.26**	**6**	P	**Pn**	**22 33 51.7**	**+1.4**
THR2	**Thira island,**	**2.26**	**6**	P	**Pn**	**22 33 51.5**	**+1.2**
IOSP	**Ios island**	**2.52**	**3**	P	**Pn**	**22 33 54.9**	**+0.9**
IOSP	**Ios island**	**2.52**	**3**	P	**Pn**	**22 33 54.9**	**+0.9**
MHLO	**Agia Marina, M**	**2.56**	**347**	P	**Pn**	**22 33 55.5**	**+1.0**
MHLA	**Plaka, Milos I**	**2.61**	**347**	P	**Pn**	**22 33 56.5**	**+1.4**
KYTH	**Kithira**	**2.68**	**321**	P	**Pn**	**22 33 58.0**	**+1.8**
KTHR	**Kythira**	**2.70**	**320**	P	**Pn**	**22 33 58.9**	**+2.5**
APE	**Apeiranthos**	**2.88**	**6**	*e*P	**Pn**	**22 33 59.7**	**+0.8**
APE	**Apeiranthos**	**2.88**	**6**	P	**Pn**	**22 33 59.5**	**+0.5**
VLI	**Veliai**	**3.09**	**325**	P	**Pn**	**22 34 02.7**	**+0.9**
VLI	**Veliai**	**3.09**	**325**	P	**Pn**	**22 34 02.6**	**+0.9**
ARG	**Arkhangelos**	**3.17**	**50**	*e*P	**Pn**	**22 34 04.9**	**+2.1**
ARG	**Arkhangelos**	**3.17**	**50**	P	**Pn**	**22 34 05.8**	**+2.9**
ARG	**Arkhangelos**	**3.17**	**50**	P	**Pn**	**22 34 05.7**	**+2.9**
DAT	**Datca**	**3.22**	**38**	*e*P	**Pn**	**22 34 05.2**	**+1.6**
DAT	**Datca**	**3.22**	**38**	*i* P	**Pn**	**22 34 06.1**	**+2.5**
DAT				IAML_P			
	comp=Z,645nm,0.2s						
DATC	**Datca-Mugla**	**3.28**	**38**	*e*P	**Pn**	**22 34 06.1**	**+1.7**
BODT	**Bodrum**	**3.36**	**31**	*e*P	**Pn**	**22 34 06.9**	**+1.4**
BDRM	**Kayabasi**	**3.42**	**33**	*i* P	**Pn**	**22 34 08.9**	**+2.6**
BDRM				IAML_P			
	comp=Z,659nm,0.4s						
KRND	**KRANIDI**	**3.56**	**334**	P	**Pn**	**22 34 09.3**	**+1.0**
DID	**Didima**	**3.64**	**335**	P	**Pn**	**22 34 09.8**	**+0.4**
DID	**Didima**	**3.64**	**335**	P	**Pn**	**22 34 09.7**	**+0.3**
SMG	**Samos**	**3.77**	**21**	P	**Pn**	**22 34 11.9**	**+0.9**
VLY	**Voula,Athens**	**3.81**	**344**	P	**Pn**	**22 34 11.3**	**-0.3**
DALY	**Dalyan (Mula)**	**3.88**	**47**	*e*P	**Pn**	**22 34 14.8**	**+2.2**
DALY	**Dalyan (Mula)**	**3.88**	**47**	*i* P	**Pn**	**22 34 15.4**	**+2.8**
TURN	**Turunc**	**3.89**	**46**	*e*P	**Pn**	**22 34 10.8**	**-1.9**
TURN	**Turunc**	**3.89**	**46**	*i* P	**Pn**	**22 34 11.7**	**-1.0**
YER	**Yerkesik**	**3.89**	**40**	*e*P	**Pn**	**22 34 14.8**	**+2.0**
ATHU	**Athens Univers**	**3.92**	**344**	P	**Pn**	**22 34 13.6**	**+0.4**
ITM	**Ithomi**	**3.96**	**320**	*e*P	**Pn**	**22 34 14.2**	**+0.5**
ITM	**Ithomi**	**3.96**	**320**	*e*Pn	**Pn**	**22 34 14.4**	**+0.6**
ITM	**Ithomi**	**3.96**	**320**	P	**Pn**	**22 34 14.5**	**+0.8**
PTL	**Penteli**	**3.98**	**345**	P	**Pn**	**22 34 14.7**	**+0.7**
FETY	**Fethiye**	**4.04**	**52**	*e*P	**Pn**	**22 34 16.3**	**+1.5**
FETY	**Fethiye**	**4.04**	**52**	*i* P	**Pn**	**22 34 16.2**	**+1.5**
FETY				IAML_P			
	comp=Z,1μm,0.3s						
ACOR	**Acrocorinthos**	**4.12**	**334**	P	**Pn**	**22 34 16.3**	**+0.4**
AKAS	**Kas**	**4.18**	**60**	*e*P	**Pn**	**22 34 18.7**	**+1.8**
AKAS	**Kas**	**4.18**	**60**	*i* P	**Pn**	**22 34 19.2**	**+2.3**
LTK	**Loutraki**	**4.20**	**336**	P	**Pn**	**22 34 17.1**	**0.0**
URLA	**Izmir**	**4.32**	**15**	*e*P	**Pn**	**22 34 19.6**	**+0.9**
EREA	**Eretria**	**4.32**	**347**	P	**Pn**	**22 34 19.7**	**+1.0**
AMT	**Artemida-Makis**	**4.34**	**321**	P	**Pn**	**22 34 21.6**	**+2.7**
AYDB	**Zeytinkoy-Aydi**	**4.36**	**30**	*e*P	**Pn**	**22 34 21.2**	**+1.9**
GUR	**Goura**	**4.36**	**330**	P	**Pn**	**22 34 20.3**	**+0.9**
GUR	**Goura**	**4.36**	**330**	P	**Pn**	**22 34 20.0**	**+0.7**
BLCB	**Balcova**	**4.45**	**20**	*e*P	**Pn**	**22 34 21.9**	**+1.4**
KLV	**Kalavryta, Ach**	**4.54**	**329**	P	**Pn**	**22 34 22.1**	**+0.4**
ELL	**Elmali**	**4.65**	**55**	*e*P	**Pn**	**22 34 25.8**	**+2.5**
DRO	**Drossia**	**4.66**	**324**	P	**Pn**	**22 34 25.9**	**+2.5**
DRO	**Drossia**	**4.66**	**324**	P	**Pn**	**22 34 25.1**	**+1.8**
AKUM	**Antalya-Kumluc**	**4.76**	**62**	*i* P	**Pn**	**22 34 26.1**	**+1.4**
KALE	**Kalithea**	**4.83**	**331**	P	**Pn**	**22 34 26.2**	**+0.5**
TRIZ	**Trizonia**	**4.84**	**330**	P	**Pn**	**22 34 26.7**	**+0.9**
RLS	**Riolos of Patr**	**4.86**	**323**	P	**Pn**	**22 34 29.2**	**+3.1**
KORT	**Korkueli**	**5.08**	**55**	*e*P	**Pn**	**22 34 32.1**	**+2.8**
ANX	**Ano Chora**	**5.10**	**330**	P	**Pn**	**22 34 30.1**	**+0.7**
MANT	**Manisa**	**5.10**	**32**	*e*Pn	**Pn**	**22 34 30.2**	**+0.7**
KULA	**Kula-Manisa**	**5.16**	**32**	*e*P	**Pn**	**22 34 31.9**	**+1.6**
ANTB	**Antalya**	**5.24**	**57**	*e*P	**Pn**	**22 34 33.4**	**+2.1**
ISP	**Isparta**	**5.67**	**49**	*e*Pn	**Pn**	**22 34 39.3**	**+2.1**
EZN	**Ezine**	**5.70**	**9**	*e*P	**Pn**	**22 34 38.7**	**+1.2**
KEPZ	**Antalya-Kepez**	**5.92**	**61**	*i* P	**Pn**	**22 34 43.3**	**+2.6**
KEPZ				IAML_P			
	comp=Z,1μm,0.2s						
LEF	**Lefka**	**6.46**	**80**	*e*P	**Pn**	**22 34 48.7**	**+0.7**
TEKE	**Tekeli-Mersin**	**6.81**	**71**	*e*P	**Pn**	**22 34 53.9**	**+1.0**
KONT	**Konya--Tatoy**	**6.94**	**55**	*e*P	**Pn**	**22 34 56.3**	**+1.6**
BERE	**Bereket-Mersin**	**6.95**	**70**	*e*P	**Pn**	**22 34 56.1**	**+1.1**
TEVE	**Tevekalti-Mers**	**7.15**	**69**	*e*P	**Pn**	**22 34 58.9**	**+1.3**
AKKU	**Akkuyu-Mersin**	**7.16**	**72**	*e*P	**Pn**	**22 34 58.6**	**+0.9**
IKL	**Isikli**	**7.29**	**71**	*e*P	**Pn**	**22 35 00.6**	**+1.2**
KEBE	**Keben-Mersin**	**7.36**	**70**	*e*P	**Pn**	**22 35 02.1**	**+1.6**
EREN	**Erenkoy**	**7.54**	**77**	*e*P	**Pn**	**22 35 04.7**	**+1.8**
KIZK	**Mersin**	**7.70**	**70**	*e*P	**Pn**	**22 35 06.7**	**+1.6**
MERS	**Mersin**	**8.10**	**68**	*e*P	**Pn**	**22 35 11.9**	**+1.3**
OFRI	**`Ofer**	**8.38**	**98**	Pn	**Pn**	**22 35 15.5**	**+1.0**
OFRI				Sn	**Sn**	**22 36 42.8**	**-5.6**
KZIT	**Kziot**	**8.48**	**110**	Pn	**Pn**	**22 35 16.4**	**+0.6**
KZIT				Sn	**Sn**	**22 36 45.4**	**-5.3**
VTS	**Vitosha**	**8.54**	**351**	*e*Pn	**Pn**	**22 35 16.3**	**-0.4**
KARA	**Karaisali**	**8.62**	**66**	*e*P	**Pn**	**22 35 18.9**	**+1.1**
AMAZ	**Amatzia**	**8.64**	**105**	Pn	**Pn**	**22 35 19.0**	**+0.9**
AMAZ				Sn	**Sn**	**22 36 50.1**	**-4.7**
AMAZ	**Amatzia**	**8.64**	**105**	P	**Sn**	**22 36 51.2**	**-3.6**
MMA0B	**Mount Meron ar**	**8.64**	**95**	Pn	**Pn**	**22 35 17.9**	**-0.2**
MMAI	**Mount Meron Ar**	**8.64**	**95**	Pn	**Pn**	**22 35 18.0**	**-0.1**
	comp=Z,2.9nm,0.3s,baz=262,slow=12,SNR=13						
MMAI				Sn	**Sn**	**22 36 50.1**	**-4.8**
	comp=Z,9.6nm,0.3s,baz=275,slow=22,SNR=13						
BR101	**Keskin Array S**	**8.76**	**48**	*e*Pn	**Pn**	**22 35 21.0**	**+1.3**
BR101				*e*Sn	**Sn**	**22 36 56.9**	**-0.9**
BR131	**Keskin Array S**	**8.76**	**48**	*e*Pn	**Pn**	**22 35 19.6**	**-0.1**
BRTR	**Keskin Array B**	**8.76**	**48**	Pn	**Pn**	**22 35 21.0**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=228,slow=16,SNR=5.2						
BRTR				Sn	**Sn**	**22 36 56.9**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=209,slow=27,SNR=2.4						
MMLI	**Mount Malkishu**	**8.78**	**99**	Pn	**Pn**	**22 35 20.7**	**+0.7**
MMLI				Sn	**Sn**	**22 36 52.7**	**-5.6**
YTIR	**Yattir**	**8.86**	**106**	Pn	**Pn**	**22 35 22.0**	**+0.8**
YTIR				Sn	**Sn**	**22 36 55.3**	**-5.1**
NATI	**Neve Ativ**	**8.88**	**93**	Pn	**Pn**	**22 35 20.9**	**-0.3**
HMDT	**Nahal Hemdat**	**8.92**	**100**	Pn	**Pn**	**22 35 22.6**	**+0.8**
HMDT				Sn	**Sn**	**22 36 56.1**	**-5.4**
KSHT	**Keshet**	**8.99**	**95**	Pn	**Pn**	**22 35 23.7**	**+0.9**
SHMJ	**Saham**	**9.00**	**96**	P	**Sn**	**22 37 01.9**	**-1.7**
DSI	**Dead Sea**

JDRJ	Daraweish	9.54	108	P	Sn	22 37 11.9	-5.2
ASF	Jabal al Asfar	10.06	98	Pn	Pn	22 35 37.5	0.0
	comp=Z,0.5nm,0.3s,baz=342,slow=4.8,SNR=4.4						
ASF				Sn	Sn	22 37 23.8	-5.9
	comp=Z,1.0nm,0.3s,baz=37,slow=12,SNR=3.6						
BLY	Banja Luka	12.19	332	*e*Pn	Pn	22 36 04.4	-2.1
BLY				*e*Sn	Sn	22 38 11.2	-10
VYHS	Vyhne	15.04	344	*e*PN	Pn	22 36 44.2	-1.1
MODS	Modra-Piesok	15.33	340	*e*P	P	22 36 53.5	-0.3
VRAC	Vranov	16.37	340	Pn	Pn	22 37 02.3	-0.3
	comp=Z,0.1nm,0.3s,baz=124,slow=13,SNR=3.7						
KIV	Kislovodsk	16.72	49	*e*Pn	P	22 37 09.2	-0.1
	comp=Z,11nm,0.9s						
KVAR	Kislovodsk Arr	16.73	49	Pn	P	22 37 10.8	+1.4
	baz=266,slow=19,SNR=3.9						
KBZ	Khabaz	16.74	50	Pn	P	22 37 10.3	+0.9
	comp=Z,0.4nm,0.3s,baz=250,slow=13,SNR=7.6						
AKASG	Malin Array Be	16.76	9	Pn	Pn	22 37 06.3	-1.2
	comp=Z,3.4nm,0.3s,baz=199,slow=10,SNR=21						
AKBB	Malin Array Si	16.76	9	*e*Pn	Pn	22 37 07.8	+0.4
	comp=Z,13nm,0.8s						
GEC2	GERESS Array S	16.93	333	*e*Pn	P	22 37 11.8	+0.2
	comp=Z,5.5nm,0.6s						
GERES	GERESS Array B	16.93	333	Pn	Pn	22 37 09.9	+0.2
	comp=Z,0.9nm,0.3s,baz=146,slow=12,SNR=32						
KHC	Kasperske Hory	17.21	334	*e*Pn	P	22 37 15.9	+1.3
	comp=Z,0.9nm,0.6s						
KHC	Kasperske Hory	17.21	334	*e*P	P	22 37 14.2	-0.4
DPC	Dobruska-Polom	17.39	341	*e*P	P	22 37 17.3	+0.7
CLL	Collm	19.24	336	*e*P	P	22 37 37.0	+0.2
	comp=Z,4.0nm,1.1s						
CLL				*e*pP	pP	22 37 41.0	-1.7
CLL				*i*		22 37 48.2	
SUW	Suwalki	19.86	357	*e*P	P	22 37 43.3	-0.3
	comp=Z,28nm,1.0s						
NACGM	Naroch	20.73	3	*e*LR	LR	22 38 33.0	
ESDC	Sonseca Array	23.84	292	P	P	22 38 25.4	-0.4
	comp=Z,0.3nm,0.5s,baz=95,slow=12,SNR=3.6						
GEYT	Alibeck	26.84	72	P	P	22 38 54.1	+1.0
	comp=Z,0.8nm,0.8s,baz=278,slow=10.0,SNR=2.6						
HFS	Hagfors	27.01	347	P	P	22 38 54.4	0.0
	comp=Z,0.8nm,0.3s,baz=140,slow=9.7,SNR=9.2						
FIA0	FINESS Array S	27.27	1	*e*P	P	22 38 55.3	-1.3
FINES	FINESS Array B	27.27	1	P	P	22 38 55.3	-1.3
	comp=Z,1.6nm,0.8s,baz=167,slow=9.8,SNR=7.0						
NB2	NORSAR Subarra	28.32	346	P	P	22 39 05.4	-0.8
	comp=Z,0.1nm,0.5s,baz=156,slow=9.3						
NB200	NORSAR Array S	28.32	346	*e*P	P	22 39 05.3	-0.8
NOA	NORSAR Array B	28.32	346	P	P	22 39 05.3	-0.8
	comp=Z,0.1nm,0.4s,baz=156,slow=10.0,SNR=4.1						
EKA	Eskdalemuir Ar	28.82	326	P	P	22 39 10.7	+0.1
	comp=Z,0.3nm,0.3s,baz=123,slow=9.2,SNR=3.1						
TOA1	Torodi Ar. Sit	29.86	231	*e*P	P	22 39 20.6	+0.4
TOA0	Torodi Ar. Sit	29.86	231	*e*P	P	22 39 22.2	+2.1
	comp=Z,8.1nm,0.6s						
TORD	Torodi Ar. Bea	29.86	231	P	P	22 39 20.6	+0.4
	comp=Z,1.9nm,0.6s,baz=279,slow=10,SNR=76						
ARA0	ARCESS Array S	35.39	0	*e*P	P	22 40 06.3	-1.7
ARCES	ARCESS Array B	35.39	0	P	P	22 40 06.3	-1.7
	comp=Z,8.2nm,0.4s,baz=184,slow=11,SNR=7.4						
DBIC	Dimbokro	38.96	232	P	P	22 40 38.3	-0.5
	comp=Z,3.1nm,0.8s,baz=31,slow=7.9,SNR=3.6						
MK32	Makanchi Array	44.33	56	*e*P	P	22 41 23.5	+1.0
MKAR	Makanchi Array	44.33	56	P	P	22 41 23.5	+1.0
	comp=Z,1.6nm,0.5s,baz=269,slow=7.2,SNR=16						
ZAA0	Zalesovo Array	45.69	45	*e*P	P	22 41 33.6	+0.4
	comp=Z,4.3nm,0.5s						
ZAA1	Zalesovo Array	45.69	45	*e*P	P	22 41 33.5	+0.3
ZALV	Zalesovo Beam	45.69	45	P	P	22 41 33.5	+0.3
	comp=Z,4.5nm,0.4s,baz=268,slow=8.5,SNR=17						
SONA0	Songino Array	60.11	50	*e*P	P	22 43 21.3	+1.4
SONM	Songino Array	60.11	50	P	P	22 43 21.3	+1.4
	comp=Z,1.1nm,0.5s,baz=292,slow=9.8,SNR=7.3						
BOSA	Boshof	62.47	180	P	P	22 43 37.7	+1.7
	comp=Z,2.5nm,0.9s,baz=6.3,slow=9.2,SNR=2.8						
USRK	Ussuriysk Ar.	77.53	45	P	P	22 45 09.2	+1.0
	comp=Z,1.9nm,0.5s,baz=265,slow=11,SNR=5.8						
MAJO	Matsushiro	85.98	48	*e*P	P	22 45 53.4	+0.4
MJAR	Matsushiro Arr	85.98	48	P	P	22 45 53.4	+0.4
	comp=Z,0.5nm,0.4s,baz=309,slow=6.1,SNR=2.9						

IDC 18 22:35:40.8±2.8, 34°.27N×24°.90E, h0km, mb4.2/2, mb1 4.2/3, mb1mx3.4/42, mbtmp3.9/3, ML3.7/1, Error ellipse: s-maj=71.0km s-min=23.0km az=107.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	1.01	360	Pn	Pn	22 36 02.6	+0.3
	8.8nm,0.3s,baz=180,slow=20,SNR=1.6						
IDI				Sn	Sn	22 36 17.2	-0.1
	30nm,0.3s,baz=300,slow=18,SNR=5.3						
GERES	GERESS Array B	16.77	334	Pn	P	22 39 39.5	+0.1
	0.1nm,0.3s,baz=147,slow=9.1,SNR=2.9						
TORD	Torodi Ar. Bea	29.76	231	P	P	22 41 48.9	-0.2
	0.3nm,0.4s,baz=30,slow=8.4,SNR=2.0						
ARCES	ARCESS Array B	35.32	0	P	P	22 42 37.0	-0.2
	0.4nm,0.6s,baz=186,slow=8.2,SNR=2.4						

IDC 18 22:39:25.8±1.2, 34°.24N×25°.08E, h0km, mb3.7/6, mb1 3.7/11, mb1mx3.5/44, mbtmp3.6/11, ML3.9/4, Error ellipse: s-maj=19.9km s-min=19.1km az=97.0

ISCJB 18 22:39:30.9±0.8, 34°.28N±0°.07×25°.11E±0°.03, h55km±7km, mb3.8/7, Error ellipse: s-maj=11.2km s-min=4.5km az=5.4

THE 18 22:39:31.6, 34°.39N×25°.08E, h0km±1km, ML3.0/6, Error ellipse: s-maj=2.1km s-min=0.7km az=169.0

ATH 18 22:39:32.1, 34°.44N×25°.05E, h33km±2km, ML3.1/7, Error ellipse: s-maj=4.2km s-min=1.6km az=5.0

DDA 18 22:39:47.8, 33°.84N×25°.01E, h36km±1km, ML3.7

ISC 18 22:39:32.2±1.5, 34°.35N±0°.08×25°.10E±0°.04, h43km±14km, n87, σ1°.46/99, mb3.7/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.71	340	P	Pn	22 39 44.7	-1.1
SIVA				S	Sn	22 39 55.4	-0.2
SIVA	Sivas	0.71	340	P	Pn	22 39 44.8	-1.0
SIVA				S	Sn	22 39 54.9	-0.6
SIVA				AML	AML	22 40 02.8	
	comp=E,11168μm,0.8s						
SIVA				AML	AML	22 40 03.2	
	comp=N,8940μm,0.6s						
TMBK	Timbaki Herakl	0.77	339	P	Pn	22 39 46.1	-0.5
TMBK				S	Sn	22 39 57.6	+0.5
LAST	Lasithi	0.86	21	P	Pn	22 39 47.6	-0.4
LAST				S	Sn	22 40 00.7	+1.2
LAST	Lasithi	0.86	21	P	Pn	22 39 47.7	-0.3
LAST				AML	AML	22 40 08.7	
	comp=E,1578μm,0.6s						
LAST				AML	AML	22 40 12.6	
	comp=N,1409μm,0.7s						
IDI	Anoyia	0.95	349	Pn	Pn	22 39 48.9	-0.3
	comp=N,51nm,0.3s,baz=166,slow=18,SNR=40						
IDI				Sn	Sn	22 40 03.6	+2.0
	comp=N,58nm,0.3s,baz=286,slow=18,SNR=10.0						
IDI	Anoyia	0.95	349	P	Pn	22 39 48.4	-0.8
KSTL	Kastelli Herak	0.95	358	P	Pn	22 39 47.6	-1.5
KSTL				S	Sn	22 40 00.2	-1.3
GVD	Gavdhos	0.97	300	P	Pn	22 39 49.1	-0.3
GVD	Gavdhos	0.97	300	P	Pn	22 39 49.2	-0.1
GVD				S	Sn	22 40 03.9	+2.0
GVD	Gavdhos	0.97	300	P	Pn	22 39 49.0	-0.3
GVD				AML	AML	22 40 10.3	
	comp=E,4430μm,0.5s						
GVD				AML	AML	22 40 10.5	
	comp=N,3440μm,0.4s						
GVDS	Gavdos	0.97	301	P	Pn	22 39 49.6	+0.3
GVDS				S	Sn	22 40 04.8	+2.9
NPS	Neapolis	1.00	25	P	Pn	22 39 50.1	+0.3
NPS				S	Sn	22 40 04.8	+2.0
NPS	Neapolis	1.00	25	P	Pn	22 39 49.9	+0.1
NPS				AML	AML	22 40 16.6	
	comp=N,1090μm,0.8s						
NPS				AML	AML	22 40 17.5	
	comp=E,1662μm,0.5s						
STIA	Sitia Lasithi	1.18	44	P	Pn	22 39 53.8	+1.6
ZKR	Zakros	1.19	50	P	Pn	22 39 52.7	+0.3
ZKR	Zakros	1.19	50	P	Pn	22 39 54.1	+1.7
ZKR				S	Sn	22 40 11.1	+3.7
ZKR	Zakros	1.19	50	P	Pn	22 39 54.7	+2.3
ZKR				AML	AML	22 40 21.2	
	comp=N,688μm,0.5s						
ZKR				AML	AML	22 40 22.8	
	comp=E,1466μm,0.6s						
VAM	Vamos	1.29	325	P	Pn	22 39 54.4	+0.7
VAM	Vamos	1.29	325	P	Pn	22 39 54.2	+0.5
VAM				AML	AML	22 40 20.4	
	comp=E,1869μm,0.4s						
VAM				AML	AML	22 40 24.1	
	comp=N,1210μm,0.4s						
IMMV	Iera Moni Meta	1.44	321	P	Pn	22 39 56.8	+1.0
IMMV	Iera Moni Meta	1.44	321	P	Pn	22 39 57.1	+1.3
IMMV				S	Sn	22 40 15.9	+2.4
IMMV	Iera Moni Meta	1.44	321	P	Pn	22 39 57.2	+1.3
IMMV				AML	AML	22 40 34.5	
	comp=E,1058μm,0.6s						
IMMV				AML	AML	22 40 35.9	
	comp=N,757μm,0.6s						
THR6	Thira Island,	2.01	7	P	Pn	22 40 05.1	+1.4
THR6	Thira Island,	2.01	7	P	Pn	22 40 05.0	+1.4
KARP	Karpathos	2.07	54	*e*P	Pn	22 40 04.7	+0.2
KARP	Karpathos	2.07	54	P	Pn	22 40 07.3	+2.8
KARP	Karpathos	2.07	54	P	Pn	22 40 07.1	+2.6
THR8	Santorini-Mono	2.07	8	P	Pn	22 40 05.0	+0.5
ANKY	Antikythira Is	2.11	316	P	Pn	22 40 06.5	+1.5
IOSP	Ios island	2.37	4	P	Pn	22 40 09.4	+0.8
IOSP	Ios island	2.37	4	P	Pn	22 40 09.3	+0.7
MHLO	Agia Marina, M	2.40	346	P	Pn	22 40 10.2	+1.2
MHLO	Agia Marina, M	2.40	346	P	Pn	22 40 10.1	+1.2
KYTH	Kithira	2.54	319	P	Pn	22 40 12.2	+1.2
APE	Apeiranthos	2.73	7	*e*P	Pn	22 40 13.9	+0.3
APE	Apeiranthos	2.73	7	P	Pn	22 40 14.3	+0.7
VLI	Veliai	2.95	324	P	Pn	22 40 17.4	+0.9
ARG	Arkhangelos	3.09	52	*e*P	Pn	22 40 19.3	+0.8
ARG	Arkhangelos	3.09	52	P	Pn	22 40 20.3	+1.8
ARG	Arkhangelos	3.09	52	P	Pn	22 40 20.3	+1.8
DAT	Datca	3.11	40	*e*P	Pn	22 40 20.3	+1.4
DAT	Datca	3.11	40	*i* P	Pn	22 40 20.8	+1.9
DAT				IAML_P			
	comp=Z,191nm,0.1s						
KRND	KRANIDI	3.42	333	P	Pn	22 40 23.9	+1.0
DID	Didima	3.49	335	P	Pn	22 40 24.3	+0.3
SMG	Samos	3.63	22	P	Pn	22 40 26.8	+0.8
PYL	PYLOS	3.73	314	P	Pn	22 40 28.0	+0.7
ATHU	Athens Univers	3.76	344	P	Pn	22 40 28.4	+0.7
YER	Yerkesik	3.79	42	*e*P	Pn	22 40 29.9	+1.7
DALY	Dalyan (Mula)	3.80	49	*e*P	Pn	22 40 29.3	+1.2
DALY	Dalyan (Mula)	3.80	49	*i* P	Pn	22 40 30.2	+2.1
DALY				IAML_P			
	comp=Z,307nm,0.2s						
TURN	Turunc	3.80	48	*e*P	Pn	22 40 25.4	-2.8
TURN	Turunc	3.80	48	*i* P	Pn	22 40 26.0	-2.2
TURN				IAML_P			
	comp=Z,770nm,0.2s						
PTL	Penteli	3.82	345	P	Pn	22 40 29.1	+0.6
ITM	Ithomi	3.83	318	*e*P	Pn	22 40 30.2	+1.6
ITM	Ithomi	3.83	318	P	Pn	22 40 29.2	+0.7
FETY	Fethiye	3.97	54	*e*P	Pn	22 40 30.9	+0.4
FETY	Fethiye	3.97	54	*i* P	Pn	22 40 31.6	+1.1
FETY				IAML_P			
	comp=Z,319nm,0.3s						
VIL2	Platees	4.13	339	P	Pn	22 40 32.4	-0.3
AKAS	Kas	4.13	62	*e*P	Pn	22 40 33.3	+0.4
AKAS	Kas	4.13	62	*i* P	Pn	22 40 33.8	+0.9
GUR	Goura	4.22	329	P	Pn	22 40 34.7	+0.7
KLV	Kalavryta, Ach	4.39	328	P	Pn	22 40 37.5	+1.1
MRKA	Markates	4.51	345	P	Pn	22 40 38.7	+0.7
ELL	Elmali	4.59	57	*e*P	Pn	22 40 40.3	+1.1
KALE	Kalithea	4.69	330	P	Pn	22 40 42.0	+1.6
TRIZ	Trizonia	4.69	329	P	Pn	22 40 41.7	+1.3
AKUM	Antalya-Kumluc	4.71	64	*i* P	Pn	22 40 41.9	+1.1
KORT	Korkueli	5.02	57	*e*P	Pn	22 40 46.4	+1.3
KORT	Korkueli	5.02	57	*i* P	Pn	22 40 47.6	+2.5
KEPZ	Antalya-Kepez	5.87	62	*i* P	Pn	22 40 57.1	+0.4
KEPZ				IAML_P			
	comp=Z,293nm,0.2s						
TEKE	Tekeli-Mersin	6.79	72	*e*P	Pn	22 41 08.9	-0.4
IKL	Isikli	7.27	73	*e*P	Pn	22 41 15.5	-0.3
KEBE	Keben-Mersin	7.33	71	*e*P	Pn	22 41 17.3	+0.5
KIZK	Mersin	7.68	71	*e*P	Pn	22 41 21.7	+0.3
BRTR	Keskin Array B	8.68	49	Pn	Pn	22 41 36.0	+0.8
	comp=Z,0.0nm,0.3s,baz=232,slow=16,SNR=3.0						
MMAI	Mount Meron Ar	8.69	96	Pn	Pn	22 41 32.4	-2.9
	comp=Z,0.5nm,0.3s,baz=292,slow=12,SNR=5.3						
MMAI				Sn	Sn	22 43 06.1	-5.9
	comp=Z,1.9nm,0.3s,baz=274,slow=22,SNR=6.5						
AKASG	Malin Array Be	16.61	9	Pn	Pn	22 43 21.7	-0.1
	comp=Z,1.1nm,0.3s,baz=199,slow=10,SNR=10						
KBZ	Khabaz	16.67	51	Pn	P	22 43 23.9	-0.5
	comp=Z,0.1nm,0.3s,baz=245,slow=10,SNR=3.8						
GERES	GERESS Array B	16.77	333	Pn	P	22 43 25.4	-0.3
	comp=Z,0.4nm,0.3s,baz=145,slow=12,SNR=18						
HFS	Hagfors	26.85	347	P	P	22 45 08.6	+0.1
	comp=Z,0.4nm,0.3s,baz=167,slow=8.8,SNR=4.1						
EKA	Eskdalemuir Ar	28.68	326	P	P	22 45 24.0	-0.8
	comp=Z,0.2nm,0.5s,baz=126,slow=9.1,SNR=2.8						
TORD	Torodi Ar. Bea	29.94	231	P	P	22 45 35.1	-1.2
	comp=Z,1.1nm,0.5s,baz=25,slow=8.5,SNR=22						
ARCES	ARCESS Array B	35.24	0	P	P	22 46 21.6	-0.5
	comp=Z,11nm,0.4s,baz=163,slow=8.9,SNR=3.7						
MKAR	Makanchi Array	44.26	56	P	P	22 47 37.2	-0.2
	comp=Z,0.4nm,0.5s,baz=273,slow=5.7,SNR=6.4						
ZALV	Zalesovo Beam	45.60	46	P	P	22 47 48.3	+0.4
	comp=Z,1.4nm,0.4s,baz=274,slow=9.2,SNR=5.3						
SONM	Songino Array	60.04	50	P	P	22 49 35.7	+1.0
	comp=Z,0.4nm,0.6s,baz=271,slow=5.0,SNR=3.2						

IDC 18 22:43:16.4±0.8, 30°.69S×71°.69W, h0km, mb4.1/8, mb1 4.1/13, mb1mx4.0/29, mbtmp4.0/13, ML3.8/5, MS3.3/4, Ms1 3.3/4, ms1mx3.0/24, Error ellipse: s-maj=19.7km s-min=16.2km az=51.0

SJA 18 22:43:17.6±0.8, 30°.69S×72°.25W, h57km±18km, ML4.4, MW4.2

NEIC 18 22:43:19.0±0.0, 30°.72S×71°.77W, h43km, mb3.6/2, ML4.1(GUC), After GUC.

GUC 18 22:43:19.2±0.8, 30°.73S×71°.75W, h42km±4km, ML4.3

ISC 18 22:43:15.6±1.8, 30°.75S±0°.03×72°.00W±0°.07, h1km±10km, n60, σ1°.83/63, mb4.2/8, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	Combarbal	0.97	118	*e*P	Pg	22 43 35.5	+1.3
CO02				*i* S	Sg	22 43 46.8	0.0
LSCH	La Serena	1.07	38	*e*P	Pg	22 43 36.5	+0.5
LSCH				*e*S	Sg	22 43 50.2	+0.3
LSCH				IAML		22 43 55.1	
	comp=N,4μm,0.4s						
GO04	Tololo Observa	1.19	61	*e*Pn	Pg	22 43 38.8	+0.4
GO04	Tololo Observa	1.19	61	*e*P	Pg	22 43 38.9	+0.4
GO04				*e*S	Sg	22 43 53.5	-0.3
LCO	Las Campanas	2.07	33	*e*Pn	Pn	22 43 52.0	+0.3
LCO	Las Campanas	2.07	33	*e*P	Pn	22 43 52.8	+1.1
LCO				*e*S	Sn	22 44 19.4	+1.1
LCO	Las Campanas	2.07	33	*e*P	Pn	22 43 52.3	+0.6
LCO				*e*S	Sn	22 44 18.1	-0.2
LCO				IAML		22 44 22.4	
	comp=E,2μm,0.4s						
ROC1	El Roble	2.37	160	*e*Pn	Pn	22 43 57.3	+1.4
RTLS	Leoncito	2.54	115	*e*P	Pb	22 44 02.1	-0.1
RTLS				*e*S	Sb	22 44 35.5	+1.5
RTLS				IAML		22 44 43.0	
	comp=Z,1μm,0.5s						
PEL	Peldehue	2.63	155	*e*Pn	Pn	22 44 00.8	+1.5
PEL	Peldehue	2.63	155	*e*P	Pn	22 44 01.8	+2.5
PEL	Peldehue	2.63	155	*e*P	Pn	22 44 01.0	+1.7
PEL				*e*S	Sn	22 44 32.6	+0.8
PEL				IAML		22 44 41.5	
	comp=E,1μm,0.4s						
AUSP	Uspallata	2.67	124	*e*P	Pb	22 44 04.2	-0.2
AUSP				*e*S	Sb	22 44 37.9	+0.1
CLCH	Cerro Calan	2.91	155	*e*P	Pn	22 44 05.3	+2.2
CLCH				IAML		22 44 59.7	
	comp=E,3μm,0.4s						
FCH	Farellones	2.95	151	*e*P	Pn	22 44 05.9	+2.1
FCH				*e*S	Sn	22 44 41.6	+1.5
FCH				IAML		22 44 54.5	
	comp=E,736nm,0.5s						
AMOG	MOGNA	3.02	94	*e*P	Pb	22 44 08.6	-1.6
AMOG				*e*S	Sb	22 44 46.2	-1.5
RTCV	Cerro Valdivia	3.16	111	*e*P	Pb	22 44 10.7	-1.9
CFA	Coronel Fontan	3.34	106	Pg	Pn	22 44 12.2	+3.2
	comp=E,35nm,0.3s,baz=294,slow=12,SNR=310						
CFA				Lg	Lg	22 44 55.9	
	comp=E,99nm,0.3s,baz=103,slow=15,SNR=12						
CFA				LR	LR	22 45 23.8	
	comp=E,279nm,21.2s,baz=262,slow=41						
ARCO	CERRO ARCO	3.34	129	*e*P	Pb	22 44 13.7	-2.0
ARCO				IAML		22 45 07.3	
	comp=Z,650nm,0.6s						
LMEL	Las Melosas	3.44	154	*e*P	Pn	22 44 12.7	+2.2
LMEL				*e*S	Sn	22 44 52.4	+0.5
LMEL				*e*S		22 44 53.2	
LMEL				IAML		22 45 12.1	
	comp=E,909nm,0.6s						
GO03	Copiap	3.51	27	*e*Pn	Pn	22 44 11.9	+0.6
GO03	Copiap	3.51	27	*e*P	Pn	22 44 11.7	+0.4
GO03				*e*S	Sn	22 44 52.4	-1.1
AAGR	Agrelo	3.56	132	*e*P	Pn	22 44 15.8	+3.7
VCA	Vinchina	3.87	60	*e*P	Pn	22 44 19.4	+3.1
GO05	Huala	4.25	179	*e*Pn	Pn	22 44 21.9	+0.5
GO05				*e*Sn	Sn	22 45 05.0	-6.6
GO02	Mina Guanaco	5.96	22	*e*Pn	Pn	22 44 45.2	-0.1
PB04	IPOC Station P	8.55	12	*e*Pn	Pn	22 45 16.6	-4.1
LVC	Limon Verde	8.57	20	Pn	Pn	22 45 20.8	-0.3
	comp=E,0.4nm,0.3s,baz=180,slow=9.1,SNR=2.6						
LVC				Pg	Pg	22 45 51.3	-8.5
	comp=E,1.9nm,0.3s,baz=319,slow=22,SNR=5.2						
LVC				Lg	Lg	22 47 22.1	
	comp=E,1.9nm,0.3s,baz=87,slow=21,SNR=5.8						
LVC	Limon Verde	8.57	20	*e*Pn	Pn	22 45 22.5	+1.4
PB01	IPOC Station P	9.93	14	*e*Pn	Pn	22 45 34.2	-5.4
PLCA	Paso Flores	10.03	174	Pn	Pn	22 45 42.5	+1.6
	comp=E,0.3nm,0.3s,baz=3.0,slow=14,SNR=5.5						
PLCA				LR	LR	22 50 21.4	
	comp=E,119nm,18.3s,baz=16,slow=42						
TRQA	Tornquist	11.02	134	*e*Pn	Pn	22 45 50.9	-3.5
PB11	IPOC Station P	11.15	12	*e*Pn	Pn	22 45 54.8	-1.5
GO01	Chusmiza	11.33	14	*e*Pn	Pn	22 46 01.9	+2.9
MNMC	Minye Minye	11.78	11	*e*Pn	Pn	22 46 12.0	+7.0
CPUP	Villa Florida	13.63	75	Pn	Pn	22 46 28.9	-1.1
	comp=E,0.2nm,0.3s,baz=249,slow=9.4,SNR=2.9						
CPUP				Lg	Lg	22 49 60.0	
	comp=E,0.2nm,0.3s,baz=8.5,slow=18,SNR=1.0						
CPUP				LR	LR	22 52 01.6	
	comp=E,135nm,19.9s,baz=222,slow=39						
CPUP	Villa Florida	13.63	75	*e*Pn	Pn	22 46 26.8	-3.3
LPAZ	La Paz	14.83	15	Pn	Pn	22 46 46.6	-0.4
	comp=E,0.3nm,0.3s,baz=177,slow=9.7,SNR=6.8						
LPAZ	La Paz	14.83	15	*e*Pn	Pn	22 46 45.8	-1.2
SIV	San Ignacio	17.77	37	P	Pn	22 47 22.8	-1.6
	comp=E,0.2nm,0.3s,baz=231,slow=13,SNR=10						
USHA	Ushuaia	24.20	175	P	P	22 48 35.8	+2.3
	comp=E,8.2nm,0.9s,baz=340,slow=12,SNR=3.2						
BDFB	Brasilia	26.61	61	P	P	22 48 53.9	-1.9
	comp=E,2.9nm,0.7s,baz=234,slow=7.8,SNR=5.0						
BDFB				LR	LR	23 00 35.8	
	comp=E,130nm,19.8s,baz=211,slow=40						
H06E1	SOCORRO T-PHASE	51.85	318	T	T	00 00 57.8	
	SNR=9.6						
TXAR	Lajitas Array	66.93	330	P	P	22 54 11.9	+2.1
	comp=E,0.3nm,0.7s,baz=159,slow=9.2,SNR=4.9						
DBIC	Dimbokro	74.13	72	P	P	22 54 53.5	-0.6
	comp=E,2.2nm,0.4s,baz=210,slow=8.0,SNR=8.7						
MAW	Mawson	76.28	164	P	P	22 55 06.2	+0.7
	comp=E,3.2nm,0.5s,baz=214,slow=4.9,SNR=11						
MAW	Mawson	76.28	164	*e*P	P	22 55 06.2	+0.7
	comp=E,1.1nm,1.1s						
PD31	Pinedale Array	80.89	333	*e*P	P	22 55 32.9	+1.5
	comp=E,0.7nm,1.1s						
PDAR	Pinedale Array	80.89	333	P	P	22 55 32.9	+1.5
	comp=E,0.1nm,0.3s,baz=141,slow=3.5,SNR=3.1						
BOSA	Boshof	81.56	118	P	P	22 55 35.5	+0.1
	comp=E,2.0nm,0.5s,baz=178,slow=1.8,SNR=6.2						
TOA1	Torodi Ar. Sit	83.08	70	*e*P	P	22 55 41.8	-1.5
TORD	Torodi Ar. Bea	83.08	70	P	P	22 55 41.8	-1.5
	comp=E,0.9nm,0.8s,baz=281,slow=7.0,SNR=6.9						
H11S2	WAKE ISLAND Hyd	25.78	271	T	T	01 21 01.6	
	baz=116,slow=74,SNR=68						
H11S1	WAKE ISLAND Hyd	25.80	271	T	T	01 21 04.4	
	baz=116,slow=74,SNR=50						
H11S3	WAKE ISLAND Hyd	25.80	271	T	T	01 21 03.1	
	baz=116,slow=74,SNR=73						
H11N3	WAKE ISLAND Hyd	26.12	273	T	T	01 21 29.

NVS	**Novosibirsk**	**1.75 290**	*i* Pg	**Pg**	**23 02 43.0**	**-0.3**
NVS			*i* Sg	**Sg**	**23 03 07.7**	**+1.7**
NVS	**Novosibirsk**	**1.75 290**	⇑*i*PN	**Pb**	**23 02 42.3**	**+0.4**
NVS			*i*		23 03 06.8	
TASR	**Tashtagol**	**1.86 144**	*i* Pg	**Pn**	**23 02 41.8**	**+0.1**
TASR			*i* Sg	**Sb**	**23 03 07.0**	**-0.2**
TASR	**Tashtagol**	**1.86 144**	*i* PN	**Pn**	**23 02 41.8**	**+0.1**
TASR			*i*		23 03 07.0	
DGZ	**Jazzator, Alta**	**4.67 169**	*i* PN	**Pn**	**23 03 22.4**	**+2.1**
SEM	**Semipalatinsk**	**5.28 225**	*d i* PN	**Pn**	**23 03 32.6**	**+3.8**
SEM			MLR	MLR		
	comp=Z,22μm,4.0s					
SEM	**Semipalatinsk**	**5.28 225**	⇓*i*P	**Pn**	**23 03 32.6**	**+3.8**
SEM			*e*LR	LR	23 05 20.7	
	comp=Z,22μm,4.4s					
KURK	**Kurchatov**	**5.79 235**	*e*PN	**Pn**	**23 03 37.8**	**+2.2**
KURK	**Kurchatov**	**5.79 235**	*ce*PN	**Pn**	**23 03 37.4**	**+1.8**
KURK			pmax	pmax		
	comp=Z,5μm,1.3s					
KURBB	**Kurchatov Arra**	**5.90 235**	Pn	**Pn**	**23 03 39.6**	**+2.5**
	comp=Z,130nm,0.3s,baz=53,slow=14,SNR=4914					
KURBB			Sn	**Sn**	**23 04 46.4**	**+1.8**
	comp=Z,45nm,0.3s,baz=352,slow=20,SNR=5.5					
KURBB			Lg	Lg	23 05 15.7	
	comp=Z,67nm,0.3s,baz=46,slow=27,SNR=8.5					
KURBB	**Kurchatov Arra**	**5.90 235**	⇓Pn	**Pn**	**23 03 36.7**	**-0.4**
	comp=Z,6μm,0.8s					
KURBB			⇓Sn	**Sn**	**23 04 44.1**	**-0.5**
	comp=Z,4μm,0.6s					
KURBB			⇓Lg	Lg	23 05 16.1	
	comp=Z,8μm,0.8s					
ZSN	**Zaisan**	**6.89 187**	*e*PN	**Pn**	**23 03 51.7**	**+1.0**
ZSN			*e*S	**Sn**	**23 05 11.0**	**+1.9**
ZSN	**Zaisan**	**6.89 187**	*e*P	**Pn**	**23 03 51.8**	**+1.0**
ZSN			*e*S	**Sn**	**23 05 11.0**	**+1.9**
MK31	**Makanchi Array**	**7.88 199**	*e*Pn	**Pn**	**23 04 05.8**	**+1.5**
MK31	**Makanchi Array**	**7.88 199**	Pn	**Pn**	**23 04 05.9**	**+1.5**
	comp=Z,993nm,0.7s,baz=23,slow=12,SNR=8256					
MK31			⇓Sn	**Sn**	**23 05 36.1**	**+2.6**
	comp=Z,592nm,0.5s,baz=50,slow=12,SNR=5.9					
MK31			⇑Lg	Lg	23 06 19.1	
	comp=Z,8μm,0.9s,baz=26,slow=31,SNR=6.7					
MK31	**Makanchi Array**	**7.88 199**	*e*P	**Pn**	**23 04 05.8**	**+1.5**
MK32	**Makanchi Array**	**7.88 199**	*e*Pn	**Pn**	**23 04 05.8**	**+1.5**
MK32			*e*Sn	**Sn**	**23 05 33.5**	**+0.1**
MKAR	**Makanchi Array**	**7.88 199**	Pn	**Pn**	**23 04 05.8**	**+1.5**
	comp=Z,165nm,0.3s,baz=25,slow=10,SNR=2312					
MKAR			Sn	**Sn**	**23 05 33.5**	**+0.1**
	comp=Z,347nm,0.3s,baz=22,slow=27,SNR=15					
MKAR			Lg	Lg	23 06 14.6	
	comp=Z,81nm,0.3s,baz=25,slow=29,SNR=4.1					
MKAR			LR	LR	23 07 14.0	
	comp=Z,14μm,19.7s,baz=8.0,slow=39					
MAKZ	**Makanchi**	**7.93 201**	*e*Pn	**Pn**	**23 04 06.4**	**+1.4**
MAKZ	**Makanchi**	**7.93 201**	⇓Pn	**Pn**	**23 04 05.1**	**+0.1**
	comp=Z,550nm,0.8s					
MAKZ			⇓Sn	**Sn**	**23 05 37.7**	**+3.0**
	comp=Z,2μm,1.1s					
MAKZ			⇓Lg	Lg	23 06 19.3	
	comp=Z,9μm,1.2s					
MAKZ	**Makanchi**	**7.93 201**	*e*P	**Pn**	**23 04 06.4**	**+1.4**
BRZS	**Berezniki**	**9.30 248**	*e*P	**Pn**	**23 04 23.4**	**-0.3**
BRZS			*e*S	**Sn**	**23 06 06.7**	**-1.6**
BRZS			MLR	MLR		
	comp=Z,5μm,8.0s					
BRZS	**Berezniki**	**9.30 248**	*e*P	**Pn**	**23 04 23.5**	**-0.3**
BRZS			*e*S	**Sn**	**23 06 06.8**	**-1.6**
BRZS			*e*LR	LR	23 07 46.1	
	comp=Z,5μm,8.0s					
MOY	**Mondy**	**9.37 100**	*e*P	**Pn**	**23 04 27.6**	**+2.8**
MOY			*e*S	**Sn**	**23 06 10.8**	**+0.7**
BVAR	**Borovoye Array**	**9.41 269**	Pn	**Pn**	**23 04 26.8**	**+1.6**
	comp=Z,32nm,0.3s,baz=79,slow=13,SNR=206					
BVAR			Sn	**Sn**	**23 06 07.2**	**-3.7**
	comp=Z,254nm,0.3s,baz=70,slow=26,SNR=27					
BVAR			Lg	Lg	23 07 06.7	
	baz=72,slow=23,SNR=2.0					
BVAR			LR	LR	23 08 25.4	
	comp=Z,248nm,21.5s,baz=182,slow=40					
BRVK	**Borovoye**	**9.46 269**	*e*Pn	**Pn**	**23 04 26.8**	**+0.8**
BRVK	**Borovoye**	**9.46 269**	⇑Pn	**Pn**	**23 04 24.1**	**-1.8**
	comp=Z,488nm,0.6s					
BRVK			⇑Sn	**Sn**	**23 06 09.0**	**-3.3**
	comp=Z,681nm,0.6s					
BRVK			⇑Lg	Lg	23 07 05.4	
	comp=Z,2μm,1.2s					
BRVK	**Borovoye**	**9.46 269**	*d i*P	**Pn**	**23 04 26.7**	**+0.8**
OTUK	**Ortayu**	**10.52 241**	⇓Pn	**Pn**	**23 04 39.7**	**-0.7**
	comp=Z,576nm,0.9s					
OTUK			⇓Sn	**Sn**	**23 06 35.9**	**-2.3**
	comp=Z,1μm,0.8s					
OTUK			⇑Lg	Lg	23 07 38.7	
	comp=Z,3μm,1.1s					
OTUK	**Ortayu**	**10.52 241**	P	**Pn**	**23 04 39.7**	**-0.7**
OTUK			S	**Sn**	**23 06 35.9**	**-2.3**
OTUK			pmax	pmax		
	comp=Z,575nm,0.9s					
WMQ	**Urumqi**	**10.53 174**	P	**Pn**	**23 04 41.4**	**+0.8**
WMQ			pP		23 04 43.9	
WMQ			sP		23 04 50.4	
WMQ			PP	**PnPn**	**23 04 53.3**	**+5.2**
WMQ			S	**Sn**	**23 06 36.3**	**-2.2**
WMQ			SS	**SnSn**	**23 06 53.8**	**+3.8**
WMQ			pmax	pmax		
	comp=Z,140nm,1.5s					
WMQ			pmax	pmax		
	comp=Z,220nm,3.8s					
WMQ			LR	LR		
	comp=Z,6μm,11.1s					
WMQ			LR	LR		
	comp=Z,16μm,11.3s					
WMQ			LR	LR		
	comp=Z,12μm,10.3s					
TDK	**Taldyqorghan**	**10.53 211**	*e*P	**Pn**	**23 04 40.1**	**-0.6**
TDK			*e*S	**Sn**	**23 06 36.4**	**-2.2**
TDK			MLR	MLR		
	comp=Z,11μm,10.0s					
TDK	**Taldyqorghan**	**10.53 211**	*e*P	**Pn**	**23 04 40.1**	**-0.6**
TDK			*e*S	**Sn**	**23 06 36.5**	**-2.2**
TDK			*e*LR	LR	23 08 17.2	
	comp=Z,11μm,10.0s					
TLY	**Talaya**	**10.90 97**	*e*Pn	**Pn**	**23 04 48.1**	**+2.4**
TLY	**Talaya**	**10.90 97**	*c i*P	**Pn**	**23 04 48.0**	**+2.4**
TLY			pmax	pmax		
	comp=Z,205nm,1.6s					
TLY			MLR	MLR		
	comp=Z,5μm,3.0s					
IRK	**Irkutsk**	**11.08 93**	*e*P	**Pn**	**23 04 49.3**	**+1.2**
PDGK	**Podgornoye**	**11.79 204**	⇑Pn	**Pn**	**23 04 57.0**	**-0.9**
	comp=Z,446nm,1.1s					
PDGK			⇑Sn	**Sn**	**23 07 07.0**	**-2.5**
	comp=Z,719nm,0.9s					
PDGK			⇓Lg	Lg	23 08 25.0	
	comp=Z,2μm,1.3s					
PDGK	**Podgornoye**	**11.79 204**	P	**Pn**	**23 04 57.2**	**-0.7**
PDGK			S	**Sn**	**23 07 07.3**	**-2.2**
PDGK			pmax	pmax		
	comp=Z,446nm,1.1s					
KPKS	**Kokpek**	**11.86 207**	*e*P	**Pn**	**23 04 57.7**	**-1.2**
KPKS			*e*S	**Sn**	**23 07 08.0**	**-3.3**
KPKS			MLR	MLR		
	comp=Z,5μm,10.0s					
KPKS	**Kokpek**	**11.86 207**	*e*P	**Pn**	**23 04 57.7**	**-1.2**
KPKS			*e*S	**Sn**	**23 07 08.1**	**-3.3**
KPKS			*e*LR	LR	23 09 12.9	
	comp=Z,5μm,10.4s					
CHKK	**Chushkaly**	**12.01 213**	*e*P	**Pn**	**23 04 59.5**	**-1.4**
CHKK			*e*S	**Sn**	**23 07 11.6**	**-3.2**
CHKK	**Chushkaly**	**12.01 213**	*e*P	**Pn**	**23 04 59.5**	**-1.4**
CHKK			*e*S	**Sn**	**23 07 11.7**	**-3.2**
UZB	**Uzynbulak**	**12.07 205**	*e*P	**Pn**	**23 05 00.5**	**-1.3**
UZB			*e*S	**Sn**	**23 07 12.9**	**-3.6**
UZB			MLR	MLR		
	comp=Z,2μm,11.0s					
UZB	**Uzynbulak**	**12.07 205**	*e*P	**Pn**	**23 05 00.6**	**-1.3**
UZB			*e*S	**Sn**	**23 07 12.9**	**-3.6**
UZB			*e*LR	LR	23 09 22.1	
	comp=Z,2μm,10.9s					
BTLS	**Baital**	**12.08 225**	*e*P	**Pn**	**23 04 59.0**	**-2.8**
BTLS			*e*S	**Sn**	**23 07 09.9**	**-6.6**
BTLS			MLR	MLR		
	comp=Z,8μm,4.0s					
BTLS	**Baital**	**12.08 225**	*e*P	**Pn**	**23 04 59.1**	**-2.8**
BTLS			*e*S	**Sn**	**23 07 10.0**	**-6.6**
BTLS			*e*LR	LR	23 09 25.1	
	comp=Z,8μm,4.2s					
KUU	**Kurty**	**12.19 215**	*e*P	**Pn**	**23 05 01.2**	**-2.1**
KUU			*e*S	**Sn**	**23 07 15.1**	**-4.1**
KUU			MLR	MLR		
	comp=Z,19μm,5.0s					
KUU	**Kurty**	**12.19 215**	*e*P	**Pn**	**23 05 01.2**	**-2.1**
KUU			*e*S	**Sn**	**23 07 15.1**	**-4.1**
KUU			*e*LR	LR	23 09 32.5	
	comp=Z,19μm,5.3s					
SATY	**Saty**	**12.32 207**	*e*P	**Pn**	**23 05 03.9**	**-1.3**
SATY			*e*S	**Sn**	**23 07 19.8**	**-2.6**
SATY			MLR	MLR		
	comp=Z,3μm,10.0s					
SATY	**Saty**	**12.32 207**	*e*P	**Pn**	**23 05 03.9**	**-1.3**
SATY			*e*S	**Sn**	**23 07 19.9**	**-2.6**
SATY			*e*LR	LR	23 09 27.3	
	comp=Z,3μm,9.6s					
KNDC	**Almaty**	**12.59 212**	⇓Pn	**Pn**	**23 05 07.5**	**-1.3**
	comp=Z,362nm,0.8s					
KNDC			⇓Lg	Lg	23 08 51.1	
	comp=Z,2μm,1.0s					
AAA	**Alma-Ata**	**12.61 212**	*e*P	**Pn**	**23 05 08.4**	**-0.8**
AAA			*e*S	**Sn**	**23 07 28.1**	**-1.5**
AAA			pmax	pmax		
	comp=Z,500nm,2.6s					
AAA			smax	smax		
	comp=E,2μm,3.1s					
AAA			MLR	MLR		
	comp=Z,19μm,7.0s					
AAA	**Alma-Ata**	**12.61 212**	*e*P	**Pn**	**23 05 08.1**	**-1.1**
AAA			*e*LR	LR	23 09 40.4	
	comp=Z,6μm,9.6s					
MDOK	**Medeo**	**12.61 212**	*e*P	**Pn**	**23 05 07.9**	**-1.3**
MDOK			MLR	MLR		
	comp=Z,10μm,10.0s					
MDOK	**Medeo**	**12.61 212**	*e*P	**Pn**	**23 05 07.9**	**-1.3**
MDOK			*e*LR	LR	23 09 35.1	
	comp=Z,10μm,9.6s					
TNSS	**Tian-Shan**	**12.76 212**	*e*P	**Pn**	**23 05 09.7**	**-1.7**
TNSS			*e*S	**Sn**	**23 07 31.5**	**-2.1**
TNSS	**Tian-Shan**	**12.76 212**	*e*P	**Pn**	**23 05 09.8**	**-1.7**
TNSS			*e*S	**Sn**	**23 07 31.6**	**-2.1**
MTBS	**Maitube**	**12.84 214**	*e*P	**Pn**	**23 05 10.7**	**-1.5**
MTBS			*e*S	**Sn**	**23 07 32.1**	**-3.1**
MTBS	**Maitube**	**12.84 214**	*e*P	**Pn**	**23 05 10.8**	**-1.5**
MTBS			*e*S	**Sn**	**23 07 32.1**	**-3.1**
TKM2	**Tokmak 2**	**13.30 216**	P	**Pn**	**23 05 16.9**	**-1.7**
	SNR=46					
TKM2	**Tokmak 2**	**13.30 216**	⇓Pn	**Pn**	**23 05 19.0**	**+0.3**
	comp=Z,140nm,1.1s					
TKM2			⇑Lg	Lg	23 09 12.1	
	comp=Z,3μm,1.4s					
TKM2	**Tokmak 2**	**13.30 216**	*i* P	**Pn**	**23 05 16.7**	**-2.0**
TKM2			pmax	pmax		
	comp=Z,140nm,1.0s					
CHMS	**Chumysh**	**13.53 218**	P	**Pn**	**23 05 23.2**	**+1.5**
	SNR=30					
BOOM	**Boomskoye usch**	**13.57 214**	*e*Pn	**Pn**	**23 05 21.2**	**-1.1**
BOOM	**Boomskoye usch**	**13.57 214**	*e*P	**Pn**	**23 05 21.2**	**-1.1**
ULHL	**Ulahol**	**13.70 212**	P	**Pn**	**23 05 25.2**	**+1.1**
	SNR=46					
FRU1	**Bishkek**	**13.74 218**	*e*Pn	**Pn**	**23 05 24.1**	**-0.4**
FRU1	**Bishkek**	**13.74 218**	*e*P	**Pn**	**23 05 24.1**	**-0.4**
KBK	**Karagaybulak**	**13.76 217**	P	**Pn**	**23 05 25.9**	**+1.0**
	SNR=136					
AAK	**Ala-Archa**	**13.94 218**	Pn	**Pn**	**23 05 28.0**	**+0.7**
	comp=Z,12nm,0.3s,baz=50,slow=5.6,SNR=172					
AAK			Sn	**Sn**	**23 07 58.8**	**-3.2**
	comp=Z,9.5nm,0.3s,baz=257,slow=16,SNR=3.0					
AAK			Lg	Lg	23 09 24.4	
	comp=Z,4.3nm,0.3s,baz=149,slow=20,SNR=3.9					
AAK			LR	LR	23 11 09.5	
	comp=Z,9μm,20.4s,baz=28,slow=39					
AAK	**Ala-Archa**	**13.94 218**	P	**Pn**	**23 05 28.4**	**+1.1**
	SNR=177					
AAK	**Ala-Archa**	**13.94 218**	*e*Pn	**Pn**	**23 05 26.1**	**-1.2**
AAK	**Ala-Archa**	**13.94 218**	⇑Pn	**Pn**	**23 05 27.6**	**+0.3**
	comp=Z,332nm,0.8s					
AAK			⇓Lg	Lg	23 09 31.7	
	comp=Z,4μm,1.4s					
AAK	**Ala-Archa**	**13.94 218**	*i* P	**Pn**	**23 05 27.0**	**-0.3**
	SNR=220					
AAK	**Ala-Archa**	**13.94 218**	*ce*P	**Pn**	**23 05 25.6**	**-1.7**
AAK			pmax	pmax		
	comp=Z,169nm,0.7s					
KZA	**Kyzart**	**14.17 215**	P	**Pn**	**23 05 29.8**	**-0.9**
	SNR=48					
EKS2	**Erkin-Say**	**14.18 220**	P	**Pn**	**23 05 30.9**	**+0.3**
	SNR=21					
SONA0	**Songino Array**	**14.28 109**	*e*Pn	**Pn**	**23 05 31.9**	**0.0**
SONM	**Songino Array**	**14.28 109**	Pn	**Pn**	**23 05 31.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=292,slow=9.9,SNR=99					
SONM			Lg	Lg	23 09 29.1	
	comp=Z,0.6nm,0.3s,baz=325,slow=26,SNR=5.3					
UCH	**Uchtor**	**14.29 217**	P	**Pn**	**23 05 33.9**	**+1.5**
	SNR=9.7					
SVE	**Sverdlovsk**	**14.59 290**	*e*P	**Pn**	**23 05 34.3**	**-1.8**
SVE			*e*S	**Sn**	**23 08 18.2**	**+0.5**
SVE			pmax	pmax		
	comp=Z,280nm,0.9s					
SVE			MLR	MLR		
	comp=E,5μm,13.0s					
SVE			MLR	MLR		
	comp=Z,6μm,14.0s					
ULN	**Ulaanbaatar**	**14.63 107**	*e*Pn	**Pn**	**23 05 36.1**	**-0.7**
ULN	**Ulaanbaatar**	**14.63 107**	*ce*P	**Pn**	**23 05 36.0**	**-0.7**
ULN			pmax	pmax		
	comp=Z,186nm,1.7s					
AML	**Almayashu**	**14.67 219**	P	**Pn**	**23 05 39.5**	**+2.0**
	SNR=16					
DZA	**Taraz**	**14.97 226**	*e*P	**Pn**	**23 05 38.2**	**-3.0**
DZA			*e*S	**Sn**	**23 08 25.4**	**-1.6**
DZA	**Taraz**	**14.97 226**	*e*P	**Pn**	**23 05 38.3**	**-3.0**
DZA			*e*S	**Sn**	**23 08 25.5**	**-1.6**
NRIK	**Noril'sk**	**15.13 2**	Pn	**Pn**	**23 05 38.1**	**-5.0**
	comp=Z,9.6nm,0.3s,baz=176,slow=9.8,SNR=179					
NRIK			Sn	**Sn**	**23 08 24.0**	**-6.4**
	comp=Z,2.8nm,0.3s,baz=295,slow=6.8,SNR=5.0					
NRIK			Lg	Lg	23 10 11.9	
	comp=Z,1.7nm,0.3s,baz=239,slow=7.0,SNR=1.8					
NRIK			LR	LR	23 11 57.1	
	comp=Z,9μm,19.5s,baz=186,slow=39					
KK31	**Karatay Array**	**15.15 229**	*e*Pn	**Pn**	**23 05 39.7**	**-4.1**
	comp=Z,215nm,0.8s					
KK31	**Karatay Array**	**15.15 229**	⇑Pn	**Pn**	**23 05 39.9**	**-3.9**
	comp=Z,111nm,0.6s,baz=35,slow=15,SNR=810					
KK31			⇓Sn	**Sn**	**23 08 34.4**	**+2.9**
	comp=Z,117nm,0.6s,baz=36,slow=26,SNR=4.2					
KK31			⇑Lg	Lg	23 10 09.9	
	comp=Z,548nm,1.0s,baz=37,slow=31,SNR=4.5					
KK31	**Karatay Array**	**15.15 229**	P	**Pn**	**23 05 39.8**	**-3.9**
KK31			S	**Sn**	**23 08 34.4**	**+2.9**
KK31			pmax	pmax		
	comp=Z,110nm,0.6s					
KKAR	**Karatay Array**	**15.15 229**	*e*Pn	**Pn**	**23 05 39.7**	**-4.0**
	comp=Z,215nm,0.8s					
KKAR	**Karatay Array**	**15.15 229**	*e*P	**Pn**	**23 05 39.7**	**-4.0**
KKAR			pmax	pmax		
	comp=Z,215nm,0.8s					
ARSB	**Arslanbob**	**15.64 219**	*e*Pn	**Pn**	**23 05 49.8**	**-0.4**
	comp=Z,2μm,1.8s					
JBG	**Jabagly**	**15.69 227**	*e*P	**Pn**	**23 05 50.7**	**-0.1**
JBG			*e*S	**Sn**	**23 08 40.8**	**-3.9**
JBG			MLR	MLR		
	comp=Z,2μm,9.0s					
ARU	**Arti**	**15.76 289**	Pn	**Pn**	**23 05 50.4**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=78,slow=6.7,SNR=87					
ARU			Sn	Sn	23 08 34.3	-12
	comp=Z,0.1nm,0.3s,baz=143,slow=21,SNR=3.6					
ARU			Lg	Lg	23 10 45.2	
	baz=5.4,slow=21,SNR=1.3					
ARU	**Arti**	**15.76 289**	*e*Pn	**Pn**	**23 05 50.2**	**-1.2**
	comp=Z,200nm,1.1s					
ARU	**Arti**	**15.76 289**	*d i*P	**Pn**	**23 05 50.2**	**-1.2**
ARU			S	**Sn**	**23 08 46.3**	**+0.4**
ARU			pmax	pmax		
	comp=Z,112nm,1.0s					
ARU			MLR	MLR		
	comp=Z,5μm,15.0s					
IUG	**Iuzhnay**	**16.14 228**	*e*P	**Pn**	**23 05 54.9**	**-1.6**
IUG			*e*S	**Sn**	**23 08 51.5**	**-3.9**
IUG	**Iuzhnay**	**16.14 228**	*e*P	**Pn**	**23 05 55.0**	**-1.6**
IUG			*e*S	**Sn**	**23 08 51.5**	**-3.9**
CHM	**Chimkent**	**16.18 229**	*e*LR	LR	23 11 47.7	
	comp=Z,2μm,10.2s					
KSH	**Kashi**	**16.28 209**	P	**P**	**23 06 03.5**	**+2.0**
KSH			sP	sP	23 06 11.4	+5.5
KSH			PP	**PnPn**	**23 06 17.8**	**+11**
KSH			S	**S**	**23 09 06.8**	**-5.1**
KSH			SS	SnSn	23 09 27.1	+15
KSH			pmax	pmax		
	comp=Z,850nm,1.2s					
KSH			pmax	pmax		
	comp=Z,2μm,3.6s					
KSH			LR	LR		
	comp=Z,35μm,12.9s					
KSH			LR	LR		
	comp=Z,22μm,7.0s					
KSH			LR	LR		
	comp=Z,53μm,10.9s					
CIT	**Chita**	**16.59 87**	*e*P	**Pn**	**23 06 01.0**	**-1.2**
CIT			pmax	pmax		
	comp=Z,96nm,1.0s					
AB31	**Akbulak array**	**16.89 263**	Pn	**Pn**	**23 06 03.4**	**-2.6**
	comp=Z,149nm,0.8s,baz=66,slow=11,SNR=571					
AB31			⇓Sn	**Sn**	**23 09 14.8**	**+1.2**
	comp=Z,80nm,0.9s,baz=65,slow=27,SNR=3.9					
AB31			⇓Lg	Lg	23 11 02.5	
	comp=Z,235nm,1.1s,baz=67,slow=22,SNR=4.2					
AB31	**Akbulak array**	**16.89 263**	P	**Pn**	**23 06 03.4**	**-2.6**
AB31			S	**Sn**	**23 09 14.8**	**+1.2**
AB31			pmax	pmax		
	comp=Z,148nm,0.8s					
ABKAR	**Akbulak array**	**16.89 263**	*e*Pn	**Pn**	**23 06 03.0**	**-3.1**
	comp=Z,194nm,0.9s					
AKTO	**Aktyubinsk**	**17.52 269**	P	**Pn**	**23 06 12.9**	**-0.9**
	comp=Z,2.1nm,0.3s,baz=77,slow=10,SNR=141					
AKTO			S	**Sn**	**23 09 20.2**	**-8.5**
	comp=Z,2.4nm,0.3s,baz=322,slow=23,SNR=1.4					
AKTO			Lg	Lg	23 11 32.3	
	comp=Z,0.7nm,0.3s,baz=335,slow=22,SNR=1.3					
AKTO			LR	LR	23 13 12.5	
	comp=Z,4μm,18.4s,baz=65,slow=38					
AKTO	**Aktyubinsk**	**17.52 269**	⇑Pn	**Pn**	**23 06 08.2**	**-5.6**
	comp=Z,174nm,0.8s					
AKTO			⇓Sn	**Sn**	**23 09 28.4**	**-0.3**
	comp=Z,220nm,0.9s					
AKTO			⇑Lg	Lg	23 11 24.3	
	comp=Z,577nm,1.6s					
I31KZ	**AKTYUBINSK INF**	**17.52 269**	*i*		00 35 50.0	
	baz=67,slow=310,SNR=0.9					
GTA	**Gaotai**	**17.54 142**	⇑P	**Pn**	**23 06 13.1**	**-1.3**
GTA			pP	pP	23 06 17.9	-0.5
GTA			sP	sP	23 06 20.3	+0.5
GTA			S	**Sn**	**23 09 30.4**	**+0.8**
GTA			sS	S	23 09 35.8	-1.8
GTA			SS	**SnSn**	**23 09 51.3**	**+8.5**
GTA			pmax	pmax		
	comp=Z,28nm,1.5s					
GTA			pmax	pmax		
	comp=Z,860nm,6.7s					
GTA			LR	LR		
	comp=Z,4μm,13.3s					
GTA			LR	LR		
	comp=Z,7μm,12.4s					
BTK	**Batken**	**17.56 222**	*e*Pn	**Pn**	**23 06 12.7**	**-1.8**
	comp=Z,380nm,0.7s					
BTK	**Batken**	**17.56 222**	*e*P	**Pn**	**23 06 12.7**	**-1.8**
BTK			pmax	pmax		
	comp=Z,380nm,0.7s					
GAR	**Garm**	**18.66 221**	*e*P	**Pn**	**23 06 28.0**	**-0.1**
	comp=Z,790nm,0.8s					
GAR	**Garm**	**18.66 221**	*e*P	**Pn**	**23 06 28.0**	**-0.1**
GAR			pmax	pmax		
	comp=Z,790nm,0.8s					
CHGR	**Chuyangaron**	**19.42 223**	*e*P	**Pn**	**23 06 36.7**	**-0.5**
KIRV	**Kirov**	**20.55 297**	P	**P**	**23 06 48.4**	**+0.3**
	comp=Z,113nm,0.9s,baz=91,slow=8.5,SNR=44					
KIRV			S	**S**	**23 10 36.8**	**-0.7**
	comp=Z,47nm,0.7s,baz=13,slow=22,SNR=2.4					
KIRV			Lg	Lg	23 13 08.4	
	comp=Z,46nm,0.9s,baz=206,slow=16,SNR=1.2					
KIRV			LR	LR	23 15 20.3	
	comp=Z,2μm,20.4s,baz=76,slow=38					
BTO	**Baotou**	**21.06 121**	*e*P	**P**	**23 06 51.3**	**-2.5**
BTO			S	**S**	**23 10 44.0**	**-4.1**
HIA	**Hailar**	**21.29 90**	*e*P	**P**	**23 06 56.9**	**+0.7**
	comp=Z,212nm,1.3s					
HIA	**Hailar**	**21.29 90**	*e*P	**P**	**23 06 56.9**	**+0.7**
HIA			pmax	pmax		
	comp=Z,212nm,1.3s					
HHC	**Hu-ho-hao-te**	**21.67 118**	*e*P	**P**	**23 07 00.4**	**0.0**
HHC			S	**S**	**23 10 59.4**	**-0.8**
HHC			sS	sS	23 11 04.5	-0.4
HHC			pmax	pmax		
	comp=Z,86nm,1.4s					
HHC			pmax	pmax		
	comp=Z,560nm,5.0s					
HHC			LR	LR		
	comp=Z,3μm,6.2s					
HHC			LR	LR		
	comp=Z,5μm,7.1s					
HHC			LR	LR		
	comp=Z,6μm,7.6s					
LZH	**Lanzhou**	**21.97 139**	⇑P	**P**	**23 07 03.5**	**-0.3**
LZH			pP	sP	23 07 07.6	-0.6
LZH			sP	pP	23 07 08.9	+2.1
LZH			PP	**PnPn**	**23 07 27.8**	**+2.5**
LZH			S	**S**	**23 11 01.6**	**-4.7**
LZH			sS	sS	23 11 10.1	-1.0
LZH			SS	**SnSn**	**23 11 38.9**	**+7.2**
LZH			pmax	pmax		
	comp=Z,270nm,1.1s					
LZH			pmax	pmax		
	comp=Z,1μm,4.3s					
LZH			LR	LR		
	comp=Z,7μm,11.9s					
LZH			LR	LR		
	comp=Z,7μm,13.0s					
LZH			LR	LR		
	comp=Z,5μm,14.7s					
PRGR	**Permogore**	**22.37 305**	⇑*i*P	**P**	**23 07 07.2**	**-0.4**
PRGR			*e*		23 07 29.5	
PRGR			*e*S	**S**	**23 11 09.7**	**-3.3**
PRGR			pmax	pmax		
	comp=Z,192nm,1.0s					
NIL	**Nilore**	**22.53 209**	*e*P	**P**	**23 07 09.6**	**0.0**
	comp=Z,774nm,0.8s					
NIL	**Nilore**	**22.53 209**	*e*P	**P**	**23 07 09.6**	**0.0**
NIL			pmax	pmax		
	comp=Z,774nm,0.8s					
KBL	**Kabul**	**23.08 218**	*e*P	**P**	**23 07 14.9**	**-0.7**
	comp=Z,248nm,0.8s					
KBL	**Kabul**	**23.08 218**	*e*P	**P**	**23 07 14.9**	**-0.7**
KBL			pmax	pmax		
	comp=Z,248nm,0.8s					
DHRM	**DHARAMSHALA**	**23.11 202**	*e*P	**P**	**23 07 15.2**	**-0.6**
**YA

comp=N,4μm,16.2s
DDI Dehra Dun 24.64 197 *e*P **P 23 07 30.6 +0.3**
DDI IAmb IAmb 23 07 32.8
comp=Z,166nm,0.5s
BJI Beijing 24.69 113 P **P 23 07 30.9 +0.2**
BJI S **S 23 11 56.0 +3.9**
BJI LR LR
comp=Z,6μm,8.1s
BJI LR LR
comp=Z,5μm,8.8s
LSA Lhasa 24.84 169 P **P 23 07 35.3 +2.7**
LSA S **S 23 11 58.8 +3.2**
LSA pmax pmax
comp=Z,630nm,0.8s
LSA LR LR
comp=Z,7μm,16.4s
LSA LR LR
comp=Z,4μm,10.3s
LSA LR LR
comp=Z,6μm,14.6s
LSA Lhasa 24.84 169 *e*P **P 23 07 35.1 +2.5**
comp=Z,144nm,0.9s
LSA Lhasa 24.84 169 *i* P **P 23 07 34.7 +2.0**
SNR=43
GEYT Alibeck 25.13 241 P **P 23 07 35.7 +1.0**
comp=Z,177nm,0.8s,baz=35,slow=5.4,SNR=236
GEYT S S 23 12 11.6 +12
comp=Z,5.7nm,0.7s,baz=26,slow=17,SNR=2.4
GEYT Lg Lg 23 15 37.2
comp=Z,9.0nm,1.0s,baz=54,slow=48,SNR=1.9
GEYT LR LR 23 18 39.1
comp=Z,7μm,19.4s,baz=45,slow=39
GYA0B ALIBECK ARRAY 25.13 241 *e*P **P 23 07 35.3 +0.6**
comp=Z,227nm,0.8s
TIXI Tiksi 25.22 30 P **P 23 07 34.4 -0.8**
comp=Z,83nm,0.9s,baz=258,slow=5.9,SNR=49
TIXI S **S 23 11 58.0 -2.2**
comp=Z,6.5nm,0.8s,baz=268,slow=13,SNR=0.8
TIXI Lg Lg 23 15 21.3
comp=Z,25nm,1.1s,baz=170,slow=9.9,SNR=1.4
TIXI LR LR 23 18 00.3
comp=Z,6μm,19.3s,baz=225,slow=38
TIXI Tiksi 25.22 30 *e*P **P 23 07 34.0 -1.2**
comp=Z,126nm,1.0s
TIXI Tiksi 25.22 30*ce*P **P 23 07 35.0 -0.2**
TIXI pmax pmax
comp=Z,135nm,1.0s
KLMR Klimovskoe 25.35 304 *e*P **P 23 07 35.4 -1.0**
KLMR pmax pmax
comp=Z,220nm,1.1s
KLMR Klimovskoe 25.35 304 *e*P **P 23 07 35.4 -1.0**
KLMR AMP 23 07 39.1
comp=Z,220nm,1.1s
XAN Xi'an 25.83 132 P **P 23 07 40.9 -0.2**
XAN pP sP 23 07 49.8 +4.2
XAN PP pP 23 08 16.8 +33
XAN pmax pmax
comp=Z,26nm,1.1s
XAN pmax pmax
comp=Z,390nm,4.2s
XAN LR LR
comp=Z,3μm,12.0s
XAN LR LR
comp=Z,6μm,15.8s
XAN LR LR
comp=Z,4μm,13.8s
DANN Dangsing 25.97 185 *e*P **P 23 07 43.6 +0.9**
comp=Z,660nm,0.8s
PYUN Piuthan 26.26 186 *e*P **P 23 07 46.1 +0.9**
comp=Z,1μm,0.9s
GKN Gorkha 26.28 183 *e*P **P 23 07 45.8 +0.5**
comp=Z,479nm,0.6s
GUN Gumba 26.35 180 *e*P **P 23 07 46.7 +0.5**
comp=Z,1μm,0.9s
KKN Kakani 26.48 182 *e*P **P 23 07 47.7 +0.5**
comp=Z,400nm,0.6s
KOLN Koldanda 26.55 185 *e*P **P 23 07 48.6 +0.8**
comp=Z,2μm,1.0s
CD2 Chengdu 26.59 144⇑ *i*P **P 23 07 48.3 +0.3**
CD2 PP sP 23 08 31.3 +39
CD2 S **S 23 12 25.3 +2.8**
CD2 SS **SnSn 23 13 27.8 +3.3**
CD2 PcS **PcS 23 14 51.5 -1.8**
CD2 pmax pmax
comp=Z,140nm,0.9s
CD2 pmax pmax
comp=Z,480nm,8.1s
CD2 LR LR
comp=Z,7μm,9.6s
CD2 LR LR
comp=Z,12μm,12.0s
CD2 LR LR
comp=Z,5μm,10.4s
JIRN Jiri 26.60 180 *e*P **P 23 07 49.2 +0.7**
comp=Z,1μm,0.8s
DMN Daman 26.66 182 *e*P **P 23 07 49.4 +0.5**
comp=Z,789nm,1.0s
PKIN Phulchoki 26.69 181 *e*P **P 23 07 49.7 +0.6**
comp=Z,443nm,0.8s
PKI Pulchoki 26.69 181 *e*P **P 23 07 49.8 +0.5**
comp=Z,869nm,1.0s
TAWA Tawang 27.00 169 *e*P **P 23 07 53.2 +1.2**
GTK Tadong 27.00 175 *e*P **P 23 07 52.3 +0.5**
GTK IAmb IAmb 23 07 56.5
comp=Z,107nm,1.2s
ZIRO ZIRO 27.33 165 *e*P **P 23 07 55.2 +0.4**
LVZ Lovozero 27.36 320 *e*P **P 23 07 56.0 +1.5**
comp=Z,64nm,1.0s
LVZ Lovozero 27.36 320 *i* P **P 23 07 56.6 +2.0**
LVZ pmax pmax
comp=Z,27nm,1.0s
MOS Moscow 27.38 293 *e*P **P 23 07 53.1 -1.7**
MOS *e* 23 08 40.0
MOS *e*S **S 23 12 31.8 -2.7**
MOS *e*SS **SnSn 23 13 49.4 +6.2**
MOS pmax pmax
comp=Z,279nm,1.7s
MOS MLR MLR
comp=E,2μm,15.0s
MOS MLR MLR
comp=Z,2μm,15.0s
MOS MLR MLR
comp=N,1μm,13.0s
CN2 Changchun 27.50 96 *e*P **P 23 07 55.3 -0.8**
CN2 pmax pmax
comp=N,30nm,0.8s
CN2 LR LR
comp=N,7μm,12.0s
CN2 LR LR
comp=N,5μm,12.0s
CN2 LR LR
comp=N,5μm,13.0s
MAK Makhachkala 27.56 262 *e*P **P 23 07 52.6 -3.9**
MAK *e* 23 08 38.2
MAK *e*S **S 23 12 31.7 -5.8**
MAK *e*SS **SnSn 23 13 47.9 +0.1**
MAK pmax pmax
comp=Z,115nm,1.3s
MAK MLR MLR
comp=Z,2μm,15.0s
LPSR Galich'ya Gora 27.73 286 *e*P **P 23 07 58.1 +0.1**
LPSR *e*S **S 23 12 40.1 0.0**
LPSR pmax pmax
comp=Z,230nm,0.9s
LPSR smax smax
comp=E,1μm,10.6s
LPSR MLR MLR
comp=Z,4μm,15.0s
APA Apatity 27.82 319⇓ *i*P **P 23 07 56.7 -1.9**
APA *i* 23 08 47.5
APA *i* S **S 23 12 35.0 -6.1**
APA pmax pmax
comp=Z,24nm,1.0s
APA MLR MLR
comp=Z,4μm,14.0s
VORR Voronezh 27.94 284 *e*P **P 23 07 59.0 -0.9**
VORR pmax pmax
comp=Z,250nm,1.4s
TIA Tai'an 28.02 117 P **P 23 08 01.8 +1.0**
TIA pmax pmax
comp=Z,36nm,1.2s
TIA LR LR
comp=Z,5μm,5.5s
TIA LR LR
comp=Z,1μm,5.1s
TEZP TEZPUR 28.08 167 *e*P **P 23 08 01.1 -0.2**

OBN Obninsk 28.15 292 P **P 23 08 02.3 +0.7**
comp=Z,13nm,0.6s,baz=72,slow=3.9,SNR=43
OBN S S 23 13 03.4 +17
comp=Z,2.2nm,0.5s,baz=204,slow=22,SNR=1.6
OBN Lg Lg 23 17 00.9
comp=Z,4.8nm,0.7s,baz=92,slow=21,SNR=1.6
OBN LR LR 23 20 10.2
comp=Z,572nm,18.4s,baz=54,slow=38
OBN Obninsk 28.15 292 *e*P **P 23 08 01.6 0.0**
comp=Z,90nm,0.9s
OBN Obninsk 28.15 292⇓ *i*P **P 23 08 00.2 -1.5**
OBN Obninsk 28.15 292*c i*P **P 23 08 01.4 -0.3**
OBN *e* 23 08 51.1
OBN *e*PPP PPP 23 08 59.8
OBN *e*S **S 23 12 53.2 +6.6**
OBN pmax pmax
comp=Z,217nm,1.7s
OBN MLR MLR
comp=Z,2μm,16.0s
VSR Storozhevoye 28.16 283 *e*P **P 23 08 02.0 +0.2**
VSR *e*S **S 23 12 46.8 0.0**
VSR pmax pmax
comp=Z,100nm,1.2s
VSR smax smax
comp=N,490nm,8.4s
VSR MLR MLR
comp=Z,6μm,15.0s
VORD Divnogorie 28.19 283 *e*P **P 23 08 02.8 +0.7**
VORD *e*S **S 23 12 44.9 -2.4**
VORD pmax pmax
comp=Z,110nm,1.2s
VORD smax smax
comp=E,60nm,3.2s
VORD MLR MLR
comp=Z,2μm,10.0s
GNBR Gunib 28.22 261 *i* P **P 23 08 04.1 +1.5**
KLR Kul'dur 28.32 81 P **P 23 08 02.3 -1.0**
comp=Z,28nm,0.9s,baz=294,slow=7.5,SNR=53
KLR Lg Lg 23 17 01.4
comp=Z,9.2nm,1.1s,baz=174,slow=21,SNR=4.6
AKT Akhty 28.36 259 *e*P **P 23 08 04.7 +0.9**
AKT *e* 23 08 51.9
AKT *e*S **S 23 12 52.9 +2.5**
AKT pmax pmax
comp=Z,172nm,1.1s
GUWA GUWAHATI 28.37 169 *e*P **P 23 08 02.9 -1.0**
GUWA IAmb IAmb 23 08 05.2
comp=Z,91nm,1.0s
GROC Groznyy 28.40 264 *e*P **P 23 08 02.9 -1.2**
GROC *e* 23 08 52.7
GROC *e* 23 11 14.4
GROC *e*S **S 23 12 52.3 +1.5**
GROC pmax pmax
comp=Z,41nm,1.0s
DL2 Dalian 28.49 108 P P 23 07 58.6 -6.2
DL2 S **S 23 12 43.6 -8.6**
DL2 pmax pmax
comp=Z,46nm,1.0s
DL2 pmax pmax
comp=Z,170nm,8.8s
DL2 LR LR
comp=N,5μm,12.1s
DL2 LR LR
comp=E,8μm,9.5s
DL2 LR LR
comp=Z,5μm,13.1s
MOKO MOKOCHONG 28.62 164 *e*P **P 23 08 07.4 +1.1**
MOKO IAmb IAmb 23 08 08.7
comp=Z,58nm,0.8s
SEKA Sheki 28.84 259 P **P 23 08 09.9 +1.8**
ZKTA Zakatala 28.89 260 P **P 23 08 11.0 +2.5**
SHL Shillong 29.01 169 *e*P **P 23 08 10.1 +0.3**
comp=Z,181nm,1.2s
SHL Shillong 29.01 169 *e*P **P 23 08 10.1 +0.3**
SHL pmax pmax
comp=Z,181nm,1.2s
SHL Shillong 29.01 169 *e*P **P 23 08 09.6 -0.2**
SHL IAmb IAmb 23 08 11.2
comp=Z,130nm,1.1s
KOHI KOHIMA 29.15 165 *e*P **P 23 08 11.7 +0.7**
KOHI IAmb IAmb 23 08 13.4
comp=Z,169nm,1.3s
MNGR Mingechevir, A 29.18 259 P **P 23 08 13.7 +2.7**
ENH Enshi 29.33 135 *e*P **P 23 08 12.5 +0.1**
comp=Z,153nm,1.6s
NCK Nalchik 29.51 266⇓ *i*P **P 23 08 15.3 +1.3**
NCK pmax pmax
comp=Z,43nm,1.0s
GANJ Ganja 29.71 259 P **P 23 08 18.0 +2.3**
ZEI Tsey 29.76 265 *e*P **P 23 08 13.4 -3.0**
ZEI pmax pmax
comp=Z,66nm,1.4s
KVAR Kislovodsk Arr 29.77 268 LR LR 23 20 36.8
comp=Z,1μm,21.4s,baz=278,slow=37
KIV Kislovodsk 29.77 268 *e*P **P 23 08 17.3 +0.9**
comp=Z,99nm,0.8s
KIV Kislovodsk 29.77 268⇑ *i*P **P 23 08 17.9 +1.5**
KIV Kislovodsk 29.77 268 *i* P **P 23 08 18.1 +1.7**
SNR=11
KIV Kislovodsk 29.77 268 *e*P **P 23 08 17.9 +1.5**
KIV *e* 23 13 15.6
KIV pmax pmax
comp=Z,192nm,1.0s
KIV MLR MLR
comp=Z,3μm,15.0s
KBZ Khabaz 29.79 267 P **P 23 08 18.1 +1.8**
comp=Z,17nm,0.9s,baz=91,slow=4.9,SNR=29
KBZ S **S 23 13 14.2 +1.8**
comp=Z,11nm,0.9s,baz=154,slow=4.8,SNR=1.8
KBZ LR LR 23 21 59.1
comp=Z,2μm,18.4s,baz=44,slow=40
TBLG Delisi 29.93 262 *e*P **P 23 08 17.8 +0.1**
comp=Z,96nm,1.1s
TBLG Delisi 29.93 262 *e*P **P 23 08 17.8 +0.1**
TBLG pmax pmax
comp=Z,96nm,1.1s
PUL Pulkovo 30.05 303*ce*P **P 23 08 19.3 +0.8**
PUL pmax pmax
comp=Z,144nm,0.8s
PUL Pulkovo 30.05 303 *e*P **P 23 08 18.9 +0.4**
PUL IAmb IAmb 23 08 19.5
comp=Z,122nm,0.5s
NEY Neytrino 30.17 267*d i*P **P 23 08 22.4 +2.4**
NEY pmax pmax
comp=Z,24nm,0.8s
GRNR Gornyy 30.30 76 *e*P **P 23 08 21.2 +0.4**
GRNR pmax pmax
comp=Z,70nm,1.2s
ARA0 ARCESS Array S 30.73 323 *e*P **P 23 08 25.0 +0.6**
ARA0 *e*PcP **PcP 23 11 21.5 -0.1**
ARCES ARCESS Array B 30.73 323 P **P 23 08 25.0 +0.6**
comp=Z,10.0nm,0.4s,baz=76,slow=9.1,SNR=23
ARCES PcP **PcP 23 11 21.5 -0.1**
comp=Z,3.5nm,0.6s,baz=91,slow=3.7,SNR=3.8
ARCES LR LR 23 21 38.5
comp=Z,1μm,20.1s,baz=97,slow=38
AKH Akhalkalaki 30.86 263⇑ *i*P **P 23 08 28.1 +2.1**
GNI Garni 30.94 260 LR LR 23 22 23.1
comp=Z,1μm,20.9s,baz=53,slow=39
GNI Garni 30.94 260 *e*P **P 23 08 28.1 +1.3**
comp=Z,146nm,1.1s
GNI Garni 30.94 260 *i* P **P 23 08 28.6 +1.8**
SNR=47
GNI Garni 30.94 260*ce*P **P 23 08 29.0 +2.2**
GNI pmax pmax
comp=Z,376nm,1.1s
USA0B Ussuriysk Arra 31.10 90 *e*P **P 23 08 28.1 +0.1**
comp=Z,45nm,1.0s
USA0B Ussuriysk Arra 31.10 90 P **P 23 08 28.1 +0.1**
USRK Ussuriysk Ar. 31.10 90 P **P 23 08 27.7 -0.3**
comp=Z,28nm,0.9s,baz=295,slow=9.0,SNR=37
NAX Nakhchivan 31.16 258 P **P 23 08 31.2 +2.6**
WHN Wuhan 31.22 128⇓ P **P 23 08 29.0 -0.1**
WHN S **S 23 13 35.3 +0.1**
WHN pmax pmax
comp=Z,95nm,1.0s
WHN pmax pmax
comp=Z,190nm,8.7s
WHN LR LR
comp=Z,5μm,10.2s
WHN LR LR
comp=Z,11μm,13.2s
WHN LR LR
comp=Z,7μm,20.2s
BELO BELONIA 31.25 170 *e*P **P 23 08 28.4 -1.0**
KTK1 Kautokeino 31.56 322 *e*P **P 23 08 33.1 +1.3**

KARS Kars 31.59 262 *e*P **P 23 08 33.8 +1.3**
comp=Z,546nm,1.0s
KARS Kars 31.59 262 *e*P **P 23 08 33.8 +1.3**
KARS pmax pmax
comp=Z,546nm,1.0s
FINES FINESS Array B 31.65 308 P **P 23 08 33.0 +0.4**
comp=Z,48nm,0.8s,baz=79,slow=9.9,SNR=91
FINES LR LR 23 22 58.3
comp=Z,1μm,18.2s,baz=79,slow=39
KMI Kunming 31.65 150 P **P 23 08 32.8 -0.4**
KMI pP sP 23 08 39.8 +2.0
KMI sP pP 23 08 42.1 +5.7
KMI PP **PP 23 09 39.3 -5.3**
KMI S **S 23 13 43.1 +0.7**
KMI sS sS 23 13 51.8 +4.1
KMI SS **SnSn 23 15 34.0 +5.7**
KMI pmax pmax
comp=Z,46nm,1.7s
KMI pmax pmax
comp=Z,340nm,3.1s
KMI LR LR
comp=Z,1μm,17.4s
KMI LR LR
comp=Z,4μm,14.1s
GYA Guiyang 31.67 143⇑ *i*P **P 23 08 32.9 -0.4**
GYA PP **PP 23 09 34.6 -10**
GYA S **S 23 13 39.8 -2.7**
GYA ScP **ScP 23 15 07.0 -1.0**
GYA SS **SnSn 23 15 32.4 +3.8**
GYA pmax pmax
comp=Z,30nm,0.9s
GYA pmax pmax
comp=Z,120nm,6.5s
GYA LR LR
comp=Z,1μm,10.6s
GYA LR LR
comp=Z,3μm,9.9s
BHPL Bhopal 31.68 195 *e*P **P 23 08 33.2 -0.1**
BHPL IAmb IAmb 23 08 34.6
comp=Z,239nm,1.5s
SOC Sochi 31.73 270 *e*P **P 23 08 34.4 +0.9**
SOC *e* 23 09 33.1
SOC *e*S **S 23 13 46.6 +3.6**
SOC *e*SS **SnSn 23 15 29.4 -0.1**
SOC pmax pmax
comp=Z,113nm,0.7s
SOC MLR MLR
comp=Z,1μm,14.0s
BATM Batumi 31.78 265⇑ *i*P **P 23 08 35.8 +1.8**
BRDH Bariadhala 31.84 170 P **P 23 08 35.0 +0.4**
comp=Z,88nm,0.4s,baz=31,slow=3.4,SNR=8.8
BCA Borcka 31.92 265⇓ *i*P **P 23 08 36.8 +1.5**
NJ2 Nanjing 32.17 120⇑ *i*P **P 23 08 38.0 +0.6**
NJ2 pP **sP 23 08 42.3 +0.3**
NJ2 sP **pP 23 08 45.1 +4.5**
NJ2 pmax pmax
comp=Z,56nm,0.8s
NJ2 pmax pmax
comp=Z,440nm,3.5s
NJ2 LR LR
comp=Z,3μm,12.1s
NJ2 LR LR
comp=Z,3μm,12.2s
NJ2 LR LR
comp=Z,3μm,14.2s
VSU Vasula 32.20 302*c i*P **P 23 08 37.7 +0.3**
VSU pmax pmax
comp=Z,376nm,0.9s
VSU Vasula 32.20 302 *e*P **P 23 08 37.0 -0.4**
VSU IAmb IAmb 23 08 40.0
comp=Z,311nm,0.7s
ANN Anapa 32.37 273 *e*P **P 23 08 36.1 -3.0**
ANN *i* *PP **pP 23 08 40.6 -1.7**
ANN *e* 23 09 42.6
ANN *e* 23 11 20.8
ANN *i* S **S 23 13 50.5 -2.4**
ANN *i* SS **SnSn 23 15 42.0 -2.8**
ANN pmax pmax
comp=Z,84nm,1.3s
ANN MLR MLR
comp=N,3μm,17.0s
ANN MLR MLR
comp=Z,2μm,17.0s
ANN MLR MLR
comp=E,1μm,17.0s
TRO Tromso 33.02 324 *e*P **P 23 08 45.9 +1.4**
KS15 Wonju Array Si 33.04 103 *e*P **P 23 08 45.0 0.0**
comp=E,35nm,1.1s
KS15 *e*ScP **ScP 23 15 15.2 +2.9**
MICGM Minsk 33.05 295⇓ *e*P **P 23 08 46.0 +1.1**
MICGM PM 23 08 48.0
comp=Z,0.5nm,1.0s
MICGM PM 23 08 50.0
comp=E,0.5nm,1.2s
MICGM *e*PP PP 23 09 46.0 -13
MICGM *e*PPP PPP 23 10 14.0
MICGM *e*PcP **PcP 23 11 21.0 -7.1**
MICGM *e*S **S 23 14 04.0 +0.7**
MICGM *e*SS **SnSn 23 15 54.0 -7.1**
MICGM *e*SSS SSS 23 16 30.0
MICGM *e*LQ LQ 23 19 50.0
MICGM *e*LR LR 23 21 20.0
MICGM LRM MLR 23 23 16.0
comp=Z,5.3nm,16.0s
MNK Minsk 33.05 295⇓ *e*P **P 23 08 46.0 +1.1**
MNK *e* 23 10 14.0
MNK *e*S **S 23 14 04.0 +0.7**
MNK *e* 23 16 30.0
MNK pmax pmax
comp=Z,510nm,1.0s
MNK pmax pmax
comp=E,500nm,1.2s
MNK MLR MLR
comp=Z,5μm,16.0s
KSRS Korea Array 33.05 103 P **P 23 08 44.6 -0.5**
comp=Z,16nm,0.9s,baz=312,slow=7.7,SNR=49
KSRS ScP **ScP 23 15 15.2 +2.9**
comp=Z,0.8nm,0.6s,baz=318,slow=1.7,SNR=4.3
KTUT Trabzon 33.30 266⇑ *i*P **P 23 08 48.9 +1.7**
IDID Didziasalis 33.33 296 *e*P **P 23 08 48.2 +0.8**
IDID IAmb IAmb 23 08 51.3
comp=Z,48nm,1.1s
BHJ Bhuj 33.36 208 *e*P **P 23 08 48.6 +0.7**
BHJ IAmb IAmb 23 08 50.1
comp=Z,76nm,0.8s
IZAR Zarasai 33.41 297 *e*P **P 23 08 48.6 +0.5**
IZAR IAmb IAmb 23 08 52.1
comp=Z,50nm,1.1s
SPA0 Spitsbergen Ar 33.43 339 *e*P **P 23 08 49.3 +1.2**
comp=Z,91nm,1.3s
NACGM Naroch 33.47 296 *e*P **P 23 08 50.0 +1.4**
NACGM *e*S **S 23 14 12.0 +2.2**
NACGM *e*PcS **PcS 23 15 18.0 +3.3**
NACGM *e*SS **SnSn 23 16 18.0 +6.7**
NACGM *e*SSS SSS 23 16 44.0
NACGM *e*LQ LQ 23 20 14.0
NACGM *e*LR LR 23 21 46.0
NACGM LRM MLR 23 23 41.0
comp=Z,19nm,14.0s
TJN Taejon 33.49 105*ce*P **P 23 08 48.5 -0.5**
NGP Nagpur 33.51 192 *e*P **P 23 08 49.0 -0.3**
NGP IAmb IAmb 23 08 50.1
comp=Z,34nm,0.5s
IIGN Ignalina 33.58 297 *e*P **P 23 08 50.5 +0.9**
IIGN IAmb IAmb 23 08 53.6
comp=Z,30nm,0.9s
TYV Tymovskoe 33.76 72 *e*P **P 23 08 52.0 +0.8**
TYV *e*S **S 23 14 19.3 +4.9**
TYV pmax pmax
comp=Z,51nm,1.5s
TYV pmax pmax
comp=Z,500nm,4.1s
TYV smax smax
comp=N,500nm,8.9s
TYV MLR MLR
comp=Z,10μm,16.0s
TYV MLR MLR
comp=E,5μm,17.0s
BWNR Bhubaneshwar 33.93 180 *ex* P 23 08 44.5 -8.3
BWNR IAmb IAmb 23 08 47.3
comp=Z,153nm,1.4s
AKASG Malin Array Be 34.00 288 P **P 23 08 53.2 -0.1**
comp=Z,52nm,0.7s,baz=54,slow=9.1,SNR=74
AKASG PcP **PcP 23 11 31.6 +0.7**
comp=Z,6.6nm,0.8s,baz=42,slow=4.3,SNR=3.4

AKASG LR LR 23 24 01.0
comp=Z,2μm,19.9s,baz=50,slow=38
AKBB Malin Array Si 34.00 288 *e*P **P 23 08 54.0 +0.7**
comp=Z,57nm,0.8s
AKBB *e*PcP **PcP 23 11 31.6 +0.7**
AKBB Malin Array Si 34.00 288 *e*P **P 23 08 54.0 +0.7**
AKBB *e* 23 11 31.6
AKBB pmax pmax
comp=Z,57nm,0.8s
SSE Sheshan 34.12 118 P **P 23 08 54.8 +0.3**
SSE S **S 23 14 18.8 -1.5**
SSE pmax pmax
comp=Z,21nm,0.8s
SSE LR LR
comp=Z,730nm,10.6s
SSE LR LR
comp=Z,870nm,10.2s
SIM Simferopol' 34.22 276 *ce*P **P 23 08 56.1 +0.8**
SIM 23 10 09.0
SIM *e*S **S 23 14 22.0 +0.3**
SIM MLR MLR
comp=Z,800nm,13.5s
KBS Kingsbay 34.34 341 *ce*P **P 23 08 56.4 +0.5**
KBS pmax pmax
comp=Z,136nm,1.3s
MA2 Magadan 34.42 54 P **P 23 08 56.1 -0.7**
comp=Z,20nm,0.8s,baz=284,slow=9.8,SNR=12
MA2 PcP **PcP 23 11 31.7 -0.2**
comp=Z,17nm,0.8s,baz=292,slow=5.4,SNR=4.4
MA2 Magadan 34.42 54 *e*P **P 23 08 56.9 0.0**
comp=Z,80nm,1.2s
MA2 Magadan 34.42 54 *ce*P **P 23 08 56.5 -0.3**
MA2 pmax pmax
comp=Z,131nm,1.7s
STEI Steigen 34.64 321 *e*P **P 23 08 59.4 +0.8**
PABE Paberze 34.70 298 *e*P **P 23 08 59.4 +0.2**
PABE IAmb IAmb 23 09 02.8
comp=Z,205nm,1.2s
SLIT Slitere, Latvi 34.70 302 *e*P **P 23 08 58.5 -0.7**
SLIT IAmb IAmb 23 09 00.9
comp=Z,1μm,1.5s
SEVA Sevastopol 34.72 276⇑*i*P **P 23 09 01.1 +1.6**
LOF Lofoten 35.22 322 *e*P **P 23 09 04.8 +1.2**
MOR8 Moi Rana 35.39 318 *e*P **P 23 09 04.7 -0.5**
DIKM Dikmen 35.52 270⇓*i*P **P 23 09 07.8 +1.3**
PBUR Paburg 35.53 300 *e*P **P 23 09 06.3 -0.1**
PBUR IAmb IAmb 23 09 09.7
comp=Z,70nm,0.7s
SLVN Son La 35.57 151 *e*P **P 23 09 07.0 -0.1**
comp=Z,48nm,1.2s
SLVN *e*PcP **PcP 23 11 36.3 +0.3**
SUW Suwalki 35.75 296 *e*P **P 23 09 07.8 -0.5**
SUW LMZ LR 23 24 44.2
comp=Z,2μm,17.4s
SUW Suwalki 35.75 296 *e*P **P 23 09 07.8 -0.5**
SUW MLR MLR
comp=Z,2μm,17.4s
SHME Shamm 35.82 230 *i* P **P 23 09 09.2 -0.1**
SNR=14
SHME P **pP 23 09 09.8 -2.6**
YSS Yuzh-Sakhalins 35.82 78 *e*P **P 23 09 09.4 +0.4**
comp=Z,204nm,1.5s
YSS Yuzh-Sakhalins 35.82 78α *i*P **P 23 09 09.2 +0.2**
YSS *e**SP **sP 23 09 12.8 -0.8**
YSS *e*S **S 23 14 44.3 -1.9**
YSS pmax pmax
comp=Z,700nm,2.4s
YSS pmax pmax
comp=E,400nm,2.5s
YSS pmax pmax
comp=Z,70nm,1.3s
YSS MLR MLR
comp=Z,2μm,13.0s
YSS MLR MLR
comp=N,1μm,12.0s
YSS MLR MLR
comp=E,4μm,12.0s
BANOM Banah 35.86 230 *i* P **P 23 09 09.9 +0.4**
SNR=8.7
BANOM Banah 35.86 230 P **P 23 09 10.1 +0.5**
BZK Bozkurt 36.06 272⇓*i*P **P 23 09 12.8 +1.7**
KIS Kishinev 36.14 283⇑*i*P **P 23 09 11.0 -0.7**
comp=E,380nm,1.8s
KIS Kishinev 36.14 283 *e*PP PP 23 10 31.0 -2.7
KIS Kishinev 36.14 283 *e*PcP **PcP 23 11 34.0 -3.2**
KIS *e*S **S 23 14 47.0 -4.1**
comp=E,500nm,8.0s
KIS *e*SS SnSn 23 16 49.0 -27
KIS *e*LQ LQ 23 21 58.0
comp=E,6μm,13.0s
KIS *e*LR LR 23 23 15.0
comp=E,4μm,17.0s
KIS Kishinev 36.14 283 *i* P **P 23 09 11.0 -0.7**
KIS *e* 23 10 31.0
KIS *e* 23 11 34.0
KIS *e*S **S 23 14 47.0 -4.1**
KIS pmax pmax
comp=Z,380nm,1.8s
KIS smax smax
comp=N,500nm,8.0s
KIS pmax pmax
comp=N,6μm,13.0s
KIS MLR MLR
comp=Z,4μm,17.0s
MILM Milestii Mici 36.19 282⇓*i*P **P 23 09 13.4 +1.3**
MDH Madha 36.40 229 P **P 23 09 13.7 -0.5**
MDH Madha 36.40 229 P **P 23 09 13.0 -1.2**
MSFE Esma-Masafi 36.41 230 *i* P **P 23 09 14.6 +0.4**
SNR=21
UOSS Minazif 36.75 229 *e*P **P 23 09 17.2 +0.1**
comp=Z,75nm,0.8s
UOSS Minazif 36.75 229 *i* P **P 23 09 17.2 +0.1**
SNR=16
IAS Iasi 36.75 284⇑*i*P **P 23 09 18.6 +1.7**
CHTO Chiang Mai 36.76 159 *e*P **P 23 09 17.3 0.0**
comp=Z,76nm,1.1s
CHTO Chiang Mai 36.76 159 *e*P **P 23 09 17.3 0.0**
CHTO pmax pmax
comp=Z,76nm,1.1s
CMMT Chiang Mai 36.76 159 P **P 23 09 17.3 0.0**
comp=Z,33nm,1.1s,comp=Z,510nm
HATD Hatta, Dubai 36.88 229 *i* P **P 23 09 18.8 +0.5**
SNR=16
HATD Hatta, Dubai 36.88 229 P **P 23 09 18.8 +0.5**
NSS Namsos 36.89 316 *e*P **P 23 09 18.4 +0.5**
POO Poona 36.91 200 *e*P **P 23 09 18.0 -0.6**
NAZ Nazwa, Dubai 36.95 230 *i* P **P 23 09 19.3 +0.4**
SNR=14
NAZ Nazwa, Dubai 36.95 230 P **P 23 09 19.6 +0.7**
KLNR Kaliningrad 37.03 298 *d*/*i*P **P 23 09 20.1 +0.9**
KLNR pmax pmax
comp=Z,157nm,1.2s
ASHO Ashiyiah 37.04 229 *i* P **P 23 09 20.0 +0.3**
SNR=46
ASHO Ashiyiah 37.04 229 P **P 23 09 20.1 +0.3**
CM31 Chiang Mai Arr 37.11 160 *e*P **P 23 09 20.8 +0.5**
comp=Z,59nm,0.9s
CM31 *e*PcP **PcP 23 11 40.0 -0.6**
CMAR Chiang Mai Arr 37.11 160 P **P 23 09 20.2 -0.1**
comp=Z,47nm,1.0s,baz=340,slow=9.0,SNR=106
CMAR PcP **PcP 23 11 40.0 -0.6**
comp=Z,9.2nm,0.8s,baz=334,slow=4.2,SNR=8.3
CMAR LR LR 23 25 54.9
comp=Z,723nm,19.7s,baz=347,slow=38
CMAR Chiang Mai Arr 37.11 160 *i* P **P 23 09 20.7 +0.5**
CMAR pmax pmax
comp=Z,47nm,1.0s
TLCR 37.16 280⇓*i*P **P 23 09 22.4 +1.9**
LAMP Lampang 37.19 158 P **P 23 09 21.0 +0.1**
comp=Z,74μm,0.7s,comp=Z,832μm
FAQ Al Faqa, Dubai 37.19 230 *i* P **P 23 09 21.1 +0.2**
SNR=20
FAQ Al Faqa, Dubai 37.19 230 P **P 23 09 21.9 +1.0**
WSAR Wadi Sarin 37.21 225 P **P 23 09 21.6 +0.5**
comp=Z,45nm,0.6s,baz=75,slow=4.2,SNR=30
WSAR Wadi Sarin 37.21 225 P **P 23 09 23.5 +2.4**
BIR Birlad 37.23 282⇑*i*P **P 23 09 23.4 +2.4**
HYB Hyderabad 37.25 192 *i* P **P 23 09 20.0 -1.5**
comp=Z,86nm,0.8s
HYB *e*S **S 23 15 08.0 -0.6**
SOHO SOHO 37.31 228 P **P 23 09 22.3 +0.4**
LVV L'vov 37.33 289 *e*P **P 23 09 23.0 +1.1**
LVV *e* 23 10 46.0
LVV *i* S **S 23 15 10.5 +1.3**
LVV pmax pmax
comp=Z,230nm,1.6s
LVV MLR MLR
comp=N,1μm,14.0s
LVV MLR MLR
comp=E,2μm,14.0s
LVV MLR MLR
comp=Z,2μm,14.0s
ASUD Al Ashush, Dub 37.41 230 *i* P **P 23 09 23.6 +0.8**
SNR=13
ASUD Al Ashush, Dub 37.41 230 P **P 23 09 23.9 +1.1**
PRAR RASCA 37.42 285⇓*i*P **P 23 09 24.0 +1.4**
CFR Carcaliu 37.56 280⇓*i*P **P 23 09 25.6 +1.8**
SMDO Samad 37.61 225 P **P 23 09 25.9 +1.2**
AJN Ajban 37.62 230 *i* P **P 23 09 25.1 +0.5**
SNR=8.0
TESR Tescani 37.65 283⇓*i*P **P 23 09 26.6 +2.0**
BR101 Keskin Array S 37.70 269 *e*P **P 23 09 26.3 +1.1**
BR101 *e*PcP **PcP 23 11 42.2 -0.1**
BRTR Keskin Array B 37.70 269 P **P 23 09 26.3 +1.0**
comp=Z,46nm,1.0s,baz=65,slow=5.6,SNR=87
BRTR PcP **PcP 23 11 42.2 -0.1**
comp=Z,3.6nm,0.7s,baz=62,slow=1.5,SNR=4.9
BRTR LR LR 23 27 51.7
comp=Z,763nm,19.3s,baz=38,slow=41
BRTR Keskin Array B 37.70 269 *i* P **P 23 09 26.2 +1.0**
BRTR pmax pmax
comp=Z,48nm,1.0s
BIZ Bicaz 37.72 284⇑*i*P **P 23 09 27.0 +1.8**
ALNE Al Ain 37.72 229 *i* P **P 23 09 25.8 +0.3**
SNR=23
PETR Petresti 37.77 282⇑*i*P **P 23 09 27.6 +2.0**
HFS Hagfors 37.81 309 LR LR 23 26 21.9
comp=Z,2μm,18.4s,baz=67,slow=38
TIRR Tirgusor 37.82 279⇓*i*P **P 23 09 27.8 +1.8**
JNU Nakatsue 37.84 105 P **P 23 09 25.5 -0.9**
comp=Z,20nm,0.9s,baz=4.8,slow=5.3,SNR=4.9
ODBI Odobesti 37.84 282⇑*i*P **P 23 09 28.0 +1.8**
BURAR Bucovina Array 37.85 286⇑*i*P **P 23 09 28.3 +1.9**
QZH Quanzhou 37.94 127 P P 23 09 21.9 -5.3
QZH S **S 23 15 19.3 +0.4**
QZH LR LR
comp=Z,1μm,16.1s
QZH LR LR
comp=Z,2μm,17.5s
QZH LR LR
comp=Z,2μm,16.1s
TLB Topalu 37.96 280⇑*i*P **P 23 09 29.5 +2.3**
VRI Vrincioaia 37.97 282⇓*i*P **P 23 09 29.4 +2.0**
BILL Bilibino 37.99 37 *e*P **P 23 09 28.2 +1.0**
comp=Z,113nm,1.5s
BILL Bilibino 37.99 37 *c*/*i*P **P 23 09 27.5 +0.3**
BILL *e* 23 10 56.6
BILL *e*SS SS 23 18 36.2 +31
BILL pmax pmax
comp=Z,132nm,2.5s
BILL MLR MLR
comp=Z,4μm,17.0s
ARQ Araqi 38.02 227 P **P 23 09 29.1 +1.2**
PLOR Plostina 38.02 282⇑*i*P **P 23 09 29.9 +2.1**
TBLU Trondheim 38.06 315 *e*P **P 23 09 27.6 -0.3**
BEL Belsk 38.06 294 *e*P **P 23 09 29.6 +1.6**
BEL LMZ LR 23 26 17.1
comp=Z,2μm,17.5s
BEL Belsk 38.06 294 *e*P **P 23 09 29.6 +1.6**
BEL MLR MLR
comp=Z,2μm,17.5s
ANTO Ankara 38.10 270 *e*P **P 23 09 29.7 +1.1**
comp=Z,95nm,0.8s
ANTO Ankara 38.10 270 *e*P **P 23 09 29.7 +1.1**
ANTO pmax pmax
comp=Z,95nm,0.8s
GRER 38.11 281⇑*i*P **P 23 09 30.2 +1.7**
UTTA Uttaradit 38.14 157 P **P 23 09 28.8 -0.2**
comp=Z,149μm,0.8s
BSY Bisya 38.25 226 P **P 23 09 30.4 +0.5**
ICOR Ion Corvin 38.38 279⇑*i*P **P 23 09 32.7 +2.0**
OZUR 38.38 283⇓*i*P **P 23 09 32.7 +1.9**
NC303 NORSAR Array S 38.40 311 *e*P **P 23 09 31.7 +0.9**
PSN Preselentsi 38.41 278 P **P 23 09 33.0 +1.9**
NONG Nongkai 38.47 153 P **P 23 09 31.2 -0.5**
comp=Z,1.3nm,1.2s
NB201 NORSAR Array S 38.51 311 *e*P **P 23 09 31.8 +0.1**
ISR Istrita 38.51 281⇑*i*P **P 23 09 34.7 +2.8**
NC602 NORSAR Array S 38.53 311 *e*P **P 23 09 32.2 +0.4**
NB2 NORSAR Subarra 38.54 311 P **P 23 09 31.8 -0.2**
comp=Z,68nm,0.9s,baz=60,slow=8.6
NB2 NORSAR Subarra 38.54 311 P **P 23 09 31.8 -0.2**
baz=60,slow=8.6
NOA NORSAR Array B 38.54 311 P **P 23 09 32.0 0.0**
comp=Z,35nm,0.8s,baz=60,slow=8.2,SNR=137
NOA LR LR 23 27 06.6
comp=Z,3μm,18.8s,baz=70,slow=39
NOA NORSAR Array B 38.54 311 P **P 23 09 32.0 0.0**
MLR Muntele Rosu 38.64 282⇓*i*P **P 23 09 34.8 +1.7**
NC204 NORSAR Array S 38.64 312 *e*P **P 23 09 33.9 +1.0**
DOPR Dopca 38.68 283⇑*i*P **P 23 09 35.8 +2.5**
NBO00 NORSAR Array S 38.74 311 *e*P **P 23 09 33.6 -0.1**
NAO01 NORSAR Array S 38.77 311 *e*P **P 23 09 34.1 +0.2**
KOLS Kolonicke sedl 38.78 289 *e*P **P 23 09 35.3 +1.2**
KOLS pmax pmax
comp=Z,66nm,1.5s
KOLS Kolonicke sedl 38.78 289 *e*P **P 23 09 35.3 +1.2**
KOLS *e*PP **PnPn 23 11 04.7 -0.1**
KOLS *e*S **S 23 15 32.2 +1.1**
KOLS *e*L L 23 26 27.7
SECR 38.83 282⇑*i*P **P 23 09 36.7 +2.1**
UZH Uzhgorod 38.93 289 *e*P **P 23 09 32.9 -2.4**
UZH *e* 23 09 38.5
UZH *e* 23 11 11.5
UZH *e*S **S 23 15 28.2 -5.2**
UZH MLR MLR
comp=N,200nm,13.0s
UZH MLR MLR
comp=E,500nm,13.0s
UZH MLR MLR
comp=Z,200nm,13.0s
SULR 38.94 281⇑*i*P **P 23 09 37.1 +1.7**
ERM Erimo 38.95 84 *e*P **P 23 09 36.0 +0.5**
comp=Z,198nm,1.3s
ERM Erimo 38.95 84 *ce*P **P 23 09 34.9 -0.7**
ERM pmax pmax
comp=Z,254nm,1.7s
DOMB Dombas 39.06 313 *e*P **P 23 09 36.7 +0.4**
TRPA Tarpa 39.07 288⇑EP **P 23 09 37.1 +0.6**
TRPA EPP 23 11 04.1
TRPA ESS 23 18 19.0
PRD Provadia 39.16 278 P **P 23 09 39.0 +1.7**
VOIR 39.18 283⇑*i*P **P 23 09 39.6 +2.0**
GKP Gorka Klasztor 39.22 298 *e*P **P 23 09 38.8 +1.1**
GKP LMZ LR 23 27 19.5
comp=Z,5μm,16.6s
GKP Gorka Klasztor 39.22 298 *e*P **P 23 09 38.8 +1.1**
GKP MLR MLR
comp=Z,5μm,16.5s
OSL Oslo 39.24 310 *e*P **P 23 09 39.1 +1.3**
UMPA Umpang Tak 39.28 160 P **P 23 09 40.9 +2.4**
comp=Z,112μm,1.4s,comp=Z,989μm
SGRR Singureni 39.37 281⇑*i*P **P 23 09 41.3 +2.3**
OJC Ojcow 39.44 292 *e*P **P 23 09 41.1 +1.5**
OJC *e*S **S 23 15 44.2 +3.1**
OJC LMZ LR 23 27 11.6
comp=Z,4μm,15.3s
OJC Ojcow 39.44 292 *e*P **P 23 09 41.1 +1.5**
OJC *e*S **S 23 15 44.2 +3.1**
OJC MLR MLR
comp=Z,4μm,15.3s
MOL Molde 39.47 314 *e*P **P 23 09 41.5 +1.8**
BSD Bornholm Skovb 39.49 301 *i* P **P 23 09 39.8 -0.1**
BSD pmax pmax
comp=Z,56nm,1.1s
BSD Bornholm Skovb 39.49 301 *i* P **P 23 09 39.8 -0.1**
comp=Z,56nm,1.1s
YHNB Yeheng 39.50 124 *e*P **P 23 09 40.4 0.0**
comp=Z,188nm,1.7s
NIE Niedzica 39.60 291 *e*P **P 23 09 42.6 +1.6**
NIE LMZ LR 23 27 20.4
comp=Z,2μm,16.0s
NIE Niedzica 39.60 291 *e*P **P 23 09 42.6 +1.6**
NIE MLR MLR
comp=Z,2μm,16.0s
QIZ Qiongzhong 39.62 143 P **P 23 09 40.6 -0.8**
QIZ PP **PnPn 23 11 16.0 +0.6**
QIZ S **S 23 15 44.8 +0.5**
QIZ pmax pmax
comp=Z,35nm,0.9s
QIZ LR LR
comp=Z,1μm,13.1s
QIZ LR LR
comp=Z,3μm,10.8s
QIZ LR LR
comp=Z,1μm,10.8s
MAJO Matsushiro 39.63 95 *e*P **P 23 09 39.9 -1.5**
MAJO Matsushiro 39.63 95 *e*P **P 23 09 39.9 -1.5**
MJAR Matsushiro Arr 39.63 95 P **P 23 09 39.9 -1.5**
comp=Z,3.6nm,0.8s,baz=318,slow=7.3,SNR=8.0
DRGR 39.73 286⇑*i*P **P 23 09 43.7 +1.6**
PANO Nakornpanom 39.74 152 P **P 23 09 42.2 -0.2**
comp=Z,1.1nm,1.5s
AKN Aaknes 39.88 314 *e*P **P 23 09 44.3 +1.2**
GOA Goa 39.88 199 *e*P **P 23 09 42.5 -0.9**
GOA IAmb IAmb 23 09 45.2
comp=Z,58nm,0.6s
KONO Kongsberg 39.88 310 *e*P **P 23 09 43.2 +0.1**
comp=Z,41nm,0.9s
KONO Kongsberg 39.88 310 *ce*P **P 23 09 43.3 +0.1**
KONO pmax pmax
comp=Z,72nm,1.3s
KONO Kongsberg 39.88 310 *e*P **P 23 09 43.2 +0.1**
LOT Lotru 39.91 284⇑*i*P **P 23 09 45.8 +2.1**
SKAR Skarslia 39.98 312 *e*P **P 23 09 45.2 +1.2**
KECS Kecovo 40.01 290 *e*P **P 23 09 46.1 +1.7**
KECS pmax pmax
comp=Z,178nm,1.2s
KECS Kecovo 40.01 290 *e*P **P 23 09 46.1 +1.7**
SSLB Suanglung 40.04 126 *e*P **P 23 09 44.6 -0.3**
comp=Z,118nm,1.1s
KHON Khomkaen 40.04 155 P **P 23 09 44.3 -0.6**
comp=Z,136μm,0.8s
HWQ Hawqa 40.06 261 *e*P **P 23 09 46.0 +0.9**
JMB Yambol 40.08 278 P **P 23 09 46.0 +1.0**
DEV Deva 40.14 285⇓*i*P **P 23 09 48.0 +2.5**
LANS Liptovska Anna 40.20 291 *e*P **P 23 09 48.2 +2.2**
LANS Liptovska Anna 40.20 291 *e*P **P 23 09 48.2 +2.2**
CHAI Chaiyaphum 40.26 156 P **P 23 09 46.1 -0.5**
comp=Z,43μm,0.8s,comp=Z,562μm
RAC Raciborz 40.38 293 *e*P **P 23 09 49.0 +1.6**
RAC *e*S **S 23 15 55.0 -0.1**
RAC MLR MLR
comp=Z,2μm,17.2s
VLAD Vladila 40.41 281⇑*i*P **P 23 09 49.4 +1.7**
QASN Qassioun 40.41 260 *e*P **P 23 09 49.8 +1.8**
COP Copenhagen 40.44 303 *i* P **P 23 09 48.5 +0.7**
COP pmax pmax
comp=Z,29nm,1.1s
COP Copenhagen 40.44 303 *i* P **P 23 09 48.5 +0.7**
comp=Z,29nm,1.1s
BHL Bhannes 40.50 261 *e*P **P 23 09 49.4 +0.7**
YULB Yu-li 40.54 125 *e*P **P 23 09 48.8 -0.2**
comp=Z,260nm,1.6s
OKC Ostrava-Krasne 40.54 293 *e*P **P 23 09 50.6 +1.9**
OKC *e*S **S 23 15 55.8 -1.8**
OKC MLR MLR
comp=Z,3μm,13.1s
OKC Ostrava-Krasne 40.54 293 *e*P **P 23 09 50.6 +1.9**
OKC *e*S **S 23 15 55.8 -1.8**
OKC AMS AMS 23 27 40.0
comp=Z,3μm,13.1s
RGN Rugen 40.57 301 *e*P **P 23 09 49.5 +0.7**
RGN IAmb IAmb 23 09 52.6
comp=Z,129nm,1.0s
SIRR Siria 40.62 286⇓*i*P **P 23 09 52.1 +2.6**
PSZ Piszkesteto 40.66 289⇓EP **P 23 09 51.1 +1.3**
PSZ EPP 23 11 23.0
PSZ ESS 23 19 18.0
HYA Hoyanger 40.68 313 *e*P **P 23 09 51.2 +1.6**
BRBR Barbar 40.68 260 *e*P **P 23 09 50.3 0.0**
RCY Rachaya 40.69 260 *e*P **P 23 09 51.1 +0.8**
SRE Strehaia 40.69 283⇓*i*P **P 23 09 52.1 +2.0**
PETK Petropavlovsk- 40.73 61 P **P 23 09 49.5 -0.8**
comp=Z,21nm,0.9s,baz=318,slow=2.0,SNR=30
PETK PP **PP 23 11 29.4 +5.5**
comp=Z,7.9nm,0.8s,baz=317,slow=8.3,SNR=3.6
PETK LR LR 23 27 39.7
comp=Z,3μm,19.5s,baz=295,slow=38
ISP Isparta 40.78 270 *e*P **P 23 09 51.8 +0.8**
ISP Isparta 40.78 270 P **P 23 09 51.8 +0.8**
ISP Isparta 40.78 270 *e*P **P 23 09 51.8 +0.8**
SHBL Chebaa 40.85 260 *e*P **P 23 09 52.8 +1.1**
MORC Moravsky Berou 40.90 293⇑*i*P **P 23 09 53.0 +1.2**
MORC *e*PP **PP 23 11 26.9 +1.1**
MORC *e*S **SS 23 19 01.2 -2.9**
VYHS Vyhne 40.91 291 *e*P **P 23 09 53.3 +1.4**
VYHS pmax pmax
comp=Z,62nm,1.9s
VYHS Vyhne 40.91 291 *e*P **P 23 09 53.3 +1.4**
VYHS *e*S **S 23 16 05.5 +2.3**
VYHS *e*SS **SS 23 19 07.6 +3.3**
VYHS *e*L L 23 28 07.0
TWG Pinlang 40.92 126 *e*P **P 23 09 52.2 +0.1**
comp=Z,407nm,0.9s
DIM Dimitrovgrad 40.95 278 P **P 23 09 53.0 +0.8**
KSP Ksiaz 40.99 295 *e*P **P 23 09 53.6 +1.2**
KSP *e*S **S 23 16 07.0 +2.8**
KSP LMZ LR 23 28 28.4
comp=Z,3μm,14.8s
KSP Ksiaz 40.99 295 *e*P **P 23 09 53.6 +1.2**
KSP *e*S **S 23 16 07.0 +2.8**
KSP MLR MLR
comp=Z,3μm,14.8s
HERR Herculane 41.01 284⇑*i*P **P 23 09 55.3 +2.6**
BZS Buzias 41.03 285⇓*i*P **P 23 09 54.7 +1.9**
BZS Buzias 41.03 285 P **P 23 09 54.4 +1.6**
BZS pmax pmax
comp=Z,31nm,0.9s
HOMB Homborsund 41.03 308 *e*P **P 23 09 53.5 +0.9**
ASF Jabal al Asfar 41.04 258 P **P 23 09 54.2 +1.0**
DAG Danmarks Havn 41.07 340⇑*i*P **P 23 09 53.0 +0.2**
DAG pmax pmax
comp=Z,120nm,1.3s
DAG Danmarks Havn 41.07 340⇑*i*P **P 23 09 53.0 +0.2**
comp=Z,62nm,1.3s
ODD1 Odda 41.08 311 *e*P **P 23 09 54.9 +1.7**
BALB Balikesir 41.12 274 *e*P **P 23 09 54.7 +1.1**
comp=Z,552nm,1.3s
MPEP Malo Peshtene 41.18 281 P **P 23 09 55.2 +1.1**
OSTC Ostas 41.19 295 *e*P **P 23 09 56.5 +2.4**
OSTC *e*x x 23 09 58.9
OSTC *e*S **S 23 16 06.4 -0.8**
OSTC AMS AMS 23 28 20.0
comp=Z,3μm,12.9s
DPC Dobruska-Polom 41.24 294 *e*P **P 23 09 56.0 +1.4**
DPC *e* 23 09 59.8
DPC *e*S **S 23 16 09.6 +1.5**
DPC MLR MLR
comp=Z,3μm,13.0s
DPC Dobruska-Polom 41.24 294 *e*P **P 23 09 56.0 +1.4**
DPC *e*pP **sP 23 09 59.8 +0.6**
DPC *e*S **S 23 16 09.6 +1.5**
DPC AMS AMS 23 28 20.0
comp=Z,3μm,13.0s
CHVC Chvalec 41.25 295 *e*P **P 23 09 55.5 +0.8**
CHVC *e*x x 23 09 59.4
CHVC AMS AMS 23 28 20.0
comp=Z,3μm,12.9s
PET Petropavlovsk 41.26 61 *e*P **P 23 09 54.6 0.0**
comp=Z,146nm,1.4s
PET Petropavlovsk 41.26 61 *ce*P **P 23 09 54.0 -0.6**
PET *e* 23 11 29.4
PET *e*S **S 23 16 09.5 +1.3**
PET *e*SS **SS 23 19 10.0 -1.0**
PET pmax pmax
comp=Z,600nm,2.4s
PET pmax pmax
comp=Z,81nm,1.3s
PET pmax pmax
comp=Z,200nm,3.1s
PET pmax pmax
comp=Z,200nm,12.5s
PET MLR MLR
comp=Z,4μm,15.0s
PET MLR MLR
comp=Z,4μm,15.0s
KDZ Kurdzhali 41.27 278 P **P 23 09 59.5 +4.6**
SHMJ Saham 41.29 259 P **P 23 09 57.5 +2.4**
UPC Upice 41.32 295 *e*P **P 23 09 56.7 +1.5**
UPC *e* 23 09 59.8
UPC *e*S **S 23 16 07.1 -2.1**
UPC MLR MLR

comp=Z,3µm,13.4s
UPC Upice 41.32 295 *e*P P 23 09 56.7 +1.5
UPC *e*pP **sP** 23 09 59.8 0.0
UPC *e*S **S** 23 16 07.1 -2.1
UPC AMS AMS 23 28 20.0
comp=Z,3µm,13.4s
JAVC Velka Javorina 41.35 292⇑ *i*P P 23 09 57.7 +2.2
JAVC *e*PP PP 23 11 40.0 +9.3
MDRS Chennai 41.38 189 *e*x P 23 10 04.7 +8.8
MDRS *e*x x 23 13 10.7
MDRS *e*x x 23 18 20.7
MDRS *e*x x 23 22 39.7
MDRS *e*x x 23 25 53.7
BLS5 Blasjo 41.40 310 *e*P **P 23 09 57.0 +1.3**
PLD Plovdiv 41.40 279 P P 23 10 05.0 +9.1
RUE Ruedersdorf 41.42 298 *e*P **P 23 09 56.5 +0.7**
RUE IAmb IAmb 23 09 58.9
comp=Z,120nm,1.2s
BER Bergen 41.42 312 *e*P **P 23 09 56.8 +1.0**
ASK Askoy 41.43 312 *e*P **P 23 09 57.4 +1.5**
MDVR Moldovita 41.47 284⇑ *i*P P 23 09 57.8 +1.3
MANT Manisa 41.48 272 *e*P **P 23 09 57.8 +0.9**
comp=Z,861nm,1.9s
RDO Rodhopi 41.52 277 *e*P **P 23 09 58.3 +1.4**
RDO Rodhopi 41.52 277 P **P 23 09 58.3 +1.4**
SRO2 Moca 41.58 290 *e*P **P 23 09 59.0 +1.7**
SRO2 Moca 41.58 290 *e*P **P 23 09 59.0 +1.7**
SRO Srobarova 41.59 290 *e*P **P 23 10 00.1 +2.7**
SRO Srobarova 41.59 290 *e*P **P 23 10 00.1 +2.7**
MUD Monsted U'grnd 41.63 306⇑ *i*P P 23 09 58.8 +1.2
MUD pmax pmax
comp=Z,99nm,1.0s
MUD Monsted U'grnd 41.63 306⇑ *i*P P 23 09 58.8 +1.2
comp=Z,99nm,1.0s
MUD Monsted U'grnd 41.63 306 *e*P **P 23 09 59.0 +1.5**
RZN Rozhen 41.66 278 P **P 23 09 59.5 +1.3**
VRAC Vranov 41.68 293 LR LR 23 29 14.1
comp=Z,1µm,18.8s,baz=71,slow=39
VRAC Vranov 41.68 293⇑ *i*P P 23 10 00.3 +2.2
VRAC Vranov 41.68 293⇑ *i*P P 23 09 59.5 +1.4
VRAC *e*PP **PP** 23 11 39.6 +5.4
VRAC *e*S **SS** 23 19 14.0 -5.4
MMLI Mount Malkishu 41.69 260 P **P 23 09 58.7 +0.2**
MODS Modra-Piesok 41.84 291 *e*P **P 23 10 00.7 +1.2**
MODS pmax pmax
comp=Z,36nm,1.3s
MODS Modra-Piesok 41.84 291 *e*P **P 23 10 00.7 +1.2**
MODS *e*S **S** 23 16 18.8 +1.9
MODS *e*SS **SS** 23 19 25.2 +2.6
MODS *e*L L 23 28 53.8
CSKK Cskako 41.88 289 ||EP **P 23 10 01.1 +1.3**
CSKK EPP 23 11 37.0
EZN Ezine 41.91 275⇑ *i*P P 23 10 02.2 +2.1
KRUC Moravsky 41.92 293⇑ *i*P P 23 10 01.7 +1.6
KRUC *e*PP **PP** 23 11 40.8 +4.0
KRUC *e*S **SS** 23 19 22.1 -2.1
VTS Vitosha 41.93 281 *e*P **P 23 10 01.1 +0.7**
VTS Vitosha 41.93 281 P **P 23 10 01.1 +0.7**
VTS Vitosha 41.93 281⇑ *i*P P 23 10 01.6 +1.2
VTS Vitosha 41.93 281 *e*P **P 23 10 01.1 +0.7**
VTS Vitosha 41.93 281 P **P 23 10 01.0 +0.7**
SMTH Samothraki Isl 41.96 276 *e*P **P 23 10 00.9 +0.4**
SMTH Samothraki Isl 41.96 276 P **P 23 10 00.9 +0.4**
STAV Stavanger 41.98 310 *e*P **P 23 10 00.6 +0.2**
ZST Bratislava 42.03 291 *e*P **P 23 10 02.4 +1.4**
ZST *e*S **S** 23 16 20.7 +1.0
ZST *e*SS **SS** 23 19 25.6 -0.8
ZST Bratislava 42.03 291 *e*P **P 23 10 02.3 +1.3**
ZST *e*S **S** 23 16 20.7 +1.0
ZST *e*SS **SS** 23 19 25.6 -0.8
KMY Karmoy 42.04 311 *e*P **P 23 10 02.4 +1.5**
PVCC Panska Ves 42.08 295 *e*P **P 23 10 02.7 +1.4**
PVCC *e* 23 10 06.5
PVCC MLR MLR
comp=Z,2µm,11.2s
PVCC Panska Ves 42.08 295 *e*P **P 23 10 02.7 +1.4**
PVCC *e*pP **sP** 23 10 06.5 +0.6
PVCC AMS AMS 23 28 40.0
comp=Z,2µm,11.2s
WALJ Wala 42.11 258 P **P 23 10 03.8 +2.0**
KAVA Kavala 42.21 278 *e*P **P 23 10 03.9 +1.4**
KAVA Kavala 42.21 278 P **P 23 10 03.9 +1.4**
BRG Berggiesshubel 42.21 296 *e*P **P 23 10 03.8 +1.3**
comp=Z,53nm,1.5s
BRG PP **PP** 23 11 39.0 -0.9
BRG *e*SCP **ScP** 23 15 48.4 +1.8
comp=Z,18nm,1.4s
BRG S **S** 23 16 22.0 -0.3
BRG SS **SS** 23 19 24.0 -5.9
comp=N,2µm,11.5s
comp=E,1µm,11.7s
comp=Z,2µm,11.4s
BRG Berggiesshubel 42.21 296 *e*P **P 23 10 03.8 +1.3**
BRG 23 11 39.0
BRG S **S** 23 16 22.0 -0.3
BRG SS **SS** 23 19 24.0 -5.9
BRG pmax pmax
comp=Z,53nm,1.5s
BRG pmax pmax
comp=N,18nm,1.4s
BRG MLR MLR
comp=N,2µm,11.5s
BRG MLR MLR
comp=E,1µm,11.7s
BRG MLR MLR
comp=Z,2µm,11.4s
MMB Musomiste 42.29 279 P **P 23 10 04.5 +1.3**
GOPC GO Pecny, Ondr 42.31 295 *e*P **P 23 10 05.2 +1.9**
GOPC *e*S **S** 23 16 23.6 -0.2
GOPC MLR MLR
comp=Z,2µm,13.0s
GOPC GO Pecny, Ondr 42.31 295 *e*P **P 23 10 05.2 +1.9**
GOPC *e*S **S** 23 16 23.6 -0.2
GOPC AMS AMS 23 29 00.0
comp=Z,2µm,13.0s
FRGS Fruska Gora 42.32 286⇑ *i*P P 23 10 04.8 +1.4
PRK Paraskevi 42.32 275 P **P 23 10 05.8 +2.3**
MORH Mrgy, Hungar 42.34 288⇑ *i*P P 23 10 04.9 +1.4
MORH Mrgy, Hungar 42.34 288 EP **P 23 10 05.0 +1.5**
MORH EPP 23 11 42.1
MORH ESS 23 19 37.0
THAS Thassos island 42.34 277 P **P 23 10 04.3 +0.7**
TIH Tihany 42.36 289 EP **P 23 10 05.0 +1.4**
TIH EPP 23 11 41.0
NVR Nevrokopi 42.37 279 P **P 23 10 04.8 +0.9**
PRU Pruhonice 42.39 295 *e*P **P 23 10 05.3 +1.4**
PRU *e*S **S** 23 16 22.9 -2.1
PRU MLR MLR
comp=Z,3µm,12.8s
PRU Pruhonice 42.39 295 *e*P **P 23 10 05.3 +1.4**
PRU *e*x x 23 10 16.6
PRU *e*S **S** 23 16 22.9 -2.1
PRU AMS AMS 23 29 00.0
comp=Z,3µm,12.8s
CLL Collm 42.47 297 *i*P **P 23 10 04.0 -0.5**
comp=Z,66nm,1.1s
CLL *e*Pmax 23 10 05.0
CLL *i*pP **pP** 23 10 08.0 +0.2
CLL *i* 23 10 13.7
CLL *e*PP **PP** 23 11 40.0 -2.6
CLL *e*pPP 23 11 45.0
CLL *i*PPP PPP 23 12 12.3
CLL *e*S **S** 23 16 23.0 -3.0
CLL *e* 23 17 12.0
CLL *e*(SS) 23 19 18.0
CLL *e*ScS **ScS** 23 20 05.0 -0.7
CLL LmH 23 25 00.0
comp=N,2µm,18.0s
CLL LmH 23 25 00.0
comp=E,1µm,21.6s
CLL Lmax 23 30 00.0
CLL Collm 42.47 297 *i*P **P 23 10 04.0 -0.5**
CLL *i* 23 10 08.0
CLL *i* 23 10 13.7
CLL *e*S **S** 23 16 23.0 -3.0
CLL pmax pmax
comp=Z,66nm,1.1s
KSL Kastellorizon 42.47 269 P **P 23 10 04.6 -0.1**
LIA Limnos Island 42.53 276 P **P 23 10 06.1 +0.9**
LISJ El Lisan 42.54 258 P **P 23 10 07.2 +2.0**
SOP Sopron 42.63 291 EP **P 23 10 07.1 +1.2**
AMAZ Amatzia 42.65 259 P **P 23 10 07.5 +1.3**

SRS Serrai 42.67 279 P **P 23 10 07.1 +0.8**
JDRJ Daraweish 42.81 258 P **P 23 10 09.1 +1.4**
TEKS Tekeris 42.85 285⇑ *i*P P 23 10 09.1 +1.3
DIVS Divibare 42.87 284⇑ *i*P P 23 10 08.6 +0.6
CONA Conrad Observa 42.87 292 *i*pP **pP** 23 10 09.7 -1.5
comp=Z,27nm,1.1s,SNR=32
CONA *e*PP **PP** 23 11 46.6 -0.5
comp=Z,11nm,1.1s
CONA PcP **PcP** 23 11 56.2 -2.5
comp=Z,28nm,1.5s
OUR Ouranopolis 42.95 277 *e*P **P 23 10 09.9 +1.4**
OUR Ouranopolis 42.95 277 P **P 23 10 09.9 +1.4**
OUR Ouranopolis 42.95 277 *e*P **P 23 10 09.9 +1.4**
SOH Sokhos 43.00 278 P **P 23 10 10.1 +1.1**
KNT Kendrikon 43.04 279 P **P 23 10 10.5 +1.2**
RAYN Ar Rayn 43.09 241 *e*P **P 23 10 10.4 +0.5**
comp=Z,106nm,0.9s
RAYN Ar Rayn 43.09 241 *i*P **P 23 10 10.4 +0.5**
SNR=111
RAYN Ar Rayn 43.09 241 *e*P **P 23 10 10.4 +0.5**
RAYN pmax pmax
comp=Z,106nm,0.9s
VAY Valandovo 43.13 280 *i*P **P 23 10 11.6 +1.6**
BEHE Becsehely 43.23 289⇑ *i*P P 23 10 12.3 +1.5
BEHE Becsehely 43.23 289 ||EP **P 23 10 13.0 +2.2**
BEHE EPP 23 11 52.0
BEHE ESS 23 19 21.1
PLG Polygyros 43.23 278 P **P 23 10 12.2 +1.3**
ARG Arkhangelos 43.27 270 *e*P **P 23 10 12.8 +1.6**
ARG Arkhangelos 43.27 270 P **P 23 10 12.8 +1.6**
ARG Arkhangelos 43.27 270 *e*P **P 23 10 12.8 +1.6**
BBLS Lazići 43.34 285⇑ *i*P P 23 10 12.7 +0.9
THE Thessaloniki 43.35 279 P **P 23 10 13.0 +1.3**
NKC Novy Kostel 43.36 296 *e*P **P 23 10 13.1 +1.3**
NKC MLR MLR
comp=Z,1µm,11.3s
NKC Novy Kostel 43.36 296 *e*P **P 23 10 13.1 +1.3**
NKC AMS AMS 23 29 30.0
comp=Z,1µm,11.3s
SKO Skopje 43.37 281 *i*P **P 23 10 13.1 +1.2**
KHC Kasperske Hory 43.40 294 *e*P **P 23 10 13.2 +1.0**
KHC *e* 23 10 17.3
KHC *e* 23 10 23.5
KHC *e*S **S** 23 16 39.2 -0.7
KHC MLR MLR
comp=Z,2µm,13.4s
KHC Kasperske Hory 43.40 294 *e*P **P 23 10 13.2 +1.0**
KHC *e*pP **sP** 23 10 17.3 +0.5
KHC *e*x x 23 10 23.5
KHC *e*x x 23 10 58.5
KHC *e*S **S** 23 16 39.2 -0.7
KHC AMS AMS 23 29 40.0
comp=Z,2µm,13.4s
KZIT Kziot 43.41 259 P **P 23 10 10.6 -1.8**
ARSA Arzberg 43.45 291 *e*pP **pP** 23 10 14.6 -1.3
comp=Z,29nm,0.9s,SNR=11
ARSA *i*PP **PP** 23 11 53.6 +0.2
comp=Z,18nm,1.1s
HAPS Han Pijesak,BI 43.46 285 *e*P **P 23 10 12.8 0.0**
GERES GERESS Array B 43.50 294 P **P 23 10 13.8 +0.8**
comp=Z,7.3nm,0.8s,baz=52,slow=7.4,SNR=53
GERES PP **PP** 23 11 55.2 +1.3
comp=Z,8.7nm,0.9s,baz=51,slow=10,SNR=6.2
GERES LR LR 23 29 39.5
comp=Z,911nm,19.4s,baz=72,slow=38
HRFI Mount Harif 43.69 257 P **P 23 10 13.9 -0.8**
MOA Molln 43.78 292 *i*pP **P 23 10 16.5 +1.3**
comp=Z,25nm,0.9s,SNR=29
MOA *e*PP **PP** 23 11 54.0 -2.9
comp=Z,15nm,1.4s
MOA *e*PcP **PcP** 23 12 01.7 0.0
comp=Z,33nm,1.2s
KRUS Krusevo 43.86 281 *i*P **P 23 10 18.1 +2.0**
BCI Bajram Curri 43.91 282 *i*P **P 23 10 17.8 +1.5**
AQBJ Aqaba 43.91 257 P **P 23 10 18.7 +2.3**
LIT Litokhoron 43.97 278 P **P 23 10 17.0 +0.2**
EIL Elat 44.02 257 P P 23 10 25.2 +7.9
UPM Unac-Piva 44.04 284⇑ *i*P P 23 10 17.8 +0.2
XOR Xorichti 44.04 277 P **P 23 10 17.8 +0.4**
PERS Pernice 44.05 290 *e*P **P 23 10 18.5 +1.1**
PERS *i* 23 12 04.0
BLY Banja Luka 44.05 287⇑ *i*P P 23 10 17.9 +0.5
NEO Neokhori 44.06 277 P **P 23 10 18.4 +0.8**
SOKA Soboth 44.07 291 *i*pP **P 23 10 19.0 +1.4**
comp=Z,32nm,1.0s,SNR=32
SOKA *e*PP **PcP** 23 12 05.5 +2.8
comp=Z,43nm,1.7s
PHP Peshkopia 44.13 281 P **P 23 10 19.2 +1.1**
PHP Peshkopia 44.13 281 *i*P **P 23 10 20.5 +2.4**
FYTO Fytoko, Volos 44.16 277 *e*P **P 23 10 19.3 +1.0**
FYTO Fytoko, Volos 44.16 277 P **P 23 10 19.3 +1.0**
FNA Florina 44.17 280 *e*P **P 23 10 19.2 +0.8**
FNA Florina 44.17 280 P **P 23 10 19.2 +0.8**
FNA Florina 44.17 280 *e*P **P 23 10 19.2 +0.8**
PUK Puka 44.21 282 *i*P **P 23 10 20.2 +1.4**
APE Apeiranthos 44.21 273 *i*P **P 23 10 18.8 0.0**
APE pmax pmax
comp=Z,120nm,1.1s
EREA Eretria 44.24 275 P **P 23 10 20.5 +1.5**
MRKA Markates 44.25 276 P **P 23 10 19.8 +0.7**
KZN Kozani 44.25 279 P **P 23 10 20.1 +1.0**
OHR Ohrid 44.29 281 *i*P **P 23 10 20.6 +1.2**
MGRS Mrkonjic Grad 44.31 287 *e*P **P 23 10 21.4 +1.9**
GRFO Grafenberg 44.32 296 *e*P **P 23 10 21.1 +1.6**
comp=Z,162nm,1.8s
GRFO Grafenberg 44.32 296 *e*P **P 23 10 21.1 +1.6**
GRFO pmax pmax
comp=Z,162nm,1.8s
PDG Podgorica 44.33 283⇑ *i*P P 23 10 20.2 +0.6
CRES Cresnjev 44.35 289⇑ *i*P P 23 10 20.5 +0.7
SMIA Simia 44.35 276 P **P 23 10 20.8 +0.9**
OBKA Obir 44.43 291 *e*pP **pP** 23 10 22.2 -1.7
comp=Z,23nm,0.8s,SNR=19
OBKA *e*PcP **PcP** 23 12 04.4 +0.4
comp=Z,20nm,1.0s
BRY Bratogost 44.44 284 *e*P **P 23 10 20.4 -0.3**
DRME Dracevica, Mon 44.52 283⇑ *i*P P 23 10 22.0 +0.8
ATAL Atalanti 44.59 276 *e*P **P 23 10 21.8 0.0**
ATAL Atalanti 44.59 276 P **P 23 10 21.8 0.0**
THL Klokotos Trika 44.59 278 P **P 23 10 21.9 +0.1**
ATHU Athens Univers 44.63 275 *e*P **P 23 10 22.0 -0.1**
ATHU Athens Univers 44.63 275 P **P 23 10 22.0 -0.1**
LKR Lokris 44.63 276 P **P 23 10 21.6 -0.5**
BOJS Bojanci 44.66 289 *i*P **P 23 10 23.1 +0.9**
BOJS *i* 23 12 06.0
TREB Trebinje 44.66 284 *e*P **P 23 10 23.1 +0.8**
TIR Tirane 44.67 281 *e*P **P 23 10 24.1 +1.7**
comp=Z,40nm,0.9s
TIR Tirane 44.67 281 P **P 23 10 24.1 +1.7**
TIR Tirane 44.67 281 *e*P **P 23 10 24.1 +1.7**
TIR pmax pmax
comp=Z,40nm,0.9s
TIR Tirane 44.67 281 *i*P **P 23 10 25.7 +3.3**
VLY Voula,Athens 44.70 275 *e*P **P 23 10 23.8 +1.1**
VLY Voula,Athens 44.70 275 P **P 23 10 23.8 +1.1**
VISS Visnje 44.70 290 *i*P **P 23 10 23.3 +0.7**
VISS *i* 23 12 09.1
LJU Ljubljana 44.73 290⇑ *i*P P 23 10 23.5 +0.7
KBA Koelnbreinsper 44.75 292 *i*pP **P 23 10 25.3 +2.1**
comp=Z,59nm,0.8s,SNR=46
KBA *e*PP **PP** 23 12 06.5 -0.8
comp=Z,25nm,1.5s
HCY Herceg Novi 44.75 284 *e*P **P 23 10 22.8 -0.2**
AGG Agios Georgios 44.77 277 P **P 23 10 23.1 -0.2**
VILL Villia 44.77 276 P **P 23 10 23.7 +0.4**
MYKA Terra Mystica 44.86 291 *e*pP **P 23 10 25.8 +1.9**
comp=Z,50nm,0.9s,SNR=26
MYKA *e*PP **PP** 23 12 11.0 +2.6
comp=Z,23nm,1.4s
STON Ston 44.93 285⇑ *i*P P 23 10 23.7 -0.7
CEY Cerknica 44.97 290⇑ *i*P P 23 10 24.8 0.0
DSF Desfina 45.06 276 P **P 23 10 25.4 -0.2**
LTK Loutraki 45.07 276 *e*P **P 23 10 25.6 0.0**
LTK Loutraki 45.07 276 P **P 23 10 25.6 0.0**
JAVS Javornik 45.08 290 *i*P **P 23 10 25.9 +0.2**
JAVS *i* 23 12 11.0
LOUT Loutraki 45.09 276 P **P 23 10 25.8 +0.1**
EVR Evrytania 45.14 278 P **P 23 10 26.6 +0.3**
ZKR Zakros 45.16 270 *e*P **P 23 10 27.5 +1.2**
ZKR *e*P **P 23 10 27.5 +1.2**
ZKR Zakros 45.16 270 P **P 23 10 27.5 +1.2**
RIY Rijeka 45.20 289⇑ *i*P P 23 10 27.1 +0.6
JAN Janina 45.21 279 *e*P **P 23 10 27.9 +1.2**

JAN Janina 45.21 279 P **P 23 10 27.9 +1.2**
JAN Janina 45.21 279 *e*P **P 23 10 27.9 +1.2**
THAL Thalero 45.23 276 P **P 23 10 26.8 -0.1**
DID Didima 45.26 275 *e*P **P 23 10 26.8 -0.4**
DID Didima 45.26 275 P **P 23 10 26.8 -0.4**
TPE Tepelena 45.27 280 P **P 23 10 28.3 +1.1**
ANX Ano Chora 45.29 277 P **P 23 10 27.8 +0.3**
KALE Kalithea 45.30 277 *e*P **P 23 10 27.3 -0.2**
KALE Kalithea 45.30 277 P **P 23 10 27.3 -0.2**
SERG Sergoula 45.34 277 P **P 23 10 27.8 +0.1**
TRIZ Trizonia 45.36 277 P **P 23 10 28.2 +0.3**
ABTA Abfaltersbach 45.40 292 *i*pP **P 23 10 29.8 +1.6**
comp=Z,28nm,1.8s,SNR=12
ABTA *e*PP **PP** 23 12 17.6 +3.5
comp=Z,21nm,1.4s
TRAZ Trapeza 45.41 276 P **P 23 10 28.9 +0.5**
EFP Efpalio 45.41 277 P **P 23 10 28.7 +0.4**
SCO Scoresbysund 45.42 333⇑ *i*P P 23 10 29.8 +1.9
SCO pmax pmax
comp=Z,98nm,1.5s
SCO Scoresbysund 45.42 333⇑ *i*P P 23 10 29.8 +1.9
comp=Z,98nm,1.5s
VLO Vlora 45.46 281 *i*P **P 23 10 30.0 +1.4**
GUR Goura 45.49 276 *e*P **P 23 10 28.8 -0.3**
GUR Goura 45.49 276 P **P 23 10 28.8 -0.3**
LAKA Lakka 45.50 277 *e*P **P 23 10 30.2 +1.2**
LAKA Lakka 45.50 277 P **P 23 10 30.2 +1.2**
PVO Paravola 45.51 277 P **P 23 10 28.8 -0.3**
KLV Kalavryta, Ach 45.53 276 P **P 23 10 29.1 -0.2**
WATA Walderalm 45.55 293 *i*pP **P 23 10 31.0 +1.5**
comp=Z,45nm,1.0s,SNR=22
WATA *i*PP **PP** 23 12 19.8 +4.1
comp=Z,49nm,1.1s
SRN Sarande 45.55 280 P **P 23 10 29.0 -0.4**
SRN Sarande 45.55 280 *i*P **P 23 10 30.4 +1.0**
WTTA Wattenberg 45.56 293 *i*pP **pP** 23 10 31.3 -1.6
comp=Z,51nm,1.2s,SNR=21
WTTA *e*PP **PP** 23 12 19.3 +3.4
comp=Z,52nm,1.3s
IGT Igoumenitsa 45.59 279 *e*P **P 23 10 29.3 -0.4**
IGT Igoumenitsa 45.59 279 P **P 23 10 29.3 -0.4**
IGT Igoumenitsa 45.59 279 *e*P **P 23 10 29.3 -0.4**
PDO Prodromos 45.72 278 P **P 23 10 29.9 -0.8**
KEK Kerkira 45.78 280 *e*P **P 23 10 30.3 -0.9**
KEK *e*P **P 23 10 30.3 -0.9**
KEK Kerkira 45.78 280 P **P 23 10 30.3 -0.9**
MOTA Moosalm 45.79 294 *e*pP **P 23 10 32.9 +1.5**
comp=Z,23nm,0.9s,SNR=25
MOTA *e*PP **PP** 23 12 21.3 +2.9
comp=Z,16nm,0.9s
IDI Anoyia 45.81 271 P **P 23 10 31.1 -0.5**
comp=Z,23nm,0.6s,baz=41,slow=9.0
SQTA Sankt Quirin 45.81 293 *e*pP **pP** 23 10 33.2 -1.7
comp=Z,34nm,1.1s,SNR=15
SQTA PP **PP** 23 12 20.6 +2.0
comp=Z,28nm,1.6s
DRO Drossia 45.85 277 P **P 23 10 32.1 +0.3**
VLX Vlachokerasia 45.85 275 *e*P **P 23 10 31.1 -0.8**
VLX Vlachokerasia 45.85 275 P **P 23 10 31.1 -0.8**
TSLK Tsoukalades, L 45.88 278 P **P 23 10 31.9 -0.1**
RETA Reutte 45.89 294 *i*pP **P 23 10 33.8 +1.7**
comp=Z,38nm,1.4s,SNR=13
RETA *i*PP **PP** 23 12 22.1 +2.8
comp=Z,26nm,1.1s
LKD2 Lefkada island 45.90 278 P **P 23 10 31.9 -0.3**
RLS Riolos of Patr 45.92 277 P **P 23 10 32.0 -0.3**
AMT Artemida-Makis 46.13 276 P **P 23 10 33.9 -0.2**
FSK Fiskardo 46.17 278 P **P 23 10 33.2 -1.1**
FETA Feichten 46.20 293 *e*pP **P 23 10 36.1 +1.5**
comp=Z,27nm,1.2s,SNR=20
FETA *e*PP **PP** 23 12 24.4 +1.8
comp=Z,22nm,1.4s
ITM Ithomi 46.25 276 *e*P **P 23 10 33.8 -1.1**
ITM Ithomi 46.25 276 P **P 23 10 33.8 -1.1**
KFL Anninata 46.28 277 P **P 23 10 34.3 -0.9**
VLS Valsamata 46.35 278 P **P 23 10 34.4 -1.3**
DAVA Damuels 46.49 294 *e*pP **P 23 10 38.2 +1.3**
comp=Z,48nm,1.2s,SNR=16
DAVA *e*PP **PP** 23 12 26.5 +0.7
comp=Z,40nm,1.3s
PYL PYLOS 46.55 275 *e*P **P 23 10 36.2 -1.1**
PYL PYLOS 46.55 275 P **P 23 10 36.2 -1.1**
GVD Gavdhos 46.60 272 *e*P **P 23 10 37.5 -0.2**
GVD Gavdhos 46.60 272 P **P 23 10 37.5 -0.2**
BFO Black Forest 46.66 296 *e*P **P 23 10 38.3 +0.2**
comp=Z,35nm,1.1s
BFO Black Forest 46.66 296 *e*P **P 23 10 38.3 +0.2**
BFO pmax pmax
comp=Z,35nm,1.1s
DAVOX Davos/Dischmat 46.80 294 LR LR 23 29 45.1
comp=Z,352nm,18.9s,baz=64,slow=35
SLE Schleitheim 46.93 296 P **P 23 10 42.4 +2.2**
PALK Pallekele 47.08 187 *e*P **P 23 10 41.4 -0.2**
comp=Z,184nm,1.9s
PALK Pallekele 47.08 187 P **P 23 10 41.5 -0.2**
PALK Pallekele 47.08 187 *e*P **P 23 10 41.4 -0.2**
PALK pmax pmax
comp=Z,184nm,1.9s
AQU L'Aquila 47.69 287⇑ *i*P P 23 10 47.5 +1.3
SUMG Summit 47.76 340⇑ *i*P P 23 10 47.8 +1.1
SUMG pmax pmax
comp=Z,260nm,1.2s
SUMG Summit 47.76 340⇑ *i*P P 23 10 47.8 +1.1
comp=Z,259nm,1.2s
ESK Eskdalemuir 48.02 310 *e*P **P 23 10 48.7 +0.2**
comp=Z,139nm,1.7s
ESK Eskdalemuir 48.02 310 *e*P **P 23 10 48.7 +0.2**
ESK pmax pmax
comp=Z,139nm,1.7s
SKLT Songkhla 48.42 161 P **P 23 10 53.0 +1.0**
comp=Z,30nm,1.7s
KULLO Kullorsuaq 49.10 348 *i*P **P 23 10 57.2 +0.6**
KULLO pmax pmax
comp=Z,70nm,1.0s
KULLO Kullorsuaq 49.10 348 *i*P **P 23 10 57.2 +0.6**
comp=Z,70nm,1.0s
LHMI Lhok Sumawe 49.70 166 P **P 23 11 00.7 -1.1**
KULM Kulim 50.26 161 *e*P **P 23 11 05.7 -0.3**
comp=Z,162nm,1.3s
KULM Kulim 50.26 161 P **P 23 11 06.0 0.0**
TOLK Toolik Lake Re 50.76 23 P **P 23 11 09.0 -0.3**
baz=321
IPM Ipoh 51.12 161 P **P 23 11 12.0 -0.6**
DAMY Dhamar 51.21 236 *e*P **P 23 11 14.2 +0.6**
comp=Z,44nm,0.9s
KCSI Kotacane, Aceh 51.50 165 P **P 23 11 13.8 -1.6**
PSI Prapat 52.39 164 *e*P **P 23 11 21.5 -0.7**
comp=Z,9.0nm,0.5s,baz=325,slow=5.8,SNR=6.6
PSI Prapat 52.39 164 *e*P **P 23 11 20.9 -1.2**
comp=Z,97nm,1.9s
ILULI Ilulissat 52.91 342⇑ *i*P P 23 11 25.5 +0.3
ILULI pmax pmax
comp=Z,54nm,0.9s
ILULI Ilulissat 52.91 342⇑ *i*P P 23 11 25.5 +0.3
comp=Z,54nm,0.9s
ANGG Ammassalik, Gr 53.00 334 *e*P **P 23 11 25.8 -0.1**
comp=Z,89nm,1.6s
TTA Tatalina 53.50 30 *e*P **P 23 11 29.7 -0.1**
comp=Z,189nm,2.0s
TTA Tatalina 53.50 30 *e*P **P 23 11 29.7 -0.1**
TTA pmax pmax
comp=Z,189nm,2.0s
GSI Gunungsitoli 53.65 166 P **P 23 11 29.9 -1.4**
comp=Z,96nm,1.4s
ADK Adak 53.85 50 *e*P **P 23 11 31.9 -0.4**
comp=Z,60nm,1.2s
ADK Adak 53.85 50 *e*P **P 23 11 31.9 -0.4**
ADK pmax pmax
comp=Z,60nm,1.2s
POKR Poker Plat Res 54.09 25 P **P 23 11 34.6 +0.6**
baz=324
TCOL CIGO, UAF Yank 54.18 25 P **P 23 11 35.1 +0.5**
baz=324
COLA College 54.19 25 *e*P **P 23 11 34.6 0.0**
comp=Z,114nm,0.8s
COLA College 54.19 25 *c i*P **P 23 11 35.0 +0.3**
COLA pmax pmax
comp=Z,93nm,1.0s
MYKOM Kota Tinggi 54.32 158 *e*P **P 23 11 36.2 0.0**
comp=Z,46nm,1.2s
MYKOM *e*PcP **PcP** 23 12 39.4 -0.8
MYKOM Kota Tinggi 54.32 158 P **P 23 11 36.0 -0.2**
MNSI Mandailing Nat 54.46 163 P **P 23 11 35.9 -1.3**
comp=Z,180nm,0.8s,comp=Z,2µm
ILAR Eielson Array 54.51 25 P **P 23 11 36.5 -0.6**

comp=Z,105nm,0.8s,baz=318,slow=5.0,SNR=412
ILAR LR LR 23 38 50.6
comp=Z,2µm,18.1s,baz=343,slow=40
ILAR PKPPKP **P'P'df** **23 41 50.4 -7.4**
comp=Z,0.8nm,0.9s,baz=162,slow=1.2,SNR=6.1
KEST Kesra 54.52 283 P **P** **23 11 38.0 +0.3**
comp=Z,40nm,1.1s,baz=258,slow=1.6,SNR=26
KEST LR LR 23 36 55.7
comp=Z,650nm,18.1s,baz=356,slow=38
ATD Arta Tunnel 54.58 235 LR LR 23 38 35.3
comp=Z,2µm,18.3s,baz=33,slow=40
ATKA Atka Island 54.72 48 *e*P **P** **23 11 39.1 +0.4**
comp=Z,67nm,1.1s
SFJD Kangerlussuaq 54.75 341 *e*P **P** **23 11 38.8 +0.1**
comp=Z,76nm,1.2s
SFJD Kangerlussuaq 54.75 341⇑ *i*P **P** **23 11 38.8 +0.1**
SFJD pmax pmax
comp=Z,51nm,1.1s
SFJD Kangerlussuaq 54.75 341⇑ *i*P **P** **23 11 38.8 +0.1**
comp=Z,51nm,1.1s
BKNI Bangkinang 55.18 162 P **P** **23 11 41.2 -1.2**
comp=Z,52nm,1.0s
TPRI Tanjung Pinang 55.31 157 P **P** **23 11 43.5 +0.1**
EPYK Eagle Plains 55.39 19 P **P** **23 11 43.5 0.0**
baz=331
SBUM Sibu 55.92 148 P **P** **23 11 49.0 +1.2**
RGRI Rengat 56.08 160 P **P** **23 11 47.9 -1.0**
KSM Kuching 56.27 150 *e*P **P** **23 11 50.0 -0.3**
comp=Z,41nm,1.1s
KSM Kuching 56.27 150 P **P** **23 11 50.0 -0.3**
SISI Saibi 56.46 164 P **P** **23 11 51.2 -0.4**
comp=Z,50nm,0.9s
DSRI Dabo 56.68 158 P **P** **23 11 53.5 +0.3**
comp=Z,137nm,1.6s
JMBI JAMBI 57.60 159 P **P** **23 11 58.3 -1.3**
KDAK Kodiak Island 58.62 32 *e*P **P** **23 12 06.5 +0.1**
comp=Z,98nm,1.0s
KDAK Kodiak Island 58.62 32 *e*P **P** **23 12 06.5 +0.1**
KDAK pmax pmax
comp=Z,98nm,1.0s
PBRG Braganca 58.91 299 *e*P **P** **23 12 09.7 +1.0**
comp=Z,34nm,2.4s
ESDC Sonseca Array 59.02 296 P **P** **23 12 09.9 +0.4**
comp=Z,16nm,0.8s,baz=43,slow=7.1,SNR=44
IVI Ivigtut 59.29 336 *e*P **P** **23 12 12.2 +1.3**
comp=Z,312nm,1.9s
PAB San Pablo 59.32 296 *e*P **P** **23 12 12.9 +1.3**
comp=Z,46nm,1.3s
PAB San Pablo 59.32 296 *e*P **P** **23 12 12.9 +1.3**
PAB pmax pmax
comp=Z,46nm,1.3s
MVO Moncorvo 59.53 299 *e*P **P** **23 12 14.9 +1.9**
comp=Z,73nm,1.7s
MVO *e*S S 23 20 32.0 +10
MVO Moncorvo 59.53 299 *e*LR LR 23 32 54.6
comp=Z,693nm,18.0s
PGAV Gavieira, Arco 59.57 300 *e*P **P** **23 12 15.8 +2.5**
comp=Z,55nm,1.7s
PGAV Gavieira, Arco 59.57 300 *e*LR LR 23 32 31.9
comp=Z,752nm,18.0s
TPI Tanjungpandan 59.60 155 P **P** **23 12 13.8 +0.2**
comp=Z,41nm,1.1s
LHSI Lahat 59.70 160 P **P** **23 12 11.9 -2.4**
POLO Lamas de Olo 59.77 300 *e*P **P** **23 12 17.8 +3.1**
comp=Z,30nm,1.5s
PVIS Viseu 60.30 299 *e*P **P** **23 12 21.5 +3.2**
comp=Z,53nm,1.7s
MTE Manteigas 60.36 299 *e*P **P** **23 12 20.7 +2.0**
comp=Z,66nm,1.5s
MTE Manteigas 60.36 299 *e*LR LR 23 32 32.2
comp=Z,926nm,18.0s
MTE Manteigas 60.36 299 *e*P **P** **23 12 19.3 +0.6**
comp=Z,62nm,1.4s
PMRV Marv??o 61.00 298 *e*P **P** **23 12 25.6 +2.6**
comp=Z,41nm,1.8s
PMRV Marv??o 61.00 298 *e*LR LR 23 31 54.1
comp=Z,531nm,18.0s
PCAS Casmilo, Conde 61.10 299 *e*P **P** **23 12 24.6 +0.9**
comp=Z,147nm,1.6s
PCAS *e*S **S** **23 20 49.6 +7.0**
PTOM Tomar 61.38 299 *e*P **P** **23 12 28.5 +2.9**
comp=Z,90nm,1.7s
PMTG Montargil 61.70 298 *e*P **P** **23 12 29.1 +1.4**
comp=Z,63nm,1.5s
EVO Evora 61.99 298 *e*P **P** **23 12 30.5 +0.8**
PBEJ Beja 62.29 297 *e*P **P** **23 12 36.1 +4.4**
comp=Z,106nm,1.5s
APSI Ampana 62.35 139 P **P** **23 12 32.2 -0.1**
comp=Z,49nm,1.4s,comp=Z,883nm
YKA Yellowknife Ar 62.43 11 P **P** **23 12 31.7 -0.6**
comp=Z,12nm,0.7s,baz=346,slow=7.1,SNR=81
YKA PKPPKP P'P'df 23 41 37.4 -8.2
comp=Z,1.2nm,0.9s,baz=170,slow=1.9,SNR=3.1
PNCL Nicolau / Gran 62.57 298 *e*P **P** **23 12 36.7 +3.1**
comp=Z,50nm,1.4s
MESJ Messejana 62.61 297 *e*P **P** **23 12 34.9 +1.0**
MESJ AMb AMB 23 12 38.5
comp=Z,79nm,1.5s
MESJ Messejana 62.61 297 *e*P **P** **23 12 34.9 +1.0**
PCVE Castro Verde 62.67 297 *e*P **P** **23 12 37.3 +3.0**
comp=Z,60nm,1.8s
PVAQ Vaqueiros 62.68 297 *e*P **P** **23 12 35.9 +1.6**
comp=Z,48nm,1.4s
PVAQ Vaqueiros 62.68 297 *e*LR LR 23 33 21.3
comp=Z,569nm,18.0s
BESE Bessie Mountai 62.74 23 *e*P **P** **23 12 35.6 +1.0**
comp=Z,105nm,1.1s
PTEO Sao Teotonio 63.10 297 *e*P **P** **23 12 39.2 +2.1**
comp=Z,76nm,2.0s
TNTI Ternate 63.16 132 P **P** **23 12 37.2 -0.6**
comp=Z,34nm,1.1s,comp=Z,2µm
TTSI Tana Toraja 63.63 142 P **P** **23 12 39.5 -1.3**
comp=Z,63nm,0.9s,comp=Z,1µm
SPSI Sidrap Palu 64.46 142 P **P** **23 12 44.7 -1.6**
comp=Z,51nm,1.1s,comp=Z,552nm
SANI Sanana 65.12 135 P **P** **23 12 49.5 -1.1**
comp=Z,51nm,1.6s,comp=Z,790nm
KDI Kendari 65.51 139 P **P** **23 12 53.2 +0.1**
comp=Z,24nm,0.8s,comp=Z,3µm
BKSI Bulukumba 65.85 142 P **P** **23 12 53.8 -1.4**
comp=Z,26nm,1.7s,comp=Z,385nm
NLAI Namlea 66.66 134 P **P** **23 13 00.2 -0.3**
comp=Z,24nm,0.8s
BBSI Bau Bau 66.90 140 P **P** **23 13 02.2 +0.2**
comp=Z,24nm,1.0s,comp=Z,383nm
AAI Ambon 67.52 134 P **P** **23 13 04.6 -1.4**
comp=Z,43nm,0.8s
MSAI Masohi 67.53 133 P **P** **23 13 05.4 -0.6**
comp=Z,9.7nm,0.8s
KMBO Kilima Mbogo 68.28 234 P **P** **23 13 10.9 -0.2**
comp=Z,20nm,1.2s,baz=29,slow=9.3,SNR=16
KMBO LR LR 23 46 39.0
comp=Z,1µm,18.3s,baz=20,slow=39
KMBO Kilima Mbogo 68.28 234 *e*P **P** **23 13 11.1 0.0**
comp=Z,72nm,1.8s
KMBO Kilima Mbogo 68.28 234 *i*P **P** **23 13 11.1 0.0**
SNR=9.5
KMBO Kilima Mbogo 68.28 234 *i*P **P** **23 13 11.5 +0.4**
KMBO pmax pmax
comp=Z,20nm,1.2s
FAKI Fak Fak 68.62 129 P **P** **23 13 12.6 -0.3**
SCHQ Schefferville 68.98 344 P **P** **23 13 14.0 -0.7**
comp=Z,36nm,1.0s,baz=22,slow=7.3,SNR=14
SCHQ LR LR 23 46 13.9
comp=Z,668nm,19.9s,baz=16,slow=38
EDFI Ende, Flores 69.58 142 P P 23 13 14.1 -4.8
FFC Flin Flon 71.15 5 *e*P **P** **23 13 27.2 -0.8**
comp=Z,38nm,1.1s
FFC Flin Flon 71.15 5 *e*P **P** **23 13 27.2 -0.8**
FFC pmax pmax
comp=Z,38nm,1.1s
SOEI Soe 71.46 140 P **P** **23 13 29.5 -0.9**
BATI Baumata 71.65 141 P **P** **23 13 29.3 -2.1**
GENI Genyem 72.11 122 P **P** **23 13 35.0 +0.8**
JAY Jayapura 72.31 121 P **P** **23 13 34.5 -0.9**
comp=Z,21nm,0.8s,baz=310,slow=4.3,SNR=12
JAY Jayapura 72.31 121 P **P** **23 13 35.4 -0.1**
A04D Lummi Island 74.53 19 P **P** **23 13 48.5 +0.4**
baz=343,SNR=13
CHGQ Chibougamau 74.89 347 P **P** **23 13 49.7 -0.5**
baz=12,SNR=13
B05A Bryant 75.09 19 P **P** **23 13 51.3 0.0**
baz=343
MATQ Matagami 75.43 349 P **P** **23 13 53.1 -0.2**
baz=9.7,SNR=19
D03D Eldon 75.59 20 P **P** **23 13 55.7 +1.4**
baz=343,SNR=15

C06D Leavenworth 75.64 18 P **P** **23 13 54.8 +0.2**
baz=344
ULM Lac du Bonnet 75.83 1 P **P** **23 13 54.8 -0.7**
comp=Z,39nm,0.8s,baz=352,slow=5.0,SNR=35
ULM LR LR 23 48 49.0
comp=Z,744nm,19.9s,baz=7.0,slow=37
ULM Lac du Bonnet 75.83 1 *e*P **P** **23 13 54.3 -1.2**
comp=Z,75nm,1.0s
NEW Newport 75.96 16 P **P** **23 13 56.7 +0.3**
baz=346,SNR=9.2
D04E Lakebay 76.00 20 P **P** **23 13 57.7 +1.2**
baz=343
LSQQ Lebel-sur-Quev 76.05 349 P **P** **23 13 56.5 -0.3**
baz=10
TOA0 Torodi Ar. Sit 76.18 273 *e*P **P** **23 13 58.2 +0.2**
comp=Z,232nm,1.9s
TORD Torodi Ar. Bea 76.18 273 P **P** **23 13 58.7 +0.6**
comp=Z,21nm,0.9s,baz=75,slow=1.2,SNR=59
E04D Cinebar 76.63 20 P **P** **23 14 01.4 +1.2**
baz=343,SNR=7.3
F04D Rainier, OR 77.00 20 P **P** **23 14 03.4 +1.2**
baz=343
LATQ La Tuque 77.14 345 P **P** **23 14 03.3 +0.2**
baz=12,SNR=12
EGMT Eagleton 77.19 11 P **P** **23 14 03.5 0.0**
baz=350,SNR=15
DGMT Dagmar 77.25 7 P **P** **23 14 04.2 +0.4**
baz=354,SNR=20
HAWA Hanford 77.36 18 *e*P **P** **23 14 04.6 +0.3**
comp=Z,16nm,1.2s
F05D White Salmon 77.49 19 P **P** **23 14 05.7 +0.6**
baz=344
G03D McMinnville, O 77.78 21 P **P** **23 14 06.8 +0.2**
baz=343
AGMN Agassiz Nation 77.78 1 P **P** **23 14 05.8 -0.9**
baz=359,SNR=28
MSO Missoula 77.84 14 P **P** **23 14 07.4 +0.2**
baz=348,SNR=43
D54A Lac Fusel, La 77.89 348 P **P** **23 14 07.2 0.0**
baz=10,SNR=22
D53A Lac Vacive, Po 78.08 349 P **P** **23 14 08.5 +0.2**
baz=9.6,SNR=39
C40A Isle Royale Na 78.09 357 P **P** **23 14 07.8 -0.6**
baz=2.8,SNR=5.5
EYMN Ely 78.12 358 *e*P **P** **23 14 08.0 -0.6**
comp=Z,56nm,0.8s
EYMN Ely 78.12 358 P **P** **23 14 08.2 -0.3**
baz=1.4,SNR=59
MDND Maddock 78.13 4 P **P** **23 14 07.8 -0.8**
baz=357
G05D Wamic, OR 78.14 19 P **P** **23 14 09.2 +0.5**
baz=344
D49A Beulah Townshi 78.26 351 P **P** **23 14 09.3 -0.1**
baz=7.4,SNR=7.9
COR Corvallis 78.37 21 *e*P **P** **23 14 11.1 +1.2**
comp=Z,78nm,1.1s
COR Corvallis 78.37 21 *e*P **P** **23 14 11.1 +1.2**
COR pmax pmax
comp=Z,78nm,1.1s
D48A Paudash Townsh 78.40 352 P **P** **23 14 09.8 -0.3**
baz=7.1,SNR=10.0
H04D Lebanon 78.54 21 P **P** **23 14 12.0 +1.1**
baz=343
D47A Chapleau 78.62 352 P **P** **23 14 11.3 0.0**
baz=6.4,SNR=24
PKME Peaks-Kenny Pk 78.63 343 P **P** **23 14 11.9 +0.5**
baz=14,SNR=20
E54A Lac Daplat, Po 78.66 348 P **P** **23 14 11.3 -0.2**
baz=9.8,SNR=35
I02D Swisshome 78.71 22 P **P** **23 14 13.0 +1.2**
baz=343
E53A Dumoine, Ponti 78.77 349 P **P** **23 14 12.3 +0.2**
baz=9.8,SNR=30
E51A G1948 Merrick 78.81 350 P **P** **23 14 12.0 -0.4**
baz=8.5,SNR=14
D46A Sault St. Mari 78.85 353 P **P** **23 14 12.4 -0.2**
baz=5.8,SNR=20
LAO LASA Array 78.86 9 P **P** **23 14 13.4 +0.7**
baz=353,SNR=11
D41A Chassel 78.93 356 P **P** **23 14 12.4 -0.6**
baz=3.1,SNR=6.8
E52A Mattawa 78.97 349 P **P** **23 14 12.7 -0.5**
baz=9.0,SNR=12
I05D Terrebonne, OR 79.00 20 P **P** **23 14 14.2 +0.7**
baz=344
E50A Wahnapitae 79.05 351 P **P** **23 14 13.6 0.0**
baz=7.8,SNR=15
E48A Lockeyer 79.11 352 P **P** **23 14 13.9 -0.1**
baz=6.9,SNR=18
F55A Otter Lake 79.14 348 P **P** **23 14 14.3 +0.1**
baz=10
ALFO Alfred 79.15 347 P **P** **23 14 14.4 +0.2**
baz=11,SNR=28
I03D Drain, OR 79.21 21 P **P** **23 14 16.1 +1.5**
baz=343,SNR=8.1
ALGO Algonquin Park 79.23 349 P **P** **23 14 14.3 -0.4**
baz=9.3,SNR=26
E47A Iron Bridge 79.23 353 P **P** **23 14 14.6 0.0**
baz=6.3,SNR=15
E44A Grand Marais A 79.24 354 P **P** **23 14 14.5 -0.2**
baz=4.7,SNR=8.1
BMO Blue Mountains 79.25 17 *e*P **P** **23 14 15.0 +0.1**
comp=Z,18nm,0.9s
BMO Blue Mountains 79.25 17 *e*P **P** **23 14 15.0 +0.1**
BMO pmax pmax
comp=Z,18nm,0.9s
I04A Tendick Farm, 79.31 21 P **P** **23 14 15.9 +0.7**
baz=344,SNR=7.0
BOZ Bozeman (W) 79.36 13 P **P** **23 14 15.5 -0.1**
baz=350,SNR=42
E46A Sault Ste Mari 79.39 353 P **P** **23 14 15.1 -0.5**
baz=5.7,SNR=12
PEMO Pembroke 79.41 348 P **P** **23 14 15.6 -0.1**
baz=9.8,SNR=18
ORIO Orleans, Innes 79.41 347 P **P** **23 14 15.7 +0.1**
baz=11,SNR=6.7
F51A Arnstein 79.45 350 P **P** **23 14 15.9 0.0**
baz=8.2,SNR=9.2
E38A The Farm, Brul 79.47 358 P **P** **23 14 15.2 -0.7**
baz=1.4,SNR=9.7
F52A Sundridge 79.53 350 P **P** **23 14 16.3 0.0**
baz=8.6,SNR=16
E43A Lone Tree Farm 79.54 355 P **P** **23 14 15.7 -0.7**
baz=4.1,SNR=18
J01E Myrtle Point 79.59 22 P **P** **23 14 16.8 +0.1**
baz=343
FITZ Fitzroy Crossi 79.64 142 *e*P **P** **23 14 15.4 -1.6**
G55A Calabogie 79.76 348 P **P** **23 14 17.5 -0.1**
baz=10,SNR=11
F48A Evansville 79.80 352 P **P** **23 14 17.5 -0.2**
baz=6.6,SNR=5.8
F49A Sandfield 79.82 352 P **P** **23 14 17.6 -0.2**
baz=7.0,SNR=7.3
BUKO Buck Lake 79.88 350 P **P** **23 14 18.1 -0.2**
baz=8.5,SNR=9.1
J04D Umpqua Nationa 79.90 21 P **P** **23 14 19.1 +0.5**
baz=344,SNR=7.2
PLVO Plevna 80.02 348 P **P** **23 14 19.3 +0.3**
baz=9.8,SNR=23
J05D Fort Rock, OR 80.04 20 P **P** **23 14 20.8 +1.5**
baz=344,SNR=18
KLBO Killbear Provi 80.05 350 P **P** **23 14 19.2 +0.1**
baz=8.0,SNR=8.4
LBNH Lisbon 80.07 344 P **P** **23 14 20.0 +0.7**
baz=13,SNR=13
K02D Willamette Mer 80.09 22 P **P** **23 14 20.2 +0.6**
baz=343,SNR=6.1
LONY Lake Ozonia 80.10 346 *e*P **P** **23 14 19.7 +0.2**
comp=Z,47nm,1.0s
LONY Lake Ozonia 80.10 346 P **P** **23 14 19.8 +0.3**
baz=11,SNR=23
RLMT Red Lodge 80.11 11 P **P** **23 14 19.8 +0.1**
baz=351,SNR=27
G53A Haliburton 80.11 349 P **P** **23 14 19.1 -0.4**
baz=8.9,SNR=23
F38A Pierce - Schro 80.12 359 P **P** **23 14 19.6 +0.1**
baz=1.2,SNR=52
F40A Park Falls 80.12 357 P **P** **23 14 18.7 -0.8**
baz=2.2,SNR=28
BANO Bancroft 80.14 349 P **P** **23 14 19.9 +0.3**
baz=9.4,SNR=16
F39A Loretta 80.14 358 P **P** **23 14 19.3 -0.3**
baz=1.7,SNR=36
F45A CMU Biological 80.15 354 P **P** **23 14 19.3 -0.3**
baz=4.9,SNR=10.0
F42A Maple Grove Fa 80.21 356 P **P** **23 14 19.5 -0.6**
baz=3.4
TOBO Tobermory, Bru 80.30 351 P **P** **23 14 20.5 0.0**

baz=7.3
H56A Elgin 80.35 347 P **P** **23 14 20.9 +0.2**
baz=10,SNR=21
F37A Hinrichs Farm, 80.36 359 P **P** **23 14 20.4 -0.4**
baz=0.7
G46A Petoskey 80.47 354 P **P** **23 14 20.5 -0.9**
baz=5.3
H55A Tweed 80.51 348 P **P** **23 14 21.9 +0.3**
baz=9.8,SNR=11
G47A Hillman 80.55 353 P **P** **23 14 21.5 -0.3**
baz=5.9,SNR=13
K04D Chiloquin, OR 80.57 20 P **P** **23 14 23.0 +0.8**
baz=344
DELO Deloro Mine 80.60 348 P **P** **23 14 22.4 +0.3**
baz=9.5,SNR=23
L02E Cave Junction 80.62 22 P **P** **23 14 22.0 -0.3**
baz=343
H17A Grant Village 80.67 12 P **P** **23 14 24.2 +1.4**
baz=350,SNR=6.4
NCB Newcomb 80.69 346 *e*P **P** **23 14 22.6 0.0**
comp=Z,36nm,1.4s
H52A Wyevale 80.72 350 P **P** **23 14 22.4 -0.4**
baz=8.2
G40A Rib Lake 80.77 357 P **P** **23 14 22.4 -0.6**
baz=2.1,SNR=34
G39A Holcombe 80.78 358 P **P** **23 14 22.3 -0.8**
baz=1.6,SNR=9.0
G45A Suttons Bay 80.80 354 P **P** **23 14 22.6 -0.5**
baz=4.8
L04D Klamath Falls 80.84 21 P **P** **23 14 24.4 +0.8**
baz=344,SNR=13
SPMN Marine on St. 80.86 359 P **P** **23 14 22.9 -0.6**
baz=0.6,SNR=6.9
I55A Frankford 80.90 348 P **P** **23 14 23.8 0.0**
baz=9.5,SNR=6.8
BMRO Meriville Lake 80.90 351 P **P** **23 14 23.8 +0.1**
baz=7.4,SNR=9.8
GLMI Grayling 80.95 353 P **P** **23 14 23.2 -0.8**
baz=5.4
HLID Hailey 80.97 15 *e*P **P** **23 14 24.0 -0.3**
comp=Z,15nm,1.0s
HLID Hailey 80.97 15 P **P** **23 14 23.7 -0.6**
baz=348,SNR=25
H48A Harrisville 80.98 352 P **P** **23 14 23.8 -0.3**
baz=6.2
PECO Prince Edward 81.09 348 P **P** **23 14 24.9 +0.2**
baz=9.9,SNR=8.0
H47A Mio 81.14 353 P **P** **23 14 24.8 -0.2**
baz=5.7
H45A Beulah 81.24 354 P **P** **23 14 25.3 -0.2**
baz=4.6
BRCO Bruce Peninsul 81.27 351 P **P** **23 14 25.7 +0.1**
baz=7.3
H46A Fife Lake 81.27 354 P **P** **23 14 25.4 -0.3**
baz=5.1
WLVO Wesleyville 81.27 349 P **P** **23 14 25.8 +0.2**
baz=9.1,SNR=13
PKRO Pickering 81.31 349 P **P** **23 14 26.1 +0.2**
baz=8.7
I52A Shelburne 81.32 350 P **P** **23 14 26.0 0.0**
baz=8.0
DRCO St. Marys Ceme 81.35 349 P **P** **23 14 26.1 0.0**
baz=8.9
M04C Macdoel 81.36 21 P **P** **23 14 27.3 +0.9**
baz=344,SNR=19
DRWO Darlington Wes 81.36 349 P **P** **23 14 26.6 +0.4**
baz=8.9,SNR=6.4
BWLO Walkerton 81.37 351 P **P** **23 14 26.1 -0.1**
baz=7.5
PMG Port Moresby 81.47 119 P **P** **23 14 26.3 -0.7**
comp=Z,21nm,0.9s,baz=349,slow=10,SNR=4.0
H43A Windswept, Lux 81.48 356 P **P** **23 14 26.4 -0.4**
baz=3.6
I53A Kortright Cn E 81.50 350 P **P** **23 14 26.9 0.0**
baz=8.4
I48A Sherman Twp 81.52 353 P **P** **23 14 26.4 -0.6**
baz=6.0
M02C Callahan 81.52 22 P **P** **23 14 28.2 +1.0**
baz=343,SNR=21
BASO Ashfield 81.52 351 P **P** **23 14 26.8 -0.2**
baz=7.2
SUSD Miller 81.55 4 P **P** **23 14 26.6 -0.6**
baz=357,SNR=5.6
RSSD Black Hills 81.59 7 *e*P **P** **23 14 27.4 -0.3**
comp=Z,76nm,0.8s
RSSD Black Hills 81.59 7 *e*P **P** **23 14 27.4 -0.3**
RSSD pmax pmax
comp=Z,76nm,0.8s
RSSD Black Hills 81.59 7 P **P** **23 14 27.3 -0.4**
baz=354
I51A Listowel 81.67 351 P **P** **23 14 27.8 -0.1**
baz=7.5,SNR=9.5
TORO Toronto--Lesli 81.68 349 P **P** **23 14 27.7 -0.1**
baz=8.5
I49A Point Hope 81.69 352 P **P** **23 14 27.2 -0.7**
baz=6.5
HRV Adam Dziewonsk 81.70 343 *e*P **P** **23 14 28.7 +0.7**
comp=Z,38nm,0.9s
HRV Adam Dziewonsk 81.70 343 *e*P **P** **23 14 28.7 +0.7**
HRV pmax pmax
comp=Z,38nm,0.9s
HRV Adam Dziewonsk 81.70 343 P **P** **23 14 28.4 +0.4**
baz=13
I47A Gladwin 81.74 353 P **P** **23 14 28.2 0.0**
baz=5.5
ACTO Acton 81.77 350 P **P** **23 14 28.5 +0.1**
baz=8.1
I45A Fountain 81.83 354 P **P** **23 14 28.1 -0.5**
baz=4.5
J55A Hilton 81.85 348 P **P** **23 14 28.6 -0.1**
baz=9.4,SNR=9.9
I46A Reed City 81.88 354 P **P** **23 14 29.0 0.0**
baz=4.9
J54A Appleton 81.94 349 P **P** **23 14 29.6 +0.3**
baz=8.9,SNR=7.6
N02D Trinity Center 81.95 22 P **P** **23 14 30.6 +1.1**
baz=343,SNR=13
I41A Arkdale 81.97 357 *e*P **P** **23 14 29.1 -0.3**
comp=Z,48nm,1.0s
I41A Arkdale 81.97 357 P **P** **23 14 28.9 -0.5**
baz=2.3
MEDO Medina 82.03 349 P **P** **23 14 29.8 +0.1**
baz=9.0,SNR=6.8
STCO Saint Catharin 82.06 349 P **P** **23 14 29.7 -0.1**
baz=8.6
I42A Draeger Farm, 82.11 356 P **P** **23 14 29.8 -0.3**
baz=2.9,SNR=7.4
J52A Paris 82.17 350 P **P** **23 14 30.5 0.0**
baz=7.8,SNR=9.1
TYNO Tyneside 82.25 350 P **P** **23 14 30.9 0.0**
baz=8.2,SNR=7.6
J49A Marlette 82.30 352 P **P** **23 14 30.4 -0.7**
baz=6.3
ECSD EROS Data Cent 82.33 2 P **P** **23 14 30.8 -0.5**
baz=358,SNR=35
WDC Whiskeytown Da 82.36 22 *e*P **P** **23 14 31.9 +0.4**
comp=Z,73nm,1.5s
WDC Whiskeytown Da 82.36 22 *e*P **P** **23 14 31.9 +0.4**
WDC pmax pmax
comp=Z,73nm,1.5s
BW06 Boulder Array 82.40 12 P **P** **23 14 31.1 -0.9**
baz=351
PDAR Pinedale Array 82.40 12 P **P** **23 14 31.1 -0.9**
comp=Z,2.5nm,0.6s,baz=36,slow=2.6,SNR=28
PDAR PP **PP** **23 17 44.9 +5.0**
comp=Z,1.0nm,0.8s,baz=21,slow=7.8,SNR=3.6
PDAR PKKPbc **PKKPbc** **23 32 56.7 +0.5**
comp=Z,0.2nm,0.3s,baz=183,slow=3.0,SNR=4.8
PDAR LR LR 23 52 55.8
comp=Z,537nm,20.7s,baz=4.5,slow=37
J48A Bridge Port 82.41 353 P **P** **23 14 31.2 -0.5**
baz=5.9
K55A Perry 82.41 348 P **P** **23 14 32.0 +0.2**
baz=9.2,SNR=11
J45A Montague 82.44 354 P **P** **23 14 31.2 -0.6**
baz=4.4
M65A Busby, Falmout 82.46 343 P **P** **23 14 32.1 +0.1**
baz=13
J46A Howard City 82.49 354 P **P** **23 14 31.7 -0.4**
baz=4.8
J47A Sunmer 82.54 353 P **P** **23 14 32.4 0.0**
baz=5.3
K54A Basiliko Farm, 82.60 349 P **P** **23 14 33.0 +0.2**
baz=8.8,SNR=13
K52A Tillsonburg 82.65 350 P **P** **23 14 32.7 -0.3**
baz=7.7
BINY Binghamton 82.67 347 P **P** **23 14 33.6 +0.5**
baz=10,SNR=12

O02D	Mt. Diablo Mer	82.69	22	P	P	23 14 34.4 +1.0
	baz=343,SNR=18					
K51A	Iona Station	82.78	351	P	P	23 14 33.2 -0.5
	baz=7.2					
O03E	Paynes Creek	82.79	21	P	P	23 14 33.7 -0.2
	baz=344,SNR=17					
K50A	Casco	82.83	352	P	P	23 14 33.6 -0.3
	baz=6.6					
K22A	Casper	82.84	9	P	P	23 14 33.4 -0.8
	baz=353,SNR=6.5					
K49A	Clarkson	82.89	352	P	P	23 14 33.8 -0.4
	baz=6.1					
K48A	Perry	82.92	353	P	P	23 14 34.0 -0.4
	baz=5.7,SNR=7.1					
L55A	Hinsdale	83.00	348	P	P	23 14 35.2 +0.3
	baz=9.0,SNR=18					
L54A	Sinclairville	83.05	349	P	P	23 14 35.1 0.0
	baz=8.5,SNR=12					
K47A	Vermontville	83.12	353	P	P	23 14 35.3 -0.1
	baz=5.2,SNR=6.4					
JFWS	Jewell Farm	83.12	357	P	P	23 14 35.0 -0.5
	baz=2.1,SNR=12					
K46A	Dorr	83.15	354	P	P	23 14 34.7 -0.9
	baz=4.7					
M61A	Granite Spring	83.22	345	P	P	23 14 35.6 -0.4
	baz=12					
ERPA	Erie	83.23	350	P	P	23 14 35.6 -0.4
	baz=8.1					
K43A	Burlington	83.27	356	P	P	23 14 35.6 -0.6
	baz=3.2,SNR=5.7					
HWUT	Hardware Ranch	83.29	13	eP	P	23 14 36.3 -0.3
	comp=Z,46nm,1.0s					
AAM	Ann Arbor	83.39	352	P	P	23 14 36.2 -0.6
	baz=6.0					
L53A	Girard	83.42	350	P	P	23 14 37.1 0.0
	baz=7.9					
PAL	Palisades	83.54	345	P	P	23 14 37.5 -0.1
	baz=12					
L50A	Kingsville	83.58	352	P	P	23 14 37.5 -0.2
	baz=6.5					
ELK	Elko	83.59	16	eP	P	23 14 38.5 +0.3
	comp=Z,57nm,1.6s					
ELK	Elko	83.59	16	eP	P	23 14 38.5 +0.3
ELK				pmax	pmax	
	comp=Z,57nm,1.6s					
L49A	Milan	83.59	352	P	P	23 14 37.8 -0.1
	baz=5.9					
M56A	Emporium	83.66	348	P	P	23 14 38.5 +0.2
	baz=9.1,SNR=15					
M55A	Ridgway	83.74	349	P	P	23 14 38.9 +0.3
	baz=8.8,SNR=21					
L44A	Lake County Fo	83.77	356	P	P	23 14 37.9 -0.9
	baz=3.5					
L48A	N Adams	83.80	353	P	P	23 14 38.6 -0.4
	baz=5.5,SNR=6.7					
M54A	Oil Creek Stat	83.80	349	P	P	23 14 39.1 +0.1
	baz=8.3,SNR=17					
L47A	Sherwood	83.82	353	P	P	23 14 38.8 -0.3
	baz=5.1,SNR=7.5					
PLIO	Pelee Island,	83.85	352	P	P	23 14 38.8 -0.4
	baz=6.6					
L46A	Eue Claire	83.86	354	P	P	23 14 38.9 -0.3
	baz=4.4					
N59A	State Game Lan	83.90	346	P	P	23 14 40.1 +0.6
	baz=10,SNR=17					
M52A	Chesterland	83.94	351	P	P	23 14 39.4 -0.3
	baz=7.3					
M53A	WI Miller and	83.97	350	P	P	23 14 39.7 -0.1
	baz=7.7,SNR=12					
L40A	Anamosa	84.00	358	P	P	23 14 38.9 -1.0
	baz=1.5,SNR=7.9					
L42A	Oliver, Polo	84.02	357	P	P	23 14 39.1 -0.9
	baz=2.4,SNR=5.7					
CTU	Camp Tracy	84.16	14	eP	P	23 14 41.2 +0.2
	comp=Z,20nm,1.0s					
SCIA	State Center	84.18	359	P	P	23 14 40.2 -0.6
	baz=0.4					
M51A	Elyria	84.23	351	P	P	23 14 40.8 -0.3
	baz=6.8					
N56A	West Decatur	84.23	348	P	P	23 14 41.6 +0.5
	baz=9.1,SNR=36					
M50A	Fremont	84.23	352	P	P	23 14 40.7 -0.4
	baz=6.3					
M49A	Liberty Center	84.23	353	P	P	23 14 40.6 -0.5
	baz=5.8,SNR=5.9					
M48A	Edgerton	84.28	353	P	P	23 14 40.7 -0.6
	baz=5.3					
N57A	Milroy	84.30	348	P	P	23 14 41.9 +0.4
	baz=9.5,SNR=21					
N54A	Moraine State	84.38	349	P	P	23 14 42.1 +0.2
	baz=8.1,SNR=15					
O60A	Telford	84.44	346	P	P	23 14 42.3 +0.1
	baz=11,SNR=7.9					
N55A	Marion Center	84.44	349	P	P	23 14 42.6 +0.3
	baz=8.7,SNR=27					
SSPA	Standing Stone	84.45	348	eP	P	23 14 42.2 -0.1
	comp=Z,95nm,1.3s					
SSPA	Standing Stone	84.45	348	P	P	23 14 41.8 -0.5
	baz=9.3					
M46A	Old House Fiel	84.46	354	P	P	23 14 41.5 -0.8
	baz=4.4					
M47A	Cromwell	84.46	354	P	P	23 14 41.7 -0.6
	baz=4.8					
DUG	Dugway, Tooele	84.50	14	P	P	23 14 43.1 +0.4
	baz=349,SNR=21					
M45A	Boilermakers S	84.53	355	P	P	23 14 42.5 -0.2
	baz=3.9					
O61A	Allentown	84.53	345	P	P	23 14 42.7 0.0
	baz=11					
O59A	Robesonia	84.55	346	P	P	23 14 43.1 +0.3
	baz=10					
M43A	Waltham Townsh	84.56	356	P	P	23 14 42.5 -0.3
	baz=2.9					
M44A	Midewin, Midew	84.57	356	P	P	23 14 42.6 -0.2
	baz=3.4					
BGNE	Belgrade	84.61	3	P	P	23 14 43.0 -0.1
	baz=358					
N53A	Lisbon	84.62	350	P	P	23 14 43.1 -0.1
	baz=7.6,SNR=7.0					
N23A	Red Feather La	84.63	9	P	P	23 14 43.8 +0.3
	baz=353,SNR=13					
N51A	Ashland	84.65	351	P	P	23 14 42.8 -0.5
	baz=6.7,SNR=6.0					
M41A	Milan	84.67	357	P	P	23 14 42.6 -0.8
	baz=1.9					
WRAB	Tennant Creek	84.68	135	eP	P	23 14 42.2 -1.3
	comp=Z,75nm,1.0s					
WRAB	Tennant Creek	84.68	135	eP	P	23 14 42.2 -1.3
WRAB				pmax	pmax	
	comp=Z,75nm,1.0s					
WRA	Warramunga Arr	84.69	135	P	P	23 14 41.8 -1.8
	comp=Z,41nm,0.8s,baz=334,slow=5.6,SNR=70					
N52A	McGinn's Farm,	84.69	351	P	P	23 14 43.2 -0.3
	baz=7.1					
KVN	Kaiserville	84.73	19	eP	P	23 14 44.4 +0.4
	comp=Z,69nm,1.9s					
KVN	Kaiserville	84.73	19	eP	P	23 14 44.4 +0.4
KVN				pmax	pmax	
	comp=Z,69nm,1.9s					
N49A	Columbus Grove	84.80	353	P	P	23 14 43.6 -0.4
	baz=5.6,SNR=11					
O57A	Amberson	84.84	348	P	P	23 14 44.7 +0.4
	baz=9.4,SNR=22					
N50A	Nevada	84.87	352	P	P	23 14 43.9 -0.4
	baz=6.2,SNR=12					
OGNE	Ogallala	84.89	6	P	P	23 14 44.2 -0.4
	baz=355,SNR=6.0					
O56A	Blue Knob Stat	84.90	348	P	P	23 14 45.1 +0.5
	baz=8.9,SNR=26					
LSZ	Lusaka	84.92	235	eP	P	23 14 45.5 +0.6
	comp=Z,52nm,0.9s					
LSZ	Lusaka	84.92	235	eP	P	23 14 45.5 +0.6
LSZ				pmax	pmax	
	comp=Z,52nm,0.9s					
N48A	Decatur	84.92	353	P	P	23 14 44.1 -0.6
	baz=5.2,SNR=6.2					
N47A	Urbana	84.95	354	P	P	23 14 44.0 -0.7
	baz=4.8,SNR=8.9					
P60A	Greenville	84.97	346	P	P	23 14 44.9 0.0
	baz=11,SNR=7.4					
P61A	Hammonton	84.98	345	P	P	23 14 44.6 -0.3
	baz=11					
N46A	Monticello	84.99	355	P	P	23 14 44.6 -0.4
	baz=4.2,SNR=6.6					
O55A	Ligonier	85.05	349	P	P	23 14 45.4 0.0
	baz=8.5,SNR=11					
N43A	Stutzman Famil	85.06	356	P	P	23 14 44.8 -0.5
	baz=2.7					
N45A	Kentland	85.08	355	P	P	23 14 44.9 -0.5
	baz=3.7					
O20A	White River Ci	85.15	11	P	P	23 14 46.4 +0.3
	baz=352,SNR=13					
N44A	Piper City	85.16	356	P	P	23 14 45.4 -0.4
	baz=3.3					
N40A	Mertquake, Sal	85.18	358	P	P	23 14 44.6 -1.3
	baz=1.3					
DBIC	Dimbokro	85.19	275	P	P	23 14 46.9 +0.6
	comp=Z,17nm,0.8s,baz=22,slow=6.0,SNR=24					
DBIC				LR	LR	23 57 01.2
	comp=Z,238nm,20.6s,baz=17,slow=39					
DBIC	Dimbokro	85.19	275	eP	P	23 14 46.5 +0.2
	comp=Z,58nm,1.2s					
DBIC	Dimbokro	85.19	275	eP	P	23 14 46.5 +0.2
DBIC				pmax	pmax	
	comp=Z,58nm,1.2s					
O54A	Avella	85.19	350	P	P	23 14 46.1 +0.1
	baz=7.8,SNR=8.7					
O53A	New Philadelph	85.21	350	P	P	23 14 46.2 +0.1
	baz=7.4,SNR=8.4					
P59A	Jarrettsville	85.28	347	P	P	23 14 46.7 +0.3
	baz=10,SNR=11					
NVAR	Mina Array Bea	85.30	19	P	P	23 14 47.3 +0.5
	comp=Z,8.3nm,0.9s,baz=324,slow=4.1,SNR=22					
NVAR				LR	LR	23 58 36.7
	comp=Z,517nm,18.2s,baz=306,slow=40					
TIC	Toumodi	85.30	275	ePKP2	P	23 14 47.0 +0.1
N41A	Harden Midland	85.34	358	P	P	23 14 45.9 -0.9
	baz=1.7					
KIC	Kosan Boka	85.37	274	ePKP2	P	23 14 47.3 +0.1
	comp=Z,234nm,1.5s					
ACSO	Alum Creek Sta	85.39	352	P	P	23 14 46.6 -0.4
	baz=6.3,SNR=9.1					
O52A	Adamsville	85.40	351	P	P	23 14 46.8 -0.3
	baz=7.0,SNR=8.0					
O51A	Pataskala	85.44	351	P	P	23 14 46.9 -0.4
	baz=6.5,SNR=7.9					
HDIL	Hopedale	85.45	356	P	P	23 14 46.6 -0.6
	baz=2.7					
O50A	Cable	85.53	352	P	P	23 14 47.4 -0.3
	baz=6.0,SNR=7.1					
SFIN	Lafayette	85.53	355	P	P	23 14 47.3 -0.4
	baz=3.9					
O48A	Farmland	85.53	353	P	P	23 14 47.2 -0.5
	baz=5.1,SNR=13					
O49A	Covington	85.54	353	P	P	23 14 47.3 -0.4
	baz=5.5,SNR=9.2					
P57A	Homestead Farm	85.61	348	P	P	23 14 48.3 +0.2
	baz=9.2,SNR=16					
O47A	Sheridan	85.62	354	P	P	23 14 47.6 -0.6
	baz=4.5,SNR=6.2					
LIC	Lamto	85.65	275	ePKP2	P	23 14 48.3 -0.3
	comp=Z,120nm,1.0s					
MCWV	Mont Chateau	85.65	349	P	P	23 14 48.7 +0.4
	baz=8.1,SNR=8.4					
P56A	Dayton Farm, R	85.69	348	P	P	23 14 48.7 +0.3
	baz=8.7,SNR=12					
O45A	Potomac	85.69	355	P	P	23 14 48.3 -0.2
	baz=3.6					
ISCO	Idaho Springs	85.75	9	eP	P	23 14 48.9 -0.3
	comp=Z,16nm,0.9s					
ISCO	Idaho Springs	85.75	9	eP	P	23 14 48.9 -0.3
ISCO				pmax	pmax	
	comp=Z,16nm,0.9s					
ISCO	Idaho Springs	85.75	9	P	P	23 14 49.5 +0.3
	baz=353,SNR=15					
Q60A	Greensboro	85.79	346	P	P	23 14 50.6 +1.6
	baz=10					
P55A	Reedsville	85.80	349	P	P	23 14 49.4 +0.3
	baz=8.2,SNR=16					
O44A	Mansfield	85.82	356	P	P	23 14 48.9 -0.2
	baz=3.1					
R11A	Troy Canyon, C	85.87	17	P	P	23 14 49.6 0.0
	baz=348,SNR=17					
P52A	Corning	85.91	351	P	P	23 14 49.1 -0.5
	baz=6.8,SNR=11					
MLAC	Mammoth, Mammo	85.97	20	P	P	23 14 50.7 +0.5
	baz=346					
P53A	Whipple	85.98	350	P	P	23 14 49.9 0.0
	baz=7.2,SNR=14					
Q59A	Harwood	86.04	347	P	P	23 14 50.2 0.0
	baz=10.0					
P50A	Jamestown	86.07	352	P	P	23 14 50.0 -0.4
	baz=5.8,SNR=9.7					
Q57A	Strasburg	86.10	348	P	P	23 14 50.5 0.0
	baz=9.0,SNR=19					
P51A	Williamsport	86.14	352	P	P	23 14 49.8 -1.0
	baz=6.3,SNR=5.9					
Q56A	Snyder Ridge,	86.18	349	P	P	23 14 50.8 -0.2
	baz=8.5,SNR=10					
P49A	Miami Univ. Ec	86.22	353	P	P	23 14 50.4 -0.7
	baz=5.3,SNR=5.6					
SMCO	Snowmass	86.23	10	eP	P	23 14 51.9 +0.2
	comp=Z,71nm,1.7s					
P46A	Rosedale	86.29	355	P	P	23 14 51.2 -0.2
	baz=3.9,SNR=9.6					
Q55A	Buckhannon	86.33	349	P	P	23 14 52.1 +0.3
	baz=8.0,SNR=13					
P48A	Milroy	86.34	353	P	P	23 14 50.8 -0.9
	baz=4.9,SNR=11					
P47A	Martinsville	86.37	354	P	P	23 14 51.3 -0.5
	baz=4.4,SNR=5.6					
P43A	Skaggs, Pawnee	86.37	357	P	P	23 14 51.0 -0.8
	baz=2.5,SNR=7.0					
P45A	Graceland, Par	86.41	355	P	P	23 14 52.1 0.0
	baz=3.6,SNR=6.3					
Q54A	Coxs Mills	86.42	350	P	P	23 14 52.3 +0.1
	baz=7.6,SNR=16					
Q52A	Bidwell	86.58	351	P	P	23 14 52.5 -0.5
	baz=6.7,SNR=9.2					
Q51A	Peebles	86.62	352	P	P	23 14 52.9 -0.2
	baz=6.1,SNR=9.9					
Q53A	Leroy	86.62	350	P	P	23 14 53.3 +0.2
	baz=7.2,SNR=21					
Q24A	Divide	86.62	9	P	P	23 14 52.9 -0.6
	baz=353,SNR=8.3					
TIN	Tinemaha, Big	86.64	19	P	P	23 14 52.7 -0.7
	baz=346					
R59A	King George, V	86.75	347	P	P	23 14 54.4 +0.7
	baz=9.7					
Q49A	Aurora	86.76	353	P	P	23 14 53.3 -0.4
	baz=5.2,SNR=6.8					
KSCO	Kaye Shedlock'	86.77	7	eP	P	23 14 53.7 -0.4
	comp=Z,70nm,1.3s					
KSCO	Kaye Shedlock'	86.77	7	P	P	23 14 53.9 -0.2
	baz=355					
R58A	Rapidan	86.77	348	P	P	23 14 54.0 +0.1
	baz=9.2,SNR=9.3					
CBN	Corbin Frederi	86.78	347	P	P	23 14 54.2 +0.3
	baz=9.5,SNR=5.2					
R57A	Stanardsville	86.84	348	P	P	23 14 54.6 +0.5
	baz=8.9,SNR=14					
Q50A	Georgetown	86.85	352	P	P	23 14 53.9 -0.4
	baz=5.7,SNR=7.9					
GRAC	Grapevine Rang	86.86	19	P	P	23 14 54.8 +0.4
	baz=346					
Q48A	North Vernon	86.89	354	P	P	23 14 54.0 -0.4
	baz=4.7,SNR=8.7					
Q46A	CEJHS Indians,	86.89	355	P	P	23 14 54.1 -0.3
	baz=3.8					
Q47A	Bedord North L	86.93	354	P	P	23 14 54.1 -0.5
	baz=4.3					
KSU1	Kansas State U	86.96	2	P	P	23 14 54.3 -0.4
	baz=358					
Q45A	Warren Harvey,	87.06	356	P	P	23 14 55.1 -0.1
	baz=3.3					
R58B	Mineral	87.09	347	P	P	23 14 55.6 +0.2
	baz=9.2,SNR=20					
TPNV	Topopah Spring	87.11	18	P	P	23 14 55.7 -0.1
	baz=347					
VOG	Valley Oaks Go	87.12	20	P	P	23 14 55.8 +0.3
	baz=345					
CBKS	Cedar Bluff	87.14	5	P	P	23 14 55.0 -0.7
	baz=357					
R53A	Hurricane	87.18	351	P	P	23 14 56.1 +0.2
	baz=6.9,SNR=8.4					
S59A	Mechanicsville	87.21	347	P	P	23 14 56.4 +0.4
	baz=9.6,SNR=8.6					
OLIL	Olney	87.22	355	eP	P	23 14 56.1 +0.1
	comp=Z,76nm,1.1s					
R54A	Victor	87.23	350	P	P	23 14 56.0 -0.2
	baz=7.5,SNR=8.9					
R52A	Catlettsburg	87.24	351	P	P	23 14 55.7 -0.4
	baz=6.5					
CWC	Cottonwood Cre	87.27	19	P	P	23 14 56.5 0.0
	baz=346					
R51A	Hillsboro	87.36	352	P	P	23 14 56.4 -0.3
	baz=6.0,SNR=8.2					
S57A	Dark Hollow, R	87.42	348	P	P	23 14 57.6 +0.6
	baz=8.6,SNR=19					
R48A	Northridge Ran	87.43	354	P	P	23 14 57.1 +0.1
	baz=4.6,SNR=7.5					
R50A	Paris	87.43	352	P	P	23 14 56.7 -0.4
	baz=5.5,SNR=6.3					
S58A	Poland Farm, P	87.45	347	P	P	23 14 57.2 +0.1
	baz=9.2,SNR=11					
FURC	Furnace Creek,	87.47	18	P	P	23 14 58.4 +1.2
	baz=347,SNR=9.1					
R49A	Shelbyville	87.49	353	P	P	23 14 57.1 -0.3
	baz=5.0,SNR=7.7					
R47A	Wooly Knot Far	87.57	354	P	P	23 14 57.6 -0.1
	baz=4.3,SNR=11					
S56A	Natural Bridge	87.58	349	P	P	23 14 57.6 -0.2
	baz=8.3					
S55A	Lewisburg	87.58	349	P	P	23 14 57.9 0.0
	baz=7.8,SNR=13					
WCI	Wyandotte Cave	87.62	354	eP	P	23 14 58.0 +0.1
	comp=Z,64nm,1.0s					
WCI	Wyandotte Cave	87.62	354	eP	P	23 14 58.1 +0.1
WCI				pmax	pmax	
	comp=Z,64nm,1.0s					
WCI	Wyandotte Cave	87.62	354	P	P	23 14 58.1 +0.1
	baz=4.4					
S54A	Dingess, Beckl	87.64	350	P	P	23 14 58.0 -0.2
	baz=7.3,SNR=6.2					
VES	Vestal, Richgr	87.65	20	P	P	23 14 58.0 -0.1
	baz=346					
S22A	4UR Ranch, Cre	87.66	10	P	P	23 14 59.3 +0.7
	baz=352,SNR=15					
R45A	Skylar, Fairfi	87.67	356	P	P	23 14 58.4 +0.2
	baz=3.2,SNR=10					
R46A	Gibon Southern	87.71	355	P	P	23 14 58.2 -0.2
	baz=3.7					
T60A	Surry	87.75	346	P	P	23 14 58.5 -0.1
	baz=9.9					
MPMC	Manual Prospec	87.75	19	P	P	23 14 59.9 +1.0
	baz=346,SNR=17					
SDCO	Great Sand Dun	87.80	9	P	P	23 14 59.5 +0.3
	baz=353,SNR=13					
S53A	Williamson	87.84	351	P	P	23 14 59.2 +0.1
	baz=6.8					
ASAR	Alice Springs	87.84	137	P	P	23 14 57.5 -1.6
	comp=Z,20nm,0.8s,baz=336,slow=4.9,SNR=128					
ASAR				PKKPbc	PKKPbc	23 32 46.1 +1.8
	comp=Z,0.6nm,0.8s,baz=157,slow=3.8,SNR=4.8					
S52A	Salyersville	87.93	351	P	P	23 14 59.2 -0.3
	baz=6.3					
ISA	Isabella, Lake	87.94	20	P	P	23 14 59.5 -0.2
	baz=346					
SMMC	Simmler	87.97	21	P	P	23 14 59.4 -0.4
	baz=345					
S49A	Springfield	88.00	353	P	P	23 14 59.3 -0.5
	baz=5.0,SNR=5.7					
CCM	Cathedral Cave	88.00	358	eP	P	23 14 59.0 -0.8
	comp=Z,39nm,1.1s					
CCM	Cathedral Cave	88.00	358	eP	P	23 14 59.0 -0.8
CCM				pmax	pmax	
	comp=Z,39nm,1.1s					
CCM	Cathedral Cave	88.00	358	P	P	23 14 59.4 -0.4
	baz=1.5					
MVCO	Mesa Verde	88.01	12	P	P	23 15 00.7 +0.5
	baz=352,SNR=6.1					
S51A	Beattyville	88.01	352	P	P	23 14 59.7 -0.1
	baz=6.0,SNR=12					
T59A	Double "B" Far	88.02	347	P	P	23 15 00.1 +0.2
	baz=9.4,SNR=17					
S50A	Richmond	88.04	352	P	P	23 14 59.7 -0.3
	baz=5.5,SNR=12					
SHOC	Shoshone, Teco	88.13	18	P	P	23 15 01.5 +1.0
	baz=347					
BLA	Blacksburg	88.13	349	P	P	23 15 00.5 0.0
	baz=7.8,SNR=7.4					
T58A	Grand View Acr	88.17	348	P	P	23 15 01.3 +0.7
	baz=8.9,SNR=28					
S48A	Wiedeman Farm,	88.18	354	P	P	23 15 00.8 +0.1
	baz=4.5,SNR=28					
T57A	Hurt	88.21	348	P	P	23 15 01.1 +0.3
	baz=8.5,SNR=19					
S46A	Don Dixon Farm	88.24	355	P	P	23 15 00.8 -0.1
	baz=3.6,SNR=6.8					
T55A	Pulaski	88.26	350	P	P	23 15 01.0 -0.1
	baz=7.6,SNR=10					
T56A	Rocky Mt	88.27	349	P	P	23 15 01.3 +0.2
	baz=8.0,SNR=14					
LRMC	Laurel Mtn Rad	88.28	19	P	P	23 15 01.7 +0.4
	baz=346					
S47A	Hartford	88.29	354	P	P	23 15 00.8 -0.4
	baz=4.0					
S44A	Carbondale	88.30	356	P	P	23 15 01.6 +0.4
	baz=2.7,SNR=15					
ARVC	Arvin	88.39	20	P	P	23 15 01.5 -0.2
	baz=346					
T54A	Tazewell	88.40	350	P	P	23 15 01.9 +0.1
	baz=7.1,SNR=16					
PKM	Mcpherson Peak	88.42	21	P	P	23 15 02.2 +0.1
	baz=345					
U60A	Pendleton	88.46	347	P	P	23 15 02.0 0.0
	baz=9.7					
T52A	Hallie	88.49	351	P	P	23 15 02.2 0.0
	baz=6.3					
T25A	Trinidad	88.50	8	P	P	23 15 02.2 -0.3
	baz=354					
U61A	Possum Corner	88.50	346	P	P	23 15 02.7 +0.6
	baz=10					
T53A	Wise	88.57	351	P	P	23 15 02.9 +0.3
	baz=6.6,SNR=9.7					
GSC	Goldstone, Bar	88.61	19	eP	P	23 15 03.3 +0.4
	comp=Z,68nm,1.6s					
GSC	Goldstone, Bar	88.61	19	eP	P	23 15 03.3 +0.4
GSC				pmax	pmax	
	comp=Z,68nm,1.6s					
GSC	Goldstone, Bar	88.61	19	P	P	23 15 03.9 +1.0
	baz=347,SNR=7.2					
TUQ	Turquoise Moun	88.64	18	P	P	23 15 03.4 +0.3
	baz=347					
U59A	Littleton	88.66	347	P	P	23 15 03.4 +0.5
	baz=9.3,SNR=7.1					
T49A	Edmonton	88.69	353	P	P	23 15 02.7 -0.4
	baz=4.8,SNR=8.7					
T51A	Gray	88.71	352	P	P	23 15 03.1 -0.1
	baz=5.8,SNR=24					
U58A	Oxford	88.72	348	P	P	23 15 03.6 +0.4
	baz=8.9,SNR=13					
T50A	Nancy	88.73	353	P	P	23 15 02.9 -0.3
	baz=5.2,SNR=11					
T48A	Bowling Green	88.74	354	P	P	23 15 03.6 +0.2
	baz=4.3,SNR=27					
U57A	Blanch	88.78	348	P	P	23 15 03.8 +0.3
	baz=8.4,SNR=13					
EDW2	Edwards Air Fo	88.79	20	P	P	23 15 03.8 +0.2
	baz=346					
T46A	Princeton	88.89	355	P	P	23 15 04.2 +0.2
	baz=3.5,SNR=12					
U55A	TA2, Sparta	88.90	350	P	P	23 15 04.3 +0.2
	baz=7.4,SNR=14					
T47A	Sharon Grove	88.91	355	P	P	23 15 04.2 +0.1
	baz=3.9,SNR=19					
OSI	Osito Audit: C	88.91	20	P	P	23 15 04.4 +0.2
	baz=346					
T45A	Paducah	88.95	356	P	P	23 15 04.1 -0.2
	baz=3.0					
U54A	Nelsons Funny	88.96	350	P	P	23 15 04.4 0.0
	baz=7.0,SNR=5.0					
U56A	King	88.98	349	P	P	23 15 04.7 +0.2
	baz=7.8,SNR=6.2					
RRX	Edison Barstow	88.99	19	P	P	23 15 05.7 +1.1
	baz=347					
V61A	Roper	89.05	346	P	P	23 15 05.2 +0.5
	baz=10.0					
TZTN	Tazewell	89.10	352	P	P	23 15 05.0 0.0
	baz=6.0,SNR=8.0					
HEC	Hector,Ludlow	89.16	18	P	P	23 15 06.5 +1.1
	baz=347,SNR=7.5					
V60A	Jim Taylor Roa	89.17	347	P	P	23 15 05.3 0.0
	baz=9.6					
V62A	Hyde County Ai	89.19	345	P	P	23 15 05.6 +0.3
	baz=10					
U53A	Fall Branch	89.19	351	P	P	23 15 05.2 -0.2
	baz=6.5,SNR=5.7					
U52A	Thorn Hill	89.23	352	P	P	23 15 05.8 +0.2
	baz=6.1,SNR=12					
U49A	Red Boiling Sp	89.30	353	P	P	23 15 05.6 -0.3
	baz=4.7,SNR=16					
U51A	La Follette	89.30	352	P	P	23 15 05.8 -0.2
	baz=5.7,SNR=8.0					

V59A	Middlesex	89.30	347	P		P	23	15 06.4	+0.5
	baz=9.0,SNR=8.6								
WUAZ	Wupatki	89.30	14	*eP*		P	23	15 06.5	+0.3
WUAZ	Wupatki	89.30	14	P		P	23	15 07.6	+1.4
	baz=350,SNR=21								
SCZ2	Santa Cruz Isl	89.31	21	P		P	23	15 06.5	+0.4
	baz=345								
BLG	Laguna Peak, P	89.33	21	P		P	23	15 06.6	+0.4
	baz=346								
GMRC	Granite Mounta	89.33	18	P		P	23	15 07.4	+1.1
	baz=347,SNR=13								
U50A	Jamestown	89.33	353	P		P	23	15 06.1	0.0
	baz=5.2,SNR=33								
DECC	Green Verdugo	89.33	20	P		P	23	15 07.0	+0.8
	baz=346								
U48A	Cassie Pea, Po	89.35	354	P		P	23	15 06.2	0.0
	baz=4.2,SNR=17								
V57A	Coltrane Farms	89.37	349	P		P	23	15 06.4	+0.1
	baz=8.2,SNR=13								
V58A	Windy Hill, Pi	89.38	348	P		P	23	15 06.7	+0.4
	baz=8.5,SNR=8.0								
U47A	Clarksville	89.46	355	P		P	23	15 06.8	+0.1
	baz=3.8,SNR=16								
BFSC	Mount Baldy Ra	89.48	19	P		P	23	15 07.3	+0.3
	baz=346								
NEE2	Needles Airpor	89.52	17	P		P	23	15 07.5	+0.5
	baz=348								
V56A	Mocksville	89.53	349	P		P	23	15 07.6	+0.5
	baz=7.7,SNR=10								
V55A	Taylorsville	89.56	350	P		P	23	15 07.5	+0.3
	baz=7.3,SNR=13								
U46A	Springville	89.59	355	P		P	23	15 07.1	-0.2
	baz=3.3								
BBRC	Big Bear Solar	89.60	19	P		P	23	15 06.6	-1.1
	baz=347								
V54A	Nebo	89.71	350	P		P	23	15 08.1	+0.2
	baz=6.9,SNR=9.2								
W61A	Ground Anchor	89.71	346	P		P	23	15 08.0	+0.1
	baz=9.7								
U40A	Yellville	89.72	359	P		P	23	15 07.7	-0.2
	baz=0.6,SNR=15								
CNNC	Cliffs of the	89.77	347	P		P	23	15 08.4	+0.3
	baz=9.2								
V52A	Sevierville	89.80	352	P		P	23	15 08.5	+0.2
	baz=6.0,SNR=19								
WVT	Waverly	89.80	355	*eP*		P	23	15 08.1	-0.2
	comp=Z,58nm,1.2s								
WVT	Waverly	89.80	355	*eP*		P	23	15 08.1	-0.2
WVT				pmax	pmax				
	comp=Z,58nm,1.2s								
WVT	Waverly	89.80	355	P		P	23	15 08.2	-0.1
	baz=3.5								
V51A	Loudon	89.90	352	P		P	23	15 08.6	-0.2
	baz=5.5,SNR=9.4								
V53A	Saluda	89.90	351	P		P	23	15 09.0	+0.2
	baz=6.4,SNR=17								
W18A	Petrified Fore	89.92	13	P		P	23	15 10.5	+1.4
	baz=351,SNR=14								
W60A	Pink Hill	89.93	347	P		P	23	15 09.1	+0.2
	baz=9.3								
BELC	Belle Mtn. Jos	90.03	18	P		P	23	15 10.3	+0.7
	baz=347								
IRM	Iron Mountain	90.03	17	P		P	23	15 10.7	+1.2
	baz=348,SNR=10								
V49A	McMinnville	90.05	353	P		P	23	15 09.0	-0.5
	baz=4.6,SNR=12								
PDMCI	Parker Dam,Lak	90.06	17	P		P	23	15 10.1	+0.6
	baz=348								
V47A	Nunnelly	90.08	355	P		P	23	15 09.6	-0.1
	baz=3.7,SNR=12								
V50A	Pikevile	90.09	353	P		P	23	15 09.6	-0.1
	baz=5.1,SNR=15								
W57A	Gilead	90.12	349	P		P	23	15 10.1	+0.4
	baz=8.0,SNR=6.3								
V48A	Smith Brothers	90.13	354	P		P	23	15 09.7	-0.1
	baz=4.1,SNR=12								
CTA	Charters Tower	90.14	125	P		P	23	15 09.1	-0.8
	comp=Z,28nm,0.9s,baz=322,slow=6.7,SNR=26								
CTAO	Charters Tower	90.14	125	*eP*		P	23	15 09.2	-0.7
	comp=Z,62nm,1.1s								
CTAO	Charters Tower	90.14	125	*eP*		P	23	15 09.2	-0.7
CTAO				pmax	pmax				
	comp=Z,61nm,1.1s								
V46A	Holladay	90.14	355	P		P	23	15 09.9	0.0
	baz=3.3,SNR=10								
CIS	Catalina Islan	90.14	20	P		P	23	15 10.4	+0.4
	baz=346								
TUL1	Leonard	90.16	2	P		P	23	15 10.1	+0.1
	baz=359,SNR=7.2								
W58A	Raeford	90.16	348	P		P	23	15 10.4	+0.4
	baz=8.5								
MURC	Murrieta	90.19	19	P		P	23	15 10.3	+0.1
	baz=347								
W56A	Indian Trail	90.20	349	P		P	23	15 10.4	+0.2
	baz=7.7,SNR=10								
KMSC	Kings Mountain	90.28	350	P		P	23	15 10.7	+0.2
	baz=7.3,SNR=6.4								
PFO	Pinyon Flats O	90.32	19	*eP*		P	23	15 11.5	+0.5
	comp=Z,49nm,1.6s								
PFO	Pinyon Flats O	90.32	19	*eP*		P	23	15 11.5	+0.5
PFO				pmax	pmax				
	comp=Z,49nm,1.6s								
PFO	Pinyon Flats O	90.32	19	P		P	23	15 11.5	+0.5
	baz=347								
W54A	Cherokee Point	90.42	350	P		P	23	15 11.4	+0.2
	baz=6.8,SNR=10.0								
W53A	Cullowhee	90.43	351	P		P	23	15 11.1	-0.3
	baz=6.2								
BC3	Big Chuckawall	90.46	18	P		P	23	15 12.7	+1.1
	baz=348								
ANMO	Albuquerque	90.47	10	*eP*		P	23	15 12.2	+0.5
	comp=Z,75nm,1.2s								
ANMO	Albuquerque	90.47	10	*eP*		P	23	15 12.2	+0.5
ANMO				pmax	pmax				
	comp=Z,75nm,1.2s								
ANMO	Albuquerque	90.47	10	P		P	23	15 12.6	+0.9
	baz=353								
TASM	ASL Pad, Albuq	90.47	10	P		P	23	15 13.0	+1.3
	baz=353,SNR=50								
TASM	ASL Pad, Albuq	90.47	10	P		P	23	15 13.1	+1.3
	baz=353,SNR=41								
SCI2	San Clemente I	90.52	21	P		P	23	15 13.3	+1.6
	baz=346								
Y12C	Blythe	90.53	17	P		P	23	15 12.2	+0.5
	baz=348								
W51A	Cleveland	90.57	353	P		P	23	15 11.7	-0.2
	baz=5.3,SNR=12								
W52A	Murphy	90.57	352	P		P	23	15 11.5	-0.4
	baz=5.8								
W50A	Signal Mountai	90.57	353	P		P	23	15 11.6	-0.4
	baz=5.0,SNR=7.6								
X58A	Rowland	90.63	348	P		P	23	15 12.5	+0.3
	baz=8.4								
W47A	Westpoint	90.66	355	P		P	23	15 12.2	-0.1
	baz=3.6,SNR=13								
W49A	Belvidere	90.72	354	P		P	23	15 12.2	-0.4
	baz=4.4,SNR=12								
W48A	Pulaski	90.74	354	P		P	23	15 12.3	-0.4
	baz=4.0,SNR=7.2								
X57A	Johnson Farm,	90.81	349	P		P	23	15 13.0	0.0
	baz=8.0								
W46A	Michie	90.82	355	P		P	23	15 12.6	-0.4
	baz=3.2								
W39A	Magazine	90.88	360	P		P	23	15 13.2	-0.1
	SNR=8.0								
X56A	White Oak	90.89	349	P		P	23	15 13.0	-0.4
	baz=7.4								
W41B	Gary Mavity, V	90.89	359	P		P	23	15 13.2	-0.2
	baz=0.9,SNR=6.4								
109C	Camp Elliot, M	90.90	19	P		P	23	15 13.9	+0.5
	baz=347								
AMTX	Amarillo	90.94	6	P		P	23	15 14.0	+0.2
	baz=355								
X54A	Belton	90.97	350	P		P	23	15 13.3	-0.5
	baz=6.7								
X55A	Gracelyn & Ava	90.97	350	P		P	23	15 13.7	0.0
	baz=7.1								
Y60A	Bolivia	91.03	347	P		P	23	15 14.3	+0.2
	baz=9.0								
X52A	Dahlonega	91.05	352	P		P	23	15 14.0	-0.2
	baz=5.8,SNR=7.8								
SWSC	Sam W. Stewart	91.09	18	P		P	23	15 14.9	+0.6
	baz=347								
X53A	Estanollee	91.10	351	P		P	23	15 14.4	+0.1
	baz=6.1,SNR=7.5								
GLA	Glamis	91.16	17	P		P	23	15 15.2	+0.4
	baz=348								
X51A	Calhoun	91.17	353	P		P	23	15 14.3	-0.4
	baz=5.2								
WMOK	Wichita Mounta	91.24	4	*eP*		P	23	15 15.0	-0.1
	comp=Z,81nm,1.6s								
WMOK	Wichita Mounta	91.24	4	*eP*		P	23	15 15.0	-0.1
WMOK				pmax	pmax				
	comp=Z,81nm,1.6s								
WMOK	Wichita Mounta	91.24	4	P		P	23	15 15.5	+0.4
	baz=357,SNR=35								
Y57A	Sumter	91.29	349	P		P	23	15 14.7	-0.5
	baz=7.8								
Y58A	Scranton	91.31	348	P		P	23	15 15.5	+0.2
	baz=8.2								
IKP	In-Ko-Pah, Jac	91.32	19	P		P	23	15 15.6	0.0
	baz=347								
X49A	Woodville	91.32	354	P		P	23	15 15.2	-0.2
	baz=4.4,SNR=6.7								
X50B	Fort Payne	91.33	353	P		P	23	15 15.2	-0.3
	baz=4.8,SNR=5.5								
X46A	Booneville	91.40	356	P		P	23	15 15.2	-0.6
	baz=3.1								
X47A	Russelville	91.41	355	P		P	23	15 14.9	-0.9
	baz=3.5								
X48A	Hartselle	91.43	354	P		P	23	15 15.2	-0.6
	baz=4.0								
OXF	Oxford	91.48	356	P		P	23	15 15.8	-0.3
	baz=2.6								
X43A	Marvell	91.52	357	P		P	23	15 16.4	+0.1
	baz=1.7								
Y55A	Saluda	91.52	350	P		P	23	15 16.1	-0.3
	baz=7.0								
MIAR	Mount Ida	91.53	360	P		P	23	15 16.5	+0.2
	baz=0.1,SNR=12								
X40A	Basin Creek Fa	91.58	359	P		P	23	15 16.2	-0.4
	baz=0.6								
Y56A	Pelion	91.61	350	P		P	23	15 16.2	-0.5
	baz=7.3								
Y54A	Tignall	91.68	351	P		P	23	15 16.9	-0.2
	baz=6.5								
Y53A	Monroe	91.77	351	P		P	23	15 17.5	0.0
	baz=6.0,SNR=5.1								
MSTX	Muleshoe	91.77	7	P		P	23	15 18.2	+0.6
	baz=355,SNR=28								
Y52A	Lilburn	91.80	352	P		P	23	15 17.9	+0.2
	baz=5.7,SNR=6.8								
Y51A	Rockmart	91.84	353	P		P	23	15 17.8	0.0
	baz=5.1,SNR=11								
Y50A	Piedmont	91.90	353	P		P	23	15 17.8	-0.3
	baz=4.7								
Y48A	Jasper	91.97	354	P		P	23	15 17.5	-0.9
	baz=3.9								
Y49A	Blount Mountai	91.98	354	P		P	23	15 18.0	-0.5
	baz=4.3,SNR=5.4								
Z57A	Bowman	92.03	349	P		P	23	15 18.5	-0.1
	baz=7.6								
Z56A	Williston	92.08	350	P		P	23	15 18.9	0.0
	baz=7.2								
GOGA	Godfrey	92.20	351	P		P	23	15 19.0	-0.5
	baz=6.0								
Z55A	Blythe	92.26	350	P		P	23	15 19.4	-0.4
	baz=6.8								
Z54A	Sparta	92.31	351	P		P	23	15 19.7	-0.3
	baz=6.4								
Z53A	Monticello	92.34	351	P		P	23	15 19.5	-0.6
	baz=6.0								
Z51A	Franklin	92.43	353	P		P	23	15 20.0	-0.5
	baz=5.0								
Z52A	Williamson	92.50	352	P		P	23	15 20.3	-0.5
	baz=5.5								
158A	Hollywood	92.53	348	P		P	23	15 20.8	-0.1
	baz=7.9								
TUC	Tucson	92.54	14	*eP*		P	23	15 21.6	+0.4
	comp=Z,51nm,1.8s								
TUC	Tucson	92.54	14	*eP*		P	23	15 21.6	+0.4
TUC				pmax	pmax				
	comp=Z,51nm,1.8s								
TUC	Tucson	92.54	14	P		P	23	15 21.8	+0.7
	baz=350								
Z50A	Ashland	92.55	353	P		P	23	15 20.5	-0.6
	baz=4.6,SNR=7.6								
214A	Organ Pipe Nat	92.57	16	P		P	23	15 21.6	+0.3
	baz=349,SNR=7.7								
Z49A	Columbiana	92.65	354	P		P	23	15 21.1	-0.4
	baz=4.3,SNR=8.9								
157A	Early Branch	92.68	349	P		P	23	15 21.9	+0.2
	baz=7.5								
121A	Cookes Peak, D	92.71	12	P		P	23	15 23.3	+1.2
	baz=352,SNR=7.4								
Z41A	Richland Creek	92.81	359	P		P	23	15 22.1	-0.2
	baz=0.6								
LRAL	Lakeview Retre	92.83	354	P		P	23	15 22.0	-0.4
	baz=4.0								
153A	Fort Valley	92.98	351	P		P	23	15 22.8	-0.3
	baz=5.8								
152A	Waverly Hall	93.04	352	P		P	23	15 23.0	-0.4
	baz=5.3								
151A	Opelika	93.23	353	P		P	23	15 24.0	-0.3
	baz=5.0,SNR=7.0								
148A	Greensboro	93.25	355	P		P	23	15 23.6	-0.7
	baz=3.6								
149A	Jones	93.25	354	P		P	23	15 23.4	-1.0
	baz=4.1								
147A	Livingston	93.26	355	P		P	23	15 23.7	-0.6
	baz=3.2								
ABTX	Abilene, Hawle	93.31	5	P		P	23	15 25.0	+0.4
	baz=357,SNR=6.6								
256A	Glennville	93.46	350	P		P	23	15 25.4	+0.1
	baz=7.0								
TSUM	Tsumeb	93.54	242	*eP*		P	23	15 25.1	-0.7
	comp=Z,17nm,1.1s								
254A	Abbeville	93.63	351	P		P	23	15 25.9	-0.2
	baz=6.1								
251A	Midway	93.66	353	P		P	23	15 26.2	0.0
	baz=4.9,SNR=5.9								
252A	Lumpkin	93.71	352	P		P	23	15 25.9	-0.5
	baz=5.3								
MNTX	Cornudas Mount	93.80	10	P		P	23	15 27.3	+0.4
	baz=353								
VBMS	Vicksburg	93.80	357	P		P	23	15 27.0	+0.2
	baz=1.9								
250A	Grady	93.84	353	P		P	23	15 26.6	-0.4
	baz=4.4								
249A	Camden	93.89	354	P		P	23	15 27.1	-0.2
	baz=3.9								
WHTX	Lake Whitney,	94.03	3	P		P	23	15 27.7	-0.2
	baz=358								
NATX	Nacogdoches	94.31	1	P		P	23	15 29.3	+0.1
	baz=360								
455A	Stateville	94.80	351	P		P	23	15 31.4	-0.1
	baz=6.3								
453A	Whigham	94.81	352	P		P	23	15 30.9	-0.6
	baz=5.5								
451A	Vernon	95.16	353	P		P	23	15 33.3	+0.3
	baz=4.7								
JCT	Junction City	95.43	5	P		P	23	15 34.1	-0.3
	baz=356								
HKT	Hockley	96.10	2	*eP*		P	23	15 38.2	+0.9
	comp=Z,23nm,1.6s								
HKT	Hockley	96.10	2	*eP*		P	23	15 38.2	+0.9
HKT				pmax	pmax				
	comp=Z,23nm,1.6s								
TXAR	Lajitas Array	96.30	9	P		P	23	15 39.2	+0.7
	comp=Z,10nm,1.3s,baz=8.5,slow=2.5,SNR=17								
TXAR				PKKP		PKKPdf	23	32 20.4	-0.6
	comp=Z,0.6nm,0.7s,baz=188,slow=4.8,SNR=9.4								
TXAR				PKPPKP		P'P'df	23	40 34.0	-10
	comp=Z,0.4nm,0.9s,baz=176,slow=3.8,SNR=4.4								
TXAR				LR		LR	00	02 02.5	
	comp=Z,458nm,19.3s,baz=0.0,slow=37								
BOSA	Boshof	97.74	231	LR		LR	00	04 16.3	
	comp=Z,382nm,18.7s,baz=30,slow=38								
STKA	Stephens Creek	98.23	135	LR		LR	00	05 24.0	
	comp=Z,128nm,18.2s,baz=353,slow=39								
DZM	Mont Dzumac	102.21	111	*e*LR		LR	23	49 23.4	
	comp=Z,926nm,26.4s								
MAW	Mawson	122.80	190	PKP		PKPdf	23	21 03.3	-0.8
	comp=Z,13nm,0.9s,baz=323,slow=4.9,SNR=24								
PPT2	Papeete2	123.97	72	*e*SS		SS	23	39 39.0	-2.6
	comp=Z,131nm,34.5s								
PPT2	Papeete2	123.97	72	*e*LR		LR	23	59 39.3	
	comp=Z,758nm,22.0s,baz=318								
BDFB	Brasilia	127.60	299	PKP		PKPdf	23	21 14.7	-0.4
	comp=Z,2.8nm,0.8s,baz=43,slow=5.0,SNR=4.4								
SYO	Syowa Base	127.60	199	‖	*i*P	PKPdf	23	21 11.8	-1.5
TBI	Tubuai	128.62	76	*e*LR		LR	00	01 48.9	
	comp=Z,622nm,23.8s,baz=320								
SIV	San Ignacio	134.07	313	PKP		PKPdf	23	21 27.1	-0.2
	comp=Z,2.0nm,0.8s,baz=92,slow=1.6,SNR=9.9								
LPAZ	La Paz	137.12	322	PKP		PKPdf	23	21 33.8	0.0
	comp=Z,1.2nm,0.6s,baz=73,slow=6.6,SNR=5.2								
VNDA	Vanda	139.40	161	PKhKP		PKPpre	23	21 25.9	
	comp=Z,1.0nm,0.6s,baz=274,slow=5.1,SNR=6.2								
VNDA				PKP		PKPdf	23	21 34.1	-1.2
	comp=Z,3.9nm,0.9s,baz=272,slow=3.7,SNR=11								
SNAA	Sanae	139.90	209	PKPdf		PKPdf	23	21 37.3	+0.8
SNAA	Sanae	139.90	209	PKP		PKPdf	23	21 35.9	-0.6
	comp=Z,3.5nm,0.8s,baz=20,slow=2.6,SNR=5.0								
SNAA	Sanae	139.90	209	*e*PKPdf		PKPdf	23	21 37.0	+0.5
SBA	Scott Base	140.49	161	*e*PKPdf		PKPdf	23	21 36.8	-0.5
SBA	Scott Base	140.49	161	*e*PKIKP		PKPdf	23	21 36.8	-0.5
PB11	IPOC Station P	140.87	322	*e*PKPdf		PKPdf	23	21 40.3	+0.4
VNA2	Neumayer--Watz	140.96	211	PKPdf		PKiKP	23	21 41.2	+0.2
VNA1	Neumayer--Stat	141.13	212	PKPdf		PKPdf	23	21 39.4	+0.8
CPUP	Villa Florida	141.25	301	PKP		PKPdf	23	21 39.5	-0.7
	comp=Z,6.9nm,0.9s,baz=350,slow=2.9,SNR=7.4								
YJA	Yavi	141.45	315	*i*P		PKPdf	23	21 41.9	+0.6
VNA3	Neumayer Olymp	141.77	211	PKPdf		PKPdf	23	21 40.7	+0.9
HJA	Humahuaca	142.32	314	*i*P		PKPdf	23	21 43.5	+0.8
AZAP	Zapla	143.07	313	*i*P		PKPbc	23	21 40.4	-0.4
LVC	Limon Verde	143.20	319	PKP		PKPdf	23	21 44.0	-0.2
	comp=Z,4.6nm,0.8s,baz=104,slow=3.7,SNR=4.9								
FSA	Cafayete	145.12	313	*i*P		PKPbc	23	21 46.5	-0.3
AHML	Horco Molle	145.42	311	*i*P		PKPab	23	21 48.0	+0.2
GO02	Mina Guanaco	145.76	318	*e*PKPdf		PKPbc	23	21 48.9	-0.1
CYA	Choya	147.06	310	*i*P		PKPdf	23	21 50.9	+0.5
HOPE	Hope Point	147.28	246	*e*PKPbc		PKPbc	23	21 52.5	+0.4
GO03	Copiap	148.19	317	*e*PKPbc		PKPbc	23	21 55.3	-0.3
VCA	Vinchina	148.37	313	*i*P		PKPbc	23	21 56.4	+0.3
TCA	Tanti	148.95	306	*i*P		PKPdf	23	21 53.3	-0.2
LCO	Las Campanas	149.64	317	*e*PKPbc		PKPbc	23	21 59.3	-0.2
LCO	Las Campanas	149.64	317	*e*PKP2		PKPbc	23	21 59.3	-0.2
GO04	Tololo Observa	150.70	316	*e*PKPbc		PKiKP	23	22 02.4	-0.2
CFA	Coronel Fontan	150.85	311	PKPbc		PKiKP	23	22 02.6	-0.1
	comp=Z,8.2nm,0.7s,baz=309,slow=0.0,SNR=9.9								
CFA	Coronel Fontan	150.85	311	*i*P		PKPbc	23	22 01.9	-0.1
ASAL	Salagasta	151.95	310	*i*P		PKPbc	23	22 04.5	-0.1
TRQA	Tornquist	152.88	294	*e*PKPbc		PKPbc	23	22 06.3	-0.1
TRQA	Tornquist	152.88	294	*e*PKIKP		PKPbc	23	22 06.3	-0.1
PLCA	Paso Flores	159.32	301	PKP		PKPdf	23	22 08.1	+0.4
	comp=Z,4.6nm,0.9s,baz=231,slow=3.8,SNR=4.2								
PLCA				PKPab		PKPab	23	22 45.9	+0.6
	comp=Z,14nm,1.1s,baz=50,slow=7.0,SNR=5.0								
PLCA	Paso Flores	159.32	301	*e*PKPdf		PKPdf	23	22 07.6	-0.1
PLCA				*e*PKPab		PKPab	23	22 46.0	+0.8
USHA	Ushuaia	165.23	258	PKPab		PKPab	23	23 11.3	+0.7
	comp=Z,31nm,0.8s,baz=281,slow=1.8,SNR=8.3								

ISCJB ***18*** *23:10:39.4±0.6,21°.3S±0°.1×176°.69E±0°.07,h33km, mb4.7/13,MS3.7/10,Error ellipse: s-maj=14.7km s-min=10.0km az=175.8*

NEIC ***18*** *23:10:41.8±1.2,21°.29S×176°.59E,h35km±4km,mb4.5/9, Error ellipse: s-maj=19.9km s-min=9.1km az=60.0*

IDC ***18*** *23:10:45.4±4.9,21°.24S×176°.48E,h66km±42km,mb4.1/6, mb1 4.3/8,mb1mx3.9/35,mbtmp4.5/8,ML4.0/2,MS3.6/10, Ms1 3.6/10,ms1mx3.5/24,Error ellipse: s-maj=27.4km s-min=22.2km az=51.0*

ISC 18 23:10:41.3±0.6,21°.2S±0°.1×176.7E±0°.1,h35km,n41,
σ1§43/33,mb4.5/13,MS3.7/10,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	8.07	266	*e*Pn	Pn	23 12 37.4	+1.4
PINNC	Pines Island,	8.69	259	*e*Pn	Pn	23 12 46.8	+2.4
OUENC	Ouen Island, N	9.22	261	*e*Pn	Pn	23 12 54.7	+2.9
DZM	Mont Dzumac	9.56	263	P	Pn	23 12 57.8	+1.3
	1.0nm,0.3s,baz=85,slow=18,SNR=13						
DZM				LR	LR	23 15 35.1	
	comp=Z,246nm,18.7s,baz=90,slow=31						
DZM	Mont Dzumac	9.56	263	*e*Pn	Pn	23 12 58.8	+2.2
	150nm,1.4s						
DZM				*e*LR	LR	23 15 11.9	
	comp=Z,2μm,25.1s						
DZM	Mont Dzumac	9.56	263	*e*Pn	Pn	23 12 57.5	+1.0
ONTNC	Ouen Toro	9.57	262	*e*Pn	Pn	23 12 57.3	+0.7
URZ	Urewera	17.00	179	P	P	23 14 39.8	+2.0
	0.8nm,0.3s,baz=39,slow=8.2,SNR=6.1						
URZ				LR	LR	23 19 26.3	
	comp=Z,523nm,21.7s,baz=40,slow=31						
URZ	Urewera	17.00	179	*e*Pn	Pn	23 14 35.6	-0.7
	88nm,1.4s						
HNR	Honiara	19.91	303	LR	LR	23 22 02.0	
	comp=Z,90nm,18.3s,baz=138,slow=34						
RAR	Rarotonga	21.95	94	LR	LR	23 22 06.6	
	comp=Z,240nm,21.2s,baz=250,slow=31						
RPZ	Rata Peaks	22.93	191	LR	LR	23 23 59.7	
	comp=Z,210nm,18.3s,baz=24,slow=35						
PMG	Port Moresby	30.73	288	P	P	23 16 52.1	-1.2
	15nm,0.7s,baz=113,slow=7.8,SNR=3.7						
TBI	Tubuai	31.36	100	*e*LR	LR	23 25 11.1	
	comp=Z,268nm,30.0s						
PPT2	Papeete2	32.00	89	*e*LR	LR	23 25 27.0	
	comp=Z,539nm,28.5s						
PPT	Papeete	32.00	89	LR	LR	23 26 55.8	
	comp=Z,73nm,20.7s,baz=230,slow=30						
STKA	Stephens Creek	33.01	244	P	P	23 17 12.9	-0.3

ISC 18 23:15:58.2±1.2, 34°27N±0°.06×25°.07E±0°.03, h34km±3km, n69, σ1§35/84, mb3.9/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.78**	**344**	P	**Pn**	**23 16 12.1**	**-0.7**
SIVA				S	**Sb**	**23 16 23.7**	**-0.1**
SIVA	**Sivas**	**0.78**	**344**	P	**Pn**	**23 16 12.3**	**-0.5**
SIVA				S	**Sb**	**23 16 21.6**	**-2.2**
SIVA				AML	AML	23 16 30.7	
	comp=N,11114μm,0.7s						
SIVA				AML	AML	23 16 31.1	
	comp=E,21008μm,0.7s						
LAST	**Lasithi**	**0.96**	**21**	P	**Pn**	**23 16 15.0**	**-0.3**
LAST				S	**Sn**	**23 16 27.9**	**+0.1**
LAST	**Lasithi**	**0.96**	**21**	P	**Pn**	**23 16 15.3**	**-0.1**
LAST				S	**Sn**	**23 16 27.8**	**+0.1**
LAST				AML	AML	23 16 39.0	
	comp=E,1806μm,0.6s						
LAST				AML	AML	23 16 40.6	
	comp=N,2320μm,0.7s						
GVD	**Gavdhos**	**0.99**	**306**	P	**Pb**	**23 16 16.2**	**-0.7**
GVD	**Gavdhos**	**0.99**	**306**	P	**Pb**	**23 16 16.4**	**-0.5**
GVD				S	**Sb**	**23 16 32.1**	**+2.4**
GVD	**Gavdhos**	**0.99**	**306**	P	**Pb**	**23 16 16.3**	**-0.7**
GVD				S	**Sn**	**23 16 28.6**	**+0.1**
GVD				AML	AML	23 16 38.5	
	comp=E,5422μm,0.4s						
GVD				AML	AML	23 16 39.9	
	comp=N,4593μm,0.4s						
IDI	**Anoyia**	**1.03**	**352**	Pn	**Pn**	**23 16 16.4**	**+0.1**
	comp=N,32nm,0.3s,baz=168,slow=20,SNR=52						
IDI				Sn	**Sb**	**23 16 31.3**	**+0.4**
	comp=N,67nm,0.3s,baz=355,slow=19,SNR=8.7						
IDI	**Anoyia**	**1.03**	**352**	P	**Pn**	**23 16 16.6**	**+0.3**
NPS	**Neapolis**	**1.09**	**24**	P	**Pn**	**23 16 17.7**	**+0.5**
NPS				S	**Sb**	**23 16 32.8**	**+0.1**
NPS	**Neapolis**	**1.09**	**24**	P	**Pb**	**23 16 17.9**	**-0.8**
NPS				S	**Sb**	**23 16 32.6**	**-0.1**
NPS				AML	AML	23 16 42.5	
	comp=N,1904μm,0.7s						
NPS				AML	AML	23 16 43.6	
	comp=E,2144μm,0.7s						
ZKR	**Zakros**	**1.27**	**48**	P	**Pn**	**23 16 19.9**	**+0.3**
ZKR	**Zakros**	**1.27**	**48**	P	**Pb**	**23 16 21.6**	**-0.1**
ZKR	**Zakros**	**1.27**	**48**	P	**Pb**	**23 16 22.0**	**+0.3**
ZKR				S	**Sb**	**23 16 39.5**	**+1.8**
ZKR				AML	AML	23 16 49.6	
	comp=N,989μm,0.5s						
ZKR				AML	AML	23 16 52.6	
	comp=E,1498μm,0.7s						
VAM	**Vamos**	**1.34**	**328**	P	**Pb**	**23 16 22.0**	**-0.9**
VAM				S	**Sb**	**23 16 40.6**	**+0.8**
VAM	**Vamos**	**1.34**	**328**	P	**Pb**	**23 16 22.3**	**-0.6**
VAM				S	**Sb**	**23 16 39.3**	**-0.5**
VAM				AML	AML	23 16 46.6	
	comp=N,1794μm,0.3s						
VAM				AML	AML	23 16 51.0	
	comp=E,2613μm,0.5s						
IMMV	**Iera Moni Meta**	**1.49**	**324**	P	**Pb**	**23 16 24.2**	**-1.1**
IMMV	**Iera Moni Meta**	**1.49**	**324**	P	**Pb**	**23 16 24.3**	**-1.1**
IMMV				S	**Sb**	**23 16 44.8**	**+0.9**
IMMV	**Iera Moni Meta**	**1.49**	**324**	P	**Pb**	**23 16 24.5**	**-0.8**
IMMV				S	**Sb**	**23 16 44.2**	**+0.3**
IMMV				AML	AML	23 16 57.9	
	comp=E,2031μm,0.8s						
IMMV				AML	AML	23 17 04.2	
	comp=N,1503μm,0.6s						
KARP	**Karpathos**	**2.15**	**53**	*e*P	**Pn**	**23 16 32.0**	**+0.3**
KARP	**Karpathos**	**2.15**	**53**	P	**Pb**	**23 16 35.0**	**-1.5**
ANKY	**Antikythira Is**	**2.15**	**318**	P	**Pb**	**23 16 34.3**	**-2.3**
IOSP	**Ios island**	**2.46**	**4**	P	**Pn**	**23 16 37.0**	**+1.1**
IOSP				S	**Sn**	**23 17 04.7**	**-0.1**
IOSP	**Ios island**	**2.46**	**4**	P	**Pn**	**23 16 37.0**	**+1.1**
MHLO	**Agia Marina, M**	**2.48**	**348**	P	**Pn**	**23 16 37.7**	**+1.5**
APE	**Apeiranthos**	**2.82**	**8**	*e*P	**Pn**	**23 16 42.1**	**+1.1**
APE	**Apeiranthos**	**2.82**	**8**	P	**Pn**	**23 16 42.3**	**+1.3**
APE				S	**Sn**	**23 17 14.5**	**+0.7**
VLI	**Veliai**	**3.00**	**325**	P	**Pn**	**23 16 45.8**	**+2.4**
ARG	**Arkhangelos**	**3.17**	**51**	*e*P	**Pn**	**23 16 46.7**	**+1.0**
ARG	**Arkhangelos**	**3.17**	**51**	P	**Pn**	**23 16 48.1**	**+2.4**
DAT	**Datca**	**3.20**	**39**	*e*P	**Pn**	**23 16 47.7**	**+1.5**
DAT	**Datca**	**3.20**	**39**	*i* P	**Pn**	**23 16 48.0**	**+1.8**
DAT				IAML_P			
	comp=Z,452nm,0.1s						
DID	**Didima**	**3.56**	**336**	P	**Pn**	**23 16 51.8**	**+0.7**
ITM	**Ithomi**	**3.87**	**320**	*e*P	**Pn**	**23 16 57.8**	**+2.5**
DALY	**Dalyan (Mula)**	**3.88**	**48**	*e*P	**Pn**	**23 16 57.0**	**+1.6**
DALY	**Dalyan (Mula)**	**3.88**	**48**	*i* P	**Pn**	**23 16 57.1**	**+1.7**
YER	**Yerkesik**	**3.88**	**42**	*e*P	**Pn**	**23 16 57.4**	**+1.9**
TURN	**Turunc**	**3.88**	**47**	*e*P	**Pn**	**23 16 53.1**	**-2.4**
TURN	**Turunc**	**3.88**	**47**	*i* P	**Pn**	**23 16 54.2**	**-2.3**
FETY	**Fethiye**	**4.04**	**53**	*e*P	**Pn**	**23 16 58.8**	**+1.1**
FETY	**Fethiye**	**4.04**	**53**	*i* P	**Pn**	**23 16 59.6**	**+1.8**
FETY				IAML_P			
	comp=Z,698nm,0.3s						
KSL	**Kastellorizon**	**4.15**	**62**	P	**Pn**	**23 17 00.3**	**+1.1**
AKAS	**Kas**	**4.20**	**61**	*e*P	**Pn**	**23 17 00.9**	**+0.9**
AKAS	**Kas**	**4.20**	**61**	*i* P	**Pn**	**23 17 01.6**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**4.33**	**31**	*e*P	**Pn**	**23 17 03.9**	**+2.2**
DRO	**Drossia**	**4.57**	**325**	P	**Pn**	**23 17 08.5**	**+3.5**
ELL	**Elmali**	**4.66**	**57**	*e*P	**Pn**	**23 17 07.6**	**+1.3**
AKUM	**Antalya-Kumluc**	**4.78**	**63**	*i* P	**Pn**	**23 17 08.2**	**+0.4**
KORT	**Korkueli**	**5.10**	**56**	*e*P	**Pn**	**23 17 13.9**	**+1.6**
KORT	**Korkueli**	**5.10**	**56**	*i* P	**Pn**	**23 17 15.2**	**+2.9**
KEPZ	**Antalya-Kepez**	**5.94**	**62**	*i* P	**Pn**	**23 17 25.7**	**+1.9**
KEPZ				IAML_P			
	comp=Z,250nm,0.3s						
TEKE	**Tekeli-Mersin**	**6.85**	**72**	*e*P	**Pn**	**23 17 36.9**	**+0.6**
KONT	**Konya--Tatoy**	**6.95**	**56**	*e*P	**Pn**	**23 17 39.5**	**+1.8**
AKKU	**Akkuyu-Mersin**	**7.20**	**72**	*e*P	**Pn**	**23 17 41.5**	**+0.5**
IKL	**Isikli**	**7.32**	**72**	*e*P	**Pn**	**23 17 42.9**	**+0.2**
KEBE	**Keben-Mersin**	**7.39**	**70**	*e*P	**Pn**	**23 17 44.3**	**+0.5**
MMAI	**Mount Meron Ar**	**8.71**	**95**	Pn	**Pn**	**23 18 00.9**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=295,slow=12,SNR=6.9						
MMAI				Sn	**Sn**	**23 19 35.5**	**-3.4**
	comp=Z,2.3nm,0.3s,baz=275,slow=28,SNR=5.8						
EIL	**Elat**	**9.56**	**116**	Pn	**Pn**	**23 18 13.5**	**0.0**
	comp=Z,0.8nm,0.3s,baz=323,slow=7.0,SNR=7.3						
KEST	**Kesra**	**12.97**	**281**	LR	LR	23 24 05.2	
	comp=Z,259nm,21.0s,baz=260,slow=38						
AKASG	**Malin Array Be**	**16.70**	**9**	Pn	**Pn**	**23 19 49.6**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=199,slow=11,SNR=3.3						
GERES	**GERESS Array B**	**16.84**	**333**	Pn	**P**	**23 19 54.1**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=142,slow=11,SNR=9.3						
HFS	**Hagfors**	**26.93**	**347**	P	**P**	**23 21 35.4**	**-0.6**
	comp=Z,7.6nm,1.0s,baz=151,slow=9.9,SNR=3.5						
NOA	**NORSAR Array B**	**28.24**	**346**	P	**P**	**23 21 47.0**	**-0.9**
	comp=Z,1.4nm,1.0s,baz=157,slow=9.6,SNR=2.4						
EKA	**Eskdalemuir Ar**	**28.73**	**326**	P	**P**	**23 21 51.7**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=125,slow=8.7,SNR=2.8						
TORD	**Torodi Ar. Bea**	**29.86**	**231**	P	**P**	**23 22 02.4**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=25,slow=9.2,SNR=15						
MKAR	**Makanchi Array**	**44.34**	**56**	P	**P**	**23 24 06.1**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=277,slow=6.5,SNR=12						
ZALV	**Zalesovo Beam**	**45.68**	**46**	P	**P**	**23 24 15.7**	**+0.1**
	comp=Z,2.5nm,0.4s,baz=265,slow=9.6,SNR=8.4						
SONM	**Songino Array**	**60.12**	**50**	P	**P**	**23 26 02.8**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=291,slow=7.6,SNR=3.8						
PTGA	**Pitinga**	**86.30**	**267**	LR	LR	00 08 54.0	
	comp=Z,79nm,18.4s,baz=15,slow=37						

GUC 18 23:16:26.1±0.6, 34°98S×71°.78W, h56km±4km, ML3.7, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.13**	**254**	*e*P	Pn	23 16 35.0	+0.2
GO05				*e*S	Sn	23 16 40.7	-0.3
GO05				IAML		23 16 41.5	
	comp=E,7μm,0.3s						
RCDM	**Rinconada Maip**	**1.69**	**29**	*e*P	Pn	23 16 53.2	-0.1
ANTU	**Antumapu**	**1.69**	**34**	*e*P	Pn	23 16 54.0	+0.6
ANTU				*i* S	Sn	23 17 14.2	+0.2
LMEL	**Las Melosas**	**1.72**	**50**	*e*P	Pn	23 16 53.8	0.0
LMEL				*e*S	Sn	23 17 15.3	+0.6
LMEL				IAML		23 17 19.4	
	comp=N,2μm,0.2s						
STL	**Santa Lucia**	**1.80**	**32**	*e*P	Pn	23 16 54.9	0.0
STL				*e*S	Sn	23 17 16.5	-0.1
STL				IAML		23 17 21.8	
	comp=N,2μm,0.2s						
FSR	**Penalolen**	**1.82**	**35**	*e*P	Pn	23 16 55.0	0.0
FSR				*e*S	Sn	23 17 17.4	+0.4
CLCH	**Cerro Calan**	**1.88**	**33**	*e*P	Pn	23 16 55.8	-0.1
CLCH				*e*S	Sn	23 17 18.8	+0.2
CLCH				IAML		23 17 22.5	
	comp=N,1μm,0.3s						
PEL	**Peldehue**	**2.04**	**27**	*e*P	Pn	23 16 58.2	+0.1
PEL				*e*S	Sn	23 17 22.6	+0.2
PEL				IAML		23 17 26.0	
	comp=N,659nm,0.5s						
FCH	**Farellones**	**2.05**	**37**	*e*P	Pn	23 16 58.5	0.0
FCH				*e*S	Sn	23 17 23.7	+0.5
FCH				IAML		23 17 26.8	
	comp=N,813nm,0.1s						

IDC 18 23:36:07.3±1.9, 8°55S×125°.95E, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.4/43, mbtmp3.6/3, ML3.3/2, Error ellipse: s-maj=196.9km s-min=33.1km az=60.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.93**	**145**	Pn	Pn	23 39 25.9	-0.3
	0.2nm,0.3s,baz=319,slow=14,SNR=3.7						
WRA				Sn	Sn	23 41 56.5	-5.3
	0.1nm,0.3s,baz=328,slow=28,SNR=2.2						
ASAR	**Alice Springs**	**16.85**	**154**	Pn	Pn	23 40 05.1	+0.3
	0.1nm,0.3s,baz=330,slow=11,SNR=2.2						
MKAR	**Makanchi Array**	**67.40**	**329**	P	P	23 47 04.7	0.0
	0.7nm,0.6s,baz=133,slow=7.2,SNR=6.3						

*ISCJB **18** 23:36:16.8±1.0, 34°.10N±0°.05×25°.13E±0°.04, h22km±7km, mb3.7/5, Error ellipse: s-maj=8.3km s-min=4.6km az=25.0*
*IDC **18** 23:36:16.1±1.2, 34°.30N×25°.13E, h0km, mb3.8/5, mb1 3.8/11, mb1mx3.5/49, mbtmp3.7/11, ML3.5/5, Error ellipse: s-maj=20.5km s-min=18.3km az=72.0*
*ATH **18** 23:36:18.8, 34°.29N×25°.10E, h28km±1km, ML3.1/7, Error ellipse: s-maj=2.8km s-min=1.1km az=346.0*
*THE **18** 23:36:19.7, 34°.33N×25°.07E, h0km±1km, ML3.0/6, Error ellipse: s-maj=3.3km s-min=1.0km az=175.0*
*DDA **18** 23:36:24.6, 34°.06N×24°.90E, h16km, ML3.7*

ISC 18 23:36:17.4±1.7, 34°.19N±0°.06×25°.12E±0°.03, h15km±10km, n62, σ1§52/78, mb3.8/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**343**	P	**Pg**	**23 36 33.6**	**-0.6**
SIVA				S	**Sb**	**23 36 45.3**	**-0.1**
SIVA	**Sivas**	**0.86**	**343**	P	**Pg**	**23 36 33.7**	**-0.5**
SIVA				S	**Sb**	**23 36 45.1**	**-0.3**
SIVA				AML	AML	23 36 53.5	
	comp=E,10562μm,0.5s						
SIVA				AML	AML	23 36 55.4	
	comp=N,7971μm,0.6s						
LAST	**Lasithi**	**1.01**	**17**	P	**Pb**	**23 36 36.7**	**0.0**
LAST				S	**Sg**	**23 36 49.7**	**-0.7**
LAST	**Lasithi**	**1.01**	**17**	P	**Pb**	**23 36 36.7**	**0.0**
LAST				S	**Sg**	**23 36 49.6**	**-0.7**
LAST				AML	AML	23 36 51.2	
	comp=E,1257μm,0.6s						
LAST				AML	AML	23 37 01.1	
	comp=N,1631μm,0.6s						
GVD	**Gavdhos**	**1.07**	**308**	P	**Pb**	**23 36 37.9**	**+0.3**
GVD	**Gavdhos**	**1.07**	**308**	P	**Pb**	**23 36 37.9**	**+0.3**
GVD				S	**Sn**	**23 36 52.9**	**+0.5**
GVD	**Gavdhos**	**1.07**	**308**	P	**Pb**	**23 36 37.9**	**+0.3**
GVD				S	**Sn**	**23 36 52.7**	**+0.3**
GVD				AML	AML	23 36 59.0	
	comp=E,3630μm,0.4s						
GVD				AML	AML	23 37 00.5	
	comp=N,3804μm,0.4s						
IDI	**Anoyia**	**1.11**	**350**	Pn	**Pb**	**23 36 37.9**	**-0.4**
	comp=N,24nm,0.3s,baz=170,slow=17,SNR=85						
IDI				Sn	**Sg**	**23 36 52.5**	**-0.9**
	comp=N,57nm,0.3s,baz=5.4,slow=18,SNR=12						
NPS	**Neapolis**	**1.14**	**21**	P	**Pb**	**23 36 39.1**	**+0.2**
NPS				S	**Sn**	**23 36 54.8**	**+0.5**
NPS	**Neapolis**	**1.14**	**21**	P	**Pb**	**23 36 39.2**	**+0.3**
NPS				S	**Sg**	**23 36 53.9**	**-0.6**
NPS				AML	AML	23 37 02.4	
	comp=E,1401μm,0.6s						
NPS				AML	AML	23 37 04.1	
	comp=N,1074μm,0.4s						
ZKR	**Zakros**	**1.29**	**44**	P	**Pb**	**23 36 42.7**	**+1.3**
ZKR	**Zakros**	**1.29**	**44**	P	**Pb**	**23 36 42.8**	**+1.3**
ZKR				S	**Sg**	**23 37 01.0**	**+1.8**
ZKR	**Zakros**	**1.29**	**44**	P	**Pn**	**23 36 42.2**	**+1.2**
ZKR				S	**Sg**	**23 36 59.2**	**0.0**
ZKR				AML	AML	23 37 10.1	
	comp=N,631μm,0.5s						
ZKR				AML	AML	23 37 13.2	
	comp=E,1235μm,0.5s						
VAM	**Vamos**	**1.43**	**328**	P	**Pn**	**23 36 43.1**	**+0.3**
VAM				S	**Sg**	**23 37 02.0**	**-1.5**
VAM	**Vamos**	**1.43**	**328**	P	**Pn**	**23 36 43.5**	**+0.7**
VAM				S	**Sb**	**23 37 01.4**	**-0.3**
VAM				AML	AML	23 37 10.6	
	comp=N,982μm,0.4s						
VAM				AML	AML	23 37 11.5	
	comp=E,1848μm,0.5s						
IMMV	**Iera Moni Meta**	**1.57**	**324**	P	**Pn**	**23 36 45.2**	**+0.4**
IMMV	**Iera Moni Meta**	**1.57**	**324**	P	**Pn**	**23 36 45.8**	**+1.0**
IMMV	**Iera Moni Meta**	**1.57**	**324**	P	**Pn**	**23 36 45.8**	**+1.0**
IMMV				S	**Sb**	**23 37 05.3**	**-0.6**
IMMV				AML	AML	23 37 24.9	
	comp=N,976μm,0.6s						
IMMV				AML	AML	23 37 31.7	
	comp=E,1449μm,0.8s						
KARP	**Karpathos**	**2.16**	**51**	*e*P	**Pb**	**23 36 56.3**	**+0.1**
KARP	**Karpathos**	**2.16**	**51**	P	**Pb**	**23 36 56.6**	**+0.4**
ANKY	**Antikythira Is**	**2.24**	**319**	P	**Pn**	**23 36 55.6**	**+1.6**
MHLO	**Agia Marina, M**	**2.56**	**347**	P	**Pn**	**23 36 59.1**	**+0.8**
APE	**Apeiranthos**	**2.89**	**7**	*e*P	**Pn**	**23 37 03.6**	**+0.6**
VLI	**Veliai**	**3.08**	**325**	P	**Pn**	**23 37 06.1**	**+0.5**
VLI	**Veliai**	**3.08**	**325**	P	**Pn**	**23 37 06.3**	**+0.8**
ARG	**Arkhangelos**	**3.19**	**50**	*e*P	**Pn**	**23 37 09.1**	**+2.1**
DAT	**Datca**	**3.23**	**38**	*e*P	**Pn**	**23 37 09.0**	**+1.3**
DAT	**Datca**	**3.23**	**38**	*i* P	**Pn**	**23 37 09.7**	**+2.0**
DAT				IAML_P			
	comp=Z,203nm,0.1s						
DALY	**Dalyan (Mula)**	**3.90**	**47**	*e*P	**Pn**	**23 37 18.9**	**+2.2**
DALY	**Dalyan (Mula)**	**3.90**	**47**	*i* P	**Pn**	**23 37 19.9**	**+3.2**
DALY				IAML_P			
	comp=Z,464nm,0.3s						
TURN	**Turunc**	**3.91**	**46**	*e*P	**Pn**	**23 37 14.5**	**-2.3**
TURN	**Turunc**	**3.91**	**46**	*i* P	**Pn**	**23 37 14.9**	**-1.9**
YER	**Yerkesik**	**3.91**	**40**	*e*P	**Pn**	**23 37 19.0**	**+2.1**
ITM	**Ithomi**	**3.95**	**320**	*e*P	**Pn**	**23 37 19.1**	**+1.6**
AKAS	**Kas**	**4.20**	**60**	*e*P	**Pn**	**23 37 22.3**	**+1.2**
AKAS	**Kas**	**4.20**	**60**	*i* P	**Pn**	**23 37 22.3**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**4.37**	**30**	*e*P	**Pn**	**23 37 25.3**	**+2.0**
ELL	**Elmali**	**4.67**	**56**	*e*P	**Pn**	**23 37 29.5**	**+2.0**
AKUM	**Antalya-Kumluc**	**4.78**	**62**	*i* P	**Pn**	**23 37 30.1**	**+1.3**
KORT	**Korkueli**	**5.10**	**55**	*e*P	**Pn**	**23 37 35.5**	**+2.1**
KORT	**Korkueli**	**5.10**	**55**	*i* P	**Pn**	**23 37 36.3**	**+2.9**
KEPZ	**Antalya-Kepez**	**5.94**	**61**	*i* P	**Pn**	**23 37 47.0**	**+2.2**
KEPZ				IAML_P			
	comp=Z,210nm,0.3s						
TEKE	**Tekeli-Mersin**	**6.83**	**71**	*e*P	**Pn**	**23 37 58.1**	**+1.0**
AKKU	**Akkuyu-Mersin**	**7.18**	**72**	*e*P	**Pn**	**23 38 02.2**	**+0.4**
IKL	**Isikli**	**7.31**	**71**	*e*P	**Pn**	**23 38 04.3**	**+0.8**
KEBE	**Keben-Mersin**	**7.38**	**70**	*e*P	**Pn**	**23 38 06.1**	**+1.5**
KIZK	**Mersin**	**7.72**	**70**	*e*P	**Pn**	**23 38 10.9**	**+1.6**
KZIT	**Kziot**	**8.49**	**110**	*e*P	**Pn**	**23 38 19.1**	**-0.8**
KARA	**Karaisali**	**8.64**	**66**	*e*P	**Pn**	**23 38 23.3**	**+1.4**
MMAI	**Mount Meron Ar**	**8.66**	**95**	Pn	**Pn**	**23 38 21.9**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=285,slow=13,SNR=5.6						
MMAI				Sn	**Sn**	**23 39 55.6**	**-4.1**
	comp=Z,1.5nm,0.3s,baz=268,slow=23,SNR=5.4						
BRTR	**Keskin Array B**	**8.78**	**49**	Pn	**Pn**	**23 38 26.4**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=226,slow=12,SNR=2.3						
HRFI	**Mount Harif**	**9.38**	**114**	*e*P	**Pn**	**23 38 30.4**	**-1.6**
EIL	**Elat**	**9.49**	**116**	Pn	**Pn**	**23 38 35.0**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=308,slow=12,SNR=4.8						
EIL				Sn	**Sn**	**23 40 16.4**	**-3.7**
	comp=Z,0.4nm,0.3s,baz=280,slow=20,SNR=2.2						
ASF	**Jabal al Asfar**	**10.08**	**98**	Sn	**Sn**	**23 40 30.2**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=304,slow=21,SNR=1.5						
KBZ	**Khabaz**	**16.76**	**50**	Pn	**P**	**23 40 14.4**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=295,slow=2.1,SNR=6.0						
AKASG	**Malin Array Be**	**16.77**	**9**	Pn	**Pn**	**23 40 10.0**	**-1.6**
	baz=201,slow=11,SNR=5.9						
GERES	**GERESS Array B**	**16.92**	**333**	Pn	**Pn**	**23 40 14.4**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=151,slow=12,SNR=9.8						
TORD	**Torodi Ar. Bea**	**29.85**	**231**	P	**P**	**23 42 25.9**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=28,slow=8.4,SNR=14						
KURBB	**Kurchatov Arra**	**41.76**	**50**	P	**P**	**23 44 06.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=276,slow=8.6,SNR=3.8						
MKAR	**Makanchi Array**	**44.34**	**56**	P	**P**	**23 44 26.7**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=283,slow=6.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**45.70**	**45**	P	**P**	**23 44 37.1**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=264,slow=8.4,SNR=6.6						
SONM	**Songino Array**	**60.13**	**50**	P	**P**	**23 46 25.3**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=287,slow=5.6,SNR=3.4						

*ISCJB **18** 23:37:14.2±1.1, 54°.30N±0°.05×86°.17E±0°.09, h0km, mb3.4/1, Error ellipse: s-maj=8.9km s-min=5.5km az=145.2*
*NNC **18** 23:37:15.6±1.6, 54°.28N×86°.17E, h0km, mb4.3, mpv3.3, Error ellipse: s-maj=17.1km s-min=8.2km az=170.0, Suspected Mining explosion.*
*IDC **18** 23:37:17.3±1.5, 54°.28N×86°.08E, h0km, mb3.4/1, mb1 3.8/4, mb1mx3.3/56, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=12.5km s-min=12.0km az=39.0*
*ASRS **18** 23:37:18.5±0.5, 53°.30N×84°.59E, h15km, Ms2.6/2*

ISC 18 23:37:16.4±1.3, 54°.31N±0°.06×86°.08E±0°.06, h0km, n12, σ1§86/20, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.82**	**245**	⇑P	**Pg**	**23 37 32.0**	**-0.2**
	0.6nm,0.3s						
ZAA0				⇑S	**Sg**	**23 37 44.3**	**+1.4**
	7.0nm,0.5s						
ZALV	**Zalesovo Beam**	**0.82**	**245**	Pg	**Pg**	**23 37 32.0**	**-0.2**
	5.5nm,0.3s,baz=70,slow=13,SNR=44						
ZALV				Lg	Lg	23 37 43.8	
	41nm,0.3s,baz=69,slow=30,SNR=114						
ELT	**Eltsovka**	**1.05**	**175**	*e*Pg	**Pg**	**23 37 36.1**	**-0.4**
ELT				*e*Sg	**Sg**	**23 37 50.0**	**-0.1**
NVS	**Novosibirsk**	**1.74**	**289**	*e*Pg	**Pg**	**23 37 49.9**	**+0.1**
NVS				*e*Sg	**Sg**	**23 38 13.5**	**+1.2**
AKAR	**Aktash**	**4.10**	**166**	*e*Pg	**Pn**	**23 38 22.9**	**+2.4**
KURBB	**Kurchatov Arra**	**5.91**	**234**	Pn	**Pn**	**23 38 46.8**	**+1.7**
	0.6nm,0.3s,baz=52,slow=14,SNR=64						
KURBB				Sn	**Sn**	**23 39 49.9**	**-3.5**
	baz=58,slow=17,SNR=2.3						
KURBB				Lg	Lg	23 40 24.7	
	0.2nm,0.3s,baz=53,slow=32,SNR=8.8						
KURBB	**Kurchatov Arra**	**5.91**	**234**	⇑Pn	**Pn**	**23 38 46.7**	**+1.7**
	6.2nm,0.5s						
KURBB				⇑Sn	**Sn**	**23 39 54.8**	**+1.4**
	5.1nm,0.4s						
KURBB				⇑Lg	Lg	23 40 24.6	
	24nm,0.7s						
MK31	**Makanchi Array**	**7.90**	**199**	⇓Pn	**Pn**	**23 39 13.5**	**+1.0**
	5.3nm,0.7s,baz=26,slow=13,SNR=107						
MK31				⇓Sn	**Sn**	**23 40 41.5**	**-1.0**
	1.4nm,0.6s,baz=22,slow=26,SNR=6.8						
MK31				⇓Lg	Lg	23 41 26.5	
	4.6nm,0.8s,baz=23,slow=31,SNR=5.1						
MKAR	**Makanchi Array**	**7.90**	**199**	Pn	**Pn**	**23 39 14.3**	**+1.8**
	1.7nm,0.3s,baz=22,slow=11,SNR=84						
MKAR				Sn	**Sn**	**23 40 42.5**	**+0.1**
	0.5nm,0.3s,baz=23,slow=27,SNR=11						
MKAR				Lg	Lg	23 41 22.4	
	0.2nm,0.3s,baz=22,slow=30,SNR=7.3						
MAKZ	**Makanchi**	**7.95**	**201**	⇓Sn	**Sn**	**23 40 43.0**	**-0.6**
	2.5nm,0.7s						
MAKZ				⇑Lg	Lg	23 41 28.9	
	6.2nm,1.1s						
BVAR	**Borovoye Array**	**9.40**	**269**	Pn	**Pn**	**23 39 34.4**	**+1.3**
	0.8nm,0.3s,baz=72,slow=16,SNR=4.6						
BVAR				Sn	**Sn**	**23 41 14.8**	**-4.6**
	1.1nm,0.3s,baz=70,slow=28,SNR=7.6						
ILAR	**Eielson Array**	**54.49**	**25**	P	**P**	**23 46 44.4**	**-0.8**
	0.3nm,0.7s,baz=316,slow=6.3,SNR=3.0						

*IDC **18** 23:37:57.5±0.6,

4.8nm,1.0s
PD31 Pinedale Array 84.32 42 *e*P **P 23 50 30.8 -0.2**
3.3nm,1.0s
PDAR Pinedale Array 84.32 42 P **P 23 50 30.3 -0.7**
2.4nm,0.8s,baz=211,slow=3.3,SNR=21
ILAR Eielson Array 84.75 11 P **P 23 50 31.8 -0.5**
2.0nm,0.7s,baz=233,slow=6.2,SNR=19
ILB Eielson Array 84.75 11 *e*P **P 23 50 32.1 -0.2**
11nm,1.5s
INK Inuvik 90.57 14 P **P 23 50 59.8 -0.3**
0.9nm,0.8s,baz=202,slow=4.9,SNR=4.0
INK Inuvik 90.57 14 *e*P **P 23 50 59.8 -0.3**
9.8nm,1.8s
MK32 Makanchi Array 111.95 314 *e*PKiKP **PKiKP 23 56 33.3 +0.1**
MKAR Makanchi Array 111.95 314 PKiKP **PKiKP 23 56 33.3 +0.1**
0.2nm,0.4s,baz=96,slow=2.9,SNR=2.6
ARA0 ARCESS Array S 126.73 352 *e*PKPdf **PKiKP 23 57 01.3 -0.1**
ARCES ARCESS Array B 126.73 352 PKP **PKiKP 23 57 01.3 -0.1**
1.5nm,0.7s,baz=344,slow=1.8,SNR=7.2
GEYT Alibeck 130.32 305 PKP **PKiKP 23 57 09.6 +0.1**
0.4nm,0.5s,baz=81,slow=21,SNR=2.5
FIA0 FINESS Array S 133.98 347 *e*PKPdf **PKiKP 23 57 16.0 -0.1**
FINES FINESS Array B 133.98 347 PKP **PKiKP 23 57 16.0 -0.1**
0.8nm,0.8s,baz=42,slow=3.1,SNR=3.4
CLL Collm 145.94 352 ||*i*PKPbc **PKPdf 23 57 37.2 +0.5**
comp=Z,18nm,1.0s
KOLS Kolonicke sedl 146.09 341 *e*PKP **PKPab 23 57 39.2 +0.3**
OSTC Ostas 146.15 348 *e*PKP **PKPbc 23 57 38.5 +0.2**
CHVC Chvalec 146.15 348 *e*PKP **PKPab 23 57 39.4 +0.3**
BURAR Bucovina Array 146.19 336 ||*i*P **PKiKP 23 57 40.8 -0.9**
UPC Upice 146.24 348 *e*PKP **PKPab 23 57 39.7 +0.3**
BRG Berggiesshubel 146.24 351 *i* PKP **PKPab 23 57 39.2 -0.1**
comp=Z,9.0nm,1.1s
BRG *e*SKP 00 01 05.8
comp=Z,1.0nm,0.7s
DPC Dobruska-Polom 146.33 348 *e*PKP **PKPab 23 57 39.8 0.0**
BIZ Bicaz 146.39 335 ||*i*P **PKPab 23 57 40.6 +0.5**
OKC Ostrava-Krasne 146.41 346 *e*PKP **PKPab 23 57 39.9 -0.2**
PVCC Panska Ves 146.47 350 *e*PKP **PKPab 23 57 40.4 +0.1**
MORC Moravsky Berou 146.61 346 ⇑*i*P **PKPab 23 57 40.9 0.0**
MORC Moravsky Berou 146.61 346 *e*PKP **PKPab 23 57 40.5 -0.4**
TRPA Tarpa 146.71 340 ⇑*i*P **PKPab 23 57 40.9 -0.3**
VRI Vrincioaia 146.98 333 ⇑*i*P **PKPab 23 57 41.9 -0.6**
PRU Pruhonice 147.00 350 *e*PKP **PKPab 23 57 41.6 -0.7**
GOPC GO Pecny, Ondr 147.03 350 *e*PKP **PKPbc 23 57 41.3 +0.5**
VRAC Vranov 147.26 347 PKPbc **PKPab 23 57 42.5 -1.0**
baz=27,slow=4.5
VRAC Vranov 147.26 347 *e*PKP **PKPab 23 57 42.4 -1.0**
TLB Topalu 147.37 330 ⇑*i*P **PKPab 23 57 43.1 -0.9**
JAVC Velka Javorina 147.44 346 *e*PKP **PKPab 23 57 44.0 -0.2**
BR101 Keskin Array S 147.46 318 *e*PKPbc **PKPbc 23 57 43.5 +0.9**
BRTR Keskin Array B 147.47 318 PKPbc **PKPbc 23 57 43.5 +0.9**
comp=Z,2.4nm,0.9s,baz=120,slow=4.4,SNR=10
DOPR Dopca 147.47 334 ||*i*P **PKPab 23 57 43.7 -0.7**
VYHS Vyhne 147.49 344 *e*PKP **PKPab 23 57 43.4 -0.9**
KRUC Moravsky 147.53 347 *e*PKP **PKPbc 23 57 42.9 +0.7**
MLR Muntele Rosu 147.62 333 ||*i*P **PKiKP 23 57 43.9 -0.8**
DRGR 147.81 338 ⇑*i*P **PKiKP 23 57 44.2 -0.8**
MODS Modra-Piesok 147.99 346 *e*PKP **PKPbc 23 57 44.3 +0.8**
KHC Kasperske Hory 147.99 351 *e*PKP **PKPbc 23 57 44.1 +0.6**
VOIR 148.04 334 ⇑*i*P **PKiKP 23 57 45.4 -0.1**
GEC2 GERESS Array S 148.25 350 *e*PKPbc **PKiKP 23 57 45.3 -0.6**
GERES GERESS Array B 148.25 350 PKPbc **PKPbc 23 57 44.9 +0.6**
comp=Z,2.1nm,0.7s,baz=29,slow=3.0,SNR=22
SIRR Siria 148.63 339 ⇑*i*P **PKiKP 23 57 46.5 -0.1**
CONA Conrad Observa 148.72 347 *i* PKiKP **PKiKP 23 57 46.9 +0.1**
comp=Z,5.9nm,1.0s
MOA Molln 149.11 349 *e*PKiKP **PKiKP 23 57 47.3 -0.3**
comp=Z,2.9nm,1.1s
BZS Buzias 149.21 338 ||*i*P **PKiKP 23 57 47.5 -0.3**
MDVR Moldovita 149.89 337 ||*i*P **PKiKP 23 57 49.6 +0.3**
RETA Reutte 149.97 354 *e*PKiKP **PKiKP 23 57 49.5 +0.1**
comp=Z,2.3nm,0.8s
KBA Koelnbreinsper 150.02 350 *e*PKiKP **PKiKP 23 57 49.4 -0.3**
comp=Z,1.9nm,0.5s
WATA Walderalm 150.03 352 *e*PKiKP **PKiKP 23 57 49.6 -0.1**
comp=Z,2.7nm,0.4s
MOTA Moosalm 150.07 353 *e*PKiKP **PKiKP 23 57 50.4 +0.6**
comp=Z,5.5nm,1.0s
SOKA Soboth 150.09 347 *e*PKPbc **PKPbc 23 57 49.3 +0.4**
comp=Z,3.0nm,1.0s
WTTA Wattenberg 150.09 352 *e*PKiKP **PKiKP 23 57 49.9 +0.1**
comp=Z,3.1nm,0.6s
SQTA Sankt Quirin 150.19 353 *e*PKiKP **PKiKP 23 57 50.2 +0.3**
comp=Z,2.7nm,0.9s
DAVA Damuels 150.26 355 *e*PKiKP **PKiKP 23 57 50.6 +0.4**
comp=Z,2.8nm,0.7s
MYKA Terra Mystica 150.40 349 *i* PKPbc **PKPbc 23 57 49.7 +0.1**
comp=Z,5.2nm,0.9s
FETA Feichten 150.44 353 *e*PKiKP **PKiKP 23 57 51.0 +0.4**
comp=Z,2.2nm,0.8s
ABTA Abfaltersbach 150.47 351 *i* PKiKP **PKiKP 23 57 50.3 -0.2**
comp=Z,5.3nm,0.7s
VTS Vitosha 151.09 333 ||*i*P **PKiKP 23 57 52.8 +0.8**

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*IDC **18** 23:46:30.8s 1.2, 34°.27N×25°.09E, h0km, mb3.8/5, mb1 3.7/10, mb1mx3.5/45, mbtmp3.6/10, ML3.8/4, Error ellipse: s-maj=21.7km s-min=18.7km az=74.0*
*ISCJB **18** 23:46:31.8s 1.1, 34°.07N±0°.05×25°.10E±0°.04, h22km±7km, mb3.6/5, Error ellipse: s-maj=8.3km s-min=4.5km az=26.3*
*THE **18** 23:46:34.7, 34°.30N×25°.06E, h1km±2km, ML3.1/5, Error ellipse: s-maj=4.5km s-min=1.4km az=178.0*
*ATH **18** 23:46:34.8, 34°.31N×25°.06E, h28km±1km, ML3.1/6, Error ellipse: s-maj=2.6km s-min=1.2km az=358.0*
*DDA **18** 23:46:57.3, 33°.96N×25°.04E, h25km, ML3.6*
ISC 18 23:46:33.3±1.6,**34°.21N**±0°.06×**25°.09E**±0°.03,**h16**km±10km,
n61,σ1§**35**/74,**mb3.8**/5,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.83**	**344**	P	**Pb**	**23 46 49.2**	**-0.2**
SIVA				S	**Sn**	**23 47 01.7**	**-0.7**
SIVA	**Sivas**	**0.83**	**344**	P	**Pb**	**23 46 49.3**	**-0.2**
SIVA				S	**Sb**	**23 46 59.8**	**-0.6**
SIVA				AML	AML	23 47 08.1	
	comp=E,11260μm,0.6s						
SIVA				AML	AML	23 47 11.0	
	comp=N,7851μm,0.5s						
LAST	**Lasithi**	**1.00**	**18**	P	**Pb**	**23 46 52.2**	**0.0**
LAST	**Lasithi**	**1.00**	**18**	P	**Pb**	**23 46 52.4**	**+0.1**
LAST				S	**Sn**	**23 47 05.6**	**-0.9**
LAST				AML	AML	23 47 06.8	
	comp=E,1314μm,0.6s						
LAST				AML	AML	23 47 11.7	
	comp=N,1297μm,0.5s						
GVD	**Gavdhos**	**1.04**	**307**	P	**Pg**	**23 46 52.6**	**-0.8**
GVD	**Gavdhos**	**1.04**	**307**	P	**Pg**	**23 46 53.3**	**-0.1**
GVD				S	**Sn**	**23 47 07.5**	**+0.1**
GVD	**Gavdhos**	**1.04**	**307**	P	**Pg**	**23 46 53.3**	**-0.1**
GVD				S	**Sb**	**23 47 07.3**	**+1.0**
GVD				AML	AML	23 47 11.5	
	comp=N,2468μm,0.5s						
GVD				AML	AML	23 47 14.6	
	comp=E,3539μm,0.4s						
IDI	**Anoyia**	**1.08**	**351**	Pn	**Pg**	**23 46 53.3**	**-1.0**
	comp=E,33nm,0.3s,baz=346,slow=23,SNR=107						
IDI				Sn	**Sn**	**23 47 08.0**	**-0.6**
	comp=E,42nm,0.3s,baz=5.6,slow=17,SNR=8.2						
NPS	**Neapolis**	**1.13**	**22**	P	**Pb**	**23 46 54.6**	**+0.1**
NPS				S	**Sn**	**23 47 09.3**	**-0.4**
NPS	**Neapolis**	**1.13**	**22**	P	**Pb**	**23 46 54.7**	**+0.3**
NPS				S	**Sn**	**23 47 10.0**	**+0.3**
NPS				AML	AML	23 47 19.1	
	comp=E,1533μm,0.6s						
NPS				AML	AML	23 47 19.6	
	comp=N,1058μm,0.5s						
ZKR	**Zakros**	**1.29**	**46**	P	**Pg**	**23 46 58.2**	**+0.1**
ZKR	**Zakros**	**1.29**	**46**	P	**Pg**	**23 46 58.3**	**+0.1**
ZKR				S	**Sn**	**23 47 16.6**	**+3.0**
ZKR	**Zakros**	**1.29**	**46**	P	**Pg**	**23 46 58.3**	**+0.1**
VAM	**Vamos**	**1.40**	**329**	P	**Pn**	**23 46 59.0**	**+0.8**
VAM				S	**Sn**	**23 47 17.8**	**+1.5**
VAM	**Vamos**	**1.40**	**329**	P	**Pn**	**23 46 59.0**	**+0.8**
VAM				S	**Sn**	**23 47 16.6**	**+0.3**
VAM				AML	AML	23 47 27.1	
	comp=N,1124μm,0.7s						
VAM				AML	AML	23 47 27.1	
	comp=E,1513μm,0.5s						
IMMV	**Iera Moni Meta**	**1.54**	**324**	P	**Pn**	**23 47 00.7**	**+0.6**
IMMV	**Iera Moni Meta**	**1.54**	**324**	P	**Pn**	**23 47 01.2**	**+1.1**
IMMV	**Iera Moni Meta**	**1.54**	**324**	P	**Pb**	**23 47 01.4**	**-0.1**
IMMV				S	**Sb**	**23 47 20.6**	**-0.2**
IMMV				AML	AML	23 47 29.2	
	comp=E,1145μm,0.4s						
IMMV				AML	AML	23 47 40.5	
	comp=N,1119μm,0.9s						
KARP	**Karpathos**	**2.16**	**51**	*e*P	**Pn**	**23 47 09.4**	**+0.8**
KARP	**Karpathos**	**2.16**	**51**	P	**Pb**	**23 47 11.8**	**-0.2**
ANKY	**Antikythira Is**	**2.21**	**319**	P	**Pn**	**23 47 08.7**	**-0.6**
IOSP	**Ios island**	**2.51**	**4**	P	**Pn**	**23 47 14.1**	**+0.6**
MHLO	**Agia Marina, M**	**2.53**	**347**	P	**Pn**	**23 47 14.5**	**+0.7**
APE	**Apeiranthos**	**2.87**	**7**	*e*P	**Pn**	**23 47 20.9**	**+2.5**
VLI	**Veliai**	**3.06**	**325**	P	**Pn**	**23 47 21.7**	**+0.8**
ARG	**Arkhangelos**	**3.19**	**50**	*e*P	**Pn**	**23 47 24.4**	**+1.7**
ARG	**Arkhangelos**	**3.19**	**50**	P	**Pn**	**23 47 25.0**	**+2.3**
DAT	**Datca**	**3.23**	**38**	*e*P	**Pn**	**23 47 24.9**	**+1.5**
DAT	**Datca**	**3.23**	**38**	*i* P	**Pn**	**23 47 25.8**	**+2.4**
DAT				IAML_P			
	comp=Z,231nm,0.2s						
DALY	**Dalyan (Mula)**	**3.90**	**47**	*e*P	**Pn**	**23 47 34.5**	**+2.0**
DALY	**Dalyan (Mula)**	**3.90**	**47**	*i* P	**Pn**	**23 47 34.8**	**+2.4**
TURN	**Turunc**	**3.90**	**46**	*e*P	**Pn**	**23 47 29.8**	**-2.7**
TURN	**Turunc**	**3.90**	**46**	*i* P	**Pn**	**23 47 30.2**	**-2.3**
YER	**Yerkesik**	**3.90**	**41**	*e*P	**Pn**	**23 47 34.4**	**+1.8**
ITM	**Ithomi**	**3.92**	**320**	*e*P	**Pn**	**23 47 33.9**	**+1.0**
KSL	**Kastellorizon**	**4.15**	**61**	P	**Pn**	**23 47 37.2**	**+1.1**
AKAS	**Kas**	**4.21**	**60**	*e*P	**Pn**	**23 47 37.9**	**+1.0**
AKAS	**Kas**	**4.21**	**60**	*i* P	**Pn**	**23 47 38.8**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**4.36**	**31**	*e*P	**Pn**	**23 47 40.7**	**+1.7**
ELL	**Elmali**	**4.67**	**56**	*e*P	**Pn**	**23 47 45.0**	**+1.7**
AKUM	**Antalya-Kumluc**	**4.78**	**62**	*i* P	**Pn**	**23 47 45.8**	**+1.2**
KORT	**Korkueli**	**5.11**	**56**	*e*P	**Pn**	**23 47 51.2**	**+2.0**
KEPZ	**Antalya-Kepez**	**5.95**	**61**	*i* P	**Pn**	**23 48 02.1**	**+1.4**
KEPZ				IAML_P			
	comp=Z,231nm,0.2s						
TEKE	**Tekeli-Mersin**	**6.84**	**71**	*e*P	**Pn**	**23 48 13.2**	**+0.2**
AKKU	**Akkuyu-Mersin**	**7.19**	**72**	*e*P	**Pn**	**23 48 18.4**	**+0.6**
IKL	**Isikli**	**7.32**	**72**	*e*P	**Pn**	**23 48 20.1**	**+0.6**
KEBE	**Keben-Mersin**	**7.39**	**70**	*e*P	**Pn**	**23 48 21.8**	**+1.3**
KIZK	**Mersin**	**7.73**	**70**	*e*P	**Pn**	**23 48 26.3**	**+1.1**
KZIT	**Kziot**	**8.52**	**110**	*e*P	**Pn**	**23 48 34.6**	**-1.4**
KARA	**Karaisali**	**8.65**	**67**	*e*P	**Pn**	**23 48 39.1**	**+1.3**
MMAI	**Mount Meron Ar**	**8.68**	**95**	Pn	**Pn**	**23 48 36.9**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=272,slow=12,SNR=6.7						
MMAI				Sn	**Sn**	**23 50 12.2**	**-3.7**
	comp=Z,1.5nm,0.3s,baz=272,slow=25,SNR=6.0						
BRTR	**Keskin Array B**	**8.77**	**49**	Pn	**Pn**	**23 48 40.6**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=222,slow=13,SNR=2.4						
HRFI	**Mount Harif**	**9.40**	**114**	*e*P	**Pn**	**23 48 46.2**	**-2.0**
EIL	**Elat**	**9.52**	**116**	Pn	**Pn**	**23 48 49.5**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=284,slow=12,SNR=6.8						
EIL				Sn	Sn	23 50 30.4	-6.1
	comp=Z,0.3nm,0.3s,baz=339,slow=13,SNR=2.2						
AKASG	**Malin Array Be**	**16.75**	**9**	Pn	**Pn**	**23 50 25.8**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=199,slow=10,SNR=5.0						
GERES	**GERESS Array B**	**16.89**	**333**	Pn	**Pn**	**23 50 30.5**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=142,slow=11,SNR=9.2						
TORD	**Torodi Ar. Bea**	**29.85**	**231**	P	**P**	**23 52 40.7**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=32,slow=8.4,SNR=9.8						
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**23 54 42.9**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=282,slow=6.2,SNR=5.4						
ZALV	**Zalesovo Beam**	**45.70**	**46**	P	**P**	**23 54 52.7**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=260,slow=8.4,SNR=6.2						
SONM	**Songino Array**	**60.13**	**50**	P	**P**	**23 56 40.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=282,slow=5.3,SNR=3.2						
YKA	**Yellowknife Ar**	**78.33**	**342**	P	**P**	**23 58 30.3**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=50,slow=5.6,SNR=4.0						

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*IDC **19** 00:00:09.3s 0.8, 34°.33N×25°.11E, h0km, mb4.0/11, mb1 4.0/21, mb1mx3.8/52, mbtmp3.9/21, ML3.4/7, MS3.3/5, Ms1 3.4/5, ms1mx2.9/42, Error ellipse: s-maj=14.2km s-min=13.3km az=95.0*
*ATH **19** 00:00:13.4, 34°.29N×25°.13E, h26km±1km, ML3.6/7, Error ellipse: s-maj=3.8km s-min=1.3km az=352.0*
*DDA **19** 00:00:14.4, 34°.01N×25°.01E, h11km±1km, ML4.1*
*THE **19** 00:00:14.6, 34°.35N×25°.13E, h0km±1km, ML3.6/8, Error ellipse: s-maj=2.7km s-min=1.0km az=167.0*
*GII **19** 00:00:21.1±0.0, 33°.73N×26°.18E, h1km, mb4.0/1, MD3.8/2*
*TIR **19** 00:01:26.9, 39°.02N×21°.29E, h10km, Md4.7/4*
ISC 19 00:00:12.8±1.4,**34°.22N**±0°.05×**25°.15E**±0°.03,**h25**km±10km,
n204,σ1§**96**/222,**mb4.3**/17,**7C-4D**,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.85**	**341**	P	**Pb**	**00 00 28.4**	**-0.5**
SIVA				S	**Sn**	**00 00 40.9**	**+0.1**
SIVA	**Sivas**	**0.85**	**341**	P	**Pb**	**00 00 28.6**	**-0.3**
SIVA				S	**Sb**	**00 00 40.2**	**+0.3**
SIVA				AML	AML	00 00 47.8	
	comp=E,30651μm,0.5s						
SIVA				AML	AML	00 00 48.1	
	comp=N,20544μm,0.6s						
TMBK	**Timbaki Herakl**	**0.91**	**340**	P	**Pb**	**00 00 30.1**	**+0.1**
TMBK				S	**Sb**	**00 00 42.4**	**+0.7**
LAST	**Lasithi**	**0.98**	**16**	P	**Pn**	**00 00 31.0**	**-0.1**
LAST				S	**Sn**	**00 00 44.5**	**+0.2**
LAST	**Lasithi**	**0.98**	**16**	P	**Pn**	**00 00 31.0**	**-0.1**
LAST				AML	AML	00 00 49.5	
	comp=N,3809μm,1.0s						
LAST				AML	AML	00 00 54.0	
	comp=E,3219μm,1.3s						
GVD	**Gavdhos**	**1.07**	**306**	P	**Pb**	**00 00 32.9**	**+0.1**
GVD	**Gavdhos**	**1.07**	**306**	P	**Pb**	**00 00 32.9**	**+0.1**
GVD				S	**Sn**	**00 00 49.6**	**+3.2**
GVD	**Gavdhos**	**1.07**	**306**	P	**Pb**	**00 00 32.9**	**+0.1**
GVD				AML	AML	00 00 55.9	
	comp=E,12756μm,0.4s						
GVD				AML	AML	00 01 01.8	
	comp=N,13067μm,0.7s						
GVDS	**Gavdos**	**1.07**	**306**	P	**Pb**	**00 00 33.3**	**+0.5**
GVDS				S	**Sn**	**00 00 50.3**	**+3.9**
KSTL	**Kastelli Herak**	**1.09**	**357**	P	**Pn**	**00 00 31.5**	**-1.0**
KSTL				S	**Sb**	**00 00 45.1**	**-1.7**
IACM	**Heraklion**	**1.09**	**357**	P	**Pb**	**00 00 33.5**	**+0.5**
IDI	**Anoyia**	**1.09**	**349**	Pn	**Pn**	**00 00 32.6**	**-0.1**
	comp=N,68nm,0.3s,baz=168,slow=20,SNR=96						
IDI				Sn	**Sb**	**00 00 45.5**	**-1.4**
	comp=N,173nm,0.3s,baz=108,slow=20,SNR=17						
IDI	**Anoyia**	**1.09**	**349**	P	**Pn**	**00 00 32.2**	**-0.4**
NPS	**Neapolis**	**1.11**	**20**	P	**Pn**	**00 00 33.1**	**+0.2**
NPS	**Neapolis**	**1.11**	**20**	P	**Pn**	**00 00 33.3**	**+0.4**
NPS				AML	AML	00 00 57.6	
	comp=E,3393μm,0.6s						
NPS				AML	AML	00 01 03.0	
	comp=N,3679μm,0.8s						
ZKR	**Zakros**	**1.26**	**44**	P	**Pb**	**00 00 35.8**	**-0.1**
ZKR	**Zakros**	**1.26**	**44**	P	**Pb**	**00 00 36.7**	**+0.8**
ZKR				S	**Sb**	**00 00 54.1**	**+2.4**
ZKR	**Zakros**	**1.26**	**44**	P	**Pb**	**00 00 36.5**	**+0.6**
ZKR				S	**Sb**	**00 00 53.6**	**+1.9**
ZKR				AML	AML	00 00 58.4	
	comp=E,4164μm,0.7s						
ZKR				AML	AML	00 01 01.7	
	comp=N,1233μm,0.7s						
VAM	**Vamos**	**1.42**	**327**	P	**Pb**	**00 00 38.5**	**-0.2**
VAM				S	**Sb**	**00 00 57.0**	**+0.6**
VAM	**Vamos**	**1.42**	**327**	P	**Pb**	**00 00 38.5**	**-0.2**
VAM				AML	AML	00 01 10.3	
	comp=E,5080μm,0.6s						
VAM				AML	AML	00 01 17.7	
	comp=N,3830μm,0.6s						
IMMV	**Iera Moni Meta**	**1.57**	**323**	P	**Pb**	**00 00 41.1**	**-0.1**
IMMV	**Iera Moni Meta**	**1.57**	**323**	P	**Pb**	**00 00 41.2**	**0.0**
IMMV				S	**Sb**	**00 01 01.5**	**+0.9**
IMMV	**Iera Moni Meta**	**1.57**	**323**	P	**Pb**	**00 00 41.4**	**+0.2**
IMMV				AML	AML	00 01 15.4	
	comp=N,3766μm,0.6s						
IMMV				AML	AML	00 01 23.4	
	comp=E,5209μm,0.5s						
CHAN	**Chania**	**1.59**	**325**	P	**Pb**	**00 00 41.6**	**+0.1**
CHAN				S	**Sb**	**00 01 00.9**	**-0.2**
KARP	**Karpathos**	**2.12**	**51**	P	**Pb**	**00 00 50.6**	**0.0**
KARP	**Karpathos**	**2.12**	**51**	P	**Pb**	**00 00 50.5**	**-0.2**
THR9	**Santorini-Faro**	**2.14**	**5**	P	**Pn**	**00 00 49.3**	**+2.3**
THR6	**Thira Island,**	**2.15**	**5**	P	**Pn**	**00 00 49.0**	**+1.9**
THR6	**Thira Island,**	**2.15**	**5**	P	**Pb**	**00 00 49.6**	**-1.4**
SANT	**Santorini**	**2.17**	**7**	*e*P	**Pn**	**00 00 49.6**	**+2.2**
THR3	**Thira Island,**	**2.20**	**5**	P	**Pn**	**00 00 49.6**	**+1.8**
THR5	**Thira Island,**	**2.20**	**4**	P	**Pn**	**00 00 49.8**	**+2.0**
THR5	**Thira Island,**	**2.20**	**4**	P	**Pn**	**00 00 49.9**	**+2.0**
THR8	**Santorini-Mono**	**2.20**	**7**	P	**Pn**	**00 00 49.7**	**+1.9**
SAP2K	**Karterados**	**2.20**	**6**	P	**Pn**	**00 00 49.1**	**+1.2**
THR7	**Fira-Santorini**	**2.21**	**6**	P	**Pn**	**00 00 49.7**	**+1.7**
SAP3	**Santorini-Thir**	**2.22**	**4**	P	**Pn**	**00 00 49.0**	**+0.9**
THT2	**Imerovigli**	**2.23**	**6**	P	**Pn**	**00 00 49.9**	**+1.7**
ANKY	**Antikythira Is**	**2.24**	**318**	P	**Pn**	**00 00 50.7**	**+2.4**
ANKY				S	**Sb**	**00 01 18.1**	**-1.8**
ANKY	**Antikythira Is**	**2.24**	**318**	P	**Pn**	**00 00 50.7**	**+2.4**
THR2	**Thira island,**	**2.24**	**6**	P	**Pn**	**00 00 49.7**	**+1.4**
IOSP	**Ios island**	**2.50**	**3**	P	**Pn**	**00 00 53.0**	**+1.0**
MHLO	**Agia Marina, M**	**2.54**	**346**	P	**Pn**	**00 00 53.8**	**+1.3**
MHLA	**Plaka, Milos I**	**2.59**	**347**	P	**Pn**	**00 00 55.1**	**+1.9**
KYTH	**Kithira**	**2.67**	**321**	P	**Pn**	**00 00 57.0**	**+2.7**
AMGA	**Amorgos Island**	**2.68**	**13**	P	**Pn**	**00 00 55.7**	**+1.3**
APE	**Apeiranthos**	**2.86**	**6**	*e*P	**Pn**	**00 00 58.4**	**+1.4**
APE	**Apeiranthos**	**2.86**	**6**	P	**Pn**	**00 00 58.1**	**+1.1**
VLI	**Veliai**	**3.08**	**325**	P	**Pn**	**00 01 01.0**	**+1.1**
ARG	**Arkhangelos**	**3.15**	**50**	*e*P	**Pn**	**00 01 03.4**	**+2.5**
ARG	**Arkhangelos**	**3.15**	**50**	P	**Pn**	**00 01 03.6**	**+2.7**
ARG	**Arkhangelos**	**3.15**	**50**	P	**Pn**	**00 01 03.6**	**+2.7**
DAT	**Datca**	**3.20**	**38**	*e*P	**Pn**	**00 01 03.8**	**+2.2**
DAT	**Datca**	**3.20**	**38**	*i* P	**Pn**	**00 01 04.1**	**+2.5**
DAT				IAML_P			
	comp=Z,468nm,0.2s						
BODT	**Bodrum**	**3.34**	**31**	*e*P	**Pn**	**00 01 05.4**	**+1.9**
BDRM	**Kayabasi**	**3.40**	**33**	*i* P	**Pn**	**00 01 07.3**	**+2.9**
BDRM				IAML_P			
	comp=Z,565nm,0.2s						
BBRN	**Bozburun-Marma**	**3.42**	**43**	*e*P	**Pn**	**00 01 06.7**	**+2.1**
MRSB	**Marmaris-Mugla**	**3.52**	**44**	*e*P	**Pn**	**00 01 07.4**	**+1.4**
KRND	**KRANIDI**	**3.55**	**333**	P	**Pn**	**00 01 07.8**	**+1.4**
DID	**Didima**	**3.63**	**335**	P	**Pn**	**00 01 08.1**	**+0.6**
DID				S	**Sn**	**00 01 49.5**	**-0.1**
EPID	**Epidavros**	**3.77**	**335**	P	**Pn**	**00 01 10.3**	**+0.9**
VLY	**Voula,Athens**	**3.79**	**344**	P	**Pn**	**00 01 10.7**	**+1.0**
DALY	**Dalyan (Mula)**	**3.86**	**47**	*e*P	**Pn**	**00 01 13.1**	**+2.5**
DALY	**Dalyan (Mula)**	**3.86**	**47**	*i* P	**Pn**	**00 01 13.7**	**+3.1**
DALY				IAML_P			
	comp=Z,745nm,0.2s						
TURN	**Turunc**	**3.87**	**46**	*e*P	**Pn**	**00 01 09.1**	**-1.6**
TURN	**Turunc**	**3.87**	**46**	*i* P	**Pn**	**00 01 09.7**	**-1.0**
TURN				IAML_P			
	comp=Z,1μm,0.2s						
YER	**Yerkesik**	**3.87**	**40**	*e*P	**Pn**	**00 01 13.2**	**+2.3**
ATHU	**Athens Univers**	**3.90**	**344**	P	**Pn**	**00 01 12.0**	**+0.7**
ITM	**Ithomi**	**3.95**	**319**	*e*P	**Pn**	**00 01 12.7**	**+0.8**
ITM	**Ithomi**	**3.95**	**319**	P	**Pn**	**00 01 12.5**	**+0.6**
PTL	**Penteli**	**3.96**	**345**	P	**Pn**	**00 01 13.2**	**+1.2**
FETY	**Fethiye**	**4.02**	**52**	*e*P	**Pn**	**00 01 13.5**	**+0.7**
ACOR	**Acrocorinthos**	**4.11**	**334**	P	**Pn**	**00 01 14.8**	**+0.8**
KSL	**Kastellorizon**	**4.11**	**61**	P	**Pn**	**00 01 15.5**	**+1.4**
MES3	**Kyparissia**	**4.14**	**318**	P	**Pn**	**00 01 14.9**	**+0.4**
AKAS	**Kas**	**4.17**	**60**	*e*P	**Pn**	**00 01 16.5**	**+1.5**
AKAS	**Kas**	**4.17**	**60**	*i* P	**Pn**	**00 01 16.7**	**+1.7**
AKAS				IAML_P			
	comp=Z,3μm,0.1s						
VIL2	**Platees**	**4.27**	**340**	P	**Pn**	**00 01 16.2**	**0.0**
EREA	**Eretria**	**4.31**	**347**	P	**Pn**	**00 01 18.1**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**4.34**	**30**	*e*P	**Pn**	**00 01 19.6**	**+2.3**
PROD	**Prodromos**	**4.42**	**336**	P	**Pn**	**00 01 18.9**	**+0.5**
KLV	**Kalavryta, Ach**	**4.53**	**328**	P	**Pn**	**00 01 20.6**	**+0.8**
TRAZ	**Trapeza**	**4.60**	**330**	P	**Pn**	**00 01 22.2**	**+1.3**
ELL	**Elmali**	**4.63**	**56**	*e*P	**Pn**	**00 01 23.2**	**+1.8**
MRKA	**Markates**	**4.65**	**345**	P	**Pn**	**00 01 22.5**	**+1.0**
AKUM	**Antalya-Kumluc**	**4.74**	**62**	*i* P	**Pn**	**00 01 24.9**	**+2.2**
ATAL	**Atalanti**	**4.79**	**340**	P	**Pn**	**00 01 24.3**	**+0.9**
KALE	**Kalithea**	**4.82**	**331**	P	**Pn**	**00 01 25.0**	**+1.1**
TRIZ	**Trizonia**	**4.83**	**330**	P	**Pn**	**00 01 24.9**	**+1.0**
RLS	**Riolos of Patr**	**4.86**	**323**	P	**Pn**	**00 01 26.9**	**+2.6**

CRES	**Cresnjev**	**13.76**	**330**	*e*Pn	**Pn**	**00 03 22.1**	**-4.1**
CEY	**Cerknica**	**14.13**	**328**	*e*Pn	**Pn**	**00 03 28.0**	**-3.3**
JAVS	**Javornik**	**14.41**	**327**	*i* Pn	**Pn**	**00 03 32.8**	**-2.4**
JAVS				*i* Sn	Sn	00 06 00.4	-14
SOKA	**Soboth**	**14.62**	**331**	*e*Pn	**Pn**	**00 03 34.9**	**-3.1**
SOKA				*e*P	**P**	**00 03 46.3**	**+2.1**
	comp=Z,2.2nm,0.7s						
OBKA	**Obir**	**14.68**	**330**	*e*Pn	**Pn**	**00 03 36.2**	**-2.7**
	comp=Z,0.2nm,0.1s						
OBKA				*e*P	**P**	**00 03 46.3**	**+1.4**
	comp=Z,1.2nm,0.4s						
VYHS	**Vyhne**	**15.02**	**344**	*e*PN	**Pn**	**00 03 40.4**	**-3.0**
ABTA	**Abfaltersbach**	**15.76**	**326**	*e*Pn	**Pn**	**00 03 51.9**	**-1.2**
	comp=Z,0.2nm,0.1s						
ABTA				*e*P	**P**	**00 03 58.9**	**+2.0**
	comp=Z,6.0nm,0.5s,SNR=5.9						
MOA	**Molln**	**15.88**	**332**	*e*P	**P**	**00 03 58.7**	**+0.6**
	comp=Z,3.2nm,0.5s						
KRUC	**Moravsky**	**16.19**	**339**	*e*PN	**P**	**00 04 01.2**	**-0.4**
VRAC	**Vranov**	**16.36**	**340**	Pn	**Pn**	**00 04 00.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=154,slow=8.2,SNR=10						
VRAC	**Vranov**	**16.36**	**340**	⇓*i*P	**P**	**00 04 03.8**	**+0.4**
VRAC	**Vranov**	**16.36**	**340**	*e*PN	**P**	**00 04 03.9**	**+0.5**
WTTA	**Wattenberg**	**16.54**	**326**	*e*P	**P**	**00 04 08.5**	**+2.9**
	comp=Z,1.1nm,0.3s,SNR=4.1						
GNI	**Garni**	**16.69**	**64**	Pn	**Pn**	**00 04 06.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=218,slow=18,SNR=2.1						
GNI				LR	LR	00 12 06.8	
	comp=Z,162nm,19.3s,baz=314,slow=43						
KIV	**Kislovodsk**	**16.70**	**49**	⇑*i*P	**P**	**00 04 10.7**	**+3.3**
KBZ	**Khabaz**	**16.73**	**50**	Pn	**P**	**00 04 07.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=255,slow=13,SNR=7.0						
AKASG	**Malin Array Be**	**16.74**	**9**	Pn	**Pn**	**00 04 04.5**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=200,slow=11,SNR=12						
FETA	**Feichten**	**16.80**	**324**	*e*P	**P**	**00 04 11.0**	**+2.5**
	comp=Z,1.7nm,0.7s						
GERES	**GERESS Array B**	**16.91**	**333**	Pn	**Pn**	**00 04 07.5**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=144,slow=12,SNR=51						
DAVOX	**Davos/Dischmat**	**17.06**	**322**	LR	LR	00 12 40.8	
	comp=Z,80nm,18.6s,baz=83,slow=44						
KHC	**Kasperske Hory**	**17.20**	**334**	*e*P	**Pn**	**00 04 11.0**	**-0.3**
KHC				*ex*	x	00 04 13.9	
DPC	**Dobruska-Polom**	**17.37**	**341**	*e*P	**Pn**	**00 04 14.3**	**+0.8**
DAVA	**Damuels**	**17.40**	**323**	*e*P	**P**	**00 04 16.4**	**+1.3**
	comp=Z,1.9nm,0.4s						
PRU	**Pruhonice**	**17.59**	**337**	*e*P	**Pn**	**00 04 15.8**	**-0.3**
PRU				*ex*	x	00 04 20.6	
BRG	**Berggiesshubel**	**18.55**	**337**	*e*P	**Pn**	**00 04 28.7**	**+0.9**
	comp=Z,3.6nm,0.8s						
ESDC	**Sonseca Array**	**23.84**	**292**	P	**P**	**00 05 24.6**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=86,slow=9.4,SNR=8.1						
HFS	**Hagfors**	**26.99**	**347**	P	**P**	**00 05 51.6**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=141,slow=9.6,SNR=5.8						
FINES	**FINESS Array B**	**27.25**	**1**	P	**P**	**00 05 52.0**	**-2.8**
	comp=Z,1.2nm,0.7s,baz=161,slow=12,SNR=7.2						
KLMR	**Klimovskoe**	**28.23**	**15**	*e*P	**P**	**00 06 02.7**	**-0.8**
KLMR				AMP		00 06 09.0	
	comp=Z,5.0nm,0.9s						
NB2	**NORSAR Subarra**	**28.31**	**346**	P	**P**	**00 06 03.7**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=158,slow=10						
NOA	**NORSAR Array B**	**28.31**	**346**	P	**P**	**00 06 01.8**	**-2.5**
	comp=Z,0.5nm,0.8s,baz=148,slow=9.7,SNR=4.7						
NOA				LR	LR	00 18 40.7	
	comp=Z,37nm,20.4s,baz=340,slow=39						
EKA	**Eskdalemuir Ar**	**28.81**	**326**	P	**P**	**00 06 07.8**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=131,slow=8.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**29.88**	**231**	P	**P**	**00 06 18.6**	**0.0**
	comp=Z,4.9nm,0.6s,baz=29,slow=8.7,SNR=83						
ARCES	**ARCESS Array B**	**35.37**	**0**	P	**P**	**00 07 03.5**	**-2.6**
	comp=Z,8.6nm,0.3s,baz=174,slow=9.5,SNR=12						
DBIC	**Dimbokro**	**38.98**	**232**	P	**P**	**00 07 37.8**	**+0.6**
	comp=Z,6.3nm,0.9s,baz=24,slow=10.0,SNR=6.1						
DBIC				LR	LR	00 25 60.0	
	comp=Z,69nm,19.5s,baz=25,slow=40						
MKAR	**Makanchi Array**	**44.31**	**56**	P	**P**	**00 08 21.6**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=283,slow=6.1,SNR=13						
ZALV	**Zalesovo Beam**	**45.67**	**46**	P	**P**	**00 08 29.7**	**-1.5**
	comp=Z,1.4nm,0.6s,baz=278,slow=10,SNR=4.5						
WMQ	**Urumqi**	**48.49**	**59**	*e*P	P	00 08 59.4	+5.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,57nm,4.5s						
WMQ				LR	LR		
	comp=N,100nm,28.9s						
WMQ				LR	LR		
	comp=E,210nm,29.2s						
WMQ				LR	LR		
	comp=Z,57nm,28.8s						
SONM	**Songino Array**	**60.09**	**50**	P	**P**	**00 10 19.2**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=293,slow=9.6,SNR=5.6						
BOSA	**Boshof**	**62.49**	**180**	P	**P**	**00 10 36.0**	**+1.8**
	comp=Z,3.8nm,1.0s,baz=26,slow=8.1,SNR=3.1						
LZH	**Lanzhou**	**62.63**	**63**	*e*P	**P**	**00 10 37.5**	**+2.1**
LZH				pP	pP	00 10 42.6	+0.1
LZH				sP	sP	00 10 44.6	-0.6
LZH				PP	**PP**	**00 12 54.6**	**+1.6**
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
CD2	**Chengdu**	**64.74**	**69**	*e*P	**P**	**00 10 49.8**	**+0.5**
HHC	**Hu-ho-hao-te**	**66.17**	**56**	*e*P	**P**	**00 11 00.1**	**+1.6**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,61nm,5.7s						
KMI	**Kunming**	**66.56**	**75**	P	**P**	**00 11 03.8**	**+2.5**
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
XAN	**Xi'an**	**67.26**	**64**	P	**P**	**00 11 07.1**	**+1.6**
XAN				pP	pP	00 11 11.5	-0.8
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				LR	LR		
	comp=N,210nm,16.3s						
XAN				LR	LR		
	comp=E,47nm,5.1s						
XAN				LR	LR		
	comp=Z,180nm,10.4s						

*SNET **19** 00:05:49.7±0.9, 14.°12N×89.°71W, h6km±7km, ML2.5*
*ISCJB **19** 00:05:51.2±0.6, 14.°07N±0.°04×89.°68W±0.°03, h12km, Error ellipse: s-maj=5.5km s-min=4.6km az=29.2*
*GCG **19** 00:05:51.3±0.6, 14.°10N×89.°71W, h24km±3km, MD2.9*
ISC 19 00:05:50.2±0.9, **14.°12N**±0.°05×**89.°71W**±0.°04, **h12**km, **n9**, σ0°**48**/13, **1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNIC	**Santa Ana**	**0.20**	**132**	*e*S	**Sg**	**00 05 57.9**	**+0.4**
UNIC				IAML		00 05 59.8	
	comp=Z,977nm,0.3s						
RTR	**El Retiro**	**0.23**	**165**	*e*P	**Pg**	**00 05 55.4**	**+0.1**
SNJE	**San Jose**	**0.27**	**158**	⇓*e*P	**Pg**	**00 05 56.0**	**+0.1**
SBLS	**San Blas**	**0.29**	**164**	*e*P	**Pg**	**00 05 56.2**	**-0.1**
MTO3	**Montecristo**	**0.43**	**51**	*e*P	**Pb**	**00 05 59.7**	**-0.3**
MTO3				*e*S	**Sb**	**00 06 06.2**	**-0.4**
IXG	**Ixpaco**	**0.71**	**274**	*e*P	**Pb**	**00 06 04.8**	**+0.1**
IXG				*e*S	**Sn**	**00 06 16.1**	**-1.2**
NBG	**Las Nubes**	**0.77**	**307**	*e*S	**Sn**	**00 06 18.7**	**-0.2**
MRL	**Marmol**	**0.95**	**1**	*e*P	**Pn**	**00 06 09.9**	**+0.3**
MRL				*e*S	**Sn**	**00 06 23.8**	**+0.5**
FUG	**Fuego 3**	**1.15**	**287**	*e*P	**Pg**	**00 06 12.3**	**0.0**
FUG				*e*S	**Sn**	**00 06 28.5**	**+0.5**

KRSC 19 00:07:23.0±1.3, **47.°86N**×**154.°93E**, **h174**km±22km, **ML4.3, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.93**	**15**	*e*P	Pn	00 08 12.5	+2.1
SKR				*e*S	Sn	00 08 48.6	+1.2
ALID	**Alaid**	**3.04**	**7**	*e*P	Pn	00 08 13.8	+1.9
PAU	**Pauzhetka**	**3.81**	**18**	*e*P	Pn	00 08 22.8	+1.4
PAU				*e*S	Sn	00 09 08.0	+0.9
KDTR	**Khodutka, Kamc**	**4.45**	**26**	*e*P	Pn	00 08 30.5	+1.0
KDTR				*e*S	Sn	00 09 21.7	0.0
ASAK	**Asacha**	**4.91**	**22**	*e*P	Pn	00 08 37.7	+2.0
MTVR	**Mutnovka**	**5.08**	**23**	*e*P	Pn	00 08 40.5	+2.6
MTVR				*e*S	Sn	00 09 37.6	+1.0
RUS	**Russkaya**	**5.12**	**25**	*e*P	Pn	00 08 39.7	+1.4
RUS				*e*S	Sn	00 09 36.8	-0.6
UGLR	**Uglovaya**	**5.90**	**23**	*e*P	Pn	00 08 50.5	+1.9
AVH	**Avacha**	**5.93**	**23**	*e*P	Pn	00 08 50.3	+1.4
SMAR	**Somma**	**5.94**	**23**	*e*P	Pn	00 08 51.8	+2.5
SDLR	**Sedlovina**	**5.98**	**23**	*e*P	Pn	00 08 51.7	+2.1
KRX	**Arik**	**5.99**	**22**	*e*P	Pn	00 08 51.9	+2.1
GNL	**Ganaly**	**6.14**	**17**	*e*P	Pn	00 08 52.8	+1.0
SPN	**Mys Shipunski**	**6.17**	**30**	*e*P	Pn	00 08 54.0	+2.0
SPN				*e*S	Sn	00 10 02.1	+0.1
MKZ	**Mys Kozlova**	**7.94**	**30**	*e*P	Pn	00 09 17.5	+2.1

IDC 19 00:39:44.8±2.1, **3.°47S**×**127.°75E**, **h0**km, **mb3.3**/2, **mb1 3.6**/3, **mb1mx3.4**/32, **mbtmp3.4**/3, **ML3.3**/1, **MS3.8**/1, **Ms1 3.8**/1, **ms1mx2.7**/14, **Error ellipse: s-maj=178.4km s-min=26.8km az=67.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.59**	**159**	P	Pn	00 43 51.6	+0.1
	0.1nm,0.3s,baz=337,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**20.94**	**164**	P	P	00 44 29.4	0.0
	0.8nm,0.5s,baz=350,slow=12,SNR=9.0						
CTA	**Charters Tower**	**24.47**	**134**	LR	LR	00 54 25.4	
	comp=Z,226nm,20.1s,baz=234,slow=36						
MKAR	**Makanchi Array**	**64.06**	**327**	P	P	00 50 20.6	0.0
	0.3nm,1.0s,baz=120,slow=8.5,SNR=2.1						

*ISCJB **19** 00:48:31.9±0.7, 40.°37N±0.°04×37.°70E±0.°04, h3km±7km, Error ellipse: s-maj=6.6km s-min=4.7km az=5.1*
*ISK **19** 00:48:31.6, 40.°34N×37.°69E, h8km, ML2.1/3*
*DDA **19** 00:48:31.7, 40.°35N×37.°71E, h7km±1km, ML2.6*
ISC 19 00:48:31.7±1.3, **40.°35N**±0.°04×**37.°72E**±0.°03, **h7**km±13km, **n13**, σ0°**52**/18, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUSE	**Susehri**	**0.39**	**110**	*i* P	**Pb**	**00 48 40.8**	**-0.3**
SUSE				*i* S	**Sb**	**00 48 46.7**	**-0.7**
CUZAR	**Zara_SIVAS**	**0.46**	**175**	*i* P	**Pg**	**00 48 41.1**	**+0.5**
ORDU	**Ordu-Boztepe**	**0.65**	**9**	*i* P	**Pg**	**00 48 44.8**	**+0.5**
SVSK	**Karacayir**	**0.70**	**233**	PG	**Pg**	**00 48 45.3**	**+0.2**
SVSK				SG	**Sb**	**00 48 55.3**	**-0.8**
ERBA	**Erbaa**	**0.81**	**295**	*i* P	**Pb**	**00 48 47.9**	**-0.3**
ERBA				IAML_P			
	comp=Z,3μm,0.1s						
TOKT	**Tokat**	**0.90**	**269**	PG	**Pg**	**00 48 48.9**	**0.0**
TOKT				SG	**Sb**	**00 49 01.6**	**-0.3**
CUKAN	**kangal_SIVAS**	**1.05**	**191**	*i* P	**Pb**	**00 48 51.9**	**-0.4**
CUKAN				*i* S	**Sn**	**00 49 08.6**	**+0.7**
KELT	**Kelkit**	**1.19**	**99**	*i* P	**Pg**	**00 48 53.9**	**-0.7**
KEMA	**Kemaliye**	**1.23**	**151**	*i* P	**Pb**	**00 48 55.2**	**-0.1**
KEMA				IAML_P			
	comp=Z,391nm,0.1s						
KVT	**Kavak**	**1.47**	**301**	PN	**Pn**	**00 48 58.7**	**0.0**
KVT				SN	**Sg**	**00 49 18.8**	**-0.1**
MACK	**Trabzon**	**1.67**	**68**	*i* P	**Pb**	**00 49 02.3**	**-0.5**
KTUT	**Trabzon**	**1.68**	**67**	PN	**Pb**	**00 49 03.1**	**+0.1**
BAYT	**Aydıntepe-Bayb**	**1.85**	**88**	PN	**Pn**	**00 49 04.8**	**+0.8**

*SFS **19** 00:55:08.0, 33.°77N×5.°12W, ML3.4, QUED NJA (MARRUECOS)*
*MDD **19** 00:55:08.7±2.3, 33.°76N×4.°84W, h0km, mb3.6/5, Error ellipse: s-maj=22.7km s-min=17.9km az=9.0, PRXIMO*
*IGIL **19** 00:55:09.9, 33.°65N×4.°82W, h22km*
*INMG **19** 00:55:09.6±1.2, 33.°71N×4.°64W, h31km±10km, ML2.1, Error ellipse: s-maj=7.2km s-min=5.3km az=77.0*
*ISCJB **19** 00:55:10.1±0.7, 33.°97N±0.°03×4.°90W±0.°07, h15km, Error ellipse: s-maj=8.5km s-min=4.6km az=0.1*
ISC 19 00:55:09.0±1.6, **33.°79N**±0.°05×**4.°86W**±0.°08, **h15**km, **n42**, σ1°**11**/65, **1C-1D, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IFR	**Ifrane**	**0.35**	**219**	⇑*i*P	**Pn**	**00 55 19.2**	**-0.5**
IFR				*e*S	**Sn**	**00 55 26.6**	**0.0**
EMIN	**Mina Concepcio**	**4.23**	**340**	P	**Pn**	**00 56 12.7**	**-0.2**
	0.9nm,0.1s,SNR=8.7						
EMIN				S	**Sn**	**00 56 59.9**	**-2.2**
	3.1nm,0.8s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**4.26**	**325**	*e*Pn	**Pn**	**00 56 14.4**	**+1.1**
PBDV				*e*Sn	**Sn**	**00 57 02.6**	**-0.1**
PBDV	**Barranco-do-Ve**	**4.26**	**325**	P	**Pn**	**00 56 14.4**	**+1.1**
PBDV				S	**Sn**	**00 57 02.6**	**-0.1**
EQES	**Quesada**	**4.26**	**19**	P	**Pn**	**00 56 15.5**	**+2.1**
	0.2nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**00 57 04.4**	**+1.5**
	2.9nm,0.4s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.29**	**328**	*e*Pn	**Pn**	**00 56 14.0**	**+0.3**
PVAQ				*e*Sn	**Sn**	**00 57 02.7**	**-0.8**
PVAQ				A	A	00 57 21.8	
	3.0nm,0.7s						
PVAQ	**Vaqueiros**	**4.29**	**328**	P	**Pn**	**00 56 14.0**	**+0.3**
PVAQ				S	**Sn**	**00 57 02.7**	**-0.8**
	3.0nm,0.7s						
EADA	**Adamuz**	**4.37**	**3**	P	**Pn**	**00 56 15.6**	**+0.7**
	0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**00 57 04.5**	**-1.1**
	2.2nm,1.0s,SNR=7.9						
PCVE	**Castro Verde**	**4.62**	**327**	*e*Pn	**Pn**	**00 56 19.5**	**+1.2**
PCVE				*e*Sn	**Sn**	**00 57 12.3**	**+0.6**
PCVE	**Castro Verde**	**4.62**	**327**	P	**Pn**	**00 56 19.5**	**+1.2**
PCVE				S	**Sn**	**00 57 12.3**	**+0.6**
MESJ	**Messejana**	**4.87**	**327**	*e*P	**Pn**	**00 56 22.0**	**+0.3**
MESJ	**Messejana**	**4.87**	**327**	P	**Pn**	**00 56 22.0**	**+0.3**
PBEJ	**Beja**	**4.88**	**331**	*e*Pn	**Pn**	**00 56 23.6**	**+1.8**
PBEJ				*e*Sn	**Sn**	**00 57 17.5**	**-0.5**
PBEJ	**Beja**	**4.88**	**331**	P	**Pn**	**00 56 23.6**	**+1.8**
PBEJ				S	**Sn**	**00 57 17.5**	**-0.5**
PTEO	**Sao Teotonio**	**4.89**	**321**	*e*Pn	**Pn**	**00 56 23.6**	**+1.6**
PTEO				*e*Sn	**Sn**	**00 57 18.2**	**-0.1**
PTEO	**Sao Teotonio**	**4.89**	**321**	P	**Pn**	**00 56 23.6**	**+1.6**
PTEO				S	**Sn**	**00 57 18.2**	**-0.1**
PNCL	**Nicolau / Gran**	**5.24**	**326**	*e*Pn	**Pn**	**00 56 27.8**	**+1.1**
PNCL				*e*Sn	**Sn**	**00 57 26.4**	**-0.4**
PNCL	**Nicolau / Gran**	**5.24**	**326**	P	**Pn**	**00 56 27.8**	**+1.1**
PNCL				S	**Sn**	**00 57 26.4**	**-0.4**
EVO	**Evora**	**5.37**	**333**	*e*Pn	**Pn**	**00 56 29.5**	**+0.9**
EVO				*e*Sn	**Sn**	**00 57 28.9**	**-1.3**
EVO				A	A	00 57 36.3	
	2.8nm,0.7s						
EVO	**Evora**	**5.37**	**333**	P	**Pn**	**00 56 29.5**	**+0.9**
EVO				S	**Sn**	**00 57 28.9**	**-1.3**
	2.8nm,0.7s						
PAB	**San Pablo**	**5.76**	**4**	P	**Pn**	**00 56 34.2**	**+0.3**
	0.2nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**00 57 36.1**	**-3.7**
	1.0nm,0.5s,SNR=7.9						
PMTG	**Montargil**	**5.92**	**334**	*e*Pn	**Pn**	**00 56 36.9**	**+0.7**
PMTG				*e*Sn	**Sn**	**00 57 42.6**	**-1.1**
PMTG	**Montargil**	**5.92**	**334**	P	**Pn**	**00 56 36.9**	**+0.7**
PMTG				S	**Sn**	**00 57 42.6**	**-1.1**
PMRV	**Marv??o**	**5.98**	**341**	*e*Pn	**Pn**	**00 56 37.8**	**+0.8**
PMRV				*e*Sn	**Sn**	**00 57 43.1**	**-2.1**
PMRV	**Marv??o**	**5.98**	**341**	P	**Pn**	**00 56 37.8**	**+0.8**
PMRV				S	**Sn**	**00 57 43.1**	**-2.1**
EPLA	**Plasencia**	**6.33**	**352**	P	**Pn**	**00 56 42.3**	**+0.4**
	0.8nm,0.1s,SNR=21						
PCBR	**Castelo Branco**	**6.39**	**342**	*e*Pn	**Pn**	**00 56 43.5**	**+0.9**
PCBR	**Castelo Branco**	**6.39**	**342**	P	**Pn**	**00 56 43.5**	**+0.9**
PTOM	**Tomar**	**6.47**	**335**	*e*Pn	**Pn**	**00 56 44.7**	**+1.0**
PTOM	**Tomar**	**6.47**	**335**	P	**Pn**	**00 56 44.7**	**+1.0**
MTE	**Manteigas**	**6.93**	**343**	*e*Pn	**Pn**	**00 56 50.8**	**+0.7**
MTE	**Manteigas**	**6.93**	**343**	P	**Pn**	**00 56 50.8**	**+0.7**
PVIS	**Viseu**	**7.32**	**342**	*e*Pn	**Pn**	**00 56 56.1**	**+0.7**
PVIS	**Viseu**	**7.32**	**342**	P	**Pn**	**00 56 56.1**	**+0.7**
MVO	**Moncorvo**	**7.56**	**347**	*e*Pn	**Pn**	**00 56 59.0**	**+0.3**
MVO	**Moncorvo**	**7.56**	**347**	P	**Pn**	**00 56 58.6**	**-0.1**
	0.5nm,0.1s,SNR=7.9						
PVRL	**Vila Real**	**7.80**	**344**	*e*Pn	**Pn**	**00 57 02.1**	**0.0**
PVRL	**Vila Real**	**7.80**	**344**	P	**Pn**	**00 57 02.1**	**0.0**
POLO	**Lamas de Olo**	**7.92**	**344**	⇓*e*Pn	**Pn**	**00 57 04.0**	**+0.4**
POLO	**Lamas de Olo**	**7.92**	**344**	P	**Pn**	**00 57 04.0**	**+0.4**
PGAV	**Gavieira, Arco**	**8.59**	**343**	*e*Pn	**Pn**	**00 57 13.9**	**+1.0**
PGAV	**Gavieira, Arco**	**8.59**	**343**	P	**Pn**	**00 57 13.9**	**+1.0**

*MOS **19** 01:11:13.7±0.0, 42.°40N×44.°77E, h24km, MPVA4.0*
*NORS **19** 01:11:14.1±0.0, 42.°35N×44.°78E, h11km, MPVA3.9*
*TIF **19** 01:11:15.0, 42.°46N×44.°80E, h26km*
*DRS **19** 01:11:16.1±0.0, 42.°52N×44.°83E, h15km, ML2.7/3*
*ISK **19** 01:11:16.3, 42.°42N×44.°66E, h10km, ML3.0/7*
*DDA **19** 01:11:20.8, 42.°06N×44.°46E, h24km±1km, ML3.1*
ISC 19 01:11:14.5±1.1, **42.°43N**±0.°01×**44.°82E**±0.°01, **h3**km±9km, **n101**, σ0°**70**/170, **5C-8D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUDG	**Gudauri**	**0.26**	**277**	P	**Pb**	**01 11 21.7**	**-0.3**
GUDG				S	**Sb**	**01 11 26.3**	**-0.6**
GUDG	**Gudauri**	**0.26**	**277**	PG	**Pb**	**01 11 21.6**	**-0.3**
LACR	**Lac**	**0.55**	**316**	⇓*i*PG	**Pg**	**01 11 25.0**	**-0.2**
LACR				*e*S	**Sg**	**01 11 32.5**	**+0.2**
LACR	**Lac**	**0.55**	**316**	*i* Pg	**Pg**	**01 11 25.0**	**-0.2**
LACR				*e*Sg	**Sg**	**01 11 32.6**	**+0.2**
VLKR	**Vladikavkaz**	**0.62**	**350**	*e*PG	**Pb**	**01 11 27.6**	**-0.5**
VLKR				*e*S	**Sb**	**01 11 37.0**	**-0.2**
VLKR	**Vladikavkaz**	**0.62**	**350**	*e*Pg	**Pb**	**01 11 28.0**	**-0.1**
VLKR				*e*Sg	**Sb**	**01 11 37.0**	**-0.2**
KMGR	**Komgaron**	**0.63**	**3**	⇓*i*PG	**Pb**	**01 11 28.0**	**-0.1**
KMGR				*e*S	**Sb**	**01 11 38.2**	**+0.8**
KMGR	**Komgaron**	**0.63**	**3**	*i* Pg	**Pb**	**01 11 28.0**	**-0.1**
KMGR				*e*Sg	**Sb**	**01 11 38.2**	**+0.8**
SEAG	**Tbilisi Sea**	**0.67**	**181**	P	**Pb**	**01 11 29.1**	**+0.3**
SEAG				S	**Sb**	**01 11 39.8**	**+1.3**
SEAG	**Tbilisi Sea**	**0.67**	**181**	PG	**Pb**	**01 11 29.1**	**+0.3**
TBLG	**Delisi**	**0.70**	**185**	PG	**Pb**	**01 11 29.4**	**0.0**
TBLG				SG	**Sb**	**01 11 40.4**	**+1.0**
TBLG	**Delisi**	**0.70**	**185**	P	**Pb**	**01 11 29.4**	**0.0**
TBLG				S	**Sb**	**01 11 40.5**	**+1.0**
TBLG	**Delisi**	**0.70**	**185**	*e*PG	**Pb**	**01 11 29.4**	**0.0**
TBLG				*e*S	**Sb**	**01 11 40.5**	**+1.0**
TBLG	**Delisi**	**0.70**	**185**	*i* P	**Pb**	**01 11 29.9**	**+0.5**
TBLG				*i* S	**Sb**	**01 11 40.8**	**+1.3**
TBLG				IAML_P			
	comp=Z,21μm,0.1s						
BTNK	**Botanikuri**	**0.75**	**181**	P	**Pb**	**01 11 30.2**	**0.0**
BTNK				S	**Sb**	**01 11 41.7**	**+0.9**
BTNK	**Botanikuri**	**0.75**	**181**	PG	**Pb**	**01 11 30.2**	**0.0**
BTNK	**Botanikuri**	**0.75**	**181**	*i* P	**Pb**	**01 11 30.4**	**+0.2**
BTNK				IAML_P			
	comp=Z,62μm,0.1s						
ZEI	**Tsey**	**0.77**	**298**	*e*PG	**Pg**	**01 11 29.6**	**+0.4**
ZEI				*e*S	**Sg**	**01 11 40.2**	**+1.0**
ZEI	**Tsey**	**0.77**	**298**	*i* Pg	**Pg**	**01 11 29.6**	**+0.4**
ZEI				*e*Sg	**Sg**	**01 11 40.2**	**+1.0**
ARNR	**Ardon**	**0.85**	**332**	⇑*i*PG	**Pb**	**01 11 31.9**	**0.0**
ARNR				*e*S	**Sb**	**01 11 44.8**	**+1.2**
ARNR	**Ardon**	**0.85**	**332**	*e*Pg	**Pb**	**01 11 31.6**	**-0.2**
ARNR				*e*Sg	**Sb**	**01 11 44.4**	**+0.7**
KORR	**Kora**	**0.86**	**320**	*i* PG	**Pb**	**01 11 31.7**	**-0.4**
KORR				pmax	pmax		
	comp=Z,104nm,0.4s						
KORR	**Kora**	**0.86**	**320**	*i* Pg	**Pb**	**01 11 31.8**	**-0.3**
KORR				*e*Sg	**Sb**	**01 11 44.3**	**+0.3**
BTKR	**Batakoyurt**	**0.96**	**348**	⇓*i*PG	**Pn**	**01 11 34.5**	**-0.5**
BTKR				*e*S	**Sn**	**01 11 49.5**	**+0.3**
BTKR	**Batakoyurt**	**0.96**	**348**	*e*Pg	**Pn**	**01 11 34.3**	**-0.6**
BTKR				*e*Sg	**Sn**	**01 11 48.4**	**-0.7**
ONI	**Oni**	**1.02**	**279**	PG	**Pb**	**01 11 34.6**	**-0.3**
ONI				SG	**Sg**	**01 11 47.2**	**-0.3**
ONI	**Oni**	**1.02**	**279**	P	**Pg**	**01 11 34.2**	**0.0**
ONI				S	**Sg**	**01 11 48.1**	**+0.6**
ONI	**Oni**	**1.02**	**279**	*e*PG	**Pg**	**01 11 34.2**	**0.0**
ONI				*e*S	**Sg**	**01 11 48.1**	**+0.6**
DIGR	**Digorskoe uzhe**	**1.03**	**297**	*e*PG	**Pg**	**01 11 33.9**	**-0.3**
DIGR				*e*S	**Sg**	**01 11 47.6**	**0.0**
DIGR	**Digorskoe uzhe**	**1.03**	**297**	*e*Pg	**Pg**	**01 11 33.9**	**-0.3**
DIGR				*e*Sg	**Sg**	**01 11 48.0**	**+0.4**
GROC	**Groznyy**	**1.05**	**43**	*e*PG	**Pn**	**

	comp=N,94nm,0.4s							
DBC	**Dubki**		**1.59**	**68**	⇓*i*PN	**Pb**	**01 11 44.2**	**-0.4**
DBC					*e*		01 12 06.2	
DBC	**Dubki**		**1.59**	**68**	*i* Pg	**Pb**	**01 11 44.4**	**-0.3**
DBC					*e*Sg	**Sg**	**01 12 06.9**	**+1.2**
KMKR	**Kumukh**		**1.72**	**99**	PN	**Pg**	**01 11 47.0**	**-0.4**
KMKR					*e*S	**Sg**	**01 12 10.5**	**+0.8**
KMKR					pmax	pmax		
	comp=Z,17nm,0.3s							
KMKR	**Kumukh**		**1.72**	**99**	*e*Pg	**Pg**	**01 11 47.0**	**-0.4**
	comp=Z,17nm,0.3s							
KMKR					*e*Sg	**Sg**	**01 12 10.5**	**+0.8**
	comp=Z,87nm,0.4s							
KBTC	**Kuba-Taba**		**1.73**	**324**	*e*PN	**Pn**	**01 11 45.2**	**-0.3**
KBTC					*e*S	**Sb**	**01 12 08.9**	**-0.1**
KBTC	**Kuba-Taba**		**1.73**	**324**	*e*Pg	**Pn**	**01 11 45.3**	**-0.3**
KBTC					*e*Sg	**Sb**	**01 12 09.1**	**+0.1**
BUJR	**Buynaksk**		**1.73**	**76**	⇑*e*PN	**Pg**	**01 11 48.9**	**+1.2**
BUJR					*e*		01 12 13.3	
BUJR	**Buynaksk**		**1.73**	**76**	*e*Pg	**Pg**	**01 11 47.0**	**-0.7**
BUJR					*e*Sg	**Sb**	**01 12 08.9**	**-0.2**
NEY	**Neytrino**		**1.75**	**299**	*e*PN	**Pb**	**01 11 46.5**	**-0.8**
NEY					*e*S	**Sb**	**01 12 09.6**	**-0.1**
NEY	**Neytrino**		**1.75**	**299**	*e*Pg	**Pn**	**01 11 46.0**	**+0.2**
NEY					*e*Sg	**Sn**	**01 12 09.1**	**+0.4**
EPOS	**Posof**		**1.82**	**240**	*i* P	**Pb**	**01 11 47.8**	**-0.7**
EPOS					*i* S	**Sb**	**01 12 12.1**	**+0.4**
EAK	**Akyaka**		**1.97**	**208**	*i* P	**Pn**	**01 11 49.6**	**+0.7**
EAK					IAML_P			
	comp=Z,1μm,0.3s							
SHA1	**Shidzhatmaz**		**2.05**	**310**	*e*PN	**Pn**	**01 11 51.0**	**+0.8**
SHA1	**Shidzhatmaz**		**2.05**	**310**	*e*Pg	**Pn**	**01 11 50.9**	**+0.8**
SHA1					*e*Sg	**Sb**	**01 12 17.5**	**-1.1**
PYA1	**Pyatigorsk**		**2.06**	**323**	*i* PN	**Pn**	**01 11 49.6**	**-0.5**
PYA1	**Pyatigorsk**		**2.06**	**323**	*e*Pg	**Pn**	**01 11 49.5**	**-0.6**
PYA1					*e*Sg	**Sn**	**01 12 17.3**	**+1.0**
URKR	**Urkarakh**		**2.10**	**96**	*e*PN	**Pg**	**01 11 54.3**	**-0.5**
URKR					*e*S	**Sg**	**01 12 22.7**	**+0.6**
URKR	**Urkarakh**		**2.10**	**96**	*e*Pg	**Pg**	**01 11 54.3**	**-0.5**
URKR					*e*Sg	**Sg**	**01 12 22.7**	**+0.6**
KIV	**Kislovodsk**		**2.18**	**315**	PN	**Pb**	**01 11 52.6**	**+0.8**
KIV	**Kislovodsk**		**2.18**	**315**	*i* PN	**Pn**	**01 11 51.3**	**-0.5**
KARS	**Kars**		**2.23**	**217**	PN	**Pn**	**01 11 53.2**	**+0.8**
KARS	**Kars**		**2.23**	**217**	PN	**Pn**	**01 11 53.1**	**+0.7**
GNI	**Garni**		**2.28**	**182**	PN	**Pb**	**01 11 55.5**	**-0.9**
GNI	**Garni**		**2.28**	**182**	*i* PN	**Pb**	**01 11 55.6**	**-0.9**
AKT	**Akhty**		**2.37**	**113**	*e*PN	**Pb**	**01 11 57.5**	**-0.4**
AKT					*e*S	**Sg**	**01 12 30.1**	**-0.5**
AKT					pmax	pmax		
	comp=Z,10.0nm,0.2s							
AKT					smax	smax		
	comp=N,34nm,0.4s							
AKT					smax	smax		
	comp=N,40nm,0.6s							
AKT					smax	smax		
	comp=E,28nm,0.5s							
AKT	**Akhty**		**2.37**	**113**	*e*Pn	**Pb**	**01 11 56.6**	**-1.3**
	comp=E,10nm,0.6s							
AKT					⇓*e*Sn	**Sb**	**01 12 27.2**	**-0.4**
	comp=E,34nm,0.9s							
BATM	**Batumi**		**2.47**	**252**	PN	**Pn**	**01 11 56.2**	**+0.5**
BATM	**Batumi**		**2.47**	**252**	PN	**Pn**	**01 11 56.1**	**+0.4**
TASB	**TASBURUN-IGDIR**		**2.48**	**190**	PN	**Pb**	**01 11 57.8**	**-2.0**
DAGI	**Agillar**		**2.56**	**239**	*i* P	**Pn**	**01 11 57.8**	**+0.7**
DAGI					IAML_P			
	comp=Z,205nm,0.3s							
BCA	**Borcka**		**2.58**	**249**	PN	**Pn**	**01 11 57.5**	**+0.3**
IGDI	**IGDIR**		**2.62**	**193**	*i* P	**Pn**	**01 11 59.2**	**+1.4**
SENK	**Senkaya-Erzuru**		**2.63**	**226**	PN	**Pn**	**01 11 58.9**	**+0.8**
DBAD	**Bademkaya**		**2.73**	**240**	*i* P	**Pn**	**01 12 00.7**	**+1.3**
DBAD					*i* S	**Sg**	**01 12 41.0**	**-1.4**
DBAD					IAML_P			
	comp=Z,420nm,0.2s							
AGRB	**Hanur-Agry**		**3.17**	**206**	PN	**Pn**	**01 12 07.2**	**+1.7**
BRVK	**Borovoye**		**20.04**	**49**	*i* P	**P**	**01 15 47.3**	**-1.2**

*ISCJB **19** 01:11:13.9±1.4, 54°.23N±0°.07×86°.25E±0°.09, h0km, Error ellipse: s-maj=11.3km s-min=5.4km az=34.4*
*NNC **19** 01:11:15.3±2.0, 54°.24N×86°.27E, h0km, mb3.9, mpv3.3, Error ellipse: s-maj=19.9km s-min=9.2km az=178.0, Suspected Mining explosion.*
*ASRS **19** 01:11:18.8±0.8, 53°.61N×85°.34E, h15km, Ms2.6/1*

ISC 19 01:11:17.3±1.6, 54°.25N±0°.10×86°.12E±0°.06, h0km, n8, σ1§83/16, 10C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.82**	**249**	⇓P	**Pg**	**01 11 32.3**	**-0.7**
	2.7nm,0.5s						
ZAA0				⇑S	**Sb**	**01 11 45.4**	**-0.6**
	14nm,0.3s						
NVS	**Novosibirsk**	**1.78**	**291**	*e*Pg	**Pb**	**01 11 50.0**	**-0.8**
NVS				*e*Sg	**Sg**	**01 12 14.8**	**+0.3**
TASR	**Tashtagol**	**1.82**	**144**	*e*Pg	**Pn**	**01 11 49.0**	**-0.9**
TASR				*e*Sg	**Sn**	**01 12 14.7**	**+1.0**
AKAR	**Aktash**	**4.04**	**166**	*e*Pg	**Pn**	**01 12 22.6**	**+2.1**
AKAR				*e*Sg	**Sn**	**01 13 11.4**	**+2.9**
KURK	**Kurchatov**	**5.79**	**235**	⇓Pn	**Pn**	**01 12 46.1**	**+1.8**
	4.2nm,0.8s						
KURK				⇑Sn	**Sn**	**01 13 53.8**	**+2.5**
	2.1nm,0.5s						
KURK				⇑Lg	Lg	01 14 19.9	
	13nm,0.8s						
KURBB	**Kurchatov Arra**	**5.89**	**235**	⇑Pn	**Pn**	**01 12 47.2**	**+1.5**
	4.7nm,0.5s						
KURBB				⇑Sn	**Sn**	**01 13 54.9**	**+1.1**
	9.4nm,0.5s						
KURBB				⇑Lg	Lg	01 14 25.1	
	31nm,0.7s						
MK31	**Makanchi Array**	**7.85**	**200**	⇑Pn	**Pn**	**01 13 13.7**	**+1.1**
	0.5nm,0.3s,baz=25,slow=13,SNR=60						
MK31				⇓Sn	**Sn**	**01 14 40.2**	**-2.0**
	1.5nm,0.4s,baz=26,slow=26,SNR=9.1						
MK31				⇑Lg	Lg	01 15 23.7	
	4.7nm,0.7s,baz=30,slow=31,SNR=6.0						
MAKZ	**Makanchi**	**7.90**	**201**	⇓Pn	**Pn**	**01 13 10.5**	**-2.9**
	3.7nm,1.1s						
MAKZ				⇑Sn	**Sn**	**01 14 42.2**	**-1.2**
	9.0nm,1.2s						
MAKZ				⇑Lg	Lg	01 15 26.9	
	14nm,1.3s						

*IDC **19** 02:21:01.5±1.2, 52°.34N×160°.76E, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.7/37, mbtmp3.8/11, ML3.1/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/29, Error ellipse: s-maj=28.4km s-min=19.7km az=159.0*
*KRSC **19** 02:21:02.7±1.5, 52°.15N×160°.84E, h61km±24km, ML4.1*
*ISCJB **19** 02:21:05.1±0.8, 52°.20N±0°.04×160°.81E±0°.07, h48km±6km, mb3.9/15, Error ellipse: s-maj=9.3km s-min=5.0km az=135.2*
*MOS **19** 02:21:05.7±0.8, 52°.23N×160°.71E, h51km, mb4.2/10, Error ellipse: s-maj=9.3km s-min=5.5km az=113.3*

ISC 19 02:21:06.5±1.3, 52°.20N±0°.05×160°.79E±0°.05, h45km±11km, n90, σ1§54/108, mb4.1/15, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.01**	**333**	*i* P	**Pn**	**02 21 22.5**	**-1.7**
SPN				*e*S	**Sn**	**02 21 36.0**	**-1.3**
SPN	**Mys Shipunski**	**1.01**	**333**	PN	**Pn**	**02 21 22.5**	**-1.7**
SPN				S	**Sn**	**02 21 36.0**	**-1.3**
NLC	**Nalytchevo**	**1.31**	**318**	*e*P	**Pn**	**02 21 27.2**	**-1.1**
NLC				*e*S	**Sn**	**02 21 43.6**	**-1.0**
NLC	**Nalytchevo**	**1.31**	**318**	PN	**Pn**	**02 21 27.2**	**-1.1**
NLC				S	**Sn**	**02 21 43.6**	**-1.0**
RUS	**Russkaya**	**1.42**	**280**	*e*P	**Pn**	**02 21 28.6**	**-1.2**
RUS				*e*S	**Sn**	**02 21 46.4**	**-0.8**
RUS	**Russkaya**	**1.42**	**280**	PN	**Pn**	**02 21 28.6**	**-1.2**
RUS				S	**Sn**	**02 21 46.4**	**-0.8**
DALK	**Dalny**	**1.49**	**304**	*e*P	**Pn**	**02 21 30.1**	**-0.7**
DALK				*e*S	**Sn**	**02 21 49.1**	**0.0**
DALK	**Dalny**	**1.49**	**304**	PN	**Pn**	**02 21 30.1**	**-0.7**
DALK				S	**Sn**	**02 21 49.1**	**0.0**
PET	**Petropavlovsk**	**1.54**	**303**	PN	**Pn**	**02 21 30.8**	**-0.7**
PET				S	**Sn**	**02 21 50.0**	**-0.3**
UGLR	**Uglovaya**	**1.56**	**311**	*e*P	**Pn**	**02 21 31.7**	**-0.2**
SDLR	**Sedlovina**	**1.58**	**314**	*e*P	**Pn**	**02 21 31.6**	**-0.6**
SDLR	**Sedlovina**	**1.58**	**314**	PN	**Pn**	**02 21 31.6**	**-0.6**
SMAR	**Somma**	**1.61**	**312**	*e*P	**Pn**	**02 21 31.9**	**-0.7**
SMAR	**Somma**	**1.61**	**312**	PN	**Pn**	**02 21 31.9**	**-0.7**
MTVR	**Mutnovka**	**1.62**	**281**	*e*P	**Pn**	**02 21 31.9**	**-0.9**
MTVR				*e*S	**Sn**	**02 21 52.4**	**-0.2**
MTVR	**Mutnovka**	**1.62**	**281**	PN	**Pn**	**02 21 31.9**	**-0.9**
MTVR				S	**Sn**	**02 21 52.4**	**-0.2**
AVH	**Avacha**	**1.64**	**311**	*e*P	**Pn**	**02 21 32.8**	**-0.1**
AVH	**Avacha**	**1.64**	**311**	PN	**Pn**	**02 21 32.8**	**-0.1**
KRER	**Koryakskii**	**1.66**	**312**	*e*P	**Pn**	**02 21 33.2**	**-0.1**
KRER	**Koryakskii**	**1.66**	**312**	PN	**Pn**	**02 21 33.2**	**-0.1**
GRL	**Gorelyy**	**1.70**	**283**	*e*P	**Pn**	**02 21 33.7**	**-0.1**
GRL	**Gorelyy**	**1.70**	**283**	PN	**Pn**	**02 21 33.7**	**-0.1**
KOK	**Koryaka**	**1.71**	**311**	*e*P	**Pn**	**02 21 33.7**	**-0.1**
KOK	**Koryaka**	**1.71**	**311**	PN	**Pn**	**02 21 33.7**	**-0.1**
KDTR	**Khodutka, Kamc**	**1.73**	**258**	*e*P	**Pn**	**02 21 32.5**	**-1.5**
KDTR				*e*S	**Sn**	**02 21 52.8**	**-2.0**
KDTR	**Khodutka, Kamc**	**1.73**	**258**	PN	**Pn**	**02 21 32.5**	**-1.5**
KDTR				S	**Sn**	**02 21 52.8**	**-2.0**
KRX	**Arik**	**1.74**	**312**	*e*P	**Pn**	**02 21 33.8**	**-0.6**
KRX	**Arik**	**1.74**	**312**	PN	**Pn**	**02 21 33.8**	**-0.6**
KRMR	**Karymshinskiy**	**1.74**	**292**	*e*P	**Pn**	**02 21 33.8**	**-0.4**
KRMR				*e*S	**Sn**	**02 21 55.4**	**+0.1**
KRMR	**Karymshinskiy**	**1.74**	**292**	PN	**Pn**	**02 21 33.8**	**-0.4**
KRMR				S	**Sn**	**02 21 55.4**	**+0.1**
ASAK	**Asacha**	**1.79**	**277**	*e*P	**Pn**	**02 21 34.6**	**-0.3**
ASAK	**Asacha**	**1.79**	**277**	PN	**Pn**	**02 21 34.6**	**-0.3**
PETK	**Petropavlovsk-**	**2.09**	**297**	Pn	**Pn**	**02 21 38.8**	**-0.2**
	34nm,0.3s,baz=99,slow=17,SNR=209						
PETK				Sn	**Sn**	**02 22 04.8**	**+1.0**
	17nm,0.3s,baz=108,slow=19,SNR=5.3						
PETK				LR	LR	02 22 10.5	
	comp=Z,83nm,20.0s,baz=44,slow=34						
GNL	**Ganaly**	**2.28**	**312**	*e*P	**Pn**	**02 21 42.3**	**+0.6**
GNL	**Ganaly**	**2.28**	**312**	PN	**Pn**	**02 21 42.3**	**+0.6**
APC	**Apacha**	**2.33**	**289**	*e*P	**Pn**	**02 21 42.8**	**+0.5**
APC				*e*S	**Sn**	**02 22 10.8**	**+1.1**
APC	**Apacha**	**2.33**	**289**	PN	**Pn**	**02 21 42.8**	**+0.5**
APC				S	**Sn**	**02 22 10.8**	**+1.1**
MKZ	**Mys Kozlova**	**2.42**	**13**	P	**Pn**	**02 21 42.4**	**-1.1**
MKZ				*e*S	**Sn**	**02 22 10.8**	**-1.1**
MKZ	**Mys Kozlova**	**2.42**	**13**	PN	**Pn**	**02 21 42.4**	**-1.1**
MKZ				S	**Sn**	**02 22 10.8**	**-1.1**
PAU	**Pauzhetka**	**2.58**	**255**	*e*P	**Pn**	**02 21 45.1**	**-0.6**
PAU	**Pauzhetka**	**2.58**	**255**	PN	**Pn**	**02 21 45.1**	**-0.6**
TUMD	**Tumrok D**	**3.01**	**356**	*e*P	**Pn**	**02 21 51.8**	**+0.1**
TUMD				*e*S	**Sn**	**02 22 26.1**	**-0.4**
TUMR	**Tumrok**	**3.11**	**353**	*e*P	**Pn**	**02 21 54.0**	**+0.9**
TUMR	**Tumrok**	**3.11**	**353**	PN	**Pn**	**02 21 51.8**	**-1.3**
TUMR				S	**Sn**	**02 22 26.1**	**-2.9**
SKR	**Severo-Kuril's**	**3.30**	**244**	*e*P	**Pn**	**02 21 54.3**	**-1.3**
SKR				*e*S	**Sn**	**02 22 31.6**	**-1.9**
SKR	**Severo-Kuril's**	**3.30**	**244**	*e*PN	**Pn**	**02 21 54.7**	**-0.9**
SKR				*e*S	**Sn**	**02 22 30.7**	**-2.8**
SKR				pmax	pmax		
	comp=Z,25nm,0.5s						
SKR				pmax	pmax		
	comp=Z,100nm,2.5s						
SKR				smax	smax		
	comp=E,107nm,0.5s						
SKR				smax	smax		
	comp=N,131nm,0.7s						
SKR				MLR	MLR		
	comp=Z,300nm,14.0s						
SKR				MLR	MLR		
	comp=Z,200nm,16.0s						
ALID	**Alaid**	**3.54**	**250**	P	**Pn**	**02 21 59.3**	**+0.3**
ALID	**Alaid**	**3.54**	**250**	PN	**Pn**	**02 21 59.3**	**+0.3**
SRDR	**Sredinnyy**	**4.17**	**352**	*e*P	**Pn**	**02 22 09.3**	**+1.7**
SRDR	**Sredinnyy**	**4.17**	**352**	PN	**Pn**	**02 22 09.3**	**+1.7**
KBTR	**Krutoberegovo**	**4.18**	**16**	*e*P	**Pn**	**02 22 07.7**	**0.0**
KBTR	**Krutoberegovo**	**4.18**	**16**	PN	**Pn**	**02 22 07.7**	**0.0**
BKI	**Bering**	**4.30**	**44**	*e*S	**Sn**	**02 22 54.8**	**-3.3**
SMKR	**Semkarok**	**4.41**	**5**	P	**Pn**	**02 22 12.3**	**+1.5**
SMKR	**Semkarok**	**4.41**	**5**	PN	**Pn**	**02 22 12.3**	**+1.5**
SRKR	**Sorokina**	**4.46**	**3**	*e*P	**Pn**	**02 22 12.2**	**+0.6**
SRKR	**Sorokina**	**4.46**	**3**	PN	**Pn**	**02 22 12.2**	**+0.6**
KUR	**Kuril'sk**	**11.02**	**236**	*i* PN	Pn	02 23 48.8	+7.5
BILL	**Biiibino**	**16.11**	**7**	*i* P	**P**	**02 24 54.7**	**+2.6**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YAK	**Yakutsk**	**19.35**	**313**	*i* P	**P**	**02 25 24.2**	**-3.6**
YAK				pmax	pmax		
	comp=Z,44nm,1.0s						
USRK	**Ussuriysk Ar.**	**20.70**	**259**	P	**P**	**02 25 41.5**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=61,slow=13,SNR=6.4						
MAJO	**Matsushiro**	**22.35**	**234**	*i* P	**P**	**02 26 05.5**	**+5.1**
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MJAR	**Matsushiro Arr**	**22.35**	**234**	P	**P**	**02 26 02.4**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=16,slow=9.5,SNR=3.4						
TIXI	**Tiksi**	**24.07**	**336**	P	**P**	**02 26 15.8**	**-1.2**
	comp=Z,1.7nm,0.5s,baz=122,slow=8.6,SNR=4.8						
TIXI	**Tiksi**	**24.07**	**336**	*i* P	**P**	**02 26 15.2**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**32.76**	**169**	T	T	03 03 17.9	
	baz=357						
H11N3	**WAKE ISLAND Hy**	**32.77**	**169**	T	T	03 03 15.6	
	baz=357						
H11N1	**WAKE ISLAND Hy**	**32.77**	**169**	T	T	03 03 13.9	
	baz=357						
H11S1	**WAKE ISLAND Hy**	**33.95**	**170**	T	T	03 04 53.4	
	baz=350						
H11S3	**WAKE ISLAND Hy**	**33.96**	**170**	T	T	03 05 00.8	
	baz=350						
H11S2	**WAKE ISLAND Hy**	**33.96**	**170**	T	T	03 04 59.1	
	baz=350						
SONM	**Songino Array**	**34.53**	**285**	P	**P**	**02 27 50.4**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=35,slow=5.3,SNR=2.3						
NVS	**Novosibirsk**	**43.97**	**306**	*e*P	**P**	**02 29 07.6**	**-1.2**
KURK	**Kurchatov**	**48.57**	**303**	*i* P	**P**	**02 29 42.2**	**-2.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	**Makanchi Array**	**48.93**	**297**	P	**P**	**02 29 47.3**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=56,slow=6.6,SNR=5.1						
MKAR	**Makanchi Array**	**48.93**	**297**	*e*P	**P**	**02 29 47.6**	**-0.2**
BRVK	**Borovoye**	**51.31**	**309**	*i* P	**P**	**02 30 04.5**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**54.27**	**342**	P	**P**	**02 30 27.9**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=45,slow=8.7,SNR=4.8						
ARCES	**ARCESS Array B**	**54.27**	**342**	*e*P	**P**	**02 30 28.8**	**+1.5**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARU	**Arti**	**54.34**	**318***c*	*i* P	**P**	**02 30 29.0**	**+1.0**
ARU						02 31 33.4	
ARU				S	**S**	**02 37 54.6**	**-7.7**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**58.42**	**259**	P	**P**	**02 30 59.1**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=28,slow=7.7,SNR=5.0						
CMAR	**Chiang Mai Arr**	**58.42**	**259**	*e*P	**P**	**02 30 59.1**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**61.11**	**337**	P	**P**	**02 31 16.4**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=37,slow=8.6,SNR=11						
FINES	**FINESS Array B**	**61.11**	**337**	*i* P	**P**	**02 31 17.0**	**+1.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
OBN	**Obninsk**	**63.50**	**328**	*e*P	**P**	**02 31 32.0**	**+0.6**
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	**NORSAR Subarra**	**64.52**	**344**	P	**P**	**02 31 39.5**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=21,slow=6.9						
NOA	**NORSAR Array B**	**64.52**	**344**	P	**P**	**02 31 39.1**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=25,slow=6.4,SNR=4.8						
NOA	**NORSAR Array B**	**64.52**	**344**	*e*P	**P**	**02 31 41.3**	**+3.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**69.60**	**329**	P	**P**	**02 32 10.1**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=34,slow=5.4,SNR=4.2						
TXAR	**Lajitas Array**	**70.59**	**67**	P	**P**	**02 32 18.6**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=292,slow=4.8,SNR=3.1						

*IDC **19** 02:33:19.3±2.0, 4°.54S×128°.78E, h0km, mb3.9/1, mb1 4.5/3, mb1mx3.8/23, mbtmp4.3/3, ML4.5/2, Error ellipse: s-maj=140.0km s-min=28.3km az=68.0*
*ISCJB **19** 02:33:30.5±0.4, 4°.57S±0°.04×129°.81E±0°.05, h150km, mb4.2/2, Error ellipse: s-maj=7.2km s-min=4.5km az=159.0*
*NEIC **19** 02:33:30.8±1.5, 4°.56S×129°.66E, h124km±14km, mb4.2/4, Error ellipse: s-maj=48.1km s-min=17.5km az=118.0*
*DJA **19** 02:33:34.3±0.6, 4°S±4°×13°0E±°, h108km±6km, M4.1/8, mb4.3/2, MLv4.0/8*

ISC 19 02:33:31.2±0.7, 4°.64S±0°.05×129°.80E±0°.06, h150km, n23, σ2§88/33, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.15**	**42**	P	**Pn**	**02 33 50.7**	**-0.7**
BNDI				S	**Sn**	**02 34 03.3**	**-3.5**
MSAI	**Masohi**	**1.55**	**326**	P	**Pn**	**02 33 58.2**	**-3.1**
AAI	**Ambon**	**1.86**	**300**	P	**Pn**	**02 34 02.5**	**-2.2**
FAKI	**Fak Fak**	**2.98**	**55**	*e*Pn	**Pn**	**02 34 19.0**	**+0.6**
FAKI				*e*Sn	**Sn**	**02 34 52.2**	**-2.6**
FAKI	**Fak Fak**	**2.98**	**55**	P	**Pn**	**02 34 19.0**	**+0.6**
FAKI				S	**Sn**	**02 34 52.6**	**-2.2**
NLAI	**Namlea**	**3.03**	**297**	P	**Pn**	**02 34 19.4**	**+0.4**
NLAI				S	**Sn**	**02 34 54.0**	**-1.9**
SWI	**Sorong**	**4.02**	**21**	P	**Pn**	**02 34 31.3**	**-0.5**
SWI				S	**Sn**	**02 35 13.7**	**-5.2**
SANI	**Sanana**	**4.59**	**304**	P	**Pn**	**02 34 36.5**	**-2.8**
LUWI	**Luwuk**	**7.88**	**297**	*e*Pn	**Pn**	**02 35 18.7**	**-4.3**
LUWI	**Luwuk**	**7.88**	**297**	P	**Pn**	**02 35 25.0**	**+2.0**
MTN	**Manton Dam**	**8.26**	**171**	*e*Pn	**Pn**	**02 35 25.6**	**-2.6**
MTN				*e*Sn	**Sn**	**02 37 01.4**	**+1.2**
SPSI	**Sidrap Palu**	**10.03**	**273**	P	**Pn**	**02 35 53.4**	**+1.8**
FITZ	**Fitzroy Crossi**	**13.98**	**197**	*e*Pn	**P**	**02 36 44.8**	**-1.4**
WRAB	**Tennant Creek**	**15.84**	**164**	*e*Pn	**P**	**02 37 08.5**	**+1.7**
	15nm,0.9s						
WR1	**Warramunga Arr**	**15.84**	**164**	*e*Pn	**P**	**02 37 08.2**	**+1.4**
WR1				*e*Sn	**Sn**	**02 39 57.0**	**-5.7**
WRA	**Warramunga Arr**	**15.84**	**164**	Pn	**P**	**02 37 08.2**	**+1.4**
	1.4nm,0.3s,baz=340,slow=12,SNR=31						
WRA				Sn	**Sn**	**02 39 57.0**	**-5.7**
	0.6nm,0.3s,baz=2.1,slow=24,SNR=6.7						
WB2	**Warramunga Arr**	**15.85**	**164**	*e*Pn	**P**	**02 37 08.4**	**+1.5**
	13nm,1.3s						
WB2				*e*Sn	**Sn**	**02 39 56.9**	**-5.9**
AS31	**Alice Springs**	**19.33**	**169**	*e*P	**Pn**	**02 37 47.6**	**-0.1**
	3.9nm,0.8s						
ASAR	**Alice Springs**	**19.33**	**169**	P	**Pn**	**02 37 50.2**	**+2.5**
	2.6nm,0.3s,baz=346,slow=11,SNR=76						
ASAR				S	**S**	**02 41 17.3**	**+1.4**
	0.1nm,0.3s,baz=350,slow=21,SNR=3.1						
BBOO	**Buckleboo**	**28.63**	**169**	*e*P	**P**	**02 39 15.8**	**+2.1**
	18nm,1.4s						
MK32	**Makanchi Array**	**66.16**	**326**	*e*P	**P**	**02 44 04.6**	**+2.0**
MKAR	**Makanchi Array**	**66.16**	**326**	P	**P**	**02 44 04.6**	**+2.0**
	0.6nm,0.4s,baz=116,slow=8.2,SNR=8.6						
KIWB	**Kanaga Island**	**72.02**	**31**	*e*P	**P**	**02 44 41.3**	**+2.7**

IDC 19 02:53:11.5±2.3, 7°.38S×127°.41E, h0km, mb3.6/1, mb1 4.0/3, mb1mx3.7/21, mbtmp3.8/3, ML4.0/2, Error ellipse: s-maj=291.0km s-min=32.1km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.18**	**152**	Pn	Pn	02 56 32.7	-1.1
	0.9nm,0.3s,baz=330,slow=13,SNR=19						
WRA				Sn	Sn	02 58 55.9	-16
	0.4nm,0.3s,baz=336,slow=22,SNR=5.6						
ASAR	**Alice Springs**	**17.35**	**160**	P	P	02 57 16.1	-0.7
	0.3nm,0.3s,baz=336,slow=9.7,SNR=21						
ASAR				S	Sn	03 00 17.8	-11
	0.1nm,0.3s,baz=346,slow=25,SNR=2.8						
MKAR	**Makanchi Array**	**67.16**	**328**	P	P	03 04 07.3	0.0
	0.3nm,0.4s,baz=124,slow=7.9,SNR=4.6						

IDC 19 03:10:05.6±11.0, 17°.56S×178°.33W, h582km±110km, mb2.9/4, mb1 3.1/4, mb1mx2.8/22, mbtmp3.8/4, Error ellipse: s-maj=128.1km s-min=45.3km az=130.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.87**	**241**	P	P	03 16 41.8	-0.3
	0.8nm,0.5s,baz=84,slow=9.2,SNR=2.7						
WRA	**Warramunga Arr**	**44.77**	**259**	P	P	03 17 28.6

0.6nm,0.3s,baz=332,slow=11,SNR=16
ASAR S S 03 30 52.0 +0.2
0.1nm,0.3s,baz=336,slow=17,SNR=5.4
NWAO Narrogin (SRO) 26.56 196 P P 03 29 03.2 -0.6
4.7nm,0.8s,baz=0.0,slow=6.1,SNR=3.6
STKA Stephens Creek 28.55 151 P P 03 29 22.2 +0.8
1.0nm,0.3s,baz=322,slow=11,SNR=5.3

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*TIF **19** 03:40:10.3, 42°.37N×40°.96E, h39km±1km*
*DDA **19** 03:40:25.8, 41°.56N×41°.87E, h7km±5km, ML2.2*
ISC 19 03:40:11.9±4.4, 42°.4N±0°.1×40°.9E±0°.2, h35km, n7, σ0°41/10, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.99**	**141**	P	**Pn**	**03 40 28.7**	**-0.6**
BATM				S	**Sn**	**03 40 42.1**	**+0.2**
DBOC	**Borcka**	**1.19**	**150**	*i* P	**Pn**	**03 40 32.0**	**0.0**
DBOC				IAML_P			
comp=Z,1μm,0.1s
DBAD	**Bademkaya**	**1.49**	**155**	*i* P	**Pn**	**03 40 36.2**	**-0.1**
DBAD				IAML_P			
comp=Z,601nm,0.1s
DAGI	**Agillar**	**1.52**	**149**	*i* P	**Pn**	**03 40 36.9**	**+0.3**
TKB	**Tkibuli**	**1.57**	**90**	P	**Pn**	**03 40 36.9**	**-0.4**
TKB				S	**Sn**	**03 40 56.0**	**-0.5**
EPOS	**Posof**	**1.64**	**122**	*i* P	**Pn**	**03 40 38.7**	**+0.4**
ONI	**Oni**	**1.92**	**83**	P	**Pn**	**03 40 42.4**	**+0.3**
ONI				S	**Sn**	**03 41 05.4**	**+0.3**

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*TIF **19** 03:42:25.5, 42°.41N×40°.99E, h31km±3km*
*DDA **19** 03:42:41.3, 41°.57N×41°.87E, h7km±4km, ML2.5*
ISC 19 03:42:28.1±4.3, 42°.4N±0°.1×40°.9E±0°.2, h35km, n7, σ0°50/11, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.96**	**143**	P	**Pn**	**03 42 44.4**	**-0.6**
BATM				S	**Sn**	**03 42 57.6**	**+0.2**
DBOC	**Borcka**	**1.16**	**151**	*i* P	**Pn**	**03 42 47.8**	**-0.1**
DBOC				IAML_P			
comp=Z,2μm,0.1s
DBAD	**Bademkaya**	**1.47**	**157**	*i* P	**Pn**	**03 42 52.6**	**+0.5**
DBAD				IAML_P			
comp=Z,1μm,0.1s
DAGI	**Agillar**	**1.49**	**150**	*i* P	**Pn**	**03 42 52.2**	**-0.2**
DAGI				*i* S	**Sn**	**03 43 10.3**	**-0.3**
TKB	**Tkibuli**	**1.53**	**90**	P	**Pn**	**03 42 52.4**	**-0.6**
TKB				S	**Sn**	**03 43 11.5**	**-0.2**
EPOS	**Posof**	**1.60**	**122**	*i* P	**Pn**	**03 42 54.8**	**+0.8**
ONI	**Oni**	**1.88**	**82**	P	**Pn**	**03 42 58.1**	**+0.3**
ONI				S	**Sn**	**03 43 20.6**	**+0.2**

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*IDC **19** 03:45:14.9±2.7, 37°.29N×73°.42E, h0km, mb3.9/6, mb1 4.0/10, mb1mx3.7/49, mbtmp4.0/10, ML3.9/4, MS3.6/1, Ms1 3.6/1, ms1mx2.4/40, Error ellipse: s-maj=47.0km s-min=29.6km az=151.0*
*ISCJB **19** 03:45:34.8±0.4, 38°.51N±0°.03×72°.95E±0°.06, h103km, mb3.9/9, Error ellipse: s-maj=7.4km s-min=4.1km az=18.5*
*NEIC **19** 03:45:36.1±2.1, 38°.45N×72°.98E, h112km±15km, mb4.1/3, Error ellipse: s-maj=27.6km s-min=9.3km az=122.0*
*NNC **19** 03:45:42.1±4.7, 39°.16N×73°.12E, h240km±45km, mb2.5, mpv3.5, Error ellipse: s-maj=50.7km s-min=26.7km az=5.0*
ISC 19 03:45:35.0±0.8, 38°.50N±0°.05×72°.89E±0°.06, h103km, n50, σ2°53/64, mb3.9/9, 5C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.07**	**285**	*e*Pn	**Pn**	**03 46 11.3**	**+2.6**
GAR				*e*Sn	**Sn**	**03 46 37.8**	**+3.3**
BTK	**Batken**	**2.24**	**315**	*e*Pn	**Pn**	**03 46 14.4**	**+3.6**
BTK				*e*Sn	**Sn**	**03 46 41.9**	**+3.7**
ARSB	**Arslanbob**	**2.82**	**1**	*e*Pn	**Pn**	**03 46 20.4**	**+1.8**
ARSB				*e*Sn	**Sn**	**03 46 52.0**	**-0.1**
CHGR	**Chuyangaron**	**2.93**	**274**	*e*Sn	Sn	03 46 38.7	-16
AML	**Almayashu**	**3.68**	**9**	P	**Pn**	**03 46 32.1**	**+1.9**
SNR=86
UCH	**Uchtor**	**3.93**	**18**	P	**Pn**	**03 46 35.4**	**+1.8**
SNR=78
KZA	**Kyzart**	**4.01**	**26**	P	**Pn**	**03 46 35.7**	**+1.1**
SNR=42
EKS2	**Erkin-Say**	**4.21**	**9**	P	**Pn**	**03 46 39.7**	**+2.5**
SNR=12
AAK	**Ala-Archa**	**4.31**	**16**	Pn	**Pn**	**03 46 41.1**	**+2.6**
7.4nm,0.3s,baz=161,slow=6.9,SNR=37
AAK				Sn	**Sn**	**03 47 29.4**	**+1.6**
5.7nm,0.3s,baz=222,slow=10,SNR=3.5
AAK	**Ala-Archa**	**4.31**	**16**	P	**Pn**	**03 46 40.7**	**+2.2**
SNR=25
AAK	**Ala-Archa**	**4.31**	**16**	*e*Pn	**Pn**	**03 46 40.9**	**+2.4**
AAK				*e*Sn	**Sn**	**03 47 29.2**	**+1.4**
AAK	**Ala-Archa**	**4.31**	**16**	⇓P	**Pn**	**03 46 40.8**	**+2.2**
8.1nm,0.4s
AAK				⇑S	**Sn**	**03 47 29.8**	**+2.0**
46nm,0.5s
KBK	**Karagaybulak**	**4.44**	**20**	P	**Pn**	**03 46 42.6**	**+2.3**
SNR=16
ULHL	**Ulahol**	**4.54**	**33**	P	**Pn**	**03 46 42.4**	**+0.9**
SNR=33
BOOM	**Boomskoye usch**	**4.62**	**29**	*e*Pn	**Pn**	**03 46 44.1**	**+1.5**
BOOM				*e*Sn	**Sn**	**03 47 33.6**	**-1.6**
CEP	**Cherat**	**4.73**	**190**	P	**Pn**	**03 46 44.7**	**+0.5**
CEP				S	**Sn**	**03 47 34.0**	**-4.0**
CHCP	**Chirah Chowk**	**4.84**	**176**	P	**Pn**	**03 46 47.2**	**+1.6**
NIL	**Nilore**	**4.85**	**176**	*e*Pn	**Pn**	**03 46 46.2**	**+0.5**
NIL				*e*Sn	**Sn**	**03 47 33.5**	**-7.1**
TKM2	**Tokmak 2**	**4.87**	**24**	P	**Pn**	**03 46 47.6**	**+1.5**
SNR=8.4
TKM2	**Tokmak 2**	**4.87**	**24**	⇓P	**Pn**	**03 46 47.4**	**+1.3**
2.2nm,0.3s
TKM2				⇑S	**Sn**	**03 47 40.4**	**-1.1**
11nm,0.6s
USP	**Ospenovka**	**4.92**	**14**	P	**Pn**	**03 46 48.5**	**+1.9**
SNR=10
KK31	**Karatay Array**	**4.94**	**339**	*e*Pn	**Pn**	**03 46 49.3**	**+2.4**
KK31				*e*Sn	**Sn**	**03 47 44.2**	**+1.4**
KK31	**Karatay Array**	**4.94**	**339**	⇑P	**Pn**	**03 46 49.1**	**+2.2**
4.5nm,0.4s,baz=143,slow=12,SNR=87
KK31				⇓S	**Sn**	**03 47 43.9**	**+1.0**
35nm,0.6s,baz=150,slow=22,SNR=19
KKAR	**Karatay Array**	**4.94**	**339**	*e*Pn	**Pn**	**03 46 49.3**	**+2.4**
KKAR				*e*Sn	**Sn**	**03 47 43.5**	**+0.6**
KBL	**Kabul**	**5.02**	**219**	*e*Pn	**Pn**	**03 46 50.6**	**+2.5**
KBL				*e*Sn	**Sn**	**03 47 48.7**	**+3.7**
GEYT	**Alibeck**	**11.64**	**272**	Sn	**Sn**	**03 50 19.5**	**-6.1**
0.6nm,0.3s,baz=83,slow=12,SNR=2.5
KURBB	**Kurchatov Arra**	**12.77**	**16**	Pn	**Pn**	**03 48 30.6**	**-1.9**
0.0nm,0.3s,baz=212,slow=12,SNR=2.8
AB31	**Akbulak array**	**14.22**	**323**	⇓P	**Pn**	**03 48 50.7**	**-0.7**
1.6nm,0.5s,baz=130,slow=13,SNR=31
AB31				⇑S	Sn	03 51 19.2	-8.7
1.4nm,0.5s,baz=150,slow=23,SNR=11
ABKAR	**Akbulak array**	**14.22**	**323**	*e*Pn	**Pn**	**03 48 51.1**	**-0.2**
ABKAR				*e*Sn	Sn	03 51 19.4	-8.4
BVAR	**Borovoye Array**	**14.63**	**354**	Pn	**Pn**	**03 48 56.4**	**-0.3**
0.3nm,0.3s,baz=169,slow=9.9,SNR=3.8
BRVK	**Borovoye**	**14.67**	**354**	*e*P	**P**	**03 49 02.9**	**+2.2**
AKTO	**Aktyubinsk**	**15.94**	**323**	Pn	**P**	**03 49 15.2**	**+0.5**
1.1nm,0.3s,baz=132,slow=11,SNR=12
AKTO				Sn	**Sn**	**03 52 02.5**	**-6.9**
0.2nm,0.3s,baz=90,slow=11,SNR=3.5
AKTO	**Aktyubinsk**	**15.94**	**323**	⇑P	**Pn**	**03 49 09.8**	**-3.3**
4.3nm,0.8s
AKTO				⇓S	**Sn**	**03 52 02.7**	**-6.7**
1.9nm,0.6s
ZALV	**Zalesovo Beam**	**17.48**	**24**	P	**P**	**03 49 31.4**	**-0.3**
0.7nm,0.3s,baz=213,slow=11,SNR=12
ZAA1	**Zalesovo Array**	**17.48**	**24**	*e*P	**P**	**03 49 31.4**	**-0.3**
AKASG	**Malin Array Be**	**32.92**	**306**	P	**P**	**03 52 00.3**	**+1.0**
0.6nm,0.3s,baz=76,slow=7.8,SNR=4.2
AKBB	**Malin Array Si**	**32.92**	**306**	*e*P	**P**	**03 52 00.3**	**+1.0**
2.0nm,1.1s
MLR	**Muntele Rosu**	**35.17**	**297**	*e*P	**P**	**03 52 18.6**	**-0.3**
7.1nm,1.2s
FIA0	**FINESS Array S**	**36.71**	**324**	*e*P	**P**	**03 52 33.2**	**+1.6**
FINES	**FINESS Array B**	**36.71**	**324**	P	**P**	**03 52 33.2**	**+1.6**
0.8nm,0.3s,baz=115,slow=8.1,SNR=13
ARA0	**ARCESS Array S**	**39.90**	**336**	*e*P	**P**	**03 53 00.0**	**+1.7**
ARCES	**ARCESS Array B**	**39.90**	**336**	P	**P**	**03 53 00.0**	**+1.7**
0.8nm,0.4s,baz=110,slow=8.1,SNR=22
HFS	**Hagfors**	**42.45**	**320**	P	**P**	**03 53 20.4**	**+1.1**
0.8nm,0.4s,baz=83,slow=12,SNR=10
GERES	**GERESS Array B**	**43.04**	**304**	LR	LR	04 14 16.6
comp=Z,62nm,19.0s,baz=335,slow=40
NB2	**NORSAR Subarra**	**43.72**	**322**	P	**P**	**03 53 30.7**	**+1.2**
comp=Z,0.2nm,0.4s,baz=91,slow=7.9
NB200	**NORSAR Array S**	**43.72**	**322**	*e*P	**P**	**03 53 30.4**	**+0.9**
NOA	**NORSAR Array B**	**43.72**	**322**	P	**P**	**03 53 30.4**	**+0.9**
comp=Z,0.2nm,0.3s,baz=93,slow=7.7,SNR=4.5
INK	**Inuvik**	**71.69**	**10**	P	**P**	**03 56 44.8**	**-0.3**
comp=Z,1.5nm,0.5s,baz=5.3,slow=4.6,SNR=8.8
YKA	**Yellowknife Ar**	**79.17**	**4**	P	**P**	**03 57 28.5**	**+0.6**
comp=Z,0.4nm,0.5s,baz=350,slow=5.6,SNR=4.1
YKB5	**Yellowknife Ar**	**79.17**	**4**	*e*P	**P**	**03 57 28.6**	**+0.6**

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*ISCJB **19** 03:48:31.9±0.5, 21°.91S±0°.03×68°.59W±0°.05, h131km±6km, mb3.5/1, Error ellipse: s-maj=7.1km s-min=4.8km az=166.5*
*SJA **19** 03:48:31.7±0.6, 21°.89S×68°.54W, h122km±3km, ML3.1, MW3.2*
*GUC **19** 03:48:33.3±0.6, 21°.91S×68°.59W, h122km±3km, ML3.6*
*IDC **19** 03:48:45.7±7.3, 20°.60S×66°.30W, h122km±36km, mb3.6/1, mb1 3.3/3, mb1mx3.0/22, mbtmp3.6/3, Error ellipse: s-maj=240.9km s-min=23.0km az=57.0*
ISC 19 03:48:32.4±1.1, 21°.91S±0°.04×68°.57W±0°.05, h124km±9km, n38, σ0°61/56, 12C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.63**	**280**	*e*P	**Pn**	**03 48 52.2**	**+0.3**
PB09				*e*S	**Sn**	**03 49 06.7**	**+0.1**
PB09	**IPOC Station P**	**0.63**	**280**	⇑*i*P	**Pn**	**03 48 52.2**	**+0.3**
PB09				*i* S	**Sn**	**03 49 06.6**	**0.0**
PB09				IAML		03 49 09.2
comp=E,2μm,0.5s
LVC	**Limon Verde**	**0.77**	**204**	*e*P	**Pn**	**03 48 53.1**	**-0.1**
LVC				*e*S	**Sn**	**03 49 09.0**	**+0.1**
LVC				IAML		03 49 09.8
comp=Z,356nm,0.2s
LVC	**Limon Verde**	**0.77**	**204**	⇓*i*P	**Pn**	**03 48 53.1**	**-0.1**
LVC				*i* S	**Sn**	**03 49 08.6**	**-0.3**
PB03	**IPOC Station P**	**1.10**	**263**	*e*P	**Pn**	**03 48 56.1**	**+0.1**
PB03				*e*S	**Sn**	**03 49 14.2**	**+0.3**
PB03	**IPOC Station P**	**1.10**	**263**	⇑*i*P	**Pn**	**03 48 56.2**	**+0.1**
PB03				*i* S	**Sn**	**03 49 13.7**	**-0.2**
PB03				IAML		03 49 15.5
comp=N,942nm,0.3s
PB01	**IPOC Station P**	**1.21**	**315**	⇑*i*P	**Pn**	**03 48 57.0**	**-0.1**
PB01				*i* S	**Sn**	**03 49 15.5**	**-0.3**
PB01				IAML		03 49 16.9
comp=N,2μm,0.2s
PB06	**IPOC Station P**	**1.22**	**229**	*e*P	**Pn**	**03 48 57.8**	**+0.6**
PB06				*e*S	**Sn**	**03 49 16.6**	**+0.5**
PB06	**IPOC Station P**	**1.22**	**229**	⇑*i*P	**Pn**	**03 48 57.8**	**+0.6**
PB06				*e*S	**Sn**	**03 49 16.1**	**+0.1**
PB06				IAML		03 49 17.6
comp=N,2μm,0.4s
PB07	**IPOC Station P**	**1.23**	**278**	*e*P	**Pn**	**03 48 57.5**	**+0.2**
PB07	**IPOC Station P**	**1.23**	**278**	⇑*i*P	**Pn**	**03 48 57.6**	**+0.2**
PB07				*e*S	**Sn**	**03 49 16.3**	**0.0**
PB07				IAML		03 49 20.5
comp=E,1μm,0.4s
PB02	**IPOC Station P**	**1.36**	**295**	*e*P	**Pn**	**03 48 58.9**	**+0.2**
PB02	**IPOC Station P**	**1.36**	**295**	⇑*i*P	**Pn**	**03 48 58.8**	**0.0**
PB02				*e*S	**Sn**	**03 49 18.4**	**-0.3**
PB02				IAML		03 49 25.7
comp=E,2μm,0.2s
PB04	**IPOC Station P**	**1.52**	**254**	*e*P	**Pn**	**03 49 00.9**	**+0.3**
PB04	**IPOC Station P**	**1.52**	**254**	⇑*i*P	**Pn**	**03 49 00.9**	**+0.3**
PB04				*e*S	**Sn**	**03 49 21.7**	**-0.3**
PB04				IAML		03 49 24.9
comp=N,834nm,0.3s
PB15	**IPOC Station P**	**1.54**	**213**	*e*P	**Pn**	**03 49 01.3**	**+0.5**
PB15	**IPOC Station P**	**1.54**	**213**	⇑*i*P	**Pn**	**03 49 01.7**	**+0.9**
PB15				*e*S	**Sn**	**03 49 23.4**	**+1.0**
PB05	**IPOC Station P**	**1.78**	**238**	*e*P	**Pn**	**03 49 04.0**	**+0.5**
PB05	**IPOC Station P**	**1.78**	**238**	⇑*i*P	**Pn**	**03 49 03.7**	**+0.2**
PB05				*e*S	**Sn**	**03 49 26.8**	**-0.5**
PB05				IAML		03 49 31.8
comp=N,495nm,0.4s
PB08	**IPOC Station P**	**1.84**	**343**	*e*P	**Pn**	**03 49 05.3**	**+0.7**
PB08	**IPOC Station P**	**1.84**	**343**	⇑*i*P	**Pn**	**03 49 05.6**	**+1.0**
PB08				*i* S	**Sn**	**03 49 29.8**	**+0.7**
PB08				IAML		03 49 31.4
comp=E,1μm,0.3s
GO01	**Chusmiza**	**2.30**	**345**	⇓*i*P	**Pn**	**03 49 11.3**	**+0.9**
GO01				*e*S	**Sn**	**03 49 40.4**	**+1.0**
PB11	**IPOC Station P**	**2.36**	**334**	*e*P	**Pn**	**03 49 10.7**	**-0.2**
PB11	**IPOC Station P**	**2.36**	**334**	⇑*i*P	**Pn**	**03 49 10.7**	**-0.2**
PB10	**IPOC Station P**	**2.43**	**228**	*e*P	**Pn**	**03 49 12.1**	**+0.6**
PSGCX	**Pisagua**	**2.72**	**327**	*e*P	**Pn**	**03 49 14.0**	**-1.3**
YJA	**Yavi**	**2.85**	**96**	*e*P	**Pn**	**03 49 18.1**	**+0.7**
YJA				IAML		03 49 21.9
comp=Z,36nm,0.4s
YJA				*e*S	**Sn**	**03 49 51.9**	**0.0**
MNMC	**Minye Minye**	**2.92**	**341**	⇑*i*P	**Pn**	**03 49 18.2**	**+0.1**
MNMC				*i* S	**Sn**	**03 49 53.8**	**+0.4**
MNMCX	**Minye Minye**	**2.92**	**341**	*e*P	**Pn**	**03 49 18.4**	**+0.2**
HJA	**Humahuaca**	**3.20**	**114**	*e*P	**Pn**	**03 49 22.3**	**+0.5**
HJA				IAML		03 49 24.7
comp=Z,88nm,0.5s
GO02	**Mina Guanaco**	**3.37**	**196**	*e*P	**Pn**	**03 49 24.7**	**+0.6**
PB12	**IPOC Station P**	**3.67**	**333**	*e*P	**Pn**	**03 49 27.8**	**0.0**
AZAP	**Zapla**	**3.97**	**126**	*e*P	**Pn**	**03 49 32.3**	**+0.4**
AZAP				IAML		03 49 34.1
comp=Z,22nm,0.5s
SLA	**San Lorenzo**	**3.98**	**135**	*e*P	**Pn**	**03 49 32.5**	**+0.6**
SLA				IAML		03 49 34.4
comp=Z,26nm,0.4s
LPAZ	**La Paz**	**5.61**	**4**	P	**Pn**	**03 49 55.0**	**+0.7**
comp=Z,1.1nm,0.3s,baz=154,slow=13,SNR=27
LPAZ				S	Sn	03 50 47.9	-10
comp=Z,0.3nm,0.3s,baz=202,slow=8.5,SNR=5.0
LPAZ	**La Paz**	**5.61**	**4**	*e*P	**Pn**	**03 49 54.6**	**+0.4**
CPUP	**Villa Florida**	**11.17**	**115**	P	**Pn**	**03 51 06.1**	**-2.5**
comp=Z,0.1nm,0.3s,baz=296,slow=14,SNR=3.2
TORD	**Torodi Ar. Bea**	**77.20**	**70**	P	**P**	**04 00 13.0**	**-0.2**
comp=Z,0.4nm,0.3s,baz=253,slow=5.5,SNR=25

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*IDC **19** 03:49:47.7±0.8, 35°.88N×27°.27E, h0km, mb3.7/10, mb1 3.7/17, mb1mx3.7/41, mbtmp3.7/17, ML3.5/7, MS2.8/8, Ms1 2.8/8, ms1mx2.5/49, Error ellipse: s-maj=19.4km s-min=13.4km az=170.0*
*ISK **19** 03:49:49.7, 35°.84N×27°.24E, h9km, ML4.1/31*
*ATH **19** 03:49:49.9, 35°.83N×27°.23E, h22km±1km, ML3.8/13, Error ellipse: s-maj=2.1km s-min=0.9km az=134.0*
*THE **19** 03:49:50.8, 35°.81N×27°.27E, h5km±2km, ML3.8/9, Error ellipse: s-maj=2.5km s-min=0.8km az=121.0*
*ISCJB **19** 03:49:51.0±0.4, 35°.74N±0°.02×27°.28E±0°.02, h27km±3km, mb3.7/11, MS2.9/4, Error ellipse: s-maj=3.0km s-min=2.2km az=1.4*
*NIC **19** 03:49:53.1±0.3, 36°.21N×27°.47E, h17km, mb4.2, ML3.8*
*HLW **19** 03:49:54.3, 35°.62N×27°.45E, h14km±11km, Md4.0*
*GII **19** 03:49:56.5±0.0, 35°.01N×27°.37E, h10km±3km, mb4.0/2, MD3.8/2*
*DDA **19** 03:49:57.3, 36°.22N×27°.55E, h32km±3km, ML3.8*
ISC 19 03:49:50.0±0.9, 35°.83N±0°.02×27°.30E±0°.02, h17km±6km, n167, σ1°77/187, mb3.7/11, MS3.0/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.30**	**201**	PG	**Pg**	**03 49 56.3**	**-0.3**
KARP				SG	**Sg**	**03 50 01.1**	**0.0**
KARP	**Karpathos**	**0.30**	**201**	P	**Pg**	**03 49 56.1**	**-0.5**
KARP				S	**Sb**	**03 50 01.2**	**-0.5**
KARP	**Karpathos**	**0.30**	**201**	P	**Pg**	**03 49 56.2**	**-0.3**
KARP				S	**Sg**	**03 50 01.0**	**0.0**
KARP				AML	AML	03 50 01.4
comp=N,76486μm,0.3s
KARP				AML	AML	03 50 01.7
ARG	**Arkhangelos**	**0.78**	**60**	PG	**Pg**	**03 50 05.3**	**+0.1**
ARG				SG	**Sn**	**03 50 17.3**	**-0.1**
ARG	**Arkhangelos**	**0.78**	**60**	P	**Pg**	**03 50 05.2**	**+0.1**
ARG				S	**Sn**	**03 50 17.6**	**+0.2**
ARG	**Arkhangelos**	**0.78**	**60**	P	**Pg**	**03 50 05.2**	**0.0**
ARG				S	**Sn**	**03 50 17.4**	**0.0**
ARG				AML	AML	03 50 20.4
comp=E,25056μm,0.7s
ARG				AML	AML	03 50 20.4
comp=N,16094μm,0.5s
NISR	**Nisiros**	**0.79**	**350**	P	**Pn**	**03 50 07.3**	**+0.9**
NISR				S	**Sn**	**03 50 18.2**	**+0.4**
NISR	**Nisiros**	**0.79**	**350**	P	**Pg**	**03 50 05.9**	**+0.4**
NISR				AML	AML	03 50 24.0
comp=E,7385μm,0.6s
NISR				AML	AML	03 50 26.9
comp=N,4593μm,0.5s
DAT	**Datca**	**0.93**	**14**	PG	**Pb**	**03 50 07.5**	**-0.2**
DAT				SG	**Sn**	**03 50 21.9**	**+0.6**
DAT	**Datca**	**0.93**	**14**	*i* P	**Pn**	**03 50 08.8**	**+0.4**
DATC	**Datca-Mugla**	**0.97**	**17**	PG	**Pg**	**03 50 09.1**	**+0.2**
BBRN	**Bozburun-Marma**	**1.05**	**36**	PG	**Pg**	**03 50 10.8**	**+0.4**
ZKR	**Zakros**	**1.13**	**231**	PN	**Pb**	**03 50 11.4**	**+0.2**
ZKR	**Zakros**	**1.13**	**231**	P	**Pb**	**03 50 11.3**	**+0.1**
ZKR				S	**Sg**	**03 50 27.2**	**+0.4**
ZKR	**Zakros**	**1.13**	**231**	P	**Pn**	**03 50 11.0**	**-0.1**
ZKR				S	**Sb**	**03 50 25.7**	**+0.1**
ZKR				AML	AML	03 50 30.4
comp=N,5364μm,0.7s
ZKR				AML	AML	03 50 36.7
comp=E,13586μm,0.9s
MRSB	**Marmaris-Mugla**	**1.15**	**39**	PN	**Pg**	**03 50 12.1**	**-0.1**
STIA	**Sitia Lasithi**	**1.17**	**238**	P	**Pg**	**03 50 12.4**	**-0.2**
STIA				S	**Sn**	**03 50 27.0**	**0.0**
BODT	**Bodrum**	**1.23**	**1**	PN	**Pg**	**03 50 13.7**	**-0.1**
BDRM	**Kayabasi**	**1.24**	**5**	*i* P	**Pg**	**03 50 14.4**	**+0.4**
YKAV	**Yalikavak-Bodr**	**1.29**	**359**	PN	**Pb**	**03 50 14.5**	**+0.6**
ANAF	**Anafi Island**	**1.34**	**293**	P	**Pb**	**03 50 14.8**	**+0.1**
ANAF				S	**Sb**	**03 50 32.4**	**+0.8**
ANAF	**Anafi Island**	**1.34**	**293**	P	**Pb**	**03 50 14.8**	**+0.1**
ANAF				AML	AML	03 50 38.4
comp=N,9424μm,0.5s
ANAF				AML	AML	03 50 41.6
comp=E,11476μm,0.4s
DALY	**Dalyan (Mula)**	**1.47**	**48**	PN	**Pg**	**03 50 17.6**	**-0.8**
DALY	**Dalyan (Mula)**	**1.47**	**48**	*i* P	**Pg**	**03 50 18.6**	**+0.2**
TURN	**Turunc**	**1.48**	**45**	PN	**Pn**	**03 50 12.9**	**-3.0**
TURN	**Turunc**	**1.48**	**45**	*i* P	**Pn**	**03 50 13.7**	**-2.1**
NPS	**Neapolis**	**1.49**	**248**	P	**Pn**	**03 50 16.2**	**+0.2**
NPS				S	**Sb**	**03 50 35.5**	**-0.2**
NPS	**Neapolis**	**1.49**	**248**	P	**Pn**	**03 50 16.5**	**+0.5**
NPS				S	**Sb**	**03 50 35.5**	**-0.2**
NPS				AML	AML	03 50 36.3
comp=E,8594μm,0.5s
NPS				AML	AML	03 50 36.5
comp=N,7251μm,0.5s
AMGA	**Amorgos Island**	**1.51**	**312**	P	**Pn**	**03 50 16.5**	**+0.2**
AMGA	**Amorgos Island**	**1.51**	**312**	P	**Pn**	**03 50 16.5**	**+0.2**
YER	**Yerkesik**	**1.52**	**31**	PN	**Pb**	**03 50 18.1**	**+0.2**
SANT	**Santorini**	**1.58**	**290**	PN	**Pn**	**03 50 17.5**	**+0.2**
SANT	**Santorini**	**1.58**	**290**	P	**Pn**	**03 50 18.0**	**+0.7**
SNT2	**Vlychada, Sant**	**1.59**	**289**	P	**Pn**	**03 50 18.1**	**+0.7**
SAP2K	**Karterados**	**1.61**	**292**	P	**Pn**	**03 50 17.8**	**+0.2**
THT1	**Athinios (Pele**	**1.61**	**291**	P	**Pn**	**03 50 18.1**	**+0.4**
THR6	**Thira Island,**	**1.62**	**289**	P	**Pb**	**03 50 19.1**	**-0.4**
LAST	**Lasithi**	**1.63**	**246**	P	**Pn**	**03 50 18.6**	**+0.6**
LAST				S	**Sb**	**03 50 39.6**	**-0.3**
LAST	**Lasithi**	**1.63**	**246**	P	**Pn**	**03 50 18.6**	**+0.6**
LAST				AML	AML	03 50 47.3
comp=E,3291μm,0.9s
LAST				AML	AML	03 50 59.2
comp=N,2776μm,0.7s
SAP1	**Santorini-Akro**	**1.63**	**289**	P	**Pb**	**03 50 19.0**	**-0.6**
THT2	**Imerovigli**	**1.63**	**292**	P	**Pn**	**03 50 18.8**	**+0.8**
THR3	**Thira Island,**	**1.64**	**291**	P	**Pn**	**03 50 18.7**	**+0.7**
THR3	**Thira Island,**	**1.64**	**291**	P	**Pn**	**03 50 18.7**	**+0.7**
FETY	**Fethiye**	**1.65**	**60**	PN	**Pg**	**03 50 20.8**	**-1.0**
FETY	**Fethiye**	**1.65**	**60**	*i* P	**Pg**	**03 50 21.3**	**-0.5**
FETY				IAML_P			
comp=Z,24μm,0.5s
THR9	**Santorini-Faro**	**1.66**	**289**	P	**Pb**	**03 50 19.4**	**-0.7**
CMBO	**Columbo, Santo**	**1.66**	**293**	P	**Pn**	**03 50 18.7**	**+0.4**
CMBO				S	**Sb**	**03 50 40.6**	**-0.1**
CMBO	**Columbo, Santo**	**1.66**	**293**	P	**Pn**	**03 50 18.7**	**+0.4**
THR5	**Thira Island,**	**1.68**	**291**	P	**Pb**	**03 50 19.9**	**-0.7**
SAP3	**Santorini-Thir**	**1.69**	**291**	P	**Pn**	**03 50 19.1**	**+0.4**
IOSP	**Ios island**	**1.85**	**299**	P	**Pn**	**03 50 21.2**	**+0.3**
GCAM	**G?zelcaml?**	**1.87**	**358**	PN	**Pb**	**03 50 22.6**	**-1.1**
KSL	**Kastellorizon**	**1.88**	**80**	P	**Pb**	**03 50 24.2**	**+0.3**
KSL				S	**Sb**	**03 50 47.8**	**+0.7**
KSL	**Kastellorizon**	**1.88**	**80**	P	**Pb**	**03 50 24.5**	**+0.6**
KSL				AML	AML	03 51 06.5
comp=N,1768μm,1.6s
KSL				AML	AML	03 51 06.6
comp=E,3926μm,1.4s
APE	**Apeiranthos**	**1.89**	**311**	PN	**Pn**	**03 50 22.0**	**+0.5**
APE	**Apeiranthos**	**1.89**	**311**	P	**Pn**	**03 50 21.9**	**+0.5**
AYDN	**Tasoluk**	**1.89**	**14**	*i* P	**Pg**	**03 50 25.6**	**-0.7**
AYDN				IAML_P			
comp=Z,6μm,0.1s
SMG	**Samos**	**1.91**	**349**	P	**Pn**	**03 50 22.0**	**+0.2**
SMG				AML	AML	03 51 01.2
comp=N,521μm,0.4s
SMG				AML	AML	03 51 01.9
comp=E,838μm,0.8s
AKAS	**Kas**	**1.91**	**77**	PN	**Pb**	**03 50 24.1**	**-0.4**
AKAS	**Kas**	**1.91**	**77**	*i* P	**Pb**	**03 50 25.0**	**+0.5**
IDI	**Anoyia**	**2.04**	**255**	Pn	**Pn**	**03 50 23.6**	**+0.1**
comp=E,10nm,0.3s,baz=58,slow=17,SNR=73
IDI				Sn	**Sn**	**03 50 45.0**	**-3.6**
comp=E,25nm,0.3s,baz=105,slow=9.6,SNR=9.6
IDI				LR	LR	03 51 00.1
comp=

PPCY	Paphos	4.23	101	P	Pn	03 50 56.0	+2.3
	baz=289						
ALFC	Alefka	4.38	97	P	Pn	03 50 58.3	+2.6
	baz=285						
ALFC				S	Sn	03 51 47.9	+1.5
MATC	Matruh	4.47	181	P	Pn	03 50 59.1	+2.1
	baz=183						
KMER	Konya-Meram	4.51	63	*i* P	Pb	03 51 03.3	-5.4
KONT	Konya--Tatoy	4.58	61	*i* P	Pn	03 51 03.5	+5.1
PYL	PYLOS	4.61	285	P	Pn	03 51 01.7	+2.8
LEF	Lefka	4.62	97	PN	Pn	03 51 01.8	+2.8
SLUM	Salum	4.66	202	P	Pn	03 51 02.6	+3.0
	baz=206						
SLUM				S	Sn	03 51 51.7	-1.7
	baz=206						
KDHN	Kadinhani	4.69	54	*i* P	Pn	03 51 03.8	+3.7
SZAC	Souni	4.69	102	P	Pn	03 51 02.0	+1.9
	baz=289						
SZAC				S	Sn	03 51 57.1	+3.0
TEKE	Tekeli-Mersin	4.73	85	PN	Pn	03 51 03.7	+3.2
MES3	Kyparissia	4.75	289	P	Pn	03 51 03.1	+2.4
BERE	Bereket-Mersin	4.83	82	PN	Pn	03 51 05.3	+3.3
KALE	Kalithea	4.85	303	P	Pn	03 51 05.3	+3.0
SRCK	Saricakaya, Es	4.96	31	*i* P	Pn	03 51 07.7	+4.0
CSS	Mathiatis	5.00	98	P	Pn	03 51 06.4	+2.1
	baz=286						
CSS				S	Sn	03 52 03.7	+1.9
AKKU	Akkuyu-Mersin	5.08	84	PN	Pn	03 51 09.1	+3.7
IKL	Isikli	5.19	84	PN	Pn	03 51 10.1	+3.2
KEBE	Keben-Mersin	5.23	81	PN	Pn	03 51 11.4	+3.9
SILI	Silifke-Mersin	5.39	82	PN	Pn	03 51 13.6	+4.0
KIZK	Mersin	5.58	81	PN	Pn	03 51 16.1	+3.9
EREN	Erenkoy	5.60	91	PN	Pn	03 51 16.3	+3.8
MERS	Mersin	5.92	78	PN	Pn	03 51 20.1	+3.1
BRTR	Keskin Array B	6.35	50	Pn	Pn	03 51 25.2	+2.3
	comp=Z,0.3nm,0.3s,baz=225,slow=16,SNR=16						
BRTR				Sn	Sn	03 52 35.1	0.0
	baz=216,slow=19,SNR=2.2						
SWA2		6.75	194	P	Pn	03 51 30.4	+2.1
	baz=196						
GLL	Jalalah	7.26	148	P	Pn	03 51 35.8	+0.5
	baz=148						
MMAI	Mount Meron Ar	7.26	110	Pn	Pn	03 51 35.2	-0.2
	comp=Z,2.4nm,0.3s,baz=309,slow=9.6,SNR=5.7						
MMAI				Sn	Sn	03 52 55.5	-2.0
	comp=Z,7.8nm,0.3s,baz=306,slow=24,SNR=11						
MMAI				LR	LR	03 54 51.7	
	comp=Z,34nm,20.8s,baz=290,slow=42						
GEM	Giv'at Ha'Em	7.38	108	Pn	Pn	03 51 41.3	+4.3
SUZ	Suez	7.57	141	P	Pn	03 51 41.3	+1.7
	baz=140						
SHMJ	Saham	7.66	111	P	Pn	03 51 41.8	+1.0
	comp=Z,27nm,0.6s,comp=Z,0.2nm						
HMDT	Nahal Hemdat	7.71	115	Pn	Pn	03 51 44.2	+2.8
HMDT				Sn	Sn	03 53 07.5	-0.8
KZIT	Kziot	7.71	128	Pn	Pn	03 51 42.0	+0.6
YTIR	Yattir	7.90	122	Pn	Pn	03 51 44.6	+0.4
NBNS	Bani Suef	7.94	154	P	Pn	03 51 46.3	+1.6
	baz=153						
DSI	Dead Sea	7.96	120	Pn	Pn	03 51 47.1	+2.1
MZDA	Masada	8.10	122	Pn	Pn	03 51 47.3	+0.5
MZDA				Sn	Sn	03 53 15.1	-2.8
LISJ	El Lisan	8.22	122	P	Pn	03 51 48.9	+0.4
	comp=Z,17nm,0.7s,comp=Z,0.1nm						
WALJ	Wala	8.27	119	P	Pn	03 51 49.9	+0.7
	comp=Z,29nm,0.7s,comp=Z,0.1nm						
PRNI	Paran	8.46	128	Pn	Pn	03 51 52.2	+0.3
PRNI				Sn	Sn	03 53 22.0	-5.0
HRFI	Mount Harif	8.70	129	Pn	Pn	03 51 55.6	+0.5
ASF	Jabal al Asfar	8.77	112	Pn	Pn	03 51 57.3	+1.3
	comp=Z,0.3nm,0.3s,baz=284,slow=8.3,SNR=2.7						
ASF				Sn	Sn	03 53 33.7	-0.8
	comp=Z,0.3nm,0.3s,baz=13,slow=11,SNR=2.5						
ASF	Jabal al Asfar	8.77	112	P	Pn	03 52 02.6	+6.5
MBRI	Mt Berech	8.79	131	Pn	Pn	03 51 56.8	+0.4
EIL	Elat	8.90	131	Pn	Pn	03 51 58.5	+0.7
	comp=Z,1.3nm,0.3s,baz=340,slow=15,SNR=9.0						
EIL				Sn	Sn	03 53 33.0	-4.7
	comp=Z,2.1nm,0.3s,baz=325,slow=4.4,SNR=5.4						
EIL	Elat	8.90	131	Pn	Pn	03 51 58.2	+0.4
VAE	Valguarnera	10.48	283	Sn	Sn	03 54 15.9	-0.6
	comp=Z,2.2nm,0.3s,baz=125,slow=12,SNR=2.9						
KBZ	Khabaz	14.34	52	LR	LR	04 00 36.9	
	comp=Z,45nm,19.6s,baz=236,slow=45						
GNI	Garni	14.41	67	LR	LR	04 00 03.8	
	comp=Z,95nm,20.8s,baz=272,slow=43						
KEST	Kesra	14.58	275	Pn	Pn	03 53 15.2	-0.4
	comp=Z,0.1nm,0.3s,baz=90,slow=4.0,SNR=2.0						
GERES	GERESS Array B	16.40	327	Pn	P	03 53 41.7	-0.4
	comp=Z,0.1nm,0.3s,baz=129,slow=10,SNR=8.7						
KHC	Kasperske Hory	16.67	327	*e*P	P	03 53 45.6	+0.6
KHC				*ex*	x	03 53 48.0	
PRU	Pruhonice	16.92	331	*e*P	P	03 53 49.4	+1.7
OBN	Obninsk	20.32	15	LR	LR	04 03 39.4	
	comp=Z,13nm,18.6s,baz=170,slow=41						
ESDC	Sonseca Array	24.95	288	P	P	03 55 12.0	-0.4
	comp=Z,1.2nm,0.7s,baz=80,slow=9.2,SNR=8.7						
FINES	FINESS Array B	25.64	359	P	P	03 55 17.7	-0.7
	comp=Z,2.6nm,1.0s,baz=133,slow=8.4,SNR=4.0						
HFS	Hagfors	25.86	344	P	P	03 55 21.1	+0.7
	comp=Z,0.6nm,0.5s,baz=140,slow=12,SNR=4.0						
MDT	Midelt	26.46	273	LR	LR	04 07 24.6	
	comp=Z,19nm,18.9s,baz=164,slow=40						
AKTO	Aktyubinsk	26.52	47	P	P	03 55 26.8	+0.2
	comp=Z,1.2nm,0.7s,baz=252,slow=16,SNR=3.8						
EKA	Eskdalemuir Ar	28.53	323	P	P	03 55 44.4	-0.1
	comp=Z,0.1nm,0.3s,baz=121,slow=9.2,SNR=2.7						
TORD	Torodi Ar. Bea	32.27	232	P	P	03 56 17.8	0.0
	comp=Z,0.7nm,0.5s,baz=36,slow=8.2,SNR=20						
TORD				LR	LR	04 09 33.0	
	comp=Z,57nm,18.8s,baz=60,slow=37						
ARCES	ARCESS Array B	33.77	359	P	P	03 56 29.4	-1.1
	comp=Z,7.4nm,0.3s,baz=168,slow=9.2,SNR=3.4						
DBIC	Dimbokro	41.35	233	LR	LR	04 18 22.8	
	comp=Z,32nm,18.3s,baz=54,slow=42						
MKAR	Makanchi Array	41.95	57	P	P	03 57 40.5	+0.6
	comp=Z,1.1nm,0.7s,baz=271,slow=7.8,SNR=8.0						
ZALV	Zalesovo Beam	43.28	47	P	P	03 57 49.8	-0.7
	comp=Z,0.9nm,0.4s,baz=284,slow=12,SNR=2.8						
SONM	Songino Array	57.71	52	P	P	03 59 39.5	-0.3
	comp=Z,0.3nm,0.4s,baz=306,slow=4.8,SNR=2.4						
KSRS	Korea Array	76.49	54	P	P	04 01 40.3	+1.3
	comp=Z,1.1nm,0.6s,baz=324,slow=4.9,SNR=4.1						

IDC 19 03:52:58.5±62.0, 19°87S×176°42W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.7/19, mbtmp3.9/3, Error ellipse: s-maj=1147.0km s-min=185.9km az=83.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.40	244	P	P	04 00 30.2	+0.1
	0.5nm,0.4s,baz=78,slow=20,SNR=2.8						
ASAR	Alice Springs	46.11	256	P	P	04 01 24.9	0.0
	1.6nm,0.6s,baz=99,slow=7.8,SNR=18						
WRA	Warramunga Arr	46.16	261	P	P	04 01 24.8	-0.5
	0.7nm,0.4s,baz=96,slow=8.1,SNR=6.7						

*ISCJB **19** 04:32:19.2±0.2, 63°.13N±0°.02×150°.83W±0°.05, h130^{km}±2^{km}, mb3.7/11, Error ellipse: s-maj=3.4km s-min=2.6km az=6.9*
*IDC **19** 04:32:19.6±1.7, 63°.19N×150°.93W, h117^{km}±15^{km}, mb3.4/10, mb1 3.5/14, mb1mx3.3/49, mbtmp3.7/14, Error ellipse: s-maj=16.5km s-min=14.0km az=62.0*
*NEIC **19** 04:32:21.0±0.0, 63°.13N×150°.81W, h121^{km}, ML3.4(AEIC), After AEIC.*
ISC 19 04:32:20.3±0.7, 63°.12N±0°.03×150°.88W±0°.03, h129^{km}±5^{km}, n84, σ1°31/126, mb3.9/11, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTH	Kantishna Hill	0.43	358	*e*Pn	Pn	04 32 39.1	+0.2
KTH				*e*Sn	Sn	04 32 51.3	-1.7
HUR	Hurricane	0.58	104	*e*Pn	Pn	04 32 39.5	-0.2
HUR				*e*Sn	Sn	04 32 54.0	-0.4
CAST	Castle Rocks	0.62	299	*e*Pn	Pn	04 32 39.8	-0.2
CAST				*e*Sn	Sn	04 32 53.9	-1.0
RND	Reindeer	0.96	72	*e*Pn	Pn	04 32 42.6	-0.1
RND				*e*Sn	Sn	04 32 59.0	-0.8
BPAW	Bear Paw Mtn.	0.98	357	*e*Pn	Pn	04 32 42.7	-0.2
BPAW				*e*Sn	Sn	04 32 59.2	-0.9
CHUM	Lake Minchumin	1.00	321	*e*Pn	Pn	04 32 43.2	+0.2
CHUM				*e*Sn	Sn	04 32 59.7	-0.5
MCK	McKinley	1.07	54	*e*Pn	Pn	04 32 43.8	+0.1
MCK				*e*Sn	Sn	04 33 00.6	-0.9
SKT	Skwentna	1.19	195	*e*Pn	Pn	04 32 44.8	-0.1
SKT				*e*Sn	Sn	04 33 02.8	-0.8
BWN	Browne	1.23	30	*e*Pn	Pn	04 32 46.0	+0.6
BWN				*e*Pn	Pn	04 32 46.2	+0.9
BWN				*e*Sn	Sn	04 33 04.3	-0.1
BWN				*e*Sn	Sn	04 33 04.5	+0.1
DHY	Denali Highway	1.60	90	*e*Pn	Pn	04 32 49.3	-0.2
DHY				*e*Sn	Sn	04 33 11.3	-0.5
SUA	Susitna One	1.67	178	*e*Pn	Pn	04 32 50.9	+0.6
SUA				*e*Sn	Sn	04 33 13.3	+0.2
PMR	Palmer	1.74	151	*e*Pn	Pn	04 32 50.7	-0.3
PMR				*e*Sn	Sn	04 33 13.9	-0.5
SML	Sawmill	1.77	137	*e*Pn	Pn	04 32 51.1	-0.4
SML				*e*Sn	Sn	04 33 14.8	-0.4
WRH	Wood River Hil	1.83	41	*e*Pn	Pn	04 32 51.9	-0.2
WRH				*e*Sn	Sn	04 33 15.2	-1.4
MLY	Manley	1.92	2	*e*Pn	Pn	04 32 53.0	-0.2
MLY				*e*Sn	Sn	04 33 16.9	-1.5
FIB	Fire Island	1.99	170	*e*Pn	Pn	04 32 54.2	+0.2
SPWE	Spurr West	2.02	204	*e*Pn	Pn	04 32 55.1	+0.6
SPU	Mount Spurr	2.02	196	*e*Pn	Pn	04 32 54.7	+0.2
SPU				*e*Sn	Sn	04 33 19.7	-0.9
CCB	Clear Creek Bu	2.05	40	*e*Pn	Pn	04 32 54.6	-0.1
KNK	Knik Glacier	2.06	145	*e*Pn	Pn	04 32 55.1	+0.3
KNK				*e*Sn	Sn	04 33 20.4	-0.9
SCM	Sheep Creek Mo	2.10	127	*e*Pn	Pn	04 32 55.1	-0.3
SCM				*e*Sn	Sn	04 33 21.3	-1.0
RC01	Rabbit Creek A	2.11	165	*e*Pn	Pn	04 32 55.6	0.0
RC01				*e*Sn	Sn	04 33 22.1	-0.4
HDA	Harding Lake	2.17	52	*e*Pn	Pn	04 32 56.1	-0.2
HDA				*e*Sn	Sn	04 33 21.9	-2.0
MDM	Murphy Dome	2.18	31	*e*Pn	Pn	04 32 56.4	0.0
MDM				*e*Sn	Sn	04 33 21.8	-2.3
COLA	College	2.21	36	*e*Pn	Pn	04 32 56.7	0.0
COLA				*e*Sn	Sn	04 33 23.4	-1.1
PS10	TAPS Pump St10	2.33	80	*e*Pn	Pn	04 32 58.8	+0.5
TTA	Tatalina	2.35	268	*e*Pn	Pn	04 32 58.3	-0.3
TTA				*e*Sn	Sn	04 33 25.3	-2.6
TT01	Tatalina	2.35	267	*e*Pn	Pn	04 32 58.4	-0.1
TT01				*e*Pn	Pn	04 32 58.4	-0.1
ILAR	Eielson Array	2.42	45	P	Pn	04 32 59.0	-0.3
	7.1nm,0.3s,baz=226,slow=13,SNR=171						
ILAR				S	Sn	04 33 27.2	-2.1
	5.4nm,0.3s,baz=231,slow=17,SNR=17						
ILB	Eielson Array	2.42	45	*e*Pn	Pn	04 32 58.5	-0.8
ILB				*e*Sn	Sn	04 33 27.2	-2.1
PAX	Paxson	2.47	91	*e*Pn	Pn	04 33 00.5	+0.4
PAX				*e*Sn	Sn	04 33 28.9	-1.8
SLKM	Skilak Lake	2.64	173	*e*Pn	Pn	04 33 02.3	+0.1
RDJH	Redoubt Jeurge	2.70	201	*e*Pn	Pn	04 33 02.8	-0.3
RIDG	Independent Ri	2.79	74	*e*Pn	Pn	04 33 04.5	+0.4
RIDG				*e*Sn	Sn	04 33 34.0	-3.8
PS06	TAPS Pump Stn6	2.79	10	*e*Pn	Pn	04 33 04.2	+0.2
RDWB	Redoubt West	2.80	200	*e*Pn	Pn	04 33 05.0	+0.6
RSO	Redoubt South	2.81	199	*e*Pn	Pn	04 33 05.7	+1.0
RSO				*e*Sn	Sn	04 33 35.7	-3.0
RDSO	Redoubt South	2.82	199	*e*Pn	Pn	04 33 05.2	+0.5
GLI	Glacier Island	2.87	140	*e*Pn	Pn	04 33 04.3	-0.9
GLI				*e*Sn	Sn	04 33 38.8	-1.0
SVW2	Sparrevohn	3.00	229	*e*Pn	Pn	04 33 07.0	+0.2
SEW	Seward	3.11	167	*e*Pn	Pn	04 33 07.8	-0.3
SEW				*e*Sn	Sn	04 33 43.3	-1.8
DOT	Dot Lake	3.12	77	*e*Pn	Pn	04 33 08.1	-0.2
DOT				*e*Sn	Sn	04 33 43.3	-2.1
IM3	Indian Mountai	3.13	338	*e*Pn	Pn	04 33 08.5	0.0
MENT	Mentasta	3.27	90	*e*Pn	Pn	04 33 10.7	+0.4
PRP	Porcupine Dome	3.35	42	*e*Pn	Pn	04 33 12.2	+0.7
BRLK	Bradley Lake	3.37	180	*e*Pn	Pn	04 33 12.1	+0.4
BRLK				*e*Sn	Sn	04 33 51.2	-0.2
EYAK	Cordova Ski Ar	3.55	134	*e*Pn	Pn	04 33 13.9	-0.1
EYAK				*e*Sn	Sn	04 33 53.4	-2.1
CNPM	China Poot	3.61	183	*e*Pn	Pn	04 33 14.9	+0.1
CNPM				*e*Sn	Sn	04 33 53.2	-3.9
COLD	Coldfoot	4.13	4	*e*Pn	Pn	04 33 21.6	0.0
COLD				*e*Sn	Sn	04 34 06.9	-2.4
BCA3	Beaver Creek A	4.13	87	*e*Pn	Pn	04 33 21.3	-0.5
HMT	Hamilton	4.21	129	*e*Pn	Pn	04 33 23.3	+0.5
HMT				*e*Sn	Sn	04 34 09.6	-1.7
FYU	Fort Yukon	4.21	32	*e*Pn	Pn	04 33 23.2	+0.5
CRQM	Cirque	4.36	120	*e*Pn	Pn	04 33 25.5	+0.6
CRQM				*e*Sn	Sn	04 34 13.4	-1.6
NICHA	Nichawak Mount	4.38	128	*e*Pn	Pn	04 33 24.6	-0.5
BALM	Baldy	4.53	114	*e*Pn	Pn	04 33 27.4	+0.4
BALM				*e*Sn	Sn	04 34 16.7	-2.2
EGAK	Eagle	4.60	65	*e*Pn	Pn	04 33 27.6	-0.3
EGAK				*e*Sn	Sn	04 34 19.1	-1.3
BM3	Burnt Mountain	5.05	29	*e*Pn	Pn	04 33 34.1	+0.1
DAWY	Dawson	5.22	74	*e*Pn	Pn	04 33 36.0	-0.2
KDAK	Kodiak Island	5.42	190	P	Pn	04 33 37.0	-1.9
	1.3nm,0.3s,baz=54,slow=6.3,SNR=50						
KDAK				S	Sn	04 34 35.2	-5.1
	3.1nm,0.3s,baz=142,slow=22,SNR=13						
KDAK	Kodiak Island	5.42	190	*e*Pn	Pn	04 33 37.6	-1.3
KDAK				*e*Sn	Sn	04 34 35.2	-5.1
TOLK	Toolik Lake Re	5.57	5	*e*Pn	Pn	04 33 43.5	+2.7
OHAK	Old Harbor	6.04	193	*e*Pn	Pn	04 33 46.2	-1.0
HYT	Haines Junctio	6.71	104	*e*Pn	Pn	04 33 57.5	+1.1
EPYK	Eagle Plains	6.87	55	*e*Pn	Pn	04 33 58.5	0.0
INK	Inuvik	8.82	46	P	Pn	04 34 24.1	-0.4
	0.1nm,0.3s,baz=228,slow=14,SNR=2.2						
YKA	Yellowknife Ar	16.46	76	P	P	04 36 03.9	+0.2
	0.1nm,0.3s,baz=286,slow=10,SNR=5.6						
YKB5	Yellowknife Ar	16.46	76	*e*Pn	P	04 36 03.9	+0.2
RES	Resolute Bay	22.14	36	P	P	04 37 05.8	+0.9
	2.1nm,0.9s,baz=245,slow=15,SNR=3.2						
WALA	Waterton Lakes	24.53	108	*e*P	P	04 37 29.2	+1.5
PDAR	Pinedale Array	31.35	111	P	P	04 38 28.5	-0.1
	0.7nm,0.8s,baz=322,slow=4.5,SNR=5.1						
NV01	Mina Array Sit	31.55	126	*e*P	P	04 38 31.5	+1.1
NVAR	Mina Array Bea	31.55	126	P	P	04 38 31.5	+1.1
	0.3nm,0.5s,baz=325,slow=7.7,SNR=3.0						
TXAR	Lajitas Array	45.27	116	P	P	04 40 26.3	+1.4
	0.3nm,0.6s,baz=331,slow=6.5,SNR=5.8						
ARA0	ARCESS Array S	47.60	2	*e*P	P	04 40 40.9	-1.6
ARCES	ARCESS Array B	47.60	2	P	P	04 40 40.9	-1.6
	8.5nm,0.3s,baz=359,slow=7.6,SNR=4.6						
KSRS	Korea Array	53.51	282	P	P	04 41 28.0	+0.9
	1.1nm,0.7s,baz=29,slow=6.9,SNR=4.0						
SONA0	Songino Array	53.79	305	*e*P	P	04 41 30.8	+1.5
SONM	Songino Array	53.79	305	P	P	04 41 30.8	+1.5
	0.7nm,0.7s,baz=24,slow=8.1,SNR=3.4						
ZAA1	Zalesovo Array	55.45	324	*e*P	P	04 41 40.7	-0.2
ZALV	Zalesovo Beam	55.45	324	P	P	04 41 40.7	-0.2
	0.8nm,0.3s,baz=67,slow=8.0,SNR=3.4						
MK32	Makanchi Array	62.61	322	*e*P	P	04 42 29.8	-0.7
MKAR	Makanchi Array	62.61	322	P	P	04 42 29.8	-0.6
	0.7nm,0.4s,baz=43,slow=7.7,SNR=7.1						
AKTO	Aktyubinsk	64.51	340	P	P	04 42 41.6	-1.1
	2.5nm,1.0s,baz=51,slow=13,SNR=5.0						
AKASG	Malin Array Be	66.52	360	P	P	04 42 55.4	-0.3
	0.5nm,0.3s,baz=2.5,slow=5.9,SNR=3.1						

*IDC **19** 04:32:53.8±0.9, 34°.26N×25°.08E, h0^{km}, mb3.8/8, mb1 4.0/14, mb1mx3.8/48, mbtmp3.9/14, ML4.0/5, MS2.8/5, Ms1 2.8/5, ms1mx2.6/33, Error ellipse: s-maj=16.9km s-min=14.1km az=75.0*
*ATH **19** 04:32:57.8, 34°.30N×25°.10E, h28^{km}±1^{km}, ML3.4/6, Error ellipse: s-maj=2.9km s-min=1.4km az=356.0*
*NEIC **19** 04:32:59.0±0.0, 34°.33N×25°.05E, h1^{km}, mb4.1/6, After THE.*
*THE **19** 04:32:59.0, 34°.33N×25°.05E, h0^{km}±2^{km}, ML3.3/6, Error ellipse: s-maj=3.6km s-min=1.1km az=164.0*
*DDA **19** 04:33:46.3, 34°.41N×25°.11E, h20^{km}, ML3.7*
ISC 19 04:32:57.4±1.6, 34°.21N±0°.06×25°.08E±0°.03, h24^{km}±11^{km}, n88, σ1°20/106, mb3.7/12, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.84	345	P	Pb	04 33 12.7	-0.6
SIVA				S	Sb	04 33 23.7	-0.5
SIVA	Sivas	0.84	345	P	Pb	04 33 13.0	-0.3
SIVA				S	Sb	04 33 23.8	-0.3
SIVA				AML	AML	04 33 31.5	
	comp=E,14393μm,0.5s						
SIVA				AML	AML	04 33 35.2	
	comp=N,18336μm,0.7s						
TMBK	Timbaki Herakl	0.90	343	P	Pn	04 33 14.4	-0.2
TMBK				S	Sn	04 33 27.1	+0.3
LAST	Lasithi	1.00	19	P	Pb	04 33 15.6	-0.6
LAST				S	Sn	04 33 30.2	+0.7
LAST	Lasithi	1.00	19	P	Pb	04 33 15.6	-0.6
LAST				S	Sb	04 33 28.5	-0.6
LAST				AML	AML	04 33 36.9	
	comp=E,1705μm,0.7s						
LAST				AML	AML	04 33 37.7	
	comp=N,1995μm,0.5s						
GVD	Gavdhos	1.03	308	P	Pn	04 33 17.7	+1.3
GVD	Gavdhos	1.03	308	*e*Pg	Pn	04 33 16.9	+0.5
GVD				*e*Sn	Sn	04 33 31.4	+1.3
GVD	Gavdhos	1.03	308	P	Pn	04 33 16.9	+0.5
GVD				S	Sn	04 33 31.4	+1.3
GVD	Gavdhos	1.03	308	P	Pn	04 33 16.8	+0.5
GVD				S	Sn	04 33 30.9	+0.8
GVD				AML	AML	04 33 43.3	
	comp=E,5764μm,0.4s						
GVD				AML	AML	04 33 45.6	
	comp=N,4673μm,0.5s						
GVDS	Gavdos	1.03	308	P	Pn	04 33 17.4	+1.0
GVDS				S	Sn	04 33 32.7	+2.6
IDI	Anoyia	1.09	352	Pn	Pn	04 33 16.9	-0.4
	comp=N,23nm,0.3s,baz=185,slow=10,SNR=30						
IDI				Sn	Sn	04 33 31.7	+0.2
	comp=N,96nm,0.3s,baz=220,slow=17,SNR=15						
IDI	Anoyia	1.09	352	P	Pb	04 33 17.4	-0.3
NPS	Neapolis	1.14	22	P	Pb	04 33 18.7	+0.3
NPS				S	Sn	04 33 34.5	+1.8
NPS	Neapolis	1.14	22	P	Pb	04 33 18.1	-0.4
NPS				S	Sn	04 33 32.7	-0.1
NPS				AML	AML	04 33 46.1	
	comp=N,1834μm,0.6s						
NPS				AML	AML	04 33 46.5	
	comp=E,2132μm,0.9s						
ZKR	Zakros	1.30	46	P	Pb	04 33 21.5	+0.3
ZKR	Zakros	1.30	46	*e*Pg	Pb	04 33 22.9	+1.7
ZKR	Zakros	1.30	46	P	Pb	04 33 22.9	+1.7
ZKR	Zakros	1.30	46	P	Pb	04 33 21.1	-0.1
VAM	Vamos	1.40	329	P	Pb	04 33 22.7	-0.2
VAM				S	Sb	04 33 41.9	+1.6
VAM	Vamos	1.40	329	P	Pb	04 33 22.7	-0.2
VAM				S	Sb	04 33 40.5	+0.2
VAM				AML	AML	04 33 50.9	
	comp=N,2093μm,0.5s						
VAM				AML	AML	04 33 52.0	
	comp=E,3269μm,0.8s						
IMMV	Iera Moni Meta	1.54	324	P	Pb	04 33 24.6	-0.7
IMMV	Iera Moni Meta	1.54	324	P	Pb	04 33 24.9	-0.4
IMMV				S	Sb	04 33 46.1	+1.7
IMMV	Iera Moni Meta	1.54	324	P	Pb	04 33 24.6	-0.7
IMMV				S	Sb	04 33 44.7	+0.2
IMMV				AML	AML	04 34 03.7	
	comp=N,2350μm,0.7s						
IMMV				AML	AML	04 34 06.5	
	comp=E,2445μm,0.8s						
THR6	Thira Island,	2.16	7	P	Pn	04 33 32.7	+0.8
KARP	Karpathos	2.17	51	*e*P	Pb	04 33 34.1	-1.9
KARP	Karpathos	2.17	51	*e*Pn	Pb	04 33 34.5	-1.5
KARP				*e*Pg	Pb	04 33 35.1	-0.9
KARP	Karpathos	2.17	51	P	Pb	04 33 35.1	-0.9
KARP	Karpathos	2.17	51	P	Pb	04 33 35.1	-0.9
SANT	Santorini	2.18	8	*e*P	Pn	04 33 32.9	+0.7
SANT	Santorini	2.18	8	*e*Pn	Pn	04 33 32.7	+0.5
SANT				*e*Sn	Sn	04 33 57.5	-1.0
ANKY	Antikythira Is	2.21	319	P	Pb	04 33 35.5	-1.1
THR8	Santorini-Mono	2.22	8	P	Pn	04 33 33.0	+0.3
SAP3	Santorini-Thir	2.23	5	P	Pn	04 33 33.4	+0.5
THR2	Thira island,	2.25	7	P	Pn	04 33 33.8	+0.6
APE	Apeiranthos	2.88	7	*e*P	Pn	04 33 41.9	+0.1
VLI	Veliai	3.06	326	P	Pn	04 33 45.2	+0.9
ARG	Arkhangelos	3.20	50	*e*P	Pn	04 33 47.9	+1.8
DAT	Datca	3.24	38	*e*P	Pn	04 33 47.9	+1.1
DAT	Datca	3.24	38	*i* P	Pn	04 33 48.5	+1.7
DAT				IAML_P			

comp=Z,1.3nm,0.5s,baz=263,slow=8.7,SNR=3.6

MAN 19 04:33:57.5, 8°.25N×122°.74E, h36km, mb4.7, ML3.6, MS3.4, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.49**	**200**	*eP*	Pn	04 34 09.3	+1.4
IPIL				*eS*	Sn	04 34 17.7	+2.6
DCPH	**Dipolog City**	**0.69**	**61⇑**	*eP*	Pn	04 34 12.9	+2.1
DCPH				*eS*	Sn	04 34 21.2	+0.9
SNPH	**Sibulan**	**1.19**	**24⇑**	*eP*	Pn	04 34 17.1	-0.7
SNPH				*i S*	Sn	04 34 34.1	+1.4
ZCP	**Zamboanga City**	**1.46**	**207⇑**	*i P*	Pn	04 34 25.9	+4.5
ZCP				*i S*	Sn	04 34 42.8	+3.5
TBP	**Tagbilaran**	**1.81**	**38**	*eP*	Pn	04 34 26.6	+0.4
CGP	**Cagayan de Oro**	**1.95**	**84⇓**	*eP*	Pn	04 34 28.9	+1.0
CGP				*eS*	Sn	04 34 58.6	+7.4
CGP	**Cagayan de Oro**	**1.95**	**84⇓**	*eP*	Pn	04 34 28.9	+1.0
CGP				*eS*	Sn	04 34 58.6	+7.4
BUKP	**Musuan**	**2.33**	**99**	*eP*	Pn	04 34 38.8	+5.5
BUKP				*eS*	Sn	04 35 15.4	+15
LLP	**Lapu-Lapu**	**2.39**	**30**	*eP*	Pn	04 34 35.1	+1.0
LLP				*eS*	Sn	04 35 03.3	+1.2
MSLP	**Maasin**	**2.81**	**48**	*eP*	Pn	04 34 43.7	+3.8
MSLP				*eS*	Sn	04 35 20.7	+8.2

*GCMT **19** 04:39:45.0±0.4, 54°.65S±0°.03×120°.48W±0°.04, h25km±2km, MW4.9/69, Moment Tensor Solution. s22,c25; s69,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.40±.20; $M_{\theta\theta}$0.94±.15; $M_{\phi\phi}$-1.34±.14; $M_{r\theta}$-0.24±.31; $M_{\theta\phi}$2.19±.10; $M_{\phi r}$-0.16±.30; Best double couple: $M_0$2.49000×10^{16} NP1:ϕ_s193.00000°,δ84.00000°,λ174.00000°. NP2: ϕ_s284.00000°,δ84.00000°,λ6.00000°. Principal axes: T 2.3120, Plg9.0000°, Azm149.0000°; N 0.3550, Plg81.0000°, Azm330.0000°; P -2.6690, Plg0.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 19 04:39:38.4±1.0, 54°.53S×120°.25W, h0km, mb4.0/5, mb1 4.3/5, mb1mx3.9/29, mbtmp4.0/5, MS3.9/14, Ms1 3.9/14, ms1mx3.8/21 Error ellipse: s-maj=79.4km s-min=29.2km az=149.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.18**	**133**	LR	LR	04 53 52.7	
	comp=Z,403nm,18.3s,baz=274,slow=29						
RKT	**Rikitea**	**33.25**	**335**	*eT*	T	05 20 38.8	
	4.1nm,0.3s						
VNDA	**Vanda**	**34.95**	**202**	LR	LR	04 57 03.2	
	comp=Z,88nm,19.3s,baz=89,slow=30						
PLCA	**Paso Flores**	**35.45**	**88**	LR	LR	04 57 17.1	
	comp=Z,196nm,20.1s,baz=251,slow=30						
TBI	**Tubuai**	**38.02**	**313**	*eLR*	LR	04 57 17.8	
	comp=Z,440nm,27.5s,baz=162						
TBI	**Tubuai**	**38.02**	**313**	*eT*	T	05 26 42.0	
	18nm,0.3s						
CFA	**Coronel Fontan**	**43.13**	**80**	LR	LR	05 01 33.0	
	comp=Z,170nm,18.8s,baz=260,slow=30						
PPT2	**Papeete2**	**43.21**	**317**	*eLR*	LR	04 59 42.1	
	comp=Z,576nm,26.0s,baz=159						
PPT	**Papeete**	**43.23**	**317**	LR	LR	05 02 47.7	
	comp=Z,165nm,18.1s,baz=157,slow=32						
SNAA	**Sanae**	**46.69**	**157**	LR	LR	05 07 52.9	
	comp=Z,218nm,19.0s,baz=274,slow=36						
TAOE	**Nuku Hiva Isla**	**48.25**	**333**	*eLR*	LR	05 01 58.3	
	comp=Z,383nm,26.6s						
LVC	**Limon Verde**	**49.68**	**71**	LR	LR	05 04 37.4	
	comp=Z,81nm,18.4s,baz=228,slow=30						
CPUP	**Villa Florida**	**53.38**	**85**	LR	LR	05 08 51.3	
	comp=Z,244nm,18.3s,baz=224,slow=33						
LPAZ	**La Paz**	**55.24**	**67**	P	P	04 49 13.6	-0.3
	2.5nm,1.1s,baz=187,slow=8.1,SNR=4.0						
LPAZ				LR	LR	05 05 35.4	
	comp=Z,22nm,20.1s,baz=203,slow=28						
MAW	**Mawson**	**58.16**	**181**	LR	LR	05 13 50.7	
	comp=Z,92nm,18.5s,baz=180,slow=35						
BDFB	**Brasilia**	**67.11**	**85**	LR	LR	05 17 33.3	
	comp=Z,123nm,18.0s,baz=163,slow=34						
ROSC	**El Rosal**	**70.38**	**49**	LR	LR	05 17 22.8	
	comp=Z,54nm,18.1s,baz=69,slow=32						
H01W1	**Cape Leeuwin H**	**79.41**	**223**	T	T	06 20 02.1	
	baz=151,slow=75						
H01W2	**Cape Leeuwin H**	**79.41**	**223**	T	T	06 20 01.7	
	baz=151,slow=75						
H01W3	**Cape Leeuwin H**	**79.42**	**223**	T	T	06 20 02.6	
	baz=151,slow=75						
ASAR	**Alice Springs**	**79.72**	**244**	P	P	04 51 47.5	-0.5
	1.1nm,0.8s,baz=144,slow=5.2,SNR=5.2						
WRA	**Warramunga Arr**	**82.54**	**246**	P	P	04 52 04.7	+1.6
	3.9nm,0.8s,baz=157,slow=4.5,SNR=5.0						
TXAR	**Lajitas Array**	**84.73**	**14**	P	P	04 52 13.3	-0.7
	0.3nm,1.0s,baz=185,slow=4.5,SNR=2.5						
BOSA	**Boshof**	**92.02**	**150**	LR	LR	05 32 47.7	
	comp=Z,59nm,18.1s,baz=148,slow=35						
NVAR	**Mina Array Bea**	**92.60**	**2**	P	P	04 52 52.5	+1.1
	0.4nm,0.5s,baz=219,slow=7.0,SNR=2.2						
NVAR				LR	LR	05 24 41.2	
	comp=Z,89nm,21.0s,baz=226,slow=29						
H11S2	**WAKE ISLAND Hy**	**95.44**	**294**	T	T	06 39 02.5	
	baz=147,slow=76,SNR=92						
H11S3	**WAKE ISLAND Hy**	**95.45**	**294**	T	T	06 38 54.4	
	baz=147,slow=76,SNR=53						
H11S1	**WAKE ISLAND Hy**	**95.46**	**294**	T	T	06 38 58.1	
	baz=147,slow=76,SNR=55						
H11N3	**WAKE ISLAND Hy**	**96.34**	**295**	T	T	06 39 57.5	
	baz=144,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**96.35**	**295**	T	T	06 39 58.9	
	baz=144,slow=75,SNR=19						
H11N2	**WAKE ISLAND Hy**	**96.36**	**295**	T	T	06 39 58.3	
	baz=144,slow=75,SNR=21						
SONM	**Songino Array**	**150.46**	**276**	PKPbc	PKPbc	04 59 30.0	-1.0
	0.5nm,0.6s,baz=138,slow=0.7,SNR=2.8						
GERES	**GERESS Array B**	**157.12**	**82**	PKPbc	PKPbc	04 59 33.2	+0.2
	1.1nm,0.8s,baz=238,slow=1.9,SNR=4.7						
MKAR	**Makanchi Array**	**163.80**	**251**	PKPab	PKPab	05 00 33.1	-1.8
	0.6nm,0.7s,baz=108,slow=4.7,SNR=2.1						

*IDC **19** 04:40:34.7±0.7, 28°.87S×176°.15W, h0km, mb4.3/11, mb1 4.5/12, mb1mx4.4/27, mbtmp4.4/12, ML4.8/1, MS3.6/10, Ms1 3.6/10, ms1mx3.4/29, Error ellipse: s-maj=25.5km s-min=19.0km az=146.0*

*ISCJB **19** 04:40:37.9±0.5, 29°.14S±0°.04×176°.22W±0°.07, h38km, mb4.7/24, MS3.8/11, Error ellipse: s-maj=9.6km s-min=4.6km az=14.8*

*NEIC **19** 04:40:57.4±1.4, 29°.64S×178°.10W, h83km±30km, mb4.6/23, Error ellipse: s-maj=66.1km s-min=25.0km az=75.0*

ISC 19 04:40:39.9±0.5, 29°.01S±0°.07×176°.08W±0°.07, h38km, n111, σ2°.12/96, mb4.7/24, MS3.9/11, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.62**	**261**	*ePn*	**Pn**	**04 41 09.4**	**+3.5**
RAO				*eSn*	**Sn**	**04 41 21.1**	**-4.5**
RIZ	**Raoul Island**	**1.63**	**261**	P	**Pn**	**04 41 09.4**	**+3.3**
RIZ				S	**Sn**	**04 41 29.3**	**+3.5**
MXZ	**Matakaoa Point**	**9.73**	**207**	P	**Pn**	**04 42 57.2**	**-0.1**
MXZ				S	**Sn**	**04 44 45.0**	**-0.2**
WMGZ	**Waiomatatini S**	**9.91**	**206**	P	**Pn**	**04 42 58.8**	**-1.0**
WMGZ				S	**Sn**	**04 44 50.6**	**+0.9**
HAZ	**Te Kaha**	**10.11**	**209**	P	**Pn**	**04 43 01.1**	**-1.4**
HAZ				S	**Sn**	**04 44 57.2**	**+2.6**
PUZ	**Puketiti**	**10.19**	**206**	P	**Pn**	**04 43 01.3**	**-2.3**
PUZ				S	**Sn**	**04 44 56.8**	**+0.2**
RUGZ	**Raukumara Rang**	**10.33**	**209**	P	**Pn**	**04 43 03.7**	**-1.9**
RUGZ				S	**Sn**	**04 44 59.9**	**-0.4**
TWGZ	**Tauwhareparae**	**10.39**	**207**	P	**Pn**	**04 43 04.3**	**-2.1**
TWGZ				S	**Sn**	**04 45 01.5**	**0.0**
CNGZ	**Carnagh Statio**	**10.57**	**205**	P	**Pn**	**04 43 06.7**	**-2.1**
MWZ	**Matawai**	**10.71**	**208**	P	**Pn**	**04 43 08.3**	**-2.4**
MWZ				S	**Sn**	**04 45 09.1**	**-0.2**
URZ	**Urewera**	**10.82**	**210**	Pn	**Pn**	**04 43 09.2**	**-3.0**
	2.2nm,0.3s,baz=280,slow=4.8,SNR=12						
URZ				Sn	**Sn**	**04 45 09.0**	**-3.0**
	5.0nm,0.3s,baz=98,slow=15,SNR=3.2						
URZ				LR	LR	04 47 52.2	
	comp=Z,284nm,19.1s,baz=23,slow=40						
URZ	**Urewera**	**10.82**	**210**	*ePn*	**Pn**	**04 43 09.7**	**-2.5**
URZ				*eSn*	Sn	04 44 57.0	-15
URZ	**Urewera**	**10.82**	**210**	P	**Pn**	**04 43 09.2**	**-3.0**
RAGZ	**Rawiri**	**10.89**	**208**	P	**Pn**	**04 43 10.9**	**-2.4**
RIGZ	**Rimuhau**	**10.93**	**206**	P	Pn	04 43 09.0	-4.8
PRGZ	**Paritu Road**	**11.08**	**205**	P	**Pn**	**04 43 13.3**	**-2.5**
MUGZ	**Murupara**	**11.15**	**210**	P	**Pn**	**04 43 14.7**	**-2.1**
MTHZ	**Maungataniwha**	**11.43**	**209**	P	**Pn**	**04 43 18.8**	**-1.8**
BKZ	**Black Stump Fm**	**11.84**	**209**	*ePn*	**Pn**	**04 43 23.4**	**-2.8**
BKZ				*eSn*	Sn	04 45 16.3	-21
BKZ	**Black Stump Fm**	**11.84**	**209**	P	**Pn**	**04 43 23.6**	**-2.7**
MCHZ	**McNeill Hill**	**11.99**	**208**	P	**Pn**	**04 43 26.0**	**-2.2**
KWHZ	**Kaweka Forest**	**12.09**	**209**	P	**Pn**	**04 43 25.9**	**-3.8**
HIZ	**Hauiti**	**12.10**	**216**	P	**Pn**	**04 43 30.1**	**+0.4**
KAHZ	**Kahuranaki**	**12.22**	**206**	P	**Pn**	**04 43 29.7**	**-1.6**
KRHZ	**Kereru**	**12.30**	**208**	P	**Pn**	**04 43 31.6**	**-0.8**
BHHZ	**Black Hill Sta**	**12.30**	**210**	P	**Pn**	**04 43 31.7**	**-0.7**
TUVZ	**Tukino**	**12.30**	**212**	P	**Pn**	**04 43 34.6**	**+2.0**
FWVZ	**Far West T-bar**	**12.34**	**212**	P	**Pn**	**04 43 32.8**	**-0.3**
MOVZ	**Moawhango**	**12.37**	**211**	P	**Pn**	**04 43 33.4**	**0.0**
PNHZ	**Pukenui**	**12.59**	**208**	P	**Pn**	**04 43 34.9**	**-1.6**
PRHZ	**Porangahau**	**12.72**	**206**	P	**Pn**	**04 43 34.0**	**-4.1**
TSZ	**Takapari Road**	**12.81**	**209**	P	**Pn**	**04 43 37.7**	**-1.8**
DVHZ	**Dannevirke**	**12.93**	**207**	P	**Pn**	**04 43 40.7**	**-0.4**
ANWZ	**Angora Road**	**12.95**	**206**	P	**Pn**	**04 43 40.7**	**-0.6**
BFZ	**Birch Farm**	**13.23**	**206**	*ePn*	**Pn**	**04 43 44.1**	**-1.0**
BFZ				*eSn*	Sn	04 45 55.5	-15
BFZ	**Birch Farm**	**13.23**	**206**	P	**Pn**	**04 43 42.9**	**-2.2**
THZ	**Tophouse**	**15.55**	**212**	*ePn*	**Pn**	**04 44 12.6**	**-3.8**
THZ				*eSn*	Sn	04 46 50.6	-17
KHZ	**Kahutara**	**15.79**	**209**	*ePn*	**Pn**	**04 44 14.1**	**-5.2**
KHZ				*eSn*	Sn	04 46 56.0	-17
LTZ	**Lake Taylor**	**16.64**	**211**	*ePn*	**Pn**	**04 44 27.5**	**-2.8**
	32nm,1.1s						
LTZ				*eSn*	Sn	04 47 12.9	-21
RAR	**Rarotonga**	**16.68**	**66**	Pn	**Pn**	**04 44 26.9**	**-3.9**
	4.2nm,0.3s,baz=252,slow=6.3,SNR=11						
RAR				Sn	Sn	04 47 11.9	-23
	2.0nm,0.3s,baz=88,slow=15,SNR=3.1						
RAR				LR	LR	04 49 38.1	
	comp=Z,163nm,19.0s,baz=248,slow=33						
OXZ	**Oxford**	**17.18**	**211**	*ePn*	**Pn**	**04 44 35.4**	**-1.5**
	98nm,0.5s						
OXZ				*eSn*	Sn	04 47 27.6	-19
DZM	**Mont Dzumac**	**17.21**	**290**	*eLR*	LR	04 48 53.6	
	comp=Z,770nm,25.6s						
DZM	**Mont Dzumac**	**17.21**	**290**	Pn	**P**	**04 44 40.8**	**+2.0**
	0.6nm,0.3s,baz=134,slow=16,SNR=6.6						
DZM				LR	LR	04 49 57.7	
	comp=Z,391nm,18.8s,baz=95,slow=33						
DZM	**Mont Dzumac**	**17.21**	**290**	*ePn*	**Pn**	**04 44 36.1**	**-1.4**
	38nm,1.5s						
MQZ	**McQueen's Vall**	**17.22**	**209**	*ePn*	**Pn**	**04 44 33.5**	**-3.9**
	41nm,1.1s						
MQZ				*eSn*	Sn	04 47 31.0	-17
RPZ	**Rata Peaks**	**17.93**	**212**	P	**Pn**	**04 44 45.1**	**-1.0**
	2.8nm,0.3s,baz=116,slow=1.2,SNR=7.3						
RPZ				S	Sn	04 47 48.4	-17
	1.0nm,0.3s,baz=270,slow=16,SNR=3.6						
RPZ	**Rata Peaks**	**17.93**	**212**	*ePn*	**Pn**	**04 44 43.6**	**-2.6**
	23nm,0.9s						
FOZ	**Fox Glacier**	**18.38**	**214**	*ePn*	**P**	**04 44 48.7**	**-2.7**
	75nm,1.4s						
LBZ	**Lake Benmore**	**18.84**	**212**	*ePn*	**P**	**04 44 54.6**	**-2.0**
	23nm,1.1s						
ODZ	**Otahua Downs**	**19.15**	**210**	*eP*	**P**	**04 44 59.3**	**-0.5**
	31nm,0.7s						
TBI	**Tubuai**	**24.52**	**83**	*eLQ*	LQ	04 50 39.9	
	646nm,29.2s						
TBI				*eLR*	LR	04 51 46.6	
	comp=Z,421nm,28.5s,baz=259						
TBI	**Tubuai**	**24.52**	**83**	*eT*	T	05 13 08.3	
	14nm,0.4s						
PAE	**Paea**	**26.77**	**71**	*eT*	T	05 15 30.3	
	4.7nm,0.3s						
PPT2	**Papeete2**	**26.80**	**71**	*eLQ*	LQ	04 51 30.8	
	488nm,26.2s						
PPT2				*eLR*	LR	04 52 44.4	
	comp=Z,451nm,26.8s,baz=243						
PPT2	**Papeete2**	**26.80**	**71**	*eT*	T	05 15 34.1	
	2.6nm,0.3s						
CTA	**Charters Tower**	**35.27**	**276**	P	**P**	**04 47 31.4**	**+0.2**
	4.1nm,0.5s,baz=103,slow=9.5,SNR=10						
CTAO	**Charters Tower**	**35.27**	**276**	*eP*	**P**	**04 47 28.0**	**-3.2**
	14nm,1.4s						
STKA	**Stephens Creek**	**36.43**	**255**	P	**P**	**04 47 41.9**	**+0.8**
	6.6nm,0.6s,baz=99,slow=11,SNR=15						
STKA				LR	LR	05 00 52.5	
	comp=Z,132nm,19.6s,baz=53,slow=33						
STKA	**Stephens Creek**	**36.43**	**255**	*eP*	**P**	**04 47 40.4**	**-0.7**
	1.2nm,0.6s						
TAOE	**Nuku Hiva Isla**	**39.23**	**67**	*eLR*	LR	04 58 26.0	
	comp=Z,233nm,27.1s						
BBOO	**Buckleboo**	**40.96**	**252**	*eP*	**P**	**04 48 16.7**	**-2.3**
	21nm,1.1s						
AS31	**Alice Springs**	**44.87**	**265**	*eP*	**P**	**04 48 50.3**	**-0.6**
	2.6nm,0.6s						
ASAR	**Alice Springs**	**44.87**	**265**	P	**P**	**04 48 50.0**	**-0.8**
	6.0nm,0.5s,baz=100,slow=6.8,SNR=45						
ASAR				LR	LR	05 06 14.6	
	comp=Z,181nm,20.8s,baz=118,slow=34						
WB2	**Warramunga Arr**	**45.73**	**270**	*eP*	**P**	**04 48 56.9**	**-0.8**
	9.6nm,0.7s						
WRAB	**Tennant Creek**	**45.73**	**270**	*eP*	**P**	**04 48 56.9**	**-0.8**
	13nm,0.9s						
WR1	**Warramunga Arr**	**45.74**	**270**	*eP*	**P**	**04 48 56.9**	**-0.8**
WRA	**Warramunga Arr**	**45.74**	**270**	P	**P**	**04 48 56.9**	**-0.8**
	5.2nm,0.5s,baz=106,slow=8.8,SNR=30						
FORT	**Forrest**	**48.03**	**253**	*eP*	**P**	**04 49 15.2**	**-0.3**
	33nm,0.8s						
SBA	**Scott Base**	**49.55**	**185**	*eP*	P	04 49 33.7	+7.3
	3.6nm,0.8s						
VNDA	**Vanda**	**49.64**	**186**	LR	LR	05 06 49.4	
	comp=Z,25nm,22.0s,baz=23,slow=32						
FITZ	**Fitzroy Crossi**	**54.05**	**268**	*eP*	**P**	**04 49 59.6**	**-1.3**
	12nm,0.9s						
GUMO	**Guam**	**56.72**	**313**	LR	LR	05 11 04.0	
	comp=Z,40nm,19.9s,baz=112,slow=32						
CASY	**Casey**	**57.14**	**207**	*eP*	**P**	**04 50 25.2**	**+2.9**
	11nm,1.0s						
PSA00	**Pilbara Seismi**	**57.80**	**262**	*eP*	**P**	**04 50 26.7**	**-1.0**
	15nm,1.1s						
MORW	**Morawa**	**58.53**	**252**	*eP*	**P**	**04 50 30.2**	**-2.6**
	28nm,1.4s						
GIRL	**Giralia**	**62.25**	**258**	*eP*	**P**	**04 50 57.9**	**-0.3**
	211nm,1.3s						
MAW	**Mawson**	**74.18**	**200**	P	**P**	**04 52 12.5**	**+0.3**
	2.3nm,0.7s,baz=321,slow=17,SNR=2.5						
SYO	**Syowa Base**	**78.83**	**192⇑**	*eX*	**P**	**04 52 40.2**	**+1.7**
SNAA	**Sanae**	**79.48**	**178**	P	**P**	**04 52 44.9**	**+2.7**
SNAA	**Sanae**	**79.48**	**178**	P	**P**	**04 52 43.3**	**+1.2**
	baz=198,slow=4.4						
VNA3	**Neumayer Olymp**	**79.56**	**176**	P	**P**	**04 52 45.3**	**+2.8**
VNA2	**Neumayer--Watz**	**80.02**	**176**	P	**P**	**04 52 48.1**	**+3.2**
	baz=174,slow=4.1						
VNA1	**Neumayer--Stat**	**80.24**	**176**	P	**P**	**04 52 49.4**	**+3.3**
PLCA	**Paso Flores**	**82.22**	**132**	LR	LR	05 22 20.0	
	comp=Z,42nm,18.0s,baz=323,slow=30						
KSRS	**Korea Array**	**84.39**	**318**	LR	LR	05 24 22.0	
	comp=Z,12nm,21.1s,baz=135,slow=31						
PETK	**Petropavlovsk-**	**84.91**	**344**	P	**P**	**04 53 10.9**	**+0.5**
	2.5nm,0.6s,baz=115,slow=7.4,SNR=6.3						
NVAR	**Mina Array Bea**	**86.09**	**42**	P	**P**	**04 53 16.1**	**-0.9**
	0.7nm,0.6s,baz=222,slow=9.3,SNR=4.6						
USRK	**Ussuriysk Ar.**	**86.95**	**325**	P	**P**	**04 53 21.3**	**+0.6**
	1.7nm,0.7s,baz=145,slow=5.3,SNR=4.4						
TXAR	**Lajitas Array**	**90.24**	**56**	P	**P**	**04 53 38.5**	**+1.7**
	0.4nm,0.9s,baz=184,slow=6.0,SNR=4.3						
LLLB	**Lilloet**	**92.61**	**31**	*eP*	P	04 54 06.2	+19
	5.7nm,0.4s						
ATAH	**Atahualpa**	**93.25**	**100**	LR	LR	05 27 10.6	
	comp=Z,42nm,21.6s,baz=188,slow=30						
PDAR	**Pinedale Array**	**93.99**	**43**	P	**P**	**04 53 54.8**	**+0.8**
	0.1nm,0.4s,baz=192,slow=6.5,SNR=3.2						
ILAR	**Eielson Array**	**96.21**	**12**	P	**P**	**04 54 02.9**	**-0.5**
	0.7nm,0.9s,baz=224,slow=4.7,SNR=6.2						
HHC	**Hu-ho-hao-te**	**96.48**	**313**	*eP*	P	04 54 16.4	+11
HHC				pmax	pmax		
	comp=Z,17nm,0.5s						
HHC				pmax	pmax		
	comp=Z,190nm,5.7s						
CD2	**Chengdu**	**96.77**	**301**	*eP*	P	04 54 15.1	+8.3
WMQ	**Urumqi**	**113.68**	**308**	*eP*	PKiKP	04 59 25.1	+11
WMQ				LR	LR		
	comp=N,280nm,29.2s						
WMQ				LR	LR		
	comp=E,500nm,29.1s						
WMQ				LR	LR		
	comp=Z,67nm,24.3s						
MKAR	**Makanchi Array**	**118.15**	**310**	PKP	**PKPdf**	**04 59 22.2**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=79,slow=1.7,SNR=5.0						
KSH	**Kashi**	**120.97**	**301**	*ePKP*	PKiKP	04 59 37.9	+9.4
ARCES	**ARCESS Array B**	**137.57**	**349**	PKP	**PKPdf**	**04 59 59.2**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=72,slow=6.7,SNR=11						
H10S3	**ASCENSION HYDR**	**138.22**	**152**	T	T	07 36 24.1	
	baz=205						
H10S2	**ASCENSION HYDR**	**138.22**	**152**	T	T	07 35 52.0	
	baz=205,slow=74						
H10S1	**ASCENSION HYDR**	**138.23**	**152**	T	T	07 36 03.5	
	baz=205,slow=74						
H10N3	**ASCENSION HYDR**	**139.29**	**151**	T	T	07 36 57.9	
	baz=205,slow=74						
H10N1	**ASCENSION HYDR**	**139.29**	**151**	T	T	07 37 01.8	
	baz=205,slow=74						
H10N2	**ASCENSION HYDR**	**139.30**	**151**	T	T	07 36 57.9	
	baz=205						
FINES	**FINESS Array B**	**144.38**	**342**	PKP	**PKPab**	**05 00 08.9**	**-0.5**
	comp=Z,3.3nm,0.7s,baz=54,slow=2.6,SNR=17						
KBZ	**Khabaz**	**145.68**	**306**	PKPbc	**PKPab**	**05 00 14.9**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=212,slow=2.5,SNR=4.2						
NB2	**NORSAR Subarra**	**147.60**	**353**	PKP	**PKPbc**	**05 00 19.5**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=8.8,slow=2.9						
NOA	**NORSAR Array B**	**147.60**	**353**	PKPbc	**PKPbc**	**05 00 18.1**	**-1.5**
	comp=Z,3.5nm,0.7s,baz=13,slow=4.4,SNR=16						
AKASG	**Malin Array Be**	**151.15**	**326**	PKPbc	**PKiKP**	**05 00 29.1**	**-0.1**
	comp=Z,6.4nm,0.8s,baz=47,slow=2.5,SNR=18						
TORD	**Torodi Ar. Bea**	**164.08**	**172**	PKPab	**PKPab**	**05 01 36.0**	**+3.0**
	comp=Z,4.1nm,0.8s,baz=186,slow=3.0,SNR=17						

IDC 19 04:48:25.4±8.0, 7°.05S×148°.66E, h67km±61km, mb2.8/1, mb1 3.5/3, mb1mx3.1/24, mbtmp3.5/3, ML3.7/1, MS3.5/1, Ms1 3.5/1, ms1mx2.9/4, Error ellipse: s-maj=125.1km s-min=57.6km az=120.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.77**	**212**	P	Pn	04 49 06.8	-0.7
	3.8nm,0.3s,baz=32,slow=5.6,SNR=5.0						
PMG				S	Sn	04 49 41.3	+1.4
	3.7nm,0.3s,baz=30,slow=7.1,SNR=3.8						
PMG				LR	LR	04 49 57.3	
	comp=Z,851nm,20.9s,baz=76,slow=33						
WRA	**Warramunga Arr**	**18.91**	**226**	P	P	04 52 40.2	-0.6
	0.3nm,0.3s,baz=49,slow=9.5,SNR=1.5						
ASAR	**Alice Springs**	**21.77**	**219**	P	P	04 53 10.4	-1.4
	0.4nm,0.4s,baz=58,slow=9.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**146.94**	**283**	PKPbc	PKPbc	05 08 01.3	-0.1
	0.3nm,0.7s,baz=55,slow=2.9,SNR=3.9						

*ISCJB **19** 05:01:31.1±0.5, 23°.91N±0°.02×122°.43E±0°.02, h15km±5km, Error ellipse: s-maj=4.2km s-min=2.4km az=143.2*

*JMA **19** 05:01:31.9±0.2, 23°.93N×122°.42E, h26km±4km, M2.6*

*TAP **19** 05:01:32.0, 23°.99N×122°.38E, h20km, ML3.0, D*

ISC 19 05:01:31.7±0.9, 23°.94N±0°.03×122°.40E±0°.02, h22km±10km, n59, σ0°.61/101, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.65**	**338**	P	**Pb**	**05 01 44.1**	**-0.3**
	baz=337						
EOS1				S	**Sb**	**05 01 52.8**	**-0.3**
	baz=337						
JYNG	**Yonagunijimaku**	**0.71**	**44**	P	**Pb**	**05 01 45.2**	**-0.2**
JYNG				*eS*	**Sb**	**05 01 53.9**	**-0.8**
TWD	**Chiawan**	**0.75**	**281**	*eP*	**Pb**	**05 01 45.9**	**-0.2**
	baz=277						
TWD				*eS*	**Sb**	**05 01 56.0**	**+0.2**
	baz=277						
YOJ	**Yonaguni jima**	**0.76**	**47**	P	**Pb**	**05 01 46.2**	**-0.1**
	baz=62						
YOJ				S	**Sn**	**05 01 57.5**	**-0.3**
	baz=62						
YOJ	**Yonaguni jima**	**0.76**	**47**	P	**Pb**	**05 01 46.1**	**-0.1**
YOJ				*eS*	**Sb**	**05 01 55.6**	**-0.6**
NANB	**Nanao**	**0.76**	**309**	*eP*	**Pb**	**05 01 45.9**	**-0.4**
	baz=317						
NANB				S	**Sn**	**05 01 57.5**	**-0.5**
	baz=317						
ENA	**Nanau**	**0.77**	**309**	P	**Pb**	**05 01 46.0**	**-0.4**
	baz=317						
ENA				*eS*	**Sb**	**05 01 57.

YHNB	Yeheng	1.18	308	eP		Pn	05 01 53.0 0.0
	baz=305						
YHNB				eS		Sn	05 02 07.9 -0.6
	baz=305						
NSK	Sanguang	1.20	308	eP		Pn	05 01 53.3 +0.1
	baz=305						
NWF	Wu-fen Shan	1.26	333	eP		Pn	05 01 53.9 -0.1
	baz=331						
NWF				eS		Sb	05 02 11.9 +1.3
	baz=331						
WFSB	Wu-fen Shan	1.26	333	eP		Pn	05 01 53.9 -0.1
	baz=331						
WFSB				eS		Sb	05 02 11.8 +1.4
	baz=331						
TWA	Mucha	1.27	324	eP		Pb	05 01 55.6 +0.6
	baz=323						
IRIF	Iriomote-Funau	1.28	72	P		Pn	05 01 54.7 +0.5
TATO	Taipei	1.32	321	eP		Pb	05 01 55.7 -0.2
	baz=319						
TATO				eS		Sb	05 02 12.9 +0.6
	baz=319						
WHP	Taichung City	1.37	284	eP		Pb	05 01 57.7 +0.9
	baz=270						
SMLT	Sun Moon Lake	1.37	268	eP		Pb	05 01 58.5 +1.7
	baz=254						
SMLT				eS		Sn	05 02 13.4 +0.2
	baz=254						
YUS	Yu-Shan	1.40	251	eP		Pn	05 01 56.8 +0.4
	baz=248						
YUS				eS		Sn	05 02 14.4 0.0
	baz=248						
TYC	Yuchr	1.41	269	eP		Pb	05 01 57.6 +0.3
	baz=255						
TYC				eS		Sn	05 02 14.5 +0.5
	baz=255						
YM01	YM01	1.42	328	eP		Pb	05 01 57.1 -0.4
	baz=326						
YM10	YM10	1.43	328	eP		Pb	05 01 57.3 -0.4
	baz=326						
YM04	YM04	1.44	327	eP		Pb	05 01 57.5 -0.3
	baz=325						
YM08	YM08	1.44	329	eP		Pn	05 01 57.0 +0.5
	baz=327						
LIOB	Emei	1.44	299	P		Pb	05 01 58.0 0.0
	baz=297						
NSTT	Nanjuang	1.45	298	eP		Pb	05 01 58.0 0.0
	baz=282						
NSTT				eS		Sb	05 02 16.1 +0.1
	baz=282						
ELDTW	Lidau	1.48	240	eP		Pn	05 01 56.9 -0.2
	baz=236						
ELDTW				eS		Sn	05 02 13.3 -2.4
	baz=236						
JKRS	Kuro-shima	1.50	78	P		Pn	05 01 57.9 +0.6
CHN5	Tsauling	1.61	258	eS		Sb	05 02 21.8 +0.9
	baz=243						
JIJ	Ishigaki jima	1.65	75	P		Pn	05 01 59.7 +0.4
JIJ				eS		Sn	05 02 20.1 +0.3
TWGBT	Beinan	1.65	228	eP		Pn	05 01 59.8 +0.4
	baz=238						
TWGBT				eS		Sn	05 02 19.4 -0.6
	baz=238						
TWG	Pinlang	1.66	228	eP		Pn	05 01 59.3 -0.2
	baz=238						
TWG				eS		Sn	05 02 20.3 +0.3
	baz=238						
WTP	Ta-pu	1.78	247	eP		Pb	05 02 03.5 -0.2
	baz=244						
WTP				eS		Sb	05 02 26.1 +0.5
	baz=244						
JISG	Ishigakijimahi	1.86	69	P		Pn	05 02 02.4 +0.2
JISG				S		Sn	05 02 24.7 -0.3
SLGT	Liugui	1.87	240	eP		Pb	05 02 04.5 -0.7
	baz=227						
SLGT				eS		Sb	05 02 29.5 +1.4
	baz=227						
ECL	Taimali	1.89	225	eP		Pn	05 02 03.8 +1.2
	baz=222						
ECL				eS		Sn	05 02 24.1 -1.6
	baz=222						
MASBT	Mashibuluo	2.10	231	eP		Pn	05 02 06.4 +0.9
	baz=221						
MASBT				eS		Sn	05 02 31.2 +0.3
	baz=221						
EAST	Anshuo	2.11	223	eP		Pn	05 02 05.7 0.0
	baz=220						
EAST				eS		Sn	05 02 30.7 -0.6
	baz=220						

*ISCJB **19** 05:06:09.3±0.3,24°.49S±0°.03×179°.78E±0°.06,h517km, mb4.3/34,Error ellipse: s-maj=6.9km s-min=3.4km az=0.6*
*BJI **19** 05:06:10.8±0.0,24°.83S×179°.78E,h545km,mb4.7/7, mB5.0/6*
*NEIC **19** 05:06:12.0±1.6,24°.61S×179°.73E,h542km±9km,mb4.5/37, Error ellipse: s-maj=19.7km s-min=15.8km az=141.0*
*IDC **19** 05:06:13.2±1.8,24°.46S×179°.69E,h554km±19km, mb3.5/11,mb1 3.8/12,mb1mx3.6/29,mbtmp4.4/12,Error ellipse: s-maj=13.9km s-min=11.0km az=143.0*
ISC 19 05:06:10.2±0.4,24°.62S±0°.06×179°.77E±0°.07,h517km, n130,σ1§74/150,mb4.4/34,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.07	156	P	P	05 07 39.5	+0.9
GLKZ				S	S	05 08 50.2	-0.7
NIUE	Niue	11.04	62	eP	P	05 08 42.7	+3.9
MARNC	Mare, Loyalty	11.25	284	eP	P	05 08 41.7	+0.8
OUZ	Omahuta	11.84	205	eP	P	05 08 50.2	+3.3
OUZ	Omahuta	11.84	205	P	P	05 08 49.5	+2.6
OUENC	Ouen Island, N	12.06	278	eP	P	05 08 51.2	+1.8
ONTNC	Ouen Toro	12.43	278	eP	P	05 08 51.9	-1.5
DZM	Mont Dzumac	12.50	279	P	P	05 08 55.9	+1.7
	2.7nm,0.3s,baz=88,slow=17,SNR=36						
DZM	Mont Dzumac	12.50	279	eP	P	05 08 55.6	+1.4
KUZ	Kuaotunu	12.58	195	P	P	05 09 03.0	+8.4
KUZ	Kuaotunu	12.58	195	P	P	05 08 57.8	+3.2
WIAZ	Waiheke Island	12.77	197	P	P	05 09 06.4	+10
MBAZ	Motutapu North	12.81	198	P	P	05 09 07.6	+10
MXZ	Matakaoa Point	12.96	185	eP	P	05 08 59.9	+1.2
MXZ	Matakaoa Point	12.96	185	P	P	05 09 04.4	+5.7
ETAZ	East Tamaki Re	12.98	198	P	P	05 09 09.4	+11
WTAZ	Waiatarua	13.06	199	P	P	05 09 10.4	+11
WMGZ	Waiomatatini S	13.21	185	P	P	05 09 05.0	+3.8
WMGZ				S	S	05 11 23.3	+1.0
RUGZ	Raukumara Rang	13.42	187	P	P	05 09 06.3	+2.7
KMRZ	Kaimai	13.58	193	P	P	05 09 09.9	+4.7
TWGZ	Tauwhareparae	13.60	186	P	P	05 09 08.3	+2.9
TWGZ				S	S	05 11 29.2	-0.6
MKRZ	Makatiti	13.77	191	P	P	05 09 15.8	+8.6
URZ	Urewera	13.79	189	P	P	05 09 07.3	0.0
	4.5nm,0.3s,baz=302,slow=3.1,SNR=21						
URZ				S	S	05 11 32.3	-0.9
	1.6nm,0.3s,baz=64,slow=22,SNR=13						
URZ	Urewera	13.79	189	eP	P	05 09 07.5	+0.2
URZ				eS	S	05 11 35.3	+2.1
URZ	Urewera	13.79	189	P	P	05 09 08.4	+1.1
URZ				S	S	05 11 32.4	-0.8
RAGZ	Rawiri	13.98	188	P	P	05 09 12.4	+3.0
HRRZ	Handcock Road	14.05	191	P	P	05 09 13.4	+3.3
TLZ	Tolley Road	14.13	194	P	P	05 09 14.3	+3.3
HIZ	Hauiti	14.47	196	eP	P	05 09 18.2	+3.7
RITZ	Rihia Road	14.69	192	P	P	05 09 18.2	+1.3
KATZ	Kakaramea	14.72	193	P	P	05 09 19.3	+2.1
BKZ	Black Stump Fm	14.77	190	eP	P	05 09 16.2	-1.5
BKZ				eS	S	05 11 50.6	-1.6
KRVZ	Karearewa	14.85	193	P	P	05 09 19.9	+1.4
NGZ	Ngauruhoe	14.94	193	P	P	05 09 20.7	+1.2
MCHZ	McNeill Hill	15.01	189	P	P	05 09 20.2	+0.1
MCHZ				S	S	05 11 56.0	-0.7
FWVZ	Far West T-bar	15.02	193	P	P	05 09 21.4	+0.9
WHVZ	Whangaehu Hut	15.04	193	P	P	05 09 21.4	+0.7
PKVZ	Pokaka	15.10	193	P	P	05 09 22.0	+0.9
MOVZ	Moawhango	15.13	192	P	P	05 09 21.2	-0.3
MOVZ				S	S	05 11 57.8	-1.3
KRHZ	Kereru	15.25	190	P	P	05 09 21.6	-1.1
KRHZ				S	S	05 11 59.0	-2.3
KAHZ	Kahuranaki	15.33	188	P	P	05 09 23.6	+0.1
KAHZ				S	S	05 12 02.1	-0.7
PNHZ	Pukenui	15.54	190	P	P	05 09 24.2	-1.5
PNHZ				S	S	05 12 02.9	-3.8
TSZ	Takapari Road	15.72	191	P	P	05 09 27.0	-0.6
TSZ				S	S	05 12 08.3	-1.7
PRHZ	Porangahau	15.82	189	P	P	05 09 27.7	-0.8
PRHZ				S	S	05 12 11.1	-0.6
DVHZ	Dannevirke	15.93	190	P	P	05 09 28.6	-1.1
DVHZ				S	S	05 12 10.7	-2.9
ANWZ	Angora Road	16.04	189	P	P	05 09 30.8	+0.1
ANWZ				S	S	05 12 14.4	-1.1
POWZ	Post Office Ro	16.08	191	P	P	05 09 30.7	-0.5
POWZ				S	S	05 12 13.9	-2.4
BFZ	Birch Farm	16.29	190	eP	P	05 09 31.9	-1.4
	12nm,0.9s						
BFZ	Birch Farm	16.29	190	P	P	05 09 31.9	-1.4
BFZ				S	S	05 12 18.1	-1.9
OGWZ	Otaki Gorge	16.61	192	P	P	05 09 35.2	-1.3
OGWZ				S	S	05 12 23.2	-2.2
HOWZ	Holdsworth Sta	16.62	191	P	P	05 09 36.0	-0.7
HOWZ				S	S	05 12 22.2	-3.5
KIW	Kapiti Island	16.70	193	P	P	05 09 36.6	-0.8
KIW				S	S	05 12 23.7	-3.4
TMWZ	Te Maipa	16.76	190	P	P	05 09 36.9	-1.1
DUWZ	D'Urville Isla	16.86	195	P	P	05 09 39.1	+0.1
MTW	Mount Morrison	16.87	191	P	P	05 09 37.8	-1.3
MTW				S	S	05 12 28.5	-1.4
CAW	Cannon Point	16.91	192	P	P	05 09 38.4	-1.0
TRWZ	Traveller	17.08	190	P	P	05 09 40.2	-0.8
MSWZ	Moikau Station	17.17	192	P	P	05 09 40.6	-1.3
SNZO	South Karori	17.17	193	eP	P	05 09 41.7	-0.2
	84nm,1.1s						
BHW	Baring Head	17.23	193	P	P	05 09 42.1	-0.4
PLWZ	Palliser	17.32	191	P	P	05 09 43.0	-0.4
NNZ	Nelson	17.39	196	P	P	05 09 44.0	0.0
TUWZ	Tuamarina	17.45	195	P	P	05 09 44.9	+0.4
THZ	Tophouse	18.02	197	eP	P	05 09 50.2	+0.4
	15nm,0.6s						
KHZ	Kahutara	18.48	195	eP	P	05 09 55.4	+1.6
	16nm,0.5s						
KHZ	Kahutara	18.48	195	P	P	05 09 55.5	+1.6
LTZ	Lake Taylor	19.14	197	eP	P	05 10 02.2	+2.2
	16nm,0.7s						
OXZ	Oxford	19.71	197	eP	P	05 10 05.9	+0.7
	29nm,1.1s						
MQZ	McQueen's Vall	19.91	195	eP	P	05 10 07.5	+0.5
	13nm,1.0s						
RPZ	Rata Peaks	20.34	198	P	P	05 10 11.9	+1.0
	6.1nm,0.3s,baz=13,slow=1.9,SNR=2.5						
RPZ				S	S	05 13 27.8	+1.6
	3.0nm,0.5s,baz=14,slow=19,SNR=1.7						
FOZ	Fox Glacier	20.56	201	eP	P	05 10 12.9	+0.2
LBZ	Lake Benmore	21.21	199	eP	P	05 10 21.2	+2.4
	19nm,1.1s						
WKZ	Wanaka	21.97	201	eP	P	05 10 23.8	-1.9
	16nm,1.0s						
ARMA	Armidale	25.58	251	eP	P	05 10 58.0	0.0
	10nm,0.9s						
EIDS	Eidsvold	25.99	262	eP	P	05 11 02.7	+1.1
	7.2nm,0.7s						
CTAO	Charters Tower	31.27	272	eP	P	05 11 48.5	+0.8
	22nm,0.5s						
TOO	Toolangi	31.88	238	eP	P	05 11 54.1	+1.4
	3.9nm,0.6s						
STKA	Stephens Creek	34.26	249	P	P	05 12 14.0	+1.1
	5.5nm,0.4s,baz=94,slow=9.2,SNR=14						
STKA	Stephens Creek	34.26	249	eP	P	05 12 13.4	+0.5
	1.4nm,0.7s						
COEN	Coen	36.02	280	eP	P	05 12 27.9	0.0
	14nm,1.0s						
MANU	Manus Island	38.49	301	ePcP	PcP	05 14 46.3	-1.7
BBOO	Buckleboo	38.97	248	eP	P	05 12 51.8	+0.1
	5.5nm,0.7s						
ASAR	Alice Springs	41.71	261	P	P	05 13 13.7	-0.2
	3.2nm,0.5s,baz=97,slow=7.2,SNR=38						
ASAR				ScP	ScP	05 17 55.3	-4.1
	0.3nm,0.5s,baz=121,slow=4.9,SNR=3.0						
ASAR				S	S	05 18 50.6	-2.8
	0.4nm,0.6s,baz=103,slow=14,SNR=3.7						
WB2	Warramunga Arr	42.14	267	eP	P	05 13 16.6	-0.6
	13nm,0.6s						
WRAB	Tennant Creek	42.14	267	eP	P	05 13 16.2	-1.0
	13nm,0.9s						
WRA	Warramunga Arr	42.15	267	P	P	05 13 17.0	-0.4
	9.6nm,0.5s,baz=95,slow=8.6,SNR=107						
WRA				ScP	ScP	05 18 03.8	+2.7
	3.4nm,0.8s,baz=130,slow=3.4,SNR=6.0						
WRA				S	S	05 18 57.9	-1.8
	1.5nm,0.9s,baz=105,slow=16,SNR=2.4						
FORT	Forrest	45.87	250	eP	P	05 13 45.5	-0.4
	21nm,0.6s						
FITZ	Fitzroy Crossi	50.56	266	eP	P	05 14 21.7	+0.5
VNDA	Vanda	53.65	185	P	P	05 14 44.3	+1.9
	0.6nm,0.8s,baz=14,slow=7.5,SNR=4.9						
QSPA	South Pole Qui	65.47	180	eP	P	05 16 03.2	+1.5
	4.7nm,0.7s						
MAW	Mawson	77.00	201	P	P	05 17 09.8	+0.7
	1.6nm,0.5s,baz=146,slow=7.3,SNR=6.3						
PETK	Petropavlovsk-	79.75	347	P	P	05 17 23.1	-0.8
	3.7nm,0.7s,baz=160,slow=4.6,SNR=4.9						
NJ2	Nanjing	80.97	311	eP	P	05 17 31.6	+0.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
SYO	Syowa Base	82.27	193	eP	P	05 17 35.3	-1.5
SNAA	Sanae	83.95	179	P	P	05 17 44.9	-0.5
AFDM	Forest Hills D	84.06	42	eP	P	05 17 45.5	-0.9
	6.5nm,1.1s						
VNA3	Neumayer Olymp	84.17	177	P	P	05 17 46.1	-0.2
CN2	Changchun	84.34	324	eP	P	05 17 47.9	+0.4
VNA2	Neumayer--Watz	84.59	178	P	P	05 17 48.5	+0.1
	baz=191,slow=4.0						
NVAR	Mina Array Bea	85.42	44	P	P	05 17 52.2	-1.0
	1.1nm,0.8s,baz=224,slow=8.6,SNR=6.6						
PINE	Pine Mountain	87.08	39	eP	P	05 18 00.5	-0.4
	12nm,1.1s						
TUC	Tucson	87.12	53	eP	P	05 18 01.2	-0.1
	6.6nm,0.9s						
PLCA	Paso Flores	87.92	134	P	P	05 18 06.2	+1.2
	1.8nm,0.9s,baz=132,slow=8.2,SNR=3.2						
I07A	Izee	88.08	39	eP	P	05 18 04.9	-0.6
	7.6nm,0.9s						
J08A	Circle Bar Ran	88.24	40	eP	P	05 18 05.9	-0.4
	12nm,1.1s						
G08A	Pilot Rock	89.12	38	eP	P	05 18 09.8	-0.5
	3.8nm,0.9s						
HHC	Hu-ho-hao-te	90.78	315	eP	P	05 18 17.9	-0.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,7.6s						
MNTX	Cornudas Mount	90.80	55	eP	P	05 18 18.1	-0.2
	2.6nm,0.9s						
SRU	San Rafael Swe	90.84	47	eP	P	05 18 17.7	-0.8
	4.9nm,0.9s						
TXAR	Lajitas Array	90.99	58	P	P	05 18 19.0	-0.3
	2.6nm,0.8s,baz=214,slow=6.6,SNR=37						
CD2	Chengdu	91.30	303	eP	P	05 18 19.6	-1.0
S22A	4UR Ranch, Cre	92.66	50	eP	P	05 18 24.0	-3.1
	4.1nm,1.1s						
PDAR	Pinedale Array	93.35	44	P	P	05 18 28.4	-1.6
	0.7nm,0.8s,baz=195,slow=6.5,SNR=5.3						
LZH	Lanzhou	93.65	308	eP	P	05 18 30.8	-0.7
LZH				sP	sP	05 21 22.8	+6.1
LZH				PP	PP	05 22 28.9	+3.3
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,95nm,5.4s						
KSH	Kashi	115.49	304	ePKP	PKPdf	05 23 52.4	-1.1
KSH				PP	PP	05 25 10.9	+5.7
KSH				SKKS		05 31 07.5	
KSH				AMB	AMB		
	comp=Z,180nm,5.3s						
AKTO	Aktyubinsk	128.66	316	PKP	PKPdf	05 24 16.4	-1.8
	0.6nm,0.6s,baz=14,slow=8.3,SNR=2.9						
ARCES	ARCESS Array B	132.54	348	PKP	PKPdf	05 24 23.6	-1.4
	7.8nm,0.3s,baz=333,slow=0.5,SNR=9.1						
ARCES				SKPbc	SKPbc	05 26 57.8	-5.9
	1.9nm,1.0s,baz=73,slow=3.0,SNR=3.2						
FINES	FINESS Array B	139.05	341	PKhKP	PKPpre	05 24 28.3	
	0.7nm,0.7s,baz=60,slow=5.0,SNR=4.2						
FINES				SKPbc	SKPbc	05 27 22.3	-1.3
	1.6nm,0.7s,baz=45,slow=4.1,SNR=7.1						
NOA	NORSAR Array B	142.75	351	PKhKP	PKPpre	05 24 39.5	
	1.2nm,0.7s,baz=1.1,slow=2.3,SNR=6.6						
HFS	Hagfors	143.20	348	PKP	PKPab	05 24 40.9	-1.7
	7.1nm,0.5s,baz=67,slow=3.9,SNR=43						
AKASG	Malin Array Be	145.45	327	PKPbc	PKPdf	05 24 48.4	-0.5
	1.8nm,0.5s,baz=40,slow=4.0,SNR=10						
AKBB	Malin Array Si	145.45	327	ePKPdf	PKPdf	05 24 48.4	-0.5
BRTR	Keskin Array B	147.83	306	PKPbc	PKPbc	05 24 56.1	-1.1
	1.6nm,0.7s,baz=147,slow=4.2,SNR=7.2						
EKA	Eskdalemuir Ar	149.24	3	PKPbc	PKPbc	05 24 57.8	-2.1
	0.8nm,0.4s,baz=349,slow=3.0,SNR=6.2						
BUR08	Bucovina Ar. S	149.43	325	ePKPbc	PKPbc	05 25 00.2	-0.6
KOLS	Kolonicke sedl	149.99	330	ePKP	PKiKP	05 25 02.5	-0.1
LANS	Liptovska Anna	151.05	333	ePKP	PKiKP	05 25 04.9	+0.1
CLL	Collm	151.47	342	iPKPbc	PKPbc	05 25 03.1	-2.2
	comp=Z,10.0nm,0.8s						
BRG	Berggiesshubel	151.59	341	i PKP	PKPbc	05 25 04.8	-0.8
	comp=Z,6.4nm,0.8s						
BRG				e		05 25 13.2	
	comp=Z,2.8nm,0.7s						
TORD	Torodi Ar. Bea	168.45	189	PKPab	PKPab	05 26 29.7	-1.1
	comp=Z,1.1nm,0.9s,baz=190,slow=2.6,SNR=5.2						

*IDC **19** 05:11:12.8±0.8,35°.85N×27°.24E,h0km,mb3.8/11, mb1 3.9/15,mb1mx3.7/41,mbtmp3.8/15,ML3.6/4,MS3.1/2, Ms1 3.1/2,ms1mx2.3/54,Error ellipse: s-maj=19.9km s-min=13.6km az=154.0*
*ATH **19** 05:11:14.8,35°.79N×27°.27E,h27km±1km,ML3.7/8,Error ellipse: s-maj=2.5km s-min=0.9km az=115.0*
*ISK **19** 05:11:14.9,35°.84N×27°.24E,h11km,ML3.8/28*
*THE **19** 05:11:16.0,35°.80N×27°.30E,h9km±2km,ML3.8/7,Error ellipse: s-maj=3.3km s-min=0.9km az=121.0*
*DDA **19** 05:11:52.2,35°.94N×27°.36E,h20km±1km,ML3.6*
ISC 19 05:11:15.2±0.8,35°.81N±0°.02×27°.30E±0°.02,h19km±2km, n95,σ1§41/116,mb3.7/12,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.28	203	PG	Pg	05 11 21.2	-0.4
KARP				SG	Sb	05 11 26.3	+0.4
KARP	Karpathos	0.28	203	P	Pg	05 11 21.2	-0.4
KARP				S	Sb	05 11 26.4	+0.5
KARP	Karpathos	0.28	203	P	Pg	05 11 21.2	-0.4
KARP				S	Sb	05 11 26.3	+0.4
KARP				AML	AML	05 11 26.7	
	comp=E,59609μm,0.4s						
KARP				AML	AML	05 11 27.6	
	comp=N,24906μm,0.3s						
ARG	Arkhangelos	0.79	59	PG	Pg	05 11 30.5	-0.1
ARG				SG	Sn	05 11 42.6	+0.1
ARG	Arkhangelos	0.79	59	P	Pg	05 11 30.5	-0.1
ARG				S	Sn	05 11 42.8	+0.3
ARG	Arkhangelos	0.79	59	P	Pg	05 11 30.5	-0.1
ARG				S	Sn	05 11 42.5	+0.1
ARG				AML	AML	05 11 45.8	
	comp=E,16266μm,0.4s						
ARG				AML	AML	05 11 49.5	
	comp=N,14464μm,0.9s						
NISR	Nisiros	0.81	350	P	Pn	05 11 31.5	-0.1
NISR				S	Sn	05 11 43.9	+0.8
NISR	Nisiros	0.81	350	P	Pn	05 11 31.5	-0.1
NISR				S	Sn	05 11 43.5	+0.4
NISR				AML	AML	05 11 46.7	
	comp=E,14062μm,0.4s						
NISR				AML	AML	05 11 49.2	
	comp=N,9627μm,0.5s						
DAT	Datca	0.95	14	PG	Pg	05 11 33.4	-0.3
DAT				SG	Sn	05 11 47.2	+0.6
DAT	Datca	0.95	14	i P	Pn	05 11 33.6	+0.1
DAT				i S	Sn	05 11 47.2	+0.6
DAT				IAML_P			
	comp=Z,6μm,0.2s						
DATC	Datca-Mugla	0.99	17	PG	Pn	05 11 34.1	0.0
BBRN	Bozburun-Marma	1.07	35	PG	Pg	05 11 35.7	-0.2
ZKR	Zakros	1.12	232	PN	Pg	05 11 36.5	-0.4
ZKR	Zakros	1.12	232	P	Pb	05 11 36.3	+0.4
ZKR				S	Sn	05 11 51.0	+0.3
ZKR	Zakros	1.12	232	P	Pb	05 11 36.3	+0.4
ZKR				S	Sg	05 11 52.0	+0.4
ZKR				AML	AML	05 11 54.3	
	comp=N,5498μm,0.5s						
ZKR				AML	AML	05 11 57.0	
	comp=E,11629μm,0.7s						
STIA	Sitia Lasithi	1.15	239	P	Pg	05 11 37.3	-0.3
STIA				S	Sg	05 11 53.9	+1.2
MRSB	Marmaris-Mugla	1.16	39	PN	Pg	05 11 37.2	-0.5
BODT	Bodrum	1.25	1	PN	Pb	05 11 38.2	0.0
BDRM	Kayabasi	1.26	5	i P	Pg	05 11 38.9	-0.7
YKAV	Yalikavak-Bodr	1.31	359	PN	Pb	05 11 39.6	+0.3
ANAF	Anafi Island	1.35	294	P	Pb	05 11 39.9	0.0
ANAF				S	Sb	05 11 57.0	+0.2
ANAF	Anafi Island	1.35	294	P	Pb	05 11 39.7	-0.2
NPS	Neapolis	1.48	249	P	Pb	05 11 41.5	-0.6
NPS				S	Sn	05 11 59.7	+0.1
NPS	Neapolis	1.48	249	P	Pb	05 11 41.4	-0.6
NPS				AML	AML	05 12 02.1	
	comp=E,9406μm,0.3s						
NPS				AML	AML	05 12 02.3	
	comp=N,10699μm,0.4s						
DALY	Dalyan (Mula)	1.49	47	PN	Pb	05 11 42.7	+0.5
DALY	Dalyan (Mula)	1.49	47	i P	Pg	05 11 43.5	-0.4
DALY				IAML_P			
	comp=Z,5μm,0.3s						
TURN	Turunc	1.50	44	PN	Pn	05 11 38.0	-3.0
TURN	Turunc	1.50	44	i P	Pn	05 11 38.3	-2.7
TURN				IAML_P			
	comp=Z,10μm,0.3s						
AMGA	Amorgos Island	1.52	312	P	Pn	05 11 41.5	+0.1
AMGA	Amorgos Island	1.52	312	P	Pn	05 11 41.7	+0.3
AMGA				AML	AML	05 12 08.2	
	comp=E,4446μm,0.5s						
AMGA				AML	AML	05 12 10.0	
	comp=N,4880μm,0.3s						
YER	Yerkesik	1.54	31	PN	Pb	05 11 43.2	0.0
SANT	Santorini	1.59	291	PN	Pn	05 11 42.6	+0.2
LAST	Lasithi	1.62	247	P	Pn	05 11 43.6	+0.8
LAST				S	Sn	05 12 03.7	+0.6
LAST	Lasithi	1.62	247	P	Pn	05 11 43.5	+0.8
LAST				S	Sn	05 12 03.7	+0.6
LAST				AML	AML	05 12 10.6	
	comp=E,2691μm,0.8s						
LAST				AML	AML	05 12 24.0	
	comp=N,2838μm,0.6s						
SAP1	Santorini-Akro	1.63	290	P	Pb	05 11 44.0	-0.7
FETY	Fethiye	1.66	60	PN	Pb	05 11 45.8	+0.6
FETY	Fethiye	1.66	60	i P	Pg	05 11 46.7	-0.5
CMBO	Columbo, Santo	1.67	294	P	Pn	05 11 44.0	+0.6
CMBO	Columbo, Santo	1.67	294	P	Pn	05 11 44.1	+0.8
IOSP	Ios island	1.86	300	P	Pn	05 11 46.1	+0.1
KSL	Kastellorizon	1.89	79	P	Pb	05 11 49.2	+0.2
KSL	

comp=E,0.2nm,0.3s,baz=230,slow=13,SNR=7.3
BRTR Sn **Sn** **05 14 02.8 +2.5**
comp=E,0.1nm,0.3s,baz=218,slow=21,SNR=2.7
MMAI Mount Meron Ar 7.25 110 Pn **Pn** **05 12 59.9 -0.4**
comp=E,1.9nm,0.3s,baz=325,slow=11,SNR=4.5
MMAI Sn **Sn** **05 14 21.4 -0.8**
comp=E,4.0nm,0.3s,baz=303,slow=25,SNR=7.5
BRBR Barbar 7.53 106 *eP* **Sn** **05 14 27.9 -1.0**
QASN Qassioun 7.74 104 *eP* **Sn** **05 14 27.5 -6.6**
TOTH TOTAH 7.92 105 *eP* **Sn** **05 14 41.2 +2.9**
ASF Jabal al Asfar 8.76 112 Sn **Sn** **05 14 55.6 -3.5**
comp=E,0.2nm,0.3s,baz=112,slow=19,SNR=1.9
EIL Elat 8.89 131 Pn **Pn** **05 13 23.7 +1.1**
comp=E,1.1nm,0.3s,baz=339,slow=13,SNR=4.6
EIL Sn **Sn** **05 14 56.6 -5.5**
comp=E,0.5nm,0.3s,baz=306,slow=15,SNR=2.5
GNI Garni 14.42 67 LR LR 05 21 28.5
comp=E,57nm,20.1s,baz=274,slow=43
AKASG Malin Array Be 14.95 5 Pn **P** **05 14 48.7 -2.1**
comp=E,0.7nm,0.3s,baz=195,slow=11,SNR=4.0
GERES GERESS Array B 16.42 327 Pn **P** **05 15 06.0 -1.2**
comp=E,0.2nm,0.3s,baz=115,slow=15,SNR=2.4
CLL Collm 18.58 331 *eP* **Pn** **05 15 34.0 +2.7**
CLL *e* 05 15 57.0
ESDC Sonseca Array 24.95 288 P **P** **05 16 37.9 +0.5**
comp=E,1.1nm,0.6s,baz=83,slow=9.5,SNR=6.6
FINES FINESS Array B 25.67 359 P **P** **05 16 43.2 -0.3**
comp=E,0.5nm,0.4s,baz=144,slow=12,SNR=5.6
HFS Hagfors 25.88 344 P **P** **05 16 45.3 -0.2**
comp=E,0.8nm,0.5s,baz=154,slow=14,SNR=4.1
EKA Eskdalemuir Ar 28.55 323 P **P** **05 17 10.0 +0.5**
comp=E,0.1nm,0.3s,baz=116,slow=11,SNR=3.1
ARU Arti 29.50 36 LR LR 05 30 32.8
comp=E,35nm,18.5s,baz=237,slow=39
TORD Torodi Ar. Bea 32.25 232 P **P** **05 17 42.4 -0.2**
comp=E,0.6nm,0.5s,baz=33,slow=9.4,SNR=13
ARCES ARCESS Array B 33.80 359 P **P** **05 17 55.0 -0.6**
comp=E,1.6nm,0.7s,baz=187,slow=7.1,SNR=6.7
ARCES PcP **PcP** **05 20 35.0 +0.7**
comp=E,0.4nm,0.4s,baz=176,slow=3.4,SNR=5.3
DBIC Dimbokro 41.34 233 P **P** **05 19 00.6 +0.6**
comp=E,2.4nm,0.7s,baz=42,slow=6.6,SNR=3.5
MKAR Makanchi Array 41.96 57 P **P** **05 19 06.5 +1.8**
comp=E,0.9nm,0.6s,baz=280,slow=6.9,SNR=6.8
ZALV Zalesovo Beam 43.30 47 P **P** **05 19 15.2 -0.2**
comp=E,0.5nm,0.3s,baz=262,slow=9.9,SNR=2.8
WMQ Urumqi 46.17 61 *eP* **P** **05 19 35.8 -2.8**
WMQ pmax pmax
comp=Z,75nm,3.9s
WMQ LR LR
comp=N,220nm,29.2s
WMQ LR LR
comp=E,360nm,29.0s
WMQ LR LR
comp=Z,84nm,28.9s
KSRS Korea Array 76.50 54 P **P** **05 23 05.2 +1.3**
comp=Z,1.1nm,0.6s,baz=305,slow=5.3,SNR=4.5
ILAR Eielson Array 79.65 357 P **P** **05 23 21.1 +0.2**
comp=Z,0.2nm,0.6s,baz=0.0,slow=4.5,SNR=3.5
ULM Lac du Bonnet 80.73 327 P **P** **05 23 25.9 -1.2**
comp=Z,3.0nm,0.6s,baz=60,slow=7.7,SNR=2.9

JMA 19 05:20:56.6±0.1,38°.89N×142°.53E,h38km±2km,M3.6,
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.70**	**286**	P	Pn	05 21 10.2	+0.2
OFUJ				S	Sn	05 21 19.6	+0.1
JKMT	**Kesennumamotoy**	**0.83**	**265**	P	Pn	05 21 11.9	+0.2
JKMT				S	Sn	05 21 22.6	-0.2
MIYJ	**Miyakonagasawa**	**0.88**	**321**	P	Pn	05 21 12.5	0.0
MIYJ				S	Sn	05 21 23.9	-0.2
JIO	**Ouri**	**1.02**	**245**	P	Pn	05 21 14.4	0.0
JIO				S	Sn	05 21 26.9	-0.5
JMK	**Ichinoseki**	**1.02**	**274**	P	Pn	05 21 14.9	+0.5
JMK				S	Sn	05 21 28.0	+0.5
JOM	**Ohasama**	**1.12**	**302**	P	Pn	05 21 16.4	+0.6
JOM				S	Sn	05 21 30.8	+0.8
JTH	**Tanohata**	**1.17**	**334**	P	Pn	05 21 16.9	+0.5
JTH				*e*S	Sn	05 21 32.5	+1.4
JKZ	**Kuzumaki**	**1.44**	**320**	P	Pn	05 21 21.0	+0.9
JKZ				*e*S	Sn	05 21 39.6	+1.9
JRG	**Rokugo**	**1.56**	**290**	P	Pn	05 21 23.2	+1.4
JRG				*e*S	Sn	05 21 42.7	+2.0
JANG	**Nango**	**1.68**	**332**	P	Pn	05 21 24.2	+0.8

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*SJA **19** 05:24:23.5±1.1,30°.67S×72°.50W,h38km±13km,ML4.2, MW4.3*
*IDC **19** 05:24:24.0±1.1,30°.71S×71°.73W,h0km,mb3.8/3, mb1 3.7/7,mb1mx3.6/26,mbtmp3.6/7,ML3.5/4,MS3.2/2, Ms1 3.2/2,ms1mx2.7/30,Error ellipse: s-maj=35.6km s-min=28.7km az=106.0*
*NEIC **19** 05:24:27.0±0.0,30°.73S×71°.80W,h37km,ML4.0(GUC), After GUC.*
*GUC **19** 05:24:27.0±0.8,30°.74S×71°.80W,h33km±5km,ML4.0*
ISC 19 05:24:24.8±2.2,30°.72S±0°.03×71°.86W±0°.06,h5km±14km,
n59,σ1°.70/63,mb3.8/3,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.88**	**123**	*eP*	**Pn**	**05 24 43.6**	**-0.3**
CO02				*i* S	**Sn**	**05 24 55.4**	**-1.9**
LSCH	**La Serena**	**0.97**	**34**	*eP*	**Pn**	**05 24 45.5**	**+0.5**
LSCH				*i* S	**Sn**	**05 24 58.4**	**-0.7**
GO04	**Tololo Observa**	**1.07**	**60**	*eP*	**Pn**	**05 24 47.2**	**+0.6**
GO04				*e*Sn	**Sn**	**05 25 00.3**	**-1.7**
GO04	**Tololo Observa**	**1.07**	**60**	*eP*	**Pn**	**05 24 47.1**	**+0.5**
GO04				*i* S	**Sn**	**05 25 02.4**	**+0.4**
LCO	**Las Campanas**	**1.98**	**31**	*e*Pn	**Pn**	**05 25 00.5**	**+1.3**
LCO				*e*Sn	**Sb**	**05 25 27.2**	**+0.8**
LCO	**Las Campanas**	**1.98**	**31**	*eP*	**Pn**	**05 25 00.8**	**+1.6**
LCO				*e*S	**Sg**	**05 25 28.6**	**+0.2**
LCO	**Las Campanas**	**1.98**	**31**	*eP*	**Pn**	**05 25 00.6**	**+1.5**
LCO				*i* S	**Sb**	**05 25 27.3**	**+0.8**
ROCH	**El Roble**	**2.36**	**162**	*i* S	**Sb**	**05 25 36.9**	**-0.5**
ROCH				IAML		05 25 44.8	
comp=N,1μm,0.2s							
ROC1	**El Roble**	**2.36**	**162**	*eP*	**Pn**	**05 25 05.6**	**+1.2**
ROC1				*e*S	**Sb**	**05 25 37.2**	**-0.2**
RTLS	**Leoncito**	**2.45**	**117**	*eP*	**Pb**	**05 25 10.3**	**+0.9**
RTLS				IAML		05 25 51.2	
comp=Z,557nm,0.7s							
AUSP	**Uspallata**	**2.59**	**126**	*eP*	**Pb**	**05 25 12.4**	**+0.5**
PEL	**Peldehue**	**2.62**	**158**	*e*Pn	**Pn**	**05 25 09.3**	**+1.6**
PEL	**Peldehue**	**2.62**	**158**	*eP*	**Pn**	**05 25 09.7**	**+1.9**
PEL	**Peldehue**	**2.62**	**158**	*eP*	**Pn**	**05 25 09.3**	**+1.6**
PEL				*i* S	**Sn**	**05 25 41.7**	**+1.8**
PEL				IAML		05 25 51.5	
comp=E,783nm,0.4s							
ZON	**Zonda**	**2.85**	**108**	*eP*	**Pb**	**05 25 16.6**	**+0.4**
AMOG	**MOGNA**	**2.91**	**95**	*eP*	**Pb**	**05 25 17.3**	**+0.2**
FCH	**Farellones**	**2.92**	**153**	*eP*	**Pn**	**05 25 14.2**	**+2.0**
FCH				IAML		05 26 01.6	
comp=E,471nm,0.5s							
RTLL	**Cerro Villicun**	**2.97**	**103**	*eP*	**Pb**	**05 25 16.7**	**-1.6**
RTCV	**Cerro Valdivia**	**3.06**	**113**	*eP*	**Pb**	**05 25 19.4**	**-0.4**
ASAL	**Salagasta**	**3.19**	**127**	*eP*	**Pb**	**05 25 20.8**	**-1.0**
CFA	**Coronel Fontan**	**3.23**	**107**	Pn	**Pb**	**05 25 20.4**	**-2.2**
comp=E,19nm,0.3s,baz=297,slow=12,SNR=345							
CFA				Sn	**Sb**	**05 26 03.3**	**+1.0**
comp=E,91nm,0.3s,baz=101,slow=14,SNR=15							
CFA				LR	LR	05 26 38.7	
comp=E,182nm,19.3s,baz=264,slow=43							
CFA	**Coronel Fontan**	**3.23**	**107**	*eP*	**Pb**	**05 25 20.6**	**-2.1**
ARCO	**CERRO ARCO**	**3.27**	**131**	*eP*	**Pb**	**05 25 22.5**	**-0.9**
ARCO				IAML		05 26 15.3	
comp=Z,335nm,0.5s							
GO03	**Copiap**	**3.43**	**25**	*e*Pn	**Pn**	**05 25 20.2**	**+1.3**
AAGR	**Agrelo**	**3.50**	**133**	*eP*	**Pb**	**05 25 25.4**	**-1.8**
VCA	**Vinchina**	**3.75**	**59**	*eP*	**Pb**	**05 25 28.9**	**-2.6**
VCA				IAML		05 26 28.5	
comp=Z,368nm,0.4s							
ACAN	**Cantantal**	**4.28**	**112**	*eP*	**Pn**	**05 25 34.3**	**+3.7**
MRA	**San Martin**	**5.51**	**109**	*eP*	**Pn**	**05 25 49.6**	**+2.0**
MRA				IAML		05 27 04.9	
comp=Z,107nm,0.6s							
CYA	**Choya**	**5.75**	**68**	*eP*	**Pn**	**05 25 54.7**	**+3.9**
GO02	**Mina Guanaco**	**5.89**	**21**	*e*Pn	**Pn**	**05 25 53.0**	**0.0**
TCA	**Tanti**	**6.27**	**97**	*eP*	**Pn**	**05 25 59.7**	**+1.7**
FSA	**Cafayete**	**6.92**	**50**	*eP*	**Pn**	**05 26 11.2**	**+4.1**
AHML	**Horco Molle**	**6.94**	**57**	*eP*	**Pn**	**05 26 10.3**	**+3.1**
LVC	**Limon Verde**	**8.50**	**19**	Pn	**Pn**	**05 26 27.4**	**-1.5**
comp=Z,0.3nm,0.3s,baz=120,slow=11,SNR=3.5							
LVC				Sn	**Sn**	**05 28 08.5**	**+3.1**
comp=Z,0.6nm,0.3s,baz=153,slow=18,SNR=2.1							
PLCA	**Paso Flores**	**10.05**	**174**	Pn	**Pn**	**05 26 50.5**	**+0.7**
comp=Z,0.2nm,0.3s,baz=7.0,slow=13,SNR=8.1							
MNMC	**Minye Minye**	**11.72**	**11**	*e*Pn	**Pn**	**05 27 15.2**	**+2.3**
CPUP	**Villa Florida**	**13.50**	**75**	Pn	**Pn**	**05 27 37.4**	**+0.3**
comp=Z,0.1nm,0.3s,baz=216,slow=17,SNR=1.8							
CPUP				Sn	**Sn**	**05 30 07.9**	**+0.4**
comp=Z,0.1nm,0.3s,baz=17,slow=17,SNR=2.0							
CPUP	**Villa Florida**	**13.50**	**75**	*e*Pn	**Pn**	**05 27 37.1**	**0.0**
LPAZ	**La Paz**	**14.77**	**14**	Pn	**Pn**	**05 27 57.4**	**+2.5**
comp=Z,0.2nm,0.3s,baz=204,slow=5.6,SNR=7.8							
LPAZ	**La Paz**	**14.77**	**14**	*e*Pn	**Pn**	**05 27 57.4**	**+2.5**
LPAZ				*eP*	**P**	**05 27 57.8**	**-3.3**
SIV	**San Ignacio**	**17.68**	**36**	P	**Pn**	**05 28 30.1**	**-1.7**
comp=Z,0.1nm,0.3s,baz=232,slow=9.6,SNR=3.8							
CMIG	**Matias Romero**	**52.44**	**332**	LR	LR	05 51 15.7	
comp=Z,47nm,19.3s,baz=279,slow=31							
TXAR	**Lajitas Array**	**66.96**	**330**	P	**P**	**05 35 19.5**	**+1.0**
comp=Z,0.2nm,0.7s,baz=162,slow=9.6,SNR=5.1							
VAH	**Vaihoa**	**70.30**	**264**	*eT*	T	05 34 53.9	
comp=Z,29nm,0.3s							
PMOR	**Pomariorio Ree**	**70.63**	**264**	*eT*	T	05 35 17.3	
comp=Z,13nm,0.3s							
DBIC	**Dimbokro**	**74.01**	**72**	P	**P**	**05 36 00.5**	**-1.3**
comp=Z,4.5nm,0.8s,baz=247,slow=7.3,SNR=6.0							
TOA1	**Torodi Ar. Sit**	**82.96**	**70**	*eP*	**P**	**05 36 51.2**	**0.0**
TORD	**Torodi Ar. Bea**	**82.96**	**70**	P	**P**	**05 36 51.2**	**0.0**
comp=Z,0.4nm,0.7s,baz=257,slow=7.6,SNR=4.7							
WR1	**Warramunga Arr**	**123.68**	**210**	*e*PKPdf	**PKPdf**	**05 43 23.2**	**-0.9**
WRA	**Warramunga Arr**	**123.68**	**210**	PKP	**PKPdf**	**05 43 23.2**	**-1.0**
comp=Z,1.1nm,0.9s,baz=149,slow=1.8,SNR=3.3							
H11S2	**WAKE ISLAND Hyl**	**25.90**	**271**	T	T	08 02 15.3	
baz=117,slow=74,SNR=44							
H11S1	**WAKE ISLAND Hyl**	**25.92**	**271**	T	T	08 02 11.1	
baz=117,slow=74,SNR=30							
H11S3	**WAKE ISLAND Hyl**	**25.92**	**271**	T	T	08 02 14.9	
baz=117,slow=74,SNR=40							
H11N3	**WAKE ISLAND Hyl**	**26.23**	**273**	T	T	08 02 38.7	
baz=120,slow=74							
H11N1	**WAKE ISLAND Hyl**	**26.25**	**273**	T	T	08 02 39.7	
baz=120							
H11N2	**WAKE ISLAND Hyl**	**26.25**	**273**	T	T	08 02 39.6	
baz=120,slow=74							
BVAR	**Borovoye Array**	**144.73**	**40**	PKP	**PKPdf**	**05 44 02.0**	**-0.2**
comp=Z,0.6nm,0.4s,baz=279,slow=2.8,SNR=2.8							
ZAA1	**Zalesovo Array**	**151.34**	**29**	*e*PKPbc	**PKPbc**	**05 44 19.1**	**+0.1**
ZALV	**Zalesovo Beam**	**151.34**	**29**	PKPbc	**PKPbc**	**05 44 19.1**	**+0.1**
comp=Z,1.4nm,0.5s,baz=272,slow=3.3,SNR=5.0							

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*ISCJB **19** 05:46:19.3±1.0,16°.23N±0°.04×99°.11W±0°.03,h7km±7km, mb4.0/32,MS3.2/1,Error ellipse: s-maj=6.6km s-min=4.6km az=13.3*
*NEIC **19** 05:46:22.8±2.2,16°.28N×99°.04W,h19km±7km,mb4.0/34, MD4.2(MEX),Error ellipse: s-maj=11.9km s-min=2.5km az=197.0*
*MEX **19** 05:46:22.1±0.6,16°.10N×99°.22W,h18km±16km,MD4.2*
*IDC **19** 05:46:23.4±4.5,16°.73N×98°.87W,h0km,mb3.8/6, mb1 4.0/9,mb1mx3.8/46,mbtmp3.7/9,ML3.1/3,MS2.9/3, Ms1 2.9/3,ms1mx2.6/30,Error ellipse: s-maj=93.8km s-min=27.1km az=18.0*
ISC 19 05:46:19.2±1.4,16°.20N±0°.07×99°.17W±0°.03,h1km±9km,
n87,σ1°.41/108,mb4.1/32,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.96**	**314**	*eP*	**Pg**	**05 46 37.3**	**-0.4**
ACP2				*e*S	**Sg**	**05 46 49.2**	**-1.1**
PNIG	**Pinotepa**	**1.02**	**79**	*e*Pn	**Pg**	**05 46 38.8**	**+0.1**
PNIG				*e*Sg	**Sg**	**05 46 51.7**	**-0.2**
PNIG	**Pinotepa**	**1.02**	**79**	*i* P	**Pg**	**05 46 38.8**	**+0.1**
PNIG				*e*S	**Sg**	**05 46 51.7**	**-0.2**
CAIG	**El Cayaco**	**1.35**	**309**	*e*Pn	**Pn**	**05 46 42.8**	**-2.5**
CAIG	**El Cayaco**	**1.35**	**309**	*eP*	**Pn**	**05 46 42.8**	**-2.5**
TLIG	**Tlapa**	**1.47**	**23**	*e*Pn	**Pn**	**05 46 46.5**	**-0.7**
TLIG	**Tlapa**	**1.47**	**23**	*eP*	**Pn**	**05 46 46.3**	**-0.8**
TLIG				*i* S	**Sn**	**05 47 04.8**	**-2.3**
MEIG	**Mezcala**	**1.77**	**346**	*e*Pn	**Pn**	**05 46 50.3**	**-0.8**
MEIG	**Mezcala**	**1.77**	**346**	*eP*	**Pn**	**05 46 50.3**	**-0.8**
PLIG	**Platanillo**	**2.21**	**352**	*e*Pn	**Pn**	**05 46 57.1**	**0.0**
PLIG				*e*Sn	**Sn**	**05 47 23.0**	**-2.2**
PLIG	**Platanillo**	**2.21**	**352**	*eP*	**Pn**	**05 46 57.1**	**0.0**
PLIG				*e*S	**Sn**	**05 47 23.0**	**-2.2**
ARIG	**Puente Sto Nin**	**2.36**	**332**	*eP*	**Pn**	**05 46 58.0**	**-1.1**
VHO	**Vista Hermosa**	**2.49**	**69**	*e*Pn	**Pn**	**05 47 01.1**	**0.0**
VHO	**Vista Hermosa**	**2.49**	**69**	*i* P	**Pn**	**05 47 01.1**	**0.0**
OXBJ	**Oaxaca**	**2.50**	**69**	*eP*	**Pn**	**05 47 00.0**	**-1.2**
ZIIG	**Zihuatanejo**	**2.61**	**303**	*e*Pn	**Pn**	**05 47 03.3**	**+0.7**
ZIIG	**Zihuatanejo**	**2.61**	**303**	*eP*	**Pn**	**05 47 03.3**	**+0.7**
ZIIG				*e*S	**Sg**	**05 47 45.5**	**+2.4**
YAIG	**Yautepec**	**2.65**	**2**	*e*Pn	**Pn**	**05 47 03.7**	**+0.4**
YAIG				*e*Sn	**Sn**	**05 47 35.4**	**-0.9**
YAIG	**Yautepec**	**2.65**	**2**	*eP*	**Pn**	**05 47 03.7**	**+0.4**
YAIG				*e*S	**Sn**	**05 47 35.4**	**-0.9**
MAVM	**Malinalco, Edo**	**2.76**	**354**	*eP*	**Pn**	**05 47 06.2**	**+1.3**
MAVM				*e*S	**Sn**	**05 47 39.8**	**+0.7**
TPIG	**Tehuac#an**	**2.80**	**38**	*e*Pn	**Pn**	**05 47 04.3**	**-1.1**
TPIG	**Tehuac#an**	**2.80**	**38**	*eP*	**Pn**	**05 47 04.3**	**-1.1**
TPIG				*i* S	**Sn**	**05 47 40.3**	**+0.3**
PPM	**Popocatepetl**	**2.90**	**10**	*e*Pn	**Pn**	**05 47 06.4**	**-0.7**
PPM				*e*Sn	**Sn**	**05 47 41.9**	**-0.9**
PPM	**Popocatepetl**	**2.90**	**10**	*eP*	**Pn**	**05 47 06.4**	**-0.7**
PPM				*e*S	**Sn**	**05 47 41.9**	**-0.9**
HUIG	**Huatulco**	**2.97**	**98**	*e*Pn	**Pn**	**05 47 06.6**	**-1.0**
HUIG	**Huatulco**	**2.97**	**98**	*eP*	**Pn**	**05 47 06.6**	**-1.0**
PHPU	**Puebla**	**2.98**	**18**	*eP*	**Pn**	**05 47 07.7**	**-0.3**
TOVM	**TOLUCA**	**3.11**	**351**	*eP*	**Pn**	**05 47 12.7**	**+2.9**
TOVM				*e*S	**Sn**	**05 47 45.5**	**-2.3**
UNM	**Universidad Na**	**3.11**	**360**	*eP*	**Pn**	**05 47 08.2**	**-1.6**
UNM				*e*S	**Sn**	**05 47 50.1**	**+2.3**
PBVM	**Pinon**	**3.23**	**1**	*e*Pn	**Pb**	**05 47 16.4**	**-1.0**
PBVM				*e*Sn	**Sn**	**05 47 48.6**	**-1.6**
PBVM	**Pinon**	**3.23**	**1**	*eP*	**Pb**	**05 47 16.4**	**-1.0**
PBVM				*i* S	**Sn**	**05 47 48.6**	**-1.6**
VTVM	**Tizayuca**	**3.57**	**6**	*eP*	**Pb**	**05 47 24.2**	**+0.7**
VTVM				*e*S	**Sn**	**05 48 01.0**	**+1.8**
ZUVM	**ZUMPANGO**	**3.61**	**1**	*eP*	**Pn**	**05 47 20.0**	**+3.4**
ZUVM				*e*S	**Sn**	**05 47 59.3**	**-0.8**
DEIG	**Demacu**	**4.08**	**2**	*e*Pg	**Pb**	**05 47 32.3**	**+0.1**
DEIG				*e*Sn	**Sn**	**05 48 10.1**	**-1.6**
DEIG	**Demacu**	**4.08**	**2**	*eP*	**Pb**	**05 47 32.3**	**+0.1**
DEIG				*e*S	**Sn**	**05 48 10.1**	**-1.6**
CMIG	**Matias Romero**	**4.20**	**77**	Pn	**Pn**	**05 47 23.7**	**-0.8**
3.1nm,0.3s,baz=258,slow=11,SNR=47							
CMIG				Sn	**Sn**	**05 48 12.2**	**-2.0**
15nm,0.3s,baz=38,slow=20,SNR=14							
CMIG				Lg	Lg	05 48 33.4	
11nm,0.3s,baz=0.1,slow=8.3,SNR=5.9							
LVIG	**Laguna Verde**	**4.37**	**36**	*e*Pn	**Pn**	**05 47 24.6**	**-2.3**
LVIG				*e*Pn	Pb	05 47 26.4	-11
LVIG				*e*Sn	**Sn**	**05 48 17.5**	**-1.1**
LVIG	**Laguna Verde**	**4.37**	**36**	*eP*	**Pn**	**05 47 26.4**	**-0.5**
LVIG				*e*S	**Sn**	**05 48 17.5**	**-1.1**
CCIG	**Comitan**	**6.75**	**88**	*e*Pn	**Pn**	**05 48 02.3**	**+2.5**
ZAIG	**Zacatecas**	**7.28**	**334**	*e*Pn	**Pn**	**05 48 07.4**	**+0.3**
APG	**El Apazote**	**8.47**	**97**	LR	LR	05 50 45.8	
comp=Z,29nm,18.9s,baz=270,slow=32							
LNIG	**Linares**	**8.66**	**358**	*e*Pn	**Pn**	**05 48 26.5**	**+0.7**
TEIG	**Tepich**	**11.10**	**67**	*e*Pn	**Pn**	**05 48 58.4**	**-0.8**
H06E1	**SOCORRO T-PHAS**	**11.51**	**285**	T	T	06 00 43.8	
SNR=10							
TXAR	**Lajitas Array**	**13.71**	**343**	Pn	**Pn**	**05 49 34.6**	**-0.5**
0.0nm,0.3s,baz=156,slow=18,SNR=2.9							
JTS	**Las Juntas de**	**15.03**	**111**	*e*Pn	**Pn**	**05 49 54.5**	**+1.5**
6.8nm,1.1s							
MIAR	**Mount Ida**	**18.95**	**14**	*eP*	**P**	**05 50 40.9**	**-1.0**
3.2nm,0.8s							
ANMO	**Albuquerque**	**19.78**	**342**	P	**P**	**05 50 52.6**	**+1.4**
0.1nm,0.3s,baz=151,slow=11,SNR=4.3							
ANMO				LR	LR	05 58 06.4	
comp=Z,42nm,20.8s,baz=57,slow=36							
ANMO	**Albuquerque**	**19.78**	**342**	*eP*	**P**	**05 50 51.7**	**+0.5**
1.6nm,0.8s							
WHAR	**Wooly Hollow**	**19.98**	**17**	*eP*	**P**	**05 50 53.5**	**+0.3**
5.7nm,1.0s							
PLAL	**Pickwick Lake**	**21.18**	**26**	*eP*	**P**	**05 51 08.4**	**+2.3**
11nm,0.9s							
X16A	**Lo Mia Camp, P**	**21.23**	**331**	*eP*	**P**	**05 51 09.6**	**+2.6**
5.5nm,0.8s							
PBMO	**Poplar Bluff**	**21.92**	**19**	*eP*	**P**	**05 51 14.0**	**-0.1**
5.2nm,0.8s							
GOGA	**Godfrey**	**22.24**	**37**	*eP*	**P**	**05 51 16.0**	**-1.5**
5.8nm,0.8s							
WVT	**Waverly**	**22.27**	**25**	*eP*	**P**	**05 51 16.8**	**-1.1**
8.6nm,0.9s							
MVCO	**Mesa Verde**	**22.50**	**340**	*eP*	**P**	**05 51 21.7**	**+1.1**
4.7nm,0.8s							
S22A	**4UR Ranch, Cre**	**22.50**	**344**	*eP*	**P**	**05 51 21.9**	**+1.1**
2.8nm,0.8s							
W50A	**Signal Mountai**	**22.62**	**31**	*eP*	**P**	**05 51 19.3**	**-2.4**
5.7nm,1.0s							
CPCT	**Cooper Cave**	**23.21**	**32**	*eP*	**P**	**05 51 27.6**	**-0.2**
6.6nm,0.8s							
T47A	**Sharon Grove**	**23.30**	**25**	*eP*	**P**	**05 51 28.0**	**-0.7**
7.7nm,1.0s							
PV12	**Saucer Basin,**	**23.61**	**341**	*eP*	**P**	**05 51 32.8**	**+0.7**
6.2nm,1.1s							
PV04	**Paradox Valley**	**23.71**	**341**	*eP*	**P**	**05 51 34.9**	**+1.9**
3.3nm,0.8s							
ISCO	**Idaho Springs**	**24.18**	**348**	*eP*	**P**	**05 51 38.7**	**+1.1**
3.4nm,0.9s							
MTPU	**Mount Pierson**	**24.60**	**335**	*eP*	**P**	**05 51 42.6**	**+1.1**
4.4nm,0.7s							
WCI	**Wyandotte Cave**	**24.70**	**25**	*eP*	**P**	**05 51 41.6**	**-0.4**
9.5nm,0.8s							
SRU	**San Rafael Swe**	**24.90**	**339**	*eP*	**P**	**05 51 44.5**	**+0.5**
4.7nm,0.8s							
O20A	**White River Ci**	**25.12**	**343**	*eP*	**P**	**05 51 47.5**	**+1.5**
4.6nm,0.9s							
TCRU	**Three Creeks R**	**25.19**	**335**	*eP*	**P**	**05 51 47.5**	**+0.8**
4.4nm,0.5s							
P18A	**Preston Nutter**	**25.27**	**340**	*eP*	**P**	**05 51 48.2**	**+0.7**
6.6nm,1.0s							
TMUT	**Trail Mountain**	**25.31**	**338**	*eP*	**P**	**05 51 49.8**	**+1.9**
3.0nm,0.7s							
S51A	**Beattyville**	**25.40**	**30**	*eP*	**P**	**05 51 45.5**	**-2.8**
6.3nm,0.9s							
LGNH	**Logne**	**25.45**	**81**	*eP*	**P**	**05 51 47.4**	**-1.6**
66nm,1.0s							
R11A	**Troy Canyon, C**	**26.37**	**330**	*eP*	**P**	**05 51 59.7**	**+2.3**
2.0nm,1.0s							
ECSD	**EROS Data Cent**	**27.53**	**4**	*eP*	**P**	**05 52 06.4**	**-1.1**
1.9nm,0.8s							
NVAR	**Mina Array Bea**	**27.81**	**326**	P	**P**	**05 52 12.8**	**+2.4**
0.3nm,0.5s,baz=142,slow=7.4,SNR=3.0							
BW06	**Boulder Array**	**27.93**	**344**	*eP*	**P**	**05 52 12.7**	**+1.3**
6.1nm,1.1s							
PD31	**Pinedale Array**	**27.93**	**344**	*eP*	**P**	**05 52 12.4**	**+1.0**
5.2nm,1.1s							
PDAR	**Pinedale Array**	**27.93**	**344**	P	**P**	**05 52 12.1**	**+0.6**
1.1nm,0.8s,baz=125,slow=7.8,SNR=8.2							
BOZ	**Bozeman (W)**	**31.12**	**343**	*eP*	**P**	**05 52 41.6**	**+2.1**
1.5nm,0.8s							
ULM	**Lac du Bonnet**	**34.07**	**4**	P	**P**	**05 53 04.5**	**-0.6**
3.4nm,0.7s,baz=183,slow=7.6,SNR=3.6							
PTGA	**Pitinga**	**42.18**	**110**	LR	LR	06 12 14.0	
comp=Z,27nm,18.2s,baz=186,slow=37							
YKA	**Yellowknife Ar**	**47.50**	**350**	P	**P**	**05 54 55.4**	**-0.4**
1.0nm,0.8s,baz=158,slow=7.4,SNR=6.1							
INK	**Inuvik**	**56.48**	**345**	P	**P**	**05 56 02.8**	**+0.2**
1.3nm,0.8s,baz=67,slow=6.6,SNR=5.4							
ILAR	**Eielson Array**	**58.16**	**338**	P	**P**	**05 56 16.4**	**+1.9**
0.6nm,0.9s,baz=153,slow=4.4,SNR=6.1							
HHC	**Hu-ho-hao-te**	**116.48**	**334**	*eP*	**PKiKP**	**06 05 07.4**	**+1.9**
HHC				pmax	pmax		
comp=Z,13nm,1.0s							
HHC				pmax	pmax		
comp=Z,180nm,5.4s							
LZH	**Lanzhou**	**123.62**	**338**	*e*PKP	**PKiKP**	**06 05 21.3**	**+1.6**
LZH				pPKP		06 05 29.8	
LZH				sPKP		06 05

19nm,0.7s
PSAC1 Pilbara Seismi 24.42 198 *e*P **P 05 52 05.6 +0.7**
23nm,0.9s
PSAB2 Pilbara Seismi 24.42 198 *e*P **P 05 52 05.2 +0.3**
19nm,0.7s
PSAA2 Pilbara Seismi 24.44 198 *e*P **P 05 52 05.9 +0.9**
22nm,0.8s
PSA00 Pilbara Seismi 24.45 198 *e*P **P 05 52 05.5 +0.4**
21nm,0.8s
PSAA3 Pilbara Seismi 24.45 198 *e*P **P 05 52 06.0 +0.8**
22nm,0.8s
PSAB1 Pilbara Seismi 24.45 198 *e*P **P 05 52 06.3 +1.1**
24nm,0.8s
PSAA1 Pilbara Seismi 24.45 198 *e*P **P 05 52 06.3 +1.1**
25nm,0.8s
PSAD2 Pilbara Seismi 24.45 197 *e*P **P 05 52 05.9 +0.7**
18nm,0.8s
PSAB3 Pilbara Seismi 24.46 198 *e*P **P 05 52 05.7 +0.5**
21nm,0.8s
PSAC3 Pilbara Seismi 24.50 198 *e*P **P 05 52 06.6 +1.0**
22nm,0.8s
PSAD3 Pilbara Seismi 24.53 198 *e*P **P 05 52 06.4 +0.5**
37nm,1.1s
AS31 Alice Springs 26.05 167 *e*PcP **PcP 05 55 42.9 +0.6**
AS31 *e*ScP **ScP 05 59 04.5 +1.4**
ASAR Alice Springs 26.05 167 P **P 05 52 19.8 +0.2**
4.6nm,0.5s,baz=337,slow=6.6,SNR=63
ASAR PcP **PcP 05 55 42.9 +0.6**
2.2nm,0.5s,baz=355,slow=2.0,SNR=10
ASAR S S 05 56 48.1 +12
2.1nm,0.8s,baz=349,slow=19,SNR=6.5
ASAR ScP **ScP 05 59 04.5 +1.4**
1.6nm,0.9s,baz=358,slow=2.6,SNR=5.9
IPM Ipoh 26.67 276 *e*P **P 05 52 22.4 -2.9**
84nm,1.0s
CTA Charters Tower 28.43 141 P **P 05 52 40.6 -0.2**
4.9nm,1.0s,baz=324,slow=8.7,SNR=3.4
CTAO Charters Tower 28.43 141 *e*P **P 05 52 40.9 0.0**
5.0nm,0.7s
FORT Forrest 32.41 179 *e*P **P 05 53 15.8 +0.1**
48nm,0.8s
MORW Morawa 32.64 199 *e*P **P 05 53 18.1 +0.4**
10nm,1.1s
KMI Kunming 33.35 316 P **P 05 53 24.8 +0.6**
KMI pmax pmax
comp=Z,18nm,0.7s
EIDS Eidsvold 35.31 141 *e*P **P 05 53 40.7 0.0**
17nm,0.8s
BBOO Buckleboo 35.35 168 *e*P **P 05 53 41.3 +0.3**
36nm,0.4s
KSRS Korea Array 35.47 0 P **P 05 53 42.0 +0.1**
7.2nm,0.6s,baz=178,slow=9.6,SNR=34
KSRS ScP **ScP 05 59 36.0 +2.1**
1.0nm,0.7s,baz=181,slow=3.0,SNR=5.7
MAJO Matsushiro 35.93 15 *e*P **P 05 53 43.3 -2.5**
MAT Matsushiro 35.93 15 P **P 05 53 43.8 -2.0**
MJAR Matsushiro Arr 35.93 15 P **P 05 53 43.3 -2.6**
4.3nm,0.5s,baz=188,slow=9.3,SNR=11
STKA Stephens Creek 36.04 160 P **P 05 53 47.3 +0.5**
41nm,0.6s,baz=334,slow=8.6,SNR=101
STKA PP **PP 05 55 12.9 -0.3**
4.8nm,0.7s,baz=318,slow=9.0,SNR=3.7
STKA PcP **PcP 05 56 09.1 +0.4**
2.3nm,0.5s,baz=15,slow=5.4,SNR=2.9
STKA Stephens Creek 36.04 160 *e*P **P 05 53 47.2 +0.5**
9.9nm,0.8s
XAN Xi'an 36.51 333 P **P 05 53 51.5 +0.6**
XAN pmax pmax
comp=Z,19nm,0.8s
XAN Xi'an 36.51 333 *e*P **P 05 53 50.1 -0.7**
15nm,0.7s
CD2 Chengdu 36.70 324 *e*P **P 05 53 52.9 +0.4**
CD2 pmax pmax
comp=Z,30nm,0.5s
ARMA Armidale 39.40 146 *e*P **P 05 54 16.1 +1.0**
19nm,0.9s
BJT Baijiatuau 39.43 346 *e*P **P 05 54 15.1 0.0**
15nm,0.8s
LZH Lanzhou 40.59 330 *e*P **P 05 54 26.4 +1.5**
LZH pP pwP 05 55 11.6 +2.0
LZH sP sP 05 55 31.3 +2.1
LZH pmax pmax
comp=Z,19nm,1.3s
LZH pmax pmax
comp=Z,110nm,5.5s
HHC Hu-ho-hao-te 41.48 342 *e*P **P 05 54 34.8 +2.8**
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,76nm,6.6s
CN2 Changchun 41.85 358 *e*P **P 05 54 36.1 +1.2**
USRK Ussuriysk Ar. 42.39 5 P **P 05 54 39.3 +0.1**
6.8nm,0.8s,baz=199,slow=7.2,SNR=9.4
ASAJ Asahikawa 44.18 16 P **P 05 54 54.0 +0.5**
4.0nm,0.4s,baz=180,slow=19,SNR=3.4
GTA Gaotai 45.18 329 *e*P **P 05 55 02.8 +1.1**
GTA pP pwP 05 55 45.4 -1.6
GTA sP sP 05 56 07.3 +0.8
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,57nm,6.2s
GTA LR LR
comp=N,76nm,17.1s
GTA LR LR
comp=E,110nm,18.4s
GTA LR LR
comp=Z,77nm,15.5s
KLR Kul'dur 47.38 4 P **P 05 55 18.0 -0.4**
2.8nm,0.6s,baz=177,slow=7.7,SNR=7.7
ULN Ulaanbaatar 49.20 342 *e*P **P 05 55 32.2 -0.4**
9.8nm,1.0s
SONM Songino Array 49.38 341 P **P 05 55 34.4 +0.4**
3.4nm,0.6s,baz=154,slow=7.8,SNR=16
WMQ Urumqi 54.79 325 *e*P **P 05 56 15.5 +1.7**
WMQ LR LR
comp=N,220nm,29.3s
WMQ LR LR
comp=E,410nm,29.0s
WMQ LR LR
comp=Z,67nm,29.2s
PETK Petropavlovsk- 56.88 21 P **P 05 56 28.6 +0.2**
3.7nm,0.8s,baz=187,slow=5.9,SNR=6.5
PEA1 Petropavlovsk- 56.88 21 *e*P **P 05 56 28.6 +0.2**
LBZ Lake Benmore 59.62 146 *e*P **P 05 56 48.0 +0.5**
27nm,0.7s
MK31 Makanchi Array 59.62 326 *e*P **P 05 56 47.6 +0.1**
2.7nm,0.4s
MK32 Makanchi Array 59.62 326 *e*PcP **PcP 05 57 33.4 +0.9**
MKAR Makanchi Array 59.62 326 P **P 05 56 48.2 +0.7**
3.0nm,0.3s,baz=114,slow=8.0,SNR=37
MKAR PcP **pwP 05 57 33.4 -2.1**
1.8nm,0.8s,baz=132,slow=7.0,SNR=6.5
THZ Tophouse 59.66 142 *e*P **P 05 56 47.8 -0.1**
7.3nm,0.6s
MAKZ Makanchi 59.80 325 *e*P **P 05 56 49.1 +0.3**
3.0nm,0.4s
KSH Kashi 60.01 316 P P 05 56 55.8 +5.4
KSH PP **PP 05 59 11.4 +6.1**
KSH S **S 06 04 52.1 +4.8**
KSH SS **SS 06 08 54.1 +6.5**
KSH pmax pmax
comp=Z,5.0nm,0.5s
KSH pmax pmax
comp=Z,290nm,4.6s
KSH LR LR
comp=N,870nm,12.3s
KSH LR LR
comp=E,440nm,11.2s
KSH LR LR
comp=Z,210nm,10.5s
BKZ Black Stump Fm 60.58 138 *e*P **P 05 56 53.8 -0.4**
7.4nm,0.8s
SEY Seymchan 63.70 12 P **P 05 57 14.2 -0.2**
2.8nm,0.5s,baz=210,slow=8.4,SNR=7.3
KURBB Kurchatov Arra 63.81 328 P **P 05 57 15.7 +0.3**
3.8nm,0.6s,baz=126,slow=6.1,SNR=28
KURBB pP **pP 05 57 57.9 -3.0**
5.1nm,1.1s,baz=123,slow=5.6,SNR=4.9
KURK Kurchatov 63.82 328 *e*P **P 05 57 15.3 0.0**
6.3nm,0.8s
BVAR Borovoye Array 69.39 327 P **P 05 57 51.0 +0.3**
0.6nm,0.5s,baz=113,slow=13,SNR=4.6
TIXI Tiksi 69.74 0 P **P 05 57 51.2 -1.2**
2.8nm,0.4s,baz=168,slow=4.3,SNR=6.3
VNDA Vanda 81.42 173 P **P 05 58 59.5 +0.8**
7.7nm,0.8s,baz=317,slow=6.8,SNR=30
VNDA Vanda 81.42 173 *e*P **P 05 58 59.4 +0.8**
6.1nm,0.8s
MAW Mawson 82.27 200 P **P 05 59 03.6 +0.5**
4.6nm,0.8s,baz=31,slow=6.7,SNR=8.6
MAW Mawson 82.27 200 *e*P **P 05 59 04.0 +0.9**
1.2nm,0.8s
SBA Scott Base 82.33 172 *e*P **P 05 59 05.3 +2.0**
4.4nm,1.1s
ARA0 ARCESS Array S 92.54 340 *e*P **P 05 59 52.0 -0.7**
ARCES ARCESS Array B 92.54 340 P **P 05 59 52.0 -0.7**
7.4nm,0.4s,baz=78,slow=5.6,SNR=7.5
MODS Modra-Piesok 102.01 320 *e*PDIF **Pdif 06 00 38.3 +2.4**
TXAR Lajitas Array 122.06 53 PKP **PKiKP 06 05 36.7 +0.5**
0.5nm,0.7s,baz=288,slow=0.9,SNR=7.1
TORD Torodi Ar. Bea 124.33 287 PKP **PKPdf 06 05 39.4 -1.2**
0.8nm,0.4s,baz=98,slow=2.2,SNR=9.4
TOA1 Torodi Ar. Sit 124.33 287 *e*PKPdf **PKPdf 06 05 39.4 -1.2**
CFA Coronel Fontan 146.81 155 PKPbc **PKPab 06 06 23.9 -1.5**
6.4nm,0.6s,baz=208,slow=2.2,SNR=22
CPUP Villa Florida 155.16 169 PKPbc PKPbc 06 06 43.6
1.3nm,0.8s,baz=310,slow=1.1,SNR=3.7
CPUP PKPab **PKPab 06 07 00.8 +0.8**
3.9nm,0.8s,baz=203,slow=3.3,SNR=8.5
LPAZ La Paz 158.86 134 PKPab **PKPab 06 07 17.8 +0.7**
1.3nm,0.9s,baz=188,slow=9.6,SNR=4.0
SIV San Ignacio 163.52 149 PKPab **PKPab 06 07 36.9 +0.3**
1.1nm,0.8s,baz=260,slow=2.0,SNR=7.2

NNC 19 05:48:47.9±1.9, 54°.23N×86°.22E, h0km, mb3.8, mpv3.2, 7C-5D, Error ellipse: s-maj=19.7km s-min=8.4km az=176.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.87**	**252**	⇓P	Pg	05 49 04.4	-0.2
	1.3nm,0.4s						
ZAA0				⇑S	Sb	05 49 17.0	-1.1
	9.1nm,0.5s						
KURK	**Kurchatov**	**5.83**	**236**	⇑Pn	Pn	05 50 17.7	+2.2
	0.9nm,0.4s						
KURK				⇓Lg	Lg	05 51 53.1	
	9.4nm,0.9s						
KURBB	**Kurchatov Arra**	**5.93**	**236**	⇓Pn	Pn	05 50 16.9	0.0
	7.4nm,0.3s						
KURBB				⇓Lg	Lg	05 51 57.5	
	17nm,0.7s						
MK31	**Makanchi Array**	**7.85**	**200**	⇑Pn	Pn	05 50 45.7	+2.4
	0.7nm,0.5s,baz=27,slow=13,SNR=42						
MK31				⇓Sn	Sn	05 52 13.0	+0.1
	0.6nm,0.3s,baz=26,slow=25,SNR=5.1						
MK31				⇑Lg	Lg	05 52 55.2	
	2.8nm,0.7s,baz=30,slow=30,SNR=5.6						
MAKZ	**Makanchi**	**7.91**	**202**	⇑Pn	Pn	05 50 46.4	+2.3
	1.0nm,0.6s						
MAKZ				⇑Sn	Sn	05 52 13.9	-0.3
	3.7nm,1.0s						
MAKZ				⇑Lg	Lg	05 52 55.7	
	9.6nm,1.4s						

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*ISCJB **19** 05:59:40.2±1.1, 54°.14N±0°.06×86°.03E±0°.09, h0km, Error ellipse: s-maj=10.1km s-min=4.4km az=41.7*
*ASRS **19** 05:59:40.6±0.5, 54°.37N×86°.33E, h15km, Ms3.2/2*
*NNC **19** 05:59:41.6±1.7, 54°.27N×86°.09E, h5km±7km, mb4.4, mpv4.0, Error ellipse: s-maj=17.5km s-min=10.3km az=157.0, Suspected Mining explosion.*

ISC 19 05:59:43.2±1.7, 54°.16N±0°.09×85°.99E±0°.07, h0km, n12, σ1§20/23, 10C-11D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.72**	**253**	⇑P	Pg	05 59 57.1	+0.1
	8.1nm,0.3s						
ZAA0				⇓S	Sb	06 00 09.3	+0.2
	64nm,0.3s						
ELT	**Eltsovka**	**0.92**	**171**	*e*Pg	Pg	06 00 00.6	-0.2
ELT				*e*Sg	Sb	06 00 15.2	+0.5
NVS	**Novosibirsk**	**1.74**	**294**	*i* Pg	Pn	06 00 14.7	0.0
NVS				*e*Sg	Sb	06 00 38.9	+0.4
TASR	**Tashtagol**	**1.81**	**140**	*e*Pg	Pn	06 00 13.8	-1.8
TASR				*e*Sg	Sn	06 00 39.4	+0.2
AKAR	**Aktash**	**3.98**	**165**	*e*Pg	Pb	06 00 55.2	+0.9
AKAR				*e*Sg	Sg	06 01 49.6	-1.4
KURK	**Kurchatov**	**5.68**	**236**	⇓Pn	Pn	06 01 10.5	+1.8
	23nm,0.7s						
KURK				⇑Lg	Lg	06 02 45.1	
	55nm,0.6s						
KURBB	**Kurchatov Arra**	**5.78**	**235**	⇑Pn	Pn	06 01 12.2	+2.0
	20nm,0.3s						
KURBB				⇓Sn	Sn	06 02 17.8	+0.7
	20nm,0.4s						
KURBB				⇓Lg	Lg	06 02 48.3	
	98nm,0.6s						
MK31	**Makanchi Array**	**7.75**	**199**	⇓Pn	Pn	06 01 38.6	+1.4
	2.2nm,0.2s,baz=25,slow=11,SNR=363						
MK31				⇑Sn	Sn	06 03 05.6	0.0
	3.3nm,0.5s,baz=19,slow=26,SNR=3.7						
MK31				⇓Lg	Lg	06 03 51.0	
	49nm,1.0s,baz=27,slow=30,SNR=10						
MAKZ	**Makanchi**	**7.79**	**201**	⇓Pn	Pn	06 01 38.8	+0.9
	4.2nm,0.3s						
MAKZ				⇑Sn	Sn	06 03 07.9	+1.1
	6.8nm,0.5s						
MAKZ				⇑Lg	Lg	06 03 50.3	
	44nm,0.9s						
BRVK	**Borovoye**	**9.40**	**270**	⇑Pn	Pn	06 01 58.8	-1.1
	1.3nm,0.5s						
BRVK				⇓Sn	Sn	06 03 43.4	-2.8
	7.1nm,0.4s						
OTUK	**Ortayu**	**10.41**	**241**	⇓Pn	Pn	06 02 12.8	-0.8
	2.3nm,0.3s						
OTUK				⇑Sn	Sn	06 04 10.5	-0.4
	1.7nm,0.3s						
OTUK				⇓Lg	Lg	06 05 17.9	
	15nm,1.0s						
PDGK	**Podgornoye**	**11.65**	**204**	⇑Pn	Pn	06 02 30.2	-0.6
	1.9nm,0.4s						
PDGK				⇑Sn	Sn	06 04 40.8	-0.8
	2.0nm,0.4s						
PDGK				⇓Lg	Lg	06 05 54.2	
	9.0nm,0.9s						

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*IDC **19** 06:00:49.8±1.1, 28°.40S×176°.80W, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/28, mbtmp3.8/8, MLL3.2/1, MS3.6/8, Ms1 3.6/8, ms1mx3.5/19, Error ellipse: s-maj=44.9km s-min=22.3km az=144.0*
*NEIC **19** 06:00:55.9±2.4, 28°.08S×176°.78W, h35km±3km, mb4.3/3, Error ellipse: s-maj=22.6km s-min=9.1km az=178.0*
*ISCJB **19** 06:00:56.5±0.6, 28°.16S±0°.09×177°.0W±0°.1, h49km, mb3.9/8, MS3.7/8, Error ellipse: s-maj=19.8km s-min=9.1km az=28.7*

ISC 19 06:00:57.3±0.7, 28°.3S±0°.1×176°.8W±0°.2, h49km, n48, σ1§27/26, mb3.9/8, MS3.7/8, 2D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**10.14**	**203**	*e*Pn	Pn	06 03 20.9	+0.7
OUZ	**Omahuta**	**10.72**	**227**	*e*Pn	Pn	06 03 30.9	+2.7
URZ	**Urewera**	**11.19**	**206**	Pn	Pn	06 03 29.1	-5.5
URZ				Sn	Sn	06 05 35.9	-2.3
	0.2nm,0.3s,baz=45,slow=20,SNR=2.6						
	1.0nm,0.3s,baz=174,slow=19,SNR=3.7						
URZ	**Urewera**	**11.19**	**206**	*e*Pn	Pn	06 03 39.1	+4.5
BKZ	**Black Stump Fm**	**12.22**	**205**	*e*Pn	Pn	06 03 50.8	+2.1
THZ	**Tophouse**	**15.88**	**209**	*e*Pn	P	06 04 39.6	-0.8
	27nm,1.1s						
KHZ	**Kahutara**	**16.16**	**207**	*e*Pn	Pn	06 04 40.5	-0.4
	24nm,1.2s						
DZM	**Mont Dzumac**	**16.38**	**288**	*e*LR	LR	06 08 38.7	
	comp=Z,669nm,24.6s						
DZM	**Mont Dzumac**	**16.38**	**288**	LR	LR	06 09 41.0	
	comp=Z,385nm,21.5s,baz=172,slow=32						
RAR	**Rarotonga**	**16.97**	**69**	LR	LR	06 11 57.2	
	comp=Z,726nm,18.1s,baz=261,slow=39						
TBI	**Tubuai**	**25.06**	**85**	*e*LQ	LQ	06 11 07.5	
	441nm,27.8s						
TBI				*e*LR	LR	06 12 24.0	
	comp=Z,290nm,27.8s						
TBI	**Tubuai**	**25.06**	**85**	*e*T	T	06 31 52.2	
	7.9nm,0.3s						
PAE	**Paea**	**27.12**	**73**	*e*T	T	06 34 25.9	
	6.7nm,0.3s						
PPT2	**Papeete2**	**27.16**	**73**	*e*LQ	LQ	06 11 54.8	
	461nm,24.8s						
PPT2				*e*LR	LR	06 13 14.6	
	comp=Z,221nm,25.8s,baz=231						
PPT2	**Papeete2**	**27.16**	**73**	*e*T	T	06 34 30.4	
	3.9nm,0.3s						
TVO	**Taravao**	**27.34**	**74**	*e*T	T	06 34 43.0	
	1.2nm,0.3s						
HNR	**Honiara**	**28.81**	**306**	LR	LR	06 17 48.8	
	comp=Z,99nm,18.1s,baz=172,slow=35						
VAH	**Vaihoa**	**29.93**	**70**	*e*T	T	06 37 57.0	
	9.5nm,0.2s						
STKA	**Stephens Creek**	**36.04**	**254**	LR	LR	06 22 12.9	
	comp=Z,139nm,18.7s,baz=48,slow=36						
ASAR	**Alice Springs**	**44.33**	**264**	P	**P**	**06 09 00.7**	**-2.1**
	0.7nm,0.8s,baz=96,slow=8.8,SNR=3.1						
WB2	**Warramunga Arr**	**45.12**	**269**	*e*P	**P**	**06 09 08.4**	**-0.7**
	6.3nm,1.1s						
WR1	**Warramunga Arr**	**45.13**	**269**	*e*P	**P**	**06 09 09.3**	**+0.1**
WRA	**Warramunga Arr**	**45.13**	**269**	P	**P**	**06 09 09.3**	**+0.1**
	0.8nm,0.7s,baz=106,slow=9.0,SNR=3.9						
VNDA	**Vanda**	**50.32**	**186**	LR	LR	06 28 20.2	
	comp=Z,35nm,20.1s,baz=14,slow=33						
SYO	**Syowa Base**	**79.42**	**193**	‖*e*P	**P**	**06 13 00.0**	**+2.1**
SYO	**Syowa Base**	**79.42**	**193**	‖*e*P	P	06 13 14.0	+16
PLCA	**Paso Flores**	**83.18**	**133**	LR	LR	06 41 37.2	
	comp=Z,51nm,18.8s,baz=297,slow=30						
PETK	**Petropavlovsk-**	**84.03**	**345**	P	**P**	**06 13 21.6**	**-0.5**
	1.3nm,0.7s,baz=146,slow=10,SNR=2.5						
PEA1	**Petropavlovsk-**	**84.03**	**345**	*e*P	**P**	**06 13 21.6**	**-0.5**
NV01	**Mina Array Sit**	**85.95**	**42**	*e*P	**P**	**06 13 34.1**	**+1.7**
NVAR	**Mina Array Bea**	**85.95**	**42**	P	**P**	**06 13 34.1**	**+1.7**
	0.2nm,0.4s,baz=246,slow=8.8,SNR=3.2						
NVAR				LR	LR	06 43 36.2	
	comp=Z,44nm,21.3s,baz=225,slow=30						
TXAR	**Lajitas Array**	**90.34**	**57**	P	**P**	**06 13 52.4**	**-1.0**
	1.5nm,1.2s,baz=277,slow=2.0,SNR=5.1						
PDAR	**Pinedale Array**	**93.86**	**43**	P	**P**	**06 14 09.6**	**0.0**
	0.4nm,0.6s,baz=188,slow=2.7,SNR=4.3						
PDAR				LR	LR	06 48 18.1	
	comp=Z,54nm,21.9s,baz=240,slow=30						
ILAR	**Eielson Array**	**95.62**	**12**	P	**P**	**06 14 17.0**	**+0.2**
	0.2nm,0.6s,baz=223,slow=6.1,SNR=3.8						
ARA0	**ARCESS Array S**	**136.72**	**349**	*e*PKPdf	**PKPdf**	**06 20 13.0**	**-0.3**
ARCES	**ARCESS Array B**	**136.72**	**349**	PKP	**PKPdf**	**06 20 13.0**	**-0.3**
	0.6nm,0.8s,baz=74,slow=3.9,SNR=3.3						
H10S3	**ASCENSION HYDR**	**139.16**	**152**	T	T	08 56 50.4	
	baz=199						
H10S2	**ASCENSION HYDR**	**139.16**	**152**	T	T	08 56 47.0	
	baz=199						
H10S1	**ASCENSION HYDR**	**139.18**	**152**	T	T	08 56 51.2	
	baz=199						
H10N3	**ASCENSION HYDR**	**140.23**	**152**	T	T	08 58 10.1	
	baz=204						
H10N1	**ASCENSION HYDR**	**140.24**	**152**	T	T	08 57 55.0	
	baz=204						
H10N2	**ASCENSION HYDR**	**140.25**	**152**	T	T	08 57 59.7	
	baz=204						
NB200	**NORSAR Array S**	**146.79**	**353**	*e*PKPbc	**PKPbc**	**06 20 33.1**	**-0.3**
NOA	**NORSAR Array B**	**146.79**	**353**	PKPbc	**PKPbc**	**06 20 33.1**	**-0.3**
	0.4nm,0.7s,baz=6.3,slow=4.0,SNR=2.8						
AKASG	**Malin Array Be**	**150.19**	**326**	PKPbc	**PKPbc**	**06 20 41.6**	**-0.8**
	1.8nm,0.7s,baz=44,slow=3.0,SNR=7.5						
AKBB	**Malin Array Si**	**150.19**	**326**	*e*PKPbc	**PKPbc**	**06 20 41.6**	**-0.8**
BR101	**Keskin Array S**	**152.44**	**302**	*e*PKPab	**PKPab**	**06 20 58.5**	**-0.1**
BRTR	**Keskin Array B**	**152.44**	**302**	PKPab	**PKPab**	**06 20 58.5**	**-0.1**
	0.8nm,0.7s,baz=76,slow=5.2,SNR=4.2						

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*ISCJB **19** 06:05:35.7±0.3, 40°.67N±0°.02×26°.93E±0°.02, h11km±2km, Error ellipse: s-maj=3.5km s-min=2.4km az=167.1*
*ISK **19** 06:05:35.2, 40°.68N×26°.92E, h13km, ML3.0/24*
*DDA **19** 06:05:35.5, 40°.65N×26°.91E, h7km±3km, ML3.6*
*ATH **19** 06:05:35.4, 40°.68N×26°.90E, h25km±1km, ML2.6/6, Error ellipse: s-maj=3.1km s-min=1.3km az=244.0*
*THE **19** 06:05:37.5, 40°.64N×26°.78E, h2km±1km, ML2.4/7, Error ellipse: s-maj=3.1km s-min=1.3km az=47.0*

ISC 19 06:05:35.7±0.8, 40°.66N±0°.02×26°.93E±0°.02, h15km±6km, n59, σ0§73/83, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKY	**Sarkoy-Tekirda**	**0.19**	**82**	PG	**Pg**	**06 05 40.4**	**+0.1**
RKY				SG	**Sg**	**06 05 43.1**	**-0.2**
SART	**Tekirdag**	**0.20**	**81**	*i* P	**Pg**	**06 05 40.6**	**+0.3**
SART				*i* S	**Sg**	**06 05 43.9**	**+0.5**
KESN	**Edirne-Kesan**	**0.25**	**312**	*i* P	**Pg**	**06 05 41.1**	**-0.3**
KESN				*i* S	**Sb**	**06 05 45.6**	**-0.9**
KESN				IAML_P			
	comp=Z,21μm,0.2s						
ERIK	**Erikli-Kesan**	**0.31**	**272**	PG	**Pb**	**06 05 42.3**	**-0.7**
ERIK				SG	**Sg**	**06 05 46.6**	**0.0**
LPK	**Lapseki**	**0.31**	**204**	PG	**Pg**	**06 05 42.5**	**+0.3**
LPK				SG	**Sb**	**06 05 47.8**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.43**	**233**	PG	**Pg**	**06 05 44.2**	**-0.1**
GELI				SG	**Sb**	**06 05 50.9**	**-0.5**
TKR	**Tekirdag**	**0.57**	**54**	PG	**Pg**	**06 05 46.8**	**-0.1**
TKR				SG	**Sg**	**06 05 54.4**	**-0.1**
ENEZ	**Enez**	**0.59**	**278**	PG	**Pb**	**06 05 47.4**	**-0.4**
CRLT	**Corlu**	**0.77**	**52**	PG	**Pb**	**06 05 51.3**	**+0.4**
EDC	**Edincik**	**0.78**	**113**	PG	**Pg**	**06 05 50.8**	**-0.1**
GONE	**Gonen-Balikesi**	**0.84**	**136**	PG	**Pg**	**06 05 51.9**	**-0.2**
GADA	**Gvkgeada**	**0.91**	**239**	PG	**Pg**	**06 05 52.8**	**-0.6**
EZN	**Ezine**	**0.95**	**209**	PG	**Pb**	**06 05 53.4**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**0.96**	**198**	*i* P	**Pb**	**06 05 54.0**	**-0.2**
BAYC				*i* S	**Sb**	**06 06 06.7**	**0.0**
PHSR	**Pinarhisar**	**1.07**	**25**	PG	**Pn**	**06 05 56.1**	**-0.1**
SMTH	**Samothraki Isl**	**1.08**	**260**	P	**Pb**	**06 05 55.6**	**-0.5**
SMTH				S	**Sb**	**06 06 09.9**	**-0.1**
SMTH	**Samothraki Isl**	**1.08**	**260**	P	**Pb**	**06 05 55.7**	**-0.5**
SMTH				S	**Sn**	**06 06 10.9**	**-0.1**
SMTH				AML	AML	06 06 12.4	
	comp=E,547μm,0.2s						
SMTH				AML	AML	06 06 12.8	
	comp=N,558μm,0.2s						
KIRK	**Kırklareli**	**1.13**	**7**	*i* P	**Pg**	**06 05 57.0**	**-0.5**
KIRK				IAML_P			
	comp=Z,3μm,0.2s						
RDO	**Rodhopi**	**1.16**	**295**	PN	**Pg**	**06 05 57.6**	**-0.5**
RDO	**Rodhopi**	**1.16**	**295**	P	**Pg**	**06 05 57.5**	**-0.5**
RDO				S	**Sn**	**06 06 13.5**	**+0.5**
RDO	**Rodhopi**	**1.16**	**295**	P	**Pb**	**06 05 57.1**	**-0.4**
RDO				S	**Sn**	**06 06 13.3**	**+0.3**
RDO				AML	AML	06 06 15.3	
	comp=N,777μm,0.2s						
RDO				AML	AML	06 06 15.7	
	comp=E,700μm,0.2s						
KCTX	**Karacabey (Bur**	**1.16**	**109**	PN	**Pn**	**06 05 57.3**	**-0.2**
EDRB	**Edirne**	**1.19**	**353**	PN	**Pb**	**06 05 57.7**	**-0.4**
ELBA	**Catalca**	**1.24**	**66**	*i* P	**Pg**	**06 05 59.2**	**-0.4**
ELBA				*i* S	**Sg**	**06 06 15.6**	**-0.1**
BALB	**Balikesir**	**1.25**	**144**	PN	**Pn**	**06 05 58.9**	**+0.2**
CTKS	**Kestanelik-??a**	**1.33**	**64**	PN	**Pn**	**06 05 59.7**	**0.0**
AYVA	**Ayvalik**	**1.36**	**188**	*i* P	**Pb**	**06 06 01.4**	**+0.5**
AYVA				*i* S	**Sn**	**06 06 18.3**	**+0.3**
ARMT	**Armutlu**	**1.48**	**93**	PN	**Pn**	**06 06 01.7**	**-0.1**
BGKT	**Bogazkoy**	**1.49**	**69**	PN	**Pn**	**06 06 01.9**	**-0.1**
PRK	**Paraskevi**	**1.50**	**200**	P	**Pg**	**06 06 04.1**	**-0.4**
PRK				S	**Sg**	**06 06 24.9**	**+0.9**
PRK	**Paraskevi**	**1.50**	**200**	P	**Pb**	**06 06 03.1**	**-0.1**
PRK				S	**Sg**	**06 06 23.6**	**-0.4**
PRK				AML	AML	06 06 26.1	
	comp=N,499μm,0.3s						
PRK				AML	AML	06 06 27.0	
	comp=E,674μm,0.3s						
KDZ	**Kurdzhali**	**1.51**	**311**	P	**Pg**	**06 06 08.8**	**+4.1**
MDNY	**Mudanya-Bursa**	**1.52**	**100**	PN	**Pn**	**06 06 02.7**	**+0.3**
LIA	**Limnos Island**	**1.54**	**241**	P	**Pn**	**06 06 02.8**	**+0.2**
LIA				S	**Sb**	**06 06 23.5**	**+0.4**
LIA	**Limnos Island**	**1.54**	**241**	P	**Pn**	**06 06 02.8**	**+0.2**
LIA				S	**Sb**	**06 06 23.4**	**+0.4**
LIA				AML	AML	06 06 25.1	
	comp=N,138μm,0.3s						
LIA				AML	AML	06 06 26.8	
	comp=E,203μm,0.6s						
DURS	**Dursunbey**	**1.59**	**131**	*i* P	**Pg**	**06 06 05.7**	**-0.5**
DURS				*i* S	**Sg

comp=N,806μm,0.4s
SIGR AML AML 06 06 31.0
comp=E,489μm,0.3s
ISK Istanbul-Kandi 1.67 75 PN **Pn 06 06 04.5 +0.1**
KAVV Kandilli-Istan 1.67 75 PN **Pn 06 06 04.4 0.0**
THAS Thassos island 1.68 269 P **Pn 06 06 04.7 +0.1**
THAS S **Sn 06 06 26.0 +0.2**
THAS Thassos island 1.68 269 P **Pn 06 06 05.0 +0.4**
THAS S **Sn 06 06 26.0 +0.2**
THAS AML AML 06 06 32.4
comp=N,92μm,0.3s
THAS AML AML 06 06 35.7
comp=E,98μm,0.4s
KLYT Kilyos 1.71 69 PN **Pn 06 06 05.3 +0.3**
DIM Dimitrovgrad 1.74 323 P **Pb 06 06 07.7 +0.3**
ULDT Uludag 1.77 106 *i* P **Pn 06 06 06.6 +0.7**
KAVA Kavala 1.86 281 P **Pb 06 06 08.0 -1.4**
KAVA S **Sb 06 06 32.0 -0.5**
KAVA Kavala 1.86 281 P **Pb 06 06 08.0 -1.4**
YLV Yalova 1.86 92 PN **Pn 06 06 06.8 -0.4**
RZN Rozhen 1.96 302 P **Pg 06 06 12.1 -1.2**
HRT Hereke 2.09 85 PN **Pn 06 06 10.0 -0.3**
SILT Sile 2.12 76 PN **Pn 06 06 10.6 0.0**
PLD Plovdiv 2.21 312 PN **Pn 06 06 12.4 +0.5**
OUR Ouranopolis 2.27 263 P **Pn 06 06 13.1 +0.4**
OUR Ouranopolis 2.27 263 P **Pn 06 06 13.0 +0.4**
CHOS Chios Island 2.37 197 P **Pn 06 06 14.9 +0.8**
NVR Nevrokopi 2.42 288 P **Pb 06 06 16.7 -2.3**
NVR S **Sn 06 06 45.6 +1.4**
NVR Nevrokopi 2.42 288 P **Pn 06 06 15.7 +0.9**
KAND Kocaeli-Kandir 2.52 79 *i* P **Pn 06 06 16.1 0.0**
KAND IAML_P
comp=Z,255nm,0.1s
SRS Serrai 2.57 281 P **Pn 06 06 18.1 +1.2**

*IDC **19** 06:12:12.8±0.9, 55°.92S×26°.93W, h0km, mb4.3/5, mb1 4.4/6, mb1mx4.0/20, mbtmp4.2/6, ML3.8/1, Error ellipse: s-maj=40.7km s-min=21.5km az=66.0*
*ISCJB **19** 06:12:20.1±0.6, 55°.85S±0°.08×27°.0W±0°.2, h63km, mb4.5/13, Error ellipse: s-maj=19.0km s-min=8.0km az=148.7*
*NEIC **19** 06:12:25.4±1.1, 55°.93S×27°.09W, h99km±8km, mb4.5/13, Error ellipse: s-maj=26.7km s-min=18.9km az=66.0*
ISC 19 06:12:21.1±0.7, 55°.9S±0°.1×27°.0W±0°.2, h63km, n39, σ0°.88/34, mb4.6/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.91**	**158**	P	**P**	**06 16 15.8**	**+1.6**
VNA3	**Neumayer Olymp**	**17.11**	**161**	P	**P**	**06 16 16.8**	**+0.3**
VNA2	**Neumayer--Watz**	**17.31**	**158**	P	**P**	**06 16 19.5**	**+0.9**
baz=318,slow=13							
SNAA	**Sanae**	**18.85**	**156**	P	**P**	**06 16 35.8**	**+0.2**
SNAA	**Sanae**	**18.85**	**156**	P	**P**	**06 16 34.5**	**-1.2**
0.3nm,0.3s,baz=303,slow=9.0,SNR=22							
SNAA	**Sanae**	**18.85**	**156**	*e*P	**P**	**06 16 35.7**	**0.0**
2.4nm,0.7s							
PMSA	**Palmer Station**	**20.10**	**229**	P	**Pn**	**06 16 52.1**	**+0.6**
11nm,0.7s,baz=101,slow=6.2,SNR=6.1							
PMSA	**Palmer Station**	**20.10**	**229**	*e*P	**Pn**	**06 16 50.9**	**-0.6**
17nm,1.0s							
QSPA	**South Pole Qui**	**34.37**	**180**	*e*P	**P**	**06 19 01.5**	**-0.2**
2.4nm,0.6s							
CPUP	**Villa Florida**	**36.79**	**311**	P	**P**	**06 19 22.6**	**0.0**
3.6nm,0.9s,baz=158,slow=9.6,SNR=7.6							
CPUP	**Villa Florida**	**36.79**	**311**	*e*P	**P**	**06 19 23.1**	**+0.6**
7.2nm,1.1s							
ROC1	**El Roble**	**38.00**	**288**	*e*P	**P**	**06 19 33.6**	**+0.5**
GO02	**Mina Guanaco**	**43.52**	**297**	*e*P	**P**	**06 20 18.6**	**0.0**
8.8nm,0.9s							
LVC	**Limon Verde**	**45.32**	**300**	*e*P	**P**	**06 20 33.7**	**+0.6**
7.9nm,0.8s							
SBA	**Scott Base**	**46.26**	**184**	*e*P	**P**	**06 20 40.6**	**+1.2**
2.2nm,0.9s							
VNDA	**Vanda**	**46.75**	**183**	P	**P**	**06 20 42.9**	**-0.3**
1.9nm,0.7s,baz=188,slow=6.4,SNR=16							
VNDA	**Vanda**	**46.75**	**183**	*e*P	**P**	**06 20 43.5**	**+0.2**
2.2nm,0.7s							
PB01	**IPOC Station P**	**46.93**	**300**	*e*P	**P**	**06 20 45.9**	**+0.5**
13nm,0.7s							
H10S2	**ASCENSION HYDR**	**47.80**	**17**	T	T	07 13 56.2	
baz=189,slow=75,SNR=22							
H10S3	**ASCENSION HYDR**	**47.81**	**17**	T	T	07 13 55.5	
baz=189,slow=75,SNR=24							
H10S1	**ASCENSION HYDR**	**47.82**	**17**	T	T	07 13 32.3	
baz=189,slow=75,SNR=21							
GO01	**Chusmiza**	**47.96**	**302**	*e*P	**P**	**06 20 54.5**	**+0.7**
10nm,0.8s							
PB11	**IPOC Station P**	**48.10**	**301**	*e*P	**P**	**06 20 54.0**	**-0.5**
9.9nm,0.9s							
MNMC	**Minye Minye**	**48.61**	**301**	*e*P	**P**	**06 20 59.2**	**+0.6**
17nm,0.5s							
H10N1	**ASCENSION HYDR**	**48.92**	**17**	T	T	07 15 05.6	
baz=191,slow=74							
H10N3	**ASCENSION HYDR**	**48.92**	**16**	T	T	07 14 36.8	
baz=191,slow=74							
H10N2	**ASCENSION HYDR**	**48.94**	**17**	T	T	07 14 52.0	
baz=191							
LPAZ	**La Paz**	**50.38**	**305**	P	**P**	**06 21 13.3**	**+0.8**
4.6nm,0.4s,baz=117,slow=3.6,SNR=59							
LPAZ	**La Paz**	**50.38**	**305**	*e*P	**P**	**06 21 13.1**	**+0.6**
5.8nm,0.4s							
TORD	**Torodi Ar. Bea**	**72.85**	**29**	P	**P**	**06 23 44.0**	**+1.0**
0.6nm,0.5s,baz=200,slow=6.5,SNR=7.8							
TOA1	**Torodi Ar. Sit**	**72.85**	**29**	*e*P	**P**	**06 23 44.0**	**+0.9**
ASAR	**Alice Springs**	**99.12**	**162**	P	**Pdif**	**06 25 54.8**	**-0.5**
0.3nm,0.5s,baz=185,slow=4.6,SNR=3.8							
YERR	**Yerington**	**122.34**	**293**	*e*Pdif	**Pdif**	**06 27 38.0**	**-0.2**
YKA	**Yellowknife Ar**	**136.12**	**318**	PKP	**PKPdf**	**06 31 31.9**	**-1.6**
0.5nm,0.8s,baz=133,slow=2.6,SNR=4.3							
YKB5	**Yellowknife Ar**	**136.12**	**318**	*e*PKPdf	**PKPdf**	**06 31 31.9**	**-1.6**
ILAR	**Eielson Array**	**150.09**	**312**	PKPbc	**PKPbc**	**06 32 02.5**	**-0.5**
2.2nm,0.8s,baz=122,slow=1.3,SNR=17							
ILB	**Eielson Array**	**150.09**	**312**	*e*PKPbc	**PKiKP**	**06 32 04.1**	**+0.3**
TOLK	**Toolik Lake Re**	**151.63**	**319**	*e*PKPdf	**PKPdf**	**06 31 58.2**	**-2.0**
TOLK				*e*PKPbc	**PKPbc**	**06 32 06.9**	**+0.3**
BPAW	**Bear Paw Mtn.**	**151.71**	**310**	*e*PKPbc	**PKPbc**	**06 32 05.5**	**-1.3**

ISC 19 06:25:48.9±0.9, 47°.82N±0°.03×18°.52E±0°.03, h11km±7km, n12, σ0°.85/24, Hungary

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRO2	**Moca**	**0.10**	**236**	*e*PG	**Pg**	**06 25 50.7**	**-0.8**
SRO2				*e*SG	**Sg**	**06 25 53.1**	**-0.3**
SRO	**Srobarova**	**0.14**	**269**	*e*PG	**Pg**	**06 25 52.5**	**+0.4**
SRO				*e*SG	**Sg**	**06 25 55.9**	**+1.6**
CSKK	**Cskako**	**0.48**	**201**	EPg	**Pg**	**06 25 59.0**	**+0.7**
CSKK				ESg	**Sg**	**06 26 06.1**	**+1.3**
VYHS	**Vyhne**	**0.71**	**17**	*e*PG	**Pg**	**06 26 02.5**	**-0.2**
VYHS				*e*SG	**Sg**	**06 26 11.3**	**-0.7**
KOLL	**Kolacno**	**0.77**	**354**	*e*PG	**Pg**	**06 26 03.9**	**+0.2**
KOLL				*e*SG	**Sg**	**06 26 13.3**	**-0.4**
PSZ	**Piszkesteto**	**0.93**	**83**	EPg	**Pg**	**06 26 07.1**	**+0.2**
PSZ				ESg	**Sg**	**06 26 20.0**	**+0.9**
MODS	**Modra-Piesok**	**1.00**	**304**	*e*PG	**Pg**	**06 26 07.8**	**-0.3**
MODS				*e*SG	**Sg**	**06 26 21.1**	**0.0**
MODS				*e*LG	Lg	06 26 25.0	
ZST	**Bratislava**	**1.02**	**292**	*e*PG	**Pg**	**06 26 08.1**	**-0.5**
ZST				*e*SG	**Sg**	**06 26 21.4**	**-0.4**
JAVC	**Velka Javorina**	**1.19**	**332**	*e*PG	**Pg**	**06 26 12.3**	**+0.6**
JAVC				*e*SG	**Sn**	**06 26 29.6**	**+1.9**
LANS	**Liptovska Anna**	**1.48**	**25**	*e*PG	**Pb**	**06 26 16.2**	**-0.3**
LANS				*e*SG	**Sg**	**06 26 37.0**	**+0.6**
KECS	**Kecovo**	**1.48**	**62**	*e*PG	**Pn**	**06 26 14.9**	**-0.6**
KECS				*e*SG	**Sb**	**06 26 35.1**	**-0.1**
KECS				*e*LG	Lg	06 26 41.0	
MORH	**Mrgy, Hungar**	**1.60**	**177**	EPn	**Pb**	**06 26 18.0**	**-0.5**
MORH				Sn	**Sg**	**06 26 39.1**	**-1.4**

*SJA **19** 06:28:15.2±0.8, 23°.82S×66°.62W, h219km±7km, ML2.6, MW3.1*
*ISCJB **19** 06:28:16.8±0.9, 23°.84S±0°.05×66°.74W±0°.04, h200km±10km, Error ellipse: s-maj=9.5km s-min=5.3km az=27.3*
*GUC **19** 06:28:17.5±0.5, 23°.83S×67°.10W, h253km±14km, ML3.8*
ISC 19 06:28:15.9±2.4, 23°.83S±0°.06×66°.69W±0°.06, h211km±21km, n27, σ0°.91/38, 2C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.33**	**62**	*e*P	**Pn**	**06 28 49.9**	**+0.2**
HJA				IAML		06 28 52.5	
comp=Z,12nm,0.3s							
HJA				*e*S	**S**	**06 29 16.0**	**+0.3**
SLA	**San Lorenzo**	**1.40**	**130**	*e*P	**Pn**	**06 28 50.6**	**+0.7**
AZAP	**Zapla**	**1.53**	**105**	*e*P	**Pn**	**06 28 51.1**	**-0.1**
AZAP				IAML		06 28 51.4	
comp=Z,86nm,0.6s							
AZAP				*e*S	**S**	**06 29 17.6**	**-0.7**
YJA	**Yavi**	**1.97**	**33**	*e*P	**Pn**	**06 28 56.1**	**+0.5**
FSA	**Cafayete**	**2.36**	**164**	*e*P	**Pn**	**06 28 59.3**	**+0.1**
LVC	**Limon Verde**	**2.38**	**300**	*e*P	**Pn**	**06 29 00.3**	**+0.7**
LVC				IAML		06 29 35.9	
comp=Z,19nm,0.6s							
PB15	**IPOC Station P**	**2.63**	**283**	*e*P	**Pn**	**06 29 03.5**	**+1.3**
PB15				*e*S	**S**	**06 29 38.5**	**+0.7**
PB15	**IPOC Station P**	**2.63**	**283**	*e*P	**Pn**	**06 29 03.2**	**+1.0**
PB15				*e*S	**S**	**06 29 37.5**	**-0.3**
PB06	**IPOC Station P**	**2.88**	**292**	*e*P	**Pn**	**06 29 06.1**	**+1.2**
PB06	**IPOC Station P**	**2.88**	**292**	*e*P	**Pn**	**06 29 05.8**	**+0.8**
PB06				*e*S	**S**	**06 29 42.2**	**-0.6**
PB06				IAML		06 29 44.8	
comp=E,170nm,0.1s							
GO02	**Mina Guanaco**	**2.96**	**243**	*e*P	**Pn**	**06 29 06.6**	**+0.6**
GO02				*e*S	**S**	**06 29 44.8**	**+0.1**
GO02				IAML		06 29 47.4	
comp=N,184nm,0.1s							
PB09	**IPOC Station P**	**3.11**	**310**	*e*P	**Pn**	**06 29 08.7**	**+1.1**
PB09	**IPOC Station P**	**3.11**	**310**	*e*P	**Pn**	**06 29 09.0**	**+1.4**
PB09				*e*S	**S**	**06 29 48.0**	**+0.3**
PB09				IAML		06 29 52.5	
comp=E,70nm,0.2s							
AHML	**Horco Molle**	**3.19**	**158**	*e*P	**Pn**	**06 29 08.4**	**+0.1**
PB03	**IPOC Station P**	**3.34**	**302**	*e*P	**Pn**	**06 29 10.8**	**+0.4**
PB03	**IPOC Station P**	**3.34**	**302**	*e*P	**Pn**	**06 29 10.7**	**+0.4**
PB03				*e*S	**S**	**06 29 51.0**	**-1.4**
PB03				IAML		06 29 54.2	
comp=N,128nm,0.3s							
PB05	**IPOC Station P**	**3.37**	**286**	*e*P	**Pn**	**06 29 11.2**	**+0.5**
PB05	**IPOC Station P**	**3.37**	**286**	‖*i*P	**Pn**	**06 29 10.9**	**+0.2**
PB05				*i* S	**S**	**06 29 51.1**	**-2.1**
PB05				IAML		06 29 55.3	
comp=N,80nm,0.2s							
PB04	**IPOC Station P**	**3.52**	**294**	*e*P	**Pn**	**06 29 13.0**	**+0.5**
PB04	**IPOC Station P**	**3.52**	**294**	‖*i*P	**Pn**	**06 29 12.9**	**+0.5**
PB04				*e*S	**S**	**06 29 54.4**	**-2.0**
PB10	**IPOC Station P**	**3.56**	**274**	*e*P	**Pn**	**06 29 13.3**	**+0.5**
PB07	**IPOC Station P**	**3.62**	**305**	*e*P	**Pn**	**06 29 13.9**	**+0.2**
PB07	**IPOC Station P**	**3.62**	**305**	‖*i*P	**Pn**	**06 29 13.8**	**0.0**
PB07				*i* S	**S**	**06 29 56.9**	**-1.7**
PB02	**IPOC Station P**	**3.88**	**310**	*e*P	**Pn**	**06 29 17.5**	**+0.7**
PB08	**IPOC Station P**	**4.33**	**328**	*e*P	**Pn**	**06 29 23.8**	**+1.2**
CYA	**Choya**	**4.66**	**170**	*e*P	**Pn**	**06 29 27.0**	**+0.6**
PB16	**IPOC Station P**	**6.07**	**334**	*e*P	**Pn**	**06 29 44.8**	**-0.1**

*IDC **19** 06:49:40.1±4.0, 19°.08N×108°.63W, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.5/40, mbtmp3.4/7, ML3.1/2, MS2.8/3, Ms1 2.8/3, ms1mx2.6/31, Error ellipse: s-maj=66.0km s-min=60.0km az=172.0*
ISC 19 06:49:45.9±3.4, 19°.2N±0°.4×108°.6W±0°.3, h35km, n11, σ0°.35/8, mb3.4/5, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**2.23**	**260**	T	T	06 52 21.5	
SNR=31							
H06N1	**SOCORRO T-PHAS**	**2.27**	**263**	T	T	06 52 23.6	
SNR=13							
LPIG	**La Paz**	**5.15**	**342**	LR	LR	06 52 16.6	
comp=Z,76nm,19.0s,baz=190,slow=30							
TXAR	**Lajitas Array**	**11.07**	**23**	Pn	**Pn**	**06 52 21.8**	**-0.1**
0.0nm,0.3s,baz=202,slow=14,SNR=5.8							
TXAR				LR	LR	06 55 59.3	
comp=Z,70nm,18.1s,baz=0.0,slow=34							
ANMO	**Albuquerque**	**15.83**	**6**	Pn	**Pn**	**06 53 26.8**	**+0.5**
0.1nm,0.3s,baz=216,slow=12,SNR=3.6							
ANMO				LR	LR	06 58 26.7	
comp=Z,28nm,21.3s,baz=336,slow=33							
NVAR	**Mina Array Bea**	**20.96**	**338**	P	**P**	**06 54 26.0**	**-0.1**
1.5nm,0.9s,baz=164,slow=12,SNR=6.7							
ELK	**Elko**	**22.24**	**347**	P	**P**	**06 54 40.0**	**+0.1**
0.6nm,0.5s,baz=158,slow=8.8,SNR=3.6							
PDAR	**Pinedale Array**	**23.54**	**358**	P	**P**	**06 54 52.9**	**-0.3**
0.3nm,0.6s,baz=178,slow=8.3,SNR=4.4							
YBH	**Yreka Blue Hor**	**25.49**	**335**	P	**P**	**06 55 10.6**	**-0.4**
0.4nm,0.3s,baz=345,slow=19,SNR=2.6							
ILAR	**Eielson Array**	**52.20**	**340**	P	**P**	**06 58 53.0**	**0.0**
0.7nm,0.8s,baz=149,slow=7.0,SNR=7.2							
ARCES	**ARCESS Array B**	**85.75**	**15**	P	**P**	**07 02 21.4**	**+0.3**
8.2nm,0.3s,baz=352,slow=1.3,SNR=4.2							

*BJI **19** 06:52:36.9±0.0, 3°.53S×151°.87E, h13km, mb5.0/56, mB5.2/56, Ms5.1/61, Ms7 4.9/56*
*IDC **19** 06:52:36.7±0.4, 3°.72S×151°.36E, h0km, mb4.7/31, mb1 4.8/33, mb1mx4.8/39, mbtmp4.7/33, ML4.4/2, MS4.7/27, Ms1 4.7/27, ms1mx4.7/34, Error ellipse: s-maj=15.5km s-min=10.3km az=90.0*
*NEIC **19** 06:52:38.4±1.9, 3°.77S×151°.40E, h10km±1km, mb5.4/98, MS5.1/533, Error ellipse: s-maj=8.1km s-min=4.4km az=188.0*
*ISCJB **19** 06:52:38.7±0.1, 3°.77S±0°.02×151°.35E±0°.02, h21km, mb5.2/137, MS5.0/544, Error ellipse: s-maj=3.5km s-min=3.2km az=158.0*
*MOS **19** 06:52:39.3±0.9, 3°.70S×151°.39E, h26km, mb5.2/34, MS4.9/19, Error ellipse: s-maj=14.0km s-min=7.0km az=93.9*
*GCMT **19** 06:52:41.4±0.1, 3°.61S±0°.01×151°.30E±0°.01, h12km, MW5.4/119, Moment Tensor Solution. s102,c166; s119,c226; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.37±.02; $M_{\theta\theta}$ 1.91±.02; $M_{\phi\phi}$-1.54±.02; $M_{r\theta}$-0.04±.05; $M_{r\phi}$0.63±.02; $M_{\theta\phi}$0.13±.05; Best double couple: $M_0$1.84200×10^{17} NP1:ϕ_s125.00000°, δ86.00000°, λ-4.00000°. NP2:ϕ_s215.00000°, δ86.00000°, λ-176.00000°. Principal axes: T 2.0210, Plg0.0000°, Azm170.0000°; N -0.3560, Plg84.0000°, Azm265.0000°; P -1.6640, Plg6.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **19** 06:52:45.1±1.0, 4°.S±4°.×15°.1E±°, h56km±7km, M5.3/43, mB5.7/21, mb5.2/43, MLv5.4/1, Mw(mB)5.2/21, Mwp6.0/1*
ISC 19 06:52:40.5±0.3, 3°.78S±0°.04×151°.49E±0°.04, h21km, n795, σ1°.85/360, mb5.2/146, MS5.1/546, 15C-9D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.79**	**121**	*e*Pg	**Pb**	**06 52 55.0**	**-0.4**
RABL				*e*Sg	**Sb**	**06 53 05.6**	**-0.1**
MANU	**Manus Island**	**4.46**	**293**	*e*Pn	**Pn**	**06 53 44.7**	**-2.3**
PMG	**Port Moresby**	**7.05**	**217**	Pn	**Pn**	**06 54 24.3**	**+1.7**
12nm,0.3s,baz=51,slow=8.6,SNR=15							
PMG				Sn	**Sn**	**06 55 45.1**	**+2.9**
baz=306,slow=19,SNR=1.2							
PMG				LR	LR	06 57 01.6	
comp=Z,10μm,21.9s,baz=24,slow=38							
PMG	**Port Moresby**	**7.05**	**217**	*e*Pn	**Pn**	**06 54 20.6**	**-2.0**
PMG				*e*Sn	**Sn**	**06 55 45.1**	**+2.9**
PMG	**Port Moresby**	**7.05**	**217**	*c i*P	**Pn**	**06 54 23.2**	**+0.6**
HNR	**Honiara**	**10.10**	**124**	LR	LR	06 59 08.3	
comp=Z,11μm,21.2s,baz=296,slow=38							
JAY	**Jayapura**	**10.84**	**276**	Pn	**Pn**	**06 55 14.2**	**-0.4**
0.8nm,0.3s,baz=124,slow=15,SNR=3.1							
JAY				LR	LR	06 58 44.1	
comp=Z,16μm,18.2s,baz=78,slow=34							
GENI	**Genyem**	**11.37**	**276**	P	**Pn**	**06 55 23.3**	**+1.6**
PATS	**Pohnpei**	**12.55**	**33**	*e*Pn	**Pn**	**06 55 37.4**	**-0.5**
COEN	**Coen**	**13.03**	**219**	*e*Pn	**Pn**	**06 55 44.1**	**-0.3**
SRPI	**Serui, Papua**	**15.35**	**277**	P	**Pn**	**06 56 15.2**	**-0.8**
BAKI	**Biak**	**15.58**	**279**	P	**Pn**	**06 56 20.9**	**+1.9**
CTA	**Charters Tower**	**17.00**	**197**	P	**Pn**	**06 56 37.8**	**+0.7**
0.6nm,0.3s,baz=16,slow=12,SNR=30							
CTA				LR	LR	07 02 52.6	
comp=Z,2μm,19.7s,baz=18,slow=36							
CTAO	**Charters Tower**	**17.00**	**197**	*e*P	**Pn**	**06 56 37.0**	**0.0**
827nm,1.8s							
CTAO	**Charters Tower**	**17.00**	**197**	*e*P	**Pn**	**06 56 37.0**	**0.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO				pmax	pmax		
comp=Z,827nm,1.8s							
GUMO	**Guam**	**18.46**	**339**	P	**P**	**06 56 53.9**	**-1.1**
comp=Z,2.5nm,0.3s,baz=194,slow=14,SNR=7.0							
GUMO				LR	LR	07 04 09.8	
comp=Z,924nm,18.1s,baz=155,slow=38							
FAKI	**Fak Fak**	**19.23**	**272**	*e*P	**P**	**06 57 02.0**	**-1.5**
comp=Z,104nm,1.0s							
FAKI	**Fak Fak**	**19.23**	**272**	P	**P**	**06 56 59.1**	**-4.4**
QIS	**Mount Isa**	**20.30**	**214**	P	**P**	**06 57 15.0**	**-0.1**
baz=20,SNR=27							
SIJI	**Sorong**	**20.41**	**278**	P	**P**	**06 57 14.5**	**-1.9**
comp=Z,24nm,0.8s,baz=64,slow=7.9,SNR=18							
SWI	**Sorong**	**20.42**	**278**	P	**P**	**06 57 16.3**	**-0.2**
SAUI	**Saumlaki**	**20.51**	**257**	PFAKE		06 57 30.0	+10
SAUI				LR	LR		
comp=Z,7μm,18.0s							
KDU	**Kakadu**	**20.78**	**244**	P	**P**	**06 57 18.5**	**-1.9**
baz=21,SNR=9.9							
SARN	**Sarigan**	**21.12**	**345**	*e*P	**P**	**06 57 23.5**	**-0.5**
comp=Z,245nm,1.2s							
EIDS	**Eidsvold**	**21.47**	**181**	*e*P	**P**	**06 57 27.9**	**+0.2**
comp=Z,206nm,1.3s							
EIDS				LR	LR		
comp=Z,7μm,20.0s							
EIDS	**Eidsvold**	**21.47**	**181**	P	**P**	**06 57 28.8**	**+1.1**
baz=22,SNR=8.6							
BNDI	**Bandanaira**	**21.54**	**267**	P	**P**	**06 57 27.3**	**-1.3**
TARA	**Tarawa**	**22.02**	**77**	PFAKE		06 57 50.0	+16
TARA				LR	LR		
comp=Z,4μm,20.0s							
MTN	**Manton Dam**	**22.05**	**245**	*e*P	**P**	**06 57 30.5**	**-3.5**
comp=Z,136nm,1.4s							
MTN				LR	LR		
comp=Z,6μm,18.0s							
MTN	**Manton Dam**	**22.05**	**245**	P	**P**	**06 57 33.3**	**-0.7**
baz=22,SNR=4.1							
MSAI	**Masohi**	**22.52**	**270**	P	**P**	**06 57 41.9**	**+2.7**
RMQ	**Roma**	**22.73**	**186**	P	**P**	**06 57 42.4**	**+1.2**
baz=23,SNR=6.2							
WRAB	**Tennant Creek**	**23.18**	**225**	*e*P	**P**	**06 57 44.7**	**-1.2**
comp=Z,207nm,1.4s							
WRAB	**Tennant Creek**	**23.18**	**225**	*e*P	**P**	**06 57 44.7**	**-1.2**
WRAB				pmax	pmax		
comp=Z,207nm,1.4s							
WB2	**Warramunga Arr**	**23.18**	**225**	*e*P	**P**	**06 57 44.4**	**-1.6**
comp=Z,185nm,1.4s							
WR1	**Warramunga Arr**	**23.19**	**225**	*e*P	**P**	**06 57 43.8**	**-2.3**
WRA	**Warramunga Arr**	**23.19**	**225**	P	**P**	**06 57 43.8**	**-2.3**
comp=Z,28nm,1.1s,baz=52,slow=9.9,SNR=33							
AAI	**Ambon**	**23.25**	**269**	P	**P**	**06 57 44.1**	**-2.6**
DZM	**Mont Dzumac**	**23.26**	**143**	*e*P	**P**	**06 57 48.5**	**+1.7**
comp=Z,767nm,1.5s							
DZM				*e*S	**S**	**07 01 56.5**	**-1.7**
comp=Z,5μm,25.5s							
DZM				*e*LR	LR	07 03 31.2	
comp=Z,11μm,24.9s							
DZM	**Mont Dzumac**	**23.26**	**143**	P	**P**	**06 57 48.5**	**+1.7**
comp=Z,155nm,1.1s,baz=351,slow=8.0,SNR=37							
DZM				LR	LR	07 06 04.0	
comp=Z,3μm,21.0s,baz=321,slow=34							
DZM	**Mont Dzumac**	**23.26**	**143**	*e*P	**P**	**06 57 48.6**	**+1.7**
comp=Z,502nm,1.4s							
DZM				LR	LR		
comp=Z,4μm,20.0s							
ONTNC	**Ouen Toro**	**23.45**	**143**	*e*P	**P**	**06 57 50.4**	**+1.8**
comp=Z,640nm,1.8s							
MARNC	**Mare, Loyalty**	**23.83**	**139**	*e*P	**P**	**06 57 53.1**	**+0.9**
comp=Z,251nm,1.0s							
MARNC				LR	LR		
comp=Z,4μm,20.0s							
TNTI	**Ternate**	**24.53**	**280**	PFAKE		06 58 10.0	+11
TNTI				LR	LR		
comp=Z,1μm,18.0s							
TNTI	**Ternate**	**24.53**	**280**	P	**P**	**06 57 54.9**	**-4.0**
SANI	**Sanana**	**25.53**	**273**	P	**P**	**06 58 02.8**	**-5.1**
AS31	**Alice Springs**	**26.07**	**219**	*e*P	**P**	**06 58 12.0**	**-0.7**
comp=Z,9.8nm,0.9s							
ASAR	**Alice Springs**	**26.07**	**219**	P	**P**	**06 58 11.8**	**-1.0**
comp=Z,26nm,1.0s,baz=54,slow=8.4,SNR=60							
ASAR				LR	LR	07 08 39.2	
comp=Z,2μm,19.1s,baz=50,slow=37							
ARMA	**Armidale**	**26.50**	**180**	*e*P	**P**	**06 58 15.4**	**-1.2**
comp=Z,96nm,1.5s							
ARMA				LR	LR		
comp=Z,8μm,20.0s							
H11S3	**WAKE ISLAND Hy**	**26.72**	**34**	T	T	07 25 46.8	
baz=217,slow=74,SNR=20							
H11S2	**WAKE ISLAND Hy**	**26.73**	**34**	T	T	07 25 46.3	
baz=217,slow=74,SNR=7.7							
H11S1	**WAKE ISLAND Hy**	**26.74**	**34**	T	T	07 25 52.1	
baz=217,slow=74,SNR=8.4							
WAKE	**Wake Island**	**27.34**	**33**	PFAKE		06 58 40.0	+16
WAKE				LR	LR		
comp=Z,2μm,18.0s							
SOEI	**Soe**	**27.66**	**256**	*e*P	**P**	**06 58 28.6**	**+1.2**
comp=Z,173nm,0.9s							
SOEI				LR	LR		
comp=Z,2μm,21.0s							
SOEI	**Soe**	**27.66**	**256**	P	**P**	**06 58 29.2**	**+1.9**
H11N1	**WAKE ISLAND Hy**	**27.82**	**32**	T	T	07 27 07.3	
baz=218,slow=76,SNR=6.7							
KMSI	**Cibinong**	**27.83**	**278**	P	**P**	**06 58 27.5**	**-1.2**
H11N3	**WAKE ISLAND Hy**	**27.84**	**32**	T	T	07 27 13

TOO				LR	LR	
	comp=Z,2μm,19.0s					
TOO	**Toolangi**	**34.08 189**	*e*P	**P**	**P**	**06 59 23.0 -0.5**
TOO				pmax	pmax	
	comp=Z,18nm,1.1s					
TOO				MLR	MLR	
	comp=Z,2μm,19.0s					
FORT	**Forrest**	**34.78 217**	*e*P	**P**	**P**	**06 59 28.1 -1.6**
	comp=Z,95nm,1.2s					
MBWA	**Marble Bar**	**35.37 238**	PFAKE			06 59 50.0 +15
MBWA				LR	LR	
	comp=Z,2μm,19.0s					
PSAB2	**Pilbara Seismi**	**35.43 237**	PFAKE			06 59 50.0 +15
PSAB2				LR	LR	
	comp=Z,2μm,18.0s					
PSAA3	**Pilbara Seismi**	**35.44 237**	PFAKE			06 59 50.0 +14
PSAA3				LR	LR	
	comp=Z,2μm,21.0s					
PSAA2	**Pilbara Seismi**	**35.45 237**	PFAKE			06 59 50.0 +14
PSAA2				LR	LR	
	comp=Z,2μm,21.0s					
PSAA1	**Pilbara Seismi**	**35.46 237**	PFAKE			06 59 50.0 +14
PSAA1				LR	LR	
	comp=Z,2μm,20.0s					
PSAC1	**Pilbara Seismi**	**35.46 237**	PFAKE			06 59 50.0 +14
PSAC1				LR	LR	
	comp=Z,2μm,19.0s					
PSAB1	**Pilbara Seismi**	**35.47 237**	PFAKE			06 59 50.0 +14
PSAB1				LR	LR	
	comp=Z,2μm,22.0s					
PSAC3	**Pilbara Seismi**	**35.49 237**	PFAKE			06 59 50.0 +14
PSAC3				LR	LR	
	comp=Z,2μm,21.0s					
PSAD3	**Pilbara Seismi**	**35.53 237**	PFAKE			06 59 50.0 +14
PSAD3				LR	LR	
	comp=Z,2μm,20.0s					
KKM	**Kota Kinabalu**	**36.55 285**	*e*P	**P**	**P**	**06 59 43.4 -1.8**
	comp=Z,49nm,0.9s					
KKM				LR	LR	
	comp=Z,900nm,21.0s					
KKM	**Kota Kinabalu**	**36.55 285**	P	**P**	**P**	**06 59 48.0 +2.8**
OUZ	**Omahuta**	**37.39 150**	*e*P	**P**	**P**	**06 59 54.7 +2.8**
	comp=Z,241nm,1.9s					
OUZ				LR	LR	
	comp=Z,2μm,22.0s					
JAGI	**Jajag, Banyuwa**	**37.40 261**	*e*P	**P**	**P**	**06 59 50.4 -1.9**
	comp=Z,70nm,1.1s					
TAU	**Tasmania Unive**	**39.14 185**	*e*P	**P**	**P**	**07 00 07.1 +0.6**
	comp=Z,158nm,1.8s					
TAU				LR	LR	
	comp=Z,4μm,21.0s					
TAU	**Tasmania Unive**	**39.14 185**	*e*P	**P**	**P**	**07 00 07.1 +0.6**
TAU				pmax	pmax	
	comp=Z,158nm,1.8s					
TAU				MLR	MLR	
	comp=Z,4μm,21.0s					
YOJ	**Yonaguni jima**	**39.44 317**	PFAKE			07 00 20.0 +11
YOJ				LR	LR	
	comp=Z,2μm,19.0s					
PWJI	**Pagerwojo**	**39.69 262**	P	**P**	**P**	**07 00 08.9 -2.6**
SBUM	**Sibu**	**39.73 278**	P	**P**	**P**	**07 00 12.0 0.0**
TWG	**Pinlang**	**39.76 313**	PFAKE			07 00 20.0 +8.0
TWG				LR	LR	
	comp=Z,7μm,22.0s					
YULB	**Yu-li**	**39.95 314**	PFAKE			07 00 20.0 +6.4
YULB				LR	LR	
	comp=Z,2μm,22.0s					
NACB	**Ninganchiao**	**40.23 315**	PFAKE			07 00 30.0 +14
NACB				LR	LR	
	comp=Z,2μm,19.0s					
TPUB	**Ta-pu**	**40.38 313**	PFAKE			07 00 30.0 +13
TPUB				LR	LR	
	comp=Z,2μm,18.0s					
SSLB	**Suanglung**	**40.44 314**	PFAKE			07 00 30.0 +12
SSLB				LR	LR	
	comp=Z,2μm,21.0s					
HIZ	**Hauiti**	**40.60 151**	PFAKE			07 00 30.0 +11
HIZ				LR	LR	
	comp=Z,1μm,21.0s					
GIRL	**Giralia**	**40.64 239**	*e*P	**P**	**P**	**07 00 18.9 -0.5**
	comp=Z,881nm,1.8s					
YHNB	**Yeheng**	**40.70 316**	PFAKE			07 00 30.0 +10
YHNB				LR	LR	
	comp=Z,2μm,20.0s					
TATO	**Taipei**	**40.82 316**	PFAKE			07 00 30.0 +9.3
TATO				LR	LR	
	comp=Z,2μm,19.0s					
INU	**Inuyama**	**41.23 342**	PFAKE			07 00 30.0 +6.1
INU				LR	LR	
	comp=Z,2μm,20.0s					
KSM	**Kuching**	**41.49 276**	PFAKE			07 00 40.0 +14
KSM				LR	LR	
	comp=Z,600nm,22.0s					
KSM	**Kuching**	**41.49 276**	P	**P**	**P**	**07 00 26.0 -0.5**
URZ	**Urewera**	**41.52 149**	P	**P**	**P**	**07 00 27.7 +1.4**
	comp=Z,11nm,0.7s,baz=353,slow=1.5,SNR=8.7					
URZ	**Urewera**	**41.52 149**	*e*P	**P**	**P**	**07 00 27.8 +1.4**
	comp=Z,105nm,1.6s					
URZ				LR	LR	
	comp=Z,2μm,18.0s					
JNU	**Nakatsue**	**41.57 334**	P	**P**	**P**	**07 00 26.3 -0.6**
	comp=Z,33nm,0.9s,baz=77,slow=5.0,SNR=4.8					
JNU	**Nakatsue**	**41.57 334**	*e*P	**P**	**P**	**07 00 25.4 -1.5**
	comp=Z,149nm,1.0s					
JNU				LR	LR	
	comp=Z,1μm,21.0s					
BKZ	**Black Stump Fm**	**41.91 151**	*e*P	**P**	**P**	**07 00 31.2 +1.6**
	comp=Z,86nm,1.7s					
BKZ				LR	LR	
	comp=Z,2μm,20.0s					
MJAR	**Matsushiro Arr**	**41.99 344**	P	P	P	07 00 24.6 -5.6
	comp=Z,3.1nm,0.8s,baz=165,slow=7.8,SNR=4.9					
MJAR				LR	LR	07 16 24.6
	comp=Z,1μm,20.4s,baz=170,slow=34					
MAJO	**Matsushiro**	**41.99 344**	PFAKE			07 00 40.0 +10
MAJO				LR	LR	
	comp=Z,1μm,19.0s					
MAJO	**Matsushiro**	**41.99 344⇑**	*e*P	**P**	**P**	**07 00 30.0 -0.2**
MAJO				pmax	pmax	
	comp=Z,33nm,1.5s					
MAT	**Matsushiro**	**41.99 344**	P	**P**	**P**	**07 00 26.7 -3.5**
MAT				S	S	07 06 36.0 -12
MORW	**Morawa**	**41.99 229**	*e*P	**P**	**P**	**07 00 29.6 -0.8**
	comp=Z,72nm,1.7s					
MORW				LR	LR	
	comp=Z,2μm,21.0s					
MJB9	**Matsu-Tunnel**	**41.99 344**	PFAKE			07 00 40.0 +10
MJB9				LR	LR	
	comp=Z,1μm,19.0s					
THZ	**Tophouse**	**42.40 156**	PFAKE			07 00 50.0 +16
THZ				LR	LR	
	comp=Z,3μm,19.0s					
KNMB	**Chin-men Tao**	**42.71 313**	PFAKE			07 00 50.0 +14
KNMB				LR	LR	
	comp=Z,1μm,20.0s					
SNZO	**South Karori**	**42.78 154**	*e*P	**P**	**P**	**07 00 38.0 +1.5**
	comp=Z,278nm,1.8s					
SNZO				LR	LR	
	comp=Z,3μm,22.0s					
FOZ	**Fox Glacier**	**42.79 160**	PFAKE			07 00 50.0 +13
FOZ				LR	LR	
	comp=Z,4μm,19.0s					
QZH	**Quanzhou**	**42.85 314**	P	**P**	**P**	**07 00 36.1 -1.3**
QZH				S	**S**	**07 06 58.8 -2.2**
QZH				LR	LR	
	comp=Z,860nm,14.2s					
QZH				LR	LR	
	comp=Z,1μm,18.5s					
QZH				LR	LR	
	comp=Z,1μm,17.5s					
BFZ	**Birch Farm**	**42.98 152**	*e*P	**P**	**P**	**07 00 39.2 +1.0**
	comp=Z,245nm,1.9s					
BFZ				LR	LR	
	comp=Z,2μm,18.0s					
LTZ	**Lake Taylor**	**43.02 157**	*e*P	**P**	**P**	**07 00 39.7 +1.1**
	comp=Z,179nm,1.8s					
LTZ				LR	LR	
	comp=Z,3μm,20.0s					
NWAO	**Narrogin (SRO)**	**43.19 224**	PFAKE			07 00 50.0 +10
NWAO				LR	LR	
	comp=Z,2μm,20.0s					
KHZ	**Kahutara**	**43.21 156**	*e*P	**P**	**P**	**07 00 40.5 +0.5**
	comp=Z,104nm,1.4s					
KHZ				LR	LR	
	comp=Z,4μm,18.0s					
RPZ	**Rata Peaks**	**43.38 159**	P	**P**	**P**	**07 00 42.1 +0.7**
	comp=Z,32nm,0.9s,baz=104,slow=1.0,SNR=5.8					
RPZ	**Rata Peaks**	**43.38 159**	*e*P	**P**	**P**	**07 00 41.0 -0.5**
	comp=Z,68nm,1.1s					
RPZ				LR	LR	
	comp=Z,6μm,20.0s					
OXZ	**Oxford**	**43.40 158**	*e*P	**P**	**P**	**07 00 42.6 +1.0**
	comp=Z,159nm,1.9s					
JOHN	**Johnston Islan**	**43.57 61**	PFAKE			07 01 00.0 +17
JOHN				LR	LR	
	comp=Z,2μm,18.0s					
CISI	**Cisompet, Garu**	**43.61 263**	*e*P	**P**	**P**	**07 00 42.2 -1.6**
	comp=Z,626nm,2.0s					
LBZ	**Lake Benmore**	**43.67 161**	PFAKE			07 01 00.0 +16
LBZ				LR	LR	
	comp=Z,4μm,20.0s					
TPI	**Tanjungpandan**	**43.77 270**	P	**P**	**P**	**07 00 44.3 -0.8**
CRLZ	**Canterbury Las**	**43.83 158**	PFAKE			07 01 00.0 +15
CRLZ				LR	LR	
	comp=Z,3μm,19.0s					
MQZ	**McQueen's Vall**	**43.95 158**	*e*P	**P**	**P**	**07 00 47.6 +1.6**
	comp=Z,113nm,1.5s					
MQZ				LR	LR	
	comp=Z,3μm,19.0s					
HKPS	**Hong Kong Po S**	**44.76 307**	PFAKE			07 01 00.0 +7.2
HKPS				LR	LR	
	comp=Z,2μm,22.0s					
SSE	**Sheshan**	**45.14 322**	P	**P**	**P**	**07 00 56.3 +0.6**
SSE				S	**S**	**07 07 33.9 -0.3**
SSE				pmax	pmax	
	comp=Z,15nm,0.6s					
SSE				pmax	pmax	
	comp=Z,150nm,5.6s					
SSE				LR	LR	
	comp=Z,300nm,18.6s					
SSE				LR	LR	
	comp=Z,580nm,24.7s					
TJN	**Taejon**	**45.87 333⇓**	*e*P	**P**	**P**	**07 00 59.8 -1.6**
ERM	**Erimo**	**46.20 351**	*e*P	**P**	**P**	**07 01 04.3 +0.4**
	comp=Z,64nm,1.6s					
ERM				LR	LR	
	comp=Z,1μm,20.0s					
ERM	**Erimo**	**46.20 351⇑**	*e*P	**P**	**P**	**07 01 02.7 -1.2**
ERM				pmax	pmax	
	comp=Z,10.0nm,1.2s					
KSRS	**Korea Array**	**46.51 334**	P	**P**	**P**	**07 01 05.3 -1.1**
	comp=Z,2.8nm,0.9s,baz=143,slow=8.5,SNR=10					
KSRS				LR	LR	07 18 48.7
	comp=Z,984nm,21.7s,baz=150,slow=34					
KS15	**Wonju Array Si**	**46.52 334**	*e*P	**P**	**P**	**07 01 06.0 -0.4**
	comp=Z,19nm,1.1s					
QIZ	**Qiongzhong**	**46.83 300**	P	**P**	**P**	**07 01 09.6 +0.4**
QIZ				pmax	pmax	
	comp=Z,160nm,5.9s					
QIZ				LR	LR	
	comp=Z,910nm,27.5s					
QIZ				LR	LR	
	comp=Z,600nm,19.6s					
QIZ				LR	LR	
	comp=Z,740nm,20.6s					
MDSI	**Maura Dua**	**47.19 267**	P	**P**	**P**	**07 01 09.4 -2.7**
NJ2	**Nanjing**	**47.24 321**	*e*P	**P**	**P**	**07 01 12.8 +0.6**
NJ2				S	**S**	**07 08 04.8 +0.5**
NJ2				pmax	pmax	
	comp=Z,6.0nm,0.6s					
NJ2				pmax	pmax	
	comp=Z,470nm,6.9s					
NJ2				LR	LR	
	comp=Z,2μm,19.1s					
NJ2				LR	LR	
	comp=Z,1μm,19.6s					
NJ2				LR	LR	
	comp=Z,2μm,18.6s					
YUK	**Yuzh-Kuril'sk**	**47.86 355**	*e*P	**P**	**P**	**07 01 15.5 -1.3**
YUK			*e*			07 02 44.6
YUK			*e*			07 03 08.0
YUK			*e*PPP	PPP		07 03 54.7
YUK			*e*S	**S**		**07 08 11.6 -1.2**
YUK			*e*			07 11 08.3
YUK			*e*SSS	SSS		07 12 50.6
YUK				pmax	pmax	
	comp=Z,206nm,1.7s					
YUK				pmax	pmax	
	comp=Z,159nm,1.2s					
MYKOM	**Kota Tinggi**	**47.94 276**	PFAKE			07 01 30.0 +12
MYKOM				LR	LR	
	comp=Z,600nm,22.0s					
MYKOM	**Kota Tinggi**	**47.94 276**	P	**P**	**P**	**07 01 18.0 +0.1**
ASAJ	**Asahikawa**	**48.34 351**	P	**P**	**P**	**07 01 19.5 -1.0**
	comp=Z,10nm,0.9s,baz=242,slow=16,SNR=5.2					
KUR	**Kuril'sk**	**48.90 357**	*e*P	**P**	**P**	**07 01 24.3 -0.5**
KUR			*e*S	**S**	**S**	**07 08 32.0 +4.6**
KUR				pmax	pmax	
	comp=Z,116nm,1.5s					
KUR				MLR	MLR	
	comp=Z,836nm,18.0s					
KUR				MLR	MLR	
	comp=N,419nm,19.0s					
KUR				MLR	MLR	
	comp=E,377nm,17.0s					
WHN	**Wuhan**	**49.22 317 ⇑**	P	**P**	**P**	**07 01 27.6 +0.1**
WHN				S	**S**	**07 08 37.3 +4.9**
WHN				pmax	pmax	
	comp=E,370nm,7.6s					
WHN				LR	LR	
	comp=E,1μm,14.9s					
WHN				LR	LR	
	comp=E,2μm,14.7s					
WHN				LR	LR	
	comp=E,4μm,27.7s					
VLA	**Vladivostok**	**49.93 341⇑**	*e*P	**P**	**P**	**07 01 33.1 +0.4**
VLA				pmax	pmax	
	comp=Z,77nm,1.8s					
SDSI	**Sungai Dareh**	**50.09 272**	P	**P**	**P**	**07 01 32.4 -2.1**
TEY	**Ternei**	**50.39 346⇑**	*e*P	P	P	07 01 45.8 +10
TEY				pmax	pmax	
	comp=Z,20nm,0.8s					
DL2	**Dalian**	**50.64 330**	P	**P**	**P**	**07 01 37.3 -0.8**
DL2				S	**S**	**07 08 52.3 +0.4**
DL2				pmax	pmax	
	comp=Z,15nm,1.2s					
DL2				pmax	pmax	
	comp=Z,180nm,5.7s					
DL2				LR	LR	
	comp=Z,740nm,21.4s					
DL2				LR	LR	
	comp=Z,810nm,24.3s					
DL2				LR	LR	
	comp=Z,2μm,23.1s					
PANO	**Nakornpanom**	**50.73 296**	P	**P**	**P**	**07 01 40.5 +1.3**
	comp=Z,0.7nm,1.1s					
USA0B	**Ussuriysk Arra**	**50.87 342**	*e*P	**P**	**P**	**07 01 39.4 -0.5**
	comp=Z,21nm,0.8s					
USA0B				LR	LR	
	comp=Z,1μm,22.0s					
USRK	**Ussuriysk Ar.**	**50.87 342**	P	**P**	**P**	**07 01 38.7 -1.1**
	comp=Z,4.0nm,0.7s,baz=174,slow=8.2,SNR=12					
USRK				LR	LR	07 22 46.9
	comp=Z,759nm,18.2s,baz=150,slow=36					
IPM	**Ipoh**	**51.08 279**	PFAKE			07 01 50.0 +8.0
IPM				LR	LR	
	comp=Z,500nm,20.0s					
YSS	**Yuzh-Sakhalins**	**51.10 352**	PFAKE			07 01 50.0 +8.5
YSS				LR	LR	
	comp=Z,600nm,22.0s					
YSS	**Yuzh-Sakhalins**	**51.10 352**	*e*P	**P**	**P**	**07 01 40.1 -1.4**
YSS			*e*S	**S**	**S**	**07 09 00.2 +2.1**
YSS				pmax	pmax	
	comp=Z,300μm,2.9s					
SKNT	**Sakolnakorn**	**51.24 295**	P	**P**	**P**	**07 01 43.7 +0.6**
	comp=Z,35nm,1.1s					
KULM	**Kulim**	**51.58 280**	PFAKE			07 02 00.0 +14
KULM				LR	LR	
	comp=Z,500nm,21.0s					
KULM	**Kulim**	**51.58 280**	P	**P**	**P**	**07 01 46.0 +0.3**
MNSI	**Mandailing Nat**	**52.08 274**	P	**P**	**P**	**07 01 47.7 -1.7**
NONG	**Nongkai**	**52.36 296**	P	**P**	**P**	**07 01 52.1 +0.7**
	comp=Z,0.7nm,0.7s					
SISI	**Saibi**	**52.40 271**	P	**P**	**P**	**07 01 52.2 +0.4**
ENH	**Enshi**	**52.51 313**	PFAKE			07 02 00.0 +7.6
ENH				LR	LR	
	comp=Z,1μm,22.0s					
CHAI	**Chaiyaphum**	**52.72 293**	P	P	P	07 01 59.0 +4.9
	comp=Z,32μm,0.8s					
GYA	**Guiyang**	**52.74 307**	P	**P**	**P**	**07 01 57.0 +2.7**
GYA			PP	**PP**	**PP**	**07 03 57.8 +4.0**
GYA			ScP	**ScP**	**ScP**	**07 07 03.6 +3.3**
GYA				S	**S**	**07 09 24.3 +2.7**
GYA				SS	**SS**	**07 13 02.8 +2.2**
GYA				pmax	pmax	
	comp=Z,20nm,1.0s					
GYA				pmax	pmax	
	comp=Z,200nm,5.9s					
GYA				LR	LR	
	comp=Z,520nm,19.3s					
GYA				LR	LR	
	comp=Z,610nm,18.0s					
GYA				LR	LR	
	comp=Z,960nm,18.3s					
CN2	**Changchun**	**52.84 336**	*e*P	**P**	**P**	**07 01 55.4 +0.9**
CN2			*e*S	**S**	**S**	**07 09 23.1 +0.9**
CN2				pmax	pmax	
	comp=Z,10.0nm,0.7s					
CN2				pmax	pmax	
	comp=Z,200nm,5.0s					
CN2				LR	LR	
	comp=Z,600nm,15.0s					
CN2				LR	LR	
	comp=Z,500nm,15.0s					
CN2				LR	LR	
	comp=Z,800nm,16.0s					
SLVN	**Son La**	**52.86 300**	PFAKE			07 02 10.0 +15
SLVN				LR	LR	
	comp=Z,700nm,20.0s					
PSI	**Prapat**	**52.94 276**	PFAKE			07 02 10.0 +14
PSI				LR	LR	
	comp=Z,1μm,22.0s					
TRTT	**Trang**	**52.95 283**	P	P	P	07 02 02.0 +6.1
	comp=Z,37nm,1.1s					
PBKT	**Sadao Pong**	**53.85 294**	P	**P**	**P**	**07 02 05.4 +3.0**
	comp=Z,5.7nm,2.0s,comp=Z,853nm					
PHET	**Kaeng Krachan**	**54.10 289**	P	P	P	07 02 11.0 +6.7
	comp=Z,56μm,1.0s					
SKR	**Severo-Kuril's**	**54.39 4**	*e*P	P	P	07 01 59.0 -6.7
SKR			*e*			07 03 06.5
SKR			*e*S	**S**	**S**	**07 09 44.0 +1.1**
SKR				pmax	pmax	
	comp=Z,300nm,5.3s					
SKR				MLR	MLR	
	comp=Z,1μm,17.0s					
UTTA	**Uttaradit**	**54.59 295**	P	**P**	**P**	**07 02 09.0 +1.2**
	comp=Z,64μm,1.0s,comp=Z,652μm					
NANT	**Nan**	**54.79 296**	P	**P**	**P**	**07 02 09.7 +0.4**
	comp=Z,56μm,0.9s					
TIY	**Taiyuan**	**54.93 322**	*e*P	**P**	**P**	**07 02 14.1 +4.1**
TIY			S	**S**	**S**	**07 09 50.6 -0.1**
TIY				pmax	pmax	
	comp=Z,140nm,6.3s					
TIY				LR	LR	
	comp=Z,1μm,18.4s					
TIY				LR	LR	
	comp=Z,800nm,18.6s					
TIY				LR	LR	
	comp=Z,1μm,18.9s					
SRDT	**SRDT**	**54.95 290**	P	**P**	**P**	**07 02 12.1 +1.7**
	comp=Z,29nm,1.2s,comp=Z,2μm					
TYV	**Tymovskoe**	**54.95 353**	*e*P	**P**	**P**	**07 02 10.5 +0.7**
TYV			*e*			07 09 54.9
TYV				pmax	pmax	
	comp=Z,13nm,1.3s					
TYV				pmax	pmax	
	comp=Z,200nm,3.3s					
TYV				MLR	MLR	
	comp=Z,900nm,21.0s					
XAN	**Xi'an**	**54.99 317**	P	**P**	**P**	**07 02 14.0 +3.5**
XAN			pP	pwP	pwP	07 02 22.6 +3.0
XAN			S	**S**	**S**	**07 09 54.5 +2.9**
XAN				pmax	pmax	
	comp=Z,12nm,1.0s					
XAN				pmax	pmax	
	comp=Z,120nm,6.2s					
XAN				LR	LR	
	comp=Z,730nm,20.2s					
XAN				LR	LR	
	comp=Z,760nm,21.7s					
XAN				LR	LR	
	comp=Z,1μm,21.6s					
XAN	**Xi'an**	**54.99 317**	PFAKE			07 02 20.0 +10
XAN				LR	LR	
	comp=Z,1μm,20.0s					
KMI	**Kunming**	**55.34 304**	PFAKE			07 02 20.0 +6.6
KMI				LR	LR	
	comp=Z,700nm,21.0s					
KLR	**Kul'dur**	**55.51 344***c*	*i*P	**P**	**P**	**07 02 12.3 -1.6**
KLR				pmax	pmax	
	comp=Z,11nm,1.4s					
LAMP	**Lampang**	**55.66 295**	P	**P**	**P**	**07 02 18.8 +3.2**
UMPA	**Umpang Tak**	**55.69 292**	P	P	P	07 02 23.9 +8.1
PAYA	**Payao**	**55.71 296**	P	**P**	**P**	**07 02 18.6 +2.7**
	comp=Z,75μm,0.9s,comp=Z,719μm					
GRNR	**Gornyy**	**55.86 348**	*e*P	**P**	**P**	**07 02 20.0 +3.6**
CMAR	**Chiang Mai Arr**	**56.26 295**	P	**P**	**P**	**07 02 19.9 0.0**
	comp=Z,6.9nm,0.8s,baz=121,slow=6.1,SNR=15					
CMAR				LR	LR	07 26 19.5
	comp=Z,443nm,19.0s,baz=107,slow=36					
CMMT	**Chiang Mai**	**56.37 295**	P	**P**	**P**	**07 02 22.8 +2.2**
	comp=Z,12nm,1.4s					
CHTO	**Chiang Mai**	**56.37 295**	*e*P	**P**	**P**	**07 02 19.4 -1.2**
	comp=Z,38nm,1.3s					
CHTO				LR	LR	
	comp=Z,500nm,20.0s					
CHTO	**Chiang Mai**	**56.37 295**	*e*P	**P**	**P**	**07 02 19.5 -1.2**
CHTO				pmax	pmax	
	comp=Z,38nm,1.3s					
CHTO				MLR	MLR	
	comp=Z,500nm,20.0s					
PET	**Petropavlovsk**	**56.91 5**	PFAKE			07 02 40.0 +16
PET				LR	LR	
	comp=Z,900nm,21.0s					
PET	**Petropavlovsk**	**56.91 5**	*e*P	**P**	**P**	**07 02 23.2 -0.6**
PET			*e*S	**S**	**S**	**07 10 13.9 -2.5**
PET				pmax	pmax	
	comp=Z,100nm,6.8s					
PEA0B	**Petropavlovsk-**	**56.92 4**	*e*P	**P**	**P**	**07 02 23.6 -0.2**
	comp=Z,32nm,0.8s					
PEA0B				LR	LR	
	comp=Z,1μm,22.0s					
PETK	**Petropavlovsk-**	**56.92 4**	P	**P**	**P**	**07 02 22.9 -1.0**
	comp=Z,16nm,0.6s,baz=164,slow=6.5,SNR=22					
PETK				LR	LR	07 22 55.4
	comp=Z,927nm,20.9s,baz=187,slow=32					
PEA1	**Petropavlovsk-**	**56.92 4**	*e*P	**P**	**P**	**07 02 22.9 -1.1**
POHA	**Pohakuloa**	**57.05 64**	PFAKE			07 02 40.0 +14
POHA				LR	LR	
	comp=Z,2μm,18.0s					
CD2	**Chengdu**	**57.09 311⇓**	*i*P	P	P	07 02 33.8 +8.2
CD2			PcP	**PcP**	**PcP**	**07 03 20.8 +0.4**
CD2			S	**S**	**S**	**07 10 20.8 +1.1**
CD2			sS	pS	pS	07 10 24.3 -2.6
CD2			ScS	**ScS**	**ScS**	**07 12 17.6 +3.4**
CD2	**Chengdu**	**57.09 311**	SS	**SS**	**SS**	**07 14 09.3 +0.4**
CD2				pmax	pmax	
	comp=Z,40nm,0.6s					
CD2				pmax	pmax	
	comp=Z,430nm,6.7s					
CD2				LR	LR	
	comp=N,2μm,18.8s					
CD2				LR	LR	
	comp=E,3μm,19.2s					
CD2				LR	LR	
	comp=Z,4μm,21.0s					
HHC	**Hu-ho-hao-te**	**57.46 325**	*e*P	**P**	**P**	**07 02 29.0 +0.9**
HHC			S	**S**	**S**	**07 10 22.0 -2.4**
HHC				pmax	pmax	
	comp=Z,25nm,0.8s					
HHC				pmax	pmax	
	comp=Z,200nm,5.7s					
HHC				LR	LR	
	comp=Z,960nm,17.1s					
HHC				LR	LR	
	comp=Z,830nm,20.8s					
HHC				LR	LR	
	comp=Z,3μm,22.7s					
BTO	**Baotou**	**58.21 324**	*e*P	**P**	**P**	**07 02 36.3 +2.9**
PPT	**Papeete**	**59.28 108**	LR	LR	LR	07 26 28.7
	comp=Z,276nm,18.1s,baz=276,slow=34					
PPT2	**Papeete2**	**59.28 108**	*e*S	**S**	**S**	**07 10 46.9 -1.9**
	comp=Z,267nm,32.8s					
PPT2			*e*LQ	LQ	LQ	07 17 38.1
	comp=Z,2μm,30.5s					
PPT2			*e*LR	LR	LR	07 20 02.7
	comp=Z,704nm,24.5s					
SMY	**Shemya**	**59.45 16**	PFAKE			07 02 50.0 +8.4

SMY LR LR
comp=Z,800nm,20.0s
HIA Hailar 59.58 336 PFAKE 07 02 50.0 +7.4
HIA LR LR
comp=Z,800nm,22.0s
LZH Lanzhou 59.59 316 ⇑P **P** **07 02 44.9 +1.7**
LZH sP pP 07 02 50.9 +1.8
LZH S **S** **07 10 51.4 -1.1**
LZH SS **SS** **07 14 47.4 -0.9**
LZH pmax pmax
comp=Z,19nm,1.2s
LZH pmax pmax
comp=Z,180nm,5.0s
LZH LR LR
comp=Z,610nm,17.4s
LZH LR LR
comp=Z,890nm,18.4s
LZH LR LR
comp=Z,1μm,18.7s
TBI Tubuai 60.17 115 *e*S **S** **07 10 57.4 -2.5**
TBI *e*LQ LQ 07 17 56.7
comp=Z,4μm,30.2s
TBI *e*LR LR 07 20 29.2
comp=Z,1μm,30.2s
ZEA Zeya 60.80 344 *e*P **P** **07 02 49.2 -1.6**
ZEA *e*S **S** **07 11 02.0 -4.9**
ZEA pmax pmax
comp=Z,300nm,5.0s
ZEA pmax pmax
comp=Z,97nm,1.6s
ZEA smax smax
comp=N,400nm,11.0s
ADK Adak 61.70 22 *e*P **P** **07 02 56.7 -0.2**
ADK LR LR
comp=N,56nm,1.3s
comp=Z,900nm,21.0s
ADK Adak 61.70 22 *e*P **P** **07 02 56.7 -0.2**
ADK pmax pmax
comp=Z,56nm,1.3s
ADK MLR MLR
comp=Z,900nm,21.0s
IMP Imphal 62.66 300 *e*P **P** **07 03 04.6 +0.5**
IMP IAmb IAmb 07 03 08.6
comp=Z,19nm,1.2s
MOKO MOKOCHONG 62.66 302 *e*P **P** **07 03 03.3 -0.8**
MOKO IAmb IAmb 07 03 11.7
comp=Z,78nm,2.0s
SAIH SAIHA 62.79 298 *e*P **P** **07 03 04.4 -0.7**
SAIH IAmb IAmb 07 03 10.7
comp=Z,23nm,1.0s
KOHI KOHIMA 62.81 301 *e*P P 07 03 00.7 -4.5
ATKA Atka Island 62.89 23 PFAKE 07 03 20.0 +15
ATKA LR LR
comp=Z,700nm,19.0s
MA2 Magadan 63.16 360 P **P** **07 03 05.8 -0.8**
comp=Z,13nm,0.8s,baz=172,slow=6.7,SNR=7.3
MA2 LR LR 07 30 24.9
comp=Z,732nm,19.3s,baz=186,slow=36
MA2 Magadan 63.16 360 *e*P **P** **07 03 06.7 +0.1**
comp=Z,27nm,1.2s
MA2 LR LR
comp=Z,2μm,22.0s
MA2 Magadan 63.16 360*c i*P **P** **07 03 06.7 +0.1**
MA2 pmax pmax
comp=Z,12nm,0.9s
AZL Aizawl 63.42 299 *e*P **P** **07 03 09.6 +0.4**
AZL IAmb IAmb 07 03 14.7
comp=Z,14nm,0.7s
ZIRO ZIRO 63.63 303 *e*P **P** **07 03 08.3 -2.2**
SILR SILCHAR 63.63 300 *e*P **P** **07 03 09.3 -1.1**
GTA Gaotai 64.03 317 *e*P **P** **07 03 14.1 +1.2**
GTA pP pP 07 03 18.3 -0.6
GTA sP sP 07 03 21.3 +0.1
GTA S **S** **07 11 50.4 +2.0**
GTA sS pS 07 11 57.6 +1.8
GTA pmax pmax
comp=Z,5.0nm,1.1s
GTA pmax pmax
comp=Z,140nm,7.1s
GTA LR LR
comp=Z,310nm,18.7s
GTA LR LR
comp=Z,730nm,19.7s
GTA LR LR
comp=Z,1μm,19.0s
TEZP TEZPUR 64.21 302 *e*P **P** **07 03 13.3 -0.9**
TEZP IAmb IAmb 07 03 19.0
comp=Z,52nm,1.6s
ULN Ulaanbaatar 64.45 328 *e*P **P** **07 03 14.8 -0.8**
comp=Z,25nm,1.2s
ULN LR LR
comp=Z,1μm,21.0s
ULN Ulaanbaatar 64.45 328⇑*e*P **P** **07 03 15.0 -0.5**
ULN pmax pmax
comp=Z,17nm,1.5s
SHL Shillong 64.67 300 *e*P **P** **07 03 16.9 -0.6**
SHL IAmb IAmb 07 03 22.7
comp=Z,26nm,1.1s
SHL Shillong 64.67 300 *e*P **P** **07 03 17.0 -0.4**
SONM Songino Array 64.77 328 P **P** **07 03 17.2 -0.4**
comp=Z,3.6nm,0.7s,baz=148,slow=6.1,SNR=12
SONM LR LR 07 29 41.2
comp=Z,1μm,21.6s,baz=139,slow=34
GUWA GUWAHATI 65.02 301 *e*P **P** **07 03 18.6 -0.9**
GUWA IAmb IAmb 07 03 24.6
comp=Z,20nm,1.1s
TAWA Tawang 65.31 303 *e*P **P** **07 03 21.0 -0.9**
TAWA IAmb IAmb 07 03 28.5
comp=Z,28nm,0.9s
TURI Tura 66.00 300 *e*P **P** **07 03 25.9 0.0**
TURI IAmb IAmb 07 03 32.0
comp=Z,2μm,4.0s
SEY Seymchan 66.53 0 P **P** **07 03 28.2 -0.3**
comp=Z,3.8nm,0.8s,baz=171,slow=4.6,SNR=7.4
SEY Seymchan 66.53 0⇑*i*P **P** **07 03 27.1 -1.4**
UNV Unalaska Valle 67.26 25 PFAKE 07 03 50.0 +17
UNV LR LR
comp=Z,700nm,19.0s
YAK Yakutsk 67.73 349 PFAKE 07 03 50.0 +14
YAK LR LR
comp=Z,899nm,22.0s
YAK Yakutsk 67.73 349 *e*P **P** **07 03 36.3 +0.2**
YAK *e**PP **pP** **07 03 40.4 -1.7**
YAK *e*S **S** **07 12 35.6 +3.3**
YAK *e**SS sS 07 12 52.1 +10
ZAK Zakamensk 67.95 329 *e*P **P** **07 03 37.3 -0.6**
ZAK pmax pmax
comp=Z,21nm,1.5s
GTK Tadong 67.99 301 *e*P **P** **07 03 38.6 -0.1**
GTK IAmb IAmb 07 03 42.1
comp=Z,109nm,2.0s
TAOE Nuku Hiva Isla 68.06 98 *e*LR LR 07 24 00.7
comp=Z,2μm,24.8s
SPIA Saint Paul Isl 68.17 21 PFAKE 07 03 50.0 +11
SPIA LR LR
comp=Z,1μm,21.0s
TLY Talaya 68.55 330 PFAKE 07 03 50.0 +8.5
TLY LR LR
comp=Z,800nm,18.0s
TLY Talaya 68.55 330 *e*P **P** **07 03 41.2 -0.3**
TLY *e*SS SS 07 17 09.2 +2.0
TLY pmax pmax
comp=Z,51nm,1.6s
TLY MLR MLR
comp=Z,2μm,15.0s
CASY Casey 68.61 197 *e*P **P** **07 03 41.4 -0.2**
comp=Z,40nm,1.1s
CASY LR LR
comp=Z,1μm,19.0s
JIRN Jiri 70.15 301 *e*P **P** **07 03 52.1 -0.3**
comp=Z,125nm,1.0s
GUN Gumba 70.48 301 *e*P **P** **07 03 54.3 -0.1**
comp=Z,126nm,1.0s
PKI Pulchoki 70.79 301 *e*P **P** **07 03 55.6 -0.7**
comp=Z,67nm,1.1s
PKIN Phulchoki 70.80 301 *e*P **P** **07 03 55.5 -0.7**
comp=Z,39nm,1.0s
SDPT Sand Point 70.89 27 PFAKE 07 04 10.0 +14
SDPT LR LR
comp=Z,800nm,20.0s
KKN Kakani 70.96 301 *e*P **P** **07 03 56.7 -0.4**
comp=Z,42nm,0.7s
DMN Daman 71.06 301 *e*P **P** **07 03 57.6 -0.2**
comp=Z,108nm,1.1s
CHGN Chignik 72.39 27 PFAKE 07 04 20.0 +15
CHGN LR LR
comp=Z,700nm,19.0s
KOLN Koldanda 72.39 301 *e*P **P** **07 04 05.2 -0.6**
comp=Z,126nm,1.0s
DANN Dangsing 72.40 301 *e*P **P** **07 04 05.1 -0.8**
comp=Z,62nm,0.8s
BILL Bilibino 72.41 6 *e*P **P** **07 04 04.2 -0.5**
comp=Z,9.9nm,0.9s
BILL Bilibino 72.41 6⇓*i*P **P** **07 04 04.4 -0.3**
BILL pmax pmax
comp=Z,5.0nm,0.9s
PYUN Piuthan 73.00 301 *e*P **P** **07 04 08.6 -0.7**
comp=Z,160nm,0.9s
RKT Rikitea 73.39 113 *e*LR LR 07 26 34.2
comp=Z,2μm,26.0s
VNDA Vanda 73.89 178 P **P** **07 04 13.5 +0.2**
comp=Z,2.2nm,0.8s,baz=348,slow=5.9,SNR=10
VNDA LR LR 07 32 49.6
comp=Z,551nm,19.7s,baz=352,slow=33
VNDA Vanda 73.89 178 *e*P **P** **07 04 13.6 +0.2**
comp=Z,19nm,1.5s
VNDA Vanda 73.89 178 *e*P **P** **07 04 13.6 +0.2**
VNDA pmax pmax
comp=Z,19nm,1.5s
WMQ Urumqi 74.11 318 *e*P **P** **07 04 15.6 +0.2**
WMQ pP pP 07 04 21.3 -0.2
WMQ sP pwP 07 04 27.4 +2.7
WMQ PcP **PcP** **07 04 31.1 +0.7**
WMQ S **S** **07 13 47.9 +0.4**
WMQ pmax pmax
comp=Z,20nm,1.7s
WMQ pmax pmax
comp=Z,28nm,3.8s
WMQ LR LR
comp=Z,140nm,20.1s
WMQ LR LR
comp=Z,230nm,17.9s
WMQ LR LR
comp=Z,780nm,26.7s
SBA Scott Base 74.46 177 *e*P **P** **07 04 17.6 +0.9**
comp=Z,70nm,1.9s
SBA Scott Base 74.46 177 *e*P **P** **07 04 17.6 +0.9**
SBA pmax pmax
comp=Z,71nm,1.9s
NGP Nagpur 75.08 293 *e*P **P** **07 04 18.7 -2.7**
ANM Nome 75.20 18 PFAKE 07 04 30.0 +8.8
ANM LR LR
comp=Z,800nm,22.0s
KDAK Kodiak Island 75.86 27 P P 07 04 30.4 +5.4
comp=Z,16nm,1.0s,baz=184,slow=5.3,SNR=3.7
SVW2 Sparrevohn 76.41 24 *e*P **P** **07 04 28.6 +0.5**
comp=Z,38nm,1.2s
SVW2 LR LR
comp=Z,600nm,20.0s
DGZ Jazzator, Alta 76.49 323⇓*e*P **P** **07 04 28.5 -0.6**
DGZ pmax pmax
comp=Z,2.0nm,0.7s
TIXI Tiksi 76.72 353 P **P** **07 04 28.0 -1.7**
comp=Z,1.1nm,0.3s,baz=142,slow=8.2,SNR=5.0
TIXI Tiksi 76.72 353 *e*P **P** **07 04 29.0 -0.7**
comp=Z,15nm,1.1s
TIXI LR LR
comp=Z,599nm,21.0s
TIXI Tiksi 76.72 353*j e*P **P** **07 04 28.4 -1.3**
TIXI pmax pmax
comp=Z,7.0nm,1.7s
TTA Tatalina 77.31 22 *e*P **P** **07 04 33.9 +0.6**
comp=Z,29nm,1.0s
TTA LR LR
comp=Z,600nm,20.0s
TTA Tatalina 77.31 22 *e*P **P** **07 04 33.9 +0.6**
TTA pmax pmax
comp=Z,29nm,1.0s
TTA MLR MLR
comp=Z,600nm,20.0s
CNPM China Poot 77.37 26 *e*P **P** **07 04 34.3 +0.7**
comp=Z,93nm,0.8s
RDOG Red Dog Mine 78.36 16 *e*P **P** **07 04 39.8 +0.8**
comp=Z,31nm,0.8s
RDOG LR LR
comp=Z,1μm,22.0s
SEW Seward 78.44 26 *e*P **P** **07 04 38.4 -1.1**
comp=Z,50nm,1.2s
SEW LR LR
comp=Z,800nm,20.0s
SMLA Simla 78.61 303 *e*P **P** **07 04 40.1 -0.9**
MK31 Makanchi Array 78.70 319 *e*P **P** **07 04 39.0 -2.3**
comp=Z,13nm,1.0s
MK31 Makanchi Array 78.70 319 *e*P **P** **07 04 39.0 -2.3**
MK31 pmax pmax
comp=Z,13nm,1.0s
MKAR Makanchi Array 78.70 319 P **P** **07 04 40.3 -1.0**
comp=Z,3.6nm,0.9s,baz=100,slow=7.5,SNR=18
MKAR Makanchi Array 78.70 319 *i* P **P** **07 04 41.0 -0.3**
MKAR pmax pmax
comp=Z,7.0nm,1.0s
MAKZ Makanchi 78.91 319 *e*P **P** **07 04 41.8 -0.7**
comp=Z,17nm,0.9s
MAKZ LR LR
comp=Z,700nm,20.0s
MAKZ Makanchi 78.91 319 *e*P **P** **07 04 41.8 -0.7**
MAKZ pmax pmax
comp=Z,17nm,0.9s
MAKZ MLR MLR
comp=Z,700nm,20.0s
CAST Castle Rocks 79.06 22 PFAKE 07 04 50.0 +7.1
CAST LR LR
comp=Z,900nm,22.0s
GOA Goa 79.16 286 *e*P **P** **07 04 43.8 -0.5**
PMR Palmer 79.31 25 PFAKE 07 05 00.0 +16
PMR LR LR
comp=Z,500nm,21.0s
GHO Glory Hole Cre 79.48 25 PFAKE 07 05 00.0 +15
GHO LR LR
comp=Z,500nm,19.0s
KNK Knik Glacier 79.50 25 PFAKE 07 05 00.0 +15
KNK LR LR
comp=Z,700nm,20.0s
DHRM DHARAMSHALA 79.55 304 *e*P **P** **07 04 45.4 -1.2**
DHRM IAmb IAmb 07 04 51.3
comp=Z,50nm,0.6s
KTH Kantishna Hill 79.57 23 *e*P **P** **07 04 45.8 0.0**
comp=Z,37nm,1.0s
KTH LR LR
comp=Z,800nm,20.0s
ZAA0 Zalesovo Array 79.58 327 PFAKE 07 05 00.0 +14
ZAA0 LR LR
comp=Z,900nm,22.0s
ZALV Zalesovo Beam 79.58 327 P **P** **07 04 44.6 -1.3**
comp=Z,6.0nm,0.9s,baz=122,slow=4.8,SNR=7.3
ZALV Zalesovo Beam 79.58 327 *i* P **P** **07 04 47.0 +1.1**
ZALV pmax pmax
comp=Z,6.0nm,0.9s
SML Sawmill 79.74 25 *e*P **P** **07 04 46.8 +0.1**
comp=Z,74nm,1.0s
SML LR LR
comp=Z,500nm,22.0s
SML Sawmill 79.74 25 *e*P **P** **07 04 46.8 +0.1**
SML pmax pmax
comp=Z,74nm,1.0s
SML MLR MLR
comp=Z,500nm,22.0s
BPAW Bear Paw Mtn. 79.83 22 *e*P **P** **07 04 47.0 -0.1**
comp=Z,23nm,1.0s
BPAW LR LR
comp=Z,700nm,20.0s
GLI Glacier Island 79.84 26 *e*P **P** **07 04 45.7 -1.5**
comp=Z,127nm,1.6s
GLI LR LR
comp=Z,500nm,21.0s
SCM Sheep Creek Mo 80.18 25 *e*P **P** **07 04 48.5 -0.6**
comp=Z,37nm,1.0s
SCM LR LR
comp=Z,500nm,21.0s
SCM Sheep Creek Mo 80.18 25 *e*P **P** **07 04 48.5 -0.6**
SCM pmax pmax
comp=Z,37nm,1.0s
SCM MLR MLR
comp=Z,500nm,21.0s
EYAK Cordova Ski Ar 80.28 26 PFAKE 07 05 00.0 +10
EYAK LR LR
comp=Z,700nm,21.0s
RND Reindeer 80.30 23 *e*P **P** **07 04 49.0 -0.7**
comp=Z,25nm,1.0s
RND LR LR
comp=Z,700nm,20.0s
RND Reindeer 80.30 23 *e*P **P** **07 04 49.0 -0.7**
RND pmax pmax
comp=Z,25nm,1.0s
RND MLR MLR
comp=Z,700nm,20.0s
MLY Manley 80.41 21 PFAKE 07 05 00.0 +10
MLY LR LR
comp=Z,600nm,19.0s
MCK McKinley 80.43 23 PFAKE 07 05 00.0 +10
MCK LR LR
comp=Z,1μm,19.0s
BWN Browne 80.44 22 PFAKE 07 05 00.0 +10
BWN LR LR
comp=Z,800nm,21.0s
DIV Divide 80.53 26 PFAKE 07 05 00.0 +9.0
DIV LR LR
comp=Z,600nm,20.0s
DHY Denali Highway 80.73 24 PFAKE 07 05 00.0 +7.8
DHY LR LR
comp=Z,2μm,18.0s
NVS Novosibirsk 80.77 327 *e*P **P** **07 04 55.5 +3.2**
NVS pmax pmax
comp=N,19nm,1.6s
NVS pmax pmax
comp=E,23nm,1.6s
NVS pmax pmax
comp=Z,37nm,1.6s
HMT Hamilton 80.86 27 *e*P **P** **07 04 54.1 +1.4**
comp=Z,68nm,1.4s
HMT LR LR
comp=Z,700nm,19.0s
WRH Wood River Hil 81.11 22 PFAKE 07 05 10.0 +16
WRH LR LR
comp=Z,700nm,19.0s
KSH Kashi 81.28 311 P P 07 05 01.8 +6.2
KSH pP pwP 07 05 07.5 +2.5
KSH S **S** **07 15 14.3 +8.9**
KSH pmax pmax
comp=Z,76nm,1.4s
KSH pmax pmax
comp=Z,410nm,6.9s
KSH LR LR
comp=Z,3μm,19.4s
KSH LR LR
comp=Z,3μm,21.5s
KSH LR LR
comp=Z,1μm,18.4s
CCB Clear Creek Bu 81.31 22 PFAKE 07 05 10.0 +15
CCB LR LR
comp=Z,500nm,20.0s
TCOL CIGO, UAF Yank 81.39 22 P **P** **07 04 55.5 +0.1**
baz=242
COLA College 81.40 22 *e*P **P** **07 04 55.4 0.0**
comp=Z,29nm,0.9s
COLA LR LR
comp=Z,500nm,20.0s
COLA College 81.40 22⇑*e*P **P** **07 04 55.4 0.0**
COLA pmax pmax
comp=Z,12nm,1.2s
HDA Harding Lake 81.52 23 *e*P **P** **07 04 55.7 -0.5**
comp=Z,11nm,0.9s
HDA LR LR
comp=Z,900nm,20.0s
HDA Harding Lake 81.52 23 P **P** **07 04 56.0 -0.1**
baz=243
POKR Poker Plat Res 81.67 22 P **P** **07 04 56.6 -0.3**
baz=242
ILAR Eielson Array 81.71 22 P **P** **07 04 55.7 -1.4**
comp=Z,4.5nm,0.9s,baz=243,slow=5.0,SNR=28
ILAR LR LR 07 41 30.0
comp=Z,219nm,18.2s,baz=264,slow=36
COLD Coldfoot 81.73 20 PFAKE 07 05 10.0 +13
COLD LR LR
comp=Z,600nm,22.0s
BOOM Boomskoye usch 81.95 314 PFAKE 07 05 10.0 +11
BOOM LR LR
comp=Z,600nm,20.0s
BALM Baldy 82.00 27 PFAKE 07 05 10.0 +11
BALM LR LR
comp=Z,500nm,20.0s
RIDG Independent Ri 82.05 24 PFAKE 07 05 10.0 +11
RIDG LR LR
comp=Z,800nm,20.0s
KURK Kurchatov 82.17 322 *e*P **P** **07 04 59.3 -0.5**
comp=Z,20nm,1.0s
KURK LR LR
comp=Z,700nm,20.0s
KURK Kurchatov 82.17 322⇓*i*P **P** **07 04 59.1 -0.7**
KURK pmax pmax
comp=Z,7.0nm,1.1s
MENT Mentasta 82.17 25 *e*P **P** **07 05 00.1 +0.4**
comp=Z,20nm,1.0s
MENT LR LR
comp=Z,700nm,21.0s
NIL Nilore 82.33 305 *e*P **P** **07 05 01.3 +0.2**
comp=Z,38nm,0.8s
NIL Nilore 82.33 305 *e*P **P** **07 05 01.3 +0.2**
NIL pmax pmax
comp=Z,37nm,0.8s
DOT Dot Lake 82.33 24 PFAKE 07 05 10.0 +10
DOT LR LR
comp=Z,700nm,20.0s
CTGM Chitina Glacie 82.43 27 PFAKE 07 05 10.0 +8.8
CTGM LR LR
comp=Z,400nm,22.0s
PRP Porcupine Dome 82.57 22 PFAKE 07 05 10.0 +8.2
PRP LR LR
comp=Z,500nm,19.0s
PCA Pinnacle 82.61 28 PFAKE 07 05 10.0 +8.0
PCA LR LR
comp=Z,500nm,19.0s
TOLK Toolik Lake Re 82.66 18 PFAKE 07 05 10.0 +7.9
TOLK LR LR
comp=Z,1μm,21.0s
TOLK Toolik Lake Re 82.66 18 P **P** **07 05 01.6 -0.5**
baz=240
BCPM Bancas Point 82.85 28 PFAKE 07 05 10.0 +6.8
BCPM LR LR
comp=Z,500nm,20.0s
FRU1 Bishkek 82.96 314 PFAKE 07 05 10.0 +5.8
FRU1 LR LR
comp=Z,500nm,22.0s
AAK Ala-Archa 83.02 314 *e*P **P** **07 05 02.8 -1.9**
comp=Z,8.7nm,0.8s
AAK LR LR
comp=Z,600nm,20.0s
AAK Ala-Archa 83.02 314⇓*e*P **P** **07 05 04.1 -0.6**
AAK pmax pmax
comp=Z,5.0nm,0.9s
FYU Fort Yukon 83.14 21 PFAKE 07 05 20.0 +16
FYU LR LR
comp=Z,500nm,19.0s
EGAK Eagle 83.94 23 PFAKE 07 05 20.0 +11
EGAK LR LR
comp=Z,700nm,22.0s
HYT Haines Junctio 84.14 28 PFAKE 07 05 20.0 +10
HYT LR LR
comp=Z,600nm,19.0s
DAWY Dawson 84.40 24 PFAKE 07 05 20.0 +8.9
DAWY LR LR
comp=Z,1μm,22.0s
NRIK Noril'sk 84.58 341 P **P** **07 05 11.3 -0.5**
comp=Z,10nm,0.8s,baz=125,slow=4.9,SNR=16
NRIK LR LR 07 44 32.8
comp=Z,482nm,18.2s,baz=126,slow=37
SKAG Skagway 84.77 29 PFAKE 07 05 20.0 +7.0
SKAG LR LR
comp=Z,500nm,19.0s
CRAG Craig 84.86 34 PFAKE 07 05 20.0 +6.5
CRAG LR LR
comp=Z,600nm,20.0s
JIS Juneau Island 84.92 31 PFAKE 07 05 20.0 +6.3
JIS LR LR
comp=Z,600nm,20.0s
WHY Whitehorse 85.32 28 PFAKE 07 05 30.0 +14
WHY LR LR
comp=Z,500nm,19.0s
GAR Garm 85.51 309 PFAKE 07 05 30.0 +13
GAR LR LR
comp=Z,1μm,21.0s
WRAK Wrangell Islan 85.52 33 PFAKE 07 05 30.0 +13
WRAK LR LR
comp=Z,600nm,20.0s
KBL Kabul 85.91 305 PFAKE 07 05 30.0 +10
KBL LR LR
comp=Z,400nm,20.0s
KKAR Karatay Array 85.98 314 *e*P **P** **07 05 19.6 +0.1**

comp=Z,44nm,1.1s
KKAR Karatay Array 85.98 314⇑ *e*P P 07 05 19.9 +0.4
MAW Mawson 86.00 203 P **P 07 05 18.5 -0.5**
comp=Z,3.8nm,0.8s,baz=60,slow=12,SNR=3.4
MAW LR LR 07 40 45.3
comp=Z,1μm,22.0s,baz=92,slow=34
MAW Mawson 86.00 203 *e*P **P 07 05 17.8 -1.2**
comp=Z,2.4nm,1.1s
MAW LR LR
comp=Z,200nm,20.0s
MAW Mawson 86.00 203 *e*P **P 07 05 17.8 -1.2**
MAW pmax pmax
comp=Z,2.0nm,1.1s
MAW MLR MLR
comp=Z,200nm,20.0s
QSPA South Pole Qui 86.17 180 *e*P **P 07 05 19.8 -0.3**
comp=Z,32nm,1.3s
EPYK Eagle Plains 86.23 23 *e*P **P 07 05 18.1 -2.0**
comp=Z,40nm,1.1s
EPYK LR LR
comp=Z,500nm,19.0s
EPYK Eagle Plains 86.23 23 P **P 07 05 20.7 +0.5**
baz=252
BBB Bella Bella 87.08 37 P **P 07 05 24.3 -0.3**
comp=Z,2.3nm,0.8s,baz=183,slow=17,SNR=2.4
DLBC Dease Lake 87.18 31 P **P 07 05 25.8 +0.7**
comp=Z,3.3nm,0.9s,baz=323,slow=6.1,SNR=6.1
DLBC Dease Lake 87.18 31 *e*P **P 07 05 26.6 +1.5**
comp=Z,42nm,1.4s
BRVK Borovoye 87.72 323 *e*P **P 07 05 26.2 -1.4**
comp=Z,12nm,1.0s
BRVK LR LR
comp=Z,900nm,19.0s
BRVK Borovoye 87.72 323 *d i*P **P 07 05 26.7 -0.9**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
INK Inuvik 87.98 21 P **P 07 05 27.6 -0.9**
comp=Z,6.6nm,0.9s,baz=244,slow=4.2,SNR=7.2
INK Inuvik 87.98 21 *e*P **P 07 05 28.1 -0.4**
comp=Z,20nm,1.1s
INK LR LR
comp=Z,800nm,20.0s
INK Inuvik 87.98 21 *e*P **P 07 05 28.1 -0.4**
INK pmax pmax
comp=Z,19nm,1.1s
INK MLR MLR
comp=Z,800nm,20.0s
KMRM Mail Ridge 88.44 50 PFAKE 07 05 40.0 +8.5
KMRM LR LR
comp=Z,900nm,18.0s
KCPM Cahto Peak 88.48 50 PFAKE 07 05 40.0 +8.2
KCPM LR LR
comp=Z,700nm,18.0s
KHMM Horse Mountain 88.50 49 PFAKE 07 05 40.0 +8.1
KHMM LR LR
comp=Z,600nm,20.0s
HOPS Hopland Field 88.81 51 PFAKE 07 05 40.0 +6.8
HOPS LR LR
comp=Z,600nm,19.0s
MCCM Marconi Confer 88.87 52 PFAKE 07 05 40.0 +6.6
MCCM LR LR
comp=Z,500nm,19.0s
GDXM Geysers 89.00 51 PFAKE 07 05 50.0 +16
GDXM LR LR
comp=Z,900nm,20.0s
COR Corvallis 89.21 45 PFAKE 07 05 50.0 +15
COR LR LR
comp=Z,600nm,18.0s
M02C Callahan 89.21 49 P **P 07 05 35.5 +0.4**
baz=264
HUMO Hull Mountain 89.26 47 *e*P **P 07 05 35.9 +0.7**
comp=Z,7.5nm,0.8s
HUMO LR LR
comp=Z,600nm,20.0s
YBH Yreka Blue Hor 89.35 48 PFAKE 07 05 50.0 +14
YBH LR LR
comp=Z,600nm,21.0s
WDC Whiskeytown Da 89.37 49 PFAKE 07 05 50.0 +14
WDC LR LR
comp=Z,500nm,19.0s
L04D Klamath Falls 89.70 48 P **P 07 05 38.2 +0.7**
baz=265
SAO San Andreas Ge 89.88 53 PFAKE 07 05 50.0 +12
SAO LR LR
comp=Z,700nm,18.0s
O03E Paynes Creek 89.90 50 P **P 07 05 38.9 +0.5**
baz=265
E04D Cinebar 89.92 43 P **P 07 05 40.2 +2.0**
baz=264
J04D Umpqua Nationa 89.94 47 P **P 07 05 38.6 0.0**
baz=265
M04C Macdoel 90.01 48 P **P 07 05 39.3 +0.4**
baz=265
H04A Detroit Lake 90.01 45 PFAKE 07 05 50.0 +11
H04A LR LR
comp=Z,400nm,18.0s
ORV Oroville 90.07 51 PFAKE 07 05 50.0 +11
ORV LR LR
comp=Z,300nm,19.0s
AFDM Forest Hills D 90.43 51 PFAKE 07 05 50.0 +9.2
AFDM LR LR
comp=Z,400nm,19.0s
J05D Fort Rock, OR 90.58 47 P **P 07 05 43.2 +1.7**
baz=265
PAGB Antelope Grade 90.77 54 PFAKE 07 05 50.0 +7.6
PAGB LR LR
comp=Z,500nm,18.0s
K05A Summer Lake 90.78 47 *e*P **P 07 05 42.6 0.0**
comp=Z,20nm,1.3s
K05A LR LR
comp=Z,700nm,18.0s
CMB Columbia Colle 90.82 52 PFAKE 07 05 50.0 +7.3
CMB LR LR
comp=Z,500nm,19.0s
PINE Pine Mountain 90.83 46 PFAKE 07 05 50.0 +7.2
PINE LR LR
comp=Z,500nm,18.0s
BEKR Beckworth 90.97 50 PFAKE 07 05 50.0 +6.5
BEKR LR LR
comp=Z,400nm,20.0s
G06A Carlson Farm, 91.16 45 PFAKE 07 06 00.0 +16
G06A LR LR
comp=Z,400nm,20.0s
MOD Modoc Plateau 91.16 48 *e*P **P 07 05 44.4 +0.1**
comp=Z,6.7nm,0.8s
MOD LR LR
comp=Z,800nm,19.0s
LTY Liberty 91.28 43 *e*P **P 07 05 45.7 +1.1**
comp=Z,2.6nm,0.7s
VCNR Virginia City 91.48 51 PFAKE 07 06 00.0 +14
VCNR LR LR
comp=Z,400nm,19.0s
PNTR Pine Nut 91.51 51 PFAKE 07 06 00.0 +14
PNTR LR LR
comp=Z,500nm,20.0s
WAKR Walker 91.60 52 PFAKE 07 06 00.0 +14
WAKR LR LR
comp=Z,400nm,20.0s
F07A Phinny Hill Vi 91.70 44 PFAKE 07 06 00.0 +14
F07A LR LR
comp=Z,400nm,21.0s
PAHR Pah Rah Range 91.71 51 PFAKE 07 06 00.0 +13
PAHR LR LR
comp=Z,400nm,21.0s
MDPB Devils Postpil 91.83 53 PFAKE 07 06 00.0 +12
MDPB LR LR
comp=Z,600nm,20.0s
I07A Izee 91.89 46 PFAKE 07 06 00.0 +12
I07A LR LR
comp=Z,400nm,20.0s
OMMB Old Mammoth Mi 91.89 53 PFAKE 07 06 00.0 +12
OMMB LR LR
comp=Z,700nm,19.0s
OSI Osito Audit: C 91.94 56 PFAKE 07 06 00.0 +12
OSI LR LR
comp=Z,700nm,19.0s
HAWA Hanford 92.00 44 PFAKE 07 06 00.0 +12
HAWA LR LR
comp=Z,400nm,20.0s
ISA Isabella, Lake 92.21 55 PFAKE 07 06 00.0 +11
ISA LR LR
comp=Z,600nm,18.0s
G08A Pilot Rock 92.34 45 PFAKE 07 06 00.0 +10
G08A LR LR
comp=Z,400nm,20.0s
PASC Pasadena Art C 92.36 56 PFAKE 07 06 00.0 +10
PASC LR LR
comp=Z,600nm,20.0s
D08A Wollman Farm, 92.46 43 PFAKE 07 06 00.0 +10
D08A LR LR
comp=Z,300nm,18.0s
MWC Mount Wilson 92.47 56 PFAKE 07 06 00.0 +9.4
MWC LR LR
comp=Z,600nm,20.0s
NVAR Mina Array Bea 92.48 52 P **P 07 05 51.2 +0.6**
comp=Z,1.1nm,0.7s,baz=261,slow=4.9,SNR=6.8
NVAR LR LR 07 39 52.0
comp=Z,328nm,21.7s,baz=267,slow=31
CWC Cottonwood Cre 92.56 54 P **P 07 05 51.0 +0.1**
baz=267
J08A Circle Bar Ran 92.59 47 PFAKE 07 06 00.0 +9.2
J08A LR LR
comp=Z,500nm,18.0s
MPMC Manual Prospec 93.02 54 P **P 07 05 53.4 +0.3**
baz=268
CPE Camp Elliot 93.21 57 PFAKE 07 06 00.0 +6.2
CPE LR LR
comp=Z,700nm,19.0s
BMO Blue Mountains 93.49 45 PFAKE 07 06 10.0 +15
BMO LR LR
comp=Z,500nm,18.0s
GSC Goldstone, Bar 93.55 55 PFAKE 07 06 10.0 +15
GSC LR LR
comp=Z,600nm,19.0s
BAR Barrett 93.56 58 PFAKE 07 06 10.0 +15
BAR LR LR
comp=Z,700nm,20.0s
NEW Newport 93.72 42 PFAKE 07 06 10.0 +14
NEW LR LR
comp=Z,400nm,19.0s
NEW Newport 93.72 42 P **P 07 05 56.3 +0.4**
baz=269
PFO Pinyon Flats O 93.78 57 PFAKE 07 06 10.0 +13
PFO LR LR
comp=Z,900nm,21.0s
TPNV Topopah Spring 94.05 53 PFAKE 07 06 10.0 +12
TPNV LR LR
comp=Z,500nm,19.0s
TPNV Topopah Spring 94.05 53 P **P 07 05 57.8 0.0**
baz=268
SYO Syowa Base 94.19 200⇓ *e*P **P 07 05 55.4 -2.1**
R11A Troy Canyon, C 94.61 52 PFAKE 07 06 10.0 +10
R11A LR LR
comp=Z,500nm,19.0s
R11A Troy Canyon, C 94.61 52 P **P 07 06 02.8 +2.4**
baz=269
ARU Arti 94.75 326 PFAKE 07 06 10.0 +10
ARU LR LR
comp=Z,1μm,20.0s
ARU Arti 94.75 326 P **P 07 05 59.6 -0.7**
ARU 07 09 47.9
ARU S **SKSac 07 16 34.8 +0.3**
ARU SP SP 07 18 29.0 +1.0
ARU SS **SS 07 23 33.1 -3.4**
ARU MLR MLR
comp=Z,1μm,22.0s
IRM Iron Mountain 94.88 56 P **P 07 06 03.0 +1.5**
baz=269
SHPR Sheep Range 94.92 54 PFAKE 07 06 10.0 +8.2
SHPR LR LR
comp=Z,400nm,20.0s
ELK Elko 94.92 50 PFAKE 07 06 10.0 +8.2
ELK LR LR
comp=Z,400nm,20.0s
LDFC Landfair 94.93 55 PFAKE 07 06 10.0 +8.2
LDFC LR LR
comp=Z,800nm,18.0s
GEYT Alibeck 94.96 308 P **P 07 05 60.0 -1.8**
comp=Z,0.6nm,0.4s,baz=115,slow=13,SNR=3.0
GEYT LR LR 07 51 16.8
comp=Z,240nm,19.8s,baz=50,slow=37
GYA0B ALIBECK ARRAY 94.96 308 PFAKE 07 06 10.0 +8.2
GYA0B LR LR
comp=Z,400nm,21.0s
GLA Glamis 95.13 57 PFAKE 07 06 10.0 +7.4
GLA LR LR
comp=Z,600nm,21.0s
YKA Yellowknife Ar 95.14 28 P **P 07 06 02.1 +0.2**
comp=Z,1.9nm,0.8s,baz=272,slow=4.4,SNR=13
YKA PP **PP 07 09 52.5 +0.9**
comp=Z,0.2nm,0.5s,baz=271,slow=7.7,SNR=4.0
YKA LR LR 07 45 24.5
comp=Z,48nm,20.6s,baz=286,slow=33
Y12C Blythe 95.39 57 PFAKE 07 06 20.0 +16
Y12C LR LR
comp=Z,500nm,20.0s
HLID Hailey 95.55 47 PFAKE 07 06 20.0 +15
HLID LR LR
comp=Z,600nm,19.0s
HLID Hailey 95.55 47 P **P 07 06 05.2 +0.6**
baz=270
WALA Waterton Lakes 95.85 41 PFAKE 07 06 20.0 +14
WALA LR LR
comp=Z,500nm,20.0s
MSO Missoula 95.86 43 PFAKE 07 06 20.0 +14
MSO LR LR
comp=Z,400nm,21.0s
W13A Hualapai Mount 95.94 55 PFAKE 07 06 20.0 +13
W13A LR LR
comp=Z,500nm,18.0s
113A Mohawk Valley, 96.01 58 PFAKE 07 06 20.0 +13
113A LR LR
comp=Z,700nm,18.0s
Y14A Wickenburg 96.66 56 PFAKE 07 06 20.0 +10
Y14A LR LR
comp=Z,600nm,22.0s
DUG Dugway, Tooele 96.77 50 PFAKE 07 06 20.0 +10
DUG LR LR
comp=Z,400nm,20.0s
SRIG Santa Rosalia 97.29 63 PFAKE 07 06 20.0 +7.4
SRIG LR LR
comp=Z,700nm,21.0s
BOZ Bozeman (W) 97.50 45 PFAKE 07 06 20.0 +6.6
BOZ LR LR
comp=Z,500nm,19.0s
HWUT Hardware Ranch 97.69 49 PFAKE 07 06 30.0 +16
HWUT LR LR
comp=Z,200nm,20.0s
X16A Lo Mia Camp, P 97.95 56 PFAKE 07 06 30.0 +14
X16A LR LR
comp=Z,600nm,22.0s
WUAZ Wupatki 97.99 55 PFAKE 07 06 30.0 +14
WUAZ LR LR
comp=Z,500nm,18.0s
AHID Auburn Hatcher 97.99 48 PFAKE 07 06 30.0 +14
AHID LR LR
comp=Z,700nm,19.0s
IMW Indian Meadow 98.06 46 PFAKE 07 06 30.0 +14
IMW LR LR
comp=Z,800nm,20.0s
TPAW Teton Pass 98.07 47 PFAKE 07 06 30.0 +14
TPAW LR LR
comp=Z,500nm,21.0s
MOOW Moose Ponds 98.21 47 PFAKE 07 06 30.0 +13
MOOW LR LR
comp=Z,500nm,21.0s
FLWY Flagg Ranch 98.23 46 PFAKE 07 06 30.0 +13
FLWY LR LR
comp=Z,400nm,19.0s
HSIG 98.43 61 PFAKE 07 06 30.0 +12
HSIG LR LR
comp=Z,600nm,19.0s
TUC Tucson 98.53 58 PFAKE 07 06 30.0 +12
TUC LR LR
comp=Z,600nm,19.0s
BW06 Boulder Array 99.13 47 P **Pdif 07 06 21.9 +1.2**
baz=273
PDAR Pinedale Array 99.13 47 P **Pdif 07 06 19.9 -0.9**
comp=Z,0.3nm,0.5s,baz=270,slow=0.6,SNR=4.8
PDAR PP **PP 07 10 25.0 +1.8**
comp=Z,0.8nm,1.1s,baz=229,slow=4.2,SNR=3.4
PDAR LR LR 07 49 23.0
comp=Z,224nm,18.1s,baz=276,slow=34
X18A Snowflake 99.18 56 PFAKE 07 06 30.0 +8.9
X18A LR LR
comp=Z,600nm,22.0s
RLMT Red Lodge 99.19 45 PFAKE 07 06 30.0 +9.0
RLMT LR LR
comp=Z,400nm,20.0s
W18A Petrified Fore 99.34 55 PFAKE 07 06 30.0 +8.2
W18A LR LR
comp=Z,500nm,20.0s
PV14 Lion Creek, Pa 99.77 52 PFAKE 07 06 40.0 +16
PV14 LR LR
comp=Z,800nm,19.0s
PV21 Cone Mtn., Par 99.80 52 PFAKE 07 06 40.0 +16
PV21 LR LR
comp=Z,300nm,21.0s
PV19 Morning Glory 99.81 52 PFAKE 07 06 40.0 +16
PV19 LR LR
comp=Z,400nm,20.0s
319A Douglas 99.83 59 PFAKE 07 06 40.0 +16
319A LR LR
comp=Z,600nm,19.0s
PV18 Skein Mesa, Pa 99.87 52 PFAKE 07 06 40.0 +16
PV18 LR LR
comp=Z,700nm,22.0s
PV03 Paradox Valley 99.92 52 PFAKE 07 06 40.0 +16
PV03 LR LR
comp=Z,100nm,19.0s
PV13 Radium Mtn., P 99.94 52 PFAKE 07 06 40.0 +15
PV13 LR LR
comp=Z,500nm,18.0s
PV12 Saucer Basin, 99.95 52 PFAKE 07 06 40.0 +15
PV12 LR LR
comp=Z,800nm,20.0s
PV02 Paradox Valley 100.01 52 PFAKE 07 06 40.0 +15
PV02 LR LR
comp=Z,2μm,22.0s
PV01 Paradox Valley 100.14 52 PFAKE 07 06 40.0 +15
PV01 LR LR
comp=Z,300nm,19.0s
O20A White River Ci 100.28 50 PFAKE 07 06 40.0 +14
O20A LR LR
comp=Z,600nm,19.0s
RWWY Rawlins 100.94 48 PFAKE 07 06 40.0 +11
RWWY LR LR
comp=Z,500nm,19.0s
LAO LASA Array 101.17 43 PFAKE 07 06 40.0 +10
LAO LR LR
comp=Z,300nm,20.0s
S22A 4UR Ranch, Cre 101.54 52 PFAKE 07 06 40.0 +8.3
S22A LR LR
comp=Z,500nm,20.0s
Y22D IRIS PASSCAL I 101.71 56 PFAKE 07 06 40.0 +7.7
Y22D LR LR
comp=Z,500nm,22.0s
N23A Red Feather La 101.96 49 PFAKE 07 06 40.0 +6.5
N23A LR LR
comp=Z,300nm,20.0s
ANMO Albuquerque 102.03 55 PFAKE 07 06 50.0 +16
ANMO LR LR
comp=Z,500nm,18.0s
KBS Kingsbay 102.18 353 PFAKE 07 06 40.0 +6.7
KBS LR LR
comp=Z,400nm,19.0s
PHWY Pilot Hill 102.29 49 PFAKE 07 06 50.0 +15
PHWY LR LR
comp=Z,200nm,19.0s
DGMT Dagmar 102.30 41 PFAKE 07 06 50.0 +16
DGMT LR LR
comp=Z,400nm,21.0s
ISCO Idaho Springs 102.32 50 PFAKE 07 06 50.0 +15
ISCO LR LR
comp=Z,400nm,20.0s
SDCO Great Sand Dun 102.59 52 PFAKE 07 06 50.0 +14
SDCO LR LR
comp=Z,400nm,20.0s
FFC Flin Flon 102.59 35 PFAKE 07 06 50.0 +14
FFC LR LR
comp=Z,400nm,19.0s
Q24A Divide 102.75 51 PFAKE 07 06 50.0 +13
Q24A LR LR
comp=Z,500nm,22.0s
SNAA Sanae 102.85 188 PFAKE 07 06 50.0 +13
SNAA LR LR
comp=Z,1μm,21.0s
SNAA Sanae 102.85 188⇑ *e*P **Pdif 07 06 38.4 +1.9**
RSSD Black Hills 103.00 46 PFAKE 07 06 50.0 +12
RSSD LR LR
comp=Z,400nm,19.0s
MNTX Cornudas Mount 103.14 58 PFAKE 07 06 50.0 +11
MNTX LR LR
comp=Z,500nm,19.0s
HPIG 103.15 63 PFAKE 07 06 50.0 +11
HPIG LR LR
comp=Z,800nm,20.0s
T25A Trinidad 103.51 53 PFAKE 07 06 50.0 +10
T25A LR LR
comp=Z,400nm,19.0s
TULEG Thule 104.00 9 PFAKE 07 06 50.0 +8.6
TULEG LR LR
comp=Z,600nm,20.0s
KSCO Kaye Shedlock' 104.70 51 PFAKE 07 07 00.0 +14
KSCO LR LR
comp=Z,500nm,20.0s
MSTX Muleshoe 105.15 56 PFAKE 07 11 10.0 +7.9
MSTX LR LR
comp=Z,500nm,18.0s
GNI Garni 105.22 310 PFAKE 07 11 10.0 +7.9
GNI LR LR
comp=Z,300nm,21.0s
MDND Maddock 105.44 41 PFAKE 07 11 10.0 +7.9
MDND LR LR
comp=Z,400nm,20.0s
FCC Fort Churchill 105.72 30 PFAKE 07 11 10.0 +7.8
FCC LR LR
comp=Z,600nm,19.0s
AMTX Amarillo 105.95 55 PFAKE 07 11 10.0 +6.5
AMTX LR LR
comp=Z,500nm,19.0s
KIV Kislovodsk 106.11 315 PFAKE 07 11 10.0 +6.5
KIV LR LR
comp=Z,400nm,20.0s
CBKS Cedar Bluff 106.96 51 PFAKE 07 11 20.0 +15
CBKS LR LR
comp=Z,400nm,20.0s
OBN Obninsk 107.17 327 PFAKE 07 11 20.0 +15
OBN LR LR
comp=Z,700nm,20.0s
BGNE Belgrade 107.71 48 PFAKE 07 11 20.0 +13
BGNE LR LR
comp=Z,300nm,18.0s
AGMN Agassiz Nation 107.78 40 PFAKE 07 11 20.0 +14
AGMN LR LR
comp=Z,400nm,19.0s
ABTX Abilene, Hawle 107.90 57 PFAKE 07 11 20.0 +13
ABTX LR LR
comp=Z,500nm,19.0s
U32A Winter Ranch, 107.91 53 PFAKE 07 11 20.0 +13
U32A LR LR
comp=Z,500nm,18.0s
JCT Junction City 108.02 59 PFAKE 07 11 20.0 +13
JCT LR LR
comp=Z,600nm,22.0s
WMOK Wichita Mounta 108.33 55 PFAKE 07 11 20.0 +12
WMOK LR LR
comp=Z,300nm,20.0s
ECSD EROS Data Cent 108.35 45 PFAKE 07 11 20.0 +12
ECSD LR LR
comp=Z,400nm,20.0s
833A Chaparral WMA, 108.60 62 PFAKE 07 11 20.0 +12
833A LR LR
comp=Z,600nm,19.0s
LNIG Linares 108.85 65 PFAKE 07 11 20.0 +11
LNIG LR LR
comp=Z,1μm,20.0s
KSU1 Kansas State U 109.31 50 PFAKE 07 11 20.0 +10
KSU1 LR LR
comp=Z,500nm,20.0s
FIA0 FINESS Array S 109.59 335 *e*Pdif **Pdif 07 07 04.7 -1.8**
FIA0 FINESS Array S 109.59 335 *e*P **Pdif 07 07 04.7 -1.8**
FINES FINESS Array B 109.59 335 Pdiff **Pdif 07 07 04.7 -1.8**
comp=Z,0.9nm,0.7s,baz=70,slow=9.0,SNR=2.8
TLIG Tlapa 110.14 73 PFAKE 07 11 20.0 +8.2
TLIG LR LR
comp=Z,800nm,19.0s
TUL1 Leonard 110.55 53 PFAKE 07 11 20.0 +8.0
TUL1 LR LR
comp=Z,500nm,19.0s
SPMN Marine on St. 110.62 43 PFAKE 07 11 20.0 +8.2
SPMN LR LR
comp=Z,500nm,18.0s
E38A The Farm, Brul 111.06 41 PFAKE 07 11 20.0 +7.4
E38A LR LR
comp=Z,400nm,20.0s
SCIA State Center 111.21 46 PFAKE 07 11 20.0 +7.0

SCIA LR LR
comp=Z,400nm,22.0s
HKT Hockley 111.49 59 PFAKE 07 11 30.0 +16
HKT LR LR
comp=Z,700nm,22.0s
HHAR Hobbs 111.95 52 PFAKE 07 11 30.0 +15
HHAR LR LR
comp=Z,500nm,18.0s
LVIG Laguna Verde 112.06 70 PFAKE 07 11 30.0 +15
LVIG LR LR
comp=Z,700nm,19.0s
C40A Isle Royale Na 112.18 39 PFAKE 07 11 30.0 +15
C40A LR LR
comp=Z,500nm,21.0s
NATX Nacogdoches 112.21 57 PFAKE 07 11 30.0 +15
NATX LR LR
comp=Z,500nm,19.0s
W39A Magazine 112.30 54 PFAKE 07 11 30.0 +15
W39A LR LR
comp=Z,400nm,20.0s
ETX06 Route 59 and C 112.36 57 PFAKE 07 11 30.0 +15
ETX06 LR LR
comp=Z,300nm,19.0s
G40A Rib Lake 112.36 42 PFAKE 07 11 30.0 +15
G40A LR LR
comp=Z,600nm,18.0s
MIAR Mount Ida 112.59 54 PFAKE 07 11 30.0 +14
MIAR LR LR
comp=Z,600nm,18.0s
L40A Anamosa 112.60 46 PFAKE 07 11 30.0 +14
L40A LR LR
comp=Z,500nm,21.0s
D41A Chassel 112.85 40 PFAKE 07 11 30.0 +14
D41A LR LR
comp=Z,500nm,19.0s
AKBB Malin Array Si 112.91 324 PFAKE 07 11 30.0 +14
AKBB LR LR
comp=Z,600nm,19.0s
I41A Arkdale 112.97 43 PFAKE 07 11 30.0 +14
I41A LR LR
comp=Z,500nm,19.0s
JFWS Jewell Farm 113.05 45 PFAKE 07 11 30.0 +14
JFWS LR LR
comp=Z,400nm,19.0s
WLAR White Oak Lake 113.14 55 PFAKE 07 11 30.0 +13
WLAR LR LR
comp=Z,500nm,19.0s
X40A Basin Creek Fa 113.20 54 PFAKE 07 11 30.0 +13
X40A LR LR
comp=Z,700nm,18.0s
N41A Harden Midland 113.24 47 PFAKE 07 11 30.0 +13
N41A LR LR
comp=Z,500nm,20.0s
FCAR Ozark Folk Cen 113.47 52 PFAKE 07 11 30.0 +13
FCAR LR LR
comp=Z,400nm,21.0s
WHAR Wooly Hollow 113.47 53 PFAKE 07 11 30.0 +12
WHAR LR LR
comp=Z,400nm,18.0s
Z41A Richland Creek 113.48 55 PFAKE 07 11 30.0 +12
Z41A LR LR
comp=Z,500nm,18.0s
W41B Gary Mavity, V 113.53 53 PFAKE 07 11 30.0 +12
W41B LR LR
comp=Z,500nm,20.0s
UALR University of 113.54 54 PFAKE 07 11 30.0 +12
UALR LR LR
comp=Z,600nm,18.0s
CCM Cathedral Cave 113.64 50 PFAKE 07 11 30.0 +12
CCM LR LR
comp=Z,400nm,20.0s
I42A Draeger Farm, 113.67 43 PFAKE 07 11 30.0 +12
I42A LR LR
comp=Z,600nm,19.0s
L42A Oliver, Polo 113.73 45 PFAKE 07 11 30.0 +12
L42A LR LR
comp=Z,500nm,22.0s
MMAI Mount Meron Ar 113.84 304 PKKPab PKKPab 07 22 10.4 +2.7
comp=Z,2.7nm,0.3s,baz=222,slow=5.2,SNR=4.8
KMBO Kilima Mbogo 114.10 267 *i* PKIKP PKPdf 07 11 19.2 -0.4
E43A Lone Tree Farm 114.10 40 PFAKE 07 11 30.0 +12
E43A LR LR
comp=Z,500nm,19.0s
CCAR Cane Creek 114.19 54 PFAKE 07 11 30.0 +11
CCAR LR LR
comp=Z,600nm,18.0s
ANTO Ankara 114.24 312 PFAKE 07 11 30.0 +11
ANTO LR LR
comp=Z,300nm,22.0s
H43A Windswept, Lux 114.26 42 PFAKE 07 11 30.0 +11
H43A LR LR
comp=Z,400nm,18.0s
FVM French Village 114.29 50 PFAKE 07 11 30.0 +11
FVM LR LR
comp=Z,400nm,19.0s
HDIL Hopedale 114.42 47 PFAKE 07 11 30.0 +11
HDIL LR LR
comp=Z,400nm,20.0s
K43A Burlington 114.45 44 PFAKE 07 11 30.0 +11
K43A LR LR
comp=Z,500nm,19.0s
PBMO Poplar Bluff 114.59 51 PFAKE 07 11 30.0 +10
PBMO LR LR
comp=Z,500nm,20.0s
E44A Grand Marais A 114.70 40 PFAKE 07 11 30.0 +10
E44A LR LR
comp=Z,500nm,20.0s
SUW Suwalki 114.70 329 PFAKE 07 11 30.0 +11
SUW LR LR
comp=Z,700nm,22.0s
HBAR Harrisburg 114.71 53 PFAKE 07 11 30.0 +10
HBAR LR LR
comp=Z,400nm,18.0s
X43A Marvell 114.77 54 PFAKE 07 11 30.0 +10
X43A LR LR
comp=Z,400nm,20.0s
M44A Midewin, Midew 115.08 46 PFAKE 07 11 30.0 +10
M44A LR LR
comp=Z,400nm,20.0s
GNAR Gosnell 115.11 52 PFAKE 07 11 30.0 +9.4
GNAR LR LR
comp=Z,500nm,18.0s
PARMO Parma 115.15 51 PFAKE 07 11 30.0 +9.3
PARMO LR LR
comp=Z,500nm,20.0s
MDUB Mudurnu 115.23 313 PFAKE 07 11 30.0 +9.1
MDUB LR LR
comp=Z,700nm,21.0s
PVMO Portageville 115.25 51 PFAKE 07 11 30.0 +9.1
PVMO LR LR
comp=Z,600nm,20.0s
I45A Fountain 115.44 42 PFAKE 07 11 30.0 +9.0
I45A LR LR
comp=Z,500nm,19.0s
G45A Suttons Bay 115.46 41 PFAKE 07 11 30.0 +9.0
G45A LR LR
comp=Z,400nm,20.0s
NOA NORSAR Array B 115.51 340 PKP **PKiKP 07 11 18.6 -2.1**
comp=Z,0.3nm,0.7s,baz=49,slow=2.1,SNR=2.1
J45A Montague 115.55 43 PFAKE 07 11 30.0 +8.7
J45A LR LR
comp=Z,500nm,19.0s
VBMS Vicksburg 115.58 56 PFAKE 07 11 30.0 +8.4
VBMS LR LR
comp=Z,500nm,19.0s
GLAT Glass 115.61 51 PFAKE 07 11 30.0 +8.4
GLAT LR LR
comp=Z,2μm,20.0s
HALT Halls 115.66 52 PFAKE 07 11 30.0 +8.3
HALT LR LR
comp=Z,500nm,19.0s
E46A Sault Ste Mari 115.83 40 PFAKE 07 11 30.0 +8.3
E46A LR LR
comp=Z,400nm,19.0s
TIRR Tirgusor 115.83 318 PFAKE 07 11 30.0 +8.3
TIRR LR LR
comp=Z,2μm,21.0s
P45A Graceland, Par 115.87 48 PFAKE 07 11 30.0 +8.0
P45A LR LR
comp=Z,300nm,18.0s
T45A Paducah 115.91 51 PFAKE 07 11 30.0 +7.9
T45A LR LR
comp=Z,600nm,19.0s
OXF Oxford 115.95 53 PFAKE 07 11 30.0 +7.7
OXF LR LR
comp=Z,500nm,20.0s
SFIN Lafayette 116.07 47 PFAKE 07 11 30.0 +7.6
SFIN LR LR
comp=Z,400nm,21.0s
L46A Eue Claire 116.11 45 PFAKE 07 11 30.0 +7.6
L46A LR LR
comp=Z,500nm,19.0s
GLMI Grayling 116.23 41 PFAKE 07 11 30.0 +7.5
GLMI LR LR
comp=Z,500nm,20.0s
M46A Old House Fiel 116.27 45 PFAKE 07 11 30.0 +7.3
M46A LR LR
comp=Z,600nm,22.0s
USIN University of 116.39 49 PFAKE 07 11 30.0 +7.0
USIN LR LR
comp=Z,600nm,18.0s
ISP Isparta 116.53 311 PFAKE 07 11 30.0 +6.5
ISP LR LR
comp=Z,300nm,21.0s
I47A Gladwin 116.61 42 PFAKE 07 11 30.0 +6.7
I47A LR LR
comp=Z,600nm,21.0s
J47A Sunmer 116.69 43 PFAKE 07 11 30.0 +6.5
J47A LR LR
comp=Z,400nm,18.0s
WVT Waverly 116.78 51 PFAKE 07 11 40.0 +16
WVT LR LR
comp=Z,400nm,19.0s
BLO Bloomington 116.88 48 PFAKE 07 11 40.0 +16
BLO LR LR
comp=Z,400nm,19.0s
PLAL Pickwick Lake 116.90 53 PFAKE 07 11 40.0 +16
PLAL LR LR
comp=Z,400nm,19.0s
MLR Muntele Rosu 117.04 320 PFAKE 07 11 40.0 +16
MLR LR LR
comp=Z,600nm,22.0s
KONO Kongsberg 117.07 339 PFAKE 07 11 30.0 +6.3
KONO LR LR
comp=Z,500nm,20.0s
T47A Sharon Grove 117.10 50 PFAKE 07 11 40.0 +16
T47A LR LR
comp=Z,400nm,19.0s
H48A Harrisville 117.12 41 PFAKE 07 11 40.0 +16
H48A LR LR
comp=Z,500nm,20.0s
147A Livingston 117.32 55 PFAKE 07 11 40.0 +15
147A LR LR
comp=Z,700nm,20.0s
WCI Wyandotte Cave 117.34 49 PFAKE 07 11 40.0 +15
WCI LR LR
comp=Z,500nm,19.0s
J48A Bridge Port 117.37 43 PFAKE 07 11 40.0 +15
J48A LR LR
comp=Z,400nm,20.0s
M48A Edgerton 117.40 45 PFAKE 07 11 40.0 +15
M48A LR LR
comp=Z,500nm,20.0s
P48A Milroy 117.59 47 PFAKE 07 11 40.0 +15
P48A LR LR
comp=Z,400nm,19.0s
V48A Smith Brothers 117.68 51 PFAKE 07 11 40.0 +14
V48A LR LR
comp=Z,500nm,18.0s
I49A Point Hope 117.76 42 PFAKE 07 11 40.0 +14
I49A LR LR
comp=Z,500nm,18.0s
AAM Ann Arbor 117.83 44 PFAKE 07 11 40.0 +14
AAM LR LR
comp=Z,600nm,19.0s
X48A Hartselle 117.86 53 PFAKE 07 11 40.0 +14
X48A LR LR
comp=Z,500nm,22.0s
CLTN Cedars of Leba 117.96 51 PFAKE 07 11 40.0 +14
CLTN LR LR
comp=Z,200nm,19.0s
N49A Columbus Grove 117.98 45 PFAKE 07 11 40.0 +14
N49A LR LR
comp=Z,500nm,21.0s
O49A Covington 118.13 46 PFAKE 07 11 40.0 +14
O49A LR LR
comp=Z,400nm,21.0s
R49A Shelbyville 118.16 48 PFAKE 07 11 40.0 +14
R49A LR LR
comp=Z,400nm,20.0s
MYIG Mrida 118.17 68 PFAKE 07 11 40.0 +13
MYIG LR LR
comp=Z,500nm,21.0s
T49A Edmonton 118.26 50 PFAKE 07 11 40.0 +13
T49A LR LR
comp=Z,400nm,18.0s
LRAL Lakeview Retre 118.27 54 PFAKE 07 11 40.0 +13
LRAL LR LR
comp=Z,400nm,20.0s
K50A Casco 118.36 43 PFAKE 07 11 40.0 +13
K50A LR LR
comp=Z,500nm,21.0s
Y49A Blount Mountai 118.52 53 PFAKE 07 11 40.0 +13
Y49A LR LR
comp=Z,400nm,20.0s
M50A Fremont 118.60 44 PFAKE 07 11 40.0 +13
M50A LR LR
comp=Z,400nm,20.0s
R50A Paris 118.79 48 PFAKE 07 11 40.0 +12
R50A LR LR
comp=Z,400nm,20.0s
W50A Signal Mountai 119.01 52 PFAKE 07 11 40.0 +12
W50A LR LR
comp=Z,400nm,20.0s
ACSO Alum Creek Sta 119.08 45 PFAKE 07 11 40.0 +12
ACSO LR LR
comp=Z,700nm,19.0s
Z50A Ashland 119.08 54 PFAKE 07 11 40.0 +12
Z50A LR LR
comp=Z,400nm,20.0s
RGN Rugen 119.10 334 PFAKE 07 11 40.0 +12
RGN LR LR
comp=Z,800nm,20.0s
250A Grady 119.14 55 PFAKE 07 11 40.0 +11
250A LR LR
comp=Z,500nm,20.0s
N51A Ashland 119.25 45 PFAKE 07 11 40.0 +11
N51A LR LR
comp=Z,500nm,22.0s
Q51A Peebles 119.25 47 PFAKE 07 11 40.0 +11
Q51A LR LR
comp=Z,400nm,19.0s
P51A Williamsport 119.30 46 PFAKE 07 11 40.0 +11
P51A LR LR
comp=Z,400nm,20.0s
S51A Beattyville 119.55 48 PFAKE 07 11 40.0 +11
S51A LR LR
comp=Z,600nm,21.0s
CPCT Cooper Cave 119.55 51 PFAKE 07 11 40.0 +11
CPCT LR LR
comp=Z,500nm,20.0s
X51A Calhoun 119.56 52 PFAKE 07 11 40.0 +11
X51A LR LR
comp=Z,400nm,19.0s
OKC Ostrava-Krasne 119.56 327 AMS AMS 08 03 20.0
comp=Z,600nm,19.6s
D53A Lac Vacive, Po 119.57 36 PFAKE 07 11 40.0 +11
D53A LR LR
comp=Z,500nm,20.0s
V51A Loudon 119.58 51 PFAKE 07 11 40.0 +11
V51A LR LR
comp=Z,500nm,18.0s
PSZ Piszkesteto 119.61 325 PFAKE 07 11 40.0 +11
PSZ LR LR
comp=Z,600nm,22.0s
M52A Chesterland 119.71 44 PFAKE 07 11 40.0 +11
M52A LR LR
comp=Z,500nm,20.0s
MORC Moravsky Berou 119.92 327 PFAKE 07 11 40.0 +10
MORC LR LR
comp=Z,700nm,22.0s
MORC Moravsky Berou 119.92 327 *e*PKP **PKiKP 07 11 35.4 +5.8**
O52A Adamsville 119.94 45 PFAKE 07 11 40.0 +10
O52A LR LR
comp=Z,400nm,20.0s
TZTN Tazewell 119.95 50 PFAKE 07 11 40.0 +10
TZTN LR LR
comp=Z,300nm,18.0s
VTS Vitosha 120.02 318 PFAKE 07 11 40.0 +10
VTS LR LR
comp=Z,400nm,22.0s
W52A Murphy 120.12 51 PFAKE 07 11 40.0 +10
W52A LR LR
comp=Z,400nm,19.0s
V52A Sevierville 120.14 50 PFAKE 07 11 40.0 +10
V52A LR LR
comp=Z,400nm,20.0s
OSTC Ostas 120.17 329 AMS AMS 08 04 00.0
comp=Z,700nm,19.1s
T52A Hallie 120.19 49 PFAKE 07 11 40.0 +9.5
T52A LR LR
comp=Z,500nm,20.0s
152A Waverly Hall 120.22 54 PFAKE 07 11 40.0 +9.3
152A LR LR
comp=Z,500nm,21.0s
CHVC Chvalec 120.24 329 AMS AMS 08 04 10.0
comp=Z,700nm,20.8s
DPC Dobruska-Polom 120.24 328 AMS AMS 08 02 10.0
comp=Z,600nm,24.2s
UPC Upice 120.31 329 *e*SP SP 07 22 40.1 -3.0
UPC AMS AMS 08 04 10.0
comp=Z,700nm,20.0s
N53A Lisbon 120.37 44 PFAKE 07 11 40.0 +9.3
N53A LR LR
comp=Z,500nm,20.0s
352A Blakely 120.37 56 PFAKE 07 11 40.0 +9.0
352A LR LR
comp=Z,400nm,19.0s
Y52A Lilburn 120.39 53 PFAKE 07 11 40.0 +9.0
Y52A LR LR
comp=Z,400nm,19.0s
ERPA Erie 120.41 42 PFAKE 07 11 40.0 +9.2
ERPA LR LR
comp=Z,600nm,20.0s
P53A Whipple 120.50 46 PFAKE 07 11 40.0 +9.0
P53A LR LR
comp=Z,500nm,19.0s
R53A Hurricane 120.52 47 PFAKE 07 11 40.0 +8.9
R53A LR LR
comp=Z,500nm,20.0s
J54A Appleton 120.79 41 PFAKE 07 11 40.0 +8.6
J54A LR LR
comp=Z,500nm,19.0s
V53A Saluda 120.80 50 PFAKE 07 11 40.0 +8.2
V53A LR LR
comp=Z,500nm,19.0s
253A Americus 120.86 55 PFAKE 07 11 40.0 +8.1
253A LR LR
comp=Z,400nm,19.0s
DELO Deloro Mine 120.87 39 PFAKE 07 11 40.0 +8.4
DELO LR LR
comp=Z,500nm,20.0s
M54A Oil Creek Stat 120.88 43 PFAKE 07 11 40.0 +8.3
M54A LR LR
comp=Z,500nm,20.0s
N54A Moraine State 120.89 44 PFAKE 07 11 40.0 +8.2
N54A LR LR
comp=Z,600nm,20.0s
KRUC Moravsky 120.94 327 *e*PKP **PKiKP 07 11 38.2 +6.6**
PLVO Plevna 120.95 38 PFAKE 07 11 40.0 +8.3
PLVO LR LR
comp=Z,500nm,20.0s
MEDO Medina 120.96 41 PFAKE 07 11 40.0 +8.2
MEDO LR LR
comp=Z,600nm,20.0s
CSGN Cosiguina Volc 120.99 77 PFAKE 07 11 40.0 +7.3
CSGN LR LR
comp=Z,500nm,21.0s
GOGA Godfrey 121.00 53 PFAKE 07 11 40.0 +7.8
GOGA LR LR
comp=Z,400nm,18.0s
PVCC Panska Ves 121.04 329 AMS AMS 08 00 50.0
comp=Z,700nm,26.4s
Q54A Coxs Mills 121.09 46 PFAKE 07 11 40.0 +7.8
Q54A LR LR
comp=Z,500nm,19.0s
BRG Berggiesshubel 121.14 330 *e*PKP **PKiKP 07 11 38.4 +6.5**
comp=Z,5.7nm,1.3s
BRG SS SS 07 29 58.0 +25
comp=N,303nm,18.4s
comp=E,515nm,20.4s
comp=Z,551nm,20.8s
BRG Berggiesshubel 121.14 330 *e*PKIKP **PKiKP 07 11 38.4 +6.5**
BRG SS SS 07 29 58.0 +25
BRG pmax pmax
comp=Z,6.0nm,1.3s
BRG MLR MLR
comp=N,303nm,18.4s
BRG MLR MLR
comp=E,515nm,20.4s
BRG MLR MLR
comp=Z,551nm,20.8s
TGUH Tegucigalpa,Un 121.19 76 PFAKE 07 11 40.0 +7.0
TGUH LR LR
comp=Z,600nm,18.0s
U54A Nelsons Funny 121.27 49 PFAKE 07 11 40.0 +7.3
U54A LR LR
comp=Z,400nm,20.0s
GOPC GO Pecny, Ondr 121.30 329 *e*SP SP 07 22 55.4 +3.5
GOPC AMS AMS 08 04 20.0
comp=Z,600nm,17.6s
J55A Hilton 121.33 40 PFAKE 07 11 40.0 +7.5
J55A LR LR
comp=Z,400nm,19.0s
CLL Collm 121.33 331 PFAKE 07 11 40.0 +7.7
CLL LR LR
comp=Z,500nm,20.0s
CLL Collm 121.33 331 *e*PKPdf **PKPdf 07 11 30.0 -2.1**
CLL *e*PPP PPP 07 15 36.0
CLL *e*PS **PS 07 22 48.0 -7.7**
CLL *e*PPS PPS 07 24 12.0
CLL *e*SS SS 07 29 24.0 -11
CLL *e*SSS SSS 07 33 48.0
CLL Collm 121.33 331 *e*PKIKP **PKPdf 07 11 30.0 -2.1**
PRU Pruhonice 121.38 329 *e*SP SP 07 22 49.0 -3.6
PRU AMS AMS 08 04 10.0
comp=Z,600nm,19.1s
TIGA Tifton 121.48 55 PFAKE 07 11 40.0 +6.8
TIGA LR LR
comp=Z,400nm,20.0s
MMNY Mt. Morris Dam 121.52 41 PFAKE 07 11 40.0 +7.1
MMNY LR LR
comp=Z,500nm,20.0s
MCWV Mont Chateau 121.52 45 PFAKE 07 11 40.0 +7.0
MCWV LR LR
comp=Z,300nm,22.0s
154A Montrose 121.53 54 PFAKE 07 11 40.0 +6.8
154A LR LR
comp=Z,600nm,22.0s
N55A Marion Center 121.66 43 PFAKE 07 11 40.0 +6.7
N55A LR LR
comp=Z,600nm,20.0s
HODGE Hodges 121.70 52 PFAKE 07 11 40.0 +6.5
HODGE LR LR
comp=Z,400nm,19.0s
PAULI Pauline 121.86 51 PFAKE 07 11 50.0 +16
PAULI LR LR
comp=Z,500nm,19.0s
BLA Blacksburg 122.06 48 PFAKE 07 11 50.0 +16
BLA LR LR
comp=Z,600nm,18.0s
KMSC Kings Mountain 122.12 50 PFAKE 07 11 50.0 +16
KMSC LR LR
comp=Z,500nm,20.0s
ESTN Estel 122.14 77 PFAKE 07 11 50.0 +15
ESTN LR LR
comp=Z,700nm,21.0s
O56A Blue Knob Stat 122.16 44 PFAKE 07 11 50.0 +16
O56A LR LR
comp=Z,600nm,19.0s
255A Hazlehurst 122.25 54 PFAKE 07 11 50.0 +15
255A LR LR
comp=Z,400nm,19.0s
555A McAlpin 122.36 57 PFAKE 07 11 50.0 +15
555A LR LR
comp=Z,500nm,18.0s
KHC Kasperske Hory 122.40 329 PFAKE 07 11 50.0 +15
KHC LR LR
comp=Z,300nm,21.0s
KHC Kasperske Hory 122.40 329 *e*PKIKP **PKiKP 07 11 35.2 +0.7**
KHC *e* 07 11 39.2
KHC *e*SP SP 07 22 58.2 -3.5
KHC MLR MLR
comp=Z,800nm,23.2s
KHC Kasperske Hory 122.40 329 *e*PKP **PKiKP 07 11 35.2 +0.7**

KHC *e*pPKP **pPKPdf** **07 11 39.2 -1.6**
KHC *e*SP SP 07 22 58.2 -3.5
KHC AMS AMS 08 04 30.0
comp=Z,800nm,23.2s

JSC Jenkinsville 122.47 51 PFAKE 07 11 50.0 +15
JSC LR LR
comp=Z,600nm,19.0s

SSPA Standing Stone 122.47 43 PFAKE 07 11 50.0 +15
SSPA LR LR
comp=Z,400nm,20.0s

GEC2 GERESS Array S 122.51 328 PFAKE 07 11 50.0 +15
GEC2 LR LR
comp=Z,1μm,21.0s

GERES GERESS Array B 122.51 328 PKP **PKPdf** **07 11 34.8 +0.2**
comp=Z,2.0nm,0.7s,baz=48,slow=2.0,SNR=7.2

V56A Mocksville 122.52 49 PFAKE 07 11 50.0 +15
V56A LR LR
comp=Z,400nm,19.0s

LONY Lake Ozonia 122.70 38 PFAKE 07 11 50.0 +15
LONY LR LR
comp=Z,400nm,18.0s

Z56A Williston 122.70 52 PFAKE 07 11 50.0 +15
Z56A LR LR
comp=Z,500nm,18.0s

TTG Podgorica 122.72 319 PFAKE 07 11 50.0 +15
TTG LR LR
comp=Z,400nm,22.0s

TIR Tirane 122.83 318 PFAKE 07 11 50.0 +14
TIR LR LR
comp=Z,700nm,22.0s

BLY Banja Luka 122.86 323 PFAKE 07 11 50.0 +15
BLY LR LR
comp=Z,600nm,20.0s

S57A Dark Hollow, R 122.93 47 PFAKE 07 11 50.0 +14
S57A LR LR
comp=Z,600nm,20.0s

BIRD Birdtown, Kers 122.96 51 PFAKE 07 11 50.0 +14
BIRD LR LR
comp=Z,500nm,19.0s

T57A Hurt 123.01 48 PFAKE 07 11 50.0 +14
T57A LR LR
comp=Z,400nm,19.0s

W57A Gilead 123.14 50 PFAKE 07 11 50.0 +14
W57A LR LR
comp=Z,500nm,20.0s

Y57A Sumter 123.23 51 PFAKE 07 11 50.0 +13
Y57A LR LR
comp=Z,600nm,20.0s

GRA1 Grafenberg Arr 123.24 330 PFAKE 07 11 50.0 +14
GRA1 LR LR
comp=Z,600nm,21.0s

PAGS Pennsylvania G 123.45 43 PFAKE 07 11 50.0 +13
PAGS LR LR
comp=Z,500nm,19.0s

KSPA Keystone Colle 123.47 41 PFAKE 07 11 50.0 +13
KSPA LR LR
comp=Z,600nm,19.0s

R58B Mineral 123.62 46 PFAKE 07 11 50.0 +13
R58B LR LR
comp=Z,500nm,18.0s

S58A Poland Farm, P 123.64 47 PFAKE 07 11 50.0 +13
S58A LR LR
comp=Z,500nm,21.0s

SDMD Soldier's Deli 123.73 44 PFAKE 07 11 50.0 +13
SDMD LR LR
comp=Z,300nm,19.0s

N59A State Game Lan 123.77 42 PFAKE 07 11 50.0 +13
N59A LR LR
comp=Z,500nm,18.0s

Y58A Scranton 123.84 51 PFAKE 07 11 50.0 +12
Y58A LR LR
comp=Z,600nm,19.0s

X58A Rowland 123.86 50 PFAKE 07 11 50.0 +12
X58A LR LR
comp=Z,600nm,18.0s

CBN Corbin Frederi 123.88 46 PFAKE 07 11 50.0 +12
CBN LR LR
comp=Z,400nm,18.0s

VT1 Waterbury 123.96 37 PFAKE 07 11 50.0 +12
VT1 LR LR
comp=Z,400nm,20.0s

658A Bunnell 123.98 57 PFAKE 07 11 50.0 +12
658A LR LR
comp=Z,400nm,18.0s

LUPA Lehigh Univers 124.19 42 PFAKE 07 11 50.0 +12
LUPA LR LR
comp=Z,100nm,20.0s

DWPF Disney Wildern 124.20 58 PFAKE 07 11 50.0 +11
DWPF LR LR
comp=Z,400nm,19.0s

ESPN Las Esperanzas 124.21 78 PFAKE 07 11 50.0 +11
ESPN LR LR
comp=Z,700nm,20.0s

TRY Troy 124.24 39 PFAKE 07 11 50.0 +12
TRY LR LR
comp=Z,600nm,20.0s

T59A Double "B" Far 124.27 47 PFAKE 07 11 50.0 +12
T59A LR LR
comp=Z,500nm,20.0s

TRI Trieste 124.34 325 PFAKE 07 11 50.0 +12
TRI LR LR
comp=Z,300nm,20.0s

U59A Littleton 124.34 48 PFAKE 07 11 50.0 +11
U59A LR LR
comp=Z,700nm,19.0s

PSUB Penn St. - Bra 124.45 43 PFAKE 07 11 50.0 +11
PSUB LR LR
comp=Z,600nm,21.0s

ODNJ Ogdensburg 124.47 41 PFAKE 07 11 50.0 +11
ODNJ LR LR
comp=Z,500nm,20.0s

HNH Hanover 124.58 38 PFAKE 07 11 50.0 +11
HNH LR LR
comp=Z,500nm,19.0s

EKA Eskdalemuir Ar 124.68 343 PKP **PKPdf** **07 11 36.0 -2.5**
comp=Z,0.2nm,0.3s,baz=9.9,slow=1.7,SNR=2.5

EKA Eskdalemuir Ar 124.68 343 *e*PKIKP **PKPdf** **07 11 36.0 -2.5**

BRNJ Basking Ridge 124.69 42 PFAKE 07 11 50.0 +11
BRNJ LR LR
comp=Z,600nm,18.0s

CNNC Cliffs of the 124.71 49 PFAKE 07 11 50.0 +11
CNNC LR LR
comp=Z,500nm,19.0s

059A Moore Haven 124.75 60 PFAKE 07 11 50.0 +10
059A LR LR
comp=Z,500nm,19.0s

T60A Surry 124.79 47 PFAKE 07 11 50.0 +10
T60A LR LR
comp=Z,600nm,21.0s

STU Stuttgart 124.85 330 PFAKE 07 11 50.0 +11
STU LR LR
comp=Z,500nm,20.0s

KSCT Kent School, K 124.88 40 PFAKE 07 11 50.0 +10
KSCT LR LR
comp=Z,700nm,21.0s

Y60A Bolivia 124.93 51 PFAKE 07 11 50.0 +10
Y60A LR LR
comp=Z,600nm,20.0s

PAL Palisades 124.96 41 PFAKE 07 11 50.0 +10
PAL LR LR
comp=Z,600nm,20.0s

V60A Jim Taylor Roa 124.97 48 PFAKE 07 11 50.0 +10
V60A LR LR
comp=Z,500nm,20.0s

FFD Franklin Falls 125.09 37 PFAKE 07 11 50.0 +10
FFD LR LR
comp=Z,600nm,18.0s

061Z Ochoppi 125.24 61 PFAKE 07 11 50.0 +9.3
061Z LR LR
comp=Z,300nm,20.0s

PQI Presque Isle 125.28 32 PFAKE 07 11 50.0 +10
PQI LR LR
comp=Z,500nm,22.0s

QUA2 Belchertown 125.31 39 PFAKE 07 11 50.0 +10
QUA2 LR LR
comp=Z,600nm,20.0s

060A Indiantown 125.41 59 PFAKE 07 11 50.0 +9.0
060A LR LR
comp=Z,400nm,20.0s

YLE Yale 125.44 40 PFAKE 07 11 50.0 +9.3
YLE LR LR
comp=Z,800nm,20.0s

PKME Peaks-Kenny Pk 125.45 34 PFAKE 07 11 50.0 +9.4
PKME LR LR
comp=Z,600nm,19.0s

BFO Black Forest 125.57 331 PFAKE 07 11 50.0 +9.2
BFO LR LR
comp=Z,500nm,21.0s

UCC Uccle 125.62 335 PFAKE 07 11 50.0 +9.3
UCC LR LR
comp=Z,800nm,20.0s

WVL Waterville 125.65 35 PFAKE 07 11 50.0 +9.0
WVL LR LR
comp=Z,500nm,21.0s

WLF Walferdange 125.67 333 PFAKE 07 11 50.0 +9.1
WLF LR LR
comp=Z,3μm,21.0s

HRV Adam Dziewonsk 125.68 38 PFAKE 07 11 50.0 +8.9
HRV LR LR
comp=Z,500nm,19.0s

FUORN Ofenpass-Fuorn 125.71 328 PFAKE 07 11 50.0 +8.6
FUORN LR LR
comp=Z,1μm,21.0s

DAVOX Davos/Dischmat 125.81 328 PKP **PKPdf** **07 11 41.4 +0.3**
comp=Z,2.6nm,0.4s,baz=306,slow=17,SNR=3.1

WES Weston 125.89 38 PFAKE 07 11 50.0 +8.4
WES LR LR
comp=Z,500nm,20.0s

BATG Bathurst New B 125.92 31 PFAKE 07 11 50.0 +8.5
BATG LR LR
comp=Z,600nm,19.0s

TIP Timpagrande 125.95 317 PFAKE 07 11 50.0 +8.1
TIP LR LR
comp=Z,600nm,22.0s

BRYW Bryant College 126.01 39 PFAKE 07 11 50.0 +8.1
BRYW LR LR
comp=Z,500nm,18.0s

ECH Echery 126.22 331 PFAKE 07 11 50.0 +7.9
ECH LR LR
comp=Z,500nm,22.0s

AQU L'Aquila 126.47 322 PFAKE 07 11 50.0 +7.2
AQU LR LR
comp=Z,500nm,21.0s

EMMW East Machias 126.81 34 PFAKE 07 11 50.0 +6.7
EMMW LR LR
comp=Z,400nm,20.0s

SENIN Lac Senin/Sane 127.42 329 PFAKE 07 12 00.0 +15
SENIN LR LR
comp=Z,600nm,22.0s

CLF Chambon-Foret 128.61 334 PFAKE 07 12 00.0 +13
CLF LR LR
comp=Z,700nm,21.0s

BNI Bardonecchia 128.63 328 PFAKE 07 12 00.0 +13
BNI LR LR
comp=Z,800nm,20.0s

WDD Wied Dalam 129.11 314 PFAKE 07 12 00.0 +12
WDD LR LR
comp=Z,200nm,22.0s

SSB Saint Sauveur 129.56 330 PFAKE 07 12 00.0 +11
SSB LR LR
comp=Z,400nm,21.0s

OTAV Otavalo 129.97 93 PFAKE 07 12 00.0 +8.8
OTAV LR LR
comp=Z,600nm,21.0s

LPAZ La Paz 136.05 118 PKP **PKiKP** **07 12 03.6 +0.1**
comp=Z,1.1nm,0.7s,baz=284,slow=10,SNR=3.9

SDV Santo Domingo 137.85 81 PFAKE 07 12 20.0 +13
SDV LR LR
comp=Z,300nm,20.0s

ESLA Sonseca Array 137.92 331 PFAKE 07 12 20.0 +14
ESLA LR LR
comp=Z,600nm,21.0s

SJG San Juan 140.51 66 PFAKE 07 12 20.0 +8.2
SJG LR LR
comp=Z,400nm,19.0s

PVAQ Vaqueiros 141.49 333 PFAKE 07 12 20.0 +6.7
PVAQ LR LR
comp=Z,500nm,21.0s

SFS San Fernando 141.53 331 PFAKE 07 12 20.0 +6.6
SFS LR LR
comp=Z,400nm,20.0s

SMRT St. Maarten 143.31 65 PFAKE 07 12 30.0 +12
SMRT LR LR
comp=Z,600nm,18.0s

SVB Belmont 146.32 72 PFAKE 07 12 30.0 +6.2
SVB LR LR
comp=Z,500nm,21.0s

PTGA Pitinga 148.24 97 *e*PKPbc **PKPbc** **07 12 26.7 +0.6**

TOA2 Torodi Ar. Sit 148.74 289 PFAKE 07 12 30.0 -1.1
TOA2 LR LR
comp=Z,400nm,22.0s

TOA0 Torodi Ar. Sit 148.75 289 *e*PKPbc **PKPbc** **07 12 27.0 -0.4**

TORD Torodi Ar. Bea 148.75 289 PKPbc **PKPdf** **07 12 25.1 +1.6**
comp=Z,7.3nm,1.1s,baz=115,slow=2.8,SNR=17

TOA1 Torodi Ar. Sit 148.75 289 *e*PKPbc **PKPdf** **07 12 25.1 +1.6**

BDFB Brasilia 152.71 135 PKPbc **PKPbc** **07 12 36.9 0.0**
comp=Z,6.0nm,0.8s,baz=211,slow=3.0,SNR=6.7

KIC Kosan Boka 156.19 277 *e*P **PKPab** **07 13 06.8 +4.4**
comp=Z,28nm,0.8s

DBIC Dimbokro 156.27 278 PKPab **PKPab** **07 13 02.0 -0.7**
comp=Z,14nm,0.7s,baz=132,slow=8.1,SNR=3.8

TIC Toumodi 156.44 278 *e*P **PKPab** **07 13 08.2 +4.7**

LIC Lamto 156.48 277 *e*P **PKPab** **07 13 08.4 +4.7**
comp=Z,120nm,1.8s

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*IDC **19** 07:06:50.2±2.5,34.°34N×25.°20E,h0km,mb3.7/3,*
mb1 3.9/7,mb1mx3.5/49,mbtmp3.8/7,ML4.0/4,MS4.4/1,
Ms1 4.4/1,ms1mx2.6/38,Error ellipse: s-maj=42.4km
s-min=18.0km az=42.0
*THE **19** 07:06:54.0,34.°33N×25.°02E,h1km±2km,ML3.1/5,Error*
ellipse: s-maj=4.1km s-min=1.2km az=159.0
*ATH **19** 07:06:54.6,34.°40N×25.°02E,h22km±3km,ML3.0/4,Error*
ellipse: s-maj=4.3km s-min=1.4km az=356.0
*HLW **19** 07:06:56.0,34.°06N×25.°39E,h10km±16km,Md2.9,Ml3.2*

ISC 19 07:06:51.5±1.3,34.°25N±0.°04×25.°10E±0.°04,h14km±9km,
n37,σ1°09/49,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.81**	**343**	P	**Pb**	**07 07 07.2**	**-0.1**
SIVA				S	**Sb**	**07 07 18.5**	**+0.4**
SIVA	**Sivas**	**0.81**	**343**	P	**Pb**	**07 07 07.6**	**+0.3**
SIVA				S	**Sg**	**07 07 16.5**	**-1.2**
SIVA	comp=N,4937μm,0.6s			AML	AML	07 07 19.8	
SIVA	comp=E,6118μm,0.4s			AML	AML	07 07 27.7	
TMBK	**Timbaki Herakl**	**0.87**	**341**	P	**Pn**	**07 07 09.2**	**-0.1**
TMBK				S	**Sn**	**07 07 21.2**	**-0.6**
LAST	**Lasithi**	**0.96**	**19**	P	**Pn**	**07 07 10.8**	**+0.1**
LAST				S	**Sn**	**07 07 24.4**	**+0.1**
LAST	**Lasithi**	**0.96**	**19**	P	**Pn**	**07 07 10.8**	**+0.1**
LAST				S	**Sn**	**07 07 23.2**	**-1.1**
LAST	comp=N,835μm,0.5s			AML	AML	07 07 30.9	
LAST	comp=E,629μm,0.6s			AML	AML	07 07 36.6	
GVD	**Gavdhos**	**1.03**	**305**	P	**Pb**	**07 07 11.5**	**+0.4**
GVD				S	**Sb**	**07 07 25.8**	**+1.4**
GVD	**Gavdhos**	**1.03**	**305**	P	**Pb**	**07 07 11.5**	**+0.4**
GVD				S	**Sg**	**07 07 24.4**	**-0.3**
GVD	comp=E,2973μm,0.4s			AML	AML	07 07 34.2	
GVD	comp=N,2729μm,0.3s			AML	AML	07 07 35.2	
GVDS	**Gavdos**	**1.03**	**306**	P	**Pn**	**07 07 11.9**	**+0.4**
GVDS				S	**Sg**	**07 07 25.2**	**+0.4**
IDI	**Anoyia**	**1.05**	**350**	LR	LR	07 07 07.7	
IDI	comp=N,15nm,21.9s,baz=61,slow=18			Pn	**Pn**	**07 07 11.9**	**-0.1**
IDI	comp=N,18nm,0.3s,baz=164,slow=20,SNR=50			Sn	**Sn**	**07 07 25.9**	**-0.6**
IDI	**Anoyia**	**1.05**	**350**	P	**Pn**	**07 07 11.6**	**-0.4**
KSTL	**Kastelli Herak**	**1.05**	**359**	P	**Pn**	**07 07 11.8**	**-0.1**
KSTL				S	**Sn**	**07 07 25.8**	**-0.6**
NPS	**Neapolis**	**1.10**	**22**	P	**Pn**	**07 07 14.1**	**+1.6**
NPS	**Neapolis**	**1.10**	**22**	P	**Pn**	**07 07 14.0**	**+1.5**
ZKR	**Zakros**	**1.26**	**46**	P	**Pg**	**07 07 17.5**	**+1.7**
VAM	**Vamos**	**1.38**	**328**	P	**Pg**	**07 07 17.3**	**-0.7**
VAM				S	**Sn**	**07 07 35.3**	**+1.0**
VAM	**Vamos**	**1.38**	**328**	P	**Pg**	**07 07 17.5**	**-0.5**
VAM				S	**Sb**	**07 07 34.1**	**-0.4**
VAM	comp=E,1455μm,0.4s			AML	AML	07 07 42.5	
VAM	comp=N,1073μm,0.6s			AML	AML	07 07 51.0	
IMMV	**Iera Moni Meta**	**1.52**	**323**	P	**Pg**	**07 07 20.1**	**-0.7**
IMMV				S	**Sb**	**07 07 39.6**	**+0.9**
IMMV	**Iera Moni Meta**	**1.52**	**323**	P	**Pg**	**07 07 20.4**	**-0.4**
KARP	**Karpathos**	**2.13**	**52**	P	**Pg**	**07 07 30.8**	**-1.5**
KARP	**Karpathos**	**2.13**	**52**	P	**Pg**	**07 07 30.9**	**-1.5**
SLUM	**Salum**	**2.75**	**178**	P	**Pn**	**07 07 37.2**	**+2.1**
SLUM	baz=184			AMP		07 08 00.0	
SLUM	baz=184			S	**Sn**	**07 08 06.9**	**-1.3**
DALY	**Dalyan (Mula)**	**3.87**	**47**	*i* P	**Pn**	**07 07 53.8**	**+3.3**
DALY	comp=Z,180nm,0.3s			IAML_P			
AKAS	**Kas**	**4.18**	**60**	*i* P	Pb	07 07 59.0	-6.0
AKAS				*i* S	**Sn**	**07 08 43.1**	**-0.6**
AKAS	comp=Z,435nm,0.2s			IAML_P			
SWA2		**5.00**	**176**	P	**Pn**	**07 08 07.7**	**+1.6**
HNAT	baz=179 **Natroun**	**6.56**	**133**	P	**Pn**	**07 08 29.0**	**+1.3**
GLL	baz=133 **Jalalah**	**7.29**	**128**	P	**Pn**	**07 08 38.4**	**+0.8**
NBNS	baz=128 **Bani Suef**	**7.71**	**135**	P	**Pn**	**07 08 44.7**	**+1.4**
EIL	baz=135 **Elat**	**9.53**	**116**	Pn	**Pn**	**07 09 08.6**	**+0.3**
ASF	comp=Z,1.1nm,0.3s,baz=274,slow=0.9,SNR=6.6 **Jabal al Asfar**	**10.09**	**99**	Pn	**Pn**	**07 09 16.1**	**-0.1**
AKASG	comp=Z,0.4nm,0.3s,baz=75,slow=12,SNR=2.4 **Malin Array Be**	**16.72**	**9**	Pn	**Pn**	**07 10 45.7**	**+0.5**
GERES	comp=Z,0.8nm,0.3s,baz=200,slow=10,SNR=4.5 **GERESS Array B**	**16.87**	**333**	Pn	**P**	**07 10 49.8**	**+0.5**
NOA	comp=Z,0.3nm,0.3s,baz=139,slow=12,SNR=13 **NORSAR Array B**	**28.27**	**346**	LR	LR	07 25 30.8	
ARCES	comp=Z,11nm,21.9s,baz=50,slow=40 **ARCESS Array B**	**35.34**	**0**	P	**P**	**07 13 44.1**	**-1.9**
KURBB	comp=Z,8.4nm,0.4s,baz=153,slow=8.1,SNR=3.1 **Kurchatov Arra**	**41.73**	**50**	P	**P**	**07 14 40.1**	**+0.1**
MKAR	comp=Z,0.6nm,0.5s,baz=269,slow=9.2,SNR=4.3 **Makanchi Array**	**44.32**	**56**	P	**P**	**07 15 01.9**	**+0.9**
ZALV	comp=Z,0.3nm,0.6s,baz=276,slow=7.1,SNR=3.7 **Zalesovo Beam**	**45.67**	**46**	P	**P**	**07 15 10.2**	**-1.4**
CPUP	comp=Z,1.1nm,0.4s,baz=262,slow=9.5,SNR=3.3 **Villa Florida**	**98.58**	**244**	LR	LR	08 06 02.7	
	comp=Z,152nm,19.9s,baz=202,slow=36						

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*DDA **19** 07:18:24.4,37.°02N×28.°26E,h7km±3km,ML2.5*
*ISK **19** 07:18:24.5,37.°00N×28.°25E,h8km,ML2.3/11*

ISC 19 07:18:24.6±0.9,37.°01N±0.°04×28.°26E±0.°03,h10km±9km,
n18,σ1°19/26,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**7**	PG	**Pg**	**07 18 28.0**	**+0.3**
YER				SG	**Sg**	**07 18 30.6**	**+0.6**
MRSB	**Marmaris-Mugla**	**0.29**	**190**	PG	**Pg**	**07 18 30.7**	**+0.2**
TURN	**Turunc**	**0.30**	**116**	PG	**Pg**	**07 18 29.4**	**-1.3**
TURN				SG	**Sg**	**07 18 33.9**	**-0.9**
TURN	**Turunc**	**0.30**	**116**	*i* P	**Pg**	**07 18 29.3**	**-1.3**
TURN				*i* S	**Sg**	**07 18 34.4**	**-0.4**
BBRN	**Bozburun-Marma**	**0.36**	**207**	PG	**Pg**	**07 18 31.9**	**+0.1**
DALY	**Dalyan (Mula)**	**0.37**	**121**	PG	**Pg**	**07 18 31.9**	**+0.1**
DALY				SG	**Sb**	**07 18 38.1**	**-0.8**
DALY	**Dalyan (Mula)**	**0.37**	**121**	*i* P	**Pg**	**07 18 32.1**	**+0.3**
DALY				*i* S	**Sb**	**07 18 38.4**	**-0.5**
DALY	comp=Z,2μm,0.1s			IAML_P			
DATC	**Datca-Mugla**	**0.54**	**243**	PG	**Pg**	**07 18 34.8**	**-0.3**
DAT	**Datca**	**0.61**	**243**	PG	**Pg**	**07 18 36.2**	**-0.4**
DAT	**Datca**	**0.61**	**243**	*i* P	**Pb**	**07 18 37.5**	**0.0**
DAT	comp=Z,262nm,0.1s			IAML_P			
BDRM	**Kayabasi**	**0.66**	**275**	*i* P	**Pg**	**07 18 37.2**	**-0.1**
BDRM				*i* S	**Sb**	**07 18 47.3**	**0.0**
BDRM	comp=Z,523nm,0.1s			IAML_P			
AYDN	**Tasoluk**	**0.72**	**335**	*i* P	**Pg**	**07 18 38.9**	**+0.3**
AYDN				*i* S	**Sg**	**07 18 48.4**	**+0.4**
AYDN	comp=Z,1μm,0.1s			IAML_P			
FETY	**Fethiye**	**0.76**	**119**	PG	**Pg**	**07 18 38.7**	**-0.5**
FETY	**Fethiye**	**0.76**	**119**	*i* P	**Pn**	**07 18 40.7**	**-0.7**
BODT	**Bodrum**	**0.76**	**274**	PG	**Pb**	**07 18 39.8**	**-0.2**
ARG	**Arkhangelos**	**0.80**	**188**	PG	**Pg**	**07 18 39.8**	**-0.2**
AKAS	**Kas**	**1.33**	**125**	PN	**Pg**	**07 18 50.3**	**+0.2**
AKAS	**Kas**	**1.33**	**125**	*i* P	**Pg**	**07 18 52.0**	**+1.9**
AKAS				*i* S	**Sg**	**07 19 11.9**	**+4.5**

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*IDC **19** 07:19:41.5±1.3,61.°43N×150.°11W,h44km±12km,mb3.8/21,*
mb1 4.0/26,mb1mx3.9/47,mbtmp4.0/26,ML3.5/5,MS4.0/3,
Ms1 4.1/3,ms1mx3.1/43,Error ellipse: s-maj=11.1km
s-min=8.5km az=99.0
*ISCJB **19** 07:19:42.2±0.2,61.°46N±0.°02×149.°87W±0.°04,h60km±2km,*
mb4.2/39,MS4.3/5,Error ellipse: s-maj=3.4km
s-min=3.1km az=178.1
*NEIC **19** 07:19:44.0±0.0,61.°43N×149.°83W,h49km,mb4.3/41,*
MW4.1,Moment Tensor Solution. s32 Moment tensor:
Scale 10^{15}Nm; M_{rr}-1.60; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$1.73; $M_{r\theta}$0.65;
$M_{\theta\phi}$0.37; $M_{\phi r}$0.21; Best double couple: $M_0$1.80000×10^{15}
NP1:ϕ_s352.00000°,δ43.00000°,λ-120.00000°. NP2:
ϕ_s210.00000°,δ54.00000°,λ-65.00000°. Principal axes:
T 1.8300, Plg6.0000°, Azm282.0000°; N 0.0100,
Plg20.0000°, Azm15.0000°; P -1.8500, Plg69.0000°,
Azm177.0000°; After AEIC.
NEIC Felt [IV] at Chugiak; [III] at Anchorage, Eagle River, Elmendorf AFB, Palmer and Wasilla; [II] at Fort Richardson and Girdwood. Also felt at Indian, Sutton, Talkeetna and Willow.

ISC 19 07:19:42.8±0.7,61.°42N±0.°03×149.°86W±0.°03,h53km±6km,
n125,σ1°17/143,mb4.1/39,MS4.1/5,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RC01	**Rabbit Creek A**	**0.34**	**170**	*e*Pn	**Pn**	**07 19 53.0**	**+0.4**
RC01				*e*Sn	**Sn**	**07 20 00.7**	**+1.1**
PMR	**Palmer**	**0.39**	**64**	*e*Pn	**Pn**	**07 19 52.8**	**-0.2**
PMR				*e*Sn	**Sn**	**07 20 00.3**	**0.0**
SUA	**Susitna One**	**0.43**	**276**	*e*Pn	**Pn**	**07 19 53.8**	**+0.2**
SUA				*e*Sn	**Sn**	**07 20 02.2**	**+0.9**
GHO	**Glory Hole Cre**	**0.57**	**52**	*e*Pn	**Pn**	**07 19 55.1**	**-0.1**
GHO				*e*Sn	**Sn**	**07 20 03.9**	**-0.1**
KNK	**Knik Glacier**	**0.67**	**90**	*e*Pn	**Pn**	**07 19 56.8**	**+0.4**
KNK				*e*Sn	**Sn**	**07 20 07.0**	**+0.9**
PTE	**Portage**	**0.69**	**144**	*e*Pn	**Pn**	**07 19 56.8**	**+0.3**
SML	**Sawmill**	**0.82**	**62**	*e*Pn	**Pn**	**07 19 58.2**	**-0.1**
SML				*e*Sn	**Sn**	**07 20 09.7**	**0.0**
SLKM	**Skilak Lake**	**0.94**	**191**	*e*Pn	**Pn**	**07 20 00.2**	**+0.4**
SKT	**Skwentna**	**0.97**	**306**	*e*Pn	**Pn**	**07 20 00.1**	**-0.2**
SKT				*e*Sn	**Sn**	**07 20 13.2**	**+0.1**
SPU	**Mount Spurr**	**1.09**	**258**	*e*Pn	**Pn**	**07 20 02.6**	**+0.8**
SCM	**Sheep Creek Mo**	**1.28**	**70**	*e*Pn	**Pn**	**07 20 04.7**	**+0.3**
SCM				*e*Sn	**Sn**	**07 20 20.9**	**+0.5**
SPWE	**Spurr West**	**1.31**	**265**	*e*Pn	**Pn**	**07 20 05.6**	**+0.7**
SEW	**Seward**	**1.34**	**171**	*e*Pn	**Pn**	**07 20 05.4**	**+0.3**
GLI	**Glacier Island**	**1.45**	**111**	*e*Pn	**Pn**	**07 20 06.6**	**0.0**
GLI				*e*Sn	**Sn**	**07 20 25.6**	**+1.1**
RDJH	**Redoubt Jeurge**	**1.66**	**241**	*e*Pn	**Pn**	**07 20 10.3**	**+0.7**
RDJH				*e*Sn	**Sn**	**07 20 30.8**	**+0.9**
RSO	**Redoubt South**	**1.71**	**237**	*e*Pn	**Pn**	**07 20 11.0**	**+0.6**
VMT	**TAPS TI Valdez**	**1.72**	**100**	*e*Pn	**Pn**	**07 20 10.5**	**+0.2**
VMT				*e*Sn	**Sn**	**07 20 32.6**	**+1.5**
BRLK	**Bradley Lake**	**1.74**	**197**	*e*Pn	**Pn**	**07 20 11.1**	**+0.5**
HOM	**Homer**	**1.98**	**207**	*e*Pn	**Pn**	**07 20 15.0**	**+1.2**
DIV	**Divide**	**2.00**	**97**	*e*Pn	**Pn**	**07 20 14.2**	**+0.1**
CNPM	**China Poot**	**2.02**	**200**	*e*Pn	**Pn**	**07 20 15.0**	**+0.5**
DHY	**Denali Highway**	**2.02**	**34**	*e*Pn	**Pn**	**07 20 15.9**	**+1.2**
RND	**Reindeer**	**2.04**	**13**	*e*Pn	**Pn**	**07 20 15.2**	**+0.4**
TRF	**Thorofare Moun**	**2.04**	**355**	*e*Pn	**Pn**	**07 20 15.3**	**+0.4**
EYAK	**Cordova Ski Ar**	**2.19**	**112**	*e*Pn	**Pn**	**07 20 16.5**	**-0.1**
PS11	**TAPS Pump Stt11**	**2.19**	**71**	*e*Pn	**Pn**	**07 20 17.9**	**+1.2**
KTH	**Kantishna Hill**	**2.19**	**347**	*e*Pn	**Pn**	**07 20 17.1**	**+0.3**
CAST	**Castle Rocks**	**2.25**	**334**	*e*Pn	**Pn**	**07 20 18.2**	**+0.6**
PS12	**TAPS Pump Stt12**	**2.27**	**87**	*e*Pn	**Pn**	**07 20 18.0**	**+0.3**
MCK	**McKinley**	**2.36**	**10**	*e*Pn	**Pn**	**07 20 19.9**	**+0.9**
PAX	**Paxson**	**2.58**	**51**	*e*Pn	**Pn**	**07 20 23.2**	**+1.1**
MID	**Middleton Isla**	**2.66**	**137**	*e*Pn	**Pn**	**07 20 23.6**	**+0.6**
BPAW	**Bear Paw Mtn.**	**2.74**	**350**	*e*Pn	**Pn**	**07 20 24.8**	**+0.6**
BWN	**Browne**	**2.77**	**4**	*e*Pn	**Pn**	**07 20 25.9**	**+1.3**

PS10	TAPS Pump St10	2.77	42	ePn	Pn	07 20 25.7	+1.1
HMT	Hamilton	2.95	109	ePn	Pn	07 20 26.6	-0.5
TT01	Tatalina	3.25	300	ePn	Pn	07 20 31.1	-0.1
MENT	Mentasta	3.25	59	ePn	Pn	07 20 33.0	+1.7
TTA	Tatalina	3.26	300	ePn	Pn	07 20 31.3	-0.1
RIDG	Independent Ri	3.29	43	ePn	Pn	07 20 33.7	+1.9
CCB	Clear Creek Bu	3.37	15	ePn	Pn	07 20 33.2	+0.4
PS08	TAPS Pump Stn8	3.42	23	ePn	Pn	07 20 34.6	+1.1
DOT	Dot Lake	3.49	48	ePn	Pn	07 20 35.8	+1.2
COLA	College	3.58	14	ePn	Pn	07 20 36.0	+0.3
ILAR	Eielson Array	3.62	21	P	Pn	07 20 36.5	+0.1
	4.0nm,0.3s,baz=207,slow=14,SNR=116						
ILAR				S	Sn	07 21 18.8	+1.0
	18nm,0.3s,baz=217,slow=16,SNR=7.2						
ILB	Eielson Array	3.62	21	ePn	Pn	07 20 36.8	+0.5
MDM	Murphy Dome	3.62	11	ePn	Pn	07 20 36.8	+0.4
MLY	Manley	3.64	354	ePn	Pn	07 20 36.5	-0.1
KDAK	Kodiak Island	3.91	202	P	Pn	07 20 39.0	-1.2
	2.7nm,0.3s,baz=55,slow=16,SNR=61						
KDAK				S	Sn	07 21 21.2	-3.5
	16nm,0.3s,baz=41,slow=14,SNR=4.3						
KDAK	Kodiak Island	3.91	202	ePn	Pn	07 20 40.7	+0.5
KDAK				e		07 20 41.4	
BCA3	Beaver Creek A	4.12	63	ePn	Pn	07 20 43.7	+0.5
KELA	Mount Kelaz	4.21	227	ePn	Pn	07 20 45.3	+0.9
PS06	TAPS Pump Stn6	4.45	1	ePn	Pn	07 20 48.1	+0.5
CHX	Chaix Hills	4.50	104	ePn	Pn	07 20 48.8	+0.4
PRP	Porcupine Dome	4.55	23	ePn	Pn	07 20 49.0	-0.1
OHAK	Old Harbor	4.56	204	ePn	Pn	07 20 49.9	+0.7
IM3	Indian Mountai	4.89	341	ePn	Pn	07 20 53.5	-0.2
PCA	Pinnacle	4.89	102	ePn	Pn	07 20 53.8	0.0
EGAK	Eagle	5.19	46	ePn	Pn	07 20 58.7	+0.9
PNL	Peninsula	5.45	104	ePn	Pn	07 21 01.5	+0.1
DAWY	Dawson	5.49	57	ePn	Pn	07 21 02.6	+0.7
COLD	Coldfoot	5.83	359	ePn	Pn	07 21 06.9	+0.4
BM3	Burnt Mountain	6.43	18	ePn	Pn	07 21 15.4	+0.6
WHY	Whitehorse	7.31	89	ePn	Pn	07 21 26.7	-0.2
EPYK	Eagle Plains	7.62	44	ePn	Pn	07 21 33.0	+2.0
ANM	Nome	7.73	301	ePn	Pn	07 21 32.6	+0.1
BESE	Bessie Mountai	8.04	104	ePn	Pn	07 21 35.5	-1.3
SIT	Sitka	8.63	114	ePn	Pn	07 21 43.5	-1.3
INK	Inuvik	9.77	38	P	Pn	07 22 01.0	+0.7
	0.1nm,0.3s,baz=232,slow=14,SNR=3.3						
INK				S	Sn	07 23 47.8	-0.4
	0.4nm,0.3s,baz=185,slow=11,SNR=1.8						
INK	Inuvik	9.77	38	ePn	Pn	07 22 00.2	-0.1
WRAK	Wrangell Islan	10.33	111	ePn	Pn	07 22 09.0	+0.9
DLBC	Dease Lake	10.38	98	P	Pn	07 22 07.9	-0.9
	0.4nm,0.3s,baz=246,slow=6.7,SNR=4.7						
DLBC				S	Sn	07 24 01.6	-1.9
	0.2nm,0.3s,baz=225,slow=20,SNR=1.9						
DLBC	Dease Lake	10.38	98	ePn	Pn	07 22 08.2	-0.7
DIB	Dawson Inlet,	12.46	124	ePn	Pn	07 22 36.6	-0.5
MOBC	Moresby Island	12.70	123	ePn	Pn	07 22 40.1	-0.4
YKA	Yellowknife Ar	16.49	71	P	P	07 23 32.2	+0.2
	0.2nm,0.3s,baz=277,slow=11,SNR=15						
YKB5	Yellowknife Ar	16.49	71	eP	P	07 23 32.2	+0.2
NLWA	Neilton Lookou	20.45	122	eP	Pn	07 24 17.7	-0.4
	9.5nm,1.0s						
NEW	Newport	22.69	111	P	P	07 24 40.3	+0.6
	0.5nm,0.4s,baz=304,slow=7.5,SNR=5.2						
NEW	Newport	22.69	111	eP	P	07 24 41.3	+1.6
	5.0nm,1.0s						
RES	Resolute Bay	23.27	33	P	P	07 24 44.3	-0.9
	1.8nm,0.6s,baz=262,slow=9.5,SNR=4.6						
H04A	Detroit Lake	23.33	123	eP	P	07 24 48.0	+2.0
	3.3nm,0.6s						
HUMO	Hull Mountain	24.77	127	eP	P	07 25 02.1	+2.7
	5.7nm,1.3s						
I07A	Izee	24.92	120	eP	P	07 25 03.5	+2.8
	3.8nm,0.8s						
K05A	Summer Lake	25.48	124	eP	P	07 25 08.5	+2.6
	4.3nm,0.8s						
YBH	Yreka Blue Hor	25.62	128	P	P	07 25 08.5	+1.4
	1.9nm,0.8s,baz=314,slow=4.0,SNR=4.7						
BOZ	Bozeman (W)	27.18	108	eP	P	07 25 22.4	+1.1
	1.4nm,0.7s						
YHH	Holmes Hill	28.16	108	eP	P	07 25 32.4	+2.3
	2.2nm,0.7s						
RLMT	Red Lodge	28.63	106	eP	P	07 25 37.0	+2.8
	8.8nm,1.2s						
ELK	Elko	29.46	119	P	P	07 25 42.9	+1.3
	2.1nm,0.8s,baz=303,slow=10,SNR=9.4						
NV01	Mina Array Sit	30.17	125	eP	P	07 25 49.4	+1.5
NV01				ePcP	PcP	07 28 48.2	+0.5
NVAR	Mina Array Bea	30.17	125	P	P	07 25 49.4	+1.5
	1.2nm,0.7s,baz=303,slow=9.8,SNR=9.4						
NVAR				PcP	PcP	07 28 48.2	+0.5
	0.5nm,0.6s,baz=321,slow=2.1,SNR=4.8						
PDAR	Pinedale Array	30.32	109	P	P	07 25 50.7	+1.5
	1.5nm,0.5s,baz=320,slow=4.8,SNR=21						
ULM	Lac du Bonnet	31.37	86	P	P	07 25 58.7	+0.6
	7.3nm,0.7s,baz=329,slow=7.8,SNR=5.4						
S22A	4UR Ranch, Cre	35.60	112	eP	P	07 26 37.4	+2.1
	1.6nm,0.7s						
SUMG	Summit	38.44	27	eP	P	07 26 58.7	-0.4
	3.7nm,0.8s						
TXAR	Lajitas Array	44.11	115	P	P	07 27 45.3	-0.4
	0.8nm,0.7s,baz=332,slow=7.3,SNR=12						
PLAL	Pickwick Lake	46.60	95	eP	P	07 28 05.6	+0.4
	7.8nm,1.0s						
USRK	Ussuriysk Ar.	47.14	286	P	P	07 28 08.8	-0.6
	0.3nm,0.3s,baz=59,slow=8.6,SNR=2.7						
LMN	Caledonia Moun	49.00	67	eP	P	07 28 23.5	-0.2
	20nm,1.6s						
Z50A	Ashland	49.04	95	eP	P	07 28 24.6	+0.4
	11nm,0.8s						
ARCES	ARCESS Array B	49.29	2	P	P	07 28 24.3	-1.3
	6.5nm,0.3s,baz=13,slow=8.7,SNR=4.0						
ARCES				PcP	PcP	07 29 46.9	-0.7
	1.6nm,0.8s,baz=355,slow=5.4,SNR=3.7						
250A	Grady	49.92	96	eP	P	07 28 30.7	-0.1
	11nm,0.7s						
HODGE	Hodges	50.00	91	eP	P	07 28 31.8	+0.3
	5.5nm,0.8s						
KSRS	Korea Array	54.35	284	P	P	07 29 04.0	+0.3
	1.8nm,0.6s,baz=28,slow=8.2,SNR=7.7						
KSRS				LR	LR	07 53 39.4	
	comp=Z,37nm,18.3s,baz=45,slow=38						
SONA0	Songino Array	55.18	307	eP	P	07 29 10.1	+0.4
SONM	Songino Array	55.18	307	P	P	07 29 10.1	+0.4
	2.0nm,0.7s,baz=30,slow=7.6,SNR=8.4						
NOA	NORSAR Array B	57.00	11	P	P	07 29 21.3	-1.1
	0.5nm,0.6s,baz=330,slow=7.2,SNR=3.0						
ZALV	Zalesovo Beam	57.12	325	P	P	07 29 22.2	-1.0
	0.7nm,0.4s,baz=31,slow=2.9,SNR=3.3						
FINES	FINESS Array B	57.42	2	P	P	07 29 22.8	-2.4
	1.2nm,0.5s,baz=10,slow=8.1,SNR=13						
HHC	Hu-ho-hao-te	58.88	299	eP	P	07 29 40.3	+4.4
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,250nm,5.7s						
MKAR	Makanchi Array	64.25	323	P	P	07 30 10.1	-1.9
	comp=Z,0.8nm,0.6s,baz=44,slow=7.2,SNR=9.4						
WMQ	Urumqi	65.27	318	eP	P	07 30 22.3	+3.6
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.7s						
WMQ				LR	LR		
	comp=N,240nm,28.8s						
WMQ				LR	LR		
	comp=E,210nm,29.0s						
WMQ				LR	LR		
	comp=Z,98nm,21.5s						
LZH	Lanzhou	66.11	302	eP	P	07 30 24.8	+0.5
LZH				pP	pP	07 30 35.5	-3.5
LZH				sP	sP	07 30 46.5	+1.5
LZH				PP	PP	07 32 47.5	-2.3
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,80nm,4.9s						
AKASG	Malin Array Be	68.22	1	P	P	07 30 36.0	-1.2
	comp=Z,3.4nm,0.4s,baz=5.2,slow=6.2,SNR=17						
AKASG				LR	LR	08 03 11.7	
	comp=Z,342nm,18.2s,baz=60,slow=38						
GERES	GERESS Array B	69.29	12	P	P	07 30 44.1	+0.1
	comp=Z,0.4nm,0.2s,baz=329,slow=4.7,SNR=4.0						
KOLS	Kolonicke sedl	69.81	6	eP	P	07 30 48.1	+1.0
VYHS	Vyhne	70.06	8	eP	P	07 30 48.5	-0.2
CD2	Chengdu	70.63	299	eP	P	07 30 54.5	+2.0
KSH	Kashi	72.75	324	P	P	07 31 07.3	+2.1
KSH				pP	PcP	07 31 24.1	+1.9
KSH				S	S	07 40 26.1	-0.4
KSH	Kashi	72.75	324	SS	SS	07 45 09.5	+3.7
KSH				pmax	pmax		
	comp=Z,17nm,1.1s						
KSH				pmax	pmax		
	comp=Z,260nm,4.4s						
KSH				LR	LR		
	comp=N,290nm,6.2s						
KSH				LR	LR		
	comp=E,330nm,9.1s						
KSH				LR	LR		
	comp=Z,490nm,13.4s						
ESDC	Sonseca Array	75.50	27	P	P	07 31 21.1	0.0
	comp=Z,1.0nm,0.5s,baz=335,slow=7.4,SNR=6.1						
BRTR	Keskin Array B	79.16	357	P	P	07 31 41.3	-0.4
	comp=Z,0.4nm,0.4s,baz=338,slow=1.6,SNR=3.6						
CMAR	Chiang Mai Arr	83.63	297	P	P	07 32 04.5	-1.0
	comp=Z,0.8nm,0.3s,baz=1.4,slow=6.6,SNR=4.8						
CMAR				LR	LR	08 10 37.1	
	comp=Z,76nm,18.8s,baz=50,slow=37						
BOSA	Boshof	147.03	8	PKPbc	PKPbc	07 39 18.7	-0.5
	comp=Z,4.8nm,1.1s,baz=296,slow=2.3,SNR=3.9						

NNC 19 07:54:05.6±0.8, 49°.97N×78°.64E, h0^{km}, mb3.6, mpv3.3, 9C-6D, Error ellipse: s-maj=7.6km s-min=3.7km az=75.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	0.65	354	⇑P	Pg	07 54 18.1	0.0
	53nm,0.3s						
KURBB				⇓S	Sg	07 54 27.7	+1.1
	132nm,0.8s						
KURK	Kurchatov	0.74	359	⇑P	Pg	07 54 19.3	-0.5
	19nm,0.3s						
KURK				⇑S	Sg	07 54 30.6	+1.2
	32nm,0.5s						
SEM	Semipalatinsk	1.12	67	P	Pn	07 54 29.0	+0.2
	20nm,0.2s						
SEM				S	Sg	07 54 42.4	+0.7
	110nm,0.5s						
MAKZ	Makanchi	3.87	144	⇑Pg	Pb	07 55 15.3	+0.5
	1.7nm,0.3s						
MAKZ				⇓Lg	Lg	07 56 05.6	
	20nm,0.6s						
MK31	Makanchi Array	4.01	141	⇑Pn	Pn	07 55 10.3	+2.1
	0.3nm,0.3s,baz=278,slow=6.3,SNR=100						
MK31				⇑Pg	Pb	07 55 19.3	+2.2
	2.7nm,0.5s,baz=326,slow=12.7,SNR=24						
MK31				⇓Lg	Lg	07 56 12.9	
	15nm,0.5s,baz=331,slow=33,SNR=17						
OTUK	Ortayu	4.48	250	⇓Pn	Pn	07 55 16.9	+2.2
	3.0nm,0.4s						
OTUK				⇓Pg	Pg	07 55 28.5	-3.0
	1.8nm,0.5s						
OTUK				⇓Lg	Lg	07 56 31.2	
	5.2nm,0.5s						
KAPS	Kapalarasan	4.72	174	Pg	Pb	07 55 31.2	+2.1
	2.3nm,0.4s						
KAPS				Lg	Lg	07 56 30.9	
	19nm,0.7s						
ZSN	Zaisan	4.84	119	Pg	Pb	07 55 28.6	-2.5
	2.1nm,0.3s						
ZSN				Lg	Lg	07 56 26.6	
DJR	Jarkent	5.70	172	Pg	Pb	07 55 50.3	+4.4
	3.0nm,0.4s						
DJR				Lg	Lg	07 57 03.1	
	4.5nm,0.6s						
BRVK	Borovoye	6.06	304	⇑Pn	Pn	07 55 39.7	+3.3
	1.0nm,0.7s						
BRVK				⇑Sn	Sn	07 56 44.5	-1.8
	2.2nm,0.5s						
BRVK				⇑Lg	Lg	07 57 17.8	
	1.8nm,0.6s						

IDC 19 07:54:18.1±3.0, 32°.75S×178°.53W, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.7/19, mbtmp3.8/3, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx3.0/26, Error ellipse: s-maj=71.8km s-min=45.8km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.54	212	Pn	Pn	07 55 54.3	-1.3
	2.3nm,0.3s,baz=264,slow=4.0,SNR=7.2						
URZ				Sn	Sn	07 57 06.5	-4.5
	1.5nm,0.3s,baz=159,slow=20,SNR=6.4						
ASAR	Alice Springs	42.59	270	P	P	08 02 16.1	0.0
	0.2nm,0.6s,baz=110,slow=7.2,SNR=5.3						
WRA	Warramunga Arr	43.79	275	P	P	08 02 26.0	+0.1
	0.9nm,0.4s,baz=105,slow=8.8,SNR=12						
RPN	Rapa Nui	59.27	104	LR	LR	08 27 31.0	
	comp=Z,43nm,18.6s,baz=11,slow=34						
FINES	FINESS Array B	147.18	338	PKPbc	PKPbc	08 14 01.7	-0.8
	0.5nm,0.4s,baz=72,slow=6.2,SNR=7.3						

*ISCJB **19** 08:17:17.8±0.6, 35°.84N±0°.03×27°.27E±0°.03, h5^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=3.2km az=139.3*
*ATH **19** 08:17:17.6, 35°.76N×27°.30E, h27^{km}±4^{km}, ML3.0/4, Error ellipse: s-maj=10.7km s-min=1.3km az=139.0*
*ISK **19** 08:17:17.6, 35°.85N×27°.26E, h11^{km}, ML3.1/16*
*THE **19** 08:17:18.7, 35°.76N×27°.36E, h10^{km}±2^{km}, ML3.0/6, Error ellipse: s-maj=4.3km s-min=0.9km az=137.0*
*DDA **19** 08:17:20.4, 35°.95N×27°.42E, h7^{km}±2^{km}, ML2.7*

ISC 19 08:17:17.6±0.9, 35°.81N±0°.03×27°.35E±0°.03, h17^{km}±8^{km}, n36, σ1§08/51, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.31	210	P	Pg	08 17 23.9	-0.3
KARP				S	Sg	08 17 28.8	+0.1
KARP	Karpathos	0.31	210	P	Pg	08 17 23.9	-0.3
KARP				S	Sg	08 17 28.8	+0.1
KARP				AML	AML	08 17 29.4	
	comp=E,10403μm,0.3s						
KARP				AML	AML	08 17 29.6	
	comp=N,7437μm,0.2s						
ARG	Arkhangelos	0.75	57	PG	Pn	08 17 33.3	0.0
ARG				SG	Sn	08 17 45.2	+0.9
ARG	Arkhangelos	0.75	57	P	Pn	08 17 33.4	0.0
ARG				S	Sn	08 17 44.6	+0.3
ARG	Arkhangelos	0.75	57	P	Pn	08 17 33.3	0.0
ARG				S	Sn	08 17 45.3	+0.9
ARG				AML	AML	08 17 48.6	
	comp=N,2212μm,0.5s						
ARG				AML	AML	08 17 48.9	
	comp=E,2423μm,0.3s						
DAT	Datca	0.93	11	PG	Pn	08 17 36.0	0.0
DAT				SG	Sn	08 17 48.7	-0.4
DAT	Datca	0.93	11	*i* P	Pn	08 17 36.4	+0.3
DAT				*i* S	Sg	08 17 47.8	-0.2
DAT				IAML_P			
	comp=Z,565nm,0.1s						
DATC	Datca-Mugla	0.98	15	PG	Pn	08 17 36.8	+0.3
BBRN	Bozburun-Marma	1.04	33	PG	Pg	08 17 38.4	+0.7
MRSB	Marmaris-Mugla	1.13	37	PN	Pg	08 17 39.5	0.0
ZKR	Zakros	1.16	233	PN	Pn	08 17 38.9	-0.2
ZKR	Zakros	1.16	233	P	Pg	08 17 40.2	+0.2
ZKR				S	Sn	08 17 54.7	+0.2
ZKR	Zakros	1.16	233	P	Pn	08 17 39.2	+0.1
ZKR				AML	AML	08 17 56.9	
	comp=N,643μm,0.4s						
ZKR				AML	AML	08 17 57.5	
	comp=E,1220μm,0.3s						
BODT	Bodrum	1.25	359	PN	Pb	08 17 40.8	+0.1
BDRM	Kayabasi	1.25	3	*i* P	Pg	08 17 42.8	+1.0
BDRM				IAML_P			
	comp=Z,1μm,0.3s						
ANAF	Anafi Island	1.39	293	P	Pb	08 17 43.5	+0.4
ANAF				S	Sg	08 18 01.6	-0.9
ANAF	Anafi Island	1.39	293	P	Pb	08 17 42.8	-0.3
DALY	Dalyan (Mula)	1.45	46	PN	Pb	08 17 44.7	+0.5
DALY	Dalyan (Mula)	1.45	46	*i* P	Pg	08 17 45.9	+0.3
DALY				IAML_P			
	comp=Z,880nm,0.3s						
TURN	Turunc	1.46	43	PN	Pn	08 17 40.7	-2.5
TURN	Turunc	1.46	43	*i* P	Pn	08 17 41.3	-1.9
TURN				*i* S	Sn	08 17 56.9	-5.1
TURN				IAML_P			
	comp=Z,939nm,0.1s						
YER	Yerkesik	1.52	29	PN	Pb	08 17 45.4	+0.1
NPS	Neapolis	1.52	249	P	Pn	08 17 44.4	+0.3
NPS				S	Sn	08 18 03.3	-0.2
NPS	Neapolis	1.52	249	P	Pn	08 17 44.4	+0.3
NPS				S	Sn	08 18 03.1	-0.4
NPS				AML	AML	08 18 04.3	
	comp=E,1323μm,0.4s						
NPS				AML	AML	08 18 04.3	
	comp=N,1149μm,0.4s						
FETY	Fethiye	1.62	59	PN	Pb	08 17 47.7	+0.6
FETY	Fethiye	1.62	59	*i* P	Pg	08 17 49.3	+0.4
FETY				*i* S	Sg	08 18 08.8	-1.2
FETY				IAML_P			
	comp=Z,3μm,0.5s						
SANT	Santorini	1.63	290	PN	Pb	08 17 46.6	-0.6
LAST	Lasithi	1.66	247	P	Pn	08 17 45.7	-0.3
LAST				S	Sn	08 18 07.2	+0.2
LAST	Lasithi	1.66	247	P	Pn	08 17 46.8	+0.8
AKAS	Kas	1.88	76	PN	Pb	08 17 51.7	+0.2
AKAS	Kas	1.88	76	*i* P	Pg	08 17 53.8	+0.2
AKAS				*i* S	Sg	08 18 18.6	+0.6
AKAS				IAML_P			
	comp=Z,864nm,0.4s						
AYDN	Tasoluk	1.89	13	*i* P	Pg	08 17 53.7	-0.2
AYDN				IAML_P			
	comp=Z,957nm,0.4s						
APE	Apeiranthos	1.93	311	PN	Pn	08 17 50.6	+0.9
ELL	Elmali	2.27	65	PN	Pb	08 17 57.3	-0.9
KORT	Korkueli	2.69	63	PN	Pn	08 18 02.1	+1.8
KHAL	Karahalli	3.07	33	*i* P	Pn	08 18 07.7	+2.2
KHAL				IAML_P			
	comp=Z,81nm,0.1s						

*IDC **19** 08:19:46.8±0.6, 2°.34N×98°.94W, h0^{km}, mb4.6/18, mb1 4.8/20, mb1mx4.6/41, mbtmp4.7/20, ML3.9/2, MS4.6/23, Ms1 4.6/23, ms1mx4.6/29, Error ellipse: s-maj=24.3km s-min=11.2km az=51.0*
*MOS **19** 08:19:47.4±0.8, 2°.44N×98°.65W, h10^{km}, mb5.2/31, Error ellipse: s-maj=13.7km s-min=7.5km az=97.7*
*ISCJB **19** 08:19:48.1±0.2, 2°.57N±0°.03×98°.73W±0°.03, h10^{km}, mb5.0/125, MS4.7/25, Error ellipse: s-maj=4.8km s-min=3.0km az=44.7*
*NEIC **19** 08:19:49.1±1.6, 2°.37N×98°.67W, h10^{km}, mb5.1/368, Error ellipse: s-maj=23.6km s-min=16.1km az=239.0*
*GCMT **19** 08:19:52.1±0.2, 2°.47N±0°.01×98°.67W±0°.01, h15^{km}, MW5.3/99, Moment Tensor Solution. s74,c117; s99,c180; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.29±.02; $M_{\theta\theta}$1.02±.02; $M_{\phi\phi}$-0.72±.02; $M_{r\theta}$0.27±.04; $M_{\theta\phi}$0.52±.02; $M_{\phi r}$0.11±.04; Best double couple: $M_0$1.04500×10^{17} NP1:ϕ_s29.00000°, δ85.00000°, λ169.00000°. NP2:ϕ_s120.00000°, δ80.00000°, λ5.00000°. Principal axes: T 1.2190, Plg11.0000°, Azm344.0000°; N -0.3460, Plg78.0000°, Azm185.0000°; P -0.8710, Plg4.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 08:19:49.0±0.4, 2°.52N±0°.06×98°.79W±0°.07, h10^{km}, n726, σ1§12/708, mb5.0/125, MS4.7/26, 7C-6D, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	Puerto Ayora	9.07	110	ePn	Pn	08 21 55.3	-4.9
APG	El Apazote	14.88	33	Pn	P	08 23 24.9	-0.7
	0.2nm,0.3s,baz=204,slow=12,SNR=12						
APG				LR	LR	08 27 35.7	
	comp=Z,1μm,19.7s,baz=227,slow=31						
TLIG	Tlapa	14.96	1	ePn	P	08 23 24.5	-1.8
	212nm,1.4s						
CMIG	Matias Romero	14.98	15	Pn	P	08 23 24.9	-1.6
	0.2nm,0.3s,baz=184,slow=10,SNR=11						
CMIG				LR	LR	08 27 47.2	
	comp=Z,5μm,19.2s,baz=198,slow=32						
CCIG	Comitan	15.17	25	ePn	Pn	08 23 23.8	+0.2
	81nm,1.2s						
CSGN	Cosiguina Volc	15.22	46	ePn	Pn	08 23 23.3	-0.9
	73nm,1.3s						
JTS	Las Juntas de	15.76	60	Pn	P	08 23 34.9	-0.3
	1.4nm,0.3s,baz=299,slow=8.3,SNR=6.2						
JTS				LR	LR	08 27 46.7	
	comp=Z,4μm,21.1s,baz=296,slow=30						
JTS	Las Juntas de	15.76	60	ePn	Pn	08 23 25.9	-5.4
JTS				eP	P	08 23 31.3	-3.9
JTS	Las Juntas de	15.76	60	eP	Pn	08 23 25.9	-5.4
TGUH	Tegucigalpa,Un	16.15	44	ePn	P	08 23 38.9	-0.7
	166nm,1.4s						
ESTN	Estel	16.17	49	ePn	Pn	08 23 37.8	+1.1
	171nm,1.0s						
HDC	Heredia	16.36	62	ePn	Pn	08 23 38.6	-0.6
	205nm,1.3s						
ACON	Acoyapa	16.44	54	ePn	Pn	08 23 41.5	+1.5
	190nm,1.5s						
ESPN	Las Esperanzas	17.28	55	eP	P	08 23 52.0	0.0
	184nm,1.3s						
BCIP	Isla Barro Col	19.97	70	eP	P	08 24 21.8	+0.1
	215nm,1.3s						
BCIP	Isla Barro Col	19.97	70	eP	P	08 24 21.8	+0.1
BCIP				pmax	pmax		
	comp=Z,215nm,1.3s						
BCIP	Isla Barro Col	19.97	70	eP	P	08 24 18.6	-3.1
H06E1	SOCORRO T-PHAS	20.07	325	T	T	08 45 09.2	
	SNR=16						
OTAV	Otavalo	20.46	96	eP	P	08 24 27.5	0.0
	comp=Z,167nm,1.3s						
OTAV	Otavalo	20.46	96	eP	P	08 24 27.5	0.0
OTAV				pmax	pmax		
	comp=Z,167nm,1.3s						
OTAV	Otavalo	20.46	96	eP	P	08 24 28.4	+0.9
OTAV	Otavalo	20.46	96	eP	P	08 24 27.9	+0.4
ZAIG	Zacatecas	20.46	350	eP	Pn	08 24 31.4	+1.9
	comp=Z,183nm,1.3s						
GCUF	Volcan Galeras	21.47	93	eP	P	08 24 39.9	+1.4
POPC	Popayan, Colom	22.09	89	eP	P	08 24 45.5	+0.6
LNIG	Linares	22.26	358	eP	P	08 24 47.9	+1.5
	comp=Z,58nm,1.3s						
PCON	Cinco Dias	22.37	90	eP	P	08 24 49.2	+0.9
YOTC	Yotoco, Valle	22.45	86	eP	P	08 24 47.6	-1.0
ATAH	Atahualpa	22.50	115	P	P	08 24 50.7	+1.3
	comp=Z,77nm,1.3s,baz=293,slow=11,SNR=18						
ATA

HKT	Hockley	27.43	6	eP	P	08 25 36.0	+1.0
HKT				pmax	pmax		
comp=Z,98nm,1.4s							
JCT	Junction City	27.83	358	eP	P	08 25 40.0	+1.3
comp=Z,69nm,1.0s							
JCT	Junction City	27.83	358	eP	P	08 25 40.0	+1.3
JCT				pmax	pmax		
comp=Z,69nm,1.0s							
JCT	Junction City	27.83	358	P	P	08 25 40.0	+1.3
baz=178,SNR=21							
SDV	Santo Domingo	28.71	76	P	P	08 25 47.6	+0.7
comp=Z,5.0nm,0.8s,baz=279,slow=8.7,SNR=6.5							
SDV				LR	LR	08 35 20.5	
comp=Z,2µm,21.1s,baz=257,slow=32							
SDV	Santo Domingo	28.71	76	eP	P	08 25 47.2	+0.2
comp=Z,23nm,1.2s							
WHTX	Lake Whitney,	29.35	2	eP	P	08 25 53.1	+0.9
comp=Z,83nm,1.1s							
WHTX	Lake Whitney,	29.35	2	P	P	08 25 53.1	+0.9
baz=182,SNR=18							
NATX	Nacogdoches	29.35	7	eP	P	08 25 54.4	+2.2
comp=Z,63nm,1.2s							
NATX	Nacogdoches	29.35	7	P	P	08 25 53.6	+1.4
baz=188,SNR=6.5							
MNTX	Cornudas Mount	29.69	349	eP	P	08 25 56.2	+1.0
comp=Z,29nm,1.4s							
MNTX	Cornudas Mount	29.69	349	P	P	08 25 55.6	+0.4
baz=166,SNR=16							
ABTX	Abilene, Hawle	29.96	359	eP	P	08 25 59.0	+1.3
comp=Z,41nm,1.0s							
ABTX	Abilene, Hawle	29.96	359	P	P	08 25 58.2	+0.6
baz=178,SNR=14							
319A	Douglas	30.37	342	eP	P	08 26 02.9	+1.6
comp=Z,37nm,0.9s							
VBMS	Vicksburg	30.55	14	eP	P	08 26 04.7	+1.9
comp=Z,49nm,1.0s							
VBMS	Vicksburg	30.55	14	P	P	08 26 04.3	+1.5
baz=196							
349A	Repton	30.70	20	P	P	08 26 06.0	+1.8
baz=203							
CPRX	Cap Rock	30.73	352	eP	P	08 26 05.9	+1.4
554A	Perry	30.94	26	P	P	08 26 06.8	+0.6
baz=210							
452A	Marianna	30.98	23	P	P	08 26 07.5	+0.9
baz=207							
121A	Cookes Peak, D	31.03	345	P	P	08 26 08.8	+1.5
baz=162,SNR=14							
350A	Dozier	31.06	21	P	P	08 26 08.5	+1.2
baz=204							
Z41A	Richland Creek	31.09	10	eP	P	08 26 07.8	+0.2
comp=Z,38nm,1.3s							
Z41A	Richland Creek	31.09	10	P	P	08 26 08.8	+1.3
baz=191							
555A	McAlpin	31.29	27	P	P	08 26 10.1	+0.7
baz=211							
249A	Camden	31.30	19	P	P	08 26 11.1	+1.7
baz=202							
453A	Whigham	31.33	24	P	P	08 26 11.0	+1.3
baz=208							
657A	Interlachen	31.36	29	P	P	08 26 10.0	+0.1
baz=214							
WLAR	White Oak Lake	31.46	9	eP	P	08 26 12.4	+1.6
comp=Z,72nm,1.2s							
454A	Quitman	31.50	26	P	P	08 26 11.9	+0.7
baz=210							
MSTX	Muleshoe	31.51	354	eP	P	08 26 12.4	+1.0
comp=Z,58nm,1.0s							
MSTX	Muleshoe	31.51	354	P	P	08 26 12.5	+1.1
baz=172,SNR=15							
147A	Livingston	31.59	17	eP	P	08 26 13.3	+1.4
comp=Z,57nm,1.3s							
147A	Livingston	31.59	17	P	P	08 26 12.8	+0.9
baz=200							
250A	Grady	31.59	21	eP	P	08 26 13.1	+1.1
comp=Z,41nm,1.3s							
250A	Grady	31.59	21	P	P	08 26 13.0	+1.0
baz=204							
TUC	Tucson	31.71	340	eP	P	08 26 14.6	+1.4
comp=Z,21nm,1.0s							
TUC	Tucson	31.71	340	eP	P	08 26 14.6	+1.4
TUC				pmax	pmax		
comp=Z,21nm,1.0s							
TUC	Tucson	31.71	340	P	P	08 26 14.5	+1.4
baz=157							
148A	Greensboro	31.77	18	P	P	08 26 14.4	+0.9
baz=201							
455A	Stateville	31.79	26	P	P	08 26 14.6	+0.9
baz=211							
353A	Camilla	31.81	24	P	P	08 26 14.9	+1.0
baz=208							
CCAR	Cane Creek	31.92	11	eP	P	08 26 17.3	+2.4
comp=Z,60nm,1.3s							
149A	Jones	31.98	19	P	P	08 26 16.1	+0.7
baz=203,SNR=5.8							
251A	Midway	32.00	22	P	P	08 26 16.0	+0.4
baz=205,SNR=6.9							
WMOK	Wichita Mounta	32.06	0	eP	P	08 26 17.1	+1.0
comp=Z,17nm,1.3s							
WMOK	Wichita Mounta	32.06	0	eP	P	08 26 17.1	+1.0
WMOK				pmax	pmax		
comp=Z,17nm,1.3s							
WMOK	Wichita Mounta	32.06	0	P	P	08 26 16.2	+0.1
baz=180,SNR=9.7							
214A	Organ Pipe Nat	32.12	337	P	P	08 26 17.6	+0.9
baz=153,SNR=13							
MIAR	Mount Ida	32.24	8	eP	P	08 26 19.1	+1.5
comp=Z,35nm,1.1s							
MIAR	Mount Ida	32.24	8	eP	P	08 26 19.1	+1.5
MIAR				pmax	pmax		
comp=Z,35nm,1.1s							
MIAR	Mount Ida	32.24	8	P	P	08 26 18.3	+0.7
baz=190,SNR=16							
X40A	Basin Creek Fa	32.29	9	eP	P	08 26 18.6	+0.5
comp=Z,16nm,1.4s							
X40A	Basin Creek Fa	32.29	9	P	P	08 26 18.6	+0.5
baz=191							
Y22D	IRIS PASSCAL I	32.30	347	eP	P	08 26 20.1	+1.7
comp=Z,32nm,1.2s							
LRAL	Lakeview Retre	32.31	19	eP	P	08 26 19.6	+1.2
comp=Z,25nm,1.3s							
LRAL	Lakeview Retre	32.31	19	P	P	08 26 19.2	+0.8
baz=202							
BNM	Barren Site	32.31	348	eP	P	08 26 20.5	+1.9
AMTX	Amarillo	32.32	356	eP	P	08 26 20.1	+1.6
comp=Z,32nm,1.0s							
AMTX	Amarillo	32.32	356	P	P	08 26 19.4	+1.0
baz=174							
LENM	Lemitar	32.40	347	eP	P	08 26 20.9	+1.6
151A	Opelika	32.42	22	P	P	08 26 19.9	+0.6
baz=205							
253A	Americus	32.47	24	eP	P	08 26 19.3	-0.4
comp=Z,102nm,1.4s							
253A	Americus	32.47	24	P	P	08 26 20.4	+0.6
baz=208							
LPM	Los Pinos Moun	32.47	348	eP	P	08 26 19.0	-0.9
Z49A	Columbiana	32.61	19	P	P	08 26 21.8	+0.8
baz=203,SNR=12							
UALR	University of	32.65	10	eP	P	08 26 22.3	+1.0
comp=Z,34nm,1.1s							
LAZ	Ladron	32.67	347	eP	P	08 26 21.5	-0.1
X43A	Marvell	32.68	12	eP	P	08 26 23.6	+2.1
comp=Z,81nm,1.4s							
X43A	Marvell	32.68	12	P	P	08 26 22.7	+1.2
baz=194							
356A	Blackshear	32.69	27	P	P	08 26 21.1	-0.5
baz=212							
254A	Abbeville	32.71	25	P	P	08 26 22.3	+0.5
baz=209,SNR=6.5							
152A	Waverly Hall	32.78	22	eP	P	08 26 23.7	+1.3
comp=Z,26nm,0.9s							
152A	Waverly Hall	32.78	22	P	P	08 26 22.8	+0.3
baz=206,SNR=9.1							
W39A	Magazine	32.85	8	P	P	08 26 22.7	-0.3
baz=189,SNR=10.0							
Z50A	Ashland	32.87	20	eP	P	08 26 24.6	+1.4
comp=Z,25nm,1.2s							
Z50A	Ashland	32.87	20	P	P	08 26 23.1	-0.2
baz=204,SNR=6.2							
OXF	Oxford	33.01	14	P	P	08 26 24.7	+0.3
baz=197							
ANMO	Albuquerque	33.05	348	eP	P	08 26 26.3	+1.3
comp=Z,16nm,1.4s							
ANMO	Albuquerque	33.05	348	eP	P	08 26 26.1	+1.1
ANMO				pmax	pmax		
comp=Z,15nm,1.4s							
ANMO	Albuquerque	33.05	348	P	P	08 26 26.3	+1.3
baz=166							
TASM	ASL Pad, Albuq	33.05	348	P	P	08 26 26.0	+1.1
baz=166,SNR=13							
TASM	ASL Pad, Albuq	33.05	348	P	P	08 26 26.2	+1.2
baz=166,SNR=12							
W41B	Gary Mavity, V	33.06	10	P	P	08 26 25.7	+0.9
baz=192,SNR=10							
Y48A	Jasper	33.07	18	P	P	08 26 25.5	+0.5
baz=201,SNR=7.4							
Z51A	Franklin	33.19	21	P	P	08 26 26.9	+0.8
baz=205,SNR=5.3							
Y49A	Blount Mountai	33.26	19	P	P	08 26 27.2	+0.6
baz=203							
X46A	Booneville	33.27	15	P	P	08 26 27.2	+0.5
baz=198,SNR=7.7							
TUL1	Leonard	33.34	4	P	P	08 26 27.8	+0.4
baz=185,SNR=13							
Z52A	Williamson	33.35	22	P	P	08 26 28.0	+0.6
baz=206,SNR=6.2							
154A	Montrose	33.37	25	eP	P	08 26 29.1	+1.6
comp=Z,45nm,1.0s							
X47A	Russelville	33.43	17	P	P	08 26 28.4	+0.3
baz=200,SNR=9.4							
Y50A	Piedmont	33.51	20	P	P	08 26 29.2	+0.3
baz=204,SNR=6.2							
X48A	Hartselle	33.61	18	eP	P	08 26 30.4	+0.8
comp=Z,21nm,1.1s							
X48A	Hartselle	33.61	18	P	P	08 26 30.2	+0.5
baz=201,SNR=5.6							
155A	Kite	33.65	25	P	P	08 26 31.7	+1.7
baz=210,SNR=7.1							
HBAR	Harrisburg	33.73	12	eP	P	08 26 32.3	+1.6
comp=Z,123nm,1.5s							
Y51A	Rockmart	33.75	21	P	P	08 26 31.3	+0.4
baz=205,SNR=8.0							
Z53A	Monticello	33.76	23	P	P	08 26 31.6	+0.6
baz=208							
W46A	Michie	33.87	15	P	P	08 26 31.9	0.0
baz=199,SNR=9.7							
X49A	Woodville	33.89	19	P	P	08 26 33.0	+0.9
baz=202							
GLA	Glamis	33.90	335	P	P	08 26 33.3	+1.0
baz=150							
GOGA	Godfrey	33.92	23	eP	P	08 26 33.1	+0.8
comp=Z,13nm,1.2s							
GOGA	Godfrey	33.92	23	eP	P	08 26 33.1	+0.8
GOGA				pmax	pmax		
comp=Z,13nm,1.2s							
GOGA	Godfrey	33.92	23	P	P	08 26 32.8	+0.4
baz=208							
W18A	Petrified Fore	34.00	344	P	P	08 26 34.6	+1.4
baz=160,SNR=9.1							
Z54A	Sparta	34.02	24	P	P	08 26 33.7	+0.5
baz=209,SNR=5.8							
X50B	Fort Payne	34.06	20	P	P	08 26 34.0	+0.4
baz=204,SNR=7.1							
Y52A	Lilburn	34.09	22	P	P	08 26 33.7	-0.1
baz=206							
IKP	In-Ko-Pah, Jac	34.11	333	P	P	08 26 35.0	+0.9
baz=148							
U40A	Yellville	34.12	9	P	P	08 26 34.8	+0.8
baz=190,SNR=11							
W47A	Westpoint	34.19	16	P	P	08 26 35.7	+1.0
baz=200,SNR=7.8							
Y53A	Monroe	34.26	23	P	P	08 26 35.6	+0.2
baz=207,SNR=5.1							
W48A	Pulaski	34.28	17	P	P	08 26 36.0	+0.5
baz=201,SNR=7.6							
157A	Early Branch	34.34	27	P	P	08 26 36.4	+0.4
baz=212							
X51A	Calhoun	34.43	21	P	P	08 26 37.3	+0.5
baz=205							
MONP2	Monument Peak	34.45	333	P	P	08 26 37.9	+0.6
baz=148							
W49A	Belvidere	34.47	18	P	P	08 26 38.3	+1.2
baz=202							
V46A	Holladay	34.56	15	P	P	08 26 38.0	0.0
baz=199,SNR=8.3							
Y54A	Tignall	34.62	24	P	P	08 26 38.9	+0.4
baz=209							
BC3	Big Chuckawall	34.68	335	P	P	08 26 40.5	+1.4
baz=150,SNR=14							
PDMCI	Parker Dam,Lak	34.72	337	P	P	08 26 40.9	+1.6
baz=152,SNR=11							
V47A	Nunnelly	34.75	16	P	P	08 26 41.1	+1.6
baz=200,SNR=12							
X52A	Dahlonega	34.81	22	P	P	08 26 41.2	+1.1
baz=206,SNR=9.5							
T25A	Trinidad	34.84	352	eP	P	08 26 42.1	+1.5
comp=Z,27nm,1.1s							
T25A	Trinidad	34.84	352	P	P	08 26 42.4	+1.8
baz=170,SNR=11							
W50A	Signal Mountai	34.85	20	eP	P	08 26 42.4	+1.9
comp=Z,38nm,1.5s							
W50A	Signal Mountai	34.85	20	P	P	08 26 41.0	+0.5
baz=204							
WUAZ	Wupatki	34.85	342	P	P	08 26 42.4	+1.8
baz=158,SNR=16							
V48A	Smith Brothers	34.87	17	P	P	08 26 41.5	+0.9
baz=201,SNR=12							
UTMT	University of	34.89	14	eP	P	08 26 42.5	+1.8
comp=Z,70nm,0.9s							
X53A	Estanollee	34.95	23	P	P	08 26 42.0	+0.8
baz=207,SNR=7.0							
WVT	Waverly	34.95	16	eP	P	08 26 42.1	+0.8
comp=Z,64nm,1.1s							
WVT	Waverly	34.95	16	eP	P	08 26 42.1	+0.8
WVT				pmax	pmax		
comp=Z,64nm,1.1s							
WVT	Waverly	34.95	16	P	P	08 26 42.1	+0.8
baz=199							
IRM	Iron Mountain	34.99	336	P	P	08 26 43.3	+1.6
baz=151,SNR=12							
Z57A	Bowman	34.99	27	P	P	08 26 42.1	+0.5
baz=212							
W51A	Cleveland	35.00	20	P	P	08 26 42.3	+0.6
baz=205							
Y55A	Saluda	35.03	25	P	P	08 26 42.1	+0.1
baz=210							
PFO	Pinyon Flats O	35.08	334	eP	P	08 26 44.1	+1.6
comp=Z,29nm,1.1s							
PFO	Pinyon Flats O	35.08	334	eP	P	08 26 44.1	+1.6
PFO				pmax	pmax		
comp=Z,29nm,1.1s							
PFO	Pinyon Flats O	35.08	334	P	P	08 26 43.2	+0.6
baz=148							
U46A	Springville	35.08	15	P	P	08 26 43.1	+0.7
baz=198							
HODGE	Hodges	35.12	24	eP	P	08 26 43.9	+1.2
comp=Z,40nm,1.4s							
V49A	Mcminnville	35.17	18	P	P	08 26 43.7	+0.5
baz=202,SNR=11							
W52A	Murphy	35.23	21	eP	P	08 26 45.1	+1.3
comp=Z,35nm,1.3s							
W52A	Murphy	35.23	21	P	P	08 26 44.8	+1.0
baz=206,SNR=7.0							
NEE2	Needles Airpor	35.31	337	P	P	08 26 46.1	+1.7
baz=152							
CPCT	Cooper Cave	35.34	20	eP	P	08 26 46.5	+1.8
comp=Z,44nm,1.5s							
V50A	Pikevile	35.35	19	P	P	08 26 45.5	+0.8
baz=204,SNR=7.3							
X54A	Belton	35.35	24	P	P	08 26 45.7	+0.9
baz=209,SNR=5.7							
U47A	Clarksville	35.39	16	P	P	08 26 45.7	+0.7
baz=200,SNR=15							
MURC	Murrieta	35.39	333	P	P	08 26 46.4	+1.2
baz=147							
JSC	Jenkinsville	35.58	25	eP	P	08 26 47.5	+0.8
comp=Z,43nm,1.4s							
JSC	Jenkinsville	35.58	25	eP	P	08 26 47.5	+0.8
JSC				pmax	pmax		
comp=Z,43nm,1.4s							
X55A	Gracelyn & Ava	35.59	25	P	P	08 26 47.9	+1.1
baz=210							
W53A	Cullowhee	35.59	22	P	P	08 26 47.0	+0.1
baz=207,SNR=5.0							
LPAZ	La Paz	35.59	123	P	P	08 26 47.5	-0.2
comp=Z,12nm,1.0s,baz=303,slow=9.0,SNR=23							
LPAZ				LR	LR	08 39 30.4	
comp=Z,940nm,19.0s,baz=310,slow=33							
LPAZ	La Paz	35.59	123	eP	P	08 26 46.9	-0.8
LPAZ	La Paz	35.59	123	eP	P	08 26 46.9	-0.8
LPAZ	La Paz	35.59	123	eP	P	08 26 47.3	-0.4
SDCO	Great Sand Dun	35.60	351	P	P	08 26 48.6	+1.4
baz=168,SNR=22							
MVCO	Mesa Verde	35.67	347	P	P	08 26 48.8	+1.1
baz=163,SNR=14							
U48A	Cassie Pea, Po	35.67	17	P	P	08 26 47.8	+0.3
baz=201,SNR=7.6							
V51A	Loudon	35.72	20	eP	P	08 26 47.4	-0.5
comp=Z,38nm,1.4s							
V51A	Loudon	35.72	20	P	P	08 26 48.8	+0.8
baz=205							
Y57A	Sumter	35.74	27	eP	P	08 26 49.3	+1.3
comp=Z,35nm,1.1s							
Y57A	Sumter	35.74	27	P	P	08 26 48.6	+0.5
baz=212							
GMRC	Granite Mounta	35.74	336	P	P	08 26 49.8	+1.6
baz=150,SNR=7.1							
T46A	Princeton	35.80	15	P	P	08 26 48.9	+0.4
baz=198,SNR=8.7							
CIS	Catalina Islan	35.80	331	P	P	08 26 49.1	+0.4
baz=145							
BBRC	Big Bear Solar	35.83	334	P	P	08 26 49.2	0.0
baz=148							
S22A	4UR Ranch, Cre	35.83	349	P	P	08 26 51.1	+1.9
baz=166,SNR=18							
X56A	White Oak	35.86	25	P	P	08 26 49.0	-0.2
baz=211							
W54A	Cherokee Point	35.89	24	P	P	08 26 50.2	+0.8
baz=209,SNR=9.7							
U49A	Red Boiling Sp	35.90	18	P	P	08 26 49.9	+0.5
baz=202,SNR=8.3							
T47A	Sharon Grove	35.95	16	P	P	08 26 50.5	+0.6
baz=200,SNR=30							
Y58A	Scranton	35.98	28	P	P	08 26 50.2	+0.1
baz=213							
FMP	Fort Macarthur	36.00	332	P	P	08 26 49.8	-0.5
baz=146							
V52A	Sevierville	36.02	21	P	P	08 26 51.1	+0.6
baz=206							
CCM	Cathedral Cave	36.04	10	eP	P	08 26 52.0	+1.4
comp=Z,20nm,1.0s							
CCM	Cathedral Cave	36.04	10	eP	P	08 26 52.0	+1.4
CCM				pmax	pmax		
comp=Z,20nm,1.0s							
CCM	Cathedral Cave	36.04	10	P	P	08 26 50.9	+0.3
baz=193							
S44A	Carbondale	36.09	13	P	P	08 26 51.7	+0.7
baz=196,SNR=21							
U50A	Jamestown	36.11	19	P	P	08 26 51.9	+0.6
baz=204,SNR=7.9							
CBKS	Cedar Bluff	36.14	359	P	P	08 26 52.7	+1.2
baz=178,SNR=7.1							
BFSC	Mount Baldy Ra	36.14	333	P	P	08 26 52.6	+0.9
baz=147							
V53A	Saluda	36.16	22	eP	P	08 26 51.1	-0.6
comp=Z,12nm,0.9s							
V53A	Saluda	36.16	22	P	P	08 26 51.7	-0.1
baz=207							
PB11	IPOC Station P	36.17	129	eP	P	08 26 51.1	-1.0
comp=Z,106nm,1.0s							
BIRD	Birdtown, Kers	36.24	26	eP	P	08 26 54.8	+2.5
comp=Z,32nm,1.3s							
T48A	Bowling Green	36.27	17	P	P	08 26 52.8	+0.2
baz=201,SNR=12							
KMSC	Kings Mountain	36.29	25	P	P	08 26 53.3	+0.5
baz=210,SNR=7.9							
MWC	Mount Wilson	36.31	332	eP	P	08 26 54.5	+1.3
comp=Z,29nm,1.1s							
MWC	Mount Wilson	36.31	332	eP	P	08 26 54.5	+1.3
MWC				pmax	pmax		
comp=Z,29nm,1.1s							
U51A	La Follette	36.36	20	P	P	08 26 53.7	+0.3
baz=205							
S46A	Don Dixon Farm	36.45	15	P	P	08 26 54.6	+0.5
baz=198,SNR=8.0							
DECC	Green Verdugo	36.46	332	P	P	08 26 55.4	+1.0
baz=146							
KSU1	Kansas State U	36.47	3	P	P	08 26 55.1	+0.9
baz=183,SNR=9.3							
GO01	Chusmiza	36.48	128	eP	P	08 26 54.1	-1.1
comp=Z,30nm,1.0s							
KSCO	Kaye Shedlock'	36.49	355	P	P	08 26 56.0	+1.3
baz=173,SNR=11							
T49A	Edmonton	36.52	18	P	P	08 26 55.6	+0.8
baz=202,SNR=7.4							
S47A	Hartford	36.59	16	P	P	08 26 55.4	+0.1
baz=200,SNR=7.8							
V54A	Nebo	36.59	23	P	P	08 26 56.2	+0.8
baz=209,SNR=8.2							
U52A	Thorn Hill	36.60	21	P	P	08 26 55.9	+0.4
baz=206							
W56A	Indian Trail	36.60	25	P	P	08 26 56.3	+0.9
baz=211,SNR=6.6							
PV05	Paradox Valley	36.63	346	eP	P	08 26 57.4	+1.4
comp=Z,36nm,1.3s							
GSC	Goldstone, Bar	36.66	335	P	P	08 26 56.4	+0.3
baz=149							
T50A	Nancy	36.66	19	P	P	08 26 56.4	+0.4
baz=203,SNR=6.1							
X58A	Rowland	36.67	27	P	P	08 26 56.1	+0.1
baz=213							
TZTN	Tazewell	36.67	21	P	P	08 26 56.0	0.0
baz=206,SNR=9.1							
BLG	Laguna Peak, P	36.69	331	P	P	08 26 56.7	+0.4
baz=145							
USIN	University of	36.73	15	eP	P	08 26 58.2	+1.7
comp=Z,102nm,1.3s							
Q24A	Divide	36.74	352	eP	P	08 26 58.1	+1.1
comp=Z,24nm,1.0s							
Q24A	Divide	36.74	352	P	P	08 26 58.2	+1.2
baz=169,SNR=12							
PV18	Skein Mesa, Pa	36.75	347	eP	P	08 26 58.3	+1.3
comp=Z,22nm,1.3s							
EDW2	Edwards Air Fo	36.83	333	P	P	08 26 58.6	+1.1
baz=147,SNR=9.2							
U53A	Fall Branch	36.86	22	P	P	08 26 58.3	+0.6
baz=207							
W57A	Gilead	36.87	26	P	P	08 26 58.2	+0.5
baz=212							
S48A	Wiedeman Farm,	36.88	17	P	P	08 26 58.3	+0.5
baz=201,SNR=19							
R45A	Skylar, Fairfi	36.88	14	P	P	08 26 58.7	+0.9
baz=197,SNR=13							
T51A	Gray	36.91	20	P	P	08 26 58.9	+0.8
baz=205,SNR=7.6							
V55A	Taylorsville	36.95	24	P	P	08 26 59.2	+0.8
baz=210,SNR=11							
R46A	Gibon Southern	37.00	15	P	P	08 26 59.6	+0.8
baz=199							
W58A	Raeford	37.10	27	P	P	08 27 00.4	+0.7
baz=213							
V56A	Mocksville	37.21	25	P	P	08 27 00.9	+0.3
baz=211,SNR=5.4							
S49A	Springfield	37.22	18	P	P	08 27 01.0	+0.2
baz=202,SNR=12							
U54A	Nelsons Funny	37.29	23	P	P	08 27 02.6	+1.2
baz=208,SNR=8.8							
R47A	Wooly Knot Far	37.34	16	P	P	08 27 02.3	+0.7
baz=200,SNR=17							
WCI	Wyandotte Cave	37.34	16	eP	P	08 27 02.9	+1.2
comp=Z,93nm,1.5s							
WCI	Wyandotte Cave	37.34	16	eP	P	08 27 02.9	+1.2
WCI				pmax	pmax		
comp=Z,93nm,1.5s							
WCI	Wyandotte Cave	37.34	16	P	P	08 27 02.5	+0.8
baz=200							
CCUT	Cedar City	37.35	341	eP	P	08 27 04.3	+2.2
comp=Z,14nm,1.0s							
T52A	Hallie	37.37	21	eP	P	08 27 00.9	-1.2
comp=Z,84nm,1.3s							
T52A	Hallie	37.37	21	P	P	08 27 03.0	+1.0
baz=206,SNR=9.8							
S50A	Richmond	37.41	19	P	P	08 27 03.2	+0.9
baz=204,SNR=21							
ARVC	Arvin	37.41	332	P	P	08 27 03.3	+0.9
baz=146							
T53A	Wise	37.43	22	P	P	08 27 03.5	+0.9
baz=207,SNR=7.6							
Q45A	Warren Harvey,	37.49	14	P	P	08 27 02.9	-0.1
baz=197,SNR=15							
U55A	TA2, Sparta	37.58	24	P	P	08 27 04.7	+0.8
baz=210,SNR=12							
V57A	Coltrane Farms	37.59	26	P	P	08 27 04.0	+0.1
baz=212,SNR=6.0							
MPMC	Manual Prospec	37.60	335	P	P	08 27 05.9	+1.8
baz=148,SNR=19							
R48A	Northridge Ran	37.62	17	P	P	08 27 04.8	+0.7
baz=201,SNR=5.3							
ISCO	Idaho Springs	37.63	351	P	P	08 27 05

	baz=147						
U56A	King	37.72	25	P		P	08 27 05.7 +0.7
	baz=211,SNR=8.8						
R49A	Shelbyville	37.73	18	P		P	08 27 05.7 +0.7
	baz=202,SNR=16						
Q46A	CEJHS Indians,	37.80	15	P		P	08 27 06.7 +1.0
	baz=198						
DAC	Darwin (Calif)	37.83	335	eP		P	08 27 10.2 +4.1
	comp=Z,18nm,1.2s						
W60A	Pink Hill	37.84	29	P		P	08 27 06.4 +0.5
	baz=215						
S52A	Salyersville	37.85	20	P		P	08 27 06.6 +0.6
	baz=206,SNR=19						
TPNV	Topopah Spring	37.86	337	P		P	08 27 08.3 +2.0
	baz=151,SNR=11						
T54A	Tazewell	37.86	23	P		P	08 27 06.6 +0.4
	baz=208,SNR=13						
P43A	Skaggs, Pawnee	37.90	12	P		P	08 27 07.2 +0.8
	baz=195						
CNNC	Cliffs of the	37.91	28	P		P	08 27 06.4 -0.1
	baz=215						
Q47A	Bedord North L	37.97	16	P		P	08 27 07.8 +0.8
	baz=200						
R50A	Paris	37.98	19	P		P	08 27 07.2 +0.1
	baz=204,SNR=12						
SMMC	Simmler	38.11	331	P		P	08 27 09.1 +0.7
	baz=144						
Q48A	North Vernon	38.15	17	P		P	08 27 09.1 +0.5
	baz=201,SNR=14						
V59A	Middlesex	38.17	28	P		P	08 27 09.2 +0.4
	baz=214						
CWC	Cottonwood Cre	38.17	334	P		P	08 27 10.1 +1.1
	baz=148						
P45A	Graceland, Par	38.19	14	eP		P	08 27 11.6 +2.8
	comp=Z,60nm,1.4s						
P45A	Graceland, Par	38.19	14	P		P	08 27 09.7 +0.8
	baz=198						
S53A	Williamson	38.20	22	P		P	08 27 09.6 +0.6
	baz=207,SNR=14						
T55A	Pulaski	38.22	24	P		P	08 27 09.8 +0.6
	baz=210,SNR=9.5						
U57A	Blanch	38.23	26	P		P	08 27 10.3 +1.1
	baz=212,SNR=16						
R51A	Hillsboro	38.24	19	P		P	08 27 10.0 +0.7
	baz=205,SNR=15						
W61A	Ground Anchor	38.29	29	P		P	08 27 10.5 +0.8
	baz=216						
GRAC	Grapevine Rang	38.34	336	P		P	08 27 11.5 +1.2
	baz=149						
OGNE	Ogallala	38.37	356	P		P	08 27 11.6 +1.1
	baz=175						
P46A	Rosedale	38.40	14	P		P	08 27 11.5 +0.8
	baz=198						
O20A	White River Ci	38.42	348	P		P	08 27 12.7 +1.7
	baz=165,SNR=23						
BLA	Blacksburg	38.44	24	P		P	08 27 11.7 +0.6
	baz=210						
T56A	Rocky Mt	38.45	24	P		P	08 27 11.8 +0.7
	baz=211,SNR=13						
Q49A	Aurora	38.47	18	P		P	08 27 12.1 +0.9
	baz=202,SNR=12						
P47A	Martinsville	38.52	16	P		P	08 27 12.1 +0.4
	baz=200						
R52A	Catlettsburg	38.59	21	P		P	08 27 12.8 +0.5
	baz=206						
Q50A	Georgetown	38.60	19	P		P	08 27 12.9 +0.5
	baz=204,SNR=9.2						
S54A	Dingess, Beckl	38.60	22	P		P	08 27 12.8 +0.3
	baz=208						
O44A	Mansfield	38.62	13	P		P	08 27 12.9 +0.4
	baz=196,SNR=6.7						
V60A	Jim Taylor Roa	38.63	29	P		P	08 27 12.4 -0.2
	baz=216						
N41A	Harden Midland	38.69	10	P		P	08 27 13.7 +0.6
	baz=192						
BGNE	Belgrade	38.72	1	P		P	08 27 13.9 +0.5
	baz=181						
P48A	Milroy	38.73	17	P		P	08 27 13.1 -0.3
	baz=201,SNR=13						
N40A	Mertquake, Sal	38.75	9	P		P	08 27 13.7 +0.2
	baz=191						
T57A	Hurt	38.75	25	eP		P	08 27 14.8 +1.2
	comp=Z,40nm,1.3s						
T57A	Hurt	38.75	25	P		P	08 27 14.2 +0.6
	baz=212						
N23A	Red Feather La	38.75	351	P		P	08 27 13.8 -0.1
	baz=168,SNR=12						
HDIL	Hopedale	38.83	12	P		P	08 27 15.2 +1.0
	baz=195,SNR=15						
R53A	Hurricane	38.84	21	eP		P	08 27 13.8 -0.5
	comp=Z,49nm,1.1s						
R53A	Hurricane	38.84	21	P		P	08 27 14.8 +0.4
	baz=207						
R11A	Troy Canyon, C	38.84	339	P		P	08 27 16.0 +1.4
	baz=153,SNR=16						
U59A	Littleton	38.86	27	P		P	08 27 14.5 0.0
	baz=214						
O45A	Potomac	38.88	14	P		P	08 27 15.1 +0.5
	baz=198						
S55A	Lewisburg	38.90	23	P		P	08 27 15.2 +0.3
	baz=210,SNR=6.7						
PTGA	Pitinga	38.95	94	P		P	08 27 15.6 0.0
	comp=Z,13nm,0.8s,baz=281,slow=9.6,SNR=16						
PTGA	Pitinga	38.95	94	eP		P	08 27 15.3 -0.3
	comp=Z,76nm,0.9s						
PTGA	Pitinga	38.95	94	eP		P	08 27 15.4 -0.2
Q51A	Peebles	38.98	19	eP		P	08 27 16.2 +0.7
	comp=Z,45nm,1.1s						
Q51A	Peebles	38.98	19	P		P	08 27 15.5 0.0
	baz=205						
P49A	Miami Univ. Ec	39.01	17	P		P	08 27 15.4 -0.3
	baz=202,SNR=8.6						
T58A	Grand View Acr	39.02	26	P		P	08 27 16.8 +0.9
	baz=213,SNR=6.9						
R54A	Victor	39.06	22	P		P	08 27 16.1 -0.1
	baz=209						
SFIN	Lafayette	39.15	14	P		P	08 27 16.9 0.0
	baz=198						
S56A	Natural Bridge	39.19	24	P		P	08 27 17.1 -0.3
	baz=211						
N43A	Stutzman Famil	39.22	12	P		P	08 27 18.3 +0.8
	baz=195						
O47A	Sheridan	39.25	15	P		P	08 27 17.6 -0.1
	baz=200						
U60A	Pendleton	39.25	28	P		P	08 27 18.2 +0.4
	baz=215						
Q52A	Bidwell	39.28	20	P		P	08 27 18.5 +0.5
	baz=206,SNR=18						
N44A	Piper City	39.30	13	P		P	08 27 18.2 -0.1
	baz=197						
P50A	Jamestown	39.36	18	P		P	08 27 18.7 0.0
	baz=204						
M41A	Milan	39.39	10	P		P	08 27 18.8 -0.1
	baz=193,SNR=12						
Q53A	Leroy	39.46	21	P		P	08 27 20.3 +0.8
	baz=207,SNR=11						
T59A	Double "B" Far	39.48	27	P		P	08 27 19.2 -0.5
	baz=214,SNR=10						
P51A	Williamsport	39.48	19	P		P	08 27 20.3 +0.6
	baz=205,SNR=7.4						
N45A	Kentland	39.50	13	P		P	08 27 20.4 +0.6
	baz=198						
MLAC	Mammoth, Mammo	39.50	335	P		P	08 27 21.2 +1.0
	baz=148						
S57A	Dark Hollow, R	39.52	25	P		P	08 27 20.5 +0.5
	baz=212						
SCIA	State Center	39.54	7	P		P	08 27 20.8 +0.7
	baz=188						
O48A	Farmland	39.55	16	P		P	08 27 20.5 +0.3
	baz=201,SNR=6.4						
OMMB	Old Mammoth Mi	39.56	334	eP		P	08 27 22.7 +2.0
	comp=Z,16nm,1.2s						
DUG	Dugway, Tooele	39.60	343	P		P	08 27 22.5 +1.5
	baz=158,SNR=21						
JLU	Jordanelle	39.61	345	eP		P	08 27 21.4 +0.3
	comp=Z,15nm,1.1s						
O49A	Covington	39.72	17	P		P	08 27 21.5 -0.2
	baz=203,SNR=22						
N46A	Monticello	39.73	14	P		P	08 27 22.0 +0.2
	baz=199						
M43A	Waltham Townsh	39.75	12	P		P	08 27 22.5 +0.7
	baz=195,SNR=7.0						
S58A	Poland Farm, P	39.78	26	P		P	08 27 22.9 +0.7
	baz=213,SNR=5.8						
Q54A	Coxs Mills	39.82	22	P		P	08 27 23.2 +0.6
	baz=208,SNR=15						
M44A	Midewin, Midew	39.89	13	P		P	08 27 23.4 +0.3
	baz=197						
NV11	Mina Array Sit	39.90	336	eP		P	08 27 24.7 +1.4
	comp=Z,1.4nm,1.1s						
O50A	Cable	39.91	18	P		P	08 27 23.2 0.0
	baz=204,SNR=14						
P52A	Corning	39.93	20	P		P	08 27 23.5 0.0
	baz=206,SNR=14						
NVAR	Mina Array Bea	39.95	336	P		P	08 27 25.6 +1.6
	comp=Z,5.1nm,0.9s,baz=162,slow=8.6,SNR=24						
NVAR				LR		LR	08 41 14.0
	comp=Z,1μm,21.4s,baz=151,slow=32						
L40A	Anamosa	39.95	9	eP		P	08 27 23.4 -0.2
	comp=Z,27nm,1.0s						
L40A	Anamosa	39.95	9	P		P	08 27 23.9 +0.3
	baz=192						
N47A	Urbana	39.98	16	P		P	08 27 23.8 0.0
	baz=200						
T60A	Surry	39.99	28	P		P	08 27 24.0 0.0
	baz=215						
P53A	Whipple	40.06	21	P		P	08 27 24.9 +0.3
	baz=207,SNR=8.6						
M45A	Boilermakers S	40.07	14	P		P	08 27 24.9 +0.4
	baz=198						
TCUT	Toone Canyon	40.08	345	eP		P	08 27 27.5 +2.5
	comp=Z,48nm,1.1s						
Q55A	Buckhannon	40.12	23	P		P	08 27 25.0 -0.1
	baz=210						
N48A	Decatur	40.14	16	P		P	08 27 25.0 -0.2
	baz=201						
R58B	Mineral	40.15	26	eP		P	08 27 26.7 +1.4
	comp=Z,22nm,1.4s						
R58B	Mineral	40.15	26	P		P	08 27 25.1 -0.2
	baz=213						
R57A	Stanardsville	40.15	25	P		P	08 27 25.2 -0.1
	baz=212						
L42A	Oliver, Polo	40.16	11	P		P	08 27 25.3 0.0
	baz=194,SNR=8.4						
ACSO	Alum Creek Sta	40.19	19	P		P	08 27 25.4 -0.2
	baz=205						
RYN	Ryan	40.21	336	eP		P	08 27 27.5 +1.5
	comp=Z,17nm,1.2s						
O51A	Pataskala	40.23	19	P		P	08 27 26.1 +0.1
	baz=205						
S59A	Mechanicsville	40.24	27	P		P	08 27 24.3 -1.8
	baz=214						
R58A	Rapidan	40.38	26	P		P	08 27 27.1 -0.1
	baz=213						
N49A	Columbus Grove	40.45	17	P		P	08 27 27.6 -0.1
	baz=202						
M47A	Cromwell	40.45	15	P		P	08 27 27.3 -0.4
	baz=200						
O52A	Adamsville	40.46	20	P		P	08 27 27.3 -0.6
	baz=206,SNR=16						
S60A	Water View	40.49	27	P		P	08 27 26.1 -2.0
	baz=215						
Q56A	Snyder Ridge,	40.51	24	P		P	08 27 27.3 -1.0
	baz=211						
N50A	Nevada	40.62	18	P		P	08 27 28.4 -0.7
	baz=204						
P55A	Reedsville	40.66	23	P		P	08 27 30.0 +0.4
	baz=210						
L44A	Lake County Fo	40.68	12	P		P	08 27 30.1 +0.5
	baz=196						
O53A	New Philadelph	40.80	21	P		P	08 27 30.6 0.0
	baz=207,SNR=9.0						
Q57A	Strasburg	40.82	25	P		P	08 27 31.2 +0.4
	baz=212						
L46A	Eue Claire	40.89	14	P		P	08 27 31.1 -0.2
	baz=199						
JFWS	Jewell Farm	40.94	10	P		P	08 27 31.7 -0.1
	baz=193						
N51A	Ashland	41.00	19	P		P	08 27 32.1 -0.2
	baz=205						
M49A	Lily Center	41.01	17	P		P	08 27 32.4 0.0
	baz=203						
O54A	Avella	41.04	22	P		P	08 27 32.5 -0.2
	baz=208						
ECSD	EROS Data Cent	41.09	2	P		P	08 27 32.7 -0.3
	baz=183,SNR=30						
K43A	Burlington	41.09	12	P		P	08 27 33.0 -0.1
	baz=196,SNR=5.2						
L47A	Sherwood	41.14	15	P		P	08 27 32.8 -0.6
	baz=201,SNR=11						
N52A	McGinn's Farm,	41.14	20	P		P	08 27 33.2 -0.2
	baz=206						
BW06	Boulder Array	41.22	348	P		P	08 27 35.0 +0.7
	baz=164,SNR=30						
PDAR	Pinedale Array	41.22	348	P		P	08 27 34.7 +0.4
	comp=Z,12nm,0.8s,baz=150,slow=7.9,SNR=45						
M50A	Fremont	41.23	18	P		P	08 27 33.7 -0.5
	baz=204						
L48A	N Adams	41.32	16	P		P	08 27 34.7 -0.2
	baz=202						
LCO	Las Campanas	41.33	141	eP		P	08 27 35.3 -0.1
P57A	Homestead Farm	41.37	25	P		P	08 27 35.7 +0.4
	baz=212,SNR=6.6						
N53A	Lisbon	41.42	21	P		P	08 27 36.0 +0.2
	baz=207,SNR=6.3						
M51A	Elyria	41.44	19	P		P	08 27 36.7 +0.8
	baz=205						
O55A	Ligonier	41.47	23	P		P	08 27 36.9 +0.8
	baz=210						
AHID	Auburn Hatcher	41.56	346	eP		P	08 27 38.0 +0.9
	comp=Z,26nm,1.4s						
SIV	San Ignacio	41.57	118	P		P	08 27 36.5 -0.8
	comp=Z,2.8nm,1.0s,baz=295,slow=11,SNR=8.1						
K46A	Dorr	41.65	14	P		P	08 27 37.0 -0.6
	baz=200						
L49A	Milan	41.66	17	P		P	08 27 37.5 -0.2
	baz=203						
PLIO	Pelee Island,	41.67	18	P		P	08 27 37.3 -0.5
	baz=204						
RSSD	Black Hills	41.69	354	eP		P	08 27 39.7 +1.5
	comp=Z,29nm,1.0s						
RSSD	Black Hills	41.69	354	eP		P	08 27 39.7 +1.5
RSSD				pmax		pmax	
	comp=Z,29nm,1.0s						
RSSD	Black Hills	41.69	354	P		P	08 27 38.2 0.0
	baz=172						
SUSD	Miller	41.75	360	P		P	08 27 38.5 0.0
	baz=180						
O56A	Blue Knob Stat	41.81	23	eP		P	08 27 40.6 +1.6
	comp=Z,35nm,1.2s						
O56A	Blue Knob Stat	41.81	23	P		P	08 27 38.9 -0.1
	baz=211						
K47A	Vermontville	41.84	15	P		P	08 27 38.5 -0.6
	baz=201,SNR=8.5						
N54A	Moraine State	41.87	21	P		P	08 27 39.7 +0.3
	baz=208,SNR=10						
AAM	Ann Arbor	41.87	17	P		P	08 27 39.0 -0.3
	baz=203						
L50A	Kingsville	41.88	18	P		P	08 27 39.1 -0.4
	baz=204						
M52A	Chesterland	41.90	20	P		P	08 27 39.4 -0.2
	baz=206						
M53A	WI Miller and	42.04	20	P		P	08 27 40.9 +0.1
	baz=207,SNR=8.2						
N55A	Marion Center	42.09	23	P		P	08 27 41.2 0.0
	baz=210,SNR=8.3						
I41A	Arkdale	42.12	10	P		P	08 27 41.1 -0.3
	baz=193						
I42A	Draeger Farm,	42.12	11	P		P	08 27 40.6 -0.8
	baz=194,SNR=9.9						
O57A	Amberson	42.13	24	P		P	08 27 41.4 -0.2
	baz=212						
P59A	Jarrettsville	42.15	26	P		P	08 27 40.5 -1.2
	baz=214						
J45A	Montague	42.21	13	P		P	08 27 41.6 -0.6
	baz=198						
J46A	Howard City	42.31	14	P		P	08 27 42.1 -0.8
	baz=199						
K49A	Clarkson	42.37	17	P		P	08 27 42.6 -0.9
	baz=203						
SSPA	Standing Stone	42.39	24	eP		P	08 27 42.9 -0.8
	comp=Z,32nm,1.0s						
SSPA	Standing Stone	42.39	24	P		P	08 27 42.3 -1.4
	baz=212						
J47A	Sunmer	42.41	15	P		P	08 27 43.6 -0.3
	baz=201,SNR=13						
M54A	Oil Creek Stat	42.46	21	P		P	08 27 43.7 -0.6
	baz=209,SNR=7.7						
N56A	West Decatur	42.47	23	P		P	08 27 44.3 -0.1
	baz=211,SNR=6.7						
MVL	Millersville	42.50	26	eP		P	08 27 46.5 +1.9
	comp=Z,19nm,0.9s						
PAGS	Pennsylvania G	42.53	25	eP		P	08 27 46.6 +1.8
	comp=Z,36nm,1.4s						
N57A	Milroy	42.63	24	P		P	08 27 45.2 -0.4
	baz=212						
L53A	Girard	42.64	20	P		P	08 27 45.6 -0.2
	baz=208						
TAOE	Nuku Hiva Isla	42.74	254	eLR		LR	08 39 33.9
	comp=Z,3μm,26.1s,baz=72						
J48A	Bridge Port	42.75	16	P		P	08 27 48.5 +2.0
	baz=202						
M55A	Ridgway	42.76	22	P		P	08 27 46.8 +0.1
	baz=210,SNR=7.0						
O59A	Robesonia	42.83	26	P		P	08 27 47.1 -0.2
	baz=214						
SPMN	Marine on St.	42.86	6	P		P	08 27 47.4 -0.1
	baz=189,SNR=7.7						
H43A	Windswept, Lux	42.90	12	eP		P	08 27 47.6 -0.2
	comp=Z,33nm,1.1s						
H43A	Windswept, Lux	42.90	12	P		P	08 27 47.6 -0.2
	baz=196						
I46A	Reed City	42.92	14	P		P	08 27 47.3 -0.6
	baz=200						
YPP	Pitchstone Pla	42.92	347	eP		P	08 27 50.7 +2.4
	comp=Z,6.1nm,0.9s						
H17A	Grant Village	42.99	348	eP		P	08 27 51.3 +2.5
	comp=Z,14nm,1.2s						
J49A	Marlette	42.99	17	P		P	08 27 47.9 -0.6
	baz=203						
O03E	Paynes Creek	43.00	334	P		P	08 27 49.1 +0.3
	baz=145,SNR=7.2						
M56A	Emporium	43.00	23	P		P	08 27 49.0 +0.4
	baz=211,SNR=9.7						
G39A	Holcombe	43.12	8	P		P	08 27 49.0 -0.6
	baz=191,SNR=12						
HLID	Hailey	43.17	343	P		P	08 27 51.3 +1.1
	baz=157,SNR=16						
K52A	Tillsonburg	43.22	19	P		P	08 27 50.0 -0.3
	baz=207,SNR=7.6						
L54A	Sinclairville	43.22	21	P		P	08 27 50.7 +0.2
	baz=209,SNR=8.7						
I47A	Gladwin	43.23	15	P		P	08 27 50.2 -0.2
	baz=201						
G40A	Rib Lake	43.24	9	P		P	08 27 51.5 +1.0
	baz=192,SNR=6.9						
F37A	Hinrichs Farm,	43.37	6	P		P	08 27 51.4 -0.2
	baz=189,SNR=13						
H45A	Beulah	43.42	13	P		P	08 27 51.5 -0.5
	baz=198						
RLMT	Red Lodge	43.42	349	P		P	08 27 52.6 +0.3
	baz=165,SNR=5.3						
L55A	Hinsdale	43.50	22	P		P	08 27 53.0 +0.3
	baz=210						
RKT	Rikitea	43.50	232	eT		T	09 13 58.3
	comp=Z,7.9nm,0.3s						
N59A	State Game Lan	43.51	25	P		P	08 27 52.9 +0.2
	baz=214						
WVOR	Wild Horse Val	43.53	339	eP		P	08 27 54.8 +1.7
	comp=Z,38nm,1.1s						
WVOR	Wild Horse Val	43.53	339	eP		P	08 27 54.8 +1.7
WVOR				pmax		pmax	
	comp=Z,38nm,1.1s						
H46A	Fife Lake	43.54	14	P		P	08 27 53.3 +0.4
	baz=200						
I48A	Sherman Twp	43.60	16	P		P	08 27 53.3 -0.1
	baz=202						
I49A	Point Hope	43.61	17	P		P	08 27 52.8 -0.7
	baz=203						
F38A	Pierce Schro	43.69	7	P		P	08 27 53.0 -1.1
	baz=190,SNR=17						
J52A	Paris	43.71	19	P		P	08 27 53.9 -0.5
	baz=207,SNR=10.0						
F39A	Loretta	43.77	8	P		P	08 27 54.2 -0.6
	baz=191,SNR=13						
K54A	Basiliko Farm,	43.78	22	P		P	08 27 54.6 -0.3
	baz=209						
TYNO	Tyneside	43.78	20	P		P	08 27 54.7 -0.2
	baz=208						
KMRM	Mail Ridge	43.80	332	eP		P	08 27 56.5 +1.3
	comp=Z,22nm,1.0s						
H47A	Mio	43.84	15	P		P	08 27 54.6 -0.8
	baz=201						
F40A	Park Falls	43.89	9	P		P	08 27 55.2 -0.6
	baz=192,SNR=13						
G45A	Suttons Bay	43.90	13	P		P	08 27 55.2 -0.6
	baz=199						
BASO	Ashfield	44.02	18	P		P	08 27 56.7 -0.2
	baz=205						
I51A	Listowel	44.03	19	P		P	08 27 56.5 -0.4
	baz=206						
K55A	Perry	44.11	22	P		P	08 27 58.2 +0.6
	baz=210,SNR=10						
GCMT	Greycliff	44.14	349	eP		P	08 27 59.1 +1.1
H48A	Harrisville	44.17	16	P		P	08 27 58.1 +0.1
	baz=202						
ACTO	Acton	44.17	20	P		P	08 27 57.8 -0.3
	baz=207						
M04C	Macdoel	44.24	335	P		P	08 27 59.1 +0.3
	baz=146,SNR=16						
BWLO	Walkerton	44.28	18	P		P	08 27 58.8 -0.1
	baz=205						
BRCO	Bruce Peninsul	44.30	18	P		P	08 27 59.0 -0.1
	baz=205						
MEDO	Medina	44.34	21	P		P	08 27 59.8 +0.4
	baz=210,SNR=7.5						
G46A	Petoskey	44.35	14	P		P	08 27 59.3 -0.2
	baz=200						
M02C	Callahan	44.35	334	P		P	08 27 59.5 -0.1
	baz=144						
BOZ	Bozeman (W)	44.36	347	P		P	08 28 00.5 +0.8
	baz=161,SNR=16						
E38A	The Farm, Brul	44.37	7	P		P	08 27 59.1 -0.4
	baz=190,SNR=11						
J54A	Appleton	44.37	21	P		P	08 27 59.3 -0.3
	baz=209						
PAL	Palisades	44.40	27	P		P	08 27 59.3 -0.7
	baz=217						
G47A	Hillman	44.47	15	P		P	08 28 00.4 0.0
	baz=201						
LAO	LASA Array	44.47	353	P		P	08 28 00.8 +0.3
	baz=169,SNR=7.9						
BINY	Binghamton	44.48	24	P		P	08 28 01.3 +0.8
	baz=213,SNR=15						
I53A	Kortright Cn E	44.52	20	P		P	08 28 01.2 +0.3
	baz=208						
F45A	CMU Biological	44.54	13	P		P	08 28 01.2 +0.2
	baz=199						
K05A	Summer Lake	44.64	337	eP		P	08 28 04.2 +2.1
	comp=Z,80nm,1.3s						
CFA	Coronel Fontan	44.65	142	P		P	08 28 01.4 -0.7
	comp=Z,9.2nm,1.1s,baz=297,slow=7.2,SNR=7.0						
J55A	Hilton	44.67	22	P		P	08 28 02.0 0.0
	baz=210						
BMRO	Meriville Lake	44.69	18	P		P	08 28 02.2 +0.1
	baz=205						
M61A	Granite Spring	44.71	27	P		P	08 28 02.3 -0.1
	baz=217						
L04D	Klamath Falls	44.79	335	P		P	08 28 03.8 +0.6
	baz=146,SNR=8.2						
DRWO	Darlington Wes	44.86	21	P		P	08 28 03.8 +0.3
	baz=209						
E43A	Lone Tree Farm	44.88	12	P		P	08 28 02.7 -1.0
	baz=197,SNR=9.6						
K04D	Chiloquin, OR	44.90	336	P		P	08 28 04.0 0.0
	baz=146						
WLVO	Wesleyville	45.02	21	P		P	08 28 04.8 0.0
	baz=209						
H52A	Wyevale	45.15	19	P		P	08 28 05.1 -0.7
	baz=207,SNR=7.5						
MDND	Maddock	45.16	359	P		P	08 28 06.2 +0.3
	baz=179,SNR=6.3						
TOBO	Tobermory, Bru	45.17	17	P		P	08 28 05.6 -0.4
	baz=204						
J05D	Fort Rock, OR	45.25	337	P		P	08 28 08.0 +1.2
	baz=148,SNR=19						
D41A	Chassel	45.25	10	P		P	08 28 06.4 -0.2
	baz=194,SNR=10						
L02E	Cave Junction	45.30	334	P		P	08 28 07.5 +0.4
	baz=144						
E44A	Grand Marais A	45.34	12	P		P	08 28 07.5 +0.2
	baz=198						
F48A	Evansville	45.41	16	P		P	08 28 06.9 -0.9
	baz=203,SNR=7.3						
E46A	Sault Ste Mari	45.47	14	P		P	08 28 08.3 -0.1
	baz=200						
F49A	Sandfield	45.51	16	P		P	08 28 08.4 -0.2
	baz=204						
I55A	Frankford	45.54	21	P		P	08 28 08.8 -0.1
	baz=210,SNR=11						
PECO	Prince Edward	45.55	22	P		P	08 28 08.4 -0.6
	baz=211						
J04D	Umpqua Nationa	45.56	336	P		P	08 28 09.2 -0.1
	baz=146						

AGMN	Agassiz Nation	45.68	3	P		P	08 28 10.0	+0.1
	baz=184,SNR=14							
KLBO	Killbear Provi	45.68	18	P		P	08 28 09.5	-0.5
	baz=206,SNR=6.3							
EYMN	Ely	45.69	7	P		P	08 28 09.5	-0.6
	baz=190,SNR=18							
K02D	Willamette Mer	45.76	334	P		P	08 28 10.9	+0.1
	baz=144,SNR=13							
E47A	Iron Bridge	45.81	15	P		P	08 28 10.5	-0.5
	baz=202							
DELO	Deloro Mine	45.82	21	P		P	08 28 10.0	-1.1
	baz=210,SNR=8.9							
C40A	Isle Royale Na	45.99	9	P		P	08 28 11.8	-0.6
	baz=193,SNR=13							
G53A	Haliburton	45.99	20	P		P	08 28 12.3	-0.2
	baz=208,SNR=11							
H55A	Tweed	46.01	21	P		P	08 28 12.4	-0.2
	baz=210							
DGMT	Dagmar	46.02	355	P		P	08 28 13.0	+0.3
	baz=172							
BUKO	Buck Lake	46.02	19	P		P	08 28 12.2	-0.5
	baz=207,SNR=17							
D46A	Sault St. Mari	46.03	14	P		P	08 28 12.8	0.0
	baz=200							
MSO	Missoula	46.07	346	P		P	08 28 13.1	-0.1
	baz=159,SNR=13							
E48A	Lockeyer	46.13	16	P		P	08 28 13.8	+0.2
	baz=203,SNR=8.3							
I04A	Tendick Farm,	46.14	336	P		P	08 28 14.1	+0.4
	baz=146							
BANO	Bancroft	46.14	21	P		P	08 28 13.5	-0.2
	baz=209							
F51A	Arnstein	46.29	18	P		P	08 28 14.7	-0.1
	baz=206							
EGMT	Eagleton	46.31	350	P		P	08 28 15.4	+0.3
	baz=165,SNR=12							
F52A	Sundridge	46.36	19	P		P	08 28 14.2	-1.2
	baz=207,SNR=8.2							
H56A	Elgin	46.38	22	P		P	08 28 15.3	-0.2
	baz=212							
D47A	Chapleau	46.41	15	P		P	08 28 16.0	+0.2
	baz=202,SNR=6.0							
PLVO	Plevna	46.47	21	P		P	08 28 16.1	-0.1
	baz=210							
E50A	Wahnapitae	46.48	17	P		P	08 28 15.6	-0.7
	baz=205,SNR=5.7							
HRV	Adam Dziewonsk	46.67	28	P		P	08 28 17.1	-0.7
	baz=219							
G55A	Calabogie	46.78	21	P		P	08 28 18.8	+0.1
	baz=211,SNR=11							
D48A	Paudash Townsh	46.86	16	P		P	08 28 19.3	-0.1
	baz=203							
ALGO	Algonquin Park	46.92	20	P		P	08 28 19.3	-0.4
	baz=209							
G05D	Wamic, OR	46.94	338	P		P	08 28 20.5	+0.6
	baz=148							
E51A	G1948 Merrick	46.96	18	P		P	08 28 20.0	-0.1
	baz=207,SNR=8.3							
I02D	Swisshome	46.98	335	P		P	08 28 20.5	+0.2
	baz=145							
E52A	Mattawa	47.01	19	P		P	08 28 19.5	-0.9
	baz=208,SNR=11							
LONY	Lake Ozonia	47.06	24	P		P	08 28 20.8	-0.1
	baz=214							
D49A	Beulah Townshi	47.08	16	P		P	08 28 21.2	+0.2
	baz=204							
ORIO	Orleans, Innes	47.39	22	P		P	08 28 23.4	0.0
	baz=212							
F55A	Otter Lake	47.41	21	P		P	08 28 23.7	+0.1
	baz=211							
E53A	Dumoine, Ponti	47.42	20	P		P	08 28 23.9	+0.3
	baz=209							
F05D	White Salmon	47.54	339	P		P	08 28 25.1	+0.5
	baz=148							
ULM	Lac du Bonnet	47.63	3	P		P	08 28 25.3	+0.1
	comp=Z,17nm,1.0s,baz=194,slow=7.6,SNR=12							
ULM				LR		LR	08 48 29.9	
	comp=Z,708nm,18.8s,baz=171,slow=36							
ULM	Lac du Bonnet	47.63	3	eP		P	08 28 25.1	-0.1
	comp=Z,33nm,1.0s							
ULM	Lac du Bonnet	47.63	3	eP		P	08 28 25.1	-0.1
ULM				pmax		pmax		
	comp=Z,33nm,1.0s							
E54A	Lac Daplat, Po	47.63	20	P		P	08 28 25.2	-0.1
	baz=210,SNR=10							
G03D	McMinnville, O	47.66	337	P		P	08 28 26.1	+0.6
	baz=146							
D52A	ZEK Kipawa Sen	47.70	19	P		P	08 28 25.7	-0.2
	baz=208							
ALFO	Alfred	47.78	23	P		P	08 28 26.4	0.0
	baz=213							
AQDB	Aquidauana	48.02	120	eP		P	08 28 28.5	-0.2
D53A	Lac Vacive, Po	48.02	19	P		P	08 28 28.4	0.0
	baz=209,SNR=13							
NEW	Newport	48.23	344	P		P	08 28 29.5	-0.5
	baz=155,SNR=13							
D54A	Lac Fusel, La	48.43	20	P		P	08 28 30.8	-0.7
	baz=210,SNR=9.2							
E04D	Cinebar	48.51	338	P		P	08 28 32.5	+0.4
	baz=148,SNR=9.0							
CPUP	Villa Florida	49.26	128	P		P	08 28 37.1	-1.0
	comp=Z,5.1nm,1.0s,baz=289,slow=9.4,SNR=7.5							
CPUP				LR		LR	08 46 36.8	
	comp=Z,385nm,20.7s,baz=321,slow=33							
CPUP	Villa Florida	49.26	128	eP		P	08 28 36.9	-1.3
	comp=Z,20nm,1.1s							
CPUP	Villa Florida	49.26	128	eP		P	08 28 36.9	-1.3
CPUP				pmax		pmax		
	comp=Z,20nm,1.1s							
CPUP	Villa Florida	49.26	128	eP		P	08 28 37.4	-0.8
D03D	Eldon	49.53	338	P		P	08 28 40.5	+0.6
	baz=147							
NLWA	Neilton Lookou	49.70	338	eP		P	08 28 41.8	+0.5
	comp=Z,22nm,1.1s							
B06A	Marblemount	49.81	340	eP		P	08 28 43.8	+1.9
	comp=Z,18nm,0.8s							
PKME	Peaks-Kenny Pk	49.84	27	P		P	08 28 41.9	-0.4
	baz=220							
LSQQ	Lebel-sur-Quev	49.99	19	P		P	08 28 43.3	-0.1
	baz=209							
LATQ	La Tuque	50.05	23	P		P	08 28 43.6	-0.2
	baz=215							
PLCA	Paso Flores	50.17	152	P		P	08 28 43.7	-1.3
	comp=Z,13nm,1.2s,baz=332,slow=5.6,SNR=6.5							
PLCA				LR		LR	08 45 13.8	
	comp=Z,2μm,19.0s,baz=358,slow=30							
PLCA	Paso Flores	50.17	152	eP		P	08 28 44.4	-0.6
	comp=Z,43nm,1.5s							
PLCA	Paso Flores	50.17	152	eP		P	08 28 44.4	-0.6
PLCA				pmax		pmax		
	comp=Z,43nm,1.5s							
PLCA	Paso Flores	50.17	152	eP		P	08 28 44.4	-0.6
MATQ	Matagami	50.40	18	P		P	08 28 45.6	-0.8
	baz=208,SNR=6.7							
CHGQ	Chibougamau	51.58	20	P		P	08 28 54.1	-1.3
	baz=212,SNR=9.9							
FFC	Flin Flon	52.11	358	eP		P	08 28 58.8	-0.4
	comp=Z,10nm,1.4s							
FFC	Flin Flon	52.11	358	eP		P	08 28 58.8	-0.4
FFC				pmax		pmax		
	comp=Z,11nm,1.4s							
TRQA	Tornquist	52.80	144	eP		P	08 29 06.9	+2.3
BDFB	Brasilia	53.34	112	P		P	08 29 07.2	-2.0
	comp=Z,4.6nm,1.1s,baz=282,slow=5.8,SNR=3.7							
BDFB				LR		LR	08 51 32.2	
	comp=Z,763nm,19.6s,baz=294,slow=36							
ITAB	Concordia	53.79	127	eP		P	08 29 14.3	+2.2
FRTB	Fartura	54.37	121	eP		P	08 29 18.3	+1.8
BB19B	Bebedouro	54.48	118	eP		P	08 29 18.6	+1.2
OGAUY	Aigu	55.29	136	eP		P	08 29 24.5	+1.6
TIJ01	Guaruva-PR	55.58	123	eP		P	08 29 27.1	+1.8
PMNB	Patos De Minas	55.58	114	eP		P	08 29 27.9	+2.5
TBI	Tubuai	55.62	239	eS		S	08 37 08.7	-3.0
	comp=Z,295nm,30.0s							
TBI				eLR		LR	08 45 34.5	
	comp=Z,997nm,28.0s,baz=67							
TBI	Tubuai	55.62	239	eT		T	09 29 07.0	
	comp=Z,3.6nm,0.3s							
CNLB	Canela	55.71	128	eP		P	08 29 27.8	+1.7
RCLB	Rio Claro- Sao	55.80	119	eP		P	08 29 29.4	+2.5
SPB	Sao Paulo	56.29	121	eP		P	08 29 33.0	+2.8
JANB	Januaria	56.66	110	eP		P	08 29 35.3	+2.2
MCI8	Montes Claros	57.41	111	eP		P	08 29 40.1	+1.7
MCI9	Montes Claros	57.44	112	eP		P	08 29 41.2	+2.6
MCI6	Montes Claros	57.47	112	eP		P	08 29 41.9	+3.1
BSCB	Bom Sucesso	57.79	117	eP		P	08 29 42.7	+1.6
SJMB	Sao Joao De Ma	60.43	113	eP		P	08 30 01.5	+2.2
YKA	Yellowknife Ar	60.99	352	P		P	08 30 02.2	-0.1
	comp=Z,6.2nm,1.1s,baz=156,slow=6.8,SNR=26							
YKA				LR		LR	08 56 22.7	
	comp=Z,273nm,19.1s,baz=158,slow=36							
NBPA	Parau_RN	62.14	98	eP		P	08 30 15.1	+4.1
WHY	Whitehorse	64.18	341	eP		P	08 30 24.2	+0.4
	comp=Z,9.4nm,1.3s							
HYT	Haines Junctio	65.17	340	eP		P	08 30 30.5	+0.2
	comp=Z,14nm,1.2s							
CRQM	Cirque	67.12	338	eP		P	08 30 43.7	+0.8
	comp=Z,25nm,1.0s							
HMT	Hamilton	67.28	337	eP		P	08 30 44.8	+1.1
	comp=Z,42nm,1.2s							
EPYK	Eagle Plains	69.05	345	P		P	08 30 55.0	+0.2
	baz=139,SNR=16							
DOT	Dot Lake	69.34	340	eP		P	08 30 57.1	+0.5
	comp=Z,12nm,1.4s							
INK	Inuvik	69.77	347	P		P	08 30 58.7	-0.4
	comp=Z,18nm,1.0s,baz=142,slow=6.7,SNR=25							
PMR	Palmer	69.93	337	eP		P	08 31 02.0	+1.8
	comp=Z,24nm,1.2s							
PMR	Palmer	69.93	337	eP		P	08 31 02.0	+1.8
PMR				pmax		pmax		
	comp=Z,24nm,1.2s							
HDA	Harding Lake	70.81	340	P		P	08 31 05.8	+0.2
	baz=128							
RND	Reindeer	70.88	339	eP		P	08 31 07.1	+1.0
	comp=Z,36nm,1.3s							
RND	Reindeer	70.88	339	eP		P	08 31 07.1	+1.0
RND				pmax		pmax		
	comp=Z,36nm,1.3s							
ILAR	Eielson Array	71.01	340	P		P	08 31 06.4	-0.4
	comp=Z,7.1nm,0.9s,baz=149,slow=4.6,SNR=39							
ILAR				LR		LR	09 03 14.4	
	comp=Z,1μm,18.1s,baz=127,slow=37							
MCK	McKinley	71.10	339	eP		P	08 31 09.0	+1.6
	comp=Z,11nm,1.1s							
MCK	McKinley	71.10	339	eP		P	08 31 09.0	+1.6
MCK				pmax		pmax		
	comp=Z,11nm,1.1s							
COLA	College	71.40	340	eP		P	08 31 11.1	+2.0
COLA				pmax		pmax		
	comp=Z,10.0nm,1.2s							
TCOL	CIGO, UAF Yank	71.41	340	P		P	08 31 09.3	+0.1
	baz=127							
POKR	Poker Plat Res	71.41	340	P		P	08 31 09.3	+0.1
	baz=128							
FYU	Fort Yukon	71.62	342	eP		P	08 31 11.4	+1.0
	comp=Z,18nm,1.2s							
RES	Resolute Bay	72.13	1	P		P	08 31 12.8	-0.5
	comp=Z,10nm,1.1s,baz=192,slow=9.7,SNR=5.9							
RES	Resolute Bay	72.13	1	eP		P	08 31 13.2	-0.1
	comp=Z,19nm,1.1s							
RES	Resolute Bay	72.13	1	eP		P	08 31 13.2	-0.1
RES				pmax		pmax		
	comp=Z,19nm,1.1s							
SFJD	Kangerlussuaq	72.42	18	LR		LR	09 02 43.7	
	comp=Z,305nm,20.1s,baz=230,slow=36							
TTA	Tatalina	73.37	336	eP		P	08 31 22.2	+1.3
	comp=Z,12nm,1.2s							
TTA	Tatalina	73.37	336	eP		P	08 31 22.3	+1.3
TTA				pmax		pmax		
	comp=Z,12nm,1.2s							
TOLK	Toolik Lake Re	74.22	343	P		P	08 31 26.0	+0.1
	baz=126							
SUMG	Summit	79.02	15	eP		P	08 31 54.0	+0.7
	comp=Z,19nm,1.1s							
SUMG	Summit	79.02	15	eP		P	08 31 54.0	+0.7
SUMG				pmax		pmax		
	comp=Z,19nm,1.1s							
SUMG	Summit	79.02	15	iP		P	08 31 53.9	+0.5
	comp=Z,42nm,1.0s							
DAG	Danmarks Havn	85.31	13	iP		P	08 32 30.9	+5.1
DAG				pmax		pmax		
	comp=Z,12nm,1.1s							
DAG	Danmarks Havn	85.31	13	iP		P	08 32 30.9	+5.1
	comp=Z,9.5nm,1.1s							
BILL	Bilibino	89.54	338	eP		P	08 32 48.7	+2.3
	comp=Z,15nm,1.2s							
BILL	Bilibino	89.54	338	eP		P	08 32 47.1	+0.7
BILL				pmax		pmax		
	comp=Z,11nm,1.4s							
KBS	Kingsbay	91.47	10	eP		P	08 32 56.5	+1.3
KBS				pmax		pmax		
	comp=Z,214nm,2.1s							
VNA3	Neumayer Olymp	92.08	161	P		P	08 32 57.0	-1.2
QSPA	South Pole Qui	92.53	180	eP		P	08 33 00.9	+0.5
	comp=Z,32nm,1.1s							
VNA1	Neumayer--Stat	92.53	161	P		P	08 33 00.6	+0.5
VNA2	Neumayer--Watz	92.82	161	P		P	08 33 00.5	-1.0
H11N3	WAKE ISLAND Hy	93.21	290	T		T	10 16 34.7	
	baz=86,slow=75,SNR=18							
H11N2	WAKE ISLAND Hy	93.22	290	T		T	10 16 30.3	
	baz=86,slow=75,SNR=13							
H11N1	WAKE ISLAND Hy	93.23	290	T		T	10 16 27.1	
	baz=86,slow=75,SNR=15							
H11S2	WAKE ISLAND Hy	93.48	289	T		T	10 16 55.4	
	baz=86,slow=75,SNR=29							
H11S1	WAKE ISLAND Hy	93.49	289	T		T	10 16 52.0	
	baz=86,slow=75,SNR=31							
H11S3	WAKE ISLAND Hy	93.50	289	T		T	10 16 52.2	
	baz=86,slow=75,SNR=29							
DBIC	Dimbokro	93.61	83	LR		LR	09 11 43.6	
	comp=Z,207nm,20.1s,baz=238,slow=33							
SNAA	Sanae	94.25	162	eP		P	08 33 06.7	-1.5
	comp=Z,7.3nm,1.2s							
SNAA	Sanae	94.25	162	iP		P	08 33 06.7	-1.5
VNDA	Vanda	94.47	192	LR		LR	09 06 29.2	
	comp=Z,334nm,21.0s,baz=118,slow=30							
PETK	Petropavlovsk-	96.08	324	LR		LR	09 08 29.6	
	comp=Z,126nm,21.5s,baz=83,slow=30							
SEY	Seymchan	96.24	334	eP		P	08 33 17.8	+0.4
KONO	Kongsberg	97.03	29	eP		P	08 33 18.6	-2.4
KONO				pmax		pmax		
	comp=Z,2.0nm,0.5s							
NOA	NORSAR Array B	97.37	27	LR		LR	09 15 43.0	
	comp=Z,48nm,20.4s,baz=320,slow=34							
MA2	Magadan	98.05	331	eP		P	08 33 24.9	-0.7
MA2				pmax		pmax		
	comp=Z,13nm,1.4s							
ARCES	ARCESS Array B	99.04	17	LR		LR	09 16 55.3	
	comp=Z,250nm,21.9s,baz=283,slow=34							
TORD	Torodi Ar. Bea	99.63	76	LR		LR	09 15 55.5	
	comp=Z,93nm,21.9s,baz=305,slow=34							
TIXI	Tiksi	99.89	346	P		Pdif	08 33 33.5	-0.1
	comp=Z,0.8nm,0.2s,baz=47,slow=4.3,SNR=3.5							
TIXI	Tiksi	99.89	346	eP		Pdif	08 33 33.5	-0.1
TIXI				pmax		pmax		
	comp=Z,3.0nm,0.9s							
OBN	Obninsk	111.88	26	iPKIKP		PKiKP	08 38 23.6	-0.7
OBN				e			08 39 06.6	
OBN				ePPP		PPP	08 41 28.4	
OBN				pmax		pmax		
	comp=Z,3.0nm,0.8s							
CN2	Changchun	119.22	325	ePKP		PKiKP	08 38 39.3	+0.5
ZAA1	Zalesovo Array	123.65	357	ePKPdf		PKPdf	08 38 46.4	-0.6
ZALV	Zalesovo Beam	123.66	357	PKP		PKPdf	08 38 46.4	-0.6
	comp=Z,0.8nm,0.4s,baz=316,slow=4.0,SNR=2.6							
BRVK	Borovoye	123.87	8	iPKIKP		PKiKP	08 38 47.5	-0.2
BVAR	Borovoye Array	123.92	8	PKP		PKiKP	08 38 47.6	-0.2
	comp=Z,0.4nm,0.4s,baz=270,slow=1.2,SNR=5.7							
ASAR	Alice Springs	124.93	243	PKP		PKPdf	08 38 48.7	-1.6
	comp=Z,0.8nm,0.7s,baz=116,slow=2.3,SNR=3.4							
ULN	Ulaanbaatar	124.97	339	iPKIKP		PKiKP	08 38 51.6	+1.3
WR1	Warramunga Arr	125.36	247	ePKPdf		PKPdf	08 38 50.4	-0.8
WRA	Warramunga Arr	125.36	247	PKP		PKPdf	08 38 50.4	-0.8
	comp=Z,1.6nm,0.6s,baz=110,slow=1.0,SNR=3.5							
GNI	Garni	126.00	34	iPKIKP		PKPdf	08 38 49.8	-2.3
KURK	Kurchatov	126.93	2	iPKIKP		PKPdf	08 38 53.0	-0.3
KURBB	Kurchatov Arra	127.02	2	PKP		PKPdf	08 38 53.0	-0.5
	comp=Z,1.7nm,0.9s,baz=348,slow=2.1,SNR=12							
HHC	Hu-ho-hao-te	128.73	331	ePKP		PKiKP	08 38 58.8	+0.9
MK32	Makanchi Array	130.89	359	ePKPdf		PKPdf	08 38 59.7	-1.4
MKAR	Makanchi Array	130.89	359	PKP		PKPdf	08 38 59.7	-1.4
	comp=Z,1.2nm,0.9s,baz=0.0,slow=1.2,SNR=6.7							
WMQ	Urumqi	133.51	354	ePKP		PKPdf	08 39 06.3	+0.1
WMQ				LR		LR		
	comp=Z,230nm,29.1s							
WMQ				LR		LR		
	comp=Z,510nm,29.3s							
WMQ				LR		LR		
	comp=Z,210nm,29.1s							
GTA	Gaotai	134.91	340	ePKP		PKiKP	08 39 12.6	+2.1
LZH	Lanzhou	136.17	333	ePKP		PKPdf	08 39 07.1	-4.4
LZH				LR		LR		
	comp=Z,130nm,18.0s							
LZH				LR		LR		
	comp=Z,130nm,17.9s							
LZH				LR		LR		
	comp=Z,170nm,20.1s							
KSH	Kashi	137.90	6	PKP		PKPdf	08 39 12.9	-1.6
KSH				PP		PP	08 42 09.3	+8.8
KSH				SKS		SKSdf	08 46 20.1	-5.6
KSH				AMB		AMB		
	comp=Z,340nm,5.6s							
KSH				LR		LR		
	comp=Z,950nm,12.5s							
KSH				LR		LR		
	comp=Z,430nm,7.9s							
KSH				LR		LR		
	comp=Z,550nm,20.3s							
CD2	Chengdu	140.42	329	PKP		PKPdf	08 39 17.9	-1.4
GYA	Guiyang	142.12	321	ePKP		PKPdf	08 39 20.0	-2.6
GYA				PP		PP	08 42 30.3	+2.9
GYA				AMB		AMB		
	comp=Z,120nm,8.2s							
KMI	Kunming	145.49	324	PKPbc		PKPab	08 39 30.3	+1.5
KMI				pPKP		PKiKP	08 39 34.9	+2.3
KMI				LR		LR		
	comp=Z,160nm,21.9s							
CMAR	Chiang Mai Arr	152.81	321	PKP		PKPdf	08 39 39.7	-0.5
	comp=Z,1.2nm,0.4s,baz=315,slow=1.3,SNR=5.2							
CMAR				PKPbc		pPKPbc	08 39 49.0	-0.5
	comp=Z,2.5nm,0.8s,baz=328,slow=2.5,SNR=5.4							

IDC 19 08:21:32.1±1.9, 3°.33S×145°.56E, h0km, mb3.7/2, mb1 4.2/3, mb1mx3.6/36, mbtmp3.9/3, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.7/29, Error ellipse: s-maj=401.0km s-min=28.4km az=118.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	15.52	114	LR	LR	08 31 21.5	
	comp=Z,53nm,19.0s,baz=160,slow=38						
WRA	Warramunga Arr	19.81	213	P	P	08 26 04.7	+0.3
	0.1nm,0.3s,baz=38,slow=10.0,SNR=7.3						
ASAR	Alice Springs	23.14	208	P	P	08 26 40.0	-0.2
	2.2nm,0.8s,baz=28,slow=13,SNR=10						
ILAR	Eielson Array	83.61	23	P	P	08 34 02.1	0.0
	0.6nm,0.8s,baz=266,slow=5.2,SNR=4.1						

*SJA **19** 08:26:44.9±0.8, 21°.93S×69°.88W, h58km±3km, ML2.3, MW3.2*
*ISCJB **19** 08:26:45.9±0.8, 21°.92S±0°.03×69°.89W±0°.06, h59km±6km, Error ellipse: s-maj=9.4km s-min=4.6km az=3.9*
*GUC **19** 08:26:45.4±0.6, 21°.91S×69°.87W, h65km±2km, ML3.0*
ISC 19 08:26:46.4±1.4, 21°.92S±0°.03×69°.89W±0°.05, h54km±7km, n25, σ0°.61/39, 3C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB03	IPOC Station P	0.17	135	eP	Pn	08 26 55.0	-0.3
PB03				eS	Sn	08 27 02.1	+0.4
PB03	IPOC Station P	0.17	135	↓iP	Pn	08 26 55.0	-0.3
PB03				eS	Sn	08 27 02.0	+0.4
PB03				IAML		08 27 02.3	
	comp=E,2μm,0.2s						
PB07	IPOC Station P	0.20	360	eP	Pn	08 26 55.2	-0.3
PB07				eS	Sn	08 27 02.3	+0.4
PB07	IPOC Station P	0.20	360	↓iP	Pn	08 26 55.1	-0.3
PB07				eS	Sn	08 27 02.3	+0.4
PB07				IAML		08 27 02.5	
	comp=N,997nm,0.3s						
PB04	IPOC Station P	0.48	211	eP	Pn	08 26 57.7	-0.2
PB04	IPOC Station P	0.48	211	↓iP	Pn	08 26 57.5	-0.4
PB04				eS	Sn	08 27 06.8	+0.7
PB04				IAML		08 27 07.5	
	comp=N,1μm,0.2s						
PB02	IPOC Station P	0.60	359	eP	Pn	08 26 58.6	-0.7
PB02	IPOC Station P	0.60	359	↓iP	Pn	08 26 58.6	-0.7
PB02				eS	Sn	08 27 08.3	-0.2
PB02				IAML		08 27 08.8	
	comp=E,2μm,0.2s						
PB09	IPOC Station P	0.61	78	eP	Pn	08 26 59.1	-0.4
PB09	IPOC Station P	0.61	78	↑iP	Pn	08 26 59.1	-0.4
PB09				eS	Sn	08 27 09.1	+0.2
PB09				IAML		08 27 09.9	
	comp=E,1μm,0.2s						
PB06	IPOC Station P	0.83	160	eP	Pn	08 27 01.4	-0.9
PB06	IPOC Station P	0.83	160	iP	Pn	08 27 01.4	-0.9
PB06				eS	Sn	08 27 13.1	-0.7
PB01	IPOC Station P	0.95	23	↓iP	Pn	08 27 02.8	-1.0
PB01				eS	Sn	08 27 15.7	-0.7
PB01				IAML		08 27 16.1	
	comp=E,1μm,0.4s						
PB05	IPOC Station P	0.97	198	eP	Pn	08 27 03.7	-0.3
PB05	IPOC Station P	0.97	198	eP	Pn	08 27 03.4	-0.6
PB05				eS	Sn	08 27 17.4	+0.4
PB05				IAML		08 27 20.7	
	comp=E,355nm,0.2s						
LVC	Limon Verde	1.13	127	eP	Pn	08 27 06.2	-0.2
	comp=E,45nm,1.0s						
LVC	Limon Verde	1.13	127	eP	Pn	08 27 06.4	0.0
LVC				eS	Sn	08 27 21.9	+0.7
LVC				IAML		08 27 23.4	
	comp=Z,55nm,0.2s						
LVC	Limon Verde	1.13	127	eP	Pn	08 27 06.2	-0.2
LVC				pmax	pmax		
	comp=Z,45nm,1.0s						
LVC	Limon Verde	1.13	127	↑iP	Pn	08 27 06.4	0.0
LVC				iS	Sn	08 27 21.8	+0.6
PB15	IPOC Station P	1.33	163	eP	Pn	08 27 08.3	-0.7
PB15	IPOC Station P	1.33	163	↑iP	Pn	08 27 08.5	-0.5
PB15				eS	Sn	08 27 26.4	+0.5
PB08	IPOC Station P	1.90	21	eP	Pn	08 27 16.4	-0.4
PB08				iS	Sn	08 27 39.9	0.0
PB08				IAML		08 27 44.3	
	comp=N,72nm,0.2s						
PB11	IPOC Station P	2.16	6	eP	Pn	08 27 20.2	0.0
PB11	IPOC Station P	2.16	6	eP	Pn	08 27 19.6	-0.7
PB16	IPOC Station P	3.59	6	eP	Pn	08 27 41.9	+1.8

*IDC **19** 08:30:21.2±0.5, 9°.38N×125°.52E, h0km, mb4.3/31, mb1 4.4/33, mb1mx4.3/57, mbtmp4.3/33, ML4.5/2, MS3.8/14, Ms1 3.8/14, ms1mx3.7/37, Error ellipse: s-maj=20

CGP	Cagayan de Oro	1.27	227⇑	*i*P		Pn	08 30 44.7 -2.4
CGP				*i*S		Sb	08 31 01.6 -1.9
BIPH	Bislig	1.35	147⇓	*i*P		Pn	08 30 46.1 -2.0
BIPH				*i*S		Sn	08 31 03.8 -1.8
BUKP	Musuan	1.55	201	*e*P		Pn	08 30 50.1 -0.8
BUKP				*e*S		Sb	08 31 12.0 +0.4
TBP	Tagbilaran	1.78	282	*e*P		Pn	08 30 52.4 -1.7
TBP				*i*S		Sn	08 31 16.1 -0.2
LLP	Lapu-Lapu	1.91	301⇓	*e*P		Pn	08 30 54.1 -1.8
LLP				*e*S		Sn	08 31 19.0 -0.5
PLP	Palo	1.93	341⇓	*e*P		Pn	08 30 55.9 -0.3
PLP				*e*S		Sb	08 31 23.4 +0.6
OCLP	Ormoc	1.98	330	*e*P		Pn	08 30 57.5 +0.6
OCLP				*e*S		Sg	08 31 25.7 -2.4
DMPH	Davao City--Mi	2.23	183⇑	*e*P		Pb	08 31 02.6 -1.4
DMPH				*e*S		Sg	08 31 37.0 +0.8
DAV	Davao City (W)	2.25	181	Pn		Pn	08 31 01.4 +0.9
DAV	218nm,0.3s,baz=311,slow=4.1,SNR=8.5				Sn	Sg	08 31 40.3 +3.9
	162nm,0.3s,baz=79,slow=21,SNR=7.1						
DAV	Davao City (W)	2.25	181	*e*Pn		Pb	08 31 03.8 -0.4
DAV				*e*			08 31 05.7
DAV				*e*Sn		Sg	08 31 40.3 +3.9
BESP	Borongan	2.27	355	*e*P		Pn	08 31 01.8 +1.0
BESP				*e*S		Sg	08 31 35.7 -1.5
SNPH	Sibulan	2.36	271⇑	*i*P		Pn	08 31 02.5 +0.3
SNPH				*i*S		Sn	08 31 33.4 +2.6
DCPH	Dipolog City	2.37	252⇑	*e*P		Pb	08 31 06.8 +0.5
DCPH				*e*S		Sn	08 31 33.5 +2.7
MATI	Mati	2.45	165	*e*P		Pn	08 31 04.5 +1.2
MATI				*e*S		Sb	08 31 37.8 +0.2
DDMP	Don Marcelino,	3.21	179	*e*P		Pn	08 31 13.0 -0.7
GUIM	Jordan	3.26	294	*e*P		Pn	08 31 13.9 -0.5
CNP	Catarman	3.30	343	*e*P		Pn	08 31 16.5 +1.5
CNP				*e*S		Sb	08 32 03.7 +1.6
PVCP	Virac	4.48	341	*e*P		Pn	08 31 35.9 +4.7
PVCP				*e*S		Sb	08 32 35.4 -0.7
SGSI	Sangihe	5.61	181	P		Pn	08 31 51.1 +4.4
TGY	Tagaytay City	6.60	316	LR		LR	08 34 50.5
	comp=Z,1µm,21.9s,baz=174,slow=42						
SMPP	San Manuel, Pa	8.32	325	*e*P		Pn	08 32 26.1 +2.0
TNTI	Ternate	8.68	168	P		Pn	08 32 33.9 +5.0
MRSI	Marisa	9.53	203	P		Pn	08 32 47.1 +6.5
LUWI	Luwuk	10.69	196	*e*Pn		Pn	08 33 01.8 +5.3
LUWI	Luwuk	10.69	196	P		Pn	08 33 00.5 +4.0
APSI	Ampana	10.92	201	P		Pn	08 33 06.0 +6.4
SANI	Sanana	11.31	178	P		Pn	08 33 10.2 +5.2
SWI	Sorong	11.57	151	P		Pn	08 33 10.8 +2.2
SIJI	Sorong	11.58	151	Pn		Pn	08 33 10.4 +1.7
	2.2nm,0.3s,baz=358,slow=7.9,SNR=9.7						
TTSI	Tana Toraja	13.59	205	P		P	08 33 41.2 -3.9
RKPI	Ransiki, Papua	13.73	141	P		P	08 33 42.5 -4.2
SPSI	Sidrap Palu	14.44	204	P		P	08 33 55.2 +0.6
TPUB	Ta-pu	14.69	342	*e*Pn		Pn	08 33 54.0 +2.7
MTKI	Muara Teweh, K	14.78	227	P		P	08 34 08.3 +10
SBUM	Sibu	14.98	244	*e*Pn		P	08 34 00.2 -0.4
	31nm,1.1s						
SSLB	Suanglong	15.06	343	*e*Pn		P	08 33 58.9 -2.5
	17nm,0.8s						
BKSI	Bulukumba	15.55	201	P		P	08 34 05.7 -1.3
YHNB	Yeheng	15.79	346	*e*Pn		P	08 34 07.9 -1.6
	25nm,0.9s						
KSM	Kuching	17.12	244	*e*P		P	08 34 25.7 +1.3
	15nm,1.1s						
GENI	Genyem	18.71	129	P		Pn	08 34 48.7 +6.3
SOEI	Soe	19.01	184	P		Pn	08 34 52.1 +6.1
JAY	Jayapura	19.08	127	LR		LR	08 42 55.2
	comp=Z,260nm,19.6s,baz=342,slow=39						
BATI	Baumata	19.51	186	LR		LR	08 43 21.1
	comp=Z,360nm,18.7s,baz=38,slow=40						
WSI	Waingapu	19.61	196	P		Pn	08 34 57.9 +4.8
PANO	Nakornpanom	21.87	293	P		P	08 35 22.4 +6.2
SKNT	Sakolnakorn	22.39	292	P		P	08 35 22.1 +0.2
	16nm,1.2s						
PPBI	Pangkal Pinang	22.53	240	P		P	08 35 27.3 +4.0
MTN	Manton Dam	22.70	166	*e*P		P	08 35 24.3 -0.7
	25nm,0.9s						
NONG	Nongkai	23.48	294	P		P	08 35 33.5 +0.4
	0.3nm,1.0s						
WHN	Wuhan	23.59	335	⇑P		P	08 35 48.4 +14
WHN				S		S	08 39 55.4 +7.8
WHN				pmax	pmax		
	comp=Z,34nm,1.0s						
WHN				LR	LR		
	comp=N,730nm,12.4s						
WHN				LR	LR		
	comp=E,630nm,15.1s						
WHN				LR	LR		
	comp=Z,1µm,13.9s						
JNU	Nakatsue	24.17	11	LR		LR	08 44 08.1
	comp=Z,120nm,19.5s,baz=172,slow=34						
PBKT	Sadao Pong	25.07	289	P		P	08 35 53.4 +5.6
	comp=Z,7.7nm,0.9s						
PAYA	Payao	26.84	295	P		P	08 36 10.1 +6.2
	comp=Z,27µm,0.9s						
FITZ	Fitzroy Crossi	27.25	180	P		P	08 36 08.5 +0.9
	comp=Z,3.1nm,0.8s,baz=22,slow=5.4,SNR=4.7						
FITZ				LR		LR	08 48 52.9
	comp=Z,88nm,18.4s,baz=6.5,slow=41						
FITZ	Fitzroy Crossi	27.25	180	*e*P		P	08 36 08.5 +0.9
	comp=Z,8.9nm,1.0s						
CMAR	Chiang Mai Arr	27.41	292	P		P	08 36 09.2 0.0
	comp=Z,3.0nm,0.3s,baz=120,slow=7.1,SNR=7.2						
CMAR				LR		LR	08 47 12.0
	comp=Z,294nm,20.0s,baz=108,slow=37						
KSRS	Korea Array	28.08	4	P		P	08 36 15.3 +0.6
	comp=Z,2.4nm,0.7s,baz=181,slow=9.5,SNR=11						
COEN	Coen	28.95	143	*e*P		P	08 36 22.2 -0.6
	comp=Z,16nm,0.8s						
XAN	Xi'an	28.99	330	P		P	08 36 38.3 +15
XAN				pP		sP	08 36 43.8 +13
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,85nm,5.3s						
XAN				LR	LR		
	comp=N,280nm,18.2s						
XAN				LR	LR		
	comp=E,390nm,21.1s						
XAN				LR	LR		
	comp=Z,280nm,19.2s						
MAJO	Matsushiro	29.40	21	*e*P		P	08 36 24.7 -1.9
MJAR	Matsushiro Arr	29.40	21	P		P	08 36 24.7 -1.9
	comp=Z,3.4nm,0.8s,baz=194,slow=11,SNR=4.4						
MJAR				LR		LR	08 46 28.9
	comp=Z,250nm,21.0s,baz=205,slow=33						
WR1	Warramunga Arr	30.32	164	*e*P		P	08 36 34.4 -0.5
WRA	Warramunga Arr	30.32	164	P		P	08 36 34.4 -0.5
	comp=Z,1.3nm,0.6s,baz=346,slow=11,SNR=7.1						
WB2	Warramunga Arr	30.33	164	*e*P		P	08 36 34.5 -0.5
	comp=Z,9.3nm,1.1s						
AS31	Alice Springs	33.78	166	*e*P		P	08 37 05.2 0.0
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	33.78	166	P		P	08 37 05.0 -0.3
	comp=Z,1.4nm,0.6s,baz=336,slow=7.0,SNR=20						
ASAR				LR		LR	08 52 23.2
	comp=Z,75nm,19.2s,baz=348,slow=39						
USRK	Ussuriysk Ar.	35.18	8	P		P	08 37 17.2 +0.2
	comp=Z,10.0nm,0.9s,baz=226,slow=13,SNR=11						
USRK				LR		LR	08 50 00.9
	comp=Z,129nm,20.7s,baz=174,slow=34						
SHL	Shillong	35.87	301	*e*P		P	08 37 23.0 -0.5
ERM	Erimo	36.03	22	*e*P		P	08 37 24.5 +0.1
	comp=Z,6.3nm,0.9s						
ASAJ	Asahikawa	37.66	20	P		P	08 37 38.4 +0.1
	comp=Z,5.8nm,0.9s,baz=211,slow=19,SNR=4.4						
HNR	Honiara	38.92	118	LR		LR	08 52 12.0
	comp=Z,54nm,21.7s,baz=0.5,slow=34						
MORW	Morawa	39.28	193	*e*P		P	08 37 51.8 -0.3
	comp=Z,19nm,1.1s						
FORT	Forrest	39.95	177	*e*P		P	08 37 57.3 -0.3
	comp=Z,23nm,0.8s						
KLR	Kul'dur	40.10	6	P		P	08 38 00.0 +1.3
	comp=Z,1.6nm,0.6s,baz=19,slow=1.1,SNR=4.5						
H11S3	WAKE ISLAND Hy 40.80	73		T		T	09 21 03.0
	baz=262,slow=74,SNR=38						
H11S1	WAKE ISLAND Hy 40.81	73		T		T	09 21 04.5
	baz=262,slow=74,SNR=24						
H11S2	WAKE ISLAND Hy 40.81	73		T		T	09 21 11.2
	baz=262,slow=74,SNR=16						
H11N1	WAKE ISLAND Hy 41.16	71		T		T	09 21 37.3
	baz=265,slow=74,SNR=38						
H11N2	WAKE ISLAND Hy 41.16	71		T		T	09 21 39.7
	baz=265,slow=74,SNR=27						
H11N3	WAKE ISLAND Hy 41.17	71		T		T	09 21 39.6
	baz=265,slow=74,SNR=43						
SONA0	Songino Array	41.68	341	*e*P		P	08 38 12.4 +0.5
SONM	Songino Array	41.68	341	P		P	08 38 12.4 +0.5
	comp=Z,0.4nm,0.3s,baz=142,slow=7.3,SNR=2.2						
NWAO	Narrogin (SRO)	42.77	190	LR		LR	08 58 07.1
	comp=Z,76nm,20.6s,baz=7.5,slow=39						
NWAO	Narrogin (SRO)	42.77	190	*e*P		P	08 38 20.2 -0.6
	comp=Z,19nm,1.1s						
BBOO	Buckleboo	43.07	167	*e*P		P	08 38 23.5 +0.3
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	43.73	160	P		P	08 38 29.4 +0.8
	comp=Z,3.6nm,0.8s,baz=341,slow=7.1,SNR=7.1						
STKA	Stephens Creek	43.73	160	*e*P		P	08 38 29.4 +0.8
	comp=Z,1.1nm,0.9s						
PETK	Petropavlovsk-	50.75	24	P		P	08 39 23.9 +0.9
	comp=Z,4.4nm,0.6s,baz=189,slow=4.6,SNR=7.0						
PEA1	Petropavlovsk-	50.75	24	*e*P		P	08 39 23.9 +0.9
MK32	Makanchi Array	52.40	323	*e*P		P	08 39 35.4 -0.1
MKAR	Makanchi Array	52.40	323	P		P	08 39 35.4 -0.1
	comp=Z,3.5nm,0.8s,baz=124,slow=8.1,SNR=16						
MAKZ	Makanchi	52.59	323	*e*P		P	08 39 36.8 -0.1
	comp=Z,4.4nm,0.9s						
KSH	Kashi	53.40	313	P		P	08 39 45.4 +2.3
KSH				pP		sP	08 40 02.0 +11
KSH				PP		PP	08 41 48.1 +4.5
KSH				S		S	08 47 12.0 -2.7
KSH				ScS		ScS	08 49 26.3 -6.0
KSH				pmax	pmax		
	comp=Z,20nm,1.1s						
KSH				pmax	pmax		
	comp=Z,210nm,4.7s						
KSH				LR	LR		
	comp=Z,770nm,12.9s						
KSH				LR	LR		
	comp=Z,630nm,13.2s						
KSH				LR	LR		
	comp=Z,430nm,17.2s						
MA2	Magadan	53.60	16	P		P	08 39 43.5 -0.6
	comp=Z,6.1nm,0.8s,baz=223,slow=4.0,SNR=3.6						
ZALV	Zalesovo Beam	55.15	332	P		P	08 39 53.4 -2.1
	comp=Z,1.1nm,0.5s,baz=123,slow=5.3,SNR=3.6						
ZAA1	Zalesovo Array	55.15	332	*e*P		P	08 39 53.4 -2.1
AAK	Ala-Archa	55.55	316	P		P	08 39 57.9 -0.9
	comp=Z,1.7nm,0.4s,baz=124,slow=7.3,SNR=3.7						
KURK	Kurchatov	56.49	326	*e*P		P	08 40 04.8 -0.3
	comp=Z,9.7nm,0.8s						
KURBB	Kurchatov Arra	56.49	326	P		P	08 40 04.3 -0.8
	comp=Z,3.2nm,0.6s,baz=126,slow=6.6,SNR=14						
SEY	Seymchan	56.88	14	P		P	08 40 08.4 +0.7
	comp=Z,1.7nm,0.6s,baz=237,slow=8.6,SNR=5.6						
GAR	Garm	57.41	310	*e*P		P	08 40 12.0 0.0
	comp=Z,15nm,0.8s						
KKAR	Karatay Array	58.46	315	*e*P		P	08 40 18.3 -0.9
	comp=Z,5.7nm,0.9s						
BVAR	Borovoye Array	62.08	326	P		P	08 40 43.3 -0.5
	comp=Z,1.9nm,0.7s,baz=126,slow=7.4,SNR=5.7						
BRVK	Borovoye	62.15	326	*e*P		P	08 40 43.8 -0.5
	comp=Z,8.8nm,1.1s						
TIXI	Tiksi	62.30	1	P		P	08 40 43.9 -1.0
	comp=Z,2.8nm,0.7s,baz=189,slow=2.3,SNR=4.3						
TIXI	Tiksi	62.30	1	*e*P		P	08 40 43.3 -1.6
	comp=Z,7.1nm,1.1s						
NRIK	Noril'sk	64.77	346	P		P	08 41 01.7 +0.5
	comp=Z,1.2nm,0.4s,baz=118,slow=4.1,SNR=4.7						
GEYT	Alibeck	66.60	307	P		P	08 41 14.0 +0.2
	comp=Z,2.5nm,0.7s,baz=123,slow=5.5,SNR=3.8						
ABKAR	Akbulak array	67.17	320	*e*P		P	08 41 16.3 -0.9
	comp=Z,2.9nm,0.9s						
BKZ	Black Stump Fm	67.48	139	*e*P		P	08 41 19.9 +0.6
	comp=Z,23nm,0.9s						
AKTO	Aktyubinsk	68.64	321	P		P	08 41 25.0 -1.4
	comp=Z,1.7nm,0.7s,baz=85,slow=8.0,SNR=4.4						
ARU	Arti	69.66	327	P		P	08 41 30.5 -2.1
	comp=Z,1.2nm,0.3s,baz=13,slow=5.8,SNR=5.8						
RAYN	Ar Rayn	77.33	292	*e*P		P	08 42 17.1 -1.3
	comp=Z,12nm,0.9s						
BPAW	Bear Paw Mtn.	78.78	26	*e*P		P	08 42 23.3 -2.3
	comp=Z,7.4nm,0.9s						
ILAR	Eielson Array	80.56	26	P		P	08 42 33.8 -1.5
	comp=Z,1.1nm,0.8s,baz=238,slow=5.6,SNR=11						
DOT	Dot Lake	81.85	27	*e*P		P	08 42 40.1 -2.1
	comp=Z,3.6nm,1.1s						
DAWY	Dawson	83.86	26	*e*P		P	08 42 51.6 -1.1
	comp=Z,5.0nm,0.9s						
ARA0	ARCESS Array S	84.85	340	*e*P		P	08 42 55.9 -1.6
ARCES	ARCESS Array B	84.85	340	P		P	08 42 55.9 -1.6
	comp=Z,1.5nm,0.7s,baz=79,slow=6.5,SNR=8.5						
INK	Inuvik	85.39	21	P		P	08 42 59.5 -0.7
	comp=Z,2.8nm,0.7s,baz=285,slow=5.7						
INK	Inuvik	85.39	21	*e*P		P	08 43 00.2 0.0
	comp=Z,3.6nm,0.8s						
BR101	Keskin Array S	85.64	309	*e*P		P	08 43 00.2 -2.0
BRTR	Keskin Array B	85.64	309	P		P	08 43 00.2 -2.0
	comp=Z,0.5nm,0.4s,baz=84,slow=7.5,SNR=3.1						
BRTR				LR		LR	09 27 04.0
	comp=Z,47nm,19.6s,baz=291,slow=40						
FIA0	FINESS Array S	86.41	332	*e*P		P	08 43 03.5 -1.9
FINES	FINESS Array B	86.41	332	P		P	08 43 03.5 -1.9
	comp=Z,1.1nm,0.5s,baz=90,slow=3.8,SNR=8.3						
MAW	Mawson	88.60	200	LR		LR	09 22 01.2
	comp=Z,309nm,18.9s,baz=224,slow=35						
VNDA	Vanda	89.08	173	P		P	08 43 18.6 +0.8
	comp=Z,0.6nm,0.6s,baz=315,slow=5.6,SNR=8.2						
NOA	NORSAR Array B	93.32	334	LR		LR	09 28 30.3
	comp=Z,54nm,21.1s,baz=305,slow=37						
YKA	Yellowknife Ar	94.87	24	P		P	08 43 44.9 -0.1
	comp=Z,1.3nm,0.8s,baz=302,slow=4.9,SNR=11						
YKB5	Yellowknife Ar	94.87	24	*e*P		P	08 43 44.9 -0.1
HPIG		118.58	52	*e*Pdif		Pdif	08 45 30.5 -1.3
TXAR	Lajitas Array	118.92	49	PKP		PKiKP	08 49 12.7 +0.1
	comp=Z,1.2nm,1.0s,baz=194,slow=2.6,SNR=5.8						
TORD	Torodi Ar. Bea	120.02	291	PKP		PKPdf	08 49 13.3 -1.5
	comp=Z,0.7nm,0.7s,baz=134,slow=4.3,SNR=4.6						
TOA1	Torodi Ar. Sit	120.02	291	*e*PKPdf		PKPdf	08 49 13.3 -1.5
PLCA	Paso Flores	145.59	158	PKPbc		PKPab	08 50 03.0 +0.7
	comp=Z,5.5nm,0.8s,baz=236,slow=3.4,SNR=11						
PLCA	Paso Flores	145.59	158	*e*PKPdf		PKPdf	08 49 58.6 -3.3
LPAZ	La Paz	164.91	119	PKPab		PKPab	08 51 28.2 +3.0
	comp=Z,1.4nm,1.0s,baz=205,slow=3.1,SNR=3.8						

*ISCJB **19** 08:34:05.9±1.0, 33°.05S±0°.06×177°.9W±0°.2, h34km, mb3.7/2, Error ellipse: s-maj=23.2km s-min=4.7km az=17.7*

*WEL **19** 08:34:08.3±0.8, 33°S±6°×17°8W±1°7, h33km, M4.1/12, mB4.7/6, ML4.7/16, MLv4.3/12, Mw(mB)3.9/6, Error ellipse: s-maj=0.0km s-min=0.0km az=109.0*

*IDC **19** 08:34:13.8±6.9, 30°.67S×179°.31W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.6/26, mbtmp3.9/2, Error ellipse: s-maj=282.5km s-min=56.2km az=156.0*

ISC 19 08:34:06.8±1.6, 33°.07S±0°.08×177°.7W±0°.2, h34km, n29, σ1°05/40, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.80	357	P	Pn	08 35 02.8	-0.2
GLKZ				S	Sn	08 35 45.3	-1.2
MXZ	Matakaoa Point	5.56	215	P	Pn	08 35 28.6	+1.6
MXZ				S	Sn	08 36 30.0	+0.3
WMGZ	Waiomatatini S	5.71	213	P	Pn	08 35 30.9	+1.7
WMGZ				S	Sn	08 36 34.7	+1.1
PKGZ	Pakihiroa	5.93	215	P	Pn	08 35 32.2	0.0
PKGZ				S	Sn	08 36 38.3	-0.6
HAZ	Te Kaha	5.97	217	P	Pn	08 35 33.9	+1.2
HAZ				S	Sn	08 36 41.3	+1.5
PUZ	Puketiti	5.99	212	P	Pn	08 35 32.8	-0.2
PUZ				S	Sn	08 36 40.3	-0.2
RUGZ	Raukumara Rang	6.18	217	P	Pn	08 35 36.4	+0.7
RUGZ				S	Sn	08 36 43.5	-1.8
TWGZ	Tauwhareparae	6.20	214	P	Pn	08 35 37.8	+1.8
TWGZ				S	Sn	08 36 44.3	-1.4
CNGZ	Carnagh Statio	6.36	211	P	Pn	08 35 38.2	+0.2
TKGZ	Te Karaka	6.48	213	P	Pn	08 35 39.6	0.0
TKGZ				S	Sn	08 36 51.3	-1.1
MWZ	Matawai	6.54	215	P	Pn	08 35 40.7	+0.1
MWZ				S	Sn	08 36 52.8	-1.2
URZ	Urewera	6.70	218	P	Pn	08 35 43.0	+0.3
URZ				S	Sn	08 36 55.4	-2.3
RIGZ	Rimuhau	6.73	212	P	Pn	08 35 43.9	+0.6
PRGZ	Paritu Road	6.86	210	P	Pn	08 35 44.9	-0.1
SNGZ	Shannon Statio	6.99	214	P	Pn	08 35 48.0	+1.2
KNZ	Kokohu	7.03	211	P	Pn	08 35 47.4	+0.1
MUGZ	Murupara	7.04	218	P	Pn	08 35 47.2	-0.1
RAHZ	Arahi	7.21	215	P	Pn	08 35 50.8	+1.0
MTHZ	Maungataniwha	7.28	216	P	Pn	08 35 51.8	+1.0
NMHZ	Naumai	7.49	215	P	Pn	08 35 53.9	+0.2
OUZ	Omahuta	7.55	251	P	Pn	08 35 55.0	+0.6
BKZ	Black Stump Fm	7.70	216	P	Pn	08 35 56.0	-0.5
MCHZ	McNeill Hill	7.82	214	P	Pn	08 35 58.5	+0.4
KWHZ	Kaweka Forest	7.93	215	P	Pn	08 35 59.6	-0.1
KAHZ	Kahuranaki	8.02	212	P	Pn	08 36 00.7	-0.2
BFZ	Birch Farm	9.02	211	P	Pn	08 36 12.6	-2.0
ASAR	Alice Springs	43.31	270	P	P	08 42 05.6	0.0
	0.8nm,0.7s,baz=111,slow=7.4,SNR=6.9						
WRA	Warramunga Arr	44.54	275	P	P	08 42 15.5	+0.1
	1.3nm,0.6s,baz=103,slow=8.5,SNR=8.2						
FINES	FINESS Array B	147.74	339	PKPbc	PKPab	08 53 51.2	+1.7
	1.2nm,0.5s,baz=349,slow=1.4,SNR=9.0						

WEL 19 08:42:39.0±1.0, 33°S±12°×17°9W±3°4, h33km, M4.2/9, mB4.8/3, ML4.6/16, MLv4.2/9, Mw(mB)4.0/3, Error ellipse: s-maj=0.0km s-min=0.0km az=108.9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.61	8	P	Pn	08 43 32.4	-0.2
GLKZ				S	Sn	08 44 13.8	-0.3
MXZ	Matakaoa Point	5.38	208	P	Pn	08 43 57.6	+0.7
WMGZ	Waiomatatini S	5.56	206	P	Pn	08 44 00.9	+1.5
WMGZ				S	Sn	08 45 03.5	+1.3
PKGZ	Pakihiroa	5.75	208	P	Pn	08 44 02.5	+0.4
PKGZ				S	Sn	08 45 06.5	-0.5
HAZ	Te Kaha	5.76	211	P	Pn	08 44 04.8	+2.7
PUZ	Puketiti	5.84	206	P	Pn	08 44 03.0	-0.4
PUZ				S	Sn	08 45 08.9	-0.3
RUGZ	Raukumara Rang	5.98	210	P	Pn	08 44 06.6	+1.3
RUGZ				S	Sn	08 45 13.3	+0.6
TWGZ	Tauwhareparae	6.04	207	P	Pn	08 44 08.2	+2.1
TWGZ				S	Sn	08 45 14.8	+0.8
CNGZ	Carnagh Statio	6.23	205	P	Pn	08 44 09.6	+1.0
MWZ	Matawai	6.36	209	P	Pn	08 44 10.7	+0.3
MWZ				S	Sn	08 45 22.1	+0.3
URZ	Urewera	6.47	212	P	Pn	08 44 12.2	+0.3
RIGZ	Rimuhau	6.58	206	P	Pn	08 44 14.0	+0.5
PRGZ	Paritu Road	6.73	205	P	Pn	08 44 15.6	0.0
SNGZ	Shannon Statio	6.81	209	P	Pn	08 44 17.4	+0.7
MHGZ	Mahia Peninsul	6.93	204	P	Pn	08 44 17.0	-1.2
MHGZ				S	Sn	08 45 34.2	-1.7
RAHZ	Arahi	7.03	209	P	Pn	08 44 21.3	+1.7
NMHZ	Naumai	7.30	210	P	Pn	08 44 24.1	+0.7
BKZ	Black Stump Fm	7.49	211	P	Pn	08 44 25.9	-0.1
KAHZ	Kahuranaki	7.87	207	P	Pn	08 44 28.6	-2.5
BHHZ	Black Hill Sta	7.95	212	P	Pn	08 44 33.3	+1.1
BFZ	Birch Farm	8.88	207	P	Pn	08 44 40.5	-4.4

ISC 19 08:43:31.8±1.6, 49°.42N±0°.09×17°.90E±0°.05, h10km, n5, σ1°78/8, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAVC	Velka Javorina	0.58	195	*e*PG	Pg	08 43 43.5	+0.5
JAVC				*e*SG	Sb	08 43 52.6	+0.3
VRAC	Vranov	0.86	263	*e*PG	Pn	08 43 52.6	+2.6
KRUC	Moravsky	1.05	251	*e*PG	Pg	08 43 50.5	-1.4
KRUC				*e*SG	Sg	08 44 03.0	-2.5
LANS	Liptovska Anna	1.06	104	*e*PG	Pg	08 43 51.6	-0.6
VYHS	Vyhne	1.11	146	*e*PG	Pn	08 43 53.6	+0.2
VYHS				*e*SG	Sn	08 44 09.0	+0.2

IDC 19 08:53:59.5±1.5, 7°.09S×146°.64E, h0km, mb3.6/2, mb1 4.0/4, mb1mx3.6/32, mbtmp3.8/4, ML3.2/1, Error ellipse: s-maj=47.5km s-min=24.9km az=94.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.36	168	Pn	Pn	08 54 40.3	+0.8
	13nm,0.3s,baz=40,slow=6.5,SNR=21						
PMG				Sn	Sn	08 55 10.4	+1.3
	15nm,0.3s,baz=137,slow=19,SNR=4.6						
WRA	Warramunga Arr	17.49	222	P	Pn	08 58 04.6	-0.4
	0.1nm,0.3s,baz=46,slow=8.7,SNR=5.2						
ASAR	Alice Springs	20.53	215	P	P	08 58 40.6	+1.0
	1.8nm,0.6s,baz=31,slow=13,SNR=31						
ILAR	Eielson Array	86.61	23	P	P	09 06 44.8	+0.2
	0.2nm,0.7s,baz=267,slow=4.5,SNR=4.9						
TORD	Torodi Ar. Bea	145.00	283	PKPbc	PKPab	09 13 36.7	-2.5
	0.6nm,0.4s,baz=70,slow=4.4,SNR=8.6						

*NEIC **19** 09:07:35.8±0.0, 16°.10N×99°.27W, h6km, MD4.2(MEX),

1.3nm,0.8s,baz=82,slow=6.8,SNR=2.7
ASAR Alice Springs 49.66 253 P P 09 24 05.5 +0.2
2.3nm,0.6s,baz=88,slow=7.7,SNR=29
ILAR Eielson Array 83.41 11 P P 09 27 40.9 +0.6
0.2nm,0.6s,baz=228,slow=6.8,SNR=3.4
BRTR Keskin Array B 146.78 320 PKPbc PKPdf 09 34 53.8 -0.5
0.6nm,0.7s,baz=22,slow=1.6,SNR=3.8

*IDC **19** 09:20:04.6±0.7, 12°.25N×143°.78E, h0km, mb4.0/10, mb1 4.2/10, mb1mx3.9/38, mbtmp4.0/10, MS3.5/8, Ms1 3.5/8, ms1mx3.3/38, Error ellipse: s-maj=29.6km s-min=15.5km az=110.0*
*NEIC **19** 09:20:05.7±0.7, 12°.18N×143°.79E, h10km±2km, mb4.4/13, Error ellipse: s-maj=16.6km s-min=10.8km az=54.0*
*ISCJB **19** 09:20:06.8±0.4, 12°.19N±0°.06×143°.71E±0°.09, h26km, mb4.2/19, MS3.5/5, Error ellipse: s-maj=13.7km s-min=6.5km az=32.2*
ISC 19 09:20:07.9±0.6, 12°.10N±0°.07×143°.9E±0°.1, h26km, n52, σ1§23/39, mb4.3/19, MS3.5/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.78**	**33**	Pn	**Pn**	**09 20 36.7**	**-0.4**
	145nm,0.3s,baz=3.7,slow=2.9,SNR=55						
GUMO				Sn	**Sn**	**09 20 58.6**	**-0.2**
	134nm,0.3s,baz=169,slow=23,SNR=12						
GUMO				LR	LR	09 21 21.6	
	comp=Z,1μm,18.1s,baz=214,slow=45						
GUMO	**Guam**	**1.78**	**33**	*e*Pn	**Pn**	**09 20 36.8**	**-0.2**
GUMO				*e*Sn	**Sn**	**09 20 58.7**	**-0.1**
ANA2	**Anatahan**	**4.58**	**23**	*e*Pn	**Pn**	**09 21 14.3**	**-1.3**
SARN	**Sarigan**	**4.94**	**22**	*e*Pn	**Pn**	**09 21 17.0**	**-3.5**
MANU	**Manus Island**	**14.47**	**166**	*e*Sn	**Sn**	**09 26 07.3**	**-3.7**
JAY	**Jayapura**	**14.85**	**192**	LR	LR	09 28 15.2	
	comp=Z,273nm,19.1s,baz=40,slow=33						
SIJI	**Sorong**	**17.96**	**225**	LR	LR	09 29 35.0	
	comp=Z,312nm,20.6s,baz=34,slow=32						
DAV	**Davao City (W)**	**18.70**	**256**	LR	LR	09 32 20.0	
	comp=Z,110nm,19.4s,baz=134,slow=39						
DAV	**Davao City (W)**	**18.70**	**256**	*e*P	**P**	**09 24 23.9**	**-0.6**
	265nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**22.91**	**71**	T	T	09 48 56.0	
	baz=254,slow=74,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**22.92**	**71**	T	T	09 49 03.2	
	baz=254						
H11S2	**WAKE ISLAND Hy**	**22.92**	**71**	T	T	09 49 10.6	
	baz=254,slow=74,SNR=5.1						
H11N1	**WAKE ISLAND Hy**	**23.39**	**68**	T	T	09 49 23.8	
	baz=253,slow=76,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**23.40**	**68**	T	T	09 49 33.2	
	baz=253						
H11N3	**WAKE ISLAND Hy**	**23.41**	**68**	T	T	09 49 28.6	
	baz=253,slow=76,SNR=5.1						
JNU	**Nakatsue**	**24.07**	**332**	LR	LR	09 33 27.8	
	comp=Z,132nm,18.2s,baz=17,slow=34						
JNU	**Nakatsue**	**24.07**	**332**	*e*P	**P**	**09 25 20.3**	**-1.0**
	31nm,1.3s						
HNR	**Honiara**	**26.70**	**143**	LR	LR	09 35 15.1	
	comp=Z,75nm,21.8s,baz=128,slow=34						
MTN	**Manton Dam**	**27.81**	**207**	*e*S	**S**	**09 30 36.3**	**-0.6**
WR1	**Warramunga Arr**	**33.19**	**197**	*e*P	**P**	**09 26 44.2**	**+1.4**
WRA	**Warramunga Arr**	**33.19**	**197**	P	**P**	**09 26 44.2**	**+1.4**
	0.9nm,0.5s,baz=6.7,slow=7.8,SNR=6.7						
AS31	**Alice Springs**	**36.85**	**195**	*e*P	**P**	**09 27 14.2**	**-0.2**
	1.2nm,1.2s						
ASAR	**Alice Springs**	**36.85**	**195**	P	**P**	**09 27 16.6**	**+2.3**
	0.6nm,0.7s,baz=22,slow=10,SNR=7.3						
PETK	**Petropavlovsk-**	**42.38**	**12**	LR	LR	09 44 50.4	
	comp=Z,50nm,19.7s,baz=195,slow=35						
STKA	**Stephens Creek**	**43.78**	**183**	P	**P**	**09 28 12.0**	**+0.5**
	0.9nm,0.5s,baz=345,slow=5.1,SNR=3.4						
STKA	**Stephens Creek**	**43.78**	**183**	*e*P	**P**	**09 28 12.2**	**+0.7**
	1.7nm,1.5s						
TIXI	**Tiksi**	**60.21**	**355**	LR	LR	09 58 42.9	
	comp=Z,35nm,18.0s,baz=279,slow=39						
JBP	**Jabalpur**	**61.46**	**290**	*i*P	P	09 29 28.8	-54
JBP				*e*S	S	09 29 29.7	-553
MK32	**Makanchi Array**	**61.88**	**317**	*e*P	**P**	**09 30 25.7**	**+0.4**
MKAR	**Makanchi Array**	**61.88**	**317**	P	**P**	**09 30 25.7**	**+0.4**
	0.6nm,0.7s,baz=90,slow=9.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**62.27**	**325**	P	**P**	**09 30 27.3**	**-0.3**
	0.6nm,0.3s,baz=111,slow=7.9,SNR=2.3						
ZAA1	**Zalesovo Array**	**62.27**	**325**	*e*P	**P**	**09 30 27.2**	**-0.3**
KURK	**Kurchatov**	**65.09**	**320**	*e*P	**P**	**09 30 46.1**	**-0.2**
	4.4nm,0.9s						
KDAK	**Kodiak Island**	**65.85**	**32**	LR	LR	09 59 03.7	
	comp=Z,43nm,18.2s,baz=203,slow=36						
ILAR	**Eielson Array**	**70.33**	**25**	P	**P**	**09 31 17.9**	**-1.2**
	0.7nm,0.8s,baz=254,slow=5.3,SNR=7.4						
ILB	**Eielson Array**	**70.33**	**25**	*e*P	**P**	**09 31 19.2**	**+0.1**
	2.7nm,1.1s						
DOT	**Dot Lake**	**71.30**	**27**	*e*P	**P**	**09 31 25.3**	**+0.3**
	3.0nm,1.0s						
DAWY	**Dawson**	**73.40**	**27**	*e*P	**P**	**09 31 37.6**	**0.0**
	5.6nm,1.4s						
EPYK	**Eagle Plains**	**74.75**	**24**	*e*P	**P**	**09 31 45.4**	**-0.1**
	7.8nm,1.5s						
INK	**Inuvik**	**76.11**	**22**	P	**P**	**09 31 52.3**	**-0.8**
	2.7nm,0.9s,baz=256,slow=4.2,SNR=8.2						
INK	**Inuvik**	**76.11**	**22**	*e*P	**P**	**09 31 53.0**	**-0.1**
	5.5nm,1.2s						
ABKAR	**Akbulak array**	**76.98**	**318**	*e*P	**P**	**09 31 58.0**	**-0.5**
	2.6nm,1.1s						
YKA	**Yellowknife Ar**	**84.63**	**27**	P	**P**	**09 32 39.7**	**+0.7**
	1.4nm,0.7s,baz=287,slow=5.1,SNR=9.3						
YKB5	**Yellowknife Ar**	**84.63**	**27**	*e*P	**P**	**09 32 39.7**	**+0.7**
NEW	**Newport**	**86.99**	**41**	*e*P	**P**	**09 32 51.7**	**+0.5**
	4.4nm,1.0s						
ARA0	**ARCESS Array S**	**88.19**	**342**	*e*P	**P**	**09 32 57.0**	**+0.7**
ARCES	**ARCESS Array B**	**88.19**	**342**	P	**P**	**09 32 57.0**	**+0.7**
	10nm,0.4s,baz=81,slow=7.5,SNR=5.5						
NV01	**Mina Array Sit**	**88.61**	**51**	*e*P	**P**	**09 33 01.4**	**+2.0**
NVAR	**Mina Array Bea**	**88.61**	**51**	P	**P**	**09 33 01.4**	**+2.0**
	1.3nm,0.7s,baz=263,slow=5.3,SNR=7.0						
FIA0	**FINESS Array S**	**92.09**	**335**	*e*P	**P**	**09 33 14.1**	**-0.6**
FINES	**FINESS Array B**	**92.09**	**335**	P	**P**	**09 33 14.1**	**-0.6**
	1.0nm,0.4s,baz=61,slow=4.3,SNR=11						
LPAZ	**La Paz**	**148.73**	**101**	PKPbc	**PKiKP**	**09 39 56.2**	**0.0**
	0.5nm,0.6s,baz=338,slow=5.4,SNR=2.3						

*ISCJB **19** 09:28:19.8±0.6, 35°.80N±0°.03×27°.23E±0°.02, h0km±5km, Error ellipse: s-maj=4.8km s-min=2.8km az=151.0*
*ISK **19** 09:28:19.3, 35°.84N×27°.23E, h3km, ML3.4/22*
*ATH **19** 09:28:20.2, 35°.78N×27°.27E, h25km±1km, ML3.5/6, Error ellipse: s-maj=2.6km s-min=1.1km az=130.0*
*THE **19** 09:28:20.9, 35°.75N×27°.35E, h13km±1km, ML3.4/8, Error ellipse: s-maj=2.2km s-min=0.7km az=134.0*
*DDA **19** 09:29:09.1, 35°.92N×27°.34E, h31km±1km, ML3.4*
ISC 19 09:28:20.3±1.0, 35°.78N±0°.03×27°.35E±0°.02, h18km±4km, n57, σ1§17/80, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.28**	**213**	PG	**Pg**	**09 28 25.9**	**-0.6**
KARP				SG	**Sg**	**09 28 30.8**	**+0.1**
KARP	**Karpathos**	**0.28**	**213**	P	**Pg**	**09 28 26.2**	**-0.3**
KARP				S	**Sg**	**09 28 31.0**	**+0.2**
KARP	**Karpathos**	**0.28**	**213**	P	**Pg**	**09 28 26.2**	**-0.3**
KARP				S	**Sg**	**09 28 31.0**	**+0.2**
KARP				AML	AML	09 28 31.4	
	comp=E,33424μm,0.2s						
KARP				AML	AML	09 28 31.8	
	comp=N,31604μm,0.1s						
ARG	**Arkhangelos**	**0.77**	**55**	PG	**Pg**	**09 28 35.6**	**+0.3**
ARG				SG	**Sn**	**09 28 48.1**	**+0.8**
ARG	**Arkhangelos**	**0.77**	**55**	P	**Pg**	**09 28 35.6**	**+0.3**
ARG				S	**Sn**	**09 28 47.2**	**-0.1**
ARG	**Arkhangelos**	**0.77**	**55**	P	**Pg**	**09 28 35.6**	**+0.3**
ARG				S	**Sn**	**09 28 47.6**	**+0.4**
ARG				AML	AML	09 28 50.7	
	comp=N,7056μm,0.5s						
ARG				AML	AML	09 28 51.2	
	comp=E,6511μm,0.3s						
NISR	**Nisiros**	**0.85**	**348**	P	**Pn**	**09 28 37.3**	**0.0**
NISR				S	**Sn**	**09 28 49.5**	**+0.2**
NISR	**Nisiros**	**0.85**	**348**	P	**Pn**	**09 28 37.4**	**0.0**
NISR				S	**Sn**	**09 28 48.5**	**-0.8**
DAT	**Datca**	**0.96**	**11**	PG	**Pb**	**09 28 38.2**	**-0.3**
DAT	**Datca**	**0.96**	**11**	*i*P	**Pn**	**09 28 39.0**	**0.0**
DAT				*i*S	**Sn**	**09 28 52.0**	**-0.4**
DATC	**Datca-Mugla**	**1.01**	**14**	PG	**Pb**	**09 28 38.8**	**-0.4**
BBRN	**Bozburun-Marma**	**1.06**	**32**	PG	**Pg**	**09 28 40.8**	**-0.1**
ZKR	**Zakros**	**1.14**	**235**	PN	**Pb**	**09 28 41.4**	**0.0**
ZKR	**Zakros**	**1.14**	**235**	P	**Pn**	**09 28 41.3**	**0.0**
ZKR				S	**Sn**	**09 28 56.6**	**+0.2**
ZKR	**Zakros**	**1.14**	**235**	P	**Pn**	**09 28 41.2**	**-0.1**
ZKR				S	**Sb**	**09 28 56.1**	**+0.2**
ZKR				AML	AML	09 28 59.1	
	comp=N,2277μm,0.4s						
ZKR				AML	AML	09 28 59.7	
	comp=E,3954μm,0.5s						
MRSB	**Marmaris-Mugla**	**1.16**	**36**	PN	**Pb**	**09 28 41.9**	**+0.1**
BODT	**Bodrum**	**1.28**	**359**	PN	**Pb**	**09 28 43.9**	**+0.1**
BDRM	**Kayabasi**	**1.28**	**3**	*i*P	**Pg**	**09 28 44.7**	**-0.4**
BDRM				*i*S	**Sg**	**09 29 04.1**	**+2.3**
BDRM				IAML_P			
	comp=Z,3μm,0.2s						
ANAF	**Anafi Island**	**1.40**	**295**	P	**Pn**	**09 28 45.0**	**+0.1**
ANAF				S	**Sb**	**09 29 03.9**	**+0.5**
ANAF	**Anafi Island**	**1.40**	**295**	P	**Pb**	**09 28 45.8**	**-0.1**
ANAF				AML	AML	09 29 06.2	
	comp=N,5401μm,0.4s						
ANAF				AML	AML	09 29 06.5	
	comp=E,4691μm,0.4s						
DALY	**Dalyan (Mula)**	**1.48**	**45**	PN	**Pg**	**09 28 48.2**	**-0.5**
DALY	**Dalyan (Mula)**	**1.48**	**45**	*i*P	**Pg**	**09 28 48.0**	**-0.7**
DALY				*i*S	**Sg**	**09 29 10.9**	**+2.9**
TURN	**Turunc**	**1.49**	**43**	PN	**Pn**	**09 28 43.7**	**-2.4**
TURN	**Turunc**	**1.49**	**43**	*i*P	**Pn**	**09 28 43.4**	**-2.7**
TURN				*i*S	**Sn**	**09 29 01.6**	**-3.4**
NPS	**Neapolis**	**1.51**	**250**	P	**Pn**	**09 28 46.2**	**-0.2**
NPS				S	**Sn**	**09 29 04.6**	**-1.0**
NPS	**Neapolis**	**1.51**	**250**	P	**Pn**	**09 28 46.4**	**0.0**
NPS				AML	AML	09 29 07.0	
	comp=E,3014μm,0.3s						
NPS				AML	AML	09 29 07.2	
	comp=N,2936μm,0.5s						
YER	**Yerkesik**	**1.55**	**29**	PN	**Pb**	**09 28 47.9**	**-0.5**
AMGA	**Amorgos Island**	**1.57**	**312**	P	**Pn**	**09 28 46.9**	**-0.5**
AMGA				S	**Sb**	**09 29 08.6**	**+0.1**
AMGA	**Amorgos Island**	**1.57**	**312**	P	**Pn**	**09 28 46.8**	**-0.5**
SANT	**Santorini**	**1.64**	**292**	PN	**Pn**	**09 28 48.7**	**+0.5**
SANT	**Santorini**	**1.64**	**292**	P	**Pn**	**09 28 48.9**	**+0.7**
FETY	**Fethiye**	**1.64**	**58**	PN	**Pb**	**09 28 50.1**	**+0.1**
FETY	**Fethiye**	**1.64**	**58**	*i*P	**Pg**	**09 28 51.5**	**-0.4**
FETY				*i*S	**Sg**	**09 29 14.8**	**+1.6**
FETY				IAML_P			
	comp=Z,12μm,0.5s						
LAST	**Lasithi**	**1.65**	**248**	P	**Pn**	**09 28 48.6**	**+0.2**
LAST				S	**Sn**	**09 29 08.6**	**-0.5**
LAST	**Lasithi**	**1.65**	**248**	P	**Pn**	**09 28 48.6**	**+0.2**
LAST				AML	AML	09 29 09.9	
	comp=E,716μm,0.7s						
LAST				AML	AML	09 29 12.7	
	comp=N,861μm,0.6s						
THR6	**Thira Island,**	**1.68**	**291**	P	**Pn**	**09 28 48.3**	**-0.5**
KSL	**Kastellorizon**	**1.85**	**78**	P	**Pb**	**09 28 54.6**	**+1.0**
AKAS	**Kas**	**1.88**	**76**	PN	**Pb**	**09 28 54.8**	**+0.6**
AKAS	**Kas**	**1.88**	**76**	*i*P	**Pb**	**09 28 55.2**	**+1.0**
AKAS				*i*S	**Sg**	**09 29 20.1**	**-1.0**
GCAM	**G?zelcaml?**	**1.92**	**357**	PN	**Pb**	**09 28 53.5**	**-1.2**
AYDN	**Tasoluk**	**1.92**	**13**	*i*P	**Pb**	**09 28 55.8**	**+0.9**
AYDN				*i*S	**Sg**	**09 29 21.3**	**-1.0**
AYDN				IAML_P			
	comp=Z,3μm,0.3s						
APE	**Apeiranthos**	**1.95**	**312**	PN	**Pn**	**09 28 51.9**	**-0.6**
APE	**Apeiranthos**	**1.95**	**312**	P	**Pn**	**09 28 52.2**	**-0.3**
ELL	**Elmali**	**2.28**	**64**	PN	**Pb**	**09 29 00.3**	**-0.7**
AKUM	**Antalya-Kumluc**	**2.49**	**77**	*i*P	**Pb**	**09 29 03.3**	**-1.1**
AKUM				*i*S	**Sb**	**09 29 35.3**	**+0.6**
AKUM				IAML_P			
	comp=Z,891nm,0.2s						
VAM	**Vamos**	**2.59**	**263**	P	**Pn**	**09 29 02.4**	**+1.1**
URLA	**Izmir**	**2.64**	**347**	PN	**Pn**	**09 29 03.2**	**+1.2**
KORT	**Korkueli**	**2.71**	**62**	PN	**Pb**	**09 29 06.3**	**-2.0**
KORT	**Korkueli**	**2.71**	**62**	*i*P	**Pb**	**09 29 08.0**	**-0.3**
KORT				*i*S	**Sb**	**09 29 42.4**	**+1.2**
IMMV	**Iera Moni Meta**	**2.76**	**264**	P	**Pn**	**09 29 05.4**	**+1.8**
BRDR	**BURDUR-Merkez**	**2.90**	**48**	*i*P	**Pg**	**09 29 14.5**	**-1.4**
KULA	**Kula-Manisa**	**2.92**	**21**	PN	**Pn**	**09 29 08.3**	**+2.4**
BCK	**Bucak**	**3.10**	**56**	PN	**Pb**	**09 29 11.8**	**-3.1**
KHAL	**Karahalli**	**3.10**	**33**	*i*P	**Pb**	**09 29 12.2**	**-2.7**
ISP	**Isparta**	**3.26**	**50**	PN	**Pn**	**09 29 13.6**	**+3.0**
KYTH	**Kithira**	**3.52**	**279**	P	**Pn**	**09 29 15.0**	**+0.9**
VLI	**Veliai**	**3.69**	**286**	P	**Pn**	**09 29 17.3**	**+1.0**

GCG 19 09:28:46.8±0.4, 14°.81N×91°.76W, h116km±9km, MD3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.21**	**118**	*e*P	Pn	09 29 03.6	+0.3
STG3				*e*S	Sn	09 29 16.9	+1.4
FUG	**Fuego 3**	**0.96**	**112**	*e*P	Pn	09 29 08.9	+0.6
FUG				*e*S	Sn	09 29 25.9	+1.4
PCG	**Pacaya**	**1.19**	**110**	*e*P	Pn	09 29 11.5	+0.8

*ISCJB **19** 09:39:27.0±4.0, 20°.93S±0°.05×174°.47W±0°.03, h1km±25km, mb5.1/185, MS4.6/36, Error ellipse: s-maj=8.5km s-min=5.2km az=164.6*
*IDC **19** 09:39:28.4±0.5, 20°.98S×174°.37W, h0km, mb4.9/27, mb1 4.9/28, mb1mx4.9/37, mbtmp4.8/28, ML4.7/1, MS4.4/19, Ms1 4.4/19, ms1mx4.4/23, Error ellipse: s-maj=16.4km s-min=12.9km az=129.0*
*MOS **19** 09:39:32.4±0.9, 20°.88S×174°.50W, h33km, mb5.2/35, MS4.7/6, Error ellipse: s-maj=10.4km s-min=8.8km az=87.6*
*BJI **19** 09:39:33.3±0.0, 20°.66S×174°.31W, h33km, mb5.3/43, mB5.5/31, Ms5.0/23, Ms7 4.8/23*
*NEIC **19** 09:39:34.0±1.4, 21°.02S×174°.44W, h42km±12km, mb5.1/151, Error ellipse: s-maj=6.1km s-min=3.9km az=151.0*
*GCMT **19** 09:39:35.0±0.2, 21°.11S±0°.02×173°.87W±0°.01, h28km, MW5.2/96, Moment Tensor Solution. s64,c85; s96,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.45±.21; $M_{\theta\theta}$0.06±.14; $M_{\phi\phi}$-5.51±.13; $M_{r\theta}$1.85±.31; $M_{\theta\phi}$-1.91±.09; $M_{r\phi}$3.13±.20; Best double couple: $M_0$6.83200×10^{16} NP1:ϕ_s189.00000°, δ30.00000°, λ76.00000°. Principal axes: T 6.5580, Plg73.0000°, Azm314.0000°; N 0.5450, Plg7.0000°, Azm201.0000°; P -7.1060, Plg16.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 09:39:29.7±0.6, 20°.96S±0°.05×174°.40W±0°.07, h11km±3km, h11km:pP-P, n635, σ1§22/646, mb5.1/184, MS4.6/36, 68C-21D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.60**	**67**	*e*P	Pn	09 40 32.9	-6.3
NIUE				*e*		09 41 17.5	
NIUE	**Niue**	**4.60**	**67**	P	Pn	09 40 32.4	-6.8
	baz=4.2,SNR=508						
GLKZ	**Green Lake**	**8.86**	**200**	P	**Pn**	**09 41 37.6**	**-0.1**
GLKZ				S	**Sn**	**09 43 12.1**	**-5.4**
RAR	**Rarotonga**	**13.66**	**94**	Pn	Pn	09 42 34.9	-8.4
	35nm,0.3s,baz=255,slow=7.5,SNR=36						
RAR				Sn	Sn	09 44 52.0	-23
	4.3nm,0.3s,baz=133,slow=19,SNR=4.1						
RAR	**Rarotonga**	**13.66**	**94**	*e*P	Pn	09 42 35.3	-8.1
RAR				*e*		09 44 52.0	
RAR	**Rarotonga**	**13.66**	**94**	*e*P	Pn	09 42 35.3	-8.1
MARNC	**Mare, Loyalty**	**16.39**	**265**	*e*P	**P**	**09 43 22.2**	**-0.5**
	243nm,1.1s						
OUZ	**Omahuta**	**17.70**	**214**	P	**P**	**09 43 37.5**	**+0.5**
DZM	**Mont Dzumac**	**17.86**	**263**	P	**P**	**09 43 42.6**	**+3.6**
	2.3nm,0.3s,baz=43,slow=23,SNR=28						
DZM				LR	LR	09 49 50.6	
	comp=Z,3μm,18.9s,baz=99,slow=35						
DZM	**Mont Dzumac**	**17.86**	**263**	*e*P	**P**	**09 43 43.1**	**+4.1**
	57nm,1.0s						
WCZ	**Waipu Caves**	**17.89**	**211**	P	**P**	**09 43 40.0**	**+0.9**
WMGZ	**Waiomatatini S**	**17.92**	**199**	P	**P**	**09 43 42.0**	**+2.5**
WMGZ				S	Sn	09 46 42.4	-16
PUZ	**Puketiti**	**18.20**	**199**	P	**P**	**09 43 43.6**	**+1.0**
PUZ				S	Sn	09 46 48.1	-17
TWGZ	**Tauwhareparae**	**18.38**	**199**	P	**P**	**09 43 47.9**	**+3.3**
TWGZ				S	Sn	09 46 53.5	-16
MKAZ	**Moumakai**	**18.48**	**207**	P	**Pn**	**09 43 48.2**	**+2.5**
MWZ	**Matawai**	**18.67**	**200**	P	**Pn**	**09 43 49.5**	**+1.4**
MWZ				S	Sn	09 47 01.1	-16
URZ	**Urewera**	**18.74**	**201**	P	**P**	**09 43 47.2**	**-1.2**
	2.2nm,0.3s,baz=45,slow=3.4,SNR=11						
URZ				S	Sn	09 47 00.1	-18
	0.5nm,0.3s,baz=292,slow=11,SNR=3.6						
URZ	**Urewera**	**18.74**	**201**	*e*P	**Pn**	**09 43 49.6**	**+0.7**
	36nm,0.9s						
URZ				*e*S	**S**	**09 47 20.1**	**-1.5**
URZ	**Urewera**	**18.74**	**201**	P	**Pn**	**09 43 49.0**	**+0.2**
TOZ	**Tahuroa Road**	**18.87**	**205**	P	**Pn**	**09 43 52.5**	**+2.0**
RIGZ	**Rimuhau**	**18.94**	**199**	P	**Pn**	**09 43 53.1**	**+1.8**
RIGZ				S	Sn	09 47 06.5	-17
RAHZ	**Arahi**	**19.34**	**200**	P	**Pn**	**09 43 56.0**	**-0.2**
RAHZ				S	Sn	09 47 15.6	-17
BKZ	**Black Stump Fm**	**19.77**	**201**	*e*P	**Pn**	**09 43 59.7**	**-1.5**
	19nm,0.9s						
BFZ	**Birch Farm**	**21.21**	**200**	*e*P	**P**	**09 44 15.1**	**-0.3**
	61nm,1.1s						
TBI	**Tubuai**	**23.21**	**101**	*e*S	S	09 48 34.7	-14
	446nm,25.2s						
TBI				*e*LQ	LQ	09 48 54.9	
	635nm,25.8s						
TBI				*e*LR	LR	09 50 07.0	
	comp=Z,2μm,27.8s,baz=277						
TBI	**Tubuai**	**23.21**	**101**	*e*T	T	10 07 57.8	
	12nm,0.3s						
THZ	**Tophouse**	**23.35**	**205**	*e*P	**P**	**09 44 37.0**	**-1.1**
	174nm,1.7s						
PAE	**Paea**	**23.64**	**86**	*e*T	T	10 08 33.0	
	6.9nm,0.4s						
PPT2	**Papeete2**	**23.66**	**86**	*e*S	S	09 48 43.0	-13
	430nm,24.5s						
PPT2				*e*LR	LR	09 50 17.3	
	comp=Z,3μm,26.2s						
PPT2	**Papeete2**	**23.66**	**86**	*e*T	T	10 08 35.5	
	5.7nm,0.4s						
PPT	**Papeete**	**23.67**	**86**	LR	LR	09 51 32.4	
	comp=Z,692nm,20.7s,baz=261,slow=31						
KHZ	**Kahutara**	**23.68**	**203**	*e*P	**P**	**09 44 40.4**	**-0.9**
	44nm,1.0s						
TIAR	**Tiarei**	**23.89**	**86**	*e*T	T	10 08 51.3	
	1.9nm,0.2s						
TVO	**Taravao**	**23.93**	**87**	*e*T	T	10 08 54.8	
	2.6nm,0.4s						
LTZ	**Lake Taylor**	**24.47**	**204**	*e*P	**P**	**09 44 48.3**	**-0.4**
	59nm,0.9s						
MEH	**Mehetia**	**25.02**	**88**	*e*T	T	10 10 14.7	
	25nm,0.3s						
OXZ	**Oxford**	**25.02**	**204**	*e*P	**P**	**09 44 52.3**	**-1.3**
	69nm,0.6s						
RPZ	**Rata Peaks**	**25.73**	**205**	P	**P**	**09 45 00.4**	**+0.4**
	22nm,0.5s,baz=46,slow=1.4,SNR=16						
FOZ	**Fox Glacier**	**26.08**	**207**	*e*P	**P**	**09 45 04.5**	**+1.2**
	144nm,1.0s						
HNR	**Honiara**	**27.23**	**291**	P	**P**	**09 45 14.4**	**+0.5**
	82nm,0.7s,baz=177,slow=4.0,SNR=5.9						
HNR				LR	LR	09 54 35.8	
	comp=Z,914nm,20.1s,baz=142,slow=33						
EIDS	**Eidsvold**	**31.98**	**255**	*e*P	**P**	**09 45 56.1**	**+0.2**
	11nm,0.8s						
EIDS	**Eidsvold**	**31.98**	**255**	P	**P**	**09 45 56.2**	**+0.2**
	baz=32,SNR=6.3						
RMQ	**Roma**	**34.09**	**253**	P	**P**	**09 46 15.0**	**+0.5**
	baz=34,SNR=8.7						
CNB	**Canberra Magne**	**34.80**	**238**	P	**P**	**09 46 21.0**	**+0.5**
	baz=35						
TAOE	**Nuku Hiva Isla**	**35.13**	**75**	*e*LR	LR	09 55 40.6	
	comp=Z,1μm,24.8s						
TAOE	**Nuku Hiva Isla**	**35.13**	**75**	*e*T	T	10 22 58.4	
	33nm,0.3s						
RKT	**Rikitea**	**36.54**	**101**	*e*T	T	10 24 35.8	
	6.0nm,0.4s						
CTA	**Charters Tower**	**36.80**	**264**	P	**P**	**09 46 37.6**	**-0.2**
	8.4nm,0.7s,baz=96,slow=9.8,SNR=12						
CTAO	**Charters Tower**	**36.80**	**264**	*e*P	**P**	**09 46 37.3**	**-0.5**
	13nm,0.9s						
CTAO	**Charters Tower**	**36.80**	**264**	*e*P	**P**	**09 46 37.3**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s						
CMSA	**Cobar Meteorol**	**37.13**	**245**	P	**P**	**09 46 40.2**	**-0.3**
	baz=38,SNR=25						
TOO	**Toolangi**	**38.38**	**236**	P	**P**	**09 46 51.0**	**0.0**
	baz=39,SNR=3.6						
PMG	**Port Moresby**	**38.73**	**281**	P	**P**	**09 46 53.9**	**-0.2**
	comp=Z,38nm,1.0s,baz=64,slow=9.1,SNR=5.9						
PMG	**Port Moresby**	**38.73**	**281**	*e*P	**P**	**09 46 53.5**	**-0.7**
	comp=Z,30nm,0.8s						
PMG	**Port Moresby**	**38.73**	**281**	*e*P	**P**	**09 46 53.5**	**-0.7**
PMG				pmax	pmax		
	comp=Z,91nm,0.7s						
STKA	**Stephens Creek**	**40.64**	**245**	P	**P**	**09 47 09.3**	**-0.6**
	comp=Z,6.1nm,0.6s,baz=101,slow=11,SNR=24						
STKA				LR	LR	10 02 25.4	
	comp=Z,644nm,18.6s,baz=76,slow=34						
STKA	**Stephens Creek**	**40.64**	**245**

TNTI **Ternate** 60.84 283 eP P 09 49 40.7 -1.8
comp=Z,44nm,1.0s
PSA00 **Pilbara Seismi** 60.84 256 eP P 09 49 42.0 -0.5
comp=Z,21nm,0.8s
SANI **Sanana** 60.98 280 P P 09 49 43.0 -0.5
BLDU **Ballidu** 61.94 246 P P 09 49 48.9 -0.9
baz=62,SNR=10
MUN **Mundaring** 62.16 244 P P 09 49 51.8 +0.5
baz=62,SNR=3.8
EDFI **Ende, Flores** 62.61 271 P P 09 49 53.9 -0.7
MORW **Morawa** 62.77 247 eP P 09 49 55.4 0.0
comp=Z,21nm,1.1s
MORW **Morawa** 62.77 247 P P 09 49 55.1 -0.3
baz=63,SNR=4.1
CASY **Casey** 65.00 206 eP P 09 50 10.7 +1.4
comp=Z,19nm,0.9s
APSI **Ampana** 65.42 279 P P 09 50 13.6 +0.7
GIRL **Giralia** 65.67 254 P P 09 50 15.6 +1.2
baz=66,SNR=3.7
MRSI **Marisa** 65.68 280 P P 09 50 13.7 -1.0
KIWB **Kanaga Island** 72.53 358 eP P 09 50 57.4 +1.0
ADK **Adak** 72.55 359 eP P 09 50 56.8 +0.4
comp=Z,38nm,1.1s
ADK **Adak** 72.55 359 eP P 09 50 56.8 +0.4
ADK pmax pmax
comp=Z,38nm,1.1s
MJAR **Matsushiro Arr** 72.61 322 P P 09 50 57.9 +0.7
comp=Z,32nm,0.8s,baz=164,slow=6.0,SNR=76
MJAR LR LR 10 23 18.6
comp=Z,105nm,18.0s,baz=135,slow=36
MAJO **Matsushiro** 72.62 322 eP P 09 50 57.3 +0.1
comp=Z,40nm,0.8s
MAJO **Matsushiro** 72.62 322c iP P 09 50 57.6 +0.4
MAJO pmax pmax
comp=Z,43nm,0.8s
MAT **Matsushiro** 72.62 322 P P 09 50 57.7 +0.5
MAT eS S 10 00 18.8 -3.3
MJB9 **Matsu-Tunnel** 72.62 322 eP P 09 50 56.9 -0.3
comp=Z,41nm,0.8s
ATKA **Atka Island** 72.84 0 eP P 09 50 57.6 -0.6
comp=Z,28nm,0.9s
ERM **Erimo** 73.93 328 eP P 09 51 06.3 +1.5
comp=Z,10nm,0.8s
ERM **Erimo** 73.93 328⇑eP P 09 51 06.1 +1.3
ERM pmax pmax
comp=Z,11nm,0.8s
KUR **Kuril'sk** 74.29 333⇓eP P 09 51 07.8 +1.0
JNU **Nakatsue** 74.95 315 eP P 09 51 11.0 -0.1
comp=Z,46nm,1.1s
ASAJ **Asahikawa** 75.78 330 P P 09 51 17.4 +2.0
comp=Z,13nm,0.9s,baz=174,slow=5.1,SNR=12
KSM **Kuching** 76.81 277 eP P 09 51 21.3 -0.8
comp=Z,21nm,0.9s
MONP2 **Monument Peak** 77.01 47 P P 09 51 24.0 +1.0
baz=234
KMRM **Mail Ridge** 77.02 37 eP P 09 51 22.9 +0.2
comp=Z,23nm,1.0s
SSLB **Suanglung** 77.06 302 eP P 09 51 22.0 -1.2
comp=Z,11nm,0.8s
TPUB **Ta-pu** 77.07 301 eP P 09 51 22.3 -1.0
comp=Z,36nm,0.8s
IKP **In-Ko-Pah, Jac** 77.08 47 P P 09 51 25.8 +2.6
baz=234
EDW2 **Edwards Air Fo** 77.13 45 P P 09 51 24.1 +0.6
baz=233
ISA **Isabella, Lake** 77.29 44 eP P 09 51 25.1 +0.8
comp=Z,30nm,1.5s
ISA **Isabella, Lake** 77.29 44 eP P 09 51 25.1 +0.8
ISA pmax pmax
comp=Z,30nm,1.5s
ISA **Isabella, Lake** 77.29 44 P P 09 51 25.2 +0.9
baz=232
O02D **Mt. Diablo Mer** 77.51 38 P P 09 51 26.4 +0.9
baz=228
CMB **Columbia Colle** 77.56 41 eP P 09 51 26.1 +0.4
comp=Z,6.1nm,0.9s
CMB **Columbia Colle** 77.56 41 eP P 09 51 26.1 +0.4
CMB pmax pmax
comp=Z,6.0nm,0.9s
PEA0B **Petropavlovsk-** 77.62 343 eP P 09 51 25.5 -0.2
comp=Z,23nm,0.9s
PETK **Petropavlovsk-** 77.62 343 P P 09 51 26.4 +0.7
comp=Z,16nm,0.8s,baz=126,slow=8.1,SNR=30
PETK LR LR 10 19 20.6
comp=Z,296nm,21.9s,baz=166,slow=31
PEA1 **Petropavlovsk-** 77.63 343 eP P 09 51 26.4 +0.7
TPI **Tanjungpandan** 77.76 272 P P 09 51 28.1 +0.7
YSS **Yuzh-Sakhalins** 77.85 332 eP P 09 51 28.0 +0.9
comp=Z,58nm,1.0s
YSS **Yuzh-Sakhalins** 77.85 332 eP P 09 51 28.2 +1.1
YSS pmax pmax
comp=Z,50nm,0.9s
BELC **Belle Mtn. Jos** 77.94 46 P P 09 51 29.2 +1.1
baz=234
BC3 **Big Chuckawall** 78.11 47 P P 09 51 31.3 +2.3
baz=235
OMMB **Old Mammoth Mi** 78.15 42 eP P 09 51 28.7 -0.7
comp=Z,10nm,1.1s
O03E **Paynes Creek** 78.16 38 P P 09 51 32.3 +3.2
baz=229
GSC **Goldstone, Bar** 78.16 45 P P 09 51 30.7 +1.4
baz=234
MPMC **Manual Prospec** 78.17 44 P P 09 51 30.0 +0.6
baz=233
HEC **Hector,Ludlow** 78.20 45 P P 09 51 30.4 +0.9
baz=234
M02C **Callahan** 78.28 37 P P 09 51 30.5 +0.8
baz=228
WAKR **Walker** 78.43 41 eP P 09 51 31.8 +1.0
comp=Z,14nm,1.1s
YBH **Yreka Blue Hor** 78.59 37 eP P 09 51 32.2 +0.8
comp=Z,18nm,1.5s
YBH **Yreka Blue Hor** 78.59 37 eP P 09 51 32.2 +0.8
YBH pmax pmax
comp=Z,18nm,1.5s
IRM **Iron Mountain** 78.61 47 P P 09 51 33.1 +1.4
baz=235
PNTR **Pine Nut** 78.70 40 eP P 09 51 32.9 +0.6
comp=Z,24nm,0.9s
BEKR **Beckworth** 78.73 39 eP P 09 51 33.0 +0.6
comp=Z,16nm,1.5s
VCNR **Virginia City** 78.80 40 eP P 09 51 33.8 +1.0
comp=Z,17nm,1.3s
GRAC **Grapevine Rang** 78.81 43 P P 09 51 34.0 +1.3
baz=233
214A **Organ Pipe Nat** 79.00 50 P P 09 51 34.7 +0.8
baz=237
RYN **Ryan** 79.07 41 eP P 09 51 35.0 +0.8
comp=Z,16nm,1.3s
NV01 **Mina Array Sit** 79.08 42 eP P 09 51 35.5 +1.1
NVAR **Mina Array Bea** 79.08 42 P P 09 51 35.5 +1.1
comp=Z,5.8nm,0.8s,baz=222,slow=8.9,SNR=31
NVAR LR LR 10 22 06.0
comp=Z,368nm,18.2s,baz=214,slow=32
M04C **Macdoel** 79.11 37 P P 09 51 35.1 +0.7
baz=229
L04D **Klamath Falls** 79.14 37 P P 09 51 35.0 +0.5
baz=229
NV11 **Mina Array Sit** 79.18 42 eP P 09 51 35.6 +0.8
comp=Z,1.1nm,1.1s
PAHR **Pah Rah Range** 79.21 40 eP P 09 51 35.7 +0.7
comp=Z,9.1nm,1.0s
TJN **Taejon** 79.22 316⇑eP P 09 51 35.1 +0.2
PDMCI **Parker Dam,Lak** 79.38 47 P P 09 51 36.8 +1.0
baz=236
KSRS **Korea Array** 79.49 317 P P 09 51 38.1 +1.8
comp=Z,16nm,0.9s,baz=138,slow=6.0,SNR=59
KSRS LR LR 10 21 30.9
comp=Z,167nm,21.5s,baz=154,slow=32
TPNV **Topopah Spring** 79.50 44 eP P 09 51 35.5 -1.1
comp=Z,10nm,1.0s
TPNV **Topopah Spring** 79.50 44 eP P 09 51 35.5 -1.1
TPNV pmax pmax
comp=Z,10.0nm,1.0s
TPNV **Topopah Spring** 79.50 44 P P 09 51 37.5 +0.9
baz=234
KS15 **Wonju Array Si** 79.51 317 eP P 09 51 35.8 -0.6
comp=Z,30nm,1.1s
KVN **Kaiserville** 79.59 41 eP P 09 51 37.6 +0.5
comp=Z,6.1nm,0.9s
KVN **Kaiserville** 79.59 41 eP P 09 51 37.6 +0.5
KVN pmax pmax
comp=Z,6.0nm,0.9s
J04D **Umpqua Nationa** 79.92 36 P P 09 51 40.2 +1.3
baz=229
SHPR **Sheep Range** 79.95 45 eP P 09 51 38.8 -0.3
comp=Z,7.7nm,1.1s

Y14A **Wickenburg** 79.95 48 eP P 09 51 39.1 0.0
comp=Z,6.3nm,1.1s
W13A **Hualapai Mount** 80.00 46 eP P 09 51 40.3 +0.8
comp=Z,6.6nm,1.1s
MOD **Modoc Plateau** 80.06 38 eP P 09 51 39.8 +0.3
comp=Z,8.6nm,0.9s
K05A **Summer Lake** 80.26 37 eP P 09 51 40.0 -0.6
comp=Z,12nm,0.9s
MDSI **Maura Dua** 80.41 269 P P 09 51 41.3 -0.6
J05D **Fort Rock, OR** 80.43 36 P P 09 51 42.2 +0.7
baz=229
KDAK **Kodiak Island** 80.53 12 P P 09 51 41.0 -0.5
comp=Z,5.8nm,0.8s,baz=130,slow=16,SNR=2.7
KDAK **Kodiak Island** 80.53 12 eP P 09 51 41.2 -0.3
comp=Z,69nm,1.5s
KDAK **Kodiak Island** 80.53 12 eP P 09 51 41.2 -0.3
KDAK pmax pmax
comp=Z,69nm,1.5s
TUC **Tucson** 80.64 50 eP P 09 51 42.7 -0.1
comp=Z,9.4nm,1.3s
TUC **Tucson** 80.64 50 eP P 09 51 42.7 -0.1
TUC pmax pmax
comp=Z,9.0nm,1.3s
TUC **Tucson** 80.64 50 P P 09 51 43.5 +0.6
baz=238
R11A **Troy Canyon, C** 80.75 43 eP P 09 51 43.8 +0.5
comp=Z,4.1nm,1.0s
R11A **Troy Canyon, C** 80.75 43 P P 09 51 43.5 +0.1
baz=234
TYV **Tymovskoe** 80.88 334 eP P 09 51 44.3 +0.8
TYV pmax pmax
comp=Z,16nm,1.2s
TYV pmax pmax
comp=Z,200nm,4.3s
PINE **Pine Mountain** 80.92 36 eP P 09 51 45.1 +0.9
comp=Z,11nm,1.0s
319A **Douglas** 81.25 52 eP P 09 51 47.4 +1.2
comp=Z,14nm,1.3s
USA0B **Ussuriysk Arra** 81.27 324 eP P 09 51 47.3 +1.5
comp=Z,15nm,1.1s
USRK **Ussuriysk Ar.** 81.27 324 P P 09 51 48.1 +2.3
comp=Z,5.1nm,0.7s,baz=154,slow=3.2,SNR=14
USRK LR LR 10 22 43.4
comp=Z,291nm,21.2s,baz=133,slow=32
X16A **Lo Mia Camp, P** 81.30 48 eP P 09 51 46.6 +0.2
comp=Z,6.8nm,1.0s
LCMT **Little Creek M** 81.50 45 eP P 09 51 48.1 +0.8
comp=Z,5.8nm,1.0s
G05D **Wamic, OR** 81.66 35 P P 09 51 49.9 +2.0
baz=229
CCUT **Cedar City** 81.72 45 eP P 09 51 49.9 +1.3
comp=Z,9.1nm,1.2s
KNB **Kanab** 81.78 45 eP P 09 51 50.2 +1.3
comp=Z,38nm,1.6s
KNB **Kanab** 81.78 45 eP P 09 51 50.2 +1.3
KNB pmax pmax
comp=Z,38nm,1.6s
U15A **North Rim** 81.81 46 eP P 09 51 49.2 -0.1
comp=Z,6.9nm,0.9s
I07A **Izee** 81.90 37 eP P 09 51 48.6 -0.7
comp=Z,5.4nm,0.9s
WUAZ **Wupatki** 81.94 47 P P 09 51 49.9 +0.1
baz=237
PSUT **Pine Spring** 81.96 44 eP P 09 51 50.2 +0.3
comp=Z,5.0nm,0.8s
G06A **Carlson Farm,** 82.03 35 eP P 09 51 50.0 +0.2
comp=Z,9.1nm,1.2s
J08A **Circle Bar Ran** 82.03 38 eP P 09 51 50.6 +0.6
comp=Z,7.1nm,1.0s
MAW **Mawson** 82.25 199 P P 09 51 52.0 +1.3
comp=Z,7.5nm,0.8s,baz=95,slow=6.7,SNR=13
MAW LR LR 10 27 33.8
comp=Z,162nm,19.1s,baz=106,slow=35
MAW **Mawson** 82.25 199 eP P 09 51 51.2 +0.6
comp=Z,2.2nm,1.5s
MAW **Mawson** 82.25 199 P P 09 51 52.3 +1.6
baz=82,SNR=7.3
MAW **Mawson** 82.25 199 eP P 09 51 51.3 +0.6
MAW pmax pmax
comp=Z,2.0nm,1.5s
PKCU **Pink Cliffs** 82.36 45 eP P 09 51 52.1 0.0
comp=Z,41nm,1.4s
ELK **Elko** 82.36 41 eP P 09 51 52.4 +0.4
comp=Z,17nm,1.6s
ELK **Elko** 82.36 41 eP P 09 51 52.4 +0.4
ELK pmax pmax
comp=Z,17nm,1.6s
DLV **T Lat** 82.48 286 eP P 09 51 51.8 -1.3
comp=Z,21nm,0.8s
D05A **Enumclaw** 82.60 33 eP P 09 51 54.0 +1.4
comp=Z,43nm,1.4s
MTPU **Mount Pierson** 82.77 45 eP P 09 51 54.6 +0.3
comp=Z,14nm,1.0s
NJ2 **Nanjing** 82.79 308 eP P 09 51 56.5 +2.5
NJ2 pmax pmax
comp=Z,13nm,0.5s
121A **Cookes Peak, D** 82.93 51 P P 09 51 53.3 -1.8
baz=240
MYKOM **Kota Tinggi** 82.93 275 eP P 09 51 54.8 -0.5
comp=Z,25nm,0.9s
G08A **Pilot Rock** 82.97 36 eP P 09 51 55.3 +0.5
comp=Z,13nm,1.0s
MSU **Marysvale** 83.04 44 eP P 09 51 57.4 +1.9
MSU **Marysvale** 83.04 44 eP P 09 51 57.4 +1.9
HAWA **Hanford** 83.36 35 eP P 09 51 56.5 -0.2
comp=Z,30nm,1.6s
GRNR **Gornyy** 83.49 331 eP P 09 51 57.1 -0.2
GRNR pmax pmax
comp=Z,16nm,1.0s
DUG **Dugway, Tooele** 83.56 43 P P 09 51 58.9 +0.8
baz=236
BMO **Blue Mountains** 83.61 37 eP P 09 51 58.4 +0.2
comp=Z,24nm,1.6s
BMO **Blue Mountains** 83.61 37 eP P 09 51 58.4 +0.2
BMO pmax pmax
comp=Z,24nm,1.6s
D08A **Wollman Farm,** 84.11 34 eP P 09 52 01.0 +0.5
comp=Z,12nm,0.9s
E09A **Wood Farm, Sta** 84.18 35 eP P 09 52 00.8 -0.1
comp=Z,8.0nm,0.8s
MNTX **Cornudas Mount** 84.30 53 eP P 09 52 01.2 -0.7
comp=Z,6.7nm,1.2s
MNTX **Cornudas Mount** 84.30 53 P P 09 52 01.9 0.0
baz=241
LAZ **Ladron** 84.33 50 eP P 09 52 03.4 +1.2
LENM **Lemitar** 84.33 50 eP P 09 52 02.6 +0.4
F10A **Beach Ranch, E** 84.34 36 eP P 09 52 02.1 +0.2
comp=Z,12nm,0.8s
DL2 **Dalian** 84.40 315 P P 09 52 03.8 +1.7
DL2 eS S 10 02 29.5 +1.3
DL2 pmax pmax
comp=Z,30nm,0.8s
DL2 LR LR
comp=Z,210nm,17.6s
DL2 LR LR
comp=Z,170nm,13.8s
DL2 LR LR
comp=Z,170nm,16.6s
SRU **San Rafael Swe** 84.45 45 eP P 09 52 03.4 +0.7
comp=Z,12nm,0.8s
GLI **Glacier Island** 84.48 13 eP P 09 52 02.0 0.0
comp=Z,29nm,0.8s
TXAR **Lajitas Array** 84.49 56 P P 09 52 03.5 +0.5
comp=Z,3.1nm,1.1s,baz=216,slow=6.2,SNR=13
TXAR LR LR 10 24 30.2
comp=Z,188nm,18.3s,baz=0.0,slow=32
PLID **Pearl Lake** 84.49 37 eP P 09 52 03.4 +0.6
comp=Z,7.7nm,0.9s
HLID **Hailey** 84.51 39 eP P 09 52 03.6 +0.8
comp=Z,9.1nm,1.0s
HLID **Hailey** 84.51 39 P P 09 52 03.7 +0.8
baz=234
BNM **Barren Site** 84.58 50 eP P 09 52 04.3 +0.8
LPM **Los Pinos Moun** 84.65 50 eP P 09 52 03.6 -0.2
KLR **Kul'dur** 84.67 328 P P 09 52 04.2 +0.9
comp=Z,4.2nm,1.0s,baz=120,slow=5.3,SNR=6.1
KLR **Kul'dur** 84.67 328ceP P 09 52 04.6 +1.3
KLR pmax pmax
comp=Z,5.0nm,1.0s
KNK **Knik Glacier** 84.69 12 eP P 09 52 02.8 -0.3
comp=Z,21nm,0.7s
PMR **Palmer** 84.72 12 eP P 09 52 03.1 -0.1
comp=Z,14nm,1.1s
PMR **Palmer** 84.72 12 eP P 09 52 03.1 -0.1
PMR pmax pmax
comp=Z,14nm,1.1s
CN2 **Changchun** 84.75 321 eP P 09 52 05.4 +1.6

CN2 eS S 10 02 29.9 -1.6
CN2 pmax pmax
comp=Z,30nm,1.1s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,100nm,21.0s
CN2 LR LR
comp=Z,200nm,21.0s
CN2 LR LR
comp=Z,200nm,22.0s
MVCO **Mesa Verde** 84.80 47 P P 09 52 05.3 +0.7
baz=239
C09A **Chrisman Ranch** 84.92 34 eP P 09 52 05.0 +0.4
comp=Z,15nm,1.4s
GHO **Glory Hole Cre** 84.93 12 eP P 09 52 04.7 +0.3
comp=Z,26nm,0.8s
DIV **Divide** 84.99 13 eP P 09 52 04.8 0.0
comp=Z,20nm,1.0s
PV09 **Paradox Valley** 85.04 46 eP P 09 52 06.2 +0.4
PV17 **East Wray Mesa** 85.05 46 eP P 09 52 04.8 -1.0
comp=Z,28nm,1.6s
PV14 **Lion Creek, Pa** 85.05 46 eP P 09 52 05.6 -0.2
comp=Z,15nm,1.4s
PV18 **Skein Mesa, Pa** 85.06 46 eP P 09 52 05.9 +0.1
comp=Z,29nm,1.6s
PV20 **West Nyswonger** 85.07 46 eP P 09 52 05.5 -0.3
comp=Z,23nm,1.5s
PV13 **Radium Mtn., P** 85.08 46 eP P 09 52 06.3 +0.3
comp=Z,18nm,1.5s
TASM **ASL Pad, Albuq** 85.09 50 P P 09 52 06.9 +0.9
baz=240
ANMO **Albuquerque** 85.09 50 eP P 09 52 06.4 +0.3
comp=Z,24nm,1.4s
ANMO **Albuquerque** 85.09 50c iP P 09 52 06.6 +0.6
ANMO pmax pmax
comp=Z,19nm,1.7s
PV16 **Nyswonger Mesa** 85.09 46 eP P 09 52 06.3 +0.4
comp=Z,24nm,1.6s
PV23 **Carpenter Ridg** 85.10 46 ePcP PcP 09 52 13.3 +4.0
PV03 **Paradox Valley** 85.11 46 eP P 09 52 06.0 0.0
comp=Z,22nm,1.6s
PV11 **David Mesa, Pa** 85.11 46 eP P 09 52 05.2 -0.8
comp=Z,31nm,1.6s
MA2 **Magadan** 85.16 343⇓eP P 09 52 05.6 +0.1
MA2 pmax pmax
comp=Z,10.0nm,1.1s
PV12 **Saucer Basin,** 85.17 46 eP P 09 52 05.7 -0.7
comp=Z,14nm,1.1s
PV01 **Paradox Valley** 85.23 46 eP P 09 52 08.0 +1.3
comp=Z,17nm,1.7s
CRQM **Cirque** 85.27 15 eP P 09 52 06.3 0.0
comp=Z,17nm,0.9s
PV22 **Blue Mesa, Par** 85.29 46 eP P 09 52 07.1 +0.1
comp=Z,19nm,1.5s
SCM **Sheep Creek Mo** 85.30 13 eP P 09 52 06.3 0.0
comp=Z,29nm,0.9s
SCM **Sheep Creek Mo** 85.30 13 eP P 09 52 06.3 0.0
SCM pmax pmax
comp=Z,29nm,0.9s
PV07 **Paradox Valley** 85.34 46 eP P 09 52 06.9 -0.3
comp=Z,15nm,1.5s
WHN **Wuhan** 85.45 305 ⇓P P 09 52 09.5 +1.9
WHN S S 10 02 31.3 -7.7
WHN pmax pmax
comp=Z,44nm,0.6s
WHN LR LR
comp=Z,710nm,23.1s
BALM **Baldy** 85.70 15 eP P 09 52 08.8 +0.5
comp=Z,15nm,1.0s
BALM **Baldy** 85.70 15 eP P 09 52 08.8 +0.5
BALM pmax pmax
comp=Z,15nm,1.0s
BESE **Bessie Mountai** 85.72 20 eP P 09 52 09.0 +0.6
comp=Z,25nm,1.3s
TIA **Tai'an** 86.09 311 P P 09 52 12.0 +1.3
TIA pmax pmax
comp=Z,24nm,1.0s
MCMT **McKenzie Canyo** 86.16 39 eP P 09 52 12.4 +1.3
S22A **4UR Ranch, Cre** 86.22 47 eP P 09 52 12.5 +0.8
comp=Z,5.5nm,1.0s
S22A **4UR Ranch, Cre** 86.22 47 P P 09 52 12.0 +0.3
baz=240
TRF **Thorofare Moun** 86.23 11 eP P 09 52 11.0 +0.1
comp=Z,24nm,0.8s
SKAG **Skagway** 86.28 19 eP P 09 52 12.3 +1.3
comp=Z,22nm,1.1s
RND **Reindeer** 86.44 11 eP P 09 52 10.8 -1.1
comp=Z,18nm,0.9s
RND **Reindeer** 86.44 11 eP P 09 52 10.8 -1.1
RND pmax pmax
comp=Z,18nm,0.9s
O20A **White River Ci** 86.48 45 P P 09 52 14.8 +2.0
baz=239
PLCA **Paso Flores** 86.50 132 P P 09 52 13.9 +1.0
comp=Z,2.1nm,0.8s,baz=198,slow=10.0,SNR=3.4
PLCA LR LR 10 21 51.7
comp=Z,188nm,21.6s,baz=267,slow=29
PLCA **Paso Flores** 86.50 132 eP P 09 52 13.9 +1.0
comp=Z,13nm,1.5s
IPM **Ipoh** 86.53 276 eP P 09 52 14.0 +0.6
comp=Z,28nm,1.1s
MNSI **Mandailing Nat** 86.56 272 P P 09 52 13.6 0.0
DLMT **Dillon** 86.61 38 eP P 09 52 13.2 0.0
comp=Z,6.2nm,1.1s
SNOW **Snow King Moun** 86.65 41 eP P 09 52 13.5 -0.2
comp=Z,7.4nm,1.0s
MSO **Missoula** 86.68 37 P P 09 52 13.2 -0.3
baz=234
MCK **McKinley** 86.73 11 eP P 09 52 13.5 +0.3
comp=Z,35nm,1.0s
MCK **McKinley** 86.73 11 eP P 09 52 13.5 +0.3
MCK pmax pmax
comp=Z,35nm,1.0s
HYT **Haines Junctio** 86.77 17 eP P 09 52 13.6 0.0
comp=Z,17nm,1.5s
LOHW **Long Hollow** 86.83 41 eP P 09 52 14.3 -0.1
comp=Z,7.7nm,1.5s
SMCO **Snowmass** 86.84 46 eP P 09 52 13.2 -1.6
comp=Z,5.2nm,0.9s
SYO **Syowa Base** 86.99 192⇓eP P 09 52 14.8 +0.2
SYO **Syowa Base** 86.99 192⇑ePcP PcP 09 52 16.8 0.0
BW06 **Boulder Array** 87.02 42 eP P 09 52 15.4 0.0
comp=Z,3.0nm,0.8s
BW06 **Boulder Array** 87.02 42 P P 09 52 15.3 -0.1
baz=238
PD31 **Pinedale Array** 87.02 42 eP P 09 52 15.6 +0.1
comp=Z,4.7nm,1.5s
PDAR **Pinedale Array** 87.02 42 P P 09 52 15.3 -0.1
comp=Z,2.3nm,0.8s,baz=208,slow=3.6,SNR=15
PDAR LR LR 10 27 27.5
comp=Z,212nm,18.1s,baz=258,slow=33
MENT **Mentasta** 87.05 14 eP P 09 52 15.5 +0.6
comp=Z,12nm,0.9s
SDCO **Great Sand Dun** 87.13 48 P P 09 52 15.5 -0.7
baz=241
DLBC **Dease Lake** 87.19 22 P P 09 52 16.8 +1.1
comp=Z,2.5nm,0.9s,baz=215,slow=10,SNR=4.9
DLBC **Dease Lake** 87.19 22 eP P 09 52 16.6 +1.0
comp=Z,7.0nm,1.1s
BOZ **Bozeman (W)** 87.30 39 eP P 09 52 16.8 +0.2
comp=Z,10nm,1.5s
BOZ **Bozeman (W)** 87.30 39 eP P 09 52 16.8 +0.2
BOZ pmax pmax
comp=Z,10.0nm,1.5s
BOZ **Bozeman (W)** 87.30 39 P P 09 52 17.3 +0.7
baz=236
MSTX **Muleshoe** 87.30 52 eP P 09 52 16.4 -0.4
comp=Z,38nm,1.5s
MSTX **Muleshoe** 87.30 52 P P 09 52 16.9 +0.1
baz=242
SNAA **Sanae** 87.43 177 P P 09 52 17.2 +0.4
SNAA **Sanae** 87.43 177 eP P 09 52 17.1 +0.2
comp=Z,9.7nm,1.1s
SNAA **Sanae** 87.43 177ceP P 09 52 16.8 0.0
VNA3 **Neumayer Olymp** 87.44 175 P P 09 52 17.3 +0.5
RIDG **Independent Ri** 87.52 13 eP P 09 52 17.5 +0.3
comp=Z,26nm,1.4s
WRH **Wood River Hil** 87.56 11 eP P 09 52 17.6 +0.4
comp=Z,31nm,1.0s
DOT **Dot Lake** 87.61 13 eP P 09 52 17.5 0.0
comp=Z,13nm,0.9s
CCB **Clear Creek Bu** 87.77 11 eP P 09 52 18.2 0.0
comp=Z,21nm,1.1s
HRY **Holter Researc** 87.81 38 eP P 09 52 19.0 +0.1
VNA2 **Neumayer-Watz** 87.92 176 P P 09 52 19.9 +0.8
baz=195,slow=3.5

PANO Nakornpanom 87.95 289 P **P** **09 52 22.6 +2.5**
RWWY Rawlins 87.95 44 *e*P **P** **09 52 18.4 -1.5**
comp=Z,6.9nm,1.0s
TCOL CIGO, UAF Yank 87.97 11 P **P** **09 52 19.6 +0.5**
baz=205
COLA College 87.97 11 *e*P **P** **09 52 19.0 -0.1**
comp=Z,20nm,1.0s
COLA College 87.97 11*c i*P **P** **09 52 19.2 +0.1**
COLA pmax pmax
comp=Z,10.0nm,1.0s
WALA Waterton Lakes 87.99 35 *e*P **P** **09 52 18.7 -1.1**
comp=Z,10nm,1.3s
JCT Junction City 88.00 56 P **P** **09 52 19.9 -0.3**
baz=244
ILAR Eielson Array 88.05 11 P **P** **09 52 19.6 +0.1**
comp=Z,4.5nm,1.1s,baz=217,slow=5.2,SNR=18
ILAR PP **PP** **09 55 44.4 -2.2**
comp=Z,0.7nm,0.9s,baz=213,slow=6.5,SNR=4.1
ILAR LR LR 10 25 34.5
comp=Z,105nm,21.2s,baz=209,slow=31
ILB Eielson Array 88.05 11 *e*P **P** **09 52 19.4 -0.1**
comp=Z,22nm,1.4s
ILB *e*PP **PP** **09 55 44.4 -2.2**
VNA1 Neumayer--Stat 88.12 175 P **P** **09 52 19.8 -0.3**
POKR Poker Plat Res 88.27 11 P **P** **09 52 20.7 +0.2**
baz=205
SKNT Sakolnakorn 88.44 289 P **P** **09 52 24.5 +2.0**
GSI Gunungsitoli 88.61 272 *e*P **P** **09 52 23.1 -0.4**
comp=Z,73nm,0.9s
GSI Gunungsitoli 88.61 272 P **P** **09 52 25.3 +1.9**
DAWY Dawson 89.01 15 *e*P **P** **09 52 24.6 +0.5**
comp=Z,14nm,1.0s
ABTX Abilene, Hawle 89.05 55 *e*P **P** **09 52 23.4 -1.7**
comp=Z,23nm,1.4s
ABTX Abilene, Hawle 89.05 55 P **P** **09 52 27.3 +2.2**
baz=244
ENH Enshi 89.10 303 *e*P **P** **09 52 26.8 +1.4**
comp=Z,78nm,1.1s
EGAK Eagle 89.22 14 *e*P **P** **09 52 25.4 +0.3**
comp=Z,14nm,1.1s
NONG Nongkai 89.59 289 P **P** **09 52 30.9 +3.0**
ZEA Zeya 89.69 330 *e*P **P** **09 52 28.4 +0.9**
ZEA pmax pmax
comp=Z,46nm,1.4s
COLD Coldfoot 89.75 9 *e*P **P** **09 52 26.8 -0.7**
comp=Z,6.3nm,1.2s
APG El Apazote 89.78 74 LR LR 10 23 09.3
comp=Z,183nm,21.3s,baz=232,slow=29
CHAI Chaiyaphum 89.81 287 P **P** **09 52 31.7 +2.7**
GYA Guiyang 89.81 298⇑*i*P **P** **09 52 30.1 +1.2**
GYA pP pwP 09 52 40.8 +8.6
GYA sP sP 09 52 44.6 +12
GYA PP **PP** **09 56 05.0 +3.4**
GYA S **S** **10 03 17.3 -4.1**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.4s
BILL Bilibino 89.87 353*c i*P **P** **09 52 27.4 -0.6**
BILL pmax pmax
comp=Z,4.0nm,0.9s
SLVN Son La 90.16 293 *e*P **P** **09 52 31.0 +0.5**
comp=Z,18nm,1.1s
WMOK Wichita Mounta 90.60 53 *e*P **P** **09 52 33.3 +1.0**
comp=Z,11nm,1.6s
HKT Hockley 90.91 58 *e*P **P** **09 52 32.5 -1.2**
comp=Z,14nm,1.4s
HKT Hockley 90.91 58 *e*P **P** **09 52 32.5 -1.2**
HKT pmax pmax
comp=Z,14nm,1.4s
PBKT Sadao Pong 90.97 287 P **P** **09 52 37.0 +2.7**
LAO LASA Array 91.07 40 *e*P **P** **09 52 33.6 -0.7**
comp=Z,22nm,1.4s
XAN Xi'an 91.11 306 P **P** **09 52 36.4 +1.7**
XAN pP pwP 09 52 43.1 +5.1
XAN pmax pmax
comp=Z,35nm,1.0s
XAN pmax pmax
comp=Z,170nm,3.7s
TOLK Toolik Lake Re 91.15 9 *e*P **P** **09 52 33.8 -0.3**
comp=Z,12nm,1.6s
TOLK Toolik Lake Re 91.15 9 P **P** **09 52 34.6 +0.6**
baz=203
RSSD Black Hills 91.17 43 P **P** **09 52 35.2 +0.2**
baz=242
EPYK Eagle Plains 91.56 14 *e*P **P** **09 52 36.2 +0.2**
comp=Z,13nm,1.1s
EPYK Eagle Plains 91.56 14 P **P** **09 52 36.5 +0.5**
baz=215
UTTA Uttaradit 91.76 288 P **P** **09 52 40.7 +2.7**
NANT Nan 92.02 289 P **P** **09 52 41.3 +2.1**
HHC Hu-ho-hao-te 92.10 313 *e*P **P** **09 52 41.1 +1.9**
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,82nm,5.7s
KMI Kunming 92.57 296 P **P** **09 52 43.8 +1.9**
KMI pP pwP 09 52 54.5 +9.3
KMI sP sP 09 52 58.0 +12
KMI pmax pmax
comp=Z,35nm,1.0s
KMI pmax pmax
comp=Z,150nm,7.2s
KMI LR LR
comp=Z,240nm,19.4s
KMI LR LR
comp=Z,200nm,22.4s
KMI LR LR
comp=Z,390nm,28.5s
LAMP Lampang 92.86 289 P **P** **09 52 45.8 +2.7**
PAYA Payao 92.95 289 P **P** **09 52 45.8 +2.3**
DGMT Dagmar 93.14 39 *e*P **P** **09 52 43.0 -0.7**
comp=Z,23nm,1.0s
DGMT Dagmar 93.14 39 P **P** **09 52 44.5 +0.8**
baz=242
CMAR Chiang Mai Arr 93.45 288 P **P** **09 52 47.9 +2.1**
comp=Z,13nm,0.9s,baz=122,slow=2.8,SNR=48
CMAR LR LR 10 37 04.0
comp=Z,60nm,18.2s,baz=162,slow=37
CMMT Chiang Mai 93.57 289 P **P** **09 52 48.4 +2.0**
CHTO Chiang Mai 93.57 289 *e*P **P** **09 52 47.4 +1.0**
comp=Z,18nm,0.9s
INK Inuvik 93.86 14 P **P** **09 52 46.9 +0.5**
comp=Z,3.5nm,0.9s,baz=197,slow=11,SNR=12
INK Inuvik 93.86 14 *e*P **P** **09 52 47.0 +0.5**
CD2 Chengdu 93.89 301 P **P** **09 52 47.8 +0.2**
CD2 pmax pmax
comp=Z,30nm,0.5s
KSU1 Kansas State U 93.99 50 P **P** **09 52 47.5 -0.3**
baz=246
MIAR Mount Ida 94.45 55 P **P** **09 52 51.2 +1.2**
baz=248
YKA Yellowknife Ar 95.54 24 P **P** **09 52 54.5 +0.2**
comp=Z,1.6nm,0.7s,baz=236,slow=4.5,SNR=19
YKA LR LR 10 30 54.4
comp=Z,12nm,19.3s,baz=244,slow=32
YKB5 Yellowknife Ar 95.54 24 *e*P **P** **09 52 54.5 +0.2**
YKW3 Yellowknife Ar 95.58 24 *e*P **P** **09 52 54.2 -0.2**
comp=Z,3.4nm,0.9s
LZH Lanzhou 95.74 306 *e*P **P** **09 52 58.6 +2.5**
LZH pP pwP 09 53 10.9 +11
LZH sP sP 09 53 13.3 +13
LZH PP **PP** **09 56 54.6 +6.5**
LZH pmax pmax
comp=Z,14nm,1.3s
LZH pmax pmax
comp=Z,130nm,4.3s
LZH LR LR
comp=Z,220nm,17.3s
LZH LR LR
comp=Z,220nm,17.5s
LZH LR LR
comp=Z,360nm,19.2s
ECSD EROS Data Cent 95.83 45 *e*P **P** **09 52 56.2 +0.1**
comp=Z,9.4nm,1.0s
ECSD EROS Data Cent 95.83 45 P **P** **09 52 55.9 -0.3**
baz=247
ULN Ulaanbaatar 97.93 318⇓*e*P Pdif 09 53 06.2 +0.4
ULN pmax pmax
comp=Z,2.0nm,1.1s
SONA0 Songino Array 98.33 318 *e*P Pdif 09 53 07.4 -0.1
SONM Songino Array 98.33 318 P Pdif 09 53 07.4 -0.1
comp=Z,1.0nm,0.6s,baz=166,slow=3.0,SNR=5.1
SONM LR LR 10 33 37.1
comp=Z,131nm,21.1s,baz=98,slow=33
LPAZ La Paz 98.76 111 LR LR 10 28 05.2
comp=Z,215nm,21.9s,baz=254,slow=30
ULM Lac du Bonnet 98.81 40 LR LR 10 34 24.9
comp=Z,283nm,18.4s,baz=263,slow=33
TIXI Tiksi 100.07 344⇑*e*P **Pdif** **09 53 13.8 -0.7**
TIXI pmax pmax
comp=Z,2.0nm,1.3s
ZAA1 Zalesovo Array 112.96 321 *e*PKiKP **PKiKP** **09 58 06.0 -0.5**
ZALV Zalesovo Beam 112.96 321 PKiKP **PKiKP** **09 58 06.0 -0.5**
comp=Z,2.7nm,0.6s,baz=148,slow=0.9,SNR=11
MK32 Makanchi Array 113.97 313 *e*PKiKP **PKiKP** **09 58 08.6 -0.2**
MKAR Makanchi Array 113.97 313 PKP **PKiKP** **09 58 08.6 -0.2**
comp=Z,1.0nm,0.5s,baz=84,slow=1.2,SNR=11
KURK Kurchatov 116.61 317 *e*PKPdf **PKPdf** **09 58 09.9 -3.7**
KURK Kurchatov 116.61 317⇑*i*PKIKP **PKPdf** **09 58 11.7 -1.9**
KURK pmax pmax
comp=Z,18nm,0.8s
KURK Kurchatov 116.61 317 ⇓Sn **PKPdf** **09 58 09.9 -3.7**
comp=Z,16nm,0.9s
KSH Kashi 117.92 304 *e*PKP **PKiKP** **09 58 18.3 +1.6**
KSH PP PP 09 59 40.5 +9.5
KSH SS SS 10 15 49.8 +4.7
KSH AMB AMB
comp=Z,180nm,5.5s
KSH LR LR
comp=Z,580nm,12.2s
KSH LR LR
comp=Z,300nm,13.0s
KSH LR LR
comp=Z,260nm,12.3s
AAK Ala-Archa 119.23 308⇓*i*PKIKP **PKiKP** **09 58 19.3 +0.1**
BRVK Borovoye 121.65 320 *e*PKPdf **PKiKP** **09 58 22.9 -0.5**
BRVK Borovoye 121.65 320*d i*PKIKP **PKiKP** **09 58 23.4 0.0**
KK31 Karatay Array 122.16 308 *e*PKPdf **PKiKP** **09 58 23.9 -0.9**
KKAR Karatay Array 122.16 308 *e*PKPdf **PKiKP** **09 58 24.8 0.0**
GAR Garm 122.27 304 *e*PKPdf **PKPdf** **09 58 23.1 -2.0**
GAR Garm 122.27 304 *e*PKIKP **PKPdf** **09 58 23.1 -2.0**
SUMG Summit 122.78 14 *e*PKPdf **PKiKP** **09 58 26.2 +0.6**
SUMG Summit 122.78 14 *e*PKIKP **PKiKP** **09 58 26.2 +0.6**
SVE Sverdlovsk 126.26 326 *e*PKIKP **PKiKP** **09 58 32.7 +0.3**
SVE pmax pmax
comp=Z,13nm,0.9s
ARU Arti 127.47 326 *e*PKPdf **PKiKP** **09 58 34.5 -0.4**
ARU Arti 127.47 326 *i*PKIKP **PKiKP** **09 58 34.7 -0.2**
ARU 10 00 33.7
ARU 10 05 43.0
ABKAR Akbulak array 128.72 317 *e*PKPdf **PKPdf** **09 58 35.7 -1.3**
ARA0 ARCESS Array S 129.94 351 *e*PKPdf **PKiKP** **09 58 38.2 -1.3**
ARCES ARCESS Array B 129.94 351 PKP **PKiKP** **09 58 38.2 -1.3**
comp=Z,9.5nm,0.4s,baz=2.0,slow=1.1,SNR=34
GEYT Alibeck 131.87 303 PKP **PKiKP** **09 58 45.0 +0.6**
comp=Z,1.8nm,0.3s,baz=81,slow=4.7,SNR=3.3
KLMR Klimovskoe 133.61 338 *e*PKIKP **PKPdf** **09 58 44.2 -1.6**
KLMR pmax pmax
comp=Z,8.0nm,1.3s
KLMR Klimovskoe 133.61 338 *e*PKPdf **PKPdf** **09 58 44.2 -1.6**
KLMR AMP 09 58 57.1
comp=Z,8.0nm,1.3s
FIA1 FINESS Array S 137.10 346 *e*PKPdf **PKPdf** **09 58 51.7 -0.6**
FIA0 FINESS Array S 137.10 346 *e*PKPpre PKPpre 09 58 46.6
FIA0 *e*PKPdf **PKiKP** **09 58 52.8 -1.4**
FINES FINESS Array B 137.10 346 PKhKP PKPpre 09 58 46.6
comp=Z,2.5nm,0.8s,baz=358,slow=9.7,SNR=4.2
FINES PKP **PKiKP** **09 58 52.8 -1.4**
comp=Z,2.0nm,0.5s,baz=16,slow=3.2,SNR=9.0
OBN Obninsk 138.72 333 *e*PKIKP **PKPdf** **09 58 55.0 -0.4**
OBN *e* 10 01 46.4
OBN *e*PPP PPP 10 04 48.7
OBN pmax pmax
comp=Z,6.0nm,0.8s
OBN MLR MLR
comp=Z,161nm,20.0s
VSU Vasula 139.53 343⇑*i*PKIKP **PKiKP** **09 58 57.7 -1.5**
VSU pmax pmax
comp=Z,42nm,1.7s
NB2 NORSAR Subarra139.76 356 PKP PKPpre 09 58 49.1
comp=Z,1.7nm,0.8s,baz=16,slow=3.2
NB200 NORSAR Array S 139.76 356 *e*PKPpre PKPpre 09 58 51.8
NB200 *e*PKPdf sPKPdf 09 58 59.8 -1.7
NOA NORSAR Array B 139.76 356 PKhKP PKPpre 09 58 51.8
comp=Z,0.9nm,0.8s,baz=18,slow=5.2,SNR=4.6
NOA PKP sPKPdf 09 58 59.8 -1.7
comp=Z,1.0nm,0.9s,baz=14,slow=4.2,SNR=5.6
ZEI Tsey 141.31 313 *i*PKIKP **PKPdf** **09 59 00.6 -0.3**
KBZ Khabaz 141.62 315 PKP **PKPdf** **09 59 00.4 -0.7**
comp=Z,3.1nm,0.9s,baz=104,slow=4.2,SNR=3.5
RAYN Ar Rayn 143.06 282 *e*PKPdf **PKPdf** **09 59 02.4 -2.0**
RAYN Ar Rayn 143.06 282 *e*PKIKP **PKPdf** **09 59 02.4 -2.0**
SENK Senkaya-Erzuru 143.21 310 *e*P **PKiKP** **09 59 08.4 +0.8**
EDU Dundee 143.89 8 *e*P **PKPdf** **09 59 02.6 -2.1**
EAB Aberfoyle 144.04 9 *e*P **PKPdf** **09 59 03.3 -1.7**
VRTB Varto-Mus 144.35 309 *e*P **PKPdf** **09 59 06.9 +0.6**
PGBU Glenifferbraes 144.39 10 *e*P **PKPdf** **09 59 04.5 -1.2**
MUD Monsted U'grnd 144.45 357⇑*i*PKIKP **PKPdf** **09 59 04.8 -0.9**
MUD pmax pmax
comp=Z,49nm,0.9s
MUD Monsted U'grnd 144.45 357⇑*i*P **PKPdf** **09 59 04.8 -0.9**
comp=Z,49nm,0.9s
ESY Stoneypath 144.55 8 *e*P **PKPdf** **09 59 04.7 -1.2**
KLNR Kaliningrad 144.63 345*d i*PKIKP **PKPdf** **09 59 05.1 -0.9**
EBL Broad Law 144.64 8 *e*P **PKPdf** **09 59 05.2 -0.9**
CLGH Cloghs, Cushen 144.80 12 *e*P **PKPdf** **09 59 05.5 -0.9**
YEDI Yedisu-Bingol 144.91 310 *e*P **PKPdf** **09 59 07.2 -0.1**
BNGB Bingl 144.97 309 *e*P **PKPdf** **09 59 07.8 +0.4**
AKASG Malin Array Be 144.98 334 PKPbc **PKPdf** **09 59 05.9 -0.9**
comp=Z,29nm,0.8s,baz=38,slow=4.6,SNR=43
ESK Eskdalemuir 145.06 9 *e*PKPbc **PKPdf** **09 59 06.8 0.0**
ESK Eskdalemuir 145.06 9 *e*P **PKPdf** **09 59 05.9 -0.9**
ESK Eskdalemuir 145.06 9 *e*PKIKP **PKPdf** **09 59 06.8 0.0**
BSD Bornholm Skovb 145.18 351 *i*PKIKP **PKPdf** **09 59 06.8 -0.2**
BSD pmax pmax
comp=Z,59nm,1.2s
BSD Bornholm Skovb 145.18 351 *i*P **PKPdf** **09 59 06.8 -0.2**
comp=Z,59nm,1.2s
GAL1 Galloway 145.26 10 *e*P **PKPdf** **09 59 07.0 -0.1**
BHH Howats Hill 145.27 9 *e*P **PKPdf** **09 59 06.7 -0.5**
BBO1 Bothel 145.61 9 *e*P **PKPab** **09 59 08.2 -0.1**
EDMD Edmundbyers 145.70 8 *e*P **PKPab** **09 59 08.6 0.0**
KESW Keswick, Cumbr 145.78 9 *e*P **PKPab** **09 59 08.6 -0.3**
IOIK Isle Michael 145.86 11 *e*P **PKPab** **09 59 08.9 -0.3**
SVRC Sivrice-ELAZID 146.19 308 *e*P **PKiKP** **09 59 12.4 -1.4**
GDLE Glaisdale, N Y 146.23 7 *e*P **PKPab** **09 59 10.2 -0.4**
SIM Simferopol' 146.46 322*d i*PKP2 **PKiKP** **09 59 12.6 -1.3**
SIM pmax pmax
comp=Z,45nm,0.8s
HPK Haverah Park 146.59 8 *e*P **PKPab** **09 59 10.6 -1.4**
WPS Cemaes, Angles 146.70 11 *e*P **PKPab** **09 59 11.7 -0.7**
WME Myndd Eilian 146.73 11 *e*P **PKPab** **09 59 11.6 -1.0**
WLF1 Llynfaes 146.82 11 *e*P **PKPab** **09 59 12.0 -0.9**
YRC Rhoscolyn 146.83 11 *e*P **PKPab** **09 59 11.8 -1.1**
URFA Urfa 146.89 307 *e*P **PKiKP** **09 59 13.9 -1.2**
LBWR Ladybower, Pea 147.12 8 *e*P **PKPab** **09 59 12.9 -1.2**
SVSK Karacayir 147.23 312 *e*P **PKiKP** **09 59 15.2 -0.4**
KVT Kavak 147.34 315 *e*P **PKiKP** **09 59 20.5 +4.6**
TOKT Tokat 147.36 313 *e*P **PKPab** **09 59 14.7 -0.9**
FOEL Foel Wylfa 147.41 10 *e*P **PKPab** **09 59 13.7 -1.6**
DARE Darende-Malaty 147.45 310 *e*P **PKiKP** **09 59 15.9 -0.4**
DIKM Dikmen 147.58 316 *e*P PKPab 09 59 24.5 +8.2
LVV L'vov 147.70 337 *e*PKP2 **PKiKP** **09 59 14.7 -1.6**
KIS Kishinev 147.90 329 *e*PKP **PKPbc** **09 59 14.0 -0.9**
KIS *e*LR LR 10 57 10.0
comp=Z,400nm,22.0s
KIS Kishinev 147.90 329 *e*PKP2 **PKPbc** **09 59 14.0 -0.9**
KIS MLR MLR
comp=Z,400nm,22.0s
KIS MLR MLR
comp=N,500nm,22.0s
MILM Milestii Mici 147.96 329⇑*i*P **PKiKP** **09 59 15.5 -1.4**
GAZ Gaziantep 148.18 307 *e*P **PKiKP** **09 59 17.1 -0.7**
KMRS Kahramanmaras 148.28 308 *e*P **PKiKP** **09 59 17.3 -0.6**
MCH1 Michaelchurch 148.30 10 *e*P **PKiKP** **09 59 15.6 -1.8**
MONM Monmouth 148.49 10 *e*P **PKiKP** **09 59 16.2 -1.6**
CORM Corum 148.72 314 *e*P **PKiKP** **09 59 18.9 0.0**
PRAR RASCA 148.81 332⇑*i*P **PKiKP** **09 59 18.8 +0.1**
ILGA Ilgaz 148.88 316 *e*PKPbc **PKiKP** **09 59 19.3 0.0**
BURAR Bucovina Array 149.04 334⇑*i*P **PKiKP** **09 59 19.5 +0.3**
BURAR Bucovina Array 149.04 334⇑PKP2 **PKiKP** **09 59 19.5 +0.3**
KOLS Kolonicke sedl 149.06 338 *e*PKP2 **PKiKP** **09 59 18.1 -1.1**
KOLS Kolonicke sedl 149.06 338 *e*PKP **PKiKP** **09 59 18.0 -1.1**
KOZT Kozan 149.08 309 *e*P **PKiKP** **09 59 18.9 -0.6**
CLL Collm 149.16 351⇑*i*PKPbc **PKiKP** **09 59 17.8 -1.4**
comp=Z,39nm,0.8s
CLL LmV 11 14 00.0
comp=Z,200nm,18.5s
CLL Collm 149.16 351⇑*i*PKP2 **PKiKP** **09 59 17.8 -1.4**
CLL pmax pmax
comp=Z,39nm,0.8s
CANT Cankiri 149.17 316 *e*P **PKiKP** **09 59 18.6 -1.1**
BIZ Bicaz 149.19 332⇑*i*P **PKiKP** **09 59 19.9 +0.5**
TAHT Tahtakopru-Hat 149.24 307 *e*P **PKiKP** **09 59 19.8 -0.1**
TESR Tescani 149.27 331⇑*i*P **PKiKP** **09 59 19.9 +0.3**
OSTC Ostas 149.29 347⇑*e*PKP **PKiKP** **09 59 19.5 -0.1**
OSTC *e*PKPAB **pPKPab** **09 59 23.6 -2.4**
CHVC Chvalec 149.30 347⇑*e*PKP **PKiKP** **09 59 19.5 -0.1**
CHVC AMS AMS 11 06 00.0
comp=Z,200nm,19.2s
UZH Uzhgorod 149.31 338⇑*e*PKP2 **PKiKP** **09 59 19.1 -0.5**
UZH *i* 10 06 16.1
UZH MLR MLR
comp=N,70nm,20.0s
UZH MLR MLR
comp=E,100nm,20.0s
UZH MLR MLR
comp=Z,70nm,20.0s
CEYT Ceyhan 149.32 308 *e*P **PKiKP** **09 59 20.2 +0.2**
UPC Upice 149.38 347 *e*PKP2 **PKiKP** **09 59 20.0 +0.3**
UPC MLR MLR
comp=Z,200nm,19.6s
UPC Upice 149.38 347⇑*e*PKP **PKiKP** **09 59 20.0 +0.3**
UPC *e*PKPAB **sPKPab** **09 59 25.9 -1.5**
UPC AMS AMS 11 06 00.0
comp=Z,200nm,19.6s
BRG Berggiesshubel 149.43 350 *e*PKP **PKPdf** **09 59 15.3 +1.1**
comp=Z,6.2nm,1.2s
BRG Berggiesshubel 149.43 350 *i*PKP **PKiKP** **09 59 19.7 -0.1**
BRG Berggiesshubel 149.43 350 *i*PKP **PKPab** **09 59 23.4 0.0**
comp=Z,27nm,1.0s
BRG Berggiesshubel 149.43 350 *e*PKHKP **PKPdf** **09 59 15.3 +1.1**
BRG *i* 09 59 23.4
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG pmax pmax
comp=Z,27nm,1.0s
DPC Dobruska-Polom 149.47 346 *e*PKP2 **PKiKP** **09 59 20.4 +0.4**
DPC MLR MLR
comp=Z,200nm,16.6s
DPC Dobruska-Polom 149.47 346⇑*e*PKP **PKiKP** **09 59 20.4 +0.4**
DPC *e*PKPAB **sPKPab** **09 59 26.3 -1.5**
DPC AMS AMS 11 05 20.0
comp=Z,200nm,16.6s
YURE YUREGIR 149.48 308 *e*P **PKiKP** **09 59 20.8 +0.4**
OKC Ostrava-Krasne 149.51 344 *e*PKP2 **PKiKP** **09 59 20.2 +0.2**
OKC Ostrava-Krasne 149.51 344⇑*e*PKP **PKiKP** **09 59 20.2 +0.2**
CFR Carcaliu 149.53 328⇑*i*P **PKiKP** **09 59 20.0 -0.2**
CFR Carcaliu 149.53 328⇑PKP2 **PKiKP** **09 59 20.0 -0.2**
BR101 Keskin Array S 149.60 314 *e*PKPdf **PKPdf** **09 59 14.7 -0.4**
BR101 *e*PKPbc **PKiKP** **09 59 20.1 -0.6**
BR131 Keskin Array S 149.60 314 *e*PKPbc **PKiKP** **09 59 20.3 -0.4**
BRTR Keskin Array B 149.60 314 PKP **PKPdf** **09 59 14.7 -0.4**
comp=Z,0.3nm,0.4s,baz=132,slow=1.8,SNR=3.6
BRTR PKPbc **PKiKP** **09 59 20.1 -0.6**
comp=Z,12nm,0.8s,baz=132,slow=3.4,SNR=45
TRPA Tarpa 149.65 337⇓*i*P **PKiKP** **09 59 20.5 +0.2**
TRPA Tarpa 149.65 337⇑*i*EPKiKP **PKiKP** **09 59 20.0 -0.3**
PVCC Panska Ves 149.65 349 *e*PKP2 **PKiKP** **09 59 20.8 +0.5**
PVCC Panska Ves 149.65 349⇑*e*PKP **PKiKP** **09 59 20.8 +0.5**
MORC Moravsky Berou 149.72 345⇑*i*P **PKiKP** **09 59 20.9 +0.4**
MORC Moravsky Berou 149.72 345⇑PKP2 **PKiKP** **09 59 20.9 +0.4**
MORC Moravsky Berou 149.72 345 *e*PKP **PKiKP** **09 59 20.5 0.0**
VRI Vrincioaia 149.72 330⇑*i*P **PKiKP** **09 59 20.3 -0.3**
VRI Vrincioaia 149.72 330⇑PKP2 **PKiKP** **09 59 20.3 -0.3**
KARA Karaisali 149.73 309 *e*P **PKiKP** **09 59 20.6 -0.3**
PLOR Plostina 149.76 330⇑*i*P **PKiKP** **09 59 20.5 -0.2**
PLOR Plostina 149.76 330⇑PKP2 **PKiKP** **09 59 20.5 -0.2**
LANS Liptovska Anna 149.77 342 *e*PKP2 **PKiKP** **09 59 21.6 +1.0**
LANS Liptovska Anna 149.77 342 *e*PKP **PKiKP** **09 59 21.6 +1.0**
ARCR ARCALIA 149.81 334⇑*i*P **PKiKP** **09 59 21.2 +0.5**
TIRR Tirgusor 149.90 326 *e*PKPdf **PKPdf** **09 59 14.3 -0.9**
TIRR *e*PKPbc **PKiKP** **09 59 20.4 -0.5**
TIRR Tirgusor 149.90 326⇑*i*P **PKiKP** **09 59 20.9 0.0**
TIRR Tirgusor 149.90 326⇑PKP2 **PKiKP** **09 59 20.9 0.0**
TLB Topalu 150.00 327⇑*i*P **PKiKP** **09 59 22.1 +1.0**
TLB Topalu 150.00 327⇑PKP2 **PKiKP** **09 59 22.1 +1.0**
SERE Sereflikochisa 150.03 313 *e*P **PKiKP** **09 59 20.6 -1.0**
KECS Kecovo 150.05 340 *e*PKP2 **PKiKP** **09 59 22.2 +1.0**
KECS Kecovo 150.05 340 *e*PKP **PKiKP** **09 59 22.2 +1.0**
ANTO Ankara 150.09 315 *e*P **PKiKP** **09 59 21.8 +0.2**
ANTO Ankara 150.09 315 *e*PKPbc **PKiKP** **09 59 21.8 +0.2**
ANTO Ankara 150.09 315⇑*i*P **PKiKP** **09 59 21.8 +0.2**
ANTO Ankara 150.09 315⇑PKP2 **PKiKP** **09 59 21.8 +0.2**
LOD Lodumlu 150.10 315 *e*P **PKiKP** **09 59 21.7 0.0**
PRU Pruhonice 150.17 348 *e*PKIKP **PKiKP** **09 59 21.7 +0.3**
PRU *e* 09 59 25.3
PRU MLR MLR
comp=Z,100nm,16.5s
PRU Pruhonice 150.17 348⇑*e*PKP **PKiKP** **09 59 21.7 +0.3**
PRU *e*PKPAB **PKPab** **09 59 25.3 -1.2**
PRU AMS AMS 11 02 40.0
comp=Z,100nm,16.5s
GOPC GO Pecny, Ondr 150.20 348 *e*PKIKP **PKiKP** **09 59 21.3 -0.2**
GOPC GO Pecny, Ondr 150.20 348⇑*e*PKP **PKiKP** **09 59 21.3 -0.2**
UCC Uccle 150.20 2⇑PKPbc **PKiKP** **09 59 21.2 -0.2**
MANR Mangalia 150.25 325⇑*i*P **PKiKP** **09 59 22.3 +0.6**
DOPR Dopca 150.25 332⇑*i*P **PKiKP** **09 59 22.6 +0.9**
MERS Mersin 150.28 309 *e*P **PKiKP** **09 59 21.8 -0.3**
NKC Novy Kostel 150.28 351 *e*PKIKP **PKiKP** **09 59 22.0 +0.4**
NKC Novy Kostel 150.28 351⇑*e*PKP **PKiKP** **09 59 22.0 +0.4**
MLR Muntele Rosu 150.36 330 *e*PKPdf **PKPdf** **09 59 14.3 -1.7**
MLR *e*PKPbc **PKiKP** **09 59 21.8 -0.2**
MLR Muntele Rosu 150.36 330⇑*i*P **PKiKP** **09 59 21.7 -0.4**
MLR Muntele Rosu 150.36 330⇑PKIKP **PKiKP** **09 59 21.7 -0.4**
VRAC Vranov 150.38 345⇑*i*P **PKiKP** **09 59 22.4 +0.6**
VRAC Vranov 150.38 345⇑PKIKP **PKiKP** **09 59 22.4 +0.6**
VRAC Vranov 150.38 345 *e*PKP **PKiKP** **09 59 21.9 +0.1**
MEM Membach 150.41 359 PKiKP **PKiKP** **09 59 21.6 -0.2**
MEM sPKP 09 59 31.3
CJR Cluj-Napoca 150.42 334⇓*i*P **PKiKP** **09 59 22.7 +0.6**
CJR Cluj-Napoca 150.42 334⇓PKIKP **PKiKP** **09 59 22.7 +0.6**
SNF Seneffe 150.49 2 PKiKP **PKiKP** **09 59 22.3 +0.3**
JAVC Velka Javorina 150.53 344 *e*PKP **PKiKP** **09 59 23.4 +1.2**
VYHS Vyhne 150.54 342 *e*PKIKP **PKiKP** **09 59 22.7 +0.5**
VYHS Vyhne 150.54 342 *e*PKP **PKiKP** **09 59 22.7 +0.5**
BCLA Clavier 150.60 0 PKiKP **PKiKP** **09 59 22.1 -0.1**
BGES Gesves 150.63 1 PKiKP **PKiKP** **09 59 21.9 -0.4**
BGES sPKP 09 59 31.2
SECR 150.65 330⇑*i*P **PKiKP** **09 59 23.0 +0.5**
KRUC Moravsky 150.66 345 *e*PKP **PKiKP** **09 59 22.6 +0.2**
CHBY Cihanbeyli 150.67 313 *e*P **PKiKP** **09 59 22.6 -0.3**
DRGR 150.70 336⇓*i*P **PKiKP** **09 59 23.0 +0.3**
DRGR 150.70 336⇓PKIKP **PKiKP** **09 59 23.0 +0.3**
BMRD Maredsous 150.71 1 PKiKP **PKiKP** **09 59 22.3 -0.2**
KIZK Mersin 150.72 308 *e*P **PKiKP** **09 59 22.8 -0.1**
PSZ Piszkesteto 150.73 340 *e*PKPbc **PKiKP** **09 59 23.1 +0.4**
PSZ Piszkesteto 150.73 340⇑*e*EPKiKP 09 59 22.1
MDUB Mudurnu 150.80 317 *e*P **PKiKP** **09 59 22.9 -0.2**
MDUB Mudurnu 150.80 317 *e*PKPbc **PKiKP** **09 59 23.4 +0.3**
VOIR 150.81 331⇑*i*P **PKiKP** **09 59 23.8 +0.9**
VOIR 150.81 331⇑PKIKP **PKiKP** **09 59 23.8 +0.9**
DOU Dourbes 150.91 1 PKiKP **PKiKP** **09 59 22.8 0.0**
DOU x x 09 59 26.4
GRA1 Grafenberg Arr 150.98 352 *e*PKPbc **PKiKP** **09 59 23.4 +0.3**
ARR Arges 151.05 332⇑*i*P **PKiKP** **09 59 24.6 +1.2**
EREN Erenkoy 151.07 306 *e*P **PKiKP** **09 59 24.2 +0.5**
MODS Modra-Piesok 151.08 344 *e*PKIKP **PKiKP** **09 59 23.3 0.0**
MODS Modra-Piesok 151.08 344 *e*PKP **PKiKP** **09 59 23.3 0.0**
MMLI Mount Malkishu 151.10 300 *e*P **PKiKP** **09 59 24.7 +0.8**
SVRH Sivrihisar-ESK 151.15 315 *e*P **PKiKP** **09 59 23.0 -0.9**
IKL Isikli 151.15 308 *e*P **PKiKP** **09 59 23.9 +0.1**
KHC Kasperske Hory 151.17 349 *e*PKPdf **PKPdf** **09 59 17.4 +0.3**
KHC *e*PKPbc **pPKPbc** **09 59 24.2 -1.8**
KHC Kasperske Hory 151.17 349 *e*PKIKP **PKPdf** **09 59 17.7 +0.6**
KHC *e* 09 59 23.9
KHC MLR MLR
comp=Z,100nm,18.4s
KHC Kasperske Hory 151.17 349 *e*PKPDF **PKPdf** **09 59 17.7 +0.6**
KHC ⇑*e*PKP **pPKPbc** **09 59 23.9 -2.2**
KHC AMS AMS 11 02 50.0
comp=Z,100nm,18.4s
KIZT Kizilcal 151.21 314 *e*P **PKiKP** **09 59 24.0 0.0**
LADK Ladik-KONYA 151.22 313 *e*P **PKiKP** **09 59 23.5 -0.6**
GULT Gulveren 151.25 318 *e*P **PKiKP** **09 59 23.9 -0.1**
WLF Walferdange 151.35 359 *e*PKPbc **PKiKP** **09 59 24.8 +1.0**
WLF Walferdange 151.35 359 PKiKP **PKiKP** **09 59 24.9 +1.0**
WLF pPKP **PKPab** **09 59 28.2 -3.1**
WLF sPKPbc **sPKPab** **09 59 37.9 +2.4**

WLF			pPKPab	**pPKPab**	09 59 41.1	+6.7
WLF			sPKPab	sPKPbc	09 59 45.4	+18
SRCK	**Saricakaya, Es**	**151.40 317**	*e*P	**PKiK**	**09 59 24.2**	**0.0**
GEC2	**GERESS Array S**	**151.43 349**	*e*PKPdf	**PKPdf**	**09 59 17.3**	**-0.3**
GEC2			*e*PKPbc	**pPKPbc**	**09 59 24.4**	**-2.4**
GEC2	**GERESS Array S**	**151.43 349**	*e*PKIKP	**PKPdf**	**09 59 17.3**	**-0.3**
GEC2			*e*		09 59 24.4	
GERES	**GERESS Array B**	**151.43 349**	PKP	**PKPdf**	**09 59 17.3**	**-0.3**
	comp=Z,0.3nm,0.2s,baz=284,slow=5.4,SNR=3.5					
GERES			PKPbc	**PKiK**	**09 59 24.1**	**0.0**
	comp=Z,9.6nm,0.7s,baz=42,slow=2.2,SNR=48					
BERE	**Bereket-Mersin**	**151.45 308**	*e*P	**PKiK**	**09 59 24.7**	**+0.1**
CIFT	**Cifteler, Eski**	**151.50 316**	*e*P	**PKiK**	**09 59 24.4**	**-0.2**
SIRR	**Siria**	**151.54 336**	⇓*i*P	**PKiK**	**09 59 25.2**	**+0.9**
CONA	**Conrad Observa**	**151.84 345**	*e*PKiKP	**PKiK**	**09 59 25.7**	**+0.7**
	comp=Z,20nm,0.9s,SNR=11					
YLV	**Yalova**	**151.88 319**	*e*P	**PKiK**	**09 59 24.9**	**-0.4**
YLV	**Yalova**	**151.88 319**	⇓*i*P	**PKiK**	**09 59 25.1**	**-0.2**
YLV	**Yalova**	**151.88 319**	⇓PKIKP	**PKiK**	**09 59 25.1**	**-0.2**
SOP	**Sopron**	**151.90 344**	⇑EPKiKP	**PKiK**	**09 59 25.1**	**+0.1**
BZS	**Buzias**	**152.10 336**	⇓*i*P	**PKiK**	**09 59 26.0**	**+0.5**
BZS	**Buzias**	**152.10 336**	⇓PKIKP	**PKiK**	**09 59 26.0**	**+0.5**
ARMT	**Armutlu**	**152.19 320**	*e*P	**PKiK**	**09 59 25.8**	**-0.1**
TIH	**Tihany**	**152.25 342**	EPKiKP	**PKiK**	**09 59 24.0**	**-1.7**
SHUT	**Suhut-Afyon**	**152.27 315**	*e*P	**PKPbc**	**09 59 25.0**	**-0.9**
MOA	**Molln**	**152.27 347**	*e*PKiKP	**PKiK**	**09 59 26.1**	**+0.3**
	comp=Z,3.1nm,0.6s					
HERR	**Herculane**	**152.39 334**	⇑*i*P	**PKiK**	**09 59 26.3**	**+0.2**
ARSA	**Arzberg**	**152.56 345**	*e*PKiKP	**PKiK**	**09 59 26.6**	**+0.2**
	comp=Z,2.0nm,0.7s					
BFO	**Black Forest**	**152.60 356**	*e*PKPdf	**PKPdf**	**09 59 19.0**	**-0.2**
BFO			*e*PKPbc	**PKiK**	**09 59 26.5**	**0.0**
BFO			*e*PKPab	**PKPab**	**09 59 36.4**	**-0.3**
MORH	**Mrgy, Hungar**	**152.64 340**	⇑EPKiKP	**PKiK**	**09 59 27.0**	**+0.5**
MDVR	**Moldovita**	**152.76 334**	⇑*i*P	**PKiK**	**09 59 27.3**	**+0.4**
ECH	**Echery**	**152.77 358**	*e*PKPdf	**PKPdf**	**09 59 18.3**	**-1.2**
ECH			*e*PKPbc	**pPKPbc**	**09 59 27.3**	**-2.4**
ECH	**Echery**	**152.77 358**	*e*PKIKP	**PKPdf**	**09 59 18.3**	**-1.2**
ECH			*e*		09 59 27.3	
KBA	**Koelnbreinsper**	**153.19 348**	*e*PKiKP	**PKiK**	**09 59 27.7**	**-0.3**
	comp=Z,5.8nm,0.7s					
KORT	**Korkueli**	**153.20 312**	*e*P	**PKiK**	**09 59 28.2**	**0.0**
RETA	**Reutte**	**153.20 352**	*e*PKiKP	**PKiK**	**09 59 28.8**	**+1.0**
	comp=Z,2.5nm,0.4s					
SOKA	**Soboth**	**153.21 345**	*e*PKiKP	**PKiK**	**09 59 28.1**	**+0.2**
	comp=Z,14nm,1.0s,SNR=5.0					
PERS	**Pernice**	**153.23 345**	*i*PKPdf	**PKPdf**	**09 59 20.0**	**-0.2**
PERS			*i*PKPbc	**PKiK**	**09 59 27.7**	**-0.1**
WATA	**Walderalm**	**153.24 351**	*e*PKiKP	**PKiK**	**09 59 28.6**	**+0.6**
	comp=Z,5.6nm,0.6s					
MOTA	**Moosalm**	**153.30 352**	*e*PKiKP	**PKiK**	**09 59 28.8**	**+0.7**
	comp=Z,9.0nm,0.8s,SNR=5.2					
WTTA	**Wattenberg**	**153.30 351**	*e*PKiKP	**PKiK**	**09 59 28.6**	**+0.5**
	comp=Z,19nm,0.8s,SNR=7.7					
SQTA	**Sankt Quirin**	**153.41 351**	*e*PKiKP	**PKiK**	**09 59 28.8**	**+0.5**
	comp=Z,12nm,0.9s					
OBKA	**Obir**	**153.48 346**	*e*PKiKP	**PKiK**	**09 59 28.2**	**-0.2**
	comp=Z,1.6nm,0.5s					
DAVA	**Damuels**	**153.50 353**	*e*PKiKP	**PKiK**	**09 59 30.1**	**+1.6**
	comp=Z,18nm,0.9s,SNR=5.3					
MYKA	**Terra Mystica**	**153.56 347**	*e*PKiKP	**PKiK**	**09 59 28.1**	**-0.5**
	comp=Z,9.1nm,1.0s					
ABTA	**Abfaltersbach**	**153.66 349**	*e*PKiKP	**PKiK**	**09 59 28.8**	**0.0**
	comp=Z,17nm,0.9s,SNR=7.8					
FETA	**Feichten**	**153.67 352**	*e*PKiKP	**PKiK**	**09 59 29.6**	**+0.7**
	comp=Z,11nm,1.0s					
VISS	**Visnje**	**154.08 345**	*i*PKPdf	**PKPdf**	**09 59 21.7**	**+0.2**
VISS			*i*PKPbc	**pPKPbc**	**09 59 30.0**	**-2.6**
FUORN	**Ofenpass-Fuorn**	**154.12 353**	*e*PKPdf	**PKPdf**	**09 59 21.7**	**-0.1**
BOJS	**Bojanci**	**154.26 344**	*i*PKPdf	**PKPdf**	**09 59 22.1**	**+0.4**
BOJS			*i*PKPbc	**pPKPbc**	**09 59 30.4**	**-2.6**
BOJS			*e*		09 59 39.2	
PDG	**Podgorica**	**155.70 335**	⇓*i*P	**PKPab**	**09 59 50.1**	**+0.1**
TTG	**Podgorica**	**155.70 335**	*e*PKPdf	**PKPdf**	**09 59 23.7**	**0.0**
TTG			*e*PKPab	**PKPab**	**09 59 49.3**	**-0.6**
TTG	**Podgorica**	**155.70 335**	*e*PKIKP	**PKPdf**	**09 59 23.7**	**0.0**
TTG			*e*		09 59 49.3	
ITM	**Ithomi**	**158.49 322**	*e*PKPab	**PKPab**	**10 00 03.2**	**+1.0**
TORD	**Torodi Ar. Bea**	**171.38 154**	PKP	**PKPdf**	**09 59 38.8**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=232,slow=1.6,SNR=4.2					
TORD			PKPab	**pPKPab**	**10 00 59.5**	**-2.9**
	comp=Z,1.4nm,0.9s,baz=226,slow=3.9,SNR=3.8					
TOA1	**Torodi Ar. Sit**	**171.39 154**	*e*PKPdf	**PKPdf**	**09 59 38.8**	**-0.4**
TOA1			*e*PKPab	**pPKPab**	**10 00 59.5**	**-2.9**

MAN 19 09:46:09.4, 9°.02N×125°.49E, h1km, mb3.8, ML2.5, MS2.0, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.14**	**110**	*e*P	Pg	09 46 12.6	+0.6
BUTP				*e*S	Sg	09 46 22.9	+9.1
CGP	**Cagayan de Oro**	**0.96**	**235**	⇓*e*P	Pg	09 46 27.5	-0.4
CGP				*e*S	Sn	09 46 44.8	+0.4
CGP	**Cagayan de Oro**	**0.96**	**235**	⇓*e*P	Pg	09 46 27.5	-0.4
CGP				*e*S	Sn	09 46 44.8	+0.4
BUKP	**Musuan**	**1.21**	**201**	*e*P	Pb	09 46 32.9	-0.2
BUKP				*e*S	Sn	09 46 55.2	+4.7
MSLP	**Maasin**	**1.27**	**331**	*e*P	Pg	09 46 33.1	-0.7

NNC 19 09:56:57.0±1.8, 52°.04N×75°.24E, h0km, mb3.1, mpv2.8, 6C-2D, Error ellipse: s-maj=25.3km s-min=10.8km az=20.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.50**	**121**	⇓Pn	Pn	09 57 40.3	+1.4
	4.7nm,0.9s						
KURBB	**Kurchatov Arra**	**2.50**	**123**	⇑Pn	Pb	09 57 41.2	-1.6
	6.0nm,0.8s,baz=308,slow=17						
KURBB				⇓Sn	Sn	09 58 10.9	+0.7
	25nm,0.6s,baz=309,slow=28						
BRVK	**Borovoye**	**3.19**	**291**	⇑Pg	Pb	09 57 54.2	-0.3
	2.7nm,1.1s						
BRVK				⇑Lg	Lg	09 58 37.2	
	7.2nm,0.8s						
OTUK	**Ortayu**	**4.23**	**207**	⇑Pg	Pb	09 58 12.8	+0.6
	1.2nm,0.8s						
OTUK				⇑Lg	Lg	09 59 10.5	
	6.7nm,1.2s						
MK31	**Makanchi Array**	**6.98**	**136**	⇑Lg	Lg	10 00 36.4	
	2.0nm,0.7s,baz=326,slow=27,SNR=4.2						

*NSSC **19** 09:57:56.7±0.7, 33°.91N×35°.73E, h7km±14km, ML1.8*
*ISCJB **19** 09:57:58.1±0.9, 33°.88N±0°.04×35°.80E±0°.07, h9km±10km, Error ellipse: s-maj=9.4km s-min=7.2km az=158.3*
*GRAL **19** 09:57:58.7±0.3, 33°.87N×35°.84E, h0km±38km, MD2.7*
ISC 19 09:57:58.0±1.8, 33°.88N±0°.05×35°.79E±0°.07, h14km±19km, n7, σ0s44/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.12**	**283**	*e*P	**Pg**	**09 58 01.5**	**0.0**
DQRL	**Deir Qamar**	**0.25**	**227**	*e*P	**Pg**	**09 58 03.7**	**+0.2**
DQRL				*e*S	**Sg**	**09 58 07.3**	**+0.1**
RCY	**Rachaya**	**0.38**	**175**	*e*P	**Pg**	**09 58 05.3**	**-0.4**
RCY				*e*S	**Sg**	**09 58 10.3**	**-0.7**
HWQ	**Hawqa**	**0.42**	**18**	*e*P	**Pg**	**09 58 06.2**	**-0.3**
BRBR	**Barbar**	**0.48**	**164**	*e*P	**Pg**	**09 58 07.3**	**-0.3**
BRBR				*e*S	**Sg**	**09 58 14.5**	**+0.4**
BRBR				AML	AML	09 58 16.9	
	comp=E,82nm,0.5s						
BRBR				AML	AML	09 58 17.9	
	comp=Z,42nm,0.3s						
BRBR				AML	AML	09 58 18.8	
	comp=N,78nm,0.3s						
QASN	**Qassioun**	**0.53**	**130**	*e*P	**Pg**	**09 58 08.3**	**-0.2**
QASN				*e*S	**Sb**	**09 58 16.8**	**+0.1**
QASN				AML	AML	09 58 19.2	
	comp=Z,133nm,0.4s						
QASN				AML	AML	09 58 20.5	
	comp=N,170nm,0.4s						
QASN				AML	AML	09 58 23.8	
	comp=E,62nm,0.4s						
TOTH	**TOTAH**	**0.74**	**134**	*e*P	**Pg**	**09 58 12.6**	**+0.2**
TOTH				*e*S	**Sg**	**09 58 22.8**	**+0.7**
TOTH				AML	AML	09 58 27.6	
	comp=N,18nm,0.7s						
TOTH				AML	AML	09 58 34.9	
	comp=Z,13nm,0.5s						
TOTH				AML	AML	09 58 36.0	
	comp=E,14nm,0.5s						

*KRNET **19** 10:18:43.6±0.1, 40°.51N×73°.53E, h22km, mb2.9*
*SOME **19** 10:18:44.4, 40°.45N×73°.60E, h20km*
*NNC **19** 10:18:46.1±2.7, 40°.63N×73°.72E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=25.0km s-min=10.9km az=167.0*
ISC 19 10:18:42.7±1.8, 40°.54N±0°.07×73°.64E±0°.03, h1km±14km, n47, σ1s27/70, 22C-12D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.93**	**328**	⇑*i*P	**Pb**	**10 19 01.3**	**-0.5**
	baz=33						
ARSB				⇑*i*S	**Sb**	**10 19 14.1**	**-0.6**
	baz=33						
ARLS	**Aral**	**1.42**	**21**	⇓*i*P	**Pg**	**10 19 10.6**	**+0.7**
	baz=24						
ARLS				⇓*i*S	**Sg**	**10 19 30.6**	**+2.4**
	baz=24						
AML	**Almayashu**	**1.59**	**1**	P	**Pg**	**10 19 14.3**	**+1.1**
	SNR=27						
AML	**Almayashu**	**1.59**	**1**	⇑*i*P	**Pg**	**10 19 13.5**	**+0.3**
	baz=4.0						
AML				⇑*i*S	**Sg**	**10 19 35.0**	**+1.1**
	baz=4.0						
ARK	**Arkit**	**1.79**	**315**	⇑*i*P	**Pb**	**10 19 15.3**	**-1.0**
	baz=18						
ARK				⇑*i*S	**Sb**	**10 19 38.5**	**-0.8**
	baz=18						
UCH	**Uchtor**	**1.81**	**21**	P	**Pg**	**10 19 17.6**	**+0.2**
	SNR=27						
UCH	**Uchtor**	**1.81**	**21**	⇓*i*P	**Pg**	**10 19 17.5**	**+0.1**
	baz=23						
UCH				⇓*i*S	**Sg**	**10 19 42.6**	**+1.7**
	baz=23						
KZA	**Kyzart**	**1.96**	**38**	P	**Pg**	**10 19 20.7**	**+0.5**
	SNR=14						
KZA	**Kyzart**	**1.96**	**38**	⇓*i*P	**Pg**	**10 19 20.1**	**-0.1**
	baz=39						
KZA				⇓*i*S	**Sg**	**10 19 46.9**	**+1.3**
	baz=39						
EKS2	**Erkin-Say**	**2.12**	**3**	P	**Sg**	**10 19 52.0**	**+1.0**
	SNR=6.7						
EKS2	**Erkin-Say**	**2.12**	**3**	⇑*e*P	**Pb**	**10 19 22.0**	**-0.1**
	baz=5.0						
EKS2				⇑*i*S	**Sg**	**10 19 49.3**	**-1.6**
	baz=5.0						
AAK	**Ala-Archa**	**2.19**	**17**	P	**Pb**	**10 19 23.6**	**+0.4**
	SNR=5.9						
AAK	**Ala-Archa**	**2.19**	**17**	Pn	**Pb**	**10 19 23.1**	**-0.1**
	7.1nm,0.5s						
AAK				Lg	Lg	10 19 53.1	
	40nm,0.6s						
AAK	**Ala-Archa**	**2.19**	**17**	⇑*i*P	**Pb**	**10 19 23.2**	**-0.1**
	baz=18						
AAK				⇑*i*S	**Sg**	**10 19 51.6**	**-1.5**
	baz=18						
BTK	**Batken**	**2.21**	**258**	⇑*i*P	**Pn**	**10 19 20.8**	**+0.1**
	baz=59						
BTK				⇑*i*S	**Sn**	**10 19 48.9**	**+0.2**
	baz=59						
KBK	**Karagaybulak**	**2.33**	**24**	P	**Pg**	**10 19 27.6**	**+0.2**
	SNR=10						
KBK	**Karagaybulak**	**2.33**	**24**	⇑*i*P	**Pb**	**10 19 25.1**	**-0.5**
	baz=26						
KBK				⇑*i*S	**Sb**	**10 19 55.0**	**0.0**
	baz=26						
ULHL	**Ulahol**	**2.59**	**48**	P	**Pg**	**10 19 31.8**	**-0.6**
	SNR=6.8						
ULHL	**Ulahol**	**2.59**	**48**	⇓*i*P	**Pb**	**10 19 29.2**	**-0.9**
	baz=49						
ULHL				⇓*i*S	**Sb**	**10 20 01.8**	**-0.8**
	baz=49						
BOOM	**Boomskoye usch**	**2.60**	**41**	⇓*i*P	**Pb**	**10 19 29.5**	**-0.8**
	baz=42						
BOOM				⇓*i*S	**Sb**	**10 20 02.7**	**-0.1**
	baz=42						
TKM2	**Tokmak 2**	**2.79**	**31**	⇓Pn	**Pg**	**10 19 35.3**	**-0.9**
	2.9nm,0.7s						
TKM2				⇑Lg	Lg	10 20 10.1	
	8.0nm,0.4s						
TKM2	**Tokmak 2**	**2.79**	**31**	⇑*e*P	**Pb**	**10 19 31.5**	**-2.0**
	baz=32						
TKM2				⇑*i*S	**Sb**	**10 20 07.0**	**-1.3**
	baz=32						
USP	**Ospenovka**	**2.80**	**13**	⇑*i*P	**Pb**	**10 19 31.0**	**-2.5**
	baz=14						
USP				⇑*i*S	**Sb**	**10 20 06.0**	**-2.4**
	baz=14						
KST	**Kastek**	**3.04**	**34**	Pg	**Pb**	**10 19 38.0**	**+0.2**
	4.3nm,0.4s						
KST				Lg	Lg	10 20 21.5	
	12nm,0.5s						
KST	**Kastek**	**3.04**	**34**	*e*P	**Pg**	**10 19 40.8**	**-0.2**
	4.3nm,0.5s						
KST				*e*S	**Sg**	**10 20 21.2**	**+0.7**
	12nm,0.6s						
DGS	**Degeres**	**3.13**	**30**	Pg	**Pb**	**10 19 39.6**	**+0.3**
	4.9nm,0.4s						
DGS				Lg	Lg	10 20 23.7	
	17nm,0.5s						
IUG	**Iuzhnay**	**3.16**	**302**	Pg	**Pb**	**10 19 39.1**	**-0.6**
IUG				Lg	Lg	10 20 23.4	
IUG	**Iuzhnay**	**3.16**	**302**	*e*P	**Pg**	**10 19 42.5**	**-0.8**
	5.4nm,0.5s						
IUG				*e*S	**Sg**	**10 20 23.9**	**-0.3**
	28nm,0.4s						
MTBS	**Maitube**	**3.32**	**38**	Pg	**Pb**	**10 19 43.2**	**+0.8**
	5.1nm,0.3s						
MTBS				Lg	Lg	10 20 29.6	
	11nm,0.2s						
MTBS	**Maitube**	**3.32**	**38**	*e*P	**Pg**	**10 19 45.9**	**-0.5**
	3.1nm,0.2s						
MTBS				*e*S	**Sg**	**10 20 29.9**	**+0.5**
	13nm,0.3s						
KK31	**Karatay Array**	**3.47**	**319**	⇑Pn	**Pb**	**10 19 46.2**	**+1.3**
	1.4nm,0.5s,baz=140,slow=16,SNR=8.2						
KK31				⇑Lg	Lg	10 20 35.4	
	6.1nm,0.5s,baz=140,slow=28,SNR=9.3						
TNSS	**Tian-Shan**	**3.51**	**44**	Pg	**Pb**	**10 19 45.9**	**+0.1**
	4.0nm,0.2s						
TNSS				Lg	Lg	10 20 34.8	
	9.9nm,0.4s						
TNSS	**Tian-Shan**	**3.51**	**44**	*e*P	**Pg**	**10 19 49.1**	**-0.9**
	4.4nm,0.3s						
TNSS				*e*S	**Sg**	**10 20 35.6**	**+0.1**
	9.9nm,0.5s						
MDOK	**Medeo**	**3.65**	**43**	Pg	**Pb**	**10 19 48.7**	**+0.6**
	4.8nm,0.3s						
MDOK				Lg	Lg	10 20 39.3	
	4.4nm,0.5s						
KOTS	**Kotyrbulak**	**3.74**	**43**	Pg	**Pb**	**10 19 51.1**	**+1.6**
	4.5nm,0.3s						
KOTS				Lg	Lg	10 20 43.3	
	62nm,0.5s						
KOTS				S	**Sg**	**10 20 43.4**	**+0.7**
	56nm,0.5s						
KOTS	**Kotyrbulak**	**3.74**	**43**	*e*P	**Pg**	**10 19 53.2**	**-1.0**
	4.4nm,0.4s						
KOTS				*e*S	**Sg**	**10 20 42.7**	**0.0**
	56nm,0.5s						
BRLS	**Borolday**	**3.78**	**312**	Pg	**Pb**	**10 19 49.9**	**-0.4**
BRLS				Lg	Lg	10 20 41.6	
BRLS	**Borolday**	**3.78**	**312**	*e*P	**Pb**	**10 19 51.6**	**+1.3**
	1.0nm,0.5s						
BRLS				*e*S	**Sb**	**10 20 39.6**	**+3.0**
	7.8nm,0.3s						
KTBS	**Karatobe**	**3.89**	**34**	Pg	**Pb**	**10 19 53.6**	**+1.5**
	1.8nm,0.4s						
KTBS				S	**Sg**	**10 20 46.7**	**-1.0**
	8.8nm,0.8s						
KTBS				Lg	Lg	10 20 47.6	
	17nm,0.3s						
KTBS	**Karatobe**	**3.89**	**34**	*e*P	**Pg**	**10 19 55.7**	**-1.6**
	1.9nm,0.8s						
KTBS				*e*S	**Sg**	**10 20 46.8**	**-1.0**
	17nm,0.5s						
KUU	**Kurty**	**3.90**	**30**	Pg	**Pb**	**10 19 53.6**	**+1.3**
	1.8nm,0.3s						
KUU				Lg	Lg	10 20 47.6	
	12nm,0.4s						
CHKK	**Chushkaly**	**4.14**	**36**	Pg	**Pb**	**10 19 57.0**	**+0.7**
	1.2nm,0.5s						
CHKK				Lg	Lg	10 20 53.9	
	8.7nm,0.4s						
SATY	**Saty**	**4.36**	**53**	Pg	**Pb**	**10 20 02.3**	**+2.1**
	3.7nm,0.1s						
SATY				Lg	Lg	10 21 02.5	
	10.0nm,0.4s						
UZB	**Uzynbulak**	**4.79**	**55**	Pg	**Pb**	**10 20 09.5**	**+2.0**
	1.0nm,0.4s						
UZB				Lg	Lg	10 21 14.5	
	3.5nm,0.7s						
ARXS	**Arharly**	**4.80**	**39**	Pg	**Pb**	**10 20 10.1**	**+2.4**
	1.9nm,0.4s						
ARXS				Lg	Lg	10 21 15.5	
	5.0nm,0.9s						
PDGK	**Podgornoye**	**5.17**	**55**	Pg	**Pb**	**10 20 16.7**	**+2.7**
	0.4nm,0.3s						
PDGK				Lg	Lg	10 21 24.6	
	1.0nm,0.7s						
PDGK	**Podgornoye**	**5.17**	**55**	⇓Pg	**Pg**	**10 20 18.3**	**-3.5**
	1.8nm,0.9s						
PDGK				⇑Lg	Lg	10 21 26.3	
	6.4nm,1.1s						

*IDC **19** 10:22:34.9±5.4, 15°.45N×99°.22W, h0km, mb3.3/4, mb1 3.6/6, mb1mx3.5/30, mbtmp3.2/6, ML3.1/2, MS2.7/1, Ms1 2.7/1, ms1mx2.4/14, Error ellipse: s-maj=103.5km s-min=41.2km az=16.0*
*ISCJB **19** 10:22:40.2±1.4, 16°.17N±0°.06×99°.20W±0°.03, h15km±8km, mb3.6/5, Error ellipse: s-maj=9.5km s-min=4.8km az=12.3*
*MEX **19** 10:22:42.7±0.5, 16°.09N×99°.25W, h16km±999km, MD4.1*
*NEIC **19** 10:22:42.6±0.0, 16°.09N×99°.25W, h17km, mb4.0/2, MD4.1(MEX), After MEX.*
ISC 19 10:22:41.0±2.2, 16°.16N±0°.07×99°.19W±0°.03, h16km±13km, n29, σ1s56/47, mb3.5/5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.98**	**317**	*i*P	**Pb**	**10 22 58.2**	**-1.5**
ACP2				*i*S	**Sb**	**10 23 09.8**	**-2.5**
PNIG	**Pinotepa**	**1.05**	**77**	*e*Pn	**Pb**	**10 22 59.7**	**-1.1**
PNIG				*e*Sn	**Sb**	**10 23 13.4**	**-1.0**
PNIG	**Pinotepa**	**1.05**	**77**	*e*P	**Pb**	**10 22 59.7**	**-1.1**
PNIG				*e*S	**Sb**	**10 23 13.4**	**-1.0**
CAIG	**El Cayaco**	**1.36**	**311**	*e*Pn	**Pn**	**10 23 03.5**	**-1.9**
CAIG				*e*Sn	**Sn**	**10 23 20.6**	**-2.6**
CAIG	**El Cayaco**	**1.36**	**311**	*e*P	**Pn**	**10 23 03.5**	**-1.9**
CAIG				*i*S	**Sn**	**10 23 20.5**	**-2.6**
TLIG	**Tlapa**	**1.52**	**23**	*e*Pn	**Pn**	**10 23 07.5**	**-0.2**
TLIG				*e*Sn	**Sb**	**10 23 26.6**	**-1.5**
TLIG				*e*Sg	**Sg**	**10 23 30.3**	**+0.1**
TLIG	**Tlapa**	**1.52**	**23**	*e*P	**Pn**	**10 23 07.1**	**-0.6**
MEIG	**Mezcala**	**1.81**	**347**	*e*Pn	**Pn**	**10 23 11.2**	**-0.5**
MEIG				*e*Sn	**Sn**	**10 23 32.6**	**-1.8**
MEIG	**Mezcala**	**1.81**	**347**	*e*P	**Pn**	**10 23 11.2**	**-0.5**
MEIG				*i*S	**Sn**	**10 23 32.6**	**-1.8**
ARIG	**Puente Sto Nin**	**2.38**	**333**	*e*P	**Pb**	**10 23 22.9**	**-0.8**
ARIG				*e*S	**Sb**	**10 23 54.9**	**+2.0**
VHO	**Vista Hermosa**	**2.53**	**68**	*e*Pn	**Pn**	**10 23 21.5**	**-0.1**
VHO				*e*Sn	**Sn**	**10 23 50.1**	**-2.2**
VHO	**Vista Hermosa**	**2.53**	**68**	*e*P	**Pn**	**10 23 21.5**	**-0.1**
VHO				*e*S	**Sn**	**10 23 50.1**	**-2.2**
ZIIG	**Zihuatanejo**	**2.61**	**304**	*e*Pn	**Pb**	**10 23 27.5**	**0.0**
ZIIG				*e*Sn	**Sb**	**10 23 59.9**	**+0.5**
ZIIG	**Zihuatanejo**	**2.61**	**304**	*e*P	**Pb**	**10 23 27.5**	**0.0**
ZIIG				*e*S	**Sb**	**10 23 59.9**	**+0.5**
TPIG	**Tehuac#an**	**2.85**	**38**	*e*Pn	**Pb**	**10 23 32.3**	**+0.7**
TPIG				*e*Sn	**Sb**	**10 24 03.6**	**-2.9**
TPIG	**Tehuac#an**	**2.85**	**38**	*i*P	**Pb**	**10 23 32.3**	**+0.7**
TPIG				*e*S	**Sb**	**10 24 03.6**	**-2.9**
CMIG	**Matias Romero**	**4.23**	**77**	Pn	**Pn**	**10 23 44.6**	**-0.4**
	0.7nm,0.3s,baz=249,slow=15,SNR=10						
CMIG				Sn	**Sn**	**10 24 32.7**	**-1.4**
	3.1nm,0.3s,baz=161,slow=20,SNR=7.3						
CMIG				LR	LR	10 24 55.0	
	comp=Z,77nm,18.9s,baz=254,slow=31						
CMIG				Lg	Lg	10 24 58.4	
	3.6nm,0.3s,baz=340,slow=11,SNR=5.8						
LVIG	**Laguna Verde**	**4.42**	**36**	*e*Pn	**Pn**	**10 23 49.6**	**+2.1**
LVIG				*e*Sn	**Sn**	**10 24 39.4**	**+0.6**
CCIG	**Comitan**	**6.78**	**88**	*e*Pn	**Pn**	**10 24 20.7**	**+0.7**
ZAIG	**Zacatecas**	**7.31**	**335**	*e*Pn	**Pn**	**10 24 28.5**	**+1.1**
LNIG	**Linares**	**8.70**	**358**	*e*Pn	**Pn**	**10 24 47.9**	**+1.6**
TXAR	**Lajitas Array**	**13.75**	**343**	Pn	**P**	**10 26 03.2**	**-0.8**
	0.0nm,0.3s,baz=131,slow=11,SNR=2.4						
ANMO	**Albuquerque**	**19.81**	**342**	P	**Pn**	**10 27 14.0**	**+1.2**
	0.2nm,0.3s,baz=151,slow=14,SNR=2.8						
X16A	**Lo Mia Camp, P**	**21.26**	**331**	*e*P	**P**	**10 27 29.1**	**+2.2**
	3.5nm,0.9s						
SMCO	**Snowmass**	**23.93**	**345**	*e*P	**P**	**10 27 56.1**	**+1.3**
	13nm,1.8s						
SMCO				*e*Sn	Sn	10 32 36.0	+1.8
PHWY	**Pilot Hill**	**25.64**	**349**	*e*S	**S**	**10 32 38.4**	**+0.2**
PDAR	**Pinedale Array**	**27.97**	**344**	P	**P**	**10 28 34.0**	**+2.7**
	0.5nm,0.8s,baz=133,slow=11,SNR=4.4						
YKA	**Yellowknife Ar**	**47.54**	**350**	P	**P**	**10 31 16.4**	**+1.0**
	0.3nm,0.7s,baz=153,slow=6.9,SNR=3.5						
ILAR	**Eielson Array**	**58.19**	**338**	P	**P**	**10 32 35.1**	**+1.0**
	0.4nm,0.9s,baz=139,slow=5.8,SNR=3.3						

*ISCJB **19** 10:24:27

	baz=306							
YHNB				S		Sg	10 24 48.9	-0.6
	baz=306							
ESL	**Shilin**	**0.65**	**225**	P		**Pg**	**10 24 41.2**	**0.0**
	baz=219							
ESL				*e*S		**Sn**	**10 24 53.0**	**-1.2**
	baz=219							
NSK	**Sanguang**	**0.66**	**307**	P		**Pg**	**10 24 41.1**	**-0.3**
	baz=306							
NSK				S		**Sg**	**10 24 49.8**	**-0.3**
	baz=306							
TWT	**Tachien**	**0.70**	**268**	*e*P		**Pg**	**10 24 42.7**	**+0.6**
	baz=264							
TWT				*e*S		**Sg**	**10 24 51.9**	**+0.7**
	baz=264							
TIPB	**Shuangxi**	**0.70**	**352**	P		**Pg**	**10 24 42.2**	**+0.1**
	baz=354							
TIPB				*e*S		**Sg**	**10 24 51.7**	**+0.4**
	baz=354							
TDCB	**Techi**	**0.71**	**268**	P		**Pg**	**10 24 42.5**	**+0.1**
	baz=264							
TDCB				*e*S		**Sb**	**10 24 53.0**	**0.0**
	baz=264							
TWB1	**Santiao Chiao**	**0.73**	**4**	P		**Pg**	**10 24 42.8**	**+0.1**
	baz=7.0							
TWB1				S		**Sg**	**10 24 52.5**	**+0.3**
	baz=7.0							
CHGB	**Renai**	**0.73**	**253**	P		**Pg**	**10 24 42.5**	**-0.2**
	baz=249							
CHGB				S		**Sb**	**10 24 54.1**	**+0.5**
	baz=249							
EGFH	**Guangfu**	**0.77**	**218**	*e*P		**Pb**	**10 24 43.1**	**-0.9**
	baz=213							
EGFH				*e*S		**Sn**	**10 24 57.3**	**+0.3**
	baz=213							
OWD	**Renai**	**0.77**	**245**	P		**Pg**	**10 24 43.1**	**-0.3**
	baz=241							
OWD				S		**Sb**	**10 24 55.4**	**+0.8**
	baz=241							
TWA	**Mucha**	**0.77**	**335**	*e*P		**Pg**	**10 24 43.7**	**+0.2**
	baz=337							
NHDH	**Xindian Distri**	**0.78**	**331**	*e*P		**Pb**	**10 24 43.9**	**-0.3**
	baz=332							
NHDH				*e*S		**Sg**	**10 24 53.7**	**-0.1**
	baz=332							
NWF	**Wu-fen Shan**	**0.80**	**350**	P		**Pb**	**10 24 44.4**	**-0.3**
	baz=351							
NWF				S		**Sg**	**10 24 55.1**	**+0.5**
	baz=351							
WFSB	**Wu-fen Shan**	**0.80**	**350**	P		**Pb**	**10 24 44.2**	**-0.4**
	baz=351							
WFSB				S		**Sb**	**10 24 55.1**	**-0.4**
	baz=351							
TATO	**Taipei**	**0.81**	**330**	P		**Pb**	**10 24 44.8**	**+0.2**
	baz=330							
TATO				S		**Sb**	**10 24 54.0**	**-1.6**
	baz=330							
WLTB	**Daxi**	**0.85**	**313**	*i* S		**Sg**	**10 24 57.4**	**+1.4**
	baz=312							
TAP	**Taipei**	**0.85**	**333**	*i* S		**Sb**	**10 24 55.9**	**-1.1**
	baz=334							
VWDT	**VWDT**	**0.90**	**234**	P		**Pb**	**10 24 45.5**	**-0.7**
	baz=231							
VWDT				*e*S		**Sn**	**10 24 59.9**	**-0.3**
	baz=231							
WHP	**Taichung City**	**0.91**	**270**	*e*P		**Pb**	**10 24 46.5**	**+0.1**
	baz=267							
HGSD	**Ruisui**	**0.91**	**211**	P		**Pb**	**10 24 46.2**	**-0.3**
	baz=207							
LIOB	**Emei**	**0.92**	**294**	⇓*i*P		**Pg**	**10 24 47.2**	**+1.0**
	baz=292							
LIOB				*e*S		**Sn**	**10 25 00.0**	**-0.7**
	baz=292							
NSTT	**Nanjuang**	**0.92**	**293**	⇓*i*P		**Pb**	**10 24 47.0**	**+0.4**
	baz=291							
NSTT				*i* S		**Sn**	**10 24 59.8**	**-1.1**
	baz=291							
YM01	**YM01**	**0.93**	**339**	*i* P		**Pb**	**10 24 46.9**	**+0.1**
	baz=340							
YM10	**YM10**	**0.94**	**339**	*e*P		**Pg**	**10 24 47.6**	**+1.0**
	baz=339							
YM04	**YM04**	**0.94**	**337**	P		**Pg**	**10 24 47.6**	**+0.8**
	baz=338							
YM05	**YM05**	**0.94**	**339**	P		**Pg**	**10 24 47.5**	**+0.7**
	baz=340							
TWS1	**Kuangyinshan**	**0.94**	**330**	*i* P		**Pn**	**10 24 47.8**	**-0.1**
	baz=331							
EHY	**Hungye**	**0.95**	**216**	*e*P		**Pb**	**10 24 45.8**	**-1.4**
	baz=212							
DPDB	**Guoxing**	**0.95**	**255**	*e*P		**Pb**	**10 24 46.9**	**-0.3**
	baz=252							
DPDB				*e*S		**Sn**	**10 25 01.9**	**+0.1**
	baz=252							
YM08	**YM08**	**0.96**	**341**	*e*P		**Pb**	**10 24 47.3**	**0.0**
	baz=342							
YM03	**YM03**	**0.97**	**338**	*e*P		**Pb**	**10 24 47.5**	**+0.1**
	baz=339							
ANP	**Anpu**	**0.98**	**337**	*e*P		**Pb**	**10 24 48.0**	**+0.3**
	baz=338							
YOJ	**Yonaguni jima**	**1.00**	**79**	⇓*i*P		**Pb**	**10 24 47.6**	**-0.3**
	baz=81							
YOJ	**Yonaguni jima**	**1.00**	**79**	P		**Pb**	**10 24 47.4**	**-0.5**
SSLB	**Suanglung**	**1.02**	**242**	P		**Pb**	**10 24 47.3**	**-1.1**
	baz=238							
SSLB				*e*S		**Sb**	**10 25 02.0**	**+0.1**
	baz=238							
SMLT	**Sun Moon Lake**	**1.03**	**248**	*e*P		**Pb**	**10 24 47.7**	**-0.8**
	baz=244							
SMLT				*e*S		**Sn**	**10 25 03.3**	**-0.3**
	baz=244							
TWY	**Chenhua**	**1.04**	**343**	*e*P		**Pn**	**10 24 49.2**	**0.0**
	baz=344							
TYC	**Yuchr**	**1.06**	**250**	P		**Pb**	**10 24 48.1**	**-0.8**
	baz=246							
YULB	**Yu-li**	**1.06**	**214**	*e*S		**Sn**	**10 25 04.6**	**+0.4**
	baz=210							
TWQ1	**Liyutan**	**1.06**	**274**	P		**Pn**	**10 24 49.8**	**+0.2**
	baz=271							
TWQ1				*e*S		**Sn**	**10 25 04.9**	**+0.5**
	baz=271							
NMLH	**Miaoli**	**1.08**	**284**	*e*P		**Pg**	**10 24 50.1**	**+0.8**
	baz=282							
WHYT	**Xinyi Township**	**1.15**	**240**	P		**Pn**	**10 24 50.3**	**-0.5**
	baz=237							
WHYT				S		**Sg**	**10 25 07.4**	**+1.7**
	baz=237							
TCU	**Taichung**	**1.16**	**264**	*e*P		**Pn**	**10 24 50.3**	**-0.6**
	baz=261							
WJS	**Zhushan**	**1.20**	**248**	*e*P		**Pn**	**10 24 51.3**	**0.0**
	baz=245							
YUS	**Yu-Shan**	**1.20**	**229**	P		**Pn**	**10 24 50.4**	**-1.4**
	baz=226							
WNT	**Mingjian**	**1.21**	**251**	*e*P		**Pg**	**10 24 52.6**	**+0.7**
	baz=248							
ALS	**Alishan**	**1.29**	**234**	*i* P		**Pn**	**10 24 52.4**	**-0.5**
	baz=231							
ALS				*e*S		**Sg**	**10 25 11.0**	**+0.8**
	baz=231							
CHN5	**Tsauling**	**1.34**	**240**	*e*P		**Pn**	**10 24 53.5**	**+0.1**
	baz=237							
ELDTW	**Lidau**	**1.37**	**218**	*e*P		**Pn**	**10 24 52.5**	**-1.4**
	baz=215							
WDLH	**Douliu**	**1.41**	**246**	*e*P		**Pb**	**10 24 55.2**	**+0.3**
	baz=243							
CHN4	**Tsaushan**	**1.54**	**233**	⇓*i*P		**Pn**	**10 24 56.9**	**+0.8**
	baz=231							
TPUB	**Ta-pu**	**1.54**	**231**	P		**Pn**	**10 24 56.7**	**+0.5**
	baz=229							
IRIF	**Iriomote-Funau**	**1.64**	**88**	P		**Pn**	**10 24 57.1**	**-0.3**
IRIF				*e*S		**Sn**	**10 25 18.0**	**-0.5**
TWG	**Pinlang**	**1.65**	**209**	*e*P		**Pn**	**10 24 56.5**	**-1.2**
	baz=206							
TWGBT	**Beinan**	**1.65**	**209**	*e*P		**Pn**	**10 24 57.4**	**-0.2**
	baz=206							
TWK	**Hsinying**	**1.67**	**233**	⇓*i*P		**Pn**	**10 24 58.7**	**+0.8**
	baz=230							
CHN1	**Nanshi**	**1.69**	**230**	P		**Pn**	**10 24 59.0**	**+0.9**
	baz=228							
SGST	**Jiashian**	**1.72**	**226**	P		**Pn**	**10 24 59.6**	**+1.0**
	baz=224							
SLGT	**Liugui**	**1.74**	**223**	*e*P		**Pn**	**10 24 59.6**	**+0.7**
	baz=221							
SLGT				*e*S		**Sg**	**10 25 25.0**	**+0.3**
	baz=221							
JKRS	**Kuro-shima**	**1.89**	**91**	P		**Pn**	**10 25 00.6**	**-0.3**
JKRS				*e*S		**Sn**	**10 25 25.4**	**+0.6**
JIJ	**Ishigaki jima**	**2.01**	**87**	P		**Pn**	**10 25 02.7**	**+0.1**
JIJ				*e*S		**Sn**	**10 25 27.3**	**-0.5**
MASBT	**Mashibuluo**	**2.05**	**216**	*e*P		**Pn**	**10 25 03.5**	**+0.4**
	baz=214							
MASBT				*e*S		**Sb**	**10 25 31.7**	**+0.3**
	baz=214							
JISG	**Ishigakijimahi**	**2.19**	**81**	P		**Pn**	**10 25 04.5**	**-0.4**
JISG				*e*S		**Sn**	**10 25 31.6**	**-0.4**
PHUB	**P'eng-hu**	**2.29**	**251**	*e*S		**Sb**	**10 25 36.7**	**-1.8**
	baz=249							
WDGT	**Dungji**	**2.32**	**245**	*e*P		**Pn**	**10 25 07.3**	**+0.5**
	baz=242							
VCHM	**Qimei**	**2.53**	**246**	*e*P		**Pn**	**10 25 10.1**	**+0.3**
	baz=244							
PTMZ	**Houxiangcun**	**2.67**	**287**	*e*P		**Pn**	**10 25 11.5**	**-0.2**
	baz=285							
PTMZ				*e*S		**Sn**	**10 25 44.4**	**+0.3**
	baz=285							

*SJA **19** 10:27:55.3±0.7, 23°.19S×68°.92W, h87km±4km, ML2.5, MW2.9*
*GUC **19** 10:27:55.5±0.6, 23°.20S×68°.93W, h97km±3km, ML2.7*
*ISCJB **19** 10:27:56.0±0.7, 23°.19S±0°.04×68°.95W±0°.06, h93km±9km, Error ellipse: s-maj=8.7km s-min=6.4km az=174.2*

ISC 19 10:27:57.0±1.4, 23°.19S±0°.04×68°.96W±0°.05, h84km±10km, n22, σ0ˢ54/34, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.47**	**267**	*e*P		**Pn**	**10 28 10.8**	**-0.3**
PB15				*e*S		**Sn**	**10 28 22.6**	**+1.0**
PB15	**IPOC Station P**	**0.47**	**267**	*e*P		**Pn**	**10 28 10.4**	**-0.7**
PB15				*i* S		**Sn**	**10 28 22.6**	**+1.0**
LVC	**Limon Verde**	**0.58**	**5**	*e*P		**Pn**	**10 28 11.4**	**-0.8**
LVC				*e*S		**Sn**	**10 28 23.8**	**+0.3**
LVC				IAML			10 28 24.2	
	comp=Z,132nm,0.1s							
LVC	**Limon Verde**	**0.58**	**5**	⇑*i*P		**Pn**	**10 28 11.3**	**-1.0**
LVC				*i* S		**Sn**	**10 28 23.6**	**+0.2**
PB06	**IPOC Station P**	**0.74**	**310**	*e*P		**Pn**	**10 28 13.2**	**-0.4**
PB06	**IPOC Station P**	**0.74**	**310**	*e*P		**Pn**	**10 28 13.1**	**-0.4**
PB06				*i* S		**Sn**	**10 28 26.5**	**+0.6**
PB06				IAML			10 28 28.8	
	comp=N,441nm,0.1s							
PB05	**IPOC Station P**	**1.19**	**286**	*e*P		**Pn**	**10 28 19.0**	**+0.3**
PB05	**IPOC Station P**	**1.19**	**286**	*e*P		**Pn**	**10 28 17.9**	**-0.8**
PB05				*i* S		**Sn**	**10 28 35.4**	**+0.3**
PB03	**IPOC Station P**	**1.35**	**327**	*e*P		**Pn**	**10 28 20.9**	**+0.2**
PB03	**IPOC Station P**	**1.35**	**327**	*e*P		**Pn**	**10 28 20.2**	**-0.6**
PB03				*i* S		**Sn**	**10 28 38.6**	**0.0**
PB03				IAML			10 28 43.1	
	comp=E,151nm,0.1s							
PB04	**IPOC Station P**	**1.39**	**308**	*e*P		**Pn**	**10 28 20.8**	**-0.5**
PB04	**IPOC Station P**	**1.39**	**308**	*e*P		**Pn**	**10 28 20.5**	**-0.8**
PB04				*i* S		**Sn**	**10 28 39.6**	**+0.2**
PB04				IAML			10 28 45.7	
	comp=N,234nm,0.2s							
PB09	**IPOC Station P**	**1.41**	**349**	*e*P		**Pn**	**10 28 21.7**	**+0.2**
PB09	**IPOC Station P**	**1.41**	**349**	*e*P		**Pn**	**10 28 21.4**	**-0.1**
PB09				*i* S		**Sn**	**10 28 40.6**	**+0.6**
PB09				IAML			10 28 45.2	
	comp=E,113nm,0.8s							
PB10	**IPOC Station P**	**1.50**	**257**	⇓*i*P		**Pn**	**10 28 22.5**	**0.0**
PB07	**IPOC Station P**	**1.69**	**329**	*e*P		**Pn**	**10 28 25.0**	**0.0**
PB07	**IPOC Station P**	**1.69**	**329**	*e*P		**Pn**	**10 28 24.6**	**-0.5**
PB07				*i* S		**Sn**	**10 28 46.4**	**+0.1**
PB07				IAML			10 28 50.1	
	comp=E,98nm,0.2s							
GO02	**Mina Guanaco**	**2.05**	**196**	*e*P		**Pn**	**10 28 29.3**	**-0.6**
GO02				*e*S		**Sn**	**10 28 55.1**	**+0.1**
PB01	**IPOC Station P**	**2.19**	**347**	⇑*i*P		**Pn**	**10 28 31.1**	**-0.5**
PB01				*i* S		**Sn**	**10 28 58.0**	**-0.1**
PB01				IAML			10 29 03.2	
	comp=E,67nm,0.3s							
HJA	**Humahuaca**	**3.27**	**91**	*e*P		**Pn**	**10 28 46.4**	**+0.1**
YJA	**Yavi**	**3.34**	**73**	*e*P		**Pn**	**10 28 47.7**	**+0.3**
AZAP	**Zapla**	**3.72**	**107**	*e*P		**Pn**	**10 28 51.8**	**-0.5**

NNC 19 10:35:53.7±4.1, 38°.24N×72°.30E, h0km, mb3.6, mpv3.2, 10C-2D, Error ellipse: s-maj=31.4km s-min=22.5km az=0.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.70**	**20**	⇑Pn		Pn	10 37 06.1	0.0
	0.9nm,0.4s							
AAK				⇓Pg		Pb	10 37 19.1	+2.0
	5.7nm,0.8s							
AAK				⇑Sn		Sn	10 38 02.0	+0.6
	8.3nm,0.8s							
KK31	**Karatay Array**	**5.05**	**345**	⇑Pn		Pn	10 37 10.5	-0.2
	1.1nm,0.3s,baz=169,slow=13,SNR=27							
KK31				⇑Pg		Pb	10 37 24.7	+1.8
	1.6nm,0.5s,baz=158,slow=16,SNR=7.1							
KK31				⇑Sn		Sn	10 38 12.4	+2.7
	3.7nm,0.6s							
KK31				⇑Lg		Lg	10 38 33.0	
	5.5nm,0.6s,baz=165,slow=32							
TKM2	**Tokmak 2**	**5.31**	**27**	⇑Pn		Pn	10 37 17.0	+2.5
	1.9nm,0.8s							
TKM2				⇓Pg		Pb	10 37 26.8	-0.7
	2.9nm,0.8s							
TKM2				⇑Lg		Lg	10 38 42.5	
	11nm,1.3s							
AB31	**Akbulak array**	**14.16**	**325**	⇑Pn		Pn	10 39 13.4	-2.0
	0.2nm,0.3s,baz=132,slow=13,SNR=10							
AB31				⇑Sn		Sn	10 41 51.9	-1.3
	0.7nm,0.8s							

*ISCJB **19** 10:39:30.2±0.5, 13°.70N±0°.05×120°.6E±0°.1, h120km±5km, mb4.2/7, Error ellipse: s-maj=16.6km s-min=7.1km az=164.0*
*IDC **19** 10:39:30.9±1.2, 13°.68N×120°.88E, h116km±14km, mb3.6/6, mb1 3.8/6, mb1mx3.3/66, mbtmp4.0/6, Error ellipse: s-maj=107.6km s-min=14.8km az=66.0*
*MAN **19** 10:39:32.2, 13°.66N×120°.59E, h93km, mb3.9, ML2.6, MS2.2*

ISC 19 10:39:31.2±0.8, 13°.69N±0°.05×120°.55E±0°.09, h115km±7km, n18, σ1ˢ18/23, mb3.8/7, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.43**	**115**	⇑*e*P		**Pn**	**10 39 47.7**	**-0.5**
PGP				*i* S		**Sn**	**10 39 59.7**	**-1.3**
TGY	**Tagaytay City**	**0.56**	**42**	P		**Pn**	**10 39 49.4**	**+0.4**
	baz=60,slow=8.1							
TGY				S		**Sn**	**10 40 02.6**	**+0.2**
	718nm,0.3s,baz=11,slow=19,SNR=4.4							
TGY	**Tagaytay City**	**0.56**	**42**	⇑*e*P		**Pn**	**10 39 49.1**	**+0.1**
TGY				*i* S		**Sn**	**10 40 04.7**	**+2.2**
BOAC	**Boac**	**1.28**	**100**	*e*P		**Pn**	**10 39 56.0**	**+0.2**
SJMP	**San Jose**	**1.34**	**155**	*e*P		**Pn**	**10 39 56.9**	**+0.4**
BUSP	**Coron**	**1.71**	**192**	*e*P		**Pn**	**10 40 01.1**	**+0.2**
OTRP	**Odiongan**	**1.95**	**132**	*e*P		**Pn**	**10 40 03.8**	**0.0**
OTRP				*e*S		**Sn**	**10 40 27.4**	**-1.2**
SCZP	**Santa Cruz**	**2.17**	**343**	*e*P		**Pn**	**10 40 04.8**	**-1.7**
SCZP				*e*S		**Sn**	**10 40 31.8**	**-1.7**
BALP	**Baler**	**2.27**	**26**	*e*P		**Pn**	**10 40 08.8**	**+0.9**
ENPP	**El Nido**	**2.70**	**204**	*e*P		**Pn**	**10 40 14.5**	**+1.1**
CUYO	**Cuyo Island**	**2.86**	**171**	*e*P		**Pn**	**10 40 15.7**	**+0.2**
SONM	**Songino Array**	**36.03**	**344**	P		**P**	**10 46 21.9**	**+0.5**
	0.7nm,0.5s,baz=156,slow=7.9,SNR=3.3							
WRA	**Warramunga Arr**	**36.07**	**158**	P		**P**	**10 46 20.0**	**-1.9**
	0.6nm,0.6s,baz=331,slow=11,SNR=5.5							
ASAR	**Alice Springs**	**39.36**	**160**	P		**P**	**10 46 48.4**	**-1.2**
	13nm,0.6s,baz=336,slow=7.0,SNR=3.8							
MKAR	**Makanchi Array**	**45.95**	**324**	P		**P**	**10 47 44.2**	**+1.5**
	0.9nm,0.5s,baz=136,slow=9.0,SNR=8.8							
KURBB	**Kurchatov Arra**	**50.12**	**326**	P		**P**	**10 48 15.5**	**+0.9**
	1.9nm,0.8s,baz=128,slow=7.6,SNR=12							
BVAR	**Borovoye Array**	**55.70**	**326**	P		**P**	**10 48 56.6**	**+1.0**
	0.3nm,0.4s,baz=102,slow=11,SNR=2.8							
ARCES	**ARCESS Array B**	**79.04**	**339**	P		**P**	**10 51 21.8**	**-0.6**
	8.4nm,0.3s,baz=78,slow=8.4,SNR=4.9							

*ISCJB **19** 10:49:18.5±0.6, 26°.48S±0°.03×27°.45E±0°.04, h3km±6km, Error ellipse: s-maj=5.8km s-min=5.1km az=171.4*
*PRE **19** 10:49:18.8±1.6, 26°.48S×27°.46E, h2km, ML2.5*
*EAF **19** 10:49:20.1±1.2, 25°.75S×25°.43E, h0km±17km, MD3.5*
*BUL **19** 10:49:21.7±1.5, 25°.74S×25°.42E, h0km±18km, MD3.7*

ISC 19 10:49:18.4±0.8, 26°.43S±0°.03×27°.42E±0°.03, h7km±5km, n14, σ1ˢ27/28, South Africa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**0.00**	**62**	*e*P		**Pg**	**10 49 19.8**	**0.0**
WDLM				*e*S		**Sg**	**10 49 20.4**	**-0.4**
WDLM				AML		AML	10 49 21.1	
	comp=Z,63μm,0.1s							
KLOF	**Kloof**	**0.19**	**66**	*e*P		**Pg**	**10 49 22.5**	**+0.3**
KLOF				*e*S		**Sg**	**10 49 24.7**	**-0.2**
KLOF				AML		AML	10 49 26.6	
	comp=Z,2μm,0.1s							
PRYS	**Parys**	**0.50**	**186**	*e*P		**Pg**	**10 49 27.9**	**-0.2**
PRYS				*e*S		**Sg**	**10 49 33.5**	**-1.2**
PRYS				AML		AML	10 49 38.9	
	comp=Z,129nm,0.5s							
KSR	**Koster**	**0.74**	**321**	*e*P		**Pg**	**10 49 33.0**	**+0.4**
KSR				*e*S		**Sn**	**10 49 46.4**	**-0.7**
KSR				AML		AML	10 49 49.3	
	comp=Z,43nm,0.2s							
ERPM	**east rand prop**	**0.74**	**84**	*e*P		**Pg**	**10 49 32.1**	**-0.6**
ERPM				*e*S		**Sb**	**10 49 44.3**	**0.0**
ERPM				AML		AML	10 49 50.8	
	comp=Z,56nm,0.3s							
SWZ	**Schweizer**	**2.01**	**248**	*e*P		**Pb**	**10 49 54.7**	**-0.7**
SWZ				*e*S		**Sb**	**10 50 20.4**	**-0.4**
SWZ				AML		AML	10 50 23.4	
	comp=Z,78nm,0.3s							
LBTB	**Lobatse**	**2.16**	**310**	*e*P		**Pb**	**10 49 58.1**	**+0.1**
LBTB				*e*S		**Sb**	**10 50 25.4**	**+0.3**
LBTB				AML		AML	10 50 27.0	
	comp=Z,114nm,0.3s							
BOSA	**Boshof**	**2.91**	**221**	*i* P		**Pn**	**10 50 05.8**	**+0.5**
BOSA				*i* S		**Sn**	**10 50 40.8**	**+0.3**
BOSA	**Boshof**	**2.91**	**221**	*i* P		**Pn**	**10 50 05.8**	**+0.5**
BOSA				*i* S		**Sn**	**10 50 40.8**	**+0.3**
BOSA	**Boshof**	**2.91**	**221**	*e*P		**Pn**	**10 50 05.8**	**+0.5**
BOSA				*e*S		**Sn**	**10 50 42.4**	**+1.9**
BOSA				AML		AML	10 50 54.7	
	comp=Z,14nm,0.3s							
MSNA	**Messina**	**4.71**	**31**	*i* P		**Pb**	**10 50 42.0**	**+0.7**
MSNA				*i* S		**Sb**	**10 51 39.7**	**+1.5**
MSNA	**Messina**	**4.71**	**31**	*i* P		**Pb**	**10 50 42.0**	**+0.7**
MSNA				*i* S		**Sb**	**10 51 39.7**	**+1.5**
MATP	**Matopo**	**6.05**	**10**	*i* P		**Pn**	**10 50 49.4**	**+0.8**
MATP				*i* S		**Sn**	**10 51 54.8**	**-3.5**
MATP	**Matopo**	**6.05**	**10**	*i* P		**Pn**	**10 50 49.4**	**+0.8**
MATP				*i* S		**Sn**	**10 51 54.8**	**-3.5**

*IDC **19** 10:51:02.2±1.0, 44°.31N×10°.85E, h0km, mb3.7/4, mb1 3.8/8, mb1mx3.5/56, mbtmp3.6/8, ML3.7/4, Error ellipse: s-maj=30.8km s-min=15.3km az=112.0*
*STR **19** 10:51:04.2±0.8, 44°.N±4°.×1°.1E±°., h5km±9km, MLv3.7/7*
*LDG **19** 10:51:06.1, 44°.43N×10°.73E, h32km*
*PRU **19** 10:51:06.9±0.0, 44°.49N×11°.21E, h0km*
*PDG **19** 10:51:06.6±0.7, 44°.40N×10°.79E, h32km, ML3.7/12, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
*GEN **19** 10:51:06.2, 44°.39N×10°.71E, h42km±5km, Ml3.5*
*ROM **19** 10:51:06.8±0.1, 44°.419N±0°.006×10°.71E±0°.01, h28km, ML3.5/99, Mw3.5, Error ellipse: s-maj=0.7km s-min=0.6km az=93.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.13; $M_{\theta\theta}$-1.92; $M_{\phi\phi}$-0.21; $M_{r\theta}$-0.48; $M_{\theta\phi}$0.62; $M_{r\phi}$0.35; Fault plane solution: M_o2.20650×10^{14} NP1,ϕ_s103.00000°, δ38.00000°, λ83.00000°. NP2,ϕ_s293.00000°, δ53.00000°, λ96.00000°.*

ISC 19 10:51:06.6±0.8, 44°.41N±0°.02×10°.74E±0°.02, h30km±5km, n244, σ2ˢ15/281, mb3.6/4, 11C-8D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ZCCA	**Zocca**	**0.18**	**109**	*i* P		**Pn**	**10 51 13.3**	**0.0**
ZCCA				AML		AML		
	comp=E,40500μm,0.5s							
ZCCA				AML		AML		
	comp=N,28950μm,0.5s							
ZCCA				AML		AML		
	comp=E,38800μm,0.4s							
ZCCA				AML		AML		
	comp=N,33800μm,0.5s							
ZCCA				AML		AML		
	comp=E,40500μm,0.5s							
ZCCA				AML		AML		
	comp=N,28900μm,0.5s							
ZCCA				AML		AML		
	comp=E,38800μm,0.4s							
ZCCA				AML		AML		
	comp=N,33800μm,0.5s							
ZCCA				AML		AML		
	comp=E,40500μm,0.5s							
ZCCA				AML		AML		
	comp=N,28950

POPM	**Popiglio**	**0.36**	**178**	*e*P	**Pb**	**10 51 14.9**	**-0.1**
POPM				S	**Sb**	**10 51 21.6**	**+0.9**
POPM				AML	AML		
	comp=E,11250µm,1.5s						
POPM				AML	AML		
	comp=N,11150µm,1.2s						
POPM				AML	AML		
	comp=E,11250µm,1.5s						
POPM				AML	AML		
	comp=N,11150µm,1.2s						
POPM				AML	AML		
	comp=E,11250µm,1.5s						
POPM				AML	AML		
	comp=N,11150µm,1.2s						
POPM				AML	AML		
	comp=N,11150µm,1.2s						
POPM				AML	AML		
	comp=E,11250µm,1.5s						
FNVD	**Fontana Vidola**	**0.36**	**131**	P	**Pb**	**10 51 15.0**	**0.0**
FNVD				S	**Sn**	**10 51 22.2**	**+0.1**
NOVE	**Novellara**	**0.39**	**357**	*i* P	**Pb**	**10 51 15.4**	**+0.1**
NOVE				AML	AML		
	comp=E,19350µm,0.7s						
NOVE				AML	AML		
	comp=N,30750µm,0.5s						
NOVE				AML	AML		
	comp=E,19350µm,0.7s						
NOVE				AML	AML		
	comp=N,30750µm,0.5s						
NOVE				AML	AML		
	comp=E,19350µm,0.7s						
NOVE				AML	AML		
	comp=N,30750µm,0.5s						
NOVE				AML	AML		
	comp=E,19350µm,0.7s						
NOVE				AML	AML		
	comp=N,30750µm,0.5s						
MTCR	**Monte La Croce**	**0.42**	**154**	*e*P	**Pb**	**10 51 15.9**	**0.0**
MTCR				S	**Sn**	**10 51 23.6**	**0.0**
MTCR				AML	AML		
	comp=E,6875µm,0.7s						
MTCR				AML	AML		
	comp=N,8060µm,0.6s						
MTCR				AML	AML		
	comp=E,6875µm,0.7s						
MTCR				AML	AML		
	comp=N,8060µm,0.6s						
MTCR				AML	AML		
	comp=E,6875µm,0.7s						
MTCR				AML	AML		
	comp=N,8060µm,0.6s						
MTCR				AML	AML		
	comp=E,6875µm,0.7s						
MTCR				AML	AML		
	comp=N,8060µm,0.6s						
CARD	**Cardoso**	**0.43**	**206**	P	**Pb**	**10 51 15.5**	**-0.4**
CARD				S	**Sb**	**10 51 22.0**	**-0.2**
CARD	**Cardoso**	**0.43**	**206**	*i* P	**Pb**	**10 51 15.4**	**-0.4**
RAVA	**Ravarino**	**0.44**	**38⇓**	*e*Pg	**Pn**	**10 51 16.9**	**0.0**
RAVA	**Ravarino**	**0.44**	**38**	P	**Pn**	**10 51 16.8**	**0.0**
RAVA				AML	AML		
	comp=E,13900µm,1.2s						
RAVA				AML	AML		
	comp=N,21350µm,0.7s						
RAVA				AML	AML		
	comp=E,13950µm,1.2s						
RAVA				AML	AML		
	comp=N,21400µm,0.7s						
RAVA				AML	AML		
	comp=E,13900µm,1.2s						
RAVA				AML	AML		
	comp=N,21400µm,0.7s						
RAVA				AML	AML		
	comp=N,21400µm,0.7s						
RAVA				AML	AML		
	comp=E,13900µm,1.2s						
PRMA	**PARMA**	**0.47**	**319**	P	**Pb**	**10 51 16.9**	**+0.4**
PRMA				AML	AML		
	comp=E,7820µm,0.7s						
PRMA				AML	AML		
	comp=N,6075µm,1.2s						
PRMA				AML	AML		
	comp=E,7820µm,0.7s						
PRMA				AML	AML		
	comp=N,6075µm,1.2s						
PRMA				AML	AML		
	comp=E,7820µm,0.7s						
PRMA				AML	AML		
	comp=N,6075µm,1.2s						
GRAM	**Graiana**	**0.49**	**280**	P	**Pb**	**10 51 16.8**	**-0.2**
GRAM				S	**Sb**	**10 51 23.9**	**-0.2**
GRAM	**Graiana**	**0.49**	**280**	P	**Pb**	**10 51 16.6**	**-0.4**
GRAM				S	**Sb**	**10 51 24.7**	**+0.7**
GRAM				AML	AML		
	comp=E,8025µm,0.4s						
GRAM				AML	AML		
	comp=N,6720µm,0.6s						
CAVE	**Cavezzo**	**0.49**	**22**	P	**Pb**	**10 51 17.1**	**+0.1**
CAVE				AML	AML		
	comp=E,15450µm,0.3s						
CAVE				AML	AML		
	comp=N,19200µm,0.6s						
CAVE				AML	AML		
	comp=E,15450µm,0.3s						
CAVE				AML	AML		
	comp=N,19200µm,0.6s						
CAVE				AML	AML		
	comp=E,15450µm,0.3s						
CAVE				AML	AML		
	comp=N,19200µm,0.6s						
CAVE				AML	AML		
	comp=E,15450µm,0.3s						
CAVE				AML	AML		
	comp=N,19200µm,0.6s						
PTF	**Prato**	**0.51**	**152**	P	**Pb**	**10 51 17.3**	**+0.1**
MTRZ	**Monterenzio**	**0.52**	**93**	P	**Pn**	**10 51 18.5**	**+0.5**
MTRZ				AML	AML		
	comp=E,8885µm,0.6s						
MTRZ				AML	AML		
	comp=N,4905µm,0.9s						
MTRZ				AML	AML		
	comp=E,9150µm,0.6s						
MTRZ				AML	AML		
	comp=N,5140µm,0.9s						
MTRZ				AML	AML		
	comp=E,8890µm,0.6s						
MTRZ				AML	AML		
	comp=N,4905µm,0.9s						
MTRZ				AML	AML		
	comp=E,9150µm,0.6s						
MTRZ				AML	AML		
	comp=N,5140µm,0.9s						
MTRZ				AML	AML		
	comp=N,5140µm,0.9s						
MTRZ				AML	AML		
	comp=N,4905µm,0.9s						
MTRZ				AML	AML		
	comp=E,9150µm,0.6s						
MTRZ				AML	AML		
	comp=E,8890µm,0.6s						
MAIM	**Mastiano**	**0.53**	**200**	P	**Pb**	**10 51 17.1**	**-0.4**
MAIM				S	**Sb**	**10 51 24.4**	**-0.5**
MAIM	**Mastiano**	**0.53**	**200**	*i* P	**Pb**	**10 51 17.1**	**-0.4**
MAIM				AML	AML		
	comp=E,3245µm,1.1s						
MAIM				AML	AML		
	comp=N,3340µm,0.5s						
MAIM				AML	AML		
	comp=E,3245µm,1.1s						
MAIM				AML	AML		
	comp=N,3340µm,0.5s						
MAIM				AML	AML		
	comp=N,3340µm,0.5s						
MAIM				AML	AML		
	comp=E,3245µm,1.1s						
SEI	**Scarperia**	**0.57**	**129**	P	**Pb**	**10 51 18.1**	**-0.1**
SEI				AML	AML		
	comp=E,7905µm,0.4s						
SEI				AML	AML		
	comp=N,9360µm,0.6s						
SEI				AML	AML		
	comp=E,7905µm,0.4s						
SEI				AML	AML		
	comp=N,9360µm,0.6s						
SEI				AML	AML		
	comp=E,7905µm,0.4s						
SEI				AML	AML		
	comp=N,9360µm,0.6s						
FIU	**Minerbio Fiu**	**0.58**	**66**	P	**Pn**	**10 51 19.1**	**+0.3**
FIU				AML	AML		
	comp=E,56050µm,0.7s						
FIU				AML	AML		
	comp=N,19500µm,1.0s						
FIU				AML	AML		
	comp=E,56050µm,0.7s						
FIU				AML	AML		
	comp=N,19550µm,1.0s						
FIU				AML	AML		
	comp=E,56050µm,0.7s						
FIU				AML	AML		
	comp=N,19550µm,1.0s						
CRMI	**Carmignano**	**0.64**	**165**	P	**Pb**	**10 51 19.4**	**+0.1**
CRMI				S	**Sn**	**10 51 30.1**	**+1.3**
CRMI				AML	AML		
	comp=E,1042µm,0.7s						
CRMI				AML	AML		
	comp=N,1255µm,0.8s						
CRMI				AML	AML		
	comp=E,1042µm,0.7s						
CRMI				AML	AML		
	comp=N,1255µm,0.8s						
CRMI				AML	AML		
	comp=N,1255µm,0.8s						
CRMI				AML	AML		
	comp=E,1042µm,0.7s						
SBPO	**S.Benedetto Po**	**0.66**	**11**	P	**Pb**	**10 51 19.8**	**+0.2**
SBPO				AML	AML		
	comp=E,50500µm,0.2s						
SBPO				AML	AML		
	comp=N,54950µm,0.3s						
SBPO				AML	AML		
	comp=E,50550µm,0.2s						
SBPO				AML	AML		
	comp=N,55000µm,0.3s						
SBPO				AML	AML		
	comp=N,55000µm,0.3s						
SBPO				AML	AML		
	comp=E,50550µm,0.2s						
SERM	**Sermide**	**0.72**	**33**	P	**Pb**	**10 51 20.6**	**0.0**
SERM				AML	AML		
	comp=E,8850µm,0.6s						
SERM				AML	AML		
	comp=N,4915µm,1.0s						
SERM				AML	AML		
	comp=E,13650µm,0.8s						
SERM				AML	AML		
	comp=N,8000µm,0.7s						
SERM				AML	AML		
	comp=E,8850µm,0.6s						
SERM				AML	AML		
	comp=N,4915µm,1.0s						
SERM				AML	AML		
	comp=E,13650µm,0.8s						
SERM				AML	AML		
	comp=N,8040µm,0.7s						
SERM				AML	AML		
	comp=E,8850µm,0.6s						
SERM				AML	AML		
	comp=N,4915µm,1.0s						
SERM				AML	AML		
	comp=N,8040µm,0.7s						
SERM				AML	AML		
	comp=E,13650µm,0.8s						
GAZZ	**Gazzo Veronese**	**0.75**	**20⇑**	*e*Pg	**Pb**	**10 51 21.2**	**0.0**
GAZZ				*e*Sg	**Sn**	**10 51 33.9**	**+2.5**
RUFI	**Rufina**	**0.79**	**136**	P	**Pb**	**10 51 22.9**	**+1.0**
RUFI				AML	AML		
	comp=E,1894µm,0.4s						
RUFI				AML	AML		
	comp=N,2370µm,1.3s						
RUFI				AML	AML		
	comp=E,1895µm,0.4s						
RUFI				AML	AML		
	comp=N,2370µm,1.3s						
RUFI				AML	AML		
	comp=E,1895µm,0.4s						
RUFI				AML	AML		
	comp=N,2370µm,1.3s						
MSSA	**Maissana**	**0.88**	**264**	P	**Pn**	**10 51 23.2**	**+0.2**
MSSA				AML	AML		
	comp=E,2090µm,0.8s						
MSSA				AML	AML		
	comp=N,2300µm,0.7s						
MSSA				AML	AML		
	comp=E,2090µm,0.8s						
MSSA				AML	AML		
	comp=N,2300µm,0.7s						
MSSA				AML	AML		
	comp=E,2090µm,0.8s						
MSSA				AML	AML		
	comp=N,2300µm,0.7s						
SFI	**Santa Sofia**	**0.94**	**122**	P	**Pb**	**10 51 25.9**	**+1.5**
SFI				AML	AML		
	comp=E,2050µm,0.5s						
SFI				AML	AML		
	comp=N,3350µm,1.0s						
SFI				AML	AML		
	comp=E,2335µm,0.4s						
SFI				AML	AML		
	comp=N,2930µm,0.6s						
SFI				AML	AML		
	comp=E,2050µm,0.5s						
SFI				AML	AML		
	comp=N,3345µm,1.0s						
SFI				AML	AML		
	comp=E,2335µm,0.4s						
SFI				AML	AML		
	comp=N,2935µm,0.6s						
SFI				AML	AML		
	comp=N,3345µm,1.0s						
SFI				AML	AML		
	comp=E,2335µm,0.4s						
SFI				AML	AML		
	comp=N,2935µm,0.6s						
SFI				AML	AML		
	comp=E,2050µm,0.5s						
OPPE	**Oppeano**	**0.95**	**19**	P	**Pb**	**10 51 24.4**	**-0.1**
OPPE				AML	AML		
	comp=E,11120µm,0.7s						
OPPE				AML	AML		
	comp=N,10375µm,1.2s						
OPPE				AML	AML		
	comp=E,11125µm,0.7s						
OPPE				AML	AML		
	comp=N,10335µm,1.2s						
OPPE				AML	AML		
	comp=E,11125µm,0.7s						
OPPE				AML	AML		
	comp=N,10335µm,1.2s						
ASQU	**Asqua**	**0.97**	**129**	P	**Pb**	**10 51 25.8**	**+0.9**
ASQU				AML	AML		
	comp=E,1325µm,0.6s						
ASQU				AML	AML		
	comp=N,1380µm,0.4s						
ASQU				AML	AML		
	comp=E,1325µm,0.6s						
ASQU				AML	AML		
	comp=N,1380µm,0.4s						
BOB	**Bobbio (Coli)**	**0.99**	**292**	P	**Pb**	**10 51 26.2**	**+1.0**
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
CSNT	**Castellina Chi**	**1.02**	**157**	*e*P	**Pb**	**10 51 26.0**	**+0.3**
CSNT				AML	AML		
	comp=E,1815µm,0.4s						
CSNT				AML	AML		
	comp=N,3050µm,0.6s						
CSNT				AML	AML		
	comp=E,1815µm,0.4s						
CSNT				AML	AML		
	comp=N,3050µm,0.6s						
CSNT				AML	AML		
	comp=E,1815µm,0.4s						
CSNT				AML	AML		
	comp=N,3050µm,0.6s						
GORR	**Gorreto**	**1.05**	**281**	P	**Pb**	**10 51 26.8**	**+0.5**
GORR				AML	AML		
	comp=E,4570µm,0.8s						
GORR				AML	AML		
	comp=N,5810µm,0.8s						
GORR				AML	AML		
	comp=E,4570µm,0.8s						
GORR				AML	AML		
	comp=N,5810µm,0.8s						
GORR				AML	AML		
	comp=N,5810µm,0.8s						
GORR				AML	AML		
	comp=E,4570µm,0.8s						
ADRI	**Adria, Italy**	**1.10**	**55⇑**	*e*Pg	**Pb**	**10 51 28.3**	**+1.1**
ADRI				*e*Sg	**Sb**	**10 51 42.0**	**+0.8**
CTL8	**Castelleone**	**1.11**	**322**	P	**Pb**	**10 51 28.6**	**+1.3**
CTL8				AML	AML		
	comp=E,7160µm,1.6s						
CTL8				AML	AML		
	comp=N,7040µm,0.9s						
CTL8				AML	AML		
	comp=E,2455µm,1.5s						
CTL8				AML	AML		
	comp=N,1710µm,1.5s						
CTL8				AML	AML		
	comp=E,7155µm,1.6s						
CTL8				AML	AML		
	comp=N,7040µm,0.9s						
CTL8				AML	AML		
	comp=E,2455µm,1.5s						
CTL8				AML	AML		
	comp=N,1710µm,1.5s						
CTL8				AML	AML		
	comp=E,2455µm,1.5s						
CTL8				AML	AML		
	comp=E,7155µm,1.6s						
CTL8				AML	AML		
	comp=N,1710µm,1.5s						
CTL8				AML	AML		
	comp=N,7040µm,0.9s						
ORZI	**Orzinuovi**	**1.15**	**330**	P	**Pb**	**10 51 29.4**	**+1.4**
ORZI				AML	AML		
	comp=E,8350µm,0.7s						
ORZI				AML	AML		
	comp=N,9125µm,1.6s						
ORZI				AML	AML		
	comp=N,9125µm,1.6s						
ORZI				AML	AML		
	comp=E,8350µm,0.7s						
TREG	**Tregnago**	**1.15**	**15**	P	**Pn**	**10 51 26.7**	**0.0**
TEOL	**Teolo**	**1.16**	**34⇑**	*e*Pg	**Pn**	**10 51 26.7**	**-0.1**
TEOL				*e*Sg	**Sb**	**10 51 42.5**	**-0.2**
TEOL	**Teolo**	**1.16**	**34**	P	**Pn**	**10 51 26.5**	**-0.2**
TEOL				AML	AML		
	comp=E,11810µm,0.7s						
TEOL				AML	AML		
	comp=N,8480µm,0.4s						
TEOL				AML	AML		
	comp=E,11810µm,0.7s						
TEOL				AML	AML		
	comp=N,8480µm,0.4s						
TEOL				AML	AML		
	comp=E,11810µm,0.7s						
TEOL				AML	AML		
	comp=N,8480µm,0.4s						
ZOVE	**Zovencedo**	**1.17**	**27**	P	**Pn**	**10 51 26.6**	**-0.3**
ZOVE				AML	AML		
	comp=E,6965µm,1.2s						
ZOVE				AML	AML		
	comp=N,6155µm,1.4s						
ZOVE				AML	AML		
	comp=E,6965µm,1.2s						
ZOVE				AML	AML		
	comp=N,6155µm,1.4s						
BOTT	**Botticino**	**1.18**	**345**	P	**Pn**	**10 51 28.1**	**+1.1**
BOTT				S	**Sb**	**10 51 44.0**	**+0.7**
VOBA	**Vobarno**	**1.25**	**352**	P	**Pb**	**10 51 29.3**	**-0.2**
VOBA				AML	AML		
	comp=E,11750µm,0.2s						
VOBA				AML	AML		
	comp=N,12750µm,0.7s						
VOBA				AML	AML		
	comp=N,12750µm,0.7s						
VOBA				AML	AML		
	comp=E,11750µm,0.2s						
CNCS	**Concesio**	**1.25**	**343**	P	**Pn**	**10 51 29.2**	**+1.2**
CNCS				S	**Sb**	**10 51 45.9**	**+0.5**
CNCS				AML	AML		
	comp=E,25200µm,0.3s						
CNCS				AML	AML		
	comp=N,22950µm,0.3s						
CNCS				AML	AML		
	comp=E,25200µm,0.3s						
CNCS				AML	AML		
	comp=N,22950µm,0.3s						
CNCS				AML	AML		
	comp=N,22950µm,0.3s						
CNCS				AML	AML		
	comp=E,25200µm,0.3s						
ROVR	**Rover Verones**	**1.26**	**11**	P	**Pn**	**10 51 27.9**	**-0.3**
MARN	**Marana (Italy)**	**1.27**	**15**	*e*Pg	**Pn**	**10 51 28.0**	**-0.4**
MARN				*e*Sg	**Sn**	**10 51 44.5**	**+0.1**
BALD	**Monte Baldo**	**1.27**	**2**	*e*Pg	**Pn**	**10 51 28.6**	**+0.1**
BALD				*e*Sg	**Sn**	**10 51 44.8**	**+0.1**
CPGN	**Carpegna, Ital**	**1.29**	**118**	P	**Pb**	**10 51 32.2**	**+1.9**
CPGN				AML	AML		
	comp=E,1775µm,0.6s						
CPGN				AML	AML		
	comp=N,1910µm,1.3s						
CPGN				AML	AML		
	comp=E,1700µm,0.6s						
CPGN				AML	AML		
	comp=N,1895µm,1.3s						
CPGN				AML	AML		
	comp=N,1910µm,1.3s						
CPGN				AML	AML		
	comp=E,1775µm,0.6s						
CPGN				AML	AML		
	comp=E,1700µm,0.6s						
CPGN				AML	AML		
	comp=N,1895µm,1.3s						
TRIF	**Trifonti**	**1.30**	**175**	P	**Pn**	**10 51 29.7**	**+1.0**
TRIF				AML	AML		
	comp=E,793µm,0.8s						
TRIF				AML	AML		
	comp=N,760µm,0.8s						
TRIF				AML	AML		
	comp=E,792µm,0.8s						
TRIF				AML	AML		
	comp=N,760µm,0.8s						
TRIF				AML	AML		
	comp=N,760µm,0.8s						
TRIF				AML	AML		
	comp=E,792µm,0.8s						
MAGA	**Magasa**	**1.37**	**357**	*e*Pg	**Pn**	**10 51 29.6**	**-0.2**
MAGA				*e*Sg	**Sn**	**10 51 47.2**	**+0.2**
MAGA	**Magasa**	**1.37**	**357**	P	**Pn**	**10 51 29.9**	**+0.1**
MAGA				AML	AML		
	comp=E,14600µm,0.6s						
MAGA				AML	AML		
	comp=N,9845µm,1.0s						
MAGA				AML	AML		
	comp=E,14600µm,0.6s						
MAGA				AML	AML		
	comp=N,9845µm,1.0s						
MAGA				AML	AML		
	comp=N,9845µm,1.0s						
MAGA				AML	AML		
	comp=E,14600µm,0.6s						
CAFI	**Castiglion Fio**	**1.40**	**140**	P	**Pb**	**10 51 31.6**	**-0.5**
CAFI				AML	AML		
	comp=E,672µm,0.6s						
CAFI				AML	AML		
	comp=N,649µm,1.3s						
CAFI				AML	AML		
	comp=E,672µm,0.6s						
CAFI				AML	AML		
	comp=N,649µm,1.3s						
BADI	**Badiali**	**1.41**	**129**	P	**Pb**	**10 51 32.2**	**-0.1**
BADI				AML	AML		
	comp=E,942µm,1.0s						
BADI				AML	AML		
	comp=N,966µm,0.6s						
BADI				AML	AML		
	comp=N,966µm,0.6s						
BADI				AML	AML		
	comp=E,942µm,1.0s						
DOSS	**Dosso del Somm**	**1.51**	**12⇓**	*e*Pg	**Pn**	**10 51 31.4**	**-0.3**
DOSS				*e*Sg	**Sn**	**10 51 50.1**	**-0.3**
ATPI	**Pietralunga -**	**1.54**	**128**	P	**Pb**	**10 51 33.9**	**-0.5**
ATPI				AML	AML		
	comp=E,695µm,1.6s						
ATPI				AML	AML		
	comp=N,798µm,0.6s						
ATPI				AML	AML		

	comp=N,798µm,0.6s				
ATPI			AML	AML	
	comp=E,695µm,1.6s				
PIEI	**Pieia**	**1.56 123**	P	**Pb**	**10 51 34.9 +0.1**
PIEI			AML	AML	
	comp=E,546µm,0.8s				
PIEI			AML	AML	
	comp=N,388µm,0.8s				
PIEI			AML	AML	
	comp=E,546µm,0.8s				
PIEI			AML	AML	
	comp=N,388µm,0.8s				
RNI	**Roncone**	**1.57 357**	*e*Pg	**Pn**	**10 51 32.6 -0.1**
PCP	**Piancastagn**	**1.58 276**	P	**Pn**	**10 51 34.1 +1.5**
PCP			AML	AML	
	comp=E,651µm,1.0s				
PCP			AML	AML	
	comp=N,720µm,0.7s				
PCP			AML	AML	
	comp=E,651µm,1.0s				
PCP			AML	AML	
	comp=N,720µm,0.7s				
ATVO	**AVT- Monte Val**	**1.58 130**	P	**Pb**	**10 51 34.5 -0.8**
ATVO			AML	AML	
	comp=E,978µm,0.7s				
ATVO			AML	AML	
	comp=N,870µm,0.6s				
ATVO			AML	AML	
	comp=E,978µm,0.7s				
ATVO			AML	AML	
	comp=N,870µm,0.6s				
CASP	**Castiglione de**	**1.62 177**	P	**Pn**	**10 51 34.0 +0.9**
CASP			AML	AML	
	comp=E,336µm,0.8s				
CASP			AML	AML	
	comp=N,450µm,0.8s				
CASP			AML	AML	
	comp=E,336µm,0.8s				
CASP			AML	AML	
	comp=N,450µm,0.8s				
FSSB	**Fossombrone**	**1.63 115**	P	**Pb**	**10 51 35.4 -0.7**
FSSB			AML	AML	
	comp=E,1135µm,0.8s				
FSSB			AML	AML	
	comp=N,1640µm,0.5s				
FSSB			AML	AML	
	comp=E,1135µm,0.8s				
FSSB			AML	AML	
	comp=N,1640µm,0.5s				
ARCI	**Arcidosso**	**1.65 161**	*e*P	**Pn**	**10 51 34.5 +1.0**
ARCI			AML	AML	
	comp=E,372µm,0.7s				
ARCI			AML	AML	
	comp=N,296µm,0.6s				
ARCI			AML	AML	
	comp=E,372µm,0.7s				
ARCI			AML	AML	
	comp=N,296µm,0.6s				
CGRP	**Cima Grappa**	**1.65 27**	*e*Pg	**Pn**	**10 51 33.7 0.0**
CGRP	**Cima Grappa**	**1.65 27**	P	**Pn**	**10 51 33.0 -0.6**
CGRP			AML	AML	
	comp=E,2100µm,0.5s				
CGRP			AML	AML	
	comp=N,1800µm,0.4s				
CGRP			AML	AML	
	comp=E,2100µm,0.5s				
CGRP			AML	AML	
	comp=N,1800µm,0.4s				
MPAG	**Monte Paganucc**	**1.65 117**	AML	AML	
	comp=N,728µm,0.9s				
MPAG			AML	AML	
	comp=E,570µm,1.2s				
MPAG			AML	AML	
	comp=N,728µm,0.9s				
MPAG			AML	AML	
	comp=E,570µm,1.2s				
MABI	**Malga Bissina**	**1.65 354**	*e*Pg	**Pn**	**10 51 33.9 +0.1**
MABI	**Malga Bissina**	**1.65 354**	P	**Pn**	**10 51 34.0 +0.2**
MABI			AML	AML	
	comp=E,1310µm,0.6s				
MABI			AML	AML	
	comp=N,1150µm,0.6s				
MABI			AML	AML	
	comp=N,1150µm,0.6s				
MABI			AML	AML	
	comp=E,1310µm,0.6s				
GAGG	**Gaggia**	**1.68 5**	*e*Pg	**Pn**	**10 51 34.0 -0.2**
PANI	**Panarotta**	**1.69 14**	*e*Pg	**Pn**	**10 51 34.1 -0.2**
IESO	**Jesolo**	**1.70 48**	*e*Pg	**Pn**	**10 51 34.3 +0.2**
MTLO	**Montello**	**1.70 34**	*e*Pg	**Pn**	**10 51 34.5 +0.3**
CELB	**S.Piero in Cam**	**1.71 193**	AML	AML	
	comp=E,496µm,0.6s				
CELB			AML	AML	
	comp=N,740µm,0.4s				
CELB			AML	AML	
	comp=E,496µm,0.6s				
CELB			AML	AML	
	comp=N,740µm,0.4s				
QLNO	**Quiliano**	**1.72 268**	AML	AML	
	comp=N,714µm,0.9s				
QLNO			AML	AML	
	comp=E,423µm,1.4s				
QLNO			AML	AML	
	comp=N,714µm,0.9s				
QLNO			AML	AML	
	comp=E,423µm,1.4s				
FINB	**Finale Ligure**	**1.75 263**	P	**Pn**	**10 51 36.1 +1.2**
FINB			AML	AML	
	comp=E,826µm,0.7s				
FINB			AML	AML	
	comp=N,1185µm,0.3s				
FINB			AML	AML	
	comp=N,1185µm,0.3s				
FINB			AML	AML	
	comp=E,826µm,0.7s				
CTI	**Castel Tesino**	**1.76 21**	P	**Pn**	**10 51 34.8 -0.4**
CTI			AML	AML	
	comp=E,4025µm,1.1s				
CTI			AML	AML	
	comp=N,4670µm,1.5s				
CTI			AML	AML	
	comp=E,4025µm,1.1s				
CTI			AML	AML	
	comp=N,4670µm,1.5s				
SACS	**San Casciano d**	**1.77 151**	AML	AML	
	comp=N,398µm,0.9s				
SACS			AML	AML	
	comp=E,504µm,0.7s				
SACS			AML	AML	
	comp=N,398µm,0.9s				
SACS			AML	AML	
	comp=E,504µm,0.7s				
MGAB	**Montegabbione**	**1.80 146**	P	**Pb**	**10 51 37.4 -1.5**
MGAB			AML	AML	
	comp=E,620µm,1.0s				
MGAB			AML	AML	
	comp=N,571µm,0.7s				
MGAB			AML	AML	
	comp=N,571µm,0.7s				
MGAB			AML	AML	
	comp=E,620µm,1.0s				
ARVD	**Arcevia**	**1.83 119**	AML	AML	
	comp=E,373µm,0.7s				
ARVD			AML	AML	
	comp=E,373µm,0.7s				
ARVD			AML	AML	
	comp=N,470µm,1.5s				
ARVD			AML	AML	
	comp=N,470µm,1.5s				
MUGIO	**Muggio**	**1.93 322**	AML	AML	
	comp=N,926µm,1.0s				
MUGIO			AML	AML	
	comp=E,1115µm,1.4s				
MUGIO			AML	AML	
	comp=E,1115µm,1.4s				
MUGIO			AML	AML	
	comp=N,926µm,1.0s				
RORO	**Rocca Rossa**	**1.94 262**	AML	AML	
	comp=E,276µm,1.5s				
RORO			AML	AML	
	comp=E,276µm,1.5s				
RORO			AML	AML	
	comp=N,312µm,0.2s				
RORO			AML	AML	
	comp=N,312µm,0.2s				
ASSB	**Assisi San Ben**	**1.95 134**	AML	AML	
	comp=E,350µm,0.9s				
ASSB			AML	AML	
	comp=N,422µm,0.7s				
ASSB			AML	AML	
	comp=N,422µm,0.7s				
ASSB			AML	AML	
	comp=E,350µm,0.9s				
SNTG	**Esanatoglia**	**1.96 125**	AML	AML	
	comp=E,369µm,0.6s				
SNTG			AML	AML	
	comp=E,369µm,0.6s				
SNTG			AML	AML	
	comp=N,361µm,1.1s				
SNTG			AML	AML	
	comp=N,361µm,1.1s				
MAON	**Monte Argentar**	**2.00 172**	AML	AML	
	comp=E,137µm,1.0s				
MAON			AML	AML	
	comp=N,186µm,0.7s				
MAON			AML	AML	
	comp=N,186µm,0.7s				
MAON			AML	AML	
	comp=E,137µm,1.0s				
EL6	**Elcito**	**2.02 121**	AML	AML	
	comp=E,957µm,0.7s				
EL6			AML	AML	
	comp=N,1060µm,0.5s				
EL6			AML	AML	
	comp=E,957µm,0.7s				
EL6			AML	AML	
	comp=N,1060µm,0.5s				
VARE	**Varese**	**2.02 317**	AML	AML	
	comp=E,1205µm,0.8s				
VARE			AML	AML	
	comp=E,1205µm,0.8s				
VARE			AML	AML	
	comp=N,1262µm,1.3s				
VARE			AML	AML	
	comp=N,1262µm,1.3s				
POLC	**Polcenigo**	**2.04 37**	AML	AML	
	comp=N,2855µm,0.5s				
POLC			AML	AML	
	comp=E,2620µm,0.9s				
POLC			AML	AML	
	comp=N,2855µm,0.5s				
POLC			AML	AML	
	comp=E,2620µm,0.9s				
MOMA	**Monte Martano**	**2.08 140**	AML	AML	
	comp=N,400µm,1.2s				
MOMA			AML	AML	
	comp=E,299µm,0.8s				
MOMA			AML	AML	
	comp=N,400µm,1.2s				
MOMA			AML	AML	
	comp=E,299µm,0.8s				
BRMO	**Bormio**	**2.08 353**↑	*e*Pn	**Pn**	**10 51 40.6 +1.0**
BRMO	**Bormio**	**2.08 353**	AML	AML	
	comp=N,396µm,0.6s				
BRMO			AML	AML	
	comp=E,626µm,0.5s				
BRMO			AML	AML	
	comp=N,396µm,0.6s				
BRMO			AML	AML	
	comp=E,626µm,0.5s				
GBOS	**Grotte di Boss**	**2.09 266**	AML	AML	
	comp=N,266µm,0.4s				
GBOS			AML	AML	
	comp=E,204µm,0.6s				
GBOS			AML	AML	
	comp=E,204µm,0.6s				
GBOS			AML	AML	
	comp=N,266µm,0.4s				
KOSI	**Kohlern**	**2.10 12**	AML	AML	
	comp=E,1505µm,0.7s				
KOSI			AML	AML	
	comp=N,1345µm,0.8s				
KOSI			AML	AML	
	comp=N,1345µm,0.8s				
KOSI			AML	AML	
	comp=E,1505µm,0.7s				
CESI	**CESI - Serrava**	**2.10 131**	AML	AML	
	comp=N,206µm,0.7s				
CESI			AML	AML	
	comp=E,63µm,0.5s				
CESI			AML	AML	
	comp=N,206µm,0.7s				
CESI			AML	AML	
	comp=E,63µm,0.5s				
MONC	**Moncucco Torin**	**2.11 289**	AML	AML	
	comp=N,1183µm,0.8s				
MONC			AML	AML	
	comp=E,1315µm,1.0s				
MONC			AML	AML	
	comp=N,1183µm,0.8s				
MONC			AML	AML	
	comp=E,1315µm,1.0s				
MGRO	**Montegrosso**	**2.14 261**	AML	AML	
	comp=N,592µm,0.8s				
MGRO			AML	AML	
	comp=E,790µm,0.8s				
MGRO			AML	AML	
	comp=N,592µm,0.8s				
MGRO			AML	AML	
	comp=E,790µm,0.8s				
FDMO	**Fiordimonte**	**2.19 128**	AML	AML	
	comp=E,330µm,0.6s				
FDMO			AML	AML	
	comp=N,255µm,0.6s				
FDMO			AML	AML	
	comp=E,330µm,0.6s				
FDMO			AML	AML	
	comp=N,255µm,0.6s				
MOSI	**Grossmontoni**	**2.21 357**	AML	AML	
	comp=N,3230µm,0.8s				
MOSI			AML	AML	
	comp=E,2035µm,0.8s				
MOSI			AML	AML	
	comp=N,3230µm,0.8s				
MOSI			AML	AML	
	comp=E,2035µm,0.8s				
PGF	**Pioggiola**	**2.25 215**	*e*P	**Pn**	**10 51 42.3 +0.4**
PGF			*e*Sn	**Sn**	**10 52 07.2 -1.5**
	comp=E,118nm,0.3s				
STAL	**STALIGIAL**	**2.31 36**	AML	AML	
	comp=N,1500µm,0.2s				
STAL			AML	AML	
	comp=E,1290µm,1.6s				
STAL			AML	AML	
	comp=N,1560µm,0.3s				
STAL			AML	AML	
	comp=E,1575µm,0.2s				
STAL			AML	AML	
	comp=N,1500µm,0.2s				
STAL			AML	AML	
	comp=E,1575µm,0.2s				
STAL			AML	AML	
	comp=E,1290µm,1.6s				
STAL			AML	AML	
	comp=N,1560µm,0.3s				
SAOF	**Saorge**	**2.33 261**	Pn	**Pn**	**10 51 44.5 +1.6**
SAOF			Sn	**Sn**	**10 52 12.4 +1.9**
ABSI	**Aberstueckl**	**2.35 10**	AML	AML	
	comp=N,1585µm,0.6s				
ABSI			AML	AML	
	comp=E,2530µm,0.8s				
ABSI			AML	AML	
	comp=E,2530µm,0.8s				
ABSI			AML	AML	
	comp=N,1585µm,0.6s				
ENR	**Entracque**	**2.39 267**	AML	AML	
	comp=E,250µm,1.3s				
ENR			AML	AML	
	comp=E,250µm,1.3s				
ENR			AML	AML	
	comp=N,366µm,0.9s				
ENR			AML	AML	
	comp=N,366µm,0.9s				
TRAV	**Traversella**	**2.40 298**	AML	AML	
	comp=N,540µm,0.3s				
TRAV			AML	AML	
	comp=E,501µm,1.2s				
TRAV			AML	AML	
	comp=E,501µm,1.2s				
TRAV			AML	AML	
	comp=N,540µm,0.3s				
SBF	**Sospel**	**2.44 258**	*e*P	**Pn**	**10 51 45.3 +0.8**
SBF			*e*Sn	**Sn**	**10 52 10.7 -2.6**
	comp=N,124nm,0.3s				
DAVOX	**Davos/Dischmat**	**2.45 346**	Pn	**Pn**	**10 51 46.8 +2.2**
	comp=N,6.9nm,0.3s,baz=159,slow=16,SNR=26				
DAVOX			Sn	**Sn**	**10 52 14.4 +0.7**
	comp=N,18nm,0.3s,baz=162,slow=20,SNR=6.0				
DAVOX	**Davos/Dischmat**	**2.45 346**	AML	AML	
	comp=E,350µm,0.4s				
DAVOX			AML	AML	
	comp=E,350µm,0.4s				
DAVOX			AML	AML	
	comp=N,360µm,0.6s				
DAVOX			AML	AML	
	comp=N,360µm,0.6s				
STV	**Sant Anna di V**	**2.46 267**	AML	AML	
	comp=N,155µm,0.3s				
STV			AML	AML	
	comp=E,189µm,0.9s				
STV			AML	AML	
	comp=N,155µm,0.3s				
STV			AML	AML	
	comp=E,189µm,0.9s				
ESCA	**l'Escarene**	**2.49 258**	Pn	**Pn**	**10 51 46.2 +1.1**
ESCA			Sn	**Sn**	**10 52 15.8 +1.3**
SATI	**Passo dei Sala**	**2.51 307**	AML	AML	
	comp=N,381µm,0.6s				
SATI			AML	AML	
	comp=E,434µm,0.9s				
SATI			AML	AML	
	comp=N,381µm,0.6s				
SATI			AML	AML	
	comp=E,434µm,0.9s				
FUSIO	**Fusio**	**2.52 325**	AML	AML	
	comp=E,942µm,0.7s				
FUSIO			AML	AML	
	comp=N,398µm,0.3s				
FUSIO			AML	AML	
	comp=E,942µm,0.7s				
FUSIO			AML	AML	
	comp=N,398µm,0.3s				
TOLF	**Tolfa**	**2.52 158**	AML	AML	
	comp=E,96µm,0.9s				
TOLF			AML	AML	
	comp=N,79µm,0.7s				
TOLF			AML	AML	
	comp=E,96µm,0.9s				
TOLF			AML	AML	
	comp=N,79µm,0.7s				
BHB	**Bricherasio**	**2.52 281**	AML	AML	
	comp=N,260µm,0.7s				
BHB			AML	AML	
	comp=E,272µm,0.5s				
BHB			AML	AML	
	comp=E,272µm,0.5s				
BHB			AML	AML	
	comp=N,260µm,0.7s				
REVF	**Revere**	**2.52 256**	Pn	**Pn**	**10 51 47.0 +1.5**
REVF			Sn	**Sn**	**10 52 17.1 +1.8**
SMPL	**Sampolo**	**2.55 205**	Pn	**Pn**	**10 51 47.6 +1.8**
SMPL	**Sampolo**	**2.55 205**	AML	AML	
	comp=E,7015µm,0.4s				
SMPL			AML	AML	
	comp=N,11300µm,0.8s				
SMPL			AML	AML	
	comp=N,11300µm,0.8s				
SMPL			AML	AML	
	comp=E,7015µm,0.4s				
SABO	**M.te Sabotino**	**2.56 51**	AML	AML	
	comp=N,2070µm,1.0s				
SABO			AML	AML	
	comp=E,1320µm,0.5s				
SABO			AML	AML	
	comp=N,2070µm,1.0s				
SABO			AML	AML	
	comp=E,1320µm,0.5s				
ROSI	**Rosskopf**	**2.56 10**	AML	AML	
	comp=E,1180µm,1.5s				
ROSI			AML	AML	
	comp=N,1625µm,0.4s				
ROSI			AML	AML	
	comp=N,1625µm,0.4s				
ROSI			AML	AML	
	comp=E,1180µm,1.5s				
RSP	**Reno Superiore**	**2.58 288**	AML	AML	
	comp=N,214µm,0.9s				
RSP			AML	AML	
	comp=E,178µm,1.6s				
RSP			AML	AML	
	comp=E,178µm,1.6s				
RSP			AML	AML	
	comp=N,214µm,0.9s				
FETA	**Feichten**	**2.61 360**	Pn	**Pn**	**10 51 49.3 +2.4**
	comp=N,3.6nm,0.3s,SNR=33				
FETA			Sn	**Sb**	**10 52 21.3 -3.2**
	comp=N,51nm,0.5s				
ABTA	**Abfaltersbach**	**2.65 27**	Pn	**Pn**	**10 51 48.4 +1.0**
	comp=N,1.2nm,0.1s				
ABTA			Sn	**Sn**	**10 52 20.6 +2.2**
	comp=N,30nm,0.2s				
ISO	**Isola**	**2.66 266**	Pn	**Pn**	**10 51 49.4 +1.9**
GUMA	**Gualdo di Mace**	**2.68 119**	AML	AML	
	comp=E,1390µm,0.5s				
GUMA			AML	AML	
	comp=N,2170µm,0.7s				
GUMA			AML	AML	
	comp=E,2260µm,0.6s				
GUMA			AML	AML	
	comp=N,1645µm,0.4s				
GUMA			AML	AML	
	comp=N,1645µm,0.4s				
GUMA			AML	AML	
	comp=N,2170µm,0.7s				
GUMA			AML	AML	
	comp=E,1390µm,0.5s				
GUMA			AML	AML	
	comp=E,2260µm,0.6s				
RISI	**Rein**	**2.71 20**	AML	AML	
	comp=N,1855µm,1.5s				
RISI			AML	AML	
	comp=E,1505µm,0.5s				
RISI			AML	AML	
	comp=E,1505µm,0.5s				
RISI			AML	AML	
	comp=N,1855µm,1.5s				
PTCC	**Patocco-Chiusa**	**2.71 42**	AML	AML	
	comp=N,364µm,1.0s				
PTCC			AML	AML	
	comp=E,438µm,0.7s				
PTCC			AML	AML	
	comp=E,438µm,0.7s				
PTCC			AML	AML	
	comp=N,364µm,1.0s				
TERO	**Teramo**	**2.74 130**	AML	AML	
	comp=E,95µm,0.8s				
TERO			AML	AML	
	comp=E,95µm,0.8s				
TERO			AML	AML	
	comp=N,93µm,1.0s				
TERO			AML	AML	
	comp=N,93µm,1.0s				
FIAM	**Fiamignano**	**2.75 140**	AML	AML	
	comp=E,220µm,0.9s				
FIAM			AML	AML	
	comp=N,171µm,0.8s				
FIAM			AML	AML	
	comp=N,171µm,0.8s				
FIAM			AML	AML	
	comp=E,220µm,0.9s				
LSD	**Lago del Serru**	**2.77 294**	AML	AML	
	comp=E,138µm,1.1s				
LSD			AML	AML	
	comp=N,160µm,0.7s				
LSD			AML	AML	
	comp=E,138µm,1.1s				
LSD			AML	AML	
	comp=N,160µm,0.7s				
PLONS	**Plons/SG**	**2.81 341**	AML	AML	
	comp=N,293µm,1.0s				
PLONS			AML	AML	
	comp=E,590µm,0.7s				
PLONS			AML	AML	
	comp=N,293µm,1.0s				
PLONS			AML	AML	
	comp=E,590µm,0.7s				
RIY	**Rijeka**	**2.81 70**	*e*Pn	**Pn**	**10 51 51.7 +2.2**
SURF	**Saint Ours**	**2.81 273**	Pn	**Pn**	**10 51 51.0 +1.3**
AQU	**L'Aquila**	**2.83 136**	*e*Pn	**Pn**	**10 51 50.0 +0.3**
CALF	**Calern**	**2.83 258**	Pn	**Pn**	**10 51 51.2 +1.4**
CALF			Sn	**Sn**	**10 52 24.2 +1.3**
SQTA	**Sankt Quirin**	**2.83 6**	*e*Pn	**Pn**	**10 51 52.2 +2.4**
	comp=E,38nm,0.2s,SNR=25				

SQTA				Sn	Sn	10 52 25.6	+2.6
	comp=E,632nm,0.5s						
MBDF	**Montbardon**	**2.85**	**278**	*e*P	Pn	10 51 50.7	+0.5
MBDF				*e*Sg	Sn	10 52 19.7	-3.9
	comp=E,191nm,0.7s						
ACOM	**Acomizza, Ital**	**2.89**	**41**	AML	AML		
	comp=E,962µm,0.9s						
ACOM				AML	AML		
	comp=E,962µm,0.9s						
ACOM				AML	AML		
	comp=N,619µm,0.7s						
ACOM				AML	AML		
	comp=N,619µm,0.7s						
WTTA	**Wattenberg**	**2.92**	**12**	*e*Pn	Pn	10 51 54.5	+3.3
	comp=N,34nm,0.2s,SNR=17						
WTTA				Sn	Sn	10 52 29.3	+3.9
	comp=N,90nm,0.2s						
WTTA	**Wattenberg**	**2.92**	**12**	AML	AML		
	comp=E,702µm,0.8s						
WTTA				AML	AML		
	comp=E,702µm,0.8s						
WTTA				AML	AML		
	comp=N,644µm,0.3s						
WTTA				AML	AML		
	comp=N,644µm,0.3s						
CEY	**Cerknica**	**2.93**	**62**	*e*Pn	Pn	10 51 50.3	-0.8
DAVA	**Damuels**	**2.94**	**348**	*e*Pn	Pn	10 51 53.6	+2.2
	comp=N,2.5nm,0.1s,SNR=12						
DAVA				Sn	Sn	10 52 27.9	+2.2
	comp=N,73nm,0.3s						
MOTA	**Moosalm**	**2.95**	**5**	*e*Pn	Pn	10 51 53.8	+2.3
	comp=N,10nm,0.3s,SNR=12						
BNALP	**Bannalp**	**2.95**	**327**	AML	AML		
	comp=N,276µm,0.7s						
BNALP				AML	AML		
	comp=E,251µm,0.3s						
BNALP				AML	AML		
	comp=N,276µm,0.7s						
BNALP				AML	AML		
	comp=E,251µm,0.3s						
NVLJ	**Novalja**	**2.96**	**86**	*e*Pn	Pn	10 51 52.0	+0.6
FAGN	**Fagnano**	**2.98**	**135**	AML	AML		
	comp=E,542µm,0.7s						
FAGN				AML	AML		
	comp=N,370µm,0.5s						
FAGN				AML	AML		
	comp=E,542µm,0.7s						
FAGN				AML	AML		
	comp=N,370µm,0.5s						
WATA	**Walderalm**	**2.98**	**11**	*e*Pn	Pn	10 51 54.3	+2.3
	comp=N,15nm,0.2s,SNR=6.6						
MYKA	**Terra Mystica**	**3.02**	**42**	*e*Pn	Pn	10 51 54.2	+1.9
	comp=N,2.8nm,0.2s,SNR=11						
MYKA				*e*Sn	Sn	10 52 27.8	+0.4
	comp=N,16nm,0.2s						
LPG	**La Plagne**	**3.04**	**292**	*e*P	Pn	10 51 53.2	+0.4
LPG				*e*Sn	Sn	10 52 24.1	-4.2
	comp=N,33nm,0.3s						
LPL	**La Plagne**	**3.05**	**293**	*e*P	Pn	10 51 53.4	+0.4
LPL				*e*Sn	Sn	10 52 24.3	-4.3
	comp=N,31nm,0.3s						
FRF	**La Foret Royal**	**3.08**	**255**	*e*P	Pn	10 51 54.0	+0.9
FRF				*e*Sn	Sn	10 52 24.9	-3.9
	comp=N,50nm,0.2s						
RETA	**Reutte**	**3.08**	**0**	*e*Pn	Pn	10 51 55.3	+2.1
	comp=N,9.8nm,0.2s,SNR=6.7						
RETA				*e*Sn	Sn	10 52 31.6	+2.6
	comp=N,20nm,0.2s						
LJU	**Ljubljana**	**3.13**	**57**	*e*Pn	Pn	10 51 54.1	+0.2
LJU	**Ljubljana**	**3.13**	**57**	AML	AML		
	comp=N,1570µm,0.2s						
LJU				AML	AML		
	comp=E,985µm,0.6s						
LJU				AML	AML		
	comp=E,985µm,0.6s						
LJU				AML	AML		
	comp=N,1570µm,0.2s						
KBA	**Koelnbreinsper**	**3.23**	**33**	*e*Pn	Pn	10 51 57.1	+1.7
	comp=N,1.4nm,0.1s,SNR=13						
KBA				*e*Sn	Sn	10 52 34.0	+1.1
	comp=N,18nm,0.2s						
LMR	**La Mourre**	**3.24**	**252**	*e*P	Pn	10 51 56.1	+0.7
LMR				*e*Sg	Sn	10 52 28.5	-4.5
	comp=N,88nm,0.3s						
OBKA	**Obir**	**3.40**	**51**	*e*Pn	Pn	10 51 58.3	+0.6
	comp=N,2.3nm,0.1s						
OBKA				*e*Sn	Sn	10 52 37.4	+0.4
	comp=N,24nm,0.2s						
BLAF	**les Blancs**	**3.41**	**264**	Pn	Pn	10 51 58.7	+1.0
ORIF	**Oris-en-Rattie**	**3.51**	**280**	*e*P	Pn	10 52 01.0	+1.9
ORIF				*e*Sn	Sn	10 52 35.0	-4.6
	comp=N,37nm,0.3s						
OZLJ	**Ozalj**	**3.56**	**69**	*e*Pn	Pn	10 52 00.3	+0.6
UDBI	**Udbina**	**3.60**	**86**	*e*Pn	Pn	10 52 01.7	+1.3
CRES	**Cresnjev**	**3.63**	**65**	*e*Pn	Pn	10 51 59.7	-1.0
OG02	**Monnetier-Morn**	**3.64**	**300**	Pn	Pn	10 52 01.4	+0.6
ARTF	**Artigues**	**3.66**	**259**	Pn	Pn	10 52 03.3	+2.2
ASEAF	**Site Antares,**	**3.70**	**246**	Pn	Pn	10 52 02.6	+1.3
ASEAF				Sn	Sn	10 52 45.1	+1.5
SMRF	**Simiane la Rot**	**3.74**	**265**	*e*P	Pn	10 52 04.7	+2.4
SMRF				*e*Sn	Sn	10 52 41.7	-3.6
	comp=N,26nm,0.4s						
SOKA	**Soboth**	**3.77**	**52**	*e*Pn	Pn	10 52 04.0	+1.3
	comp=N,1.3nm,0.2s,SNR=5.8						
SOKA				*e*Sn	Sn	10 52 45.5	-0.6
	comp=N,26nm,0.6s						
OGSM	**Saint Maurice**	**3.77**	**290**	Pn	Pn	10 52 04.0	+1.2
GIMEL	**St. Georges /**	**3.80**	**306**	AML	AML		
	comp=N,74µm,1.3s						
GIMEL				AML	AML		
	comp=E,76µm,0.8s						
GIMEL				AML	AML		
	comp=E,76µm,0.8s						
GIMEL				AML	AML		
	comp=N,74µm,1.3s						
RUSF	**Rustrel**	**3.81**	**265**	Pn	Pn	10 52 05.7	+2.5
CABF	**La Chapelle**	**3.94**	**306**	*e*P	Pn	10 52 06.3	+1.2
CABF				*e*Sn	Sn	10 52 46.8	-3.6
	comp=N,42nm,0.6s						
OG35	**Corcelles**	**4.00**	**296**	Pn	Pn	10 52 06.6	+0.7
LOMF	**Lomont**	**4.02**	**318**	Pn	Pn	10 52 06.8	+0.7
CHMF	**Charmoille**	**4.03**	**316**	Pn	Pn	10 52 06.8	+0.5
KIZ	**Kirchzarten**	**4.05**	**332**	Pn	Pn	10 52 06.3	-0.3
MOA	**Molln**	**4.22**	**34**	*e*Pn	Pn	10 52 10.0	+1.1
	comp=N,4.4nm,0.2s,SNR=7.2						
MOA				*e*Sn	Sn	10 52 58.3	+1.1
	comp=N,23nm,0.3s						
MOF	**Molkenrain**	**4.26**	**325**	Pn	Pn	10 52 09.6	+0.1
HINF	**Hinteralfeld**	**4.35**	**323**	*e*P	Pn	10 52 10.7	0.0
HINF				*e*Sn	Sn	10 52 55.7	-4.6
	comp=N,51nm,0.2s						
VIVF	**Saint-Julien-l**	**4.36**	**278**	*e*P	Pn	10 52 11.6	+0.9
VIVF				*e*Sn	Sn	10 52 55.2	-5.2
	comp=N,5.6nm,0.2s						
ARSA	**Arzberg**	**4.39**	**48**	*e*Pn	Pn	10 52 11.2	+0.1
	comp=N,2.8nm,0.2s						
ARSA				*e*Sn	Sn	10 52 58.7	-2.5
	comp=N,8.5nm,0.5s						
ARSA	**Arzberg**	**4.39**	**48**	AML	AML		
	comp=N,55µm,0.7s						
ARSA				AML	AML		
	comp=E,37µm,0.6s						
ARSA				AML	AML		
	comp=N,55µm,0.7s						
ARSA				AML	AML		
	comp=E,37µm,0.6s						
SGRT	**San Giovanni R**	**4.52**	**124**	AML	AML		
	comp=E,90µm,0.5s						
SGRT				AML	AML		
	comp=N,85µm,1.5s						
SGRT				AML	AML		
	comp=E,90µm,0.5s						
SGRT				AML	AML		
	comp=N,85µm,1.5s						
MGRS	**Mrkonjic Grad**	**4.54**	**88**	*e*Pn	Pn	10 52 13.9	+0.6
BLY	**Banja Luka**	**4.62**	**84**	*e*Pn	Pn	10 52 06.6	-7.6
CDF	**Champ du Feu**	**4.67**	**330**	*e*P	Pn	10 52 15.0	0.0
CDF				*e*Sn	Sn	10 53 03.3	-4.9
	comp=N,37nm,0.2s						
HAU	**Haudompre**	**4.72**	**321**	*e*P	Pn	10 52 15.8	+0.1
HAU				*e*Sn	Sn	10 53 04.3	-5.0
	comp=N,65nm,0.2s						
GERES	**GERESS Array B**	**4.88**	**24**	Pn	Pn	10 52 17.8	-0.2
	comp=N,1.6nm,0.3s,baz=199,slow=14,SNR=19						
GERES				Sn	Sn	10 53 10.2	-3.4
	comp=N,8.2nm,0.3s,baz=206,slow=24,SNR=15						
LASF	**Ste Croix**	**4.96**	**269**	*e*P	Pn	10 52 20.2	+1.2
LASF				*e*Sn	Sn	10 53 10.0	-5.3
	comp=N,5.5nm,0.3s						
LANF	**Langenberg**	**5.00**	**337**	Pn	Pn	10 52 20.0	+0.5
CONA	**Conrad Observa**	**5.00**	**43**	*e*Pn	Pn	10 52 20.4	+0.7
	comp=N,1.5nm,0.2s						
CONA				*e*Sn	Sn	10 53 14.7	-1.8
	comp=N,21nm,0.4s						
KHC	**Kasperske Hory**	**5.11**	**21**	*e*PN	Pn	10 52 21.1	0.0
KHC				*e*PG	Pb	10 52 40.0	+4.8
KHC				*e*SN	Sn	10 53 16.0	-3.0
KHC				*e*x	x	10 53 50.0	
STON	**Ston**	**5.28**	**105**	*e*Pn	Pn	10 52 23.5	+0.1
STON	**Ston**	**5.28**	**105**	*e*Pn	Pn	10 52 21.3	-2.0
SMF	**Signal de Mont**	**5.34**	**297**	*e*P	Pn	10 52 24.6	+0.4
SMF				*e*Sn	Sn	10 53 19.7	-5.0
	comp=N,20nm,0.3s						
PAGF	**Fort de Pagny**	**5.40**	**322**	*e*P	Pn	10 52 25.9	+0.8
	baz=147						
PAGF				*e*Sn	Sn	10 53 20.7	-5.5
	comp=N,23nm,0.2s,baz=151						
SFTF	**Sexfontaines**	**5.48**	**316**	*e*P	Pn	10 52 26.5	+0.4
	baz=134						
SFTF				*e*Sn	Sn	10 53 23.7	-4.4
	comp=N,11nm,0.2s						
LOR	**Lormes**	**5.59**	**303**	*e*P	Pn	10 52 28.1	+0.4
LOR				*e*Sn	Sn	10 53 26.3	-4.6
	comp=N,44nm,0.3s						
MEZF	**Maizieres J'vi**	**5.67**	**318**	*e*P	Pn	10 52 30.2	+1.4
	baz=138						
MEZF				*e*Sn	Sn	10 53 27.1	-5.8
	comp=N,6.1nm,0.2s						
AVF	**Avril sur Loir**	**5.71**	**297**	*e*P	Pn	10 52 29.8	+0.6
AVF				*e*Sn	Sn	10 53 28.2	-5.4
	comp=N,8.6nm,0.4s						
SSF	**Saint Saulge**	**5.72**	**300**	*e*P	Pn	10 52 29.5	+0.1
SSF				*e*Sn	Sn	10 53 28.0	-5.9
	comp=N,13nm,0.3s						
TREB	**Trebinje**	**5.78**	**104**	*e*Pn	Pn	10 52 29.2	-1.1
ZST	**Bratislava**	**5.81**	**47**	*e*SN	Sn	10 53 33.3	-2.9
BRY	**Bratogost**	**5.85**	**102**	⇓*i*Pn	Pn	10 52 32.6	+1.1
BRY				*e*Sn	Sn	10 53 36.2	-1.3
BRY	**Bratogost**	**5.85**	**102**	*e*Pn	Pn	10 52 32.5	+1.1
MORH	**Mrgy, Hungar**	**5.86**	**69**	*e*Pn	Pn	10 52 24.7	-6.6
BGF	**Bois d'Agland**	**5.95**	**294**	*e*P	Pn	10 52 32.8	+0.2
BGF				*e*Sn	Sn	10 53 34.2	-5.5
	comp=N,21nm,0.4s						
HCY	**Herceg Novi**	**5.97**	**106**	⇓*i*Pn	Pn	10 52 33.6	+0.7
HCY				*e*Sn	Sn	10 53 38.5	-1.8
MODS	**Modra-Piesok**	**6.01**	**46**	*e*PN	Pn	10 52 32.8	-0.6
MODS				*e*SN	Sn	10 53 37.6	-3.6
UPM	**Unac-Piva**	**6.03**	**99**	⇑*i*Pn	Pn	10 52 35.3	+1.4
UPM				*e*Sn	Sn	10 53 40.5	-1.4
UPM	**Unac-Piva**	**6.03**	**99**	*e*Pn	Pn	10 52 35.6	+1.7
KRUC	**Moravsky**	**6.06**	**38**	*e*PN	Pn	10 52 33.9	-0.2
KRUC				*e*SN	Sn	10 53 38.7	-3.7
PRU	**Pruhonice**	**6.15**	**24**	*e*SN	Sn	10 53 39.8	-4.8
NKME	**Niksic**	**6.18**	**103**	⇑*i*Pn	Pn	10 52 37.1	+1.2
NKME				*e*Sn	Sn	10 53 44.3	-1.3
CAF	**Calviac**	**6.21**	**278**	*e*P	Pn	10 52 37.4	+1.2
CAF				*e*Sn	Sn	10 53 39.4	-6.7
	comp=N,16nm,0.9s						
CEME	**Cevo**	**6.23**	**105**	⇑*i*Pn	Pn	10 52 37.5	+1.0
CEME				*e*Sn	Sn	10 53 44.8	-1.9
MTLF	**Montolieu**	**6.25**	**263**	*e*P	Pn	10 52 37.9	+1.1
MTLF				*e*Sn	Sn	10 53 41.9	-5.3
	comp=N,18nm,0.8s						
BBLS	**Lazići**	**6.26**	**92**	*e*Pn	Pn	10 52 37.5	+0.6
TCF	**Toulx Ste Croi**	**6.30**	**290**	*e*P	Pn	10 52 37.8	+0.4
TCF				*e*Sn	Sn	10 53 42.4	-5.9
	comp=N,5.5nm,0.3s						
BUM	**Brajici-Budva**	**6.30**	**107**	⇑*i*Pn	Pn	10 52 38.3	+0.8
BUM				*e*Sn	Sn	10 53 46.7	-1.8
VRAC	**Vranov**	**6.33**	**37**	Sn	Sn	10 53 45.1	-4.0
	comp=N,1.0nm,0.3s,baz=353,slow=14,SNR=7.1						
VRAC				Lg	Lg	10 54 28.3	
	comp=N,0.6nm,0.3s,baz=139,slow=20,SNR=3.2						
VRAC	**Vranov**	**6.33**	**37**	*e*SN	Sn	10 53 44.6	-4.5
HYF	**Humbligny**	**6.34**	**300**	*e*P	Pn	10 52 38.8	+0.8
HYF				*e*Sn	Sn	10 53 45.1	-4.2
PLE	**Pljevlja**	**6.34**	**97**	⇓*i*Pn	Pn	10 52 39.6	+1.5
PLE				*e*Sn	Sn	10 53 48.4	-1.1
TTG	**Podgorica**	**6.51**	**105**	⇑*i*Pn	Pn	10 52 41.3	+1.1
TTG				*e*Sn	Sn	10 53 51.6	-1.8
DRME	**Dracevica, Mon**	**6.55**	**107**	⇑*i*Pn	Pn	10 52 41.6	+0.8
DRME				*e*Sn	Sn	10 53 51.4	-3.0
DRME	**Dracevica, Mon**	**6.55**	**107**	*e*Pn	Pn	10 52 41.4	+0.6
KOME	**Kolasin**	**6.55**	**101**	⇓*i*Pn	Pn	10 52 42.2	+1.2
KOME				*e*Sn	Sn	10 53 52.9	-1.8
DIVS	**Divibare**	**6.65**	**89**	*e*Pn	Pn	10 52 40.3	-2.0
ULC	**Ulcinj**	**6.68**	**109**	⇓*i*Pn	Pn	10 52 43.1	+0.5
ULC				*e*Sn	Sn	10 53 55.3	-2.4
IVA	**Berane**	**6.81**	**100**	⇓*i*Pn	Pn	10 52 45.6	+1.1
IVA				*e*Sn	Sn	10 53 59.1	-2.0
BRG	**Berggiesshubel**	**6.82**	**17**	PN	Pn	10 52 45.0	+0.5
BRG				SN	Sn	10 53 56.4	-4.6
BRG				SG	Sb	10 54 41.2	+16
	comp=N,20nm,1.0s						
VYHS	**Vyhne**	**6.92**	**51**	*e*PN	Pn	10 52 45.6	-0.3
VYHS				*e*SN	Sn	10 53 57.5	-6.1
PVY	**Plav**	**6.94**	**102**	⇑*i*Pn	Pn	10 52 47.6	+1.3
PVY				*e*Sn	Sn	10 54 01.9	-2.4
GIVF	**Givet**	**6.97**	**327**	*e*P	Pn	10 52 48.7	+2.1
GIVF				*e*Sn	Sn	10 53 58.1	-6.7
	comp=N,5.9nm,0.3s						
MEM	**Membach**	**6.98**	**334**	P	Pn	10 52 47.0	+0.3
MEM				S	Sn	10 54 00.3	-4.7
DPC	**Dobruska-Polom**	**7.05**	**31**	*e*SN	Sn	10 54 00.9	-5.8
DOU	**Dourbes**	**7.06**	**326**	S	Sn	10 54 02.6	-4.3
CLL	**Collm**	**7.07**	**12**	*e*Pg	Pb	10 53 21.0	+13
CLL				*e*Sn	Sn	10 53 55.0	-12
CLL				*e*		10 54 03.0	
CLL				*e*		10 54 37.0	
CLL				*e*Sg	Sb	10 54 49.0	+17
	comp=Z,38nm,1.0s						
EPF	**Esparros**	**7.66**	**263**	*e*P	Pn	10 52 59.0	+2.9
KEST	**Kesra**	**8.73**	**188**	Pn	Pn	10 53 09.3	-1.5
	comp=Z,0.2nm,0.3s,baz=284,slow=8.3,SNR=2.0						
ESDC	**Sonseca Array**	**11.91**	**252**	Pn	Pn	10 53 55.9	+1.6
	comp=Z,0.3nm,0.3s,baz=57,slow=13,SNR=4.9						
TORD	**Torodi Ar. Bea**	**32.10**	**197**	P	P	10 57 30.1	-1.0
	comp=Z,2.0nm,0.6s,baz=11,slow=8.8,SNR=15						
MKAR	**Makanchi Array**	**48.51**	**60**	P	P	10 59 46.9	+0.4
	comp=Z,0.6nm,0.7s,baz=297,slow=5.3,SNR=5.0						
MKAR				PcP	PcP	11 01 12.5	+0.4
	comp=Z,0.4nm,0.7s,baz=286,slow=5.8,SNR=2.7						
YKA	**Yellowknife Ar**	**64.84**	**335**	P	P	11 01 42.0	-0.1
	comp=Z,0.2nm,0.6s,baz=42,slow=6.0,SNR=3.6						
TXAR	**Lajitas Array**	**85.34**	**307**	P	P	11 03 41.9	+0.9
	comp=Z,0.2nm,0.6s,baz=64,slow=4.1,SNR=3.9						

MEX ***19*** *11:00:40.2±1.0, 16°.04N×99°.24W, h21km±22km, MD4.4*
IDC ***19*** *11:00:40.8±3.7, 16°.49N×98°.96W, h0km, mb4.1/5, mb1 4.2/9, mb1mx3.9/40, mbtmp3.9/9, ML3.3/4, MS3.3/7, Ms1 3.3/7, ms1mx3.0/25, Error ellipse: s-maj=79.0km s-min=19.0km az=22.0*
NEIC ***19*** *11:00:42.6±2.1, 16°.38N×98°.99W, h17km±8km, mb4.3/104, MD4.4(MEX), Error ellipse: s-maj=14.3km s-min=5.5km az=205.0*
ISC 19 11:00:37.0±1.5,**16°.12N**±0°.06×**99°.19W**±0°.03,**h2**km±9km, **n255**,σ1°.**90**/275,**mb4.4**/83,**MS3.2**/4,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
ACP2	**Acapulco**	**1.00**	**318**	*e*P	Pg	11 00 55.5		-0.7
ACP2				*i* S	Sg	11 01 08.8		-0.4
PNIG	**Pinotepa**	**1.06**	**75**	*e*Pg	Pg	11 00 57.7		+0.4
PNIG				*e*Sn	Sg	11 01 10.7		-0.3
PNIG	**Pinotepa**	**1.06**	**75**	*i* P	Pg	11 00 57.7		+0.4
PNIG				*i* S	Sg	11 01 10.7		-0.3
CAIG	**El Cayaco**	**1.38**	**312**	*e*P	Pn	11 01 01.5		-1.9
CAIG				*e*		11 01 17.8		
CAIG	**El Cayaco**	**1.38**	**312**	*e*P	Pn	11 01 01.5		-1.9
CAIG				*i* S	Sb	11 01 17.8		-4.0
TLIG	**Tlapa**	**1.55**	**23**	*e*Pn	Pn	11 01 05.6		-0.3
TLIG				*e*Sn	Sn	11 01 25.1		-1.6
TLIG	**Tlapa**	**1.55**	**23**	*e*P	Pn	11 01 05.0		-0.8
TLIG				*e*S	Sn	11 01 24.4		-2.3
MEIG	**Mezcala**	**1.84**	**347**	*e*Pn	Pn	11 01 09.2		-0.6
MEIG	**Mezcala**	**1.84**	**347**	*i* P	Pn	11 01 09.2		-0.6
PLIG	**Platanillo**	**2.28**	**353**	*e*Pn	Pn	11 01 15.9		+0.1
PLIG				*e*Sn	Sn	11 01 42.7		-1.8
PLIG	**Platanillo**	**2.28**	**353**	*e*P	Pn	11 01 15.9		+0.1
PLIG				*e*S	Sn	11 01 42.7		-1.8
ARIG	**Puente Sto Nin**	**2.42**	**333**	*e*P	Pn	11 01 17.7		+0.1
ARIG				*e*S	Sn	11 01 45.4		-2.4
VHO	**Vista Hermosa**	**2.54**	**68**	*e*Pn	Pn	11 01 19.6		+0.1
VHO				*e*Sg	Sn	11 01 49.9		-1.2
VHO	**Vista Hermosa**	**2.54**	**68**	*e*P	Pn	11 01 19.6		+0.1
VHO				*i* S	Sn	11 01 49.9		-1.2
ZIIG	**Zihuatanejo**	**2.63**	**304**	*e*Pn	Pn	11 01 20.4		-0.1
ZIIG				*e*Sn	Sn	11 01 49.8		-3.3
ZIIG	**Zihuatanejo**	**2.63**	**304**	*e*P	Pn	11 01 20.4		-0.1
ZIIG				*e*S	Sn	11 01 49.8		-3.3
YAIG	**Yautepec**	**2.73**	**2**	*e*Pn	Pn	11 01 21.2		-0.8
YAIG				*e*Sn	Sn	11 01 54.5		-1.2
YAIG	**Yautepec**	**2.73**	**2**	*e*P	Pn	11 01 21.2		-0.8
YAIG				*e*S	Sn	11 01 54.5		-1.2
TPIG	**Tehuac#an**	**2.88**	**37**	*e*Pn	Pn	11 01 24.2		+0.1
TPIG	**Tehuac#an**	**2.88**	**37**	*i* P	Pn	11 01 24.2		+0.1
TPIG				*e*S	Sn	11 01 58.6		-0.8
PPM	**Popocatepetl**	**2.98**	**10**	*e*Pn	Pn	11 01 25.2		-0.6
PPM	**Popocatepetl**	**2.98**	**10**	*e*P	Pn	11 01 25.2		-0.6
PPM				*e*S	Sn	11 02 02.1		-0.3
UNM	**Universidad Na**	**3.19**	**0**	*e*P	Pn	11 01 31.5		+3.0
UNM				*e*S	Sn	11 02 07.0		-0.3
DEIG	**Demacu**	**4.16**	**2**	*e*Pg	Pb	11 01 48.8		-2.4
DEIG				*e*Sn	Sn	11 02 21.4		-10
DEIG	**Demacu**	**4.16**	**2**	*e*P	Pb	11 01 48.8		-2.4
DEIG				*i* S	Sn	11 02 21.4		-10
CMIG	**Matias Romero**	**4.24**	**76**	Pn	Pn	11 01 42.4		-0.3
	3.7nm,0.3s,baz=257,slow=9.6,SNR=60						
CMIG				Sn	Sn	11 02 30.0		-2.9
	24nm,0.3s,baz=161,slow=18,SNR=11						
CMIG				Lg	Lg	11 02 55.8		
	13nm,0.3s,baz=346,slow=8.8,SNR=5.8						
CMIG				LR	LR	11 03 24.8		
	comp=Z,364nm,20.3s,baz=259,slow=42						
LVIG	**Laguna Verde**	**4.45**	**36**	*e*Pn	Pn	11 01 43.0		-2.6
LVIG				*e*Sn	Sn	11 02 37.3		-0.7
LVIG	**Laguna Verde**	**4.45**	**36**	*i* P	Pn	11 01 45.0		-0.6
LVIG				*e*S	Sn	11 02 37.3		-0.7
MMIG	**Aquila**	**4.52**	**299**	*e*Pn	Pn	11 01 45.3		-1.2
MMIG	**Aquila**	**4.52**	**299**	*e*P	Pn	11 01 45.3		-1.2
EZ5V		**5.37**	**309**	*e*P	Pn	11 02 02.6		+4.1
EZ5V				*e*S	Sn	11 03 05.8		+4.7
CCIG	**Comitan**	**6.78**	**88**	*e*Pn	Pn	11 02 16.0		-1.8
ZAIG	**Zacatecas**	**7.34**	**335**	*e*Pn	Pn	11 02 29.8		+4.2
APG	**El Apazote**	**8.48**	**96**	Pn	Pn	11 02 44.4		+3.2
	0.2nm,0.3s,baz=38,slow=8.6,SNR=2.9						
APG				Sn	Sn	11 04 14.6		-3.2
	0.5nm,0.3s,baz=68,slow=18,SNR=2.0						
APG				Lg	Lg	11 05 05.0		
	0.2nm,0.3s,baz=100,slow=17,SNR=2.3						
LNIG	**Linares**	**8.74**	**358**	*e*Pn	Pn	11 02 44.5		0.0
TEIG	**Tepich**	**11.15**	**67**	*e*Pn	Pn	11 03 17.0		-0.5
LTX	**Lajitas**	**13.78**	**343**	*e*Pn	Pn	11 03 56.4		+2.7
TXAR	**Lajitas Array**	**13.78**	**343**	Pn	Pn	11 03 56.4		+2.7
	0.0nm,0.3s,baz=164,slow=13,SNR=4.3						
TXAR				LR	LR	11 09 04.7		
	comp=Z,159nm,18.9s,baz=0.0,slow=37						
WHTX	**Lake Whitney,**	**15.88**	**5**	*e*Pn	Pn	11 04 21.8		+0.1
	19nm,0.8s						
ABTX	**Abilene, Hawle**	**16.44**	**359**	*e*Pn	Pn	11 04 29.3		+0.4
	12nm,1.0s						
ABTX	**Abilene, Hawle**	**16.44**	**359**	P	P	11 04 32.1		+0.3
	baz=178						
MNTX	**Cornudas Mount**	**16.50**	**341**	*e*Pn	P	11 04 31.9		-0.6
	4.2nm,1.1s						
GDL2	**Guadalupe Moun**	**16.68**	**345**	*e*P	P	11 04 35.8		+1.2
319A	**Douglas**	**17.76**	**331**	*e*P	P	11 04 49.1		+2.6
	8.7nm,0.8s						
MSTX	**Muleshoe**	**18.06**	**350**	*e*P	P	11 04 50.9		+1.0
	9.9nm,0.8s						
MSTX	**Muleshoe**	**18.06**	**350**	P	P	11 04 50.6		+0.8
	baz=168,SNR=5.9						
AMTX	**Amarillo**	**18.82**	**354**	*e*Pn	Pn	11 04 58.7		+0.2
	12nm,0.8s						
AMTX	**Amarillo**	**18.82**	**354**	P	Pn	11 04 59.7		+1.1
	baz=172						
MIAR	**Mount Ida**	**19.03**	**14**	*e*P	P	11 04 59.7		-0.6
	7.0nm,0.9s						
BNM	**Barren Site**	**19.16**	**341**	*e*P	Pn	11 05 04.7		+1.8
TUC	**Tucson**	**19.25**	**329**	*e*P	Pn	11 05 07.0		+3.2
	4.9nm,0.9s						
TUC	**Tucson**	**19.25**	**329**	P	Pn	11 05 07.2		+3.4
	baz=143						
LENM	**Lemitar**	**19.29**	**340**	*e*P

GOGA	Godfrey	22.32	37	P		P	11 05 35.5	-0.5
	baz=223							
Y12C	Blythe	22.34	325	eP		P	11 05 39.1	+2.8
	11nm,0.9s							
Y12C	Blythe	22.34	325	P		P	11 05 39.6	+3.3
	baz=137							
WVT	Waverly	22.35	25	eP		P	11 05 35.5	-0.8
	13nm,0.9s							
WVT	Waverly	22.35	25	P		P	11 05 35.5	-0.8
	baz=210							
155A	Kite	22.35	40	P		P	11 05 35.0	-1.3
	baz=227							
X51A	Calhoun	22.43	32	P		P	11 05 35.8	-1.4
	baz=218							
V48A	Smith Brothers	22.44	27	eP		P	11 05 34.5	-2.8
	10.0nm,0.9s							
V48A	Smith Brothers	22.44	27	P		P	11 05 36.6	-0.8
	baz=212							
IKP	In-Ko-Pah, Jac	22.49	320	P		P	11 05 42.0	+4.1
	baz=132							
SWSC	Sam W. Stewart	22.50	321	P		P	11 05 41.5	+3.5
	baz=133							
PDMCI	Parker Dam,Lak	22.55	326	P		P	11 05 41.8	+3.3
	baz=139							
Z54A	Sparta	22.55	38	P		P	11 05 36.3	-2.3
	baz=225							
MVCO	Mesa Verde	22.57	340	eP		P	11 05 40.9	+1.9
	18nm,1.1s							
MVCO	Mesa Verde	22.57	340	P		P	11 05 40.9	+1.9
	baz=156,SNR=7.9							
S22A	4UR Ranch, Cre	22.57	344	eP		P	11 05 41.6	+2.6
	8.9nm,1.0s							
S22A	4UR Ranch, Cre	22.57	344	P		P	11 05 41.3	+2.3
	baz=160,SNR=11							
U47A	Clarksville	22.84	25	P		P	11 05 41.8	+0.3
	baz=210,SNR=5.1							
V49A	McMinnville	22.88	29	P		P	11 05 41.6	-0.4
	baz=214							
CCM	Cathedral Cave	22.95	16	P		P	11 05 42.8	+0.2
	baz=200							
CLTN	Cedars of Leba	22.95	28	eP		P	11 05 40.7	-2.0
	6.6nm,1.2s							
X52A	Dahlonega	22.96	34	P		P	11 05 41.5	-1.4
	baz=220							
KSCO	Kaye Shedlock'	23.00	353	eP		P	11 05 44.5	+1.1
	11nm,0.9s							
KSU1	Kansas State U	23.01	5	P		P	11 05 44.5	+1.3
	baz=186							
W13A	Hualapai Mount	23.03	328	eP		P	11 05 46.9	+3.1
	8.0nm,1.2s							
Y54A	Tignall	23.09	37	P		P	11 05 41.8	-2.4
	baz=224							
FVM	French Village	23.11	18	eP		P	11 05 43.8	-0.6
	6.2nm,0.8s							
T46A	Princeton	23.12	24	P		P	11 05 43.8	-0.6
	baz=208							
V50A	Pikevile	23.18	30	P		P	11 05 43.8	-1.3
	baz=216							
S44A	Carbondale	23.21	20	P		P	11 05 45.5	+0.1
	baz=205							
U48A	Cassie Pea, Po	23.21	27	P		P	11 05 45.3	-0.2
	baz=212,SNR=7.2							
SIUC	Southern Illin	23.24	20	eP		P	11 05 45.0	-0.7
	16nm,1.0s							
CPCT	Cooper Cave	23.29	32	eP		P	11 05 43.2	-3.0
	12nm,0.9s							
W52A	Murphy	23.32	33	eP		P	11 05 43.7	-2.8
	13nm,1.0s							
W52A	Murphy	23.32	33	P		P	11 05 45.0	-1.5
	baz=220							
U15A	North Rim	23.34	333	eP		P	11 05 49.9	+2.8
	10nm,1.0s							
T47A	Sharon Grove	23.39	25	eP		P	11 05 47.2	0.0
	15nm,1.0s							
T47A	Sharon Grove	23.39	25	P		P	11 05 46.6	-0.6
	baz=210							
PV01	Paradox Valley	23.43	341	eP		P	11 05 49.0	+1.1
	2.9nm,0.9s							
PV13	Radium Mtn., P	23.54	341	eP		P	11 05 50.5	+1.6
	3.6nm,0.8s							
U49A	Red Boiling Sp	23.55	28	P		P	11 05 47.9	-0.9
	baz=214							
PV12	Saucer Basin,	23.68	341	eP		P	11 05 51.4	+1.1
	13nm,1.2s							
PV07	Paradox Valley	23.74	341	eP		P	11 05 52.9	+2.0
	15nm,1.3s							
PV04	Paradox Valley	23.78	341	eP		P	11 05 53.2	+2.0
	9.5nm,0.9s							
T48A	Bowling Green	23.78	26	P		P	11 05 51.4	+0.3
	baz=212,SNR=6.9							
PV14	Lion Creek, Pa	23.80	341	eP		P	11 05 53.4	+1.9
	21nm,1.6s							
PV23	Carpenter Ridg	23.86	341	eP		P	11 05 53.9	+1.7
	15nm,1.3s							
PV22	Blue Mesa, Par	23.87	341	eP		P	11 05 53.3	+1.1
	12nm,1.3s							
PV21	Cone Mtn., Par	23.95	341	eP		P	11 05 55.3	+2.3
	5.8nm,1.0s							
SMCO	Snowmass	23.96	345	eP		P	11 05 55.2	+2.0
	30nm,1.4s							
KNB	Kanab	24.07	332	eP		P	11 05 54.7	+0.7
	8.5nm,1.1s							
PKCU	Pink Cliffs	24.20	334	eP		P	11 05 57.8	+2.3
	13nm,1.1s							
ISCO	Idaho Springs	24.25	348	eP		P	11 05 57.8	+2.0
	16nm,1.3s							
ISCO	Idaho Springs	24.25	348	P		P	11 05 57.3	+1.5
	baz=164,SNR=6.0							
T50A	Nancy	24.40	29	P		P	11 05 56.0	-0.8
	baz=215							
MTPU	Mount Pierson	24.66	335	eP		P	11 06 02.3	+2.7
	15nm,1.2s							
R47A	Wooly Knot Far	24.74	24	P		P	11 05 59.5	-0.5
	baz=210,SNR=8.0							
SHPR	Sheep Range	24.77	328	eP		P	11 06 03.5	+3.0
	4.5nm,1.0s							
WCI	Wyandotte Cave	24.78	25	eP		P	11 05 58.5	-1.8
	15nm,0.9s							
V54A	Nebo	24.90	35	P		P	11 05 58.9	-2.5
	baz=222							
SRU	San Rafael Swe	24.96	339	eP		P	11 06 04.1	+1.9
	8.6nm,0.9s							
Q16A	Castle Valley	25.02	337	eP		P	11 06 05.0	+2.2
	6.7nm,1.0s							
MSU	Marysvale	25.06	335	eP		P	11 06 05.6	+2.5
O20A	White River Ci	25.19	344	eP		P	11 06 07.3	+3.0
	21nm,1.2s							
O20A	White River Ci	25.19	344	P		P	11 06 06.7	+2.5
	baz=159,SNR=5.3							
V55A	Taylorsville	25.36	36	P		P	11 06 03.1	-2.4
	baz=224							
P17A	Butcher Ranch,	25.36	339	eP		P	11 06 08.4	+2.6
	6.8nm,1.2s							
N23A	Red Feather La	25.37	348	eP		P	11 06 08.0	+2.0
	6.8nm,1.0s							
N23A	Red Feather La	25.37	348	P		P	11 06 08.3	+2.4
	baz=164,SNR=5.5							
TMUT	Trail Mountain	25.37	338	eP		P	11 06 08.0	+2.0
	8.9nm,1.1s							
S51A	Beattyville	25.48	30	eP		P	11 06 04.9	-1.8
	14nm,1.0s							
U54A	Nelsons Funny	25.52	34	eP		P	11 06 03.3	-3.8
	23nm,1.0s							
Q48A	North Vernon	25.61	25	P		P	11 06 07.5	-0.2
	baz=211							
PHWY	Pilot Hill	25.67	349	eP		P	11 06 10.9	+2.2
	9.0nm,0.9s							
TPNV	Topopah Spring	25.67	327	eP		P	11 06 11.0	+2.4
	12nm,1.1s							
TPNV	Topopah Spring	25.67	327	P		P	11 06 11.4	+2.7
	baz=139							
MPMC	Manual Prospec	25.69	324	P		P	11 06 11.4	+2.6
	baz=135							
HDIL	Hopedale	25.82	17	eP		P	11 06 08.7	-1.0
	19nm,0.8s							
HDIL	Hopedale	25.82	17	P		P	11 06 10.0	+0.3
	baz=202							
U55A	TA2, Sparta	25.92	35	P		P	11 06 09.2	-1.5
	baz=223							
N43A	Stutzman Famil	26.21	17	P		P	11 06 13.5	+0.3
	baz=202							
N44A	Piper City	26.39	19	P		P	11 06 14.4	-0.5
	baz=204							
RWWY	Rawlins	26.40	346	eP		P	11 06 16.5	+1.2
	29nm,1.5s							
R11A	Troy Canyon, C	26.43	330	eP		P	11 06 15.8	+0.4
	12nm,1.5s							
R11A	Troy Canyon, C	26.43	330	P		P	11 06 18.7	+3.2
	baz=142							
P49A	Miami Univ. Ec	26.54	26	P		P	11 06 15.8	-0.4
	baz=212,SNR=5.5							
O48A	Farmland	26.97	24	P		P	11 06 20.0	-0.1
	baz=211,SNR=12							
P50A	Jamestown	26.99	27	P		P	11 06 19.8	-0.5
	baz=214							
L42A	Oliver, Polo	27.07	16	eP		P	11 06 18.6	-2.3
	11nm,0.9s							
L42A	Oliver, Polo	27.07	16	P		P	11 06 21.2	+0.3
	baz=200							
P51A	Williamsport	27.21	28	eP		P	11 06 22.9	+0.6
	13nm,0.8s							
O49A	Covington	27.24	25	eP		P	11 06 22.6	0.0
	10nm,0.8s							
O49A	Covington	27.24	25	P		P	11 06 21.9	-0.7
	baz=212							
N47A	Urbana	27.30	23	P		P	11 06 22.7	-0.4
	baz=209,SNR=7.1							
N48A	Decatur	27.54	24	P		P	11 06 25.1	-0.2
	baz=210							
HWUT	Hardware Ranch	27.55	340	eP		P	11 06 26.4	+0.9
	5.4nm,1.1s							
ECSD	EROS Data Cent	27.61	4	eP		P	11 06 26.2	+0.4
	8.0nm,1.2s							
ECSD	EROS Data Cent	27.61	4	P		P	11 06 26.9	+1.0
	baz=185							
NV11	Mina Array Sit	27.78	327	eP		P	11 06 30.5	+2.9
	0.5nm,1.3s							
NV01	Mina Array Sit	27.86	327	eP		P	11 06 31.6	+3.2
NVAR	Mina Array Bea	27.86	327	P		P	11 06 31.6	+3.2
	1.9nm,0.9s,baz=150,slow=10,SNR=9.7							
BW06	Boulder Array	28.00	344	eP		P	11 06 31.4	+1.8
	12nm,1.3s							
PD31	Pinedale Array	28.00	344	eP		P	11 06 31.5	+1.8
	10nm,1.2s							
PDAR	Pinedale Array	28.00	344	P		P	11 06 30.9	+1.2
	2.1nm,0.8s,baz=141,slow=9.7,SNR=14							
PDAR				LR		LR	11 18 37.2	
	comp=Z,85nm,18.4s,baz=145,slow=39							
ELK	Elko	28.21	334	LR		LR	11 19 32.2	
	comp=Z,115nm,20.1s,baz=260,slow=40							
KVN	Kaiserville	28.22	328	eP		P	11 06 34.3	+2.8
	3.0nm,1.0s							
L47A	Sherwood	28.44	22	P		P	11 06 32.1	-1.2
	baz=209							
L48A	N Adams	28.70	23	P		P	11 06 35.0	-0.6
	baz=210							
SDV	Santo Domingo	28.77	101	LR		LR	11 19 12.3	
	comp=Z,48nm,19.7s,baz=247,slow=39							
LOHW	Long Hollow	29.07	343	eP		P	11 06 41.3	+2.2
	2.9nm,0.8s							
FXWY	Fox Creek	29.22	342	eP		P	11 06 42.1	+1.6
	3.3nm,0.9s							
MOOW	Moose Ponds	29.24	343	eP		P	11 06 42.2	+1.6
	2.7nm,0.9s							
RLMT	Red Lodge	30.13	346	eP		P	11 06 49.9	+1.4
	9.3nm,1.4s							
HLID	Hailey	30.27	338	P		P	11 06 52.4	+2.7
	baz=150							
F40A	Park Falls	30.66	12	P		P	11 06 53.4	+0.4
	baz=197							
N57A	Milroy	30.89	33	P		P	11 06 53.5	-1.5
	baz=224							
I48A	Sherman Twp	30.90	22	P		P	11 06 54.3	-0.8
	baz=210							
LAO	LASA Array	31.04	351	P		P	11 06 57.5	+1.2
	baz=166							
WVOR	Wild Horse Val	31.08	331	eP		P	11 06 59.4	+2.6
	6.8nm,0.6s							
M56A	Emporium	31.10	31	P		P	11 06 54.7	-2.2
	baz=222							
BOZ	Bozeman (W)	31.19	343	eP		P	11 07 00.2	+2.5
	2.3nm,0.9s							
BOZ	Bozeman (W)	31.19	343	P		P	11 07 00.1	+2.3
	baz=156							
DLMT	Dillon	31.25	342	eP		P	11 07 01.2	+2.9
	8.4nm,1.2s							
O59A	Robesonia	31.31	35	P		P	11 06 56.2	-2.5
	baz=226							
MDND	Maddock	31.64	359	eP		P	11 07 01.5	0.0
	33nm,1.0s							
MDND	Maddock	31.64	359	P		P	11 07 02.6	+1.1
	baz=179							
J08A	Circle Bar Ran	31.73	333	eP		P	11 07 04.7	+2.1
	11nm,1.4s							
E43A	Lone Tree Farm	31.84	16	P		P	11 07 03.6	+0.3
	baz=202							
D41A	Chassel	32.09	14	P		P	11 07 06.0	+0.5
	baz=199							
AGMN	Agassiz Nation	32.20	4	eP		P	11 07 06.8	+0.4
	14nm,0.8s							
AGMN	Agassiz Nation	32.20	4	P		P	11 07 07.3	+0.9
	baz=186,SNR=6.8							
EYMN	Ely	32.37	10	P		P	11 07 07.3	-0.6
	baz=194							
C40A	Isle Royale Na	32.77	13	P		P	11 07 11.7	+0.3
	baz=198							
F49A	Sandfield	32.86	22	P		P	11 07 11.6	-0.7
	baz=211							
EGMT	Eagleton	32.98	347	eP		P	11 07 13.6	+0.2
	6.6nm,0.7s							
MSO	Missoula	32.98	341	eP		P	11 07 15.6	+2.1
	2.1nm,0.8s							
MSO	Missoula	32.98	341	P		P	11 07 15.0	+1.5
	baz=153							
D46A	Sault St. Mari	33.16	19	P		P	11 07 14.5	-0.4
	baz=207							
J04D	Umpqua Nationa	33.35	329	P		P	11 07 18.8	+1.9
	baz=137							
F10A	Beach Ranch, E	33.37	337	eP		P	11 07 18.7	+1.9
	6.2nm,0.8s							
G08A	Pilot Rock	33.49	334	eP		P	11 07 20.1	+2.1
	5.8nm,1.1s							
D47A	Chapleau	33.61	20	P		P	11 07 18.2	-0.6
	baz=208							
BUKO	Buck Lake	33.62	25	P		P	11 07 17.4	-1.6
	baz=216							
I05D	Terrebonne, OR	33.80	331	P		P	11 07 23.1	+2.5
	baz=139							
ULM	Lac du Bonnet	34.15	4	P		P	11 07 24.4	+1.0
	7.0nm,0.8s,baz=200,slow=7.6,SNR=5.2							
ULM	Lac du Bonnet	34.15	4	eP		P	11 07 22.3	-1.1
	7.1nm,0.8s							
C09A	Chrisman Ranch	35.29	338	eP		P	11 07 34.9	+1.6
	4.9nm,0.7s							
E04D	Cinebar	36.05	332	P		P	11 07 42.5	+2.7
	baz=139							
LSQQ	Lebel-sur-Quev	37.52	24	P		P	11 07 51.9	-0.4
	baz=216							
MATQ	Matagami	37.83	23	P		P	11 07 54.7	-0.3
	baz=215							
FFC	Flin Flon	38.59	357	eP		P	11 08 02.3	+1.0
	43nm,0.8s							
CHGQ	Chibougamau	39.24	25	P		P	11 08 05.9	-0.9
	baz=219							
YKA	Yellowknife Ar	47.58	350	P		P	11 09 14.7	+0.8
	1.4nm,0.8s,baz=159,slow=7.4,SNR=13							
YKA				LR		LR	11 30 32.3	
	comp=Z,6.0nm,18.9s,baz=167,slow=38							
YKB5	Yellowknife Ar	47.58	350	eP		P	11 09 14.7	+0.8
EGAK	Eagle	56.25	340	eP		P	11 10 20.3	+1.7
	2.4nm,0.8s							
INK	Inuvik	56.55	345	eP		P	11 10 22.2	+1.6
	3.2nm,0.8s							
HDA	Harding Lake	58.05	338	P		P	11 10 33.0	+1.6
	baz=123							
ILAR	Eielson Array	58.23	338	P		P	11 10 34.2	+1.6
	1.4nm,1.0s,baz=143,slow=6.2,SNR=10							
ILB	Eielson Array	58.23	338	eP		P	11 10 33.6	+1.0
	6.4nm,1.1s							
TOLK	Toolik Lake Re	61.23	341	P		P	11 10 54.5	+1.2
	baz=122							
LZH	Lanzhou	123.69	338	ePKP		PKPdf	11 19 31.3	-5.8
LZH				pPKP		sPKPdf	11 19 42.8	+6.8
LZH				sPKP			11 19 45.4	
KSH	Kashi	124.47	5	ePKP		PKPdf	11 19 35.0	-3.5
CD2	Chengdu	128.29	335	Pdif		Pdif	11 16 27.6	-2.7

*BJI **19** 11:05:38.5±0.0, 14°.75N×122°.11E, h34km, mb4.5/30, mB4.6/28, Ms4.1/26, Ms7 3.9/17*
*NEIC **19** 11:05:40.1±1.6, 14°.87N×121°.98E, h35km±3km, mb4.7/43, Error ellipse: s-maj=17.0km s-min=10.2km az=83.0*
NEIC Felt [III PIVS] at Arayat, Infanta, Labo and Quezon City; [II PIVS] at Antipolo, Jumalig, Makati City, Mandaluyong City, Muntinlupa City, Palayan City, Pasay, Pasig, San Jose del Monte and Taguig City; [I PIVS] at Angeles City and Caloocan City. Felt [III] at Manila. Also felt at Bulacan, Cabanatuan, Cainta, Daet, Gapan and Polillo.
*ISCJB **19** 11:05:42.3±0.3, 15°.02N±0°.02×122°.09E±0°.03, h64km±2km, mb4.6/70, Error ellipse: s-maj=5.1km s-min=2.6km az=165.4*
*IDC **19** 11:05:42.5±0.7, 14°.85N×122°.05E, h54km±6km, mb4.1/25, mb1 4.2/26, mb1mx4.1/43, mbtmp4.3/26, MS3.7/20, Ms1 3.7/20, ms1mx3.5/34, Error ellipse: s-maj=16.8km s-min=10.0km az=78.0*
*MAN **19** 11:05:42.9, 15°.04N×122°.03E, h44km, mb5.6, ML4.6, MS4.9*
MAN INTENSITY IV - POLILIO AND BURDEOS QUEZON; INTENSITY III - LABO CAMARINES NORTE; INFANTA QUEZON; DINGALAN AND BALER AURORA; QUEZON CITY; ARAYAT PAMPANGA INTENSITY III - MARIA AURORA AURORA; PALAYAN CITY GABALDON ND GAPAN NUEVA ECIJA; PASIG CITY; MAKATI CITY; TAGUIG CITY; MANDALUYONG CITY; MUNTINLUPA CITY; PASAY CITY; ANTIPOLO CITY; SAN MATEO RIZAL; SAN JOSE DEL MONTE BULACAN; JOMALIG QUEZON; CAVINTI LAGUNA; JOSE PANGANIBAN CAMARINES NORTE; INTENSITY I - CALOOCAN CITY; ANGELES CITY.
*KLM **19** 11:05:43.0, 14°.91N×122°.49E, h30km, mb4.9*
*GCMT **19** 11:05:44.1±0.3, 15°.00N±0°.02×122°.19E±0°.02, h52km±3km, MW4.9/66, Moment Tensor Solution. s20,c20; s66,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.60±.20; $M_{\theta\theta}$1.05±.13; $M_{\phi\phi}$-2.65±.12; $M_{r\theta}$-1.44±.09; $M_{\theta\phi}$1.16±.09; $M_{\phi r}$0.19±.11; Best double couple: $M_0$2.96100×10^{16} NP1:ϕ_s310.00000°, δ65.00000°, λ43.00000°. NP2: ϕ_s198.00000°, δ52.00000°, λ147.00000°. Principal axes: T 2.8590, Plg48.0000°, Azm170.0000°; N 0.2040, Plg41.0000°, Azm335.0000°; P -3.0630, Plg8.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **19** 11:05:44.6±1.2, 15°N±7°×12°2E±°, h57km±11km, M4.7/24, mb4.8/24, mB5.2/11, Mw(mB)4.6/11*

ISC 19 11:05:43.1±0.5, 14°.99N±0°.03×122°.02E±0°.04, h57km±5km, h58km:pP-P, n176, σ1°81/185, mb4.6/70, MS3.8/26, 3C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
POLP	Polilio Island	0.28	197	eP	Pn	11 05 53.1		+0.4
POLP				eS	Sn	11 06 00.5		+0.8
BALP	Baler	0.86	330	eP	Pn	11 05 58.8		-0.4
BALP				eS	Sn	11 06 11.2		+0.1
TGY	Tagaytay City	1.38	230	P	Pn	11 06 07.9		+1.8
	4μm,0.3s,baz=68,slow=1.8,SNR=135							
TGY				S	Sn	11 06 25.9		+2.5
	4μm,0.3s,baz=89,slow=15,SNR=13							
TGY	Tagaytay City	1.38	230‖	eP	Pn	11 06 08.1		+2.0
BOAC	Boac	1.54	187	eP	Pn	11 06 09.4		+1.2
BOAC				eS	Sn	11 06 30.1		+3.0
SMPP	San Manuel, Pa	1.73	312	eP	Pn	11 06 10.6		-0.3
SMPP				eS	Sn	11 06 30.9		-1.1
AUQP	San Andres	1.78	159	eP	Pn	11 06 13.4		+1.9
AUQP				eS	Sn	11 06 38.4		+5.4
PGP	Puerto Galera	1.81	215‖	eP	Pn	11 06 12.8		+0.8
CAUP	Cauayan	1.95	354	eP	Pn	11 06 14.2		+0.3
CAUP				eS	Sn	11 06 38.6		+1.4
PALP	Palanan	2.09	11	eP	Pn	11 06 15.4		-0.4
PALP				eS	Sn	11 06 39.4		-1.3
SCZP	Santa Cruz	2.18	291	eP	Pn	11 06 17.1		+0.1
BOLP	Bolinao	2.46	304	eP	Pn	11 06 21.6		+0.9
OTRP	Odiongan	2.62	180	eP	Pn	11 06 23.9		+0.9
SJMP	San Jose	2.67	199	eP	Pn	11 06 25.1		+1.4
CVP	Callao Caves	2.70	356‖	iP	Pn	11 06 24.0		-0.1
ABRA	Dolores	2.92	335	eP	Pn	11 06 28.2		+1.1
ABRA				eS	Sn	11 07 06.7		+5.5
APYP	Conner	2.95	345	eP	Pn	11 06 28.3		+0.8
APYP				eS	Sn	11 07 01.4		-0.3
MMPH	Masbate	3.05	149	eP	Pn	11 06 32.2		+3.3
MMPH				i S	Sn	11 07 04.3		+0.1
BUSP	Coron	3.46	211	eP	Pn	11 06 35.0		+0.5
CNP	Catarman	3.56	134	eP	Pn	11 06 36.5		+0.6
CNP				eS	Sn	11 07 20.7		+4.0
CUYO	Cuyo Island	4.23	193	eP	Pn	11 06 45.1		-0.1
BESP	Borongan	4.74	135	eP	Pn	11 06 52.9		+0.9
PLP	Palo	4.77	143‖	iP	Pn	11 06 52.0		-0.5
PLP				eS	Sn	11 07 45.8		-0.8
LLP	Lapu-Lapu	5.02	158	eP	Pn	11 06 57.6		+1.7
LLP				eS	Sn	11 07 58.0		+5.4
BBP	Basco	5.42	359‖	iP	Pn	11 07 00.9		-0.4
BBP				i S	Sn	11 07 57.9		-4.5
MSLP	Maasin	5.57	150	eP	Pn	11 07 06.5		+3.1
SNPH	Sibulan	5.74	168‖	iP	Pn	11 07 10.3		+4.5
TPUB	Ta-pu	8.37	351	ePn	Pn	11 07 41.9		+0.1
YULB	Yu-li	8.38	355	ePn	Pn	11 07 38.7		-3.3
DAV	Davao City (W)	8.61	156	ePn	Pn	11 07 44.7		-0.4
SSLB	Suanglung	8.81	354	ePn	Pn	11 07 45.1		-2.7
SSLB				eSn	Sn	11 09 25.9		+0.3
NACB	Ninganchiao	9.14	358	ePn	Pn	11 07 51.2		-1.1
NACB				eSn	Sn	11 09 34.5		+0.7
YOJ	Yonaguni jima	9.46	5	ePn	Pn	11 07 55.8		-0.9
YOJ				eSn	Sn	11 09 41.0		-0.7
YHNB	Yeheng	9.65	356	ePn	Pn	11 07 57.7		-1.6
KKM	Kota Kinabalu	10.57	213	P	Pn	11 08 19.0		+7.0
QIZ	Qiongzhong	12.32	291	P	Pn	11 08 34.1		-1.7
QIZ				S	Sn	11 10 53.0		+1.4
QIZ				LR	LR			
	comp=N,480nm,13.2s							
QIZ				LR	LR			
	comp=E,210nm,12.3s							
GTOI	Gorontalo	14.30	176	P	Pn	11 08 54.9		-7.7
MRSI	Marisa	14.42	180	P	Pn	11 09 05.5		+1.2
SBUM	Sibu	15.78	219	eP	P	11 09 24.1		-0.6
	21nm,0.9s							
SBUM	Sibu	15.78	219	P	P	11 09 27.0		+2.4
APSI	Ampana	15.81	181	P	P	11 09 27.6		+2.6
LUWI	Luwuk	15.95	177	eP	Pn	11 09 23.0		-1.0
	278nm,1.3s							
LUWI	Luwuk	15.95	177	P	P	11 09 30.6		+4.0
NJ2	Nanjing	17.23	351	eP	P	11 09 41.3		+0.7
NJ2				pmax	pmax			
	comp=Z,12nm,0.5s							
KSM	Kuching	17.73	222	eP	Pn	11 09 42.7		-3.4
	33nm,1.2s							
KSM	Kuching	17.73	222	P	P	11 09 49.0		+2.7
TTSI	Tana Toraja	18.05	187	P	Pn	11 09 51.2		+1.1
SIJI	Sorong	18.22	149	P	Pn	11 09 53.3		+1.2
	2.4nm,0.3s,baz=329,slow=15,SNR=7.4							
GYA	Guiyang	18.32	311	P	P	11 09 51.4		-1.5
GYA				pP	pP	11 09 59.8		-5.4
GYA				PP	PnPn	11 10 06.4		0.0
GYA				S	S	11 13 19.9		+0.5
GYA				sS	sS	11 13 29.6		-10
GYA				SS	Sn	11 13 40.6		+23
GYA				pmax	pmax			
	comp=Z,10.0nm,0.7s							
GYA				pmax	pmax			
	comp=Z,110nm,4.8s

BAKI	Biak	21.28 138	P	P	11 10 25.3	+0.3
SRPI	Serui, Papua	21.88 139	P	P	11 10 34.6	+3.2
	357nm,0.9s,8μm					
MYKOM	Kota Tinggi	22.22 236	eP	P	11 10 31.3	-3.8
	27nm,1.2s					
XAN	Xi'an	22.36 330	P	P	11 10 37.8	+1.4
XAN			pP	pP	11 10 46.3	-2.3
XAN			pmax	pmax		
	comp=Z,98nm,3.7s					
XAN			LR	LR		
	comp=N,76nm,12.5s					
XAN			LR	LR		
	comp=E,230nm,22.6s					
CM31	Chiang Mai Arr	22.37 282	eP	P	11 10 34.9	-1.8
	8.5nm,0.6s					
CMAR	Chiang Mai Arr	22.37 282	P	P	11 10 38.9	+2.2
	6.4nm,1.0s,baz=94,slow=7.3,SNR=20					
CMAR			LR	LR	11 19 40.1	
	comp=Z,171nm,18.3s,baz=101,slow=37					
TPI	Tanjungpandan	22.66 220	P	P	11 10 41.3	+1.5
	35nm,1.0s					
KS15	Wonju Array Si	22.96 12	eP	P	11 10 43.1	+0.5
	17nm,1.4s					
KSRS	Korea Array	22.98 12	P	P	11 10 43.1	+0.3
	4.8nm,0.8s,baz=198,slow=11,SNR=18					
KSRS			LR	LR	11 20 07.8	
	comp=Z,164nm,20.9s,baz=201,slow=38					
CD2	Chengdu	23.05 317	P	P	11 10 43.4	-0.3
CD2			pmax	pmax		
	comp=Z,10.0nm,0.5s					
CD2			LR	LR		
	comp=N,820nm,13.9s					
CD2			LR	LR		
	comp=E,740nm,22.6s					
CD2			LR	LR		
	comp=Z,510nm,13.9s					
DSRI	Dabo	23.11 230	P	P	11 10 47.8	+3.4
	69nm,0.7s,9μm					
IPM	Ipoh	23.16 245	eP	P	11 10 43.4	-1.4
	25nm,0.9s					
IPM	Ipoh	23.16 245	P	P	11 10 45.0	+0.1
EDFI	Ende, Flores	23.59 181	P	P	11 10 49.7	+0.7
	26nm,1.5s,3μm					
PLAI	Plampang	24.04 190	P	P	11 10 54.6	+1.6
	71nm,1.1s					
GENI	Genyem	25.06 133	P	P	11 11 04.6	+2.2
	77nm,1.0s					
BATI	Baumata	25.09 176	P	P	11 11 01.6	-1.0
	90nm,0.7s,baz=318,slow=3.3,SNR=12					
BATI	Baumata	25.09 176	eP	P	11 11 01.6	-1.0
BATI			eP	P	11 11 01.6	-1.0
BATI	Baumata	25.09 176	P	P	11 11 02.3	-0.3
	55nm,0.9s					
PSI	Prapat	25.80 244	LR	LR	11 20 59.6	
	comp=Z,191nm,19.0s,baz=49,slow=36					
PSI	Prapat	25.80 244	eP	P	11 11 05.0	-4.2
	22nm,1.1s					
MAJO	Matsushiro	25.86 31	eP	P	11 11 12.1	+2.6
MJAR	Matsushiro Arr	25.87 31	P	P	11 11 12.1	+2.6
	0.9nm,0.5s,baz=180,slow=6.1,SNR=4.2					
MJAR			LR	LR	11 19 25.8	
	comp=Z,46nm,20.4s,baz=215,slow=32					
LEM	Lembang	25.96 214	LR	LR	11 22 08.6	
	comp=Z,141nm,19.5s,baz=5.0,slow=38					
MNSI	Mandailing Nat	26.28 240	P	P	11 11 14.7	+1.3
	20nm,0.6s					
LZH	Lanzhou	26.56 326	eP	P	11 11 14.6	-1.3
LZH			pP	pP	11 11 29.9	+0.3
LZH			sP	pwP	11 11 33.0	+1.3
LZH			PP	PnPn	11 12 05.6	+6.7
LZH			pmax	pmax		
	comp=Z,11nm,1.3s					
LZH			pmax	pmax		
	comp=Z,51nm,4.3s					
LZH			LR	LR		
	comp=N,370nm,15.0s					
LZH			LR	LR		
	comp=E,240nm,15.7s					
LZH			LR	LR		
	comp=Z,320nm,16.1s					
HHC	Hu-ho-hao-te	27.32 343	eP	P	11 11 25.4	+2.7
HHC			pmax	pmax		
	comp=Z,13nm,0.8s					
HHC			pmax	pmax		
	comp=Z,100nm,5.7s					
HHC			LR	LR		
	comp=N,330nm,17.1s					
HHC			LR	LR		
	comp=E,130nm,13.3s					
HHC			LR	LR		
	comp=Z,810nm,15.2s					
BRDH	Bariadhala	29.71 290	LR	LR	11 25 01.6	
	comp=Z,198nm,18.2s,baz=148,slow=39					
USRK	Ussuriysk Ar.	30.32 14	P	P	11 11 50.9	+1.8
	6.0nm,0.7s,baz=194,slow=3.9,SNR=11					
USRK			LR	LR	11 23 12.9	
	comp=Z,71nm,20.6s,baz=193,slow=34					
GTA	Gaotai	31.16 326	eP	P	11 11 59.9	+3.1
GTA			pP	pwP	11 12 11.3	-1.5
GTA			sP	sP	11 12 15.9	-1.3
GTA			pmax	pmax		
	comp=Z,38nm,6.7s					
GTA			LR	LR		
	comp=N,200nm,20.3s					
GTA			LR	LR		
	comp=E,150nm,20.3s					
GTA			LR	LR		
	comp=Z,210nm,21.0s					
ASAJ	Asahikawa	33.90 27	P	P	11 12 21.2	+0.7
	7.2nm,0.7s,baz=256,slow=9.7,SNR=7.0					
PMG	Port Moresby	34.76 133	eP	P	11 12 26.2	-2.1
	40nm,1.0s					
KLR	Kul'dur	35.06 11	P	P	11 12 31.9	+1.4
	6.1nm,1.1s,baz=215,slow=5.5,SNR=8.2					
KLR			LR	LR	11 27 12.9	
	comp=Z,136nm,20.9s,baz=186,slow=37					
SONA0	Songino Array	35.21 342	eP	P	11 12 33.4	+1.4
SONM	Songino Array	35.21 342	P	P	11 12 33.4	+1.4
	2.6nm,0.6s,baz=162,slow=9.7,SNR=15					
JIRN	Jiri	35.55 297	eP	P	11 12 36.9	+1.5
	23nm,0.5s					
COEN	Coen	35.57 143	eP	P	11 12 32.5	-2.7
	16nm,0.9s					
GUN	Gumba	35.87 297	eP	P	11 12 39.6	+1.5
	35nm,0.8s					
PKI	Pulchoki	36.20 296	eP	P	11 12 41.7	+0.8
	12nm,0.7s					
PKIN	Phulchoki	36.21 296	eP	P	11 12 41.9	+0.9
	9.1nm,0.6s					
WRAB	Tennant Creek	36.76 160	eP	P	11 12 43.2	-2.1
	10nm,0.6s					
WR1	Warramunga Arr	36.77 160	eP	P	11 12 43.0	-2.4
WRA	Warramunga Arr	36.77 160	P	P	11 12 42.9	-2.4
	12nm,0.5s,baz=343,slow=11,SNR=149					
WB2	Warramunga Arr	36.77 160	eP	P	11 12 42.9	-2.6
	15nm,0.9s					
DANN	Dangsing	37.79 297	eP	P	11 12 55.3	+0.9
	24nm,0.6s					
PYUN	Piuthan	38.41 296	eP	P	11 13 00.3	+0.8
	26nm,0.8s					
TLY	Talaya	39.45 342	eP	P	11 13 08.7	+1.1
	9.4nm,0.6s					
AS31	Alice Springs	40.14 163	eP	P	11 13 11.7	-2.0
	6.9nm,0.3s					
ASAR	Alice Springs	40.14 163	P	P	11 13 12.1	-1.6
	8.0nm,0.5s,baz=340,slow=7.0,SNR=228					
WMQ	Urumqi	40.97 321	eP	P	11 13 22.1	+1.7
CTAO	Charters Tower	42.23 145	eP	P	11 13 29.6	-1.3
	12nm,0.8s					
H11S3	WAKE ISLAND Hy	42.83 79	T	T	12 00 02.3	
	baz=274,slow=74,SNR=768					
H11S1	WAKE ISLAND Hy	42.84 79	T	T	12 00 02.9	
	baz=274,slow=74,SNR=545					
H11S2	WAKE ISLAND Hy	42.85 79	T	T	12 00 11.3	
	baz=274,slow=74,SNR=694					
H11N1	WAKE ISLAND Hy	42.99 77	T	T	12 00 29.8	
	baz=266,slow=73,SNR=98					
H11N2	WAKE ISLAND Hy	43.00 77	T	T	12 00 30.3	
	baz=266,slow=73,SNR=106					
H11N3	WAKE ISLAND Hy	43.01 77	T	T	12 00 30.6	
	baz=266,slow=73,SNR=85					
MORW	Morawa	44.18 188	eP	P	11 13 44.0	-2.5
	27nm,0.9s					
MK31	Makanchi Array	45.78 322	eP	P	11 13 58.7	-0.4
	5.0nm,0.8s					
MK32	Makanchi Array	45.78 322	eP	P	11 14 00.1	+1.0
MKAR	Makanchi Array	45.78 322	P	P	11 14 00.1	+1.0
	1.4nm,0.6s,baz=120,slow=8.9,SNR=14					
FORT	Forrest	45.88 173	eP	P	11 13 58.4	-1.4
	39nm,0.7s					
MAKZ	Makanchi	45.97 322	eP	P	11 14 00.4	-0.2
	3.9nm,0.8s					
PETK	Petropavlovsk-	47.28 29	P	P	11 14 11.8	+1.2
	6.4nm,0.7s,baz=205,slow=4.3,SNR=15					
PETK			LR	LR	11 36 02.2	
	comp=Z,20nm,18.4s,baz=226,slow=38					
PEA1	Petropavlovsk-	47.28 29	eP	P	11 14 11.8	+1.1
NWAO	Narrogin (SRO)	47.87 185	eP	P	11 14 13.7	-1.7
	35nm,0.8s					
ZAA0	Zalesovo Array	48.52 332	eP	P	11 14 20.8	+0.6
	8.3nm,0.8s					
ZALV	Zalesovo Beam	48.52 332	P	P	11 14 20.9	+0.7
	1.6nm,0.5s,baz=135,slow=7.2,SNR=5.2					
ZALV			pP	pP	11 14 35.1	+0.1
	2.6nm,0.6s,baz=123,slow=5.6,SNR=4.4					
ZAA1	Zalesovo Array	48.52 332	eP	P	11 14 20.9	+0.7
ZAA1			esP	pP	11 14 35.1	0.0
EIDS	Eidsvold	49.10 144	eP	P	11 14 23.7	-1.4
	29nm,1.4s					
BBOO	Buckleboo	49.39 164	eP	P	11 14 25.8	-1.3
	38nm,0.7s					
KURK	Kurchatov	49.85 325	eP	P	11 14 31.6	+1.2
	25nm,0.8s					
KURBB	Kurchatov Arra	49.85 325	P	P	11 14 31.7	+1.2
	3.1nm,0.5s,baz=122,slow=8.3,SNR=25					
KURBB			pP	pP	11 14 45.7	+0.4
	14nm,0.8s,baz=122,slow=7.8,SNR=19					
STKA	Stephens Creek	50.24 158	P	P	11 14 32.4	-1.2
	20nm,0.7s,baz=332,slow=7.7,SNR=59					
STKA	Stephens Creek	50.24 158	eP	P	11 14 32.3	-1.3
	4.7nm,0.7s					
GAR	Garm	51.11 308	eP	P	11 14 40.4	+0.1
	20nm,1.1s					
KK31	Karatay Array	52.01 313	eP	P	11 14 47.1	+0.3
	6.5nm,1.1s					
KKAR	Karatay Array	52.01 313	eP	P	11 14 46.8	-0.1
	6.5nm,1.1s					
SEY	Seymchan	52.41 17	P	P	11 14 50.0	+0.6
	2.1nm,0.7s,baz=210,slow=8.1,SNR=5.3					
BVAR	Borovoye Array	55.45 325	P	P	11 15 12.9	+1.1
	0.9nm,0.5s,baz=123,slow=7.7,SNR=7.5					
BRVK	Borovoye	55.52 325	eP	P	11 15 12.5	+0.2
	9.3nm,0.9s					
TOO	Toolangi	56.75 158	eP	P	11 15 20.5	-0.8
	21nm,0.7s					
TIXI	Tiksi	56.79 3	eP	P	11 15 20.0	-1.0
	4.9nm,0.8s					
NRIK	Noril'sk	58.46 346	LR	LR	11 42 17.5	
	comp=Z,84nm,20.9s,baz=162,slow=38					
GEYT	Alibeck	60.43 305	P	P	11 15 48.7	+1.7
	2.2nm,0.5s,baz=157,slow=8.0,SNR=5.5					
GEYT			LR	LR	11 44 18.5	
	comp=Z,61nm,20.8s,baz=35,slow=38					
ABKAR	Akbulak array	60.61 318	eP	P	11 15 48.1	+0.1
	3.9nm,1.0s					
AKTO	Aktyubinsk	62.06 319	P	P	11 15 57.5	-0.3
	0.8nm,0.4s,baz=94,slow=8.8,SNR=3.7					
ARU	Arti	63.02 326	P	P	11 16 02.7	-1.3
	1.6nm,0.6s,baz=93,slow=1.7,SNR=7.2					
ARU	Arti	63.02 326	eP	P	11 16 03.1	-0.9
	5.2nm,1.0s					
RAYN	Ar Rayn	72.01 290	eP	P	11 17 00.2	-1.3
	3.9nm,0.8s					
BKZ	Black Stump Fm	74.05 139	eP	P	11 17 13.0	-0.1
	16nm,0.9s					
ILAR	Eielson Array	77.03 26	P	P	11 17 28.6	-1.1
	0.3nm,0.7s,baz=224,slow=5.0,SNR=3.5					
ARA0	ARCESS Array S	78.34 339	eP	P	11 17 37.1	+0.2
ARCES	ARCESS Array B	78.34 339	P	P	11 17 37.1	+0.2
	1.1nm,0.5s,baz=76,slow=7.6,SNR=9.1					
FIA0	FINESS Array S	79.78 331	eP	P	11 17 44.6	-0.4
FINES	FINESS Array B	79.78 331	P	P	11 17 44.6	-0.4
	1.0nm,0.6s,baz=57,slow=7.0,SNR=7.0					
EPYK	Eagle Plains	80.84 24	eP	P	11 17 50.6	0.0
	12nm,1.5s					
BUR08	Bucovina Ar. S	83.58 317	eP	P	11 18 05.4	-0.1
	3.6nm,0.9s					
MLR	Muntele Rosu	83.64 315	LR	LR	11 58 39.7	
	comp=Z,52nm,21.4s,baz=102,slow=38					
KMBO	Kilima Mbogo	85.24 268	LR	LR	11 55 37.2	
	comp=Z,50nm,18.4s,baz=97,slow=35					
KMBO	Kilima Mbogo	85.24 268	eP	P	11 18 13.5	-1.1
	8.7nm,1.4s					
HFS	Hagfors	85.96 332	LR	LR	11 59 52.8	
	comp=Z,82nm,18.0s,baz=64,slow=38					
NC405	NORSAR Array S	86.45 333	eP	P	11 18 18.8	-0.6
	22nm,0.9s					
NB2	NORSAR Subarra	86.70 333	P	P	11 18 19.9	-0.8
	comp=Z,1.1nm,0.6s,baz=67,slow=5.1					
NB200	NORSAR Array S	86.70 333	eP	P	11 18 19.8	-0.9
NB200			esP	pP	11 18 35.0	-1.8
NOA	NORSAR Array B	86.70 333	P	P	11 18 19.8	-0.9
	comp=Z,1.4nm,0.6s,baz=68,slow=4.8,SNR=10					
NOA			pP	pP	11 18 35.0	-1.8
	comp=Z,3.2nm,0.8s,baz=66,slow=4.9,SNR=7.3					
NOA			LR	LR	12 00 24.9	
	comp=Z,106nm,21.6s,baz=60,slow=38					
JMIC	Jan Mayen	87.88 346	LR	LR	11 58 59.4	
	comp=Z,43nm,19.8s,baz=66,slow=36					
VRAC	Vranov	88.50 321	LR	LR	12 00 19.9	
	comp=Z,39nm,18.9s,baz=80,slow=37					
CLL	Collm	89.86 324	eP	P	11 18 38.0	+2.2
GERES	GERESS Array B	90.44 321	LR	LR	12 03 25.7	
	comp=Z,45nm,18.6s,baz=86,slow=38					
YKA	Yellowknife Ar	91.09 23	P	P	11 18 41.5	+0.3
	comp=Z,0.6nm,0.6s,baz=303,slow=4.4,SNR=10					
YKB5	Yellowknife Ar	91.09 23	eP	P	11 18 41.5	+0.3
PPT	Papeete	92.95 107	LR	LR	11 53 13.7	
	comp=Z,22nm,19.1s,baz=260,slow=31					
DAVOX	Davos/Dischmat	93.84 320	LR	LR	12 06 25.2	
	comp=Z,37nm,18.0s,baz=82,slow=39					
VNDA	Vanda	95.13 172	P	P	11 18 58.5	-1.0
	comp=Z,0.8nm,0.9s,baz=320,slow=7.9,SNR=5.7					
VNDA	Vanda	95.13 172	eP	P	11 18 59.0	-0.5
TXAR	Lajitas Array	117.66 45	PKP	PKiKP	11 24 23.9	+0.3
	comp=Z,0.3nm,0.5s,baz=218,slow=0.9,SNR=7.4					
TXAR			pPKP	pPKPdf	11 24 40.6	+0.2
	comp=Z,0.3nm,0.6s,baz=179,slow=0.4,SNR=3.8					
PLCA	Paso Flores	152.11 159	PKPbc	PKPbc	11 25 32.1	-0.4
	comp=Z,3.2nm,0.7s,baz=294,slow=1.2,SNR=8.9					
PLCA	Paso Flores	152.11 159	ePKPab	PKPab	11 25 40.8	-1.3
CPUP	Villa Florida	168.70 183	PKPab	PKPab	11 26 53.1	-1.2
	comp=Z,2.1nm,1.0s,baz=196,slow=7.4,SNR=3.3					

JMA 19 11:29:29.6±0.1, 38°.86N×142°.05E, h46km±1km, M3.6,
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.37	307	P	Pn	11 29 39.2	+0.1
OFUJ				S	Sn	11 29 45.8	0.0
JKMT	Kesennumamotoy	0.45	264	P	Pn	11 29 40.0	0.0
JKMT				S	Sn	11 29 47.1	-0.3
JMK	Ichinoseki	0.65	278	P	Pn	11 29 42.6	0.0
JMK				S	Sn	11 29 51.8	-0.1
JIO	Ouri	0.68	234	P	Pn	11 29 42.7	-0.2
JIO				S	Sn	11 29 51.5	-1.1
JOM	Ohasama	0.85	316	P	Pn	11 29 45.4	+0.2
JOM				S	Sn	11 29 56.8	+0.2
JOU	Okura	1.19	246	P	Pn	11 29 49.9	0.0
JOU				S	Sn	11 30 05.0	+0.1
JRG	Rokugo	1.23	296	P	Pn	11 29 50.5	+0.2
JYK	Kaneyama	1.32	273	P	Pn	11 29 51.8	+0.2
JMM	Marumori	1.40	225	P	Pn	11 29 52.2	-0.5
JANG	Nango	1.57	345	P	Pn	11 29 54.9	-0.1

ISK 19 11:30:56.8, 38°.02N×34°.90E, h6km, ML2.3/14
DDA 19 11:30:57.8, 37°.99N×34°.87E, h7km±3km, ML2.7
ISC 19 11:30:57.4±1.2, 38°.01N±0°.03×34°.88E±0°.03, h8km±10km,
n22, σ0°.63/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIG	Nigde	0.24	295	PG	Pg	11 31 01.8	-0.4
NIG				SG	Sg	11 31 05.8	+0.3
YAHY	KAYSERI_Yahyal	0.39	77	i P	Pb	11 31 07.0	+0.4
YAHY				i S	Sb	11 31 12.4	-0.4
YAHY				IAML_P			
	comp=Z,3μm,0.1s						
AKO	Adana	0.71	141	i P	Pg	11 31 11.4	+0.4
AKO				IAML_P			
	comp=Z,1μm,0.2s						
GULE	Gulek	0.73	187	i P	Pb	11 31 12.1	-0.3
GULE				i S	Sb	11 31 21.8	-0.8
KARA	Karaisali	0.76	170	PG	Pg	11 31 11.3	-0.7
KARA				SG	Sb	11 31 23.2	-0.1
AVNS	Nevsehir-Avano	0.80	358	i P	Pb	11 31 14.0	+0.4
AVNS				i S	Sn	11 31 26.5	-0.7
AVNS				IAML_P			
	comp=Z,2μm,0.1s						
KERG	Konya-Eregli	0.84	226	i P	Pg	11 31 13.4	-0.2
KERG				i S	Sb	11 31 26.1	+0.2
KERG				IAML_P			
	comp=Z,166nm,0.1s						
KOZT	Kozan	0.92	125	PG	Pb	11 31 15.5	0.0
KOZT				SG	Sb	11 31 27.4	-0.4
SAIM	ADANA	0.95	92	i P	Pb	11 31 16.6	+0.5
SAIM				i S	Sn	11 31 30.2	-0.6
SULT	Sultanhani-AKS	1.09	280	PN	Pb	11 31 18.9	+0.3
MERS	Mersin	1.17	194	PN	Pg	11 31 19.7	-0.2
CEYT	Ceyhan	1.21	145	PN	Pn	11 31 20.7	+0.1
YAYX	Yaylak	1.25	318	PN	Pg	11 31 20.9	-0.5
YURE	YUREGIR	1.32	153	PN	Pb	11 31 22.5	0.0
SERE	Sereflikochisa	1.40	313	PN	Pn	11 31 23.2	-0.1
KRTS	Karatas	1.49	165	PN	Pb	11 31 25.1	-0.1
KIZK	Mersin	1.64	201	PN	Pb	11 31 27.3	-0.5
KMRS	Kahramanmaras	1.68	107	PN	Pn	11 31 27.5	+0.5
KEBE	Keben-Mersin	1.82	211	PN	Pn	11 31 29.8	+0.8
IKL	Isikli	2.01	209	PN	Pn	11 31 32.5	+0.9
BERE	Bereket-Mersin	2.12	219	PN	Pn	11 31 34.3	+1.0
TEKE	Tekeli-Mersin	2.34	218	PN	Pn	11 31 37.9	+1.8

MEX 19 11:52:24.2±0.8, 15°.57N×93°.69W, h89km±11km, MD3.9,
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.47	73	i P	Pn	11 52 37.1	-1.5
PCIG				eS	Sn	11 52 48.0	-1.3
TGIG		1.32	24	i P	Pn	11 52 46.0	-1.7
TGIG				i S	Sn	11 53 02.9	-2.6
CCIG	Comitan	1.65	64	i P	Pn	11 52 51.6	-0.4
CCIG				i S	Sn	11 53 11.1	-2.0
CMIG	Matias Romero	1.90	323	i P	Pn	11 52 54.2	-1.0
CMIG				i S	Sn	11 53 18.3	-0.4
HUIG	Huatulco	2.34	275	eP	Pn	11 52 58.5	-2.4
HUIG				i S	Sn	11 53 24.1	-4.9

IDC 19 12:13:05.2±2.7, 32°.93S×178°.30W, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.8/27, mbtmp4.1/4, ML4.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/24, Error ellipse: s-maj=61.9km s-min=43.4km az=129.0
ISCJB 19 12:13:07.3±1.1, 33°.03S±0°.06×178°.4W±0°.1, h34km, mb4.0/3, Error ellipse: s-maj=17.1km s-min=7.2km az=17.6
NEIC 19 12:13:08.9±1.7, 32°.99S×178°.29W, h35km±3km, mb4.3/2, Error ellipse: s-maj=24.8km s-min=18.0km az=108.0
ISC 19 12:13:07.9±1.1, 33°.04S±0°.08×178°.1W±0°.1, h34km, n20,
σ1§42/24, mb4.1/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.78	2	ePn	Pn	12 14 03.6	-0.1
MXZ	Matakaoa Point	5.38	212	ePn	Pn	12 14 26.2	+0.5
URZ	Urewera	6.50	215	Pn	Pn	12 14 41.9	+0.8
	4.0nm,0.3s,baz=269,slow=4.9,SNR=20						
URZ				Sn	Sn	12 15 54.2	+0.2
	3.0nm,0.3s,baz=108,slow=20,SNR=6.1						
URZ	Urewera	6.50	215	ePn	Pn	12 14 41.7	+0.7
URZ				eSn	Sn	12 15 54.9	+0.9
OUZ	Omahuta	7.21	250	ePn	Pn	12 14 54.0	+3.1
OUZ				eSn	Sn	12 16 09.5	-2.1
BKZ	Black Stump Fm	7.51	214	ePn	Pn	12 14 55.0	0.0
BKZ				eSn	Sn	12 16 19.0	0.0
HIZ	Hauiti	7.90	224	ePn	Pn	12 15 00.1	-0.3
BFZ	Birch Farm	8.86	209	ePn	Pn	12 15 14.7	+1.2
BFZ				eSn	Sn	12 16 49.5	-2.6
DZM	Mont Dzumac	17.50	305	LR	LR	12 22 22.9	
	comp=Z,132nm,18.0s,baz=77,slow=32						
DZM	Mont Dzumac	17.50	305	ePn	Pn	12 17 06.4	-3.0
	45nm,1.7s						
CTA	Charters Tower	34.22	283	P	P	12 19 51.9	+1.4
	1.2nm,0.4s,baz=113,slow=9.4,SNR=3.2						
AS31	Alice Springs	42.94	270	eP	P	12 21 02.4	-1.4
	5μm,0.9s						
ASAR	Alice Springs	42.94	270	P	P	12 21 04.4	+0.7
	1.1nm,0.6s,baz=106,slow=7.2,SNR=23						
WR1	Warramunga Arr	44.17	275	eP	P	12 21 14.1	+0.5
WRA	Warramunga Arr	44.17	275	P	P	12 21 14.1	+0.5
	2.1nm,0.4s,baz=111,slow=8.7,SNR=41						
TGL	Tana Glacier	97.82	17	eS	S	12 38 02.2	-0.1
CCB	Clear Creek Bu	100.23	13	ePdif	Pdif	12 26 51.5	+1.7
FIA0	FINESS Array S	147.58	338	ePKPbc	PKiKP	12 32 49.4	-0.4
FINES	FINESS Array B	147.58	338	PKPbc	PKiKP	12 32 49.4	-0.4
	1.4nm,0.4s,baz=20,slow=4.4,SNR=15						
BR131	Keskin Array S	153.68	294	ePKPdf	PKPdf	12 32 55.9	+0.5

ISCJB 19 12:13:34.2±0.5, 6°.84N±0°.02×73°.15W±0°.03, h154km±4km, mb3.4/2, Error ellipse: s-maj=5.3km s-min=3.8km az=17.7
IDC 19 12:13:34.9±0.7, 6°.79N×73°.02W, h162km±11km, mb3.1/2, mb1 3.6/4, mb1mx3.1/31, mbtmp3.8/4, Error ellipse: s-maj=35.7km s-min=7.7km az=131.0
RSNC 19 12:13:35.6±0.9, 6°.82N×73°.16W, h148km±3km, ML3.4, Mw3.8
ISC 19 12:13:34.5±0.9, 6°.84N±0°.03×73°.14W±0°.04, h152km±6km,
n33, σ0°.73/55, 3C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.25	190	↓↓iP	Pn	12 13 55.5	0.0
BARC				eS	Sn	12 14 10.8	-0.7
BARC				i		12 14 12.0	
	comp=Z,827nm,0.2s						
GIRC	Giron, Santand	0.25	347	eP	Pn	12 13 55.5	+0.1
BRRC	Barranca, Sant	0.63	295	↓↓eP	Pn	12 13 57.4	+0.6
BRRC				eS	Sn	12 14 14.2	+0.4
BRRC				i		12 14 17.3	
	comp=Z,462nm,0.3s						
RUSC	La Rusia	0.94	177	↑iP	Pn	12 13 59.5	-0.1
RUSC				eS	Sn	12 14 18.0	-0.7
RUSC				i		12 14 19.6	
	comp=Z,276nm,0.3s						
CAPV	Capacho	1.31	39	↓↓iP	Pn	12 14 02.9	+0.3
CAPV				eS	Sn	12 14 24.1	+0.1
PTBC	PUERTO BERRIO,	1.34	257	eP	Pn	12 14 02.0	-0.7
PTBC				eS	Sn	12 14 23.3	-0.9
PTBC				i		12 14 30.6	
	comp=Z,467nm,0.4s						
TAMC	Tame, Arauca	1.40	106	↑iP	Pn	12 14 04.0	+0.7
TAMC				eS	Sn	12 14 25.4	+0.3
TAMC				i		12 14 27.0	
	comp=Z,197nm,0.5s						
OCAC	Ocana	1.41	353	eP	Pn	12 14 03.5	0.0
OCAC				eS	Sn	12 14 26.1	+0.5
OCAC				i		12 14 28.7	
	comp=Z,382nm,0.3s						
YOPC	Yopal, Colombi	1.64	154	↑iP	Pn	12 14 06.3	+0.5
YOPC				e

ROSC			eS	Sn	12 14 45.7	+1.6
HELC	**Santa Helena**	**2.46 255**	eP	Pn	12 14 16.5	+0.8
HELC			eS	Sn	12 14 46.7	-0.5
HELC			i		12 14 55.0	
	comp=Z,147nm,0.6s					
GUY2C	**Guyana, Caldas**	**2.73 234**	eP	Pn	12 14 19.9	+0.8
GUY2C			eS	Sn	12 14 54.0	+0.5
VILC	**Villavicencio,**	**2.76 192**	eP	Pn	12 14 19.1	0.0
VILC			eS	Sn	12 14 54.2	+0.5
VILC			i		12 14 57.5	
	comp=Z,312nm,0.4s					
RREF	**El Recreo**	**2.92 229**	eP	Pn	12 14 22.6	+1.0
DBBC	**Dabeiba**	**3.06 274**	eP	Pn	12 14 23.2	+0.4
DBBC			eS	Sn	12 14 59.4	-0.6
CODC	**Agustn Codazz**	**3.10 354**	eP	Pn	12 14 23.4	+0.2
CODC			eS	Sn	12 15 01.1	+0.2
CODC			i		12 15 12.4	
	comp=Z,40nm,0.5s					
ARGC	**Ariguani, Magd**	**3.20 340**	eP	Pn	12 14 25.9	+1.4
ARGC			eS	Sn	12 15 04.2	+0.9
ARGC			i		12 15 11.3	
	comp=Z,59nm,0.3s					
SDV	**Santo Domingo**	**3.21 50** P		Pn	12 14 25.1	+0.2
	comp=Z,38nm,0.3s,baz=189,slow=2.4,SNR=122					
SDV		S		Sn	12 15 03.8	0.0
	comp=Z,16nm,0.3s,baz=66,slow=22,SNR=17					
SDV	**Santo Domingo**	**3.21 50**	eP	Pn	12 14 25.0	+0.2
PRAC	**Prado**	**3.56 209**	eP	Pn	12 14 28.8	-0.3
PRAC			eS	Sn	12 15 11.1	-0.5
PRAC			i		12 15 20.4	
	comp=Z,204nm,0.5s					
YOTC	**Yotoco, Valle**	**4.27 229**	eP	Pn	12 14 38.4	-0.1
YOTC			i		12 15 41.0	
	comp=Z,14nm,0.7s					
SMRC	**Santa Marta, M**	**4.43 346**	eP	Pn	12 14 40.9	+0.4
MARP	**Paez Belalcaza**	**4.86 215**	eP	Pn	12 14 46.4	0.0
FLOC	**Florencia**	**5.79 206**	eP	Pn	12 14 58.6	+0.1
TXAR	**Lajitas Array**	**36.44 312**	P	P	12 20 25.3	+0.4
	comp=Z,0.2nm,0.4s,baz=125,slow=7.9,SNR=3.6					
YKA	**Yellowknife Ar**	**63.24 340**	P	P	12 23 46.2	-0.2
	comp=Z,0.8nm,0.6s,baz=132,slow=6.6,SNR=14					
ASAR	**Alice Springs**	**149.10 234**	PKPbc	PKPbc	12 33 04.7	-1.1
	comp=Z,0.4nm,0.9s,baz=113,slow=3.8,SNR=5.5					
WRA	**Warramunga Arr**	**150.33 241**	PKPbc	PKPbc	12 33 07.7	-1.1
	comp=Z,0.6nm,0.6s,baz=103,slow=2.4,SNR=4.4					

MAN 19 12:21:57.2, 14°.90N×121°.63E, h45km, mb4.2, ML3.1, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.34**	**120**	eP	Pn	12 22 08.0	+1.7
POLP				eS	Sn	12 22 15.6	+2.9
BALP	**Baler**	**0.84**	**356**	eP	Pn	12 22 13.7	+1.1
BALP				eS	Sn	12 22 25.6	+1.8
CAUP	**Cauayan**	**2.04**	**5**	eP	Pn	12 22 29.4	+0.3
CAUP				eS	Sn	12 22 53.9	+0.6
APYP	**Conner**	**2.97**	**353**	eP	Pn	12 22 43.5	+1.7
APYP				eS	Sn	12 23 16.8	+0.6

*IDC **19** 12:34:17.9±1.3, 5°.35N×77°.93W, h0km, mb3.5/5, mb1 3.8/7, mb1mx3.6/26, mbtmp3.6/7, ML2.4/2, MS2.7/2, Ms1 2.7/2, ms1mx2.4/22, Error ellipse: s-maj=37.2km s-min=21.5km az=33.0*
*ISCJB **19** 12:34:19.0±0.7, 5°.45N±0°.04×77°.72W±0°.06, h19km, mb3.6/5, MS2.7/1, Error ellipse: s-maj=8.1km s-min=5.2km az=9.7*
*RSNC **19** 12:34:18.9±1.1, 5°.44N×77°.64W, h0km±10km, ML2.6*
ISC 19 12:34:20.3±0.8, 5°.45N±0°.05×77.71W±0°.07, h19km, n22, σ1°.77/26, mb3.6/5, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.83**	**21**	eP	Pb	12 34 33.7	-2.4
SOLC				eS	Sb	12 34 45.7	-1.2
MALC	**Bahia Malaga**	**1.47**	**165**	eP	Pn	12 34 44.8	-1.1
MALC				i		12 34 57.1	
	comp=Z,119nm,0.6s						
MALC				eS	Sn	12 35 04.6	0.0
PLMC	**San Jos del P**	**1.52**	**111**	eP	Pn	12 34 43.4	-3.1
YOTC	**Yotoco, Valle**	**1.99**	**137**	eP	Pn	12 34 50.5	-2.6
YOTC				i		12 35 23.2	
	comp=Z,46nm,0.5s						
DBBC	**Dabeiba**	**2.15**	**44**	eP	Pn	12 34 53.7	-1.6
HELC	**Santa Helena**	**2.29**	**71**	eP	Pn	12 34 55.3	-2.1
HELC				eS	Sn	12 35 25.8	+0.6
HELC				i		12 35 30.6	
	comp=Z,40nm,0.7s						
RREF	**El Recreo**	**2.41**	**103**	eP	Pn	12 34 58.9	-0.4
NORC	**Norcasia**	**2.83**	**88**	eP	Pn	12 35 04.2	-0.4
NORC				i		12 35 48.3	
	comp=Z,23nm,0.5s						
POPC	**Popayan, Colom**	**3.07**	**160**	eP	Pn	12 35 07.2	-0.8
POPC				i		12 35 16.8	
	comp=Z,11nm,0.4s						
MARP	**Paez Belalcaza**	**3.12**	**146**	eP	Pn	12 35 09.5	+0.7
PRAC	**Prado**	**3.30**	**121**	eP	Pn	12 35 10.2	-0.9
PTBC	**PUERTO BERRIO,**	**3.41**	**71**	eP	Pn	12 35 13.4	+0.9
PTBC				eS	Sn	12 35 54.5	+2.0
PTBC				i		12 36 03.3	
	comp=Z,23nm,0.5s						
ROSC	**El Rosal**	**3.42**	**100**	Pn	Pn	12 35 17.7	+4.6
	comp=Z,3.9nm,0.3s,baz=47,slow=19,SNR=5.9						
ROSC				Sn	Sb	12 36 00.6	-1.5
	comp=Z,2.4nm,0.3s,baz=150,slow=19,SNR=4.7						
SDV	**Santo Domingo**	**7.80**	**64**	Pn	Pn	12 36 14.2	+1.1
	comp=Z,0.8nm,0.3s,baz=239,slow=13,SNR=3.9						
SDV				Sn	Sn	12 37 40.1	-1.0
	baz=296,slow=18,SNR=2.1						
APG	**El Apazote**	**15.73**	**308**	LR	LR	12 44 22.8	
	comp=Z,16nm,18.5s,baz=94,slow=39						
CMIG	**Matias Romero**	**20.41**	**306**	LR	LR	12 46 12.6	
	comp=Z,33nm,19.8s,baz=76,slow=35						
LPAZ	**La Paz**	**23.58**	**156**	P	P	12 39 30.9	+0.2
	comp=Z,0.5nm,0.4s,baz=11,slow=5.2,SNR=2.8						
PDAR	**Pinedale Array**	**46.65**	**328**	P	P	12 42 48.5	+0.6
	comp=Z,0.2nm,0.3s,baz=149,slow=11,SNR=3.6						
NVAR	**Mina Array Bea**	**49.30**	**318**	P	P	12 43 09.4	+0.8
	comp=Z,0.4nm,0.7s,baz=123,slow=6.7,SNR=3.2						
YKA	**Yellowknife Ar**	**63.05**	**342**	P	P	12 44 46.2	+0.2
	comp=Z,0.7nm,0.7s,baz=131,slow=7.2,SNR=9.1						
ESDC	**Sonseca Array**	**74.03**	**50**	P	P	12 45 57.6	+2.4
	comp=Z,0.7nm,0.7s,baz=264,slow=6.9,SNR=3.8						
ASAR	**Alice Springs**	**144.59**	**236**	PKP	PKPab	12 53 55.2	+0.1
	comp=Z,1.1nm,0.9s,baz=119,slow=4.0,SNR=12						

MAN 19 12:36:58.0, 10°.07N×125°.06E, h18km, mb4.3, ML3.1, MS2.8, 3C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.21**	**288**	eP	Pg	12 37 03.8	+0.9
MSLP				eS	Sg	12 37 09.2	+2.8
SCPH	**Surigao**	**0.51**	**124**	↑iP	Pn	12 37 16.3	+5.9
SCPH				i S	Sn	12 37 24.8	+6.1
OCLP	**Ormoc**	**1.07**	**336**	eP	Pb	12 37 16.9	-1.0
OCLP				eS	Sg	12 37 33.6	+0.8
PLP	**Palo**	**1.09**	**356**	↓eP	Pb	12 37 15.9	-2.4
PLP				i S	Sb	12 37 31.6	-0.7
LLP	**Lapu-Lapu**	**1.10**	**283**	eP	Pb	12 37 16.7	-1.8
LLP				eS	Sb	12 37 32.8	+0.2
BUTP	**Butuan**	**1.23**	**153**	eP	Pg	12 37 23.5	+1.8
TBP	**Tagbilaran**	**1.24**	**252**	eP	Pb	12 37 20.6	-0.2
TBP				eS	Sg	12 37 38.0	-0.2
BESP	**Borongan**	**1.57**	**14**	eP	Pn	12 37 24.9	0.0
CGP	**Cagayan de Oro**	**1.65**	**193**	↑eP	Pn	12 37 26.2	+0.3
CGP				eS	Sn	12 37 46.5	-0.2
CGP	**Cagayan de Oro**	**1.65**	**193**	↑eP	Pn	12 37 26.2	+0.3
CGP				eS	Sn	12 37 46.5	-0.2
SNPH	**Sibulan**	**1.94**	**248**	i P	Pg	12 37 37.3	+2.1
BUKP	**Musuan**	**2.18**	**180**	eP	Pn	12 37 34.1	+0.8
CNP	**Cataman**	**2.46**	**351**	eP	Pn	12 37 38.2	+1.1

NNC 19 12:39:55.5±1.8, 54°.18N×86°.18E, h0km, mb3.6, mpv3.0, 9C-5D, Error ellipse: s-maj=17.5km s-min=8.5km az=2.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.83**	**254**	↑P	Pg	12 40 11.2	-0.3
	1.1nm,0.3s						
ZAA0				↑S	Sb	12 40 23.5	-1.1
	3.2nm,0.3s						
KURK	**Kurchatov**	**5.78**	**236**	↓Pn	Pn	12 41 24.3	+1.9
	1.3nm,0.6s						
KURK				↑Sn	Sn	12 42 29.6	+0.2
	0.7nm,0.5s						
KURK				↑Lg	Lg	12 42 59.5	
	3.2nm,0.8s						
KURBB	**Kurchatov Arra**	**5.88**	**236**	↓Pn	Pn	12 41 26.3	+2.4
	2.3nm,0.5s						
KURBB				↓Sn	Sn	12 42 32.3	+0.4
	2.6nm,0.6s						
KURBB				↑Lg	Lg	12 42 59.6	
	6.1nm,0.7s						
MK31	**Makanchi Array**	**7.80**	**200**	↑Pn	Pn	12 41 52.8	+2.6
	0.6nm,0.6s,baz=26,slow=14,SNR=21						
MK31				↓Sn	Sn	12 43 18.9	-0.3
	0.7nm,0.6s,baz=20,slow=28,SNR=3.6						
MK31				↑Lg	Lg	12 44 01.1	
	4.3nm,0.9s,baz=29,slow=32,SNR=7.0						
MAKZ	**Makanchi**	**7.85**	**202**	↑Pn	Pn	12 41 52.7	+1.8
	0.5nm,0.4s						
MAKZ				↑Sn	Sn	12 43 21.3	+0.9
	0.5nm,0.5s						
MAKZ				↓Lg	Lg	12 44 01.9	
	4.5nm,1.2s						

*BJI **19** 12:40:51.3±0.0, 9°.10S×125°.30E, h11km, mb4.7/30, mB5.0/20, Ms4.5/7, Ms7 4.3/7*
*NEIC **19** 12:40:52.9±2.6, 8°.74S×125°.43E, h10km±2km, mb4.6/16, Error ellipse: s-maj=12.9km s-min=4.1km az=56.0*
*IDC **19** 12:40:52.8±0.5, 8°.75S×125°.19E, h0km, mb4.3/16, mb1 4.3/19, mb1mx4.2/44, mbtmp4.3/19, ML4.4/2, MS3.4/8, Ms1 3.4/8, ms1mx2.9/41, Error ellipse: s-maj=16.0km s-min=11.4km az=98.0*
*ISCJB **19** 12:40:54.4±0.3, 9°.01S±0°.03×125°.34E±0°.04, h33km, mb4.5/34, MS3.8/8, Error ellipse: s-maj=6.0km s-min=4.0km az=145.6*
*DJA **19** 12:40:57.0±0.3, 9°.5S±3°×12°.5E±°, h10km, M4.5/17, mb4.7/15, mB5.4/5, MLv4.4/17, Mw(mB)4.8/5*
ISC 19 12:40:57.4±0.4, 9°.04S±0°.05×125°.33E±0°.05, h35km, n94, σ2°.21/93, mb4.6/34, MS3.6/8, 1C-1D, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.27**	**236**	ePn	Pn	12 41 21.3	+2.6
SOEI	**Soe**	**1.27**	**236**	P	Pn	12 41 19.5	+0.8
BATI	**Baumata**	**2.01**	**235**	Pn	Pn	12 41 31.0	+2.1
	23nm,0.3s,baz=99,slow=2.1,SNR=37						
BATI				Lg	Lg	12 41 59.5	
	37nm,0.3s,baz=89,slow=22,SNR=6.1						
BATI				LR	LR	12 42 27.2	
	comp=Z,647nm,18.1s,baz=208,slow=45						
BATI	**Baumata**	**2.01**	**235**	ePn	Pn	12 41 31.0	+2.1
BATI				ePn	Pn	12 41 31.0	+2.1
BATI				eSn	Sn	12 41 59.5	+6.6
BATI	**Baumata**	**2.01**	**235**	P	Pn	12 41 29.8	+0.9
MMRI	**Maumere**	**3.08**	**277**	ePn	Pn	12 41 40.8	-2.9
MMRI	**Maumere**	**3.08**	**277**	P	Pn	12 41 42.7	-0.9
EDFI	**Ende, Flores**	**3.61**	**274**	P	Pn	12 41 47.8	-3.2
BASI	**Baing, Sumba**	**4.83**	**256**	P	Pn	12 42 06.5	-1.2
BSSI	**Bau Bau, Buton**	**5.60**	**301**	P	Pn	12 42 17.8	-0.4
WBSI	**Waikabubak, Su**	**5.89**	**264**	P	Pn	12 42 23.7	+1.4
NLAI	**Namlea**	**6.03**	**17**	P	Pn	12 42 27.2	+3.1
AAI	**Ambon**	**6.03**	**28**	P	Pn	12 42 28.3	+4.1
BKSI	**Bulukumba**	**6.35**	**305**	P	Pn	12 42 28.4	-0.2
MSAI	**Masohi**	**6.69**	**33**	P	Pn	12 42 45.1	+12
MTN	**Manton Dam**	**6.84**	**124**	ePn	Pn	12 42 38.4	+3.1
MTN				eSn	Sn	12 43 52.9	+1.0
SANI	**Sanana**	**6.98**	**5**	P	Pn	12 42 39.5	+2.3
PLAI	**Plampang**	**7.47**	**271**	P	Pn	12 42 44.4	+0.5
SPSI	**Sidrap Palu**	**7.48**	**312**	P	Pn	12 42 44.8	+0.7
TTSI	**Tana Toraja**	**8.09**	**317**	P	Pn	12 42 52.7	+0.2
LUWI	**Luwuk**	**8.35**	**342**	ePn	Pn	12 42 48.9	-7.1
LUWI	**Luwuk**	**8.35**	**342**	P	Pn	12 42 56.5	+0.5
APSI	**Ampana**	**8.87**	**335**	P	Pn	12 43 02.2	-1.0
FITZ	**Fitzroy Crossi**	**9.01**	**178**	Pn	Pn	12 43 06.8	+1.8
	8.9nm,0.3s,baz=357,slow=9.1,SNR=40						
FITZ				Sn	Sn	12 44 45.4	+0.1
	1.7nm,0.3s,baz=121,slow=12,SNR=3.7						
FITZ				LR	LR	12 47 16.7	
	comp=Z,50nm,22.0s,baz=6.5,slow=41						
FITZ	**Fitzroy Crossi**	**9.01**	**178**	ePn	Pn	12 43 06.0	+1.0
FITZ				eSn	Sn	12 44 47.4	+2.1
FAKI	**Fak Fak**	**9.18**	**49**	ePn	Pn	12 43 00.2	-7.3
TNTI	**Ternate**	**9.96**	**12**	ePn	Pn	12 43 11.8	-6.3
TNTI	**Ternate**	**9.96**	**12**	P	Pn	12 43 28.6	+10
SIJI	**Sorong**	**10.04**	**36**	Pn	Pn	12 43 22.0	+2.7
	0.5nm,0.3s,baz=270,slow=20,SNR=2.5						
PSA00	**Pilbara Seismi**	**13.53**	**202**	ePn	Pn	12 44 06.8	-0.2
WRA	**Warramunga Arr**	**13.90**	**142**	Pn	Pn	12 44 10.3	-1.8
	1.1nm,0.3s,baz=318,slow=14,SNR=45						
WRA				Sn	Sn	12 46 39.1	-6.2
	0.5nm,0.3s,baz=321,slow=22,SNR=5.5						
WRAB	**Tennant Creek**	**13.90**	**142**	ePn	Pn	12 44 10.8	-1.3
WR1	**Warramunga Arr**	**13.90**	**142**	ePn	Pn	12 44 10.3	-1.8
WB2	**Warramunga Arr**	**13.91**	**142**	ePn	Pn	12 44 10.5	-1.7
JAY	**Jayapura**	**16.61**	**68**	Pn	Pn	12 44 47.8	+0.1
	0.0nm,0.3s,baz=292,slow=16,SNR=2.2						
AS31	**Alice Springs**	**16.70**	**152**	ePn	P	12 44 49.5	-1.4
	4μm,0.8s						
ASAR	**Alice Springs**	**16.70**	**152**	P	Pn	12 44 47.7	-1.1
	0.3nm,0.3s,baz=321,slow=10,SNR=39						
ASAR				S	Sn	12 47 47.8	-5.5
	0.1nm,0.3s,baz=317,slow=19,SNR=5.8						
LEM	**Lembang**	**17.68**	**276**	LR	LR	12 53 23.5	
	comp=Z,123nm,20.4s,baz=42,slow=43						
PMG	**Port Moresby**	**21.55**	**93**	P	P	12 45 47.3	+3.4
	19nm,1.0s,baz=252,slow=20,SNR=3.9						
CTA	**Charters Tower**	**23.01**	**121**	P	P	12 46 02.1	+2.6
	3.0nm,0.8s,baz=274,slow=13,SNR=2.4						
NWAO	**Narrogin (SRO)**	**24.92**	**196**	P	P	12 46 20.1	+2.8
	6.1nm,0.8s,baz=162,slow=16,SNR=3.0						
STKA	**Stephens Creek**	**27.28**	**149**	P	P	12 46 40.2	+1.5
	1.1nm,0.4s,baz=135,slow=18,SNR=2.1						
STKA				LR	LR	12 59 30.6	
	comp=Z,128nm,20.0s,baz=17,slow=40						
STKA	**Stephens Creek**	**27.28**	**149**	eP	P	12 46 40.0	+1.3
	1.2nm,1.1s						
PSI	**Prapat**	**28.83**	**293**	LR	LR	12 58 37.0	
	comp=Z,120nm,21.9s,baz=133,slow=37						
PSI	**Prapat**	**28.83**	**293**	eP	P	12 46 51.2	-1.7
	12nm,1.1s						
CMAR	**Chiang Mai Arr**	**37.74**	**316**	LR	LR	13 04 49.3	
	comp=Z,28nm,18.2s,baz=164,slow=38						
NJ2	**Nanjing**	**41.33**	**352**	eP	P	12 48 40.8	+1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
CD2	**Chengdu**	**44.79**	**333**	eP	P	12 49 07.0	-1.0
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
XAN	**Xi'an**	**45.59**	**341**	P	P	12 49 12.6	-1.7
XAN				pP	pP	12 49 15.4	-9.4
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN	**Xi'an**	**45.59**	**341**	eP	P	12 49 11.7	-2.6
	12nm,0.8s						
KS15	**Wonju Array Si**	**46.30**	**3**	eP	P	12 49 16.2	-3.5
	14nm,1.3s						
KSRS	**Korea Array**	**46.31**	**3**	P	P	12 49 19.6	-0.2
	1.5nm,0.8s,baz=180,slow=9.7,SNR=6.0						
MJAR	**Matsushiro Arr**	**46.93**	**14**	P	P	12 49 23.8	-1.0
	5.6nm,1.1s,baz=201,slow=8.4,SNR=6.5						
MAJO	**Matsushiro**	**46.93**	**14**	eP	P	12 49 23.8	-1.0
LZH	**Lanzhou**	**49.24**	**337**	↑P	P	12 49 45.4	+2.6
LZH				pP	pP	12 49 51.4	-2.0
LZH				sP	sP	12 49 56.0	-1.6
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,4.8s						
LZH				LR	LR		
	comp=N,210nm,16.2s						
LZH				LR	LR		
	comp=E,220nm,16.0s						
LZH				LR	LR		
	comp=Z,310nm,17.7s						
HHC	**Hu-ho-hao-te**	**51.24**	**347**	eP	P	12 49 59.0	+1.2
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,60nm,5.7s						
RPZ	**Rata Peaks**	**52.59**	**139**	LR	LR	13 13 45.5	
	comp=Z,74nm,18.1s,baz=302,slow=37						
CN2	**Changchun**	**52.59**	**0**	eP	P	12 50 09.4	+1.8
USRK	**Ussuriysk Ar.**	**53.33**	**6**	P	P	12 50 11.2	-1.9
	1.6nm,0.7s,baz=195,slow=10,SNR=2.9						
GTA	**Gaotai**	**53.71**	**336**	eP	P	12 50 15.5	-0.7
GTA				pP	pP	12 50 20.5	-6.4
GTA				sP	sP	12 50 23.4	-7.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
URZ	**Urewera**	**54.74**	**131**	LR	LR	13 15 17.6	
	comp=Z,42nm,18.8s,baz=308,slow=38						
ULN	**Ulaanbaatar**	**58.93**	**346**	eP	P	12 50 51.8	-1.4
	15nm,1.3s						
SONA0	**Songino Array**	**59.06**	**345**	eP	P	12 50 53.0	-1.1
SONM	**Songino Array**	**59.06**	**345**	P	P	12 50 53.0	-1.1
	4.8nm,0.9s,baz=161,slow=6.9,SNR=12						
WMQ	**Urumqi**	**62.71**	**330**	eP	P	12 51 18.5	-0.5
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,46nm,4.3s						
WMQ				LR	LR		
	comp=N,130nm,29.2s						
WMQ				LR	LR		
	comp=E,260nm,28.8s						
WMQ				LR	LR		
	comp=Z,64nm,24.7s						
KSH	**Kashi**	**66.50**	**320**	P	P	12 51 46.5	+2.6
KSH				sP	sP	12 51 57.5	-1.5
KSH				PP	PP	12 54 14.4	+3.6
KSH				S	S	13 00 34.3	+1.9
KSH				ScS	ScS	13 01 38.8	+0.4
KSH				pmax	pmax		
	comp=Z,15nm,0.6s						
KSH				pmax	pmax		
	comp=Z,180nm,5.5s						
KSH				LR	LR		
	comp=N,310nm,11.1s						
KSH				LR	LR		
	comp=E,390nm,9.2s						
KSH				LR	LR		
	comp=Z,150nm,15.7s						
MK31	**Makanchi Array**	**67.51**	**330**	eP	P	12 51 48.6	-1.4
	8.0nm,0.8s						
MK32	**Makanchi Array**	**67.51**	**330**	eP	P	12 51 48.7	-1.3
MKAR	**Makanchi Array**	**67.51**	**330**	P	P	12 51 48.7	-1.3
	9.1nm,0.6s,baz=135,slow=7.9,SNR=74						
MAKZ	**Makanchi**	**67.67**	**329**	eP	P	12 51 49.4	-1.7
	5.5nm,0.8s						
BOOM	**Boomskoye usch**	**68.26**	**323**	eP	P	12 51 52.6	-2.4
	5.2nm,0.8s						
AAK	**Ala-Archa**	**69.21**	**322**	P	P	12 51 59.5	-1.4
	4.4nm,0.7s,baz=118,slow=6.8,SNR=9.6						
AAK	**Ala-Archa**	**69.21**	**322**	eP	P	12 51 56.8	-4.2
	4.6nm,0.8s						
VNDA	**Vanda**	**71.03**	**172**	P	P	12 52 13.4	+2.1
	0.6nm,1.0s,baz=253,slow=8.9,SNR=2.2						
VNDA	**Vanda**	**71.03**	**172**	eP	P	12 52 10.4	-0.9
ZAA0	**Zalesovo Array**	**71.46**	**336**	eP	P	12 52 11.9	-2.3
	4.7nm,1.0s						
ZALV	**Zalesovo Beam**	**71.46**	**336**	P	P	12 52 12.0	-2.2
	4.9nm,0.9s,baz=131,slow=4.1,SNR=12						
ZAA1	**Zalesovo Array**	**71.46**	**336**	eP	P	12 52 12.0	-2.2
KURBB	**Kurchatov Arra**	**71.92**	**331**	P	P	12 52 15.4	-1.7
	5.1nm,0.8s,baz=134,slow=5.0,SNR=32						
KURK	**Kurchatov**	**71.94**	**331**	eP	P	12 52 15.2	-1.9
	11nm,0.9s						
BRVK	**Borovoye**	**77.46**	**330**	eP	P	12 52 47.6	-1.5
	7.1nm,1.1s						
KIWB	**Kanaga Island**	**78.08**	**32**	eS	S	13 02 45.6	+1.4
SYO	**Syowa Base**	**80.09**	**201**	↓eSP	sP	12 53 17.6	-1.1
TIXI	**Tiksi**	**80.55**	**1**	P	P	12 53 03.8	-1.8
	1.6nm,0.5s,baz=195,slow=2.0,SNR=5.8						
TIXI	**Tiksi**	**80.55**	**1**	eP	P	12 53 03.5	-2.1
	2.3nm,0.8s						
ABKAR	**Akbulak array**	**81.28**	**323**	eP	P	12 53 08.4	-1.6
	3.7nm,1.0s						
AKTO	**Aktyubinsk**	**82.90**	**324**	P	P	12 53 17.8	-0.7
	3.6nm,0.8s,baz=107,slow=5.6,SNR=11						
ARU	**Arti**	**85.03**	**329**	P	P	12 53 28.8	-0.4
	0.5nm,0.3s,baz=180,slow=19,SNR=2.4						
ARU	**Arti**	**85.03**	**329**	eP	P	12 53 25.7	-3.5
	3.6nm,1.0s						
SMCO	**Snowmass**	**124.59**	**48**	ePKPdf	PKPdf	12 59 53.8	-0.3
Q24A	**Divide**	**126.00**	**48**	ePKPdf	PKPdf	12 59 54.9	-1.8
V51A	**Loudon**	**142.05**	**41**	ePKPdf	PKPdf	13 00 24.1	-2.2
CPUP	**Villa Florida**	**144.75**	**176**	PKPbc	PKPdf	13 00 32.8	+1.4
	3.0nm,0.8s,baz=268,slow=3.1,SNR=3.8						
LPAZ	**La Paz**	**151.52**	**152**	PKPbc	PKiKP	13 00 52.9	+2.8
	3.6nm,1.1s,baz=37,slow=1.8,SNR=5.6						

*NEIC **19** 12:41:41.6±0.0, 19°.48N×66°.30W, h64km, MD3.3(RSPR), After RSPR.*
RSPR 19 12:41:41.6, 19°.48N×66°.30W, h64km±6km, MD3.3/10, 10C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**1.02**	**193**	↑eP	Pn	12 41 59.2	-0.9
EMPR	**Esperanza - Ma**	**1.02**	**193**	eS	Sn	12 42 13.2	-0.6
EMPR	**Esperanza - Ma**	**1.02**	**193**	ePn	Pn	12 41 59.1	-1.0
EMPR				ePn	Pn	12 41 59.2	-0.9
EMPR				eSn	Sn	12 42 13.1	-0.7
EMPR				eSn	Sn	12 42 13.2	-0.6
AOPR	**Arecibo Observ**	**1.21**	**201**	↑eP	Pn	12 42 01.0	-1.6
AOPR	**Arecibo Observ**	**1.21**	**201**	eS	Sn	12 42 17.2	-0.9
AOPR	**

s-min=2.3km az=0.8
NEIC ***19*** *13:02:38.8±0.0, 35°.79N×27°.33E, h9km, mb3.9/8, ML4.0(THE), After THE.*
THE ***19*** *13:02:38.8, 35°.79N×27°.33E, h9km±1km, ML4.0/7, Error ellipse: s-maj=1.8km s-min=0.4km az=129.0*
ATH ***19*** *13:02:38.2, 35°.81N×27°.22E, h25km±1km, ML3.9/16, Error ellipse: s-maj=2.4km s-min=1.0km az=133.0*
NIC ***19*** *13:02:42.6±0.2, 35°.99N×27°.51E, h17km, mb4.4, ML3.9*
GII ***19*** *13:02:45.6±0.0, 35°.17N×27°.69E, h2km, mb4.2/4, MD4.0/4*
ISC 19 13:02:39.1±0.7,**35°.78N**±0°.02×**27°.29E**±0°.02,**h18**km±2km,
n178,σ1$45/223,**mb4.0**/20,**MS3.3**/7,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.26**	**204**	PG	**Pg**	**13 02 44.2**	**-0.8**
KARP				SG	**Sg**	**13 02 48.9**	**-0.2**
KARP	**Karpathos**	**0.26**	**204**	*e*Pg	**Pg**	**13 02 44.0**	**-1.1**
KARP				*e*Sg	**Sb**	**13 02 49.3**	**+0.2**
KARP	**Karpathos**	**0.26**	**204**	P	**Pg**	**13 02 44.1**	**-1.0**
KARP				S	**Sb**	**13 02 49.3**	**+0.2**
KARP	**Karpathos**	**0.26**	**204**	P	**Pg**	**13 02 44.1**	**-1.0**
KARP				S	**Sb**	**13 02 49.1**	**0.0**
KARP				AML	AML	13 02 49.8	
KARP				AML	AML	13 02 50.1	
ARG	**Arkhangelos**	**0.81**	**57**	PG	**Pb**	**13 02 53.6**	**-1.0**
ARG				SG	**Sn**	**13 03 06.4**	**-0.6**
ARG	**Arkhangelos**	**0.81**	**57**	*e*Pg	**Pb**	**13 02 53.5**	**-1.0**
ARG	**Arkhangelos**	**0.81**	**57**	P	**Pb**	**13 02 53.5**	**-1.0**
ARG				S	**Sg**	**13 03 05.6**	**0.0**
ARG	**Arkhangelos**	**0.81**	**57**	P	**Pb**	**13 02 53.6**	**-1.0**
ARG				S	**Sn**	**13 03 06.8**	**-0.2**
ARG				AML	AML	13 03 08.9	
	comp=N,21771μm,0.5s						
ARG				AML	AML	13 03 09.8	
	comp=E,40010μm,1.1s						
NISR	**Nisiros**	**0.84**	**351**	*e*Pg	**Pb**	**13 02 54.9**	**-0.2**
NISR	**Nisiros**	**0.84**	**351**	P	**Pb**	**13 02 54.9**	**-0.2**
NISR				S	**Sg**	**13 03 06.8**	**+0.2**
NISR	**Nisiros**	**0.84**	**351**	P	**Pb**	**13 02 54.5**	**-0.6**
NISR				S	**Sb**	**13 03 05.6**	**-0.3**
NISR				AML	AML	13 03 11.1	
	comp=N,8560μm,0.6s						
NISR				AML	AML	13 03 12.3	
	comp=E,10927μm,0.7s						
DAT	**Datca**	**0.97**	**14**	PG	**Pb**	**13 02 56.1**	**-1.4**
DAT				SG	**Sb**	**13 03 09.7**	**-0.3**
DAT	**Datca**	**0.97**	**14**	*i* P	**Pb**	**13 02 57.1**	**-0.4**
DAT				*i* S	**Sg**	**13 03 10.6**	**-0.3**
DATC	**Datca-Mugla**	**1.02**	**17**	PG	**Pb**	**13 02 57.1**	**-1.1**
BBRN	**Bozburun-Marma**	**1.09**	**35**	PN	**Pn**	**13 02 59.5**	**0.0**
ZKR	**Zakros**	**1.10**	**233**	PN	**Pb**	**13 02 58.9**	**-0.7**
ZKR	**Zakros**	**1.10**	**233**	P	**Pb**	**13 02 59.1**	**-0.5**
ZKR				S	**Sg**	**13 03 14.8**	**-0.1**
ZKR	**Zakros**	**1.10**	**233**	P	**Pb**	**13 02 59.3**	**-0.3**
ZKR				S	**Sn**	**13 03 14.1**	**-0.2**
ZKR				AML	AML	13 03 18.7	
	comp=N,10000μm,1.0s						
ZKR				AML	AML	13 03 24.1	
	comp=E,21474μm,0.7s						
STIA	**Sitia Lasithi**	**1.14**	**240**	P	**Pb**	**13 03 00.4**	**+0.2**
STIA				S	**Sg**	**13 03 15.9**	**-0.1**
MRSB	**Marmaris-Mugla**	**1.19**	**38**	PN	**Pn**	**13 03 00.8**	**0.0**
BODT	**Bodrum**	**1.28**	**1**	PN	**Pn**	**13 03 01.5**	**-0.5**
BDRM	**Kayabasi**	**1.28**	**6**	*i* P	**Pn**	**13 03 02.1**	**0.0**
BDRM				*i* S	**Sg**	**13 03 20.9**	**+0.1**
ANAF	**Anafi Island**	**1.35**	**295**	P	**Pn**	**13 03 02.7**	**-0.4**
ANAF	**Anafi Island**	**1.35**	**295**	P	**Pn**	**13 03 02.7**	**-0.4**
ANAF				AML	AML	13 03 26.6	
	comp=N,16469μm,0.4s						
ANAF				AML	AML	13 03 27.7	
	comp=E,19753μm,0.4s						
NPS	**Neapolis**	**1.46**	**250**	P	**Pn**	**13 03 04.6**	**0.0**
NPS				S	**Sb**	**13 03 23.6**	**-0.4**
NPS	**Neapolis**	**1.46**	**250**	P	**Pn**	**13 03 04.6**	**0.0**
NPS				S	**Sn**	**13 03 22.5**	**-0.8**
NPS				AML	AML	13 03 25.0	
	comp=N,17677μm,0.5s						
NPS				AML	AML	13 03 25.2	
	comp=E,20892μm,0.4s						
DALY	**Dalyan (Mula)**	**1.51**	**47**	PN	**Pb**	**13 03 05.9**	**-0.7**
DALY	**Dalyan (Mula)**	**1.51**	**47**	*i* P	**Pb**	**13 03 06.6**	**0.0**
DALY				*i* S	**Sg**	**13 03 28.5**	**+0.6**
DALY				IAML_P			
	comp=Z,8μm,0.1s						
TURN	**Turunc**	**1.52**	**44**	PN	**Pn**	**13 03 01.7**	**-3.6**
TURN	**Turunc**	**1.52**	**44**	*i* P	**Pn**	**13 03 01.2**	**-4.1**
TURN				*i* S	**Sn**	**13 03 19.5**	**-5.2**
TURN				IAML_P			
	comp=Z,17μm,0.1s						
AMGA	**Amorgos Island**	**1.54**	**313**	P	**Pn**	**13 03 04.8**	**-0.8**
AMGA				S	**Sb**	**13 03 25.9**	**-0.3**
AMGA	**Amorgos Island**	**1.54**	**313**	P	**Pn**	**13 03 05.1**	**-0.5**
AMGA				S	**Sb**	**13 03 26.0**	**-0.1**
AMGA				AML	AML	13 03 33.3	
	comp=N,5798μm,0.5s						
AMGA				AML	AML	13 03 36.6	
	comp=E,3380μm,0.7s						
YER	**Yerkesik**	**1.57**	**30**	PN	**Pn**	**13 03 06.7**	**+0.6**
SANT	**Santorini**	**1.59**	**292**	PN	**Pn**	**13 03 05.9**	**-0.5**
SANT	**Santorini**	**1.59**	**292**	*e*Pn	**Pn**	**13 03 05.8**	**-0.6**
SANT	**Santorini**	**1.59**	**292**	P	**Pn**	**13 03 06.1**	**-0.3**
SANT				S	**Sn**	**13 03 26.8**	**+0.3**
SANT	**Santorini**	**1.59**	**292**	P	**Pn**	**13 03 05.9**	**-0.5**
SANT				AML	AML	13 03 34.5	
	comp=N,2586μm,0.9s						
SANT				AML	AML	13 03 35.9	
	comp=E,8242μm,0.7s						
LAST	**Lasithi**	**1.60**	**248**	*e*Pn	**Pn**	**13 03 06.7**	**+0.1**
LAST	**Lasithi**	**1.60**	**248**	P	**Pn**	**13 03 06.7**	**+0.1**
LAST				S	**Sb**	**13 03 27.6**	**-0.5**
LAST	**Lasithi**	**1.60**	**248**	P	**Pn**	**13 03 06.0**	**-0.6**
LAST				S	**Sn**	**13 03 26.8**	**0.0**
LAST				AML	AML	13 03 33.9	
	comp=E,5564μm,0.8s						
LAST				AML	AML	13 03 47.6	
	comp=N,4214μm,0.7s						
THR6	**Thira Island,**	**1.64**	**291**	*e*Pn	**Pn**	**13 03 07.0**	**+0.1**
THR6	**Thira Island,**	**1.64**	**291**	P	**Pn**	**13 03 07.0**	**+0.1**
THR7	**Fira-Santorini**	**1.64**	**293**	P	**Pn**	**13 03 07.1**	**+0.1**
SAP1	**Santorini-Akro**	**1.64**	**291**	P	**Pn**	**13 03 07.1**	**+0.1**
THR2	**Thira island,**	**1.64**	**294**	*e*Pn	**Pn**	**13 03 07.2**	**+0.2**
THR2	**Thira island,**	**1.64**	**294**	P	**Pn**	**13 03 07.2**	**+0.2**
THT2	**Imerovigli**	**1.65**	**294**	P	**Pn**	**13 03 07.3**	**+0.2**
THR3	**Thira Island,**	**1.65**	**293**	*e*Pn	**Pn**	**13 03 07.2**	**0.0**
THR3	**Thira Island,**	**1.65**	**293**	P	**Pn**	**13 03 07.2**	**0.0**
THR9	**Santorini-Faro**	**1.67**	**291**	P	**Pn**	**13 03 07.7**	**+0.3**
CMBO	**Columbo, Santo**	**1.67**	**295**	P	**Pn**	**13 03 07.2**	**-0.2**
FETY	**Fethiye**	**1.68**	**59**	PN	**Pb**	**13 03 09.5**	**0.0**
FETY	**Fethiye**	**1.68**	**59**	*i* P	**Pb**	**13 03 09.0**	**-0.5**
FETY				*i* S	**Sg**	**13 03 33.4**	**-0.1**
IOSP	**Ios island**	**1.87**	**301**	P	**Pn**	**13 03 09.0**	**-1.2**
KSL	**Kastellorizon**	**1.90**	**78**	P	**Pb**	**13 03 12.8**	**-0.3**
KSL				S	**Sb**	**13 03 36.8**	**+0.3**
KSL				AML	AML	13 03 55.0	
	comp=N,2155μm,1.5s						
KSL				AML	AML	13 03 55.0	
	comp=E,5613μm,1.5s						
APE	**Apeiranthos**	**1.91**	**313**	PN	**Pn**	**13 03 10.1**	**-0.7**
APE	**Apeiranthos**	**1.91**	**313**	*e*Pn	**Pn**	**13 03 10.2**	**-0.6**
APE	**Apeiranthos**	**1.91**	**313**	P	**Pn**	**13 03 10.2**	**-0.6**
APE	**Apeiranthos**	**1.91**	**313**	P	**Pn**	**13 03 10.0**	**-0.8**
APE				AML	AML	13 03 43.3	
	comp=E,1178μm,0.4s						
APE				AML	AML	13 03 43.4	
	comp=N,1372μm,0.8s						
GCAM	**G?zelcaml?**	**1.91**	**359**	PN	**Pn**	**13 03 11.3**	**+0.5**
AKAS	**Kas**	**1.93**	**76**	PN	**Pb**	**13 03 13.6**	**-0.2**
AKAS	**Kas**	**1.93**	**76**	*i* P	**Pb**	**13 03 13.7**	**-0.2**
AKAS				*i* S	**Sg**	**13 03 43.9**	**+2.5**
AYDN	**Tasoluk**	**1.93**	**14**	*i* P	**Pb**	**13 03 14.8**	**+1.0**
AYDN				*i* S	**Sb**	**13 03 38.9**	**+1.3**
AYDN				IAML_P			
	comp=Z,8μm,0.2s						
SMG	**Samos**	**1.96**	**349**	P	**Pn**	**13 03 10.4**	**-1.0**
SMG	**Samos**	**1.96**	**349**	P	**Pn**	**13 03 11.2**	**-0.2**
SMG				S	**Sn**	**13 03 34.8**	**-0.6**
SMG				AML	AML	13 03 49.6	
	comp=N,632μm,0.4s						
SMG				AML	AML	13 03 52.0	
	comp=E,942μm,0.7s						
IDI	**Anoyia**	**2.02**	**256**	Pn	**Pn**	**13 03 12.3**	**+0.1**
	comp=E,16nm,0.3s,baz=58,slow=15,SNR=48						
IDI				Sn	**Sn**	**13 03 37.4**	**+0.3**
	comp=E,87nm,0.3s,baz=160,slow=18,SNR=18						
IDI				LR	LR	13 03 48.5	
	comp=E,119nm,21.5s,baz=79,slow=37						
SIVA	**Sivas**	**2.16**	**250**	P	**Pn**	**13 03 15.4**	**+1.2**
SIVA	**Sivas**	**2.16**	**250**	P	**Pn**	**13 03 15.1**	**+0.9**
SIVA				S	**Sn**	**13 03 41.1**	**+0.6**
SIVA				AML	AML	13 03 55.8	
	comp=N,4842μm,0.7s						
SIVA				AML	AML	13 03 58.2	
	comp=E,6116μm,0.6s						
ELL	**Elmali**	**2.33**	**65**	PN	**Pb**	**13 03 19.0**	**-1.6**
DENT	**Denizli**	**2.41**	**35**	PN	**Pn**	**13 03 18.2**	**+0.5**
VAM	**Vamos**	**2.54**	**262**	P	**Pn**	**13 03 19.1**	**-0.4**
VAM				AML	AML	13 04 08.5	
	comp=N,3894μm,0.6s						
VAM				AML	AML	13 04 17.3	
	comp=E,2447μm,0.7s						
BLCB	**Balcova**	**2.60**	**356**	PN	**Pn**	**13 03 21.2**	**+0.9**
URLA	**Izmir**	**2.63**	**348**	PN	**Pn**	**13 03 20.6**	**-0.1**
IMMV	**Iera Moni Meta**	**2.71**	**264**	PN	**Pn**	**13 03 22.3**	**+0.5**
IMMV	**Iera Moni Meta**	**2.71**	**264**	P	**Pn**	**13 03 22.0**	**+0.2**
IMMV	**Iera Moni Meta**	**2.71**	**264**	P	**Pn**	**13 03 22.7**	**+0.9**
IMMV				AML	AML	13 04 15.4	
	comp=N,2390μm,0.7s						
IMMV				AML	AML	13 04 25.1	
	comp=E,2001μm,0.7s						
KORT	**Korkueli**	**2.75**	**63**	PN	**Pn**	**13 03 24.7**	**+2.2**
KORT	**Korkueli**	**2.75**	**63**	*i* P	**Pb**	**13 03 26.1**	**-1.8**
GVD	**Gavdhos**	**2.78**	**251**	PN	**Pn**	**13 03 23.9**	**+1.2**
GVD	**Gavdhos**	**2.78**	**251**	P	**Pn**	**13 03 21.3**	**-1.4**
GVD				AML	AML	13 04 06.7	
	comp=N,1627μm,0.6s						
GVD				AML	AML	13 04 21.3	
	comp=E,1682μm,0.7s						
MANT	**Manisa**	**2.89**	**20**	*e*Pn	**Pn**	**13 03 24.2**	**-0.2**
BRDR	**BURDUR-Merkez**	**2.93**	**49**	*i* P	**Pb**	**13 03 32.1**	**+1.2**
BRDR				IAML_P			
	comp=Z,2μm,0.1s						
KULA	**Kula-Manisa**	**2.94**	**22**	PN	**Pn**	**13 03 25.8**	**+0.8**
BCK	**Bucak**	**3.14**	**57**	PN	**Pn**	**13 03 29.7**	**+2.0**
ANKY	**Antikythira Is**	**3.24**	**273**	*e*Pn	**Pn**	**13 03 29.5**	**+0.5**
ANKY	**Antikythira Is**	**3.24**	**273**	P	**Pn**	**13 03 29.5**	**+0.5**
ANKY	**Antikythira Is**	**3.24**	**273**	P	**Pn**	**13 03 29.5**	**+0.5**
KYTH	**Kithira**	**3.47**	**279**	*e*Pn	**Pn**	**13 03 33.0**	**+0.8**
KYTH	**Kithira**	**3.47**	**279**	P	**Pn**	**13 03 33.0**	**+0.8**
KTHR	**Kythira**	**3.50**	**279**	P	**Pn**	**13 03 33.6**	**+0.9**
VLI	**Veliai**	**3.64**	**286**	*e*Pn	**Pn**	**13 03 35.1**	**+0.6**
VLI	**Veliai**	**3.64**	**286**	P	**Pn**	**13 03 35.1**	**+0.6**
BALB	**Balikesir**	**3.88**	**7**	*e*Pn	**Pn**	**13 03 37.1**	**-0.6**
DURS	**Dursunbey**	**3.92**	**14**	*i* P	**Sg**	**13 04 45.4**	**+0.2**
DURS				IAML_P			
	comp=Z,308nm,0.0s						
PPCY	**Paphos**	**4.23**	**101**	P	**Pn**	**13 03 44.4**	**+1.8**
	baz=286						
ALFC	**Alefka**	**4.38**	**97**	P	**Pn**	**13 03 46.1**	**+1.4**
	baz=282						
ALFC				S	**Sn**	**13 04 35.5**	**+0.2**
ITM	**Ithomi**	**4.54**	**289**	*e*Pn	**Pn**	**13 03 50.2**	**+3.3**
SLUM	**Salum**	**4.62**	**203**	P	**Pn**	**13 03 51.1**	**+3.2**
	baz=202						
SLUM				AMP		13 04 00.0	
	baz=202						
SLUM				S	**Sn**	**13 04 38.8**	**-2.3**
	baz=202						
SZAC	**Souni**	**4.69**	**101**	P	**Pn**	**13 03 50.7**	**+1.7**
	baz=287						
SZAC				S	**Sn**	**13 04 43.7**	**+0.8**
CSS	**Mathiatis**	**5.00**	**98**	P	**Pn**	**13 03 54.8**	**+1.5**
	baz=283						
CSS				S	**Sn**	**13 04 51.8**	**+1.1**
BR101	**Keskin Array S**	**6.39**	**50**	*e*Pn	**Pn**	**13 04 14.0**	**+1.6**
BR101				*e*Sn	**Sn**	**13 05 25.4**	**+0.5**
BR131	**Keskin Array S**	**6.39**	**50**	*e*Pn	**Pn**	**13 04 15.7**	**+3.3**
BRTR	**Keskin Array B**	**6.39**	**50**	Pn	**Pn**	**13 04 14.0**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=220,slow=15,SNR=15						
BRTR				Sn	**Sn**	**13 05 25.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=221,slow=19,SNR=2.5						
BRTR				LR	LR	13 07 29.8	
	comp=Z,150nm,20.6s,baz=230,slow=46						
HMYD	**Mayadein**	**6.66**	**153**	P	**Pn**	**13 04 17.4**	**+1.4**
	baz=152						
SWA2		**6.70**	**194**	P	**Pn**	**13 04 17.1**	**+0.5**
	baz=194						
HNAT	**Natroun**	**6.74**	**154**	P	**Pn**	**13 04 18.0**	**+0.8**
	baz=154						
MMAI	**Mount Meron Ar**	**7.25**	**110**	Pn	**Pn**	**13 04 24.4**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=311,slow=12,SNR=6.9						
MMAI				Sn	**Sn**	**13 05 45.3**	**-0.9**
	comp=Z,7.1nm,0.3s,baz=308,slow=24,SNR=9.9						
GEM	**Giv'at Ha'Em**	**7.38**	**108**	Pn	**Pn**	**13 04 28.1**	**+2.3**
GEM				Sn	**Sn**	**13 05 47.2**	**-1.8**
KSDI	**Kefar Szold**	**7.38**	**108**	Pn	**Pn**	**13 04 27.7**	**+1.8**
NATI	**Neve Ativ**	**7.41**	**107**	Pn	**Pn**	**13 04 29.0**	**+2.7**
VTS	**Vitosha**	**7.51**	**336**	*e*Pn	**Pn**	**13 04 30.2**	**+2.3**
MMLI	**Mount Malkishu**	**7.53**	**114**	Pn	**Pn**	**13 04 29.7**	**+1.8**
SUZ	**Suez**	**7.54**	**140**	P	**Pn**	**13 04 28.9**	**+0.7**
	baz=139						
HMDT	**Nahal Hemdat**	**7.69**	**115**	Pn	**Pn**	**13 04 31.1**	**+0.9**
YTIR	**Yattir**	**7.88**	**122**	Pn	**Pn**	**13 04 33.2**	**+0.3**
YTIR				Sn	**Sn**	**13 05 57.1**	**-4.5**
NBNS	**Bani Suef**	**7.91**	**153**	P	**Pn**	**13 04 34.6**	**+1.4**
	baz=153						
DSI	**Dead Sea**	**7.95**	**120**	Pn	**Pn**	**13 04 35.3**	**+1.6**
MZDA	**Masada**	**8.08**	**121**	Pn	**Pn**	**13 04 35.6**	**+0.1**
MZDA				Sn	**Sn**	**13 06 02.6**	**-3.8**
ZFRI	**Zfri**	**8.42**	**126**	Pn	**Pn**	**13 04 40.5**	**+0.3**
KRMI	**Paran Flat**	**8.42**	**130**	Pn	**Pn**	**13 04 40.2**	**-0.1**
PRNI	**Paran**	**8.44**	**128**	Pn	**Pn**	**13 04 40.3**	**-0.2**
PRNI				Sn	**Sn**	**13 06 09.6**	**-5.7**
HRFI	**Mount Harif**	**8.67**	**129**	Pn	**Pn**	**13 04 43.7**	**0.0**
HRFI				Sn	**Sn**	**13 06 16.4**	**-4.7**
ASF	**Jabal al Asfar**	**8.76**	**112**	Pn	**Pn**	**13 04 46.4**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=110,slow=12,SNR=2.7						
ASF				Sn	**Sn**	**13 06 24.5**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=3,4,slow=17,SNR=2.1						
MBRI	**Mt Berech**	**8.77**	**131**	Pn	**Pn**	**13 04 45.1**	**+0.1**
EIL	**Elat**	**8.88**	**131**	Pn	**Pn**	**13 04 47.0**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=241,slow=2.8,SNR=14						
EIL				Sn	**Sn**	**13 06 20.4**	**-5.5**
	comp=Z,1.6nm,0.3s,baz=297,slow=14,SNR=3.4						
EIL	**Elat**	**8.88**	**131**	Pn	**Pn**	**13 04 46.9**	**+0.5**
EIL				Sn	**Sn**	**13 06 19.7**	**-6.3**
TTG	**Podgorica**	**9.11**	**319**	*e*Pn	**Pn**	**13 04 49.9**	**+0.3**
MLR	**Muntele Rosu**	**9.75**	**354**	Pn	**Pn**	**13 04 59.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=309,slow=8.9,SNR=2.3						
VYHS	**Vyhne**	**14.15**	**336**	*e*PN	**Pn**	**13 05 54.1**	**-4.4**
KBZ	**Khabaz**	**14.38**	**52**	Pn	**P**	**13 06 09.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=1.8						
KBZ				LR	LR	13 13 25.1	
	comp=Z,56nm,18.3s,baz=235,slow=45						
GNI	**Garni**	**14.44**	**67**	LR	LR	13 12 51.6	
	comp=Z,149nm,20.4s,baz=273,slow=42						
KEST	**Kesra**	**14.57**	**275**	Pn	**P**	**13 06 08.3**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=107,slow=14,SNR=4.4						
AKASG	**Malin Array Be**	**14.98**	**5**	Pn	**Pn**	**13 06 11.1**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=199,slow=12,SNR=4.1						
AKBB	**Malin Array Si**	**14.98**	**5**	*e*Pn	**Pn**	**13 06 11.2**	**+1.4**
VRAC	**Vranov**	**15.62**	**333**	Pn	**P**	**13 06 21.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=146,slow=8.3,SNR=4.2						
GEC2	**GERESS Array S**	**16.44**	**327**	*e*Pn	**Pn**	**13 06 29.4**	**+0.6**
	comp=Z,20nm,1.6s						
GERES	**GERESS Array B**	**16.44**	**327**	Pn	**P**	**13 06 31.0**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=150,slow=16,SNR=9.8						
KHC	**Kasperske Hory**	**16.70**	**327**	*e*Pn	**Pn**	**13 06 32.5**	**+0.4**
	comp=Z,9.4nm,1.5s						
DAVOX	**Davos/Dischmat**	**17.05**	**315**	Pn	**Pn**	**13 06 37.2**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=198,slow=20,SNR=1.9						
DAVOX				LR	LR	13 13 55.6	
	comp=Z,17nm,21.7s,baz=90,slow=40						
SENIN	**Lac Senin/Sane**	**18.36**	**311**	*e*Pn	**P**	**13 06 52.9**	**+0.1**
	comp=Z,6.9nm,1.0s						
SUW	**Suwalki**	**18.45**	**352**	*e*P	**P**	**13 06 53.3**	**-0.2**
	comp=Z,30nm,0.8s						
CLL	**Collm**	**18.60**	**331**	*e*(P)	**Pn**	**13 06 57.0**	**+1.5**
GEYT	**Alibeck**	**24.71**	**76**	P	**P**	**13 08 01.5**	**+2.2**
	comp=Z,1.3nm,0.3s,baz=303,slow=14,SNR=3.2						
ESDC	**Sonseca Array**	**24.95**	**288**	P	**P**	**13 08 01.5**	**0.0**
	comp=Z,1.9nm,0.7s,baz=81,slow=9.8,SNR=11						
FIA0	**FINESS Array S**	**25.69**	**359**	*e*P	**P**	**13 08 06.1**	**-1.6**
FIA0				*e*PcP	**PcP**	**13 11 38.0**	**+0.4**
FINES	**FINESS Array B**	**25.69**	**359**	P	**P**	**13 08 06.1**	**-1.6**
	comp=Z,2.7nm,0.8s,baz=130,slow=8.7,SNR=7.7						
FINES				PcP	**PcP**	**13 11 38.0**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=197,slow=4.4,SNR=4.4						
HFS	**Hagfors**	**25.90**	**344**	P	**P**	**13 08 08.6**	**-1.1**
	comp=Z,2.9nm,0.9s,baz=226,slow=31,SNR=3.9						
AKTO	**Aktyubinsk**	**26.55**	**47**	P	**P**	**13 08 16.0**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=256,slow=12,SNR=5.9						
KIRV	**Kirov**	**27.07**	**26**	LR	LR	13 18 55.4	
	comp=Z,17nm,19.2s,baz=179,slow=36						
NB200	**NORSAR Array S**	**27.28**	**343**	*e*P	**P**	**13 08 21.4**	**-0.8**
NOA	**NORSAR Array B**	**27.28**	**343**	P	**P**	**13 08 21.4**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=164,slow=9.7,SNR=2.1						
ABKAR	**Akbulak array**	**27.34**	**50**	*e*P	**P**	**13 08 23.4**	**+0.6**
	comp=Z,1.0nm,0.8s						
TOA1	**Torodi Ar. Sit**	**32.23**	**232**	*e*P	**P**	**13 09 05.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**32.23**	**232**	P	**P**	**13 09 05.7**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=35,slow=9.1,SNR=17						
TORD				LR	LR	13 22 58.5	
	comp=Z,72nm,21.0s,baz=340,slow=38						
ARA0	**ARCESS Array S**	**33.82**	**359**	*e*P	**P**	**13 09 18.0**	**-1.8**
ARCES	**ARCESS Array B**	**33.82**	**359**	P	**P**	**13 09 18.0**	**-1.8**
	comp=Z,1.8nm,0.7s,baz=188,slow=7.4,SNR=7.8						
KURK	**Kurchatov**	**39.44**	**51**	*e*P	**P**	**13 10 08.0**	**+0.1**
	comp=Z,3.1nm,1.0s						
DBIC	**Dimbokro**	**41.32**	**233**	LR	LR	13 30 10.8	
	comp=Z,51nm,18.0s,baz=82,slow=40						
MK31	**Makanchi Array**	**41.98**	**57**	*e*P	**P**	**13 10 29.8**	**+0.8**
	comp=Z,2.0nm,0.7s						
MK32	**Makanchi Array**	**41.98**	**57**	*e*P	**P**	**13 10 29.5**	**+0.5**
MKAR	**Makanchi Array**	**41.98**	**57**	P	**P**	**13 10 29.5**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=276,slow=7.4,SNR=11						
MKAR				LR	LR	13 28 35.8	
	comp=Z,26nm,18.9s,baz=227,slow=37						
ZAA1	**Zalesovo Array**	**43.32**	**47**	*e*P	**P**	**13 10 39.6**	**-0.1**
ZALV	**Zalesovo Beam**	**43.32**	**47**	P	**P**	**13 10 39.6**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=275,slow=9.0,SNR=3.2						
WMQ	**Urumqi**	**46.19**	**61**	*e*P	**P**	**13 11 06.1**	**+3.3**
WMQ				LR	LR		
	comp=N,44nm,29.2s						
WMQ				LR	LR		
	comp=E,230nm,28.8s						
WMQ				LR	LR		
	comp=Z,71nm,20.3s						
SONM	**Songino Array**	**57.74**	**51**	LR	LR	13 43 16.3	
	comp=Z,33nm,20.0s,baz=256,slow=42						
LZH	**Lanzhou**	**60.36**	**65**	*e*P	**P**	**13 12 48.0**	**+0.7**
LZH				pP	pP	13 12 51.4	-1.4
LZH				sP	sP	13 12 55.3	-0.1
LZH				PP	**PP**	**13 15 02.8**	**+2.6**
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,87nm,5.4s						
CD2	**Chengdu**	**62.54**	**70**	*e*P	**P**	**13 13 00.9**	**-1.1**
HHC	**Hu-ho-hao-te**	**63.84**	**57**	*e*P	**P**	**13 13 10.6**	**+0.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
KMI	**Kunming**	**64.47**	**76**	P	**P**	**13 13 15.8**	**+0.8**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KS15	**Wonju Array Si**	**76.50**	**54**	*e*P	**P**	**13 14 29.0**	**+1.0**
	comp=Z,57nm,1.8s						
KSAR	**Wonju Array Be**	**76.50**	**54**	P	**P**	**13 14 29.0**	**+1.0**
KSRS	**Korea Array**	**76.52**	**54**	P	**P**	**13 14 29.0**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=310,slow=4.7,SNR=8.4						
KSRS				LR	LR	13 54 47.7	
	comp=Z,14nm,18.0s,baz=295,slow=41						
YKA	**Yellowknife Ar**	**77.38**	**343**	P	**P**	**13 14 31.4**	**-1.1**
	comp=Z,0.4

HATD	**Hatta, Dubai**	**2.20 216**	P	**Pn**		**13 27 12.6**	**-2.1**
HATD	**Hatta, Dubai**	**2.20 216**	*e*Pn	**Pn**		**13 27 14.8**	**+0.1**
ASHO	**Ashiyiah**	**2.36 215**	*e*P	**Pn**		**13 27 16.4**	**-0.4**
SNR=6.5							
ASHO	**Ashiyiah**	**2.36 215**	*e*Pn	**Pn**		**13 27 16.8**	**0.0**
NAZ	**Nazwa, Dubai**	**2.36 227**	*e*P	**Pn**		**13 27 16.8**	**0.0**
SNR=18							
NAZ	**Nazwa, Dubai**	**2.36 227**	*e*Pn	**Pn**		**13 27 19.3**	**+2.5**
FAQ	**Al Faqa, Dubai**	**2.57 224**	*e*Pn	**Pn**		**13 27 21.8**	**+2.0**
ASUD	**Al Ashush, Dub**	**2.83 226**	P	**Pn**		**13 27 23.4**	**+0.2**
ASUD	**Al Ashush, Dub**	**2.83 226**	*e*Pn	**Pn**		**13 27 25.6**	**+2.4**
CHBR	**Chabahar**	**2.83 111**	*e*Pn	**Pb**		**13 27 25.6**	**-3.0**
NGRK	**Negar Kerman**	**3.09 347**	*e*Pn	**Pb**		**13 27 31.0**	**-2.4**
NGRK			IAMB	IAmb		13 27 33.9	
comp=Z,0.0nm,0.4s							
TVBK	**TV Kerman**	**3.42 348**	*e*Pn	Pb		13 27 33.2	-5.7
TVBK			IAMB	IAmb		13 28 33.0	
comp=Z,0.0nm,0.6s							
KHGB	**Koh Gabri**	**3.85 346**	*e*Pn	**Pn**		**13 27 38.8**	**+1.2**
KHGB			IAMB	IAmb		13 28 56.0	
comp=Z,0.0nm,0.9s							
ZHSF	**Zahedan**	**4.12 43**	*e*Pn	**Pn**		**13 27 41.5**	**+0.3**
GHIR	**Ghir-Karzin**	**4.38 293**	*e*Pn	**Pb**		**13 27 50.7**	**-4.4**
BSRN	**Basiran**	**5.50 14**	*e*Pn	**Pn**		**13 28 01.3**	**+1.2**
IRAM	**Ramesheh**	**6.86 320**	*e*Pn	**Pn**		**13 28 19.4**	**+0.5**
AKTO	**Aktyubinsk**	**23.78 1**	P	**P**		**13 31 54.0**	**+3.4**
comp=Z,1.3nm,0.6s,baz=180,slow=13,SNR=3.6							
MKAR	**Makanchi Array**	**28.06 38**	P	P		13 32 50.2	+21
comp=Z,0.3nm,0.6s,baz=222,slow=11,SNR=3.2							
AKASG	**Malin Array Be**	**32.32 326**	P	**P**		**13 33 04.1**	**-3.0**
comp=Z,0.3nm,0.3s,baz=129,slow=8.0,SNR=4.8							
FINES	**FINESS Array B**	**40.73 337**	P	**P**		**13 34 19.4**	**+0.6**
comp=Z,0.5nm,0.6s,baz=137,slow=11,SNR=3.5							
TORD	**Torodi Ar. Bea**	**53.83 267**	P	**P**		**13 36 03.9**	**+2.5**
comp=Z,0.5nm,0.5s,baz=68,slow=6.7,SNR=6.7							

BJI 19 13:37:07.8±0.0, 43°.44N×94°.82E, h7km, mb4.1/4, ML3.8/9, 1C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**5.19**	**277**	Pn	Pb	13 38 39.8	+1.0
WMQ				Sg	Sb	13 39 46.0	+4.7
WMQ				smax	smax		
comp=N,130nm,0.8s							
WMQ				smax	smax		
comp=E,120nm,0.5s							
WMQ	**Urumqi**	**5.19**	**277**	*e*Pn	Pn	13 38 23.9	-2.0
WMQ				Sn	Sn	13 39 29.8	+3.8
WMQ				smax	smax		
comp=E,57nm,1.1s							
WMQ				smax	smax		
comp=E,110nm,0.7s							
GTA	**Gaotai**	**5.50**	**135**	⇑Pn	Pn	13 38 31.4	+1.1
GTA				smax	smax		
comp=E,36nm,1.2s							
GTA				smax	smax		
comp=E,28nm,1.3s							

MAN 19 13:42:09.4, 13°.68N×120°.66E, h120km, mb4.3, ML3.1, MS2.8, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.34**	**121**	⇑*e*P	Pn	13 42 27.6	+1.0
BOAC	**Boac**	**1.18**	**100**	*e*P	Pn	13 42 32.7	-0.4
SJMP	**San Jose**	**1.29**	**159**	*e*P	Pn	13 42 35.5	+1.1
SJMP				*e*S	Sn	13 42 55.2	+1.7
POLP	**Polilio Island**	**1.62**	**50**	*e*P	Pn	13 42 39.9	+1.6
BUSP	**Coron**	**1.72**	**195**	*e*P	Pn	13 42 40.1	+0.6
BUSP				*e*S	Sn	13 43 03.3	+1.0

IDC 19 13:46:05.1±4.1, 5°.83S×151°.47E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.4/29, mbtmp3.6/2, Error ellipse: s-maj=188.4km s-min=49.1km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.77**	**228**	P	P	13 50 58.0	-0.6
2.4nm,0.7s,baz=55,slow=10,SNR=12							
ASAR	**Alice Springs**	**24.50**	**222**	P	P	13 51 26.9	+0.5
0.8nm,0.7s,baz=58,slow=7.9,SNR=8.5							
TORD	**Torodi Ar. Bea**	**149.34**	**286**	PKPbc	PKPbc	14 05 56.5	-0.6
0.7nm,0.8s,baz=72,slow=4.7,SNR=2.9							

*IDC **19** 13:48:30.7±1.4, 29°.62S×71°.91W, h0km, mb4.1/1, mb1 3.7/6, mb1mx3.5/29, mbtmp3.5/6, ML3.5/5, MS2.8/2, Ms1 2.8/2, ms1mx2.6/16, Error ellipse: s-maj=45.6km s-min=22.2km az=92.0*
*ISCJB **19** 13:48:37.0±0.8, 29°.59S±0°.03×71°.55W±0°.09, h55km±7km, mb4.2/1, Error ellipse: s-maj=13.0km s-min=4.7km az=6.9*
*GUC **19** 13:48:37.8±0.7, 29°.62S×71°.20W, h50km±2km, ML4.1*
*SJA **19** 13:48:39.5±0.5, 29°.66S×71°.12W, h17km±3km, ML4.0, MW3.8*
*NEIC **19** 13:48:39.6±1.8, 29°.65S×71°.27W, h45km±12km, ML4.1(GUC), Error ellipse: s-maj=25.6km s-min=2.6km az=95.0*
NEIC Felt [III] at La Higuera and [II] at Paiguano.

ISC 19 13:48:37.9±0.9, 29°.61S±0°.03×71°.49W±0°.08, h47km±8km, n45, σ1°65/54, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.37**	**144**	*e*P	**Pn**	**13 48 47.5**	**+0.1**
LSCH				*i* P	**Pn**	**13 48 47.5**	**+0.1**
LSCH				*i* S	**Sn**	**13 48 54.5**	**+0.3**
GO04	**Tololo Observa**	**0.83**	**133**	*e*Pn	**Pn**	**13 48 53.2**	**-0.3**
GO04				*e*Sn	**Sn**	**13 49 03.0**	**-1.7**
GO04	**Tololo Observa**	**0.83**	**133**	*e*P	**Pn**	**13 48 51.5**	**-2.0**
GO04	**Tololo Observa**	**0.83**	**133**	⇓*i* P	**Pn**	**13 48 52.9**	**-0.6**
GO04				*i* S	**Sn**	**13 49 03.7**	**-1.1**
LCO	**Las Campanas**	**0.91**	**50**	*e*Pn	**Pn**	**13 48 54.0**	**-0.6**
LCO				*e*Sn	**Sn**	**13 49 05.2**	**-1.6**
LCO	**Las Campanas**	**0.91**	**50**	*e*P	**Pn**	**13 48 53.9**	**-0.6**
LCO				*e*S	**Sn**	**13 49 05.5**	**-1.3**
LCO	**Las Campanas**	**0.91**	**50**	⇑*i* P	**Pn**	**13 48 53.9**	**-0.6**
LCO				*e*S	**Sn**	**13 49 05.5**	**-1.3**
LCO				IAML		13 49 06.2	
comp=E,10μm,0.2s							
CO02	**Combarbal**	**1.65**	**165**	⇑*i* P	**Pn**	**13 49 04.9**	**+0.3**
GO03	**Copiap**	**2.29**	**29**	*e*Pn	**Pn**	**13 49 14.2**	**+1.0**
GO03	**Copiap**	**2.29**	**29**	*e*P	**Pn**	**13 49 17.9**	**+4.6**
GO03	**Copiap**	**2.29**	**29**	*e*P	**Pn**	**13 49 14.1**	**+0.8**
GO03				*i* S	**Sn**	**13 49 41.6**	**+1.4**
GO03				IAML		13 49 52.9	
comp=E,1μm,0.5s							
RTLS	**Leoncito**	**2.89**	**140**	*e*P	**Pn**	**13 49 24.8**	**+3.0**
RTLS				IAML		13 50 08.4	
comp=Z,624nm,0.4s							
AMOG	**MOGNA**	**2.92**	**118**	*e*P	**Pn**	**13 49 23.3**	**+1.4**
VCA	**Vinchina**	**3.00**	**74**	*e*P	**Pn**	**13 49 25.1**	**+2.0**
VCA				IAML		13 49 44.6	
comp=Z,734nm,0.3s							
AUSP	**Uspallata**	**3.18**	**146**	*e*P	**Pn**	**13 49 29.1**	**+3.5**
ROC1	**El Roble**	**3.39**	**173**	*e*Pn	**Pn**	**13 49 29.3**	**+0.9**
RTCV	**Cerro Valdivia**	**3.40**	**132**	*e*P	**Pn**	**13 49 30.8**	**+2.3**
CFA	**Coronel Fontan**	**3.44**	**126**	Pn	**Pn**	**13 49 30.4**	**+1.3**
comp=Z,118nm,0.3s,baz=320,slow=9.0,SNR=110							
CFA				Sn	**Sn**	**13 50 10.4**	**+1.8**
comp=Z,39nm,0.3s,baz=92,slow=17,SNR=8.5							
PEL	**Peldehue**	**3.59**	**169**	*e*Pn	**Pn**	**13 49 32.1**	**+0.9**
PEL	**Peldehue**	**3.59**	**169**	*e*P	**Pn**	**13 49 32.0**	**+0.9**
PEL				*i* S	**Sn**	**13 50 14.2**	**+1.8**
PEL				IAML		13 50 28.0	
comp=E,418nm,0.4s							
ASAL	**Salagasta**	**3.75**	**143**	*e*P	**Pn**	**13 49 36.6**	**+3.2**
FCH	**Farellones**	**3.85**	**165**	*e*P	**Pn**	**13 49 36.6**	**+1.6**
FCH				*i* S	**Sn**	**13 50 21.3**	**+2.2**
CLCH	**Cerro Calan**	**3.87**	**168**	*e*P	**Pn**	**13 49 36.1**	**+1.2**
CLCH				*e*S	**Sn**	**13 50 20.1**	**+1.0**
ARCO	**CERRO ARCO**	**3.90**	**146**	*e*P	**Pn**	**13 49 39.0**	**+3.5**
ARCO				IAML		13 50 38.6	
comp=Z,275nm,0.6s							
GO02	**Mina Guanaco**	**4.74**	**21**	*e*Pn	**Pn**	**13 49 49.0**	**+1.9**
GO05	**Huala**	**5.40**	**184**	*e*Pn	**Pn**	**13 49 54.9**	**-1.1**
LVC	**Limon Verde**	**7.34**	**19**	Pn	**Pn**	**13 50 21.0**	**-1.9**
comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=3.8							
LVC				Sn	Sn	13 52 02.5	+17
comp=Z,3.4nm,0.3s,baz=146,slow=22,SNR=6.2							
LVC				LR	LR	13 53 25.5	
comp=Z,73nm,21.2s,baz=192,slow=39							
LVC	**Limon Verde**	**7.34**	**19**	*e*Pn	**Pn**	**13 50 23.2**	**+0.3**
PLCA	**Paso Flores**	**11.13**	**176**	Pn	**Pn**	**13 51 13.2**	**-1.2**
comp=Z,0.1nm,0.3s,baz=69,slow=8.5,SNR=2.5							
PLCA	**Paso Flores**	**11.13**	**176**	*e*Pn	**Pn**	**13 51 14.6**	**+0.1**
TRQA	**Tornquist**	**11.55**	**139**	*e*Pn	**Pn**	**13 51 19.3**	**-0.9**
CPUP	**Villa Florida**	**12.94**	**79**	Pn	**Pn**	**13 51 38.7**	**-0.4**
comp=Z,0.3nm,0.3s,baz=229,slow=12,SNR=3.7							
CPUP				LR	LR	13 57 21.4	
comp=Z,42nm,20.1s,baz=239,slow=40							
LPAZ	**La Paz**	**13.61**	**14**	Pn	**Pn**	**13 51 48.8**	**-0.1**
comp=Z,0.0nm,0.3s,baz=281,slow=10,SNR=2.1							
LPAZ	**La Paz**	**13.61**	**14**	*e*Pn	**Pn**	**13 51 48.5**	**-0.4**
SIV	**San Ignacio**	**16.59**	**38**	Pn	**P**	**13 52 28.6**	**-0.7**
comp=Z,0.1nm,0.3s,baz=248,slow=16,SNR=2.2							
VNA3	**Neumayer Olymp**	**53.27**	**159**	P	**P**	**13 57 51.3**	**-0.2**
VNA2	**Neumayer--Watz**	**53.90**	**159**	P	**P**	**13 57 55.9**	**-0.2**
baz=286,slow=8.4							
SNAA	**Sanae**	**55.49**	**159**	P	**P**	**13 58 07.4**	**-0.3**
SNAA	**Sanae**	**55.49**	**159**	P	**P**	**13 58 07.5**	**-0.3**
comp=Z,1.3nm,0.5s,baz=271,slow=8.8,SNR=15							
KNB	**Kanab**	**76.77**	**327**	*e*P	P	14 00 29.9	+5.3
H11S2	**WAKE ISLAND Hyl**	**26.19**	**272**	T	T	16 26 38.4	
baz=115,slow=75,SNR=7.3							
H11S1	**WAKE ISLAND Hyl**	**26.20**	**272**	T	T	16 26 43.5	
baz=115,slow=75,SNR=8.0							
H11S3	**WAKE ISLAND Hyl**	**26.21**	**272**	T	T	16 26 49.0	
baz=115,slow=75,SNR=7.7							
ZALV	**Zalesovo Beam**	**150.21**	**29**	PKPbc	**PKPbc**	**14 08 23.6**	**+0.3**
comp=Z,3.2nm,0.6s,baz=299,slow=4.1,SNR=12							
MKAR	**Makanchi Array**	**153.37**	**43**	PKPbc	**PKPbc**	**14 08 29.6**	**-1.2**
comp=Z,0.2nm,0.5s,baz=0.0,slow=0.0,SNR=2.7							
MKAR				PKPab	**sPKPdf**	**14 08 45.1**	**+2.6**
comp=Z,0.4nm,0.8s,baz=298,slow=3.1,SNR=4.0							

MAN 19 13:59:22.1, 16°.86N×119°.51E, h27km, mb4.2, ML3.0, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.61**	**141**	*e*P	Pb	13 59 34.1	-0.1
BOLP				*e*S	Sb	13 59 42.6	+0.1
SCZP	**Santa Cruz**	**1.14**	**160**	*e*P	Pb	13 59 43.1	-0.1
SCZP				*e*S	Sn	13 59 56.5	-0.6
ABRA	**Dolores**	**1.39**	**55**	*e*P	Pn	13 59 45.6	-0.2
ABRA				*e*S	Sn	14 00 04.0	+0.7
APYP	**Conner**	**1.93**	**59**	*e*P	Pn	13 59 53.7	+0.5
APYP				*e*S	Sn	14 00 17.1	+0.5
BALP	**Baler**	**2.27**	**119**	*e*P	Pn	13 59 59.0	+1.1
BALP				*e*S	Sn	14 00 26.8	+1.7

MAN 19 14:16:03.1, 9°.03N×125°.50E, h3km, mb4.0, ML2.7, MS2.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.13**	**117**	*e*P	Pg	14 16 06.5	+0.8
BUTP				*e*S	Sg	14 16 16.4	+9.0
SCPH	**Surigao**	**0.75**	**359**	⇑*i* P	Pg	14 16 17.8	+0.3
SCPH				*i* S	Sg	14 16 26.3	-0.9
CGP	**Cagayan de Oro**	**0.98**	**235**	*e*P	Pg	14 16 22.0	+0.1
CGP				*e*S	Sn	14 16 38.2	0.0
CGP	**Cagayan de Oro**	**0.98**	**235**	*e*P	Pg	14 16 22.0	+0.1
CGP				*e*S	Sn	14 16 38.2	0.0
BUKP	**Musuan**	**1.22**	**201**	*e*P	Pg	14 16 26.5	-0.1
BUKP				*e*S	Sn	14 16 49.3	+5.1

*IDC **19** 14:22:54.4±1.5, 34°.26N×25°.16E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.3/27, mbtmp3.5/4, ML4.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/31, Error ellipse: s-maj=79.7km s-min=24.9km az=135.0*
*ATH **19** 14:22:54.9, 34°.14N×25°.01E, h16km±5km, ML2.7/5, Error ellipse: s-maj=6.0km s-min=2.0km az=8.0*
*ISCJB **19** 14:22:56.8±1.9, 34°.21N±0°.03×25°.16E±0°.05, h15km±14km, mb3.5/3, MS3.1/1, Error ellipse: s-maj=8.2km s-min=4.5km az=154.8*
*HLW **19** 14:22:57.3, 34°.26N×24°.99E, h10km±20km, Md2.9, Ml3.0*
*THE **19** 14:22:57.8, 34°.34N×25°.08E, h0km±1km, ML2.8/3, Error ellipse: s-maj=3.4km s-min=0.9km az=153.0*

ISC 19 14:22:56.4±1.4, 34°.24N±0°.04×25°.05E±0°.04, h8km±10km, n26, σ0°99/37, mb3.7/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.80**	**346**	P	**Pg**	**14 23 11.8**	**0.0**
SIVA				S	**Sg**	**14 23 22.9**	**+0.7**
SIVA	**Sivas**	**0.80**	**346**	P	**Pg**	**14 23 11.8**	**0.0**
SIVA				S	**Sb**	**14 23 24.1**	**+0.7**
SIVA				AML	AML	14 23 27.3	
comp=E,4645μm,0.4s							
SIVA				AML	AML	14 23 36.0	
comp=N,2306μm,0.5s							
TMBK	**Timbaki Herakl**	**0.86**	**344**	P	**Pb**	**14 23 13.3**	**-0.2**
TMBK				S	**Sg**	**14 23 24.5**	**+0.4**
LAST	**Lasithi**	**0.98**	**21**	P	**Pg**	**14 23 15.2**	**-0.1**
LAST				S	**Sb**	**14 23 28.8**	**-0.1**
LAST	**Lasithi**	**0.98**	**21**	P	**Pg**	**14 23 15.1**	**-0.2**
LAST				S	**Sn**	**14 23 31.3**	**+0.6**
LAST				AML	AML	14 23 43.3	
comp=E,490μm,0.7s							
LAST				AML	AML	14 23 44.9	
comp=N,378μm,0.6s							
GVD	**Gavdhos**	**0.99**	**307**	P	**Pb**	**14 23 15.7**	**-0.1**
GVD				S	**Sn**	**14 23 31.8**	**+1.0**
GVD	**Gavdhos**	**0.99**	**307**	P	**Pg**	**14 23 15.2**	**-0.3**
GVD				AML	AML	14 23 40.0	
comp=N,1226μm,0.4s							
GVD				AML	AML	14 23 46.8	
comp=E,1270μm,0.6s							
GVDS	**Gavdos**	**0.99**	**307**	P	**Pb**	**14 23 16.4**	**+0.6**
GVDS				S	**Sn**	**14 23 31.8**	**+1.0**
KSTL	**Kastelli Herak**	**1.06**	**1**	P	**Pg**	**14 23 15.7**	**-1.0**
NPS	**Neapolis**	**1.12**	**24**	P	**Pg**	**14 23 17.1**	**-0.8**
NPS	**Neapolis**	**1.12**	**24**	P	**Pg**	**14 23 17.0**	**-0.8**
PRNS	**Prines Rethymn**	**1.21**	**338**	P	**Pb**	**14 23 19.7**	**+0.2**
ZKR	**Zakros**	**1.30**	**48**	P	**Pb**	**14 23 21.5**	**+0.5**
ZKR				S	**Sn**	**14 23 40.5**	**+2.1**
ZKR				AML	AML	14 23 51.4	
comp=E,378μm,0.7s							
ZKR				AML	AML	14 23 52.6	
comp=N,151μm,0.7s							
VAM	**Vamos**	**1.35**	**329**	P	**Pn**	**14 23 21.5**	**-0.1**
VAM				S	**Sn**	**14 23 41.0**	**+1.3**
VAM	**Vamos**	**1.35**	**329**	P	**Pn**	**14 23 21.2**	**-0.4**
VAM				S	**Sn**	**14 23 41.7**	**+2.0**
VAM				AML	AML	14 23 48.3	
comp=E,498μm,0.5s							
VAM				AML	AML	14 23 48.3	
comp=N,529μm,0.3s							
IMMV	**Iera Moni Meta**	**1.50**	**324**	P	**Pn**	**14 23 24.3**	**+0.7**
IMMV	**Iera Moni Meta**	**1.50**	**324**	P	**Pn**	**14 23 24.2**	**+0.7**
ANAF	**Anafi Island**	**2.19**	**15**	P	**Pn**	**14 23 33.0**	**-0.1**
SLUM	**Salum**	**2.75**	**177**	P	**Pn**	**14 23 41.4**	**+0.7**
baz=176							
SLUM				AMP		14 24 00.0	
baz=176							
SLUM				S	**Sn**	**14 24 13.0**	**-1.1**
baz=176							
SWA2		**5.00**	**176**	P	**Pn**	**14 24 12.3**	**+0.7**
baz=175							
HNAT	**Natroun**	**6.60**	**133**	P	**Pn**	**14 24 35.6**	**+1.9**
baz=132							
GLL	**Jalalah**	**7.33**	**128**	P	**Pn**	**14 24 44.9**	**+1.2**
baz=127							
AKASG	**Malin Array Be**	**16.73**	**9**	Pn	**Pn**	**14 26 49.5**	**-1.5**
comp=N,0.8nm,0.3s,baz=202,slow=10,SNR=5.5							
TORD	**Torodi Ar. Bea**	**29.84**	**231**	P	**P**	**14 29 04.2**	**0.0**
comp=N,0.6nm,0.5s,baz=35,slow=9.0,SNR=8.7							
MKAR	**Makanchi Array**	**44.36**	**56**	P	**P**	**14 31 06.4**	**-0.7**
comp=N,0.2nm,0.5s,baz=286,slow=6.6,SNR=3.6							
MKAR				LR	LR	14 51 47.8	
comp=N,23nm,18.9s,baz=76,slow=39							
ZALV	**Zalesovo Beam**	**45.71**	**46**	P	**P**	**14 31 15.6**	**-2.1**
comp=N,0.3nm,0.3s,baz=251,slow=8.6,SNR=2.4							

*ISCJB **19** 14:43:43.7±1.8, 33°.81N±0°.05×35°.6E±0°.1, h21km±11km, Error ellipse: s-maj=15.2km s-min=7.9km az=171.3*

*NSSC **19** 14:43:43.0±0.4, 33°.83N×35°.61E, h14km±2km, ML1.6*
*GRAL **19** 14:43:45.2±0.3, 33°.79N×35°.78E, h3km±10km, MD2.6*

ISC 19 14:43:43.0±1.4, 33°.86N±0°.07×35°.82E±0°.09, h14km±11km, n7, σ0°64/13, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.14**	**287**	*e*P	**Pb**	**14 43 48.0**	**+0.4**
BHL				*e*S	**Sg**	**14 43 50.1**	**+0.6**
DQRL	**Deir Qamar**	**0.26**	**233**	*e*P	**Pg**	**14 43 48.8**	**+0.1**
DQRL				*e*S	**Sg**	**14 43 51.4**	**-1.1**
RCY	**Rachaya**	**0.36**	**178**	*e*P	**Pg**	**14 43 50.6**	**+0.1**
RCY				*e*S	**Sg**	**14 43 54.6**	**-0.9**
HWQ	**Hawqa**	**0.43**	**14**	*e*P	**Pn**	**14 43 54.2**	**-0.7**
BRBR	**Barbar**	**0.46**	**166**	*e*P	**Pg**	**14 43 52.7**	**+0.4**
BRBR				*e*S	**Sb**	**14 44 00.4**	**+0.5**
BRBR				AML	AML	14 44 02.1	
comp=E,67nm,0.3s							
BRBR				AML	AML	14 44 02.5	
comp=N,51nm,0.3s							
BRBR				AML	AML	14 44 05.9	
comp=Z,28nm,0.6s							
QASN	**Qassioun**	**0.50**	**131**	*e*P	**Pn**	**14 43 55.7**	**-0.2**
QASN				*e*S	**Sn**	**14 44 04.0**	**-0.4**
QASN				AML	AML	14 44 08.3	
comp=E,39nm,0.3s							
QASN				AML	AML	14 44 09.4	
comp=Z,114nm,0.3s							
QASN				AML	AML	14 44 10.7	
comp=N,113nm,0.3s							
TOTH	**TOTAH**	**0.71**	**134**	*e*P	**Pn**	**14 43 58.9**	**+0.2**
TOTH				*e*S	**Sn**	**14 44 09.7**	**+0.2**
TOTH				AML	AML	14 44 19.1	
comp=Z,9.1nm,0.5s							
TOTH				AML	AML	14 44 20.5	
comp=N,14nm,0.4s							
TOTH				AML	AML	14 44 26.5	
comp=E,12nm,0.5s							

*IDC **19** 14:51:12.8±1.3, 48°.63N×77°.53E, h0km, mb1 2.9/4, mb1mx2.9/52, mbtmp2.9/4, ML2.4/4, Error ellipse: s-maj=20.6km s-min=11.2km az=94.0*
*ISCJB **19** 14:51:13.4±0.8, 48°.63N±0°.05×77°.8E±0°.1, h0km, Error ellipse: s-maj=10.4km s-min=6.8km az=2.4*
*NNC **19** 14:51:16.5±1.1, 48°.74N×78°.25E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=13.8km s-min=7.6km az=77.0, Suspected Mining explosion.*

ISC 19 14:51:14.0±1.1, 48°.65N±0°.06×77°.71E±0°.06, h0km, n11, σ0°92/13, 7C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.04**	**15**	Pn	**Pn**	**14 51 50.0**	**+0.4**
0.7nm,0.3s,baz=201,slow=16,SNR=48							
KURBB				Lg	Lg	14 52 17.4	
0.6nm,0.3s,baz=202,slow=29,SNR=13							
KURBB	**Kurchatov Arra**	**2.04**	**15**	⇑Pn	**Pn**	**14 51 48.4**	**-1.2**
12nm,0.6s							
KURBB				⇑Sn	**Sn**	**14 52 15.9**	**+0.1**
15nm,0.5s							
KURK	**Kurchatov**	**2.15**	**16**	⇓Pn	**Pn**	**14 51 50.1**	**-1.0**
6.9nm,0.6s							
KURK				⇓Sn	**Sn**	**14 52 19.1**	**+0.7**
10.0nm,0.5s							
MAKZ	**Makanchi**	**3.42**	**121**	⇓Pn	**Pn**	**14 52 08.5**	**-0.1**
1.0nm,0.6s							
MAKZ				⇑Lg	Lg	14 52 55.2	
4.2nm,0.6s							
OTUK	**Ortayu**	**3.60**	**265**	⇓Pn	**Pb**	**14 52 19.7**	**+1.2**
1.5nm,0.6s							
OTUK				⇓Pg	Pg	14 52 28.2	+5.3
3.8nm,0.7s							
OTUK				⇑Lg	Lg	14 53 23.6	
3.6nm,0.6s							
MK31	**Makanchi Array**	**3.61**	**119**	⇑Pn	**Pn**	**14 52 11.0**	**-0.2**
0.9nm,0.6s,baz=301,slow=11,SNR=13							
MK31				⇑Pg	**Pb**	**14 52 18.6**	**-0.1**
0.5nm,0.5s,baz=119,slow=68,SNR=5.5							
MK31				⇑Lg	Lg	14 52 59.9	
3.2nm,0.6s,baz=309,slow=28,SNR=13							
MKAR	**Makanchi Array**	**3.61**	**119**	Pn	**Pn**	**14 52 11.4**	**+0.2**
0.2nm,0.3s,baz=302,slow=12,SNR=16							
MKAR				Lg	Lg	14 53 02.3	
0.9nm,0.3s,baz=310,slow=28,SNR=19							
BVAR	**Borovoye Array**	**6.37**	**316**	Sn	**Sn**	**14 54 01.0**	**-1.6**
0.3nm,0.3s,baz=121,slow=24,SNR=5.7							
BVAR				Lg	Lg	14 54 30.7	
0.2nm,0.3s,baz=124,slow=28,SNR=3.4							
AAK	**Ala-Archa**	**6.42**	**202**	Pn	**Pn**	**14 52 49.2**	**-0.7**
0.4nm,0.3s,baz=14,slow=5.4,SNR=3.8							
ZALV	**Zalesovo Beam**	**6.92**	**37**	Pn	**Pn**	**14 52 57.6**	**+0.9**
0.2nm,0.3s,baz=228,slow=13,SNR=3.3							
I31KZ	**AKTYUBINSK INF**	**12.90**	**285**	*i*		16 05 30.0	
baz=91,slow=313,SNR=2.4							

NNC 19 14:53:11.6±2.1, 54°.21N×86°.18E, h0km, mb3.6, mpv2.9, 9C-5D, Error ellipse: s-maj=21.3km s-min=9.4km az=177.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.84**	**252**	⇑P	Pg	14 53 27.6	-0.1
0.7nm,0.3s							
ZAA0				⇑S	Sg	14 53 39.7	+1.0
5.2nm,0.6s							
KURK	**Kurchatov**	**5.79**	**236**	⇑Pn	Pn	14 54 40.7	+2.0
1.0nm,0.4s							
KURK				⇓Sn

comp=N,144nm,0.4s
PEL Peldehue 3.31 164 *e*P **Pn 14 54 24.1 -0.2**
PEL *i* S **Sn 14 55 01.4 -1.1**
PEL IAML 14 55 17.1
comp=N,82nm,0.3s
VCA Vinchina 3.37 70 *e*P **Pn 14 54 28.1 +2.9**
RTCV Cerro Valdivia 3.38 125 *e*P **Pn 14 54 26.2 +0.9**
FCH Farellones 3.59 159 *e*P **Pn 14 54 28.1 -0.4**
FCH *i* S **Sn 14 55 08.4 -1.4**
FCH IAML 14 55 20.8
comp=E,58nm,0.3s
ASAL Salagasta 3.65 137 *e*P **Pn 14 54 30.1 +1.1**
ARCO CERRO ARCO 3.77 140 *e*P **Pn 14 54 32.5 +1.6**
ARCO IAML 14 54 38.6
comp=Z,25nm,0.3s
ARCO *e*S **Sn 14 55 16.3 +2.2**

*IDC **19** 14:57:27.7±1.2,55°.77S×27°.69W,h0km,mb4.3/3,*
mb1 4.3/3,mb1mx3.9/29,mbtmp4.3/3,Error ellipse:
s-maj=60.5km s-min=27.0km az=90.0
*ISCJB **19** 14:57:40.4±1.9,55°.9S±0°.1×27°.2W±0°.8,h112km,mb4.2/3,*
Error ellipse: s-maj=67.5km s-min=20.0km az=174.4
ISC 19 14:57:41.7±1.5,55°.9S±0°.2×27°.4W±0°.4,h112km,n8,
σ0s43/8,mb4.1/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.95**	**158**	P	**P**	**15 01 31.7**	**0.0**
VNA3	**Neumayer Olymp**	**17.14**	**161**	P	**P**	**15 01 33.3**	**-0.7**
VNA2	**Neumayer--Watz**	**17.35**	**158**	P	**P**	**15 01 35.9**	**-0.2**
baz=315,slow=13							
SNAA	**Sanae**	**18.90**	**156**	P	**P**	**15 01 52.8**	**-0.3**
MAW	**Mawson**	**40.31**	**144**	P	**P**	**15 05 07.6**	**+0.2**
1.6nm,0.5s,baz=245,slow=8.0,SNR=3.4							
VNDA	**Vanda**	**46.70**	**183**	P	**P**	**15 05 58.9**	**+0.4**
2.5nm,0.7s,baz=188,slow=7.5,SNR=29							
TORD	**Torodi Ar. Bea**	**72.99**	**30**	P	**P**	**15 08 59.0**	**+0.1**
2.6nm,0.5s,baz=200,slow=6.1,SNR=25							
ILAR	**Eielson Array**	**149.96**	**312**	PKPbc	**PKPbc**	**15 17 17.0**	**-0.4**
0.4nm,0.6s,baz=123,slow=3.0,SNR=7.3							

*IDC **19** 15:01:00.7±3.0,12°.20S×167°.29E,h192km±27km,*
mb3.9/12,mb1 4.0/15,mb1mx3.7/40,mbtmp4.4/15,MS4.5/1,
Ms1 4.5/1,ms1mx2.8/22,Error ellipse: s-maj=19.8km
s-min=15.9km az=103.0
*NEIC **19** 15:01:01.7±1.1,12°.18S×167°.24E,h201km±10km,*
mb4.5/19,Error ellipse: s-maj=8.6km s-min=8.2km
az=124.0
*ISCJB **19** 15:01:02.3±0.4,12°.23S±0°.06×167°.17E±0°.07,h220km,*
mb4.2/25,Error ellipse: s-maj=11.1km s-min=7.9km
az=34.1
ISC 19 15:01:03.6±0.6,12°.24S±0°.09×167°.08E±0°.10,h220km,n49,
σ0s99/48,mb4.3/25,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.54**	**291**	P	**Pn**	**15 02 48.5**	**-2.5**
3.3nm,0.3s,baz=90,slow=20,SNR=2.5							
MARNC	**Mare, Loyalty**	**9.24**	**174**	*e*Pn	**Pn**	**15 03 12.3**	**-0.4**
DZM	**Mont Dzumac**	**9.80**	**183**	P	**Pn**	**15 03 19.0**	**-1.1**
0.1nm,0.3s,baz=254,slow=18,SNR=3.3							
RABL	**Rabaul**	**16.78**	**297**	*e*P	**Pn**	**15 04 47.0**	**+0.5**
34nm,0.5s							
PMG	**Port Moresby**	**19.77**	**276**	P	**Pn**	**15 05 20.2**	**-1.5**
1.0nm,0.3s,baz=119,slow=14,SNR=4.4							
PMG	**Port Moresby**	**19.77**	**276**	*e*P	**Pn**	**15 05 20.1**	**-1.5**
41nm,1.4s							
EIDS	**Eidsvold**	**19.97**	**227**	*e*P	**Pn**	**15 05 22.0**	**-2.0**
23nm,0.6s							
CTA	**Charters Tower**	**21.46**	**246**	P	**P**	**15 05 37.0**	**+1.9**
7.3nm,0.6s,baz=78,slow=11,SNR=8.7							
CTAO	**Charters Tower**	**21.46**	**246**	*e*P	**P**	**15 05 37.0**	**+1.9**
12nm,0.9s							
STKA	**Stephens Creek**	**30.52**	**226**	P	**P**	**15 06 57.9**	**+1.4**
1.3nm,0.5s,baz=26,slow=10,SNR=4.2							
STKA	**Stephens Creek**	**30.52**	**226**	*e*P	**P**	**15 06 57.6**	**+1.1**
5.1nm,1.9s							
WR1	**Warramunga Arr**	**32.33**	**252**	*e*P	**P**	**15 07 13.0**	**+0.6**
WRA	**Warramunga Arr**	**32.33**	**252**	P	**P**	**15 07 13.0**	**+0.5**
2.7nm,0.4s,baz=83,slow=9.0,SNR=43							
AS31	**Alice Springs**	**33.46**	**246**	*e*P	**P**	**15 07 22.3**	**+0.1**
1.3nm,1.0s							
ASAR	**Alice Springs**	**33.46**	**246**	P	**P**	**15 07 22.4**	**+0.2**
3.2nm,0.7s,baz=68,slow=10,SNR=52							
SIJI	**Sorong**	**37.27**	**285**	P	**P**	**15 07 56.2**	**+1.5**
3.8nm,0.4s,baz=116,slow=15,SNR=4.8							
JHJ	**Hachijo jima 2**	**52.08**	**331**	LR	LR	15 28 46.7	
comp=Z,464nm,21.8s,baz=56,slow=32							
MJAR	**Matsushiro Arr**	**55.63**	**332**	P	**P**	**15 10 16.8**	**0.0**
1.5nm,0.7s,baz=178,slow=9.1,SNR=4.6							
MAJO	**Matsushiro**	**55.63**	**332**	*e*P	**P**	**15 10 16.8**	**0.0**
VNDA	**Vanda**	**65.33**	**181**	P	**P**	**15 11 22.2**	**+0.5**
0.7nm,0.6s,baz=350,slow=6.6,SNR=7.8							
VNDA	**Vanda**	**65.33**	**181**	*e*P	**P**	**15 11 22.1**	**+0.3**
PETK	**Petropavlovsk-**	**65.58**	**354**	P	**P**	**15 11 24.5**	**+0.9**
2.3nm,0.8s,baz=90,slow=7.4,SNR=3.8							
PEA1	**Petropavlovsk-**	**65.58**	**354**	*e*P	**P**	**15 11 24.5**	**+0.9**
BILL	**Bilibino**	**80.06**	**360**	*e*P	**P**	**15 12 48.7**	**+0.3**
4.0nm,0.8s							
TRF	**Thorofare Moun**	**82.24**	**18**	*e*P	**P**	**15 12 59.5**	**-0.6**
2.2nm,1.1s							
RND	**Reindeer**	**82.64**	**18**	*e*P	**P**	**15 13 02.1**	**0.0**
5.9nm,0.6s							
DIB	**Dawson Inlet,**	**83.00**	**32**	*e*P	**P**	**15 13 04.3**	**+0.3**
5.8nm,0.9s							
CCB	**Clear Creek Bu**	**83.86**	**18**	*e*P	**P**	**15 13 07.5**	**-0.7**
7.1nm,0.5s							
HDA	**Harding Lake**	**83.95**	**18**	*e*P	**P**	**15 13 08.4**	**-0.2**
19nm,0.6s							
RIDG	**Independent Ri**	**84.15**	**19**	*e*P	**P**	**15 13 10.3**	**+0.6**
46nm,1.9s							
ILAR	**Eielson Array**	**84.23**	**18**	P	**P**	**15 13 10.0**	**0.0**
7.0nm,0.6s,baz=244,slow=5.2,SNR=112							
ILB	**Eielson Array**	**84.23**	**18**	*e*P	**P**	**15 13 09.5**	**-0.5**
8.6nm,0.6s							
DOT	**Dot Lake**	**84.34**	**20**	*e*P	**P**	**15 13 11.0**	**+0.3**
4.5nm,0.8s							
PAHR	**Pah Rah Range**	**85.43**	**48**	*e*P	**P**	**15 13 16.1**	**-0.6**
11nm,0.8s							
NV01	**Mina Array Sit**	**85.80**	**49**	*e*P	**P**	**15 13 17.8**	**-0.9**
NVAR	**Mina Array Bea**	**85.80**	**49**	P	**P**	**15 13 17.8**	**-0.9**
0.7nm,0.6s,baz=232,slow=8.3,SNR=6.5							
EGAK	**Eagle**	**86.05**	**20**	*e*P	**P**	**15 13 18.8**	**-0.2**
4.4nm,0.8s							
I07A	**Izee**	**86.84**	**44**	*e*P	**P**	**15 13 23.9**	**+0.4**
3.2nm,0.9s							
MK31	**Makanchi Array**	**95.28**	**317**	*e*P	**P**	**15 14 03.2**	**+0.6**
1.4nm,0.8s							
MK32	**Makanchi Array**	**95.28**	**317**	*e*P	**P**	**15 14 03.5**	**+1.0**
MKAR	**Makanchi Array**	**95.28**	**317**	P	**P**	**15 14 03.5**	**+1.0**
2.0nm,0.8s,baz=100,slow=6.7,SNR=14							
YKA	**Yellowknife Ar**	**95.43**	**27**	P	**P**	**15 14 01.1**	**-1.7**
0.8nm,0.6s,baz=257,slow=4.0,SNR=7.5							
YKB5	**Yellowknife Ar**	**95.43**	**27**	*e*P	**P**	**15 14 01.1**	**-1.7**
ARA0	**ARCESS Array S**	**117.81**	**346**	*e*PKPdf	**PKPdf**	**15 19 23.0**	**-0.2**
ARCES	**ARCESS Array B**	**117.81**	**346**	PKP	**PKPdf**	**15 19 23.0**	**-0.2**
9.8nm,0.4s,baz=86,slow=2.3,SNR=20							
FIA0	**FINESS Array S**	**123.35**	**339**	*e*PKPdf	**PKPdf**	**15 19 33.8**	**-0.3**
FINES	**FINESS Array B**	**123.35**	**339**	PKP	**PKPdf**	**15 19 33.7**	**-0.3**
1.2nm,0.7s,baz=29,slow=4.4,SNR=5.8							
KEST	**Kesra**	**149.15**	**323**	PKPbc	**PKPbc**	**15 20 27.1**	**+0.6**
3.4nm,0.7s,baz=346,slow=17,SNR=3.8							
ESDC	**Sonseca Array**	**151.54**	**345**	PKPbc	**PKPbc**	**15 20 32.0**	**0.0**
0.7nm,0.6s,baz=43,slow=2.8,SNR=4.4							

MEX 19 15:01:04.5±0.6,16°.26N×98°.05W,h5km±7km,MD4.0,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**331**	*e*P	Pg	15 01 07.0	-0.5
PNIG				*i* S	Sg	15 01 09.6	+0.2
TLIG	**Tlapa**	**1.38**	**339**	*e*P	Pn	15 01 26.6	-4.0
TLIG				*e*S	Sb	15 01 44.3	-4.7
VHO	**Vista Hermosa**	**1.50**	**57**	*e*P	Pn	15 01 29.2	-3.1
VHO				*e*S	Sn	15 01 47.9	-4.4
ACP2	**Acapulco**	**1.86**	**289**	*i* S	Sn	15 01 59.8	-1.2
HUIG	**Huatulco**	**1.93**	**104**	*e*P	Pn	15 01 34.9	-3.2
HUIG				*e*S	Sb	15 02 05.2	+0.5
MEIG	**Mezcala**	**2.23**	**318**	*e*P	Pn	15 01 43.6	+1.3
MEIG				*i* S	Sn	15 02 11.0	+0.8
TPIG	**Tehuac#an**	**2.24**	**17**	*i* P	Pn	15 01 40.0	-2.5
TPIG				*i* S	Sn	15 02 12.2	+1.5
CAIG	**El Cayaco**	**2.26**	**290**	*e*P	Pn	15 01 39.4	-3.2
CAIG				*i* P	Pb	15 01 45.5	-0.4
CAIG				*e*S	Sn	15 02 10.9	+0.1
CMIG	**Matias Romero**	**3.15**	**74**	*e*P	Pn	15 01 51.3	-3.5
CMIG				*e*S	Sb	15 02 37.9	-1.8

*IDC **19** 15:01:48.4±1.0,46°.66N×27°.36W,h0km,mb3.7/7,*
mb1 4.0/8,mb1mx3.7/59,mbtmp3.7/8,ML4.9/1,MS3.3/22,
Ms1 3.3/22,ms1mx3.1/47,Error ellipse: s-maj=33.8km
s-min=20.1km az=20.0
*ISCJB **19** 15:01:49.2±0.5,46°.7N±0°.1×27°.3W±0°.1,h16km,mb4.2/16,*
MS3.2/20,Error ellipse: s-maj=18.7km s-min=7.9km
az=21.7
*NEIC **19** 15:01:50.0±0.4,46°.67N×27°.32W,h10km,mb4.4/11,Error*
ellipse: s-maj=15.0km s-min=6.3km az=201.0
ISC 19 15:01:51.0±0.8,46°.7N±0°.2×27°.3W±0°.1,h16km,n51,
σ0s85/26,mb4.2/16,MS3.2/20,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAB	**San Pablo**	**18.17**	**105**	*e*Pn	**P**	**15 06 02.8**	**0.0**
21nm,1.7s							
ESDC	**Sonseca Array**	**18.36**	**104**	P	**Pn**	**15 06 06.2**	**+1.3**
0.7nm,0.3s,baz=304,slow=12,SNR=8.4							
ESDC				LR	LR	15 11 59.0	
comp=Z,92nm,18.3s,baz=320,slow=33							
ESLA	**Sonseca Array**	**18.36**	**104**	*e*Pn	**P**	**15 06 04.4**	**-0.5**
38nm,1.9s							
BORG	**Borgarnes**	**18.42**	**8**	LR	LR	15 11 16.9	
comp=Z,46nm,21.2s,baz=244,slow=31							
MDT	**Midelt**	**22.17**	**121**	LR	LR	15 13 34.3	
comp=Z,65nm,19.7s,baz=338,slow=32							
SFJD	**Kangerlussuaq**	**23.75**	**337**	LR	LR	15 14 16.3	
comp=Z,69nm,21.8s,baz=130,slow=32							
DAVOX	**Davos/Dischmat**	**25.34**	**76**	LR	LR	15 15 36.3	
comp=Z,65nm,20.2s,baz=87,slow=33							
SCHQ	**Schefferville**	**26.01**	**303**	LR	LR	15 16 02.1	
comp=Z,79nm,19.5s,baz=114,slow=33							
NOA	**NORSAR Array B**	**26.41**	**43**	LR	LR	15 16 48.0	
comp=Z,17nm,19.6s,baz=245,slow=34							
HFS	**Hagfors**	**27.39**	**46**	LR	LR	15 17 44.8	
comp=Z,25nm,18.1s,baz=236,slow=35							
GERES	**GERESS Array B**	**27.42**	**70**	LR	LR	15 18 14.9	
comp=Z,91nm,18.2s,baz=293,slow=36							
FRB	**Frobisher Bay**	**28.39**	**322**	LR	LR	15 16 25.2	
comp=Z,30nm,20.9s,baz=195,slow=31							
VRAC	**Vranov**	**29.19**	**69**	LR	LR	15 19 31.3	
comp=Z,93nm,18.5s,baz=290,slow=36							
KEST	**Kesra**	**29.41**	**99**	LR	LR	15 19 10.1	
comp=Z,109nm,18.2s,baz=232,slow=35							
FINES	**FINESS Array B**	**33.56**	**44**	LR	LR	15 20 25.7	
comp=Z,31nm,19.5s,baz=208,slow=33							
ARA0	**ARCESS Array S**	**34.40**	**30**	*e*P	**P**	**15 08 36.0**	**-1.0**
ARCES	**ARCESS Array B**	**34.40**	**30**	P	**P**	**15 08 36.0**	**-1.0**
7.8nm,0.4s,baz=269,slow=6.9,SNR=4.5							
AKASG	**Malin Array Be**	**36.76**	**62**	LR	LR	15 23 53.4	
comp=Z,37nm,21.5s,baz=235,slow=36							
TOA1	**Torodi Ar. Sit**	**41.35**	**134**	*e*P	**P**	**15 09 35.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**41.35**	**134**	P	**P**	**15 09 35.5**	**-0.7**
2.1nm,1.0s,baz=326,slow=7.8,SNR=5.7							
TORD				LR	LR	15 25 23.3	
comp=Z,108nm,19.3s,baz=330,slow=34							
BRTR	**Keskin Array B**	**43.98**	**76**	LR	LR	15 28 17.1	
comp=Z,25nm,19.1s,baz=270,slow=36							
ULM	**Lac du Bonnet**	**44.16**	**301**	LR	LR	15 26 22.3	
comp=Z,36nm,21.9s,baz=90,slow=33							
DBIC	**Dimbokro**	**44.28**	**147**	LR	LR	15 26 43.7	
comp=Z,48nm,18.3s,baz=358,slow=34							
YKA	**Yellowknife Ar**	**48.91**	**322**	P	**P**	**15 10 34.7**	**-1.0**
0.4nm,0.8s,baz=65,slow=8.1,SNR=4.3							
YKB5	**Yellowknife Ar**	**48.91**	**322**	*e*P	**P**	**15 10 34.7**	**-1.1**
WALA	**Waterton Lakes**	**55.05**	**307**	*e*P	**P**	**15 11 21.8**	**0.0**
4.6nm,0.8s							
PTGA	**Pitinga**	**55.21**	**221**	LR	LR	15 31 14.1	
comp=Z,27nm,18.3s,baz=38,slow=32							
ISCO	**Idaho Springs**	**55.27**	**293**	*e*P	**P**	**15 11 22.8**	**-1.0**
11nm,1.8s							
H10N2	**ASCENSION HYDR**	**55.44**	**165**	T	T	16 10 59.0	
baz=350,slow=75,SNR=9.4							
H10N3	**ASCENSION HYDR**	**55.45**	**165**	T	T	16 10 58.8	
baz=350,slow=75,SNR=6.6							
H10N1	**ASCENSION HYDR**	**55.46**	**165**	T	T	16 11 02.9	
baz=350,slow=75,SNR=7.2							
BOZ	**Bozeman (W)**	**55.66**	**302**	*e*P	**P**	**15 11 26.3**	**0.0**
2.6nm,0.8s							
PD31	**Pinedale Array**	**56.02**	**298**	*e*P	**P**	**15 11 28.3**	**-0.7**
6.1nm,1.7s							
PDAR	**Pinedale Array**	**56.02**	**298**	P	**P**	**15 11 27.5**	**-1.6**
1.1nm,0.8s,baz=67,slow=8.7,SNR=7.7							
PDAR				LR	LR	15 33 56.7	
comp=Z,34nm,19.4s,baz=72,slow=34							
IMW	**Indian Meadow**	**56.21**	**300**	*e*P	**P**	**15 11 30.6**	**+0.2**
2.3nm,1.0s							
H10S1	**ASCENSION HYDR**	**56.50**	**165**	T	T	16 12 13.9	
baz=350,slow=75,SNR=15							
H10S3	**ASCENSION HYDR**	**56.51**	**165**	T	T	16 12 14.6	
baz=350,slow=75,SNR=18							
H10S2	**ASCENSION HYDR**	**56.52**	**165**	T	T	16 12 15.3	
baz=350,slow=75,SNR=18							
PV13	**Radium Mtn., P**	**58.25**	**294**	*e*P	**P**	**15 11 45.0**	**+0.1**
6.6nm,0.9s							
ILAR	**Eielson Array**	**59.38**	**334**	P	**P**	**15 11 52.9**	**+0.9**
0.4nm,0.9s,baz=46,slow=5.1,SNR=3.6							
TXAR	**Lajitas Array**	**60.32**	**282**	P	**P**	**15 11 59.6**	**+0.5**
0.8nm,0.7s,baz=70,slow=7.0,SNR=8.0							
JTS	**Las Juntas de**	**60.57**	**253**	LR	LR	15 33 53.0	
comp=Z,37nm,19.4s,baz=67,slow=32							
APG	**El Apazote**	**60.86**	**261**	LR	LR	15 34 25.1	
comp=Z,20nm,19.4s,baz=192,slow=32							
CCUT	**Cedar City**	**61.47**	**296**	*e*P	**P**	**15 12 07.8**	**+0.8**
5.7nm,1.4s							
WVOR	**Wild Horse Val**	**61.60**	**303**	*e*P	**P**	**15 12 08.7**	**+1.0**
2.8nm,0.8s							
SKT	**Skwentna**	**62.86**	**334**	*e*P	**P**	**15 12 17.1**	**+1.5**
KVN	**Kaiserville**	**63.42**	**299**	*e*P	**P**	**15 12 20.2**	**+0.2**
3.6nm,0.8s							
NV01	**Mina Array Sit**	**63.94**	**299**	*e*P	**P**	**15 12 23.4**	**0.0**
NVAR	**Mina Array Bea**	**63.94**	**299**	P	**P**	**15 12 23.4**	**0.0**
0.4nm,0.7s,baz=1.9,slow=4.5,SNR=4.2							
MK32	**Makanchi Array**	**68.40**	**44**	*e*P	**P**	**15 12 52.2**	**+0.5**
MKAR	**Makanchi Array**	**68.40**	**44**	P	**P**	**15 12 52.2**	**+0.5**
0.7nm,0.8s,baz=325,slow=6.2,SNR=6.4							

IDC 19 15:03:54.6±2.1,10°.19S×66°.47E,h0km,mb3.8/5,
mb1 3.9/5,mb1mx3.5/65,mbtmp3.8/5,MS3.4/2,Ms1 3.4/2,
ms1mx2.7/45,Error ellipse: s-maj=62.1km
s-min=39.4km az=63.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**5.88**	**50**	T	T	15 11 17.9	
baz=228,slow=76,SNR=923							
H08N1	**Diego Garcia H**	**5.90**	**50**	T	T	15 11 18.1	
baz=228,slow=76,SNR=805							
H08N2	**Diego Garcia H**	**5.90**	**50**	T	T	15 11 20.8	
baz=228,slow=76,SNR=529							
H08S1	**Diego Garcia H**	**6.45**	**67**	T	T	15 11 58.2	
baz=245,slow=75,SNR=124							
H08S3	**Diego Garcia H**	**6.47**	**67**	T	T	15 11 55.0	
baz=245,slow=75,SNR=88							
H08S2	**Diego Garcia H**	**6.47**	**67**	T	T	15 11 58.2	
baz=245,slow=75,SNR=122							
PSI	**Prapat**	**34.80**	**70**	LR	LR	15 22 38.6	
comp=Z,74nm,20.5s,baz=192,slow=32							
CMAR	**Chiang Mai Arr**	**42.86**	**49**	P	P	15 11 56.0	+1.0
0.6nm,0.3s,baz=245,slow=11,SNR=3.3							
H01W3	**Cape Leeuwin H**	**49.83**	**127**	T	T	16 05 58.5	
baz=287,slow=74,SNR=8.1							
H01W2	**Cape Leeuwin H**	**49.83**	**127**	T	T	16 05 59.0	
baz=287,slow=74,SNR=7.8							
H01W1	**Cape Leeuwin H**	**49.85**	**127**	T	T	16 06 00.1	
baz=287,slow=74,SNR=7.5							
MKAR	**Makanchi Array**	**58.46**	**13**	P	P	15 13 51.7	-0.7
0.4nm,0.7s,baz=198,slow=8.1,SNR=4.7							
ASAR	**Alice Springs**	**65.39**	**111**	P	P	15 14 39.0	-0.7
1.0nm,1.0s,baz=278,slow=5.7,SNR=4.8							
ZALV	**Zalesovo Beam**	**65.76**	**12**	P	P	15 14 40.3	-0.9
0.6nm,0.4s,baz=193,slow=6.1,SNR=4.6							
SONM	**Songino Array**	**67.74**	**28**	P	P	15 14 54.1	-0.2
0.5nm,0.4s,baz=219,slow=6.5,SNR=4.0							
HFS	**Hagfors**	**81.61**	**336**	LR	LR	15 53 21.5	
comp=Z,17nm,18.2s,baz=70,slow=36							
PDAR	**Pinedale Array**	**147.36**	**355**	PKPbc	PKPbc	15 23 40.6	-0.3
0.2nm,0.4s,baz=228,slow=1.8,SNR=3.9							
NVAR	**Mina Array Bea**	**151.56**	**8**	PKPbc	PKiKP	15 23 52.4	+0.3
0.8nm,0.8s,baz=285,slow=1.4,SNR=5.2							

*ISK **19** 15:06:39.7,37°.48N×27°.81E,h10km,ML2.3/7*
*DDA **19** 15:06:39.9,37°.46N×27°.80E,h7km±2km,ML2.7*
*ISCJB **19** 15:06:40.0±0.6,37°.44N±0°.02×27°.87E±0°.05,h0km±9km,*
Error ellipse: s-maj=6.8km s-min=4.2km az=6.0
ISC 19 15:06:40.1±1.1,37°.45N±0°.03×27°.85E±0°.04,h11km±10km,
n11,σ0s69/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.21**	**7**	*i* P	**Pg**	**15 06 44.7**	**0.0**
AYDN				*i* S	**Sg**	**15 06 48.9**	**+1.1**
AYDN				IAML_P			
comp=Z,8μm,0.2s							
BDRM	**Kayabasi**	**0.50**	**220**	*i* P	**Pg**	**15 06 49.5**	**-0.3**
BDRM				*i* S	**Sb**	**15 06 57.6**	**-0.6**
BDRM				IAML_P			
comp=Z,2μm,0.2s							
AYDB	**Zeytinkoy-Aydi**	**0.50**	**4**	PG	**Pg**	**15 06 49.6**	**-0.3**
AYDB				SG	**Sg**	**15 06 56.2**	**-0.4**
GCAM	**G?zelcaml?**	**0.55**	**298**	PG	**Pg**	**15 06 50.2**	**-0.6**
GCAM				SG	**Sg**	**15 06 57.7**	**-0.4**
GCAM	**G?zelcaml?**	**0.55**	**298**	*i* P	**Pg**	**15 06 50.1**	**-0.7**
GCAM				*i* S	**Sg**	**15 06 58.5**	**+0.4**
GCAM				IAML_P			
comp=Z,3μm,0.1s							
BODT	**Bodrum**	**0.57**	**228**	PG	**Pg**	**15 06 51.1**	**-0.2**
BODT				SG	**Sb**	**15 06 59.9**	**-0.5**
DAT	**Datca**	**0.75**	**197**	PG	**Pg**	**15 06 54.8**	**+0.2**
DAT				SG	**Sb**	**15 07 06.4**	**+0.9**
TURN	**Turunc**	**0.83**	**133**	PG	**Pg**	**15 06 55.1**	**-1.0**
DALY	**Dalyan (Mula)**	**0.90**	**134**	PG	**Pn**	**15 06 58.4**	**-0.3**
DGB	**zmir**	**0.97**	**309**	*i* P	**Pb**	**15 06 59.0**	**0.0**
DGB				*i* S	**Sn**	**15 07 14.8**	**+1.3**
DGB				IAML_P			
comp=Z,846nm,0.1s							
ARG	**Arkhangelos**	**1.25**	**170**	PN	**Pg**	**15 07 04.3**	**+0.2**

*ISCJB **19** 15:11:30.8±0.4,7°.06S±0°.04×130°.04E±0°.05,h150km,*
mb4.3/5,Error ellipse: s-maj=7.0km s-min=4.9km
az=163.2
*IDC **19** 15:11:30.0±2.2,7°.08S×130°.08E,h118km±25km,mb3.8/2,*
mb1 4.1/7,mb1mx3.5/39,mbtmp4.4/7,MS3.2/1,Ms1 3.2/1,
ms1mx2.3/32,Error ellipse: s-maj=35.2km s-min=20.5km
az=91.0
*NEIC **19** 15:11:31.9±0.7,6°.98S×130°.04E,h136km±8km,mb4.6/5,*
Error ellipse: s-maj=10.0km s-min=9.4km az=202.0
*DJA **19** 15:11:31.8±0.4,7°.S±3°×13°0E±°,h158km±8km,M4.5/11,*
mb4.4/6,mB5.0/3,MLv4.5/11,Mw(mB)4.3/3
ISC 19 15:11:31.4±0.7,7°.01S±0°.05×130°.00E±0°.06,h150km,n35,
σ2s32/37,mb4.4/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.61**	**127**	*e*Pn	**Pn**	**15 12 03.0**	**+0.8**
SAUI	**Saumlaki**	**1.61**	**127**	P	**Pn**	**15 12 02.9**	**+0.8**
SAUI				S	**Sn**	**15 12 27.1**	**+1.4**
BNDI	**Bandanaira**	**2.47**	**358**	P	**Pn**	**15 12 12.0**	**-0.2**
AAI	**Ambon**	**3.76**	**331**	P	**Pn**	**15 12 30.0**	**+1.5**
MSAI	**Masohi**	**3.79**	**344**	P	**Pn**	**15 12 30.4**	**+1.4**
FAKI	**Fak Fak**	**4.64**	**29**	*e*Pn	**Pn**	**15 12 38.2**	**-1.9**
FAKI	**Fak Fak**	**4.64**	**29**	P	**Pn**	**15 12 38.0**	**-2.1**
MTN	**Manton Dam**	**5.90**	**169**	*e*Pn	**Pn**	**15 12 57.0**	**+0.2**
SIJI	**Sorong**	**6.23**	**12**	P	**Pn**	**15 12 59.8**	**-1.5**
6.1nm,0.3s,baz=207,slow=16,SNR=29							
SIJI				S	**Sn**	**15 14 06.0**	**-5.6**
6.2nm,0.3s,baz=278,slow=22,SNR=6.9							
SOEI	**Soe**	**6.29**	**244**	*e*Pn	**Pn**	**15 13 03.3**	**+1.1**
SOEI	**Soe**	**6.29**	**244**	P	**Pn**	**15 13 03.4**	**+1.3**
RKPI	**Ransiki, Papua**	**6.87**	**38**	P	**Pn**	**15 13 09.8**	**0.0**
BATI	**Baumata**	**7.02**	**243**	P	**Pn**	**15 13 12.8**	**+1.0**
10nm,0.3s,baz=97,slow=1.7,SNR=14							
BATI				S	**Sn**	**15 14 27.2**	**-3.4**
20nm,0.3s,baz=284,slow=24,SNR=13							
BATI	**Baumata**	**7.02**	**243**	P	**Pn**	**15 13 13.0**	**+1.2**
BAKI	**Biak**	**8.40**	**47**	P	**Pn**	**15 13 31.2**	**+1.1**
EDFI	**Ende, Flores**	**8.41**	**258**	P	**Pn**	**15 13 31.2**	**+0.8**
LUWI	**Luwuk**	**9.33**	**309**

3.6nm,0.5s,baz=77,slow=4.3,SNR=4.4
GUMO Guam 52.29 310 LR LR 15 41 03.1
comp=Z,259nm,22.0s,baz=358,slow=33
FITZ Fitzroy Crossi 53.80 264 P **P 15 21 39.0 +0.3**
1.0nm,0.4s,baz=85,slow=7.0,SNR=4.3
SIJI Sorong 54.97 286 P **P 15 21 47.5 +0.2**
11nm,0.6s,baz=93,slow=6.0,SNR=8.0
TXAR Lajitas Array 87.54 57 P **P 15 25 06.8 +4.4**
0.4nm,0.7s,baz=217,slow=6.0,SNR=4.5
AKASG Malin Array Be 145.79 330 PKPbc **PKiKP 15 31 56.8 +1.1**
0.4nm,0.4s,baz=40,slow=4.1,SNR=4.9

ISC 19 15:12:56.2±1.1, 50°.55N±0°.03×5°.95E±0°.04, h12km, n9, σ0°76/16, 2C-2D, Belgium

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEM	**Membach**	**0.07**	**30**	⇓P	**Pg**	**15 12 59.3**	**+0.5**
MEM				S	**Sg**	**15 13 01.7**	**+1.1**
comp=N,18nm,0.1s							
BHOU	**Houvegnez**	**0.20**	**170**	P	**Pb**	**15 13 01.2**	**-0.6**
BHOU				S	**Sg**	**15 13 04.8**	**+1.2**
HGN	**Heimansgroeve**	**0.22**	**357**	*e*Pg	**Pb**	**15 13 01.0**	**-1.1**
HGN				*e*Sg	**Sg**	**15 13 04.3**	**+0.2**
BSTI	**Sart Tilman**	**0.25**	**278**	P	**Pb**	**15 13 02.5**	**-0.1**
BEBN	**Eben Emael**	**0.30**	**325**	⇑P	**Pb**	**15 13 02.8**	**-0.8**
BEBN				S	**Sg**	**15 13 06.9**	**+0.4**
BCLA	**Clavier**	**0.43**	**253**	⇑P	**Pb**	**15 13 05.5**	**-0.3**
LKLB	**Kalborn**	**0.46**	**167**	⇓P	**Pb**	**15 13 05.3**	**-1.0**
LKLB				S	**Sg**	**15 13 11.4**	**0.0**
comp=E,3.9nm,0.2s							
BGES	**Gesves**	**0.58**	**254**	P	**Pg**	**15 13 07.6**	**+0.1**
BGES				S	**Sb**	**15 13 16.6**	**+0.2**
DOU	**Dourbes**	**0.98**	**243**	P	**Pb**	**15 13 14.1**	**-1.0**
DOU				S	**Sg**	**15 13 28.0**	**+0.1**
comp=E,2.2nm,0.3s							

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*IDC **19** 15:24:26.7±0.7, 30°.05S×71°.23W, h0km, mb4.2/9, mb1 4.3/12, mb1mx4.1/29, mbtmp4.1/12, ML3.8/3, MS3.1/5, Ms1 3.1/5, ms1mx2.9/20, Error ellipse: s-maj=21.0km s-min=14.1km az=49.0*
*SJA **19** 15:24:27.1±0.6, 29°.85S×71°.73W, h18km±4km, ML4.2, MW3.6*
*BJI **19** 15:24:30.0±0.0, 30°.00S×71°.50W, h24km, mB5.4/1, Ms5.2/2, Ms7 5.1/1*
*NEIC **19** 15:24:31.2±2.6, 30°.01S×71°.46W, h27km±4km, mb4.8/9, ML4.6(GUC), Error ellipse: s-maj=11.5km s-min=3.9km az=200.0*
NEIC Felt [IV] at Andacollo, Coquimbo, La Higuera and La Serena; [III] at Ovalle and Rio Hurtado; [II] at Paiguano and Vallenar.
*ISCJB **19** 15:24:32.5±0.5, 29°.91S±0°.02×71°.44W±0°.08, h54km±4km, mb4.4/15, Error ellipse: s-maj=11.3km s-min=3.9km az=0.2*
*GUC **19** 15:24:33.1±0.7, 29°.98S×71°.19W, h51km±2km, ML4.6*

ISC 19 15:24:32.4±0.8, 29°.95S±0°.04×71°.41W±0°.07, h42km±6km, n86, σ1°67/96, mb4.5/15, 3C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.15**	**73**	⇑*i*P	**Pn**	**15 24 41.7**	**+2.1**
LSCH				*i* S	**Sn**	**15 24 47.3**	**+2.8**
GO04	**Tololo Observa**	**0.57**	**113**	*e*Pn	**Pn**	**15 24 45.0**	**+0.5**
GO04				*e*Sn	**Sn**	**15 24 53.0**	**0.0**
GO04	**Tololo Observa**	**0.57**	**113**	*e*P	**Pn**	**15 24 44.0**	**-0.5**
GO04	**Tololo Observa**	**0.57**	**113**	*e*P	**Pn**	**15 24 44.8**	**+0.3**
GO04				*i* S	**Sn**	**15 24 53.2**	**+0.1**
LCO	**Las Campanas**	**1.12**	**34**	*e*Pn	**Pn**	**15 24 53.5**	**+1.5**
LCO	**Las Campanas**	**1.12**	**34**	*e*P	**Pn**	**15 24 50.6**	**-1.4**
LCO				*e*S	**Sn**	**15 25 08.0**	**+1.6**
LCO	**Las Campanas**	**1.12**	**34**	⇓*i*P	**Pn**	**15 24 53.6**	**+1.6**
LCO				*i* S	**Sn**	**15 25 08.5**	**+2.2**
CO02	**Combarbal**	**1.30**	**164**	*e*P	**Pn**	**15 24 54.5**	**+0.3**
CO02				*i* S	**Sn**	**15 25 10.0**	**-0.4**
GO03	**Copiap**	**2.57**	**24**	*e*Pn	**Pn**	**15 25 14.2**	**+2.5**
GO03	**Copiap**	**2.57**	**24**	*e*P	**Pn**	**15 25 13.9**	**+2.3**
GO03				IAML		15 25 56.2	
comp=E,3μm,0.4s							
AGUA	**GUANDACOL**	**2.58**	**80**	*e*P	**Pn**	**15 25 14.0**	**+2.2**
RTLS	**Leoncito**	**2.59**	**136**	*e*P	**Pn**	**15 25 15.4**	**+3.3**
RTLS				IAML		15 26 05.9	
comp=Z,687nm,0.6s							
AMOG	**MOGNA**	**2.71**	**112**	*e*P	Pn	15 25 16.6	+3.1
AMOG				*e*S	Sn	15 25 53.7	+8.7
AUSP	**Uspallata**	**2.85**	**143**	*e*P	**Pn**	**15 25 18.9**	**+3.1**
ROCH	**El Roble**	**3.03**	**174**	*e*P	**Pn**	**15 25 19.6**	**+1.5**
ROCH				*i* S	**Sn**	**15 25 56.2**	**+2.9**
ROCH				IAML		15 26 10.3	
comp=E,2μm,0.5s							
ROC1	**El Roble**	**3.03**	**174**	*e*Pn	**Pn**	**15 25 19.3**	**+1.1**
VCA	**Vinchina**	**3.05**	**67**	*e*P	**Pn**	**15 25 20.6**	**+2.2**
RTCV	**Cerro Valdivia**	**3.12**	**128**	*e*P	**Pn**	**15 25 22.3**	**+3.2**
CFA	**Coronel Fontan**	**3.19**	**122**	Pg	**Pn**	**15 25 22.3**	**+2.2**
comp=E,26nm,0.3s,baz=315,slow=12,SNR=72							
CFA				Lg	Lg	15 26 01.6	
comp=E,46nm,0.3s,baz=273,slow=16,SNR=4.7							
CFA				LR	LR	15 26 18.3	
comp=E,196nm,21.2s,baz=317,slow=37							
PEL	**Peldehue**	**3.24**	**169**	*e*Pn	**Pn**	**15 25 22.6**	**+1.7**
PEL	**Peldehue**	**3.24**	**169**	⇑*i*P	**Pn**	**15 25 22.7**	**+1.8**
PEL				*i* S	**Sn**	**15 26 00.3**	**+2.0**
PEL				IAML		15 26 12.8	
comp=E,916nm,0.5s							
ASAL	**Salagasta**	**3.43**	**141**	*e*P	**Pn**	**15 25 26.6**	**+3.1**
ASAL				*e*S	Sn	15 26 10.0	+7.0
FCH	**Farellones**	**3.50**	**164**	⇑*i*P	**Pn**	**15 25 26.7**	**+2.1**
FCH				*i* S	**Sn**	**15 26 07.5**	**+2.5**
FCH				IAML		15 26 24.8	
comp=E,736nm,0.3s							
CLCH	**Cerro Calan**	**3.51**	**168**	*e*P	**Pn**	**15 25 27.0**	**+2.4**
CLCH				*i* S	**Sn**	**15 26 07.2**	**+2.2**
CLCH				IAML		15 26 25.6	
comp=E,2μm,0.6s							
ARCO	**CERRO ARCO**	**3.58**	**144**	*e*P	**Pn**	**15 25 28.6**	**+3.0**
ARCO				IAML		15 25 53.7	
comp=Z,437nm,0.8s							
CRCH	**Chaqaral**	**3.66**	**11**	*e*P	**Pn**	**15 25 27.2**	**+0.6**
AAGR	**Agrelo**	**3.82**	**145**	*e*P	**Pn**	**15 25 32.3**	**+3.4**
GO02	**Mina Guanaco**	**5.04**	**19**	*e*Pn	**Pn**	**15 25 46.9**	**+1.2**
GO05	**Huala**	**5.06**	**185**	*e*Pn	**Pn**	**15 25 45.2**	**-0.7**
LVC	**Limon Verde**	**7.65**	**18**	Pn	**Pn**	**15 26 21.3**	**-0.4**
comp=Z,1.5nm,0.3s,baz=153,slow=10,SNR=9.6							
LVC				Sn	**Sn**	**15 27 47.0**	**-0.2**
comp=Z,4.3nm,0.3s,baz=148,slow=7.0,SNR=3.3							
LVC				LR	LR	15 29 18.5	
comp=Z,159nm,21.3s,baz=211,slow=38							
LVC	**Limon Verde**	**7.65**	**18**	*e*Pn	**Pn**	**15 26 21.6**	**0.0**
PB04	**IPOC Station P**	**7.67**	**9**	*e*Pn	**Pn**	**15 26 21.5**	**-0.3**
PB01	**IPOC Station P**	**9.04**	**12**	*e*Pn	**Pn**	**15 26 38.6**	**-1.9**
PB11	**IPOC Station P**	**10.27**	**9**	*e*Pn	**Pn**	**15 26 56.0**	**-1.4**
GO01	**Chusmiza**	**10.44**	**12**	*e*Pn	**Pn**	**15 26 58.2**	**-1.8**
PLCA	**Paso Flores**	**10.78**	**177**	Pn	**Pn**	**15 27 02.5**	**-1.7**
comp=Z,0.1nm,0.3s,baz=13,slow=12,SNR=2.2							
PLCA				LR	LR	15 31 27.4	
comp=Z,141nm,18.7s,baz=9.5,slow=39							
PLCA	**Paso Flores**	**10.78**	**177**	*e*Pn	**Pn**	**15 27 01.2**	**-3.0**
MNMC	**Minye Minye**	**10.90**	**9**	*e*Pn	**Pn**	**15 27 05.3**	**-0.9**
TRQA	**Tornquist**	**11.24**	**138**	*e*Pn	**Pn**	**15 27 09.8**	**-0.7**
CPUP	**Villa Florida**	**12.94**	**77**	Pn	**Pn**	**15 27 30.1**	**-3.6**
comp=Z,0.4nm,0.3s,baz=238,slow=11,SNR=6.0							
CPUP				LR	LR	15 33 04.4	
comp=Z,116nm,21.6s,baz=223,slow=40							
BDFB	**Brasilia**	**25.78**	**62**	P	**P**	**15 29 59.3**	**-0.4**
comp=Z,6.8nm,0.5s,baz=232,slow=7.0,SNR=9.0							
BDFB				LR	LR	15 42 33.3	
comp=Z,28nm,19.3s,baz=163,slow=42							
PTGA	**Pitinga**	**31.03**	**23**	P	**P**	**15 30 47.0**	**+0.7**
comp=Z,1.1nm,0.3s,baz=179,slow=11,SNR=4.2							
VNA3	**Neumayer Olymp**	**52.92**	**159**	P	**P**	**15 33 43.8**	**-0.2**
VNA2	**Neumayer--Watz**	**53.55**	**158**	P	**P**	**15 33 48.6**	**0.0**
baz=283,slow=8.1							
SNAA	**Sanae**	**55.14**	**159**	P	**P**	**15 34 00.2**	**-0.1**
SNAA	**Sanae**	**55.14**	**159**	P	**P**	**15 34 00.2**	**-0.1**
comp=Z,3.3nm,0.8s,baz=281,slow=8.9,SNR=24							
SNAA	**Sanae**	**55.14**	**159**	*e*P	**P**	**15 33 59.6**	**-0.6**
comp=Z,7.4nm,1.1s							
LTX	**Lajitas**	**66.50**	**329**	*e*P	**P**	**15 35 19.8**	**+1.8**
TXAR	**Lajitas Array**	**66.50**	**329**	P	**P**	**15 35 19.8**	**+1.8**
comp=Z,1.0nm,0.6s,baz=154,slow=9.6,SNR=11							
R50A	**Paris**	**68.94**	**349**	*e*P	**P**	**15 35 34.0**	**+1.0**
comp=Z,43nm,1.4s							
MNTX	**Cornudas Mount**	**69.28**	**329**	*e*P	**P**	**15 35 36.2**	**+0.9**
comp=Z,2.1nm,0.8s							
MSTX	**Muleshoe**	**70.15**	**333**	*e*P	**P**	**15 35 42.1**	**+1.4**
comp=Z,8.5nm,0.9s							
DBIC	**Dimbokro**	**73.40**	**72**	P	**P**	**15 36 01.0**	**+0.4**
comp=Z,3.0nm,0.5s,baz=191,slow=6.1,SNR=6.2							
DBIC	**Dimbokro**	**73.40**	**72**	*e*P	**P**	**15 36 01.0**	**+0.4**
comp=Z,40nm,1.5s							
L40A	**Anamosa**	**73.95**	**345**	*e*P	**P**	**15 36 03.9**	**+0.8**
comp=Z,8.8nm,0.9s							
ECSD	**EROS Data Cent**	**76.88**	**342**	*e*P	**P**	**15 36 21.2**	**+1.3**
comp=Z,24nm,2.0s							
SZCU	**Shurtz Canyon**	**77.69**	**327**	*e*pP	pP	15 36 34.7	-2.7
PD31	**Pinedale Array**	**80.41**	**333**	*e*P	**P**	**15 36 40.9**	**+1.2**
comp=Z,5.2nm,1.5s							
PDAR	**Pinedale Array**	**80.41**	**333**	P	**P**	**15 36 40.9**	**+1.2**
comp=Z,0.3nm,0.5s,baz=132,slow=6.8,SNR=4.5							
NV01	**Mina Array Sit**	**80.89**	**324**	*e*P	**P**	**15 36 44.7**	**+2.4**
NVAR	**Mina Array Bea**	**80.89**	**324**	P	**P**	**15 36 44.7**	**+2.4**
comp=Z,0.6nm,0.8s,baz=146,slow=6.6,SNR=3.6							
BOSA	**Boshof**	**81.48**	**118**	P	**P**	**15 36 45.5**	**-0.3**
comp=Z,1.6nm,0.5s,baz=117,slow=1.2,SNR=4.5							
TOA0	**Torodi Ar. Sit**	**82.33**	**70**	*e*P	**P**	**15 36 50.3**	**+0.1**
comp=Z,29nm,1.8s							
TORD	**Torodi Ar. Bea**	**82.33**	**70**	P	**P**	**15 36 48.8**	**-1.4**
comp=Z,3.7nm,0.9s,baz=204,slow=3.2,SNR=22							
TOA1	**Torodi Ar. Sit**	**82.33**	**70**	*e*P	**P**	**15 36 48.8**	**-1.4**
ASAR	**Alice Springs**	**121.40**	**207**	PKP	**PKPdf**	**15 43 20.8**	**-1.0**
comp=Z,8.9nm,0.3s,baz=134,slow=1.9,SNR=5.5							
AS31	**Alice Springs**	**121.40**	**207**	*e*PKPdf	**PKPdf**	**15 43 20.8**	**-1.0**
WR1	**Warramunga Arr**	**124.54**	**210**	*e*PKPdf	**PKPdf**	**15 43 27.5**	**-0.3**
WRA	**Warramunga Arr**	**124.54**	**210**	PKP	**PKPdf**	**15 43 27.5**	**-0.3**
comp=Z,0.7nm,0.4s,baz=185,slow=1.8,SNR=15							
CHGR	**Chuyangaron**	**146.50**	**64**	*e*PKPdf	**PKPdf**	**15 44 06.7**	**-1.1**
KK31	**Karatay Array**	**146.99**	**56**	*e*PKPdf	**PKPab**	**15 44 10.9**	**-1.1**
KKAR	**Karatay Array**	**146.99**	**56**	*e*PKPdf	**PKPab**	**15 44 11.0**	**-1.0**
GAR	**Garm**	**147.38**	**64**	*e*PKPdf	**PKPab**	**15 44 12.1**	**-1.7**
AAK	**Ala-Archa**	**149.95**	**56**	*e*PKPbc	**PKiKP**	**15 44 19.7**	**+0.4**
ZAA1	**Zalesovo Array**	**150.48**	**29**	*e*PKPbc	**PKiKP**	**15 44 20.1**	**+0.3**
ZAA0	**Zalesovo Array**	**150.48**	**29**	*e*PKPbc	**PKiKP**	**15 44 19.7**	**0.0**
ZALV	**Zalesovo Beam**	**150.48**	**29**	*e*PKPbc	**PKiKP**	**15 44 20.0**	**+0.3**
comp=Z,13nm,0.7s,baz=298,slow=3.9,SNR=44							
KSH	**Kashi**	**151.68**	**62**	PKPbc	**PKPbc**	**15 44 20.1**	**-2.4**
KSH				SKS	**SKSdf**	**15 51 23.8**	**+3.4**
KSH				AMB	AMB		
comp=Z,140nm,4.4s							
KSH				LR	LR		
comp=Z,100nm,6.1s							
KSH				LR	LR		
comp=Z,160nm,12.4s							
MK31	**Makanchi Array**	**153.57**	**43**	*e*PKPbc	**PKiKP**	**15 44 26.6**	**+0.1**
MK32	**Makanchi Array**	**153.57**	**43**	*e*PKPbc	**PKiKP**	**15 44 26.6**	**+0.2**
MKAR	**Makanchi Array**	**153.57**	**43**	PKPbc	**PKiKP**	**15 44 26.6**	**+0.2**
comp=Z,1.0nm,0.7s,baz=294,slow=2.3,SNR=11							
WMQ	**Urumqi**	**158.38**	**44**	*e*PKP	**PKPdf**	**15 44 26.0**	**+0.9**
WMQ				LR	LR		
comp=Z,55nm,28.9s							
WMQ				LR	LR		
comp=Z,260nm,29.0s							
HHC	**Hu-ho-hao-te**	**168.86**	**348**	*e*PKP	**PKPdf**	**15 44 34.1**	**-0.9**
NJ2	**Nanjing**	**170.94**	**286**	*e*PKP	**PKPdf**	**15 44 36.5**	**+0.2**
LZH	**Lanzhou**	**172.70**	**32**	*e*PKP	**PKPdf**	**15 44 36.3**	**-0.9**
LZH				pPKP	pPKPdf	15 44 45.8	-4.7
LZH				sPKP		15 44 50.3	
CD2	**Chengdu**	**175.72**	**76**	PKP	**PKPdf**	**15 44 37.4**	**-0.8**

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*DDA **19** 15:25:02.2, 41°.41N×43°.34E, h7km±3km, ML2.6*

ISC 19 15:25:00.8±4.9, 41°.6N±0°.2×43°.5E±0°.2, h12km±12km, n5, σ0°79/9, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.19**	**175**	P	**Pg**	**15 25 05.0**	**-0.1**
AKH				S	**Sg**	**15 25 07.4**	**-0.7**
BGD	**Bogdanovka**	**0.35**	**164**	P	**Pg**	**15 25 08.1**	**+0.2**
BGD				S	**Sg**	**15 25 13.5**	**+0.8**
EPOS	**Posof**	**0.57**	**260**	*i* P	**Pg**	**15 25 11.5**	**-0.4**
DBOC	**Borcka**	**1.38**	**260**	*i* P	**Pg**	**15 25 27.4**	**+0.2**
DBOC				*i* S	**Sg**	**15 25 46.2**	**+1.0**
DBOC				IAML_P			
comp=Z,274nm,0.2s							
DBAD	**Bademkaya**	**1.46**	**247**	*i* P	**Pb**	**15 25 28.0**	**+0.1**
DBAD				*i* S	**Sn**	**15 25 45.4**	**-0.8**
DBAD				IAML_P			
comp=Z,556nm,0.2s							

IDC 19 15:29:17.2±1.7, 4°.56S×128°.46E, h0km, mb3.6/1, mb1 4.0/4, mb1mx3.6/31, mbtmp3.8/4, ML4.0/3, Error ellipse: s-maj=53.0km s-min=27.6km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.61**	**38**	Pn	Pn	15 30 27.9	-0.4
2.2nm,0.3s,baz=186,slow=19,SNR=29							
SIJI				Sn	Sn	15 31 09.8	-13
8.3nm,0.3s,baz=56,slow=20,SNR=20							
WRA	**Warramunga Arr**	**16.33**	**160**	Pn	Pn	15 33 09.1	+1.0
0.6nm,0.3s,baz=340,slow=12,SNR=46							
WRA				Sn	Sn	15 35 54.7	-15
0.3nm,0.3s,baz=296,slow=27,SNR=5.8							
ASAR	**Alice Springs**	**19.71**	**165**	P	P	15 33 48.0	-0.4
0.9nm,0.3s,baz=347,slow=11,SNR=75							
MKAR	**Makanchi Array**	**65.36**	**327**	P	P	15 40 01.6	+0.1
0.2nm,0.4s,baz=123,slow=7.1,SNR=4.7							

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*ISCJB **19** 15:39:43.5±0.8, 14°.90S±0°.06×167°.5E±0°.1, h129km, mb3.9/9, Error ellipse: s-maj=17.6km s-min=7.9km az=165.6*
*IDC **19** 15:39:47.7±2.7, 14°.94S×167°.36E, h154km±22km, mb3.8/8, mb1 4.0/10, mb1mx3.6/33, mbtmp4.3/10, Error ellipse: s-maj=24.2km s-min=14.7km az=72.0*
*NEIC **19** 15:39:47.2±1.4, 15°.02S×167°.38E, h154km±12km, mb4.1/3, Error ellipse: s-maj=16.9km s-min=11.7km az=67.0*

ISC 19 15:39:44.3±0.9, 14°.87S±0°.07×167°.7E±0°.1, h129km, n22, σ1°47/28, mb4.1/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**6.58**	**177**	*e*Pn	**Pn**	**15 41 19.1**	**+0.4**
DZM	**Mont Dzumac**	**7.25**	**189**	P	**Pn**	**15 41 29.5**	**+1.7**
2.4nm,0.3s,baz=116,slow=21,SNR=20							
DZM				S	**Sn**	**15 42 49.8**	**+1.0**
0.4nm,0.3s,baz=142,slow=19,SNR=1.7							
DZM	**Mont Dzumac**	**7.25**	**189**	*e*Pn	**Pn**	**15 41 29.0**	**+1.2**
DZM				S	**Sn**	**15 42 49.8**	**+1.0**
HNR	**Honiara**	**9.27**	**305**	P	**Pn**	**15 41 56.2**	**+1.3**
3.1nm,0.3s,baz=194,slow=5.7,SNR=4.1							
HNR				S	**Sn**	**15 43 37.4**	**-0.1**
5.5nm,0.3s,baz=306,slow=21,SNR=11							
HNR	**Honiara**	**9.27**	**305**	P	**Pn**	**15 41 56.2**	**+1.3**
HNR				*e*Sn	**Sn**	**15 43 39.6**	**+2.1**
STKA	**Stephens Creek**	**29.18**	**230**	P	**P**	**15 45 33.6**	**-0.1**
3.8nm,0.4s,baz=50,slow=8.8,SNR=29							
STKA	**Stephens Creek**	**29.18**	**230**	*e*P	**P**	**15 45 33.4**	**-0.3**
6.3nm,1.9s							
WR1	**Warramunga Arr**	**32.15**	**256**	*e*P	**P**	**15 45 56.9**	**-3.0**
WRA	**Warramunga Arr**	**32.15**	**256**	P	**P**	**15 45 56.9**	**-3.0**
0.4nm,0.3s,baz=84,slow=7.8,SNR=11							
AS31	**Alice Springs**	**32.96**	**249**	*e*P	**P**	**15 46 04.2**	**-2.9**
1.1nm,0.8s							
AS31				*e*PcP	**PcP**	**15 48 47.8**	**-0.6**
ASAR	**Alice Springs**	**32.97**	**249**	P	**P**	**15 46 04.7**	**-2.4**
1.9nm,0.4s,baz=77,slow=9.3,SNR=40							
ASAR				PcP	**PcP**	**15 48 47.8**	**-0.6**
0.5nm,0.7s,baz=83,slow=2.7,SNR=4.8							
FITZ	**Fitzroy Crossi**	**40.35**	**259**	P	**P**	**15 47 08.2**	**-1.5**
2.7nm,0.6s,baz=67,slow=9.3,SNR=8.6							
FITZ	**Fitzroy Crossi**	**40.35**	**259**	*e*P	**P**	**15 47 08.3**	**-1.3**
30nm,1.4s							
VNDA	**Vanda**	**62.73**	**181**	P	**P**	**15 49 55.6**	**+0.4**
1.5nm,0.6s,baz=350,slow=7.7,SNR=15							
VNDA	**Vanda**	**62.73**	**181**	*e*P	**P**	**15 49 55.4**	**+0.2**
SONA0	**Songino Array**	**82.83**	**323**	*e*P	**P**	**15 51 55.1**	**+0.8**
SONM	**Songino Array**	**82.83**	**323**	P	**P**	**15 51 55.1**	**+0.8**
0.6nm,0.6s,baz=151,slow=5.6,SNR=2.9							
ILAR	**Eielson Array**	**86.55**	**18**	P	**P**	**15 52 13.1**	**+0.6**
0.4nm,0.9s,baz=242,slow=4.8,SNR=3.2							
MK32	**Makanchi Array**	**97.56**	**316**	*e*P	**P**	**15 53 03.8**	**-0.2**
MKAR	**Makanchi Array**	**97.56**	**316**	P	**P**	**15 53 03.8**	**-0.2**
0.6nm,0.7s,baz=90,slow=6.3,SNR=7.6							
ARA0	**ARCESS Array S**	**120.48**	**345**	*e*PKPdf	**PKPdf**	**15 58 19.2**	**-0.9**
ARCES	**ARCESS Array B**	**120.48**	**345**	PKP	**PKPdf**	**15 58 19.2**	**-0.9**
0.6nm,0.5s,baz=48,slow=1.8,SNR=8.4							

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*ISCJB **19** 15:42:52.7±0.4, 52°.12S±0°.06×161°.48E±0°.09, h10km, mb4.6/13, MS3.9/13, Error ellipse: s-maj=9.6km s-min=5.7km az=135.7*
*IDC **19** 15:42:53.9±1.2, 52°.15S×161°.17E, h0km, mb4.2/5, mb1 4.5/7, mb1mx4.2/22, mbtmp4.3/7, ML3.9/2, MS3.9/11, Ms1 3.9/11, ms1mx3.7/18, Error ellipse: s-maj=33.6km s-min=25.5km az=75.0*
*NEIC **19** 15:42:55.7±0.5, 52°.14S×161°.17E, h10km, mb4.7/13, Error ellipse: s-maj=12.2km s-min=10.1km az=115.0*
*BJI **19** 15:42:55.0±0.0, 52°.10S×161°.30E, h10km, mb5.1/7, mB5.2/2, Ms5.1/1*
*GCMT **19** 15:42:57.7±0.4, 52°.09S±0°.03×160°.49E±0°.04, h30km±2km, MW5.0/71, Moment Tensor Solution. s34,c38; s71,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.23; $M_{\theta\theta}$3.01±.16; $M_{\phi\phi}$-2.82±.16; $M_{r\theta}$-0.74±.23; $M_{\theta\phi}$1.42±.14; $M_{r\phi}$0.38±.29; Best double couple: $M_0$3.34800×10^{16} NP1:ϕ_s122.00000°, δ90.00000°, λ-14.00000°. NP2: ϕ_s212.00000°, δ76.00000°, λ-180.00000°. Principal axes: T 3.4510, Plg10.0000°, Azm168.0000°; N -0.2060, Plg76.0000°, Azm302.0000°; P -3.2450, Plg10.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 15:42:55.6±0.6, 52°.20S±0°.08×161°.4E±0°.1, h10km, n67, σ2°10/51, mb4.8/13, MS4.0/13, 1C, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**2.72**	**211**	*e*Pn	**Pn**	**15 43 36.5**	**-2.8**
PYZ	**Puysegur Point**	**6.97**	**32**	*e*Pn	**Pn**	**15 44 33.7**	**-4.1**
WHZ	**Wether Hill Ro**	**7.65**	**37**	*e*Pn	**Pn**	**15 44 43.6**	**-3.5**
DCZ	**Deep Cove**	**7.75**	**32**	*e*Pn	**Pn**	**15 44 45.0**	**-3.3**
WKZ	**Wanaka**	**8.96**	**38**	*e*Pn	**Pn**	**15 45 03.7**	**-1.3**
ODZ	**Otahua Downs**	**9.43**	**44**	*e*Pn	**Pn**	**15 45 09.3**	**-2.2**
LBZ	**Lake Benmore**	**9.78**	**40**	*e*Pn	**Pn**	**15 45 12.8**	**-3.5**
FOZ	**Fox Glacier**	**10.36**	**37**	*e*Pn	**Pn**	**15 45 21.3**	**-2.9**
RPZ	**Rata Peaks**	**10.69**	**41**	Pn	**Pn**	**15 45 26.7**	**-2.0**
0.9nm,0.3s,baz=194,slow=3.1,SNR=3.6							
RPZ				Sn	Sn	15 47 18.4	-10
5.4nm,0.3s,baz=53,slow=19,SNR=9.7							
RPZ				LR	LR	15 49 11.1	
comp=Z,1μm,19.5s,baz=194,slow=35							
MQZ	**McQueen's Vall**	**11.37**	**46**	*e*Pn	**Pn**	**15 45 36.2**	**-1.8**
CRLZ	**Canterbury Las**	**11.46**	**46**	*e*Pn	**Pn**	**15 45 39.0**	**-0.3**
LTZ	**Lake Taylor**	**11.96**	**42**	*e*Pn	**Pn**	**15 45 45.3**	**-0.8**
KHZ	**Kahutara**	**12.79**	**45**	*e*Pn	**Pn**	**15 45 55.8**	**-1.6**
THZ	**Tophouse**	**13.06**	**42**	*e*Pn	**Pn**	**15 45 59.8**	**-1.4**
TAU	**Tasmania Unive**	**13.25**	**309**	*e*Pn	Pn	15 45 56.9	-6.8
SNZO	**South Karori**	**14.20**	**45**	*e*Pn	**Pn**	**15 46 16.9**	**+0.2**
BFZ	**Birch Farm**	**15.39**	**47**	*e*Pn	**Pn**	**15 46 32.3**	**-0.5**
63nm,1.3s							
HIZ	**Hauiti**	**16.61**	**40**	*e*Pn	**Pn**	**15 46 45.9**	**-2.5**
382nm,1.7s							
BKZ	**Black Stump Fm**	**16.74**	**45**	*e*Pn	**Pn**	**15 46 50.0**	**-0.1**
107nm,1.3s							
URZ	**Urewera**	**17.76**	**44**	P	**Pn**	**15 47 02.6**	**-0.2**
0.4nm,0.3s,baz=278,slow=9.4,SNR=4.5							
URZ				LR	LR	15 54 00.9	
comp=Z,1μm,18.0s,baz=232,slow=38							
URZ	**Urewera**	**17.76**	**44**	*e*Pn	**Pn**	**15 47 02.5**	**-0.3**
53nm,1.1s							
TOO	**Toolangi**	**18.38**	**316**	*e*Pn	**Pn**	**15 47 08.3**	**-2.2**
18nm,1.0s							
CAN	**Canberra**	**19.04**	**328**	*e*P	**P**	**15 47 16.3**	**-1.4**
94nm,1.4s	

AKBB	Malin Array Si	150.55 286	*e*PKPbc	PKiKP	16 02 47.8 +0.5
ARA0	ARCESS Array S	153.26 327	*e*PKPbc	PKiKP	16 02 54.1 +1.7
ARCES	ARCESS Array B	153.26 327	PKPbc	PKiKP	16 02 54.1 +1.7
	1.6nm,1.0s,baz=132,slow=1.8,SNR=3.8				

MAN 19 15:55:56.6,10°.67N×123°.39E,h17km,mb4.4,ML3.2, MS3.0,1D,Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	1.33	187	⇓*i*P	Pg	15 56 23.2	+0.9
SNPH				*i*S	Sg	15 56 44.3	+4.5
CUYO	Cuyo Island	2.34	275	*e*S	Pb	15 56 39.3	+1.0
SJMP	San Jose	2.85	309	*e*P	Pn	15 56 32.7	-8.6

NNC 19 16:09:48.5±1.9,54°.29N×86°.22E,h0km,mb4.0,mpv3.5, 9C-5D,Error ellipse: s-maj=20.9km s-min=9.4km az=169.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.89	248	⇑P	Pg	16 10 05.4	-0.3
	3.2nm,0.3s						
ZAA0				⇓S	Sb	16 10 18.4	-1.0
	13nm,0.5s						
KURK	Kurchatov	5.86	235	⇑Pn	Pn	16 11 19.1	+2.5
	5.4nm,0.6s						
KURK				⇓Lg	Lg	16 12 55.1	
	9.2nm,0.5s						
KURBB	Kurchatov Arra	5.97	235	⇓Pn	Pn	16 11 20.5	+2.5
	7.2nm,0.3s						
KURBB				⇑Lg	Lg	16 12 58.1	
	25nm,0.6s						
MK31	Makanchi Array	7.91	200	⇑Pn	Pn	16 11 46.6	+1.8
	0.9nm,0.4s,baz=27,slow=13,SNR=98						
MK31				⇑Sn	Sn	16 13 13.5	-1.4
	0.8nm,0.3s,baz=24,slow=26,SNR=6.9						
MK31				⇑Lg	Lg	16 13 58.7	
	15nm,0.9s,baz=29,slow=31,SNR=9.6						
MAKZ	Makanchi	7.96	202	⇓Pn	Pn	16 11 47.7	+2.2
	0.9nm,0.3s						
MAKZ				⇑Sn	Sn	16 13 16.0	-0.2
	2.7nm,0.8s						
MAKZ				⇑Lg	Lg	16 13 59.2	
	12nm,0.8s						
BRVK	Borovoye	9.54	269	⇓Pn	Pn	16 12 06.5	-0.5
	1.0nm,0.6s						
BRVK				⇑Sn	Sn	16 13 53.3	-1.6
	1.8nm,0.5s						

*ISCJB **19** 16:21:39.0±0.6,41°.2N±0°.1×92°.36E±0°.08,h10km,mb3.6/5, MS2.7/1,Error ellipse: s-maj=16.8km s-min=5.6km az=24.8*
*IDC **19** 16:21:39.9±0.9,41°.29N×92°.40E,h0km,mb3.7/5, mb1 3.7/11,mb1mx3.5/61,mbtmp3.6/11,ML3.3/6,MS2.9/1, Ms1 2.9/1,ms1mx2.3/34,Error ellipse: s-maj=25.4km s-min=13.2km az=41.0*
*BJI **19** 16:21:43.9±0.0,41°.24N×92°.28E,h20km,mb3.8/3, mB4.1/3,ML4.0/11,Ms3.5/3,Ms7 3.3/3*
*NNC **19** 16:21:53.4±8.6,41°.49N×91°.13E,h0km,mb3.9,mpv3.7, Error ellipse: s-maj=63.2km s-min=62.0km az=174.0*
ISC 19 16:21:41.4±0.8,41°.3N±0°.1×92°.19E±0°.07,h10km,n17, σ2s73/23,mb3.7/5,7C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	4.20	309	Pn	Pn	16 22 49.3	+3.8
WMQ				Sn	Sn	16 23 37.3	+2.8
WMQ				smax	smax		
	comp=N,150nm,0.5s						
WMQ				smax	smax		
	comp=E,210nm,0.4s						
GTA	Gaotai	6.11	105	Pn	Pn	16 23 09.4	-2.4
GTA				Pg	Pb	16 23 27.8	-0.1
GTA				Sn	Sn	16 24 18.8	-3.0
GTA				Sg	Sb	16 24 46.8	+5.6
GTA				smax	smax		
	comp=N,110nm,1.1s						
GTA				smax	smax		
	comp=E,70nm,1.0s						
MK31	Makanchi Array	9.02	311	⇑Pn	Pn	16 23 53.1	+1.4
	0.8nm,0.4s,baz=124,slow=13,SNR=28						
MK31				⇓Sn	Sn	16 25 29.6	-3.8
	14nm,0.8s,baz=123,slow=24,SNR=8.5						
MK31				⇑Lg	Lg	16 26 15.1	
	5.9nm,0.6s,baz=134,slow=26,SNR=4.2						
MKAR	Makanchi Array	9.02	311	Pn	Pn	16 23 52.8	+1.1
	0.4nm,0.3s,baz=120,slow=13,SNR=16						
MKAR				Sn	Sn	16 25 29.7	-3.6
	0.7nm,0.3s,baz=115,slow=26,SNR=12						
MKAR				Lg	Lg	16 26 31.0	
	0.0nm,0.3s,baz=127,slow=26,SNR=2.6						
MAKZ	Makanchi	9.21	310	⇑Pn	Pn	16 23 58.2	+4.0
	1.6nm,0.6s						
MAKZ				⇑Sn	Sn	16 25 33.4	-4.5
	7.2nm,0.8s						
MAKZ				⇓Lg	Lg	16 26 21.5	
	8.4nm,0.7s						
PDGK	Podgornoye	9.64	287	⇑Pn	Pn	16 24 01.8	+1.6
	4.1nm,0.7s						
PDGK				⇑Sn	Sn	16 25 46.3	-2.3
	19nm,0.9s						
PDGK				⇑Lg	Lg	16 26 31.9	
	22nm,0.6s						
SONM	Songino Array	12.07	52	Pn	Pn	16 24 32.7	-0.7
	0.6nm,0.3s,baz=235,slow=15,SNR=5.1						
SONM				Lg	Lg	16 27 56.1	
	0.4nm,0.3s,baz=237,slow=39,SNR=5.5						
AAK	Ala-Archa	13.25	282	Pn	Pn	16 24 50.9	+1.2
	0.2nm,0.3s,baz=104,slow=4.2,SNR=2.4						
AAK				Lg	Lg	16 28 43.8	
	0.6nm,0.3s,baz=329,slow=18,SNR=2.5						
KURBB	Kurchatov Arra	13.32	319	Pn	Pn	16 24 47.5	-2.9
	0.1nm,0.3s,baz=127,slow=13,SNR=4.6						
KURBB				Sn	Sn	16 27 10.6	-8.0
	0.1nm,0.3s,baz=118,slow=28,SNR=4.2						
KURBB				Lg	Lg	16 28 47.5	
	baz=133,slow=28,SNR=2.9						
ZALV	Zalesovo Beam	13.62	341	Pn	Pn	16 24 55.8	+1.3
	0.1nm,0.3s,baz=146,slow=13,SNR=2.6						
ZALV				Lg	Lg	16 28 51.7	
	0.1nm,0.3s,baz=163,slow=30,SNR=2.3						
BVAR	Borovoye Array	18.85	316	P	P	16 26 02.4	+1.1
	0.2nm,0.3s,baz=119,slow=12,SNR=8.7						
AKTO	Aktyubinsk	25.32	303	LR	LR	16 36 38.6	
	comp=Z,23nm,18.4s,baz=278,slow=35						
FINES	FINESS Array B	43.71	321	P	P	16 29 46.9	+0.6
	0.8nm,0.6s,baz=94,slow=9.8,SNR=3.3						
NOA	NORSAR Array B	50.84	322	P	P	16 30 42.3	+0.4
	0.3nm,0.5s,baz=72,slow=7.0,SNR=2.7						
ILAR	Eielson Array	64.69	24	P	P	16 32 18.7	-0.4
	0.5nm,0.8s,baz=306,slow=6.5,SNR=6.8						
WRA	Warramunga Arr	72.35	139	P	P	16 33 06.9	-0.6
	0.7nm,0.7s,baz=322,slow=5.3,SNR=3.7						
ASAR	Alice Springs	75.30	141	P	P	16 33 24.7	0.0
	0.4nm,0.6s,baz=334,slow=5.0,SNR=12						

*ISCJB **19** 16:26:56.7±0.3,26°.83N±0°.03×60°.25E±0°.04,h10km, mb4.2/29,MS3.1/4,Error ellipse: s-maj=5.6km s-min=3.3km az=136.9*
*NEIC **19** 16:26:58.1±1.7,27°.01N×59°.99E,h10km±4km,mb4.2/13, ML4.2(THR),MN4.2(TEH),Error ellipse: s-maj=16.0km s-min=11.3km az=139.0*
*TEH **19** 16:26:59.5,26°.89N×60°.09E,h10km,ML4.2*
*IDC **19** 16:27:03.1±2.8,26°.90N×60°.05E,h54km±27km,mb4.0/19, mb1 4.0/22,mb1mx3.8/52,mbtmp4.2/22,ML3.9/3,MS3.0/5, Ms1 3.0/5,ms1mx2.7/32,Error ellipse: s-maj=18.2km s-min=12.7km az=143.0*
*DSN **19** 16:27:08.3±1.5,26°.70N×59°.44E,h12km±27km,ML4.7/12, Error ellipse: s-maj=31.1km s-min=27.4km az=27.0*
ISC 19 16:26:57.1±0.4,26°.86N±0°.04×60°.09E±0°.04,h10km,n117, σ2s58/112,mb4.3/29,MS3.2/4,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHBR	Chabahar	1.31	164	*e*Pn	Pg	16 27 25.0	+2.8
KHNJ	Kahnooj	2.38	298	*e*Pn	Pb	16 27 39.7	-0.4
JSK1	Jask	2.41	240	*e*Pn	Pb	16 27 40.7	+0.1
SZD1	Zahaedan-tmp	2.71	14	*e*Pn	Pb	16 27 44.7	-1.0
ZHSF	Zahedan	2.81	12	*e*Pn	Pn	16 27 45.1	+2.8
NIAN	Nian	2.98	284	*e*Pn	Pb	16 27 48.6	-1.7
BANOM	Banah	3.52	256	*e*P	Pn	16 27 54.0	+2.0
	SNR=194						
GENO	Geno	3.53	280	*e*Pn	Pn	16 27 55.7	+3.5
GENO				IAMB	IAmb	16 28 37.2	
	comp=Z,0.0nm,0.5s						
SHME	Shamm	3.63	258	*i* P	Pn	16 27 56.3	+2.9
	SNR=136						
SHME	Shamm	3.63	258	*e*Pn	Pn	16 27 56.9	+3.5
CHMN	Cheshme madani	3.74	324	*e*Pn	Pn	16 27 58.5	+3.2
CHMN				IAMB	IAmb	16 28 43.0	
	comp=Z,0.0nm,0.7s						
MDH	Madha	3.75	246	*i* P	Pn	16 27 56.8	+1.8
	SNR=19						
MDH				S	Sn	16 28 36.2	-3.0
MDH	Madha	3.75	246	*e*Pn	Pn	16 27 57.0	+2.0
BIDO	Bidbid	3.77	209	*e*Pn	Pn	16 27 57.7	+2.4
MSFE	Esma-Masafi	3.83	248	*i* P	Pn	16 27 57.8	+1.6
	SNR=42						
MSFE	Esma-Masafi	3.83	248	*e*Pn	Pn	16 27 58.6	+2.3
WSAR	Wadi Sarin	3.84	200	P	Pn	16 27 58.9	+2.5
	comp=Z,40nm,0.3s,baz=62,slow=4.3,SNR=1163						
WSAR				S	Sn	16 28 39.3	-2.2
	comp=Z,232nm,0.3s,baz=108,slow=16,SNR=28						
WSAR				LR	LR	16 29 32.3	
	comp=Z,167nm,19.1s,baz=36,slow=39						
UOSS	Minazif	3.98	242	*e*Pn	Pn	16 27 59.5	+1.2
UOSS	Minazif	3.98	242	*i* P	Pn	16 27 59.6	+1.2
	SNR=141						
UOSS	Minazif	3.98	242	*e*Pn	Pn	16 27 59.5	+1.2
NGRK	Negar Kerman	4.06	314	*e*Pn	Pb	16 28 05.0	-3.9
NGRK				IAMB	IAmb	16 28 56.3	
	comp=Z,0.0nm,0.3s						
HATD	Hatta, Dubai	4.10	241	*i* P	Pn	16 28 01.5	+1.6
	SNR=21						
HATD	Hatta, Dubai	4.10	241	*e*Pn	Pn	16 28 01.3	+1.4
HOQ	Hoqain	4.12	218	*e*Pn	Pn	16 28 01.7	+1.5
UMQ	Umm Al-Quwin	4.19	253	*e*Pn	Pn	16 28 06.4	+5.3
ASHO	Ashiyiah	4.23	240	*i* P	Pn	16 28 03.7	+2.0
	SNR=169						
ASHO	Ashiyiah	4.23	240	*e*Pn	Pn	16 28 03.5	+1.8
TVBK	TV Kerman	4.28	318	*e*Pn	Pn	16 28 06.6	+4.0
TVBK				IAMB	IAmb	16 29 32.7	
	comp=Z,0.0nm,0.8s						
NAZ	Nazwa, Dubai	4.40	246	*i* P	Pn	16 28 08.3	+4.3
	SNR=22						
NAZ	Nazwa, Dubai	4.40	246	*e*Pn	Pn	16 28 08.5	+4.5
FAQ	Al Faqa, Dubai	4.57	244	*i* P	Pn	16 28 10.7	+4.5
	SNR=140						
FAQ	Al Faqa, Dubai	4.57	244	*e*Pn	Pn	16 28 10.8	+4.5
KHGB	Koh Gabri	4.73	319	*e*Pn	Pn	16 28 12.2	+3.5
KHGB				IAMB	IAmb	16 29 36.1	
	comp=Z,0.0nm,0.9s						
ALNE	Al Ain	4.81	236	*i* P	Pn	16 28 13.9	+4.1
	SNR=43						
ALNE	Al Ain	4.81	236	*e*Pn	Pn	16 28 13.8	+4.1
ASUD	Al Ashush, Dub	4.83	244	*i* P	Pn	16 28 14.5	+4.5
	SNR=814						
AJN	Ajban	5.14	245	*i* P	Pn	16 28 17.9	+3.8
	SNR=51						
BSRN	Basiran	5.16	351	*e*Pn	Pn	16 28 17.4	+2.9
IKOO	Kooshah	5.63	351	*e*Pn	Pn	16 28 24.8	+3.7
IDAH	Dahanechah	5.86	358	*e*Pn	Pn	16 28 27.8	+3.5
ITEG	Tejag	6.13	349	*e*Pn	Pn	16 28 31.5	+3.6
GHIR	Ghir-Karzin	6.46	284	*e*Pn	Pn	16 28 35.2	+2.7
MZR	Muzera	7.12	239	*i* P	Pn	16 28 43.7	+2.3
	SNR=15						
MZR	Muzera	7.12	239	*e*Pn	Pn	16 28 44.3	+2.9
TKDS	Koohdasht(Taba	7.20	340	*e*Pn	Pn	16 28 45.6	+3.0
ISAD	Sadrabad	7.52	314	*e*Pn	Pn	16 28 50.1	+3.0
TNSJ	Nastanj	7.69	338	*e*Pn	Pn	16 28 52.7	+3.4
IKAZ	Kazeroun	7.83	294	*e*Pn	Pn	16 28 53.6	+2.2
IZEF	Zefreh	9.03	314	*e*Pn	Pn	16 29 10.2	+2.4
BHJ	Bhuj	9.38	110	*ex*	Sn	16 30 50.8	-7.3
IMYA	Miami	9.45	0	*e*Pn	Pn	16 29 17.6	+4.0
IPAY	Payeh	9.61	355	*e*Pn	Pn	16 29 20.6	+4.9
SBZV	Sabzevar	9.73	348	*e*Pn	Pn	16 29 21.9	+4.5
ISFR	Sfrayin	10.32	351	*e*Pn	Pn	16 29 29.9	+4.4
IEMG	Emamgholi	10.60	354	*e*Pn	Pn	16 29 33.0	+3.7
GEYT	Alibeck	11.16	352	P	Pn	16 29 38.0	+1.2
	comp=Z,0.2nm,0.3s,baz=184,slow=12,SNR=4.8						
GEYT				LR	LR	16 34 48.3	
	comp=Z,60nm,21.2s,baz=205,slow=42						
THW	Thamme Wali	11.72	57	P	Pn	16 29 45.6	+1.2
NIL	Nilore	13.23	56	*e*Pn	Pn	16 30 07.2	+2.1
NIL	Nilore	13.23	56	*e*Pn	Pn	16 30 07.2	+2.1
RAYN	Ar Rayn	13.62	259	*e*Pn	Pn	16 30 07.7	-2.8
CHGR	Chuyangaron	14.01	31	*e*Pn	Pn	16 30 16.2	+0.4
DHRM	DHARAMSHALA	15.09	65	*e*P	Pn	16 30 31.9	+1.2
DHRM				*e*S	Sn	16 33 09.6	-8.4
SMLA	Simla	15.54	70	*ex*	Pn	16 30 37.4	+1.1
SMLA				*ex*	x	16 33 19.4	
KK31	Karatay Array	18.29	25	*e*P	Pn	16 31 10.9	-0.1
	comp=Z,2.9nm,0.7s						
KKAR	Karatay Array	18.29	25	*e*P	Pn	16 31 11.0	0.0
	comp=Z,2.9nm,0.7s						
GNI	Garni	18.39	320	*e*Pn	Pn	16 31 08.3	-4.1
	comp=Z,14nm,1.0s						
DAMY	Dhamar	19.08	233	*e*Pn	Pn	16 31 22.7	+1.7
	comp=Z,64nm,1.1s						
AAK	Ala-Archa	19.65	33	P	Pn	16 31 28.3	+0.7
	comp=Z,0.4nm,0.3s,baz=191,slow=7.0,SNR=5.0						
AAK	Ala-Archa	19.65	33	*e*P	Pn	16 31 27.9	+0.4
	comp=Z,4.1nm,1.0s						
PYUN	Piuthan	20.35	81	*e*P	Pn	16 31 39.8	+3.7
	comp=Z,65nm,1.3s						
ASF	Jabal al Asfar	20.85	290	P	Pn	16 31 41.6	-0.1
	comp=Z,18nm,0.8s,baz=60,slow=8.0,SNR=25						
KOLN	Koldanda	20.91	82	*e*P	Pn	16 31 47.8	+5.2
	comp=Z,9.3nm,0.5s						
DANN	Dangsing	21.03	80	*e*P	P	16 31 49.0	+7.6
	comp=Z,57nm,0.9s						
MMAI	Mount Meron Ar	22.23	292	P	P	16 31 56.2	+2.1
	comp=Z,2.1nm,0.6s,baz=97,slow=14,SNR=6.2						
EIL	Elat	22.31	283	P	P	16 31 56.8	+1.9
	comp=Z,5.4nm,0.5s,baz=54,slow=3.7,SNR=8.4						
ABKAR	Akbulak array	22.36	360	*e*P	P	16 31 53.6	-1.7
	comp=Z,9.9nm,0.9s						
PKIN	Phulchoki	22.51	82	*e*P	P	16 32 09.7	+12
	comp=Z,11nm,0.8s						
PKI	Pulchoki	22.52	82	*e*P	P	16 32 09.8	+12
	comp=Z,12nm,0.8s						
JIRN	Jiri	23.21	82	*e*P	P	16 32 19.1	+14
	comp=Z,17nm,0.6s						
AKTO	Aktyubinsk	23.59	357	P	P	16 32 08.8	+0.8
	comp=Z,1.6nm,0.4s,baz=170,slow=12,SNR=8.2						
BR101	Keskin Array S	25.46	307	*e*P	P	16 32 26.4	+1.0
BRTR	Keskin Array B	25.46	307	P	P	16 32 26.4	+1.0
	comp=Z,1.2nm,0.6s,baz=119,slow=10,SNR=8.3						
BRTR				LR	LR	16 43 15.3	
	comp=Z,25nm,21.1s,baz=106,slow=38						
MK31	Makanchi Array	26.52	36	*e*P	P	16 32 35.1	+0.3
	comp=Z,1.0nm,0.8s						
MK32	Makanchi Array	26.52	36	*e*P	P	16 32 35.8	+0.9
MKAR	Makanchi Array	26.52	36	P	P	16 32 35.8	+0.9
	comp=Z,1.2nm,0.7s,baz=241,slow=7.6,SNR=11						
MKAR				LR	LR	16 42 48.3	
	comp=Z,48nm,19.0s,baz=224,slow=36						
BVAR	Borovoye Array	27.25	14	P	P	16 32 41.7	+0.4
	comp=Z,9.9nm,0.8s,baz=197,slow=9.3,SNR=45						
BRVK	Borovoye	27.25	13	*e*P	P	16 32 40.9	-0.4
	comp=Z,9.4nm,1.0s						
KURBB	Kurchatov Arra	27.60	26	P	P	16 32 44.9	+0.5
	comp=Z,3.8nm,0.8s,baz=224,slow=8.6,SNR=25						
KURK	Kurchatov	27.70	26	*e*P	P	16 32 45.6	+0.2
	comp=Z,3.4nm,0.8s						
WMQ	Urumqi	27.98	46	*e*P	P	16 32 52.1	+4.0
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,49nm,4.3s						
WMQ				LR	LR		
	comp=N,110nm,29.3s						
WMQ				LR	LR		
	comp=E,270nm,28.9s						
WMQ				LR	LR		
	comp=Z,44nm,29.2s						
ZAA0	Zalesovo Array	32.64	27	*e*P	P	16 33 28.7	-0.3
	comp=Z,7.1nm,0.5s						
ZALV	Zalesovo Beam	32.64	27	P	P	16 33 29.1	+0.1
	comp=Z,5.4nm,0.4s,baz=235,slow=9.7,SNR=32						
ZAA1	Zalesovo Array	32.64	27	*e*P	P	16 33 29.1	0.0
AKASG	Malin Array Be	33.44	324	P	P	16 33 35.5	-0.6
	comp=Z,2.2nm,0.5s,baz=124,slow=8.8,SNR=10						
AKBB	Malin Array Si	33.44	324	*e*P	P	16 33 35.5	-0.6
KOLS	Kolonicke sedl	36.56	317	*e*P	P	16 34 06.6	+3.6
LZH	Lanzhou	38.17	65	*e*P	P	16 34 17.3	+0.3
LZH				pP	sP	16 34 23.3	+1.6
LZH				sP	pP	16 34 26.8	+6.4
LZH				PP	PnPn	16 35 46.9	+1.2
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,93nm,4.8s						
CD2	Chengdu	38.27	73	*e*P	P	16 34 19.0	+1.2
FIA0	FINESS Array S	41.42	336	*e*P	P	16 34 42.9	-0.6
FINES	FINESS Array B	41.42	336	P	P	16 34 42.9	-0.6
	comp=Z,2.6nm,0.5s,baz=135,slow=9.2,SNR=18						
SONA0	Songino Array	41.59	47	*e*P	P	16 34 46.8	+1.5
SONM	Songino Array	41.59	47	P	P	16 34 46.8	+1.5
	comp=Z,1.6nm,0.5s,baz=254,slow=9.1,SNR=6.6						
HHC	Hu-ho-hao-te	44.37	58	*e*P	P	16 35 09.1	+1.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
NRIK	Noril'sk	45.46	13	P	P	16 35 16.1	+0.1
	comp=Z,2.6nm,0.5s,baz=202,slow=4.5,SNR=6.9						
NRIK				LR	LR	16 55 09.7	
	comp=Z,42nm,19.3s,baz=44,slow=37						
NC405	NORSAR Array S	47.08	330	*e*P	P	16 35 27.4	-1.5
	comp=Z,24nm,1.4s						
ARA0	ARCESS Array S	47.21	344	*e*P	P	16 35 28.9	-0.8
ARCES	ARCESS Array B	47.21	344	P	P	16 35 28.9	-0.8
	comp=Z,6.9nm,0.3s,baz=142,slow=9.2,SNR=16						
NB2	NORSAR Subarra	47.27	330	P	P	16 35 29.5	-0.9
	comp=Z,0.9nm,0.5s,baz=119,slow=7.4						
NB200	NORSAR Array S	47.27	330	*e*P	P	16 35 29.5	-0.9
NOA	NORSAR Array B	47.27	330	P	P	16 35 29.5	-0.9
	comp=Z,0.7nm,0.5s,baz=118,slow=7.5,SNR=8.5						
ESDC	Sonseca Array	54.02	301	P	P	16 36 21.6	-0.2
	comp=Z,1.0nm,0.4s,baz=71,slow=7.8,SNR=7.3						
TOA1	Torodi Ar. Sit	56.11	268	*e*P	P	16 36 36.4	-0.7
TORD	Torodi Ar. Bea	56.11	268	P	P	16 36 36.4	-0.7
	comp=Z,5.7nm,0.6s,baz=63,slow=7.1,SNR=26						
TIXI	Tiksi	58.08	20	*e*P	P	16 36 49.4	-0.8
	comp=Z,2.9nm,1.0s						
BOSA	Boshof	64.49	214	P	P	16 37 34.9	+0.6
	comp=Z,1.8nm,0.5s,baz=2.8,slow=5.1,SNR=5.2						
AS31	Alice Springs	87.19	118	*e*P	P	16 39 44.2	+0.2
	comp=Z,2.5nm,1.4s						
ASAR	Alice Springs	87.19	118	P	P	16 39 44.2	+0.2
	comp=Z,0.3nm,0.8s,baz=300,slow=4.8,SNR=4.3						

JMA 19 16:48:29.7±0.1,24°.11N×123°.55E,h17km±3km,M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.24	103	P	Pg	16 48 35.1	0.0
HATJ				*e*S	Sg	16 48 38.3	-0.5
IRIF	Iriomote-Funau	0.28	36	P	Pg	16 48 35.8	0.0
IRIF				S	Sg	16 48 40.0	+0.1
JKRS	Kuro-shima	0.44	73	P	Pg	16 48 38.1	-0.1
JKRS				S	Sb	16 48 45.0	-0.3
JIJ	Ishigaki jima	0.60	65	P	Pg	16 48 41.0	-0.5
JIJ				S	Sg	16 48 49.4	-0.1
YOJ	Yonaguni jima	0.60	306	P	Pg	16 48 40.9	-0.8
YOJ				S	Sg	16 48 48.1	-1.6
JISG	Ishigakijimahi	0.84	55	P	Pb	16 48 45.4	-0.5
JISG				S	Sb	16 48 56.6	-0.3

TAP 19 16:48:54.0,24°.65N×121°.85E,h26km±1km,ML1.3,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.04	186	*i* P	Pb	16 48 59.1	+0.6
	baz=170						
TWC				*i* S	Sb	16 49 02.2	+0.8
	baz=170						
EGS		0.21	20	*e*P	Pb	16 48 59.5	-0.4
	baz=23						
EGS				*e*S	Sb	16 49 04.8	+1.0
	baz=23						
NANB	Nanao	0.24	203	P	Pb	16 49 00.8	+0.6
	baz=203						
NANB				S	Sb	16 49 05.4	+0.9
	baz=203						
ENA	Nanau	0.24	205	*e*S	Sb	16 49 05.2	+0.7
	baz=203						
ENTT	Nioudou	0.26	269	*e*S	Sn	16 49 06.8	-0.6
	baz=267						
EOS1	EOS1	0.27	111	*e*P	Pb	16 49 00.9	+0.3
	baz=111						
EOS1				*e*S	Sn	16 49 06.3	-1.1
	baz=111						
TIPB	Shuangxi	0.32	356	P	Pb	16 49 02.2	+0.7
	baz=355						
TIPB				S	Sb	16 49 07.4	+0.8
	baz=355						
TWB1	Santiao Chiao	0.38	19	*e*S	Sb	16 49 09.1	+1.1
	baz=20						
YHNB	Yeheng	0.43	273	*e*P	Pn	16 49 04.0	-0.6
	baz=272						
YHNB				S	Sn	16 49 10.7	-1.0
	baz=272						
NSK	Sanguang	0.45	274	*e*P	Pn	16 49 04.4	-0.4
	baz=273						
NSK				*e*S	Sn	16 49 11.1	-1.0
	baz=273						

*IDC **19** 17:16:10.1±1.0,35°.73N×27°.25E,h0km,mb3.8/6, mb1 3.8/10,mb1mx3.5/39,mbtmp3.7/10,ML3.5/4,MS2.9/2, Ms1 2.8/2,ms1mx2.3/42,Error ellipse: s-maj=23.6km s-min=14.3km az=160.0*
*ISK **19** 17:16:10.4,35°.83N×27°.25E,h14km,ML3.7/25*
*ISCJB **19** 17:16:10.6±0.5,35°.78N±0°.02×27°.29E±0°.02,h12km±3km, mb3.8/7,Error ellipse: s-maj=4.2km s-min=2.6km az=150.4*
*ATH **19** 17:16:10.4,35°.77N×27°.31E,h29km±1km,ML3.6/11,Error ellipse: s-maj

ZKR	Zakros	1.10 232	P	Pg	17 16 32.1	+0.3
ZKR			S	Sn	17 16 48.0	0.0
ZKR			AML	AML	17 16 51.5	
	comp=N,3570μm,0.7s					
ZKR			AML	AML	17 17 01.3	
	comp=E,8531μm,1.1s					
STIA	Sitia Lasithi	1.14 239	P	Pb	17 16 32.0	-0.6
STIA			S	Sn	17 16 47.6	-1.2
MRSB	Marmaris-Mugla	1.18 39	PN	Pg	17 16 33.2	-0.1
BODT	Bodrum	1.27 1	PN	Pb	17 16 34.2	-0.7
ANAF	Anafi Island	1.34 295	P	Pn	17 16 35.1	-0.8
ANAF	Anafi Island	1.34 295	P	Pn	17 16 35.4	-0.5
ANAF			S	Sb	17 16 53.6	-0.1
ANAF			AML	AML	17 16 54.9	
	comp=E,10637μm,0.4s					
ANAF			AML	AML	17 16 59.5	
	comp=N,13771μm,0.4s					
NPS	Neapolis	1.46 249	P	Pb	17 16 37.2	-0.9
NPS			S	Sn	17 16 55.4	-1.5
NPS	Neapolis	1.46 249	P	Pb	17 16 37.2	-0.9
NPS			S	Sb	17 16 56.1	-0.8
NPS			AML	AML	17 16 57.2	
	comp=E,6419μm,0.5s					
NPS			AML	AML	17 17 01.1	
	comp=N,6011μm,0.5s					
DALY	Dalyan (Mula)	1.51 47	PN	Pb	17 16 37.7	-1.3
TURN	Turunc	1.52 44	PN	Pn	17 16 33.9	-4.4
AMGA	Amorgos Island	1.53 313	P	Pn	17 16 37.2	-1.2
AMGA			S	Sg	17 16 59.3	-0.3
AMGA	Amorgos Island	1.53 313	P	Pn	17 16 37.4	-1.0
AMGA			S	Sb	17 16 59.0	+0.1
AMGA			AML	AML	17 17 03.9	
	comp=N,4645μm,0.6s					
AMGA			AML	AML	17 17 04.3	
	comp=E,2581μm,0.6s					
YER	Yerkesik	1.56 31	PN	Pb	17 16 38.9	-1.1
SANT	Santorini	1.58 292	PN	Pn	17 16 38.5	-0.7
SANT	Santorini	1.58 292	P	Pn	17 16 38.5	-0.7
SANT			S	Sb	17 16 59.9	-0.7
SANT			AML	AML	17 17 06.5	
	comp=E,2308μm,0.5s					
SANT			AML	AML	17 17 10.8	
	comp=N,916μm,1.0s					
LAST	Lasithi	1.60 247	P	Pb	17 16 39.4	-1.2
LAST	Lasithi	1.60 247	P	Pb	17 16 39.4	-1.2
LAST			S	Sb	17 17 00.1	-0.9
LAST			AML	AML	17 17 10.8	
	comp=E,2628μm,1.0s					
LAST			AML	AML	17 17 13.0	
	comp=N,1861μm,0.7s					
THR6	Thira Island,	1.62 291	P	Pn	17 16 38.9	-0.8
SAP1	Santorini-Akro	1.63 291	P	Pn	17 16 39.1	-0.7
THR2	Thira island,	1.63 294	P	Pn	17 16 39.3	-0.5
THR3	Thira Island,	1.64 293	P	Pn	17 16 39.4	-0.5
THR9	Santorini-Faro	1.66 290	P	Pn	17 16 39.8	-0.4
CMBO	Columbo, Santo	1.66 295	P	Pn	17 16 39.5	-0.7
FETY	Fethiye	1.68 60	PN	Pb	17 16 40.9	-1.1
THR5	Thira Island,	1.68 292	P	Pn	17 16 40.2	-0.3
IOSP	Ios Island	1.86 301	P	Pn	17 16 41.9	-1.0
IOSP	Ios Island	1.86 301	P	Pn	17 16 42.3	-0.6
APE	Apeiranthos	1.90 313	PN	Pn	17 16 42.6	-1.0
APE	Apeiranthos	1.90 313	P	Pn	17 16 43.0	-0.6
APE	Apeiranthos	1.90 313	P	Pn	17 16 42.9	-0.7
GCAM	G?zelcaml?	1.91 359	PN	Pn	17 16 42.2	-1.4
GCAM	G?zelcaml?	1.91 359	*i* P	Pg	17 16 47.2	+0.1
GCAM			*i* S	Sg	17 17 14.1	+2.3
GCAM			IAML_P			
	comp=Z,1μm,0.3s					
AKAS	Kas	1.94 76	PN	Pb	17 16 44.7	-1.6
SMG	Samos	1.94 350	P	Pn	17 16 43.5	-0.7
SMG			S	Sn	17 17 08.4	-0.6
SMG			AML	AML	17 17 18.3	
	comp=N,402μm,0.3s					
SMG			AML	AML	17 17 21.7	
	comp=E,963μm,0.5s					
IDI	Anoyia	2.01 256	Pn	Pn	17 16 45.2	0.0
	comp=E,15nm,0.3s,baz=62,slow=16,SNR=61					
IDI			Sn	Sn	17 17 09.9	-0.7
	comp=E,33nm,0.3s,baz=171,slow=22,SNR=9.6					
IDI			LR	LR	17 17 50.8	
	comp=E,174nm,21.6s,baz=84,slow=51					
SIVA	Sivas	2.16 250	P	Pn	17 16 46.5	-0.6
SIVA			S	Sn	17 17 11.7	-2.5
SIVA			AML	AML	17 17 25.6	
	comp=E,2902μm,0.8s					
SIVA			AML	AML	17 17 27.7	
	comp=N,1818μm,0.6s					
AYDB	Zeytinkoy-Aydi	2.21 13	PN	Pn	17 16 47.2	-0.7
ELL	Elmali	2.33 65	PN	Pn	17 16 49.8	+0.3
MHLO	Agia Marina, M	2.49 292	P	Pn	17 16 53.1	+1.4
AKUM	Antalya-Kumluc	2.54 77	*i* P	Pb	17 16 55.0	-1.5
AKUM			IAML_P			
	comp=Z,524nm,0.2s					
VAM	Vamos	2.54 262	P	Pn	17 16 52.2	-0.2
VAM	Vamos	2.54 262	P	Pn	17 16 52.1	-0.2
BLCB	Balcova	2.59 356	PN	Pn	17 16 52.5	-0.6
URLA	Izmir	2.62 348	PN	Pn	17 16 53.1	-0.4
IMMV	Iera Moni Meta	2.71 264	PN	Pn	17 16 54.3	-0.3
IMMV	Iera Moni Meta	2.71 264	P	Pn	17 16 54.8	+0.2
KORT	Korkueli	2.75 63	PN	Pn	17 16 55.5	+0.1
GVD	Gavdhos	2.78 251	PN	Pn	17 16 55.2	-0.4
KULA	Kula-Manisa	2.93 22	PN	Pn	17 16 57.4	-0.4
USAK	Uak-Merkez	3.23 25	*i* P	Pn	17 17 03.7	+1.9
USAK			IAML_P			
	comp=Z,190nm,0.1s					
KEPZ	Antalya-Kepez	3.66 71	*i* P	Pb	17 17 11.5	-4.2
KEPZ			IAML_P			
	comp=Z,431nm,0.4s					
BALY	Balya	3.95 4	*i* P	Pn	17 17 14.1	+2.4
GAZI	Gazipasa	4.11 82	PN	Pn	17 17 14.7	+0.8
GAZI	Gazipasa	4.11 82	*i* P	Pn	17 17 15.0	+1.1
GAZI			*i* S	Sn	17 18 01.1	-1.2
ITM	Ithomi	4.53 289	PN	Pn	17 17 19.9	+0.2
LEF	Lefka	4.63 97	PN	Pn	17 17 21.9	+0.9
THL	Klokotos Trika	5.62 314	P	Pn	17 17 37.1	+2.4
BRTR	Keskin Array B	6.39 50	Pn	Pn	17 17 47.4	+2.0
	comp=Z,0.2nm,0.3s,baz=240,slow=16,SNR=7.5					
BRTR			Sn	Sn	17 19 03.0	+4.4
	comp=Z,0.1nm,0.3s,baz=203,slow=29,SNR=2.8					
MMAI	Mount Meron Ar	7.26 110	Pn	Pn	17 17 57.0	-0.3
	comp=Z,1.5nm,0.3s,baz=304,slow=12,SNR=7.3					
MMAI			Sn	Sn	17 19 19.2	-0.9
	comp=Z,2.5nm,0.3s,baz=309,slow=22,SNR=5.6					
EIL	Elat	8.89 131	Pn	Pn	17 18 19.7	+0.1
	comp=Z,0.4nm,0.3s,baz=349,slow=15,SNR=3.7					
KBZ	Khabaz	14.38 52	LR	LR	17 27 06.7	
	comp=Z,46nm,19.3s,baz=238,slow=46					
GNI	Garni	14.44 67	LR	LR	17 26 34.7	
	comp=Z,48nm,18.5s,baz=276,slow=43					
GERES	GERESS Array B	16.43 327	Pn	P	17 20 05.0	+0.4
	comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=5.5					
KHC	Kasperske Hory	16.69 327	*eP*	P	17 20 08.5	+1.1
ESDC	Sonseca Array	24.94 288	P	P	17 21 35.6	+0.9
	comp=Z,0.9nm,0.7s,baz=83,slow=10.0,SNR=5.7					
FINES	FINESS Array B	25.68 359	P	P	17 21 41.1	+0.1
	comp=Z,1.6nm,0.9s,baz=156,slow=10.0,SNR=4.5					
AKTO	Aktyubinsk	26.55 47	P	P	17 21 51.6	+2.5
	comp=Z,1.3nm,0.3s,baz=244,slow=9.0,SNR=5.2					
TORD	Torodi Ar. Bea	32.23 232	P	P	17 22 39.6	-0.2
	comp=Z,1.0nm,0.7s,baz=36,slow=8.8,SNR=5.2					
ARCES	ARCESS Array B	33.81 359	P	P	17 22 53.0	-0.1
	comp=Z,9.2nm,0.3s,baz=180,slow=11,SNR=3.5					
MKAR	Makanchi Array	41.98 57	P	P	17 24 03.0	+0.6
	comp=Z,0.6nm,0.7s,baz=278,slow=8.5,SNR=7.7					
ZALV	Zalesovo Beam	43.32 47	P	P	17 24 14.0	+1.0
	comp=Z,0.7nm,0.5s,baz=281,slow=8.0,SNR=2.8					

*ISCJB **19** 17:25:44.7±0.7, 40°.40N±0°.05×20°.66E±0°.04, h19km±8km, Error ellipse: s-maj=8.4km s-min=4.4km az=153.1*
*ATH **19** 17:25:44.2, 40°.39N×20°.69E, h26km±4km, ML1.9/5, Error ellipse: s-maj=4.7km s-min=1.4km az=131.0*
*THE **19** 17:25:44.7, 40°.35N×20°.67E, h14km±4km, ML2.0/2, Error ellipse: s-maj=4.1km s-min=0.9km az=52.0*
*TIR **19** 17:25:44.3, 40°.29N×20°.73E, h2km, Md2.6/7*

ISC 19 17:25:45.2±1.0, 40°.30N±0°.03×20.71E±0°.02, h17km±9km, n20, σ1§19/30, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PENT	Pentalofos	0.34	107	P	Pg	17 25 52.2	-0.3
PENT	Pentalofos	0.34	107	P	Pg	17 25 52.3	-0.2
PENT				S	Sb	17 25 59.6	+1.5
PENT				AML	AML	17 26 04.7	
	comp=E,461μm,0.5s						
PENT				AML	AML	17 26 05.3	
	comp=N,558μm,0.5s						
TPE	Tepelena	0.54	270	P	Pg	17 25 54.5	-1.4
TPE	Tepelena	0.54	270	*i* PN	Pg	17 25 44.3	-12
TPE				*i* SN	Sb	17 26 04.2	+0.6
KPRO	Kipourio	0.60	124	P	Pg	17 25 56.9	-0.3
KPRO				S	Sb	17 26 07.6	+2.0
KPRO	Kipourio	0.60	124	P	Pg	17 25 57.1	-0.1
KPRO				S	Sn	17 26 08.3	-0.2
KPRO				AML	AML	17 26 10.5	
	comp=E,249μm,0.4s						
KPRO				AML	AML	17 26 15.6	
	comp=N,236μm,0.7s						
MEV	Metsovon	0.65	142	P	Pg	17 25 57.6	-0.4
MEV	Metsovon	0.65	142	P	Pg	17 25 58.1	+0.1
SRN	Sarande	0.69	233	P	Pg	17 25 58.0	-0.7
SRN	Sarande	0.69	233	*i* PN	Pn	17 25 59.5	-0.6
SRN				*i* SN	Sn	17 26 10.3	-0.1
FNA	Florina	0.70	46	P	Pb	17 25 57.9	-1.2
FNA				S	Sb	17 26 08.3	-0.2
FNA	Florina	0.70	46	*i* PN	Pb	17 25 58.6	-0.5
FNA				*i* SN	Sn	17 26 09.2	-1.8
FNA	Florina	0.70	46	P	Pb	17 25 57.9	-1.2
FNA				S	Sb	17 26 07.1	-1.4
FNA				AML	AML	17 26 12.4	
	comp=N,307μm,0.6s						
FNA				AML	AML	17 26 14.1	
	comp=E,404μm,0.3s						
KZN	Kozani	0.81	89	P	Pb	17 26 00.6	-0.3
KZN				S	Sg	17 26 11.4	-0.4
KZN				AML	AML	17 26 19.2	
	comp=E,179μm,0.5s						
KZN				AML	AML	17 26 21.7	
	comp=N,185μm,0.4s						
IGT	Igoumenitsa	0.81	201	P	Pb	17 26 01.4	+0.5
IGT	Igoumenitsa	0.81	201	P	Pn	17 26 01.7	-0.2
IGT				S	Sn	17 26 15.1	+1.5
IGT				AML	AML	17 26 21.2	
	comp=E,113μm,0.4s						
IGT				AML	AML	17 26 22.5	
	comp=N,115μm,0.9s						
KEK	Kerkira	0.91	231	P	Pb	17 26 02.2	-0.4
THL	Klokotos Trika	1.24	126	P	Pg	17 26 08.9	-0.2
PHP	Peshkopia	1.40	352	*i* PN	Pg	17 26 14.3	+2.0
PHP				*i* SN	Sg	17 26 33.8	+3.2
SCTE	Santa Cesarea	1.73	263	P	Pb	17 26 15.3	-1.3

*ISCJB **19** 17:42:11.9±0.3, 2°.55S±0°.06×102°.25E±0°.06, h150km, mb3.6/13, Error ellipse: s-maj=11.8km s-min=4.7km az=136.3*
*DJA **19** 17:42:12.4±0.3, 3°.5S±3°×10°.2E±°, h165km±4km, M4.3/23, mB5.5/3, mb4.3/8, MLv4.3/23, Mw(mB)4.9/3*
*IDC **19** 17:42:13.3±2.4, 2°.67S×102°.09E, h161km±21km, mb3.4/12, mb1 3.5/13, mb1mx3.4/34, mbtmp3.9/13, Error ellipse: s-maj=32.1km s-min=11.2km az=60.0*

ISC 19 17:42:12.6±0.6, 2°.65S±0°.07×102°.21E±0°.08, h150km, n37, σ1§57/38, mb3.8/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	0.93	307	P	Pn	17 42 39.0	+2.1
KRJI				S	Sn	17 42 58.4	+2.9
LHSI	Lahat	1.76	132	P	Pn	17 42 47.0	+2.0
MNAI	Manna	1.85	156	P	Pn	17 42 47.8	+1.7
SDSI	Sungai Dareh	1.88	335	P	Pn	17 42 46.6	+0.3
PPSI	Pulau Pagai	2.20	267	P	Pn	17 42 51.4	+1.3
PDSI	Padang	2.46	315	P	Pn	17 42 53.5	+0.3
MDSI	Maura Dua	2.68	133	P	Pn	17 42 57.6	+1.6
LWLI	Liwa	2.99	142	P	Pn	17 43 01.1	+1.1
BKNI	Bangkinang	3.18	338	P	Pn	17 43 02.9	+0.6
SISI	Saibi	3.38	293	P	Pn	17 43 05.3	+0.4
KLI	Kotabumi	3.44	130	P	Pn	17 43 07.2	+1.6
KASI	Kota Agung	3.65	141	P	Pn	17 43 09.1	+0.7
PPBI	Pangkal Pinang	3.95	83	P	Pn	17 43 13.4	+1.1
MNSI	Mandailing Nat	4.32	322	P	Pn	17 43 16.9	-0.1
CGJI	Cibinong	5.25	139	P	Pn	17 43 27.7	-1.7
TPI	Tanjungpandan	5.44	91	P	Pn	17 43 33.6	+1.7
GSI	Gunungsitoli	6.07	310	P	Pn	17 43 39.3	-1.1
	355nm,0.5s,7μm1.8nm						
PSI	Prapat	6.33	329	P	Pn	17 43 42.8	-1.1
	3.2nm,0.3s,baz=148,slow=11,SNR=7.1						
CISI	Cisompet, Garu	7.41	131	P	Pn	17 43 57.0	-1.2
KCSI	Kotacane, Aceh	7.57	324	P	Pn	17 43 58.4	-1.9
MLSI	Meulaboh, Aceh	8.99	320	P	Pn	17 44 16.9	-2.4
SRAK	Srakaew	16.55	359	P	Pn	17 46 00.1	+3.9
	178μm,0.6s						
BKSI	Bulukumba	18.06	99	P	P	17 46 10.0	-2.7
CMAR	Chiang Mai Arr	21.22	351	P	P	17 46 45.7	-1.1
	1.1nm,0.7s,baz=183,slow=9.0,SNR=6.9						
FITZ	Fitzroy Crossi	27.63	125	P	P	17 47 47.4	+1.0
	1.9nm,0.7s,baz=331,slow=9.6,SNR=5.7						
WRA	Warramunga Arr	35.77	121	P	P	17 48 57.5	0.0
	1.0nm,0.3s,baz=290,slow=10,SNR=37						
ASAR	Alice Springs	37.09	127	P	P	17 49 08.3	-0.5
	1.0nm,0.4s,baz=301,slow=7.6,SNR=26						
ASAR				ScP	ScP	17 54 56.8	-2.6
	0.2nm,0.5s,baz=294,slow=3.8,SNR=7.0						
KSRS	Korea Array	46.49	28	P	P	17 50 24.9	+0.1
	0.2nm,0.3s,baz=223,slow=6.6,SNR=4.6						
STKA	Stephens Creek	47.08	133	P	P	17 50 29.8	+0.2
	0.7nm,0.3s,baz=320,slow=9.1,SNR=7.5						
SONM	Songino Array	50.41	4	P	P	17 50 55.9	+1.2
	1.2nm,0.5s,baz=192,slow=10,SNR=4.9						
MKAR	Makanchi Array	52.27	343	P	P	17 51 08.0	-0.5
	0.2nm,0.3s,baz=146,slow=9.7,SNR=7.9						
USRK	Ussuriysk Ar.	53.72	26	P	P	17 51 19.2	+0.1
	2.0nm,0.4s,baz=221,slow=3.9,SNR=13						
ZALV	Zalesovo Beam	58.23	348	P	P	17 51 50.0	-1.1
	0.7nm,0.4s,baz=165,slow=5.6,SNR=3.8						
VNDA	Vanda	81.10	169	P	P	17 54 11.1	+0.4
	0.5nm,0.7s,baz=318,slow=5.2,SNR=5.1						
FINES	FINESS Array B	85.71	332	P	P	17 54 33.7	-0.7
	0.3nm,0.4s,baz=108,slow=8.9,SNR=3.3						
ARCES	ARCESS Array B	87.83	340	P	P	17 54 43.4	-1.1
	0.5nm,0.5s,baz=99,slow=5.6,SNR=3.3						
TXAR	Lajitas Array	143.82	40	PKP	PKPab	18 01 28.9	+0.8
	0.7nm,0.5s,baz=158,slow=0.4,SNR=11						

*IDC **19** 17:52:32.1±0.7, 5°.54S×102°.92E, h0km, mb4.4/24, mb1 4.5/24, mb1mx4.4/42, mbtmp4.4/24, MS3.4/13, Ms1 3.5/13, ms1mx3.2/32, Error ellipse: s-maj=23.7km s-min=11.8km az=50.0*
*NEIC **19** 17:52:32.5±1.6, 5°.64S×102°.90E, h8km±1km, mb4.8/28, Error ellipse: s-maj=19.1km s-min=11.5km az=54.0*
*BJI **19** 17:52:32.7±0.0, 5°.96S×102°.67E, h30km, mb4.6/19, mB4.9/13, Ms4.4/5, Ms7 4.2/4*
*ISCJB **19** 17:52:35.1±0.3, 5°.72S±0°.04×102°.78E±0°.03, h38km, mb4.6/54, MS3.5/12, Error ellipse: s-maj=6.4km s-min=3.2km az=29.2*
*DJA **19** 17:52:37.8±0.3, 6°.5S±3°×10°.3E±°, h47km±5km, M4.6/24, mb4.7/15, mB5.2/7, MLv4.7/24, Mw(mB)4.6/7, Mwp6.5/1*

ISC 19 17:52:37.0±0.5, 5°.65S±0°.07×102°.83E±0°.06, h38km, n143, σ1§54/137, mb4.7/63, MS3.5/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	1.29	6	*e*Pn	Pn	17 52 58.7	+0.2
MNAI	Manna	1.29	6	P	Pn	17 52 59.6	+1.1
LWLI	Liwa	1.38	63	P	Pn	17 53 00.2	+0.4
LWLI				S	Sn	17 53 18.5	+1.7
KASI	Kota Agung	1.67	86	P	Pn	17 53 03.8	+0.2
KASI				S	Sn	17 53 25.6	+1.8
MDSI	Maura Dua	1.77	49	P	Pn	17 53 05.8	+0.7
LHSI	Lahat	1.94	21	P	Pn	17 53 09.0	+1.6
KLI	Kotabumi	2.17	69	P	Pn	17 53 12.0	+1.5
BLSI	Bandar Lampung	2.42	83	P	Pn	17 53 15.5	+1.4
CGJI	Cibinong	3.00	109	P	Pn	17 53 22.2	+0.1
PMBI	Palembang	3.33	36	P	Pn	17 53 27.9	+1.4
KRJI	Kerinci	3.79	339	P	Pn	17 53 34.7	+1.7
PPSI	Pulau Pagai	4.02	315	P	Pn	17 53 37.0	+1.0
CBJI	Citeko	4.07	101	P	Pn	17 53 40.6	+3.8
JMBI	JAMBI	4.07	12	P	Pn	17 53 36.3	-0.5
PPBI	Pangkal Pinang	4.79	44	P	Pn	17 53 47.8	+1.2
SDSI	Sungai Dareh	4.89	343	P	Pn	17 53 48.6	+0.6
LEM	Lembang	4.90	104	Pn	Pn	17 53 50.4	+2.1
	9.2nm,0.3s,baz=176,slow=14,SNR=8.3						
LEM				Sn	Sn	17 54 46.0	+2.1
	7.5nm,0.3s,baz=299,slow=19,SNR=2.2						
LEM				LR	LR	17 56 10.3	
	comp=Z,369nm,20.9s,baz=252,slow=45						
LEM	Lembang	4.90	104	P	Pn	17 53 51.7	+3.4
PDSI	Padang	5.27	333	P	Pn	17 53 53.8	+0.6
CISI	Cisompet, Garu	5.30	111	*e*Pn	Pn	17 53 53.4	-0.3
CISI	Cisompet, Garu	5.30	111	P	Pn	17 53 53.5	-0.3
XMIS	Christmas Isla	5.55	150	*e*Pn	Pn	17 53 51.0	-6.1
TPI	Tanjungpandan	5.61	59	P	Pn	17 53 58.3	+0.5
SISI	Saibi	5.69	319	P	Pn	17 53 59.5	+0.5
TPRI	Tanjung Pinang	6.74	15	P	Pn	17 54 15.5	+2.0
MNSI	Mandailing Nat	7.18	333	P	Pn	17 54 19.2	-0.3
MYKOM	Kota Tinggi	7.46	8	*e*Pn	Pn	17 54 24.4	+1.0
UGM	Wanagama	7.96	107	*e*Pn	Pn	17 54 30.9	+0.7
UGM	Wanagama	7.96	107	P	Pn	17 54 30.8	+0.5
WOJI	Wonogiri, Jawa	8.33	106	P	Pn	17 54 36.0	+0.8
GSI	Gunungsitoli	8.68	323	*e*Pn	Pn	17 54 39.2	-0.8
GSI	Gunungsitoli	8.68	323	P	Pn	17 54 39.7	-0.3
PWJI	Pagerwojo	9.22	105	P	Pn	17 54 48.3	+0.8
	55nm,0.7s						
PSI	Prapat	9.26	335	LR	LR	17 58 41.5	
	comp=Z,315nm,18.5s,baz=104,slow=41						
JAGI	Jajag, Banyuwa	11.58	105	*e*Pn	Pn	17 55 19.6	-0.3
PLAI	Plampang	15.16	103	P	Pn	17 56 02.8	-5.7
TTSI	Tana Toraja	17.14	82	P	P	17 56 43.0	+7.9
BKSI	Bulukumba	17.22	90	P	Pn	17 56 35.4	+0.6
	7.3nm,1.3s						
APSI	Ampana	19.36	77	P	Pn	17 57 00.5	-0.5
	24nm,0.9s,329nm						
SRAK	Srakaew	19.55	358	P	Pn	17 57 04.8	+1.7
	161μm,0.7s						
LUWI	Luwuk	20.42	78	*e*P	P	17 57 08.6	-2.5
	31nm,0.7s						
BATI	Baumata	21.12	104	P	P	17 57 18.5	-0.2
	68nm,0.5s,baz=272,slow=0.8,SNR=25						
BATI				S	S	18 01 06.5	-5.4
	17nm,1.0s,baz=194,slow=8.3,SNR=3.3						
BATI	Baumata	21.12	104	P	P	17 57 19.3	+0.6
CHAI	Chaiyaphum	21.43	358	P	P	17 57 24.7	+2.8
	20μm,0.7s						
SOEI	Soe	21.63	102	*e*P	P	17 57 22.9	-1.3
	38nm,0.6s						
KHON	Khomkaen	21.85	360	P	P	17 57 28.7	+2.3
	26μm,0.6s						
NONG	Nongkai	23.57	1	P	P	17 57 45.1	+0.9
	0.2nm,0.8s						
LAMP	Lampang	24.23	353	P	P	17 58 04.7	+14
CM31	Chiang Mai Arr	24.26	351	*e*P	P	17 57 50.2	-0.5
	15nm,0.8s						
CMAR	Chiang Mai Arr	24.26	351	P	P	17 57 50.2	-0.5
	8.9nm,0.5s,baz=183,slow=8.5,SNR=88						
CMAR				LR	LR	18 07 49.9	
	comp=Z,65nm,18.4s,baz=190,slow=38						
CMMT	Chiang Mai	24.61	351	P	P	17 57 53.6	-0.3
	7.8nm,1.0s						
CHTO	Chiang Mai	24.61	351	*e*P	P	17 57 53.0	-0.9
	13nm,0.9s						
FITZ	Fitzroy Crossi	25.48	121	P	P	17 58 02.7	+0.9
	4.6nm,1.0s,baz=295,slow=15,SNR=3.8						
FITZ				LR	LR	18 09 02.5	
	comp=Z,65nm,19.0s,baz=294,slow=39						
DAV	Davao City (W)	25.98	61	LR	LR	18 09 24.2	
	comp=Z,52nm,19.3s,baz=206,slow=39						
SLVN	Son La	26.84	2	*e*P	P	17 58 13.5	-0.7
	6.2nm,1.0s						
MTN	Manton Dam	28.81	106	*e*P	P	17 58 31.4	-0.5
	62nm,1.6s						
H08S2	Diego Garcia H	30.19	265	T	T	18 30 07.1	
	baz=88,slow=75,SNR=32						
H08S3	Diego Garcia H	30.20	265	T	T	18 30 05.4	
	baz=88,slow=75,SNR=79						
H08S1	Diego Carcia H	30.21	265	T	T	18 30 08.2	
	baz=88,slow=75,SNR=62						
H01W3	Cape Leeuwin H	30.91	162	T	T	18 31 16.9	
	baz=337						
H01W2	Cape Leeuwin H	30.92	162	T	T	18 31 28.7	
	baz=337,slow=74						
H01W1	Cape Leeuwin H	30.92	162	T	T	18 31 22.9	
	baz=337,slow=74						
KOHI	KOHIMA	32.31	345	*e*P	P	17 58 59.8	-3.0
KOHI				IAmb	IAmb	17 59 05.4	
	comp=Z,16nm,0.6s						
MOKO	MOKOCHONG	32.79	346	*e*P	P	17 59 06.5	-0.4
MOKO				IAmb	IAmb	17 59 07.7	
	comp=Z,25nm,0.8s						
SHL	Shillong	32.80	342	*e*P	P	17 59 06.6	-0.5
SHL				IAmb	IAmb	17 59 07.1	
	comp=Z,8.4nm,0.7s						
TURI	Tura	33.31	339	*e*P	P	17 59 11.0	-0.3
TURI				IAmb	IAmb	17 59 12.3	
	comp=Z,4.7nm,0.8s						
TEZP	TEZPUR	33.52	344	*e*P	P	17 59 12.5	-0.5
TEZP				IAmb	IAmb	17 59 13.8	
	comp=Z,6.9nm,0.6s						
WR1	Warramunga Arr	33.76	118	*e*P	P	17 59 15.2	-0.2
WRA	Warramunga Arr	33.76	118	P	P	17 59 15.2	-0.2
	comp=Z,4.1nm,0.7s,baz=286,slow=11,SNR=23						
WB2	Warramunga Arr	33.77	118	*e*P	P	17 59 15.4	-0.1
	comp=Z,19nm,1.3s						
ZIRO	ZIRO	34.10	346	*e*P	P	17 59 18.1	-0.3
ZIRO				IAmb	IAmb	17 59 19.0	
	comp=Z,20nm,0.5s						
TAWA	Tawang	34.71	343	*e*P	P	17 59 21.3	-2.5
TAWA				IAmb	IAmb	17 59 25.4	
ASAR	Alice Springs	34.86	124	P	P	17 59 25.4	+0.5
	comp=Z,2.4nm,0.7s,baz=291,slow=7.3,SNR=64						
ASAR				LR	LR	18 15 06.

WMQ	Urumqi	51.11	346	eP		P	18 01 34.8	-1.2
	comp=Z,21nm,0.6s							
KSH	Kashi	51.33	333	P		P	18 01 37.4	-0.4
KSH				sP		sP	18 01 55.4	+2.6
KSH				PP		PP	18 03 39.4	+4.2
KSH				S		S	18 08 49.0	-5.6
KSH				ScS		ScS	18 11 18.8	-6.7
KSH				pmax	pmax			
	comp=Z,21nm,0.8s							
KSH				pmax	pmax			
	comp=Z,180nm,5.4s							
KSH				LR	LR			
	comp=Z,150nm,8.1s							
KSH				LR	LR			
	comp=Z,190nm,12.3s							
KSH				LR	LR			
	comp=Z,190nm,11.3s							
SONM	Songino Array	53.35	3	P		P	18 01 52.9	+0.3
	comp=Z,4.7nm,0.5s,baz=180,slow=9.1,SNR=29							
SONM				LR	LR		18 27 30.1	
	comp=Z,40nm,18.2s,baz=206,slow=39							
MAJO	Matsushiro	53.45	35	eP		P	18 01 52.1	-1.4
MJAR	Matsushiro Arr	53.45	35	P		P	18 01 52.1	-1.4
	comp=Z,1.3nm,0.5s,baz=275,slow=6.0,SNR=7.2							
BOOM	Boomskoye usch	53.79	336	eP		P	18 01 56.8	+0.7
	comp=Z,4.7nm,0.8s							
ARSB	Arslanbob	54.14	332	eP		P	18 01 59.4	+0.9
	comp=Z,10nm,0.6s							
AAK	Ala-Archa	54.52	335	P		P	18 02 01.6	+0.2
	comp=Z,0.7nm,0.3s,baz=154,slow=9.9,SNR=4.5							
MK31	Makanchi Array	55.30	343	eP		P	18 02 06.3	-0.5
	comp=Z,5.0nm,0.8s							
MKAR	Makanchi Array	55.30	343	P		P	18 02 07.1	+0.4
	comp=Z,5.8nm,0.7s,baz=150,slow=8.4,SNR=60							
MAKZ	Makanchi	55.41	343	eP		P	18 02 07.6	+0.1
	comp=Z,4.1nm,1.1s							
USRK	Ussuriysk Ar.	56.14	25	P		P	18 02 12.5	-0.2
	comp=Z,5.3nm,0.5s,baz=208,slow=5.8,SNR=22							
USA0B	Ussuriysk Arra	56.14	25	eP		P	18 02 12.1	-0.7
	comp=Z,10.0nm,0.7s							
KURK	Kurchatov	59.90	342	eP		P	18 02 39.2	+0.2
	comp=Z,11nm,1.2s							
GEYT	Alibeck	60.04	320	P		P	18 02 40.8	+0.5
	comp=Z,3.4nm,0.8s,baz=126,slow=6.3,SNR=6.5							
KLR	Kul'dur	60.19	21	LR	LR		18 29 33.9	
	comp=Z,37nm,19.6s,baz=194,slow=37							
ZAA0	Zalesovo Array	61.28	348	eP		P	18 02 48.1	-0.2
	comp=Z,14nm,0.8s							
ZALV	Zalesovo Beam	61.28	348	P		P	18 02 48.2	-0.1
	comp=Z,8.7nm,0.4s,baz=165,slow=4.5,SNR=52							
ZALV				LR	LR		18 32 10.8	
	comp=Z,47nm,19.3s,baz=70,slow=39							
BRVK	Borovoye	64.64	339	eP		P	18 03 10.6	0.0
	comp=Z,6.3nm,0.6s							
ABKAR	Akbulak array	66.18	331	eP		P	18 03 20.7	0.0
	comp=Z,7.1nm,0.9s							
MAW	Mawson	67.50	195	LR	LR		18 28 09.0	
	comp=Z,55nm,21.2s,baz=12,slow=32							
ARU	Arti	71.66	336	eP		P	18 03 54.9	+0.2
	comp=Z,11nm,1.1s							
KBZ	Khabaz	72.90	319	P		P	18 04 03.4	+1.1
	comp=Z,2.4nm,0.8s,baz=160,slow=6.5,SNR=5.1							
PETK	Petropavlovsk-	74.50	31	P		P	18 04 10.7	-0.8
	comp=Z,2.2nm,0.6s,baz=340,slow=1.6,SNR=4.0							
PETK				LR	LR		18 38 11.7	
	comp=Z,15nm,18.7s,baz=343,slow=37							
PEA1	Petropavlovsk-	74.50	31	eP		P	18 04 10.7	-0.8
NRIK	Noril'sk	75.56	354	LR	LR		18 39 43.3	
	comp=Z,36nm,20.6s,baz=172,slow=38							
BR101	Keskin Array S	77.85	312	eP		P	18 04 31.7	+0.6
BRTR	Keskin Array B	77.85	312	P		P	18 04 31.7	+0.6
	comp=Z,2.1nm,0.7s,baz=135,slow=7.0,SNR=12							
VNDA	Vanda	78.06	169	P		P	18 04 32.8	+1.4
	comp=Z,0.6nm,0.8s,baz=0.0,slow=0.0,SNR=3.6							
VNDA				LR	LR		18 36 31.9	
	comp=Z,28nm,19.9s,baz=262,slow=34							
KLMR	Klimovskoe	82.33	334	eP		P	18 04 53.2	-1.3
KLMR				AMP			18 05 10.2	
	comp=Z,6.0nm,1.3s							
AKASG	Malin Array Be	84.08	322	P		P	18 05 04.3	+0.5
	comp=Z,0.8nm,0.5s,baz=80,slow=5.1,SNR=4.7							
AKBB	Malin Array Si	84.08	322	eP		P	18 05 02.7	-1.1
	comp=Z,2.6nm,0.9s							
MLR	Muntele Rosu	84.88	317	eP		P	18 05 09.4	+1.2
	comp=Z,7.1nm,1.1s							
BUR08	Bucovina Ar. S	85.86	319	eP		P	18 05 15.0	+2.0
	comp=Z,4.1nm,0.8s							
KOLS	Kolonicke sedl	88.04	319	eP		P	18 05 25.7	+2.3
FINES	FINESS Array B	88.64	332	P		P	18 05 27.2	+1.3
	comp=Z,0.8nm,0.7s,baz=106,slow=4.2,SNR=3.9							
KECS	Kecovo	89.13	319	eP		P	18 05 30.1	+1.6
ARCES	ARCESS Array B	90.84	340	P		P	18 05 36.9	+0.7
	comp=Z,1.1nm,0.8s,baz=107,slow=4.8,SNR=2.2							
GERES	GERESS Array B	93.64	319	P		P	18 05 50.7	+1.1
	comp=Z,0.3nm,0.5s,baz=106,slow=2.9,SNR=4.6							
TX31	Lajitas Ar. Si	145.63	44	ePKPdf		PKPdf	18 12 11.9	-0.3
TXAR	Lajitas Array	145.63	44	PKPbc		PKPab	18 12 13.2	+0.5
	comp=Z,8.3nm,0.7s,baz=289,slow=0.9,SNR=67							
TXAR	Lajitas Array	145.63	44	ePKPdf		PKPab	18 12 12.9	+0.2
JCT	Junction City	147.39	38	ePKPdf		PKPdf	18 12 14.8	-0.3

KRSC 19 17:59:11.2±2.2, 50.37N×157.00E, h53km±19km, ML4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.64	300	i P		Pn	17 59 24.9 +0.6
SKR				eS		Sn	17 59 33.8 -0.1
ALID	Alaid	1.05	299	eP		Pn	17 59 30.3 +0.5
ALID				eS		Sn	17 59 43.8 +0.3
PAU	Pauzhetka	1.10	354	i P		Pn	17 59 32.6 +2.2
PAU				eS		Sn	17 59 47.2 +2.6
KDTR	Khodutka, Kamc	1.59	25	eP		Pn	17 59 39.6 +2.6
KDTR				eS		Sn	17 59 59.4 +3.0
ASAK	Asacha	2.10	15	eP		Pn	17 59 46.3 +2.4
MTVR	Mutnovka	2.24	19	eP		Pn	17 59 48.9 +2.9
MTVR				eS		Sn	18 00 16.2 +3.6
RUS	Russkaya	2.27	24	eP		Pn	17 59 48.7 +2.4
RUS				eS		Sn	18 00 15.8 +2.7
APC	Apacha	2.56	2	eP		Pn	17 59 54.9 +4.7
KRMR	Karymshinskiy	2.56	16	eP		Pn	17 59 52.3 +2.1
KRMR				eS		Sn	18 00 22.7 +2.5
DALK	Dalny	2.88	22	eP		Pn	17 59 57.9 +3.3
DALK				eS		Sn	18 00 32.0 +4.0
UGLR	Uglovaya	3.06	21	eP		Pn	18 00 01.4 +4.2
AVH	Avacha	3.10	20	eP		Pn	18 00 01.3 +3.7
AVH				eS		Sn	18 00 37.2 +3.8
KOK	Koryaka	3.10	19	eP		Pn	18 00 02.1 +4.4
SMAR	Somma	3.11	20	eP		Pn	18 00 02.4 +4.5
KRER	Koryakskii	3.13	20	eP		Pn	18 00 02.3 +4.1
SDLR	Sedlovina	3.14	21	eP		Pn	18 00 01.6 +3.4
NLC	Nalytchevo	3.16	27	eP		Pn	18 00 00.5 +2.1
NLC				eS		Sn	18 00 37.2 +2.4
KRX	Arik	3.17	18	eP		Pn	18 00 01.7 +3.1
SPN	Mys Shipunski	3.32	33	eP		Pn	18 00 03.5 +2.9
SPN				eS		Sn	18 00 41.1 +2.4
GNL	Ganaly	3.38	10	eP		Pn	18 00 06.4 +4.8
MKZ	Mys Kozlova	5.09	33	eP		Pn	18 00 27.8 +2.9
MKZ				eS		Sn	18 01 24.5 +2.2
TUMR	Tumrok	5.28	20	eP		Pn	18 00 33.4 +5.9
BKI	Bering	7.28	45	eS		Sn	18 02 14.6 -1.4

*MOS **19** 18:36:55.2±0.6, 45.39N×149.97E, h104km, mb4.5/1, Error ellipse: s-maj=32.6km s-min=13.7km az=141.8*
*JMA **19** 18:36:56.6±0.4, 44.51N×150.19E, h100km, M3.5*
*SKHL **19** 18:36:56.4±0.8, 45.07N×149.99E, h113km±8km, mb4.5/4, msh5.4/5*
*IDC **19** 18:37:04.3±10.0, 45.96N×150.18E, h149km±72km, mb3.3/3, mb1 3.5/4, mb1mx3.0/27, mbtmp3.7/4, Error ellipse: s-maj=118.2km s-min=30.6km az=2.0*

ISC 19 18:36:51.5±1.2, 44.9N±0.1×150.47E±0.09, h61km, n38, σ2.55/48, mb3.7/3, 2C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.87	281	d iPN		Pn	18 37 23.1 +1.9
KUR	Kuril'sk	1.87	281	i P		Pn	18 37 23.0 +1.9
KUR				AMB	AMB	18 37 23.0	
	98nm,0.3s						
KUR				i S		Sn	18 37 43.0 -0.7
KUR				A	A	18 37 47.0	
	115nm,0.3s						
KUR				A	A	18 37 47.0	
	720nm,0.3s						
YUK	Yuzh-Kuril'sk	3.41	257	c iPN		Pn	18 37 45.1 +3.0
YUK				i S		Sn	18 38 21.7 +0.4
YUK				pmax	pmax		
	comp=Z,164nm,0.2s						
YUK				pmax	pmax		
	comp=N,30nm,0.1s						
YUK				pmax	pmax		
	comp=E,45nm,0.1s						
YUK				smax	smax		
	comp=N,248nm,0.4s						
YUK				smax	smax		
	comp=E,163nm,0.5s						
YUK	Yuzh-Kuril'sk	3.41	257	i P		Pn	18 37 45.1 +3.0
YUK				AMB	AMB	18 37 46.0	
	comp=E,16nm,0.3s						
YUK				i S		Sn	18 38 21.0 -0.3
YUK				A	A	18 38 24.0	
	comp=E,250nm,0.5s						
YUK				A	A	18 38 24.0	
	comp=E,163nm,0.5s						
LAGR	Lagunnoye	3.45	258	ePN		Pn	18 37 45.4 +2.7
LAGR				eS		Sn	18 38 22.6 +0.2
LAGR				smax	smax		
	comp=N,345nm,0.3s						
LAGR				smax	smax		
	comp=E,102nm,0.1s						
LAGR	Lagunnoye	3.45	258	eP		Pn	18 37 45.0 +2.3
LAGR				eS		Sn	18 38 22.0 -0.4
LAGR				A	A	18 38 38.0	
	comp=E,35nm,0.3s						
LAGR				A	A	18 38 38.0	
	comp=E,102nm,0.3s						
GRPR	Tuman	3.48	257	ePN		Pn	18 37 46.1 +2.9
GRPR				eS		Sn	18 38 23.2 +0.1
GRPR				pmax	pmax		
	comp=Z,86nm,0.2s						
GRPR				smax	smax		
	comp=N,211nm,0.4s						
GRPR				smax	smax		
	comp=E,280nm,0.4s						
GRPR	Tuman	3.48	257	eP		Pn	18 37 46.0 +2.9
GRPR				AMB	AMB	18 37 48.0	
	comp=E,43nm,0.3s						
GRPR				eS		Sn	18 38 23.0 -0.1
GRPR				A	A	18 38 27.0	
	comp=E,110nm,0.4s						
GRPR				A	A	18 38 27.0	
	comp=E,140nm,0.4s						
NEM2	Nemuro 2	3.73	247	P		Pn	18 37 48.7 +2.2
NEM2				eS		Sn	18 38 28.7 -0.5
GLVR	Golovnino	3.73	254	ePN		Pn	18 37 49.6 +3.0
GLVR				eS		Sn	18 38 30.0 +0.7
GLVR				pmax	pmax		
	comp=Z,127nm,0.3s						
GLVR				smax	smax		
	comp=N,290nm,0.2s						
GLVR				smax	smax		
	comp=E,74nm,0.2s						
GLVR	Golovnino	3.73	254	eP		Pn	18 37 50.0 +3.4
GLVR				AMB	AMB	18 37 51.0	
	comp=E,13nm,0.3s						
GLVR				eS		Sn	18 38 29.6 +0.3
GLVR				A	A	18 38 38.0	
	comp=E,140nm,0.3s						
GLVR				A	A	18 38 38.0	
	comp=E,170nm,0.3s						
JRA	Rausu	3.95	258	P		Pn	18 37 52.8 +3.3
JNK	Nakash	4.33	254	P		Pn	18 37 57.9 +3.1
JAK	Akkeshi	4.58	247	P		Pn	18 38 00.1 +1.9
JAK				eS		Sn	18 38 49.2 -0.8
JTKR	Abashiri--Toko	4.79	261	P		Pn	18 38 04.0 +3.0
JAR	Ashorobuto	5.08	254	P		Pn	18 38 08.2 +3.2
JMP	Maruseppu	5.16	263	P		Pn	18 38 09.4 +3.2
JOB	Onbets	5.19	250	P		Pn	18 38 09.0 +2.5
JOB				eS		Sn	18 39 05.0 0.0
JKK2	Kamakawa 2	5.62	262	P		Pn	18 38 15.6 +3.1
JCH	Churui	5.63	249	P		Pn	18 38 14.4 +1.9
JCH				eS		Sn	18 39 14.2 -1.6
JEM	Erimo	6.05	244	P		Pn	18 38 22.2 +3.9
JEM				eS		Sn	18 39 26.9 +0.8
ERM	Erimo	6.05	244	ePN		Pn	18 38 22.5 +4.2
JNBK	Urakawa-nobuka	6.18	248	P		Pn	18 38 22.5 +2.4
JNBK				eS		Sn	18 39 28.0 -1.4
JBT2	Biratori 2	6.23	253	P		Pn	18 38 24.0 +3.2
JNB	Noboribetsu	7.25	254	P		Pn	18 38 37.5 +2.7
JNB				eS		Sn	18 39 53.9 -1.7
JKB	Kayabe	7.50	250	eS		Sn	18 39 57.8 -3.9
JANG	Nango	8.00	239	eS		Sn	18 40 09.0 -4.9
JTM	Tenmabayashi	8.03	243	eS		Sn	18 40 10.7 -4.1
PETK	Petropavlovsk-	9.49	27	P		Pn	18 39 06.3 +1.1
	comp=E,0.1nm,0.3s,baz=207,slow=11,SNR=3.9						
H11N2	WAKE ISLAND Hy	28.57	146	T		T	19 13 43.8
	baz=336						
H11N1	WAKE ISLAND Hy	28.58	146	T		T	19 13 41.6
	baz=336						
H11N3	WAKE ISLAND Hy	28.59	146	T		T	19 13 38.4
	baz=336						
H11S1	WAKE ISLAND Hy	29.60	148	T		T	19 15 01.7
	baz=336,slow=76,SNR=80						
H11S3	WAKE ISLAND Hy	29.61	148	T		T	19 15 02.3
	baz=336,slow=76,SNR=54						
H11S2	WAKE ISLAND Hy	29.62	148	T		T	19 15 00.9
	baz=336,slow=76,SNR=51						
MKAR	Makanchi Array	46.16	298	P		P	18 45 08.4 -1.4
	comp=E,0.6nm,0.7s,baz=79,slow=7.5,SNR=5.5						
FINES	FINESS Array B	64.91	334	P		P	18 47 20.4 -3.6
	comp=E,0.8nm,0.6s,baz=42,slow=5.9,SNR=6.2						
TXAR	Lajitas Array	80.03	59	P		P	18 48 55.4 +0.8
	comp=E,0.4nm,0.4s,baz=294,slow=4.9,SNR=6.1						

*ISK **19** 19:00:21.8, 38.57N×37.35E, h9km, ML1.8/7*
*DDA **19** 19:00:21.8, 38.62N×37.34E, h14km±1km, ML2.7*
*ISCJB **19** 19:00:22.6±0.5, 38.60N±0.03×37.37E±0.04, h11km±4km, Error ellipse: s-maj=5.5km s-min=4.8km az=161.3*

ISC 19 19:00:21.9±0.9, 38.59N±0.04×37.36E±0.03, h11km±6km, n13, σ0.35/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DARE	Darende-Malaty	0.10	103	PG		Pg	19 00 24.7 -0.1
DARE				SG		Sg	19 00 26.9 -0.1
CUGUR	Gurin_SVAS	0.15	333	i P		Pg	19 00 25.7 +0.2
CUGUR				i S		Sg	19 00 28.4 +0.3
ELBS	KAHRAMANMARAS	0.32	213	i P		Pb	19 00 29.6 -0.2
ELBS				i S		Sb	19 00 34.8 -0.1
ELBS				IAML_P			
	comp=Z,819nm,0.1s						
AKCD	Akcadag	0.54	124	i P		Pb	19 00 33.1 -0.3
AKCD				i S		Sb	19 00 41.6 +0.4
HEKM	Malatya_Hekimh	0.55	59	i P		Pg	19 00 33.2 +0.4
HEKM				i S		Sb	19 00 41.6 -0.1
HEKM				IAML_P			
	comp=Z,1μm,0.1s						
CUKAN	kangal_SIVAS	0.73	7	i P		Pg	19 00 35.3 -0.7
CUKAN				i S		Sb	19 00 46.9 +0.2
KMRS	Kahramanmaras	1.15	198	PN		Pb	19 00 43.6 -0.1
CUSAR	Sarkisla-SIVAS	1.20	314	i P		Pg	19 00 45.0 0.0
CUSAR				i S		Sn	19 01 01.4 +0.4
SVSK	Karacayir	1.35	348	PN		Pg	19 00 47.7 -0.2
GAZ	Gaziantep	1.42	185	PN		Pb	19 00 48.1 -0.4
SVRC	Sivrice-ELAZID	1.54	97	PN		Pb	19 00 50.3 -0.3
URFA	Urfa	1.63	134	PN		Pn	19 00 50.8 +0.2
KOZT	Kozan	1.64	228	PN		Pb	19 00 51.8 -0.4

OTT 19 19:01:52.5±0.4, 57.17N×57.86W, h18km, ML3.6/10, LAlbertaRADOR Sea Seismic Zone. 234km northeast from Aillik, NI, Labrador Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANL	Nain	2.20	255	PN	Pn	19 02 27.5	-0.6
NANL				SN	Sn	19 02 54.4	-0.4
NANL				Trac		19 02 58.2	
	comp=Z,71nm,0.1s						
MKVL	Makkovik	2.21	200	PN	Pn	19 02 28.6	+0.3
MKVL				SN	Sn	19 02 54.7	-0.5
MKVL				Trac		19 02 59.3	
	comp=Z,6.4nm,0.0s						
KAJQ	Kangiqsualujju	4.57	293	PN	Pn	19 03 00.2	-0.4
KAJQ				SN	Sn	19 03 51.4	-1.7
KAJQ				Trac		19 03 53.6	
	comp=Z,3.9nm,0.1s						
SCHQ	Schefferville	5.56	249	PN	Pn	19 03 14.4	+0.1
SCHQ				SN	Sn	19 04 14.0	-3.6
SCHQ				Trac		19 04 17.7	
	comp=Z,6.0nm,0.1s						
NATG	Natashquan Que	7.50	205	PN	Pn	19 03 40.8	-0.1
NATG				SN	Sn	19 05 01.1	-4.1
NATG				Trac		19 05 03.2	
	comp=Z,1.1nm,0.0s						
DRLN	Deer Lake	7.94	178	PN	Pn	19 03 46.5	-0.3
DRLN				SN	Sn	19 05 10.2	-5.9
DRLN				Trac		19 05 20.4	
	comp=Z,34nm,0.8s						
SMQ	Clarke City	8.71	221	PN	Pn	19 03 55.6	-1.9
SMQ				SN	Sn	19 05 28.6	-6.6
SMQ				Trac		19 05 34.0	
	comp=Z,1.7nm,0.1s						
ICQ	Pointe Anglais	9.50	220	PN	Pn	19 04 06.1	-2.2
ICQ				SN	Sn	19 05 48.1	-6.4
ICQ				Trac		19 06 03.7	
	comp=Z,34nm,1.0s						
LG4Q	La Grande 4	9.89	256	PN	Pn	19 04 11.5	-2.1
LG4Q				SN	Sn	19 05 53.8	-10
LG4Q				Trac		19 05 58.4	
	comp=Z,5.5nm,0.2s						
GSQ	Grosses Roches	9.97	218	PN	Pn	19 04 13.3	-1.4
GSQ				SN	Sn	19 05 59.6	-6.4
GSQ				Trac		19 06 11.2	
	comp=Z,1.0nm,0.0s						
CNQ	Baie Comeau	9.97	222	PN	Pn	19 04 13.2	-1.6
SFJD	Kangerlussuaq	10.41	16	PN	Pn	19 04 16.9	-3.8
CHEG	Cheticamp, Nov	10.53	191	PN	Pn	19 04 20.5	-1.9
CHEG				SN	Sn	19 06 11.2	-8.6
CHEG				Trac		19 06 20.7	
	comp=Z,10nm,0.6s						
BATG	Bathurst New B	11.11	210	PN	Pn	19 04 28.7	-1.6
BATG				SN	Sn	19 06 25.9	-8.0

*NIED **19** 19:02:00, 43.30N×147.70E, h17km, Mw3.7 Best double couple: M0:3.48000×10^14 NP1:φ0=222.00000°, δ32.00000°, λ90.00000°. NP2:φ0=42.00000°, δ58.00000°, λ90.00000°.*
*ISCJB **19** 19:02:22.4±0.9, 43.37N±0.06×147.84E±0.08, h10km, mb3.5/5, Error ellipse: s-maj=9.4km s-min=7.2km az=145.3*
*SKHL **19** 19:02:23.1±0.6, 43.16N×148.04E, h58km±5km, mb4.3/3*
*JMA **19** 19:02:23.1±0.5, 43.28N×147.74E, h5km, M3.6*
*IDC **19** 19:02:30.5±12.0, 44.24N×146.83E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.5/57, mbtmp3.7/5, Error ellipse: s-maj=333.6km s-min=30.5km az=168.0*

ISC 19 19:02:26.1±1.4, 43.48N±0.09×147.64E±0.09, h10km, n22, σ1.32/27, mb3.7/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.38	266	P		Pn	19 02 50.1 -1.3
NEM2				eS		Sn	19 03 09.5 -0.2
YUK	Yuzh-Kuril'sk	1.40	294	i P		Pn	19 02 51.1 -0.6
YUK				AMB	AMB	19 02 52.0	
	59nm,0.5s						
YUK				AMB	AMB	19 02 52.0	
	54nm,0.5s						
YUK				AMB	AMB	19 02 52.0	
	130nm,0.5s						
YUK				i S		Sn	19 03 11.5 +1.3
YUK				A	A	19 03 19.0	
	493nm,0.5s						
YUK				A	A	19 03 19.0	
	876nm,0.5s						
GRPR	Tuman	1.45	292	eP		Pn	19 02 51.0 -1.3
GRPR				AMB	AMB	19 02 53.0	
	162nm,0.4s						
GRPR				eS		Sn	19 03 12.0 +0.7
GRPR				A	A	19 03 20.0	
	430nm,0.4s						
GRPR				A	A	19 03 20.0	
	413nm,0.4s						
LAGR	Lagunnoye	1.46	294	eS		Sn	19 03 12.5 +0.9
GLVR	Golovnino	1.56	280	eP		Pn	19 02 52.5 -1.3
GLVR				eS		Sn	19 03 15.0 +0.9
GLVR				A	A	19 03 32.0	
	460nm,0.5s						
GLVR				A	A	19 03 32.0	
	485nm,0.5s						
KUR	Kuril'sk	1.77	5	i P		Pn	19 02 55.0 -1.7
KUR				AMB	AMB	19 02 57.0	
	33nm,0.4s						
KUR				AMB	AMB	19 02 57.0	
	27nm,0.4s						
KUR				AMB	AMB	19 02 57.0	
	67nm,0.4s						
KUR				i S		Sn	19 03 19.0 -0.2
KUR				A	A	19 03 30.0	
	456nm,0.5s						
KUR				A	A	19 03 30.0	
	236nm,0.5s						
JKHN	Kushirohamanak	1.85	259	P		Pn	19 02 56.9 -0.9
JRA	Rausu	1.88	285	P		Pn	19 02 58.1 -0.1
JNK	Nakash	2.12	274	P		Pn	19 03 00.9 -0.7
JAK	Akkeshi	2.20	258	P		Pn	19 03 01.3 -1.3
JTKR	Abashiri--Toko	2.75	282	P		Pn	19 03 10.6 +0.4
JAR	Ashorobuto	2.82	268	P		Pn	19 03 10.8 -0.4
JMP	Maruseppu	3.14	281	P		Pn	19 03 16.5 +0.8
JCH	Churui	3.25	256	P		Pn	19 03 15.8 -1.3
JEM	Erimo	3.61	248	P		Pn	19 03 22.4 +0.4
JFR	Furan	3.69	267	P		Pn	19 03 24.1 +0.9
JNBK	Urakawa-nobuka	3.78	253	P		Pn	19 03 23.3 -1.1
SONM	Songino Array	28.90	293	P		P	19 08 24.4 -0.7
	0.6nm,0.4s,baz=92,slow=8.5,SNR=5.7						
ZALV	Zalesovo Beam	41.45	307	P		P	19 10 10.9 -1.7
	0.5nm,0.4s,baz=91,slow=12,SNR=2.5						
ILAR	Eielson Array	41.50	36	P		P	19 10 16.6 +3.6
	0.2nm,0.5s,baz=267,slow=8.0,SNR=3.7						
MKAR	Makanchi Array	45.02	298	P		P	19 10 40.3 -1.4
	0.5nm,0.5s,baz=80,slow=8.2,SNR=11						
KURBB	Kurchatov Arra	46.06	304	P		P	19 10 48.1 -1.7
	0.7nm,0.5s,baz=78,slow=9.4,SNR=6.7						

IDC 19 19:04:28.6±1.7, 11.69S×165.14E, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.6/30, mbtmp3.8/5, ML3.8/2, MS2.9/2, Ms1 2.9/2, ms1mx2.6/27, Error ellipse: s-maj=33.9km s-min=32.4km az=164.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.57	293	Pn	Pn	19 05 54.6	+1.8
	5.6nm,0.3s,baz=184,slow=4.0,SNR=2.5						
HNR				Sn	Sn	19 06 57.3	-0.3
	4.1nm,0.3s,baz=18,slow=20,SNR=2.8						
HNR				LR	LR	19 07 52.8	
	comp=Z,64nm,18.4s,baz=176,slow=37						
DZM	Mont Dzumac	10.40	173	Pn	Pn	19 06 59.9	+0.6
	0.4nm,0.3s,baz=307,slow=20,SNR=6.7						
STKA	Stephens Creek	29.57	224	LR	LR	19 20 57.4	
	comp=Z,47nm,21.0s,baz=25,slow=33						
WRA	Warramunga Arr	30.70	251	P		P	19 10 45.8

Moment Tensor Solution.Mantle waves: s6,d8; Duration: 1±1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.36±.13; $M_{\theta\theta}$-0.17±.08; $M_{\phi\phi}$0.53±.12; $M_{r\theta}$2.33±.21; $M_{r\phi}$-0.56±.06; $M_{\theta\phi}$-0.83±.22; Best double couple: $M_0$2.58000×10^{16} NP1:φs291.00000°,δ86.00000°,λ-105.00000°. NP2: φs187.00000°,δ15.00000°,λ-15.00000°. Principal axes: T 2.5400, Plg39.0000°, Azm35.0000°; N 0.0700, Plg15.0000°, Azm292.0000°; P -2.6100, Plg47.0000°, Azm186.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.

THE ***19*** *19:05:08.5,34°.28N×25°.04E,h0km±1km,ML4.7/6 Error ellipse: s-maj=2.1km s-min=0.6km az=175.0*

MOS ***19*** *19:05:08.5±1.4,34°.31N×24°.97E,h33km,mb4.8/35, MS4.0/13,Error ellipse: s-maj=5.7km s-min=3.1km az=84.0*

PDG ***19*** *19:05:11.2±0.1,34°.42N×24°.00E,h7km±4km,ML4.6/13, Error ellipse: s-maj=4.4km s-min=2.4km az=90.0*

DDA ***19*** *19:05:11.3,34°.28N×25°.11E,h11km,ML4.4*

NIC ***19*** *19:05:11.7±0.2,34°.34N×25°.31E,h25km,mb4.7,ML4.1*

GII ***19*** *19:05:15.1±0.0,33°.79N×25°.68E,h12km,mb4.6/3, MD4.6/3*

NSSC ***19*** *19:05:25.3±1.2,37°.54N×28°.06E,h5km,ML3.6*

ISC 19 19:05:07.7±0.6,**34°.19N**±0°.03×**25°.08E**±0°.02,**h19**km±2km, **n634**,σ1§**88**/**668**,**mb4.7**/107,**MS3.9**/32,**38C-39D**,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**345**	P	**Pb**	**19 05 23.2**	**-0.7**
SIVA				S	**Sg**	**19 05 35.1**	**-0.8**
SIVA	**Sivas**	**0.86**	**345**	P	**Pb**	**19 05 23.3**	**-0.7**
SIVA				S	**Sb**	**19 05 35.6**	**+0.6**
SIVA				AML	AML	19 05 44.1	
SIVA				AML	AML	19 05 45.3	
TMBK	**Timbaki Herakl**	**0.92**	**344**	P	**Pb**	**19 05 24.8**	**-0.2**
TMBK				S	**Sg**	**19 05 37.3**	**-0.5**
LAST	**Lasithi**	**1.02**	**19**	P	**Pb**	**19 05 26.5**	**-0.3**
LAST				S	**Sn**	**19 05 41.4**	**+0.5**
LAST	**Lasithi**	**1.02**	**19**	P	**Pb**	**19 05 26.7**	**-0.1**
LAST				S	**Sg**	**19 05 40.9**	**-0.3**
LAST				AML	AML	19 05 54.7	
	comp=E,18488μm,0.6s						
LAST				AML	AML	19 05 56.4	
	comp=N,17970μm,1.9s						
GVD	**Gavdhos**	**1.05**	**309**	P	**Pn**	**19 05 27.1**	**-0.2**
GVD	**Gavdhos**	**1.05**	**309**	*e*Pg	**Pb**	**19 05 26.8**	**-0.4**
GVD				*e*Sn	**Sn**	**19 05 41.7**	**+0.4**
GVD	**Gavdhos**	**1.05**	**309**	P	**Pb**	**19 05 26.8**	**-0.4**
GVD				S	**Sn**	**19 05 41.7**	**+0.4**
GVD	**Gavdhos**	**1.05**	**309**	P	**Pb**	**19 05 26.6**	**-0.6**
GVD				S	**Sn**	**19 05 42.0**	**+0.7**
GVD				AML	AML	19 05 48.6	
GVD				AML	AML	19 05 48.8	
GVDS	**Gavdos**	**1.05**	**309**	P	**Pg**	**19 05 27.3**	**-0.8**
GVDS				S	**Sn**	**19 05 42.8**	**+1.4**
IDI	**Anoyia**	**1.11**	**352**	Pn	**Pb**	**19 05 27.4**	**-0.8**
	comp=N,271nm,0.3s,baz=189,slow=11,SNR=315						
IDI				Sn	**Sb**	**19 05 41.8**	**-0.5**
	comp=N,918nm,0.3s,baz=254,slow=15,SNR=24						
KSTL	**Kastelli Herak**	**1.11**	**360**	P	**Pb**	**19 05 27.1**	**-1.2**
KSTL				S	**Sb**	**19 05 42.0**	**-0.4**
IACM	**Heraklion**	**1.11**	**360**	P	**Pb**	**19 05 28.2**	**-0.1**
IACM	**Heraklion**	**1.11**	**360**	P	**Pn**	**19 05 28.5**	**+0.3**
IACM				S	**Sb**	**19 05 42.8**	**+0.3**
NPS	**Neapolis**	**1.16**	**22**	P	**Pn**	**19 05 28.7**	**-0.1**
NPS				S	**Sn**	**19 05 44.6**	**+0.5**
NPS	**Neapolis**	**1.16**	**22**	P	**Pn**	**19 05 28.8**	**-0.1**
NPS				S	**Sg**	**19 05 45.6**	**+0.2**
NPS				AML	AML	19 06 00.2	
	comp=E,25140μm,0.7s						
NPS				AML	AML	19 06 01.0	
	comp=N,19844μm,0.8s						
PRNS	**Prines Rethymn**	**1.27**	**338**	P	**Pn**	**19 05 30.3**	**0.0**
PRNS				S	**Sg**	**19 05 48.3**	**-0.5**
STIA	**Sitia Lasithi**	**1.31**	**39**	P	**Pg**	**19 05 32.5**	**-0.5**
ZKR	**Zakros**	**1.32**	**45**	P	**Pg**	**19 05 32.6**	**-0.5**
ZKR	**Zakros**	**1.32**	**45**	*e*Pn	**Pg**	**19 05 32.4**	**-0.7**
ZKR				*e*Pn	**Pg**	**19 05 32.4**	**-0.7**
ZKR				*e*Sn	**Sg**	**19 05 51.4**	**+1.0**
ZKR				*e*Sn	**Sg**	**19 05 51.4**	**+1.0**
ZKR	**Zakros**	**1.32**	**45**	P	**Pg**	**19 05 32.4**	**-0.7**
ZKR				S	**Sg**	**19 05 51.4**	**+1.0**
ZKR	**Zakros**	**1.32**	**45**	P	**Pg**	**19 05 33.1**	**-0.1**
ZKR				S	**Sg**	**19 05 50.5**	**+0.1**
ZKR				AML	AML	19 06 10.7	
	comp=N,6326μm,0.7s						
ZKR				AML	AML	19 06 11.9	
	comp=E,16301μm,0.6s						
VAM	**Vamos**	**1.42**	**329**	P	**Pn**	**19 05 32.7**	**+0.3**
VAM				S	**Sb**	**19 05 52.0**	**+0.9**
VAM	**Vamos**	**1.42**	**329**	P	**Pn**	**19 05 32.5**	**+0.1**
VAM				S	**Sg**	**19 05 53.0**	**-0.6**
VAM				AML	AML	19 06 05.7	
	comp=E,40236μm,1.0s						
VAM				AML	AML	19 06 13.3	
	comp=N,37094μm,0.9s						
IMMV	**Iera Moni Meta**	**1.56**	**325**	P	**Pb**	**19 05 35.3**	**-0.6**
IMMV	**Iera Moni Meta**	**1.56**	**325**	P	**Pb**	**19 05 35.0**	**-0.9**
IMMV				S	**Sb**	**19 05 55.5**	**+0.3**
IMMV	**Iera Moni Meta**	**1.56**	**325**	P	**Pb**	**19 05 35.4**	**-0.5**
IMMV				S	**Sg**	**19 05 58.8**	**+0.7**
IMMV				AML	AML	19 06 07.3	
	comp=E,32898μm,0.9s						
IMMV				AML	AML	19 06 15.3	
	comp=N,30998μm,0.7s						
CHAN	**Chania**	**1.58**	**328**	P	**Pb**	**19 05 36.0**	**-0.2**
THR6	**Thira Island,**	**2.18**	**7**	*e*Pn	**Pn**	**19 05 43.3**	**+0.5**
THR6	**Thira Island,**	**2.18**	**7**	P	**Pn**	**19 05 43.3**	**+0.5**
KARP	**Karpathos**	**2.18**	**51**	*e*P	**Pn**	**19 05 43.8**	**+0.9**
KARP	**Karpathos**	**2.18**	**51**	*e*Pn	**Pb**	**19 05 44.9**	**-1.6**
KARP	**Karpathos**	**2.18**	**51**	P	**Pb**	**19 05 45.7**	**-0.8**
KARP	**Karpathos**	**2.18**	**51**	P	**Pb**	**19 05 46.1**	**-0.4**
KARP				AML	AML	19 06 50.6	
	comp=N,5263μm,0.7s						
KARP				AML	AML	19 06 59.3	
	comp=E,5700μm,1.3s						
SANT	**Santorini**	**2.20**	**8**	*e*P	**Pn**	**19 05 43.6**	**+0.4**
SANT	**Santorini**	**2.20**	**8**	*e*Pn	**Pn**	**19 05 43.5**	**+0.3**
SANT	**Santorini**	**2.20**	**8**	P	**Pn**	**19 05 43.6**	**+0.4**
SANT	**Santorini**	**2.20**	**8**	P	**Pn**	**19 05 44.4**	**+1.2**
SANT				AML	AML	19 06 25.1	
	comp=N,2487μm,0.7s						
SANT				AML	AML	19 06 25.1	
	comp=E,8303μm,0.9s						
ANKY	**Antikythira Is**	**2.22**	**319**	*e*Pn	**Pn**	**19 05 44.9**	**+1.5**
ANKY	**Antikythira Is**	**2.22**	**319**	P	**Pn**	**19 05 44.9**	**+1.5**
ANKY	**Antikythira Is**	**2.22**	**319**	P	**Pb**	**19 05 46.2**	**-1.0**
ANKY				AML	AML	19 06 33.2	
	comp=N,9337μm,1.0s						
ANKY				AML	AML	19 06 39.5	
	comp=E,12167μm,0.6s						
THR3	**Thira Island,**	**2.23**	**7**	*e*Pn	**Pn**	**19 05 44.3**	**+0.7**
THR3	**Thira Island,**	**2.23**	**7**	P	**Pn**	**19 05 44.3**	**+0.7**
THR5	**Thira Island,**	**2.23**	**6**	P	**Pn**	**19 05 44.3**	**+0.7**
ANAF	**Anafi Island**	**2.24**	**14**	P	**Pn**	**19 05 44.6**	**+0.9**
THR2	**Thira island,**	**2.27**	**7**	*e*Pn	**Pn**	**19 05 44.6**	**+0.5**
THR2	**Thira island,**	**2.27**	**7**	P	**Pn**	**19 05 44.6**	**+0.5**
IOSP	**Ios island**	**2.54**	**4**	P	**Pn**	**19 05 48.3**	**+0.5**
MHLO	**Agia Marina, M**	**2.56**	**348**	P	**Pn**	**19 05 48.2**	**+0.1**
MHLO				S	**Sn**	**19 06 20.8**	**+2.2**
MHLO	**Agia Marina, M**	**2.56**	**348**	P	**Pn**	**19 05 49.3**	**+1.2**
MHLO				AML	AML	19 06 42.9	
	comp=N,16687μm,0.6s						
MHLO				AML	AML	19 06 50.1	
	comp=E,15831μm,0.9s						
KYTH	**Kithira**	**2.66**	**322**	*e*Pn	**Pn**	**19 05 50.9**	**+1.4**
KYTH	**Kithira**	**2.66**	**322**	P	**Pn**	**19 05 50.9**	**+1.4**
KYTH	**Kithira**	**2.66**	**322**	P	**Pn**	**19 05 51.8**	**+2.4**
KYTH				AML	AML	19 06 40.9	
	comp=E,6773μm,0.7s						
KYTH				AML	AML	19 06 43.6	
	comp=N,6628μm,1.4s						
KTHR	**Kythira**	**2.68**	**321**	P	**Pn**	**19 05 51.5**	**+1.8**
SLUM	**Salum**	**2.69**	**178**	P	**Pb**	**19 05 52.5**	**-2.7**
	baz=179						
SLUM				AMP		19 06 00.0	
	baz=179						
SLUM				S	**Sn**	**19 06 24.2**	**+2.3**
	baz=179						
AMGA	**Amorgos Island**	**2.72**	**14**	P	**Pn**	**19 05 50.5**	**+0.2**
APE	**Apeiranthos**	**2.90**	**7**	*e*P	**Pn**	**19 05 53.1**	**+0.3**
APE	**Apeiranthos**	**2.90**	**7**	*e*Pn	**Pn**	**19 05 52.8**	**0.0**
APE	**Apeiranthos**	**2.90**	**7**	P	**Pn**	**19 05 52.8**	**0.0**
APE	**Apeiranthos**	**2.90**	**7**	*e*P	**Pn**	**19 05 52.8**	**0.0**
ARG	**Arkhangelos**	**3.21**	**50**	*e*P	**Pn**	**19 05 58.7**	**+1.7**
ARG	**Arkhangelos**	**3.21**	**50**	*e*Pn	**Pn**	**19 05 59.4**	**+2.4**
ARG	**Arkhangelos**	**3.21**	**50**	P	**Pn**	**19 05 59.4**	**+2.4**
ARG	**Arkhangelos**	**3.21**	**50**	*e*P	**Pn**	**19 05 59.4**	**+2.4**
ARG	**Arkhangelos**	**3.21**	**50**	P	**Pn**	**19 05 59.6**	**+2.5**
DAT	**Datca**	**3.25**	**38**	*e*P	**Pn**	**19 05 59.1**	**+1.4**
DATC	**Datca-Mugla**	**3.32**	**39**	*e*P	**Pn**	**19 06 00.2**	**+1.7**
BODT	**Bodrum**	**3.39**	**32**	*e*P	**Pn**	**19 06 00.7**	**+1.1**
BDRM	**Kayabasi**	**3.46**	**33**	*i* P	**Pn**	**19 06 02.9**	**+2.5**
BBRN	**Bozburun-Marma**	**3.48**	**44**	*e*P	**Pn**	**19 06 01.9**	**+1.2**
KRND	**KRANIDI**	**3.55**	**334**	P	**Pn**	**19 06 02.2**	**+0.5**
MRSB	**Marmaris-Mugla**	**3.58**	**44**	*e*P	**Pn**	**19 06 03.4**	**+1.2**
SMG	**Samos**	**3.79**	**22**	P	**Pn**	**19 06 05.9**	**+0.9**
VLY	**Voula,Athens**	**3.80**	**344**	*e*Pn	**Pn**	**19 06 05.4**	**+0.2**
VLY	**Voula,Athens**	**3.80**	**344**	P	**Pn**	**19 06 05.4**	**+0.2**
PYL	**PYLOS**	**3.84**	**316**	*e*Pn	**Pn**	**19 06 05.4**	**-0.2**
PYL	**PYLOS**	**3.84**	**316**	P	**Pn**	**19 06 05.4**	**-0.2**
GCAM	**G?zelcaml?**	**3.92**	**26**	*e*P	**Pn**	**19 06 08.6**	**+1.9**
DALY	**Dalyan (Mula)**	**3.92**	**47**	*e*P	**Pn**	**19 06 08.6**	**+1.8**
TURN	**Turunc**	**3.93**	**46**	*e*P	**Pn**	**19 06 04.5**	**-2.4**
TURN	**Turunc**	**3.93**	**46**	*i* P	**Pn**	**19 06 04.4**	**-2.4**
TURN				*i* S	**Sn**	**19 06 46.1**	**-6.3**
TURN				IAML_P			
	comp=Z,3μm,0.2s						
YER	**Yerkesik**	**3.93**	**41**	*e*P	**Pn**	**19 06 08.6**	**+1.6**
ITM	**Ithomi**	**3.94**	**320**	*e*P	**Pn**	**19 06 07.3**	**+0.2**
ITM	**Ithomi**	**3.94**	**320**	*e*Pn	**Pn**	**19 06 07.3**	**+0.2**
PTL	**Penteli**	**3.98**	**346**	*e*Pn	**Pn**	**19 06 07.8**	**+0.2**
PTL	**Penteli**	**3.98**	**346**	P	**Pn**	**19 06 07.8**	**+0.2**
FETY	**Fethiye**	**4.08**	**52**	*e*P	**Pn**	**19 06 10.1**	**+1.1**
AYDN	**Tasoluk**	**4.14**	**32**	*i* P	**Pn**	**19 06 13.0**	**+3.1**
AYDN				IAML_P			
	comp=Z,2μm,0.3s						
VILL	**Villa**	**4.22**	**341**	P	**Pn**	**19 06 10.7**	**-0.2**
AKAS	**Kas**	**4.23**	**60**	*e*P	**Pn**	**19 06 12.5**	**+1.3**
AKAS	**Kas**	**4.23**	**60**	*i* P	**Pn**	**19 06 13.6**	**+2.5**
AKAS				*i* S	**Sn**	**19 06 58.5**	**-1.6**
AKAS				IAML_P			
	comp=Z,6μm,0.2s						
CHOS	**Chios island**	**4.26**	**10**	P	**Pn**	**19 06 12.5**	**+0.9**
EREA	**Eretria**	**4.32**	**348**	P	**Pn**	**19 06 12.7**	**+0.3**
URLA	**Izmir**	**4.34**	**16**	*e*P	**Pn**	**19 06 14.2**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**4.39**	**30**	*e*P	**Pn**	**19 06 15.4**	**+2.1**
BLCB	**Balcova**	**4.48**	**20**	*e*P	**Pn**	**19 06 15.5**	**+1.1**
KLV	**Kalavryta, Ach**	**4.52**	**329**	P	**Pn**	**19 06 16.0**	**+0.9**
MRKA	**Markates**	**4.67**	**345**	P	**Pn**	**19 06 17.3**	**+0.2**
ELL	**Elmali**	**4.70**	**56**	*e*P	**Pn**	**19 06 19.3**	**+1.7**
LAKA	**Lakka**	**4.76**	**329**	*e*Pn	**Pn**	**19 06 19.3**	**+1.0**
LAKA	**Lakka**	**4.76**	**329**	P	**Pn**	**19 06 19.3**	**+1.0**
AKUM	**Antalya-Kumluc**	**4.80**	**62**	*i* P	**Pn**	**19 06 21.2**	**+2.3**
AKUM				*i* S	**Sn**	**19 07 15.0**	**+1.0**
SWA2		**4.94**	**176**	P	**Pn**	**19 06 22.7**	**+1.9**
	baz=177						
EFP	**Efpalio**	**4.95**	**330**	P	**Pn**	**19 06 22.1**	**+1.2**
ANX	**Ano Chora**	**5.08**	**331**	P	**Pn**	**19 06 23.6**	**+0.8**
KORT	**Korkueli**	**5.13**	**55**	*e*P	**Pn**	**19 06 25.0**	**+1.5**
KORT	**Korkueli**	**5.13**	**55**	*i* P	**Pn**	**19 06 26.6**	**+3.1**
KORT				*i* S	**Sn**	**19 07 23.6**	**+1.3**
KORT				IAML_P			
	comp=Z,2μm,0.3s						
MANT	**Manisa**	**5.13**	**32**	*e*Pn	**Pn**	**19 06 24.4**	**+0.8**
MANT	**Manisa**	**5.13**	**32**	*i* P	**Pn**	**19 06 26.0**	**+2.4**
MANT				IAML_P			
	comp=Z,1μm,0.3s						
AKHS	**Akhisar**	**5.17**	**24**	*i* P	**Pn**	**19 06 26.0**	**+2.0**
AKHS				IAML_P			
	comp=Z,2μm,0.4s						
KULA	**Kula-Manisa**	**5.19**	**33**	*e*P	**Pn**	**19 06 26.7**	**+2.3**
AGG	**Agios Georgios**	**5.31**	**336**	P	**Pn**	**19 06 27.0**	**+1.1**
NEO	**Neokhori**	**5.32**	**344**	P	**Pn**	**19 06 26.2**	**+0.1**
XOR	**Xorichti**	**5.39**	**344**	P	**Pn**	**19 06 27.0**	**0.0**
KHAL	**Karahalli**	**5.49**	**39**	*i* P	**Pn**	**19 06 30.2**	**+1.8**
KHAL				*i* S	**Sn**	**19 07 31.9**	**+0.9**
KHAL				IAML_P			
	comp=Z,602nm,0.2s						
USAK	**Uak-Merkez**	**5.52**	**34**	*i* P	**Pn**	**19 06 30.8**	**+2.0**
USAK				IAML_P			
	comp=Z,3μm,0.5s						
EZN	**Ezine**	**5.71**	**10**	⇓*i* P	**Pn**	**19 06 32.3**	**+0.9**
EZN	**Ezine**	**5.71**	**10**	⇓P	**Pn**	**19 06 32.3**	**+0.9**
LKD2	**Lefkada island**	**5.81**	**323**	P	**Pn**	**19 06 33.8**	**+1.0**
BALB	**Balikesir**	**5.88**	**22**	*e*Pn	**Pn**	**19 06 35.4**	**+1.6**
BAGO	**Egridir - ISPA**	**5.98**	**49**	*i* P	**Pn**	**19 06 38.4**	**+3.2**
BAGO				IAML_P			
	comp=Z,983nm,0.3s						
GDZ	**Gediz**	**6.04**	**35**	*i* P	**Pn**	**19 06 38.5**	**+2.6**
PPCY	**Paphos**	**6.04**	**81**	P	**Pn**	**19 06 36.3**	**+0.5**
	baz=266						
ALAN	**Alanya-ANTALYA**	**6.15**	**65**	*e*P	**Pn**	**19 06 39.2**	**+1.8**
SHUT	**Suhut-Afyon**	**6.20**	**44**	*e*P	**Pn**	**19 06 39.4**	**+1.2**
GAZI	**Gazipasa**	**6.26**	**69**	*e*P	**Pn**	**19 06 39.5**	**+0.5**
ALFC	**Alefka**	**6.27**	**79**	P	**Pn**	**19 06 39.2**	**+0.1**
	baz=264						
ALFC				S	**Sn**	**19 07 48.0**	**-2.2**
SZAC	**Souni**	**6.47**	**83**	P	**Pn**	**19 06 41.9**	**+0.1**
	baz=268						
SZAC				S	**Sn**	**19 07 53.3**	**-1.8**
LEF	**Lefka**	**6.50**	**80**	*e*P	**Pn**	**19 06 42.9**	**+0.6**
HNAT	**Natroun**	**6.54**	**132**	P	**Pn**	**19 06 45.0**	**+2.2**
	baz=134						
HNAT				S	**Sn**	**19 07 55.4**	**-1.4**
	baz=134						
PENT	**Pentalofos**	**6.77**	**333**	P	**Pn**	**19 06 46.4**	**+0.3**
CSS	**Mathiatis**	**6.85**	**81**	P	**Pn**	**19 06 47.2**	**+0.1**
	baz=266						
CSS				S	**Sn**	**19 08 02.2**	**-2.3**
TEKE	**Tekeli-Mersin**	**6.86**	**71**	*e*P	**Pn**	**19 06 47.8**	**+0.6**
KONT	**Konya--Tatoy**	**6.99**	**55**	*e*P	**Pn**	**19 06 51.0**	**+2.1**
BERE	**Bereket-Mersin**	**7.00**	**70**	*e*P	**Pn**	**19 06 50.3**	**+1.1**
LADK	**Ladik-KONYA**	**7.12**	**54**	*e*P	**Pn**	**19 06 52.3**	**+1.4**
KOT	**Kottamia**	**7.13**	**125**	P	**Pn**	**19 06 51.8**	**+0.9**
	baz=126						
TEVE	**Tevekalti-Mers**	**7.19**	**69**	*e*P	**Pn**	**19 06 53.0**	**+1.2**
KIZT	**Kizilcal**	**7.20**	**47**	*e*P	**Pn**	**19 06 53.1**	**+1.1**
AKKU	**Akkuyu-Mersin**	**7.21**	**72**	*e*P	**Pn**	**19 06 52.9**	**+0.9**
GLL	**Jalalah**	**7.27**	**127**	P	**Pn**	**19 06 54.0**	**+1.1**
	baz=128						
IKL	**Isikli**	**7.33**	**71**	*e*P	**Pn**	**19 06 54.3**	**+0.6**
VAY	**Valandovo**	**7.39**	**345**	*e*Pn	**Pn**	**19 06 53.8**	**-0.7**
KEBE	**Keben-Mersin**	**7.41**	**70**	*e*P	**Pn**	**19 06 56.3**	**+1.5**
MMB	**Musomiste**	**7.47**	**352**	*e*P	**Pn**	**19 06 56.1**	**+0.6**
RZN	**Rozhen**	**7.49**	**358**	*e*P	**Pn**	**19 06 56.5**	**+0.5**
SILI	**Silifke-Mersin**	**7.55**	**71**	*e*P	**Pn**	**19 06 57.7**	**+1.0**
EREN	**Erenkoy**	**7.59**	**77**	*e*P	**Pn**	**19 06 58.5**	**+1.3**
CHBY	**Cihanbeyli**	**7.67**	**53**	*e*P	**Pn**	**19 06 59.2**	**+0.8**
NBNS	**Bani Suef**	**7.68**	**135**	P	**Pn**	**19 06 59.9**	**+1.4**
	baz=135						
OHR	**Ohrid**	**7.70**	**335**	*e*Pn	**Pn**	**19 06 57.2**	**-1.5**
KIZK	**Mersin**	**7.75**	**70**	*e*P	**Pn**	**19 07 00.3**	**+0.9**
KKB	**Krupnik**	**7.83**	**349**	*e*P	**Pn**	**19 07 01.4**	**+1.0**
SUZ	**Suez**	**7.88**	**121**	P	**Pn**	**19 07 01.8**	**+0.6**
	baz=122						
MDUB	**Mudurnu**	**7.94**	**36**	*e*Pn	**Pn**	**19 07 03.3**	**+1.2**
MERS	**Mersin**	**8.15**	**68**	*e*P	**Pn**	**19 07 05.7**	**+0.8**
BR231	**Keskin MP Arra**	**8.35**	**45**	*e*Pn	**Pn**	**19 07 09.5**	**+1.8**
ANTO	**Ankara**	**8.38**	**45**	*e*Pn	**Pn**	**19 07 10.2**	**+2.1**
ANTO	**Ankara**	**8.38**	**45**	*e*P	**Pn**	**19 07 10.2**	**+2.1**
OFRI	**`Ofer**	**8.43**	**98**	Pn	**Pn**	**19 07 09.8**	**+1.1**
OFRI				Sn	**Sn**	**19 08 39.1**	**-4.2**
KZIT	**Kziot**	**8.52**	**110**	*e*P	**Pn**	**19 07 09.5**	**-0.4**
KZIT	**Kziot**	**8.52**	**110**	Pn	**Pn**	**19 07 10.1**	**+0.2**
KZIT				Sn	**Sn**	**19 08 41.0**	**-4.5**
KZIT	**Kziot**	**8.52**	**110**	P	**Pn**	**19 07 11.0**	**+1.1**
	comp=Z,99nm,0.8s,comp=Z,1.9nm						
VTS	**Vitosha**	**8.54**	**351**	*e*Pn	**Pn**	**19 07 10.7**	**+0.4**
VTS	**Vitosha**	**8.54**	**351**	⇓*i* P	**Pn**	**19 07 12.9**	**+2.5**
VTS	**Vitosha**	**8.54**	**351**	⇓P	**Pn**	**19 07 12.9**	**+2.5**
VTS	**Vitosha**	**8.54**	**351**	*e*P	**Pn**	**19 07 12.0**	**+1.6**
SLTI	**Sal'it**	**8.57**	**100**	Pn	**Pn**	**19 07 11.1**	**+0.5**
KARA	**Karaisali**	**8.67**	**66**	*e*P	**Pn**	**19 07 13.3**	**+1.3**
AMAZ	**Amatzia**	**8.69**	**105**	Pn	**Pn**	**19 07 13.4**	**+1.1**
AMAZ				Sn	**Sn**	**19 08 44.9**	**-4.8**
AMAZ	**Amatzia**	**8.69**	**105**	P	**Pn**	**19 07 13.3**	**+1.0**
MMA0B	**Mount Meron ar**	**8.69**	**95**	Pn	**Pn**	**19 07 14.0**	**+1.6**
MMAI	**Mount Meron Ar**	**8.69**	**95**	Pn	**Pn**	**19 07 12.2**	**-0.2**
	comp=Z,8.9nm,0.3s,baz=266,slow=12,SNR=19						
MMAI				Sn	**Sn**	**19 08 49.7**	**-0.2**
	comp=Z,14nm,0.3s,baz=255,slow=15,SNR=7.0						
DQRL	**Deir Qamar**	**8.73**	**90**	*e*P	**Pn**	**19 07 14.8**	**+1.9**
BR101	**Keskin Array S**	**8.80**	**49**	*e*Pn	**Pn**	**19 07 15.2**	**+1.2**
BR131	**Keskin Array S**	**8.80**	**49**	*e*Pn	**Pn**	**19 07 15.8**	**+1.9**
BRTR	**Keskin Array B**	**8.80**	**49**	Pn	**Pn**	**19 07 15.2**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=228,slow=15,SNR=15						
BRTR				LR	LR	19 11 38.9	
	comp=Z,1μm,19.6s,baz=228,slow=45						
WDD	**Wied Dalam**	**8.82**	**284**	*e*Pn	**Pn**	**19 07 13.6**	**-0.4**
MMLI	**Mount Malkishu**	**8.83**	**99**	*e*P	**Pn**	**19 07 14.2**	**0.0**
MMLI	**Mount Malkishu**	**8.83**	**99**	Pn	**Pn**	**19 07 15.3**	**+1.1**
MMLI	**Mount Malkishu**	**8.83**	**99**	P	**Pn**	**19 07 12.0**	**-2.2**
MMLI	**Mount Malkishu**	**8.83**	**99**	P	**Pn**	**19 07 14.6**	**+0.4**
GEM	**Giv'at Ha'Em**	**8.87**	**93**	Pn	**Pn**	**19 07 16.1**	**+1.3**
GEM				Sn	**Sn**	**19 08 51.2**	**-3.0**
KSDI	**Kefar Szold**	**8.87**	**93**	Pn	**Pn**	**19 07 15.9**	**+1.1**
YTIR	**Yattir**	**8.91**	**106**	Pn	**Pn**	**19 07 16.1**	**+0.7**
YTIR				Sn	**Sn**	**19 08 50.0**	**-5.2**
SHBL	**Chebaa**	**8.92**	**92**	*e*P	**Pn**	**19 07 16.4**	**+0.9**
NATI	**Neve Ativ**	**8.92**	**93**	Pn	**Pn**	**19 07 17.1**	**+1.6**
NATI				Sn	**Sn**	**19 08 52.7**	**-2.7**
HMDT	**Nahal Hemdat**	**8.96**	**100**	Pn	**Pn**	**19 07 17.3**	**+1.3**
HMDT				Sn	**Sn**	**19 08 51.2**	**-5.2**
HWQ	**Hawqa**	**9.00**	**86**	*e*P	**Pn**	**19 07 16.8**	**+0.2**
ULC	**Ulcinj**	**9.02**	**331**	⇑*i*Pn	**Pn**	**19 07 15.4**	**-1.4**
ULC				*e*Sn	Sn	19 08 48.4	-9.5
SHMJ	**Saham**	**9.04**	**96**	P	**Pn**	**19 07 17.4**	**+0.2**
	comp=Z,53nm,0.8s,comp=Z,0.6nm						
SHMJ	**Saham**	**9.04**	**96**	P	**Pn**	**19 07 17.2**	**0.0**
	comp=Z,53nm,0.8s,comp=Z,1μm						
DSI	**Dead Sea**	**9.05**	**104**	Pn	**Pn**	**19 07 18.2**	**+1.0**
BRBR	**Barbar**	**9.08**	**92**	*e*P	**Pn**	**19 07 17.7**	**-0.2**
BRBR				*e*S	Sn	19 08 40.4	-19
BRBR				AML	AML	19 09 01.1	
	comp=E,82nm,0.8s						
BRBR				AML	AML	19 09 01.6	
	comp=N,117nm,0.9s						
BRBR				AML	AML	19 09 03.1	
	comp=Z,52nm,0.7s						
MZDA	**Masada**	**9.12**	**106**	Pn	**Pn**	**19 07 18.8**	**+0.6**
MZDA				Sn	**Sn**	**19 08 55.4**	**-4.9**
MPEP	**Malo Peshtene**	**9.21**	**354**	P	**Pn**	**19 07 22.1**	**+2.6**
PRNI	**Paran**	**9.23**	**112**	Pn	**Pn**	**19 07 19.9**	**+0.2**
PRNI				Sn	**Sn**	**19 08 57.6**	**-5.5**
DRME	**Dracevica, Mon**	**9.23**	**332**	⇓*i*Pn	**Pn**	**19 07 18.4**	**-1.3**
DRME				*e*Sn	Sn	19 08 53.7	-9.3
DRME	**Dracevica, Mon**	**9.23**	**332**	*e*Pn	**Pn**	**19 07 16.4**	**-3.3**
LISJ	**El Lisan**	**9.24**	**106**	P	**Pn**	**19 07 21.3**	**+1.5**
	comp=Z,34nm,0.5s						
LISJ	**El Lisan**	**9.24**	**106**	P	**Pn**	**19 07 19.4**	**-0.4**
	comp=Z,34nm,0.5s,comp=Z,917nm						
VAE	**Valguarnera**	**9.26**	**294**

BZS Buzias 11.72 348 ⇓iP Pn 19 07 53.4 -0.3
BZS Buzias 11.72 348 ⇓P Pn 19 07 53.4 -0.3
VRI Vrincioaia 11.73 6 ⇓iP Pn 19 08 04.1 +10
VRI Vrincioaia 11.73 6 ⇓P Pn 19 08 04.1 +10
DOPR Dopca 11.77 1 ⇓iP Pn 19 08 01.2 +6.8
OZUR 11.91 2 ⇓iP Pn 19 08 15.2 +19
BLY Banja Luka 12.18 332 *e*Pn **Pn 19 08 01.3 +1.3**
BLY Banja Luka 12.18 332 ⇑iP Pn 19 07 57.7 -2.3
BLY Banja Luka 12.18 332 *e*Pn Pn 19 07 53.6 -6.4
TESR Tescani 12.37 5 ⇓iP P 19 08 10.6 -4.0
UDBI Udbina 12.58 328 *i* Pn **Pn 19 08 03.2 -2.5**
BIZ Bicaz 12.76 3 ⇑iP P 19 08 14.8 -4.2
ARCR ARCALIA 12.90 358 ⇓iP P 19 08 16.3 -4.2
MORH Mrgy, Hungar 12.97 340 EPn **P 19 08 20.1 -1.2**
KEST Kesra 13.00 281 LR LR 19 14 15.4
comp=Z,200nm,20.9s,baz=5.5,slow=42
NVLJ Novalja 13.02 326 *e*Pn **Pn 19 08 09.8 -1.7**
KIS Kishinev 13.11 11 *e*PP **P 19 08 20.0 -2.7**
KIS LRM MLR 19 13 50.0
comp=Z,2µm,12.0s
BURAR Bucovina Array 13.41 0 ⇑iP P 19 08 24.8 -1.5
BURAR Bucovina Array 13.41 0 ⇑P P 19 08 24.8 -1.5
BUR08 Bucovina Ar. S 13.44 0 *e*Pn **Pn 19 08 18.7 +1.3**
BOJS Bojanci 13.58 329 *i* Pn **Pn 19 08 17.0 -2.1**
BOJS *i* Sn Sn 19 10 37.1 -12
CRES Cresnjev 13.75 331 *e*Pn **Pn 19 08 17.8 -3.7**
RIY Rijeka 13.78 327 *e*Pn **Pn 19 08 19.3 -2.5**
TRPA Tarpa 14.06 353 EPn **Pn 19 08 27.1 +1.4**
CEY Cerknica 14.12 328 *e*Pn **Pn 19 08 25.2 -1.4**
CSKK Cskako 14.13 341 EPn **Pn 19 08 26.1 -0.6**
ANN Anapa 14.24 38 *e*P **Pn 19 08 27.5 -0.6**
ANN *e*S **Sn 19 11 06.4 +1.0**
ANN pmax pmax
comp=Z,54nm,1.7s
PSZ Piszkesteto 14.26 346 *e*Pn **Pn 19 08 30.7 +2.2**
PSZ Piszkesteto 14.26 346 ⇑iP Pn 19 08 30.0 +1.5
PSZ Piszkesteto 14.26 346 ⇑P Pn 19 08 30.0 +1.5
PSZ Piszkesteto 14.26 346 EPn **P 19 08 34.0 -1.7**
JAVS Javornik 14.40 328 *i* Pn **Pn 19 08 27.4 -3.1**
JAVS *i* Sn Sn 19 10 58.4 -11
PERS Pernice 14.55 332 *i* Pn **Pn 19 08 29.3 -3.2**
PERS *i* Sn Sn 19 11 03.2 -10
SOKA Soboth 14.62 332 Pn **Pn 19 08 30.9 -2.5**
comp=Z,0.9nm,0.7s,SNR=7.3
OBKA Obir 14.68 330 *e*P **P 19 08 40.5 +0.2**
comp=Z,2.9nm,0.6s
SOC Sochi 14.74 46 *e*P **Pn 19 08 35.3 +0.3**
SOC *e* 19 11 21.4
SOC MLR MLR
comp=Z,488nm,14.0s
KOLS Kolonicke sedl 14.88 353 *e*P **Pn 19 08 36.1 -0.8**
KOLS Kolonicke sedl 14.88 353 *e*PN **Pn 19 08 36.1 -0.8**
KOLS Kolonicke sedl 14.88 353 *e*P **P 19 08 43.8 +1.3**
ARSA Arzberg 14.91 334 *e*P **P 19 08 44.0 +1.1**
comp=Z,4.4nm,0.5s
SOP Sopron 14.93 337 P **P 19 08 45.1 +2.1**
SOP Sopron 14.93 337 EPn **Pn 19 08 37.1 -0.4**
VYHS Vyhne 15.03 344 *e*P **Pn 19 08 34.5 -4.5**
VYHS Vyhne 15.03 344 *e*PN **Pn 19 08 34.5 -4.5**
VYHS Vyhne 15.03 344 *e*P **P 19 08 45.4 +1.2**
MYKA Terra Mystica 15.16 328 *e*Pn **Pn 19 08 41.5 +0.9**
comp=Z,3.2nm,0.5s
MODS Modra-Piesok 15.32 340 *e*P **P 19 08 46.6 -0.8**
MODS Modra-Piesok 15.32 340 *e*P **P 19 08 46.6 -0.8**
CONA Conrad Observa 15.37 336 *e*P **P 19 08 46.7 -1.3**
comp=Z,3.2nm,1.3s
KWP Kalwaria Pacla 15.53 354 *e*Pn **Pn 19 08 40.9 -4.6**
KWP Kalwaria Pacla 15.53 354 *e*Pn **Pn 19 08 41.7 -3.8**
comp=Z,228nm,0.8s
KWP Kalwaria Pacla 15.53 354 *e*P **Pn 19 08 41.7 -3.8**
KWP pmax pmax
comp=Z,228nm,0.8s
NIE Niedzica 15.62 348 *e*P **P 19 08 51.6 +0.9**
NIE Niedzica 15.62 348 *e*P **P 19 08 51.7 +0.9**
KBA Koelnbreinsper 15.63 329 *e*P **P 19 08 51.2 +0.2**
comp=Z,8.9nm,0.6s,SNR=8.0
KBA Koelnbreinsper 15.63 329 P **P 19 08 53.1 +2.1**
LVV L'vov 15.64 357 *e*P **Pn 19 08 47.7 +0.8**
LVV *e*S **Sn 19 11 38.7 -0.8**
LVV MLR MLR
comp=E,200nm,12.0s
LVV MLR MLR
comp=N,1µm,13.0s
LVV MLR MLR
comp=Z,1µm,13.0s
JAVC Velka Javorina 15.66 342 *e*PN **P 19 08 51.8 +0.6**
ABTA Abfaltersbach 15.75 327 *e*P **P 19 08 51.7 -0.5**
comp=Z,10nm,0.6s,SNR=16
MOA Molln 15.88 332 *e*Pn **Pn 19 08 50.7 +0.7**
comp=Z,7.9nm,0.7s,SNR=11
KRUC Moravsky 16.20 339 *e*PN **P 19 08 55.7 -1.4**
AKH Akhalkalaki 16.22 58 *e*Pn **Pn 19 08 55.6 +1.0**
comp=Z,41nm,1.3s
AKH Akhalkalaki 16.22 58 ⇓iP Pn 19 08 56.2 +1.6
VRAC Vranov 16.36 340 Pn **Pn 19 08 55.6 -0.5**
comp=Z,1.2nm,0.3s,baz=149,slow=11,SNR=17
VRAC LR LR 19 16 52.1
comp=Z,558nm,19.1s,baz=168,slow=44
VRAC Vranov 16.36 340 ⇓iP P 19 08 58.4 -0.6
VRAC Vranov 16.36 340 ⇓P P 19 08 58.4 -0.6
VRAC Vranov 16.36 340 *e*PN **P 19 08 58.2 -0.8**
NEY Neytrino 16.45 51 ⇑ *e*P **P 19 08 59.5 -0.6**
OKC Ostrava-Krasne 16.45 344 *e*P **P 19 09 02.9 +3.0**
OKC Ostrava-Krasne 16.45 344 *e*P **P 19 09 02.9 +3.0**
OJC Ojcow 16.48 348 *e*P **Pn 19 08 54.5 -3.2**
OJC Ojcow 16.48 348 *e*Pn **Pn 19 08 53.6 -4.1**
comp=Z,16nm,1.2s
OJC Ojcow 16.48 348 *e*P **Pn 19 08 54.5 -3.2**
WTTA Wattenberg 16.53 326 *e*P **P 19 09 03.1 +2.1**
comp=Z,15nm,0.7s,SNR=10
MORC Moravsky Berou 16.54 343 *e*Pn **Pn 19 08 57.0 -1.5**
comp=Z,20nm,1.1s
MORC Moravsky Berou 16.54 343 ⇓iP P 19 09 00.2 -0.7
MORC Moravsky Berou 16.54 343 ⇓P P 19 09 00.2 -0.7
MORC Moravsky Berou 16.54 343 *e*PN **Pn 19 08 57.2 -1.3**
WATA Walderalm 16.61 326 Pn **Pn 19 08 59.5 0.0**
comp=Z,9.0nm,0.6s
SHA1 Shidzhatmaz 16.64 50 P **P 19 09 04.2 +1.9**
SQTA Sankt Quirin 16.70 325 *e*P **P 19 09 04.7 +1.9**
comp=Z,13nm,0.9s
FUORN Ofenpass-Fuorn 16.74 322 *e*Pn **P 19 09 02.4 -1.1**
comp=Z,54nm,1.0s
GNI Garni 16.75 63 Pn **P 19 09 02.7 -0.8**
comp=Z,1.0nm,0.3s,baz=239,slow=4.2,SNR=4.6
GNI LR LR 19 17 02.8
comp=Z,1µm,19.7s,baz=270,slow=43
GNI Garni 16.75 63 *e*Pn **Pn 19 09 02.4 +1.1**
comp=Z,28nm,0.9s
GNI Garni 16.75 63 ⇑ *e*P **P 19 09 04.5 +1.0**
GNI pmax pmax
comp=Z,145nm,1.7s
KIV Kislovodsk 16.76 49 *e*Pn **P 19 09 04.7 +1.2**
comp=Z,86nm,1.6s
KIV Kislovodsk 16.76 49 ⇑iP P 19 09 05.7 +2.2
KIV Kislovodsk 16.76 49 *i* P **P 19 09 05.1 +1.6**
SNR=10.0
KIV Kislovodsk 16.76 49 *e*P **P 19 09 04.5 +1.0**
KIV *e*S **Sn 19 12 12.8 +5.8**
KIV pmax pmax
comp=Z,96nm,1.1s
KIV MLR MLR
comp=Z,759nm,14.0s
KVAR Kislovodsk Arr 16.77 49 LR LR 19 16 57.9
comp=Z,245nm,20.4s,baz=174,slow=43
AKASG Malin Array Be 16.78 9 Pn **Pn 19 08 59.6 -1.8**
comp=Z,6.2nm,0.3s,baz=201,slow=10,SNR=26
AKASG Sn **Sn 19 12 10.4 +3.2**
baz=194,slow=22,SNR=4.9
AKBB Malin Array Si 16.78 9 *e*Pn **Pn 19 09 01.8 +0.4**
comp=Z,55nm,0.8s
AKBB Malin Array Si 16.78 9 *e*P **Pn 19 09 01.8 +0.4**
AKBB pmax pmax
comp=Z,55nm,0.8s
KBZ Khabaz 16.79 50 Pn **P 19 09 03.2 -0.4**
comp=Z,1.4nm,0.3s,baz=248,slow=7.2,SNR=28
KBZ LR LR 19 17 25.6
comp=Z,448nm,18.1s,baz=254,slow=44
FETA Feichten 16.79 324 *e*P **P 19 09 06.2 +2.4**
comp=Z,17nm,1.0s,SNR=8.8
GEC2 GERESS Array S 16.91 333 *e*Pn **P 19 09 04.6 -0.5**
comp=Z,53nm,1.1s
GEC2 GERESS Array S 16.91 333 *e*P **P 19 09 04.6 -0.5**
GEC2 pmax pmax
comp=Z,53nm,1.1s
GERES GERESS Array B 16.91 333 Pn **Pn 19 09 03.3 +0.1**
comp=Z,2.2nm,0.3s,baz=145,slow=11,SNR=88
GERES LR LR 19 16 18.6
comp=Z,243nm,21.4s,baz=145,slow=40
ZEI Tsey 17.03 54 *e*P **P 19 09 06.0 -0.6**
ZEI pmax pmax
comp=Z,16nm,0.6s
DAVOX Davos/Dischmat 17.05 322 Pn **Pn 19 09 05.8 +0.7**
comp=Z,0.4nm,0.3s,baz=142,slow=12,SNR=5.3
DAVOX LR LR 19 17 42.8
comp=Z,295nm,19.4s,baz=98,slow=45
NCK Nalchik 17.13 52 ⇑ *e*P **P 19 09 08.1 +0.6**
KHC Kasperske Hory 17.20 334 *e*Pn **Pn 19 09 06.8 +0.1**
comp=Z,14nm,1.1s
KHC Kasperske Hory 17.20 334 *e*P **P 19 09 07.6 -0.6**
KHC MLR MLR
comp=Z,1µm,13.8s
KHC Kasperske Hory 17.20 334 *e*P **P 19 09 07.6 -0.6**
KHC *e*pP **pwP 19 09 14.9 -1.5**
KHC AMS AMS 19 16 40.0
comp=Z,1µm,13.8s
TBLG Delisi 17.21 58 *e*Pn **P 19 09 08.6 +0.2**
comp=Z,18nm,1.0s
TBLG Delisi 17.21 58 *e*P **P 19 09 08.6 +0.2**
TBLG pmax pmax
comp=Z,18nm,1.0s
DPC Dobruska-Polom 17.38 341 *e*P **Pn 19 09 09.1 +0.1**
DPC MLR MLR
comp=Z,600nm,12.2s
DPC Dobruska-Polom 17.38 341 *e*P **Pn 19 09 09.1 +0.1**
DPC AMS AMS 19 17 00.0
comp=Z,600nm,12.2s
DAVA Damuels 17.39 323 Pn **P 19 09 11.3 +0.8**
comp=Z,13nm,0.8s,SNR=8.0
GOPC GO Pecny, Ondr 17.45 337 *e*P **P 19 09 11.0 +0.1**
GOPC MLR MLR
comp=Z,500nm,10.4s
GOPC GO Pecny, Ondr 17.45 337 *e*P **P 19 09 11.0 +0.1**
GOPC *e*pP **sP 19 09 16.3 -1.6**
GOPC AMS AMS 19 16 50.0
comp=Z,500nm,10.4s
GOF Gofitskoye 17.55 46 ⇑ *e*P **Pn 19 09 08.0 -3.1**
GOF pmax pmax
comp=Z,23nm,0.6s
PRU Pruhonice 17.59 337 *e*P **Pn 19 09 11.3 -0.3**
PRU MLR MLR
comp=Z,500nm,10.8s
PRU Pruhonice 17.59 337 *e*P **Pn 19 09 11.3 -0.3**
PRU *e*pP **pwP 19 09 18.7 -2.1**
PRU AMS AMS 19 16 50.0
comp=Z,500nm,10.8s
OSTC Ostas 17.60 341 *e*P **P 19 09 13.2 +0.6**
UPC Upice 17.61 341 *e*P **P 19 09 12.9 +0.2**
UPC MLR MLR
comp=Z,800nm,12.2s
UPC Upice 17.61 341 *e*P **P 19 09 12.9 +0.2**
UPC AMS AMS 19 17 00.0
comp=Z,800nm,12.2s
CHVC Chvalec 17.67 341 *e*P **P 19 09 14.4 +1.0**
CHVC AMS AMS 19 17 00.0
comp=Z,700nm,13.4s
LPL La Plagne 18.02 314 P **P 19 09 22.7 +5.1**
LPL pmax pmax
comp=Z,3.0nm,0.4s
PVCC Panska Ves 18.05 338 AMS AMS 19 17 20.0
comp=Z,400nm,10.4s
SENIN Lac Senin/Sane 18.17 317 *e*Pn **Pn 19 09 17.0 -1.9**
comp=Z,21nm,1.1s
GROC Groznyy 18.47 55 *e*P **P 19 09 21.4 -0.8**
GROC *e*S **Sn 19 12 49.9 +1.7**
GROC pmax pmax
comp=Z,27nm,1.2s
NKC Novy Kostel 18.52 334 AMS AMS 19 17 30.0
comp=Z,600nm,13.4s
BRG Berggiesshubel 18.55 337 *e*P **P 19 09 21.4 -1.6**
comp=Z,6.3nm,0.8s
BRG *i* 19 09 30.3
comp=Z,20nm,1.0s
BRG *i* PP **PnPn 19 09 33.8 -1.4**
comp=Z,25nm,1.3s
BRG S **Sn 19 12 46.0 -4.0**
BRG *i* 19 17 21.5
comp=Z,2.3nm,0.7s
comp=N,338nm,11.1s
comp=E,234nm,20.9s
comp=Z,483nm,12.0s
BRG Berggiesshubel 18.55 337 *e*P **P 19 09 21.4 -1.6**
BRG S **Sn 19 12 46.0 -4.0**
BRG pmax pmax
comp=Z,6.0nm,0.8s
BRG pmax pmax
comp=Z,20nm,1.0s
BRG pmax pmax
comp=Z,25nm,1.3s
BRG pmax pmax
comp=Z,2.0nm,0.7s
BRG MLR MLR
comp=N,338nm,11.1s
BRG MLR MLR
comp=E,234nm,20.9s
BRG MLR MLR
comp=Z,483nm,12.0s
GRA1 Grafenberg Arr 18.56 331 *e*P **P 19 09 22.7 -0.5**
comp=Z,208nm,1.7s
GRF Grafenberg Arr 18.56 331 *e*P **P 19 09 22.7 -0.5**
GRF pmax pmax
comp=Z,208nm,1.7s
GRFO Grafenberg 18.56 331 *e*P **P 19 09 20.8 -2.4**
comp=Z,70nm,1.1s
GRFO Grafenberg 18.56 331 *e*P **P 19 09 20.8 -2.4**
GRFO pmax pmax
comp=Z,71nm,1.1s
BFO Black Forest 18.87 324 *e*P **P 19 09 25.4 -1.1**
comp=Z,11nm,0.9s
BFO Black Forest 18.87 324 *e*P **P 19 09 25.5 -1.1**
BFO pmax pmax
comp=Z,11nm,0.9s
MOX Moxa 19.16 333 P **Pn 19 09 30.9 +0.1**
CLL Collm 19.23 336 *e*P **P 19 09 27.7 -2.8**
comp=Z,48nm,1.3s
CLL Collm 19.23 336 *i* P **P 19 09 30.1 -0.4**
CLL *i* sP **pwP 19 09 38.7 -0.1**
comp=Z,46nm,1.3s
CLL *i* pPP 19 09 47.0
CLL *e*PPP PPP 19 09 51.0
CLL *e* 19 11 02.0
CLL *e*S **Sn 19 13 05.0 -1.4**
CLL *e*SS **SnSn 19 13 24.0 +3.5**
CLL Lmax 19 17 00.0
CLL Collm 19.23 336 *i* P **P 19 09 30.1 -0.4**
CLL *e*S **Sn 19 13 05.0 -1.4**
SSB Saint Sauveur 19.24 311 *e*P **P 19 09 26.9 -3.8**
comp=Z,8.7nm,0.9s
SSB Saint Sauveur 19.24 311 *e*P **P 19 09 26.9 -3.8**
SSB pmax pmax
comp=Z,9.0nm,0.9s
ECH Echery 19.38 322 *e*P **P 19 09 29.9 -2.4**
comp=Z,62nm,1.7s
ECH Echery 19.38 322 *e*P **P 19 09 29.9 -2.4**
ECH pmax pmax
comp=Z,62nm,1.7s
MAK Makhachkala 19.55 57 *e*P **Pn 19 09 35.1 -0.4**
MAK *e*S **Sn 19 13 17.3 +2.9**
MAK pmax pmax
comp=Z,96nm,0.7s
MAK MLR MLR
comp=Z,196nm,15.0s
VORD Divnogorie 19.71 27 *e*P **P 19 09 34.6 -1.1**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 19.86 27 *e*P **P 19 09 36.9 -0.5**
VSR pmax pmax
comp=Z,20nm,1.7s
SUW Suwalki 19.87 357 *e*P **P 19 09 37.2 -0.1**
SUW Suwalki 19.87 357 *e*P **P 19 09 34.0 -3.4**
comp=Z,187nm,0.8s
SUW Suwalki 19.87 357 *e*P **P 19 09 37.3 -0.1**
MICGM Minsk 20.41 5 *e*P **P 19 09 41.0 -2.3**
MICGM *e*PP PnPn 19 10 15.0 +14
MICGM *e*S **S 19 13 24.0 -6.9**
MICGM *e*SS **SnSn 19 13 58.0 +8.6**
MICGM *e*LR LR 19 17 16.0
MNK Minsk 20.41 5 *e*P **P 19 09 41.0 -2.3**
MNK *e* 19 10 15.0
MNK *e*S **S 19 13 24.0 -6.9**
MNK *e* 19 13 58.0
TAM Tamanrasset 20.56 242 *e*P **P 19 09 45.8 +0.4**
comp=Z,12nm,1.0s
TAM Tamanrasset 20.56 242 *e*P **P 19 09 45.8 +0.4**
TAM pmax pmax
comp=Z,12nm,1.0s
KLNR Kaliningrad 20.70 352 *c*e**P P 19 09 45.4 -1.0**
KLNR pmax pmax
comp=Z,22nm,0.6s
SSF Saint Saulge 20.74 315 P **P 19 09 47.1 +0.1**
RAYN Ar Rayn 20.77 115 *e*P Pn 19 09 49.5 -0.5
comp=Z,16nm,1.0s
RAYN Ar Rayn 20.77 115 *i* P Pn 19 09 51.1 +1.1
SNR=16
RAYN Ar Rayn 20.77 115 *e*P Pn 19 09 49.5 -0.5
RAYN pmax pmax
comp=Z,16nm,1.0s
WLF Walferdange 20.83 324 *e*P **P 19 09 48.8 +0.9**
comp=Z,188nm,1.1s
WLF Walferdange 20.83 324 *e*P **P 19 09 48.8 +0.9**
WLF pmax pmax
comp=Z,188nm,1.1s
LPSR Galich'ya Gora 20.91 24 *e*P **P 19 09 46.3 -2.4**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
IIGN Ignalina 21.18 2 *e*P **P 19 09 51.9 +0.3**
IIGN IAmb IAmb 19 10 04.2
comp=Z,23nm,0.9s
PABE Paberze 21.33 358 IAmb IAmb 19 09 59.9
comp=Z,63nm,1.0s
ISAL Salakas 21.39 2 *e*P **P 19 09 54.0 +0.1**
ISAL IAmb IAmb 19 10 04.5
comp=Z,12nm,1.0s
IZAR Zarasai 21.58 2 *e*P **P 19 09 56.5 +0.6**
IZAR IAmb IAmb 19 10 05.3
comp=Z,8.7nm,0.7s
PBUR Paburg 21.94 355 *e*P **P 19 09 58.5 -1.3**
PBUR IAmb IAmb 19 10 05.2
comp=Z,105nm,1.1s
CLF Chambon-Foret 21.96 316 *e*P **P 19 10 01.1 +1.0**
comp=Z,24nm,1.0s
BSD Bornholm Skovb 22.09 344 *e*P **P 19 09 58.2 -3.2**
BSD Bornholm Skovb 22.09 344 *i* P **P 19 09 58.2 -3.2**
OBN Obninsk 22.41 17 P **P 19 10 05.6 +0.8**
comp=Z,9.5nm,0.4s,baz=153,slow=4.2,SNR=5.7
OBN LR LR 19 19 26.3
comp=Z,120nm,21.5s,baz=191,slow=39
OBN Obninsk 22.41 17 *e*P **P 19 10 05.1 +0.3**
comp=Z,38nm,0.5s
OBN Obninsk 22.41 17 *c*e**P P 19 10 06.3 +1.5**
OBN *i* 19 10 18.4
OBN *e*PPP PPP 19 10 36.3
OBN pmax pmax
comp=Z,22nm,0.5s
OBN MLR MLR
comp=Z,399nm,15.0s
UCC Uccle 22.44 324 *e*P **P 19 10 05.8 +0.6**
comp=Z,39nm,1.3s
UCC Uccle 22.44 324 *e*P **P 19 10 05.8 +0.6**
UCC pmax pmax
comp=Z,39nm,1.3s
MOS Moscow 23.23 18 *e*P **P 19 10 09.5 -3.9**
MOS *e* 19 10 27.1
MOS *e*S **S 19 14 17.9 -6.4**
MOS *e* 19 14 35.0
MOS pmax pmax
comp=Z,71nm,1.2s
MOS pmax pmax
comp=Z,200nm,1.7s
ESDC Sonseca Array 23.80 292 P **P 19 10 20.1 +0.9**
comp=Z,5.4nm,0.8s,baz=83,slow=9.2,SNR=22
ESLA Sonseca Array 23.80 292 *e*P **P 19 10 20.9 +1.7**
comp=Z,15nm,0.9s
VSU Vasula 24.31 2 ⇓ *e*P **P 19 10 23.7 +0.1**
VSU pmax pmax
comp=Z,24nm,0.8s
VSU Vasula 24.31 2 *e*P **P 19 10 23.2 -0.5**
VSU IAmb IAmb 19 10 30.4
comp=Z,49nm,1.1s
MDT Midelt 24.76 275 P **P 19 10 29.1 +0.9**
comp=Z,7.0nm,0.9s,baz=90,slow=13,SNR=8.2
MDT LR LR 19 22 44.8
comp=Z,120nm,19.0s,baz=98,slow=43
MUD Monsted U'grnd 24.80 339 *e*P **P 19 10 28.8 +0.7**
MUD pmax pmax
comp=Z,37nm,0.9s
MUD Monsted U'grnd 24.80 339 *i* P **P 19 10 28.8 +0.7**
comp=Z,37nm,0.9s
PBRG Braganca 26.10 296 *e*P **P 19 10 42.9 +2.7**
MVO Moncorvo 26.25 295 *e*P **P 19 10 44.9 +3.3**
comp=Z,35nm,1.5s
PMRV Marv??o 26.43 291 *e*P **P 19 10 45.3 +2.1**
HOMB Homborsund 26.53 340 *e*P **P 19 10 43.5 -0.2**
PVAQ Vaqueiros 26.72 286 *e*P **P 19 10 51.5 +5.7**
comp=Z,49nm,1.5s
GEYT Alibeck 26.89 72 P **P 19 10 48.3 +0.9**
comp=Z,1.3nm,0.3s,baz=275,slow=8.2,SNR=5.9
GYA0B ALIBECK ARRAY 26.89 72 *e*P **P 19 10 49.5 +2.2**
comp=Z,9.4nm,1.0s
PBDV Barranco-do-Ve 26.90 286 *e*P **P 19 10 50.2 +2.7**
comp=Z,60nm,1.9s
PCVE Castro Verde 26.97 287 *e*P **P 19 10 52.8 +4.8**
HFS Hagfors 27.01 347 P **P 19 10 46.9 -1.2**
comp=Z,4.2nm,0.7s,baz=156,slow=11,SNR=25
HFS LR LR 19 24 00.7
comp=Z,308nm,18.0s,baz=155,slow=42
PMTG Montargil 27.08 290 *e*P **P 19 10 52.2 +3.2**
FIA0 FINESS Array S 27.28 1 *e*P **P 19 10 48.4 -2.2**
FIA0 *e*PcP **PcP 19 14 10.4 +0.7**
FIA0 FINESS Array S 27.28 1 *e*P **P 19 10 48.4 -2.2**
FIA0 *e* 19 14 10.4
FINES FINESS Array B 27.28 1 P **P 19 10 48.4 -2.2**
comp=Z,2.4nm,0.5s,baz=160,slow=11,SNR=20
FINES PcP **PcP 19 14 10.4 +0.7**
comp=Z,0.7nm,0.4s,baz=151,slow=4.4,SNR=3.5
FINES LR LR 19 22 23.9
comp=Z,312nm,20.4s,baz=186,slow=38
FIA1 FINESS Array S 27.28 1 *e*P **P 19 10 47.6 -2.9**
comp=Z,21nm,1.2s
PNCL Nicolau / Gran 27.33 288 *e*P **P 19 10 57.5 +6.2**
KONO Kongsberg 27.44 343 *e*P **P 19 10 50.1 -1.8**
comp=Z,28nm,1.1s
KONO Kongsberg 27.44 343 ⇑ *e*P **P 19 10 50.5 -1.5**
KONO pmax pmax
comp=Z,6.0nm,0.9s
KONO Kongsberg 27.44 343 *e*P **P 19 10 49.7 -2.3**
ATD Arta Tunnel 27.78 140 LR LR 19 21 15.9
comp=Z,82nm,19.1s,baz=16,slow=35
NC602 NORSAR Array S 27.98 346 *e*P **P 19 10 55.2 -1.6**
comp=Z,22nm,0.8s
NC602 NORSAR Array S 27.98 346 *e*P **P 19 10 55.6 -1.1**
BLS5 Blasjo 28.08 340 *e*P **P 19 10 59.0 +1.3**
FAQ Al Faqa, Dubai 28.09 101 P **P 19 10 59.4 +1.2**
NAO01 NORSAR Array S 28.21 345 *e*P **P 19 10 57.2 -1.7**
comp=Z,44nm,0.8s
NAO01 NORSAR Array S 28.21 345 *e*P **P 19 10 58.2 -0.7**
KLMR Klimovskoe 28.27 15 *e*P **P 19 10 56.5 -2.9**
KLMR pmax pmax
comp=Z,38nm,1.5s
KLMR Klimovskoe 28.27 15 *e*P **P 19 10 56.5 -2.9**
KLMR AMP 19 11 07.6
comp=Z,38nm,1.6s
NC405 NORSAR Array S 28.29 346 *e*P **P 19 10 58.2 -1.3**
comp=Z,14nm,0.9s
NB201 NORSAR Array S 28.32 346 *e*P **P 19 10 58.3 -1.5**
comp=Z,29nm,1.1s
NB201 NORSAR Array S 28.32 346 *e*P **P 19 10 58.6 -1.2**
NB2 NORSAR Subarra 28.32 346 P **P 19 10 58.5 -1.4**
comp=Z,8.6nm,0.9s,baz=156,slow=9.3
NB2 NORSAR Subarra 28.32 346 P **P 19 10 59.1 -0.8**
NB2 pmax pmax
comp=Z,1.0nm,0.3s
NB2 NORSAR Subarra 28.32 346 P **P 19 10 58.5 -1.4**
baz=156,slow=9.3
NB200 NORSAR Array S 28.32 346 *e*P **P 19 10 58.7 -1.2**
NOA NORSAR Array B 28.32 346 P **P 19 10 58.7 -1.2**
comp=Z,2.9nm,0.8s,baz=158,slow=9.5,SNR=16
NOA LR LR 19 24 16.0
comp=Z,231nm,19.4s,baz=165,slow=41
NBO00 NORSAR Array S 28.40 345 *e*P **P 19 10 59.9 -0.7**
comp=Z,51nm,0.9s
NBO00 NORSAR Array S 28.40 345 *e*P **P 19 10 59.7 -0.9**
NC303 NORSAR Array S 28.46 346 *e*P **P 19 10 59.9 -1.2**
comp=Z,16nm,1.0s
ASHO Ashiyiah 28.50 101 P **P 19 11 03.6 +1.7**
UOSS Minazif 28.50 101 P **P 19 11 03.3 +1.4**

NC204 NORSAR Array S 28.63 346 *eP* **P 19 11 02.9 +0.2**
comp=Z,25nm,1.2s
EKA Eskdalemuir Ar 28.80 326 P **P 19 11 03.5 -0.7**
comp=Z,4.6nm,0.8s,baz=128,slow=9.1,SNR=14
AKTO Aktyubinsk 28.96 46 P **P 19 11 05.8 0.0**
comp=Z,1.8nm,0.5s,baz=252,slow=10,SNR=7.6
AKTO LR LR 19 25 03.1
comp=Z,66nm,19.8s,baz=254,slow=42
KIRV Kirov 29.30 26 P **P 19 11 07.5 -1.0**
comp=Z,6.9nm,0.5s,baz=328,slow=2.7,SNR=3.8
KIRV LR LR 19 23 48.9
comp=Z,112nm,18.4s,baz=43,slow=38
HYA Hoyanger 29.61 341 *eP* **P 19 11 10.8 -0.5**
DOMB Dombas 29.68 345 *eP* **P 19 11 11.9 0.0**
AB31 Akbulak array 29.75 49 P **P 19 11 13.3 +0.6**
AB31 pmax pmax
comp=Z,1.0nm,0.5s
ABKAR Akbulak array 29.75 49 *eP* **P 19 11 12.7 +0.1**
comp=Z,3.3nm,0.8s
TOA1 Torodi Ar. Sit 29.82 231 *eP* **P 19 11 14.9 +1.3**
TOA0 Torodi Ar. Sit 29.82 231 *eP* **P 19 11 14.3 +0.7**
comp=Z,15nm,0.8s
TORD Torodi Ar. Bea 29.82 231 P **P 19 11 14.9 +1.3**
comp=Z,5.8nm,0.6s,baz=48,slow=5.9,SNR=40
TORD LR LR 19 26 21.6
comp=Z,590nm,18.5s,baz=5.0,slow=43
PRGR Permogore 30.45 19 *eP* **P 19 11 17.7 -0.9**
PRGR pmax pmax
comp=Z,15nm,0.6s
ARU Arti 31.88 35 *eP* **P 19 11 30.4 -1.0**
comp=Z,12nm,0.9s
ARU Arti 31.88 35*d iP* **P 19 11 29.2 -2.2**
ARU S **S 19 16 40.4 -0.6**
ARU SS **SnSn 19 18 26.2 -3.2**
ARU pmax pmax
comp=Z,9.0nm,0.8s
ARU MLR MLR
comp=Z,154nm,15.0s
SVE Sverdlovsk 33.07 36↑*eP* **P 19 11 42.1 +0.3**
SVE pmax pmax
comp=Z,23nm,0.6s
STEI Steigen 34.26 353 *eP* **P 19 11 51.0 -1.0**
KTK1 Kautokeino 34.89 359 *eP* **P 19 11 56.1 -1.4**
ARA0 ARCESS Array S 35.40 0 *eP* **P 19 12 00.1 -1.8**
ARCES ARCESS Array B 35.40 0 P **P 19 12 00.1 -1.8**
comp=Z,1.5nm,0.4s,baz=177,slow=9.4,SNR=20
ARCES LR LR 19 27 15.1
comp=Z,332nm,18.5s,baz=186,slow=38
ARE0 ARCESS Array S 35.40 0 *eP* **P 19 12 00.3 -1.5**
KK31 Karatay Array 36.21 62 *eP* **P 19 12 09.9 +0.8**
comp=Z,34nm,1.8s
KK31 Karatay Array 36.21 62 *i P* **P 19 12 10.1 +1.0**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 36.21 62 *eP* **P 19 12 09.7 +0.6**
comp=Z,34nm,1.8s
KKAR Karatay Array 36.21 62 *eP* **P 19 12 09.7 +0.6**
KKAR pmax pmax
comp=Z,34nm,1.8s
GAR Garm 36.35 69 *eP* **P 19 12 12.1 +1.6**
comp=Z,10nm,0.7s
GAR Garm 36.35 69 *eP* **P 19 12 12.1 +1.6**
GAR pmax pmax
comp=Z,11nm,0.7s
BTK Batken 36.62 67 *eP* **P 19 12 13.8 +1.0**
comp=Z,4.6nm,0.9s
BTK Batken 36.62 67 *eP* **P 19 12 13.8 +1.0**
BTK pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 36.94 159 LR LR 19 27 13.0
comp=Z,185nm,20.6s,baz=90,slow=36
BRVK Borovoye 37.01 45 *eP* **P 19 12 16.2 +0.4**
comp=Z,5.4nm,1.0s
BRVK Borovoye 37.01 45*ceP* **P 19 12 16.2 +0.4**
BRVK pmax pmax
comp=Z,4.0nm,0.9s
OTUK Ortayu 37.62 54 P **P 19 12 22.0 +0.9**
OTUK pmax pmax
comp=Z,15nm,1.0s
ARSB Arslanbob 38.14 65 *eP* **P 19 12 27.3 +1.6**
comp=Z,12nm,0.9s
AML Almayashu 38.60 63 P **P 19 12 33.7 +3.8**
SNR=6.0
EKS2 Erkin-Say 38.62 63 P **P 19 12 31.8 +2.1**
SNR=9.0
DBIC Dimbokro 38.91 232 P **P 19 12 33.2 +1.0**
comp=Z,4.8nm,0.7s,baz=33,slow=8.0,SNR=4.3
DBIC LR LR 19 31 48.0
comp=Z,331nm,19.0s,baz=25,slow=41
TIC Toumodi 39.04 232 *e*PKP1 **P 19 12 34.0 +0.6**
KIC Kosan Boka 39.07 232 *e*PKP1 **P 19 12 35.2 +1.6**
comp=Z,94nm,1.4s
AAK Ala-Archa 39.15 63 P **P 19 12 35.0 +0.8**
comp=Z,4.1nm,0.6s,baz=224,slow=7.4,SNR=14
AAK Ala-Archa 39.15 63 P **P 19 12 35.6 +1.4**
SNR=6.1
AAK Ala-Archa 39.15 63 *eP* **P 19 12 35.4 +1.2**
comp=Z,7.8nm,1.0s
AAK Ala-Archa 39.15 63 *i P* **P 19 12 35.7 +1.4**
SNR=7.6
AAK Ala-Archa 39.15 63*d iP* **P 19 12 36.1 +1.9**
AAK pmax pmax
comp=Z,6.0nm,0.8s
UCH Uchtor 39.20 63 P **P 19 12 36.8 +1.8**
SNR=6.4
FRU1 Bishkek 39.24 62 *eP* **P 19 12 36.7 +1.9**
comp=Z,10nm,0.6s
FRU1 Bishkek 39.24 62 *eP* **P 19 12 36.7 +1.9**
FRU1 pmax pmax
comp=Z,10.0nm,0.6s
CHMS Chumysh 39.31 62 P **P 19 12 37.1 +1.7**
SNR=6.6
LIC Lamto 39.36 232 *e*PKP1 **P 19 12 35.0 -1.0**
comp=Z,52nm,0.9s
KBK Karagaybulak 39.49 62 P **P 19 12 39.2 +2.2**
SNR=7.0
NIL Nilore 39.68 77 *eP* **P 19 12 41.1 +2.6**
comp=Z,12nm,0.9s
NIL Nilore 39.68 77 *eP* **P 19 12 41.1 +2.6**
NIL pmax pmax
comp=Z,13nm,0.9s
TKM2 Tokmak 2 39.94 62 P **P 19 12 42.3 +1.4**
SNR=7.3
TKM2 Tokmak 2 39.94 62 P **P 19 12 40.8 0.0**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s
BOOM Boomskoye usch 40.23 63 *eP* **P 19 12 46.3 +3.1**
comp=Z,7.7nm,1.1s
BOOM Boomskoye usch 40.23 63 *eP* **P 19 12 46.3 +3.1**
BOOM pmax pmax
comp=Z,8.0nm,1.1s
ULHL Ulahol 40.48 63 P **P 19 12 47.7 +2.4**
SNR=13
KSH Kashi 40.63 67 *eP* P 19 12 51.3 +4.8
KURBB Kurchatov Arra 41.79 50 P **P 19 12 56.6 +0.9**
comp=Z,5.6nm,0.5s,baz=278,slow=8.7,SNR=70
KURK Kurchatov 41.85 50 *eP* **P 19 12 56.5 +0.3**
comp=Z,7.9nm,0.6s
KURK Kurchatov 41.85 50*c iP* **P 19 12 56.3 +0.1**
KURK pmax pmax
comp=Z,9.0nm,0.8s
PDGK Podgornoye 42.74 61 P **P 19 13 03.7 0.0**
PDGK pmax pmax
comp=Z,7.0nm,0.8s
MAKZ Makanchi 44.15 56 *eP* **P 19 13 16.0 +1.1**
comp=Z,5.8nm,0.8s
MAKZ Makanchi 44.15 56 *eP* **P 19 13 16.0 +1.1**
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
SPA0 Spitsbergen Ar 44.25 357 *eP* **P 19 13 14.8 -0.5**
MK31 Makanchi Array 44.37 56 *eP* **P 19 13 17.4 +0.7**
comp=Z,9.8nm,0.8s
MK31 Makanchi Array 44.37 56 *i P* **P 19 13 17.3 +0.6**
MK31 pmax pmax
comp=Z,5.0nm,0.5s
MK32 Makanchi Array 44.37 56 *eP* **P 19 13 17.5 +0.8**
MKAR Makanchi Array 44.37 56 P **P 19 13 17.5 +0.8**
comp=Z,8.3nm,0.6s,baz=275,slow=5.9,SNR=97
MKAR LR LR 19 35 21.4
comp=Z,69nm,19.5s,baz=266,slow=41
NVS Novosibirsk 44.83 44↑*iP* **P 19 13 21.0 +0.9**
NVS *e* 19 15 12.2
NVS *eS* **S 19 19 54.4 -2.0**
NVS pmax pmax
comp=Z,10.0nm,0.5s
NVS pmax pmax
comp=E,4.0nm,0.6s
NVS pmax pmax
comp=Z,13nm,1.8s
NVS pmax pmax
comp=E,13nm,1.9s
NVS smax smax
comp=N,10.0nm,2.2s
KBS Kingsbay 45.18 356 *eP* **P 19 13 23.4 +0.7**
comp=N,59nm,1.4s
KBS Kingsbay 45.18 356 *eP* **P 19 13 23.4 +0.7**
KBS pmax pmax
comp=Z,59nm,1.4s
ZAA0 Zalesovo Array 45.73 45 *eP* **P 19 13 26.7 -0.6**
comp=Z,12nm,0.5s
ZAA1 Zalesovo Array 45.73 45 *eP* **P 19 13 27.1 -0.2**
ZALV Zalesovo Beam 45.73 45 P **P 19 13 27.1 -0.2**
comp=Z,15nm,0.4s,baz=268,slow=9.0,SNR=43
ZALV LR LR 19 36 56.7
comp=Z,101nm,18.2s,baz=248,slow=42
DAG Danmarks Havn 46.98 347 *i P* **P 19 13 36.5 -0.4**
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 46.98 347 *i P* **P 19 13 36.5 -0.4**
comp=Z,7.3nm,0.9s
DGZ Jazzator, Alta 47.53 51*d iP* **P 19 13 42.9 +1.1**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
NRIK Noril'sk 48.78 25 P **P 19 13 51.7 +0.7**
comp=Z,5.5nm,0.6s,baz=254,slow=7.2,SNR=5.3
NRIK LR LR 19 36 44.9
comp=Z,123nm,19.6s,baz=239,slow=39
PYUN Piuthan 49.37 80 *eP* **P 19 13 57.6 +1.3**
comp=Z,24nm,0.7s
SUMG Summit 49.86 339 *eP* **P 19 14 00.3 +0.7**
comp=Z,20nm,1.3s
SUMG Summit 49.86 339 *eP* **P 19 14 00.4 +0.8**
SUMG pmax pmax
comp=Z,53nm,1.3s
SUMG Summit 49.86 339 *i P* **P 19 14 00.4 +0.8**
comp=Z,53nm,1.3s
DANN Dangsing 49.91 80 *eP* **P 19 14 02.0 +1.5**
comp=Z,35nm,0.6s
KOLN Koldanda 50.00 81 *eP* **P 19 14 02.1 +1.1**
comp=Z,30nm,0.9s
DMN Daman 51.29 80 *eP* **P 19 14 11.8 +0.9**
comp=Z,42nm,0.9s
KKN Kakani 51.36 80 *eP* **P 19 14 12.3 +0.9**
comp=Z,16nm,0.6s
PKIN Phulchoki 51.54 80 *eP* **P 19 14 13.5 +0.7**
comp=Z,21nm,0.9s
PKI Pulchoki 51.55 80 *eP* **P 19 14 13.5 +0.6**
comp=Z,20nm,0.7s
GUN Gumba 51.80 79 *eP* **P 19 14 15.8 +1.0**
comp=Z,24nm,0.6s
JIRN Jiri 52.16 80 *eP* **P 19 14 18.3 +0.8**
comp=Z,29nm,0.7s
MOY Mondy 55.72 47 *eP* **P 19 14 44.6 +1.8**
MOY pmax pmax
comp=Z,14nm,1.7s
TLY Talaya 57.31 46 *eP* P 19 15 00.9 +6.8
TLY pmax pmax
comp=Z,14nm,0.9s
TLY MLR MLR
comp=Z,265nm,21.0s
ZAK Zakamensk 57.44 48 *eP* **P 19 14 56.3 +1.2**
ZAK pmax pmax
comp=Z,7.0nm,1.1s
GTA Gaotai 58.48 61 *eP* **P 19 15 04.3 +1.7**
GTA pP pwP 19 15 09.4 -2.3
GTA sP sP 19 15 12.8 +2.9
GTA pmax pmax
comp=Z,6.0nm,1.0s
SONA0 Songino Array 60.15 50 *eP* **P 19 15 15.0 +1.0**
SONM Songino Array 60.15 50 P **P 19 15 15.0 +1.0**
comp=Z,2.8nm,0.5s,baz=286,slow=8.5,SNR=21
SONM LR LR 19 45 43.8
comp=Z,124nm,19.2s,baz=290,slow=41
ULN Ulaanbaatar 60.56 50 *eP* **P 19 15 17.4 +0.6**
comp=Z,10nm,1.0s
ULN Ulaanbaatar 60.56 50*c iP* **P 19 15 17.7 +0.8**
ULN pmax pmax
comp=Z,7.0nm,1.0s
TIXI Tiksi 62.10 20 *eP* **P 19 15 25.8 -0.8**
comp=Z,6.1nm,1.1s
TIXI Tiksi 62.10 20↓*eP* **P 19 15 26.1 -0.5**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
BOSA Boshof 62.46 180 P **P 19 15 30.9 +1.2**
comp=Z,4.9nm,0.7s,baz=21,slow=3.7,SNR=6.9
BOSA LR LR 19 45 58.5
comp=Z,259nm,18.8s,baz=356,slow=39
SCHQ Schefferville 63.88 320 P **P 19 15 37.7 -1.1**
comp=Z,3.0nm,0.6s,baz=50,slow=6.4,SNR=7.7
SCHQ LR LR 19 44 34.7
comp=Z,38nm,18.0s,baz=331,slow=37
SCHQ Schefferville 63.88 320 *eP* **P 19 15 38.5 -0.3**
comp=Z,11nm,1.0s
CM31 Chiang Mai Arr 66.75 83 *eP* **P 19 15 59.3 +1.3**
comp=Z,19nm,1.6s
CMAR Chiang Mai Arr 66.75 83 P **P 19 15 57.4 -0.6**
comp=Z,0.3nm,0.3s,baz=300,slow=9.0,SNR=4.4
CMAR LR LR 19 50 27.9
comp=Z,164nm,18.1s,baz=125,slow=41
XAN Xi'an 67.33 63 P P 19 16 09.3 +7.8
XAN pP pwP 19 16 14.4 +3.8
XAN pmax pmax
comp=Z,6.0nm,0.7s
D53A Lac Vacive, Po 73.56 316 *eP* **P 19 16 40.7 +1.4**
comp=Z,55nm,2.0s
BILL Bilibino 74.02 14↑*eP* **P 19 16 38.7 -2.9**
BILL pmax pmax
comp=Z,2.0nm,1.1s
SEY Seymchan 74.48 22↑*eP* **P 19 16 44.9 +0.6**
KLR Kul'dur 74.54 41↓*eP* **P 19 16 45.8 +0.8**
KLR pmax pmax
comp=Z,3.0nm,0.9s
MA2 Magadan 76.39 25 *eP* **P 19 16 55.7 +0.4**
comp=Z,15nm,1.0s
MA2 Magadan 76.39 25↓*eP* **P 19 16 56.0 +0.7**
MA2 pmax pmax
comp=Z,6.0nm,1.3s
INK Inuvik 76.57 352 *eP* **P 19 16 57.7 +1.5**
comp=Z,7.0nm,1.2s
INK Inuvik 76.57 352 *eP* **P 19 16 57.7 +1.5**
INK pmax pmax
comp=Z,7.0nm,1.2s
USRK Ussuriysk Ar. 77.57 45 P **P 19 17 02.9 +0.6**
comp=Z,3.4nm,0.5s,baz=306,slow=4.4,SNR=18
USRK LR LR 19 54 38.7
comp=Z,79nm,19.9s,baz=7.4,slow=38
YKA Yellowknife Ar 78.35 342 P **P 19 17 06.4 +0.2**
comp=Z,0.6nm,0.8s,baz=35,slow=5.6,SNR=3.0
YKA LR LR 19 54 22.4
comp=Z,4.8nm,18.0s,baz=27,slow=38
YKB5 Yellowknife Ar 78.35 342 *eP* **P 19 17 06.4 +0.2**
EPYK Eagle Plains 78.79 353 *eP* **P 19 17 10.1 +1.4**
comp=Z,14nm,1.4s
COLD Coldfoot 78.84 358 *eP* **P 19 17 10.2 +1.4**
comp=Z,6.9nm,1.0s
KS15 Wonju Array Si 78.91 52 *eP* **P 19 17 10.3 +0.5**
comp=Z,58nm,1.8s
KSRS Korea Array 78.93 52 P **P 19 17 10.1 +0.2**
comp=Z,2.1nm,0.5s,baz=305,slow=4.4,SNR=13
KSRS LR LR 19 57 13.3
comp=Z,100nm,18.1s,baz=301,slow=40
COWI Conover 80.50 320 *eP* **P 19 17 18.3 0.0**
comp=Z,7.7nm,0.9s
ULM Lac du Bonnet 81.08 326 LR LR 19 53 45.4
comp=Z,97nm,19.8s,baz=12,slow=36
ILAR Eielson Array 81.17 357 P **P 19 17 21.7 +0.2**
comp=Z,0.9nm,0.8s,baz=353,slow=3.0,SNR=7.4
ILAR LR LR 19 53 59.5
comp=Z,40nm,21.8s,baz=356,slow=36
ILB Eielson Array 81.17 357 *eP* **P 19 17 22.3 +0.8**
comp=Z,18nm,2.0s
DAWY Dawson 81.31 353 *eP* **P 19 17 23.2 +0.8**
comp=Z,4.4nm,0.8s
CCB Clear Creek Bu 81.33 357 *eP* **P 19 17 23.9 +1.5**
comp=Z,4.2nm,0.9s
WRH Wood River Hil 81.52 357 *eP* **P 19 17 23.4 0.0**
comp=Z,9.6nm,0.9s
HDA Harding Lake 81.53 357 *eP* **P 19 17 24.6 +1.1**
comp=Z,10nm,1.0s
MCK McKinley 82.30 357 *eP* **P 19 17 28.2 +0.7**
comp=Z,14nm,1.1s
MCK McKinley 82.30 357 *eP* **P 19 17 28.2 +0.7**
MCK pmax pmax
comp=Z,14nm,1.1s
KTH Kantishna Hill 82.54 358 *eP* **P 19 17 30.9 +2.1**
comp=Z,7.8nm,0.4s
PETK Petropavlovsk- 83.81 27 LR LR 19 59 14.0
comp=Z,60nm,19.4s,baz=290,slow=39
SKT Skwentna 84.13 358 *eP* **P 19 17 38.0 +0.9**
comp=Z,6.8nm,0.6s
BDFB Brasília 85.28 248 LR LR 19 56 04.1
comp=Z,156nm,19.9s,baz=86,slow=36
MAJO Matsushiro 86.02 48 *eP* **P 19 17 47.1 +0.2**
MAJO Matsushiro 86.02 48 *eP* **P 19 17 47.2 +0.2**
MJAR Matsushiro Arr 86.02 48 P **P 19 17 47.1 +0.1**
comp=Z,2.0nm,0.8s,baz=293,slow=5.3,SNR=4.9
CCM Cathedral Cave 86.95 315 *eP* **P 19 17 49.8 -1.7**
comp=Z,5.8nm,0.8s
CCM Cathedral Cave 86.95 315 *eP* **P 19 17 49.8 -1.7**
CCM pmax pmax
comp=Z,6.0nm,0.8s
LRAL Lakeview Retre 87.61 309 *eP* **P 19 17 54.6 -0.2**
comp=Z,9.6nm,0.8s
PDAR Pinedale Array 92.89 328 LR LR 20 01 40.7
comp=Z,91nm,21.2s,baz=54,slow=37
ROSC El Rosal 95.05 279 LR LR 19 58 43.2
comp=Z,22nm,19.9s,baz=117,slow=34
CPUP Villa Florida 98.54 244 LR LR 20 05 49.3
comp=Z,78nm,18.4s,baz=46,slow=37
NVAR Mina Array Bea 100.16 332 LR LR 20 08 29.1
comp=Z,114nm,18.5s,baz=74,slow=38
WR1 Warramunga Arr 116.54 97 *e*PKPdf **PKPdf 19 23 50.1 -0.6**
WRA Warramunga Arr 116.54 97 PKP **PKPdf 19 23 50.1 -0.6**
comp=Z,1.3nm,0.9s,baz=305,slow=2.5,SNR=3.2
ASAR Alice Springs 117.94 101 PKP **PKPdf 19 23 53.2 -0.1**
comp=Z,0.3nm,0.7s,baz=347,slow=1.3,SNR=4.6

ISK ***19*** *19:27:05.1,38°.85N×27°.73E, h10km±1km, ML1.8/4*
DDA ***19*** *19:27:05.9,38°.84N×27°.75E, h8km±1km, ML2.6*
ISCJB ***19*** *19:27:06.1±0.5,38°.82N±0°.03×27°.73E±0°.03, h7km±4km, Error ellipse: s-maj=4.7km s-min=4.6km az=178.2*
ISC 19 19:27:05.6±0.9,**38°.83N**±0°.03×**27°.73E**±0°.04,**h12**km±6km, **n11**,σ0°**48**/20,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.08**	**52**	PG	**Pg**	**19 27 07.7**	**-0.5**
AKS				SG	**Sg**	**19 27 09.4**	**-0.7**
AKHS	**Akhisar**	**0.08**	**53**	*i* P	**Pg**	**19 27 08.8**	**+0.6**
AKHS				*i* S	**Sg**	**19 27 10.2**	**+0.1**
AKHS				IAML_P			
comp=Z,86μm,0.1s							
ZEDA	**zmir-Bergama**	**0.53**	**285**	*i* P	**Pb**	**19 27 17.1**	**+0.3**
ZEDA				*i* S	**Sb**	**19 27 24.8**	**+0.3**
STEP	**BALIKESIR_Sava**	**0.55**	**359**	*i* P	**Pb**	**19 27 17.2**	**+0.1**
STEP				*i* S	**Sb**	**19 27 25.6**	**+0.7**
STEP				IAML_P			
comp=Z,629nm,0.1s							
BLCB	**Balcova**	**0.70**	**231**	PG	**Pg**	**19 27 18.8**	**-0.4**
BLCB				SG	**Sb**	**19 27 29.9**	**+0.5**
MANT	**Manisa**	**0.73**	**118**	*i* P	**Pn**	**19 27 21.4**	**-0.5**
MANT				*i* S	**Sb**	**19 27 30.6**	**+0.2**
MANT				IAML_P			
comp=Z,616nm,0.1s							
KULA	**Kula-Manisa**	**0.79**	**113**	PG	**Pb**	**19 27 21.6**	**+0.3**
KULA				SG	**Sb**	**19 27 32.6**	**+0.6**
BALB	**Balikesir**	**0.81**	**8**	PG	**Pg**	**19 27 21.0**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**0.89**	**172**	PG	**Pg**	**19 27 22.8**	**0.0**
BALY	**Balya**	**0.91**	**354**	*i* P	**Pb**	**19 27 23.8**	**+0.4**
BALY				*i* S	**Sb**	**19 27 35.4**	**-0.1**
BALY				IAML_P			
comp=Z,354nm,0.1s							
DURS	**Dursunbey**	**0.96**	**37**	*i* P	**Pn**	**19 27 25.3**	**+0.3**
DURS				*i* S	**Sn**	**19 27 38.0**	**-0.7**
DURS				IAML_P			
comp=Z,636nm,0.2s							

KLM ***19*** *19:33:01.0,2°.85N×128°.94E, h194km, mb5.2*
BJI ***19*** *19:33:02.9±0.0,2°.98N×128°.59E, h200km, mb5.0/50, mB4.7/26*
ISCJB ***19*** *19:33:03.7±0.3,2°.82N±0°.02×128°.59E±0°.02, h229km±2km, mb5.1/200, Error ellipse: s-maj=3.9km s-min=2.8km az=154.8*
MOS ***19*** *19:33:03.2±0.9,2°.79N×128°.54E, h226km, mb5.1/47, Error ellipse: s-maj=9.7km s-min=4.7km az=117.1*
IDC ***19*** *19:33:04.2±0.5,2°.80N×128°.62E, h220km±4km, mb4.5/43, mb1 4.6/47, mb1mx4.5/53, mbtmp5.1/47, Error ellipse: s-maj=9.7km s-min=6.0km az=71.0*
NEIC ***19*** *19:33:04.5±1.8,2°.80N×128°.52E, h222km±5km, mb5.0/110, Error ellipse: s-maj=13.8km s-min=8.1km az=63.0*
GCMT ***19*** *19:33:04.5±0.3,2°.83N±0°.02×128°.46E±0°.02, h214km±2km, MW5.1/78, Moment Tensor Solution. s38,c46; s78,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.83±.18; $M_{\theta\theta}$0.49±.15; $M_{\phi\phi}$0.33±.18; $M_{r\theta}$-0.79±.14; $M_{\theta\phi}$3.18±.14; $M_{\phi r}$-4.37±.16; Best double couple: $M_0$5.47700×10^{16} NP1:ϕ_s8.00000°, δ85.00000°, λ-124.00000°. NP2: ϕ_s270.00000°, δ34.00000°, λ-10.00000°. Principal axes: T 5.8190, Plg31.0000°, Azm125.0000°; N -0.6850, Plg34.0000°, Azm11.0000°; P -5.1350, Plg41.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***19*** *19:33:05.1±0.2,3°N±2°×12°9E±°, h215km±2km, M4.9/80, mb5.3/80, mB5.4/49, MLv5.6/16, Mw(mB)4.8/49*
MAN ***19*** *19:33:06.3,2°.88N×128°.25E, h217km, mb5.6, ML4.6, MS4.9*
ISC 19 19:33:04.8±0.4,**2°.79N**±0°.03×**128°.54E**±0°.04,**h226**km±3km, **h226**km:**pP-P**,**n486**,σ1**9**13/533,**mb5.0**/205,**22C-25D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.32**	**210**	*e*Pn	**Pn**	**19 33 48.1**	**-0.5**
TNTI	**Ternate**	**2.32**	**210**	P	**Pn**	**19 33 47.9**	**-0.7**
TNTI				S	**S**	**19 34 21.8**	**-0.9**
SGSI	**Sangihe**	**3.13**	**287**	P	**Pn**	**19 33 56.3**	**-1.1**
SGSI				S	**S**	**19 34 36.4**	**-2.1**
DDMP	**Don Marcelino,**	**4.33**	**320**	*e*P	**Pn**	**19 34 09.9**	**-1.8**
SWI	**Sorong**	**4.54**	**143**	P	**Pn**	**19 34 14.7**	**+0.5**
SIJI	**Sorong**	**4.55**	**143**	P	**Pn**	**19 34 14.6**	**+0.2**
62nm,0.3s,baz=333,slow=18,SNR=417							
SIJI				S	**S**	**19 35 10.0**	**+0.8**
2.6nm,0.3s,baz=147,slow=17,SNR=7.7							
MATI	**Mati**	**4.71**	**331**	*e*P	**Pn**	**19 34 15.7**	**-0.7**
MATI				*e*S	**S**	**19 35 08.9**	**-4.0**
KMSI	**Cibinong**	**5.06**	**244**	P	**Pn**	**19 34 20.1**	**-0.6**
1μm,0.7s,11μm18nm							
DAV	**Davao City (W)**	**5.17**	**325**	P	**Pn**	**19 34 21.7**	**-0.4**
70nm,0.3s,baz=130,slow=1.4,SNR=21							
SKMP	**Bagumbayan, Su**	**5.44**	**313**	*e*P	**Pn**	**19 34 23.9**	**-1.5**
MSAI	**Masohi**	**6.11**	**176**	P	**Pn**	**19 34 35.1**	**+1.1**
BUKP	**Musuan**	**6.12**	**326**	*e*P	**Pn**	**19 34 32.9**	**-1.3**
AAI	**Ambon**	**6.44**	**183**	P	**Pn**	**19 34 38.6**	**+0.4**
320nm,0.8s,2μm1.0nm							
FAKI	**Fak Fak**	**6.78**	**147**	*e*Pn	**Pn**	**19 34 43.2**	**+0.7**
FAKI	**Fak Fak**	**6.78**	**147**	P	**Pn**	**19 34 43.0**	**+0.5**
579nm,1.3s,6μm1.7nm							
BUTP	**Butuan**	**6.79**	**335**	*e*P	**Pn**	**19 34 41.7**	**-0.9**
CGP	**Cagayan de Oro**	**6.80**	**326**‖	*e*P	**Pn**	**19 34 42.9**	**+0.1**
CGP	**Cagayan de Oro**	**6.80**	**326**‖	*e*P	**Pn**	**19 34 42.9**	**+0.1**
LUWI	**Luwuk**	**6.91**	**237**	*e*Pn	**Pn**	**19 34 42.6**	**-1.5**
LUWI	**Luwuk**	**6.91**	**237**	P	**Pn**	**19 34 42.8**	**-1.3**
1μm,0.6s,16μm10nm							
RKPI	**Ransiki, Papua**	**7.08**	**127**	P	**Pn**	**19 34 48.4**	**+2.1**
547nm,1.6s,7μm2.5nm							
PAGZ	**Pagadian**	**7.18**	**315**	*e*P	**Pn**	**19 34 46.3**	**-1.3**
BNDI	**Bandanaira**	**7.39**	**169**	P	**Pn**	**19 34 51.1**	**+0.7**
814nm,1.2s,7μm2.4nm							
IPIL	**Ipil**	**7.74**	**310**	*e*P	**Pn**	**19 34 53.5**	**-1.3**
APSI	**Ampana**	**7.81**	**242**	P	**Pn**	**19 34 55.0**	**-0.7**
514nm,0.8s,6μm2.4nm							
SNPH	**Sibulan**	**8.37**	**321**	*e*P	**Pn**	**19 35 03.4**	**+0.4**
BAKI	**Biak**	**8.54**	**118**	P	**Pn**	**19 35 07.0**	**+1.9**
590nm,0.9s,7μm1.7nm							
KDI	**Kendari**	**8.94**	**221**	P	**Pn**	**19 35 09.7**	**-0.5**
100nm,0.8s,4μm							
SRPI	**Serui, Papua**	**8.99**	**121**	P	**Pn**	**19 35 11.7**	**+0.9**
113nm,0.6s,2μm							
TTSI	**Tana Toraja**	**10.47**	**236**	P	**Pn**	**19 35 29.2**	**-0.5**
508nm,1.6s,5μm							
SPSI	**Sidrap Palu**	**11.04**	**233**	P	**Pn**	**19 35 36.7**	**-0.3**

195nm,1.1s,2μm
SAUI Saumlaki 11.05 166 *e*Pn **Pn 19 35 35.6 -1.5**
BKSI Bulukumba 11.64 226 P **Pn 19 35 45.4 +0.7**
158nm,0.6s,2μm
BSSI Bau Bau, Buton 11.97 222 P **Pn 19 35 50.0 +1.2**
254nm,0.7s,3μm
KKM Kota Kinabalu 12.70 285 *e*Pn **Pn 19 35 57.7 -0.3**
KKM Kota Kinabalu 12.70 285 P **P 19 36 01.0 +0.1**
GENI Genyem 12.80 115 P **P 19 36 01.0 -0.8**
959nm,1.3s,11μm
MMRI Maumere 12.97 209 *e*Pn **Pn 19 36 00.6 -0.7**
MMRI Maumere 12.97 209 P **P 19 36 06.2 +2.4**
SOEI Soe 13.17 199 *e*Pn **Pn 19 36 03.8 -0.1**
SOEI Soe 13.17 199 P **Pn 19 36 05.4 +1.6**
590nm,0.9s,4μm
JAY Jayapura 13.26 113 P **Pn 19 36 04.4 -0.5**
14nm,0.3s,baz=284,slow=3.9,SNR=86
JAY Jayapura 13.26 113 P **P 19 36 08.5 +1.5**
2μm,0.8s,19μm
EDFI Ende, Flores 13.34 211 P **Pn 19 36 06.9 +0.9**
156nm,1.4s,3μm
BATI Baumata 13.79 201 P **Pn 19 36 12.2 +0.8**
52nm,0.3s,baz=12,slow=2.1,SNR=81
BATI Baumata 13.79 201 P **Pn 19 36 12.6 +1.2**
166nm,1.0s,2μm
MTKI Muara Teweh, K 14.13 255 P **P 19 36 18.3 +1.6**
119nm,0.7s
WSI Waingapu 14.85 213 P P 19 36 30.3 +5.7
WBSI Waikabubak, Su 15.35 216 P **P 19 36 30.3 +0.2**
151nm,0.5s,3μm
MTN Manton Dam 15.75 171 *e*P **P 19 36 33.0 -1.5**
242nm,0.4s
PLAI Plampang 15.76 223 P **Pn 19 36 37.2 +2.0**
332nm,1.1s,6μm
SBUM Sibu 16.30 269 *e*P **Pn 19 36 42.7 +0.9**
380nm,1.8s
SBUM Sibu 16.30 269 P **Pn 19 36 44.0 +2.2**
SRBI Singaraja 17.13 231 P **Pn 19 36 51.6 +0.1**
236nm,1.2s,3μm
DNP Denpasar 17.50 229 P **Pn 19 36 56.1 +0.2**
642nm,1.0s
KMMI Kalianget 17.52 236 P **Pn 19 36 57.1 +1.0**
134nm,0.7s,2μm
PBKI Pangkalan Bun 17.72 252 P **Pn 19 36 57.8 -0.7**
408nm,1.4s,4μm
JAGI Jajag, Banyuwa 18.19 232 *e*P **Pn 19 37 03.1 -0.9**
319nm,1.2s
JAGI Jajag, Banyuwa 18.19 232 P **P 19 37 02.2 +1.0**
133nm,0.5s
KSM Kuching 18.26 266 *e*P **P 19 37 03.6 +1.6**
659nm,1.4s
KSM Kuching 18.26 266 P **Pn 19 37 05.0 +0.2**
KNRA Kununurra 18.35 179 P **P 19 37 02.9 0.0**
baz=18,SNR=95
GRJI Gresik 18.70 239 P **Pn 19 37 09.3 -0.7**
494nm,0.9s,5μm
MANU Manus Island 19.43 104 *e*P **P 19 37 14.8 +0.2**
57nm,0.9s
NGJI Ngawi 19.80 239 P **P 19 37 17.9 -0.6**
309nm,0.7s
PWJI Pagerwojo 19.85 237 P **P 19 37 20.5 +1.5**
370nm,0.6s,5μm
WOJI Wonogiri, Jawa 20.50 239 P **P 19 37 28.6 +2.6**
84nm,0.6s
UGM Wanagama 20.88 239 *e*P **P 19 37 30.9 +0.8**
538nm,1.5s
UGM Wanagama 20.88 239 P **P 19 37 31.0 +0.9**
216nm,0.6s
FITZ Fitzroy Crossi 20.95 188 P **P 19 37 29.5 -1.2**
27nm,0.4s,baz=18,slow=7.2,SNR=135
FITZ S **S 19 41 07.5 -2.9**
25nm,1.0s,baz=158,slow=21,SNR=4.6
FITZ Fitzroy Crossi 20.95 188 *e*P **P 19 37 28.9 -1.8**
FITZ *e*S **S 19 41 07.5 -2.9**
YOGI Yogyakarta 21.03 240 P **P 19 37 33.2 +1.6**
1μm,1.5s
TWG Pinlang 21.18 341 *e*P **P 19 37 30.5 -2.6**
177nm,1.0s
TPI Tanjungpandan 21.59 255 P **P 19 37 37.2 0.0**
96nm,0.8s,1μm
TPUB Ta-pu 21.78 340 *e*P **P 19 37 37.1 -1.8**
34nm,0.6s
DLV T Lat 21.84 296 *e*P **P 19 37 40.5 +0.6**
45nm,0.8s
COEN Coen 22.08 139 *e*P **P 19 37 40.4 -1.4**
118nm,1.6s
SSLB Suanglung 22.12 341 *e*P **P 19 37 41.3 -0.9**
20nm,0.8s
PMG Port Moresby 22.16 123 P **P 19 37 40.6 -1.9**
22nm,0.7s,baz=347,slow=8.5,SNR=9.4
PMG Port Moresby 22.16 123 *ce*P **P 19 37 41.0 -1.6**
PMG pmax pmax
comp=Z,100nm,0.9s
JCJI Jatiwangi 22.23 245 P **P 19 37 45.6 +2.3**
comp=Z,547nm,0.8s
YHNB Yeheng 22.82 343 *e*P **P 19 37 48.0 -0.6**
comp=Z,32nm,0.7s
PPBI Pangkal Pinang 22.93 258 P **P 19 37 50.8 +1.2**
comp=Z,96nm,0.8s,comp=Z,1μm
LEM Lembang 22.96 245 P **P 19 37 52.5 +2.4**
comp=Z,314nm,0.6s,baz=25,slow=10.0,SNR=66
CISI Cisompet, Garu 23.09 243 *e*P **P 19 37 50.5 -0.6**
comp=Z,201nm,0.6s
CISI Cisompet, Garu 23.09 243 P **P 19 37 51.8 +0.7**
comp=Z,305nm,0.8s,comp=Z,5μm
WRAB Tennant Creek 23.29 166 *e*P **P 19 37 50.9 -1.9**
comp=Z,207nm,1.3s
WRAB Tennant Creek 23.29 166 *e*P **P 19 37 50.9 -1.9**
WRAB pmax pmax
comp=Z,207nm,1.3s
WR1 Warramunga Arr 23.30 166 *e*P **P 19 37 51.5 -1.3**
WR1 *e*S **S 19 41 44.9 -3.5**
WRA Warramunga Arr 23.30 166 P **P 19 37 51.5 -1.3**
comp=Z,62nm,0.3s,baz=338,slow=11,SNR=568
WRA S **S 19 41 44.9 -3.5**
comp=Z,15nm,0.8s,baz=349,slow=16,SNR=6.5
WB2 Warramunga Arr 23.30 166 *e*P **P 19 37 51.8 -1.1**
comp=Z,101nm,0.9s
CBJI Citeko 23.51 247 P **P 19 37 56.7 +1.9**
comp=Z,448nm,0.9s,comp=Z,5μm
SBJI Serang 24.06 248 P **P 19 38 02.6 +2.7**
comp=Z,267nm,1.3s,comp=Z,4μm
TPRI Tanjung Pinang 24.07 266 P **P 19 38 01.5 +1.6**
comp=Z,67nm,0.7s,comp=Z,3μm
QIZ Qiongzhong 24.39 313 *e*P **P 19 38 03.1 +0.3**
comp=Z,23nm,0.9s
RABL Rabaul 24.61 106 *e*P **P 19 38 04.5 -0.4**
comp=Z,94nm,0.6s
BLSI Bandar Lampung 24.64 251 P **P 19 38 06.8 +1.7**
comp=Z,317nm,0.7s
CGJI Cibinong 24.64 248 P **P 19 38 05.1 0.0**
comp=Z,362nm,0.5s,comp=Z,5μm
MYKOM Kota Tinggi 24.69 268 *e*P **P 19 38 06.5 +0.9**
comp=Z,107nm,0.7s
MYKOM Kota Tinggi 24.69 268 P **P 19 38 08.0 +2.5**
KLI Kotabumi 24.85 252 P **P 19 38 08.8 +1.8**
comp=Z,157nm,0.8s
JMBI JAMBI 25.27 260 P **P 19 38 12.8 +2.0**
comp=Z,807nm,0.8s,comp=Z,6μm
MDSI Maura Dua 25.39 254 P **P 19 38 13.0 +1.1**
comp=Z,63nm,0.7s,comp=Z,952nm
KASI Kota Agung 25.39 251 P **P 19 38 12.2 +0.3**
comp=Z,126nm,0.5s
LWLI Liwa 25.66 252 P **P 19 38 16.2 +1.8**
comp=Z,105nm,0.6s
PSA00 Pilbara Seismi 25.66 199 *e*P **P 19 38 13.9 -0.3**
comp=Z,59nm,1.3s
LHSI Lahat 25.85 255 P **P 19 38 18.2 +2.2**
comp=Z,59nm,1.5s
AS31 Alice Springs 26.81 169 *e*P **P 19 38 23.8 -0.7**
comp=Z,33nm,0.4s
ASAR Alice Springs 26.81 169 P **P 19 38 24.1 -0.5**
comp=Z,56nm,0.5s,baz=352,slow=7.7,SNR=1280
ASAR PcP **PcP 19 41 41.8 +0.4**
comp=Z,4.8nm,0.4s,baz=348,slow=2.2,SNR=4.9
ASAR S **S 19 42 42.1 -1.8**
comp=Z,12nm,0.8s,baz=349,slow=18,SNR=11
ASAR ScP **ScP 19 44 59.7 -0.3**
comp=Z,5.8nm,0.8s,baz=345,slow=2.5,SNR=5.6
SDSI Sungai Dareh 27.35 263 P **P 19 38 30.4 +1.0**
comp=Z,19nm,0.8s
PANO Nakornpanom 27.49 303 P **P 19 38 31.9 +1.3**
comp=Z,0.9nm,1.0s
KRJI Kerinci 27.50 260 P **P 19 38 33.1 +2.3**
comp=Z,209nm,0.7s,comp=Z,3μm
IPM Ipoh 27.50 274 *e*P **P 19 38 31.4 +0.6**
comp=Z,46nm,0.7s
IPM Ipoh 27.50 274 P **P 19 38 32.0 +1.2**

BKNI Bangkinang 27.59 265 *e*P **P 19 38 31.6 0.0**
comp=Z,213nm,0.8s
BKNI Bangkinang 27.59 265 P **P 19 38 33.0 +1.4**
comp=Z,299nm,0.8s,comp=Z,2μm
CHBT CHBT 27.75 292 P **P 19 38 37.5 +4.5**
comp=Z,52nm,0.5s,comp=Z,636nm
KULM Kulim 27.93 276 *e*P **P 19 38 35.0 +0.5**
comp=Z,37nm,0.8s
KULM Kulim 27.93 276 P **P 19 38 36.0 +1.5**
SKNT Sakolnakorn 27.94 302 P **P 19 38 35.7 +1.1**
comp=Z,95nm,0.8s
SKLT Songkhla 28.14 280 P **P 19 38 38.3 +1.9**
comp=Z,38nm,0.9s
PDSI Padang 28.31 263 P **P 19 38 39.4 +1.5**
comp=Z,56nm,0.7s
CTA Charters Tower 28.63 143 P **P 19 38 39.6 -1.1**
comp=Z,3.5nm,0.6s,baz=292,slow=9.9,SNR=8.8
CTAO Charters Tower 28.63 143 *e*P **P 19 38 40.7 +0.1**
comp=Z,13nm,0.9s
CTAO Charters Tower 28.63 143 *e*P **P 19 38 40.7 +0.1**
CTAO pmax pmax
comp=Z,13nm,0.9s
KHON Khomkaen 28.65 300 P **P 19 38 42.4 +1.5**
comp=Z,186μm,0.8s
GIRL Giralia 28.88 208 P **P 19 38 43.8 +1.0**
baz=29,SNR=20
MNSI Mandailing Nat 29.01 267 P **P 19 38 44.2 +0.1**
comp=Z,82nm,0.7s,comp=Z,919nm
TRTT Trang 29.14 281 P **P 19 38 46.9 +1.6**
comp=Z,64nm,0.9s
NONG Nongkai 29.15 303 P **P 19 38 46.1 +0.8**
comp=Z,1.2nm,0.9s
CHAI Chaiyaphum 29.20 298 P **P 19 38 46.8 +1.0**
comp=Z,137μm,0.8s
PSI Prapat 29.58 271 P **P 19 38 50.0 +0.7**
comp=Z,64nm,0.8s,baz=102,slow=4.3,SNR=27
PSI ScP **ScP 19 45 08.5 -0.5**
comp=Z,5.3nm,0.6s,baz=18,slow=2.5,SNR=5.1
PSI Prapat 29.58 271 *e*P **P 19 38 49.7 +0.4**
comp=Z,111nm,1.0s
PSI Prapat 29.58 271 P **P 19 38 50.0 +0.7**
SISI Saibi 29.72 262 P **P 19 38 51.7 +1.3**
comp=Z,107nm,0.6s
SLVN Son La 30.23 309 *e*P **P 19 38 55.9 +1.0**
comp=Z,16nm,0.8s
PHET Kaeng Krachan 30.31 291 P **P 19 38 57.7 +2.2**
comp=Z,89μm,0.7s,comp=Z,652μm
PBKT Sadao Pong 30.36 299 P **P 19 38 57.4 +1.4**
comp=Z,29nm,0.7s
PKDT Phuket 30.48 281 P **P 19 38 58.7 +1.6**
comp=Z,153nm,0.7s
WHN Wuhan 30.69 336 ⇑P **P 19 39 00.5 +1.8**
WHN S **S 19 43 45.4 +0.9**
WHN pmax pmax
comp=Z,52nm,0.7s
WHN LR LR
comp=Z,480nm,22.9s
KCSI Kotacane, Aceh 30.73 272 P **P 19 38 59.1 -0.2**
comp=Z,127nm,1.2s
GSI Gunungsitoli 30.98 268 *e*P **P 19 39 00.8 -0.7**
comp=Z,144nm,0.6s
GSI Gunungsitoli 30.98 268 P **P 19 39 01.2 -0.2**
comp=Z,210nm,0.9s
UTTA Uttaradit 31.21 300 P **P 19 39 04.8 +1.4**
comp=Z,69μm,0.9s,comp=Z,674μm
SRDT SRDT 31.22 293 P **P 19 39 05.6 +2.1**
comp=Z,36nm,0.9s
NANT Nan 31.55 302 P **P 19 39 07.8 +1.4**
comp=Z,80μm,0.8s,comp=Z,899μm
UMPA Umpang Tak 32.09 296 P **P 19 39 12.7 +1.5**
comp=Z,90μm,0.9s,comp=Z,562μm
MLSI Meulaboh, Aceh 32.10 274 P **P 19 39 11.3 0.0**
comp=Z,181nm,0.6s
LAMP Lampang 32.33 301 P **P 19 39 15.1 +1.9**
comp=Z,121μm,0.9s
ENH Enshi 32.75 329 *e*P **P 19 39 17.5 +0.7**
comp=Z,44nm,0.8s
CM31 Chiang Mai Arr 32.90 300 *e*P **P 19 39 19.8 +1.7**
comp=Z,46nm,0.8s
CMAR Chiang Mai Arr 32.90 300 P **P 19 39 19.9 +1.7**
comp=Z,32nm,0.8s,baz=114,slow=7.0,SNR=225
CMAR PcP **PcP 19 41 58.6 +1.4**
comp=Z,3.6nm,0.9s,baz=155,slow=1.6,SNR=6.7
CMAR Chiang Mai Arr 32.90 300 *i*P **P 19 39 19.8 +1.7**
CMAR pmax pmax
comp=Z,33nm,0.8s
CMMT Chiang Mai 33.04 301 P **P 19 39 20.7 +1.3**
comp=Z,47nm,0.9s,comp=Z,372nm
CHTO Chiang Mai 33.05 301 *e*P **P 19 39 20.9 +1.4**
comp=Z,58nm,0.8s
CHTO Chiang Mai 33.05 301 *e*P **P 19 39 20.9 +1.4**
CHTO pmax pmax
comp=Z,58nm,0.8s
KMI Kunming 33.32 314 P **P 19 39 23.9 +1.9**
KMI pmax pmax
comp=Z,42nm,1.0s
INU Inuyama 33.34 13 *e*P **P 19 39 21.3 -0.3**
comp=Z,18nm,1.0s
FORT Forrest 33.39 181 *e*P **P 19 39 21.6 -0.6**
comp=Z,137nm,0.6s
FORT Forrest 33.39 181 P **P 19 39 22.0 -0.1**
baz=34,SNR=36
TJN Taejon 33.44 358 *de*P **P 19 39 22.8 +0.3**
HNR Honiara 33.57 112 P **P 19 39 22.6 -1.4**
comp=Z,30nm,0.6s,baz=225,slow=1.0,SNR=3.8
MORW Morawa 33.87 200 *e*P **P 19 39 25.6 -0.8**
comp=Z,40nm,1.2s
MORW Morawa 33.87 200 P **P 19 39 25.9 -0.4**
baz=34,SNR=38
KS15 Wonju Array Si 34.49 359 *e*P **P 19 39 32.5 +1.0**
comp=Z,21nm,1.2s
KSRS Korea Array 34.50 359 P **P 19 39 32.2 +0.6**
comp=Z,7.4nm,0.6s,baz=176,slow=9.8,SNR=57
KSRS pP **pP 19 40 16.9 +1.2**
comp=Z,2.2nm,1.0s,baz=170,slow=11,SNR=1.7
KSRS PcP **PcP 19 42 02.6 +1.3**
comp=Z,1.7nm,0.8s,baz=188,slow=3.6,SNR=7.0
KSRS ScP **ScP 19 45 25.7 +0.6**
comp=Z,1.8nm,0.7s,baz=183,slow=3.8,SNR=12
KMBL Kambalda 34.55 190 P **P 19 39 31.9 -0.3**
baz=35,SNR=21
MAJO Matsushiro 34.75 14 *e*P **P 19 39 32.9 -0.9**
comp=Z,11nm,0.6s
MAJO *es*P **sP 19 40 45.1 +1.5**
MAJO *e*PcP **PcP 19 42 02.8 +0.6**
MAJO *e*ScP **ScP 19 45 26.5 +0.4**
MAJO Matsushiro 34.75 14 *d i*P **P 19 39 32.4 -1.4**
MAJO pmax pmax
comp=Z,9.0nm,1.0s
MAT Matsushiro 34.75 14 P **P 19 39 32.8 -1.0**
MJAR Matsushiro Arr 34.75 14 P **P 19 39 32.9 -1.0**
comp=Z,4.8nm,0.5s,baz=199,slow=9.8,SNR=20
MJAR sP **sP 19 40 45.1 +1.5**
comp=Z,4.0nm,0.7s,baz=190,slow=8.9,SNR=2.9
MJAR PcP **PcP 19 42 02.8 +0.6**
comp=Z,4.4nm,0.9s,baz=173,slow=3.6,SNR=4.4
MJAR ScP **ScP 19 45 26.5 +0.4**
comp=Z,1.5nm,0.8s,baz=178,slow=5.4,SNR=4.5
MJB9 Matsu-Tunnel 34.75 14 *e*P **P 19 39 33.0 -0.9**
comp=Z,11nm,0.6s
RMQ Roma 35.06 147 P **P 19 39 36.1 -0.5**
baz=35,SNR=8.2
BLDU Ballidu 35.09 198 P **P 19 39 36.3 -0.4**
baz=35,SNR=86
EIDS Eidsvold 35.52 143 *e*P **P 19 39 39.8 -0.8**
comp=Z,14nm,0.6s
EIDS Eidsvold 35.52 143 P **P 19 39 39.7 -0.8**
baz=36,SNR=8.9
XAN Xi'an 36.08 332 P **P 19 39 45.6 +0.4**
XAN pmax pmax
comp=Z,33nm,1.0s
XAN Xi'an 36.08 332 *e*P **P 19 39 45.2 0.0**
comp=Z,24nm,0.6s
XAN Xi'an 36.08 332 *e*P **P 19 39 45.2 0.0**
XAN pmax pmax
comp=Z,24nm,0.6s
BBOO Buckleboo 36.12 169 *e*P **P 19 39 45.2 -0.3**
comp=Z,152nm,0.4s
BBOO Buckleboo 36.12 169 P **P 19 39 45.3 -0.2**
baz=36,SNR=450
MUN Mundaring 36.51 198 P **P 19 39 48.6 -0.2**
baz=37,SNR=11
STKA Stephens Creek 36.64 161 P **P 19 39 49.6 -0.4**
comp=Z,37nm,0.3s,baz=341,slow=7.9,SNR=268
STKA Stephens Creek 36.64 161 *e*P **P 19 39 49.4 -0.5**
comp=Z,9.5nm,0.3s
STKA Stephens Creek 36.64 161 P **P 19 39 49.5 -0.4**
baz=37,SNR=93

STKA Stephens Creek 36.64 161 *e*P **P 19 39 49.4 -0.5**
STKA pmax pmax
comp=Z,10.0nm,0.3s
NWAO Narrogin (SRO) 37.10 196 *e*P **P 19 39 53.8 0.0**
NWAO comp=Z,44nm,1.1s
NWAO Narrogin (SRO) 37.10 196 *e*P **P 19 39 53.8 0.0**
NWAO pmax pmax
comp=Z,44nm,1.1s
HTT Hallett 37.34 166 P **P 19 39 55.7 -0.1**
baz=38,SNR=63
CMSA Cobar Meteorol 37.84 156 P **P 19 39 59.5 -0.5**
baz=38,SNR=32
BJT Baijiatuau 38.72 345 *e*P **P 19 40 07.1 -0.1**
comp=Z,28nm,0.7s
BJT Baijiatuau 38.72 345 *e*P **P 19 40 07.1 -0.1**
BJT pmax pmax
comp=Z,28nm,0.7s
ARMA Armidale 39.71 148 *e*P **P 19 40 15.6 0.0**
comp=Z,33nm,0.6s
ARMA Armidale 39.71 148 P **P 19 40 15.7 0.0**
baz=40,SNR=35
MOKO MOKOCHONG 40.15 309 *e*P **P 19 40 20.0 +0.6**
KOHI KOHIMA 40.18 308 *e*P **P 19 40 18.7 -1.0**
LZH Lanzhou 40.23 328 ⇓P **P 19 40 21.9 +2.0**
LZH pmax pmax
comp=Z,93nm,1.1s
H11S3 WAKE ISLAND Hy 40.48 65 T T 20 24 34.8
baz=252,slow=75,SNR=18
H11S1 WAKE ISLAND Hy 40.49 65 T T 20 24 22.4
baz=252,slow=75,SNR=10
H11S2 WAKE ISLAND Hy 40.49 65 T T 20 24 24.2
baz=252,slow=75,SNR=15
JORH JORHAT 40.57 309 *e*P **P 19 40 23.0 +0.4**
BRDH Bariadhala 40.86 302 P **P 19 40 26.4 +1.4**
comp=Z,136nm,0.4s,baz=89,slow=8.6,SNR=8.2
H11N1 WAKE ISLAND Hy 41.05 63 T T 20 24 56.0
baz=250,slow=75,SNR=24
H11N2 WAKE ISLAND Hy 41.06 63 T T 20 24 56.9
baz=250,slow=75,SNR=14
H11N3 WAKE ISLAND Hy 41.07 63 T T 20 24 57.3
baz=250,slow=75,SNR=17
BELO BELONIA 41.25 303 *e*P **P 19 40 28.0 -0.3**
ARPS Mount Arapiles 41.26 164 P **P 19 40 28.6 +0.5**
baz=42,SNR=94
ZIRO ZIRO 41.27 310 *e*P **P 19 40 29.3 +0.7**
ZIRO IAmb IAmb 19 40 30.7
comp=Z,4μm,0.1s
USA0B Ussuriysk Arra 41.35 4 *e*P **P 19 40 29.4 +0.7**
comp=Z,15nm,1.0s
USRK Ussuriysk Ar. 41.35 4 P **P 19 40 28.5 -0.2**
comp=Z,6.4nm,0.6s,baz=202,slow=8.2,SNR=17
USRK pP **pP 19 41 15.3 +1.1**
comp=Z,1.1nm,0.5s,baz=212,slow=10,SNR=1.1
TEZP TEZPUR 41.64 308 *e*P **P 19 40 31.2 -0.1**
MDJ Mudanjiang 41.66 1 P **P 19 40 32.3 +1.1**
MDJ pmax pmax
comp=Z,24nm,1.2s
MDJ pmax pmax
comp=Z,53nm,3.3s
SHL Shillong 41.88 306 *e*P **P 19 40 34.1 +0.5**
comp=Z,199nm,0.6s
SHL Shillong 41.88 306 *e*P **P 19 40 34.1 +0.5**
SHL pmax pmax
comp=Z,199nm,0.6s
SHL Shillong 41.88 306 *e*P **P 19 40 34.1 +0.5**
SHL IAmb IAmb 19 40 35.4
comp=Z,4μm,0.1s
TEY Ternei 42.67 8 *e*P **P 19 40 38.5 -0.8**
TAWA Tawang 42.83 309 *e*P **P 19 40 42.4 +1.0**
TURI Tura 43.13 305 *e*P **P 19 40 43.8 +0.3**
TOO Toolangi 43.13 160 *e*P **P 19 40 44.1 +0.9**
comp=Z,38nm,1.5s
TOO Toolangi 43.13 160 P **P 19 40 44.6 +1.4**
baz=43,SNR=11
TOO Toolangi 43.13 160 *e*P **P 19 40 44.2 +0.9**
TOO pmax pmax
comp=Z,38nm,1.5s
LSA Lhasa 44.41 311 *e*P **P 19 40 54.7 +0.6**
comp=Z,62nm,1.1s
LSA Lhasa 44.41 311 P **P 19 40 56.0 +2.0**
LSA Lhasa 44.41 311 *e*P **P 19 40 54.7 +0.6**
LSA pmax pmax
comp=Z,62nm,1.1s
DZM Mont Dzumac 44.52 126 *e*P **P 19 40 54.5 -0.1**
comp=Z,24nm,0.7s
GTA Gaotai 44.83 328 ⇓P **P 19 40 58.0 +1.2**
GTA pP pP 19 41 41.6 -3.0
GTA sP sP 19 42 00.3 -10
GTA PcP **PcP 19 42 35.8 +1.2**
GTA ScP **ScP 19 46 06.5 +1.1**
GTA S **S 19 47 18.8 +1.7**
GTA ScS **ScS 19 50 29.9 -0.1**
GTA pmax pmax
comp=Z,40nm,1.0s
GTA LR LR
comp=Z,140nm,16.5s
GTA LR LR
comp=Z,100nm,18.4s
GTA LR LR
comp=Z,130nm,19.4s
BWNR Bhubaneshwar 45.14 296 *ex* x 19 40 51.5
GTK Tadong 45.29 307 *e*P **P 19 41 01.1 +0.5**
GTK IAmb IAmb 19 41 02.7
comp=Z,1μm,0.1s
KLR Kul'dur 46.35 3 P **P 19 41 08.0 -0.3**
comp=Z,7.6nm,0.9s,baz=208,slow=6.3
KLR Kul'dur 46.35 3 *d i*P **P 19 41 08.2 -0.1**
KLR pmax pmax
comp=Z,10.0nm,1.2s
JIRN Jiri 47.38 306 *e*P **P 19 41 18.3 +1.1**
comp=Z,379nm,0.6s
GUN Gumba 47.73 306 *e*P **P 19 41 20.9 +1.1**
comp=Z,260nm,0.5s
PALK Pallekele 47.84 277 P **P 19 41 20.9 +0.4**
comp=Z,17nm,0.7s,baz=118,slow=2.2,SNR=4.3
PALK Pallekele 47.84 277 *e*P **P 19 41 20.3 -0.1**
comp=Z,90nm,1.6s
PALK Pallekele 47.84 277 P **P 19 41 19.6 -0.9**
PKI Pulchoki 47.98 305 *e*P **P 19 41 22.2 +0.5**
comp=Z,55nm,0.4s
PKIN Phulchoki 47.99 305 *e*P **P 19 41 22.2 +0.5**
comp=Z,39nm,0.3s
KKN Kakani 48.17 305 *e*P **P 19 41 23.7 +0.7**
comp=Z,108nm,0.5s
DMN Daman 48.24 305 *e*P **P 19 41 24.3 +0.7**
comp=Z,147nm,0.7s
GRNR Gornyy 48.27 7 *e*P **P 19 41 23.0 -0.1**
GRNR pmax pmax
comp=Z,13nm,1.0s
ULN Ulaanbaatar 48.58 341 *e*P **P 19 41 25.1 -0.6**
comp=Z,24nm,0.8s
ULN Ulaanbaatar 48.58 341 *d i*P **P 19 41 26.3 +0.6**
ULN pmax pmax
comp=Z,29nm,0.9s
SONA0 Songino Array 48.77 340 *e*P **P 19 41 27.7 +0.6**
SONA0 *e*PcP **PcP 19 42 48.9 +0.5**
SONA0 *e*ScP **ScP 19 46 21.7 -0.1**
SONM Songino Array 48.77 340 P **P 19 41 27.7 +0.6**
comp=Z,10nm,0.7s,baz=152,slow=7.8,SNR=46
SONM PcP **PcP 19 42 48.9 +0.5**
comp=Z,3.0nm,0.7s,baz=149,slow=3.7,SNR=5.2
SONM ScP **ScP 19 46 21.7 -0.1**
comp=Z,1.0nm,0.8s,baz=165,slow=6.2,SNR=4.4
GKN Gorkha 48.78 305 *e*P **P 19 41 28.2 +0.6**
comp=Z,78nm,0.5s
MDRS Chennai 48.82 285 *e*P **P 19 41 28.3 +0.5**
MDRS IAmb IAmb 19 41 29.6
comp=Z,35nm,0.5s
KOLN Kolganda 49.54 305 *e*P **P 19 41 34.5 +1.1**
comp=Z,462nm,0.8s
DANN Dangsing 49.62 305 *e*P **P 19 41 35.0 +0.8**
comp=Z,454nm,0.6s
PYUN Piuthan 50.16 305 *e*P **P 19 41 39.3 +1.2**
comp=Z,480nm,0.8s
ZEA Zeya 50.79 359 *e*P **P 19 41 41.4 -0.7**
ZEA pmax pmax
comp=Z,12nm,1.0s
NGP Nagpur 51.46 295 *e*P **P 19 41 47.0 -0.7**
NGP IAmb IAmb 19 41 48.3
comp=Z,100nm,1.4s
ZAK Zakamensk 52.01 340 *e*P **P 19 41 51.3 0.0**
ZAK pmax pmax
comp=Z,4.0nm,1.6s
BHPL Bhopal 53.43 297 *e*P **P 19 42 00.9 -1.2**
BHPL IAmb IAmb 19 42 02.5
comp=Z,47nm,0.8s

MOY	Mondy	53.88	339	eP	P	19 42 06.1	+1.1
MOY				pmax	pmax		
comp=Z,25nm,2.3s							
WMQ	Urumqi	54.53	324	eP	P	19 42 10.8	+1.2
comp=Z,54nm,1.0s							
WMQ	Urumqi	54.53	324	eP	P	19 42 10.9	+1.2
WMQ				pmax	pmax		
comp=Z,54nm,1.0s							
DDI	Dehra Dun	54.98	305	eP	P	19 42 12.5	-0.6
PETK	Petropavlovsk-	55.64	21	P	P	19 42 18.2	+0.9
comp=Z,5.9nm,0.8s,baz=185,slow=4.3,SNR=8.7							
PETK				PcP	pwP	19 43 12.7	-0.2
comp=Z,2.3nm,0.6s,baz=208,slow=1.9,SNR=4.6							
PEA1	Petropavlovsk-	55.64	21	eP	P	19 42 18.2	+0.8
POO	Poona	55.73	290	eP	P	19 42 17.0	-1.7
POO				IAmb	IAmb	19 42 18.6	
comp=Z,47nm,0.8s							
SMLA	Simla	55.97	306	eP	P	19 42 20.2	+0.2
H08S2	Diego Garcia H	56.86	259	P	P	19 42 27.0	+0.7
baz=49,slow=8.0,SNR=14							
H08S3	Diego Garcia H	56.87	259	P	P	19 42 26.8	+0.3
baz=49,slow=8.0,SNR=12							
H08S1	Diego Carcia H	56.88	259	P	P	19 42 27.0	+0.5
baz=49,slow=8.0,SNR=12							
DHRM	DHARAMSHALA	57.04	307	eP	P	19 42 26.9	-1.0
DHRM				IAmb	IAmb	19 42 29.0	
comp=Z,4μm,3.0s							
DGZ	Jazzator, Alta	58.30	330d	iP	P	19 42 36.8	+0.5
DGZ				pmax	pmax		
comp=Z,8.0nm,0.9s							
YAK	Yakutsk	59.10	1	eP	P	19 42 41.3	0.0
comp=Z,68nm,0.6s							
YAK	Yakutsk	59.10	1d	iP	P	19 42 41.5	+0.2
YAK				e*PP	PcP	19 43 26.6	-0.8
YAK				e		19 43 29.9	
YAK				e		19 44 54.0	
YAK				iS	S	19 50 29.6	-0.5
YAK				e		19 52 06.0	
MA2	Magadan	59.19	13	P	P	19 42 42.5	+0.6
comp=Z,11nm,0.8s,baz=187,slow=7.2,SNR=14							
MA2				PcP	PcP	19 43 27.7	-0.1
comp=Z,1.6nm,0.3s,baz=269,slow=4.2,SNR=3.8							
MA2	Magadan	59.19	13	eP	P	19 42 42.7	+0.7
comp=Z,21nm,1.1s							
MA2	Magadan	59.19	13de	P	P	19 42 43.0	+1.0
MA2				pmax	pmax		
comp=Z,21nm,1.1s							
MK31	Makanchi Array	59.35	325	eP	P	19 42 43.7	+0.3
comp=Z,18nm,0.6s							
MK31	Makanchi Array	59.35	325	eP	P	19 42 43.7	+0.3
MK31				pmax	pmax		
comp=Z,18nm,0.6s							
MK32	Makanchi Array	59.35	325	eP	P	19 42 43.9	+0.5
MK32				ePcP	PcP	19 43 28.8	-0.1
MK32				eScP	ScP	19 47 07.7	-0.3
MKAR	Makanchi Array	59.35	325	P	P	19 42 43.9	+0.5
comp=Z,23nm,0.5s,baz=117,slow=8.5,SNR=399							
MKAR				PcP	PcP	19 43 28.8	0.0
comp=Z,10nm,0.7s,baz=120,slow=4.8,SNR=13							
MKAR				ScP	ScP	19 47 07.7	-0.3
comp=Z,2.5nm,0.8s,baz=121,slow=4.7,SNR=7.0							
MAKZ	Makanchi	59.54	325	eP	P	19 42 44.8	+0.1
comp=Z,56nm,1.1s							
MAKZ	Makanchi	59.54	325	eP	P	19 42 44.8	+0.1
MAKZ				pmax	pmax		
comp=Z,57nm,1.1s							
THZ	Tophouse	59.86	143	eP	P	19 42 47.2	+0.2
comp=Z,39nm,0.7s							
NIL	Nilore	59.92	308	eP	P	19 42 46.8	-0.8
comp=Z,58nm,1.4s							
NIL	Nilore	59.92	308	eP	P	19 42 46.8	-0.8
NIL				pmax	pmax		
comp=Z,58nm,1.4s							
KSH	Kashi	59.98	315	P	P	19 42 49.6	+1.7
KSH				pP	pP	19 43 36.3	-2.0
KSH				PP	PP	19 45 06.4	+3.3
KSH				S	S	19 50 41.6	-0.9
KSH				ScS	ScS	19 52 13.0	-3.0
KSH				SS	SS	19 54 42.1	-1.1
KSH				pmax	pmax		
comp=Z,82nm,1.1s							
KSH				pmax	pmax		
comp=Z,230nm,6.4s							
KSH				LR	LR		
comp=Z,270nm,6.3s							
KSH				LR	LR		
comp=Z,340nm,11.7s							
KSH				LR	LR		
comp=Z,190nm,19.4s							
OXZ	Oxford	60.29	145	eP	P	19 42 49.8	+0.1
comp=Z,181nm,1.7s							
BHJ	Bhuj	60.41	295	eP	P	19 42 50.2	-0.7
BHJ				IAmb	IAmb	19 42 52.2	
comp=Z,48nm,0.9s							
BKZ	Black Stump Fm	60.69	139	eP	P	19 42 52.4	-0.2
comp=Z,43nm,0.6s							
ULHL	Ulahol	60.92	318	P	P	19 42 54.9	+0.6
SNR=12							
BOOM	Boomskoye usch	61.23	318	eP	P	19 42 56.4	0.0
comp=Z,9.2nm,0.6s							
BOOM	Boomskoye usch	61.23	318	eP	P	19 42 56.4	0.0
BOOM				pmax	pmax		
comp=Z,9.0nm,0.6s							
KZA	Kyzart	61.52	317	P	P	19 42 59.9	+1.2
SNR=5.4							
TKM2	Tokmak 2	61.64	318	P	P	19 42 59.3	+0.2
SNR=21							
KBK	Karagaybulak	61.96	318	P	P	19 43 02.2	+0.9
SNR=11							
UCH	Uchtor	62.08	317	P	P	19 43 03.5	+1.1
SNR=37							
CHMS	Chumysh	62.24	318	P	P	19 43 03.2	+0.3
SNR=7.0							
ZAA0	Zalesovo Array	62.24	333	eP	P	19 43 01.7	-0.9
comp=Z,22nm,1.0s							
ZALV	Zalesovo Beam	62.24	333	P	P	19 43 02.0	-0.7
comp=Z,12nm,0.5s,baz=116,slow=6.5,SNR=53							
ZALV				PcP	PcP	19 43 39.2	-1.1
comp=Z,5.0nm,0.7s,baz=182,slow=3.8,SNR=5.4							
ZAA1	Zalesovo Array	62.24	333	eP	P	19 43 02.0	-0.7
ZAA1				ePcP	PcP	19 43 39.2	-1.1
AAK	Ala-Archa	62.26	318	P	P	19 43 03.5	+0.3
comp=Z,4.2nm,0.5s,baz=92,slow=5.2,SNR=11							
AAK				PcP	PcP	19 43 41.6	+0.7
comp=Z,8.3nm,0.5s,baz=126,slow=4.4,SNR=12							
AAK	Ala-Archa	62.26	318	P	P	19 43 04.0	+0.8
SNR=6.0							
AAK	Ala-Archa	62.26	318	eP	P	19 43 03.3	+0.1
comp=Z,9.1nm,0.6s							
AAK	Ala-Archa	62.26	318	iP	P	19 43 03.7	+0.5
SNR=7.8							
AAK	Ala-Archa	62.26	318d	iP	P	19 43 03.8	+0.6
AAK				pmax	pmax		
comp=Z,13nm,1.2s							
USP	Ospenovka	62.52	318	P	P	19 43 05.3	+0.5
SNR=23							
SEY	Seymchan	62.55	12⇓	eP	P	19 43 06.0	+1.5
AML	Almayashu	62.60	317	P	P	19 43 06.8	+1.0
SNR=36							
EKS2	Erkin-Say	62.76	317	P	P	19 43 07.4	+0.9
SNR=27							
ARSB	Arslanbob	62.78	316	eP	P	19 43 06.8	+0.2
comp=Z,33nm,1.1s							
KURK	Kurchatov	63.50	327	eP	P	19 43 10.9	0.0
comp=Z,60nm,0.6s							
KURK	Kurchatov	63.50	327d	iP	P	19 43 11.0	0.0
KURK				pmax	pmax		
comp=Z,55nm,0.7s							
KURBB	Kurchatov Arra	63.50	327	P	P	19 43 11.1	+0.1
comp=Z,47nm,0.6s,baz=127,slow=5.9,SNR=350							
KURBB				PcP	PcP	19 43 45.1	-0.5
comp=Z,2.4nm,0.5s,baz=126,slow=3.9,SNR=4.1							
KURBB				pP	pP	19 44 00.7	-1.4
comp=Z,5.5nm,0.8s,baz=124,slow=5.8,SNR=2.5							
KBL	Kabul	63.52	307	eP	P	19 43 11.0	-0.8
comp=Z,31nm,1.0s							
KBL	Kabul	63.52	307	eP	P	19 43 11.0	-0.8
KBL				pmax	pmax		
comp=Z,31nm,1.0s							
NVS	Novosibirsk	63.52	333	eP	P	19 43 10.6	-0.4
NVS				pmax	pmax		
comp=Z,31nm,0.8s							
NVS				pmax	pmax		
comp=N,15nm,0.7s							
NVS				pmax	pmax		
comp=E,19nm,0.7s							
GAR	Garm	63.88	312	eP	P	19 43 13.8	-0.1
comp=E,124nm,1.1s							
GAR	Garm	63.88	312	eP	P	19 43 13.8	-0.1
GAR				pmax	pmax		
comp=Z,124nm,1.1s							
KK31	Karatay Array	65.14	317	eP	P	19 43 21.7	-0.1
comp=Z,39nm,1.1s							
KK31	Karatay Array	65.14	317	eP	P	19 43 21.7	-0.1
KK31				pmax	pmax		
comp=Z,39nm,1.1s							
KKAR	Karatay Array	65.14	317	eP	P	19 43 21.6	-0.2
comp=Z,39nm,1.1s							
KKAR	Karatay Array	65.14	317	eP	P	19 43 21.6	-0.2
KKAR				pmax	pmax		
comp=Z,39nm,1.1s							
ATKA	Atka Island	68.25	34	eP	P	19 43 40.6	-0.6
comp=Z,20nm,1.1s							
TIXI	Tiksi	68.76	0	P	P	19 43 43.8	-0.2
comp=Z,9.3nm,0.5s,baz=172,slow=5.1,SNR=37							
TIXI	Tiksi	68.76	0	eP	P	19 43 43.2	-0.7
comp=Z,16nm,1.0s							
TIXI	Tiksi	68.76	0de	P	P	19 43 43.3	-0.7
TIXI				pmax	pmax		
comp=Z,18nm,1.0s							
BVAR	Borovoye Array	69.09	327	P	P	19 43 46.4	0.0
comp=Z,24nm,0.6s,baz=120,slow=7.3,SNR=202							
BVAR				PcP	PcP	19 44 08.3	-0.5
comp=Z,4.7nm,0.7s,baz=134,slow=4.3,SNR=5.6							
BVAR				pP	pP	19 44 36.4	-2.1
comp=Z,1.7nm,0.6s,baz=99,slow=8.9,SNR=1.1							
BRVK	Borovoye	69.16	327	eP	P	19 43 46.7	-0.1
comp=Z,57nm,1.0s							
BRVK	Borovoye	69.16	327d	iP	P	19 43 46.7	-0.1
BRVK				i *PP	pP	19 44 36.5	-2.5
BRVK				pmax	pmax		
comp=Z,38nm,0.9s							
BILL	Bilibino	70.00	14⇓	eP	P	19 43 51.6	-0.1
BILL				pmax	pmax		
comp=Z,7.0nm,1.3s							
CASY	Casey	70.12	188	eP	P	19 43 53.3	+1.0
comp=Z,15nm,0.8s							
NRIK	Noril'sk	71.77	346	P	P	19 44 02.3	+0.1
comp=Z,13nm,0.6s,baz=143,slow=5.6,SNR=13							
MDH	Madha	72.76	295	P	P	19 44 07.8	-1.2
UOSS	Minazif	72.81	295	P	P	19 44 08.6	-0.8
HATD	Hatta, Dubai	72.87	295	P	P	19 44 09.7	0.0
GEYT	Alibeck	72.88	309	P	P	19 44 10.2	+0.6
comp=Z,15nm,0.7s,baz=157,slow=4.8,SNR=45							
GYA0B	ALIBECK ARRAY	72.88	309	eP	P	19 44 09.8	+0.3
comp=Z,19nm,0.8s							
MSFE	Esma-Masafi	72.89	296	P	P	19 44 10.6	+0.8
ASHO	Ashiyiah	72.92	295	P	P	19 44 09.9	-0.1
SHME	Shamm	72.97	296	P	P	19 44 10.3	0.0
ALNE	Al Ain	73.15	294	iP	P	19 44 11.7	+0.4
SNR=24							
FAQ	Al Faqa, Dubai	73.35	295	iP	P	19 44 12.3	-0.2
SNR=8.6							
ASUD	Al Ashush, Dub	73.58	295	iP	P	19 44 14.3	+0.5
SNR=10							
ABKAR	Akbulak array	74.01	321	eP	P	19 44 15.3	-0.5
comp=Z,20nm,0.8s							
AKTO	Aktyubinsk	75.51	321	P	P	19 44 24.2	-0.2
comp=Z,13nm,0.7s,baz=96,slow=7.5,SNR=37							
SVE	Sverdlovsk	75.70	328c	iP	P	19 44 25.2	-0.1
SVE				pmax	pmax		
comp=Z,37nm,0.9s							
ARU	Arti	76.69	328	P	P	19 44 30.4	-0.5
comp=Z,6.3nm,0.6s,baz=112,slow=2.8,SNR=38							
ARU	Arti	76.69	328	eP	P	19 44 30.1	-0.8
comp=Z,20nm,0.7s							
ARU	Arti	76.69	328c	iP	P	19 44 30.0	-0.8
ARU				S	S	19 54 01.3	+2.7
ARU				pmax	pmax		
comp=Z,20nm,0.7s							
TTA	Tatalina	80.92	27	eP	P	19 44 54.7	+0.8
comp=Z,3.8nm,0.7s							
TTA	Tatalina	80.92	27	eP	P	19 44 54.7	+0.8
TTA				pmax	pmax		
comp=Z,4.0nm,0.7s							
AKT	Akhty	81.27	311	eP	P	19 44 56.1	-0.1
AKT				e		19 48 05.6	
AKT				pmax	pmax		
comp=Z,22nm,1.0s							
MAK	Makhachkala	81.54	313	eP	P	19 44 56.4	-1.0
MAK				eS	S	19 54 53.4	+3.2
MAK				e*SS	sS	19 56 12.7	-12
MAK				pmax	pmax		
comp=Z,38nm,0.9s							
KDAK	Kodiak Island	81.72	32	eP	P	19 44 59.1	+1.0
comp=Z,118nm,1.8s							
KDAK	Kodiak Island	81.72	32	iP	P	19 44 59.0	+1.0
KIRV	Kirov	81.95	329	P	P	19 44 59.2	0.0
comp=Z,42nm,0.7s,baz=260,slow=0.9,SNR=21							
VNDA	Vanda	82.28	173	P	P	19 45 00.9	+0.3
comp=Z,3.4nm,0.7s,baz=319,slow=6.5,SNR=32							
VNDA	Vanda	82.28	173	eP	P	19 45 00.9	+0.3
comp=Z,5.2nm,0.8s							
RAYN	Ar Rayn	82.51	293	eP	P	19 45 02.1	-0.9
comp=Z,17nm,0.8s							
RAYN	Ar Rayn	82.51	293	iP	P	19 45 02.7	-0.3
SNR=22							
RAYN	Ar Rayn	82.51	293	eP	P	19 45 02.1	-0.9
RAYN				pmax	pmax		
comp=Z,17nm,0.8s							
SKT	Skwentna	82.81	28	eP	P	19 45 04.0	+0.3
comp=Z,18nm,1.1s							
SUA	Susitna One	83.12	29	eP	P	19 45 05.7	+0.3
comp=Z,20nm,1.0s							
GNI	Garni	83.46	310⇑	eP	P	19 45 09.0	+1.3
GNI				pmax	pmax		
comp=Z,21nm,0.8s							
MAW	Mawson	83.51	201	P	P	19 45 07.3	+0.3
comp=Z,4.5nm,0.6s,baz=70,slow=8.5,SNR=8.4							
MAW	Mawson	83.51	201	eP	P	19 45 06.9	-0.1
comp=Z,9.8nm,2.0s							
MAW	Mawson	83.51	201	eP	P	19 45 06.9	-0.1
MAW				pmax	pmax		
comp=Z,10.0nm,2.0s							
TBLG	Delisi	83.52	312	eP	P	19 45 08.0	+0.3
comp=Z,17nm,0.7s							
RC01	Rabbit Creek A	83.56	29	eP	P	19 45 07.8	+0.3
comp=Z,16nm,0.7s							
TRF	Thorofare Moun	83.56	27	eP	P	19 45 08.1	+0.4
comp=Z,3.4nm,1.1s							
DAMY	Dhamar	83.64	284	eP	P	19 45 08.1	-1.1
comp=Z,16nm,0.7s							
PMR	Palmer	83.90	28	eP	P	19 45 09.8	+0.6
comp=Z,19nm,1.0s							
PMR	Palmer	83.90	28	eP	P	19 45 09.8	+0.6
PMR				pmax	pmax		
comp=Z,19nm,1.0s							
COLD	Coldfoot	84.05	23	eP	P	19 45 11.3	+1.5
comp=Z,3.3nm,0.8s							
ZEI	Tsey	84.17	313	eP	P	19 45 10.4	-0.9
ZEI				pmax	pmax		
comp=Z,17nm,1.4s							
PRGR	Permogore	84.18	332	eP	P	19 45 07.1	-3.4
PRGR				pmax	pmax		
comp=Z,20nm,0.6s							
MCK	McKinley	84.20	26	eP	P	19 45 11.4	+0.7
comp=Z,23nm,1.3s							
MCK	McKinley	84.20	26	eP	P	19 45 11.4	+0.7
MCK				pmax	pmax		
comp=Z,23nm,1.3s							
KNK	Knik Glacier	84.21	29	eP	P	19 45 11.4	+0.7
comp=Z,44nm,1.2s							
SML	Sawmill	84.30	28	eP	P	19 45 12.3	+1.1
comp=Z,29nm,1.0s							
SML	Sawmill	84.30	28	eP	P	19 45 12.3	+1.1
SML				pmax	pmax		
comp=Z,29nm,1.0s							
NCK	Nalchik	84.42	313⇓	eP	P	19 45 12.1	-0.1
NCK				pmax	pmax		
comp=Z,26nm,1.5s							
AKH	Akhalkalaki	84.45	311	eP	P	19 45 13.4	+0.8
comp=Z,33nm,0.9s							
AKH	Akhalkalaki	84.45	311⇓	iP	P	19 45 14.0	+1.4
AKH	Akhalkalaki	84.45	311	eP	P	19 45 13.4	+0.8
AKH				pmax	pmax		
comp=Z,33nm,0.9s							
TOLK	Toolik Lake Re	84.45	21	eP	P	19 45 13.2	+1.3
comp=Z,18nm,1.3s							
WRH	Wood River Hil	84.63	26	eP	P	19 45 13.4	+0.6
comp=Z,7.9nm,1.2s							
CCB	Clear Creek Bu	84.77	25	eP	P	19 45 13.2	-0.2
comp=Z,12nm,1.5s							
SCM	Sheep Creek Mo	84.78	28	eP	P	19 45 13.9	+0.2
comp=Z,58nm,1.3s							
SCM	Sheep Creek Mo	84.78	28	eP	P	19 45 13.9	+0.2
SCM				pmax	pmax		
comp=Z,58nm,1.3s							
KBZ	Khabaz	84.93	313	P	P	19 45 14.4	-0.3
comp=Z,5.8nm,0.8s,baz=127,slow=2.6,SNR=9.6							
KIV	Kislovodsk	85.09	314	eP	P	19 45 15.6	0.0
KIV				pmax	pmax		
comp=Z,29nm,1.1s							
KIV				MLR	MLR		
comp=Z,72nm,19.0s							
ILAR	Eielson Array	85.17	25	P	P	19 45 14.8	-0.7
comp=Z,0.4nm,0.4s,baz=248,slow=5.8,SNR=8.7							
ILAR				pP	pP	19 46 08.8	+0.4
comp=Z,1.4nm,1.0s,baz=263,slow=5.8,SNR=3.5							
DIV	Divide	85.49	29	eP	P	19 45 19.0	+1.8
comp=Z,25nm,1.0s							
BCA	Borcka	85.85	311	⇓iP	P	19 45 19.4	0.0
KLMR	Klimovskoe	87.10	331	eP	P	19 45 22.8	-2.1
KLMR				pmax	pmax		
comp=Z,16nm,0.6s							
KLMR	Klimovskoe	87.10	331	eP	P	19 45 22.9	-2.0
KLMR				AMP		19 45 24.5	
comp=Z,16nm,0.6s							
VORD	Divnogorie	87.37	321	eP	P	19 45 24.6	-1.8
VORD				pmax	pmax		
comp=Z,9.0nm,0.6s							
VSR	Storozhevoye	87.45	321	eP	P	19 45 25.2	-1.6
VSR				pmax	pmax		
comp=Z,20nm,1.2s							
LPSR	Galich'ya Gora	87.56	322	eP	P	19 45 26.1	-1.2
LPSR				pmax	pmax		
comp=Z,30nm,0.7s							
DAWY	Dawson	88.42	26	eP	P	19 45 31.8	+0.6
comp=Z,4.1nm,0.8s							
ANN	Anapa	88.84	315	eP	P	19 45 30.1	-3.4
ANN				eS	S	19 55 39.7	-22
ANN				e		19 55 51.5	
ANN				pmax	pmax		
comp=Z,53nm,1.4s							
OBN	Obninsk	88.86	325	P	P	19 45 32.6	-0.7
comp=Z,6.4nm,0.5s,baz=63,slow=2.6,SNR=8.4							
OBN	Obninsk	88.86	325	eP	P	19 45 32.7	-0.6
comp=Z,33nm,0.9s							
OBN	Obninsk	88.86	325d	iP	P	19 45 32.2	-1.1
OBN				e		19 49 03.7	
OBN				ePPP	PPP	19 51 01.6	
OBN				pmax	pmax		
comp=Z,37nm,0.9s							
LVZ	Lovozero	88.90	338	eP	P	19 45 32.2	-1.2
comp=Z,21nm,0.9s							
LVZ	Lovozero	88.90	338de	P	P	19 45 31.9	-1.5
LVZ				pmax	pmax		
comp=Z,20nm,0.9s							
ASF	Jabal al Asfar	89.92	302	P	P	19 45 38.9	-0.1
comp=Z,7.8nm,0.7s,baz=50,slow=4.0,SNR=18							
INK	Inuvik	90.37	22	eP	P	19 45 39.8	-0.3
comp=Z,2.2nm,0.9s							
INK	Inuvik	90.37	22	eP	P	19 45 39.8	-0.3
INK				pmax	pmax		
comp=Z,2.0nm,0.9s							
MMAI	Mount Meron Ar	91.12	303	P	P	19 45 44.2	-0.3
comp=Z,4.4nm,0.7s,baz=85,slow=9.3,SNR=13							
SIM	Simferopol'	91.18	315c	iP	P	19 45 43.7	-0.7
SIM				pmax	pmax		
comp=Z,16nm,0.8s							
SPITS	Spitsbergen Ar	91.74	349	P	P	19 45 45.6	-0.7
comp=Z,2.0nm,0.4s,baz=84,slow=8.5,SNR=14							
EIL	Elat	91.75	300	P	P	19 45 47.1	-0.3
comp=Z,5.8nm,0.9s,baz=351,slow=9.7,SNR=4.3							
ARA0	ARCESS Array S	91.94	340	eP	P	19 45 46.5	-0.9
ARCES	ARCESS Array B	91.94	340	P	P	19 45 46.5	-0.9
comp=Z,8.1nm,0.3s,baz=85,slow=6.4,SNR=67							
ARE0	ARCESS Array S	91.94	340	eP	P	19 45 46.7	-0.7
comp=Z,1.2nm,0.9s							
ARE0	ARCESS Array S	91.94	340	eP	P	19 45 46.8	-0.7
BR101	Keskin Array S	92.00	310	eP	P	19 45 47.5	-1.0
BR131	Keskin Array S	92.00	310	eP	P	19 45 47.4	-1.2
comp=Z,4.1nm,0.9s							
BRTR	Keskin Array B	92.00	310	P	P	19 45 47.5	-1.0
comp=Z,2.4nm,0.8s,baz=117,slow=5.2,SNR=15							
BRTR				PP	PP	19 49 29.3	-2.0
comp=Z,0.8nm,0.8s,baz=121,slow=5.9,SNR=3.9							
HAMF	Hammerfest	92.28	341	eP	P	19 45 47.9	-1.0
HEF	Hetta	92.86	339	eP	P	19 45 50.6	-1.1
FIA1	FINESS Array S	93.50	332	eP	P	19 45 53.1	-1.6
comp=Z,6.0nm,0.9s							
FIA0	FINESS Array S	93.50	332	eP	P	19 45 53.5	-1.2
FIA0	FINESS Array S	93.50	332	eP	P	19 45 53.5	-1.2
FINES	FINESS Array B	93.50	332	P	P	19 45 53.5	-1.2
comp=Z,3.0nm,0.6s,baz=69,slow=6.3,SNR=14							
KIF	Kilpisjarvi	93.70	340	eP	P	19 45 54.4	-1.1
AKASG	Malin Array Be	93.75	321	P	P	19 45 54.5	-1.7
comp=Z,3.7nm,0.8s,baz=60,slow=5.1,SNR=13							
AKBB	Malin Array Si	93.75	321	eP	P	19 45 54.3	-1.8
comp=Z,5.5nm,1.0s							
AKBB	Malin Array Si	93.75	321	eP	P	19 45 54.3	-1.8
AKBB				pmax	pmax		
comp=Z,6.0nm,1.0s							
VSU	Vasula	93.80	329c	iP	P	19 45 54.8	-1.3
VSU				pmax	pmax		
comp=Z,35nm,1.3s							
TRO	Tromso	94.13	341	eP	P	19 45 56.0	-1.4
TLCR		94.88	316⇑	iP	P	19 46 00.8	-0.6
TLCR		94.88	316	⇑P	P	19 46 00.8	-0.6
SALU	Saltoluokta	95.03	339	eP	P	19 46 00.4	-1.3
CFR	Carcaliu	95.36	316⇑	iP	P	19 46 02.3	-1.3
CFR	Carcaliu	95.36	316	⇑P	P	19 46 02.3	-1.3
TLB	Topalu	95.52	315⇑	iP	P	19 46 03.3	-1.0
TLB	Topalu	95.52	315	⇑P	P	19 46 03.3	-1.0
PETR	Petresti	95.89	316⇑	iP	P	19 46 06.3	+0.3
STEI	Steigen	96.00	340	eP	P	19 46 04.8	-1.1
TESR	Tescani	96.15	317⇑	iP	P	19 46 06.0	-1.2
VRI	Vrincioaia	96.21	317⇑	iP	P	19 46 07.5	0.0
VRI	Vrincioaia	96.21	317	⇑P	P	19 46 07.5	0.0
PLOR	Plostina	96.27	317⇑	iP	P	19 46 07.4	-0.3
PLOR	Plostina	96.27	317	⇑P	P	19 46 07.5	-0.3
BIZ	Bicaz	96.44	318⇓	iP	P	19 46 07.7	-0.8
MLR	Muntele Rosu	96.82	316	P	P	19 46 09.3	-1.1
comp=Z,4.7nm,0.7s,baz=149,slow=0.6,SNR=14							
MLR	Muntele Rosu	96.82	316	eP	P	19 46 09.6	-0.8
comp=Z,6.4nm,0.8s							
MLR	Muntele Rosu	96.82	316⇑	iP	P	19 46 10.1	-0.3
MLR	Muntele Rosu	96.82	316	⇑P	P	19 46 10.1	-0.3
BURAR	Bucovina Array	96.90	318⇓	iP	P	19 46 10.4	-0.3
BURAR	Bucovina Array	96.90	318	⇓P	P	19 46 10.4	-0.3
BUR08	Bucovina Ar. S	96.90	318	eP	P	19 46 10.1	-0.6
comp=Z,5.0nm,0.6s							
LVV	L'vov	97.19	321

TORD	**Torodi Ar. Bea**	**124.92 288**	PKP	**PKPdf**	**19 51 38.1**	**-1.0**
	comp=Z,4.1nm,0.6s,baz=83,slow=1.7,SNR=29					
TORD			SKPbc	SKiKP	19 54 31.2	-23
	comp=Z,0.6nm,0.5s,baz=84,slow=3.8,SNR=4.8					
TORD			SKP		19 54 52.8	
	comp=Z,0.7nm,0.6s,baz=55,slow=2.9,SNR=4.4					
TOA1	**Torodi Ar. Sit**	**124.92 288**	*e*PKPdf	**PKPdf**	**19 51 38.1**	**-1.0**
DBIC	**Dimbokro**	**132.53 282**	SKPbc	**SKPbc**	**19 54 58.8**	**-0.7**
	comp=Z,5.0nm,0.6s,baz=92,slow=5.4,SNR=7.6					
PLCA	**Paso Flores**	**138.48 158**	PKP	**PKPdf**	**19 52 04.5**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=9.5,slow=3.6,SNR=4.2					
PLCA			SKPbc	**SKPbc**	**19 55 18.6**	**+1.4**
	comp=Z,2.6nm,0.9s,baz=280,slow=3.5,SNR=3.8					
PEL	**Peldehue**	**144.85 151**	*e*PKPbc	PKPbc	19 52 15.5	+0.3
PEL	**Peldehue**	**144.85 151**	*e*PKIKP	PKPbc	19 52 15.5	+0.3
LCO	**Las Campanas**	**148.14 147**	*e*PKPbc	**PKPbc**	**19 52 25.3**	**+0.3**
LCO	**Las Campanas**	**148.14 147**	*e*PKP2	**PKPbc**	**19 52 25.3**	**+0.3**
GO02	**Mina Guanaco**	**151.72 143**	*e*PKPbc	**PKPbc**	**19 52 33.5**	**-0.3**
CPUP	**Villa Florida**	**155.93 167**	PKPab	**PKPab**	**19 53 01.7**	**+1.0**
	comp=Z,4.9nm,0.9s,baz=110,slow=2.1,SNR=7.1					
LPAZ	**La Paz**	**158.82 130**	PKP	**PKPdf**	**19 52 37.6**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=132,slow=3.4,SNR=3.9					
LPAZ			PKPab	**PKPab**	**19 53 16.1**	**+1.7**
	comp=Z,3.0nm,0.7s,baz=223,slow=8.1,SNR=8.8					

IDC 19 19:39:42.0±15.0, 7°.20S×129°.04E, h272km±173km, mb3.5/2, mb1 3.5/4, mb1mx3.0/40, mbtmp4.1/4, Error ellipse: s-maj=158.6km s-min=45.0km az=44.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.33**	**197**	P	Pn	19 42 17.4	+0.5
WRA	**Warramunga Arr**	**13.67**	**158**	P	Pn	19 42 43.6	-2.0
	baz=324,slow=16,SNR=2.9						
WRA				S	S	19 45 08.5	-8.5
	1.0nm,0.3s,baz=340,slow=22,SNR=6.0						
ASAR	**Alice Springs**	**17.02**	**165**	P	P	19 43 23.4	+0.5
	baz=339,slow=10.0,SNR=3.0						
MKAR	**Makanchi Array**	**67.88**	**327**	P	P	19 50 11.7	+0.2
	1.8nm,0.5s,baz=120,slow=8.1,SNR=26						
KURBB	**Kurchatov Arra**	**72.19**	**329**	P	P	19 50 37.2	-0.2
	0.4nm,0.4s,baz=131,slow=5.5,SNR=3.5						

ROM 19 19:42:21.2±0.1, 42°.791N±0°.002×12°.965E±0°.006, h10km, ML0.9/3, Error ellipse: s-maj=0.5km s-min=0.1km az=91.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**69**	P	Pg	19 42 24.6	+0.5
NRCA				S	Sg	19 42 26.8	+0.6
NRCA				AML	AML		
	comp=E,187μm,0.5s						
NRCA				AML	AML		
	comp=N,87μm,1.2s						
NRCA				AML	AML		
	comp=N,87μm,1.2s						
NRCA				AML	AML		
	comp=E,187μm,0.5s						
FEMA	**Monte Fema**	**0.18**	**20**	P	Pg	19 42 25.8	+0.6
FEMA				S	Sg	19 42 29.1	+1.2
LNSS	**Leonessa**	**0.20**	**163**	P	Pg	19 42 26.1	+0.7
LNSS				S	Sg	19 42 29.4	+1.2
LNSS				AML	AML		
	comp=E,45μm,0.3s						
LNSS				AML	AML		
	comp=N,58μm,1.2s						
LNSS				AML	AML		
	comp=N,58μm,1.2s						
LNSS				AML	AML		
	comp=E,45μm,0.3s						
CESI	**CESI - Serrava**	**0.22**	**348**	P	Pg	19 42 26.5	+0.7
CESI				S	Sg	19 42 30.1	+1.2
CESI				AML	AML		
	comp=E,6μm,1.2s						
CESI				AML	AML		
	comp=N,18μm,0.8s						
CESI				AML	AML		
	comp=E,6μm,1.2s						
CESI				AML	AML		
	comp=N,18μm,0.8s						
FDMO	**Fiordimonte**	**0.26**	**20**	P	Pg	19 42 27.2	+0.7
FDMO				S	Sb	19 42 31.5	-1.1
FDMO				AML	AML		
	comp=E,31μm,0.8s						
FDMO				AML	AML		
	comp=N,15μm,1.2s						
FDMO				AML	AML		
	comp=N,15μm,1.2s						
FDMO				AML	AML		
	comp=E,31μm,0.8s						

*IPEC **19** 19:43:44.8±0.3, 51°.50N×16°.21E, h1km, ML1.6/3, Error ellipse: s-maj=2.1km s-min=0.9km az=33.0*

PRU 19 19:43:45.1±0.0, 51°.48N×16°.09E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**169**	*e*Pg	Pg	19 43 57.7	+0.2
KSP				*e*Sg	Sg	19 44 06.2	+0.3
CHVC	**Chvalec**	**0.89**	**181**	*e*PG	Pg	19 44 02.6	+0.4
CHVC				*e*SG	Sg	19 44 14.1	+0.3
	comp=Z,13nm,0.6s						
OSTC	**Ostas**	**0.93**	**175**	*e*PG	Pg	19 44 03.0	+0.1
OSTC				*e*SG	Sg	19 44 15.1	+0.2
	comp=Z,10.0nm,0.2s						
UPC	**Upice**	**0.97**	**183**	*e*PG	Pg	19 44 03.9	+0.1
UPC				*e*SG	Sg	19 44 16.4	0.0
	comp=Z,30nm,0.6s						
DPC	**Dobruska-Polom**	**1.14**	**173**	*e*PG	Pg	19 44 06.5	-0.4
DPC				*e*SG	Sg	19 44 21.5	-0.2
	comp=Z,6.5nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	Pg	19 44 11.0	0.0
PVCC				*e*SG	Sb	19 44 29.1	0.0
	comp=Z,30nm,0.3s						
BRG	**Berggiesshubel**	**1.48**	**247**	PG	Pg	19 44 13.4	-0.1
BRG				SG	Sn	19 44 33.4	+0.4
	26nm,0.3s						
PRU	**Pruhonice**	**1.79**	**214**	*e*PG	Pb	19 44 18.1	-0.6
PRU				*e*SG	Sb	19 44 41.5	-0.2
	comp=Z,9.4nm,0.4s						
MORC	**Moravsky Berou**	**1.94**	**151**	*e*PN	Pn	19 44 18.6	-0.7
MORC				*e*SG	Sb	19 44 45.7	-0.4
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	Pn	19 44 18.5	-0.8
	baz=334						
MORC				*e*Sg	Sb	19 44 45.6	-0.5
	3.6nm,0.3s,baz=334						
CLL	**Collm**	**1.94**	**266**	*e*Pg	Pn	19 44 20.0	+0.7
CLL				*i* Sg	Sb	19 44 46.3	+0.2
	comp=Z,6.0nm,0.5s						
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*SG	Sb	19 44 50.9	+0.2
	comp=Z,5.5nm,0.5s						
VRAC	**Vranov**	**2.20**	**171**	*e*PN	Pn	19 44 22.7	-0.2
VRAC				*e*SG	Sb	19 44 53.6	+0.1
VRAC	**Vranov**	**2.20**	**171**	*e*Pn	Pn	19 44 22.6	-0.3
	baz=354						
VRAC				*e*Sg	Sb	19 44 53.6	+0.1
	comp=Z,2.3nm,0.3s,baz=354						
KRUC	**Moravsky**	**2.43**	**175**	*e*PG	Pb	19 44 29.9	+0.3
KRUC				*e*SG	Sg	19 45 01.6	-1.5
KRUC	**Moravsky**	**2.43**	**175**	*e*Pg	Pb	19 44 29.9	+0.3
	baz=357						
KRUC				*e*Sg	Sg	19 45 01.6	-1.5
	comp=Z,3.1nm,0.4s,baz=357						
NKC	**Novy Kostel**	**2.62**	**243**	*e*PG	Pb	19 44 32.8	-0.2
NKC				*e*SG	Sg	19 45 08.8	-0.5
	comp=Z,9.9nm,0.4s						
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	Pn	19 44 32.1	+0.2
KHC				*e*PG	Pb	19 44 37.9	+1.1
KHC				*e*SN	Sn	19 45 06.0	-0.9
KHC				*e*SG	Sg	19 45 15.5	-1.1
	comp=Z,2.9nm,0.4s						

*ISCJB **19** 19:45:20.9±0.5, 25°.33N±0°.04×91°.49E±0°.03, h28km, Error ellipse: s-maj=6.2km s-min=4.2km az=164.2*
*NDI **19** 19:45:22.6±2.5, 25°.33N×91°.53E, h32km±7km, ML3.5*

ISC 19 19:45:22.8±1.0, 25°.34N±0°.06×91°.54E±0°.03, h28km, n19, σ1§47/29, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.38**	**53**	*e*P	Pn	19 45 31.9	-0.7
SHL				*e*S	Sb	19 45 37.0	-0.4
SHL				IAML		19 45 37.7	
	comp=N,1μm,0.1s						
SHL				IAML		19 45 37.8	
	comp=E,1μm,0.1s						
TURI	**Tura**	**1.11**	**281**	*e*P	Pb	19 45 45.0	+1.6
TURI				*e*S	Sb	19 45 59.9	+2.4
TURI				IAML		19 46 02.3	
	comp=N,2μm,0.1s						
TURI				IAML		19 46 02.9	
	comp=E,2μm,0.1s						
TEZP	**TEZPUR**	**1.70**	**41**	*e*P	Pn	19 45 50.7	+0.1
TEZP				*e*S	Sn	19 46 10.1	-1.5
TEZP				IAML		19 46 12.9	
	comp=N,608nm,0.1s						
TEZP				IAML		19 46 13.3	
	comp=E,582nm,0.1s						
BELO	**BELONIA**	**2.08**	**182**	*e*P	Pn	19 45 54.2	-1.6
BELO				*e*S	Sn	19 46 18.4	-2.4
TAWA	**Tawang**	**2.27**	**7**	*e*P	Pn	19 45 59.3	+0.6
TAWA				*e*S	Sn	19 46 23.2	-2.7
TAWA				IAML		19 46 27.1	
	comp=E,614nm,0.1s						
TAWA				IAML		19 46 27.1	
	comp=N,521nm,0.1s						
KOHI	**KOHIMA**	**2.35**	**80**	*e*P	Pb	19 46 05.5	+1.0
KOHI				*e*S	Sb	19 46 35.7	+2.5
KOHI				IAML		19 46 44.1	
	comp=N,178nm,0.3s						
KOHI				IAML		19 46 44.2	
	comp=E,142nm,0.3s						
JORH	**JORHAT**	**2.81**	**60**	*e*P	Pn	19 46 07.2	+1.4
JORH				*e*S	Sn	19 46 36.9	-1.9
MOKO	**MOKOCHONG**	**2.85**	**69**	*e*P	Pn	19 46 06.8	+0.2
MOKO				*e*S	Sn	19 46 39.4	-0.7
ZIRO	**ZIRO**	**3.01**	**43**	*e*P	Pn	19 46 09.1	+0.4
ZIRO				*e*x	Sb	19 46 52.5	+0.4
GTK	**Tadong**	**3.30**	**307**	*e*P	Pn	19 46 11.7	-0.9
GTK				*e*S	Sn	19 46 47.6	-3.5
JIRN	**Jiri**	**5.33**	**297**	*e*P	Pn	19 46 41.5	+0.7
	comp=E,11nm,0.2s						
GUN	**Gumba**	**5.68**	**298**	*e*P	Pn	19 46 46.3	+0.7
	comp=E,15nm,0.4s						
PKI	**Pulchoki**	**5.93**	**293**	*e*P	Pn	19 46 49.1	0.0
	comp=E,2.7nm,0.2s						
PKIN	**Phulchoki**	**5.94**	**293**	*e*P	Pn	19 46 49.1	-0.1
	comp=E,3.6nm,0.2s						
KKN	**Kakani**	**6.12**	**295**	*e*P	Pn	19 46 51.3	-0.2
	comp=E,8.7nm,0.2s						
DMN	**Daman**	**6.20**	**293**	*e*P	Pn	19 46 52.4	-0.3
	comp=E,5.0nm,0.3s						
GKN	**Gorkha**	**6.72**	**295**	*e*P	Pn	19 47 00.0	+0.2
KOLN	**Koldanda**	**7.51**	**291**	*e*P	Pn	19 47 10.1	-0.6
	comp=E,4.1nm,0.2s						
PYUN	**Piuthan**	**8.13**	**292**	*e*P	Pn	19 47 18.1	-1.0
	comp=E,4.9nm,0.2s						

*DSN **19** 20:05:19.4±2.8, 26°.72N×58°.01E, h15km, ML3.8/8, Error ellipse: s-maj=38.1km s-min=12.4km az=4.0*
*IDC **19** 20:05:20.8±1.3, 26°.60N×57°.40E, h0km, mb3.6/13, mb1 3.7/14, mb1mx3.5/55, mbtmp3.7/14, ML4.3/1, Error ellipse: s-maj=26.1km s-min=19.2km az=157.0*
*TEH **19** 20:05:22.5, 26°.76N×57°.67E, h11km, ML3.9*
*NEIC **19** 20:05:24.2±2.5, 26°.52N×57°.49E, h26km±3km, mb3.7/5, MN4.0(TEH), Error ellipse: s-maj=19.1km s-min=18.7km az=102.0*

ISC 19 20:05:20.5±0.6, 26°.38N±0°.05×57°.83E±0°.03, h10km, n73, σ1§54/74, mb3.7/14, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.74**	**184**	*e*Pg	Pn	20 05 44.4	+7.5
BANOM	**Banah**	**1.44**	**252**	*e*P	**Pg**	**20 05 48.9**	**+0.7**
	SNR=639						
NIAN	**Nian**	**1.47**	**323**	*e*Pg	**Pn**	**20 05 45.4**	**-1.7**
NIAN				IAMB	IAmb	20 05 47.4	
	comp=Z,0.0nm,0.2s						
SHME	**Shamm**	**1.55**	**258**	*e*P	**Pg**	**20 05 50.8**	**+0.6**
	SNR=96						
SHME				S	**Sg**	**20 06 13.5**	**+3.2**
SHME	**Shamm**	**1.55**	**258**	*e*Pn	**Pg**	**20 05 51.2**	**+1.0**
KHNJ	**Kahnooj**	**1.57**	**356**	*e*Pg	**Pn**	**20 05 44.8**	**-3.7**
MDH	**Madha**	**1.75**	**232**	*e*P	**Pb**	**20 05 52.9**	**+0.4**
	SNR=62						
MDH	**Madha**	**1.75**	**232**	*e*Pn	**Pb**	**20 05 53.0**	**+0.4**
GENO	**Geno**	**1.79**	**305**	*e*Pn	**Pn**	**20 05 52.0**	**+0.3**
GENO				IAMB	IAmb	20 06 20.9	
	comp=Z,0.0nm,0.6s						
MSFE	**Esma-Masafi**	**1.81**	**236**	*e*P	**Pb**	**20 05 53.6**	**-0.1**
	SNR=18						
MSFE	**Esma-Masafi**	**1.81**	**236**	*e*Pn	**Pb**	**20 05 54.2**	**+0.5**
UOSS	**Minazif**	**2.04**	**226**	*e*Pn	**Pn**	**20 05 55.5**	**+0.5**
UOSS	**Minazif**	**2.04**	**226**	*e*P	**Pb**	**20 05 57.0**	**-0.7**
	SNR=25						
UOSS	**Minazif**	**2.04**	**226**	*e*Pn	**Pb**	**20 05 57.2**	**-0.5**
UMQ	**Umm Al-Quwin**	**2.12**	**247**	*e*Pn	**Pg**	**20 06 01.5**	**+0.3**
HATD	**Hatta, Dubai**	**2.17**	**225**	*e*P	**Pb**	**20 06 00.1**	**+0.2**
	SNR=12						
HATD	**Hatta, Dubai**	**2.17**	**225**	*e*Pn	**Pb**	**20 05 59.2**	**-0.7**
ASHO	**Ashiyiah**	**2.32**	**224**	*e*P	**Pb**	**20 06 02.4**	**0.0**
	SNR=22						
ASHO	**Ashiyiah**	**2.32**	**224**	*e*Pn	**Pb**	**20 06 02.7**	**+0.2**
NAZ	**Nazwa, Dubai**	**2.39**	**235**	*e*P	**Pb**	**20 06 03.0**	**-0.6**
	SNR=19						
NAZ	**Nazwa, Dubai**	**2.39**	**235**	*e*Pn	**Pb**	**20 06 05.4**	**+1.8**
CHBR	**Chabahar**	**2.51**	**107**	*e*Pn	**Pg**	**20 06 10.4**	**+1.7**
FAQ	**Al Faqa, Dubai**	**2.59**	**232**	*e*Pn	**Pb**	**20 06 08.1**	**+1.1**
HOQ	**Hoqain**	**2.82**	**190**	*e*Pn	**Pb**	**20 06 09.9**	**-1.1**
ASUD	**Al Ashush, Dub**	**2.85**	**233**	*e*Pn	**Pb**	**20 06 12.0**	**+0.5**
BIDO	**Bidbid**	**2.85**	**174**	*e*Pn	**Pb**	**20 06 12.0**	**+0.4**
ALNE	**Al Ain**	**2.98**	**220**	*i* P	**Pb**	**20 06 13.4**	**-0.3**
	SNR=19						
ALNE	**Al Ain**	**2.98**	**220**	*e*Pn	**Pb**	**20 06 13.7**	**+0.1**
WSAR	**Wadi Sarin**	**3.21**	**167**	Pn	**Pb**	**20 06 15.8**	**-1.8**
	comp=Z,26nm,0.3s,baz=337,slow=4.8,SNR=212						
WSAR				Sn	**Sb**	**20 06 55.1**	**-1.6**
	comp=Z,27nm,0.3s,baz=286,slow=22,SNR=8.8						
NGRK	**Negar Kerman**	**3.40**	**344**	*e*Pn	**Pn**	**20 06 13.3**	**-0.6**
NGRK				IAMB	IAmb	20 07 07.3	
	comp=Z,0.0nm,0.4s						
CHMN	**Cheshme madani**	**3.48**	**356**	*e*Pn	**Pn**	**20 06 14.9**	**-0.1**
CHMN				IAMB	IAmb	20 07 17.3	
	comp=Z,0.0nm,1.0s						
TVBK	**TV Kerman**	**3.72**	**346**	*e*Pn	**Pn**	**20 06 16.8**	**-1.5**
TVBK				IAMB	IAmb	20 06 23.9	
	comp=Z,0.0nm,0.3s						
ZHSF	**Zahedan**	**4.15**	**38**	*e*Pn	**Pn**	**20 06 26.1**	**+2.1**
KHGB	**Koh Gabri**	**4.16**	**344**	*e*Pn	**Pn**	**20 06 24.7**	**+0.4**
KHGB				IAMB	IAmb	20 07 34.7	
	comp=Z,0.0nm,1.0s						
GHIR	**Ghir-Karzin**	**4.71**	**295**	*e*Pn	**Pn**	**20 06 33.6**	**+1.9**
IPAR	**Pars**	**5.45**	**310**	*e*Pn	**Pn**	**20 06 42.6**	**+0.5**
IBAF	**Bafgh**	**5.56**	**340**	*e*Pn	**Pn**	**20 06 41.3**	**-2.1**
BSRN	**Basiran**	**5.68**	**11**	*e*Pn	**Pn**	**20 06 45.3**	**+0.2**
IMEH	**Mehriz**	**5.74**	**331**	*e*Pn	**Pn**	**20 06 44.7**	**-1.2**
IKOO	**Kooshah**	**6.11**	**9**	*e*Pn	**Pn**	**20 06 50.7**	**-0.5**
ITEG	**Tejag**	**6.55**	**7**	*e*Pn	**Pn**	**20 06 56.7**	**-0.3**
ISAD	**Sadrabad**	**6.60**	**328**	*e*Pn	**Pn**	**20 06 56.9**	**-0.9**
YZKH	**Yazd**	**6.62**	**336**	*e*Pn	**Pn**	**20 06 57.4**	**-0.6**
IRAM	**Ramesheh**	**7.21**	**320**	*e*Pn	**Pn**	**20 07 04.5**	**-1.7**
TABS	**Tabas**	**7.28**	**355**	*e*Pn	**Pn**	**20 07 06.6**	**-0.3**
SHRT	**Shahrakht**	**7.55**	**16**	*e*Pn	**Pn**	**20 07 11.3**	**+0.5**
IPIR	**Pirpir**	**8.71**	**318**	*e*Pn	**Pn**	**20 07 25.6**	**-1.3**
RAYN	**Ar Rayn**	**11.54**	**258**	*e*Pn	**Pn**	**20 08 03.9**	**-1.4**
KK31	**Karatay Array**	**19.64**	**29**	*e*P	**Pn**	**20 09 50.6**	**0.0**
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**19.64**	**29**	*e*P	**Pn**	**20 09 51.4**	**+0.7**
	comp=Z,3.0nm,0.9s						
EIL	**Elat**	**20.45**	**284**	P	**P**	**20 09 59.2**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=106,slow=15,SNR=2.0						
MMAI	**Mount Meron Ar**	**20.55**	**294**	P	**P**	**20 09 56.8**	**-2.6**
	comp=Z,0.2nm,0.4s,baz=315,slow=55,SNR=3.2						
AAK	**Ala-Archa**	**21.19**	**36**	P	**P**	**20 10 09.5**	**+3.1**
	comp=Z,1.5nm,0.6s,baz=262,slow=5.4,SNR=5.2						
BOOM	**Boomskoye usch**	**21.87**	**38**	*e*P	**P**	**20 10 16.6**	**+3.0**
	comp=Z,2.5nm,0.8s						
ABKAR	**Akbulak array**	**22.90**	**4**	*e*P	**P**	**20 10 23.4**	**-1.0**
	comp=Z,3.1nm,0.9s						
AKTO	**Aktyubinsk**	**24.02**	**0**	P	**P**	**20 10 34.2**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=162,slow=12,SNR=6.3						
BR101	**Keskin Array S**	**24.16**	**309**	*e*P	**P**	**20 10 36.5**	**-0.5**
BR131	**Keskin Array S**	**24.16**	**309**	*e*P	**P**	**20 10 36.9**	**-0.2**
	comp=Z,3.1nm,0.8s						
BRTR	**Keskin Array B**	**24.16**	**309**	P	**P**	**20 10 36.5**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=128,slow=10.0,SNR=11						
MK32	**Makanchi Array**	**28.11**	**37**	*e*P	**P**	**20 11 15.6**	**+3.2**
MKAR	**Makanchi Array**	**28.11**	**37**	P	**P**	**20 11 15.6**	**+3.2**
	comp=Z,0.3nm,0.6s,baz=221,slow=6.7,SNR=3.0						
BVAR	**Borovoye Array**	**28.23**	**16**	P	**P**	**20 11 12.6**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=196,slow=6.0,SNR=3.9						
KURBB	**Kurchatov Arra**	**28.94**	**28**	P	**P**	**20 11 22.4**	**+2.7**
	comp=Z,0.2nm,0.4s,baz=227,slow=8.0,SNR=6.5						
ZALV	**Zalesovo Beam**	**34.01**	**29**	P	**P**	**20 12 06.9**	**+2.5**
	comp=Z,0.6nm,0.3s,baz=231,slow=9.1,SNR=3.4						
ZAA1	**Zalesovo Array**	**34.02**	**29**	*e*P	**P**	**20 12 06.9**	**+2.5**
GERES	**GERESS Array B**	**40.79**	**315**	P	**P**	**20 13 01.3**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=111,slow=10,SNR=5.3						
FIA0	**FINESS Array S**	**41.06**	**337**	*e*P	**P**	**20 13 01.9**	**-1.9**
FINES	**FINESS Array B**	**41.06**	**337**	P	**P**	**20 13 01.9**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=131,slow=8.4,SNR=5.8						
HFS	**Hagfors**	**45.19**	**331**	P	**P**	**20 13 34.9**	**-2.5**
	comp=Z,0.6nm,0.4s,baz=124,slow=9.3,SNR=5.6						
NB200	**NORSAR Array S**	**46.69**	**331**	*e*P	**P**	**20 13 46.7**	**-2.5**
NOA	**NORSAR Array B**	**46.69**	**331**	P	**P**	**20 13 46.7**	**-2.5**
	comp=Z,0.3nm,0.6s,baz=116,slow=8.0,SNR=2.9						
TORD	**Torodi Ar. Bea**	**54.06**	**267**	P	**P**	**20 14 45.0**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=48,slow=7.0,SNR=7.3						
TOA1	**Torodi Ar. Sit**	**54.06**	**267**	*e*P	**P**	**20 14 45.0**	**-0.6**

IDC 19 20:11:49.1±1.7, 11°.67S×165°.14E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/27, mbtmp3.8/5, ML3.3/1, MS3.4/4, Ms1 3.5/4, ms1mx2.9/25, Error ellipse: s-maj=49.9km s-min=31.0km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.42**	**173**	Pn	Pn	20 14 20.6	+0.5
	0.3nm,0.3s,baz=345,slow=20,SNR=3.7						
DZM				LR	LR	20 17 23.4	
	comp=Z,95nm,19.0s,baz=16,slow=32						
STKA	**Stephens Creek**	**29.58**	**223**	LR	LR	20 28 16.7	
	comp=Z,103nm,19.6s,baz=25,slow=33						
H11S2	**WAKE ISLAND Hy 30.00**	**3**		T	T	20 49 33.2	
	baz=184,slow=76,SNR=6.6						
H11S3	**WAKE ISLAND Hy 30.01**	**3**		T	T	20 49 33.4	
	baz=184,slow=76,SNR=6.7						
H11S1	**WAKE ISLAND Hy 30.02**	**3**		T	T	20 49 36.2	
	baz=184,slow=76,SNR=4.8						
WRA	**Warramunga Arr**	**30.71**	**251**	P	P	20 18 05.7	-0.4
	1.9nm,0.9s,baz=83,slow=8.9,SNR=4.0						
ASAR	**Alice Springs**	**31.98**	**244**	P	P	20 18 17.3	0.0
	0.7nm,0.8s,baz=64,slow=10,SNR=5.6						
ASAR				LR	LR	20 29 07.0	
	comp=Z,78nm,21.6s,baz=88,slow=32						
ILAR	**Eielson Array**	**84.29**	**19**	P	P	20 24 22.0	-0.5
	0.5nm,0.7s,baz=238,slow=6.6,SNR=5.3						
NVAR	**Mina Array Bea**	**86.88**	**50**	LR	LR	20 56 15.7	
	comp=Z,35nm,18.9s,baz=218,slow=31						
MKAR	**Makanchi Array**	**93.56**	**317**	P	P	20 25 08.2	+1.0
	1.1nm,1.1s,baz=93,slow=6.1,SNR=4.2						

*ISCJB **19** 20:42:58.4±0.8, 34°.80N±0°.03×26°.13E±0°.02, h6km±4km, mb3.5/5, Error ellipse: s-maj=5.9km s-min=3.4km az=175.6*
*ATH **19** 20:42:58.4, 34°.83N×26°.14E, h19km±1km, ML3.6/6, Error ellipse: s-maj=3.0km s-min=0.9km az=346.0*
*ISK **19** 20:42:58.5, 34°.83N×26°.14E, h8km, ML3.6/21*
*IDC **19** 20:42:58.2±1.2, 34°.87N×25°.98E, h0km, mb3.7/5, mb1 3.6/7, mb1mx3.4/44, mbtmp3.5/7, ML3.1/2, MS2.9/1, Ms1 2.9/1, ms1mx2.0/50, Error ellipse: s-maj=33.2km s-min=14.2km az=0.0*
*THE **19** 20:42:59.9, 34°.89N×26°.09E, h1km±1km, ML3.3/5, Error ellipse: s-maj=2.3km s-min=0.8km az=164.0*

ISC 19 20:42:59.0±1.4, 34°.85N±0°.05×26°.05E±0°.02, h4km±9km, n82, σ1§20/99, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.29**	**28**	PG	**Pg**	**20 43 05.1**	**+0.3**
ZKR				SG	**Sg**	**20 43 09.2**	**+0.6**
ZKR	**Zakros**	**0.29**	**28**	P	**Pg**	**20 43 05.0**	**+0.3**
ZKR				S	**Sg**	**20 43 09.2**	**+0.6**
ZKR	**Zakros**	**0.29**	**28**	P	**Pg**	**20 43 05.0**	**+0.3**
ZKR				S	**Sg**	**20 43 09.3**	**+0.6**
ZKR				AML	AML	20 43 09.4	
ZKR				AML	AML	20 43 09.5	
	comp=N,60698μm,0.2s						
STIA	**Sitia Lasithi**	**0.35**	**6**	P	**Pg**	**20 43 06.3**	**+0.5**
STIA				S	**Sg**	**20 43 11.3**	**+0.9**
NPS	**Neapolis**	**0.54**	**319**	P	**Pg**	**20 43 10.3**	**+0.8**
NPS				S	**Sb**	**20 43 19.7**	**+0.4**
NPS	**Neapolis**	**0.54**	**319**	P	**Pg**	**20 43 10.3**	**+0.8**
NPS				S	**Sb**	**20 43 19.5**	**+0.2**
NPS				AML	AML	20 43 21.7	
	comp=E,9848μm,0.3s						
NPS				AML	AML	20 43 22.4	
	comp=N,6512μm,0.

DAT	**Datca**	**2.25**	**33**	PN	**Pn**	**20 43 37.2**	**+0.1**
APE	**Apeiranthos**	**2.25**	**349**	PN	**Pn**	**20 43 37.4**	**+0.3**
APE	**Apeiranthos**	**2.25**	**349**	P	**Pn**	**20 43 36.9**	**-0.2**
APE	**Apeiranthos**	**2.25**	**349**	P	**Pn**	**20 43 36.8**	**-0.3**
BODT	**Bodrum**	**2.43**	**25**	PN	**Pn**	**20 43 39.6**	**+0.1**
ANKY	**Antikythira Is**	**2.46**	**295**	P	**Pb**	**20 43 42.7**	**-1.2**
BDRM	**Kayabasi**	**2.48**	**27**	*i* P	**Pb**	**20 43 45.2**	**+1.0**
BDRM				*i* S	**Sb**	**20 44 14.3**	**-0.8**
BDRM				IAML_P			
	comp=Z,638nm,0.5s						
DALY	**Dalyan (Mula)**	**2.88**	**46**	PN	**Pn**	**20 43 45.9**	**+0.1**
TURN	**Turunc**	**2.89**	**45**	PN	**Pn**	**20 43 42.2**	**-3.7**
TURN	**Turunc**	**2.89**	**45**	*i* P	**Pn**	**20 43 43.2**	**-2.6**
TURN				*i* S	**Sn**	**20 44 23.8**	**+2.8**
TURN				IAML_P			
	comp=Z,11nm,0.1s						
YER	**Yerkesik**	**2.91**	**38**	PN	**Pn**	**20 43 46.1**	**-0.1**
GCAM	**G?zelcaml?**	**3.00**	**18**	PN	**Pn**	**20 43 47.9**	**+0.6**
FETY	**Fethiye**	**3.04**	**53**	PN	**Pn**	**20 43 47.7**	**-0.3**
VLI	**Veliai**	**3.14**	**307**	P	**Pn**	**20 43 50.3**	**+1.0**
AYDN	**Tasoluk**	**3.17**	**27**	*i* P	**Pb**	**20 43 54.3**	**-1.7**
AYDN				IAML_P			
	comp=Z,326nm,0.4s						
AKAS	**Kas**	**3.21**	**64**	PN	**Pn**	**20 43 50.2**	**-0.2**
AKAS	**Kas**	**3.21**	**64**	*i* P	**Pn**	**20 43 52.1**	**+1.7**
AKAS				IAML_P			
	comp=Z,242nm,0.3s						
DGB	**zmir**	**3.26**	**12**	*i* P	**Pn**	**20 43 51.2**	**+0.3**
DGB				IAML_P			
	comp=Z,240nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**3.42**	**25**	PN	**Pn**	**20 43 53.8**	**+0.5**
URLA	**Izmir**	**3.53**	**7**	PN	**Pn**	**20 43 55.5**	**+0.9**
BLCB	**Balcova**	**3.61**	**12**	PN	**Pn**	**20 43 56.9**	**+1.1**
ELL	**Elmali**	**3.66**	**58**	PN	**Pn**	**20 43 56.8**	**+0.2**
AKUM	**Antalya-Kumluc**	**3.79**	**66**	*i* P	**Pn**	**20 43 58.5**	**+0.2**
AKUM				IAML_P			
	comp=Z,160nm,0.2s						
ITM	**Ithomi**	**4.07**	**306**	PN	**Pn**	**20 44 04.1**	**+2.0**
KULA	**Kula-Manisa**	**4.21**	**29**	PN	**Pn**	**20 44 05.1**	**+1.0**
GUR	**Goura**	**4.29**	**317**	P	**Pn**	**20 44 06.5**	**+1.3**
USAK	**Uak-Merkez**	**4.53**	**31**	*i* P	**Pn**	**20 44 09.9**	**+1.4**
DURS	**Dursunbey**	**5.12**	**22**	*i* P	**Pn**	**20 44 19.9**	**+3.3**
DURS				IAML_P			
	comp=Z,210nm,0.3s						
GAZI	**Gazipasa**	**5.29**	**73**	PN	**Pn**	**20 44 18.9**	**0.0**
TEKE	**Tekeli-Mersin**	**5.91**	**75**	PN	**Pn**	**20 44 27.5**	**+0.2**
BERE	**Bereket-Mersin**	**6.03**	**74**	PN	**Pn**	**20 44 29.6**	**+0.4**
BRTR	**Keskin Array B**	**7.76**	**49**	Pn	**Pn**	**20 44 53.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=238,slow=12,SNR=4.2						
MMAI	**Mount Meron Ar**	**7.99**	**101**	Pn	**Pn**	**20 44 55.4**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=319,slow=11,SNR=5.9						
KEST	**Kesra**	**13.68**	**278**	LR	LR	20 53 16.1	
	comp=Z,49nm,18.3s,baz=218,slow=45						
KOLS	**Kolonicke sedl**	**14.34**	**350**	*e*PN	Pn	20 46 15.0	-7.8
VYHS	**Vyhne**	**14.64**	**341**	*e*PN	Pn	20 46 19.1	-7.9
ESDC	**Sonseca Array**	**24.30**	**290**	P	**P**	**20 48 16.6**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=79,slow=9.9,SNR=5.5						
GEYT	**Alibeck**	**25.93**	**74**	P	**P**	**20 48 32.6**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=351,slow=7.3,SNR=5.8						
TORD	**Torodi Ar. Bea**	**30.86**	**232**	P	**P**	**20 49 16.2**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=24,slow=9.2,SNR=4.9						
MKAR	**Makanchi Array**	**43.34**	**56**	P	**P**	**20 51 01.5**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=272,slow=7.2,SNR=10.0						
ZALV	**Zalesovo Beam**	**44.69**	**46**	P	**P**	**20 51 14.5**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=283,slow=8.5,SNR=2.6						

BUC 19 21:15:07.9±0.5, 45°.47N×27°.11E, h12^{km}±8^{km}, MD1.9/3, 8C-2D, Error ellipse: s-maj=9.5km s-min=5.1km az=60.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRER		**0.13**	**228**	⇑*i*P	Pg	21 15 11.4	+0.3
GRER		**0.13**	**228**	⇑*i*P	Pg	21 15 11.4	+0.3
VRI	**Vrincioaia**	**0.48**	**326**	⇑*i*P	Pg	21 15 17.6	+0.2
VRI				*i* S	Sb	21 15 26.1	+0.7
VRI	**Vrincioaia**	**0.48**	**326**	⇑*i*P	Pg	21 15 17.6	+0.2
VRI	**Vrincioaia**	**0.48**	**326**	S	Sb	21 15 26.1	+0.7
CFR	**Carcaliu**	**0.78**	**111**	⇑*i*P	Pn	21 15 24.5	-0.2
CFR				*i* S	Sb	21 15 34.7	+0.7
CFR	**Carcaliu**	**0.78**	**111**	⇑*i*P	Pn	21 15 24.5	-0.2
CFR	**Carcaliu**	**0.78**	**111**	S	Sb	21 15 34.7	+0.7
TLB	**Topalu**	**1.10**	**143**	⇑*i*P	Pn	21 15 29.7	+0.5
TLB				*i* S	Sn	21 15 45.0	+0.7
TLB	**Topalu**	**1.10**	**143**	⇑*i*P	Pn	21 15 29.7	+0.5
TLB	**Topalu**	**1.10**	**143**	S	Sn	21 15 45.0	+0.7
TIRR	**Tirgusor**	**1.37**	**137**	⇓*i*P	Pb	21 15 33.6	+0.2
TIRR				*i* S	Sn	21 15 51.4	+0.5
TIRR	**Tirgusor**	**1.37**	**137**	⇓*i*P	Pb	21 15 33.6	+0.2
TIRR	**Tirgusor**	**1.37**	**137**	S	Sn	21 15 51.4	+0.5

*ROM **19** 21:15:12.3±0.5, 45°.99N±0°.02×14°.87E±0°.03, h10^{km}, ML3.0/11, Error ellipse: s-maj=3.0km s-min=2.3km az=227.0*
*ISCJB **19** 21:15:12.9±0.2, 46°.08N±0°.01×14°.80E±0°.01, h8^{km}±1^{km}, Error ellipse: s-maj=1.7km s-min=1.4km az=13.5*
*VIE **19** 21:15:13.5±0.2, 46°.07N×14°.75E, h6^{km}, mb2.7/13, ml3.0/13, Error ellipse: s-maj=2.0km s-min=1.0km az=133.0*
*SAR **19** 21:15:13.4±0.4, 46°.10N×14°.75E, h4^{km}±2^{km}, ML3.1/1*
*LJU **19** 21:15:13.6, 46°.05N×14°.76E, h8^{km}, ML2.7*
*PRU **19** 21:15:14.6±0.0, 46°.10N×14°.79E, h4^{km}*
*BGR **19** 21:15:17.4±0.6, 46°.19N×14°.77E, h10^{km}, ML2.7/9, Error ellipse: s-maj=6.7km s-min=4.4km az=172.0*
ISC 19 21:15:14.2±0.8, 46°.08N±0°.01×14°.79E±0°.01, h7^{km}±6^{km}, n123, σ1°30/216, 19C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDS	**Vrh nad Dolski**	**0.07**	**293**	*i* Pg	**Pg**	**21 15 15.7**	**-0.3**
VNDS				*i* Sg	**Sg**	**21 15 16.9**	**-0.5**
	comp=Z,507nm,0.0s						
PDKS	**Podkum**	**0.15**	**96**	⇑*i*Pg	**Pg**	**21 15 17.6**	**+0.2**
PDKS				*i* Sg	**Sg**	**21 15 20.0**	**+0.5**
	comp=Z,3μm,0.2s						
LJU	**Ljubljana**	**0.18**	**260**	⇑*i*Pg	**Pg**	**21 15 17.5**	**-0.4**
LJU				*i* Sg	**Sg**	**21 15 19.8**	**-0.7**
	comp=Z,606nm,0.1s						
LJU	**Ljubljana**	**0.18**	**260**	*e*Pg	**Pg**	**21 15 16.7**	**-1.3**
LJU				*e*Sg	**Sg**	**21 15 19.8**	**-0.7**
VISS	**Visnje**	**0.28**	**172**	⇓*i*Pg	**Pg**	**21 15 19.0**	**-0.6**
VISS				*i* Sg	**Sg**	**21 15 22.6**	**-0.8**
	comp=Z,308nm,0.1s						
GBAS	**Gorenja Brezov**	**0.28**	**240**	⇑*i*Pg	**Pg**	**21 15 19.0**	**-0.7**
GBAS				*i* Sg	**Sg**	**21 15 22.3**	**-1.1**
	comp=Z,677nm,0.1s						
MOZS	**Mozjanca**	**0.32**	**312**	⇓*i*Pg	**Pg**	**21 15 20.6**	**0.0**
MOZS				*i* Sg	**Sg**	**21 15 24.7**	**-0.2**
	comp=Z,418nm,0.1s						
CRNS	**Crni Vrh**	**0.37**	**271**	⇑*i*Pg	**Pg**	**21 15 20.8**	**-0.6**
CRNS				*e*Sg	**Sg**	**21 15 25.3**	**-0.9**
	comp=Z,657nm,0.1s						
LEGS	**Legarje**	**0.39**	**109**	⇑*i*Pg	**Pg**	**21 15 21.8**	**0.0**
LEGS				*e*Sg	**Sg**	**21 15 27.9**	**+0.9**
CEY	**Cerknica**	**0.42**	**217**	*i* Pg	**Pg**	**21 15 21.5**	**-0.9**
CEY				*i* Sg	**Sg**	**21 15 26.7**	**-1.3**
	comp=Z,480nm,0.2s						
CEY	**Cerknica**	**0.42**	**217**	*e*Pg	**Pg**	**21 15 21.4**	**-1.0**
CEY				*e*Sg	**Sg**	**21 15 26.8**	**-1.1**
OBKA	**Obir**	**0.46**	**339**	*i* Pg	**Pg**	**21 15 23.1**	**-0.1**
	comp=Z,74nm,0.2s,SNR=152						
OBKA				Sg	**Sg**	**21 15 29.7**	**+0.4**
	comp=Z,209nm,0.2s						
OBKA	**Obir**	**0.46**	**339**	*e*Pg	**Pg**	**21 15 23.1**	**-0.1**
OBKA				*e*Sg	**Sg**	**21 15 29.9**	**+0.6**
DOBS	**Dobrina**	**0.48**	**81**	⇑*i*Pg	**Pg**	**21 15 23.4**	**-0.1**
DOBS				*e*Sg	**Sg**	**21 15 30.6**	**+0.8**
	comp=Z,183nm,0.1s						
CESS	**Cesta pri Krsk**	**0.48**	**102**	⇑*i*Pg	**Pg**	**21 15 23.6**	**0.0**
CESS				*e*Sg	**Sg**	**21 15 30.2**	**+0.3**
	comp=Z,214nm,0.2s						
CRES	**Cresnjev**	**0.53**	**118**	*i* Pg	**Pg**	**21 15 24.1**	**-0.4**
CRES				*e*Sg	**Sg**	**21 15 32.0**	**+0.7**
	comp=Z,99nm,0.1s						
CRES	**Cresnjev**	**0.53**	**118**	⇑*i*Pg	**Pg**	**21 15 24.0**	**-0.4**
CRES				*e*Sg	**Sg**	**21 15 31.8**	**+0.4**
JAVS	**Javornik**	**0.54**	**250**	⇑*i*Pg	**Pg**	**21 15 23.5**	**-1.1**
GBRS	**Gornja Briga**	**0.55**	**178**	⇓*i*Pg	**Pg**	**21 15 24.0**	**-0.7**
GOLS	**Golise**	**0.59**	**96**	⇑*i*Pg	**Pg**	**21 15 25.5**	**0.0**
	comp=Z,430nm,0.4s						
GORS	**Gorjuse**	**0.60**	**294**	⇑*i*Pg	**Pg**	**21 15 25.1**	**-0.7**
GORS				*i* Sg	**Sg**	**21 15 33.0**	**-0.6**
	comp=Z,196nm,0.2s						
PERS	**Pernice**	**0.60**	**22**	⇓*i*Pg	**Pg**	**21 15 25.7**	**-0.2**
	comp=Z,101nm,0.1s						
BISS	**Bistriski jare**	**0.62**	**22**	*i* Pg	**Pg**	**21 15 26.0**	**-0.2**
	comp=Z,184nm,0.1s						
KNDS	**Knezji Dol**	**0.62**	**208**	*i* Pg	**Pg**	**21 15 24.8**	**-1.3**
KNDS				*e*Sg	**Sg**	**21 15 33.2**	**-1.0**
	comp=Z,532nm,0.3s						
GCIS	**Gornji Cirnik**	**0.62**	**109**	*i* Pg	**Pg**	**21 15 25.9**	**-0.3**
	comp=Z,96nm,0.2s						
SOKA	**Soboth**	**0.62**	**16**	*e*Pg	**Pg**	**21 15 26.1**	**-0.2**
	comp=Z,43nm,0.2s,SNR=170						
SOKA				*e*Sg	**Sg**	**21 15 34.0**	**-0.5**
	comp=Z,83nm,0.2s						
GROS	**Grobnik**	**0.63**	**52**	*i* Pg	**Pg**	**21 15 26.2**	**-0.1**
	comp=Z,72nm,0.1s						
VOJS	**Vojsko**	**0.63**	**266**	⇑*i*Pg	**Pg**	**21 15 25.2**	**-1.2**
VOJS				*i* Sg	**Sg**	**21 15 34.5**	**-0.1**
	comp=Z,78nm,0.1s						
BOJS	**Bojanci**	**0.66**	**150**	⇓*i*Pg	**Pg**	**21 15 26.3**	**-0.6**
BOJS				*i* Sg	**Sg**	**21 15 34.3**	**-1.1**
	comp=Z,252nm,0.2s						
OZLJ	**Ozalj**	**0.66**	**134**	*i* Pg	**Pg**	**21 15 26.5**	**-0.5**
OZLJ				Sg	**Sg**	**21 15 33.3**	**-2.3**
CADS	**Cadrg**	**0.75**	**282**	*i* Pg	**Pg**	**21 15 27.4**	**-1.2**
CADS				*e*Sg	**Sg**	**21 15 37.5**	**-0.8**
	comp=Z,138nm,0.1s						
SKDS	**Skadanscina**	**0.76**	**226**	*i* Pg	**Pg**	**21 15 27.1**	**-1.7**
SKDS				*e*Sg	**Sg**	**21 15 37.3**	**-1.3**
	comp=Z,158nm,0.1s						
RIY	**Rijeka**	**0.78**	**196**	*e*Pg	**Pg**	**21 15 27.3**	**-1.9**
RIY				*e*Sg	**Sg**	**21 15 39.4**	**0.0**
TRI	**Trieste**	**0.80**	**243**	P	**Pg**	**21 15 27.8**	**-1.9**
TRI				S	**Sg**	**21 15 39.0**	**-1.0**
SABO	**M.te Sabotino**	**0.83**	**264**	P	**Pg**	**21 15 28.4**	**-1.8**
SABO				S	**Sg**	**21 15 41.0**	**0.0**
SABO				AML	AML		
	comp=E,1116μm,0.7s						
SABO				AML	AML		
	comp=N,969μm,0.4s						
SABO				AML	AML		
	comp=E,1116μm,0.7s						
SABO				AML	AML		
	comp=N,969μm,0.4s						
SABO				AML	AML		
	comp=E,1116μm,0.7s						
SABO				AML	AML		
	comp=N,969μm,0.4s						
ROBS	**Robic**	**0.90**	**281**	*i* Pg	**Pg**	**21 15 29.9**	**-1.7**
	comp=Z,79nm,0.2s						
MYKA	**Terra Mystica**	**0.97**	**305**	Pg	**Pg**	**21 15 32.1**	**-0.7**
	comp=Z,8.3nm,0.2s,SNR=21						
MYKA				Sg	**Sg**	**21 15 44.5**	**-0.8**
	comp=Z,22nm,0.2s						
ACOM	**Acomizza, Ital**	**1.00**	**299**	P	**Pg**	**21 15 32.8**	**-0.7**
ACOM				S	**Sg**	**21 15 46.7**	**+0.2**
ACOM				AML	AML		
	comp=E,1095μm,1.6s						
ACOM				AML	AML		
	comp=N,1096μm,1.5s						
ACOM				AML	AML		
	comp=E,1095μm,1.6s						
ACOM				AML	AML		
	comp=N,1096μm,1.5s						
ACOM				AML	AML		
	comp=E,1095μm,1.6s						
ACOM				AML	AML		
	comp=N,1096μm,1.5s						
PTCC	**Patocco-Chiusa**	**1.05**	**289**	P	**Pg**	**21 15 32.8**	**-1.5**
PTCC				S	**Sg**	**21 15 48.1**	**+0.2**
PTCC				AML	AML		
	comp=E,417μm,0.6s						
PTCC				AML	AML		
	comp=N,410μm,1.0s						
PTCC				AML	AML		
	comp=E,417μm,0.6s						
PTCC				AML	AML		
	comp=N,411μm,1.0s						
PTCC				AML	AML		
	comp=E,417μm,0.6s						
PTCC				AML	AML		
	comp=N,411μm,1.0s						
VINO	**Villanova**	**1.06**	**280**	P	**Pg**	**21 15 32.8**	**-1.8**
VINO				S	**Sg**	**21 15 48.4**	**0.0**
KOGS	**Kog**	**1.08**	**69**	*i* Pg	**Pg**	**21 15 34.5**	**-0.5**
KOGS				*e*Sg	**Sb**	**21 15 50.2**	**+0.7**
	comp=Z,180nm,0.3s						
GEPF	**Gemona**	**1.16**	**280**	P	**Pg**	**21 15 35.0**	**-1.5**
GEPF				S	**Sg**	**21 15 51.8**	**+0.2**
GEPF				AML	AML		
	comp=E,420μm,0.4s						
GEPF				AML	AML		
	comp=N,593μm,0.7s						
GEPF				AML	AML		
	comp=E,420μm,0.4s						
GEPF				AML	AML		
	comp=N,593μm,0.7s						
GEPF				AML	AML		
	comp=E,420μm,0.4s						
GEPF				AML	AML		
	comp=N,593μm,0.7s						
ARSA	**Arzberg**	**1.28**	**23**	*e*Pg	**Pg**	**21 15 37.6**	**-1.1**
	comp=N,14nm,0.3s,SNR=43						
ARSA				Sg	**Sn**	**21 15 55.9**	**0.0**
	comp=N,19nm,0.3s						
ARSA	**Arzberg**	**1.28**	**23**	*e*Pn	**Pg**	**21 15 37.8**	**-1.0**
ARSA				*e*Sg	**Sg**	**21 15 54.5**	**-0.9**
ARSA	**Arzberg**	**1.28**	**23**	P	**Sg**	**21 15 54.5**	**-0.9**
ARSA				AML	AML		
	comp=E,208μm,0.4s						
ARSA				AML	AML		
	comp=N,159μm,0.6s						
ARSA				AML	AML		
	comp=E,208μm,0.4s						
ARSA				AML	AML		
	comp=N,159μm,0.6s						
KBA	**Koelnbreinsper**	**1.41**	**316**	Pg	**Pn**	**21 15 40.0**	**-0.5**
	comp=N,2.6nm,0.1s,SNR=34						
KBA				Sg	**Sg**	**21 15 59.0**	**-0.6**
	comp=N,19nm,0.3s						
KBA	**Koelnbreinsper**	**1.41**	**316**	*e*Pn	**Pn**	**21 15 40.1**	**-0.5**
KBA				*e*Pg	**Pg**	**21 15 42.5**	**+1.2**
KBA				*e*Sg	**Sg**	**21 15 58.9**	**-0.8**
BEHE	**Becsehely**	**1.43**	**73**	*e*Pg	**Pn**	**21 15 39.6**	**-1.0**
BEHE				*e*Sg	**Sb**	**21 15 59.6**	**-0.1**
BEHE	**Becsehely**	**1.43**	**73**	EPn	**Pn**	**21 15 40.0**	**-0.6**
BEHE				EPg		21 15 41.1	
BEHE				ESg		21 16 06.0	
STAL	**STALIGIAL**	**1.46**	**278**	P	**Pn**	**21 15 40.0**	**-0.9**
STAL				S	**Sb**	**21 16 01.1**	**+0.8**
STAL				AML	AML		
	comp=E,674μm,0.2s						
STAL				AML	AML		
	comp=N,689μm,0.8s						
STAL				AML	AML		
	comp=E,810μm,0.2s						
STAL				AML	AML		
	comp=N,516μm,0.8s						
STAL				AML	AML		
	comp=E,674μm,0.2s						
STAL				AML	AML		
	comp=N,690μm,0.8s						
STAL				AML	AML		
	comp=E,810μm,0.2s						
STAL				AML	AML		
	comp=N,516μm,0.8s						
STAL				AML	AML		
	comp=N,690μm,0.8s						
STAL				AML	AML		
	comp=E,674μm,0.2s						
STAL				AML	AML		
	comp=E,810μm,0.2s						
STAL				AML	AML		
	comp=N,516μm,0.8s						
FVI	**Forni Avoltri**	**1.48**	**291**	P	**Pn**	**21 15 41.3**	**-0.1**
FVI				S	**Sg**	**21 16 02.4**	**+0.5**
FVI				AML	AML		
	comp=E,248μm,1.4s						
FVI				AML	AML		
	comp=N,274μm,1.2s						
FVI				AML	AML		
	comp=N,274μm,1.2s						
FVI				AML	AML		
	comp=E,248μm,1.4s						
NVLJ	**Novalja**	**1.51**	**178**	*i* Pn	**Pn**	**21 15 41.8**	**+0.2**
NVLJ				Sn	**Sn**	**21 16 02.7**	**+1.1**
POLC	**Polcenigo**	**1.59**	**269**	P	**Pn**	**21 15 43.0**	**+0.2**
POLC				AML	AML		
	comp=E,764μm,0.8s						
POLC				AML	AML		
	comp=N,1068μm,0.6s						
POLC				AML	AML		
	comp=E,764μm,0.8s						
POLC				AML	AML		
	comp=N,1068μm,0.6s						
UDBI	**Udbina**	**1.69**	**156**	⇓*i*Pn	**Pn**	**21 15 45.0**	**+0.7**
UDBI				Sn	**Sn**	**21 16 05.5**	**-0.8**
ABTA	**Abfaltersbach**	**1.71**	**294**	Pg	**Pn**	**21 15 45.5**	**+0.9**
	comp=N,14nm,0.3s,SNR=32						
ABTA				Sg	**Sg**	**21 16 10.5**	**+1.3**
	comp=N,33nm,0.3s						
MOA	**Molln**	**1.81**	**349**	*e*Pg	**Pn**	**21 15 46.8**	**+1.0**
	comp=N,2.7nm,0.2s,SNR=28						
MOA				Sg	**Sb**	**21 16 11.0**	**+0.5**
	comp=N,14nm,0.5s						
MOA	**Molln**	**1.81**	**349**	*e*Pn	**Pn**	**21 15 46.7**	**+1.0**
MOA				*e*Sg	**Sb**	**21 16 11.2**	**+0.6**
CONA	**Conrad Observa**	**1.99**	**21**	Pn	**Pn**	**21 15 48.6**	**+0.2**
	comp=N,1.1nm,0.4s						
CONA				*e*Pg	**Pg**	**21 15 53.0**	**+0.6**
	comp=N,12nm,0.3s,SNR=11						
CONA				Sn	**Sn**	**21 16 13.1**	**-0.6**
	comp=N,10.0nm,0.4s						
CONA				Sg	**Sg**	**21 16 20.8**	**+2.5**
	comp=N,14nm,0.5s						
SOP	**Sopron**	**2.02**	**36**	EPn	**Pn**	**21 15 49.0**	**+0.4**
SOP				Sn	**Sg**	**21 16 20.1**	**+1.1**
CGRP	**Cima Grappa**	**2.09**	**266**	P	**Pn**	**21 15 50.4**	**+0.6**
CGRP				AML	AML		
	comp=E,301μm,0.5s						
CGRP				AML	AML		
	comp=N,336μm,1.3s						
CGRP				AML	AML		
	comp=E,301μm,0.5s						
CGRP				AML	AML		
	comp=N,336μm,1.3s						
BLY	**Banja Luka**	**2.15**	**127**	⇑*i*P	**Pb**	**21 15 53.3**	**-0.1**
BLY	**Banja Luka**	**2.15**	**127**	S	**Sb**	**21 16 20.8**	**+0.6**
BLY	**Banja Luka**	**2.15**	**127**	*e*Pn	**Pn**	**21 15 50.2**	**-0.2**
BLY				*e*Sn	**Sn**	**21 16 16.8**	**-0.5**
RJOB	**Jochberg**	**2.15**	**321**	*e*Pn	**Pn**	**21 15 52.0**	**+1.4**
RJOB				*e*Sg	**Sg**	**21 16 22.9**	**-0.4**
TIH	**Tihany**	**2.30**	**68**	EPn	**Pb**	**21 15 55.1**	**-0.9**
TIH				Sn	**Sn**	**21 16 22.1**	**+1.1**
MGRS	**Mrkonjic Grad**	**2.32**	**135**	*e*Pn	**Pn**	**21 15 52.9**	**+0.1**
MGRS				*e*Sn	**Sn**	**21 16 22.3**	**+0.7**
KOSI	**Kohlern**	**2.40**	**281**	P	**Pb**	**21 15 57.3**	**-0.5**
KOSI				AML	AML		
	comp=E,199μm,0.6s						
KOSI				AML	AML		
	comp=N,308μm,0.5s						
KOSI				AML	AML		
	comp=N,308μm,0.5s						
KOSI				AML	AML		
	comp=E,199μm,0.6s						
WTTA	**Wattenberg**	**2.47**	**300**	Pg	**Pb**	**21 16 00.3**	**+1.2**
	comp=E,5.7nm,0.4s						
WTTA				Sg	**Sg**	**21 16 32.7**	**-0.9**
	comp=E,2.7nm,0.1s						
WTTA	**Wattenberg**	**2.47**	**300**	*e*Pn	**Pn**	**21 15 56.9**	**+1.8**
WTTA				*e*Sg	**Sg**	**21 16 33.2**	**-0.5**
APPI	**Appiano**	**2.50**	**281**	P	**Pn**	**21 15 56.6**	**+1.3**
APPI				AML	AML		
	comp=E,96μm,0.5s						
APPI				AML	AML		
	comp=N,130μm,0.4s						
APPI				AML	AML		
	comp=N,130μm,0.4s						
APPI				AML	AML		
	comp=E,96μm,0.5s						
WATA	**Walderalm**	**2.54**	**301**	Pn	**Pn**	**21 15 57.7**	**+1.7**
	comp=E,1.6nm,0.2s						
ZST	**Bratislava**	**2.65**	**36**	*e*PN	**Pn**	**21 15 56.6**	**-0.7**
ZST				*e*SN	**Sn**	**21 16 26.6**	**-2.9**
ZST				*e*SG	**Sg**	**21 16 40.7**	**+1.6**
MORH	**Mrgy, Hungar**	**2.68**	**86**	EPn	**Pg**	**21 16 05.1**	**-0.5**
MORH				Sn	**Sn**	**21 16 27.0**	**-3.5**
CSKK	**Cskako**	**2.71**	**60**	EPn	**Pn**	**21 15 57.0**	**-1.2**
CSKK				Sn	**Sn**	**21 16 29.1**	**-2.2**
SQTA	**Sankt Quirin**	**2.72**	**296**	Pg	**Pb**	**21 16 05.0**	**+1.8**
	comp=E,2.3nm,0.3s						
SQTA				Sg	**Sg**	**21 16 42.2**	**+0.7**
	comp=E,9.2nm,0.4s						
IMOL	**Imola, Italy**	**2.75**	**232**	P	**Pg**	**21 16 11.0**	**+4.0**
MOTA	**Moosalm**	**2.83**	**298**	Pn	**Pn**	**21 16 01.1**	**+1.1**
	comp=E,0.3nm,0.2s						
MODS	**Modra-Piesok**	**2.86**	**36**	*e*PN	**Pn**	**21 15 58.8**	**-1.4**
MODS				*e*PG	**Pg**	**21 16 08.7**	**-0.2**
MODS				*e*SG	**Sg**	**21 16 45.0**	**-0.9**
MODS				*e*LG	Lg	21 16 53.5	
GEC2	**GERESS Array S**	**2.87**	**346**	*e*Pn	**Pn**	**21 16 01.0**	**+0.6**
GEC2				*e*Sg	**Sg**	**21 16 45.1**	**-1.1**
CAVE	**Cavezzo**	**2.92**	**247**	S	**Sn**	**21 16 40.0**	**+3.6**
FETA	**Feichten**	**2.96**	**290**	Pg	**Pg**	**21 16 10.3**	**-0.5**
	comp=E,2.4nm,0.3s						
FETA				Sg	**Sg**	**21 16 48.6**	**-0.5**
	comp=E,17nm,0.9s						
SRO	**Srobarova**	**2.98**	**53**	*e*PN	**Pn**	**21 16 02.2**	**+0.4**
SRO				*e*SN	**Sn**	**21 16 35.6**	**-2.1**
SRO				*e*SG	**Sg**	**21 16 51.7**	**+2.0**
SRO2	**Moca**	**2.99**	**54**	*e*SN	**Sn**	**21 16 34.7**	**-3.4**
SRO2				*e*SG	**Sg**	**21 16 51.8**	**+1.5**
KHC	**Kasperske Hory**	**3.16**	**345**	*e*PN	**Pn**	**21 16 04.6**	**+0.2**
KHC				*e*PG	**Pb**	**21 16 11.0**	**+0.2**
KHC				*e*SN	**Sn**	**21 16 43.0**	**+0.6**
KHC				*e*SG	**Sg**	**21 16 54.4**	**-1.4**
	comp=E,8.1nm,0.7s				

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZS	Buzias	4.79	93⇑	*i*P	Pn	21 16 27.5	+0.7
BRG	Berggiesshubel	4.83	354	*e*	Pg	21 16 46.6	-0.2
BRG				*e*		21 17 29.9	
BRG	Berggiesshubel	4.83	354	SG	Sg	21 17 46.3	-3.0
	comp=E,5.9nm,0.8s						
PDG	Podgorica	4.86	137⇑	*i*P	Pn	21 16 29.6	+2.0
PDG	Podgorica	4.86	137	S	Sn	21 17 29.6	+5.5
PDG	Podgorica	4.86	137	*e*Pn	Pn	21 16 28.0	+0.4
PDG				*e*Sn	Sn	21 17 22.8	-1.3
MRB1	Monte Rocchett	4.95	178	P	Pb	21 16 41.9	+0.7
DRME	Dracevica, Mon	5.01	139	*e*Pn	Pn	21 16 29.5	-0.3
DRME				*e*Sn	Sn	21 17 26.5	-1.5
MDVR	Moldovita	5.04	102⇓	*i*P	Pn	21 16 32.6	+2.3
CLL	Collm	5.37	348	*e*Sn	Sn	21 17 23.0	-14
CLL				*e*Sg	Sg	21 18 05.0	-1.4
	comp=Z,13nm,1.2s						
MATE	Matera	5.60	165⇓	*i*P	Pn	21 16 39.0	+1.1
GZR	Gura Zlata	5.63	94⇑	*i*P	Pn	21 16 40.0	+1.6

IDC ***19*** *21:23:36.5±1.6, 33°.51S×73°.56W, h0km, mb3.7/3, mb1 3.8/6, mb1mx3.7/33, mbtmp3.6/6, ML3.5/3, Error ellipse: s-maj=32.3km s-min=31.3km az=79.0*

ISCJB ***19*** *21:23:39.3±0.9, 33°.58S±0°.06×73°.48W±0°.07, h33km, mb3.6/2, Error ellipse: s-maj=8.4km s-min=7.9km az=168.4*

GUC ***19*** *21:23:39.7±0.5, 33°.66S×73°.17W, h20km, ML3.8*

ISC 19 21:23:41.1±1.2, 33°.59S±0°.07×73°.44W±0°.10, h35km, n12, σ0°.88/18, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	Huala	1.89	139	*e*P	Pn	21 24 10.2	-0.8
GO05				*e*S	Sn	21 24 32.8	-0.8
GO05				IAML		21 24 35.8	
	comp=E,2μm,0.2s						
ROCH	El Roble	2.13	74	*e*P	Pn	21 24 12.4	-2.0
ROCH				*e*S	Sn	21 24 38.9	-0.9
PEL	Peldehue	2.35	80	*e*P	Pn	21 24 16.6	-0.7
PEL				*i*S	Sn	21 24 45.2	+0.2
PEL				IAML		21 24 50.2	
	comp=N,422nm,0.3s						
CLCH	Cerro Calan	2.44	86	*e*P	Pn	21 24 18.3	-0.2
FCH	Farellones	2.65	85	*e*P	Pn	21 24 21.5	-0.2
FCH				*i*S	Sn	21 24 53.4	+0.7
FCH				IAML		21 24 56.0	
	comp=N,648nm,0.2s						
LMEL	Las Melosas	2.71	96	*e*P	Pn	21 24 22.1	-0.3
LMEL				*e*S	Sn	21 24 53.7	-0.3
LMEL				IAML		21 24 58.8	
	comp=N,1μm,0.2s						
CFA	Coronel Fontan	4.82	67	Pn	Pn	21 24 51.7	+0.4
	comp=N,0.9nm,0.3s,baz=255,slow=15,SNR=6.1						
CFA				Sn	Sn	21 25 47.0	+1.2
	comp=N,15nm,0.3s,baz=125,slow=17,SNR=36						
PLCA	Paso Flores	7.49	163	Pn	Pn	21 25 29.2	+1.2
	comp=N,0.4nm,0.3s,baz=5.9,slow=11,SNR=7.9						
LPAZ	La Paz	17.88	17	P	Pn	21 27 47.2	-0.6
	comp=N,0.0nm,0.3s,baz=176,slow=5.3,SNR=4.0						
SIV	San Ignacio	20.78	36	P	P	21 28 20.0	+0.7
	comp=N,1.8nm,0.7s,baz=226,slow=14,SNR=4.7						
TXAR	Lajitas Array	68.81	332	P	P	21 34 41.8	-0.1
	comp=N,0.4nm,0.5s,baz=162,slow=8.2,SNR=6.9						
TORD	Torodi Ar. Bea	85.17	71	P	P	21 36 14.8	+0.6
	comp=N,0.5nm,0.8s,baz=250,slow=3.2,SNR=3.8						

MAN 19 21:28:56.6, 13°.22N×120°.48E, h2km, mb3.6, ML2.3, MS1.7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.53	59⇑	*e*P	Pg	21 29 07.4	+0.5
PGP				*e*S	Sn	21 29 20.7	-0.2
SJMP	San Jose	0.98	141	*e*P	Pg	21 29 15.9	+0.5
SJMP				*e*S	Sn	21 29 35.7	+3.9
BUSP	Coron	1.24	193	*e*P	Pg	21 29 20.2	-0.3

VAO ***19*** *21:29:05.8±0.4, 32°.42S×69°.71W, h10km, mb5.2*

SJA ***19*** *21:29:10.6±1.0, 32°.65S×70°.25W, h119km, ML5.3, MW5.4*

NEIC ***19*** *21:29:11.5±1.6, 32°.66S×70°.04W, h104km±4km, mb5.5/381, MW5.3, MD5.4(SJA), ML5.5(GUC), Error ellipse: s-maj=13.5km s-min=9.4km az=97.0 Best double couple: NP1:ϕs=53.00000°, δ54.00000°, λ-84.00000°. NP2: ϕs=224.00000°, δ36.00000°, λ-98.00000°. Principal axes: T 1.1100, Plg9.0000°, Azm139.0000°; N -0.1000, Plg5.0000°, Azm230.0000°; P -1.0100, Plg80.0000°, Azm347.0000°;*

NEIC Felt [IV] at Mendoza and [III] at San Juan. Felt [V] at Zapallar and [IV] at La Calera, Calle Larga, Concon, La Ligua, Nogales, Petorca, Quillota, Rinconada, San Felipe, Valparaiso and Villa Alemana, Chile. Felt as far as La Serena and San Antonio.

ISCJB ***19*** *21:29:11.3±0.2, 32°.56S±0°.02×70°.05W±0°.03, h113km±1km, mb5.4/62 Error ellipse: s-maj=4.1km s-min=3.5km az=16.4*

GUC ***19*** *21:29:11.8±0.6, 32°.67S×70°.31W, h124km±5km, ML5.6*

MOS ***19*** *21:29:11.4±0.9, 32°.68S×70°.08W, h105km, mb5.5/12, Error ellipse: s-maj=14.3km s-min=7.4km az=96.3*

GCMT ***19*** *21:29:12.5±0.2, 32°.74S±0°.01×70°.20W±0°.02, h115km±1km, MW5.2/103, Moment Tensor Solution. s78,c99; s103,c149; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.80±.01; Mθθ0.06±.02; Mϕϕ0.74±.02; Mrθ=0.19±.01; Mϕϕ0.40±.02; Mϕr=0.04±.02; Best double couple: M0.88700×10^17 NP1:ϕs39.00000°, δ48.00000°, λ-70.00000°. NP2:ϕs190.00000°, δ45.00000°, λ-111.00000°. Principal axes: T 0.9270, Plg2.0000°, Azm115.0000°; N -0.0800, Plg15.0000°, Azm205.0000°; P -0.8480, Plg75.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***19*** *21:29:13.0±0.6, 32°.66S×70°.05W, h111km±4km, mb5.0/22, mb1 5.1/24, mb1mx5.0/28, mbtmp5.4/24, MS3.7/9, Ms1 3.6/9, ms1mx3.5/18 Error ellipse: s-maj=9.5km s-min=7.9km az=120.0*

ISC 19 21:29:11.8±0.4, 32°.60S±0°.03×70°.14W±0°.04, h105km±3km, h105km:pP-P, n1029, σ0°.98/1101, mb5.4/62, 49C-37D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	Peldehue	0.70	220	*e*Pn	Pn	21 29 30.0	+0.2
PEL				*e*Sn	Sn	21 29 43.5	+0.2
PEL	Peldehue	0.70	220	*e*P	Pn	21 29 29.8	-0.1
PEL				*e*S	Sn	21 29 43.7	+0.4
PEL	Peldehue	0.70	220	*e*P	Pn	21 29 30.0	+0.2
PEL				*e*		21 29 43.5	
PEL	Peldehue	0.70	220⇓	*i*P	Pn	21 29 29.9	+0.2
PEL				*i*S	Sn	21 29 43.9	+0.5
FCH	Farellones	0.73	190⇓	*i*P	Pn	21 29 31.0	+0.6
FCH				*i*S	Sn	21 29 45.8	+1.5
AUSP	Uspallata	0.74	59	*e*P	Pn	21 29 31.9	+1.5
ROCH	El Roble	0.82	243⇓	*i*P	Pn	21 29 31.2	+0.2
ROCH				*i*S	Sn	21 29 45.8	+0.4
ROCH				IAML		21 29 46.9	
	comp=N,312μm,0.6s						
ROC1	El Roble	0.82	243	*e*Pn	Pn	21 29 31.3	+0.1
ROC1				*e*Sn	Sn	21 29 45.8	+0.2
ROC1	El Roble	0.82	243	*e*P	Pn	21 29 31.6	+0.5
CLCH	Cerro Calan	0.86	203⇓	*i*P	Pn	21 29 31.7	+0.5
CLCH				*i*S	Sn	21 29 46.7	+0.8
CLCH				IAML		21 29 53.5	
	comp=E,109μm,0.7s						
STL	Santa Lucia	0.93	207⇑	*i*P	Pn	21 29 33.3	+1.3
STL				*i*S	Sn	21 29 49.0	+1.9
STL				IAML		21 29 49.8	
	comp=N,219μm,0.7s						
FSR	Penalolen	0.93	200⇑	*i*P	Pn	21 29 33.7	+1.7
RCDM	Rinconada Maip	1.04	212⇓	*i*P	Pn	21 29 34.3	+1.2
RCDM				*i*S	Sn	21 29 50.6	+1.4
ANTU	Antumapu	1.05	203	*e*P	Pn	21 29 34.3	+1.1
ANTU				IAML		21 29 52.0	
	comp=E,111μm,0.4s						
ARCO	CERRO ARCO	1.05	103	*e*P	Pn	21 29 35.1	+1.8
ARCO				IAML		21 29 53.0	
	comp=Z,71μm,0.5s						
RTLS	Leoncito	1.08	42	*e*P	Pn	21 29 35.9	+2.1
RTLS				IAML		21 29 56.4	
	comp=Z,24μm,0.5s						
ASAL	Salagasta	1.10	90	*e*P	Pn	21 29 35.7	+1.9
UTNM	Universidad Te	1.12	105	*e*P	Pn	21 29 36.0	+2.0
UTNM				IAML		21 29 58.9	
	comp=Z,34μm,0.5s						
AAGR	Agrelo	1.21	114	*e*P	Pn	21 29 36.4	+1.4
LMEL	Las Melosas	1.24	182⇓	*i*P	Pn	21 29 36.0	+0.5
LMEL				*i*S	Sn	21 29 54.5	+1.1
RTCV	Cerro Valdivia	1.55	62	*e*P	Pn	21 29 40.5	+1.6
CO02	Combarbal	1.57	332⇑	*i*P	Pn	21 29 40.5	+1.1
CO02				*i*S	Sn	21 30 02.2	+1.9
SJA	San Juan	1.72	52	*e*P	Pn	21 29 43.1	+2.0
SJA				IAML		21 30 11.3	
	comp=Z,12μm,0.4s						
CFA	Coronel Fontan	1.90	59	P	Pn	21 29 44.6	+1.2
	comp=Z,2μm,0.3s,baz=220,slow=8.9						
CFA				S	Sn	21 30 08.8	+1.4
	comp=Z,6μm,0.3s,baz=108,slow=14,SNR=85						
CFA				LR	LR	21 30 19.6	
	comp=Z,3μm,18.2s,baz=116,slow=36						
CFA	Coronel Fontan	1.90	59	*e*P	Pn	21 29 44.5	+1.2
RTLL	Cerro Villicun	1.90	49	*e*P	Pn	21 29 45.0	+1.6
RTLL				IAML		21 30 11.9	
	comp=Z,35μm,0.6s						
AMOG	MOGNA	2.17	41	*e*P	Pn	21 29 48.7	+1.7
GO04	Tololo Observa	2.49	347	*e*Pn	Pn	21 29 52.1	+0.9
GO04				*e*Sn	Sn	21 30 17.9	-3.4
GO04	Tololo Observa	2.49	347	*e*P	Pn	21 29 52.0	+0.9
GO04	Tololo Observa	2.49	347⇑	*i*P	Pn	21 29 52.1	+0.9
GO04				*i*S	Sn	21 30 23.3	+2.0
ACAN	Cantantal	2.52	83	*e*P	Pn	21 29 52.1	+0.7
GO05	Huala	2.82	211	*e*Pn	Pn	21 29 53.8	-1.6
GO05				*e*Sn	Sn	21 30 19.6	-9.3
GO05	Huala	2.82	211	*e*P	Pn	21 29 53.8	-1.6
GO05	Huala	2.82	211	*e*P	Pn	21 29 53.3	-2.0
EDS3	Malargue	3.22	169	*e*P	Pn	21 30 01.4	+0.7
LCO	Las Campanas	3.61	352	*e*Pn	Pn	21 30 06.4	+0.3
LCO				*e*Sn	Sn	21 30 37.9	-10
LCO	Las Campanas	3.61	352	*e*P	Pn	21 30 06.4	+0.3
LCO	Las Campanas	3.61	352⇑	*i*P	Pn	21 30 06.5	+0.3
MRA	San Martin	3.74	88	IAML		21 31 11.2	
	comp=Z,11μm,0.9s						
VCA	Vinchina	4.20	24	IAML		21 32 02.6	
	comp=Z,3μm,0.5s						
TCA	Tanti	4.88	76	IAML		21 31 53.6	
	comp=Z,3μm,0.6s						
GO03	Copiap	4.99	359	*e*Pn	Pn	21 30 24.5	-0.1
GO03	Copiap	4.99	359⇑	*i*P	Pn	21 30 24.5	-0.1
GO02	Mina Guanaco	7.43	4	*e*Pn	Pn	21 30 56.0	-1.9
PLCA	Paso Flores	8.12	182	P	Pn	21 31 05.9	-1.1
	comp=Z,1.2nm,0.3s,baz=17,slow=9.7,SNR=16						
PLCA	Paso Flores	8.12	182	*e*Pn	Pn	21 31 06.3	-0.6
PLCA	Paso Flores	8.12	182	*e*P	Pn	21 31 06.4	-0.6
PLCA	Paso Flores	8.12	182	*e*P	Pn	21 31 06.5	-0.5
TRQA	Tornquist	8.61	131	*e*Pn	Pn	21 31 11.9	-1.6
TRQA	Tornquist	8.61	131	*e*P	Pn	21 31 11.9	-1.6
PB10	IPOC Station P	9.06	358	*e*Pn	Pn	21 31 17.4	-2.4
LVC	Limon Verde	10.02	7	P	Pn	21 31 29.6	-3.5
	comp=Z,1.8nm,0.3s,baz=198,slow=9.1,SNR=9.2						
LVC				LR	LR	21 35 56.5	
	comp=Z,281nm,20.5s,baz=198,slow=40						
LVC	Limon Verde	10.02	7	*e*P	Pn	21 31 27.2	-5.9
PB04	IPOC Station P	10.23	360	*e*Pn	Pn	21 31 31.9	-3.9
GO07	Milladeo Hill,	10.85	194	*e*Pn	Pn	21 31 39.2	-4.7
PB01	IPOC Station P	11.53	3	*e*Pn	Pn	21 31 49.1	-4.2
CPUP	Villa Florida	12.79	64	P	Pn	21 32 04.8	-5.0
	comp=Z,4.5nm,0.3s,baz=230,slow=11,SNR=44						
CPUP				LR	LR	21 36 54.6	
	comp=Z,322nm,20.4s,baz=234,slow=36						
CPUP	Villa Florida	12.79	64	*e*P	Pn	21 32 02.5	-7.3
PB11	IPOC Station P	12.80	2	*e*Pn	Pn	21 32 10.2	+0.1
GO01	Chusmiza	12.91	4	*e*Pn	Pn	21 32 12.7	+0.8
LPAZ	La Paz	16.35	7	P	P	21 32 56.7	-0.1
	comp=Z,3.2nm,0.3s,baz=180,slow=7.4,SNR=168						
ITAB	Concordia	16.50	76	*e*P	Pn	21 32 53.7	-3.4
CNLB	Canela	16.87	84	*e*P	Pn	21 32 57.6	-4.0
AQDB	Aquidauana	17.66	50	*e*P	P	21 33 08.5	-2.2
PTGB	Pitanga	17.69	68	*e*P	P	21 33 08.3	-2.8
SIV	San Ignacio	18.47	29	P	P	21 33 19.7	+0.1
	comp=Z,4.7nm,0.3s,baz=216,slow=9.1,SNR=221						
GO09	Cerro Castillo	18.72	184	*e*P	P	21 33 20.5	-1.6
	comp=Z,96nm,1.0s						
TIJ01	Guaruva-PR	19.85	74	*e*P	P	21 33 31.1	-3.5
FRTB	Fartura	20.36	68	*e*P	P	21 33 38.2	-1.8
EFI	East Falkland	21.00	159	*e*P	P	21 33 44.6	-2.0
	comp=Z,118nm,0.8s						
EFI	East Falkland	21.00	159⇑	*e*P	P	21 33 45.9	-0.8
EFI				pmax	pmax		
	comp=Z,77nm,0.7s						
NNA	Nana	21.42	342	P	P	21 33 52.3	+0.8
	comp=Z,99nm,0.8s,baz=183,slow=12,SNR=26						
NNA	Nana	21.42	342	*e*P	P	21 33 51.8	+0.3
	comp=Z,151nm,0.9s						
NNA	Nana	21.42	342	*i*P	P	21 33 53.2	+1.7
ITRB	Iturama	21.87	59	*e*P	P	21 33 55.2	-1.0
SPB	Sao Paulo	21.92	72	*e*P	P	21 33 56.1	-0.6
	comp=Z,232nm,1.3s						
SPB	Sao Paulo	21.92	72	*e*P	P	21 33 56.2	-0.6
USHA	Ushuaia	22.25	177	P	P	21 34 00.2	+0.4
	comp=Z,104nm,1.1s,baz=347,slow=12,SNR=17						
BB19B	Bebedouro	22.41	65	*e*P	P	21 34 00.1	-1.8
RCLB	Rio Claro- Sao	22.43	69	*e*P	P	21 34 00.5	-1.6
PARB	Paraibuna	23.50	73	*e*P	P	21 34 11.4	-1.0
CLDB	Colider	25.34	35	*e*P	P	21 34 29.0	-0.1
BSCB	Bom Sucesso	25.36	69	*e*P	P	21 34 29.6	+0.4
PMNB	Patos De Minas	25.48	62	*e*P	P	21 34 30.2	-0.2
BDFB	Brasilia	26.24	55	P	P	21 34 36.6	-0.7
	comp=Z,82nm,0.8s,baz=229,slow=7.8,SNR=90						
BDFB				LR	LR	21 47 16.3	
	comp=Z,184nm,21.0s,baz=238,slow=41						
BDFB	Brasilia	26.24	55	*e*P	P	21 34 36.6	-0.7
	comp=Z,123nm,1.1s						
ATAH	Atahualpa	26.48	341	P	P	21 34 41.5	+1.7
	comp=Z,23nm,0.8s,baz=164,slow=8.4,SNR=13						
CAM01	Campos-RJ	27.43	74	*e*P	P	21 34 49.2	+1.4
MCI6	Montes Claros	28.46	63	*e*P	P	21 34 56.6	-0.4
MCI9	Montes Claros	28.52	63	*e*P	P	21 34 56.8	-0.9
MCI8	Montes Claros	28.53	62	*e*P	P	21 34 56.9	-0.8
PEXB	Peixe	28.60	49	*e*P	P	21 34 58.5	+0.2
SJMB	Sao Joao De Ma	29.43	69	*e*P	P	21 35 05.6	-0.1
BSFB	Barra de Sao F	29.63	70	*e*P	P	21 35 07.5	+0.1
RIB01	Linhares ES	29.73	71	*e*P	P	21 35 08.2	0.0
SMTB	Santa Maria do	31.53	46	*e*P	P	21 35 23.8	-0.3
PMSA	Palmer Station	32.41	175	*e*P	P	21 35 36.5	+5.2
PTLC	Puerto Leguiza	32.89	351	*e*P	P	21 35 35.1	-1.0
PTGA	Pitinga	33.12	19	*e*P	P	21 35 37.6	-0.5
	comp=Z,55nm,0.9s						
PTGA				*e*PcP	PcP	21 38 18.8	-0.2
OTAV	Otavalo	33.59	345	*e*P	P	21 35 45.1	+2.4
OTAV	Otavalo	33.59	345	*e*P	P	21 35 45.3	+2.7
FLOC	Florencia	34.40	350	*e*P	P	21 35 50.4	+1.3
CRUC	La Cruz	34.59	348	*e*P	P	21 35 53.7	+2.6
MACC	Macarena, Meta	34.74	353	*e*P	P	21 35 52.4	+0.4
BBAC	Balboa, Cauca	35.09	348	*e*P	P	21 35 55.7	+0.5
SOTA	Rioblanco	35.09	349	*e*P	P	21 35 58.9	+3.3
SOTA				*e*P	P	21 35 59.1	+3.5
PCON	Cinco Dias	35.24	349	*e*P	P	21 35 59.7	+2.7
POPC	Popayan, Colom	35.50	349	*e*P	P	21 35 59.7	+0.9
MARP	Paez Belalcaza	35.68	350	*e*P	P	21 36 00.4	0.0
PRAC	Prado	36.40	352	*e*P	P	21 36 07.7	+1.5
VILC	Villavicencio,	36.67	354	*e*P	P	21 36 10.0	+1.3
YOTC	Yotoco, Valle	36.86	350	*e*P	P	21 36 11.3	+1.1
PAYG	Puerto Ayora	37.00	325	*e*P	P	21 36 13.0	+1.6
	comp=Z,184nm,1.2s						
CHIC	Chingaza	37.19	354	*e*P	P	21 36 13.0	-0.3
ROSC	El Rosal	37.45	353	P	P	21 36 18.1	+2.5
	comp=Z,25nm,0.4s,baz=161,slow=9.2,SNR=14						
ROSC	El Rosal	37.45	353	*e*P	P	21 36 14.4	-1.2
RREF	El Recreo	37.62	351	*e*P	P	21 36 20.4	+3.1
YOPC	Yopal, Colombi	37.81	356	*e*P	P	21 36 19.3	+1.0
GUY2C	Guyana, Caldas	37.95	352	*e*P	P	21 36 21.7	+1.9
NORC	Norcasia	38.22	352	*e*P	P	21 36 21.0	-0.6
RUSC	La Rusia	38.38	355	*e*P	P	21 36 25.7	+2.2
TAMC	Tame, Arauca	38.85	357	*e*P	P	21 36 27.1	+0.1
HELC	Santa Helena	38.92	351	*e*P	P	21 36 27.0	-0.8
BARC	Barichara	39.09	355	*e*P	P	21 36 27.7	-1.4
PTBC	PUERTO BERRIO,	39.14	353	*e*P	P	21 36 29.0	-0.3
NBPA	Parau_RN	40.76	56	*e*P	P	21 36 42.7	0.0
MDP	Montagnes des	41.02	27	P	P	21 36 44.2	-0.6
	comp=Z,37nm,0.8s,baz=197,slow=9.4,SNR=22						
MDP				PcP	PcP	21 38 43.5	+0.5
	comp=Z,8.8nm,0.5s,baz=215,slow=4.1,SNR=5.1						
SDV	Santo Domingo	41.26	359	*e*P	P	21 36 46.3	-0.6
	comp=Z,80nm,0.9s						
SMLC	San Martn de	41.34	354	*e*P	P	21 36 45.7	-1.8
RCBR	Riachuelo	41.56	58	*e*P	P	21 36 49.9	+0.6
ARGC	Ariguani, Magd	42.40	354	*e*P	P	21 36 53.6	-2.4
SMRC	Santa Marta, M	43.70	354	*e*P	P	21 37 05.6	-0.8
TOSP	Speyside	44.61	13	*e*P	P	21 37 14.4	+0.7
JTS	Las Juntas de	44.94	339	P	P	21 37 18.3	+1.9
	comp=Z,23nm,0.7s,baz=257,slow=0.9,SNR=14						
JTS	Las Juntas de	44.94	339	*e*P	P	21 37 17.3	+0.9
	comp=Z,200nm,1.8s						
GRGR	Grenville	45.22	12	*e*P	P	21 37 18.2	-0.3
	comp=Z,448nm,1.0s						
GRGR	Grenville	45.22	12	*e*P	P	21 37 18.3	-0.3
SVB	Belmont	46.40	12	*e*P	P	21 37 28.1	+0.2
SLBI	Saint Lucia, B	47.19	12	*e*P	P	21 37 33.5	-0.5
MPOM	Morne Pois Mar	47.62	12	*e*P	P	21 37 36.4	-0.9
BIM	Bigot	47.65	12	*e*P	P	21 37 36.7	-1.0
TRMF	Trois Ilets	47.67	12	*e*P	P	21 37 37.1	-0.6
ZAM	Aeronautique	47.71	12	*e*P	P	21 37 37.5	-0.5
LPMF	Morne Lapointe	47.73	12	*e*P	P	21 37 37.6	-0.5
FDF	Fort de France	47.85	12	*e*P	P	21 37 38.1	-1.0
PML	Morne Lenard	47.89	12	*e*P	P	21 37 39.3	-0.1
GBMF	Grand Be	47.91	12	*e*P	P	21 37 39.5	-0.2
VNA3	Neumayer Olymp	50.06	158	P	P	21 37 55.9	+0.5
VNA1	Neumayer--Stat	50.34	158	P	P	21 37 58.3	+0.8
SJG	San Juan	50.57	5	*e*P	P	21 37 58.5	-1.3
	comp=Z,161nm,1.0s						
SJG	San Juan	50.57	5	*e*P	P	21 37 58.5	-1.3
SJG				pmax	pmax		
	comp=Z,161nm,1.0s						
VNA2	Neumayer--Watz	50.69	158	P	P	21 38 00.8	+0.7
	baz=284,slow=8.4						
AOPR	Arecibo Observ	50.77	4	*e*P	P	21 37 59.3	-2.0
	comp=Z,214nm,1.4s						
APG	El Apazote	51.18	334	P	P	21 38 06.2	+1.5
	comp=Z,124nm,0.7s,baz=154,slow=6.2,SNR=88						
SNAA	Sanae	52.28	158	P	P	21 38 12.4	+0.3
SNAA	Sanae	52.28	158	P	P	21 38 12.2	+0.1
	comp=Z,33nm,0.7s,baz=282,slow=7.3,SNR=222						
SNAA	Sanae	52.28	158	*e*P	P	21 38 12.2	+0.1
	comp=Z,86nm,1.0s						
SNAA				*e*PcP	PcP	21 39 20.1	-1.8
SNAA	Sanae	52.28	158	*d i*P	P	21 38 12.0	-0.1
SNAA				*i* *PP	pP	21 38 39.6	+1.2
CMIG	Matias Romero	54.80	331	P	P	21 38 32.3	+1.4
	comp=Z,42nm,0.8s,baz=148,slow=5.1,SNR=65						
TEIG	Tepich	55.32	339	*e*P	P	21 38 35.0	+0.4
	comp=Z,272nm,0.8s						
062Z	Marathon	57.95	348	P	P	21 38 53.6	+0.4
	baz=169						
061Z	Ochoppi	59.04	349	P	P	21 39 01.2	+0.4
	baz=169						
060Z	West Palm Beac	59.52	349	P	P	21 39 04.5	+0.5
	baz=170						
059Z	Ave Maria	59.59	348	P	P	21 39 04.8	+0.3
	baz=169						
060A	Indiantown	60.10	349	P	P	21 39 08.7	+0.7
	baz=170						
059A	Moore Haven	60.16	349	P	P	21 39 08.8	+0.4
	baz=169						
058A	Arcadia	60.36	348	P	P	21 39 10.0	+0.3
	baz=169,SNR=10						
959A	Okeechobee	60.66	349	P	P	21 39 12.2	+0.4
	baz=170						
958A	Wauchula	60.87	348	P	P	21 39 13.5	+0.3
	baz=169						
957A	Wimauma	61.04	348	P	P	21 39 14.8	+0.4
	baz=168						
DWPF	Disney Wildern	61.33	349	P	P	21 39 16.2	-0.1
	baz=169						
858A	St. Cloud	61.41	349	P	P	21 39 17.0	+0.2
	baz=169						
857A	Zephyrhills	61.62	348	P	P	21 39 18.4	+0.2
	baz=168						
758A	Lake Helen	62.12	349	P	P	21 39 22.0	+0.4
	baz=169						
757A	Oxford	62.25	348	P	P	21 39 22.7	+0.3
	baz=169,SNR=10						
658A	Bunnell	62.58	349	P	P	21 39 24.8	+0.2
	baz=169						
656A	Willston	62.75	348	P	P	21 39 26.0	+0.3
	baz=168,SNR=11						
657A	Interlachen	62.84	349	P	P	21 39 26.6	+0.2
	baz=169,SNR=8.9						
655A	Horseshoe Beac	63.02	347	P	P	21 39 27.7	+0.1
	baz=168						
557A	Orange Park	63.24	349	P	P	21 39 29.2	+0.2
	baz=169						
556A	Lake Butler	63.34	348	P	P	21 39 29.8	+0.1
	baz=168,SNR=7.3						
555A	McAlpin	63.56	348	P	P	21 39 31.1	0.0
	baz=168						
554A	Perry	63.66	347	P	P	21 39 31.9	+0.2
	baz=167						
457A	Yulee

	baz=165,SNR=5.7					
NHSC	New Hope	66.04 351	P	P	21 39 47.8	+0.7
	baz=171,SNR=5.5					
153A	Fort Valley	66.18 347	P	P	21 39 48.0	-0.1
	baz=167					
249A	Camden	66.21 344	P	P	21 39 48.4	+0.2
	baz=164,SNR=12					
Z58A	St. Stephen	66.22 351	P	P	21 39 48.9	+0.6
	baz=171					
Z57A	Bowman	66.30 350	P	P	21 39 48.9	+0.1
	baz=170,SNR=9.1					
151A	Opelika	66.35 346	P	P	21 39 48.6	-0.5
	baz=166,SNR=7.2					
152A	Waverly Hall	66.36 347	P	P	21 39 48.9	-0.4
	baz=167,SNR=17					
Z56A	Williston	66.43 350	P	P	21 39 49.6	0.0
	baz=170					
Z55A	Blythe	66.44 349	P	P	21 39 49.9	+0.2
	baz=169					
150A	Eclectic	66.57 345	P	P	21 39 50.5	-0.1
	baz=165,SNR=23					
SYO	Syowa Base	66.58 158⇑	eP	P	21 39 48.6	-1.6
SYO	Syowa Base	66.58 158⇓	epP	pP	21 40 12.0	-5.7
Z54A	Sparta	66.58 348	P	P	21 39 50.3	-0.3
	baz=168,SNR=14					
833A	Chaparral WMA,	66.66 332	P	P	21 39 52.8	+1.6
	baz=153,SNR=25					
Y60A	Bolivia	66.69 353	P	P	21 39 52.0	+0.7
	baz=172					
149A	Jones	66.73 345	P	P	21 39 51.2	-0.4
	baz=165					
Z53A	Monticello	66.75 348	P	P	21 39 51.4	-0.3
	baz=168,SNR=13					
Y58A	Scranton	66.76 351	P	P	21 39 52.2	+0.5
	baz=171					
HKT	Hockley	66.81 336	eP	P	21 39 53.3	+1.2
	comp=Z,94nm,1.4s					
HKT	Hockley	66.81 336	eP	P	21 39 53.3	+1.2
HKT			pmax	pmax		
	comp=Z,94nm,1.4s					
Z52A	Williamson	66.81 347	P	P	21 39 52.1	0.0
	baz=167,SNR=22					
GOGA	Godfrey	66.85 348	P	P	21 39 52.2	-0.2
	baz=168,SNR=18					
Y56A	Pelion	66.88 350	P	P	21 39 52.6	+0.2
	baz=170					
148A	Greensboro	66.95 344	P	P	21 39 53.1	+0.1
	baz=164,SNR=6.7					
Y57A	Sumter	66.97 351	P	P	21 39 53.3	+0.2
	baz=171					
Z51A	Franklin	67.08 346	P	P	21 39 53.8	0.0
	baz=166,SNR=5.9					
Y55A	Saluda	67.10 349	P	P	21 39 53.9	0.0
	baz=169,SNR=13					
Y54A	Tignall	67.16 349	P	P	21 39 54.2	-0.1
	baz=168,SNR=14					
Z50A	Ashland	67.17 346	P	P	21 39 54.3	-0.1
	baz=166,SNR=36					
LRAL	Lakeview Retre	67.20 345	P	P	21 39 54.4	-0.1
	baz=165,SNR=12					
X60A	Albert Glenn T	67.23 353	P	P	21 39 55.3	+0.6
	baz=173					
Z49A	Columbiana	67.25 345	P	P	21 39 54.7	-0.1
	baz=165,SNR=24					
VBMS	Vicksburg	67.28 341	P	P	21 39 56.4	+1.3
	baz=161,SNR=7.0					
X59A	McDuffie Farm,	67.29 352	P	P	21 39 55.4	+0.4
	baz=172					
Y53A	Monroe	67.31 348	P	P	21 39 55.2	-0.1
	baz=168,SNR=16					
X58A	Rowland	67.36 352	P	P	21 39 55.9	+0.3
	baz=172,SNR=6.4					
X57A	Johnson Farm,	67.37 351	P	P	21 39 55.8	+0.3
	baz=171					
Y52A	Lilburn	67.40 347	P	P	21 39 55.8	0.0
	baz=167,SNR=23					
X56A	White Oak	67.52 350	P	P	21 39 56.6	+0.1
	baz=170,SNR=8.6					
X55A	Gracelyn & Ava	67.59 350	P	P	21 39 57.0	0.0
	baz=170,SNR=11					
Y51A	Rockmart	67.63 347	P	P	21 39 57.1	-0.1
	baz=166,SNR=24					
W60A	Pink Hill	67.68 353	P	P	21 39 58.2	+0.7
	baz=173					
W61A	Ground Anchor	67.73 354	P	P	21 39 58.8	+1.0
	baz=174					
Y50A	Piedmont	67.75 346	P	P	21 39 57.9	-0.1
	baz=166,SNR=21					
X54A	Belton	67.78 349	P	P	21 39 58.3	+0.1
	baz=169,SNR=13					
W58A	Raeford	67.81 352	P	P	21 39 58.8	+0.4
	baz=172,SNR=10					
Y49A	Blount Mountai	67.86 345	P	P	21 39 58.6	-0.1
	baz=165,SNR=14					
W59A	Clinton	67.86 353	P	P	21 39 59.3	+0.6
	baz=172					
CNNC	Cliffs of the	67.88 353	P	P	21 39 59.6	+0.8
	baz=173					
X53A	Estanollee	67.89 348	P	P	21 39 58.9	0.0
	baz=168,SNR=21					
PAULI	Pauline	67.96 350	eP	P	21 39 59.5	+0.2
	comp=Z,95nm,1.2s					
PAULI			ePP	PP	21 42 27.6	-3.3
W57A	Gilead	68.03 351	P	P	21 39 59.9	+0.1
	baz=171,SNR=10					
Y48A	Jasper	68.08 345	P	P	21 39 59.8	-0.2
	baz=164,SNR=7.9					
NATX	Nacogdoches	68.08 338	P	P	21 40 01.4	+1.2
	baz=158,SNR=8.6					
X52A	Dahlonega	68.09 348	P	P	21 40 00.2	0.0
	baz=168,SNR=31					
W56A	Indian Trail	68.09 351	P	P	21 39 60.0	-0.1
	baz=170,SNR=6.3					
KMSC	Kings Mountain	68.20 350	P	P	21 40 00.7	-0.1
	baz=170,SNR=11					
X51A	Calhoun	68.23 347	P	P	21 40 01.4	+0.3
	baz=167,SNR=40					
W54A	Cherokee Point	68.28 349	P	P	21 40 01.6	+0.3
	baz=169,SNR=22					
X50B	Fort Payne	68.29 346	P	P	21 40 01.1	-0.3
	baz=166,SNR=25					
V61A	Roper	68.31 354	P	P	21 40 01.7	+0.3
	baz=174					
V60A	Jim Taylor Roa	68.34 354	P	P	21 40 02.2	+0.6
	baz=174					
V59A	Middlesex	68.44 353	P	P	21 40 02.9	+0.7
	baz=173,SNR=9.9					
X49A	Woodville	68.47 346	P	P	21 40 02.7	+0.1
	baz=165,SNR=9.5					
W53A	Cullowhee	68.52 349	P	P	21 40 02.9	0.0
	baz=168,SNR=26					
V58A	Windy Hill, Pi	68.56 352	P	P	21 40 03.2	+0.2
	baz=172,SNR=10					
X48A	Hartselle	68.57 345	P	P	21 40 03.4	+0.3
	baz=165					
W52A	Murphy	68.58 348	P	P	21 40 03.4	+0.2
	baz=168,SNR=16					
V57A	Coltrane Farms	68.73 352	P	P	21 40 04.0	-0.1
	baz=171,SNR=5.1					
JCT	Junction City	68.74 333	P	P	21 40 05.3	+0.9
	baz=153,SNR=34					
V56A	Mocksville	68.75 351	P	P	21 40 04.5	+0.3
	baz=171,SNR=20					
W51A	Cleveland	68.79 347	P	P	21 40 04.7	+0.2
	baz=167,SNR=26					
X47A	Russelville	68.81 344	P	P	21 40 04.6	0.0
	baz=164,SNR=20					
U61A	Possum Corner	68.83 355	P	P	21 40 05.8	+1.2
	baz=174					
V55A	Taylorsville	68.89 350	P	P	21 40 05.4	+0.3
	baz=170,SNR=20					
Z41A	Richland Creek	68.91 340	P	P	21 40 06.5	+1.3
	baz=160					
V54A	Nebo	68.92 350	P	P	21 40 05.4	+0.1
	baz=169,SNR=24					
W50A	Signal Mountai	68.94 347	P	P	21 40 05.7	+0.3
	baz=166,SNR=43					
V53A	Saluda	68.95 349	P	P	21 40 05.5	0.0
	baz=168,SNR=28					
U59A	Littleton	68.97 353	P	P	21 40 05.9	+0.4
	baz=173,SNR=10					
X46A	Booneville	69.02 344	P	P	21 40 06.1	+0.2
	baz=163,SNR=5.1					
U60A	Pendleton	69.03 354	P	P	21 40 06.5	+0.6
	baz=174,SNR=6.7					
W49A	Belvidere	69.05 346	P	P	21 40 06.3	+0.2
	baz=165,SNR=18					
U58A	Oxford	69.09 353	P	P	21 40 06.8	+0.5
	baz=172,SNR=8.4					
W48A	Pulaski	69.21 345	P	P	21 40 07.2	+0.2
	baz=165,SNR=21					
U57A	Blanch	69.22 352	P	P	21 40 07.4	+0.3
	baz=172,SNR=11					
WHTX	Lake Whitney,	69.24 335	P	P	21 40 08.0	+0.7
	baz=156,SNR=14					
V52A	Sevierville	69.25 348	P	P	21 40 07.0	-0.3
	baz=168,SNR=17					
U56A	King	69.26 351	P	P	21 40 07.9	+0.5
	baz=171,SNR=12					
TXAR	Lajitas Array	69.33 329	P	P	21 40 09.0	+1.0
	comp=Z,21nm,0.7s,baz=151,slow=8.4,SNR=234					
TXAR			PKPPKP	P'P'df	22 08 16.0	+1.0
	comp=Z,0.4nm,0.8s,baz=222,slow=1.7,SNR=5.2					
V51A	Loudon	69.34 348	P	P	21 40 07.5	-0.4
	baz=167,SNR=15					
V50A	Pikeville	69.35 347	P	P	21 40 08.0	0.0
	baz=166,SNR=47					
W47A	Westpoint	69.46 345	P	P	21 40 08.6	0.0
	baz=164,SNR=21					
U55A	TA2, Sparta	69.50 351	P	P	21 40 09.0	0.0
	baz=170,SNR=8.4					
W46A	Michie	69.52 344	P	P	21 40 08.3	-0.7
	baz=164					
X43A	Marvell	69.56 342	P	P	21 40 09.4	+0.2
	baz=161					
T59A	Double "B" Far	69.56 354	P	P	21 40 09.9	+0.8
	baz=173,SNR=15					
U53A	Fall Branch	69.59 349	P	P	21 40 09.0	-0.4
	baz=169,SNR=14					
V49A	McMinnville	69.60 346	P	P	21 40 09.3	-0.2
	baz=166,SNR=40					
U54A	Nelsons Funny	69.63 350	P	P	21 40 09.7	0.0
	baz=170,SNR=22					
T58A	Grand View Acr	69.63 353	P	P	21 40 10.3	+0.6
	baz=172,SNR=15					
T60A	Surry	69.66 354	P	P	21 40 10.8	+1.1
	baz=174					
U52A	Thorn Hill	69.75 349	P	P	21 40 09.9	-0.5
	baz=168					
V48A	Smith Brothers	69.76 346	P	P	21 40 10.7	+0.2
	baz=165,SNR=64					
T57A	Hurt	69.77 352	P	P	21 40 10.8	+0.3
	baz=172,SNR=8.3					
U51A	La Follette	69.84 348	P	P	21 40 10.7	-0.3
	baz=168,SNR=21					
T56A	Rocky Mt	69.89 352	P	P	21 40 11.9	+0.7
	baz=171,SNR=19					
TZTN	Tazewell	69.92 349	P	P	21 40 11.2	-0.3
	baz=168,SNR=10					
V47A	Nunnelly	70.00 345	P	P	21 40 11.7	-0.2
	baz=164,SNR=52					
U50A	Jamestown	70.03 347	P	P	21 40 11.8	-0.3
	baz=167,SNR=22					
X40A	Basin Creek Fa	70.06 340	P	P	21 40 11.7	-0.7
	baz=160					
T55A	Pulaski	70.07 351	P	P	21 40 12.8	+0.4
	baz=170,SNR=12					
V46A	Holladay	70.10 345	P	P	21 40 12.2	-0.3
	baz=164,SNR=52					
BLA	Blacksburg	70.12 351	P	P	21 40 13.1	+0.4
	baz=171					
T54A	Tazewell	70.12 350	P	P	21 40 12.5	-0.2
	baz=170,SNR=19					
T53A	Wise	70.19 349	P	P	21 40 12.7	-0.4
	baz=169,SNR=7.7					
S60A	Water View	70.21 355	P	P	21 40 14.0	+0.9
	baz=174					
S58A	Poland Farm, P	70.25 353	P	P	21 40 14.1	+0.7
	baz=173,SNR=17					
U49A	Red Boiling Sp	70.30 347	P	P	21 40 13.4	-0.3
	baz=166,SNR=17					
S59A	Mechanicsville	70.32 354	P	P	21 40 14.8	+1.0
	baz=174,SNR=9.3					
MIAR	Mount Ida	70.33 340	P	P	21 40 14.4	+0.5
	baz=159,SNR=7.9					
WVT	Waverly	70.35 345	eP	P	21 40 14.1	0.0
	comp=Z,227nm,0.8s					
WVT	Waverly	70.35 345	eP	P	21 40 14.1	0.0
WVT			pmax	pmax		
	comp=Z,227nm,0.8s					
WVT	Waverly	70.35 345	P	P	21 40 14.2	+0.2
	baz=164					
T51A	Gray	70.40 348	P	P	21 40 14.2	-0.2
	baz=168,SNR=25					
U48A	Cassie Pea, Po	70.45 346	P	P	21 40 14.4	-0.2
	baz=165,SNR=19					
S56A	Natural Bridge	70.47 352	P	P	21 40 15.3	+0.5
	baz=172					
S57A	Dark Hollow, R	70.48 353	P	P	21 40 15.3	+0.5
	baz=172,SNR=16					
U47A	Clarksville	70.54 345	P	P	21 40 15.2	0.0
	baz=165,SNR=35					
W41B	Gary Mavity, V	70.54 341	P	P	21 40 15.5	+0.2
	baz=160,SNR=6.4					
R58B	Mineral	70.58 354	P	P	21 40 16.1	+0.8
	baz=173,SNR=17					
ABTX	Abilene, Hawle	70.60 334	P	P	21 40 16.3	+0.6
	baz=154,SNR=24					
T50A	Nancy	70.61 348	P	P	21 40 15.1	-0.5
	baz=167,SNR=12					
U46A	Springville	70.65 345	P	P	21 40 16.0	+0.1
	baz=164,SNR=24					
S55A	Lewisburg	70.68 351	P	P	21 40 16.4	+0.4
	baz=171,SNR=18					
R59A	King George, V	70.74 354	P	P	21 40 17.4	+1.0
	baz=174					
R60A	Leonardtown, M	70.77 355	P	P	21 40 17.8	+1.3
	baz=174					
CBN	Corbin Frederi	70.77 354	P	P	21 40 17.5	+1.0
	baz=174					
S54A	Dingess, Beckl	70.81 351	P	P	21 40 16.8	-0.1
	baz=170,SNR=9.7					
T49A	Edmonton	70.82 347	P	P	21 40 16.6	-0.3
	baz=166,SNR=28					
R58A	Rapidan	70.92 353	P	P	21 40 18.2	+0.8
	baz=173,SNR=13					
R57A	Stanardsville	70.97 353	P	P	21 40 18.7	+0.9
	baz=172,SNR=19					
T48A	Bowling Green	71.00 346	P	P	21 40 17.5	-0.5
	baz=166,SNR=20					
W39A	Magazine	71.00 340	P	P	21 40 19.1	+1.1
	baz=159,SNR=19					
T47A	Sharon Grove	71.02 346	P	P	21 40 17.9	-0.2
	baz=165,SNR=20					
R54A	Victor	71.14 351	P	P	21 40 18.9	+0.1
	baz=170,SNR=13					
S50A	Richmond	71.18 348	P	P	21 40 18.9	-0.1
	baz=167,SNR=18					
T46A	Princeton	71.24 345	P	P	21 40 19.4	-0.1
	baz=164,SNR=29					
Q61A	Milford	71.28 356	P	P	21 40 20.6	+1.1
	baz=175					
Q59A	Harwood	71.36 355	P	P	21 40 20.8	+0.7
	baz=174					
T45A	Paducah	71.39 344	P	P	21 40 20.2	-0.1
	baz=164					
R53A	Hurricane	71.42 350	P	P	21 40 20.3	-0.2
	baz=170,SNR=6.4					
S49A	Springfield	71.44 347	P	P	21 40 19.8	-0.7
	baz=166,SNR=11					
S48A	Wiedeman Farm,	71.46 347	P	P	21 40 19.8	-0.9
	baz=166,SNR=20					
R52A	Catlettsburg	71.53 350	P	P	21 40 20.9	-0.2
	baz=169					
S47A	Hartford	71.56 346	P	P	21 40 20.5	-0.9
	baz=165,SNR=8.9					
R51A	Hillsboro	71.64 349	P	P	21 40 21.7	-0.1
	baz=168,SNR=18					
TVO	Taravao	71.66 260	eP	P	21 40 24.4	+1.9
	comp=Z,22nm,0.9s					
Q57A	Strasburg	71.69 353	P	P	21 40 23.2	+1.1
	baz=173,SNR=14					
R50A	Paris	71.75 348	P	P	21 40 22.1	-0.3
	baz=167,SNR=12					
Q56A	Snyder Ridge,	71.78 353	P	P	21 40 23.6	+1.0
	baz=172					
U40A	Yellville	71.82 341	P	P	21 40 23.2	+0.2
	baz=160,SNR=9.1					
S46A	Don Dixon Farm	71.82 345	P	P	21 40 22.4	-0.5
	baz=164,SNR=12					
Q55A	Buckhannon	71.83 352	P	P	21 40 23.7	+0.7
	baz=171					
TIAR	Tiarei	71.84 260	eP	P	21 40 25.5	+1.9
	comp=Z,22nm,1.1s					
Q53A	Leroy	71.88 351	P	P	21 40 23.1	-0.1
	baz=170,SNR=9.7					
R49A	Shelbyville	71.91 348	P	P	21 40 22.9	-0.5
	baz=167,SNR=11					
Q54A	Coxs Mills	71.92 351	P	P	21 40 23.2	-0.2
	baz=170,SNR=6.4					
PAE	Paea	71.99 260	eP	P	21 40 26.0	+1.6
	comp=Z,16nm,1.0s					
PPTF	Pamatai, Papee	72.01 260	eP	P	21 40 25.2	+0.5
	comp=Z,131nm,1.0s					
PPT2	Papeete2	72.02 260	eP	P	21 40 26.5	+1.8
	comp=Z,91nm,1.0s					
PPT	Papeete	72.03 260	P	P	21 40 26.3	+1.6
	comp=Z,125nm,0.9s,baz=61,slow=5.6,SNR=8.0					
P61A	Hammonton	72.04 356	P	P	21 40 25.0	+0.9
	baz=176					
WCI	Wyandotte Cave	72.06 347	eP	P	21 40 23.8	-0.5
	comp=Z,49nm,1.0s					
WCI	Wyandotte Cave	72.06 347	eP	P	21 40 23.8	-0.5
WCI			pmax	pmax		
	comp=Z,49nm,1.0s					
WCI	Wyandotte Cave	72.06 347	P	P	21 40 23.6	-0.7
	baz=166					
P59A	Jarrettsville	72.09 355	P	P	21 40 25.7	+1.3
	baz=174,SNR=26					
Q52A	Bidwell	72.09 350	P	P	21 40 24.3	-0.2
	baz=169,SNR=14					
P57A	Homestead Farm	72.09 354	P	P	21 40 25.5	+1.1
	baz=173,SNR=22					
MNTX	Cornudas Mount	72.11 329	P	P	21 40 24.6	-0.2
	baz=149,SNR=73					
R48A	Northridge Ran	72.14 347	P	P	21 40 24.5	-0.3
	baz=166,SNR=13					
R47A	Wooly Knot Far	72.17 347	P	P	21 40 24.1	-0.8
	baz=166,SNR=10					
S44A	Carbondale	72.17 344	P	P	21 40 24.7	-0.3
	baz=163,SNR=11					
WMOK	Wichita Mounta	72.19 336	P	P	21 40 24.9	-0.3
	baz=155					
P56A	Dayton Farm, R	72.20 353	P	P	21 40 25.9	+0.8
	baz=172					
P60A	Greenville	72.23 356	P	P	21 40 25.7	+0.4
	baz=175,SNR=8.9					
Q50A	Georgetown	72.24 349	P	P	21 40 24.9	-0.4
	baz=168,SNR=7.7					
TUL1	Leonard	72.27 338	P	P	21 40 25.7	+0.1
	baz=158,SNR=7.4					
R46A	Gibon Southern	72.29 346	P	P	21 40 24.8	-0.8
	baz=165,SNR=6.0					
P55A	Reedsville	72.31 352	P	P	21 40 25.8	0.0
	baz=171					
Q51A	Peebles	72.32 349	P	P	21 40 25.6	-0.2
	baz=168,SNR=19					
O61A	Allentown	72.45 356	P	P	21 40 27.5	+1.0
	baz=176					
MCWV	Mont Chateau	72.46 352	P	P	21 40 27.1	+0.4
	baz=171					
P53A	Whipple	72.48 351	P	P	21 40 26.7	-0.1
	baz=170,SNR=9.4					
R45A	Skylar, Fairfi	72.53 345	P	P	21 40 26.4	-0.6
	baz=164,SNR=12					
Q49A	Aurora	72.55 348	P	P	21 40 26.9	-0.3
	baz=167,SNR=22					
Q48A	North Vernon	72.63 347	P	P	21 40 27.2	-0.4
	baz=166,SNR=21					
P51A	Williamsport	72.72 350	P	P	21 40 27.7	-0.5
	baz=169,SNR=10					
O60A	Telford	72.72 356	P	P	21 40 29.2	+1.1
	baz=175,SNR=8.5					
P52A	Corning	72.73 350	P	P	21 40 27.9	-0.4
	baz=169,SNR=13					
Q47A	Bedord North L	72.77 347	P	P	21 40 27.5	-1.0
	baz=166					
O57A	Amberson	72.78 354	P	P	21 40 29.4	+0.8
	baz=173,SNR=10.0					
LIC	Lamto	72.82 71	eP	P	21 40 29.1	-0.3
	comp=Z,60nm,0.4s					
O56A	Blue Knob Stat	72.93 353	P	P	21 40 30.1	+0.6
	baz=172					
O55A	Ligonier	72.94 353	P	P	21 40 29.9	+0.4
	baz=172,SNR=6.4					
P50A	Jamestown	72.96 349	P	P	21 40 29.4	-0.2
	baz=168,SNR=14					
MSTX	Muleshoe	72.99 332	P	P	21 40 30.4	+0.3
	baz=152,SNR=18					
CCM	Cathedral Cave	73.00 343	eP	P	21 40 30.2	+0.4
	comp=Z,124nm,1.0s					
CCM	Cathedral Cave	73.00 343	eP	P	21 40 30.2	+0.4
CCM			pmax	pmax		
	comp=Z,124nm,1.0s					
CCM	Cathedral Cave	73.00 343	P	P	21 40 30.2	+0.4
	baz=162					
P49A	Miami Univ. Ec	73.04 348	P	P	21 40 29.5	-0.6
	baz=167,SNR=17					
Q46A	CEJHS Indians,	73.04 346	P	P	21 40 29.3	-0.8
	baz=165,SNR=7.2					
O54A	Avella	73.04 352	P	P	21 40 29.7	-0.4
	baz=171					
TIC	Toumodi	73.08 70	eP	P	21 40 30.9	-0.1
Q45A	Warren Harvey,	73.08 345	P	P	21 40 29.8	-0.6
	baz=164,SNR=20					
P48A	Milroy	73.09 348	P	P	21 40 29.7	-0.7
	baz=166,SNR=20					
KIC	Kosan Boka	73.13 71	eP	P	21 40 31.4	+0.1
	comp=Z,154nm,0.8s					
O52A	Adamsville	73.16 351	P	P	21 40 30.6	-0.2
	baz=170,SNR=8.6					
O53A	New Philadelph	73.21 351	P	P	21 40 30.9	-0.1
	baz=170,SNR=7.3					
DBIC	Dimbokro	73.22 70	P	P	21 40 31.9	+0.2
	comp=Z,63nm,0.7s,baz=207,slow=6.6,SNR=70					
DBIC			LR	LR	22 08 09.6	
	comp=Z,57nm,21.3s,baz=208,slow=32					
DBIC	Dimbokro	73.22 70	eP	P	21 40 31.4	-0.4
	comp=Z,68nm,0.8s					
DBIC	Dimbokro	73.22 70	eP	P	21 40 31.4	-0.4
DBIC			pmax	pmax		
	comp=Z,68nm,0.8s					
SSPA	Standing Stone	73.23 354	eP	P	21 40 31.7	+0.5
	comp=Z,59nm,1.4s					
SSPA	Standing Stone	73.23 354	P	P	21 40 31.6	+0.4
	baz=173					
P47A	Martinsville	73.27 347	P	P	21 40 30.9	-0.6
	baz=166,SNR=5.5					
O51A	Pataskala	73.30 350	P	P	21 40 31.4	-0.2
	baz=169,SNR=16					
N57A	Milroy	73.32 354	P	P	21 40 32.1	+0.4
	baz=173,SNR=11					
PAL	Palisades	73.33 357	P	P	21 40 32.2	+0.5
	baz=177					
N59A	State Game Lan	73.34 356	P	P	21 40 32.9	+1.0
	baz=175,SNR=12					
AMTX	Amarillo	73.38 333	P	P	21 40 32.8	+0.5
	baz=153					
ACSO	Alum Creek Sta	73.44 350	P	P	21 40 32.3	-0.1
	baz=169,SNR=22					
O50A	Cable	73.45 349	P	P	21 40 32.2	-0.3
	baz=168,SNR=9.7					
N55A	Marion Center	73.48 353	P	P	21 40 33.1	+0.4
	baz=172,SNR=25					
N56A	West Decatur	73.54 354	P	P	21 40 33.5	+0.4
	baz=173,SNR=7.3					
P46A	Rosedale	73.58 346	P	P	21 40 32.6	-0.7
	baz=165					
P45A	Graceland, Par	73.60 346	P	P	21 40 32.5	-0.8
	baz=165,SNR=12					
O49A	Covington	73.61 349	P	P	21 40 33.1	-0.3
	baz=168,SNR=20					
M61A	Granite Spring	73.62 357	P	P	21 40 34.1	+0.7
	baz=177,SNR=5.3					
N53A	Lisbon	73.71 352	P	P	21 40 34.0	0.0
	baz=171,SNR=7.7					
N54A	Moraine State	73.76 352	P	P	21 40 34.6	+0.3
	baz=171,SNR=12					
O48A	Farmland	73.82 348	P	P	21 40 34.0	-0.6
	baz=167,SNR=16					
N52A	McGinn's Farm,	73.83 351	P	P	21 40 34.1	-0.6
	baz=170,SNR=5.6					
121A	Cookes Peak, D	73.89 328	P	P	21 40 37.2	+1.7
	baz=148,SNR=49					
O47A	Sheridan	73.98 347	P	P	21 40 34.8	-0.7
	baz=166,SNR=10					
N50A	Nevada	73.99 350	P	P	21 40 35.6	0.0
	baz=169,SNR=20					
N51A	Ashland	74.03 350	P	P	21 40 35.4	-0.4
	baz=169,SNR=7.2					
MAW	Mawson	74.06 163	P	P	21 40 36.2	+0.4
	comp=Z,42nm,1.1s,baz=220,slow=6.4,SNR=28					
MAW			LR	LR	22 12 36.3	
	comp=Z,60nm,21.1s,baz=223,slow=35					

MAW	Mawson	74.06 163	*e*P	P	21 40 36.2	+0.4
	comp=Z,10nm,1.2s					
M56A	Emporium	74.09 354	P	P	21 40 36.4	+0.1
	baz=173,SNR=12					
P43A	Skaggs, Pawnee	74.09 345	P	P	21 40 36.0	-0.2
	baz=163,SNR=13					
M55A	Ridgway	74.14 353	P	P	21 40 36.8	+0.3
	baz=172,SNR=17					
M54A	Oil Creek Stat	74.27 353	P	P	21 40 37.3	0.0
	baz=172,SNR=10					
O45A	Potomac	74.29 346	P	P	21 40 36.5	-0.9
	baz=165,SNR=7.6					
SFIN	Lafayette	74.29 347	P	P	21 40 36.4	-1.0
	baz=165,SNR=7.7					
N49A	Columbus Grove	74.30 349	P	P	21 40 37.2	-0.2
	baz=168,SNR=17					
M53A	Wl Miller and	74.31 352	P	P	21 40 37.4	-0.1
	baz=171,SNR=7.1					
O44A	Mansfield	74.35 346	P	P	21 40 36.8	-0.9
	baz=164					
N48A	Decatur	74.38 348	P	P	21 40 37.2	-0.7
	baz=167,SNR=15					
M51A	Elyria	74.41 351	P	P	21 40 37.9	-0.1
	baz=169,SNR=7.0					
M52A	Chesterland	74.50 351	P	P	21 40 38.5	-0.1
	baz=170,SNR=8.4					
N47A	Urbana	74.52 348	P	P	21 40 37.9	-0.8
	baz=166,SNR=17					
M50A	Fremont	74.60 350	P	P	21 40 39.0	-0.1
	baz=169					
BINY	Binghamton	74.63 356	P	P	21 40 40.0	+0.6
	baz=175					
N46A	Monticello	74.72 347	P	P	21 40 39.0	-0.8
	baz=166,SNR=16					
HRV	Adam Dziewonsk	74.76 359	*e*P	P	21 40 40.6	+0.6
	comp=Z,75nm,1.2s					
HRV	Adam Dziewonsk	74.76 359	*e*P	P	21 40 40.6	+0.6
HRV			pmax	pmax		
	comp=Z,75nm,1.2s					
HRV	Adam Dziewonsk	74.76 359	P	P	21 40 41.1	+1.1
	baz=179					
L53A	Girard	74.77 352	P	P	21 40 40.0	-0.1
	baz=171,SNR=7.8					
M49A	Liberty Center	74.81 349	P	P	21 40 39.9	-0.5
	baz=168,SNR=14					
L55A	Hinsdale	74.81 354	P	P	21 40 40.9	+0.5
	baz=173,SNR=17					
N45A	Kentland	74.83 346	P	P	21 40 39.6	-0.8
	baz=165,SNR=7.2					
PLIO	Pelee Island,	74.88 350	P	P	21 40 40.2	-0.5
	baz=169,SNR=6.3					
N44A	Piper City	74.90 346	P	P	21 40 40.2	-0.7
	baz=164,SNR=16					
ERPA	Erie	74.91 352	P	P	21 40 40.9	0.0
	baz=171					
HDIL	Hopedale	74.92 345	P	P	21 40 40.8	-0.2
	baz=163					
M48A	Edgerton	74.94 349	P	P	21 40 40.4	-0.7
	baz=167,SNR=9.4					
L54A	Sinclairville	74.95 353	P	P	21 40 41.4	+0.2
	baz=172,SNR=18					
M47A	Cromwell	74.97 348	P	P	21 40 40.9	-0.4
	baz=166					
TUC	Tucson	75.10 325	*e*P	P	21 40 43.6	+1.2
	comp=Z,64nm,1.6s					
TUC			*e*PP	PP	21 43 20.7	-12
TUC	Tucson	75.10 325	*e*P	P	21 40 43.6	+1.2
TUC			pmax	pmax		
	comp=Z,64nm,1.6s					
TUC	Tucson	75.10 325	P	P	21 40 43.5	+1.2
	baz=145					
M46A	Old House Fiel	75.15 347	P	P	21 40 41.4	-0.8
	baz=166					
L50A	Kingsville	75.19 350	P	P	21 40 41.8	-0.7
	baz=169,SNR=6.2					
K54A	Basiliko Farm,	75.26 353	P	P	21 40 43.3	+0.3
	baz=172,SNR=7.3					
N43A	Stutzman Famil	75.26 345	P	P	21 40 42.9	0.0
	baz=163,SNR=11					
M45A	Boilermakers S	75.30 347	P	P	21 40 41.8	-1.4
	baz=165					
K55A	Perry	75.32 354	P	P	21 40 43.5	+0.3
	baz=173,SNR=8.3					
L48A	N Adams	75.34 349	P	P	21 40 42.8	-0.6
	baz=168,SNR=9.7					
ANMO	Albuquerque	75.35 330	*e*P	P	21 40 45.3	+1.4
	comp=Z,87nm,1.4s					
ANMO			*e*PP	PP	21 43 29.5	-4.9
ANMO	Albuquerque	75.35 330	*d i*P	P	21 40 45.2	+1.4
ANMO			pmax	pmax		
	comp=Z,44nm,1.1s					
ANMO	Albuquerque	75.35 330	P	P	21 40 45.2	+1.4
	baz=149					
TASM	ASL Pad, Albuq	75.35 330	P	P	21 40 45.2	+1.3
	baz=149,SNR=44					
TASM	ASL Pad, Albuq	75.35 330	P	P	21 40 45.2	+1.3
	baz=149,SNR=32					
L49A	Milan	75.40 350	P	P	21 40 43.2	-0.5
	baz=168,SNR=6.0					
N41A	Harden Midland	75.42 344	P	P	21 40 43.7	-0.2
	baz=162,SNR=17					
M44A	Midewin, Midew	75.45 346	P	P	21 40 43.6	-0.5
	baz=164,SNR=11					
KSU1	Kansas State U	75.46 339	P	P	21 40 44.0	-0.1
	baz=157					
L47A	Sherwood	75.50 348	P	P	21 40 43.7	-0.6
	baz=167,SNR=15					
AAM	Ann Arbor	75.57 350	P	P	21 40 44.2	-0.5
	baz=168					
K52A	Tillsonburg	75.64 352	P	P	21 40 44.7	-0.4
	baz=171					
K51A	Iona Station	75.68 351	P	P	21 40 44.8	-0.6
	baz=170					
M43A	Waltham Townsh	75.69 346	P	P	21 40 45.0	-0.4
	baz=164,SNR=16					
L46A	Eue Claire	75.72 348	P	P	21 40 44.5	-1.1
	baz=166					
N40A	Mertquake, Sal	75.76 343	P	P	21 40 45.6	-0.2
	baz=161,SNR=8.3					
MEDO	Medina	75.79 354	P	P	21 40 45.9	0.0
	baz=173					
214A	Organ Pipe Nat	75.81 324	P	P	21 40 48.1	+1.7
	baz=144,SNR=33					
J55A	Hilton	75.83 354	P	P	21 40 46.0	-0.1
	baz=173					
TYNO	Tyneside	75.86 353	P	P	21 40 46.4	+0.1
	baz=172,SNR=6.6					
K50A	Casco	75.88 351	P	P	21 40 46.0	-0.4
	baz=169					
STCO	Saint Catharin	75.90 353	P	P	21 40 46.6	0.0
	baz=172					
J54A	Appleton	75.91 354	P	P	21 40 46.8	+0.2
	baz=173					
M41A	Milan	75.98 344	P	P	21 40 46.7	-0.3
	baz=162,SNR=7.5					
K49A	Clarkson	76.01 350	P	P	21 40 46.3	-0.8
	baz=168					
J52A	Paris	76.07 352	P	P	21 40 47.3	-0.2
	baz=171,SNR=15					
K48A	Perry	76.13 349	P	P	21 40 47.3	-0.6
	baz=168,SNR=11					
K47A	Vermontville	76.14 349	P	P	21 40 47.1	-0.8
	baz=167,SNR=9.9					
L44A	Lake County Fo	76.19 346	P	P	21 40 47.9	-0.3
	baz=165					
CBKS	Cedar Bluff	76.19 337	P	P	21 40 49.2	+0.8
	baz=155					
K46A	Dorr	76.29 348	P	P	21 40 47.7	-1.1
	baz=166					
TORO	Toronto--Lesli	76.32 353	P	P	21 40 49.0	+0.1
	baz=172					
L42A	Oliver, Polo	76.39 345	P	P	21 40 48.9	-0.4
	baz=163,SNR=10					
ACTO	Acton	76.39 353	P	P	21 40 49.3	0.0
	baz=171					
T25A	Trinidad	76.41 332	P	P	21 40 51.5	+1.6
	baz=151,SNR=38					
PECO	Prince Edward	76.43 355	P	P	21 40 49.9	+0.4
	baz=174,SNR=12					
LBNH	Lisbon	76.50 359	P	P	21 40 51.0	+1.1
	baz=178,SNR=15					
DRWO	Darlington Wes	76.51 354	P	P	21 40 50.2	+0.2
	baz=172					
DRCO	St. Marys Ceme	76.52 354	P	P	21 40 50.4	+0.4
	baz=172					
J49A	Marlette	76.53 350	P	P	21 40 49.3	-0.8
	baz=169,SNR=7.0					
WLVO	Wesleyville	76.53 354	P	P	21 40 50.3	+0.2
	baz=173,SNR=9.3					
I53A	Kortright Cn E	76.55 353	P	P	21 40 50.7	+0.5
	baz=172					
J48A	Bridge Port	76.56 350	P	P	21 40 49.8	-0.5
	baz=168,SNR=12					
PKRO	Pickering	76.64 353	P	P	21 40 50.8	+0.2
	baz=172,SNR=5.8					
J47A	Sumner	76.66 349	P	P	21 40 50.4	-0.5
	baz=167					
I51A	Listowel	76.69 352	P	P	21 40 50.9	-0.1
	baz=170,SNR=19					
I55A	Frankford	76.76 354	P	P	21 40 51.6	+0.2
	baz=173,SNR=16					
K43A	Burlington	76.78 346	P	P	21 40 51.2	-0.3
	baz=164,SNR=6.5					
L40A	Anamosa	76.79 344	P	P	21 40 51.4	-0.2
	baz=162,SNR=54					
I52A	Shelburne	76.85 353	P	P	21 40 52.2	+0.3
	baz=171					
J46A	Howard City	76.91 348	P	P	21 40 51.4	-0.8
	baz=167					
W18A	Petrified Fore	76.93 328	P	P	21 40 54.2	+1.4
	baz=147,SNR=21					
LONY	Lake Ozonia	76.96 357	P	P	21 40 53.3	+0.7
	baz=176					
BASO	Ashfield	76.97 351	P	P	21 40 52.5	-0.1
	baz=170					
BWLO	Walkerton	77.01 352	P	P	21 40 52.8	0.0
	baz=170					
H56A	Elgin	77.03 356	P	P	21 40 53.4	+0.5
	baz=175,SNR=26					
I49A	Point Hope	77.05 351	P	P	21 40 52.6	-0.5
	baz=169,SNR=7.7					
H55A	Tweed	77.06 355	P	P	21 40 53.4	+0.3
	baz=174,SNR=14					
DELO	Deloro Mine	77.06 355	P	P	21 40 53.2	+0.2
	baz=174					
J45A	Montague	77.12 348	P	P	21 40 52.6	-0.9
	baz=166					
SCIA	State Center	77.13 343	P	P	21 40 53.7	+0.2
	baz=160					
BRCO	Bruce Peninsul	77.17 352	P	P	21 40 53.8	+0.1
	baz=170					
SDCO	Great Sand Dun	77.36 332	P	P	21 40 56.6	+1.3
	baz=150					
I47A	Gladwin	77.38 349	P	P	21 40 54.4	-0.5
	baz=168					
JFWS	Jewell Farm	77.38 345	P	P	21 40 54.9	0.0
	baz=163					
H52A	Wyevale	77.39 353	P	P	21 40 55.1	+0.2
	baz=172					
I48A	Sherman Twp	77.42 350	P	P	21 40 54.8	-0.3
	baz=168,SNR=12					
I46A	Reed City	77.45 349	P	P	21 40 54.4	-0.9
	baz=167					
BMRO	Meriville Lake	77.49 352	P	P	21 40 55.5	0.0
	baz=170					
PKME	Peaks-Kenny Pk	77.51 1	P	P	21 40 56.6	+1.1
	baz=181					
PLVO	Plevna	77.53 355	P	P	21 40 56.3	+0.7
	baz=174					
BANO	Bancroft	77.58 354	P	P	21 40 55.9	-0.1
	baz=173,SNR=9.4					
I45A	Fountain	77.68 348	P	P	21 40 55.7	-0.8
	baz=166					
GLA	Glamis	77.71 323	P	P	21 40 58.6	+1.6
	baz=143,SNR=8.0					
G55A	Calabogie	77.72 355	P	P	21 40 56.9	+0.2
	baz=174,SNR=9.5					
G53A	Haliburton	77.74 354	P	P	21 40 57.2	+0.3
	baz=173,SNR=26					
ORIO	Orleans, Innes	77.84 356	P	P	21 40 57.6	+0.3
	baz=175,SNR=5.6					
H48A	Harrisville	77.87 350	P	P	21 40 57.5	-0.1
	baz=169,SNR=5.6					
H47A	Mio	77.90 350	P	P	21 40 57.3	-0.5
	baz=168					
S22A	4UR Ranch, Cre	77.90 331	P	P	21 40 59.7	+1.4
	baz=149					
ALFO	Alfred	77.98 357	P	P	21 40 58.3	+0.2
	baz=176,SNR=14					
H46A	Fife Lake	77.99 349	P	P	21 40 57.3	-0.9
	baz=167					
WUAZ	Wupatki	78.01 327	P	P	21 41 00.6	+1.8
	baz=145					
I42A	Draeger Farm,	78.04 346	P	P	21 40 58.4	-0.1
	baz=164,SNR=12					
BGNE	Belgrade	78.04 339	P	P	21 40 59.2	+0.6
	baz=156,SNR=8.4					
IKP	In-Ko-Pah, Jac	78.05 322	P	P	21 41 00.6	+1.6
	baz=142,SNR=5.4					
TSUM	Tsumeb	78.06 105	*e*P	P	21 40 59.4	-0.1
	comp=Z,29nm,1.1s					
Y12C	Blythe	78.11 323	P	P	21 41 00.9	+1.7
	baz=143,SNR=16					
SWSC	Sam W. Stewart	78.12 322	P	P	21 41 01.0	+1.8
	baz=142,SNR=8.6					
KLBO	Killbear Provi	78.13 353	P	P	21 40 59.3	+0.3
	baz=171					
BUKO	Buck Lake	78.13 353	P	P	21 40 59.3	+0.3
	baz=172					
MVCO	Mesa Verde	78.14 330	P	P	21 41 00.9	+1.3
	baz=148					
TOBO	Tobermory, Bru	78.15 352	P	P	21 40 58.8	-0.3
	baz=170					
GLMI	Grayling	78.18 350	P	P	21 40 58.7	-0.6
	baz=168					
PEMO	Pembroke	78.18 355	P	P	21 40 59.6	+0.4
	baz=174					
H45A	Beulah	78.21 348	P	P	21 40 58.7	-0.8
	baz=166					
LMN	Caledonia Moun	78.24 4	*e*P	P	21 41 00.5	+0.9
	comp=Z,72nm,0.9s					
F55A	Otter Lake	78.27 356	P	P	21 40 59.8	0.0
	baz=175,SNR=8.0					
Q24A	Divide	78.28 333	P	P	21 41 01.9	+1.5
	baz=150					
PDMCI	Parker Dam,Lak	78.36 324	P	P	21 41 02.0	+1.5
	baz=143					
H43A	Windswept, Lux	78.37 347	P	P	21 41 00.2	-0.2
	baz=165,SNR=12					
I41A	Arkdale	78.39 346	P	P	21 41 00.2	-0.3
	baz=163,SNR=8.9					
MONP2	Monument Peak	78.41 322	P	P	21 41 02.7	+1.6
	baz=142,SNR=10.0					
G47A	Hillman	78.41 350	P	P	21 41 00.3	-0.2
	baz=168,SNR=11					
F52A	Sundridge	78.47 353	P	P	21 41 00.9	0.0
	baz=172,SNR=16					
BC3	Big Chuckawall	78.50 323	P	P	21 41 03.1	+1.6
	baz=142,SNR=29					
ALGO	Algonquin Park	78.52 354	P	P	21 41 01.2	+0.1
	baz=173,SNR=20					
G45A	Suttons Bay	78.56 349	P	P	21 41 01.1	-0.2
	baz=167					
F51A	Arnstein	78.67 353	P	P	21 41 01.8	-0.1
	baz=172,SNR=15					
G46A	Petoskey	78.70 349	P	P	21 41 01.9	-0.2
	baz=167					
F49A	Sandfield	78.74 352	P	P	21 41 02.0	-0.4
	baz=170,SNR=12					
IRM	Iron Mountain	78.74 323	P	P	21 41 04.2	+1.5
	baz=143,SNR=17					
109C	Camp Elliot, M	78.76 321	P	P	21 41 04.0	+1.2
	baz=141					
F48A	Evansville	78.88 351	P	P	21 41 02.9	-0.2
	baz=169,SNR=12					
OGNE	Ogallala	78.89 336	P	P	21 41 04.2	+0.8
	baz=153					
E52A	Mattawa	78.90 354	P	P	21 41 02.9	-0.3
	baz=173,SNR=9.3					
E53A	Dumoine, Ponti	78.91 355	P	P	21 41 03.4	+0.2
	baz=174,SNR=21					
E54A	Lac Daplat, Po	78.93 355	P	P	21 41 03.7	+0.3
	baz=174					
PQI	Presque Isle	78.93 1	*e*P	P	21 41 04.1	+0.8
	comp=Z,49nm,1.0s					
NEE2	Needles Airpor	78.97 324	P	P	21 41 05.2	+1.4
	baz=143					
PFO	Pinyon Flats O	78.99 322	*e*P	P	21 41 06.1	+1.9
	comp=Z,70nm,1.1s					
PFO	Pinyon Flats O	78.99 322	*i*P	P	21 41 06.4	+2.2
PFO	Pinyon Flats O	78.99 322	P	P	21 41 06.1	+1.9
	baz=142,SNR=21					
BELC	Belle Mtn. Jos	79.05 323	P	P	21 41 06.1	+1.6
	baz=142,SNR=13					
F45A	CMU Biological	79.16 349	P	P	21 41 04.7	+0.1
	baz=167					
ISCO	Idaho Springs	79.18 333	P	P	21 41 06.5	+1.2
	baz=150					
E51A	G1948 Merrick	79.22 353	P	P	21 41 05.1	+0.1
	baz=172,SNR=18					
E50A	Wahnapitae	79.24 353	P	P	21 41 04.9	-0.2
	baz=171,SNR=13					
BOSA	Boshof	79.30 117	*i*P	P	21 41 06.6	+0.3
BOSA			*i*S	PcP	21 41 17.1	+3.0
BOSA	Boshof	79.30 117	P	P	21 41 06.1	-0.1
	comp=Z,22nm,0.8s,baz=256,slow=3.6,SNR=26					
BOSA			LR	LR	22 10 51.8	
	comp=Z,79nm,18.9s,baz=224,slow=32					
BOSA	Boshof	79.30 117	*e*P	P	21 41 04.3	-1.9
	comp=Z,45nm,0.6s					
BOSA			*e*PP	PP	21 43 57.7	-9.4
BOSA	Boshof	79.30 117	*e*P	P	21 41 04.3	-1.9
BOSA			pmax	pmax		
	comp=Z,45nm,0.6s					
BOSA	Boshof	79.30 117	*i*P	P	21 41 06.6	+0.3
BOSA			*i*S	PcP	21 41 17.1	+3.0
MURC	Murrieta	79.36 322	P	P	21 41 07.9	+1.8
	baz=141,SNR=13					
E48A	Lockeyer	79.47 352	P	P	21 41 06.2	0.0
	baz=170,SNR=21					
GMRC	Granite Mounta	79.50 323	P	P	21 41 09.0	+2.1
	baz=142					
D52A	ZEK Kipawa Sen	79.56 354	P	P	21 41 07.2	+0.4
	baz=173					
E47A	Iron Bridge	79.58 351	P	P	21 41 06.7	-0.2
	baz=169,SNR=17					
D54A	Lac Fusel, La	79.61 355	P	P	21 41 06.7	-0.3
	baz=174,SNR=26					
D53A	Lac Vacive, Po	79.61 355	P	P	21 41 07.3	+0.3
	baz=174					
G40A	Rib Lake	79.62 346	P	P	21 41 07.0	-0.2
	baz=163,SNR=11					
E46A	Sault Ste Mari	79.64 350	P	P	21 41 07.0	-0.2
	baz=168,SNR=20					
LATQ	La Tuque	79.66 358	P	P	21 41 08.3	+1.0
	baz=178					
F42A	Maple Grove Fa	79.68 347	P	P	21 41 07.7	+0.2
	baz=165					
ECSD	EROS Data Cent	79.73 341	P	P	21 41 08.1	+0.3
	baz=158					
BBRC	Big Bear Solar	79.73 322	P	P	21 41 10.3	+2.0
	baz=141					
G39A	Holcombe	79.84 345	P	P	21 41 07.9	-0.5
	baz=162,SNR=7.7					
HEC	Hector,Ludlow	79.88 323	P	P	21 41 10.8	+1.9
	baz=142					
FMP	Fort Macarthur	80.03 321	P	P	21 41 11.4	+1.8
	baz=140					
E43A	Lone Tree Farm	80.08 348	P	P	21 41 09.7	+0.1
	baz=166,SNR=19					
BFSC	Mount Baldy Ra	80.10 322	P	P	21 41 11.8	+1.6
	baz=141					
D48A	Paudash Townsh	80.11 352	P	P	21 41 09.6	-0.1
	baz=170					
D46A	Sault St. Mari	80.11 350	P	P	21 41 09.4	-0.4
	baz=168					
E44A	Grand Marais A	80.14 349	P	P	21 41 09.9	0.0
	baz=166					
TUQ	Turquoise Moun	80.14 324	P	P	21 41 12.3	+1.8
	baz=142					
D49A	Beulah Townshi	80.15 352	P	P	21 41 10.0	+0.1
	baz=170					
D47A	Chapleau	80.15 351	P	P	21 41 09.5	-0.5
	baz=169,SNR=9.7					
SPMN	Marine on St.	80.15 344	P	P	21 41 09.5	-0.5
	baz=161,SNR=8.5					
F40A	Park Falls	80.22 346	P	P	21 41 10.7	+0.3
	baz=163					
RRX	Edison Barstow	80.25 323	P	P	21 41 12.9	+2.0
	baz=141					
N23A	Red Feather La	80.26 333	P	P	21 41 12.5	+1.4
	baz=150					
SNCC	San Nicolas Is	80.34 320	P	P	21 41 12.6	+1.3
	baz=140					
F39A	Loretta	80.39 345	P	P	21 41 11.3	0.0
	baz=162					
DECC	Green Verdugo	80.47 321	P	P	21 41 13.6	+1.6
	baz=140					
GSC	Goldstone, Bar	80.49 323	P	P	21 41 13.9	+1.7
	baz=142					
O20A	White River Ci	80.51 331	P	P	21 41 13.7	+1.3
	baz=148					
F37A	Hinrichs Farm,	80.58 344	P	P	21 41 12.2	-0.1
	baz=161					
F38A	Pierce - Schro	80.64 345	P	P	21 41 12.7	+0.1
	baz=162					
SHOC	Shoshone, Teco	80.69 324	P	P	21 41 14.4	+1.3
	baz=142					
BLG	Laguna Peak, P	80.75 321	P	P	21 41 14.9	+1.4
	baz=140					
EDW2	Edwards Air Fo	80.77 322	P	P	21 41 15.0	+1.4
	baz=141					
OSI	Osito Audit: C	80.95 321	P	P	21 41 16.0	+1.4
	baz=140					
SCZ2	Santa Cruz Isl	80.97 320	P	P	21 41 16.4	+1.7
	baz=140					
D41A	Chassel	81.02 347	P	P	21 41 15.4	+0.8
	baz=164					
SUSD	Miller	81.05 340	P	P	21 41 15.1	+0.2
	baz=156					
LRMC	Laurel Mtn Rad	81.07 322	P	P	21 41 16.8	+1.5
	baz=141					
E38A	The Farm, Brul	81.18 345	P	P	21 41 15.5	0.0
	baz=162					
ARVC	Arvin	81.40 321	P	P	21 41 18.6	+1.7
	baz=140					
MPMC	Manual Prospec	81.42 323	P	P	21 41 18.7	+1.4
	baz=141					
CMLA	Cha da Macela	81.42 34	*i*P	P	21 41 19.6	+2.6
FURC	Furnace Creek,	81.42 324	P	P	21 41 18.9	+1.9
	baz=142					
CASY	Casey	81.43 180	*e*P	P	21 41 16.5	-0.2
	comp=Z,51nm,1.1s					
LBTB	Lobatse	81.44 114	*e*P	P	21 41 16.8	-0.9
	comp=Z,24nm,0.6s					
LBTB	Lobatse	81.44 114	*e*P	P	21 41 16.8	-0.9
LBTB			pmax	pmax		
	comp=Z,24nm,0.6s					
TPNV	Topopah Spring	81.50 324	P	P	21 41 19.6	+2.0
	baz=142					
LSQQ	Lebel-sur-Quev	81.53 355	P	P	21 41 17.5	+0.3
	baz=174					
ISA	Isabella, Lake	81.62 322	P	P	21 41 20.1	+1.9
	baz=140					
PKM	Mcpherson Peak	81.74 321	P	P	21 41 20.8	+1.8
	baz=140					
C40A	Isle Royale Na	81.95 347	P	P	21 41 19.3	-0.1
	baz=164					
K22A	Casper	81.99 334	P	P	21 41 21.2	+1.1
	baz=150					
CWC	Cottonwood Cre	82.02 323	P	P	21 41 21.9	+1.5
	baz=141					
VES	Vestal, Richgr	82.08 322	P	P	21 41 22.0	+1.5
	baz=140					
GRAC	Grapevine Rang	82.09 324	P	P	21 41 22.5	+1.9
	baz=141					
SMMC	Simmler	82.16 321	P	P	21 41 22.9	+1.9
	baz=139					
TOA0	Torodi Ar. Sit	82.24 69	*e*P	P	21 41 21.8	0.0
	comp=Z,82nm,0.6s					
TORD	Torodi Ar. Bea	82.24 69	P	P	21 41 20.2	-1.5
	comp=Z,45nm,0.7s,baz=253,slow=4.8,SNR=138					
TORD			pP	pP	21 41 50.6	+0.3
	comp=Z,15nm,0.9s,baz=236,slow=2.7,SNR=2.7					
TORD			S	S	21 51 29.0	+0.2
	comp=Z,3.3nm,1.3s,baz=196,slow=9.8,SNR=4.6					
TORD			PKKPbc	PKKPbc	21 59 49.0	+0.6
	comp=Z,1.7nm,1.1s,baz=117,slow=3.1,SNR=4.1					
TORD			LR	LR	22 15 13.0	
	comp=Z,57nm,21.6s,baz=305,slow=34					
CHGQ	Chibougamau	82.24 357	P	P	21 41 21.1	+0.2
	baz=176					
MATQ	Matagami	82.27 355	P	P	21 41 20.8	-0.3
	baz=174					
R11A	Troy Canyon, C	82.28 326	P	P	21 41 23.5	+1.7
	baz=143					
RSSD	Black Hills	82.38 336	*e*P	P	21 41 22.8	+0.7
	comp=Z,76nm,1.0s					
RSSD	Black Hills	82.38 336	*e*P	P	21 41 22.8	+0.7
RSSD			pmax	pmax		
	comp=Z,76nm,1.0s					
RSSD	Black Hills	82.38 336	P	P	21 41 22.9	+0.7
	baz=152					
EYMN	Ely	82.44 346	P	P	21 41 21.8	-0.2

baz=162
DUG Dugway, Tooele 82.49 328 P P 21 41 23.8 +1.1
baz=145
TIN Tinemaha, Big 82.57 323 P P 21 41 25.0 +1.8
baz=141
VOG Valley Oaks Go 82.60 322 P P 21 41 23.5 +0.4
baz=140
BW06 Boulder Array 83.26 332 P P 21 41 26.8 +0.1
baz=147
PDAR Pinedale Array 83.26 332 P P 21 41 26.9 +0.2
comp=Z,8.0nm,0.6s,baz=144,slow=5.5,SNR=41
PDAR PKKPbc **PKKPbc 21 59 45.7 -2.4**
comp=Z,0.8nm,0.5s,baz=147,slow=2.5,SNR=7.3
MLAC Mammoth, Mammo 83.32 323 P P 21 41 28.8 +1.6
baz=140
NVAR Mina Array Bea 83.67 324 P P 21 41 30.2 +1.3
comp=Z,27nm,0.8s,baz=155,slow=6.0,SNR=142
NVAR PKKPbc **PKKPbc 21 59 47.0 +0.2**
comp=Z,0.2nm,0.3s,baz=289,slow=4.5,SNR=3.7
AGMN Agassiz Nation 83.77 343 P P 21 41 28.8 0.0
baz=158
MDND Maddock 84.34 341 P P 21 41 32.5 +0.7
baz=155
H17A Grant Village 85.03 332 P P 21 41 36.9 +1.3
baz=147
RLMT Red Lodge 85.13 333 P P 21 41 36.9 +0.7
baz=148
LAO LASA Array 85.38 336 P P 21 41 37.5 +0.4
baz=150
ULM Lac du Bonnet 85.59 344 P P 21 41 37.6 -0.3
comp=Z,85nm,1.2s,baz=161,slow=3.6,SNR=24
ULM LR LR 22 20 07.0
comp=Z,33nm,20.0s,baz=104,slow=36
RPZ Rata Peaks 85.73 220 *e*P **P 21 41 39.4 +0.2**
comp=Z,127nm,1.1s
HLID Hailey 85.92 329 P P 21 41 40.3 +0.3
baz=144
THZ Tophouse 86.01 222 *e*P **P 21 41 40.3 -0.3**
comp=Z,136nm,1.3s
MATP Matopo 86.15 112 *i* P **P 21 41 42.6 +0.8**
MATP *i* S pP 21 41 56.7 -14
MATP Matopo 86.15 112 *i* P **P 21 41 42.6 +0.8**
MATP *i* S pP 21 41 56.7 -14
DGMT Dagmar 86.27 338 P P 21 41 42.3 +0.9
baz=152
BOZ Bozeman (W) 86.44 332 P P 21 41 43.2 +0.7
baz=146
O03E Paynes Creek 86.85 323 P P 21 41 44.6 +0.1
baz=138
SCHQ Schefferville 87.13 2 P P 21 41 45.2 -0.2
comp=Z,33nm,0.9s,baz=182,slow=4.5,SNR=17
SCHQ LR LR 22 23 36.7
comp=Z,21nm,19.4s,baz=128,slow=37
O02D Mt. Diablo Mer 87.26 322 P P 21 41 47.4 +0.8
baz=138
EGMT Eagleton 87.76 335 P P 21 41 48.9 +0.2
baz=147
N02D Trinity Center 87.81 323 P P 21 41 49.7 +0.5
baz=138
M04C Macdoel 87.98 324 P P 21 41 51.1 +1.2
baz=139
M02C Callahan 88.19 323 P P 21 41 52.0 +1.1
baz=138
MSO Missoula 88.37 332 P P 21 41 52.7 +1.0
baz=144
L04D Klamath Falls 88.53 324 P P 21 41 53.2 +0.6
baz=138
K04D Chiloquin, OR 88.57 325 P P 21 41 54.0 +1.3
baz=139
LSZ Lusaka 88.72 107 *e*P **P 21 41 54.1 -0.1**
comp=Z,20nm,0.8s
LSZ Lusaka 88.72 107 *e*P **P 21 41 54.1 -0.1**
LSZ pmax pmax
comp=Z,20nm,0.8s
J05D Fort Rock, OR 88.81 325 P P 21 41 55.2 +1.3
baz=139
L02E Cave Junction 89.14 323 P P 21 41 56.9 +1.6
baz=137
J04D Umpqua Nationa 89.20 325 P P 21 41 56.8 +1.0
baz=138
K02D Willamette Mer 89.56 324 P P 21 41 58.6 +1.3
baz=137
I05D Terrebonne, OR 89.65 326 P P 21 41 59.2 +1.5
baz=139
I04A Tendick Farm, 89.76 325 P P 21 41 58.8 +0.7
baz=138
J01E Myrtle Point 90.04 324 P P 21 42 00.6 +1.2
baz=137
G05D Wamic, OR 90.32 327 P P 21 42 02.2 +1.4
baz=139
H04D Lebanon 90.46 325 P P 21 42 01.2 -0.1
baz=138
TAM Tamanrasset 90.79 63 *e*P **P 21 42 03.6 0.0**
comp=Z,25nm,1.4s
TAM *e*PP **PP 21 45 35.2 -5.8**
TAM Tamanrasset 90.79 63 *e*P **P 21 42 03.6 0.0**
TAM pmax pmax
comp=Z,25nm,1.4s
NEW Newport 90.81 331 P P 21 42 03.0 0.0
baz=142
F05D White Salmon 90.88 327 P P 21 42 04.4 +1.2
baz=139
FFC Flin Flon 91.19 342 *e*P **P 21 42 04.6 +0.1**
comp=Z,26nm,1.1s
FFC Flin Flon 91.19 342 *i* P **P 21 42 04.5 0.0**
G03D McMinnville, O 91.22 326 P P 21 42 05.9 +1.1
baz=138
E04D Cinebar 91.89 327 P P 21 42 08.1 +0.2
baz=138
D04E Lakebay 92.44 327 P P 21 42 11.6 +1.2
baz=138
D03D Eldon 92.85 327 P P 21 42 13.0 +0.7
baz=138
B05A Bryant 92.95 328 P P 21 42 12.6 -0.1
baz=138
A04D Lummi Island 93.56 328 P P 21 42 16.1 +0.6
baz=138
ESDC Sonseca Array 94.47 45 P P 21 42 19.3 -0.8
comp=Z,1.7nm,0.8s,baz=230,slow=5.0,SNR=9.7
ESDC pP **pP 21 42 49.8 +1.1**
comp=Z,1.3nm,0.8s,baz=227,slow=2.9,SNR=3.9
YKA Yellowknife Ar 101.26 341 P Pdif 21 42 49.4 -0.5
comp=Z,2.9nm,0.8s,baz=141,slow=4.5,SNR=10
YKA PP **PP 21 47 00.4 -0.4**
comp=Z,1.0nm,0.7s,baz=138,slow=8.2,SNR=5.8
YKB5 Yellowknife Ar 101.26 341 *e*Pdif **Pdif 21 42 49.4 -0.5**
YKW3 Yellowknife Ar 101.32 341 *e*Pdif **Pdif 21 42 50.1 -0.1**
DAVA Damuels 107.05 45 *e*PKiKP **PKiKP 21 47 25.8 +0.6**
comp=Z,1.3nm,0.4s
FETA Feichten 107.43 45 *e*PKiKP **PKiKP 21 47 27.6 +1.7**
comp=Z,4.6nm,1.3s
MOTA Moosalm 107.81 45 *e*PKiKP **PKiKP 21 47 27.5 +0.9**
comp=Z,1.2nm,0.5s
JAVS Javornik 108.92 47 *i* PP **PKiKP 21 47 28.5 -0.2**
VISS Visnje 109.36 48 *i* PP **PKiKP 21 47 30.0 +0.6**
BOJS Bojanci 109.49 48 *i* PP **PKiKP 21 47 28.9 -0.8**
OBKA Obir 109.50 47 *e*PKiKP **PKiKP 21 47 30.3 +0.5**
comp=Z,4.4nm,0.6s
SOKA Soboth 109.88 47 *e*PKiKP **PKiKP 21 47 30.7 +0.2**
comp=Z,1.0nm,0.5s
PERS Pernice 109.91 47 *i* PP **PKiKP 21 47 30.6 +0.1**
MOA Molln 109.94 45 *e*PKiKP **PKiKP 21 47 30.4 0.0**
comp=Z,1.1nm,0.5s
GERES GERESS Array B 110.05 44 PKiKP **PKiKP 21 47 30.7 0.0**
comp=Z,1.9nm,0.7s,baz=179,slow=1.3,SNR=20
GERES PKKPbc **PKKPbc 21 58 34.1 +0.2**
comp=Z,0.4nm,0.5s,baz=52,slow=2.2,SNR=5.5
GERES PKKP **PKKPab 21 58 45.5 +3.4**
comp=Z,1.4nm,0.8s,baz=57,slow=4.9,SNR=10
BLY Banja Luka 110.38 49⇑*i*P **PKiKP 21 47 31.1 -0.2**
ARSA Arzberg 110.43 46 *e*PKiKP **PKiKP 21 47 31.6 +0.2**
comp=Z,2.4nm,0.5s
CLL Collm 110.75 42 *e*Pdif **Pdif 21 43 32.0 -0.4**
CLL *i* PKiKP **PKiKP 21 47 31.2 -0.6**
CLL *e*PP **PP 21 48 09.0 -2.0**
CLL *e*(PKKPdf) 21 58 52.0
CONA Conrad Observa 110.94 46 *e*PKiKP **PKiKP 21 47 32.3 -0.1**
comp=Z,2.2nm,0.5s
BRG Berggiesshubel 111.09 42 *e*PKP **PKiKP 21 47 32.8 +0.3**
comp=Z,3.2nm,0.9s
BRG Berggiesshubel 111.09 42 *e*PKIKP **PKiKP 21 47 32.8 +0.3**
BRG pmax pmax
comp=Z,3.0nm,0.9s
PVCC Panska Ves 111.30 43 *e*PKIKP **PKiKP 21 47 33.3 +0.4**
PVCC Panska Ves 111.30 43 *e*PKP **PKiKP 21 47 33.3 +0.4**
KRUC Moravsky 111.74 45 *e*PKIKP **PKiKP 21 47 33.8 0.0**
VRAC Vranov 111.96 45 *e*PKIKP **PKiKP 21 47 33.4 -0.8**

DPC Dobruska-Polom 112.24 44 *e*PKIKP **PKiKP 21 47 34.4 -0.4**
DPC Dobruska-Polom 112.24 44 *e*PKP **PKiKP 21 47 34.4 -0.4**
OSTC Ostas 112.26 43 *e*PKP **PKiKP 21 47 35.4 +0.6**
JAVC Velka Javorina 112.42 46 *e*PKIKP **PKiKP 21 47 36.4 +1.2**
MORC Moravsky Berou 112.72 45⇓*i*P **PKiKP 21 47 35.9 +0.2**
MORC Moravsky Berou 112.72 45 ⇓PKIKP **PKiKP 21 47 35.9 +0.2**
MORC Moravsky Berou 112.72 45 *e*PKIKP **PKiKP 21 47 35.9 +0.2**
OKC Ostrava-Krasne 113.10 45 *e*PKIKP **PKiKP 21 47 36.9 +0.6**
OKC Ostrava-Krasne 113.10 45 *e*PKP **PKiKP 21 47 36.9 +0.6**
VTS Vitosha 113.48 53⇑*i*P **PKiKP 21 47 37.7 +0.2**
VTS Vitosha 113.48 53 ⇑PKIKP **PKiKP 21 47 37.7 +0.2**
BZS Buzias 113.59 50⇓*i*P **PKiKP 21 47 37.1 -0.3**
BZS Buzias 113.59 50 ⇓PKIKP **PKiKP 21 47 37.1 -0.3**
ILAR Eielson Array 113.68 333 PKIKP **PKiKP 21 47 36.9 -0.2**
comp=Z,3.2nm,1.0s,baz=177,slow=1.7,SNR=17
ILAR PP **PP 21 48 32.8 +1.3**
comp=Z,1.4nm,0.9s,baz=128,slow=4.0,SNR=5.4
ILAR PKKPbc **PKKPbc 21 58 19.4 -2.8**
comp=Z,0.3nm,0.9s,baz=264,slow=5.0,SNR=4.1
HERR Herculane 113.82 51⇑*i*P **PKiKP 21 47 37.1 -0.8**
GKP Gorka Klasztor 113.93 41 *e*PKP **PKiKP 21 47 38.6 +0.8**
GKP Gorka Klasztor 113.93 41 *e*PKIKP **PKiKP 21 47 38.6 +0.8**
NB2 NORSAR Subarra 114.00 32 PKPdf **PKiKP 21 47 36.6 -1.2**
comp=Z,4.2nm,1.2s,baz=248,slow=1.9
NOA NORSAR Array B 114.00 32 PKP **PKiKP 21 47 37.7 -0.1**
comp=Z,1.3nm,0.7s,baz=251,slow=2.1,SNR=9.2
NOA PKKPbc **PKKPab 21 58 25.7 +1.6**
comp=Z,2.2nm,0.8s,baz=67,slow=4.5,SNR=8.4
NIE Niedzica 114.23 46 *e*PKP **PKiKP 21 47 39.2 +0.6**
NIE Niedzica 114.23 46 *e*PKIKP **PKiKP 21 47 39.2 +0.6**
OJC Ojcow 114.23 45 *e*PKP **PKiKP 21 47 38.9 +0.4**
OJC Ojcow 114.23 45 *e*PKIKP **PKiKP 21 47 38.9 +0.4**
GZR Gura Zlata 114.26 51⇑*i*P **PKiKP 21 47 39.0 +0.2**
GZR Gura Zlata 114.26 51 ⇑PKIKP **PKiKP 21 47 39.0 +0.2**
DRGR 114.74 49⇑*i*P PKPdf 21 47 39.7 0.0
DRGR 114.74 49 ⇑PKIKP PKPdf 21 47 39.7 0.0
TRPA Tarpa 115.12 48⇓*i*P **PKiKP 21 47 40.6 +0.3**
HUMR Humele 115.38 52⇓*i*P **PKPdf 21 47 40.9 0.0**
VOIR 115.76 51⇑*i*P **PKPdf 21 47 41.4 -0.3**
VOIR 115.76 51 ⇑PKIKP **PKPdf 21 47 41.4 -0.3**
KWP Kalwaria Pacla 115.77 46 *e*PKP **PKiKP 21 47 41.9 +0.4**
KWP Kalwaria Pacla 115.77 46 *e*PKIKP **PKiKP 21 47 41.9 +0.4**
ARCR ARCALIA 115.90 49⇓*i*P **PKiKP 21 47 42.1 +0.3**
DOPR Dopca 116.17 51⇑*i*P **PKPdf 21 47 42.4 0.0**
SECR 116.29 52⇑*i*P **PKPdf 21 47 42.6 -0.1**
MLR Muntele Rosu 116.37 51⇓*i*P **PKPdf 21 47 42.3 -0.6**
MLR Muntele Rosu 116.37 51 ⇓PKIKP **PKPdf 21 47 42.3 -0.6**
HNR Honiara 116.55 238 PP PP 21 48 55.4 +3.4
comp=Z,58nm,0.4s,baz=208,slow=2.4,SNR=4.8
BURAR Bucovina Array 116.63 49⇑*i*P **PKPdf 21 47 43.4 +0.1**
BURAR Bucovina Array 116.63 49 ⇑PKIKP **PKPdf 21 47 43.4 +0.1**
TTA Tatalina 116.68 329 *e*PKPdf **PKiKP 21 47 43.9 +0.9**
TTA Tatalina 116.68 329 *e*PKIKP **PKiKP 21 47 43.9 +0.9**
BIZ Bicaz 116.97 50⇓*i*P **PKPdf 21 47 43.3 -0.6**
VRI Vrincioaia 117.01 51⇓*i*P **PKPdf 21 47 43.3 -0.7**
VRI Vrincioaia 117.01 51 ⇓PKIKP **PKPdf 21 47 43.3 -0.7**
TESR Tescani 117.18 50⇑*i*P **PKPdf 21 47 43.6 -0.7**
PRAR RASCA 117.19 49⇑*i*P **PKPdf 21 47 44.0 -0.3**
PBUR Paburg 117.45 39 *e*P **PKPdf 21 47 43.7 -0.7**
PBUR IAmb IAmb 21 47 45.0
comp=Z,26nm,0.9s
TLB Topalu 117.45 53⇑*i*P **PKPdf 21 47 44.5 -0.3**
TLB Topalu 117.45 53 ⇑PKIKP **PKPdf 21 47 44.5 -0.3**
SUW Suwalki 117.50 42 *e*PKP **PKPdf 21 47 44.5 -0.1**
SUW Suwalki 117.50 42 *e*PKIKP **PKPdf 21 47 44.6 -0.1**
TIRR Tirgusor 117.66 53⇑*i*P **PKPdf 21 47 44.9 -0.4**
TIRR Tirgusor 117.66 53 ⇑PKIKP **PKPdf 21 47 44.9 -0.4**
CFR Carcaliu 117.71 52⇑*i*P **PKPdf 21 47 44.7 -0.6**
CFR Carcaliu 117.71 52 ⇑PKIKP **PKPdf 21 47 44.7 -0.6**
IAS Iasi 117.99 50⇓*i*P **PKPdf 21 47 45.0 -0.8**
IAS Iasi 117.99 50 ⇓PKIKP **PKPdf 21 47 45.0 -0.8**
SLIT Slitere, Latvi 118.12 38 *e*P **PKPdf 21 47 44.3 -1.4**
SLIT IAmb IAmb 21 47 45.3
comp=Z,48nm,0.6s
TLCR 118.17 52⇑*i*P **PKPdf 21 47 45.4 -0.8**
TLCR 118.17 52 ⇑PKIKP **PKPdf 21 47 45.4 -0.8**
PABE Paberze 118.39 40 *e*P **PKPdf 21 47 45.9 -0.4**
PABE IAmb IAmb 21 47 46.7
comp=Z,24nm,0.8s
MILM Milestii Mici 118.72 51⇓*i*P **PKPdf 21 47 46.7 -0.5**
ANTO Ankara 119.20 59⇓*i*P **PKPdf 21 47 48.6 +0.1**
ANTO Ankara 119.20 59 ⇓PKIKP **PKPdf 21 47 48.6 +0.1**
AS31 Alice Springs 119.52 205 *e*PKPdf **PKPdf 21 47 48.7 -1.0**
ASAR Alice Springs 119.52 205 PKP **PKPdf 21 47 48.5 -1.2**
comp=Z,4.6nm,0.8s,baz=148,slow=2.3,SNR=34
ASAR PKKPbc **PKKPbc 21 58 00.9 +0.2**
comp=Z,3.7nm,0.9s,baz=347,slow=3.4,SNR=18
ASAR PKKP **PKKPdf 21 58 32.2 +1.5**
comp=Z,2.3nm,0.8s,baz=335,slow=3.1,SNR=9.5
IIGN Ignalina 119.58 41 *e*P **PKPdf 21 47 48.7 +0.1**
IIGN IAmb IAmb 21 47 49.3
comp=Z,10nm,0.5s
IZAR Zarasai 119.70 40 *e*P **PKPdf 21 47 48.5 -0.3**
IZAR IAmb IAmb 21 47 49.5
comp=Z,6.5nm,0.6s
BRTR Keskin Array B 119.77 60 PKP **PKPdf 21 47 49.4 -0.3**
comp=Z,5.3nm,0.8s,baz=192,slow=3.5,SNR=35
BRTR PKKPbc **PKKPab 21 58 00.6 +0.2**
comp=Z,0.5nm,0.7s,baz=46,slow=5.3,SNR=3.5
IDID Didziasalis 119.86 41 *e*P **PKPdf 21 47 49.0 -0.2**
IDID IAmb IAmb 21 47 49.7
comp=Z,6.5nm,0.8s
AKASG Malin Array Be 120.08 46 PKP **PKPdf 21 47 48.8 -0.9**
comp=Z,6.8nm,0.5s,baz=264,slow=2.5,SNR=53
AKASG pPKP **pPKPdf 21 48 19.3 -0.6**
comp=Z,2.5nm,0.7s,baz=271,slow=2.5,SNR=2.3
AKASG PKKPbc **PKKPbc 21 58 00.5 +1.5**
comp=Z,0.5nm,0.2s,baz=67,slow=4.1,SNR=8.1
VSU Vasula 120.62 37 *d i*PKIKP **PKPdf 21 47 49.8 -0.7**
VSU pmax pmax
comp=Z,170nm,1.7s
VSU Vasula 120.62 37 *e*P **PKPdf 21 47 49.8 -0.7**
VSU IAmb IAmb 21 47 50.9
comp=Z,74nm,0.8s
FINES FINESS Array B 120.95 34 PKP **PKPdf 21 47 50.8 -0.2**
comp=Z,5.9nm,0.7s,baz=207,slow=0.7,SNR=26
FINES PKKPbc **PKKPbc 21 57 55.0 -1.0**
comp=Z,1.1nm,0.5s,baz=79,slow=4.5,SNR=9.5
FIA1 FINESS Array S 120.95 34 *e*PKPdf **PKPdf 21 47 51.0 -0.1**
SEVA Sevastopol 121.27 54⇑*i*P **PKiKP 21 47 52.4 +0.1**
SIM Simferopol' 121.68 54 *c i*PKIKP **PKPdf 21 47 53.1 +0.1**
SIM pmax pmax
comp=Z,21nm,0.9s
ARA0 ARCESS Array S 122.09 24 *e*PKPdf **PKPdf 21 47 52.9 -0.2**
ARCES ARCESS Array B 122.09 24 PKP **PKPdf 21 47 52.9 -0.2**
comp=Z,3.6nm,0.4s,baz=245,slow=3.1,SNR=46
ARCES PKKPbc **PKKPbc 21 57 50.3 -1.6**
comp=Z,2.1nm,0.6s,baz=77,slow=5.2,SNR=17
PUL Pulkovo 122.69 36⇑*i*PKIKP **PKPdf 21 47 53.9 -0.5**
PUL pmax pmax
comp=Z,51nm,0.3s
WB2 Warramunga Arr 122.74 208 *e*PKPdf **PKPdf 21 47 55.3 -0.6**
WRA Warramunga Arr 122.74 208 PKP **PKPdf 21 47 55.2 -0.8**
comp=Z,16nm,0.6s,baz=199,slow=1.8,SNR=101
WRAB Tennant Creek 122.75 208 *e*PKPdf **PKPdf 21 47 53.4 -2.5**
WRAB Tennant Creek 122.75 208 *e*PKIKP **PKPdf 21 47 53.4 -2.5**
RAYN Ar Rayn 123.24 82 *e*PKPdf **PKiKP 21 47 57.1 +0.1**
RAYN Ar Rayn 123.24 82 *i* PKiKP **PKiKP 21 47 57.3 +0.3**
SNR=11
RAYN Ar Rayn 123.24 82 *e*PKIKP **PKiKP 21 47 57.1 +0.1**
ATKA Atka Island 123.28 314 *e*PKPdf **PKPdf 21 47 55.4 -0.4**
ANN Anapa 123.92 55 *i* PKIKP **PKPdf 21 47 57.1 -0.2**
ANN *e* 21 48 28.6
ANN pmax pmax
comp=Z,54nm,1.1s
ADK Adak 124.73 314 *e*PKPdf **PKPdf 21 47 58.2 -0.4**
ADK Adak 124.73 314 *e*PKIKP **PKPdf 21 47 58.2 -0.4**
APA Apatity 124.83 27⇑*i*PKIKP **PKPdf 21 47 58.0 -0.3**
APA pmax pmax
comp=Z,4.0nm,0.8s
APA MLR MLR
comp=Z,100nm,26.0s
LVZ Lovozero 125.31 27 *e*PKPdf **PKPdf 21 47 59.5 +0.2**
LVZ Lovozero 125.31 27 *c i*PKIKP **PKPdf 21 47 59.5 +0.2**
LVZ pmax pmax
comp=Z,53nm,2.5s
OBN Obninsk 125.34 42⇓*i*P **PKPdf 21 47 59.5 -0.1**
OBN Obninsk 125.34 42 *d i*PKIKP **PKPdf 21 47 59.1 -0.5**
OBN *e* 21 49 49.0
OBN *e*PPP PPP 21 52 30.9
OBN pmax pmax
comp=Z,70nm,1.7s
BCA Borcka 126.08 60⇓*i*P **PKiKP 21 48 02.0 0.0**

VSR Storozhevoye 126.33 47 *e*PKIKP **PKPdf 21 48 00.9 -0.8**
VSR pmax pmax
comp=Z,30nm,1.2s
VORD Divnogorie 126.37 48 *e*PKIKP **PKPdf 21 48 01.1 -0.7**
VORD pmax pmax
comp=Z,30nm,1.2s
LPSR Galich'ya Gora 126.38 46 *e*PKIKP **PKPdf 21 48 00.8 -0.9**
LPSR pmax pmax
comp=Z,30nm,0.9s
NEY Neytrino 127.28 58⇑*i*PKIKP **PKiKP 21 48 04.9 +0.3**
KLMR Klimovskoe 127.35 35 *e*PKIKP **PKPdf 21 48 01.4 -1.9**
KLMR pmax pmax
comp=Z,84nm,1.3s
KLMR Klimovskoe 127.35 35 *e*PKPdf **PKPdf 21 48 01.4 -1.9**
KLMR AMP 21 48 04.9
comp=Z,84nm,1.2s
FITZ Fitzroy Crossi 127.37 199 *e*PKPdf **PKPdf 21 48 04.3 -0.5**
KIV Kislovodsk 127.40 57 *e*PKPdf **PKPdf 21 48 03.8 -0.4**
KIV Kislovodsk 127.40 57⇓*i*P **PKPdf 21 48 04.2 +0.1**
KIV Kislovodsk 127.40 57 *i* PKiKP **PKiKP 21 48 05.1 +0.4**
SNR=9.4
KIV Kislovodsk 127.40 57 *i* PKIKP **PKPdf 21 48 03.9 -0.2**
KIV pmax pmax
comp=Z,94nm,1.1s
AKH Akhalkalaki 127.44 60⇑*i*P **PKPdf 21 48 04.7 +0.3**
KBZ Khabaz 127.51 57 PKP **PKiKP 21 48 04.9 +0.2**
comp=Z,10nm,0.9s,baz=238,slow=3.0,SNR=13
GOF Gofitskoye 127.87 56⇑*i*PKIKP **PKiKP 21 48 05.4 0.0**
GOF pmax pmax
comp=Z,67nm,0.9s
NCK Nalchik 127.96 58⇑*i*PKIKP **PKiKP 21 48 05.9 +0.2**
ZEI Tsey 128.03 59 *i* PKIKP **PKPdf 21 48 05.4 -0.1**
ZEI pmax pmax
comp=Z,23nm,1.3s
GNI Garni 128.07 62 *e*PKPdf **PKiKP 21 48 07.1 +0.8**
GNI Garni 128.07 62 *c i*PKIKP **PKiKP 21 48 06.5 +0.3**
GNI pmax pmax
comp=Z,100nm,1.3s
GROC Groznyy 129.48 58 *i* PKIKP **PKPdf 21 48 07.9 -0.1**
GROC *e* 21 48 40.2
GROC *e* 21 55 03.0
GROC pmax pmax
comp=Z,40nm,1.4s
PRGR Permogore 130.27 34⇓*i*PKIKP **PKPdf 21 48 09.0 +0.1**
PRGR *e* 21 48 39.9
PRGR pmax pmax
comp=Z,55nm,0.9s
MTN Manton Dam 130.44 208 *e*PKPdf **PKPdf 21 48 10.5 -0.2**
AKT Akhty 130.57 61 *e*PKIKP **PKiKP 21 48 10.9 -0.2**
AKT *e* 21 48 42.2
AKT pmax pmax
comp=Z,29nm,1.0s
ASUD Al Ashush, Dub 131.91 85 PKiKP **PKPdf 21 48 13.7 +0.5**
BILL Bilibino 132.26 335 *d i*PKIKP **PKPdf 21 48 12.9 +0.4**
BILL *e* 21 50 34.8
BILL *e*PPP PPP 21 53 29.1
BILL pmax pmax
comp=Z,39nm,1.7s
KIRV Kirov 132.45 38 PKP **PKiKP 21 48 13.8 -0.4**
comp=Z,19nm,0.6s,baz=289,slow=1.6,SNR=16
ASHO Ashiyiah 132.55 85 PKPdf **PKPdf 21 48 13.6 -0.8**
UOSS Minazif 132.77 85 PKPdf **PKPdf 21 48 14.9 +0.1**
MSFE Esma-Masafi 132.89 84 PKPdf **PKPdf 21 48 14.3 -0.8**
ARU Arti 137.66 40 PKhKP PKPpre 21 48 14.3
comp=Z,0.4nm,0.4s,baz=185,slow=8.4,SNR=3.4
ARU PKP **PKPdf 21 48 23.5 +0.6**
comp=Z,5.8nm,0.6s,baz=328,slow=3.3,SNR=28
ARU Arti 137.66 40 *e*PKPpre PKPpre 21 48 16.9
ARU *e*PKPdf **PKPdf 21 48 23.5 +0.6**
ARU Arti 137.66 40 *i* PKIKP **PKPdf 21 48 23.2 +0.3**
ARU 21 51 08.2
GEYT Alibeck 137.87 68 PKhKP PKPpre 21 48 12.9
comp=Z,2.2nm,1.0s,baz=297,slow=6.5,SNR=4.2
GEYT PKP **PKPdf 21 48 23.4 -0.6**
comp=Z,8.8nm,1.0s,baz=270,slow=4.4,SNR=14
GEYT pPKP pPKPdf 21 48 54.0 -0.1
comp=Z,3.2nm,0.8s,baz=153,slow=0.7,SNR=2.6
AKTO Aktyubinsk 138.23 49 PKP **PKPdf 21 48 23.5 -0.7**
comp=Z,11nm,0.8s,baz=184,slow=3.1,SNR=26
SVE Sverdlovsk 138.68 39 *e*PKIKP **PKPdf 21 48 25.4 +0.6**
SVE pmax pmax
comp=Z,19nm,1.4s
SEY Seymchan 139.59 332 PKhKP PKPpre 21 48 17.5
comp=Z,1.8nm,0.3s,baz=61,slow=3.2,SNR=6.7
SEY PKP **PKPdf 21 48 26.2 -0.1**
comp=Z,30nm,0.8s,baz=157,slow=4.3,SNR=35
SEY Seymchan 139.59 332⇑*e*PKIKP **PKPdf 21 48 26.7 +0.5**
TIXI Tiksi 139.59 351 PKhKP PKPpre 21 48 16.1
comp=Z,1.7nm,0.3s,baz=39,slow=4.1,SNR=5.4
TIXI PKP **PKPdf 21 48 25.7 -0.3**
comp=Z,11nm,0.8s,baz=24,slow=1.9,SNR=4.2
TIXI Tiksi 139.59 351 *de*PKIKP **PKPdf 21 48 25.5 -0.5**
TIXI pmax pmax
comp=Z,16nm,1.3s
PETK Petropavlovsk- 140.30 316 PKhKP PKPpre 21 48 20.9
comp=Z,8.5nm,0.7s,baz=97,slow=6.2,SNR=15
PETK PKP **PKPdf 21 48 28.8 +0.9**
comp=Z,18nm,0.8s,baz=119,slow=4.9,SNR=17
NRIK Noril'sk 141.12 12 PKP **PKPdf 21 48 29.8 +0.9**
comp=Z,7.1nm,0.8s,baz=47,slow=3.8,SNR=8.0
MA2 Magadan 141.84 327 PKhKP PKPpre 21 48 25.1
comp=Z,7.3nm,0.6s,baz=97,slow=4.9,SNR=8.2
MA2 Magadan 141.84 327 *e*PKPpre PKPpre 21 48 23.8
MA2 *e*PKPdf **PKPdf 21 48 29.9 -0.5**
MA2 Magadan 141.84 327 *e*PKHKP PKPpre 21 48 23.8
MA2 *e* 21 48 29.9
TNTI Ternate 144.30 211 *e*PKPdf **PKPab 21 48 32.7 -1.6**
BRVK Borovoye 145.11 42 *e*PKPbc **PKPdf 21 48 36.9 +0.5**
BRVK Borovoye 145.11 42 *d i*PKIKP **PKPdf 21 48 36.6 +0.2**
BVAR Borovoye Array 145.18 42 PKPbc **PKPab 21 48 37.2 +0.6**
comp=Z,80nm,0.6s,baz=291,slow=2.9,SNR=690
BVAR pPKPbc **pPKPdf 21 49 06.9 +0.2**
comp=Z,25nm,0.8s,baz=302,slow=3.3,SNR=4.6
KBL Kabul 146.10 75 *e*PKPdf **PKPdf 21 48 39.5 +0.5**
KBL Kabul 146.10 75 *e*PKP2 **PKPdf 21 48 39.5 +0.5**
YAK Yakutsk 147.92 342 *e*PKPdf **PKPdf 21 48 40.7 -0.1**
YAK *e*PKPbc **PKPbc 21 48 43.8 -0.2**
YAK Yakutsk 147.92 342 *i* PKIKP **PKPbc 21 48 43.2 -0.7**
YAK *e* 21 49 24.4
HYB Hyderabad 148.00 111 *i* PKP **PKPdf 21 48 43.0 +0.6**
PSI Prapat 148.63 159 PKPbc **PKPbc 21 48 46.7 -0.7**
comp=Z,48nm,0.7s,baz=216,slow=1.8,SNR=21
KSM Kuching 149.03 181 *e*PKPdf **PKPdf 21 48 42.4 -1.8**
KSM *e*PKPbc **PKPbc 21 48 48.1 -0.2**
TSI Tuntungan 149.17 158 PKP **PKPbc 21 48 48.5 -0.2**
NIL Nilore 149.43 78 *e*PKPdf **PKPdf 21 48 44.5 +0.2**
NIL *e*PKPbc **PKPbc 21 48 48.7 -0.1**
ARSB Arslanbob 149.46 63 *e*PKPbc **PKPdf 21 48 45.7 +1.5**
NKL Nikolayevsk 149.84 322 *e*PKHKP **PKPbc 21 48 49.2 +0.1**
NKL pmax pmax
comp=Z,160nm,1.0s
EKS2 Erkin-Say 149.91 60 P **PKPdf 21 48 45.8 +1.0**
SNR=24
AML Almayashu 149.92 61 P **PKPdf 21 48 46.5 +1.3**
SNR=9.5
SBUM Sibu 149.92 185 *e*PKPdf **PKPdf 21 48 45.0 -0.6**
SBUM *e*PKPab **PKPbc 21 48 50.8 +0.2**
USP Ospenovka 150.35 59 P **PKPdf 21 48 46.6 +1.2**
SNR=9.1
AAK Ala-Archa 150.44 60 PKP **PKPdf 21 48 46.6 +0.9**
comp=Z,11nm,0.8s,baz=188,slow=2.2,SNR=32
AAK PKPbc **PKiKP 21 48 52.3 +0.4**
comp=Z,125nm,0.8s,baz=194,slow=2.3,SNR=172
AAK Ala-Archa 150.44 60 P **PKPdf 21 48 46.6 +0.9**
SNR=12
AAK Ala-Archa 150.44 60 *i* PKPdf **PKPdf 21 48 46.6 +0.9**
SNR=118
AAK Ala-Archa 150.44 60 *de*PKIKP **PKPdf 21 48 46.5 +0.8**
UCH Uchtor 150.51 61 P **PKPdf 21 48 47.3 +1.1**
SNR=21
CHMS Chumysh 150.57 59 P **PKiKP 21 48 52.0 +0.1**
SNR=44
KURBB Kurchatov Arra 150.77 43 PKP **PKPdf 21 48 46.4 +0.7**
comp=Z,120nm,0.8s,baz=301,slow=3.0,SNR=52
KURBB PKPbc **PKiKP 21 48 52.0 0.0**
comp=Z,120nm,0.8s,baz=300,slow=3.0,SNR=390
KURBB PP **PP 21 52 32.0 +2.7**
comp=Z,8.2nm,1.1s,baz=287,slow=6.6,SNR=5.2
KBK Karagaybulak 150.77 60 P **PKPdf 21 48 47.2 +0.9**
SNR=9.7
KURK Kurchatov 150.78 42 *e*PKPdf **PKPdf 21 48 46.1 +0.4**
KURK *e*PKPbc **PKiKP 21 48 52.1 +0.1**
KURK Kurchatov 150.78 42 *e*PKIKP **PKPdf 21 48 46.1 +0.4**
NVS Novosibirsk 150.92 32 *e*PKIKP **PKiKP 21 48 52.2 +0.1**
NVS pmax pmax

comp=Z,225nm,0.9s
NVS pmax pmax
comp=N,21nm,0.8s
NVS pmax pmax
comp=E,40nm,0.7s
KZA Kyzart 151.07 61 P **PKPdf 21 48 47.9 +0.9**
SNR=7.7
YSS Yuzh-Sakhalins 151.18 309 *e*PKPbc **PKPbc 21 48 52.0 -0.4**
YSS *e*PKPab **PKPab 21 48 58.7 -2.0**
YSS Yuzh-Sakhalins 151.18 309 *e*PKIKP **PKPbc 21 48 52.4 -0.1**
YSS *e* 21 48 58.7
YSS pmax pmax
comp=Z,80nm,0.8s
TKM2 Tokmak 2 151.20 59 P **PKPdf 21 48 47.8 +0.8**
SNR=15
KULM Kulim 151.50 160 *e*PKPdf **PKPdf 21 48 47.6 -0.4**
KULM *e*PKPbc **PKPbc 21 48 53.6 -0.6**
BOOM Boomskoye usch 151.52 60 *e*PKPdf **PKPdf 21 48 48.0 +0.6**
BOOM Boomskoye usch 151.52 60 *e*PKIKP **PKPdf 21 48 48.0 +0.6**
ULHL Ulahol 151.78 60 P **PKPdf 21 48 48.7 +0.9**
SNR=15
KSH Kashi 151.87 66 PKPbc **PKPdf 21 48 48.1 +0.1**
KSH sPKP 21 49 25.4
KSH PP **PP 21 52 40.5 +4.0**
KSH SKS **SKSdf 21 55 48.3 +2.5**
KSH SS **SS 22 11 53.9 -1.4**
KSH AMB AMB
comp=Z,260nm,4.5s
KSH LR LR
comp=Z,220nm,7.9s
KSH LR LR
comp=Z,270nm,7.9s
KSH LR LR
comp=Z,210nm,15.6s
ERM Erimo 152.04 299 *e*PKPbc **PKiKP 21 48 55.7 +0.8**
ERM *e*PKPab **PKPab 21 49 04.3 -0.2**
ERM Erimo 152.04 299 *c i*PKIKP **PKiKP 21 48 56.2 +1.3**
ERM pmax pmax
comp=Z,114nm,1.7s
ASAJ Asahikawa 152.05 304 PKP **PKPdf 21 48 47.9 0.0**
comp=Z,19nm,1.0s,baz=259,slow=11,SNR=7.0
ASAJ PKPbc **PKPbc 21 48 54.2 -0.3**
comp=Z,49nm,0.9s,baz=260,slow=6.9,SNR=17
ZAA0 Zalesovo Array 152.20 32 *e*PKPdf **PKPdf 21 48 47.8 0.0**
ZAA0 *e*PKPbc **PKiKP 21 48 55.0 +0.2**
ZALV Zalesovo Beam 152.20 32 PKP **PKPdf 21 48 47.7 -0.1**
comp=Z,10nm,0.8s,baz=290,slow=2.6,SNR=22
ZALV PKPbc **PKPbc 21 48 54.4 -0.2**
comp=Z,195nm,0.4s,baz=315,slow=3.1,SNR=438
ZALV PKPab **PKPab 21 49 05.5 +0.7**
comp=Z,17nm,0.5s,baz=315,slow=4.2,SNR=5.1
MAKZ Makanchi 154.45 48 *e*PKPdf **PKPdf 21 48 50.9 -0.4**
MAKZ *e*PKPbc **PKPbc 21 48 59.6 -0.1**
MAKZ *e*PKPab **PKPab 21 49 13.7 -0.9**
MAKZ Makanchi 154.45 48 *e*PKIKP **PKPdf 21 48 50.9 -0.4**
MAKZ *e* 21 49 13.7
MKAR Makanchi Array 154.65 48 PKP **PKPdf 21 48 51.4 -0.3**
comp=Z,5.5nm,0.9s,baz=312,slow=1.0,SNR=43
MKAR PKPbc **PKPbc 21 49 00.2 +0.1**
comp=Z,16nm,0.8s,baz=304,slow=2.1,SNR=49
MKAR PKPab **PKPab 21 49 15.7 +0.2**
comp=Z,21nm,0.8s,baz=306,slow=4.1,SNR=22
ZEA Zeya 155.49 335 *e*PKIKP **PKPdf 21 48 51.4 -1.0**
ZEA *e* 21 49 18.8
ZEA pmax pmax
comp=Z,28nm,1.4s
TEY Ternei 155.87 309⇑ *e*PKIKP **PKPdf 21 48 53.6 +0.4**
TEY *e* 21 49 21.1
TEY pmax pmax
comp=Z,20nm,1.2s
MJAR Matsushiro Arr 156.36 287 PKP **PKPdf 21 48 53.6 -0.6**
comp=Z,4.6nm,1.0s,baz=230,slow=2.2,SNR=9.2
MJAR PKPab **PKPab 21 49 23.2 +0.1**
comp=Z,19nm,0.9s,baz=132,slow=2.0,SNR=19
MAJO Matsushiro 156.37 287 *e*PKPdf **PKPdf 21 48 53.6 -0.6**
MAJO *e*PKPab **PKPab 21 49 23.2 +0.1**
MAJO Matsushiro 156.37 287 *e*PKIKP **PKPdf 21 48 53.6 -0.6**
MAJO *e* 21 49 23.2
MAT Matsushiro 156.37 287 *e*PKP **PKPdf 21 48 53.7 -0.5**
MJB9 Matsu-Tunnel 156.37 287 *e*PKPdf **PKPdf 21 48 53.2 -1.0**
MJB9 *e*PKPab **PKPab 21 49 21.7 -1.4**
PYUN Piuthan 156.41 94 *e*P **PKPdf 21 48 54.7 -0.1**
comp=Z,43nm,1.1s
KLR Kul'dur 156.69 322 PKP **PKPdf 21 48 53.2 -0.9**
comp=Z,4.6nm,0.9s,baz=36,slow=2.5,SNR=12
KLR PKPab **pPKPdf 21 49 24.6 +0.2**
comp=Z,2.2nm,0.5s,baz=63,slow=4.3,SNR=4.4
KOLN Koldanda 156.82 95 *e*P **PKPdf 21 48 55.0 -0.3**
comp=Z,46nm,1.1s
DANN Dangsing 157.13 94 *e*P **PKPdf 21 48 56.1 +0.3**
comp=Z,84nm,0.9s
DMN Daman 158.04 97 *e*P **PKPdf 21 48 56.7 -0.2**
comp=Z,16nm,0.8s
KKN Kakani 158.24 96 *e*P **PKPdf 21 48 56.6 -0.5**
comp=Z,20nm,0.9s
PKIN Phulchoki 158.27 97 *e*P **PKPdf 21 48 56.7 -0.5**
comp=Z,25nm,1.1s
PKI Pulchoki 158.28 97 *e*P **PKPdf 21 48 56.7 -0.6**
comp=Z,31nm,1.0s
GUN Gumba 158.78 96 *e*P **PKPdf 21 48 57.7 -0.2**
comp=Z,47nm,1.1s
JIRN Jiri 158.96 97 *e*P **PKPdf 21 48 57.8 -0.4**
comp=Z,47nm,0.9s
USRK Ussuriysk Ar. 159.22 310 PKP **PKPdf 21 48 56.0 -1.4**
comp=Z,4.9nm,1.0s,baz=241,slow=3.5,SNR=12
USRK PKPab **PKPab 21 49 35.8 +0.7**
comp=Z,8.6nm,0.7s,baz=68,slow=2.9,SNR=15
WMQ Urumqi 159.36 51⇑ *i*PKP **PKPdf 21 48 58.5 +0.8**
WMQ LR LR
comp=Z,61nm,29.2s
WMQ LR LR
comp=Z,230nm,29.0s
WMQ LR LR
comp=Z,91nm,24.9s
IRK Irkutsk 159.96 10 *e*PKP2 **PKPab 21 49 38.3 +0.3**
IRK pmax pmax
comp=Z,44nm,1.5s
TLY Talaya 160.40 12 *c i*PKP2 **PKPab 21 49 41.4 +1.4**
TLY pmax pmax
comp=Z,77nm,0.8s
ZAK Zakamensk 161.58 13 *e*PKP2 **PKPab 21 49 42.6 -2.7**
ZAK pmax pmax
comp=Z,9.0nm,1.8s
JNU Nakatsue 162.33 277 PKPab **PKPab 21 49 49.1 -0.1**
comp=Z,13nm,0.9s,baz=72,slow=5.8,SNR=4.0
SHL Shillong 162.81 109 *e*PKPdf **PKPdf 21 49 01.2 -0.9**
SHL Shillong 162.81 109 *e*PKIKP **PKPdf 21 49 01.2 -0.9**
CMAR Chiang Mai Arr 162.83 142 PKP **PKPdf 21 49 02.2 +0.1**
comp=Z,5.9nm,0.9s,baz=247,slow=2.5,SNR=27
CMAR pPKP **pPKPdf 21 49 32.3 -0.1**
comp=Z,2.9nm,1.0s,baz=241,slow=2.8,SNR=2.9
CMAR PKPab **PKPab 21 49 51.2 -0.3**
comp=Z,6.0nm,1.0s,baz=218,slow=4.9,SNR=11
CHTO Chiang Mai 163.13 142 *e*PKPdf **PKPdf 21 49 01.8 -0.6**
CHTO *e*PKPab **PKPab 21 49 52.3 -0.5**
CHTO Chiang Mai 163.13 142 *e*PKIKP **PKPdf 21 49 01.8 -0.6**
CHTO *e* 21 49 52.3
CMMT Chiang Mai 163.13 142 P **PKPab 21 49 52.6 -0.2**
CMMT Chiang Mai 163.13 142 P **PKPdf 21 49 02.6 +0.2**
comp=Z,6.8nm,1.3s,comp=Z,169nm
LAMP Lampang 163.23 144 P **PKPab 21 49 53.1 -0.1**
LAMP Lampang 163.23 144 P **PKPdf 21 49 04.0 +1.5**
CN2 Changchun 163.44 317 *e*PKP **PKPdf 21 49 00.3 -1.6**
CN2 AMB AMB
comp=Z,200nm,5.0s
LSA Lhasa 163.72 95 *e*PKPdf **PKPdf 21 49 04.0 +0.8**
LSA Lhasa 163.72 95 *i* PKPdf **PKPdf 21 49 04.2 +0.9**
SNR=7.9
NONG Nongkai 164.31 156 P **PKPab 21 49 57.4 -0.5**
KSRS Korea Array 164.43 293 PKP **PKPdf 21 49 02.8 -0.2**
comp=Z,8.4nm,1.1s,baz=122,slow=0.8,SNR=36
KSRS PKPab **PKPab 21 49 59.2 +1.0**
comp=Z,13nm,1.0s,baz=92,slow=4.5,SNR=24
SONA0 Songino Array 164.56 9 *e*PKPdf **PKPdf 21 49 03.9 +0.9**
SONM Songino Array 164.56 9 PKP **PKPdf 21 49 03.9 +0.9**
comp=Z,4.7nm,1.0s,baz=344,slow=0.7,SNR=5.2
SONM PKPab **PKPab 21 49 59.3 +0.9**
comp=Z,8.7nm,0.8s,baz=329,slow=4.5,SNR=12
SONM PP **PP 21 53 44.2 -0.1**
comp=Z,2.3nm,1.0s,baz=321,slow=4.2,SNR=4.9
ULN Ulaanbaatar 164.61 7 *e*PKPdf **PKPdf 21 49 01.9 -1.1**
ULN *e*PKPab **PKPab 21 49 60.0 +1.3**
ULN Ulaanbaatar 164.61 7 *e*PKIKP **PKPdf 21 49 01.9 -1.1**
ULN *e* 21 50 00.0
SSLB Suanglung 166.86 231 *e*PKPdf **PKPdf 21 49 04.7 -0.8**
SSLB *e*PKPab **PKPab 21 50 09.4 +0.2**
DL2 Dalian 168.56 307 PKP **PKPdf 21 49 05.9 -0.2**
GTA Gaotai 169.41 47 ⇓PKP **PKPdf 21 49 07.5 +0.6**
GTA pPKP pPKPdf 21 49 39.3 +2.2
GTA PKPab **PKPab 21 50 21.1 +0.8**
GTA LR LR
comp=Z,72nm,16.5s
GTA LR LR
comp=Z,53nm,17.1s
GTA LR LR
comp=Z,96nm,20.3s
KMI Kunming 170.28 138 PKP **PKPdf 21 49 08.5 +0.6**
HHC Hu-ho-hao-te 171.66 351 *e*PKP **PKPdf 21 49 07.8 -0.2**
NJ2 Nanjing 172.37 268 *e*PKP **PKPdf 21 49 09.0 +0.6**
TIA Tai'an 173.00 303 PKP **PKPdf 21 49 08.6 0.0**
GYA Guiyang 173.27 155 PKP **PKPdf 21 49 08.9 -0.3**
GYA pPKP pPKPdf 21 49 35.6 -3.9
GYA sPKP 21 49 46.4
GYA PKPab **PKPab 21 50 39.9 +2.4**
GYA PP **PP 21 54 32.4 +3.8**
GYA AMB AMB
comp=Z,180nm,10.8s
LZH Lanzhou 173.93 53 ⇑PKP **PKPdf 21 49 08.4 -0.8**
LZH pPKP pPKPdf 21 49 31.8 -7.7
CD2 Chengdu 174.54 106 PKP **PKPdf 21 49 08.5 -0.9**
WHN Wuhan 175.65 243 ⇑PKP **PKPdf 21 49 09.8 +0.2**
XAN Xi'an 178.37 28 PKP **PKPdf 21 49 10.1 0.0**

IDC 19 21:53:05.0±6.6, 6°.93S×129°.33E, h170^{km}±67^{km}, mb3.5/2, mb1 3.5/4, mb1mx3.1/30, mbtmp3.9/4, Error ellipse: s-maj=96.5km s-min=21.1km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.82**	**160**	P	Pn	21 56 11.9	-2.0
0.2nm,0.3s,baz=337,slow=11,SNR=5.4							
WRA				S	Sn	21 58 38.8	-8.8
0.6nm,0.3s,baz=325,slow=23,SNR=6.3							
ASAR	**Alice Springs**	**17.21**	**166**	P	Pn	21 56 56.3	+0.9
0.5nm,0.3s,baz=336,slow=9.3,SNR=22							
ASAR				S	S	22 00 04.3	-0.7
0.2nm,0.3s,baz=354,slow=26,SNR=4.9							
STKA	**Stephens Creek**	**27.34**	**157**	P	P	21 58 34.4	+0.3
0.5nm,0.3s,baz=352,slow=7.1,SNR=5.5							
MKAR	**Makanchi Array**	**67.80**	**327**	P	P	22 03 44.5	-0.1
1.0nm,0.4s,baz=120,slow=7.9,SNR=14							

*IDC **19** 22:25:44.2±1.8, 13°.56N×91°.29W, h0^{km}, mb3.8/1, mb1 3.9/4, mb1mx3.3/40, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=26.0km s-min=19.6km az=137.0*
*SNET **19** 22:25:47.4±1.6, 13°.44N×90°.84W, h11^{km}±12^{km}, ML3.8*
*UCR **19** 22:25:47.2±2.1, 13°.46N×90°.92W, h22^{km}±10^{km}, MD3.6, ML3.7*
*GCG **19** 22:25:50.4±0.3, 13°.79N×91°.07W, h26^{km}±45^{km}, MD4.0*
ISC 19 22:25:46.8±1.3, 13°.54N±0°.10×91°.00W±0°.05, h29^{km}, n36, σ0°.92/44, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.82**	**41**	*e*P	**Pn**	**22 26 03.3**	**+0.6**
IXG	**Ixpaco**	**0.82**	**41**	*e*P	**Pn**	**22 26 03.3**	**+0.6**
PCG	**Pacaya**	**0.92**	**24**	*e*P	**Pb**	**22 26 05.3**	**+0.9**
PCG	**Pacaya**	**0.92**	**24**	*e*P	**Pb**	**22 26 05.3**	**+0.9**
NBG	**Las Nubes**	**1.21**	**31**	*e*P	**Pb**	**22 26 10.3**	**+1.0**
NBG	**Las Nubes**	**1.21**	**31**	*e*P	**Pb**	**22 26 10.3**	**+1.0**
STG3	**Santiaguito 3,**	**1.29**	**334**	*e*P	**Pn**	**22 26 09.8**	**+0.8**
RTR	**El Retiro**	**1.36**	**75**	*e*P	**Pn**	**22 26 09.8**	**-0.1**
RTR	**El Retiro**	**1.36**	**75**	*e*P	**Pn**	**22 26 09.8**	**-0.1**
SBLS	**San Blas**	**1.37**	**77**	*e*P	**Pn**	**22 26 09.6**	**-0.6**
SBLS	**San Blas**	**1.37**	**77**	*e*P	**Pn**	**22 26 09.6**	**-0.6**
SNJE	**San Jose**	**1.39**	**76**	*e*P	**Pn**	**22 26 10.0**	**-0.4**
SNJE	**San Jose**	**1.39**	**76**	*e*P	**Pn**	**22 26 10.0**	**-0.4**
UNIC	**Santa Ana**	**1.47**	**72**	*e*P	**Pn**	**22 26 11.3**	**-0.1**
UNIC				*e*S	**Sb**	**22 26 31.2**	**-0.6**
UNIC	**Santa Ana**	**1.47**	**72**	*e*P	**Pn**	**22 26 11.3**	**-0.1**
UNIC				*e*S	**Sb**	**22 26 31.2**	**-0.6**
APG	**El Apazote**	**1.54**	**20**	Pn	**Pb**	**22 26 14.5**	**-0.3**
28nm,0.3s,baz=156,slow=9.5,SNR=96							
APG				LR	LR	22 26 22.2	
comp=Z,45nm,21.8s,baz=290,slow=23							
APG				Lg	Lg	22 26 36.4	
22nm,0.3s,baz=222,slow=8.9,SNR=3.5							
BOQS	**Boqueron**	**1.68**	**83**	*e*P	**Pn**	**22 26 15.4**	**+0.9**
UEES	**San Salvador**	**1.71**	**84**	*e*P	**Pn**	**22 26 15.7**	**+0.9**
UEES				*e*S	**Sb**	**22 26 36.9**	**-2.0**
UEES				IAML		22 26 40.6	
comp=Z,1μm,0.2s							
UEES	**San Salvador**	**1.71**	**84**	*e*P	**Pn**	**22 26 15.7**	**+0.9**
UEES				*e*S	**Sb**	**22 26 36.9**	**-2.0**
UEES				IAML		22 26 40.6	
comp=Z,1μm,0.2s							
MTO3	**Montecristo**	**1.80**	**62**	*e*P	**Pn**	**22 26 16.9**	**+0.8**
MTO3				*e*S	**Sb**	**22 26 41.5**	**0.0**
MTO3	**Montecristo**	**1.80**	**62**	*e*P	**Pn**	**22 26 16.9**	**+0.8**
MTO3				*e*S	**Sb**	**22 26 41.5**	**0.0**
LFU	**La Fuente**	**1.84**	**83**	*e*P	**Pn**	**22 26 17.2**	**+0.7**
LFU	**La Fuente**	**1.84**	**83**	*e*P	**Pn**	**22 26 17.2**	**+0.7**
LFRS	**El Faro**	**1.88**	**87**	*e*P	**Pn**	**22 26 17.3**	**+0.2**
LBRS	**Las Brisas**	**1.91**	**84**	*e*P	**Pn**	**22 26 17.9**	**+0.4**
MRL	**Marmol**	**1.99**	**40**	*e*P	**Pb**	**22 26 21.4**	**-1.1**
MRL	**Marmol**	**1.99**	**40**	*e*P	**Pb**	**22 26 21.4**	**-1.1**
LLGN	**La Laguna**	**2.08**	**72**	*e*P	**Pn**	**22 26 20.5**	**+0.6**
LLGN	**La Laguna**	**2.08**	**72**	*e*P	**Pn**	**22 26 20.5**	**+0.6**
LCND	**La Caada**	**3.03**	**94**	*e*P	**Pn**	**22 26 34.6**	**+1.7**
LCND				*e*S	**Sn**	**22 27 07.4**	**-0.9**
LCND				IAML		22 27 16.8	
comp=Z,291nm,0.4s							
LCND	**La Caada**	**3.03**	**94**	*e*P	**Pn**	**22 26 34.6**	**+1.7**
LCND				*e*S	**Sn**	**22 27 07.4**	**-0.9**
LCND				IAML		22 27 16.8	
comp=Z,291nm,0.4s							
CMIG	**Matias Romero**	**5.15**	**314**	Pn	**Pn**	**22 27 00.6**	**-1.4**
comp=Z,0.4nm,0.3s,baz=72,slow=13,SNR=3.1							
CMIG				Sn	**Sn**	**22 27 59.8**	**-0.7**
comp=Z,1.2nm,0.3s,baz=43,slow=20,SNR=4.7							
CMIG				Lg	Lg	22 28 13.4	
comp=Z,3.1nm,0.3s,baz=111,slow=22,SNR=11							
JTS	**Las Juntas de**	**6.74**	**118**	Pn	Pn	22 27 29.9	+6.0
comp=Z,1.1nm,0.3s,baz=14,slow=19,SNR=2.9							
TXAR	**Lajitas Array**	**19.62**	**325**	P	**P**	**22 30 13.7**	**+0.6**
comp=Z,0.1nm,0.3s,baz=152,slow=12,SNR=7.3							
NVAR	**Mina Array Bea**	**34.64**	**321**	P	**P**	**22 32 33.8**	**-0.1**
comp=Z,1.0nm,0.7s,baz=136,slow=8.7,SNR=6.0							
CMAR	**Chiang Mai Arr**	**146.72**	**343**	PKPbc	**PKPdf**	**22 45 26.6**	**+1.3**
comp=Z,0.8nm,0.4s,baz=356,slow=4.6,SNR=4.5							

*GCG **19** 22:35:55.4±0.5, 13°.16N×91°.15W, h4^{km}±999^{km}, MD4.0*
*ISCJB **19** 22:35:59.4±1.6, 13°.38N±0°.09×91°.10W±0°.04, h22^{km}±11^{km}, mb3.9/4, Error ellipse: s-maj=16.5km s-min=5.6km az=17.1*
*SNET **19** 22:36:00.9±1.7, 13°.53N×90°.97W, h15^{km}, ML3.7*
*IDC **19** 22:36:02.3±6.4, 13°.66N×91°.25W, h0^{km}, mb3.8/2, mb1 3.9/4, mb1mx3.3/40, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=124.0km s-min=39.5km az=12.0*
ISC 19 22:35:59.6±3.1, 13°.4N±0°.2×91°.06W±0°.06, h5^{km}±15^{km}, n21, σ1°.37/25, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.94**	**39**	*e*P	**Pg**	**22 36 18.3**	**+0.6**
FUG	**Fuego 3**	**1.02**	**12**	*e*P	**Pg**	**22 36 20.0**	**+0.6**
PCG	**Pacaya**	**1.04**	**25**	*e*P	**Pg**	**22 36 20.1**	**+0.4**
NBG	**Las Nubes**	**1.33**	**31**	*e*P	**Pg**	**22 36 25.2**	**-0.1**
STG3	**Santiaguito 3,**	**1.36**	**339**	*e*P	**Pg**	**22 36 24.4**	**-1.3**
RTR	**El Retiro**	**1.45**	**72**	*e*P	Pn	22 36 24.3	-2.3
SBLS	**San Blas**	**1.45**	**74**	*e*P	Pn	22 36 24.1	-2.7
SNJE	**San Jose**	**1.48**	**73**	*e*P	**Pn**	**22 36 25.4**	**-1.6**
UEES	**San Salvador**	**1.79**	**81**	*e*P	**Pn**	**22 36 30.5**	**-0.8**
UEES				*e*S	**Sn**	**22 36 52.0**	**-2.5**
UEES				IAML		22 37 03.8	
comp=Z,1μm,0.3s							
SNET	**Serv Nac Est T**	**1.79**	**82**	*e*P	**Pn**	**22 36 31.5**	**+0.2**
SNET				*e*S	**Sn**	**22 36 51.8**	**-2.7**
SNET				IAML		22 36 57.2	
comp=Z,1μm,0.3s							
MTO3	**Montecristo**	**1.91**	**60**	*e*P	Pn	22 36 31.5	-1.5
MTO3				*e*S	**Sn**	**22 36 55.8**	**-1.7**
MTO3				IAML		22 36 59.6	
comp=Z,272nm,0.5s							
LFU	**La Fuente**	**1.92**	**81**	*e*P	**Pn**	**22 36 31.6**	**-1.4**
PAVA	**Las Pavas**	**2.08**	**82**	*e*P	**Pn**	**22 36 34.6**	**-0.7**
PAVA				*e*S	**Sn**	**22 37 01.1**	**-0.5**
PAVA				IAML		22 37 03.2	
comp=Z,710nm,0.5s							
VICT	**Victoria**	**2.41**	**77**	*e*P	**Pn**	**22 36 39.0**	**-0.8**
VICT				*e*S	**Sn**	**22 37 09.8**	**0.0**
VICT				IAML		22 37 11.6	
comp=Z,152nm,0.4s							
TECA	**Tecapa**	**2.49**	**88**	*e*P	**Pn**	**22 36 39.6**	**-1.4**
PACA	**Pacayal**	**2.66**	**89**	*e*P	**Pn**	**22 36 43.0**	**-0.4**
CNCH	**Conchagua**	**3.14**	**93**	*e*P	**Pn**	**22 36 48.6**	**-1.3**
CNCH				*e*S	**Sn**	**22 37 27.2**	**-0.7**
CNCH				IAML		22 37 38.2	
comp=Z,876nm,0.4s							
CMIG	**Matias Romero**	**5.18**	**315**	Pn	**Pn**	**22 37 16.7**	**-1.1**
comp=Z,0.9nm,0.3s,baz=130,slow=13,SNR=6.2							
CMIG				Sn	**Sn**	**22 38 16.7**	**-1.3**
comp=Z,1.5nm,0.3s,baz=60,slow=6.4,SNR=3.7							
TXAR	**Lajitas Array**	**19.67**	**326**	P	**P**	**22 40 30.2**	**+0.5**
comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=4.4							
NVAR	**Mina Array Bea**	**34.68**	**321**	P	**P**	**22 42 51.5**	**+0.9**
comp=Z,0.4nm,0.5s,baz=134,slow=7.7,SNR=2.6							
SCHQ	**Schefferville**	**45.43**	**19**	P	**P**	**22 44 21.7**	**+2.3**
comp=Z,1.8nm,0.6s,baz=217,slow=5.1,SNR=3.8							

MEX 19 22:51:55.9±0.3, 17°.26N×101°.23W, h24^{km}±28^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.41**	**327**	*e*P	Pb	22 52 03.2	-1.5
ZIIG				*e*S	Sb	22 52 08.8	-1.8
CAIG	**El Cayaco**	**0.94**	**103**	*i* P	Pb	22 52 10.7	-2.9
CAIG				*i* S	Sb	22 52 22.1	-3.6
ARIG	**Puente Sto Nin**	**1.32**	**39**	*e*P	Pn	22 52 16.0	-2.9
ARIG				*i* S	Sn	22 52 32.0	-3.7

MEX 19 22:55:48.0±0.4, 16°.22N×98°.35W, h2^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.27**	**52**	*e*P	Pg	22 55 52.9	-0.4
PNIG				*e*S	Sg	22 55 57.1	+0.2
TLIG	**Tlapa**	**1.35**	**351**	*i* P	Pg	22 56 10.0	-3.9

MAN 19 22:58:36.8, 10°.62N×122°.96E, h33^{km}, mb3.7, ML2.5, MS1.9, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**1.03**	**107**	*e*P	Pn	22 58 54.7	-0.2
LLP				*e*S	Sn	22 59 08.4	+0.2
SNPH	**Sibulan**	**1.29**	**168⇑**	*i* P	Pn	22 58 58.9	+0.3
SNPH				*i* S	Sn	22 59 14.8	0.0
MSLP	**Maasin**	**1.93**	**104**	*e*P	Pb	22 59 10.5	-0.7
MSLP				*e*S	Sb	22 59 36.4	+1.4

MAN 19 23:05:42.7, 15°.05N×122°.08E, h42^{km}, mb5.6, ML4.6, MS4.9, Philippine Islands region

GCG 19 23:22:06.7±0.5, 13°.09N×91°.14W, h16^{km}±19^{km}, MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.27**	**32**	*e*P	Pn	23 22 29.8	-0.2
FUG	**Fuego 3**	**1.38**	**12**	*e*P	Pn	23 22 31.6	+0.1
PCG	**Pacaya**	**1.39**	**22**	*e*P	Pn	23 22 31.6	-0.2
STG3	**Santiaguito 3,**	**1.66**	**346**	*e*P	Pn	23 22 35.5	+0.1
NBG	**Las Nubes**	**1.67**	**27**	*e*P	Pn	23 22 36.1	+0.4

*IDC **19** 23:31:19.3±7.2, 6°.50S×150°.87E, h48^{km}±53^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.6/30, mbtmp4.2/5, ML2.1/1, Error ellipse: s-maj=80.8km s-min=31.5km az=108.0*
ISC 19 23:31:17.5±2.6, 6°.5S±0°.3×151°.0E±0°.4, h36^{km}, n6, σ0°.51/7, mb4.0/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.77**	**232**	P	**Pn**	**23 32 27.6**	**+0.6**
6.4nm,0.3s,baz=7.9,slow=8.4,SNR=8.6							
PMG				S	**Sn**	**23 33 20.9**	**-0.2**
2.7nm,0.3s,baz=104,slow=19,SNR=2.7							
WRA	**Warramunga Arr**	**20.99**	**229**	P	**P**	**23 35 57.7**	**-0.2**
9.3nm,0.5s,baz=56,slow=10,SNR=75							
ASAR	**Alice Springs**	**23.71**	**222**	P	**P**	**23 36 26.2**	**-0.1**
2.0nm,0.4s,baz=56,slow=9.0,SNR=30							
FITZ	**Fitzroy Crossi**	**27.27**	**243**	P	**P**	**23 36 58.0**	**-0.7**
2.1nm,0.5s,baz=56,slow=9.3,SNR=6.5							
KSRS	**Korea Array**	**48.68**	**336**	P	**P**	**23 39 58.4**	**+0.1**
1.2nm,0.6s,baz=157,slow=8.6,SNR=5.5							
TORD	**Torodi Ar. Bea**	**149.01**	**285**	PKPbc	**PKPbc**	**23 51 02.9**	**0.0**
0.8nm,0.4s,baz=88,slow=2.6,SNR=17							

*JMA **19** 23:33:02.9±0.5, 44°.26N×147°.97E, h0^{km}, M3.5*
*SKHL **19** 23:33:04.1±0.8, 44°.55N×148°.21E, h42^{km}±6^{km}, mb4.2/3*
ISC 19 23:33:02.0±3.4, 44°.6N±0°.1×148°.3E±0°.2, h65^{km}, n12, σ1°.19/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.72**	**334**	*i* P	**Pn**	**23 33 17.0**	**+0.2**
KUR				AMB	AMB	23 33 18.0	
41nm,0.2s							
KUR				AMB	AMB	23 33 18.0	
26nm,0.2s							
KUR				AMB	AMB	23 33 18.0	
111nm,0.2s							
KUR				*i* S	**Sn**	**23 33 27.0**	**-0.7**
KUR				A	A	23 33 29.0	
1μm,0.2s							
KUR				A	A	23 33 29.0	
537nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**1.84**	**254**	*e*P	**Pn**	**23 33 31.0**	**-0.4**
YUK				AMB	AMB	23 33 33.0	
32nm,0.2s							
YUK				*e*S	**Sn**	**23 33 52.3**	**-1.4**
YUK				A	A	23 33 59.0	
195nm,0.3s							
YUK				A	A	23 33 59.0	
356nm,0.3s							
GRPR	**Tuman**	**1.92**	**253**	*e*P	**Pn**	**23 33 33.0**	**+0.6**
GRPR				AMB	AMB	23 33 34.0	
64nm,0.2s							
GRPR				*e*S	**Sn**	**23 33 54.0**	**-1.5**
GRPR				A	A	23 34 01.0	
194nm,0.3s							
GRPR				A	A	23 34 01.0	
113nm,0.3s							
GLVR	**Golovnino**	**2.18**	**248**	*e*P	**Pn**	**23 33 37.0**	**+1.0**
GLVR				*e*S	**Sn**	**23 34 02.0**	**+0.1**
GLVR				A	A	23 34 07.0	
190nm,0.3s							
GLVR				A	A	23 34 07.0	
251nm,0.3s							
NEM2	**Nemuro 2**	**2.22**	**238**	P	**Pn**	**23 33 36.0**	**-0.5**
NEM2				*e*S	**Sn**	**23 34 00.6**	**-2.2**
JKHN	**Kushirohamanak**	**2.73**	**238**	P

RTLL				eS	Sn	23 44 45.1	+0.6
RTLL				IAML		23 44 45.9	
	comp=Z,265nm,0.3s						
SJA	**San Juan**	**0.40**	**178**	eP	Pn	23 44 34.6	+1.1
SJA				eS	Sn	23 44 46.5	+0.7
ZON	**Zonda**	**0.43**	**192**	eP	Pn	23 44 34.5	+0.8
ZON				eS	Sn	23 44 47.0	+0.9
ZON				IAML		23 44 47.4	
	comp=Z,292nm,0.2s						
CFA	**Coronel Fontan**	**0.56**	**149**	eP	Pn	23 44 35.3	+0.8
CFA				eS	Sn	23 44 48.2	+0.6
RTCV	**Cerro Valdivia**	**0.74**	**178**	eP	Pn	23 44 36.8	+0.9
RTLS	**Leoncito**	**0.91**	**222**	eP	Pn	23 44 39.1	+1.3
RTLS				IAML		23 44 57.5	
	comp=Z,235nm,0.4s						
AUSP	**Uspallata**	**1.30**	**212**	eP	Pn	23 44 43.5	+1.5
AGUA	**GUANDACOL**	**1.63**	**3**	eP	Pn	23 44 46.9	+1.1
GO04	**Tololo Observa**	**2.14**	**296**	eP	Pn	23 44 53.2	+1.0
VCA	**Vinchina**	**2.40**	**8**	eP	Pn	23 44 57.0	+1.5
VCA				IAML		23 45 27.9	
	comp=Z,88nm,0.3s						
MRA	**San Martin**	**2.76**	**119**	eP	Pn	23 45 01.4	+1.3
ROC1	**El Roble**	**2.77**	**228**	eP	Pn	23 45 01.0	+0.5
TCA	**Tanti**	**3.42**	**95**	eP	Pn	23 45 09.6	+0.7
CYA	**Choya**	**3.60**	**43**	eP	Pn	23 45 11.2	0.0
GO03	**Copiap**	**3.80**	**337**	eP	Pn	23 45 14.9	+0.9

ISC 19 23:53:47.5±2.1, 50°.3N±0°.2×18°.89E±0°.04, h0km, n5, σ0°61/9, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.59**	**102**	ePg	**Pg**	**23 53 58.5**	**-0.3**
OJC				eSg	**Sg**	**23 54 06.5**	**-0.1**
MORC	**Moravsky Berou**	**1.04**	**237**	ePG	**Pg**	**23 54 07.4**	**0.0**
MORC				eSG	**Sb**	**23 54 21.7**	**-0.9**
NIE	**Niedzica**	**1.30**	**135**	ePg	**Pg**	**23 54 12.2**	**-0.2**
NIE				eSg	**Sb**	**23 54 30.1**	**+0.1**
VRAC	**Vranov**	**1.81**	**236**	ePN	**Pn**	**23 54 20.4**	**+0.4**
VRAC				eSG	**Sb**	**23 54 44.2**	**-0.7**
KRUC	**Moravsky**	**2.07**	**233**	ePN	**Pn**	**23 54 24.3**	**+0.8**

MEX 20 00:01:19.7±0.3, 16°24N×98°34W, h4km±2km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.25**	**53**	i P	Pg	00 01 24.3	-0.3
PNIG				i S	Sg	00 01 28.1	+0.2
TLIG	**Tlapa**	**1.33**	**350**	eP	Pn	00 01 41.3	-3.9
TLIG				eS	Sg	00 01 58.0	-4.6
VHO	**Vista Hermosa**	**1.74**	**62**	eS	Sn	00 02 10.3	-3.3
CAIG	**El Cayaco**	**2.02**	**294**	i P	Pn	00 01 53.6	-0.9

MAN 20 00:08:31.5, 14°36N×121°06E, h144km, mb3.8, ML2.5, MS2.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.85**	**187**	⇑iP	Pn	00 08 56.8	+2.2
PGP				i S	Sn	00 09 06.9	-5.2
SCZP	**Santa Cruz**	**1.79**	**322**	eP	Pn	00 09 04.7	+0.7
SCZP				eS	Sn	00 09 29.8	+1.0
SJMP	**San Jose**	**1.88**	**178**	eP	Pn	00 09 05.5	+0.5
SJMP				eS	Sn	00 09 31.6	+1.0

*ISCJB **20** 00:17:14.2±0.6, 54°.2S±0°.2×120°.8W±0°.2, h10km, mb4.2/13, MS4.0/10, Error ellipse: s-maj=29.7km s-min=12.8km az=155.8*
*IDC **20** 00:17:14.0±0.5, 54°.14S×120°.89W, h0km, mb4.2/13, mb1 4.4/13, mb1mx4.3/37, mbtmp4.2/13, MS3.9/8, Ms1 3.8/8, ms1mx3.6/20, Error ellipse: s-maj=30.9km s-min=14.2km az=159.0*

ISC 20 00:17:15.5±0.5, 54°.1S±0°.2×120°.9W±0°.1, h10km, n51, σ0°61/33, mb4.2/13, MS3.9/10, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.71**	**134**	LR	LR	00 32 07.5	
	comp=Z,354nm,18.8s,baz=258,slow=30						
USHA	**Ushuaia**	**29.88**	**113**	LR	LR	00 32 54.2	
	comp=Z,108nm,18.2s,baz=248,slow=32						
RKT	**Rikitea**	**32.74**	**335**	eT	T	00 58 24.5	
	5.1nm,0.4s						
VNDA	**Vanda**	**35.19**	**202**	P	**P**	**00 24 10.2**	**+1.2**
	1.4nm,0.9s,baz=97,slow=7.7,SNR=8.6						
VNDA				PcP	**PcP**	**00 26 39.5**	**-0.3**
	0.5nm,0.9s,baz=131,slow=3.3,SNR=2.5						
VNDA				LR	LR	00 34 41.2	
	comp=Z,125nm,20.9s,baz=94,slow=30						
PLCA	**Paso Flores**	**35.79**	**89**	P	**P**	**00 24 14.8**	**+0.1**
	1.5nm,1.0s,baz=263,slow=8.1,SNR=2.6						
PLCA				LR	LR	00 35 38.1	
	comp=Z,114nm,19.0s,baz=253,slow=31						
TBI	**Tubuai**	**37.48**	**314**	eLR	LR	00 34 28.9	
	comp=Z,487nm,25.8s,baz=156						
PPT2	**Papeete2**	**42.68**	**317**	eLR	LR	00 36 53.8	
	comp=Z,791nm,25.8s						
PPT	**Papeete**	**42.70**	**317**	LR	LR	00 38 33.6	
	comp=Z,265nm,20.9s,baz=190,slow=30						
CFA	**Coronel Fontan**	**43.41**	**81**	P	**P**	**00 25 18.3**	**+0.1**
	3.1nm,0.9s,baz=218,slow=12,SNR=3.3						
RPZ	**Rata Peaks**	**44.28**	**254**	LR	LR	00 39 38.4	
	comp=Z,128nm,22.0s,baz=82,slow=30						
PMOR	**Pomariorio Ree**	**44.39**	**321**	eT	T	01 12 56.2	
	11nm,0.4s						
LVC	**Limon Verde**	**49.89**	**72**	P	**P**	**00 26 09.4**	**0.0**
	4.1nm,0.7s,baz=251,slow=5.8,SNR=3.8						
CPUP	**Villa Florida**	**53.69**	**85**	P	**P**	**00 26 37.4**	**+0.1**
	2.5nm,0.9s,baz=259,slow=5.2,SNR=3.8						
LPAZ	**La Paz**	**55.41**	**68**	P	**P**	**00 26 51.9**	**+1.2**
	6.9nm,1.1s,baz=197,slow=4.9,SNR=8.5						
MAW	**Mawson**	**58.56**	**182**	LR	LR	00 50 00.4	
	comp=Z,79nm,19.6s,baz=166,slow=34						
SIV	**San Ignacio**	**59.59**	**75**	P	**P**	**00 27 18.7**	**-0.8**
	3.9nm,0.9s,baz=232,slow=7.4,SNR=15						
STKA	**Stephens Creek**	**68.95**	**245**	P	**P**	**00 28 21.3**	**+0.6**
	1.4nm,0.5s,baz=141,slow=6.5,SNR=2.9						
H01W1	**Cape Leeuwin H**	**79.46**	**223**	T	T	01 57 45.0	
	baz=151,slow=75,SNR=26						
H01W2	**Cape Leeuwin H**	**79.46**	**223**	T	T	01 57 43.8	
	baz=151,slow=75,SNR=25						
H01W3	**Cape Leeuwin H**	**79.47**	**223**	T	T	01 57 46.2	
	baz=151,slow=75,SNR=22						
ASAR	**Alice Springs**	**79.58**	**244**	P	**P**	**00 29 22.8**	**0.0**
	1.8nm,0.9s,baz=144,slow=5.5,SNR=11						
WRA	**Warramunga Arr**	**82.38**	**247**	P	**P**	**00 29 37.1**	**-0.6**
	5.4nm,0.8s,baz=148,slow=4.9,SNR=11						
TXAR	**Lajitas Array**	**84.44**	**15**	P	**P**	**00 29 49.1**	**+1.2**
	0.9nm,0.8s,baz=190,slow=9.2,SNR=8.6						
FITZ	**Fitzroy Crossi**	**88.49**	**241**	P	**P**	**00 30 07.1**	**-1.1**
	3.4nm,0.7s,baz=203,slow=8.5,SNR=5.4						
NVAR	**Mina Array Bea**	**92.21**	**2**	P	**P**	**00 30 25.6**	**+0.5**
	1.0nm,0.8s,baz=188,slow=4.2,SNR=5.5						
BOSA	**Boshof**	**92.55**	**151**	LR	LR	01 06 16.8	
	comp=Z,85nm,19.3s,baz=194,slow=32						
H11S2	**WAKE ISLAND Hy**	**94.95**	**295**	T	T	02 16 36.4	
	baz=147,slow=75,SNR=72						
H11S3	**WAKE ISLAND Hy**	**94.96**	**295**	T	T	02 16 39.3	
	baz=147,slow=75,SNR=36						
H11S1	**WAKE ISLAND Hy**	**94.97**	**295**	T	T	02 16 38.3	
	baz=147,slow=75,SNR=35						
H11N3	**WAKE ISLAND Hy**	**95.85**	**296**	T	T	02 17 42.4	
	baz=144,slow=76,SNR=10						
H11N1	**WAKE ISLAND Hy**	**95.86**	**296**	T	T	02 17 43.5	
	baz=144,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	**95.87**	**296**	T	T	02 17 43.9	
	baz=144,slow=76,SNR=6.8						
ILAR	**Eielson Array**	**120.25**	**347**	PKP	**PKiKP**	**00 36 05.3**	**0.0**
	0.3nm,0.7s,baz=143,slow=3.2,SNR=2.4						
MJAR	**Matsushiro Arr**	**124.69**	**286**	PKP	**PKiKP**	**00 36 14.7**	**-0.3**
	0.5nm,0.3s,baz=123,slow=3.0,SNR=2.6						
EKA	**Eskdalemuir Ar**	**145.06**	**62**	PKPbc	**PKPbc**	**00 36 50.9**	**-0.4**
	2.4nm,0.8s,baz=238,slow=2.5,SNR=9.7						
TIXI	**Tiksi**	**146.25**	**328**	PKPbc	**PKPbc**	**00 36 53.9**	**-0.6**
	3.0nm,0.5s,baz=110,slow=1.6,SNR=8.8						
DAVA	**Damuels**	**148.61**	**82**	ePKPdf	**PKiKP**	**00 37 03.2**	**-0.2**
	3.3nm,0.8s						
FETA	**Feichten**	**148.97**	**83**	ePKPdf	**PKPbc**	**00 37 03.1**	**+0.2**
	1.8nm,0.7s						
RETA	**Reutte**	**149.23**	**82**	ePKPdf	**PKPbc**	**00 37 03.4**	**0.0**
	2.8nm,1.1s						
SQTA	**Sankt Quirin**	**149.35**	**83**	ePKPdf	**PKPbc**	**00 37 02.8**	**-1.0**
	5.7nm,0.9s						
MOTA	**Moosalm**	**149.36**	**83**	ePKPdf	**PKiKP**	**00 37 05.0**	**0.0**
	1.7nm,0.7s						
ABTA	**Abfaltersbach**	**149.87**	**85**	ePKPdf	**PKPbc**	**00 37 04.4**	**-0.6**
	1.4nm,0.6s						
SONM	**Songino Array**	**150.06**	**278**	PKPbc	**PKPbc**	**00 37 05.2**	**-0.3**
	1.2nm,0.7s,baz=127,slow=2.1,SNR=6.8						
OBKA	**Obir**	**150.94**	**87**	ePKPdf	**PKiKP**	**00 37 07.9**	**-0.3**
	3.0nm,1.0s						
SOKA	**Soboth**	**151.31**	**87**	ePKPdf	**PKPbc**	**00 37 08.5**	**+0.1**
	1.9nm,0.8s						
MOA	**Molln**	**151.46**	**84**	ePKPdf	**PKPbc**	**00 37 07.9**	**-0.7**
	2.0nm,0.8s						
GERES	**GERESS Array B**	**151.61**	**82**	PKPbc	**PKPbc**	**00 37 08.5**	**-0.6**
	1.4nm,0.7s,baz=222,slow=1.8,SNR=13						
ARSA	**Arzberg**	**151.90**	**86**	ePKPdf	**PKPbc**	**00 37 09.5**	**-0.2**
	2.1nm,0.7s						
BRTR	**Keskin Array B**	**157.57**	**120**	PKPab	**PKPab**	**00 37 43.0**	**-0.5**
	0.5nm,0.8s,baz=207,slow=3.9,SNR=3.1						
MKAR	**Makanchi Array**	**163.59**	**253**	PKPab	**PKPab**	**00 38 09.6**	**+0.1**
	0.8nm,0.8s,baz=101,slow=6.3,SNR=6.4						
BVAR	**Borovoye Array**	**173.21**	**265**	PKPab	**PKPab**	**00 38 51.0**	**-0.9**
	0.2nm,0.6s,baz=134,slow=4.2,SNR=2.9						

*ISCJB **20** 00:22:53.1±0.2, 45°.56N±0°.01×26°.70E±0°.02, h129km±1km, mb3.4/12, Error ellipse: s-maj=2.1km s-min=1.8km az=36.2*
*SIGU **20** 00:22:53.5±0.2, 46°.N±1°.×2°.7E±°., h130km±1km, mb3.6/16*
*BUC **20** 00:22:54.6±0.3, 45°.58N×26°.69E, h124km±3km, MD4.3/7, Error ellipse: s-maj=2.9km s-min=2.5km az=46.0*
*IDC **20** 00:22:54.6±0.5, 45°.59N×26°.55E, h117km±3km, mb3.2/11, mb1 3.2/18, mb1mx3.1/40, mbtmp3.5/18, MS2.2/1, Ms1 2.2/1, ms1mx1.8/28, Error ellipse: s-maj=14.5km s-min=9.6km az=148.0*
*PDG **20** 00:22:54.5±0.6, 45°.55N×26°.62E, h115km±2km, ML3.8/11, Error ellipse: s-maj=1.0km s-min=1.7km az=0.0*

ISC 20 00:22:54.6±0.5, 45°.58N±0°.02×26°.69E±0°.02, h125km±4km, n226, σ1°40/316, mb3.4/12, 79C-54D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.27**	**354**	⇑iP	**Pn**	**00 23 11.9**	**-0.3**
PLOR				i S	**Sn**	**00 23 24.5**	**-1.0**
PLOR	**Plostina**	**0.27**	**354**	⇑iP	**Pn**	**00 23 11.9**	**-0.3**
GRER		**0.28**	**136**	⇑iP	**Pn**	**00 23 12.9**	**+0.7**
GRER				i S	**Sn**	**00 23 24.6**	**-0.8**
GRER		**0.28**	**136**	⇑iP	**Pn**	**00 23 12.9**	**+0.7**
VRI	**Vrincioaia**	**0.28**	**5**	P	**Pn**	**00 23 12.2**	**0.0**
VRI				S	**Sn**	**00 23 22.4**	**-3.1**
VRI	**Vrincioaia**	**0.28**	**5**	⇑iP	**Pn**	**00 23 12.5**	**+0.3**
VRI				i S	**Sn**	**00 23 24.7**	**-0.8**
VRI	**Vrincioaia**	**0.28**	**5**	⇑iP	**Pn**	**00 23 12.5**	**+0.3**
PETR	**Petresti**	**0.40**	**69**	⇑iP	**Pn**	**00 23 12.9**	**+0.3**
PETR				i S	**Sn**	**00 23 26.1**	**-0.1**
PETR	**Petresti**	**0.40**	**69**	⇑iP	**Pn**	**00 23 12.9**	**+0.3**
ISR	**Istrita**	**0.48**	**193**	⇓iP	**Pn**	**00 23 13.3**	**+0.2**
ISR				i S	**Sn**	**00 23 26.8**	**-0.3**
ISR	**Istrita**	**0.48**	**193**	⇓iP	**Pn**	**00 23 13.3**	**+0.2**
MLR	**Muntele Rosu**	**0.53**	**260**	P	**Pn**	**00 23 13.5**	**0.0**
	55nm,0.3s,baz=64,slow=7.4,SNR=1422						
MLR				S	**Sn**	**00 23 26.7**	**-1.1**
	1μm,0.3s,baz=39,slow=24,SNR=80						
MLR	**Muntele Rosu**	**0.53**	**260**	⇑iP	**Pn**	**00 23 13.6**	**0.0**
MLR				i S	**Sn**	**00 23 27.0**	**-0.8**
MLR	**Muntele Rosu**	**0.53**	**260**	⇑iP	**Pn**	**00 23 13.6**	**0.0**
TUDR		**0.69**	**89**	⇑iP	**Pn**	**00 23 13.8**	**-0.6**
TUDR				i S	**Sn**	**00 23 28.3**	**-1.0**
TUDR		**0.69**	**89**	⇑iP	**Pn**	**00 23 13.8**	**-0.6**
SECR		**0.70**	**219**	⇑iP	**Pn**	**00 23 15.0**	**+0.4**
SECR				i S	**Sn**	**00 23 29.5**	**-0.1**
SECR		**0.70**	**219**	⇑iP	**Pn**	**00 23 15.0**	**+0.4**
PGOR	**Pogoanele**	**0.71**	**163**	⇑iP	**Pn**	**00 23 14.8**	**+0.2**
PGOR				i S	**Sn**	**00 23 29.8**	**+0.2**
PGOR	**Pogoanele**	**0.71**	**163**	⇑iP	**Pn**	**00 23 14.8**	**+0.2**
OZUR		**0.81**	**309**	⇑iP	**Pn**	**00 23 14.9**	**-0.6**
OZUR				i S	**Sn**	**00 23 29.2**	**-2.1**
OZUR		**0.81**	**309**	⇑iP	**Pn**	**00 23 14.9**	**-0.6**
PLAR	**PLOIESTI**	**0.82**	**215**	⇑iP	**Pn**	**00 23 15.9**	**+0.4**
PLAR				i S	**Sn**	**00 23 32.0**	**+0.8**
PLAR	**PLOIESTI**	**0.82**	**215**	⇑iP	**Pn**	**00 23 15.9**	**+0.4**
TESR	**Tescani**	**0.93**	**358**	⇑iP	**Pn**	**00 23 16.0**	**-0.5**
TESR				i S	**Sn**	**00 23 30.6**	**-2.4**
TESR	**Tescani**	**0.93**	**358**	⇑iP	**Pn**	**00 23 16.0**	**-0.5**
BIR	**Birlad**	**0.94**	**43**	⇓iP	**Pn**	**00 23 16.5**	**-0.1**
BIR				i S	**Sn**	**00 23 32.2**	**-1.0**
BIR	**Birlad**	**0.94**	**43**	⇓iP	**Pn**	**00 23 16.5**	**-0.1**
SULR		**0.96**	**199**	⇑iP	**Pn**	**00 23 17.0**	**+0.3**
SULR				i S	**Sn**	**00 23 33.6**	**+0.2**
SULR		**0.96**	**199**	⇑iP	**Pn**	**00 23 17.0**	**+0.3**
DOPR	**Dopca**	**0.99**	**293**	⇓iP	**Pn**	**00 23 16.8**	**-0.2**
DOPR				i S	**Sn**	**00 23 32.6**	**-1.4**
DOPR	**Dopca**	**0.99**	**293**	⇓iP	**Pn**	**00 23 16.8**	**-0.2**
GIUM	**Giurgiulesti**	**1.07**	**95**	⇑iP	**Pn**	**00 23 17.8**	**+0.1**
GIUM				i S	**Sn**	**00 23 34.9**	**-0.4**
GIUM	**Giurgiulesti**	**1.07**	**95**	⇑iP	**Pn**	**00 23 17.8**	**+0.1**
AMRR	**Amara**	**1.07**	**155**	⇑iP	**Pn**	**00 23 17.9**	**+0.1**
AMRR				i S	**Sn**	**00 23 35.3**	**-0.1**
AMRR	**Amara**	**1.07**	**155**	⇑iP	**Pn**	**00 23 17.9**	**+0.1**
CFR	**Carcaliu**	**1.09**	**111**	⇑iP	**Pn**	**00 23 17.4**	**-0.6**
CFR				i S	**Sn**	**00 23 34.0**	**-1.7**
CFR	**Carcaliu**	**1.09**	**111**	⇑iP	**Pn**	**00 23 17.4**	**-0.6**
LEHL	**Lehliu**	**1.11**	**175**	⇑iP	**Pn**	**00 23 18.4**	**+0.2**
LEHL				i S	**Sn**	**00 23 35.8**	**-0.3**
LEHL	**Lehliu**	**1.11**	**175**	⇑iP	**Pn**	**00 23 18.4**	**+0.2**
VOIR		**1.16**	**263**	⇓iP	**Pn**	**00 23 18.5**	**-0.3**
VOIR				i S	**Sn**	**00 23 35.8**	**-1.4**
VOIR		**1.16**	**263**	⇓iP	**Pn**	**00 23 18.5**	**-0.3**
MTUR	**Matau**	**1.20**	**253**	⇓iP	**Pn**	**00 23 19.4**	**+0.2**
MTUR	**Matau**	**1.20**	**253**	⇓iP	**Pn**	**00 23 19.4**	**+0.2**
INCR	**INCERC-Sediu C**	**1.20**	**198**	⇑iP	**Pn**	**00 23 19.1**	**0.0**
INCR				i S	**Sn**	**00 23 37.2**	**-0.5**
INCR	**INCERC-Sediu C**	**1.20**	**198**	⇑iP	**Pn**	**00 23 19.1**	**0.0**
HARR	**Harsova**	**1.25**	**135**	⇑iP	**Pn**	**00 23 19.5**	**-0.1**
HARR	**Harsova**	**1.25**	**135**	⇑iP	**Pn**	**00 23 19.5**	**-0.1**
BUC1	**Bucharest**	**1.32**	**201**	⇑iP	**Pn**	**00 23 20.5**	**+0.1**
BUC1				i S	**Sn**	**00 23 39.3**	**-0.7**
BUC1	**Bucharest**	**1.32**	**201**	⇑iP	**Pn**	**00 23 20.5**	**+0.1**
GIRR	**Girov**	**1.38**	**355**	⇑iP	**Pn**	**00 23 21.0**	**0.0**
GIRR	**Girov**	**1.38**	**355**	⇑iP	**Pn**	**00 23 21.0**	**0.0**
TLB	**Topalu**	**1.38**	**136**	⇑iP	**Pn**	**00 23 20.9**	**-0.1**
TLB				i S	**Sn**	**00 23 39.4**	**-1.7**
TLB	**Topalu**	**1.38**	**136**	⇑iP	**Pn**	**00 23 20.9**	**-0.1**
JOSR	**Joseni**	**1.39**	**324**	⇑iP	**Pn**	**00 23 20.9**	**-0.3**
JOSR	**Joseni**	**1.39**	**324**	⇑iP	**Pn**	**00 23 20.9**	**-0.3**
BIZ	**Bicaz**	**1.42**	**343**	⇑iP	**Pn**	**00 23 22.0**	**+0.6**
BIZ				i S	**Sn**	**00 23 41.5**	**-0.4**
BIZ	**Bicaz**	**1.42**	**343**	⇑iP	**Pn**	**00 23 22.0**	**+0.6**
GOLR		**1.43**	**239**	⇑iP	**Pn**	**00 23 21.8**	**+0.2**
GOLR				i S	**Sn**	**00 23 41.9**	**-0.2**
GOLR		**1.43**	**239**	⇑iP	**Pn**	**00 23 21.8**	**+0.2**
SGRR	**Singureni**	**1.45**	**201**	⇑iP	**Pn**	**00 23 21.7**	**-0.1**
SGRR				i S	**Sn**	**00 23 41.7**	**-0.8**
SGRR	**Singureni**	**1.45**	**201**	⇑iP	**Pn**	**00 23 21.7**	**-0.1**
ARR	**Arges**	**1.46**	**262**	⇓iP	**Pn**	**00 23 22.1**	**0.0**
ARR				i S	**Sn**	**00 23 42.4**	**-0.5**
ARR	**Arges**	**1.46**	**262**	⇓iP	**Pn**	**00 23 22.1**	**0.0**
TLCR		**1.55**	**104**	⇓iP	**Pn**	**00 23 22.7**	**-0.2**
TLCR				i S	**Sn**	**00 23 43.3**	**-1.1**
TLCR		**1.55**	**104**	⇓iP	**Pn**	**00 23 22.7**	**-0.2**
CVDA	**Cernavoda**	**1.57**	**142**	⇓iP	**Pn**	**00 23 23.3**	**+0.1**
CVDA				i S	**Sn**	**00 23 44.5**	**-0.5**
CVDA	**Cernavoda**	**1.57**	**142**	⇓iP	**Pn**	**00 23 23.3**	**+0.1**
HUMR	**Humele**	**1.61**	**230**	⇓iP	**Pn**	**00 23 23.4**	**-0.2**
HUMR				i S	**Sn**	**00 23 44.7**	**-1.0**
HUMR	**Humele**	**1.61**	**230**	⇓iP	**Pn**	**00 23 23.4**	**-0.2**
TIRR	**Tirgusor**	**1.66**	**132**	⇓iP	**Pn**	**00 23 24.1**	**-0.1**
TIRR				i S	**Sn**	**00 23 44.8**	**-2.0**
TIRR	**Tirgusor**	**1.66**	**132**	⇓iP	**Pn**	**00 23 24.1**	**-0.1**
ICOR	**Ion Corvin**	**1.67**	**151**	⇑iP	**Pn**	**00 23 24.5**	**+0.2**
ICOR				i S	**Sn**	**00 23 45.5**	**-1.4**
ICOR	**Ion Corvin**	**1.67**	**151**	⇑iP	**Pn**	**00 23 24.5**	**+0.2**
MDB	**Medias**	**1.71**	**290**	⇓iP	**Pn**	**00 23 25.3**	**+0.5**
MDB	**Medias**	**1.71**	**290**	⇓iP	**Pn**	**00 23 25.3**	**+0.5**
IAS	**Iasi**	**1.72**	**20**	⇑iP	**Pn**	**00 23 24.7**	**-0.2**
IAS				i S	**Sn**	**00 23 46.2**	**-1.9**
IAS	**Iasi**	**1.72**	**20**	⇑iP	**Pn**	**00 23 24.7**	**-0.2**
PRAR	**RASCA**	**1.81**	**350**	⇑iP	**Pn**	**00 23 26.3**	**+0.3**
PRAR	**RASCA**	**1.81**	**350**	⇑iP	**Pn**	**00 23 26.3**	**+0.3**
MFTR	**Murfatlar**	**1.87**	**138**	⇓iP	**Pn**	**00 23 26.6**	**-0.1**
MFTR				i S	**Sn**	**00 23 49.6**	**-1.6**
MFTR	**Murfatlar**	**1.87**	**138**	⇓iP	**Pn**	**00 23 26.6**	**-0.1**
MILM	**Milestii Mici**	**1.99**	**47**	⇑iP	**Pn**	**00 23 28.0**	**-0.1**
MILM				i S	**Sn**	**00 23 51.6**	**-2.2**
MILM	**Milestii Mici**	**1.99**	**47**	⇑iP	**Pn**	**00 23 28.0**	**-0.1**
TSCT	**Constanta Port**	**1.99**	**135**	⇑iP	**Pn**	**00 23 28.2**	**0.0**
TSCT				i S	**Sn**	**00 23 52.2**	**-1.7**
TSCT	**Constanta Port**	**1.99**	**135**	⇑iP	**Pn**	**00 23 28.2**	**0.0**
EFOR	**EFORIE**	**2.04**	**137**	⇓iP	**Pn**	**00 23 28.9**	**+0.1**
EFOR				i S	**Sn**	**00 23 53.6**	**-1.4**
EFOR	**EFORIE**	**2.04**	**137**	⇓iP	**Pn**	**00 23 28.9**	**+0.1**
KIS	**Kishinev**	**2.04**	**45**	⇓iP	**Pn**	**00 23 28.0**	**-0.8**
	240nm,0.4s						
KIS				i S	**Sn**	**00 23 52.3**	**-2.7**
	4μm,0.6s						
KIS	**Kishinev**	**2.04**	**45**	P	**Pn**	**00 23 28.0**	**-0.8**
KIS				Pm		00 23 28.2	
KIS				S	**Sn**	**00 23 52.3**	**-2.7**
KIS				Sm		00 23 55.0	
LOT	**Lotru**	**2.06**	**267**	P	**Pn**	**00 23 28.6**	**-0.6**
LOT	**Lotru**	**2.06**	**267**	⇓iP	**Pn**	**00 23 28.7**	**-0.5**
LOT				i S	**Sn**	**00 23 55.9**	**+0.3**
LOT	**Lotru**	**2.06**	**267**	⇓iP	**Pn**	**00 23 28.7**	**-0.5**
ZIMR		**2.15**	**207**	⇓iP	**Pn**	**00 23 29.8**	**-0.3**
ZIMR				i S	**Sn**	**00 23 55.5**	**-1.8**
ZIMR		**2.15**	**207**	⇓iP	**Pn**	**00 23 29.8**	**-0.3**
TSSL	**Sulina**	**2.18**	**100**	⇑iP	**Pn**	**00 23 30.8**	**+0.3**
TSSL				i S	**Sn**	**00 23 57.8**	**-0.2**
TSSL	**Sulina**	**2.18**	**100**	⇑iP	**Pn**	**00 23 30.8**	**+0.3**
ARCR	**ARCALIA**	**2.21**	**314**	⇓iP	**Pn**	**00 23 30.7**	**-0.2**
ARCR	**ARCALIA**	**2.21**	**314**	⇓iP	**Pn**	**00 23 30.7**	**-0.2**
MANR	**Mangalia**	**2.22**	**142**	⇑iP	**Pn**	**00 23 31.1**	**0.0**
MANR				i S	**Sn**	**00 23 55.5**	**-3.5**
TSMN	**Mangalia Port-**	**2.24**	**142**	⇑iP	**Pn**	**00 23 31.3**	**0.0**
TSMN				i S	**Sn**	**00 23 58.3**	**-1.1**
BURAR	**Bucovina Array**	**2.27**	**334**	⇓iP	**Pn**	**00 23 33.2**	**+1.4**
VLAD	**Vladila**	**2.27**	**227**	⇓iP	**Pn**	**00 23 31.1**	**-0.6**
VLAD				i S	**Sn**	**00 23 58.5**	**-1.6**
CRAR	**CRAIOVA**	**2.41**	**240**	⇓iP	**Pn**	**00 23 32.8**	**-0.6**
CRAR				i S	**Sn**	**00 24 01.1**	**-2.1**
CJR	**Cluj-Napoca**	**2.43**	**299**	⇓iP	**Pn**	**00 23 33.5**	**-0.2**
SRE	**Strehaia**	**2.63**	**251**	⇓iP	**Pn**	**00 23 36.0**	**-0.3**
SRE				i S	**Sn**	**00 24 06.2**	**-2.2**
DEV	**Deva**	**2.67**	**278**	⇓iP	**Pn**	**00 23 37.2**	**+0.4**
GZR	**Gura Zlata**	**2.76**	**267**	⇑iP	**Pn**	**00 23 38.0**	**0.0**
CHRU	**Chernivtsi**	**2.77**	**349**	⇓iP	**Pn**	**00 23 38.0**	**0.0**
CHRU				Pm		00 23 38.7	
CHRU				i S	**Sn**	**00 24 10.5**	**-0.9**
CHRU				Sm		00 24 12.6	
KSV	**Kosov**	**2.95**	**338**	i P	**Pn**	**00 23 40.8**	**+0.4**
KSV				Pm		00 23 43.6	
KSV				i S	**Sn**	**00 24 15.4

KCTX	Karacabey (Bur	5.45 166	eP	Pn	00 24 08.3	-5.4
GEMT	Gemlik	5.46 160	eP	Pn	00 24 09.5	-4.3
BBLS	Lazići	5.47 254	ePn	Pn	00 24 12.4	-1.6
SAUV	Serdivan-Sakar	5.52 150	eP	Pn	00 24 15.4	+0.8
ALU	Alushta	5.53 97	eP	Pn	00 24 12.9	-1.8
ALU			Pm		00 24 15.3	
ALU			eS	Sn	00 25 15.0	-2.1
ALU			Sm		00 25 16.5	
IVA	Berane	5.59 243	⇑iPn	Pn	00 24 15.6	0.0
IVA			eSn	Sn	00 25 16.5	-2.1
MORH	Mrgy, Hungar	5.65 279	ePn	Pn	00 24 16.2	-0.1
MORH	Mrgy, Hungar	5.65 279	EPn	Pn	00 24 16.1	-0.3
PLE	Pljevlja	5.69 249	⇑iPn	Pn	00 24 16.6	-0.4
PLE			eSn	Sn	00 25 19.3	-1.9
PVY	Plav	5.70 241	⇓iPn	Pn	00 24 17.1	0.0
PVY			eSn	Sn	00 25 18.9	-2.4
HAPS	Han Pijesak,BI	5.71 258	ePn	Pn	00 24 14.9	-2.3
KURC	Kurucasile-Bar	5.76 128	eP	Pn	00 24 14.8	-3.0
KOME	Kolasin	5.84 245	⇑iPn	Pn	00 24 19.3	+0.4
KOME			eSn	Sn	00 25 22.1	-2.6
GULT	Gulveren	5.86 150	eP	Pn	00 24 15.2	-4.1
SUDU	Sudak	5.91 94	eP	Pn	00 24 20.1	+0.3
SUDU			Pm		00 24 21.9	
SUDU			eS	Sn	00 25 25.4	-0.8
SUDU			Sm		00 25 32.6	
UPM	Unac-Piva	6.07 250	⇓iPn	Pn	00 24 21.9	-0.2
UPM			eSn	Sn	00 25 27.8	-2.5
UPM	Unac-Piva	6.07 250	ePn	Pn	00 24 21.4	-0.7
VYHS	Vyhne	6.11 301	ePN	Pn	00 24 22.6	+0.1
SRO2	Moca	6.11 294	ePN	Pn	00 24 23.0	+0.5
SRO	Srobarova	6.18 294	ePN	Pn	00 24 24.2	+0.8
OHR	Ohrid	6.20 226	ePn	Pn	00 24 19.1	-4.7
PDG	Podgorica	6.22 242	ePn	Pn	00 24 25.9	-0.1
TTG	Podgorica	6.22 242	⇑iPn	Pn	00 24 24.8	+0.8
TTG			eSn	Sn	00 25 32.3	-1.5
SRCK	Saricakaya, Es	6.25 151	eP	Pn	00 24 21.4	-3.0
CEME	Cevo	6.37 244	⇓iPn	Pn	00 24 26.6	+0.5
CEME			eSn	Sn	00 25 34.9	-2.6
DRME	Dracevica, Mon	6.40 241	⇓iPn	Pn	00 24 27.6	+1.1
DRME			eSn	Sn	00 25 35.6	-2.5
DRME	Dracevica, Mon	6.40 241	ePn	Pn	00 24 27.5	+1.1
BZK	Bozkurt	6.41 122	eP	Pn	00 24 24.7	-1.9
BRY	Bratogost	6.44 248	⇑iPn	Pn	00 24 27.7	+0.6
BRY			eSn	Sn	00 25 36.8	-2.5
BRY	Bratogost	6.44 248	ePn	Pn	00 24 27.0	-0.1
ULC	Ulcinj	6.49 239	⇓iPn	Pn	00 24 28.9	+1.2
ULC			eSn	Sn	00 25 38.8	-1.6
BUM	Brajici-Budva	6.51 243	⇑iPn	Pn	00 24 28.9	+0.8
BUM			eSn	Sn	00 25 38.8	-2.2
TREB	Trebinje	6.65 247	ePn	Pn	00 24 30.5	+0.7
HCY	Herceg Novi	6.69 245	⇑iPn	Pn	00 24 31.9	+1.6
HCY			eSn	Sn	00 25 42.8	-2.4
HCY	Herceg Novi	6.69 245	ePn	Pn	00 24 31.5	+1.1
BLY	Banja Luka	6.77 266	ePn	Pn	00 24 30.5	-1.0
STON	Ston	7.00 250	ePn	Pn	00 24 35.6	+1.0
STON	Ston	7.00 250	ePn	Pn	00 24 34.9	+0.3
DIKM	Dikmen	7.35 119	eP	Pn	00 24 35.6	-3.7
BRTR	Keskin Array B	7.78 136	P	Pn	00 24 44.5	-0.6
	0.2nm,0.3s,baz=324,slow=13,SNR=7.5					
BRTR			S	Sn	00 26 10.3	-1.4
	0.1nm,0.3s,baz=327,slow=31,SNR=2.1					
VRAC	Vranov	7.79 302	P	Pn	00 24 43.9	-1.3
	0.1nm,0.3s,baz=116,slow=15,SNR=3.4					
CRES	Cresnjev	7.87 276	ePn	Pn	00 24 46.5	+0.2
NVLJ	Novalja	8.43 267	i Pn	Pn	00 24 54.8	+1.1
GERES	GERESS Array B	9.42 295	P	Pn	00 25 07.7	+0.4
	0.1nm,0.3s,baz=94,slow=13,SNR=6.7					
OBN	Obninsk	11.43 30	LR	LR	00 29 52.4	
	comp=Z,12nm,19.1s,baz=295,slow=36					
FINES	FINESS Array B	15.89 359	P	Pn	00 26 30.2	-0.8
	0.1nm,0.3s,baz=168,slow=12,SNR=5.4					
FINES			S	Sn	00 29 14.1	-13
	0.2nm,0.3s,baz=166,slow=24,SNR=3.7					
HFS	Hagfors	16.50 337	P	Pn	00 26 38.4	0.0
	0.1nm,0.3s,baz=139,slow=13,SNR=4.0					
KLMR	Klimovskoe	17.06 22	ePn	P	00 26 41.4	-3.6
KLMR			AMP		00 26 48.1	
	comp=Z,5.0nm,1.3s					
KLMR			eSn	Sn	00 29 42.6	-13
KLMR			eSn	Sn	00 29 42.6	-13
NOA	NORSAR Array B	17.95 335	P	P	00 26 54.4	-0.4
	comp=Z,0.0nm,0.3s,baz=142,slow=11,SNR=2.7					
NOA			pP	pP	00 27 17.2	-0.3
	comp=Z,0.0nm,0.3s,baz=142,slow=11,SNR=2.4					
EKA	Eskdalemuir Ar	21.21 308	P	P	00 27 30.4	+0.4
	comp=Z,1.1nm,0.8s,baz=99,slow=10,SNR=4.6					
AKTO	Aktyubinsk	21.42 66	P	P	00 27 33.7	+1.4
	comp=Z,1.1nm,0.5s,baz=261,slow=11,SNR=3.9					
ARU	Arti	22.59 50	P	P	00 27 46.4	+2.0
	comp=Z,0.6nm,0.3s,baz=264,slow=18,SNR=3.5					
ARU			pP	pP	00 28 07.8	-0.2
	comp=Z,0.4nm,0.3s,baz=268,slow=15,SNR=2.0					
ESDC	Sonseca Array	23.23 266	P	P	00 27 50.1	-0.5
	comp=Z,0.2nm,0.5s,baz=63,slow=10,SNR=4.2					
ARCES	ARCESS Array B	24.02 359	P	P	00 27 57.8	+0.3
	comp=Z,0.4nm,0.4s,baz=178,slow=11,SNR=7.9					
ARCES			pP	pP	00 28 21.6	-1.7
	comp=Z,0.6nm,0.5s,baz=173,slow=11,SNR=2.3					
GEYT	Alibeck	24.54 97	P	P	00 28 04.3	+1.8
	comp=Z,0.9nm,0.7s,baz=300,slow=12,SNR=2.8					
ZALV	Zalesovo Beam	37.49 56	P	P	00 29 57.5	+1.7
	comp=Z,0.5nm,0.5s,baz=289,slow=4.4,SNR=3.0					
ZALV			pP	pP	00 30 24.0	+0.3
	comp=Z,0.5nm,0.4s,baz=292,slow=9.2,SNR=2.2					
MKAR	Makanchi Array	37.83 68	P	P	00 30 00.7	+2.0
	comp=Z,0.2nm,0.4s,baz=269,slow=10,SNR=5.7					
TORD	Torodi Ar. Bea	38.66 221	P	P	00 30 06.8	+0.9
	comp=Z,0.9nm,0.4s,baz=28,slow=8.7,SNR=20					
TORD			pP	pP	00 30 35.5	+1.6
	comp=Z,0.5nm,0.8s,baz=17,slow=7.7,SNR=1.8					
TORD			PcP	PcP	00 32 15.2	-0.3
	comp=Z,0.5nm,0.8s,baz=45,slow=2.2,SNR=2.7					
DBIC	Dimbokro	47.42 225	P	P	00 31 16.0	-0.5
	comp=Z,2.5nm,0.3s,baz=9.8,slow=7.2,SNR=16					
SONM	Songino Array	52.36 57	P	P	00 31 54.2	+0.5
	comp=Z,0.5nm,0.5s,baz=282,slow=7.2,SNR=2.5					
TXAR	Lajitas Array	92.87 318	P	P	00 35 53.7	+0.3
	comp=Z,0.1nm,0.5s,baz=39,slow=4.6,SNR=2.5					

*TIR **20** 00:26:54.6, 42.01N×20.73E, h10km, Md2.8/5*
*PDG **20** 00:26:54.7±0.2, 41.95N×20.76E, h8km, MD2.9/1, ML2.9/12, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
*SKO **20** 00:26:54.5, 41.96N×20.78E, h15km, M2.1, ML2.8*
*SIK **20** 00:26:55.7, 42.00N×20.74E, h0km, M2.5*
*THE **20** 00:26:55.7, 41.89N×20.74E, h4km±2km, ML2.5/4, Error ellipse: s-maj=2.3km s-min=0.6km az=230.0*
*BEO **20** 00:26:56.7±0.3, 42.01N×20.84E, h10km±3km, ML2.5/14*
ISC 20 00:26:54.7±1.1,**41.98N**±0.02×**20.79E**±0.01,**h1**km±10km, **n77**,σ1°**08**/126,**13C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.40	222	P	Pg	00 27 01.5	-0.7
PHP				S	Sg	00 27 05.7	-1.7
PHP	Peshkopia	0.40	222	i PG	Pg	00 27 01.5	-0.7
PHP				i SG	Sg	00 27 08.5	+1.1
SKO	Skopje	0.48	91	⇑iPg	Pg	00 27 04.4	+0.5
SKO				i Sg	Sg	00 27 11.5	+1.3
SKO				eLg	Lg	00 27 11.6	
	comp=E,42nm,0.5s						
SKO				eLg	Lg	00 27 12.1	
	comp=N,72nm,0.3s						
BCI	Bajram Curri	0.66	306	i PG	Pg	00 27 06.9	-0.4
BCI				i SG	Sb	00 27 18.0	-0.8
PUK	Puka	0.67	276	i PG	Pg	00 27 06.9	-0.7
PUK				i SG	Sg	00 27 17.3	+1.0
OHR	Ohrid	0.87	180	⇑iPg	Pg	00 27 11.4	+0.1
OHR				i Sg	Sb	00 27 23.8	-1.0
OHR				eLg	Lg	00 27 24.7	
	comp=E,370nm,0.6s						
OHR				eLg	Lg	00 27 24.9	
	comp=N,280nm,0.7s						
PVY	Plav	0.87	315	⇑iPg	Pg	00 27 10.3	-1.1
PVY				eSg	Sb	00 27 24.7	-0.2
TIR	Tirane	0.94	228	ePg	Pn	00 27 14.6	-0.4
TIR				eSg	Sn	00 27 28.4	-0.7
TIR	Tirane	0.94	228	P	Pg	00 27 12.3	-0.4
TIR				S	Sg	00 27 24.1	-0.7
TIR	Tirane	0.94	228	i Pg	Pg	00 27 12.8	+0.2
TIR	Tirane	0.94	228	i PG	Pb	00 27 13.7	-0.1
TIR				i SG	Sn	00 27 28.5	-0.6
BEY	Berane	1.11	324	i Pg	Pg	00 27 15.1	-0.9
IVA	Berane	1.11	324	⇑iPg	Pg	00 27 15.3	-0.7
IVA				eSg	Sn	00 27 33.1	-0.4
BARS	Barje	1.13	42	ePg	Pg	00 27 16.8	+0.5
BARS				eSg	Sg	00 27 31.4	+0.5
BARS				eSg	Sn	00 27 34.9	+1.1
ULC	Ulcinj	1.15	270	⇑iPg	Pg	00 27 15.8	-1.0
ULC				eSg	Sb	00 27 33.0	+0.1
ULC	Ulcinj	1.15	270	i Pg	Pg	00 27 15.8	-1.0
DRME	Dracevica, Mon	1.21	280	⇑iPg	Pg	00 27 16.8	-1.1
DRME				eSg	Sn	00 27 35.7	-0.2
DRME	Dracevica, Mon	1.21	280	ePn	Pg	00 27 16.8	-1.1
PDG	Podgorica	1.23	292	ePg	Pg	00 27 18.4	+0.2
PDG				eSg	Sn	00 27 37.3	+1.1
PDG	Podgorica	1.23	292	i Pg	Pg	00 27 16.4	-1.8
PDG	Podgorica	1.23	292	⇑iPn	Pg	00 27 16.3	-1.9
TTG	Podgorica	1.23	292	⇓iPg	Pg	00 27 16.4	-1.8
TTG				eSg	Sn	00 27 36.5	+0.3
SELS	Selova	1.26	11	ePg	Pg	00 27 18.4	-0.4
SELS				eSg	Sg	00 27 35.6	+0.4
FNA	Florina	1.27	160	P	Pg	00 27 17.9	-1.2
FNA				S	Sb	00 27 36.3	-0.1
KOME	Kolasin	1.28	313	⇑iPg	Pg	00 27 18.5	-0.8
KOME				eSg	Sn	00 27 38.6	+0.8
SJES	Sjenica	1.42	335	ePg	Pn	00 27 21.3	-0.4
SJES				eSg	Sn	00 27 41.1	+0.1
BUM	Brajici-Budva	1.45	283	⇑iPg	Pn	00 27 21.2	-0.9
BUM				eSg	Sn	00 27 43.6	+1.8
VAY	Valandovo	1.49	116	i Pn	Pn	00 27 22.5	-0.1
VAY				i Sg	Sb	00 27 42.0	-0.5
VAY				eLg	Lg	00 27 44.4	
	comp=E,86nm,0.5s						
VAY				eLg	Lg	00 27 44.5	
	comp=N,121nm,0.5s						
CEME	Cevo	1.50	293	⇓iPg	Pn	00 27 22.2	-0.6
CEME				eSg	Sg	00 27 45.3	+2.4
NKY	Niksic	1.57	303	⇑iPg	Pn	00 27 23.4	-0.4
NKY				eSg	Sg	00 27 46.9	+1.8
NKME	Niksic	1.57	301	⇑iPg	Pn	00 27 23.6	-0.2
NKME				eSg	Sg	00 27 47.1	+1.9
GRG	Griva	1.58	130	P	Pn	00 27 24.0	+0.1
GRG				S	Sn	00 27 45.1	0.0
IVAS	Ivanjica	1.66	344	ePn	Pn	00 27 24.5	-0.6
IVAS				eSg	Sg	00 27 49.3	+1.2
PLE	Pljevlja	1.70	323	ePn	Pn	00 27 25.8	+0.2
PLE				eSn	Sg	00 27 50.3	+1.0
KKB	Krupnik	1.71	93	i Pn	Pb	00 27 26.8	-0.2
KKB				i Sn	Sg	00 27 49.8	+0.1
HCY	Herceg Novi	1.77	286	⇑iPn	Pn	00 27 26.5	0.0
HCY				eSn	Sg	00 27 51.3	-0.2
HCY	Herceg Novi	1.77	286	ePn	Pn	00 27 26.1	-0.4
KNT	Kendrikon	1.78	117	P	Pn	00 27 26.6	0.0
KNT				S	Sn	00 27 49.6	-0.3
BOVS	Bovan	1.78	22	ePn	Pn	00 27 26.9	+0.2
BOVS				eSg	Sg	00 27 51.8	-0.2
TPE	Tepelena	1.79	200	i PN	Pg	00 27 30.5	+1.6
TPE				i SN	Sg	00 27 57.1	+5.1
KZN	Kozani	1.83	156	P	Pn	00 27 26.4	-0.9
KZN				S	Sn	00 27 50.3	-0.9
UPM	Unac-Piva	1.85	312	⇑iPn	Pn	00 27 28.2	+0.4
UPM				eSn	Sg	00 27 53.8	-0.4
UPM	Unac-Piva	1.85	312	ePn	Pb	00 27 29.1	-0.4
ZAPS	Zavoj	1.88	46	ePn	Pb	00 27 29.2	-0.6
ZAPS				eSg	Sg	00 27 54.6	-0.3
BRY	Bratogost	1.90	300	⇓iPn	Pn	00 27 28.3	-0.1
BRY				eSn	Sg	00 27 55.2	-0.6
BRY	Bratogost	1.90	300	ePn	Pn	00 27 29.0	+0.6
GRUS	Gruza	1.91	358	ePn	Pn	00 27 28.5	+0.1
GRUS				eSg	Sg	00 27 56.9	+1.0
VTS	Vitosha	1.92	70	ePg	Pn	00 27 28.8	+0.1
VTS				eSg	Sb	00 27 55.3	+0.1
VTS				eSg	Sg	00 27 56.3	-0.1
VTS	Vitosha	1.92	70	P	Pn	00 27 29.0	+0.4
VTS				S	Sb	00 27 54.6	-0.6
VTS	Vitosha	1.92	70	i Pn	Pn	00 27 29.1	+0.4
TREB	Trebinje	1.95	293	ePg	Pb	00 27 31.4	+0.3
TREB				eSg	Sg	00 27 58.9	+1.5
TREB	Trebinje	1.95	293	ePn	Pb	00 27 30.1	-1.0
KPRO	Kipourio	2.07	168	P	Pn	00 27 29.9	-0.8
ZAGS	Zajecar	2.12	30	ePn	Pn	00 27 31.5	+0.3
ZAGS				eSg	Sg	00 28 03.0	+0.4
BBLS	Lazići	2.14	332	ePn	Pn	00 27 31.9	+0.3
BBLS				eSg	Sg	00 28 04.9	+1.4
BBLS	Lazići	2.14	332	ePn	Pn	00 27 31.4	-0.2
DIVS	Divibare	2.20	345	ePn	Pn	00 27 32.1	-0.3
DIVS				eSg	Sg	00 28 05.5	+0.3
DIVS	Divibare	2.20	345	ePn	Pn	00 27 31.6	-0.8
MMB	Musomiste	2.23	99	i Pn	Pb	00 27 35.0	-0.9
TRUS	Trudelj	2.26	353	ePn	Pn	00 27 34.1	+0.9
TRUS				eSg	Sg	00 28 08.2	+1.0
SRS	Serrai	2.27	111	P	Pn	00 27 33.2	-0.2
STON	Ston	2.46	292	ePn	Pb	00 27 38.7	-0.9
STON				eSg	Sg	00 28 15.5	+1.9
STON	Ston	2.46	292	ePn	Pb	00 27 38.6	-1.0
STON				Sn	Sb	00 28 10.8	+0.5
STON	Ston	2.46	292	ePn	Pn	00 27 37.5	+1.6
HAPS	Han Pijesak,BI	2.50	328	ePn	Pn	00 27 36.7	+0.1
HAPS	Han Pijesak,BI	2.50	328	ePn	Pn	00 27 35.9	-0.7
KUBS	Kucevo	2.51	15	ePn	Pn	00 27 37.3	+0.6
FRGS	Fruska Gora	3.25	348	ePn	Pn	00 27 46.8	-0.1
FRGS	Fruska Gora	3.25	348	ePn	Pn	00 27 46.3	-0.6
MGRS	Mrkonjic Grad	3.64	313	ePn	Pb	00 27 56.6	-3.3
BLY	Banja Luka	3.82	318	ePn	Pb	00 28 04.5	+1.7
UDBI	Udbina	4.47	306	ePn	Pn	00 28 07.0	+3.4
MORH	Mrgy, Hungar	4.51	341	ePn	Pn	00 28 02.7	-1.3
NVLJ	Novalja	5.03	303	i Pn	Pn	00 28 12.7	+1.4
CRES	Cresnjev	5.44	317	ePn	Pn	00 28 17.1	+0.2
AQU	L'Aquila	5.50	276	ePn	Pn	00 28 18.4	+0.6
CEY	Cerknica	5.94	311	ePn	Pn	00 28 25.5	+1.7

*ISCJB **20** 00:27:20.4±0.3, 24.50N±0.02×122.28E±0.02, h74km±3km, Error ellipse: s-maj=2.9km s-min=2.2km az=167.5*
*TAP **20** 00:27:20.4, 24.50N×122.28E, h71km, ML3.6, B*
*JMA **20** 00:27:20.3±0.1, 24.40N×122.25E, h74km±2km, M2.9*
ISC 20 00:27:20.7±1.2,**24.49N**±0.03×**122.27E**±0.02,**h73**km±6km, **n103**,σ0°**94**/189,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.14	293	P	Pn	00 27 31.8	+0.5
	baz=291						
EOS1				S	Sn	00 27 40.3	+1.1
	baz=291						
TWC	Suao	0.40	287	P	Pn	00 27 33.0	0.0
	baz=286						
TWC				S	Sn	00 27 41.7	-0.2
	baz=286						
EGS		0.47	319	eP	Pn	00 27 32.8	-0.7
	baz=318						
EGS				eS	Sn	00 27 43.4	+0.5
	baz=318						
NANB	Nanao	0.48	262	P	Pn	00 27 33.6	0.0
	baz=261						
NANB				S	Sn	00 27 43.3	+0.1
	baz=261						
ENA	Nanau	0.49	262	P	Pn	00 27 33.6	0.0
	baz=261						
ENA				S	Sn	00 27 43.4	+0.1
	baz=261						
NTC	Toucheng	0.54	312	eP	Pn	00 27 34.3	+0.2
	baz=311						
NTC				eS	Sn	00 27 44.0	0.0
	baz=311						
ILA	Ilan	0.55	300	eP	Pn	00 27 35.4	+1.2
	baz=299						
ILA				eS	Sn	00 27 44.9	+0.6
	baz=299						
TWB1	Santiao Chiao	0.57	333	P	Pn	00 27 34.5	0.0
	baz=333						
TWB1				S	Sn	00 27 44.8	+0.1
	baz=333						
TWE	Neicheng	0.60	292	eP	Pn	00 27 35.2	+0.5
	baz=292						
TWE				eS	Sn	00 27 45.6	+0.5
	baz=292						
JYNG	Yonagunijimaku	0.61	94	P	Pn	00 27 35.0	+0.1
JYNG				S	Sn	00 27 45.2	-0.2
TIPB	Shuangxi	0.63	320	P	Pn	00 27 35.1	+0.1
	baz=318						
TIPB				S	Sn	00 27 45.6	-0.1
	baz=318						
ENTT	Nioudou	0.66	283	P	Pn	00 27 35.9	+0.5
	baz=282						
ENTT				eS	Sn	00 27 47.0	+0.8
	baz=282						
YOJ	Yonaguni jima	0.67	93	P	Pn	00 27 35.6	+0.1
	baz=92						
YOJ				S	Sn	00 27 46.2	-0.2
	baz=92						
YOJ	Yonaguni jima	0.67	93	P	Pn	00 27 35.6	+0.1
YOJ				S	Sn	00 27 46.1	-0.4
NACB	Ninganchiao	0.70	243	eP	Pn	00 27 35.0	-0.7
	baz=242						
NACB				eS	Sn	00 27 45.9	-1.0
	baz=242						
NWF	Wu-fen Shan	0.73	322	P	Pn	00 27 36.4	+0.2
	baz=321						
NWF				S	Sn	00 27 47.8	+0.1
	baz=321						
WFSB	Wu-fen Shan	0.73	322	P	Pn	00 27 36.4	+0.3
	baz=321						
WFSB				S	Sn	00 27 47.8	+0.2
	baz=321						
TWD	Chiawan	0.74	236	P	Pn	00 27 35.6	-0.6
	baz=236						
TWD				eS	Sn	00 27 46.9	-0.9
	baz=236						
ETLH	Xiulin Townshi	0.78	249	eP	Pn	00 27 36.4	-0.3
	baz=248						
TWA	Mucha	0.79	308	P	Pn	00 27 37.1	+0.2
	baz=307						
TWA				S	Sn	00 27 49.1	+0.2
	baz=307						
HWA	Hwalien	0.80	230	eS	Sn	00 27 49.3	+0.4
	baz=229						
NNSB	Datong	0.81	266	eP	Pn	00 27 37.2	-0.1
	baz=265						
NNSB				eS	Sn	00 27 49.1	-0.4
	baz=265						
NNS	Nan Shan	0.82	266	P	Pn	00 27 37.3	0.0
	baz=265						
NNS				S	Sn	00 27 49.7	0.0
	baz=265						
NHDH	Xindian Distri	0.82	305	eP	Pn	00 27 37.6	+0.4
	baz=304						
NHDH				eS	Sn	00 27 50.1	+0.6
	baz=304						
YHNB	Yeheng	0.84	282	eP	Pn	00 27 37.9	+0.4
	baz=281						
YHNB				eS	Sn	00 27 50.1	+0.3
	baz=281						
ENLB	Shoufeng	0.85	226	eP	Pn	00 27 35.8	-1.8
	baz=226						
ENLB				eS	Sn	00 27 48.5	-1.5
	baz=226						
NSK	Sanguang	0.85	283	P	Pn	00 27 38.0	+0.4
	baz=281						
NSK				S	Sn	00 27 50.6	+0.4
	baz=281						
TATO	Taipei	0.86	304	eP	Pn	00 27 37.9	+0.2
	baz=303						
TATO				eS	Sn	00 27 50.5	+0.2
	baz=303						
TAP	Taipei	0.88	308	eS	Sn	00 27 51.0	+0.3
	baz=307						
YM01	YM01	0.91	316	P	Pn	00 27 38.3	-0.1
	baz=315						
YM01				S	Sn	00 27 51.5	+0.1
	baz=315						
YM10	YM10	0.92	316	P	Pn	00 27 38.7	+0.2
	baz=315						
YM10				S	Sn	00 27 51.8	+0.1
	baz=315						
YM05	YM05	0.93	316	eP	Pn	00 27 38.6	+0.1
	baz=315						
YM05				eS	Sn	00 27 51.7	-0.1
	baz=315						
YM08	YM08	0.93	318	eP	Pn	00 27 38.4	-0.1
	baz=317						
YM08				eS	Sn	00 27 51.1	-0.6
	baz=317						
YM04	YM04	0.94	315	eP	Pn	00 27 38.8	+0.1
	baz=314						
YM04				eS	Sn	00 27 51.9	-0.1
	baz=314						
YM03	YM03	0.95	316	eP	Pn	00 27 38.9	0.0
	baz=315						
YM03				eS	Sn	00 27 51.4	-1.0
	baz=315						
ANP	Anpu	0.97	315	eP	Pn	00 27 39.1	0.0
	baz=315						
WHF	Hehuan Shan	0.98	250	P	Pn	00 27 39.3	-0.2
	baz=249						
WHF				S	Sn	00 27 53.1	-0.5
	baz=249						
TWS1	Kuangyinshan	0.98	308	P	Pn	00 27 39.6	+0.4
	baz=307						
TWS1				eS	Sn	00 27 53.6	+0.7
	baz=307						
TWY	Chenhua	0.99	322	eP	Pn	00 27 39.7	+0.5
	baz=321						
TWY				eS	Sn	00 27 53.8	+0.8
	baz=321						
WLTB	Daxi	0.99	291	eP	Pn	00 27 39.7	+0.4
	baz=290						
NTST	Danshui	1.00	312	eP	Pn	00 27 39.9	+0.5
	baz=311						
NTST				eS	Sn	00 27 53.6	+0.3
	baz=311						
ESL	Shilin	1.02	229	P	Pn	00 27 38.7	-0.9
	baz=228						
ESL				eS	Sn	00 27 51.9	-1.9
	baz=228						
TWT	Tachien	1.03	257	P	Pn	00 27 40.6	+0.7
	baz=256						
TWT				S	Sn	00 27 54.6	+0.4
	baz=256						
TDCB	Techi	1.04	257	eP	Pn	00 27 40.5	+0.5
	baz=256						
TDCB				eS	Sn	00 27 54.3	-0.2
	baz=256						
CHGB	Renai	1.09	247	eP	Pn	00 27 40.8	+0.1
	baz=246						
CHGB				eS	Sn	00 27 55.2	-0.5
	baz=246						
NCU	National Centr	1.10	296	eP	Pn	00 27 41.3	+0.7
	baz=295						
NCU				eS	Sn	00 27 56.9	+1.6
	baz=295						
NCUH	Zhongli	1.10	296	P	Pn	00 27 41.2	+0.7
	baz=295						
NCUH				eS	Sn	00 27 57.0	+1.6
	baz=295						
EGFH	Guangfu	1.13	223	eP	Pn	00

NMLH	**Miaoli**	**1.35 272**	*e*P	**Pn**	**00 27 44.6**	**+0.8**
	baz=271					
NMLH			*e*S	**Sn**	**00 28 02.0**	**+0.8**
	baz=271					
TWQ1	**Liyutan**	**1.38 264**	*e*P	**Pn**	**00 27 44.7**	**+0.6**
	baz=263					
NSY	**Sanyi**	**1.38 267**	*e*P	**Pn**	**00 27 45.1**	**+0.9**
	baz=266					
NSY			*e*S	**Sn**	**00 28 03.0**	**+1.1**
	baz=266					
SMLT	**Sun Moon Lake**	**1.39 244**	*e*P	**Pn**	**00 27 45.6**	**+1.1**
	baz=243					
SMLT			*e*S	**Sn**	**00 28 04.5**	**+2.2**
	baz=243					
SSLB	**Suanglung**	**1.40 240**	*e*P	**Pn**	**00 27 44.3**	**-0.1**
	baz=239					
SSLB			*e*S	**Sn**	**00 28 02.7**	**+0.5**
	baz=239					
YULB	**Yu-li**	**1.41 219**	*e*P	**Pn**	**00 27 43.4**	**-1.3**
	baz=219					
TYC	**Yuchr**	**1.42 246**	*e*P	**Pn**	**00 27 45.3**	**+0.6**
	baz=245					
TYC			*e*S	**Sn**	**00 28 04.1**	**+1.3**
	baz=245					
PTSB	**Yuanli**	**1.43 268**	*e*P	**Pn**	**00 27 45.6**	**+0.8**
	baz=268					
PTSB			*e*S	**Sn**	**00 28 04.3**	**+1.2**
	baz=268					
TWF1	**Yuli**	**1.45 218**	*e*P	**Pn**	**00 27 43.9**	**-1.1**
	baz=217					
HATJ	**Hateruma jima**	**1.46 107**	P	**Pn**	**00 27 45.9**	**+0.6**
HATJ			*e*S	**Sn**	**00 28 03.8**	**0.0**
WDJ	**Dajia District**	**1.50 265**	*e*P	**Pn**	**00 27 46.6**	**+0.9**
	baz=264					
WDJ			*e*S	**Sn**	**00 28 05.4**	**+0.9**
	baz=264					
WHYT	**Xinyi Township**	**1.52 239**	*e*P	**Pn**	**00 27 47.3**	**+1.2**
	baz=238					
WHYT			*e*S	**Sn**	**00 28 06.8**	**+1.6**
	baz=238					
WJS	**Zhushan**	**1.56 245**	*e*P	**Pn**	**00 27 48.0**	**+1.5**
	baz=244					
WJS			*e*S	**Sn**	**00 28 07.9**	**+1.7**
	baz=244					
YUS	**Yu-Shan**	**1.57 231**	*e*P	**Pn**	**00 27 47.1**	**0.0**
	baz=230					
YUS			*e*S	**Sn**	**00 28 05.7**	**-1.3**
	baz=230					
WNT	**Mingjian**	**1.57 247**	*e*P	**Pn**	**00 27 48.3**	**+1.5**
	baz=246					
WNT			*e*S	**Sn**	**00 28 09.2**	**+2.8**
	baz=246					
JKRS	**Kuro-shima**	**1.60 99**	P	**Pn**	**00 27 47.5**	**+0.4**
JKRS			S	**Sn**	**00 28 07.3**	**+0.2**
ALS	**Alishan**	**1.66 234**	*e*P	**Pn**	**00 27 48.8**	**+0.6**
	baz=233					
ALS			*e*S	**Sn**	**00 28 09.7**	**+0.8**
	baz=233					
JIJ	**Ishigaki jima**	**1.71 94**	P	**Pn**	**00 27 48.5**	**0.0**
JIJ			S	**Sn**	**00 28 08.8**	**-0.8**
CHN5	**Tsauling**	**1.71 239**	*e*P	**Pn**	**00 27 49.6**	**+1.0**
	baz=238					
CHN5			*e*S	**Sn**	**00 28 11.5**	**+1.7**
	baz=238					
ELDTW	**Lidau**	**1.73 222**	*e*P	**Pn**	**00 27 48.9**	**-0.1**
	baz=221					
WDLH	**Douliu**	**1.78 244**	*e*P	**Pn**	**00 27 50.8**	**+1.4**
	baz=243					
WDLH			*e*S	**Sn**	**00 28 13.2**	**+2.0**
	baz=243					
RLNB	**Erlin**	**1.85 251**	*e*P	**Pn**	**00 27 51.0**	**+0.7**
	baz=251					
RLNB			*e*S	**Sn**	**00 28 13.2**	**+0.4**
	baz=251					
JISG	**Ishigakijimahi**	**1.86 87**	P	**Pn**	**00 27 50.4**	**-0.1**
JISG			S	**Sn**	**00 28 12.7**	**-0.4**
CHN4	**Tsaushan**	**1.91 234**	*e*P	**Pn**	**00 27 53.0**	**+1.7**
	baz=233					
CHN4			*e*S	**Sn**	**00 28 16.7**	**+2.2**
	baz=233					
TPUB	**Ta-pu**	**1.92 232**	*e*P	**Pn**	**00 27 52.4**	**+1.1**
	baz=231					
TPUB			*e*S	**Sn**	**00 28 16.2**	**+1.6**
	baz=231					
CHY	**Chiayi**	**1.96 240**	*e*P	**Pn**	**00 27 53.2**	**+1.4**
	baz=239					
TWK	**Hsinying**	**2.04 234**	*e*P	**Pn**	**00 27 53.7**	**+0.7**
	baz=233					
TWK			*e*S	**Sn**	**00 28 19.1**	**+1.5**
	baz=233					
WSF	**Szhu**	**2.06 246**	*e*S	**Sn**	**00 28 18.4**	**+0.5**
	baz=245					
CHN1	**Nanshi**	**2.06 231**	*e*P	**Pn**	**00 27 54.7**	**+1.5**
	baz=230					
CHN1			*e*S	**Sn**	**00 28 19.5**	**+1.4**
	baz=230					
SLGT	**Liugui**	**2.11 225**	*e*P	**Pn**	**00 27 54.7**	**+0.8**
	baz=224					
SLGT			*e*S	**Sn**	**00 28 21.0**	**+1.7**
	baz=224					
JTJ	**Tarama**	**2.22 86**	P	**Pn**	**00 27 56.1**	**+0.8**
JTJ			S	**Sn**	**00 28 22.9**	**+1.1**
MASBT	**Mashibuluo**	**2.40 219**	*e*P	**Pn**	**00 27 58.6**	**+0.8**
	baz=218					
MASBT			*e*S	**Sn**	**00 28 27.6**	**+1.3**
	baz=218					
EAST	**Anshuo**	**2.48 212**	*e*P	**Pn**	**00 27 59.5**	**+0.6**
	baz=211					
PTTC	**Pingtan**	**2.48 294**	*e*P	**Pn**	**00 27 58.8**	**-0.1**
	baz=293					
PTTC			*e*S	**Sn**	**00 28 26.6**	**-1.6**
	baz=293					
PHUB	**P'eng-hu**	**2.66 249**	*e*S	**Sn**	**00 28 29.7**	**-2.7**
	baz=248					
JIRB	**Irabujima**	**2.66 82**	S	**Sn**	**00 28 33.0**	**+0.5**
MATB	**Ma-tsu**	**2.68 309**	*e*P	**Pn**	**00 28 01.6**	**+0.1**
	baz=307					
MATB			*e*S	**Sn**	**00 28 32.6**	**-0.3**
	baz=307					
WDGT	**Dungji**	**2.69 243**	*e*P	**Pn**	**00 28 01.4**	**-0.3**
	baz=242					
WDGT			*e*S	**Sn**	**00 28 32.8**	**-0.5**
	baz=242					
VCHM	**Qimei**	**2.90 244**	*e*P	**Pn**	**00 28 04.2**	**-0.3**
	baz=243					
VCHM			*e*S	**Sn**	**00 28 36.4**	**-2.0**
	baz=243					
PTMZ	**Houxiangcun**	**2.92 281**	*e*P	**Pn**	**00 28 04.5**	**-0.2**
	baz=280					
PTMZ			*e*S	**Sn**	**00 28 36.5**	**-2.2**
	baz=280					
LYJJ	**Jianjiangzhen**	**3.06 313**	*e*P	**Pn**	**00 28 06.9**	**+0.2**
	baz=311					
LYJJ			*e*S	**Sn**	**00 28 41.9**	**-0.3**
	baz=311					
XPSS	**Dashiqiu**	**3.07 323**	*e*P	**Pn**	**00 28 06.6**	**-0.3**
	baz=322					
MHZQ	**Yeshan**	**3.34 299**	*e*P	**Pn**	**00 28 10.5**	**-0.1**
	baz=298					
MHZQ			*e*S	**Sn**	**00 28 47.6**	**-1.6**
	baz=298					
KNMB	**Chin-men Tao**	**3.54 270**	*e*P	**Pn**	**00 28 12.4**	**-0.9**
	baz=269					
KNMB			*e*S	**Sn**	**00 28 51.7**	**-2.3**
	baz=269					
AXDP	**Jialang**	**3.94 277**	*e*P	**Pn**	**00 28 18.7**	**0.0**
	baz=275					
AXDP			*e*S	**Sn**	**00 29 00.7**	**-2.9**
	baz=275					
ZPLA	**Ao Xicun**	**4.17 263**	*e*P	**Pn**	**00 28 20.9**	**-0.9**
	baz=262					

JMA 20 00:32:13.9±0.2, 24°.84N×123°.16E, h141km±3km, M2.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.43**	**207**	P	Pn	00 32 34.2	+0.3
JYNG				S	Sn	00 32 49.4	+0.4
IRIF	**Iriomote-Funau**	**0.72**	**134**	S	Sn	00 32 52.0	0.0
HATJ	**Hateruma jima**	**0.98**	**143**	*e*S	Sn	00 32 56.1	+0.5
JKRS	**Kuro-shima**	**0.98**	**128**	P	Pn	00 32 38.4	+0.8
JKRS				S	Sn	00 32 56.2	+0.6
JIJ	**Ishigaki jima**	**1.01**	**118**	P	Pn	00 32 38.0	+0.1
JIJ				S	Sn	00 32 55.3	-0.9
JISG	**Ishigakijimahi**	**1.08**	**103**	P	Pn	00 32 38.4	-0.1
JISG				S	Sn	00 32 56.8	-0.4
JTJ	**Tarama**	**1.42**	**98**	P	Pn	00 32 42.0	+0.1
JTJ				S	Sn	00 33 03.0	-0.2
JMJ2	**Miyako jima3**	**1.97**	**92**	P	Pn	00 32 48.6	+0.5
JOGS	**Gusukube**	**2.04**	**92**	P	Pn	00 32 49.4	+0.4

TAP 20 00:32:56.3, 24°.05N×121°.71E, h22km±1km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.11**	**288**	*e*P	Pb	00 33 00.9	-0.9
	baz=290						
TWD				*e*S	Sb	00 33 04.5	-1.2
	baz=290						
NACB	**Ninganchiao**	**0.17**	**320**	P	Pb	00 33 01.3	-0.5
	baz=320						
NACB				*e*S	Sb	00 33 05.9	+0.3
	baz=320						
ETLH	**Xiulin Townshi**	**0.26**	**307**	*e*P	Pb	00 33 03.2	+0.5
	baz=307						
ETLH				*e*S	Sb	00 33 07.7	+0.6
	baz=307						
ESL	**Shilin**	**0.34**	**228**	*e*S	Sb	00 33 10.0	+1.2
	baz=226						
WHF	**Hehuan Shan**	**0.42**	**284**	*e*S	Sb	00 33 11.9	+0.5
	baz=283						
CHGB	**Renai**	**0.49**	**272**	*e*P	Pn	00 33 07.5	-0.8
	baz=271						
CHGB				*e*S	Sn	00 33 15.1	-1.1
	baz=271						
OWD	**Renai**	**0.50**	**260**	*e*S	Sb	00 33 14.5	+1.1
	baz=259						
VWDT	**VWDT**	**0.60**	**241**	*e*S	Sn	00 33 17.7	-0.8
	baz=240						
HGSD	**Ruisui**	**0.61**	**206**	*e*P	Pb	00 33 08.9	+0.5
	baz=205						
HGSD				*e*S	Sn	00 33 18.2	-0.7
	baz=205						
SSLB	**Suanglung**	**0.74**	**250**	*e*P	Pn	00 33 11.2	-0.3
	baz=249						
SSLB				*e*S	Sn	00 33 21.7	-0.4
	baz=249						
SMLT	**Sun Moon Lake**	**0.76**	**258**	*e*P	Pb	00 33 11.2	+0.3
	baz=257						
SMLT				*e*S	Sn	00 33 23.2	+0.5
	baz=257						
TYC	**Yuchr**	**0.79**	**260**	*e*S	Sn	00 33 23.0	-0.4
	baz=259						
YUS	**Yu-Shan**	**0.89**	**232**	*e*S	Sb	00 33 25.6	+0.6
	baz=231						

MAN 20 00:33:46.6, 5°.85N×124°.87E, h82km, mb4.1, ML2.9, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.74**	**334**	*e*P	Pn	00 34 04.4	+1.5
SKMP				*e*S	Sn	00 34 17.5	+2.6
DDMP	**Don Marcelino,**	**0.87**	**73**	*e*P	Pn	00 34 05.1	+0.8
DDMP				*e*S	Sn	00 34 19.4	+1.9
DMPH	**Davao City--Mi**	**1.38**	**27**	*e*P	Pn	00 34 07.5	-2.9
DMPH				*e*S	Sn	00 34 39.6	+11
IPIL	**Ipil**	**2.99**	**310**	*e*P	Pn	00 34 33.7	+1.9
IPIL				*e*S	Sn	00 35 08.1	+1.4

*ISCJB **20** 00:36:01.8±1.1, 4°.92S±0°.05×153°.53E±0°.05, h68km±10km, mb4.2/21, Error ellipse: s-maj=9.1km s-min=7.9km az=8.0*
*NEIC **20** 00:36:04.6±2.6, 4°.90S×153°.52E, h82km±3km, mb4.3/16, Error ellipse: s-maj=20.0km s-min=12.5km az=51.0*
*IDC **20** 00:36:04.1±0.5, 4°.94S×153°.53E, h74km±4km, mb3.9/12, mb1 4.1/15, mb1mx4.1/27, mbtmp4.3/15, MS3.6/6, Ms1 3.6/6, ms1mx3.3/22, Error ellipse: s-maj=14.0km s-min=12.0km az=82.0*

ISC 20 00:36:04.4±0.5, 4°.93S±0°.06×153°.53E±0°.06, h80km±4km, h80km:pP-P, n54, σ1°.36/66, mb4.3/26, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.55**	**298**	*e*Pn	**Pn**	**00 36 30.5**	**+0.1**
MANU	**Manus Island**	**6.79**	**295**	*e*Pn	**Pn**	**00 37 41.4**	**-0.1**
MANU				*e*Sn	Sn	00 38 34.7	-23
PMG	**Port Moresby**	**7.73**	**235**	P	**Pn**	**00 37 54.3**	**0.0**
	21nm,0.3s,baz=52,slow=6.2,SNR=19						
PMG				S	**Sn**	**00 39 20.5**	**+0.2**
	18nm,0.3s,baz=283,slow=22,SNR=11						
PMG				LR	LR	00 41 07.3	
	comp=Z,243nm,18.9s,baz=110,slow=39						
PMG	**Port Moresby**	**7.73**	**235**	*e*Pn	**Pn**	**00 37 55.2**	**+1.0**
PMG				*e*Sn	Sn	00 38 58.6	-22
HNR	**Honiara**	**7.78**	**125**	P	**Pn**	**00 37 54.1**	**-0.9**
	10nm,0.3s,baz=230,slow=5.9,SNR=7.9						
HNR				S	**Sn**	**00 39 23.2**	**+1.6**
	15nm,0.3s,baz=336,slow=20,SNR=2.1						
HNR	**Honiara**	**7.78**	**125**	*e*Pn	**Pn**	**00 37 53.9**	**-1.1**
PATS	**Pohnpei**	**12.62**	**22**	*e*Pn	**Pn**	**00 38 57.9**	**-3.1**
PATS				*e*Sn	Sn	00 41 03.6	-16
JAY	**Jayapura**	**13.02**	**280**	LR	LR	00 43 33.6	
	comp=Z,203nm,20.1s,baz=316,slow=34						
COEN	**Coen**	**13.59**	**228**	*e*Pn	**Pn**	**00 39 11.2**	**-2.7**
CTA	**Charters Tower**	**16.65**	**205**	P	**Pn**	**00 39 53.1**	**+0.2**
	0.3nm,0.3s,baz=34,slow=13,SNR=6.1						
CTAO	**Charters Tower**	**16.65**	**205**	*e*Pn	**P**	**00 39 53.8**	**-0.2**
	15nm,1.0s						
DZM	**Mont Dzumac**	**21.14**	**145**	P	**P**	**00 40 43.2**	**+0.1**
	4.4nm,0.4s,baz=219,slow=9.7,SNR=13						
DZM	**Mont Dzumac**	**21.14**	**145**	*e*P	**P**	**00 40 40.3**	**-2.8**
	31nm,1.1s						
FAKI	**Fak Fak**	**21.32**	**275**	*e*P	**P**	**00 40 41.5**	**-3.6**
	41nm,0.9s						
OUENC	**Ouen Island, N**	**21.64**	**145**	*e*P	**P**	**00 40 51.0**	**+2.8**
	30nm,1.1s						
MTN	**Manton Dam**	**23.47**	**249**	*e*P	**P**	**00 41 05.6**	**-1.5**
	19nm,1.0s						
WC3	**Warramunga Arr**	**23.89**	**230**	*e*P	**P**	**00 41 10.1**	**-0.9**
	10nm,0.9s						
WRAB	**Tennant Creek**	**23.90**	**230**	*e*P	**P**	**00 41 08.7**	**-2.3**
	16nm,0.4s						
WB2	**Warramunga Arr**	**23.90**	**230**	*e*P	**P**	**00 41 10.5**	**-0.5**
	18nm,1.0s						
WR1	**Warramunga Arr**	**23.91**	**230**	*e*P	**P**	**00 41 11.3**	**+0.2**
WR1				*e*PcP	**PcP**	**00 44 52.0**	**0.0**
WRA	**Warramunga Arr**	**23.91**	**230**	P	**P**	**00 41 11.3**	**+0.2**
	7.6nm,0.6s,baz=54,slow=10,SNR=43						
WRA				PcP	**PcP**	**00 44 52.0**	**0.0**
	1.9nm,0.7s,baz=46,slow=4.8,SNR=3.5						
AS31	**Alice Springs**	**26.55**	**224**	*e*P	**P**	**00 41 35.1**	**+0.1**
	2.1nm,0.8s						
AS31				*e*PcP	**PcP**	**00 44 58.6**	**+0.8**
AS31				*e*ScP	**ScP**	**00 48 34.4**	**+3.5**
ASAR	**Alice Springs**	**26.55**	**224**	P	**P**	**00 41 35.4**	**+0.4**
	1.6nm,0.4s,baz=62,slow=8.8,SNR=24						
ASAR				PcP	**PcP**	**00 44 58.7**	**+0.8**
	1.1nm,0.7s,baz=57,slow=2.7,SNR=5.9						
ASAR				ScP	**ScP**	**00 48 34.4**	**+3.5**
	0.3nm,0.3s,baz=40,slow=3.0,SNR=4.2						
ASAR				LR	LR	00 51 44.2	
	comp=Z,143nm,21.4s,baz=72,slow=35						
H11S3	**WAKE ISLAND Hy**	**26.65**	**29**	T	T	01 10 19.7	
	baz=208,slow=76,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**26.65**	**29**	T	T	01 10 17.5	
	baz=208,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**26.66**	**29**	T	T	01 10 13.2	
	baz=208,slow=76,SNR=6.0						
STKA	**Stephens Creek**	**29.05**	**201**	P	**P**	**00 41 57.0**	**-0.2**
	2.8nm,0.8s,baz=4.4,slow=9.4,SNR=4.1						
STKA	**Stephens Creek**	**29.05**	**201**	*e*P	**P**	**00 41 57.0**	**-0.2**
	1.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**30.24**	**242**	P	**P**	**00 42 07.5**	**-0.4**
	8.4nm,0.9s,baz=73,slow=7.3,SNR=16						
FITZ				pP	**pP**	**00 42 26.6**	**+0.6**
	8.8nm,0.8s,baz=87,slow=9.6,SNR=4.3						
FITZ	**Fitzroy Crossi**	**30.24**	**242**	*e*P	**P**	**00 42 07.5**	**-0.4**
	16nm,1.1s						
RPZ	**Rata Peaks**	**41.61**	**161**	P	**P**	**00 43 44.0**	**-0.6**
	21nm,0.8s,baz=37,slow=18,SNR=3.9						
JNU	**Nakatsue**	**43.51**	**332**	pP	pP	00 44 20.1	+1.7
	10nm,0.9s,baz=104,slow=4.3,SNR=3.8						
LEM	**Lembang**	**45.70**	**265**	LR	LR	01 03 39.3	
	comp=Z,93nm,22.0s,baz=118,slow=36						
KSRS	**Korea Array**	**48.45**	**333**	pP	pP	00 44 58.8	+1.4
	1.9nm,0.7s,baz=153,slow=9.4,SNR=4.7						
USRK	**Ussuriysk Ar.**	**52.61**	**341**	pP	pP	00 45 29.7	+1.0
	2.5nm,0.8s,baz=177,slow=7.6,SNR=4.6						
PETK	**Petropavlovsk-**	**57.93**	**3**	pP	pP	00 46 08.9	+1.7
	3.0nm,0.8s,baz=157,slow=8.6,SNR=2.8						
CM31	**Chiang Mai Arr**	**58.59**	**295**	*e*P	**P**	**00 45 54.9**	**+1.5**
	9.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**58.59**	**295**	P	**P**	**00 45 54.9**	**+1.5**
	1.7nm,0.7s,baz=107,slow=5.3,SNR=7.3						
SONA0	**Songino Array**	**66.82**	**328**	*e*P	**P**	**00 46 48.2**	**+0.4**
SONA0				*e*pP	**pP**	**00 47 08.9**	**+1.7**
SONM	**Songino Array**	**66.82**	**328**	P	**P**	**00 46 48.2**	**+0.4**
	0.3nm,0.4s,baz=123,slow=5.3,SNR=3.1						
SONM				pP	**pP**	**00 47 08.9**	**+1.7**
	0.5nm,0.5s,baz=136,slow=6.1,SNR=2.6						
SONM				LR	LR	01 17 49.2	
	comp=Z,22nm,18.1s,baz=114,slow=38						
VNDA	**Vanda**	**72.68**	**178**	P	**P**	**00 47 24.2**	**+1.1**
	5.2nm,0.8s,baz=329,slow=6.6,SNR=39						
VNDA				pP	**pP**	**00 47 42.2**	**-0.7**
	2.5nm,0.8s,baz=327,slow=3.0,SNR=5.4						
VNDA	**Vanda**	**72.68**	**178**	*e*P	**P**	**00 47 23.7**	**+0.6**
	5.7nm,0.8s						
MK32	**Makanchi Array**	**80.90**	**319**	*e*P	**P**	**00 48 10.7**	**+0.7**
MK32				*e*pP	**pP**	**00 48 29.8**	**-0.1**
MKAR	**Makanchi Array**	**80.90**	**319**	P	**P**	**00 48 10.7**	**+0.7**
	0.3nm,0.4s,baz=116,slow=5.5,SNR=5.2						
MKAR				pP	**pP**	**00 48 29.8**	**-0.1**
	2.0nm,0.8s,baz=108,slow=4.7,SNR=7.6						
ZALV	**Zalesovo Beam**	**81.66**	**326**	P	**P**	**00 48 14.2**	**+0.5**
	0.4nm,0.4s,baz=107,slow=5.0,SNR=2.5						
ZALV				pP	**pP**	**00 48 33.5**	**-0.2**
	1.0nm,0.5s,baz=99,slow=3.5,SNR=3.6						
ZAA1	**Zalesovo Array**	**81.67**	**326**	*e*P	**P**	**00 48 14.2**	**+0.4**
ZAA1				*e*pP	**pP**	**00 48 33.5**	**-0.2**
ILAR	**Eielson Array**	**82.01**	**22**	P	**P**	**00 48 15.2**	**-0.2**
	0.4nm,0.8s,baz=243,slow=6.0,SNR=3.3						
ILAR				pP	**pP**	**00 48 36.9**	**+1.5**
	4.4nm,0.9s,baz=251,slow=5.3,SNR=21						
ILB	**Eielson Array**	**82.01**	**22**	*e*P	**P**	**00 48 15.2**	**-0.2**
	1.0nm,0.9s						
KURK	**Kurchatov**	**84.32**	**322**	*e*P	**P**	**00 48 29.1**	**+1.6**
	2.9nm,0.9s						
NVAR	**Mina Array Bea**	**91.59**	**52**	pP	**pP**	**00 49 24.9**	**+1.5**
	0.5nm,0.6s,baz=261,slow=4.5,SNR=2.9						
NVAR				LR	LR	01 27 08.6	
	comp=Z,49nm,18.1s,baz=252,slow=33						
TXAR	**Lajitas Array**	**103.56**	**61**	Pdiff	**Pdif**	**00 49 56.1**	**-1.0**
	0.2nm,0.8s,baz=256,slow=3.6,SNR=2.7						
SCHQ	**Schefferville**	**120.59**	**26**	PKP	**PKPdf**	**00 54 46.1**	**-0.8**
	4.5nm,0.6s,baz=300,slow=8.1,SNR=3.1						
TORD	**Torodi Ar. Bea**	**151.04**	**288**	PKPbc	**PKPbc**	**00 55 49.2**	**-0.1**
	2.1nm,0.7s,baz=99,slow=2.5,SNR=18						
TORD				PKPab	**PKPab**	**00 55 55.4**	**-1.6**
	1.6nm,0.6s,baz=75,slow=2.3,SNR=8.5						
TORD				pPKPbc	**pPKPbc**	**00 56 09.7**	**-0.5**
	2.7nm,0.7s,baz=96,slow=2.1,SNR=5.3						
TOA1	**Torodi Ar. Sit**	**151.04**	**288**	*e*PKPbc	**PKPbc**	**00 55 49.2**	**-0.1**
TOA1				*e*PKPab	**PKPab**	**00 55 55.4**	**-1.6**
TOA1				*e*pPKPdf	**pPKPbc**	**00 56 09.7**	**-0.5**

*IDC **20** 00:41:02.7±1.0, 54°.11S×120°.92W, h0km, mb4.1/3, mb1 4.4/3, mb1mx4.0/17, mbtmp4.1/3, MS3.7/13, Ms1 3.7/13, ms1mx3.7/15, Error ellipse: s-maj=257.7km s-min=30.4km az=159.0*

ISC 20 00:41:04.0±1.1, 53°.S±2°×121°.3W±0°.8, h10km, n27, σ0°.31/6, mb4.4/3, MS4.0/16, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**27.77**	**23**	LR	LR	00 55 42.7	
	comp=Z,73nm,18.1s,baz=8.0,slow=31						
VNDA	**Vanda**	**35.71**	**201**	LR	LR	00 58 28.9	
	comp=Z,62nm,21.9s,baz=93,slow=30						
PLCA	**Paso Flores**	**36.06**	**90**	LR	LR	00 58 42.4	
	comp=Z,149nm,19.4s,baz=251,slow=30						
TBI	**Tubuai**	**36.82**	**314**	*e*LR	LR	00 58 06.9	
	comp=Z,400nm,29.8s						
PPT2	**Papeete2**	**42.00**	**318**	*e*LR	LR	01 00 30.0	
	comp=Z,460nm,25.5s						
PPT	**Papeete**	**42.02**	**318**	LR	LR	01 01 07.9	
	comp=Z,58nm,21.3s,baz=172,slow=28						
VAH	**Vaihoa**	**43.38**	**321**	*e*T	T	01 36 23.8	
	19nm,0.3s						
PMOR	**Pomariorio Ree**	**43.70**	**321**	*e*T	T	01 36 47.4	
	6.7nm,0.3s						
TAOE	**Nuku Hiva Isla**	**47.01**	**334**	*e*LR	LR	01 02 55.3	
	comp=Z,262nm,26.5s						
CPUP	**Villa Florida**	**53.92**	**86**	LR	LR	01 10 13.3	
	comp=Z,196nm,18.7s,baz=220,slow=33						
LPAZ	**La Paz**	**55.43**	**69**	P	**P**	**00 50 39.4**	**+0.2**
	4.7nm,1.1s,baz=229,slow=9.3,SNR=6.7						
MAW	**Mawson**	**59.22**	**182**	LR	LR	01 12 50.1	
	comp=Z,48nm,20.7s,baz=156,slow=33						
DZM	**Mont Dzumac**	**62.05**	**270**	*e*LR	LR	01 09 34.9	
	comp=Z,105nm,22.6s						
DZM	**Mont Dzumac**	**62.05**	**270**	LR	LR	01 12 19.4	
	comp=Z,111nm,19.4s,baz=50,slow=30						
BDFB	**Brasilia**	**67.65**	**86**	LR	LR	01 18 46.4	
	comp=Z,102nm,18.1s,baz=140,slow=34						
STKA	**Stephens Creek**	**68.99**	**245**	LR	LR	01 15 47.1	
	comp=Z,56nm,21.9s,baz=63,slow=30						
ROSC	**El Rosal**	**70.17**	**51**	LR	LR	01 17 55.0	
	comp=Z,75nm,18.9s,baz=24,slow=31						
ASAR	**Alice Springs**	**79.62**	**244**	P	**P**	**00 53 11.7**	**+0.3**
	0.5nm,0.7s,baz=135,slow=6.0,SNR=3.1						
ASAR				LR	LR	01 23 50.8	
	comp=Z,81nm,18.5s,baz=108,slow=32						
H01W1	**Cape Leeuwin H**	**79.75**	**223**	T	T	02 21 31.8	
	baz=151,slow=75,SNR=9.6						
H01W2	**Cape Leeuwin H**	**79.76**	**223**	T	T	02 21 27.3	
	baz=151,slow=75,SNR=9.3						
H01W3	**Cape Leeuwin H**	**79.77**	**223**	T	T	02 21 27.9	
	baz=151,slow=75,SNR=8.2						
WRA	**Warramunga Arr**	**82.39**	**247**	P	**P**	**00 53 26.1**	**-0.2**
	2.5nm,0.8s,baz=148,slow=4.8,SNR=3.5						
FITZ	**Fitzroy Crossi**	**88.57**	**241**	LR	LR	01 26 09.0	
	comp=Z,21nm,20.7s,baz=170,slow=31						
BOSA	**Boshof**	**93.27**	**151**	LR	LR	01 30 05.5	
	comp=Z,46nm,19.3s,baz=192,slow=32						
SONM	**Songino Array**	**149.69**	**279**	PKPbc	**PKiKP**	**01

SHBL *eS* **Sg** **00 42 12.4 -0.6**

TIR 20 00:54:11.5, 42°.45N×19°.82E, h7km, Md1.8/2, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCI	**Bajram Curri**	**0.20**	**114**	*i* PG	Pg	00 54 16.0	+0.5
BCI				*i* SG	Sg	00 54 19.4	+1.1
PUK	**Puka**	**0.41**	**172**	*i* PG	Pg	00 54 20.1	+0.6
PUK				*i* SG	Sb	00 54 26.5	-1.1
STON	**Ston**	**1.62**	**286**	*e*Pn	Pb	00 54 41.9	+0.2
STON				Sn	Sg	00 55 07.4	+3.9

ATH 20 00:55:28.7, 38°.19N×22°.13E, h16km±2km, ML0.9/1, Error ellipse: s-maj=3.0km s-min=1.2km az=126.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRAZ	**Trapeza**	**0.07**	**106**	P	Pg	00 55 32.1	+0.1
TRAZ				S	Sg	00 55 33.8	-0.2
LAKA	**Lakka**	**0.13**	**294**	P	Pb	00 55 32.8	0.0
LAKA				S	Sg	00 55 34.9	-0.2
LAKA				AML	AML	00 55 34.9	
	comp=E,161μm,0.2s						
LAKA				AML	AML	00 55 34.9	
	comp=N,89μm,0.1s						
KLV	**Kalavryta, Ach**	**0.14**	**173**	P	Pg	00 55 32.6	-0.1
KLV				S	Sg	00 55 35.5	+0.1
TRIZ	**Trizonia**	**0.18**	**347**	P	Pg	00 55 32.8	-0.4
KALE	**Kalithea**	**0.20**	**3**	P	Pg	00 55 33.5	-0.1
KALE				S	Sg	00 55 37.2	+0.3
EFP	**Efpalio**	**0.29**	**324**	P	Pg	00 55 34.7	-0.3
ANX	**Ano Chora**	**0.44**	**338**	P	Pg	00 55 37.2	-0.4

*ISCJB **20** 00:58:53.2±0.2, 2°.53N±0°.03×125°.57E±0°.05, h150km, mb4.5/50, Error ellipse: s-maj=7.2km s-min=3.3km az=149.8*
*NEIC **20** 00:58:54.6±1.6, 2°.48N×125°.41E, h154km±7km, mb4.5/30, Error ellipse: s-maj=19.2km s-min=11.0km az=70.0*
*IDC **20** 00:58:55.8±1.2, 2°.45N×125°.52E, h164km±10km, mb4.0/18, mb1 4.1/21, mb1mx3.9/34, mbtmp4.5/21, Error ellipse: s-maj=18.4km s-min=6.8km az=69.0*
*DJA **20** 00:58:55.7±0.4, 3°.1N±3°×12°.6E±°, h146km±5km, M4.7/15, mb4.8/8, mB5.2/7, MLv4.7/15, Mw(mB)4.5/7*
ISC 20 00:58:54.4±0.4, 2°.43N±0°.04×125°.52E±0°.05, h150km, n99, σ1°.63/118, mb4.5/49, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.25**	**0**	P	Pn	00 59 22.2	+0.7
SGSI				S	Sn	00 59 42.3	0.0
TNTI	**Ternate**	**2.47**	**132**	*e*Pn	Pn	00 59 36.1	+1.0
TNTI				*e*Sn	Sn	01 00 05.6	-0.9
TNTI	**Ternate**	**2.47**	**132**	P	Pn	00 59 35.5	+0.4
TNTI				S	Sn	01 00 06.3	-0.2
LUWI	**Luwuk**	**4.41**	**219**	*e*Pn	Pn	01 00 03.3	+3.2
LUWI				*e*Sn	Sn	01 00 45.1	-6.0
LUWI	**Luwuk**	**4.41**	**219**	P	Pn	01 00 04.4	+4.4
SANI	**Sanana**	**4.47**	**174**	P	Pn	01 00 01.0	+0.2
DAV	**Davao City (W)**	**4.61**	**1**	P	Pn	01 00 03.4	+0.6
	51nm,0.3s,baz=219,slow=16,SNR=3.1						
DAV				S	Sn	01 00 59.1	+3.1
	84nm,0.3s,baz=226,slow=8.3,SNR=1.9						
DAV	**Davao City (W)**	**4.61**	**1**	*e*Pn	Pn	01 00 00.1	-2.7
DAV				*e*Sn	Sn	01 00 44.6	-11
APSI	**Ampana**	**5.10**	**230**	P	Pn	01 00 13.7	+4.6
NLAI	**Namlea**	**5.84**	**164**	P	Pn	01 00 20.5	+1.4
	398nm,0.6s,20μm8.7nm						
SIJI	**Sorong**	**6.61**	**120**	P	Pn	01 00 30.0	+0.7
	2.3nm,0.3s,baz=287,slow=7.4,SNR=7.3						
SIJI				S	Sn	01 01 42.8	-0.9
	1.7nm,0.3s,baz=204,slow=22,SNR=1.4						
AAI	**Ambon**	**6.63**	**156**	P	Pn	01 00 31.2	+1.6
MSAI	**Masohi**	**6.67**	**149**	P	Pn	01 00 31.3	+1.2
KDI	**Kendari**	**6.97**	**205**	P	Pn	01 00 36.9	+2.8
	96nm,0.5s,5μm0.5nm						
FAKI	**Fak Fak**	**8.57**	**128**	*e*Pn	Pn	01 00 54.8	-0.6
FAKI	**Fak Fak**	**8.57**	**128**	P	Pn	01 00 55.4	0.0
JAGI	**Jajag, Banyuwa**	**15.68**	**226**	*e*Pn	Pn	01 02 23.8	-3.5
	47nm,1.0s						
JAY	**Jayapura**	**15.95**	**108**	P	Pn	01 02 32.1	+1.4
	0.3nm,0.3s,baz=284,slow=14,SNR=3.2						
FITZ	**Fitzroy Crossi**	**20.39**	**180**	P	P	01 03 20.9	+1.2
	4.8nm,0.6s,baz=9.1,slow=6.6,SNR=11						
FITZ	**Fitzroy Crossi**	**20.39**	**180**	*e*P	P	01 03 20.9	+1.2
	6.3nm,0.9s						
TPUB	**Ta-pu**	**21.29**	**348**	*e*P	P	01 03 27.8	-1.4
	43nm,0.6s						
SSLB	**Suanglung**	**21.69**	**349**	*e*P	P	01 03 33.1	-0.5
	15nm,0.9s						
CGJI	**Cibinong**	**21.74**	**245**	P	P	01 03 36.9	+2.8
MDSI	**Maura Dua**	**22.41**	**252**	P	P	01 03 45.0	+4.2
QIZ	**Qiongzhong**	**22.54**	**318**	*e*P	P	01 03 42.5	+0.5
	16nm,0.8s						
WRAB	**Tennant Creek**	**23.85**	**159**	*e*P	P	01 03 54.8	+0.7
	67nm,0.8s						
WR1	**Warramunga Arr**	**23.85**	**159**	*e*P	P	01 03 54.9	+0.8
WR1				*e*S	S	01 07 56.7	-2.6
WRA	**Warramunga Arr**	**23.85**	**159**	P	P	01 03 54.8	+0.8
	61nm,0.8s,baz=338,slow=11,SNR=137						
WRA				S	S	01 07 56.7	-2.6
	1.3nm,0.7s,baz=330,slow=20,SNR=3.1						
WB2	**Warramunga Arr**	**23.86**	**159**	*e*P	P	01 03 54.8	+0.7
	71nm,0.8s						
COEN	**Coen**	**23.90**	**133**	*e*P	P	01 03 55.3	+0.7
	20nm,0.8s						
PMG	**Port Moresby**	**24.55**	**119**	P	P	01 04 02.5	+2.0
	17nm,0.6s,baz=298,slow=9.9,SNR=4.8						
ASAR	**Alice Springs**	**27.19**	**163**	P	P	01 04 25.0	+0.8
	3.7nm,0.7s,baz=345,slow=8.3,SNR=40						
ASAR				PcP	PcP	01 07 41.3	+0.5
	0.6nm,0.5s,baz=335,slow=3.5,SNR=3.6						
ASAR				S	S	01 08 51.3	-0.7
	0.9nm,1.0s,baz=344,slow=16,SNR=4.3						
ASAR				ScP	ScP	01 11 07.1	-0.2
	0.2nm,0.6s,baz=350,slow=4.2,SNR=3.1						
NANT	**Nan**	**29.25**	**306**	P	P	01 04 45.4	+2.9
	15μm,0.9s						
CM31	**Chiang Mai Arr**	**30.53**	**203**	*e*P	P	01 04 54.4	+0.6
	7.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.53**	**203**	P	P	01 04 54.4	+0.6
	3.0nm,0.8s,baz=118,slow=6.6,SNR=12						
KMI	**Kunming**	**31.49**	**318**	P	P	01 05 05.1	+2.7
KMI				pmax	pmax		
	comp=Z,26nm,0.5s						
ENH	**Enshi**	**31.59**	**333**	*e*P	P	01 05 02.6	-0.5
	comp=Z,34nm,0.8s						
KS15	**Wonju Array Si**	**34.91**	**3**	*e*P	P	01 05 32.2	+0.5
	comp=Z,3.2nm,1.0s						
KS15				*e*ScP	ScP	01 11 31.9	-0.8
KSRS	**Korea Array**	**34.93**	**3**	P	P	01 05 32.2	+0.4
	comp=Z,1.5nm,0.6s,baz=187,slow=9.5,SNR=17						
KSRS				ScP	ScP	01 11 31.9	-0.9
	comp=Z,1.1nm,0.6s,baz=189,slow=3.1,SNR=6.9						
CD2	**Chengdu**	**35.02**	**326**	*e*P	P	01 05 32.4	-0.4
XAN	**Xi'an**	**35.07**	**336**	P	P	01 05 32.3	-0.8
XAN				pP	pP	01 05 50.9	-13
XAN				sP	pwP	01 06 00.0	-10
XAN				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN				LR	LR		
	comp=E,130nm,17.3s						
XAN				LR	LR		
	comp=Z,120nm,13.0s						
XAN	**Xi'an**	**35.07**	**336**	*e*P	P	01 05 32.5	-0.7
	comp=Z,14nm,0.8s						
MAJO	**Matsushiro**	**35.91**	**18**	*e*P	P	01 05 39.4	-0.9
MAT	**Matsushiro**	**35.91**	**18**	P	P	01 05 38.9	-1.4
MAT				S	S	01 11 05.2	-2.2
MJAR	**Matsushiro Arr**	**35.91**	**18**	P	P	01 05 39.4	-0.9
	comp=Z,7.6nm,0.8s,baz=197,slow=9.4,SNR=14						
STKA	**Stephens Creek**	**37.37**	**157**	P	P	01 05 53.6	+0.9
	comp=Z,16nm,0.7s,baz=329,slow=8.3,SNR=29						
BJI	**Beijing**	**38.39**	**348**	P	P	01 06 01.8	+0.7
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LZH	**Lanzhou**	**39.04**	**332**	⇑P	P	01 06 06.9	+0.1
LZH				pP	pwP	01 06 43.5	-0.6
LZH				sP	sP	01 07 01.0	+6.3
LZH				PP	PnPn	01 07 46.8	+3.2
LZH				pmax	pmax		
	comp=Z,27nm,1.2s						
LZH				pmax	pmax		
	comp=Z,97nm,5.4s						
SHL	**Shillong**	**39.71**	**308**	*e*P	P	01 06 13.2	+0.7
	comp=Z,18nm,0.6s						
HHC	**Hu-ho-hao-te**	**40.28**	**344**	*e*P	P	01 06 19.8	+2.9
HHC				pmax	pmax		
	comp=Z,18nm,1.2s						
HHC				pmax	pmax		
	comp=Z,22nm,5.3s						
CN2	**Changchun**	**41.20**	**360**	*e*P	P	01 06 26.1	+1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
USRK	**Ussuriysk Ar.**	**41.99**	**7**	P	P	01 06 30.6	-0.1
	comp=Z,3.0nm,0.7s,baz=202,slow=6.2,SNR=6.8						
GTA	**Gaotai**	**43.62**	**331**	*e*P	P	01 06 43.8	-0.3
GTA				pP	pwP	01 07 19.4	-2.6
GTA				sP	sP	01 07 34.4	+1.9
GTA				PcP	PcP	01 08 31.8	+2.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,63nm,5.7s						
GTA				LR	LR		
	comp=N,99nm,15.2s						
GTA				LR	LR		
	comp=E,85nm,16.8s						
GTA				LR	LR		
	comp=Z,100nm,16.5s						
JIRN	**Jiri**	**45.18**	**308**	*e*P	P	01 06 56.8	-0.2
	comp=Z,39nm,0.9s						
GUN	**Gumba**	**45.54**	**308**	*e*P	P	01 06 59.6	-0.2
	comp=Z,19nm,0.6s						
KOLN	**Koldanda**	**47.30**	**306**	*e*P	P	01 07 13.2	-0.1
	comp=Z,36nm,0.7s						
DANN	**Dangsing**	**47.41**	**307**	*e*P	P	01 07 14.0	-0.3
	comp=Z,45nm,0.7s						
PYUN	**Piuthan**	**47.92**	**306**	*e*P	P	01 07 18.2	0.0
	comp=Z,43nm,0.7s						
ULN	**Ulaanbaatar**	**48.00**	**343**	*e*P	P	01 07 18.0	-0.2
	comp=Z,3.2nm,0.8s						
SONM	**Songino Array**	**48.16**	**343**	P	P	01 07 19.1	-0.5
	comp=Z,3.2nm,0.8s,baz=161,slow=8.6,SNR=14						
SONM				PcP	PcP	01 08 44.7	+0.1
	comp=Z,0.8nm,0.6s,baz=140,slow=3.2,SNR=3.1						
SONM				ScP	ScP	01 12 23.8	-1.5
	comp=Z,0.5nm,0.6s,baz=162,slow=4.7,SNR=2.5						
WMQ	**Urumqi**	**53.12**	**326**	*e*P	P	01 07 57.8	+1.1
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,66nm,4.7s						
WMQ				LR	LR		
	comp=N,80nm,29.0s						
WMQ				LR	LR		
	comp=E,250nm,28.9s						
WMQ				LR	LR		
	comp=Z,65nm,29.0s						
PETK	**Petropavlovsk-**	**57.09**	**22**	P	P	01 08 25.4	+0.5
	comp=Z,2.3nm,0.6s,baz=260,slow=2.7,SNR=4.6						
PEA1	**Petropavlovsk-**	**57.09**	**22**	*e*P	P	01 08 25.4	+0.5
MK31	**Makanchi Array**	**57.95**	**326**	*e*P	P	01 08 30.4	-0.7
	comp=Z,6.2nm,0.8s						
MKAR	**Makanchi Array**	**57.95**	**326**	P	P	01 08 30.4	-0.7
	comp=Z,7.3nm,0.7s,baz=120,slow=8.8,SNR=65						
MKAR				PcP	PcP	01 09 21.4	-0.2
	comp=Z,2.0nm,0.7s,baz=120,slow=5.1,SNR=5.7						
MKAR				ScP	ScP	01 13 05.6	-2.1
	comp=Z,0.7nm,0.7s,baz=110,slow=5.1,SNR=5.2						
KSH	**Kashi**	**58.13**	**316**	P	P	01 08 34.4	+1.8
KSH				pP	pwP	01 09 11.5	-0.1
KSH				PP	PP	01 10 46.1	+3.1
KSH				S	S	01 16 19.3	-3.0
KSH	**Kashi**	**58.13**	**316**	SS	SS	01 20 15.8	-0.5
KSH				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH				pmax	pmax		
	comp=Z,340nm,6.6s						
KSH				LR	LR		
	comp=N,200nm,8.9s						
KSH				LR	LR		
	comp=E,160nm,7.5s						
KSH				LR	LR		
	comp=Z,170nm,13.3s						
MAKZ	**Makanchi**	**58.13**	**326**	*e*P	P	01 08 31.7	-0.7
	comp=Z,9.3nm,0.9s						
KZA	**Kyzart**	**59.77**	**318**	P	P	01 08 44.7	+0.4
	SNR=7.1						
TKM2	**Tokmak 2**	**59.93**	**319**	P	P	01 08 44.8	-0.3
	SNR=6.3						
KBK	**Karagaybulak**	**60.23**	**319**	P	P	01 08 48.2	+1.1
	SNR=5.2						
MA2	**Magadan**	**60.26**	**14**	*e*P	P	01 08 47.7	+1.0
	comp=Z,10nm,0.7s						
UCH	**Uchtor**	**60.33**	**318**	P	P	01 08 48.5	+0.5
	SNR=10						
AAK	**Ala-Archa**	**60.52**	**319**	*e*P	P	01 08 49.9	+0.8
	comp=Z,2.4nm,0.8s						
USP	**Ospenovka**	**60.81**	**319**	P	P	01 08 50.3	-0.5
	SNR=10						
AML	**Almayashu**	**60.83**	**318**	P	P	01 08 51.4	-0.1
	SNR=8.4						
EKS2	**Erkin-Say**	**61.01**	**319**	P	P	01 08 53.9	+1.7
	SNR=7.5						
ZALV	**Zalesovo Beam**	**61.21**	**334**	P	P	01 08 52.4	-0.8
	comp=Z,2.9nm,0.7s,baz=129,slow=7.2,SNR=11						
KURK	**Kurchatov**	**62.20**	**328**	*e*P	P	01 08 58.9	-0.9
	comp=Z,21nm,0.8s						
KK31	**Karatay Array**	**63.37**	**318**	*e*P	P	01 09 07.0	-0.9
	comp=Z,2.7nm,0.8s						
BRVK	**Borovoye**	**67.83**	**328**	*e*P	P	01 09 35.3	-0.9
	comp=Z,3.4nm,0.8s						
GEYT	**Alibeck**	**70.78**	**309**	*e*P	P	01 09 54.4	-0.4
	comp=Z,1.0nm,0.6s,baz=102,slow=6.0,SNR=3.3						
NRIK	**Noril'sk**	**71.41**	**347**	P	P	01 09 57.9	+0.1
	comp=Z,20nm,0.7s,baz=133,slow=6.3,SNR=32						
ABKAR	**Akbulak array**	**72.40**	**321**	*e*P	P	01 10 03.1	-1.0
	comp=Z,2.3nm,0.7s						
RAYN	**Ar Rayn**	**79.89**	**293**	*e*P	P	01 10 45.9	-1.2
	comp=Z,3.5nm,0.9s						
VNDA	**Vanda**	**82.30**	**173**	P	P	01 10 59.3	+0.7
	comp=Z,1.2nm,0.8s,baz=314,slow=6.0,SNR=9.4						
KLMR	**Klimovskoe**	**85.94**	**331**	*e*P	P	01 11 16.5	-0.9
KLMR				AMP		01 11 17.6	
	comp=Z,10.0nm,0.6s						
VAH	**Vaihoa**	**87.59**	**105**	*e*T	T	01 12 32.5	
	comp=Z,30nm,0.3s						
ARCES	**ARCESS Array B**	**91.25**	**340**	P	P	01 11 41.1	-1.3
	comp=Z,1.4nm,0.7s,baz=74,slow=4.3,SNR=6.1						
AKASG	**Malin Array Be**	**92.14**	**321**	P	P	01 11 45.2	-1.7
	comp=Z,2.1nm,0.6s,baz=61,slow=4.9,SNR=7.8						
FINES	**FINESS Array B**	**92.40**	**332**	P	P	01 11 46.5	-1.3
	comp=Z,2.1nm,0.6s,baz=42,slow=6.5,SNR=13						
BUR08	**Bucovina Ar. S**	**95.17**	**318**	*e*P	P	01 12 00.4	-0.6
	comp=Z,6.1nm,0.7s						
KOLS	**Kolonicke sedl**	**96.86**	**320**	*e*P	P	01 12 08.0	-0.5
VYHS	**Vyhne**	**99.17**	**320**	*e*PDIF	Pdif	01 12 22.4	+3.5
NB2	**NORSAR Subarra**	**99.41**	**333**	P	Pdif	01 12 17.8	-1.9
	comp=Z,0.5nm,0.6s,baz=67,slow=4.6						
NOA	**NORSAR Array B**	**99.41**	**333**	P	Pdif	01 12 18.4	-1.3
	comp=Z,0.9nm,0.8s,baz=67,slow=4.5,SNR=5.4						
TORD	**Torodi Ar. Bea**	**122.16**	**287**	PKP	PKPdf	01 17 31.3	-1.1
	comp=Z,0.5nm,0.7s,baz=57,slow=2.4,SNR=2.7						
TOA1	**Torodi Ar. Sit**	**122.17**	**287**	*e*PKPdf	PKPdf	01 17 31.3	-1.1
TXAR	**Lajitas Array**	**123.34**	**52**	SKP	SKPdf	01 20 53.9	-2.1
	comp=Z,0.1nm,0.6s,baz=267,slow=4.5,SNR=2.1						

PGC 20 01:03:15.2±5.3, 55°.12N×137°.62W, h10km, ML3.5/9, 258km southwest of Sitka, Ak Off Coast Of Southeastern Alaska, Off coast of southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDB	**Naden**	**2.96**	**111**	Pn	Pn	01 04 01.6	-0.7
NDB				Sn	Sn	01 04 36.5	-1.4
MASB	**Masset**	**3.44**	**106**	Pn	Pn	01 04 08.6	-0.1
DIB	**Dawson Inlet,**	**3.58**	**120**	Pn	Pn	01 04 09.2	-1.4
DIB				Sn	Sn	01 04 50.2	-2.8
MOBC	**Moresby Island**	**3.87**	**118**	Pn	Pn	01 04 14.1	-0.6
MOBC				Sn	Sn	01 04 58.8	-1.3
HG1B	**Mitchell Dam**	**3.91**	**122**	Pn	Pn	01 04 14.5	-0.6
BNB	**Barry Inlet**	**4.31**	**124**	Pn	Pn	01 04 19.7	-1.0
BNB				Sn	Sn	01 05 08.3	-2.6
RUBB	**Prince Rupert**	**4.34**	**98**	Pn	Pn	01 04 20.1	-1.1
HG3B	**Hotspring**	**4.46**	**122**	Pn	Pn	01 04 22.3	-0.4
HG3B				Sn	Sn	01 05 11.5	-3.0
HG4B	**Hotspring**	**4.75**	**124**	Pn	Pn	01 04 26.4	-0.4
HG4B				Sn	Sn	01 05 20.5	-1.3
DLBC	**Dease Lake**	**5.34**	**48**	Pn	Pn	01 04 34.2	-0.7
DLBC				Sn	Sn	01 05 32.2	-4.1
BBB	**Bella Bella**	**6.37**	**114**	Pn	Pn	01 04 48.9	-0.1
BBB				Sn	Sn	01 05 57.4	-4.2
HOLB	**Holberg**	**7.28**	**124**	Pn	Pn	01 05 00.7	-0.8
BPBC	**Brooks Peninsu**	**7.78**	**126**	Pn	Pn	01 05 08.6	+0.2
MAYB	**Maynard**	**7.90**	**122**	Pn	Pn	01 05 09.4	-0.7

*ISCJB **20** 01:07:09.5±0.4, 39°.65N±0°.02×25°.58E±0°.02, h9km±3km, Error ellipse: s-maj=3.2km s-min=2.6km az=41.8*
*ATH **20** 01:07:09.8, 39°.65N×25°.58E, h28km±1km, ML3.0/9, Error ellipse: s-maj=2.6km s-min=1.0km az=61.0*
*ISK **20** 01:07:09.9, 39°.66N×25°.65E, h13km, ML3.3/26*
*THE **20** 01:07:10.3, 39°.66N×25°.62E, h10km, ML3.2/7, Error ellipse: s-maj=1.2km s-min=0.4km az=62.0*
*DDA **20** 01:07:10.0, 39°.63N×25°.68E, h30km±1km, ML3.6*
ISC 20 01:07:10.2±1.0, 39°.65N±0°.02×25°.61E±0°.02, h9km±9km, n97, σ0°.75/119, 13C-6D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.41**	**307**	P	Pg	01 07 18.8	+0.5
LIA				S	Sg	01 07 24.6	+0.9
LIA	**Limnos Island**	**0.41**	**307**	P	Pg	01 07 19.0	+0.7
LIA				S	Sg	01 07 24.7	+0.9
LIA				AML	AML	01 07 25.4	
	comp=E,4110μm,0.4s						
LIA				AML	AML	01 07 28.7	
	comp=N,2694μm,0.4s						
GPNR	**Gulpinar-Canak**	**0.45**	**115**	PG	Pg	01 07 18.9	-0.1
SIGR	**SIGRI**	**0.48**	**156**	P	Pg	01 07 19.5	0.0
SIGR				S	Sg	01 07 26.6	+0.8
SIGR	**SIGRI**	**0.48**	**156**	P	Pg	01 07 19.5	0.0
SIGR				S	Sg	01 07 26.9	+1.1
SIGR				AML	AML	01 07 27.0	
	comp=E,14106μm,0.5s						
SIGR				AML	AML	01 07 27.0	
	comp=N,20306μm,0.6s						
EZN	**Ezine**	**0.58**	**72**	PG	Pg	01 07 21.1	-0.4
EZN				SG	Sg	01 07 28.8	-0.3
EZN	**Ezine**	**0.58**	**72**	⇓*i* P	Pg	01 07 21.2	-0.3
EZN				S	Sg	01 07 28.9	-0.2
GADA	**Gvkgeada**	**0.58**	**22**	PG	Pg	01 07 21.5	-0.1
GADA				SG	Sg	01 07 29.7	+0.5
GOKC	**Gokceada-Canak**	**0.60**	**23**	PG	Pg	01 07 21.8	0.0
PRK	**Paraskevi**	**0.65**	**128**	P	Pb	01 07 23.8	+0.1
PRK				S	Sb	01 07 32.3	-0.7
PRK	**Paraskevi**	**0.65**	**128**	P	Pb	01 07 23.9	+0.1
PRK				S	Sb	01 07 33.3	+0.3
PRK				AML	AML	01 07 36.6	
	comp=E,6246μm,0.4s						
PRK				AML	AML	01 07 36.9	
	comp=N,5560μm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.73**	**83**	*i* P	Pb	01 07 24.6	-0.5
BAYC				*i* S	Sb	01 07 35.0	-0.3
SMTH	**Samothraki Isl**	**0.82**	**356**	P	Pg	01 07 25.9	-0.1
SMTH				S	Sg	01 07 37.2	+0.4
SMTH	**Samothraki Isl**	**0.82**	**356**	P	Pg	01 07 26.0	-0.1
SMTH				S	Sb	01 07 37.4	-0.5
SMTH				AML	AML	01 07 39.3	
	comp=E,735μm,0.3s						
SMTH				AML	AML	01 07 39.4	
	comp=N,824μm,0.4s						
AYVA	**Ayvalik**	**0.91**	**112**	*i* P	Pg	01 07 27.6	0.0
GELI	**Tayfur-Gelibol**	**1.00**	**41**	PG	Pg	01 07 29.0	-0.5
SKY	**Skiros Island**	**1.13**	**227**	P	Pb	01 07 31.3	-0.5
LPK	**Lapseki**	**1.14**	**50**	PN	Pb	01 07 31.5	-0.6
ENEZ	**Enez**	**1.16**	**21**	PN	Pb	01 07 31.9	-0.6
THAS	**Thassos island**	**1.17**	**325**	P	Pb	01 07 31.9	-0.7
THAS				S	Sb	01 07 47.6	-0.4
THAS	**Thassos island**	**1.17**	**325**	P	Pb	01 07 32.0	-0.7
THAS				S	Sb	01 07 47.5	-0.4
THAS				AML	AML	01 07 49.8	
	comp=E,2320μm,0.3s						
THAS				AML	AML	01 07 50.0	
	comp=N,1909μm,0.4s						
ERIK	**Erikli-Kesan**	**1.23**	**34**	PN	Pn	01 07 33.1	-0.5
FOCM	**Foa**	**1.28**	**137**	PN	Pb	01 07 34.4	0.0
KRBN	**Karaburun**	**1.29**	**145**	PN	Pn	01 07 34.1	-0.2
CHOS	**Chios island**	**1.31**	**164**	P	Pn	01 07 33.7	-1.0
CHOS				S	Sg	01 07 52.6	+0.3
CHOS	**Chios island**	**1.31**	**164**	P	Pn	01 07 33.8	-0.9
CHOS				AML	AML	01 07 55.0	
	comp=N,1496μm,0.4s						
CHOS				AML	AML	01 07 56.5	
	comp=E,2915μm,0.3s						
ZEDA	**zmir-Bergama**	**1.33**	**120**	*i* P	Pb	01 07 35.0	-0.3
ZEDA				IAML_P			
	comp=Z,5μm,0.2s						
OUR	**Ouranopolis**	**1.42**	**299**	P	Pn	01 07 35.5	-0.7
OUR				S	Sn	01 07 55.2	+0.1
OUR	**Ouranopolis**	**1.42**	**299**	P	Pn	01 07 35.4	-0.9
OUR				AML	AML	01 07 58.0	
	comp=E,1204μm,0.4s						
OUR				AML	AML	01 07 59.7	
	comp=N,1118μm,0.4s						
KESN	**Edirne-Kesan**	**1.43**	**35**	*i* P	Pn	01 07 36.3	-0.5
KESN				*i* S	Sg	01 07 56.3	-0.1
KESN				IAML_P			
	comp=Z,799nm,0.2s						
RDO	**Rodhopi**	**1.50**	**358**	PN	Pn	01 07 36.4	-0.8
RDO	**Rodhopi**	**1.50**	**358**	P	Pn	01 07 36.5	-0.8
RDO	**Rodhopi**	**1.50**	**358**	P	Pn	01 07 36.7	-0.6
RDO				AML	AML	01 08 07.2	
	comp=E,212μm,0.3s						
RDO				AML	AML	01 08 08.0	
	comp=N,264μm,0.3s						
URLA	**Izmir**	**1.50**	**149**	PN	Pn	01 07 36.5	-0.8
URLA	**Izmir**	**1.50**	**149**	*i* P	Pn	01

ORLT	**Orhaneli**	**2.56**	**80**	PN	**Pn**	**01 07 51.6**	**-0.4**
APE	**Apeiranthos**	**2.58**	**181**	PN	**Pn**	**01 07 50.7**	**-1.5**
MDNY	**Mudanya-Bursa**	**2.62**	**73**	PN	**Pn**	**01 07 52.4**	**-0.2**
KULA	**Kula-Manisa**	**2.63**	**115**	PN	**Pn**	**01 07 53.6**	**+0.6**
ARMT	**Armutlu**	**2.66**	**69**	PN	**Pn**	**01 07 52.5**	**-0.7**
CTKS	**Kestanelik-??a**	**2.72**	**53**	PN	**Pn**	**01 07 53.8**	**-0.3**
ULDT	**Uludag**	**2.76**	**79**	*i* P	**Pn**	**01 07 54.5**	**-0.3**
VAY	**Valandovo**	**2.85**	**307**	*e*Pn	**Pb**	**01 07 59.0**	**-2.3**
VAY				*i* Sn	**Sg**	**01 08 43.1**	**+1.2**
BGKT	**Bogazkoy**	**2.86**	**57**	PN	**Pn**	**01 07 55.6**	**-0.4**
BODT	**Bodrum**	**2.91**	**152**	PN	**Pn**	**01 07 56.2**	**-0.5**
BUY	**Buyukada**	**2.94**	**65**	PN	**Pn**	**01 07 56.5**	**-0.6**
YLV	**Yalova**	**3.03**	**71**	⇑*i*P	**Pn**	**01 07 58.5**	**+0.1**
YLV	**Yalova**	**3.03**	**71**	S	**Sn**	**01 08 35.3**	**+0.5**
KLYT	**Kilyos**	**3.07**	**57**	⇑*i*P	**Pn**	**01 07 59.2**	**+0.3**
KLYT	**Kilyos**	**3.07**	**57**	S	**Sn**	**01 08 37.7**	**+2.0**
VTS	**Vitosha**	**3.46**	**330**	⇓*i*P	**Pn**	**01 08 05.2**	**+0.7**
VTS	**Vitosha**	**3.46**	**330**	S	**Sn**	**01 08 49.0**	**+3.3**
TIRR	**Tirgusor**	**5.24**	**23**	⇓*i*P	**Pn**	**01 08 28.8**	**+0.1**
TLB	**Topalu**	**5.25**	**19**	⇑*i*P	**Pn**	**01 08 29.1**	**+0.2**
HERR	**Herculane**	**5.74**	**337**	⇑*i*P	**Pn**	**01 08 36.3**	**+0.8**
ARR	**Arges**	**5.76**	**353**	⇑*i*P	**Pn**	**01 08 36.0**	**+0.1**
VOIR		**5.80**	**356**	⇑*i*P	**Pn**	**01 08 36.7**	**+0.2**
MLR	**Muntele Rosu**	**5.84**	**2**	⇑*i*P	**Pn**	**01 08 38.6**	**+1.5**
LOT	**Lotru**	**5.95**	**347**	⇑*i*P	**Pn**	**01 08 39.2**	**+0.6**
GZR	**Gura Zlata**	**6.11**	**341**	⇓*i*P	**Pn**	**01 08 40.3**	**-0.4**
PLOR	**Plostina**	**6.25**	**7**	⇑*i*P	**Pn**	**01 08 44.0**	**+1.5**
VRI	**Vrincioaia**	**6.27**	**7**	⇑*i*P	**Pn**	**01 08 42.8**	**0.0**
BZS	**Buzias**	**6.65**	**335**	⇑*i*P	**Pn**	**01 08 48.4**	**+0.4**
TESR	**Tescani**	**6.90**	**6**	⇓*i*P	**Pn**	**01 08 52.8**	**+1.3**
SIRR	**Siria**	**7.22**	**338**	⇑*i*P	**Pn**	**01 08 55.8**	**-0.1**
DRGR		**7.45**	**344**	⇑*i*P	**Pn**	**01 08 59.5**	**+0.5**

IDC 20 01:07:24.8±1.6, 9°.59S×150°.01E, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.5/32, mbtmp3.6/4, ML2.5/2, Error ellipse: s-maj=52.4km s-min=27.6km az=150.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.82**	**274**	Pn	Pn	01 08 10.2	-0.9
	6.2nm,0.3s,baz=84,slow=9.2,SNR=6.6						
PMG				Sn	Sn	01 08 47.2	+1.5
	4.6nm,0.3s,baz=90,slow=14,SNR=4.0						
WRA	**Warramunga Arr**	**18.30**	**234**	P	Pn	01 11 39.7	-0.6
	0.1nm,0.3s,baz=63,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**20.80**	**226**	P	P	01 12 08.5	+0.6
	0.3nm,0.5s,baz=62,slow=10,SNR=3.7						
ILAR	**Eielson Array**	**87.61**	**22**	P	P	01 20 14.7	+0.1
	0.6nm,0.7s,baz=242,slow=5.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**148.75**	**280**	PKPbc	PKPbc	01 27 14.6	-0.6
	0.7nm,0.5s,baz=57,slow=2.5,SNR=13						

IDC 20 01:15:51.9±5.8, 22°.92S×67°.40W, h0km, mb3.9/1, mb1 4.0/2, mb1mx3.6/16, mbtmp3.9/2, ML3.9/1, Error ellipse: s-maj=168.4km s-min=51.3km az=60.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.64**	**354**	Pn	Pn	01 17 31.3	0.0
	1.3nm,0.3s,baz=165,slow=6.0,SNR=36						
TORD	**Torodi Ar. Bea**	**76.53**	**69**	P	P	01 27 44.5	+0.1
	0.5nm,0.4s,baz=252,slow=5.4,SNR=13						
MKAR	**Makanchi Array**	**145.92**	**38**	PKPbc	PKPdf	01 35 32.4	-0.3
	0.4nm,0.6s,baz=327,slow=4.4,SNR=4.1						

*KRSC **20** 01:18:31.0±1.5, 51°.86N×160°.29E, h68km±25km, ML4.0*
*IDC **20** 01:18:33.0±2.6, 51°.64N×160°.07E, h36km±8km, mb3.6/4, mb1 3.6/5, mb1mx3.3/35, mbtmp3.7/5, ML2.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/32, Error ellipse: s-maj=73.4km s-min=43.2km az=40.0*
ISC 20 01:18:32.1±1.1, 51°.87N±0°.05×160°.24E±0°.05, h23km±6km, n40, σ1§09/54, mb3.9/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.20**	**298**	*e*P	**Pn**	**01 18 53.0**	**-0.4**
RUS				*e*S	**Sn**	**01 19 08.5**	**-0.5**
SPN	**Mys Shipunski**	**1.23**	**354**	*e*P	**Pb**	**01 18 54.4**	**-0.3**
SPN				*e*S	**Sb**	**01 19 10.0**	**-0.2**
KDTR	**Khodutka, Kamc**	**1.34**	**268**	*e*P	**Pn**	**01 18 55.3**	**0.0**
KDTR				*e*S	**Sn**	**01 19 12.0**	**-0.4**
MTVR	**Mutnovka**	**1.41**	**297**	*e*P	**Pn**	**01 18 56.6**	**+0.2**
MTVR				*e*S	**Sn**	**01 19 14.0**	**-0.2**
NLC	**Nalytchevo**	**1.41**	**338**	*e*P	**Pb**	**01 18 57.2**	**-0.5**
NLC				*e*S	**Sb**	**01 19 15.1**	**-0.1**
DALK	**Dalny**	**1.47**	**323**	*e*P	**Pn**	**01 18 57.8**	**+0.7**
DALK				*e*S	**Sn**	**01 19 16.5**	**+0.8**
GRL	**Gorelyy**	**1.50**	**298**	*i* P	**Pb**	**01 18 59.0**	**-0.2**
PET	**Petropavlovsk**	**1.51**	**321**	*i* P	**Pn**	**01 18 58.6**	**+1.0**
ASAK	**Asacha**	**1.53**	**290**	*e*P	**Pn**	**01 18 58.9**	**+0.9**
UGLR	**Uglovaya**	**1.59**	**328**	*e*P	**Pb**	**01 19 00.2**	**-0.7**
KRMR	**Karymshinskiy**	**1.61**	**307**	*e*P	**Pn**	**01 18 59.6**	**+0.6**
KRMR				*e*S	**Sn**	**01 19 19.2**	**+0.2**
SDLR	**Sedlovina**	**1.63**	**330**	*e*P	**Pn**	**01 19 00.5**	**+1.0**
SMAR	**Somma**	**1.65**	**328**	*i* P	**Pn**	**01 19 00.7**	**+1.0**
AVH	**Avacha**	**1.67**	**327**	*e*P	**Pn**	**01 19 01.2**	**+1.3**
KRER	**Koryakskii**	**1.70**	**328**	*e*P	**Pn**	**01 19 01.6**	**+1.2**
KRER				*e*S	**Sb**	**01 19 23.1**	**-0.6**
KOK	**Koryaka**	**1.73**	**326**	*i* P	**Pn**	**01 19 02.1**	**+1.4**
KRX	**Arik**	**1.78**	**328**	*i* P	**Pn**	**01 19 02.8**	**+1.3**
PETK	**Petropavlovsk-**	**1.98**	**310**	Pn	**Pn**	**01 19 05.6**	**+1.4**
	17nm,0.3s,baz=110,slow=20,SNR=190						
PETK				Sn	**Sb**	**01 19 31.3**	**-0.4**
	27nm,0.3s,baz=246,slow=20,SNR=9.7						
APC	**Apacha**	**2.16**	**300**	*e*P	**Pb**	**01 19 09.1**	**-1.4**
APC				*e*S	**Sb**	**01 19 36.0**	**-0.8**
PAU	**Pauzhetka**	**2.17**	**261**	*e*P	**Pn**	**01 19 07.9**	**+1.1**
PAU				*e*S	**Sn**	**01 19 32.9**	**0.0**
GNL	**Ganaly**	**2.30**	**324**	*e*P	**Pn**	**01 19 10.2**	**+1.6**
MKZ	**Mys Kozlova**	**2.83**	**18**	*e*P	**Pn**	**01 19 16.9**	**+1.1**
MKZ				*e*S	**Sn**	**01 19 48.4**	**-0.8**
SKR	**Severo-Kuril's**	**2.85**	**247**	*e*P	**Pn**	**01 19 17.8**	**+1.8**
SKR				*e*S	**Sn**	**01 19 49.5**	**-0.1**
ALID	**Alaid**	**3.10**	**253**	*i* P	**Pn**	**01 19 20.3**	**+0.6**
KZV	**Kizimen**	**3.25**	**1**	*e*P	**Pn**	**01 19 23.8**	**+2.1**
TUMD	**Tumrok D**	**3.34**	**2**	*e*P	**Pn**	**01 19 23.9**	**+1.1**
TUMD				*e*S	**Sn**	**01 20 00.9**	**-0.8**
TUMR	**Tumrok**	**3.42**	**359**	*e*P	**Pn**	**01 19 26.7**	**+2.7**
SRDR	**Sredinnyy**	**4.46**	**356**	*e*P	**Pn**	**01 19 38.2**	**-0.1**
BDR	**Baidarnaya**	**4.74**	**7**	*e*P	**Pn**	**01 19 41.9**	**-0.2**
SMKR	**Semkarok**	**4.77**	**8**	*e*P	**Pn**	**01 19 44.4**	**+1.8**
BKI	**Bering**	**4.78**	**43**	*e*P	**Pn**	**01 19 43.6**	**+1.1**
BKI				*e*S	**Sn**	**01 20 34.0**	**-3.1**
SRKR	**Sorokina**	**4.82**	**6**	*e*P	**Pn**	**01 19 44.4**	**+1.2**
TIXI	**Tiksi**	**24.23**	**336**	P	**P**	**01 23 46.6**	**-0.1**
	1.4nm,0.4s,baz=113,slow=9.7,SNR=5.0						
TIXI				pP	**pwP**	**01 23 57.1**	**+0.2**
	1.8nm,0.4s,baz=122,slow=8.5,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**32.50**	**168**	T	T	02 00 25.8	
	baz=353,slow=74,SNR=3.0						
H11N3	**WAKE ISLAND Hy**	**32.51**	**168**	T	T	02 00 29.1	
	baz=353,slow=74,SNR=2.9						
H11N1	**WAKE ISLAND Hy**	**32.52**	**168**	T	T	02 00 24.4	
	baz=353						
SONM	**Songino Array**	**34.28**	**285**	LR	LR	01 41 00.6	
	comp=Z,50nm,19.2s,baz=110,slow=39						
MKAR	**Makanchi Array**	**48.77**	**297**	P	**P**	**01 27 13.6**	**-1.3**
	0.2nm,0.4s,baz=51,slow=7.4,SNR=6.3						
FINES	**FINESS Array B**	**61.28**	**337**	P	**P**	**01 28 45.7**	**+0.8**
	0.5nm,0.4s,baz=12,slow=9.8,SNR=4.7						
FINES				pP	**pwP**	**01 28 56.5**	**+0.5**
	1.0nm,0.6s,baz=20,slow=6.1,SNR=2.9						
AKASG	**Malin Array Be**	**69.71**	**329**	P	**P**	**01 29 40.0**	**+0.5**
	0.4nm,0.3s,baz=31,slow=7.3,SNR=3.4						
AKASG				pP	**pwP**	**01 29 50.7**	**0.0**
	1.1nm,0.4s,baz=30,slow=6.7,SNR=5.4						

*NIED **20** 01:49:00, 40°.80N×142°.50E, h38km, Mw4.8 Best double couple: M0=1.97000×10^16 NP1:φs=219.00000°, δ19.00000°, λ114.00000°. NP2:φs=14.00000°, δ73.00000°, λ82.00000°.*
*BJI **20** 01:49:40.4±0.0, 40°.68N×142°.72E, h52km, mb5.1/68, mB5.0/47, Ms4.4/60, Ms7 4.2/55*
*JMA **20** 01:49:41.8±0.2, 40°.74N×142°.54E, h29km±4km, M4.9*
JMA Felt III J1.

*ISCJB **20** 01:49:42.6±0.3, 40°.80N±0°.02×142°.41E±0°.02, h48km±2km, mb5.0/238, MS4.2/63, Error ellipse: s-maj=3.5km s-min=2.2km az=41.7*
*MOS **20** 01:49:42.3±0.9, 40°.89N×142°.36E, h44km, mb5.3/74, MS4.3/19, Error ellipse: s-maj=5.8km s-min=3.7km az=99.9*
*NEIC **20** 01:49:44.7±1.7, 40°.83N×142°.35E, h53km±3km, mb5.0/178, Error ellipse: s-maj=13.5km s-min=9.3km az=120.0*
NEIC Felt at Misawa. Recorded [3 JMA] in Iwate.
*GCMT **20** 01:49:44.7±0.4, 40°.90N±0°.02×142°.48E±0°.04, h41km±1km, MW4.9/61, Moment Tensor Solution. s27,c35; s61,c83; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.15±.17; Mθθ0.19±.12; Mφφ-2.34±.11; Mrθ0.69±.09; Mrφ-0.62±.08; Mθφ1.53±.09; Best double couple: M0=2.86500×10^16 NP1:φs=20.00000°, δ63.00000°, λ97.00000°. NP2: φs184.00000°, δ28.00000°, λ76.00000°. Principal axes: T 2.7170, Plg71.0000°, Azm307.0000°; N 0.2940, Plg7.0000°, Azm197.0000°; P -3.0120, Plg18.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **20** 01:49:44.2±0.5, 40°.79N×142°.39E, h51km±3km, mb4.5/29, mb1 4.7/36, mb1mx4.6/52, mbtmp4.8/36, MS4.0/33, Ms1 4.0/33, ms1mx4.0/39 Error ellipse: s-maj=12.1km s-min=9.6km az=121.0*
ISC 20 01:49:43.6±0.3, 40°.78N±0°.03×142°.47E±0°.03, h49km±2km, h49km:pP-P, n721, σ1§36/850, mb5.0/251, MS4.3/67, 70C-36D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.81**	**226**	P	**Pn**	**01 49 57.1**	**-1.6**
JKEN				S	**Sn**	**01 50 07.5**	**-2.2**
JANG	**Nango**	**0.83**	**241**	⇓P	**Pn**	**01 49 57.9**	**-1.1**
JANG				*e*S	**Sn**	**01 50 09.6**	**-0.6**
JARK	**Aomorirokkasho**	**0.87**	**286**	P	**Pn**	**01 49 58.6**	**-0.9**
JARK				*e*S	**Sn**	**01 50 10.3**	**-0.8**
JTH	**Tanohata**	**0.95**	**209**	⇓P	**Pn**	**01 49 58.8**	**-1.9**
JTH				*e*S	**Sn**	**01 50 10.5**	**-2.7**
JTM	**Tenmabayashi**	**1.06**	**271**	⇓P	**Pn**	**01 50 01.6**	**-0.5**
JTM				*e*S	**Sn**	**01 50 15.8**	**0.0**
JOT	**Ohata**	**1.23**	**300**	⇓P	**Pn**	**01 50 03.7**	**-0.7**
ERM	**Erimo**	**1.34**	**22**	*e*Pn	**Pn**	**01 50 05.8**	**-0.1**
ERM				*e*Sn	**Sn**	**01 50 21.5**	**-1.1**
ERM	**Erimo**	**1.34**	**22**	*e*P	**Pn**	**01 50 05.8**	**-0.1**
ERM				*e*		01 50 21.5	
JEM	**Erimo**	**1.34**	**22**	P	**Pn**	**01 50 05.7**	**-0.2**
JEM				*e*S	**Sn**	**01 50 22.6**	**0.0**
JAH	**Hinai**	**1.52**	**248**	⇓P	**Pn**	**01 50 08.4**	**+0.1**
JAH				*e*S	**Sn**	**01 50 28.2**	**+1.4**
JNBK	**Urakawa-nobuka**	**1.52**	**8**	P	**Pn**	**01 50 08.7**	**+0.4**
JNBK				*e*S	**Sn**	**01 50 28.9**	**+2.0**
JKB	**Kayabe**	**1.55**	**316**	⇓P	**Pn**	**01 50 08.2**	**-0.5**
JKB				*e*S	**Sn**	**01 50 28.4**	**+0.7**
JOM	**Ohasama**	**1.58**	**215**	⇓P	**Pn**	**01 50 08.8**	**-0.4**
JOM				*e*S	**Sn**	**01 50 29.3**	**+0.8**
JSR	**Shiriuchi**	**1.72**	**297**	⇓P	**Pn**	**01 50 11.0**	**-0.1**
JSR				*e*S	**Sn**	**01 50 33.0**	**+1.1**
JIW	**Iwasaki**	**1.88**	**265**	⇓P	**Pn**	**01 50 13.4**	**+0.1**
JIW				S	**Sn**	**01 50 37.1**	**+1.3**
JIAM	**Iburiatsuma**	**1.89**	**348**	P	**Pn**	**01 50 15.1**	**+1.7**
JIAM				*e*S	**Sn**	**01 50 39.3**	**+3.3**
ASAJ	**Asahikawa**	**3.34**	**2**	P	**Pn**	**01 50 33.9**	**+0.7**
	90nm,0.3s,baz=214,slow=10.0,SNR=53						
ASAJ				LR	LR	01 51 46.0	
	comp=Z,586nm,20.1s,baz=195,slow=37						
GLVR	**Golovnino**	**3.73**	**36**	*e*P	**Pn**	**01 50 37.4**	**-1.2**
GLVR				*e*S	**Sn**	**01 51 18.1**	**-3.1**
GLVR				pmax	pmax		
	comp=Z,349nm,0.6s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,3μm,0.4s						
GRPR	**Tuman**	**4.04**	**36**	*e*P	**Pn**	**01 50 41.2**	**-1.7**
GRPR				*e*S	**Sn**	**01 51 24.0**	**-4.9**
GRPR				pmax	pmax		
	comp=Z,200nm,0.4s						
GRPR				smax	smax		
	comp=N,2μm,0.4s						
GRPR				smax	smax		
	comp=E,1μm,0.4s						
LAGR	**Lagunnoye**	**4.10**	**36**	*e*P	**Pn**	**01 50 42.1**	**-1.5**
LAGR				*e*S	**Sn**	**01 51 25.8**	**-4.4**
LAGR				pmax	pmax		
	comp=Z,491nm,0.4s						
LAGR				smax	smax		
	comp=E,4μm,0.7s						
LAGR				smax	smax		
	comp=N,966nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.11**	**37**	*d i*P	**Pn**	**01 50 42.5**	**-1.3**
YUK				*i* S	**Sn**	**01 51 26.5**	**-4.2**
YUK				pmax	pmax		
	comp=N,321nm,0.3s						
YUK				pmax	pmax		
	comp=E,178nm,0.3s						
YUK				pmax	pmax		
	comp=Z,463nm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.2s						
YUK				smax	smax		
	comp=N,3μm,0.5s						
YUK				MLR	MLR		
	comp=Z,2μm,17.0s						
MJB9	**Matsu-Tunnel**	**5.38**	**220**	*e*Pn	**Pn**	**01 51 02.5**	**+1.2**
MJB9				*e*Sn	**Sn**	**01 52 01.3**	**-0.7**
MAJO	**Matsushiro**	**5.38**	**220**	*e*Pn	**Pn**	**01 51 02.7**	**+1.4**
MAJO				*e*Sn	**Sn**	**01 52 01.3**	**-0.7**
MAJO	**Matsushiro**	**5.38**	**220**	*c i*P	**Pn**	**01 51 03.2**	**+1.9**
MAT	**Matsushiro**	**5.38**	**220**	P	**Pn**	**01 51 03.0**	**+1.7**
MAT				S	**Sn**	**01 52 02.8**	**+0.8**
MJAR	**Matsushiro Arr**	**5.38**	**220**	P	**Pn**	**01 51 03.3**	**+1.9**
	comp=Z,2.0nm,0.3s,baz=34,slow=12,SNR=165						
MJAR				LR	LR	01 53 32.8	
	comp=Z,1μm,21.9s,baz=40,slow=43						
KUR	**Kuril'sk**	**5.96**	**40**	*d i*P	**Pn**	**01 51 08.4**	**-0.7**
KUR				*i* S	**Sn**	**01 52 13.7**	**-2.3**
KUR				pmax	pmax		
	comp=N,96nm,0.6s						
KUR				pmax	pmax		
	comp=Z,453nm,0.6s						
KUR				pmax	pmax		
	comp=E,74nm,0.4s						
KUR				smax	smax		
	comp=N,188nm,0.6s						
KUR				smax	smax		
	comp=E,277nm,0.6s						
KUR				MLR	MLR		
	comp=Z,1μm,13.0s						
KUR				MLR	MLR		
	comp=N,1μm,14.0s						
TEY	**Ternei**	**6.05**	**317**	⇑*e*P	**Pn**	**01 51 11.0**	**+0.5**
TEY				*e*S	**Sn**	**01 52 18.8**	**+0.4**
TEY				pmax	pmax		
	comp=N,80nm,0.6s						
TEY				pmax	pmax		
	comp=Z,80nm,0.6s						
TEY				pmax	pmax		
	comp=E,60nm,0.6s						
TEY				MLR	MLR		
	comp=Z,1μm,17.0s						
YSS	**Yuzh-Sakhalins**	**6.18**	**2**	*e*Pn	**Pn**	**01 51 13.2**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.18**	**2**	⇑*e*P	**Pn**	**01 51 12.8**	**+0.6**
YSS				*e*S	**Sn**	**01 52 21.0**	**-0.5**
YSS				pmax	pmax		
	comp=Z,120nm,1.1s						
YSS				MLR	MLR		
	comp=Z,1μm,15.0s						
INU	**Inuyama**	**6.92**	**220**	*e*Pn	**Pn**	**01 51 23.6**	**+1.3**
INU				*e*Sn	**Sn**	**01 52 41.9**	**+2.3**
JHJ	**Hachijo jima 2**	**7.94**	**197**	P	**Pn**	**01 51 35.5**	**-0.9**
	comp=Z,32nm,0.3s,baz=89,slow=21,SNR=10						
JHJ				S	**Sn**	**01 52 59.0**	**-5.7**
	comp=Z,36nm,0.3s,baz=57,slow=22,SNR=7.9						
VLA	**Vladivostok**	**8.23**	**290**	*de*P	**Pn**	**01 51 43.6**	**+3.3**
UGL	**Uglegorsk**	**8.31**	**358**	*e*P	**Pn**	**01 51 45.5**	**+4.2**
UGL				pmax	pmax		
	comp=Z,69nm,0.7s						
UGL				MLR	MLR		
	comp=Z,1μm,13.0s						
UGL				MLR	MLR		
	comp=E,1μm,20.0s						
USA0B	**Ussuriysk Arra**	**8.46**	**297**	*e*Pn	**Pn**	**01 51 44.6**	**+1.1**
USRK	**Ussuriysk Ar.**	**8.46**	**297**	P	**Pn**	**01 51 44.3**	**+0.8**
	comp=E,5.4nm,0.3s,baz=100,slow=15,SNR=71						
USRK				LR	LR	01 54 57.5	
	comp=E,1μm,19.2s,baz=101,slow=37						
MSHR	**Mys Shultsa**	**8.66**	**286**	⇑*e*P	**Pn**	**01 51 46.9**	**+0.8**
TYV	**Tymovskoe**	**10.09**	**1**	*e*P	**Pn**	**01 52 05.9**	**+0.2**
TYV				*e*S	**Sn**	**01 53 59.6**	**+2.2**
TYV				pmax	pmax		
	comp=Z,15nm,1.0s						
TYV				smax	smax		
	comp=N,13nm,1.2s						
TYV				MLR	MLR		
	comp=N,2μm,18.0s						
TYV				MLR	MLR		
	comp=Z,1μm,18.0s						
MDJ	**Mudanjiang**	**10.22**	**296**	P	**Pn**	**01 52 10.0**	**+2.4**
MDJ				sP		01 52 26.8	
MDJ				S	**Sn**	**01 54 05.6**	**+4.9**
MDJ				PcS	**PcS**	**02 01 48.8**	**+2.8**
MDJ				ScS	**ScS**	**02 05 15.8**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,36nm,0.9s						
MDJ				LR	LR		
	comp=Z,560nm,16.5s						
MDJ				LR	LR		
	comp=Z,1μm,18.8s						
MDJ				LR	LR		
	comp=Z,2μm,17.8s						
MDJ	**Mudanjiang**	**10.22**	**296**	*e*Pn	**Pn**	**01 52 07.2**	**-0.4**
GRNR	**Gornyy**	**10.85**	**339**	*e*P	**Pn**	**01 52 16.8**	**+0.7**
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
KLR	**Kul'dur**	**11.35**	**322**	P	**Pn**	**01 52 24.8**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=130,slow=13,SNR=20						
KLR				LR	LR	01 57 02.9	
	comp=Z,919nm,19.1s,baz=138,slow=39						
KLR	**Kul'dur**	**11.35**	**322**	*de*P	**Pn**	**01 52 23.9**	**+1.0**
KSRS	**Korea Array**	**11.78**	**258**	P	**Pn**	**01 52 31.5**	**+2.7**
	comp=Z,0.8nm,0.3s,baz=70,slow=13,SNR=34						
KSRS				LR	LR	01 56 45.0	
	comp=Z,1μm,18.3s,baz=75,slow=36						
KS15	**Wonju Array Si**	**11.81**	**258**	*e*Pn	**Pn**	**01 52 33.9**	**+4.7**
JNU	**Nakatsue**	**12.00**	**234**	P	**Pn**	**01 52 33.0**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=160,slow=0.8,SNR=10						
JNU				LR	LR	01 57 13.5	
	comp=Z,667nm,18.6s,baz=48,slow=38						
JNU	**Nakatsue**	**12.00**	**234**	*e*Pn	**Pn**	**01 52 32.8**	**+0.8**
NKL	**Nikolayevsk**	**12.44**	**355**	*e*P	**Pn**	**01 52 37.5**	**-0.2**
NKL				pmax	pmax		
	comp=Z,16nm,0.9s						
NKL				pmax	pmax		
	comp=N,500nm,4.0s						
TJN	**Taejon**	**12.61**	**254**	*de*P	**Pn**	**01 52 42.9**	**+2.8**
CN2	**Changchun**	**12.96**	**289**	*e*P	**Pn**	**01 52 46.8**	**+1.9**
CN2				*e*S	**Sn**	**01 55 06.4**	**-1.2**
CN2				pmax	pmax		
	comp=N,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=N,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s						
CN2				LR	LR		
	comp=N,900nm,18.0s						
CN2				LR	LR		
	comp=N,1μm,19.0s						
SNY	**Shenyang**	**14.24**	**280**	⇓P	**Pn**	**01 53 03.9**	**+1.5**
SNY				pmax	pmax		
	comp=N,17nm,0.6s						
SNY				pmax	pmax		
	comp=N,140nm,3.5s						
SNY				LR	LR		
	comp=N,290nm,13.9s						
SNY				LR	LR		
	comp=N,880nm,15.1s						
SNY				LR	LR		
	comp=N,1μm,17.2s						
PEA0B	**Petropavlovsk-**	**16.09**	**35**	*e*Pn	**Pn**	**01 53 25.5**	**-0.9**
	comp=N,22nm,1.0s						
PETK	**Petropavlovsk-**	**16.09**	**35**	P	**Pn**	**01 53 24.7**	**-1.6**
	comp=N,0.1nm,0.3s,baz=224,slow=8.2,SNR=3.8						
PETK				LR	LR	02 00 05.9	
	comp=N,276nm,18.8s,baz=227,slow=39						
PEA1	**Petropavlovsk-**	**16.09**	**35**	*e*Pn	**Pn**	**01 53 24.7**	**-1.7**
DL2	**Dalian**	**16.11**	**270**	P	**P**	**01 53 28.1**	**-1.2**
DL2				sP	**sP**	**01 53 46.1**	**-0.3**
DL2				*e*S	**Sn**	**01 56 25.4**	**+1.1**
DL2				pmax	pmax		
	comp=N,79nm,0.9s						
DL2				pmax	pmax		
	comp=N,140nm,4.4s						
ZEA	**Zeya**	**16.53**	**327**	*e*P	**Pn**	**01 53 28.6**	**-3.2**
ZEA				pmax	pmax		
	comp=Z,46nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,14.0s						
ZEA				MLR	MLR		
	comp=E,500nm,15.0s						
HIA	**Hailar**	**18.12**	**306**	*e*P	**P**	**01 53 46.3**	**-5.1**
	comp=E,42nm,0.7s						
HIA	**Hailar**	**18.12**	**306**	*e*P	**P**	**01 53 46.3**	**-5.1**
HIA				pmax	pmax		
	comp=Z,41nm,0.7s						
MA2	**Magadan**	**19.53**	**13**	P	**P**	**01 54 05.6**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=195,slow=12,SNR=7.4						
MA2	**Magadan**	**19.53**	**13**	*e*P	**P**	**01 54 06.2**	**-0.5**
	comp=Z,18nm,0.8s						
MA2	**Magadan**	**19.53**	**13**	*ce*P	**P**	**01 54 05.7**	**-1.0**
MA2				pmax	pmax		
	comp=Z,25nm,1.

WHN				LR	LR	
	comp=Z,2μm,16.1s					
WHN				LR	LR	
	comp=Z,3μm,19.3s					
WHN				LR	LR	
	comp=Z,2μm,18.0s					
TPUB	**Ta-pu**	**25.31**	**233**	*e*P	**P**	**01 55 04.4 -1.3**
TWG	**Pinlang**	**25.41**	**232**	*e*P	**P**	**01 55 06.9 +0.4**
	comp=Z,144nm,0.9s					
ULN	**Ulaanbaatar**	**26.14**	**298**	*e*P	**P**	**01 55 12.7 -0.4**
	comp=Z,13nm,0.9s					
ULN	**Ulaanbaatar**	**26.14**	**298***c*	*i*P	**P**	**01 55 12.2 -1.0**
ULN				pmax	pmax	
	comp=Z,11nm,1.1s					
SONA0	**Songino Array**	**26.58**	**298**	*e*P	**P**	**01 55 16.6 -0.5**
SONM	**Songino Array**	**26.58**	**298**	P	**P**	**01 55 16.7 -0.5**
	comp=Z,6.0nm,0.5s,baz=87,slow=8.6,SNR=27					
SONM				LR	LR	02 06 33.6
	comp=Z,756nm,18.2s,baz=95,slow=38					
XAN	**Xi'an**	**27.37**	**267**	P	**P**	**01 55 22.5 -1.7**
XAN				pP	pP	01 55 34.0 -2.5
XAN				sP	sP	01 55 39.3 -2.9
XAN				pmax	pmax	
	comp=Z,21nm,0.8s					
XAN				pmax	pmax	
	comp=Z,100nm,3.5s					
XAN				LR	LR	
	comp=Z,290nm,19.5s					
XAN	**Xi'an**	**27.37**	**267**	*e*P	**P**	**01 55 22.8 -1.4**
	comp=Z,17nm,0.8s					
XAN	**Xi'an**	**27.37**	**267**	*e*P	**P**	**01 55 22.8 -1.4**
XAN				pmax	pmax	
	comp=Z,17nm,0.8s					
TLY	**Talaya**	**28.66**	**306**	*e*P	**P**	**01 55 35.5 -0.1**
TLY				pmax	pmax	
	comp=Z,30nm,0.9s					
TLY				MLR	MLR	
	comp=Z,1μm,18.0s					
ZAK	**Zakamensk**	**28.76**	**303**	*e*P	**P**	**01 55 36.0 -0.6**
ZAK				pmax	pmax	
	comp=Z,16nm,1.2s					
H11N2	**WAKE ISLAND Hy**	**29.58**	**128**	T	T	02 26 41.2
	baz=319,slow=75,SNR=578					
H11N1	**WAKE ISLAND Hy**	**29.59**	**128**	T	T	02 26 42.1
	baz=319,slow=75,SNR=597					
H11N3	**WAKE ISLAND Hy**	**29.60**	**128**	T	T	02 26 42.6
	baz=319,slow=75,SNR=494					
BILL	**Bilibino**	**30.21**	**18**	*e*P	**P**	**01 55 49.1 0.0**
	comp=Z,44nm,1.1s					
BILL	**Bilibino**	**30.21**	**18***d*	*i*P	**P**	**01 55 49.3 +0.2**
BILL				*i*		01 56 02.7
BILL				*i*		01 58 47.4
BILL				pmax	pmax	
	comp=Z,35nm,1.0s					
BILL				MLR	MLR	
	comp=Z,326nm,20.0s					
MOY	**Mondy**	**30.30**	**305**	*e*P	**P**	**01 55 50.4 +0.2**
MOY				pmax	pmax	
	comp=Z,27nm,2.5s					
H11S1	**WAKE ISLAND Hy**	**30.41**	**130**	T	T	02 28 33.0
	baz=322,slow=75,SNR=78					
H11S3	**WAKE ISLAND Hy**	**30.41**	**130**	T	T	02 28 27.5
	baz=322,slow=75,SNR=90					
H11S2	**WAKE ISLAND Hy**	**30.43**	**130**	T	T	02 28 27.9
	baz=322,slow=75,SNR=74					
LZH	**Lanzhou**	**30.45**	**274**	⇑P	**P**	**01 55 51.0 -0.7**
LZH				pP	pP	01 56 03.5 -0.6
LZH				sP	sP	01 56 11.6 +1.8
LZH				pmax	pmax	
	comp=Z,15nm,1.4s					
LZH				pmax	pmax	
	comp=Z,110nm,4.8s					
LZH				LR	LR	
	comp=Z,250nm,12.5s					
LZH				LR	LR	
	comp=Z,420nm,12.7s					
LZH				LR	LR	
	comp=Z,360nm,13.3s					
ATKA	**Atka Island**	**31.49**	**54**	*e*P	**P**	**01 56 01.0 +0.5**
	comp=Z,40nm,1.0s					
TIXI	**Tiksi**	**31.69**	**352**⇓	*e*P	**P**	**01 56 00.4 -1.6**
TIXI				pmax	pmax	
	comp=Z,6.0nm,1.7s					
GTA	**Gaotai**	**32.43**	**282**	*e*P	**P**	**01 56 08.8 -0.2**
GTA				pP	pP	01 56 20.6 -0.9
GTA				sP	sP	01 56 26.3 -0.9
GTA				PcP	**PcP**	**01 58 56.3 +0.9**
GTA				S	**S**	**02 01 18.4 -1.8**
GTA				pmax	pmax	
	comp=Z,14nm,1.1s					
GTA				pmax	pmax	
	comp=Z,76nm,7.3s					
GTA				LR	LR	
	comp=Z,230nm,17.5s					
GTA				LR	LR	
	comp=Z,620nm,17.8s					
GTA				LR	LR	
	comp=Z,910nm,17.8s					
CD2	**Chengdu**	**32.66**	**265**⇑	*i*P	**P**	**01 56 10.9 -0.2**
CD2				PP	**PP**	**01 57 20.3 -5.1**
CD2				S	**S**	**02 01 26.0 +2.2**
CD2				pmax	pmax	
	comp=Z,70nm,0.9s					
CD2				pmax	pmax	
	comp=Z,150nm,11.2s					
CD2				LR	LR	
	comp=Z,1μm,15.7s					
CD2				LR	LR	
	comp=Z,530nm,22.1s					
CD2				LR	LR	
	comp=Z,940nm,16.9s					
GYA	**Guiyang**	**32.81**	**255**⇑	*i*P	**P**	**01 56 12.3 -0.2**
GYA				pP	pP	01 56 26.8 +1.8
GYA				sP	sP	01 56 34.6 +3.9
GYA				PP	**PnPn**	**01 57 23.5 +1.3**
GYA				S	**S**	**02 01 23.8 -2.6**
GYA				sS	sS	02 01 49.5 +2.3
GYA				ScP	**ScP**	**02 02 33.8 -2.7**
GYA				SS	**SnSn**	**02 03 25.4 -0.6**
GYA				pmax	pmax	
	comp=Z,70nm,0.8s					
GYA				pmax	pmax	
	comp=Z,130nm,4.8s					
GYA				LR	LR	
	comp=Z,490nm,15.7s					
GYA				LR	LR	
	comp=Z,480nm,18.4s					
GYA				LR	LR	
	comp=Z,740nm,16.8s					
KMI	**Kunming**	**36.47**	**257**	P	**P**	**01 56 44.8 +0.6**
KMI				S	S	02 02 13.4 -10
KMI				SS	**SnSn**	**02 04 49.8 -5.0**
KMI				pmax	pmax	
	comp=Z,36nm,0.6s					
KMI				pmax	pmax	
	comp=Z,150nm,3.2s					
KMI				LR	LR	
	comp=Z,390nm,14.6s					
KMI				LR	LR	
	comp=Z,350nm,16.9s					
KMI				LR	LR	
	comp=Z,550nm,20.6s					
SLVN	**Son La**	**37.91**	**251**	*e*P	**P**	**01 56 56.8 +0.5**
	comp=Z,22nm,1.0s					
ANM	**Nome**	**38.00**	**34**	*e*P	**P**	**01 56 57.7 +1.2**
	comp=Z,25nm,1.0s					
ANM	**Nome**	**38.00**	**34**	*e*P	**P**	**01 56 57.7 +1.2**
ANM				pmax	pmax	
	comp=Z,25nm,1.0s					
DGZ	**Jazzator, Alta**	**38.98**	**302***c*	*i*P	**P**	**01 57 06.0 +0.9**
DGZ				pmax	pmax	
	comp=Z,26nm,1.0s					
WMQ	**Urumqi**	**40.01**	**293**	*e*P	**P**	**01 57 14.3 +0.7**
WMQ				pP	pP	01 57 23.8 -2.5
WMQ				pmax	pmax	
	comp=Z,26nm,1.3s					
WMQ				pmax	pmax	
	comp=Z,80nm,3.7s					
WMQ				LR	LR	
	comp=Z,55nm,10.1s					
WMQ				LR	LR	
	comp=Z,270nm,18.9s					
WMQ				LR	LR	
	comp=Z,380nm,21.1s					
WMQ	**Urumqi**	**40.01**	**293**	*e*P	**P**	**01 57 14.5 +0.9**
	comp=Z,34nm,0.9s					
WMQ	**Urumqi**	**40.01**	**293**	*e*P	**P**	**01 57 14.5 +0.9**
WMQ				pmax	pmax	
	comp=Z,34nm,0.9s					
ZAA0	**Zalesovo Array**	**40.10**	**309**	*e*P	**P**	**01 57 14.2 +0.1**
	comp=Z,30nm,0.8s					
ZAA1	**Zalesovo Array**	**40.10**	**309**	*e*P	**P**	**01 57 13.8 -0.3**
ZAA1				*e*PcP	**PcP**	**01 59 18.2 +0.3**
ZALV	**Zalesovo Beam**	**40.10**	**309**	P	**P**	**01 57 13.8 -0.3**
	comp=Z,24nm,0.6s,baz=90,slow=7.7,SNR=80					
ZALV				PcP	**PcP**	**01 59 18.2 +0.3**
	comp=Z,7.0nm,0.5s,baz=98,slow=3.1,SNR=5.1					
ZALV				pPcP		01 59 33.3
	comp=Z,5.2nm,0.5s,baz=95,slow=3.1,SNR=5.5					
ZALV				LR	LR	02 14 42.6
	comp=Z,455nm,18.7s,baz=70,slow=37					
NRIK	**Noril'sk**	**40.26**	**333**	P	**P**	**01 57 15.0 -0.2**
	comp=Z,12nm,0.8s,baz=106,slow=11,SNR=19					
NRIK				LR	LR	02 14 52.8
	comp=Z,431nm,20.8s,baz=89,slow=38					
NRIK	**Noril'sk**	**40.26**	**333**	P	**P**	**01 57 15.0 -0.2**
LKP	**Lekhapani**	**40.43**	**266**	*e*P	**P**	**01 57 18.2 +0.9**
NONG	**Nongkai**	**40.59**	**248**	P	**P**	**01 57 19.8 +1.3**
	comp=Z,1.2nm,0.9s					
SKNT	**Sakolnakorn**	**40.74**	**246**	P	**P**	**01 57 20.7 +0.9**
	comp=Z,24nm,0.8s					
NVS	**Novosibirsk**	**40.94**	**311**	*e*P	**P**	**01 57 21.2 +0.2**
NVS				pmax	pmax	
	comp=Z,27nm,1.2s					
NVS				pmax	pmax	
	comp=E,16nm,1.0s					
DIBR	**DIBRUGARH**	**41.07**	**266**	*e*P	**P**	**01 57 24.7 +2.2**
DIBR				IAmb	IAmb	01 57 25.3
	comp=Z,1μm,0.1s					
ZIRO	**ZIRO**	**41.85**	**267**	*e*P	**P**	**01 57 29.4 +0.4**
TTA	**Tatalina**	**41.91**	**37**	*e*P	**P**	**01 57 28.3 -0.7**
	comp=Z,14nm,1.2s					
TTA	**Tatalina**	**41.91**	**37**	*e*P	**P**	**01 57 28.3 -0.7**
TTA				pmax	pmax	
	comp=Z,14nm,1.2s					
JORH	**JORHAT**	**41.95**	**266**	*e*P	**P**	**01 57 30.7 +1.1**
MOKO	**MOKOCHONG**	**41.98**	**265**	*e*P	**P**	**01 57 30.9 +0.8**
KHON	**Khomkaen**	**41.98**	**246**	P	P	01 57 36.9 +6.9
PAYA	**Payao**	**42.08**	**252**	P	**P**	**01 57 34.1 +3.3**
	comp=Z,66μm,0.9s					
SVW2	**Sparrevohn**	**42.09**	**40**	*e*P	**P**	**01 57 31.1 +0.7**
	comp=Z,20nm,1.1s					
BAKI	**Biak**	**42.17**	**189**	P	P	01 57 37.9 +6.4
KOHI	**KOHIMA**	**42.61**	**265**	*e*P	**P**	**01 57 34.5 -0.8**
UTTA	**Uttaradit**	**42.64**	**250**	P	**P**	**01 57 36.9 +1.6**
	comp=Z,29μm,1.0s					
SWI	**Sorong**	**42.68**	**197**	P	**P**	**01 57 40.0 +4.4**
SIJI	**Sorong**	**42.69**	**197**	P	**P**	**01 57 36.3 +0.6**
	comp=Z,12nm,0.6s,baz=69,slow=6.5,SNR=6.9					
RKPI	**Ransiki, Papua**	**42.76**	**192**	P	P	01 57 41.7 +5.4
LAMP	**Lampang**	**42.79**	**252**	P	**P**	**01 57 39.0 +2.4**
	comp=Z,31μm,0.8s					
CHAI	**Chaiyaphum**	**42.86**	**247**	P	**P**	**01 57 37.8 +0.6**
	comp=Z,30μm,0.7s,comp=Z,674μm					
MK31	**Makanchi Array**	**42.93**	**299**	*e*P	**P**	**01 57 37.4 0.0**
	comp=Z,25nm,0.9s					
MK31	**Makanchi Array**	**42.93**	**299**	*e*P	**P**	**01 57 37.4 0.0**
MK31				pmax	pmax	
	comp=Z,25nm,0.9s					
MK32	**Makanchi Array**	**42.93**	**299**	*e*P	**P**	**01 57 37.4 0.0**
MK32				*e*PcP	**PcP**	**01 59 27.7 +0.4**
MKAR	**Makanchi Array**	**42.93**	**299**	P	**P**	**01 57 37.4 0.0**
	comp=Z,24nm,0.8s,baz=83,slow=9.6,SNR=170					
MKAR				PcP	**PcP**	**01 59 27.7 +0.4**
	comp=Z,4.0nm,0.8s,baz=83,slow=2.6,SNR=3.5					
MKAR				LR	LR	02 16 40.9
	comp=Z,400nm,18.6s,baz=84,slow=38					
CMMT	**Chiang Mai**	**43.10**	**253**	P	**P**	**01 57 39.9 +0.8**
	comp=Z,14nm,1.0s					
CHTO	**Chiang Mai**	**43.10**	**253**	*e*P	**P**	**01 57 39.5 +0.4**
	comp=Z,19nm,0.8s					
CHTO	**Chiang Mai**	**43.10**	**253**	*e*P	**P**	**01 57 39.5 +0.4**
CHTO				pmax	pmax	
	comp=Z,19nm,0.8s					
TEZP	**TEZPUR**	**43.12**	**267**	*e*P	**P**	**01 57 38.3 -0.9**
PBKT	**Sadao Pong**	**43.12**	**248**	P	**P**	**01 57 40.6 +1.4**
	comp=Z,6.8nm,0.7s					
MAKZ	**Makanchi**	**43.13**	**299**	*e*P	**P**	**01 57 39.2 +0.1**
	comp=Z,28nm,0.8s					
MAKZ	**Makanchi**	**43.13**	**299**	*e*P	**P**	**01 57 39.2 +0.1**
MAKZ				pmax	pmax	
	comp=Z,28nm,0.8s					
GENI	**Genyem**	**43.21**	**183**	P	P	01 57 48.5 +8.6
IMP	**Imphal**	**43.22**	**264**	*e*P	**P**	**01 57 38.3 -1.8**
IMP				IAmb	IAmb	01 57 41.6
	comp=Z,19nm,0.5s					
TAWA	**Tawang**	**43.32**	**269**	*e*P	**P**	**01 57 41.9 +0.7**
CM31	**Chiang Mai Arr**	**43.33**	**252**	*e*P	**P**	**01 57 41.4 +0.5**
	comp=Z,16nm,0.9s					
CM31				*e*PP	**PcP**	**01 59 30.1 +1.0**
CMAR	**Chiang Mai Arr**	**43.33**	**252**	P	**P**	**01 57 41.4 +0.5**
	comp=Z,3.5nm,0.4s,baz=52,slow=6.0,SNR=13					
CMAR				PcP	**PcP**	**01 59 30.1 +1.0**
	comp=Z,2.3nm,0.4s,baz=11,slow=2.2,SNR=5.0					
CMAR				LR	LR	02 15 59.9
	comp=Z,152nm,21.6s,baz=56,slow=36					
RSO	**Redoubt South**	**43.49**	**41**	*e*P	**P**	**01 57 43.8 +1.8**
OHAK	**Old Harbor**	**43.50**	**45**	*e*P	**P**	**01 57 42.4 +0.6**
	comp=Z,26nm,1.1s					
CAST	**Castle Rocks**	**43.70**	**36**	*e*P	**P**	**01 57 45.5 +2.0**
	comp=Z,18nm,0.8s					
KDAK	**Kodiak Island**	**43.81**	**45**	P	**P**	**01 57 44.6 +0.3**
	comp=Z,10.0nm,0.8s,baz=291,slow=3.8,SNR=8.7					
KDAK	**Kodiak Island**	**43.81**	**45**	*e*P	**P**	**01 57 44.4 0.0**
	comp=Z,52nm,1.3s					
KDAK	**Kodiak Island**	**43.81**	**45**	*i* P	**P**	**01 57 44.9 +0.6**
SILR	**SILCHAR**	**44.11**	**265**	*e*P	**P**	**01 57 48.1 +0.9**
BPAW	**Bear Paw Mtn.**	**44.17**	**35**	*e*P	**P**	**01 57 48.9 +1.7**
	comp=Z,11nm,0.9s					
GUWA	**GUWAHATI**	**44.19**	**267**	*e*P	**P**	**01 57 46.6 -1.1**
GUWA				IAmb	IAmb	01 57 49.7
	comp=Z,36nm,0.9s					
KTH	**Kantishna Hill**	**44.22**	**36**	*e*P	**P**	**01 57 49.0 +1.4**
	comp=Z,52nm,1.0s					
KURK	**Kurchatov**	**44.36**	**305**	*e*P	**P**	**01 57 48.6 -0.2**
	comp=Z,45nm,0.7s					
KURK	**Kurchatov**	**44.36**	**305***c*	*i*P	**P**	**01 57 48.4 -0.4**
KURK				pmax	pmax	
	comp=Z,81nm,1.3s					
SHL	**Shillong**	**44.38**	**266**	*e*P	**P**	**01 57 50.1 +0.6**
	comp=Z,25nm,0.8s					
SHL	**Shillong**	**44.38**	**266**	*e*P	**P**	**01 57 50.1 +0.6**
SHL				pmax	pmax	
	comp=Z,25nm,0.8s					
SHL	**Shillong**	**44.38**	**266**	*e*P	**P**	**01 57 49.9 +0.4**
KURBB	**Kurchatov Arra**	**44.43**	**305**	P	**P**	**01 57 49.3 -0.1**
	comp=Z,33nm,0.6s,baz=80,slow=8.6,SNR=185					
KURBB				PcP	**PcP**	**01 59 32.4 +0.1**
	comp=Z,7.3nm,0.6s,baz=79,slow=3.9,SNR=5.5					
KURBB				pPcP		01 59 47.3
	comp=Z,7.1nm,0.7s,baz=80,slow=3.5,SNR=5.6					
FAKI	**Fak Fak**	**44.48**	**195**	*e*P	**P**	**01 57 50.9 +0.8**
	comp=Z,36nm,1.1s					
COLD	**Coldfoot**	**44.50**	**31**	*e*P	**P**	**01 57 51.4 +1.6**
	comp=Z,8.3nm,0.8s					
TOLK	**Toolik Lake Re**	**44.79**	**29**	*e*P	**P**	**01 57 53.4 +1.3**
	comp=Z,29nm,1.4s					
MCK	**McKinley**	**45.09**	**36**	*e*P	**P**	**01 57 56.2 +1.6**
	comp=Z,22nm,1.0s					
RND	**Reindeer**	**45.15**	**36**	*e*P	**P**	**01 57 55.8 +0.7**
	comp=Z,24nm,1.0s					
PMR	**Palmer**	**45.17**	**39**	*e*P	**P**	**01 57 55.7 +0.6**
	comp=Z,18nm,1.0s					
PMR	**Palmer**	**45.17**	**39**	*e*P	**P**	**01 57 55.7 +0.6**
PMR				pmax	pmax	
	comp=Z,18nm,1.0s					
SANI	**Sanana**	**45.20**	**204**	P	**P**	**01 57 59.5 +3.7**
LUWI	**Luwuk**	**45.32**	**208**	P	**P**	**01 57 58.7 +1.9**
WRH	**Wood River Hil**	**45.42**	**35**	*e*P	**P**	**01 57 58.2 +1.1**
	comp=Z,12nm,0.9s					
COLA	**College**	**45.50**	**34**⇓	*e*P	**P**	**01 57 59.0 +1.3**
COLA				pmax	pmax	
	comp=Z,8.0nm,1.0s					
SML	**Sawmill**	**45.52**	**38**	*e*P	**P**	**01 57 58.6 +0.6**
	comp=Z,28nm,1.0s					
SML	**Sawmill**	**45.52**	**38**	*e*P	**P**	**01 57 58.6 +0.6**
SML				pmax	pmax	
	comp=Z,28nm,1.0s					
CCB	**Clear Creek Bu**	**45.53**	**34**	*e*P	**P**	**01 57 59.4 +1.5**
	comp=Z,11nm,1.0s					
TURI	**Tura**	**45.56**	**267**	*e*P	**P**	**01 58 01.2 +2.5**
APSI	**Ampana**	**45.61**	**210**	P	**P**	**01 58 01.9 +2.8**
MSAI	**Masohi**	**45.62**	**199**	P	P	01 58 04.8 +5.6
PDGK	**Podgornoye**	**45.84**	**295**	P	**P**	**01 58 00.1 -0.8**
PDGK				pmax	pmax	
	comp=Z,38nm,0.9s					
DHY	**Denali Highway**	**45.85**	**37**	*e*P	**P**	**01 58 01.9 +1.3**
	comp=Z,31nm,1.3s					
HDA	**Harding Lake**	**45.92**	**35**	*e*P	**P**	**01 58 02.1 +1.0**
	comp=Z,19nm,0.9s					
ILAR	**Eielson Array**	**45.92**	**34**	P	**P**	**01 58 01.3 +0.2**
	comp=Z,4.7nm,0.7s,baz=269,slow=6.2,SNR=58					
ILAR				pP	**pwP**	**01 58 15.8 0.0**
	comp=Z,15nm,0.8s,baz=271,slow=6.3,SNR=19					
ILAR				LR	LR	02 18 53.5
	comp=Z,59nm,19.8s,baz=295,slow=38					
ILB	**Eielson Array**	**45.92**	**34**	*e*P	**P**	**01 58 01.7 +0.7**
ILB				*e*pP	**pwP**	**01 58 15.8 0.0**
GTK	**Tadong**	**45.94**	**270**	*e*P	**P**	**01 58 02.2 +0.3**
GTK				IAmb	IAmb	01 58 04.8
	comp=Z,13nm,0.4s					
SCM	**Sheep Creek Mo**	**46.00**	**38**	*e*P	**P**	**01 58 03.0 +1.2**
	comp=Z,23nm,1.0s					
SCM	**Sheep Creek Mo**	**46.00**	**38**	*e*P	**P**	**01 58 03.0 +1.2**
SCM				pmax	pmax	
	comp=Z,23nm,1.0s					
NLAI	**Namlea**	**46.00**	**202**	P	**P**	**01 58 06.1 +3.9**
FYU	**Fort Yukon**	**46.48**	**32**	*e*P	**P**	**01 58 07.9 +2.5**
	comp=Z,64nm,1.0s					
PHET	**Kaeng Krachan**	**46.57**	**246**	P	**P**	**01 58 08.8 +2.1**
	comp=Z,64μm,0.8s					
DOT	**Dot Lake**	**47.26**	**36**	*e*P	**P**	**01 58 12.1 +0.5**
	comp=Z,9.6nm,0.9s					
MENT	**Mentasta**	**47.52**	**37**	*e*P	**P**	**01 58 15.9 +2.4**
	comp=Z,18nm,0.9s					
JIRN	**Jiri**	**47.59**	**272**	*e*P	**P**	**01 58 15.6 +0.6**
	comp=Z,167nm,0.6s					
GUN	**Gumba**	**47.70**	**273**	*e*P	**P**	**01 58 16.3 +0.5**
	comp=Z,266nm,0.7s					
BKB	**Balikpapan**	**47.88**	**216**	P	**P**	**01 58 17.3 +0.5**
KKN	**Kakani**	**48.22**	**273**	*e*P	**P**	**01 58 20.0 +0.3**
	comp=Z,174nm,0.7s					
PKI	**Pulchoki**	**48.23**	**273**	*e*P	**P**	**01 58 20.0 +0.1**
	comp=Z,61nm,0.6s					
PKIN	**Phulchoki**	**48.24**	**273**	*e*P	**P**	**01 58 19.9 0.0**
	comp=Z,63nm,0.7s					
TTSI	**Tana Toraja**	**48.27**	**211**	P	**P**	**01 58 23.4 +3.5**
EGAK	**Eagle**	**48.36**	**34**	*e*P	**P**	**01 58 20.8 +0.8**
	comp=Z,15nm,1.1s					
DMN	**Daman**	**48.44**	**273**	*e*P	**P**	**01 58 21.8 +0.3**
	comp=Z,93nm,0.8s					
ULHL	**Ulahol**	**48.46**	**295**	P	**P**	**01 58 21.6 +0.1**
	SNR=10					
BALM	**Baldy**	**48.49**	**39**	*e*P	**P**	**01 58 22.6 +1.4**
	comp=Z,16nm,1.0s					
BALM	**Baldy**	**48.49**	**39**	*e*P	**P**	**01 58 22.6 +1.4**
BALM				pmax	pmax	
	comp=Z,16nm,1.0s					
MTKI	**Muara Teweh, K**	**48.51**	**218**	P	**P**	**01 58 22.9 +1.2**
TKM2	**Tokmak 2**	**48.66**	**296**	P	**P**	**01 58 23.4 +0.5**
	SNR=29					
TKM2	**Tokmak 2**	**48.66**	**296**	P	**P**	**01 58 22.8 -0.1**
TKM2				pmax	pmax	
	comp=Z,66nm,0.8s					
BRVK	**Borovoye**	**48.78**	**310**	*e*P	**P**	**01 58 23.7 +0.3**
	comp=Z,27nm,0.8s					
BRVK	**Borovoye**	**48.78**	**310***c*	*i*P	**P**	**01 58 23.6 +0.2**
BRVK				pmax	pmax	
	comp=Z,28nm,0.9s					
OTUK	**Ortayu**	**48.97**	**304**	P	**P**	**01 58 24.5 -0.5**
OTUK				pmax	pmax	
	comp=Z,25nm,1.0s					
MMPI	**Merauke**	**49.03**	**183**	P	P	01 58 34.7 +9.0
DANN	**Dangsing**	**49.08**	**275**	*e*P	**P**	**01 58 27.1 +0.7**
	comp=Z,384nm,0.6s					
SPSI	**Sidrap Palu**	**49.13**	**211**	P	**P**	**01 58 29.0 +2.5**
KBK	**Karagaybulak**	**49.20**	**296**	P	**P**	**01 58 27.4 +0.4**
	SNR=29					
KZA	**Kyzart**	**49.21**	**295**	P	**P**	**01 58 28.4 +1.1**
	SNR=12					
KOLN	**Koldanda**	**49.50**	**274**	*e*P	**P**	**01 58 29.8 +0.3**
	comp=Z,110nm,0.7s					
AAK	**Ala-Archa**	**49.52**	**296**	*e*P	**P**	**01 58 29.4 -0.1**
	comp=Z,9.2nm,0.8s					
AAK	**Ala-Archa**	**49.52**	**296**	P	**P**	**01 58 29.8 +0.4**
AAK	**Ala-Archa**	**49.52**	**296***c*	*i*P	**P**	**01 58 29.3 -0.1**
AAK				pmax	pmax	
	comp=Z,7.0nm,0.8s					
SAUI	**Saumlaki**	**49.59**	**195**	P	P	01 58 36.1 +6.1
KSH	**Kashi**	**49.71**	**292**	P	**P**	**01 58 35.1 +4.2**
KSH				sP	sP	01 58 57.4 +8.0
KSH				PP	**PP**	**02 00 27.9 +2.3**
KSH				S	**S**	**02 05 37.8 +1.4**
KSH				SS	**SS**	**02 09 07.8 -1.1**
KSH				pmax	pmax	
	comp=Z,37nm,1.1s					
KSH				pmax	pmax	
	comp=Z,270nm,5.4s					
KSH				LR	LR	
	comp=Z,520nm,8.7s					
KSH				LR	LR	
	comp=Z,290nm,11.2s					
KSH				LR	LR	
	comp=Z,1μm,17.2s					
PYUN	**Piuthan**	**49.79**	**275**	*e*P	**P**	**01 58 32.1 +0.4**
EPYK	**Eagle Plains**	**49.89**	**31**	*e*P	**P**	**01 58 33.0 +1.2**
	comp=Z,49nm,0.9s					
EKS2	**Erkin-Say**	**50.00**	**296**	P	**P**	**01 58 33.1 +0.1**
	SNR=18					
BKSI	**Bulukumba**	**50.25**	**210**	P	**P**	**01 58 36.7 +1.8**
AML	**Almayashu**	**50.26**	**296**	P	**P**	**01 58 36.0 +0.7**
	SNR=14					
INK	**Inuvik**	**50.70**	**29**	P	**P**	**01 58 38.9 +1.1**
	comp=Z,12nm,0.7s,baz=293,slow=7.1,SNR=41					
INK	**Inuvik**	**50.70**	**29**	*e*P	**P**	**01 58 38.8 +1.1**
	comp=Z,37nm,1.0s					
INK	**Inuvik**	**50.70**	**29**	*e*P	**P**	**01 58 38.8 +1.1**
INK				pmax	pmax	
	comp=Z,37nm,1.0s					
BWNR	**Bhubaneshwar**	**51.97**	**265**	*ex*	P	01 58 40.7 -7.2
KK31	**Karatay Array**	**52.03**	**298**	*e*P	**P**	**01 58 48.0 -0.2**
	comp=Z,9.9nm,0.8s					
KK31	**Karatay Array**	**52.03**	**298**	*i* P	**P**	**01 58 47.5 -0.6**
KK31				pmax	pmax	
	comp=Z,6.0nm,0.7s					
KKAR	**Karatay Array**	**52.03**	**298**	*e*P	**P**	**01 58 48.0 -0.2**
	comp=Z,9.9nm,0.8s					
KKAR	**Karatay Array**	**52.03**	**298**	*e*P	**P**	**01 58 48.0 -0.2**
KKAR				pmax	pmax	
	comp=Z,10.0nm,0.8s					
WHY	**Whitehorse**	**52.12**	**38**	*e*P	**P**	**01 58 45.9 -2.8**
	comp=Z,8.0nm,0.8s					
DDI	**Dehra Dun**	**52.38**	**280**	*e*P	**P**	**01 58 50.8 -0.2**
MMRI	**Maumere**	**52.59**	**205**	P	**P**	**01 58 55.8 +3.4**
SMLA	**Simla**	**52.64**	**281**	*e*P	**P**	**01 58 52.9 +0.1**
DHRM	**DHARAMSHALA**	**52.73**	**283**	*e*P	**P**	**01 58 53.2 -0.6**
DHRM				IAmb	IAmb	01 58 54.4
	comp=Z,1μm,0.1s					
SVE	**Sverdlovsk**	**52.93**	**317***d*	*i*P	**P**	**01 58 55.3 +0.8**
SVE				pmax	pmax	
	comp=Z,81nm,0.9s					
SVE				MLR	MLR	
	comp=Z,603nm,17.0s					
SOEI	**Soe**	**53

KMMI Kalianget 54.33 216 P P 01 59 06.3 +1.1
KCSI Kotacane, Aceh 54.65 239 P P 01 59 07.2 -0.5
DLBC Dease Lake 55.20 40 P P 01 59 13.0 +1.8
comp=Z,4.0nm,0.8s,baz=278,slow=8.3,SNR=11
DLBC LR LR 02 26 31.9
comp=Z,65nm,18.0s,baz=308,slow=40
DLBC Dease Lake 55.20 40 *eP* **P 01 59 13.6 +2.4**
comp=Z,10nm,0.9s
SDSI Sungai Dareh 55.79 233 P P 01 59 16.1 +0.3
SMRI Semarang 55.96 219 P P 01 59 18.8 +1.8
AB31 Akbulak array 56.21 309 *i* P **P 01 59 18.4 0.0**
AB31 pmax pmax
comp=Z,7.0nm,0.5s
ABKAR Akbulak array 56.21 309 *eP* **P 01 59 18.5 +0.1**
comp=Z,53nm,1.3s
PDSI Padang 56.36 233 P P 01 59 18.9 -1.0
SNSI Sinabang, Aceh 56.43 240 P P 01 59 19.6 -0.8
GSI Gunungsitoli 56.45 238 P P 01 59 19.3 -1.3
JCJI Jatiwangi 56.56 222 P P 01 59 24.7 +3.5
NGP Nagpur 56.59 270 *eP* **P 01 59 20.7 -0.9**
NGP IAmb IAmb 01 59 22.0
comp=Z,32nm,1.2s
BHPL Bhopal 56.63 273 *eP* **P 01 59 21.4 -0.5**
BHPL IAmb IAmb 01 59 22.5
comp=Z,19nm,0.7s
UGM Wanagama 56.67 219 P P 01 59 24.0 +1.9
YOGI Yogyakarta 56.70 219 P P 01 59 23.5 +1.2
AKTO Aktyubinsk 56.83 310 P P 01 59 22.2 -0.6
AKTO pmax pmax
comp=Z,21nm,0.8s
KBL Kabul 56.91 289 *eP* **P 01 59 23.6 -0.3**
comp=Z,36nm,0.9s
KBL Kabul 56.91 289 *eP* **P 01 59 23.6 -0.3**
KBL pmax pmax
comp=Z,36nm,0.9s
PRGR Permogore 58.10 326 *eP* **P 01 59 30.7 -0.9**
PRGR *e*PP* **pP 01 59 42.1 -2.6**
PRGR *e* 02 01 38.2
PRGR pmax pmax
comp=Z,39nm,1.0s
RES Resolute Bay 58.78 15 P **P 01 59 36.2 +0.1**
comp=Z,21nm,0.8s,baz=310,slow=7.1,SNR=45
RES LR LR 02 28 47.8
comp=Z,110nm,19.1s,baz=262,slow=40
RES Resolute Bay 58.78 15 *eP* **P 01 59 36.2 +0.1**
comp=Z,23nm,0.8s
RES Resolute Bay 58.78 15 *eP* **P 01 59 36.2 +0.1**
RES pmax pmax
comp=Z,23nm,0.8s
BBB Bella Bella 58.84 46 LR LR 02 22 00.3
comp=Z,76nm,21.1s,baz=246,slow=33
HYB Hyderabad 59.18 267 *i* P **P 01 59 39.0 -0.8**
APA Apatity 59.63 335⇑ *i P* **P 01 59 40.7 -1.4**
YKA Yellowknife Ar 60.18 31 P **P 01 59 45.9 0.0**
comp=Z,2.5nm,0.9s,baz=300,slow=7.0,SNR=5.7
YKA LR LR 02 28 10.8
comp=Z,7.4nm,20.1s,baz=308,slow=38
YKB5 Yellowknife Ar 60.18 31 *eP* **P 01 59 45.9 0.0**
FITZ Fitzroy Crossi 60.62 198 P **P 01 59 50.1 +0.7**
comp=Z,8.1nm,0.8s,baz=349,slow=7.2,SNR=5.3
FITZ Fitzroy Crossi 60.62 198 *eP* **P 01 59 50.1 +0.7**
comp=Z,14nm,1.0s
ARA0 ARCESS Array S 60.80 339 *eP* **P 01 59 50.1 +0.1**
ARCES ARCESS Array B 60.80 339 P **P 01 59 50.1 +0.1**
comp=Z,9.4nm,0.5s,baz=52,slow=7.6,SNR=20
ARCES LR LR 02 31 58.8
comp=Z,88nm,18.7s,baz=88,slow=42
ARE0 ARCESS Array S 60.80 339 *eP* **P 01 59 50.1 +0.1**
WB2 Warramunga Arr 60.88 189 *eP* **P 01 59 50.9 -0.2**
comp=Z,18nm,0.9s
WR1 Warramunga Arr 60.88 189 *eP* **P 01 59 50.5 -0.7**
WRA Warramunga Arr 60.88 189 P **P 01 59 50.5 -0.7**
comp=Z,7.3nm,0.7s,baz=0.7,slow=6.9,SNR=13
KLMR Klimovskoe 61.05 327 *eP* **P 01 59 49.2 -2.7**
KLMR *e* 02 02 02.7
KLMR pmax pmax
comp=Z,60nm,1.2s
KLMR Klimovskoe 61.05 327 *eP* **P 01 59 49.2 -2.7**
KLMR AMP 02 00 07.3
comp=Z,60nm,1.2s
KLMR *e*PP **PP 02 02 02.7 -3.6**
TULEG Thule 61.29 8 *eP* **P 01 59 52.7 -0.6**
comp=Z,22nm,0.7s
KTK1 Kautokeino 61.75 339 *eP* **P 01 59 57.1 +0.6**
DAG Danmarks Havn 62.12 355⇑ *i P* **P 01 59 58.6 -0.3**
DAG pmax pmax
comp=Z,11nm,0.9s
DAG Danmarks Havn 62.12 355⇑ *i P* **P 01 59 58.6 -0.3**
comp=Z,13nm,0.9s
TRO Tromso 62.45 341 *eP* **P 02 00 01.3 +0.2**
GEYT Alibeck 62.78 298 P **P 02 00 03.9 -0.1**
comp=Z,12nm,0.8s,baz=35,slow=3.6,SNR=29
GEYT LR LR 02 29 24.7
comp=Z,221nm,18.8s,baz=20,slow=38
GYA0B ALIBECK ARRAY 62.78 298 *eP* **P 02 00 03.2 -0.8**
comp=Z,19nm,0.9s
LLLB Lilloet 63.01 45 *ep*P pP 02 00 21.7 +3.2
GOA Goa 63.94 268 *eP* **P 02 00 12.1 +0.3**
AS31 Alice Springs 64.60 189 *eP* **P 02 00 16.1 +0.2**
comp=Z,3.2nm,0.8s
ASAR Alice Springs 64.60 189 P **P 02 00 15.8 -0.1**
comp=Z,11nm,0.7s,baz=9.2,slow=5.8,SNR=45
ASAR LR LR 02 28 11.8
comp=Z,54nm,21.9s,baz=20,slow=36
STEI Steigen 64.61 341 *eP* **P 02 00 15.2 -0.2**
MOS Moscow 64.75 323 *eP* **P 02 00 15.3 -1.2**
MOS *e*PP* **pP 02 00 29.3 -0.6**
MOS *e* 02 02 37.6
MOS pmax pmax
comp=Z,31nm,0.9s
LOF Lofoten 64.89 341 *eP* **P 02 00 16.3 -0.9**
PUL Pulkovo 65.40 329⇓ *eP* **P 02 00 21.1 +0.4**
PUL pmax pmax
comp=Z,47nm,0.8s
OBN Obninsk 65.61 323 *eP* **P 02 00 22.1 0.0**
OBN *ep*P **pP 02 00 34.5 -1.0**
OBN Obninsk 65.61 323*c i P* **P 02 00 21.5 -0.6**
OBN *i *PP* **pP 02 00 35.0 -0.4**
OBN *i* 02 00 52.3
OBN *i* 02 02 45.2
OBN pmax pmax
comp=Z,50nm,1.3s
OBN MLR MLR
comp=Z,301nm,17.0s
FIA1 FINESS Array S 65.90 332 *eP* **P 02 00 23.7 -0.2**
comp=Z,62nm,0.9s
FIA0 FINESS Array S 65.90 332 *eP* **P 02 00 23.7 -0.2**
FIA0 FINESS Array S 65.90 332 *eP* **P 02 00 23.7 -0.2**
FINES FINESS Array B 65.90 332 P **P 02 00 23.7 -0.2**
comp=Z,35nm,0.8s,baz=43,slow=7.8,SNR=127
FINES pP **pP 02 00 37.9 +0.7**
comp=Z,61nm,1.0s,baz=47,slow=7.5,SNR=15
FINES LR LR 02 31 10.4
comp=Z,272nm,21.0s,baz=44,slow=38
LPSR Galich'ya Gora 65.98 320 *eP* **P 02 00 24.1 -0.4**
LPSR *e*SP* **pP 02 00 38.2 +0.3**
LPSR pmax pmax
comp=Z,30nm,0.9s
MOR8 Moi Rana 66.15 340 *eP* **P 02 00 24.0 -1.4**
DZM Mont Dzumac 66.38 156 *e*LR LR 02 20 35.5
comp=Z,238nm,22.6s
VSR Storozhevoye 66.68 318 *eP* **P 02 00 28.8 -0.2**
VSR *e*SP* **pP 02 00 42.7 +0.2**
VSR pmax pmax
comp=Z,40nm,1.1s
VORD Divnogorie 66.76 318 *eP* **P 02 00 29.3 -0.3**
VORD *e*SP* **pP 02 00 42.6 -0.4**
VORD pmax pmax
comp=Z,30nm,1.3s
MAK Makhachkala 66.83 307 *eP* **P 02 00 29.2 -0.9**
MAK *eS* **S 02 09 18.6 -0.3**
MAK pmax pmax
comp=Z,67nm,0.9s
MAK MLR MLR
comp=Z,197nm,15.0s
NEW Newport 66.90 46 LR LR 02 27 10.3
comp=Z,81nm,20.8s,baz=314,slow=34
SUMG Summit 66.95 0 *eP* **P 02 00 31.6 +0.7**
comp=Z,34nm,0.9s
SUMG Summit 66.95 0 *eP* **P 02 00 31.6 +0.7**
SUMG pmax pmax
comp=Z,34nm,0.9s
SUMG Summit 66.95 0 *i P* **P 02 00 31.5 +0.6**
comp=Z,98nm,1.0s
PINE Pine Mountain 67.32 51 *eP* **P 02 00 35.6 +2.0**
comp=Z,12nm,0.8s
AKT Akhty 67.53 306⇑ *iP* **P 02 00 34.7 -0.1**
AKT *e* 02 00 59.5
AKT *e* 02 03 04.3
AKT pmax pmax
comp=Z,29nm,0.7s
VSU Vasula 67.66 329*ceP* **P 02 00 35.0 -0.1**
VSU pmax pmax
comp=Z,123nm,1.3s
VSU Vasula 67.66 329 *eP* **P 02 00 35.0 -0.1**
VSU IAmb IAmb 02 00 50.9
comp=Z,162nm,0.8s
GROC Groznyy 67.71 308 *eP* **P 02 00 34.8 -0.9**
GROC *e*PP* **pP 02 00 48.7 -0.5**
GROC *e*SP* **sP 02 00 54.7 +0.1**
GROC *e* 02 01 01.4
GROC *eS* **S 02 09 27.8 -1.8**
GROC *e* 02 09 45.3
GROC pmax pmax
comp=Z,23nm,1.3s
GOF Gofitskoye 68.23 311⇑ *eP* **P 02 00 39.5 +0.5**
GOF pmax pmax
comp=Z,81nm,0.9s
BMO Blue Mountains 68.81 49 *eP* **P 02 00 44.0 +1.3**
comp=Z,5.6nm,1.0s
BMO Blue Mountains 68.81 49 *eP* **P 02 00 44.0 +1.3**
BMO pmax pmax
comp=Z,6.0nm,1.0s
NCK Nalchik 68.84 310⇓ *eP* **P 02 00 43.8 +1.0**
NCK pmax pmax
comp=Z,24nm,1.0s
J08A Circle Bar Ran 69.03 50 *eP* **P 02 00 46.4 +2.2**
J08A *ep*P **sP 02 01 01.7 -1.1**
ZEI Tsey 69.08 309 *eP* **P 02 00 43.1 -1.5**
ZEI pmax pmax
comp=Z,17nm,0.9s
KIV Kislovodsk 69.10 310 *eP* **P 02 00 45.3 +0.8**
comp=Z,55nm,0.9s
KIV Kislovodsk 69.10 310⇑ *i P* **P 02 00 46.0 +1.5**
KIV Kislovodsk 69.10 310 *i P* **P 02 00 45.8 +1.3**
SNR=6.0
KIV Kislovodsk 69.10 310 *eP* **P 02 00 45.4 +0.9**
KIV pmax pmax
comp=Z,191nm,1.1s
KIV MLR MLR
comp=Z,340nm,17.0s
KBZ Khabaz 69.11 310 P **P 02 00 45.1 +0.7**
comp=Z,19nm,0.9s,baz=57,slow=4.4,SNR=25
KBZ LR LR 02 36 33.6
comp=Z,265nm,18.3s,baz=43,slow=41
TBLG Delisi 69.21 307 *eP* **P 02 00 46.0 +0.8**
comp=Z,19nm,0.9s
TBLG *ep*P **pP 02 00 54.9 -3.7**
TBLG Delisi 69.21 307 *eP* **P 02 00 46.0 +0.8**
TBLG *e*PP* **pP 02 00 54.9 -3.7**
TBLG pmax pmax
comp=Z,19nm,0.9s
MSO Missoula 69.49 45 *eP* **P 02 00 47.9 +1.0**
comp=Z,7.2nm,1.1s
NEY Neytrino 69.50 310⇓ *eP* **P 02 00 47.9 +0.8**
NEY pmax pmax
comp=Z,3.0nm,0.8s
IZAR Zarasai 69.70 327 *eP* **P 02 00 48.1 +0.2**
IZAR IAmb IAmb 02 01 03.8
comp=Z,22nm,0.9s
IDID Didziasalis 69.80 327 *eP* **P 02 00 48.8 +0.3**
IDID IAmb IAmb 02 01 04.5
comp=Z,39nm,1.1s
SLIT Slitere, Latvi 69.94 330 *eP* **P 02 00 48.2 -1.0**
SLIT IAmb IAmb 02 01 04.7
comp=Z,199nm,0.8s
BEKR Beckworth 69.98 54 *eP* **P 02 00 51.7 +1.6**
comp=Z,11nm,0.9s
IIGN Ignalina 69.99 327 *eP* **P 02 00 50.1 +0.4**
IIGN IAmb IAmb 02 01 05.8
comp=Z,36nm,0.8s
NACGM Naroch 70.06 326 *e* pP 02 01 05.0 +1.5
FFC Flin Flon 70.13 34 *eP* **P 02 00 51.0 +0.5**
comp=Z,18nm,1.0s
FFC Flin Flon 70.13 34 *i P* **P 02 00 51.2 +0.6**
GNI Garni 70.15 306 P **P 02 00 52.2 +1.1**
GNI Garni 70.15 306⇓ *eP* **P 02 00 52.7 +1.5**
GNI pmax pmax
comp=Z,98nm,1.3s
FCC Fort Churchill 70.30 28 *eP* **P 02 00 51.5 0.0**
comp=Z,9.3nm,0.8s
FCC Fort Churchill 70.30 28 *eP* **P 02 00 51.5 0.0**
FCC pmax pmax
comp=Z,9.0nm,0.8s
PAHR Pah Rah Range 70.67 54 *eP* **P 02 00 55.7 +1.3**
comp=Z,11nm,1.0s
HRY Holter Researc 70.69 45 *eP* **P 02 00 55.5 +1.2**
HRY *ep*P **pP 02 01 05.1 -2.6**
PABE Paberze 70.80 328 *eP* **P 02 00 55.0 +0.4**
PABE IAmb IAmb 02 01 10.3
comp=Z,84nm,0.8s
NC405 NORSAR Array S 70.85 337 *eP* **P 02 00 55.0 +0.2**
comp=Z,96nm,1.3s
SHME Shamm 70.86 288 *i P* **P 02 00 55.3 -0.2**
SNR=8.1
DOMB Dombas 70.86 339 *eP* **P 02 00 55.1 +0.2**
NC303 NORSAR Array S 70.86 337 *eP* **P 02 00 55.0 0.0**
comp=Z,46nm,1.0s
NC204 NORSAR Array S 71.00 338 *eP* **P 02 00 55.9 0.0**
comp=Z,116nm,1.2s
NC204 NORSAR Array S 71.00 338 *eP* **P 02 00 56.0 +0.2**
NB201 NORSAR Array S 71.03 337 *eP* **P 02 00 56.0 +0.1**
comp=Z,108nm,1.3s
NB201 NORSAR Array S 71.03 337 *eP* **P 02 00 55.4 -0.5**
NB2 NORSAR Subarra 71.06 337 P **P 02 00 55.7 -0.5**
comp=Z,26nm,1.0s,baz=37,slow=6.2
NB2 NORSAR Subarra 71.06 337 P **P 02 00 55.7 -0.5**
baz=37,slow=6.2
NB200 NORSAR Array S 71.06 337 *eP* **P 02 00 56.0 -0.2**
NB200 *ep*P **pP 02 01 10.7 +1.1**
NOA NORSAR Array B 71.06 337 P **P 02 00 56.0 -0.2**
comp=Z,12nm,0.8s,baz=37,slow=6.0,SNR=71
NOA pP **pP 02 01 10.7 +1.1**
comp=Z,1.9nm,0.5s,baz=34,slow=2.8,SNR=13
DLMT Dillon 71.13 46 *eP* **P 02 00 58.8 +1.8**
comp=Z,9.0nm,0.8s
MDH Madha 71.19 287 P **P 02 00 57.4 -0.1**
NBO00 NORSAR Array S 71.19 337 *eP* **P 02 00 57.0 0.0**
comp=Z,46nm,0.9s
NBO00 *ep*P **pP 02 01 10.0 -0.4**
NBO00 NORSAR Array S 71.19 337 *eP* **P 02 00 56.9 0.0**
YERR Yerington 71.20 55 *eP* **P 02 00 59.6 +2.0**
YERR *ep*P **pP 02 01 11.7 +0.7**
PBUR Paburg 71.23 329 *eP* **P 02 00 57.0 -0.2**
PBUR IAmb IAmb 02 01 12.9
comp=Z,58nm,0.9s
HLID Hailey 71.25 48 *eP* **P 02 00 59.2 +1.4**
HLID *ep*P **pP 02 01 11.2 0.0**
MSFE Esma-Masafi 71.25 288 P **P 02 00 58.2 +0.2**
NAO01 NORSAR Array S 71.31 337 *eP* **P 02 00 57.6 0.0**
comp=Z,45nm,1.1s
NAO01 NORSAR Array S 71.31 337 *eP* **P 02 00 57.9 +0.2**
UOSS Minazif 71.47 287 *eP* **P 02 00 59.2 0.0**
comp=Z,36nm,1.0s
UOSS Minazif 71.47 287 *i P* **P 02 00 59.3 +0.1**
SNR=6.7
BOZ Bozeman (W) 71.51 45 *eP* **P 02 01 00.1 +0.8**
comp=Z,7.8nm,0.7s
BOZ Bozeman (W) 71.51 45 *eP* **P 02 01 00.1 +0.8**
BOZ pmax pmax
comp=Z,8.0nm,0.7s
BMN Battle Mountai 71.55 52 *eP* **P 02 01 01.3 +1.6**
comp=Z,8.0nm,0.9s
HATD Hatta, Dubai 71.59 287 *i P* **P 02 01 00.4 +0.5**
SNR=8.1
ASHO Ashiyiah 71.73 287 P **P 02 01 00.9 +0.1**
NAZ Nazwa, Dubai 71.84 288 P **P 02 01 01.5 +0.1**
AKASG Malin Array Be 71.85 322 P **P 02 01 00.7 -0.3**
comp=Z,7.8nm,0.5s,baz=43,slow=6.5,SNR=57
AKASG pP **pP 02 01 15.0 +0.3**
comp=Z,37nm,0.7s,baz=44,slow=6.7,SNR=28
AKASG LR LR 02 35 50.9
comp=Z,149nm,18.5s,baz=50,slow=38
AKBB Malin Array Si 71.85 322 *eP* **P 02 01 00.9 -0.1**
AKBB *ep*P **pP 02 01 15.0 +0.4**
AKBB Malin Array Si 71.85 322 *eP* **P 02 01 00.9 -0.1**
AKBB *e*PP* **pP 02 01 15.0 +0.4**
KVN Kaiserville 71.86 54 *eP* **P 02 01 03.1 +1.6**
comp=Z,13nm,0.9s
FAQ Al Faqa, Dubai 72.03 287 *i P* **P 02 01 02.6 0.0**
SNR=5.7
OSL Oslo 72.09 337 *eP* **P 02 01 03.0 +0.7**
SFJD Kangerlussuaq 72.09 5 *i P* **P 02 01 02.5 +0.3**
SFJD pmax pmax
comp=Z,14nm,0.8s
SFJD Kangerlussuaq 72.09 5 *i P* **P 02 01 02.5 +0.3**
comp=Z,14nm,0.8s
NV01 Mina Array Sit 72.12 55 *eP* **P 02 01 04.7 +1.5**
NVAR Mina Array Bea 72.12 55 P **P 02 01 04.7 +1.5**
comp=Z,2.0nm,0.8s,baz=293,slow=5.4,SNR=7.3
NVAR LR LR 02 31 56.4
comp=Z,50nm,18.2s,baz=286,slow=35
SUW Suwalki 72.19 327 *eP* **P 02 01 03.0 +0.1**
SUW *ep*P **pP 02 01 17.2 +0.8**
SUW LMZ LR 02 34 02.5
comp=Z,200nm,22.4s
SUW Suwalki 72.19 327 *eP* **P 02 01 03.1 +0.1**
SUW *e*PP* **pP 02 01 17.2 +0.8**
SUW MLR MLR
comp=Z,200nm,22.4s
SKAR Skarslia 72.19 338 *eP* **P 02 01 03.7 +0.8**
NV11 Mina Array Sit 72.21 54 *ep*P pP 02 01 21.4 +4.3
STKA Stephens Creek 72.29 181 LR LR 02 32 14.3
comp=Z,47nm,21.9s,baz=27,slow=35
ASUD Al Ashush, Dub 72.30 287 P **P 02 01 04.4 +0.3**
ALNE Al Ain 72.33 287 P **P 02 01 04.6 +0.2**
KRIK Erzurum-spir 72.34 308 *i P* **P 02 01 06.9 +2.4**
KRIK IAML_P
comp=Z,357nm,0.5s
ELK Elko 72.53 51 *eP* **P 02 01 07.2 +1.5**
comp=Z,2.6nm,0.9s
ELK Elko 72.53 51 *eP* **P 02 01 07.2 +1.5**
ELK pmax pmax
comp=Z,3.0nm,0.9s
KONO Kongsberg 72.66 337 *eP* **P 02 01 02.5 -3.2**
KONO *ep*P **pP 02 01 19.5 +0.4**
KONO Kongsberg 72.66 337*deP* **P 02 01 05.8 +0.1**
KONO pmax pmax
comp=Z,9.0nm,1.3s
STRU Stroemstad 72.68 336 *eP* **P 02 01 05.9 +0.1**
KLNR Kaliningrad 72.94 329*deP* **P 02 01 07.4 0.0**
KLNR pmax pmax
comp=Z,41nm,0.8s
IMW Indian Meadow 72.98 46 *eP* **P 02 01 10.3 +2.0**
IMW *ep*P **PcP 02 01 25.6 +0.5**
MUSM Mu-Merkez 73.00 307 *i P* **P 02 01 09.9 +1.6**
MUSM IAML_P
comp=Z,234nm,0.8s
BNGL BINGOL 73.08 307 *i P* **P 02 01 10.5 +1.6**
FXWY Fox Creek 73.10 47 *eP* **P 02 01 10.9 +1.9**
comp=Z,3.5nm,0.8s
ASK Askoy 73.20 339 *eP* **P 02 01 09.6 +0.7**
SIM Simferopol' 73.25 315*ceP* **P 02 01 09.6 +0.1**
SIM 02 01 24.0
SIM pmax pmax
comp=Z,25nm,0.9s
SIM MLR MLR
comp=Z,40nm,16.0s
SIM MLR MLR
comp=N,100nm,20.0s
ODD1 Odda 73.30 339 *eP* **P 02 01 10.1 +0.6**
KELT Kelkit 73.45 309 *i P* **P 02 01 12.4 +1.4**
KELT IAML_P
comp=Z,602nm,0.6s
R11A Troy Canyon, C 73.84 53 *eP* **P 02 01 14.6 +1.3**
comp=Z,8.7nm,1.3s
TPNV Topopah Spring 74.31 55 *eP* **P 02 01 18.5 +2.4**
comp=Z,8.7nm,1.0s
TPNV Topopah Spring 74.31 55 *eP* **P 02 01 18.5 +2.4**
TPNV pmax pmax
comp=Z,9.0nm,1.0s
MARD Mardin 74.33 306 *i P* **P 02 01 17.6 +1.4**
MARD IAML_P
comp=Z,1μm,0.7s
KEMA Kemaliye 74.47 309 *i P* **P 02 01 18.2 +1.3**
KEMA IAML_P
comp=Z,341nm,0.8s
PD31 Pinedale Array 74.48 47 *eP* **P 02 01 17.6 +0.6**
PD31 *ep*PcP **PcP 02 01 26.9 -4.5**
PDAR Pinedale Array 74.48 47 P **P 02 01 17.4 +0.4**
comp=Z,2.0nm,0.7s,baz=276,slow=3.0,SNR=22
MILM Milestii Mici 74.64 319⇑ *i P* **P 02 01 17.3 -0.3**
BEL Belsk 74.77 327 *eP* **P 02 01 19.2 +1.0**
BEL *ep*P **PcP 02 01 33.9 +1.8**
BEL LMZ LR 02 35 58.4
comp=Z,200nm,20.2s
BEL Belsk 74.77 327 *eP* **P 02 01 19.2 +1.0**
BEL *e*PP* **PcP 02 01 33.9 +1.8**
BEL MLR MLR
comp=Z,200nm,20.2s
LVV L'vov 74.85 324 *eP* **P 02 01 18.8 +0.1**
LVV *e* 02 01 33.1
HEKM Malatya_Hekimh 75.04 309 *i P* **P 02 01 22.5 +2.3**
HEKM IAML_P
comp=Z,54nm,0.1s
CUKAN kangal_SIVAS 75.05 309 *i P* **P 02 01 21.6 +1.3**
IAS Iasi 75.07 320⇑ *i P* pP 02 01 34.5 +0.8
GKP Gorka Klasztor 75.11 329 *eP* **P 02 01 20.6 +0.5**
GKP *ep*P **pP 02 01 35.5 +1.8**
GKP LMZ LR 02 34 54.3
comp=Z,100nm,22.4s
GKP Gorka Klasztor 75.11 329 *eP* **P 02 01 20.6 +0.5**
GKP *e*PP* **pP 02 01 35.5 +1.8**
GKP MLR MLR
comp=Z,100nm,22.4s
MUD Monsted U'grnd 75.41 335 *i P* **P 02 01 22.1 +0.4**
MUD Monsted U'grnd 75.41 335 *i P* **P 02 01 22.1 +0.4**
MUD Monsted U'grnd 75.41 335 *eP* **P 02 01 22.2 +0.4**
AKCD Akcadag 75.44 308 *i P* **P 02 01 24.2 +1.7**
AKCD IAML_P
comp=Z,65nm,0.2s
CUALT Altinyayla-SIV 75.49 309 *i P* **P 02 01 24.9 +2.0**
KWP Kalwaria Pacla 75.57 324 *eP* **P 02 01 24.0 +1.1**
KWP *ep*P **pP 02 01 38.0 +1.5**
KWP LMZ LR 02 37 50.2
comp=Z,300nm,17.0s
KWP Kalwaria Pacla 75.57 324 *eP* **P 02 01 24.0 +1.1**
KWP *e*PP* **pP 02 01 38.0 +1.5**
KWP MLR MLR
comp=Z,300nm,17.0s
CUSAR Sarkisla-SIVAS 75.69 310 *i P* **P 02 01 24.2 +0.2**
TLCR 75.85 318⇑ *i P* **P 02 01 24.9 +0.4**
COAL Corum-Alaca 75.87 311 *i P* **P 02 01 26.8 +1.9**
COAL IAML_P
comp=Z,203nm,0.7s
BUR08 Bucovina Ar. S 75.88 322 *eP* **P 02 01 25.3 +0.5**
comp=Z,30nm,0.8s
BURAR Bucovina Array 75.89 322⇓ *i P* **P 02 01 25.2 +0.3**
ULM Lac du Bonnet 75.94 34 LR LR 02 37 58.5
comp=Z,51nm,18.4s,baz=330,slow=38
BIZ Bicaz 75.95 321⇑ *i P* **P 02 01 26.0 +0.9**
TESR Tescani 75.99 320⇑ *i P* **P 02 01 25.8 +0.5**
MDND Maddock 76.04 38 *ep*P pP 02 01 41.5 +2.4
ILGA Ilgaz 76.06 312 *eP* **P 02 01 27.7 +1.6**
comp=Z,33nm,1.0s
MTPU Mount Pierson 76.08 52 *eP* **P 02 01 28.5 +2.0**
comp=Z,2.7nm,0.7s
CFR Carcaliu 76.20 318⇑ *i P* **P 02 01 26.7 +0.2**
GZT Gaziantep 76.27 308 *i P* **P 02 01 28.8 +1.5**
GZT IAML_P
comp=Z,33nm,0.4s
KOLS Kolonicke sedl 76.28 324 *eP* **P 02 01 27.5 +0.6**
KOLS *e* 02 01 42.4
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS Kolonicke sedl 76.28 324 *eP* **P 02 01 27.5 +0.6**
KOLS *ep*P **pP 02 01 42.4 +1.8**
SRU San Rafael Swe 76.36 50 *eP* **P 02 01 29.4 +1.6**
comp=Z,5.4nm,0.8s
STHS Stebnicka Huta 76.38 325 *ep*P pP 02 01 46.0 +4.9
SIRC Yozgat 76.39 310 *i P* **P 02 01 28.6 +0.8**
SIRC IAML_P
comp=Z,341nm,0.8s
OJC Ojcow 76.39 326 *eP* **P 02 01 28.2 +0.7**
OJC *ep*P **pP 02 01 43.2 +2.0**
OJC LMZ LR 02 37 48.4
comp=Z,200nm,20.4s
OJC Ojcow 76.39 326 *eP* **P 02 01 28.2 +0.7**
comp=Z,67nm,0.9s
OJC Ojcow 76.39 326 *eP* **P 02 01 28.3 +0.7**
OJC *e*PP* **pP 02 01 43.2 +2.0**
OJC MLR MLR
comp=Z,200nm,20.4s
VRI Vrincioaia 76.41 320⇑ *iP* **P 02 01 29.4 +1.6**

UZH	Uzhgorod	76.49	324	eP	P	02 01 28.6 +0.5
UZH				e		02 01 36.8
UZH				i		02 01 40.6
TIRR	Tirgusor	76.56	318	eP	P	02 01 29.2 +0.6
TIRR				ePcP	PcP	02 01 39.0 -1.0
TIRR	Tirgusor	76.56	318 ⇑	iP	P	02 01 29.0 +0.4
TIRR	Tirgusor	76.56	318	eP	P	02 01 29.2 +0.6
TIRR				e		02 01 39.0
HARR	Harsova	76.64	318 ⇑	iP	pP	02 01 43.1 +0.4
BMR	Baia Mare	76.65	323 ⇓	iP	P	02 01 38.8 +10
TLB	Topalu	76.66	318 ⇑	iP	P	02 01 29.7 +0.6
OZUR		76.71	320 ⇑	iP	P	02 01 30.8 +1.3
TRPA	Tarpa	76.75	323 ⇑	iP	P	02 01 30.8 +1.2
TRPA	Tarpa	76.75	323 ⇑	EP	P	02 01 30.1 +0.5
NIE	Niedzica	76.78	325	eP	P	02 01 31.1 +1.3
NIE				epP	pP	02 01 45.5 +2.1
NIE				LMZ	LR	02 38 30.4
	comp=Z,100nnm,18.5s					
NIE	Niedzica	76.78	325	eP	P	02 01 31.1 +1.3
NIE				e*PP	pP	02 01 45.5 +2.1
NIE				MLR	MLR	
	comp=Z,100nnm,18.5s					
ANDN	Andirin	76.85	308	i P	P	02 01 32.4 +1.9
ANDN				IAML_P		
	comp=Z,950nm,0.8s					
AVNS	Nevsehir-Avano	76.91	310	i P	P	02 01 32.0 +1.2
AVNS				IAML_P		
	comp=Z,458nm,0.3s					
KAMA	Osmaniye	76.92	308	i P	P	02 01 32.9 +2.0
KAMA				IAML_P		
	comp=Z,14nm,0.2s					
MANR	Mangalia	76.92	317 ⇑	iP	P	02 01 31.2 +0.6
PGOR	Pogoanele	76.97	319 ⇑	iP	P	02 01 32.4 +1.6
BR101	Keskin Array S	76.99	311	eP	P	02 01 31.7 +0.4
BR101				epP	pP	02 01 45.5 +0.5
BR101				ePP	PP	02 04 24.6 +0.2
BR131	Keskin Array S	76.99	311	eP	P	02 01 31.8 +0.5
	comp=Z,7.6nm,0.8s					
BRTR	Keskin Array B	76.99	311	P	P	02 01 31.7 +0.4
	comp=Z,5.3nm,0.6s,baz=69,slow=3.8,SNR=34					
BRTR				pP	pP	02 01 45.5 +0.5
	comp=Z,4.8nm,0.8s,baz=67,slow=3.2,SNR=7.9					
BRTR				PP	PP	02 04 24.7 +0.2
	comp=Z,2.2nm,1.0s,baz=80,slow=6.8,SNR=4.2					
BRTR				LR	LR	02 40 00.4
	comp=Z,63nm,19.5s,baz=50,slow=39					
DOPR	Dopca	76.99	320 ⇑	iP	P	02 01 32.6 +1.6
MLR	Muntele Rosu	77.06	320	eP	P	02 01 32.3 +0.7
	comp=Z,22nm,1.2s					
MLR	Muntele Rosu	77.06	320	eP	P	02 01 32.3 +0.7
MLR				pmax	pmax	
	comp=Z,22nm,1.2s					
U15A	North Rim	77.08	53	eP	P	02 01 33.9 +1.8
	comp=Z,8.1nm,1.3s					
ICOR	Ion Corvin	77.11	318 ⇑	iP	P	02 01 33.0 +1.3
CJR	Cluj-Napoca	77.30	322 ⇑	iP	P	02 01 34.1 +1.3
SECR		77.33	319 ⇑	iP	P	02 01 34.1 +1.2
LANS	Liptovska Anna	77.34	326	eP	P	02 01 34.4 +1.4
LANS				e		02 01 49.0
LANS	Liptovska Anna	77.34	326	eP	P	02 01 34.4 +1.4
LANS				epP	pP	02 01 49.0 +2.4
KSP	Ksiaz	77.36	328	eP	P	02 01 34.1 +1.2
KSP				epP	pP	02 01 48.8 +2.2
KSP				LMZ	LR	02 38 00.9
	comp=Z,100nnm,22.2s					
KSP	Ksiaz	77.36	328	eP	P	02 01 34.2 +1.2
KSP				e*PP	pP	02 01 48.8 +2.2
KSP				MLR	MLR	
	comp=Z,100nnm,22.3s					
ANTO	Ankara	77.37	312	eP	P	02 01 34.5 +1.2
	comp=Z,27nm,0.8s					
ANTO				epP	pP	02 01 48.6 +1.6
ANTO	Ankara	77.37	312 ⇑	iP	P	02 01 33.9 +0.5
ANTO	Ankara	77.37	312	eP	P	02 01 34.5 +1.2
ANTO				e*PP	pP	02 01 48.6 +1.6
ANTO				pmax	pmax	
	comp=Z,27nm,0.8s					
OKC	Ostrava-Krasne	77.38	327	eP	P	02 01 33.2 +0.1
OKC				e		02 01 47.8
OKC				MLR	MLR	
	comp=Z,400nnm,28.0s					
OKC	Ostrava-Krasne	77.38	327	eP	P	02 01 33.2 +0.1
OKC				epP	pP	02 01 47.8 +1.1
OKC				AMS	AMS	02 37 50.0
	comp=Z,400nnm,28.0s					
BR231	Keskin MP Arra	77.40	312	eP	P	02 01 34.8 +1.2
	comp=Z,21nm,0.8s					
AGMN	Agassiz Nation	77.41	36	eP	P	02 01 33.0 -0.3
AGMN				ePcP	PcP	02 01 42.3 -1.4
VOIR		77.54	320 ⇑	iP	P	02 01 34.8 +0.6
OSTC	Ostas	77.61	328	eP	P	02 01 35.1 +0.7
OSTC				AMS	AMS	02 38 00.0
	comp=Z,100nnm,14.8s					
CHVC	Chvalec	77.65	328	eP	P	02 01 35.3 +0.7
CHVC				ex	x	02 01 49.4
CHVC				AMS	AMS	02 38 00.0
	comp=Z,200nnm,27.2s					
DRGR		77.66	322 ⇓	iP	P	02 01 35.7 +0.9
MORC	Moravsky Berou	77.67	327	eP	P	02 01 35.6 +0.8
	comp=Z,28nm,0.9s					
MORC	Moravsky Berou	77.67	327 ⇑	iP	P	02 01 35.6 +0.8
MORC	Moravsky Berou	77.67	327	eP	P	02 01 35.6 +0.8
MORC				pmax	pmax	
	comp=Z,28nm,0.9s					
MORC	Moravsky Berou	77.67	327	eP	P	02 01 35.4 +0.6
PV10	Paradox Valley	77.71	50	eP	P	02 01 37.6 +2.2
	comp=Z,15nm,0.9s					
DPC	Dobruska-Polom	77.73	328	eP	P	02 01 36.0 +0.9
DPC				e		02 01 50.5
DPC				MLR	MLR	
	comp=Z,100nnm,20.0s					
DPC	Dobruska-Polom	77.73	328	eP	P	02 01 36.0 +0.9
DPC				epP	pP	02 01 50.5 +1.7
DPC				AMS	AMS	02 38 40.0
	comp=Z,100nnm,20.0s					
UPC	Upice	77.73	328	eP	P	02 01 35.8 +0.7
UPC				e		02 01 50.6
UPC				MLR	MLR	
	comp=Z,200nm,15.6s					
UPC	Upice	77.73	328	eP	P	02 01 35.8 +0.7
UPC				epP	pP	02 01 50.6 +1.9
UPC				AMS	AMS	02 38 40.0
	comp=Z,200nm,15.6s					
PV22	Blue Mesa, Par	77.75	49	eP	P	02 01 37.0 +1.3
	comp=Z,12nm,1.4s					
ARR	Arges	77.79	320 ⇑	iP	P	02 01 37.2 +1.6
PV17	East Wray Mesa	77.82	50	eP	P	02 01 37.8 +1.8
	comp=Z,10nm,0.9s					
PV16	Nyswonger Mesa	77.82	50	eP	P	02 01 37.6 +1.5
	comp=Z,4.5nm,0.7s					
MDUB	Mudurnu	77.85	313	eP	P	02 01 37.0 +1.0
	comp=Z,131nm,0.9s					
PV18	Skein Mesa, Pa	77.87	50	eP	P	02 01 38.2 +1.8
	comp=Z,10nm,1.3s					
PSZ	Piszkesteto	78.09	325	eP	P	02 01 37.3 +0.1
	comp=Z,26nm,0.9s					
PSZ	Piszkesteto	78.09	325 ⇑	iP	P	02 01 37.2 +0.1
PSZ	Piszkesteto	78.09	325	eP	P	02 01 37.3 +0.1
PSZ				pmax	pmax	
	comp=Z,26nm,0.9s					
PSZ	Piszkesteto	78.09	325 ⇑	EP	P	02 01 37.1 -0.1
VYHS	Vyhne	78.11	326	eP	P	02 01 38.1 +0.9
VYHS				e		02 01 52.8
VYHS				pmax	pmax	
	comp=Z,7.0nm,1.0s					
VYHS	Vyhne	78.11	326	eP	P	02 01 38.1 +0.9
VYHS				epP	pP	02 01 52.8 +1.9
KOLL	Kolacno	78.23	326	eP	P	02 01 38.9 +1.0
BRG	Berggiesshubel	78.25	330	i P	P	02 01 38.2 +0.3
	comp=Z,10nm,1.1s					
BRG				e		02 01 52.0
	comp=Z,11nm,1.0s					
BRG	Berggiesshubel	78.25	330	i P	P	02 01 38.2 +0.3
BRG				e		02 01 52.0
BRG				pmax	pmax	
	comp=Z,10.0nm,1.1s					
BRG				pmax	pmax	
	comp=Z,11nm,1.0s					
CLL	Collm	78.26	330	eP	P	02 01 37.6 -0.4
	comp=Z,30nm,1.1s					
CLL	Collm	78.26	330 ⇑	iP	P	02 01 37.8 -0.2
	comp=Z,22nm,0.9s					
CLL				i PcP	PcP	02 01 45.2 -2.0
CLL				i pP	pP	02 01 52.7 +1.1
	comp=Z,28nm,1.0s					
CLL				ePP	PP	02 04 34.0 -0.5
CLL				Lm	MLR	02 37 00.0
	comp=Z,100nm,20.8s					
CLL	Collm	78.26	330 ⇑	iP	P	02 01 37.8 -0.2
CLL				i *PP	pP	02 01 52.7 +1.1
CLL				pmax	pmax	
	comp=Z,22nm,0.9s					
PVCC	Panska Ves	78.28	329	eP	P	02 01 38.9 +0.8
PVCC				e		02 01 46.0
PVCC				e		02 01 52.6
PVCC				MLR	MLR	
	comp=Z,200nm,18.7s					
PVCC	Panska Ves	78.28	329	eP	P	02 01 38.9 +0.8
PVCC				ePCP	PcP	02 01 46.0 -1.4
PVCC				epP	pP	02 01 52.6 +0.8
PVCC				AMS	AMS	02 39 10.0
	comp=Z,200nm,18.7s					
JAVC	Velka Javorina	78.33	326	eP	P	02 01 40.2 +1.7
VRAC	Vranov	78.43	327 ⇑	iP	P	02 01 40.0 +1.0
VRAC	Vranov	78.43	327	eP	P	02 01 39.9 +1.0
SIRR	Siria	78.54	323 ⇑	iP	P	02 01 40.1 +0.5
GZR	Gura Zlata	78.66	321 ⇑	iP	P	02 01 41.0 +0.6
ISCO	Idaho Springs	78.67	47	eP	P	02 01 42.3 +1.4
	comp=Z,11nm,1.4s					
ISCO	Idaho Springs	78.67	47	eP	P	02 01 42.3 +1.4
ISCO				pmax	pmax	
	comp=Z,11nm,1.4s					
GOPC	GO Pecny, Ondr	78.68	329	eP	P	02 01 40.4 0.0
GOPC				e		02 01 55.3
GOPC				MLR	MLR	
	comp=Z,200nm,18.9s					
GOPC	GO Pecny, Ondr	78.68	329	eP	P	02 01 40.4 0.0
GOPC				epP	pP	02 01 55.3 +1.3
GOPC				AMS	AMS	02 39 20.0
	comp=Z,200nm,18.9s					
KRUC	Moravsky	78.70	327	eP	P	02 01 41.2 +0.7
PRU	Pruhonice	78.72	329	eP	P	02 01 41.0 +0.5
PRU				e		02 01 55.6
PRU				MLR	MLR	
	comp=Z,200nm,18.2s					
PRU	Pruhonice	78.72	329	eP	P	02 01 41.0 +0.5
PRU				epP	pP	02 01 55.6 +1.4
PRU				AMS	AMS	02 39 30.0
	comp=Z,200nm,18.2s					
MVCO	Mesa Verde	78.81	50	eP	P	02 01 42.9 +1.3
	comp=Z,4.8nm,0.9s					
SRO	Srobarova	78.86	325	eP	P	02 01 42.7 +1.4
SRO				e		02 01 57.4
SRO	Srobarova	78.86	325	eP	P	02 01 42.7 +1.4
SRO				epP	pP	02 01 57.4 +2.4
MODS	Modra-Piesok	78.87	326	eP	P	02 01 41.6 +0.2
MODS				e		02 01 56.7
MODS				pmax	pmax	
	comp=Z,17nm,1.1s					
MODS	Modra-Piesok	78.87	326	eP	P	02 01 41.6 +0.2
MODS				epP	pP	02 01 56.7 +1.6
VLAD	Vladila	78.90	320 ⇑	iP	P	02 01 42.1 +0.5
X16A	Lo Mia Camp, P	78.93	54	eP	P	02 01 44.0 +1.8
X16A				epP	pwP	02 01 59.3 +1.4
PHSR	Pinarhisar	79.02	316 ⇑	iP	P	02 01 43.5 +1.2
BZS	Buzias	79.04	322 ⇓	iP	P	02 01 42.9 +0.5
HERR	Herculane	79.21	321 ⇑	iP	P	02 01 43.2 -0.1
CSKK	Cskako	79.23	325	EP	pP	02 01 56.1 -1.0
NKC	Novy Kostel	79.33	330	eP	P	02 01 44.4 +0.5
NKC	Novy Kostel	79.33	330	eP	P	02 01 44.4 +0.5
PUNG	Punghina	79.41	321 ⇑	iP	P	02 01 45.1 +0.7
EYMN	Ely	79.56	34	eP	P	02 01 44.9 -0.3
EYMN				epP	pP	02 01 58.6 -0.2
TOTH	TOTAH	79.60	305	eP	P	02 01 46.6 +0.8
SOP	Sopron	79.71	326	EP	P	02 01 47.0 +1.0
KHC	Kasperske Hory	79.78	329	eP	P	02 01 47.1 +0.7
	comp=Z,8.0nm,0.9s					
KHC	Kasperske Hory	79.78	329	eP	P	02 01 47.1 +0.7
KHC				pmax	pmax	
	comp=Z,8.0nm,0.9s					
KHC	Kasperske Hory	79.78	329	eP	P	02 01 47.1 +0.7
KHC				epP	pP	02 02 01.8 +1.7
KHC				AMS	AMS	02 39 40.0
	comp=Z,200nm,13.6s					
CONA	Conrad Observa	79.81	327	eP	P	02 01 47.7 +1.1
	comp=Z,14nm,0.9s,SNR=11					
CONA				epP	pP	02 02 02.6 +2.3
	comp=Z,14nm,0.9s					
BRBR	Barbar	79.86	305	eP	P	02 01 47.2 -0.1
MORH	Mrgy, Hungar	79.94	324	eP	P	02 01 47.0 -0.2
MORH	Mrgy, Hungar	79.94	324	EP	P	02 01 47.0 -0.2
GEC2	GERESS Array S	79.96	328	eP	P	02 01 47.9 +0.4
GEC2				epP	pP	02 01 58.4 -2.8
GEC2	GERESS Array S	79.96	328	eP	P	02 01 47.9 +0.4
GEC2				e*PP	pP	02 01 58.4 -2.8
GERES	GERESS Array B	79.96	328	P	P	02 01 47.8 +0.3
	comp=Z,4.8nm,0.8s,baz=34,slow=5.2,SNR=31					
GERES				pP	pP	02 02 02.5 +1.3
	comp=Z,5.4nm,0.8s,baz=41,slow=6.1,SNR=11					
GERES				LR	LR	02 40 33.2
	comp=Z,112nm,19.3s,baz=60,slow=38					
RAYN	Ar Rayn	80.00	292	eP	P	02 01 48.1 +0.1
	comp=Z,14nm,0.6s					
RAYN	Ar Rayn	80.00	292	i P	P	02 01 48.2 +0.1
	SNR=18					
RAYN	Ar Rayn	80.00	292	eP	P	02 01 48.1 +0.1
RAYN				pmax	pmax	
	comp=Z,14nm,0.6s					
FRGS	Fruska Gora	80.22	323 ⇑	iP	P	02 01 48.9 +0.1
GRA1	Grafenberg Arr	80.24	330	eP	P	02 01 49.4 +0.6
	comp=Z,31nm,0.9s					
GRF	Grafenberg Arr	80.24	330	eP	P	02 01 49.4 +0.6
GRF				pmax	pmax	
	comp=Z,31nm,0.9s					
GRFO	Grafenberg	80.24	330	eP	P	02 01 50.2 +1.4
	comp=Z,35nm,0.9s					
GRFO				epP	pP	02 02 03.7 +1.1
GRFO	Grafenberg	80.24	330	eP	P	02 01 50.2 +1.4
GRFO				e*PP	pP	02 02 03.7 +1.1
GRFO				pmax	pmax	
	comp=Z,35nm,0.9s					
ECSD	EROS Data Cent	80.48	39	eP	P	02 01 50.3 0.0
	comp=Z,11nm,1.1s					
ARSA	Arzberg	80.49	326	eP	P	02 01 50.8 +0.6
	comp=Z,4.6nm,0.8s,SNR=6.2					
ARSA				epP	pP	02 02 05.6 +1.7
	comp=Z,4.7nm,0.8s					
VTS	Vitosha	80.50	319	eP	P	02 01 50.7 +0.2
	comp=Z,32nm,0.9s					
VTS	Vitosha	80.50	319 ⇓	iP	P	02 01 50.8 +0.2
VTS	Vitosha	80.50	319	eP	P	02 01 50.7 +0.2
VTS				pmax	pmax	
	comp=Z,32nm,0.9s					
MOA	Molln	80.53	328	eP	P	02 01 50.8 +0.4
	comp=Z,4.7nm,1.1s					
MOA				epP	pP	02 02 06.6 +2.5
	comp=Z,12nm,1.6s					
E38A	The Farm, Brul	80.58	34	eP	P	02 01 50.4 -0.3
	comp=Z,21nm,1.2s					
DIVS	Divibare	80.95	322 ⇑	iP	P	02 01 52.7 -0.1
EZN	Ezine	80.95	316 ⇓	iP	P	02 01 53.5 +0.8
PERS	Pernice	81.14	326	i P	P	02 01 54.1 +0.4
PERS				i		02 02 08.9
SOKA	Soboth	81.14	326	eP	P	02 01 54.1 +0.3
	comp=Z,25nm,0.8s,SNR=20					
SOKA				epP	pP	02 02 09.3 +1.8
	comp=Z,22nm,0.8s					
MEM	Membach	81.33	334	x	P	02 01 54.8 +0.2
MEM				PcP	PcP	02 01 59.7 -1.0
MEM				x	x	02 02 06.2
MEM				x	x	02 02 11.5
BBLS	Lazići	81.40	322 ⇑	iP	P	02 01 55.8 +0.6
HAPS	Han Pijesak,Bl	81.44	323	eP	P	02 01 54.9 -0.6
OBKA	Obir	81.48	327	eP	P	02 01 55.7 +0.1
	comp=Z,11nm,0.7s,SNR=8.7					
OBKA				epP	pP	02 02 10.8 +1.4
	comp=Z,11nm,0.8s					
SCHQ	Schefferville	81.52	17	P	P	02 01 55.9 +0.3
	comp=Z,5.1nm,0.5s,baz=14,slow=7.3,SNR=4.1					
SCHQ				LR	LR	02 42 34.6
	comp=Z,39nm,18.2s,baz=336,slow=39					
SCHQ	Schefferville	81.52	17	eP	P	02 01 55.9 +0.3
	comp=Z,8.1nm,0.8s					
KBA	Koelnbreinsper	81.52	328	eP	P	02 01 57.1 +1.2
	comp=Z,9.5nm,0.7s,SNR=9.3					
ANMO	Albuquerque	81.57	51 ⇓	eP	P	02 01 58.0 +1.6
ANMO				pmax	pmax	
	comp=Z,2.0nm,1.3s					
CRES	Cresnjev	81.64	326 ⇑	iP	P	02 01 56.2 -0.1
RAR	Rarotonga	81.72	127	LR	LR	02 31 12.8
	comp=Z,109nm,21.3s,baz=296,slow=30					
BLY	Banja Luka	81.73	324	eP	P	02 01 57.4 +0.6
	comp=Z,10.0nm,1.1s					
BLY	Banja Luka	81.73	324 ⇓	iP	P	02 01 55.8 -1.0
BLY	Banja Luka	81.73	324	eP	P	02 01 53.7 -3.1
BCLA	Clavier	81.73	334 ⇑	P	P	02 01 56.6 -0.1
	comp=Z,9.3nm,1.0s					
STU	Stuttgart	81.75	331	eP	P	02 01 57.4 +0.5
	comp=Z,22nm,0.9s					
STU	Stuttgart	81.75	331	eP	P	02 01 57.4 +0.5
STU				pmax	pmax	
	comp=Z,22nm,0.9s					
MYKA	Terra Mystica	81.76	327	eP	P	02 01 57.0 -0.1
	comp=Z,7.8nm,0.9s,SNR=5.9					
MYKA				epP	pP	02 02 12.4 +1.6
	comp=Z,13nm,0.9s					
VAY	Valandovo	81.79	319	i P	P	02 01 57.9 +0.7
BGES	Gesves	81.83	334	P	P	02 01 55.6 -1.7
BGES				x	x	02 01 57.4
LJU	Ljubljana	81.86	326 ⇑	iP	P	02 01 57.2 -0.3
SKO	Skopje	81.86	320	i P	P	02 01 58.7 +1.1
VISS	Visnje	81.92	326	i P	P	02 01 57.6 -0.2
VISS				i		02 02 12.4
BOJS	Bojanci	81.98	326	i P	P	02 01 58.1 0.0
BOJS				i		02 02 13.0
COWI	Conover	82.01	33	eP	P	02 01 58.2 -0.1
	comp=Z,4.1nm,0.9s					
BMRD	Maredsous	82.01	334	P	P	02 01 57.2 -0.9
	comp=Z,13nm,0.8s					
BMRD				x	x	02 01 58.2
WATA	Walderalm	82.02	329	eP	P	02 01 59.3 +0.8
	comp=Z,4.1nm,0.6s,SNR=6.8					
MGRS	Mrkonjic Grad	82.03	324	eP	P	02 01 59.5 +1.0
WTTA	Wattenberg	82.06	329	eP	P	02 01 59.4 +0.6
	comp=Z,7.4nm,0.9s,SNR=6.4					
WTTA				epP	pP	02 02 14.9 +2.4
	comp=Z,18nm,1.0s					
ABTA	Abfaltersbach	82.13	328	eP	P	02 01 59.0 0.0
	comp=Z,8.0nm,1.1s					
ABTA				epP	pP	02 02 14.1 +1.3
	comp=Z,8.2nm,0.9s					
UPM	Unac-Piva	82.14	322	eP	P	02 01 59.0 -0.3
CEY	Cerknica	82.15	326	eP	P	02 01 58.7 -0.3
JAVS	Javornik	82.18	326	i P	P	02 01 58.6 -0.6
JAVS				i		02 02 13.4
MOTA	Moosalm	82.20	329	eP	P	02 01 60.0 +0.5
	comp=Z,21nm,0.8s,SNR=18					
MOTA				epP	pP	02 02 15.4 +2.2
	comp=Z,16nm,0.8s					
G40A	Rib Lake	82.22	35	eP	P	02 01 59.5 0.0
G40A				epP	pP	02 02 13.5 +0.4
RETA	Reutte	82.22	329	eP	P	02 02 00.1 +0.6
	comp=Z,23nm,0.9s,SNR=14					
RETA				epP	pP	02 02 15.6 +2.4
	comp=Z,25nm,1.0s					
SQTA	Sankt Quirin	82.26	329	eP	P	02 02 00.2 +0.5
	comp=Z,7.7nm,0.6s,SNR=6.0					
SQTA				epP	pP	02 02 15.8 +2.3
	comp=Z,18nm,1.0s					
BFO	Black Forest	82.44	331	eP	P	02 02 00.7 +0.2
BFO				epP	pP	02 02 16.4 +2.1
BFO	Black Forest	82.44	331	i P	P	02 02 01.0 +0.5
TRI	Trieste	82.45	327	eP	P	02 02 00.2 -0.4
	comp=Z,18nm,0.8s					
TRI	Trieste	82.45	327	eP	P	02 02 00.2 -0.4
TRI				pmax	pmax	
	comp=Z,18nm,0.8s					
BRY	Bratogost	82.54	322	eP	P	02 02 00.3 -1.0
PDG	Podgorica	82.57	321 ⇑	iP	P	02 02 01.5 +0.2
PDG	Podgorica	82.57	321 ⇑	iP	P	02 02 01.3 +0.1
TTG	Podgorica	82.57	321	eP	P	02 02 01.4 +0.2
	comp=Z,28nm,0.8s					
TTG	Podgorica	82.57	321	eP	P	02 02 01.4 +0.2
TTG				pmax	pmax	
	comp=Z,28nm,0.8s					
FETA	Feichten	82.61	329	eP	P	02 02 01.9 +0.2
	comp=Z,5.3nm,0.7s,SNR=9.0					
FETA				epP	pP	02 02 17.6 +2.2
	comp=Z,13nm,1.0s					
DAVA	Damuels	82.72	330	i P	P	02 02 02.7 +0.5
	comp=Z,20nm,0.9s,SNR=9.3					
DAVA				epP	pP	02 02 18.2 +2.2
	comp=Z,23nm,0.9s					
DRME	Dracevica, Mon	82.79	321 ⇑	iP	P	02 02 02.6 +0.2
OHR	Ohrid	82.83	320	i P	P	02 02 02.7 0.0
ECH	Echery	82.96	332	eP	P	02 02 03.4 +0.2
	comp=Z,11nm,0.9s					
ECH				epP	pP	02 02 16.6 -0.4
ECH	Echery	82.96	332	eP	P	02 02 03.4 +0.2
ECH				e*PP	pP	02 02 16.6 -0.4
ECH				pmax	pmax	
	comp=Z,11nm,0.9s					
TIR	Tirane	83.10	320	eP	P	02 02 04.0 -0.1
	comp=Z,21nm,0.9s					
TIR	Tirane	83.10	320	eP	P	02 02 04.0 -0.1
TIR				pmax	pmax	
	comp=Z,21nm,0.9s					
FUORN	Ofenpass-Fuorn	83.12	329	eP	P	02 02 05.2 +0.7
	comp=Z,27nm,0.8s					
I42A	Draeger Farm,	83.87	35	eP	P	02 02 08.3 +0.3
	comp=Z,8.6nm,0.8s					
I42A				epP	pP	02 02 22.3 +0.6
H43A	Windswept, Lux	83.89	34	eP	P	02 02 08.5 +0.5
	comp=Z,14nm,0.8s					
SENIN	Lac Senin/Sane	84.47	331	eP	P	02 02 11.7 +0.5
	comp=Z,12nm,1.1s					
MNTX	Cornudas Mount	84.48	52	eP	P	02 02 12.5 +1.2
MNTX				epP	pP	02 02 23.8 -1.2
VLDQ	Val d'Or	84.69	26	eP	P	02 02 11.3 -0.7
	comp=Z,20nm,0.8s					
PMOR	Pomariorio Ree	84.95	115	eT	T	03 36 01.8
	comp=Z,15nm,0.2s					
MATE	Matera	85.16	322 ⇑	iP	P	02 02 14.3 -0.2
ITM	Ithomi	85.22	316	eP	P	02 02 14.7 -0.3
	comp=Z,62nm,0.7s					
AQU	L'Aquila	85.30	325	eP	P	02 02 16.0 +0.7
	comp=Z,20nm,1.0s					
AQU	L'Aquila	85.30	325	eP	P	02 02 16.0 +0.7
AQU				pmax	pmax	
	comp=Z,20nm,1.0s					
AQU	L'Aquila	85.30	325 ⇑	iP	P	02 02 15.4 +0.1
D53A	Lac Vacive, Po	85.51	26	eP	P	02 02 15.6 -0.6
	comp=Z,13nm,1.0s					
D53A				epP	pP	02 02 30.3 +0.4
PPT	Papeete	85.60	118	LR	LR	02 34 28.7
	comp=Z,197nm,20.1s,baz=5.5,slow=31					
PPT2	Papeete2	85.61	118	eLQ	LQ	02 25 47.5
	comp=Z,4µm,32.5s					
PPT2				eLR	LR	02 29 22.3
	comp=Z,346nm,22.5s					
PPT2	Papeete2	85.61	118	eT	T	03 36 51.8
	comp=Z,6.2nm,0.3s					
BNI	Bardonecchia	85.81	330	eP	P	02 02 18.1 +0.2
	comp=Z,9.2nm,0.9s					
BNI	Bardonecchia	85.81	330	eP	P	02 02 18.1 +0.2
BNI				pmax	pmax	
	comp=Z,9.0nm,0.9s					
WMOK	Wichita Mounta	86.09	46	eP	P	02 02 20.0 +0.7
	comp=Z,3.9nm,0.9s					
WMOK	Wichita Mounta	86.09	46	eP	P	02 02 20.0 +0.7
WMOK				pmax	pmax	
	comp=Z,4.0nm,0.9s					
J47A	Sunmer	86.12	33	e

FCAR	**Ozark Folk Cen**	**88.72**	**41**	*e*P	**P**	**02 02 32.0**	**+0.2**
FCAR				*e*pP	**pP**	**02 02 46.8**	**+1.1**
MOQ	**Mont Orford**	**88.82**	**24**	*e*P	**P**	**02 02 33.0**	**+0.7**
MOQ				*e*pP	**pP**	**02 02 48.0**	**+1.9**
PBMO	**Poplar Bluff**	**88.85**	**40**	*e*P	**P**	**02 02 33.0**	**+0.6**
PBMO				*e*pP	**pP**	**02 02 48.6**	**+2.3**
MIAR	**Mount Ida**	**89.02**	**43**	*e*P	**P**	**02 02 34.0**	**+0.7**
MIAR				*e*pP	**pP**	**02 02 45.2**	**-1.9**
MIAR	**Mount Ida**	**89.02**	**43**	*e*P	**P**	**02 02 34.0**	**+0.7**
MIAR				*e**PP	**pP**	**02 02 45.2**	**-1.9**
WHAR	**Wooly Hollow**	**89.10**	**42**	*e*P	**P**	**02 02 34.2**	**+0.5**
WHAR				*e*pP	**pP**	**02 02 49.0**	**+1.5**
ALLY	**Alegheny Colle**	**89.32**	**30**	*e*P	**P**	**02 02 35.5**	**+0.9**
	comp=Z,19nm,0.8s						
ALLY				*e*pP	**pP**	**02 02 50.3**	**+1.9**
ACSO	**Alum Creek Sta**	**89.39**	**33**	*e*P	**P**	**02 02 35.6**	**+0.7**
ACSO				*e*pP	**pP**	**02 02 51.5**	**+2.7**
M54A	**Oil Creek Stat**	**89.63**	**30**	*e*P	**P**	**02 02 35.4**	**-0.7**
	comp=Z,15nm,0.9s						
M54A				*e*pP	**pP**	**02 02 49.5**	**-0.5**
TBI	**Tubuai**	**89.75**	**122**	*e*LR	LR	02 30 49.8	
	comp=Z,197nm,25.2s						
TBI	**Tubuai**	**89.75**	**122**	*e*T	T	03 42 00.7	
	comp=Z,21nm,0.4s						
N59A	**State Game Lan**	**91.58**	**28**	*e*P	**P**	**02 02 46.1**	**+0.9**
	comp=Z,16nm,1.1s						
N59A				*e*pP	**pP**	**02 03 01.5**	**+2.5**
KEST	**Kesra**	**92.53**	**324**	LR	LR	02 49 16.3	
	comp=Z,148nm,18.5s,baz=292,slow=39						
Z50A	**Ashland**	**93.87**	**39**	*e*P	**P**	**02 02 56.0**	**+0.1**
Z50A				*e*pP	**pP**	**02 03 10.5**	**+0.8**
ESDC	**Sonseca Array**	**94.28**	**335**	P	**P**	**02 02 57.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=12,slow=4.2,SNR=7.5						
ESDC				pP	**pP**	**02 03 13.1**	**+1.4**
	comp=Z,1.5nm,0.6s,baz=15,slow=4.1,SNR=7.2						
ESDC				LR	LR	02 51 18.0	
	comp=Z,63nm,18.2s,baz=40,slow=39						
TOA1	**Torodi Ar. Sit**	**115.21**	**317**	*e*PKiKP	**PKiKP**	**02 08 18.6**	**-1.4**
TORD	**Torodi Ar. Bea**	**115.22**	**317**	PKP	**PKiKP**	**02 08 18.6**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=41,slow=1.6,SNR=14						
VNDA	**Vanda**	**118.63**	**175**	PKP	**PKiKP**	**02 08 25.2**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=323,slow=4.2,SNR=3.8						
DBIC	**Dimbokro**	**124.05**	**320**	PKP	**PKPdf**	**02 08 36.9**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=349,slow=5.2,SNR=3.3						
DBIC				pPKP	**pPKPdf**	**02 08 52.1**	**+0.7**
	comp=Z,7.4nm,0.9s,baz=61,slow=4.6,SNR=2.3						
BOSA	**Boshof**	**127.97**	**263**	PKP	**PKiKP**	**02 08 45.5**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=102,slow=10.0,SNR=4.0						
SYO	**Syowa Base**	**131.90**	**208**	⇓*e*Pdiff	**Pdif**	**02 05 45.8**	**+1.6**
SYO	**Syowa Base**	**131.90**	**208**	⇑*e*sPdiff	sPdiff	02 06 06.8	
LPAZ	**La Paz**	**144.01**	**56**	PKP	PKPbc	02 09 13.3	+0.6
	comp=Z,2.4nm,0.9s,baz=26,slow=4.3,SNR=7.7						
LPAZ	**La Paz**	**144.01**	**56**	*e*PKPdf	PKPbc	02 09 13.6	+0.8
SNAA	**Sanae**	**144.56**	**198**	Pdiff	**PKPab**	**02 09 11.9**	**-0.1**
SNAA	**Sanae**	**144.56**	**198**	*e*PKPdf	**PKPab**	**02 09 12.0**	**-0.1**
SNAA	**Sanae**	**144.56**	**198**	*e*PKIKP	**PKPab**	**02 09 12.0**	**-0.1**
MNMC	**Minye Minye**	**145.13**	**61**	*e*PKPbc	**PKPdf**	**02 09 17.7**	**+1.4**
PB11	**IPOC Station P**	**145.53**	**62**	*e*PKPdf	**PKPbc**	**02 09 17.1**	**+0.2**
VNA2	**Neumayer--Watz**	**146.13**	**197**	Pdiff	**PKPbc**	**02 09 17.1**	**0.0**
VNA3	**Neumayer Olymp**	**146.39**	**196**	Pdiff	**PKPdf**	**02 09 17.0**	**+0.5**
VNA1	**Neumayer--Stat**	**146.53**	**197**	Pdiff	**PKPbc**	**02 09 17.6**	**-0.6**
LCO	**Las Campanas**	**150.54**	**77**	*e*PKPbc	**PKiKP**	**02 09 31.2**	**+0.2**
LCO	**Las Campanas**	**150.54**	**77**	*e*PKIKP	**PKiKP**	**02 09 31.2**	**+0.2**

*ISCJB **20** 01:52:24.8±0.5, 4°.99S±0°.06×153°.65E±0°.05, h56km, mb4.5/17, Error ellipse: s-maj=9.0km s-min=7.3km az=13.5*
*NEIC **20** 01:52:27.3±1.9, 4°.92S×153°.61E, h74km±10km, mb4.7/14, Error ellipse: s-maj=19.8km s-min=7.3km az=47.0*
*IDC **20** 01:52:27.7±5.5, 4°.84S×153°.54E, h75km±46km, mb3.8/7, mb1 4.1/8, mb1mx3.8/31, mbtmp4.2/8, ML2.8/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/27, Error ellipse: s-maj=32.2km s-min=24.9km az=84.0*

ISC 20 01:52:26.4±0.6, 4°.87±0°.07×153°.60E±0°.06, h56km, n31, σ1°58/33, mb4.3/18, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.58**	**295**	*e*Pn	**Pn**	**01 52 54.3**	**+2.2**
RABL				*e*Sn	**Sn**	**01 53 14.2**	**+2.7**
MANU	**Manus Island**	**6.83**	**294**	*e*Pn	**Pn**	**01 54 02.0**	**-1.9**
HNR	**Honiara**	**7.76**	**126**	LR	LR	01 57 41.3	
	comp=Z,100nm,19.1s,baz=332,slow=40						
HNR	**Honiara**	**7.76**	**126**	*e*Pn	**Pn**	**01 54 16.5**	**-0.3**
HNR				*e*Sn	**Sn**	**01 55 46.7**	**+3.4**
PMG	**Port Moresby**	**7.82**	**234**	P	**Pn**	**01 54 19.3**	**+1.7**
	7.5nm,0.3s,baz=341,slow=7.7,SNR=13						
PMG				S	**Sn**	**01 55 46.0**	**+1.1**
	4.5nm,0.3s,baz=281,slow=22,SNR=7.2						
PMG	**Port Moresby**	**7.82**	**234**	*e*Pn	**Pn**	**01 54 18.6**	**+1.0**
PMG				*e*Sn	**Sn**	**01 55 45.7**	**+0.9**
DZM	**Mont Dzumac**	**21.15**	**145**	*e*P	**P**	**01 57 05.7**	**-1.4**
	22nm,1.3s						
FAKI	**Fak Fak**	**21.39**	**274**	*e*P	**P**	**01 57 11.6**	**+2.0**
	19nm,0.8s						
WB2	**Warramunga Arr**	**24.00**	**230**	*e*P	**P**	**01 57 35.1**	**-1.0**
	8.9nm,1.0s						
WR1	**Warramunga Arr**	**24.00**	**230**	*e*P	**P**	**01 57 35.1**	**-1.0**
WRA	**Warramunga Arr**	**24.01**	**230**	P	**P**	**01 57 35.1**	**-1.0**
	2.2nm,0.5s,baz=56,slow=9.9,SNR=20						
ARMA	**Armidale**	**25.49**	**184**	*e*P	**P**	**01 57 50.3**	**+0.7**
	28nm,1.4s						
AS31	**Alice Springs**	**26.64**	**224**	*e*P	**P**	**01 57 58.9**	**-1.2**
	2.2nm,1.4s						
ASAR	**Alice Springs**	**26.65**	**224**	P	**P**	**01 57 58.9**	**-1.2**
	0.7nm,0.5s,baz=59,slow=8.7,SNR=7.5						
WAKE	**Wake Island**	**27.22**	**28**	*e*P	**P**	**01 58 07.0**	**+1.8**
	158nm,1.0s						
FITZ	**Fitzroy Crossi**	**30.33**	**242**	P	**P**	**01 58 31.4**	**-1.5**
	2.2nm,0.6s,baz=83,slow=9.3,SNR=4.2						
FITZ	**Fitzroy Crossi**	**30.33**	**242**	*e*P	**P**	**01 58 31.4**	**-1.5**
	14nm,1.4s						
LUWI	**Luwuk**	**31.02**	**276**	*e*P	**P**	**01 58 38.0**	**-1.0**
	34nm,0.6s						
BFZ	**Birch Farm**	**41.05**	**154**	*e*P	**P**	**02 00 03.1**	**-1.4**
	85nm,1.4s						
RPZ	**Rata Peaks**	**41.65**	**161**	P	**P**	**02 00 09.0**	**-0.3**
	28nm,0.9s,baz=330,slow=4.6,SNR=3.7						
KSRS	**Korea Array**	**48.42**	**333**	pP		02 01 23.0	+6.6
	0.8nm,0.6s,baz=147,slow=9.6,SNR=2.4						
VNDA	**Vanda**	**72.74**	**178**	P	**P**	**02 03 48.0**	**-0.2**
	3.1nm,0.7s,baz=326,slow=6.4,SNR=21						
VNDA	**Vanda**	**72.74**	**178**	*e*P	**P**	**02 03 47.7**	**-0.4**
	3.3nm,0.8s						
MK32	**Makanchi Array**	**80.90**	**319**	*e*P	**P**	**02 04 34.7**	**0.0**
MKAR	**Makanchi Array**	**80.90**	**319**	P	**P**	**02 04 34.7**	**0.0**
	0.7nm,0.7s,baz=101,slow=6.3,SNR=3.7						
COLA	**College**	**81.62**	**22**	*e*P	**P**	**02 04 40.6**	**+2.6**
	149nm,0.2s						
ILAR	**Eielson Array**	**81.92**	**22**	P	**P**	**02 04 37.9**	**-1.8**
	0.5nm,0.9s,baz=242,slow=5.0,SNR=4.5						
ILAR				pP	**pwP**	**02 05 00.3**	**+0.7**
	1.5nm,0.7s,baz=254,slow=5.4,SNR=10						
ILB	**Eielson Array**	**81.92**	**22**	*e*P	**P**	**02 04 37.9**	**-1.8**
	2.5nm,1.3s						
PNTR	**Pine Nut**	**90.55**	**51**	*e*P	P	02 05 16.3	-6.7
	8.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**151.09**	**288**	PKPbc	**PKPbc**	**02 12 12.8**	**-1.5**
	1.7nm,0.7s,baz=105,slow=2.6,SNR=14						
TOA1	**Torodi Ar. Sit**	**151.09**	**288**	*e*PKPbc	**PKPbc**	**02 12 12.8**	**-1.5**

*ISCJB **20** 02:26:06.7±0.6, 16°.63N±0°.08×94°.44W±0°.05, h126km±6km, mb4.9/2, Error ellipse: s-maj=13.6km s-min=7.1km az=4.6*
*MEX **20** 02:26:09.6±0.9, 16°.57N×94°.43W, h117km±17km, MD4.1*
*NEIC **20** 02:26:09.4±0.0, 16°.57N×94°.44W, h118km, mb4.1/6, MD4.1(MEX), After MEX.*

ISC 20 02:26:08.3±0.9, 16°.59N±0°.07×94°.45W±0°.04, h115km±8km, n16, σ1°02/27, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.66**	**320**	*e*Pn	**Pn**	**02 26 27.2**	**+0.4**
CMIG				*e*Sn	**Sn**	**02 26 41.0**	**+0.3**
CMIG	**Matias Romero**	**0.66**	**320**	*i* P	**Pn**	**02 26 27.2**	**+0.4**
CMIG				*i* S	**Sn**	**02 26 41.0**	**+0.3**
TGIG		**1.28**	**81**	*e*Pn	**Pn**	**02 26 32.8**	**-0.2**
TGIG				*e*Sn	**Sn**	**02 26 50.8**	**-0.9**
TGIG		**1.28**	**81**	*e*P	**Pn**	**02 26 32.8**	**-0.2**
TGIG				*i* S	**Sn**	**02 26 50.8**	**-0.9**
PCIG		**1.47**	**126**	*e*Pn	**Pn**	**02 26 35.7**	**+0.7**
PCIG				*e*Sn	**Sn**	**02 26 55.0**	**-0.4**
PCIG		**1.47**	**126**	*i* P	**Pn**	**02 26 35.7**	**+0.7**
PCIG				*i* S	**Sn**	**02 26 55.0**	**-0.4**
HUIG	**Huatulco**	**1.79**	**243**	*e*Pn	**Pn**	**02 26 38.3**	**-0.6**
HUIG				*e*Sn	**Sn**	**02 27 02.5**	**+0.2**
HUIG	**Huatulco**	**1.79**	**243**	*i* P	**Pn**	**02 26 38.3**	**-0.6**
HUIG				*i* S	**Sn**	**02 27 02.5**	**+0.2**
CCIG	**Comitan**	**2.24**	**97**	*e*Pn	**Pn**	**02 26 45.2**	**+0.5**
CCIG				*e*Pn	Pn	02 26 45.5	+0.8
CCIG				*e*Sn	**Sn**	**02 27 13.7**	**+1.1**
CCIG				*e*Sn	**Sn**	**02 27 13.7**	**+1.1**
CCIG	**Comitan**	**2.24**	**97**	*e*P	**Pn**	**02 26 45.2**	**+0.5**
CCIG				*e*S	**Sn**	**02 27 11.7**	**-0.9**
TLIG	**Tlapa**	**4.06**	**284**	*e*Pn	**Pn**	**02 27 08.8**	**+0.1**
TLIG				*e*Sn	Sn	02 27 45.5	-10
TUL1	**Leonard**	**19.29**	**357**	*e*P	**P**	**02 30 23.2**	**-0.8**
	3.6nm,0.8s						
Y52A	**Lilburn**	**19.58**	**27**	*e*P	**P**	**02 30 25.4**	**-1.9**
	8.0nm,1.4s						
PBMO	**Poplar Bluff**	**20.43**	**9**	*e*P	**P**	**02 30 35.1**	**-1.3**
	3.3nm,0.6s						
PV13	**Radium Mtn., P**	**24.93**	**332**	*e*P	**P**	**02 31 24.2**	**+3.1**
	6.6nm,0.8s						
PAX	**Paxson**	**58.13**	**335**	*e*P	**P**	**02 35 49.4**	**-0.4**
	33nm,0.5s						

*ISCJB **20** 02:41:47.3±0.5, 24°.79N±0°.04×90°.21E±0°.03, h37km±14km, mb3.2/3, MS3.2/1, Error ellipse: s-maj=7.3km s-min=4.8km az=12.5*
*NDI **20** 02:41:47.4±2.6, 24°.77N×90°.40E, h10km±13km, ML3.9*
*DMN **20** 02:41:51.4±0.2, 24°.45N×89°.71E, h10km, Ml4.7/6, Error ellipse: s-maj=12.7km s-min=3.8km az=37.0*
*IDC **20** 02:41:52.7±1.9, 25°.05N×90°.20E, h35km±10km, mb3.2/3, mb1 3.5/4, mb1mx3.1/37, mbtmp3.5/4, ML3.7/1, MS2.8/2, Ms1 2.9/2, ms1mx2.5/19, Error ellipse: s-maj=57.9km s-min=19.2km az=62.0*

ISC 20 02:41:46.5±0.8, 24°.68N±0°.05×90°.22E±0°.03, h31km±5km, n29, σ2°56/49, mb3.8/3, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**1.23**	**130**	*e*P	**Pn**	**02 42 08.8**	**+1.3**
AGT				*e*S	**Sn**	**02 42 25.7**	**+2.6**
AGT				IAML		02 42 27.1	
	comp=E,3μm,0.2s						
AGT				IAML		02 42 28.7	
	comp=N,3μm,0.1s						
DHUB	**DHUBRI**	**1.35**	**351**	*e*P	**Pb**	**02 42 11.3**	**+0.2**
DHUB				*e*S	**Sb**	**02 42 31.3**	**+3.3**
DHUB				IAML		02 42 32.6	
	comp=N,1μm,0.2s						
DHUB				IAML		02 42 32.8	
	comp=E,2μm,0.1s						
SHL	**Shillong**	**1.74**	**59**	*e*P	**Pn**	**02 42 15.0**	**+0.3**
SHL				*e*S	**Sn**	**02 42 34.4**	**-1.6**
SHL				IAML		02 42 54.9	
	comp=N,4μm,0.6s						
SHL				IAML		02 42 55.2	
	comp=E,3μm,0.7s						
BELO	**BELONIA**	**1.81**	**142**	*e*S	**Sb**	**02 42 43.4**	**+2.0**
BELO				IAML		02 43 03.0	
	comp=N,2μm,0.3s						
BELO				IAML		02 43 04.0	
	comp=E,1μm,0.0s						
GUWA	**GUWAHATI**	**2.01**	**41**	*e*P	**Pn**	**02 42 18.6**	**+0.4**
GUWA				*e*S	**Sn**	**02 42 43.2**	**+1.0**
SILR	**SILCHAR**	**2.35**	**87**	*e*P	**Pn**	**02 42 22.3**	**-0.6**
SILR				*e*S	**Sn**	**02 42 47.3**	**-3.3**
BRDH	**Bariadhala**	**2.38**	**147**	Pg	Pb	02 42 42.7	+14
	comp=E,46nm,0.3s,baz=58,slow=20,SNR=5.7						
GTK	**Tadong**	**3.00**	**331**	*e*P	**Pn**	**02 42 34.5**	**+2.4**
GTK				*e*S	**Sn**	**02 43 09.3**	**+2.2**
GTK				IAML		02 43 24.3	
	comp=E,547nm,0.2s						
GTK				IAML		02 43 24.4	
	comp=N,459nm,0.3s						
TEZP	**TEZPUR**	**3.02**	**50**	*e*P	**Pn**	**02 42 32.6**	**+0.5**
TEZP				*e*S	**Sn**	**02 43 05.9**	**-1.3**
TAWA	**Tawang**	**3.25**	**27**	*e*P	**Pn**	**02 42 38.2**	**+2.5**
TAWA				*e*S	**Sn**	**02 43 13.0**	**-0.5**
IMP	**Imphal**	**3.39**	**87**	*e*P	**Pn**	**02 42 39.0**	**+1.7**
IMP				*e*S	**Sn**	**02 43 16.0**	**-0.5**
KOHI	**KOHIMA**	**3.67**	**73**	*e*P	**Pb**	**02 42 47.7**	**-3.0**
KOHI				*e*S	**Sb**	**02 43 31.2**	**-3.6**
KOHI				IAML		02 44 02.6	
	comp=E,226nm,0.4s						
KOHI				IAML		02 44 03.1	
	comp=N,165nm,0.1s						
ZIRO	**ZIRO**	**4.32**	**48**	*e*P	**Pn**	**02 42 51.8**	**+1.7**
ZIRO				*e*S	**Sn**	**02 43 37.3**	**-2.3**
JIRN	**Jiri**	**4.68**	**310**	*e*Pn	**Pn**	**02 42 57.9**	**+2.6**
JIRN				*e*Sn	**Sn**	**02 43 46.6**	**-2.2**
	comp=N,323nm,0.2s						
GUN	**Gumba**	**5.05**	**310**	*e*Pn	**Pn**	**02 43 03.0**	**+2.6**
PKI	**Pulchoki**	**5.20**	**305**	*e*Pn	**Pn**	**02 43 04.3**	**+1.9**
PKI				*e*Sn	**Sn**	**02 43 58.1**	**-3.3**
	comp=N,177nm,0.3s						
PKIN	**Phulchoki**	**5.21**	**305**	*e*Pn	**Pn**	**02 43 04.3**	**+1.8**
PKIN				*e*Sn	**Sn**	**02 43 58.0**	**-3.6**
	comp=N,174nm,0.3s						
KKN	**Kakani**	**5.41**	**306**	*e*Pn	**Pn**	**02 43 07.5**	**+2.3**
KKN				*e*Sn	**Sn**	**02 44 04.1**	**-2.5**
DMN	**Daman**	**5.44**	**303**	*e*Pn	**Pn**	**02 43 07.4**	**+1.7**
DMN				*e*Sn	**Sn**	**02 44 04.2**	**-3.2**
GKN	**Gorkha**	**6.00**	**305**	*e*Pn	**Pn**	**02 43 14.8**	**+1.5**
GKN				*e*Sn	**Sn**	**02 44 17.0**	**-4.1**
KOLN	**Koldanda**	**6.70**	**299**	*e*Pn	**Pn**	**02 43 23.5**	**+0.6**
KOLN				*e*Sn	**Sn**	**02 44 32.4**	**-5.8**
	comp=N,186nm,0.4s						
DANN	**Dangsing**	**6.84**	**304**	*e*Pn	**Pn**	**02 43 25.9**	**+0.9**
DANN				*e*Sn	**Sn**	**02 44 37.8**	**-4.2**
	comp=N,126nm,0.4s						
PYUN	**Piuthan**	**7.32**	**299**	*e*Pn	**Pn**	**02 43 32.4**	**+0.9**
PYUN				*e*Sn	**Sn**	**02 44 47.9**	**-5.8**
	comp=N,120nm,0.4s						
CMAR	**Chiang Mai Arr**	**10.21**	**126**	Pn	Pn	02 44 20.0	+9.2
	comp=N,0.2nm,0.3s,baz=300,slow=13,SNR=6.6						
CMAR				LR	LR	02 49 20.7	
	comp=N,18nm,18.2s,baz=350,slow=43						
CHCP	**Chirah Chowk**	**17.28**	**305**	P	**Pn**	**02 45 42.9**	**-2.6**
MKAR	**Makanchi Array**	**22.96**	**346**	P	**P**	**02 46 51.5**	**+3.3**
	comp=N,0.4nm,0.5s,baz=173,slow=9.6,SNR=4.5						
MKAR				pP	**sP**	**02 47 00.5**	**-0.1**
	comp=N,3.2nm,0.8s,baz=161,slow=10,SNR=17						
SONM	**Songino Array**	**26.42**	**25**	P	**P**	**02 47 22.3**	**+1.9**
	comp=N,1.5nm,0.5s,baz=204,slow=9.5,SNR=5.0						
SONM				pP	**sP**	**02 47 33.5**	**+0.2**
	comp=N,1.5nm,0.6s,baz=209,slow=11,SNR=3.3						
KURBB	**Kurchatov Arra**	**27.43**	**344**	P	**P**	**02 47 31.1**	**+1.8**
	comp=N,0.3nm,0.8s,baz=164,slow=9.2,SNR=3.0						
KURBB				pP	**sP**	**02 47 41.8**	**-0.4**
	comp=N,1.0nm,0.7s,baz=163,slow=8.9,SNR=6.6						
KSRS	**Korea Array**	**34.48**	**59**	LR	LR	03 03 29.4	
	comp=N,41nm,19.5s,baz=205,slow=38						

*KRNET **20** 02:44:24.0±0.1, 39°.03N×77°.30E, mb3.5*
*SOME **20** 02:44:29.7, 39°.57N×76°.90E, h10km*
*NNC **20** 02:44:30.4±1.8, 39°.62N×77°.04E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=12.7km s-min=8.9km az=164.0*

ISC 20 02:44:31.5±2.0, 39°.64N±0°.09×76°.80E±0°.04, h10km, n42, σ2°53/67, 18C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.64**	**351**	⇑*i*P	**Pb**	**02 45 17.0**	**-2.0**
	baz=46						
ULHL				⇑*i*S	**Sg**	**02 45 56.2**	**-0.2**
	baz=46						
KZA	**Kyzart**	**2.71**	**335**	⇓*i*P	**Pb**	**02 45 19.0**	**-1.3**
	baz=34						
KZA				⇓*i*S	**Sg**	**02 45 58.9**	**+0.3**
	baz=34						
ARLS	**Aral**	**2.92**	**321**	⇑*i*P	**Pb**	**02 45 21.5**	**-2.2**
	baz=22						
ARLS				⇑*i*S	**Sb**	**02 46 03.4**	**+4.0**
	baz=22						
BOOM	**Boomskoye usch**	**2.93**	**347**	⇓*i*P	**Pb**	**02 45 21.4**	**-2.5**
	baz=44						
BOOM				⇓*i*S	**Sb**	**02 46 03.2**	**+3.4**
	baz=44						
UCH	**Uchtor**	**3.12**	**327**	⇑*e*P	**Pb**	**02 45 24.7**	**-2.6**
	baz=27						
UCH				⇑*i*S	**Sb**	**02 46 09.3**	**+3.8**
	baz=27						
KBK	**Karagaybulak**	**3.33**	**336**	⇑*i*P	**Pb**	**02 45 27.3**	**-3.4**
	baz=35						
KBK				⇑*e*S	**Sb**	**02 46 13.9**	**+2.6**
	baz=35						
ARSB	**Arslanbob**	**3.37**	**301**	⇑*i*P	**Pn**	**02 45 27.5**	**+3.2**
	baz=6.0						
ARSB				⇑*i*S	**Sb**	**02 46 14.3**	**+1.9**
	baz=6.0						
TNSS	**Tian-Shan**	**3.40**	**2**	Pg	**Pb**	**02 45 33.6**	**+1.5**
	14nm,0.6s						
TNSS				Lg	Lg	02 46 19.5	
	14nm,0.9s						
TNSS	**Tian-Shan**	**3.40**	**2**	*e*P	**Pg**	**02 45 34.0**	**-2.7**
	14nm,0.6s						
TNSS				*e*S	**Sg**	**02 46 19.8**	**-1.0**
	14nm,0.9s						
TKM2	**Tokmak 2**	**3.41**	**345**	⇑Pg	**Pb**	**02 45 31.0**	**-1.0**
	4.2nm,0.8s						
TKM2				⇓Lg	Lg	02 46 20.8	
	11nm,0.7s						
TKM2	**Tokmak 2**	**3.41**	**345**	⇑*e*P	**Pb**	**02 45 28.0**	**-4.1**
	baz=42						
TKM2				⇑*i*S	**Sb**	**02 46 15.3**	**+1.7**
	baz=42						
AML	**Almayashu**	**3.43**	**318**	⇑*e*P	**Pb**	**02 45 28.9**	**-3.7**
	baz=20						
AML				⇑*e*S	**Sb**	**02 46 16.7**	**+2.2**
	baz=20						
KST	**Kastek**	**3.46**	**350**	Pg	**Pg**	**02 45 36.1**	**-1.7**
	8.4nm,0.6s						
KST				Lg	Lg	02 46 23.3	
	11nm,0.8s						
KST	**Kastek**	**3.46**	**350**	*e*P	**Pg**	**02 45 36.1**	**-1.7**
	8.4nm,0.6s						
KST				*e*S	**Sg**	**02 46 23.3**	**+0.6**
	11nm,0.8s						
AAK	**Ala-Archa**	**3.47**	**331**	⇑Pg	**Pb**	**02 45 34.6**	**+1.5**
	3.4nm,0.6s						
AAK				Lg	Lg	02 46 24.9	
	37nm,1.0s						
MDOK	**Medeo**	**3.53**	**3**	Pg	**Pg**	**02 45 36.5**	**-2.6**
	5.6nm,0.3s						
MDOK				Lg	Lg	02 46 24.1	
	17nm,0.5s						
MDOK	**Medeo**	**3.53**	**3**	*e*P	**Pg**	**02 45 36.5**	**-2.6**
	5.6nm,0.3s						
MDOK				*e*S	**Sg**	**02 46 24.1**	**-0.7**
	17nm,0.5s						
KOTS	**Kotyrbulak**	**3.60**	**4**	Pg	**Pb**	**02 45 37.0**	**+1.6**
	7.5nm,0.4s						
KOTS				Lg	Lg	02 46 24.8	
	13nm,0.5s						
KOTS	**Kotyrbulak**	**3.60**	**4**	*e*P	**Pb**	**02 45 37.0**	**+1.6**
	7.5nm,0.4s						
KOTS				*e*S	**Sg**	**02 46 24.8**	**-2.4**
	13nm,0.5s						
SATY	**Saty**	**3.63**	**19**	Pg	**Pg**	**02 45 37.8**	**-3.2**
	11nm,0.6s						
SATY				Lg	Lg	02 46 26.4	
	26nm,1.3s						
SATY	**Saty**	**3.63**	**19**	*e*P	**Pg**	**02 45 37.8**	**-3.2**
	11nm,0.6s						
SATY				*e*S	**Sg**	**02 46 26.4**	**-1.6**
	26nm,1.3s						
DGS	**Degeres**	**3.69**	**348**	*e*P	**Pb**	**02 45 37.0**	**+0.2**
	8.3nm,0.6s						
DGS				*e*S	**Sb**	**02 46 24.8**	**+3.3**
	13nm,0.6s						
EKS2	**Erkin-Say**	**3.79**	**324**	⇓*e*P	**Pn**	**02 45 33.6**	**+3.5**
	baz=25						
EKS2				⇓*e*S	**Sb**	**02 46 24.9**	**+0.3**
	baz=25						
UZB	**Uzynbulak**	**3.89**	**25**	Pg	**Pb**	**02 45 40.0**	**-0.2**
	2.8nm,0.4s						
UZB				Lg	Lg	02 46 30.5	
	7.4nm,0.7s						
UZB	**Uzynbulak**	**3.89**	**25**	*e*P	**Pb**	**02 45 40.0**	**-0.2**
	2.8nm,0.4s						
UZB				*e*S	**Sb**	**02 46 30.5**	**+3.1**
	7.4nm,0.7s						
KURS	**Kuram**	**3.98**	**14**	Pg	**Pb**	**02 45 41.9**	**+0.1**
	6.8nm,0.9s						
KURS				Lg	Lg	02 46 33.3	
	8.1nm,0.9s						
KURS	**Kuram**	**3.98**	**14**	*e*P	**Pb**	**02 45 42.5**	**+0.7**
	6.6nm,0.9s						
KURS				*e*S	**Sg**	**02 46 35.1**	**-4.3**
	8.2nm,0.8s						
KPKS	**Kokpek**	**4.08**	**20**	*e*P	**Pb**	**02 45 44.7**	**+1.3**
	6.3nm,0.6s						
KPKS				*e*S	**Sg**	**02 46 38.1**	**-4.4**
	10nm,0.3s						
MRKS	**

VNA1	Neumayer--Stat	11.49 151	P	Pn	03 08 48.6	+0.5
VNA3	Neumayer Olymp	11.62 155	P	Pn	03 08 49.9	0.0
VNA2	Neumayer--Watz	11.89 151	P	Pn	03 08 53.4	-0.2
	baz=311,slow=16					
SNAA	Sanae	13.49 149	P	Pn	03 09 15.5	+0.1
SNAA	Sanae	13.49 149	Pn	Pn	03 09 15.2	-0.1
	2.0nm,0.3s,baz=322,slow=15,SNR=65					
SNAA			Sn	Sn	03 11 35.6	-10
	0.7nm,0.3s,baz=178,slow=22,SNR=7.0					
SNAA			LR	LR	03 13 28.0	
	comp=Z,143nm,20.2s,baz=276,slow=32					
SNAA	Sanae	13.49 149	*e*Pn	Pn	03 09 15.4	+0.1
SNAA			*e*Sn	Sn	03 11 37.4	-7.7
QSPA	South Pole Qui	28.83 180	*e*P	P	03 12 03.3	+0.9
	7.1nm,0.9s					
CFA	Coronel Fontan	40.79 297	P	P	03 13 44.4	-1.0
	3.3nm,0.6s,baz=164,slow=9.9,SNR=6.1					
CPUP	Villa Florida	41.21 314	P	P	03 13 48.0	-0.9
	5.9nm,0.8s,baz=165,slow=6.1,SNR=10					
CPUP	Villa Florida	41.21 314	*e*P	P	03 13 46.9	-1.9
	11nm,1.0s					
VNDA	Vanda	41.26 182	P	P	03 13 53.8	+5.0
	2.2nm,0.9s,baz=182,slow=7.2,SNR=8.2					
VNDA			LR	LR	03 29 34.8	
	comp=Z,62nm,20.3s,baz=179,slow=34					
VNDA	Vanda	41.26 182	*e*P	P	03 13 52.0	+3.3
	5.2nm,1.2s					
BOSA	Boshof	46.60 69	P	P	03 14 33.9	+1.6
	4.9nm,0.8s,baz=196,slow=8.5,SNR=10					
BOSA	Boshof	46.60 69	*e*P	P	03 14 33.2	+0.9
	11nm,1.4s					
CASY	Casey	48.52 158	*e*P	P	03 14 49.2	+2.7
	9.0nm,1.0s					
BDFB	Brasilia	48.54 330	P	P	03 14 47.1	-0.4
	2.0nm,0.7s,baz=117,slow=2.3,SNR=4.0					
LBTB	Lobatse	49.86 67	P	P	03 14 58.7	+1.2
	5.7nm,0.8s,baz=229,slow=4.5,SNR=6.2					
LBTB	Lobatse	49.86 67	*e*P	P	03 14 58.7	+1.2
	7.3nm,0.9s					
TSUM	Tsumeb	51.65 55	*e*P	P	03 15 10.9	-0.1
	2.6nm,0.8s					
H10S2	ASCENSION HYDR	52.92 13	T	T	04 12 31.1	
	baz=186,slow=75,SNR=47					
H10S3	ASCENSION HYDR	52.92 13	T	T	04 12 28.5	
	baz=186,slow=75,SNR=69					
H10S1	ASCENSION HYDR	52.94 13	T	T	04 12 29.5	
	baz=186,slow=75,SNR=44					
LPAZ	La Paz	54.37 306	P	P	03 15 32.3	+0.6
	1.9nm,0.9s,baz=161,slow=9.2,SNR=5.7					
LPAZ	La Paz	54.37 306	*e*P	P	03 15 30.3	-1.4
	3.7nm,1.1s					
LSZ	Lusaka	59.56 64	*e*P	P	03 16 07.9	0.0
	4.7nm,1.0s					
RPN	Rapa Nui	63.82 261	*e*P	P	03 16 36.0	-0.4
	97nm,1.0s					
SACV	Santiago Islan	76.12 2	*e*P	P	03 17 48.6	-3.3
	49nm,1.1s					
TOA0	Torodi Ar. Sit	77.29 27	*e*P	P	03 17 60.0	+1.4
	9.7nm,0.8s					
TORD	Torodi Ar. Bea	77.29 27	P	P	03 17 57.9	-0.6
	7.2nm,0.7s,baz=191,slow=5.5,SNR=36					
TOA1	Torodi Ar. Sit	77.30 27	*e*P	P	03 17 57.9	-0.6
HIZ	Hauiti	79.11 196	*e*P	P	03 18 06.9	-1.6
ASAR	Alice Springs	93.56 161	P	P	03 19 21.8	+1.5
	0.5nm,0.7s,baz=184,slow=4.3,SNR=3.7					
ASAR			LR	LR	03 59 06.9	
	comp=Z,60nm,19.9s,baz=246,slow=34					
AS31	Alice Springs	93.56 161	*e*P	P	03 19 21.8	+1.5
	2.2nm,1.4s					
FITZ	Fitzroy Crossi	97.40 152	LR	LR	04 01 40.1	
	comp=Z,23nm,19.1s,baz=146,slow=34					
GCMT	Greycliff	126.44 300	*e*PKPpre	PKPpre	03 24 59.7	
FINES	FINESS Array B	128.62 29	PKP	PKiKP	03 25 10.8	+0.4
	2.4nm,0.8s,baz=186,slow=4.2,SNR=8.1					
ABKAR	Akbulak array	129.45 58	*e*PKPdf	PKiKP	03 25 12.9	+0.4
ARCES	ARCESS Array B	135.51 23	PKP	PKiKP	03 25 24.4	+0.2
	1.4nm,0.7s,baz=216,slow=2.9,SNR=5.5					
SONA0	Songino Array	149.64 94	*e*PKPbc	PKiKP	03 25 54.5	+0.5
SONM	Songino Array	149.64 94	PKPbc	PKiKP	03 25 54.5	+0.5
	3.2nm,0.8s,baz=218,slow=2.3,SNR=13					
INK	Inuvik	150.47 314	PKPbc	PKiKP	03 25 55.0	+0.2
	4.7nm,0.8s,baz=103,slow=3.3,SNR=13					
KS15	Wonju Array Si	150.70 133	*e*PKPbc	PKiKP	03 25 57.5	+1.2
KSRS	Korea Array	150.73 133	PKPbc	PKiKP	03 25 57.5	+1.1
	0.8nm,0.7s,baz=221,slow=2.6,SNR=5.0					
DAWY	Dawson	150.94 304	*e*PKPbc	PKiKP	03 25 56.0	-0.1
ILAR	Eielson Array	154.22 303	PKPbc	PKiKP	03 26 03.2	+0.5
	0.7nm,0.8s,baz=157,slow=2.0,SNR=8.1					
ILB	Eielson Array	154.22 303	*e*PKPbc	PKiKP	03 26 03.2	+0.5

MEX 20 03:12:19.6±0.3, 16°33'N×96°17'W, h70km±7km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.56	174	*i* P	Pn	03 12 31.8	-1.2
HUIG				*i* S	Sn	03 12 41.0	-1.9
VHO	Vista Hermosa	0.92	324	*e*P	Pn	03 12 36.1	-1.2
VHO				*e*S	Sn	03 12 48.4	-2.0
CMIG	Matias Romero	1.44	58	*e*P	Pn	03 12 42.4	-1.5
CMIG				*i* S	Sn	03 13 00.3	-1.8

MAN 20 03:18:56.2, 11°31N×125°53E, h44km, mb3.9, ML2.6, MS2.2, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.31	343	*e*P	Pn	03 19 02.3	-2.5
BESP				*e*S	Sn	03 19 13.9	+3.0
PLP	Palo	0.56	255	‖*e*P	Pn	03 19 08.5	+0.7
PLP				*e*S	Sn	03 19 18.6	+2.4
CNP	Cataraman	1.47	325	*e*P	Pn	03 19 23.5	+3.4
CNP				*e*S	Sn	03 19 44.6	+6.4

*IDC **20** 03:23:48.9±1.3, 42°60S×171°97E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.7/15, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=50.6km s-min=33.7km az=173.0*
*WEL **20** 03:23:50.5±0.5, 42°S±3°×17°2E±°, h5km, M3.9/11, ML3.8/4, MLv3.9/11, Error ellipse: s-maj=0.0km s-min=0.0km az=50.5*
*ISCJB **20** 03:23:51.5±0.5, 42°16S±0°02×171°93E±0°04, h17km±6km, mb3.5/2, Error ellipse: s-maj=5.9km s-min=3.2km az=28.1*

ISC 20 03:23:51.1±1.1, 42°17S±0°03×171°96E±0°03, h13km±8km, n45, σ1§20/53, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSZ	Denniston Nort	0.44	345	P	Pg	03 23 59.7	-0.2
DSZ				S	Sg	03 24 05.6	-0.2
LTZ	Lake Taylor	0.65	159	P	Pb	03 24 03.7	-0.6
LTZ				S	Sb	03 24 12.3	-1.0
INZ	Inchbonnie	0.67	214	P	Pg	03 24 04.0	-0.1
INZ				S	Sb	03 24 13.3	-0.5
THZ	Tophouse	0.82	60	P	Pb	03 24 05.9	-1.3
THZ				S	Sb	03 24 15.5	-2.6
AMCZ	Amberley	1.13	153	P	Pg	03 24 13.6	+0.7
OXZ	Oxford	1.16	177	P	Pg	03 24 13.4	0.0
OXZ				S	Sg	03 24 28.7	+0.3
KHZ	Kahutara	1.20	102	P	Pg	03 24 14.3	+0.1
WVZ	Waitaha Valley	1.27	225	P	Pg	03 24 15.8	+0.1
WVZ				S	Sg	03 24 32.3	+0.1
QRZ	Quartz Range	1.41	18	P	Pn	03 24 16.4	0.0
QRZ				S	Sn	03 24 35.2	+0.3
NNZ	Nelson	1.43	49	P	Pn	03 24 17.0	+0.3
CRLZ	Canterbury Las	1.48	161	P	Pb	03 24 18.0	-0.5
BSWZ	Blackbirch Sta	1.50	73	P	Pb	03 24 19.0	+0.2
MQZ	McQueen's Vall	1.62	162	P	Pb	03 24 19.5	-1.3
TUWZ	Tuamarina	1.66	64	P	Pn	03 24 21.1	+1.2
RPZ	Rata Peaks	1.68	203	P	Pb	03 24 21.1	-0.7
OKCZ	Okains Bay	1.75	153	P	Pb	03 24 22.8	-0.2
AKCZ	Akaroa Harbour	1.84	158	P	Pb	03 24 23.2	-1.3
TCW	Tory Channel	1.98	62	P	Pn	03 24 25.8	+1.5
FOZ	Fox Glacier	2.08	228	P	Pn	03 24 26.9	+1.3
PLWZ	Palliser	2.54	77	P	Pn	03 24 32.6	+0.7
CAW	Cannon Point	2.56	67	P	Pn	03 24 33.8	+1.5
LBZ	Lake Benmore	2.56	210	P	Pn	03 24 33.1	+0.8
MSWZ	Moikau Station	2.58	74	P	Pn	03 24 33.8	+1.4
OGWZ	Otaki Gorge	2.77	62	P	Pn	03 24 36.7	+1.7
MTW	Mount Morrison	2.84	70	P	Pn	03 24 36.8	+0.7
HOWZ	Holdsworth Sta	2.96	66	P	Pn	03 24 39.3	+1.5
ODZ	Otahua Downs	3.02	198	P	Pn	03 24 38.7	+0.1
MRZ	Mangatainoka R	3.11	62	P	Pn	03 24 41.1	+1.3
PKE	Pukeiti	3.35	28	P	Pn	03 24 45.1	+1.9
WKZ	Wanaka	3.41	218	P	Pn	03 24 44.1	+0.2
BFZ	Birch Farm	3.55	67	P	Pn	03 24 47.1	+1.2
EAZ	Earnscleugh	3.61	211	P	Pn	03 24 48.0	+1.4
BHHZ	Black Hill Sta	4.11	51	P	Pn	03 24 55.1	+1.5
TUZ	Tuapeka	4.14	203	P	Pn	03 24 53.8	-0.1
HIZ	Hauiti	4.27	32	P	Pn	03 24 56.8	+1.0
SYZ	Scrubby Hill	4.81	204	P	Pn	03 25 03.2	+0.1
TOZ	Tahuroa Road	5.21	33	P	Pn	03 25 09.6	+1.0
APZ	The Paps	5.45	210	P	Pn	03 25 13.0	+1.0
URZ	Urewera	5.55	47	Pn	Pn	03 25 17.4	+4.1
	1.0nm,0.3s,baz=218,slow=7.8,SNR=4.1						
URZ				Sn	Sn	03 26 15.9	-1.1
	2.0nm,0.3s,baz=65,slow=16,SNR=3.6						
ASAR	Alice Springs	36.52 288		P	P	03 30 57.1	+0.8
	0.3nm,0.4s,baz=124,slow=7.2,SNR=5.8						
WRA	Warramunga Arr	38.67 293		P	P	03 31 16.5	+2.0
	0.8nm,0.7s,baz=147,slow=6.8,SNR=3.0						
ARCES	ARCESS Array B	147.57 339	PKPbc	PKPbc	03 43 33.8	0.0
	1.2nm,0.8s,baz=60,slow=2.9,SNR=8.8						
BRTR	Keskin Array B	148.64 280	PKPbc	PKPbc	03 43 36.2	-1.5
	0.2nm,0.5s,baz=126,slow=6.8,SNR=3.6						
TORD	Torodi Ar. Bea	149.87 199	PKPbc	PKPbc	03 43 40.5	-0.8
	0.5nm,0.4s,baz=180,slow=1.8,SNR=14						
FINES	FINESS Array B	151.92 325	PKPbc	PKiKP	03 43 45.2	+0.2
	0.8nm,0.6s,baz=69,slow=4.6,SNR=4.0						

*ISK **20** 03:37:50.4, 38°39N×30°98E, h6km, ML2.0/9*
*DDA **20** 03:37:50.8, 38°41N×30°97E, h7km±3km, ML2.9*
*ISCJB **20** 03:37:51.2±0.5, 38°41N±0°03×30°99E±0°03, h3km±5km, Error ellipse: s-maj=4.6km s-min=3.6km az=22.5*

ISC 20 03:37:50.9±1.1, 38°40N±0°03×30°97E±0°03, h8km±11km, n20, σ0§52/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	Bolvadin	0.32	357	*i* P	Pb	03 37 58.5	-0.5
BOLV				*i* S	Sg	03 38 01.5	-0.1
BOLV				IAML_P			
	comp=Z,7μm,0.1s						
SHUT	Suhut-Afyon	0.36	296	PG	Pg	03 37 58.1	0.0
SHUT				SG	Sg	03 38 03.7	+0.8
BAGO	Egridir - ISPA	0.43	199	*i* P	Pb	03 38 00.1	-0.7
BAGO				*i* S	Sb	03 38 06.6	-0.9
DOGA	KONYA_Doganhis	0.62	118	*i* P	Pg	03 38 03.0	+0.1
DOGA				*i* S	Sb	03 38 13.5	+0.4
AFYO	Afyonkarahisar	0.65	307	*i* P	Pb	03 38 04.2	-0.5
KIZT	Kizilcal	0.86	56	PG	Pb	03 38 07.6	-0.6
KIZT				SG	Sb	03 38 19.5	-0.4
KDHN	Kadinhani	0.91	82	*i* P	Pg	03 38 08.1	-0.4
KDHN				IAML_P			
	comp=Z,1μm,0.3s						
CIFT	Cifteler, Eski	0.97	4	PG	Pb	03 38 09.8	-0.2
LADK	Ladik-KONYA	1.12	100	PN	Pg	03 38 12.1	-0.3
SVRH	Sivrihisar-ESK	1.13	22	PN	Pn	03 38 13.2	0.0
KHAL	Karahalli	1.16	269	*i* P	Pb	03 38 13.2	-0.1
KHAL				*i* S	Sn	03 38 30.3	+0.7
KHAL				IAML_P			
	comp=Z,1μm,0.1s						
KONT	Konya--Tatoy	1.19	112	PN	Pg	03 38 13.3	-0.4
KONT	Konya--Tatoy	1.19	112	*i* P	Pn	03 38 13.7	-0.2
KONT				*i* S	Sn	03 38 30.6	+0.5
KONT				IAML_P			
	comp=Z,846nm,0.1s						
KMER	Konya-Meram	1.27	119	*i* P	Pb	03 38 15.9	+0.8
KMER				IAML_P			
	comp=Z,310nm,0.2s						
GDZ	Gediz	1.35	301	*i* P	Pb	03 38 16.4	-0.2
KORT	Korkueli	1.48	200	PN	Pb	03 38 18.3	-0.4
CHBY	Cihanbeyli	1.52	82	PN	Pn	03 38 18.7	+0.2
BORA	Eskisehir	1.53	345	*i* P	Pg	03 38 20.5	+0.1
BORA				*i* S	Sg	03 38 41.2	+0.9
BORA				IAML_P			
	comp=Z,764nm,0.1s						
USAK	Uak-Merkez	1.56	282	*i* P	Pb	03 38 19.8	-0.3
USAK				*i* S	Sg	03 38 41.5	+0.4
USAK				IAML_P			
	comp=Z,581nm,0.2s						
SRCK	Saricakaya, Es	1.66	351	PN	Pb	03 38 21.1	-0.7

WEL 20 03:54:11.6, 40°3S±0°9×17°7E±°, h30km±1km, M3.7/16, ML4.0/12, MLv3.7/16, Error ellipse: s-maj=0.0km s-min=0.0km az=82.6, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRHZ	Porangahau	0.21	281	P	Pn	03 54 18.3	-0.3
PRHZ				S	Sn	03 54 23.1	0.0
PXZ	Pawanui	0.28	354	P	Pb	03 54 18.9	+0.2
PXZ				S	Sn	03 54 24.5	-0.3
ANWZ	Angora Road	0.36	245	P	Pn	03 54 20.7	0.0
ANWZ				S	Sn	03 54 27.3	+0.5
WPHZ	Waipukurau	0.43	304	P	Pb	03 54 21.1	+0.2
WPHZ				S	Sn	03 54 28.1	-0.4
KAHZ	Kahuranaki	0.51	358	P	Pb	03 54 22.4	+0.2
KAHZ				S	Sn	03 54 30.8	+0.2
DVHZ	Dannevirke	0.56	271	P	Pb	03 54 23.1	+0.1
DVHZ				S	Sn	03 54 31.4	-0.4
BFZ	Birch Farm	0.62	233	P	Pn	03 54 24.2	-0.2
BFZ				S	Sn	03 54 33.1	-0.2
CKHZ	Cape Kidnapper	0.66	12	P	Pb	03 54 24.5	-0.2
PNHZ	Pukenui	0.67	306	P	Pb	03 54 24.6	-0.2
PNHZ				S	Sb	03 54 33.9	+0.1
PRWZ	Pori Road	0.75	251	P	Pb	03 54 26.2	+0.1
PRWZ				S	Sn	03 54 37.3	+0.8
TSZ	Takapari Road	0.76	289	P	Pn	03 54 25.9	-0.4
TSZ				S	Sb	03 54 36.0	-0.4
KRHZ	Kereru	0.78	328	P	Pn	03 54 26.0	-0.5
CPWZ	Castlepoint	0.80	221	P	Pb	03 54 27.1	+0.1
POWZ	Post Office Ro	0.87	264	P	Pn	03 54 27.9	+0.1
MCHZ	McNeill Hill	0.88	350	P	Pn	03 54 27.7	-0.1
MCHZ				S	Sn	03 54 39.6	0.0
TIWZ	Tintock	0.91	239	P	Pn	03 54 28.2	-0.1
TIWZ				S	Sn	03 54 40.2	-0.1
KWHZ	Kaweka Forest	0.96	337	P	Pn	03 54 28.7	-0.3
BHHZ	Black Hill Sta	1.04	321	P	Pn	03 54 29.8	-0.3
ARHZ	Aropaoanui	1.04	4	P	Pn	03 54 29.9	-0.2
MRZ	Mangatainoka R	1.07	250	P	Pn	03 54 30.1	-0.4
TMWZ	Te Maipa	1.11	224	P	Pn	03 54 30.5	-0.6
BKZ	Black Stump Fm	1.18	344	P	Pn	03 54 31.9	-0.2
HOWZ	Holdsworth Sta	1.21	240	P	Pn	03 54 31.8	-0.6
HOWZ				S	Sn	03 54 46.9	-0.9
NMHZ	Naumai	1.21	356	P	Pn	03 54 32.5	0.0
OHWZ	Ohakea	1.22	274	P	Pb	03 54 33.7	-0.3
WHHZ	Waihua	1.25	12	P	Pn	03 54 32.7	-0.3
MOVZ	Moawhango	1.26	315	P	Pn	03 54 33.6	+0.4
MTW	Mount Morrison	1.36	231	P	Pn	03 54 33.5	-1.0
MHGZ	Mahia Peninsul	1.39	34	P	Pn	03 54 34.2	-0.7
RAHZ	Arahi	1.40	6	P	Pn	03 54 34.6	-0.4
KNZ	Kokohu	1.42	25	P	Pn	03 54 34.2	-1.0
OGWZ	Otaki Gorge	1.42	248	P	Pn	03 54 34.8	-0.5
TRWZ	Traveller	1.43	220	P	Pn	03 54 34.3	-1.1
WHVZ	Whangaehu Hut	1.44	315	P	Pb	03 54 37.1	-0.8
MTHZ	Maungataniwha	1.45	358	P	Pn	03 54 35.4	-0.4
FWVZ	Far West T-bar	1.48	315	P	Pb	03 54 37.5	-1.1
NGZ	Ngauruhoe	1.51	318	P	Pb	03 54 38.0	-1.0
HATZ	Hinemaiaia	1.55	336	P	Pn	03 54 37.8	+0.8
PAWZ	Paruwai Farm	1.55	226	P	Pn	03 54 36.0	-1.1
KRVZ	Karewarewa	1.55	321	P	Pb	03 54 38.7	-1.1
RITZ	Rihia Road	1.55	328	P	Pb	03 54 38.6	-1.1
SNGZ	Shannon Statio	1.56	13	P	Pn	03 54 36.8	-0.5
WTVZ	West Tongariro	1.56	319	P	Pb	03 54 38.9	-1.0
PRGZ	Paritu Road	1.58	29	P	Pn	03 54 36.6	-0.9
CAW	Cannon Point	1.61	240	P	Pn	03 54 37.0	-0.9
KIW	Kapiti Island	1.61	249	P	Pn	03 54 37.7	-0.3
MSWZ	Moikau Station	1.67	228	P	Pn	03 54 37.4	-1.4
TWVZ	Taurewa	1.67	317	P	Pn	03 54 40.0	+1.1
RIGZ	Rimuhau	1.73	23	P	Pn	03 54 39.0	-0.6
PLWZ	Palliser	1.77	224	P	Pn	03 54 38.5	-1.7
ALRZ	Allen Road	1.80	346	P	Pn	03 54 40.8	+0.3
MUGZ	Murupara	1.83	357	P	Pn	03 54 41.0	+0.1
PRRZ	Plateau Road	1.85	347	P	Pn	03 54 41.5	+0.3
RAGZ	Rawiri	1.85	13	P	Pn	03 54 40.5	-0.8
WPRZ	Whakapapatarin	1.88	342	P	Pn	03 54 42.4	+0.8
BHW	Baring Head	1.89	234	P	Pn	03 54 40.7	-1.1
HRRZ	Handcock Road	1.97	346	P	Pn	03 54 43.7	+0.8
RRRZ	Republican Roa	1.99	351	P	Pn	03 54 43.3	+0.1
TKGZ	Te Karaka	2.00	22	P	Pn	03 54 42.8	-0.5
MWZ	Matawai	2.03	14	P	Pn	03 54 42.4	-1.3
GRRZ	Galatos Road	2.05	342	P	Pn	03 54 44.6	+0.6
URZ	Urewera	2.05	5	P	Pn	03 54 43.0	-0.9
HSRZ	Hossack Road	2.06	345	P	Pn	03 54 44.4	+0.3
CNGZ	Carnagh Statio	2.08	29	P	Pn	03 54 43.4	-1.0
TARZ	Mount Tarawera	2.09	351	P	Pn	03 54 44.9	+0.3
TCW	Tory Channel	2.19	245	P	Pn	03 54 44.7	-1.1
EDRZ	Edgecumbe	2.20	357	P	Pn	03 54 47.4	+1.3
OMRZ	Omania	2.24	349	P	Pn	03 54 46.7	+0.1
TLZ	Tolley Road	2.24	331	P	Pn	03 54 47.0	+0.3
TWGZ	Tauwhareparae	2.29	22	P	Pn	03 54 46.8	-0.4
DUWZ	D'Urville Isla	2.32	257	P	Pn	03 54 47.8	0.0
HIZ	Hauiti	2.39	318	P	Pn	03 54 50.2	+1.5
RUGZ	Raukumara Rang	2.42	15	P	Pn	03 54 48.0	-1.1
PUZ	Puketiti	2.47	26	P	Pn	03 54 48.8	-0.9
OPRZ	Ohinepanea	2.48	354	P	Pn	03 54 50.2	+0.4
TUWZ	Tuamarina	2.51	243	P	Pn	03 54 48.5	-1.7
PKGZ	Pakihiroa	2.58	21	P	Pn	03 54 50.2	-1.2
HAZ	Te Kaha	2.64	15	P	Pn	03 54 51.3	-0.8
BSWZ	Blackbirch Sta	2.69	237	P	Pn	03 54 51.0	-1.8
WMGZ	Waiomatatini S	2.75	26	P	Pn	03 54 52.5	-1.1
TOZ	Tahuroa Road	2.79	337	P	Pn	03 54 54.3	+0.1
NNZ	Nelson	2.83	250	P	Pn	03 54 54.0	-0.6
THZ	Tophouse	3.35	243	P	Pn	03 55 00.0	-1.9
QRZ	Quartz Range	3.37	260	P	Pn	03 55 01.7	-0.4
MKAZ	Moumakai	3.48	336	P	Pn	03 55 04.3	+0.8
GRZ	Great Barrier	4.21	344	P	Pn	03 55 13.9	+0.3
LTZ	Lake Taylor	4.26	233	P	Pn	03 55 12.5	-2.0
MQZ	McQueen's Vall	4.64	222	P	Pn	03 55 18.4	-1.2
INZ	Inchbonnie	4.76	238	P	Pn	03 55 18.7	-2.4
WCZ	Waipu Caves	4.80	334	P	Pn	03 55 23.1	+1.3
RPZ	Rata Peaks	5.53	230	P	Pn	03 55 31.0	-0.8
OUZ	Omahuta	5.71	332	P	Pn	03 55 36.0	+1.7
CTZ	Chatham Island	5.92	127	P	Pn	03 55 37.8	+0.7
LBZ	Lake Benmore	6.43	228	P	Pn	03 55 42.6	-1.6
ODZ	Otahua Downs	6.61	222	P	Pn	03 55 44.5	-2.0
TUZ	Tuapeka	7.75	221	P	Pn	03 56 02.0	-0.2

*ISCJB **20** 03:54:32.6±0.7, 29°25S±0°05×136°90E±0°09, h10km, Error ellipse: s-maj=12.1km s-min=5.8km az=161.4*
*AUST **20** 03:54:33.4±0.0, 29°19S×136°88E, h10km, Error ellipse: s-maj=0.2km s-min=0.1km az=261.0*
*IDC **20** 03:54:37.6±3.0, 28°84S×137°59E, h0km, mb1 3.4/3, mb1mx3.3/23, mbtmp3.2/3, ML2.9/3, Error ellipse: s-maj=83.7km s-min=23.0km az=52.0*

ISC 20 03:54:34.8±1.0, 29°27S±0°06×136°94E±0°07, h10km, n9, σ1§94/15, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBOO	Buckleboo	3.62	192	P	Pn	03 55 31.0	+0.2
	baz=3.7						
BBOO				S	Sn	03 56 11.5	-2.1
	baz=3.7						
HTT	Hallett	4.49	158	P	Pn	03 55 44.0	+1.2
	baz=4.6						
STKA	Stephens Creek	4.78	124	Pn	Pn	03 55 48.7	+1.8
	0.1nm,0.3s,baz=313,slow=19,SNR=1.8						
STKA				Sn	Sn	03 56 42.2	-0.2
	0.6nm,0.3s,baz=141,slow=19,SNR=3.8						
STKA	Stephens Creek	4.78	124	P	Pn	03 55 47.7	+0.8
	baz=4.9						
STKA				S	Sn	03 56 39.9	-2.5
	baz=4.9						
ASAR	Alice Springs	6.20	333	Pn	Pn	03 56 09.6	+3.0
	0.4nm,0.3s,baz=149,slow=15,SNR=12						
ASAR				Sn	Sn	03 57 16.2	-1.4
	0.8nm,0.3s,baz=153,slow=22,SNR=12						
CMSA	Cobar Meteorol	7.89	109	P	Pn	03 56 29.6	0.0
	baz=8.0						
QIS	Mount Isa	9.00	16	P	Pn	03 56 45.9	+1.0
	baz=9.0						
WB2	Warramunga Arr	9.57	345	P	Pn	03 56 54.0	+1.2
	baz=9.5						
WB2				S	Sn	03 58 37.8	-2.7
	baz=9.5						
WRA	Warramunga Arr	9.58	345	Pn	Pn	03 56 54.1	+1.3
	0.3nm,0.3s,baz=162,slow=13,SNR=12						
WRA				Sn	Sn	03 58 38.0	-2.6
	0.2nm,0.3s,baz=163,slow=28,SNR=5.2						

*ISCJB **20** 04:05:54.9±1.0, 21°99S±0°04×68°76W±0°07, h116km±12km, Error ellipse: s-maj=10.6km s-min=5.7km az=172.0*
*SJA **20** 04:05:54.6±0.5, 21°93S×68°66W, h98km±6km, ML2.1, MW2.5*
*GUC **20** 04:05:55.2±2.1, 21°95S×68°85W, h127km±16km, ML3.3*

ISC 20 04:05:55.4±1.8, 21°97S±0°04×68°75W±0°06, h110km±16km, n20, σ0§88/34, 1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.66	193	*e*P	Pn

CMAR				LR	LR	04 16 05.1	
	comp=Z,47nm,18.2s,baz=158,slow=45						
MKAR	**Makanchi Array**	**25.64**	**344**	P	**P**	**04 15 42.0**	**-0.2**
	1.3nm,0.6s,baz=152,slow=9.8,SNR=14						
ASAR	**Alice Springs**	**61.25**	**136**	P	**P**	**04 20 28.2**	**+0.4**
	0.5nm,0.7s,baz=316,slow=6.5,SNR=3.7						

*NNC **20** 04:51:47.2±2.4, 38°.22N×71°.95E, h0km, mb3.9, mpv3.6,*
Error ellipse: s-maj=18.8km s-min=12.6km az=171.0
ISC 20 04:51:48.4±3.0, 37°.9N±0°.2×72°.1E±0°.1, h113km, n10, σ0s87/15, 5C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.36**	**16**	P	**Pn**	**04 52 53.2**	**+0.2**
	SNR=40						
UCH	**Uchtor**	**4.67**	**23**	P	**Pn**	**04 52 57.0**	**-0.1**
	SNR=12						
KZA	**Kyzart**	**4.79**	**29**	P	**Pn**	**04 52 58.2**	**-0.5**
	SNR=11						
EKS2	**Erkin-Say**	**4.89**	**15**	P	**Pn**	**04 53 01.0**	**+1.2**
	SNR=6.0						
AAK	**Ala-Archa**	**5.04**	**21**	P	**Pn**	**04 53 02.2**	**+0.3**
	SNR=10						
AAK	**Ala-Archa**	**5.04**	**21**	⇓P	**Pn**	**04 53 01.9**	**+0.1**
	4.0nm,0.4s						
AAK				⇓S	**Sn**	**04 53 59.1**	**+0.1**
	14nm,0.6s						
KK31	**Karatay Array**	**5.29**	**347**	P	**Pn**	**04 53 05.0**	**-0.2**
	5.0nm,0.2s,baz=166,slow=12,SNR=48						
KK31				⇑S	**Sn**	**04 54 03.2**	**-1.8**
	8.9nm,0.5s,baz=133,slow=24,SNR=5.2						
TKM2	**Tokmak 2**	**5.65**	**27**	⇑P	**Pn**	**04 53 08.7**	**-1.4**
	1.3nm,0.5s						
TKM2				⇑S	**Sn**	**04 54 14.5**	**+0.6**
	2.9nm,0.8s						
AB31	**Akbulak array**	**14.31**	**326**	P	**Pn**	**04 55 05.4**	**-0.2**
	0.3nm,0.3s,baz=132,slow=13,SNR=13						
AB31				⇓S	**Sn**	**04 57 43.4**	**+0.1**
	0.8nm,0.5s,baz=135,slow=25,SNR=5.0						
AKTO	**Aktyubinsk**	**16.02**	**326**	⇑P	**P**	**04 55 28.9**	**+0.6**
	1.2nm,0.4s						
AKTO				⇑S	**Sn**	**04 58 25.6**	**+1.0**
	1.5nm,0.6s						

*ISCJB **20** 04:55:41.1±0.9, 9°.9S±0°.1×66°.64E±0°.09, h10km, mb4.4/20,*
MS3.3/6, Error ellipse: s-maj=19.9km s-min=11.8km
az=20.9
*IDC **20** 04:55:41.6±1.5, 10°.11S×66°.60E, h0km, mb4.0/7,*
mb1 4.2/7, mb1mx3.7/40, mbtmp4.0/7, MS3.3/6, Ms1 3.3/6,
ms1mx2.9/40, Error ellipse: s-maj=42.8km s-min=27.8km
az=49.0
*NEIC **20** 04:55:41.3±1.9, 10°.29S×66°.28E, h10km±3km, mb4.5/13,*
Error ellipse: s-maj=23.4km s-min=18.2km az=198.0
ISC 20 04:55:43.7±1.2, 9°.8S±0°.2×66°.6E±0°.1, h10km, n42,
σ1s31/31, mb4.3/20, MS3.3/6, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**6.16**	**70**	Pn	**Pn**	**04 57 14.4**	**-0.2**
	baz=269,slow=14,SNR=21						
H08S1				T	T	05 03 43.9	
	baz=245,slow=75,SNR=133						
H08S3	**Diego Garcia H**	**6.18**	**70**	Pn	**Pn**	**04 57 14.2**	**-0.6**
	baz=269,slow=14,SNR=34						
H08S3				T	T	05 03 45.6	
	baz=245,slow=75,SNR=131						
H08S2	**Diego Garcia H**	**6.18**	**70**	Pn	**Pn**	**04 57 14.3**	**-0.5**
	baz=269,slow=14,SNR=45						
H08S2				T	T	05 03 45.8	
	baz=245,slow=75,SNR=136						
KMBO	**Kilima Mbogo**	**30.48**	**285**	LR	LR	05 12 17.3	
	comp=Z,44nm,20.0s,baz=98,slow=33						
KMBO	**Kilima Mbogo**	**30.48**	**285**	*e*P	P	05 01 50.5	-7.0
	20nm,1.8s						
ATD	**Arta Tunnel**	**31.79**	**311**	LR	LR	05 13 29.8	
	comp=Z,25nm,18.3s,baz=324,slow=34						
DAMY	**Dhamar**	**32.79**	**317**	*e*P	**P**	**05 02 16.2**	**-1.5**
	96nm,2.0s						
LHMI	**Lhok Sumawe**	**33.70**	**65**	*e*P	**P**	**05 02 24.9**	**-0.5**
	92nm,0.9s						
MBAR	**Mbarara**	**36.88**	**282**	*e*P	P	05 02 45.8	-7.1
	7.1nm,1.3s						
CM31	**Chiang Mai Arr**	**42.50**	**49**	*e*P	**P**	**05 03 42.1**	**+2.5**
	6.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**42.50**	**49**	P	**P**	**05 03 42.1**	**+2.5**
	1.1nm,0.6s,baz=246,slow=9.5,SNR=4.4						
CHTO	**Chiang Mai**	**42.73**	**48**	*e*P	**P**	**05 03 40.0**	**-1.4**
	25nm,1.9s						
SHL	**Shillong**	**42.93**	**34**	*e*P	**P**	**05 03 42.0**	**-1.1**
	5.2nm,0.5s						
BOSA	**Boshof**	**43.03**	**238**	LR	LR	05 18 26.6	
	comp=Z,74nm,21.3s,baz=154,slow=32						
GAR	**Garm**	**48.71**	**4**	*e*P	**P**	**05 04 27.1**	**-1.4**
	5.8nm,0.9s						
H01W3	**Cape Leeuwin H**	**49.90**	**128**	T	T	05 57 44.7	
	baz=287,slow=75,SNR=15						
H01W2	**Cape Leeuwin H**	**49.90**	**128**	T	T	05 57 44.6	
	baz=287,slow=75,SNR=20						
H01W1	**Cape Leeuwin H**	**49.92**	**128**	T	T	05 57 46.2	
	baz=287,slow=75,SNR=18						
MK32	**Makanchi Array**	**58.09**	**13**	*e*P	**P**	**05 05 37.9**	**+0.6**
MKAR	**Makanchi Array**	**58.09**	**13**	P	**P**	**05 05 37.9**	**+0.6**
	0.4nm,0.6s,baz=203,slow=7.9,SNR=5.2						
BR231	**Keskin MP Arra**	**58.56**	**330**	*e*P	**P**	**05 05 40.0**	**-0.8**
	7.4nm,0.6s						
ABKAR	**Akbulak array**	**59.14**	**355**	*e*P	**P**	**05 05 45.5**	**+1.1**
	1.8nm,0.8s						
KURK	**Kurchatov**	**61.20**	**9**	*e*P	**P**	**05 05 59.9**	**+1.4**
	2.5nm,0.8s						
ASAR	**Alice Springs**	**65.35**	**112**	P	**P**	**05 06 25.5**	**-1.3**
	1.1nm,0.8s,baz=247,slow=6.6,SNR=6.6						
AS31	**Alice Springs**	**65.35**	**112**	*e*P	**P**	**05 06 25.5**	**-1.3**
	1.6nm,1.3s						
ZALV	**Zalesovo Beam**	**65.39**	**12**	P	**P**	**05 06 26.5**	**+0.3**
	1.1nm,0.5s,baz=202,slow=7.4,SNR=5.6						
ZAA1	**Zalesovo Array**	**65.39**	**12**	*e*P	**P**	**05 06 26.5**	**+0.3**
WRA	**Warramunga Arr**	**65.83**	**107**	P	**P**	**05 06 29.2**	**-0.6**
	1.9nm,0.8s,baz=269,slow=11,SNR=5.1						
WR1	**Warramunga Arr**	**65.83**	**107**	*e*P	**P**	**05 06 29.2**	**-0.6**
SONA0	**Songino Array**	**67.36**	**28**	*e*P	**P**	**05 06 40.9**	**+1.7**
SONM	**Songino Array**	**67.36**	**28**	P	**P**	**05 06 40.9**	**+1.7**
	1.2nm,0.8s,baz=218,slow=5.0,SNR=6.0						
ULN	**Ulaanbaatar**	**67.68**	**28**	*e*P	**P**	**05 06 39.2**	**-2.1**
	1.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**68.40**	**288**	LR	LR	05 37 50.3	
	comp=Z,31nm,18.1s,baz=280,slow=37						
KSRS	**Korea Array**	**74.10**	**47**	LR	LR	05 41 57.4	
	comp=Z,14nm,18.1s,baz=145,slow=37						
MAJO	**Matsushiro**	**81.36**	**51**	*e*P	**P**	**05 08 01.5**	**+0.6**
MJAR	**Matsushiro Arr**	**81.36**	**51**	P	**P**	**05 08 01.5**	**+0.6**
	1.4nm,0.5s,baz=250,slow=5.9,SNR=4.2						
JMIC	**Jan Mayen**	**94.45**	**341**	LR	LR	05 49 41.6	
	comp=Z,12nm,20.1s,baz=75,slow=34						
PD31	**Pinedale Array**	**147.03**	**355**	*e*PKPbc	**PKPdf**	**05 15 27.0**	**+1.7**
PDAR	**Pinedale Array**	**147.03**	**355**	PKPbc	**PKPdf**	**05 15 27.0**	**+1.7**
	0.5nm,0.8s,baz=73,slow=1.2,SNR=4.6						
NV01	**Mina Array Sit**	**151.19**	**8**	*e*PKPbc	**PKPbc**	**05 15 38.9**	**+0.8**
NVAR	**Mina Array Bea**	**151.19**	**8**	PKPbc	**PKPbc**	**05 15 38.9**	**+0.8**
	0.7nm,0.7s,baz=257,slow=2.4,SNR=4.6						
TXAR	**Lajitas Array**	**158.59**	**336**	PKPab	**PKPab**	**05 16 17.3**	**0.0**
	0.4nm,0.7s,baz=56,slow=4.7,SNR=4.8						

*ISCJB **20** 05:04:03.3±1.1, 39°.35N±0°.04×25°.99E±0°.08, h6km±7km,*
Error ellipse: s-maj=10.1km s-min=5.7km az=164.2
*ISK **20** 05:04:03.8, 39°.35N×26°.18E, h8km, ML2.3/8*
*DDA **20** 05:04:03.1, 39°.36N×26°.04E, h7km±2km, ML2.5*
ISC 20 05:04:03.6±1.3, 39°.35N±0°.04×26°.06E±0°.08, h12km±7km,
n13, σ0s34/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.12**	**29**	PG	**Pg**	**05 04 06.6**	**0.0**
GPNR				SG	**Sg**	**05 04 08.9**	**0.0**
AYVA	**Ayvalik**	**0.49**	**95**	*i* P	**Pb**	**05 04 14.3**	**+0.2**
AYVA				*i* S	**Sb**	**05 04 21.1**	**-0.1**
AYVA				IAML_P			
	comp=Z,392nm,0.1s						
EZN	**Ezine**	**0.51**	**23**	PG	**Pg**	**05 04 13.8**	**+0.2**
EZN				SG	**Sb**	**05 04 21.2**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**0.54**	**44**	*i* P	**Pb**	**05 04 14.8**	**-0.2**
BAYC				*i* S	**Sb**	**05 04 22.8**	**+0.1**
BAYC				IAML_P			
	comp=Z,683nm,0.1s						
GADA	**Gvkgeada**	**0.84**	**352**	PG	**Pn**	**05 04 21.2**	**-0.1**
ZEDA	**zmir-Bergama**	**0.88**	**116**	*i* P	**Pn**	**05 04 21.8**	**0.0**
ZEDA				*i* S	**Sn**	**05 04 34.3**	**-0.1**
ZEDA				IAML_P			
	comp=Z,1μm,0.2s						
URLA	**Izmir**	**1.08**	**157**	PG	**Pb**	**05 04 24.1**	**-0.1**
URLA	**Izmir**	**1.08**	**157**	*i* P	**Pb**	**05 04 24.1**	**-0.1**
URLA				*i* S	**Sn**	**05 04 39.8**	**+0.4**
URLA				IAML_P			
	comp=Z,787nm,0.1s						
LPK	**Lapseki**	**1.15**	**28**	PN	**Pn**	**05 04 25.6**	**+0.1**
ERIK	**Erikli-Kesan**	**1.36**	**15**	PN	**Pg**	**05 04 29.3**	**-0.4**
ENEZ	**Enez**	**1.38**	**3**	PN	**Pb**	**05 04 29.7**	**+0.4**
GONE	**Gonen-Balikesi**	**1.43**	**61**	PN	**Pn**	**05 04 29.3**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.58**	**32**	PN	**Pn**	**05 04 32.2**	**+0.7**

*JMA **20** 05:18:03.7±0.1, 24°.28N×121°.52E, h30km±1km, M3.0*
*ASIES **20** 05:18:03.9, 24°.33N×121°.63E, h18km, MW3.1*
*ISCJB **20** 05:18:04.7±0.2, 24°.33N±0°.01×121°.67E±0°.01, h24km±2km,*
Error ellipse: s-maj=2.3km s-min=1.5km az=28.7
*TAP **20** 05:18:04.3, 24°.34N×121°.64E, h24km, ML3.8, B*
ISC 20 05:18:04.6±0.9, 24°.33N±0°.01×121°.65E±0°.02, h19km±2km,
n115, σ0s62/183, 10C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.12**	**41**	⇑*i*P	**Pg**	**05 18 09.4**	**+0.7**
	baz=48						
ENA				S	**Sg**	**05 18 12.7**	**+1.2**
	baz=48						
NANB	**Nanao**	**0.13**	**43**	⇑P	**Pg**	**05 18 09.4**	**+0.6**
	baz=48						
NANB				S	**Sg**	**05 18 12.6**	**+1.0**
	baz=48						
NACB	**Ninganchiao**	**0.17**	**198**	⇑P	**Pg**	**05 18 09.5**	**+0.2**
	baz=194						
NACB				S	**Sg**	**05 18 12.9**	**+0.6**
	baz=194						
ETLH	**Xiulin Townshi**	**0.20**	**231**	⇑P	**Pg**	**05 18 10.3**	**+0.5**
	baz=228						
ETLH				S	**Sg**	**05 18 13.9**	**+0.7**
	baz=228						
TWD	**Chiawan**	**0.26**	**192**	⇑*i*P	**Pb**	**05 18 10.7**	**+0.2**
	baz=181						
TWD				*i* S	**Sg**	**05 18 15.4**	**+0.8**
	baz=181						
NNSB	**Datong**	**0.26**	**291**	⇓P	**Pg**	**05 18 10.9**	**+0.2**
	baz=297						
NNSB				S	**Sg**	**05 18 15.0**	**+0.1**
	baz=297						
NNS	**Nan Shan**	**0.28**	**293**	⇓*i*P	**Pg**	**05 18 11.1**	**+0.1**
	baz=299						
NNS				*i* S	**Sg**	**05 18 15.4**	**+0.1**
	baz=299						
ENTT	**Nioudou**	**0.32**	**346**	P	**Pg**	**05 18 11.7**	**+0.2**
	baz=353						
ENTT				S	**Sb**	**05 18 16.5**	**0.0**
	baz=353						
TWC	**Suao**	**0.33**	**33**	⇑P	**Pb**	**05 18 12.0**	**+0.1**
	baz=36						
TWC				*e*S	**Sb**	**05 18 17.1**	**+0.3**
	baz=36						
HWA	**Hwalien**	**0.36**	**187**	*e*P	**Pb**	**05 18 12.7**	**+0.2**
	baz=191						
HWA				*e*S	**Sb**	**05 18 18.7**	**+0.9**
	baz=191						
TWE	**Neicheng**	**0.39**	**2**	⇓*i*P	**Pg**	**05 18 12.9**	**+0.1**
	baz=9.0						
TWE				*e*S	**Sg**	**05 18 18.3**	**+0.1**
	baz=9.0						
WHF	**Hehuan Shan**	**0.40**	**242**	⇑P	**Pg**	**05 18 13.2**	**0.0**
	baz=240						
WHF				S	**Sg**	**05 18 19.1**	**+0.1**
	baz=240						
YHNB	**Yeheng**	**0.42**	**323**	⇓P	**Pg**	**05 18 13.3**	**-0.1**
	baz=324						
YHNB				S	**Sg**	**05 18 19.1**	**-0.2**
	baz=324						
ENLB	**Shoufeng**	**0.43**	**186**	P	**Pg**	**05 18 12.4**	**-1.1**
	baz=191						
ENLB				S	**Sb**	**05 18 20.8**	**+0.9**
	baz=191						
ILA	**Ilan**	**0.44**	**11**	P	**Pg**	**05 18 13.8**	**+0.2**
	baz=10.0						
ILA				*e*S	**Sb**	**05 18 20.4**	**+0.3**
	baz=10.0						
TWT	**Tachien**	**0.44**	**260**	P	**Pg**	**05 18 14.1**	**+0.3**
	baz=256						
TWT				S	**Sg**	**05 18 20.3**	**+0.3**
	baz=256						
TDCB	**Techi**	**0.46**	**260**	⇓P	**Pg**	**05 18 14.2**	**+0.1**
	baz=257						
TDCB				S	**Sg**	**05 18 20.2**	**-0.2**
	baz=257						
EOS1	**EOS1**	**0.48**	**64**	*e*P	**Pb**	**05 18 15.2**	**+0.7**
	baz=59						
CHGB	**Renai**	**0.52**	**238**	⇑P	**Pg**	**05 18 15.2**	**0.0**
	baz=238						
CHGB				S	**Sg**	**05 18 22.2**	**0.0**
	baz=238						
NTC	**Toucheng**	**0.54**	**17**	*e*P	**Pb**	**05 18 15.3**	**-0.2**
	baz=18						
NTC				*e*S	**Sg**	**05 18 23.4**	**+0.5**
	baz=18						
ESL	**Shilin**	**0.56**	**201**	*e*P	**Pb**	**05 18 14.7**	**-1.0**
	baz=199						
ESL				*e*S	**Sb**	**05 18 22.9**	**-0.3**
	baz=199						
EGS		**0.57**	**27**	P	**Pg**	**05 18 16.2**	**+0.1**
	baz=21						
OWD	**Renai**	**0.58**	**229**	⇑P	**Pb**	**05 18 15.9**	**-0.2**
	baz=228						
OWD				S	**Sb**	**05 18 23.5**	**-0.4**
	baz=228						
WLTB	**Daxi**	**0.63**	**325**	P	**Pb**	**05 18 17.1**	**+0.1**
	baz=323						
WLTB				S	**Sg**	**05 18 26.4**	**+0.7**
	baz=323						
NHDH	**Xindian Distri**	**0.64**	**350**	P	**Pg**	**05 18 17.3**	**0.0**
	baz=355						
NHDH				S	**Sb**	**05 18 25.5**	**-0.1**
	baz=355						
TWA	**Mucha**	**0.65**	**354**	P	**Pb**	**05 18 17.4**	**+0.1**
	baz=2.0						
TWA				S	**Sg**	**05 18 26.3**	**+0.1**
	baz=2.0						
WHP	**Taichung City**	**0.65**	**265**	⇓P	**Pb**	**05 18 17.5**	**+0.2**
	baz=265						
WHP				S	**Sb**	**05 18 25.7**	**-0.2**
	baz=265						
TIPB	**Shuangxi**	**0.66**	**14**	⇓*i*P	**Pb**	**05 18 17.2**	**-0.2**
	baz=8.0						
TIPB				S	**Sb**	**05 18 25.6**	**-0.6**
	baz=8.0						
TATO	**Taipei**	**0.66**	**347**	⇓P	**Pb**	**05 18 17.4**	**-0.1**
	baz=352						
TATO				*e*S	**Sb**	**05 18 25.3**	**-0.8**
	baz=352						
LIOB	**Emei**	**0.66**	**298**	⇓P	**Pg**	**05 18 17.8**	**+0.1**
	baz=292						
LIOB				*e*S	**Sb**	**05 18 26.5**	**+0.3**
	baz=292						
EGFH	**Guangfu**	**0.69**	**197**	*e*P	**Pb**	**05 18 17.8**	**-0.3**
	baz=196						
EGFH				*e*S	**Sg**	**05 18 28.1**	**+0.5**
	baz=196						
TAP	**Taipei**	**0.71**	**349**	P	**Pg**	**05 18 19.1**	**+0.4**
	baz=350						
TAP				S	**Sg**	**05 18 28.4**	**+0.1**
	baz=350						
DPDB	**Guoxing**	**0.73**	**246**	P	**Pb**	**05 18 18.6**	**-0.1**
	baz=246						
DPDB				*e*S	**Sb**	**05 18 28.2**	**-0.1**
	baz=246						
TWB1	**Santiao Chiao**	**0.74**	**24**	P	**Pb**	**05 18 18.6**	**-0.2**
	baz=25						
TWB1				S	**Sb**	**05 18 28.4**	**-0.2**
	baz=25						
VWDT	**VWDT**	**0.74**	**219**	P	**Pb**	**05 18 18.6**	**-0.4**
	baz=223						
VWDT				S	**Sb**	**05 18 29.0**	**+0.3**
	baz=223						
NWF	**Wu-fen Shan**	**0.74**	**9**	P	**Pb**	**05 18 19.1**	**+0.1**
	baz=9.0						
NWF				S	**Sg**	**05 18 29.3**	**+0.1**
	baz=9.0						
WFSB	**Wu-fen Shan**	**0.74**	**9**	P	**Pb**	**05 18 19.1**	**+0.1**
	baz=9.0						
WFSB				S	**Sg**	**05 18 29.3**	**+0.1**
	baz=9.0						
SBCB	**Hsinchu**	**0.76**	**307**	⇓P	**Pg**	**05 18 20.0**	**+0.4**
	baz=307						
SBCB				S	**Sn**	**05 18 31.0**	**-0.3**
	baz=307						
NCUH	**Zhongli**	**0.76**	**326**	P	**Pg**	**05 18 19.9**	**+0.3**
	baz=326						
NCUH				*e*S	**Sn**	**05 18 31.2**	**-0.2**
	baz=326						
NCU	**National Centr**	**0.76**	**326**	P	**Pb**	**05 18 19.1**	**-0.2**
	baz=327						
NCU				S	**Sg**	**05 18 30.6**	**+0.8**
	baz=327						
HSN	**Hsinchu**	**0.78**	**307**	P	**Pb**	**05 18 19.6**	**0.0**
	baz=311						
HSN				S	**Sn**	**05 18 31.6**	**-0.1**
	baz=311						
TWS1	**Kuangyinshan**	**0.79**	**344**	P	**Pg**	**05 18 20.3**	**+0.1**
	baz=357						
TWS1				S	**Sn**	**05 18 31.6**	**-0.6**
	baz=357						
NMLH	**Miaoli**	**0.81**	**285**	P	**Pn**	**05 18 21.4**	**+0.4**
	baz=285						
NMLH				*e*S	**Sb**	**05 18 31.1**	**+0.4**
	baz=285						
YM01	**YM01**	**0.81**	**355**	P	**Pb**	**05 18 20.4**	**+0.2**
	baz=343						
YM01				S	**Sb**	**05 18 31.0**	**+0.2**
	baz=343						
NSY	**Sanyi**	**0.82**	**276**	*e*P	**Pg**	**05 18 21.1**	**+0.4**
	baz=276						
SMLT	**Sun Moon Lake**	**0.82**	**237**	⇓P	**Pb**	**05 18 20.3**	**0.0**
	baz=236						
SMLT				*e*S	**Sb**	**05 18 30.5**	**-0.5**
	baz=236						
YM04	**YM04**	**0.82**	**353**	⇓P	**Pb**	**05 18 20.3**	**-0.1**
	baz=353						
YM04				S	**Sg**	**05 18 31.5**	**-0.2**
	baz=353						
YM10	**YM10**	**0.82**	**354**	*e*P	**Pb**	**05 18 20.6**	**+0.3**
	baz=354						
YM10				*e*S	**Sb**	**05 18 30.9**	**-0.2**
	baz=354						
YM05	**YM05**	**0.83**	**355**	*e*P	**Pb**	**05 18 20.4**	**-0.1**
	baz=354						
YM05				*e*S	**Sb**	**05 18 31.5**	**+0.2**
	baz=354						
SSLB	**Suanglung**	**0.84**	**230**	⇓P	**Pb**	**05 18 20.1**	**-0.5**
	baz=229						
SSLB				*e*S	**Sb**	**05 18 31.6**	**0.0**
	baz=229						
TYC	**Yuchr**	**0.84**	**240**	⇑P	**Pb**	**05 18 20.8**	**+0.2**
	baz=239						
TYC				*e*S	**Sb**	**05 18 31.2**	**-0.4**
	baz=239						
NTST	**Danshui**	**0.85**	**347**	*e*P	**Pb**	**05 18 20.9**	**+0.2**
	baz=359						
NTST				*e*S	**Sg**	**05 18 32.5**	**0.0**
	baz=359						
YM03	**YM03**	**0.85**	**353**	P	**Pb**	**05 18 20.5**	**-0.3**
	baz=353						
YM03				*e*S	**Sb**	**05 18 32.1**	**+0.3**
	baz=353						
YM08	**YM08**	**0.85**	**356**	P	**Pb**	**05 18 20.7**	**-0.2**
	baz=345						
YM08				S	**Sb**	**05 18 31.8**	**-0.1**
	baz=345						
ANP	**Anpu**	**0.86**	**352**	*e*P	**Pb**	**05 18 20.8**	**-0.1**
	baz=352						
HGSD	**Ruisui**	**0.86**	**194**	*e*P	**Pb**	**05 18 19.6**	**-1.4**
	baz=203						
PTSB	**Yuanli**	**0.87**	**278**	*e*P	**Pn**	**05 18 22.1**	**+0.2**
	baz=278						
PTSB				*e*S	**Sg**	**05 18 33.8**	**+0.5**
	baz=278						
EHY	**Hungye**	**0.88**	**200**	*e*P	**Pb**	**05 18 20.7**	**-0.5**
	baz=190						
TCU	**Taichung**	**0.91**	**258**	P	**Pn**	**05 18 22.9**	**+0.5**
	baz=258						
TCU				*e*S	**Sn**	**05 18 36.1**	**+1.1**
	baz=258						
WDJ	**Dajia District**	**0.92**	**271**	P	**Pg**	**05 18 23.0**	**+0.3**
	baz=271						
WDJ				*e*S	**Sn**	**05 18 36.1**	**+0.7**
	baz=271						
TWY	**Chenhua**	**0.94**	**357**	*e*P	**Pn**	**05 18 22.8**	**0.0**
	baz=346						
WHYT	**Xinyi Township**	**0.97**	**229**	*e*P	**Pg**	**05 18 23.9**	**+0.4**
	baz=229						
WJS	**Zhushan**	**0.99**	**239**	*e*P	**Pn**	**05 18 23.8**	**+0.3**
	baz=239						
WJS				*e*S	**Sn**	**05 18 39.1**	**+2.2**
	baz=239						
YULB	**Yu-li**	**0.99**	**199**	*e*P	**Pb**	**05 18 21.0**	**-2.2**
	baz=192						
WNT	**Mingjian**	**0.99**	**243**	*e*P	**Pg**	**05 18 24.5**	**+0.5**
	baz=255						
TWF1	**Yuli**	**1.03**	**198**	*e*P	**Pb**	**05 18 23.7**	**-0.2**
	baz=197						
WCHH	**Zhanghua**	**1.03**	**256**	P	**Pg**	**05 18 24.6**	**-0.1**
	baz=256						
WCHH				*e*S	**Sg**	**05 18 39.8**	**+1.5**
	baz=256						
YUS	**Yu-Shan**	**1.06**	**217**	*e*P	**Pb**	**05 18 24.7**	**+0.1**
	baz=224						
ALS	**Alishan**	**1.13**	**224**	*e*P	**Pb**	**05 18 26.1**	**+0.3**
	baz=216						
ALS				*e*S	**Sg**	**05 18 41.8**	**+0.3**
	baz=216						
CHN5	**Tsauling**	**1.15**	**231**	P	**Pb**	**05 18 26.6**	**+0.6**
	baz=231						
CHN5				*e*S	**Sg**	**05 18 42.5**	**+0.4**
	baz=231						
JYNG	**Yonagunijimaku**	**1.19**	**84**	P	**Pn**	**05 18 26.2**	**0.0**
JYNG				S	**Sg**	**05 18 42.8**	**-0.3**
WGK	**Gukeng**	**1.19**	**237**	*e*P	**Pg**	**05 18 27.5**	**-0.2**
	baz=236						
WDLH	**Douliu**	**1.20**	**238**	*e*P	**Pb**	**05 18 27.0**	**+0.1**
	baz=249						
WDLH				*e*S	**Sg**	**05 18 43.7**	**-0.1**
	baz=249						
YOJ	**Yonaguni jima**	**1.25**	**84**	P	**Pn**	**05 18 27.1**	**+0.1**
	baz=85						
YOJ	**Yonaguni jima**	**1.25**	**84**	P	**Pn**	**05 18 27.2**	**+0.1**
YOJ				S	**Sg**	**05 18 45.2**	**+0.1**
CHKT	**Chengkung**	**1.26**	**192**	*e*P	**Pn**	**05 18 26.5**	**-0.7**
	baz=192						
CHKT				*e*S	**Sb**	**05 18 42.4**	**-1.1**
	baz=192						
RLNB	**Erlin**	**1.26**	**250**	P	**Pn**	**05 18 27.5**	**+0.3**
	baz=262						
RLNB				*e*S	**Sg**	**05 18 45.3**	**-0.3**
	baz=262						
ELDTW	**Lidau**	**1.28**	**207**	*e*P	**Pn**	**05 18 27.8**	**+0.2**
	baz=193						
WTCT	**Ta-ch'eng**	**1.34**	**250**	*e*P	**Pn**	**05 18 27.9**	**-0.4**
	baz=264						
CHN2	**Minshiung**	**1.34**	**234**	*e*P	**Pb**	**05 18 29.7**	**+0.5**
	baz=233	

SSD	Sandimen	1.84 211	*e*P	Pn	05 18 34.6	-0.5
	baz=194					
IRIF	Iriomote-Funau	1.90 90	P	Pn	05 18 35.7	-0.3
IRIF			*e*S	Sn	05 18 58.7	-0.6
MASBT	Mashibuluo	1.95 209	*e*P	Pn	05 18 37.3	+0.5
	baz=193					
PNG	Penghu	2.06 249	*e*P	Pn	05 18 36.9	-1.4
	baz=247					
PTTC	Pingtan	2.07 305	*e*P	Pn	05 18 36.8	-1.5
	baz=305					
PHUB	P'eng-hu	2.07 247	*e*P	Pn	05 18 36.2	-2.2
	baz=245					
EAST	Anshuo	2.08 201	*e*P	Pn	05 18 39.4	+0.8
	baz=190					
WDGT	Dungji	2.12 240	*e*P	Pn	05 18 38.8	-0.2
	baz=247					
JKRS	Kuro-shima	2.15 92	P	Pn	05 18 40.3	+0.8
JKRS			S	Sn	05 19 06.1	+0.4
SCZT	Fangliau	2.17 206	*e*P	Pn	05 18 40.1	+0.4
	baz=189					
JIJ	Ishigaki jima	2.27 89	P	Pn	05 18 41.1	0.0
JIJ			S	Sn	05 19 08.4	-0.2
LAY	Lan-yu	2.29 182	*e*P	Pn	05 18 40.1	-1.3
	baz=182					
VCHM	Qimei	2.32 242	*e*P	Pn	05 18 41.6	-0.3
	baz=239					
MATB	Ma-tsu	2.38 320	*e*P	Pn	05 18 41.5	-1.1
	baz=321					
PTMZ	Houxiangcun	2.41 288	*e*P	Pn	05 18 41.9	-1.1
	baz=288					
JISG	Ishigakijimahi	2.44 84	P	Pn	05 18 42.8	-0.6
JISG			S	Sn	05 19 12.0	-0.7
JTJ	Tarama	2.79 83	S	Sn	05 19 22.2	+0.7
XPSS	Dashiqiu	2.90 333	*e*P	Pn	05 18 48.4	-1.5
	baz=334					
KNM	Kinmen	2.94 272	*e*P	Pn	05 18 51.4	+1.1
	baz=272					
MHZQ	Yeshan	2.96 307	*e*P	Pn	05 18 49.7	-0.9
	baz=308					
KNMB	Chin-men Tao	2.98 273	*e*P	Pn	05 18 49.6	-1.3
	baz=273					
AXDP	Jialang	3.40 280	*e*P	Pn	05 18 55.6	-1.1
	baz=280					
ZPLA	Ao Xicun	3.59 264	*e*P	Pn	05 18 58.2	-1.0
	baz=264					
ZZJH	Jiuhuzhen	3.67 273	*e*P	Pn	05 18 59.5	-0.8
	baz=272					

IDC ***20*** *05:21:14.9±2.5, 9°.56N×123°.84E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/34, mbtmp3.7/3, MS3.0/3, Ms1 3.1/3, ms1mx2.8/26, Error ellipse: s-maj=278.1km s-min=27.3km az=64.0*

MAN ***20*** *05:21:17.2, 10°.13N×125°.03E, h19km, mb4.5, ML3.4, MS3.2*

ISC 20 05:21:16.3±1.5, 10°.16N±0°.03×125°.07E±0°.04, h16km±11km, n20, σ1§84/30, mb3.6/3, 2C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	Maasin	0.21 263		*e*P	Pb	05 21 22.1	+0.4
MSLP				*e*S	Sb	05 21 30.9	+5.5
SCPH	Surigao	0.56 132	⇓	*i*P	Pn	05 21 34.5	+5.0
SCPH				*i* S	Sn	05 21 43.7	+5.3
OCLP	Ormoc	1.00 333		*e*P	Pn	05 21 35.4	-0.2
OCLP				*e*S	Sn	05 21 50.5	+1.1
PLP	Palo	1.00 355	⇓	*e*P	Pb	05 21 34.5	-0.9
PLP				*e*S	Sn	05 21 50.2	+0.7
LLP	Lapu-Lapu	1.10 278	⇓	*e*P	Pn	05 21 36.7	-0.4
LLP				*e*S	Sg	05 21 52.1	+0.1
TBP	Tagbilaran	1.28 249		*e*P	Pb	05 21 39.6	-0.4
TBP				*i* S	Sg	05 21 59.1	+1.4
BUTP	Butuan	1.30 155		*e*P	Pn	05 21 39.4	-0.4
BUTP				*e*S	Sg	05 21 59.4	+1.0
BESP	Borongan	1.48 14		*e*P	Pb	05 21 43.3	-0.1
BESP				*e*S	Sg	05 22 03.7	-0.3
CGP	Cagayan de Oro	1.73 192	⇑	*e*P	Pn	05 21 44.5	-1.3
CGP				*e*S	Sn	05 22 04.8	-2.7
SNPH	Sibulan	1.98 246		*i* P	Pb	05 21 51.4	-0.7
BUKP	Musuan	2.27 180		*e*P	Pn	05 21 53.0	-0.1
BUKP				*e*S	Sn	05 22 21.9	+1.1
DCPH	Dipolog City	2.31 227	⇑	*e*P	Pb	05 21 56.5	-1.1
DCPH				*e*S	Sb	05 22 23.8	-2.1
CNP	Catarman	2.37 350		*e*P	Pb	05 21 56.9	-1.8
CNP				*e*S	Sn	05 22 24.8	+1.5
GUIM	Jordan	2.49 281		*e*P	Pn	05 21 55.8	-0.3
GUIM				*e*S	Sn	05 22 26.6	+0.4
SIJI	Sorong	12.57 150		LR	LR	05 28 32.3	
	comp=Z,65nm,18.3s,baz=354,slow=34						
BATI	Baumata	20.28 184		LR	LR	05 34 29.8	
	comp=Z,65nm,18.9s,baz=258,slow=40						
CMAR	Chiang Mai Arr	26.60 291		LR	LR	05 36 49.5	
	comp=Z,26nm,19.2s,baz=100,slow=36						
WRA	Warramunga Arr	31.27 163		P	P	05 27 35.4	-0.3
	1.2nm,0.9s,baz=339,slow=12,SNR=2.7						
ASAR	Alice Springs	34.71 166		P	P	05 28 04.6	-1.1
	0.3nm,0.5s,baz=343,slow=8.0,SNR=4.9						
ASAR				PcP	PcP	05 30 39.4	-0.2
	0.4nm,0.5s,baz=340,slow=2.8,SNR=4.4						
MKAR	Makanchi Array	51.41 323		P	P	05 30 19.9	-0.6
	0.7nm,0.9s,baz=132,slow=8.9,SNR=5.5						

IDC 20 05:26:27.4±9.4, 13°.35S×166°.64E, h159km±101km, mb3.5/4, mb1 3.6/5, mb1mx3.3/32, mbtmp3.9/5, MS3.9/1, Ms1 3.9/1, ms1mx2.7/18, Error ellipse: s-maj=83.4km s-min=54.0km az=137.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.67 181		P	Pn	05 28 30.5	+0.8
	0.4nm,0.3s,baz=119,slow=17,SNR=7.9						
DZM				S	Sn	05 30 05.3	-1.1
	0.1nm,0.3s,baz=174,slow=13,SNR=2.1						
PMG	Port Moresby	19.50 280		LR	LR	05 37 25.8	
	comp=Z,318nm,19.5s,baz=94,slow=34						
STKA	Stephens Creek	29.45 227		P	P	05 32 15.9	-0.4
	1.2nm,0.4s,baz=52,slow=8.4,SNR=3.6						
WRA	Warramunga Arr	31.60 254		P	P	05 32 36.1	+0.7
	0.4nm,0.5s,baz=80,slow=9.7,SNR=3.7						
ASAR	Alice Springs	32.62 247		P	P	05 32 43.9	-0.5
	0.9nm,0.5s,baz=74,slow=9.2,SNR=18						
MKAR	Makanchi Array	95.79 317		P	P	05 39 35.3	-0.3
	0.2nm,0.3s,baz=106,slow=4.7,SNR=3.6						

ISCJB ***20*** *05:41:58.8±0.5, 51°.49N±0°.02×16°.22E±0°.03, h0km, Error ellipse: s-maj=3.5km s-min=2.7km az=16.1*

VIE ***20*** *05:42:02.7±1.6, 51°.38N×16°.17E, h0km, mb2.3/5, ml2.7/6, Error ellipse: s-maj=12.9km s-min=8.0km az=50.0, Suspected Mining induced.*

IDC ***20*** *05:42:03.1±0.9, 51°.43N×16°.08E, h0km, mb1 3.2/4, mb1mx3.1/39, mbtmp3.1/4, ML2.7/5, Error ellipse: s-maj=20.0km s-min=7.9km az=103.0*

ISC 20 05:42:01.0±0.8, 51°.50N±0°.04×16°.19E±0°.03, h0km, n30, σ1§17/57, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.66 174		*i* Pg	Pg	05 42 13.9	+0.2
KSP				*e*Sg	Sg	05 42 21.4	-0.9
CHVC	Chvalec	0.92 185		*e*PG	Pg	05 42 18.8	+0.2
CHVC				*e*SG	Sg	05 42 30.5	0.0
OSTC	Ostas	0.95 179		*e*PG	Pg	05 42 19.4	+0.3
OSTC				*e*SG	Sg	05 42 31.5	+0.1
UPC	Upice	1.00 187		*e*PG	Pg	05 42 19.9	-0.3
UPC				*e*SG	Sg	05 42 33.1	0.0
	comp=Z,104nm,0.4s						
DPC	Dobruska-Polom	1.16 176		*e*PG	Pg	05 42 22.7	-0.4
DPC				*e*SG	Sg	05 42 37.7	-0.4
	comp=Z,51nm,0.5s						
PVCC	Panska Ves	1.42 227		*e*PG	Pb	05 42 28.7	+0.5
PVCC				*e*SG	Sn	05 42 47.8	+0.5
	comp=Z,202nm,0.3s						
BRG	Berggiesshubel	1.55 247		PN	Pn	05 42 29.9	+0.1
BRG				PG	Pg	05 42 31.2	+0.6
BRG				SG	Sg	05 42 51.3	+0.6
	52nm,0.4s						
GOPC	GO Pecny, Ondr	1.82 210		*e*PG	Pb	05 42 34.8	-0.4
GOPC				*e*SG	Sb	05 42 58.9	+0.3
	comp=Z,24nm,0.4s						
PRU	Pruhonice	1.84 215		*e*PG	Pb	05 42 35.4	-0.1
PRU				*e*SG	Sg	05 42 59.9	-0.2
	comp=Z,27nm,0.7s						
MORC	Moravsky Berou	1.93 153		*e*PN	Pn	05 42 34.3	-0.8
MORC				*e*SG	Sn	05 43 00.4	+0.3
CLL	Collm	2.01 266		*e*Pn	Pn	05 42 35.0	-1.1
CLL				*e*Pg	Pb	05 42 38.0	-0.3
CLL				*e*Sg	Sb	05 43 04.0	+0.2
	comp=Z,22nm,0.9s						
OKC	Ostrava-Krasne	2.08 142		*e*PG	Pb	05 42 39.4	-0.2
OKC				*e*SG	Sb	05 43 06.3	+0.4
	comp=Z,59nm,1.3s						
VRAC	Vranov	2.21 173		Pn	Pn	05 42 40.0	+1.1
	comp=Z,2.0nm,0.3s,baz=346,slow=17,SNR=7.9						
VRAC				Lg	Lg	05 43 11.0	
	comp=Z,5.0nm,0.3s,baz=274,slow=21,SNR=7.6						
VRAC	Vranov	2.21 173		*e*PN	Pn	05 42 39.6	+0.7
VRAC				*e*SG	Sb	05 43 10.3	+0.6
KRUC	Moravsky	2.45 177		*e*PN	Pn	05 42 43.7	+1.6
KRUC				*e*SG	Sb	05 43 15.9	-0.6
OJC	Ojcow	2.62 118		*e*Pg	Pg	05 42 52.0	+0.8
OJC				*e*Sg	Sg	05 43 26.6	+1.4
NKC	Novy Kostel	2.69 243		*e*SG	Sg	05 43 29.1	+1.8
	comp=Z,32nm,0.9s						
KHC	Kasperske Hory	2.91 216		*e*PN	Pn	05 42 49.4	+0.9
KHC				*e*PG	Pb	05 42 54.8	+1.1
KHC				*e*SG	Sg	05 43 33.6	-0.7
	comp=Z,14nm,0.9s						
GERES	GERESS Array B	3.10 212		Pn	Pn	05 42 52.5	+1.3
	comp=Z,0.5nm,0.3s,baz=34,slow=13,SNR=5.7						
GERES				Pg	Pb	05 42 57.9	+0.8
	comp=Z,4.8nm,0.3s,baz=32,slow=18,SNR=40						
GERES				Lg	Lg	05 43 37.6	
	comp=Z,4.7nm,0.3s,baz=28,slow=28,SNR=7.0						
LANS	Liptovska Anna	3.15 137		*e*PG	Pg	05 43 01.2	-0.2
LANS				*e*SG	Sg	05 43 43.2	+0.9
MODS	Modra-Piesok	3.21 167		*e*PG	Pg	05 43 00.9	-1.6
MODS				*e*SG	Sg	05 43 42.8	-1.2
VYHS	Vyhne	3.46 149		*e*PG	Pg	05 43 05.9	-1.4
VYHS				*e*SG	Sg	05 43 51.1	-1.0
CONA	Conrad Observa	3.58 184		Pg	Pg	05 43 07.7	-2.0
	comp=Z,2.3nm,0.3s						
CONA				Sg	Sg	05 43 54.5	-1.6
	comp=Z,6.2nm,0.3s						
MOA	Molln	3.87 200		Pn	Pn	05 43 02.3	+0.7
	comp=Z,0.8nm,0.2s						
MOA				Pg	Pg	05 43 14.2	-0.8
	comp=Z,2.6nm,0.3s						
MOA				Sg	Sg	05 44 05.4	+0.3
	comp=Z,8.5nm,0.5s						
ARSA	Arzberg	4.28 186		Pg	Pg	05 43 24.4	+1.5
	comp=Z,2.8nm,0.4s						
ARSA				Sg	Sg	05 44 21.7	+3.4
	comp=Z,2.8nm,0.4s						
KOLS	Kolonicke sedl	4.68 121		*e*SG	Sg	05 44 35.0	+3.9
KBA	Koelnbreinsper	4.80 204		Sg	Sg	05 44 36.3	+1.0
	comp=Z,8.2nm,0.8s						
HFS	Hagfors	8.76 352		Pn	Pn	05 44 08.9	+0.1
	comp=Z,0.1nm,0.3s,baz=169,slow=16,SNR=3.1						
FINES	FINESS Array B	11.35 25		Pn	Pn	05 44 43.5	-0.6
	comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=3.7						
ARCES	ARCESS Array B	18.62 10		Pn	P	05 46 17.0	-2.7
	comp=Z,0.1nm,0.3s,baz=190,slow=13,SNR=4.9						

KRSC ***20*** *06:00:25.2±1.5, 52°.01N×160°.63E, h60km±23km, ML4.8*

BJI ***20*** *06:00:27.7±0.0, 52°.55N×160°.19E, h37km, mb4.7/40, mB4.8/24, Ms4.6/21, Ms7 4.3/15*

MOS ***20*** *06:00:29.0±1.0, 52°.13N×160°.38E, h50km, mb4.8/36, MS3.8/5, Error ellipse: s-maj=6.8km s-min=3.4km az=98.2*

ISCJB ***20*** *06:00:29.1±0.6, 52°.12N±0°.03×160°.41E±0°.05, h50km±3km, mb4.6/87, MS4.0/20, Error ellipse: s-maj=6.9km s-min=3.3km az=136.1*

NEIC ***20*** *06:00:30.2±2.4, 52°.26N×160°.03E, h35km, mb4.5/56, Error ellipse: s-maj=19.4km s-min=14.1km az=161.0*

IDC ***20*** *06:00:31.0±0.6, 52°.26N×160°.23E, h38km±3km, mb4.1/24, mb1 4.2/26, mb1mx4.1/38, mbtmp4.3/26, ML4.1/2, MS3.8/12, Ms1 3.8/12, ms1mx3.6/30, Error ellipse: s-maj=15.0km s-min=9.8km az=156.0*

ISC 20 06:00:30.3±0.5, 52°.10N±0°.04×160°.46E±0°.04, h48km±3km, h48km:pP-P, n289, σ1§53/338, mb4.6/87, MS4.0/20, 27C-7D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.04 345		*i* P	Pn	06 00 46.3	-2.2
SPN				*e*S	Sn	06 01 00.5	-1.4
SPN	Mys Shipunski	1.04 345		PN	Pn	06 00 46.3	-2.2
SPN				S	Sn	06 01 00.5	-1.4
RUS	Russkaya	1.24 287		*e*P	Pn	06 00 49.8	-1.4
RUS				*e*S	Sn	06 01 06.6	-0.2
RUS	Russkaya	1.24 287		PN	Pn	06 00 49.8	-1.4
RUS				S	Sn	06 01 06.6	-0.2
NLC	Nalytchevo	1.27 328		*e*P	Pn	06 00 50.7	-1.0
NLC				*e*S	Sn	06 01 08.4	+0.8
NLC	Nalytchevo	1.27 328		PN	Pn	06 00 50.7	-1.0
NLC				S	Sn	06 01 08.4	+0.8
DALK	Dalny	1.40 313		*e*P	Pn	06 00 51.9	-1.5
DALK				*e*S	Sn	06 01 10.3	-0.4
DALK	Dalny	1.40 313		PN	Pn	06 00 51.9	-1.5
DALK				S	Sn	06 01 10.3	-0.4
PET	Petropavlovsk	1.44 311		*e*Pn	Pn	06 00 53.0	-0.9
PET	Petropavlovsk	1.44 311	α	*i* PN	Pn	06 00 53.1	-0.9
PET				*e*S	Sn	06 01 12.8	+1.1
PET				smax	smax		
	comp=E,3μm,0.7s						
PET				smax	smax		
	comp=N,4μm,0.5s						
MTVR	Mutnovka	1.45 286		*i* P	Pn	06 00 53.4	-0.8
MTVR				*e*S	Sn	06 01 12.6	+0.5
MTVR	Mutnovka	1.45 286		PN	Pn	06 00 53.4	-0.8
MTVR				S	Sn	06 01 12.6	+0.5
UGLR	Uglovaya	1.49 319		*e*P	Pn	06 00 54.3	-0.5
KDTR	Khodutka, Kamc	1.50 260		*i* P	Pn	06 00 53.0	-1.8
KDTR				*e*S	Sn	06 01 11.9	-1.2
KDTR	Khodutka, Kamc	1.50 260		PN	Pn	06 00 53.0	-1.8
KDTR				S	Sn	06 01 11.9	-1.2
SDLR	Sedlovina	1.52 322		*e*P	Pn	06 00 54.4	-0.8
SDLR	Sedlovina	1.52 322		PN	Pn	06 00 54.4	-0.8
SMAR	Somma	1.54 320		*e*P	Pn	06 00 54.7	-0.9
SMAR	Somma	1.54 320		PN	Pn	06 00 54.7	-0.9
AVH	Avacha	1.57 319		*e*P	Pn	06 00 54.9	-0.9
AVH	Avacha	1.57 319		PN	Pn	06 00 54.9	-0.9
KRER	Koryakskii	1.59 320		*e*P	Pn	06 00 55.9	-0.4
KRER	Koryakskii	1.59 320		PN	Pn	06 00 55.9	-0.4
ASAK	Asacha	1.60 281		*e*P	Pn	06 00 55.2	-1.0
ASAK	Asacha	1.60 281		PN	Pn	06 00 55.2	-1.0
KRMR	Karymshinskiy	1.60 298		*e*P	Pn	06 00 55.4	-0.8
KRMR				*e*S	Sn	06 01 16.0	+0.4
KRMR	Karymshinskiy	1.60 298		PN	Pn	06 00 55.4	-0.8
KRMR				S	Sn	06 01 16.0	+0.4
KOK	Koryaka	1.63 318		*e*P	Pn	06 00 56.2	-0.5
KOK	Koryaka	1.63 318		PN	Pn	06 00 56.2	-0.5
KRX	Arik	1.68 320		*e*P	Pn	06 00 56.3	-1.0
KRX	Arik	1.68 320		PN	Pn	06 00 56.3	-1.0
PEA0B	Petropavlovsk-	1.96 302		*e*Pn	Pn	06 01 01.2	+0.1
PETK	Petropavlovsk-	1.96 302		Pn	Pn	06 01 00.9	-0.2
	comp=N,67nm,0.3s,baz=107,slow=19,SNR=308						
PETK				LR	LR	06 01 33.4	
	comp=N,605nm,19.5s,baz=69,slow=35						
PEA1	Petropavlovsk-	1.97 302		*e*Pn	Pn	06 01 00.9	-0.3
PEA1				*e*		06 01 33.4	
APC	Apacha	2.18 294		*e*P	Pn	06 01 04.7	+0.6
APC				*e*S	Sn	06 01 31.7	+1.9
APC	Apacha	2.18 294		PN	Pn	06 01 04.7	+0.6
APC				S	Sn	06 01 31.7	+1.9
GNL	Ganaly	2.21 317		*e*P	Pn	06 01 04.7	+0.1
GNL	Ganaly	2.21 317		PN	Pn	06 01 04.7	+0.1
PAU	Pauzhetka	2.35 256		*e*P	Pn	06 01 05.0	-1.4
PAU	Pauzhetka	2.35 256		PN	Pn	06 01 05.0	-1.4
MKZ	Mys Kozlova	2.58 17		P	Pn	06 01 07.6	-1.9
MKZ				*e*S	Sn	06 01 37.3	-2.3
MKZ	Mys Kozlova	2.58 17		PN	Pn	06 01 07.6	-1.9
MKZ				S	Sn	06 01 37.3	-2.3
KZV	Kizimen	3.02 358		*e*P	Pn	06 01 15.3	-0.5
KZV				*e*S	Sn	06 01 51.2	+0.4
KZV	Kizimen	3.02 358		PN	Pn	06 01 15.3	-0.5
KZV				S	Sn	06 01 51.2	+0.4
SKR	Severo-Kuril's	3.06 244		*e*P	Pn	06 01 14.8	-1.4
SKR				*e*S	Sn	06 01 50.0	-1.6
SKR	Severo-Kuril's	3.06 244		*e*PN	Pn	06 01 14.9	-1.3
SKR				*e*S	Sn	06 01 49.3	-2.3
SKR				pmax	pmax		
	comp=Z,166nm,0.5s						
SKR				smax	smax		
	comp=N,827nm,0.5s						
SKR				smax	smax		
	comp=E,1μm,0.5s						
TUMD	Tumrok D	3.11 359		*e*P	Pn	06 01 15.8	-1.1
TUMD				*e*S	Sn	06 01 51.9	-0.9
TUMR	Tumrok	3.20 357		*e*P	Pn	06 01 18.2	+0.1
TUMR	Tumrok	3.20 357		PN	Pn	06 01 15.8	-2.4
TUMR				S	Sn	06 01 51.9	-3.1
ALID	Alaid	3.30 250		*e*P	Pn	06 01 18.8	-0.8
ALID	Alaid	3.30 250		PN	Pn	06 01 18.8	-0.8
BZGR	Bezymyannyi-Gr	3.85 2		*e*P	Pn	06 01 26.6	-0.5
BZGR	Bezymyannyi-Gr	3.85 2		PN	Pn	06 01 26.6	-0.5
BZWR	Bezymyannyi-We	3.88 0		*e*P	Pn	06 01 26.4	-1.1
BZWR	Bezymyannyi-We	3.88 0		PN	Pn	06 01 26.4	-1.1
KPT	Kopyto	3.88 358		*e*P	Pn	06 01 26.9	-0.6
KPT	Kopyto	3.88 358		PN	Pn	06 01 26.9	-0.6
ESO	Esso	3.97 346		*e*P	Pn	06 01 28.6	-0.1
ESO	Esso	3.97 346		PN	Pn	06 01 28.6	-0.1
KOZ	Kozyrevsk	3.98 355		*e*P	Pn	06 01 29.1	+0.3
KOZ	Kozyrevsk	3.98 355		PN	Pn	06 01 29.1	+0.3
LGNR	Loginova	4.00 2		*e*P	Pn	06 01 29.4	+0.1
LGNR	Loginova	4.00 2		PN	Pn	06 01 29.4	+0.1
CIRR	Tsirk	4.03 2		*e*P	Pn	06 01 28.6	-1.0
CIRR	Tsirk	4.03 2		PN	Pn	06 01 28.6	-1.0
KRSR	Krestovskiy	4.13 1		*e*P	Pn	06 01 31.0	+0.1
KRSR	Krestovskiy	4.13 1		PN	Pn	06 01 31.0	+0.1
KLY	Klyuchi	4.23 1		*e*P	Pn	06 01 31.1	-1.0
KLY	Klyuchi	4.23 1		PN	Pn	06 01 31.1	-1.0
SRDR	Sredinnyy	4.25 354		*e*P	Pn	06 01 32.8	+0.3
SRDR	Sredinnyy	4.25 354		PN	Pn	06 01 32.8	+0.3
KBTR	Krutoberegovo	4.35 18		*e*P	Pn	06 01 33.0	-0.8
KBTR	Krutoberegovo	4.35 18		PN	Pn	06 01 33.0	-0.8
KBG	Krutoberegovo	4.37 17		*e*P	Pn	06 01 34.6	+0.5
KBG				*e*S	Sn	06 02 23.0	-0.7
KBG	Krutoberegovo	4.37 17		PN	Pn	06 01 34.6	+0.5
KBG				S	Sn	06 02 23.0	-0.7
BDR	Baidarnaya	4.50 5		*e*P	Pn	06 01 36.0	0.0
BDR	Baidarnaya	4.50 5		PN	Pn	06 01 36.0	0.0
BKI	Bering	4.52 44		*e*P	Pn	06 01 33.3	-2.9
BKI				*e*S	Sn	06 02 21.0	-6.4
BKI	Bering	4.52 44		PN	Pn	06 01 33.3	-2.9
SMKR	Semkarok	4.53 7		*e*P	Pn	06 01 37.1	+0.7
SMKR	Semkarok	4.53 7		PN	Pn	06 01 37.1	+0.7
SRKR	Sorokina	4.59 5		*e*P	Pn	06 01 37.2	+0.1
SRKR	Sorokina	4.59 5		PN	Pn	06 01 37.2	+0.1
MA2	Magadan	9.26 328		LR	LR	06 07 01.9	
	comp=E,457nm,18.3s,baz=149,slow=43						
MA2	Magadan	9.26 328	*ce*	PN	Pn	06 02 40.7	-0.3
MA2				pmax	pmax		
	comp=Z,16nm,2.5s						
KUR	Kuril'sk	10.78 235		PN	Pn	06 03 07.1	+5.2
KUR				S	Sn	06 05 11.6	+11
KUR				MLR	MLR		
	comp=Z,700nm,13.0s						
KUR				MLR	MLR		
	comp=N,1μm,16.0s						
SEY	Seymchan	11.69 342	*ce*	PN	Pn	06 03 14.8	+0.6
NKL	Nikolayevsk	12.06 283		*e*PN	P	06 03 31.6	+0.7
NKL				MLR	MLR		
	comp=E,600nm,16.0s						
YSS	Yuzh-Sakhalins	12.59 253		*e*PN	P	06 03 37.9	+1.1
YSS				MLR	MLR		
	comp=Z,500nm,17.0s						
YUK	Yuzh-Kuril'sk	12.64 236		*i* PN	Pn	06 03 25.8	-1.5
ASAJ	Asahikawa	14.33 243		Pn	Pn	06 03 49.1	-1.2
	comp=Z,1.2nm,0.3s,baz=70,slow=12,SNR=8.6						
BILL	Bilibino	16.24 8		*e*Pn	Pn	06 04 14.4	-0.5
	comp=Z,18nm,0.9s						
BILL	Bilibino	16.24 8		*i* P	Pn	06 04 14.9	+0.1
BILL				pmax	pmax		
	comp=Z,21nm,1.0s						
BILL				MLR	MLR		
	comp=Z,275nm,19.0s						
TEY	Ternei	17.25 255	⇑	*e*P	P	06 04 28.8	+0.3
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
KLR	Kul'dur	18.37 272		P	Pn	06 04 41.2	0.0
	comp=N,0.7nm,0.3s,baz=63,slow=12,SNR=12						
KLR	Kul'dur	18.37 272		*i* P	P	06 04 41.1	+0.3
KLR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK	Yakutsk	19.27 313		*e*P	P	06 04 46.8	-3.7
	comp=Z,50nm,0.7s						
YAK	Yakutsk	19.27 313		*e*P	P	06 04 47.5	-3.1
ZEA	Zeya	19.99 288		*e*P	Pn	06 05 06.8	+6.2
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,15.0s						
ZEA				MLR	MLR		
	comp=E,600nm,14.0s						
ZEA				MLR	MLR		
	comp=N,300nm,15.0s						
USA0B	Ussuriysk Arra	20.47 259		*e*P	P	06 05 00.8	-3.0
	comp=N,12nm,0.8s						
USA0B	Ussuriysk Arra	20.47 259		P	P	06 05 00.7	-3.0
USA0B				pmax	pmax		
	comp=Z,12nm,0.9s						
USRK	Ussuriysk Ar.	20.47 259		P	P	06 05 02.1	-1.6
	comp=Z,12nm,0.8s,baz=64,slow=11,SNR=16						
MDJ	Mudanjiang	21.71 262		P	P	06 05 15.5	-1.6
MDJ				pP	pP	06 05 26.8	-0.8
MDJ				sP	sP	06 05 33.6	+0.3
MDJ				S	S	06 09 08.8	-5.7
MDJ				sS	Sn	06 09 26.0	+0.3
MDJ				pmax	pmax		
	comp=Z,15nm,0.7s						
MDJ				LR	LR		
	comp=Z,500nm,19.2s						
MDJ				LR	LR		
	comp=Z,250nm,19.2s

H11N1	WAKE ISLAND Hy	32.71	169	T	T	06 43 04.2	
	baz=352,slow=75,SNR=74						
ULN	Ulaanbaatar	33.95	285	*ce*P	P	06 07 08.3	-0.6
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TLY	Talaya	34.30	292	*e*P	P	06 07 11.8	+0.1
TLY				pmax	pmax		
	comp=Z,16nm,0.9s						
TLY				MLR	MLR		
	comp=Z,615nm,14.0s						
SONA0	Songino Array	34.36	285	*e*P	P	06 07 11.8	-0.7
SONM	Songino Array	34.36	285	P	P	06 07 11.8	-0.7
	comp=Z,1.2nm,0.5s,baz=69,slow=9.0,SNR=6.7						
SONM				LR	LR	06 22 51.3	
	comp=Z,451nm,18.2s,baz=72,slow=39						
INK	Inuvik	34.53	37	P	P	06 07 14.6	+1.1
	comp=Z,1.1nm,0.8s,baz=298,slow=5.7,SNR=3.4						
INK				pP	pP	06 07 25.5	+0.5
	comp=Z,1.8nm,0.6s,baz=287,slow=5.7,SNR=5.6						
INK	Inuvik	34.53	37	*e*P	P	06 07 17.3	+3.8
	comp=Z,1.9nm,0.6s						
HHC	Hu-ho-hao-te	34.87	271	*e*P	P	06 07 15.4	-1.5
HHC				S	S	06 12 38.8	-5.7
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,22nm,5.2s						
HHC				LR	LR		
	comp=Z,450nm,16.1s						
HHC				LR	LR		
	comp=Z,470nm,17.3s						
NJ2	Nanjing	36.16	253	*e*P	P	06 07 26.6	-1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NRIK	Noril'sk	36.85	326	P	P	06 07 33.4	0.0
	comp=Z,1.3nm,0.4s,baz=91,slow=7.9,SNR=5.6						
NRIK				LR	LR	06 24 11.6	
	comp=Z,311nm,18.3s,baz=49,slow=39						
XAN	Xi'an	40.78	264	P	P	06 08 02.5	-4.3
XAN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
XAN				LR	LR		
	comp=Z,280nm,21.7s						
XAN				LR	LR		
	comp=Z,240nm,21.7s						
XAN				LR	LR		
	comp=Z,270nm,17.3s						
LZH	Lanzhou	42.56	271	*e*P	P	06 08 19.8	-1.6
LZH				pP	pP	06 08 29.4	-4.2
LZH				sP	pwP	06 08 33.0	-3.9
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
LZH				LR	LR		
	comp=Z,270nm,15.2s						
LZH				LR	LR		
	comp=Z,330nm,15.7s						
LZH				LR	LR		
	comp=Z,220nm,15.7s						
GTA	Gaotai	42.95	278	*e*P	P	06 08 27.8	+3.3
GTA				pP	pwP	06 08 38.5	-1.6
GTA				sP	sP	06 08 42.6	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA1	Zalesovo Array	43.51	304	*e*P	P	06 08 26.9	-1.7
ZALV	Zalesovo Beam	43.51	304	P	P	06 08 26.9	-1.7
	comp=Z,2.3nm,0.6s,baz=64,slow=6.8,SNR=5.9						
ZALV	Zalesovo Beam	43.51	304	*i* P	P	06 08 26.2	-2.4
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NVS	Novosibirsk	43.87	306	*e*P	P	06 08 30.3	-1.2
NVS				pmax	pmax		
	comp=Z,17nm,1.0s						
NVS				pmax	pmax		
	comp=E,14nm,1.1s						
RES	Resolute Bay	44.17	22	P	P	06 08 35.0	+1.4
	comp=E,4.1nm,1.0s,baz=8.0,slow=2.2,SNR=4.1						
RES	Resolute Bay	44.17	22	*e*P	P	06 08 35.0	+1.4
	comp=E,6.3nm,1.0s						
RES	Resolute Bay	44.17	22	*e*P	P	06 08 35.0	+1.4
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DGZ	Jazzator, Alta	44.31	297	*d* iP	P	06 08 35.2	-0.2
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CD2	Chengdu	46.10	266	*e*P	P	06 08 46.6	-3.0
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=Z,700nm,18.6s						
CD2				LR	LR		
	comp=Z,520nm,21.1s						
CD2				LR	LR		
	comp=Z,510nm,13.7s						
WMQ	Urumqi	47.52	290	*e*P	P	06 08 59.1	-1.4
WMQ				sP	pP	06 09 09.8	-3.2
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,40nm,3.8s						
WMQ				LR	LR		
	comp=Z,100nm,15.5s						
WMQ				LR	LR		
	comp=Z,180nm,21.5s						
WMQ				LR	LR		
	comp=Z,260nm,19.1s						
SPA0	Spitsbergen Ar	48.16	351	*e*P	P	06 09 03.7	-1.3
	comp=Z,34nm,1.1s						
KURK	Kurchatov	48.45	303	*e*P	P	06 09 05.4	-2.2
	comp=Z,20nm,1.1s						
KURK	Kurchatov	48.45	303	*ce*P	P	06 09 06.4	-1.2
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
MK31	Makanchi Array	48.79	297	*e*P	P	06 09 09.0	-1.3
	comp=Z,3.3nm,0.6s						
MK31	Makanchi Array	48.79	297	*i* P	P	06 09 09.3	-1.0
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK32	Makanchi Array	48.79	297	*e*P	P	06 09 09.2	-1.1
MKAR	Makanchi Array	48.79	297	P	P	06 09 09.2	-1.1
	comp=Z,3.1nm,0.5s,baz=58,slow=7.5,SNR=31						
MKAR				LR	LR	06 31 04.2	
	comp=Z,112nm,19.7s,baz=52,slow=38						
MKAR	Makanchi Array	48.79	297	*i* P	P	06 09 09.1	-1.2
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MAKZ	Makanchi	48.96	297	*e*P	P	06 09 10.0	-1.5
	comp=Z,3.8nm,0.7s						
MAKZ	Makanchi	48.96	297	*e*P	P	06 09 10.0	-1.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KMI	Kunming	50.88	261	P	P	06 09 30.6	+4.0
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
BRVK	Borovoye	51.22	309	*e*P	P	06 09 27.5	-1.0
	comp=Z,14nm,0.6s						
BRVK	Borovoye	51.22	309	*ce*P	P	06 09 28.1	-0.4
BRVK				pmax	pmax		
	comp=Z,15nm,0.8s						
DAG	Danmarks Havn	51.40	360	*i* P	P	06 09 29.8	+0.2
DAG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DAG	Danmarks Havn	51.40	360	*i* P	P	06 09 29.8	+0.2
	comp=Z,4.6nm,0.8s						
SLVN	Son La	53.01	257	*e*P	P	06 09 41.0	-1.4
	comp=Z,7.6nm,1.0s						
OTUK	Ortayu	53.21	303	P	P	06 09 42.3	-1.1
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARU	Arti	54.28	318	*e*P	P	06 09 49.0	-2.1
	comp=Z,10.0nm,0.5s						
ARU	Arti	54.28	318	*c* iP	P	06 09 50.5	-0.6
ARU				S	S	06 17 24.1	-0.8
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ARA0	ARCESS Array S	54.30	342	*e*P	P	06 09 51.4	+0.3
ARCES	ARCESS Array B	54.30	342	P	P	06 09 51.4	+0.3
	comp=Z,5.9nm,0.3s,baz=36,slow=9.0,SNR=11						
BOZ	Bozeman (W)	54.82	59	*e*P	P	06 10 02.7	+7.3
	comp=Z,4.4nm,0.9s						
SUMG	Summit	54.92	7	*e*P	P	06 09 57.2	+1.2
	comp=Z,11nm,0.9s						
SUMG	Summit	54.92	7	*i* P	P	06 09 57.0	+1.0
SUMG				pmax	pmax		
	comp=Z,25nm,0.8s						
SUMG	Summit	54.92	7	*i* P	P	06 09 57.0	+1.0
	comp=Z,25nm,0.8s						
BOOM	Boomskoye usch	55.02	296	*e*P	P	06 09 56.6	-0.3
	comp=Z,4.0nm,0.9s						
BOOM	Boomskoye usch	55.02	296	*e*P	P	06 09 56.6	-0.3
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GCMT	Greycliff	55.72	58	*e*S	S	06 17 44.7	0.0
AAK	Ala-Archa	55.72	297	*e*P	P	06 09 59.8	-2.1
	comp=Z,4.6nm,1.0s						
AAK	Ala-Archa	55.72	297	*ce*P	P	06 10 00.7	-1.2
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NV01	Mina Array Sit	55.88	70	*e*P	P	06 10 05.8	+2.6
NV01				*e*pP	pP	06 10 16.6	+1.4
NVAR	Mina Array Bea	55.88	70	P	P	06 10 05.8	+2.6
	comp=Z,0.4nm,0.5s,baz=294,slow=6.8,SNR=3.2						
NVAR				pP	pP	06 10 16.6	+1.4
	comp=Z,1.4nm,0.7s,baz=304,slow=6.8,SNR=6.3						
MDPB	Devils Postpil	55.97	71	*e*P	P	06 10 08.3	+4.4
	comp=Z,4.9nm,1.0s						
KSH	Kashi	57.00	293	*e*P	P	06 10 12.6	+1.6
KSH				PP	PP	06 12 17.9	+0.3
KSH				S	S	06 17 58.9	-2.9
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,290nm,5.9s						
KSH				LR	LR		
	comp=Z,290nm,7.9s						
KSH				LR	LR		
	comp=Z,210nm,7.5s						
KSH				LR	LR		
	comp=Z,320nm,14.9s						
KK31	Karatay Array	57.57	300	*e*P	P	06 10 12.4	-2.4
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	57.57	300	P	P	06 10 13.4	-1.4
KK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KKAR	Karatay Array	57.57	300	*e*P	P	06 10 12.3	-2.5
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	57.57	300	*e*P	P	06 10 12.3	-2.5
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PD31	Pinedale Array	57.82	60	*e*P	P	06 10 18.9	+2.0
PD31				*e*pP	pP	06 10 31.3	+2.3
PDAR	Pinedale Array	57.82	60	P	P	06 10 18.9	+2.0
	comp=Z,0.9nm,0.8s,baz=300,slow=3.6,SNR=8.1						
PDAR				pP	pP	06 10 31.3	+2.3
	comp=Z,0.6nm,0.6s,baz=308,slow=2.7,SNR=4.4						
KLMR	Klimovskoe	57.92	330	*e*P	P	06 10 16.5	-0.5
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KLMR	Klimovskoe	57.92	330	*e*P	P	06 10 16.5	-0.5
KLMR				AMP		06 10 18.1	
	comp=Z,6.0nm,0.6s						
CHTO	Chiang Mai	57.93	259	*e*P	P	06 10 16.9	-0.7
	comp=Z,9.2nm,0.8s						
CHTO	Chiang Mai	57.93	259	*e*P	P	06 10 16.9	-0.7
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CM31	Chiang Mai Arr	58.20	259	*e*P	P	06 10 21.5	+2.0
CM31				*e*pP	pP	06 10 32.2	+0.3
CMAR	Chiang Mai Arr	58.20	259	P	P	06 10 21.5	+2.0
	comp=Z,3.7nm,0.4s,baz=24,slow=7.3,SNR=6.4						
CMAR				pP	pP	06 10 32.2	+0.3
	comp=Z,2.6nm,0.5s,baz=26,slow=7.2,SNR=3.4						
CMAR				LR	LR	06 38 43.7	
	comp=Z,69nm,18.1s,baz=58,slow=40						
AB31	Akbulak array	58.61	311	P	P	06 10 21.7	-0.3
AB31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ABKAR	Akbulak array	58.61	311	*e*P	P	06 10 20.3	-1.7
	comp=Z,4.1nm,0.8s						
GUN	Gumba	59.23	277	*e*P	P	06 10 26.7	-0.3
	comp=Z,8.3nm,0.5s						
BTK	Batken	59.50	297	*e*P	P	06 10 27.1	-1.3
	comp=Z,7.1nm,0.7s						
BTK	Batken	59.50	297	*e*P	P	06 10 27.1	-1.3
BTK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KKN	Kakani	59.68	277	*e*P	P	06 10 30.1	+0.2
	comp=Z,15nm,0.5s						
PKI	Pulchoki	59.76	277	*e*P	P	06 10 30.3	-0.3
	comp=Z,7.1nm,0.5s						
PKIN	Phulchoki	59.76	277	*e*P	P	06 10 30.3	-0.3
	comp=Z,9.0nm,0.5s						
DMN	Daman	59.92	277	*e*P	P	06 10 31.8	+0.2
	comp=Z,15nm,0.6s						
PKCU	Pink Cliffs	59.99	67	*e*P	P	06 10 37.0	+4.9
	comp=Z,7.8nm,1.4s						
DANN	Dangsing	60.20	279	*e*P	P	06 10 33.9	+0.3
	comp=Z,23nm,0.6s						
GAR	Garm	60.52	296	*e*P	P	06 10 30.7	-4.7
	comp=Z,12nm,0.7s						
GAR	Garm	60.52	296	*e*P	P	06 10 30.7	-4.7
GAR				pmax	pmax		
	comp=Z,12nm,0.7s						
KOLN	Koldanda	60.72	278	*e*P	P	06 10 37.0	-0.1
	comp=Z,16nm,0.7s						
PYUN	Piuthan	60.85	279	*e*P	P	06 10 38.0	0.0
	comp=Z,18nm,0.6s						
FIA1	FINESS Array S	61.12	337	*e*P	P	06 10 38.6	-0.4
	comp=Z,14nm,0.6s						
FIA0	FINESS Array S	61.12	337	*e*P	P	06 10 39.6	+0.6
FIA0				*e*pP	pP	06 10 50.6	-1.3
FIA0	FINESS Array S	61.12	337	*e*P	P	06 10 39.6	+0.6
FIA0				*e**PP	pP	06 10 50.7	-1.3
FINES	FINESS Array B	61.12	337	P	P	06 10 39.6	+0.6
	comp=Z,12nm,0.6s,baz=35,slow=8.4,SNR=60						
FINES				pP	pP	06 10 50.6	-1.3
	comp=Z,6.5nm,0.6s,baz=40,slow=10.0,SNR=9.1						
FINES				LR	LR	06 41 01.4	
	comp=Z,86nm,18.9s,baz=24,slow=40						
FINES	FINESS Array B	61.12	337	*i* P	P	06 10 40.0	+1.0
FINES				pmax	pmax		
	comp=Z,12nm,0.6s						
NIL	Nilore	62.67	290	*e*P	P	06 10 48.4	-1.4
	comp=Z,11nm,0.6s						
NIL	Nilore	62.67	290	*e*P	P	06 10 48.4	-1.4
NIL				pmax	pmax		
	comp=Z,11nm,0.6s						
OBN	Obninsk	63.48	328	*i* P	P	06 10 52.4	-2.4
OBN				*i*		06 13 15.5	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,69nm,15.0s						
BORG	Borgarnes	63.48	1	*ce*P	P	06 10 55.6	+0.9
VSU	Vasula	63.55	335	*ce*P	P	06 10 56.4	+1.2
VSU				pmax	pmax		
	comp=Z,14nm,0.7s						
NC303	NORSAR Array S	64.36	344	*e*P	P	06 11 00.5	-0.1
	comp=Z,9.4nm,0.8s						
NC405	NORSAR Array S	64.41	344	*e*P	P	06 10 60.0	-0.9
NC204	NORSAR Array S	64.42	344	*e*P	P	06 11 00.6	-0.4
	comp=Z,15nm,0.9s						
NB201	NORSAR Array S	64.54	344	*e*P	P	06 11 01.4	-0.4
	comp=Z,11nm,0.7s						
NB2	NORSAR Subarra	64.56	344	P	P	06 11 02.3	+0.4
	comp=Z,1.9nm,0.6s,baz=21,slow=6.9						
NB2	NORSAR Subarra	64.56	344	P	P	06 11 01.8	-0.1
NB2				pmax	pmax		
	comp=Z,42nm,1.6s						
NB200	NORSAR Array S	64.56	344	*e*P	P	06 11 02.4	+0.5
NOA	NORSAR Array B	64.56	344	P	P	06 11 02.4	+0.5
	comp=Z,4.4nm,0.8s,baz=21,slow=6.6,SNR=21						
NOA				LR	LR	06 41 06.5	
	comp=Z,44nm,20.6s,baz=45,slow=38						
T25A	Trinidad	64.59	62	*e*P	P	06 11 07.7	+5.0
	comp=Z,22nm,0.8s						
NBO00	NORSAR Array S	64.64	344	*e*P	P	06 11 02.1	-0.3
	comp=Z,9.2nm,0.9s						
GEYT	Alibeck	67.82	303	P	P	06 11 23.9	+0.7
	comp=Z,2.4nm,0.6s,baz=9.5,slow=3.6,SNR=5.6						
AKASG	Malin Array Be	69.58	329	P	P	06 11 34.0	+0.1
	comp=Z,7.8nm,0.7s,baz=29,slow=6.3,SNR=26						
AKASG				pP	pP	06 11 44.9	-1.9
	comp=Z,2.6nm,0.5s,baz=30,slow=6.8,SNR=5.2						
AKASG				LR	LR	06 46 13.7	
	comp=Z,70nm,18.6s,baz=25,slow=40						
AKBB	Malin Array Si	69.58	329	*e*P	P	06 11 33.6	-0.3
	comp=Z,11nm,0.8s						
AKBB	Malin Array Si	69.58	329	*e*P	P	06 11 33.6	-0.3
AKBB				pmax	pmax		
	comp=Z,11nm,0.8s						
KBZ	Khabaz	70.41	317	P	P	06 11 40.2	+1.1
	comp=Z,5.3nm,0.9s,baz=297,slow=2.1,SNR=6.4						
KBZ				LR	LR	06 46 22.5	
	comp=Z,81nm,19.9s,baz=336,slow=39						
LTX	Lajitas	70.83	67	*e*P	P	06 11 43.7	+1.7
LTX	Lajitas	70.83	67	*e*P	P	06 11 43.7	+1.7
TXAR	Lajitas Array	70.83	67	P	P	06 11 43.7	+1.7
	comp=Z,0.5nm,0.5s,baz=304,slow=4.7,SNR=12						
AKH	Akhalkalaki	72.05	315	⇑*i* P	P	06 11 50.0	+0.8
KOLS	Kolonicke sedl	73.23	333	*e*P	P	06 11 57.1	+1.2
KOLS	Kolonicke sedl	73.23	333	*e*P	P	06 11 57.1	+1.2
CLL	Collm	73.36	339	⇓*i* P	P	06 11 56.9	+0.3
	comp=Z,9.0nm,1.2s						
CLL				*i* pP	pP	06 12 07.3	-2.5
CLL	Collm	73.36	339	⇓*i* P	P	06 11 56.9	+0.3
CLL				*i*		06 12 07.3	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
DPC	Dobruska-Polom	73.50	337	*e*P	P	06 11 59.8	+2.3
DPC	Dobruska-Polom	73.50	337	*e*P	P	06 11 59.8	+2.3
BUR08	Bucovina Ar. S	73.53	330	*e*P	P	06 11 58.4	+0.5
	comp=Z,7.1nm,0.7s						
BURAR	Bucovina Array	73.55	330	⇓*i* P	P	06 11 58.4	+0.5
MORC	Moravsky Berou	73.73	336	*e*P	P	06 11 58.3	-0.6
	comp=Z,5.6nm,0.9s						
MORC	Moravsky Berou	73.73	336	⇑*i* P	P	06 11 59.8	+0.9
MORC	Moravsky Berou	73.73	336	*e*P	P	06 11 58.3	-0.6
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LANS	Liptovska Anna	73.81	335	*e*P	P	06 12 01.4	+2.1
LANS	Liptovska Anna	73.81	335	*e*P	P	06 12 01.4	+2.1
BIZ	Bicaz	73.88	329	⇑*i* P	P	06 12 00.8	+1.1
TRPA	Tarpa	73.88	332	⇑*i* P	P	06 12 01.3	+1.6
TESR	Tescani	74.08	329	⇑*i* P	P	06 12 02.2	+1.3
VYHS	Vyhne	74.57	335	*e*P	P	06 12 05.2	+1.4
VYHS	Vyhne	74.57	335	*e*P	P	06 12 05.2	+1.4
VRI	Vrincioaia	74.63	328	⇓*i* P	P	06 12 05.1	+0.9
CFR	Carcaliu	74.77	327	⇑*i* P	P	06 12 05.6	+0.7
MODS	Modra-Piesok	75.09	336	*e*P	P	06 12 08.4	+1.6
MODS	Modra-Piesok	75.09	336	*e*P	P	06 12 08.4	+1.6
MLR	Muntele Rosu	75.21	329	*e*P	P	06 12 07.0	-0.7
	comp=Z,8.2nm,0.6s						
MLR	Muntele Rosu	75.21	329	⇑*i* P	P	06 12 09.4	+1.7
GRFO	Grafenberg	75.27	340	*e*P	P	06 12 06.9	-0.8
	comp=Z,26nm,0.6s						
KHC	Kasperske Hory	75.28	338	*e*P	P	06 12 06.2	-1.7
	comp=Z,1.5nm,0.9s						
KHC	Kasperske Hory	75.28	338	*e*P	P	06 12 06.2	-1.7
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KHC	Kasperske Hory	75.28	338	*e*P	P	06 12 09.4	+1.5
KHC				*ex*	x	06 12 19.9	
KHC				*ex*	x	06 12 25.3	
TIRR	Tirgusor	75.31	327	*e*P	P	06 12 06.8	-1.2
	comp=Z,27nm,1.0s						
TIRR	Tirgusor	75.31	327	⇓*i* P	P	06 12 09.3	+1.2
TIRR	Tirgusor	75.31	327	*e*P	P	06 12 06.9	-1.2
TIRR				pmax	pmax		
	comp=Z,27nm,1.0s						
TLB	Topalu	75.33	327	⇑*i* P	P	06 12 09.5	+1.4
MEM	Membach	75.41	344	P	P	06 12 10.0	+1.5
MEM				PcP	PcP	06 12 21.8	+0.3
GEC2	GERESS Array S	75.52	338	*e*P	P	06 12 10.5	+1.1
	comp=Z,4.4nm,1.3s						
GEC2				*e*pP	pP	06 12 21.5	-0.8
GEC2	GERESS Array S	75.52	338	*e*P	P	06 12 10.5	+1.1
GEC2				*e**PP	pP	06 12 21.5	-0.8
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GERES	GERESS Array B	75.52	338	P	P	06 12 10.5	+1.1
	comp=Z,0.6nm,0.4s,baz=46,slow=3.9,SNR=7.0						
GERES				pP	pP	06 12 21.5	-0.8
	comp=Z,1.4nm,0.6s,baz=42,slow=6.2,SNR=5.5						
VOIR		75.55	329	⇑*i* P	P	06 12 11.1	+1.6
ARR	Arges	75.74	330	⇑*i* P	P	06 12 13.1	+2.5
GZR	Gura Zlata	76.29	331	⇓*i* P	P	06 12 14.4	+0.7
ILGA	Ilgaz	76.36	321	*e*P	P	06 12 13.5	-0.9
	comp=Z,18nm,0.9s						
BZS	Buzias	76.43	332	⇑*i* P	P	06 12 14.8	+0.4
BFO	Black Forest	77.16	341	*ce*P	P	06 12 21.1	+2.6
KBA	Koelnbreinsper	77.26	338	P	P	06 12 21.6	+2.3
KBA				pmax	pmax		
	comp=Z,22nm,0.8s						
BR101	Keskin Array S	77.53	321	*e*P	P	06 12 21.7	+0.8
BR101				*e*pP	PcP	06 12 32.5	+1.4
BR131	Keskin Array S	77.53	321	*e*P	P	06 12 20.4	-0.5
	comp=Z,3.9nm,0.9s						
BRTR	Keskin Array B	77.53	321	P	P	06 12 21.7	+0.8
	comp=Z,2.2nm,0.7s,baz=27,slow=3.3,SNR=10.0						
BRTR				pP	PcP	06 12 32.5	+1.4
	comp=Z,1.3nm,0.7s,baz=56,slow=3.1,SNR=4.5						
BRTR				LR	LR	06 52 07.1	
	comp=Z,44nm,18.6s,baz=80,slow=40						
BRTR	Keskin Array B	77.53	321	*i* P	P	06 12 21.8	+0.8
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VTS	Vitosha	78.65	329	⇑*i* P	P	06 12 28.1	+1.0
AS31	Alice Springs	78.94	205	*e*P	P	06 12 30.4	+1.9
	comp=Z,0.8nm,0.6s						
AS31				*e*pP	pP	06 12 41.8	+0.7
ASAR	Alice Springs	78.94	205	P	P	06 12 30.4	+1.8
	comp=Z,0.8nm,0.8s,baz=13,slow=5.7,SNR=7.2						
ASAR				pP	pP	06 12 41.8	+0.6
	comp=Z,1.2nm,0.7s,baz=16,slow=5.3,SNR=5.7						
PDG	Podgorica	80.03	332	⇑*i* P	P	06 12 35.5	+1.1
TTG	Podgorica	80.03	332	*e*P	P	06 12 33.9	-0.5
	comp=Z,7.4nm,0.7s						
TTG	Podgorica	80.03	332	*e*P	P	06 12 33.9	-0.5
TTG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RAYN	Ar Rayn	85.79	303	*e*P	P	06 13 04.2	-0.3
	comp=Z,7.5nm,1.2s						
RAYN	Ar Rayn	85.79	303	*e*P	P	06 13 04.3	-0.3
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.2s						

KRNET 20 06:10:58.4±0.1, 42°.49N×70°.55E, mb2.5, 8C, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	2.16	122	⇑*i* P		Pb	06 11 38.0	-0.4
	baz=22							
ARSB				⇑*i* S		Sb	06 12 06.6	+0.9
	baz=22							
AML	Almayashu	2.36	98	⇑*i* P		Pb	06 11 40.4	-1.6
	baz=98							
AML				⇑*i* S		Sb	06 12 11.5	-0.3
	baz=98							
AAK	Ala-Archa	2.92	86	Pg		Pg	06 11 53.0	-1.2
	3.5nm,1.1s							
AAK				Lg		Lg	06 12 30.9	
	1.6nm,0.7s							
UCH	Uchtor	2.95	94	⇑*e*P		Pn	06 11 49.1	+2.2
	baz=

KRER	**Koryakskii**	**1.75**	**318**	*eP*	Pn	06 31 40.3 +2.4
ASAK	**Asacha**	**1.76**	**283**	*eP*	Pn	06 31 40.4 +2.4
KRMR	**Karymshinskiy**	**1.77**	**298**	*eP*	Pn	06 31 40.0 +2.0
KRMR				*eS*	Sn	06 32 00.9 +1.4
KOK	**Koryaka**	**1.78**	**316**	*eP*	Pn	06 31 40.8 +2.5
KRX	**Arik**	**1.83**	**318**	*eP*	Pn	06 31 41.7 +2.7
APC	**Apacha**	**2.34**	**294**	*eP*	Pn	06 31 49.1 +3.3
APC				*eS*	Sn	06 32 17.8 +4.3
GNL	**Ganaly**	**2.36**	**316**	*eP*	Pn	06 31 50.3 +4.1
PAU	**Pauzhetka**	**2.48**	**258**	P	Pn	06 31 51.0 +3.3
MKZ	**Mys Kozlova**	**2.61**	**13**	*eP*	Pn	06 31 52.3 +2.9
MKZ				*eS*	Sn	06 32 21.7 +1.8
KZV	**Kizimen**	**3.10**	**356**	*eP*	Pn	06 31 59.5 +3.2
KZV				*eS*	Sn	06 32 35.2 +3.0
SKR	**Severo-Kuril's**	**3.17**	**247**	*eS*	Sn	06 32 35.2 +1.5
TUMD	**Tumrok D**	**3.19**	**357**	*eP*	Pn	06 31 59.8 +2.5
TUMD				*eS*	Sn	06 32 35.9 +1.8
TUMR	**Tumrok**	**3.28**	**354**	*eP*	Pn	06 32 02.6 +3.9
ALID	**Alaid**	**3.42**	**252**	*eP*	Pn	06 32 04.7 +4.0
SRDR	**Sredinnyy**	**4.34**	**353**	*eP*	Pn	06 32 17.3 +4.3
KBTR	**Krutoberegovo**	**4.37**	**16**	*eP*	Pn	06 32 16.4 +3.0
BKI	**Bering**	**4.47**	**43**	*eP*	Pn	06 32 16.5 +1.7
BKI				*eS*	Sn	06 33 05.9 +0.5
SMKR	**Semkarok**	**4.59**	**5**	P	Pn	06 32 21.3 +4.8
SRKR	**Sorokina**	**4.64**	**3**	*eP*	Pn	06 32 21.3 +4.0

GCG ***20*** *06:32:37.9±0.3, 14°.01N×91°.40W, h29km±3km, MD3.8*
SNET ***20*** *06:32:38.7±1.0, 14°.17N×91°.24W, h20km±7km, ML2.5*

ISC 20 06:32:34.5±3.6, 13°.8N±0°.1×91°.5W±0°.2, h10km, n10, σ0§68/16, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.87**	**45**	⇑*iP*	**Pg**	**06 32 51.6**	**+0.3**
FUG				*eP*	**Pg**	**06 32 51.6**	**+0.3**
PCG	**Pacaya**	**1.01**	**56**	*eP*	**Pg**	**06 32 54.4**	**+0.4**
IXG	**Ixpaco**	**1.06**	**71**	*eP*	**Pg**	**06 32 55.7**	**+0.8**
IXG				*eS*	**Sb**	**06 33 09.5**	**+0.5**
NBG	**Las Nubes**	**1.33**	**55**	*eP*	**Pb**	**06 32 59.1**	**-0.6**
NBG				*eS*	**Sn**	**06 33 17.8**	**+0.5**
RTR	**El Retiro**	**1.78**	**87**	*eP*	**Pn**	**06 33 06.2**	**+0.7**
RTR				*eS*	**Sn**	**06 33 27.2**	**-1.0**
SBLS	**San Blas**	**1.80**	**89**	*eP*	**Pn**	**06 33 06.1**	**+0.3**
SBLS				*eS*	**Sn**	**06 33 27.7**	**-1.1**
SNJE	**San Jose**	**1.81**	**88**	*eP*	**Pn**	**06 33 06.9**	**+0.9**
SNJE				*eS*	**Sn**	**06 33 28.8**	**-0.4**
UNIC	**Santa Ana**	**1.86**	**85**	*eP*	**Pn**	**06 33 06.3**	**-0.3**
MTO3	**Montecristo**	**2.13**	**74**	*eP*	**Pn**	**06 33 09.7**	**-0.6**
PAVA	**Las Pavas**	**2.47**	**92**	*eP*	**Pn**	**06 33 15.0**	**+0.1**

KRAR ***20*** *06:33:37.2±0.1, 53°.71N×91°.03E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC ***20*** *06:33:40.9±5.1, 53°.30N×90°.58E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=39.1km s-min=35.7km az=18.0, Suspected Mining explosion.*
IDC ***20*** *06:33:43.9±5.1, 53°.38N×90°.49E, h0km, mb1 3.1/3, mb1mx3.0/44, mbtmp3.1/3, ML2.5/3, Error ellipse: s-maj=53.9km s-min=24.3km az=54.0*

ISC 20 06:33:46.4±4.1, 53°.4N±0°.1×90°.2E±0°.2, h0km, n7, σ1§89/9, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.23**	**283**	*i*		06 55 03.8	
	baz=94, slow=328, SNR=5.9						
ZAA0	**Zalesovo Array**	**3.23**	**283**	⇑Pg	**Pb**	**06 34 44.0**	**-0.5**
	1.0nm, 0.7s						
ZAA0				⇑Lg	Lg	06 35 31.4	
	1.7nm, 0.8s						
ZALV	**Zalesovo Beam**	**3.23**	**283**	Pn	**Pn**	**06 34 40.6**	**+2.3**
	0.6nm, 0.3s, baz=99, slow=14, SNR=5.5						
ZALV				Pg	**Pg**	**06 34 47.0**	**-1.2**
	1.1nm, 0.3s, baz=96, slow=15, SNR=10						
ZALV				Lg	Lg	06 35 32.8	
	0.6nm, 0.3s, baz=98, slow=26, SNR=5.9						
KURK	**Kurchatov**	**7.58**	**254**	⇓Pn	**Pn**	**06 35 35.4**	**-2.6**
	3.2nm, 1.2s						
KURK				⇓Sn	**Sn**	**06 37 06.5**	**+1.9**
	4.0nm, 1.1s						
KURK				⇑Lg	Lg	06 37 52.5	
	7.1nm, 0.8s						
KURBB	**Kurchatov Arra**	**7.67**	**254**	Pn	**Pn**	**06 35 38.8**	**-0.5**
	0.1nm, 0.3s, baz=65, slow=15, SNR=7.3						
KURBB	**Kurchatov Arra**	**7.67**	**254**	⇑Pn	**Pn**	**06 35 38.4**	**-0.9**
	1.9nm, 0.5s, baz=64, slow=14						
KURBB				⇓Sn	**Sn**	**06 37 08.4**	**+1.5**
	7.7nm, 0.7s						
KURBB				⇑Lg	Lg	06 37 52.4	
	21nm, 0.8s, baz=71, slow=29						
MKAR	**Makanchi Array**	**8.28**	**221**	Pn	**Pn**	**06 35 48.5**	**+0.9**
	0.2nm, 0.3s, baz=41, slow=14, SNR=6.9						

ISK ***20*** *06:42:08.0, 37°.18N×38°.66E, h14km, ML2.6/8*
ISCJB ***20*** *06:42:09.3±0.8, 37°.25N±0°.04×38°.63E±0°.04, h3km±6km, Error ellipse: s-maj=7.0km s-min=4.6km az=155.0*
DDA ***20*** *06:42:09.5, 37°.25N×38°.51E, h7km±3km, ML3.0*

ISC 20 06:42:08.8±1.3, 37°.25N±0°.04×38°.67E±0°.03, h12km±10km, n19, σ0§84/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.23**	**31**	PG	**Pb**	**06 42 14.4**	**-0.5**
SANL	**SANLIURFA_Merk**	**0.26**	**106**	*i* P	**Pn**	**06 42 17.7**	**-0.8**
SANL				IAML_P			
	comp=Z, 6μm, 0.2s						
ATAB	**Bozova**	**0.38**	**307**	*i* P	**Pg**	**06 42 15.3**	**-1.0**
ATAB				*i* S	**Sg**	**06 42 20.0**	**-1.4**
ATAB				IAML_P			
	comp=Z, 24μm, 0.2s						
GZT	**Gaziantep**	**0.89**	**277**	*i* P	**Pn**	**06 42 26.9**	**-0.4**
GZT				*i* S	**Sn**	**06 42 39.7**	**-0.5**
GAZ	**Gaziantep**	**1.17**	**267**	PN	**Pb**	**06 42 31.0**	**0.0**
AKCD	**Akcadag**	**1.21**	**331**	*i* P	**Pg**	**06 42 32.2**	**+0.2**
AKCD				*i* S	**Sg**	**06 42 48.6**	**+0.9**
SVRC	**Sivrice-ELAZID**	**1.24**	**24**	PN	**Pg**	**06 42 33.1**	**+0.5**
ELZG	**Elazig**	**1.27**	**11**	*i* P	**Pg**	**06 42 34.2**	**+0.8**
ELZG				*i* S	**Sg**	**06 42 51.6**	**+1.7**
DYBB	**Diyarbakir**	**1.36**	**58**	PN	**Pb**	**06 42 33.8**	**-0.5**
KUZU	**Kuzuini**	**1.36**	**250**	*i* P	**Pg**	**06 42 36.1**	**+1.1**
KUZU				*i* S	**Sg**	**06 42 54.1**	**+1.3**
HCB	**Kahramanmara**	**1.41**	**275**	*i* P	**Pg**	**06 42 35.5**	**-0.4**
HCB				*i* S	**Sn**	**06 42 52.6**	**-0.3**
HCB				IAML_P			
	comp=Z, 683nm, 0.1s						
MAZI	**Mazidag**	**1.43**	**81**	PN	**Pn**	**06 42 34.2**	**-0.4**
KMRS	**Kahramanmaras**	**1.44**	**281**	PN	**Pn**	**06 42 33.9**	**-0.8**
KMRS				SN	**Sb**	**06 42 53.4**	**-0.3**
KAMA	**Osmaniye**	**1.60**	**268**	*i* P	**Pb**	**06 42 37.8**	**-0.6**
KAMA				*i* S	**Sb**	**06 42 58.4**	**-0.1**
DARE	**Darende-Malaty**	**1.62**	**325**	PN	**Pn**	**06 42 37.5**	**+0.2**
DARE				SN	**Sb**	**06 42 58.8**	**-0.4**
ELBS	**KAHRAMANMARAS**	**1.63**	**312**	*i* P	**Pb**	**06 42 39.0**	**+0.2**
ELBS				*i* S	**Sb**	**06 42 59.5**	**+0.2**
ELBS				IAML_P			
	comp=Z, 283nm, 0.3s						
ANDN	**Andirin**	**1.88**	**281**	*i* P	**Pb**	**06 42 43.8**	**+0.6**
ANDN				*i* S	**Sb**	**06 43 08.0**	**+1.3**
ANDN				IAML_P			
	comp=Z, 498nm, 0.1s						
KEMA	**Kemaliye**	**2.02**	**356**	*i* P	**Pb**	**06 42 44.4**	**-1.2**
KEMA				*i* S	**Sb**	**06 43 12.0**	**+1.3**
KOZT	**Kozan**	**2.28**	**277**	PN	**Pn**	**06 42 45.8**	**-0.4**

VIE 20 06:45:40.2±1.1, 48°.29N×9°.70E, h0km, mb1.7/1, ml1.8/3, Error ellipse: s-maj=10.8km s-min=7.4km az=117.0, Suspected Mining explosion., Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels**	**1.01**	**173**	Pn	Pn	06 46 01.4	-0.5
	2.9nm, 0.2s						
DAVA				Sn	Sn	06 46 17.8	+0.9
	11nm, 0.5s						
FETA	**Feichten**	**1.45**	**151**	Pn	Pn	06 46 07.7	-0.2
	0.5nm, 0.3s						
FETA				Sg	Sn	06 46 29.2	+1.5
WTTA	**Wattenberg**	**1.67**	**127**	Pn	Pn	06 46 10.3	-0.6
	1.4nm, 0.3s						
WTTA				Sn	Sg	06 46 34.0	+0.3
	3.8nm, 0.3s						

MEX 20 07:16:14.2±0.3, 17°.39N×101°.07W, h4km±9km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.43**	**300**	*eP*	Pg	07 16 22.2	-0.3
ZIIG				*i* S	Sg	07 16 28.5	+0.3
CAIG	**El Cayaco**	**0.84**	**114**	*i* P	Pg	07 16 29.0	-1.4
CAIG				*eS*	Sg	07 16 39.8	-1.5
ARIG	**Puente Sto Nin**	**1.12**	**38**	*eP*	Pg	07 16 32.7	-3.1
ARIG				*i* S	Sg	07 16 47.4	-3.0
MEIG	**Mezcala**	**1.48**	**69**	*eP*	Pn	07 16 38.2	-3.5
MEIG				*eS*	Sn	07 16 56.7	-4.9
PLIG	**Platanillo**	**1.80**	**56**	*eP*	Pn	07 16 42.1	-4.0
PLIG				*i* S	Sn	07 17 04.7	-4.7
TLIG	**Tlapa**	**2.40**	**86**	*eP*	Pn	07 16 50.2	-4.2
TLIG				*eS*	Sn	07 17 19.6	-4.7

MEX 20 07:20:19.2±0.7, 16°.44N×98°.42W, h10km±7km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.28**	**100**	*i* P	Pg	07 20 24.4	-0.5
PNIG				*i* S	Sg	07 20 28.9	+0.2
TLIG	**Tlapa**	**1.12**	**353**	*eP*	Pb	07 20 37.1	-3.7
TLIG				*i* S	Sg	07 20 51.1	-4.4
VHO	**Vista Hermosa**	**1.73**	**69**	*eP*	Pg	07 20 51.9	-0.6
VHO				*i* P	Pb	07 20 54.3	+3.1
VHO				*eS*	Sn	07 21 08.5	-3.4

SKHL ***20*** *07:26:51.8±0.3, 48°.29N×153°.75E, h143km±3km, mb5.1/9, msh5.5/5*
MOS ***20*** *07:26:52.3±0.8, 48°.52N×153°.42E, h162km, mb4.5/62, Error ellipse: s-maj=7.3km s-min=3.5km az=69.4*
ISCJB ***20*** *07:26:52.2±0.3, 48°.56N±0°.03×153°.44E±0°.03, h159km±2km, mb4.5/283, Error ellipse: s-maj=5.0km s-min=2.3km az=153.0*
KRSC ***20*** *07:26:53.3±1.4, 48°.11N×155°.10E, h168km±26km, ML4.9*
NEIC ***20*** *07:26:53.7±1.4, 48°.55N×153°.37E, h160km±5km, mb4.6/250, Error ellipse: s-maj=15.6km s-min=11.9km az=144.0*
IDC ***20*** *07:26:53.9±0.7, 48°.59N×153°.33E, h159km±6km, mb4.0/24, mb1 4.2/29, mb1mx4.0/41, mbtmp4.5/29, Error ellipse: s-maj=13.1km s-min=8.8km az=161.0*

ISC 20 07:26:52.9±0.6, 48°.48N±0°.05×153°.50E±0°.04, h155km±5km, n923, σ1§12/982, mb4.5/283, 26C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**2.73**	**28**	*eP*	**Pn**	**07 27 38.5**	**+1.2**
ALID				*eS*	**Sn**	**07 28 15.2**	**+3.6**
ALID	**Alaid**	**2.73**	**28**	PN	**Pn**	**07 27 38.5**	**+1.2**
ALID				S	**Sn**	**07 28 15.2**	**+3.6**
SKR	**Severo-Kuril's**	**2.78**	**37**	*eP*	**Pn**	**07 27 38.4**	**+0.8**
SKR				*eS*	**Sn**	**07 28 12.9**	**+0.6**
SKR	**Severo-Kuril's**	**2.78**	**37**	⇑*iPN*	**Pn**	**07 27 38.5**	**+0.8**
SKR				*eS*	**Sn**	**07 28 13.0**	**+0.6**
SKR				pmax	pmax		
	comp=Z, 602nm, 0.9s						
SKR				smax	smax		
	comp=N, 824nm, 0.3s						
SKR				smax	smax		
	comp=E, 1μm, 0.5s						
SKR	**Severo-Kuril's**	**2.78**	**37**	*i* P	**Pn**	**07 27 37.8**	**+0.1**
SKR				AMB	AMB	07 27 39.0	
	comp=E, 600nm, 0.9s						
SKR				*eS*	**Sn**	**07 28 12.1**	**-0.3**
SKR				A	A	07 28 16.3	
	comp=E, 410nm, 0.7s						
SKR				A	A	07 28 16.3	
	comp=E, 1μm, 0.7s						
PAU	**Pauzhetka**	**3.67**	**34**	*eP*	**Pn**	**07 27 49.0**	**+0.1**
PAU				*eS*	**Sn**	**07 28 32.1**	**-0.5**
PAU	**Pauzhetka**	**3.67**	**34**	PN	**Pn**	**07 27 49.0**	**+0.1**
PAU				S	**Sn**	**07 28 32.1**	**-0.5**
PAU	**Pauzhetka**	**3.67**	**34**	*i* P	**Pn**	**07 27 49.1**	**+0.1**
PAU				AMB	AMB	07 27 50.2	
	comp=E, 396nm, 0.7s						
PAU				*i* S	**Sn**	**07 28 32.3**	**-0.3**
PAU				A	A	07 28 33.0	
	comp=E, 1μm, 0.6s						
PAU				A	A	07 28 33.0	
	comp=E, 159nm, 0.6s						
KDTR	**Khodutka, Kamc**	**4.44**	**40**	*eP*	**Pn**	**07 27 57.8**	**-1.2**
KDTR				*eS*	**Sn**	**07 28 46.0**	**-4.5**
KDTR	**Khodutka, Kamc**	**4.44**	**40**	PN	**Pn**	**07 27 57.8**	**-1.2**
KDTR				S	**Sn**	**07 28 46.0**	**-4.5**
ASAK	**Asacha**	**4.81**	**34**	*eP*	**Pn**	**07 28 04.4**	**+0.5**
ASAK				*eS*	**Sn**	**07 28 56.1**	**-3.2**
ASAK	**Asacha**	**4.81**	**34**	PN	**Pn**	**07 28 04.4**	**+0.5**
ASAK				S	**Sn**	**07 28 56.1**	**-3.2**
MTVR	**Mutnovka**	**5.00**	**35**	*eP*	**Pn**	**07 28 07.0**	**+0.6**
MTVR				*eS*	**Sn**	**07 29 02.1**	**-1.7**
MTVR	**Mutnovka**	**5.00**	**35**	PN	**Pn**	**07 28 07.0**	**+0.6**
MTVR				S	**Sn**	**07 29 02.1**	**-1.7**
APC	**Apacha**	**5.02**	**26**	*eP*	**Pn**	**07 28 09.1**	**+2.6**
APC				*eS*	**Sn**	**07 29 04.3**	**+0.2**
APC	**Apacha**	**5.02**	**26**	PN	**Pn**	**07 28 09.1**	**+2.6**
APC				S	**Sn**	**07 29 04.3**	**+0.2**
KUR	**Kuril'sk**	**5.05**	**232**	*ePN*	**Pn**	**07 28 08.1**	**+1.1**
KUR				*eS*	**Sn**	**07 29 07.2**	**+2.4**
KUR				pmax	pmax		
	comp=Z, 71nm, 0.4s						
KUR				smax	smax		
	comp=E, 94nm, 0.3s						
KUR				smax	smax		
	comp=N, 140nm, 0.5s						
KUR	**Kuril'sk**	**5.05**	**232**	*eP*	**Pn**	**07 28 06.6**	**-0.4**
KUR				AMB	AMB	07 28 13.0	
	comp=N, 37nm, 0.4s						
KUR				AMB	AMB	07 28 13.0	
	comp=N, 62nm, 0.4s						
KUR				*eS*	**Sn**	**07 29 03.5**	**-1.4**
KUR				A	A	07 29 17.0	
	comp=N, 200nm, 0.6s						
KUR				A	A	07 29 17.0	
	comp=N, 350nm, 0.6s						
RUS	**Russkaya**	**5.09**	**37**	*eP*	**Pn**	**07 28 06.2**	**-1.2**
RUS				*eS*	**Sn**	**07 29 00.9**	**-4.8**
RUS	**Russkaya**	**5.09**	**37**	PN	**Pn**	**07 28 06.2**	**-1.2**
RUS				S	**Sn**	**07 29 00.9**	**-4.8**
KRMR	**Karymshinskiy**	**5.25**	**32**	*eP*	**Pn**	**07 28 09.8**	**+0.1**
KRMR				*eS*	**Sn**	**07 29 07.3**	**-2.4**
KRMR	**Karymshinskiy**	**5.25**	**32**	PN	**Pn**	**07 28 09.8**	**+0.1**
KRMR				S	**Sn**	**07 29 07.3**	**-2.4**
PEA0B	**Petropavlovsk-**	**5.34**	**28**	*ePn*	**Pn**	**07 28 12.3**	**+1.4**
PEA0B	**Petropavlovsk-**	**5.34**	**28**	PN	**Pn**	**07 28 12.3**	**+1.4**
PETK	**Petropavlovsk-**	**5.34**	**28**	P	**Pn**	**07 28 11.8**	**+0.9**
	comp=N, 1.2nm, 0.3s, baz=176, slow=11, SNR=14						
PEA1	**Petropavlovsk-**	**5.35**	**28**	*ePn*	**Pn**	**07 28 11.8**	**+0.9**
PET	**Petropavlovsk**	**5.60**	**34**	*ePn*	**Pn**	**07 28 14.3**	**+0.1**
PET	**Petropavlovsk**	**5.60**	**34**	*ePN*	**Pn**	**07 28 14.8**	**+0.6**
PET				*eS*	**Sn**	**07 29 15.7**	**-2.1**
PET				smax	smax		
	comp=N, 178nm, 0.7s						
PET	**Petropavlovsk**	**5.60**	**34**	*i* P	**Pn**	**07 28 14.4**	**+0.1**
PET				AMB	AMB	07 28 17.3	
	comp=N, 102nm, 0.5s						
PET				*eS*	**Sn**	**07 29 16.4**	**-1.4**
PET				A	A	07 29 17.6	
	comp=N, 125nm, 0.5s						
PET				A	A	07 29 17.6	
	comp=N, 80nm, 0.5s						
DALK	**Dalny**	**5.64**	**34**	*eP*	**Pn**	**07 28 14.6**	**-0.2**
DALK				*eS*	**Sn**	**07 29 15.5**	**-3.4**
DALK	**Dalny**	**5.64**	**34**	PN	**Pn**	**07 28 14.6**	**-0.2**
DALK				S	**Sn**	**07 29 15.5**	**-3.4**
KOK	**Koryaka**	**5.81**	**32**	*eP*	**Pn**	**07 28 17.9**	**+0.8**
KOK	**Koryaka**	**5.81**	**32**	PN	**Pn**	**07 28 17.9**	**+0.8**
KOK	**Koryaka**	**5.81**	**32**	*eP*	**Pn**	**07 28 17.9**	**+0.8**
UGLR	**Uglovaya**	**5.81**	**33**	*eP*	**Pn**	**07 28 18.2**	**+1.1**
UGLR				*eS*	**Sn**	**07 29 20.6**	**-2.4**
AVH	**Avacha**	**5.82**	**33**	*eP*	**Pn**	**07 28 18.5**	**+1.2**
AVH				*eS*	**Sn**	**07 29 20.2**	**-3.1**
AVH	**Avacha**	**5.82**	**33**	PN	**Pn**	**07 28 18.5**	**+1.2**
AVH				S	**Sn**	**07 29 20.2**	**-3.1**
SMAR	**Somma**	**5.84**	**33**	*eP*	**Pn**	**07 28 18.3**	**+0.6**
SMAR	**Somma**	**5.84**	**33**	PN	**Pn**	**07 28 18.3**	**+0.6**
KRER	**Koryakskii**	**5.86**	**33**	*eP*	**Pn**	**07 28 18.1**	**+0.2**
KRER				*eS*	**Sn**	**07 29 22.0**	**-2.3**
KRER	**Koryakskii**	**5.86**	**33**	PN	**Pn**	**07 28 18.1**	**+0.2**
KRER				S	**Sn**	**07 29 22.0**	**-2.3**
KRX	**Arik**	**5.87**	**32**	*eP*	**Pn**	**07 28 18.8**	**+0.9**
KRX	**Arik**	**5.87**	**32**	PN	**Pn**	**07 28 18.8**	**+0.9**
SDLR	**Sedlovina**	**5.89**	**33**	*eP*	**Pn**	**07 28 18.5**	**+0.3**
SDLR				*eS*	**Sn**	**07 29 22.2**	**-2.7**
SDLR	**Sedlovina**	**5.89**	**33**	PN	**Pn**	**07 28 18.5**	**+0.3**
SDLR				S	**Sn**	**07 29 22.2**	**-2.7**
GNL	**Ganaly**	**5.92**	**26**	*eP*	**Pn**	**07 28 19.3**	**+0.7**
GNL	**Ganaly**	**5.92**	**26**	PN	**Pn**	**07 28 19.3**	**+0.7**
NLC	**Nalytchevo**	**5.98**	**36**	*eP*	**Pn**	**07 28 17.6**	**-1.6**
NLC				*eS*	**Sn**	**07 29 20.3**	**-6.5**
NLC	**Nalytchevo**	**5.98**	**36**	PN	**Pn**	**07 28 17.6**	**-1.6**
SPN	**Mys Shipunski**	**6.20**	**39**	*eP*	**Pn**	**07 28 20.8**	**-1.4**
SPN				*eS*	**Sn**	**07 29 24.4**	**-7.7**
SPN	**Mys Shipunski**	**6.20**	**39**	PN	**Pn**	**07 28 20.8**	**-1.4**
YUK	**Yuzh-Kuril'sk**	**6.92**	**233**	*ePN*	**Pn**	**07 28 30.6**	**-1.2**
YUK				S	**Sn**	**07 29 51.3**	**+2.0**
YUK				pmax	pmax		
	comp=Z, 139nm, 0.4s						
YUK	**Yuzh-Kuril'sk**	**6.92**	**233**	*eP*	**Pn**	**07 28 31.0**	**-0.8**
YUK				AMB	AMB	07 28 33.0	
	comp=Z, 139nm, 0.4s						
YUK				*eS*	**Sn**	**07 29 46.1**	**-3.2**
GLVR	**Golovnino**	**7.30**	**232**	*ePN*	**Pn**	**07 28 35.8**	**-1.1**
GLVR				*eS*	**Sn**	**07 29 58.9**	**+0.4**
GLVR	**Golovnino**	**7.30**	**232**	*eP*	**Pn**	**07 28 35.0**	**-1.9**
GLVR				*eS*	**Sn**	**07 29 55.9**	**-2.6**
YSS	**Yuzh-Sakhalins**	**7.41**	**262**	*ePn*	**Pn**	**07 28 39.2**	**+0.8**
YSS	**Yuzh-Sakhalins**	**7.41**	**262**	*ePN*	**Pn**	**07 28 39.8**	**+1.4**
YSS				*eS*	**Sn**	**07 30 00.2**	**-1.0**
YSS				pmax	pmax		
	comp=Z, 50nm, 1.0s						
YSS				MLR	MLR		
	comp=Z, 500nm, 17.0s						
YSS	**Yuzh-Sakhalins**	**7.41**	**262**	*eP*	**Pn**	**07 28 39.5**	**+1.1**
YSS				AMB	AMB	07 28 41.5	
	comp=Z, 50nm, 1.0s						
YSS				*eS*	**Sn**	**07 30 00.2**	**-1.0**
TYV	**Tymovskoe**	**7.43**	**293**	*ePN*	**Pn**	**07 28 39.2**	**+0.6**
TYV				*eS*	**Sn**	**07 30 03.7**	**+2.0**
TYV				pmax	pmax		
	comp=Z, 39nm, 1.2s						
TYV				pmax	pmax		
	comp=Z, 100nm, 2.8s						
TYV				smax	smax		
	comp=N, 12nm, 1.3s						
TYV	**Tymovskoe**	**7.43**	**293**	*eP*	**Pn**	**07 28 39.2**	**+0.6**
TYV				AMB	AMB	07 28 41.9	
	comp=N, 39nm, 1.0s						
TYV				*eS*	**Sn**	**07 30 03.7**	**+2.0**
TYV				A	A	07 30 06.9	
	comp=N, 12nm, 1.0s						
UGL	**Uglegorsk**	**7.58**	**279**	*eP*	**Pn**	**07 28 42.3**	**+1.7**
UGL				AMB	AMB	07 28 44.5	
	comp=N, 90nm, 0.9s						
KZV	**Kizimen**	**7.86**	**30**	*eP*	**Pn**	**07 28 45.5**	**+1.1**
KZV				*eS*	**Sn**	**07 30 08.7**	**-3.4**
KZV	**Kizimen**	**7.86**	**30**	PN	**Pn**	**07 28 45.5**	**+1.1**
KZV				S	**Sn**	**07 30 08.7**	**-3.4**
TUMR	**Tumrok**	**7.95**	**29**	*eP*	**Pn**	**07 28 47.4**	**+1.8**
TUMR	**Tumrok**	**7.95**	**29**	PN	**Pn**	**07 28 45.7**	**+0.1**
TUMR				S	**Sn**	**07 30 10.0**	**-4.3**
MKZ	**Mys Kozlova**	**7.95**	**37**	*eP*	**Pn**	**07 28 42.9**	**-2.6**
MKZ				*eS*	Sn	07 30 05.0	-9.1
MKZ	**Mys Kozlova**	**7.95**	**37**	PN	**Pn**	**07 28 42.9**	**-2.6**
TUMD	**Tumrok D**	**7.97**	**30**	*eP*	**Pn**	**07 28 45.7**	**0.0**
TUMD				*eS*	**Sn**	**07 30 10.0**	**-4.5**
OKH	**Okha**	**8.37**	**311**	*eP*	**Pn**	**07 28 54.2**	**+3.1**
JKA	**Kamikawa-asahi**	**8.72**	**244**	*eP*	**Pn**	**07 28 57.3**	**+1.5**
ASAJ	**Asahikawa**	**8.72**	**244**	P	**Pn**	**07 28 57.3**	**+1.5**
	comp=N, 7.0nm, 0.3s, baz=77, slow=11, SNR=22						
NKL	**Nikolayevsk**	**9.36**	**305**	*eP*	**Pn**	**07 29 05.7**	**+1.5**
NKL				AMB	AMB	07 29 07.5	
	comp=N, 15nm, 0.8s						
KBTR	**Krutoberegovo**	**9.60**	**33**	*eP*	**Pn**	**07 29 05.9**	**-1.5**
KBTR	**Krutoberegovo**	**9.60**	**33**	PN	**Pn**	**07 29 05.9**	**-1.5**
ERM	**Erimo**	**9.74**	**232**	*ePn*	**Pn**	**07 29 07.7**	**-1.7**
ERM	**Erimo**	**9.74**	**232**	*ePN*	**Pn**	**07 29 07.7**	**-1.7**
BKI	**Bering**	**10.23**	**44**	*eP*	**Pn**	**07 29 13.0**	**-2.6**
BKI				*eS*	Sn	07 30 55.6	-13
BKI	**Bering**	**10.23**	**44**	PN	**Pn**	**07 29 13.0**	**-2.6**
MA2	**Magadan**	**11.23**	**353**	P	**Pn**	**07 29 29.1**	**+0.3**
	comp=N, 0.2nm, 0.3s, baz=154, slow=9.6, SNR=5.6						
MA2	**Magadan**	**11.23**	**353**	*ePn*	**Pn**	**07 29 26.8**	**-2.0**
MA2	**Magadan**	**11.23**	**353**	*cePN*	**Pn**	**07 29 25.6**	**-3.2**
MA2				pmax	pmax		
	comp=Z, 9.0nm, 1.0s						
GRNR	**Gornyy**	**11.32**

comp=Z,46nm,5.6s
ULN Ulaanbaatar 30.62 287 *e*P **P 07 32 50.8 -1.5**
comp=Z,4.5nm,1.4s
ULN Ulaanbaatar 30.62 287 *i* P **P 07 32 52.1 -0.2**
ULN pmax pmax
comp=Z,1.0nm,1.1s
ULN Ulaanbaatar 30.62 287 *i* P **P 07 32 52.1 -0.2**
H11N2 WAKE ISLAND Hy 30.65 155 T T 08 05 00.7
baz=342,slow=76,SNR=43
H11N1 WAKE ISLAND Hy 30.67 155 T T 08 05 16.7
baz=342,slow=76,SNR=73
H11N3 WAKE ISLAND Hy 30.67 155 T T 08 05 00.1
baz=342,slow=76,SNR=44
NJ2 Nanjing 30.79 251 *e*P **P 07 32 52.3 -1.5**
NJ2 pmax pmax
comp=Z,13nm,0.6s
TTA Tatalina 30.96 43 *e*P **P 07 32 56.2 +1.1**
comp=Z,15nm,1.1s
TTA Tatalina 30.96 43 *e*P **P 07 32 56.2 +1.1**
TTA pmax pmax
comp=Z,15nm,1.1s
SONA0 Songino Array 31.05 287 *e*PcP **PcP 07 35 47.5 -0.3**
SONM Songino Array 31.05 287 PcP **PcP 07 35 47.5 -0.3**
comp=Z,0.3nm,0.4s,baz=99,slow=2.0,SNR=4.5
SVW2 Sparrevohn 31.10 47 *e*P **P 07 32 57.3 +1.1**
comp=Z,9.3nm,0.8s
H11S1 WAKE ISLAND Hy 31.76 156 T T 08 06 37.3
baz=344,slow=76,SNR=276
H11S3 WAKE ISLAND Hy 31.77 156 T T 08 06 41.8
baz=344,slow=76,SNR=231
H11S2 WAKE ISLAND Hy 31.78 156 T T 08 06 38.1
baz=344,slow=76,SNR=139
RSO Redoubt South 32.50 48 *e*P **P 07 33 08.1 -0.6**
OHAK Old Harbor 32.52 54 *e*P **P 07 33 08.8 +0.1**
comp=Z,12nm,1.0s
KDAK Kodiak Island 32.83 53 *e*P **P 07 33 11.6 +0.3**
comp=Z,26nm,1.3s
KDAK Kodiak Island 32.83 53 *e*P **P 07 33 11.6 +0.3**
KDAK pmax pmax
comp=Z,26nm,1.3s
SKT Skwentna 33.03 45 *e*P **P 07 33 11.8 -1.2**
BPAW Bear Paw Mtn. 33.27 41 *e*P **P 07 33 13.0 -2.0**
comp=Z,11nm,0.8s
KTH Kantishna Hill 33.29 42 *e*P **P 07 33 15.9 +0.6**
comp=Z,29nm,1.0s
CNPM China Poot 33.33 50 *e*P **P 07 33 16.1 +0.4**
comp=Z,13nm,0.6s
MLY Manley 33.40 40 *e*P **P 07 33 14.5 -1.8**
comp=Z,7.7nm,0.8s
TRF Thorofare Moun 33.57 42 *e*P **P 07 33 17.2 -0.7**
comp=Z,13nm,0.8s
COLD Coldfoot 33.76 36 *e*P **P 07 33 19.2 -0.1**
comp=Z,2.9nm,0.7s
BWN Browne 33.93 41 *e*P **P 07 33 22.9 +2.1**
comp=Z,67nm,1.0s
TOLK Toolik Lake Re 34.14 33 *e*P **P 07 33 23.9 +1.2**
comp=Z,8.6nm,0.6s
TOLK Toolik Lake Re 34.14 33 P **P 07 33 23.6 +1.0**
baz=264,SNR=14
MCK McKinley 34.17 42 *e*P **P 07 33 23.8 +0.9**
comp=Z,15nm,0.8s
MCK McKinley 34.17 42 *e*P **P 07 33 23.8 +0.9**
MCK pmax pmax
comp=Z,15nm,0.8s
RND Reindeer 34.22 43 *e*P **P 07 33 24.0 +0.6**
comp=Z,20nm,0.8s
RND Reindeer 34.22 43 *e*P **P 07 33 24.0 +0.6**
RND pmax pmax
comp=Z,20nm,0.8s
MDM Murphy Dome 34.46 40 *e*P **P 07 33 25.1 -0.3**
comp=Z,12nm,0.7s
KNK Knik Glacier 34.52 46 *e*P **P 07 33 26.6 +0.7**
comp=Z,30nm,0.9s
WRH Wood River Hil 34.53 41 *e*P **P 07 33 26.8 +0.8**
comp=Z,6.8nm,0.8s
SML Sawmill 34.55 45 *e*P **P 07 33 27.3 +1.1**
comp=Z,56nm,0.7s
SML Sawmill 34.55 45 *e*P **P 07 33 27.3 +1.1**
SML pmax pmax
comp=Z,56nm,0.7s
TCOL CIGO, UAF Yank 34.62 40 P **P 07 33 28.0 +1.3**
baz=271,SNR=9.9
COLA College 34.63 40 *e*P **P 07 33 27.8 +1.1**
comp=Z,43nm,0.7s
COLA College 34.63 40*d i*P **P 07 33 27.9 +1.1**
COLA pmax pmax
comp=Z,33nm,0.7s
CCB Clear Creek Bu 34.65 40 *e*P **P 07 33 27.4 +0.5**
comp=Z,20nm,1.2s
POKR Poker Plat Res 34.80 39 P **P 07 33 29.7 +1.4**
baz=271,SNR=8.4
ILAR Eielson Array 35.04 40 P **P 07 33 30.5 +0.1**
comp=Z,6.4nm,0.7s,baz=260,slow=5.4,SNR=94
ILB Eielson Array 35.04 40 *e*P **P 07 33 31.5 +1.1**
comp=Z,9.6nm,0.8s
GLI Glacier Island 35.24 47 *e*P **P 07 33 32.6 +0.5**
comp=Z,9.1nm,0.8s
PRP Porcupine Dome 35.60 39 *e*P **P 07 33 35.6 +0.4**
comp=Z,25nm,0.8s
FYU Fort Yukon 35.69 37 *e*P **P 07 33 36.4 +0.5**
comp=Z,25nm,0.7s
DIV Divide 35.84 46 *e*P **P 07 33 38.6 +1.3**
comp=Z,16nm,0.7s
EYAK Cordova Ski Ar 35.94 47 *e*P **P 07 33 38.8 +0.8**
comp=Z,16nm,1.4s
DOT Dot Lake 36.34 42 *e*P **P 07 33 41.7 +0.2**
comp=Z,12nm,0.7s
MENT Mentasta 36.58 43 *e*P **P 07 33 44.0 +0.5**
comp=Z,7.7nm,0.6s
EGAK Eagle 37.49 40 *e*P **P 07 33 51.8 +0.7**
comp=Z,24nm,0.8s
BALM Baldy 37.50 46 *e*P **P 07 33 52.7 +1.3**
comp=Z,7.8nm,0.9s
BALM Baldy 37.50 46 *e*P **P 07 33 52.7 +1.3**
BALM pmax pmax
comp=Z,8.0nm,0.9s
LZH Lanzhou 38.13 270 *e*P **P 07 33 55.0 -2.0**
LZH pP pP 07 34 27.8 -1.7
LZH sP sP 07 34 43.1 -3.6
LZH pmax pmax
comp=Z,13nm,1.4s
LZH pmax pmax
comp=Z,200nm,4.9s
DAWY Dawson 38.34 41 *e*P **P 07 33 59.3 +1.0**
comp=Z,4.3nm,0.8s
GTA Gaotai 38.99 277 *e*P **P 07 34 02.1 -2.0**
GTA pP pP 07 34 34.9 -1.9
GTA sP sP 07 34 50.3 -3.7
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,82nm,6.0s
GTA LR LR
comp=Z,73nm,15.9s
GTA LR LR
comp=Z,56nm,17.8s
GTA LR LR
comp=Z,87nm,16.2s
BCPM Bancas Point 39.04 47 *e*P **P 07 34 05.6 +1.4**
comp=Z,7.3nm,0.8s
EPYK Eagle Plains 39.11 37 *e*P **P 07 34 06.7 +2.0**
comp=Z,22nm,1.1s
EPYK Eagle Plains 39.11 37 P **P 07 34 06.1 +1.4**
baz=278
HYT Haines Junctio 39.86 46 *e*P **P 07 34 13.3 +2.2**
comp=Z,12nm,1.1s
INK Inuvik 40.05 34 *e*P **P 07 34 13.8 +1.5**
comp=Z,8.5nm,0.6s
INK Inuvik 40.05 34 *e*P **P 07 34 13.8 +1.5**
INK pmax pmax
comp=Z,9.0nm,0.6s
WHY Whitehorse 41.14 45 *e*P **P 07 34 22.0 +0.5**
comp=Z,7.5nm,0.8s
CD2 Chengdu 41.31 264 *e*P **P 07 34 20.9 -2.3**
ZAA1 Zalesovo Array 41.83 304 *e*P **P 07 34 26.3 -0.7**
ZAA1 *e*PcP **PcP 07 36 20.1 +0.1**
ZALV Zalesovo Beam 41.83 304 P **P 07 34 26.3 -0.8**
comp=Z,0.8nm,0.3s,baz=68,slow=8.2,SNR=3.9
ZALV PcP **PcP 07 36 20.1 +0.1**
comp=Z,4.2nm,0.7s,baz=78,slow=3.5,SNR=12
ZALV Zalesovo Beam 41.83 304 *i* P **P 07 34 28.3 +1.2**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
JIS Juneau Island 42.12 49 *e*P **P 07 34 30.9 +1.6**
comp=Z,11nm,1.2s
CRAG Craig 43.77 52 *e*P **P 07 34 44.2 +1.6**
comp=Z,12nm,1.1s

WRAK Wrangell Islan 43.81 51 *e*P **P 07 34 44.1 +1.2**
comp=Z,6.4nm,0.9s
DLBC Dease Lake 44.21 47 *e*P **P 07 34 48.1 +1.9**
comp=Z,6.7nm,1.0s
WMQ Urumqi 44.57 290 *e*P **P 07 34 47.8 -1.5**
WMQ pP pP 07 35 21.8 -1.0
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ pmax pmax
comp=Z,25nm,3.7s
WMQ LR LR
comp=Z,230nm,28.9s
WMQ LR LR
comp=Z,700nm,29.1s
WMQ LR LR
comp=Z,80nm,29.2s
DIB Dawson Inlet, 45.05 55 *e*P **P 07 34 54.3 +1.5**
comp=Z,6.9nm,1.0s
KMI Kunming 45.84 258 P **P 07 35 01.8 +2.1**
KMI pmax pmax
comp=Z,17nm,0.5s
MK31 Makanchi Array 46.40 296 *e*P **P 07 35 02.9 -0.6**
comp=Z,1.9nm,0.8s
MK31 Makanchi Array 46.40 296 *e*P **P 07 35 02.9 -0.6**
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MK32 Makanchi Array 46.40 296 *e*P **P 07 35 02.6 -1.0**
MK32 *e*PcP **PcP 07 36 35.5 -0.2**
MKAR Makanchi Array 46.40 296 P **P 07 35 02.6 -1.0**
comp=Z,1.6nm,0.6s,baz=66,slow=8.2,SNR=16
MKAR PcP **PcP 07 36 35.5 -0.2**
comp=Z,1.8nm,0.7s,baz=46,slow=5.2,SNR=8.7
MKAR Makanchi Array 46.40 296 *i* P **P 07 35 02.9 -0.7**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 46.40 296 *i* P **P 07 35 03.2 -0.4**
KURK Kurchatov 46.64 302 *e*P **P 07 35 04.7 -0.6**
comp=Z,6.1nm,0.6s
KURK Kurchatov 46.64 302 P **P 07 35 05.1 -0.2**
KURK 07 36 36.7
KURK Kurchatov 46.64 302 *i* P **P 07 35 05.1 -0.2**
KURBB Kurchatov Arra 46.74 302 P **P 07 35 05.1 -0.9**
comp=Z,6.2nm,0.8s,baz=66,slow=8.4,SNR=20
KURBB PcP **PcP 07 36 36.7 -0.1**
comp=Z,2.3nm,0.9s,baz=64,slow=3.7,SNR=6.9
RES Resolute Bay 49.11 19 *e*P **P 07 35 23.5 -0.4**
comp=Z,15nm,1.1s
RES Resolute Bay 49.11 19 *e*P **P 07 35 23.5 -0.4**
RES pmax pmax
comp=Z,15nm,1.1s
YKW3 Yellowknife Ar 49.35 38 *e*P **P 07 35 26.4 +0.5**
comp=Z,11nm,0.8s
YKA Yellowknife Ar 49.38 38 P **P 07 35 27.1 +1.0**
comp=Z,11nm,0.8s,baz=299,slow=7.3,SNR=34
YKA PcP **PcP 07 36 46.3 +0.2**
comp=Z,1.0nm,0.6s,baz=304,slow=3.4,SNR=3.8
YKB5 Yellowknife Ar 49.38 38 *e*P **P 07 35 27.1 +1.0**
YKB5 *e*PcP **PcP 07 36 46.3 +0.2**
KHLU Kahalu`u 49.69 107 *e*P **P 07 35 30.1 +0.9**
comp=Z,133nm,1.2s
BVAR Borovoye Array 49.98 308 P **P 07 35 30.2 -0.6**
comp=Z,4.3nm,0.5s,baz=54,slow=7.9,SNR=34
BVAR PcP **PcP 07 36 48.5 0.0**
comp=Z,2.5nm,0.7s,baz=67,slow=3.9,SNR=9.2
BRVK Borovoye 50.01 309 *e*P **P 07 35 29.8 -1.3**
comp=Z,6.3nm,0.6s
BRVK Borovoye 50.01 309*ce*P **P 07 35 30.5 -0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 50.01 309 *i* P **P 07 35 30.5 -0.6**
OTUK Ortayu 51.43 302 P **P 07 35 42.6 +0.8**
OTUK pmax pmax
comp=Z,24nm,0.8s
CM31 Chiang Mai Arr 53.05 255 *e*P **P 07 35 55.2 +1.1**
comp=Z,4.7nm,0.9s
CMAR Chiang Mai Arr 53.05 255 P **P 07 35 55.2 +1.1**
comp=Z,1.9nm,0.6s,baz=36,slow=7.6,SNR=7.5
CMAR Chiang Mai Arr 53.05 255 *i* P **P 07 35 55.5 +1.4**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
D03D Eldon 53.08 57 P **P 07 35 55.2 +1.3**
baz=304
B05A Bryant 53.22 56 P **P 07 35 55.8 +0.9**
baz=304
AAK Ala-Archa 53.31 295 P **P 07 35 55.6 -0.4**
comp=Z,2.5nm,0.6s,baz=133,slow=6.7,SNR=7.3
AAK Ala-Archa 53.31 295 *e*P **P 07 35 55.4 -0.5**
comp=Z,4.7nm,1.0s
AAK Ala-Archa 53.31 295*ce*P **P 07 35 55.9 -0.1**
AAK pmax pmax
comp=Z,3.0nm,0.7s
AAK Ala-Archa 53.31 295 *i* P **P 07 35 55.9 -0.1**
B06A Marblemount 53.41 56 *e*P **P 07 35 56.4 +0.1**
comp=Z,5.7nm,0.8s
D04E Lakebay 53.45 58 P **P 07 35 59.1 +2.4**
baz=305
ARU Arti 53.92 317 P **P 07 35 59.1 -0.8**
comp=Z,1.7nm,0.5s,baz=20,slow=3.3,SNR=7.4
ARU Arti 53.92 317 *e*P **P 07 35 59.1 -0.8**
comp=Z,6.1nm,0.6s
ARU Arti 53.92 317*d i*P **P 07 35 58.9 -1.0**
ARU 07 37 01.0
ARU S **S 07 43 23.1 +0.2**
ARU SS **SKiKP 07 46 57.9 +2.4**
ARU pmax pmax
comp=Z,6.0nm,0.7s
ARU Arti 53.92 317 *i* P **P 07 35 59.2 -0.7**
LON Longmire 54.24 58 *e*P **P 07 36 03.4 +0.9**
comp=Z,6.0nm,1.4s
LON Longmire 54.24 58 *e*P **P 07 36 03.4 +0.9**
LON pmax pmax
comp=Z,6.0nm,1.4s
KSH Kashi 54.25 291 P **P 07 36 05.9 +3.2**
KSH PcP **PcP 07 37 08.1 +3.1**
KSH S **S 07 43 31.0 +2.9**
KSH SS **SS 07 47 15.8 +4.2**
KSH pmax pmax
comp=Z,14nm,1.2s
KSH pmax pmax
comp=Z,220nm,8.2s
KSH LR LR
comp=Z,890nm,17.7s
KSH LR LR
comp=Z,330nm,8.8s
KSH LR LR
comp=Z,220nm,15.0s
LTY Liberty 54.58 56 *e*P **P 07 36 05.8 +0.8**
comp=Z,5.6nm,1.4s
DAG Danmarks Havn 54.92 358 *i* P **PcP 07 37 03.7 -3.0**
H04D Lebanon 55.01 60 P **P 07 36 09.5 +1.5**
baz=306
G05D Wamic, OR 55.40 59 P **P 07 36 12.6 +1.8**
baz=307
KK31 Karatay Array 55.41 298 *e*P **P 07 36 09.8 -1.1**
comp=Z,2.3nm,0.8s
KK31 Karatay Array 55.41 298 *e*P **P 07 36 09.8 -1.1**
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KKAR Karatay Array 55.41 298 *e*P **P 07 36 09.7 -1.2**
comp=Z,2.3nm,0.8s
KKAR Karatay Array 55.41 298 *e*P **P 07 36 09.7 -1.2**
KKAR pmax pmax
comp=Z,2.0nm,0.8s
KULLO Kullorsuaq 55.51 10 *i* P **P 07 36 10.2 -0.9**
KULLO pmax pmax
comp=Z,22nm,0.7s
KULLO Kullorsuaq 55.51 10 *i* P **P 07 36 10.2 -0.9**
comp=Z,22nm,0.7s
C09A Chrisman Ranch 55.58 55 *e*P **P 07 36 12.5 +0.5**
comp=Z,3.6nm,1.0s
I04A Tendick Farm, 55.63 61 P **P 07 36 13.5 +1.0**
baz=307
HAWA Hanford 55.72 57 *e*P **P 07 36 14.5 +1.4**
comp=Z,6.0nm,1.0s
I05D Terrebonne, OR 55.93 60 P **P 07 36 15.9 +1.3**
baz=307
NEW Newport 55.93 54 *e*P **P 07 36 15.7 +1.2**
comp=Z,9.4nm,1.1s
NEW Newport 55.93 54 *e*P **P 07 36 15.7 +1.2**
NEW pmax pmax
comp=Z,9.0nm,1.1s
NEW Newport 55.93 54 P **P 07 36 15.2 +0.7**
baz=307,SNR=5.8
PRGR Permogore 56.06 327 *e*P **P 07 36 14.0 -1.1**
PRGR pmax pmax
comp=Z,9.0nm,0.6s

J04D Umpqua Nationa 56.14 61 P **P 07 36 17.8 +1.4**
baz=307
ARA0 ARCESS Array S 56.31 341 *e*P **P 07 36 15.4 -1.4**
ARCES ARCESS Array B 56.31 341 P **P 07 36 15.4 -1.4**
comp=Z,8.5nm,0.3s,baz=39,slow=7.5,SNR=6.9
E09A Wood Farm, Sta 56.42 56 *e*P **P 07 36 18.8 +0.9**
comp=Z,9.8nm,1.1s
PINE Pine Mountain 56.48 60 *e*P **P 07 36 20.7 +2.0**
comp=Z,8.2nm,0.9s
J05D Fort Rock, OR 56.62 61 P **P 07 36 21.6 +1.9**
baz=308,SNR=5.3
L04D Klamath Falls 56.65 62 P **P 07 36 21.1 +1.3**
baz=308
G08A Pilot Rock 56.70 58 *e*P **P 07 36 21.2 +1.1**
comp=Z,2.5nm,1.1s
BTK Batken 57.08 295 *e*P **P 07 36 21.1 -1.7**
comp=Z,5.1nm,0.6s
BTK Batken 57.08 295 *e*P **P 07 36 21.1 -1.7**
BTK pmax pmax
comp=Z,5.0nm,0.6s
I07A Izee 57.13 59 *e*P **P 07 36 24.0 +0.8**
comp=Z,3.4nm,1.0s
WALA Waterton Lakes 57.14 51 *e*P **P 07 36 23.6 +0.4**
comp=Z,12nm,0.7s
K05A Summer Lake 57.16 61 *e*P **P 07 36 25.5 +2.0**
comp=Z,6.5nm,0.9s
N02D Trinity Center 57.17 64 P **P 07 36 25.0 +1.6**
baz=308
M04C Macdoel 57.19 62 P **P 07 36 25.0 +1.4**
baz=308
ABKAR Akbulak array 57.53 309 *e*P **P 07 36 24.9 -0.9**
comp=Z,4.1nm,1.0s
O02D Mt. Diablo Mer 57.62 64 P **P 07 36 28.1 +1.5**
baz=309
BMO Blue Mountains 57.90 57 *e*P **P 07 36 29.3 +0.8**
comp=Z,2.7nm,0.8s
BMO Blue Mountains 57.90 57 *e*P **P 07 36 29.3 +0.8**
BMO pmax pmax
comp=Z,3.0nm,0.8s
MOD Modoc Plateau 58.02 61 *e*P **P 07 36 30.4 +0.9**
comp=Z,3.8nm,0.8s
GAR Garm 58.04 294 *e*P **P 07 36 28.7 -0.9**
comp=Z,7.2nm,0.7s
GAR Garm 58.04 294 *e*P **P 07 36 28.7 -0.9**
GAR pmax pmax
comp=Z,7.0nm,0.7s
O03E Paynes Creek 58.13 64 P **P 07 36 31.1 +0.9**
baz=309
J08A Circle Bar Ran 58.17 59 *e*P **P 07 36 29.3 -1.1**
comp=Z,8.6nm,1.3s
MSO Missoula 58.51 54 *e*P **P 07 36 32.6 -0.1**
comp=Z,10nm,1.0s
MSO Missoula 58.51 54 P **P 07 36 33.7 +0.9**
baz=309,SNR=12
WVOR Wild Horse Val 58.65 60 *e*P **P 07 36 33.8 0.0**
comp=Z,8.2nm,1.0s
WVOR Wild Horse Val 58.65 60 *e*P **P 07 36 33.8 0.0**
WVOR pmax pmax
comp=Z,8.0nm,1.0s
CHGR Chuyangaron 58.95 295 *e*P **P 07 36 35.3 -0.6**
comp=Z,12nm,1.1s
CHGR *e*PcP **PcP 07 37 25.2 +1.9**
SUMG Summit 58.95 4 *e*P **P 07 36 35.8 +0.1**
comp=Z,20nm,0.9s
SUMG Summit 58.95 4 *e*P **P 07 36 35.8 +0.1**
SUMG pmax pmax
comp=Z,20nm,0.9s
SUMG Summit 58.95 4 *i* P **P 07 36 35.5 -0.2**
comp=Z,59nm,1.0s
FFC Flin Flon 59.25 41 *e*P **P 07 36 37.6 +0.1**
comp=Z,120nm,0.8s
FFC Flin Flon 59.25 41 *i* P **P 07 36 38.9 +1.4**
BEKR Beckworth 59.26 63 *e*P **P 07 36 38.7 +0.6**
comp=Z,3.7nm,0.8s
FCC Fort Churchill 59.67 34 *e*P **P 07 36 41.0 +0.7**
comp=Z,10nm,0.9s
FCC Fort Churchill 59.67 34 *e*P **P 07 36 41.0 +0.7**
FCC pmax pmax
comp=Z,10.0nm,0.9s
HRY Holter Researc 59.71 53 *e*P **P 07 36 41.4 +0.4**
PAHR Pah Rah Range 59.94 63 *e*P **P 07 36 43.5 +0.8**
comp=Z,4.1nm,0.8s
LRM Limekiln Ridge 59.95 54 *e*P **P 07 36 38.5 -4.3**
VCNR Virginia City 60.05 63 *e*P **P 07 36 44.5 +1.0**
comp=Z,4.3nm,0.8s
DLMT Dillon 60.16 54 *e*P **P 07 36 45.1 +0.9**
comp=Z,5.8nm,1.0s
PNTR Pine Nut 60.21 64 *e*P **P 07 36 44.8 +0.1**
comp=Z,8.0nm,0.8s
HLID Hailey 60.33 57 *e*P **P 07 36 46.4 +1.1**
comp=Z,5.3nm,1.3s
HLID Hailey 60.33 57 P **P 07 36 46.7 +1.4**
baz=310,SNR=5.4
MCMT McKenzie Canyo 60.37 55 *e*P **P 07 36 46.7 +1.0**
CMB Columbia Colle 60.42 65 *e*P **P 07 36 46.4 +0.5**
comp=Z,2.7nm,1.1s
CMB Columbia Colle 60.42 65 *e*P **P 07 36 46.4 +0.5**
CMB pmax pmax
comp=Z,3.0nm,1.1s
YERR Yerington 60.49 63 *e*P **P 07 36 46.4 -0.1**
comp=Z,16nm,1.4s
BOZ Bozeman (W) 60.53 53 *e*P **P 07 36 47.6 +1.0**
comp=Z,10nm,0.9s
BOZ Bozeman (W) 60.53 53 *e*P **P 07 36 47.6 +1.0**
BOZ pmax pmax
comp=Z,10.0nm,0.9s
BOZ Bozeman (W) 60.53 53 P **P 07 36 48.0 +1.4**
baz=311,SNR=11
WAKR Walker 60.68 64 *e*P **P 07 36 48.8 +1.0**
comp=Z,3.9nm,0.7s
BMN Battle Mountai 60.74 61 *e*P **P 07 36 49.0 +0.9**
comp=Z,4.9nm,0.8s
BMN Battle Mountai 60.74 61 *e*P **P 07 36 49.1 +0.9**
BMN pmax pmax
comp=Z,5.0nm,0.8s
KVN Kaiserville 61.12 63 *e*P **P 07 36 52.1 +1.3**
comp=Z,8.9nm,1.1s
KVN Kaiserville 61.12 63 *e*P **P 07 36 52.1 +1.3**
KVN pmax pmax
comp=Z,9.0nm,1.1s
NV01 Mina Array Sit 61.41 63 *e*P **P 07 36 53.9 +1.1**
NV01 *e*pP **pP 07 37 30.7 +1.7**
NV01 *e*PcP **PcP 07 37 34.0 +0.6**
NVAR Mina Array Bea 61.41 63 P **P 07 36 53.9 +1.1**
comp=Z,3.4nm,0.6s,baz=298,slow=7.1,SNR=20
NVAR pP **pP 07 37 30.7 +1.7**
comp=Z,0.8nm,0.7s,baz=290,slow=8.4,SNR=2.6
NVAR PcP **PcP 07 37 34.0 +0.6**
comp=Z,0.7nm,0.6s,baz=294,slow=4.7,SNR=3.7
GCMT Greycliff 61.45 52 *e*P **P 07 36 54.1 +1.3**
YHH Holmes Hill 61.48 54 *e*P **P 07 36 53.1 -0.1**
comp=Z,5.3nm,0.9s
ELK Elko 61.69 60 *e*P **P 07 36 56.0 +1.4**
comp=Z,2.7nm,1.0s
ELK Elko 61.69 60 *e*P **P 07 36 56.0 +1.4**
ELK pmax pmax
comp=Z,3.0nm,1.0s
IMW Indian Meadow 62.02 55 *e*P **P 07 36 58.0 +1.2**
comp=Z,8.0nm,1.1s
RLMT Red Lodge 62.10 53 *e*PcP **PcP 07 37 40.6 +4.5**
RLMT Red Lodge 62.10 53 P **P 07 36 58.8 +1.5**
baz=312
FXWY Fox Creek 62.14 55 *e*P **P 07 36 59.7 +2.1**
comp=Z,3.4nm,0.9s
MOOW Moose Ponds 62.22 55 *e*P **P 07 37 00.2 +2.1**
comp=Z,3.7nm,0.9s
TPAW Teton Pass 62.28 55 *e*P **P 07 37 01.0 +2.4**
comp=Z,9.9nm,0.9s
TIN Tinemaha, Big 62.35 65 P **P 07 37 01.0 +2.1**
baz=312
LOHW Long Hollow 62.39 55 *e*P **P 07 37 00.5 +1.2**
comp=Z,7.7nm,1.1s
SNOW Snow King Moun 62.40 55 *e*P **P 07 37 00.8 +1.5**
comp=Z,7.7nm,1.0s
DGMT Dagmar 62.43 47 *e*P **P 07 37 00.3 +1.1**
comp=Z,17nm,0.8s
DGMT Dagmar 62.43 47 P **P 07 37 00.1 +0.9**
baz=313
FIA0 FINESS Array S 62.59 335 *e*P **P 07 36 58.8 -1.2**
FIA0 FINESS Array S 62.59 335 *e*P **P 07 36 58.8 -1.2**
FINES FINESS Array B 62.59 335 P **P 07 36 58.8 -1.1**
comp=Z,3.7nm,0.6s,baz=34,slow=8.0,SNR=19
FINES FINESS Array B 62.59 335 *i* P **P 07 36 59.4 -0.5**
FINES pmax pmax
comp=Z,4.0nm,0.6s
AHID Auburn Hatcher 62.68 56 *e*P **P 07 37 02.4 +1.3**
comp=Z,8.2nm,1.3s

CWC Cottonwood Cre 62.85 65 P P 07 37 03.0 +0.6
baz=312
GRAC Grapevine Rang 62.91 64 P P 07 37 03.6 +1.1
baz=312
R11A Troy Canyon, C 63.07 62 eP P 07 37 04.5 +0.8
comp=Z,2.5nm,0.7s
R11A Troy Canyon, C 63.07 62 P P 07 37 04.7 +0.9
baz=312,SNR=6.5
HWUT Hardware Ranch 63.20 57 eP P 07 37 06.2 +1.7
comp=Z,7.4nm,1.4s
SFJD Kangerlussuaq 63.40 10 eP P 07 36 53.9 -11
SFJD pmax pmax
comp=Z,15nm,0.8s
SFJD Kangerlussuaq 63.40 10 i P P 07 36 53.9 -11
comp=Z,15nm,0.8s
DUG Dugway, Tooele 63.44 59 eP P 07 37 07.2 +1.1
comp=Z,7.9nm,1.2s
DUG Dugway, Tooele 63.44 59 eP P 07 37 07.2 +1.1
DUG pmax pmax
comp=Z,8.0nm,1.2s
DUG Dugway, Tooele 63.44 59 P P 07 37 07.5 +1.3
baz=312
MPMC Manual Prospec 63.46 65 P P 07 37 06.9 +0.6
baz=312
SOEI Soe 63.47 213 eP P 07 37 05.2 -1.3
comp=Z,42nm,1.3s
BW06 Boulder Array 63.52 55 eP P 07 37 07.8 +1.1
comp=Z,9.3nm,0.9s
BW06 Boulder Array 63.52 55 P P 07 37 07.6 +0.8
baz=313,SNR=9.8
PD31 Pinedale Array 63.52 55 eP P 07 37 07.5 +0.8
comp=Z,8.1nm,0.9s
PDAR Pinedale Array 63.52 55 P P 07 37 07.6 +0.8
comp=Z,5.7nm,0.8s,baz=302,slow=1.6,SNR=48
PDAR pP pP 07 37 45.5 +2.2
comp=Z,1.8nm,1.0s,baz=284,slow=1.2,SNR=2.6
FURC Furnace Creek 63.56 64 P P 07 37 07.9 +1.1
baz=312,SNR=6.4
TPNV Topopah Spring 63.61 63 eP P 07 37 07.7 +0.4
comp=Z,4.4nm,0.8s
TPNV Topopah Spring 63.61 63 eP P 07 37 07.7 +0.4
TPNV pmax pmax
comp=Z,4.0nm,0.8s
TPNV Topopah Spring 63.61 63 P P 07 37 08.1 +0.8
baz=312,SNR=6.4
CTU Camp Tracy 63.70 58 eP P 07 37 09.5 +1.6
comp=Z,5.5nm,1.1s
EDW2 Edwards Air Fo 63.94 66 P P 07 37 10.1 +0.7
baz=312
MPU Maple Canyon 64.23 58 eP P 07 37 12.5 +1.1
comp=Z,3.6nm,0.7s
GSC Goldstone, Bar 64.38 65 P P 07 37 12.7 +0.5
baz=313
CCUT Cedar City 64.90 61 eP P 07 37 17.4 +1.6
comp=Z,2.0nm,1.1s
MSU Marysvale 64.94 60 eP P 07 37 17.2 +1.2
TMUT Trail Mountain 64.96 59 eP P 07 37 16.7 +0.5
comp=Z,3.7nm,0.9s
ULM Lac du Bonnet 65.04 42 P P 07 37 16.7 +0.5
comp=Z,3.5nm,0.7s,baz=313,slow=5.6,SNR=3.6
ULM Lac du Bonnet 65.04 42 eP P 07 37 15.5 -0.7
comp=Z,5.5nm,0.8s
ULM Lac du Bonnet 65.04 42 eP P 07 37 15.5 -0.7
ULM pmax pmax
comp=Z,6.0nm,0.8s
MDND Maddock 65.07 45 eP P 07 37 17.4 +1.0
comp=Z,15nm,0.6s
MDND Maddock 65.07 45 P P 07 37 17.3 +0.9
baz=316
P17A Butcher Ranch, 65.10 58 eP P 07 37 18.1 +1.2
comp=Z,7.6nm,1.1s
K22A Casper 65.23 53 eP P 07 37 18.8 +1.0
comp=Z,4.1nm,0.9s
K22A Casper 65.23 53 P P 07 37 18.5 +0.7
baz=314
Q16A Castle Valley 65.23 59 eP P 07 37 19.0 +1.1
comp=Z,5.5nm,1.1s
MTPU Mount Pierson 65.25 60 eP P 07 37 19.6 +1.4
comp=Z,2.2nm,0.8s
P18A Preston Nutter 65.27 58 eP P 07 37 19.6 +1.4
comp=Z,10nm,1.3s
MURC Murrieta 65.29 67 P P 07 37 19.0 +0.9
baz=313
LCMT Little Creek M 65.34 62 eP P 07 37 20.1 +1.6
comp=Z,4.7nm,0.8s
GMRC Granite Mounta 65.42 65 P P 07 37 19.8 +0.7
baz=313
SRU San Rafael Swe 65.47 58 eP P 07 37 20.1 +0.7
comp=Z,10nm,0.9s
RSSD Black Hills 65.51 51 eP P 07 37 19.5 -0.1
comp=Z,16nm,1.4s
RSSD Black Hills 65.51 51 eP P 07 37 19.5 -0.1
RSSD pmax pmax
comp=Z,16nm,1.4s
RSSD Black Hills 65.51 51 P P 07 37 20.2 +0.6
baz=315
LDFC Landfair 65.55 64 eP P 07 37 20.3 +0.5
comp=Z,9.3nm,0.8s
KNB Kanab 65.58 61 eP P 07 37 21.5 +1.4
comp=Z,5.2nm,0.9s
KNB Kanab 65.58 61 eP P 07 37 21.5 +1.4
KNB pmax pmax
comp=Z,5.0nm,0.9s
BELC Belle Mtn. Jos 65.75 66 P P 07 37 21.3 +0.1
baz=313
O20A White River Ci 66.04 56 eP P 07 37 23.7 +0.7
comp=Z,5.5nm,1.1s
O20A White River Ci 66.04 56 P P 07 37 23.5 +0.5
baz=314
IRM Iron Mountain 66.16 65 P P 07 37 24.3 +0.6
baz=314
MONP2 Monument Peak 66.25 67 P P 07 37 25.0 +0.5
baz=314
U15A North Rim 66.30 61 eP P 07 37 26.3 +1.5
comp=Z,3.7nm,0.9s
BC3 Big Chuckawall 66.32 66 P P 07 37 25.2 +0.4
baz=314
NC303 NORSAR Array S 66.47 341 eP P 07 37 24.9 -0.3
comp=Z,8.9nm,0.6s
NC405 NORSAR Array S 66.50 341 eP P 07 37 25.0 -0.3
comp=Z,15nm,0.6s
NC204 NORSAR Array S 66.56 341 eP P 07 37 25.5 -0.3
comp=Z,19nm,0.7s
NB201 NORSAR Array S 66.65 341 eP P 07 37 25.9 -0.4
comp=Z,19nm,0.8s
PDMCI Parker Dam,Lak 66.66 64 P P 07 37 27.6 +0.8
baz=314
NB2 NORSAR Subarra 66.67 341 P P 07 37 25.7 -0.8
comp=Z,3.8nm,0.6s,baz=25,slow=6.5
NB2 NORSAR Subarra 66.67 341 P P 07 37 22.2 -4.3
NB2 pmax pmax
comp=Z,38nm,0.6s
NB200 NORSAR Array S 66.67 341 eP P 07 37 25.8 -0.8
NOA NORSAR Array B 66.67 341 P P 07 37 25.8 -0.8
comp=Z,4.1nm,0.5s,baz=26,slow=6.4,SNR=36
PV09 Paradox Valley 66.68 58 eP P 07 37 28.6 +1.4
N23A Red Feather La 66.77 54 eP P 07 37 28.7 +1.0
comp=Z,5.1nm,0.9s
N23A Red Feather La 66.77 54 P P 07 37 28.7 +1.0
baz=315
NBO00 NORSAR Array S 66.78 341 eP P 07 37 26.8 -0.3
comp=Z,11nm,0.8s
PV23 Carpenter Ridg 66.78 58 eP P 07 37 29.1 +1.2
comp=Z,17nm,1.2s
Y12C Blythe 66.81 65 P P 07 37 28.5 +0.7
baz=314
PV22 Blue Mesa, Par 66.85 58 eP P 07 37 29.4 +1.2
comp=Z,8.1nm,1.0s
PV04 Paradox Valley 66.88 58 eP P 07 37 29.5 +1.1
comp=Z,8.4nm,0.9s
PV11 David Mesa, Pa 66.97 58 eP P 07 37 28.8 -0.1
comp=Z,30nm,1.4s
PV05 Paradox Valley 66.99 58 eP P 07 37 29.9 +0.8
comp=Z,12nm,0.9s
PV07 Paradox Valley 67.00 58 eP P 07 37 29.5 +0.4
comp=Z,6.3nm,1.1s
GLA Glamis 67.11 66 eP P 07 37 30.4 +0.7
comp=Z,6.6nm,0.7s
GLA Glamis 67.11 66 eP P 07 37 30.4 +0.7
GLA pmax pmax
comp=Z,7.0nm,0.7s
GLA Glamis 67.11 66 P P 07 37 30.6 +0.9
baz=314
SMCO Snowmass 67.41 56 eP P 07 37 32.9 +1.0
comp=Z,5.5nm,0.8s
WUAZ Wupatki 67.46 62 P P 07 37 33.2 +1.1
baz=314
Y14A Wickenburg 67.59 64 eP P 07 37 33.5 +0.7
comp=Z,2.9nm,0.8s
ISCO Idaho Springs 67.72 55 eP P 07 37 35.5 +1.7
ISCO Idaho Springs 67.72 55 eP P 07 37 35.5 +1.7
ISCO Idaho Springs 67.72 55 P P 07 37 34.9 +1.2
baz=315,SNR=9.1
MVCO Mesa Verde 67.94 59 eP P 07 37 35.6 +0.5
comp=Z,8.7nm,1.1s
MVCO Mesa Verde 67.94 59 P P 07 37 35.9 +0.8
baz=315,SNR=5.5
X16A Lo Mia Camp, P 68.19 62 eP P 07 37 37.7 +1.1
comp=Z,3.0nm,0.8s
S22A 4UR Ranch, Cre 68.50 57 eP P 07 37 39.5 +0.8
comp=Z,5.0nm,0.9s
S22A 4UR Ranch, Cre 68.50 57 P P 07 37 39.8 +1.2
baz=315,SNR=8.4
CTAO Charters Tower 68.56 187 eP P 07 37 40.0 +1.3
comp=Z,12nm,1.4s
CTAO Charters Tower 68.56 187 eP P 07 37 40.0 +1.3
CTAO pmax pmax
comp=Z,12nm,1.4s
Q24A Divide 68.56 55 P P 07 37 39.7 +0.6
baz=316
EYMN Ely 68.68 41 eP P 07 37 39.2 0.0
comp=Z,6.0nm,0.8s
EYMN Ely 68.68 41 P P 07 37 39.1 -0.1
baz=320,SNR=5.0
W18A Petrified Fore 68.70 61 P P 07 37 40.8 +1.0
baz=315
OGNE Ogallala 68.81 52 eP P 07 37 39.8 -0.5
comp=Z,22nm,0.9s
OGNE Ogallala 68.81 52 P P 07 37 41.0 +0.7
baz=316
214A Organ Pipe Nat 69.09 65 P P 07 37 42.9 +0.8
baz=315
SDCO Great Sand Dun 69.24 56 eP P 07 37 44.0 +0.8
comp=Z,2.3nm,0.8s
SDCO Great Sand Dun 69.24 56 P P 07 37 44.2 +0.9
baz=316,SNR=6.8
ECSD EROS Data Cent 69.50 47 eP P 07 37 44.4 0.0
comp=Z,6.5nm,0.6s
ECSD EROS Data Cent 69.50 47 P P 07 37 44.4 0.0
baz=318,SNR=8.4
E38A The Farm, Brul 69.68 42 eP P 07 37 44.9 -0.5
comp=Z,9.6nm,0.6s
E38A The Farm, Brul 69.68 42 P P 07 37 45.1 -0.3
baz=320,SNR=6.6
C40A Isle Royale Na 69.71 40 P P 07 37 45.7 +0.1
baz=321
KIV Kislovodsk 69.78 314 eP P 07 37 47.0 +0.8
KIV pmax pmax
comp=Z,18nm,0.9s
KIV Kislovodsk 69.78 314 i P P 07 37 47.0 +0.8
KBZ Khabaz 69.85 314 P P 07 37 47.4 +1.0
comp=Z,2.8nm,0.7s,baz=65,slow=1.4,SNR=4.5
F38A Pierce - Schro 70.03 42 P P 07 37 47.8 +0.3
baz=320,SNR=6.9
TUC Tucson 70.06 64 P P 07 37 48.5 +0.5
baz=316
SPMN Marine on St. 70.17 43 eP P 07 37 48.0 -0.4
comp=Z,6.8nm,0.9s
SPMN Marine on St. 70.17 43 P P 07 37 48.2 -0.2
baz=320
AKASG Malin Array Be 70.26 326 P P 07 37 47.8 -1.0
comp=Z,3.9nm,0.6s,baz=35,slow=6.1,SNR=7.5
AKBB Malin Array Si 70.26 326 eP P 07 37 47.2 -1.5
comp=Z,5.5nm,0.8s
AKBB Malin Array Si 70.26 326 eP P 07 37 47.3 -1.5
AKBB pmax pmax
comp=Z,6.0nm,0.8s
F39A Loretta 70.49 42 P P 07 37 50.4 0.0
baz=321,SNR=5.4
D41A Chassel 70.63 40 P P 07 37 51.1 0.0
baz=322
TASM ASL Pad, Albuq 70.71 59 P P 07 37 53.1 +0.9
baz=316
TASM ASL Pad, Albuq 70.71 59 P P 07 37 53.0 +0.9
baz=316
LAZ Ladron 70.71 60 eP P 07 37 53.7 +1.6
F40A Park Falls 70.84 41 P P 07 37 52.2 -0.3
baz=321
G39A Holcombe 70.86 42 P P 07 37 52.2 -0.4
baz=321
COWI Conover 71.13 41 eP P 07 37 54.3 0.0
comp=Z,14nm,1.3s
G40A Rib Lake 71.31 42 eP P 07 37 55.0 -0.3
comp=Z,7.2nm,0.9s
G40A Rib Lake 71.31 42 P P 07 37 54.8 -0.5
baz=321
CBKS Cedar Bluff 71.57 52 P P 07 37 56.7 -0.4
baz=318
SCHQ Schefferville 71.61 23 P P 07 37 57.0 +0.1
comp=Z,5.7nm,0.5s,baz=350,slow=6.7,SNR=3.9
SCHQ Schefferville 71.61 23 eP P 07 37 56.6 -0.4
comp=Z,7.7nm,0.6s
319A Douglas 71.62 63 eP P 07 37 58.3 +0.7
comp=Z,6.5nm,0.8s
E43A Lone Tree Farm 71.83 39 P P 07 37 58.2 -0.2
baz=323
I41A Arkdale 72.40 43 eP P 07 38 01.9 +0.1
comp=Z,5.8nm,1.1s
I41A Arkdale 72.40 43 P P 07 38 01.6 -0.2
baz=322
SCIA State Center 72.52 46 eP P 07 38 02.8 +0.2
comp=Z,17nm,0.6s
SCIA State Center 72.52 46 P P 07 38 02.6 0.0
baz=320
D46A Sault St. Mari 72.64 37 P P 07 38 02.3 -0.9
baz=324
MATQ Matagami 72.69 32 P P 07 38 02.9 -0.5
baz=327
LVV L'vov 72.86 328 eP P 07 38 03.5 -0.9
D47A Chapleau 72.88 37 P P 07 38 03.7 -0.9
baz=325
E46A Sault Ste Mari 72.95 38 P P 07 38 04.2 -0.9
baz=324
I42A Draeger Farm, 72.96 42 P P 07 38 04.7 -0.5
baz=322
KSU1 Kansas State U 72.97 50 P P 07 38 05.5 +0.2
baz=319
F45A CMU Biological 73.01 39 P P 07 38 04.8 -0.6
baz=324
H43A Windswept, Lux 73.01 41 P P 07 38 05.3 -0.1
baz=323
JFWS Jewell Farm 73.12 44 P P 07 38 05.4 -0.8
baz=322
D48A Paudash Townsh 73.29 36 P P 07 38 05.9 -1.2
baz=325
E47A Iron Bridge 73.30 37 P P 07 38 06.0 -1.1
baz=325
L40A Anamosa 73.34 45 P P 07 38 06.9 -0.4
baz=321
D49A Beulah Townshi 73.39 36 P P 07 38 06.6 -0.9
baz=326
AMTX Amarillo 73.43 56 eP P 07 38 08.6 +0.4
comp=Z,15nm,0.9s
AMTX Amarillo 73.43 56 P P 07 38 08.4 +0.2
baz=318
G45A Suttons Bay 73.46 39 eP P 07 38 07.7 -0.3
comp=Z,6.9nm,0.6s
G45A Suttons Bay 73.46 39 P P 07 38 07.2 -0.9
baz=324
MSTX Muleshoe 73.50 57 eP P 07 38 09.2 +0.5
comp=Z,9.6nm,1.1s
MSTX Muleshoe 73.50 57 P P 07 38 08.7 +0.1
baz=318
G46A Petoskey 73.57 39 P P 07 38 08.4 -0.3
baz=324
H45A Beulah 73.63 40 P P 07 38 08.8 -0.3
baz=324
MNTX Cornudas Mount 73.68 61 P P 07 38 10.2 +0.6
baz=317
CHGQ Chibougamau 73.68 30 P P 07 38 08.6 -0.7
baz=329,SNR=5.2
E48A Lockeyer 73.72 36 P P 07 38 08.5 -1.0
baz=325
AS31 Alice Springs 73.93 199 eP P 07 38 12.1 +1.2
comp=Z,0.8nm,1.0s
OJC Ojcow 73.93 331 eP P 07 38 10.5 -0.2
comp=Z,8.9nm,0.8s
OJC Ojcow 73.93 331 eP P 07 38 10.5 -0.2
OJC pmax pmax
comp=Z,9.0nm,0.8s
ASAR Alice Springs 73.93 199 P P 07 38 11.4 +0.5
comp=Z,1.0nm,0.7s,baz=16,slow=5.8,SNR=8.9
ASAR pP pP 07 38 50.1 +1.6
comp=Z,1.0nm,0.6s,baz=14,slow=5.5,SNR=5.3
I45A Fountain 74.02 40 eP P 07 38 11.7 +0.4
comp=Z,17nm,0.8s
I45A Fountain 74.02 40 P P 07 38 11.5 +0.2
baz=324
H46A Fife Lake 74.06 39 P P 07 38 11.5 0.0
baz=324
GLMI Grayling 74.07 39 eP P 07 38 11.5 -0.1
comp=Z,21nm,0.7s
GLMI Grayling 74.07 39 P P 07 38 11.5 -0.1
baz=324
F48A Evansville 74.08 37 P P 07 38 11.0 -0.6
baz=325
N40A Mertquake, Sal 74.08 46 P P 07 38 11.6 -0.1
baz=321
L42A Oliver, Polo 74.11 44 P P 07 38 11.0 -0.9
baz=322
G47A Hillman 74.11 38 P P 07 38 11.4 -0.4
baz=325
VLDQ Val d'Or 74.14 33 eP P 07 38 11.1 -0.8
comp=Z,14nm,1.0s
K43A Burlington 74.16 42 P P 07 38 11.7 -0.4
baz=323
M41A Milan 74.19 45 P P 07 38 11.9 -0.4
baz=322
KOLS Kolonicke sedl 74.22 329 eP P 07 38 12.3 -0.1
KOLS pmax pmax
comp=Z,6.0nm,1.0s
KOLS Kolonicke sedl 74.22 329 eP P 07 38 12.3 -0.1
BUR08 Bucovina Ar. S 74.27 327 eP P 07 38 11.9 -0.9
comp=Z,6.3nm,0.6s
BURAR Bucovina Array 74.29 327⇑ iP P 07 38 12.5 -0.5
E50A Wahnapitae 74.33 36 P P 07 38 12.3 -0.8
baz=326
F49A Sandfield 74.36 37 P P 07 38 12.4 -0.9
baz=326
I46A Reed City 74.44 40 P P 07 38 13.5 -0.2
baz=324
BIZ Bicaz 74.53 326⇑ iP P 07 38 14.4 +0.2
N41A Harden Midland 74.57 45 eP P 07 38 14.9 +0.3
comp=Z,17nm,0.9s
N41A Harden Midland 74.57 45 P P 07 38 14.3 -0.2
baz=322
TESR Tescani 74.68 325⇓ iP P 07 38 14.8 -0.3
H48A Harrisville 74.71 38 P P 07 38 14.9 -0.4
baz=325
E51A G1948 Merrick 74.72 35 P P 07 38 14.3 -1.0
baz=327,SNR=6.0
D52A ZEK Kipawa Sen 74.75 34 P P 07 38 14.7 -0.8
baz=327
CHVC Chvalec 74.77 333 eP P 07 38 15.7 +0.1
TRPA Tarpa 74.81 328⇑ iP P 07 38 16.3 +0.5
J46A Howard City 74.83 40 P P 07 38 15.8 -0.2
baz=324
UPC Upice 74.85 333 eP P 07 38 16.0 0.0
UPC Upice 74.85 333 eP P 07 38 16.0 0.0
DPC Dobruska-Polom 74.90 333 eP P 07 38 16.8 +0.5
DPC Dobruska-Polom 74.90 333 eP P 07 38 16.8 +0.5
D53A Lac Vacive, Po 74.93 33 eP P 07 38 15.8 -0.6
comp=Z,8.8nm,0.6s
D53A Lac Vacive, Po 74.93 33 P P 07 38 16.0 -0.5
baz=328,SNR=7.7
TLCR 74.93 323⇑ iP P 07 38 16.6 +0.1
LANS Liptovska Anna 74.97 331 eP P 07 38 17.6 +0.9
LANS Liptovska Anna 74.97 331 eP P 07 38 17.6 +0.9
CLL Collm 75.00 336 eP P 07 38 14.5 -2.3
comp=Z,24nm,0.8s
CLL Collm 75.00 336⇓ iP P 07 38 15.4 -1.4
comp=Z,25nm,0.8s
CLL Collm 75.00 336⇓ iP P 07 38 15.4 -1.4
CLL pmax pmax
comp=Z,25nm,0.8s
TOBO Tobermory, Bru 75.01 37 P P 07 38 16.4 -0.6
baz=326
MORC Moravsky Berou 75.03 332 eP P 07 38 17.0 -0.1
comp=Z,11nm,0.8s
MORC Moravsky Berou 75.03 332⇓ iP P 07 38 16.9 -0.2
MORC Moravsky Berou 75.03 332 eP P 07 38 17.0 -0.1
MORC pmax pmax
comp=Z,11nm,0.8s
MORC Moravsky Berou 75.03 332 eP P 07 38 17.1 -0.1
F51A Arnstein 75.06 35 P P 07 38 16.2 -1.1
baz=327
WMOK Wichita Mounta 75.12 54 eP P 07 38 18.1 +0.2
comp=Z,9.2nm,1.1s
WMOK Wichita Mounta 75.12 54 eP P 07 38 18.1 +0.2
WMOK pmax pmax
comp=Z,9.0nm,1.1s
WMOK Wichita Mounta 75.12 54 P P 07 38 18.0 +0.2
baz=319
BRG Berggiesshubel 75.13 335 i P P 07 38 17.2 -0.4
comp=Z,8.2nm,1.0s
BRG Berggiesshubel 75.13 335 i P P 07 38 17.2 -0.4
BRG pmax pmax
comp=Z,8.0nm,1.0s
VRI Vrincioaia 75.19 325⇑ iP P 07 38 18.2 +0.2
CFR Carcaliu 75.21 323⇑ iP P 07 38 18.0 -0.1
KECS Kecovo 75.21 330 eP P 07 38 18.2 +0.1
KECS pmax pmax
comp=Z,31nm,1.0s
KECS Kecovo 75.21 330 eP P 07 38 18.2 +0.1
E52A Mattawa 75.24 34 P P 07 38 17.3 -1.0
baz=327,SNR=5.8
D54A Lac Fusel, La 75.25 33 P P 07 38 17.6 -0.7
baz=328,SNR=5.1
PVCC Panska Ves 75.26 334 eP P 07 38 18.5 +0.2
PVCC Panska Ves 75.26 334 eP P 07 38 18.5 +0.2
J47A Sunmer 75.27 40 P P 07 38 18.7 +0.2
baz=324
K46A Dorr 75.30 41 P P 07 38 18.4 -0.3
baz=324
M44A Midewin, Midew 75.33 43 P P 07 38 18.6 -0.3
baz=323
F52A Sundridge 75.40 35 P P 07 38 18.5 -0.7
baz=327,SNR=8.2
HDIL Hopedale 75.42 44 eP P 07 38 19.1 -0.3
comp=Z,30nm,1.4s
HDIL Hopedale 75.42 44 P P 07 38 19.2 -0.2
baz=322
KLBO Killbear Provi 75.42 36 P P 07 38 18.6 -0.7
baz=327
E53A Dumoine, Ponti 75.53 34 P P 07 38 19.3 -0.7
baz=328
I49A Point Hope 75.54 38 eP P 07 38 20.4 +0.3
comp=Z,14nm,0.8s
I49A Point Hope 75.54 38 P P 07 38 20.0 -0.1
baz=325
L46A Eue Claire 75.62 42 eP P 07 38 20.5 -0.1
comp=Z,9.9nm,0.8s
L46A Eue Claire 75.62 42 P P 07 38 20.0 -0.5
baz=324
BMRO Meriville Lake 75.65 37 P P 07 38 20.5 -0.2
baz=326,SNR=6.8
K47A Vermontville 75.66 40 P P 07 38 20.4 -0.3
baz=324
E54A Lac Daplat, Po 75.66 34 P P 07 38 19.9 -0.8
baz=328,SNR=5.7
BUKO Buck Lake 75.66 35 P P 07 38 20.1 -0.6
baz=327
TIRR Tirgusor 75.69 323 eP P 07 38 20.8 -0.1
comp=Z,39nm,1.0s
TIRR Tirgusor 75.69 323⇑ iP P 07 38 21.0 +0.1
TIRR Tirgusor 75.69 323 eP P 07 38 20.8 -0.1
TIRR pmax pmax
comp=Z,39nm,1.0s
HARR Harsova 75.69 323⇑ iP P 07 38 20.8 -0.1
TLB Topalu 75.73 323⇑ iP P 07 38 21.1 0.0
VRAC Vranov 75.74 333⇑ iP P 07 38 21.8 +0.7
VRAC Vranov 75.74 333 eP P 07 38 21.2 +0.1
GOPC GO Pecny, Ondr 75.74 334 eP P 07 38 21.2 +0.1
GOPC GO Pecny, Ondr 75.74 334 eP P 07 38 21.2 +0.1
VYHS Vyhne 75.74 331 eP P 07 38 21.5 +0.3
VYHS pmax pmax
comp=Z,4.0nm,0.9s
VYHS Vyhne 75.74 331 eP P 07 38 21.5 +0.3
ALGO Algonquin Park 75.75 34 P P 07 38 20.5 -0.7
baz=328
PRU Pruhonice 75.75 334 eP P 07 38 21.3 +0.2
PRU e 07 38 58.8
PRU Pruhonice 75.75 334 eP P 07 38 21.3 +0.2
N44A Piper City 75.77 44 P P 07 38 21.0 -0.4
baz=323
JAVC Velka Javorina 75.80 332 eP P 07 38 22.5 +1.0
MLR Muntele Rosu 75.80 325 eP P 07 38 21.3 -0.4
comp=Z,15nm,0.9s
MLR Muntele Rosu 75.80 325⇓ iP P 07 38 22.4 +0.7
MLR Muntele Rosu 75.80 325 eP P 07 38 21.3 -0.4
MLR pmax pmax
comp=Z,15nm,0.9s

TUL1	Leonard	75.82	52	eP		P	07 38 22.0	+0.2
	comp=Z,10nm,0.7s							
TUL1	Leonard	75.82	52	P		P	07 38 21.8	0.0
	baz=320							
BRCO	Bruce Peninsul	75.85	37	P		P	07 38 22.0	+0.2
	baz=326							
J49A	Marlette	75.88	39	P		P	07 38 21.8	-0.2
	baz=325							
PSZ	Piszkesteto	75.90	330	eP		P	07 38 21.9	-0.2
	comp=Z,9.8nm,1.0s							
PSZ	Piszkesteto	75.90	330	eP		P	07 38 21.9	-0.2
PSZ				pmax		pmax		
	comp=Z,10.0nm,1.0s							
K48A	Perry	75.92	40	P		P	07 38 22.1	-0.2
	baz=325							
BASO	Ashfield	75.95	38	P		P	07 38 22.4	0.0
	baz=326							
N45A	Kentland	76.01	43	P		P	07 38 22.6	-0.1
	baz=323							
KRUC	Moravsky	76.02	333	eP		P	07 38 22.8	+0.1
P43A	Skaggs, Pawnee	76.04	45	P		P	07 38 22.8	-0.1
	baz=323							
BWLO	Walkerton	76.08	37	P		P	07 38 23.1	0.0
	baz=326							
NKC	Novy Kostel	76.12	335	eP		P	07 38 23.4	+0.1
NKC	Novy Kostel	76.12	335	eP		P	07 38 23.4	+0.1
L47A	Sherwood	76.13	41	P		P	07 38 22.6	-0.8
	baz=324							
H52A	Wyevale	76.14	36	P		P	07 38 22.8	-0.7
	baz=327,SNR=5.8							
VOIR		76.19	325⇑	iP		P	07 38 24.4	+0.6
ILGA	Ilgaz	76.21	317	eP		P	07 38 24.3	+0.2
	comp=Z,14nm,0.8s							
ICOR	Ion Corvin	76.22	323⇑	iP		P	07 38 24.7	+0.8
K49A	Clarkson	76.22	39	P		P	07 38 24.1	+0.1
	baz=325							
G53A	Haliburton	76.23	35	P		P	07 38 23.3	-0.6
	baz=328,SNR=8.6							
ABTX	Abilene, Hawle	76.25	56	P		P	07 38 24.6	+0.3
	baz=319							
PEMO	Pembroke	76.28	34	P		P	07 38 23.1	-1.1
	baz=328,SNR=6.0							
N46A	Monticello	76.32	43	P		P	07 38 23.9	-0.7
	baz=324							
MODS	Modra-Piesok	76.35	332	eP		P	07 38 24.4	-0.2
MODS				pmax		pmax		
	comp=Z,9.0nm,0.9s							
MODS	Modra-Piesok	76.35	332	eP		P	07 38 24.4	-0.2
I51A	Listowel	76.39	37	P		P	07 38 25.0	+0.2
	baz=326							
O45A	Potomac	76.39	44	P		P	07 38 24.7	-0.2
	baz=323							
LATQ	La Tuque	76.40	30	P		P	07 38 24.4	-0.4
	baz=330							
ARR	Arges	76.40	326⇓	iP		P	07 38 25.8	+0.8
TX31	Lajitas Ar. Si	76.42	61	eP		P	07 38 25.5	+0.1
	comp=Z,9.9nm,1.4s							
LTX	Lajitas	76.42	61	eP		P	07 38 26.0	+0.6
TXAR	Lajitas Array	76.42	61	P		P	07 38 26.0	+0.6
	comp=Z,3.2nm,0.6s,baz=298,slow=5.0,SNR=52							
CCM	Cathedral Cave	76.46	47	eP		P	07 38 25.6	+0.2
	comp=Z,7.1nm,0.8s							
CCM	Cathedral Cave	76.46	47	eP		P	07 38 25.6	+0.2
CCM				pmax		pmax		
	comp=Z,7.0nm,0.8s							
CCM	Cathedral Cave	76.46	47	P		P	07 38 25.0	-0.3
	baz=322							
F55A	Otter Lake	76.48	33	P		P	07 38 24.5	-0.9
	baz=329							
L48A	N Adams	76.49	41	P		P	07 38 25.4	0.0
	baz=325							
HHAR	Hobbs	76.49	50	eP		P	07 38 25.6	0.0
	comp=Z,8.3nm,0.7s							
BANO	Bancroft	76.58	35	P		P	07 38 25.5	-0.4
	baz=328,SNR=5.6							
L49A	Milan	76.64	40	P		P	07 38 26.5	+0.2
	baz=325							
SIRR	Siria	76.72	328⇑	iP		P	07 38 26.9	+0.2
TRQ	Mont Tremblant	76.79	32	eP		P	07 38 26.7	-0.5
KHC	Kasperske Hory	76.79	334	eP		P	07 38 27.4	+0.3
	comp=Z,5.4nm,0.7s							
KHC	Kasperske Hory	76.79	334	eP		P	07 38 27.4	+0.3
KHC				pmax		pmax		
	comp=Z,5.0nm,0.7s							
KHC	Kasperske Hory	76.79	334	eP		P	07 38 27.0	-0.1
N47A	Urbana	76.80	42	P		P	07 38 26.8	-0.4
	baz=324							
G55A	Calabogie	76.84	34	P		P	07 38 26.8	-0.5
	baz=329							
PLVO	Plevna	76.89	34	eP		P	07 38 27.1	-0.5
	comp=Z,8.5nm,1.1s							
PLVO	Plevna	76.89	34	P		P	07 38 27.1	-0.5
	baz=328							
ACTO	Acton	76.94	37	P		P	07 38 27.8	-0.1
	baz=327							
P45A	Graceland, Par	76.96	44	P		P	07 38 28.0	-0.2
	baz=323							
U40A	Yellville	76.98	49	P		P	07 38 28.1	-0.2
	baz=322,SNR=14							
HPIG		77.01	64	eP		P	07 38 28.9	0.0
	comp=Z,2.2nm,0.7s							
GEC2	GERESS Array S	77.02	334	eP		P	07 38 27.6	-0.8
	comp=Z,4.9nm,0.7s							
GEC2	GERESS Array S	77.02	334	eP		P	07 38 27.6	-0.8
GEC2				pmax		pmax		
	comp=Z,5.0nm,0.7s							
GERES	GERESS Array B	77.02	334	P		P	07 38 28.2	-0.2
	comp=Z,4.1nm,0.7s,baz=29,slow=6.1,SNR=24							
PKRO	Pickering	77.03	36	P		P	07 38 28.1	-0.3
	baz=327							
GZR	Gura Zlata	77.07	327⇑	iP		P	07 38 28.6	-0.1
J52A	Paris	77.08	37	P		P	07 38 28.4	-0.4
	baz=327							
ORIO	Orleans, Innes	77.11	33	P		P	07 38 28.1	-0.8
	baz=329							
N48A	Decatur	77.11	42	P		P	07 38 28.5	-0.5
	baz=325							
DELO	Deloro Mine	77.12	35	P		P	07 38 28.3	-0.6
	baz=328							
P46A	Rosedale	77.13	44	P		P	07 38 29.0	-0.1
	baz=324							
ALFO	Alfred	77.19	33	P		P	07 38 28.3	-0.9
	baz=330							
CONA	Conrad Observa	77.19	332	eP		P	07 38 29.8	+0.5
	comp=Z,4.6nm,0.7s,SNR=6.4							
DRWO	Darlington Wes	77.24	36	P		P	07 38 29.2	-0.4
	baz=328							
DRCO	St. Marys Ceme	77.25	36	P		P	07 38 29.3	-0.4
	baz=328							
H55A	Tweed	77.26	35	P		P	07 38 29.2	-0.5
	baz=328							
Q45A	Warren Harvey,	77.27	45	P		P	07 38 29.8	-0.1
	baz=323							
BZS	Buzias	77.29	328⇑	iP		P	07 38 29.7	-0.2
BR101	Keskin Array S	77.31	317	eP		P	07 38 30.3	0.0
BR131	Keskin Array S	77.31	317	eP		P	07 38 29.4	-0.9
	comp=Z,7.0nm,1.0s							
BRTR	Keskin Array B	77.31	317	P		P	07 38 30.3	0.0
	comp=Z,4.7nm,0.8s,baz=57,slow=4.6,SNR=20							
WLVO	Wesleyville	77.33	36	P		P	07 38 29.8	-0.3
	baz=328							
I55A	Frankford	77.36	35	P		P	07 38 29.4	-0.8
	baz=328							
K52A	Tillsonburg	77.36	38	P		P	07 38 30.2	-0.1
	baz=327							
MEM	Membach	77.42	339	P		P	07 38 30.8	+0.3
N49A	Columbus Grove	77.43	41	P		P	07 38 30.4	-0.4
	baz=325							
TYNO	Tyneside	77.44	37	P		P	07 38 30.8	0.0
	baz=327							
O48A	Farmland	77.55	42	P		P	07 38 30.9	-0.5
	baz=325							
H56A	Elgin	77.57	34	P		P	07 38 30.5	-0.9
	baz=329							
HERR	Herculane	77.64	327⇑	iP		P	07 38 31.2	-0.6
P47A	Martinsville	77.67	43	P		P	07 38 31.7	-0.4
	baz=324							
R45A	Skylar, Fairfi	77.69	45	P		P	07 38 31.4	-0.8
	baz=323							
S44A	Carbondale	77.71	46	P		P	07 38 32.4	+0.1
	baz=323							
SIUC	Southern Illin	77.71	46	eP		P	07 38 32.5	+0.2
	comp=Z,8.2nm,0.8s							
FCAR	Ozark Folk Cen	77.72	49	eP		P	07 38 32.3	-0.1
	comp=Z,11nm,0.7s							
MOA	Molln	77.74	333	eP		P	07 38 32.8	+0.4
	comp=Z,5.6nm,0.8s							
JCT	Junction City	77.77	58	eP		P	07 38 33.3	+0.4
	comp=Z,8.3nm,1.0s							
JCT	Junction City	77.77	58	P		P	07 38 33.0	+0.1
	baz=320							
J54A	Appleton	77.78	36	P		P	07 38 32.2	-0.4
	baz=328							
MDUB	Mudurnu	77.80	319	eP		P	07 38 33.1	+0.2
	comp=Z,55nm,0.6s							
PECO	Prince Edward	77.86	35	eP		P	07 38 32.4	-0.6
	comp=Z,5.7nm,0.8s							
PECO	Prince Edward	77.86	35	P		P	07 38 32.4	-0.6
	baz=328							
PBMO	Poplar Bluff	77.86	48	eP		P	07 38 33.4	+0.2
	comp=Z,10.0nm,1.0s							
ARSA	Arzberg	77.89	332	eP		P	07 38 34.0	+0.7
	comp=Z,2.6nm,0.6s							
WHTX	Lake Whitney,	77.93	55	eP		P	07 38 34.4	+0.7
	comp=Z,23nm,1.3s							
WHTX	Lake Whitney,	77.93	55	P		P	07 38 33.8	+0.1
	baz=320							
MEDO	Medina	77.94	36	eP		P	07 38 32.6	-0.9
	comp=Z,11nm,0.8s							
MEDO	Medina	77.94	36	P		P	07 38 33.0	-0.5
	baz=328							
N50A	Nevada	78.00	40	P		P	07 38 33.8	-0.1
	baz=326							
MIAR	Mount Ida	78.02	51	eP		P	07 38 30.8	-3.4
	comp=Z,9.5nm,0.8s							
MIAR	Mount Ida	78.02	51	eP		P	07 38 30.8	-3.4
MIAR				pmax		pmax		
	comp=Z,9.0nm,0.8s							
MIAR	Mount Ida	78.02	51	P		P	07 38 33.8	-0.3
	baz=321							
Q47A	Bedord North L	78.04	44	P		P	07 38 34.0	-0.1
	baz=324							
P48A	Milroy	78.07	43	P		P	07 38 33.5	-0.9
	baz=325							
WHAR	Wooly Hollow	78.10	50	eP		P	07 38 34.5	-0.1
	comp=Z,12nm,1.0s							
J55A	Hilton	78.11	36	eP		P	07 38 34.2	-0.2
	comp=Z,5.8nm,0.8s							
J55A	Hilton	78.11	36	P		P	07 38 33.8	-0.6
	baz=328							
R46A	Gibon Southern	78.12	45	P		P	07 38 34.7	+0.2
	baz=324							
M52A	Chesterland	78.13	39	P		P	07 38 34.4	-0.2
	baz=326							
LONY	Lake Ozonia	78.16	33	eP		P	07 38 34.2	-0.6
	comp=Z,5.6nm,0.9s							
LONY	Lake Ozonia	78.16	33	P		P	07 38 34.0	-0.7
	baz=330							
N51A	Ashland	78.22	40	eP		P	07 38 35.2	+0.1
	comp=Z,30nm,1.3s							
N51A	Ashland	78.22	40	P		P	07 38 34.6	-0.4
	baz=326							
W41B	Gary Mavity, V	78.22	50	eP		P	07 38 35.4	+0.2
	comp=Z,14nm,0.8s							
W41B	Gary Mavity, V	78.22	50	P		P	07 38 35.2	0.0
	baz=322,SNR=8.5							
L53A	Girard	78.24	38	P		P	07 38 35.0	-0.2
	baz=327							
USIN	University of	78.25	45	eP		P	07 38 35.9	+0.6
	comp=Z,17nm,0.6s							
O50A	Cable	78.31	41	P		P	07 38 35.3	-0.4
	baz=325							
K54A	Basiliko Farm,	78.32	37	P		P	07 38 35.2	-0.5
	baz=328							
P49A	Miami Univ. Ec	78.33	42	P		P	07 38 35.4	-0.3
	baz=325							
Q48A	North Vernon	78.36	43	P		P	07 38 35.4	-0.5
	baz=324							
MOQ	Mont Orford	78.38	31	eP		P	07 38 36.4	+0.4
L54A	Sinclairville	78.39	37	P		P	07 38 35.6	-0.4
	baz=327							
PHSR	Pinarhisar	78.40	322⇑	iP		P	07 38 36.6	+0.5
S46A	Don Dixon Farm	78.45	45	P		P	07 38 36.0	-0.4
	baz=324							
X40A	Basin Creek Fa	78.45	51	eP		P	07 38 36.6	+0.1
	comp=Z,6.8nm,1.0s							
X40A	Basin Creek Fa	78.45	51	P		P	07 38 37.1	+0.6
	baz=322							
K55A	Perry	78.47	36	P		P	07 38 36.0	-0.4
	baz=328,SNR=5.1							
M53A	Wi Miller and	78.50	38	P		P	07 38 36.7	+0.1
	baz=327,SNR=5.4							
R47A	Wooly Knot Far	78.51	44	P		P	07 38 36.6	-0.1
	baz=324							
ACSO	Alum Creek Sta	78.52	41	P		P	07 38 36.4	-0.3
	baz=326							
ALLY	Alegheny Colle	78.54	38	eP		P	07 38 37.2	+0.4
	comp=Z,13nm,0.6s							
SOKA	Soboth	78.56	332	eP		P	07 38 37.1	+0.1
	comp=Z,3.3nm,0.6s,SNR=7.6							
WCI	Wyandotte Cave	78.67	44	eP		P	07 38 37.9	+0.3
	comp=Z,12nm,0.8s							
WCI	Wyandotte Cave	78.67	44	eP		P	07 38 37.9	+0.3
WCI				pmax		pmax		
	comp=Z,12nm,0.8s							
WCI	Wyandotte Cave	78.67	44	P		P	07 38 37.8	+0.1
	baz=324							
P50A	Jamestown	78.67	42	P		P	07 38 37.5	-0.1
	baz=325							
Q49A	Aurora	78.68	43	P		P	07 38 37.5	-0.2
	baz=325							
KBA	Koelnbreinsper	78.71	333	eP		P	07 38 38.8	+0.9
	comp=Z,12nm,0.6s,SNR=11							
R48A	Northridge Ran	78.73	44	P		P	07 38 38.2	+0.3
	baz=324							
O51A	Pataskala	78.75	40	P		P	07 38 37.9	-0.1
	baz=326							
L55A	Hinsdale	78.78	37	P		P	07 38 37.8	-0.4
	baz=328							
M54A	Oil Creek Stat	78.86	38	P		P	07 38 38.4	-0.2
	baz=327							
T46A	Princeton	78.88	46	P		P	07 38 39.2	+0.5
	baz=324,SNR=6.8							
S47A	Hartford	78.91	45	P		P	07 38 39.4	+0.5
	baz=324							
WLAR	White Oak Lake	78.93	51	eP		P	07 38 39.4	+0.3
	comp=Z,12nm,0.8s							
N53A	Lisbon	78.96	39	eP		P	07 38 39.4	+0.2
	comp=Z,17nm,1.1s							
N53A	Lisbon	78.96	39	P		P	07 38 39.1	0.0
	baz=327							
BFO	Black Forest	78.96	337	iP		P	07 38 39.8	+0.7
WATA	Walderalm	78.99	335	eP		P	07 38 40.0	+0.6
	comp=Z,6.3nm,0.7s							
MYKA	Terra Mystica	79.02	333	eP		P	07 38 39.5	0.0
	comp=Z,4.2nm,0.9s							
WTTA	Wattenberg	79.04	335	eP		P	07 38 40.3	+0.6
	comp=Z,9.9nm,0.6s,SNR=7.8							
RETA	Reutte	79.08	335	eP		P	07 38 40.2	+0.4
	comp=Z,7.7nm,0.8s							
O52A	Adamsville	79.11	40	eP		P	07 38 39.8	-0.2
	comp=Z,14nm,0.8s							
O52A	Adamsville	79.11	40	P		P	07 38 39.6	-0.3
	baz=326							
MOTA	Moosalm	79.12	335	eP		P	07 38 40.6	+0.5
	comp=Z,6.4nm,0.6s,SNR=5.3							
R49A	Shelbyville	79.14	43	P		P	07 38 40.2	0.0
	baz=325							
N54A	Moraine State	79.18	38	eP		P	07 38 40.5	+0.1
	comp=Z,8.8nm,0.9s							
N54A	Moraine State	79.18	38	P		P	07 38 40.4	+0.1
	baz=327							
SQTA	Sankt Quirin	79.20	335	eP		P	07 38 41.3	+0.8
	comp=Z,17nm,1.0s							
Q50A	Georgetown	79.22	42	P		P	07 38 40.5	-0.1
	baz=325							
S48A	Wiedeman Farm,	79.24	44	P		P	07 38 40.7	0.0
	baz=324							
M55A	Ridgway	79.25	37	P		P	07 38 40.7	-0.1
	baz=328							
ABTA	Abfaltersbach	79.25	334	eP		P	07 38 40.7	0.0
	comp=Z,4.5nm,1.1s							
O53A	New Philadelph	79.26	39	P		P	07 38 40.6	-0.2
	baz=327,SNR=5.2							
VTS	Vitosha	79.27	325	eP		P	07 38 41.3	+0.3
	comp=Z,15nm,0.8s							
VTS	Vitosha	79.27	325⇑	iP		P	07 38 40.6	-0.4
VTS	Vitosha	79.27	325	eP		P	07 38 41.3	+0.3
VTS				pmax		pmax		
	comp=Z,15nm,0.8s							
U46A	Springville	79.29	46	P		P	07 38 41.5	+0.5
	baz=324							
T47A	Sharon Grove	79.30	45	eP		P	07 38 41.4	+0.4
	comp=Z,21nm,1.4s							
T47A	Sharon Grove	79.30	45	P		P	07 38 41.3	+0.2
	baz=324							
Q51A	Peebles	79.35	42	eP		P	07 38 41.6	+0.2
	comp=Z,11nm,0.7s							
Q51A	Peebles	79.35	42	P		P	07 38 41.3	0.0
	baz=326							
P52A	Corning	79.38	40	P		P	07 38 41.1	-0.4
	baz=326							
X43A	Marvell	79.42	49	P		P	07 38 42.3	+0.5
	baz=323							
Z41A	Richland Creek	79.43	51	P		P	07 38 42.3	+0.5
	baz=322							
M56A	Emporium	79.47	37	P		P	07 38 41.5	-0.5
	baz=328							
S49A	Springfield	79.50	44	P		P	07 38 42.3	+0.2
	baz=325							
DAVA	Damuels	79.51	336	eP		P	07 38 42.3	0.0
	comp=Z,9.7nm,1.0s							
FETA	Feichten	79.52	335	eP		P	07 38 43.0	+0.7
	comp=Z,6.8nm,1.1s							
R50A	Paris	79.53	43	P		P	07 38 42.5	+0.2
	baz=325							
NATX	Nacogdoches	79.62	54	eP		P	07 38 43.3	+0.4
	comp=Z,27nm,0.9s							
NATX	Nacogdoches	79.62	54	P		P	07 38 43.4	+0.5
	baz=321							
WVT	Waverly	79.64	46	eP		P	07 38 42.9	0.0
	comp=Z,5.5nm,0.8s							
WVT	Waverly	79.64	46	eP		P	07 38 42.9	0.0
WVT				pmax		pmax		
	comp=Z,6.0nm,0.8s							
WVT	Waverly	79.64	46	P		P	07 38 43.0	0.0
	baz=324							
U47A	Clarksville	79.65	46	P		P	07 38 43.2	+0.3
	baz=324							
O54A	Avella	79.67	39	P		P	07 38 43.1	0.0
	baz=327							
N55A	Marion Center	79.74	38	eP		P	07 38 43.4	0.0
	comp=Z,13nm,0.9s							
N55A	Marion Center	79.74	38	P		P	07 38 43.4	0.0
	baz=328							
V46A	Holladay	79.77	47	P		P	07 38 43.6	0.0
	baz=324							
P53A	Whipple	79.82	40	P		P	07 38 43.4	-0.5
	baz=327							
R51A	Hillsboro	79.84	42	P		P	07 38 44.1	+0.1
	baz=326							
Q52A	Bidwell	79.88	41	P		P	07 38 43.9	-0.3
	baz=326							
N56A	West Decatur	79.91	37	P		P	07 38 44.2	-0.1
	baz=328							
T49A	Edmonton	79.94	44	eP		P	07 38 44.7	+0.2
	comp=Z,7.1nm,0.7s							
T49A	Edmonton	79.94	44	P		P	07 38 44.6	+0.1
	baz=325							
U48A	Cassie Pea, Po	79.95	45	P		P	07 38 44.7	+0.1
	baz=324							
S50A	Richmond	79.99	43	P		P	07 38 44.7	-0.1
	baz=325							
FUORN	Ofenpass-Fuorn	80.01	335	eP		P	07 38 44.2	-0.8
	comp=Z,21nm,1.4s							
V47A	Nunnelly	80.03	46	P		P	07 38 45.1	0.0
	baz=324							
O55A	Ligonier	80.10	38	P		P	07 38 45.3	0.0
	baz=328							
P54A	Burton	80.11	39	P		P	07 38 45.7	+0.2
	baz=327							
OXF	Oxford	80.16	48	eP		P	07 38 46.0	+0.2
	comp=Z,22nm,1.0s							
OXF	Oxford	80.16	48	eP		P	07 38 46.0	+0.2
OXF				pmax		pmax		
	comp=Z,22nm,1.0s							
OXF	Oxford	80.16	48	P		P	07 38 46.0	+0.2
	baz=323							
W46A	Michie	80.17	47	P		P	07 38 45.5	-0.3
	baz=324							
R52A	Catlettsburg	80.23	42	P		P	07 38 45.9	-0.2
	baz=326							
LMN	Caledonia Moun	80.27	26	eP		P	07 38 46.7	+0.6
	comp=Z,5.8nm,0.6s							
Q53A	Leroy	80.29	40	P		P	07 38 46.5	+0.2
	baz=327,SNR=6.6							
U49A	Red Boiling Sp	80.30	45	P		P	07 38 46.7	+0.2
	baz=325,SNR=6.6							
SSPA	Standing Stone	80.31	37	eP		P	07 38 46.6	+0.2
	comp=Z,5.8nm,0.7s							
SSPA	Standing Stone	80.31	37	P		P	07 38 46.5	0.0
	baz=328							
GGN	Saint George	80.32	28	eP		P	07 38 46.5	+0.1
	comp=Z,7.3nm,0.8s							
T50A	Nancy	80.33	44	P		P	07 38 46.7	+0.1
	baz=325,SNR=7.2							
MCWV	Mont Chateau	80.33	39	eP		P	07 38 47.2	+0.6
	comp=Z,6.1nm,0.8s							
MCWV	Mont Chateau	80.33	39	P		P	07 38 46.3	-0.3
	baz=327							
N57A	Milroy	80.34	37	P		P	07 38 46.5	-0.1
	baz=329							
O56A	Blue Knob Stat	80.35	38	eP		P	07 38 46.7	0.0
	comp=Z,15nm,1.0s							
O56A	Blue Knob Stat	80.35	38	P		P	07 38 46.5	-0.2
	baz=328							
S51A	Beattyville	80.38	43	P		P	07 38 46.9	0.0
	baz=326							
CLTN	Cedars of Leba	80.39	45	eP		P	07 38 46.6	-0.3
	comp=Z,7.3nm,0.9s							
PLAL	Pickwick Lake	80.44	47	eP		P	07 38 47.2	0.0
	comp=Z,6.6nm,0.6s							
W47A	Westpoint	80.46	47	P		P	07 38 47.2	-0.1
	baz=324							
P55A	Reedsville	80.47	39	P		P	07 38 47.8	+0.4
	baz=328,SNR=8.2							
Q54A	Coxs Mills	80.48	40	eP		P	07 38 47.6	+0.2
	comp=Z,7.6nm,0.8s							
Q54A	Coxs Mills	80.48	40	P		P	07 38 47.5	+0.2
	baz=327							
R53A	Hurricane	80.54	41	P		P	07 38 47.7	-0.1
	baz=326							
S52A	Salyersville	80.58	42	P		P	07 38 47.8	-0.2
	baz=326							
O57A	Amberson	80.77	37	P		P	07 38 49.0	+0.1
	baz=329							
T51A	Gray	80.78	43	P		P	07 38 48.8	-0.3
	baz=326							
Q55A	Buckhannon	80.79	39	P		P	07 38 49.2	+0.1
	baz=327							
U50A	Jamestown	80.82	44	P		P	07 38 49.3	0.0
	baz=325							
V49A	McMinnville	80.85	45	P		P	07 38 49.4	0.0
	baz=325							
W48A	Pulaski	80.87	46	P		P	07 38 49.6	+0.1
	baz=324,SNR=5.6							
P56A	Dayton Farm, R	80.88	38	P		P	07 38 49.8	+0.3
	baz=328,SNR=6.6							
PDG	Podgorica	80.90	328⇑	iP		P	07 38 49.1	-0.4
TTG	Podgorica	80.90	328	eP		P	07 38 48.3	-1.2
	comp=Z,13nm,1.0s							
TTG	Podgorica	80.90	328	eP		P	07 38 48.3	-1.2
TTG				pmax		pmax		
	comp=Z,13nm,1.0s							
N59A	State Game Lan	80.91	36	P		P	07 38 49.4	-0.2
	baz=330							
X47A	Russelvile	80.92	47	P		P	07 38 49.4	-0.4
	baz=324							
HRV	Adam Dziewonsk	81.08	32	P		P	07 38 50.3	-0.2
	baz=332							
W49A	Belvidere	81.20	46	P		P	07 38 51.2	-0.1
	baz=325							
U51A	La Follette	81.23	44	P		P	07 38 51.2	-0.2
	baz=326							
O59A	Robesonia	81.26	36	P		P	07 38 51.

	baz=326							
PAL	Palisades	81.54	34	P		P	07 38 52.7	-0.2
	baz=330							
V51A	Loudon	81.55	44	P		P	07 38 53.0	-0.1
	baz=326							
W50A	Signal Mountai	81.59	45	P		P	07 38 53.2	-0.2
	baz=325							
X49A	Woodville	81.67	46	P		P	07 38 53.6	-0.1
	baz=325,SNR=6.0							
Y48A	Jasper	81.75	47	P		P	07 38 53.6	-0.5
	baz=324							
T54A	Tazewell	81.76	42	P		P	07 38 54.3	0.0
	baz=327							
P59A	Jarrettsville	81.77	37	P		P	07 38 54.3	+0.1
	baz=329							
V52A	Sevierville	81.86	44	P		P	07 38 55.0	+0.3
	baz=326							
W51A	Cleveland	81.88	45	P		P	07 38 54.7	-0.1
	baz=325							
U53A	Fall Branch	81.89	43	P		P	07 38 54.9	-0.1
	baz=326							
R57A	Stanardsville	82.03	39	P		P	07 38 55.4	-0.2
	baz=328							
X50B	Fort Payne	82.03	46	P		P	07 38 55.4	-0.3
	baz=325							
T55A	Pulaski	82.06	41	P		P	07 38 55.5	-0.3
	baz=327							
O61A	Allentown	82.08	35	P		P	07 38 55.2	-0.6
	baz=330							
U54A	Nelsons Funny	82.10	42	P		P	07 38 55.9	-0.1
	baz=327							
Y49A	Blount Mountai	82.16	47	P		P	07 38 56.2	-0.2
	baz=325							
R58A	Rapidan	82.25	38	P		P	07 38 56.6	-0.1
	baz=328							
X51A	Calhoun	82.32	45	eP		P	07 38 57.2	0.0
	comp=Z,12nm,1.1s							
X51A	Calhoun	82.32	45	P		P	07 38 56.8	-0.3
	baz=325							
W52A	Murphy	82.33	44	P		P	07 38 57.1	-0.1
	baz=326							
V53A	Saluda	82.36	43	P		P	07 38 57.3	-0.1
	baz=326							
BNI	Bardonecchia	82.43	337	eP		P	07 38 57.7	0.0
	comp=Z,3.5nm,0.7s							
BNI	Bardonecchia	82.43	337	eP		P	07 38 57.7	0.0
BNI				pmax		pmax		
	comp=Z,4.0nm,0.7s							
Y50A	Piedmont	82.46	46	P		P	07 38 57.7	-0.1
	baz=325,SNR=5.6							
U55A	TA2, Sparta	82.46	41	P		P	07 38 57.9	0.0
	baz=327							
LRAL	Lakeview Retre	82.54	48	P		P	07 38 58.1	-0.2
	baz=324							
W53A	Cullowhee	82.62	44	P		P	07 38 58.7	-0.1
	baz=326							
Z49A	Columbiana	82.64	47	P		P	07 38 58.6	-0.2
	baz=325							
X52A	Dahlonega	82.75	44	P		P	07 38 59.4	0.0
	baz=326							
Y51A	Rockmart	82.77	46	P		P	07 38 59.4	-0.1
	baz=325,SNR=6.6							
Z50A	Ashland	82.89	47	eP		P	07 38 59.7	-0.4
	comp=Z,21nm,0.8s							
Z50A	Ashland	82.89	47	P		P	07 38 60.0	-0.2
	baz=325,SNR=12							
149A	Jones	83.00	48	P		P	07 39 00.8	+0.2
	baz=325,SNR=7.8							
X53A	Estanollee	83.10	44	P		P	07 39 01.4	+0.2
	baz=326							
W54A	Cherokee Point	83.13	43	P		P	07 39 01.1	-0.2
	baz=327							
U57A	Blanch	83.27	40	P		P	07 39 01.8	-0.2
	baz=328							
Y52A	Lilburn	83.27	45	P		P	07 39 02.1	+0.1
	baz=326							
V56A	Mocksville	83.28	41	eP		P	07 39 02.4	+0.3
	comp=Z,7.2nm,0.9s							
V56A	Mocksville	83.28	41	P		P	07 39 01.9	-0.2
	baz=327							
249A	Camden	83.34	48	P		P	07 39 03.1	+0.7
	baz=324,SNR=7.6							
150A	Eclectic	83.36	47	P		P	07 39 02.5	0.0
	baz=325							
X54A	Belton	83.49	43	P		P	07 39 03.1	0.0
	baz=327							
Y53A	Monroe	83.51	45	P		P	07 39 03.5	+0.2
	baz=326							
V57A	Coltrane Farms	83.53	41	P		P	07 39 02.8	-0.6
	baz=328							
Z52A	Williamson	83.66	46	P		P	07 39 04.1	+0.1
	baz=326							
S61A	Accomac	83.73	37	P		P	07 39 04.3	0.0
	baz=330							
250A	Grady	83.76	48	P		P	07 39 04.8	+0.3
	baz=325							
151A	Opelika	83.77	47	P		P	07 39 04.5	-0.1
	baz=325							
349A	Repton	83.81	49	P		P	07 39 05.2	+0.3
	baz=324							
RAYN	Ar Rayn	83.83	299	eP		P	07 39 05.5	+0.4
	comp=Z,4.0nm,1.1s							
RAYN	Ar Rayn	83.83	299	eP		P	07 39 05.5	+0.4
RAYN				pmax		pmax		
	comp=Z,4.0nm,1.1s							
X55A	Gracelyn & Ava	83.89	43	P		P	07 39 05.1	-0.1
	baz=327							
V58A	Windy Hill, Pi	83.90	41	P		P	07 39 05.2	0.0
	baz=328							
Y54A	Tignall	83.92	44	P		P	07 39 06.0	+0.6
	baz=326,SNR=15							
GOGA	Godfrey	83.93	45	P		P	07 39 05.6	+0.2
	baz=326							
152A	Waverly Hall	83.94	46	P		P	07 39 05.2	-0.3
	baz=326							
Z53A	Monticello	83.99	45	P		P	07 39 05.8	+0.1
	baz=326							
BRAL	Brewton	84.03	49	P		P	07 39 06.3	+0.3
	baz=325							
W57A	Gilead	84.06	41	P		P	07 39 05.8	-0.2
	baz=328							
251A	Midway	84.08	47	P		P	07 39 06.3	+0.1
	baz=325							
X56A	White Oak	84.15	43	P		P	07 39 06.6	+0.2
	baz=327							
350A	Dozier	84.18	48	P		P	07 39 07.0	+0.3
	baz=325							
Y55A	Saluda	84.24	43	P		P	07 39 07.1	+0.2
	baz=327							
V59A	Middlesex	84.30	40	P		P	07 39 07.4	+0.1
	baz=329							
Z54A	Sparta	84.36	45	P		P	07 39 07.8	+0.2
	baz=326							
153A	Fort Valley	84.38	46	P		P	07 39 07.7	0.0
	baz=326							
252A	Lumpkin	84.49	47	P		P	07 39 08.4	+0.1
	baz=326							
W58A	Raeford	84.50	41	P		P	07 39 08.1	-0.2
	baz=328							
U61A	Possum Corner	84.57	38	P		P	07 39 08.8	+0.3
	baz=330							
X57A	Johnson Farm,	84.59	42	P		P	07 39 09.1	+0.4
	baz=328							
V60A	Jim Taylor Roa	84.71	39	P		P	07 39 09.5	+0.2
	baz=329							
253A	Americus	84.73	46	P		P	07 39 09.8	+0.4
	baz=326							
154A	Montrose	84.76	45	P		P	07 39 10.1	+0.5
	baz=326							
352A	Blakely	84.82	47	eP		P	07 39 10.3	+0.4
	comp=Z,23nm,0.8s							
352A	Blakely	84.82	47	P		P	07 39 10.3	+0.4
	baz=326							
254A	Abbeville	85.22	46	P		P	07 39 12.6	+0.7
	baz=326							
Y58A	Scranton	85.25	42	P		P	07 39 12.5	+0.5
	baz=328							
TIGA	Tifton	85.50	46	P		P	07 39 14.1	+0.8
	baz=326							
556A	Lake Butler	87.25	46	P		P	07 39 23.2	+1.4
	baz=327							
557A	Orange Park	87.57	45	P		P	07 39 24.8	+1.5
	baz=327							
CPUP	Villa Florida	147.36	59	PKPbc		PKPbc	07 46 17.7	-0.5
	comp=Z,2.0nm,0.6s,baz=293,slow=2.5,SNR=6.7							
PLCA	Paso Flores	148.06	93	PKPbc		PKPbc	07 46 19.6	-0.1
	comp=Z,4.2nm,0.7s,baz=299,slow=3.6,SNR=14							
PLCA	Paso Flores	148.06	93	ePKPbc		PKPbc	07 46 20.0	+0.3

IGQ 20 07:36:34.4±1.2, 4°S±4°×7°8W±°, h3km, MLv3.5,
Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GONZ	Gonzanam	1.46	250	P	Pn	07 37 00.3	-1.6
ZUMB	Zumba	1.58	225	P	Pn	07 37 01.1	-2.4
ZUMB				S	Sn	07 37 22.4	-2.2
COHC	Cochancay	1.76	316	P	Pn	07 37 04.0	-1.8
COHC				S	Sn	07 37 27.0	-1.7
MCRA	Macar, Loja	2.03	252	P	Pn	07 37 03.3	-6.2
MCRA				S	Sn	07 37 30.7	-4.7
MILO	Milagro-Astudi	2.11	313	P	Pn	07 37 08.1	-2.4
MILO				S	Sn	07 37 35.2	-2.1
PAT1	Patacocha	2.25	349	P	Pn	07 37 10.3	-2.7
BPAT	Tungurahua Vol	2.25	349	P	Pn	07 37 10.1	-2.9
ARRY	Arrayan	2.25	349	P	Pn	07 37 09.8	-3.1
APUY	Puyo	2.26	1	P	Pn	07 37 08.8	-4.0
BMAS	Trigal station	2.26	348	P	Pn	07 37 10.2	-2.9
RETU	Refugio	2.31	349	P	Pn	07 37 11.4	-2.4
BULB	Ulba Tungurahu	2.31	350	P	Pn	07 37 10.7	-3.0
BRUN	Tungurahua Vol	2.33	350	P	Pn	07 37 11.2	-2.7
BRUN				S	Sn	07 37 41.4	-1.8
POND	Pondoa	2.34	349	P	Pn	07 37 11.2	-2.8
PISA	Pisayambo	2.68	352	P	Pn	07 37 16.0	-2.9
ARDO	Archidona, Ten	2.73	5	P	Pn	07 37 14.0	-5.2
BTAM	Cotopaxi Volca	3.06	353	P	Pn	07 37 21.2	-2.9
BREF	Cotopaxi Volca	3.07	352	P	Pn	07 37 22.3	-2.1
BNAS	Cotopaxi Volca	3.08	351	P	Pn	07 37 22.2	-2.2
BVC2	Cotopaxi Volca	3.08	353	P	Pn	07 37 20.8	-3.6
ANTS	Antisana-Sarah	3.22	357	P	Pn	07 37 23.6	-2.7

*IDC **20** 08:02:29.3±1.9, 0°15N×126°35E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/24, mbtmp3.4/3, Error ellipse: s-maj=171.5km s-min=25.7km az=65.0*
*DJA **20** 08:02:33.6±0.3, 0°S±2°×12°6E±°, h10km, M4.1/13, mb4.4/7, mB4.7/1, MLv4.0/13, Mw(mB)4.0/1*
*ISCJB **20** 08:02:34.4±0.7, 0°22S±0°07×125°88E±0°05, h44km, mb3.3/3, Error ellipse: s-maj=10.6km s-min=7.1km az=8.1*

ISC 20 08:02:36.2±1.1, 0°22S±0°07×125°92E±0°07, h44km, n14, σ1§35/17, mb3.4/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.75	56	P	Pn	08 03 04.7	+0.6
SANI	Sanana	1.82	178	P	Pn	08 03 02.9	-2.2
SANI				S	Sn	08 03 29.2	+2.2
KMSI	Cibinong	2.09	292	P	Pn	08 03 07.5	-1.3
KMSI				S	Sn	08 03 35.7	+2.1
NLAI	Namlea	3.23	159	P	Pn	08 03 24.8	+0.4
LUWI	Luwuk	3.25	255	P	Pn	08 03 24.0	-0.8
LUWI				S	Sn	08 04 03.6	+1.4
APSI	Ampana	4.33	261	P	Pn	08 03 38.8	-0.7
KDI	Kendari	4.97	222	P	Pn	08 03 47.7	-0.6
FAKI	Fak Fak	6.87	113	P	Pn	08 04 15.0	+0.5
SPSI	Sidrap Palu	7.18	239	P	Pn	08 04 17.7	-1.1
BKSI	Bulukumba	7.70	229	P	Pn	08 04 24.5	-1.3
SGKI	Sangatta, Kali	8.32	268	P	Pn	08 04 34.2	-0.2
WRA	Warramunga Arr	21.27	158	P	P	08 07 19.0	-0.1
	0.7nm,0.4s,baz=337,slow=13,SNR=16						
ASAR	Alice Springs	24.57	162	P	P	08 07 53.5	+1.3
	0.4nm,0.6s,baz=348,slow=8.5,SNR=5.2						
MKAR	Makanchi Array	60.36	327	P	P	08 12 39.8	-1.1
	0.2nm,0.4s,baz=125,slow=7.2,SNR=3.8						

*ISCJB **20** 08:38:44.3±1.0, 55°37N±0°03×134°88W±0°08, h14km±6km, Error ellipse: s-maj=8.7km s-min=3.9km az=156.3*
*PGC **20** 08:38:45.5±0.0, 55°35N×134°87W, h5km, ML3.0/7, 191km Sse of Sitka, Ak Southeastern Alaska*
*NEIC **20** 08:38:45.0±0.0, 55°35N×134°87W, h5km, ML2.6(AEIC), ML2.7(AEIC), ML3.0(OTT), After OTT.*
*AEIC **20** 08:38:47.3±0.0, 55°43N×134°87W, h11km*

ISC 20 08:38:44.1±2.3, 55°37N±0°04×134°94W±0°07, h3km±15km, n23, σ1§40/41, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRAG	Craig	1.04	84	ePg	Pb	08 39 04.9	+0.2
CRAG				eSg	Sg	08 39 17.8	+0.3
SIT	Sitka	1.70	353	ePn	Pn	08 39 14.1	-0.5
SIT				eSn	Sn	08 39 35.8	-1.2
WRAK	Wrangell Islan	1.80	53	ePn	Pn	08 39 16.0	0.0
WRAK				eSn	Sn	08 39 37.5	-1.7
NDB	Naden	1.83	140	ePn	Pn	08 39 17.2	+0.7
NDB	Naden	1.83	140	Pn	Pn	08 39 17.2	+0.7
NDB				Sg	Sg	08 39 42.0	-1.0
MASB	Masset	2.17	128	ePn	Pn	08 39 21.8	+0.7
DIB	Dawson Inlet,	2.61	145	ePn	Pn	08 39 27.1	0.0
DIB				eSn	Sn	08 39 59.6	+0.3
DIB	Dawson Inlet,	2.61	145	Pn	Pn	08 39 27.2	0.0
DIB				Sn	Sn	08 39 56.9	-2.3
MOBC	Moresby Island	2.83	141	ePn	Pn	08 39 31.0	+0.8
MOBC				eSn	Sn	08 40 05.9	+1.1
MOBC	Moresby Island	2.83	141	Pn	Pn	08 39 30.5	+0.2
MOBC				Sn	Sn	08 40 03.9	-1.0
RUBB	Prince Rupert	2.90	109	Pn	Pn	08 39 31.2	0.0
RUBB				Sn	Sn	08 40 04.9	-1.6
RUBB				Sg	Sb	08 40 13.7	+1.4
JIS	Juneau Island	2.93	6	ePn	Pn	08 39 32.1	+0.6
JIS				eSn	Sn	08 40 07.0	-0.1
BESE	Bessie Mountai	3.22	1	ePn	Pn	08 39 36.6	+1.1
BESE				eSn	Sn	08 40 11.9	-2.4
BNB	Barry Inlet	3.37	145	Pn	Pn	08 39 37.3	-0.5
BNB				Sg	Sg	08 40 29.8	-2.6
HG3B	Hotspring	3.48	142	Pn	Pn	08 39 38.9	-0.2
HG3B				Sn	Sn	08 40 18.4	-2.2
HG3B				Sg	Sb	08 40 31.7	+2.8
HG4B	Hotspring	3.80	143	Pn	Pn	08 39 43.5	0.0
HG4B				Sg	Sb	08 40 41.5	+3.4
DLBC	Dease Lake	4.08	39	ePn	Pn	08 39 47.2	-0.2
SKAG	Skagway	4.10	357	ePn	Pn	08 39 47.6	-0.1
BBB	Bella Bella	5.15	125	ePn	Pn	08 40 03.0	+1.0
BBB				eSn	Sn	08 41 00.8	-1.2
BBB	Bella Bella	5.15	125	Pn	Pn	08 40 02.0	-0.1
BBB				Sn	Sn	08 40 59.0	-2.9
WHY	Whitehorse	5.30	0	ePn	Pn	08 40 05.8	+1.6
HYT	Haines Junctio	5.63	347	ePn	Pn	08 40 09.2	+0.4
HYT				eLg	Lg	08 41 48.0	
EYAK	Cordova Ski Ar	7.74	316	ePn	Pn	08 40 38.0	+0.5

*ISCJB **20** 08:40:06.6±0.8, 4°81S±0°07×153°39E±0°08, h10km, mb4.3/11, Error ellipse: s-maj=11.1km s-min=9.7km az=25.7*
*NEIC **20** 08:40:07.8±1.0, 4°77S×153°39E, h10km±1km, mb4.5/9, Error ellipse: s-maj=12.2km s-min=2.9km az=151.0*
*IDC **20** 08:40:07.3±5.0, 4°79S×153°29E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/20, mbtmp4.1/3, Error ellipse: s-maj=153.1km s-min=37.4km az=107.0*

ISC 20 08:40:07.5±0.9, 4°75S±0°09×153°42E±0°08, h10km, n19, σ0§81/21, mb4.5/11, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.37	294	ePn	Pg	08 40 34.2	+0.4
RABL				eSn	Sb	08 40 50.3	-0.6
MANU	Manus Island	6.62	294	ePn	Pn	08 41 45.0	+0.1
PMG	Port Moresby	7.75	233	ePn	Pn	08 42 00.5	0.0
PMG				eSn	Sn	08 43 27.6	-0.7
PATS	Pohnpei	12.50	23	ePn	Pn	08 43 04.6	-1.0
MTN	Manton Dam	23.43	248	eP	P	08 45 17.6	+0.5
	8.8nm,0.8s						
WC3	Warramunga Arr	23.93	229	eP	P	08 45 22.2	+0.2
	8.7nm,0.9s						
WRAB	Tennant Creek	23.93	229	eP	P	08 45 21.5	-0.5
	6.9nm,0.6s						
WB2	Warramunga Arr	23.94	229	eP	P	08 45 22.1	+0.1
	8.6nm,0.7s						
WR1	Warramunga Arr	23.95	229	eP	P	08 45 22.1	0.0
WRA	Warramunga Arr	23.95	229	P	P	08 45 22.1	0.0
	5.0nm,0.4s,baz=54,slow=9.6,SNR=48						
ASAR	Alice Springs	26.61	223	P	P	08 45 46.5	+0.2
	1.2nm,0.4s,baz=57,slow=9.0,SNR=17						
ASAR	Alice Springs	26.61	223	eP	P	08 45 47.4	+1.1
FITZ	Fitzroy Crossi	30.23	242	eP	P	08 46 16.7	-2.0
	8.5nm,0.8s						
FORT	Forrest	35.22	220	eP	P	08 47 02.8	+0.6
	21nm,0.9s						
TRF	Thorofare Moun	79.91	22	eP	P	08 52 15.9	-0.7
	4.9nm,0.9s						
MK32	Makanchi Array	80.69	319	eP	P	08 52 22.2	+1.2
MKAR	Makanchi Array	80.69	319	P	P	08 52 22.2	+1.2
	0.4nm,0.5s,baz=100,slow=5.9,SNR=4.6						
MENT	Mentasta	82.25	24	eP	P	08 52 29.6	+0.8
	2.5nm,0.6s						
TORD	Torodi Ar. Bea	150.88	289	ePKPbc	PKPbc	09 00 01.6	+0.1

IGQ 20 08:49:22.2±0.7, 4°S±3°×8°0W±°, h2km, MLv3.6,
Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCRA	Macar, Loja	0.67	169	P	Pg	08 49 33.5	-1.6
GONZ	Gonzanam	0.87	127	P	Pb	08 49 39.9	-0.4
GONZ				S	Sb	08 49 52.6	+0.1
MORR	Playas El Morr	1.09	347	P	Pg	08 49 42.8	-0.4
MORR				S	Sg	08 49 57.8	+0.5
ZUMB	Zumba	1.48	141	P	Pn	08 49 47.8	-2.3
ZUMB				S	Sb	08 50 06.6	-3.4
COHC	Cochancay	1.49	34	P	Pn	08 49 47.5	-2.4
COHC				S	Sb	08 50 05.5	-4.4
MILO	Milagro-Astudi	1.51	20	P	Pn	08 49 48.8	-1.5
MILO				S	Sn	08 50 09.0	-1.6
BMAS	Trigal station	2.71	36	P	Pn	08 50 04.8	-2.4
ARRY	Arrayan	2.73	37	P	Pn	08 50 05.2	-2.2

MEX 20 08:49:26.3±0.5, 16°27N×98°11W, h10km±2km, MD3.9,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.12	353	iP	Pg	08 49 28.6	-0.7
PNIG				iS	Sg	08 49 31.1	-0.3
TLIG	Tlapa	1.36	341	eP	Pn	08 49 48.0	-3.5
TLIG				iS	Sb	08 50 04.6	-4.8
VHO	Vista Hermosa	1.54	59	eP	Pn	08 49 50.4	-3.7
VHO				eS	Sn	08 50 10.1	-4.2

*KRSC **20** 08:59:07.1±1.6, 52°02N×160°66E, h65km±24km, ML4.2*
*MOS **20** 08:59:10.8±1.0, 52°13N×160°46E, h55km, mb4.2/8, Error ellipse: s-maj=8.6km s-min=4.8km az=106.2*
*IDC **20** 08:59:14.9±3.3, 52°24N×160°19E, h57km±27km, mb3.6/12, mb1 3.8/12, mb1mx3.5/46, mbtmp3.9/12, Error ellipse: s-maj=28.8km s-min=18.8km az=146.0*

ISC 20 08:59:08.8±2.5, 52°03N±0°04×160°64E±0°04, h25km±18km, n89, σ1§23/119, mb4.1/19, 4C-1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.13	341	eP	Pn	08 59 28.5	-0.6
SPN				eS	Sn	08 59 42.7	-1.2
SPN	Mys Shipunski	1.13	341	PN	Pn	08 59 28.5	-0.6
SPN				S	Sn	08 59 42.7	-1.2
RUS	Russkaya	1.37	288	eP	Pn	08 59 32.0	-0.3
RUS				eS	Sn	08 59 48.6	-1.1
RUS	Russkaya	1.37	288	PN	Pn	08 59 32.0	-0.3
RUS				S	Sn	08 59 48.6	-1.1
NLC	Nalytchevo	1.39	326	eP	Pn	08 59 33.2	+0.6
NLC				eS	Sn	08 59 50.6	+0.5
NLC	Nalytchevo	1.39	326	PN	Pn	08 59 33.2	+0.6
NLC				S	Sn	08 59 50.6	+0.5
DALK	Dalny	1.53	312	eP	Pn	08 59 34.0	-0.5
DALK				eS	Sn	08 59 51.9	-1.7
DALK	Dalny	1.53	312	PN	Pn	08 59 34.0	-0.5
DALK				S	Sn	08 59 51.9	-1.7
PET	Petropavlovsk	1.57	310	ePN	Pn	08 59 35.1	0.0
PET				eS	Sn	08 59 54.9	+0.3
PET				smax	smax		
	comp=N,922nm,0.8s						
PET				smax	smax		
	comp=E,1μm,0.7s						
MTVR	Mutnovka	1.58	288	eP	Pn	08 59 35.4	0.0
MTVR				eS	Sn	08 59 54.6	-0.4
MTVR	Mutnovka	1.58	288	PN	Pn	08 59 35.4	0.0
MTVR				S	Sn	08 59 54.6	-0.4
KDTR	Khodutka, Kamc	1.60	263	eP	Pn	08 59 35.0	-0.5
KDTR				eS	Sn	08 59 53.9	-1.5
KDTR	Khodutka, Kamc	1.60	263	PN	Pn	08 59 35.0	-0.5
KDTR				S	Sn	08 59 53.9	-1.5
UGLR	Uglovaya	1.62	318	eP	Pn	08 59 36.3	+0.4
SDLR	Sedlovina	1.65	320	eP	Pn	08 59 36.6	+0.3
SDLR	Sedlovina	1.65	320	PN	Pn	08 59 36.6	+0.3
SMAR	Somma	1.67	318	eP	Pn	08 59 36.7	0.0
SMAR	Somma	1.67	318	PN	Pn	08 59 36.7	0.0
AVH	Avacha	1.69	318	eP	Pn	08 59 38.0	+1.1
AVH	Avacha	1.69	318	PN	Pn	08 59 38.0	+1.1
KRER	Koryakskii	1.72	319	eP	Pn	08 59 37.8	+0.4
KRER	Koryakskii	1.72	319	PN	Pn	08 59 37.8	+0.4
ASAK	Asacha	1.72	283	eP	Pn	08 59 37.9	+0.6
ASAK	Asacha	1.72	283	PN	Pn	08 59 37.9	+0.6
KRMR	Karymshinskiy	1.73	298	eP	Pn	08 59 37.7	+0.4
KRMR				eS	Sn	08 59 58.4	-0.2
KRMR	Karymshinskiy	1.73	298	PN	Pn	08 59 37.7	+0.4
KRMR				S	Sn	08 59 58.4	-0.2
KOK	Koryaka	1.76	317	eP	Pn	08 59 38.3	+0.5
KOK	Koryaka	1.76	317	PN	Pn	08 59 38.3	+0.5
KRX	Arik	1.80	318	eP	Pn	08 59 39.4	+1.0
KRX	Arik	1.80	318	PN	Pn	08 59 39.4	+1.0
PETK	Petropavlovsk-	2.10	302	P	Pn	08 59 43.0	+0.7
	comp=E,7.2nm,0.3s,baz=107,slow=19,SNR=96						
PETK				LR	LR	09 00 15.8	
	comp=E,210nm,19.4s,baz=54,slow=35						
APC	Apacha	2.31	294	eP	Pn	08 59 46.6	+1.3
APC				eS	Sn	09 00 14.1	+1.2
APC	Apacha	2.31	294	PN	Pn	08 59 46.6	+1.3
APC				S	Sn	09 00 14.1	+1.2
GNL	Ganaly	2.33	317	eP	Pn	08 59 47.2	+1.4
GNL	Ganaly	2.33	317	PN	Pn	08 59 47.2	+1.4
PAU	Pauzhetka	2.45	258	eP	Pn	08 59 46.5	-0.6
PAU	Pauzhetka	2.45	258	PN	Pn	08 59 46.5	-0.6
MKZ	Mys Kozlova	2.61	14	eP	Pn	08 59 49.2	-0.2
MKZ				eS	Sn	09 00 19.0	-1.3
MKZ	Mys Kozlova	2.61	14	PN	Pn	08 59 49.2	-0.2
MKZ				S	Sn	09 00 19.0	-1.3
KZV	Kizimen	3.10	356	eP	Pn	08 59 57.5	+1.3
KZV				eS	Sn	09 00 32.4	-0.1
KZV	Kizimen	3.10	356	PN	Pn	08 59 57.5	+1.3
KZV				S	Sn	09 00 32.4	-0.1
SKR	Severo-Kuril's	3.14	246	eP	Pn	08 59 57.4	+0.7
SKR				eS	Sn	09 00 32.0	-1.3
SKR	Severo-Kuril's	3.14	246	PN	Pn	08 59 57.4	+0.7
SKR				S	Sn	09 00 32.0	-1.3
TUMD	Tumrok D	3.18	358	eP	Pn	08 59 58.3	+1.0
TUMD				eS	Sn	09 00 33.2	-1.2
TUMR	Tumrok	3.27	355	eP	Pn	08 59 59.8	+1.2
TUMR	Tumrok	3.27	355	PN	Pn

USRK Ussuriysk Ar. 20.57 259 P P 09 03 45.4 -0.2
comp=Z,3.5nm,0.7s,baz=77,slow=16,SNR=6.0
MJA0 Matsu Arr-Jizo 22.15 234 *e*P **P 09 04 06.6 +3.9**
MJA0 pmax pmax
comp=Z,2.0nm,0.7s
MAJO Matsushiro 22.17 235 *i* P **P 09 04 03.2 +0.3**
MAJO pmax pmax
comp=Z,24nm,2.1s
MJAR Matsushiro Arr 22.17 235 P **P 09 04 05.0 +2.1**
comp=Z,2.9nm,0.9s,baz=34,slow=8.6,SNR=6.9
TIXI Tiksi 24.19 336 P **P 09 04 22.4 -0.4**
comp=Z,3.0nm,0.6s,baz=126,slow=8.7,SNR=8.1
TIXI Tiksi 24.19 336*ce*P **P 09 04 22.6 -0.2**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
KSRS Korea Array 27.15 250 P **P 09 04 52.4 +2.5**
comp=Z,0.6nm,0.6s,baz=33,slow=12,SNR=5.0
ILAR Eielson Array 29.34 44 P **P 09 05 11.8 +2.6**
comp=Z,0.4nm,0.9s,baz=274,slow=5.1,SNR=3.0
ULN Ulaanbaatar 34.08 285 *i* P **P 09 05 50.1 -1.1**
ULN pmax pmax
comp=Z,1.0nm,0.9s
TLY Talaya 34.43 293 *i* P **P 09 05 53.5 -0.5**
DGZ Jazzator, Alta 44.45 297 *i* P **P 09 07 16.7 -0.9**
DGZ pmax pmax
comp=Z,1.0nm,0.9s
KURK Kurchatov 48.59 303*ce*P **P 09 07 48.8 -1.0**
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra 48.69 303 P **P 09 07 49.4 -1.3**
comp=Z,2.5nm,0.9s,baz=59,slow=7.8,SNR=13
MKAR Makanchi Array 48.92 297 P **P 09 07 51.4 -1.2**
comp=Z,0.7nm,0.5s,baz=56,slow=7.1,SNR=11
BVAR Borovoye Array 51.32 309 P **P 09 08 09.9 -0.7**
comp=Z,2.5nm,0.5s,baz=64,slow=7.8,SNR=18
BRVK Borovoye 51.35 309*ce*P **P 09 08 10.6 -0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
ARU Arti 54.41 318*d i*P **P 09 08 33.8 +0.5**
ARU 09 10 31.5
ARU S **S 09 16 09.6 -0.3**
ARU SS **SS 09 19 49.4 -2.1**
ARU pmax pmax
comp=Z,6.0nm,1.0s
AAK Ala-Archa 55.85 297 *i* P **P 09 08 43.2 -1.0**
AAK pmax pmax
comp=Z,2.0nm,1.1s
FINES FINESS Array B 61.23 337 P **P 09 09 22.2 +1.1**
comp=Z,3.1nm,0.6s,baz=35,slow=8.4,SNR=12
OBN Obninsk 63.59 328 *i* P **P 09 09 36.8 -0.2**
OBN pmax pmax
comp=Z,2.0nm,0.6s
NB2 NORSAR Subarra 64.66 344 P **P 09 09 44.5 +0.5**
comp=Z,0.7nm,0.7s,baz=22,slow=6.9
NOA NORSAR Array B 64.66 344 P **P 09 09 44.7 +0.7**
comp=Z,1.4nm,0.9s,baz=22,slow=6.7,SNR=6.0
AKASG Malin Array Be 69.70 329 P **P 09 10 16.5 +0.5**
comp=Z,1.7nm,0.5s,baz=30,slow=6.1,SNR=7.1
AKASG Malin Array Be 69.70 329 *e*P **P 09 10 15.0 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
TXAR Lajitas Array 70.75 67 P **P 09 10 25.8 +2.9**
comp=Z,0.1nm,0.4s,baz=297,slow=5.1,SNR=4.2

NEIC ***20*** *08:59:18.9±0.0, 16°.14N×98°.61W, h1km, MD4.2(MEX), After MEX.*
MEX 20 08:59:18.9±0.5, 16°.14N×98°.60W, h1km±4km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.52**	**61**	*e*Pg	Pg	08 59 28.8	-0.2
PNIG				*e*Sg	Sg	08 59 35.9	+0.2
PNIG	**Pinotepa**	**0.52**	**61**	*e*P	Pg	08 59 28.8	-0.2
PNIG				*e*S	Sg	08 59 35.9	+0.2
TLIG	**Tlapa**	**1.42**	**1**	*e*Pn	Pn	08 59 42.0	-4.0
TLIG				*e*Sn	Sg	09 00 00.2	-4.4
TLIG	**Tlapa**	**1.42**	**1**	*e*P	Pn	08 59 42.0	-4.0
TLIG				*e*S	Sg	08 59 59.9	-4.7
CAIG	**El Cayaco**	**1.83**	**300**	*e*Pn	Pn	08 59 47.3	-4.2
CAIG				*e*Sn	Sn	09 00 11.1	-4.3
CAIG	**El Cayaco**	**1.83**	**300**	*i* P	Pn	08 59 47.3	-4.2
CAIG				*i* S	Sn	09 00 11.1	-4.3
VHO	**Vista Hermosa**	**2.02**	**62**	*e*Pn	Pn	08 59 51.6	-2.6
VHO				*e*Sn	Sn	09 00 15.7	-4.6
VHO	**Vista Hermosa**	**2.02**	**62**	*e*P	Pn	08 59 51.6	-2.6
VHO				*e*S	Sn	09 00 15.7	-4.6
MEIG	**Mezcala**	**2.03**	**331**	*e*Pn	Pn	08 59 50.5	-3.7
MEIG				*e*Sn	Sn	09 00 15.7	-4.6
MEIG	**Mezcala**	**2.03**	**331**	*e*P	Pn	08 59 50.5	-3.7
MEIG				*i* S	Sn	09 00 15.7	-4.6
PLIG	**Platanillo**	**2.40**	**339**	*e*Pn	Pn	09 00 00.3	+0.8
PLIG				*e*Sn	Sn	09 00 31.0	+1.4
PLIG	**Platanillo**	**2.40**	**339**	*e*P	Pn	09 00 00.3	+0.8
PLIG				*i* S	Sn	09 00 31.0	+1.4
HUIG	**Huatulco**	**2.43**	**98**	*e*Pn	Pn	08 59 55.8	-3.9
HUIG				*e*Sn	Sn	09 00 27.5	-2.5
HUIG	**Huatulco**	**2.43**	**98**	*e*P	Pn	08 59 55.8	-3.9
HUIG				*e*S	Sn	09 00 27.5	-2.5
ARIG	**Puente Sto Nin**	**2.71**	**322**	*e*P	Pn	09 00 01.1	-2.5
ARIG				*i* S	Sb	09 00 41.4	-0.5
ZIIG	**Zihuatanejo**	**3.11**	**298**	*e*Pn	Pn	09 00 10.9	+1.9
ZIIG				*e*Sn	Sn	09 00 43.8	-3.0
ZIIG	**Zihuatanejo**	**3.11**	**298**	*i* P	Pn	09 00 10.9	+1.9
ZIIG				*e*S	Sn	09 00 43.8	-3.0
LVIG	**Laguna Verde**	**4.13**	**30**	*e*Pn	Pn	09 00 20.5	-2.6
CCIG	**Comitan**	**6.21**	**88**	*e*Pn	Pn	09 00 46.6	-5.3
ZAIG	**Zacatecas**	**7.58**	**331**	*e*Pn	Pn	09 01 06.7	-4.1
ZAIG				*e*Sn	Sn	09 02 33.8	-3.8
833A	**Chaparral WMA,**	**12.15**	**357**	*e*Pn	Pn	09 02 08.7	-4.5
HPIG		**12.59**	**330**	*e*Pn	Pn	09 02 14.7	-4.7

BJI ***20*** *09:05:11.7±0.0, 49°.75N×125°.20E, h10km, mb4.6/33, mB4.7/29, ML5.4/10, Ms5.0/28, Ms7 4.5/21*
ISCJB ***20*** *09:05:12.1±0.2, 49°.75N±0°.02×125°.35E±0°.03, h10km, mb4.3/63, MS4.0/25, Error ellipse: s-maj=3.4km s-min=3.2km az=8.8*
IDC ***20*** *09:05:12.0±0.5, 49°.64N×125°.30E, h0km, mb4.1/24, mb1 4.3/27, mb1mx4.2/40, mbtmp4.2/27, ML4.9/3, MS3.8/25, Ms1 3.8/25, ms1mx3.7/37, Error ellipse: s-maj=14.7km s-min=10.9km az=5.0*
NEIC ***20*** *09:05:13.8±2.2, 49°.75N×125°.29E, h11km±3km, mb4.3/30, Error ellipse: s-maj=10.6km s-min=8.2km az=190.0*
MOS ***20*** *09:05:15.4±1.2, 49°.62N×125°.31E, h40km, mb4.7/16, Error ellipse: s-maj=9.2km s-min=6.2km az=111.9*
MOS Felt (II-III) at Blagoveshchensk.
ISC 20 09:05:13.8±0.3, 49°.86N±0°.04×125°.27E±0°.04, h10km, n177, σ1§89/188, mb4.3/63, MS3.9/25, 8C-3D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HIA	**Hailar**	**3.65**	**263**	*e*Pn	**Pn**	**09 06 08.6**	**-1.7**
HIA				*e*Pg	**Pb**	**09 06 18.5**	**+0.2**
HIA	**Hailar**	**3.65**	**263**	*e*P	**Pn**	**09 06 08.6**	**-1.7**
ZEA	**Zeya**	**4.07**	**17**	*e*P	**Pn**	**09 06 14.2**	**-1.9**
ZEA				*e*S	**Sn**	**09 07 01.8**	**-2.0**
ZEA				pmax	pmax		
comp=Z,29nm,0.4s
ZEA pmax pmax
comp=E,210nm,0.8s
ZEA pmax pmax
comp=N,190nm,0.4s
ZEA pmax pmax
comp=Z,410nm,0.6s
ZEA pmax pmax
comp=N,4.0nm,0.5s
ZEA pmax pmax
comp=N,400nm,1.0s
ZEA pmax pmax
comp=E,200nm,1.0s
ZEA pmax pmax
comp=Z,500nm,1.0s
ZEA pmax pmax
comp=E,6.0nm,0.5s
ZEA pmax pmax
comp=Z,12nm,0.3s
ZEA smax smax
comp=E,12nm,0.7s
ZEA smax smax
comp=E,2μm,1.0s
ZEA smax smax
comp=N,16nm,0.6s
ZEA smax smax
comp=N,770nm,0.8s
ZEA smax smax
comp=E,2μm,0.8s
ZEA smax smax
comp=Z,360nm,0.8s
ZEA smax smax
comp=N,40nm,0.6s
ZEA smax smax
comp=N,4μm,1.0s
ZEA smax smax
comp=N,6μm,1.5s
ZEA smax smax
comp=E,60nm,0.3s
KLR Kul'dur 4.27 96 Pn **Pn 09 06 17.4 -1.4**
comp=E,112nm,0.3s,baz=297,slow=16,SNR=711
KLR Sn **Sn 09 07 06.7 -2.0**
comp=E,170nm,0.3s,baz=46,slow=22,SNR=8.1
KLR Lg Lg 09 07 26.4
comp=E,405nm,0.3s,baz=203,slow=8.2,SNR=7.3
KLR LR LR 09 08 17.1
comp=E,504nm,20.7s,baz=294,slow=44
MDJ Mudanjiang 6.02 149 Pn **Pn 09 06 39.8 -3.1**
MDJ Sn **Sn 09 07 52.3 +0.5**
MDJ LR LR
comp=E,6μm,4.6s
MDJ LR LR
comp=E,9μm,3.7s
MDJ LR LR
comp=E,2μm,6.0s
MDJ Mudanjiang 6.02 149 *e*Pn **Pn 09 06 39.7 -3.2**
GRNR Gornyy 7.20 79 *e*P Pn 09 07 05.8 +6.7
GRNR pmax pmax
comp=Z,9.0nm,0.2s
GRNR pmax pmax
comp=Z,45nm,0.2s
USA0B Ussuriysk Arra 7.29 138 *e*Pn **Pn 09 06 58.1 -2.2**
USA0B *e*Sn **Sn 09 08 21.6 -1.5**
USA0B Ussuriysk Arra 7.29 138 P **Pn 09 06 58.7 -1.6**
USA0B S **Sn 09 08 21.6 -1.5**
USRK Ussuriysk Ar. 7.29 138 Pn **Pn 09 06 58.4 -2.0**
comp=Z,10nm,0.3s,baz=323,slow=14,SNR=74
USRK Pg Pb 09 07 24.2 +3.8
comp=Z,17nm,0.3s,baz=320,slow=20,SNR=10
USRK Lg Lg 09 09 00.2
comp=Z,82nm,0.3s,baz=323,slow=29,SNR=13
USRK LR LR 09 10 09.7
comp=Z,396nm,18.1s,baz=319,slow=42
USRK Ussuriysk Ar. 7.29 138 *e*Pn **Pn 09 06 57.8 -2.5**
SNY Shenyang 8.12 189 P **Pn 09 07 10.8 -0.9**
VLA Vladivostok 8.14 143 *i* P **Pn 09 07 10.4 -1.6**
MSHR Mys Shultsa 8.35 149 *i* P **Pn 09 07 12.0 -2.8**
TEY Ternei 9.07 118⇑ *e*P **Pn 09 07 23.4 -1.3**
TEY *e*S **Sn 09 09 06.2 -0.6**
TEY pmax pmax
comp=Z,10.0nm,0.4s
TEY smax smax
comp=N,40nm,0.6s
TEY smax smax
comp=E,70nm,0.8s
TEY MLR MLR
comp=Z,2μm,16.0s
NKL Nikolayevsk 10.16 65 *e*P **Pn 09 07 37.2 -2.4**
NKL pmax pmax
comp=Z,16nm,0.9s
DL2 Dalian 11.26 195 P Pn 09 07 58.6 +3.9
DL2 *e*S **Sn 09 10 06.8 +6.3**
DL2 pmax pmax
comp=Z,20nm,0.5s
DL2 LR LR
comp=Z,1μm,8.4s
DL2 LR LR
comp=Z,2μm,9.0s
YSS Yuzh-Sakhalins 11.98 97 *i* P **Pn 09 08 05.1 +0.6**
ULN Ulaanbaatar 12.16 268 *e*Pn **Pn 09 08 04.3 -2.9**
ULN Ulaanbaatar 12.16 268*ce*P **Pn 09 08 04.8 -2.4**
ULN pmax pmax
comp=Z,6.0nm,0.6s
YAK Yakutsk 12.44 10 *e*Pn **Pn 09 08 08.1 -2.6**
YAK Yakutsk 12.44 10 *e*P **Pn 09 08 07.8 -2.9**
YAK *e*SS Sn 09 10 42.2 +13
KSRS Korea Array 12.55 170 Pn **Pn 09 08 11.6 -0.8**
comp=Z,0.4nm,0.3s,baz=352,slow=14,SNR=32
KSRS Lg Lg 09 11 46.6
comp=Z,2.3nm,0.3s,baz=348,slow=30,SNR=13
KSRS LR LR 09 13 45.1
comp=Z,418nm,18.1s,baz=353,slow=42
KS15 Wonju Array Si 12.56 170 *e*Pn **Pn 09 08 11.2 -1.3**
SONA0 Songino Array 12.59 268 *e*Pn **Pn 09 08 09.9 -3.2**
SONM Songino Array 12.59 268 Pn **Pn 09 08 09.9 -3.2**
comp=Z,1.4nm,0.3s,baz=79,slow=12,SNR=14
SONM Lg Lg 09 11 44.7
comp=Z,11nm,0.3s,baz=72,slow=25,SNR=8.5
SONM LR LR 09 13 28.5
comp=Z,832nm,18.7s,baz=72,slow=39
SONM Songino Array 12.59 268 *e*Pn **Pn 09 08 10.9 -2.2**
SONM Songino Array 12.59 268 *e*P **Pn 09 08 10.9 -2.2**
ASAJ Asahikawa 13.14 109 LR LR 09 13 08.5
comp=Z,382nm,19.4s,baz=234,slow=36
HHC Hu-ho-hao-te 13.18 232 *e*P **Pn 09 08 22.3 +1.3**
HHC S **Sn 09 10 49.0 +1.4**
HHC pmax pmax
comp=Z,18nm,1.2s
HHC pmax pmax
comp=Z,69nm,5.3s
HHC LR LR
comp=Z,4μm,10.0s
HHC LR LR
comp=Z,3μm,10.5s
TJN Taejon 13.57 173*ce*P **Pn 09 08 25.1 -1.1**
TLY Talaya 13.80 286 *e*Pn **Pn 09 08 25.9 -3.5**
TLY Talaya 13.80 286 *e*P **Pn 09 08 26.2 -3.1**
TLY pmax pmax
comp=Z,4.0nm,0.8s
TLY MLR MLR
comp=Z,1μm,7.0s
ZAK Zakamensk 14.11 281 *e*P **P 09 08 42.8 +1.3**
ZAK pmax pmax
comp=Z,21nm,1.0s
TIA Tai'an 14.87 206 P Pn 09 08 37.1 -7.0
TIA S S 09 12 03.4 +16
TIA LR LR
comp=N,580nm,11.4s
TIA LR LR
comp=Z,720nm,11.8s
TIY Taiyuan 15.25 222 *e*P **Pn 09 08 48.6 -0.6**
TIY S **Sn 09 11 38.8 +0.7**
TIY LR LR
comp=Z,5μm,9.4s
TIY LR LR
comp=Z,6μm,11.9s
TIY LR LR
comp=Z,2μm,5.4s
MOY Mondy 15.45 286 *e*P **P 09 08 58.1 +1.8**
MOY pmax pmax
comp=Z,15nm,1.5s
MAJO Matsushiro 16.29 140 *e*P **Pn 09 09 02.5 0.0**
MAJO Matsushiro 16.29 140 *e*P **Pn 09 09 02.5 0.0**
MJAR Matsushiro Arr 16.29 140 Pn **Pn 09 09 02.5 0.0**
comp=Z,0.1nm,0.3s,baz=312,slow=9.0,SNR=7.4
MJAR LR LR 09 14 32.2
comp=Z,259nm,18.7s,baz=320,slow=35
INU Inuyama 16.86 145 *e*P **Pn 09 09 09.3 -0.5**
comp=Z,17nm,0.9s
MA2 Magadan 17.54 47 P **P 09 09 20.4 +1.1**
comp=Z,0.7nm,0.3s,baz=241,slow=6.4,SNR=5.8
MA2 Magadan 17.54 47*ce*P **P 09 09 20.2 +0.9**
MA2 pmax pmax
comp=Z,10.0nm,1.0s
NJ2 Nanjing 18.43 197 *e*P **P 09 09 29.8 +0.6**
NJ2 S **S 09 12 56.0 -3.6**
NJ2 pmax pmax
comp=Z,15nm,0.5s
NJ2 pmax pmax
comp=Z,310nm,5.5s
NJ2 LR LR
comp=Z,800nm,10.0s
NJ2 LR LR
comp=Z,1μm,8.1s
SEY Seymchan 19.71 38 P **Pn 09 09 44.6 +0.1**
comp=Z,0.4nm,0.3s,baz=222,slow=16,SNR=3.9
SEY Seymchan 19.71 38*ce*P **Pn 09 09 46.7 +2.2**
XAN Xi'an 19.87 223 P **P 09 09 44.4 -0.7**
XAN pP sP 09 09 48.9 -0.5
XAN S **S 09 13 25.1 -3.7**
XAN pmax pmax
comp=Z,13nm,1.2s
XAN pmax pmax
comp=Z,99nm,4.3s
XAN LR LR
comp=Z,2μm,14.1s
XAN LR LR
comp=Z,3μm,14.1s
XAN LR LR
comp=Z,1μm,10.8s
XAN Xi'an 19.87 223 *e*P **P 09 09 44.1 -1.0**
comp=Z,14nm,1.0s
XAN Xi'an 19.87 223 *e*P **P 09 09 44.2 -1.0**
XAN pmax pmax
comp=Z,14nm,1.0s
JHJ Hachijo jima 2 19.89 142 LR LR 09 17 19.7
comp=Z,148nm,19.8s,baz=341,slow=37
PEA1 Petropavlovsk- 20.36 68 *e*P **P 09 09 50.9 +0.7**
PEA0B Petropavlovsk- 20.36 68 *e*P **P 09 09 51.2 +1.0**
comp=Z,48nm,1.0s
PEA0B Petropavlovsk- 20.36 68 P **P 09 09 51.2 +1.0**
PEA0B pmax pmax
comp=Z,48nm,1.1s
PETK Petropavlovsk- 20.36 68 P **P 09 09 50.9 +0.7**
comp=Z,23nm,0.9s,baz=266,slow=4.5,SNR=12
PETK LR LR 09 18 11.4
comp=Z,223nm,18.7s,baz=278,slow=38
PETK Petropavlovsk- 20.36 68 *e*P **P 09 09 50.6 +0.4**
LZH Lanzhou 20.76 237 ⇓P **P 09 09 54.9 0.0**
LZH pP pP 09 09 57.4 -0.5
LZH sP sP 09 09 59.0 -0.2
LZH S **S 09 13 42.9 -3.8**
LZH SS **SnSn 09 14 08.3 +2.1**
LZH pmax pmax
comp=Z,25nm,1.1s
LZH pmax pmax
comp=Z,130nm,4.3s
LZH LR LR
comp=Z,1μm,13.0s
LZH LR LR
comp=Z,2μm,13.6s
LZH LR LR
comp=Z,1μm,11.4s
GTA Gaotai 20.81 250 ⇑P **P 09 09 56.1 +0.7**
GTA pP sP 09 10 00.3 +0.6
GTA sP pP 09 10 03.0 +4.7
GTA pmax pmax
comp=Z,11nm,1.1s
GTA pmax pmax
comp=Z,130nm,6.8s
WHN Wuhan 20.98 207 P Pn 09 09 57.8 -1.8
WHN S **S 09 13 45.3 -5.4**
WHN LR LR
comp=Z,790nm,9.9s
WHN LR LR
comp=Z,2μm,8.5s
WHN LR LR
comp=Z,1μm,17.6s
TIXI Tiksi 21.92 3 P **P 09 10 07.0 +0.1**
comp=Z,23nm,0.7s,baz=160,slow=9.6,SNR=44
TIXI LR LR 09 19 30.3
comp=Z,560nm,19.8s,baz=253,slow=39
TIXI Tiksi 21.92 3 *e*P **P 09 10 07.1 +0.2**
comp=Z,38nm,1.0s
TIXI Tiksi 21.92 3*d i*P **P 09 10 06.8 -0.1**
TIXI pmax pmax
comp=Z,82nm,1.6s
DGZ Jazzator, Alta 24.26 284 *i* P **P 09 10 31.0 -0.1**
DGZ pmax pmax
comp=Z,6.0nm,0.9s
CD2 Chengdu 24.88 228⇓ *i*P **P 09 10 37.4 +0.7**
CD2 pmax pmax
comp=Z,60nm,1.0s
CD2 pmax pmax
comp=Z,330nm,6.9s
CD2 LR LR
comp=Z,2μm,17.2s
CD2 LR LR
comp=Z,3μm,14.7s
CD2 LR LR
comp=Z,1μm,9.3s
ZAA1 Zalesovo Array 25.04 295 *e*P **P 09 10 39.4 +1.5**
ZALV Zalesovo Beam 25.04 295 P **P 09 10 39.4 +1.5**
comp=Z,2.1nm,0.6s,baz=103,slow=8.2,SNR=7.6
ZALV LR LR 09 21 17.3
comp=Z,84nm,19.7s,baz=72,slow=38
ZALV Zalesovo Beam 25.04 295 *e*P **P 09 10 39.0 +1.1**
ZALV Zalesovo Beam 25.04 295 *e*P **P 09 10 39.0 +1.1**
WMQ Urumqi 26.20 271 *e*P **P 09 10 49.9 +1.4**
WMQ pP sP 09 10 54.8 +1.8
WMQ sS sS 09 15 32.8 +7.2
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,120nm,4.5s
BILL Bilibino 27.12 33 *i* P **P 09 10 58.0 +1.5**
BILL pmax pmax
comp=Z,2.0nm,0.8s
GYA Guiyang 27.42 218 *e*P **P 09 11 02.6 +2.9**
GYA PP PP 09 11 48.9 -13
GYA S **S 09 15 43.4 +3.4**
GYA SS **SnSn 09 16 53.8 +4.6**
GYA pmax pmax
comp=Z,10.0nm,0.6s
GYA pmax pmax
comp=Z,90nm,4.5s
GYA LR LR
comp=Z,450nm,12.7s
MK31 Makanchi Array 28.45 281 *e*P **P 09 11 08.7 0.0**
comp=Z,1.7nm,0.8s
MK31 Makanchi Array 28.45 281 *e*P **P 09 11 08.7 0.0**
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MK32 Makanchi Array 28.45 281 *e*P **P 09 11 08.6 -0.1**
MKAR Makanchi Array 28.45 281 P **P 09 11 08.6 -0.1**
comp=Z,0.7nm,0.5s,baz=88,slow=12,SNR=6.8
MKAR LR LR 09 23 21.4
comp=Z,192nm,22.0s,baz=68,slow=38
MKAR Makanchi Array 28.45 281 *e*P **P 09 11 08.8 +0.1**
MKAR Makanchi Array 28.45 281 *e*P **P 09 11 08.8 +0.1**
KURK Kurchatov 29.43 290 *e*P **P 09 11 17.0 -0.3**
comp=Z,3.2nm,0.9s
KURK Kurchatov 29.43 290*ce*P **P 09 11 18.0 +0.7**
KURK pmax pmax
comp=Z,3.0nm,1.3s
KURBB Kurchatov Arra 29.52 290 P **P 09 11 17.9 -0.2**
comp=Z,2.5nm,0.7s,baz=76,slow=9.8,SNR=13
KMI Kunming 30.26 224 P P 09 11 30.8 +5.7
KMI pmax pmax
comp=Z,14nm,0.6s
KMI LR LR
comp=N,1μm,15.2s
KMI LR LR
comp=E,2μm,16.8s
KMI LR LR
comp=Z,510nm,15.6s
QIZ Qiongzhong 33.15 207 P **P 09 11 50.3 0.0**
QIZ S **S 09 17 10.8 +1.2**
QIZ LR LR
comp=Z,370nm,17.2s
QIZ LR LR
comp=Z,870nm,17.7s
BVAR Borovoye Array 33.65 297 P **P 09 11 55.6 +1.3**
comp=Z,0.9nm,0.6s,baz=70,slow=9.6,SNR=6.1
BRVK Borovoye 33.70 297 *i* P **P 09 11 54.1 -0.7**
BRVK pmax pmax
comp=Z,3.0nm,1.1s
OTUK Ortayu 34.13 288 P **P 09 11 59.4 +0.8**
OTUK pmax pmax
comp=Z,23nm,0.9s
AAK Ala-Archa 35.26 278 LR LR 09 25 39.3
comp=Z,179nm,18.4s,baz=40,slow=35
KSH Kashi 35.94 272 *e*P **P 09 12 18.5 +4.0**
CMMT Chiang Mai 37.45 224 P **P 09 12 28.2 +0.8**
CHTO Chiang Mai 37.46 224 *e*P **P 09 12 26.4 -1.0**
comp=Z,9.4nm,0.9s
CHTO Chiang Mai 37.46 224 *e*P **P 09 12 26.4 -1.0**
CHTO pmax pmax
comp=Z,9.0nm,0.9s
KK31 Karatay Array 37.57 281 P **P 09 12 27.7 -0.5**
KK31 pmax pmax
comp=Z,56nm,1.2s
KKAR Karatay Array 37.57 281 P **P 09 12 27.7 -0.5**
KKAR pmax pmax

comp=Z,56nm,1.2s
CMAR Chiang Mai Arr 37.77 223 P **P 09 12 29.1 -0.9**
comp=Z,1.0nm,0.3s,baz=18,slow=7.1,SNR=8.2
CMAR LR LR 09 29 10.5
comp=Z,140nm,18.0s,baz=27,slow=38
SVE Sverdlovsk 37.88 306 *e*P **P 09 12 33.1 +2.5**
SVE pmax pmax
comp=Z,25nm,1.6s
ARU Arti 39.10 306 P **P 09 12 42.4 +1.6**
comp=Z,0.7nm,0.3s,baz=40,slow=8.7,SNR=5.4
ARU Arti 39.10 306*c i*P **P 09 12 40.7 -0.1**
ARU S **S 09 18 41.5 +1.5**
ARU SS **SnSn 09 21 19.5 -12**
ARU pmax pmax
comp=Z,11nm,1.4s
ARU MLR MLR
comp=Z,127nm,13.0s
ABKAR Akbulak array 41.15 295 *e*P **P 09 12 58.1 +0.2**
ABKAR *e*P **P 09 12 58.3 +0.3**
AKTO Aktyubinsk 41.74 298 P **P 09 13 04.8 +2.0**
comp=Z,1.2nm,0.5s,baz=65,slow=11,SNR=5.4
IMAR Indian Mountai 42.52 37 *e*P **P 09 13 09.2 +0.3**
TOLK Toolik Lake Re 43.17 32 *e*P **P 09 13 14.8 +0.6**
comp=Z,3.3nm,0.9s
COLD Coldfoot 43.43 34 *e*P **P 09 13 17.4 +1.1**
comp=Z,2.1nm,1.0s
PRGR Permogore 43.50 317 *e*P **P 09 13 15.9 -1.0**
PRGR pmax pmax
comp=Z,10.0nm,0.4s
ILAR Eielson Array 45.64 37 P **P 09 13 34.6 +0.6**
comp=Z,2.1nm,0.6s,baz=288,slow=8.8,SNR=12
ILAR LR LR 09 32 53.9
comp=Z,166nm,19.6s,baz=308,slow=36
KLMR Klimovskoe 46.51 318 *e*P **P 09 13 40.6 -0.2**
KLMR pmax pmax
comp=Z,17nm,1.4s
KLMR Klimovskoe 46.51 318 *e*P **P 09 13 40.6 -0.2**
KLMR AMP 09 13 44.6
comp=Z,17nm,1.4s
ARA0 ARCESS Array S 47.54 332 *e*P **P 09 13 50.0 +1.2**
ARCES ARCESS Array B 47.54 332 P **P 09 13 50.0 +1.2**
comp=Z,7.6nm,0.3s,baz=63,slow=8.2,SNR=3.3
ARCES LR LR 09 38 28.4
comp=Z,289nm,18.5s,baz=84,slow=42
ARCES ARCESS Array B 47.54 332 P **P 09 13 50.0 +1.2**
EGAK Eagle 47.81 35 *e*P **P 09 13 51.4 +0.4**
comp=Z,3.6nm,0.9s
EYAK Cordova Ski Ar 48.05 42 *e*P **P 09 13 51.9 -0.9**
comp=Z,4.6nm,1.0s
GEYT Alibeck 48.29 283 LR LR 09 34 28.1
comp=Z,185nm,18.9s,baz=90,slow=36
INK Inuvik 48.63 29 P **P 09 13 59.2 +2.0**
comp=Z,2.0nm,0.6s,baz=314,slow=8.4,SNR=8.6
INK Inuvik 48.63 29 *e*P **P 09 13 58.4 +1.2**
comp=Z,2.5nm,1.0s
INK Inuvik 48.63 29 *e*P **P 09 13 58.4 +1.2**
INK pmax pmax
comp=Z,3.0nm,1.0s
BALM Baldy 49.24 40 *e*P **P 09 14 00.9 -1.3**
comp=Z,4.1nm,0.8s
BALM Baldy 49.24 40 *e*P **P 09 14 00.9 -1.3**
BALM pmax pmax
comp=Z,4.0nm,0.8s
OBN Obninsk 50.77 312 *i*P **P 09 14 13.5 -0.1**
OBN pmax pmax
comp=Z,5.0nm,1.0s
FIA0 FINESS Array S 51.76 323 *e*P **P 09 14 20.8 -0.2**
FIA0 *e*PcP **PcP 09 15 34.7 +0.7**
FIA0 FINESS Array S 51.76 323 *e*P **P 09 14 20.8 -0.2**
FIA0 *e* 09 15 34.7
FINES FINESS Array B 51.76 323 P **P 09 14 20.8 -0.2**
comp=Z,4.1nm,0.7s,baz=64,slow=6.6,SNR=11
FINES PcP **PcP 09 15 34.7 +0.7**
comp=Z,3.8nm,1.0s,baz=74,slow=5.5,SNR=4.4
FINES FINESS Array B 51.76 323 *e*P **P 09 14 20.4 -0.7**
KIV Kislovodsk 54.01 298 *e*P **P 09 14 35.1 -2.9**
KIV pmax pmax
comp=Z,23nm,1.0s
KBZ Khabaz 54.02 297 LR LR 09 37 51.5
comp=Z,96nm,18.8s,baz=12,slow=36
AKASG Malin Array Be 56.97 311 P **P 09 14 58.7 -0.3**
comp=Z,1.5nm,0.5s,baz=46,slow=8.6,SNR=11
AKBB Malin Array Si 56.97 311 *e*P **P 09 14 59.9 +0.8**
comp=Z,6.1nm,1.0s
AKBB Malin Array Si 56.97 311 *e*P **P 09 14 59.9 +0.8**
AKBB pmax pmax
comp=Z,6.0nm,1.0s
NC204 NORSAR Array S 57.46 329 *e*P **P 09 15 03.4 +0.9**
comp=Z,6.0nm,1.0s
NB2 NORSAR Subarra 57.48 328 P **P 09 15 02.0 -0.6**
comp=Z,1.3nm,0.6s,baz=42,slow=6.9
NB200 NORSAR Array S 57.48 328 *e*P **P 09 15 02.7 +0.1**
NOA NORSAR Array B 57.48 328 P **P 09 15 02.7 +0.1**
comp=Z,1.8nm,0.8s,baz=48,slow=6.6,SNR=6.0
NOA LR LR 09 43 33.5
comp=Z,68nm,18.7s,baz=40,slow=40
YKA Yellowknife Ar 58.37 28 P **P 09 15 08.4 -0.4**
comp=Z,0.8nm,0.8s,baz=320,slow=6.1,SNR=5.1
YKA LR LR 09 42 34.1
comp=Z,8.0nm,18.1s,baz=302,slow=38
YKB5 Yellowknife Ar 58.37 28 *e*P **P 09 15 08.4 -0.4**
BURAR Bucovina Array 60.99 310 P **P 09 15 28.4 +1.2**
BURAR pmax pmax
comp=Z,57nm,1.1s
BR101 Keskin Array S 61.89 299 *e*P **P 09 15 34.4 +1.0**
BRTR Keskin Array B 61.89 299 P **P 09 15 34.4 +1.0**
comp=Z,0.8nm,0.6s,baz=64,slow=3.4,SNR=3.9
BRTR LR LR 09 44 49.8
comp=Z,42nm,19.1s,baz=354,slow=38
VYHS Vyhne 63.42 314 *e*P **P 09 15 44.9 +1.6**
VYHS Vyhne 63.42 314 *e*P **P 09 15 44.9 +1.6**
CLL Collm 63.92 320 *e*P **P 09 15 47.0 +0.4**
comp=Z,5.0nm,0.5s
CLL Collm 63.92 320 *e*P **P 09 15 47.0 +0.4**
CLL pmax pmax
comp=Z,5.0nm,0.5s
GERES GERESS Array B 65.47 318 P **P 09 15 58.6 +1.8**
comp=Z,0.4nm,0.6s,baz=66,slow=4.5,SNR=5.2
ESK Eskdalemuir 66.71 331 *i*P **P 09 16 08.0 +3.5**
KBA Koelnbreinsper 66.96 316 P **P 09 16 08.1 +1.6**
KBA pmax pmax
comp=Z,43nm,1.1s
WR1 Warramunga Arr 69.96 171 *e*P **P 09 16 22.6 -2.6**
WRA Warramunga Arr 69.96 171 P **P 09 16 22.6 -2.6**
comp=Z,3.2nm,0.7s,baz=2.3,slow=7.3,SNR=16
BMO Blue Mountains 71.11 42 *e*P **P 09 16 32.7 +0.5**
comp=Z,1.2nm,0.6s
BMO Blue Mountains 71.11 42 *e*P **P 09 16 32.7 +0.5**
BMO pmax pmax
comp=Z,1.0nm,0.6s
HRY Holter Researc 71.86 37 *e*P **P 09 16 38.0 +1.2**
DLMT Dillon 72.66 39 *e*P **P 09 16 42.8 +1.1**
comp=Z,3.6nm,0.6s
HLID Hailey 73.38 41 *e*P **P 09 16 47.5 +1.6**
comp=Z,1.5nm,0.6s
ASAR Alice Springs 73.60 172 P **P 09 16 44.8 -2.3**
comp=Z,1.6nm,0.7s,baz=358,slow=6.2,SNR=20
ULM Lac du Bonnet 74.24 26 LR LR 09 53 00.0
comp=Z,45nm,18.9s,baz=6.0,slow=38
SCHQ Schefferville 75.18 7 LR LR 09 53 58.7
comp=Z,45nm,18.3s,baz=352,slow=39
ELK Elko 75.31 43 *e*P **P 09 16 57.8 +0.5**
comp=Z,1.2nm,0.8s
ELK Elko 75.31 43 *e*P **P 09 16 57.8 +0.5**
ELK pmax pmax
comp=Z,1.0nm,0.8s
NV01 Mina Array Sit 75.78 47 *e*P **P 09 17 02.6 +2.6**
NVAR Mina Array Bea 75.78 47 P **P 09 17 02.6 +2.6**
comp=Z,0.8nm,0.8s,baz=305,slow=4.8,SNR=5.9
BW06 Boulder Array 76.04 38 *e*P **P 09 17 01.2 -0.3**
comp=Z,1.4nm,0.6s
PD31 Pinedale Array 76.04 38 *e*P **P 09 17 01.8 +0.3**
comp=Z,1.3nm,0.6s
PDAR Pinedale Array 76.04 38 P **P 09 17 01.6 +0.1**
comp=Z,1.3nm,0.6s,baz=25,slow=2.3,SNR=18
PDAR LR LR 09 50 49.4
comp=Z,59nm,18.5s,baz=342,slow=36
PDAR Pinedale Array 76.04 38 *e*P **P 09 17 02.1 +0.7**
HWUT Hardware Ranch 76.18 40 *e*P **P 09 17 04.6 +2.3**
comp=Z,4.4nm,0.8s
TCUT Toone Canyon 76.66 40 *e*P **P 09 17 06.0 +1.0**
comp=Z,8.8nm,0.4s
MSU Marysvale 78.49 42 *e*P **P 09 17 16.5 +1.2**
MSU Marysvale 78.49 42 *e*P **P 09 17 16.5 +1.2**
SRU San Rafael Swe 78.70 41 *e*P **P 09 17 16.9 +0.5**
comp=Z,2.5nm,0.8s
SRU San Rafael Swe 78.70 41 *e*P **P 09 17 16.9 +0.5**
SRU pmax pmax
comp=Z,3.0nm,0.8s
MTPU Mount Pierson 78.88 43 *e*P **P 09 17 18.8 +1.2**
comp=Z,3.0nm,0.8s
KNB Kanab 79.44 44 *e*P **P 09 17 20.5 +0.1**
comp=Z,3.9nm,1.0s
KNB Kanab 79.44 44 *e*P **P 09 17 20.5 +0.1**
KNB pmax pmax
comp=Z,4.0nm,1.0s
PV23 Carpenter Ridg 79.89 40 *e*P **P 09 17 23.2 +0.2**
comp=Z,4.8nm,0.6s
SMCO Snowmass 80.12 39 *e*P **P 09 17 24.5 +0.2**
comp=Z,2.5nm,0.7s
ESDC Sonseca Array 80.28 323 P **P 09 17 26.7 +1.9**
comp=Z,0.2nm,0.3s,baz=35,slow=5.3,SNR=6.5
ESDC LR LR 09 55 32.2
comp=Z,57nm,18.4s,baz=15,slow=38
X16A Lo Mia Camp, P 82.23 44 *e*P **P 09 17 34.2 -1.2**
X16A *e*pP **pP 09 17 38.2 -0.6**
KMBO Kilima Mbogo 89.57 268 LR LR 10 01 34.0
comp=Z,75nm,18.1s,baz=75,slow=38
LTX Lajitas 89.98 41 *e*P **P 09 18 14.9 +1.4**
LTX Lajitas 89.98 41 *e*P **P 09 18 15.0 +1.4**
TXAR Lajitas Array 89.98 41 P **P 09 18 14.9 +1.3**
comp=Z,0.3nm,0.7s,baz=2.6,slow=2.8,SNR=4.7
BDFB Brasilia 145.43 349 PKPbc **PKPab 09 24 52.9 +0.5**
comp=Z,5.0nm,0.8s,baz=345,slow=4.6,SNR=5.1

*ISCJB **20** 09:20:09.6±0.8, 23°.25S±0°.04×68°.13W±0°.06, h134km±13km, Error ellipse: s-maj=9.0km s-min=7.1km az=159.1*
*SJA **20** 09:20:09.1±0.3, 23°.28S×68°.09W, h130km±5km, ML2.7, MW2.6*
*GUC **20** 09:20:09.9±0.7, 23°.26S×68°.13W, h136km±5km, ML3.8*
ISC 20 09:20:10.2±1.7, 23°.25S±0°.05×68°.12W±0°.05, h131km±16km, n21, σ0°.35/34, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.97**	**311**	⇑*i*P	**Pn**	**09 20 33.0**	**-0.3**
LVC				*i*S	**Sn**	**09 20 50.0**	**-0.8**
PB15	**IPOC Station P**	**1.25**	**272**	*e*P	**Pn**	**09 20 36.1**	**+0.2**
PB15				*e*S	**Sn**	**09 20 55.4**	**+0.1**
PB15	**IPOC Station P**	**1.25**	**272**	*e*P	**Pn**	**09 20 36.1**	**+0.2**
PB15				*i*S	**Sn**	**09 20 55.7**	**+0.4**
PB06	**IPOC Station P**	**1.45**	**292**	*e*P	**Pn**	**09 20 37.9**	**0.0**
PB06				*e*S	**Sn**	**09 20 59.3**	**+0.3**
PB06	**IPOC Station P**	**1.45**	**292**	*e*P	**Pn**	**09 20 38.1**	**+0.2**
PB06				*i*S	**Sn**	**09 20 59.4**	**+0.3**
PB03	**IPOC Station P**	**1.93**	**308**	*e*P	**Pn**	**09 20 43.8**	**+0.3**
PB03	**IPOC Station P**	**1.93**	**308**	*e*P	**Pn**	**09 20 43.5**	**0.0**
PB03				*i*S	**Sn**	**09 21 09.1**	**+0.2**
PB05	**IPOC Station P**	**1.96**	**281**	*e*P	**Pn**	**09 20 43.4**	**-0.5**
PB05				*i*S	**Sn**	**09 21 09.0**	**-0.6**
PB05				IAML		09 21 19.6	
comp=E,453nm,0.3s							
PB04	**IPOC Station P**	**2.09**	**296**	*e*P	**Pn**	**09 20 45.6**	**+0.2**
PB04	**IPOC Station P**	**2.09**	**296**	*e*P	**Pn**	**09 20 45.3**	**-0.1**
PB04				*i*S	**Sn**	**09 21 12.4**	**0.0**
PB04				IAML		09 21 20.2	
comp=E,790nm,0.5s							
PB07	**IPOC Station P**	**2.23**	**313**	*e*P	**Pn**	**09 20 47.3**	**0.0**
PB07				*i*S	**Sn**	**09 21 15.6**	**-0.1**
PB07				IAML		09 21 24.4	
comp=E,694nm,0.2s							
PB10	**IPOC Station P**	**2.25**	**263**	*e*P	**Pn**	**09 20 47.5**	**+0.2**
PB10	**IPOC Station P**	**2.25**	**263**	⇑*i*P	**Pn**	**09 20 47.5**	**+0.2**
PB10				*i*S	**Sn**	**09 21 15.2**	**-0.6**
GO02	**Mina Guanaco**	**2.33**	**215**	⇑*i*P	**Pn**	**09 20 48.9**	**+0.3**
GO02				*i*S	**Sn**	**09 21 18.5**	**+0.5**
HJA	**Humahuaca**	**2.49**	**90**	*e*P	**Pn**	**09 20 50.9**	**+0.2**
HJA				IAML		09 20 51.9	
comp=Z,78nm,0.4s							
PB02	**IPOC Station P**	**2.53**	**319**	*e*P	**Pn**	**09 20 50.7**	**-0.3**
PB02				*i*S	**Sn**	**09 21 22.1**	**-0.2**
PB01	**IPOC Station P**	**2.54**	**330**	*e*P	**Pn**	**09 20 50.9**	**-0.1**
PB01				*i*S	**Sn**	**09 21 22.6**	**+0.2**
PB01				IAML		09 21 28.8	
comp=E,356nm,0.2s							
YJA	**Yavi**	**2.63**	**66**	*e*P	**Pn**	**09 20 52.9**	**+0.4**
YJA				IAML		09 20 53.8	
comp=Z,10nm,0.7s							
AZAP	**Zapla**	**2.96**	**110**	*e*P	**Pn**	**09 20 56.4**	**-0.2**
GO01	**Chusmiza**	**3.70**	**344**	⇓*i*P	**Pn**	**09 21 06.9**	**+0.3**
AHML	**Horco Molle**	**4.33**	**145**	*e*P	**Pn**	**09 21 13.8**	**-0.6**

MEX 20 09:29:35.8±0.5, 15°.06N×93°.31W, h69km±9km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.64**	**7**	*e*P	Pn	09 29 48.8	-1.3
PCIG				*e*S	Sn	09 29 58.7	-1.8
THIG		**1.02**	**99**	*e*P	Pn	09 29 51.6	-2.9
THIG				*i*S	Sn	09 30 07.1	-1.2
CCIG	**Comitan**	**1.65**	**43**	*e*P	Pn	09 30 02.0	-0.9
CCIG				*e*S	Sn	09 30 21.6	-2.0
TGIG		**1.71**	**6**	*i*P	Pn	09 30 01.9	-1.7
TGIG				*i*S	Sn	09 30 22.2	-2.6

IDC 20 09:46:49.2±1.7, 11°.39S×164°.79E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/44, mbtmp3.9/5, ML4.0/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/27, Error ellipse: s-maj=48.3km s-min=30.8km az=123.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.14**	**292**	LR	LR	09 50 17.6	
comp=Z,135nm,20.4s,baz=158,slow=40							
DZM	**Mont Dzumac**	**10.74**	**172**	Pn	Pn	09 49 23.8	-0.7
1.1nm,0.3s,baz=318,slow=13,SNR=27							
DZM				Sn	Sn	09 51 19.1	-6.5
0.3nm,0.3s,baz=335,slow=23,SNR=2.6							
STKA	**Stephens Creek**	**29.55**	**223**	LR	LR	10 03 17.6	
comp=Z,81nm,18.8s,baz=26,slow=33							
WRA	**Warramunga Arr**	**30.49**	**250**	P	P	09 53 04.6	+0.5
0.8nm,0.6s,baz=80,slow=9.0,SNR=7.0							
ASAR	**Alice Springs**	**31.80**	**243**	P	P	09 53 15.3	-0.4
1.1nm,0.8s,baz=64,slow=9.7,SNR=11							
ASAR				LR	LR	10 05 12.0	
comp=Z,63nm,19.8s,baz=86,slow=35							
ILAR	**Eielson Array**	**84.13**	**19**	P	P	09 59 21.8	0.0
0.4nm,0.7s,baz=240,slow=4.1,SNR=4.8							
ELK	**Elko**	**89.87**	**48**	LR	LR	10 34 36.8	
comp=Z,13nm,18.4s,baz=290,slow=32							
MKAR	**Makanchi Array**	**93.13**	**317**	P	P	10 00 05.3	0.0
0.2nm,0.3s,baz=101,slow=6.5,SNR=4.5							

EAF 20 09:47:10.9±1.4, 25°.02S×28°.61E, h0km±38km, MD3.5, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**2.96**	**26**	*i*P	Pn	09 47 59.0	-0.2
MSNA	**Messina**	**2.96**	**26**	*i*P	Pn	09 47 59.0	-0.2
MATP	**Matopo**	**4.57**	**359**	*i*P	Pn	09 48 20.5	-0.9
MATP	**Matopo**	**4.57**	**359**	*i*P	Pn	09 48 20.5	-0.9
BOSA	**Boshof**	**4.67**	**219**	*i*P	Pn	09 48 21.1	-1.8
BOSA				*i*S	Sn	09 49 14.9	-3.0
BOSA	**Boshof**	**4.67**	**219**	*i*P	Pn	09 48 21.1	-1.8
BOSA				*i*S	Sn	09 49 14.9	-3.0

NNC 20 09:51:34.5±1.7, 54°.20N×86°.22E, h0km, mb4.3, mpv3.8, 9C-9D, Error ellipse: s-maj=17.3km s-min=7.8km az=178.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**0.86**	**254**	⇓P	Pg	09 51 50.6	-0.3
6.2nm,0.3s							
ZAA0				⇓S	Sb	09 52 03.3	-1.0
17nm,0.3s							
KURK	**Kurchatov**	**5.81**	**236**	⇑Pn	Pn	09 53 04.2	+2.4
9.6nm,0.6s							
KURK				⇑Sn	Sn	09 54 09.3	+0.3
3.3nm,0.4s							
KURK				⇓Lg	Lg	09 54 38.4	
27nm,0.7s							
KURBB	**Kurchatov Arra**	**5.91**	**236**	⇑Pn	Pn	09 53 05.8	+2.5
14nm,0.3s							
KURBB				⇓Sn	Sn	09 54 12.0	+0.4
11nm,0.5s							
KURBB				⇑Lg	Lg	09 54 42.8	
36nm,0.6s							
MK31	**Makanchi Array**	**7.83**	**200**	⇑Pn	Pn	09 53 31.9	+2.4
1.2nm,0.3s,baz=25,slow=13,SNR=93							
MK31				⇓Sn	Sn	09 54 58.1	-0.6
1.8nm,0.4s,baz=32,slow=29,SNR=7.2							
MK31				⇓Lg	Lg	09 55 42.6	
32nm,1.0s,baz=29,slow=31,SNR=9.9							
MAKZ	**Makanchi**	**7.88**	**202**	⇓Pn	Pn	09 53 33.2	+3.0
2.0nm,0.3s							
MAKZ				⇑Sn	Sn	09 55 00.3	+0.2
2.6nm,0.5s							
MAKZ				⇑Lg	Lg	09 55 45.1	
19nm,0.8s							
BRVK	**Borovoye**	**9.54**	**270**	⇓Pn	Pn	09 53 54.1	+1.2
3.2nm,0.7s							
OTUK	**Ortayu**	**10.54**	**241**	⇑Pn	Pn	09 54 04.9	-1.8
1.3nm,0.2s							
OTUK				⇑Sn	Sn	09 56 05.6	+0.1
0.7nm,0.4s							
OTUK				⇓Lg	Lg	09 57 10.3	
8.1nm,1.1s							

GUC 20 09:55:29.3±0.4, 24°.08S×67°.40W, h229km±6km, ML4.2, 2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.02**	**316**	⇓*i*P	Pn	09 56 10.3	-0.3
LVC				*i*S	S	09 56 41.7	-1.2
PB15	**IPOC Station P**	**2.09**	**294**	*e*P	Pn	09 56 11.0	-0.2
PB15				*i*S	S	09 56 42.7	-1.1
GO02	**Mina Guanaco**	**2.27**	**241**	⇓*i*P	Pn	09 56 11.2	-1.8
GO02				*i*S	S	09 56 43.9	-3.3
PB06	**IPOC Station P**	**2.42**	**304**	*e*P	Pn	09 56 14.5	+0.1
PB06				*i*S	S	09 56 49.1	-0.6
PB06				IAML		09 56 51.7	
comp=N,488nm,0.4s							
PB05	**IPOC Station P**	**2.85**	**295**	*e*P	Pn	09 56 19.1	+0.1
PB05				*i*S	S	09 56 56.7	-1.2
PB10	**IPOC Station P**	**2.95**	**280**	*e*P	Pn	09 56 20.4	+0.5
PB10				*i*S	S	09 56 58.5	-1.0
PB03	**IPOC Station P**	**2.96**	**312**	*e*P	Pn	09 56 20.6	+0.3
PB03				*i*S	S	09 56 59.4	-0.9
PB03				IAML		09 57 02.4	
comp=N,206nm,0.3s							
PB04	**IPOC Station P**	**3.07**	**304**	*e*P	Pn	09 56 21.7	+0.1
PB04				*i*S	S	09 57 01.7	-0.7
PB04				IAML		09 57 04.5	
comp=N,316nm,0.5s							
PB07	**IPOC Station P**	**3.28**	**315**	*e*P	Pn	09 56 24.1	+0.2
PB07				*i*S	S	09 57 05.7	-1.1
PB01	**IPOC Station P**	**3.58**	**327**	*e*P	Pn	09 56 27.3	-0.1
PB01				*i*S	S	09 57 12.3	-0.8
PB01				IAML		09 57 17.3	
comp=E,120nm,0.2s							
PB02	**IPOC Station P**	**3.59**	**319**	*e*P	Pn	09 56 27.6	+0.1
PB02				*i*S	S	09 57 11.9	-1.3
PB02				IAML		09 57 21.7	
comp=E,244nm,0.4s							

IDC 20 10:06:44.5±10.0, 6°.98S×129°.15E, h75km±101km, mb3.6/2, mb1 3.9/4, mb1mx3.5/29, mbtmp4.1/4, ML4.2/2, Error ellipse: s-maj=119.3km s-min=42.0km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.84**	**159**	P	Pn	10 09 57.1	-0.3
1.6nm,0.3s,baz=338,slow=13,SNR=58							
WRA				S	Sn	10 12 19.2	-10
0.7nm,0.3s,baz=326,slow=23,SNR=5.8							
ASAR	**Alice Springs**	**17.21**	**165**	P	P	10 10 41.0	+0.3
0.6nm,0.3s,baz=338,slow=10,SNR=56							
STKA	**Stephens Creek**	**27.36**	**156**	P	P	10 12 22.4	-0.4
0.6nm,0.3s,baz=320,slow=9.2,SNR=2.9							
MKAR	**Makanchi Array**	**67.75**	**327**	P	P	10 17 34.2	+0.1
0.5nm,0.5s,baz=124,slow=8.4,SNR=6.2							

*NORS **20** 10:29:11.4±0.0, 44°.00N×42°.03E, h1km, MPVA3.7*
MOS 20 10:29:08.8±0.0, 44°.13N×41°.99E, h0km, MPVA3.7, Explosion, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVNR	**Nevinnomyssk**	**0.48**	**358**	*e*Pg	Pb	10 29 20.6	+0.3
NVNR				*e*Sg	Sb	10 29 28.6	+0.7
KIV0	**Kislovodsk Arr**	**0.54**	**109**	*i*Pg	Pg	10 29 20.0	+1.0
KIV0				*e*Sg	Sg	10 29 26.6	+0.6
SHA1	**Shidzhatmaz**	**0.62**	**129**	*i*Pg	Pg	10 29 21.5	+0.8
SHA1				*e*Sg	Sg	10 29 29.1	+0.4
ARXR	**Arkhyz**	**0.77**	**223**	*e*Pg	Pg	10 29 24.2	+0.6
ARXR				*e*Sg	Sg	10 29 34.6	+1.1
PYA1	**Pyatigorsk**	**0.80**	**95**	*e*Pg	Pb	10 29 25.1	-0.5
PYA1				*e*Sg	Sg	10 29 35.3	+0.8
DOMR	**Dombai**	**0.88**	**198**	*e*Pg	Pg	10 29 25.9	+0.3
DOMR				*e*Sg	Sg	10 29 36.9	-0.2
NEY	**Neytrino**	**1.03**	**149**	*e*Pg	Pg	10 29 28.5	0.0
NEY				*e*Sg	Sg	10 29 41.0	-0.8
PRTR	**Priterechnaya**	**1.70**	**102**	*e*Pg	Pg	10 29 43.0	+1.7
PRTR				*e*Sg	Sg	10 30 05.1	+1.8
ARNR	**Ardon**	**1.92**	**119**	*e*Pg	Pg	10 29 45.6	+0.1
ARNR				*e*Sg	Sg	10 30 11.1	+0.8
ZEI	**Tsey**	**1.93**	**133**	*e*Pg	Pb	10 29 45.0	0.0
ZEI				*e*Sg	Sg	10 30 10.5	-0.4
LACR	**Lac**	**2.12**	**127**	*e*Pg	Pb	10 29 48.9	+0.6
LACR				*e*Sg	Sb	10 30 15.9	+0.7

*IDC **20** 10:43:06.6±2.8, 6°.34S×154°.73E, h64km±25km, mb4.1/12, mb1 4.3/14, mb1mx3.9/34, mbtmp4.4/14, ML2.6/1, MS3.3/9, Ms1 3.3/9, ms1mx3.1/26, Error ellipse: s-maj=18.9km s-min=16.8km az=82.0*
*ISCJB **20** 10:43:08.8±0.4, 6°.43S±0°.05×154°.70E±0°.05, h100km, mb4.3/20, Error ellipse: s-maj=7.9km s-min=6.8km az=26.1*
*NEIC **20** 10:43:11.4±1.6, 6°.44S×154°.61E, h109km±9km, mb4.6/15, Error ellipse: s-maj=13.7km s-min=3.8km az=186.0*
ISC 20 10:43:10.8±0.5, 6°.44S±0°.07×154°.60E±0°.06, h100km, n47, σ1°.34/43, mb4.5/20, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.29**	**313**	*e*Pn	**Pn**	**10 44 02.0**	**+1.5**
HNR	**Honiara**	**6.08**	**120**	P	Pn	10 44 46.0	+7.7
HNR				S	**Sn**	**10 45 49.0**	**+2.5**
HNR	**Honiara**	**6.08**	**120**	LR	LR	10 46 56.4	
comp=Z,360nm,19.8s,baz=270,slow=38							
HNR	**Honiara**	**6.08**	**120**	*e*Pn	**Pn**	**10 44 40.0**	**+1.8**
HNR				*e*Sn	**Sn**	**10 45 44.5**	**-2.0**
PMG	**Port Moresby**	**7.93**	**248**	P	**Pn**	**10 45 02.6**	**-0.8**
4.2nm,0.3s,baz=47,slow=7.9,SNR=18							
PMG				S	**Sn**	**10 46 33.8**	**+2.2**
7.7nm,0.3s,baz=358,slow=18,SNR=9.4							
PMG	**Port Moresby**	**7.93**	**248**	*e*Pn	**Pn**	**10 45 04.1**	**+0.6**
PMG				*e*Sn	**Sn**	**10 46 29.6**	**-2.1**
COEN	**Coen**	**13.49**	**235**	*e*Pn	**Pn**	**10 46 19.5**	**+1.2**
EIDS	**Eidsvold**	**19.12**	**190**	*e*P	**P**	**10 47 26.2**	**+0.1**
8.8nm,0.9s							
DZM	**Mont Dzumac**	**19.30**	**145**	*e*P	**P**	**10 47 26.2**	**-2.0**
84nm,1.1s							
DZM				*e*LR	LR	10 52 07.6	
comp=Z,261nm,28.4s							
DZM	**Mont Dzumac**	**19.30**	**145**	P	**P**	**10 47 26.9**	**-1.2**
2.6nm,0.3s,baz=346,slow=13,SNR=29							
DZM				LR	LR	10 53 13.8	
comp=Z,157nm,19.1s,baz=350,slow=32							
DZM	**Mont Dzumac**	**19.30**	**145**	*e*P	**P**	**10 47 27.4**	**-0.8**
27nm,0.8s							
ONTNC	**Ouen Toro**	**19.49**	**145**	*e*P	**P**	**10 47 29.5**	**-0.6**
31nm,0.7s							
MARNC	**

FAKI	Fak Fak	22.54	278	*e*P	P	10 48 01.8	-1.0
	26nm,1.0s						
WRAB	Tennant Creek	23.80	234	*e*P	P	10 48 14.9	+0.2
	16nm,0.8s						
WB2	Warramunga Arr	23.80	234	*e*P	P	10 48 15.2	+0.5
	18nm,0.8s						
WR1	Warramunga Arr	23.81	234	*e*P	P	10 48 15.0	+0.2
WRA	Warramunga Arr	23.82	234	P	P	10 48 15.0	+0.2
	11nm,0.7s,baz=57,slow=9.1,SNR=38						
SIJI	Sorong	23.92	282	P	P	10 48 16.0	+0.1
	25nm,0.8s,baz=92,slow=6.7,SNR=19						
SIJI				LR	LR	11 00 03.5	
	comp=Z,47nm,18.8s,baz=86,slow=42						
MTN	Manton Dam	23.98	253	*e*P	P	10 48 16.6	+0.3
	15nm,0.8s						
AS31	Alice Springs	26.25	227	*e*P	P	10 48 36.4	-0.5
	1.1nm,0.5s						
ASAR	Alice Springs	26.25	227	P	P	10 48 36.4	-0.5
	2.1nm,0.5s,baz=56,slow=9.1,SNR=49						
ASAR				ScP	ScP	10 55 36.4	+4.3
	1.1nm,0.9s,baz=57,slow=2.5,SNR=5.9						
ASAR				LR	LR	10 58 55.2	
	comp=Z,57nm,19.2s,baz=90,slow=36						
H11S3	WAKE ISLAND Hy	27.50	26	T	T	11 17 09.2	
	baz=204,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	27.50	26	T	T	11 17 13.5	
	baz=204,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	27.51	26	T	T	11 17 04.4	
	baz=204,slow=75,SNR=10						
STKA	Stephens Creek	28.07	204	LR	LR	10 59 44.0	
	comp=Z,34nm,20.2s,baz=25,slow=35						
URZ	Urewera	37.69	150	*e*P	P	10 50 16.6	+0.1
	26nm,1.2s						
BKZ	Black Stump Fm	38.11	152	*e*P	P	10 50 19.2	-0.9
	20nm,1.1s						
RPZ	Rata Peaks	39.85	161	P	P	10 50 34.1	-0.5
	23nm,0.7s,baz=354,slow=6.9,SNR=5.0						
RPZ	Rata Peaks	39.85	161	*e*P	P	10 50 33.9	-0.6
	42nm,0.9s						
JNU	Nakatsue	45.33	332	P	P	10 51 17.4	-1.7
	30nm,1.3s,baz=148,slow=3.0,SNR=4.7						
JNU	Nakatsue	45.33	332	*e*P	P	10 51 17.4	-1.7
	17nm,1.1s						
KSRS	Korea Array	50.26	332	P	P	10 51 55.4	-1.6
	1.7nm,0.8s,baz=148,slow=8.8,SNR=7.4						
PPT	Papeete	55.54	107	LR	LR	11 11 45.6	
	comp=Z,29nm,21.3s,baz=23,slow=31						
PPT2	Papeete2	55.54	107	*e*LR	LR	11 08 42.7	
	comp=Z,55nm,24.8s						
PETK	Petropavlovsk-	59.38	2	P	P	10 53 01.5	-1.0
	1.2nm,0.5s,baz=140,slow=7.3,SNR=5.6						
PEA1	Petropavlovsk-	59.38	2	*e*P	P	10 53 01.5	-1.0
CMAR	Chiang Mai Arr	60.19	295	P	P	10 53 09.8	+1.1
	4.4nm,0.8s,baz=113,slow=5.4,SNR=13						
SONA0	Songino Array	68.66	327	*e*P	P	10 54 03.1	-0.4
SONM	Songino Array	68.66	327	P	P	10 54 03.1	-0.4
	1.0nm,0.5s,baz=156,slow=6.1,SNR=5.0						
MK32	Makanchi Array	82.72	319	*e*P	P	10 55 23.5	-0.2
MKAR	Makanchi Array	82.72	319	P	P	10 55 23.5	-0.2
	0.6nm,0.5s,baz=101,slow=6.4,SNR=6.0						
MKAR				LR	LR	11 32 02.7	
	comp=Z,22nm,21.3s,baz=89,slow=36						
ILAR	Eielson Array	83.00	22	P	P	10 55 24.1	-0.6
	0.3nm,0.8s,baz=249,slow=5.1,SNR=4.6						
ILAR				LR	LR	11 32 22.0	
	comp=Z,17nm,18.2s,baz=350,slow=36						
BESE	Bessie Mountai	85.50	30	*e*P	P	10 55 38.6	+1.0
	7.6nm,0.7s						
NV01	Mina Array Sit	91.69	52	*e*P	P	10 56 07.3	-0.3
NVAR	Mina Array Bea	91.69	52	P	P	10 56 07.3	-0.3
	1.6nm,0.8s,baz=254,slow=6.6,SNR=11						

GCG ***20*** *11:35:48.6±0.4, 13°.14N×91°.14W, h5km, MD4.0*
SNET ***20*** *11:35:54.2±1.5, 13°.53N×90°.94W, h12km±18km, ML3.8*
UCR ***20*** *11:35:54.6±1.9, 13°.47N×90°.95W, h20km±11km, MD3.7, ML3.7*

ISC 20 11:35:52.8±2.5, 13°.4N±0°.1×91°.0W±0°.1, h10km, n34, σ0°82/44, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.94	36	*e*P	Pg	11 36 11.6	+0.6
IXG	Ixpaco	0.94	36	*e*P	Pg	11 36 11.6	+0.6
FUG	Fuego 3	1.04	9	*e*P	Pg	11 36 13.3	+0.4
FUG	Fuego 3	1.04	9	*e*P	Pg	11 36 13.3	+0.4
PCG	Pacaya	1.05	22	*e*P	Pg	11 36 13.4	+0.4
PCG	Pacaya	1.05	22	*e*P	Pg	11 36 13.4	+0.4
NBG	Las Nubes	1.34	29	*e*P	Pn	11 36 18.4	+0.6
NBG	Las Nubes	1.34	29	*e*P	Pn	11 36 18.4	+0.6
STG3	Santiaguito 3,	1.40	337	*e*P	Pn	11 36 17.8	-0.8
RTR	El Retiro	1.42	70	*e*P	Pn	11 36 17.6	-1.2
RTR	El Retiro	1.42	70	*e*P	Pn	11 36 17.6	-1.2
SBLS	San Blas	1.42	72	*e*P	Pn	11 36 17.5	-1.4
SBLS	San Blas	1.42	72	*e*P	Pn	11 36 17.5	-1.4
SNJE	San Jose	1.44	71	*e*P	Pn	11 36 17.9	-1.3
SNJE	San Jose	1.44	71	*e*P	Pn	11 36 17.9	-1.3
BOQS	Boqueron	1.72	79	*e*P	Pn	11 36 22.6	-0.4
UEES	San Salvador	1.75	79	*e*P	Pn	11 36 22.5	-0.8
UEES				*e*S	Sn	11 36 45.3	-0.4
UEES	San Salvador	1.75	79	*e*P	Pn	11 36 22.5	-0.8
UEES				*e*S	Sn	11 36 45.3	-0.4
OPAM	San Salvador	1.79	80	*e*P	Pn	11 36 23.7	-0.1
OPAM				*e*S	Sn	11 36 47.1	+0.5
OPAM				IAML		11 36 51.0	
	comp=Z,1μm,0.3s						
OPAM	San Salvador	1.79	80	*e*P	Pn	11 36 23.7	-0.1
OPAM				*e*S	Sn	11 36 47.1	+0.5
OPAM				IAML		11 36 51.0	
	comp=Z,1μm,0.3s						
MTO3	Montecristo	1.88	58	*e*P	Pn	11 36 24.8	-0.4
MTO3				IAML		11 36 52.8	
	comp=Z,257nm,0.5s						
MTO3	Montecristo	1.88	58	*e*P	Pn	11 36 24.8	-0.4
MTO3				IAML		11 36 52.8	
	comp=Z,257nm,0.5s						
LFRS	El Faro	1.91	83	*e*P	Pn	11 36 25.6	0.0
LBRS	Las Brisas	1.94	80	*e*P	Pn	11 36 26.1	+0.1
PAVA	Las Pavas	2.04	81	*e*P	Pn	11 36 27.6	+0.3
PAVA				*e*S	Sn	11 36 50.9	-2.1
PAVA				IAML		11 36 56.9	
	comp=Z,584nm,0.4s						
PAVA	Las Pavas	2.04	81	*e*P	Pn	11 36 27.6	+0.3
PAVA				*e*S	Sn	11 36 50.9	-2.1
PAVA				IAML		11 36 56.9	
	comp=Z,584nm,0.4s						
VICT	Victoria	2.37	76	*e*P	Pn	11 36 31.5	-0.4
VICT	Victoria	2.37	76	*e*P	Pn	11 36 31.5	-0.4
PACA	Pacayal	2.62	88	*e*P	Pn	11 36 35.9	+0.6
PACA	Pacayal	2.62	88	*e*P	Pn	11 36 35.9	+0.6
LCND	La Caada	3.04	92	*e*P	Pn	11 36 40.9	-0.1
LCND				*e*S	Sn	11 37 17.7	+0.2
LCND				IAML		11 37 27.1	
	comp=Z,284nm,0.5s						
LCND	La Caada	3.04	92	*e*P	Pn	11 36 40.9	-0.1
LCND				*e*S	Sn	11 37 17.7	+0.2
LCND				IAML		11 37 27.1	
	comp=Z,284nm,0.5s						
CNCH	Conchagua	3.10	92	*e*P	Pn	11 36 41.7	-0.2
CNCH				*e*S	Sn	11 37 20.0	+1.0
CNCH				IAML		11 37 28.2	
	comp=Z,866nm,0.4s						
CNCH	Conchagua	3.10	92	*e*P	Pn	11 36 41.7	-0.2
CNCH				*e*S	Sn	11 37 20.0	+1.0
CNCH				IAML		11 37 28.2	
	comp=Z,866nm,0.4s						

ISCJB ***20*** *11:38:09.1±0.4, 36°.60N±0°.03×52°.49E±0°.05, h10km, Error ellipse: s-maj=6.0km s-min=3.1km az=146.0*
TEH ***20*** *11:38:11.1, 36°.46N×52°.49E, h21km, ML3.4*
AZER ***20*** *11:38:15.3±2.7, 36°.66N×52°.26E, h20km, mL4.0/2, Error ellipse: s-maj=42.5km s-min=18.8km az=56.0*

ISC 20 11:38:10.0±0.9, 36°.52N±0°.05×52°.46E±0°.04, h10km, n34, σ1°45/41, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPRN	Peran	0.29	200	*e*Pg	Pb	11 38 17.3	0.0
IPRN				*e*Sg	Sb	11 38 21.8	-0.5
IPRN				IAMB	IAmb	11 38 22.4	
	comp=Z,17μm,0.1s						
IALA	Alasht	0.52	147	*e*Pg	Pb	11 38 20.9	-0.4
IALA				IAMB	IAmb	11 38 28.0	
	comp=Z,26μm,0.1s						
IFIR	Firoozkooh	0.90	165	*e*Pg	Pg	11 38 26.6	-0.8
IFIR				IAMB	IAmb	11 38 39.4	
	comp=Z,34μm,0.1s						
DAMV	Damavand	0.97	204	*e*Pg	Pg	11 38 28.5	-0.1
ISHM	Shahmirzad	0.98	136	*e*Pg	Pg	11 38 28.9	+0.1
ISHM				IAMB	IAmb	11 38 45.7	
	comp=Z,18μm,0.2s						
IDMV	Damavand	1.00	201	*e*Pg	Pg	11 38 29.0	-0.2
IDMV				IAMB	IAmb	11 38 29.3	
	comp=Z,14μm,0.2s						
IKIA	Kiasar	1.03	107	*e*Pg	Pg	11 38 30.0	+0.1
IKIA				IAMB	IAmb	11 38 31.9	
	comp=Z,7μm,0.1s						
ILAS	Lasjerd	1.20	160	*e*Pg	Pg	11 38 32.5	-0.5
ILAS				IAMB	IAmb	11 38 49.3	
	comp=Z,17μm,0.2s						
CHTH	Charan	1.24	241	*e*Pg	Pn	11 38 33.9	+0.3
IHSB	Hasanabad	1.44	222	*e*Pg	Pn	11 38 37.3	+1.1
QALM	Alamut, Qazvin	1.47	267	*e*Pn	Pn	11 38 38.3	+1.6
IANJ	Anjilo	1.58	131	*e*Pn	Pb	11 38 39.4	+0.1
IANJ				IAMB	IAmb	11 38 40.7	
	comp=Z,6μm,0.1s						
IVRN	Varamin	1.63	202	*e*Pn	Pn	11 38 40.0	+1.2
IMHD	Mahdasht	1.67	241	*e*Pn	Pb	11 38 41.9	+1.0
IGZV	Ghazvin	1.81	267	*e*Pn	Pn	11 38 43.1	+1.6
IGZV				IAMB	IAmb	11 38 46.2	
	comp=Z,3μm,0.1s						
GHVR	GHOM	2.24	205	*e*Pn	Pb	11 38 49.7	-0.9
IRAZ	Razeghan	2.33	242	*e*Pn	Pn	11 38 50.9	+2.3
IRAZ				IAMB	IAmb	11 39 26.1	
	comp=Z,1μm,0.3s						
QABG	Abgarm-Qazvin	2.47	252	*e*Pn	Pn	11 38 52.4	+2.0
KRSH	Karshahi	2.55	186	*e*Pn	Pn	11 38 53.1	+1.5
IKLH	Kolahrood	3.27	193	*e*Pn	Pn	11 39 02.3	+0.8
ANAR	Anarak	3.48	162	*e*Pn	Pn	11 39 05.2	+0.9
ASTR	Astara	3.56	306	P	Pn	11 39 06.4	+1.1
ASTR				S	Sn	11 39 47.6	+0.3
LRK	Lerik	3.90	304	P	Pn	11 39 11.3	+1.2
LRK				S	Sn	11 39 54.6	-1.5
ISRB	Sarab	4.05	290	*e*Pn	Pn	11 39 15.0	+2.9
GLBA	Ciilabad	4.21	311	P	Pn	11 39 15.0	+0.8
GLBA				S	Sn	11 40 02.6	-0.9
TNSJ	Nastanj	4.24	126	*e*Pn	Pn	11 39 15.9	+1.1
TKDS	Koohdasht(Taba	4.79	126	*e*Pn	Pn	11 39 23.7	+1.3
PQL	Pirkuli	5.23	326	P	Pn	11 39 30.7	+2.4
PQL				S	Sn	11 40 29.3	+0.5
XNQ	Khinaliq	5.74	325	S	Sn	11 40 40.0	-1.5
SEKA	Sheki	6.23	320	S	Sn	11 40 50.2	-3.1
GANJ	Ganja	6.33	312	P	Pn	11 39 43.9	+0.5
GANJ				S	Sn	11 40 53.2	-2.6
GDB	GEDABAY	6.72	311	P	Pn	11 39 48.9	+0.1
GDB				S	Sn	11 41 03.0	-2.6
IMON	Monand	6.79	117	*e*Pn	Pn	11 39 52.2	+2.4
ZKTA	Zakatala	6.84	320	S	Sn	11 41 07.0	-1.2

ISC 20 11:43:22.1±3.5, 43°.0N±0°.2×42°.10E±0°.09, h14km, n7, σ0°77/11, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKB	Tkibuli	0.91	133	P	Pg	11 43 39.9	+0.3
TKB				S	Sb	11 43 50.8	-0.9
ONI	Oni	1.07	111	P	Pn	11 43 42.4	-0.3
ONI				S	Sg	11 43 57.0	+0.5
BATM	Batumi	1.41	193	P	Pn	11 43 47.3	0.0
BATM				S	Sn	11 44 06.0	+0.4
EPOS	Posof	1.55	162	*i* P	Pb	11 43 50.7	+0.1
DBOC	Borcka	1.67	191	*i* P	Pn	11 43 49.3	-1.5
DAGI	Agillar	1.91	184	*i* P	Pn	11 43 54.9	+0.6
DBAD	Bademkaya	1.98	189	*i* P	Pn	11 43 56.0	+0.7
DBAD				*i* S	Sn	11 44 19.5	-0.5

DDA ***20*** *11:56:25.5, 39°.11N×29°.09E, h7km±4km, ML2.8*
ISCJB ***20*** *11:56:26.1±0.5, 39°.12N±0°.03×29°.10E±0°.04, h11km±3km, Error ellipse: s-maj=5.5km s-min=4.6km az=15.6*
ISK ***20*** *11:56:26.0, 39°.11N×29°.10E, h12km, ML2.0/9*

ISC 20 11:56:25.9±0.9, 39°.13N±0°.03×29°.10E±0°.03, h14km±6km, n15, σ0°40/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.10	254	PG	Pg	11 56 28.9	-0.1
SMAA				SG	Sg	11 56 31.4	+0.3
SHAP	Saphane-Kutahy	0.14	137	PG	Pg	11 56 29.4	-0.2
SHAP				SG	Sg	11 56 32.1	0.0
GDZ	Gediz	0.30	97	*i* P	Pg	11 56 32.1	-0.1
GDZ				*i* S	Sg	11 56 36.3	-0.1
USAK	Uak-Merkez	0.42	189	*i* P	Pb	11 56 34.6	-0.5
USAK				*i* S	Sg	11 56 39.8	0.0
USAK				IAML_P			
	comp=Z,4μm,0.2s						
KULA	Kula-Manisa	0.70	209	PG	Pb	11 56 40.0	0.0
KULA				SG	Sb	11 56 49.5	0.0
MANT	Manisa	0.76	214	*i* P	Pb	11 56 40.7	-0.4
MANT				*i* S	Sg	11 56 50.7	-0.1
KHAL	Karahalli	0.82	158	*i* P	Pb	11 56 42.4	+0.5
KHAL				*i* S	Sb	11 56 52.6	-0.2
KHAL				IAML_P			
	comp=Z,646nm,0.1s						
ULDT	Uludag	1.01	2	*i* P	Pg	11 56 45.4	-0.1
ULDT				*i* S	Sg	11 56 57.6	-1.2
ULDT				IAML_P			
	comp=Z,1μm,0.2s						
MDNY	Mudanya-Bursa	1.25	353	PN	Pn	11 56 49.5	+0.5
KCTX	Karacabey (Bur	1.27	334	PN	Pn	11 56 49.4	+0.1
GONE	Gonen-Balikesi	1.43	311	PN	Pb	11 56 52.8	+0.5
ARMT	Armutlu	1.45	353	PN	Pb	11 56 52.9	+0.2
SRCK	Saricakaya, Es	1.49	52	PN	Pb	11 56 53.4	0.0
CIFT	Cifteler, Eski	1.54	81	PN	Pn	11 56 53.5	+0.4
EDC	Edincik	1.55	322	PN	Pb	11 56 54.2	-0.1

ISCJB ***20*** *12:15:44.9±0.4, 21°.25S±0°.03×68°.58W±0°.10, h149km±7km, mb4.1/3, Error ellipse: s-maj=14.9km s-min=4.1km az=3.0*
IDC ***20*** *12:15:45.7±0.9, 21°.21S×68°.24W, h124km±12km, mb4.0/3, mb1 4.1/7, mb1mx3.6/35, mbtmp4.5/7, MS2.9/1, Ms1 2.9/1, ms1mx2.6/21, Error ellipse: s-maj=30.5km s-min=14.1km az=113.0*
NEIC ***20*** *12:15:46.0±0.0, 21°.23S×68°.55W, h128km, mb4.2/4, ML4.0(GUC), After GUC.*
GUC ***20*** *12:15:46.5±0.7, 21°.21S×68°.59W, h142km±5km, ML4.1*

ISC 20 12:15:44.8±0.7, 21°.24S±0°.03×68°.52W±0°.08, h146km±7km, n45, σ1°18/67, mb4.2/3, 10C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.93	282	*e*Pn	Pn	12 16 09.4	+0.7
PB01				*e*Sn	Sn	12 16 26.3	-0.6
PB01	IPOC Station P	0.93	282	⇑*i*P	Pn	12 16 08.8	0.0
PB01				*e*S	Sn	12 16 25.6	-1.3
PB01				IAML		12 16 27.9	
	comp=N,4μm,0.5s						
PB08	IPOC Station P	1.24	331	⇓*i*P	Pn	12 16 12.5	+0.6
PB08				*e*S	Sn	12 16 32.3	-0.3
PB08				IAML		12 16 33.3	
	comp=N,2μm,0.2s						
PB08				IAML		12 16 35.6	
	comp=E,2μm,0.6s						
PB02	IPOC Station P	1.29	266	⇑*i*P	Pn	12 16 12.7	+0.7
PB02				*e*S	Sn	12 16 32.1	-0.7
PB02				IAML		12 16 33.0	
	comp=N,6μm,0.4s						
PB07	IPOC Station P	1.36	249	⇑*i*P	Pn	12 16 13.6	+0.7
PB07				*e*S	Sn	12 16 33.7	-0.5
PB07				IAML		12 16 35.8	
	comp=N,4μm,0.7s						
PB03	IPOC Station P	1.40	235	⇑*i*P	Pn	12 16 14.1	+0.8
PB03				*e*S	Sn	12 16 34.8	-0.2
PB03				IAML		12 16 35.8	
	comp=E,2μm,0.3s						
LVC	Limon Verde	1.41	195	P	Pn	12 16 14.5	+0.9
	comp=E,283nm,0.3s,baz=18,slow=7.8,SNR=2130						
LVC				S	Sn	12 16 35.4	-0.1
	comp=E,300nm,0.3s,baz=119,slow=19,SNR=44						
LVC				LR	LR	12 16 53.5	
	comp=E,143nm,20.4s,baz=56,slow=44						
LVC	Limon Verde	1.41	195	*e*Pn	Pn	12 16 14.6	+1.0
LVC				*e*Sn	Sn	12 16 35.2	-0.4
LVC	Limon Verde	1.41	195	⇓*i*P	Pn	12 16 14.5	+0.9
LVC				*i* S	Sn	12 16 36.2	+0.7
GO01	Chusmiza	1.69	338	*e*Pn	Pn	12 16 17.3	+0.6
GO01				*e*Sn	Sn	12 16 39.2	-1.8
GO01	Chusmiza	1.69	338	⇓*i*P	Pn	12 16 17.2	+0.5
GO01				*e*S	Sn	12 16 41.1	+0.1
GO01				IAML		12 16 45.0	
	comp=E,2μm,0.1s						
PB06	IPOC Station P	1.76	214	⇑*i*P	Pn	12 16 18.1	+1.0
PB06				*e*S	Sn	12 16 42.1	+0.2
PB06				IAML		12 16 42.9	
	comp=E,2μm,0.2s						
PB11	IPOC Station P	1.82	324	*e*Pn	Pn	12 16 18.4	+0.6
PB11				*e*Sn	Sn	12 16 42.5	-0.5
PB11	IPOC Station P	1.82	324	⇓*i*P	Pn	12 16 17.8	0.0
PB11				*e*S	Sn	12 16 42.1	-1.0
PB11				IAML		12 16 44.2	
	comp=N,2μm,0.4s						
PB04	IPOC Station P	1.87	234	*e*Pn	Pn	12 16 19.6	+1.3
PB04				*e*Sn	Sn	12 16 44.0	0.0
PB04	IPOC Station P	1.87	234	⇑*i*P	Pn	12 16 19.0	+0.6
PB04				⇓*e*S	Sn	12 16 44.1	0.0
PB04				IAML		12 16 49.4	
	comp=N,965nm,0.4s						
PB15	IPOC Station P	2.15	204	⇑*i*P	Pn	12 16 22.8	+1.1
PB15				*i* S	Sn	12 16 51.1	+1.0
PSGC	Pisagua	2.22	317	*e*P	Pn	12 16 22.0	-0.5
PSGC				*i* S	Sn	12 16 49.8	-1.7
PB05	IPOC Station P	2.24	224	⇑*i*P	Pn	12 16 23.4	+0.7
PB05				*i* S	Sn	12 16 51.7	-0.2
MNMC	Minye Minye	2.33	334	*e*Pn	Pn	12 16 24.3	+0.3
MNMC				*e*Sn	Sn	12 16 54.6	+0.6
MNMC	Minye Minye	2.33	334	*e*P	Pn	12 16 24.6	+0.6
MNMC				*i* S	Sn	12 16 54.1	0.0
PB10	IPOC Station P	2.94	219	*e*Pn	Pn	12 16 32.1	+0.8
GO02	Mina Guanaco	4.03	194	*e*Pn	Pn	12 16 46.5	+0.9
GO02				*e*Sn	Sn	12 17 32.3	-0.5
LPAZ	La Paz	4.94	4	P	Pn	12 16 59.9	+1.9
	comp=N,5.2nm,0.3s,baz=271,slow=2.2,SNR=123						
GO03	Copiap	6.52	194	*e*Pn	Pn	12 17 17.1	-1.3
GO03				*e*Sn	Sn	12 18 30.3	-1.5
LCO	Las Campanas	7.99	194	*e*Pn	Pn	12 17 36.0	-2.3
SIV	San Ignacio	8.78	55	P	Pn	12 17 45.9	-2.9
	comp=N,8.5nm,0.3s,baz=248,slow=12,SNR=190						
SIV				LR	LR	12 21 42.7	
	comp=N,81nm,21.9s,baz=268,slow=42						
GO04	Tololo Observa	9.13	193	*e*Pn	Pn	12 17 50.9	-2.6
CFA	Coronel Fontan	10.33	179	P	Pn	12 18 08.4	-0.8
	comp=N,1.1nm,0.3s,baz=347,slow=14,SNR=6.9						
TRQA	Tornquist	17.69	163	*e*P	Pn	12 19 43.4	+1.3
	comp=N,9.8nm,0.6s						
PLCA	Paso Flores	19.51	185	P	Pn	12 20 04.0	+0.5
	comp=N,0.3nm,0.3s,baz=26,slow=12,SNR=15						
PLCA	Paso Flores	19.51	185	*e*P	Pn	12 20 03.1	-0.4
	comp=N,12nm,1.0s						
BDFB	Brasilia	20.23	77	P	P	12 20 09.4	+0.7
	comp=N,3.5nm,0.3s,baz=246,slow=8.8,SNR=16						
BDFB	Brasilia	20.23	77	*e*P	P	12 20 09.5	+0.8
	comp=N,14nm,0.5s						
PTGA	Pitinga	22.03	23	P	P	12 20 27.2	-0.5
	comp=N,3.5nm,0.5s,baz=192,slow=17,SNR=9.5						
PTGA	Pitinga	22.03	23	*e*P	P	12 20 27.3	-0.5
	comp=N,5.7nm,0.7s						
SYO	Syowa Base	76.62	159	⇑*e*PcP	PcP	12 27 27.1	-2.7
SYO	Syowa Base	76.62	159	⇑*e*pP	pP	12 27 50.1	-6.3
TOA1	Torodi Ar. Sit	76.92	70	*e*P	P	12 27 23.3	+1.7
TORD	Torodi Ar. Bea	76.92	70	P	P	12 27 23.3	+1.7
	comp=N,3.6nm,0.6s,baz=254,slow=5.4,SNR=20						
YKA	Yellowknife Ar	91.06	340	P	P	12 28 35.4	+3.3
	comp=N,1.1nm,0.6s,baz=134,slow=4.5,SNR=8.1						
KSH	Kashi	144.65	51	*e*PKP	PKPab	12 35 02.1	-1.4
MKAR	Makanchi Array	145.21	36	PKPbc	PKiKP	12 35 08.3	-0.7
	comp=N,1.5nm,0.7s,baz=336,slow=3.7,SNR=14						
LZH	Lanzhou	163.77	23	*e*PKP	PKPdf	12 35 28.8	-2.1
LZH				pPKP	pPKPdf	12 36 09.6	-1.9
LZH				sPKP		12 36 27.3	
CD2	Chengdu	168.13	34	PKP	PKPdf	12 35 34.6	+0.2

ISCJB ***20*** *12:19:08.2±0.6, 48°.65S±0°.07×31°.3E±0°.2, h10km, mb4.2/11, MS3.6/10, Error ellipse: s-maj=19.8km s-min=9.7km az=172.2*
IDC ***20*** *12:19:08.3±0.6, 48°.67S×31°.36E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.1/37, mbtmp4.2/13, ML4.3/1, MS3.6/11, Ms1 3.6/11, ms1mx3.4/26, Error ellipse: s-maj=24.2km s-min=14.9km az=78.0*

ISC 20 12:19:10.2±0.7, 48°.73S±0°.10×31°.3E±0°.2, h10km, n25, σ1°59/21, mb4.3/11, MS3.6/10, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	18.14	330	P	Pn	12 23 21.1	-1.1
	1.1nm,0.3s,baz=141,slow=11,SNR=10.0						
SUR				LR	LR	12 28 23.2	
	comp=Z,282nm,21.5s,baz=146,slow=31						
BOSA	Boshof	20.62	345	P	P	12 23 48.8	-0.9
	4.7nm,0.7s,baz=172,slow=11,SNR=9.6						
BOSA				LR	LR	12 30 03.4	
	comp=Z,112nm,21.8s,baz=198,slow=32						
LBTB	Lobatse	24.09	347	P	P	12 24 24.8	-1.2
	2.1nm,0.6s,baz=148,slow=5.2,SNR=4.7						
LBTB				LR	LR	12 32 07.0	
	comp=Z,117nm,18.4s,baz=184,slow=32						
MAW	Mawson	24.73	151	P	P	12 24 31.9	+0.7

JSZ	Suzu	2.24	147	P	Pn	12 21 31.8	-0.8
JSD	Sado	2.30	124	P	Pn	12 21 32.1	-0.9
MJAR	Matsushiro Arr	3.36	145	P	Pn	12 21 40.5	-0.9
	baz=323,slow=11,SNR=5.6						
JMK	Ichinoseki	4.21	94	P	Pn	12 21 49.8	+0.8
JOT	Ohata	4.48	61	P	Pn	12 21 53.2	+1.6
USRK	Ussuriysk Ar.	5.64	331	P	Pn	12 22 02.5	-1.2
	0.4nm,0.3s,baz=160,slow=8.4,SNR=6.8						
BSO1	Boso 1	6.23	137	P	Pn	12 22 08.6	-1.0
KSRS	Korea Array	6.49	256	P	Pn	12 22 11.1	-1.9
	0.2nm,0.3s,baz=78,slow=9.5,SNR=4.9						
JCH	Churui	6.57	58	P	P	12 22 15.1	+0.7
JCH				S	S	12 23 31.8	-2.6
ASAJ	Asahikawa	6.96	44	P	P	12 22 19.5	+0.9
	0.7nm,0.3s,baz=234,slow=12,SNR=9.3						
JTKR	Abashiri--Toko	7.61	50	P	P	12 22 26.7	+0.8
JTKR				eS	S	12 23 55.1	-0.8
NEM2	Nemuro 2	8.47	58	P	P	12 22 36.1	+0.6
NEM2				eS	S	12 24 11.3	-2.5
SONM	Songino Array	22.84	301	P	P	12 25 05.2	0.0
	1.9nm,0.5s,baz=105,slow=8.8,SNR=10						
WRA	Warramunga Arr	58.98	182	P	P	12 29 55.3	+0.9
	1.3nm,1.0s,baz=5.6,slow=5.7,SNR=7.5						
ASAR	Alice Springs	62.70	182	P	P	12 30 20.4	+1.3
	0.2nm,0.4s,baz=5.4,slow=7.4,SNR=3.8						
STKA	Stephens Creek	71.05	175	P	P	12 31 11.6	+0.7
	2.4nm,0.7s,baz=19,slow=2.7,SNR=5.3						

*ISCJB **20** 12:26:22.4±0.5,21°.23S±0°.03×68°.9W±0°.1, h130km±7km, mb3.7/2, Error ellipse: s-maj=15.9km s-min=4.7km az=5.0*
*GUC **20** 12:26:23.2±0.6,21°.22S×68°.87W, h122km±3km, ML3.8*
*IDC **20** 12:26:23.9±1.1,21°.25S×68°.45W, h109km±16km, mb3.7/3, mb1 3.6/5, mb1mx3.3/31, mbtmp4.0/5, Error ellipse: s-maj=39.1km s-min=16.8km az=108.0*

ISC 20 12:26:22.5±0.9,21°.21S±0°.04×68°.89W±0°.09, h124km±9km, n21,σ0°.90/34, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.59	287	⇑iP	Pn	12 26 41.6	0.0
PB01				i S	Sn	12 26 55.6	-0.4
PB01				IAML		12 26 56.5	
	comp=E,4μm,0.1s						
PB02	IPOC Station P	0.95	263	eP	Pn	12 26 44.9	+0.3
PB02				i P		12 26 44.9	
PB02				i S	Sn	12 27 01.1	-0.2
PB02				IAML		12 27 03.9	
	comp=E,3μm,0.2s						
PB07	IPOC Station P	1.06	241	⇑iP	Pn	12 26 46.2	+0.4
PB07				i S	Sn	12 27 03.4	+0.1
PB07				IAML		12 27 05.8	
	comp=E,2μm,0.4s						
PB08	IPOC Station P	1.09	347	eP	Pn	12 26 47.0	+0.7
PB08				i S	Sn	12 27 04.6	+0.3
PB08				IAML		12 27 06.9	
	comp=E,2μm,0.2s						
PB03	IPOC Station P	1.16	224	i P	Pn	12 26 47.0	+0.3
PB03				i S	Sn	12 27 04.8	-0.3
LVC	Limon Verde	1.39	181	P	Pn	12 26 49.9	+0.5
	comp=E,18nm,0.3s,baz=36,slow=10,SNR=167						
LVC				S	Sn	12 27 09.8	0.0
	comp=E,53nm,0.3s,baz=107,slow=22,SNR=45						
LVC	Limon Verde	1.39	181	⇓iP	Pn	12 26 50.0	+0.6
LVC				eS	Sn	12 27 10.1	+0.2
GO01	Chusmiza	1.56	349	eP	Pn	12 26 51.9	+0.4
GO01				eS	Sn	12 27 14.1	+0.6
PB11	IPOC Station P	1.61	333	i S	Sn	12 27 14.5	+0.5
PB06	IPOC Station P	1.62	203	eP	Pn	12 26 52.1	+0.4
PB06				i S	Sn	12 27 14.3	+0.2
PB06				IAML		12 27 15.0	
	comp=E,1μm,0.4s						
PB04	IPOC Station P	1.62	226	eP	Pn	12 26 52.0	+0.2
PB04				i S	Sn	12 27 14.6	+0.4
PB04				IAML		12 27 19.1	
	comp=E,1μm,0.2s						
PSGC	Pisagua	1.98	324	⇑iP	Pn	12 26 56.0	-0.1
PB05	IPOC Station P	2.04	217	i P	Pn	12 26 57.1	+0.3
PB05				i S	Sn	12 27 22.7	-0.3
PB15	IPOC Station P	2.06	195	eP	Pn	12 26 58.0	+0.9
PB15				i S	Sn	12 27 24.4	+0.7
MNMC	Minye Minye	2.18	342	eP	Pn	12 26 59.4	+0.7
MNMC				i S	Sn	12 27 27.9	+1.5
LPAZ	La Paz	4.95	8	P	Pn	12 27 37.7	+2.2
	comp=E,0.4nm,0.3s,baz=197,slow=4.3,SNR=8.0						
SIV	San Ignacio	9.05	56	P	Pn	12 28 27.1	-3.1
	comp=E,1.8nm,0.3s,baz=258,slow=11,SNR=22						
BDFB	Brasilia	20.55	78	P	P	12 30 51.5	-0.1
	comp=E,5.6nm,0.5s,baz=246,slow=8.2,SNR=6.1						
PTGA	Pitinga	22.14	24	P	P	12 31 07.6	-0.7
	comp=E,2.3nm,0.3s,baz=209,slow=19,SNR=8.5						
TORD	Torodi Ar. Bea	77.24	70	P	P	12 38 04.0	+0.5
	comp=E,0.4nm,0.4s,baz=255,slow=5.4,SNR=5.7						
MKAR	Makanchi Array	145.39	36	PKPbc	PKiKP	12 45 48.5	-1.3
	comp=E,0.6nm,0.7s,baz=291,slow=4.7,SNR=4.5						

*PGC **20** 13:13:56.9±4.5,58°.28N×133°.55W, h1km, ML2.6/3, 50km east of Juneau, Ak Southeastern Alaska*
*NEIC **20** 13:13:57.0±0.0,58°.36N×133°.53W, h4km, ML2.3(AEIC), ML2.6(OTT), After AEIC.*

ISC 20 13:13:56.9±1.3,58°.32N±0°.04×133°.55W±0°.03, h5km±12km, n17,σ1°.35/33, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	Juneau Island	0.44	264	ePg	Pg	13 14 05.6	+0.2
JIS				eSg	Sg	13 14 12.3	+1.2
BESE	Bessie Mountai	0.73	291	ePg	Pg	13 14 10.9	+0.1
BESE				ePn	Sg	13 14 18.1	-2.2
BESE				eSg	Sg	13 14 21.3	+0.9
BESE	Bessie Mountai	0.73	291	P	Pg	13 14 10.9	+0.1
BESE				S	Sg	13 14 18.1	-2.2
SKAG	Skagway	1.47	322	ePn	Pn	13 14 23.5	-0.3
SKAG				eSn	Sg	13 14 45.5	+1.6
SIT	Sitka	1.59	218	ePn	Pn	13 14 25.6	+0.1
SIT				eSn	Sg	13 14 48.5	+0.6
PLBC	Pleasant Camp	1.85	309	ePn	Pb	13 14 30.9	-0.2
PLBC				eSn	Sb	13 14 55.1	+0.7
PLBC	Pleasant Camp	1.85	309	Pg	Pb	13 14 30.9	-0.2
PLBC				Sg	Sb	13 14 55.1	+0.7
DLBC	Dease Lake	1.86	85	ePn	Pb	13 14 30.8	-0.6
DLBC				eSn	Sn	13 14 53.1	-0.1
DLBC				eSg	Sb	13 14 55.7	+0.8
DLBC	Dease Lake	1.86	85	Pn	Pn	13 14 29.1	-0.3
DLBC				Pg	Pb	13 14 30.8	-0.6
DLBC				Sn	Sn	13 14 53.1	-0.1
DLBC				Sg	Sb	13 14 55.7	+0.8
WRAK	Wrangell Islan	2.02	161	ePn	Pn	13 14 29.1	-2.4
WRAK				eSn	Sn	13 14 57.3	+0.3
WHY	Whitehorse	2.44	344	ePn	Pn	13 14 37.3	-0.1
WHY	Whitehorse	2.44	344	Pn	Pn	13 14 37.2	-0.1
WHY				Pg	Pb	13 14 41.2	0.0
WHY				Sg	Sb	13 15 12.1	+0.5
CRAG	Craig	2.87	175	ePn	Pn	13 14 42.5	-0.7
HYT	Haines Junctio	3.21	323	ePn	Pn	13 14 46.2	-1.8
HYT	Haines Junctio	3.21	323	Sg	Sb	13 15 37.4	+3.5
BCPM	Bancas Point	3.53	300	ePn	Pn	13 14 48.9	-3.4
DIB	Dawson Inlet,	5.17	173	ePn	Pn	13 15 15.8	+1.1

*IDC **20** 13:14:31.6±9.4,21°.20S×178°.16W, h412km±106km, mb3.1/6, mb1 3.5/6, mb1mx3.2/30, mbtmp3.9/6, Error ellipse: s-maj=137.7km s-min=29.9km az=161.0*
*ISCJB **20** 13:14:38.3±1.7,21°.3S±0°.9×178°.4W±0°.5, h500km, mb3.4/6, Error ellipse: s-maj=137.1km s-min=18.1km az=154.8*

ISC 20 13:14:39.1±1.8,21°.3S±0°.9×178°.3W±0°.5, h500km, n9, σ0°.52/9, mb3.4/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.18	245	P	P	13 21 07.0	-0.1
	2.4nm,0.7s,baz=114,slow=13,SNR=4.1						
ASAR	Alice Springs	44.06	258	P	P	13 22 02.6	+0.4
	2.0nm,0.7s,baz=96,slow=7.9,SNR=31						
WRA	Warramunga Arr	44.21	263	P	P	13 22 03.0	-0.4
	1.0nm,0.8s,baz=97,slow=7.2,SNR=4.3						
NVAR	Mina Array Bea	81.81	43	P	P	13 26 05.7	0.0
	0.5nm,0.6s,baz=227,slow=9.3,SNR=4.6						
TXAR	Lajitas Array	87.73	57	P	P	13 26 34.4	-0.3
	0.4nm,0.7s,baz=234,slow=4.0,SNR=4.6						
PDAR	Pinedale Array	89.75	43	P	P	13 26 43.8	-0.1
	0.1nm,0.4s,baz=186,slow=3.0,SNR=4.2						
AKASG	Malin Array Be	143.57	330	PKP	PKPdf	13 33 16.9	+0.6
	2.4nm,0.5s,baz=42,slow=4.2,SNR=12						
BRTR	Keskin Array B	147.16	311	PKPbc	PKiKP	13 33 27.2	-0.6
	1.0nm,0.6s,baz=140,slow=6.4,SNR=5.4						
GERES	GERESS Array B	150.89	344	PKPbc	PKiKP	13 33 35.9	+0.7
	0.4nm,0.5s,baz=90,slow=1.9,SNR=3.9						

*IDC **20** 13:15:14.1±4.2, 40°.35N×20°.96E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/42, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.0/43, Error ellipse: s-maj=157.7km s-min=26.8km az=104.0*
*ATH **20** 13:15:14.8, 40°.33N×20°.67E, h24km±3km, ML3.0/7, Error ellipse: s-maj=3.7km s-min=1.2km az=162.0*
*TIR **20** 13:15:15.0, 40°.29N×20°.69E, h2km, Md3.3/7*
*THE **20** 13:15:15.2, 40°.34N×20°.65E, h0km±3km, ML3.1/6, Error ellipse: s-maj=3.8km s-min=0.7km az=266.0*
*SKO **20** 13:15:17.2, 40°.33N×20°.67E, h11km, M2.7, ML3.2*
*PDG **20** 13:15:17.5±0.9, 40°.45N×20°.76E, h5km±2km, ML3.2/10, Error ellipse: s-maj=1.2km s-min=2.0km az=0.0*

ISC 20 13:15:15.2±1.1, 40°.32N±0°.02×20°.67E±0°.02, h2km±9km, n96, σ1°.47/132, mb3.5/3, 12C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PENT	Pentalofos	0.38	109	P	Pg	13 15 22.4	-0.2
PENT				S	Sg	13 15 28.5	+0.9
PENT	Pentalofos	0.38	109	P	Pg	13 15 22.6	0.0
PENT				AML	AML	13 15 35.1	
	comp=E,6566μm,0.4s						
PENT				AML	AML	13 15 35.6	
	comp=N,9041μm,0.5s						
TPE	Tepelena	0.50	267	P	Pg	13 15 24.6	-0.2
TPE	Tepelena	0.50	267	i PN	Pg	13 15 24.2	-0.6
TPE				i SN	Sb	13 15 34.0	-0.4
KPRO	Kipourio	0.65	124	P	Pg	13 15 27.0	-0.6
KPRO				S	Sb	13 15 38.0	-0.7
KPRO	Kipourio	0.65	124	P	Pg	13 15 27.2	-0.5
SRN	Sarande	0.67	229	P	Pg	13 15 28.1	0.0
SRN	Sarande	0.67	229	i PN	Pg	13 15 28.7	+0.6
SRN				i SN	Sg	13 15 36.6	-0.2
JAN	Janina	0.68	168	P	Pg	13 15 28.4	+0.2
JAN				S	Sb	13 15 38.8	-0.7
JAN				AML	AML	13 15 47.1	
	comp=E,3232μm,0.5s						
JAN				AML	AML	13 15 52.9	
	comp=N,1863μm,0.8s						
MEV	Metsovon	0.69	141	P	Pg	13 15 28.3	-0.1
FNA	Florina	0.71	49	P	Pg	13 15 28.1	-0.8
FNA				S	Sb	13 15 39.3	-1.4
FNA	Florina	0.71	49	i Pg	Pg	13 15 28.1	-0.8
FNA				i Sg	Sb	13 15 39.6	-1.1
FNA	Florina	0.71	49	i PN	Pg	13 15 28.0	-0.8
FNA				i SN	Sb	13 15 40.1	-0.6
FNA	Florina	0.71	49	P	Pg	13 15 28.0	-0.8
FNA				S	Sb	13 15 39.6	-1.1
FNA				AML	AML	13 15 42.7	
	comp=N,5217μm,0.5s						
FNA				AML	AML	13 15 43.6	
	comp=E,4549μm,0.6s						
OHR	Ohrid	0.80	7	i Pg	Pg	13 15 30.6	+0.1
OHR				i Sg	Sn	13 15 44.9	-1.1
OHR				eLg	Lg	13 15 46.5	
	comp=E,776nm,0.8s						
OHR				eLg	Lg	13 15 46.6	
	comp=N,597nm,0.7s						
IGT	Igoumenitsa	0.83	198	P	Pg	13 15 31.0	-0.1
IGT				S	Sn	13 15 45.5	-1.1
IGT	Igoumenitsa	0.83	198	i Pg	Pb	13 15 32.0	-0.3
IGT				i Sg	Sn	13 15 45.7	-0.9
IGT	Igoumenitsa	0.83	198	i PN	Pg	13 15 31.6	+0.6
IGT				i SN	Sb	13 15 44.7	+0.9
IGT	Igoumenitsa	0.83	198	P	Pg	13 15 31.7	+0.6
IGT				S	Sb	13 15 43.6	-0.2
IGT				AML	AML	13 15 55.4	
	comp=E,2153μm,0.6s						
IGT				AML	AML	13 15 57.8	
	comp=N,1339μm,0.8s						
KZN	Kozani	0.85	91	P	Pg	13 15 31.0	-0.4
KZN				S	Sb	13 15 44.8	+0.3
KZN	Kozani	0.85	91	P	Pg	13 15 30.8	-0.6
KZN				S	Sb	13 15 43.9	-0.6
KZN				AML	AML	13 15 52.1	
	comp=N,2194μm,0.4s						
KZN				AML	AML	13 15 53.2	
	comp=E,2491μm,0.5s						
KEK	Kerkira	0.90	228	P	Pg	13 15 32.1	-0.4
KEK	Kerkira	0.90	228	P	Pg	13 15 32.1	-0.4
KEK				S	Sg	13 15 45.1	+1.0
KEK				AML	AML	13 15 54.8	
	comp=E,1657μm,0.8s						
KEK				AML	AML	13 15 55.1	
	comp=N,1146μm,0.6s						
KTI	Kastanea	1.11	86	P	Pb	13 15 36.6	-0.6
TIR	Tirane	1.19	330	⇓iP	Pn	13 15 42.2	+3.3
TIR	Tirane	1.19	330	ePg	Pg	13 15 37.8	-0.3
TIR	Tirane	1.19	330	i PN	Pn	13 15 39.5	+0.6
TIR				i SN	Sn	13 15 57.9	+2.3
TIR	Tirane	1.19	330	P	Pg	13 15 37.4	-0.7
THL	Klokotos Trika	1.28	126	P	Pg	13 15 38.4	-1.4
THL				AML	AML	13 16 07.7	
	comp=E,632μm,0.5s						
THL				AML	AML	13 16 08.0	
	comp=N,936μm,0.5s						
PHP	Peshkopia	1.37	353	P	Pn	13 15 40.9	-0.5
PHP	Peshkopia	1.37	353	i PN	Pg	13 15 43.5	+1.9
PHP				i SN	Sn	13 16 03.5	+3.2
LIT	Litokhoron	1.42	98	P	Pb	13 15 41.6	-0.7
LIT				S	Sn	13 16 04.5	+3.3
LIT	Litokhoron	1.42	98	ePg	Pn	13 15 41.2	-0.7
LIT				i Sg	Sn	13 16 04.4	+3.3
GRG	Griva	1.47	64	P	Pn	13 15 42.3	-0.4
GRG	Griva	1.47	64	i Pg	Pn	13 15 42.3	-0.4
GRG				i Sg	Sg	13 16 04.7	+2.4
GRG	Griva	1.47	64	P	Pb	13 15 42.6	-0.6
EVR	Evrytania	1.66	147	P	Pn	13 15 45.6	+0.3
SKO	Skopje	1.75	19	i Pn	Pg	13 15 48.5	-0.4
SKO				i Sg	Sg	13 16 12.9	+1.4
VAY	Valandovo	1.76	55	i Pn	Pn	13 15 46.7	0.0
VAY				i Sg	Sg	13 16 11.8	+0.1
VAY				eLg	Lg	13 16 18.0	
	comp=N,379nm,1.1s						
VAY				eLg	Lg	13 16 19.9	
	comp=E,240nm,0.9s						
THE	Thessaloniki	1.78	79	ePn	Pb	13 15 48.3	-0.2
STIP	Stip	1.79	39	i Pn	Pg	13 15 50.2	+0.6
STIP				i Sg	Sg	13 16 19.7	+6.9
AGG	Agios Georgios	1.82	135	P	Pb	13 15 48.5	-0.8
KNT	Kendrikon	1.89	63	i Pn	Pn	13 15 48.2	-0.4
ULC	Ulcinj	1.96	327	⇓iPn	Pb	13 15 51.5	-0.2
ULC				eSn	Sg	13 16 18.8	+0.5
SOH	Sokhos	2.11	75	i Pn	Pn	13 15 51.5	0.0
SOH				i Pn	Pn	13 15 51.6	0.0
DRME	Dracevica, Mon	2.17	330	ePn	Pb	13 15 55.0	-0.3
DRME	Dracevica, Mon	2.17	330	ePn	Pb	13 15 53.8	-1.5
PVY	Plav	2.33	347	⇑iPn	Pb	13 15 57.2	-0.9
PVY				eSn	Sb	13 16 26.8	-0.6
PDG	Podgorica	2.36	334	⇓iP	Pb	13 15 57.1	-1.3
PDG	Podgorica	2.36	334	ePn	Pn	13 15 56.3	+1.4
TTG	Podgorica	2.36	334	⇓iPn	Pb	13 15 57.1	-1.3
TTG				eSn	Sb	13 16 27.8	-0.2
SRS	Serrai	2.36	69	ePn	Pn	13 15 54.8	-0.2
BUM	Brajici-Budva	2.39	327	⇓iPn	Pn	13 15 56.5	+1.1
BUM				eSn	Sb	13 16 28.8	0.0
KKB	Krupnik	2.39	49	i Pn	Pn	13 15 56.1	+0.7
CEME	Cevo	2.58	330	ePn	Pb	13 16 00.1	-2.2
IVA	Berane	2.62	347	⇓iPn	Pb	13 16 01.0	-1.8
IVA				eSn	Sb	13 16 33.1	-2.3
MMB	Musomiste	2.64	60	ePn	Pn	13 15 59.8	+0.9
KOME	Kolasin	2.67	342	ePn	Pb	13 16 02.8	-1.0
HCY	Herceg Novi	2.68	323	⇑iPn	Pn	13 16 00.4	+1.0
HCY				eSn	Sb	13 16 36.1	-1.1
HCY	Herceg Novi	2.68	323	ePn	Pn	13 16 00.3	+0.9
NKME	Niksic	2.76	333	⇓iPn	Pn	13 16 02.5	+2.0
NKME				eSn	Sb	13 16 37.6	-2.0
NKY	Niksic	2.79	334	⇑iPn	Pb	13 16 03.5	-2.3
NKY				eSn	Sb	13 16 38.3	-2.1
TREB	Trebinje	2.96	325	ePn	Pn	13 16 02.4	-0.8
VTS	Vitosha	3.00	39	⇑iP	Pn	13 16 04.7	+0.8
VTS	Vitosha	3.00	39	ePn	Pb	13 16 06.7	-2.7
BRY	Bratogost	3.03	329	⇓iPn	Pn	13 16 06.8	+2.5
BRY				eSn	Sb	13 16 44.5	-3.0
BRY	Bratogost	3.03	329	ePn	Pn	13 16 05.6	+1.3
MATE	Matera	3.04	278	⇑iP	Pn	13 16 04.5	+0.3
UPM	Unac-Piva	3.17	336	⇓iPn	Pn	13 16 08.5	+2.3
UPM				eSn	Sn	13 16 47.0	+2.4
UPM	Unac-Piva	3.17	336	ePn	Pn	13 16 08.6	+2.3
TIP	Timpagrande	3.22	251	⇓iP	Pn	13 16 06.4	-0.4
STON	Ston	3.38	320	ePn	Pn	13 16 09.2	+0.2
STON				Sn	Sn	13 16 49.7	+0.1
STON	Ston	3.38	320	ePn	Pn	13 16 09.1	+0.2
BBLS	Lazići	3.67	346	ePn	Pn	13 16 13.9	+0.9
DIVS	Divibare	3.81	353	ePn	Pn	13 16 16.4	+1.5
HAPS	Han Pijesak,Bl	3.97	342	ePn	Pn	13 16 17.3	+0.1
MDVR	Moldovita	4.53	10	⇓iP	Pn	13 16 26.4	+1.6
HERR	Herculane	4.74	15	⇑iP	Pn	13 16 29.5	+1.9
FRGS	Fruska Gora	4.88	353	ePn	Pn	13 16 30.0	+0.5
BZS	Buzias	5.34	7	⇑iP	Pn	13 16 37.8	+1.9
UDBI	Udbina	5.55	321	ePn	Pn	13 16 39.9	+1.1
SIRR	Siria	5.99	7	⇑iP	Pn	13 16 46.8	+2.0
VOIR		6.04	31	⇓iP	Pn	13 16 46.2	+0.6
MLR	Muntele Rosu	6.46	35	LR	LR	13 19 41.6	
	comp=E,71nm,19.0s,baz=122,slow=42						
MLR	Muntele Rosu	6.46	35	⇑iP	Pb	13 17 04.0	-4.3
CRES	Cresnjev	6.69	327	ePn	Pn	13 16 53.8	-0.7
PLOR	Plostina	7.05	36	⇑iP	Pn	13 16 56.4	-3.0
CEY	Cerknica	7.08	322	ePn	Pn	13 16 59.5	-0.4
VRI	Vrincioaia	7.10	37	⇑iP	Pn	13 17 00.4	+0.3
BURAR	Bucovina Array	8.00	23	⇑iP	Pn	13 17 13.6	+1.2
VYHS	Vyhne	8.28	352	ePN	Pn	13 17 14.7	-1.5
VYHS				e		13 17 22.4	
HFS	Hagfors	20.31	350	P	P	13 19 51.4	-0.8
	comp=E,1.1nm,0.6s,baz=169,slow=17,SNR=3.2						
FINES	FINESS Array B	21.41	7	P	P	13 20 02.6	-1.4
	comp=E,1.9nm,0.9s,baz=181,slow=12,SNR=4.5						
NB2	NORSAR Subarra	21.55	347	P	P	13 20 05.2	-0.4
	comp=Z,2.8nm,0.9s,baz=160,slow=11						
NOA	NORSAR Array B	21.55	347	P	P	13 20 05.2	-0.4
	comp=Z,1.4nm,0.9s,baz=158,slow=8.9,SNR=5.3						
TORD	Torodi Ar. Bea	31.79	217	P	P	13 21 41.6	+0.6
	comp=Z,1.2nm,1.0s,baz=14,slow=8.8,SNR=3.7						

*ISCJB **20** 13:18:59.4±0.5, 37°.17N±0°.04×141°.21E±0°.06, h88km±3km, mb3.9/17, Error ellipse: s-maj=9.1km s-min=5.2km az=32.0*
*NIED **20** 13:19:00, 37°.20N×141°.20E, h83km, Mw4.1 Best double couple: M0 1.82000×10^15 NP1:φs185.00000°, δ43.00000°, λ-135.00000°. NP2:φs59.00000°, δ61.00000°, λ-57.00000°.*
*IDC **20** 13:19:00.4±2.0, 37°.19N×141°.10E, h81km±18km, mb3.7/16, mb1 3.8/19, mb1mx3.7/43, mbtmp4.0/19, MS2.6/4, Ms1 2.6/4, ms1mx2.4/37, Error ellipse: s-maj=18.6km s-min=13.5km az=104.0*
*JMA **20** 13:19:00.6±0.1, 37°.17N×141°.15E, h86km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs62.00000°, δ67.00000°, λ-44.00000°. NP2:φs173.00000°, δ50.00000°, λ-149.00000°. Principal axes: T Plg10.0000°, Azm121.0000°; N Plg41.0000°, Azm220.0000°; P Plg47.0000°, Azm20.0000°;*
JMA Felt II J1.

ISC 20 13:19:00.7±0.8, 37°.18N±0°.05×141°.15E±0°.07, h85km±6km, n45, σ1°.52/55, mb4.0/17, 8C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.29	310	⇓P	Pn	13 19 13.4	-0.2
JFK				S	Sn	13 19 22.6	-0.5
ONAJ	Iwakimizuishiy	0.29	254	⇓P	Pn	13 19 13.4	-0.2
ONAJ				S	Sn	13 19 22.8	-0.4
JFFD	Fukushimafurud	0.48	259	⇓P	Pn	13 19 14.9	+0.1
JFFD				S	Sn	13 19 25.1	-0.2
JFT	Otama	0.73	298	⇑P	Pn	13 19 17.3	+0.2
JFT				S	Sn	13 19 29.5	+0.1
JMM	Marumori	0.74	338	⇑P	Pn	13 19 17.3	+0.1
JMM				S	Sn	13 19 29.5	0.0
JFY	Yanaizu	1.18	282	⇑P	Pn	13 19 22.1	-0.1
JFY				S	Sn	13 19 38.7	+0.4
JOU	Okura	1.24	342	⇑P	Pn	13 19 22.9	-0.2
JOU				S	Sn	13 19 39.8	-0.1
JIO	Ouri	1.28	7	⇑P	Pn	13 19 23.3	-0.2
JIO				S	Sn	13 19 39.9	-0.7
JYS	Shiratake	1.35	321	⇑P	Pn	13 19 24.5	+0.1
JYS				S	Sn	13 19 42.4	+0.2
JAG	Ashikaga	1.56	242	P	Pn	13 19 26.9	-0.1
JAG				S	Sn	13 19 46.5	-0.4
JKT	Katashina	1.58	255	P	Pn	13 19 28.1	+0.8
JKT				eS	Sn	13 19 49.1	+1.6
JNS	Sasagawa	1.59	294	⇑P	Pn	13 19 27.0	-0.4
JNS				S	Sn	13 19 46.8	-0.8
JMK	Ichinoseki	1.77	2	⇑P	Pn	13 19 29.4	-0.3
JMK				S	Sn	13 19 51.5	-0.2
MJAR	Matsushiro Arr	2.44	256	P	Pn	13 19 39.2	+0.5
	4.2nm,0.3s,baz=80,slow=14,SNR=230						
MJAR				S	Sn	13 20 00.3	-7.5
	5.6nm,0.3s,baz=80,slow=15,SNR=20						
MJAR				LR	LR	13 20 50.2	
	comp=Z,88nm,19.5s,baz=80,slow=46						
MAT	Matsushiro	2.44	256	P	Pn	13 19 39.6	+0.9
MAT				S	Sn	13 20 09.2	+1.4
JHJ	Hachijo jima 2	4.20	196	P	Pn	13 20 01.0	-1.5
	15nm,0.3s,baz=339,slow

NVAR Mina Array Bea 75.07 53 P P 13 30 34.7 +1.1
comp=Z,1.0nm,0.8s,baz=284,slow=6.0,SNR=6.8
PDAR Pinedale Array 77.71 45 P P 13 30 48.5 +0.1
comp=Z,0.6nm,0.7s,baz=258,slow=2.7,SNR=5.0
TXAR Lajitas Array 90.20 52 P P 13 31 52.5 +0.5
comp=Z,0.8nm,0.7s,baz=310,slow=2.4,SNR=6.1
LPAZ La Paz 146.80 59 PKPbc **PKPbc 13 38 34.2 0.0**
comp=Z,2.4nm,0.7s,baz=6.0,slow=7.4,SNR=8.9

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*ISK **20** 13:36:35.7,38°.60N×43°.28E,h20km, ML2.2/4*
*ISCJB **20** 13:36:37.0±0.8,38°.58N±0°.05×43°.29E±0°.06,h21km±8km, Error ellipse: s-maj=10.5km s-min=4.9km az=42.3*
*DDA **20** 13:36:36.3,38°.60N×43°.17E,h7km±3km, ML2.8*
ISC 20 13:36:36.5±1.1,38°.61N±0°.03×43°.25E±0°.03,h15km±11km, n10,σ0s57/18,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.11**	**97**	P	**Pb**	**13 36 40.3**	**-0.2**
VANB				SG	**Sb**	**13 36 43.6**	**+0.5**
TVAN	**Van**	**0.15**	**123**	*i* P	**Pg**	**13 36 40.7**	**+0.1**
TVAN				*i* S	**Sb**	**13 36 44.7**	**+0.5**
TVAN				IAML_P			
comp=Z,19μm,0.1s							
GEVA	**Gevas**	**0.33**	**207**	*i* P	**Pg**	**13 36 43.1**	**-0.3**
GEVA				*i* S	**Sb**	**13 36 50.1**	**+0.6**
GEVA				IAML_P			
comp=Z,8μm,0.2s							
AKDM	**Akdamar-Van**	**0.35**	**217**	PG	**Pg**	**13 36 43.4**	**-0.4**
AKDM				SG	**Sb**	**13 36 49.9**	**-0.1**
ADCV	**BITLIS_Adilcev**	**0.46**	**296**	*i* P	**Pg**	**13 36 45.7**	**0.0**
ADCV				*i* S	**Sb**	**13 36 54.1**	**+1.0**
ADCV				IAML_P			
comp=Z,2μm,0.2s							
VMUR	**Van-Muradiye**	**0.46**	**33**	*i* P	**Pb**	**13 36 46.2**	**-0.3**
VMUR				*i* S	**Sb**	**13 36 54.3**	**+1.2**
VMUR				IAML_P			
comp=Z,1μm,0.2s							
CLDR	**Caldiran**	**0.75**	**44**	PG	**Pg**	**13 36 50.6**	**-0.5**
CLDR				SG	**Sb**	**13 37 01.4**	**-0.1**
TUTA	**Tutak**	**0.86**	**337**	*i* P	**Pg**	**13 36 53.0**	**-0.4**
TUTA				IAML_P			
comp=Z,2μm,0.2s							
AGRB	**Hanur-Agry**	**0.99**	**348**	PG	**Pb**	**13 36 55.1**	**-0.4**
MUSM	**Mu-Merkez**	**1.36**	**275**	*i* P	**Pb**	**13 37 01.6**	**-0.3**
MUSM				*i* S	**Sg**	**13 37 21.0**	**+0.4**
MUSM				IAML_P			
comp=Z,229nm,0.3s							

IDC 20 13:37:28.6±1.4,2°.87S×139°.07E,h0km,mb3.3/2, mb1 3.6/3,mb1mx3.4/26,mbtmp3.5/3,ML3.5/1,MS3.6/3, Ms1 3.6/3,ms1mx2.9/14,Error ellipse: s-maj=30.5km s-min=21.9km az=156.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.67**	**78**	Pg	Pn	13 37 58.8	-0.3
27nm,0.3s,baz=230,slow=9.1,SNR=157							
JAY				Lg	Lg	13 38 15.4	
62nm,0.3s,baz=14,slow=12,SNR=19							
WRA	**Warramunga Arr**	**17.59**	**195**	P	Pn	13 41 33.4	-1.9
0.2nm,0.3s,baz=16,slow=13,SNR=9.9							
ASAR	**Alice Springs**	**21.27**	**193**	P	P	13 42 18.0	+1.2
0.3nm,0.5s,baz=25,slow=9.7,SNR=5.8							
KSRS	**Korea Array**	**41.43**	**347**	LR	LR	13 59 44.9	
comp=Z,110nm,21.7s,baz=135,slow=32							
KLR	**Kul'dur**	**52.28**	**354**	LR	LR	14 06 38.5	
comp=Z,40nm,18.4s,baz=176,slow=34							
SONM	**Songino Array**	**58.02**	**335**	LR	LR	14 11 33.8	
comp=Z,52nm,21.5s,baz=116,slow=35							
MKAR	**Makanchi Array**	**70.14**	**322**	P	P	13 48 43.0	-0.1
0.6nm,0.8s,baz=101,slow=7.5,SNR=2.8							

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*VIE **20** 13:51:04.9±1.3,44°.40N×15°.14E,h10km±10km,mb2.0/1, ml2.5/2,Error ellipse: s-maj=8.3km s-min=6.6km az=154.0*
*SAR **20** 13:51:10.1±0.6,44°.50N×15°.07E,h5km±3km,MLJ.4/7*
ISC 20 13:51:07.8±1.1,44°.45N±0°.04×15°.06E±0°.04,h7km±9km, n19,σ1s46/36,1C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.18**	**309**	*i* Pg	**Pg**	**13 51 11.4**	**0.0**
NVLJ				Sg	**Sg**	**13 51 14.0**	**+0.2**
UDBI	**Udbina**	**0.51**	**81**	*i* Pg	**Pb**	**13 51 18.2**	**-0.9**
UDBI				Sg	**Sb**	**13 51 26.1**	**-0.6**
RIY	**Rijeka**	**0.97**	**335**	*e*Pg	**Pg**	**13 51 26.1**	**-0.2**
RIY				*e*Sg	**Sb**	**13 51 40.1**	**+0.3**
BOJS	**Bojanci**	**1.06**	**7**	*i* Pg	**Pg**	**13 51 27.8**	**-0.3**
BOJS				*i* Sg	**Sb**	**13 51 42.6**	**0.0**
comp=Z,9.0nm,0.2s							
GBRS	**Gornja Briga**	**1.09**	**351**	*i* Pg	**Pg**	**13 51 28.3**	**-0.5**
GBRS				*i* Sg	**Sn**	**13 51 44.8**	**-0.2**
KNDS	**Knezji Do**	**1.18**	**336**	*i* Pg	**Pn**	**13 51 30.6**	**-0.2**
KNDS				*i* Sg	**Sn**	**13 51 48.6**	**+1.4**
comp=Z,25nm,0.3s							
OZLJ	**Ozalj**	**1.20**	**14**	*i* Pg	**Pn**	**13 51 30.7**	**-0.2**
OZLJ				Sg	**Sn**	**13 51 47.3**	**-0.1**
CEY	**Cerknica**	**1.36**	**341**	*e*Pg	**Pg**	**13 51 34.1**	**+0.2**
CEY				*e*Sg	**Sg**	**13 51 52.5**	**+0.9**
CRES	**Cresnjev**	**1.40**	**11⇑**	*i*Pg	**Pb**	**13 51 34.0**	**-0.3**
CRES				*e*Sg	**Sg**	**13 51 53.6**	**+0.7**
MGRS	**Mrkonjic Grad**	**1.45**	**91**	*e*Pg	**Pg**	**13 51 36.5**	**+1.0**
MGRS				*e*Sg	**Sg**	**13 51 55.7**	**+1.4**
BLY	**Banja Luka**	**1.54**	**78**	*e*Pn	**Pg**	**13 51 37.1**	**-0.2**
BLY				*e*Sn	**Sg**	**13 51 58.2**	**+0.8**
LJU	**Ljubljana**	**1.64**	**347**	*e*Pn	**Pg**	**13 51 38.7**	**-0.4**
LJU				*e*Sn	**Sg**	**13 52 00.0**	**-0.4**
OBKA	**Obir**	**2.09**	**350**	*e*Pg	**Pb**	**13 51 45.9**	**-0.2**
comp=Z,3.4nm,0.3s							
OBKA				Sn	**Sn**	**13 52 07.7**	**-2.0**
comp=Z,4.1nm,0.3s							
STON	**Ston**	**2.48**	**129**	*e*Pn	**Pb**	**13 51 52.8**	**+0.2**
STON				Sn	**Sg**	**13 52 24.8**	**-2.6**
STON	**Ston**	**2.48**	**129**	*e*Pn	**Pb**	**13 51 51.5**	**-1.1**
STON				*e*Sn	**Sb**	**13 52 22.5**	**-0.8**
ABTA	**Abfaltersbach**	**2.91**	**323**	Pg	**Pg**	**13 52 02.5**	**-1.0**
comp=Z,1.3nm,0.2s							
ABTA				Sg	**Sg**	**13 52 43.7**	**+2.4**
comp=Z,5.7nm,0.4s							
TREB	**Trebinje**	**2.95**	**125**	*e*Sn	**Sb**	**13 52 33.6**	**-3.3**
BRY	**Bratogost**	**2.96**	**120**	*e*Sn	**Sb**	**13 52 34.1**	**-3.2**
DRME	**Dracevica, Mon**	**3.76**	**126**	*e*Pn	**Pn**	**13 52 09.2**	**+3.0**
DRME				*e*Sn	**Sn**	**13 52 53.8**	**+3.1**

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*NIED **20** 13:57:00,36°.20N×141°.50E,h23km,Mw3.9 Best double couple: M0:6.75000×10^14 NP1:φ=256.00000°,δ19.00000°, λ141.00000°. NP2:φ=24.00000°,δ78.00000°,λ75.00000°.*
*IDC **20** 13:57:30.1±0.9,36°.23N×141°.61E,h0km,mb3.9/9, mb1 4.0/12,mb1mx3.7/44,mbtmp3.9/12,ML3.6/3,MS3.0/5, Ms1 3.0/5,ms1mx2.7/45,Error ellipse: s-maj=24.2km s-min=17.4km az=92.0*
*ISCJB **20** 13:57:31.4±0.4,36°.24N±0°.03×141°.74E±0°.05,h26km, mb4.0/18,MS3.1/2,Error ellipse: s-maj=5.8km s-min=4.4km az=25.3*
*JMA **20** 13:57:33.7±0.2,36°.24N×141°.54E,h49km±4km,M3.6*
*NEIC **20** 13:57:34.5±1.3,36°.26N×141°.69E,h33km±7km,mb4.0/11, Error ellipse: s-maj=17.1km s-min=12.9km az=103.0*
ISC 20 13:57:33.0±0.8,36°.23N±0°.05×141°.68E±0°.07,h26km,n56, σ0s91/52,mb4.0/18,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.85**	**232**	P	**Pb**	**13 57 48.4**	**-0.7**
CHOJ				S	**Sb**	**13 57 59.6**	**-0.4**
JHYU	**Hitachinakayam**	**0.89**	**278**	P	**Pb**	**13 57 48.7**	**-1.1**
JIHU	**Itakohorinouch**	**0.97**	**255**	P	**Pn**	**13 57 50.3**	**-0.6**
JHO	**Hitachi**	**0.97**	**293**	P	**Pn**	**13 57 49.5**	**-1.5**
JFK	**Kawauchi**	**1.31**	**331**	P	**Pn**	**13 57 54.8**	**-0.8**
BSO1	**Boso 1**	**1.67**	**200**	P	**Pn**	**13 58 00.3**	**+0.2**
JFT	**Otama**	**1.68**	**321**	P	**Pn**	**13 58 01.0**	**+0.3**
BSO3	**Boso 3**	**1.71**	**214**	P	**Pn**	**13 58 01.5**	**+0.6**
JMM	**Marumori**	**1.78**	**337**	P	**Pn**	**13 58 01.9**	**-0.2**
JAG	**Ashikaga**	**1.81**	**277**	P	**Pn**	**13 58 01.4**	**-1.1**
JFY	**Yanaizu**	**1.97**	**307**	P	**Pn**	**13 58 05.1**	**+0.3**
JKT	**Katashina**	**2.03**	**286**	P	**Pn**	**13 58 05.5**	**-0.1**
MJAR	**Matsushiro Arr**	**2.81**	**277**	Pn	**Pn**	**13 58 16.5**	**+0.1**
5.1nm,0.3s,baz=117,slow=8.0,SNR=220							
MJAR				LR	LR	13 59 27.4	

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comp=Z,158nm,19.6s,baz=135,slow=43

MAJO	**Matsushiro**	**2.82**	**277**	*e*Pn	**Pn**	**13 58 17.3**	**+0.9**
MAJO				*e*Sn	**Sn**	**13 58 50.3**	**+0.8**
MAT	**Matsushiro**	**2.82**	**277**	P	**Pn**	**13 58 17.0**	**+0.6**
MAT				S	**Sn**	**13 58 49.8**	**+0.3**
MJB9	**Matsu-Tunnel**	**2.82**	**277**	*e*Pn	**Pn**	**13 58 17.3**	**+0.9**
MJB9				*e*Sn	**Sn**	**13 58 49.9**	**+0.2**
JHJ2	**Mitsune**	**3.47**	**207**	*e*Pn	**Pn**	**13 58 25.7**	**+0.4**
JHJ2				*e*Sn	**Sn**	**13 59 07.0**	**+1.5**
JHJ	**Hachijo jima 2**	**3.47**	**207**	Pn	**Pn**	**13 58 25.5**	**+0.1**
23nm,0.3s,baz=330,slow=22,SNR=39							
JHJ				Sn	**Sn**	**13 59 04.1**	**-1.6**
70nm,0.3s,baz=68,slow=23,SNR=10							
INU	**Inuyama**	**3.89**	**258**	*e*Pn	**Pn**	**13 58 33.0**	**+1.9**
ERM	**Erimo**	**5.89**	**11**	*e*Pn	**Pn**	**13 58 58.3**	**-0.3**
ASAJ	**Asahikawa**	**7.91**	**5**	Pn	**Pn**	**13 59 26.0**	**-0.3**
0.8nm,0.3s,baz=212,slow=14,SNR=10							
ASAJ				LR	LR	14 03 04.7	
comp=Z,58nm,20.7s,baz=266,slow=42							
USRK	**Ussuriysk Ar.**	**10.87**	**320**	LR	LR	14 04 01.5	
comp=Z,90nm,19.5s,baz=161,slow=36							
KSRS	**Korea Array**	**11.09**	**280**	Pn	Pn	14 00 15.4	+5.5
0.2nm,0.3s,baz=96,slow=14,SNR=6.9							
MA2	**Magadan**	**24.10**	**11**	LR	LR	14 12 04.1	
comp=Z,22nm,18.1s,baz=165,slow=36							
H11N2	**WAKE ISLAND Hy**	**27.56**	**120**	T	T	14 32 22.6	
baz=312,slow=75,SNR=14							
H11N1	**WAKE ISLAND Hy**	**27.57**	**120**	T	T	14 32 23.9	
baz=312,slow=75,SNR=15							
H11N3	**WAKE ISLAND Hy**	**27.58**	**120**	T	T	14 32 34.4	
baz=312,slow=75,SNR=17							
H11S1	**WAKE ISLAND Hy**	**28.25**	**122**	T	T	14 32 59.6	
baz=314,slow=75,SNR=20							
H11S3	**WAKE ISLAND Hy**	**28.25**	**122**	T	T	14 33 23.2	
baz=314,slow=75,SNR=17							
H11S2	**WAKE ISLAND Hy**	**28.27**	**122**	T	T	14 33 25.1	
baz=314,slow=75,SNR=19							
SONA0	**Songino Array**	**28.41**	**305**	*e*P	**P**	**14 03 25.7**	**+0.2**
SONM	**Songino Array**	**28.41**	**305**	P	**P**	**14 03 25.7**	**+0.2**
1.0nm,0.6s,baz=105,slow=8.1,SNR=5.0							
TIXI	**Tiksi**	**36.11**	**353**	*e*P	**P**	**14 04 30.4**	**-1.9**
1.9nm,1.0s							
CHTO	**Chiang Mai**	**41.31**	**257**	*e*P	**P**	**14 05 15.2**	**-1.4**
1.3nm,0.6s							
ZAA0	**Zalesovo Array**	**42.62**	**313**	*e*P	**P**	**14 05 26.8**	**-0.1**
3.6nm,0.7s							
ZAA1	**Zalesovo Array**	**42.62**	**313**	*e*P	**P**	**14 05 27.7**	**+0.8**
ZALV	**Zalesovo Beam**	**42.62**	**313**	P	**P**	**14 05 27.7**	**+0.8**
1.3nm,0.5s,baz=76,slow=5.7,SNR=5.9							
MK31	**Makanchi Array**	**44.73**	**303**	*e*P	**P**	**14 05 44.7**	**+0.7**
1.8nm,0.9s							
MK32	**Makanchi Array**	**44.73**	**303**	*e*P	**P**	**14 05 44.5**	**+0.5**
MKAR	**Makanchi Array**	**44.73**	**303**	P	**P**	**14 05 44.5**	**+0.5**
1.5nm,0.8s,baz=84,slow=8.6,SNR=14							
MAKZ	**Makanchi**	**44.94**	**303**	*e*P	**P**	**14 05 46.8**	**+1.1**
2.7nm,1.1s							
KURK	**Kurchatov**	**46.60**	**309**	*e*P	**P**	**14 05 58.9**	**+0.2**
3.3nm,0.8s							
KURBB	**Kurchatov Arra**	**46.67**	**309**	P	**P**	**14 05 59.2**	**0.0**
2.6nm,0.7s							
IMAR	**Indian Mountai**	**47.24**	**30**	*e*P	**P**	**14 06 02.6**	**-0.9**
ILAR	**Eielson Array**	**50.06**	**32**	P	**P**	**14 06 26.8**	**+1.6**
0.6nm,0.7s,baz=256,slow=6.0,SNR=9.6							
ILB	**Eielson Array**	**50.06**	**32**	*e*P	**P**	**14 06 26.8**	**+1.6**
0.9nm,0.7s							
AAK	**Ala-Archa**	**51.06**	**299**	LR	LR	14 29 53.3	
comp=Z,46nm,19.7s,baz=58,slow=38							
BRVK	**Borovoye**	**51.33**	**313**	*e*P	**P**	**14 06 35.5**	**+0.6**
2.2nm,1.0s							
INK	**Inuvik**	**55.01**	**27**	P	**P**	**14 07 03.2**	**+1.5**
0.9nm,0.7s,baz=320,slow=6.1,SNR=4.4							
WR1	**Warramunga Arr**	**56.29**	**188**	*e*P	**P**	**14 07 11.7**	**+0.2**
WRA	**Warramunga Arr**	**56.30**	**188**	P	**P**	**14 07 11.7**	**+0.2**
1.8nm,1.0s,baz=12,slow=8.8,SNR=3.6							
ABKAR	**Akbulak array**	**58.62**	**311**	*e*P	**P**	**14 07 28.0**	**+0.3**
1.8nm,0.6s							
AS31	**Alice Springs**	**60.02**	**188**	*e*P	**P**	**14 07 39.0**	**+1.5**
1.0nm,0.9s							
ASAR	**Alice Springs**	**60.02**	**188**	P	**P**	**14 07 39.0**	**+1.5**
0.2nm,0.6s,baz=5.7,slow=10,SNR=2.9							
FIA0	**FINESS Array S**	**69.62**	**332**	*e*P	**P**	**14 08 39.9**	**+0.2**
FINES	**FINESS Array B**	**69.62**	**332**	P	**P**	**14 08 39.9**	**+0.2**
2.0nm,0.8s,baz=2.2,slow=10,SNR=4.5							

KRSC 20 14:03:14.8±2.2,50°.33N×156°.87E,h132km±25km,ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.60**	**306**	*e*P	Pn	14 03 36.0	+1.4
SKR				*e*S	Sn	14 03 50.0	+0.4
ALID	**Alaid**	**1.00**	**303**	*e*P	Pn	14 03 37.9	-0.1
PAU	**Pauzhetka**	**1.14**	**358**	S	Sn	14 04 00.8	+3.1
KDTR	**Khodutka, Kamc**	**1.66**	**27**	*e*P	Pn	14 03 47.2	+2.4
KDTR				*e*S	Sn	14 04 09.7	+1.9
ASAK	**Asacha**	**2.15**	**17**	*e*P	Pn	14 03 52.8	+2.0
MTVR	**Mutnovka**	**2.31**	**20**	*e*P	Pn	14 03 54.1	+1.4
MTVR				*e*S	Sn	14 04 23.6	+1.8
RUS	**Russkaya**	**2.34**	**25**	*e*P	Pn	14 03 55.1	+2.1
RUS				*e*S	Sn	14 04 23.8	+1.4
APC	**Apacha**	**2.60**	**4**	*e*P	Pn	14 03 56.7	+0.4
PET	**Petropavlovsk**	**2.91**	**22**	*e*P	Pn	14 04 02.3	+2.0
PET				*e*S	Sn	14 04 37.4	+2.0
DALK	**Dalny**	**2.94**	**23**	*e*P	Pn	14 04 02.8	+2.1
DALK				*e*S	Sn	14 04 37.2	+1.1
UGLR	**Uglovaya**	**3.12**	**22**	*e*P	Pn	14 04 05.9	+2.8
AVH	**Avacha**	**3.16**	**21**	*e*P	Pn	14 04 06.2	+2.7
AVH				*e*S	Sn	14 04 40.8	-0.4
KOK	**Koryaka**	**3.16**	**20**	*e*P	Pn	14 04 06.5	+2.9
SMAR	**Somma**	**3.17**	**21**	*e*P	Pn	14 04 06.4	+2.6
KRER	**Koryakskii**	**3.20**	**21**	*e*P	Pn	14 04 06.6	+2.5
KRER				*e*S	Sn	14 04 44.5	+2.2
SDLR	**Sedlovina**	**3.20**	**22**	*e*P	Pn	14 04 06.4	+2.2
KRX	**Arik**	**3.23**	**19**	*e*P	Pn	14 04 06.8	+2.3
SPN	**Mys Shipunski**	**3.39**	**34**	*e*P	Pn	14 04 08.8	+2.3
SPN				*e*S	Sn	14 04 46.3	-0.2
GNL	**Ganaly**	**3.43**	**11**	*e*P	Pn	14 04 08.2	+1.1
MKZ	**Mys Kozlova**	**5.17**	**33**	*e*P	Pn	14 04 31.2	+1.2
MKZ				*e*S	Sn	14 05 26.4	-2.2
KBTR	**Krutoberegovo**	**6.88**	**29**	*e*P	Pn	14 04 52.7	-0.3

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*ISCJB **20** 14:14:43.5±1.0,42°.16N±0°.06×42°.72E±0°.06,h13km±16km, Error ellipse: s-maj=9.4km s-min=8.0km az=2.8*
*TIF **20** 14:14:44.0,42°.11N×42°.83E,h15km±4km*
*NORS **20** 14:14:45.1±0.0,42°.17N×42°.79E,h15km,MPVA3.2*
*DDA **20** 14:14:46.3,42°.10N×42°.23E,h8km±4km,ML2.7*
ISC 20 14:14:43.3±1.1,42°.12N±0°.04×42°.73E±0°.05,h14km±10km, n11,σ0s41/20,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKB	**Tkibuli**	**0.30**	**39**	P	**Pb**	**14 14 50.1**	**-0.5**
TKB				S	**Sb**	**14 14 54.9**	**-0.6**
ONI	**Oni**	**0.71**	**48**	P	**Pb**	**14 14 57.6**	**+0.1**
ONI				S	**Sb**	**14 15 07.4**	**+0.1**
AKH	**Akhalkalaki**	**0.91**	**141**	P	Pn	14 15 13.4	+12
BATM	**Batumi**	**0.93**	**237**	P	**Pb**	**14 15 00.8**	**-0.4**
BATM				S	**Sb**	**14 15 13.7**	**+0.2**
ZEI	**Tsey**	**1.09**	**52**	*e*Pg	**Pn**	**14 15 05.1**	**+0.7**
ZEI				*e*Sg	**Sn**	**14 15 19.2**	**-0.3**
DBOC	**Borcka**	**1.11**	**226**	*i* P	**Pg**	**14 15 04.5**	**-0.2**
DBOC				*i* S	**Sg**	**14 15 18.9**	**-0.3**
DBOC				IAML_P			
comp=Z,929nm,0.1s							
NEY	**Neytrino**	**1.13**	**360**	*e*Pg	**Pg**	**14 15 05.7**	**+0.5**
NEY				*e*Sg	**Sn**	**14 15 20.6**	**+0.2**
DAGI	**Agillar**	**1.21**	**211**	*i* P	**Pg**	**14 15 07.0**	**+0.4**
DAGI				*i* S	**Sn**	**14 15 21.6**	**-0.5**
DAGI				IAML_P			
comp=Z,163nm,0.1s							
DBAD	**Bademkaya**	**1.35**	**216**	*i* P	**Pb**	**14 15 08.3**	**0.0**
DBAD				*i* S	**Sn**	**14 15 25.4**	**-0.2**
DBAD				IAML_P			
comp=Z,773nm,0.1s							
LACR	**Lac**	**1.36**	**58**	*e*Pg	**Pg**	**14 15 09.1**	**-0.4**
LACR				*e*Sg	**Sg**	**14 15 27.4**	**+0.3**
SHA1	**Shidzhatmaz**	**1.62**	**358**	*e*Pg	**Pg**	**14 15 14.0**	**-0.5**
SHA1				*e*Sg	**Sg**	**14 15 35.6**	**0.0**

MAN 20 14:25:49.9,7°.33N×124°.87E,h1km,mb5.0,ML3.9,MS3.9, 3C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.58**	**19**	*e*P	Pg	14 26 00.8	-0.2
BUKP				*e*S	Sn	14 26 15.2	-0.3
DMPH	**Davao City--Mi**	**0.68**	**111⇑**	*e*P	Pb	14 26 03.9	-0.7
DMPH				*e*S	Sn	14 26 19.9	+2.0
SKMP	**Bagumbayan, Su**	**0.87**	**202**	*e*P	Pg	14 26 06.6	+0.1
SKMP				*e*S	Sn	14 26 22.4	-0.1
CGP	**Cagayan de Oro**	**1.13**	**351⇑**	*i*P	Pg	14 26 10.8	-0.9
CGP				*i* S	Sg	14 26 26.2	-0.1
GSPH	**General Santos**	**1.24**	**176**	*e*P	Pn	14 26 18.7	+4.2
MATI	**Mati**	**1.43**	**105**	*e*P	Pn	14 26 16.6	-0.4
MATI				*e*S	Sn	14 26 36.4	0.0
DDMP	**Don Marcelino,**	**1.48**	**145**	*e*P	Pn	14 26 17.4	-0.2
DDMP				*e*S	Sn	14 26 38.2	+0.6
BUTP	**Butuan**	**1.79**	**24**	*e*P	Pn	14 26 21.9	-0.1
BUTP				*e*S	Sb	14 26 46.5	0.0
DCPH	**Dipolog City**	**1.95**	**310⇑**	*e*P	Pg	14 26 31.4	+4.0
IPIL	**Ipil**	**2.33**	**281**	*e*P	Pn	14 26 29.8	+0.5
IPIL				*e*S	Sb	14 27 00.8	-1.1
SNPH	**Sibulan**	**2.57**	**321**	*e*P	Pb	14 26 35.8	-1.1
MSLP	**Maasin**	**2.79**	**360**	*e*P	Pn	14 26 36.8	+1.1
MSLP				*e*S	Sn	14 27 10.8	+0.9

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*ISCJB **20** 14:34:41.2±0.3,7°.47S±0°.03×128°.77E±0°.04,h150km, mb4.0/17,Error ellipse: s-maj=5.3km s-min=4.9km az=166.9*
*IDC **20** 14:34:41.8±1.6,7°.50S×128°.77E,h142km±16km,mb3.8/4, mb1 4.0/8,mb1mx3.6/37,mbtmp4.3/8,Error ellipse: s-maj=22.7km s-min=13.3km az=121.0*
*BJI **20** 14:34:42.3±0.0,7°.24S×128°.72E,h147km,mb4.6/5, mB4.9/5*
*NEIC **20** 14:34:43.2±2.4,7°.46S×128°.79E,h153km±8km,mb4.1/18, Error ellipse: s-maj=16.2km s-min=14.1km az=206.0*
*DJA **20** 14:34:44.2±0.5,8°.S±6°.×12°.9E±°.,h156km±7km,M4.6/7, mB5.0/3,mb4.7/7,MLv4.5/6,Mw(mB)4.4/3*
ISC 20 14:34:42.7±0.5,7°.50S±0°.05×128°.78E±0°.05,h150km,n50, σ1s80/55,mb4.1/17,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.55**	**101**	*e*Pn	**Pn**	**14 35 25.7**	**+1.2**
SAUI				*e*Sn	**Sn**	**14 35 56.6**	**0.0**
AAI	**Ambon**	**3.83**	**351**	P	**Pn**	**14 35 43.3**	**+2.5**
MSAI	**Masohi**	**4.12**	**2**	P	**Pn**	**14 35 47.9**	**+3.2**
SOEI	**Soe**	**4.99**	**243**	*e*Pn	**Pn**	**14 35 57.1**	**+0.9**
SOEI	**Soe**	**4.99**	**243**	P	**Pn**	**14 35 57.2**	**+1.0**
FAKI	**Fak Fak**	**5.71**	**37**	*e*Pn	**Pn**	**14 36 04.5**	**-1.2**
FAKI	**Fak Fak**	**5.71**	**37**	P	**Pn**	**14 36 08.8**	**+3.1**
51nm,0.5s,2μm0.2nm							
BATI	**Baumata**	**5.72**	**242**	P	**Pn**	**14 36 06.7**	**+0.9**
211nm,0.3s,baz=257,slow=0.7,SNR=273							
BATI				S	**Sn**	**14 37 09.4**	**-1.4**
59nm,0.3s,baz=327,slow=20,SNR=7.7							
BATI	**Baumata**	**5.72**	**242**	*e*Pn	**Pn**	**14 36 06.7**	**+0.9**
BATI				*e*Pn	**Pn**	**14 36 06.7**	**+0.9**
BATI				*e*Sn	**Sn**	**14 37 09.4**	**-1.4**
BATI	**Baumata**	**5.72**	**242**	P	**Pn**	**14 36 06.6**	**+0.8**
360nm,0.5s,5μm1.5nm							
MTN	**Manton Dam**	**5.80**	**157**	*e*Pn	**Pn**	**14 36 08.6**	**+1.8**
MMRI	**Maumere**	**6.57**	**260**	*e*Pn	**Pn**	**14 36 18.0**	**+0.9**
SIJI	**Sorong**	**7.04**	**21**	P	**Pn**	**14 36 23.3**	**0.0**
5.9nm,0.3s,baz=218,slow=22,SNR=31							
SIJI				S	**Sn**	**14 37 40.3**	**-2.0**
3.5nm,0.3s,baz=272,slow=23,SNR=9.0							
BAKI	**Biak**	**9.62**	**50**	P	**Pn**	**14 37 00.1**	**+2.3**
112nm,0.7s							
FITZ	**Fitzroy Crossi**	**10.97**	**196**	P	**Pn**	**14 37 13.2**	**-2.4**
2.0nm,0.3s,baz=11,slow=10,SNR=79							
FITZ				S	Sn	14 39 08.4	-8.6
3.5nm,0.3s,baz=25,slow=16,SNR=3.7							
WRAB	**Tennant Creek**	**13.49**	**157**	*e*Pn	Pn	14 37 43.2	-5.1
WRAB				*e*Sn	Sn	14 40 08.9	-8.9
WRA	**Warramunga Arr**	**13.50**	**157**	P	**Pn**	**14 37 46.8**	**-1.6**
0.9nm,0.3s,baz=329,slow=14,SNR=29							
WRA				S	Sn	14 40 08.2	-10
6.2nm,0.3s,baz=322,slow=22,SNR=15							
WR1	**Warramunga Arr**	**13.50**	**157**	*e*Pn	**Pn**	**14 37 46.8**	**

TEZP				IAML			15 00 46.1
	comp=N,207nm,0.3s						
TEZP				IAML			15 00 46.5
	comp=E,272nm,0.4s						
GUWA	**GUWAHATI**	**3.61**	**317**	*e*P	**Pn**	**15 00 09.7**	**+0.6**
GUWA				*e*S	**Sn**	**15 00 48.6**	**-2.2**
GUWA				IAML		15 00 49.6	
	comp=N,78nm,0.3s						
GUWA				IAML		15 00 51.7	
	comp=E,96nm,0.3s						
ZIRO	**ZIRO**	**3.96**	**352**	*e*P	Pn	15 00 20.2	+6.2
ZIRO				*e*S	**Sn**	**15 00 58.2**	**-1.3**
ZIRO				IAML		15 01 00.7	
	comp=E,106nm,0.2s						
ZIRO				IAML		15 01 00.8	
	comp=N,113nm,0.1s						
TURI	**Tura**	**4.23**	**298**	*e*P	**Pn**	**15 00 19.8**	**+2.3**
TURI				*e*S	**Sn**	**15 01 05.8**	**0.0**
TURI				IAML		15 01 08.5	
	comp=N,273nm,0.7s						
TURI				IAML		15 01 10.1	
	comp=E,290nm,0.6s						
TAWA	**Tawang**	**4.63**	**330**	*e*P	**Pn**	**15 00 24.5**	**+1.5**
TAWA				*e*S	**Sn**	**15 01 13.9**	**-2.0**
DHUB	**DHUBRI**	**4.72**	**302**	*e*P	**Pn**	**15 00 25.2**	**+1.2**
DHUB				*e*S	**Sn**	**15 01 14.9**	**-2.8**
DHUB				IAML		15 01 18.8	
	comp=N,144nm,0.1s						
DHUB				IAML		15 01 19.4	
	comp=E,120nm,0.5s						
JIRN	**Jiri**	**8.49**	**300**	*e*P	**Pn**	**15 01 18.0**	**+2.4**
	comp=E,18nm,0.2s						
GUN	**Gumba**	**8.85**	**301**	*e*P	**Pn**	**15 01 22.4**	**+1.9**
	comp=E,21nm,0.4s						
PKI	**Pulchoki**	**9.08**	**298**	*e*P	**Pn**	**15 01 25.6**	**+2.0**
	comp=E,9.8nm,0.4s						
PKIN	**Phulchoki**	**9.09**	**298**	*e*P	**Pn**	**15 01 25.7**	**+2.0**
	comp=E,6.4nm,0.3s						
KKN	**Kakani**	**9.28**	**299**	*e*P	**Pn**	**15 01 28.2**	**+2.1**
	comp=E,7.3nm,0.2s						
DMN	**Daman**	**9.34**	**297**	*e*P	**Pn**	**15 01 29.0**	**+1.9**
	comp=E,4.6nm,0.2s						
KOLN	**Koldanda**	**10.64**	**295**	*e*P	**Pn**	**15 01 45.5**	**+0.8**
	comp=E,5.0nm,0.2s						
DANN	**Dangsing**	**10.73**	**298**	*e*P	**Pn**	**15 01 46.9**	**+0.9**
	comp=E,10nm,0.5s						
PYUN	**Piuthan**	**11.26**	**296**	*e*P	**Pn**	**15 01 53.8**	**+0.7**
	comp=E,7.0nm,0.5s						
MKAR	**Makanchi Array**	**25.14**	**340**	P	P	15 04 38.5	+7.7
	comp=E,0.3nm,0.5s,baz=132,slow=9.0,SNR=3.6						
WRA	**Warramunga Arr**	**58.17**	**135**	P	**P**	**15 08 57.7**	**-1.1**
	comp=E,0.5nm,0.4s,baz=315,slow=9.2,SNR=13						
ASAR	**Alice Springs**	**60.61**	**138**	P	**P**	**15 09 14.6**	**-1.0**
	comp=E,0.5nm,0.5s,baz=320,slow=6.7,SNR=21						

IDC ***20*** *15:11:06.7±1.2,23°.47N×121°.12E,h0km,mb3.6/5,*
mb1 3.7/6,mb1mx3.4/37,mbtmp3.6/6,ML3.3/1,MS2.8/1,
Ms1 2.8/1,ms1mx2.5/21,Error ellipse: s-maj=46.3km
s-min=24.0km az=66.0
JMA ***20*** *15:11:07.7,23°.87N×121°.55E,h0km,M3.3*
ISCJB ***20*** *15:11:08.8±0.2,23°.900N±0°.009×121°.53E±0°.01,*
h10km±1km,mb3.4/5,Error ellipse: s-maj=2.0km
s-min=1.3km az=30.8
TAP ***20*** *15:11:08.9,23°.91N×121°.48E,h15km,ML4.1,B*
ASIES ***20*** *15:11:08.5,23°.91N×121°.47E,h18km,MW3.4*
BJI ***20*** *15:11:12.8±0.0,24°.20N×121°.17E,h20km,ML3.9/1,*
Ms3.9/1,Ms7 3.8/1
ISC 20 15:11:08.8±0.9,23°.91N±0°.01×121°.49E±0°.02,h13km±6km,
n150,σ0°.84/232,mb3.4/5,10C-31D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.10**	**210**	⇑*i*P			**Pb**	**15 11 12.4**	**-0.3**
	baz=200								
ESL				*i*S			**Sb**	**15 11 14.6**	**-0.7**
	baz=200								
HWA	**Hwalien**	**0.13**	**56**	P			**Pb**	**15 11 13.4**	**+0.3**
	baz=62								
HWA				S			**Sb**	**15 11 16.2**	**+0.3**
	baz=62								
TWD	**Chiawan**	**0.20**	**29**	⇑*i*P			**Pb**	**15 11 13.9**	**-0.4**
	baz=27								
TWD				S			**Sg**	**15 11 16.9**	**+0.7**
	baz=27								
EGFH	**Guangfu**	**0.24**	**194**	P			**Pb**	**15 11 14.4**	**-0.7**
	baz=197								
EGFH				S			**Sb**	**15 11 18.1**	**-1.1**
	baz=197								
NACB	**Ninganchiao**	**0.28**	**20**	⇑P			**Pb**	**15 11 15.0**	**-0.8**
	baz=21								
NACB				S			**Sg**	**15 11 18.8**	**+0.1**
	baz=21								
OWD	**Renai**	**0.29**	**280**	⇓P			**Pb**	**15 11 15.2**	**-0.7**
	baz=283								
OWD				S			**Sb**	**15 11 19.3**	**-1.5**
	baz=283								
ETLH	**Xiulin Townshi**	**0.30**	**358**	⇓P			**Pb**	**15 11 15.4**	**-0.7**
	baz=360								
ETLH				S			**Sg**	**15 11 19.6**	**+0.4**
	baz=360								
WHF	**Hehuan Shan**	**0.32**	**319**	⇓*i*P			**Pb**	**15 11 15.7**	**-0.8**
	baz=312								
WHF				S			**Sg**	**15 11 20.1**	**+0.1**
	baz=312								
CHGB	**Renai**	**0.33**	**298**	⇓P			**Pb**	**15 11 16.1**	**-0.6**
	baz=302								
CHGB				S			**Sb**	**15 11 20.7**	**-1.2**
	baz=302								
VWDT	**VWDT**	**0.35**	**245**	⇓P			**Pb**	**15 11 16.7**	**-0.2**
	baz=243								
VWDT				S			**Sb**	**15 11 21.1**	**-1.3**
	baz=243								
HGSD	**Ruisui**	**0.42**	**188**	⇑P			**Pb**	**15 11 17.8**	**-0.2**
	baz=193								
HGSD				*e*S			**Sb**	**15 11 24.4**	**+0.1**
	baz=193								
EHY	**Hungye**	**0.43**	**201**	⇓*i*P			**Pg**	**15 11 16.8**	**-0.5**
	baz=192								
EHY				*e*S			**Sg**	**15 11 23.4**	**+0.4**
	baz=192								
TWT	**Tachien**	**0.45**	**320**	⇓*i*P			**Pb**	**15 11 18.5**	**-0.2**
	baz=313								
TWT				S			**Sb**	**15 11 24.6**	**-0.8**
	baz=313								
TDCB	**Techi**	**0.46**	**319**	⇓P			**Pb**	**15 11 18.5**	**-0.4**
	baz=313								
TDCB				S			**Sg**	**15 11 23.8**	**-0.3**
	baz=313								
SSLB	**Suanglung**	**0.51**	**257**	⇓P			**Pb**	**15 11 18.9**	**-0.7**
	baz=264								
SSLB				S			**Sg**	**15 11 25.1**	**-0.4**
	baz=264								
NNSB	**Datong**	**0.53**	**349**	⇓P			**Pb**	**15 11 19.6**	**-0.4**
	baz=350								
NNSB				S			**Sb**	**15 11 26.5**	**-1.2**
	baz=350								
DPDB	**Guoxing**	**0.53**	**284**	P			**Pb**	**15 11 19.6**	**-0.4**
	baz=283								
DPDB				S			**Sb**	**15 11 26.3**	**-1.3**
	baz=283								
SMLT	**Sun Moon Lake**	**0.54**	**268**	⇓*i*P			**Pb**	**15 11 19.8**	**-0.4**
	baz=274								
SMLT				*i*S			**Sb**	**15 11 27.2**	**-0.8**
	baz=274								
YULB	**Yu-li**	**0.54**	**199**	⇓*e*P			**Pg**	**15 11 18.4**	**-1.0**
	baz=190								
YULB				*e*S			**Sg**	**15 11 26.8**	**+0.2**
	baz=190								
NNS	**Nan Shan**	**0.54**	**349**	⇓*i*P			**Pb**	**15 11 19.9**	**-0.4**
	baz=349								
NNS				S			**Sb**	**15 11 26.9**	**-1.1**
	baz=349								
ENA	**Nanau**	**0.57**	**24**	⇑P			**Pg**	**15 11 19.9**	**0.0**
	baz=25								
ENA				S			**Sg**	**15 11 27.8**	**+0.3**
	baz=25								
NANB	**Nanao**	**0.57**	**24**	⇑P			**Pg**	**15 11 19.9**	**-0.1**
	baz=25								
NANB				S			**Sg**	**15 11 27.4**	**-0.1**
	baz=25								
TWF1	**Yuli**	**0.58**	**198**	P			**Pb**	**15 11 20.3**	**-0.5**
	baz=196								
TWF1				S			**Sb**	**15 11 28.2**	**-0.7**
	baz=196								
TYC	**Yuchr**	**0.58**	**270**	⇓*i*P			**Pb**	**15 11 20.3**	**-0.5**
	baz=277								
TYC				S			**Sb**	**15 11 27.8**	**-1.2**
	baz=277								
WHP	**Taichung City**	**0.62**	**307**	⇓*i*P			**Pb**	**15 11 21.3**	**-0.3**
	baz=301								
WHP				S			**Sb**	**15 11 29.9**	**-0.3**
	baz=301								
WHYT	**Xinyi Township**	**0.62**	**250**	P			**Pb**	**15 11 21.5**	**0.0**
	baz=254								
WHYT				*e*S			**Sb**	**15 11 29.5**	**-0.6**
	baz=254								
WJS	**Zhushan**	**0.70**	**263**	⇓*e*P			**Pn**	**15 11 23.3**	**-1.1**
	baz=265								
WJS				*e*S			**Sn**	**15 11 33.9**	**-1.3**
	baz=265								
ENTT	**Nioudou**	**0.73**	**5**	⇓P			**Pb**	**15 11 23.2**	**-0.3**
	baz=6.0								
ENTT				*e*S			**Sb**	**15 11 32.8**	**-0.7**
	baz=6.0								
WNT	**Mingjian**	**0.74**	**268**	⇓P			**Pn**	**15 11 24.4**	**-0.6**
	baz=269								
WNT				S			**Sn**	**15 11 35.0**	**-1.0**
	baz=269								
ALS	**Alishan**	**0.74**	**238**	⇓*i*P			**Pb**	**15 11 23.8**	**0.0**
	baz=226								
ALS				S			**Sb**	**15 11 33.2**	**-0.7**
	baz=226								
YHNB	**Yeheng**	**0.77**	**352**	⇓P			**Pb**	**15 11 23.9**	**-0.1**
	baz=344								
YHNB				S			**Sg**	**15 11 33.5**	**-0.3**
	baz=344								
TWC	**Suao**	**0.77**	**25**	*e*P			**Pg**	**15 11 23.3**	**-0.5**
	baz=20								
TWC				*e*S			**Sg**	**15 11 33.6**	**-0.3**
	baz=20								
NSK	**Sanguang**	**0.78**	**351**	⇓P			**Pb**	**15 11 24.2**	**0.0**
	baz=344								
NSK				S			**Sg**	**15 11 33.6**	**-0.4**
	baz=344								
TWQ1	**Liyutan**	**0.79**	**304**	⇓P			**Pn**	**15 11 24.9**	**-0.8**
	baz=304								
TWQ1				*e*S			**Sn**	**15 11 36.6**	**-0.8**
	baz=304								
CHN5	**Tsauling**	**0.81**	**248**	⇓*i*P			**Pn**	**15 11 25.4**	**-0.6**
	baz=237								
CHN5				S			**Sn**	**15 11 37.2**	**-0.6**
	baz=237								
CHKT	**Chengkung**	**0.81**	**188**	*e*P			**Pg**	**15 11 23.6**	**-0.9**
	baz=186								
CHKT				S			**Sb**	**15 11 35.9**	**+0.3**
	baz=186								
TWE	**Neicheng**	**0.83**	**11**	*e*P			**Pb**	**15 11 24.4**	**-0.6**
	baz=13								
TWE				S			**Sg**	**15 11 35.5**	**-0.2**
	baz=13								
ELDTW	**Lidau**	**0.83**	**211**	*e*P			**Pg**	**15 11 24.7**	**-0.3**
	baz=219								
ELDTW				*e*S			**Sg**	**15 11 35.1**	**-0.8**
	baz=219								
NSY	**Sanyi**	**0.84**	**307**	P			**Pn**	**15 11 26.4**	**+0.1**
	baz=318								
NSY				S			**Sn**	**15 11 37.5**	**-1.1**
	baz=318								
NSTT	**Nanjuang**	**0.85**	**328**	⇓*i*P			**Pn**	**15 11 25.6**	**-0.9**
	baz=329								
NSTT				S			**Sb**	**15 11 36.1**	**-0.7**
	baz=329								
LIOB	**Emei**	**0.85**	**330**	⇓P			**Pn**	**15 11 26.0**	**-0.6**
	baz=330								
LIOB				S			**Sb**	**15 11 36.9**	**0.0**
	baz=330								
SLBB	**Yuanshan**	**0.85**	**9**	*e*P			**Pb**	**15 11 25.0**	**-0.5**
	baz=9.0								
SLBB				*e*S			**Sg**	**15 11 36.7**	**+0.2**
	baz=9.0								
EOS1	**EOS1**	**0.87**	**42**	*e*P			**Pn**	**15 11 26.2**	**-0.5**
	baz=31								
EOS1				*e*S			**Sn**	**15 11 39.8**	**+0.6**
	baz=31								
WCHH	**Zhanghua**	**0.87**	**282**	P			**Pn**	**15 11 26.8**	**0.0**
	baz=281								
WCHH				*e*S			**Sn**	**15 11 39.8**	**+0.5**
	baz=281								
WGK	**Gukeng**	**0.88**	**256**	⇓P			**Pn**	**15 11 26.7**	**-0.2**
	baz=254								
WGK				*e*S			**Sn**	**15 11 39.2**	**-0.3**
	baz=254								
ILA	**Ilan**	**0.89**	**15**	*e*P			**Pg**	**15 11 25.8**	**-0.2**
	baz=16								
ILA				*e*S			**Sn**	**15 11 39.1**	**-0.6**
	baz=16								
WDJ	**Dajia District**	**0.89**	**300**	*e*P			**Pn**	**15 11 27.3**	**+0.2**
	baz=299								
WDJ				*e*S			**Sn**	**15 11 40.3**	**+0.4**
	baz=299								
NMLH	**Miaoli**	**0.90**	**315**	⇓*e*P			**Pn**	**15 11 27.4**	**+0.3**
	baz=324								
NMLH				*e*S			**Sn**	**15 11 38.8**	**-1.2**
	baz=324								
PTSB	**Yuanli**	**0.90**	**307**	⇓P			**Pn**	**15 11 27.2**	**0.0**
	baz=307								
PTSB				*e*S			**Sn**	**15 11 39.9**	**-0.1**
	baz=307								
WDLH	**Douliu**	**0.90**	**256**	*e*P			**Pn**	**15 11 26.9**	**-0.2**
	baz=255								
WDLH				*e*S			**Sn**	**15 11 39.3**	**-0.7**
	baz=255								
WLTB	**Daxi**	**0.97**	**347**	*e*P			**Pn**	**15 11 28.1**	**0.0**
	baz=355								
WLTB				*e*S			**Sn**	**15 11 40.4**	**-1.3**
	baz=355								
CHN4	**Tsaushan**	**0.99**	**236**	⇑P			**Pn**	**15 11 28.6**	**+0.1**
	baz=223								
CHN4				S			**Sn**	**15 11 43.1**	**+0.8**
	baz=223								
TPUB	**Ta-pu**	**0.99**	**233**	⇑P			**Pn**	**15 11 28.4**	**-0.1**
	baz=219								
TPUB				*e*S			**Sn**	**15 11 42.3**	**-0.1**
	baz=219								
NTC	**Toucheng**	**0.99**	**18**	*e*P			**Pb**	**15 11 27.2**	**-0.7**
	baz=20								
SBCB	**Hsinchu**	**1.00**	**333**	⇓P			**Pn**	**15 11 29.1**	**+0.6**
	baz=325								
SBCB				S			**Sn**	**15 11 42.8**	**+0.3**
	baz=325								
CHN2	**Minshiung**	**1.00**	**248**	P			**Pn**	**15 11 29.0**	**+0.4**
	baz=260								
CHN2				S			**Sn**	**15 11 43.3**	**+0.7**
	baz=260								
HSN	**Hsinchu**	**1.01**	**332**	*e*P			**Pn**	**15 11 29.2**	**+0.5**
	baz=342								
HSN				*e*S			**Sn**	**15 11 43.3**	**+0.5**
	baz=342								
RLNB	**Erlin**	**1.03**	**269**	P			**Pn**	**15 11 29.1**	**+0.1**
	baz=269								
RLNB				S			**Sn**	**15 11 43.4**	**0.0**
	baz=269								
WTP	**Ta-pu**	**1.04**	**231**	⇑*i*P			**Pn**	**15 11 29.0**	**-0.1**
	baz=229								
WTP				*e*S			**Sn**	**15 11 43.3**	**-0.3**
	baz=229								
NHDH	**Xindian Distri**	**1.05**	**2**	*e*P			**Pg**	**15 11 29.0**	**-0.1**
	baz=2.0								
NHDH				*e*S			**Sg**	**15 11 42.4**	**-0.4**
	baz=2.0								
CHY	**Chiayi**	**1.06**	**248**	*e*P			**Pg**	**15 11 29.2**	**0.0**
	baz=259								
CHY				*e*S			**Sn**	**15 11 45.1**	**+1.2**
	baz=259								
TATO	**Taipei**	**1.06**	**360**	P			**Pn**	**15 11 28.9**	**-0.6**
	baz=7.0								
TATO				*e*S			**Sg**	**15 11 42.8**	**-0.4**
	baz=7.0								
TWA	**Mucha**	**1.07**	**5**	P			**Pn**	**15 11 29.1**	**-0.5**
	baz=358								
TWA				*e*S			**Sg**	**15 11 43.1**	**-0.4**
	baz=358								
NCUH	**Zhongli**	**1.09**	**345**	*e*P			**Pg**	**15 11 30.6**	**+0.7**
	baz=4.0								
NCU	**National Centr**	**1.09**	**345**	P			**Pg**	**15 11 30.6**	**+0.7**
	baz=346								
NCU				*e*S			**Sn**	**15 11 46.5**	**+1.6**
	baz=346								
TIPB	**Shuangxi**	**1.10**	**16**	*e*P			**Pb**	**15 11 28.6**	**-1.2**
	baz=17								
TIPB				*e*S			**Sb**	**15 11 42.8**	**-1.4**
	baz=17								
WTCT	**Ta-ch'eng**	**1.11**	**268**	*e*P			**Pg**	**15 11 29.5**	**-0.7**
	baz=267								
WTCT				*e*S			**Sn**	**15 11 46.0**	**+0.9**
	baz=267								
TWK	**Hsinying**	**1.12**	**236**	P			**Pg**	**15 11 30.2**	**-0.1**
	baz=234								
TAP	**Taipei**	**1.13**	**1**	*e*P			**Pg**	**15 11 30.0**	**-0.6**
	baz=1.0								
TAP				*e*S			**Sn**	**15 11 44.9**	**-0.9**
	baz=1.0								
CHN1	**Nanshi**	**1.14**	**231**	⇓P			**Pg**	**15 11 30.7**	**0.0**
	baz=229								
CHN1				S			**Sg**	**15 11 47.0**	**+1.5**
	baz=229								
SNST	**Tainan City**	**1.14**	**233**	*e*P			**Pg**	**15 11 30.8**	**+0.1**
	baz=231								
SNST				*e*S			**Sg**	**15 11 46.7**	**+1.2**
	baz=231								
TWG	**Pinlang**	**1.15**	**200**	*e*P			**Pn**	**15 11 29.8**	**-0.7**
	baz=185								
TWGBT	**Beinan**	**1.15**	**199**	*e*P			**Pb**	**15 11 30.3**	**-0.2**
	baz=185								
WMLT	**Mailiao**	**1.17**	**265**	*e*P			**Pg**	**15 11 31.4**	**+0.2**
	baz=265								
SGST	**Jiashian**	**1.17**	**226**	*e*P			**Pg**	**15 11 31.3**	**0.0**
	baz=224								
SGST				S			**Sg**	**15 11 47.4**	**+0.8**
	baz=224								
WLGB	**Puzi**	**1.17**	**249**	*e*P			**Pg**	**15 11 31.2**	**-0.1**
	baz=260								
WLGB				S			**Sg**	**15 11 48.4**	**+1.8**
	baz=260								
TWB1	**Santiao Chiao**	**1.19**	**22**	*e*P			**Pb**	**15 11 30.8**	**-0.4**
	baz=14								
TTN	**Taitung**	**1.19**	**195**	*e*P			**Pg**	**15 11 31.5**	**-0.2**
	baz=175								
NWF	**Wu-fen Shan**	**1.19**	**13**	*e*P			**Pb**	**15 11 31.1**	**-0.1**
	baz=13								
NWF				*e*S			**Sn**	**15 11 46.8**	**-0.6**
	baz=13								
WFSB	**Wu-fen Shan**	**1.19**	**13**	*e*P			**Pb**	**15 11 31.0**	**-0.2**
	baz=26								
TWS1	**Kuangyinshan**	**1.19**	**357**	*e*P			**Pg**	**15 11 31.4**	**-0.4**
	baz=10.0								
TWS1				*e*S			**Sg**	**15 11 48.7**	**+1.4**
	baz=10.0								
WSF	**Szhu**	**1.19**	**257**	*e*P			**Pg**	**15 11 31.6**	**-0.2**
	baz=256								
WSF				*e*S			**Sg**	**15 11 48.6**	**+1.3**
	baz=256								
SLGT	**Liugui**	**1.19**	**221**	*e*P			**Pg**	**15 11 31.6**	**-0.2**
	baz=213								
SLGT				*e*S			**Sg**	**15 11 48.2**	**+0.9**
	baz=213								
YM01	**YM01**	**1.24**	**3**	*e*P			**Pb**	**15 11 31.5**	**-0.5**
	baz=6.0								
YM04	**YM04**	**1.24**	**2**	*e*P			**Pg**	**15 11 32.1**	**-0.6**
	baz=5.0								
YM10	**YM10**	**1.25**	**3**	*e*P			**Pn**	**15 11 31.6**	**-0.5**
	baz=6.0								
NTST	**Danshui**	**1.25**	**358**	*e*P			**Pg**	**15 11 32.3**	**-0.6**
	baz=15								
YM05	**YM05**	**1.25**	**3**	*e*P			**Pb**	**15 11 32.2**	**-0.1**
	baz=6.0								
YM03	**YM03**	**1.27**	**2**	P			**Pg**	**15 11 32.6**	**-0.6**
	baz=2.0								
YM03				S			**Sg**	**15 11 49.6**	**-0.1**
	baz=2.0								
ANP	**Anpu**	**1.27**	**1**	*e*P			**Pg**	**15 11 32.8**	**-0.5**
	baz=25								
YM08	**YM08**	**1.28**	**4**	*e*P			**Pb**	**15 11 32.6**	**-0.2**
	baz=7.0								
CHN8	**Yiju**	**1.30**	**245**	*e*P			**Pg**	**15 11 33.3**	**-0.5**
	baz=243								
CHN8				*e*S			**Sg**	**15 11 51.2**	**+0.5**
	baz=243								
TWY	**Chenhua**	**1.37**	**4**	*e*P			**Pg**	**15 11 35.3**	**+0.2**
	baz=7.0								
ECL	**Taimali**	**1.39**	**201**	*e*P			**Pb**	**15 11 34.3**	**-0.4**
	baz=184								
SCLT	**Jiali**	**1.40**	**239**	*e*P			**Pb**	**15 11 34.3**	**-0.4**
	baz=237								
SSD	**Sandimen**	**1.40**	**215**	*e*P			**Pb**	**15 11 34.7**	**-0.1**
	baz=226								
JYNG	**Yonagunijimaku**	**1.44**	**67**	P			**Pb**	**15 11 34.7**	**-0.7**
JYNG				S			**Sb**	**15 11 53.3**	**-0.3**
TAI1	**Yung-k'ang**	**1.44**	**234**	*e*P			**Pg**	**15 11 37.1**	**+0.5**
	baz=232								
TWM1	**Shoushan**	**1.46**	**223**	⇓*e*P			**Pg**	**15 11 36.3**	**-0.5**
	baz=221								
SGLT	**Jiouru**	**1.49**	**218**	*e*P			**Pg**	**15 11 37.5**	**0.0**
	baz=216								
YOJ	**Yonaguni jima**	**1.50**	**68**	*e*P			**Pn**	**15 11 34.8**	**-0.5**
	baz=68								
YOJ	**Yonaguni jima**	**1.50**	**68**	P			**Pn**	**15 11 34.8**	**-0.5**
YOJ				S			**Sn**	**15 11 54.2**	**-0.5**
MASBT	**Mashibuluo**	**1.51**	**212**	*e*P			**Pb**	**15 11 35.8**	**-0.9**
	baz=195								
SNJT	**Kaohsiung City**	**1.56**	**223**	*e*P			**Pb**	**15 11 37.0**	**-0.6**
	baz=221								
EAST	**Anshuo**	**1.63**	**201**	*e*P			**Pb**	**15 11 38.4**	**-0.4**
	baz=188								
TAW	**Tawu**	**1.64**	**200**	*e*P			**Pb**	**15 11 37.7**	**-1.1**
	baz=186								
SSPT	**Xinbi**	**1.65**	**211**	*e*P			**Pb**	**15 11 38.0**	**-1.1**
	baz=209								
SCZT	**Fangliau**	**1.72**	**208**	*e*P			**Pb**	**15 11 39.4**	**-0.9**
	baz=205								
SCZT				*e*S			**Sb**	**15 12 02.1**	**+0.2**
	baz=205								
PCYT	**Pengchaiyu**	**1.80**	**17**	*e*P			**Pb**	**15 11 40.7**	**-0.9**
	baz=21								
WDGT	**Dungji**	**1.80**	**249**	P			**Pb**	**15 11 39.8**	**-1.8**
	baz=233								
WDGT				S			**Sb**	**15 12 03.2**	**-0.9**
	baz=233								
PHUB	**P'eng-hu**	**1.80**	**258**	P			**Pn**	**15 11 39.7**	**+0.2**
	baz=257								
PHUB				S			**Sb**	**15 12 03.5**	**-0.6**
	baz=257								
PNG	**Penghu**	**1.81**	**260**	P			**Pn**	**15 11 39.8**	**+0.2**
	baz=258								
PNG				*e*S			**Sn**	**15 12 02.2**	**-0.2**
	baz=258								
WLCH	**Liuqiu**	**1.85**	**214**	*e*P			**Pg**	**15 11 44.5**	**+0.1**
	baz=230								
LAY	**Lan-yu**	**1.86**	**178**	*e*P			**Pn**	**15 11 37.5**	**-2.9**
	baz=165								
TWP	**Hsiaoliuchiu**	**1.87**	**214**	*e*P			**Pg**	**15 11 45.5**	**+0.9**
	baz=230								
VCHM	**Qimei**	**2.02**	**250**	*e*P			**Pn**	**15 11 42.5**	**0.0**
	baz=232								
VCHM				*e*S			**Sb**	**15 12 08.3**	**-1.9**
	baz=232								
TWK1	**Hengchun**	**2.05**	**198**	*e*P			**Pb**	**15 11 44.0**	**-1.9**
	baz=187								
TWKBT	**Hengchun**	**2.05**	**198**	*e*P			**Pb**	**15 11 44.1**	**-1.9**
	baz=187								
TSEB	**Hengchuen, Pin**	**2.07**	**195**	*e*P			**Pn**	**15 11 43.6**	**+0.3**
	baz=181								
IRIF	**Iriomote-

ZPLA	**Ao Xicun**	**3.42**	**271**	*eP*	**Pn**	**15 12 02.0**	**+0.1**
	baz=270						
ZZJH	**Jiuhuzhen**	**3.57**	**280**	*eP*	**Pn**	**15 12 04.0**	**+0.1**
	baz=280						
JMJ	**Miyako jima 2**	**3.58**	**75**	*eP*	**Pn**	**15 12 06.6**	**+2.5**
	baz=68						
VDOS	**Pratas Island**	**5.44**	**235**	*eP*	**Pn**	**15 12 30.1**	**+0.4**
	baz=227						
KSRS	**Korea Array**	**14.59**	**21**	Pn	**P**	**15 14 41.0**	**-0.3**
	0.1nm,0.3s,baz=199,slow=11,SNR=4.5						
KSRS				LR	LR	15 20 47.8	
	comp=Z,30nm,18.1s,baz=140,slow=38						
SONM	**Songino Array**	**26.73**	**337**	P	**P**	**15 16 50.2**	**+2.0**
	0.3nm,0.3s,baz=154,slow=7.9,SNR=3.3						
MKAR	**Makanchi Array**	**38.73**	**316**	P	**P**	**15 18 33.2**	**+0.5**
	1.0nm,0.7s,baz=111,slow=9.2,SNR=11						
H11N1	**WAKE ISLAND Hy 42.22**		**87**	T	T	16 04 04.9	
	baz=283,slow=75,SNR=5.3						
H11N2	**WAKE ISLAND Hy 42.22**		**87**	T	T	16 04 04.5	
	baz=283,slow=75,SNR=7.3						
H11N3	**WAKE ISLAND Hy 42.24**		**87**	T	T	16 04 07.9	
	baz=283,slow=75,SNR=4.5						
H11S3	**WAKE ISLAND Hy 42.35**		**88**	T	T	16 04 09.4	
	baz=284,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy 42.35**		**88**	T	T	16 04 10.0	
	baz=284,slow=75,SNR=9.4						
H11S2	**WAKE ISLAND Hy 42.36**		**88**	T	T	16 04 13.4	
	baz=284,slow=75,SNR=7.3						
KURBB	**Kurchatov Arra**	**42.50**	**320**	P	**P**	**15 19 04.5**	**+0.8**
	0.3nm,0.6s,baz=112,slow=9.4,SNR=4.6						
WRA	**Warramunga Arr**	**45.35**	**163**	P	**P**	**15 19 24.1**	**-2.8**
	0.8nm,0.8s,baz=345,slow=11,SNR=4.1						
ILAR	**Eielson Array**	**69.33**	**27**	P	**P**	**15 22 19.4**	**+3.6**
	0.2nm,0.7s,baz=293,slow=9.2,SNR=5.4						

*ISCJB **20** 15:29:01.8±1.4, 13°.48N±0°.09×90°.81W±0°.08, h38km, Error ellipse: s-maj=15.2km s-min=8.0km az=40.2*
*GCG **20** 15:29:02.9±0.6, 13°.64N×90°.87W, h28km±4km, MD3.9*
*UCR **20** 15:29:03.4±1.5, 13°.63N×90°.72W, h35km±999km, MD3.5, ML3.6*
*SNET **20** 15:29:04.6±1.0, 13°.74N×90°.62W, h51km±18km, ML3.6*
ISC 20 15:29:02.1±2.4, 13°.5N±0°.1×90°.82W±0°.09, h38km, n27, σ0s67/31, 11C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.76**	**29**	*eP*	**Pn**	**15 29 16.1**	**-0.4**
IXG	**Ixpaco**	**0.76**	**29**	*eP*	**Pn**	**15 29 16.1**	**-0.4**
PCG	**Pacaya**	**0.90**	**13**	⇑*eP*	**Pn**	**15 29 18.3**	**-0.2**
PCG	**Pacaya**	**0.90**	**13**	⇑*eP*	**Pn**	**15 29 18.3**	**-0.2**
FUG	**Fuego 3**	**0.94**	**359**	*eP*	**Pn**	**15 29 18.6**	**-0.3**
FUG	**Fuego 3**	**0.94**	**359**	*eP*	**Pn**	**15 29 18.6**	**-0.3**
NBG	**Las Nubes**	**1.17**	**23**	*eP*	**Pn**	**15 29 23.1**	**+0.9**
NBG				*eS*	**Sn**	**15 29 38.1**	**+1.1**
NBG	**Las Nubes**	**1.17**	**23**	*eP*	**Pn**	**15 29 23.1**	**+0.9**
NBG				*eS*	**Sn**	**15 29 38.1**	**+1.1**
RTR	**El Retiro**	**1.20**	**71**	⇑*iP*	**Pn**	**15 29 22.5**	**-0.1**
RTR	**El Retiro**	**1.20**	**71**	⇑*iP*	**Pn**	**15 29 22.5**	**-0.1**
SBLS	**San Blas**	**1.21**	**74**	⇑*eP*	**Pn**	**15 29 22.3**	**-0.4**
SBLS				*eS*	**Sn**	**15 29 36.5**	**-1.4**
SBLS	**San Blas**	**1.21**	**74**	⇑*eP*	**Pn**	**15 29 22.3**	**-0.4**
SBLS				*eS*	**Sn**	**15 29 36.5**	**-1.4**
SNJE	**San Jose**	**1.23**	**73**	⇑*eP*	**Pn**	**15 29 22.8**	**-0.2**
SNJE	**San Jose**	**1.23**	**73**	⇑*eP*	**Pn**	**15 29 22.8**	**-0.2**
STG3	**Santiaguito 3,**	**1.40**	**329**	*eP*	**Pn**	**15 29 24.9**	**-0.4**
BOQS	**Boqueron**	**1.51**	**81**	*eP*	**Pn**	**15 29 27.0**	**+0.1**
SNET	**Serv Nac Est T**	**1.55**	**83**	*eP*	**Pn**	**15 29 27.6**	**+0.3**
SNET				IAML		15 29 48.5	
	comp=Z,1μm,0.2s						
SNET	**Serv Nac Est T**	**1.55**	**83**	*eP*	**Pn**	**15 29 27.6**	**+0.3**
SNET				IAML		15 29 48.5	
	comp=Z,1μm,0.2s						
CUSC	**San Salvador**	**1.60**	**82**	*eP*	**Pn**	**15 29 28.7**	**+0.7**
CUSC	**San Salvador**	**1.60**	**82**	*eP*	**Pn**	**15 29 28.7**	**+0.7**
MTO3	**Montecristo**	**1.67**	**58**	⇑*iP*	**Pn**	**15 29 28.5**	**-0.5**
MTO3	**Montecristo**	**1.67**	**58**	⇑*iP*	**Pn**	**15 29 28.5**	**-0.5**
LFRS	**El Faro**	**1.71**	**86**	⇑*eP*	**Pn**	**15 29 30.0**	**+0.5**
PAVA	**Las Pavas**	**1.84**	**83**	*eP*	**Pn**	**15 29 31.6**	**+0.3**
PAVA	**Las Pavas**	**1.84**	**83**	*eP*	**Pn**	**15 29 31.6**	**+0.3**
CNCH	**Conchagua**	**2.91**	**94**	*eP*	**Pn**	**15 29 46.7**	**+0.7**
CNCH	**Conchagua**	**2.91**	**94**	*eP*	**Pn**	**15 29 46.7**	**+0.7**

GUC 20 15:29:37.3±0.9, 20°.51S×69°.74W, h91km±4km, ML3.9, 5C-9D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.58**	**156**	⇑*iP*	Pn	15 29 52.7	-0.2
PB01				*i S*	Sn	15 30 03.7	-0.8
PB01				IAML		15 30 04.8	
	comp=E,5μm,0.1s						
PB08	**IPOC Station P**	**0.66**	**56**	⇑*iP*	Pn	15 29 54.1	+0.2
PB08				*i S*	Sn	15 30 06.5	+0.1
PB08				IAML		15 30 06.9	
	comp=N,4μm,0.2s						
PB11	**IPOC Station P**	**0.75**	**6**	⇓*iP*	Pn	15 29 54.3	-0.3
PB11				*i S*	Sn	15 30 07.3	-0.2
PB02	**IPOC Station P**	**0.81**	**190**	⇑*iP*	Pn	15 29 55.4	+0.2
PB02				*i S*	Sn	15 30 08.2	-0.4
PB02				IAML		15 30 09.8	
	comp=N,7μm,0.1s						
PSGC	**Pisagua**	**0.98**	**338**	⇓*iP*	Pn	15 29 56.5	-0.4
PSGC				*i S*	Sn	15 30 10.9	-0.8
GO01	**Chusmiza**	**0.98**	**31**	⇑*iP*	Pn	15 29 57.3	-0.1
GO01				*i S*	Sn	15 30 12.4	0.0
PB07	**IPOC Station P**	**1.22**	**187**	⇓*iP*	Pn	15 29 58.9	+0.2
PB07				*i S*	Sn	15 30 16.3	-0.3
PB07				IAML		15 30 16.7	
	comp=E,3μm,0.5s						
PB09	**IPOC Station P**	**1.36**	**160**	⇓*iP*	Pn	15 30 02.0	+0.5
PB09				*i S*	Sn	15 30 20.4	+0.6
MNMC	**Minye Minye**	**1.38**	**6**	⇓*iP*	Pn	15 30 02.2	+0.3
MNMC				*i S*	Sn	15 30 21.1	+0.6
MNMC				IAML		15 30 21.7	
	comp=E,5μm,0.2s						
PB03	**IPOC Station P**	**1.53**	**181**	⇓*iP*	Pn	15 30 03.6	0.0
PB03				IAML		15 30 23.7	
	comp=E,2μm,0.3s						
PB04	**IPOC Station P**	**1.85**	**192**	IAML		15 30 31.9	
	comp=E,1μm,0.2s						
PB12	**IPOC Station P**	**1.97**	**343**	⇓*iP*	Pn	15 30 08.9	-0.4
PB16	**IPOC Station P**	**2.18**	**6**	⇓*iP*	Pn	15 30 13.7	+1.3
PB16				*i S*	Sn	15 30 41.1	+1.9
PB06	**IPOC Station P**	**2.19**	**176**	⇓*iP*	Pn	15 30 11.9	-0.3
PB06				*i S*	Sn	15 30 37.3	-1.4
PB15	**IPOC Station P**	**2.69**	**175**	⇑*iP*	Pn	15 30 19.0	0.0

GUC 20 15:31:50.0±0.6, 21°.37S×68°.74W, h132km±3km, ML3.9, 8C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.63**	**228**	*eP*	Pn	15 32 09.9	-0.4
PB09				*i S*	Sn	15 32 24.7	-0.9
PB09				IAML		15 32 27.4	
	comp=E,2μm,0.6s						
PB01	**IPOC Station P**	**0.77**	**295**	⇑*iP*	Pn	15 32 10.8	-0.4
PB01				*i S*	Sn	15 32 26.1	-1.1
PB01				IAML		15 32 27.6	
	comp=N,5μm,0.2s						
PB02	**IPOC Station P**	**1.08**	**272**	*eP*	Pn	15 32 13.9	0.0
PB02				*i S*	Sn	15 32 31.4	-0.7
PB02				IAML		15 32 33.7	
	comp=E,5μm,0.4s						
PB07	**IPOC Station P**	**1.12**	**251**	⇑*iP*	Pn	15 32 14.5	0.0
PB07				*i S*	Sn	15 32 32.5	-0.5
PB07				IAML		15 32 33.6	
	comp=N,2μm,0.3s						
PB03	**IPOC Station P**	**1.16**	**234**	⇑*eP*	Pn	15 32 14.7	-0.1
PB03				*i S*	Sn	15 32 33.1	-0.5
PB03				IAML		15 32 34.1	
	comp=N,2μm,0.5s						
PB08	**IPOC Station P**	**1.28**	**342**	⇑*eP*	Pn	15 32 16.1	-0.2
PB08				*eS*	Sn	15 32 36.2	0.0
PB08				IAML		15 32 38.2	
	comp=E,1μm,0.4s						
PB06	**IPOC Station P**	**1.54**	**210**	⇑*eP*	Pn	15 32 18.6	-0.2
PB06				*i S*	Sn	15 32 40.4	-0.4
PB06				IAML		15 32 42.3	
	comp=E,3μm,0.2s						
PB04	**IPOC Station P**	**1.62**	**233**	⇑*eP*	Pn	15 32 19.6	-0.2
PB04				*eS*	Sn	15 32 42.1	-0.4
GO01	**Chusmiza**	**1.74**	**346**	⇑*iP*	Pn	15 32 21.6	0.0
GO01				*i S*	Sn	15 32 45.3	-0.3
PB11	**IPOC Station P**	**1.81**	**332**	*eP*	Pn	15 32 21.6	-0.5
PB11				*i S*	Sn	15 32 46.2	-0.3
PB15	**IPOC Station P**	**1.95**	**200**	⇓*iP*	Pn	15 32 23.8	+0.1
PB15				*i S*	Sn	15 32 49.4	-0.1
PB05	**IPOC Station P**	**2.00**	**222**	*eP*	Pn	15 32 23.9	-0.4
PB05				*i S*	Sn	15 32 49.7	-0.7
PB05				IAML		15 32 53.3	
	comp=N,587nm,0.3s						
PSGC	**Pisagua**	**2.19**	**323**	⇑*iP*	Pn	15 32 25.5	-1.0
PSGC				*i S*	Sn	15 32 53.4	-1.1
MNMC	**Minye Minye**	**2.37**	**340**	⇓*iP*	Pn	15 32 29.0	+0.1
MNMC				*i S*	Sn	15 32 58.8	+0.1
PB10	**IPOC Station P**	**2.71**	**218**	*eP*	Pn	15 32 32.6	-0.4
GO02	**Mina Guanaco**	**3.86**	**192**	*eP*	Pn	15 32 48.1	-0.1

*ISCJB **20** 15:52:27.7±0.6, 37°.05N±0°.03×37°.30E±0°.03, h1km±6km, Error ellipse: s-maj=5.1km s-min=4.4km az=7.1*
*ISK **20** 15:52:27.4, 37°.09N×37°.29E, h5km, ML2.1/5*
*DDA **20** 15:52:27.2, 37°.07N×37°.27E, h7km±4km, ML2.8*
ISC 20 15:52:27.3±1.1, 37°.06N±0°.04×37°.28E±0°.03, h6km±9km, n16, σ0s86/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.12**	**332**	PG	**Pg**	**15 52 29.8**	**-0.2**
KUZU	**Kuzuini**	**0.33**	**210**	*i P*	**Pb**	**15 52 35.1**	**-0.6**
KUZU				*i S*	**Sg**	**15 52 39.1**	**+0.8**
KUZU				IAML_P			
	comp=Z,10μm,0.2s						
GZT	**Gaziantep**	**0.37**	**38**	*i P*	**Pb**	**15 52 35.5**	**-0.9**
GZT				*i S*	**Sg**	**15 52 40.1**	**+0.7**
GZT				IAML_P			
	comp=Z,2μm,0.1s						
HCB	**Kahramanmara**	**0.41**	**313**	*i P*	**Pg**	**15 52 35.4**	**+0.1**
HCB				*i S*	**Sg**	**15 52 40.9**	**+0.3**
KAMA	**Osmaniye**	**0.51**	**284**	*i P*	**Pg**	**15 52 37.4**	**+0.2**
KAMA				IAML_P			
	comp=Z,2μm,0.1s						
KMRS	**Kahramanmaras**	**0.54**	**325**	PG	**Pb**	**15 52 38.3**	**-0.9**
KMRS				SG	**Sb**	**15 52 45.6**	**-1.6**
ATAB	**Bozova**	**0.90**	**63**	*i P*	**Pn**	**15 52 46.6**	**0.0**
ATAB				*i S*	**Sb**	**15 52 57.8**	**0.0**
ATAB				IAML_P			
	comp=Z,3μm,0.2s						
ANDN	**Andirin**	**0.91**	**305**	*i P*	**Pn**	**15 52 46.0**	**-0.8**
ANDN				*i S*	**Sn**	**15 53 00.3**	**0.0**
ANDN				IAML_P			
	comp=Z,1μm,0.2s						
SURC	**SANLIURFA_SURC**	**1.08**	**99**	*i P*	**Pg**	**15 52 48.2**	**+0.1**
SURC				*i S*	**Sg**	**15 53 02.2**	**+0.1**
KOZT	**Kozan**	**1.23**	**290**	PN	**Pn**	**15 52 51.2**	**0.0**
ELBS	**KAHRAMANMARAS1**	**1.27**	**355**	*i P*	**Pn**	**15 52 52.0**	**+0.3**
ELBS				*i S*	**Sn**	**15 53 11.1**	**+2.0**
ELBS				IAML_P			
	comp=Z,474nm,0.1s						
URFA	**Urfa**	**1.28**	**72**	PN	**Pg**	**15 52 52.2**	**+0.2**
URFA				SN	**Sn**	**15 53 10.1**	**+0.6**
SAIM	**ADANA**	**1.32**	**314**	*i P*	**Pg**	**15 52 54.6**	**+1.9**
AKCD	**Akcadag**	**1.33**	**22**	*i P*	**Pg**	**15 52 53.9**	**+1.0**
AKCD				*i S*	**Sn**	**15 53 11.0**	**+0.3**
SANL	**SANLIURFA_Merk**	**1.37**	**85**	*i P*	**Pg**	**15 52 53.6**	**0.0**
SANL				IAML_P			
	comp=Z,1μm,0.3s						
DARE	**Darende-Malaty**	**1.51**	**6**	PN	**Pg**	**15 52 55.9**	**-0.5**

*GII **20** 15:57:29.8±0.0, 33°.49N×35°.61E, h1km*
*ISCJB **20** 15:57:31.5±0.7, 33°.49N±0°.05×35°.7E±0°.1, h14km±10km, Error ellipse: s-maj=15.3km s-min=5.7km az=21.3*
*GRAL **20** 15:57:32.3±0.3, 33°.45N×35°.63E, h0km±24km, MD2.5*
ISC 20 15:57:31.5±1.2, 33°.47N±0°.04×35°.65E±0°.07, h11km±10km, n9, σ0s73/16, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRWL	**Qaraoun**	**0.08**	**20**	*eP*	**Pg**	**15 57 34.1**	**+0.1**
QRWL				*eS*	**Sg**	**15 57 35.6**	**-0.3**
SHBL	**Chebaa**	**0.15**	**147**	*eP*	**Pg**	**15 57 34.8**	**-0.2**
SHBL				*eS*	**Sg**	**15 57 36.8**	**-0.7**
RCY	**Rachaya**	**0.16**	**81**	*eP*	**Pg**	**15 57 35.5**	**+0.4**
RCY				*eS*	**Sg**	**15 57 37.9**	**+0.1**
NATI	**Neve Ativ**	**0.22**	**160**	Pg	**Pg**	**15 57 36.0**	**-0.1**
NATI				Sg	**Sg**	**15 57 41.3**	**+2.1**
DQRL	**Deir Qamar**	**0.24**	**344**	*eP*	**Pg**	**15 57 37.0**	**+0.4**
GEM	**Giv'at Ha'Em**	**0.26**	**177**	Pg	**Pg**	**15 57 37.0**	**+0.2**
GEM				Sg	**Sb**	**15 57 42.5**	**-0.2**
KSDI	**Kefar Szold**	**0.28**	**178**	Pg	**Pg**	**15 57 37.2**	**+0.1**
KSDI				Sg	**Sb**	**15 57 43.3**	**+0.1**
MMA0B	**Mount Meron ar**	**0.50**	**204**	Pg	**Pb**	**15 57 41.6**	**-0.7**
MMA0B				Sg	**Sb**	**15 57 50.1**	**+0.5**
KSHT	**Keshet**	**0.51**	**164**	Pg	**Pb**	**15 57 42.0**	**-0.4**

*IDC **20** 16:16:08.6±1.8, 15°.45N×87°.18W, h0km, mb3.8/7, mb1 4.2/9, mb1mx3.8/30, mbtmp3.8/9, ML3.6/2, MS3.4/12, Ms1 3.4/12, ms1mx3.1/30, Error ellipse: s-maj=47.9km s-min=22.0km az=175.0*
*NEIC **20** 16:16:11.5±2.9, 15°.69N×87°.20W, h9km±5km, mb4.3/31, Error ellipse: s-maj=12.0km s-min=8.7km az=54.0*
*UCR **20** 16:16:16.5±2.5, 15°.55N×87°.20W, h38km±999km, ML4.2, mb4.3(NEIC)*
*SNET **20** 16:16:16.5±1.3, 15°.39N×87°.17W, h15km±28km, ML4.4*
ISC 20 16:16:09.3±1.6, 15°.58N±0°.05×87°.23W±0°.04, h4km±11km, n101, σ1s60/97, mb4.3/29, MS3.2/8, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.52**	**182**	*ePn*	**Pb**	**16 16 37.7**	**-0.4**
TGUH				*eSn*	**Sg**	**16 16 58.3**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.52**	**182**	*eP*	**Pg**	**16 16 38.5**	**+0.1**
TGUH				*eS*	**Sn**	**16 16 56.9**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.52**	**182**	*eP*	**Pg**	**16 16 38.5**	**+0.1**
TGUH				*eS*	**Sn**	**16 16 56.9**	**-0.7**
VICT	**Victoria**	**2.11**	**220**	*eP*	**Pg**	**16 16 50.0**	**+0.1**
VICT	**Victoria**	**2.11**	**220**	*eP*	**Pg**	**16 16 50.0**	**+0.1**
RCON	**San Juan de Ri**	**2.33**	**153**	*eP*	**Pb**	**16 16 51.5**	**-0.6**
LCND	**La Caada**	**2.35**	**196**	*eP*	**Pb**	**16 16 52.4**	**+0.1**
LCND				IAML		16 17 30.2	
	comp=Z,1μm,0.6s						
LCND	**La Caada**	**2.35**	**196**	*eP*	**Pb**	**16 16 52.4**	**+0.1**
LCND				IAML		16 17 30.2	
	comp=Z,1μm,0.6s						
PACA	**Pacayal**	**2.35**	**207**	*eP*	**Pb**	**16 16 52.0**	**-0.4**
PACA	**Pacayal**	**2.35**	**207**	*eP*	**Pb**	**16 16 52.0**	**-0.4**
CNCH	**Conchagua**	**2.37**	**194**	*eP*	**Pb**	**16 16 52.1**	**-0.6**
CNCH				IAML		16 17 36.4	
	comp=Z,5μm,0.5s						
CNCH	**Conchagua**	**2.37**	**194**	*eP*	**Pb**	**16 16 52.1**	**-0.6**
CNCH				IAML		16 17 36.4	
	comp=Z,5μm,0.5s						
VSM	**San Miguel**	**2.37**	**205**	*eP*	**Pb**	**16 16 51.9**	**-0.9**
LCY	**Lacayo**	**2.38**	**206**	*eP*	**Pb**	**16 16 52.3**	**-0.6**
LCY	**Lacayo**	**2.38**	**206**	*eP*	**Pb**	**16 16 52.3**	**-0.6**
PAVA	**Las Pavas**	**2.49**	**222**	*eP*	**Pb**	**16 16 55.3**	**+0.6**
PAVA	**Las Pavas**	**2.49**	**222**	*eP*	**Pb**	**16 16 55.3**	**+0.6**
SNVI	**San Vicente**	**2.50**	**219**	*eP*	**Pb**	**16 16 53.5**	**-1.5**
ESTN	**Estel**	**2.60**	**161**	*ePn*	**Pn**	**16 16 53.6**	**+1.2**
ESTN				*eSn*	**Sg**	**16 17 31.0**	**-2.1**
ESTN	**Estel**	**2.60**	**161**	*eP*	**Pb**	**16 16 55.6**	**-1.1**
ESTN	**Estel**	**2.60**	**161**	*eP*	**Pb**	**16 16 55.6**	**-1.1**
CSGN	**Cosiguina Volc**	**2.61**	**187**	*ePn*	**Pb**	**16 16 56.6**	**-0.2**
CSGN				*eSn*	**Sg**	**16 17 31.4**	**-2.0**
CSGN	**Cosiguina Volc**	**2.61**	**187**	*eP*	**Pb**	**16 16 56.7**	**-0.2**
CSGN				*eS*	**Sg**	**16 17 32.7**	**-0.7**
LFRS	**El Faro**	**2.64**	**223**	*eP*	**Pb**	**16 16 57.7**	**+0.5**
BOQS	**Boqueron**	**2.71**	**227**	*eP*	**Pb**	**16 16 59.3**	**+0.8**
CRIN	**San Cristobal**	**2.87**	**177**	*eP*	**Pb**	**16 17 00.8**	**-0.4**
CRIN				IAML		16 17 47.2	
	comp=N,2μm,0.7s						
SBLS	**San Blas**	**2.89**	**233**	*eP*	**Pb**	**16 17 01.1**	**-0.7**
SBLS	**San Blas**	**2.89**	**233**	*eP*	**Pb**	**16 17 01.4**	**-0.3**
MATN	**Matagalpa**	**2.93**	**154**	*eP*	**Pb**	**16 17 01.4**	**-0.7**
CNGN	**Cerro Negro**	**3.11**	**170**	*eP*	**Pb**	**16 17 04.6**	**-0.7**
APG	**El Apazote**	**3.17**	**260**	Pn	**Pn**	**16 16 59.8**	**-0.6**
	comp=N,14nm,0.3s,baz=85,slow=8.8,SNR=49						
APG				Sn	**Sn**	**16 17 38.8**	**0.0**
	comp=N,46nm,0.3s,baz=249,slow=20,SNR=6.4						
APG				Lg	Lg	16 17 48.2	
	comp=N,97nm,0.3s,baz=57,slow=22,SNR=7.8						
APG				LR	LR	16 18 21.3	
	comp=N,639nm,20.8s,baz=106,slow=42						
MOMN	**Momotombo**	**3.23**	**168**	*eP*	**Pb**	**16 17 03.9**	**-3.4**
COPN	**Copaltepe**	**3.44**	**170**	*eP*	**Pb**	**16 17 09.2**	**-1.7**
ACON	**Acoyapa**	**4.11**	**151**	*ePn*	**Pn**	**16 17 15.3**	**+2.3**
ACON	**Acoyapa**	**4.11**	**151**	*eP*	**Pn**	**16 17 16.6**	**+3.6**
CONN	**Concepcion**	**4.29**	**158**	*eP*	**Pn**	**16 17 17.9**	**+2.4**
ESPN	**Las Esperanzas**	**4.41**	**139**	*ePn*	**Pn**	**16 17 17.9**	**+0.8**
CCIG	**Comitan**	**4.77**	**279**	*ePn*	**Pn**	**16 17 22.8**	**+0.5**
JTS	**Las Juntas de**	**5.71**	**157**	Lg	Lg	16 19 05.9	
	comp=N,3.3nm,0.3s,baz=269,slow=24,SNR=2.5						
JTS				LR	LR	16 20 10.0	
	comp=N,376nm,19.1s,baz=42,slow=43						
JTS	**Las Juntas de**	**5.71**	**157**	*ePn*	**Pn**	**16 17 37.6**	**+2.6**
JTS				*ePb*	Pb	16 17 37.8	-12
MYIG	**Mrida**	**5.85**	**336**	*ePn*	**Pn**	**16 17 34.9**	**-2.1**
CMIG	**Matias Romero**	**7.50**	**283**	Pn	**Pn**	**16 17 59.6**	**0.0**
	comp=N,0.4nm,0.3s,baz=116,slow=5.1,SNR=2.4						
CMIG				Sn	**Sn**	**16 19 18.2**	**-7.0**
	comp=N,1.6nm,0.3s,baz=213,slow=21,SNR=4.0						
CMIG				LR	LR	16 21 11.0	
	comp=N,408nm,19.5s,baz=98,slow=40						
LVIG	**Laguna Verde**	**9.68**	**297**	*ePn*	**Pn**	**16 18 29.2**	**-0.3**
656A	**Willston**	**14.38**	**17**	*ePn*	**Pn**	**16 19 33.7**	**-0.2**
LNIG	**Linares**	**14.74**	**311**	*ePn*	**Pn**	**16 19 40.7**	**+1.9**
ROSC	**El Rosal**	**16.58**	**129**	LR	LR	16 27 29.7	
	comp=N,86nm,20.4s,baz=158,slow=41						
WHTX	**Lake Whitney,**	**18.80**	**332**	*eP*	**Pn**	**16 20 31.0**	**+0.6**
	comp=N,16nm,0.6s						
MIAR	**Mount Ida**	**19.73**	**344**	*eP*	**Pn**	**16 20 39.5**	**-1.9**
	comp=N,15nm,1.4s						
WHAR	**Wooly Hollow**	**20.14**	**348**	*eP*	Pn	16 20 45.9	-0.5
	comp=N,7.8nm,1.0s						
SJG	**San Juan**	**20.33**	**80**	LR	LR	16 29 29.2	
	comp=N,69nm,18.3s,baz=106,slow=39						
ABTX	**Abilene, Hawle**	**20.37**	**329**	*eP*	Pn	16 20 48.0	-1.1
	comp=N,22nm,1.2s						
W39A	**Magazine**	**20.40**	**344**	*eP*	**P**	**16 20 44.0**	**-3.3**
	comp=N,28nm,1.3s						
TXAR	**Lajitas Array**	**20.41**	**315**	P	Pn	16 20 51.7	+2.0
	comp=N,4.1nm,0.7s,baz=135,slow=10,SNR=32						
WVT	**Waverly**	**20.47**	**359**	*eP*	Pn	16 20 49.4	-0.8
	comp=N,6.5nm,1.0s						
PBMO	**Poplar Bluff**	**21.30**	**353**	*eP*	**P**	**16 20 58.9**	**+1.8**
	comp=N,14nm,0.7s						
T49A	**Edmonton**	**21.49**	**4**	*eP*	**P**	**16 20 59.1**	**-0.1**
	comp=N,8.8nm,0.8s						
WMOK	**Wichita Mounta**	**21.72**	**334**	*eP*	**P**	**16 21 03.2**	**+1.6**
	comp=N,8.7nm,1.1s						
CCM	**Cathedral Cave**	**22.66**	**352**	*eP*	**P**	**16 21 11.8**	**+0.1**
	comp=N,5.0nm,0.8s						
MNTX	**Cornudas Mount**	**23.05**	**317**	*eP*	**P**	**16 21 17.4**	**+1.6**
	comp=N,21nm,1.8s						
MSTX	**Muleshoe**	**23.06**	**325**	*eP*	**P**	**16 21 16.4**	**+0.3**
	comp=N,13nm,1.1s						
LPIG	**La Paz**	**23.28**	**295**	LR	LR	16 30 54.5	
	comp=N,87nm,21.0s,baz=150,slow=38						
Q51A	**Peebles**	**23.60**	**8**	*eP*	**P**	**16 21 22.8**	**+1.4**
	comp=N,12nm,0.7s						
ATAH	**Atahualpa**	**24.21**	**158**	LR	LR	16 30 00.4	
	comp=N,128nm,18.3s,baz=331,slow=35						
P53A	**Whipple**	**24.36**	**11**	*eP*	**P**	**16 21 30.3**	**+1.9**
	comp=N,10nm,0.8s						
319A	**Douglas**	**25.54**	**312**	*eP*	**P**	**16 21 41.9**	**+2.4**
	comp=N,6.0nm,0.9s						
L42A	**Oliver, Polo**	**26.41**	**356**	*eP*	**P**	**16 21 46.5**	**-0.6**
	comp=N,7.5nm,0.8s						
L40A	**Anamosa**	**26.61**	**353**	*eP*	**P**	**16 21 49.0**	**+0.1**
	comp=N,7.2nm,0.8s						
X16A	**Lo Mia Camp, P**	**28.74**	**315**	*eP*	**P**	**16 22 10.8**	**+2.5**
	comp=N,2.1nm,0.8s						
SADO	**Sadowa**	**29.89**	**12**	LR	LR	16 33 34.5	
	comp=N,40nm,20.3s,baz=352,slow=35						
PSUT	**Pine Spring**	**32.72**	**319**	*eP*	**P**	**16 22 45.7**	**+

DDMP				*e*S	Sn	17 06 48.8	+0.6

MAN 20 17:16:37.1, 7°.23N×124°.96E, h30km, mb3.8, ML2.5, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.66**	**9**	*e*P	Pb	17 16 50.3	+0.1
BUKP				*e*S	Sn	17 16 59.9	+0.1
SKMP	**Bagumbayan, Su**	**0.82**	**211**	*e*P	Pn	17 16 52.4	-0.2
SKMP				*e*S	Sn	17 17 04.4	+0.6
CGP	**Cagayan de Oro**	**1.25**	**348**	⇑*e*P	Pb	17 16 59.9	-0.2
CGP				*e*S	Sn	17 17 15.0	+0.6
PAGZ	**Pagadian**	**1.68**	**292**	*e*P	Pn	17 17 04.8	+0.2
PAGZ				*e*S	Sn	17 17 25.2	+0.1

KRSC 20 17:18:16.9±2.8, 49°.39N×156°.06E, h103km±38km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.30**	**2**	*e*P	Pn	17 18 41.1	+0.2
ALID	**Alaid**	**1.52**	**348**	*e*P	Pn	17 18 42.0	-1.7
PAU	**Pauzhetka**	**2.14**	**13**	*e*P	Pn	17 18 53.8	+2.5
PAU				*e*S	Sn	17 19 20.9	+3.2
KDTR	**Khodutka, Kamc**	**2.75**	**27**	*e*P	Pn	17 19 01.9	+2.6
KDTR				*e*S	Sn	17 19 34.7	+2.8
ASAK	**Asacha**	**3.22**	**20**	*e*P	Pn	17 19 08.4	+2.7
MTVR	**Mutnovka**	**3.38**	**23**	*e*S	Sn	17 19 51.1	+3.9
RUS	**Russkaya**	**3.42**	**26**	*e*P	Pn	17 19 10.7	+2.4
RUS				*e*S	Sn	17 19 50.2	+2.2
DALK	**Dalny**	**4.02**	**24**	*e*P	Pn	17 19 18.5	+2.1
DALK				*e*S	Sn	17 20 04.3	+1.8
UGLR	**Uglovaya**	**4.20**	**23**	P	Pn	17 19 22.2	+3.3
AVH	**Avacha**	**4.23**	**22**	*e*P	Pn	17 19 23.5	+4.2
KOK	**Koryaka**	**4.23**	**21**	*e*P	Pn	17 19 23.5	+4.2
SDLR	**Sedlovina**	**4.28**	**23**	P	Pn	17 19 21.9	+1.9
KRX	**Arik**	**4.30**	**21**	P	Pn	17 19 23.6	+3.4
GNL	**Ganaly**	**4.47**	**14**	*e*P	Pn	17 19 24.4	+1.9
SPN	**Mys Shipunski**	**4.47**	**32**	*e*P	Pn	17 19 25.5	+3.1
SPN				*e*S	Sn	17 20 14.7	+1.4
MKZ	**Mys Kozlova**	**6.25**	**32**	*e*P	Pn	17 19 48.0	+1.5
MKZ				*e*S	Sn	17 20 54.0	-2.4
KBTR	**Krutoberegovo**	**7.96**	**28**	*e*P	Pn	17 20 11.4	+1.7

*IDC **20** 17:48:52.7±1.6, 25°.62N×99°.15E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.4/45, mbtmp3.7/6, ML3.8/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/41, Error ellipse: s-maj=71.9km s-min=18.6km az=88.0*
*BJI **20** 17:48:52.1±0.0, 25°.58N×99°.43E, h9km, ML3.6/8, Ms3.4/2, Ms7 3.3/2*
ISC 20 17:48:54.0±1.0, 25°.5N±0°.1×99°.28E±0°.07, h10km, n9, σ1°36/11, mb3.9/5, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.16**	**97**	Pn	**Pn**	**17 49 44.0**	**0.0**
KMI				Pg	**Pb**	**17 49 49.3**	**-1.1**
KMI				Sn	**Sn**	**17 50 21.3**	**-0.6**
KMI				Sg	**Sb**	**17 50 29.3**	**+0.2**
KMI				smax	smax		
	comp=N,480nm,1.0s						
KMI				smax	smax		
	comp=E,330nm,1.0s						
KMI				LR	LR		
	comp=N,450nm,5.4s						
KMI				LR	LR		
	comp=E,380nm,4.9s						
KMI				LR	LR		
	comp=Z,250nm,5.2s						
CMAR	**Chiang Mai Arr**	**7.05**	**183**	Pn	**Pn**	**17 50 38.4**	**+1.0**
	0.5nm,0.3s,baz=359,slow=13,SNR=27						
CMAR				Pg	Pg	17 51 04.2	-4.9
	0.8nm,0.3s,baz=359,slow=17,SNR=15						
CMAR				Lg	Lg	17 52 38.7	
	0.6nm,0.3s,baz=3.7,slow=29,SNR=6.0						
XAN	**Xi'an**	**11.91**	**42**	P	**Pn**	**17 51 46.8**	**+2.9**
SONM	**Songino Array**	**22.96**	**12**	P	**P**	**17 53 58.2**	**-0.4**
	0.3nm,0.4s,baz=198,slow=8.8,SNR=3.4						
MKAR	**Makanchi Array**	**25.16**	**332**	P	**P**	**17 54 19.5**	**+0.2**
	1.1nm,0.7s,baz=137,slow=10,SNR=13						
ZALV	**Zalesovo Beam**	**30.36**	**343**	P	**P**	**17 55 05.3**	**-0.5**
	1.1nm,0.6s,baz=139,slow=9.9,SNR=5.5						
ZALV				LR	LR	18 08 33.1	
	comp=Z,20nm,19.8s,baz=70,slow=39						
OBN	**Obninsk**	**53.92**	**321**	LR	LR	18 24 45.4	
	comp=Z,15nm,18.7s,baz=353,slow=40						
FINES	**FINESS Array B**	**59.91**	**328**	P	**P**	**17 58 58.9**	**-0.9**
	1.2nm,0.8s,baz=113,slow=11,SNR=5.0						
NOA	**NORSAR Array B**	**67.08**	**328**	P	**P**	**17 59 45.8**	**-1.6**
	0.8nm,0.8s,baz=77,slow=6.5,SNR=3.5						

*NIED **20** 18:02:00, 43°.00N×145°.50E, h41km, Mw3.9 Best double couple: M0:9.26000×10^14 NP1:φ0=235.00000°, δ=25.00000°, λ=123.00000°. NP2:φ0=19.00000°, δ=69.00000°, λ=76.00000°.*
*ISCJB **20** 18:02:32.6±0.6, 42°.98N±0°.04×145°.43E±0°.06, h54km±3km, mb3.9/14, MS3.3/3, Error ellipse: s-maj=8.8km s-min=4.7km az=43.8*
*MOS **20** 18:02:32.6±0.8, 42°.97N×145°.38E, h57km, mb4.1/4, Error ellipse: s-maj=12.1km s-min=7.2km az=85.5*
*SKHL **20** 18:02:33.8±0.6, 42°.97N×145°.59E, h57km±5km, mb4.5/6*
*JMA **20** 18:02:33.6±0.1, 42°.99N×145°.40E, h48km±1km, M3.7*
JMA Felt II J1.
*IDC **20** 18:02:35.0±3.0, 43°.01N×145°.36E, h56km±25km, mb3.7/11, mb1 3.8/14, mb1mx3.5/61, mbtmp4.0/14, ML3.6/2, MS2.8/10, Ms1 2.8/10, ms1mx2.7/37, Error ellipse: s-maj=26.0km s-min=21.6km az=127.0*
ISC 20 18:02:33.8±0.9, 42°.99N±0°.06×145°.42E±0°.05, h46km±7km, n66, σ0°88/69, mb3.9/14, MS3.2/3, 2C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.21**	**296**	P	**Pn**	**18 02 41.8**	**0.0**
JKHN				*e*S	**Sn**	**18 02 47.4**	**0.0**
NEM2	**Nemuro 2**	**0.44**	**32**	⇑P	**Pn**	**18 02 43.9**	**-0.2**
NEM2				*e*S	**Sn**	**18 02 51.1**	**-0.3**
JAK	**Akkeshi**	**0.53**	**271**	⇓P	**Pn**	**18 02 44.8**	**-0.4**
JAK				*e*S	**Sn**	**18 02 53.1**	**-0.2**
GLVR	**Golovnino**	**0.75**	**5**	*e*PN	**Pn**	**18 02 48.1**	**0.0**
GLVR				*i* S	**Sn**	**18 02 58.1**	**-0.3**
GLVR				pmax	pmax		
	comp=Z,1μm,0.3s						
GLVR				smax	smax		
	comp=N,8μm,0.3s						
GLVR				smax	smax		
	comp=E,6μm,0.3s						
GLVR	**Golovnino**	**0.75**	**5**	*e*P	**Pn**	**18 02 48.0**	**0.0**
GLVR				AMB	AMB	18 02 48.0	
	comp=E,128nm,0.3s						
GLVR				*i* S	**Sn**	**18 02 58.0**	**-0.3**
GLVR				A	A	18 03 02.0	
	comp=E,800nm,0.2s						
GLVR				A	A	18 03 02.0	
	comp=E,600nm,0.2s						
JNK	**Nakash**	**0.79**	**319**	P	**Pn**	**18 02 48.1**	**-0.4**
JNK				*e*S	**Sn**	**18 02 58.4**	**-0.9**
JRA	**Rausu**	**0.97**	**347**	⇓P	**Pn**	**18 02 51.0**	**0.0**
JRA				*e*S	**Sn**	**18 03 03.8**	**+0.1**
GRPR	**Tuman**	**1.04**	**14**	⇓*i*PN	**Pn**	**18 02 51.6**	**-0.3**
GRPR				*i* S	**Sn**	**18 03 04.0**	**-1.2**
GRPR				pmax	pmax		
	comp=Z,346nm,0.3s						
GRPR				pmax	pmax		
	comp=N,84nm,0.2s						
GRPR				pmax	pmax		
	comp=E,138nm,0.2s						
GRPR				smax	smax		
	comp=E,12μm,0.5s						
GRPR				smax	smax		
	comp=N,5μm,0.3s						
GRPR	**Tuman**	**1.04**	**14**	*i* P	**Pn**	**18 02 51.0**	**-0.9**
GRPR				AMB	AMB	18 02 53.0	
	comp=N,346nm,0.3s						
GRPR				*i* S	**Sn**	**18 03 04.0**	**-1.2**
GRPR				A	A	18 03 05.0	
	comp=N,501nm,0.4s						
GRPR				A	A	18 03 05.0	
	comp=N,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.09**	**17**	*d i*PN	**Pn**	**18 02 52.8**	**+0.2**
YUK				*i* S	**Sn**	**18 03 06.2**	**-0.4**
YUK	**Yuzh-Kuril'sk**	**1.09**	**17**	*i* P	**Pn**	**18 02 52.0**	**-0.6**
YUK				AMB	AMB	18 02 54.0	
	comp=N,290nm,0.3s						
YUK				*e*S	**Sn**	**18 03 06.0**	**-0.6**
YUK				A	A	18 03 08.0	
	comp=N,2μm,0.3s						
YUK				A	A	18 03 08.0	
	comp=N,420nm,0.3s						
LAGR	**Lagunnoye**	**1.10**	**14**	*e*PN	**Pn**	**18 02 52.8**	**+0.1**
LAGR				*i* S	**Sn**	**18 03 06.1**	**-0.7**
LAGR				pmax	pmax		
	comp=Z,442nm,0.4s						
LAGR				pmax	pmax		
	comp=N,101nm,0.2s						
LAGR				pmax	pmax		
	comp=E,153nm,0.1s						
LAGR				smax	smax		
	comp=N,6μm,0.6s						
LAGR				smax	smax		
	comp=E,9μm,0.4s						
LAGR	**Lagunnoye**	**1.10**	**14**	*e*P	**Pn**	**18 02 52.0**	**-0.7**
LAGR				AMB	AMB	18 02 54.0	
	comp=E,44nm,0.2s						
LAGR				*i* S	**Sn**	**18 03 06.0**	**-0.7**
LAGR				A	A	18 03 09.0	
	comp=E,640nm,0.3s						
LAGR				A	A	18 03 09.0	
	comp=E,430nm,0.3s						
JOB	**Onbets**	**1.17**	**266**	⇓P	**Pn**	**18 02 53.3**	**-0.4**
JAR	**Ashorobuto**	**1.25**	**285**	⇓P	**Pn**	**18 02 54.7**	**-0.1**
JTKR	**Abashiri--Toko**	**1.48**	**312**	⇓P	**Pn**	**18 02 58.3**	**+0.4**
JCH	**Churui**	**1.56**	**257**	P	**Pn**	**18 02 58.3**	**-0.7**
ERM	**Erimo**	**1.94**	**241**	*i* PN	**Pn**	**18 03 05.5**	**+1.3**
JKA	**Kamikawa-asahi**	**2.34**	**300**	*e*P	**Pn**	**18 03 11.3**	**+1.6**
ASAJ	**Asahikawa**	**2.34**	**300**	P	**Pn**	**18 03 11.3**	**+1.5**
	comp=E,22nm,0.3s,baz=122,slow=9.9,SNR=110						
ASAJ				LR	LR	18 04 25.5	
	comp=E,180nm,21.3s,baz=154,slow=48						
KUR	**Kuril'sk**	**2.85**	**37**	⇑*i*PN	**Pn**	**18 03 18.0**	**+1.3**
KUR				*i* S	**Sn**	**18 03 50.7**	**+0.9**
KUR				pmax	pmax		
	comp=Z,68nm,0.4s						
KUR				pmax	pmax		
	comp=E,38nm,0.2s						
KUR				pmax	pmax		
	comp=N,28nm,0.5s						
KUR				smax	smax		
	comp=N,353nm,0.5s						
KUR				smax	smax		
	comp=E,165nm,0.5s						
KUR	**Kuril'sk**	**2.85**	**37**	*i* P	**Pn**	**18 03 17.0**	**+0.3**
KUR				AMB	AMB	18 03 25.0	
	comp=E,28nm,0.4s						
KUR				AMB	AMB	18 03 25.0	
	comp=E,38nm,0.4s						
KUR				AMB	AMB	18 03 25.0	
	comp=E,68nm,0.4s						
KUR				*i* S	**Sn**	**18 03 49.0**	**-0.8**
KUR				A	A	18 03 58.0	
	comp=E,353nm,0.5s						
KUR				A	A	18 03 58.0	
	comp=E,465nm,0.5s						
UGL	**Uglegorsk**	**6.52**	**340**	*e*PN	**Pn**	**18 04 08.9**	**+1.9**
UGL				S	**Sn**	**18 05 22.8**	**+2.8**
UGL				pmax	pmax		
	comp=Z,24nm,0.8s						
MAJO	**Matsushiro**	**8.50**	**223**	*i* PN	**Pn**	**18 04 34.2**	**-0.1**
MJAR	**Matsushiro Arr**	**8.50**	**223**	P	**Pn**	**18 04 33.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=12						
MJAR				LR	LR	18 08 29.7	
	comp=Z,30nm,18.1s,baz=95,slow=42						
USRK	**Ussuriysk Ar.**	**9.82**	**282**	P	**Pn**	**18 04 52.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=92,slow=8.7,SNR=2.7						
JHJ	**Hachijo jima 2**	**10.81**	**206**	LR	LR	18 09 30.9	
	comp=Z,27nm,18.0s,baz=94,slow=38						
KLR	**Kul'dur**	**11.35**	**308**	LR	LR	18 09 50.2	
	comp=Z,69nm,18.5s,baz=143,slow=38						
KLR	**Kul'dur**	**11.35**	**308**	*i* PN	**Pn**	**18 05 14.8**	**+1.6**
KLR	**Kul'dur**	**11.35**	**308**	*e*P	**Pn**	**18 05 14.8**	**+1.6**
PETK	**Petropavlovsk-**	**13.02**	**35**	LR	LR	18 11 12.4	
	comp=Z,30nm,19.1s,baz=202,slow=40						
EKMR	**Ekimchan**	**13.07**	**325**	*e*P	**Pn**	**18 05 37.0**	**+0.4**
KSRS	**Korea Array**	**14.46**	**253**	LR	LR	18 11 43.3	
	comp=Z,12nm,18.5s,baz=90,slow=38						
MA2	**Magadan**	**16.93**	**9**	LR	LR	18 13 17.9	
	comp=Z,23nm,18.2s,baz=158,slow=38						
YAK	**Yakutsk**	**21.23**	**339**	*i* P	**P**	**18 07 13.9**	**-1.5**
YAK	**Yakutsk**	**21.23**	**339**	*e*P	**P**	**18 07 13.8**	**-1.6**
ULN	**Ulaanbaatar**	**27.17**	**294**	*i* P	**P**	**18 08 12.2**	**-0.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ULN	**Ulaanbaatar**	**27.17**	**294**	*e*P	**P**	**18 08 12.2**	**-0.6**
BILL	**Bilibino**	**27.45**	**17**	*i* P	**P**	**18 08 15.7**	**+0.8**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	**Bilibino**	**27.45**	**17**	*e*P	**P**	**18 08 15.7**	**+0.8**
SONM	**Songino Array**	**27.61**	**294**	P	**P**	**18 08 17.0**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=85,slow=9.0,SNR=9.1						
H11N2	**WAKE ISLAND Hy**	**29.40**	**135**	T	T	18 39 29.4	
	baz=328,slow=75,SNR=1426						
H11N1	**WAKE ISLAND Hy**	**29.41**	**135**	T	T	18 39 34.2	
	baz=328,slow=75,SNR=1370						
H11N3	**WAKE ISLAND Hy**	**29.41**	**135**	T	T	18 39 30.8	
	baz=328,slow=75,SNR=1015						
H11S1	**WAKE ISLAND Hy**	**30.32**	**137**	T	T	18 40 33.1	
	baz=329,slow=76,SNR=2184						
H11S3	**WAKE ISLAND Hy**	**30.33**	**137**	T	T	18 40 32.8	
	baz=329,slow=76,SNR=1195						
H11S2	**WAKE ISLAND Hy**	**30.34**	**137**	T	T	18 40 31.6	
	baz=329,slow=76,SNR=1110						
TGY	**Tagaytay City**	**35.67**	**224**	LR	LR	18 23 03.6	
	comp=Z,58nm,19.9s,baz=120,slow=34						
ZALV	**Zalesovo Beam**	**40.46**	**307**	PcP	**PcP**	**18 12 09.4**	**0.0**
	comp=Z,1.1nm,0.4s,baz=94,slow=2.1,SNR=4.8						
ZALV				LR	LR	18 27 53.8	
	comp=Z,36nm,18.9s,baz=72,slow=38						
ILAR	**Eielson Array**	**42.84**	**36**	P	**P**	**18 10 27.5**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=258,slow=5.8,SNR=6.8						
MKAR	**Makanchi Array**	**43.82**	**298**	P	**P**	**18 10 35.0**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=78,slow=9.0,SNR=16						
MKAR	**Makanchi Array**	**43.82**	**298**	P	**P**	**18 10 35.0**	**-0.1**
MKAR	**Makanchi Array**	**43.82**	**298**	*e*P	**P**	**18 10 35.0**	**-0.1**
KURK	**Kurchatov**	**44.91**	**304**	*i* P	**P**	**18 10 42.0**	**-1.6**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KURK	**Kurchatov**	**44.91**	**304**	*e*P	**P**	**18 10 42.0**	**-1.6**
INK	**Inuvik**	**47.69**	**30**	P	**P**	**18 11 05.4**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=263,slow=6.2,SNR=3.8						
RES	**Resolute Bay**	**56.05**	**16**	P	**P**	**18 12 07.1**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=314,slow=5.2,SNR=13						
AKTO	**Aktyubinsk**	**57.08**	**310**	P	**P**	**18 12 15.3**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=44,slow=7.5,SNR=3.5						
GEYT	**Alibeck**	**63.70**	**298**	LR	LR	18 43 35.2	
	comp=Z,18nm,19.5s,baz=75,slow=39						
FINES	**FINESS Array B**	**64.97**	**332**	P	**P**	**18 13 07.7**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=45,slow=7.4,SNR=14						
FINES	**FINESS Array B**	**64.97**	**332**	*i* P	**P**	**18 13 08.3**	**0.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**67.17**	**191**	P	**P**	**18 13 23.4**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=14,slow=6.2,SNR=4.1						
NB2	**NORSAR Subarra**	**69.85**	**338**	P	**P**	**18 13 38.5**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**69.85**	**338**	P	**P**	**18 13 38.9**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=35,slow=6.1,SNR=11						
HFS	**Hagfors**	**69.90**	**337**	P	**P**	**18 13 38.6**	**-0.9**
	comp=Z,2.2nm,0.6s,baz=54,slow=7.5,SNR=11						
EKA	**Eskdalemuir Ar**	**78.48**	**342**	P	**P**	**18 14 29.8**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=30,slow=5.0,SNR=5.9						

*ISK **20** 18:09:43.9, 33°.94N×25°.06E, h19km, ML3.8/12*
*ATH **20** 18:09:45.8, 34°.17N×25°.09E, h21km±5km, ML3.3/3, Error ellipse: s-maj=7.3km s-min=2.8km az=31.0*
*THE **20** 18:09:46.8, 34°.22N×25°.13E, h0km±1km, ML3.4/3, Error ellipse: s-maj=3.4km s-min=0.9km az=165.0*
*IDC **20** 18:09:48.7±2.6, 34°.29N×25°.10E, h30km±16km, mb3.7/7, mb1 3.7/12, mb1mx3.5/49, mbtmp3.8/12, ML4.1/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/38, Error ellipse: s-maj=21.5km s-min=19.1km az=43.0*
*HLW **20** 18:09:56.8, 31°.53N×28°.50E, h10km±31km*
*DDA **20** 18:10:22.5, 34°.00N×25°.17E, h10km±1km, ML3.6*
ISC 20 18:09:47.0±1.6, 34°.21N±0°.06×25°.16E±0°.04, h15km±10km, n70, σ1°60/80, mb3.9/8, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**340**	P	**Pg**	**18 10 02.8**	**-0.8**
SIVA				S	**Sg**	**18 10 15.7**	**+0.8**
SIVA	**Sivas**	**0.86**	**340**	P	**Pg**	**18 10 02.9**	**-0.8**
SIVA				S	**Sg**	**18 10 15.5**	**+0.5**
SIVA				AML	AML	18 10 21.2	
	comp=E,23277μm,0.8s						
SIVA				AML	AML	18 10 22.6	
	comp=N,15701μm,0.6s						
TMBK	**Timbaki Herakl**	**0.92**	**340**	P	**Pg**	**18 10 04.3**	**-0.6**
TMBK				S	**Sg**	**18 10 18.1**	**+1.2**
LAST	**Lasithi**	**0.99**	**15**	P	**Pg**	**18 10 05.3**	**-0.8**
LAST				S	**Sb**	**18 10 20.6**	**+1.8**
	comp=N,1μm,0.8s						
LAST	**Lasithi**	**0.99**	**15**	P	**Pg**	**18 10 05.5**	**-0.6**
LAST				S	**Sb**	**18 10 20.4**	**+1.6**
LAST				AML	AML	18 10 28.6	
	comp=N,2256μm,0.7s						
LAST				AML	AML	18 10 31.0	
	comp=E,1839μm,0.9s						
GVD	**Gavdhos**	**1.09**	**306**	PN	**Pg**	**18 10 06.3**	**-1.7**
GVD				SN	**Sg**	**18 10 22.5**	**+0.3**
GVD	**Gavdhos**	**1.09**	**306**	P	**Pg**	**18 10 06.3**	**-1.7**
GVD				S	**Sg**	**18 10 23.3**	**+1.1**
	comp=E,4μm,0.4s						
GVD	**Gavdhos**	**1.09**	**306**	P	**Pg**	**18 10 06.5**	**-1.5**
GVDS	**Gavdos**	**1.09**	**306**	P	**Pg**	**18 10 06.8**	**-1.2**
GVDS				S	**Sg**	**18 10 23.4**	**+1.2**
KSTL	**Kastelli Herak**	**1.10**	**356**	P	**Pg**	**18 10 06.0**	**-2.2**
KSTL				S	**Sg**	**18 10 20.9**	**-1.6**
IDI	**Anoyia**	**1.10**	**348**	Pg	**Pg**	**18 10 06.9**	**-1.3**
	comp=E,22nm,0.3s,baz=166,slow=21,SNR=111						
IDI				Lg	Lg	18 10 22.7	
	comp=E,67nm,0.3s,baz=52,slow=21,SNR=19						
IDI				LR	LR	18 10 53.1	
	comp=E,158nm,19.3s,baz=170,slow=64						
IDI	**Anoyia**	**1.10**	**348**	P	**Pg**	**18 10 07.0**	**-1.3**
IDI				S	**Sg**	**18 10 22.5**	**-0.2**
IDI				AML	AML	18 10 29.7	
	comp=E,1578μm,0.5s						
IDI				AML	AML	18 10 29.8	
	comp=N,1484μm,0.6s						
NPS	**Neapolis**	**1.12**	**19**	P	**Pg**	**18 10 07.8**	**-0.8**
NPS				S	**Sb**	**18 10 24.6**	**+2.2**
	comp=N,1μm,1.1s						
NPS	**Neapolis**	**1.12**	**19**	P	**Pg**	**18 10 07.7**	**-0.8**
STIA	**Sitia Lasithi**	**1.25**	**37**	P	**Pn**	**18 10 11.1**	**+1.1**
ZKR	**Zakros**	**1.26**	**44**	PN	**Pn**	**18 10 10.6**	**+0.5**
ZKR				SN	**Sn**	**18 10 30.3**	**+3.6**
ZKR	**Zakros**	**1.26**	**44**	P	**Pn**	**18 10 10.9**	**+0.8**
ZKR	**Zakros**	**1.26**	**44**	P	**Pn**	**18 10 11.3**	**+1.2**
PRNS	**Prines Rethymn**	**1.27**	**335**	P	**Pn**	**18 10 10.0**	**-0.3**
VAM	**Vamos**	**1.43**	**327**	P	**Pn**	**18 10 12.6**	**+0.1**
VAM	**Vamos**	**1.43**	**327**	P	**Pn**	**18 10 12.7**	**+0.1**
IMMV	**Iera Moni Meta**	**1.58**	**323**	PN	**Pn**	**18 10 14.2**	**-0.3**
IMMV	**Iera Moni Meta**	**1.58**	**323**	P	**Pn**	**18 10 15.0**	**+0.5**
KARP	**Karpathos**	**2.12**	**50**	PN	**Pn**	**18 10 22.9**	**+0.9**
SLUM	**Salum**	**2.71**	**179**	P	**Pn**	**18 10 32.4**	**+2.4**
	baz=271						
APE	**Apeiranthos**	**2.87**	**6**	PN	**Pn**	**18 10 33.8**	**+1.5**
ARG	**Arkhangelos**	**3.15**	**50**	PN	**Pn**	**18 10 37.4**	**+1.3**
DAT	**Datca**	**3.20**	**37**	PN	**Pn**	**18 10 38.3**	**+1.4**
DAT	**Datca**	**3.20**	**37**	*i* P	**Pn**	**18 10 37.3**	**+0.4**
DAT				IAML_P			
	comp=Z,203nm,0.2s						
DALY	**Dalyan (Mula)**	**3.86**	**47**	PN	**Pn**	**18 10 47.5**	**+1.7**
DALY	**Dalyan (Mula)**	**3.86**	**47**	*i* P	**Pn**	**18 10 48.2**	**+2.3**
DALY				IAML_P			
	comp=Z,457nm,0.4s						
TURN	**Turunc**	**3.87**	**46**	PN	Pn	18 10 43.2	-2.7
TURN	**Turunc**	**3.87**	**46**	*i* P	Pn	18 10 43.9	-2.0
TURN				*i* S	**Sn**	**18 11 25.1**	**-6.1**
TURN				IAML_P			
	comp=Z,701nm,0.3s						
ITM	**Ithomi**	**3.96**	**319**	PN	**Pn**	**18 10 48.0**	**+0.7**
FETY	**Fethiye**	**4.02**	**52**	PN	**Pn**	**18 10 48.8**	**+0.8**
FETY	**Fethiye**	**4.02**	**52**	*i* P	**Pn**	**18 10 47.8**	**-0.3**
FETY				*i* S	**Sn**	**18 11 34.1**	**-0.8**
FETY				IAML_P			
	comp=Z,217nm,0.3s						
AYDN	**Tasoluk**	**4.09**	**32**	*i* P	**Pn**	**18 10 51.7**	**+2.6**
AYDN				IAML_P			
	comp=Z,427nm,0.3s						
AKAS	**Kas**	**4.16**	**60**	PN	**Pn**	**18 10 51.4**	**+1.3**
AKAS	**Kas**	**4.16**	**60**	*i* P	**Pn**	**18 10 51.5**	**+1.4**
AKAS				*i* S	**Sn**	**18 11 36.4**	**-2.3**
AKAS				IAML_P			
	comp=Z,883nm,0.3s						
ELL	**Elmali**	**4.63**	**55**	PN	**Pn**	**18 10 58.2**	**+1.6**
AKUM	**Antalya-Kumluc**	**4.74**	**62**	*i* P	**Pn**	**18 10 58.6**	**+0.7**
AKUM				*i* S	**Sn**	**18 11 51.6**	**-1.0**
AKUM				IAML_P			
	comp=Z,326nm,0.2s						
SWA2		**4.96**	**177**	P	**Pn**	**18 11 01.5**	**+0.6**
	baz=230						
KORT	**Korkueli**	**5.07**	**55**	*i* P	**Pn**	**18 11 04.0**	**+1.4**
USAK	**Uak-Merkez**	**5.47**	**34**	*i* P	**Pn**	**18 11 10.7**	**+2.7**
USAK				IAML_P			
	comp=Z,864nm,0.3s						
KEPZ	**Antalya-Kepez**	**5.90**	**61**	*i* P	**Pn**	**18 11 14.9**	**+1.0**
KEPZ				*i* S	**Sn**	**18 12 18.0**	**-3.3**
KEPZ				IAML_P			
	comp=Z,108nm,0.4s						
GAZI	**Gazipasa**	**6.20**	**69**	*i* P	**Pn**	**18 11 18.1**	**+0.1**
GAZI				*i* S	Sn	18 12 21.9	-6.7
GAZI				IAML_P			
	comp=Z,441nm,0.3s						
ERMK	**Ermenek**	**6.78**	**67**	*i* P	**Pn**

Ms1 2.3/1, ms1mx2.2/30, Error ellipse: s-maj=134.6km s-min=19.0km az=59.0

ISC 20 18:20:51.7±1.6, 2°.5N±0°.2×95°.8E±0°.2, h25km, n14, σ0°50/8, mb4.0/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.18**	**84**	**P**	**Pn**	**18 21 40.2**	**0.0**
	3.2nm,0.3s,baz=322,slow=14,SNR=6.1						
PSI				LR	LR	18 22 40.3	
	comp=Z,52nm,20.8s,baz=198,slow=35						
CMAR	**Chiang Mai Arr**	**16.18**	**11**	**P**	**Pn**	**18 24 38.2**	**+0.7**
	0.1nm,0.3s,baz=200,slow=11,SNR=7.0						
H08S2	**Diego Garcia H**	**25.30**	**246**	T	T	18 52 32.6	
	baz=67,slow=75,SNR=137						
H08S3	**Diego Garcia H**	**25.30**	**246**	T	T	18 52 38.5	
	baz=67,slow=75,SNR=98						
H08S1	**Diego Carcia H**	**25.32**	**246**	T	T	18 52 36.1	
	baz=67,slow=75,SNR=130						
H01W3	**Cape Leeuwin H**	**40.98**	**157**	T	T	19 12 08.6	
	baz=332,slow=76,SNR=36						
H01W2	**Cape Leeuwin H**	**40.99**	**157**	T	T	19 12 09.6	
	baz=332,slow=76,SNR=39						
H01W1	**Cape Leeuwin H**	**40.99**	**157**	T	T	19 12 09.8	
	baz=332,slow=76,SNR=32						
WRA	**Warramunga Arr**	**43.93**	**122**	**P**	**P**	**18 28 56.9**	**0.0**
	2.1nm,0.9s,baz=301,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**45.31**	**127**	**P**	**P**	**18 29 08.2**	**+0.2**
	0.2nm,0.4s,baz=298,slow=7.9,SNR=6.8						
MKAR	**Makanchi Array**	**45.67**	**347**	**P**	**P**	**18 29 10.2**	**-0.2**
	1.1nm,0.4s,baz=160,slow=8.8,SNR=36						
SONM	**Songino Array**	**46.10**	**10**	**P**	**P**	**18 29 13.2**	**-0.7**
	1.0nm,0.7s,baz=184,slow=7.6,SNR=5.4						
ZALV	**Zalesovo Beam**	**52.08**	**352**	**P**	**P**	**18 29 59.2**	**-0.2**
	1.4nm,0.5s,baz=179,slow=7.1,SNR=7.5						
ARCES	**ARCESS Array B**	**80.85**	**340**	P	**P**	**18 33 03.6**	**+0.4**
	2.1nm,1.0s,baz=116,slow=5.5,SNR=4.4						

*IDC **20** 18:22:31.5±1.6, 35°.59N×27°.37E, h0km, mb3.3/3, mb1 3.4/5, mb1mx3.2/35, mbtmp3.2/5, ML3.5/2, Error ellipse: s-maj=42.1km s-min=22.7km az=154.0*
*ISK **20** 18:22:32.9, 35°.83N×27°.25E, h9km, ML3.5/18*
*ATH **20** 18:22:33.1, 35°.77N×27°.32E, h28km±1km, ML3.4/4, Error ellipse: s-maj=3.6km s-min=1.4km az=120.0*
*ISCJB **20** 18:22:33.4±0.6, 35°.81N±0°.02×27°.27E±0°.02, h5km±4km, mb3.2/3, Error ellipse: s-maj=4.5km s-min=2.6km az=142.4*
*THE **20** 18:22:34.0, 35°.78N×27°.32E, h5km±1km, ML3.5/5, Error ellipse: s-maj=1.8km s-min=0.5km az=129.0*
*DDA **20** 18:22:34.0, 35°.82N×27°.41E, h4km±3km, ML3.3*

ISC 20 18:22:33.1±1.2, 35°.78N±0°.02×27°.30E±0°.02, h9km±9km, n68, σ1°49/97, mb3.1/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.26**	**206**	PG	**Pb**	**18 22 39.3**	**-0.7**
KARP				SG	**Sb**	**18 22 44.0**	**-0.7**
KARP	**Karpathos**	**0.26**	**206**	P	**Pb**	**18 22 39.4**	**-0.6**
KARP				S	**Sb**	**18 22 44.2**	**-0.5**
KARP	**Karpathos**	**0.26**	**206**	P	**Pb**	**18 22 39.5**	**-0.6**
KARP				S	**Sb**	**18 22 44.3**	**-0.3**
KARP				AML	AML	18 22 45.0	
	comp=E,29355μm,0.3s						
KARP				AML	AML	18 22 45.4	
	comp=N,14349μm,0.2s						
ARG	**Arkhangelos**	**0.80**	**57**	PG	**Pg**	**18 22 48.6**	**+0.1**
ARG				SG	**Sb**	**18 23 00.3**	**+0.2**
ARG	**Arkhangelos**	**0.80**	**57**	P	**Pb**	**18 22 48.8**	**-0.3**
ARG				S	**Sb**	**18 23 00.5**	**+0.5**
	comp=N,3μm,0.3s						
ARG	**Arkhangelos**	**0.80**	**57**	P	**Pg**	**18 22 48.6**	**+0.1**
ARG				S	**Sb**	**18 23 00.2**	**+0.2**
ARG				AML	AML	18 23 03.6	
	comp=N,5315μm,0.4s						
ARG				AML	AML	18 23 04.1	
	comp=E,5611μm,0.3s						
NISR	**Nisiros**	**0.84**	**350**	P	**Pb**	**18 22 50.0**	**+0.1**
NISR				S	**Sn**	**18 23 02.9**	**-0.7**
NISR	**Nisiros**	**0.84**	**350**	P	**Pb**	**18 22 50.5**	**+0.7**
NISR				S	**Sb**	**18 23 02.2**	**+1.0**
NISR				AML	AML	18 23 03.2	
	comp=E,4832μm,0.6s						
NISR				AML	AML	18 23 05.4	
	comp=N,2789μm,0.5s						
DAT	**Datca**	**0.97**	**13**	PG	**Pg**	**18 22 51.5**	**-0.3**
DAT				SG	**Sb**	**18 23 05.3**	**+0.1**
DAT	**Datca**	**0.97**	**13**	*i* P	**Pg**	**18 22 51.2**	**-0.5**
DAT				*i* S	**Sb**	**18 23 05.4**	**+0.2**
DAT				IAML_P			
	comp=Z,3μm,0.2s						
DATC	**Datca-Mugla**	**1.02**	**17**	PG	**Pg**	**18 22 52.6**	**-0.1**
BBRN	**Bozburun-Marma**	**1.08**	**34**	PG	**Pg**	**18 22 53.9**	**-0.1**
ZKR	**Zakros**	**1.11**	**233**	PN	**Pb**	**18 22 54.6**	**+0.1**
ZKR	**Zakros**	**1.11**	**233**	P	**Pb**	**18 22 54.6**	**+0.1**
ZKR				S	**Sn**	**18 23 10.5**	**+0.2**
	comp=Z,2μm,0.3s						
ZKR	**Zakros**	**1.11**	**233**	P	**Pb**	**18 22 54.5**	**+0.1**
ZKR				S	**Sn**	**18 23 10.4**	**+0.1**
ZKR				AML	AML	18 23 12.3	
	comp=E,4957μm,0.3s						
ZKR				AML	AML	18 23 12.5	
	comp=N,2891μm,0.5s						
STIA	**Sitia Lasithi**	**1.15**	**240**	P	**Pn**	**18 22 55.5**	**+0.2**
STIA				S	**Sn**	**18 23 11.1**	**0.0**
MRSB	**Marmaris-Mugla**	**1.18**	**38**	PN	**Pb**	**18 22 55.4**	**-0.3**
BODT	**Bodrum**	**1.28**	**0**	PN	**Pn**	**18 22 56.9**	**-0.3**
BODT	**Bodrum**	**1.28**	**0**	P	**Pn**	**18 22 57.1**	**-0.1**
BODT				S	**Sn**	**18 23 14.7**	**+0.3**
BDRM	**Kayabasi**	**1.28**	**5**	*i* P	**Pg**	**18 22 58.1**	**+0.3**
BDRM				*i* S	**Sb**	**18 23 14.0**	**-0.1**
ANAF	**Anafi Island**	**1.36**	**295**	P	**Pg**	**18 22 59.3**	**0.0**
NPS	**Neapolis**	**1.47**	**250**	P	**Pn**	**18 22 59.7**	**-0.2**
NPS				S	**Sn**	**18 23 19.1**	**-0.2**
	comp=N,6μm,0.4s						
NPS	**Neapolis**	**1.47**	**250**	P	**Pn**	**18 22 59.8**	**0.0**
DALY	**Dalyan (Mula)**	**1.50**	**46**	PN	**Pb**	**18 23 00.9**	**-0.3**
TURN	**Turunc**	**1.51**	**44**	PN	**Pn**	**18 22 56.4**	**-4.0**
TURN	**Turunc**	**1.51**	**44**	*i* P	**Pn**	**18 22 57.1**	**-3.3**
TURN				*i* S	**Sn**	**18 23 13.6**	**-6.6**
TURN				IAML_P			
	comp=Z,3μm,0.3s						
AMGA	**Amorgos Island**	**1.54**	**313**	P	**Pn**	**18 23 00.3**	**-0.5**
YER	**Yerkesik**	**1.56**	**30**	PN	**Pn**	**18 23 01.4**	**+0.2**
YER	**Yerkesik**	**1.56**	**30**	P	**Pn**	**18 23 01.1**	**-0.1**
YER				S	**Sb**	**18 23 22.4**	**+0.2**
SANT	**Santorini**	**1.60**	**292**	PN	**Pn**	**18 23 01.0**	**-0.7**
LAST	**Lasithi**	**1.61**	**248**	P	**Pn**	**18 23 01.9**	**+0.1**
LAST				S	**Sn**	**18 23 22.9**	**+0.1**
	comp=Z,938nm,0.5s						
LAST	**Lasithi**	**1.61**	**248**	P	**Pn**	**18 23 01.9**	**+0.1**
THR3	**Thira Island,**	**1.66**	**293**	P	**Pn**	**18 23 02.1**	**-0.3**
FETY	**Fethiye**	**1.67**	**59**	PN	**Pb**	**18 23 03.5**	**-0.6**
FETY	**Fethiye**	**1.67**	**59**	*i* P	**Pg**	**18 23 04.7**	**-0.5**
FETY				*i* S	**Sg**	**18 23 26.6**	**-0.3**
FETY				IAML_P			
	comp=Z,3μm,0.2s						
THR5	**Thira Island,**	**1.70**	**292**	P	**Pn**	**18 23 03.4**	**+0.4**
GCAM	**G?zelcami?**	**1.91**	**358**	PN	**Pn**	**18 23 06.3**	**+0.4**
GCAM	**G?zelcami?**	**1.91**	**358**	*i* P	**Pg**	**18 23 10.2**	**+0.4**
APE	**Apeiranthos**	**1.92**	**312**	PN	**Pn**	**18 23 05.5**	**-0.5**
APE	**Apeiranthos**	**1.92**	**312**	P	**Pn**	**18 23 05.7**	**-0.4**
AKAS	**Kas**	**1.92**	**76**	PN	**Pb**	**18 23 07.7**	**-0.7**
AKAS	**Kas**	**1.92**	**76**	*i* P	**Pb**	**18 23 08.9**	**+0.5**
AYDN	**Tasoluk**	**1.93**	**14**	*i* P	**Pg**	**18 23 10.7**	**+0.6**
AYDN				IAML_P			
	comp=Z,4μm,0.3s						
SIVA	**Sivas**	**2.17**	**250**	P	**Pn**	**18 23 10.1**	**+0.6**
SIVA				S	**Sn**	**18 23 37.6**	**+1.1**
	comp=Z,1μm,0.8s						
AYDB	**Zeytinkoy-Aydi**	**2.21**	**12**	PN	**Pn**	**18 23 10.7**	**+0.6**
DGB	**zmir**	**2.29**	**352**	*i* P	**Pb**	**18 23 13.8**	**-0.8**
ELL	**Elmali**	**2.32**	**65**	PN	**Pb**	**18 23 14.0**	**-1.2**
AKUM	**Antalya-Kumluc**	**2.52**	**77**	*i* P	**Pb**	**18 23 17.8**	**-0.8**
AKUM				IAML_P			
	comp=Z,751nm,0.3s						
URLA	**Izmir**	**2.63**	**348**	PN	**Pn**	**18 23 16.3**	**+0.5**
URLA	**Izmir**	**2.63**	**348**	*i* P	**Pg**	**18 23 25.7**	**+2.1**
URLA				*i* S	**Sg**	**18 24 00.8**	**+3.0**
KORT	**Korkueli**	**2.74**	**63**	PN	**Pn**	**18 23 19.5**	**+2.0**
KORT	**Korkueli**	**2.74**	**63**	*i* P	**Pb**	**18 23 20.1**	**-2.3**
KORT				*i* S	**Sb**	**18 23 57.0**	**+0.7**
KORT				IAML_P			
	comp=Z,711nm,0.5s						
BRDR	**BURDUR-Merkez**	**2.93**	**48**	*i* P	**Pb**	**18 23 25.6**	**+0.1**
BRDR				*i* S	**Sg**	**18 24 05.0**	**-2.1**
KULA	**Kula-Manisa**	**2.93**	**21**	PN	**Pn**	**18 23 21.1**	**+1.1**
KHAL	**Karahalli**	**3.12**	**34**	*i* P	**Pn**	**18 23 24.0**	**+1.4**
BAGO	**Egridir - ISPA**	**3.56**	**51**	*i* P	**Pb**	**18 23 33.8**	**-2.5**
KEPZ	**Antalya-Kepez**	**3.65**	**71**	*i* P	**Pn**	**18 23 32.3**	**+2.4**
KEPZ				*i* S	**Sn**	**18 24 16.7**	**+3.7**
KEPZ				IAML_P			
	comp=Z,598nm,0.4s						
GAZI	**Gazipasa**	**4.09**	**82**	*i* P	**Pn**	**18 23 37.9**	**+2.0**
GAZI				*i* S	**Sn**	**18 24 24.8**	**+0.9**
LEF	**Lefka**	**4.61**	**97**	*i* P	**Pn**	**18 23 43.9**	**+0.9**
LEF				*i* S	**Sn**	**18 24 35.2**	**-1.5**
ERMK	**Ermenek**	**4.62**	**78**	*i* P	**Pn**	**18 23 47.8**	**+4.5**
ERMK				*i* S	**Sn**	**18 24 41.0**	**+3.9**
ERMK				IAML_P			
	comp=Z,642nm,0.4s						
KDHN	**Kadinhani**	**4.72**	**53**	*i* P	**Pn**	**18 23 47.3**	**+2.8**
GULN	**MERSIN_Gulnar**	**5.08**	**84**	*i* P	**Pn**	**18 23 51.8**	**+2.3**
GULN				*i* S	**Sn**	**18 24 47.8**	**-0.4**
BRTR	**Keskin Array B**	**6.38**	**50**	Pn	**Pn**	**18 24 09.8**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=233,slow=18,SNR=4.5						
VYHS	**Vyhne**	**14.15**	**336**	*e*PN	**Pn**	**18 25 51.7**	**-2.0**
GERES	**GERESS Array B**	**16.44**	**327**	Pn	**P**	**18 26 27.8**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=140,slow=12,SNR=3.4						
ESDC	**Sonseca Array**	**24.96**	**288**	**P**	**P**	**18 27 57.1**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=88,slow=11,SNR=4.1						
TORD	**Torodi Ar. Bea**	**32.24**	**232**	**P**	**P**	**18 29 01.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=40,slow=7.8,SNR=6.2						
MKAR	**Makanchi Array**	**41.97**	**57**	**P**	**P**	**18 30 24.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=276,slow=5.7,SNR=2.6						

*SNET **20** 18:23:38.8±0.9, 15°.93N×87°.14W, h35km±999km, ML4.2*
*UCR **20** 18:23:40.9±2.7, 15°.87N×87°.39W, h15km, ML4.0*

ISC 20 18:23:33.4±2.7, 15°.8N±0°.1×87°.21W±0°.05, h10km, n22, σ1°28/41, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VICT	**Victoria**	**2.30**	**217**	*e*P	**Pg**	**18 24 16.4**	**-1.2**
VICT				*e*S	**Sg**	**18 24 45.9**	**-1.6**
VICT	**Victoria**	**2.30**	**217**	*e*P	**Pg**	**18 24 16.4**	**-1.2**
VICT				*e*S	**Sg**	**18 24 45.9**	**-1.6**
MTO3	**Montecristo**	**2.51**	**236**	*e*P	**Pg**	**18 24 19.8**	**-1.7**
MTO3				*e*S	**Sb**	**18 24 51.4**	**+1.8**
MTO3	**Montecristo**	**2.51**	**236**	*e*P	**Pg**	**18 24 19.8**	**-1.7**
MTO3				*e*S	**Sb**	**18 24 51.4**	**+1.8**
PACA	**Pacayal**	**2.57**	**205**	*e*P	**Pb**	**18 24 20.0**	**+0.4**
PACA				*e*S	**Sb**	**18 24 52.4**	**+1.1**
PACA	**Pacayal**	**2.57**	**205**	*e*P	**Pb**	**18 24 20.0**	**+0.4**
PACA				*e*S	**Sb**	**18 24 52.4**	**+1.1**
LCND	**La Caada**	**2.58**	**195**	*e*P	**Pb**	**18 24 19.6**	**-0.1**
LCND				*e*S	**Sb**	**18 24 51.8**	**+0.4**
LCND	**La Caada**	**2.58**	**195**	*e*P	**Pb**	**18 24 19.6**	**-0.1**
LCND				*e*S	**Sb**	**18 24 51.8**	**+0.4**
CNCH	**Conchagua**	**2.59**	**193**	*e*P	**Pb**	**18 24 20.9**	**+0.8**
CNCH				*e*S	**Sb**	**18 24 53.5**	**+1.4**
CNCH	**Conchagua**	**2.59**	**193**	*e*P	**Pb**	**18 24 20.9**	**+0.8**
CNCH				*e*S	**Sb**	**18 24 53.5**	**+1.4**
PAVA	**Las Pavas**	**2.67**	**219**	*e*P	**Pb**	**18 24 22.3**	**+0.9**
PAVA				*e*S	**Sb**	**18 24 55.2**	**+0.8**
PAVA				IAML		18 25 00.2	
	comp=Z,820nm,0.3s						
PAVA	**Las Pavas**	**2.67**	**219**	*e*P	**Pb**	**18 24 22.3**	**+0.9**
PAVA				*e*S	**Sb**	**18 24 55.2**	**+0.8**
PAVA				IAML		18 25 00.2	
	comp=Z,820nm,0.3s						
LBRS	**Las Brisas**	**2.72**	**221**	*e*P	**Pb**	**18 24 22.5**	**+0.3**
LBRS				*e*S	**Sb**	**18 24 55.8**	**+0.1**
LFU	**La Fuente**	**2.76**	**222**	*e*P	**Pb**	**18 24 23.1**	**+0.3**
LFU				*e*S	**Sb**	**18 24 57.0**	**+0.3**
LFU	**La Fuente**	**2.76**	**222**	*e*P	**Pb**	**18 24 23.1**	**+0.3**
LFU				*e*S	**Sb**	**18 24 57.0**	**+0.3**
ESTN	**Estel**	**2.82**	**163**	*e*P	**Pg**	**18 24 28.5**	**+1.1**
ESTN				*e*S	**Sb**	**18 24 59.1**	**+0.6**
CSGN	**Cosiguina Volc**	**2.84**	**187**	*e*P	**Pb**	**18 24 25.2**	**+0.9**
CSGN				*e*S	**Sb**	**18 25 00.9**	**+1.8**
BOQS	**Boqueron**	**2.88**	**224**	*e*P	**Pg**	**18 24 31.6**	**+3.1**
MATN	**Matagalpa**	**3.13**	**156**	*e*P	**Pb**	**18 24 29.3**	**+0.1**
MATN				*e*S	**Sb**	**18 25 08.8**	**+1.4**
MATN				IAML		18 25 11.1	
	comp=N,4μm,0.3s						
CNGN	**Cerro Negro**	**3.33**	**171**	*e*P	**Pg**	**18 24 35.7**	**-1.6**
CNGN				*e*S	**Sb**	**18 25 15.1**	**+1.8**
CNGN				IAML		18 25 24.9	
	comp=N,299nm,0.4s						
MOMN	**Momotombo**	**3.45**	**169**	*e*P	**Pg**	**18 24 36.6**	**-2.8**
ACON	**Acoyapa**	**4.30**	**152**	*e*P	**Pb**	**18 24 49.4**	**+0.2**

*IDC **20** 19:03:07.8±0.9, 55°.87S×24°.87W, h0km, mb4.3/3, mb1 4.3/4, mb1mx4.0/22, mbtmp4.2/4, ML3.5/1, MS3.5/1, Ms1 3.4/1, ms1mx2.8/21, Error ellipse: s-maj=39.9km s-min=25.8km az=77.0*
*ISCJB **20** 19:03:10.7±0.7, 55°.91S±0°.09×24°.9W±0°.4, h30km, mb4.5/5, MS3.5/1, Error ellipse: s-maj=30.5km s-min=11.1km az=169.2*
*NEIC **20** 19:03:12.9±0.8, 55°.97S×24°.90W, h35km±4km, mb4.8/4, Error ellipse: s-maj=34.7km s-min=9.9km az=72.0*

ISC 20 19:03:12.1±0.7, 55°.9S±0°.1×24°.9W±0°.2, h30km, n28, σ0°52/24, mb4.7/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.45**	**160**	P	**P**	**19 07 02.7**	**0.0**
VNA3	**Neumayer Olymp**	**16.70**	**163**	P	**Pn**	**19 07 04.1**	**+0.6**
VNA2	**Neumayer--Watz**	**16.84**	**160**	P	**Pn**	**19 07 04.9**	**-0.4**
	baz=320,slow=15						
SNAA	**Sanae**	**18.35**	**158**	P	**Pn**	**19 07 24.2**	**+0.3**
SNAA	**Sanae**	**18.35**	**158**	P	**Pn**	**19 07 23.9**	**0.0**
	0.2nm,0.3s,baz=312,slow=9.3,SNR=6.9						
SNAA	**Sanae**	**18.35**	**158**	*e*P	**P**	**19 07 23.2**	**-0.6**
	13nm,1.3s						
QSPA	**South Pole Qui**	**34.33**	**180**	*e*P	**P**	**19 09 55.7**	**0.0**
	26nm,1.7s						
BOSA	**Boshof**	**44.67**	**74**	LR	LR	19 25 19.2	
	comp=Z,58nm,20.9s,baz=224,slow=30						
VNDA	**Vanda**	**46.76**	**182**	P	**P**	**19 11 38.8**	**+1.0**
	1.2nm,0.8s,baz=178,slow=5.1,SNR=7.6						
VNDA	**Vanda**	**46.76**	**182**	*e*P	**P**	**19 11 37.7**	**-0.1**
H10S2	**ASCENSION HYDR**	**47.53**	**14**	T	T	20 03 05.7	
	baz=188,slow=75,SNR=5.3						
H10S3	**ASCENSION HYDR**	**47.54**	**14**	T	T	20 03 06.1	
	baz=188,slow=75,SNR=4.7						
H10S1	**ASCENSION HYDR**	**47.55**	**14**	T	T	20 03 06.2	
	baz=188,slow=75,SNR=4.7						
LPAZ	**La Paz**	**51.39**	**303**	P	**P**	**19 12 14.9**	**+0.2**
	4.5nm,0.7s,baz=164,slow=8.4,SNR=13						
LPAZ	**La Paz**	**51.39**	**303**	*e*P	**P**	**19 12 14.9**	**+0.2**
	28nm,1.8s						
TOA0	**Torodi Ar. Sit**	**72.32**	**27**	*e*P	**P**	**19 14 35.1**	**+0.5**
	6.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.32**	**27**	**P**	**P**	**19 14 35.4**	**+0.7**
	3.4nm,0.5s,baz=203,slow=5.8,SNR=18						
TOA1	**Torodi Ar. Sit**	**72.33**	**27**	*e*P	**P**	**19 14 35.4**	**+0.7**
HYT	**Haines Junctio**	**145.76**	**307**	*e*PKPdf	**PKPab**	**19 22 47.4**	**+0.1**
INK	**Inuvik**	**146.53**	**320**	*e*PKPdf	**PKPbc**	**19 22 48.6**	**-0.1**
SONA0	**Songino Array**	**149.41**	**85**	*e*PKPbc	**PKPbc**	**19 22 56.6**	**-0.6**
SONM	**Songino Array**	**149.41**	**85**	PKPbc	**PKPbc**	**19 22 56.6**	**-0.6**
	0.7nm,0.5s,baz=244,slow=2.7,SNR=6.6						
DOT	**Dot Lake**	**149.56**	**310**	*e*PKPbc	**PKiKP**	**19 22 57.4**	**-0.6**
ILAR	**Eielson Array**	**151.01**	**311**	PKPbc	**PKiKP**	**19 23 00.2**	**-0.7**
	2.5nm,0.8s,baz=125,slow=1.7,SNR=22						
ILB	**Eielson Array**	**151.01**	**311**	*e*PKPbc	**PKPbc**	**19 23 00.0**	**-0.3**
WRH	**Wood River Hil**	**151.47**	**311**	*e*PKPbc	**PKiKP**	**19 23 01.4**	**-0.5**
RND	**Reindeer**	**151.61**	**308**	*e*PKPbc	**PKiKP**	**19 23 01.8**	**-0.5**
BPAW	**Bear Paw Mtn.**	**152.66**	**309**	*e*PKPbc	**PKPbc**	**19 23 03.6**	**-0.5**

*NIED **20** 19:28:00, 35°.90N×140°.80E, h8km, Mw3.3 Best double couple: M0 9.97000×10^13 NP1:φ0=180.00000°, δ45.00000°, λ=-111.00000°. NP2:φ0=29.00000°, δ49.00000°, λ=-70.00000°.*

JMA 20 19:28:26.6±0.1, 35°.91N×140°.81E, h16km±1km, M3.6, 2C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.21**	**169**	⇑P	Pg	19 28 31.4	-0.1
CHOJ				S	Sg	19 28 34.6	-0.2
JIHU	**Itakohorinouch**	**0.24**	**284**	P	Pb	19 28 32.5	0.0
JSMT	**Sammumatsuo**	**0.40**	**228**	P	Pb	19 28 35.0	-0.2
JSMT				S	Sb	19 28 41.7	+0.6
JHYU	**Hitachinakayam**	**0.47**	**337**	P	Pb	19 28 36.2	-0.2
JHYU				S	Sb	19 28 42.7	-0.4
JYT	**Yasato**	**0.59**	**303**	⇑P	Pg	19 28 37.9	-0.4
JYT				S	Sg	19 28 45.9	-0.3
JCN	**Nagara**	**0.70**	**225**	P	Pn	19 28 41.1	-0.7
JCN				S	Sn	19 28 51.7	-0.5
JHO	**Hitachi**	**0.73**	**345**	⇓P	Pg	19 28 40.3	-0.5
JHO				S	Sg	19 28 50.4	0.0
MAT	**Matsushiro**	**2.20**	**287**	P	Pn	19 29 02.3	-0.2
MAT				S	Sn	19 29 27.7	-1.6

DJA 20 20:05:37.3±0.3, 8°S±2°×12°2E±°, h10km, M4.1/13, mb4.4/2, mB4.8/1, MLv3.9/13, Mw(mB)4.1/1, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.35**	**209**	P	Pg	20 05 44.9	+0.6
EDFI				S	Sg	20 05 50.0	+1.0
WSI	**Waingapu**	**1.97**	**232**	P	Pn	20 06 10.7	0.0
BATI	**Baumata**	**2.50**	**135**	P	Pn	20 06 19.5	+1.4
BATI				S	Sg	20 06 55.5	-2.2
BSSI	**Bau Bau, Buton**	**2.66**	**329**	P	Pn	20 06 19.5	-0.7
SOEI	**Soe**	**2.71**	**119**	P	Pn	20 06 22.6	+1.5
SOEI				S	Sb	20 06 59.5	+0.1
WBSI	**Waikabubak, Su**	**2.71**	**244**	P	Pn	20 06 20.5	-0.6
WBSI				S	Sn	20 06 54.7	+0.7
BKSI	**Bulukumba**	**3.55**	**331**	P	Pn	20 06 32.3	-0.1
PLAI	**Plampang**	**4.06**	**264**	P	Pn	20 06 40.5	+1.0
PLAI				S	Sn	20 07 28.3	+1.2
KDI	**Kendari**	**4.52**	**10**	P	Pn	20 06 44.6	-1.2
SPSI	**Sidrap Palu**	**4.91**	**335**	P	Pn	20 06 51.6	+0.4
LUWI	**Luwuk**	**7.41**	**7**	P	Pn	20 07 26.2	+0.7
APSI	**Ampana**	**7.48**	**358**	P	Pn	20 07 27.4	+0.8

MAN 20 20:08:53.7, 7°30N×124°77E, h1km, mb3.8, ML2.5, MS2.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.64**	**27**	*e*P	Pg	20 09 06.5	+0.4
BUKP				*e*S	Sn	20 09 20.8	-0.2
SKMP	**Bagumbayan, Su**	**0.81**	**196**	*e*P	Pg	20 09 09.3	+0.1
SKMP				*e*S	Sb	20 09 21.4	-0.6
CGP	**Cagayan de Oro**	**1.15**	**356**	⇑*e*P	Pg	20 09 15.5	-0.3
CGP				*e*S	Sg	20 09 30.4	-0.2
PAGZ	**Pagadian**	**1.48**	**292**	*e*P	Pn	20 09 20.6	-0.8
PAGZ				*e*S	Sn	20 09 41.8	+0.4
DDMP	**Don Marcelino,**	**1.52**	**142**	*e*P	Pn	20 09 21.6	-0.5
DDMP				*e*S	Sg	20 09 43.2	+0.7
IPIL	**Ipil**	**2.23**	**283**	*e*P	Pn	20 09 33.1	+1.3
IPIL				*e*S	Sb	20 10 02.0	-1.0

MEX 20 20:28:48.5±0.5, 15°.07N×93°.29W, h80km±7km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.64**	**7**	*e*P	Pn	20 29 02.2	-1.3
PCIG				*e*S	Sn	20 29 12.7	-1.9
THIG		**1.01**	**99**	*i* P	Pn	20 29 06.7	-0.9
THIG				*e*S	Sn	20 29 20.6	-1.3
CCIG	**Comitan**	**1.64**	**43**	*e*P	Pn	20 29 15.5	-0.3
CCIG				*i* S	Sn	20 29 35.0	-1.5
TGIG		**1.71**	**6**	*e*P	Pn	20 29 15.3	-1.3
TGIG				*i* S	Sn	20 29 35.9	-2.0

IDC 20 20:48:09.4±11.0, 16°.58S×174°.78E, h0km, mb4.4/3, mb1 4.6/4, mb1mx3.8/32, mbtmp4.4/4, ML4.2/1, Error ellipse: s-maj=225.0km s-min=97.0km az=105.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.58**	**234**	Pn	Pn	20 50 28.7	0.0
	2.3nm,0.3s,baz=45,slow=19,SNR=19						
STKA	**Stephens Creek**	**33.71**	**237**	P	P	20 54 52.4	-0.2
	3.5nm,0.8s,baz=54,slow=8.7,SNR=5.5						
WRA	**Warramunga Arr**	**38.49**	**259**	P	P	20 55 33.9	+0.2
	0.7nm,0.2s,baz=87,slow=7.6,SNR=18						
ASAR	**

IXG	**Ixpaco**	**0.99**	**34**	*eP*	**Pn**	**21 05 20.4**	**+0.2**
FUG	**Fuego 3**	**1.11**	**9**	*eP*	**Pn**	**21 05 22.0**	**+0.2**
PCG	**Pacaya**	**1.11**	**21**	*eP*	**Pn**	**21 05 22.5**	**+0.6**
NBG	**Las Nubes**	**1.39**	**28**	*eP*	**Pn**	**21 05 27.0**	**+1.2**
RTR	**El Retiro**	**1.44**	**68**	*eP*	**Pn**	**21 05 26.3**	**-0.1**
SBLS	**San Blas**	**1.44**	**70**	*eP*	**Pn**	**21 05 25.9**	**-0.5**
SBLS				*eS*	**Sn**	**21 05 43.2**	**-1.3**
STG3	**Santiaguito 3,**	**1.46**	**338**	*eP*	**Pn**	**21 05 26.5**	**-0.2**
SNJE	**San Jose**	**1.47**	**69**	*eP*	**Pn**	**21 05 27.2**	**+0.4**
LFU	**La Fuente**	**1.89**	**78**	*eP*	**Pn**	**21 05 33.0**	**+0.4**
MTO3	**Montecristo**	**1.92**	**57**	*eP*	**Pn**	**21 05 33.5**	**+0.5**
MTO3				*eS*	**Sn**	**21 05 56.2**	**-0.1**
CNCH	**Conchagua**	**3.10**	**91**	*eP*	**Pn**	**21 05 49.9**	**+0.8**

MAN 20 21:19:57.0, 7.°18N×124.°78E, h5km, mb4.7, ML3.6, MS3.5, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.70**	**200**	*eP*	Pb	21 20 11.5	-0.2
SKMP				*eS*	Sn	21 20 24.2	-0.6
DMPH	**Davao City--Mi**	**0.73**	**98**	⇑*iP*	Pn	21 20 15.8	+1.7
DMPH				*i* S	Sn	21 20 28.9	+3.4
BUKP	**Musuan**	**0.75**	**22**	*eP*	Pg	21 20 10.9	-0.5
BUKP				*eS*	Sn	21 20 26.3	+0.2
GSPH	**General Santos**	**1.10**	**171**	*eP*	Pn	21 20 26.4	+7.2
CGP	**Cagayan de Oro**	**1.27**	**356**	⇑*iP*	Pg	21 20 19.2	-2.3
CGP				*i* S	Sg	21 20 35.0	-3.0
DDMP	**Don Marcelino,**	**1.41**	**139**	*eP*	Pn	21 20 22.4	-1.1
DDMP				*eS*	Sg	21 20 42.6	+0.1
MATI	**Mati**	**1.48**	**99**	*eP*	Pn	21 20 24.2	-0.2
MATI				*eS*	Sg	21 20 45.2	+0.4
BUTP	**Butuan**	**1.96**	**25**	*eP*	Pn	21 20 31.9	+0.9
BUTP				*eS*	Sn	21 20 56.3	+0.2
IPIL	**Ipil**	**2.27**	**286**	*eP*	Pn	21 20 36.1	+0.8
IPIL				*eS*	Sn	21 21 04.6	+0.9

IDC ***20*** *21:21:08.5±0.6, 54.°80N×164.°13E, h0km, mb4.1/22, mb1 4.3/24, mb1mx4.2/46, mbtmp4.1/24, ML3.9/2, MS3.1/15, Ms1 3.2/15, ms1mx3.0/40, Error ellipse: s-maj=18.5km s-min=11.7km az=155.0*
KRSC ***20*** *21:21:09.2±1.5, 54.°68N×164.°06E, h54km±30km, ML4.6*
NEIC ***20*** *21:21:11.1±1.1, 54.°78N×164.°15E, h20km±4km, mb4.5/39, Error ellipse: s-maj=20.1km s-min=8.7km az=144.0*
MOS ***20*** *21:21:11.8±0.9, 54.°73N×164.°08E, h42km, mb4.8/17, Error ellipse: s-maj=6.0km s-min=5.0km az=82.0*
BJI ***20*** *21:21:12.9±0.0, 55.°00N×163.°39E, h26km, mb4.6/30, mB5.0/23, Ms4.4/11, Ms7 4.1/8*

ISC 20 21:21:09.4±1.1, 54.°70N±0.°03×164.°18E±0.°04, h11km±7km, n215, σ1s54/255, mb4.5/67, MS3.4/16, 6C-1D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.15**	**63**	*i* P	**Pb**	**21 21 30.2**	**-1.1**
BKI				*eS*	**Sb**	**21 21 44.1**	**-2.1**
BKI	**Bering**	**1.15**	**63**	PN	**Pb**	**21 21 30.2**	**-1.1**
BKI				S	**Sb**	**21 21 44.1**	**-2.1**
MKZ	**Mys Kozlova**	**1.43**	**265**	*eP*	**Pn**	**21 21 34.7**	**-0.6**
MKZ				*eS*	**Sn**	**21 21 51.5**	**-2.6**
MKZ	**Mys Kozlova**	**1.43**	**265**	PN	**Pn**	**21 21 34.7**	**-0.6**
MKZ				S	**Sn**	**21 21 51.5**	**-2.6**
KBTR	**Krutoberegovo**	**1.70**	**333**	*eP*	**Pn**	**21 21 37.3**	**-1.7**
KBTR				*eS*	**Sn**	**21 21 57.6**	**-3.2**
KBTR	**Krutoberegovo**	**1.70**	**333**	PN	**Pn**	**21 21 37.3**	**-1.7**
KBTR				S	**Sn**	**21 21 57.6**	**-3.2**
KBG	**Krutoberegovo**	**1.77**	**332**	*eP*	**Pn**	**21 21 38.4**	**-1.6**
KBG				*eS*	**Sn**	**21 22 00.2**	**-2.3**
KBG	**Krutoberegovo**	**1.77**	**332**	PN	**Pn**	**21 21 38.4**	**-1.6**
KBG				S	**Sn**	**21 22 00.2**	**-2.3**
TUMD	**Tumrok D**	**2.24**	**285**	*eP*	**Pn**	**21 21 46.6**	**+0.2**
TUMD				*eS*	**Sn**	**21 22 11.7**	**-2.4**
KZV	**Kizimen**	**2.28**	**282**	*eP*	**Pn**	**21 21 47.1**	**-0.1**
KZV				*eS*	**Sn**	**21 22 13.6**	**-1.7**
KZV	**Kizimen**	**2.28**	**282**	PN	**Pn**	**21 21 47.1**	**-0.1**
KZV				S	**Sn**	**21 22 13.6**	**-1.7**
TUMR	**Tumrok**	**2.40**	**286**	*eP*	**Pn**	**21 21 49.4**	**+0.7**
TUMR	**Tumrok**	**2.40**	**286**	PN	**Pn**	**21 21 46.6**	**-2.1**
CIRR	**Tsirk**	**2.42**	**307**	*eP*	**Pn**	**21 21 48.9**	**-0.1**
CIRR	**Tsirk**	**2.42**	**307**	PN	**Pn**	**21 21 48.9**	**-0.1**
LGNR	**Loginova**	**2.43**	**306**	*eP*	**Pn**	**21 21 49.8**	**+0.5**
LGNR	**Loginova**	**2.43**	**306**	PN	**Pn**	**21 21 49.8**	**+0.5**
SMKR	**Semkarok**	**2.44**	**322**	*eP*	**Pn**	**21 21 48.9**	**-0.3**
SMKR	**Semkarok**	**2.44**	**322**	PN	**Pn**	**21 21 48.9**	**-0.3**
BZWR	**Bezymyannyi-We**	**2.46**	**303**	*eP*	**Pn**	**21 21 50.0**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.46**	**303**	PN	**Pn**	**21 21 50.0**	**+0.4**
BDR	**Baidarnaya**	**2.52**	**319**	*eP*	**Pn**	**21 21 50.4**	**0.0**
BDR				*eS*	**Sn**	**21 22 19.2**	**-1.9**
BDR	**Baidarnaya**	**2.52**	**319**	PN	**Pn**	**21 21 50.4**	**0.0**
BDR				S	**Sn**	**21 22 19.2**	**-1.9**
KRSR	**Krestovskiy**	**2.56**	**308**	*eP*	**Pn**	**21 21 50.8**	**-0.1**
KRSR				*eS*	**Sn**	**21 22 19.6**	**-2.5**
KRSR	**Krestovskiy**	**2.56**	**308**	PN	**Pn**	**21 21 50.8**	**-0.1**
KRSR				S	**Sn**	**21 22 19.6**	**-2.5**
KLY	**Klyuchi**	**2.58**	**310**	*eP*	**Pn**	**21 21 49.9**	**-1.1**
KLY				*eS*	**Sn**	**21 22 17.7**	**-4.7**
KLY	**Klyuchi**	**2.58**	**310**	PN	**Pn**	**21 21 49.9**	**-1.1**
KLY				S	**Sn**	**21 22 17.7**	**-4.7**
KPT	**Kopyto**	**2.59**	**301**	*eP*	**Pn**	**21 21 52.4**	**+1.0**
KPT				*eS*	**Sn**	**21 22 21.8**	**-1.1**
KPT	**Kopyto**	**2.59**	**301**	PN	**Pn**	**21 21 52.4**	**+1.0**
KPT				S	**Sn**	**21 22 21.8**	**-1.1**
SRKR	**Sorokina**	**2.60**	**320**	*eP*	**Pn**	**21 21 51.4**	**0.0**
SRKR	**Sorokina**	**2.60**	**320**	PN	**Pn**	**21 21 51.4**	**0.0**
KOZ	**Kozyrevsk**	**2.81**	**301**	*eP*	**Pn**	**21 21 55.7**	**+1.4**
KOZ				*eS*	**Sn**	**21 22 27.5**	**-0.7**
KOZ	**Kozyrevsk**	**2.81**	**301**	PN	**Pn**	**21 21 55.7**	**+1.4**
KOZ				S	**Sn**	**21 22 27.5**	**-0.7**
SPN	**Mys Shipunski**	**2.94**	**239**	*eP*	**Pn**	**21 21 55.7**	**-0.3**
SPN				*eS*	**Sn**	**21 22 27.6**	**-3.6**
SPN	**Mys Shipunski**	**2.94**	**239**	PN	**Pn**	**21 21 55.7**	**-0.3**
SPN				S	**Sn**	**21 22 27.6**	**-3.6**
SRDR	**Sredinnyy**	**3.01**	**304**	*eP*	**Pn**	**21 21 57.7**	**+0.6**
SRDR	**Sredinnyy**	**3.01**	**304**	PN	**Pn**	**21 21 57.7**	**+0.6**
NLC	**Nalytchevo**	**3.24**	**244**	*eP*	**Pn**	**21 22 00.1**	**-0.1**
NLC				*eS*	**Sn**	**21 22 35.6**	**-3.1**
NLC	**Nalytchevo**	**3.24**	**244**	PN	**Pn**	**21 22 00.1**	**-0.1**
NLC				S	**Sn**	**21 22 35.6**	**-3.1**
ESO	**Esso**	**3.37**	**294**	*eP*	**Pn**	**21 22 01.7**	**-0.2**
ESO				*eS*	**Sn**	**21 22 39.2**	**-2.6**
ESO	**Esso**	**3.37**	**294**	PN	**Pn**	**21 22 01.7**	**-0.2**
ESO				S	**Sn**	**21 22 39.2**	**-2.6**
SDLR	**Sedlovina**	**3.44**	**248**	*eP*	**Pn**	**21 22 03.3**	**+0.3**
SDLR				*eS*	**Sn**	**21 22 40.1**	**-3.6**
SDLR	**Sedlovina**	**3.44**	**248**	PN	**Pn**	**21 22 03.3**	**+0.3**
SMAR	**Somma**	**3.49**	**248**	*eP*	**Pn**	**21 22 04.0**	**+0.2**
SMAR	**Somma**	**3.49**	**248**	PN	**Pn**	**21 22 04.0**	**+0.2**
KRER	**Koryakskii**	**3.50**	**249**	*eP*	**Pn**	**21 22 04.9**	**+1.0**
KRER				*eS*	**Sn**	**21 22 43.1**	**-2.2**
KRER	**Koryakskii**	**3.50**	**249**	PN	**Pn**	**21 22 04.9**	**+1.0**
KRER				S	**Sn**	**21 22 43.1**	**-2.2**
UGLR	**Uglovaya**	**3.50**	**247**	*eP*	**Pn**	**21 22 04.3**	**+0.5**
AVH	**Avacha**	**3.52**	**248**	*eP*	**Pn**	**21 22 04.8**	**+0.7**
AVH				*eS*	**Sn**	**21 22 44.7**	**-1.0**
AVH	**Avacha**	**3.52**	**248**	PN	**Pn**	**21 22 04.8**	**+0.7**
AVH				S	**Sn**	**21 22 44.7**	**-1.0**
KRX	**Arik**	**3.53**	**250**	*eP*	**Pn**	**21 22 04.9**	**+0.7**
KRX	**Arik**	**3.53**	**250**	PN	**Pn**	**21 22 04.9**	**+0.7**
KOK	**Koryaka**	**3.56**	**249**	*eP*	**Pn**	**21 22 05.3**	**+0.6**
KOK				*eS*	**Sn**	**21 22 44.7**	**-2.1**
KOK	**Koryaka**	**3.56**	**249**	PN	**Pn**	**21 22 05.3**	**+0.6**
KOK				S	**Sn**	**21 22 44.7**	**-2.1**
DALK	**Dalny**	**3.62**	**245**	*eP*	**Pn**	**21 22 06.9**	**+1.5**
DALK				*eS*	**Sn**	**21 22 46.2**	**-1.9**
DALK	**Dalny**	**3.62**	**245**	PN	**Pn**	**21 22 06.9**	**+1.5**
DALK				S	**Sn**	**21 22 46.2**	**-1.9**
PET	**Petropavlovsk**	**3.68**	**245**	*e*Pn	**Pn**	**21 22 06.3**	**+0.1**
PET	**Petropavlovsk**	**3.68**	**245**	*e*PN	**Pn**	**21 22 07.8**	**+1.7**
PET				*eS*	**Sn**	**21 22 46.9**	**-2.6**
PET	comp=E,328nm,0.5s			smax	smax		
PET	comp=N,384nm,0.5s			smax	smax		
PET	comp=Z,500nm,16.0s			MLR	MLR		
GNL	**Ganaly**	**3.80**	**257**	*eP*	**Pn**	**21 22 09.4**	**+1.4**
GNL	**Ganaly**	**3.80**	**257**	PN	**Pn**	**21 22 09.4**	**+1.4**
KRMR	**Karymshinskiy**	**4.05**	**245**	*eP*	**Pn**	**21 22 11.7**	**+0.4**
KRMR				*eS*	**Sn**	**21 22 55.4**	**-3.2**
KRMR	**Karymshinskiy**	**4.05**	**245**	PN	**Pn**	**21 22 11.7**	**+0.4**
RUS	**Russkaya**	**4.07**	**238**	*eP*	**Pn**	**21 22 11.3**	**-0.2**
RUS				*eS*	**Sn**	**21 22 56.5**	**-2.6**
RUS	**Russkaya**	**4.07**	**238**	PN	**Pn**	**21 22 11.3**	**-0.2**
PEA1	**Petropavlovsk-**	**4.15**	**250**	*e*Pn	**Pn**	**21 22 13.7**	**+1.0**
PEA1				*e*Sn	**Sn**	**21 23 02.7**	**+1.5**
PEA0B	**Petropavlovsk-**	**4.15**	**250**	*e*Pn	**Pn**	**21 22 13.6**	**+0.9**
PEA0B	**Petropavlovsk-**	**4.15**	**250**	PN	**Pn**	**21 22 13.6**	**+0.9**
PETK	**Petropavlovsk-**	**4.15**	**250**	Pn	**Pn**	**21 22 13.7**	**+1.0**
	comp=Z,6.0nm,0.3s,baz=73,slow=17,SNR=64						
PETK				Sn	**Sn**	**21 23 02.7**	**+1.5**
	comp=Z,13nm,0.3s,baz=308,slow=17,SNR=14						
PETK				LR	LR	21 24 03.5	
	comp=Z,278nm,18.6s,baz=61,slow=42						
MTVR	**Mutnovka**	**4.21**	**241**	*eP*	**Pn**	**21 22 14.0**	**+0.4**
MTVR				*eS*	**Sn**	**21 22 59.1**	**-3.6**
MTVR	**Mutnovka**	**4.21**	**241**	PN	**Pn**	**21 22 14.0**	**+0.4**
ASAK	**Asacha**	**4.41**	**241**	*eP*	**Pn**	**21 22 17.1**	**+0.8**
ASAK	**Asacha**	**4.41**	**241**	PN	**Pn**	**21 22 17.1**	**+0.8**
APC	**Apacha**	**4.53**	**250**	*eP*	**Pn**	**21 22 19.9**	**+2.1**
APC	**Apacha**	**4.53**	**250**	PN	**Pn**	**21 22 19.9**	**+2.1**
KDTR	**Khodutka, Kamc**	**4.67**	**234**	*eP*	**Pn**	**21 22 19.2**	**-0.6**
KDTR				*eS*	**Sn**	**21 23 09.3**	**-4.6**
KDTR	**Khodutka, Kamc**	**4.67**	**234**	PN	**Pn**	**21 22 19.2**	**-0.6**
PAU	**Pauzhetka**	**5.50**	**237**	*eP*	**Pn**	**21 22 32.9**	**+1.8**
PAU	**Pauzhetka**	**5.50**	**237**	PN	**Pn**	**21 22 32.9**	**+1.8**
SKR	**Severo-Kuril's**	**6.34**	**234**	*eS*	**Sn**	**21 23 51.2**	**-3.8**
SKR	**Severo-Kuril's**	**6.34**	**234**	*i* PN	Pn	21 22 33.9	-8.8
ALID	**Alaid**	**6.49**	**237**	*eP*	**Pn**	**21 22 47.6**	**+2.7**
ALID	**Alaid**	**6.49**	**237**	PN	**Pn**	**21 22 47.6**	**+2.7**
MA2	**Magadan**	**8.77**	**309**	LR	LR	21 27 12.3	
	comp=Z,88nm,18.1s,baz=118,slow=42						
MA2	**Magadan**	**8.77**	**309**	*ce*PN	**Pn**	**21 23 13.5**	**-2.6**
MA2				pmax	pmax		
	comp=Z,21nm,1.7s						
SEY	**Seymchan**	**10.26**	**328**	*i* PN	**Pn**	**21 23 38.1**	**+1.7**
BILL	**Bilibino**	**13.42**	**3**	*e*PN	**Pn**	**21 24 23.9**	**+4.3**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
UNV	**Unalaska Valle**	**17.09**	**81**	*e*Pn	**P**	**21 25 08.9**	**-0.9**
	comp=Z,24nm,0.7s						
ASAJ	**Asahikawa**	**17.51**	**242**	Pn	**P**	**21 25 14.1**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=61,slow=8.6,SNR=12						
ASAJ				LR	LR	21 31 50.5	
	comp=Z,35nm,20.1s,baz=314,slow=37						
ERM	**Erimo**	**18.78**	**236**	*i* P	**P**	**21 25 25.2**	**-3.2**
YAK	**Yakutsk**	**19.33**	**306**	*i* P	**P**	**21 25 33.2**	**-1.1**
TEY	**Ternei**	**20.11**	**253**	⇑*eP*	**P**	**21 25 43.5**	**+0.5**
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
KLR	**Kul'dur**	**20.59**	**268**	LR	LR	21 34 29.3	
	comp=Z,60nm,18.6s,baz=74,slow=39						
KLR	**Kul'dur**	**20.59**	**268**	*i* P	**P**	**21 25 45.9**	**-2.3**
KLR				pmax	pmax		
	comp=Z,7.0nm,2.0s						
TIXI	**Tiksi**	**22.72**	**332**	P	**P**	**21 26 11.1**	**+0.3**
	comp=Z,7.4nm,0.5s,baz=113,slow=9.4,SNR=34						
TIXI				LR	LR	21 34 58.5	
	comp=Z,42nm,18.2s,baz=186,slow=37						
TIXI	**Tiksi**	**22.72**	**332**	*eP*	**P**	**21 26 10.8**	**-0.1**
	comp=Z,9.3nm,0.7s						
TIXI	**Tiksi**	**22.72**	**332**	*eP*	**P**	**21 26 11.3**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
RSO	**Redoubt South**	**23.45**	**58**	*eP*	**P**	**21 26 19.0**	**+0.3**
KDAK	**Kodiak Island**	**23.92**	**65**	P	**P**	**21 26 22.7**	**-0.3**
	comp=Z,6.0nm,0.5s,baz=270,slow=24,SNR=6.5						
KDAK				LR	LR	21 35 32.8	
	comp=Z,51nm,20.2s,baz=305,slow=36						
KDAK	**Kodiak Island**	**23.92**	**65**	*eP*	**P**	**21 26 22.6**	**-0.3**
	comp=Z,121nm,2.0s						
KDAK	**Kodiak Island**	**23.92**	**65**	*ce*P	**P**	**21 26 22.4**	**-0.6**
SKT	**Skwentna**	**23.94**	**54**	*eP*	**P**	**21 26 23.1**	**0.0**
	comp=Z,48nm,2.0s						
BPAW	**Bear Paw Mtn.**	**24.17**	**49**	*eP*	**P**	**21 26 25.0**	**-0.3**
	comp=Z,8.8nm,0.9s						
KTH	**Kantishna Hill**	**24.19**	**50**	*eP*	**P**	**21 26 26.4**	**+0.8**
	comp=Z,7.2nm,0.8s						
MLY	**Manley**	**24.32**	**47**	*eP*	**P**	**21 26 26.3**	**-0.4**
	comp=Z,5.5nm,0.9s						
MDJ	**Mudanjiang**	**24.32**	**260**	P	**P**	**21 26 26.0**	**-0.9**
MDJ				pP	sP	21 26 32.4	+3.4
MDJ				sP	pwP	21 26 36.3	+0.6
MDJ				S	**S**	**21 30 43.8**	**-1.8**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.0s						
MDJ				LR	LR		
	comp=Z,290nm,3.9s						
MDJ				LR	LR		
	comp=Z,300nm,3.9s						
SUA	**Susitna One**	**24.34**	**56**	*eP*	**P**	**21 26 26.1**	**-0.9**
	comp=Z,10nm,1.0s						
TRF	**Thorofare Moun**	**24.47**	**51**	*eP*	**P**	**21 26 28.7**	**+0.4**
	comp=Z,4.5nm,0.8s						
MCK	**McKinley**	**25.07**	**50**	*eP*	**P**	**21 26 33.1**	**-0.4**
	comp=Z,18nm,1.4s						
MCK	**McKinley**	**25.07**	**50**	*eP*	**P**	**21 26 33.1**	**-0.4**
MCK				pmax	pmax		
	comp=Z,19nm,1.4s						
RND	**Reindeer**	**25.12**	**51**	*eP*	**P**	**21 26 33.7**	**-0.3**
	comp=Z,15nm,1.2s						
RND	**Reindeer**	**25.12**	**51**	*eP*	**P**	**21 26 33.7**	**-0.3**
RND				pmax	pmax		
	comp=Z,15nm,1.2s						
TOLK	**Toolik Lake Re**	**25.21**	**38**	*eP*	**P**	**21 26 34.6**	**-0.1**
	comp=Z,12nm,0.8s						
WRH	**Wood River Hil**	**25.44**	**48**	*eP*	**P**	**21 26 36.5**	**-0.2**
	comp=Z,9.6nm,0.9s						
MJB9	**Matsu-Tunnel**	**25.45**	**235**	*eP*	**P**	**21 26 36.6**	**-0.5**
	comp=Z,15nm,0.7s						
MAJO	**Matsushiro**	**25.45**	**235**	*eP*	**P**	**21 26 35.9**	**-1.2**
	comp=Z,15nm,0.6s						
MAJO	**Matsushiro**	**25.45**	**235**	*eP*	**P**	**21 26 35.9**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,15nm,0.6s						
MAT	**Matsushiro**	**25.45**	**235**	P	**P**	**21 26 37.7**	**+0.6**
MAT				S	**S**	**21 30 57.4**	**-6.5**
MJAR	**Matsushiro Arr**	**25.45**	**235**	P	**P**	**21 26 38.6**	**+1.5**
	comp=Z,5.8nm,0.7s,baz=26,slow=6.9,SNR=20						
SCM	**Sheep Creek Mo**	**25.93**	**54**	*eP*	**P**	**21 26 40.7**	**-0.7**
	comp=Z,52nm,1.7s						
SCM	**Sheep Creek Mo**	**25.93**	**54**	*eP*	**P**	**21 26 40.7**	**-0.7**
SCM				pmax	pmax		
	comp=Z,52nm,1.7s						
ILAR	**Eielson Array**	**25.95**	**48**	P	**P**	**21 26 40.8**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=258,slow=8.6,SNR=34						
ILAR				LR	LR	21 38 12.6	
	comp=Z,27nm,18.8s,baz=189,slow=40						
GLI	**Glacier Island**	**26.16**	**56**	*eP*	**P**	**21 26 43.9**	**+0.4**
	comp=Z,18nm,1.4s						
PRP	**Porcupine Dome**	**26.53**	**46**	*eP*	**P**	**21 26 46.5**	**-0.3**
	comp=Z,6.3nm,0.7s						
DOT	**Dot Lake**	**27.25**	**50**	*eP*	**P**	**21 26 52.3**	**-0.9**
	comp=Z,12nm,1.7s						
KSRS	**Korea Array**	**30.05**	**250**	LR	LR	21 38 04.8	
	comp=Z,31nm,20.6s,baz=105,slow=34						
INK	**Inuvik**	**31.10**	**40**	P	**P**	**21 27 27.7**	**+0.4**
	comp=Z,1.6nm,0.4s,baz=284,slow=5.7,SNR=4.1						
JIS	**Juneau Island**	**33.07**	**58**	*eP*	**P**	**21 27 46.1**	**+1.4**
	comp=Z,8.6nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**34.97**	**176**	T	T	22 05 46.2	
	baz=358,slow=76,SNR=41						
H11N3	**WAKE ISLAND Hy**	**34.98**	**176**	T	T	22 05 43.7	
	baz=358,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**34.99**	**176**	T	T	22 05 42.5	
	baz=358,slow=76,SNR=44						
SONA0	**Songino Array**	**35.88**	**283**	*eP*	**P**	**21 28 09.1**	**-0.2**
SONA0				*e*PcP	**PcP**	**21 30 37.1**	**+0.9**
SONM	**Songino Array**	**35.88**	**283**	P	**P**	**21 28 09.1**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=60,slow=8.3,SNR=7.7						
SONM				PcP	**PcP**	**21 30 37.1**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=84,slow=2.1,SNR=4.3						
SONM				LR	LR	21 43 52.1	
	comp=Z,56nm,18.2s,baz=78,slow=38						
HHC	**Hu-ho-hao-te**	**37.07**	**270**	*eP*	**P**	**21 28 20.6**	**+1.1**
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,78nm,5.7s						
NJ2	**Nanjing**	**39.05**	**253**	*eP*	**P**	**21 28 35.3**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
YKA	**Yellowknife Ar**	**40.33**	**45**	P	**P**	**21 28 46.7**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=299,slow=8.9,SNR=4.0						
XAN	**Xi'an**	**43.25**	**265**	P	P	21 29 22.3	+12
XAN				pP	pwP	21 29 31.8	+12
XAN				pmax	pmax		
	comp=Z,4.0nm,2.3s						
ZALV	**Zalesovo Beam**	**43.93**	**303**	LR	LR	21 47 28.5	
	comp=Z,33nm,19.3s,baz=70,slow=36						
NVS	**Novosibirsk**	**44.19**	**305**	*eP*	**P**	**21 29 16.8**	**-1.1**
LZH	**Lanzhou**	**44.75**	**271**	*eP*	**P**	**21 29 24.9**	**+2.1**
LZH				pP	pwP	21 29 33.6	+1.8
LZH				sP	sP	21 29 36.1	+11
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.8s						
LZH				LR	LR		
	comp=Z,110nm,15.2s						
LZH				LR	LR		
	comp=Z,120nm,14.6s						
LZH				LR	LR		
	comp=Z,190nm,15.6s						
GTA	**Gaotai**	**44.81**	**278**	*eP*	**P**	**21 29 25.3**	**+2.0**
GTA				pP	pwP	21 29 33.0	+0.7
GTA				sP	sP	21 29 36.3	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,37nm,6.2s						
GTA				LR	LR		
	comp=Z,83nm,14.6s						
GTA				LR	LR		
	comp=Z,95nm,14.6s						
GTA				LR	LR		
	comp=Z,150nm,15.6s						
NEW	**Newport**	**47.01**	**64**	LR	LR	21 48 06.4	
	comp=Z,36nm,19.3s,baz=316,slow=34						
CD2	**Chengdu**	**48.51**	**266**	*eP*	**P**	**21 29 51.3**	**-0.9**
WMQ	**Urumqi**	**48.70**	**290**	*eP*	**P**	**21 29 55.4**	**+1.8**
WMQ				pP	pwP	21 30 00.3	-2.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,55nm,4.7s						
WMQ				LR	LR		
	comp=Z,78nm,29.2s						
WMQ				LR	LR		
	comp=Z,400nm,29.0s						
KURK	**Kurchatov**	**48.92**	**303**	*eP*	**P**	**21 29 54.4**	**-0.6**
	comp=Z,9.7nm,0.4s						
KURK	**Kurchatov**	**48.92**	**303**	*ce*P	**P**	**21 29 54.8**	**-0.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	**Makanchi Array**	**49.62**	**297**	*eP*	**P**	**21 29 59.2**	**-1.2**
	comp=Z,1.6nm,0.9s						
MK31	**Makanchi Array**	**49.62**	**297**	*eP*	**P**	**21 29 59.3**	**-1.2**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**49.62**	**297**	P	**P**	**21 29 59.3**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=38,slow=6.1,SNR=11						
MKAR				LR	LR	21 51 26.5	
	comp=Z,37nm,20.1s,baz=51,slow=37						
MKAR	**Makanchi Array**	**49.62**	**297**	*ce*P	**P**	**21 30 00.0**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAKZ	**Makanchi**	**49.77**	**297**	*eP*	**P**	**21 30 00.5**	**-1.2**
	comp=Z,3.8nm,1.2s						
MAKZ	**Makanchi**	**49.77**	**297**	*eP*	**P**	**21 30 00.5**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BOZ	**Bozeman (W)**	**51.60**	**63**	*eP*	**P**	**21 30 15.7**	**0.0**
	comp=Z,4.0nm,0.8s						
BOZ	**Bozeman (W)**	**51.60**	**63**	*eP*	**P**	**21 30 15.7**	**0.0**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NV01	**Mina Array Sit**	**52.95**	**74**	*eP*	**P**	**21 30 27.5**	**+1.7**
NVAR	**Mina Array Bea**	**52.95**

NOA				LR	LR	22 00 48.7	
	comp=Z,4.0nm,18.8s,baz=190,slow=38						
NIL	**Nilore**	**63.82**	**292**	*eP*	**P**	**21 31 41.6**	**0.0**
	comp=Z,14nm,1.1s						
NIL	**Nilore**	**63.82**	**292**	*eP*	**P**	**21 31 41.6**	**0.0**
NIL				pmax	pmax		
	comp=Z,14nm,1.1s						
KBL	**Kabul**	**65.38**	**295**	*eP*	**P**	**21 31 51.0**	**-1.0**
	comp=Z,5.9nm,0.8s						
KBL	**Kabul**	**65.38**	**295**	*eP*	**P**	**21 31 51.0**	**-1.0**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TX31	**Lajitas Ar. Si**	**67.80**	**70**	*eP*	**P**	**21 32 07.6**	**+0.2**
	comp=Z,5.2nm,1.4s						
TXAR	**Lajitas Array**	**67.80**	**70**	P	**P**	**21 32 08.3**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=298,slow=5.2,SNR=15						
GEYT	**Alibeck**	**68.20**	**305**	P	**P**	**21 32 10.1**	**+0.5**
	comp=Z,4.8nm,0.8s,baz=33,slow=3.5,SNR=10.0						
AKASG	**Malin Array Be**	**68.43**	**331**	P	**P**	**21 32 10.5**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=26,slow=6.5,SNR=4.7						
KBZ	**Khabaz**	**69.98**	**319**	P	**P**	**21 32 21.6**	**+1.1**
	comp=Z,3.5nm,0.8s,baz=60,slow=5.1,SNR=5.4						
CLL	**Collm**	**71.66**	**341**	*eP*	**P**	**21 32 32.0**	**+1.3**
CLL	**Collm**	**71.66**	**341**	*eP*	**P**	**21 32 32.0**	**+1.3**
KOLS	**Kolonicke sedl**	**71.89**	**335**	*eP*	**P**	**21 32 31.8**	**-0.3**
KOLS	**Kolonicke sedl**	**71.89**	**335**	*eP*	**P**	**21 32 31.8**	**-0.3**
DPC	**Dobruska-Polom**	**71.92**	**339**	*eP*	**P**	**21 32 33.6**	**+1.3**
DPC				*e*		21 32 44.2	
DPC	**Dobruska-Polom**	**71.92**	**339**	*eP*	**P**	**21 32 33.6**	**+1.3**
DPC				*ex*	x	21 32 44.2	
BUR08	**Bucovina Ar. S**	**72.32**	**332**	*eP*	**P**	**21 32 34.6**	**-0.2**
	comp=Z,2.2nm,0.8s						
LANS	**Liptovska Anna**	**72.36**	**337**	*eP*	**P**	**21 32 36.5**	**+1.5**
LANS	**Liptovska Anna**	**72.36**	**337**	*eP*	**P**	**21 32 36.5**	**+1.5**
VYHS	**Vyhne**	**73.12**	**337**	*eP*	**P**	**21 32 40.6**	**+1.1**
VYHS	**Vyhne**	**73.12**	**337**	*eP*	**P**	**21 32 40.6**	**+1.1**
GERES	**GERESS Array B**	**73.88**	**340**	P	**P**	**21 32 44.6**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=353,slow=4.6,SNR=5.1						
KBA	**Koelnbreinsper**	**75.64**	**340**	P	**P**	**21 32 55.6**	**+1.2**
KBA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BR101	**Keskin Array S**	**76.86**	**323**	*eP*	**P**	**21 33 01.7**	**+0.3**
BRTR	**Keskin Array B**	**76.86**	**323**	P	**P**	**21 33 01.7**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=80,slow=4.6,SNR=4.8						
WR1	**Warramunga Arr**	**78.60**	**209**	*eP*	**P**	**21 33 11.6**	**+0.7**
WRA	**Warramunga Arr**	**78.61**	**209**	P	**P**	**21 33 11.6**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=24,slow=6.4,SNR=8.2						
ASAR	**Alice Springs**	**82.27**	**208**	P	**P**	**21 33 31.7**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=16,slow=5.2,SNR=20						
ESDC	**Sonseca Array**	**85.45**	**351**	P	**P**	**21 33 47.8**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=12,slow=5.1,SNR=5.5						
COCO	**West Island**	**87.26**	**245⇑**	*eP*	P	21 33 50.6	-5.3

NIED ***20*** *22:04:00, 35°.80N×141°.80E, h14km, Mw3.5 Best double couple: M0=2.22000×10^14 NP1:φ=332.00000°, δ=71.00000°, λ=164.00000°. NP2:φ=67.00000°, δ=75.00000°, λ=20.00000°.*

JMA 20 22:04:24.2±0.4, 35°.82N×141°.84E, h24km±4km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.81**	**262**	P	Pb	22 04 39.3	-0.2
CHOJ				S	Sb	22 04 49.7	-0.3
JIHU	**Itakohorinouch**	**1.08**	**278**	P	Pb	22 04 44.5	+0.4
JIHU				*eS*	Sn	22 04 59.0	+1.1
JHYU	**Hitachinakayam**	**1.14**	**297**	P	Pn	22 04 44.9	+0.3
JSMT	**Sammumatsuo**	**1.15**	**262**	P	Pb	22 04 46.1	+0.8
JSMT				*eS*	Sb	22 05 01.3	+1.5
JHO	**Hitachi**	**1.30**	**308**	P	Pn	22 04 47.0	+0.2
BSO1	**Boso 1**	**1.36**	**211**	P	Pn	22 04 46.9	-0.3
MAT	**Matsushiro**	**3.03**	**285**	P	Pn	22 05 12.7	+2.1
MAT				S	Sn	22 05 47.9	+1.8

IDC 20 22:20:05.2±2.6, 6°.73S×148°.82E, h0km, mb4.2/3, mb1 4.3/5, mb1mx3.7/41, mbtmp4.1/5, ML3.9/1, MS3.5/10, Ms1 3.5/10, ms1mx3.2/41, Error ellipse: s-maj=63.2km s-min=34.2km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.13**	**212**	Pn	Pn	22 20 57.8	+2.0
	10nm,0.3s,baz=31,slow=7.1,SNR=14						
PMG				Sn	Sn	22 21 36.4	+2.5
	33nm,0.3s,baz=58,slow=15,SNR=13						
PMG				LR	LR	22 22 21.1	
	comp=Z,813nm,19.3s,baz=358,slow=43						
HNR	**Honiara**	**11.34**	**104**	LR	LR	22 26 23.8	
	comp=Z,185nm,19.0s,baz=306,slow=33						
WRA	**Warramunga Arr**	**19.24**	**226**	P	P	22 24 29.8	-1.4
	0.4nm,0.3s,baz=54,slow=11,SNR=12						
ASAR	**Alice Springs**	**22.12**	**219**	P	P	22 25 01.3	-1.1
	2.5nm,0.4s,baz=56,slow=9.0,SNR=40						
DZM	**Mont Dzumac**	**22.85**	**134**	LR	LR	22 32 26.5	
	comp=Z,264nm,19.8s,baz=11,slow=32						
FITZ	**Fitzroy Crossi**	**25.26**	**241**	P	P	22 25 32.5	-0.8
	19nm,1.1s,baz=64,slow=10.0,SNR=14						
STKA	**Stephens Creek**	**25.92**	**194**	P	P	22 25 40.8	+1.7
	1.1nm,0.3s,baz=359,slow=12,SNR=4.2						
STKA				LR	LR	22 36 26.0	
	comp=Z,123nm,18.5s,baz=14,slow=38						
DAV	**Davao City (W)**	**26.93**	**300**	LR	LR	22 37 44.7	
	comp=Z,108nm,18.7s,baz=174,slow=39						
KAPI	**Kappang**	**28.96**	**272**	LR	LR	22 39 54.8	
	comp=Z,58nm,18.2s,baz=298,slow=41						
KSRS	**Korea Array**	**48.09**	**338**	LR	LR	22 47 56.2	
	comp=Z,76nm,19.2s,baz=158,slow=35						
CMAR	**Chiang Mai Arr**	**55.18**	**298**	LR	LR	22 54 54.4	
	comp=Z,25nm,19.5s,baz=130,slow=38						
SONM	**Songino Array**	**65.92**	**330**	LR	LR	23 00 40.2	
	comp=Z,44nm,18.7s,baz=128,slow=37						
ZALV	**Zalesovo Beam**	**80.59**	**327**	LR	LR	23 07 46.5	
	comp=Z,16nm,20.7s,baz=70,slow=36						
TORD	**Torodi Ar. Bea**	**147.02**	**284**	PKPbc	PKPbc	22 39 50.4	-0.7
	2.1nm,0.7s,baz=68,slow=3.2,SNR=7.8						

SOME ***20*** *22:21:48.4, 41°.22N×78°.55E, h15km*
KRNET ***20*** *22:21:50.8±0.1, 41°.43N×78°.53E, mb2.9*
NNC ***20*** *22:21:51.4±1.2, 41°.40N×78°.53E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=8.4km s-min=5.3km az=166.0*

ISC 20 22:21:52.2±1.6, 41°.42N±0°.07×78°.53E±0°.04, h10km, n45, σ1§80/74, 15C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**1.64**	**357**	*eP*	**Pg**	**22 22 22.2**	**-1.4**
	8.5nm,0.1s						
SATY				*eS*	**Sg**	**22 22 46.6**	**+1.8**
	46nm,0.3s						
UZB	**Uzynbulak**	**1.76**	**12**	P	**Pb**	**22 22 23.0**	**-1.8**
	3.1nm,0.3s						
UZB				S	**Sg**	**22 22 47.7**	**-1.1**
	6.4nm,0.2s						
UZB	**Uzynbulak**	**1.76**	**12**	*eP*	**Pb**	**22 22 22.9**	**-1.8**
	3.8nm,0.2s						
UZB				*eS*	**Sg**	**22 22 47.7**	**-1.1**
	8.6nm,0.4s						
ULHL	**Ulahol**	**1.89**	**296**	⇓*iP*	**Pb**	**22 22 25.7**	**-1.3**
	baz=96						
ULHL				⇓*iS*	**Sg**	**22 22 51.7**	**-1.4**
	baz=96						
TNSS	**Tian-Shan**	**1.99**	**325**	Pg	**Pb**	**22 22 28.4**	**-0.4**
	4.7nm,0.2s						
TNSS				Lg	Lg	22 22 57.3	
	21nm,0.3s						
TNSS	**Tian-Shan**	**1.99**	**325**	*eP*	**Pb**	**22 22 28.4**	**-0.4**
	4.7nm,0.2s						
TNSS				*eS*	**Sg**	**22 22 57.4**	**+1.0**
	21nm,0.3s						
PDGK	**Podgornoye**	**2.03**	**20**	Pg	**Pb**	**22 22 27.7**	**-1.6**
	3.5nm,0.2s						
PDGK				Lg	Lg	22 22 56.3	
	7.7nm,0.4s						
PDGK	**Podgornoye**	**2.03**	**20**	⇓Pn	**Pb**	**22 22 27.7**	**-1.6**
	2.7nm,0.3s						
PDGK				⇓Lg	Lg	22 22 57.8	
	18nm,0.5s						
PDGK	**Podgornoye**	**2.03**	**20**	⇑*eP*	**Pb**	**22 22 27.8**	**-1.6**
	baz=20						
PDGK				⇑*iS*	**Sb**	**22 22 55.2**	**+0.4**
	baz=20						
KPKS	**Kokpek**	**2.04**	**3**	*eP*	**Pb**	**22 22 29.0**	**-0.5**
	18nm,0.2s						
KPKS				*eS*	**Sg**	**22 22 58.2**	**+0.2**
	42nm,0.4s						
MDOK	**Medeo**	**2.06**	**328**	Pg	**Pb**	**22 22 28.9**	**-0.8**
	4.4nm,0.2s						
MDOK				Lg	Lg	22 22 58.0	
	16nm,0.6s						
MDOK	**Medeo**	**2.06**	**328**	*eP*	**Pb**	**22 22 28.9**	**-0.8**
	4.4nm,0.2s						
MDOK				*eS*	**Sg**	**22 22 58.0**	**-0.2**
	16nm,0.6s						
KURS	**Kuram**	**2.08**	**353**	Pg	**Pb**	**22 22 29.4**	**-0.7**
	5.1nm,0.3s						
KURS				Lg	Lg	22 22 58.7	
	11nm,0.4s						
KURS	**Kuram**	**2.08**	**353**	*eP*	**Pb**	**22 22 29.4**	**-0.7**
	5.1nm,0.3s						
KURS				*eS*	**Sg**	**22 22 58.7**	**-0.3**
	11nm,0.4s						
KOTS	**Kotyrbulak**	**2.09**	**330**	Pg	**Pb**	**22 22 29.7**	**-0.6**
	3.2nm,0.2s						
KOTS				Lg	Lg	22 22 58.9	
	26nm,0.4s						
KOTS	**Kotyrbulak**	**2.09**	**330**	*eP*	**Pb**	**22 22 29.7**	**-0.6**
	3.2nm,0.2s						
KOTS				*eS*	**Sg**	**22 22 58.9**	**-0.5**
	26nm,0.4s						
KNDC	**Almaty**	**2.13**	**328**	⇑Pg	**Pb**	**22 22 30.7**	**-0.3**
	6.1nm,0.5s						
KNDC				⇓Lg	Lg	22 23 01.8	
	36nm,0.6s						
BOOM	**Boomskoye usch**	**2.20**	**300**	⇑*eP*	**Pb**	**22 22 29.9**	**-2.4**
	baz=0.0						
BOOM				⇑*iS*	**Sb**	**22 22 59.2**	**-0.5**
	baz=0.0						
KTMS	**Ketmen**	**2.43**	**33**	Pg	**Pb**	**22 22 34.8**	**-1.3**
	12nm,0.3s						
KTMS				Lg	Lg	22 23 08.7	
	12nm,0.4s						
KTMS	**Ketmen**	**2.43**	**33**	*eP*	**Pb**	**22 22 34.9**	**-1.3**
	12nm,0.3s						
KTMS				*eS*	**Sg**	**22 23 08.7**	**-1.6**
	12nm,0.4s						
KST	**Kastek**	**2.50**	**311**	Pg	**Pb**	**22 22 36.5**	**-0.8**
	4.8nm,0.2s						
KST				Lg	Lg	22 23 10.9	
	21nm,0.6s						
KST	**Kastek**	**2.50**	**311**	*eP*	**Pb**	**22 22 36.5**	**-0.8**
	4.8nm,0.2s						
KST				*eS*	**Sg**	**22 23 10.9**	**-1.6**
	21nm,0.6s						
KZA	**Kyzart**	**2.54**	**286**	⇓*iP*	**Pb**	**22 22 35.2**	**-2.9**
	baz=86						
KZA				⇓*iS*	**Sb**	**22 23 07.6**	**-1.9**
	baz=86						
TKM2	**Tokmak 2**	**2.64**	**305**	⇓Pn	**Pb**	**22 22 38.2**	**-1.6**
	2.0nm,0.3s						
TKM2				⇑Lg	Lg	22 23 15.0	
	5.1nm,0.5s						
TKM2	**Tokmak 2**	**2.64**	**305**	⇑*iP*	**Pb**	**22 22 36.8**	**-2.9**
	baz=5.0						
TKM2				⇑*iS*	**Sb**	**22 23 09.9**	**-2.4**
	baz=5.0						
MNBS	**Baschi**	**2.66**	**358**	Pg	**Pb**	**22 22 38.4**	**-1.5**
	5.6nm,0.3s						
MNBS				Lg	Lg	22 23 15.0	
	30nm,0.3s						
MNBS	**Baschi**	**2.66**	**358**	*eP*	**Pb**	**22 22 38.4**	**-1.5**
	5.6nm,0.3s						
MNBS				*eS*	**Sg**	**22 23 14.9**	**-2.6**
	30nm,0.3s						
KTBS	**Karatobe**	**2.66**	**330**	Pg	**Pb**	**22 22 39.3**	**-0.7**
	5.3nm,0.6s						
KTBS				Lg	Lg	22 23 16.2	
	39nm,0.6s						
KTBS	**Karatobe**	**2.66**	**330**	*eP*	**Pb**	**22 22 39.3**	**-0.7**
	5.3nm,0.6s						
KTBS				*eS*	**Sg**	**22 23 16.2**	**-1.5**
	39nm,0.6s						
CHKK	**Chushkaly**	**2.68**	**335**	Pg	**Pb**	**22 22 39.5**	**-0.8**
	2.1nm,0.2s						
CHKK				Lg	Lg	22 23 15.8	
	25nm,0.3s						
CHKK	**Chushkaly**	**2.68**	**335**	*eP*	**Pb**	**22 22 39.5**	**-0.8**
	2.1nm,0.2s						
CHKK				*eS*	**Sg**	**22 23 15.8**	**-2.5**
	25nm,0.3s						
DGS	**Degeres**	**2.73**	**313**	Pg	**Pb**	**22 22 40.2**	**-1.0**
	3.7nm,0.2s						
DGS				Lg	Lg	22 23 17.8	
	21nm,0.5s						
DGS	**Degeres**	**2.73**	**313**	*eP*	**Pb**	**22 22 40.2**	**-1.0**
	3.7nm,0.2s						
DGS				*eS*	**Sg**	**22 23 17.8**	**-2.2**
	21nm,0.5s						
ARXS	**Arharly**	**2.83**	**350**	*eP*	**Pb**	**22 22 41.1**	**-1.9**
	3.7nm,0.5s						
ARXS				*eS*	**Sb**	**22 23 18.8**	**+1.0**
	67nm,0.5s						
KBK	**Karagaybulak**	**2.94**	**296**	⇓*eP*	**Pn**	**22 22 40.5**	**+1.4**
	baz=96						
KBK				⇓*iS*	**Sb**	**22 23 17.1**	**-3.6**
	baz=96						
KUU	**Kurty**	**2.95**	**328**	*eP*	**Pb**	**22 22 42.6**	**-2.3**
	1.6nm,0.4s						
KUU				*eS*	**Sb**	**22 23 22.0**	**+1.0**
	10.0nm,0.5s						
DJR	**Jarkent**	**3.05**	**17**	Pg	**Pb**	**22 22 45.3**	**-1.4**
	5.0nm,0.3s						
DJR				Lg	Lg	22 23 26.5	
	10nm,0.4s						
DJR	**Jarkent**	**3.05**	**17**	*eP*	**Pb**	**22 22 45.3**	**-1.4**
	5.0nm,0.3s						
DJR				*eS*	**Sg**	**22 23 26.5**	**-3.7**
	10nm,0.4s						
UCH	**Uchtor**	**3.10**	**286**	⇑*iP*	**Pn**	**22 22 43.6**	**+1.9**
	baz=86						
UCH				⇑*iS*	**Sn**	**22 23 21.1**	**+2.1**
	baz=86						
ARLS	**Aral**	**3.18**	**279**	⇓*iP*	**Pn**	**22 22 43.9**	**+1.5**
	baz=79						
ARLS				⇓*iS*	**Sn**	**22 23 22.5**	**+2.0**
	baz=79						
CHMS	**Chumysh**	**3.21**	**301**	⇑*iP*	**Pn**	**22 22 44.5**	**+1.7**
	baz=0.0						
CHMS				⇑*iS*	**Sn**	**22 23 23.6**	**+2.4**
	baz=0.0						
AAK	**Ala-Archa**	**3.24**	**293**	⇓Pg	**Pb**	**22 22 49.9**	**0.0**
	2.6nm,0.8s						
AAK				Lg	Lg	22 23 34.0	
	4.2nm,0.7s						
KAPS	**Kapalarasan**	**3.91**	**9**	*eP*	**Pb**	**22 23 00.9**	**-0.3**
	1.4nm,0.5s						
KAPS				*eS*	**Sg**	**22 23 52.6**	**-5.0**
	2.1nm,0.3s						
MRKS	**Merke**	**4.16**	**290**	*eP*	**Pb**	**22 23 05.2**	**-0.4**
	3.8nm,0.5s						
MRKS				*eS*	**Sb**	**22 23 59.7**	**+3.9**
	2.8nm,1.1s						
MK31	**Makanchi Array**	**6.01**	**26**	⇑Pn	**Pn**	**22 23 24.2**	**+3.0**
	0.6nm,0.8s,baz=214,slow=15,SNR=4.3						
MK31				⇑Sn	**Sn**	**22 24 33.3**	**+3.2**
	0.6nm,0.7s						
MK31				⇑Lg	Lg	22 25 03.2	
	0.5nm,0.7s,baz=208,slow=30,SNR=3.5						

MEX 20 22:27:58.1±0.5, 16°.09N×99°.16W, h5km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.04**	**73**	*eP*	Pg	22 28 15.3	-2.7
PNIG				*eS*	Sg	22 28 29.5	-2.0
CAIG	**El Cayaco**	**1.43**	**312**	*eP*	Pn	22 28 21.0	-3.7
CAIG				*i S*	Sb	22 28 39.5	-4.3
TLIG	**Tlapa**	**1.57**	**21**	*eP*	Pn	22 28 23.0	-3.8
TLIG				*i S*	Sn	22 28 42.2	-5.5
MEIG	**Mezcala**	**1.88**	**347**	*i P*	Pn	22 28 27.4	-3.6
MEIG				*i S*	Sn	22 28 51.2	-4.0
PLIG	**Platanillo**	**2.32**	**352**	*i P*	Pn	22 28 38.3	+1.2
PLIG				*eS*	Sn	22 29 07.2	+1.2
ARIG	**Puente Sto Nin**	**2.46**	**333**	*i P*	Pn	22 28 40.5	+1.6
ARIG				*i S*	Sb	22 29 11.6	-1.9

IDC ***20*** *22:56:01.3±4.5, 15°.54S×173°.80W, h0km, mb4.5/3, mb1 4.7/3, mb1mx3.9/38, mbtmp4.5/3, MS3.4/1, Ms1 3.4/1, ms1mx2.9/19, Error ellipse: s-maj=208.3km s-min=40.6km az=137.0*
ISCJB ***20*** *22:56:03.3±0.6, 16°.1S±0°.1×173°.43W±0°.08, h35km, mb5.0/9, MS3.2/3, Error ellipse: s-maj=16.5km s-min=9.6km az=27.5*
NEIC ***20*** *22:56:04.8±2.1, 15°.93S×173°.49W, h30km±6km, mb4.8/8, Error ellipse: s-maj=27.2km s-min=13.0km az=154.0*

ISC 20 22:56:05.2±0.7, 16°.0S±0°.1×173°.4W±0°.1, h35km, n26, σ1§02/18, mb4.7/7, MS3.3/3, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.56**	**133**	*e*Pn	**Pn**	**22 57 13.6**	**+1.9**
NIUE				*e*Sn	**Sn**	**22 58 01.4**	**-2.1**
DZM	**Mont Dzumac**	**19.96**	**249**	*e*LR	LR	23 05 55.8	
	comp=Z,171nm,27.9s						
PPT2	**Papeete2**	**22.90**	**97**	*e*LR	LR	23 06 22.6	
	comp=Z,127nm,28.5s						
TBI	**Tubuai**	**23.72**	**112**	*e*LR	LR	23 06 53.6	
	comp=Z,136nm,28.5s						
HNR	**Honiara**	**26.75**	**281**	LR	LR	23 11 18.8	
	comp=Z,71nm,18.1s,baz=136,slow=35						
H11S2	**WAKE ISLAND Hy**	**39.43**	**329**	T	T	23 44 54.3	
	baz=149,slow=76,SNR=8.1						
H11S3	**WAKE ISLAND Hy**	**39.44**	**329**	T	T	23 44 50.5	
	baz=149,slow=76,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**39.45**	**330**	T	T	23 45 06.8	
	baz=149,slow=76,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**40.38**	**331**	T	T	23 46 12.4	
	baz=150,slow=76,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	**40.39**	**331**	T	T	23 46 12.8	
	baz=150,slow=76,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**40.40**	**331**	T	T	23 46 13.8	
	baz=150,slow=76,SNR=6.1						
STKA	**Stephens Creek**	**43.73**	**240**	P	**P**	**23 04 08.0**	**+0.7**
	7.5nm,1.0s,baz=60,slow=7.9,SNR=5.8						
STKA	**Stephens Creek**	**43.73**	**240**	*eP*	**P**	**23 04 07.4**	**+0.2**
	2.6nm,1.1s						
WR1	**Warramunga Arr**	**49.68**	**257**	*eP*	**P**	**23 04 53.7**	**-0.4**
WRA	**Warramunga Arr**	**49.68**	**257**	P	**P**	**23 04 53.7**	**-0.4**
	2.9nm,0.9s,baz=94,slow=6.8,SNR=4.5						
AS31	**Alice Springs**	**49.90**	**252**	*eP*	**P**	**23 04 55.9**	**+0.1**
	3.0nm,0.8s						
ASAR	**Alice Springs**	**49.90**	**252**	P	**P**	**23 04 54.9**	**-0.9**
	11nm,0.7s,baz=85,slow=8.0,SNR=56						
SPIA	**Saint Paul Isl**	**72.92**	**2**	*eS*	**S**	**23 16 54.8**	**+0.5**
RWWY	**Rawlins**	**83.73**	**44**	*eP*	**P**	**23 08 29.4**	**-1.6**
	7.6nm,1.3s						
RWWY				*eS*	**S**	**23 18 51.9**	**+0.2**
RDOG	**Red Dog Mine**	**84.14**	**4**	*eP*	**P**	**23 08 32.4**	**+0.2**
	17nm,0.6s						
N41A	**Harden Midland**	**94.77**	**49**	*eP*	**P**	**23 09 24.5**	**+1.2**
	22nm,0.4s						
V52A	**Sevierville**	**99.05**	**55**	*eP*	**Pdif**	**23 09 42.0**	**-0.8**
	31nm,1.6s						
O49A	**Covington**	**99.45**	**51**	*eP*	**Pdif**	**23 09 44.0**	**-0.5**
	11nm,0.6s						
BR101	**Keskin Array S**	**146.57**	**320**	*e*PKPdf	**PKPbc**	**23 15 43.0**	**-0.5**
BRTR	**Keskin Array B**	**146.57**	**320**	PKPbc	**PKPbc**	**23 15 43.0**	**-0.5**
	1.2nm,0.8s,baz=79,slow=1.6,SNR=7.5						
GERES	**GERESS Array B**	**146.69**	**351**	PKPbc	**PKPbc**	**23 15 42.9**	**-0.5**
	0.2nm,0.4s,baz=357,slow=4.2,SNR=3.6						

BJI ***20*** *23:05:01.5±0.0, 40°.91N×73°.36E, h22km, ML3.6/5, Ms3.3/1, Ms7 3.2/1*
SOME ***20*** *23:05:02.4, 40°.88N×73°.72E, h5km*
IDC ***20*** *23:05:02.2±1.5, 41°.05N×73°.47E, h0km, mb3.6/8, mb1 3.7/12, mb1mx3.6/46, mbtmp3.5/12, ML2.9/4, Error ellipse: s-maj=31.5km s-min=10.5km az=142.0*
NNC ***20*** *23:05:04.0±0.9, 40°.99N×73°.67E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=7.7km s-min=4.6km az=173.0*
KRNET ***20*** *23:05:03.0±0.1, 40°.94N×73°.70E, h14km, mb3.9*

ISC 20 23:05:01.8±1.2, 40°.91N±0°.03×73°.78E±0°.02, h2km±8km, n87, σ1§50/128, mb3.8/8, 30C-21D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.73**	**305**	⇓*eP*	**Pg**	**23 05 15.6**	**-0.2**
	baz=5.0						
ARSB				⇓*iS*	**Sg**	**23 05 25.5**	**+0.2**
	baz=5.0						
ARLS	**Aral**	**1.04**	**23**	⇑*eP*	**Pb**	**23 05 22.5**	**-0.1**
	baz=27						
ARLS				⇑*iS*	**Sb**	**23 05 37.0**	**+0.3**
	baz=27						
AML	**Almayashu**	**1.23**	**357**	P	**Pg**	**23 05 25.6**	**+0.4**
	SNR=1157						
AML	**Almayashu**	**1.23**	**357**	⇓*iP*	**Pg**	**23 05 25.7**	**+0.4**
	baz=60						
AML				⇓*iS*	**Sb**	**23 05 41.9**	**-0.4**
	baz=60						
UCH	**Uchtor**	**1.43**	**22**	P	**Pb**	**23 05 29.8**	**+0.4**
	SNR=234						
UCH	**Uchtor**	**1.43**	**22**	⇓*iP*	**Pb**	**23 05 29.9**	**+0.5**
	baz=25						
UCH				⇓*iS*	**Sn**	**23 05 49.3**	**+0.5**
	baz=25						
KZA	**Kyzart**	**1.61**	**43**	P	**Pg**	**23 05 33.4**	**+0.8**
	SNR=142						
KZA	**Kyzart**	**1.61**	**43**	⇑*iP*	**Pg**	**23 05 33.5**	**+0.8**
	baz=45						
KZA				⇑*iS*	**Sg**	**23 05 55.8**	**+2.3**
	baz=45						
ARK	**Arkit**	**1.63**	**304**	⇓*eP*	**Pn**	**23 05 31.3**	**-0.3**
	baz=3.0						
ARK				⇓*iS*	**Sn**	**23 05 53.5**	**+0.3**
	baz=3.0						
EKS2	**Erkin-Say**	**1.75**	**360**	P	**Pb**	**23 05 35.0**	**+0.3**
	SNR=108						
EKS2	**Erkin-Say**	**1.75**	**360**	⇑*iP*	**Pb**	**23 05 35.0**	**+0.3**
	baz=2.0						
EKS2				⇑*iS*	**Sg**	**23 05 58.1**	**0.0**
	baz=2.0						
AAK	**Ala-Archa**	**1.81**	**17**	Pn	**Pg**	**23 05 36.6**	**+0.1**
	40nm,0.3s,baz=186,slow=13,SNR=170						
AAK				Sn	**Sg**	**23 06 00.5**	**+0.5**
	35nm,0.3s,baz=190,slow=8.1,SNR=8.1						
AAK	**Ala-Archa**	**1.81**	**17**	P	**Pg**

SNR=112
ULHL Ulahol 2.28 53⇑iP Pb 23 05 44.3 +0.5
baz=55
ULHL ⇑iS Sg 23 06 14.5 -0.6
baz=55
USP Ospenovka 2.42 13 P Pb 23 05 46.1 +0.1
SNR=193
USP Ospenovka 2.42 13⇑iP Pb 23 05 45.7 -0.3
baz=14
USP ⇑iS Sb 23 06 16.2 -0.1
baz=14
TKM2 Tokmak 2 2.43 33 P Pg 23 05 47.4 -0.9
SNR=202
TKM2 Tokmak 2 2.43 33 ⇑Pn Pb 23 05 47.0 +0.7
67nm,0.3s
TKM2 ⇑Lg Lg 23 06 20.2
220nm,0.6s
TKM2 Tokmak 2 2.43 33⇓iP Pb 23 05 46.3 0.0
baz=35
TKM2 ⇓iS Sb 23 06 17.4 +0.7
baz=35
KST Kastek 2.69 37 Pg Pg 23 05 52.9 -0.3
95nm,0.4s
KST Lg Lg 23 06 29.6
202nm,0.4s
KST Kastek 2.69 37 eP Pg 23 05 52.9 -0.3
95nm,0.4s
KST eS Sg 23 06 29.6 +1.5
202nm,0.4s
DZA Taraz 2.70 318 eP Pb 23 05 51.5 +0.7
434nm,0.4s
DZA eS Sg 23 06 26.9 -1.5
1μm,0.3s
DGS Degeres 2.77 32 Pg Pg 23 05 54.5 -0.2
188nm,0.6s
DGS Lg Lg 23 06 32.2
222nm,0.6s
DGS Degeres 2.77 32 eP Pg 23 05 54.5 -0.2
188nm,0.6s
DGS eS Sg 23 06 32.2 +1.5
222nm,0.6s
IUG Iuzhnay 3.07 295 eP Pb 23 05 58.1 +0.9
40nm,0.4s
IUG eS Sb 23 06 37.2 +2.0
1μm,0.7s
TNSS Tian-Shan 3.18 47 Pg Pg 23 06 02.0 -0.8
92nm,0.6s
TNSS Lg Lg 23 06 44.8
143nm,0.6s
TNSS Tian-Shan 3.18 47 eP Pg 23 06 02.0 -0.8
92nm,0.6s
TNSS eS Sg 23 06 44.8 +0.8
143nm,0.6s
KK31 Karatay Array 3.28 313 Pn Pn 23 05 55.3 +1.1
1.1nm,0.2s,baz=124,slow=13,SNR=341
KK31 ⇑Pg Pb 23 05 59.1 -1.5
23nm,0.3s,baz=126,slow=13,SNR=122
KK31 ⇑Lg Lg 23 06 43.1
207nm,0.7s,baz=133,slow=28,SNR=14
AAA Alma-Ata 3.28 44 Pg Pg 23 06 04.0 -0.7
54nm,0.4s
AAA Lg Lg 23 06 48.7
198nm,0.6s
AAA Alma-Ata 3.28 44 eP Pg 23 06 04.0 -0.7
54nm,0.4s
AAA eS Sg 23 06 48.7 +1.6
198nm,0.6s
KNDC Almaty 3.31 45 ⇓Pg Pg 23 06 03.9 -1.3
47nm,0.5s
KNDC ⇓Lg Lg 23 06 49.4
266nm,0.7s
MDOK Medeo 3.32 46 Pg Pg 23 06 04.3 -1.1
59nm,0.5s
MDOK Lg Lg 23 06 48.7
109nm,0.8s
MDOK Medeo 3.32 46 eP Pg 23 06 04.3 -1.1
59nm,0.5s
MDOK eS Sg 23 06 48.7 +0.3
109nm,0.8s
KOTS Kotyrbulak 3.40 46 Pg Pg 23 06 06.0 -0.9
45nm,0.6s
KOTS Lg Lg 23 06 51.3
277nm,0.4s
KOTS Kotyrbulak 3.40 46 eP Pg 23 06 06.0 -0.9
45nm,0.6s
KOTS eS Sg 23 06 51.3 +0.3
277nm,0.4s
TAS Tashkent 3.42 279⇓iP Pn 23 05 58.1 +2.0
baz=78
TAS ⇓iS Sn 23 06 39.4 +2.2
baz=78
CHM Chimkent 3.43 296 eP Pb 23 06 04.9 +1.6
71nm,0.2s
CHM eS Sb 23 06 49.0 +3.5
587nm,0.5s
KTBS Karatobe 3.54 37 Pg Pg 23 06 07.8 -1.7
12nm,0.3s
KTBS Lg Lg 23 06 54.6
198nm,0.5s
KTBS Karatobe 3.54 37 eP Pg 23 06 07.8 -1.7
12nm,0.3s
KTBS eS Sg 23 06 54.6 -0.7
198nm,0.5s
KUU Kurty 3.54 32 Pg Pg 23 06 07.6 -1.9
60nm,0.3s
KUU Lg Lg 23 06 54.6
229nm,0.8s
KUU Kurty 3.54 32 eP Pg 23 06 07.6 -1.9
60nm,0.3s
KUU eS Sg 23 06 54.6 -0.8
229nm,0.8s
BRLS Borolday 3.62 307 eP Pb 23 06 07.3 +0.7
0.7nm,0.2s
BRLS eS Sb 23 06 53.7 +2.7
24nm,0.5s
CHKK Chushkaly 3.79 38 Pg Pg 23 06 13.0 -1.3
8.0nm,0.3s
CHKK Lg Lg 23 07 03.6
144nm,0.5s
CHKK Chushkaly 3.79 38 eP Pg 23 06 13.0 -1.3
8.0nm,0.3s
CHKK eS Sg 23 07 03.6 +0.2
144nm,0.5s
SATY Saty 4.07 57 Pg Pg 23 06 17.7 -2.0
14nm,0.4s
SATY Lg Lg 23 07 11.6
109nm,0.6s
SATY Saty 4.07 57 eP Pg 23 06 17.7 -2.0
14nm,0.4s
SATY eS Sg 23 07 11.6 -0.8
109nm,0.6s
BTLS Baital 4.14 3 Pg Pb 23 06 16.8 +1.5
5.5nm,0.3s
BTLS Lg Lg 23 07 09.8
24nm,0.7s
BTLS Baital 4.14 3 eP Pb 23 06 16.8 +1.5
5.5nm,0.3s
BTLS eS Sb 23 07 09.8 +4.1
24nm,0.7s
KPKS Kokpek 4.45 53 eP Pg 23 06 24.8 -2.3
36nm,0.7s
KPKS eS Sg 23 07 23.2 -1.5
108nm,0.8s
UZB Uzynbulak 4.50 58 Pg Pg 23 06 24.9 -3.1
21nm,0.7s
UZB Lg Lg 23 07 24.4
39nm,0.7s
UZB Uzynbulak 4.50 58 eP Pg 23 06 24.9 -3.1
21nm,0.7s
UZB eS Sg 23 07 24.4 -1.9
39nm,0.7s
PDGK Podgornoye 4.89 58 Pg Pb 23 06 31.5 +3.3
2.0nm,0.4s
PDGK Lg Lg 23 07 36.5
24nm,0.8s
PDGK Podgornoye 4.89 58 ⇑Pn Pn 23 06 19.4 +3.0
3.4nm,0.6s
PDGK ⇓Pg Pg 23 06 33.7 -1.8
7.3nm,0.5s
PDGK ⇑Lg Lg 23 07 40.3
40nm,0.6s
KAPS Kapalarasan 5.98 41 Pg Pg 23 06 52.8 -3.6
3.0nm,0.4s
KAPS Lg Lg 23 08 11.2
24nm,0.8s
KAPS Kapalarasan 5.98 41 eP Pg 23 06 52.8 -3.6
3.0nm,0.4s
KAPS eS Sg 23 08 11.2 -2.7
24nm,0.8s

OTUK Ortayu 7.41 353 ⇓Pn Pn 23 06 51.0 +0.1
1.7nm,0.5s
OTUK ⇑Lg Lg 23 08 56.4
140nm,1.3s
MAKZ Makanchi 8.36 42 ⇑Pn Pn 23 07 05.7 +1.9
0.8nm,0.6s
MAKZ ⇓Lg Lg 23 09 31.3
5.2nm,0.8s
MK31 Makanchi Array 8.51 43 ⇑Pn Pn 23 07 09.4 +3.5
0.3nm,0.4s,baz=228,slow=14,SNR=5.7
MK31 ⇑Lg Lg 23 09 34.2
2.9nm,0.6s
MKAR Makanchi Array 8.51 43 Pn Pn 23 07 09.0 +3.0
0.2nm,0.3s,baz=227,slow=14,SNR=8.1
MKAR Lg Lg 23 09 35.8
0.3nm,0.3s,baz=228,slow=29,SNR=5.1
KURBB Kurchatov Arra 10.27 17 Pn Pn 23 07 30.4 +0.4
0.1nm,0.3s,baz=208,slow=13,SNR=3.9
KURBB Lg Lg 23 10 24.3
0.1nm,0.3s,baz=212,slow=27,SNR=5.2
BVAR Borovoye Array 12.34 350 Pn Pn 23 07 59.6 +1.2
0.2nm,0.3s,baz=156,slow=12,SNR=6.9
BVAR Lg Lg 23 11 27.5
0.3nm,0.3s,baz=176,slow=25,SNR=3.7
GEYT Alibeck 12.47 261 Pn Pn 23 07 56.3 -4.0
0.3nm,0.3s,baz=91,slow=11,SNR=4.2
AB31 Akbulak array 12.84 315 Pn Pn 23 08 05.6 +0.4
4.5nm,0.9s,baz=126,slow=12,SNR=26
AKTO Aktyubinsk 14.54 316 Pn Pn 23 08 28.1 -0.3
0.3nm,0.3s,baz=126,slow=13,SNR=6.6
AKTO Sn Sn 23 10 59.8 -10
0.3nm,0.3s,baz=108,slow=9.1,SNR=1.6
AKTO Lg Lg 23 12 37.1
0.3nm,0.3s,baz=19,slow=22,SNR=1.6
ZALV Zalesovo Beam 15.01 26 Pn Pn 23 08 36.5 +1.7
0.1nm,0.3s,baz=215,slow=12,SNR=2.2
ZALV Lg Lg 23 12 56.9
0.1nm,0.3s,baz=208,slow=27,SNR=2.5
SONM Songino Array 24.19 62 P P 23 10 21.9 +2.3
0.3nm,0.4s,baz=270,slow=7.2,SNR=2.8
BRTR Keskin Array B 30.45 281 P P 23 11 15.5 -0.3
1.0nm,0.6s,baz=84,slow=6.5,SNR=8.2
FINES FINESS Array B 35.20 322 P P 23 11 55.8 -1.1
0.5nm,0.4s,baz=98,slow=10,SNR=8.8
CLL Collm 42.26 305 eP P 23 12 57.0 +0.7
CLL ePP PP 23 14 35.0 +1.2
NOA NORSAR Array B 42.28 320 P P 23 12 54.7 -1.7
0.3nm,0.7s,baz=90,slow=8.0,SNR=2.8
GERES GERESS Array B 42.31 302 P P 23 12 56.7 -0.2
0.5nm,0.4s,baz=64,slow=9.4,SNR=7.2
ESDC Sonseca Array 57.38 296 P P 23 14 50.2 -1.4
0.7nm,0.6s,baz=57,slow=7.3,SNR=6.2
TORD Torodi Ar. Bea 68.00 269 P P 23 16 00.2 -2.5
0.7nm,0.6s,baz=41,slow=6.5,SNR=7.2
YKA Yellowknife Ar 76.73 4 P P 23 16 53.9 -0.1
0.5nm,0.5s,baz=350,slow=5.1,SNR=3.5

UCR ***20*** *23:05:01.9±2.6, 16°.27N×87°.77W, h0km±26km, ML3.9*
SNET ***20*** *23:05:02.8±1.1, 16°.31N×87°.46W, h36km±97km, ML3.8*
ISC 20 23:05:06.7±3.1, 16°.0N±0°.2×87°.70W±0°.07, h10km, n24, σ1§72/32, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.98**	**168**	*eP*	**Pn**	**23 05 36.9**	**-3.3**
TGUH				*eS*	**Sn**	**23 06 04.1**	**-1.0**
TGUH	**Tegucigalpa,Un**	**1.98**	**168**	*eP*	**Pn**	**23 05 36.9**	**-3.3**
TGUH				*eS*	**Sn**	**23 06 04.1**	**-1.0**
VICT	**Victoria**	**2.22**	**204**	*eP*	**Pn**	**23 05 42.7**	**-1.1**
VICT				IAML		23 06 18.3	
comp=Z,222nm,0.5s							
VICT	**Victoria**	**2.22**	**204**	*eP*	**Pn**	**23 05 42.7**	**-1.1**
VICT				IAML		23 06 18.3	
comp=Z,222nm,0.5s							
MTO3	**Montecristo**	**2.26**	**225**	*eP*	**Pn**	**23 05 43.0**	**-1.3**
MTO3	**Montecristo**	**2.26**	**225**	*eP*	**Pn**	**23 05 43.0**	**-1.3**
PAVA	**Las Pavas**	**2.57**	**208**	*eP*	**Pn**	**23 05 48.0**	**-0.6**
PAVA	**Las Pavas**	**2.57**	**208**	*eP*	**Pn**	**23 05 48.0**	**-0.6**
PACA	**Pacayal**	**2.59**	**193**	*eP*	**Pn**	**23 05 48.0**	**-0.8**
PACA	**Pacayal**	**2.59**	**193**	*eP*	**Pn**	**23 05 48.0**	**-0.8**
LCND	**La Caada**	**2.68**	**184**	*eP*	**Pn**	**23 05 48.9**	**-1.1**
LCND				IAML		23 06 33.9	
comp=Z,606nm,0.4s							
LCND	**La Caada**	**2.68**	**184**	*eP*	**Pn**	**23 05 48.9**	**-1.1**
LCND				IAML		23 06 33.9	
comp=Z,606nm,0.4s							
LFRS	**El Faro**	**2.71**	**209**	*eP*	**Pn**	**23 05 50.0**	**-0.3**
CNCH	**Conchagua**	**2.71**	**183**	*eP*	**Pn**	**23 05 50.2**	**-0.2**
CNCH				*eS*	**Sn**	**23 06 27.8**	**+4.3**
CNCH	**Conchagua**	**2.71**	**183**	*eP*	**Pn**	**23 05 49.3**	**-1.2**
BOQS	**Boqueron**	**2.72**	**214**	*eP*	**Pn**	**23 05 50.5**	**-0.2**
BOQS				*eS*	**Sb**	**23 06 29.2**	**0.0**
SNJE	**San Jose**	**2.81**	**221**	*eP*	**Pn**	**23 05 51.4**	**-0.5**
SNJE	**San Jose**	**2.81**	**221**	*eP*	**Pn**	**23 05 51.4**	**-0.5**
SBLS	**San Blas**	**2.84**	**221**	*eP*	**Pn**	**23 05 52.0**	**-0.4**
SBLS	**San Blas**	**2.84**	**221**	*eP*	**Pn**	**23 05 52.0**	**-0.4**
RCON	**San Juan de Ri**	**2.92**	**149**	*eP*	**Pn**	**23 05 52.2**	**-1.1**
RCON				*eS*	**Sn**	**23 06 33.1**	**+4.6**
CSGN	**Cosiguina Volc**	**3.01**	**177**	*eP*	**Pn**	**23 05 55.3**	**+0.8**
CSGN				*eS*	**Sb**	**23 06 37.1**	**-0.3**
CSGN				IAML		23 06 47.6	
comp=N,2μm,0.6s							
ESTN	**Estel**	**3.16**	**156**	*eP*	**Pn**	**23 05 57.2**	**+0.6**
ESTN				*eS*	**Sb**	**23 06 40.7**	**-1.0**
ESTN				IAML		23 06 45.2	
comp=N,481nm,0.6s							
MATN	**Matagalpa**	**3.51**	**150**	*eP*	**Pn**	**23 06 02.9**	**+1.5**
MATN				*eS*	**Sb**	**23 06 49.8**	**-1.9**

ISCJB ***20*** *23:06:04.8±0.5, 62°.25N±0°.02×145°.72W±0°.03, h9km±3km, mb4.4/62, MS4.0/34, Error ellipse: s-maj=2.7km s-min=2.6km az=163.2*
IDC ***20*** *23:06:04.6±0.6, 62°.29N×145°.86W, h0km, mb3.8/19, mb1 4.0/23, mb1mx3.9/44, mbtmp3.9/23, ML3.6/4, MS3.9/29, Ms1 3.9/29, ms1mx3.8/40, Error ellipse: s-maj=14.6km s-min=9.3km az=40.0*
NEIC ***20*** *23:06:07.8±0.0, 62°.21N×145°.64W, h16km, mb4.5/49, ML4.6, MW4.6, ML4.4(AEIC), Moment Tensor Solution. s100 Moment tensor: Scale 10^15 Nm; Mrr3.08; Mθθ-4.64; Mφφ 1.57; Mrθ-2.59; Mθφ3.82; Mφr6.75; Best double couple: M0 9.10000×10^15 NP1:φs80.00000°, δ33.00000°, λ22.00000°. NP2:φs331.00000°, δ78.00000°, λ121.00000°. Principal axes: T 9.1400, Plg47.0000°, Azm274.0000°; N 0.0000, Plg31.0000°, Azm144.0000°; P -9.1400, Plg27.0000°, Azm37.0000°; After AEIC.*
NEIC Felt [IV] at Glennallen. Also felt at Anchorage, Copper Center, Gakona and Valdez.
ISC 20 23:06:05.3±1.1, 62°.24N±0°.02×145°.76W±0°.03, h4km±7km, n183, σ1§49/183, mb4.5/62, MS4.0/34, 1C-1D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAX	**Paxson**	**0.75**	**10**	*ePg*	**Pg**	**23 06 19.8**	**+0.1**
PAX				*eSg*	**Sg**	**23 06 29.6**	**+0.3**
PS12	**TAPS Pump St12**	**0.82**	**159**	*eSg*	**Sg**	**23 06 31.8**	**+0.4**
SCM	**Sheep Creek Mo**	**0.84**	**242**	*ePg*	**Pb**	**23 06 22.2**	**-0.3**
SCM				*eSg*	**Sb**	**23 06 34.0**	**-0.2**
DIV	**Divide**	**1.11**	**180**	*ePn*	**Pb**	**23 06 27.0**	**0.0**
DIV				*eSg*	**Sg**	**23 06 41.4**	**+0.5**
DHY	**Denali Highway**	**1.13**	**319**	*ePn*	**Pg**	**23 06 26.9**	**0.0**
DHY				*eSg*	**Sb**	**23 06 42.2**	**-0.2**
MENT	**Mentasta**	**1.18**	**52**	*ePn*	**Pg**	**23 06 26.7**	**-1.1**
MENT				*eSg*	**Sg**	**23 06 42.1**	**-0.9**
PS10	**TAPS Pump St10**	**1.19**	**360**	*ePn*	**Pg**	**23 06 27.6**	**-0.5**
PS10				*eSg*	**Sg**	**23 06 43.4**	**-0.2**
GLI	**Glacier Island**	**1.50**	**206**	*ePn*	**Pn**	**23 06 32.8**	**-0.2**
KNK	**Knik Glacier**	**1.52**	**238**	*ePn*	**Pn**	**23 06 33.1**	**-0.2**
KNK				*eSn*	**Sn**	**23 06 52.7**	**-0.9**
GHO	**Glory Hole Cre**	**1.56**	**254**	*ePn*	**Pn**	**23 06 34.0**	**+0.1**
GHO				*eSn*	**Sn**	**23 06 53.4**	**-1.3**
RIDG	**Independent Ri**	**1.57**	**15**	*ePn*	**Pn**	**23 06 34.0**	**+0.1**
DOT	**Dot Lake**	**1.62**	**28**	*ePn*	**Pn**	**23 06 34.3**	**-0.3**
DOT				*eSn*	**Sb**	**23 06 56.4**	**0.0**
EYAK	**Cordova Ski Ar**	**1.69**	**180**	*ePn*	**Pn**	**23 06 35.5**	**-0.1**
PS09	**TAPS Pump Stn9**	**1.70**	**360**	*ePn*	**Pn**	**23 06 36.2**	**+0.5**
PMR	**Palmer**	**1.72**	**249**	*ePn*	**Pn**	**23 06 36.3**	**+0.4**
SGAM	**Sherman Glacie**	**1.76**	**171**	*ePn*	**Pn**	**23 06 36.1**	**-0.4**
RND	**Reindeer**	**1.84**	**311**	*ePn*	**Pb**	**23 06 39.2**	**-0.3**
SCRK	**Sand Creek**	**1.93**	**24**	*ePn*	**Pn**	**23 06 38.5**	**-0.4**
BCA3	**Beaver Creek A**	**2.01**	**64**	*ePn*	**Pn**	**23 06 38.9**	**-1.1**
BALM	**Baldy**	**2.02**	**125**	*ePn*	**Pn**	**23 06 41.2**	**+0.9**
HMT	**Hamilton**	**2.04**	**159**	*ePn*	**Pb**	**23 06 42.2**	**-0.6**
TGL	**Tana Glacier**	**2.04**	**135**	*ePn*	**Pn**	**23 06 40.6**	**+0.1**
MCK	**McKinley**	**2.09**	**317**	*ePn*	**Pb**	**23 06 43.5**	**-0.2**
RC01	**Rabbit Creek A**	**2.22**	**241**	*ePn*	**Pb**	**23 06 45.1**	**-0.8**
HDA	**Harding Lake**	**2.25**	**347**	*ePn*	**Pb**	**23 06 46.9**	**+0.6**
PS08	**TAPS Pump Stn8**	**2.37**	**349**	*ePn*	**Pn**	**23 06 44.4**	**-0.4**
TRF	**Thorofare Moun**	**2.41**	**302**	*ePn*	**Pb**	**23 06 47.7**	**-1.6**
WRH	**Wood River Hil**	**2.48**	**336**	*ePn*	**Pn**	**23 06 48.0**	**+1.6**
SUA	**Susitna One**	**2.49**	**254**	*ePn*	**Pb**	**23 06 49.1**	**-1.4**
BWN	**Browne**	**2.57**	**321**	*ePn*	**Pn**	**23 06 48.0**	**+0.4**
CCB	**Clear Creek Bu**	**2.59**	**340**	*ePn*	**Pn**	**23 06 47.7**	**-0.1**
ILAR	**Eielson Array**	**2.60**	**349**	Pn	**Pn**	**23 06 47.3**	**-0.7**
7.1nm,0.3s,baz=175,slow=13,SNR=119							
ILAR				Pg	**Pb**	**23 06 53.2**	**+0.9**
65nm,0.3s,baz=165,slow=18,SNR=170							
ILAR				Lg	Lg	23 07 26.2	
265nm,0.3s,baz=163,slow=29,SNR=23							
ILB	**Eielson Array**	**2.60**	**349**	*ePn*	**Pn**	**23 06 47.5**	**-0.5**
KTH	**Kantishna Hill**	**2.71**	**301**	*ePn*	**Pn**	**23 06 51.9**	**+2.3**
COLA	**College**	**2.81**	**341**	*ePn*	**Pn**	**23 06 52.0**	**+1.1**
MDM	**Murphy Dome**	**2.95**	**339**	*ePn*	**Pn**	**23 06 54.2**	**+1.4**
BPAW	**Bear Paw Mtn.**	**3.02**	**311**	*ePn*	**Pn**	**23 06 55.3**	**+1.4**
PPLA	**Purkeypile**	**3.05**	**285**	*ePn*	**Pn**	**23 06 57.0**	**+2.6**
CAST	**Castle Rocks**	**3.14**	**295**	*ePn*	**Pn**	**23 06 57.6**	**+2.2**
EGAK	**Eagle**	**3.28**	**37**	*ePn*	**Pn**	**23 06 57.2**	**-0.1**
PRP	**Porcupine Dome**	**3.30**	**2**	*ePn*	**Pn**	**23 06 57.6**	**-0.1**
PCA	**Pinnacle**	**3.42**	**126**	*ePn*	**Pn**	**23 06 59.8**	**+0.4**
DAWY	**Dawson**	**3.42**	**55**	*ePn*	**Pn**	**23 06 59.1**	**-0.3**
BRLK	**Bradley Lake**	**3.52**	**227**	*ePn*	**Pn**	**23 07 02.3**	**+1.6**
MLY	**Manley**	**3.58**	**324**	*ePn*	**Pn**	**23 07 02.7**	**+1.2**
BCPM	**Bancas Point**	**3.75**	**125**	*ePn*	**Pn**	**23 07 04.8**	**+1.0**
CNPM	**China Poot**	**3.82**	**227**	*ePn*	**Pn**	**23 07 06.4**	**+1.7**
PNL	**Peninsula**	**4.03**	**127**	*ePn*	**Pn**	**23 07 06.9**	**-0.8**
PS06	**TAPS Pump Stn6**	**4.03**	**336**	*ePn*	**Pn**	**23 07 08.1**	**+0.4**
YKU2	**Yakutat**	**4.04**	**130**	*ePn*	**Pn**	**23 07 07.2**	**-0.5**
HYT	**Haines Junctio**	**4.20**	**106**	*ePn*	**Pn**	**23 07 11.1**	**+1.0**
FYU	**Fort Yukon**	**4.36**	**3**	*ePn*	**Pn**	**23 07 12.5**	**+0.4**
TTA	**Tatalina**	**4.79**	**283**	*ePn*	**Pn**	**23 07 19.2**	**+1.0**
SVW2	**Sparrevohn**	**4.82**	**261**	*ePn*	**Pn**	**23 07 19.2**	**+0.6**
IM3	**Indian Mountai**	**5.14**	**321**	*ePn*	**Pn**	**23 07 23.2**	**+0.4**
BM3	**Burnt Mountain**	**5.23**	**5**	*ePn*	**Pn**	**23 07 24.3**	**+0.1**
COLD	**Coldfoot**	**5.36**	**341**	*ePn*	**Pn**	**23 07 26.7**	**+0.8**
WHY	**Whitehorse**	**5.45**	**102**	*ePn*	**Pn**	**23 07 26.9**	**-0.4**
KDAK	**Kodiak Island**	**5.63**	**221**	Pn	**Pn**	**23 07 30.1**	**+0.6**
4.0nm,0.3s,baz=46,slow=9.7,SNR=51							
KDAK				Sn	**Sn**	**23 08 32.2**	**-2.4**
13nm,0.3s,baz=128,slow=23,SNR=7.6							
KDAK				Lg	Lg	23 09 03.6	
7.1nm,0.3s,baz=153,slow=18,SNR=7.3							
KDAK				LR	LR	23 09 56.0	
comp=Z,3μm,18.0s,baz=47,slow=41							
KDAK	**Kodiak Island**	**5.63**	**221**	*ePn*	**Pn**	**23 07 29.7**	**+0.1**
KDAK				*ePg*	**Pn**	**23 07 31.1**	**+1.5**
EPYK	**Eagle Plains**	**5.71**	**39**	*ePn*	**Pn**	**23 07 30.0**	**-0.8**
SKAG	**Skagway**	**5.81**	**114**	*ePn*	**Pn**	**23 07 32.2**	**+0.2**
BESE	**Bessie Mountai**	**6.52**	**119**	*ePn*	**Pn**	**23 07 42.4**	**+0.4**
JIS	**Juneau Island**	**6.91**	**120**	*ePn*	**Pn**	**23 07 46.8**	**-0.4**
SII	**Sitkinak Islan**	**7.13**	**221**	*ePn*	**Pn**	**23 07 51.7**	**+1.5**
SIT	**Sitka**	**7.40**	**130**	*ePn*	**Pn**	**23 07 52.5**	**-1.4**
INK	**Inuvik**	**7.95**	**35**	Pn	**Pn**	**23 08 00.6**	**-0.8**
3.7nm,0.3s,baz=258,slow=18,SNR=51							
INK				Sn	**Sn**	**23 09 34.0**	**+2.4**
4.2nm,0.3s,baz=162,slow=16,SNR=3.4							
INK				Lg	Lg	23 10 12.4	
2.9nm,0.3s,baz=108,slow=19,SNR=4.0							
INK	**Inuvik**	**7.95**	**35**	*ePn*	**Pn**	**23 08 00.1**	**-1.2**
DLBC	**Dease Lake**	**8.67**	**109**	Pn	**Pn**	**23 08 12.8**	**+1.4**
0.4nm,0.3s,baz=315,slow=11,SNR=2.8							
DLBC				Lg	Lg	23 10 40.0	
0.7nm,0.3s,baz=31,slow=18,SNR=8.8							
DLBC				LR	LR	23 12 01.5	
comp=Z,1μm,19.1s,baz=308,slow=41							
CHGN	**Chignik**	**8.79**	**233**	*ePn*	**Pn**	**23 08 15.1**	**+2.2**
ANM	**Nome**	**9.10**	**293**	*ePn*	**Pn**	**23 08 18.8**	**+1.7**
RDOG	**Red Dog Mine**	**9.26**	**316**	*ePn*	**Pn**	**23 08 20.6**	**+1.3**
CRAG	**Craig**	**9.41**	**130**	*ePn*	**Pn**	**23 08 21.1**	**-0.3**
SDPT	**Sand Point**	**10.28**	**234**	*ePn*	**Pn**	**23 08 35.2**	**+1.9**
DIB	**Dawson Inlet,**	**11.48**	**136**	*ePn*	**Pn**	**23 08 49.2**	**-0.6**
AKUT	**Akutan**	**13.27**	**241**	*ePn*	**Pn**	**23 09 15.3**	**+1.2**
SPIA	**Saint Paul Isl**	**13.31**	**259**	*ePn*	**Pn**	**23 09 16.4**	**+1.7**
UNV	**Unalaska Valle**	**13.77**	**242**	*ePn*	**Pn**	**23 09 22.0**	**+1.0**
BBB	**Bella Bella**	**13.83**	**129**	LR	LR	23 14 24.6	
comp=Z,401nm,19.4s,baz=310,slow=36							
BBB	**Bella Bella**	**13.83**	**129**	*ePn*	**Pn**	**23 09 22.4**	**+0.6**
YKW3	**Yellowknife Ar**	**14.37**	**75**	*ePn*	**Pn**	**23 09 28.9**	**-0.2**
YKA	**Yellowknife Ar**	**14.39**	**75**	Pn	**Pn**	**23 09 28.3**	**-1.1**
0.1nm,0.3s,baz=280,slow=12,SNR=6.9							
YKA				Lg	Lg	23 13 31.9	
baz=281,slow=28,SNR=3.7							
NIKH	**Nikolski High**	**15.38**	**243**	*ePn*	**Pn**	**23 09 43.7**	**+0.8**
30nm,1.1s							
ATKA	**Atka Island**	**18.22**	**250**	*ePn*	**Pn**	**23 10 17.7**	**-1.1**
135nm,1.6s							
NLWA	**Neilton Lookou**	**19.34**	**130**	*eP*	**Pn**	**23 10 32.0**	**-0.4**
44nm,1.6s							
ADK	**Adak**	**19.55**	**252**	*eP*	**P**	**23 10 34.0**	**+0.4**
98nm,1.2s							
BILL	**Bilibino**	**20.51**	**307**	*eP*	**P**	**23 10 44.4**	**+0.5**
17nm,1.3s							
NEW	**Newport**	**21.25**	**118**	P	**P**	**23 10 52.5**	**+0.3**
1.8nm,0.7s,baz=310,slow=14,SNR=3.2							
NEW				LR	LR	23 18 56.5	
comp=Z,362nm,19.7s,baz=310,slow=36							
NEW	**Newport**	**21.25**	**118**	*eP*	**P**	**23 10 52.6**	**+0.5**
14nm,1.0s							
RES	**Resolute Bay**	**21.51**	**34**	P	**P**	**23 10 54.1**	**-0.5**
2.1nm,0.7s,baz=247,slow=18,SNR=9.4							
RES				LR	LR	23 20 08.2	
comp=Z,339nm,20.1s,baz=244,slow=39							
RES	**Resolute Bay**	**21.51**	**34**	*eP*	**P**	**23 10 55.3**	**+0.7**
30nm,1.8s							
E08A	**Dider Farm, El**	**21.90**	**124**	*eP*	**P**	**23 10 59.2**	**+0.1**
30nm,1.3s							
G08A	**Pilot Rock**	**22.94**	**125**	*eP*	**P**	**23 11 10.3**	**0.0**
24nm,1.7s							
SMY	**Shemya**	**23.20**	**264**	*eP*	**P**	**23 11 14.8**	**+2.0**
165nm,1.1s							
MSO	**Missoula**	**23.71**	**116**	*eP*	**P**	**23 11 19.0**	**+1.0**
17nm,1.6s							
I07A	**Izee**	**23.76**	**128**	*eP*	**P**	**23 11 20.1**	**+1.5**
50nm,1.9s							
K05A	**Summer Lake**	**24.44**	**132**	*eP*	**P**	**23 11 26.2**	**+1.2**
17nm,1.3s							
HRY	**Holter Researc**	**24.70**	**113**	*eP*	**P**	**23 11 28.6**	**+1.4**
YBH	**Yreka Blue Hor**	**24.70**	**135**	P	**P**	**23 11 32.4**	**+5.2**
4.0nm,0.9s,baz=356,slow=5.0,SNR=8.9							
YBH				LR	LR	23 20 35.7	
comp=Z,237nm,18.1s,baz=318,slow=35							
YBH	**Yreka Blue Hor**	**24.70**	**135**	*eP*	**P**	**23 11 28.4**	**+1.1**
8.0nm,1.0s							
J08A	**Circle Bar Ran**	**24.77**	**127**	*eP*	**P**	**23 11 29.1**	**+1.2**
23nm,1.8s							
BOZ	**Bozeman (W)**	**25.66**	**115**	*eP*	**P**	**23 11 36.1**	**+0.1**
7.6nm,1.3s							
MCMT	**McKenzie Canyo**	**25.77**	**117**	*eP*	**P**	**23 11 37.9**	**+0.8**
WDC	**Whiskeytown Da**	**25.80**	**136**	*eP*	**P**	**23 11 37.8**	**+0.7**
12nm,1.0s							
HLID	**Hailey**	**26.17**	**121**	*eP*	**P**	**23 11 41.2**	**+0.6**
13nm,1.4s							
YHH	**Holmes Hill**	**26.64**	**115**	*eP*	**P**	**23 11 45.4**	**+0.3**
14nm,1.3s							
RLMT	**Red Lodge**	**27.06**	**112**	*eP*	**P**	**23 11 49.5**	**+0.8**
FXWY	**Fox Creek**	**27.50**	**116**	*eP*	**P**	**23 11 53.0**	**+0.4**
11nm,1.5s							
MOOW	**Moose Ponds**	**27.53**	**116**	*eP*	**P**	**23 11 53.5**	**+0.5**
17nm,1.5s							
PAHR	**Pah Rah Range**	**27

comp=Z,250nm,18.2s,baz=334,slow=37
NV11 Mina Array Sit 29.20 132 *eP* **P 23 12 10.6 +2.7**
0.6nm,1.1s
ULM Lac du Bonnet 29.40 91 LR LR 23 24 45.8
comp=Z,514nm,19.2s,baz=316,slow=38
DUG Dugway, Tooele 29.65 123 *eP* **P 23 12 15.5 +3.8**
5.7nm,1.1s
MA2 Magadan 29.89 294 LR LR 23 25 07.0
comp=Z,194nm,18.1s,baz=102,slow=38
R11A Troy Canyon, C 30.20 128 *ep*P pP 23 12 20.1 +2.1
PEA1 Petropavlovsk- 30.61 279 *eP* **P 23 12 19.5 -0.5**
PETK Petropavlovsk- 30.62 279 *P* **P 23 12 19.5 -0.5**
1.7nm,0.5s,baz=64,slow=13,SNR=6.6
PETK LR LR 23 25 46.4
comp=Z,296nm,18.7s,baz=66,slow=39
MSU Marysvale 31.35 123 *eP* **P 23 12 29.8 +2.9**
PV22 Blue Mesa, Par 32.69 119 *eP* **P 23 12 38.7 +0.2**
20nm,1.2s
PV02 Paradox Valley 32.99 119 *eP* **P 23 12 44.8 +3.5**
16nm,1.3s
PV01 Paradox Valley 33.12 119 *eP* **P 23 12 45.4 +3.0**
18nm,1.2s
ANMO Albuquerque 36.72 120 *eP* **P 23 13 17.0 +3.5**
15nm,1.4s
SCHQ Schefferville 39.40 63 *eP* **P 23 13 33.8 -1.9**
6.9nm,0.8s
TRQ Mont Tremblant 42.21 78 *eP* **P 23 13 58.8 -0.1**
MEDO Medina 42.73 84 *eP* **P 23 14 01.5 -1.6**
15nm,1.0s
TX31 Lajitas Ar. Si 42.77 120 *eP* **P 23 14 04.5 +0.8**
6.3nm,1.2s
TXAR Lajitas Array 42.77 120 P **P 23 14 05.4 +1.7**
0.4nm,0.5s,baz=303,slow=3.5,SNR=5.8
TXAR LR LR 23 33 38.8
comp=Z,577nm,18.8s,baz=0.0,slow=39
NRIK Noril'sk 43.38 336 LR LR 23 35 14.1
comp=Z,94nm,19.4s,baz=48,slow=40
FRNY Flat Rock 43.70 79 *eP* **P 23 14 12.9 +1.9**
22nm,1.8s
MOQ Mont Orford 43.95 77 *eP* **P 23 14 12.2 -0.8**
ARCES ARCESS Array B 48.37 4 P **P 23 14 48.4 +1.0**
11nm,0.4s,baz=23,slow=7.9,SNR=2.8
USRK Ussuriysk Ar. 48.76 289 P **P 23 14 50.2 -0.5**
3.3nm,0.6s,baz=62,slow=10,SNR=7.6
USRK LR LR 23 35 08.3
comp=Z,179nm,20.2s,baz=40,slow=36
MAJO Matsushiro 52.06 278 *eP* **P 23 15 15.6 -0.2**
MJAR Matsushiro Arr 52.06 278 *P* **P 23 15 15.6 -0.2**
0.7nm,0.3s,baz=9.9,slow=6.4,SNR=5.0
MJAR LR LR 23 37 06.6
comp=Z,90nm,21.9s,baz=45,slow=36
NB2 NORSAR Subarra 55.80 13 P **P 23 15 41.4 -1.5**
comp=Z,4.8nm,1.1s,baz=348,slow=7.4
NB200 NORSAR Array S 55.80 13 *eP* **P 23 15 41.6 -1.2**
NOA NORSAR Array B 55.80 13 P **P 23 15 41.6 -1.2**
comp=Z,0.4nm,0.6s,baz=349,slow=7.3,SNR=5.9
NOA LR LR 23 40 40.3
comp=Z,46nm,21.4s,baz=345,slow=37
ULN Ulaanbaatar 55.94 309 *eP* **P 23 15 43.7 -0.5**
comp=Z,4.9nm,1.1s
KSRS Korea Array 56.02 287 P **P 23 15 45.2 +0.6**
comp=Z,2.7nm,0.8s,baz=29,slow=6.6,SNR=10
KSRS LR LR 23 40 01.2
comp=Z,117nm,19.7s,baz=32,slow=36
SONA0 Songino Array 56.20 309 *eP* **P 23 15 45.9 -0.1**
SONM Songino Array 56.20 309 P **P 23 15 45.9 -0.1**
comp=Z,2.4nm,0.8s,baz=27,slow=7.4,SNR=12
SONM LR LR 23 41 30.9
comp=Z,214nm,18.2s,baz=24,slow=38
FIA0 FINESS Array S 56.48 5 *eP* **P 23 15 45.5 -2.1**
FINES FINESS Array B 56.48 5 P **P 23 15 45.5 -2.1**
comp=Z,0.6nm,0.7s,baz=5.7,slow=9.6,SNR=3.8
ZAA1 Zalesovo Array 57.52 327 *eP* **P 23 15 53.8 -1.4**
ZALV Zalesovo Beam 57.53 327 P **P 23 15 53.8 -1.4**
comp=Z,0.6nm,0.3s,baz=10,slow=10,SNR=3.3
ZALV LR LR 23 43 42.6
comp=Z,83nm,18.5s,baz=70,slow=39
JNU Nakatsue 58.27 281 LR LR 23 39 41.0
comp=Z,105nm,19.7s,baz=353,slow=35
HHC Hu-ho-hao-te 60.15 301 *eP* **P 23 16 14.8 +1.1**
HHC pmax pmax
comp=Z,14nm,1.1s
HHC pmax pmax
comp=Z,36nm,5.1s
BRVK Borovoye 61.58 336 *eP* **P 23 16 24.4 +1.3**
comp=Z,11nm,1.9s
BVAR Borovoye Array 61.59 336 P **P 23 16 22.1 -1.1**
comp=Z,1.1nm,0.8s,baz=37,slow=6.4,SNR=7.0
KURBB Kurchatov Arra 62.12 330 P **P 23 16 25.2 -1.6**
comp=Z,0.5nm,0.8s,baz=29,slow=6.6,SNR=4.2
NJ2 Nanjing 64.58 291 *eP* **P 23 16 43.0 -0.3**
NJ2 pmax pmax
comp=Z,15nm,0.5s
MKAR Makanchi Array 64.73 326 P **P 23 16 41.9 -2.3**
comp=Z,0.4nm,0.5s,baz=28,slow=5.9,SNR=5.8
MKAR LR LR 23 46 35.3
comp=Z,72nm,20.9s,baz=10,slow=38
GTA Gaotai 65.88 309 *eP* **P 23 16 51.9 0.0**
GTA pP sP 23 16 59.3 +5.5
GTA sP pP 23 17 02.3 +9.0
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,43nm,7.5s
GTA LR LR
comp=N,170nm,17.8s
GTA LR LR
comp=E,180nm,15.2s
GTA LR LR
comp=Z,280nm,17.5s
WMQ Urumqi 65.93 320 *eP* **P 23 16 52.3 +0.2**
WMQ pmax pmax
comp=Z,40nm,3.9s
WMQ LR LR
comp=N,76nm,29.3s
WMQ LR LR
comp=E,160nm,29.3s
WMQ LR LR
comp=Z,160nm,18.5s
XAN Xi'an 67.07 300 P P 23 17 05.5 +6.0
XAN pP sP 23 17 13.1 +12
XAN pmax pmax
comp=Z,4.0nm,0.9s
XAN LR LR
comp=N,170nm,15.2s
XAN LR LR
comp=E,260nm,17.3s
XAN LR LR
comp=Z,160nm,16.3s
LZH Lanzhou 67.30 305 ⇑P **P 23 17 00.3 -0.7**
LZH pP sP 23 17 06.3 +3.3
LZH sP pP 23 17 09.1 +6.6
LZH PP **PP 23 19 21.9 -6.8**
LZH pmax pmax
comp=Z,13nm,1.1s
LZH pmax pmax
comp=Z,100nm,4.3s
LZH LR LR
comp=N,410nm,15.7s
LZH LR LR
comp=E,200nm,15.3s
LZH LR LR
comp=Z,390nm,16.3s
AKASG Malin Array Be 67.34 3 P **P 23 16 59.4 -1.4**
comp=Z,0.3nm,0.3s,baz=0.0,slow=5.7,SNR=3.4
AKASG LR LR 23 46 40.5
comp=Z,39nm,20.9s,baz=275,slow=36
GERES GERESS Array B 68.06 14 P **P 23 17 05.1 -0.5**
comp=Z,0.1nm,0.3s,baz=345,slow=6.1,SNR=2.6
GUMO Guam 68.49 258 LR LR 23 43 39.8
comp=Z,90nm,21.8s,baz=92,slow=33
TAOE Nuku Hiva Isla 71.01 174 *eLR* LR 23 39 03.6
comp=Z,168nm,29.7s
CD2 Chengdu 71.89 302 *eP* **P 23 17 27.4 -1.9**
KSH Kashi 73.16 327 P **P 23 17 39.4 +2.5**
KSH sP PcP 23 17 46.8 -6.7
KSH PP **PP 23 20 25.5 +6.5**
KSH S **S 23 27 05.1 0.0**
KSH Kashi 73.16 327 ScS **SKSac 23 27 43.0 -0.3**
KSH pmax pmax
comp=Z,8.0nm,0.9s
KSH pmax pmax
comp=Z,320nm,5.3s
KSH LR LR
comp=N,280nm,6.2s
KSH LR LR
comp=E,210nm,8.0s
KSH LR LR
comp=Z,470nm,14.2s
ESDC Sonseca Array 73.87 30 P **P 23 17 40.8 -0.1**
comp=Z,0.7nm,0.7s,baz=344,slow=5.3,SNR=5.2
GAR Garm 75.00 332 *eP* **P 23 17 47.7 +0.1**
comp=Z,12nm,1.1s
CHGR Chuyangaron 75.58 332 *eP* **P 23 17 51.9 +1.0**
comp=Z,23nm,1.4s
ROSC El Rosal 77.14 104 LR LR 23 55 22.9
comp=Z,74nm,18.1s,baz=52,slow=38
KMI Kunming 77.44 300 P **P 23 18 05.0 +3.2**
KMI pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 78.39 0 LR LR 23 55 58.1
comp=Z,16nm,19.5s,baz=68,slow=38
NIL Nilore 79.41 328 *eP* **P 23 18 12.5 +0.1**
comp=Z,20nm,1.3s
PPT Papeete 79.59 184 LR LR 23 43 49.5
comp=Z,31nm,19.9s,baz=328,slow=28
PPT2 Papeete2 79.61 184 *eLR* 23 43 00.2
comp=Z,71nm,23.0s
CSS Mathiatis 83.14 1 *eP* **P 23 18 33.3 +1.2**
comp=Z,6.6nm,0.6s
DAV Davao City (W) 83.17 272 LR LR 23 55 48.5
comp=Z,28nm,18.5s,baz=12,slow=36
DAV Davao City (W) 83.17 272 ⇓*iP* **P 23 18 32.0 -0.5**
CMAR Chiang Mai Arr 84.95 301 LR LR 00 00 03.7
comp=Z,74nm,18.5s,baz=28,slow=38
NNA Nana 91.00 114 *eP* **P 23 19 09.5 -0.9**
comp=Z,149nm,1.8s
DZM Mont Dzumac 92.19 223 *eLR* LR 23 48 51.6
comp=Z,79nm,23.4s

MEX 20 23:13:10.8±0.5, 15°.19N×92°.80W, h103km±10km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
THIG		**0.58**	**118**	*i*	P	Pn	23 13 26.6	-1.0
THIG				*e*	S	Sn	23 13 38.5	-1.6
PCIG		**0.66**	**322**	*e*	P	Pn	23 13 27.0	-1.2
PCIG				*e*	S	Sn	23 13 39.0	-2.2
CCIG	**Comitan**	**1.26**	**30**	*i*	P	Pn	23 13 35.5	+0.9
CCIG				*e*	S	Sn	23 13 53.2	+0.6
TGIG		**1.61**	**349**	*e*	P	Pn	23 13 37.8	-0.9
TGIG				*i*	S	Sn	23 13 58.2	-1.7

*IDC **20** 23:23:25.4±1.0, 34°.08N×69°.90E, h0km, mb3.6/6, mb1 3.7/11, mb1mx3.5/41, mbtmp3.6/11, ML3.6/5, Error ellipse: s-maj=23.9km s-min=19.5km az=83.0*
*NDI **20** 23:23:26.1±2.4, 34°.51N×69°.53E, h48km±102km, ML3.6*
*ISCJB **20** 23:23:27.9±0.5, 34°.05N±0°.04×70°.03E±0°.06, h33km, mb3.7/7, Error ellipse: s-maj=8.4km s-min=4.4km az=141.2*
*NNC **20** 23:23:36.3±6.2, 34°.79N×69°.16E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=58.9km s-min=50.0km az=132.0*
ISC 20 23:23:30.3±0.7, 34°.04N±0°.07×70°.02E±0°.07, h35km, n31, σ2°52/37, mb3.6/7, 3C-2D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**5.56**	**107**	*e*	P	**Pn**	**23 24 52.7**	**+1.9**
DHRM				*e*	S	**Sn**	**23 25 57.7**	**+4.0**
DHRM					IAML		23 26 01.8	
	comp=N,89nm,0.2s							
DHRM					IAML		23 26 02.0	
	comp=E,139nm,0.4s							
SMLA	**Simla**	**6.70**	**114**	*e*	P	**Pn**	**23 25 08.8**	**+2.6**
SMLA				*e*	S	**Sn**	**23 26 22.9**	**+1.8**
SMLA					IAML		23 26 26.8	
	comp=E,60nm,0.5s							
SMLA					IAML		23 26 26.8	
	comp=N,67nm,0.5s							
KKR	**Kurukshetra**	**7.06**	**123**	*ex*		**Sn**	**23 26 26.4**	**-3.9**
KUDL	**Kundal**	**8.08**	**135**	*e*	P	Pn	23 25 17.6	-7.6
KUDL				*e*	S	Sn	23 26 45.1	-10
KUDL					IAML		23 27 51.2	
	comp=E,8.5nm,0.8s							
SONA	**Sohna**	**8.36**	**132**	*e*	P	**Pn**	**23 25 31.9**	**+2.8**
SONA				*e*	S	**Sn**	**23 27 05.3**	**+3.1**
JOSI	**Joshimath**	**8.79**	**111**	*e*	P	**Pn**	**23 25 38.4**	**+3.2**
JOSI				*e*	S	**Sn**	**23 27 12.5**	**-0.6**
JOSI					IAML		23 28 19.2	
	comp=E,38nm,0.7s							
JOSI					IAML		23 28 20.6	
KK31	**Karatay Array**	**9.06**	**2**	⇑P		**Pn**	**23 25 39.5**	**+0.9**
	comp=E,2.6nm,0.5s,baz=187,slow=13							
KK31				⇓S		**Sn**	**23 27 16.6**	**-2.7**
	comp=E,4.6nm,0.7s,baz=191,slow=23							
AAK	**Ala-Archa**	**9.28**	**21**	Pn		**Pn**	**23 25 43.5**	**+1.8**
	comp=E,0.8nm,0.3s,baz=195,slow=4.6,SNR=4.8							
AAK				Sn		**Sn**	**23 27 27.1**	**+2.3**
	comp=E,0.4nm,0.3s,baz=319,slow=20,SNR=3.1							
AAK	**Ala-Archa**	**9.28**	**21**	⇑P		**Pn**	**23 25 44.5**	**+2.8**
	comp=E,3.1nm,0.7s							
AAK				⇓S		**Sn**	**23 27 26.1**	**+1.2**
	comp=E,5.4nm,0.8s							
TKM2	**Tokmak 2**	**9.89**	**25**	⇑P		Pn	23 25 56.0	+6.0
	comp=E,4.2nm,1.1s							
GEYT	**Alibeck**	**10.39**	**295**	Pn		**Pn**	**23 25 58.2**	**+1.3**
	comp=E,0.3nm,0.3s,baz=120,slow=8.7,SNR=3.4							
BHPL	**Bhopal**	**12.56**	**147**	*e*S		**Sn**	**23 28 42.5**	**-2.9**
PYUN	**Piuthan**	**12.59**	**115**	*e*P		**Pn**	**23 26 24.5**	**-2.7**
	comp=E,12nm,0.3s							
PYUN				*e*S		**Sn**	**23 28 40.3**	**-6.0**
DANN	**Dangsing**	**13.05**	**112**	*e*P		**Pn**	**23 26 33.1**	**-0.5**
	comp=E,11nm,0.4s							
KOLN	**Koldanda**	**13.22**	**115**	*e*P		**Pn**	**23 26 31.7**	**-4.1**
	comp=E,4.3nm,0.3s							
KKN	**Kakani**	**14.50**	**111**	*e*P		**Pn**	**23 26 51.0**	**-2.2**
	comp=E,14nm,0.6s							
PKIN	**Phulchoki**	**14.69**	**112**	*e*P		**Pn**	**23 26 52.6**	**-3.3**
	comp=E,6.6nm,0.3s							
PKI	**Pulchoki**	**14.71**	**112**	*e*P		**Pn**	**23 26 52.9**	**-3.2**
	comp=E,11nm,0.4s							
JIRN	**Jiri**	**15.27**	**110**	*e*P		**Pn**	**23 27 02.1**	**-1.5**
	comp=E,16nm,0.4s							
MKAR	**Makanchi Array**	**15.78**	**32**	Pn		**Pn**	**23 27 08.5**	**-1.3**
	comp=E,0.3nm,0.3s,baz=210,slow=11,SNR=11							
AB31	**Akbulak array**	**16.94**	**337**	P		**Pn**	**23 27 22.0**	**-2.5**
	comp=E,1.0nm,0.6s,baz=149,slow=16,SNR=18							
KURBB	**Kurchatov Arra**	**17.71**	**18**	P		**Pn**	**23 27 34.1**	**+0.1**
	comp=E,0.0nm,0.3s,baz=210,slow=11,SNR=4.2							
AKTO	**Aktyubinsk**	**18.60**	**335**	P		**P**	**23 27 44.4**	**-0.1**
	comp=E,0.2nm,0.3s,baz=143,slow=10,SNR=3.5							
BVAR	**Borovoye Array**	**18.98**	**1**	P		**P**	**23 27 47.1**	**-1.5**
	comp=E,0.3nm,0.3s,baz=175,slow=10,SNR=6.6							
ZALV	**Zalesovo Beam**	**22.49**	**23**	P		**P**	**23 28 25.8**	**-0.7**
	comp=E,0.8nm,0.3s,baz=224,slow=10,SNR=4.1							
FINES	**FINESS Array B**	**39.11**	**328**	P		**P**	**23 30 53.6**	**-0.3**
	comp=E,0.6nm,0.7s,baz=125,slow=7.3,SNR=3.0							
ARCES	**ARCESS Array B**	**43.13**	**339**	P		**P**	**23 31 24.8**	**-2.1**
	comp=E,6.9nm,0.3s,baz=108,slow=7.7,SNR=5.4							
NOA	**NORSAR Array B**	**45.89**	**325**	P		**P**	**23 31 48.8**	**-0.3**
	comp=E,0.1nm,0.4s,baz=101,slow=8.0,SNR=2.6							
TORD	**Torodi Ar. Bea**	**64.87**	**269**	P		**P**	**23 34 06.2**	**0.0**
	comp=E,0.6nm,1.0s,baz=41,slow=6.5,SNR=2.5							
WRA	**Warramunga Arr**	**81.40**	**121**	P		**P**	**23 35 44.9**	**+1.2**
	comp=E,1.8nm,0.9s,baz=302,slow=4.8,SNR=2.5							
ASAR	**Alice Springs**	**83.53**	**124**	P		**P**	**23 35 56.2**	**+1.4**
	comp=E,0.2nm,0.4s,baz=302,slow=5.2,SNR=3.4							

*ISCJB **20** 23:39:53.7±0.6, 33°.35N±0°.04×140°.0E±0°.1, h120km±4km, mb3.6/4, Error ellipse: s-maj=14.9km s-min=6.0km az=167.5*
*IDC **20** 23:39:55.0±0.7, 33°.11N×139°.60E, h109km±20km, mb3.3/4, mb1 3.4/5, mb1mx3.1/40, mbtmp3.5/5, Error ellipse: s-maj=83.4km s-min=11.1km az=69.0*
*JMA **20** 23:39:55.6±0.1, 33°.44N×139°.95E, h107km±1km, M3.1*
ISC 20 23:39:54.6±0.9, 33°.35N±0°.05×139°.95E±0°.08, h113km±6km, n26, σ1°18/34, mb3.6/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.26**	**204**	P		**Pn**	**23 40 11.4**	**+0.8**
JHJ2				S		**Sn**	**23 40 23.5**	**+0.9**
JHJ	**Hachijo jima 2**	**0.27**	**210**	P		**Pn**	**23 40 11.5**	**+0.8**
	176nm,0.3s,baz=106,slow=22,SNR=171							
JHJ				S		**Sn**	**23 40 22.9**	**+0.3**
	275nm,0.3s,baz=274,slow=23,SNR=46							
JHCJ	**Hachijojimakas**	**0.31**	**204**	P		**Pn**	**23 40 11.1**	**+0.3**
JHCJ				S		**Sn**	**23 40 23.3**	**+0.4**
JMKN	**Mikurajimanish**	**0.61**	**331**	P		**Pn**	**23 40 12.4**	**-0.2**
JMKN				S		**Sn**	**23 40 25.0**	**-1.1**
JAOM	**Aogashimamukai**	**0.90**	**190**	S		**Sn**	**23 40 32.5**	**+2.0**
JKO	**Kozu shima**	**1.07**	**321**	P		**Pn**	**23 40 16.7**	**0.0**
JKO				*e*S		**Sn**	**23 40 33.0**	**-0.5**
JTHY	**Toshimahigashi**	**1.29**	**335**	P		**Pn**	**23 40 19.4**	**+0.3**
JTHY				S		**Sn**	**23 40 37.4**	**-0.4**
JIM2	**Oshima 3**	**1.43**	**343**	P		**Pn**	**23 40 21.0**	**+0.3**
JIM2				*e*S		**Sn**	**23 40 39.6**	**-1.0**
BSO3	**Boso 3**	**1.52**	**18**	P		**Pn**	**23 40 22.1**	**+0.6**
BSO1	**Boso 1**	**1.56**	**33**	P		**Pn**	**23 40 22.4**	**+0.7**
JIZS	**Izushimoda**	**1.62**	**327**	P		**Pn**	**23 40 23.3**	**+0.2**
JIZS				*e*S		**Sn**	**23 40 44.3**	**-0.4**
TK02	**Tokai 2**	**1.92**	**289**	P		**Pn**	**23 40 27.0**	**+0.5**
TK04	**Tokai 4**	**2.01**	**301**	P		**Pn**	**23 40 28.4**	**+0.7**
JOD2	**Odawara 2**	**2.03**	**340**	P		**Pn**	**23 40 28.6**	**+0.5**
JOD2				S		**Sn**	**23 40 53.3**	**-0.5**
SHZ3	**Shizuoka 3**	**2.23**	**320**	P		**Pn**	**23 40 31.5**	**+0.8**
JYN	**Shimob**	**2.43**	**332**	P		**Pn**	**23 40 34.3**	**+1.0**
TTO2	**TONANKAI O.B.S**	**2.47**	**280**	P		**Pn**	**23 40 33.9**	**+0.5**
MJAR	**Matsushiro Arr**	**3.49**	**336**	P		**Pn**	**23 40 48.1**	**+1.0**
	0.2nm,0.3s,baz=178,slow=13,SNR=6.2							
MJAR				S		**Sn**	**23 41 31.6**	**+3.8**
	0.3nm,0.3s,baz=181,slow=18,SNR=5.7							
MAT	**Matsushiro**	**3.49**	**336**	P		**Pn**	**23 40 47.5**	**+0.4**
MAT				S		**Sn**	**23 41 30.8**	**+3.0**
H11N2	**WAKE ISLAND Hy**	**27.57**	**113**	T		T	00 14 34.5	
	baz=306,slow=75,SNR=8.5							
H11N1	**WAKE ISLAND Hy**	**27.57**	**113**	T		T	00 14 27.0	
	baz=306,slow=75,SNR=14							
H11N3	**WAKE ISLAND Hy**	**27.59**	**113**	T		T	00 14 26.4	
	baz=306,slow=75,SNR=7.6							
MKAR	**Makanchi Array**	**45.15**	**305**	P		**P**	**23 47 58.8**	**-1.0**
	0.3nm,0.5s,baz=83,slow=8.9,SNR=5.1							
WRA	**Warramunga Arr**	**53.27**	**187**	P		**P**	**23 49 00.3**	**-1.4**
	0.6nm,0.4s,baz=5.0,slow=7.3,SNR=6.6							
ASAR	**Alice Springs**	**56.99**	**187**	P		**P**	**23 49 27.9**	**-0.6**
	0.3nm,0.5s,baz=10,slow=7.7,SNR=6.3							
FINES	**FINESS Array B**	**71.51**	**332**	P		**P**	**23 51 03.0**	**+0.4**
	0.7nm,0.7s,baz=46,slow=5.5,SNR=4.9							

KRSC 20 23:44:31.4±0.8, 55°.33N×162°.65E, h69km±18km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.89**	**6**	*i*	P	Pn	23 44 49.6	+1.2
KBTR				*e*S		Sn	23 45 01.8	+0.8
MKZ	**Mys Kozlova**	**0.94**	**215**	*e*P		Pn	23 44 51.2	+2.1
MKZ				*e*S		Sn	23 45 04.1	+1.9
TUMD	**Tumrok D**	**1.29**	**265**	*e*P		Pn	23 44 55.6	+1.9
TUMD				*e*S		Sn	23 45 12.4	+2.1
CIRR	**Tsirk**	**1.33**	**307**	*e*P		Pn	23 44 56.1	+1.8
LGNR	**Loginova**	**1.34**	**305**	*e*P		Pn	23 44 56.6	+2.1
KZV	**Kizimen**	**1.37**	**262**	*e*P		Pn	23 44 56.4	+1.7
KZV				*e*S		Sn	23 45 13.9	+1.7
BZWR	**Bezymyannyi-We**	**1.38**	**298**	*e*P		Pn	23 44 56.9	+2.0
SMKR	**Semkarok**	**1.42**	**333**	*e*P		Pn	23 44 56.7	+1.4
TUMR	**Tumrok**	**1.43**	**269**	*e*P		Pn	23 44 57.9	+2.4
TUMR				*e*S		Sn	23 45 16.2	+2.5
KRSR	**Krestovskiy**	**1.48**	**308**	*e*P		Pn	23 44 57.5	+1.4
KRSR				*e*S		Sn	23 45 15.7	+1.0
BDR	**Baidarnaya**	**1.48**	**327**	*e*P		Pn	23 44 57.9	+1.7
KLY	**Klyuchi**	**1.50**	**312**	*e*P		Pn	23 44 57.0	+0.7
KLY				*e*S		Sn	23 45 14.6	-0.4
KPT	**Kopyto**	**1.52**	**296**	*e*S		Sn	23 45 18.7	+3.1
SRKR	**Sorokina**	**1.57**	**329**	*e*P		Pn	23 44 58.8	+1.5
KOZ	**Kozyrevsk**	**1.73**	**296**	*e*P		Pn	23 45 02.0	+2.6
KOZ				*e*S		Sn	23 45 23.2	+2.5
BKI	**Bering**	**1.91**	**92**	*e*P		Pn	23 45 04.3	+2.6
BKI				*e*S		Sn	23 45 26.6	+1.9
SRDR	**Sredinnyy**	**1.93**	**302**	*e*P		Pn	23 45 03.8	+1.7
ESO	**Esso**	**2.32**	**287**	*e*P		Pn	23 45 09.0	+1.7
SPN	**Mys Shipunski**	**2.72**	**216**	*e*P		Pn	23 45 14.3	+1.6
SPN				*e*S		Sn	23 45 44.2	-0.2
NLC	**Nalytchevo**	**2.91**	**223**	*e*P		Pn	23 45 18.5	+3.2
NLC				*e*S		Sn	23 45 51.3	+2.3
SDLR	**Sedlovina**	**3.02**	**229**	*e*P		Pn	23 45 20.3	+3.4
SDLR				*e*S		Sn	23 45 54.7	+2.8
KRER	**Koryakskii**	**3.06**	**230**	*e*P		Pn	23 45 21.5	+4.0
SMAR	**Somma**	**3.06**	**229**	*e*P		Pn	23 45 20.5	+2.9
SMAR				*e*S		Sn	23 45 55.4	+2.2
KRX	**Arik**	**3.06**	**231**	*e*P		Pn	23 45 21.7	+4.1
AVH	**Avacha**	**3.09**	**230**	*e*S		Sn	23 45 56.0	+2.4
UGLR	**Uglovaya**	**3.09**	**228**	*e*P		Pn	23 45 20.9	+3.0
UGLR				*e*S		Sn	23 45 56.0	+2.3
KOK	**Koryaka**	**3.11**	**231**	*e*P		Pn	23 45 22.5	+4.3
GNL	**Ganaly**	**3.20**	**241**	*e*P		Pn	23 45 22.3	+3.0
DALK	**Dalny**	**3.25**	**226**	*e*P		Pn	23 45 23.9	+4.0
RUS	**Russkaya**	**3.80**	**222**	*e*S		Sn	23 46 12.5	+1.7
MTVR	**Mutnovka**	**3.89**	**225**	*e*S		Sn	23 46 15.4	+2.1
ASAK	**Asacha**	**4.08**	**226**	*e*P		Pn	23 45 34.5	+3.2
KDTR	**Khodutka, Kamc**	**4.46**	**220**	*e*P		Pn	23 45 38.6	+2.2
KDTR				*e*S		Sn	23 46 26.9	0.0

ISC 21 00:00:57.6±1.0, 50°.20N±0°.04×19°.05E±0°.04, h0km, n6, σ0°82/12, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.10**	**338**	*e*Pg		**Pg**	**00 01 00.0**	**+0.6**
CHZP				*e*Sg		**Sg**	**00 01 01.7**	**+1.0**
OJC	**Ojcow**	**0.48**	**88**	*e*Pg		**Pg**	**00 01 06.5**	**-0.4**
OJC				*e*Sg		**Sg**	**00 01 13.7**	**+0.6**
MORC	**Moravsky Berou**	**1.06**	**247**	*e*PG		**Pb**	**00 01 17.9**	**-1.0**
MORC				*e*SG		**Sg**	**00 01 32.0**	**+0.3**
LANS	**Liptovska Anna**	**1.09**	**165**	*e*PG		**Pg**	**00 01 19.2**	**+0.7**
LANS				*e*SG		**Sg**	**00 01 33.8**	**+1.2**
NIE	**Niedzica**	**1.13**	**134**	*e*Pg		**Pg**	**00 01 19.4**	**+0.1**
NIE				*e*Sg		**Sb**	**00 01 36.1**	**+0.8**
VYHS	**Vyhne**	**1.72**	**185**	*e*PN		**Pn**	**00 01 28.2**	**-0.6**
VYHS				*e*SN		**Sn**	**00 01 51.2**	**-0.2**

*SJA **21** 00:06:09.7±0.8, 27°.01S×63°.27W, h655km±15km, ML4.8, MW4.4*
*ISCJB **21** 00:06:19.4±0.1, 26°.93S±0°.02×63°.32W±0°.03, h600km, mb4.1/15, Error ellipse: s-maj=3.1km s-min=3.0km az=136.0*
*NEIC **21** 00:06:19.3±1.5, 26°.89S×63°.25W, h577km±7km, mb4.5/1, Error ellipse: s-maj=16.3km s-min=13.8km az=64.0*
*IDC **21** 00:06:19.6±0.8, 26°.87S×63°.17W, h578km±9km, mb3.7/12, mb1 3.9/19, mb1mx3.8/27, mbtmp4.7/19, Error ellipse: s-maj=13.7km s-min=11.1km az=89.0*
*VAO **21** 00:06:19.9±0.2, 26°.87S×63°.31W, h585km±4km, mb4.2*
ISC 21 00:06:20.4±0.3, 26°.90S±0°.05×63°.32W±0°.05, h600km, n561, σ1°27/586, mb4.2/15, 1C, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AHML	**Horco Molle**	**1.80**	**273**	*i*	P	**P**	**00 07 32.0**	**-2.1**
AHML					IAML		00 07 32.4	
	comp=Z,115nm,0.4s							
AHML				*i*	S	S	00 08 53.9	+20
FSA	**Cafayete**	**2.51**	**288**	*i*	P	**P**	**00 07 35.0**	**-2.3**
CYA	**Choya**	**2.69**	**234**	*e*P		**P**	**00 07 35.4**	**-2.5**
CYA					IAML		00 07 35.9	
	comp=Z,330nm,0.3s							
AZAP	**Zapla**	**3.10**	**329**	*i*	P	**P**	**00 07 38.5**	**-2.0**
HJA	**Humahuaca**	**4.13**	**332**	*i*	P	**P**	**00 07 46.8**	**-0.6**
TCA	**Tanti**	**4.56**	**194**	*e*P		**P**	**00

RTLL eS S 00 09 26.9 -2.3
ACAN Cantantal 6.33 211 i P P 00 08 02.6 -1.8
ACAN i S S 00 09 24.9 -4.6
CFA Coronel Fontan 6.36 221 P P 00 08 03.6 -1.0
comp=Z,72nm,0.3s,baz=65,slow=11,SNR=844
CFA S S 00 09 26.9 -3.1
comp=Z,3.7nm,0.3s,baz=320,slow=23,SNR=7.7
ZON Zonda 6.58 224 i P P 00 08 05.7 -0.9
ZON IAML 00 08 12.2
comp=Z,78nm,0.3s
ZON i S S 00 09 25.9 -7.7
LVC Limon Verde 6.64 309 P P 00 08 06.9 -0.7
comp=Z,4.5nm,0.3s,baz=118,slow=5.7,SNR=43
LVC S S 00 09 29.8 -5.4
comp=Z,10nm,0.3s,baz=357,slow=18,SNR=22
LVC Limon Verde 6.64 309 eP P 00 08 07.0 -0.7
LVC eS S 00 09 31.3 -3.9
LVC Limon Verde 6.64 309 eP P 00 08 07.0 -0.7
RTCV Cerro Valdivia 6.72 221 i P P 00 08 06.9 -1.0
LCO Las Campanas 6.86 250 eP P 00 08 08.0 -1.5
LCO Las Campanas 6.86 250 eP P 00 08 08.3 -1.1
LCO eS S 00 09 37.2 -1.5
RTLS Leoncito 7.14 225 eP P 00 08 11.6 -0.4
RTLS IAML 00 08 12.8
comp=Z,73nm,0.4s
RTLS i S S 00 09 43.7 +0.3
GO04 Tololo Observa 7.34 242 eP P 00 08 12.7 -1.1
PB10 IPOC Station P 7.37 296 eP P 00 08 12.1 -1.8
PB10 eS S 00 09 47.5 +0.7
PB04 IPOC Station P 7.70 305 eP P 00 08 16.0 -1.2
PB04 eS S 00 09 50.2 -2.5
AAGR Agrelo 7.80 216 i P P 00 08 17.3 -0.6
PB01 IPOC Station P 8.11 315 eP P 00 08 20.0 -1.0
PB01 eS S 00 09 57.0 -2.7
PEL Peldehue 8.91 224 eP P 00 08 26.6 -1.9
GO01 Chusmiza 8.99 322 eP P 00 08 29.1 -0.9
GO01 eS S 00 10 15.1 -1.0
ROC1 El Roble 9.01 226 eP P 00 08 28.1 -1.5
PB11 IPOC Station P 9.18 319 eP P 00 08 30.9 -0.5
PB11 eS S 00 10 16.5 -2.3
AQDB Aquidauana 9.46 49 eP P 00 08 33.4 -0.6
AQDB eS S 00 10 22.0 -1.5
MNMC Minye Minye 9.65 322 eP P 00 08 35.5 -0.6
ITAB Concordia 9.98 94 eP P 00 08 37.1 -1.9
PTGB Pitanga 10.37 80 eP P 00 08 42.1 -0.9
OGAUY Aigu 10.48 137 eP P 00 08 42.9 -0.9
GO05 Huala 10.95 220 eP P 00 08 46.9 -1.7
SIV San Ignacio 11.05 11 P P 00 08 48.5 -1.4
comp=Z,1.3nm,0.3s,baz=207,slow=9.4,SNR=130
SIV S S 00 10 49.0 -3.6
baz=196,slow=17,SNR=3.7
TRQA Tornquist 11.18 175 eP P 00 08 49.5 -1.4
TRQA Tornquist 11.18 175 eP P 00 08 50.6 -0.2
CNLB Canela 11.27 105 eP P 00 08 50.4 -1.5
LPAZ La Paz 11.46 336 P P 00 08 53.4 -1.2
comp=Z,4.3nm,0.3s,baz=138,slow=3.9,SNR=124
LPAZ S S 00 10 55.7 -5.4
comp=Z,1.3nm,0.3s,baz=223,slow=9.1,SNR=10
LPAZ La Paz 11.46 336 eP P 00 08 53.1 -1.5
FRTB Fartura 12.96 77 eP P 00 09 08.5 -0.4
ITRB Iturama 13.89 62 eP P 00 09 17.3 -1.1
BB19B Bebedouro 14.71 70 eP P 00 09 25.4 -0.7
SPB Sao Paulo 14.75 81 eP P 00 09 26.0 -0.4
RCLB Rio Claro- Sao 15.03 76 eP P 00 09 28.4 -0.6
PLCA Paso Flores 15.04 202 P P 00 09 27.4 -1.4
comp=Z,0.9nm,0.3s,baz=52,slow=8.9,SNR=28
PLCA Paso Flores 15.04 202 eP P 00 09 27.9 -1.0
PLCA Paso Flores 15.04 202 eP P 00 09 28.0 -0.8
CLDB Colider 17.45 25 eP P 00 09 51.1 -0.2
ESAR Angra dos Reis 17.55 81 eP P 00 09 52.3 +0.3
PMNB Patos De Minas 17.64 65 eP P 00 09 53.4 +0.3
BSCB Bom Sucesso 17.93 75 eP P 00 09 56.1 +0.4
BDFB Brasilia 18.12 55 P P 00 09 57.4 -0.1
comp=Z,6.0nm,0.3s,baz=229,slow=8.5,SNR=73
BDFB S S 00 12 50.2 -3.3
comp=Z,0.2nm,0.3s,baz=46,slow=18,SNR=1.7
DUB01 Friburgo-RJ 19.65 80 eP P 00 10 11.7 +0.5
CAM01 Campos-RJ 20.36 80 eP P 00 10 18.0 +0.5
PEXB Peixe 20.39 47 eP P 00 10 17.5 -0.4
MCI8 Montes Claros 20.67 64 eP P 00 10 20.3 -0.1
MCI9 Montes Claros 20.67 65 eP P 00 10 20.2 -0.3
JANB Januaria 21.27 60 eP P 00 10 25.8 0.0
ALF01 Guarapari-ES 21.59 78 eP P 00 10 29.0 +0.4
SJMB Sao Joao De Ma 21.95 73 eP P 00 10 31.7 -0.1
BSFB Barra de Sao F 22.19 73 eP P 00 10 33.9 0.0
RIB01 Linhares ES 22.38 75 eP P 00 10 35.9 +0.3
SMTB Santa Maria do 23.32 43 eP P 00 10 43.9 -0.1
PTGA Pitinga 26.22 8 P P 00 11 09.2 -0.4
comp=Z,26nm,0.4s,baz=195,slow=13,SNR=92
PTGA Pitinga 26.22 8 eP P 00 11 09.2 -0.4
USHA Ushuaia 28.16 186 P P 00 11 25.8 -0.1
comp=Z,7.2nm,0.4s,baz=347,slow=7.8,SNR=11
OTAV Otavalo 30.66 329 eP P 00 11 48.7 +0.1
OTAV Otavalo 30.66 329 eP P 00 11 49.9 +1.3
OTAV Otavalo 30.66 329 eP P 00 11 48.1 -0.5
NBLI Livramento-PB 31.69 57 eP P 00 11 56.8 -0.1
BBAC Balboa, Cauca 31.74 333 eP P 00 11 58.2 +0.8
POPC Popayan, Colom 31.98 334 eP P 00 12 00.7 +1.2
NBMO Morrinhos-CE 32.35 48 eP P 00 12 02.0 -0.4
VILC Villavicencio, 32.42 340 eP P 00 12 03.4 +0.3
NBPA Parau_RN 32.65 55 eP P 00 12 05.0 +0.1
CHIC Chingaza 32.92 341 eP P 00 12 07.2 -0.5
YOPC Yopal, Colombi 33.25 343 eP P 00 12 09.8 -0.2
ROSC El Rosal 33.30 340 eP P 00 12 11.4 +0.6
RCBR Riachuelo 33.48 56 eP P 00 12 12.2 +0.2
RUSC La Rusia 33.94 342 eP P 00 12 15.7 -0.6
GUY2C Guyana, Caldas 33.99 338 eP P 00 12 16.2 -0.5
BARC Barichara 34.64 343 eP P 00 12 19.4 -2.4
PTBC PUERTO BERRIO, 34.95 340 eP P 00 12 20.6 -3.5
SDV Santo Domingo 36.27 348 eP P 00 12 34.1 -1.1
SDV Santo Domingo 36.27 348 eP P 00 12 33.8 -1.4
PAYG Puerto Ayora 36.76 311 eP P 00 12 40.8 +1.8
SMLC San Martn de 36.99 342 eP P 00 12 37.5 -3.3
GRGR Grenville 38.83 3 eP P 00 12 55.8 +0.1
BCIP Isla Barro Col 39.27 334 eP P 00 13 00.2 +0.9
SVB Belmont 39.98 3 eP P 00 13 04.7 -0.2
FDF Fort de France 41.44 3 eP P 00 13 15.7 -0.8
ACON Acoyapa 44.08 328 eP P 00 13 37.7 +0.7
ANWB Willy Bob 44.33 2 eP P 00 13 37.3 -1.4
ICMP Isla Caja de M 44.63 356 eP P 00 13 40.0 -1.1
MTP Monte Pirata 44.78 357 eP P 00 13 41.3 -1.0
OBIP Obispado Ponce 44.79 356 eP P 00 13 41.5 -0.8
CRPR Cabo Rojo, PR 44.79 355 eP P 00 13 41.4 -0.9
HUMP Col San Antoni 44.84 357 eP P 00 13 42.9 +0.2
CBYP Canovanas 44.97 357 eP P 00 13 42.4 -1.3
CUPR Culebra, Puert 44.98 357 eP P 00 13 42.8 -1.0
MPR Mayaguez 44.99 355 eP P 00 13 42.8 -1.1
STVI Saint Thomas 45.01 358 eP P 00 13 42.9 -1.0
AOPR Arecibo Observ 45.10 355 eP P 00 13 43.0 -1.8
AGP Aguadilla 45.19 355 eP P 00 13 44.1 -1.3
EMPR Esperanza - Ma 45.21 356 eP P 00 13 46.1 +0.6
GRTK Grand Turk 48.72 350 eP P 00 14 11.4 -0.3
CCIG Comitan 51.24 324 eP P 00 14 30.0 -0.4
VNA3 Neumayer Olymp 53.34 161 P P 00 14 45.3 +0.9
VNA2 Neumayer--Watz 53.88 160 P P 00 14 49.5 +1.3
SNAA Sanae 55.52 160 P P 00 15 00.6 +0.8
059A Moore Haven 56.23 341 P P 00 15 06.1 +0.9
baz=161
657A Interlachen 58.91 341 P P 00 15 23.5 +0.4
baz=161
555A McAlpin 59.73 340 P P 00 15 29.3 +0.6
baz=160
553A Crawfordville 60.25 339 P P 00 15 32.8 +0.8
baz=158
455A Stateville 60.33 340 P P 00 15 33.3 +0.7
baz=160
356A Blackshear 60.62 342 P P 00 15 34.4 0.0
baz=161
257A Skidaway Islan 60.93 343 P P 00 15 36.6 +0.1
baz=162
353A Camilla 61.26 340 P P 00 15 39.0 +0.3
baz=159
255A Hazlehurst 61.28 341 P P 00 15 38.6 -0.2
baz=160
254A Abbeville 61.54 341 P P 00 15 40.6 +0.1
baz=160
450A Crestview 61.54 337 P P 00 15 40.5 0.0
baz=156
352A Blakely 61.60 339 P P 00 15 41.1 +0.1
baz=158
NHSC New Hope 61.79 344 P P 00 15 42.7 +0.7
baz=163
155A Kite 61.93 342 P P 00 15 43.8 +0.8
baz=161
252A Lumpkin 62.02 339 P P 00 15 43.9 +0.3
baz=158
BRAL Brewton 62.03 337 P P 00 15 44.2 +0.6
baz=156
251A Midway 62.33 339 P P 00 15 45.6 +0.1
baz=158
250A Grady 62.50 338 P P 00 15 46.6 -0.1
baz=157
Z54A Sparta 62.62 342 P P 00 15 47.8 +0.4
baz=160
152A Waverly Hall 62.64 340 P P 00 15 47.5 0.0
baz=158
249A Camden 62.79 337 P P 00 15 48.8 +0.3
baz=156
Z53A Monticello 62.87 341 P P 00 15 49.1 0.0
baz=160
GOGA Godfrey 62.96 341 P P 00 15 49.6 0.0
baz=160
150A Eclectic 63.00 339 P P 00 15 50.0 +0.2
baz=157
Y55A Saluda 63.01 343 P P 00 15 50.9 +1.0
baz=161
Z52A Williamson 63.03 340 P P 00 15 50.4 +0.3
baz=159
X57A Johnson Farm, 63.06 344 P P 00 15 51.3 +1.0
baz=163
Y54A Tignall 63.16 342 P P 00 15 51.6 +0.7
baz=161
JSC Jenkinsville 63.18 343 eP P 00 15 51.7 +0.7
QSPA South Pole Qui 63.32 180 eP P 00 15 53.2 +1.6
X56A White Oak 63.32 344 P P 00 15 52.9 +1.0
baz=162
BIRD Birdtown, Kers 63.33 344 eP P 00 15 52.5 +0.6
Z51A Franklin 63.38 340 P P 00 15 52.8 +0.4
baz=158
W58A Raeford 63.40 345 P P 00 15 53.4 +1.1
baz=164
Y53A Monroe 63.41 341 P P 00 15 52.7 +0.2
baz=160
X55A Gracelyn & Ava 63.45 343 P P 00 15 54.0 +1.3
baz=162
KVTX Kingsville 63.52 326 eP P 00 15 53.2 0.0
Y52A Lilburn 63.56 341 eP P 00 15 53.8 +0.4
Y52A Lilburn 63.56 341 P P 00 15 54.0 +0.5
baz=159
Z50A Ashland 63.56 339 eP P 00 15 53.8 +0.3
Z50A Ashland 63.56 339 P P 00 15 53.9 +0.5
baz=158,SNR=7.5
W57A Gilead 63.70 345 P P 00 15 55.2 +1.0
baz=163
Z49A Columbiana 63.70 338 P P 00 15 54.7 +0.3
baz=157
LRAL Lakeview Retre 63.71 338 eP P 00 15 54.9 +0.4
LRAL Lakeview Retre 63.71 338 P P 00 15 54.7 +0.2
baz=156
X54A Belton 63.72 343 P P 00 15 55.4 +0.9
baz=161
W56A Indian Trail 63.82 344 P P 00 15 56.1 +1.1
baz=163
Y51A Rockmart 63.89 340 P P 00 15 55.9 +0.3
baz=158
V59A Middlesex 63.90 347 P P 00 15 56.7 +1.2
baz=165
X53A Estanollee 63.94 342 P P 00 15 56.6 +0.8
baz=160
KMSC Kings Mountain 64.01 344 P P 00 15 57.2 +0.9
baz=162
Y50A Piedmont 64.09 339 P P 00 15 57.2 +0.4
baz=158
U61A Possum Corner 64.10 348 P P 00 15 58.2 +1.4
baz=167
V58A Windy Hill, Pi 64.11 346 P P 00 15 58.0 +1.1
baz=164
W54A Cherokee Point 64.18 343 P P 00 15 58.5 +1.1
baz=161
X52A Dahlonega 64.20 341 P P 00 15 58.1 +0.6
baz=160
Y49A Blount Mountai 64.28 339 eP P 00 15 58.1 +0.1
Y49A Blount Mountai 64.28 339 P P 00 15 58.4 +0.4
baz=157
V57A Coltrane Farms 64.35 345 P P 00 15 59.1 +0.7
baz=164
U59A Littleton 64.38 347 P P 00 15 59.5 +1.0
baz=166
V56A Mocksville 64.44 345 eP P 00 15 59.3 +0.3
V56A Mocksville 64.44 345 P P 00 16 00.4 +1.4
baz=163
X51A Calhoun 64.44 340 P P 00 15 59.6 +0.6
baz=159
W53A Cullowhee 64.52 342 P P 00 16 00.4 +0.8
baz=160
U58A Oxford 64.57 346 P P 00 16 00.9 +1.1
baz=165
X50B Fort Payne 64.59 340 P P 00 16 00.3 +0.3
baz=158
V55A Taylorsville 64.66 344 P P 00 16 01.8 +1.4
baz=162,SNR=7.0
W52A Murphy 64.67 341 P P 00 16 01.2 +0.8
baz=160
V54A Nebo 64.77 343 P P 00 16 02.2 +1.1
baz=162,SNR=6.5
U57A Blanch 64.78 346 P P 00 16 02.2 +1.1
baz=164
X49A Woodville 64.85 339 P P 00 16 02.2 +0.7
baz=157
V53A Saluda 64.90 343 eP P 00 16 02.6 +0.7
V53A Saluda 64.90 343 P P 00 16 02.7 +0.7
baz=161
T59A Double "B" Far 64.93 347 P P 00 16 03.2 +1.2
baz=166
U56A King 64.93 345 P P 00 16 03.5 +1.5
baz=163
W51A Cleveland 64.97 341 P P 00 16 02.8 +0.5
baz=159
X48A Hartselle 65.03 338 eP P 00 16 02.6 -0.1
X48A Hartselle 65.03 338 P P 00 16 03.2 +0.5
baz=157
T58A Grand View Acr 65.10 347 P P 00 16 04.2 +1.2
baz=165
CPCT Cooper Cave 65.17 341 eP P 00 16 03.9 +0.3
W50A Signal Mountai 65.17 340 eP P 00 16 04.3 +0.7
W50A Signal Mountai 65.17 340 P P 00 16 04.2 +0.6
baz=158
U55A TA2, Sparta 65.24 344 P P 00 16 05.2 +1.2
baz=163
V52A Sevierville 65.27 342 eP P 00 16 04.8 +0.6
V52A Sevierville 65.27 342 P P 00 16 04.4 +0.2
baz=160
LIC Lamto 65.28 69 eP P 00 16 04.5 -0.2
comp=Z,58nm,1.6s
X47A Russelville 65.36 338 P P 00 16 04.9 +0.2
baz=156
SWET Sewanee 65.38 340 eP P 00 16 05.2 +0.3
W49A Belvidere 65.39 339 P P 00 16 05.4 +0.5
baz=158
U54A Nelsons Funny 65.44 344 eP P 00 16 06.0 +0.7
U54A Nelsons Funny 65.44 344 P P 00 16 06.4 +1.1
baz=162,SNR=7.2
V51A Loudon 65.45 341 eP P 00 16 06.1 +0.8
V51A Loudon 65.45 341 P P 00 16 05.5 +0.2
baz=159
U53A Fall Branch 65.49 343 P P 00 16 06.2 +0.7
baz=161
T56A Rocky Mt 65.50 345 P P 00 16 07.2 +1.5
baz=164
TIC Toumodi 65.52 68 eP P 00 16 06.7 +0.5
V50A Pikevile 65.55 341 P P 00 16 06.3 +0.4
baz=159,SNR=6.0
KIC Kosan Boka 65.59 69 eP P 00 16 06.6 -0.1
comp=Z,63nm,1.0s
W48A Pulaski 65.62 339 P P 00 16 06.8 +0.5
baz=157,SNR=9.8
S58A Poland Farm, P 65.64 347 P P 00 16 07.7 +1.2
baz=166
DBIC Dimbokro 65.67 68 P P 00 16 07.3 +0.2
comp=Z,7.5nm,0.3s,baz=209,slow=4.1,SNR=76
DBIC Dimbokro 65.67 68 eP P 00 16 06.9 -0.2
T55A Pulaski 65.76 345 P P 00 16 08.7 +1.5
baz=163
BLA Blacksburg 65.77 345 P P 00 16 08.7 +1.4
baz=163
PLAL Pickwick Lake 65.85 338 eP P 00 16 08.1 +0.2
V49A McMinnville 65.88 340 P P 00 16 08.0 0.0
baz=158,SNR=8.5
OXF Oxford 65.89 337 eP P 00 16 07.8 -0.2
OXF Oxford 65.89 337 P P 00 16 08.0 -0.1
baz=155
U51A La Follette 65.89 342 P P 00 16 08.3 +0.2
baz=160
T54A Tazewell 65.90 344 P P 00 16 08.9 +0.7
baz=162
TZTN Tazewell 65.92 342 eP P 00 16 08.7 +0.5
TZTN Tazewell 65.92 342 P P 00 16 08.5 +0.3
baz=160
W47A Westpoint 65.94 338 P P 00 16 08.7 +0.4
baz=156,SNR=12
R58B Mineral 65.95 347 eP P 00 16 09.9 +1.5
R58B Mineral 65.95 347 P P 00 16 09.6 +1.3
baz=166
S57A Dark Hollow, R 65.97 346 eP P 00 16 09.8 +1.4
S57A Dark Hollow, R 65.97 346 P P 00 16 09.7 +1.2
baz=165
T53A Wise 66.06 343 P P 00 16 09.2 0.0
baz=161
W46A Michie 66.09 338 P P 00 16 09.0 -0.3
baz=156
V48A Smith Brothers 66.14 339 eP P 00 16 10.0 +0.4
V48A Smith Brothers 66.14 339 P P 00 16 09.8 +0.2
baz=157,SNR=7.4
U50A Jamestown 66.16 341 P P 00 16 09.8 +0.1
baz=159
R58A Rapidan 66.30 347 P P 00 16 11.9 +1.4
baz=166
T52A Hallie 66.30 343 P P 00 16 11.0 +0.4
baz=161
CLTN Cedars of Leba 66.31 340 eP P 00 16 10.8 +0.3
S55A Lewisburg 66.32 345 P P 00 16 11.8 +1.1
baz=163
R57A Stanardsville 66.40 347 P P 00 16 12.7 +1.5
baz=165
T51A Gray 66.42 342 P P 00 16 11.5 +0.2
baz=160
V47A Nunnelly 66.44 339 P P 00 16 11.4 -0.1
baz=156,SNR=7.2
U49A Red Boiling Sp 66.53 340 P P 00 16 12.0 0.0
baz=158
S54A Dingess, Beckl 66.54 345 P P 00 16 13.0 +1.0
baz=162
V46A Holladay 66.61 338 P P 00 16 12.3 -0.2
baz=156,SNR=7.1
T50A Nancy 66.72 341 P P 00 16 13.3 +0.1
baz=159
U48A Cassie Pea, Po 66.76 340 P P 00 16 13.4 0.0
baz=158
WVT Waverly 66.82 339 eP P 00 16 13.6 -0.1
WVT Waverly 66.82 339 P P 00 16 13.5 -0.1
baz=156
JCT Junction City 66.87 326 eP P 00 16 15.8 +1.5
U47A Clarksville 66.93 339 P P 00 16 14.4 0.0
baz=157,SNR=8.3
S51A Beattyville 66.96 343 eP P 00 16 15.3 +0.7
T49A Edmonton 67.00 341 eP P 00 16 15.5 +0.6
T49A Edmonton 67.00 341 P P 00 16 15.0 +0.1
baz=158
S50A Richmond 67.22 342 P P 00 16 17.0 +0.9
baz=160
Q56A Snyder Ridge, 67.25 347 P P 00 16 18.2 +1.9
baz=165
HPIG 67.26 319 eP P 00 16 17.9 +0.9
P59A Jarrettsville 67.29 349 P P 00 16 18.4 +1.9
baz=167,SNR=5.6
P60A Greenville 67.35 350 P P 00 16 18.2 +1.3
baz=168
R52A Catlettsburg 67.37 344 P P 00 16 17.7 +0.6
baz=161
T47A Sharon Grove 67.37 340 eP P 00 16 17.1 -0.1
T47A Sharon Grove 67.37 340 P P 00 16 17.0 -0.1
baz=157,SNR=6.1
Q55A Buckhannon 67.40 346 P P 00 16 18.8 +1.6
baz=164
P57A Homestead Farm 67.45 348 P P 00 16 19.5 +2.0
baz=166,SNR=5.9
MIAR Mount Ida 67.50 333 eP P 00 16 18.0 +0.1
MIAR Mount Ida 67.50 333 P P 00 16 18.5 +0.6
baz=151
W41B Gary Mavity, V 67.53 335 eP P 00 16 18.4 +0.4
Q54A Coxs Mills 67.55 345 P P 00 16 19.0 +0.9
baz=163
S49A Springfield 67.57 341 P P 00 16 18.3 0.0
baz=159
R51A Hillsboro 67.58 343 P P 00 16 19.0 +0.7
baz=160
Q53A Leroy 67.59 345 P P 00 16 19.1 +0.7
baz=162
P56A Dayton Farm, R 67.63 347 P P 00 16 19.8 +1.2
baz=165
WHAR Wooly Hollow 67.64 335 eP P 00 16 19.8 +0.9
MVL Millersville 67.65 349 eP P 00 16 19.8 +1.1
S48A Wiedeman Farm, 67.67 341 P P 00 16 18.6 -0.4
baz=158
T46A Princeton 67.67 339 P P 00 16 18.9 0.0
baz=156
O60A Telford 67.81 350 P P 00 16 21.2 +1.6
baz=168
P55A Reedsville 67.83 346 P P 00 16 21.4 +1.5
baz=164
S47A Hartford 67.86 340 P P 00 16 19.5 -0.5
baz=157
Q52A Bidwell 67.87 344 P P 00 16 20.8 +0.7
baz=162
O59A Robesonia 67.93 349 P P 00 16 22.1 +1.6
baz=168
TXAR Lajitas Array 67.98 322 P P 00 16 22.3 +1.2
comp=Z,0.6nm,0.4s,baz=148,slow=6.9,SNR=13
TX31 Lajitas Ar. Si 67.98 322 eP P 00 16 22.2 +1.1
MCWV Mont Chateau 67.98 346 eP P 00 16 22.1 +1.3
MCWV Mont Chateau 67.98 346 P P 00 16 22.1 +1.3
baz=164
R49A Shelbyville 68.00 342 P P 00 16 21.9 +0.9
baz=159
O57A Amberson 68.08 348 P P 00 16 23.0 +1.6
baz=166
FCAR Ozark Folk Cen 68.11 335 eP P 00 16 22.1 +0.5
W39A Magazine 68.15 333 eP P 00 16 23.1 +1.3
W39A Magazine 68.15 333 P P 00 16 23.4 +1.5
baz=151
P53A Whipple 68.16 345 eP P 00 16 23.2 +1.4
P53A Whipple 68.16 345 P P 00 16 23.1 +1.2
baz=163
Q51A Peebles 68.20 343 P P 00 16 22.6 +0.5
baz=161
S46A Don Dixon Farm 68.20 339 P P 00 16 22.7 +0.6
baz=157
WCI Wyandotte Cave 68.27 341 eP P 00 16 22.2 -0.3
WCI Wyandotte Cave 68.27 341 P P 00 16 22.3 -0.2
baz=158
PBMO Poplar Bluff 68.29 337 eP P 00 16 23.2 +0.6
R48A Northridge Ran 68.31 341 P P 00 16 22.9 +0.2
baz=158
O56A Blue Knob Stat 68.31 347 eP P 00 16 23.4 +0.6
O56A Blue Knob Stat 68.31 347 P P 00 16 24.2 +1.4
baz=165
O55A Ligonier 68.40 347 P P 00 16 24.7 +1.4
baz=165
N59A State Game Lan 68.45 350 eP P 00 16 25.1 +1.5
N59A State Game Lan 68.45 350 P P 00 16 25.2 +1.6
baz=168
P52A Corning 68.48 344 P P 00 16 24.3 +0.6
baz=162
SSPA Standing Stone 68.54 348 eP P 00 16 25.2 +1.1
SSPA Standing Stone 68.54 348 P P 00 16 25.6 +1.5
baz=166
ABTX Abilene, Hawle 68.55 328 P P 00 16 25.2 +0.8
baz=145
P51A Williamsport 68.56 344 P P 00 16 24.4 +0.2
baz=161
Q49A Aurora 68.59 342 P P 00 16 24.7 +0.3
baz=159
N57A Milroy 68.60 348 P P 00 16 25.9 +1.5
baz=166,SNR=6.9
O54A Avella 68.60 346 P P 00 16 25.1 +0.6
baz=164
R46A Gibon Southern 68.62 340 P P 00 16 23.9 -0.7
baz=157
S44A Carbondale 68.71 338 P P 00 16 25.0 -0.2
baz=155
Q48A North Vernon 68.76 341 P P 00 16 25.6 +0.1
baz=159
U40A Yellville 68.80 335 P P 00 16 26.2 +0.4
baz=152
O53A New Philadelph 68.85 345 P P 00 16 26.7 +0.8
baz=163

O52A	Adamsville	68.86	345	P	P	00 16 26.7 +0.7
	baz=162					
P50A	Jamestown	68.87	343	P	P	00 16 26.5 +0.4
	baz=160					
N56A	West Decatur	68.89	348	P	P	00 16 27.7 +1.4
	baz=166					
N55A	Marion Center	68.89	347	eP	P	00 16 27.6 +1.4
N55A	Marion Center	68.89	347	P	P	00 16 27.7 +1.4
	baz=165					
KSCT	Kent School, K	68.92	352	eP	P	00 16 27.5 +1.1
R45A	Skylar, Fairfi	68.94	339	P	P	00 16 26.3 -0.2
	baz=156					
P49A	Miami Univ. Ec	69.04	342	P	P	00 16 27.3 +0.2
	baz=160					
O51A	Pataskala	69.08	344	P	P	00 16 27.9 +0.6
	baz=162					
P48A	Milroy	69.17	342	P	P	00 16 27.6 -0.3
	baz=159					
ACSO	Alum Creek Sta	69.25	344	P	P	00 16 28.8 +0.4
	baz=161					
N54A	Moraine State	69.27	347	eP	P	00 16 29.7 +1.2
N54A	Moraine State	69.27	347	P	P	00 16 29.8 +1.4
	baz=164					
N53A	Lisbon	69.30	346	P	P	00 16 29.4 +0.8
	baz=163					
O50A	Cable	69.33	343	P	P	00 16 29.0 +0.1
	baz=161					
WES	Weston	69.33	354	eP	P	00 16 29.2 +0.4
QUA2	Belchertown	69.33	353	eP	P	00 16 29.5 +0.7
FVM	French Village	69.37	337	eP	P	00 16 29.5 +0.4
M56A	Emporium	69.42	348	P	P	00 16 30.6 +1.3
	baz=166					
Q45A	Warren Harvey,	69.45	340	P	P	00 16 29.3 -0.2
	baz=156					
HRV	Adam Dziewonsk	69.48	354	eP	P	00 16 31.5 +1.8
HRV	Adam Dziewonsk	69.48	354	P	P	00 16 30.9 +1.2
	baz=172					
M55A	Ridgway	69.51	348	P	P	00 16 31.2 +1.3
	baz=165					
O49A	Covington	69.55	343	eP	P	00 16 31.7 +1.6
O49A	Covington	69.55	343	P	P	00 16 31.2 +1.0
	baz=160					
TUL1	Leonard	69.58	332	eP	P	00 16 31.4 +1.0
TUL1	Leonard	69.58	332	P	P	00 16 31.2 +0.7
	baz=149					
SYO	Syowa Base	69.64	158⇑	eP	P	00 16 30.2 -0.1
CCM	Cathedral Cave	69.72	337	eP	P	00 16 31.8 +0.6
CCM	Cathedral Cave	69.72	337	P	P	00 16 31.3 +0.1
	baz=154					
M54A	Oil Creek Stat	69.72	347	eP	P	00 16 32.1 +0.9
M54A	Oil Creek Stat	69.72	347	P	P	00 16 32.3 +1.1
	baz=164,SNR=5.1					
BINY	Binghamton	69.74	350	eP	P	00 16 33.0 +1.7
BINY	Binghamton	69.74	350	P	P	00 16 32.8 +1.6
	baz=168					
N51A	Ashland	69.75	345	P	P	00 16 31.7 +0.4
	baz=162					
N50A	Nevada	69.80	344	P	P	00 16 31.9 +0.3
	baz=161					
O48A	Farmland	69.83	342	P	P	00 16 31.8 -0.1
	baz=159					
M53A	WI Miller and	69.87	346	P	P	00 16 33.6 +1.6
	baz=164					
WMOK	Wichita Mounta	69.89	329	eP	P	00 16 34.2 +1.8
WMOK	Wichita Mounta	69.89	329	P	P	00 16 33.7 +1.3
	baz=147					
P45A	Graceland, Par	69.90	340	P	P	00 16 32.0 -0.3
	baz=157					
TRY	Troy	69.94	352	eP	P	00 16 34.6 +2.3
O47A	Sheridan	70.10	342	P	P	00 16 33.3 -0.1
	baz=158					
M51A	Elyria	70.10	345	P	P	00 16 34.7 +1.3
	baz=162					
M52A	Chesterland	70.11	346	eP	P	00 16 33.6 +0.1
M52A	Chesterland	70.11	346	P	P	00 16 34.3 +0.8
	baz=163					
L55A	Hinsdale	70.14	348	P	P	00 16 35.0 +1.3
	baz=166					
N49A	Columbus Grove	70.20	343	eP	P	00 16 34.6 +0.6
N49A	Columbus Grove	70.20	343	P	P	00 16 34.3 +0.3
	baz=160					
L53A	Girard	70.28	347	P	P	00 16 35.5 +1.1
	baz=164					
L54A	Sinclairville	70.36	347	P	P	00 16 36.2 +1.3
	baz=165,SNR=7.8					
N48A	Decatur	70.36	343	P	P	00 16 34.9 -0.1
	baz=160					
M50A	Fremont	70.37	344	P	P	00 16 35.1 +0.1
	baz=161					
ERPA	Erie	70.38	347	eP	P	00 16 36.1 +1.1
ERPA	Erie	70.38	347	P	P	00 16 36.1 +1.1
	baz=164,SNR=5.6					
SFIN	Lafayette	70.49	341	eP	P	00 16 35.7 0.0
SFIN	Lafayette	70.49	341	P	P	00 16 35.5 -0.2
	baz=158					
O45A	Potomac	70.56	340	P	P	00 16 35.8 -0.3
	baz=157					
N47A	Urbana	70.56	342	P	P	00 16 36.1 0.0
	baz=159					
MMNY	Mt. Morris Dam	70.58	349	eP	P	00 16 37.5 +1.3
K54A	Basiliko Farm,	70.60	348	P	P	00 16 37.6 +1.2
	baz=165					
K55A	Perry	70.60	349	P	P	00 16 37.4 +1.1
	baz=166					
M49A	Liberty Center	70.67	344	P	P	00 16 37.1 +0.4
	baz=160					
HNH	Hanover	70.74	353	eP	P	00 16 39.3 +2.3
MNTX	Cornudas Mount	70.74	323	eP	P	00 16 38.0 +0.5
MNTX	Cornudas Mount	70.74	323	P	P	00 16 37.6 +0.2
	baz=141					
N46A	Monticello	70.87	341	P	P	00 16 37.7 -0.2
	baz=158					
M47A	Cromwell	70.99	342	P	P	00 16 38.8 +0.2
	baz=159					
J55A	Hilton	71.08	349	eP	P	00 16 40.0 +0.9
J55A	Hilton	71.08	349	P	P	00 16 40.0 +0.9
	baz=166					
L48A	N Adams	71.22	344	P	P	00 16 40.0 0.0
	baz=160					
NCB	Newcomb	71.23	352	eP	P	00 16 40.8 +0.9
LBNH	Lisbon	71.23	353	eP	P	00 16 41.4 +1.4
LBNH	Lisbon	71.23	353	P	P	00 16 41.9 +1.9
	baz=172					
TYNO	Tyneside	71.29	347	P	P	00 16 41.2 +0.9
	baz=164					
HDIL	Hopedale	71.32	339	P	P	00 16 40.6 +0.1
	baz=156					
EMMW	East Machias	71.36	357	eP	P	00 16 41.8 +1.2
L47A	Sherwood	71.45	343	P	P	00 16 41.3 0.0
	baz=159					
J52A	Paris	71.56	347	P	P	00 16 42.8 +0.9
	baz=164					
K50A	Casco	71.57	345	P	P	00 16 42.3 +0.3
	baz=162					
PECO	Prince Edward	71.59	350	eP	P	00 16 43.2 +1.2
PECO	Prince Edward	71.59	350	P	P	00 16 43.1 +1.0
	baz=167					
N43A	Stutzman Famil	71.63	340	P	P	00 16 42.7 +0.4
	baz=156					
GGN	Saint George	71.74	357	eP	P	00 16 44.5 +1.6
WLVO	Wesleyville	71.82	349	P	P	00 16 44.5 +1.2
	baz=166					
LONY	Lake Ozonia	71.91	352	P	P	00 16 45.5 +1.6
	baz=169					
K48A	Perry	71.96	344	P	P	00 16 44.6 +0.4
	baz=160					
GBN	Guysborough	71.98	1	eP	P	00 16 46.4 +2.2
I55A	Frankford	71.98	349	P	P	00 16 45.2 +0.9
	baz=166					
FRNY	Flat Rock	72.00	352	eP	P	00 16 45.5 +1.1
M43A	Waltham Townsh	72.02	340	P	P	00 16 45.3 +0.7
	baz=156					
PKME	Peaks-Kenny Pk	72.02	356	eP	P	00 16 46.1 +1.6
PKME	Peaks-Kenny Pk	72.02	356	P	P	00 16 46.4 +1.9
	baz=174,SNR=6.2					
H56A	Elgin	72.12	350	P	P	00 16 46.4 +1.3
	baz=168					
I51A	Listowel	72.21	347	P	P	00 16 46.6 +1.0
	baz=163					
H55A	Tweed	72.22	350	P	P	00 16 46.9 +1.2
	baz=167					
J49A	Marlette	72.25	345	P	P	00 16 46.0 +0.2
	baz=162					
DELO	Deloro Mine	72.26	349	eP	P	00 16 47.0 +1.1
DELO	Deloro Mine	72.26	349	P	P	00 16 47.2 +1.3
	baz=167					
MOQ	Mont Orford	72.32	353	eP	P	00 16 47.9 +1.6
J48A	Bridge Port	72.34	344	P	P	00 16 46.0 -0.4
	baz=161					
N40A	Mertquake, Sal	72.36	338	P	P	00 16 46.8 +0.2
	baz=154					
VNDA	Vanda	72.41	189	P	P	00 16 48.6 +2.3
	comp=Z,1.7nm,0.8s,baz=133,slow=6.1,SNR=11					
VNDA	Vanda	72.41	189	eP	P	00 16 48.3 +2.0
LMN	Caledonia Moun	72.42	359	eP	P	00 16 47.9 +1.2
M41A	Milan	72.46	339	P	P	00 16 47.0 -0.1
	baz=155					
BWLO	Walkerton	72.53	347	P	P	00 16 48.2 +0.8
	baz=163					
BASO	Ashfield	72.54	346	P	P	00 16 48.5 +0.9
	baz=163					
KSU1	Kansas State U	72.65	333	P	P	00 16 48.7 +0.4
	baz=149					
PLVO	Plevna	72.68	350	eP	P	00 16 49.4 +1.1
PLVO	Plevna	72.68	350	P	P	00 16 49.5 +1.2
	baz=167					
I49A	Point Hope	72.73	345	eP	P	00 16 47.8 -0.8
SADO	Sadowa	72.77	348	eP	P	00 16 49.7 +0.9
H52A	Wyevale	72.79	348	P	P	00 16 50.3 +1.4
	baz=164					
BANO	Bancroft	72.80	349	P	P	00 16 50.0 +1.0
	baz=166					
ALFO	Alfred	72.94	352	P	P	00 16 51.0 +1.3
	baz=169					
K43A	Burlington	73.00	341	P	P	00 16 50.6 +0.5
	baz=157					
BMRO	Meriville Lake	73.00	347	P	P	00 16 51.1 +1.0
	baz=163,SNR=5.2					
G53A	Haliburton	73.02	349	P	P	00 16 51.3 +1.1
	baz=166					
ROSA	Rosais	73.06	28	eP	P	00 16 51.5 +0.9
I48A	Sherman Twp	73.16	345	P	P	00 16 51.7 +0.7
	baz=161					
L40A	Anamosa	73.30	339	P	P	00 16 52.7 +0.8
	baz=154					
PEMO	Pembroke	73.33	350	P	P	00 16 53.0 +1.0
	baz=167					
PQI	Presque Isle	73.35	357	eP	P	00 16 53.3 +1.3
BUKO	Buck Lake	73.47	348	P	P	00 16 53.8 +1.0
	baz=165					
TRQ	Mont Tremblant	73.48	352	eP	P	00 16 54.3 +1.3
KLBO	Killbear Provi	73.54	348	P	P	00 16 54.0 +0.9
	baz=164					
H48A	Harrisville	73.56	345	P	P	00 16 54.0 +0.7
	baz=161					
TOBO	Tobermory, Bru	73.67	347	P	P	00 16 55.2 +1.3
	baz=163					
TSUM	Tsumeb	73.71	104	eP	P	00 16 55.3 +0.3
ALGO	Algonquin Park	73.73	349	P	P	00 16 55.0 +0.8
	baz=166,SNR=7.6					
JFWS	Jewell Farm	73.76	340	eP	P	00 16 55.2 +0.7
JFWS	Jewell Farm	73.76	340	P	P	00 16 54.9 +0.4
	baz=155,SNR=6.7					
F52A	Sundridge	73.80	348	P	P	00 16 55.5 +0.9
	baz=165					
ANMO	Albuquerque	73.81	324	eP	P	00 16 56.3 +1.0
ANMO	Albuquerque	73.81	324	P	P	00 16 57.2 +2.0
	baz=141					
TASM	ASL Pad, Albuq	73.82	324	P	P	00 16 57.1 +1.8
	baz=141					
TASM	ASL Pad, Albuq	73.82	324	P	P	00 16 57.1 +1.8
	baz=141					
H46A	Fife Lake	73.86	344	P	P	00 16 55.8 +0.8
	baz=160					
BATG	Bathurst New B	73.87	358	eP	P	00 16 56.7 +1.7
GLMI	Grayling	73.98	344	P	P	00 16 56.3 +0.6
	baz=160					
F51A	Arnstein	74.03	348	P	P	00 16 56.0 +0.1
	baz=165					
E54A	Lac Daplat, Po	74.06	350	P	P	00 16 57.1 +1.0
	baz=167,SNR=5.2					
E53A	Dumoine, Ponti	74.08	350	P	P	00 16 57.3 +1.1
	baz=167					
G47A	Hillman	74.13	345	P	P	00 16 58.6 +2.1
	baz=161					
E52A	Matawa	74.15	349	P	P	00 16 57.3 +0.7
	baz=166					
I42A	Draeger Farm,	74.25	341	P	P	00 16 58.0 +0.8
	baz=156					
F49A	Sandfield	74.29	347	P	P	00 16 58.1 +0.7
	baz=163					
LATQ	La Tuque	74.43	353	P	P	00 16 59.1 +1.0
	baz=171					
G45A	Suttons Bay	74.44	344	eP	P	00 16 58.8 +0.6
G45A	Suttons Bay	74.44	344	P	P	00 16 58.8 +0.6
	baz=159					
H43A	Windswept, Lux	74.46	342	eP	P	00 16 58.1 -0.3
H43A	Windswept, Lux	74.46	342	P	P	00 16 59.1 +0.7
	baz=157					
F48A	Evansville	74.48	346	P	P	00 16 59.1 +0.7
	baz=162					
T25A	Trinidad	74.50	327	eP	P	00 16 59.5 +0.4
T25A	Trinidad	74.50	327	P	P	00 17 01.2 +2.1
	baz=142					
E51A	G19948 Merrick	74.54	348	P	P	00 16 59.8 +1.0
	baz=165					
TOA0	Torodi Ar. Sit	74.59	66	eP	P	00 17 00.0 +0.2
TORD	Torodi Ar. Bea	74.59	66	P	P	00 16 58.2 -1.6
	comp=Z,12nm,0.6s,baz=265,slow=3.6,SNR=98					
TORD				pP	pP	00 19 00.7 -2.4
	comp=Z,2.2nm,0.8s,baz=248,slow=4.4,SNR=8.2					
E50A	Wahnapitae	74.66	348	P	P	00 17 00.2 +0.7
	baz=164					
D54A	Lac Fusel, La	74.68	351	P	P	00 17 00.0 +0.5
	baz=168					
I41A	Arkdale	74.69	340	P	P	00 17 00.0 +0.4
	baz=156					
D53A	Lac Vacive, Po	74.77	350	eP	P	00 17 01.1 +1.0
D53A	Lac Vacive, Po	74.77	350	P	P	00 17 01.0 +1.0
	baz=167,SNR=6.1					
D52A	ZEK Kipawa Sen	74.78	349	P	P	00 17 01.3 +1.2
	baz=166,SNR=6.0					
E48A	Lockeyer	75.00	347	P	P	00 17 02.3 +0.9
	baz=163					
F45A	CMU Biological	75.00	344	P	P	00 17 02.4 +1.0
	baz=160,SNR=6.6					
E47A	Iron Bridge	75.22	346	P	P	00 17 03.3 +0.8
	baz=162					
E46A	Sault Ste Mari	75.36	345	P	P	00 17 04.0 +0.6
	baz=161					
D48A	Paudash Townsh	75.59	347	P	P	00 17 05.2 +0.6
	baz=163,SNR=5.8					
D49A	Beulah Townshi	75.60	347	P	P	00 17 05.6 +1.0
	baz=163,SNR=6.0					
VLDQ	Val d'Or	75.74	350	eP	P	00 17 06.4 +1.0
D47A	Chapleau	75.75	346	P	P	00 17 06.1 +0.6
	baz=162					
D46A	Sault St. Mari	75.80	346	P	P	00 17 06.2 +0.5
	baz=161					
G40A	Rib Lake	75.89	341	P	P	00 17 07.1 +0.8
	baz=155					
DRLN	Deer Lake	75.99	4	eP	P	00 17 08.2 +1.4
E43A	Lone Tree Farm	76.02	343	eP	P	00 17 07.9 +0.9
E43A	Lone Tree Farm	76.02	343	P	P	00 17 08.1 +1.1
	baz=158,SNR=6.9					
F40A	Park Falls	76.45	341	P	P	00 17 10.5 +1.1
	baz=156					
BOSA	Boshof	76.47	115	P	P	00 17 10.7 +0.5
	comp=Z,4.8nm,0.5s,baz=263,slow=4.2,SNR=26					
BOSA	Boshof	76.47	115	eP	P	00 17 10.6 +0.4
LSQQ	Lebel-sur-Quev	76.59	351	P	P	00 17 11.4 +1.3
	baz=167					
MVCO	Mesa Verde	76.61	324	eP	P	00 17 11.6 +0.8
MVCO	Mesa Verde	76.61	324	P	P	00 17 12.5 +1.8
	baz=139					
ECSD	EROS Data Cent	76.64	336	eP	P	00 17 11.2 +0.7
ECSD	EROS Data Cent	76.64	336	P	P	00 17 11.2 +0.7
	baz=150,SNR=6.9					
WUAZ	Wupatki	76.90	321	eP	P	00 17 12.9 +0.6
F38A	Pierce - Schro	77.01	340	P	P	00 17 13.1 +0.7
	baz=154					
D41A	Chassel	77.07	343	eP	P	00 17 13.7 +1.1
D41A	Chassel	77.07	343	P	P	00 17 14.2 +1.5
	baz=157,SNR=9.4					
CHGQ	Chibougamau	77.09	353	P	P	00 17 13.5 +0.8
	baz=170					
PV01	Paradox Valley	77.35	325	eP	P	00 17 15.3 +0.5
Y12C	Blythe	77.45	318	P	P	00 17 17.3 +2.2
	baz=135					
PV22	Blue Mesa, Par	77.76	325	eP	P	00 17 18.7 +1.8
PV10	Paradox Valley	77.77	325	eP	P	00 17 15.7 -1.3
LBTB	Lobatse	78.20	112	eP	P	00 17 20.2 +0.6
EYMN	Ely	78.69	341	eP	P	00 17 22.2 +0.8
EYMN	Ely	78.69	341	P	P	00 17 22.0 +0.6
	baz=154					
P18A	Preston Nutter	79.33	325	eP	P	00 17 26.9 +1.5
CCUT	Cedar City	79.47	322	eP	P	00 17 28.0 +2.0
AGMN	Agassiz Nation	80.34	339	eP	P	00 17 31.3 +1.2
AGMN	Agassiz Nation	80.34	339	P	P	00 17 31.1 +1.0
	baz=151					
PSUT	Pine Spring	80.44	322	eP	P	00 17 32.3 +1.2
JLU	Jordanelle	80.67	325	eP	P	00 17 33.4 +1.2
DUG	Dugway, Tooele	81.08	324	eP	P	00 17 35.0 +0.7
R11A	Troy Canyon, C	81.28	321	P	P	00 17 37.6 +2.3
	baz=134					
PD31	Pinedale Array	81.35	327	eP	P	00 17 37.0 +1.4
PDAR	Pinedale Array	81.35	327	P	P	00 17 36.9 +1.2
	comp=Z,1.3nm,0.6s,baz=125,slow=8.9,SNR=13					
SCHQ	Schefferville	81.45	358	P	P	00 17 36.5 +0.9
	comp=Z,6.2nm,0.7s,baz=194,slow=6.2,SNR=3.6					
SCHQ	Schefferville	81.45	358	eP	P	00 17 36.6 +1.0
SPUT	South Promonto	81.70	325	eP	P	00 17 38.6 +1.2
BGU	Big Grassy Mou	81.72	324	eP	P	00 17 38.8 +1.3
ULM	Lac du Bonnet	82.06	340	P	P	00 17 39.5 +0.8
	comp=Z,3.7nm,0.7s,baz=166,slow=4.2,SNR=2.7					
ULM	Lac du Bonnet	82.06	340	eP	P	00 17 39.7 +0.9
TAM	Tamanrasset	82.87	60	eP	P	00 17 44.3 +0.6
LAO	LASA Array	82.88	332	P	P	00 17 44.2 +1.1
	baz=142					
NVAR	Mina Array Bea	82.88	320	P	P	00 17 45.2 +1.7
	comp=Z,0.1nm,0.3s,baz=122,slow=6.5,SNR=3.4					
GCMT	Greycliff	83.69	329	eP	P	00 17 45.4 -1.8
HLID	Hailey	84.34	325	eP	P	00 17 51.9 +1.4
HLID	Hailey	84.34	325	P	P	00 17 52.8 +2.3
	baz=136					
LSZ	Lusaka	84.54	104	eP	P	00 17 53.0 +0.9
MTE	Manteigas	84.66	39	eP	P	00 17 52.7 +0.7
ESDC	Sonseca Array	86.27	42	P	P	00 18 00.3 +0.6
	comp=Z,0.9nm,0.6s,baz=234,slow=4.8,SNR=8.3					
J08A	Circle Bar Ran	86.31	323	eP	P	00 18 02.1 +2.2
MOD	Modoc Plateau	86.34	321	eP	P	00 18 00.6 +0.5
FCC	Fort Churchill	89.09	345	eP	P	00 18 13.8 +1.5
SSB	Saint Sauveur	94.65	41	eP	P	00 18 39.0 +0.7
YKA	Yellowknife Ar	98.00	339	P	P	00 18 53.1 +0.3
	comp=Z,0.5nm,0.6s,baz=129,slow=4.7,SNR=5.7					
ARCES	ARCESS Array B	114.51	23	PKKPbc	PKKPbc	00 34 34.3 -0.4
	comp=Z,1.4nm,0.9s,baz=71,slow=5.8,SNR=4.8					
ASAR	Alice Springs	127.05	200	PKP	PKiKP	00 24 18.8 +0.2
	comp=Z,0.6nm,0.5s,baz=149,slow=1.5,SNR=8.6					
ABKAR	Akbulak array	131.37	47	ePKPdf	PKiKP	00 24 26.7 +0.4
AAK	Ala-Archa	142.37	54	ePKPdf	PKPdf	00 24 44.7 -1.3
KURK	Kurchatov	142.59	40	ePKPdf	PKPdf	00 24 44.8 -1.0
KSH	Kashi	143.98	59	PKP	PKiKP	00 24 48.4 -4.2
KSH				PP	pPKPdf	00 27 11.4 +3.7
KSH				SKS	SKSdf	00 31 04.3 +2.1
KSH	Kashi	143.98	59	SS	SS	00 46 07.6 -1.3
KSH				AMB	AMB	
	comp=Z,200nm,5.4s					
KSH				LR	LR	
	comp=N,230nm,6.2s					
KSH				LR	LR	
	comp=E,310nm,8.1s					
KSH				LR	LR	
	comp=Z,120nm,11.3s					
ZAA0	Zalesovo Array	144.22	32	ePKPbc	PKiKP	00 24 49.9 -2.5
ZALV	Zalesovo Beam	144.22	32	PKP	PKiKP	00 24 49.8 -2.6
	comp=Z,6.4nm,0.3s,baz=296,slow=4.9,SNR=25					
ZALV				SKPbc	SKiKP	00 27 34.9 +2.6
	comp=Z,1.9nm,0.4s,baz=319,slow=2.6,SNR=5.2					
MAKZ	Makanchi	146.24	45	ePKPdf	PKPab	00 24 55.2 -1.9
MK31	Makanchi Array	146.44	45	ePKPbc	PKPab	00 24 56.0 -1.9
MKAR	Makanchi Array	146.44	45	PKP	PKiKP	00 24 54.0 -3.3
	comp=Z,9.8nm,0.8s,baz=306,slow=1.2,SNR=53					
MKAR				PKPbc	PKPab	00 24 56.3 -1.7
	comp=Z,9.0nm,0.4s,baz=293,slow=3.2,SNR=65					
MKAR				PKPab	PKPbc	00 24 59.2 +4.0
	comp=Z,8.8nm,0.4s,baz=300,slow=3.6,SNR=65					
MKAR				SKPbc	SKiKP	00 27 39.4 +2.2
	comp=Z,1.0nm,0.6s,baz=290,slow=2.2,SNR=5.7					
SONM	Songino Array	157.60	18	PKPab	PKPab	00 25 46.1 +0.9
	comp=Z,0.9nm,0.6s,baz=336,slow=3.2,SNR=4.0					
CD2	Chengdu	168.00	68	PKP	PKPdf	00 25 18.8 -0.5

*ISCJB **21** 00:42:39.6±0.9, 17°.93S±0°.06×69°.8W±0°.1, h139km±7km, mb3.8/2, Error ellipse: s-maj=18.6km s-min=8.1km az=18.4*
*GUC **21** 00:42:41.2±0.6, 17°.98S×69°.75W, h135km±3km, ML3.5*
*IDC **21** 00:42:45.5±7.1, 18°.34S×67°.73W, h96km±46km, mb3.8/2, mb1 3.8/3, mb1mx3.3/18, mbtmp4.0/3, Error ellipse: s-maj=88.5km s-min=45.6km az=44.0*

ISC 21 00:42:39.9±1.4, 17°.92S±0°.07×69°.9W±0°.1, h137km±9km, n14, σ0°78/21, 6C-3D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.53	142	⇑iP	Pn	00 43 01.0	+0.4
PB16				i S	Sn	00 43 16.2	-0.1
PB12	IPOC Station P	0.83	213	⇑iP	Pn	00 43 02.5	+0.4
PB12				i S	Sn	00 43 19.1	+0.1
PB12				IAML		00 43 19.6	
	comp=N,1μm,0.3s						
MNMC	Minye Minye	1.23	169	⇑eP	Pn	00 43 06.4	+0.4
MNMC				eS	Sn	00 43 25.1	-0.8
MNMC				IAML		00 43 27.1	
	comp=N,701nm,0.4s						
PSGC	Pisagua	1.69	189	⇑iP	Pn	00 43 10.9	+0.1
PSGC				i S	Sn	00 43 33.4	-1.0
PB11	IPOC Station P	1.84	174	⇑iP	Pn	00 43 12.9	+0.3
PB11				i S	Sn	00 43 36.9	-0.7
PB11				IAML		00 43 38.2	
	comp=E,406nm,0.5s						
GO01	Chusmiza	1.85	161	eP	Pn	00 43 13.8	+0.8
GO01				i S	Sn	00 43 38.2	-0.1
LPAZ	La Paz	2.31	46	P	Pn	00 43 19.6	+1.0
	comp=E,2.2nm,0.3s,baz=180,slow=11,SNR=51						
LPAZ				S	Sn	00 43 46.0	-2.2
	comp=E,0.9nm,0.3s,baz=92,slow=23,SNR=6.6						
PB08	IPOC Station P	2.31	164	⇑iP	Pn	00 43 19.1	+0.8
PB08				i S	Sn	00 43 47.6	-0.4
PB08				IAML		00 43 49.4	
	comp=N,163nm,0.3s						
PB01	IPOC Station P	3.13	174	⇓iP	Pn	00 43 28.5	0.0
PB02	IPOC Station P	3.39	181	⇓iP	Pn	00 43 32.0	+0.2
PB07	IPOC Station P	3.79	181	eP	Pn	00 43 37.3	+0.1
PB07				IAML		00 44 21.9	
	comp=E,56nm,0.4s						
PB03	IPOC Station P	4.11	179	⇓iP	Pn	00 43 41.6	+0.2
PB03				IAML		00 44 30.1	
	comp=E,59nm,0.4s						
ULM	Lac du Bonnet	71.65	343	P	P	00 54 02.6	+16
	comp=E,3.6nm,0.6s,baz=146,slow=3.7,SNR=3.5						
TORD	Torodi Ar. Bea	77.03	71	P	P	00 54 18.5	+0.2
	comp=E,0.6nm,0.7s,baz=234,slow=5.5,SNR=7.2						

*PRE **21** 00:51:34.5±1.9, 27°.83S×26°.63E, h2km, ML2.6*
*EAF **21** 00:51:38.9±0.6, 27°.49S×26°.17E, h0km±19km, MD3.8*
*BUL **21** 00:51:39.7±0.9, 27°.59S×26°.25E, h0km±25km, MD4.1*

ISC 21 00:51:37.6±3.8, 27°.76S±0°.07×26°.57E±0°.07, h17km±27km, n15, σ0°79/24, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWZ	Schweizer	1.24	297	eP	Pb	00 52 01.0	+0.3
SWZ				eS	Sn	00 52 17.1

comp=Z,43nm,0.2s
ERPM east rand prop 2.06 47 *e*P **Pn 00 52 10.4 -1.2**
ERPM *e*S **Sb 00 52 39.5 -0.6**
ERPM AML AML 00 52 40.9
comp=Z,33nm,0.5s
UPI Upington 4.73 262 *e*P **Pn 00 52 49.0 +0.6**
UPI *e*S **Sn 00 53 43.2 +0.2**
UPI AML AML 00 54 02.6
comp=Z,22nm,0.7s
MSNA Messina 6.24 31 *i* P **Pn 00 53 10.9 +1.9**
MSNA Messina 6.24 31 *i* P **Pn 00 53 10.9 +1.9**
MATP Matopo 7.51 14 *i* P **Pn 00 53 26.0 -0.6**
MATP Matopo 7.51 14 *i* P **Pn 00 53 26.0 -0.6**
BLWY Bulawayo 7.81 14 *i* P **Pn 00 53 30.4 -0.4**
BLWY Bulawayo 7.81 14 *i* P **Pn 00 53 30.4 -0.4**

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*ISCJB **21** 01:19:10.1±0.9, 6°.53N±0°.05×126°.73E±0°.08, h77km±9km, mb3.7/8, Error ellipse: s-maj=13.5km s-min=8.3km az=8.4*
*MAN **21** 01:19:11.4, 6°.51N×126°.67E, h41km, mb4.5, ML3.3, MS3.1*
*IDC **21** 01:19:12.9±3.8, 6°.75N×126°.60E, h101km±28km, mb3.5/8, mb1 3.7/8, mb1mx3.3/54, mbtmp3.9/8, Error ellipse: s-maj=83.5km s-min=13.7km az=66.0*
ISC 21 01:19:10.7±1.2, **6°.55N**±0°.06×**126°.70E**±0°.09, **h78**km±9km, **n18**, σ1°**97**/27, **mb3.7**/8, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.59**	**312**	*e*P	**Pn**	**01 19 24.6**	**-0.6**
MATI				*e*S	**Sn**	**01 19 34.6**	**-1.2**
DDMP	**Don Marcelino,**	**1.08**	**246**	*e*P	**Pn**	**01 19 30.8**	**+0.2**
DDMP				*e*S	**Sn**	**01 19 44.1**	**-1.3**
DAV	**Davao City (W)**	**1.23**	**295**	P	**Pn**	**01 19 33.5**	**+1.0**
	183nm,0.3s,baz=80,slow=6.1,SNR=25						
DAV				S	**Sn**	**01 19 50.6**	**+1.8**
	153nm,0.3s,baz=277,slow=22,SNR=3.6						
DMPH	**Davao City--Mi**	**1.30**	**294**	⇓*i*P	**Pn**	**01 19 33.0**	**-0.4**
DMPH				*i* S	**Sn**	**01 19 55.1**	**+4.7**
BIPH	**Bislig**	**1.66**	**348**	*e*P	**Pn**	**01 19 37.5**	**-0.6**
BIPH				*e*S	**Sn**	**01 19 57.7**	**-1.1**
GSPH	**General Santos**	**1.80**	**255**	*e*P	**Sn**	**01 19 59.6**	**-2.7**
BUKP	**Musuan**	**2.10**	**309**	*e*P	**Pn**	**01 19 44.7**	**+0.7**
BUKP				*e*S	**Sn**	**01 20 10.1**	**+0.3**
SKMP	**Bagumbayan, Su**	**2.14**	**269**	*e*P	**Pn**	**01 19 45.1**	**+0.5**
SKMP				*e*S	**Sn**	**01 20 10.1**	**-0.3**
BUTP	**Butuan**	**2.63**	**336**	*e*P	**Pn**	**01 19 52.6**	**+1.5**
BUTP				*e*S	**Sn**	**01 20 24.8**	**+2.7**
CGP	**Cagayan de Oro**	**2.75**	**314**	⇑*e*P	**Pn**	**01 19 54.1**	**+1.4**
FITZ	**Fitzroy Crossi**	**24.51**	**182**	P	**P**	**01 24 25.0**	**+2.0**
	4.5nm,0.8s,baz=352,slow=7.1,SNR=9.1						
WRA	**Warramunga Arr**	**27.38**	**164**	P	**P**	**01 24 50.0**	**+1.1**
	1.3nm,0.8s,baz=341,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**30.84**	**167**	P	**P**	**01 25 21.6**	**+1.9**
	0.4nm,0.3s,baz=348,slow=7.4,SNR=6.6						
STKA	**Stephens Creek**	**40.77**	**160**	P	**P**	**01 26 47.0**	**+2.6**
	1.5nm,0.4s,baz=343,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**55.25**	**324**	P	**P**	**01 28 35.1**	**-0.9**
	0.3nm,0.4s,baz=117,slow=7.4,SNR=4.9						
MKAR				PcP	**PcP**	**01 29 35.0**	**-1.0**
	0.7nm,0.7s,baz=125,slow=2.5,SNR=5.5						
KURBB	**Kurchatov Arra**	**59.38**	**327**	P	**P**	**01 29 01.3**	**-3.6**
	0.5nm,0.7s,baz=132,slow=6.0,SNR=4.7						
BVAR	**Borovoye Array**	**64.97**	**326**	P	**P**	**01 29 41.2**	**-1.1**
	0.4nm,0.6s,baz=133,slow=8.5,SNR=2.7						
FINES	**FINESS Array B**	**89.35**	**332**	P	**P**	**01 31 56.1**	**-2.3**
	1.0nm,0.9s,baz=73,slow=6.6,SNR=5.2						

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*ISCJB **21** 01:19:53.7±0.3, 18°.18N±0°.03×100°.46W±0°.03, h58km±3km, mb4.0/32, MS2.8/2, Error ellipse: s-maj=5.2km s-min=4.6km az=160.3*
*MEX **21** 01:19:55.8±1.1, 18°.18N×100°.50W, h51km±7km, MD4.1*
*NEIC **21** 01:19:55.8±0.0, 18°.18N×100°.50W, h51km, mb4.0/41, MD4.1(MEX), After MEX.*
NEIC Felt at Ciudad Altamirano.
*IDC **21** 01:19:59.4±3.7, 18°.62N×100°.11W, h80km±22km, mb3.7/9, mb1 3.9/13, mb1mx3.7/48, mbtmp4.0/13, MS2.8/5, Ms1 2.8/5, ms1mx2.7/28, Error ellipse: s-maj=69.9km s-min=15.3km az=35.0*
ISC 21 01:19:54.3±0.7, **18°.19N**±0°.03×**100°.48W**±0°.04, **h55**km±7km, **n86**, σ1°**39**/106, **mb4.0**/32, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.16**	**54**	*e*P	**Pn**	**01 20 02.3**	**-0.8**
ARIG				*e*S	**Sn**	**01 20 08.5**	**-0.8**
MEIG	**Mezcala**	**0.86**	**108**	*e*Pn	**Pn**	**01 20 10.3**	**-0.1**
MEIG				*e*Sn	**Sn**	**01 20 22.2**	**-0.1**
MEIG	**Mezcala**	**0.86**	**108**	*e*P	**Pn**	**01 20 10.3**	**-0.1**
MEIG				*e*S	**Sn**	**01 20 22.2**	**-0.1**
PLIG	**Platanillo**	**0.95**	**78**	*e*Pn	**Pn**	**01 20 11.6**	**-0.1**
PLIG				*e*Sn	**Sn**	**01 20 23.7**	**-0.7**
PLIG	**Platanillo**	**0.95**	**78**	*e*P	**Pn**	**01 20 11.6**	**-0.1**
PLIG				*e*S	**Sn**	**01 20 23.7**	**-0.7**
ZIIG	**Zihuatanejo**	**1.10**	**238**	*e*Pn	**Pn**	**01 20 12.9**	**-0.6**
ZIIG				*e*Sn	**Sn**	**01 20 26.8**	**-1.0**
ZIIG	**Zihuatanejo**	**1.10**	**238**	*i* P	**Pn**	**01 20 12.9**	**-0.6**
ZIIG				*e*S	**Sn**	**01 20 26.8**	**-1.0**
CAIG	**El Cayaco**	**1.15**	**170**	*e*Pn	**Pn**	**01 20 13.7**	**-0.5**
CAIG				*e*Sn	**Sn**	**01 20 28.2**	**-0.8**
CAIG	**El Cayaco**	**1.15**	**170**	*i* P	**Pn**	**01 20 13.7**	**-0.5**
CAIG				*e*S	**Sn**	**01 20 28.2**	**-0.8**
MAVM	**Malinalco, Edo**	**1.21**	**51**	*e*S	**Sn**	**01 20 30.4**	**-0.2**
TOVM	**TOLUCA**	**1.33**	**35**	*e*P	**Pn**	**01 20 17.0**	**+0.1**
TOVM				*i* S	**Sn**	**01 20 33.0**	**-0.7**
YAIG	**Yautepec**	**1.50**	**63**	*e*Pn	**Pn**	**01 20 18.8**	**-0.2**
YAIG				*e*Sn	**Sn**	**01 20 37.0**	**-0.6**
YAIG	**Yautepec**	**1.50**	**63**	*e*P	**Pn**	**01 20 18.8**	**-0.2**
YAIG				*e*S	**Sn**	**01 20 37.0**	**-0.6**
UNM	**Universidad Na**	**1.68**	**47**	*e*P	Pn	01 20 38.3	+17
UNM				*i* S	Sn	01 20 58.0	+16
ATVM	**ATLACOMULCO**	**1.68**	**21**	*i* P	**Pn**	**01 20 21.8**	**+0.2**
ATVM				*i* S	**Sn**	**01 20 41.4**	**-0.8**
PBVM	**Pinon**	**1.82**	**47**	*e*Pn	**Pn**	**01 20 23.9**	**+0.8**
PBVM				*e*Sn	**Sn**	**01 20 44.9**	**-0.2**
PBVM	**Pinon**	**1.82**	**47**	*e*P	**Pn**	**01 20 23.9**	**+0.8**
PBVM				*i* S	**Sn**	**01 20 44.9**	**-0.2**
AMVM	**AMECAMECA**	**1.86**	**59**	*e*P	**Pn**	**01 20 24.8**	**+0.7**
AMVM				*i* S	**Sn**	**01 20 46.1**	**-0.5**
TLIG	**Tlapa**	**1.93**	**109**	*e*Pn	**Pn**	**01 20 25.3**	**+0.5**
TLIG	**Tlapa**	**1.93**	**109**	*e*P	**Pn**	**01 20 25.8**	**+1.0**
TLIG				*e*S	**Sn**	**01 20 47.9**	**-0.1**
PPM	**Popocatepetl**	**1.96**	**63**	*e*Pn	**Pn**	**01 20 26.2**	**+0.6**
PPM				*e*Sn	**Sn**	**01 20 47.9**	**-1.5**
PPM	**Popocatepetl**	**1.96**	**63**	*e*P	**Pn**	**01 20 26.2**	**+0.6**
PPM				*i* S	**Sn**	**01 20 47.9**	**-1.5**
ZUVM	**ZUMPANGO**	**2.10**	**39**	*i* P	**Pn**	**01 20 27.5**	**+0.1**
ZUVM				*i* S	**Sn**	**01 20 44.5**	**-7.9**
VTVM	**Tizayuca**	**2.25**	**45**	*i* P	**Pn**	**01 20 29.5**	**+0.1**
VTVM				*i* S	Sn	01 20 41.2	-15
LVIG	**Laguna Verde**	**4.14**	**68**	*e*Pn	**Pn**	**01 20 56.3**	**+1.4**
ZAIG	**Zacatecas**	**4.96**	**337**	*e*Pn	**Pn**	**01 21 07.8**	**+1.4**
CMIG	**Matias Romero**	**5.45**	**101**	P	**Pn**	**01 21 14.7**	**+1.7**
	2.4nm,0.3s,baz=264,slow=13,SNR=28						
CMIG				S	**Sn**	**01 22 13.9**	**-0.5**
	9.1nm,0.3s,baz=131,slow=23,SNR=6.9						
CMIG				LR	LR	01 23 50.3	
	comp=Z,57nm,18.6s,baz=292,slow=44						
LNIG	**Linares**	**6.74**	**8**	*e*Pn	**Pn**	**01 21 30.0**	**-0.7**
CCIG	**Comitan**	**8.20**	**102**	*e*Pn	**Pn**	**01 21 52.2**	**+1.4**
APG	**El Apazote**	**10.11**	**107**	P	**Pn**	**01 22 19.1**	**+2.0**
	0.8nm,0.3s,baz=63,slow=22,SNR=7.9						
APG				S	**Sn**	**01 24 05.1**	**-4.1**
	0.5nm,0.3s,baz=66,slow=20,SNR=2.4						
APG				LR	LR	01 25 47.7	
	comp=Z,54nm,19.3s,baz=271,slow=35						
LPIG	**La Paz**	**10.89**	**304**	LR	LR	01 26 13.9	
	comp=Z,75nm,20.3s,baz=276,slow=34						
TXAR	**Lajitas Array**	**11.47**	**346**	P	**Pn**	**01 22 37.5**	**+2.0**
	0.1nm,0.3s,baz=157,slow=14,SNR=14						
TX31	**Lajitas Ar. Si**	**11.47**	**346**	*e*Pn	**Pn**	**01 22 36.6**	**+1.2**
ABTX	**Abilene, Hawle**	**14.39**	**3**	*e*Pn	**Pn**	**01 23 15.6**	**+0.6**
MSTX	**Muleshoe**	**15.85**	**353**	*e*Pn	**Pn**	**01 23 34.3**	**+0.4**
	36nm,0.8s						
Z41A	**Richland Creek**	**16.51**	**23**	*e*Pn	**Pn**	**01 23 43.7**	**+1.5**
	37nm,0.7s						
WMOK	**Wichita Mounta**	**16.55**	**5**	*e*Pn	**Pn**	**01 23 43.5**	**+0.7**
	4.6nm,0.9s						
TUC	**Tucson**	**16.85**	**329**	*e*Pn	**Pn**	**01 23 46.5**	**0.0**
	2.3nm,0.8s						
MIAR	**Mount Ida**	**17.41**	**19**	*e*Pn	**Pn**	**01 23 53.0**	**-0.3**
	6.2nm,0.8s						
ANMO	**Albuquerque**	**17.52**	**343**	P	**Pn**	**01 23 55.9**	**+1.1**
	0.1nm,0.3s,baz=148,slow=13,SNR=9.5						
ANMO	**Albuquerque**	**17.52**	**343**	*e*Pn	**Pn**	**01 23 55.3**	**+0.4**
	2.6nm,0.8s						
W39A	**Magazine**	**17.95**	**18**	*e*P	**Pn**	**01 24 00.3**	**+0.3**
	10nm,1.1s						
TUL1	**Leonard**	**18.13**	**12**	*e*P	**P**	**01 24 00.9**	**-1.0**
	15nm,0.6s						
WHAR	**Wooly Hollow**	**18.52**	**22**	*e*P	**P**	**01 24 05.7**	**-0.5**
	12nm,1.3s						
HHAR	**Hobbs**	**18.93**	**16**	*e*P	**P**	**01 24 09.8**	**-0.9**
	5.6nm,0.6s						
FCAR	**Ozark Folk Cen**	**19.12**	**21**	*e*P	**P**	**01 24 12.5**	**-0.2**
	16nm,0.8s						
T25A	**Trinidad**	**19.19**	**350**	*e*P	**Pn**	**01 24 15.9**	**+0.7**
	11nm,1.4s						
Y14A	**Wickenburg**	**19.27**	**327**	*e*P	**Pn**	**01 24 16.7**	**+0.7**
	2.9nm,0.7s						
Y12C	**Blythe**	**19.95**	**324**	*e*P	**P**	**01 24 23.8**	**+2.0**
	7.8nm,0.7s						
MVCO	**Mesa Verde**	**20.22**	**341**	*e*P	**P**	**01 24 27.0**	**+2.1**
	4.4nm,0.8s						
W13A	**Hualapai Mount**	**20.63**	**327**	*e*P	**P**	**01 24 31.0**	**+1.6**
	3.6nm,0.8s						
WVT	**Waverly**	**21.08**	**30**	*e*P	**P**	**01 24 34.6**	**+0.6**
	13nm,1.5s						
CCM	**Cathedral Cave**	**21.38**	**20**	*e*P	**P**	**01 24 38.2**	**+1.1**
	7.5nm,1.1s						
MTPU	**Mount Pierson**	**22.27**	**335**	*e*P	**P**	**01 24 49.1**	**+1.9**
	4.6nm,0.9s						
SHPR	**Sheep Range**	**22.37**	**328**	*e*P	**P**	**01 24 49.5**	**+1.4**
	13nm,1.9s						
O20A	**White River Ci**	**22.88**	**345**	*e*P	**P**	**01 24 55.0**	**+1.6**
	5.3nm,1.0s						
P18A	**Preston Nutter**	**22.98**	**340**	*e*P	**P**	**01 24 55.5**	**+0.9**
	3.3nm,0.8s						
TMUT	**Trail Mountain**	**23.00**	**338**	*e*P	**P**	**01 24 56.3**	**+1.5**
	12nm,1.5s						
N23A	**Red Feather La**	**23.11**	**349**	*e*P	**P**	**01 24 56.6**	**+0.8**
	6.0nm,0.8s						
TPNV	**Topopah Spring**	**23.28**	**327**	*e*P	**P**	**01 24 58.5**	**+1.2**
	4.7nm,0.8s						
R11A	**Troy Canyon, C**	**24.03**	**330**	*e*P	**P**	**01 25 06.5**	**+2.2**
	4.2nm,1.5s						
K22A	**Casper**	**24.92**	**349**	*e*P	**P**	**01 25 13.3**	**+1.0**
	5.8nm,1.0s						
L40A	**Anamosa**	**25.07**	**16**	*e*P	**P**	**01 25 13.1**	**-0.4**
	8.6nm,0.8s						
NV11	**Mina Array Sit**	**25.39**	**326**	*e*P	**P**	**01 25 17.7**	**+1.1**
	0.3nm,0.8s						
NVAR	**Mina Array Bea**	**25.46**	**326**	P	**P**	**01 25 18.8**	**+1.4**
	4.4nm,0.7s,baz=149,slow=9.3,SNR=19						
ECSD	**EROS Data Cent**	**25.67**	**6**	*e*P	**P**	**01 25 19.3**	**+0.3**
	4.8nm,0.7s						
BW06	**Boulder Array**	**25.68**	**344**	*e*P	**P**	**01 25 20.9**	**+1.6**
	3.0nm,0.8s						
PD31	**Pinedale Array**	**25.68**	**344**	*e*P	**P**	**01 25 19.7**	**+0.3**
	2.2nm,0.8s						
PDAR	**Pinedale Array**	**25.68**	**344**	P	**P**	**01 25 19.2**	**-0.2**
	2.4nm,0.7s,baz=145,slow=11,SNR=21						
PDAR				LR	LR	01 36 46.1	
	comp=Z,53nm,21.7s,baz=146,slow=40						
RYN	**Ryan**	**25.73**	**326**	*e*P	**P**	**01 25 21.9**	**+2.2**
	3.6nm,0.9s						
KVN	**Kaiserville**	**25.82**	**327**	*e*P	**P**	**01 25 22.2**	**+1.7**
	3.0nm,0.7s						
LOHW	**Long Hollow**	**26.75**	**344**	*e*P	**P**	**01 25 30.9**	**+2.0**
	2.1nm,0.6s						
F10A	**Beach Ranch, E**	**30.99**	**337**	*e*P	**P**	**01 26 06.8**	**+0.3**
	5.8nm,1.1s						
ULM	**Lac du Bonnet**	**32.20**	**6**	P	**P**	**01 26 14.8**	**-2.1**
	3.9nm,0.5s,baz=187,slow=11,SNR=4.0						
YKA	**Yellowknife Ar**	**45.34**	**351**	P	**P**	**01 28 04.8**	**-1.9**
	0.8nm,0.6s,baz=157,slow=7.4,SNR=5.2						
YKA				LR	LR	01 48 31.5	
	comp=Z,5.2nm,19.6s,baz=198,slow=38						
INK	**Inuvik**	**54.25**	**346**	*e*P	**P**	**01 29 13.7**	**-0.5**
	3.3nm,0.6s						
PRP	**Porcupine Dome**	**55.81**	**339**	*e*P	**P**	**01 29 26.8**	**+1.1**
	4.6nm,0.9s						
ILAR	**Eielson Array**	**55.86**	**338**	P	**P**	**01 29 25.9**	**+0.1**
	1.5nm,0.9s,baz=141,slow=5.9,SNR=12						
MLY	**Manley**	**57.39**	**337**	*e*P	**P**	**01 29 37.2**	**+0.4**
	5.5nm,1.2s						
SPITS	**Spitsbergen Ar**	**77.58**	**11**	P	**P**	**01 31 45.0**	**+1.0**
	6.3nm,1.0s,baz=289,slow=9.0,SNR=2.5						
EKA	**Eskdalemuir Ar**	**79.31**	**35**	P	**P**	**01 31 53.1**	**-0.8**
	0.4nm,0.6s,baz=302,slow=4.1,SNR=3.2						
ESDC	**Sonseca Array**	**83.45**	**51**	P	**P**	**01 32 15.2**	**-1.0**
	0.3nm,0.6s,baz=306,slow=5.6,SNR=4.3						
NB2	**NORSAR Subarra**	**84.26**	**27**	P	**P**	**01 32 20.5**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=299,slow=5.1						
NOA	**NORSAR Array B**	**84.26**	**27**	P	**P**	**01 32 20.2**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=303,slow=4.9,SNR=5.0						
ARCES	**ARCESS Array B**	**84.61**	**17**	P	**P**	**01 32 21.3**	**-0.1**
	comp=Z,8.3nm,0.3s,baz=305,slow=4.3,SNR=6.1						
CD2	**Chengdu**	**125.91**	**334**	Pdif	**Pdif**	**01 35 25.8**	**-3.4**

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*NNC **21** 01:23:17.8±1.5, 39°.51N×76°.45E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=10.0km s-min=8.2km az=177.0*
*SOME **21** 01:23:19.3, 39°.52N×76°.63E, h20km*
ISC 21 01:23:20.6±3.4, **39°.7N**±0°.2×**76°.41E**±0°.06, **h10**km, **n20**, σ2°**44**/22, **5C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**3.30**	**335**	⇓Pg	**Pg**	**01 24 22.4**	**-1.5**
	3.0nm,0.5s						
AAK				⇑Lg	Lg	01 25 06.8	
	7.3nm,0.7s						
TKM2	**Tokmak 2**	**3.31**	**350**	⇑Pg	**Pg**	**01 24 21.9**	**-2.1**
	3.4nm,0.7s						
TKM2				⇑Lg	Lg	01 25 08.2	
	5.4nm,0.6s						
KST	**Kastek**	**3.39**	**354**	Pg	**Pg**	**01 24 23.3**	**-2.2**
	5.2nm,0.4s						
KST				Lg	Lg	01 25 12.4	
	8.7nm,0.4s						
KST	**Kastek**	**3.39**	**354**	*e*P	**Pg**	**01 24 25.5**	**0.0**
	2.2nm,0.3s						
KST				*e*S	**Sg**	**01 25 11.1**	**+1.6**
	6.2nm,0.8s						
TNSS	**Tian-Shan**	**3.39**	**7**	Pg	**Pb**	**01 24 21.4**	**+0.4**
	4.3nm,0.4s						
TNSS				Lg	Lg	01 25 09.2	
	5.7nm,0.7s						
MDOK	**Medeo**	**3.53**	**8**	Pg	**Pg**	**01 24 25.7**	**-2.5**
	2.7nm,0.5s						
MDOK				Lg	Lg	01 25 16.3	
	7.6nm,0.8s						
KOTS	**Kotyrbulak**	**3.60**	**8**	Pg	**Pg**	**01 24 27.8**	**-1.8**
	2.3nm,0.5s						
KOTS				Lg	Lg	01 25 19.9	
	10nm,0.6s						
DGS	**Degeres**	**3.60**	**353**	Pg	**Pb**	**01 24 24.7**	**+0.3**
	6.3nm,0.7s						
DGS				Lg	Lg	01 25 14.6	
	7.0nm,0.6s						
SATY	**Saty**	**3.71**	**23**	Pg	**Pb**	**01 24 27.0**	**+0.8**
	4.1nm,0.3s						
SATY				Lg	Lg	01 25 18.5	
	10nm,0.5s						
MRKS	**Merke**	**3.90**	**323**	Pg	**Pb**	**01 24 30.3**	**+0.7**
	4.0nm,0.5s						
MRKS				Lg	Lg	01 25 24.5	
	2.8nm,0.5s						
MRKS	**Merke**	**3.90**	**323**	*e*P	**Pg**	**01 24 33.6**	**-1.8**
	3.6nm,0.5s						
MRKS				*e*S	**Sg**	**01 25 24.5**	**-1.4**
	2.7nm,0.5s						
KTBS	**Karatobe**	**4.05**	**3**	Pg	**Pb**	**01 24 33.6**	**+1.6**
	1.4nm,0.7s						
KTBS				Lg	Lg	01 25 30.0	
	6.2nm,0.5s						
CHKK	**Chushkaly**	**4.21**	**6**	Pg	**Pg**	**01 24 37.9**	**-3.2**
	1.0nm,0.1s						
CHKK				Lg	Lg	01 25 37.3	
	3.7nm,0.2s						
KUU	**Kurty**	**4.22**	**359**	Pg	**Pb**	**01 24 38.1**	**+3.1**
	3.2nm,0.4s						
KUU				Lg	Lg	01 25 37.7	
	8.9nm,0.8s						
PDGK	**Podgornoye**	**4.33**	**31**	Pg	**Pb**	**01 24 37.8**	**+1.1**
	1.1nm,0.6s						
PDGK				Lg	Lg	01 25 37.4	
	2.0nm,0.8s						
PDGK	**Podgornoye**	**4.33**	**31**	⇑Pg	**Pb**	**01 24 38.0**	**+1.2**
	1.8nm,0.6s						
PDGK				⇑Lg	Lg	01 25 38.9	
	7.4nm,0.8s						
ARXS	**Arharly**	**4.66**	**13**	Pg	**Pg**	**01 24 46.2**	**-3.7**
	2.2nm,0.6s						
ARXS				Lg	Lg	01 25 51.6	
	5.7nm,0.8s						
KTMS	**Ketmen**	**4.79**	**37**	Pg	**Pb**	**01 24 47.3**	**+2.6**
	1.6nm,0.3s						
KTMS				Lg	Lg	01 25 53.8	
	3.0nm,0.4s						
BTLS	**Baital**	**5.65**	**343**	Pg	**Pb**	**01 25 03.6**	**+4.4**
	1.8nm,0.6s						
BTLS				Lg	Lg	01 26 21.5	
	1.9nm,0.3s						
KAPS	**Kapalarasan**	**6.02**	**20**	Pg	**Pb**	**01 25 09.9**	**+4.3**
	0.9nm,0.5s						
KAPS				Lg	Lg	01 26 32.3	
	1.7nm,0.3s						

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*ISCJB **21** 01:24:59.1±0.5, 36°.69N±0°.06×5°.34E±0°.07, h19km, Error ellipse: s-maj=10.8km s-min=4.5km az=41.4*
*MDD **21** 01:24:59.8±0.5, 36°.66N×5°.37E, h0km, mb3.8/2, Error ellipse: s-maj=7.3km s-min=5.1km az=45.0, PRXIMO*
*CRAAG **21** 01:25:03.0, 36°.28N×5°.74E, Ml2.6*
ISC 21 01:24:58.3±1.0, **36°.55N**±0°.06×**5°.39E**±0°.07, **h19**km, **n23**, σ2°**02**/27, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SET	**Setif**	**0.35**	**179**	P	**Pn**	**01 25 09.0**	**+0.6**
SET	**Setif**	**0.35**	**179**	P	**Pn**	**01 25 09.0**	**+0.6**
DFRA	**Djebel Bou Aff**	**0.39**	**90**	P	**Pg**	**01 25 07.0**	**+0.5**
DFRA	**Djebel Bou Aff**	**0.39**	**90**	P	**Pg**	**01 25 07.0**	**+0.5**
CKHR	**Kef el Ahmar**	**0.54**	**170**	P	**Pn**	**01 25 11.2**	**+0.1**
CKHR	**Kef el Ahmar**	**0.54**	**170**	P	**Pn**	**01 25 11.2**	**+0.1**
CASM	**Ain Smara**	**0.93**	**108**	P	**Pg**	**01 25 17.1**	**+0.7**
CASM	**Ain Smara**	**0.93**	**108**	P	**Pg**	**01 25 17.1**	**+0.7**
CKFL	**Kef-Lekhel**	**1.08**	**98**	P	**Pg**	**01 25 20.2**	**+0.9**
CKFL	**Kef-Lekhel**	**1.08**	**98**	P	**Pg**	**01 25 20.2**	**+0.9**
CAEH	**'Ain El Ouahch**	**1.19**	**78**	P	**Pg**	**01 25 23.4**	**+2.0**
CAEH	**'Ain El Ouahch**	**1.19**	**78**	P	**Pg**	**01 25 23.4**	**+2.0**
CMAH	**Djebel Manchou**	**1.63**	**87**	P	**Pb**	**01 25 28.0**	**+0.2**
CMAH	**Djebel Manchou**	**1.63**	**87**	P	**Pb**	**01 25 28.0**	**+0.2**
ETOS	**Mallorca**	**3.80**	**328**	P	**Pn**	**01 25 57.7**	**+1.9**
	1.5nm,0.1s,SNR=11						
ETOS				S	**Sn**	**01 26 37.6**	**-2.4**
	0.2nm,0.1s,SNR=5.6						
EIBI	**Ibiza**	**4.05**	**309**	P	**Pn**	**01 26 01.3**	**+2.0**
	1.5nm,0.1s,SNR=6.9						
EIBI				S	**Sn**	**01 26 45.4**	**-0.8**
	0.1nm,0.1s,SNR=7.9						
CFON	**Fontmartina**	**5.69**	**337**	S	**Sn**	**01 27 22.4**	**-4.3**
	0.1nm,0.0s,SNR=7.9						
EPOB	**Poblet**	**5.86**	**326**	P	**Pn**	**01 26 24.7**	**+0.6**
	0.3nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**01 27 26.8**	**-4.0**
	0.0nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.89**	**293**	P	**Pn**	**01 26 27.8**	**+3.1**
	0.1nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**5.97**	**311**	P	**Pn**	**01 26 27.7**	**+1.9**
	0.1nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**6.14**	**332**	P	**Pn**	**01 26 28.2**	**+0.2**
	0.2nm,0.1s,SNR=7.9						
EMIR				S	**Sn**	**01 27 33.2**	**-4.6**
	0.3nm,0.1s,SNR=7.9						
CLLI	**Llivia**	**6.49**	**337**	P	**Pn**	**01 26 33.8**	**+1.0**
	0.1nm,0.1s,SNR=7.9						
CSOR	**Sort**	**6.69**	**332**	P	**Pn**	**01 26 36.9**	**+1.3**
	0.4nm,0.1s,SNR=7.9						

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*ISK **21** 01:39:53.8, 42°.85N×35°.70E, h7km, ML2.9/9*
*SIGU **21** 01:39:54.4±0.3, 42°.92N×35°.74E, h21km±5km, mb2.9/6*
*DDA **21** 01:39:55.4, 42°.76N×35°.86E, h26km, ML3.3*
ISC 21 01:39:51.4±1.5, **42°.95N**±0°.03×**35°.81E**±0°.04, **h3**km±11km, **n43**, σ1°**81**/61, **Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SINO	**SINOP_Merkez**	**1.03**	**206**	*i* P	**Pn**	**01 40 14.2**	**+1.4**
SINO				*i* S	**Sn**	**01 40 26.1**	**-1.6**
SINO				IAML_P			
	comp=Z,4μm,0.1s						
DIKM	**Dikmen**	**1.36**	**198**	PN	**Pg**	**01 40 18.0**	**+0.6**
DIKM				SN	**Sn**	**01 40 35.7**	**-0.1**
DIKM	**D

ERBA	**Erbaa**	**2.37 162**	*i* P		**Pn**	**01 40 33.0**	**+1.8**
ERBA			IAML_P				
comp=Z,429nm,0.1s							
ILGA	**Ilgaz**	**2.45 220**	*i* P		**Pb**	**01 40 35.5**	**-0.7**
ILGA			IAML_P				
comp=Z,526nm,0.2s							
ORDU	**Ordu-Boztepe**	**2.48 141**	*i* P		**Pn**	**01 40 31.2**	**-1.5**
KURC	**Kurucasile-Bar**	**2.52 245**	PN		**Pn**	**01 40 34.7**	**+1.4**
TOKA	**Tokat**	**2.67 169**	*i* P		**Pn**	**01 40 38.1**	**+2.8**
TOKA			IAML_P				
comp=Z,195nm,0.1s							
TOKT	**Tokat**	**2.68 168**	PN		**Pn**	**01 40 37.8**	**+2.3**
COAL	**Corum-Alaca**	**2.76 193**	*i* P		**Pb**	**01 40 39.3**	**-2.1**
COAL			IAML_P				
comp=Z,67nm,0.2s							
CORM	**Corum**	**2.90 198**	PN		**Pn**	**01 40 40.3**	**+1.7**
BTIN	**Bartın**	**2.95 245**	*i* P		**Pn**	**01 40 40.6**	**+1.5**
BTIN			*i* S		**Sn**	**01 41 13.3**	**-1.7**
SVSK	**Karacayir**	**3.15 163**	PN		**Pn**	**01 40 44.5**	**+2.6**
DELI	**KIRIKKALE**	**3.27 206**	*i* P		**Pn**	**01 40 45.5**	**+1.9**
DELI			*i* S		**Sn**	**01 41 23.1**	**-0.1**
DELI			IAML_P				
comp=Z,233nm,0.2s							
SUSE	**Susehri**	**3.27 146**	*i* P		**Pn**	**01 40 43.2**	**-0.6**
CDAG	**Cicekdag**	**3.49 199**	*i* P		**Pn**	**01 40 49.7**	**+3.0**
CDAG			IAML_P				
comp=Z,82nm,0.1s							
BCAM	**Yenicaga**	**3.51 234**	*i* P		**Pn**	**01 40 49.8**	**+2.8**
CUSAR	**Sarkisla-SIVAS**	**3.54 175**	*i* P		**Pn**	**01 40 48.5**	**+1.1**
CUSAR			*i* S		**Sn**	**01 41 29.0**	**-0.9**
KTUT	**Trabzon**	**3.54 122**	PN		**Pn**	**01 40 51.1**	**+3.8**
MACK	**Trabzon**	**3.57 123**	*i* P		**Pn**	**01 40 49.9**	**+2.2**
MACK			*i* S		**Sn**	**01 41 27.7**	**-2.7**
SIRC	**Yozgat**	**3.64 188**	*i* P		**Pn**	**01 40 51.6**	**+2.8**
SIRC			IAML_P				
comp=Z,152nm,0.2s							
KELT	**Kelkit**	**3.81 136**	*e*P		**Pn**	**01 40 53.3**	**+2.2**
baz=153							
KELT	**Kelkit**	**3.81 136**	*i* P		**Pn**	**01 40 53.7**	**+2.5**
KELT			*i* S		**Sn**	**01 41 34.3**	**-2.2**
KELT			IAML_P				
comp=Z,185nm,0.3s							
YIGI	**Dzce**	**3.81 240**	*i* P		**Pn**	**01 40 53.9**	**+2.9**
YIGI			IAML_P				
comp=Z,102nm,0.2s							
KIBS	**BOLU**	**3.89 231**	*i* P		**Pn**	**01 40 54.7**	**+2.5**
KIBS			IAML_P				
comp=Z,180nm,0.2s							
BBAL	**Bala**	**3.96 212**	*i* P		**Pn**	**01 40 55.3**	**+2.1**
BBAL			*i* S		**Sn**	**01 41 39.6**	**-0.5**
BBAL			IAML_P				
comp=Z,81nm,0.1s							
BAYT	**Aydıntepe-Bayb**	**4.13 127**	PN		**Pn**	**01 40 59.3**	**+3.8**
REFA	**Refahiye_ERZN**	**4.19 147**	*i* P		**Pn**	**01 40 55.6**	**-0.7**
SAHE	**Sakarya_HENDEK**	**4.25 242**	*i* P		**Pn**	**01 40 59.5**	**+2.5**
KKUL	**Konya-Kulu**	**4.36 211**	*i* P		**Pn**	**01 41 01.1**	**+2.4**
KKUL			*i* S		**Sn**	**01 41 48.3**	**-1.7**
KKUL			IAML_P				
comp=Z,106nm,0.1s							

BJI 21 01:50:57.8±0.0, 37°.54N×102°.23E, h7km, ML3.5/14, Ms3.3/2, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.94**	**138**	Pg	Pn	01 51 32.3	+0.9
LZH				Sg	Sb	01 51 58.6	+0.4
LZH				smax	smax		
comp=N,790nm,1.0s							
LZH				smax	smax		
comp=E,840nm,1.1s							
GTA	**Gaotai**	**2.66**	**315**	Pn	Pn	01 51 41.3	+0.1
GTA				Pg	Pb	01 51 43.8	-2.1
GTA				Sg	Sb	01 52 17.9	-0.9
GTA				smax	smax		
comp=N,350nm,0.7s							
GTA				smax	smax		
comp=E,340nm,0.9s							
XAN	**Xi'an**	**6.46**	**121**	Pn	Pn	01 52 38.6	+5.2
XAN				Sg	Sg	01 54 22.0	-3.3
XAN				smax	smax		
comp=N,21nm,0.8s							
XAN				smax	smax		
comp=E,18nm,0.8s							
WMQ	**Urumqi**	**12.68**	**304**	*e*P	Pn	01 53 59.6	+1.0

MAN 21 02:18:08.3, 12°.55N×123°.59E, h15km, mb4.3, ML3.1, MS2.9, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.20**	**171**	⇑*e*P	Pb	02 18 13.8	+0.2
MMPH				*i* S	Sb	02 18 18.6	+1.5
CNP	**Cataraman**	**1.05**	**92**	*e*P	Pb	02 18 27.6	-0.5
CNP				*e*S	Sn	02 18 45.5	+2.8
PVCP	**Virac**	**1.17**	**28**	*e*P	Pn	02 18 28.7	-1.5
PVCP				*e*S	Sg	02 18 46.3	+0.1
AUQP	**San Andres**	**1.18**	**311**	*e*P	Pn	02 18 29.4	-0.9
AUQP				*e*S	Sg	02 18 48.8	+2.3
BOAC	**Boac**	**1.93**	**298**	*e*P	Pn	02 18 37.8	-2.8
BOAC				*e*S	Sb	02 19 06.2	-0.8
PLP	**Palo**	**1.94**	**135**	⇑*i*P	Pn	02 18 40.4	-0.2
PLP				*i* S	Pb	02 18 43.5	+0.2
GUIM	**Jordan**	**2.15**	**207**	*e*P	Pn	02 18 44.1	+0.5
GUIM				*e*S	Sn	02 19 11.1	+1.0
LLP	**Lapu-Lapu**	**2.25**	**171**	*e*P	Pn	02 18 46.2	+1.2
LLP				*e*S	Sn	02 19 13.4	+0.9

BJI ***21*** *02:21:14.5±0.0, 51°.19N×156°.91E, h141km, mb4.9/54, mB4.9/35*
KRSC ***21*** *02:21:14.7±1.9, 50°.88N×157°.11E, h143km±13km, ML5.5, FELT [II] at Petropavlovsk.*
MOS ***21*** *02:21:16.7±0.9, 51°.03N×156°.83E, h151km, mb4.7/24, Error ellipse: s-maj=7.8km s-min=3.2km az=74.6*
MOS Felt (II) at Severo-Kuril'sk.
ISCJB ***21*** *02:21:16.7±0.3, 51°.05N±0°.03×156°.78E±0°.05, h146km±2km, mb4.6/101, Error ellipse: s-maj=6.5km s-min=2.8km az=137.1*
IDC ***21*** *02:21:17.2±0.6, 51°.10N×156°.67E, h135km±4km, mb4.1/30, mb1 4.3/36, mb1mx4.2/43, mbtmp4.6/36, MS3.1/8, Ms1 3.1/8, ms1mx2.8/33, Error ellipse: s-maj=10.7km s-min=7.3km az=144.0*
NEIC ***21*** *02:21:17.8±1.4, 51°.10N×156°.69E, h142km±6km, mb4.6/128, Error ellipse: s-maj=17.7km s-min=11.7km az=137.0*

ISC 21 02:21:17.0±0.4, 51°.00N±0°.05×156°.96E±0°.04, h140km±3km, h139km:pP-P, n299, σ1943/362, mb4.5/101, 14C-8D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.48**	**349**	*e*P	**Pn**	**02 21 37.7**	**+0.8**
PAU				*e*S	**Sn**	**02 21 53.1**	**+0.9**
PAU	**Pauzhetka**	**0.48**	**349**	PN	**Pn**	**02 21 37.7**	**+0.8**
PAU				S	**Sn**	**02 21 53.1**	**+0.9**
SKR	**Severo-Kuril's**	**0.62**	**239**	*i* P	**Pn**	**02 21 37.6**	**-0.1**
SKR				*e*S	**Sn**	**02 21 52.8**	**-0.8**
SKR	**Severo-Kuril's**	**0.62**	**239**	⇓*i*PN	**Pn**	**02 21 37.7**	**-0.1**
SKR				*i* S	**Sn**	**02 21 52.7**	**-0.8**
SKR				pmax	pmax		
comp=Z,4μm,0.6s							
SKR				smax	smax		
comp=E,48μm,0.6s							
SKR				smax	smax		
comp=N,27μm,0.3s							
ALID	**Alaid**	**0.90**	**262**	*i* P	**Pn**	**02 21 40.3**	**+0.3**
ALID				*e*S	**Sn**	**02 21 57.0**	**-0.5**
ALID	**Alaid**	**0.90**	**262**	PN	**Pn**	**02 21 40.3**	**+0.3**
ALID				S	**Sn**	**02 21 57.0**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.07**	**40**	*i* P	**Pn**	**02 21 41.6**	**+0.3**
KDTR				*e*S	**Sn**	**02 21 59.1**	**-0.8**
KDTR	**Khodutka, Kamc**	**1.07**	**40**	PN	**Pn**	**02 21 41.6**	**+0.3**
KDTR				S	**Sn**	**02 21 59.1**	**-0.8**
ASAK	**Asacha**	**1.50**	**23**	*e*P	**Pn**	**02 21 47.2**	**+1.4**
ASAK	**Asacha**	**1.50**	**23**	PN	**Pn**	**02 21 47.2**	**+1.4**
MTVR	**Mutnovka**	**1.67**	**27**	*e*P	**Pn**	**02 21 48.9**	**+1.2**
MTVR				*e*S	**Sn**	**02 22 12.4**	**+1.1**
MTVR	**Mutnovka**	**1.67**	**27**	PN	**Pn**	**02 21 48.9**	**+1.2**
MTVR				S	**Sn**	**02 22 12.4**	**+1.1**
GRL	**Gorelyy**	**1.70**	**24**	*i* P	**Pn**	**02 21 49.8**	**+1.8**
GRL	**Gorelyy**	**1.70**	**24**	PN	**Pn**	**02 21 49.8**	**+1.8**
RUS	**Russkaya**	**1.73**	**33**	*e*P	**Pn**	**02 21 48.7**	**+0.5**
RUS				*e*S	**Sn**	**02 22 12.1**	**-0.1**
RUS	**Russkaya**	**1.73**	**33**	PN	**Pn**	**02 21 48.7**	**+0.5**
RUS				S	**Sn**	**02 22 12.1**	**-0.1**
APC	**Apacha**	**1.93**	**4**	*i* P	**Pn**	**02 21 51.7**	**+1.2**
APC				*e*S	**Sn**	**02 22 17.8**	**+1.4**
APC	**Apacha**	**1.93**	**4**	PN	**Pn**	**02 21 51.7**	**+1.2**
APC				S	**Sn**	**02 22 17.8**	**+1.4**
KRMR	**Karymshinskiy**	**1.97**	**21**	*i* P	**Pn**	**02 21 52.3**	**+1.3**
KRMR				*e*S	**Sn**	**02 22 18.0**	**+0.8**
KRMR	**Karymshinskiy**	**1.97**	**21**	PN	**Pn**	**02 21 52.3**	**+1.3**
KRMR				S	**Sn**	**02 22 18.0**	**+0.8**
PEA0B	**Petropavlovsk-**	**2.16**	**12**	*e*Pn	**Pn**	**02 21 54.1**	**+0.8**
PEA0B				*e*Sn	**Sn**	**02 22 19.9**	**-1.4**
PETK	**Petropavlovsk-**	**2.16**	**12**	P	**Pn**	**02 21 54.5**	**+1.2**
comp=N,109nm,0.3s,baz=175,slow=11,SNR=1301							
PETK				S	**Sn**	**02 22 22.1**	**+0.7**
comp=N,27nm,0.3s,baz=154,slow=16,SNR=4.6							
PEA1	**Petropavlovsk-**	**2.17**	**12**	*e*Pn	**Pn**	**02 21 54.5**	**+1.1**
PEA1				*e*Sn	**Sn**	**02 22 22.1**	**+0.6**
PET	**Petropavlovsk**	**2.28**	**27**	*e*Pn	**Pn**	**02 21 55.5**	**+0.7**
PET				*e*Sn	**Sn**	**02 22 24.8**	**+0.9**
PET	**Petropavlovsk**	**2.28**	**27**	*i* P	**Pn**	**02 21 54.5**	**-0.3**
PET	**Petropavlovsk**	**2.28**	**27**	⇓*i*PN	**Pn**	**02 21 55.8**	**+1.0**
PET				*e*S	**Sn**	**02 22 22.6**	**-1.3**
PET				pmax	pmax		
comp=Z,632nm,0.3s							
PET				smax	smax		
comp=N,12μm,0.5s							
PET				smax	smax		
comp=E,5μm,0.6s							
DALK	**Dalny**	**2.32**	**28**	*e*P	**Pn**	**02 21 56.3**	**+1.1**
DALK				*e*S	**Sn**	**02 22 24.8**	**+0.1**
DALK	**Dalny**	**2.32**	**28**	PN	**Pn**	**02 21 56.3**	**+1.1**
DALK				S	**Sn**	**02 22 24.8**	**+0.1**
UGLR	**Uglovaya**	**2.49**	**27**	*e*P	**Pn**	**02 21 59.2**	**+1.7**
KOK	**Koryaka**	**2.52**	**24**	*i* P	**Pn**	**02 22 00.2**	**+2.4**
KOK	**Koryaka**	**2.52**	**24**	PN	**Pn**	**02 22 00.2**	**+2.4**
AVH	**Avacha**	**2.52**	**25**	*e*P	**Pn**	**02 21 59.7**	**+1.9**
AVH				*e*S	**Sn**	**02 22 30.8**	**+1.5**
AVH	**Avacha**	**2.52**	**25**	PN	**Pn**	**02 21 59.7**	**+1.9**
AVH				S	**Sn**	**02 22 30.8**	**+1.5**
SMAR	**Somma**	**2.54**	**26**	*e*P	**Pn**	**02 21 59.8**	**+1.7**
SMAR				*e*S	**Sn**	**02 22 31.4**	**+1.5**
SMAR	**Somma**	**2.54**	**26**	PN	**Pn**	**02 21 59.8**	**+1.7**
SMAR				S	**Sn**	**02 22 31.4**	**+1.5**
KRER	**Koryakskii**	**2.56**	**25**	*i* P	**Pn**	**02 22 00.3**	**+1.9**
KRER	**Koryakskii**	**2.56**	**25**	PN	**Pn**	**02 22 00.3**	**+1.9**
SDLR	**Sedlovina**	**2.57**	**27**	*e*P	**Pn**	**02 21 59.9**	**+1.4**
SDLR				*e*S	**Sn**	**02 22 30.9**	**+0.3**
SDLR	**Sedlovina**	**2.57**	**27**	PN	**Pn**	**02 21 59.9**	**+1.4**
SDLR				S	**Sn**	**02 22 30.9**	**+0.3**
KRX	**Arik**	**2.58**	**23**	*e*P	**Pn**	**02 22 00.4**	**+1.7**
KRX	**Arik**	**2.58**	**23**	PN	**Pn**	**02 22 00.4**	**+1.7**
NLC	**Nalytchevo**	**2.63**	**33**	*e*P	**Pn**	**02 21 58.9**	**-0.1**
NLC				*e*S	**Sn**	**02 22 29.3**	**-2.2**
NLC	**Nalytchevo**	**2.63**	**33**	PN	**Pn**	**02 21 58.9**	**-0.1**
NLC				S	**Sn**	**02 22 29.3**	**-2.2**
GNL	**Ganaly**	**2.77**	**12**	*i* P	**Pn**	**02 22 02.3**	**+1.4**
GNL	**Ganaly**	**2.77**	**12**	PN	**Pn**	**02 22 02.3**	**+1.4**
SPN	**Mys Shipunski**	**2.83**	**41**	*i* P	**Pn**	**02 22 02.1**	**+0.5**
SPN				*e*S	**Sn**	**02 22 34.1**	**-2.0**
SPN	**Mys Shipunski**	**2.83**	**41**	PN	**Pn**	**02 22 02.1**	**+0.5**
SPN				S	**Sn**	**02 22 34.1**	**-2.0**
KZV	**Kizimen**	**4.58**	**25**	*e*P	**Pn**	**02 22 25.6**	**+0.9**
KZV				*e*S	**Sn**	**02 23 18.2**	**+0.8**
KZV	**Kizimen**	**4.58**	**25**	PN	**Pn**	**02 22 25.6**	**+0.9**
KZV				S	**Sn**	**02 23 18.2**	**+0.8**
MKZ	**Mys Kozlova**	**4.59**	**37**	*e*P	**Pn**	**02 22 24.3**	**-0.3**
MKZ				*e*S	**Sn**	**02 23 14.1**	**-3.2**
MKZ	**Mys Kozlova**	**4.59**	**37**	PN	**Pn**	**02 22 24.3**	**-0.3**
MKZ				S	**Sn**	**02 23 14.1**	**-3.2**
TUMD	**Tumrok D**	**4.69**	**25**	*e*P	**Pn**	**02 22 27.1**	**+1.1**
TUMD				*e*S	**Sn**	**02 23 19.6**	**-0.2**
TUMR	**Tumrok**	**4.70**	**23**	*e*P	**Pn**	**02 22 28.0**	**+1.8**
TUMR	**Tumrok**	**4.70**	**23**	PN	**Pn**	**02 22 27.1**	**+0.9**
TUMR				S	**Sn**	**02 23 19.6**	**-0.5**
ESO	**Esso**	**5.04**	**11**	*e*P	**Pn**	**02 22 32.2**	**+1.6**
ESO	**Esso**	**5.04**	**11**	PN	**Pn**	**02 22 32.2**	**+1.6**
KPT	**Kopyto**	**5.34**	**20**	*e*P	**Pn**	**02 22 34.8**	**+0.1**
KPT	**Kopyto**	**5.34**	**20**	PN	**Pn**	**02 22 34.8**	**+0.1**
KIRR	**Kirishev**	**5.36**	**21**	*e*P	**Pn**	**02 22 36.5**	**+1.5**
KIRR	**Kirishev**	**5.36**	**21**	PN	**Pn**	**02 22 36.5**	**+1.5**
KOZ	**Kozyrevsk**	**5.36**	**18**	*e*P	**Pn**	**02 22 35.8**	**+1.0**
KOZ	**Kozyrevsk**	**5.36**	**18**	PN	**Pn**	**02 22 35.8**	**+1.0**
BZWR	**Bezymyannyi-We**	**5.40**	**22**	*e*P	**Pn**	**02 22 37.2**	**+1.6**
BZWR	**Bezymyannyi-We**	**5.40**	**22**	PN	**Pn**	**02 22 37.2**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**5.43**	**23**	*e*P	**Pn**	**02 22 37.4**	**+1.5**
BZGR	**Bezymyannyi-Gr**	**5.43**	**23**	PN	**Pn**	**02 22 37.4**	**+1.5**
LGNR	**Loginova**	**5.56**	**22**	*e*P	**Pn**	**02 22 39.4**	**+1.7**
LGNR	**Loginova**	**5.56**	**22**	PN	**Pn**	**02 22 39.4**	**+1.7**
SRDR	**Sredinnyy**	**5.57**	**16**	*e*P	**Pn**	**02 22 38.9**	**+1.1**
SRDR	**Sredinnyy**	**5.57**	**16**	PN	**Pn**	**02 22 38.9**	**+1.1**
CIRR	**Tsirk**	**5.60**	**22**	*e*P	**Pn**	**02 22 39.8**	**+1.6**
CIRR	**Tsirk**	**5.60**	**22**	PN	**Pn**	**02 22 39.8**	**+1.6**
KRSR	**Krestovskiy**	**5.65**	**21**	*e*P	**Pn**	**02 22 39.3**	**+0.5**
KRSR	**Krestovskiy**	**5.65**	**21**	PN	**Pn**	**02 22 39.3**	**+0.5**
KLY	**Klyuchi**	**5.76**	**21**	*e*P	**Pn**	**02 22 42.3**	**+2.2**
KLY	**Klyuchi**	**5.76**	**21**	PN	**Pn**	**02 22 42.3**	**+2.2**
BDR	**Baidarnaya**	**6.12**	**23**	*e*P	**Pn**	**02 22 46.3**	**+1.2**
BDR	**Baidarnaya**	**6.12**	**23**	PN	**Pn**	**02 22 46.3**	**+1.2**
SRKR	**Sorokina**	**6.19**	**22**	*e*P	**Pn**	**02 22 47.0**	**+1.0**
SRKR	**Sorokina**	**6.19**	**22**	PN	**Pn**	**02 22 47.0**	**+1.0**
SMKR	**Semkarok**	**6.20**	**24**	*e*P	**Pn**	**02 22 46.4**	**+0.3**
SMKR	**Semkarok**	**6.20**	**24**	PN	**Pn**	**02 22 46.4**	**+0.3**
KBTR	**Krutoberegovo**	**6.27**	**31**	*e*P	**Pn**	**02 22 47.1**	**0.0**
KBTR	**Krutoberegovo**	**6.27**	**31**	PN	**Pn**	**02 22 47.1**	**0.0**
KBG	**Krutoberegovo**	**6.28**	**31**	*e*P	**Pn**	**02 22 47.7**	**+0.7**
KBG				*e*S	**Sn**	**02 23 55.8**	**-1.7**
KBG	**Krutoberegovo**	**6.28**	**31**	PN	**Pn**	**02 22 47.7**	**+0.7**
KBG				S	**Sn**	**02 23 55.8**	**-1.7**
BKI	**Bering**	**6.87**	**49**	*e*P	**Pn**	**02 22 54.3**	**-0.7**
BKI				*e*S	**Sn**	**02 24 04.9**	**-6.8**
BKI	**Bering**	**6.87**	**49**	PN	**Pn**	**02 22 54.3**	**-0.7**
PALN	**Palana**	**8.29**	**11**	*e*P	**Pn**	**02 23 14.9**	**+0.9**
PALN	**Palana**	**8.29**	**11**	PN	**Pn**	**02 23 14.9**	**+0.9**
KUR	**Kuril'sk**	**8.38**	**230**	⇑*i*PN	**Pn**	**02 23 14.6**	**-0.8**
KUR				*e*S	**Sn**	**02 24 46.4**	**-2.0**
KUR				pmax	pmax		
comp=Z,104nm,0.3s							
KUR				pmax	pmax		
comp=E,43nm,0.4s							
KUR				pmax	pmax		
comp=N,54nm,0.2s							
KUR				smax	smax		
comp=N,83nm,0.7s							
KUR				smax	smax		
comp=E,71nm,0.7s							
OSSR	**Ossora**	**8.97**	**21**	*e*P	**Pn**	**02 23 24.7**	**+1.6**
OSSR	**Ossora**	**8.97**	**21**	PN	**Pn**	**02 23 24.7**	**+1.6**
TYV	**Tymovskoe**	**9.04**	**275**	*e*PN	**Pn**	**02 23 25.8**	**+1.7**
TYV				*e*S	**Sn**	**02 25 07.4**	**+3.3**
TYV				pmax	pmax		
comp=Z,200nm,2.2s							
TYV				pmax	pmax		
comp=Z,77nm,1.0s							
TYV				smax	smax		
comp=N,7.0nm,0.6s							
MA2	**Magadan**	**9.29**	**340**	P	**Pn**	**02 23 26.4**	**-1.0**
comp=N,1.5nm,0.3s,baz=114,slow=7.5,SNR=13							
MA2	**Magadan**	**9.29**	**340**	*e*Pn	**Pn**	**02 23 26.1**	**-1.2**
MA2	**Magadan**	**9.29**	**340**	*de*PN	**Pn**	**02 23 27.4**	**0.0**
MA2				pmax	pmax		
comp=Z,52nm,1.7s							
UGL	**Uglegorsk**	**9.78**	**264**	*e*PN	**Pn**	**02 23 36.0**	**+2.0**
UGL				S	**Sn**	**02 25 24.1**	**+2.1**
UGL				pmax	pmax		
comp=Z,600nm,2.2s							
UGL				pmax	pmax		
comp=Z,138nm,1.2s							
YSS	**Yuzh-Sakhalins**	**10.18**	**252**	*e*Pn	**Pn**	**02 23 38.3**	**-1.0**
YSS	**Yuzh-Sakhalins**	**10.18**	**252**	*de*PN	**Pn**	**02 23 40.4**	**+1.1**
YSS				*e*S	**Sn**	**02 25 33.7**	**+2.0**
YSS				pmax	pmax		
comp=Z,90nm,1.0s							
YSS				pmax	pmax		
comp=E,110nm,1.1s							
YSS				MLR	MLR		
comp=Z,100nm,11.0s							
YUK	**Yuzh-Kuril'sk**	**10.23**	**231**	⇑*i*PN	**Pn**	**02 23 37.4**	**-2.7**
YUK				pmax	pmax		
comp=E,282nm,0.3s							
YUK				pmax	pmax		
comp=Z,800nm,0.3s							
YUK				pmax	pmax		
comp=N,45nm,0.2s							
NKL	**Nikolayevsk**	**10.25**	**288**	*e*PN	**Pn**	**02 23 41.0**	**+0.8**
NKL				pmax	pmax		
comp=Z,16nm,0.9s							
GRPR	**Tuman**	**10.31**	**231**	⇑*i*PN	**Pn**	**02 23 38.1**	**-3.0**
GRPR				pmax	pmax		
comp=E,138nm,0.4s							
GRPR				pmax	pmax		
comp=Z,285nm,0.4s							
GRPR				pmax	pmax		
comp=N,115nm,0.3s							
GLVR	**Golovnino**	**10.62**	**231**	*e*PN	**Pn**	**02 23 41.6**	**-3.6**
GLVR				pmax	pmax		
comp=Z,142nm,0.4s							
TILK	**Tilichiki**	**10.78**	**25**	*e*P	**Pn**	**02 23 47.7**	**+0.5**
TILK	**Tilichiki**	**10.78**	**25**	PN	**Pn**	**02 23 47.7**	**+0.5**
ASAJ	**Asahikawa**	**11.88**	**240**	P	**Pn**	**02 24 01.8**	**-0.2**
comp=Z,11nm,0.3s,baz=78,slow=11,SNR=37							
SEY	**Seymchan**	**12.22**	**350**	P	**Pn**	**02 24 06.5**	**+0.4**
comp=Z,0.4nm,0.3s,baz=165,slow=11,SNR=14							
SEY	**Seymchan**	**12.22**	**350**	*ce*PN	**Pn**	**02 24 06.3**	**+0.2**
GRNR	**Gornyy**	**12.97**	**277**	*e*PN	**Pn**	**02 24 16.1**	**+0.2**
GRNR				pmax	pmax		
comp=Z,49nm,1.2s							
ERM	**Erimo**	**13.06**	**232**	*ce*PN	Pn	02 24 12.8	-4.4
ERM				pmax	pmax		
comp=Z,39nm,0.7s							
TEY	**Ternei**	**14.85**	**254**	⇑*i*P	**Pn**	**02 24 40.6**	**+0.8**
TEY				*e*S	**Sn**	**02 27 23.7**	**-0.5**
TEY				pmax	pmax		
comp=Z,70nm,1.5s							
TEY				pmax	pmax		
comp=E,60nm,1.4s							
TEY				pmax	pmax		
comp=N,20nm,1.7s							
KLR	**Kul'dur**	**16.24**	**274**	P	**Pn**	**02 24 58.0**	**+1.0**
comp=N,1.1nm,0.3s,baz=62,slow=12,SNR=25							
KLR				LR	LR	02 32 26.4	
comp=N,46nm,19.4s,baz=110,slow=42							
KLR	**Kul'dur**	**16.24**	**274**	*c i*P	**P**	**02 24 58.1**	**+0.7**
KLR				pmax	pmax		
comp=Z,40nm,0.9s							
BILL	**Bilibino**	**17.69**	**12**	*e*P	**P**	**02 25 13.0**	**-0.2**
comp=Z,38nm,0.6s							
BILL	**Bilibino**	**17.69**	**12**	*d i*P	**P**	**02 25 13.3**	**+0.1**
BILL				pmax	pmax		
comp=Z,28nm,0.4s							
USA0B	**Ussuriysk Arra**	**18.11**	**258**	*e*P	**P**	**02 25 16.7**	**-1.2**
comp=Z,43nm,1.0s							
USRK	**Ussuriysk Ar.**	**18.11**	**258**	P	**P**	**02 25 16.8**	**-1.1**
comp=Z,0.8nm,0.3s,baz=66,slow=11,SNR=38							
ZEA	**Zeya**	**18.28**	**290**	*e*P	**P**	**02 25 19.2**	**-0.5**
ZEA				pmax	pmax		
comp=Z,35nm,1.0s							
YAK	**Yakutsk**	**18.50**	**317**	*e*P	**P**	**02 25 20.7**	**-1.3**
comp=Z,48nm,0.7s							
YAK	**Yakutsk**	**18.50**	**317**	*e*P	**P**	**02 25 20.6**	**-1.4**
YAK				*e*S	**S**	**02 28 40.3**	**-5.3**
MDJ	**Mudanjiang**	**19.39**	**261**	P	**P**	**02 25 30.4**	**-1.4**
MDJ				pmax	pmax		
comp=Z,92nm,0.9s							
MDJ	**Mudanjiang**	**19.39**	**261**	*e*P	**P**	**02 25 30.7**	**-1.1**
comp=Z,69nm,0.8s							
MJB9	**Matsu-Tunnel**	**19.72**	**230**	*e*P	**P**	**02 25 35.9**	**+0.4**
comp=Z,162nm,0.8s							
MAJO	**Matsushiro**	**19.72**	**230**	*e*P	**P**	**02 25 36.3**	**+0.7**
comp=Z,159nm,0.8s							
MAJO	**Matsushiro**	**19.72**	**230**	*c i*P	**P**	**02 25 36.0**	**+0.5**
MAJO				pmax	pmax		
comp=Z,107nm,0.5s							
MAT	**Matsushiro**	**19.72**	**230**	P	**P**	**02 25 36.2**	**+0.7**
MAT				S	**S**	**02 29 13.2**	**+3.0**
MJAR	**Matsushiro Arr**	**19.72**	**230**	P	**P**	**02 25 36.3**	**+0.8**
comp=Z,1.3nm,0.3s,baz=19,slow=10,SNR=228							
INU	**Inuyama**	**21.25**	**230**	*e*P	**P**	**02 25 52.0**	**+0.1**
comp=Z,202nm,1.0s							
CN2	**Changchun**	**22.38**	**264**	*e*P	**P**	**02 26 01.5**	**-2.1**
CN2				pmax	pmax		
comp=Z,20nm,0.7s							
HIA	**Hailar**	**23.76**	**280**	*e*P	**P**	**02 26 15.4**	**-0.9**
comp=Z,36nm,0.8s							
HIA	**Hailar**	**23.76**	**280**	*e*P	**P**	**02 26 15.4**	**-0.9**
HIA				pmax	pmax		
comp=Z,36nm,0.8s							
TIXI	**Tiksi**	**24.25**	**339**	P	**P**	**02 26 19.6**	**-0.9**
comp=Z,6.7nm,0.5s,baz=137,slow=11,SNR=10							
TIXI	**Tiksi**	**24.25**	**339**	*e*P	**P**	**02 26 19.1**	**-1.3**

H11S3	WAKE ISLAND Hy	33.34	163	T	T	03 02 58.9
	baz=348,slow=76,SNR=1220					
H11S2	WAKE ISLAND Hy	33.35	163	T	T	03 02 59.5
	baz=348,slow=76,SNR=949					
ZAK	Zakamensk	33.38	290	eP	P	02 27 41.0 -0.8
ZAK				pmax	pmax	
	comp=Z,8.0nm,1.2s					
NJ2	Nanjing	33.74	251	eP	P	02 27 45.1 +0.1
NJ2				pmax	pmax	
	comp=Z,13nm,0.5s					
NRIK	Noril'sk	36.53	326	LR	LR	02 45 58.5
	comp=Z,29nm,18.4s,baz=51,slow=41					
INK	Inuvik	36.71	36	P	P	02 28 11.1 +1.2
	comp=Z,10nm,0.6s,baz=288,slow=7.3,SNR=44					
INK				pP	pP	02 28 39.5 -0.7
	comp=Z,3.5nm,0.7s,baz=341,slow=3.3,SNR=2.7					
INK	Inuvik	36.71	36	eP	P	02 28 10.7 +0.8
	comp=Z,10.0nm,0.6s					
INK				epP	pP	02 28 39.5 -0.7
INK	Inuvik	36.71	36	eP	P	02 28 10.7 +0.8
INK				e*PP	pP	02 28 39.5 -0.7
INK				pmax	pmax	
	comp=Z,10.0nm,0.6s					
WHN	Wuhan	37.52	254	P	P	02 28 16.6 -0.6
BESE	Bessie Mountai	38.45	51	eP	P	02 28 26.8 +2.1
	comp=Z,3.7nm,0.7s					
XAN	Xi'an	38.49	263	P	P	02 28 29.1 +3.7
XAN				pP	pP	02 28 59.1 +3.0
XAN				pmax	pmax	
	comp=Z,5.0nm,0.5s					
XAN				pmax	pmax	
	comp=Z,91nm,4.3s					
LZH	Lanzhou	40.38	269	eP	P	02 28 40.8 -0.4
LZH				pP	pP	02 29 11.8 -0.2
LZH				sP	sP	02 29 27.8 0.0
LZH				pmax	pmax	
	comp=Z,16nm,1.1s					
LZH				pmax	pmax	
	comp=Z,130nm,4.2s					
WRAK	Wrangell Islan	40.49	54	eP	P	02 28 44.2 +2.6
	comp=Z,9.9nm,0.8s					
DLBC	Dease Lake	40.86	50	P	P	02 28 47.0 +2.3
	comp=Z,4.7nm,0.6s,baz=304,slow=8.1,SNR=12					
GTA	Gaotai	40.91	276	eP	P	02 28 45.1 -0.4
GTA				pP	pP	02 29 18.5 +2.4
GTA				sP	sP	02 29 35.4 +3.6
GTA				pmax	pmax	
	comp=Z,5.0nm,1.0s					
ZAA1	Zalesovo Array	42.29	303	eP	P	02 28 54.4 -1.9
ZAA1				ePcP	PcP	02 30 46.7 -0.6
ZALV	Zalesovo Beam	42.29	303	P	P	02 28 54.4 -1.9
	comp=Z,4.6nm,0.8s,baz=58,slow=7.5,SNR=12					
ZALV				PcP	PcP	02 30 46.7 -0.6
	comp=Z,1.1nm,0.5s,baz=46,slow=4.2,SNR=4.1					
NVS	Novosibirsk	42.72	305	⇑iP	P	02 28 59.4 -0.3
NVS				pmax	pmax	
	comp=Z,19nm,0.8s					
NVS				pmax	pmax	
	comp=N,8.0nm,0.8s					
NVS				pmax	pmax	
	comp=E,15nm,0.8s					
DGZ	Jazzator, Alta	42.86	297	iP	P	02 29 00.1 -1.1
DGZ				pmax	pmax	
	comp=Z,3.0nm,1.0s					
CD2	Chengdu	43.82	264	eP	P	02 29 07.3 -1.7
CD2				pmax	pmax	
	comp=Z,20nm,0.5s					
GYA	Guiyang	45.14	257	⇓iP	P	02 29 19.6 0.0
GYA				pP	pP	02 29 51.8 +0.8
GYA				sP	sP	02 30 07.4 +0.8
GYA				pmax	pmax	
	comp=Z,20nm,0.9s					
GYA				pmax	pmax	
	comp=Z,90nm,4.2s					
WMQ	Urumqi	45.83	289	eP	P	02 29 24.9 +0.1
WMQ				pP	pP	02 29 51.0 -5.0
WMQ				pmax	pmax	
	comp=Z,14nm,1.3s					
WMQ				pmax	pmax	
	comp=Z,110nm,4.7s					
WMQ				LR	LR	
	comp=Z,100nm,27.1s					
WMQ				LR	LR	
	comp=Z,320nm,29.3s					
WMQ				LR	LR	
	comp=Z,69nm,25.7s					
RES	Resolute Bay	45.98	21	P	P	02 29 26.1 +0.7
	comp=Z,7.7nm,0.6s,baz=316,slow=4.9,SNR=42					
YKA	Yellowknife Ar	46.02	40	P	P	02 29 27.1 +1.3
	comp=Z,3.3nm,0.6s,baz=296,slow=7.4,SNR=20					
YKA				pP	pP	02 29 56.6 -0.7
	comp=Z,1.3nm,0.7s,baz=303,slow=7.8,SNR=3.6					
YKB5	Yellowknife Ar	46.02	40	eP	P	02 29 27.1 +1.3
YKB5				epP	pP	02 29 56.6 -0.7
KURK	Kurchatov	47.20	302	eP	P	02 29 33.9 -1.2
	comp=Z,45nm,1.4s					
KURK	Kurchatov	47.20	302	eP	P	02 29 33.9 -1.2
KURK				pmax	pmax	
	comp=Z,45nm,1.4s					
MK32	Makanchi Array	47.31	296	eP	P	02 29 35.0 -1.3
MK32				epP	pP	02 30 06.8 -0.8
MKAR	Makanchi Array	47.31	296	P	P	02 29 35.0 -1.3
	comp=Z,2.1nm,0.5s,baz=63,slow=9.0,SNR=25					
MKAR				pP	pP	02 30 06.8 -0.8
	comp=Z,2.6nm,0.7s,baz=61,slow=9.9,SNR=3.2					
MKAR				LR	LR	02 49 49.1
	comp=Z,33nm,19.0s,baz=34,slow=36					
MAKZ	Makanchi	47.48	296	eP	P	02 29 36.1 -1.4
MAKZ	Makanchi	47.48	296	eP	P	02 29 36.1 -1.4
KMI	Kunming	48.53	259	P	P	02 29 45.8 -0.3
KMI				pmax	pmax	
	comp=Z,28nm,0.6s					
BRVK	Borovoye	50.20	308	eP	P	02 29 55.7 -2.4
	comp=Z,6.8nm,0.7s					
BRVK	Borovoye	50.20	308	ceP	P	02 29 58.0 -0.1
BRVK				pmax	pmax	
	comp=Z,4.0nm,0.6s					
SLVN	Son La	50.62	255	eP	P	02 30 02.2 +0.5
	comp=Z,24nm,0.8s					
DAG	Danmarks Havn	52.47	359	iP	P	02 30 14.4 -0.2
DAG				pmax	pmax	
	comp=Z,6.0nm,0.8s					
DAG	Danmarks Havn	52.47	359	iP	P	02 30 14.4 -0.2
	comp=Z,8.6nm,0.8s					
PANO	Nakornpanom	53.40	251	P	P	02 30 24.3 +2.1
	comp=Z,0.5nm,1.3s,comp=Z,48nm					
NONG	Nongkai	53.57	253	P	P	02 30 25.0 +1.5
	comp=Z,0.6nm,1.6s					
YBH	Yreka Blue Hor	53.60	66	P	P	02 30 26.3 +2.8
	comp=Z,1.9nm,0.6s,baz=349,slow=7.4,SNR=7.7					
YBH				pP	pP	02 30 55.0 -0.8
	comp=Z,1.5nm,0.7s,baz=220,slow=3.2,SNR=2.6					
ARU	Arti	53.62	317	diP	P	02 30 20.7 -2.6
ARU				*PP	pP	02 30 54.6 -0.9
ARU						02 31 23.1
ARU				S	S	02 37 40.9 -4.7
ARU				pmax	pmax	
	comp=Z,12nm,1.8s					
SKNT	Sakolnakorn	53.91	251	P	P	02 30 27.2 +1.2
	comp=Z,26nm,0.7s					
AAK	Ala-Archa	54.25	296	eP	P	02 30 27.6 -0.7
	comp=Z,3.9nm,0.7s					
AAK	Ala-Archa	54.25	296	eP	P	02 30 27.6 -0.7
AAK				pmax	pmax	
	comp=Z,4.0nm,0.7s					
PAYA	Payao	54.58	257	P	P	02 30 32.2 +1.4
	comp=Z,137μm,0.8s,comp=Z,989μm					
ARA0	ARCESS Array S	54.66	341	eP	P	02 30 28.9 -1.8
ARCES	ARCESS Array B	54.66	341	P	P	02 30 28.9 -1.8
	comp=Z,1.2nm,0.7s,baz=39,slow=7.2,SNR=8.0					
KHON	Khomkaen	55.10	252	P	P	02 30 36.3 +1.8
LAMP	Lampang	55.36	256	P	P	02 30 37.8 +1.4
	comp=Z,86μm,0.8s,comp=Z,719μm					
UTTA	Uttaradit	55.39	255	P	P	02 30 38.7 +2.1
	comp=Z,65μm,0.8s					
KSH	Kashi	55.40	292	P	P	02 30 39.8 +3.2
KSH				pP	pP	02 31 12.0 +3.0
KSH				PP	PP	02 32 44.3 +2.8
KSH				S	S	02 38 10.3 0.0
KSH				SS	SS	02 41 57.3 +1.0
KSH				pmax	pmax	
	comp=Z,21nm,1.1s					
KSH				pmax	pmax	
	comp=Z,230nm,6.4s					
KSH				LR	LR	
	comp=Z,360nm,8.8s					
KSH				LR	LR	
	comp=Z,190nm,7.2s					
KSH				LR	LR	
	comp=Z,220nm,17.1s					
CMMT	Chiang Mai	55.56	257	P	P	02 30 38.6 +0.8
	comp=Z,39nm,0.8s,comp=Z,343nm					
CHTO	Chiang Mai	55.56	257	eP	P	02 30 38.2 +0.4
	comp=Z,51nm,0.7s					
CHTO	Chiang Mai	55.56	257	eP	P	02 30 38.2 +0.4
CHTO				pmax	pmax	
	comp=Z,51nm,0.7s					
CM31	Chiang Mai Arr	55.83	257	eP	P	02 30 40.5 +0.7
	comp=Z,32nm,0.7s					
CMAR	Chiang Mai Arr	55.83	257	P	P	02 30 41.0 +1.3
	comp=Z,24nm,0.8s,baz=28,slow=7.0,SNR=64					
FFC	Flin Flon	55.88	43	eP	P	02 30 40.8 +1.2
	comp=Z,3.3nm,0.8s					
FFC	Flin Flon	55.88	43	iP	P	02 30 41.2 +1.6
CHAI	Chaiyaphum	55.94	252	P	P	02 30 41.6 +1.1
	comp=Z,44μm,0.8s					
PBKT	Sadao Pong	56.04	253	P	P	02 30 43.1 +1.9
	comp=Z,9.1nm,0.8s					
SUMG	Summit	56.25	6	eP	P	02 30 43.0 +0.6
	comp=Z,15nm,0.9s					
SUMG	Summit	56.25	6	⇓iP	P	02 30 42.9 +0.4
SUMG				pmax	pmax	
	comp=Z,43nm,1.0s					
SUMG	Summit	56.25	6	⇓iP	P	02 30 42.9 +0.4
	comp=Z,43nm,1.0s					
JIRN	Jiri	57.14	274	eP	P	02 30 49.3 -0.1
	comp=Z,93nm,0.7s					
GUN	Gumba	57.16	275	eP	P	02 30 49.0 -0.5
	comp=Z,83nm,0.7s					
KKN	Kakani	57.62	275	eP	P	02 30 52.4 -0.2
	comp=Z,85nm,0.6s					
ABKAR	Akbulak array	57.66	310	eP	P	02 30 50.7 -1.5
	comp=Z,4.4nm,0.8s					
PKI	Pulchoki	57.70	275	eP	P	02 30 52.5 -0.7
	comp=Z,20nm,0.4s					
PKIN	Phulchoki	57.70	275	eP	P	02 30 53.0 -0.2
	comp=Z,29nm,0.5s					
DMN	Daman	57.86	275	eP	P	02 30 54.4 +0.1
	comp=Z,107nm,0.8s					
DANN	Dangsing	58.19	277	eP	P	02 30 56.4 -0.2
	comp=Z,91nm,0.7s					
NV01	Mina Array Sit	58.31	67	eP	P	02 30 59.4 +2.2
NV01				epP	pP	02 31 29.9 -0.2
NVAR	Mina Array Bea	58.31	67	P	P	02 30 59.4 +2.2
	comp=Z,1.4nm,0.4s,baz=300,slow=7.5,SNR=11					
NVAR				pP	pP	02 31 29.9 -0.2
	comp=Z,1.8nm,0.8s,baz=293,slow=7.5,SNR=5.2					
KOLN	Koldanda	58.70	276	eP	P	02 30 59.7 -0.3
	comp=Z,90nm,0.9s					
SCO	Scoresbysund	58.82	360	eP	P	02 30 59.8 -0.1
	comp=Z,3.0nm,0.6s					
SCO	Scoresbysund	58.82	360	iP	P	02 31 00.2 +0.2
SCO				pmax	pmax	
	comp=Z,3.0nm,0.6s					
SCO	Scoresbysund	58.82	360	iP	P	02 31 00.2 +0.2
	comp=Z,2.9nm,0.6s					
PYUN	Piuthan	58.85	277	eP	P	02 31 00.7 -0.4
	comp=Z,150nm,1.0s					
FXWY	Fox Creek	58.88	58	eP	P	02 31 04.0 +2.8
	comp=Z,3.3nm,0.8s					
BW06	Boulder Array	60.26	58	eP	P	02 31 12.8 +2.2
	comp=Z,6.7nm,0.8s					
PDAR	Pinedale Array	60.26	58	P	P	02 31 12.4 +1.9
	comp=Z,5.2nm,0.7s,baz=316,slow=2.2,SNR=52					
PDAR				pP	pP	02 31 42.5 -1.0
	comp=Z,1.9nm,0.8s,baz=300,slow=3.3,SNR=3.5					
NIL	Nilore	60.97	289	eP	P	02 31 14.6 -0.7
	comp=Z,18nm,0.9s					
NIL	Nilore	60.97	289	eP	P	02 31 14.6 -0.7
NIL				pmax	pmax	
	comp=Z,18nm,0.9s					
FINES	FINESS Array B	61.25	336	P	P	02 31 15.0 -1.6
	comp=Z,0.7nm,0.4s,baz=31,slow=7.1,SNR=16					
FINES				LR	LR	03 02 25.3
	comp=Z,26nm,18.7s,baz=240,slow=40					
ULM	Lac du Bonnet	61.67	44	P	P	02 31 20.2 +0.6
	comp=Z,4.5nm,0.6s,baz=311,slow=4.8,SNR=3.4					
RSSD	Black Hills	62.19	54	eP	P	02 31 25.4 +1.8
	comp=Z,11nm,0.6s					
RSSD	Black Hills	62.19	54	eP	P	02 31 25.4 +1.8
RSSD				pmax	pmax	
	comp=Z,11nm,0.6s					
KBL	Kabul	62.84	292	eP	P	02 31 26.6 -1.4
	comp=Z,5.5nm,0.8s					
KBL	Kabul	62.84	292	eP	P	02 31 26.6 -1.4
KBL				pmax	pmax	
	comp=Z,6.0nm,0.8s					
NC204	NORSAR Array S	64.85	343	eP	P	02 31 39.9 -0.6
	comp=Z,12nm,0.6s					
NB2	NORSAR Subarra	64.98	342	P	P	02 31 40.1 -1.2
	comp=Z,2.0nm,0.5s,baz=24,slow=6.5					
NOA	NORSAR Array B	64.98	342	P	P	02 31 40.2 -1.2
	comp=Z,2.4nm,0.5s,baz=24,slow=6.5,SNR=33					
NOA				LR	LR	03 03 58.8
	comp=Z,11nm,18.3s,baz=145,slow=40					
GEYT	Alibeck	66.57	302	P	P	02 31 51.0 -0.9
	comp=Z,1.7nm,0.3s,baz=29,slow=3.4,SNR=7.2					
ANMO	Albuquerque	67.52	62	eP	P	02 31 60.0 +1.9
	comp=Z,1.2nm,0.6s					
ANMO	Albuquerque	67.52	62	eP	P	02 32 00.0 +1.9
ANMO				pmax	pmax	
	comp=Z,1.0nm,0.6s					
AKASG	Malin Array Be	69.37	327	P	P	02 32 07.9 -1.2
	comp=Z,0.4nm,0.3s,baz=34,slow=5.8,SNR=3.0					
HYB	Hyderabad	69.40	272	iP	P	02 32 09.0 -0.8
KIV	Kislovodsk	69.60	315	eP	P	02 32 10.2 -0.6
KIV				pmax	pmax	
	comp=Z,22nm,1.1s					
KBZ	Khabaz	69.69	315	P	P	02 32 09.8 -1.4
	comp=Z,2.4nm,0.6s,baz=66,slow=6.0,SNR=4.0					
VLDQ	Val d'Or	70.80	35	eP	P	02 32 16.8 -1.0
	comp=Z,6.5nm,0.9s					
TXAR	Lajitas Array	73.27	64	P	P	02 32 34.7 +1.7
	comp=Z,2.2nm,0.4s,baz=296,slow=5.1,SNR=57					
TXAR				pP	pP	02 33 07.3 +0.1
	comp=Z,2.2nm,0.7s,baz=291,slow=3.9,SNR=5.7					
WR1	Warramunga Arr	73.39	202	eP	P	02 32 33.8 +0.4
WRA	Warramunga Arr	73.39	202	P	P	02 32 33.8 +0.4
	comp=Z,3.2nm,0.6s,baz=18,slow=7.4,SNR=20					
CLL	Collm	73.58	337	eP	P	02 32 33.0 -1.3
CLL	Collm	73.58	337	eP	P	02 32 33.0 -1.3
VYHS	Vyhne	74.59	333	eP	P	02 32 40.5 +0.3
VYHS	Vyhne	74.59	333	eP	P	02 32 40.5 +0.3
MLR	Muntele Rosu	74.97	327	eP	P	02 32 42.9 +0.2
	comp=Z,6.4nm,1.3s					
MLR	Muntele Rosu	74.97	327	eP	P	02 32 42.9 +0.2
MLR				pmax	pmax	
	comp=Z,6.0nm,1.3s					
MMNY	Mt. Morris Dam	75.16	39	eP	P	02 32 43.6 0.0
	comp=Z,16nm,0.5s					
KHC	Kasperske Hory	75.44	336	eP	P	02 32 45.0 -0.2
KHC	Kasperske Hory	75.44	336	eP	P	02 32 45.0 -0.2
GERES	GERESS Array B	75.68	336	P	P	02 32 46.2 -0.4
	comp=Z,0.6nm,0.4s,baz=46,slow=9.5,SNR=6.4					
BRTR	Keskin Array B	76.95	319	P	P	02 32 54.0 0.0
	comp=Z,1.0nm,0.8s,baz=53,slow=2.2,SNR=4.5					
BRTR	Keskin Array B	76.95	319	iP	P	02 32 53.7 -0.3
BRTR				pmax	pmax	
	comp=Z,1.0nm,0.9s					
AS31	Alice Springs	77.07	202	eP	P	02 32 55.7 +1.2
	comp=Z,1.3nm,0.5s					
ASAR	Alice Springs	77.07	202	P	P	02 32 55.7 +1.2
	comp=Z,2.8nm,0.5s,baz=13,slow=5.5,SNR=29					
KBA	Koelnbreinsper	77.40	335	eP	P	02 32 57.9 +1.5
	comp=Z,6.5nm,0.8s					
UOSS	Minazif	77.40	294	eP	P	02 32 55.3 -1.2
	comp=Z,34nm,1.3s					
WATA	Walderalm	77.61	337	iP	P	02 32 57.8 +0.2
	comp=Z,1.6nm,0.5s					
RETA	Reutte	77.67	337	eP	P	02 32 58.8 +1.0
	comp=Z,2.3nm,0.8s					
MOTA	Moosalm	77.72	337	eP	P	02 32 59.3 +1.2
	comp=Z,1.4nm,0.4s					
SQTA	Sankt Quirin	77.81	337	eP	P	02 32 59.9 +1.3
	comp=Z,4.6nm,0.8s					
ABTA	Abfaltersbach	77.92	336	eP	P	02 32 59.9 +0.7
	comp=Z,6.2nm,1.1s					
DAVA	Damuels	78.07	338	eP	P	02 33 01.2 +1.1
	comp=Z,4.9nm,1.2s					
FETA	Feichten	78.12	337	iP	P	02 33 01.6 +1.3
	comp=Z,6.0nm,1.2s					
TIR	Tirane	80.70	329	eP	P	02 33 14.2 0.0
	comp=Z,13nm,0.5s					
TIR	Tirane	80.70	329	eP	P	02 33 14.2 0.0
TIR				pmax	pmax	
	comp=Z,13nm,0.5s					
TIP	Timpagrande	83.66	330	eP	P	02 33 29.3 -0.5
	comp=Z,3.1nm,0.8s					
RAYN	Ar Rayn	84.52	301	eP	P	02 33 33.7 -0.7
	comp=Z,18nm,0.7s					
RAYN	Ar Rayn	84.52	301	eP	P	02 33 33.7 -0.7
RAYN				pmax	pmax	
	comp=Z,18nm,0.7s					
ESDC	Sonseca Array	88.17	345	P	P	02 33 51.0 -0.8
	comp=Z,1.2nm,0.7s,baz=5.0,slow=3.8,SNR=10					
KEST	Kesra	89.05	334	P	P	02 33 56.0 -0.2
	comp=Z,2.7nm,0.7s,baz=14,slow=2.5,SNR=7.9					
NNA	Nana	121.67	68	iPKIKP	PKPdf	02 39 53.1 -1.2
CPUP	Villa Florida	144.14	60	PKP	PKPbc	02 40 34.2 -0.1
	comp=Z,0.9nm,0.6s,baz=11,slow=10.0,SNR=3.0					
PLCA	Paso Flores	145.91	91	PKPbc	PKPbc	02 40 38.6 -0.9
	comp=Z,1.5nm,0.8s,baz=248,slow=6.8,SNR=3.2					
VNA3	Neumayer Olymp	158.79	192	PKPdf	PKPdf	02 41 02.3 +5.9
VNA1	Neumayer--Stat	159.13	194	PKPdf	PKPdf	02 41 03.5 +6.8

*IDC **21** 02:41:28.8±6.5, 28°.60N×52°.76E, h0km, mb3.5/2, mb1 3.5/3, mb1mx3.2/32, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=129.6km s-min=47.8km az=113.0*
*ISCJB **21** 02:41:33.6±0.8, 28°.66N±0°.07×52°.33E±0°.07, h16km, mb3.6/2, Error ellipse: s-maj=10.7km s-min=8.1km az=43.4*
*TEH **21** 02:41:33.2, 28°.71N×52°.42E, h12km, ML3.1*

ISC 21 02:41:33.5±0.9, 28°.64N±0°.07×52°.42E±0°.07, h16km, n18, σ1§41/18, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRV	Sarvestan	0.96	39	ePg	Pb	02 41 49.8	-2.2
ISRV				IAMB	IAmb	02 42 22.7	
	comp=Z,5μm,0.4s						
SHI	Shiraz	1.01	4	ePg	Pb	02 41 51.3	-1.4
SHI				IAMB	IAmb	02 42 10.0	
	comp=Z,4μm,0.6s						
JHRM	Jahrom	1.02	97	ePg	Pn	02 41 53.8	+0.5
IKAZ	Kazeroun	1.25	336	ePg	Pb	02 41 56.6	-0.3
IKAZ				IAMB	IAmb	02 42 18.5	
	comp=Z,14μm,0.3s						
IPAR	Pars	1.32	24	ePg	Pb	02 41 57.9	-0.2
IPAR				IAMB	IAmb	02 42 00.7	
	comp=Z,2μm,0.6s						
LMD1	Lamerd	1.45	153	ePg	Pg	02 42 02.0	+0.6
KLNJ	Kolanjah	2.47	343	ePn	Pn	02 42 13.9	+0.4
IRAM	Ramesheh	3.16	359	ePn	Pn	02 42 24.0	+1.1
IRAM				IAMB	IAmb	02 43 30.1	
	comp=Z,412nm,0.9s						
IMEH	Mehriz	3.34	34	ePn	Pn	02 42 27.6	+2.3
IMEH				IAMB	IAmb	02 42 30.6	
	comp=Z,474nm,0.2s						
ISAD	Sadrabad	3.44	18	ePn	Pn	02 42 28.2	+1.4
ISAD				IAMB	IAmb	02 42 30.9	
	comp=Z,588nm,0.4s						
ROKH	ROKH	3.89	342	ePn	Pn	02 42 34.3	+1.5
KHGB	Koh Gabri	3.94	63	ePn	Pn	02 42 35.0	+1.5
IBAF	Bafgh	4.01	42	ePn	Pn	02 42 36.0	+1.8
IBAF				IAMB	IAmb	02 42 52.5	
	comp=Z,307nm,0.5s						
IZEF	Zefreh	4.25	359	ePn	Pn	02 42 39.5	+1.7
IZEF				IAMB	IAmb	02 42 56.9	
	comp=Z,102nm,0.5s						
IKLH	Kolahrood	4.72	351	ePn	Pn	02 42 45.7	+1.3
IKLH				IAMB	IAmb	02 43 42.6	
	comp=Z,101nm,0.5s						
BRTR	Keskin Array B	19.04	310	P	Pn	02 45 55.5	-0.3
	comp=Z,0.1nm,0.3s,baz=129,slow=13,SNR=7.3						
FINES	FINESS Array B	37.19	339	P	P	02 48 42.4	-1.2
	comp=Z,0.4nm,0.5s,baz=140,slow=10.0,SNR=6.5						
TORD	Torodi Ar. Bea	49.48	263	P	P	02 50 23.4	-0.1
	comp=Z,0.3nm,0.5s,baz=69,slow=7.7,SNR=7.7						

*JMA **21** 03:00:12.5±0.3, 46°.76N×141°.59E, h0km, M3.4*
*ISCJB **21** 03:00:13.4±1.1, 46°.80N±0°.07×141°.58E±0°.07, h11km, Error ellipse: s-maj=10.8km s-min=5.3km az=155.9*
*SKHL **21** 03:00:13.5±0.6, 46°.68N×141°.64E, h10km, mb4.6/4*
SKHL Felt (II-III) at Nevel'sk.

ISC 21 03:00:15.5±1.2, 46°.65N±0°.07×141°.77E±0°.06, h11km, n5, σ1§16/9, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.75	65	ePg	Pb	03 00 29.7	-0.8
YSS				AMB	AMB	03 00 30.1	
	40nm,0.4s						
YSS				eSg	Sb	03 00 41.4	+0.7
YSS				A	A	03 00 42.3	
	410nm,0.6s						
YSS				AMS	AMS	03 01 05.0	
	300nm,9.0s						
JWK2	Keihoku	1.34	176	P	Pb	03 00 39.9	-0.7
JWK2				eS	Sg	03 00 59.6	+1.1
JRR	Rishiri	1.54	192	P	Pb	03 00 43.2	-0.9
JRR				eS	Sg	03 01 04.7	-0.5
JSS	Shosan	2.25	178	P	Pn	03 00 53.5	+0.8
TEY	Ternei	3.95	248	ePg	Pg	03 01 30.3	-0.9
TEY				eSg	Sg	03 02 24.0	+1.6
TEY				A	A	03 02 24.1	
	13nm,0.5s						

MAN 21 03:13:39.2, 11°.35N×124°.97E, h16km, mb4.0, ML2.7, MS2.3, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	Palo	0.18	176	⇑iP	Pb	03 13 44.4	+0.2
PLP				iS	Sb	03 13 48.9	+1.4
CNP	Catarman	1.20	346	eP	Pn	03 14 00.6	-0.7
CNP				eS	Sn	03 14 17.4	+0.2
MSLP	Maasin	1.21	185	eP	Pn	03 14 01.3	-0.2
MSLP				eS	Sg	03 14 18.8	+0.4

NNC 21 03:41:17.1±2.3, 43°.04N×85°.35E, h0km, mb3.6, mpv3.3, 4C-4D, Error ellipse: s-maj=16.4km s-min=9.7km az=124.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	3.68	278	Pg	Pb	03 42 23.5	+0.5
KTMS				Lg	Lg	03 43 15.5	
	2.7nm,0.2s						
PDGK	Podgornoye	4.30	276	Pg	Pb	03 42 35.3	+1.7
PDGK				Lg	Lg	03 43 35.4	
	9.9nm,0.1s						
MK31	Makanchi Array	4.34	331	⇑Pn	Pn	03 42 24.7	+0.4
MK31				⇓Sn	Sn	03 43 16.7	+1.0
	0.1nm,0.1s,baz=133,slow=14,SNR=16						
MK31				⇓Lg	Lg	03 43 35.1	
	1.1nm,0.3s,baz=127,slow=26,SNR=4.3						
ZSN	Zaisan	4.43	356	Pg	Pn	03 42 28.3	+2.7
ZSN				Lg	Lg	03 43 23.7	
	2.3nm,0.4s						
MAKZ	Makanchi	4.47	329	⇑Pn	Pn	03 42 26.9	+0.7
MAKZ				⇓Sn	Sn	03 43 20.2	+1.4
	1.3nm,0.5s						
MAKZ				⇑Lg	Lg	03 43 40.0	
	1.7nm,0.3s						
UZB	Uzynbulak	4.64	274

7.1nm,0.7s

IDC 21 03:56:29.4±13.0, 16°.93N×104°.62W, h0km, mb3.3/2, mb1 3.8/4, mb1mx3.5/28, mbtmp3.4/4, ML3.4/2, MS3.1/4, Ms1 3.1/4, ms1mx2.9/12, Error ellipse: s-maj=368.3km s-min=83.9km az=114.0, Off coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**6.28**	**288**	T	T	04 02 53.6	
	SNR=137						
H06N1	**SOCORRO T-PHAS**	**6.36**	**289**	T	T	04 02 55.9	
	SNR=4.3						
LPIG	**La Paz**	**8.90**	**324**	LR	LR	04 01 22.1	
	comp=Z,30nm,20.3s,baz=179,slow=33						
TXAR	**Lajitas Array**	**12.37**	**4**	Pn	Pn	03 59 29.2	+2.2
	0.1nm,0.3s,baz=182,slow=15,SNR=11						
TXAR				LR	LR	04 03 33.7	
	comp=Z,67nm,20.7s,baz=0.0,slow=34						
ANMO	**Albuquerque**	**18.01**	**355**	P	Pn	04 00 40.9	-0.6
	0.0nm,0.3s,baz=165,slow=14,SNR=3.9						
PDAR	**Pinedale Array**	**26.09**	**352**	P	P	04 02 05.1	0.0
	0.1nm,0.4s,baz=144,slow=8.8,SNR=3.1						
ULM	**Lac du Bonnet**	**33.97**	**10**	LR	LR	04 17 28.4	
	comp=Z,76nm,18.1s,baz=340,slow=37						
SIV	**San Ignacio**	**53.99**	**125**	LR	LR	04 27 32.6	
	comp=Z,38nm,21.2s,baz=156,slow=34						
ILAR	**Eielson Array**	**55.59**	**340**	P	P	04 06 06.5	-0.1
	0.5nm,0.9s,baz=138,slow=6.2,SNR=4.1						

*ISCJB **21** 03:57:58.7±0.6, 1°.69N±0°.09×89°.50E±0°.09, h10km, mb4.0/13, MS3.3/5, Error ellipse: s-maj=14.6km s-min=10.7km az=37.5*
*IDC **21** 03:57:58.9±1.0, 1°.64N×89°.49E, h0km, mb3.8/10, mb1 4.0/12, mb1mx3.8/35, mbtmp3.9/12, ML4.3/2, MS3.2/8, Ms1 3.3/8, ms1mx3.0/31, Error ellipse: s-maj=32.8km s-min=19.1km az=42.0*
*NEIC **21** 03:58:00.9±1.1, 1°.71N×89°.53E, h10km±3km, mb4.1/5, Error ellipse: s-maj=28.7km s-min=18.6km az=49.0*

ISC 21 03:58:00.5±1.0, 1.7N±0°.2×89°.5E±0°.1, h10km, n30, σ0§69/25, mb4.0/13, MS3.3/5, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**9.48**	**83**	LR	LR	04 03 48.4	
	comp=Z,103nm,18.8s,baz=202,slow=37						
PALK	**Pallekele**	**10.41**	**303**	Pn	**Pn**	**04 00 29.8**	**-0.2**
	1.2nm,0.3s,baz=296,slow=15,SNR=3.4						
PALK				Sn	Sn	04 02 16.7	-10
	4.0nm,0.3s,baz=295,slow=3.7,SNR=5.4						
PALK				LR	LR	04 03 43.4	
	comp=Z,96nm,21.0s,baz=115,slow=33						
CM31	**Chiang Mai Arr**	**19.10**	**28**	*e*P	**P**	**04 02 23.4**	**-0.2**
	8.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**19.10**	**28**	P	**P**	**04 02 23.4**	**-0.2**
	0.6nm,0.3s,baz=219,slow=11,SNR=3.1						
CMAR				LR	LR	04 10 24.7	
	comp=Z,76nm,18.1s,baz=214,slow=39						
H08S2	**Diego Garcia H**	**19.32**	**241**	T	T	04 22 29.0	
	baz=60,slow=74,SNR=142						
H08S3	**Diego Garcia H**	**19.32**	**241**	T	T	04 22 33.0	
	baz=60,slow=74,SNR=117						
H08S1	**Diego Carcia H**	**19.34**	**241**	T	T	04 22 33.0	
	baz=60,slow=74,SNR=96						
SLVN	**Son La**	**24.08**	**35**	*e*P	**P**	**04 03 15.3**	**-1.1**
	7.0nm,1.1s						
MK32	**Makanchi Array**	**45.40**	**353**	*e*P	**P**	**04 06 19.3**	**-0.1**
MKAR	**Makanchi Array**	**45.40**	**353**	P	**P**	**04 06 19.3**	**-0.1**
	0.6nm,0.6s,baz=173,slow=11,SNR=4.8						
GEYT	**Alibeck**	**46.19**	**325**	P	**P**	**04 06 25.8**	**0.0**
	1.5nm,0.5s,baz=115,slow=8.4,SNR=2.5						
GEYT				LR	LR	04 27 28.7	
	comp=Z,34nm,18.0s,baz=210,slow=38						
SONA0	**Songino Array**	**48.27**	**15**	*e*P	**P**	**04 06 41.9**	**-0.1**
SONM	**Songino Array**	**48.27**	**15**	P	**P**	**04 06 41.9**	**-0.1**
	2.4nm,0.7s,baz=193,slow=8.8,SNR=11						
SONM				LR	LR	04 28 47.5	
	comp=Z,46nm,20.1s,baz=241,slow=38						
WR1	**Warramunga Arr**	**48.91**	**118**	*e*P	**P**	**04 06 47.2**	**+0.1**
WRA	**Warramunga Arr**	**48.91**	**118**	P	**P**	**04 06 47.2**	**+0.1**
	1.8nm,0.7s,baz=295,slow=9.6,SNR=8.3						
AS31	**Alice Springs**	**49.95**	**123**	*e*P	**P**	**04 06 55.4**	**+0.3**
	3.3nm,1.4s						
ASAR	**Alice Springs**	**49.95**	**123**	P	**P**	**04 06 55.4**	**+0.3**
	0.9nm,0.6s,baz=294,slow=7.0,SNR=6.7						
KSRS	**Korea Array**	**50.16**	**40**	LR	LR	04 30 04.0	
	comp=Z,27nm,18.3s,baz=220,slow=38						
ZALV	**Zalesovo Beam**	**52.27**	**356**	P	**P**	**04 07 11.1**	**-0.8**
	0.7nm,0.5s,baz=161,slow=6.1,SNR=3.3						
ZALV				LR	LR	04 30 38.3	
	comp=Z,25nm,19.8s,baz=242,slow=38						
ZAA1	**Zalesovo Array**	**52.27**	**356**	*e*P	**P**	**04 07 11.1**	**-0.8**
ABKAR	**Akbulak array**	**53.76**	**336**	*e*P	**P**	**04 07 23.4**	**+0.4**
	8.7nm,1.8s						
BR101	**Keskin Array S**	**63.21**	**314**	*e*P	**P**	**04 08 30.0**	**+0.6**
BRTR	**Keskin Array B**	**63.21**	**314**	P	**P**	**04 08 30.0**	**+0.6**
	0.5nm,0.6s,baz=128,slow=7.1,SNR=4.3						
BRTR				LR	LR	04 36 11.0	
	comp=Z,16nm,21.6s,baz=93,slow=36						
FIA0	**FINESS Array S**	**76.12**	**334**	*e*P	**P**	**04 09 49.1**	**+0.8**
FINES	**FINESS Array B**	**76.12**	**334**	P	**P**	**04 09 49.1**	**+0.8**
	1.0nm,0.8s,baz=179,slow=8.3,SNR=3.0						
GEC2	**GERESS Array S**	**79.44**	**319**	*e*P	**P**	**04 10 07.8**	**+0.6**
	2.2nm,0.9s						
GERES	**GERESS Array B**	**79.44**	**319**	P	**P**	**04 10 07.8**	**+0.6**
	0.6nm,0.8s,baz=165,slow=8.0,SNR=4.9						
TORD	**Torodi Ar. Bea**	**87.50**	**283**	P	**P**	**04 10 47.8**	**-1.5**
	0.2nm,0.6s,baz=64,slow=3.7,SNR=2.8						
TOA1	**Torodi Ar. Sit**	**87.51**	**283**	*e*P	**P**	**04 10 47.8**	**-1.5**
TXAR	**Lajitas Array**	**146.71**	**21**	PKPbc	**PKPdf**	**04 17 42.6**	**+0.6**
	0.5nm,0.7s,baz=256,slow=0.7,SNR=5.2						

DJA 21 04:54:12.4±1.1, 0°S±5°×12°3E±°, h33km±19km, M3.6/6, MLv3.6/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.83**	**185**	P	Pb	04 54 28.5	+0.1
APSI	**Ampana**	**1.38**	**240**	P	Pn	04 54 35.9	+0.5
APSI				S	Sb	04 54 54.0	-1.0
KMSI	**Cibinong**	**1.38**	**56**	P	Pn	04 54 35.6	+0.2
KMSI				S	Sn	04 54 53.3	+0.8
TTSI	**Tana Toraja**	**4.13**	**227**	P	Pn	04 55 12.6	-0.6
SPSI	**Sidrap Palu**	**4.83**	**219**	P	Pn	04 55 22.1	-0.7

KRSC 21 05:10:04.3±1.2, 51°.05N×157°.79E, h60km±16km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.74**	**305**	*e*P	Pn	05 10 20.7	+1.7
PAU				*e*S	Sn	05 10 31.9	+2.1
KDTR	**Khodutka, Kamc**	**0.78**	**13**	*i*P	Pn	05 10 21.2	+1.7
KDTR				*e*S	Sn	05 10 32.2	+1.5
SKR	**Severo-Kuril's**	**1.12**	**251**	*e*P	Pn	05 10 25.3	+1.4
SKR				*e*S	Sn	05 10 39.5	+1.0
ASAK	**Asacha**	**1.34**	**3**	*e*P	Pn	05 10 29.0	+2.1
ALID	**Alaid**	**1.43**	**264**	*i*P	Pn	05 10 29.9	+1.8
ALID				*e*S	Sn	05 10 47.0	+1.0
MTVR	**Mutnovka**	**1.46**	**10**	*e*P	Pn	05 10 30.8	+2.3
MTVR				*e*S	Sn	05 10 48.7	+2.0
RUS	**Russkaya**	**1.46**	**18**	*e*P	Pn	05 10 29.8	+1.4
RUS				*e*S	Sn	05 10 47.8	+1.4
KRMR	**Karymshinskiy**	**1.79**	**7**	*e*P	Pn	05 10 35.3	+2.4
KRMR				*e*S	Sn	05 10 56.9	+2.3
APC	**Apacha**	**1.92**	**349**	*e*P	Pn	05 10 37.3	+2.7
DALK	**Dalny**	**2.07**	**16**	*e*P	Pn	05 10 38.4	+1.7
DALK				*e*S	Sn	05 11 03.4	+2.1
UGLR	**Uglovaya**	**2.25**	**16**	*e*P	Pn	05 10 41.8	+2.5
AVH	**Avacha**	**2.29**	**14**	*e*P	Pn	05 10 43.7	+3.9
SMAR	**Somma**	**2.30**	**15**	*e*P	Pn	05 10 43.1	+3.1
KOK	**Koryaka**	**2.30**	**13**	*e*P	Pn	05 10 43.5	+3.5
SDLR	**Sedlovina**	**2.33**	**16**	*e*P	Pn	05 10 42.4	+2.1
KRER	**Koryakskii**	**2.33**	**14**	*e*P	Pn	05 10 42.1	+1.7
KRX	**Arik**	**2.37**	**13**	*e*P	Pn	05 10 43.9	+3.0
SPN	**Mys Shipunski**	**2.47**	**33**	*e*P	Pn	05 10 44.0	+1.9
SPN				*e*S	Sn	05 11 12.8	+1.7
GNL	**Ganaly**	**2.65**	**2**	*e*P	Pn	05 10 47.4	+2.7

*ISCJB **21** 05:20:15.0±0.3, 39°.66N±0°.01×27°.87E±0°.02, h5km±2km, Error ellipse: s-maj=2.4km s-min=2.4km az=175.9*
*DDA **21** 05:20:14.3, 39°.64N×27°.88E, h24km±1km, ML3.8*
*ISK **21** 05:20:14.7, 39°.64N×27°.87E, h5km, ML3.6/41*
*THE **21** 05:20:15.9, 39°.70N×27°.89E, h2km±3km, ML3.5/4, Error ellipse: s-maj=3.3km s-min=1.4km az=78.0*
*SOF **21** 05:20:16.5, 40°.01N×28°.12E, h5km*

ISC 21 05:20:15.0±0.8, 39°.68N±0°.02×27°.88E±0°.01, h6km±6km, n123, σ1§02/146, 13C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.04**	**177**	PG	**Pg**	**05 20 16.1**	**-0.2**
BALB				SG	**Sg**	**05 20 17.2**	**0.0**
STEP	**BALIKESIR_Sava**	**0.32**	**202**	*i*P	**Pg**	**05 20 21.8**	**+0.5**
STEP				IAML_P			
	comp=Z,90μm,0.2s						
GONE	**Gonen-Balikesi**	**0.40**	**338**	PG	**Pb**	**05 20 23.7**	**-0.7**
DURS	**Dursunbey**	**0.47**	**99**	*i*P	**Pb**	**05 20 24.6**	**-1.0**
DURS				*i*S	**Sb**	**05 20 31.6**	**-1.2**
DURS				IAML_P			
	comp=Z,13μm,0.1s						
KNL	**Balıkesir**	**0.65**	**336**	*i*P	**Pb**	**05 20 28.6**	**-0.2**
KNL				*i*S	**Sb**	**05 20 38.3**	**+0.2**
KNL				IAML_P			
	comp=Z,38μm,0.2s						
EDC	**Edincik**	**0.67**	**359**	PG	**Pb**	**05 20 28.6**	**-0.5**
KCTX	**Karacabey (Bur**	**0.69**	**32**	PG	**Pb**	**05 20 28.7**	**-0.8**
AKHS	**Akhisar**	**0.80**	**184**	*i*P	**Pg**	**05 20 30.0**	**-0.3**
AKHS				*i*S	**Sg**	**05 20 41.6**	**+0.9**
AKHS				IAML_P			
	comp=Z,17μm,0.2s						
AKS	**Akhisar**	**0.80**	**184**	PG	**Pg**	**05 20 29.7**	**-0.6**
ORLT	**Orhaneli**	**0.87**	**64**	PG	**Pb**	**05 20 31.9**	**-0.5**
ZEDA	**zmir-Bergama**	**0.94**	**221**	*i*P	**Pg**	**05 20 32.2**	**-0.8**
ZEDA				*i*S	**Sg**	**05 20 44.5**	**-0.8**
ZEDA				IAML_P			
	comp=Z,22μm,0.1s						
GOMA	**Golmarmara-Man**	**0.97**	**178**	PG	**Pg**	**05 20 32.9**	**-0.6**
AYVA	**Ayvalik**	**0.99**	**249**	*i*P	**Pb**	**05 20 34.5**	**0.0**
AYVA				*i*S	**Sg**	**05 20 46.6**	**-0.2**
AYVA				IAML_P			
	comp=Z,16μm,0.1s						
BAYC	**CANAKKALE_Bayr**	**1.03**	**274**	*i*P	**Pg**	**05 20 34.3**	**-0.5**
BAYC				*i*S	**Sb**	**05 20 49.5**	**+0.6**
BAYC				IAML_P			
	comp=Z,127μm,0.1s						
SMAA	**Simav-Kutahya**	**1.03**	**124**	PG	**Pg**	**05 20 34.7**	**0.0**
MDNY	**Mudanya-Bursa**	**1.04**	**48**	PG	**Pn**	**05 20 35.3**	**-0.7**
ULDT	**Uludag**	**1.07**	**64**	*i*P	**Pb**	**05 20 36.0**	**-0.1**
ULDT				*i*S	**Sn**	**05 20 50.9**	**-1.1**
ULDT				IAML_P			
	comp=Z,26μm,0.2s						
LPK	**Lapseki**	**1.10**	**309**	PN	**Pb**	**05 20 36.7**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.14**	**332**	PN	**Pn**	**05 20 37.8**	**+0.2**
SART	**Tekirdag**	**1.14**	**332**	*i*P	**Pn**	**05 20 37.6**	**0.0**
SART				*i*S	**Sn**	**05 20 54.3**	**+0.7**
SART				IAML_P			
	comp=Z,33μm,0.2s						
ARMT	**Armutlu**	**1.17**	**40**	PN	**Pb**	**05 20 37.3**	**-0.2**
EZN	**Ezine**	**1.21**	**278**	PN	**Pb**	**05 20 38.3**	**+0.1**
EZN	**Ezine**	**1.21**	**278**	P	**Pg**	**05 20 37.9**	**-0.2**
EZN	**Ezine**	**1.21**	**278**	↑*i*P	**Pg**	**05 20 37.5**	**-0.6**
SHAP	**Saphane-Kutahy**	**1.23**	**122**	PN	**Pg**	**05 20 38.3**	**-0.3**
GEMT	**Gemlik**	**1.26**	**53**	PN	**Pn**	**05 20 39.9**	**+0.8**
GELI	**Tayfur-Gelibol**	**1.30**	**304**	PN	**Pg**	**05 20 40.1**	**+0.3**
MANT	**Manisa**	**1.30**	**156**	*i*P	**Pb**	**05 20 39.9**	**0.0**
MANT				*i*S	**Sg**	**05 20 54.9**	**-1.8**
MANT				IAML_P			
	comp=Z,11μm,0.2s						
USAK	**Uak-Merkez**	**1.31**	**137**	*i*P	**Pg**	**05 20 40.1**	**+0.1**
USAK				*i*S	**Sg**	**05 20 56.5**	**-0.5**
USAK				IAML_P			
	comp=Z,4μm,0.2s						
FOCM	**Foa**	**1.31**	**223**	PN	**Pn**	**05 20 39.3**	**-0.5**
KULA	**Kula-Manisa**	**1.31**	**152**	PN	**Pn**	**05 20 39.4**	**-0.5**
KULA	**Kula-Manisa**	**1.31**	**152**	P	**Pg**	**05 20 40.2**	**+0.1**
PRK	**Paraskevi**	**1.31**	**251**	P	**Pg**	**05 20 40.6**	**+0.4**
PRK				S	**Sn**	**05 20 59.1**	**+1.4**
TKR	**Tekirdag**	**1.34**	**349**	PN	**Pb**	**05 20 40.3**	**-0.2**
GEDZ	**Gediz**	**1.34**	**117**	PN	**Pb**	**05 20 40.2**	**-0.1**
GPNR	**Gulpinar-Canak**	**1.37**	**261**	PN	**Pn**	**05 20 40.6**	**+0.1**
GDZ	**Gediz**	**1.37**	**115**	*i*P	**Pg**	**05 20 41.2**	**-0.1**
GDZ				*i*S	**Sn**	**05 20 59.4**	**0.0**
GDZ				IAML_P			
	comp=Z,25μm,0.2s						
IZI	**Iznik**	**1.39**	**61**	PN	**Pg**	**05 20 41.7**	**0.0**
ERIK	**Erikli-Kesan**	**1.44**	**314**	PN	**Pb**	**05 20 42.2**	**0.0**
BLCB	**Balcova**	**1.44**	**207**	PN	**Pn**	**05 20 41.4**	**-0.2**
YLV	**Yalova**	**1.45**	**52**	PN	**Pg**	**05 20 42.5**	**-0.3**
YLV	**Yalova**	**1.45**	**52**	↓*i*P	**Pn**	**05 20 41.3**	**-0.5**
CRLT	**Corlu**	**1.46**	**356**	PN	**Pg**	**05 20 42.6**	**-0.3**
KESN	**Edirne-Kesan**	**1.47**	**322**	*i*P	**Pg**	**05 20 43.3**	**+0.1**
KESN				*i*S	**Sg**	**05 21 02.8**	**+0.5**
KESN				IAML_P			
	comp=Z,5μm,0.1s						
KRBN	**Karaburun**	**1.49**	**224**	PN	**Pn**	**05 20 41.9**	**-0.4**
BUY	**Buyukada**	**1.51**	**39**	PN	**Pg**	**05 20 43.5**	**-0.4**
BUY	**Buyukada**	**1.51**	**39**	*i*P	**Pb**	**05 20 43.0**	**-0.4**
BUY				*i*S	**Sn**	**05 21 02.0**	**-0.4**
BUY				IAML_P			
	comp=Z,11μm,0.2s						
ELBA	**Catalca**	**1.53**	**16**	*i*P	**Pb**	**05 20 43.6**	**-0.1**
ELBA				IAML_P			
	comp=Z,16μm,0.1s						
GOKC	**Gokceada-Canak**	**1.59**	**290**	PN	**Pn**	**05 20 44.2**	**+0.5**
ADVT	**Abdulvahap**	**1.62**	**62**	PN	**Pb**	**05 20 44.9**	**-0.3**
CTKS	**Kestanelik-??a**	**1.63**	**17**	PN	**Pn**	**05 20 44.3**	**+0.1**
SIGR	**SIGRI**	**1.63**	**254**	PN	**Pn**	**05 20 44.2**	**0.0**
SIGR	**SIGRI**	**1.63**	**254**	P	**Pn**	**05 20 45.0**	**+0.8**
SIGR				S	**Sb**	**05 21 06.4**	**+0.1**
BGKT	**Bogazkoy**	**1.65**	**24**	PN	**Pb**	**05 20 45.3**	**-0.5**
URLA	**Izmir**	**1.65**	**218**	PN	**Pn**	**05 20 44.1**	**-0.4**
URLA	**Izmir**	**1.65**	**218**	*i*P	**Pn**	**05 20 44.5**	**0.0**
URLA				*i*S	**Sg**	**05 21 10.3**	**+2.3**
URLA				IAML_P			
	comp=Z,4μm,0.2s						
KAVV	**Kandilli-Istan**	**1.65**	**33**	PN	**Pb**	**05 20 45.5**	**-0.3**
ISK	**Istanbul-Kandi**	**1.66**	**33**	PN	**Pb**	**05 20 45.4**	**-0.5**
ISK	**Istanbul-Kandi**	**1.66**	**33**	P	**Pn**	**05 20 43.9**	**-0.6**
ENEZ	**Enez**	**1.69**	**309**	PN	**Pn**	**05 20 45.7**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**180**	PN	**Pn**	**05 20 45.3**	**-0.3**
HRT	**Hereke**	**1.79**	**50**	PN	**Pb**	**05 20 47.3**	**-0.8**
DGB	**zmir**	**1.80**	**206**	*i*P	**Pn**	**05 20 45.6**	**-0.9**
DGB				*i*S	**Sb**	**05 21 10.7**	**-0.3**
DGB				IAML_P			
	comp=Z,2μm,0.2s						
KLYT	**Kilyos**	**1.81**	**29**	PN	**Pb**	**05 20 47.9**	**-0.6**
KLYT	**Kilyos**	**1.81**	**29**	↑*i*P	**Pg**	**05 20 48.8**	**-0.8**
KHAL	**Karahalli**	**1.81**	**136**	*i*P	**Pn**	**05 20 47.5**	**+0.7**
KHAL				IAML_P			
	comp=Z,1μm,0.2s						
KIYI	**Yalıkoy-Catalc**	**1.83**	**10**	PN	**Pb**	**05 20 48.1**	**-0.8**
ALN	**Alexandroupoli**	**1.86**	**312**	PN	**Pn**	**05 20 47.8**	**+0.4**
ALN	**Alexandroupoli**	**1.86**	**312**	P	**Pn**	**05 20 47.7**	**+0.4**
ALN				S	**Sn**	**05 21 11.3**	**+0.2**
KHL	**Karahalli**	**1.86**	**136**	PN	**Pn**	**05 20 47.6**	**+0.1**
CHOS	**Chios island**	**1.92**	**228**	PN	**Pn**	**05 20 48.1**	**-0.1**
CHOS	**Chios island**	**1.92**	**228**	P	**Pn**	**05 20 47.5**	**-0.7**
CHOS				S	**Sb**	**05 21 15.0**	**+0.5**
SMTH	**Samothraki Isl**	**1.97**	**295**	P	**Pn**	**05 20 49.0**	**+0.2**
PHSR	**Pinarhisar**	**1.97**	**352**	PN	**Pb**	**05 20 50.1**	**-1.1**
PHSR	**Pinarhisar**	**1.97**	**352**	↑*i*P	**Pg**	**05 20 52.5**	**-0.3**
BORA	**Eskisehir**	**2.00**	**83**	*i*P	**Pb**	**05 20 50.3**	**-1.4**
BORA				IAML_P			
	comp=Z,1μm,0.1s						
SILT	**Sile**	**2.00**	**42**	PN	**Pb**	**05 20 50.3**	**-1.4**
SILT	**Sile**	**2.00**	**42**	↑*i*P	Pn	05 20 39.6	-10
AYDN	**Tasoluk**	**2.01**	**180**	*i*P	**Pn**	**05 20 48.9**	**-0.6**
AYDN				IAML_P			
	comp=Z,993nm,0.1s						
GEYV	**SAKARYA_Geyve**	**2.02**	**66**	*i*P	**Pg**	**05 20 55.0**	**+1.2**
GEYV				*i*S	**Sg**	**05 21 21.5**	**+1.5**
GCAM	**G?zelcaml?**	**2.04**	**195**	PN	**Pn**	**05 20 49.4**	**-0.3**
GCAM	**G?zelcaml?**	**2.04**	**195**	*i*P	**Pn**	**05 20 49.7**	**-0.1**
GCAM				IAML_P			
	comp=Z,998nm,0.2s						
LIA	**Limnos Island**	**2.09**	**277**	P	**Pn**	**05 20 50.7**	**+0.2**
AUKIR	**Kırka- Seyitga**	**2.09**	**100**	*i*P	**Pg**	**05 20 55.8**	**+0.8**
SPNC	**Sapanca-Adapaz**	**2.12**	**61**	PN	**Pn**	**05 20 51.9**	**+1.0**
SRCK	**Saricakaya, Es**	**2.15**	**79**	PN	**Pn**	**05 20 52.1**	**+0.8**
SRCK	**Saricakaya, Es**	**2.15**	**79**	*i*P	**Pn**	**05 20 51.6**	**+0.3**
SRCK				*i*S	**Sg**	**05 21 24.8**	**+0.9**
SRCK				IAML_P			
	comp=Z,511nm,0.2s						
SAUV	**Serdivan-Sakar**	**2.16**	**60**	PN	**Pn**	**05 20 52.4**	**+1.0**
GULT	**Gulveren**	**2.16**	**69**	PN	**Pn**	**05 20 52.5**	**+0.9**
KIRK	**Kırklareli**	**2.19**	**345**	*i*P	**Pn**	**05 20 52.5**	**+0.7**
KIRK				IAML_P			
	comp=Z,1μm,0.2s						
KAND	**Kocaeli-Kandir**	**2.27**	**51**	*i*P	**Pn**	**05 20 53.7**	**+0.8**
KAND				IAML_P			
	comp=Z,521nm,0.3s						
RDO	**Rodhopi**	**2.31**	**310**	P	**Pn**	**05 20 54.4**	**+0.8**
EDRB	**Edirne**	**2.33**	**339**	P	**Pn**	**05 20 54.2**	**+0.3**
CIFT	**Cifteler, Eski**	**2.48**	**96**	*i*P	**Pb**	**05 21 00.6**	**+0.5**
BTAS	**Tasketsi**	**2.56**	**69**	*i*P	**Pg**	**05 21 03.7**	**-0.3**
BTAS				*i*S	**Sg**	**05 21 38.9**	**+1.9**
SAHE	**Sakarya_HENDEK**	**2.56**	**62**	*i*P	**Pn**	**05 20 57.8**	**+0.7**
BRDR	**BURDUR-Merkez**	**2.61**	**138**	*i*P	**Pn**	**05 20 58.7**	**+0.9**
BRDR				IAML_P			
	comp=Z,501nm,0.2s						
BDRM	**Kayabasi**	**2.63**	**188**	*i*P	**Pb**	**05 21 03.7**	**+1.3**
KDZ	**Kurdzhali**	**2.72**	**317**	*i*P	**Pb**	**05 21 04.1**	**+0.1**
AUMIH	**MIHALICIK**	**2.79**	**85**	*i*P	**Pg**	**05 21 07.7**	**-0.7**
AUSIV	**SIVRIHISAR**	**2.84**	**94**	*i*P	**Pg**	**05 21 08.7**	**-0.7**
DIM	**Dimitrovgrad**	**2.96**	**324**	*i*P	**Pn**	**05 21 03.3**	**+0.8**
RZN	**Rozhen**	**3.13**	**311**	*i*P	**Pn**	**05 21 03.8**	**-1.2**
KIBS	**BOLU**	**3.14**	**75**	*i*P	**Pg**	**05 21 15.2**	**0.0**
FETY	**Fethiye**	**3.18**	**162**	*i*P	**Pn**	**05 21 05.8**	**+0.3**
BCAM	**Yenicaga**	**3.40**	**69**	*i*P	**Pn**	**05 21 09.8**	**+1.1**
MMB	**Musomiste**	**3.69**	**303**	*i*P	**Pb**	**05 21 17.7**	**-2.9**
AKAS	**Kas**	**3.70**	**158**	*i*P	**Pn**	**05 21 15.9**	**+3.2**
KKB	**Krupnik**	**4.25**	**303**	*i*P	**Pn**	**05 21 20.5**	**+0.3**
VTS	**Vitosha**	**4.57**	**311**	↑*i*P	**Pn**	**05 21 26.0**	**+1.2**
VTS	**Vitosha**	**4.57**	**311**	*i*P	**Pn**	**05 21 25.8**	**+1.0**
DELI	**KIRIKKALE**	**4.66**	**84**	*i*P	**Pn**	**05 21 26.6**	**+0.6**
STIP	**Stip**	**4.77**	**297**	*i*Pn	**Pn**	**05 21 26.4**	**-1.0**
STIP				*e*Sn	**Sn**	**05 22 19.0**	**-4.0**
TIRR	**Tirgusor**	**4.79**	**5**	↑*i*P	**Pn**	**05 21 26.8**	**-0.9**
MPEP	**Malo Peshtene**	**4.81**	**321**	P	**Pn**	**05 21 28.9**	**+1.0**
TLB	**Topalu**	**4.91**	**1**	↑*i*P	**Pn**	**05 21 28.4**	**-0.8**
MLR	**Muntele Rosu**	**5.98**	**347**	↑*i*P	**Pn**	**05 21 47.0**	**+2.9**
VOIR	**Voir**	**6.12**	**341**	↑*i*P	**Pn**	**05 21 49.5**	**+3.5**
PLOR	**Plostina**	**6.24**	**352**	↑*i*P	**Pn**	**05 21 48.7**	**+1.2**
VRI	**Vrincioaia**	**6.24**	**353**	↑*i*P	**Pn**	**05 21 49.8**	**+2.2**
DOPR	**Dopca**	**6.55**	**345**	↑*i*P	**Pn**	**05 21 54.8**	**+3.0**
BIZ	**Bicaz**	**7.37**	**350**	↑*i*P	**Pn**	**05 22 05.3**	**+2.2**
BURAR	**Bucovina Array**	**8.17**	**347**	↓*i*P	**Pn**	**05 22 16.4**	**+2.4**

*IDC **21** 05:26:59.0±48.0, 23°.43S×178°.75W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/36, mbtmp4.1/3, Error ellipse: s-maj=868.8km s-min=158.9km az=87.0*
*ISCJB **21** 05:27:39.6±0.8, 24°.9S±0°.1×178°.9W±0°.1, h400km, mb4.0/11, Error ellipse: s-maj=19.3km s-min=13.7km az=173.0*
*NEIC **21** 05:27:43.9±1.6, 24°.95S×178°.78W, h443km±12km, mb4.1/11, Error ellipse: s-maj=25.4km s-min=14.7km az=171.0*

ISC 21 05:27:40.7±1.0, 24°.8S±0°.2×178°.8W±0°.1, h400km, n16, σ1§11/16, mb3.9/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUZ	**Omahuta**	**12.25**	**211**	*e*P	**Pn**	**05 30 25.8**	**+1.1**
SNZO	**South Karori**	**17.29**	**197**	*e*P	**P**	**05 31 16.7**	**-0.8**
	394nm,1.4s						
RAR	**Rarotonga**	**17.89**	**82**	*e*P	**P**	**05 31 26.0**	**+1.9**
	50nm,1.1s						
EIDS	**Eidsvold**

IANJ IAMB IAmb 05 58 35.6
comp=Z,18μm,0.3s
ISFB Sefidab 1.45 189 *e*Pn **Pn 05 58 10.4 -1.6**
ISFB IAMB IAmb 05 58 45.1
comp=Z,14μm,0.2s
IMHD Mahdasht 1.51 267 *e*Pn **Pn 05 58 11.7 -1.2**
IMHD IAMB IAmb 05 58 16.8
comp=Z,10μm,0.1s
GHVR GHOM 1.65 218 *e*Pn **Pn 05 58 14.2 -0.5**
QALM Alamut, Qazvin 1.65 294 *e*Pn **Pn 05 58 14.7 -0.2**
KRSH Karshahi 1.84 190 *e*Pn **Pn 05 58 17.0 -0.5**
IGZV Ghazvin 1.96 288 *e*Pn **Pn 05 58 18.8 -0.4**
IGZV IAMB IAmb 05 58 21.5
comp=Z,7μm,0.3s
IRAZ Razeghan 2.15 261 *e*Pn **Pn 05 58 22.6 +0.9**
IRAZ IAMB IAmb 05 58 59.9
comp=Z,9μm,0.4s
QABG Abgarm-Qazvin 2.39 269 *e*Pn **Pn 05 58 26.1 +1.0**
IKLH Kolahrood 2.58 198 *e*Pn **Pn 05 58 27.7 -0.1**
IKLH IAMB IAmb 05 59 08.0
comp=Z,6μm,0.4s
IMND Minoodasht 2.75 57 *e*Pn **Pn 05 58 29.8 0.0**
ANAR Anarak 2.78 159 *e*Pn **Pn 05 58 30.4 +0.1**
IZEF Zefreh 2.89 183 *e*Pn **Pn 05 58 31.8 -0.2**
IZEF IAMB IAmb 05 59 32.5
comp=Z,2μm,0.5s
HAGD Aghdareh 2.93 252 *e*Pn **Pn 05 58 33.3 +0.8**
IGAR Gharneh 3.40 187 *e*Pn **Pn 05 58 39.9 +0.9**
IGAR IAMB IAmb 05 58 57.4
comp=Z,2μm,0.4s
MRVT Maraveh tapeh 3.42 56 *e*Pn **Pn 05 58 39.4 +0.2**
HSAM Samen 3.58 245 *e*Pn **Pn 05 58 43.7 +2.2**
ROKH ROKH 3.65 200 *e*Pn **Pn 05 58 43.8 +1.4**
YZKH Yazd 3.80 153 *e*Pn **Pn 05 58 44.4 0.0**
TNSJ Nastanj 3.82 117 *e*Pn **Pn 05 58 44.7 0.0**
JHBN Jahan bin 3.87 204 *e*Pn **Pn 05 58 47.5 +2.0**
IRAM Ramesheh 3.97 182 *e*Pn **Pn 05 58 47.6 +0.8**
IRAM IAMB IAmb 06 00 02.6
comp=Z,683nm,0.5s
ISAD Sadrabad 3.98 166 *e*Pn **Pn 05 58 47.2 +0.1**
IBZA Bozab 4.04 252 *e*Pn **Pn 05 58 49.9 +2.1**
IDOB Doab 4.09 242 *e*Pn **Pn 05 58 50.4 +1.9**
IKMR Kamar-syah 4.09 238 *e*Pn **Pn 05 58 49.6 +1.3**
SBZV Sabzevar 4.17 80 *e*Pn **Pn 05 58 49.7 +0.2**
LKRN Lenkeran, Azer 4.17 315 P **Pn 05 58 50.0 +0.6**
LKRN S **Sn 05 59 38.5 0.0**
TKDS Koohdasht(Taba 4.37 118 *e*Pn **Pn 05 58 52.2 0.0**
LRK Lerik 4.39 312 P **Pn 05 58 52.5 0.0**
SNR=8.9
LRK S **Sn 05 59 43.6 -0.5**
ISRB Sarab 4.39 299 *e*Pn **Pn 05 58 55.0 +2.4**
IKOM Komasi 4.42 250 *e*Pn **Pn 05 58 54.3 +1.4**
IKFM Kafar-mosalman 4.46 241 *e*Pn **Pn 05 58 54.8 +1.4**
ISFR Sfrayin 4.60 72 *e*Pn **Pn 05 58 56.7 +1.2**
ILIN Lien 4.62 261 *e*Pn **Pn 05 58 57.3 +1.5**
IMEH Mehriz 4.72 158 *e*Pn **Pn 05 58 58.0 +0.8**
IMEH IAMB IAmb 06 00 42.2
comp=Z,916nm,0.8s
GLBA Ciilabad 4.76 318 P **Pn 05 58 57.8 +0.4**
SNR=9.1
GLBA S **Sn 05 59 51.8 -1.2**
IBAF Bafgh 4.90 148 *e*Pn **Pn 05 58 59.5 0.0**
IBAF IAMB IAmb 06 00 39.5
comp=Z,804nm,0.6s
IBST Bostanabad 4.91 295 *e*Pn **Pn 05 59 01.4 +1.7**
IBST IAMB IAmb 05 59 20.7
comp=Z,329nm,0.6s
IKRD Kardeh 4.94 77 *e*Pn **Pb 05 59 13.5 +1.3**
GEYT Alibeck 4.97 63 Pn **Pn 05 59 01.4 +1.0**
comp=Z,8.6nm,0.3s,baz=251,slow=14,SNR=23
GEYT Sn **Sn 05 59 57.0 -1.3**
comp=Z,1.4nm,0.3s,baz=256,slow=16,SNR=2.4
GEYT LR LR 06 01 20.5
comp=Z,177nm,19.5s,baz=260,slow=44
GALA Gala 4.98 339 S **Sn 05 59 59.6 +1.3**
IHRS Heris 5.06 302 *e*Pn **Pn 05 59 04.4 +2.6**
GOBA Gobu 5.10 335 P **Pn 05 59 03.7 +1.6**
GOBA S **Sn 06 00 02.1 +0.7**
IAKL Akhelmad 5.11 79 *e*Pn **Pn 05 59 03.3 +0.8**
IDHR Dehrash 5.13 260 *e*Pn **Pn 05 59 04.2 +1.4**
NDR Nardaran 5.18 338 P **Pn 05 59 04.9 +1.6**
IEMG Emamgholi 5.20 70 IAMB IAmb 05 59 27.1
comp=Z,839nm,0.8s
IEMG *e*Pn **Pn 05 59 03.8 +0.1**
SAAT Saatly 5.20 323 P **Pn 05 59 05.3 +1.8**
IPAY Payeh 5.29 81 *e*Pn **Pn 05 59 06.5 +1.6**
GBS Qobustan 5.51 330 P **Pn 05 59 09.0 +1.1**
GBS S **Sn 06 00 11.6 -0.1**
KDMR Kurdemir 5.72 325 P **Pn 05 59 11.6 +1.0**
ATGJ Altiaghaj 5.79 332 P **Pn 05 59 12.2 +0.5**
SNR=6.4
ATGJ S **Sn 06 00 19.2 +0.6**
PQL Pirkuli 5.87 329 P **Pn 05 59 14.0 +1.1**
SNR=11
PQL S **Sn 06 00 19.7 -0.9**
ZRD Zardab 5.89 321 S **Sn 06 00 20.1 -0.6**
SIZA Siyzn 6.00 333 P **Pn 05 59 16.0 +1.5**
SNR=4.9
SIZA S **Sn 06 00 23.8 +0.2**
IKAZ Kazeroun 6.02 186 *e*Pn **Pn 05 59 16.3 +1.2**
IML Ismayilli 6.05 327 P **Pn 05 59 16.0 +0.8**
IML S **Sn 06 00 24.6 -0.3**
ORD Ordubad 6.07 303 P **Pn 05 59 15.9 +0.4**
SNR=6.6
ORD S **Sn 06 00 22.9 -2.5**
BRDA Brd 6.14 318 P **Pn 05 59 16.8 +0.4**
BRDA S **Sn 06 00 25.9 -1.2**
QBL Gabala 6.33 326 P **Pn 05 59 19.8 +0.7**
QBL S **Sn 06 00 29.4 -2.3**
IKOO Kooshah 6.34 120 *e*Pn **Pn 05 59 19.4 0.0**
XNQ Khinaliq 6.38 329 P **Pn 05 59 20.4 +0.5**
SNR=6.7
XNQ S **Sn 06 00 31.7 -1.5**
QUBA Quba, Azerbaij 6.39 332 P **Pn 05 59 20.1 +0.2**
QUBA S **Sn 06 00 33.2 -0.1**
IMON Monand 6.44 112 *e*Pn **Pn 05 59 21.2 +0.4**
NAX Nakhchivan 6.53 303 P **Pn 05 59 22.2 +0.4**
MNGR Mingechevir, A 6.56 321 S **Sn 06 00 36.1 -1.2**
QSAR Qusar 6.62 331 P **Pn 05 59 23.3 +0.3**
SNR=4.8
QSAR S **Sn 06 00 39.0 +0.1**
IDAH Dahanechah 6.80 114 *e*Pn **Pn 05 59 26.7 +0.9**
SEKA Sheki 6.83 324 P **Pn 05 59 26.1 +0.1**
SNR=18
SEKA S **Sn 06 00 42.3 -2.0**
GANJ Ganja 6.88 317 P **Pn 05 59 27.0 +0.4**
SNR=4.7
GANJ S **Sn 06 00 43.6 -1.7**
HYR Heyderabad 7.23 305 S **Sn 06 00 51.3 -2.7**
GDB GEDABAY 7.25 315 P **Pn 05 59 32.0 +0.1**
SNR=18
GDB S **Sn 06 00 52.4 -2.2**
ZKTA Zakatala 7.44 324 S **Sn 06 00 58.3 -0.8**
GNI Garni 7.53 308 Pn **Pn 05 59 37.7 +2.1**
comp=Z,1.1nm,0.3s,baz=109,slow=18,SNR=2.3
GNI LR LR 06 03 18.3
comp=Z,38nm,18.9s,baz=104,slow=44
QZX Qazax, Azerbai 7.69 315 P **Pn 05 59 37.2 -0.5**
QZX S **Sn 06 01 03.9 -1.4**
KBZ Khabaz 10.84 320 Pn **Pn 06 00 23.0 +2.1**
comp=Z,0.1nm,0.3s,baz=94,slow=8.6,SNR=1.9
KBZ Sn **Sn 06 02 23.5 +0.9**
comp=Z,0.1nm,0.3s,baz=178,slow=4.2,SNR=2.2
MMAI Mount Meron Ar 14.40 264 LR LR 06 07 09.9
comp=Z,39nm,21.5s,baz=150,slow=39
AKTO Aktyubinsk 15.17 14 Pn **Pn 06 01 15.5 -4.4**
comp=Z,0.7nm,0.3s,baz=181,slow=13,SNR=11
AKTO Sn Sn 06 03 55.6 -13
comp=Z,0.7nm,0.3s,baz=91,slow=20,SNR=6.6
EIL Elat 15.98 253 LR LR 06 08 47.2
comp=Z,106nm,18.1s,baz=36,slow=41
AAK Ala-Archa 18.32 61 P **Pn 06 02 00.0 -0.1**
comp=Z,0.4nm,0.3s,baz=222,slow=14,SNR=4.1
AAK LR LR 06 08 48.7
comp=Z,54nm,18.6s,baz=231,slow=36
ARU Arti 21.05 9 P **P 06 02 29.6 -0.1**
comp=Z,5.1nm,0.7s,baz=191,slow=13,SNR=13
BVAR Borovoye Array 21.34 31 P **P 06 02 32.4 -0.5**
comp=Z,4.7nm,0.7s,baz=218,slow=9.6,SNR=14
OBN Obninsk 22.23 335 LR LR 06 12 12.6
comp=Z,12nm,19.3s,baz=256,slow=39
MLR Muntele Rosu 22.29 304 P **P 06 02 45.1 +1.8**
comp=Z,1.9nm,0.7s,baz=149,slow=4.8,SNR=3.1
AKASG Malin Array Be 22.45 319 P **P 06 02 44.8 0.0**
comp=Z,0.8nm,0.5s,baz=124,slow=10,SNR=2.8
KIRV Kirov 22.90 356 P **P 06 02 48.7 -0.8**
comp=Z,11nm,0.4s,baz=231,slow=3.2,SNR=5.8
KIRV LR LR 06 12 56.3
comp=Z,38nm,18.6s,baz=158,slow=40
KURBB Kurchatov Arra 23.90 44 P **P 06 03 00.9 +1.3**
comp=Z,0.3nm,0.4s,baz=253,slow=8.9,SNR=4.3
MKAR Makanchi Array 24.78 54 P **P 06 03 08.8 +1.1**
comp=Z,0.9nm,0.6s,baz=244,slow=9.9,SNR=7.2
MKAR LR LR 06 13 19.5
comp=Z,37nm,19.9s,baz=266,slow=38
ATD Arta Tunnel 25.69 202 LR LR 06 14 33.2
comp=Z,48nm,21.2s,baz=58,slow=39
KLMR Klimovskoe 26.43 346 *e* **P 06 03 24.7 +2.2**
KLMR AMP 06 03 26.6
comp=Z,8.0nm,0.8s
VYHS Vyhne 27.78 308 *e*P **P 06 03 36.6 +1.8**
ZALV Zalesovo Beam 28.86 41 P **P 06 03 43.6 -0.7**
comp=Z,0.5nm,0.3s,baz=248,slow=11,SNR=2.3
ZALV LR LR 06 16 01.5
comp=Z,42nm,19.3s,baz=154,slow=38
NRIK Noril'sk 38.69 19 LR LR 06 24 25.3
comp=Z,54nm,18.6s,baz=206,slow=42
CMAR Chiang Mai Arr 44.34 100 P **P 06 05 57.2 +0.8**
comp=Z,1.0nm,0.3s,baz=303,slow=8.4,SNR=2.9
TORD Torodi Ar. Bea 50.81 257 LR LR 06 31 05.0
comp=Z,56nm,19.4s,baz=350,slow=39
KSRS Korea Array 58.96 64 P **P 06 07 45.5 0.0**
comp=Z,1.3nm,0.8s,baz=274,slow=6.0,SNR=3.0
KSRS LR LR 06 36 36.5
comp=Z,19nm,19.6s,baz=340,slow=40
BOSA Boshof 69.02 206 LR LR 06 40 10.4
comp=Z,73nm,19.7s,baz=352,slow=37
YKA Yellowknife Ar 81.51 354 P **P 06 10 03.6 +0.5**
comp=Z,0.2nm,0.8s,baz=7.7,slow=6.8,SNR=3.7
ULM Lac du Bonnet 89.89 340 LR LR 06 54 44.3
comp=Z,21nm,18.6s,baz=84,slow=38

*JMA **21** 06:11:33.8±0.4, 45°.80N×141°.75E, h15km±4km, M2.5*
*SKHL **21** 06:11:33.2±0.7, 45°.75N×141°.75E, h10km, mb3.6/1*
*ISCJB **21** 06:11:34.0±1.2, 45°.77N±0°.04×141°.8E±0°.1, h10km, Error ellipse: s-maj=13.5km s-min=5.1km az=13.2*
ISC 21 06:11:35.3±1.4, 45.71N±0°.06×141°.8E±0°.1, h10km, n4, σ0°87/7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.40**	**170**	P	**Pg**	**06 11 43.3**	**+0.1**
JWK2				*e*S	**Sg**	**06 11 49.6**	**+1.1**
JRR	**Rishiri**	**0.67**	**211**	*e*S	**Sb**	**06 11 57.7**	**-0.7**
JSE	**Soyaes**	**0.94**	**143**	P	**Pg**	**06 11 52.4**	**-0.9**
JSE				*e*S	**Sg**	**06 12 05.9**	**+0.5**
YSS	**Yuzh-Sakhalins**	**1.41**	**28**	*e*Pg	**Pn**	**06 12 00.9**	**-0.1**
YSS				AMB	AMB	06 12 01.5	
	30nm,0.5s						
YSS				*e*Sg	**Sn**	**06 12 20.2**	**+0.6**
YSS				A	A	06 12 21.8	
	80nm,0.3s						

UCR 21 06:17:33.1±3.0, 12°.22N×86°.95W, h10km, MD3.7, ML2.7, 1C-1D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.35**	**96**	*e*P	Pg	06 17 38.3	-1.7
COPN				*e*S	Sb	06 17 48.3	+1.3
CNGN	**Cerro Negro**	**0.37**	**41**	*e*P	Pg	06 17 40.9	+0.4
CNGN				IAML		06 17 58.5	
	comp=Z,64nm,0.3s						
MOMN	**Momotombo**	**0.44**	**64**	*e*P	Pg	06 17 41.0	-0.8
CSGN	**Cosiguina Volc**	**0.96**	**322**	*e*P	Pg	06 17 48.5	-3.2
CSGN				*e*S	Sn	06 18 06.9	+0.3
CSGN				IAML		06 18 08.5	
	comp=E,2μm,0.5s						
GBS3	**Finca Las Img**	**2.04**	**134**	*i* P	Pn	06 18 08.7	+1.1
GB1A	**Borinquen Arri**	**2.06**	**132**	*e*P	Pn	06 18 08.6	+0.7
BUEV	**Buena Vista**	**2.07**	**133⇑**	*i* P	Pn	06 18 08.6	+0.6
LAPC	**Finca la Perla**	**2.07**	**134**	*i* P	Pn	06 18 08.1	+0.1
NY14	**Universidad de**	**2.09**	**138**	*i* P	Pn	06 18 07.9	-0.2
GPS1	**Guardaparques**	**2.12**	**132**	*i* P	Pn	06 18 09.3	+0.6
MESS	**Mesas**	**2.26**	**130**	*i* P	Pn	06 18 11.2	+0.6
ACAL	**Aguas Claras**	**2.45**	**130**	*i* P	Pn	06 18 13.4	+0.2
JTS	**Las Juntas de**	**2.74**	**134**	*e*P	Pn	06 18 15.9	-1.2
ARE1	**Arenal 1**	**2.80**	**128**	*i* P	Pn	06 18 18.1	+0.2
DRK0	**Durika**	**4.67**	**129**	*e*P	Pn	06 18 44.6	+0.7

MEX 21 06:17:49.2±0.8, 16°.43N×95°.97W, h80km±18km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.67**	**192**	*i* P	Pn	06 18 03.2	-1.4
HUIG				*e*S	Sn	06 18 14.2	-1.7
OXBJ	**Oaxaca**	**0.96**	**311**	*i* S	Sn	06 18 19.9	-2.1
VHO	**Vista Hermosa**	**0.97**	**311**	*i* P	Pn	06 18 07.3	-0.8
VHO				*e*S	Sn	06 18 19.8	-2.4

*SCEDC **21** 06:45:05.5, 31°.24N×115°.79W, h7km*
*ANF **21** 06:45:06.7±1.1, 31°.33N×115°.60W, h19km±8km, ML3.6/15, Error ellipse: s-maj=5.8km s-min=4.4km az=17.0*
*ECX **21** 06:45:06.0±0.6, 31°.26N×115°.69W, h4km, MD3.7, ML3.9*
*MEX **21** 06:45:06.9±0.8, 31°.13N×115°.73W, h15km±23km, MD3.8*
ISC 21 06:45:03.5±1.3, 31°.27N±0°.03×115°.65W±0°.03, h1km±11km, n34, σ1°14/51, 9C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**0.27**	**145**	*e*P	**Pb**	**06 45 11.8**	**+0.5**
SPIG				*e*S	**Sb**	**06 45 15.9**	**-0.6**
SPIG	**San Pedro Mart**	**0.27**	**145**	*e*P	**Pb**	**06 45 11.6**	**+0.3**
SPIG				*e*S	**Sb**	**06 45 16.0**	**-0.6**
SPX	**San Pedro Mart**	**0.27**	**145**	*e*P	**Pb**	**06 45 11.4**	**0.0**
SPX				*i* S	**Sb**	**06 45 15.9**	**-0.7**
SPX	**San Pedro Mart**	**0.27**	**145⇓**	*e*P	**Pb**	**06 45 11.8**	**+0.5**
SPX				*e*S	**Sb**	**06 45 15.9**	**-0.7**
SPX				IAML		06 45 16.5	
	comp=E,13μm,0.3s						
ECBX	**El Chinero**	**0.55**	**68⇑**	*i* P	**Pb**	**06 45 16.7**	**+0.9**
ECBX				*e*S	**Sb**	**06 45 24.2**	**0.0**
ZAX	**El Zacaton**	**0.59**	**295⇑**	*e*P	**Pg**	**06 45 15.7**	**+0.9**
ZAX				⇑*e*S	**Sg**	**06 45 23.5**	**+1.1**
ZAX				IAML		06 45 25.3	
	comp=E,8μm,0.4s						
ECNX	**Esteban Cantu**	**0.90**	**296⇑**	*e*P	**Pg**	**06 45 21.1**	**+0.3**
PBX	**Punta Banda**	**1.03**	**297⇑**	*e*P	**Pg**	**06 45 23.3**	**-0.1**
MBIG	**Mexicali**	**1.20**	**18**	*i* P	**Pn**	**06 45 28.4**	**+1.0**
CBX	**Cerro Bola**	**1.35**	**321**	*e*P	**Pn**	**06 45 29.1**	**-0.5**
CBX				*e*S	**Sg**	**06 45 45.4**	**-1.6**
CBX	**Cerro Bola**	**1.35**	**321⇑**	*e*P	**Pn**	**06 45 29.3**	**-0.3**
CBX				*e*S	**Sg**	**06 45 46.8**	**-0.2**
CBX				IAML		06 45 49.5	
	comp=N,2μm,0.4s						
CBX				*e*		06 45 49.5	
RMX	**La Rumorosa**	**1.38**	**345⇓**	*e*P	**Pn**	**06 45 29.5**	**-0.5**
RMX				IAML		06 45 49.1	
	comp=E,2μm,0.2s						
IKP	**In-Ko-Pah, Jac**	**1.43**	**344**	P	**Pb**	**06 45 30.9**	**-0.1**
	baz=169,SNR=140						
IKP				S	**Sb**	**06 45 49.0**	**-0.8**
	baz=169						
IKP	**In-Ko-Pah, Jac**	**1.43**	**344**	*e*P	**Pg**	**06 45 31.1**	**+0.1**
TJIG	**Tijuana**	**1.45**	**323**	*e*P	**Pn**	**06 45 30.8**	**-0.1**
TJIG				*e*S	**Sb**	**06 45 47.9**	**-2.5**
TJIG	**Tijuana**	**1.45**	**323⇓**	*e*P	**Pn**	**06 45 30.8**	**-0.1**
BAR	**Barrett**	**1.66**	**328⇓**	*e*P	**Pn**	**06 45 34.0**	**+0.4**
SWSC	**Sam W. Stewart**	**1.68**	**356**	Pb	**Pg**	**06 45 36.2**	**+0.6**
	baz=180,SNR=142						
SWSC				Sb	**Sg**	**06 45 58.0**	**+0.6**
	baz=180						
MONP2	**Monument Peak**	**1.75**	**338**	P	**Pn**	**06 45 35.5**	**+0.4**
	baz=162,SNR=225						
MONP2				S	**Sb**	**06 45 58.4**	**-0.6**
	baz=162						
MONP2	**Monument Peak**	**1.75**	**338**	*i* P	**Pb**	**06 45 36.3**	**-0.2**
SDRC	**San Diego Road**	**1.83**	**323⇑**	*e*P	**Pb**	**06 45 37.1**	**-0.6**
GLA	**Glamis**	**1.91**	**21**	Sb	**Sg**	**06 46 05.1**	**+0.3**
	baz=204						
EML	**El Monte Cty P**	**1.91**	**328⇑**	*i* P	**Pb**	**06 45 38.5**	**-0.6**
109C	**Camp Elliot, M**	**2.04**	**323**	P	**Pn**	**06 45 39.5**	**+0.7**
	baz=146,SNR=25						
109C				S	**Sn**	**06 46 05.7**	**+0.8**
	baz=146						
BC3	**Big Chuckawall**	**2.38**	**4**	P	**Pn**	**06 45 43.8**	**0.0**
	baz=187						
PFO	**Pinyon Flats O**	**2.44**	**344**	P	**Pn**	**06 45 44.4**	**-0.1**
	baz=166,SNR=26						
PFO				Sb	**Sb**	**06 46 20.0**	**+1.4**
	baz=166						
214A	**Organ Pipe Nat**	**2.51**	**73**	P	**Pn**	**06 45 45.1**	**-0.4**
	baz=255,SNR=12						
214A				S	**Sn**	**06 46 15.1**	**-1.7**
	baz=255						
BELC	**Belle Mtn. Jos**	**2.74**	**354**	P	**Pn**	**06 45 49.6**	**+0.9**
	baz=176,SNR=27						
IRM	**Iron Mountain**	**2.91**	**8**	P	**Pn**	**06 45 52.5**	**+1.5**
	baz=191,SNR=9.9						
SCI2	**San Clemente I**	**2.99**	**305**	P	**Pn**	**06 45 53.6**	**+1.5**
	baz=126						
SCI2				S	**Sn**	**06 46 28.9**	**+0.3**
	baz=126						
BBRC	**Big Bear Solar**	**3.17**	**341**	P	**Pn**	**06 45 56.0**	**+1.3**
	baz=162,SNR=18						
BBRC				Sb	**Sb**	**06 46 41.6**	**+1.6**
	baz=162						
EDW2	**Edwards Air Fo**	**4.11**	**332**	Sb	**Sb**	**06 47 08.2**	**+1.5**
	baz=152						
TUC	**Tucson**	**4.27**	**75**	P	**Pn**	**06 46 09.8**	**+0.2**
	baz=257						
MPMC	**Manual Prospec**	**5.02**	**343**	Sb	**Sg**	**06 47 39.7**	**-4.9**
	baz=163						

IDC 21 07:00:05.8±24.0, 24°.50S×178°.08E, h650km±236km, mb3.1/4, mb1 3.3/4, mb1mx2.9/31, mbtmp4.3/4, Error ellipse: s-maj=208.8km s-min=99.6km az=87.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**29.74**	**272**	P	P	07 05 23.4	+0.5
	2.7nm,0.4s,baz=96,slow=11,SNR=9.1						
STKA	**Stephens Creek**	**32.87**	**249**	P	P	07 05 49.2	-0.1
	13nm,1.4s,baz=90,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**40.21**	**262**	P	P	07 06 49.0	-0.2
	1.3nm,0.8s,baz=92,slow=7.2,SNR=9.1						
WRA	**Warramunga Arr**	**40.62**	**267**	P	P	07 06 52.5	0.0
	2.2nm,0.4s,baz=100,slow=8.9,SNR=28						
AKASG	**Malin Array Be**	**144.50**	**326**	PKP	PKPdf	07 18 28.6	-1.1
	0.5nm,0.4s,baz=47,slow=3.2,SNR=3.5						
BRTR	**Keskin Array B**	**146.52**	**306**	PKPbc	PKPbc	07 18 36.1	-0.3
	0.5nm,0.6s,baz=93,slow=7.2,SNR=2.6						

IDC 21 07:10:43.1±7.2, 17°.68N×105°.78W, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.5/32, mbtmp3.4/5, ML3.3/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/21, Error ellipse: s-maj=141.3km s-min=85.4km az=132.0, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**5.02**	**283**	T	T	07 16 43.6	
	SNR=138						
LPIG	**La Paz**	**7.67**	**327**	LR	LR	07 14 49.1	
	comp=Z,83nm,19.2s,baz=200,slow=32						
TXAR	**Lajitas Array**	**11.76**	**9**	Pn	Pn	07 13 34.4	+2.0
	0.1nm,0.3s,baz=189,slow=13,SNR=9.2						
TXAR				LR	LR	07 18 02.5	
	comp=Z,50nm,20.8s,baz=0.0,slow=37						
ANMO	**Albuquerque**	**17.21**	**358**	LR	LR	07 21 41.4	
	comp=Z,41nm,20.6s,baz=180,slow=38						
NVAR	**Mina Array Bea**	**23.40**	**335**	P	P	07 15 54.0	+0.1
	0.5nm,0.6s,baz=158,slow=9.7,SNR=3.2						
YKA	**Yellowknife Ar**	**45.20**	**354**	P	P	07 19 01.6	0.0
	0.1nm,0.2s,baz=161,slow=7.8,SNR=4.5						
INK	**Inuvik**	**53.57**	**348**	P	P	07 20 05.2	-0.2
	1.1nm,0.8s,baz=143,slow=10,SNR=6.9						
INK				LR	LR	07 42 31.9	
	comp=Z,32nm,18.2s,baz=6.5,slow=36						
ILAR	**Eielson Array**	**54.51**	**340**	P	P	07 20 12.3	-0.2
	0.5nm,0.7s,baz=145,slow=7.5,SNR=7.7						

IDC 21 07:19:11.3±2.1, 6°.37S×129°.83E, h0km, mb4.1/2, mb1 4.1/4, mb1mx3.7/21, mbtmp4.0/4, ML3.7/2, MS4.0/1, Ms1 4.0/1, ms1mx2.8/23, Error ellipse: s-maj=233.5km s-min=24.9km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.19**	**162**	Pn	Pn	07 22 34.4	+0.7
	0.2nm,0.3s,baz=334,slow=13,SNR=8.6						
WRA				Sn	Sn	07 25 04.2	-7.8
	1.1nm,0.3s,baz=333,slow=22,SNR=9.9						
ASAR	**Alice Springs**	**17.64**	**168**	P	P	07 23 20.5	+0.8
	0.6nm,0.3s,baz=348,slow=11,SNR=28						
ASAR				S	Sn	07 26 26.7	-9.3
	0.1nm,0.3s,baz=346,slow=25,SNR=4.0						
STKA	**Stephens Creek**	**27.66**	**158**	P	P	07 24 59.9	-1.0
	0.8nm,0.3s,baz=323,slow=10,SNR=5.3						
DZM	**Mont Dzumac**	**38.63**	**118**	LR	LR	07 43 53.6	
	comp=Z,224nm,18.9s,baz=359,slow=38						
MKAR	**Makanchi Array**	**67.61**	**327**	P	P	07 30 10.1	+0.1
	0.9nm,0.5s,baz=119,slow=8.2,SNR=9.4						

*IDC **21** 07:29:49.8±0.7, 5°.42S×153°.07E, h0km, mb4.2/17, mb1 4.3/19, mb1mx4.2/38, mbtmp4.2/19, ML2.2/2, MS3.4/6, Ms1 3.4/6, ms1mx3.1/25, Error ellipse: s-maj=22.4km s-min=13.5km az=99.0*
*ISCJB **21** 07:29:53.6±0.4, 5°.47S±0°.05×153°.28E±0°.08, h37km, mb4.4/30, MS3.3/5, Error ellipse: s-maj=11.2km s-min=7.1km az=19.1*
*NEIC **21** 07:29:55.5±3.0, 5°.50S×153°.29E, h35km, mb4.6/18, Error ellipse: s-maj=20.5km s-min=9.9km az=237.0*
ISC 21 07:29:55.2±0.5, 5°.51S±0°.07×153°.26E±0°.10, h37km, n53, σ1°52/52, mb4.4/30, MS3.4/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.71**	**320**	*e*Pn	**Pn**	**07 30 22.6**	**+0.2**
MANU	**Manus Island**	**6.82**	**300**	*e*Pn	Pn	07 31 42.6	+10
PMG	**Port Moresby**	**7.18**	**237**	Pn	**Pn**	**07 31 34.7**	**-3.0**
	0.4nm,0.3s,baz=24,slow=10.0,SNR=1.9						
PMG				Sn	**Sn**	**07 32 56.1**	**-2.0**
	2.2nm,0.3s,baz=53,slow=20,SNR=2.9						
PMG	**Port Moresby**	**7.18**	**237**	*e*Pn	**Pn**	**07 31 40.0**	**+2.3**
PMG				*e*Sn	**Sn**	**07 33 01.9**	**+3.8**
HNR	**Honiara**	**7.69**	**121**	LR	LR	07 34 55.0	
	comp=Z,203nm,19.5s,baz=296,slow=39						
CTA	**Charters Tower**	**16.01**	**205**	Pn	**Pn**	**07 33 35.6**	**-2.1**
	0.1nm,0.3s,baz=48,slow=14,SNR=2.6						
CTAO	**Charters Tower**	**16.01**	**205**	*e*Pn	**P**	**07 33 41.0**	**+0.2**
	12nm,1.2s						
EIDS	**Eidsvold**	**19.86**	**186**	*e*P	**Pn**	**07 34 24.7**	**-0.2**
	18nm,1.2s						
DZM	**Mont Dzumac**	**20.82**	**143**	P	Pn	07 34 35.5	-0.8
	4.0nm,0.5s,baz=319,slow=18,SNR=2.5						
MTN	**Manton Dam**	**23.02**	**250**	*e*P	**P**	**07 34 58.6**	**+1.5**
	39nm,1.4s						
WB2	**Warramunga Arr**	**23.33**	**230**	*e*P	**P**	**07 34 59.4**	**-0.8**
	14nm,1.1s						
WR1	**Warramunga Arr**	**23.34**	**230**	*e*P	**P**	**07 34 59.8**	**-0.5**
WRA	**Warramunga Arr**	**23.34**	**230**	P	**P**	**07 34 59.8**	**-0.5**
	1.6nm,0.5s,baz=59,slow=10,SNR=10						
AS31	**Alice Springs**	**25.95**	**224**	*e*P	**P**	**07 35 23.8**	**

MAJO Matsushiro 44.15 343 *eP* **P** **07 37 56.9 -3.3**
KSRS Korea Array 48.84 333 P **P** **07 38 36.2 -0.8**
0.8nm,0.6s,baz=152,slow=8.2,SNR=5.5
KSRS LR LR 07 58 38.8
comp=Z,20nm,18.0s,baz=155,slow=36
ASAJ Asahikawa 50.33 350 P **P** **07 38 47.9 -0.3**
5.8nm,0.6s,baz=235,slow=13,SNR=5.4
USRK Ussuriysk Ar. 53.06 341 P **P** **07 39 08.3 -0.4**
1.8nm,0.7s,baz=169,slow=6.8,SNR=6.1
KLR Kul'dur 57.65 343 P **P** **07 39 41.1 -0.5**
3.6nm,0.8s,baz=134,slow=7.2,SNR=7.4
PEA0B Petropavlovsk- 58.52 3 *eP* **P** **07 39 49.8 +2.2**
22nm,1.1s
PETK Petropavlovsk- 58.52 3 P **P** **07 39 47.4 -0.2**
3.9nm,0.5s,baz=168,slow=5.5,SNR=10
PEA1 Petropavlovsk- 58.52 3 *eP* **P** **07 39 47.4 -0.3**
CMAR Chiang Mai Arr 58.59 295 P **P** **07 39 47.5 -1.4**
0.9nm,0.3s,baz=128,slow=5.8,SNR=2.5
TAOE Nuku Hiva Isla 66.08 97 *eP* **P** **07 40 38.2 -1.0**
123nm,1.3s
SONA0 Songino Array 67.17 328 *eP* **P** **07 40 45.4 -0.1**
SONM Songino Array 67.17 328 P **P** **07 40 45.4 -0.1**
1.6nm,0.5s,baz=146,slow=5.9,SNR=8.4
VNDA Vanda 72.11 178 P **P** **07 41 16.4 +1.1**
0.6nm,0.8s,baz=338,slow=5.7,SNR=3.3
SKT Skwentna 79.39 23 *eP* **P** **07 41 59.5 +2.3**
12nm,1.5s
MK32 Makanchi Array 81.16 319 *eP* **P** **07 42 06.0 -1.0**
MKAR Makanchi Array 81.16 319 P **P** **07 42 06.0 -1.0**
2.6nm,0.9s,baz=101,slow=6.3,SNR=9.4
MAKZ Makanchi 81.37 319 *eP* **P** **07 42 09.7 +1.6**
3.9nm,0.9s
MLY Manley 81.38 21 *eP* **P** **07 42 08.8 +1.0**
5.4nm,1.4s
ZAA0 Zalesovo Array 82.00 326 *eP* **P** **07 42 11.9 +0.7**
5.5nm,0.6s
ZALV Zalesovo Beam 82.00 326 P **P** **07 42 11.1 -0.1**
5.9nm,0.6s,baz=119,slow=5.3,SNR=13
ZAA1 Zalesovo Array 82.00 326 *eP* **P** **07 42 11.1 -0.2**
ILAR Eielson Array 82.64 22 P **P** **07 42 13.6 -0.8**
0.9nm,0.7s,baz=244,slow=5.5,SNR=5.1
QSPA South Pole Qui 84.45 180 *eP* **P** **07 42 25.9 +2.0**
13nm,1.4s
KURK Kurchatov 84.61 322 *eP* **P** **07 42 25.5 +0.7**
6.8nm,0.9s
AAK Ala-Archa 85.49 313 *eP* **P** **07 42 30.7 +1.1**
4.3nm,0.8s
NRIK Noril'sk 86.78 341 P **P** **07 42 35.5 +0.4**
5.7nm,0.6s,baz=130,slow=4.1,SNR=5.4
BRVK Borovoye 90.15 323 *eP* **P** **07 42 50.8 -0.7**
3.6nm,0.8s
GERES GERESS Array B 124.90 329 PKP **PKiKP** **07 48 51.4 -0.5**
0.6nm,0.4s,baz=359,slow=5.9,SNR=3.7
LPAZ La Paz 133.68 119 PKP **PKiKP** **07 49 12.2 +1.2**
0.9nm,0.6s,baz=275,slow=5.0,SNR=3.7
BDFB Brasilia 150.24 135 PKPbc **PKiKP** **07 49 43.8 -0.6**
3.3nm,0.8s,baz=325,slow=1.7,SNR=7.3
TOA0 Torodi Ar. Sit 150.96 287 *e*PKPbc **PKiKP** **07 49 45.7 0.0**
TORD Torodi Ar. Bea 150.96 287 PKPbc **PKPbc** **07 49 43.2 -1.9**
4.1nm,0.8s,baz=46,slow=2.1,SNR=19
TOA1 Torodi Ar. Sit 150.96 287 *e*PKPbc **PKPbc** **07 49 43.2 -1.9**

NIED ***21*** *07:31:00,28.°00N×129.°40E,h35km,Mw4.5 Best double couple: M0 5.90000×10^15 NP1:φs124.00000°,δ4.00000°, λ-73.00000°. NP2:φs287.00000°,δ86.00000°, λ-91.00000°.*
BJI ***21*** *07:31:09.7±0.0,27.°71N×129.°68E,h37km,mb4.4/39, mB4.7/29,Ms4.1/31,Ms7 3.9/31*
ISCJB ***21*** *07:31:10.8±0.5,27.°99N±0.°02×129.°42E±0.°03,h25km±3km, mb4.5/79,MS3.8/22,Error ellipse: s-maj=4.8km s-min=2.5km az=37.1*
MOS ***21*** *07:31:11.9±1.4,27.°93N×129.°44E,h38km,mb4.6/18, MS4.0/4,Error ellipse: s-maj=9.4km s-min=5.6km az=89.5*
JMA ***21*** *07:31:11.9±0.1,28.°05N×129.°32E,h22km±2km,M4.6*
JMA Felt IV J1.
NEIC ***21*** *07:31:14.7±1.8,28.°00N×129.°29E,h44km±6km,mb4.6/53, Error ellipse: s-maj=11.5km s-min=11.0km az=102.0*
NEIC Recorded [4 JMA] on Uke-jima.
IDC ***21*** *07:31:14.8±1.3,28.°05N×129.°26E,h48km±12km,mb4.0/21, mb1 4.2/25,mb1mx4.1/43,mbtmp4.2/25,ML4.4/3,MS3.7/20, Ms1 3.8/20,ms1mx3.6/34,Error ellipse: s-maj=15.6km s-min=8.7km az=105.0*
ISC 21 07:31:11.7±0.6,27.°98N±0.°03×129.°42E±0.°03,h19km±2km, n216,σ1$77/230,mb4.6/83,MS3.9/24,4C-19D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMN	**Amaminishikomi**	**0.34**	**321**	⇓*P*	**Pg**	**07 31 17.8**	**-1.3**
JAMN				*e*S	**Sg**	**07 31 21.4**	**-2.7**
JTK	**Tokunoshima**	**0.46**	**246**	⇓P	**Pg**	**07 31 20.4**	**-0.7**
JTK				*e*S	**Sg**	**07 31 26.3**	**-1.1**
JAM	**Amami Oshima**	**0.46**	**20**	⇓P	**Pg**	**07 31 20.5**	**-0.7**
JAM				*e*S	**Sg**	**07 31 26.8**	**-0.8**
JZK	**Kikaishima**	**0.59**	**55**	P	**Pn**	**07 31 25.1**	**+0.1**
JOKE	**Okinoerabujima**	**0.97**	**231**	P	**Pb**	**07 31 29.4**	**-0.5**
JOKE				*e*S	**Sb**	**07 31 41.7**	**-0.6**
JTAJ	**Takarajima**	**1.19**	**351**	⇑P	**Pn**	**07 31 30.8**	**-2.4**
JTAJ				*e*S	**Sb**	**07 31 46.1**	**-2.5**
JYRO	**Yoronjima**	**1.28**	**223**	P	**Pn**	**07 31 34.6**	**+0.1**
JYRO				S	**Sn**	**07 31 50.8**	**-0.3**
JOW	**Kunigami**	**1.53**	**222**	P	**Pn**	**07 31 38.5**	**+0.6**
94nm,0.3s,baz=86,slow=20,SNR=452
JOW S **Sn** **07 31 57.8** **+0.5**
648nm,0.3s,baz=105,slow=14,SNR=35
JOW Kunigami 1.53 222 *e*Pn **Pn** **07 31 38.6 +0.7**
JOW *e*Sn **Sn** **07 31 57.4 +0.1**
JOW Kunigami 1.53 222 ⇓P **Pn** **07 31 38.4 +0.5**
JOW *e*S **Sn** **07 31 57.6 +0.3**
JIH Iheya 1.60 234 ⇓P **Pn** **07 31 38.4 -0.5**
JIH *e*S **Sn** **07 31 58.3 -0.6**
JNN Nakanoshima 1.90 12 ⇓P **Pn** **07 31 41.7 -1.4**
JNN *e*S **Sn** **07 32 05.7 -0.8**
JNTH Nagotoyohara 1.91 221 P **Pn** **07 31 44.2 +1.0**
JAGN Aguni-jima 2.38 235 ⇓P **Pn** **07 31 49.4 -0.3**
JAGN *e*S **Sn** **07 32 17.3 -1.0**
JYAK Yakushimahirau 2.45 23 P **Pn** **07 31 50.2 -0.4**
JYAK *e*S **Sn** **07 32 19.4 -0.5**
JKC Kuchinoerabu 2.57 15 *e*S **Sn** **07 32 22.1 -0.8**
JMZ Minamidaito 2 2.68 143 P **Pn** **07 31 53.9 +0.1**
JMZ *e*S **Sn** **07 32 25.4 -0.3**
JMTN Minamitane 2.74 28 P **Pn** **07 31 55.2 +0.6**
JMTN *e*S **Sn** **07 32 26.7 -0.4**
JKE Kume jima 2 2.87 236 P **Pn** **07 31 56.5 +0.2**
JKE *e*S **Sn** **07 32 30.1 -0.2**
JTN Tanegashima 3 3.00 27 P **Pn** **07 31 58.7 +0.6**
JTN *e*S **Sn** **07 32 33.6 +0.1**
JNU Nakatsue 5.28 13 P **Pn** **07 32 31.8 +2.2**
29nm,0.3s,baz=228,slow=5.0,SNR=109
JNU LR LR 07 34 48.1
comp=Z,715nm,21.2s,baz=169,slow=41
JNU Nakatsue 5.28 13 *e*Pn **Pn** **07 32 32.3 +2.8**
YOJ Yonaguni jima 6.74 240 *e*Pn **Pn** **07 32 47.2 -2.3**
YOJ Yonaguni jima 6.74 240 *e*P **Pn** **07 32 47.2 -2.3**
TATO Taipei 7.71 249 *e*Pn **Pn** **07 33 06.0 +3.1**
YHNB Yeheng 7.93 247 *e*Pn **Pn** **07 33 06.9 +0.9**
NACB Ninganchiao 7.99 243 *e*Pn **Pn** **07 33 05.1 -1.7**
TJN Taejon 8.56 349 ⇓*iP* **Pn** **07 33 18.9 +4.4**
YULB Yu-li 8.63 240 *e*Pn **Pn** **07 33 11.8 -3.8**
SSLB Suanglung 8.69 243 *e*Pn **Pn** **07 33 14.6 -1.8**
TWG Pinlang 9.13 238 *e*Pn **Pn** **07 33 18.5 -3.9**
TPUB Ta-pu 9.20 242 *e*Pn **Pn** **07 33 22.1 -1.2**
KS15 Wonju Array Si 9.53 353 *e*Pn **Pn** **07 33 29.3 +1.5**
KSRS Korea Array 9.54 353 P **Pn** **07 33 29.3 +1.4**
0.7nm,0.3s,baz=174,slow=14,SNR=17
KSRS LR LR 07 37 16.5
comp=Z,608nm,19.3s,baz=155,slow=38
INU Inuyama 9.79 39 *e*Pn **Pn** **07 33 31.7 +0.3**
NJ2 Nanjing 10.02 296 *e*P **Pn** **07 33 34.5 -0.1**
NJ2 pmax pmax
comp=Z,20nm,0.5s
QZH Quanzhou 10.16 255 *e*P Pn 07 33 42.0 +5.5
QZH S **Sn** **07 35 36.1** **+6.1**
QZH LR LR
comp=N,270nm,10.4s
QZH LR LR
comp=E,560nm,12.8s
QZH LR LR
comp=Z,710nm,11.4s
JHJ Hachijo jima 2 10.30 58 LR LR 07 37 09.3
comp=Z,412nm,19.5s,baz=231,slow=34
JHJ2 Mitsune 10.32 58 *e*Pn **Pn** **07 33 41.7 +3.1**
KNMB Chin-men Tao 10.51 253 *e*Pn **Pn** **07 33 41.1 -0.1**
MAJO Matsushiro 11.32 39 *e*Pn **Pn** **07 33 55.8 +3.4**
MAJO Matsushiro 11.32 39 ⇓*iP* **Pn** **07 33 54.5 +2.1**
MAJO pmax pmax
comp=Z,3.0nm,1.0s
MJAR Matsushiro Arr 11.32 39 P **Pn** **07 33 52.8 +0.4**
comp=Z,0.1nm,0.3s,baz=238,slow=17,SNR=4.5
MJAR LR LR 07 38 54.3
comp=Z,264nm,18.3s,baz=220,slow=40
MJB9 Matsu-Tunnel 11.32 39 *e*Pn **Pn** **07 33 56.0 +3.6**
DL2 Dalian 12.69 331 *e*P Pn 07 34 03.8 -7.2
DL2 *e*S Sn 07 36 18.6 -13
DL2 pmax pmax
comp=Z,24nm,0.8s
DL2 pmax pmax
comp=Z,150nm,5.7s
DL2 LR LR
comp=N,530nm,12.1s
DL2 LR LR
comp=E,430nm,11.0s
DL2 LR LR
comp=Z,710nm,12.9s
WHN Wuhan 13.40 285 *e*P **Pn** **07 34 21.4 +0.5**
WHN S S 07 37 02.3 -11
WHN LR LR
comp=Z,2μm,4.4s
WHN LR LR
comp=Z,2μm,12.8s
WHN LR LR
comp=Z,1μm,13.0s
HKPS Hong Kong Po S 14.95 251 *e*Pn **Pn** **07 34 40.4 -1.6**
VLA Vladivostok 15.24 7 ⇓*iP* **P** **07 34 48.4 -2.1**
VLA pmax pmax
comp=Z,12nm,0.5s
CN2 Changchun 16.11 350 *e*P **P** **07 35 06.3 +6.1**
CN2 *e*S **S** **07 38 07.3 -1.0**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 LR LR
comp=N,840nm,12.0s
CN2 LR LR
comp=E,470nm,12.0s
CN2 LR LR
comp=Z,830nm,13.0s
BJT Baijiatuau 16.26 321 *e*Pn **P** **07 35 00.9 -1.0**
comp=Z,34nm,1.1s
BJT Baijiatuau 16.26 321 *e*P **P** **07 35 00.9 -1.0**
BJT pmax pmax
comp=Z,34nm,1.1s
BJI Beijing 16.27 321 P **P** **07 35 01.1 -0.9**
BJI pP **sP** **07 35 09.1 -0.4**
BJI sP pP 07 35 15.8 +8.4
BJI pmax pmax
comp=Z,9.0nm,1.4s
USRK Ussuriysk Ar. 16.32 7 LR LR 07 41 26.7
comp=Z,240nm,18.5s,baz=175,slow=38
XAN Xi'an 18.57 294 P **Pn** **07 35 29.1 +1.3**
XAN pP sP 07 35 42.8 +7.5
XAN PP **PnPn** **07 35 48.1 +8.4**
XAN S **Sn** **07 38 53.4 -1.6**
XAN pmax pmax
comp=Z,21nm,0.6s
XAN pmax pmax
comp=Z,110nm,3.5s
XAN LR LR
comp=Z,220nm,12.6s
XAN LR LR
comp=Z,220nm,4.9s
XAN LR LR
comp=Z,230nm,12.5s
XAN Xi'an 18.57 294 *e*P **Pn** **07 35 28.8 +1.0**
comp=Z,17nm,0.6s
XAN Xi'an 18.57 294 *e*P **Pn** **07 35 28.8 +1.0**
XAN pmax pmax
comp=Z,17nm,0.6s
ASAJ Asahikawa 19.27 30 P **P** **07 35 33.4 -1.6**
comp=Z,2.2nm,0.3s,baz=201,slow=10,SNR=9.3
ASAJ LR LR 07 42 56.0
comp=Z,313nm,21.8s,baz=236,slow=36
HHC Hu-ho-hao-te 19.50 316 *e*P **Pn** **07 35 40.1 +1.1**
HHC pmax pmax
comp=Z,17nm,0.8s
HHC pmax pmax
comp=Z,28nm,3.9s
HHC LR LR
comp=Z,370nm,12.0s
HHC LR LR
comp=Z,300nm,10.5s
HHC LR LR
comp=Z,100nm,11.3s
QIZ Qiongzhong 20.02 248 P **P** **07 35 43.8 +0.3**
QIZ S **S** **07 39 26.9 -1.0**
QIZ pmax pmax
comp=Z,210nm,3.3s
QIZ LR LR
comp=Z,340nm,19.1s
QIZ LR LR
comp=Z,420nm,15.7s
GYA Guiyang 20.29 271 *e*P **P** **07 35 47.5 +1.0**
GYA pP sP 07 35 56.8 +2.6
GYA PP **PnPn** **07 36 08.9 +5.5**
GYA S Sn 07 39 36.8 0.0
GYA sS pS 07 39 45.3 -1.7
GYA SS **SnSn** **07 39 56.0 +4.7**
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,110nm,4.5s
GYA LR LR
comp=Z,180nm,13.4s
GYA LR LR
comp=Z,140nm,13.0s
GYA LR LR
comp=Z,160nm,13.8s
GUMO Guam 20.30 132 LR LR 07 42 08.9
comp=Z,120nm,19.2s,baz=30,slow=32
YUK Yuzh-Kuril'sk 20.76 35 ⇓*iP* Pn 07 35 52.6 -1.1
YUK *e*S **S** **07 39 43.6 +1.4**
YUK pmax pmax
comp=Z,219nm,0.9s
YUK pmax pmax
comp=N,116nm,0.8s
YUK pmax pmax
comp=E,93nm,0.8s
YUK pmax pmax
comp=Z,274nm,2.8s
YUK MLR MLR
comp=Z,551nm,23.0s
DAV Davao City (W) 21.11 191 LR LR 07 43 21.4
comp=Z,230nm,21.4s,baz=8.5,slow=34
KLR Kul'dur 21.30 4 P **P** **07 35 54.0 -3.1**
comp=Z,2.5nm,0.8s,baz=210,slow=8.4,SNR=6.6
KLR Kul'dur 21.30 4 ⇓*iP* **P** **07 35 58.4 +1.4**
KLR pmax pmax
comp=Z,3.0nm,0.9s
YSS Yuzh-Sakhalins 21.64 25 *e*P **P** **07 36 01.5 +0.8**
comp=Z,107nm,1.3s
YSS Yuzh-Sakhalins 21.64 25 *e*P **P** **07 36 01.5 +0.8**
YSS pmax pmax
comp=Z,107nm,1.3s
CD2 Chengdu 22.52 284 *e*P **P** **07 36 08.6 -1.9**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 LR LR
comp=Z,820nm,25.0s
CD2 LR LR
comp=Z,570nm,14.7s
CD2 LR LR
comp=Z,750nm,13.2s
KUR Kuril'sk 22.62 36 ⇓*iP* **P** **07 36 12.0 +0.7**
LZH Lanzhou 23.10 297 *e*P **P** **07 36 17.1 +0.6**
LZH pP sP 07 36 27.6 +3.3
LZH sP pP 07 36 30.8 +8.7
LZH S **S** **07 40 28.6 +1.7**
LZH pmax pmax
comp=Z,25nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.9s
LZH LR LR
comp=Z,500nm,11.3s
LZH LR LR
comp=Z,390nm,11.9s
LZH LR LR
comp=Z,510nm,12.2s
KMI Kunming 24.02 269 P **P** **07 36 26.1 +0.4**
KMI pmax pmax
comp=Z,22nm,0.6s
KMI LR LR
comp=Z,120nm,7.2s
KMI LR LR
comp=Z,280nm,10.3s
KMI LR LR
comp=Z,280nm,16.7s
KMI Kunming 24.02 269 *e*P **P** **07 36 25.9 +0.2**
comp=Z,17nm,0.6s
KMI Kunming 24.02 269 *e*P **P** **07 36 25.9 +0.2**
KMI pmax pmax
comp=Z,17nm,0.6s
SLVN Son La 24.09 260 *e*P **P** **07 36 27.3 +1.1**
comp=Z,3.8nm,0.9s
PANO Nakornpanom 25.27 250 P **P** **07 36 39.8 +3.0**
comp=Z,0.4nm,1.0s
ZEA Zeya 25.79 357 *e*P **P** **07 36 40.4 -0.8**
ZEA pmax pmax
comp=Z,12nm,1.0s
SKNT Sakolnakorn 25.88 250 P **P** **07 36 44.6 +2.2**
comp=Z,11nm,0.9s
ULN Ulaanbaatar 26.40 325 ⇓*iP* **P** **07 36 48.1 +1.1**
ULN pmax pmax
comp=Z,3.0nm,1.0s
SONA0 Songino Array 26.72 324 *e*P **P** **07 36 48.4 -1.5**
SONM Songino Array 26.72 324 P **P** **07 36 48.4 -1.5**
comp=Z,4.1nm,0.9s,baz=141,slow=9.7,SNR=9.0
SONM LR LR 07 48 32.6
comp=Z,86nm,18.7s,baz=120,slow=39
GTA Gaotai 27.03 303 *e*P **P** **07 36 53.9 +1.1**
GTA pP sP 07 37 05.3 +4.6
GTA sP pP 07 37 11.5 +13
GTA S **S** **07 41 29.4 -0.2**
GTA pmax pmax
comp=Z,6.0nm,0.8s
GTA pmax pmax
comp=Z,110nm,6.4s
GTA LR LR
comp=Z,200nm,16.8s
GTA LR LR
comp=Z,250nm,14.3s
GTA LR LR
comp=Z,300nm,14.6s
PBKT Sadao Pong 28.60 253 P **P** **07 37 07.8 +1.0**
comp=Z,6.8nm,1.1s
CMAR Chiang Mai Arr 29.50 258 LR LR 07 50 21.9
comp=Z,185nm,19.1s,baz=77,slow=39
SKR Severo-Kuril's 30.38 34 ⇓*iP* **P** **07 37 21.4 -0.8**
PETK Petropavlovsk- 32.66 32 P **P** **07 37 41.1 -1.3**
comp=Z,6.4nm,0.9s,baz=208,slow=9.0,SNR=5.5
PETK LR LR 07 50 54.4
comp=Z,155nm,21.8s,baz=237,slow=36
PEA1 Petropavlovsk- 32.66 32 *e*P **P** **07 37 41.1 -1.3**
MA2 Magadan 34.82 19 ⇓*iP* **P** **07 38 01.5 +0.5**
MA2 pmax pmax
comp=Z,5.0nm,0.9s
H11N2 WAKE ISLAND Hy 35.13 95 T T 08 15 18.2
baz=290,slow=75,SNR=276
H11N1 WAKE ISLAND Hy 35.13 95 T T 08 15 18.3
baz=290,slow=75,SNR=188
H11N3 WAKE ISLAND Hy 35.15 95 T T 08 15 19.4
baz=290,slow=75,SNR=245
H11S3 WAKE ISLAND Hy 35.40 97 T T 08 15 45.5
baz=292,slow=75,SNR=44
H11S1 WAKE ISLAND Hy 35.41 97 T T 08 15 43.2
baz=292,slow=75,SNR=25
H11S2 WAKE ISLAND Hy 35.42 97 T T 08 15 43.7
baz=292,slow=75,SNR=23
WMQ Urumqi 36.89 307 *e*P **P** **07 38 20.0 +0.9**
WMQ sP sP 07 38 34.9 +7.6
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,87nm,5.1s
WMQ LR LR
comp=Z,190nm,18.5s
WMQ LR LR
comp=Z,170nm,17.9s
SEY Seymchan 38.05 17 ⇓*iP* **P** **07 38 28.4 -0.1**
MK31 Makanchi Array 41.20 310 *e*P **P** **07 38 55.0 0.0**
comp=Z,1.4nm,0.6s
MK31 Makanchi Array 41.20 310 *e*P **P** **07 38 55.0 0.0**
MK31 pmax pmax
comp=Z,1.0nm,0.6s
MK32 Makanchi Array 41.20 310 *e*P **P** **07 38 53.6 -1.4**
MK32 *e*PcP **PcP** **07 40 53.2 -0.7**
MKAR Makanchi Array 41.20 310 P **P** **07 38 53.6 -1.4**
comp=Z,0.9nm,0.5s,baz=93,slow=10,SNR=13
MKAR PcP **PcP** **07 40 53.2 -0.7**
comp=Z,0.3nm,0.6s,baz=84,slow=5.9,SNR=2.6
MKAR LR LR 07 59 09.7
comp=Z,20nm,20.9s,baz=95,slow=41
MKAR Makanchi Array 41.20 310 *c*eP P 07 39 00.7 +5.7
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MAKZ Makanchi 41.41 310 *e*P **P** **07 38 56.6 -0.2**
comp=Z,2.6nm,1.0s
MAKZ Makanchi 41.41 310 *e*P **P** **07 38 56.6 -0.2**
MAKZ pmax pmax
comp=Z,3.0nm,1.0s
ZALV Zalesovo Beam 41.53 321 P **P** **07 38 56.4 -1.2**
comp=Z,2.0nm,0.5s,baz=102,slow=7.4,SNR=3.9
ZAA1 Zalesovo Array 41.53 321 *e*P **P** **07 38 56.4 -1.2**
KURK Kurchatov 44.31 315 *e*P **P** **07 39 20.0 -0.2**
comp=Z,4.4nm,0.8s
KURK Kurchatov 44.31 315 ⇓*iP* **P** **07 39 24.6 +4.4**
KURK pmax pmax
comp=Z,4.0nm,0.7s
KSH Kashi 45.32 299 *e*P **P** **07 39 24.0 -4.6**
BILL Bilibino 45.69 18 *e*P **P** **07 39 30.4 -0.5**
comp=Z,21nm,1.0s
BILL Bilibino 45.69 18 ⇓*iP* **P** **07 39 30.8 -0.1**
BILL *e**PP **sP** **07 39 42.4 +3.5**
BILL *SP pP 07 39 47.0 +10
BILL 07 41 18.0
BILL PPP PPP 07 42 05.0
BILL S **S** **07 46 16.0 +3.4**
BILL pmax pmax
comp=Z,22nm,1.1s
BILL MLR MLR
comp=Z,254nm,21.0s
FITZ Fitzroy Crossi 45.95 185 P **P** **07 39 33.7 +0.3**
comp=Z,6.2nm,0.6s,baz=16,slow=9.4,SNR=9.2
FITZ Fitzroy Crossi 45.95 185 *e*P **P** **07 39 33.8 +0.4**
comp=Z,6.7nm,0.9s
KIWB Kanaga Island 46.14 44 *e*P **P** **07 39 36.2 +1.6**
WR1 Warramunga Arr 47.87 174 *e*P **P** **07 39 48.5 0.0**
WRA Warramunga Arr 47.87 174 P **P** **07 39 48.5 0.0**
comp=Z,4.2nm,0.9s,baz=350,slow=8.8,SNR=9.6
WB2 Warramunga Arr 47.88 174 *e*P **P** **07 39 48.5 0.0**
comp=Z,8.4nm,0.9s
NRIK Noril'sk 47.93 341 LR LR 08 01 36.5
comp=Z,179nm,18.0s,baz=42,slow=38
KK31 Karatay Array 49.29 304 *e*P **P** **07 40 00.7 +1.4**
comp=Z,2.3nm,0.8s
KK31 Karatay Array 49.29 304 *e*P **P** **07 40 00.7 +1.4**
KK31 pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 49.77 317 *e*P **P** **07 40 02.8 +0.1**
comp=Z,5.4nm,1.0s
BRVK Borovoye 49.77 317 *c*eP **P** **07 40 03.2 +0.4**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
CTA Charters Tower 50.48 159 P **P** **07 40 08.8 +0.3**
comp=Z,3.8nm,0.7s,baz=338,slow=7.3,SNR=4.1
AS31 Alice Springs 51.52 175 *e*P **P** **07 40 16.9 +0.5**
comp=Z,2.8nm,1.3s
AS31 *e*PcP **PcP** **07 41 27.6 -2.8**
ASAR Alice Springs 51.52 175 P **P** **07 40 16.9 +0.5**
comp=Z,2.1nm,0.7s,baz=5.5,slow=14,SNR=18
ASAR PcP **PcP** **07 41 27.5 -2.8**
comp=Z,0.7nm,0.7s,baz=355,slow=3.2,SNR=3.2
ABKAR Akbulak array 56.24 312 *e*P **P** **07 40 49.2 -1.4**
comp=Z,1.8nm,0.9s
ARU Arti 56.69 321 LR LR 08 07 38.3
comp=Z,111nm,19.6s,baz=115,slow=39
ARU Arti 56.69 321 *c iP* P 07 41 00.9 +7.2
ARU 07 43 04.2
ARU S S 07 48 57.2 +12
ARU SS **SS** **07 52 37.3 +4.8**
ARU pmax pmax
comp=Z,7.0nm,1.0s
ARU MLR MLR
comp=Z,151nm,17.0s
AKTO Aktyubinsk 57.38 314 LR LR 08 06 46.2

comp=Z,38nm,20.6s,baz=85,slow=37
SKT Skwentna 60.61 32 *e*P **P 07 41 21.2 +0.3**
comp=Z,3.3nm,0.8s
STKA Stephens Creek 60.64 168 P **P 07 41 20.9 -0.4**
comp=Z,0.8nm,0.5s,baz=353,slow=8.1,SNR=3.1
MLY Manley 60.74 29 *e*P **P 07 41 22.2 +0.5**
comp=Z,4.9nm,1.2s
TOLK Toolik Lake Re 61.00 24 *e*P **P 07 41 24.0 +0.6**
comp=Z,12nm,1.2s
CNPM China Poot 61.00 35 *e*P **P 07 41 23.6 +0.1**
comp=Z,10nm,1.1s
MCK McKinley 61.63 30 *e*P **P 07 41 27.9 +0.1**
comp=Z,4.6nm,0.8s
MCK McKinley 61.63 30 *e*P **P 07 41 27.9 +0.1**
MCK pmax pmax
comp=Z,5.0nm,0.8s
RND Reindeer 61.70 30 *e*P **P 07 41 28.2 -0.1**
comp=Z,5.8nm,0.8s
RND Reindeer 61.70 30 *e*P **P 07 41 28.3 -0.1**
RND pmax pmax
comp=Z,6.0nm,0.8s
WRH Wood River Hil 61.92 29 *e*P **P 07 41 30.1 +0.4**
comp=Z,4.0nm,0.9s
ILAR Eielson Array 62.40 29 P **P 07 41 32.9 0.0**
comp=Z,1.8nm,0.7s,baz=279,slow=6.3,SNR=26
ILB Eielson Array 62.40 29 *e*P **P 07 41 32.4 -0.5**
comp=Z,2.7nm,0.8s
HDA Harding Lake 62.42 29 *e*P **P 07 41 32.3 -0.8**
comp=Z,4.7nm,0.8s
FYU Fort Yukon 62.84 27 *e*P **P 07 41 36.5 +0.7**
comp=Z,14nm,1.2s
PRGR Permogore 62.89 328 *e*P **P 07 41 33.7 -2.5**
PRGR pmax pmax
comp=Z,10.0nm,0.6s
SCRK Sand Creek 63.77 29 *e*P **P 07 41 43.2 +1.1**
comp=Z,4.9nm,1.0s
DOT Dot Lake 63.80 30 *e*P **P 07 41 41.3 -0.9**
comp=Z,4.2nm,0.7s
MENT Mentasta 64.08 31 *e*P **P 07 41 44.3 +0.2**
comp=Z,5.4nm,0.9s
DAWY Dawson 65.73 29 *e*P **P 07 41 55.4 +0.5**
comp=Z,3.3nm,1.2s
KLMR Klimovskoe 65.94 328 *e*P **P 07 41 59.4 +3.3**
KLMR pmax pmax
comp=Z,11nm,1.4s
KLMR Klimovskoe 65.94 328 *e*P **P 07 41 59.5 +3.3**
KLMR AMP 07 42 04.1
comp=Z,11nm,1.4s
EPYK Eagle Plains 66.23 26 *e*P **P 07 41 58.5 +0.4**
comp=Z,14nm,1.1s
INK Inuvik 66.87 24 P **P 07 42 02.0 0.0**
comp=Z,1.2nm,0.5s,baz=310,slow=4.6,SNR=12
INK Inuvik 66.87 24 *e*P **P 07 42 01.9 0.0**
comp=Z,11nm,1.3s
INK Inuvik 66.87 24 P **P 07 42 02.0 0.0**
SPA0 Spitsbergen Ar 67.34 348 *e*P **P 07 42 04.6 -0.3**
comp=Z,25nm,1.4s
LPH Laupahoehoe 68.19 78 *e*P **P 07 42 11.0 -0.1**
ZEI Tsey 68.49 308 *e*P **P 07 42 13.9 +0.9**
ARA0 ARCESS Array S 68.78 339 *e*P **P 07 42 11.1 -2.9**
ARCES ARCESS Array B 68.78 339 P **P 07 42 11.1 -2.9**
comp=Z,1.5nm,0.8s,baz=65,slow=9.7,SNR=7.3
KBZ Khabaz 68.88 309 P **P 07 42 12.4 -2.6**
comp=Z,1.4nm,0.5s,baz=100,slow=6.1,SNR=2.4
KIV Kislovodsk 68.95 309 *e*P **P 07 42 17.8 +2.1**
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,80nm,17.0s
FIA1 FINESS Array S 71.87 331 *e*P **P 07 42 32.4 -0.6**
comp=Z,6.6nm,0.6s
FIA0 FINESS Array S 71.87 331 *e*P **P 07 42 31.8 -1.2**
FIA0 FINESS Array S 71.87 331 *e*P **P 07 42 31.8 -1.2**
FINES FINESS Array B 71.87 331 P **P 07 42 31.8 -1.2**
comp=Z,2.6nm,0.5s,baz=67,slow=6.1,SNR=29
FINES LR LR 08 17 59.4
comp=Z,126nm,18.2s,baz=38,slow=39
RES Resolute Bay 73.64 11 *e*P **P 07 42 43.6 +0.3**
comp=Z,11nm,1.1s
RES Resolute Bay 73.64 11 *e*P **P 07 42 43.6 +0.3**
RES pmax pmax
comp=Z,11nm,1.1s
DAG Danmarks Havn 73.67 353 *i*P **P 07 42 42.0 -1.5**
DAG Danmarks Havn 73.67 353 *i*P **P 07 42 42.0 -1.5**
AKASG Malin Array Be 74.90 320 P **P 07 42 48.9 -2.2**
comp=Z,0.7nm,0.3s,baz=53,slow=7.1,SNR=6.5
AKASG LR LR 08 18 15.6
comp=Z,106nm,18.5s,baz=100,slow=38
AKBB Malin Array Si 74.90 320 *e*P **P 07 42 48.9 -2.2**
comp=Z,3.7nm,0.6s
AKBB Malin Array Si 74.90 320 *e*P **P 07 42 48.9 -2.2**
AKBB pmax pmax
comp=Z,4.0nm,0.6s
TULEG Thule 75.12 4 *e*P **P 07 42 52.1 +0.2**
comp=Z,17nm,1.0s
YKW3 Yellowknife Ar 76.46 25 *e*P **P 07 43 02.8 +3.0**
comp=Z,9.3nm,1.5s
YKA Yellowknife Ar 76.50 25 P **P 07 43 00.0 0.0**
comp=Z,0.9nm,0.6s,baz=303,slow=5.8,SNR=11
YKB5 Yellowknife Ar 76.50 25 *e*P **P 07 43 00.1 0.0**
BR101 Keskin Array S 76.80 308 *e*P **P 07 43 01.6 -0.8**
BRTR Keskin Array B 76.80 308 P **P 07 43 01.6 -0.8**
comp=Z,1.9nm,0.9s,baz=86,slow=5.3,SNR=6.9
BRTR Keskin Array B 76.80 308 *i*P **P 07 43 04.0 +1.6**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
NC405 NORSAR Array S 77.98 334 *e*P **P 07 43 07.1 -1.3**
comp=Z,16nm,0.8s
NB201 NORSAR Array S 78.18 334 *e*P **P 07 43 08.7 -0.8**
comp=Z,15nm,0.9s
NB2 NORSAR Subarra 78.22 334 P **P 07 43 07.7 -2.1**
comp=Z,1.5nm,0.6s,baz=49,slow=5.6
NB200 NORSAR Array S 78.22 334 *e*P **P 07 43 08.3 -1.4**
NOA NORSAR Array B 78.22 334 P **P 07 43 08.3 -1.4**
comp=Z,1.5nm,0.6s,baz=50,slow=5.4,SNR=11
NOA LR LR 08 21 04.3
comp=Z,56nm,18.4s,baz=55,slow=38
NC204 NORSAR Array S 78.25 334 *e*P **P 07 43 08.7 -1.2**
comp=Z,17nm,1.2s
BUR08 Bucovina Ar. S 78.65 318 *e*P **P 07 43 11.9 -0.6**
comp=Z,4.7nm,1.3s
SUMG Summit 79.37 356 *e*P **P 07 43 16.5 +0.2**
comp=Z,19nm,1.0s
SUMG Summit 79.37 356 *i*P **P 07 43 16.8 +0.5**
SUMG pmax pmax
comp=Z,30nm,1.0s
SUMG Summit 79.37 356 *i*P **P 07 43 16.8 +0.5**
comp=Z,30nm,1.0s
SCO Scoresbysund 79.71 351 *e*P **P 07 43 18.1 +0.4**
comp=Z,6.9nm,0.9s
SCO Scoresbysund 79.71 351 *i*P **P 07 43 17.8 +0.1**
SCO pmax pmax
comp=Z,6.0nm,1.1s
SCO Scoresbysund 79.71 351 *i*P **P 07 43 17.8 +0.1**
comp=Z,6.3nm,1.1s
VYHS Vyhne 81.86 321 *e*P **P 07 43 30.6 +0.9**
VYHS Vyhne 81.86 321 *e*P **P 07 43 30.6 +0.9**
CLL Collm 83.32 326 *e*P **P 07 43 41.0 +3.8**
CONA Conrad Observa 83.82 322 *e*PcP **P 07 43 41.3 +1.4**
comp=Z,3.9nm,1.0s
GEC2 GERESS Array S 84.45 323 *e*P **P 07 43 42.2 -0.9**
comp=Z,4.4nm,1.2s
GEC2 GERESS Array S 84.45 323 *e*P **P 07 43 42.2 -0.9**
GEC2 pmax pmax
comp=Z,4.0nm,1.2s
GERES GERESS Array B 84.45 323 P **P 07 43 42.2 -0.9**
comp=Z,1.0nm,0.7s,baz=46,slow=3.9,SNR=6.1
GERES LR LR 08 23 46.5
comp=Z,58nm,20.0s,baz=82,slow=37
MOA Molln 84.74 322 *e*PcP **P 07 43 45.4 +0.9**
comp=Z,4.0nm,1.0s
SOKA Soboth 85.01 321 *e*PcP **P 07 43 46.7 +0.8**
comp=Z,7.2nm,1.3s
ITM Ithomi 86.08 310 *e*P **P 07 43 50.0 -1.4**
comp=Z,18nm,0.8s
ABTA Abfaltersbach 86.36 322 *e*PcP **P 07 43 53.5 +0.8**
comp=Z,3.2nm,0.7s
FFC Flin Flon 86.56 27 *e*P **P 07 43 53.4 0.0**
comp=Z,12nm,1.4s
FFC Flin Flon 86.56 27 *i*P **P 07 43 54.6 +1.2**
CMB Columbia Colle 87.41 48 *e*P **P 07 43 58.1 +0.2**
comp=Z,2.7nm,0.8s
CMB Columbia Colle 87.41 48 *e*P **P 07 43 58.1 +0.2**
CMB pmax pmax
comp=Z,3.0nm,0.8s
DLMT Dillon 87.80 39 *e*P **P 07 44 00.2 +0.4**
comp=Z,6.9nm,1.1s

NV01 Mina Array Sit 88.54 47 *e*P **P 07 44 04.5 +1.0**
NVAR Mina Array Bea 88.54 47 P **P 07 44 04.5 +1.0**
comp=Z,0.6nm,0.7s,baz=293,slow=5.3,SNR=4.3
H17A Grant Village 89.52 38 *e*pP pP 07 44 17.6 +3.2
PD31 Pinedale Array 91.14 39 *e*P **P 07 44 15.4 -0.2**
comp=Z,1.8nm,1.0s
PDAR Pinedale Array 91.14 39 P **P 07 44 15.4 -0.2**
comp=Z,0.3nm,0.7s,baz=46,slow=2.6,SNR=3.9
MSU Marysvale 92.33 44 *e*P **P 07 44 20.3 -0.9**
MSU Marysvale 92.33 44 *e*P **P 07 44 20.3 -0.9**
KNB Kanab 92.86 45 *e*P **P 07 44 22.0 -1.6**
comp=Z,7.6nm,1.0s
KNB Kanab 92.86 45 *e*P **P 07 44 22.0 -1.6**
KNB pmax pmax
comp=Z,8.0nm,1.0s
KEST Kesra 95.12 315 LR LR 08 34 43.2
comp=Z,46nm,18.6s,baz=266,slow=40

NNC 21 07:44:35.1±1.5, 48°.24N×70°.44E, h0km, mb3.6, mpv3.4, 2C, Error ellipse: s-maj=10.2km s-min=5.2km az=137.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTUK	**Ortayu**	**1.27**	**89**	P	Pg	07 44 58.4	-1.0
OTUK	1.8nm,0.1s			S	Sb	07 45 16.5	-0.3
	29nm,0.6s						
OTUK	**Ortayu**	**1.27**	**89**	⇑P	Pg	07 44 57.7	-1.7
OTUK	3.0nm,0.3s			⇑S	Sb	07 45 16.5	-0.3
	30nm,0.6s						
BTLS	**Baital**	**4.05**	**141**	Pg	Pb	07 45 48.6	+1.3
BTLS	2.9nm,1.3s			Lg	Lg	07 46 42.4	
	4.2nm,0.6s						
KTBS	**Karatobe**	**6.28**	**134**	Pg	Pb	07 46 29.3	+4.1
KTBS	0.9nm,0.6s			Lg	Lg	07 47 52.1	
	5.9nm,0.5s						
CHKK	**Chushkaly**	**6.32**	**132**	Pg	Pb	07 46 30.4	+4.4
CHKK	1.5nm,0.3s			Lg	Lg	07 47 54.3	
	3.3nm,0.3s						
ARXS	**Arharly**	**6.52**	**125**	Pg	Pg	07 46 35.8	-4.1
ARXS	3.1nm,0.5s			Lg	Lg	07 48 03.8	
	2.8nm,0.6s						
KAPS	**Kapalarasan**	**6.80**	**112**	Pg	Pg	07 46 40.0	-5.3
KAPS	1.6nm,1.2s			Lg	Lg	07 48 11.5	
	2.0nm,0.7s						
KURS	**Kuram**	**7.19**	**129**	Pg	Pg	07 46 47.0	-5.7
KURS	5.6nm,0.5s			Lg	Lg	07 48 22.7	
	3.4nm,0.6s						

*NEIC **21** 07:57:25.5±0.0, 68°.27N×155°.78W, h10km, ML3.4(AEIC), After AEIC.*
*IDC **21** 07:57:32.8±3.2, 68°.14N×154°.35W, h0km, mb3.2/2, mb1 3.8/4, mb1mx3.4/39, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=45.4km s-min=32.2km az=62.0*
ISC 21 07:57:30.6±1.6, 68°.18N±0°.07×154°.70W±0°.08, h10km, n27, σ1§77/37, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLK	**Toolik Lake Re**	**1.95**	**74**	*e*Pn	**Pb**	**07 58 04.1**	**-2.1**
TOLK				*e*Sn	**Sg**	**07 58 32.0**	**-1.2**
COLD	**Coldfoot**	**1.97**	**117**	*e*Pn	**Pn**	**07 58 04.3**	**+0.4**
COLD				*e*Sn	**Sb**	**07 58 31.5**	**+0.6**
RDOG	**Red Dog Mine**	**3.08**	**271**	*e*Pn	Pn	07 58 08.5	-11
MLY	**Manley**	**3.54**	**152**	*e*Pn	**Pn**	**07 58 24.9**	**-0.7**
FYU	**Fort Yukon**	**4.00**	**110**	*e*Pn	**Pn**	**07 58 31.4**	**-0.5**
FYU				*e*Sg	**Sg**	**07 59 38.0**	**-0.8**
MDM	**Murphy Dome**	**4.14**	**138**	*e*Pn	**Pn**	**07 58 33.3**	**-0.5**
MDM				*e*Sg	**Sg**	**07 59 42.9**	**-0.5**
COLA	**College**	**4.31**	**137**	*e*Pn	**Pn**	**07 58 35.5**	**-0.5**
BPAW	**Bear Paw Mtn.**	**4.37**	**158**	*e*Pn	**Pn**	**07 58 36.2**	**-0.7**
CCB	**Clear Creek Bu**	**4.50**	**139**	*e*Pn	**Pn**	**07 58 38.1**	**-0.6**
CCB				*e*Sn	**Sn**	**07 59 30.8**	**-0.3**
PRP	**Porcupine Dome**	**4.50**	**122**	*e*Pn	**Pn**	**07 58 38.8**	**-0.1**
PRP				*e*Sn	**Sn**	**07 59 32.6**	**+1.3**
BWN	**Browne**	**4.55**	**150**	*e*Pn	**Pn**	**07 58 39.3**	**-0.1**
WRH	**Wood River Hil**	**4.58**	**141**	*e*Pn	**Pn**	**07 58 39.4**	**-0.4**
ILAR	**Eielson Array**	**4.64**	**134**	Pn	**Pn**	**07 58 40.1**	**-0.5**
	1.3nm,0.3s,baz=318,slow=13,SNR=56						
ILAR				Sn	**Sn**	**07 59 32.6**	**-1.9**
	1.6nm,0.3s,baz=320,slow=20,SNR=4.3						
ILAR				Lg	Lg	07 59 54.6	
	3.2nm,0.3s,baz=324,slow=31,SNR=7.1						
ILB	**Eielson Array**	**4.64**	**134**	*e*Pn	**Pn**	**07 58 40.2**	**-0.5**
KTH	**Kantishna Hill**	**4.90**	**160**	*e*Pn	**Pn**	**07 58 43.4**	**-0.9**
HDA	**Harding Lake**	**4.91**	**137**	*e*Pn	**Pn**	**07 58 43.5**	**-0.8**
HDA				*e*Sn	**Sn**	**07 59 47.2**	**+6.0**
MCK	**McKinley**	**5.05**	**150**	*e*Pn	**Pn**	**07 58 46.1**	**-0.2**
TRF	**Thorofare Moun**	**5.09**	**157**	*e*Pn	**Pn**	**07 58 46.1**	**-0.8**
TTA	**Tatalina**	**5.30**	**187**	*e*Pn	**Pn**	**07 58 46.6**	**-3.2**
PPLA	**Purkeypile**	**5.41**	**168**	*e*Pn	**Pn**	**07 58 50.4**	**-1.0**
PPLA				*e*Sn	**Sn**	**07 59 55.7**	**+2.1**
SVW2	**Sparrevohn**	**7.13**	**183**	*e*Pn	**Pn**	**07 59 12.0**	**-2.7**
EPYK	**Eagle Plains**	**7.19**	**96**	*e*Pn	**Pn**	**07 59 16.0**	**+0.4**
INK	**Inuvik**	**7.86**	**79**	*e*Pn	**Pn**	**07 59 24.1**	**-0.6**
INK				*e*Sn	**Sn**	**08 00 55.1**	**+1.6**
HYT	**Haines Junctio**	**10.42**	**127**	*e*Pn	**Pn**	**07 59 59.3**	**-0.6**
HYT				*e*Sn	**Sn**	**08 01 53.1**	**-3.6**
YKA	**Yellowknife Ar**	**17.40**	**90**	Pn	**Pn**	**08 01 31.0**	**-2.0**
	0.1nm,0.3s,baz=306,slow=12,SNR=12						
NVAR	**Mina Array Bea**	**35.86**	**127**	P	**P**	**08 04 32.0**	**+1.6**
	0.4nm,0.6s,baz=322,slow=7.2,SNR=2.7						
TXAR	**Lajitas Array**	**48.90**	**116**	P	**P**	**08 06 19.0**	**+2.6**
	0.1nm,0.7s,baz=334,slow=6.0,SNR=2.6						

MEX 21 08:02:33.7±0.9, 16°.09N×97°.52W, h18km±21km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.66**	**298**	*i*P	Pg	08 02 44.3	-2.4
PNIG				*e*S	Sg	08 02 52.7	-2.8
VHO	**Vista Hermosa**	**1.24**	**37**	*e*P	Pn	08 02 53.5	-2.8
VHO				*e*S	Sb	08 03 08.4	-4.0
TLIG	**Tlapa**	**1.78**	**326**	*e*P	Pn	08 03 03.0	-0.7
TLIG				*i*S	Sn	08 03 25.4	-0.6

*ISCJB **21** 09:22:37.6±0.6, 33°.14S±0°.06×179°.4W±0°.2, h100km, mb3.8/5, Error ellipse: s-maj=21.3km s-min=4.6km az=19.1*
*WEL **21** 09:22:39.7±0.6, 33°S±9°×17°9W±2°2, h33km, M5.0/26, mB5.7/6, ML5.1/16, MLv4.9/26, Mw(mB)5.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=110.7*
*IDC **21** 09:22:39.5±6.2, 33°.25S×179°.62W, h122km±58km, mb3.6/4, mb1 3.8/5, mb1mx3.5/33, mbtmp4.0/5, Error ellipse: s-maj=53.6km s-min=32.1km az=178.0*
ISC 21 09:22:37.4±0.8, 33°.18S±0°.07×179°.3W±0°.1, h100km, n52, σ2§29/59, mb4.0/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.09**	**17**	P	**Pn**	**09 23 39.0**	**+1.2**
GLKZ				S	**Sn**	**09 24 25.2**	**+0.6**
MXZ	**Matakaoa Point**	**4.78**	**203**	P	**Pn**	**09 23 51.8**	**+4.7**
MXZ				S	**Sn**	**09 24 40.4**	**-0.8**
WMGZ	**Waiomatatini S**	**4.98**	**201**	P	**Pn**	**09 23 52.2**	**+2.5**
WMGZ				S	**Sn**	**09 24 45.4**	**-0.6**
HAZ	**Te Kaha**	**5.14**	**207**	P	**Pn**	**09 23 54.3**	**+2.4**
HAZ				S	**Sn**	**09 24 51.0**	**+1.1**
PKGZ	**Pakihiroa**	**5.15**	**204**	P	**Pn**	**09 23 54.0**	**+1.8**
PKGZ				S	**Sn**	**09 24 49.5**	**-0.9**
PUZ	**Puketiti**	**5.26**	**201**	P	**Pn**	**09 23 56.9**	**+3.3**
PUZ				S	**Sn**	**09 24 52.1**	**-0.8**

GRZ Great Barrier 5.27 233 S **Pn 09 23 57.2 +3.5**
RUGZ Raukumara Rang 5.36 206 P **Pn 09 23 57.7 +2.6**
RUGZ S **Sn 09 24 55.0 -0.5**
TWGZ Tauwhareparae 5.44 203 P Pn 09 24 01.1 +5.0
TWGZ S **Sn 09 24 58.4 +1.0**
CNGZ Carnagh Statio 5.66 200 P **Pn 09 24 01.2 +2.2**
TKGZ Te Karaka 5.72 203 P **Pn 09 24 04.0 +4.2**
OPRZ Ohinepanea 5.74 215 P **Pn 09 24 04.3 +4.3**
MWZ Matawai 5.74 206 P **Pn 09 24 00.9 +0.7**
MWZ S **Sn 09 25 03.3 -1.4**
TGRZ Tauranga 5.79 217 P **Pn 09 24 04.6 +3.9**
URZ Urewera 5.83 209 P **Pn 09 24 02.4 +1.1**
8.8nm,0.3s,baz=249,slow=7.0,SNR=66
URZ S **Sn 09 25 04.9 -2.0**
22nm,0.3s,baz=336,slow=22,SNR=14
URZ Urewera 5.83 209 P **Pn 09 24 02.6 +1.2**
RAGZ Rawiri 5.92 206 P **Pn 09 24 06.3 +3.7**
RIGZ Rimuhau 6.00 202 P **Pn 09 24 07.3 +3.7**
MUGZ Murupara 6.16 210 P **Pn 09 24 07.3 +1.5**
RTZ Ruatahuna 6.19 208 P **Pn 09 24 08.9 +2.6**
TOZ Tahuroa Road 6.20 221 P Pn 09 24 13.2 +6.9
SNGZ Shannon Statio 6.21 205 P **Pn 09 24 08.8 +2.4**
KNZ Kokohu 6.31 202 P **Pn 09 24 09.8 +2.0**
PRRZ Plateau Road 6.34 212 P **Pn 09 24 11.5 +3.2**
MHGZ Mahia Peninsul 6.36 200 P **Pn 09 24 11.5 +2.9**
ALRZ Allen Road 6.42 212 P **Pn 09 24 12.3 +3.0**
RAHZ Arahi 6.42 206 P **Pn 09 24 12.0 +2.7**
MTHZ Maungataniwha 6.45 208 P **Pn 09 24 13.2 +3.4**
WHHZ Waihua 6.51 204 P **Pn 09 24 13.1 +2.6**
NMHZ Naumai 6.68 207 P **Pn 09 24 14.5 +1.6**
ARHZ Aropaoanui 6.75 205 P **Pn 09 24 16.7 +2.8**
BKZ Black Stump Fm 6.86 208 P **Pn 09 24 16.0 +0.6**
MCHZ McNeill Hill 7.02 206 P **Pn 09 24 19.0 +1.4**
HIZ Hauiti 7.11 220 P **Pn 09 24 22.7 +3.9**
KAHZ Kahuranaki 7.27 204 P **Pn 09 24 21.4 +0.5**
MOVZ Moawhango 7.37 211 P **Pn 09 24 22.4 +0.1**
TSZ Takapari Road 7.84 208 P **Pn 09 24 27.9 -0.7**
DVHZ Dannevirke 7.97 206 P **Pn 09 24 29.1 -1.3**
PRWZ Pori Road 8.26 206 P **Pn 09 24 35.6 +1.2**
BFZ Birch Farm 8.28 204 P **Pn 09 24 34.3 -0.3**
CTA Charters Tower 33.26 284 P **P 09 29 06.4 +1.1**
1.3nm,0.3s,baz=127,slow=12,SNR=4.0
ASAR Alice Springs 41.92 271 P **P 09 30 16.0 -2.3**
0.2nm,0.3s,baz=112,slow=7.8,SNR=8.7
WRA Warramunga Arr 43.16 276 P **P 09 30 26.3 -2.1**
0.9nm,0.4s,baz=106,slow=8.7,SNR=20
PETK Petropavlovsk- 88.23 346 P **P 09 35 15.4 -1.5**
2.2nm,0.6s,baz=151,slow=6.8,SNR=4.1
NVAR Mina Array Bea 91.04 43 P **P 09 35 30.6 -0.1**
0.2nm,0.5s,baz=184,slow=9.9,SNR=2.6
ARCES ARCESS Array B 141.04 346 PKhKP PKPpre 09 41 48.9
0.9nm,0.8s,baz=75,slow=1.4,SNR=4.2
FINES FINESS Array B 147.32 338 PKPbc **PKPdf 09 42 07.7 +1.7**
2.7nm,0.6s,baz=45,slow=4.9,SNR=22
MMAI Mount Meron Ar 150.99 279 PKPbc **PKPbc 09 42 18.3 -0.5**
1.9nm,0.5s,baz=140,slow=4.7,SNR=3.5
NB2 NORSAR Subarra151.30 349 PKP **PKPbc 09 42 19.1 +0.6**
comp=Z,0.6nm,0.4s,baz=16,slow=2.6
NOA NORSAR Array B151.30 349 PKPbc **PKPbc 09 42 18.6 +0.1**
comp=Z,0.7nm,0.5s,baz=16,slow=4.1,SNR=7.2
AKASG Malin Array Be 152.73 318 PKPbc **PKPbc 09 42 20.1 -1.9**
comp=Z,0.6nm,0.4s,baz=100,slow=2.2,SNR=3.0
BRTR Keskin Array B 152.80 293 PKPbc **PKPbc 09 42 20.9 -1.8**
comp=Z,0.5nm,0.5s,baz=144,slow=4.8,SNR=4.5

DJA 21 09:27:21.8±1.3, 0°S±14°×13°2E±°, h10km, M3.9/5, MLv3.9/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**0.91**	**237**	P	Pg	09 27 39.2	-0.1
SWI				S	Sb	09 27 52.0	+0.1
RKPI	**Ransiki, Papua**	**2.44**	**118**	Pg	Pg	09 28 08.0	-0.6
FAKI	**Fak Fak**	**2.55**	**175**	P	Pn	09 28 04.0	+0.7

*NEIC **21** 09:41:33.3±0.0, 18°.52N×98°.73W, h2km, MD4.0(MEX), After MEX.*
MEX 21 09:41:33.4±1.3, 18°.52N×98°.74W, h2km, MD4.0, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAIG	**Yautepec**	**0.46**	**317**	*e*Pg	Pg	09 41 41.6	-0.6
YAIG				*e*Sg	Sg	09 41 48.4	+0.1
YAIG	**Yautepec**	**0.46**	**317**	*e*P	Pg	09 41 41.6	-0.6
YAIG				*i*S	Sg	09 41 48.4	+0.1
PPM	**Popocatepetl**	**0.55**	**11**	*e*Pg	Pg	09 41 43.4	-0.7
PPM				*e*Sg	Sg	09 41 51.3	0.0
PPM	**Popocatepetl**	**0.55**	**11**	*e*P	Pg	09 41 43.4	-0.7
PPM				*e*S	Sg	09 41 51.3	0.0
AMVM	**AMECAMECA**	**0.61**	**356**	*i*P	Pg	09 41 45.4	+0.3
AMVM				*e*S	Sg	09 41 54.0	+0.9
PLIG	**Platanillo**	**0.74**	**260**	*e*Pg	Pg	09 41 46.7	-0.9
PLIG	**Platanillo**	**0.74**	**260**	*e*P	Pg	09 41 46.7	-0.9
PLIG				*e*S	Sg	09 41 57.2	+0.1
MAVM	**Malinalco, Edo**	**0.84**	**301**	*e*P	Pg	09 41 48.9	-0.6
UNM	**Universidad Na**	**0.91**	**333**	*i*P	Sb	09 42 04.5	-0.2
UNM				*e*S	Sn	09 42 16.8	+10
TLIG	**Tlapa**	**0.97**	**170**	*e*Pg	Pg	09 41 50.9	-1.1
TLIG				*e*Sg	Sg	09 42 03.4	-1.1
TLIG	**Tlapa**	**0.97**	**170**	*e*P	Pg	09 41 49.4	-2.5
TLIG				*e*S	Sg	09 42 02.8	-1.7
PBVM	**Pinon**	**0.97**	**340**	*e*Pg	Pg	09 41 48.3	-3.8
PBVM	**Pinon**	**0.97**	**340**	*e*P	Pg	09 41 48.3	-3.8
MEIG	**Mezcala**	**1.03**	**235**	*e*Pg	Pg	09 41 51.5	-1.6
MEIG				*e*Sg	Sg	09 42 05.8	-0.6
MEIG	**Mezcala**	**1.03**	**235**	*e*P	Pg	09 41 51.5	-1.6
MEIG				*e*S	Sg	09 42 05.8	-0.6
ZUVM	**ZUMPANGO**	**1.34**	**346**	*e*P	Pg	09 41 51.9	-7.2
ARIG	**Puente Sto Nin**	**1.55**	**261**	*e*P	Pn	09 42 01.4	-0.6
ARIG				*e*S	Sn	09 42 22.4	-0.4
DEIG	**Demacu**	**1.79**	**351**	*e*Pn	Pb	09 42 06.5	-0.7
DEIG				*e*Sn	Sn	09 42 27.0	-2.1
DEIG	**Demacu**	**1.79**	**351**	*e*P	Pb	09 42 06.5	-0.7
DEIG				*i*S	Sn	09 42 27.0	-2.1
CAIG	**El Cayaco**	**2.07**	**225**	*e*Pn	Pn	09 42 08.2	-0.9
CAIG				*e*Sn	Sn	09 42 36.6	+1.1
CAIG	**El Cayaco**	**2.07**	**225**	*e*P	Pn	09 42 08.2	-0.9
CAIG				*i*S	Sn	09 42 36.6	+1.1
PNIG	**Pinotepa**	**2.20**	**165**	*e*Pn	Pn	09 42 10.8	-0.2
PNIG				*e*Sn	Sn	09 42 33.7	-5.0
PNIG	**Pinotepa**	**2.20**	**165**	*e*P	Pn	09 42 10.8	-0.2
PNIG				*e*S	Sn	09 42 33.7	-5.0
LVIG	**Laguna Verde**	**2.50**	**61**	*e*Pn	Pn	09 42 13.8	-1.3
LVIG				*e*Sn	Sn	09 42 45.7	-0.5
LVIG	**Laguna Verde**	**2.50**	**61**	*i*P	Pb	09 42 17.1	-1.9
ZIIG	**Zihuatanejo**	**2.75**	**251**	*e*Pn	Pb	09 42 21.7	-1.6
ZIIG				*e*Sn	Sb	09 42 56.0	-1.4
ZIIG	**Zihuatanejo**	**2.75**	**251**	*e*P	Pb	09 42 21.7	-1.6
ZIIG				*e*S	Sb	09 42 56.0	-1.4
MMIG	**Aquila**	**4.38**	**268**	*e*S	Sb	09 43 45.1	+0.6

*SJA **21** 09:46:59.9±0.6, 30°.36S×71°.94W, h23km±10km, ML3.6, MW3.6*
*ISCJB **21** 09:47:00.7±1.6, 30°.40S±0°.04×71°.8W±0°.1, h6km±9km, Error ellipse: s-maj=15.7km s-min=6.7km az=12.3*
*GUC **21** 09:47:03.2±0.7, 30°.42S×71°.49W, h40km±3km, ML3.6*
ISC 21 09:47:00.2±2.5, 30°.40S±0°.04×71°.8W±0°.1, h1km±12km, n14, σ1§38/22, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.69**	**45**	*e*P	**Pb**	**09 47 15.2**	**+0.2**
LSCH				*i*S	**Sg**	**09 47 24.1**	**+1.8**
LSCH				IAML		09 47 25.0	
	comp=N,3μm,0.3s						
GO04	**Tololo Observa**	**0.90**	**76**	*e*P	**Pg**	**09 47 17.6**	**+0.1**
GO04				*i*S	**Sg**	**09 47 28.0**	**-1.2**
GO04				IAML		09 47 30.4	
	comp=N,11μm,0.2s						
CO02	**Combarbal**	**1.07**	**139**	*e*P	**Pg**	**09 47 20.4**	**-0.3**
CO02				*i*S	**Sg**	**09 47 33.5**	**-1.0**
LCO	**Las Campanas**	**1.68**	**35**	*e*P	**P

RTLS			*e*S		**Sb**	**09 48 18.6**	**-1.0**
RTLS			IAML			09 48 24.9	
	comp=Z,169nm,0.5s						
ROCH	**El Roble**	**2.66 165**	*i* S		**Sn**	**09 48 18.3**	**+0.9**
ROCH			IAML			09 48 25.3	
	comp=N,686nm,0.2s						
AUSP	**Uspallata**	**2.76 132**	*e*P		**Pn**	**09 47 47.7**	**+1.8**
AUSP			*e*S		**Sb**	**09 48 22.7**	**-2.3**
PEL	**Peldehue**	**2.90 161**	*e*P		**Pn**	**09 47 48.7**	**+1.1**
AMOG	**MOGNA**	**2.91 102**	*e*P		**Pn**	**09 47 49.4**	**+1.7**
RTCV	**Cerro Valdivia**	**3.16 118**	*e*P		**Pn**	**09 47 53.0**	**+1.8**
FCH	**Farellones**	**3.20 157**	*i* S		**Sn**	**09 48 30.7**	**-0.2**
ARCO	**CERRO ARCO**	**3.46 136**	*e*P		**Pn**	**09 47 57.3**	**+1.9**
ARCO			IAML			09 48 04.1	
	comp=Z,197nm,0.3s						
LMEL	**Las Melosas**	**3.70 159**	*e*P		**Pn**	**09 47 59.1**	**+0.3**
LMEL			*i* S		**Sn**	**09 48 41.7**	**-1.4**

*NNC **21** 09:54:37.3±1.5, 51°.72N×75°.43E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=19.0km s-min=8.8km az=17.0, Suspected Mining explosion.*

IDC 21 09:54:39.3±1.2, 51°.67N×75°.50E, h0km, mb1 2.7/3, mb1mx2.7/34, mbtmp2.7/3, ML2.1/3, 7C, Error ellipse: s-maj=42.7km s-min=10.9km az=33.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.18**	**118**	⇑Pg	Pb	09 55 18.4	-1.1
	1.4nm,0.4s						
KURBB				⇑Lg	Lg	09 55 47.2	
	22nm,0.8s						
BVAR	**Borovoye Array**	**3.42**	**295**	Pn	Pn	09 55 33.7	-0.1
	0.2nm,0.3s,baz=109,slow=13,SNR=2.6						
BVAR				Pg	Pb	09 55 39.1	-1.6
	0.5nm,0.3s,baz=105,slow=16,SNR=4.5						
BVAR				Lg	Lg	09 56 22.1	
	0.8nm,0.3s,baz=114,slow=28,SNR=5.8						
BRVK	**Borovoye**	**3.49**	**295**	⇑Lg	Lg	09 56 25.5	
	7.6nm,0.7s						
OTUK	**Ortayu**	**3.99**	**212**	⇑Lg	Lg	09 56 44.8	
	4.0nm,0.9s						
ZALV	**Zalesovo Beam**	**6.09**	**64**	Pn	Pn	09 56 10.1	-0.5
	0.1nm,0.3s,baz=255,slow=10,SNR=2.6						
MAKZ	**Makanchi**	**6.46**	**136**	⇑Lg	Lg	09 58 05.4	
	2.3nm,0.9s						
MK31	**Makanchi Array**	**6.60**	**135**	⇑Lg	Lg	09 58 07.7	
	1.2nm,0.6s,baz=321,slow=27,SNR=3.8						
MKAR	**Makanchi Array**	**6.60**	**135**	Pn	Pn	09 56 17.7	+0.1
	0.1nm,0.3s,baz=309,slow=9.1,SNR=3.1						
MKAR				Lg	Lg	09 58 04.9	
	0.1nm,0.3s,baz=320,slow=38,SNR=4.0						
KK31	**Karatay Array**	**9.21**	**203**	S	Pn	09 56 55.3	+1.9
	6.2nm,0.4s,baz=309,slow=31,SNR=82						
KK31				⇑Rg	Rg	09 57 00.4	
	61nm,0.8s,baz=323,slow=35,SNR=14						
I31KZ	**AKTYUBINSK INF**	**11.07**	**270**	*i*		10 57 00.0	
	baz=76,slow=318,SNR=0.9						

*NEIC **21** 10:04:07.0±0.0, 21°.38N×157°.07W, h12km, ML4.5(HVO), After HVO.*

NEIC Felt [III] at Honolulu and Kailua and [II] at Kane`ohe. Also felt [III] at Kaunakakai, Moloka`i. Felt [II] at Kula and Lahaina, Maui. Felt in much of O`ahu and parts of Kaua`i, Lana`i, Maui and Moloka`i.

*BJI **21** 10:04:07.1±0.0, 21°.50N×156°.82W, h31km, mb5.0/5, mB4.8/2*

ISC 21 10:04:07.7±2.3, 21°.4N±0°.1×157°.08W±0°.07, h19km±8km, n39, σ1§42/73, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHLH	**Kahului Airpor**	**0.76**	**127**	*e*Pn	**Pn**	**10 04 24.9**	**+1.5**
KHLH				*e*Sn	**Sn**	**10 04 36.1**	**+1.7**
HON	**Honolulu**	**0.86**	**268**	*e*Pn	**Pn**	**10 04 26.1**	**+1.4**
HON				*e*Sn	**Sn**	**10 04 39.6**	**+2.9**
KIP	**Kipapa**	**0.87**	**275**	*e*Pn	**Pn**	**10 04 25.8**	**+0.9**
KIP				*e*Sn	**Sn**	**10 04 37.6**	**+0.5**
OPA	**Opana**	**0.93**	**291**	*e*Pn	**Pb**	**10 04 25.5**	**+0.4**
OPA				*e*Sg	**Sg**	**10 04 36.8**	**-1.2**
HLK	**Haleakala**	**0.98**	**127**	*e*Pn	**Pn**	**10 04 27.6**	**+0.9**
HLK				*e*Sn	**Sn**	**10 04 41.1**	**+1.0**
MHA	**Mahukona**	**1.60**	**136**	*e*Pn	**Pb**	**10 04 36.5**	**-0.2**
MHA				*e*Sn	**Sn**	**10 04 55.2**	**+0.1**
HPAH	**Hawaii Prepara**	**1.85**	**135**	*e*Pn	**Pn**	**10 04 39.1**	**+0.7**
HPAH				*e*Sn	**Sn**	**10 04 59.0**	**-2.3**
KKH	**Kailua Kona**	**1.96**	**149**	*e*Pn	**Pn**	**10 04 41.4**	**+1.5**
KKH				*e*Sn	**Sn**	**10 05 03.1**	**-0.9**
HUH	**Hualalai**	**2.03**	**145**	*e*Pn	**Pn**	**10 04 42.1**	**+1.0**
HUH				*e*Sn	**Sn**	**10 05 06.1**	**-0.1**
LPH	**Laupahoehoe**	**2.07**	**130**	*e*Pn	**Pn**	**10 04 42.7**	**+1.3**
LPH				*e*Sn	**Sn**	**10 05 06.8**	**+0.1**
KHLU	**Kahalu`u**	**2.08**	**147**	*e*Pn	**Pn**	**10 04 42.3**	**+0.7**
KHLU				*e*Sn	**Sn**	**10 05 06.1**	**-1.0**
POHA	**Pohakuloa**	**2.15**	**137**	*e*Pn	**Pn**	**10 04 43.0**	**+0.2**
POHA				*e*Sn	**Sn**	**10 05 08.0**	**-1.1**
MLOA	**Mauna Loa Obse**	**2.30**	**142**	*e*Pn	**Pn**	**10 04 45.9**	**+0.9**
MLOA				*e*Sn	**Sn**	**10 05 11.8**	**-1.1**
HMH	**Humu`ula Sheep**	**2.30**	**139**	*e*Pn	**Pn**	**10 04 45.4**	**+0.5**
HMH				*e*Sn	**Sn**	**10 05 11.6**	**-1.2**
MWH	**Moku`aweowe**	**2.33**	**143**	*e*Pn	**Pn**	**10 04 46.1**	**+0.7**
MWH				*e*Sn	**Sn**	**10 05 11.8**	**-1.9**
MLH	**Mauna Loa**	**2.44**	**139**	*e*Pn	**Pn**	**10 04 47.1**	**+0.4**
MLH				*e*Sn	**Sn**	**10 05 14.9**	**-1.3**
AIN	**Ainahou**	**2.49**	**142**	*e*Pn	**Pn**	**10 04 48.3**	**+0.9**
AIN				*e*Sn	**Sn**	**10 05 17.0**	**-0.4**
KHU	**Kahuku**	**2.51**	**147**	*e*Pn	**Pn**	**10 04 48.2**	**+0.5**
KHU				*e*Sn	**Sn**	**10 05 16.5**	**-1.4**
KEKH	**Kekaha**	**2.52**	**285**	*e*Pn	**Pn**	**10 04 46.8**	**-0.9**
KEKH				*e*Sn	**Sn**	**10 05 12.9**	**-5.0**
UWE	**Uwekahuna**	**2.55**	**139**	*e*Pn	**Pn**	**10 04 48.5**	**+0.3**
UWE				*e*Sn	**Sn**	**10 05 17.5**	**-1.3**
UWB	**Uwekahuna B**	**2.56**	**138**	*e*Pn	**Pn**	**10 04 48.5**	**+0.2**
UWB				*e*Sn	**Sn**	**10 05 17.8**	**-1.2**
WRMHI	**West Rim**	**2.56**	**139**	*e*Pn	**Pn**	**10 04 48.5**	**+0.2**
WRMHI				*e*Sn	**Sn**	**10 05 17.3**	**-1.7**
OBL	**Observatory Le**	**2.56**	**139**	*e*Pn	**Pn**	**10 04 48.6**	**+0.3**
OBL				*e*Sn	**Sn**	**10 05 17.4**	**-1.6**
SBLHI	**Steaming Bluff**	**2.56**	**138**	*e*Pn	**Pn**	**10 04 48.7**	**+0.4**
SBLHI				*e*Sn	**Sn**	**10 05 16.9**	**-2.2**
NPH	**North Pit**	**2.57**	**139**	*e*Pn	**Pn**	**10 04 48.6**	**+0.2**
NPH				*e*Sn	**Sn**	**10 05 16.7**	**-2.4**
HATHI	**Halema`uma`u T**	**2.57**	**138**	*e*Pn	**Pn**	**10 04 48.7**	**+0.2**
HATHI				*e*Sn	**Sn**	**10 05 17.1**	**-2.1**
SDHHI	**Sand Hill**	**2.58**	**139**	*e*Pn	**Pn**	**10 04 48.8**	**+0.2**
SDHHI				*e*Sn	**Sn**	**10 05 19.2**	**-0.2**
BYL	**Byron's Ledge**	**2.58**	**138**	*e*Pn	**Pn**	**10 04 48.8**	**+0.2**
BYL				*e*Sn	**Sn**	**10 05 17.0**	**-2.5**
RIM	**Rim**	**2.58**	**139**	*e*Pn	**Pn**	**10 04 49.3**	**+0.7**
RIM				*e*Sn	**Sn**	**10 05 18.3**	**-1.3**
KKO	**Keanakako`i**	**2.59**	**139**	*e*Pn	**Pn**	**10 04 49.0**	**+0.3**
KKO				*e*Sn	**Sn**	**10 05 17.0**	**-2.6**
PUH	**Pauahi**	**2.64**	**138**	*e*Pn	**Pn**	**10 04 49.5**	**+0.2**
PUH				*e*Sn	**Sn**	**10 05 17.9**	**-2.9**
HLP	**Hilina Pali**	**2.64**	**141**	*e*Pn	**Pn**	**10 04 50.0**	**+0.7**
HLP				*e*Sn	**Sn**	**10 05 20.0**	**-0.9**
STCH	**Steam Cracks**	**2.69**	**137**	*e*Pn	**Pn**	**10 04 50.3**	**+0.3**
NPOC	**North of Pu`u**	**2.69**	**136**	*e*Pn	**Pn**	**10 04 51.2**	**+1.2**
NPOC				*e*Sn	**Sn**	**10 05 19.7**	**-2.4**
JCUZ	**Jacuzzi**	**2.70**	**136**	*e*Pn	**Pn**	**10 04 50.3**	**+0.1**
JCUZ				*e*Sn	**Sn**	**10 05 19.8**	**-2.6**
NJ2	**Nanjing**	**74.15**	**299**	*e*P	**P**	**10 15 42.9**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	**Chengdu**	**86.70**	**302**	*e*P	**P**	**10 16 50.0**	**-0.8**
KMI	**Kunming**	**89.80**	**297**	P	**P**	**10 17 06.3**	**+0.5**
WMQ	**Urumqi**	**92.16**	**319**	*e*P	**P**	**10 17 17.5**	**+1.3**

NNC 21 10:12:57.3±0.6, 51°.70N×75°.42E, h0km, mb3.8, mpv3.4, 6C-4D, Error ellipse: s-maj=6.2km s-min=3.4km az=7.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.24**	**118**	⇑Pg	Pb	10 13 37.9	-0.6
	9.9nm,0.5s						
KURBB				⇑Lg	Lg	10 14 08.3	
	66nm,0.7s						
SEM	**Semipalatinsk**	**3.31**	**111**	Pg	Pb	10 13 58.7	+1.8
	8.9nm,0.0s						
SEM				Lg	Lg	10 14 42.8	
	27nm,0.2s						
BRVK	**Borovoye**	**3.43**	**295**	⇑Pg	Pb	10 13 58.8	-0.1
	4.1nm,0.7s						
BRVK				⇓Lg	Lg	10 14 47.0	
	21nm,0.8s						
OTUK	**Ortayu**	**4.00**	**211**	Pg	Pg	10 14 11.5	-2.3
	0.6nm,0.3s						
OTUK				Lg	Lg	10 15 04.9	
	4.7nm,0.6s						
OTUK	**Ortayu**	**4.00**	**211**	⇑Pg	Pb	10 14 10.4	+1.9
	1.8nm,0.8s						
OTUK				⇓Lg	Lg	10 15 04.5	
	14nm,0.8s						
MAKZ	**Makanchi**	**6.51**	**136**	⇓Sn	Sn	10 15 49.9	+0.7
	0.5nm,0.3s						
MAKZ				⇓Lg	Lg	10 16 23.5	
	6.0nm,0.8s						
MK31	**Makanchi Array**	**6.66**	**135**	Pn	Pn	10 14 37.0	+0.7
	0.6nm,0.5s,baz=11,slow=4.5,SNR=6.0						
MK31				⇑Sn	Sn	10 15 53.4	+0.5
	1.1nm,0.6s,baz=325,slow=18,SNR=4.7						
MK31				⇑Lg	Lg	10 16 25.5	
	2.8nm,0.6s,baz=323,slow=26,SNR=6.6						
BTLS	**Baital**	**6.73**	**188**	Pg	Pg	10 15 02.2	-4.0
	2.6nm,0.5s						
BTLS				Lg	Lg	10 16 31.7	
	5.1nm,0.6s						
KAPS	**Kapalarasan**	**6.93**	**156**	Pg	Pb	10 15 03.5	+4.9
	0.5nm,0.3s						
KAPS				Lg	Lg	10 16 34.4	
	6.2nm,0.7s						
ARXS	**Arharly**	**7.67**	**167**	Pg	Pb	10 15 16.2	+5.1
	1.1nm,0.3s						
ARXS				Lg	Lg	10 16 56.1	
	4.1nm,0.7s						
KUU	**Kurty**	**7.84**	**175**	Pg	Pb	10 15 19.9	+5.9
	1.1nm,0.3s						
KUU				Lg	Lg	10 17 01.7	
	6.8nm,1.0s						
DJR	**Jarkent**	**7.94**	**157**	Pg	Pg	10 15 24.4	-4.8
	1.5nm,0.2s						
DJR				Lg	Lg	10 17 09.9	
	2.9nm,0.4s						

*BJI **21** 10:33:52.6±0.0, 43°.86N×9°.36E, h10km, mb5.2/63, mB5.6/49, Ms5.4/54, Ms7 5.0/50*

*LDG **21** 10:33:56.7±0.1, 44°.16N×10°.16E, h5km, Md4.9/3, Ml5.3/43, Error ellipse: s-maj=2.7km s-min=1.7km az=6.0*

*ROM **21** 10:33:56.1±0.1, 44°.090N±0°.008×10°.062E±0°.009, h6km±1km, ML5.3/30, Mw5.1, Error ellipse: s-maj=0.9km s-min=0.3km az=202.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}=-4.20; $M_{\theta\theta}$=4.87; $M_{\phi\phi}$=-0.67; $M_{r\theta}$=-0.13; $M_{\theta\phi}$=0.11; $M_{\phi r}$=1.37; Fault plane solution: M_0=4.77452×10^{16} NP1:ϕ_s=251.00000°, δ47.00000°, λ-116.00000°. NP2:ϕ_s=107.00000°, δ49.00000°, λ-64.00000°.*

*PRU **21** 10:33:56.6±0.0, 44°.16N×10°.08E, h0km, M5.1*

*STR **21** 10:33:56.2±0.5, 44°.N±2°.×1°.0E±°, h0km, mB5.5/5, mb5.0/4, MLv5.3/18, Mw(mB)5.0/5, Mwp4.9/1, Mwp5.2/1*

*MOS **21** 10:33:56.8±1.0, 44°.18N×10°.14E, h10km, mb5.4/89, MS4.8/22, Error ellipse: s-maj=4.4km s-min=2.8km az=66.3*

*NEIC **21** 10:33:57.0±0.0, 44°.15N×10°.14E, h5km, mb5.1/334, MW5.2, ML5.2(ROM), Moment Tensor Solution. s20 Moment tensor: Scale 10^{16}Nm; M_{rr}=6.90; $M_{\theta\theta}$=6.03; $M_{\phi\phi}$=0.87; $M_{r\theta}$=4.18; $M_{\theta\phi}$=-1.84; $M_{\phi r}$=0.15; Best double couple: M_0=8.00000×10^{16} NP1:ϕ_s=278.00000°, δ61.00000°, λ-99.00000°. NP2:ϕ_s=116.00000°, δ30.00000°, λ-74.00000°. Principal axes: T 7.7000, Plg15.0000°, Azm15.0000°; N 0.4900, Plg8.0000°, Azm282.0000°; P -8.1900, Plg73.0000°, Azm166.0000°; After ROM.*

NEIC Felt [IV] at Reggio nell'Emilia; [III] at Bologna, Livorno, Milan, Padova and Vicenza; [II] at Florence and Pisa. Felt in parts of Emilia-Romagna, Liguria, Lombardy, Tuscany and Veneto.

*ISCJB **21** 10:33:57.9±0.2, 44°.133N±0°.009×10°.098E±0°.008, h21km±1km, mb5.0/370, MS4.9/68 Error ellipse: s-maj=1.5km s-min=1.0km az=11.2*

*MED_RC **21** 10:33:57.0±0.2, 44°.18N×10°.10E, h10km, MW5.4/15, Moment Tensor Solution. Mantle waves: s15,c33; Duration: 0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.91±.03; $M_{\theta\theta}$1.17±.03; $M_{\phi\phi}$-0.25±.03; $M_{r\theta}$-0.76±.10; $M_{\theta\phi}$-0.06±.02; $M_{\phi r}$0.86±.11; Best double couple: M_0=1.56000×10^{17} NP1:ϕ_s=123.00000°, δ71.00000°, λ-64.00000°. NP2: ϕ_s=247.00000°, δ32.00000°, λ-141.00000°. Principal axes: T 1.4800, Plg21.0000°, Azm193.0000°; N 0.1500, Plg25.0000°, Azm293.0000°; P -1.6300, Plg56.0000°, Azm67.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*GEN **21** 10:33:57.6, 44°.16N×10°.16E, h6km±3km, Ml5.1*

*PDG **21** 10:33:57.8±0.6, 44°.17N×10°.19E, h12km±1km, ML5.4/12, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0*

*IDC **21** 10:33:59.7±1.6, 44°.14N×10°.12E, h19km±9km, mb4.6/33, mb1 4.7/43, mb1mx4.7/46, mbtmp4.8/43, ML5.0/9, MS4.7/52, Ms1 4.7/52, ms1mx4.7/53, Error ellipse: s-maj=9.7km s-min=8.9km az=143.0*

*CRAAG **21** 10:33:59.0, 44°.19N×10°.15E, Mw5.3*

*GCMT **21** 10:34:00.0±0.1, 44°.10N±0°.01×10°.17E±0°.01, h12km, MW5.3/116, Moment Tensor Solution. s81,c124; s116,c231; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.01±.01; $M_{\theta\theta}$1.15±.01; $M_{\phi\phi}$-0.13±.01; $M_{r\theta}$-0.46±.04; $M_{\theta\phi}$-0.17±.01; $M_{\phi r}$0.15±.04; Best double couple: M_0=1.19600×10^{17} NP1:ϕ_s=102.00000°, δ57.00000°, λ-84.00000°. NP2:ϕ_s=272.00000°, δ33.00000°, λ-99.00000°. Principal axes: T 1.2740, Plg12.0000°, Azm188.0000°; N -0.1530, Plg5.0000°, Azm279.0000°; P -1.1180, Plg77.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGS **21** 10:34:13.7±2.4, 44°.93N×9°.04E, h10km, MS4.8*

*TIR **21** 10:35:00.2, 44°.19N×10°.15E, h2km, Md5.3/7*

ISC 21 10:33:57.9±0.4, 44°.10N±0°.01×10°.05E±0°.01, h12km±2km, n1688, σ1§72/1820, mb5.1/375, MS4.9/69, 80C-53D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.25**	**75**	*e*Pg	**Pg**	**10 34 01.8**	**-1.3**
VLC				*e*Sg	**Sg**	**10 34 04.9**	**-1.8**
VLC	**Villacollemand**	**0.25**	**75**	⇓*e*Pg	**Pg**	**10 34 01.1**	**-2.0**
VLC				*e*Sg	**Sg**	**10 34 04.5**	**-2.1**
VLC	**Villacollemand**	**0.25**	**75**	P	**Pg**	**10 34 01.1**	**-2.0**
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
SARO	**Sassorosso**	**0.27**	**71**	P	**Pg**	**10 34 01.3**	**-2.1**
SARO				S	**Sg**	**10 34 04.5**	**-2.7**
SARO	**Sassorosso**	**0.27**	**71**	*e*P	**Pg**	**10 34 01.3**	**-2.1**
CARD	**Cardoso**	**0.32**	**103**	P	**Pg**	**10 34 03.0**	**-1.4**
CARD				S	**Sg**	**10 34 07.1**	**-1.5**
CARD	**Cardoso**	**0.32**	**103**	*e*P	**Pg**	**10 34 03.0**	**-1.4**
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CODM	**Codolo**	**0.33**	**334**	P	**Pg**	**10 34 03.6**	**-1.0**
CODM				S	**Sg**	**10 34 07.3**	**-1.8**
MAIM	**Mastiano**	**0.36**	**120**	P	**Pb**	**10 34 04.7**	**-1.6**
MAIM				S	**Sb**	**10 34 09.5**	**-2.4**
MAIM	**Mastiano**	**0.36**	**120**	P	**Pb**	**10 34 04.3**	**-2.0**
MAIM				S	**Sb**	**10 34 09.8**	**-2.1**
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
BDI	**Bagni Di Lucca**	**0.39**	**95**	P	**Pg**	**10 34 04.2**	**-1.6**
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
GRAM	**Graiana**	**0.40**	**1**	P	**Pg**	**10 34 04.2**	**-1.6**
GRAM				S	**Sg**	**10 34 09.8**	**-1.3**
GRAM	**Graiana**	**0.40**	**1**	P	**Pg**	**10 34 04.2**	**-1.6**
GRAM				S	**Sg**	**10 34 10.1**	**-1.0**
ERBM	**Eremo**	**0.41**	**39**	P	**Pg**	**10 34 04.2**	**-2.0**
MSSA	**Maissana**	**0.44**	**300**	P	**Pb**	**10 34 06.8**	**-0.9**
MSSA				S	**Sb**	**10 34 14.2**	**-0.1**
MSSA				AML	AML		
MSSA				AML	AML		
MSSA				AML	AML		
MSSA				AML	AML		
MSSA				AML	AML		
MSSA				AML	AML		
MSSA				AML	AML		
MSSA				AML	AML		
MSSA				AML	AML		
POPM	**Popiglio**	**0.51**	**96**	P	**Pg**	**10 34 06.5**	**-1.4**
POPM				S	**Sg**	**10 34 12.6**	**-2.1**
POPM	**Popiglio**	**0.51**	**96**	P	**Pg**	**10 34 06.3**	**-1.6**
POPM				S	**Sg**	**10 34 13.4**	**-1.3**
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
NEVI	**Neviano degli**	**0.52**	**21**	P	**Pb**	**10 34 07.3**	**-1.7**
NEVI				S	**Sb**	**10 34 15.4**	**-1.1**
NEVI				AML	AML		
NEVI				AML	AML		
NEVI				AML	AML		
NEVI				AML	AML		
NEVI				AML	AML		
NEVI				AML	AML		
NEVI				AML	AML		
NEVI				AML	AML		
NEVI				AML	AML		
NEVI				AML	AML		
MTCR	**Monte La Croce**	**0.68**	**96**	P	**Pg**	**10 34 09.5**	**-1.7**
MTCR				S	**Sb**	**10 34 19.7**	**-1.6**
MTCR				AML	AML		
MTCR				AML	AML		
MTCR				AML	AML		
MTCR				AML	AML		
MTCR				AML	AML		
MTCR				AML	AML		
MTCR				AML	AML		
MTCR				AML	AML		
PRMA	**PARMA**	**0.69**	**15**	*e*P	**Pb**	**10 34 10.7**	**-1.2**
PRMA				S	**Sb**	**10 34 21.0**	**-0.4**
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
ZCCA	**Zocca**	**0.71**	**69**	*e*P	**Pb**	**10 34 11.2**	**-1.0**
ZCCA				S	**Sn**	**10 34 23.0**	**-1.7**
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
CRMI	**Carmignano**	**0.73**	**115**	P	**Pb**	**10 34 11.1**	**-1.4**
CRMI				S	**Sb**	**10 34 22.4**	**-0.1**
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
CRMI				AML	AML		
PTF	**Prato**	**0.74**	**100**	*e*P	**Pg**	**10 34 10.6**	**-1.7**
GORR	**Gorreto**	**0.75**	**313**	P	**Pb**	**10 34 11.7**	**-1.1**
GORR				S	**Sb**	**10 34 22.9**	**-0.1**
GORR	**Gorreto**	**0.75**	**313**	P	**Pb**	**10 34 11.8**	**-1.1**
GORR				AML	AML		
GORR				AML	AML		
GORR				AML	AML		
GORR				AML	AML		
GORR				AML	AML		
GORR				AML	AML		
GORR				AML	AML		
GORR				AML	AML		
FNVD	**Fontana Vidola**	**0.77**	**84**	*e*P	**Pg**	**10 34 11.2**	**-1.7**
FNVD				S	**Sb**	**10 34 21.7**	**-2.0**
FNVD				AML	AML		
FNVD				AML	AML		
FNVD				AML	AML		
FNVD				AML	AML		
FNVD				AML	AML		
FNVD				AML	AML		
BOB	**Bobbio (Coli)**	**0.80**	**327**	P	**Pb**	**10 34 12.6**	**-1.1**
BOB				AML	AML		
BOB				AML	AML		

BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
MODE	**Modena**	**0.83**	**50**	P	**Pn**	**10 34 14.1**	**-1.3**
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
NOVE	**Novellara**	**0.85**	**34**	P	**Pn**	**10 34 14.0**	**-1.6**
NOVE				S	**Sn**	**10 34 27.5**	**-0.4**
FIR	**Firenze**	**0.93**	**110**	P	**Pn**	**10 34 15.9**	**-0.8**
FIR				S	**Sb**	**10 34 26.7**	**-1.3**
SEI	**Scarperia**	**0.94**	**92**	P	**Pb**	**10 34 14.4**	**-1.7**
SEI				AML	AML		
SEI				AML	AML		
SEI				AML	AML		
SEI				AML	AML		
SEI				AML	AML		
SEI				AML	AML		
SEI				AML	AML		
SEI				AML	AML		
RAVA	**Ravarino**	**1.01**	**49**	P	**Pn**	**10 34 17.8**	**0.0**
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
CAVE	**Cavezzo**	**1.03**	**41**	P	**Pn**	**10 34 16.8**	**-1.2**
CAVE				S	**Sn**	**10 34 33.4**	**+1.1**
BRIS	**BRISIGHELLA**	**1.05**	**87**	AML	AML		
BRIS				AML	AML		
BRIS				AML	AML		
BRIS				AML	AML		
BRIS				AML	AML		
BRIS				AML	AML		
BRIS				AML	AML		
BRIS				AML	AML		
MTRZ	**Monterenzio**	**1.05**	**74**	*e*P	**Pb**	**10 34 16.7**	**-1.4**
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
RUFI	**Rufina**	**1.08**	**103**	P	**Pn**	**10 34 17.5**	**-1.3**
RUFI				AML	AML		
RUFI				AML	AML		
RUFI				AML	AML		
RUFI				AML	AML		
RUFI				AML	AML		
RUFI				AML	AML		
RUFI				AML	AML		
RUFI				AML	AML		
CSNT	**Castellina Chi**	**1.09**	**124**	P	**Pn**	**10 34 18.2**	**-0.8**
CSNT				AML	AML		
CSNT				AML	AML		
CSNT				AML	AML		
CSNT				AML	AML		
CSNT				AML	AML		
CSNT				AML	AML		
CSNT				AML	AML		
CSNT				AML	AML		
TRIF	**Trifonti**	**1.16**	**148**	P	**Pn**	**10 34 20.1**	**+0.2**
TRIF				AML	AML		
	comp=E,62500µm,0.7s						
TRIF				AML	AML		
	comp=N,53100µm,0.9s						
TRIF				AML	AML		
	comp=E,62500µm,0.7s						
TRIF				AML	AML		
	comp=N,57500µm,0.9s						
TRIF				AML	AML		
	comp=N,57500µm,0.9s						
TRIF				AML	AML		
	comp=E,62500µm,0.7s						
TRIF				AML	AML		
	comp=N,57500µm,0.9s						
TRIF				AML	AML		
	comp=E,62500µm,0.7s						
FIU	**Minerbio Fiu**	**1.17**	**62**	AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
PCP	**Piancastagn**	**1.17**	**293**	P	**Pn**	**10 34 20.2**	**+0.1**
PCP				AML	AML		
	comp=E,37300µm,1.0s						
PCP				AML	AML		
	comp=N,34500µm,0.6s						
PCP				AML	AML		
	comp=E,37300µm,1.0s						
PCP				AML	AML		
	comp=N,34500µm,0.6s						
PCP				AML	AML		
	comp=E,37300µm,1.0s						
PCP				AML	AML		
	comp=N,34500µm,0.6s						
PCP				AML	AML		
	comp=E,37300µm,1.0s						
PCP				AML	AML		
	comp=N,34500µm,0.6s						
FROS	**Frosini**	**1.19**	**138**	*e*P	**Pn**	**10 34 20.4**	**0.0**
FROS				AML	AML		
FROS				AML	AML		
FROS				AML	AML		
FROS				AML	AML		
FROS				AML	AML		
FROS				AML	AML		
FROS				AML	AML		
FROS				AML	AML		
CTL8	**Castelleone**	**1.20**	**350**	P	**Pn**	**10 34 21.7**	**+1.3**
CTL8				AML	AML		
CTL8				AML	AML		
CTL8				AML	AML		
	comp=E,87450µm,0.6s						
CTL8				AML	AML		
	comp=N,81200µm,0.5s						
CTL8				AML	AML		
CTL8				AML	AML		
	comp=N,81200µm,0.5s						
CTL8				AML	AML		
CTL8				AML	AML		
	comp=E,87450µm,0.6s						
CTL8				AML	AML		
CTL8				AML	AML		
	comp=N,81200µm,0.5s						
CTL8				AML	AML		
CTL8				AML	AML		
	comp=E,87450µm,0.6s						
FINB	**Finale Ligure**	**1.25**	**274**	P	**Pn**	**10 34 21.0**	**-0.1**
FINB				AML	AML		
	comp=E,16250µm,0.4s						
FINB				AML	AML		
	comp=N,26050µm,1.1s						
FINB				AML	AML		
	comp=E,16250µm,0.4s						
FINB				AML	AML		
	comp=N,26050µm,1.1s						
FINB				AML	AML		
	comp=E,16250µm,0.4s						
FINB				AML	AML		
	comp=N,26050µm,1.1s						
QLNO	**Quiliano**	**1.25**	**281**	*e*P	**Pn**	**10 34 21.3**	**+0.1**
QLNO				AML	AML		
	comp=E,23200µm,0.8s						
QLNO				AML	AML		
	comp=N,38500µm,0.8s						
QLNO				AML	AML		
	comp=N,38500µm,0.8s						
QLNO				AML	AML		
	comp=E,23200µm,0.8s						
QLNO				AML	AML		
	comp=N,38500µm,0.8s						
QLNO				AML	AML		
	comp=E,23200µm,0.8s						
SERM	**Sermide**	**1.27**	**44**	P	**Pg**	**10 34 21.8**	**-0.6**
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
SERM				AML	AML		
ASQU	**Asqua**	**1.29**	**103**	*e*P	**Pn**	**10 34 20.0**	**-1.7**
ASQU				AML	AML		
	comp=E,64700µm,0.6s						
ASQU				AML	AML		
	comp=N,65300µm,0.6s						
ASQU				AML	AML		
	comp=E,64700µm,0.6s						
ASQU				AML	AML		
	comp=N,65300µm,0.6s						
ASQU				AML	AML		
	comp=E,64700µm,0.6s						
ASQU				AML	AML		
	comp=N,65300µm,0.6s						
SFI	**Santa Sofia**	**1.31**	**98**	P	**Pn**	**10 34 20.4**	**-1.6**
SFI				AML	AML		
SFI				AML	AML		
	comp=N,91500µm,1.5s						
SFI				AML	AML		
SFI				AML	AML		
SFI				AML	AML		
SFI				AML	AML		
SFI				AML	AML		
SFI				AML	AML		
	comp=N,91500µm,1.5s						
SFI				AML	AML		
SFI				AML	AML		
SFI				AML	AML		
SFI				AML	AML		
	comp=N,91500µm,1.5s						
FERS	**Ferrara-Casagl**	**1.33**	**52**	AML	AML		
FERS				AML	AML		
FERS				AML	AML		
FERS				AML	AML		
FERS				AML	AML		
FERS				AML	AML		
CMPO	**Campotto Po**	**1.35**	**68**	AML	AML		
CMPO				AML	AML		
CMPO				AML	AML		
CMPO				AML	AML		
CMPO				AML	AML		
CMPO				AML	AML		
CELB	**S.Piero in Cam**	**1.35**	**175**	P	**Pg**	**10 34 22.4**	**-1.5**
CELB				AML	AML		
	comp=E,18500µm,0.7s						
CELB				AML	AML		
	comp=N,17900µm,0.6s						
CELB				AML	AML		
	comp=N,17900µm,0.6s						
CELB				AML	AML		
	comp=E,18500µm,0.7s						
CELB				AML	AML		
	comp=N,17900µm,0.6s						
CELB				AML	AML		
	comp=E,18500µm,0.7s						
RORO	**Rocca Rossa**	**1.43**	**271**	P	**Pb**	**10 34 23.4**	**-1.0**
ROTM	**Rocchetta Tana**	**1.43**	**302**	P	**Pg**	**10 34 25.2**	**-0.2**
ROTM				AML	AML		
ROTM				AML	AML		
ROTM				AML	AML		
ROTM				AML	AML		
ROTM				AML	AML		
ROTM				AML	AML		
CASP	**Castiglione de**	**1.43**	**155**	P	**Pg**	**10 34 23.4**	**-2.0**
CASP				AML	AML		
	comp=E,24750µm,1.2s						
CASP				AML	AML		
	comp=N,30150µm,1.0s						
CASP				AML	AML		
	comp=N,30150µm,1.0s						
CASP				AML	AML		
	comp=E,24750µm,1.2s						
CASP				AML	AML		
	comp=N,30150µm,1.0s						
CASP				AML	AML		
	comp=E,24750µm,1.2s						
OPPE	**Oppeano**	**1.45**	**33**	P	**Pg**	**10 34 24.2**	**-1.6**
OPPE				AML	AML		
OPPE				AML	AML		
OPPE				AML	AML		
OPPE				AML	AML		
OPPE				AML	AML		
OPPE				AML	AML		
CNCS	**Concesio**	**1.51**	**4**	P	**Pg**	**10 34 25.9**	**-1.0**
CNCS				AML	AML		
CNCS				AML	AML		
CNCS				AML	AML		
CNCS				AML	AML		
CNCS				AML	AML		
CNCS				AML	AML		
IMI	**Imperia**	**1.57**	**264**	P	**Pb**	**10 34 25.7**	**-1.2**
VOBA	**Vobarno**	**1.58**	**12**	P	**Pg**	**10 34 26.9**	**-1.3**
VOBA				AML	AML		
VOBA				AML	AML		
VOBA				AML	AML		
VOBA				AML	AML		
VOBA				AML	AML		
VOBA				AML	AML		
CAFI	**Castiglion Fio**	**1.58**	**118**	AML	AML		
	comp=E,35100µm,0.5s						
CAFI				AML	AML		
	comp=E,33800µm,0.5s						
CAFI				AML	AML		
	comp=N,32700µm,1.6s						
CAFI				AML	AML		
	comp=N,34500µm,1.6s						
CAFI				AML	AML		
	comp=E,33800µm,0.5s						
CAFI				AML	AML		
	comp=E,35100µm,0.5s						
CAFI				AML	AML		
	comp=N,34500µm,1.6s						
CAFI				AML	AML		
	comp=N,32700µm,1.6s						
CAFI				AML	AML		
	comp=E,33800µm,0.5s						
CAFI				AML	AML		
	comp=E,35100µm,0.5s						
CAFI				AML	AML		
	comp=N,34500µm,1.6s						
CAFI				AML	AML		
	comp=N,32700µm,1.6s						
SSP9	**Sansepolcro**	**1.59**	**108**	AML	AML		
	comp=E,51000µm,1.5s						
SSP9				AML	AML		
	comp=E,51000µm,1.5s						
SSP9				AML	AML		
	comp=N,66700µm,1.4s						
SSP9				AML	AML		
	comp=E,51000µm,1.5s						
SSP9				AML	AML		
	comp=N,66700µm,1.4s						
SSP9				AML	AML		
	comp=N,66700µm,1.4s						
GBOS	**Grotte di Boss**	**1.60**	**276**	P	**Pg**	**10 34 26.6**	**-2.0**
ZEN8	**San Zeno di Mo**	**1.61**	**17**	P	**Pb**	**10 34 26.7**	**-0.9**
ZEN8				AML	AML		
ZEN8				AML	AML		
ZEN8				AML	AML		
ZEN8				AML	AML		
ZEN8				AML	AML		
ZEN8				AML	AML		
ARCI	**Arcidosso**	**1.62**	**140**	*e*P	**Pb**	**10 34 26.3**	**-1.4**
ARCI				AML	AML		
	comp=E,20900µm,1.1s						
ARCI				AML	AML		
	comp=N,22250µm,1.4s						
ARCI				AML	AML		
	comp=E,20900µm,1.1s						
ARCI				AML	AML		
	comp=N,22250µm,1.4s						
ARCI				AML	AML		
	comp=E,20900µm,1.1s						
ARCI				AML	AML		
	comp=N,22250µm,1.4s						
MGRO	**Montegrosso**	**1.62**	**269**	P	**Pb**	**10 34 26.6**	**-1.1**
PARC	**Parchiule**	**1.64**	**105**	AML	AML		
	comp=N,52250µm,1.2s						
PARC				AML	AML		
	comp=E,49350µm,1.3s						
PARC				AML	AML		
	comp=N,52250µm,1.2s						
PARC				AML	AML		
	comp=E,49350µm,1.3s						
PARC				AML	AML		
	comp=E,49350µm,1.3s						
PARC				AML	AML		
	comp=N,52250µm,1.2s						
CPGN	**Carpegna, Ital**	**1.66**	**99**	AML	AML		
	comp=N,79100µm,1.1s						
CPGN				AML	AML		
	comp=E,59100µm,1.2s						
CPGN				AML	AML		
	comp=N,79100µm,1.1s						
CPGN				AML	AML		
	comp=E,68850µm,1.4s						
CPGN				AML	AML		
	comp=N,85550µm,1.4s						
CPGN				AML	AML		
	comp=N,85550µm,1.4s						
CPGN				AML	AML		
	comp=E,59100µm,1.2s						
CPGN				AML	AML		
	comp=E,68850µm,1.4s						
CPGN				AML	AML		
	comp=N,85550µm,1.4s						
CPGN				AML	AML		
	comp=E,59100µm,1.2s						
CPGN				AML	AML		
	comp=E,68850µm,1.4s						
CPGN				AML	AML		
	comp=N,79100µm,1.1s						
BALD	**Monte Baldo**	**1.68**	**19⇑**	*e*Pg	**Pb**	**10 34 27.5**	**-1.3**
BALD				*e*Sg	**Sg**	**10 34 51.4**	**-0.5**
ADRI	**Adria, Italy**	**1.69**	**55**	*e*Pg	**Pg**	**10 34 28.1**	**-2.2**
BADI	**Badiali**	**1.69**	**110**	AML	AML		
	comp=N,34550µm,0.6s						
BADI				AML	AML		
	comp=E,44050µm,1.5s						
BADI				AML	AML		
	comp=N,34550µm,0.6s						
BADI				AML	AML		
	comp=E,44050µm,1.5s						
BADI				AML	AML		
	comp=E,44050µm,1.5s						
BADI				AML	AML		
	comp=N,34550µm,0.6s						
CDCA	**Citt' di Caste**	**1.70**	**111**	AML	AML		
CDCA				AML	AML		
	comp=E,95050µm,0.7s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=E,63500µm,1.3s						
CDCA				AML	AML		
	comp=N,69300µm,1.6s						
CDCA				AML	AML		
	comp=E,95050µm,0.7s						
CDCA				AML	AML		
	comp=N,69300µm,1.6s						
CDCA				AML	AML		
	comp=E,63500µm,1.3s						
CDCA				AML	AML		
	comp=E,95050µm,0.7s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=N,69300µm,1.6s						
CDCA				AML	AML		
	comp=E,63500µm,1.3s						
TEOL	**Teolo**	**1.71**	**42**	*e*Pg	**Pb**	**10 34 27.6**	**-1.6**
TEOL				*e*Sg	**Sg**	**10 34 51.9**	**-1.0**
TEOL	**Teolo**	**1.71**	**42**	P	**Pn**	**10 34 27.1**	**-0.4**
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
NEGI	**Seborga**	**1.71**	**262**	*e*P	**Pb**	**10 34 27.6**	**-1.7**
MAGA	**Magasa**	**1.73**	**13**	*e*Pg	**Pb**	**10 34 27.9**	**-1.7**
MAGA				*e*Sg	**Sb**	**10 34 50.5**	**-0.8**
MAGA	**Magasa**	**1.73**	**13**	*e*P	**Pb**	**10 34 28.2**	**-1.4**
MAGA				AML	AML		
MAGA				AML	AML		
MAGA				AML	AML		
MAGA				AML	AML		
MAGA				AML	AML		
MAGA				AML	AML		
PGF	**Pioggiola**	**1.73**	**207**	*e*Pn	**Pb**	**10 34 28.3**	**-1.3**
PGF				*e*Sn	**Sb**	**10 34 50.4**	**-0.9**
	comp=E,5µm,0.6s						
BLLA	**Bellaria**	**1.74**	**88**	AML	AML		
BLLA				AML	AML		
BLLA				AML	AML		
BLLA				AML	AML		
BLLA				AML	AML		
BLLA				AML	AML		
BAG8	**Bagolino**	**1.75**	**9**	P	**Pb**	**10 34 28.2**	**-1.8**
BAG8				AML	AML		
BAG8				AML	AML		
	comp=N,70900µm,1.0s						
BAG8				AML	AML		
BAG8				AML	AML		
	comp=N,70900µm,1.0s						
BAG8				AML	AML		
BAG8				AML	AML		
	comp=N,70900µm,1.0s						
MCIV	**Monte Civitell**	**1.77**	**138**	AML	AML		
	comp=E,9765µm,0.7s						
MCIV				AML	AML		
	comp=N,11250µm,1.1s						
MCIV				AML	AML		
	comp=N,11250µm,1.1s						
MCIV				AML	AML		
	comp=E,9765µm,0.7s						
MCIV				AML	AML		
	comp=N,11250µm,1.1s						
MCIV				AML	AML		
	comp=E,9765µm,0.7s						
ATMI	**Monte Miggiano**	**1.78**	**115**	AML	AML		
ATMI				AML	AML		
	comp=E,73000µm,0.5s						
ATMI				AML	AML		
ATMI				AML	AML		
	comp=E,73000µm,0.5s						
ATMI				AML	AML		
ATMI				AML	AML		
	comp=E,73000µm,0.5s						
SAOF	**Saorge**	**1.81**	**267**	Pn	**Pb**	**10 34 29.5**	**-1.4**
SAOF				Sn	**Sb**	**10 34 53.3**	**-0.2**
MONC	**Moncucco Torin**	**1.81**	**303**	AML	AML		
	comp=E,60350µm,0.6s						
MONC				AML	AML		
	comp=E,60350µm,0.6s						

MONC				AML	AML		
	comp=N,51000µm,0.9s						
MONC				AML	AML		
	comp=E,60350µm,0.6s						
MONC				AML	AML		
	comp=N,51000µm,0.9s						
MONC				AML	AML		
	comp=N,51000µm,0.9s						
PE3	**Peglio**	**1.81**	**102**	AML	AML		
	comp=N,86100µm,0.8s						
PE3				AML	AML		
	comp=E,82850µm,1.5s						
PE3				AML	AML		
	comp=N,86100µm,0.8s						
PE3				AML	AML		
	comp=N,86100µm,0.8s						
PE3				AML	AML		
	comp=E,82850µm,1.5s						
PE3				AML	AML		
	comp=E,82850µm,1.5s						
ATPI	**Pietralunga -**	**1.82**	**110**	AML	AML		
	comp=N,31250µm,0.6s						
ATPI				AML	AML		
	comp=E,36700µm,0.7s						
ATPI				AML	AML		
	comp=N,31250µm,0.6s						
ATPI				AML	AML		
	comp=N,31250µm,0.6s						
ATPI				AML	AML		
	comp=E,36700µm,0.7s						
ATPI				AML	AML		
	comp=E,36700µm,0.7s						
SACS	**San Casciano d**	**1.84**	**132**	AML	AML		
	comp=N,12560µm,1.6s						
SACS				AML	AML		
	comp=E,12040µm,1.2s						
SACS				AML	AML		
	comp=N,12250µm,1.6s						
SACS				AML	AML		
	comp=E,12500µm,1.2s						
SACS				AML	AML		
	comp=N,12560µm,1.6s						
SACS				AML	AML		
	comp=E,12040µm,1.2s						
SACS				AML	AML		
	comp=E,12500µm,1.2s						
SACS				AML	AML		
	comp=N,12560µm,1.6s						
SACS				AML	AML		
	comp=N,12250µm,1.6s						
SACS				AML	AML		
	comp=E,12040µm,1.2s						
SACS				AML	AML		
	comp=E,12500µm,1.2s						
SACS				AML	AML		
	comp=N,12250µm,1.6s						
MAON	**Monte Argentar**	**1.84**	**154**	P	**Pn**	**10 34 29.0**	**-0.3**
MAON				AML	AML		
	comp=E,15600µm,0.7s						
MAON				AML	AML		
	comp=N,14800µm,0.8s						
MAON				AML	AML		
	comp=N,14800µm,0.8s						
MAON				AML	AML		
	comp=E,15600µm,0.7s						
MAON				AML	AML		
	comp=N,14800µm,0.8s						
MAON				AML	AML		
	comp=E,15600µm,0.7s						
ATVO	**AVT- Monte Val**	**1.85**	**112**	AML	AML		
	comp=E,35150µm,0.8s						
ATVO				AML	AML		
	comp=E,35150µm,0.8s						
ATVO				AML	AML		
	comp=N,41950µm,0.7s						
ATVO				AML	AML		
	comp=N,41950µm,0.7s						
ATVO				AML	AML		
	comp=E,35150µm,0.8s						
ATVO				AML	AML		
	comp=N,41950µm,0.7s						
PIEI	**Piela**	**1.88**	**106**	AML	AML		
	comp=E,21450µm,0.9s						
PIEI				AML	AML		
	comp=E,21450µm,0.9s						
PIEI				AML	AML		
	comp=N,18500µm,1.0s						
PIEI				AML	AML		
	comp=E,21450µm,0.9s						
PIEI				AML	AML		
	comp=N,18500µm,1.0s						
PIEI				AML	AML		
	comp=N,18500µm,1.0s						
ATTE	**AVT- Monte Tez**	**1.90**	**117**	AML	AML		
	comp=N,28650µm,0.5s						
ATTE				AML	AML		
	comp=E,31800µm,0.6s						
ATTE				AML	AML		
	comp=N,28650µm,0.5s						
ATTE				AML	AML		
	comp=N,28650µm,0.5s						
ATTE				AML	AML		
	comp=E,31800µm,0.6s						
ATTE				AML	AML		
	comp=E,31800µm,0.6s						
ENR	**Entracque**	**1.90**	**275**	P	**Pb**	**10 34 31.0**	**-1.5**
SBF	**Sospel**	**1.91**	**264**	*e*Pn	**Pb**	**10 34 30.7**	**-1.9**
SBF				*e*Sn	**Sn**	**10 34 53.4**	**-0.8**
	comp=E,20µm,0.6s						
RNI	**Roncone**	**1.93**	**12⇑**	*e*Pn	**Pn**	**10 34 30.7**	**0.0**
RNI				*e*Sn	**Sb**	**10 34 56.6**	**-0.5**
MON	**Monaco**	**1.94**	**260**	Pn	**Pb**	**10 34 31.6**	**-1.4**
MON				Sn	**Sg**	**10 34 57.9**	**-2.2**
ESCA	**l'Escarene**	**1.95**	**263**	Pn	**Pb**	**10 34 31.3**	**-2.1**
ESCA				Sn	**Sb**	**10 34 57.2**	**-0.6**
DOSS	**Dosso del Somm**	**1.96**	**24**	*e*Pn	**Pn**	**10 34 30.9**	**-0.2**
DOSS				*e*Sn	**Sg**	**10 34 58.8**	**-2.1**
MUGIO	**Muggio**	**1.96**	**339**	*e*P	**Pb**	**10 34 31.8**	**-1.8**
MUGIO				AML	AML		
	comp=E,30000µm,0.6s						
MUGIO				AML	AML		
	comp=N,23550µm,0.5s						
MUGIO				AML	AML		
	comp=N,23550µm,0.5s						
MUGIO				AML	AML		
	comp=E,30000µm,0.6s						
MUGIO				AML	AML		
	comp=N,23550µm,0.5s						
MUGIO				AML	AML		
	comp=E,30000µm,0.6s						
ATFO	**Monte Foce - G**	**1.96**	**111**	AML	AML		
	comp=N,27850µm,0.8s						
ATFO				AML	AML		
	comp=E,41300µm,0.8s						
ATFO				AML	AML		
	comp=N,27850µm,0.8s						
ATFO				AML	AML		
	comp=E,41300µm,0.8s						
ATFO				AML	AML		
	comp=E,41300µm,0.8s						
ATFO				AML	AML		
	comp=N,27850µm,0.8s						
MURB	**Monte Urbino**	**1.98**	**114**	AML	AML		
	comp=N,49100µm,0.4s						
MURB				AML	AML		
	comp=E,60650µm,1.2s						
MURB				AML	AML		
	comp=N,49100µm,0.4s						
MURB				AML	AML		
	comp=E,61350µm,1.2s						
MURB				AML	AML		
	comp=N,54100µm,0.4s						
MURB				AML	AML		
	comp=N,49100µm,0.4s						
MURB				AML	AML		
	comp=N,54100µm,0.4s						
MURB				AML	AML		
	comp=E,61350µm,1.2s						
MURB				AML	AML		
	comp=E,60650µm,1.2s						
MURB				AML	AML		
	comp=N,54100µm,0.4s						
MURB				AML	AML		
	comp=E,61350µm,1.2s						
MURB				AML	AML		
	comp=E,60650µm,1.2s						
MABI	**Malga Bissina**	**1.98**	**9⇑**	*e*Pn	**Pb**	**10 34 31.8**	**-2.3**
MABI				*e*Sn	**Sb**	**10 34 58.0**	**-0.8**
MABI	**Malga Bissina**	**1.98**	**9**	*e*P	**Pb**	**10 34 31.8**	**-2.3**
MABI				AML	AML		
	comp=E,55000µm,0.7s						
MABI				AML	AML		
	comp=N,38100µm,1.0s						
MABI				AML	AML		
	comp=E,55000µm,0.7s						
MABI				AML	AML		
	comp=N,38100µm,1.0s						
MABI				AML	AML		
	comp=E,55000µm,0.7s						
MABI				AML	AML		
	comp=N,38100µm,1.0s						
VARE	**Varese**	**1.99**	**333**	P	**Pb**	**10 34 33.1**	**-1.0**
VARE				AML	AML		
	comp=E,52000µm,0.6s						
VARE				AML	AML		
	comp=N,41250µm,0.6s						
VARE				AML	AML		
	comp=E,52000µm,0.6s						
VARE				AML	AML		
	comp=N,41250µm,0.6s						
VARE				AML	AML		
	comp=E,52000µm,0.6s						
VARE				AML	AML		
	comp=N,41250µm,0.6s						
FSSB	**Fossombrone**	**2.01**	**101**	AML	AML		
	comp=N,65850µm,0.5s						
FSSB				AML	AML		
	comp=E,40100µm,1.5s						
FSSB				AML	AML		
	comp=N,65850µm,0.5s						
FSSB				AML	AML		
	comp=E,40100µm,1.5s						
FSSB				AML	AML		
	comp=E,40100µm,1.5s						
FSSB				AML	AML		
	comp=N,65850µm,0.5s						
MPAG	**Monte Paganucc**	**2.01**	**102**	AML	AML		
	comp=N,31750µm,1.1s						
MPAG				AML	AML		
	comp=E,22250µm,1.1s						
MPAG				AML	AML		
	comp=N,30700µm,1.1s						
MPAG				AML	AML		
	comp=E,23150µm,1.1s						
MPAG				AML	AML		
	comp=N,31750µm,1.1s						
MPAG				AML	AML		
	comp=N,30700µm,1.1s						
MPAG				AML	AML		
	comp=E,23150µm,1.1s						
MPAG				AML	AML		
	comp=E,22250µm,1.1s						
MPAG				AML	AML		
	comp=N,30700µm,1.1s						
MPAG				AML	AML		
	comp=E,23150µm,1.1s						
MPAG				AML	AML		
	comp=E,22250µm,1.1s						
MPAG				AML	AML		
	comp=N,31750µm,1.1s						
PESA	**Pesaro**	**2.02**	**93**	AML	AML		
	comp=E,46650µm,1.3s						
PESA				AML	AML		
	comp=N,54600µm,1.2s						
PESA				AML	AML		
	comp=E,46650µm,1.3s						
PESA				AML	AML		
	comp=N,54600µm,1.2s						
PESA				AML	AML		
	comp=E,46650µm,1.3s						
PESA				AML	AML		
	comp=N,54600µm,1.2s						
DOI	**San Damiano**	**2.06**	**282**	P	**Pn**	**10 34 32.6**	**+0.3**
DOI				AML	AML		
	comp=E,22150µm,0.9s						
DOI				AML	AML		
	comp=N,22500µm,1.2s						
DOI				AML	AML		
	comp=E,22150µm,0.9s						
DOI				AML	AML		
	comp=N,22500µm,1.2s						
DOI				AML	AML		
	comp=E,22150µm,0.9s						
DOI				AML	AML		
	comp=N,22500µm,1.2s						
SMPL	**Sampolo**	**2.08**	**196**	Pn	**Pb**	**10 34 33.8**	**-1.7**
SMPL				Sg	**Sb**	**10 35 00.1**	**-1.2**
SMPL	**Sampolo**	**2.08**	**196**	P	**Pb**	**10 34 34.1**	**-1.5**
GAGG	**Gaggia**	**2.09**	**18⇑**	*e*Pn	**Pn**	**10 34 32.8**	**-0.1**
GAGG				*e*Sn	**Sb**	**10 35 01.0**	**-0.8**
FOSV	**Fossato di Vic**	**2.12**	**111**	AML	AML		
	comp=N,23350µm,0.8s						
FOSV				AML	AML		
	comp=E,23600µm,0.9s						
FOSV				AML	AML		
	comp=N,23350µm,0.8s						
FOSV				AML	AML		
	comp=E,23600µm,0.9s						
FOSV				AML	AML		
	comp=E,23600µm,0.9s						
FOSV				AML	AML		
	comp=N,23350µm,0.8s						
BHB	**Bricherasio**	**2.13**	**291**	P	**Pb**	**10 34 34.2**	**-2.2**
PZZ	**Stroppo**	**2.15**	**282**	P	**Pn**	**10 34 34.1**	**+0.5**
PZZ				AML	AML		
	comp=E,15300µm,0.6s						
PZZ				AML	AML		
	comp=N,23950µm,0.6s						
PZZ				AML	AML		
	comp=N,23950µm,0.6s						
PZZ				AML	AML		
	comp=E,15300µm,0.6s						
PZZ				AML	AML		
	comp=N,23950µm,0.6s						
PZZ				AML	AML		
	comp=E,15300µm,0.6s						
PANI	**Panarotta**	**2.15**	**24**	*e*Pn	**Pn**	**10 34 33.5**	**-0.2**
ISO	**Isola**	**2.16**	**273**	Pn	**Pb**	**10 34 35.0**	**-2.0**
ISO				Sn	**Sb**	**10 35 04.2**	**+0.4**
ASSB	**Assisi San Ben**	**2.17**	**118**	AML	AML		
	comp=E,18350µm,0.7s						
ASSB				AML	AML		
	comp=N,23750µm,1.6s						
ASSB				AML	AML		
	comp=N,23750µm,1.6s						
ASSB				AML	AML		
	comp=E,18350µm,0.7s						
ASSB				AML	AML		
	comp=N,23750µm,1.6s						
ASSB				AML	AML		
	comp=E,18350µm,0.7s						
TRAV	**Traversella**	**2.17**	**312**	P	**Pb**	**10 34 35.1**	**-2.0**
CGRP	**Cima Grappa**	**2.17**	**34**	*e*Pn	**Pn**	**10 34 34.0**	**0.0**
CGRP				*e*Sn	**Sb**	**10 35 03.1**	**-1.0**
CGRP	**Cima Grappa**	**2.17**	**34**	P	**Pn**	**10 34 34.2**	**+0.2**
CGRP				AML	AML		
CGRP				AML	AML		
CGRP				AML	AML		
CGRP				AML	AML		
CGRP				AML	AML		
CGRP				AML	AML		
ARVD	**Arcevia**	**2.17**	**105**	AML	AML		
	comp=E,26650µm,1.0s						
ARVD				AML	AML		
	comp=E,26650µm,1.0s						
ARVD				AML	AML		
	comp=N,26100µm,1.2s						
ARVD				AML	AML		
	comp=N,26100µm,1.2s						
ARVD				AML	AML		
	comp=E,26650µm,1.0s						
ARVD				AML	AML		
	comp=N,26100µm,1.2s						
COR1	**Corinaldo**	**2.18**	**101**	AML	AML		
	comp=E,82150µm,1.6s						
COR1				AML	AML		
	comp=E,82150µm,1.6s						
COR1				AML	AML		
	comp=N,78200µm,1.0s						
COR1				AML	AML		
	comp=E,46620µm,1.6s						
COR1				AML	AML		
	comp=N,78650µm,0.9s						
COR1				AML	AML		
	comp=N,78200µm,1.0s						
COR1				AML	AML		
	comp=E,46620µm,1.6s						
COR1				AML	AML		
	comp=N,78650µm,0.9s						
COR1				AML	AML		
	comp=E,82150µm,1.6s						
MOMA	**Monte Martano**	**2.24**	**124**	AML	AML		
	comp=N,18350µm,1.3s						
MOMA				AML	AML		
	comp=E,19750µm,0.6s						
MOMA				AML	AML		
	comp=N,18350µm,1.3s						
MOMA				AML	AML		
	comp=E,20750µm,0.6s						
MOMA				AML	AML		
	comp=N,18400µm,1.4s						
MOMA				AML	AML		
	comp=E,20750µm,0.6s						
MOMA				AML	AML		
	comp=E,19750µm,0.6s						
MOMA				AML	AML		
	comp=N,18400µm,1.4s						
MOMA				AML	AML		
	comp=E,20750µm,0.6s						
MOMA				AML	AML		
	comp=E,19750µm,0.6s						
MOMA				AML	AML		
	comp=N,18400µm,1.4s						
MOMA				AML	AML		
	comp=N,18350µm,1.3s						
MTLO	**Montello**	**2.25**	**39**	*e*Pn	**Pn**	**10 34 34.3**	**-0.5**
MTLO				*e*Sn	**Sn**	**10 35 03.4**	**+0.9**
RSP	**Reno Superiore**	**2.25**	**299**	P	**Pb**	**10 34 36.1**	**-2.5**
RSP				AML	AML		
	comp=E,10080µm,0.8s						
RSP				AML	AML		
	comp=N,11850µm,1.5s						
RSP				AML	AML		
	comp=E,10080µm,0.8s						
RSP				AML	AML		
	comp=N,11850µm,1.5s						
RSP				AML	AML		
	comp=E,10080µm,0.8s						
RSP				AML	AML		
	comp=N,11850µm,1.5s						
CTI	**Castel Tesino**	**2.25**	**30**	P	**Pn**	**10 34 34.9**	**-0.2**
SNTG	**Esanatoglia**	**2.26**	**111**	AML	AML		
	comp=N,20850µm,1.6s						
SNTG				AML	AML		
	comp=E,2330µm,1.5s						
SNTG				AML	AML		
	comp=N,2520µm,1.6s						
SNTG				AML	AML		
	comp=E,18050µm,1.5s						
SNTG				AML	AML		
	comp=N,20850µm,1.6s						
SNTG				AML	AML		
	comp=E,2330µm,1.5s						
SNTG				AML	AML		
	comp=N,2520µm,1.6s						
SNTG				AML	AML		
	comp=N,20850µm,1.6s						
SNTG				AML	AML		
	comp=E,18050µm,1.5s						
SNTG				AML	AML		
	comp=E,18050µm,1.5s						
SNTG				AML	AML		
	comp=N,2520µm,1.6s						
SNTG				AML	AML		
	comp=E,2330µm,1.5s						
IESO	**Jesolo**	**2.28**	**50**	*e*Pn	**Pn**	**10 34 35.2**	**0.0**
IESO				*e*Sn	**Sb**	**10 35 05.3**	**-1.7**
CALF	**Calern**	**2.29**	**262**	Pn	**Pb**	**10 34 36.3**	**-2.9**
CALF				Sn	**Sn**	**10 35 04.5**	**+0.8**
BERNI	**Berninapass**	**2.32**	**359**	*e*P	**Pb**	**10 34 37.2**	**-2.6**
BERNI				AML	AML		
	comp=E,25150µm,0.6s						
BERNI				AML	AML		
	comp=N,22150µm,0.8s						
BERNI				AML	AML		
	comp=N,22150µm,0.8s						
BERNI				AML	AML		
	comp=E,25150µm,0.6s						
BERNI				AML	AML		
	comp=N,22150µm,0.8s						
BERNI				AML	AML		
	comp=E,25150µm,0.6s						
SENI	**Senigallia**	**2.33**	**99**	AML	AML		
	comp=E,97600µm,0.8s						
SENI				AML	AML		
	comp=N,70550µm,1.5s						
SENI				AML	AML		
	comp=E,45900µm,0.9s						
SENI				AML	AML		
	comp=N,54900µm,1.0s						
SENI				AML	AML		
	comp=N,70550µm,1.5s						
SENI				AML	AML		
	comp=E,45900µm,0.9s						
SENI				AML	AML		
	comp=N,54900µm,1.0s						
SENI				AML	AML		
	comp=E,97600µm,0.8s						
SENI				AML	AML		
	comp=N,70550µm,1.5s						
SENI				AML	AML		
	comp=E,45900µm,0.9s						
SENI				AML	AML		
	comp=N,54900µm,1.0s						
SENI				AML	AML		
	comp=E,97600µm,0.8s						
EL6	**Elcito**	**2.34**	**108**	AML	AML		
	comp=E,33250µm,1.3s						
EL6				AML	AML		
	comp=E,33250µm,1.3s						
EL6				AML	AML		
	comp=N,39400µm,0.8s						
EL6				AML	AML		
	comp=N,39400µm,0.8s						
EL6				AML	AML		
	comp=E,33250µm,1.3s						
EL6				AML	AML		
	comp=N,39400µm,0.8s						
SURF	**Saint Ours**	**2.36**	**280**	Pn	**Pn**	**10 34 37.2**	**+0.6**
SATI	**Passo dei Sala**	**2.36**	**320**	*e*P	**Pb**	**10 34 38.3**	**-2.2**
CESX	**Cesi**	**2.37**	**128**	AML	AML		
	comp=E,20400µm,0.5s						
CESX				AML	AML		
	comp=E,20400µm,0.5s						
CESX				AML	AML		
	comp=N,16600µm,0.6s						
CESX				AML	AML		
	comp=N,16600µm,0.6s						
CESX				AML	AML		
	comp=N,16600µm,0.6s						
CESX				AML	AML		
	comp=E,20400µm,0.5s						
CING	**Cingoli**	**2.39**	**106**	AML	AML		
	comp=E,16850µm,0.8s						
CING				AML	AML		
	comp=E,16850µm,0.8s						
CING				AML	AML		
	comp=N,19100µm,1.0s						
CING				AML	AML		
	comp=N,19100µm,1.0s						
CING				AML	AML		
	comp=E,16850µm,0.8s						
CING				AML	AML		
	comp=N,19100µm,1.0s						
BRMO	**Bormio**	**2.39**	**5**	P	**Pb**	**10 34 38.2**	**-2.8**
BRMO				AML	AML		
	comp=E,18850µm,1.4s						
BRMO				AML	AML		
	comp=N,21100µm,1.6s						
BRMO				AML	AML		
	comp=E,18850µm,1.4s						
BRMO				AML	AML		
	comp=N,21100µm,1.6s						
BRMO				AML	AML		
	comp=E,18850µm,1.4s						
BRMO				AML	AML		
	comp=N,21100µm,1.6s						

TUE	**Stuetta**	**2.43 348**	*e*Pn	**Pb**	**10 34 39.3 -2.3**
TUE			*e*Sn	**Sn**	**10 35 02.4 -4.8**
TUE	**Stuetta**	**2.43 348**	AML	AML	
	comp=E,14850µm,0.5s				
TUE			AML	AML	
	comp=E,14850µm,0.5s				
TUE			AML	AML	
	comp=N,15380µm,0.8s				
TUE			AML	AML	
	comp=E,19700µm,0.5s				
TUE			AML	AML	
	comp=N,19100µm,0.8s				
TUE			AML	AML	
	comp=N,15380µm,0.8s				
TUE			AML	AML	
	comp=N,19100µm,0.8s				
TUE			AML	AML	
	comp=E,19700µm,0.5s				
TUE			AML	AML	
	comp=E,14850µm,0.5s				
TUE			AML	AML	
	comp=N,19100µm,0.8s				
TUE			AML	AML	
	comp=N,15380µm,0.8s				
TUE			AML	AML	
	comp=E,19700µm,0.5s				
MBDF	**Montbardon**	**2.44 286**	*e*P	**Pb**	**10 34 38.7 -3.0**
MBDF			*e*Sn	**Sn**	**10 35 05.7 -1.7**
MBDF			*e*Sg	**Sg**	**10 35 15.8 -0.3**
	comp=E,5µm,0.5s				
FDMO	**Fiordimonte**	**2.45 115**	AML	AML	
	comp=N,13850µm,1.4s				
FDMO			AML	AML	
	comp=E,13600µm,0.5s				
FDMO			AML	AML	
	comp=N,13850µm,1.4s				
FDMO			AML	AML	
	comp=E,13600µm,0.5s				
FDMO			AML	AML	
	comp=N,13850µm,1.4s				
FDMO			AML	AML	
	comp=E,13600µm,0.5s				
RRL	**Rocca Remolon**	**2.48 291**	P	**Pb**	**10 34 39.5 -2.9**
TOLF	**Tolfa**	**2.48 144**	AML	AML	
	comp=E,4220µm,1.3s				
TOLF			AML	AML	
	comp=E,4220µm,1.3s				
TOLF			AML	AML	
	comp=N,4090µm,0.9s				
TOLF			AML	AML	
	comp=N,4090µm,0.9s				
TOLF			AML	AML	
	comp=N,4090µm,0.9s				
TOLF			AML	AML	
	comp=E,4220µm,1.3s				
LSD	**Lago del Serru**	**2.49 304**	AML	AML	
	comp=E,8585µm,1.2s				
LSD			AML	AML	
	comp=N,7750µm,0.9s				
LSD			AML	AML	
	comp=N,7750µm,0.9s				
LSD			AML	AML	
	comp=E,8585µm,1.2s				
LSD			AML	AML	
	comp=N,7750µm,0.9s				
LSD			AML	AML	
	comp=E,8585µm,1.2s				
ARRO	**Arrone**	**2.49 127**	AML	AML	
	comp=N,10485µm,0.7s				
ARRO			AML	AML	
	comp=E,9760µm,1.1s				
ARRO			AML	AML	
	comp=N,10485µm,0.7s				
ARRO			AML	AML	
	comp=N,10485µm,0.7s				
ARRO			AML	AML	
	comp=E,9760µm,1.1s				
ARRO			AML	AML	
	comp=E,9760µm,1.1s				
CSP1	**Cessapalombo**	**2.50 113**	AML	AML	
	comp=N,28350µm,0.5s				
CSP1			AML	AML	
	comp=E,22500µm,1.0s				
CSP1			AML	AML	
	comp=E,22500µm,1.0s				
CSP1			AML	AML	
	comp=N,28350µm,0.5s				
CSP1			AML	AML	
	comp=E,22500µm,1.0s				
CSP1			AML	AML	
	comp=N,28350µm,0.5s				
FRF	**La Foret Royal**	**2.52 259**	*e*Pn	**Pn**	**10 34 39.2 +0.5**
FRF			*e*Sn	**Sn**	**10 35 08.4 -0.9**
	comp=N,4µm,0.5s				
FUORN	**Ofenpass-Fuorn**	**2.53 3**	*e*Pn	**Pb**	**10 34 41.4 -2.0**
KOSI	**Kohlern**	**2.54 21**	AML	AML	
	comp=N,96000µm,1.6s				
KOSI			AML	AML	
KOSI			AML	AML	
	comp=N,96000µm,1.6s				
KOSI			AML	AML	
KOSI			AML	AML	
	comp=N,96000µm,1.6s				
KOSI			AML	AML	
MOSI	**Grossmontoni**	**2.54 8**	P	**Pb**	**10 34 40.5 -3.0**
MOSI			AML	AML	
	comp=E,91650µm,1.1s				
MOSI			AML	AML	
MOSI			AML	AML	
MOSI			AML	AML	
	comp=E,91650µm,1.1s				
MOSI			AML	AML	
MOSI			AML	AML	
	comp=E,91650µm,1.1s				
OGAG	**Argentiere**	**2.55 279**	Pn	**Pb**	**10 34 41.8 -1.8**
NRCA	**Norcia**	**2.56 118**	AML	AML	
	comp=E,9850µm,1.6s				
NRCA			AML	AML	
	comp=E,9850µm,1.6s				
NRCA			AML	AML	
	comp=N,11000µm,1.5s				
NRCA			AML	AML	
	comp=E,10170µm,1.6s				
NRCA			AML	AML	
	comp=N,11345µm,1.5s				
NRCA			AML	AML	
	comp=N,11345µm,1.5s				
NRCA			AML	AML	
	comp=E,10170µm,1.6s				
NRCA			AML	AML	
	comp=N,11000µm,1.5s				
NRCA			AML	AML	
	comp=N,11345µm,1.5s				
NRCA			AML	AML	
	comp=E,10170µm,1.6s				
NRCA			AML	AML	
	comp=E,9850µm,1.6s				
NRCA			AML	AML	
	comp=N,11000µm,1.5s				
SRES	**S.Oreste - Sor**	**2.58 135**	AML	AML	
	comp=E,4290µm,0.8s				
SRES			AML	AML	
	comp=E,4290µm,0.8s				
SRES			AML	AML	
	comp=N,4385µm,1.0s				
SRES			AML	AML	
	comp=N,4385µm,1.0s				
SRES			AML	AML	
	comp=E,4290µm,0.8s				
SRES			AML	AML	
	comp=N,4385µm,1.0s				
POLC	**Polcenigo**	**2.59 41**	P	**Pn**	**10 34 39.8 +0.2**
POLC			AML	AML	
POLC			AML	AML	
POLC			AML	AML	
POLC			AML	AML	
POLC			AML	AML	
POLC			AML	AML	
BNI	**Bardonecchia**	**2.59 293**	*e*Pn	**Pb**	**10 34 43.3 -1.1**
BNI	**Bardonecchia**	**2.59 293**	*e*P	**Pb**	**10 34 43.3 -1.1**
AGOR	**Agordo**	**2.60 32**	AML	AML	
	comp=N,6640µm,1.4s				
AGOR			AML	AML	
	comp=E,3660µm,0.5s				
AGOR			AML	AML	
	comp=N,6640µm,1.4s				
AGOR			AML	AML	
	comp=E,3660µm,0.5s				
AGOR			AML	AML	
	comp=E,3660µm,0.5s				
AGOR			AML	AML	
	comp=N,6640µm,1.4s				
EMBD	**Embd, Matterta**	**2.64 324**	Pn	**Pb**	**10 34 42.4 -2.7**
LNSS	**Leonessa**	**2.64 123**	AML	AML	
	comp=E,19200µm,1.4s				
LNSS			AML	AML	
	comp=N,20550µm,0.5s				
LNSS			AML	AML	
	comp=N,20550µm,0.5s				
LNSS			AML	AML	
	comp=E,19200µm,1.4s				
LNSS			AML	AML	
	comp=N,20550µm,0.5s				
LNSS			AML	AML	
	comp=E,19200µm,1.4s				
LMR	**La Mourre**	**2.68 255**	*e*Pn	**Pn**	**10 34 41.1 +0.3**
LMR			*e*Sn	**Sn**	**10 35 12.2 -1.0**
	comp=E,958nm,0.3s				
DAVOX	**Davos/Dischmat**	**2.69 357**	Pn	**Pb**	**10 34 42.6 -3.4**
	comp=E,644nm,0.3s,baz=170,slow=9.0,SNR=1078				
DAVOX			Sn	**Sb**	**10 35 16.0 -3.0**
	comp=E,563nm,0.3s,baz=158,slow=19,SNR=10				
DAVOX			LR	LR	10 36 11.8
	comp=E,51µm,19.3s,baz=228,slow=50				
OGDI	**Digne**	**2.70 272**	Pn	**Pb**	**10 34 44.5 -1.7**
MRGE	**Morge**	**2.71 309**	AML	AML	
	comp=E,13775µm,0.8s				
MRGE			AML	AML	
	comp=E,13775µm,0.8s				
MRGE			AML	AML	
	comp=N,13400µm,0.7s				
MRGE			AML	AML	
	comp=E,13775µm,0.8s				
MRGE			AML	AML	
	comp=N,13400µm,0.7s				
MRGE			AML	AML	
	comp=N,13400µm,0.7s				
LPG	**La Plagne**	**2.74 302**	*e*P	**Pb**	**10 34 43.5 -3.4**
LPG			*e*Sn	**Sn**	**10 35 12.1 -2.9**
	comp=N,7µm,0.8s				
LPL	**La Plagne**	**2.76 302**	*e*P	**Pb**	**10 34 44.4 -2.8**
LPL			*e*Sn	**Sn**	**10 35 12.1 -3.3**
LPL			*e*Sg	**Sg**	**10 35 25.4 -1.1**
	comp=N,3µm,0.5s				
ABSI	**Aberstueckl**	**2.78 18**	AML	AML	
ABSI			AML	AML	
ABSI			AML	AML	
ABSI			AML	AML	
ABSI			AML	AML	
ABSI			AML	AML	
BRES	**Bressanone**	**2.86 24**	AML	AML	
	comp=E,61800µm,0.9s				
BRES			AML	AML	
	comp=E,61800µm,0.9s				
BRES			AML	AML	
	comp=N,99350µm,1.3s				
BRES			AML	AML	
	comp=N,99350µm,1.3s				
BRES			AML	AML	
	comp=E,61800µm,0.9s				
BRES			AML	AML	
	comp=N,99350µm,1.3s				
STAL	**STALIGIAL**	**2.87 40**	AML	AML	
	comp=E,73700µm,0.9s				
STAL			AML	AML	
	comp=E,52250µm,0.9s				
STAL			AML	AML	
	comp=N,57300µm,1.0s				
STAL			AML	AML	
	comp=E,73700µm,0.9s				
STAL			AML	AML	
	comp=N,72900µm,0.8s				
STAL			AML	AML	
	comp=N,57300µm,1.0s				
STAL			AML	AML	
	comp=N,72900µm,0.8s				
STAL			AML	AML	
	comp=E,52250µm,0.9s				
STAL			AML	AML	
	comp=E,73700µm,0.9s				
STAL			AML	AML	
	comp=N,57300µm,1.0s				
STAL			AML	AML	
	comp=N,72900µm,0.8s				
STAL			AML	AML	
	comp=E,52250µm,0.9s				
RSL	**Roselend**	**2.91 304**	Pn	**Pb**	**10 34 47.2 -2.6**
T0104	**Madonna delle**	**2.96 125**	AML	AML	
	comp=E,15200µm,0.6s				
T0104			AML	AML	
	comp=E,15200µm,0.6s				
T0104			AML	AML	
	comp=N,11710µm,1.0s				
T0104			AML	AML	
	comp=E,14500µm,0.6s				
T0104			AML	AML	
	comp=N,12050µm,0.5s				
T0104			AML	AML	
	comp=E,14500µm,0.6s				
T0104			AML	AML	
	comp=N,11710µm,1.0s				
T0104			AML	AML	
	comp=N,12050µm,0.5s				
T0104			AML	AML	
	comp=E,15200µm,0.6s				
T0104			AML	AML	
	comp=E,14500µm,0.6s				
T0104			AML	AML	
	comp=N,11710µm,1.0s				
T0104			AML	AML	
	comp=N,12050µm,0.5s				
FETA	**Feichten**	**2.96 9**	*e*Pn	**Pn**	**10 34 46.6 +1.7**
	comp=N,192nm,0.5s,SNR=263				
FETA			Pg	**Pg**	**10 34 55.2 +0.6**
	comp=N,1µm,1.0s				
TERO	**Teramo**	**2.98 118**	AML	AML	
	comp=N,12100µm,0.6s				
TERO			AML	AML	
	comp=E,9860µm,0.8s				
TERO			AML	AML	
	comp=E,4420µm,1.1s				
TERO			AML	AML	
	comp=N,5045µm,0.6s				
TERO			AML	AML	
	comp=E,9860µm,0.8s				
TERO			AML	AML	
	comp=N,12100µm,0.6s				
TERO			AML	AML	
	comp=E,4420µm,1.1s				
TERO			AML	AML	
	comp=N,5045µm,0.6s				
TERO			AML	AML	
	comp=E,9860µm,0.8s				
TERO			AML	AML	
	comp=N,12100µm,0.6s				
TERO			AML	AML	
	comp=E,4420µm,1.1s				
TERO			AML	AML	
	comp=N,5045µm,0.6s				
ROSI	**Rosskopf**	**2.99 18**	AML	AML	
	comp=E,83150µm,0.8s				
ROSI			AML	AML	
	comp=N,85100µm,0.7s				
ROSI			AML	AML	
	comp=N,85100µm,0.7s				
ROSI			AML	AML	
	comp=E,83150µm,0.8s				
ROSI			AML	AML	
	comp=N,85100µm,0.7s				
ROSI			AML	AML	
	comp=E,83150µm,0.8s				
SENIN	**Lac Senin/Sane**	**2.99 320**	*e*Pn	**Pb**	**10 34 47.9 -3.3**
RMP	**Rome, Mte Porz**	**3.00 139**	AML	AML	
	comp=N,5690µm,1.3s				
RMP			AML	AML	
	comp=E,5415µm,0.9s				
RMP			AML	AML	
	comp=N,5690µm,1.3s				
RMP			AML	AML	
	comp=E,5415µm,0.9s				
RMP			AML	AML	
	comp=E,5415µm,0.9s				
RMP			AML	AML	
	comp=N,5690µm,1.3s				
AQU	**L'Aquila**	**3.00 124**	*e*Pn	**Pb**	**10 34 47.8 -3.5**
AQU	**L'Aquila**	**3.00 124**	*e*P	**Pb**	**10 34 47.8 -3.5**
AQU	**L'Aquila**	**3.00 124**	*i*/Pn	**Pn**	**10 34 45.9 +0.6**
CERT	**Cerreto**	**3.04 134**	AML	AML	
	comp=E,5970µm,1.1s				
CERT			AML	AML	
	comp=E,5970µm,1.1s				
CERT			AML	AML	
	comp=N,4485µm,0.6s				
CERT			AML	AML	
	comp=N,4485µm,0.6s				
CERT			AML	AML	
	comp=E,5970µm,1.1s				
CERT			AML	AML	
	comp=N,4485µm,0.6s				
GEPF	**Gemona**	**3.08 44**	AML	AML	
	comp=N,46750µm,1.2s				
GEPF			AML	AML	
	comp=E,41150µm,0.8s				
GEPF			AML	AML	
	comp=E,41150µm,0.8s				
GEPF			AML	AML	
	comp=N,46750µm,1.2s				
GEPF			AML	AML	
	comp=E,41150µm,0.8s				
GEPF			AML	AML	
	comp=N,46750µm,1.2s				
ORIF	**Oris-en-Rattie**	**3.10 287**	*e*P	**Pb**	**10 34 49.1 -3.8**
ORIF			*e*Sn	**Sn**	**10 35 21.3 -2.3**
ORIF			*e*Sg	**Sg**	**10 35 36.4 -0.9**
	comp=N,6µm,0.8s				
LAV9	**Lanuvio**	**3.10 140**	AML	AML	
	comp=E,6930µm,1.6s				
LAV9			AML	AML	
	comp=E,6515µm,1.6s				
LAV9			AML	AML	
	comp=N,6860µm,1.5s				
LAV9			AML	AML	
	comp=N,7030µm,1.5s				
LAV9			AML	AML	
	comp=E,6930µm,1.6s				
LAV9			AML	AML	
	comp=E,6515µm,1.6s				
LAV9			AML	AML	
	comp=N,6860µm,1.5s				
LAV9			AML	AML	
	comp=N,7030µm,1.5s				
LAV9			AML	AML	
	comp=E,6930µm,1.6s				
LAV9			AML	AML	
	comp=E,6515µm,1.6s				
LAV9			AML	AML	
	comp=N,7030µm,1.5s				
LAV9			AML	AML	
	comp=N,6860µm,1.5s				
BAD	**Bernadia**	**3.11 45⇑**	*e*Pn	**Pn**	**10 34 46.0 -0.8**
ARTF	**Artigues**	**3.12 262**	Pn	**Pn**	**10 34 48.3 +1.5**
ASEAF	**Site Antares,**	**3.12 247**	Pn	**Pn**	**10 34 47.6 +1.1**
ASEAF			Sn	**Sn**	**10 35 25.8 +2.3**
SABO	**M.te Sabotino**	**3.14 52**	AML	AML	
	comp=E,69200µm,0.8s				
SABO			AML	AML	
	comp=E,69200µm,0.8s				
SABO			AML	AML	
	comp=N,72600µm,0.8s				
SABO			AML	AML	
	comp=N,72600µm,0.8s				
SABO			AML	AML	
	comp=N,72600µm,0.8s				
SABO			AML	AML	
	comp=E,69200µm,0.8s				
FVI	**Forni Avoltri**	**3.15 37**	AML	AML	
	comp=E,42850µm,1.4s				
FVI			AML	AML	
	comp=E,42850µm,1.4s				
FVI			AML	AML	
	comp=N,55500µm,1.0s				
FVI			AML	AML	
	comp=N,55500µm,1.0s				
FVI			AML	AML	
	comp=E,42850µm,1.4s				
FVI			AML	AML	
	comp=N,55500µm,1.0s				
FAGN	**Fagnano**	**3.16 124**	AML	AML	
	comp=N,19750µm,0.5s				
FAGN			AML	AML	
	comp=E,24750µm,0.7s				
FAGN			AML	AML	
	comp=N,19750µm,0.5s				
FAGN			AML	AML	
	comp=E,24750µm,0.7s				
FAGN			AML	AML	
	comp=N,19750µm,0.5s				
FAGN			AML	AML	
	comp=E,24750µm,0.7s				
ABTA	**Abfaltersbach**	**3.17 32**	*e*Pn	**Pn**	**10 34 48.3 +0.7**
	SNR=464				
ABTA			Sn	**Sn**	**10 35 26.9 +1.6**
	comp=E,13µm,1.0s				
ABTA			Sg	**Sg**	**10 35 43.1 +3.6**
	comp=E,11µm,0.7s				
SKDS	**Skadanscina**	**3.17 61**	*i* Pn	**Pn**	**10 34 46.3 -1.3**
SKDS			*e*Sn	**Sn**	**10 35 22.2 -3.1**
	comp=Z,10µm,0.7s				
RISI	**Rein**	**3.19 26**	AML	AML	
	comp=N,76700µm,0.5s				
RISI			AML	AML	
	comp=E,79550µm,1.4s				
RISI			AML	AML	
	comp=N,76700µm,0.5s				
RISI			AML	AML	
	comp=E,79550µm,1.4s				
RISI			AML	AML	
	comp=N,76700µm,0.5s				
RISI			AML	AML	
	comp=E,79550µm,1.4s				
DAVA	**Damuels**	**3.19 358**	*e*Pn	**Pn**	**10 34 50.1 +2.1**
	comp=E,22nm,0.3s,SNR=2502				
DAVA			Sn	**Sn**	**10 35 27.9 +1.8**
	comp=E,5µm,0.8s				
SQTA	**Sankt Quirin**	**3.23 14**	*i* Pn	**Pn**	**10 34 50.3 +1.9**
	comp=E,472nm,0.3s,SNR=1977				
SQTA			*e*Sn	**Sb**	**10 35 33.0 -1.4**
	comp=E,5µm,0.5s				
SMRF	**Simiane la Rot**	**3.23 269**	*e*P	**Pn**	**10 34 50.2 +1.8**
SMRF			*e*Sn	**Sn**	**10 35 25.3 -1.6**
	comp=E,2µm,0.5s				
VCEL	**Villa Celiera**	**3.25 120**	AML	AML	
	comp=N,11685µm,0.9s				
VCEL			AML	AML	
	comp=E,13800µm,0.7s				
VCEL			AML	AML	
	comp=N,11685µm,0.9s				
VCEL			AML	AML	
	comp=E,13800µm,0.7s				
VCEL			AML	AML	
	comp=N,11685µm,0.9s				
VCEL			AML	AML	
	comp=E,13800µm,0.7s				
PTCC	**Patocco-Chiusa**	**3.28 44**	AML	AML	
	comp=N,26950µm,0.8s				
PTCC			AML	AML	
	comp=E,40300µm,0.8s				
PTCC			AML	AML	
	comp=N,26950µm,0.8s				
PTCC			AML	AML	
	comp=E,40300µm,0.8s				
PTCC			AML	AML	
	comp=N,26950µm,0.8s				
PTCC			AML	AML	
	comp=E,40300µm,0.8s				
MOTA	**Moosalm**	**3.33 12**	*i* Pn	**Pn**	**10 34 52.1 +2.2**
	comp=E,7.5nm,0.2s,SNR=2229				
WTTA	**Wattenberg**	**3.36 19**	*i* Pn	**Pn**	**10 34 51.6 +1.4**
	comp=E,38nm,0.3s,SNR=855				
WTTA			*e*Sn	**Sb**	**10 35 35.9 -2.3**
	comp=E,21µm,0.9s				
WTTA	**Wattenberg**	**3.36 19**	AML	AML	
	comp=E,51850µm,0.7s				
WTTA			AML	AML	
	comp=N,37950µm,0.9s				
WTTA			AML	AML	
	comp=N,37950µm,0.9s				
WTTA			AML	AML	
	comp=E,51850µm,0.7s				
WTTA			AML	AML	
	comp=N,37950µm,0.9s				
WTTA			AML	AML	
	comp=E,51850µm,0.7s				

CADS	**Cadrg**	**3.37**	**49**	*i* Pn	**Pn**	**10 34 48.4**	**-1.9**
CADS				*i* Sn	**Sn**	**10 35 28.4**	**-1.8**
comp=Z,14µm,0.6s							
RIY	**Rijeka**	**3.39**	**67**	⇓*i* Pn	**Pn**	**10 34 49.7**	**-0.8**
OG02	**Monnetier-Morn**	**3.41**	**309**	Pn	**Pb**	**10 34 53.8**	**-4.3**
OG02				Sn	**Sn**	**10 35 33.8**	**+2.7**
WATA	**Walderalm**	**3.41**	**18**	*i* Pn	**Pn**	**10 34 52.8**	**+1.8**
comp=Z,23nm,0.2s,SNR=1285							
RETA	**Reutte**	**3.43**	**8**	*e*Pn	**Pn**	**10 34 53.0**	**+1.9**
comp=Z,466nm,0.5s,SNR=584							
RETA				Sn	**Sb**	**10 35 36.1**	**-4.0**
comp=Z,3µm,0.6s							
OGSM	**Saint Maurice**	**3.45**	**298**	Pn	**Pb**	**10 34 54.5**	**-4.3**
OGSM				Sn	**Sn**	**10 35 35.2**	**+3.0**
TORNY	**Torny/Romont**	**3.45**	**322**	Pn	**Pb**	**10 34 55.4**	**-3.6**
ACOM	**Acomizza, Ital**	**3.46**	**44**	AML	AML		
comp=E,89000µm,0.8s							
ACOM				AML	AML		
comp=N,53500µm,1.0s							
ACOM				AML	AML		
comp=E,89000µm,0.8s							
ACOM				AML	AML		
comp=N,53500µm,1.0s							
ACOM				AML	AML		
comp=E,89000µm,0.8s							
ACOM				AML	AML		
comp=N,53500µm,1.0s							
GIUL	**Giuliano Di Ro**	**3.46**	**136**	AML	AML		
comp=E,2360µm,1.6s							
GIUL				AML	AML		
comp=E,2360µm,1.6s							
GIUL				AML	AML		
comp=N,2205µm,0.9s							
GIUL				AML	AML		
comp=N,2205µm,0.9s							
GIUL				AML	AML		
comp=E,2360µm,1.6s							
GIUL				AML	AML		
comp=N,2205µm,0.9s							
ARBF	**Arbois**	**3.47**	**262**	Pn	**Pn**	**10 34 53.4**	**+1.7**
NVLJ	**Novalja**	**3.49**	**81**	*i* Pn	**Pn**	**10 34 52.8**	**+0.9**
NVLJ				Sn	**Sn**	**10 35 31.6**	**-1.5**
INTR	**Introdacqua**	**3.51**	**125**	AML	AML		
comp=E,33540µm,1.6s							
INTR				AML	AML		
comp=N,37100µm,1.4s							
INTR				AML	AML		
comp=E,9455µm,1.3s							
INTR				AML	AML		
comp=N,12050µm,0.9s							
INTR				AML	AML		
comp=N,37100µm,1.4s							
INTR				AML	AML		
comp=E,33540µm,1.6s							
INTR				AML	AML		
comp=E,9455µm,1.3s							
INTR				AML	AML		
comp=N,12050µm,0.9s							
INTR				AML	AML		
comp=N,37100µm,1.4s							
INTR				AML	AML		
comp=E,33540µm,1.6s							
INTR				AML	AML		
comp=E,9455µm,1.3s							
INTR				AML	AML		
comp=N,12050µm,0.9s							
CEY	**Cerknica**	**3.51**	**61**	⇓*i* Pn	**Pn**	**10 34 51.2**	**-1.1**
MYKA	**Terra Mystica**	**3.58**	**44**	*e*Pn	**Pn**	**10 34 53.4**	**+0.2**
comp=N,112nm,0.4s,SNR=143							
MYKA				Pg	**Pg**	**10 35 06.9**	**+0.5**
comp=N,834nm,0.5s							
MYKA				*e*Sn	**Sn**	**10 35 37.9**	**+2.4**
comp=N,2µm,0.5s							
POFI	**Posta Fibreno**	**3.59**	**130**	AML	AML		
comp=N,2950µm,1.5s							
POFI				AML	AML		
comp=E,4010µm,1.1s							
POFI				AML	AML		
comp=E,4100µm,1.1s							
POFI				AML	AML		
comp=N,2960µm,1.4s							
POFI				AML	AML		
comp=N,2960µm,1.4s							
POFI				AML	AML		
comp=E,4100µm,1.1s							
POFI				AML	AML		
comp=E,4010µm,1.1s							
POFI				AML	AML		
comp=N,2950µm,1.5s							
GIMEL	**St. Georges /**	**3.62**	**314**	Pn	**Pb**	**10 34 57.3**	**-4.4**
GIMEL				Sn	**Sn**	**10 35 39.5**	**+3.1**
LPEL	**Lama dei Pelig**	**3.65**	**123**	AML	AML		
comp=E,4825µm,1.3s							
LPEL				AML	AML		
comp=E,4825µm,1.3s							
LPEL				AML	AML		
comp=N,3755µm,1.1s							
LPEL				AML	AML		
comp=N,3755µm,1.1s							
LPEL				AML	AML		
comp=E,4825µm,1.3s							
LPEL				AML	AML		
comp=N,3755µm,1.1s							
LJU	**Ljubljana**	**3.72**	**57**	⇓*i* Pn	**Pn**	**10 34 54.6**	**-0.5**
LJU	**Ljubljana**	**3.72**	**57**	AML	AML		
comp=E,60150µm,1.0s							
LJU				AML	AML		
comp=E,60150µm,1.0s							
LJU				AML	AML		
comp=N,87700µm,0.5s							
LJU				AML	AML		
comp=N,87700µm,0.5s							
LJU				AML	AML		
comp=E,60150µm,1.0s							
LJU				AML	AML		
comp=N,87700µm,0.5s							
OG35	**Corcelles**	**3.73**	**303**	Pn	**Pn**	**10 34 57.6**	**+2.4**
CABF	**La Chapelle**	**3.76**	**313**	*e*P	**Pn**	**10 34 58.1**	**+2.4**
CABF				*e*Sn	**Sn**	**10 35 36.6**	**-3.4**
comp=N,8µm,1.1s							
KBA	**Koelnbreinsper**	**3.77**	**37**	*i* Pn	**Pn**	**10 34 56.8**	**+0.8**
comp=N,19nm,0.3s,SNR=613							
KBA				Pg	**Pg**	**10 35 12.3**	**+2.2**
comp=N,1µm,0.7s							
KBA				Sn	**Sn**	**10 35 42.2**	**+1.8**
comp=N,3µm,0.6s							
KBA				Sg	**Sg**	**10 35 59.7**	**+0.8**
comp=N,6µm,0.6s							
CERA	**Filignano**	**3.84**	**129**	AML	AML		
comp=E,4464µm,1.6s							
CERA				AML	AML		
comp=E,4464µm,1.6s							
CERA				AML	AML		
comp=N,4755µm,1.6s							
CERA				AML	AML		
comp=E,4645µm,1.6s							
CERA				AML	AML		
comp=N,4965µm,1.6s							
CERA				AML	AML		
comp=N,4755µm,1.6s							
CERA				AML	AML		
comp=N,4965µm,1.6s							
CERA				AML	AML		
comp=E,4645µm,1.6s							
CERA				AML	AML		
comp=E,4464µm,1.6s							
CERA				AML	AML		
comp=N,4965µm,1.6s							
CERA				AML	AML		
comp=N,4755µm,1.6s							
CERA				AML	AML		
comp=E,4645µm,1.6s							
VIVF	**Saint-Julien-I**	**3.93**	**283**	*e*P	**Pn**	**10 34 59.5**	**+1.5**
VIVF				*e*Sn	**Sn**	**10 35 41.1**	**-2.9**
comp=E,575nm,0.8s							
BOJS	**Bojanci**	**3.96**	**67**	AML	AML		
comp=N,12850µm,1.2s							
BOJS				AML	AML		
comp=E,8895µm,1.2s							
BOJS				AML	AML		
comp=E,8895µm,1.2s							
BOJS				AML	AML		
comp=E,8895µm,1.2s							
BOJS				AML	AML		
comp=N,12850µm,1.2s							
BOJS				AML	AML		
comp=E,8895µm,1.2s							
BOJS				AML	AML		
comp=E,8895µm,1.2s							
BOJS				AML	AML		
comp=N,12850µm,1.2s							
OBKA	**Obir**	**3.98**	**51**	*i* Pn	**Pn**	**10 34 58.4**	**-0.4**
comp=N,125nm,0.3s,SNR=456							
OBKA				*e*Sn	**Sn**	**10 35 48.5**	**+3.0**
comp=N,5µm,0.7s							
OBKA				Sg	**Sg**	**10 36 07.9**	**+2.2**
comp=N,7µm,0.7s							
VAGA	**Valle Agricola**	**4.08**	**130**	P	**Pn**	**10 35 02.5**	**+2.3**
SSB	**Saint Sauveur**	**4.11**	**289**	*e*Pn	**Pn**	**10 35 02.1**	**+1.7**
SSB				*e*Sn	**Sn**	**10 35 45.6**	**-2.8**
SSB	**Saint Sauveur**	**4.11**	**289**	*e*P	**Pn**	**10 35 02.1**	**+1.7**
SSB				*e*		10 35 45.6	
UDBI	**Udbina**	**4.12**	**82**	*e*Pn	**Pn**	**10 35 02.7**	**+2.0**
UDBI				Sn	**Sn**	**10 35 49.2**	**+0.4**
OZLJ	**Ozalj**	**4.14**	**67**	*e*Pn	**Pn**	**10 35 02.0**	**+1.2**
BSSO	**Busso**	**4.20**	**126**	P	Pb	10 35 05.5	-6.2
CRES	**Cresnjev**	**4.21**	**64**	⇓*i* Pn	**Pn**	**10 35 01.3**	**-0.5**
HINF	**Hinteralfeld**	**4.34**	**330**	*e*P	**Pn**	**10 35 04.7**	**+1.1**
HINF				*e*Sn	**Sn**	**10 35 49.4**	**-4.7**
comp=N,4µm,0.6s							
SOKA	**Soboth**	**4.35**	**52**	*i* Pn	**Pn**	**10 35 03.7**	**-0.2**
comp=N,233nm,0.4s,SNR=1551							
SOKA				*e*Sn	**Sn**	**10 35 54.8**	**+0.2**
comp=N,3µm,0.8s							
BFO	**Black Forest**	**4.40**	**345**	*e*Pn	**Pn**	**10 35 05.5**	**+1.0**
BFO				*e*Sn	**Sn**	**10 35 47.3**	**-8.3**
BFO	**Black Forest**	**4.40**	**345**	*i* P	**Pn**	**10 35 05.2**	**+0.7**
MELA	**Melanico ??? S**	**4.43**	**121**	P	**Pn**	**10 35 06.5**	**+1.7**
MELA				AML	AML		
comp=E,5325µm,0.8s							
MELA				AML	AML		
comp=N,5090µm,1.4s							
MELA				AML	AML		
comp=E,5460µm,0.8s							
MELA				AML	AML		
comp=N,5355µm,1.4s							
MELA				AML	AML		
comp=E,5460µm,0.8s							
MELA				AML	AML		
comp=E,5325µm,0.8s							
MELA				AML	AML		
comp=N,5355µm,1.4s							
MELA				AML	AML		
comp=N,5090µm,1.4s							
MELA				AML	AML		
comp=E,5460µm,0.8s							
MELA				AML	AML		
comp=E,5325µm,0.8s							
MELA				AML	AML		
comp=N,5355µm,1.4s							
MELA				AML	AML		
comp=N,5090µm,1.4s							
LASF	**Ste Croix**	**4.46**	**272**	*e*P	**Pn**	**10 35 06.3**	**+0.9**
LASF				*e*Sn	**Sn**	**10 35 54.6**	**-2.6**
comp=N,367nm,0.5s							
LASF				*e*Sg	**Sg**	**10 36 19.9**	**-1.3**
comp=N,2µm,1.1s							
ECH	**Echery**	**4.58**	**335**	*e*Pn	**Pn**	**10 35 08.2**	**+1.2**
ECH				*e*Sn	**Sn**	**10 35 57.4**	**-2.8**
ECH	**Echery**	**4.58**	**335**	*e*P	**Pn**	**10 35 08.2**	**+1.2**
ECH				*e*		10 35 57.4	
VSL	**Villasalto**	**4.62**	**187**	P	**Pn**	**10 35 09.3**	**+1.7**
HAU	**Haudompre**	**4.68**	**328**	*e*P	**Pn**	**10 35 09.8**	**+1.4**
HAU				*e*Sn	**Sn**	**10 35 58.0**	**-4.6**
comp=N,3µm,0.4s							
STU	**Stuttgart**	**4.71**	**353**	*e*Pn	**Pn**	**10 35 09.5**	**+0.7**
STU	**Stuttgart**	**4.71**	**353**	*e*P	**Pn**	**10 35 09.5**	**+0.7**
CDF	**Champ du Feu**	**4.73**	**337**	*e*P	**Pn**	**10 35 09.6**	**+0.6**
CDF				*e*Sn	**Sn**	**10 35 58.2**	**-5.6**
comp=N,2µm,0.4s							
CGL	**Cagliari Serpe**	**4.76**	**187**	P	**Pn**	**10 35 11.6**	**+2.1**
MOA	**Molln**	**4.76**	**37**	*e*Pn	**Pn**	**10 35 09.9**	**+0.4**
comp=N,672nm,0.5s,SNR=673							
MOA				*e*Sn	**Sn**	**10 36 06.1**	**+1.4**
comp=N,2µm,0.6s							
SGRT	**San Giovanni R**	**4.79**	**117**	P	**Pn**	**10 35 09.7**	**-0.2**
MSAG	**Monte S. Angel**	**4.92**	**117**	P	**Pn**	**10 35 12.3**	**+0.6**
SNAL	**S. Angelo Dei**	**4.96**	**128**	P	**Pn**	**10 35 15.6**	**+3.5**
ARSA	**Arzberg**	**4.96**	**49**	*e*Pn	**Pn**	**10 35 12.0**	**-0.2**
comp=N,660nm,0.4s,SNR=651							
ARSA				Sn	**Sn**	**10 36 07.0**	**-2.5**
comp=N,926nm,0.6s							
ARSA				Sg	**Sg**	**10 36 41.5**	**+4.3**
comp=N,1µm,0.8s							
ARSA	**Arzberg**	**4.96**	**49**	P	**Pn**	**10 35 11.1**	**-1.1**
KOGS	**Kog**	**4.96**	**60**	P	**Pn**	**10 35 12.8**	**+0.6**
LBL	**Lubilhac**	**4.99**	**286**	Pn	**Pn**	**10 35 14.4**	**+1.8**
MCRV	**Calabrutti - M**	**5.03**	**129**	P	**Pn**	**10 35 16.3**	**+3.1**
MGRS	**Mrkonjic Grad**	**5.06**	**84**	⇑*i* Pn	**Pn**	**10 35 15.8**	**+2.3**
SMF	**Signal de Mont**	**5.07**	**302**	*e*P	**Pn**	**10 35 15.0**	**+1.4**
SMF				*e*Sn	**Sn**	**10 36 07.7**	**-4.3**
comp=N,2µm,0.4s							
BLY	**Banja Luka**	**5.15**	**80**	*e*Pn	**Pn**	**10 35 15.3**	**+0.6**
BLY	**Banja Luka**	**5.15**	**80**	⇓*i* Pn	**Pn**	**10 35 15.0**	**+0.3**
BLY	**Banja Luka**	**5.15**	**80**	P	**Pn**	**10 35 16.2**	**+1.5**
BLY				AML	AML		
comp=E,9540µm,0.8s							
BLY				AML	AML		
comp=N,7280µm,1.5s							
BLY				AML	AML		
comp=E,9265µm,0.8s							
BLY				AML	AML		
comp=N,7110µm,1.5s							
BLY				AML	AML		
comp=E,9265µm,0.8s							
BLY				AML	AML		
comp=E,9540µm,0.8s							
BLY				AML	AML		
comp=N,7280µm,1.5s							
BLY				AML	AML		
comp=N,7110µm,1.5s							
BLY				AML	AML		
comp=E,9265µm,0.8s							
BLY				AML	AML		
comp=E,9540µm,0.8s							
BLY				AML	AML		
comp=N,7280µm,1.5s							
BLY				AML	AML		
comp=N,7110µm,1.5s							
VULT	**Monte Vulture**	**5.17**	**125**	P	Pb	10 35 21.2	-7.1
PYM	**Petit Puy Mans**	**5.27**	**291**	Pn	**Pn**	**10 35 18.2**	**+1.7**
AGO	**Saint Agoulin**	**5.28**	**294**	Pn	**Pn**	**10 35 18.4**	**+1.8**
BEHE	**Becsehely**	**5.30**	**61**	⇓*i* Pn	**Pn**	**10 35 15.7**	**-1.2**
BEHE	**Becsehely**	**5.30**	**61**	EPn	**Pn**	**10 35 20.1**	**+3.2**
BEHE				EPg		10 35 37.0	
BEHE				Sn	**Sn**	**10 36 18.0**	**+0.2**
PAGF	**Fort de Pagny**	**5.37**	**328**	*e*Sn	**Sn**	**10 36 13.8**	**-5.8**
comp=N,4µm,0.7s							
LOR	**Lormes**	**5.38**	**308**	*e*P	**Pn**	**10 35 19.6**	**+1.7**
LOR				*e*Sn	**Sn**	**10 36 15.0**	**-4.7**
comp=N,2µm,0.6s							
GEC2	**GERESS Array S**	**5.38**	**27**	*e*Pn	**Pn**	**10 35 17.7**	**-0.2**
GEC2				*e*Sn	**Sn**	**10 36 16.5**	**-3.3**
GEC2	**GERESS Array S**	**5.38**	**27**	*e*P	**Pn**	**10 35 17.7**	**-0.2**
GEC2				*e*		10 36 16.5	
GERES	**GERESS Array B**	**5.38**	**27**	Pn	**Pn**	**10 35 17.5**	**-0.4**
comp=N,98nm,0.3s,baz=196,slow=14,SNR=392							
GERES				Sn	**Sn**	**10 36 18.0**	**-1.8**
comp=N,192nm,0.3s,baz=205,slow=21,SNR=11							
GERES				Lg	Lg	10 36 43.5	
comp=N,72nm,0.3s,baz=215,slow=25,SNR=6.0							
SFTF	**Sexfontaines**	**5.39**	**321**	*e*Sn	**Sn**	**10 36 14.8**	**-5.1**
comp=N,6µm,1.2s							
AVF	**Avril sur Loir**	**5.43**	**302**	*e*P	**Pn**	**10 35 20.0**	**+1.4**
AVF				*e*Sn	**Sn**	**10 36 16.7**	**-4.3**
comp=N,1µm,0.8s							
SSF	**Saint Saulge**	**5.47**	**305**	*e*P	**Pn**	**10 35 21.4**	**+2.3**
SSF				*e*Sn	**Sn**	**10 36 17.4**	**-4.5**
comp=N,914nm,0.7s							
SJAF	**Saint Jean de**	**5.48**	**255**	Pn	**Pn**	**10 35 19.6**	**+0.3**
CONA	**Conrad Observa**	**5.57**	**45**	*e*Pn	**Pn**	**10 35 20.6**	**0.0**
comp=N,669nm,0.5s,SNR=995							
CONA				Sn	**Sn**	**10 36 25.9**	**+1.3**
comp=N,852nm,0.6s							
KHC	**Kasperske Hory**	**5.59**	**24**	*e*Pn	**Pn**	**10 35 20.8**	**0.0**
KHC				*e*Sn	**Sn**	**10 36 21.2**	**-3.8**
KHC	**Kasperske Hory**	**5.59**	**24**	*e*P	**Pn**	**10 35 20.8**	**0.0**
KHC				*e*		10 36 21.2	
KHC	**Kasperske Hory**	**5.59**	**24**	*e*PN	**Pn**	**10 35 20.3**	**-0.5**
KHC				*e*SN	**Sn**	**10 36 23.7**	**-1.3**
KHC				AMS	AMS	10 37 40.0	
comp=N,23µm,12.2s							
MEZF	**Maizieres J'vi**	**5.61**	**324**	*e*P	**Pn**	**10 35 23.2**	**+2.2**
baz=142							
MEZF				*e*Sn	**Sn**	**10 36 19.8**	**-5.5**
comp=N,3µm,0.9s							
BGF	**Bois d'Agland**	**5.65**	**298**	*e*P	**Pn**	**10 35 23.4**	**+1.8**
BGF				*e*Sn	**Sn**	**10 36 21.9**	**-4.4**
comp=N,2µm,0.5s							
GRFO	**Grafenberg**	**5.65**	**8**	*e*Pn	**Pn**	**10 35 21.8**	**+0.1**
GRFO	**Grafenberg**	**5.65**	**8**	*e*P	**Pn**	**10 35 21.8**	**+0.1**
GRA1	**Grafenberg Arr**	**5.65**	**8**	*e*Pn	**Pn**	**10 35 21.7**	**0.0**
GRA1				*e*Sn	**Sn**	**10 36 29.5**	**+3.0**
GRF	**Grafenberg Arr**	**5.65**	**8**	*e*P	**Pn**	**10 35 21.7**	**0.0**
GRF				*e*		10 36 29.5	
STON	**Ston**	**5.70**	**100**	*e*Pn	**Pn**	**10 35 22.4**	**+0.2**
STON				Sn	**Sn**	**10 36 26.1**	**-1.4**
STON	**Ston**	**5.70**	**100**	*e*Pn	**Pn**	**10 35 21.5**	**-0.7**
STON	**Ston**	**5.70**	**100**	P	**Pn**	**10 35 21.9**	**-0.3**
MTSN	**Montesano sull**	**5.71**	**130**	P	**Pn**	**10 35 25.6**	**+3.2**
MTLF	**Montolieu**	**5.73**	**265**	*e*P	**Pn**	**10 35 23.9**	**+1.2**
MTLF				*e*Sn	**Sn**	**10 36 25.8**	**-2.6**
comp=N,770nm,0.8s							
MTLF				*e*Sg	**Sg**	**10 36 59.2**	**-2.5**
CAF	**Calviac**	**5.77**	**281**	*e*P	**Pn**	**10 35 25.2**	**+1.8**
CAF				*e*Sn	**Sn**	**10 36 25.4**	**-4.1**
comp=N,550nm,0.8s							
SOP	**Sopron**	**5.79**	**49**	EPn	**Pn**	**10 35 23.0**	**-0.4**
SOP				Sn	**Sn**	**10 36 28.1**	**-1.6**
AMUR	**Altamura**	**5.80**	**121**	P	**Pn**	**10 35 24.9**	**+1.2**
BAI	**Bari**	**5.86**	**118**	*e*Pn	**Pn**	**10 35 25.7**	**+1.3**
BAI				Sn	**Sn**	**10 36 31.5**	**+0.1**
CUC	**Castrocucco**	**5.93**	**132**	P	**Pn**	**10 35 28.8**	**+3.3**
TCF	**Toulx Ste Croi**	**5.96**	**294**	*e*P	**Pn**	**10 35 28.0**	**+2.1**
TCF				*e*Sn	**Sn**	**10 36 30.3**	**-3.8**
comp=N,531nm,0.6s							
MATE	**Matera**	**6.01**	**123**	⇑*i* P	**Pn**	**10 35 28.1**	**+1.6**
MATE	**Matera**	**6.01**	**123**	S	**Sn**	**10 36 35.9**	**+0.7**
HYF	**Humbligny**	**6.09**	**304**	*e*P	**Pn**	**10 35 30.6**	**+3.0**
HYF				*e*Sn	**Sn**	**10 36 32.6**	**-4.5**
NOCI	**Noci**	**6.15**	**120**	P	**Pn**	**10 35 29.5**	**+1.0**
WLF	**Walferdange**	**6.18**	**336**	*e*Pn	**Pn**	**10 35 31.3**	**+2.5**
WLF	**Walferdange**	**6.18**	**336**	*e*P	**Pn**	**10 35 31.3**	**+2.5**
WLF	**Walferdange**	**6.18**	**336**	Pn	**Pn**	**10 35 29.8**	**+0.9**
TIH	**Tihany**	**6.18**	**60**	EPn	Pn	10 35 34.0	+5.1
TIH				Sn	**Sn**	**10 36 40.0**	**+0.6**
TREB	**Trebinje**	**6.20**	**100**	*e*Pn	**Pn**	**10 35 30.5**	**+1.3**
RJF	**Les Rejaudoux**	**6.20**	**284**	*e*P	**Pn**	**10 35 32.1**	**+2.9**
RJF				*e*Sn	**Sn**	**10 36 35.5**	**-4.6**
comp=N,629nm,0.9s							
BRY	**Bratogost**	**6.29**	**98**	⇓*i* Pn	**Pn**	**10 35 31.2**	**+0.7**
BRY				*e*Sn	**Sn**	**10 36 40.8**	**-1.5**
MASS	**Massafra**	**6.29**	**121**	*e*Pn	**Pn**	**10 35 32.1**	**+1.7**
FASA	**Fasano**	**6.32**	**119**	*e*Pn	**Pn**	**10 35 31.2**	**+0.4**
FASA				Sn	**Sn**	**10 36 44.3**	**+1.5**
MONQ	**Montcuq**	**6.37**	**276**	Pn	**Pn**	**10 35 32.2**	**+0.7**
HCY	**Herceg Novi**	**6.38**	**102**	⇑*i* Pn	**Pn**	**10 35 32.4**	**+0.8**
HCY				*e*Sn	**Sn**	**10 36 43.1**	**-1.2**
ZST	**Bratislava**	**6.38**	**48**	*e*P	**Pn**	**10 35 31.0**	**-0.7**
ZST				*e*		10 36 39.6	
ZST	**Bratislava**	**6.38**	**48**	*e*PN	**Pn**	**10 35 31.0**	**-0.7**
ZST				*e*PG	**Pg**	**10 36 02.3**	**+2.2**
ZST				*e*SN	**Sn**	**10 36 39.6**	**-4.9**
ZST				*e*SG	**Sg**	**10 37 18.6**	**-4.1**
HAPS	**Han Pijesak,BI**	**6.41**	**87**	*e*Pn	**Pn**	**10 35 32.2**	**+0.1**
MORH	**Mrgy, Hungar**	**6.43**	**68**	⇓*i* Pn	**Pn**	**10 35 30.3**	**-2.0**
MORH	**Mrgy, Hungar**	**6.43**	**68**	EPn	**Pn**	**10 35 33.0**	**+0.7**
MORH				Sn	**Sn**	**10 36 43.0**	**-2.6**
TAR1	**Taranto**	**6.44**	**121**	*e*Pn	Pn	10 35 36.8	+4.4
CGL1	**Ceglie Messapi**	**6.48**	**119**	*e*Pn	**Pn**	**10 35 34.4**	**+1.3**
UPM	**Unac-Piva**	**6.48**	**95**	⇓*i* Pn	**Pn**	**10 35 34.3**	**+1.1**
UPM				*e*Sn	**Sn**	**10 36 44.9**	**-2.3**
LKLB	**Kalborn**	**6.58**	**337**	Pn	**Pn**	**10 35 35.7**	**+1.3**
MODS	**Modra-Piesok**	**6.59**	**47**	*e*P	**Pn**	**10 35 33.3**	**-1.2**
MODS				*e*		10 36 44.8	
MODS				MLR	MLR		
comp=Z,4µm,1.4s							
MODS	**Modra-Piesok**	**6.59**	**47**	*e*PN	**Pn**	**10 35 33.3**	**-1.2**
MODS				*e*SN	**Sn**	**10 36 44.8**	**-4.7**
MODS				*e*SG	**Sg**	**10 37 33.2**	**+4.1**
MODS				*e*LG	Lg	10 37 48.2	
CSKK	**Cskako**	**6.61**	**58**	EPn	**Pn**	**10 35 34.0**	**-0.7**
CSKK				Sn	**Sn**	**10 36 48.1**	**-1.9**
MLS	**Moulis**	**6.61**	**263**	Pn	**Pn**	**10 35 36.3**	**+1.5**
KRUC	**Moravsky**	**6.61**	**39**	*e*PN	**Pn**	**10 35 33.8**	**-1.0**
KRUC				*e*SN	**Sn**	**10 36 46.0**	**-4.1**
NKME	**Niksic**	**6.61**	**99**	⇑*i* Pn	**Pn**	**10 35 35.3**	**+0.4**
NKME				*e*Sn	**Sn**	**10 36 48.6**	**-1.6**
NKY	**Niksic**	**6.63**	**98**	⇓*i* Pn	**Pn**	**10 35 36.2**	**+1.0**
NKY				*e*Sn	**Sn**	**10 36 49.3**	**-1.4**
PRU	**Pruhonice**	**6.64**	**26**	*e*P	**Pn**	**10 35 34.8**	**-0.4**
PRU				MLR	MLR		
comp=Z,20µm,14.8s							
PRU	**Pruhonice**	**6.64**	**26**	*e*PN	**Pn**	**10 35 34.8**	**-0.4**
PRU				AMS	AMS	10 38 10.0	
comp=Z,20µm,14.8s							
CEME	**Cevo**	**6.65**	**100**	⇓*i* Pn	**Pn**	**10 35 36.1**	**+0.7**
CEME				*e*Sn	**Sn**	**10 36 49.6**	**-1.5**
GOPC	**GO Pecny, Ondr**	**6.66**	**27**	*e*P	**Pn**	**10 35 35.0**	**-0.5**
GOPC	**GO Pecny, Ondr**	**6.66**	**27**	*e*PN	**Pn**	**10 35 35.0**	**-0.5**
CLF	**Chambon-Foret**	**6.70**	**309**	*e*Pn	**Pn**	**10 35 39.1**	**+3.1**
BUM	**Brajici-Budva**	**6.71**	**102**	⇑*i* Pn	**Pn**	**10 35 37.2**	**+1.0**
BUM				*e*Sn	**Sn**	**10 36 51.0**	**-1.5**
LFF	**La Frestale**	**6.71**	**280**	*e*P	**Pn**	**10 35 38.4**	**+2.2**
LFF				*e*Sn	**Sn**	**10 36 47.9**	**-4.6**
comp=Z,567nm,0.8s							
BBLS	**Lazići**	**6.75**	**89**	⇓*i* Pn	**Pn**	**10 35 36.8**	**0.0**
RUDO	**Rudo**	**6.75**	**91**	*e*Pn	**Pn**	**10 35 37.5**	**+0.7**
MMGO	**Monte Magaggia**	**6.80**	**160**	P	Pn	10 35 43.5	+6.1
PLE	**Pljevlja**	**6.81**	**93**	⇑*i* Pn	**Pn**	**10 35 38.8**	**+1.2**
PLE				*e*Sn	**Sn**	**10 36 52.5**	**-2.6**
TEKS	**Tekeris**	**6.81**	**83**	*e*Pn	**Pn**	**10 35 38.7**	**+1.1**
BHOU	**Houvegnez**	**6.84**	**338**	Pn	**Pn**	**10 35 38.1**	**+0.1**
SRO	**Srobarova**	**6.85**	**54**	*e*P	**Pn**	**10 35 38.7**	**+0.6**
SRO				*e*		10 36 52.4	
SRO	**Srobarova**	**6.85**	**54**	*e*PN	**Pn**	**10 35 38.7**	**+0.6**
SRO				*e*SN	**Sn**	**10 36 52.4**	**-3.5**
SRO2	**Moca**	**6.87**	**55**	*e*P	**Pn**	**10 35 37.5**	**-0.9**
SRO2				*e*		10 36 51.8	
SRO2	**Moca**	**6.87**	**55**	*e*PN	**Pn**	**10 35 37.5**	**-0.9**
SRO2				*e*SN	**Sn**	**10 36 51.8**	**-4.7**
VRAC	**Vranov**	**6.88**	**38**	Pn	**Pn**	**10 35 37.

MEM	**Membach**	**7.07 339**	Pn	**Pn**	**10 35 43.1 +2.0**
TAMR	**Tamra**	**7.08 186**	*e*Pn	**Pn**	**10 35 43.7 +2.5**
JAVC	**Velka Javorina**	**7.09 45**	*e*PN	**Pn**	**10 35 41.4 -0.1**
BCLA	**Clavier**	**7.10 335**	Pn	**Pn**	**10 35 43.7 +2.1**
BCLA			Sn	**Sn**	**10 37 02.3 +0.2**
PVCC	**Panska Ves**	**7.13 24**	*e*P	**Pn**	**10 35 42.0 +0.1**
PVCC			*e*		10 36 59.9
PVCC	**Panska Ves**	**7.13 24**	*e*PN	**Pn**	**10 35 42.0 +0.1**
PVCC			*e*SN	**Sn**	**10 36 59.9 -2.8**
EPF	**Esparros**	**7.14 265**	*e*P	**Pn**	**10 35 44.3 +2.2**
EPF			*e*Sn	**Sn**	**10 36 58.8 -4.3**
	comp=Z,266nm,0.8s				
BGES	**Gesves**	**7.14 334**	Pn	**Pn**	**10 35 43.5 +1.5**
BGES			Sn	**Sn**	**10 37 03.4 +0.4**
DIVS	**Divibare**	**7.16 87**	⇓*i*Pn	**Pn**	**10 35 42.5 +0.1**
BAIF	**Baives**	**7.17 328**	*e*P	**Pn**	**10 35 45.2 +2.7**
BAIF			*e*Sn	**Sn**	**10 36 57.1 -6.8**
	comp=Z,2μm,1.0s				
BMRD	**Maredsous**	**7.17 332**	Pn	**Pn**	**10 35 44.2 +1.7**
HGN	**Heimansgroeve**	**7.23 339**	*e*P	**Pn**	**10 35 46.4 +3.1**
IVA	**Berane**	**7.26 96**	⇑*i*Pn	**Pn**	**10 35 45.0 +1.2**
IVA			*e*Sn	**Sn**	**10 37 03.7 -2.5**
BRG	**Berggiesshubel**	**7.27 20**	PN	**Pn**	**10 35 43.8 -0.1**
BRG			PG	**Pg**	**10 36 18.3 +1.3**
BRG			SN	Sn	10 36 56.3 -10
BRG			SG	**Sg**	**10 37 51.5 +0.4**
	comp=Z,2μm,1.4s				
	comp=N,7μm,14.7s				
	comp=E,11μm,8.8s				
	comp=Z,17μm,9.0s				
BRG	**Berggiesshubel**	**7.27 20**	P	**Pn**	**10 35 43.8 -0.1**
BRG			MLR	MLR	
	comp=N,7μm,14.7s				
BRG			MLR	MLR	
	comp=E,11μm,8.8s				
BRG			MLR	MLR	
	comp=Z,17μm,9.0s				
CEL	**Celeste**	**7.31 141**	*e*Pn	**Pn**	**10 35 44.1 -0.4**
BEBN	**Eben Emael**	**7.33 338**	Pn	**Pn**	**10 35 45.8 +1.2**
PVY	**Plav**	**7.38 98**	*e*Pn	**Pn**	**10 35 46.7 +1.3**
PVY			*e*Sn	**Sn**	**10 37 06.7 -2.4**
VAE	**Valguarnera**	**7.39 152**	Pn	Pn	10 35 53.0 +7.4
	comp=Z,7.6nm,0.3s,baz=343,slow=7.1,SNR=16				
VAE			LR	LR	10 38 32.1
	comp=Z,7μm,19.5s,baz=43,slow=37				
CLL	**Collm**	**7.48 14**	*e*Pn	**Pn**	**10 35 45.0 -1.8**
CLL	**Collm**	**7.48 14**	*e*Pn	**Pn**	**10 35 45.0 -1.8**
CLL			*i*		10 35 49.7
	comp=Z,155nm,0.6s				
CLL			*e*		10 36 11.0
CLL			*e*Pg	**Pg**	**10 36 22.0 +0.9**
CLL			*e*Sn	Sn	10 36 53.0 -18
CLL			*i*		10 37 11.0
CLL			*e*		10 37 25.0
CLL			*e*Sg	**Sg**	**10 37 54.0 -3.9**
	comp=Z,3μm,1.1s				
CLL			*e*Sglp		10 37 57.0
	comp=N,8μm,21.2s				
CLL			*e*Sglp		10 37 57.0
	comp=E,14μm,18.8s				
CLL			*e*Sglp		10 37 57.0
	comp=Z,8μm,30.3s				
CLL			Lmax		10 39 00.0
CLL	**Collm**	**7.48 14**	*e*P	**Pn**	**10 35 45.0 -1.8**
VYHS	**Vyhne**	**7.50 51**	*e*P	**Pn**	**10 35 45.8 -1.3**
VYHS			*e*		10 37 07.4
VYHS	**Vyhne**	**7.50 51**	*e*PN	**Pn**	**10 35 45.8 -1.3**
VYHS			*e*SN	**Sn**	**10 37 07.4 -4.6**
VYHS			*e*SG	Sg	10 38 06.4 +7.9
BCI	**Bajram Curri**	**7.51 100**	*i* PN	**Pn**	**10 35 50.0 +2.7**
BCI			*i* SN	Sg	10 38 26.3 +27
SNF	**Seneffe**	**7.52 331**	Pn	**Pn**	**10 35 48.5 +1.3**
BBOU	**Bougnies**	**7.54 329**	Pn	**Pn**	**10 35 47.4 -0.1**
BBOU			pPn	**pPn**	**10 35 47.8 -2.7**
BBOU			PnPn	**PnPn**	**10 35 54.7 -0.3**
BBOU			x	x	10 36 00.3
BBOU			Pb	**Pb**	**10 36 06.1 -2.4**
DPC	**Dobruska-Polom**	**7.57 32**	*e*P	**Pn**	**10 35 46.7 -1.3**
DPC			*e*		10 37 09.9
DPC			MLR	MLR	
	comp=Z,17μm,12.8s				
DPC	**Dobruska-Polom**	**7.57 32**	*e*PN	**Pn**	**10 35 46.7 -1.3**
DPC			*e*SN	**Sn**	**10 37 09.9 -3.8**
DPC			AMS	AMS	10 39 00.0
	comp=Z,17μm,12.8s				
UPC	**Upice**	**7.58 30**	*e*P	**Pn**	**10 35 47.7 -0.4**
UPC			*e*		10 37 10.9
UPC			MLR	MLR	
	comp=Z,20μm,17.2s				
UPC	**Upice**	**7.58 30**	*e*PN	**Pn**	**10 35 47.7 -0.4**
UPC			*e*SN	**Sn**	**10 37 10.9 -3.0**
UPC			AMS	AMS	10 39 00.0
	comp=Z,20μm,17.2s				
MFF	**Saint Martin d**	**7.61 293**	*e*P	**Pn**	**10 35 51.4 +2.9**
MFF			*e*Sn	**Sn**	**10 37 09.3 -5.3**
	comp=Z,369nm,0.7s				
MORC	**Moravsky Berou**	**7.65 39**	*e*Pn	**Pn**	**10 35 49.4 +0.2**
MORC	**Moravsky Berou**	**7.65 39**	⇑*i*P	**Pn**	**10 35 49.3 +0.2**
MORC	**Moravsky Berou**	**7.65 39**	*e*PN	**Pn**	**10 35 48.3 -0.8**
MORC			*e*SN	**Sn**	**10 37 11.1 -4.5**
CHVC	**Chvalec**	**7.67 30**	*e*PN	**Pn**	**10 35 48.9 -0.4**
CHVC			AMS	AMS	10 38 50.0
	comp=Z,20μm,14.8s				
OSTC	**Ostas**	**7.70 31**	*e*PN	**Pn**	**10 35 49.2 -0.5**
OSTC			AMS	AMS	10 39 00.0
	comp=Z,20μm,14.1s				
CAEH	**'Ain El Ouahch**	**7.71 200**	P	**Pn**	**10 35 53.0 +3.1**
TIR	**Tirane**	**7.73 107**	*e*Pn	**Pn**	**10 35 50.3 +0.2**
TIR	**Tirane**	**7.73 107**	P	**Pn**	**10 35 49.8 -0.3**
TIR	**Tirane**	**7.73 107**	⇑*i*P	**Pn**	**10 35 51.5 +1.4**
TIR	**Tirane**	**7.73 107**	*i* PN	**Pn**	**10 35 52.5 +2.3**
TIR			*i* SN	Sg	10 38 20.3 +15
TIR	**Tirane**	**7.73 107**	P	**Pn**	**10 35 52.9 +2.7**
CMAH	**Djebel Manchou**	**7.73 196**	P	**Pn**	**10 35 53.6 +3.4**
UCC	**Uccle**	**7.73 332**	*e*Pn	**Pn**	**10 35 48.2 -2.0**
UCC	**Uccle**	**7.73 332**	*e*P	**Pn**	**10 35 48.2 -2.0**
UCC	**Uccle**	**7.73 332**	Pn	**Pn**	**10 35 50.9 +0.7**
ETSF	**Etsaut**	**7.81 265**	*e*P	Pn	10 35 55.9 +4.6
ETSF			*e*Sn	**Sn**	**10 37 15.3 -4.4**
	comp=Z,313nm,0.9s				
PSZ	**Piszkesteto**	**7.84 57**	*e*Pn	**Pn**	**10 35 52.4 +0.6**
PSZ	**Piszkesteto**	**7.84 57**	⇑*i*P	**Pn**	**10 35 52.4 +0.6**
PSZ	**Piszkesteto**	**7.84 57**	*e*P	**Pn**	**10 35 52.4 +0.6**
PSZ	**Piszkesteto**	**7.84 57**	EPn	**Pn**	**10 35 53.1 +1.3**
PSZ			Sn	**Sn**	**10 37 17.1 -3.4**
KSP	**Ksiaz**	**7.96 30**	*e*P	**Pn**	**10 35 53.5 +0.2**
KSP			*e*S	**Sg**	**10 38 19.9 +6.8**
KSP	**Ksiaz**	**7.96 30**	*e*P	**Pn**	**10 35 53.5 +0.2**
OKC	**Ostrava-Krasne**	**7.97 41**	*e*P	**Pn**	**10 35 53.0 -0.5**
OKC			MLR	MLR	
	comp=Z,12μm,13.1s				
OKC	**Ostrava-Krasne**	**7.97 41**	*e*PN	**Pn**	**10 35 53.0 -0.5**
OKC			AMS	AMS	10 39 10.0
	comp=Z,12μm,13.1s				
PHP	**Peshkopia**	**8.00 104**	P	**Pn**	**10 35 55.2 +1.3**
PHP	**Peshkopia**	**8.00 104**	*i* PN	**Pn**	**10 35 53.4 -0.5**
PHP			*i* SN	Sg	10 38 31.7 +17
ABSA	**Djebel Ababsia**	**8.06 195**	P	Pn	10 35 59.6 +4.8
CKFL	**Kef-Lekhel**	**8.10 199**	P	**Pn**	**10 35 55.3 -0.1**
RAC	**Raciborz**	**8.16 40**	*e*P	**Pn**	**10 35 56.9 +0.8**
RAC			MLR	MLR	
	comp=Z,16μm,15.3s				
WTSB	**Winterswijk**	**8.17 346**	*e*P	**Pn**	**10 35 58.4 +2.3**
DFRA	**Djebel Bou Aff**	**8.19 204**	P	Pn	10 36 00.4 +3.8
LANS	**Liptovska Anna**	**8.21 49**	*e*P	**Pn**	**10 35 57.6 +0.8**
LANS			*e*		10 37 26.8
LANS	**Liptovska Anna**	**8.21 49**	*e*PN	**Pn**	**10 35 57.6 +0.8**
LANS			*e*SN	**Sn**	**10 37 26.8 -2.8**
CASM	**Ain Smara**	**8.29 200**	P	Pn	10 36 02.7 +4.8
TPE	**Tepelena**	**8.31 114**	*i* PN	Pn	10 36 02.3 +4.1
TPE			*i* SN	Sg	10 38 52.8 +28
LDF	**La Druitiere**	**8.35 306**	*e*P	**Pn**	**10 36 00.6 +1.9**
LDF			*e*Sn	**Sn**	**10 37 26.5 -6.3**
	comp=Z,501nm,0.8s				
BZS	**Buzias**	**8.36 75**	⇑*i*P	**Pn**	**10 36 00.1 +1.4**
KEST	**Kesra**	**8.37 184**	Pn	Pn	10 36 03.8 +4.7
	comp=Z,12nm,0.3s,baz=305,slow=4.1,SNR=61				
KEST			Sn	**Sn**	**10 37 35.7 +2.1**
	comp=Z,2.0nm,0.3s,baz=339,slow=16,SNR=1.8				
KEST			LR	LR	10 39 29.9
	comp=Z,10μm,21.5s,baz=299,slow=39				
KEST	**Kesra**	**8.37 184**	*e*Pn	Pn	10 36 05.1 +6.0
KEST			*e*Sn	**Sn**	**10 37 35.7 +2.1**
MDVR	**Moldovita**	**8.37 81**	⇑*i*P	**Pn**	**10 35 59.9 +0.9**
KECS	**Kecovo**	**8.45 55**	*e*P	**Pn**	**10 36 00.5 +0.5**
KECS			*e*		10 37 30.4
KECS	**Kecovo**	**8.45 55**	*e*PN	**Pn**	**10 36 00.5 +0.5**
KECS			*e*SN	**Sn**	**10 37 30.4 -4.9**
OHR	**Ohrid**	**8.47 107**	*i* Pn	**Pn**	**10 36 01.7 +1.4**
OHR			*i* Sn	**Sn**	**10 37 36.1 +0.2**
SIRR	**Siria**	**8.48 71**	⇑*i*P	**Pn**	**10 36 02.2 +1.7**
KEK	**Kerkira**	**8.48 118**	*e*Pn	**Pn**	**10 36 02.0 +1.5**
KEK			*e*Pn	**Pn**	**10 36 02.0 +1.5**
KEK	**Kerkira**	**8.48 118**	P	**Pn**	**10 36 02.0 +1.5**
CTEI	**Djebel Teioual**	**8.50 200**	P	Pn	10 36 06.1 +5.3
SRN	**Sarande**	**8.52 116**	P	**Pn**	**10 36 02.2 +1.2**
SRN	**Sarande**	**8.52 116**	*i* PN	Pn	10 36 05.9 +4.9
SRN			*i* SN	**Sg**	**10 38 34.2 +3.1**
SKO	**Skopje**	**8.61 100**	*e*Pn	**Pn**	**10 36 03.9 +1.7**
SKO	**Skopje**	**8.61 100**	P	**Pn**	**10 36 03.9 +1.7**
SKO	**Skopje**	**8.61 100**	*i* Pn	**Pn**	**10 36 04.5 +2.3**
SKO			*i* Sn	**Sn**	**10 37 37.6 -1.6**
SKO	**Skopje**	**8.61 100**	*e*P	**Pn**	**10 36 03.9 +1.7**
FLN	**La Foliniere**	**8.64 306**	*e*P	**Pn**	**10 36 04.5 +1.9**
	baz=126				
FLN			*e*Sn	**Sn**	**10 37 33.6 -6.4**
	comp=Z,1μm,1.2s,baz=124				
SET	**Setif**	**8.65 206**	P	**Pn**	**10 36 05.0 +2.1**
GRR	**Gorron**	**8.69 303**	*e*P	**Pn**	**10 36 05.9 +2.5**
GRR			*e*Sn	**Sn**	**10 37 34.5 -6.7**
	comp=Z,696nm,1.0s				
CKHR	**Kef el Ahmar**	**8.79 205**	P	**Pn**	**10 36 07.6 +2.8**
NIE	**Niedzica**	**8.82 49**	*e*P	**Pn**	**10 36 07.5 +2.4**
NIE	**Niedzica**	**8.82 49**	*e*P	**Pn**	**10 36 07.5 +2.4**
HERR	**Herculane**	**8.87 81**	⇓*i*P	**Pn**	**10 36 06.5 +0.7**
OJC	**Ojcow**	**9.03 44**	*e*P	**Pn**	**10 36 07.5 -0.4**
OJC	**Ojcow**	**9.03 44**	*e*Pn	**Pn**	**10 36 06.1 -1.8**
OJC	**Ojcow**	**9.03 44**	*e*P	**Pn**	**10 36 07.5 -0.4**
GZR	**Gura Zlata**	**9.15 77**	⇑*i*P	**Pn**	**10 36 10.8 +1.1**
STIP	**Stip**	**9.22 101**	*i* Pn	**Pn**	**10 36 12.5 +1.9**
PUNG	**Punghina**	**9.26 84**	⇓*i*P	**Pn**	**10 36 12.1 +1.0**
ELSH	**Elham, Standar**	**9.27 323**	*e*P	**Pn**	**10 36 13.9 +2.7**
ELSH			IAMs_20	IAMs_20	10 40 40.2
	comp=Z,19μm,9.4s				
DEV	**Deva**	**9.28 74**	⇑*i*P	**Pn**	**10 36 13.0 +1.6**
DRGR		**9.30 69**	⇑*i*P	**Pn**	**10 36 13.3 +1.6**
STHS	**Stebnicka Huta**	**9.34 51**	*e*P	**Pn**	**10 36 13.1 +0.9**
STHS			*e*		10 37 53.9
STHS	**Stebnicka Huta**	**9.34 51**	*e*PN	**Pn**	**10 36 13.1 +0.9**
STHS			*e*SN	**Sn**	**10 37 53.9 -3.2**
KPRO	**Kipourio**	**9.38 112**	P	**Pn**	**10 36 14.2 +1.4**
SRE	**Strehaia**	**9.44 82**	⇓*i*P	**Pn**	**10 36 15.6 +2.0**
KZN	**Kozani**	**9.48 110**	P	**Pn**	**10 36 16.3 +2.0**
TSLK	**Tsoukalades, L**	**9.54 120**	P	**Pn**	**10 36 16.4 +1.4**
TRPA	**Tarpa**	**9.56 61**	⇓*i*P	**Pn**	**10 36 16.8 +1.6**
TRPA	**Tarpa**	**9.56 61**	⇑EPn	**Pn**	**10 36 16.0 +0.8**
TRPA			Sn	Sn	10 37 37.1 -25
LKD2	**Lefkada island**	**9.56 120**	P	**Pn**	**10 36 17.4 +2.1**
UZH	**Uzhgorod**	**9.60 58**	*e*P	**Pn**	**10 36 16.2 +0.5**
UZH			*e*S	**Sn**	**10 38 03.0 -0.4**
UZH			MLR	MLR	
	comp=N,3μm,9.5s				
UZH			MLR	MLR	
	comp=E,2μm,9.5s				
UZH			MLR	MLR	
	comp=Z,1μm,9.5s				
GRG	**Griva**	**9.64 105**	P	**Pn**	**10 36 18.4 +2.0**
SGMF	**Saint Gilles**	**9.68 300**	*e*P	**Pn**	**10 36 17.7 +0.8**
SGMF			*e*Sn	**Sn**	**10 37 58.4 -7.2**
	comp=Z,196nm,0.7s				
KOLS	**Kolonicke sedl**	**9.71 56**	*e*P	**Pn**	**10 36 18.0 +0.7**
KOLS	**Kolonicke sedl**	**9.71 56**	*e*PN	**Pn**	**10 36 18.0 +0.7**
VTS	**Vitosha**	**9.72 94**	*e*Pn	**Pn**	**10 36 17.9 +0.4**
VTS			*e*Pn	Pn	10 36 18.8 +1.2
VTS	**Vitosha**	**9.72 94**	P	**Pn**	**10 36 17.9 +0.4**
VTS	**Vitosha**	**9.72 94**	⇑*i*P	**Pn**	**10 36 19.0 +1.5**
VTS	**Vitosha**	**9.72 94**	*e*P	**Pn**	**10 36 17.9 +0.4**
VTS	**Vitosha**	**9.72 94**	*e*P	**Pn**	**10 36 18.5 +1.0**
JQE	**Queens East**	**9.75 306**	*e*P	**Pn**	**10 36 19.0 +1.1**
KKB	**Krupnik**	**9.81 99**	*e*P	**Pn**	**10 36 21.7 +3.0**
JLP	**Les Platons**	**9.81 306**	*e*P	**Pn**	**10 36 19.8 +1.2**
JSA	**Saint Aubin**	**9.82 305**	*e*P	**Pn**	**10 36 20.9 +2.0**
LOT	**Lotru**	**9.85 77**	⇑*i*P	**Pn**	**10 36 21.1 +1.8**
JVM	**Valle D.L. Mar**	**9.86 306**	*e*P	**Pn**	**10 36 20.8 +1.5**
CJR	**Cluj-Napoca**	**9.88 70**	⇓*i*P	**Pn**	**10 36 20.9 +1.2**
KNT	**Kendrikon**	**9.91 103**	P	**Pn**	**10 36 21.5 +1.4**
MPEP	**Malo Peshtene**	**9.94 90**	P	**Pn**	**10 36 21.5 +1.1**
QUIF	**Quistinic**	**9.96 297**	*e*P	**Pn**	**10 36 23.4 +2.7**
QUIF			*e*Sn	**Sn**	**10 38 05.2 -7.1**
	comp=Z,193nm,0.8s				
PDO	**Prodromos**	**10.01 119**	P	**Pn**	**10 36 22.8 +1.4**
THL	**Klokotos Trika**	**10.01 113**	P	**Pn**	**10 36 24.9 +3.5**
KFL	**Anninata**	**10.06 123**	P	**Pn**	**10 36 24.5 +2.3**
LIT	**Litokhoron**	**10.07 109**	*e*Pn	**Pn**	**10 36 21.8 -0.4**
LIT	**Litokhoron**	**10.07 109**	P	**Pn**	**10 36 23.4 +1.2**
LIT	**Litokhoron**	**10.07 109**	*e*P	**Pn**	**10 36 21.8 -0.4**
EBNR	**Beni Rached**	**10.16 223**	P	Pn	10 36 33.8 +10
ROSF	**Rostrenen**	**10.16 299**	*e*Pn	**Pn**	**10 36 24.6 +1.1**
ROSF			*e*Sn	**Sn**	**10 38 10.5 -6.8**
	comp=Z,334nm,1.0s				
PVO	**Paravola**	**10.21 118**	P	**Pn**	**10 36 25.9 +1.7**
EVR	**Evrytania**	**10.22 116**	P	**Pn**	**10 36 27.1 +2.7**
KWP	**Kalwaria Pacla**	**10.28 53**	*e*P	**Pn**	**10 36 27.1 +2.0**
KWP	**Kalwaria Pacla**	**10.28 53**	*e*Pn	**Pn**	**10 36 25.7 +0.6**
KWP	**Kalwaria Pacla**	**10.28 53**	*e*P	**Pn**	**10 36 25.7 +0.6**
GKP	**Gorka Klasztor**	**10.33 25**	*e*P	**Pn**	**10 36 27.3 +1.6**
GKP			*e*S	**Sn**	**10 38 16.9 -4.4**
GKP	**Gorka Klasztor**	**10.33 25**	*e*P	**Pn**	**10 36 27.3 +1.6**
GKP			*e*S	**Sn**	**10 38 16.9 -4.4**
ECHA	**Ech Chlef**	**10.35 223**	P	Pn	10 36 36.1 +10
MMB	**Musomiste**	**10.35 99**	*e*P	**Pn**	**10 36 28.7 +2.6**
SRS	**Serrai**	**10.41 102**	P	**Pn**	**10 36 26.4 -0.6**
ARR	**Arges**	**10.46 78**	⇑*i*P	**Pn**	**10 36 30.2 +2.6**
ARCR	**ARCALIA**	**10.46 68**	⇓*i*P	**Pn**	**10 36 29.2 +1.6**
WOL	**Wolverton**	**10.47 318**	*e*P	**Pn**	**10 36 30.6 +2.9**
WOL			IAMs_20	IAMs_20	10 41 30.8
	comp=Z,11μm,9.4s				
ANX	**Ano Chora**	**10.48 118**	P	Pn	10 36 31.6 +3.7
AGG	**Agios Georgios**	**10.50 115**	*e*P	Pn	10 36 33.4 +5.2
AGG	**Agios Georgios**	**10.50 115**	*e*Pn	**Pn**	**10 36 27.3 -0.9**
AGG	**Agios Georgios**	**10.50 115**	P	Pn	10 36 31.9 +3.7
AGG	**Agios Georgios**	**10.50 115**	*e*P	**Pn**	**10 36 27.3 -0.9**
NVR	**Nevrokopi**	**10.53 100**	P	**Pn**	**10 36 30.7 +2.2**
EFP	**Efpalio**	**10.56 118**	P	**Pn**	**10 36 31.8 +2.8**
UCM	**Universidad Co**	**10.57 254**	*e*P	**Pn**	**10 36 30.9 +1.8**
UCM			*e*S	**Sn**	**10 38 30.1 +2.8**
PLG	**Polygyros**	**10.60 106**	P	**Pn**	**10 36 31.5 +1.9**
EANR	**'Ain N'Sour**	**10.64 223**	P	Pn	10 36 39.6 +9.5
WACR	**West Acre**	**10.66 327**	*e*P	**Pn**	**10 36 32.2 +2.0**
WACR			IAMs_20	IAMs_20	10 40 51.0
	comp=Z,8μm,12.9s				
SERG	**Sergoula**	**10.67 118**	P	**Pn**	**10 36 33.4 +2.9**
HUMR	**Humele**	**10.71 82**	⇑*i*P	**Pn**	**10 36 32.2 +1.2**
VOIR		**10.75 78**	⇑*i*P	**Pn**	**10 36 33.5 +1.9**
SWN1	**Swindon**	**10.88 317**	*e*P	**Pn**	**10 36 34.5 +1.2**
SWN1			IAMs_20	IAMs_20	10 41 25.4
	comp=Z,8μm,11.1s				
XOR	**Xorichti**	**10.89 111**	P	**Pn**	**10 36 34.8 +1.2**
PLD	**Plovdiv**	**10.90 95**	*e*P	**Pn**	**10 36 35.2 +1.6**
PLD	**Plovdiv**	**10.90 95**	*e*P	**Pn**	**10 36 34.7 +1.1**
KLV	**Kalavryta, Ach**	**10.95 119**	P	Pn	10 36 38.6 +4.3
OUR	**Ouranopolis**	**10.99 105**	*e*P	**Pn**	**10 36 35.3 +0.5**
OUR	**Ouranopolis**	**10.99 105**	*e*Pn	**Pn**	**10 36 36.5 +1.7**
OUR	**Ouranopolis**	**10.99 105**	P	**Pn**	**10 36 36.5 +1.7**
OUR	**Ouranopolis**	**10.99 105**	*e*P	**Pn**	**10 36 36.5 +1.7**
ETRT	**Tiaret**	**10.99 221**	P	Pn	10 36 44.2 +9.2
DOPR	**Dopca**	**11.02 75**	⇑*i*P	**Pn**	**10 36 37.1 +1.9**
RZN	**Rozhen**	**11.03 98**	*e*P	**Pn**	**10 36 37.8 +2.3**
KAVA	**Kavala**	**11.11 101**	*e*Pn	**Pn**	**10 36 37.8 +1.3**
KAVA	**Kavala**	**11.11 101**	P	**Pn**	**10 36 37.8 +1.3**
PVL	**Pavlikeni**	**11.11 89**	*e*P	**Pn**	**10 36 36.6 +0.2**
LVV	**L'vov**	**11.13 54**	*c*P	**Pn**	**10 36 39.3 +2.6**
LVV			*e*S	**Sn**	**10 38 41.5 +0.5**
LVV			pmax	pmax	
	comp=Z,420nm,2.5s				
LVV			MLR	MLR	
	comp=Z,6μm,8.0s				
ATAL	**Atalanti**	**11.13 115**	*e*Pn	**Pn**	**10 36 39.5 +2.7**
ATAL	**Atalanti**	**11.13 115**	P	**Pn**	**10 36 39.5 +2.7**
GUR	**Goura**	**11.13 119**	*e*Pn	**Pn**	**10 36 40.1 +3.2**
GUR	**Goura**	**11.13 119**	P	**Pn**	**10 36 40.1 +3.2**
BUR08	**Bucovina Ar. S**	**11.14 66**	*e*Pn	**Pn**	**10 36 40.0 +3.0**
BURAR	**Bucovina Array**	**11.14 66**	⇓*i*P	**Pn**	**10 36 38.3 +1.3**
STRD	**Stroud**	**11.22 317**	*e*P	**Pn**	**10 36 40.1 +2.1**
STRD			IAMs_20	IAMs_20	10 41 35.5
	comp=Z,8μm,13.9s				
OZUR		**11.30 74**	⇓*i*P	**Pn**	**10 36 40.7 +1.6**
ESDC	**Sonseca Array**	**11.34 252**	Pn	**Pn**	**10 36 40.8 +1.1**
	comp=Z,3.6nm,0.3s,baz=67,slow=13,SNR=57				
ESDC			LR	LR	10 41 04.0
	comp=Z,3μm,20.9s,baz=75,slow=37				
ESLA	**Sonseca Array**	**11.34 252**	*e*Pn	**Pn**	**10 36 41.0 +1.3**
OLDB	**Oldbury-Upon-S**	**11.34 316**	*e*P	**Pn**	**10 36 41.7 +2.1**
OLDB			IAMs_20	IAMs_20	10 42 05.3
	comp=Z,6μm,14.5s				
ITM	**Ithomi**	**11.36 123**	*e*Pn	Pn	10 36 43.5 +3.7
MLR	**Muntele Rosu**	**11.38 77**	Pn	**Pn**	**10 36 40.8 +0.5**
	comp=Z,2.0nm,0.3s,baz=276,slow=6.1,SNR=21				
MLR			LR	LR	10 42 30.1
	comp=Z,5μm,18.6s,baz=266,slow=45				
MLR	**Muntele Rosu**	**11.38 77**	*e*Pn	**Pn**	**10 36 40.9 +0.6**
MLR	**Muntele Rosu**	**11.38 77**	⇓*i*P	**Pn**	**10 36 41.6 +1.3**
MLR	**Muntele Rosu**	**11.38 77**	*e*P	**Pn**	**10 36 40.9 +0.6**
DYA	**Yadsworthy**	**11.41 309**	*e*P	**Pn**	**10 36 41.1 +0.6**
CWF	**Charnwood Fore**	**11.46 323**	*e*P	**Pn**	**10 36 42.6 +1.4**
CWF			IAMs_20	IAMs_20	10 41 23.6
	comp=Z,9μm,21.6s				
DIM	**Dimitrovgrad**	**11.51 95**	*e*P	**Pn**	**10 36 43.7 +1.8**
KDZ	**Kurdzhali**	**11.54 97**	*e*P	**Pn**	**10 36 42.9 +0.6**
KDZ	**Kurdzhali**	**11.54 97**	*e*P	Pn	10 36 46.9 +4.6
MONM	**Monmouth**	**11.58 317**	*e*P	**Pn**	**10 36 44.2 +1.4**
LMK	**Market Rasen**	**11.59 328**	*e*P	**Pn**	**10 36 44.0 +1.0**
LMK			IAMs_20	IAMs_20	10 41 29.1
	comp=Z,7μm,13.1s				
BIZ	**Bicaz**	**11.61 70**	⇑*i*P	**Pn**	**10 36 45.3 +1.9**
PAB	**San Pablo**	**11.67 252**	*e*Pn	**Pn**	**10 36 46.1 +1.9**
PAB	**San Pablo**	**11.67 252**	*e*P	**Pn**	**10 36 46.1 +1.9**
COP	**Copenhagen**	**11.70 7**	*e*P	Pn	10 36 56.1 +12
COP	**Copenhagen**	**11.70 7**	*i* P	Pn	10 36 56.1 +12
MCH1	**Michaelchurch**	**11.77 317**	*e*P	**Pn**	**10 36 46.0 +0.6**
MCH1			IAMs_20	IAMs_20	10 41 53.5
	comp=Z,8μm,15.7s				
RDO	**Rodhopi**	**11.78 99**	*e*P	**Pn**	**10 36 46.1 +0.4**
RDO	**Rodhopi**	**11.78 99**	*e*Pn	**Pn**	**10 36 46.0 +0.4**
RDO	**Rodhopi**	**11.78 99**	P	**Pn**	**10 36 46.0 +0.4**
PLOR	**Plostina**	**11.89 76**	⇑*i*P	**Pn**	**10 36 48.6 +1.5**
TESR	**Tescani**	**11.93 73**	⇓*i*P	**Pn**	**10 36 49.2 +1.5**
VRI	**Vrincioaia**	**11.94 76**	⇓*i*P	**Pn**	**10 36 49.4 +1.5**
HTL	**Hartland**	**11.99 310**	*e*P	**Pn**	**10 36 48.0 -0.5**
LEHL	**Lehliu**	**12.03 82**	⇓*i*P	**Pn**	**10 36 50.1 +1.1**
STNC	**Stoke**	**12.10 322**	*e*P	**Pn**	**10 36 51.8 +1.8**
STNC			IAMs_20	IAMs_20	10 41 56.7
	comp=Z,9μm,13.1s				
LBWR	**Ladybower, Pea**	**12.11 324**	*e*P	**Pn**	**10 36 51.6 +1.5**
LBWR			IAMs_20	IAMs_20	10 42 46.4
	comp=Z,11μm,7.5s				
JMB	**Yambol**	**12.16 92**	*e*P	**Pn**	**10 36 49.5 -1.3**
ALN	**Alexandroupoli**	**12.23 100**	*e*P	**Pn**	**10 36 53.0 +1.2**
ALN	**Alexandroupoli**	**12.23 100**	*e*Pn	**Pn**	**10 36 52.8 +1.0**
ALN			*e*		10 36 53.0
ALN	**Alexandroupoli**	**12.23 100**	P	**Pn**	**10 36 52.8 +1.0**
ALN	**Alexandroupoli**	**12.23 100**	*e*P	**Pn**	**10 36 52.8 +1.0**
ENEZ	**Enez**	**12.36 100**	*e*P	**Pn**	**10 36 54.4 +0.8**
MUD	**Monsted U'grnd**	**12.

comp=Z,157nm,0.8s
PVLZ Peæn de 14.19 236⇑ *i*P Pn 10 37 20.0 +1.4
PVLZ *e*S S 10 40 08.0 -8.7
KLYT Kilyos 14.26 95 *e*P Pn 10 37 21.8 +2.4
ISK Istanbul-Kandi 14.33 96 *e*P Pn 10 37 22.5 +2.1
KAVV Kandilli-Istan 14.33 96 *e*P Pn 10 37 20.3 -0.1
ESY Stoneypath 14.33 330 *e*P Pn 10 37 20.7 +0.2
ARMT Armutlu 14.35 98 *e*P Pn 10 37 22.6 +1.8
PCAS Casmilo, Conde 14.36 260 *e*P P 10 37 23.8 -4.1
comp=Z,67nm,1.7s
CEU Ceuta 14.37 241⇑ *i*P P 10 37 24.3 -3.7
CEU *e*S S 10 40 18.0 -2.3
EBL Broad Law 14.38 329 *e*P Pn 10 37 20.7 -0.4
GAL1 Galloway 14.40 324 *e*P Pn 10 37 22.4 +1.1
GAL1 IAMs_20 IAMs_20 10 44 13.9
comp=Z,3μm,8.9s
IDI Anoyia 14.40 123 Pn P 10 37 26.3 -2.2
comp=Z,0.9nm,0.3s,baz=312,slow=15,SNR=5.2
IDI PcP PcP 10 42 38.4 +1.1
comp=Z,1.1nm,0.3s,baz=252,slow=1.0,SNR=5.1
IDI LR LR 10 44 18.8
comp=Z,3μm,19.4s,baz=319,slow=43
MDNY Mudanya-Bursa 14.44 98 *e*P Pn 10 37 23.2 +1.3
BUY Buyukada 14.44 96 *e*P Pn 10 37 23.9 +2.0
GCAM G?zelcaml? 14.47 110 *e*P P 10 37 24.9 -4.2
PABE Paberze 14.49 33 *e*P Pn 10 37 22.9 +0.3
PABE IAmb IAmb 10 37 33.0
comp=Z,192nm,0.9s
AKASG Malin Array Be 14.54 56 Pn Pn 10 37 22.8 -0.6
comp=Z,1.9nm,0.3s,baz=253,slow=12,SNR=12
AKASG LR LR 10 44 11.7
comp=Z,3μm,21.8s,baz=255,slow=42
AKASG ScP ScP 10 46 09.0 -1.5
comp=Z,0.3nm,0.3s,baz=259,slow=2.9,SNR=4.9
AKBB Malin Array Si 14.54 56 *e*Pn Pn 10 37 22.7 -0.7
AKBB Malin Array Si 14.54 56 *e*P Pn 10 37 22.7 -0.7
GMM Mts of Mourne 14.54 320 *e*P Pn 10 37 23.7 +0.3
EDI Edinburgh 14.55 329 *e*P Pn 10 37 23.4 0.0
EDI IAMs_20 IAMs_20 10 43 29.8
comp=Z,5μm,9.5s
SFS San Fernando 14.55 244 *e*P P 10 37 27.5 -2.6
PMTG Montargil 14.57 256 *e*P P 10 37 26.3 -3.9
comp=Z,58nm,1.3s
GEMT Gemlik 14.63 98 *e*P Pn 10 37 25.9 +1.3
YLV Yalova 14.71 97 *e*P Pn 10 37 26.7 +0.9
YLV Yalova 14.71 97⇑ *i*P Pn 10 37 26.6 +0.8
SILT Sile 14.72 95 *e*P Pn 10 37 27.9 -4.0
HRT Hereke 14.84 96 *e*P Pn 10 37 27.6 +0.1
BODT Bodrum 14.86 112 *e*P P 10 37 30.4 -3.1
MANT Manisa 14.98 106 *e*Pn Pn 10 37 29.0 -0.6
ADVT Abdulvahap 15.02 97 *e*P P 10 37 31.6 -3.7
PVAQ Vaqueiros 15.02 250 *e*LQ LQ 10 40 33.1
PVAQ *e*LR LR 10 41 29.6
comp=Z,3μm,14.0s
PVAQ Vaqueiros 15.02 250 *e*Pn Pn 10 37 30.5 +0.6
comp=Z,46nm,1.4s
KULA Kula-Manisa 15.04 105 *e*P Pn 10 37 31.4 +1.1
STAV Stavanger 15.10 351 *e*P P 10 37 33.7 -2.3
PCVE Castro Verde 15.12 251 *e*P P 10 37 35.5 -0.9
comp=Z,55nm,1.5s
EAB Aberfoyle 15.18 328 *e*P Pn 10 37 33.3 +1.4
PNCL Nicolau / Gran 15.22 253 *e*P P 10 37 35.4 -2.1
DAT Datca 15.23 113 *e*P P 10 37 36.1 -1.6
INVG Invergeldie, C 15.24 329 *e*P P 10 37 34.9 -2.7
INVG IAMs_20 IAMs_20 10 43 52.0
comp=Z,4μm,11.5s
NACGM Naroch 15.29 39 *e*Pn Pn 10 37 33.0 -0.3
NACGM PM 10 37 37.0
comp=Z,0.5nm,1.0s
NACGM *e*Sn Sn 10 40 22.0 -0.4
NACGM *e*LQ LQ 10 42 00.0
NACGM *e*LR LR 10 43 34.0
NACGM LRM MLR 10 44 08.0
comp=Z,18nm,10.0s
GEDZ Gediz 15.33 103 *e*P Pn 10 37 34.9 +0.8
SAUV Serdivan-Sakar 15.34 96 *e*P P 10 37 35.9 -2.9
SPNC Sapanca-Adapaz 15.35 96 *e*P P 10 37 36.3 -2.6
KMY Karmoy 15.42 351 *e*P P 10 37 42.2 +2.7
ISAL Salakas 15.43 36 *e*P Pn 10 37 34.7 -0.4
ISAL IAmb IAmb 10 37 50.3
comp=Z,60nm,1.1s
YER Yerkesik 15.47 110 *e*P P 10 37 38.3 -2.1
BLS5 Blasjo 15.51 353 *e*P P 10 37 39.0 -1.5
IDID Didziasalis 15.53 38 *e*P Pn 10 37 37.1 +0.7
IDID IAmb IAmb 10 37 46.2
comp=Z,44nm,0.9s
SLIT Slitere, Latvi 15.56 25 *e*P Pn 10 37 36.6 -0.2
SLIT IAmb IAmb 10 37 43.9
comp=Z,948nm,0.7s
MICGM Minsk 15.56 42⇓ *e*Pn Pn 10 37 35.0 -1.9
MICGM PM 10 37 37.0
comp=Z,0.6nm,1.4s
MICGM *e*PP PnPn 10 37 44.0 -1.1
MICGM *e*Sn Sn 10 40 26.0 -3.1
MICGM *e*SS SnSn 10 40 42.0 +0.3
MICGM *e*LR LR 10 42 19.0
MNK Minsk 15.56 42*d* *i*P Pn 10 37 35.0 -1.9
GULT Gulveren 15.58 97 *e*P P 10 37 39.2 -2.4
KONO Kongsberg 15.58 359 *e*Pn Pn 10 37 36.8 -0.3
comp=Z,61nm,1.0s
KONO Kongsberg 15.58 359*ce*P P 10 37 38.6 -2.7
KONO pmax pmax
comp=Z,32nm,1.0s
KONO Kongsberg 15.58 359 *e*P P 10 37 39.0 -2.3
IZAR Zarasai 15.60 36 *e*P Pn 10 37 38.1 +0.8
IZAR IAmb IAmb 10 37 50.1
comp=Z,44nm,0.6s
LAWE Loch Awe, Argy 15.64 327 *e*P P 10 37 40.4 -1.7
LAWE IAMs_20 IAMs_20 10 44 09.9
comp=Z,5μm,22.4s
KARP Karpathos 15.65 117 *e*Pn Pn 10 37 37.9 -0.3
comp=Z,77nm,0.8s
SRCK Saricakaya, Es 15.80 98 *e*P P 10 37 41.9 -2.0
IFR Ifrane 15.84 233⇑ *i*P P 10 37 44.7 +0.1
IFR *e*S S 10 40 47.0 -3.8
DALY Dalyan (Mula) 15.90 111 *e*P P 10 37 44.2 -0.8
ODD1 Odda 15.98 354 *e*P P 10 37 46.9 +1.1
MDUB Mudurnu 16.05 96 *e*Pn Pn 10 37 42.9 -0.6
comp=Z,632nm,1.0s
MDT Midelt 16.06 230 Pn P 10 37 51.3 +4.3
comp=Z,0.3nm,0.3s,baz=54,slow=12,SNR=27
MDT LR LR 10 43 08.3
comp=Z,3μm,20.8s,baz=48,slow=34
HFS Hagfors 16.21 7 Pn P 10 37 46.2 -2.2
comp=Z,3.5nm,0.3s,baz=193,slow=12,SNR=68
HFS LR LR 10 44 20.2
comp=Z,4μm,20.6s,baz=194,slow=38
SHUT Suhut-Afyon 16.35 103 *e*P P 10 37 49.2 -1.0
CIFT Cifteler, Eski 16.37 100 *e*P P 10 37 49.4 -0.9
KAC Achnashellach 16.50 330 *e*P P 10 37 50.6 -0.9
KPL Plockton 16.51 329 *e*P P 10 37 52.1 +0.4
KPL IAMs_20 IAMs_20 10 44 40.1
comp=Z,4μm,11.2s
BER Bergen 16.56 352 *e*P P 10 37 53.0 +0.8
SKAR Skarslia 16.64 357 *e*P P 10 37 58.9 +5.7
SVRH Sivrihisar-ESK 16.66 99 *e*P P 10 37 53.4 -0.2
ASK Askoy 16.67 352 *e*P P 10 37 55.3 +1.9
NC602 NORSAR Array S 16.69 3 *e*Pn Pn 10 37 51.1 -0.2
comp=Z,182nm,1.0s
NC602 NORSAR Array S 16.69 3 *e*P P 10 37 54.9 +1.3
NAO01 NORSAR Array S 16.78 1 *e*Pn Pn 10 37 49.6 -2.9
comp=Z,142nm,0.9s
NAO01 NORSAR Array S 16.78 1 *e*P P 10 37 56.4 +1.7
BIGH Upper Bighouse 16.80 334 *e*P P 10 37 55.0 +0.2
BIGH IAMs_20 IAMs_20 10 46 00.7
comp=Z,4μm,9.7s
RRR Rubha Reidh 16.95 330⇑ *e*P P 10 37 58.4 +1.8
NBO00 NORSAR Array S 16.97 1 *e*Pn Pn 10 37 53.9 -0.9
comp=Z,100nm,1.1s
NBO00 NORSAR Array S 16.97 1 *e*P P 10 37 58.5 +1.7
NB2 NORSAR Subarra 16.99 2 P P 10 37 56.1 -0.9
comp=Z,375nm,3.3s,baz=183,slow=11
NB2 NORSAR Subarra 16.99 2 P P 10 37 56.1 -0.9
baz=183,slow=11
NB200 NORSAR Array S 16.99 2 *e*Pn Pn 10 37 54.7 -0.4
NOA NORSAR Array B 16.99 2 Pn Pn 10 37 54.7 -0.4
comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=26
NOA LR LR 10 45 15.8
comp=Z,5μm,18.9s,baz=185,slow=40
NB201 NORSAR Array S 17.00 2 *e*Pn Pn 10 37 54.0 -1.3
comp=Z,167nm,1.0s
NB201 NORSAR Array S 17.00 2 *e*P P 10 37 56.7 -0.4
NC405 NORSAR Array S 17.07 3 *e*Pn Pn 10 37 55.9 -0.3
comp=Z,158nm,0.9s

RSC Scourie 17.10 332⇑ *e*P P 10 37 59.9 +1.8
KIZT Kizilcal 17.15 100 *e*P P 10 37 59.6 +0.6
SIM Simferopol' 17.17 79*de*P P 10 38 00.5 +1.4
SIM *e*S Sn 10 41 09.0 +0.8
SIM pmax pmax
comp=Z,45nm,1.0s
SIM MLR MLR
comp=E,5μm,13.0s
NC303 NORSAR Array S 17.18 2 *e*Pn Pn 10 37 54.5 -2.9
comp=E,299nm,1.5s
NC303 NORSAR Array S 17.18 2 *e*P P 10 37 58.7 -0.4
NC204 NORSAR Array S 17.21 1 *e*P Pn 10 37 55.9 -2.1
comp=E,176nm,1.3s
NC204 NORSAR Array S 17.21 1 *e*P P 10 38 01.4 +1.8
HYA Hoyanger 17.25 354 *e*P P 10 38 03.0 +3.1
SUE Sulen 17.28 351 *e*P P 10 38 02.7 +2.6
RRH Rhenigidale 17.32 329⇑ *e*P P 10 38 01.7 +1.1
ANTO Ankara 17.41 96 *e*P P 10 38 00.3 -1.6
comp=E,32nm,0.8s
ANTO Ankara 17.41 96⇓ *i*P P 10 38 02.6 +0.7
ANTO Ankara 17.41 96 *e*P P 10 38 00.3 -1.6
ANTO pmax pmax
comp=Z,32nm,0.8s
BZK Bozkurt 17.63 89⇑ *i*P P 10 38 05.1 +1.0
ILGA Ilgaz 17.68 92 *e*P P 10 38 05.9 +1.0
VSU Vasula 17.69 30*c* *i*P P 10 38 04.8 +0.1
VSU pmax pmax
comp=Z,2μm,2.5s
VSU Vasula 17.69 30 *e*P Pn 10 38 02.7 -1.1
VSU IAmb IAmb 10 38 23.9
comp=Z,928nm,0.8s
DOMB Dombas 17.99 358 *e*P P 10 38 11.0 +3.0
BR101 Keskin Array S 18.07 96 *e*P P 10 38 10.8 +1.6
BR101 *e*PcP PcP 10 42 43.2 +0.3
BR101 *e*ScP ScP 10 46 16.6 -1.3
BR131 Keskin Array S 18.07 96 *e*P P 10 38 09.4 +0.2
comp=Z,78nm,1.3s
BR131 *e*PcP PcP 10 42 43.0 +0.2
BRTR Keskin Array B 18.07 96 P P 10 38 10.8 +1.6
comp=Z,0.6nm,0.3s,baz=294,slow=9.3,SNR=39
BRTR PcP PcP 10 42 43.2 +0.3
comp=Z,0.2nm,0.3s,baz=244,slow=0.7,SNR=7.0
BRTR LR LR 10 45 55.8
comp=Z,3μm,18.6s,baz=288,slow=40
BRTR ScP ScP 10 46 16.6 -1.3
comp=Z,0.1nm,0.3s,baz=196,slow=0.1,SNR=6.2
BRTR Keskin Array B 18.07 96*ce*P P 10 38 11.1 +1.9
BRTR pmax pmax
comp=Z,11nm,0.7s
AKN Aaknes 18.20 355 *e*P P 10 38 14.4 +4.0
MOL Molde 18.57 356 *e*P Pn 10 38 16.5 +2.0
DIKM Dikmen 18.61 89⇑ *i*P Pn 10 38 17.1 +1.8
TBLU Trondheim 19.19 0 *e*P Pn 10 38 26.6 +4.4
LEF Lefka 19.70 109⇑ *i*P Pn 10 38 30.1 +1.7
FIA0 FINESS Array S 19.80 23 *e*P Pn 10 38 27.9 -1.4
FIA0 *e*PcP PcP 10 42 45.5 +0.2
FIA0 *e*ScP ScP 10 46 18.4 -2.6
FIA0 FINESS Array S 19.80 23 *e*P Pn 10 38 27.9 -1.4
FINES FINESS Array B 19.80 23 P Pn 10 38 27.9 -1.4
comp=Z,7.2nm,0.3s,baz=216,slow=10,SNR=170
FINES PcP PcP 10 42 45.5 +0.2
comp=Z,0.7nm,0.3s,baz=193,slow=3.3,SNR=4.7
FINES ScP ScP 10 46 18.4 -2.6
comp=Z,0.1nm,0.3s,baz=198,slow=1.3,SNR=4.0
FINES LR LR 10 46 50.0
comp=Z,4μm,21.8s,baz=218,slow=39
FIA1 FINESS Array S 19.80 23 *e*P Pn 10 38 28.1 -1.2
comp=Z,86nm,0.6s
PUL Pulkovo 19.92 31*c* *i*P Pn 10 38 30.7 -0.1
PUL pmax pmax
comp=Z,156nm,0.9s
PUL Pulkovo 19.92 31 *e*P P 10 38 26.5 -2.6
PUL IAmb IAmb 10 38 33.0
comp=Z,224nm,0.7s
CSS Mathiatis 20.09 109 *e*P Pn 10 38 35.0 +2.1
comp=Z,83nm,1.0s
CSS Mathiatis 20.09 109 P Pn 10 38 38.5 +5.5
OBN Obninsk 20.28 48 P Pn 10 38 33.4 -1.7
comp=Z,44nm,0.9s,baz=241,slow=7.1,SNR=36
OBN LR LR 10 47 09.7
comp=Z,1μm,19.2s,baz=245,slow=39
OBN Obninsk 20.28 48 *e*P P 10 38 33.1 0.0
comp=Z,248nm,1.0s
OBN Obninsk 20.28 48*d* *i*P P 10 38 32.5 -0.6
OBN *i* *PP **sP** 10 38 36.7 -1.7
OBN *e* 10 38 52.3
OBN *e*PPP PPP 10 39 00.2
OBN *e*S S 10 42 15.2 -4.9
OBN *e*SS SnSn 10 42 37.0 -0.6
OBN *e*SSS SSS 10 42 55.6
OBN pmax pmax
comp=Z,508nm,2.1s
OBN MLR MLR
comp=Z,2μm,16.0s
NSS Namsos 20.50 2 *e*P Pn 10 38 36.7 -0.9
VSR Storozhevoye 20.77 60 *e*P P 10 38 38.3 -0.1
VSR *e*S S 10 42 24.9 -4.9
VSR pmax pmax
comp=Z,200nm,0.5s
VSR smax smax
comp=N,640nm,5.1s
VSR MLR MLR
comp=Z,4μm,10.0s
VORD Divnogorie 20.81 60 *e*P P 10 38 38.7 -0.2
VORD pmax pmax
comp=Z,70nm,0.7s
VORD MLR MLR
comp=Z,1μm,9.0s
VORR Voronezh 20.86 58 *e*P Pn 10 38 40.0 -2.0
VORR pmax pmax
comp=Z,750nm,2.2s
LPSR Galich'ya Gora 20.88 56 *e*P P 10 38 38.8 -0.8
LPSR *e*S S 10 42 27.8 -4.2
LPSR pmax pmax
comp=Z,280nm,0.9s
LPSR smax smax
comp=N,730nm,4.3s
LPSR MLR MLR
comp=Z,2μm,9.0s
MOS Moscow 21.07 47 *e*P P 10 38 38.8 -2.9
MOS *e* 10 38 58.4
MOS *e* 10 39 12.6
MOS *e*S S 10 42 33.1 -2.8
MOS *e*SS SnSn 10 42 57.3 +0.3
MOS pmax pmax
comp=Z,169nm,0.9s
MOS pmax pmax
comp=Z,3μm,4.2s
MOS MLR MLR
comp=Z,4μm,19.0s
MOS MLR MLR
comp=N,3μm,16.0s
MOS MLR MLR
comp=E,4μm,19.0s
SOC Sochi 21.35 81*d* *i*P P 10 38 45.1 +0.3
SOC *e* 10 39 02.8
SOC *e*S S 10 42 42.3 +0.7
SOC *e*SSS SSS 10 43 33.4
SOC pmax pmax
comp=Z,226nm,1.1s
SOC MLR MLR
comp=Z,1μm,14.0s
TAM Tamanrasset 21.58 191 *e*P P 10 38 48.3 +0.8
comp=Z,57nm,0.9s
TAM Tamanrasset 21.58 191 *e*P P 10 38 48.3 +0.8
TAM pmax pmax
comp=Z,57nm,0.9s
KTUT Trabzon 22.06 88⇑ *i*P P 10 38 53.7 +1.3
MOR8 Moi Rana 22.25 5 *e*P P 10 38 56.5 +2.2
KONS Konsvik 22.52 3 *e*P P 10 38 58.1 +1.1
MMAI Mount Meron Ar 22.61 111 P P 10 38 58.9 +0.4
comp=Z,5.6nm,0.5s,baz=310,slow=8.9,SNR=8.3
MMAI LR LR 10 49 30.5
comp=Z,1μm,21.2s,baz=310,slow=41
AMAZ Amatzia 23.20 114 P P 10 39 06.5 +1.9
comp=Z,124nm,1.1s
BCA Borcka 23.25 86⇓ *i*P P 10 39 07.0 +2.0
BATM Batumi 23.26 85⇑ *i*P P 10 39 06.8 +1.8
KZIT Kziot 23.27 116 P P 10 39 03.9 -1.3
comp=Z,148nm,1.2s
KIV Kislovodsk 23.39 79 *e*P P 10 39 06.0 -0.4
comp=Z,193nm,1.1s
KIV Kislovodsk 23.39 79⇑ *i*P P 10 39 08.6 +2.2
KIV Kislovodsk 23.39 79 *i*P P 10 39 10.4 +4.0
SNR=28

KIV Kislovodsk 23.39 79 *e*P P 10 39 06.7 +0.3
KIV *e*S S 10 43 20.3 +1.1
KIV pmax pmax
comp=Z,480nm,1.1s
KIV MLR MLR
comp=Z,2μm,15.0s
KVAR Kislovodsk Arr 23.39 79 P P 10 39 08.5 +2.0
comp=Z,6.8nm,0.5s,baz=280,slow=19,SNR=12
KVAR LR LR 10 49 05.6
comp=Z,2μm,21.2s,baz=338,slow=39
GOF Gofitskoye 23.43 76⇑ *e*P P 10 39 08.5 +1.7
GOF pmax pmax
comp=Z,63nm,0.6s
NEY Neytrino 23.56 81 *i*P P 10 39 10.3 +2.0
NEY pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 23.58 79 P P 10 39 09.6 +1.4
comp=Z,10nm,0.6s,baz=256,slow=14,SNR=23
KBZ LR LR 10 51 13.6
comp=Z,609nm,18.0s,baz=300,slow=44
LISJ El Lisan 23.76 114 P P 10 39 12.4 +2.4
WALJ Wala 23.77 113 P P 10 39 16.6 +6.4
STEI Steigen 24.05 5 *e*P P 10 39 13.5 +1.1
ASF Jabal al Asfar 24.13 110 P P 10 39 13.9 +0.2
comp=Z,24nm,0.9s,baz=285,slow=2.1,SNR=21
ASF PcP PcP 10 42 55.3 +0.8
comp=Z,3.8nm,0.7s,baz=37,slow=3.4,SNR=5.3
ASF ScP ScP 10 46 33.3 +0.7
comp=Z,4.4nm,0.8s,baz=281,slow=1.7,SNR=7.3
ASF LR LR 10 50 39.8
comp=Z,1μm,18.3s,baz=263,slow=42
ASF Jabal al Asfar 24.13 110 P P 10 39 15.4 +1.8
NCK Nalchik 24.13 80 *i*P P 10 39 16.7 +3.2
NCK pmax pmax
comp=Z,28nm,0.8s
JDRJ Daraweish 24.21 115 P P 10 39 16.7 +2.2
KLMR Klimovskoe 24.25 36 *e*P P 10 39 12.7 -1.7
KLMR pmax pmax
comp=Z,147nm,0.7s
KLMR Klimovskoe 24.25 36 *e*P P 10 39 12.7 -1.7
KLMR AMP 10 39 17.1
comp=Z,147nm,0.7s
HRFI Mount Harif 24.26 117 P P 10 39 15.0 +0.2
comp=Z,67nm,1.1s
EIL Elat 24.45 118 P P 10 39 16.8 +0.3
comp=Z,14nm,0.7s,baz=332,slow=11,SNR=9.7
EIL PcP PcP 10 42 55.8 +0.6
comp=Z,6.2nm,0.6s,baz=316,slow=4.6,SNR=5.7
EIL ScP ScP 10 46 34.0 +0.5
comp=Z,3.8nm,0.7s,baz=281,slow=3.5,SNR=3.7
EIL LR LR 10 51 26.3
comp=Z,1μm,21.8s,baz=335,slow=43
EIL Elat 24.45 118 P P 10 39 30.6 +14
AQBJ Aqaba 24.48 117 P P 10 39 18.5 +1.8
ZEI Tsey 24.52 81 *e*P P 10 39 18.2 +0.9
ZEI *e*S S 10 43 41.7 +4.2
ZEI pmax pmax
comp=Z,64nm,0.6s
AKH Akhalkalaki 24.61 85 *e*P P 10 39 19.0 +1.0
comp=Z,77nm,0.8s
AKH Akhalkalaki 24.61 85⇓ *i*P P 10 39 20.4 +2.3
AKH Akhalkalaki 24.61 85 *e*P P 10 39 19.0 +1.0
AKH pmax pmax
comp=Z,77nm,0.8s
TBLG Delisi 25.40 83 *e*P P 10 39 25.3 +0.2
comp=Z,44nm,0.7s
TBLG Delisi 25.40 83 *e*P P 10 39 25.3 +0.2
TBLG pmax pmax
comp=Z,44nm,0.7s
GROC Groznyy 25.76 79 *e*P P 10 39 26.7 -1.5
GROC *e* 10 40 03.6
GROC *e*S S 10 43 56.1 -0.8
GROC pmax pmax
comp=Z,46nm,0.6s
KTK1 Kautokeino 25.89 11 *e*P P 10 39 29.2 0.0
GNI Garni 25.91 87 P P 10 39 31.4 +1.5
comp=Z,63nm,0.9s,baz=354,slow=3.0,SNR=15
GNI LR LR 10 51 02.9
comp=Z,674nm,21.9s,baz=286,slow=40
GNI Garni 25.91 87 *e*P P 10 39 30.1 +0.2
comp=Z,185nm,1.1s
GNI Garni 25.91 87 *i*P P 10 39 32.5 +2.7
SNR=16
TRO Tromso 26.00 7 *e*P P 10 39 29.9 -0.2
APA Apatity 26.59 20⇑ *i*P P 10 39 35.4 -0.1
APA *i*S S 10 44 07.0 -2.7
APA pmax pmax
comp=Z,14nm,0.9s
APA MLR MLR
comp=Z,3μm,12.0s
ARA0 ARCESS Array S 26.70 12 *e*P P 10 39 35.9 -0.7
ARA0 *e*PcP PcP 10 42 59.5 0.0
ARCES ARCESS Array B 26.70 12 P P 10 39 35.9 -0.7
comp=Z,7.6nm,0.6s,baz=200,slow=10,SNR=41
ARCES PcP PcP 10 42 59.5 0.0
comp=Z,7.2nm,0.8s,baz=234,slow=3.0,SNR=4.8
ARCES LR LR 10 51 31.4
comp=Z,969nm,19.5s,baz=221,slow=40
ARE0 ARCESS Array S 26.70 12 *e*P P 10 39 36.0 -0.5
comp=Z,1.2nm,0.9s
MAK Makhachkala 27.03 79 *e*P P 10 39 41.1 +1.4
MAK *e*S S 10 44 17.7 +0.7
MAK pmax pmax
comp=Z,241nm,1.0s
BORG Borgarnes 27.09 331 P P 10 39 41.2 +1.2
comp=Z,3.9nm,0.7s,baz=130,slow=11,SNR=2.3
BORG LR LR 10 51 16.9
comp=Z,851nm,18.2s,baz=140,slow=38
BORG Borgarnes 27.09 331 *e*P P 10 39 40.5 +0.4
comp=Z,21nm,1.1s
LVZ Lovozero 27.15 20 *e*P P 10 39 39.1 -1.5
comp=Z,44nm,0.9s
LVZ Lovozero 27.15 20*ce*P P 10 39 40.7 +0.1
LVZ pmax pmax
comp=Z,28nm,0.8s
PRGR Permogore 27.24 37⇓ *i*P P 10 39 41.4 0.0
PRGR *e*S S 10 44 25.7 +5.8
PRGR pmax pmax
comp=Z,108nm,0.8s
PSMN Pico do Norte, 27.46 267 *e*LR LR 10 47 33.9
comp=Z,1μm,22.1s
HAMF Hammerfest 27.47 10 *e*P P 10 39 43.0 -0.4
PSET Sete Cidades 27.58 269 *e*LR LR 10 47 44.1
comp=Z,1μm,22.1s
KIRV Kirov 28.05 45 P P 10 39 48.6 -0.1
comp=Z,46nm,0.5s,baz=267,slow=4.5,SNR=17
KIRV LR LR 10 52 25.1
comp=Z,1μm,18.5s,baz=232,slow=40
JMIC Jan Mayen 28.48 347 LR LR 10 52 00.2
comp=Z,1μm,18.6s,baz=150,slow=38
PGRA Graciosa 28.73 273 *e*LR LR 10 48 04.5
comp=Z,806nm,23.3s
ROSA Rosais 29.03 273 *e*LR LR 10 48 04.5
comp=Z,442nm,20.1s
SCO Scoresbysund 30.86 340 *e*P P 10 40 15.9 +2.4
comp=Z,30nm,1.0s
SCO Scoresbysund 30.86 340 *i*P P 10 40 16.1 +2.7
SCO pmax pmax
comp=Z,29nm,1.0s
SCO Scoresbysund 30.86 340 *i*P P 10 40 16.1 +2.7
comp=Z,29nm,1.0s
TOA1 Torodi Ar. Sit 31.66 196 *e*P P 10 40 21.6 +0.5
TOA1 *e*PcP PcP 10 43 13.3 +0.4
TOA1 *e*ScP ScP 10 46 56.0 +0.2
TOA0 Torodi Ar. Sit 31.66 196 *e*P P 10 40 22.1 +1.1
comp=Z,23nm,0.8s
TORD Torodi Ar. Bea 31.66 196 P P 10 40 21.5 +0.5
comp=Z,11nm,0.8s,baz=21,slow=6.4,SNR=38
TORD PcP PcP 10 43 13.3 +0.4
comp=Z,2.2nm,0.7s,baz=15,slow=3.1,SNR=4.7
TORD ScP ScP 10 46 56.0 +0.2
comp=Z,1.5nm,0.9s,baz=359,slow=3.1,SNR=3.5
TORD LR LR 10 53 46.1
comp=Z,3μm,19.6s,baz=345,slow=37
ARU Arti 32.67 50 *e*P P 10 40 29.4 -0.1
comp=Z,84nm,0.6s
ARU Arti 32.67 50*d* *i*P P 10 40 29.5 -0.1
ARU 10 41 37.3
ARU PPP PPP 10 41 50.1
ARU 10 43 18.8
ARU S S 10 45 46.8 +1.6
ARU SS SnSn 10 47 40.5 +0.6
ARU pmax pmax
comp=Z,81nm,0.7s
ARU MLR MLR
comp=Z,3μm,14.0s

AKTO Aktyubinsk 32.69 62 P P 10 40 29.6 -0.2
AKTO pmax pmax
comp=Z,49nm,0.9s
SVE Sverdlovsk 33.82 50c *i*P **P 10 40 40.3 +0.7**
SVE *e*S **S 10 46 08.0 +4.9**
SVE *e* 10 51 01.7
SVE pmax pmax
comp=Z,204nm,1.4s
SVE MLR MLR
comp=Z,3µm,15.0s
AB31 Akbulak array 34.10 63 *i* P **P 10 40 42.0 -0.1**
AB31 pmax pmax
comp=Z,17nm,0.7s
ABKAR Akbulak array 34.10 63 *e*P **P 10 40 42.3 +0.2**
comp=Z,46nm,1.1s
SPA0 Spitsbergen Ar 34.29 2 *e*P **P 10 40 43.9 +0.5**
comp=Z,72nm,1.1s
SPA0 Spitsbergen Ar 34.29 2 *e*P **P 10 40 45.4 +1.9**
DAG Danmarks Havn 34.88 349 *i* P **P 10 40 50.9 +2.4**
DAG pmax pmax
comp=Z,310nm,1.8s
DAG Danmarks Havn 34.88 349 *i* P **P 10 40 50.9 +2.4**
comp=Z,68nm,1.8s
KBS Kingsbay 34.96 1 *e*P **P 10 40 51.3 +2.1**
comp=Z,38nm,1.0s
KBS Kingsbay 34.96 1c *i*P **P 10 40 50.0 +0.8**
KBS pmax pmax
comp=Z,42nm,0.7s
RAYN Ar Rayn 35.52 114 *e*P **P 10 40 54.6 0.0**
comp=Z,17nm,1.1s
RAYN Ar Rayn 35.52 114 P **P 10 40 54.0 -0.7**
RAYN Ar Rayn 35.52 114 *e*P **P 10 40 54.6 0.0**
RAYN pmax pmax
comp=Z,17nm,1.1s
GEYT Alibeck 36.37 83 P **P 10 41 02.9 +1.1**
comp=Z,53nm,0.6s,baz=281,slow=8.6,SNR=69
GEYT LR LR 10 59 50.8
comp=Z,588nm,18.1s,baz=220,slow=43
GYA0B ALIBECK ARRAY 36.37 83 *e*P **P 10 41 02.6 +0.8**
comp=Z,60nm,0.6s
SUMG Summit 36.38 338 *e*P **P 10 41 03.2 +1.2**
comp=Z,31nm,1.3s
SUMG Summit 36.38 338 ‖ *i*P **P 10 41 03.6 +1.6**
SUMG Summit 36.38 338 ‖ *i*P **P 10 41 03.6 +1.6**
NRS Narsarsuaq 36.44 318 *e*P **P 10 41 02.9 +0.9**
comp=Z,20nm,0.7s
NRS Narsarsuaq 36.44 318 *e*P **P 10 41 02.9 +0.9**
NRS pmax pmax
comp=Z,20nm,0.7s
IVI Ivigtut 37.77 318 *e*P **P 10 41 14.3 +1.0**
comp=Z,53nm,1.5s
SFJD Kangerlussuaq 39.07 327 *e*P **P 10 41 21.4 -2.9**
comp=Z,36nm,1.0s
SFJD Kangerlussuaq 39.07 327 *e*P **P 10 41 21.4 -2.9**
SFJD pmax pmax
comp=Z,36nm,1.0s
ILULI Ilulissat 39.48 331 *e*P **P 10 41 28.2 +0.6**
comp=Z,41nm,0.8s
ILULI Ilulissat 39.48 331 *e*P **P 10 41 28.2 +0.6**
ILULI pmax pmax
comp=Z,41nm,0.8s
DBIC Dimbokro 39.50 204 P **P 10 41 31.3 +2.9**
comp=Z,3.7nm,0.6s,baz=4.3,slow=11,SNR=7.0
DBIC LR LR 10 58 24.5
comp=Z,2µm,20.5s,baz=3.5,slow=37
DBIC Dimbokro 39.50 204 *e*P **P 10 41 31.1 +2.7**
comp=Z,30nm,1.4s
TIC Toumodi 39.57 204 *e*P **P 10 41 24.4 -4.6**
BRVK Borovoye 39.75 55 *e*P **P 10 41 30.6 +0.5**
comp=Z,50nm,0.9s
BRVK Borovoye 39.75 55d *i*P **P 10 41 30.5 +0.4**
BRVK pmax pmax
comp=Z,44nm,0.9s
BRVK Borovoye 39.75 55 P **P 10 41 31.1 +1.0**
SNR=31
KIC Kosan Boka 39.76 203 *e*P **P 10 41 26.3 -4.2**
comp=Z,47nm,1.2s
LIC Lamto 39.98 204 *e*P P 10 41 23.8 -8.5
comp=Z,61nm,0.9s
SHME Shamm 41.20 100 P **P 10 41 41.3 -1.1**
BANOM Banah 41.39 100 P **P 10 41 43.0 -1.0**
ASUD Al Ashush, Dub 41.51 103 P **P 10 41 44.9 -0.1**
ASUD Al Ashush, Dub 41.51 103 P **P 10 41 45.2 +0.2**
SNR=6.8
NAZ Nazwa, Dubai 41.52 102 *i* P **P 10 41 44.3 -0.8**
SNR=14
FAQ Al Faqa, Dubai 41.62 102 *i* P **P 10 41 44.9 -1.0**
SNR=9.6
MSFE Esma-Masafi 41.64 101 P **P 10 41 44.2 -1.8**
MDH Madha 41.77 101 P **P 10 41 44.5 -2.6**
UOSS Minazif 41.93 102 *e*P **P 10 41 47.2 -1.1**
comp=Z,39nm,0.8s
HATD Hatta, Dubai 41.95 102 *i* P **P 10 41 47.7 -0.9**
SNR=7.9
ASHO Ashiyiah 41.99 102 *i* P **P 10 41 47.7 -1.2**
SNR=6.5
ALNE Al Ain 42.17 103 *i* P **P 10 41 49.4 -1.0**
SNR=16
OTUK Ortayu 42.29 62 P **P 10 41 50.9 -0.2**
OTUK pmax pmax
comp=Z,96nm,1.2s
KK31 Karatay Array 42.92 69 *e*P **P 10 41 57.0 +0.8**
comp=Z,58nm,0.7s
KK31 Karatay Array 42.92 69 *i* P **P 10 41 57.1 +0.8**
KK31 pmax pmax
comp=Z,43nm,0.7s
KKAR Karatay Array 42.92 69 *e*P **P 10 41 57.5 +1.2**
comp=Z,58nm,0.7s
KKAR Karatay Array 42.92 69 *e*P **P 10 41 57.5 +1.2**
KKAR pmax pmax
comp=Z,58nm,0.7s
BTK Batken 44.39 73 *e*P **P 10 42 09.7 +1.4**
comp=Z,40nm,0.6s
BTK Batken 44.39 73 *e*P **P 10 42 09.7 +1.4**
BTK pmax pmax
comp=Z,40nm,0.6s
GAR Garm 44.51 75 *e*P **P 10 42 10.2 +0.9**
comp=Z,163nm,0.5s
GAR Garm 44.51 75 *e*P **P 10 42 10.2 +0.9**
GAR pmax pmax
comp=Z,163nm,0.5s
TULEG Thule 45.03 341 *e*P **P 10 42 13.5 +0.7**
comp=Z,39nm,0.9s
DRLN Deer Lake 45.24 301 *e*P **P 10 42 15.7 +0.9**
comp=Z,43nm,0.8s
NRIK Noril'sk 45.28 29 P **P 10 42 15.9 +1.1**
comp=Z,20nm,0.9s,baz=272,slow=6.4,SNR=12
NRIK LR LR 11 03 53.4
comp=Z,2µm,18.4s,baz=279,slow=40
EKS2 Erkin-Say 45.29 69 P **P 10 42 17.3 +1.9**
SNR=129
ARSB Arslanbob 45.32 71 *e*P **P 10 42 17.1 +1.4**
comp=Z,183nm,1.3s
KURK Kurchatov 45.36 56 *e*P **P 10 42 15.7 0.0**
comp=Z,51nm,0.6s
KURK Kurchatov 45.36 56 *i* P **P 10 42 15.3 -0.4**
KURK pmax pmax
comp=Z,35nm,0.8s
KURK Kurchatov 45.36 56 P **P 10 42 16.3 +0.6**
SNR=17
AML Almayashu 45.46 69 P **P 10 42 19.8 +2.7**
SNR=21
USP Ospenovka 45.52 67 P **P 10 42 17.9 +0.8**
SNR=18
KBL Kabul 45.75 81 *e*P **P 10 42 19.2 -0.1**
comp=Z,16nm,0.7s
KBL Kabul 45.75 81 *e*P **P 10 42 19.2 -0.1**
KBL pmax pmax
comp=Z,16nm,0.7s
AAK Ala-Archa 45.78 68 P **P 10 42 21.3 +2.0**
SNR=24
AAK Ala-Archa 45.78 68 *e*P **P 10 42 19.8 +0.4**
comp=Z,70nm,1.1s
AAK Ala-Archa 45.78 68 *i* P **P 10 42 20.6 +1.2**
SNR=16
AAK Ala-Archa 45.78 68 P **P 10 42 20.1 +0.7**
AAK pmax pmax
comp=Z,61nm,1.0s
FRU1 Bishkek 45.80 68 *e*P **P 10 42 21.3 +1.9**
comp=Z,130nm,1.0s
FRU1 Bishkek 45.80 68 *e*P **P 10 42 21.3 +1.9**
FRU1 pmax pmax
comp=Z,130nm,1.0s
CHMS Chumysh 45.80 68 P **P 10 42 21.1 +1.7**
SNR=9.2
UCH Uchtor 45.97 69 P **P 10 42 23.2 +2.0**
SNR=37

KBK Karagaybulak 46.08 68 P P 10 42 26.5 +4.8
SNR=7.8
TKM2 Tokmak 2 46.40 67 P **P 10 42 25.5 +1.2**
SNR=16
TKM2 Tokmak 2 46.40 67 P **P 10 42 24.7 +0.4**
TKM2 pmax pmax
comp=Z,18nm,0.9s
KZA Kyzart 46.53 69 P **P 10 42 27.8 +2.3**
SNR=120
NVS Novosibirsk 46.66 50 ‖ *i*P **P 10 42 28.2 +2.3**
NVS *e* 10 44 14.0
NVS *e*S **S 10 49 18.9 +4.2**
NVS pmax pmax
comp=Z,60nm,0.9s
NVS pmax pmax
comp=N,3.0nm,0.5s
NVS pmax pmax
comp=E,16nm,0.7s
NVS smax smax
comp=N,13nm,1.6s
BOOM Boomskoye usch 46.81 68 *e*P **P 10 42 29.1 +1.6**
comp=N,35nm,0.9s
BOOM Boomskoye usch 46.81 68 *e*P **P 10 42 29.1 +1.6**
BOOM pmax pmax
comp=Z,35nm,0.9s
ULHL Ulahol 47.12 68 P P 10 42 36.3 +6.4
SNR=16
ZAA1 Zalesovo Array 47.84 50 *e*P **P 10 42 35.7 +0.6**
ZAA1 *e*PP **PP 10 44 30.1 +3.5**
ZAA0 Zalesovo Array 47.84 50 *e*P **P 10 42 34.2 -0.9**
comp=Z,26nm,0.9s
ZALV Zalesovo Beam 47.84 50 P **P 10 42 35.7 +0.6**
comp=Z,14nm,0.5s,baz=287,slow=8.4,SNR=48
ZALV PP **PP 10 44 30.1 +3.5**
comp=Z,8.6nm,0.7s,baz=294,slow=11,SNR=4.3
ZALV LR LR 11 05 31.9
comp=Z,1µm,19.6s,baz=283,slow=40
KSH Kashi 48.17 71 P **P 10 42 39.0 +0.9**
KSH sP sP 10 42 45.9 +2.4
KSH PP **PP 10 44 30.8 +0.7**
KSH S **S 10 49 35.1 -1.8**
KSH SS **SS 10 52 59.4 -6.3**
KSH pmax pmax
comp=Z,160nm,0.8s
KSH pmax pmax
comp=Z,2µm,3.9s
KSH LR LR
comp=Z,4µm,15.3s
KSH LR LR
comp=Z,2µm,11.5s
KSH LR LR
comp=Z,3µm,15.7s
SCHQ Schefferville 48.69 311 P **P 10 42 42.2 +0.6**
comp=Z,2.0nm,0.3s,baz=61,slow=4.9,SNR=3.7
SCHQ LR LR 11 01 36.1
comp=Z,825nm,20.5s,baz=81,slow=34
SCHQ Schefferville 48.69 311 *e*P **P 10 42 42.4 +0.7**
comp=Z,9.9nm,0.8s
PDGK Podgornoye 48.79 65 P **P 10 42 43.0 +0.2**
PDGK pmax pmax
comp=Z,51nm,0.7s
MAKZ Makanchi 48.89 60 *e*P **P 10 42 43.8 +0.5**
comp=Z,21nm,0.8s
MAKZ Makanchi 48.89 60 *e*P **P 10 42 43.8 +0.5**
MAKZ pmax pmax
comp=Z,21nm,0.8s
MK31 Makanchi Array 49.09 60 *e*P **P 10 42 45.0 +0.1**
comp=Z,24nm,0.8s
MK31 Makanchi Array 49.09 60 *i* P **P 10 42 45.0 +0.1**
MK31 pmax pmax
comp=Z,46nm,1.0s
MK32 Makanchi Array 49.09 60 *e*P **P 10 42 45.7 +0.8**
MK32 *e*ScP **ScP 10 48 03.4 +0.3**
MKAR Makanchi Array 49.09 60 P **P 10 42 45.7 +0.8**
comp=Z,28nm,0.8s,baz=283,slow=6.2,SNR=136
MKAR ScP **ScP 10 48 03.4 +0.3**
comp=Z,1.3nm,0.8s,baz=318,slow=1.9,SNR=3.6
MKAR LR LR 11 05 05.3
comp=Z,2µm,19.8s,baz=294,slow=38
NIL Nilore 49.20 80 *e*P **P 10 42 47.2 +1.3**
comp=Z,93nm,1.0s
NIL Nilore 49.20 80 *e*P **P 10 42 47.2 +1.3**
NIL pmax pmax
comp=Z,93nm,1.0s
GBN Guysborough 49.26 298 *e*P **P 10 42 46.6 +0.5**
comp=Z,25nm,0.9s
DGZ Jazzator, Alta 50.98 55c *i*P **P 10 43 00.8 +1.5**
DGZ pmax pmax
comp=Z,12nm,0.7s
LMN Caledonia Moun 51.13 300 *e*P **P 10 43 00.2 -0.2**
comp=Z,11nm,0.8s
KMBO Kilima Mbogo 51.16 144 P **P 10 43 01.1 -0.1**
comp=Z,0.8nm,0.3s,baz=34,slow=11,SNR=3.0
KMBO LR LR 11 07 48.0
comp=Z,506nm,18.4s,baz=264,slow=40
KMBO Kilima Mbogo 51.16 144 *e*P **P 10 43 00.5 -0.6**
comp=Z,7.6nm,1.3s
KMBO Kilima Mbogo 51.16 144 *e*P **P 10 43 00.5 -0.6**
KMBO pmax pmax
comp=Z,8.0nm,1.3s
BATG Bathurst New B 51.27 302 *e*P **P 10 43 01.2 -0.2**
comp=Z,25nm,1.1s
RES Resolute Bay 51.75 341 *e*P **P 10 43 04.9 +0.4**
comp=Z,20nm,1.1s
RES Resolute Bay 51.75 341 *e*P **P 10 43 04.9 +0.4**
RES pmax pmax
comp=Z,20nm,1.1s
DHRM DHARAMSHALA 52.11 79 *e*P **P 10 43 08.5 +0.4**
PQI Presque Isle 52.74 302 *e*P **P 10 43 11.9 -0.5**
comp=Z,17nm,1.0s
SMLA Simla 53.34 80 *e*P **P 10 43 16.7 -0.2**
WMQ Urumqi 53.84 61 P **P 10 43 23.9 +3.4**
WMQ pP sP 10 43 28.4 +2.4
WMQ S **S 10 50 56.8 +1.7**
WMQ SS **SS 10 54 36.6 +1.1**
WMQ pmax pmax
comp=Z,42nm,0.9s
WMQ pmax pmax
comp=Z,440nm,3.7s
WMQ LR LR
comp=Z,1µm,16.9s
WMQ LR LR
comp=Z,1µm,13.5s
WMQ LR LR
comp=Z,1µm,19.5s
PKME Peaks-Kenny Pk 54.19 301 *e*P **P 10 43 23.6 +0.6**
comp=Z,16nm,0.9s
PKME Peaks-Kenny Pk 54.19 301 P **P 10 43 21.9 -1.0**
baz=61
DDI Dehra Dun 54.43 80 *e*P **P 10 43 26.0 +1.0**
DDI IAmb IAmb 10 43 27.0
CHGQ Chibougamau 54.95 308 P **P 10 43 27.8 -0.7**
baz=61
LATQ La Tuque 55.26 305 P **P 10 43 30.1 -0.6**
baz=60
MOQ Mont Orford 55.98 302 *e*P **P 10 43 36.5 +0.5**
LBNH Lisbon 56.33 301 *e*P **P 10 43 39.6 +1.1**
comp=Z,11nm,0.8s
LBNH Lisbon 56.33 301 *e*P **P 10 43 39.6 +1.1**
LBNH pmax pmax
comp=Z,11nm,0.8s
LBNH Lisbon 56.33 301 P **P 10 43 38.3 -0.2**
baz=59
TIXI Tiksi 56.79 19 *e*P **P 10 43 42.5 +1.3**
comp=Z,15nm,1.2s
TIXI Tiksi 56.79 19d *i*P **P 10 43 42.3 +1.1**
TIXI pmax pmax
comp=Z,9.0nm,0.8s
LSQQ Lebel-sur-Quev 56.85 308 P **P 10 43 41.2 -0.9**
baz=59
MATQ Matagami 56.86 309 P **P 10 43 41.2 -0.9**
baz=59
TRQ Mont Tremblant 56.90 304 *e*P **P 10 43 43.7 +1.1**
FRNY Flat Rock 57.04 303 *e*P **P 10 43 43.2 -0.2**
comp=Z,7.8nm,1.1s
VLDQ Val d'Or 57.61 308 *e*P **P 10 43 49.9 +2.5**
comp=Z,12nm,1.1s
QUA2 Belchertown 57.62 299 *e*P **P 10 43 48.2 +0.6**
comp=Z,15nm,0.8s
MOY Mondy 57.64 47 *e*P **P 10 43 50.0 +2.2**
MOY pmax pmax
comp=Z,95nm,2.2s
D54A Lac Fusel, La 57.65 306 P **P 10 43 46.3 -1.4**
baz=58
LONY Lake Ozonia 57.76 303 *e*P **P 10 43 50.9 +2.3**
comp=Z,12nm,1.3s

LONY Lake Ozonia 57.76 303 P **P 10 43 47.3 -1.3**
baz=58
ACCN Adirondack Com 57.85 301 *e*P **P 10 43 50.4 +1.1**
comp=Z,7.2nm,0.9s
ORIO Orleans, Innes 57.87 304 P **P 10 43 48.8 -0.5**
baz=58
BHPL Bhopal 58.19 87 *e*P **P 10 43 49.3 -2.6**
BHPL IAmb IAmb 10 43 58.0
comp=Z,69nm,1.9s
D53A Lac Vacive, Po 58.30 307 *e*P **P 10 43 54.6 +2.3**
comp=Z,19nm,1.5s
D53A Lac Vacive, Po 58.30 307 P **P 10 43 52.2 -0.1**
baz=58
E54A Lac Daplat, Po 58.34 306 P **P 10 43 52.2 -0.4**
baz=58,SNR=5.2
E53A Dumoine, Ponti 58.65 306 P **P 10 43 54.2 -0.6**
baz=57,SNR=7.4
G55A Calabogie 58.70 304 P **P 10 43 54.9 -0.2**
baz=57
D52A ZEK Kipawa Sen 58.76 307 P **P 10 43 55.6 0.0**
baz=57
H56A Elgin 58.78 304 P **P 10 43 55.3 -0.4**
baz=57
PEMO Pembroke 58.78 305 P **P 10 43 55.9 +0.2**
baz=57
PLVO Plevna 59.03 304 *e*P **P 10 43 56.3 -1.1**
comp=Z,10nm,0.9s
PLVO Plevna 59.03 304 P **P 10 43 57.0 -0.3**
baz=57
TLY Talaya 59.03 46 *e*P **P 10 43 58.8 +1.5**
comp=Z,67nm,0.9s
TLY Talaya 59.03 46 *e*P **P 10 43 58.6 +1.2**
TLY *e* 10 44 40.3
TLY *e* 10 46 08.2
TLY *e*PPP PPP 10 47 30.3
TLY *e*S **S 10 52 08.1 +4.5**
TLY pmax pmax
comp=Z,166nm,0.9s
TLY MLR MLR
comp=Z,5µm,18.0s
M61A Granite Spring 59.04 299 P **P 10 43 57.3 -0.2**
baz=56
IRK Irkutsk 59.05 46 *e*P **P 10 43 58.5 +1.0**
IRK pmax pmax
comp=Z,156nm,2.4s
ALGO Algonquin Park 59.11 306 P **P 10 43 57.8 -0.1**
baz=57
PYUN Piuthan 59.22 79 *e*P **P 10 43 59.6 +0.3**
comp=Z,190nm,1.1s
D51A Lot 18 Range I 59.25 307 P **P 10 43 59.2 +0.3**
baz=57
E52A Mattawa 59.28 306 P **P 10 43 59.4 +0.3**
baz=57
PAL Palisades 59.30 299 P **P 10 43 59.0 -0.3**
baz=56
H55A Tweed 59.36 304 P **P 10 44 00.0 +0.4**
baz=57
CPNY Central Park 59.45 299 *e*P **P 10 43 58.9 -1.5**
comp=Z,28nm,1.0s
BANO Bancroft 59.55 305 P **P 10 44 00.7 -0.3**
baz=56
ZAK Zakamensk 59.55 48 *e*P **P 10 44 02.3 +1.2**
ZAK pmax pmax
comp=Z,20nm,1.2s
PECO Prince Edward 59.58 303 *e*P **P 10 44 01.3 +0.1**
comp=Z,9.1nm,1.0s
PECO Prince Edward 59.58 303 P **P 10 44 01.1 -0.2**
baz=56
DANN Dangsing 59.62 79 *e*P **P 10 44 02.3 +0.2**
comp=Z,182nm,1.0s
E51A G1948 Merrick 59.63 307 P **P 10 44 01.5 -0.1**
baz=56
DELO Deloro Mine 59.64 304 *e*P **P 10 44 01.9 +0.3**
comp=Z,10nm,1.4s
DELO Deloro Mine 59.64 304 P **P 10 44 01.3 -0.3**
baz=56
I55A Frankford 59.84 304 P **P 10 44 03.0 0.0**
baz=56
KOLN Koldanda 59.85 79 *e*P **P 10 44 03.6 0.0**
comp=Z,60nm,0.9s
G53A Haliburton 59.90 305 P **P 10 44 03.5 +0.1**
baz=56
BINY Binghamton 59.93 301 P **P 10 44 03.2 -0.5**
baz=56
F52A Sundridge 59.94 306 P **P 10 44 03.4 -0.3**
baz=56
BUKO Buck Lake 60.18 306 P **P 10 44 04.1 -1.2**
baz=56
F51A Arnstein 60.21 306 P **P 10 44 05.5 0.0**
baz=56
D49A Beulah Townshi 60.28 308 P **P 10 44 05.3 -0.7**
baz=56
SADO Sadowa 60.40 305 *e*P **P 10 44 07.3 +0.4**
comp=Z,9.9nm,0.8s
WLVO Wesleyville 60.43 304 P **P 10 44 06.9 -0.2**
baz=56
J55A Hilton 60.45 303 *e*P **P 10 44 06.2 -1.1**
comp=Z,16nm,0.8s
J55A Hilton 60.45 303 P **P 10 44 07.1 -0.1**
baz=56
N59A State Game Lan 60.52 300 *e*P **P 10 44 06.3 -1.4**
comp=Z,8.8nm,0.9s
N59A State Game Lan 60.52 300 P **P 10 44 07.6 -0.2**
baz=56
D48A Paudash Townsh 60.59 308 P **P 10 44 08.0 -0.1**
baz=56
O60A Telford 60.62 299 P **P 10 44 08.3 -0.1**
baz=55
KLBO Killbear Provi 60.70 306 P **P 10 44 09.1 +0.2**
baz=56
MEDO Medina 60.90 303 *e*P **P 10 44 12.4 +2.2**
comp=Z,14nm,0.8s
K55A Perry 60.91 303 P **P 10 44 11.1 +0.7**
baz=55
J54A Appleton 60.95 303 P **P 10 44 10.9 +0.4**
baz=55
DMN Daman 61.01 79 *e*P **P 10 44 11.8 +0.2**
comp=Z,175nm,1.4s
KKN Kakani 61.03 78 *e*P **P 10 44 12.4 +0.8**
comp=Z,43nm,0.7s
P60A Greenville 61.06 299 P **P 10 44 11.0 -0.4**
baz=55
O59A Robesonia 61.12 299 P **P 10 44 11.8 0.0**
baz=55
TORO Toronto--Lesli 61.17 304 P **P 10 44 12.3 +0.2**
baz=55
E48A Lockeyer 61.19 308 P **P 10 44 12.5 +0.4**
baz=55
PKIN Phulchoki 61.24 78 *e*P **P 10 44 13.1 0.0**
comp=Z,27nm,0.6s
PKI Pulchoki 61.25 78 *e*P **P 10 44 13.3 0.0**
comp=Z,116nm,1.1s
GUN Gumba 61.38 78 *e*P **P 10 44 14.5 +0.3**
comp=Z,141nm,0.7s
D47A Chapleau 61.39 309 P **P 10 44 13.5 0.0**
baz=55
Q61A Milford 61.39 298 P **P 10 44 13.8 +0.1**
baz=55
MVL Millersville 61.40 299 *e*P **P 10 44 13.3 -0.4**
comp=Z,25nm,1.6s
L55A Hinsdale 61.44 302 P **P 10 44 14.0 0.0**
baz=55
F49A Sandfield 61.53 307 P **P 10 44 14.7 +0.2**
baz=55
TOBO Tobermory, Bru 61.53 307 P **P 10 44 14.8 +0.3**
baz=55
ACTO Acton 61.60 304 P **P 10 44 16.5 +1.5**
baz=55
M56A Emporium 61.69 301 P **P 10 44 15.3 -0.4**
baz=55
N57A Milroy 61.72 300 P **P 10 44 14.9 -1.0**
baz=55,SNR=9.9
R61A Willards 61.72 297 P **P 10 44 15.7 -0.1**
baz=54
BMRO Meriville Lake 61.72 306 P **P 10 44 16.3 +0.6**
baz=55
JIRN Jiri 61.75 78 *e*P **P 10 44 17.1 +0.4**
comp=Z,140nm,0.7s
F48A Evansville 61.82 308 P **P 10 44 16.0 -0.4**
baz=55
E47A Iron Bridge 61.83 308 P **P 10 44 16.7 +0.2**
baz=54
BWLO Walkerton 61.95 305 P **P 10 44 17.7 +0.3**
baz=54
SSPA Standing Stone 61.99 301 *e*P **P 10 44 18.2 +0.5**
comp=Z,20nm,1.1s
SSPA Standing Stone 61.99 301 P **P 10 44 17.7 0.0**
baz=54

D46A	Sault St. Mari	62.00 309	P	P	10 44 17.5	-0.2
	baz=54					
M55A	Ridgway	62.05 302	P	P	10 44 18.2	0.0
	baz=54					
I51A	Listowel	62.06 305	P	P	10 44 17.9	-0.2
	baz=54					
J52A	Paris	62.06 304	P	P	10 44 17.7	-0.4
	baz=54					
N56A	West Decatur	62.08 301	P	P	10 44 18.3	-0.1
	baz=54					
O57A	Amberson	62.08 300	P	P	10 44 18.4	+0.1
	baz=54					
Q59A	Harwood	62.25 298	P	P	10 44 19.2	-0.3
	baz=54					
BASO	Ashfield	62.32 305	P	P	10 44 19.9	+0.1
	baz=54					
E46A	Sault Ste Mari	62.46 309	eP	P	10 44 21.4	+0.7
	comp=Z,9.3nm,0.8s					
E46A	Sault Ste Mari	62.46 309	P	P	10 44 20.2	-0.5
	baz=54					
M54A	Oil Creek Stat	62.58 302	eP	P	10 44 20.3	-1.4
	comp=Z,21nm,1.1s					
M54A	Oil Creek Stat	62.58 302	P	P	10 44 21.0	-0.7
	baz=54,SNR=5.4					
N55A	Marion Center	62.59 301	eP	P	10 44 20.6	-1.2
	comp=Z,15nm,0.9s					
N55A	Marion Center	62.59 301	P	P	10 44 22.0	+0.3
	baz=54					
O56A	Blue Knob Stat	62.63 301	eP	P	10 44 22.4	+0.3
	comp=Z,22nm,1.1s					
O56A	Blue Knob Stat	62.63 301	P	P	10 44 22.1	0.0
	baz=54					
L53A	Girard	62.68 303	P	P	10 44 22.8	+0.5
	baz=54					
SONA0	Songino Array	62.69 49	eP	P	10 44 23.7	+1.3
SONM	Songino Array	62.69 49	P	P	10 44 23.7	+1.3
	comp=Z,28nm,0.9s,baz=290,slow=8.0,SNR=67					
SONM			LR	LR	11 13 32.9	
	comp=Z,1μm,21.3s,baz=301,slow=38					
P57A	Homestead Farm	62.74 300	P	P	10 44 23.4	+0.7
	baz=54					
H48A	Harrisville	62.88 307	eP	P	10 44 25.5	+1.9
	comp=Z,29nm,1.1s					
G47A	Hillman	62.91 308	P	P	10 44 23.9	+0.2
	baz=54					
ULN	Ulaanbaatar	63.03 49	eP	P	10 44 25.9	+1.2
	comp=Z,31nm,1.0s					
ULN	Ulaanbaatar	63.03 49	ceP	P	10 44 25.2	+0.5
ULN			pmax	pmax		
	comp=Z,56nm,1.7s					
I49A	Point Hope	63.04 306	eP	P	10 44 26.4	+1.8
	comp=Z,18nm,0.8s					
I49A	Point Hope	63.04 306	P	P	10 44 24.9	+0.2
	baz=54					
N54A	Moraine State	63.10 302	eP	P	10 44 25.9	+0.8
	comp=Z,18nm,1.1s					
N54A	Moraine State	63.10 302	P	P	10 44 24.9	-0.2
	baz=54					
O55A	Ligonier	63.12 301	P	P	10 44 25.1	-0.2
	baz=54					
M53A	WI Miller and	63.24 303	P	P	10 44 26.2	+0.2
	baz=54					
P56A	Dayton Farm, R	63.25 300	P	P	10 44 25.7	-0.4
	baz=54					
Q57A	Strasburg	63.26 299	P	P	10 44 26.4	+0.2
	baz=54					
R58A	Rapidan	63.44 298	P	P	10 44 27.9	+0.5
	baz=53					
R58B	Mineral	63.55 298	eP	P	10 44 29.1	+1.0
	comp=Z,20nm,0.8s					
R58B	Mineral	63.55 298	P	P	10 44 27.8	-0.3
	baz=53,SNR=7.0					
J49A	Marlette	63.57 306	P	P	10 44 28.4	+0.2
	baz=53					
M52A	Chesterland	63.59 303	eP	P	10 44 28.3	0.0
	comp=Z,14nm,0.7s					
M52A	Chesterland	63.59 303	P	P	10 44 28.0	-0.3
	baz=53					
GTK	Tadong	63.65 77⇑	eP	P	10 44 29.0	-0.1
GTK			IAmb	IAmb	10 44 32.5	
	comp=Z,153nm,0.1s					
YAK	Yakutsk	63.66 27	eP	P	10 44 28.7	+0.3
	comp=Z,53nm,0.6s					
YAK	Yakutsk	63.66 27	eP	P	10 44 28.8	+0.3
YAK			e		10 45 11.8	
YAK			eS	S	10 52 55.4	-6.6
YAK			e*SS	sS	10 53 20.9	+12
N53A	Lisbon	63.71 302	eP	P	10 44 29.1	0.0
	comp=Z,17nm,1.1s					
N53A	Lisbon	63.71 302	P	P	10 44 29.7	+0.5
	baz=53					
Q56A	Snyder Ridge,	63.74 300	P	P	10 44 29.8	+0.5
	baz=53					
R57A	Stanardsville	63.77 299	P	P	10 44 29.7	+0.2
	baz=53					
O54A	Avella	63.80 301	P	P	10 44 29.6	-0.1
	baz=53					
GTA	Gaotai	63.84 60	eP	P	10 44 31.8	+1.6
GTA			pP	sP	10 44 35.9	+0.2
GTA			sP	pP	10 44 38.8	+4.5
GTA			S	S	10 53 05.8	+0.5
GTA			pmax	pmax		
	comp=Z,8.0nm,1.2s					
GTA			pmax	pmax		
	comp=Z,300nm,6.5s					
GTA			LR	LR		
	comp=Z,1μm,19.0s					
GTA			LR	LR		
	comp=Z,1μm,21.3s					
P55A	Reedsville	63.86 300	P	P	10 44 30.2	0.0
	baz=53					
S58A	Poland Farm, P	63.87 298	eP	P	10 44 31.5	+1.2
	comp=Z,19nm,0.9s					
S58A	Poland Farm, P	63.87 298	P	P	10 44 30.3	+0.1
	baz=53					
BOK	Bokaro	63.91 81	eP	P	10 44 31.5	+0.8
BOK			IAmb	IAmb	10 44 36.6	
	comp=Z,34nm,1.4s					
E43A	Lone Tree Farm	63.95 310	eP	P	10 44 32.3	+1.6
	comp=Z,13nm,0.8s					
E43A	Lone Tree Farm	63.95 310	P	P	10 44 31.0	+0.3
	baz=53					
LSA	Lhasa	63.97 73	eP	P	10 44 31.5	-0.1
	comp=Z,49nm,0.7s					
LSA	Lhasa	63.97 73	P	P	10 44 32.6	+1.0
LSA	Lhasa	63.97 73	eP	P	10 44 31.5	-0.1
LSA			pmax	pmax		
	comp=Z,49nm,0.7s					
J48A	Bridge Port	63.98 306	P	P	10 44 27.4	-3.5
	baz=53					
G45A	Suttons Bay	64.01 308	eP	P	10 44 31.3	+0.3
	comp=Z,13nm,0.8s					
G45A	Suttons Bay	64.01 308	P	P	10 44 30.9	-0.2
	baz=53					
P54A	Burton	64.21 301	P	P	10 44 32.1	-0.4
	baz=53					
N52A	McGinn's Farm,	64.22 303	P	P	10 44 32.8	+0.3
	baz=53					
PLIO	Pelee Island,	64.23 304	P	P	10 44 32.3	-0.2
	baz=53					
O53A	New Philadelph	64.27 302	P	P	10 44 33.0	+0.2
	baz=53					
D41A	Chassel	64.39 311	eP	P	10 44 36.5	+3.0
	comp=Z,11nm,0.8s					
D41A	Chassel	64.39 311	P	P	10 44 33.5	0.0
	baz=52					
U59A	Littleton	64.46 297	eP	P	10 44 35.1	+0.9
	comp=Z,14nm,0.9s					
U59A	Littleton	64.46 297	P	P	10 44 34.2	0.0
	baz=53					
N51A	Ashland	64.58 303	eP	P	10 44 36.6	+1.7
	comp=Z,23nm,1.2s					
N51A	Ashland	64.58 303	P	P	10 44 35.8	+1.0
	baz=53					
J47A	Sunmer	64.62 306	eP	P	10 44 36.6	+1.5
	comp=Z,12nm,0.8s					
J47A	Sunmer	64.62 306	P	P	10 44 35.4	+0.3
	baz=52					
INK	Inuvik	64.65 346	eP	P	10 44 35.3	+0.5
	comp=Z,62nm,1.6s					
INK	Inuvik	64.65 346	eP	P	10 44 35.3	+0.5
INK			pmax	pmax		
	comp=Z,62nm,1.6s					
O52A	Adamsville	64.73 302	eP	P	10 44 36.6	+0.8
	comp=Z,28nm,1.1s					
O52A	Adamsville	64.73 302	P	P	10 44 36.1	+0.2
	baz=53					
S56A	Natural Bridge	64.80 299	P	P	10 44 36.1	-0.2
	baz=53					
Q54A	Coxs Mills	64.80 301	eP	P	10 44 37.4	+1.1
	comp=Z,18nm,1.1s					
Q54A	Coxs Mills	64.80 301	P	P	10 44 36.4	+0.1
	baz=53					
P53A	Whipple	64.84 301	eP	P	10 44 37.8	+1.2
	comp=Z,19nm,0.8s					
P53A	Whipple	64.84 301	P	P	10 44 37.0	+0.4
	baz=52					
YKW3	Yellowknife Ar	64.87 335	eP	P	10 44 36.3	-0.1
	comp=Z,12nm,0.7s					
YKA	Yellowknife Ar	64.92 335	P	P	10 44 37.2	+0.6
	comp=Z,9.3nm,0.7s,baz=42,slow=6.3,SNR=84					
YKA			LR	LR	11 13 03.4	
	comp=Z,123nm,19.2s,baz=40,slow=36					
YKA			PKP2ab		11 13 31.1	
	comp=Z,0.1nm,0.3s,baz=215,slow=2.3,SNR=4.4					
YKB5	Yellowknife Ar	64.92 335	eP	P	10 44 37.2	+0.6
YKB5			⇑e		11 13 31.1	
U58A	Oxford	64.92 297	P	P	10 44 37.8	+0.7
	baz=52					
T57A	Hurt	65.01 298	eP	P	10 44 38.5	+0.8
	comp=Z,14nm,1.0s					
T57A	Hurt	65.01 298	P	P	10 44 37.9	+0.2
	baz=52					
K47A	Vermontville	65.07 306	P	P	10 44 38.4	+0.3
	baz=52					
V59A	Middlesex	65.11 296	P	P	10 44 38.7	+0.4
	baz=52					
L48A	N Adams	65.18 305	P	P	10 44 38.8	0.0
	baz=52					
O51A	Pataskala	65.18 302	P	P	10 44 38.6	-0.2
	baz=52,SNR=7.9					
M49A	Liberty Center	65.20 304	P	P	10 44 39.1	+0.3
	baz=52					
P52A	Corning	65.21 302	P	P	10 44 39.0	+0.1
	baz=52					
Q53A	Leroy	65.30 301	P	P	10 44 39.8	+0.2
	baz=52					
ACSO	Alum Creek Sta	65.36 303	eP	P	10 44 41.4	+1.5
	comp=Z,14nm,0.8s					
ACSO	Alum Creek Sta	65.36 303	P	P	10 44 40.3	+0.4
	baz=52					
R54A	Victor	65.39 300	P	P	10 44 40.3	+0.1
	baz=52					
U57A	Blanch	65.40 298	P	P	10 44 41.0	+0.7
	baz=52					
DHUB	DHUBRI	65.43 77	eP	P	10 44 40.4	-0.2
T56A	Rocky Mt	65.48 298	P	P	10 44 41.0	+0.2
	baz=52					
H43A	Windswept, Lux	65.55 309	P	P	10 44 41.1	0.0
	baz=52					
L47A	Sherwood	65.62 305	P	P	10 44 41.7	+0.1
	baz=52					
V58A	Windy Hill, Pi	65.65 297	P	P	10 44 42.6	+0.7
	baz=52					
N49A	Columbus Grove	65.66 304	eP	P	10 44 43.2	+1.3
	comp=Z,14nm,0.8s					
N49A	Columbus Grove	65.66 304	P	P	10 44 42.2	+0.4
	baz=52					
Q52A	Bidwell	65.70 301	P	P	10 44 42.5	+0.3
	baz=52					
TAWA	Tawang	65.76 74	eP	P	10 44 42.3	-0.8
O50A	Cable	65.80 303	P	P	10 44 42.5	-0.2
	baz=52,SNR=6.1					
P51A	Williamsport	65.87 302	eP	P	10 44 43.9	+0.6
	comp=Z,10nm,0.8s					
P51A	Williamsport	65.87 302	P	P	10 44 43.3	+0.1
	baz=52					
R53A	Hurricane	65.89 301	eP	P	10 44 44.6	+1.2
	comp=Z,20nm,0.8s					
R53A	Hurricane	65.89 301	P	P	10 44 43.6	+0.2
	baz=52					
T55A	Pulaski	65.91 299	P	P	10 44 43.9	+0.3
	baz=52					
FFC	Flin Flon	65.92 324	eP	P	10 44 44.0	+0.7
	comp=Z,7.8nm,0.7s					
FFC	Flin Flon	65.92 324	i P	P	10 44 46.1	+2.8
F40A	Park Falls	65.94 311	P	P	10 44 43.4	-0.3
	baz=51					
TURI	Tura	65.96 77	eP	P	10 44 43.1	-0.9
U56A	King	66.12 298	P	P	10 44 45.0	+0.1
	baz=52					
ULM	Lac du Bonnet	66.12 318	P	P	10 44 44.5	-0.2
	comp=Z,5.5nm,0.5s,baz=36,slow=5.5,SNR=5.9					
ULM			LR	LR	11 12 00.2	
	comp=Z,935nm,20.9s,baz=36,slow=34					
ULM	Lac du Bonnet	66.12 318	eP	P	10 44 43.8	-0.9
	comp=Z,10nm,0.9s					
N48A	Decatur	66.20 304	P	P	10 44 45.0	-0.3
	baz=52					
W58A	Raeford	66.20 296	P	P	10 44 46.2	+0.7
	baz=52					
O49A	Covington	66.20 303	P	P	10 44 45.2	-0.2
	baz=52					
P50A	Jamestown	66.24 303	P	P	10 44 46.0	+0.4
	baz=52					
M47A	Cromwell	66.24 305	P	P	10 44 46.4	+0.8
	baz=51					
R52A	Catlettsburg	66.32 301	P	P	10 44 46.0	-0.1
	baz=52					
Q51A	Peebles	66.32 302	eP	P	10 44 47.5	+1.3
	comp=Z,17nm,0.8s					
Q51A	Peebles	66.32 302	P	P	10 44 46.7	+0.5
	baz=52					
G40A	Rib Lake	66.40 311	eP	P	10 44 47.6	+1.1
	comp=Z,10nm,1.3s					
G40A	Rib Lake	66.40 311	P	P	10 44 46.1	-0.5
	baz=50					
T54A	Tazewell	66.44 299	P	P	10 44 47.4	+0.4
	baz=52					
U55A	TA2, Sparta	66.45 299	P	P	10 44 47.7	+0.5
	baz=52					
GUWA	GUWAHATI	66.51 76	ex	P	10 44 42.6	-4.9
GUWA			IAmb	IAmb	10 44 47.4	
	comp=Z,12nm,0.6s					
V56A	Mocksville	66.53 298	P	P	10 44 48.1	+0.6
	baz=52					
I42A	Draeger Farm,	66.55 309	eP	P	10 44 47.4	-0.2
	comp=Z,6.5nm,0.8s					
I42A	Draeger Farm,	66.55 309	P	P	10 44 48.1	+0.5
	baz=51					
TOLK	Toolik Lake Re	66.56 352	eP	P	10 44 49.0	+1.8
	comp=Z,36nm,1.1s					
TOLK	Toolik Lake Re	66.56 352	P	P	10 44 46.4	-0.9
	baz=16,SNR=30					
N47A	Urbana	66.58 305	P	P	10 44 48.0	+0.1
	baz=51					
W57A	Gilead	66.61 297	eP	P	10 44 47.2	-0.9
	comp=Z,16nm,1.0s					
W57A	Gilead	66.61 297	P	P	10 44 48.6	+0.6
	baz=52					
BILL	Bilibino	66.76 10	eP	P	10 44 47.8	-0.7
	comp=Z,20nm,1.3s					
BILL	Bilibino	66.76 10	⇓iP	P	10 44 50.1	+1.6
BILL			e*PP	sP	10 44 52.8	-1.2
BILL			e		10 44 57.1	
BILL					10 45 18.0	
BILL			pmax	pmax		
	comp=Z,23nm,1.7s					
BILL			MLR	MLR		
	comp=Z,816nm,20.0s					
STVI	Saint Thomas	66.79 273	eP	P	10 44 49.1	-0.3
	comp=Z,30nm,0.9s					
F38A	Pierce - Schro	66.86 312	P	P	10 44 48.2	-1.3
	baz=50					
G39A	Holcombe	66.91 311	P	P	10 44 50.3	+0.4
	baz=50					
R51A	Hillsboro	66.92 301	P	P	10 44 51.0	+1.0
	baz=51					
U54A	Nelsons Funny	66.93 299	eP	P	10 44 49.7	-0.4
	comp=Z,13nm,0.8s					
U54A	Nelsons Funny	66.93 299	P	P	10 44 49.8	-0.4
	baz=51					
EPYK	Eagle Plains	66.94 346	eP	P	10 44 50.1	+0.4
	comp=Z,21nm,0.7s					
EPYK	Eagle Plains	66.94 346	P	P	10 44 49.4	-0.3
	baz=25,SNR=28					
V55A	Taylorsville	66.96 298	P	P	10 44 50.1	-0.1
	baz=51					
K43A	Burlington	66.97 308	eP	P	10 44 48.7	-1.5
	comp=Z,38nm,1.1s					
K43A	Burlington	66.97 308	P	P	10 44 49.7	-0.6
	baz=51					
I41A	Arkdale	66.98 310	eP	P	10 44 50.2	0.0
	comp=Z,13nm,1.2s					
TEZP	TEZPUR	67.02 75	eP	P	10 44 50.0	-0.7
SHL	Shillong	67.04 76	eP	P	10 44 50.4	-0.7
	comp=Z,33nm,0.7s					
SHL	Shillong	67.04 76	eP	P	10 44 50.4	-0.7
SHL			pmax	pmax		
	comp=Z,33nm,0.7s					
SHL	Shillong	67.04 76	eP	P	10 44 50.2	-0.9
SHL	Shillong	67.04 76	eP	P	10 44 52.0	+0.9
L44A	Lake County Fo	67.07 307	P	P	10 44 50.4	-0.5
	baz=51					
T53A	Wise	67.09 300	P	P	10 44 51.2	+0.1
	baz=51					
X57A	Johnson Farm,	67.10 296	P	P	10 44 51.0	-0.2
	baz=51					
ZIRO	ZIRO	67.17 73	eP	P	10 44 53.8	+1.8
O47A	Sheridan	67.27 304	P	P	10 44 52.5	+0.3
	baz=51					
S51A	Beattyville	67.34 301	eP	P	10 44 54.6	+2.0
	comp=Z,8.7nm,0.9s					
S51A	Beattyville	67.34 301	P	P	10 44 52.3	-0.3
	baz=51					
R50A	Paris	67.39 302	P	P	10 44 52.7	-0.2
	baz=51					
AGMN	Agassiz Nation	67.40 316	eP	P	10 44 54.6	+1.7
	comp=Z,5.7nm,0.8s					
V54A	Nebo	67.47 298	P	P	10 44 53.4	-0.2
	baz=51					
KMSC	Kings Mountain	67.48 298	P	P	10 44 53.3	-0.2
	baz=51					
U53A	Fall Branch	67.50 299	P	P	10 44 53.4	-0.3
	baz=51					
X56A	White Oak	67.69 297	P	P	10 44 55.6	+0.7
	baz=51					
SJG	San Juan	67.81 274	LR	LR	11 14 23.5	
	comp=Z,126nm,18.2s,baz=52,slow=36					
SPMN	Marine on St.	67.83 312	eP	P	10 44 54.8	-0.9
	comp=Z,20nm,1.5s					
JFWS	Jewell Farm	67.93 309	eP	P	10 44 57.3	+1.0
	comp=Z,8.9nm,0.8s					
JFWS	Jewell Farm	67.93 309	eP	P	10 44 57.3	+1.0
JFWS			pmax	pmax		
	comp=Z,9.0nm,0.8s					
DIBR	DIBRUGARH	67.94 73	ex	P	10 45 00.1	+3.5
JSC	Jenkinsville	67.97 297	eP	P	10 44 57.6	+0.9
	comp=Z,10nm,0.9s					
JSC	Jenkinsville	67.97 297	eP	P	10 44 57.6	+0.9
JSC			pmax	pmax		
	comp=Z,10.0nm,0.9s					
T51A	Gray	67.98 300	P	P	10 44 56.5	-0.2
	baz=51					
PAULI	Pauline	67.98 298	eP	P	10 44 57.4	+0.6
	comp=Z,57nm,0.6s					
COLD	Coldfoot	67.99 352	eP	P	10 44 57.7	+1.4
	comp=Z,16nm,1.1s					
TZTN	Tazewell	68.00 300	P	P	10 44 56.5	-0.3
	baz=51					
FYU	Fort Yukon	68.05 350	eP	P	10 44 59.2	+2.6
	comp=Z,76nm,0.9s					
RDOG	Red Dog Mine	68.05 357	eP	P	10 44 57.4	+0.8
	comp=Z,66nm,1.6s					
W54A	Cherokee Point	68.06 298	P	P	10 44 57.4	+0.2
	baz=51					
V53A	Saluda	68.08 299	eP	P	10 44 58.5	+1.1
	comp=Z,8.2nm,1.0s					
V53A	Saluda	68.08 299	P	P	10 44 56.8	-0.7
	baz=51					
X55A	Gracelyn & Ava	68.09 297	P	P	10 44 56.8	-0.6
	baz=51					
M43A	Waltham Townsh	68.14 307	P	P	10 44 56.8	-0.8
	baz=50					
SILR	SILCHAR	68.18 76	eP	P	10 44 56.5	-1.6
L42A	Oliver, Polo	68.18 308	eP	P	10 44 59.2	+1.3
MOKO	MOKOCHONG	68.39 74	eP	P	10 44 59.7	+0.1
U51A	La Follette	68.39 300	P	P	10 44 59.2	-0.2
	baz=50,SNR=9.9					
LZH	Lanzhou	68.40 60	eP	P	10 45 02.5	+2.9
LZH			pP	sP	10 45 07.8	+2.7
LZH			sP	pP	10 45 10.3	+6.6
LZH			S	S	10 54 03.1	+2.2
LZH			pmax	pmax		
	comp=Z,34nm,1.1s					
LZH			pmax	pmax		
	comp=Z,350nm,4.8s					
LZH			LR	LR		
	comp=Z,1μm,14.6s					
LZH			LR	LR		
	comp=Z,850nm,13.6s					
LZH			LR	LR		
	comp=Z,980nm,14.6s					
KOHI	KOHIMA	68.49 75	eP	P	10 45 01.5	+1.2
KOHI			IAmb	IAmb	10 45 05.3	
	comp=Z,18nm,0.9s					
T50A	Nancy	68.50 301	P	P	10 45 00.9	+0.9
	baz=50					
X54A	Belton	68.52 298	P	P	10 45 00.9	+0.8
	baz=50					
Y55A	Saluda	68.57 297	P	P	10 45 01.3	+0.8
	baz=50					
HIA	Hailar	68.59 41	eP	P	10 45 01.8	+1.3
	comp=Z,64nm,1.0s					
WCI	Wyandotte Cave	68.62 303	eP	P	10 45 00.6	-0.1
	comp=Z,8.6nm,0.7s					
WCI	Wyandotte Cave	68.62 303	eP	P	10 45 00.6	-0.1
WCI			pmax	pmax		
	comp=Z,9.0nm,0.7s					
WCI	Wyandotte Cave	68.62 303	P	P	10 45 00.6	-0.1
	baz=50					
W53A	Cullowhee	68.62 299	P	P	10 45 01.2	+0.3
	baz=50					
HODGE	Hodges	68.64 297	eP	P	10 45 01.4	+0.5
	comp=Z,7.6nm,1.0s					
P45A	Graceland, Par	68.66 305	eP	P	10 45 00.6	-0.3
	comp=Z,12nm,0.8s					
P45A	Graceland, Par	68.66 305	P	P	10 45 00.3	-0.6
	baz=50					
O44A	Mansfield	68.68 306	P	P	10 45 01.0	-0.1
	baz=50					
R47A	Wooly Knot Far	68.72 303	P	P	10 45 01.4	+0.1
	baz=50					
ZEA	Zeya	68.76 35	eP	P	10 45 03.0	+1.7
ZEA			pmax	pmax		
	comp=Z,43nm,1.2s					
ZEA			MLR	MLR		
	comp=Z,2μm,15.0s					
ZEA			MLR	MLR		
	comp=E,1μm,14.0s					
ZEA			MLR	MLR		
	comp=N,1μm,15.0s					
S48A	Wiedeman Farm,	68.84 302	P	P	10 45 02.3	+0.2
	baz=50					
T49A	Edmonton	68.87 301	eP	P	10 45 02.9	+0.6
	comp=N,5.0nm,0.8s					
T49A	Edmonton	68.87 301	P	P	10 45 02.4	+0.1
	baz=50					
U50A	Jamestown	68.88 301	P	P	10 45 02.7	+0.2
	baz=50					
HDIL	Hopedale	68.90 306	eP	P	10 45 02.1	-0.3
	comp=N,10nm,0.6s					
HDIL	Hopedale	68.90 306	P	P	10 45 02.4	0.0
	baz=50					
V51A	Loudon	68.97 300	P	P	10 45 03.0	+0.1
	baz=50					
L40A	Anamosa	69.03 309	eP	P	10 45 02.6	-0.6
	comp=N,15nm,1.0s					
L40A	Anamosa	69.03 309	P	P	10 45 03.5	+0.3
	baz=49					
PRP	Porcupine Dome	69.08 349	eP	P	10 45 04.2	+0.9
	comp=N,65nm,1.5s					
X53A	Estanollee	69.13 298	P	P	10 45 04.0	0.0
	baz=50					
EGAK	Eagle	69.14 347	eP	P	10 45 04.3	+0.8
	comp=N,51nm,1.4s					
Y54A	Tignall	69.15 297	P	P	10 45 04.2	+0.2
	baz=50					
W52A	Murphy	69.15 299	eP	P	10 45 05.0	+0.8
	comp=N,9.4nm,1.0s					
W52A	Murphy	69.15 299	P	P	10 45 04.5	+0.4
	baz=50					
SEY	Seymchan	69.16 17	ceP	P	10 45 05.9	+2.3
BTO	Baotou	69.23 53	eP	P	10 45 05.4	+0.8
CPCT	Cooper Cave	69.30 300	eP	P	10 45 06.5	+1.5
	comp=N,14nm,1.2s					
Q45A	Warren Harvey,	69.31 304	P	P	10 45 03.7	-1.3
	baz=50					
R46A	Gibon Southern	69.36 303	P	P	10 45 05.2	-0.1
	baz=50					
OLIL	Olney	69.38 304	eP	P	10 45 06.0	+0.6
	comp=N,9.8nm,0.9s					
S47A	Hartford	69.38 303	P	P	10 45 05.5	+0.1

baz=50
T48A Bowling Green 69.40 302 P **P 10 45 05.3 -0.2**
baz=50
U49A Red Boiling Sp 69.40 301 P **P 10 45 05.5 -0.1**
baz=50
X52A Dahlonega 69.45 298 P **P 10 45 05.9 0.0**
baz=50
DAWY Dawson 69.51 346 *e*P **P 10 45 07.3 +1.4**
comp=N,46nm,0.9s
V50A Pikevile 69.52 300 P **P 10 45 07.0 +0.6**
baz=50
P43A Skaggs, Pawnee 69.63 306 P **P 10 45 07.0 0.0**
baz=49
W51A Cleveland 69.64 299 P **P 10 45 06.9 -0.1**
baz=50
Z54A Sparta 69.65 297 P **P 10 45 07.2 +0.1**
baz=50
POKR Poker Plat Res 69.71 350 P **P 10 45 06.5 -0.5**
baz=17
Y53A Monroe 69.73 298 P **P 10 45 07.5 -0.1**
baz=50
R45A Skylar, Fairfi 69.77 304 P **P 10 45 07.8 0.0**
baz=49
SAIH SAIHA 69.78 78 *e*P **P 10 45 09.0 +0.8**
S46A Don Dixon Farm 69.83 303 P **P 10 45 08.4 +0.2**
baz=49
U48A Cassie Pea, Po 69.87 302 P **P 10 45 08.2 -0.3**
baz=50
T47A Sharon Grove 69.91 302 *e*P **P 10 45 08.3 -0.4**
comp=N,18nm,0.9s
T47A Sharon Grove 69.91 302 P **P 10 45 08.4 -0.4**
baz=49,SNR=7.1
GOGA Godfrey 69.94 297 *e*P **P 10 45 10.9 +2.0**
comp=N,20nm,1.3s
GOGA Godfrey 69.94 297 *e*P **P 10 45 10.9 +2.0**
GOGA pmax pmax
comp=Z,20nm,1.3s
GOGA Godfrey 69.94 297 P **P 10 45 09.0 +0.1**
baz=50
HHC Hu-ho-hao-te 69.95 52 *e*P **P 10 45 13.0 +3.9**
HHC S **S 10 54 14.4 -4.6**
HHC pmax pmax
comp=Z,16nm,1.2s
HHC pmax pmax
comp=Z,65nm,7.0s
HHC LR LR
comp=Z,2μm,15.8s
HHC LR LR
comp=Z,2μm,17.0s
W50A Signal Mountai 69.95 300 *e*P **P 10 45 10.6 +1.5**
comp=Z,15nm,1.2s
W50A Signal Mountai 69.95 300 P **P 10 45 09.1 0.0**
baz=50
V49A McMinnville 69.96 301 P **P 10 45 08.7 -0.3**
baz=50
MDM Murphy Dome 69.96 350 *e*P **P 10 45 08.2 -0.4**
comp=Z,62nm,1.6s
ILAR Eielson Array 69.97 350 P **P 10 45 09.8 +1.2**
comp=Z,6.1nm,0.8s,baz=12,slow=5.8,SNR=66
ILAR PKPPKP **P'P'df 11 13 16.6 -4.0**
comp=Z,0.4nm,0.8s,baz=229,slow=2.6,SNR=5.0
ILAR LR LR 11 20 00.9
comp=Z,364nm,18.5s,baz=36,slow=40
ILB Eielson Array 69.97 350 *e*P **P 10 45 09.9 +1.2**
comp=Z,8.5nm,0.7s
COLA College 70.00 350 *e*P **P 10 45 09.8 +1.0**
comp=Z,12nm,0.9s
COLA College 70.00 350 *d i*P **P 10 45 09.7 +1.0**
COLA pmax pmax
comp=Z,10.0nm,1.0s
TCOL CIGO, UAF Yank 70.00 350 P **P 10 45 09.0 +0.2**
baz=17
N40A Mertquake, Sal 70.00 308 P **P 10 45 10.0 +0.8**
baz=48
CLTN Cedars of Leba 70.01 301 *e*P **P 10 45 09.6 +0.2**
comp=Z,3.8nm,0.8s
Y52A Lilburn 70.03 298 *e*P **P 10 45 09.5 0.0**
comp=Z,21nm,1.1s
Y52A Lilburn 70.03 298 P **P 10 45 09.3 -0.2**
baz=50
X51A Calhoun 70.08 299 P **P 10 45 09.5 -0.2**
baz=50
Z53A Monticello 70.09 297 P **P 10 45 10.1 +0.3**
baz=50
MLY Manley 70.18 351 *e*P **P 10 45 11.5 +1.6**
comp=Z,24nm,0.9s
CCB Clear Creek Bu 70.21 350 *e*P **P 10 45 10.9 +0.8**
comp=Z,12nm,1.0s
255A Hazlehurst 70.25 296 P **P 10 45 10.9 0.0**
baz=50
HDA Harding Lake 70.33 350 *e*P **P 10 45 12.0 +1.2**
comp=Z,25nm,0.8s
HDA Harding Lake 70.33 350 P **P 10 45 11.5 +0.6**
baz=17
SCRK Sand Creek 70.33 348 *e*P **P 10 45 12.6 +1.6**
comp=Z,16nm,0.8s
T46A Princeton 70.35 303 P **P 10 45 11.5 +0.1**
baz=49
U47A Clarksville 70.38 302 P **P 10 45 11.7 +0.2**
baz=49
WRH Wood River Hil 70.42 350 *e*P **P 10 45 12.5 +1.1**
comp=Z,14nm,0.8s
V48A Smith Brothers 70.54 301 *e*P **P 10 45 12.8 +0.2**
comp=Z,12nm,1.2s
V48A Smith Brothers 70.54 301 P **P 10 45 12.9 +0.2**
baz=49
W49A Belvidere 70.60 300 P **P 10 45 11.7 -1.3**
baz=49
Y51A Rockmart 70.64 299 P **P 10 45 13.6 +0.3**
baz=49
X50B Fort Payne 70.64 299 P **P 10 45 13.7 +0.4**
baz=49
DOT Dot Lake 70.65 348 *e*P **P 10 45 14.2 +1.3**
comp=Z,26nm,0.9s
RIDG Independent Ri 70.68 348 *e*P **P 10 45 14.6 +1.6**
Z52A Williamson 70.69 298 P **P 10 45 13.9 +0.4**
baz=49
S44A Carbondale 70.75 304 P **P 10 45 13.8 0.0**
baz=49
254A Abbeville 70.77 296 P **P 10 45 14.2 +0.2**
baz=49
ECSD EROS Data Cent 70.86 313 *e*P **P 10 45 14.1 -0.4**
comp=Z,7.8nm,0.9s
ECSD EROS Data Cent 70.86 313 P **P 10 45 14.4 0.0**
baz=47,SNR=9.6
WVT Waverly 70.91 302 *e*P **P 10 45 15.2 +0.4**
comp=Z,12nm,1.1s
WVT Waverly 70.91 302 *e*P **P 10 45 15.2 +0.4**
WVT pmax pmax
comp=Z,12nm,1.1s
WVT Waverly 70.91 302 P **P 10 45 14.9 0.0**
baz=49
V47A Nunnelly 70.92 302 P **P 10 45 14.9 0.0**
baz=49
SDDR Presa de Saban 70.92 278 *e*P **P 10 45 17.5 +2.3**
comp=Z,44nm,0.9s
U46A Springville 70.97 302 P **P 10 45 15.2 0.0**
baz=49
W48A Pulaski 71.00 301 P **P 10 45 15.7 +0.3**
baz=49
X49A Woodville 71.03 300 P **P 10 45 15.4 -0.2**
baz=49
BPAW Bear Paw Mtn. 71.11 351 *e*P **P 10 45 16.5 +0.9**
comp=Z,24nm,1.0s
152A Waverly Hall 71.22 297 *e*P **P 10 45 17.5 +0.7**
comp=Z,8.4nm,0.9s
152A Waverly Hall 71.22 297 P **P 10 45 16.5 -0.3**
baz=49
MCK McKinley 71.23 350 *e*P **P 10 45 17.5 +1.2**
comp=Z,43nm,1.1s
253A Americus 71.23 297 *e*P **P 10 45 17.7 +0.9**
comp=Z,29nm,0.7s
253A Americus 71.23 297 P **P 10 45 17.3 +0.4**
baz=49
FVM French Village 71.25 305 *e*P **P 10 45 17.5 +0.6**
comp=Z,10nm,0.9s
FVM French Village 71.25 305 *e*P **P 10 45 17.5 +0.6**
FVM pmax pmax
comp=Z,10.0nm,0.9s
MENT Mentasta 71.27 348 *e*P **P 10 45 18.2 +1.6**
comp=Z,13nm,0.8s
TIGA Tifton 71.29 296 P **P 10 45 17.5 +0.3**
baz=49
DGMT Dagmar 71.30 320 *e*P **P 10 45 18.0 +1.0**
comp=Z,21nm,1.2s
V46A Holladay 71.30 302 P **P 10 45 16.1 -1.1**
baz=49,SNR=6.6
W47A Westpoint 71.34 301 P **P 10 45 17.6 +0.2**
baz=49
Y49A Blount Mountai 71.52 299 P **P 10 45 18.7 +0.1**
baz=49
X48A Hartselle 71.52 300 *e*P **P 10 45 17.9 -0.6**
comp=Z,12nm,0.8s
X48A Hartselle 71.52 300 P **P 10 45 18.6 0.0**
baz=49
RND Reindeer 71.54 350 *e*P **P 10 45 18.3 0.0**
comp=Z,10nm,0.8s
RND Reindeer 71.54 350 *e*P **P 10 45 18.3 0.0**
RND pmax pmax
comp=Z,10.0nm,0.8s
Z50A Ashland 71.60 299 *e*P **P 10 45 19.4 +0.3**
Z50A Ashland 71.60 299 P **P 10 45 19.2 +0.1**
baz=49
KTH Kantishna Hill 71.64 351 *e*P **P 10 45 20.0 +1.1**
comp=Z,17nm,1.0s
TRF Thorofare Moun 71.66 351 *e*P **P 10 45 20.3 +1.1**
comp=Z,26nm,0.9s
252A Lumpkin 71.67 297 P **P 10 45 19.6 +0.1**
baz=49
CD2 Chengdu 71.67 65 P **P 10 45 22.0 +2.4**
CD2 PcP **PcP 10 45 38.8 +0.1**
CD2 S **S 10 54 37.8 -1.3**
CD2 pmax pmax
comp=Z,60nm,0.5s
CD2 pmax pmax
comp=Z,550nm,4.7s
CD2 LR LR
comp=Z,2μm,25.5s
CD2 LR LR
comp=Z,2μm,26.7s
CD2 LR LR
comp=Z,2μm,20.4s
CCM Cathedral Cave 71.69 305 *e*P **P 10 45 20.3 +0.8**
comp=Z,8.4nm,0.9s
CCM Cathedral Cave 71.69 305 *e*P **P 10 45 20.3 +0.8**
CCM pmax pmax
comp=Z,8.0nm,0.9s
CCM Cathedral Cave 71.69 305 P **P 10 45 19.4 -0.1**
baz=48
151A Opelika 71.70 298 P **P 10 45 20.3 +0.6**
baz=49
MA2 Magadan 71.75 20 *e*P **P 10 45 20.9 +1.4**
comp=Z,38nm,1.0s
MA2 Magadan 71.75 20 *ce*P **P 10 45 21.6 +2.1**
MA2 pmax pmax
comp=Z,68nm,1.7s
353A Camilla 71.75 296 P **P 10 45 20.2 +0.2**
baz=49
WHY Whitehorse 71.75 343 *e*P **P 10 45 21.1 +1.5**
comp=Z,27nm,1.1s
454A Quitman 71.79 295 P **P 10 45 20.7 +0.5**
baz=49
PLAL Pickwick Lake 71.81 301 *e*P **P 10 45 21.5 +1.2**
comp=Z,14nm,1.1s
W46A Michie 71.90 301 P **P 10 45 20.7 -0.2**
baz=48
Y48A Jasper 71.95 300 P **P 10 45 20.9 -0.2**
baz=48
X47A Russelville 71.98 301 P **P 10 45 20.9 -0.5**
baz=48
Z49A Columbiana 72.03 299 P **P 10 45 21.6 0.0**
baz=49
251A Midway 72.03 297 P **P 10 45 21.5 -0.2**
baz=49
PBMO Poplar Bluff 72.05 304 *e*P **P 10 45 22.3 +0.6**
comp=Z,9.7nm,0.8s
150A Eclectic 72.09 298 P **P 10 45 21.9 -0.1**
baz=49
352A Blakely 72.13 297 *e*P **P 10 45 22.3 0.0**
comp=Z,13nm,1.0s
HYT Haines Junctio 72.15 344 *e*P **P 10 45 23.6 +1.6**
comp=Z,20nm,0.8s
X46A Booneville 72.41 301 P **P 10 45 23.6 -0.3**
baz=48
PPLA Purkeypile 72.41 352 *e*P **P 10 45 24.2 +0.6**
comp=Z,17nm,0.7s
LRAL Lakeview Retre 72.42 299 *e*P **P 10 45 24.2 +0.2**
comp=Z,10nm,0.8s
LRAL Lakeview Retre 72.42 299 P **P 10 45 23.6 -0.4**
baz=48
TIY Taiyuan 72.55 54 *e*P **P 10 45 27.0 +2.2**
TIY pP **sP 10 45 29.9 -0.4**
TIY S **SKiKP 10 54 56.4 -2.8**
TIY pmax pmax
comp=Z,290nm,3.9s
TIY LR LR
comp=Z,3μm,19.4s
TIY LR LR
comp=Z,1μm,12.5s
TIY LR LR
comp=Z,1μm,27.6s
149A Jones 72.58 299 P **P 10 45 24.6 -0.4**
baz=48,SNR=9.1
DLBC Dease Lake 72.59 339 *e*P **P 10 45 25.2 +0.6**
comp=Z,28nm,1.3s
553A Crawfordville 72.65 295 P **P 10 45 25.9 +0.5**
baz=49
TTA Tatalina 72.74 353 *e*P **P 10 45 26.8 +1.4**
comp=Z,77nm,1.6s
BALM Baldy 72.84 346 *e*P **P 10 45 27.5 +1.3**
comp=Z,38nm,1.2s
SCM Sheep Creek Mo 72.85 349 *e*P **P 10 45 27.8 +1.7**
comp=Z,88nm,1.2s
XAN Xi'an 72.89 59 P **P 10 45 27.5 +0.7**
XAN pP PcP 10 45 38.3 -5.6
XAN pmax pmax
comp=Z,100nm,0.7s
XAN pmax pmax
comp=Z,400nm,4.1s
XAN LR LR
comp=Z,950nm,18.4s
XAN LR LR
comp=Z,680nm,16.9s
XAN Xi'an 72.89 59 *e*P **P 10 45 27.0 +0.2**
comp=Z,95nm,0.6s
SKAG Skagway 72.94 342 *e*P **P 10 45 27.2 +0.7**
comp=Z,22nm,1.0s
OXF Oxford 72.95 302 *e*P **P 10 45 26.4 -0.7**
comp=Z,18nm,1.0s
OXF Oxford 72.95 302 *e*P **P 10 45 26.4 -0.7**
OXF pmax pmax
comp=Z,18nm,1.0s
OXF Oxford 72.95 302 P **P 10 45 27.1 +0.1**
baz=48
SML Sawmill 73.01 349 *e*P **P 10 45 27.9 +0.8**
comp=Z,50nm,1.2s
SML Sawmill 73.01 349 *e*P **P 10 45 27.9 +0.8**
SML pmax pmax
comp=Z,51nm,1.2s
148A Greensboro 73.04 299 P **P 10 45 27.8 +0.2**
baz=48
BJI Beijing 73.10 50⇓ *e*P **P 10 45 28.9 +1.1**
BJI PcP **PcP 10 45 48.1 +3.5**
BJI S **S 10 54 54.4 -0.6**
BJI pmax pmax
comp=Z,16nm,0.9s
BJI LR LR
comp=Z,1μm,18.2s
BJI LR LR
comp=Z,810nm,18.1s
BJT Baijiatuau 73.11 50 *e*P **P 10 45 28.7 +0.8**
comp=Z,30nm,0.8s
BJT Baijiatuau 73.11 50 *e*P **P 10 45 28.7 +0.8**
BJT pmax pmax
comp=Z,30nm,0.8s
GHO Glory Hole Cre 73.12 350 *e*P **P 10 45 28.7 +0.9**
comp=Z,19nm,0.8s
SKT Skwentna 73.23 351 *e*P **P 10 45 28.6 +0.2**
comp=Z,31nm,1.4s
CRQM Cirque 73.24 347 *e*P **P 10 45 30.9 +2.3**
comp=Z,187nm,1.6s
DIV Divide 73.30 348 *e*P **P 10 45 31.0 +2.2**
comp=Z,10.0nm,0.8s
PMR Palmer 73.32 350 *e*P **P 10 45 30.2 +1.4**
comp=Z,50nm,1.6s
PMR Palmer 73.32 350 *e*P **P 10 45 30.2 +1.4**
PMR pmax pmax
comp=Z,50nm,1.6s
PCA Pinnacle 73.35 345 *e*P **P 10 45 29.1 0.0**
comp=Z,37nm,0.8s
KNK Knik Glacier 73.41 349 *e*P **P 10 45 29.2 -0.2**
comp=Z,59nm,1.3s
BESE Bessie Mountai 73.63 342 *e*P **P 10 45 30.7 -0.1**
comp=Z,18nm,1.0s
SUA Susitna One 73.65 351 *e*P **P 10 45 32.0 +1.1**
comp=Z,59nm,0.8s
FCAR Ozark Folk Cen 73.66 304 *e*P **P 10 45 30.5 -0.8**
comp=Z,6.3nm,0.8s
BOSA Boshof 73.68 166 P **P 10 45 31.8 +0.4**
comp=Z,4.2nm,0.7s,baz=349,slow=6.2,SNR=6.6
BOSA LR LR 11 19 07.4
comp=Z,1μm,21.0s,baz=356,slow=37
BOSA Boshof 73.68 166 *e*P **P 10 45 32.1 +0.7**
comp=Z,16nm,1.3s
BOSA Boshof 73.68 166 *e*P **P 10 45 32.1 +0.7**
BOSA pmax pmax
comp=Z,16nm,1.3s
GLI Glacier Island 73.74 349 *e*P **P 10 45 32.4 +1.1**
comp=Z,33nm,1.3s
U40A Yellville 73.78 305 P **P 10 45 31.9 0.0**
baz=47
HMT Hamilton 73.82 347 *e*P **P 10 45 32.3 +0.5**
comp=Z,15nm,1.0s
RC01 Rabbit Creek A 73.89 350 *e*P **P 10 45 34.1 +2.0**
comp=Z,28nm,0.8s
KLR Kul'dur 74.01 35 *i*P **P 10 45 33.1 0.0**
KLR pmax pmax
comp=Z,24nm,1.4s
EGMT Eagleton 74.12 323 *e*P **P 10 45 34.4 +0.5**
comp=Z,24nm,0.8s
EGMT Eagleton 74.12 323 P **P 10 45 33.9 0.0**
baz=40,SNR=9.3
WHAR Wooly Hollow 74.17 304 *e*P **P 10 45 34.8 +0.6**
comp=Z,9.3nm,1.0s
W41B Gary Mavity, V 74.22 304 *e*P **P 10 45 34.4 -0.1**
comp=Z,19nm,1.4s
W41B Gary Mavity, V 74.22 304 P **P 10 45 34.5 -0.1**
baz=47
NKL Nikolayevsk 74.28 28 *e*P **P 10 45 35.2 +0.7**
RSSD Black Hills 74.38 317 *e*P **P 10 45 37.4 +1.8**
comp=Z,4.3nm,0.8s
RSSD Black Hills 74.38 317 *e*P **P 10 45 37.4 +1.8**
RSSD pmax pmax
comp=Z,4.0nm,0.8s
HHAR Hobbs 74.47 306 *e*P **P 10 45 36.5 +0.5**
comp=Z,8.2nm,0.8s
SVW2 Sparrevohn 74.51 353 *e*P **P 10 45 36.3 +0.4**
comp=Z,71nm,1.5s
GRNR Gornyy 74.67 32 *e*P **P 10 45 38.2 +1.3**
GRNR pmax pmax
comp=Z,26nm,1.0s
KMI Kunming 74.80 70 P **P 10 45 40.0 +1.6**
KMI sP sP 10 45 44.5 +0.6
KMI S **S 10 55 13.9 -1.2**
KMI SKS **SKSac 10 55 39.3 -7.9**
KMI pmax pmax
comp=Z,13nm,0.7s
KMI pmax pmax
comp=Z,240nm,4.4s
KMI LR LR
comp=Z,550nm,16.0s
KMI LR LR
comp=Z,550nm,18.6s
KMI LR LR
comp=Z,610nm,21.6s
SEW Seward 74.81 350 *e*P **P 10 45 36.9 -0.6**
comp=Z,20nm,1.1s
RSO Redoubt South 74.85 351 *e*P **P 10 45 40.2 +2.1**
X40A Basin Creek Fa 75.04 304 *e*P **P 10 45 38.9 -0.4**
comp=Z,7.4nm,0.8s
X40A Basin Creek Fa 75.04 304 P **P 10 45 39.1 -0.2**
baz=46
WALA Waterton Lakes 75.08 326 *e*P **P 10 45 40.4 +0.9**
comp=Z,27nm,1.4s
SIT Sitka 75.12 341 *e*P **P 10 45 39.7 +0.4**
comp=Z,24nm,1.2s
SIT Sitka 75.12 341 *e*P **P 10 45 39.7 +0.4**
SIT pmax pmax
comp=Z,24nm,1.2s
W39A Magazine 75.12 305 P **P 10 45 39.7 -0.1**
baz=46
CN2 Changchun 75.25 43 *e*P **P 10 45 41.8 +1.4**
CN2 *e*S **S 10 55 15.8 -3.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,1μm,15.0s
CN2 LR LR
comp=Z,1μm,15.0s
CN2 LR LR
comp=Z,2μm,16.0s
MIAR Mount Ida 75.45 304 *e*P **P 10 45 41.5 -0.2**
comp=Z,17nm,1.1s
MIAR Mount Ida 75.45 304 *e*P **P 10 45 41.5 -0.2**
MIAR pmax pmax
comp=Z,17nm,1.1s
MIAR Mount Ida 75.45 304 P **P 10 45 41.7 0.0**
baz=46,SNR=6.7
CNPM China Poot 75.59 350 *e*P **P 10 45 42.7 +0.6**
comp=Z,70nm,1.6s
SNY Shenyang 75.77 45 ⇑P **P 10 45 43.8 +0.4**
SNY pmax pmax
comp=Z,13nm,0.9s
ENH Enshi 75.78 62 *e*P **P 10 45 43.1 -0.6**
comp=Z,34nm,0.8s
GCMT Greycliff 75.79 321 *e*P P 10 45 48.0 +4.4
TUL1 Leonard 75.81 306 P **P 10 45 44.1 +0.4**
baz=45
CBKS Cedar Bluff 75.98 311 P **P 10 45 45.1 +0.4**
baz=44
HRY Holter Researc 76.04 323 *e*P **P 10 45 44.8 -0.2**
CHTO Chiang Mai 76.38 77 *e*P **P 10 45 47.6 +0.4**
comp=Z,22nm,0.9s
CHTO Chiang Mai 76.38 77 *e*P **P 10 45 47.6 +0.4**
CHTO pmax pmax
comp=Z,22nm,0.9s
CMMT Chiang Mai 76.38 77 P **P 10 45 48.3 +1.0**
GYA Guiyang 76.53 66 ⇑*i*P **P 10 45 48.9 +0.8**
GYA PP **PP 10 48 40.9 +1.1**
GYA S **S 10 55 30.9 -3.1**
GYA SKS **SKSac 10 55 55.8 -4.0**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,160nm,5.2s
GYA LR LR
comp=Z,310nm,19.4s
GYA LR LR
comp=Z,280nm,18.6s
GYA LR LR
comp=Z,260nm,18.8s
MDJ Mudanjiang 76.60 40 P **P 10 45 52.1 +4.0**
MDJ pmax pmax
comp=Z,5.0nm,0.5s
MDJ pmax pmax
comp=Z,230nm,3.6s
MDJ Mudanjiang 76.60 40 *e*P **P 10 45 47.0 -1.0**
comp=Z,8.4nm,0.5s
CMAR Chiang Mai Arr 76.61 77 P **P 10 45 49.0 +0.4**
comp=Z,5.9nm,0.7s,baz=308,slow=6.6,SNR=17
CMAR LR LR 11 27 29.1
comp=Z,348nm,18.4s,baz=346,slow=42
CMAR Chiang Mai Arr 76.61 77 P **P 10 45 49.0 +0.4**
PAYA Payao 76.66 76 P **P 10 45 51.1 +2.3**
BOZ Bozeman (W) 76.81 322 *e*P **P 10 45 49.6 +0.2**
comp=Z,10nm,1.0s
BOZ Bozeman (W) 76.81 322 *e*P **P 10 45 49.7 +0.2**
BOZ pmax pmax
comp=Z,10.0nm,1.0s
BOZ Bozeman (W) 76.81 322 P **P 10 45 48.3 -1.1**
baz=39
MSO Missoula 76.85 324 P **P 10 45 48.3 -1.2**
baz=38
TYV Tymovskoe 76.86 29 *e*P **P 10 45 51.9 +2.5**
TYV pmax pmax
comp=Z,8.0nm,0.9s
TYV pmax pmax
comp=Z,100nm,4.4s
DL2 Dalian 76.88 48 P P 10 45 44.4 -5.3
DL2 *e*S S 10 55 27.9 -9.2
DL2 pmax pmax
comp=Z,40nm,0.8s
DL2 pmax pmax
comp=Z,270nm,4.7s
DL2 LR LR
comp=N,2μm,20.4s
DL2 LR LR
comp=E,2μm,19.7s
DL2 LR LR
comp=Z,840nm,20.6s
NEW Newport 77.00 327 *e*P **P 10 45 50.1 -0.2**
comp=Z,11nm,1.1s

NEW Newport 77.00 327 *e*P **P 10 45 50.1 -0.2**
NEW pmax pmax
comp=Z,11nm,1.1s
NEW Newport 77.00 327 P **P 10 45 49.1 -1.2**
baz=36
LAMP Lampang 77.06 77 P **P 10 45 53.0 +2.0**
DLMT Dillon 77.42 323 *e*P **P 10 45 53.9 +1.0**
comp=Z,13nm,1.0s
KDAK Kodiak Island 77.46 351 *e*P **P 10 45 54.3 +1.7**
comp=Z,29nm,0.8s
KDAK Kodiak Island 77.46 351 *e*P **P 10 45 54.3 +1.7**
KDAK pmax pmax
comp=Z,29nm,0.8s
FSCY Frank Sound, G 77.69 285 *e*P **P 10 45 55.7 +1.2**
comp=Z,191nm,1.1s
MOBC Moresby Island 77.80 338 *e*P **P 10 45 54.5 -0.2**
comp=Z,48nm,1.5s
C09A Chrisman Ranch 77.82 327 *e*P **P 10 45 55.1 +0.2**
comp=Z,14nm,0.6s
ETX06 Route 59 and C 77.83 303 *e*P **P 10 45 54.3 -0.9**
comp=Z,10.0nm,0.9s
DIB Dawson Inlet, 77.88 338 *e*P **P 10 45 55.3 +0.2**
comp=Z,15nm,1.0s
MCMT McKenzie Canyo 77.95 322 *e*P **P 10 45 56.7 +0.7**
USA0B Ussuriysk Arra 78.01 39 *e*P **P 10 45 53.7 -2.3**
comp=Z,24nm,1.2s
USRK Ussuriysk Ar. 78.01 39 P **P 10 45 56.7 +0.7**
comp=Z,6.9nm,0.8s,baz=333,slow=2.1,SNR=18
USRK LR LR 11 22 14.3
comp=Z,503nm,20.6s,baz=318,slow=37
BW06 Boulder Array 78.05 319 *e*P **P 10 45 56.8 +0.2**
comp=Z,6.7nm,1.2s
BW06 Boulder Array 78.05 319 P **P 10 45 56.1 -0.5**
baz=40
PD31 Pinedale Array 78.05 319 *e*P **P 10 45 58.0 +1.4**
comp=Z,6.3nm,1.2s
PDAR Pinedale Array 78.05 319 P **P 10 45 56.8 +0.2**
comp=Z,1.1nm,0.7s,baz=55,slow=6.2,SNR=8.7
PDAR LR LR 11 20 14.0
comp=Z,561nm,18.2s,baz=40,slow=36
UMPA Umpang Tak 78.07 79 P P 10 46 07.1 +10
OHAK Old Harbor 78.09 351 *e*P **P 10 45 57.6 +1.5**
comp=Z,23nm,0.9s
SLVN Son La 78.13 72 *e*P **P 10 45 57.1 0.0**
comp=Z,13nm,0.9s
WMOK Wichita Mounta 78.36 307 *e*P **P 10 45 58.7 +0.6**
comp=Z,5.7nm,0.9s
WMOK Wichita Mounta 78.36 307 *e*P **P 10 45 58.7 +0.6**
WMOK pmax pmax
comp=Z,6.0nm,0.9s
WMOK Wichita Mounta 78.36 307 P **P 10 45 57.8 -0.3**
baz=44
ISCO Idaho Springs 78.36 315 *e*P **P 10 45 57.9 -0.5**
comp=Z,4.3nm,0.8s
ISCO Idaho Springs 78.36 315 *e*P **P 10 45 57.9 -0.5**
ISCO pmax pmax
comp=Z,4.0nm,0.8s
WHN Wuhan 78.63 59 ⇑P **P 10 46 00.6 +1.0**
WHN S **S 10 55 49.8 -6.5**
WHN LR LR
comp=Z,4μm,16.9s
WHN LR LR
comp=Z,8μm,21.0s
WHN LR LR
comp=Z,3μm,12.9s
AHID Auburn Hatcher 78.78 320 *e*P **P 10 45 58.5 -2.1**
comp=Z,3.9nm,0.6s
F10A Beach Ranch, E 78.89 326 *e*P **P 10 45 59.7 -1.3**
comp=Z,8.8nm,0.9s
PGC Sidney 79.04 331 *e*P **P 10 46 01.6 0.0**
comp=Z,41nm,1.4s
PEA1 Petropavlovsk- 79.26 19 *e*P **P 10 46 03.0 +0.3**
PEA0B Petropavlovsk- 79.26 19 *e*P **P 10 46 02.3 -0.5**
comp=Z,50nm,1.3s
PETK Petropavlovsk- 79.26 19 P **P 10 46 03.0 +0.3**
comp=Z,10nm,0.9s,baz=53,slow=4.4,SNR=13
PETK LR LR 11 25 49.7
comp=Z,859nm,19.9s,baz=321,slow=39
PBKT Sadao Pong 79.31 77 P P 10 46 09.6 +6.1
TEY Ternei 79.35 35⇓*e*P **P 10 46 04.7 +1.4**
TEY pmax pmax
comp=Z,10.0nm,0.5s
TEY MLR MLR
comp=E,100nm,19.0s
TEY MLR MLR
comp=N,100nm,16.0s
TEY MLR MLR
comp=Z,100nm,17.0s
O20A White River Ci 79.43 317 *e*P **P 10 46 04.1 0.0**
comp=Z,13nm,0.8s
O20A White River Ci 79.43 317 P **P 10 46 04.7 +0.5**
baz=40,SNR=12
CHGN Chignik 79.50 353 *e*P **P 10 46 04.6 +0.7**
comp=Z,23nm,0.7s
BDFB Brasilia 79.55 236 P **P 10 46 07.0 +2.1**
comp=Z,8.3nm,0.7s,baz=39,slow=7.5,SNR=11
BDFB LR LR 11 19 24.8
comp=Z,114nm,18.1s,baz=70,slow=34
BDFB Brasilia 79.55 236 *e*P **P 10 46 05.7 +0.8**
comp=Z,10nm,0.7s
BDFB *e*P **P 10 46 07.0 +2.1**
BDFB Brasilia 79.55 236 *e*P **P 10 46 05.7 +0.8**
BDFB *e* 10 46 07.0
BDFB pmax pmax
comp=Z,11nm,0.7s
PET Petropavlovsk 79.56 19 *e*P **P 10 46 04.6 +0.2**
comp=Z,21nm,1.1s
PET Petropavlovsk 79.56 19 *e*P P 10 46 09.4 +5.1
PET *e*S **S 10 56 05.8 +0.3**
PET pmax pmax
comp=Z,100nm,11.7s
PET MLR MLR
comp=Z,600nm,19.0s
PET MLR MLR
comp=Z,900nm,14.0s
HLID Hailey 79.64 322 *e*P **P 10 46 06.1 +0.9**
comp=Z,5.6nm,1.0s
HLID Hailey 79.64 322 P **P 10 46 05.8 +0.5**
baz=37
T25A Trinidad 79.72 312 P **P 10 46 06.6 +0.8**
baz=42
NONG Nongkai 79.82 75 P **P 10 46 09.0 +2.7**
BMO Blue Mountains 79.84 325 *e*P **P 10 46 06.5 +0.4**
comp=Z,29nm,1.0s
BMO Blue Mountains 79.84 325 *e*P **P 10 46 06.5 +0.4**
BMO pmax pmax
comp=Z,29nm,1.0s
SDCO Great Sand Dun 79.84 313 *e*P **P 10 46 07.5 +1.0**
comp=Z,5.7nm,1.1s
SDCO Great Sand Dun 79.84 313 P **P 10 46 07.2 +0.7**
baz=41
D03D Eldon 79.86 330 P **P 10 46 07.2 +1.1**
baz=32
LON Longmire 80.05 329 *e*P **P 10 46 08.3 +1.2**
comp=Z,8.1nm,1.0s
YSS Yuzh-Sakhalins 80.19 31 *e*P **P 10 46 07.8 0.0**
comp=Z,131nm,1.0s
YSS Yuzh-Sakhalins 80.19 31⇑*e*P **P 10 46 08.9 +1.1**
YSS *e* 10 46 12.4
YSS *e* 10 46 17.5
YSS *e*S **S 10 56 11.9 -0.4**
YSS pmax pmax
comp=Z,40nm,0.7s
YSS pmax pmax
comp=Z,400nm,3.2s
YSS smax smax
comp=E,200nm,7.5s
YSS MLR MLR
comp=Z,800nm,17.0s
YSS MLR MLR
comp=N,700nm,18.0s
YSS MLR MLR
comp=E,900nm,15.0s
NLWA Neilton Lookou 80.26 330 *e*P **P 10 46 09.0 +0.7**
comp=E,22nm,1.1s
NJ2 Nanjing 80.27 55 *e*P **P 10 46 09.4 +0.9**
NJ2 pmax pmax
comp=E,21nm,0.7s
NJ2 LR LR
comp=E,2μm,24.9s
NJ2 LR LR
comp=E,2μm,24.9s
NJ2 LR LR
comp=E,1μm,23.8s
ABTX Abilene, Hawle 80.38 306 P **P 10 46 10.7 +1.5**
baz=43
CHAI Chaiyaphum 80.48 77 P **P 10 46 11.7 +1.8**

E04D Cinebar 80.49 329 P **P 10 46 10.3 +0.8**
baz=32
S22A 4UR Ranch, Cre 80.53 314 P **P 10 46 11.0 +0.7**
baz=40
CTU Camp Tracy 80.70 319 *e*P **P 10 46 09.9 -1.1**
comp=E,11nm,1.5s
KHON Khomkaen 80.77 76 P **P 10 46 14.8 +3.4**
P18A Preston Nutter 80.81 318 *e*P **P 10 46 10.8 -1.0**
comp=E,6.9nm,1.0s
PV22 Blue Mesa, Par 80.93 316 *e*P **P 10 46 13.1 +0.8**
comp=E,9.9nm,0.9s
PV07 Paradox Valley 80.93 316 *e*P **P 10 46 13.1 +0.8**
comp=E,7.2nm,0.9s
PV21 Cone Mtn., Par 81.00 316 *e*P **P 10 46 12.4 -0.3**
comp=E,33nm,1.6s
PV04 Paradox Valley 81.10 316 *e*P **P 10 46 13.7 +0.6**
comp=E,26nm,1.4s
PV12 Saucer Basin, 81.10 316 *e*P **P 10 46 13.5 +0.2**
comp=E,15nm,1.0s
PV23 Carpenter Ridg 81.11 316 *e*P **P 10 46 13.9 +0.6**
comp=E,12nm,0.8s
PV01 Paradox Valley 81.13 316 *e*P **P 10 46 14.0 +0.6**
comp=E,5.7nm,1.1s
PV09 Paradox Valley 81.13 316 *e*P **P 10 46 11.0 -2.5**
SKNT Sakolnakorn 81.14 75 P **P 10 46 15.0 +1.6**
PV11 David Mesa, Pa 81.15 316 *e*P **P 10 46 11.7 -1.8**
comp=E,17nm,1.1s
PV02 Paradox Valley 81.16 316 *e*P **P 10 46 12.2 -1.3**
comp=E,14nm,1.4s
PV16 Nyswonger Mesa 81.17 316 *e*P **P 10 46 13.1 -0.4**
comp=E,12nm,1.0s
PV20 West Nyswonger 81.17 316 *e*P **P 10 46 14.3 +0.8**
comp=E,8.7nm,0.9s
PV14 Lion Creek, Pa 81.17 316 *e*P **P 10 46 13.7 +0.1**
comp=E,9.8nm,0.7s
PV03 Paradox Valley 81.17 316 *e*P **P 10 46 12.3 -1.3**
comp=E,13nm,1.1s
PV10 Paradox Valley 81.18 316 *e*P **P 10 46 12.2 -1.5**
comp=E,16nm,1.0s
PV19 Morning Glory 81.20 316 *e*P **P 10 46 14.0 +0.2**
comp=E,8.8nm,1.0s
PV17 East Wray Mesa 81.21 316 *e*P **P 10 46 11.0 -2.8**
comp=E,11nm,0.9s
PV18 Skein Mesa, Pa 81.21 316 *e*P **P 10 46 12.9 -0.8**
comp=E,13nm,1.1s
PV13 Radium Mtn., P 81.23 316 *e*P **P 10 46 12.4 -1.6**
comp=E,6.8nm,1.1s
KS15 Wonju Array Si 81.25 45 *e*P **P 10 46 11.8 -2.0**
comp=E,9.7nm,0.8s
KSRS Korea Array 81.26 45 P **P 10 46 14.2 +0.4**
comp=E,4.3nm,0.8s,baz=323,slow=4.8,SNR=13
KSRS LR LR 11 26 37.0
comp=E,1μm,18.0s,baz=320,slow=39
SRU San Rafael Swe 81.34 317 *e*P **P 10 46 15.1 +0.7**
comp=E,8.4nm,0.8s
SRU San Rafael Swe 81.34 317 *e*P **P 10 46 15.1 +0.7**
SRU pmax pmax
comp=Z,8.0nm,0.8s
PANO Nakornpanom 81.46 75 P **P 10 46 16.4 +1.3**
TMUT Trail Mountain 81.53 318 *e*P **P 10 46 14.5 -1.1**
comp=Z,6.0nm,1.0s
J08A Circle Bar Ran 81.54 325 *e*P **P 10 46 15.6 +0.3**
comp=Z,6.9nm,0.8s
DUG Dugway, Tooele 81.59 319 *e*P **P 10 46 16.8 +1.2**
comp=Z,4.8nm,0.9s
DUG Dugway, Tooele 81.59 319 P **P 10 46 16.9 +1.2**
baz=38
TJN Taejon 81.80 46*ce*P **P 10 46 17.2 +0.6**
MVCO Mesa Verde 81.80 315 *e*P **P 10 46 17.8 +0.9**
comp=Z,5.5nm,0.8s
MVCO Mesa Verde 81.80 315 P **P 10 46 17.6 +0.6**
baz=40
Q16A Castle Valley 81.81 318 *e*P **P 10 46 16.6 -0.3**
comp=Z,6.3nm,1.1s
I05D Terrebonne, OR 81.89 327 P **P 10 46 17.3 +0.3**
baz=33
G03D McMinnville, O 81.89 329 P **P 10 46 18.0 +1.0**
baz=32
H04A Detroit Lake 81.93 328 *e*P **P 10 46 18.5 +1.3**
comp=Z,10nm,1.1s
JCT Junction City 82.03 305 *e*P **P 10 46 15.4 -2.6**
comp=Z,8.2nm,1.0s
JCT Junction City 82.03 305 *e*P **P 10 46 15.4 -2.6**
JCT pmax pmax
comp=Z,8.0nm,1.0s
JCT Junction City 82.03 305 P **P 10 46 18.4 +0.4**
baz=43
PINE Pine Mountain 82.19 327 *e*P **P 10 46 19.8 +1.0**
comp=Z,9.2nm,0.9s
ELK Elko 82.27 321 *e*P **P 10 46 21.2 +1.8**
comp=Z,7.1nm,1.3s
H04D Lebanon 82.27 328 P **P 10 46 18.7 -0.3**
baz=32
WVOR Wild Horse Val 82.37 324 *e*P **P 10 46 18.3 -1.4**
comp=Z,4.8nm,0.9s
WVOR Wild Horse Val 82.37 324 *e*P **P 10 46 18.3 -1.4**
WVOR pmax pmax
comp=Z,5.0nm,0.9s
ANMO Albuquerque 82.46 312 LR LR 11 22 05.7
comp=Z,264nm,21.5s,baz=44,slow=35
ANMO Albuquerque 82.46 312 *e*P **P 10 46 18.9 -1.5**
comp=Z,3.1nm,0.9s
ANMO Albuquerque 82.46 312*ce*P **P 10 46 20.8 +0.4**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 82.46 312 P **P 10 46 20.8 +0.4**
baz=40
TASM ASL Pad, Albuq 82.46 312 P **P 10 46 20.2 -0.2**
baz=40
TASM ASL Pad, Albuq 82.46 312 P **P 10 46 19.8 -0.6**
baz=40
MSU Marysvale 82.61 318 *e*P **P 10 46 20.0 -1.2**
MSU Marysvale 82.61 318 *e*P **P 10 46 20.0 -1.2**
ROSC El Rosal 82.62 270 LR LR 11 20 17.5
comp=Z,330nm,19.4s,baz=56,slow=34
J05D Fort Rock, OR 82.73 326 P **P 10 46 22.0 +0.4**
baz=33,SNR=5.2
I04A Tendick Farm, 82.76 327 P **P 10 46 22.1 +0.5**
baz=32
MTPU Mount Pierson 82.99 318 *e*P **P 10 46 25.8 +2.5**
comp=Z,5.6nm,1.1s
K05A Summer Lake 83.06 326 *e*P **P 10 46 24.9 +1.5**
comp=Z,30nm,1.2s
J04D Umpqua Nationa 83.11 327 P **P 10 46 23.2 -0.5**
baz=32
PSUT Pine Spring 83.40 319 *e*P **P 10 46 23.4 -1.8**
comp=Z,23nm,1.7s
BMN Battle Mountai 83.40 322 *e*P **P 10 46 25.2 0.0**
comp=Z,3.9nm,0.8s
BMN Battle Mountai 83.40 322 *e*P **P 10 46 25.2 0.0**
BMN pmax pmax
comp=Z,4.0nm,0.8s
MOD Modoc Plateau 83.50 325 *e*P **P 10 46 26.5 +0.9**
comp=Z,16nm,1.0s
PKCU Pink Cliffs 83.52 317 *e*P **P 10 46 27.9 +1.8**
comp=Z,15nm,0.9s
SZCU Shurtz Canyon 83.78 318 *e*P **P 10 46 24.7 -2.5**
comp=Z,16nm,1.6s
YUK Yuzh-Kuril'sk 83.81 30*d i*P **P 10 46 28.0 +1.1**
YUK *e* 10 49 42.3
YUK *e*PPP PPP 10 51 34.1
YUK *e*S **S 10 56 50.0 +0.2**
YUK *e*SS **SS 11 02 18.3 +2.7**
YUK *e*SSS SSS 11 05 46.1
YUK pmax pmax
comp=Z,152nm,1.0s
YUK pmax pmax
comp=N,77nm,0.5s
YUK pmax pmax
comp=E,60nm,0.7s
HUMO Hull Mountain 83.98 327 *e*P **P 10 46 27.3 -0.6**
comp=E,4.5nm,0.7s
W18A Petrified Fore 84.05 314 *e*P **P 10 46 29.5 +0.9**
comp=E,3.7nm,0.8s
W18A Petrified Fore 84.05 314 P **P 10 46 28.8 +0.3**
baz=39
L04D Klamath Falls 84.05 327 P **P 10 46 29.2 +0.8**
baz=32,SNR=12
KNB Kanab 84.11 317 *e*P **P 10 46 28.8 0.0**
comp=E,6.8nm,1.2s
KNB Kanab 84.11 317 *e*P **P 10 46 28.8 0.0**
KNB pmax pmax
comp=Z,7.0nm,1.2s
K02D Willamette Mer 84.18 328 P **P 10 46 29.2 +0.2**
baz=31
M04C Macdoel 84.23 326 P **P 10 46 29.2 -0.1**
baz=32,SNR=7.9

U15A North Rim 84.31 317 *e*P **P 10 46 30.4 +0.4**
comp=Z,8.8nm,0.8s
LCMT Little Creek M 84.32 318 *e*P **P 10 46 30.7 +0.9**
comp=Z,3.9nm,1.0s
MNTX Cornudas Mount 84.33 309 *e*P **P 10 46 29.6 -0.3**
comp=Z,3.4nm,0.9s
MNTX Cornudas Mount 84.33 309 P **P 10 46 30.7 +0.8**
baz=41
R11A Troy Canyon, C 84.35 320 *e*P **P 10 46 31.6 +1.5**
comp=Z,10nm,1.0s
R11A Troy Canyon, C 84.35 320 P **P 10 46 30.0 0.0**
baz=36,SNR=21
ERM Erimo 84.52 33 *e*P **P 10 46 31.5 +0.9**
comp=Z,34nm,0.9s
ERM Erimo 84.52 33 *i*P **P 10 46 31.7 +1.1**
ERM pmax pmax
comp=Z,32nm,1.0s
WUAZ Wupatki 84.57 316 *e*P **P 10 46 29.6 -1.7**
comp=Z,12nm,1.2s
WUAZ Wupatki 84.57 316 P **P 10 46 31.8 +0.6**
baz=38
L02E Cave Junction 84.61 327 P **P 10 46 32.1 +1.0**
baz=31
X18A Snowflake 84.62 314 *e*P **P 10 46 31.9 +0.4**
comp=Z,4.8nm,1.1s
YBH Yreka Blue Hor 84.62 327 *e*P **P 10 46 32.5 +1.2**
comp=Z,7.4nm,1.0s
YBH Yreka Blue Hor 84.62 327 *e*P **P 10 46 32.5 +1.2**
YBH pmax pmax
comp=Z,7.0nm,1.0s
PAHR Pah Rah Range 84.94 323 *e*P **P 10 46 32.0 -0.9**
comp=Z,10nm,1.1s
M02C Callahan 84.97 326 P **P 10 46 33.5 +0.5**
baz=32
121A Cookes Peak, D 85.01 311 P **P 10 46 33.4 -0.1**
baz=40
TXAR Lajitas Array 85.13 307 P **P 10 46 35.4 +1.4**
comp=Z,3.1nm,0.7s,baz=60,slow=7.2,SNR=25
TXAR PKKPbc **PKKPbc 11 04 40.1 +1.7**
comp=Z,0.3nm,0.8s,baz=184,slow=5.4,SNR=3.3
TXAR LR LR 11 23 43.6
comp=Z,522nm,20.7s,baz=0.0,slow=35
N02D Trinity Center 85.26 326 P **P 10 46 34.8 +0.3**
baz=32
KRMB Red Mountain 85.27 327 *e*P **P 10 46 36.3 +1.7**
comp=Z,9.9nm,0.8s
O03E Paynes Creek 85.47 325 P **P 10 46 35.8 +0.3**
baz=32
ACON Acoyapa 85.49 282 *e*P **P 10 46 36.3 +0.4**
comp=Z,29nm,1.0s
NV01 Mina Array Sit 85.52 322 *e*P **P 10 46 37.4 +1.4**
NVAR Mina Array Bea 85.52 322 P **P 10 46 37.4 +1.4**
comp=Z,1.1nm,0.7s,baz=54,slow=3.6,SNR=6.4
NVAR LR LR 11 24 50.5
comp=Z,739nm,19.1s,baz=42,slow=36
KHMM Horse Mountain 85.76 327 *e*P **P 10 46 37.6 +0.6**
comp=Z,21nm,1.0s
TPNV Topopah Spring 85.80 320 P **P 10 46 37.5 +0.2**
baz=35
LNIG Linares 85.89 301 *e*P **P 10 46 37.9 +0.1**
comp=Z,16nm,1.3s
W13A Hualapai Mount 86.15 317 *e*P **P 10 46 40.2 +1.0**
comp=Z,6.8nm,1.1s
TUC Tucson 86.78 313 *e*P **P 10 46 43.6 +1.4**
comp=Z,6.0nm,1.3s
TUC Tucson 86.78 313 *e*P **P 10 46 43.6 +1.4**
TUC pmax pmax
comp=Z,6.0nm,1.3s
TUC Tucson 86.78 313 P **P 10 46 42.8 +0.7**
baz=38
KULM Kulim 86.79 86 *e*P **P 10 46 43.1 +0.9**
comp=Z,44nm,1.5s
PDMCI Parker Dam,Lak 86.92 317 P **P 10 46 43.7 +1.1**
baz=36
MAJO Matsushiro 86.98 39 *i*P **P 10 46 44.1 +1.1**
MAJO pmax pmax
comp=Z,12nm,1.1s
MAT Matsushiro 86.98 39 P **P 10 46 44.4 +1.4**
MAT S **S 10 57 18.8 -2.6**
MJAR Matsushiro Arr 86.98 39 P **P 10 46 41.9 -1.1**
comp=Z,3.6nm,0.7s,baz=315,slow=4.8,SNR=14
MJAR LR LR 11 30 33.1
comp=Z,663nm,18.0s,baz=340,slow=39
GMRC Granite Mounta 87.27 318 P **P 10 46 44.8 +0.3**
baz=36
IRM Iron Mountain 87.53 317 P **P 10 46 45.4 -0.3**
baz=36
ISA Isabella, Lake 87.88 320 *e*P **P 10 46 49.4 +2.0**
comp=Z,4.1nm,0.9s
ISA Isabella, Lake 87.88 320 *e*P **P 10 46 49.4 +2.0**
ISA pmax pmax
comp=Z,4.0nm,0.9s
BC3 Big Chuckawall 88.08 317 P **P 10 46 48.2 -0.2**
baz=36
LPAZ La Paz 92.96 250 P **P 10 47 11.4 -0.4**
comp=Z,1.8nm,0.7s,baz=303,slow=0.9,SNR=6.8
LPAZ LR LR 11 24 55.2
comp=Z,308nm,21.8s,baz=35,slow=33
LPAZ La Paz 92.96 250 *e*P **P 10 47 11.0 -0.9**
comp=Z,6.5nm,1.4s
LPAZ La Paz 92.96 250 *e*P **P 10 47 11.0 -0.9**
LPAZ pmax pmax
comp=Z,7.0nm,1.4s
CPUP Villa Florida 93.28 236 LR LR 11 29 18.6
comp=Z,301nm,18.1s,baz=47,slow=36
MAW Mawson 118.27 160 PKP **PKiKP 10 52 44.7 +1.0**
comp=Z,1.4nm,0.6s,baz=295,slow=10,SNR=4.7
MAW Mawson 118.27 160 *e*PKPdf **PKiKP 10 52 44.0 +0.3**
MAW Mawson 118.27 160 *e*PKIKP **PKiKP 10 52 44.0 +0.3**
WRA Warramunga Arr 128.09 81 PKhKP PKPpre 10 52 51.1
comp=Z,2.3nm,1.0s,baz=303,slow=1.9,SNR=3.1
WRA PKP **PKiKP 10 53 03.8 -0.8**
comp=Z,4.4nm,0.8s,baz=298,slow=2.2,SNR=13
WR1 Warramunga Arr 128.09 81 *e*PKPpre PKPpre 10 52 51.1
WR1 *e*PKPdf **PKiKP 10 53 03.8 -0.8**
ASAR Alice Springs 130.15 85 PKhKP PKPpre 10 52 50.8
comp=Z,0.4nm,0.7s,baz=348,slow=1.9,SNR=5.3
ASAR PKP **PKPdf 10 53 07.2 -0.6**
comp=Z,4.2nm,0.6s,baz=330,slow=1.7,SNR=28
ASAR SKPbc **SKPab 10 56 28.5 -1.7**
comp=Z,2.5nm,0.7s,baz=325,slow=4.0,SNR=13
AS31 Alice Springs 130.15 85 *e*PKPdf **PKiKP 10 53 08.0 -0.7**
STKA Stephens Creek 140.44 89 PKhKP PKPpre 10 53 18.1
comp=Z,3.4nm,0.5s,baz=330,slow=6.1,SNR=9.3
STKA SKPbc **SKPbc 10 57 01.2 -1.5**
comp=Z,4.1nm,0.7s,baz=344,slow=5.1,SNR=7.1
VNDA Vanda 144.59 170 PKP **PKPdf 10 53 32.1 -0.6**
comp=Z,3.3nm,0.7s,baz=283,slow=5.0,SNR=23
SBA Scott Base 144.87 172 *e*PKPdf **PKPdf 10 53 33.0 -0.2**
SBA Scott Base 144.87 172 *e*PKIKP **PKPdf 10 53 33.0 -0.2**
TOO Toolangi 145.99 95 *e*PKPbc **PKPab 10 53 37.5 -0.2**
TOO Toolangi 145.99 95 *e*PKP2 **PKPab 10 53 37.5 -0.2**
ARMA Armidale 146.82 79 *e*PKPbc **PKPab 10 53 41.1 -0.2**
CAN Canberra 147.50 89 *e*PKPbc **PKPbc 10 53 41.8 +0.1**
CAN Canberra 147.50 89 *e*PKP2 **PKPbc 10 53 41.8 +0.1**
PPT2 Papeete2 148.49 321 *e*LR LR 11 42 54.6
comp=Z,307nm,22.0s
DZM Mont Dzumac 150.63 49 *e*LR LR 11 43 35.7
comp=Z,603nm,24.8s
DZM Mont Dzumac 150.63 49 *e*PKPbc **PKiKP 10 53 51.1 +0.4**
TBI Tubuai 153.33 314 *e*LR LR 11 45 11.7
comp=Z,277nm,33.5s

GEN ***21*** *10:39:53.8, 44°.23N×10°.20E, h12km±1km, MI3.0*
LDG ***21*** *10:39:53.8±0.0, 44°.22N×10°.19E, h12km, MI3.5/26, Error ellipse: s-maj=0.8km s-min=0.7km az=55.0*
ROM ***21*** *10:39:56.0±0.1, 44°.183N±0°.007×10°.158E±0°.009, h9km, ML3.1/8, Error ellipse: s-maj=0.9km s-min=0.4km az=41.0*

ISC 21 10:39:52.7±0.9, **44°.22N**±0°.02×**10°.09E**±0°.02, **h16**km±7km, **n58**, σ1.**78**/84, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.22**	**106**	P	**Pb**	**10 40 00.1**	**+1.7**
VLC				S	**Sb**	**10 40 03.1**	**+0.9**
VLC				AML	AML		
	comp=E,7875μm,0.9s						
VLC				AML	AML		
	comp=N,8165μm,1.0s						
VLC				AML	AML		
	comp=E,8115μm,0.7s						
VLC				AML	AML		
	comp=N,8175μm,1.0s						
VLC				AML	AML		

	comp=E,7875μm,0.9s						
VLC				AML	AML		
	comp=N,8190μm,1.0s						
VLC				AML	AML		
	comp=E,8115μm,0.7s						
VLC				AML	AML		
	comp=N,8175μm,1.0s						
VLC				AML	AML		
	comp=N,8175μm,1.0s						
VLC				AML	AML		
	comp=N,8190μm,1.0s						
VLC				AML	AML		
	comp=E,7875μm,0.9s						
VLC				AML	AML		
	comp=E,8115μm,0.7s						
VLC				AML	AML		
	comp=N,8175μm,1.0s						
VLC				AML	AML		
	comp=N,8190μm,1.0s						
VLC				AML	AML		
	comp=E,7875μm,0.9s						
VLC				AML	AML		
	comp=E,8115μm,0.7s						
SARO	**Sassorosso**	**0.22 99**		P	**Pg**	**10 39 57.3**	**-0.5**
SARO				S	**Sg**	**10 40 00.6**	**-0.7**
SARO	**Sassorosso**	**0.22 99**		P	**Pb**	**10 40 00.4**	**+1.9**
SARO				S	**Sb**	**10 40 03.2**	**+0.8**
SARO				AML	AML		
	comp=E,15800μm,0.4s						
SARO				AML	AML		
	comp=N,13350μm,0.7s						
SARO				AML	AML		
	comp=E,15800μm,0.4s						
SARO				AML	AML		
	comp=N,13350μm,0.7s						
SARO				AML	AML		
	comp=E,15800μm,0.4s						
SARO				AML	AML		
	comp=N,13350μm,0.7s						
SARO				AML	AML		
	comp=E,15800μm,0.4s						
SARO				AML	AML		
	comp=N,13350μm,0.7s						
GRAM	**Graiana**	**0.27 356**		P	**Pb**	**10 39 59.7**	**+0.4**
GRAM				S	**Sb**	**10 40 04.3**	**+0.6**
GRAM	**Graiana**	**0.27 356**		P	**Pn**	**10 40 02.9**	**+0.7**
GRAM				S	**Sn**	**10 40 07.6**	**-0.4**
GRAM				AML	AML		
	comp=E,27350μm,0.4s						
GRAM				AML	AML		
	comp=N,21900μm,1.4s						
GRAM				AML	AML		
	comp=E,27350μm,0.4s						
GRAM				AML	AML		
	comp=N,21900μm,1.4s						
GRAM				AML	AML		
	comp=E,27350μm,0.4s						
GRAM				AML	AML		
	comp=N,21900μm,1.4s						
GRAM				AML	AML		
	comp=E,27350μm,0.4s						
GRAM				AML	AML		
	comp=N,21900μm,1.4s						
ERBM	**Eremo**	**0.30 49**		P	**Pn**	**10 40 02.8**	**+0.2**
ERBM				S	**Sn**	**10 40 07.8**	**-1.0**
ERBM				AML	AML		
	comp=E,9560μm,1.6s						
ERBM				AML	AML		
	comp=N,9250μm,1.1s						
ERBM				AML	AML		
	comp=N,9250μm,1.1s						
ERBM				AML	AML		
	comp=E,9560μm,1.6s						
ERBM				AML	AML		
	comp=N,9250μm,1.1s						
ERBM				AML	AML		
	comp=E,9560μm,1.6s						
CARD	**Cardoso**	**0.34 125**		P	**Pn**	**10 40 02.8**	**-0.3**
CARD				S	**Sb**	**10 40 06.7**	**+1.1**
CARD				AML	AML		
	comp=E,6220μm,0.1s						
CARD				AML	AML		
	comp=N,6525μm,0.9s						
BDI	**Bagni Di Lucca**	**0.40 113**		P	**Pn**	**10 40 03.4**	**-0.4**
BDI				S	**Sb**	**10 40 08.7**	**+1.4**
BDI				AML	AML		
	comp=E,3310μm,0.5s						
BDI				AML	AML		
	comp=N,3250μm,0.7s						
BDI				AML	AML		
	comp=E,3265μm,0.4s						
BDI				AML	AML		
	comp=N,4035μm,0.7s						
BDI				AML	AML		
	comp=E,3265μm,0.4s						
BDI				AML	AML		
	comp=E,3310μm,0.5s						
BDI				AML	AML		
	comp=N,4035μm,0.7s						
BDI				AML	AML		
	comp=N,3250μm,0.7s						
BDI				AML	AML		
	comp=E,3265μm,0.4s						
BDI				AML	AML		
	comp=E,3310μm,0.5s						
BDI				AML	AML		
	comp=N,4035μm,0.7s						
BDI				AML	AML		
	comp=N,3250μm,0.7s						
MAIM	**Mastiano**	**0.42 137**		P	**Pg**	**10 40 01.1**	**-0.1**
MAIM				S	**Sg**	**10 40 07.0**	**+0.1**
MAIM	**Mastiano**	**0.42 137**		P	**Pn**	**10 40 04.1**	**0.0**
MAIM				S	**Sb**	**10 40 09.3**	**+1.4**
MAIM				AML	AML		
	comp=E,5565μm,0.4s						
MAIM				AML	AML		
	comp=N,2510μm,0.8s						
MSSA	**Maissana**	**0.42 283**		P	**Pn**	**10 40 06.4**	**+2.1**
MSSA				AML	AML		
	comp=E,2410μm,0.7s						
MSSA				AML	AML		
	comp=N,2140μm,0.6s						
MSSA				AML	AML		
	comp=E,2410μm,0.7s						
MSSA				AML	AML		
	comp=N,2140μm,0.6s						
MSSA				AML	AML		
	comp=N,2140μm,0.6s						
MSSA				AML	AML		
	comp=E,2410μm,0.7s						
MSSA				AML	AML		
	comp=N,2140μm,0.6s						
MSSA				AML	AML		
	comp=E,2410μm,0.7s						
POPM	**Popiglio**	**0.51 110**		P	**Pg**	**10 40 02.5**	**-0.3**
POPM				S	**Sg**	**10 40 09.2**	**-0.5**
POPM	**Popiglio**	**0.51 110**		P	**Pn**	**10 40 05.4**	**0.0**
POPM				S	**Sn**	**10 40 12.3**	**-1.5**
POPM				AML	AML		
	comp=E,4505μm,0.5s						
POPM				AML	AML		
	comp=N,4400μm,0.5s						
POPM				AML	AML		
	comp=E,4505μm,0.5s						
POPM				AML	AML		
	comp=N,4400μm,0.5s						
POPM				AML	AML		
	comp=E,4505μm,0.5s						
POPM				AML	AML		
	comp=N,4400μm,0.5s						
POPM				AML	AML		
	comp=E,4505μm,0.5s						
POPM				AML	AML		
	comp=N,4400μm,0.5s						
MTCR	**Monte La Croce**	**0.68 106**		P	**Pn**	**10 40 08.7**	**+0.9**
MTCR				S	**Sn**	**10 40 17.9**	**-0.3**
MTCR				AML	AML		
	comp=E,1795μm,0.6s						
MTCR				AML	AML		
	comp=N,1856μm,0.6s						
MTCR				AML	AML		
	comp=E,1795μm,0.6s						
MTCR				AML	AML		
	comp=N,1856μm,0.6s						
MTCR				AML	AML		
	comp=E,1795μm,0.6s						
MTCR				AML	AML		
	comp=N,1856μm,0.6s						
BOB	**Bobbio (Coli)**	**0.71 320**		P	**Pn**	**10 40 11.3**	**+3.0**
FNVD	**Fontana Vidola**	**0.74 94**		P	**Pn**	**10 40 09.9**	**+1.2**
PTF	**Prato**	**0.75 110**		P	**Pn**	**10 40 09.2**	**+0.5**
CRMI	**Carmignano**	**0.77 124**		P	**Pn**	**10 40 09.3**	**+0.4**
RUFI	**Rufina**	**1.09 110**		P	**Pg**	**10 40 15.8**	**+2.0**
PCP	**Piancastagn**	**1.16 287**		P	**Pg**	**10 40 18.6**	**+3.6**
TRIF	**Trifonti**	**1.25 152**		P	**Pg**	**10 40 16.9**	**+0.1**
FINB	**Finale Ligure**	**1.27 269**		P	**Pg**	**10 40 19.2**	**+2.0**
CASP	**Castiglione de**	**1.54 158**		P	**Pg**	**10 40 22.2**	**0.0**
PGF	**Pioggiola**	**1.85 206**		*e*Pn	**Pn**	**10 40 24.5**	**+0.6**
PGF				*e*Sn	**Sn**	**10 40 46.6**	**-0.5**
	comp=N,65nm,0.4s						
SBF	**Sospel**	**1.95 260**		*e*Pn	**Pb**	**10 40 26.3**	**-1.6**
SBF				*e*Sn	**Sb**	**10 40 49.9**	**-2.1**
	comp=N,266nm,0.4s						
MBDF	**Montbardon**	**2.43 283**		*e*P	**Pb**	**10 40 35.4**	**-0.8**
MBDF	**Montbardon**	**2.43 283**		*e*Pg	**Pg**	**10 40 40.1**	**+0.8**
MBDF				*e*Sn	**Sn**	**10 41 01.3**	**-0.1**
	comp=N,128nm,0.6s						
FRF	**La Foret Royal**	**2.58 256**		*e*Pn	**Pn**	**10 40 34.9**	**+1.1**
FRF				*e*Sn	**Sn**	**10 41 04.8**	**0.0**
	comp=N,39nm,0.3s						
LPG	**La Plagne**	**2.70 299**		*e*P	**Pb**	**10 40 39.4**	**-1.4**
LPG	**La Plagne**	**2.70 299**		*e*Pg	**Pg**	**10 40 45.4**	**+1.0**
LPG				*e*Sn	**Sn**	**10 41 07.8**	**-0.4**
	comp=N,87nm,0.6s						
LPL	**La Plagne**	**2.72 300**		*e*P	**Pb**	**10 40 39.6**	**-1.5**
LPL	**La Plagne**	**2.72 300**		*e*Pg	**Pg**	**10 40 45.7**	**+0.9**
LPL				*e*Sn	**Sn**	**10 41 08.1**	**-0.5**
	comp=N,81nm,0.7s						
LMR	**La Mourre**	**2.74 252**		*e*Pn	**Pn**	**10 40 36.8**	**+0.7**
LMR	**La Mourre**	**2.74 252**		*e*Pg	**Pg**	**10 40 45.6**	**+0.3**
LMR				*e*Sn	**Sn**	**10 41 08.5**	**-0.4**
	comp=N,6.1nm,0.1s						
DAVA	**Damuels**	**3.07 357**		Pn	**Pb**	**10 40 46.6**	**-0.4**
	comp=N,46nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.09 284**		*e*P	**Pb**	**10 40 44.7**	**-2.7**
ORIF				*e*Sn	**Sn**	**10 41 19.4**	**+1.8**
	comp=N,113nm,0.8s						
SQTA	**Sankt Quirin**	**3.10 14**		*e*Pn	**Pb**	**10 40 47.9**	**+0.4**
	comp=N,36nm,0.5s						
MOTA	**Moosalm**	**3.20 12**		*e*Pn	**Pb**	**10 40 49.9**	**+0.6**
	comp=N,32nm,0.6s						
WTTA	**Wattenberg**	**3.23 19**		*e*Pn	**Pb**	**10 40 48.9**	**-0.9**
	comp=N,18nm,0.3s						
WTTA				*e*Pn	**Pg**	**10 40 51.7**	**-2.9**
	comp=N,15nm,0.3s						
SMRF	**Simiane la Rot**	**3.26 267**		*e*Pn	**Pn**	**10 40 44.3**	**+1.0**
SMRF				*e*Sn	**Sn**	**10 41 21.2**	**-0.6**
	comp=N,70nm,0.6s						
WATA	**Walderalm**	**3.28 18**		*e*Pn	**Pb**	**10 40 50.0**	**-0.7**
	comp=N,7.7nm,0.3s						
CABF	**La Chapelle**	**3.70 312**		*e*P	**Pb**	**10 40 54.2**	**-3.5**
CABF				*e*Sn	**Sn**	**10 41 31.2**	**-1.4**
	comp=N,39nm,0.5s						
VIVF	**Saint-Julien-l**	**3.93 281**		*e*P	Pb	10 40 56.5	-5.1
VIVF				*e*Sn	**Sn**	**10 41 37.0**	**-1.2**
	comp=N,5.0nm,0.3s						
HINF	**Hinteralfeld**	**4.25 329**		*e*P	**Pn**	**10 41 00.9**	**+4.1**
HINF				*e*Sn	**Sn**	**10 41 43.9**	**-2.1**
	comp=N,31nm,0.4s						
LASF	**Ste Croix**	**4.49 270**		*e*P	Pn	10 41 04.6	+4.5
LASF				*e*Sn	**Sn**	**10 41 50.4**	**-1.6**
	comp=N,16nm,0.5s						
HAU	**Haudompre**	**4.59 327**		*e*P	**Pn**	**10 41 05.6**	**+4.1**
HAU				*e*Sn	**Sn**	**10 41 52.2**	**-2.4**
	comp=N,89nm,0.6s						
CDF	**Champ du Feu**	**4.62 336**		*e*P	**Pn**	**10 41 05.9**	**+3.9**
CDF				*e*Sn	**Sn**	**10 41 52.7**	**-2.7**
	comp=N,46nm,0.5s						
SMF	**Signal de Mont**	**5.02 301**		*e*P	Pn	10 41 12.1	+4.7
SMF				*e*Sn	**Sn**	**10 42 03.0**	**-2.1**
	comp=N,35nm,0.4s						
PAGF	**Fort de Pagny**	**5.28 327**		*e*P	Pn	10 41 15.4	+4.4
	baz=143						
PAGF				*e*Sn	**Sn**	**10 42 08.5**	**-3.0**
	comp=N,36nm,0.6s						
SFTF	**Sexfontaines**	**5.31 320**		*e*P	Pn	10 41 15.7	+4.4
	baz=133						
SFTF				*e*Sn	**Sn**	**10 42 09.3**	**-2.8**
	comp=N,7.0nm,0.3s						
LOR	**Lormes**	**5.32 307**		*e*P	Pn	10 41 16.2	+4.7
LOR				*e*Sn	**Sn**	**10 42 10.1**	**-2.4**
	comp=N,19nm,0.4s						
AVF	**Avril sur Loir**	**5.39 301**		*e*P	Pn	10 41 17.0	+4.6
AVF				*e*Sn	**Sn**	**10 42 11.6**	**-2.5**
	comp=N,12nm,0.5s						
MEZF	**Maizieres J'vi**	**5.52 323**		*e*P	Pn	10 41 18.8	+4.6
	baz=142						
MEZF				*e*Sn	**Sn**	**10 42 14.2**	**-3.2**
	comp=N,24nm,0.6s						
BGF	**Bois d'Agland**	**5.61 297**		*e*P	Pn	10 41 20.2	+4.7
BGF				*e*Sn	**Sn**	**10 42 17.0**	**-2.7**
	comp=N,44nm,0.6s						
MTLF	**Montolieu**	**5.77 264**		*e*P	Pn	10 41 23.0	+5.3
MTLF				*e*Sn	**Sn**	**10 42 21.0**	**-2.5**
	comp=N,19nm,0.6s						
CAF	**Calviac**	**5.78 280**		*e*P	Pn	10 41 22.7	+4.9
TCF	**Toulx Ste Croi**	**5.94 293**		*e*P	Pn	10 41 24.9	+4.9
TCF				*e*Sn	**Sn**	**10 42 24.9**	**-2.8**
	comp=N,5.3nm,0.4s						
HYF	**Humbligny**	**6.04 303**		*e*P	Pn	10 41 26.3	+4.9
HYF				*e*Sn	**Sn**	**10 42 27.3**	**-2.9**

ISCJB ***21*** *10:46:29.7±0.4, 44°.11N±0°.03×10°.10E±0°.03, h8km±4km, Error ellipse: s-maj=5.1km s-min=3.5km az=35.6*
LDG ***21*** *10:46:29.8±0.1, 44°.16N×10°.12E, h6km, Ml3.0/13, Error ellipse: s-maj=1.4km s-min=0.9km az=22.0*
ROM ***21*** *10:46:30.0±0.2, 44°.181N±0°.009×10°.17E±0°.01, h10km±1km, ML2.6/9, Error ellipse: s-maj=1.1km s-min=0.6km az=47.0*
GEN ***21*** *10:46:30.3, 44°.19N×10°.18E, h4km±1km, Ml2.5*
ISC 21 10:46:30.0±0.8, 44°.16N±0°.03×10°.15E±0°.03, h15km±6km, n47, σ1.95/71, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.17**	**91**	P	**Pg**	**10 46 33.8**	**-0.5**
VLC				S	**Sg**	**10 46 36.4**	**-0.7**
VLC				AML	AML		
	comp=E,3375μm,1.0s						
VLC				AML	AML		
	comp=N,4515μm,0.2s						
VLC				AML	AML		
	comp=E,3305μm,1.0s						
VLC				AML	AML		
	comp=N,4745μm,0.2s						
VLC				AML	AML		
	comp=E,3375μm,1.0s						
VLC				AML	AML		
	comp=N,4520μm,0.2s						
VLC				AML	AML		
	comp=E,3305μm,1.0s						
VLC				AML	AML		
	comp=N,4745μm,0.2s						
VLC				AML	AML		
	comp=N,4745μm,0.2s						
VLC				AML	AML		
	comp=E,3305μm,1.0s						
VLC				AML	AML		
	comp=N,4520μm,0.2s						
VLC				AML	AML		
	comp=E,3375μm,1.0s						
VLC				AML	AML		
	comp=E,3305μm,1.0s						
VLC				AML	AML		
	comp=N,4745μm,0.2s						
VLC				AML	AML		
	comp=E,3375μm,1.0s						
VLC				AML	AML		
	comp=N,4520μm,0.2s						
SARO	**Sassorosso**	**0.18**	**84**	P	**Pg**	**10 46 33.9**	**-0.6**
SARO				S	**Sg**	**10 46 36.6**	**-0.9**
CARD	**Cardoso**	**0.28**	**120**	P	**Pg**	**10 46 35.8**	**-0.2**
CARD				S	**Sg**	**10 46 40.0**	**0.0**
CARD	**Cardoso**	**0.28**	**120**	P	**Pg**	**10 46 36.6**	**+0.6**
CARD				S	**Sg**	**10 46 40.0**	**0.0**
ERBM	**Eremo**	**0.32**	**36**	P	**Pg**	**10 46 36.5**	**-0.2**
ERBM				S	**Sg**	**10 46 41.5**	**+0.2**
ERBM				AML	AML		
	comp=E,2590μm,0.2s						
ERBM				AML	AML		
	comp=N,2390μm,0.3s						
ERBM				AML	AML		
	comp=E,3905μm,0.8s						
ERBM				AML	AML		
	comp=N,3885μm,0.8s						
ERBM				AML	AML		
	comp=E,3905μm,0.8s						
ERBM				AML	AML		
	comp=N,3885μm,0.8s						
ERBM				AML	AML		
	comp=E,3905μm,0.8s						
ERBM				AML	AML		
	comp=N,3885μm,0.8s						
GRAM	**Graiana**	**0.33 349**		P	**Pg**	**10 46 36.6**	**-0.4**
GRAM				S	**Sg**	**10 46 41.4**	**-0.4**
GRAM	**Graiana**	**0.33 349**		P	**Pg**	**10 46 36.7**	**-0.4**
GRAM				S	**Sg**	**10 46 41.7**	**-0.1**
GRAM				AML	AML		
	comp=E,9065μm,0.3s						
GRAM				AML	AML		
	comp=N,6580μm,0.8s						
GRAM				AML	AML		
	comp=E,9065μm,0.3s						
GRAM				AML	AML		
	comp=N,6580μm,0.8s						
GRAM				AML	AML		
	comp=N,6580μm,0.8s						
GRAM				AML	AML		
	comp=E,9065μm,0.3s						
GRAM				AML	AML		
	comp=N,6580μm,0.8s						
GRAM				AML	AML		
	comp=E,9065μm,0.3s						
BDI	**Bagni Di Lucca**	**0.34 107**		P	**Pg**	**10 46 37.2**	**+0.2**
BDI				S	**Sg**	**10 46 41.9**	**+0.1**
BDI				AML	AML		
	comp=E,1164μm,0.8s						
BDI				AML	AML		
	comp=N,973μm,0.6s						
BDI				AML	AML		
	comp=E,1112μm,0.8s						
BDI				AML	AML		
	comp=N,1210μm,0.6s						
BDI				AML	AML		
	comp=E,1166μm,0.8s						
BDI				AML	AML		
	comp=N,982μm,0.8s						
BDI				AML	AML		
	comp=E,1112μm,0.8s						
BDI				AML	AML		
	comp=N,1210μm,0.6s						
BDI				AML	AML		
	comp=N,1210μm,0.6s						
BDI				AML	AML		
	comp=E,1112μm,0.8s						
BDI				AML	AML		
	comp=E,1166μm,0.8s						
BDI				AML	AML		
	comp=N,982μm,0.8s						
BDI				AML	AML		
	comp=N,1210μm,0.6s						
BDI				AML	AML		
	comp=E,1112μm,0.8s						
BDI				AML	AML		
	comp=E,1166μm,0.8s						
BDI				AML	AML		
	comp=N,982μm,0.8s						
MAIM	**Mastiano**	**0.35 135**		P	**Pg**	**10 46 37.4**	**+0.1**
MAIM				S	**Sg**	**10 46 42.5**	**+0.3**
MAIM	**Mastiano**	**0.35 135**		P	**Pg**	**10 46 37.7**	**+0.4**
MAIM				S	**Sg**	**10 46 42.6**	**+0.5**
MAIM				AML	AML		
	comp=E,1985μm,0.2s						
MAIM				AML	AML		
	comp=N,1097μm,1.1s						
MAIM				AML	AML		
	comp=E,1985μm,0.2s						
MAIM				AML	AML		
	comp=N,1097μm,1.1s						
MAIM				AML	AML		
	comp=E,1985μm,0.2s						
MAIM				AML	AML		
	comp=N,1097μm,1.1s						
MAIM				AML	AML		
	comp=E,1985μm,0.2s						
MAIM				AML	AML		
	comp=N,1097μm,1.1s						
POPM	**Popiglio**	**0.45 105**		P	**Pg**	**10 46 38.8**	**-0.3**
POPM				S	**Sg**	**10 46 45.4**	**+0.2**
POPM	**Popiglio**	**0.45 105**		P	**Pg**	**10 46 39.2**	**+0.1**
POPM				S	**Sg**	**10 46 46.0**	**+0.8**
MSSA	**Maissana**	**0.48 289**		P	**Pg**	**10 46 40.0**	**+0.3**
MSSA				S	**Sg**	**10 46 46.6**	**+0.4**
MSSA				AML	AML		
	comp=E,597μm,0.3s						
MSSA				AML	AML		
	comp=N,376μm,1.3s						
MSSA				AML	AML		
	comp=E,1006μm,1.1s						
MSSA				AML	AML		
	comp=N,898μm,0.2s						
MSSA				AML	AML		
	comp=E,1006μm,1.1s						
MSSA				AML	AML		
	comp=N,898μm,0.2s						
MSSA				AML	AML		
	comp=E,1006μm,1.1s						
MSSA				AML	AML		
	comp=N,898μm,0.2s						
ZCCA	**Zocca**	**0.62 72**		P	**Pb**	**10 46 43.2**	**+0.6**
CRMI	**Carmignano**	**0.70 122**		P	**Pg**	**10 46 44.4**	**+0.7**
CRMI				AML	AML		
	comp=E,182μm,0.4s						
CRMI				AML	AML		
	comp=N,149μm,1.2s						
CRMI				AML	AML		
	comp=E,364μm,0.4s						
CRMI				AML	AML		
	comp=N,302μm,1.0s						
CRMI				AML	AML		
	comp=N,302μm,1.0s						
CRMI				AML	AML		
	comp=E,364μm,0.4s						
CRMI				AML	AML		
	comp=N,302μm,1.0s						
CRMI				AML	AML		
	comp=E,364μm,0.4s						
FNVD	**Fontana Vidola**	**0.70 89**		P	**Pg**	**10 46 44.0**	**+0.2**
BOB	**Bobbio (Coli)**	**0.79 320**		P	**Pb**	**10 46 45.2**	**-0.2**
TRIF	**Trifonti**	**1.18 152**		AML	AML		
	comp=E,177μm,0.8s						
TRIF				AML	AML		
	comp=N,172μm,0.6s						
TRIF				AML	AML		
	comp=N,172μm,0.6s						
TRIF				AML	AML		
	comp=E,177μm,0.8s						
TRIF				AML	AML		
	comp=N,172μm,0.6s						
TRIF				AML	AML		
	comp=E,177μm,0.8s						
FINB	**Finale Ligure**	**1.31 271**		P	**Pb**	**10 46 55.2**	**+0.8**
CASP	**Castiglione de**	**1.47 159**		P	**Pn**	**10 46 56.6**	**+0.6**
CASP				AML	AML		
	comp=E,127μm,0.6s						
CASP				AML	AML		
	comp=N,124μm,0.5s						
CASP				AML	AML		
	comp=N,124μm,0.5s						
CASP				AML	AML		
	comp=E,127μm,0.6s						
CASP				AML	AML		
	comp=N,124μm,0.5s						
CASP				AML	AML		
	comp=E,127μm,0.6s						
PGF	**Pioggiola**	**1.82 208**		*e*Pn	**Pn**	**10 46 59.9**	**-1.0**
PGF				*e*Sn	**Sn**	**10 47 21.9**	**-1.8**
	comp=E,18nm,0.2s						
SBF	**Sospel**	**1.98 262**		*e*Pn	**Pn**	**10 47 01.9**	**-1.2**
SBF				*e*Sn	**Sn**	**10 47 25.4**	**-2.2**
	comp=E,22nm,0.2s						
MBDF	**Montbardon**	**2.49 284**		*e*P	**Pn**	**10 47 11.6**	**+1.5**
MBDF				*e*Sn	**Sn**	**10 47 37.6**	**-2.6**
MBDF				*e*Sg	**Sb**	**10 47 47.4**	**+2.5**
	comp=E,16nm,0.5s						
FRF	**La Foret Royal**	**2.61 258**		*e*Pn	**Pn**	**10 47 12.0**	**+0.4**
FRF				*e*Sn	**Sn**	**10 47 41.4**	**-1.5**
	comp=E,12nm,0.3s						

LPG	**La Plagne**	**2.76**	**300**	*e*P	**Pn**	**10 47 15.9**	**+1.9**
LPG	**La Plagne**	**2.76**	**300**	*e*Pg	**Pb**	**10 47 20.7**	**+1.4**
LMR	**La Mourre**	**2.77**	**254**	*e*Pn	**Pn**	**10 47 13.1**	**-0.7**
LMR				*e*Sn	**Sn**	**10 47 43.9**	**-3.0**
	comp=E,5.1nm,0.2s						
LPL	**La Plagne**	**2.78**	**300**	*e*P	**Pn**	**10 47 16.0**	**+1.8**
LPL	**La Plagne**	**2.78**	**300**	*e*Pg	**Pb**	**10 47 21.1**	**+1.5**
FETA	**Feichten**	**2.89**	**8**	Pn	**Pn**	**10 47 17.7**	**+2.1**
	comp=E,1.1nm,0.5s						
DAVA	**Damuels**	**3.13**	**357**	*e*Pn	**Pb**	**10 47 23.3**	**-2.1**
	comp=E,2.0nm,0.2s						
SQTA	**Sankt Quirin**	**3.15**	**13**	*e*Pn	**Pb**	**10 47 23.3**	**-2.4**
	comp=E,4.2nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.15**	**285**	*e*P	**Pn**	**10 47 21.3**	**+2.2**
ORIF				*e*Sn	**Sn**	**10 47 53.4**	**-3.0**
	comp=E,10nm,0.5s						
MOTA	**Moosalm**	**3.25**	**11**	Pn	**Pn**	**10 47 24.5**	**+4.0**
	comp=E,4.2nm,0.2s						
SMRF	**Simiane la Rot**	**3.30**	**268**	*e*P	**Pn**	**10 47 22.9**	**+1.7**
CABF	**La Chapelle**	**3.77**	**312**	*e*P	**Pn**	**10 47 29.8**	**+2.2**
CABF				*e*Sn	**Sn**	**10 48 08.5**	**-3.2**
	comp=E,6.8nm,0.4s						
VIVF	**Saint-Julien-l**	**3.98**	**282**	*e*P	**Pn**	**10 47 32.7**	**+2.2**
HINF	**Hinteralfeld**	**4.32**	**329**	*e*P	**Pn**	**10 47 37.7**	**+2.6**
HINF				*e*Sn	**Sn**	**10 48 22.0**	**-3.1**
	comp=E,13nm,0.5s						
LASF	**Ste Croix**	**4.53**	**271**	*e*P	**Pn**	**10 47 40.0**	**+1.9**
HAU	**Haudompre**	**4.67**	**327**	*e*P	**Pn**	**10 47 42.6**	**+2.7**
HAU				*e*Sn	**Sn**	**10 48 30.2**	**-3.5**
	comp=E,16nm,0.3s						
MOA	**Molln**	**4.67**	**36**	*e*Pn	**Pn**	**10 47 42.7**	**+2.8**
	comp=E,1.6nm,0.3s						
CDF	**Champ du Feu**	**4.69**	**336**	*e*P	**Pn**	**10 47 42.8**	**+2.5**
CDF				*e*Sn	**Sn**	**10 48 31.0**	**-3.5**
	comp=E,9.2nm,0.3s						
SMF	**Signal de Mont**	**5.09**	**301**	*e*P	**Pn**	**10 47 48.0**	**+2.3**
SFTF	**Sexfontaines**	**5.38**	**321**	*e*P	**Pn**	**10 47 52.6**	**+2.9**
AVF	**Avril sur Loir**	**5.46**	**301**	*e*P	**Pn**	**10 47 53.1**	**+2.4**
AVF				*e*Sn	**Sn**	**10 48 47.8**	**-5.3**
	comp=E,2.2nm,0.4s						
SSF	**Saint Saulge**	**5.49**	**304**	*e*P	**Pn**	**10 47 54.2**	**+3.0**
BGF	**Bois d'Agland**	**5.68**	**297**	*e*P	**Pn**	**10 47 56.6**	**+2.8**

*GEN **21** 10:47:21.6, 44.°19N×10.°15E, h7km±2km, Ml2.5*
*LDG **21** 10:47:21.8±0.1, 44.°21N×10.°15E, h7km, Md3.2/2, Ml3.2/24,*
Error ellipse: s-maj=1.3km s-min=0.9km az=25.0
ISC 21 10:47:21.4±0.9, **44.°18N**±0.°03×**10.°14E**±0.°04, **h18**km±7km,
n31, σ2s**50**/60, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARO	**Sassorosso**	**0.19**	**90**	P	**Pg**	**10 47 25.5**	**-0.8**
SARO				S	**Sg**	**10 47 28.5**	**-1.1**
CARD	**Cardoso**	**0.29**	**122**	P	**Pg**	**10 47 27.5**	**-0.3**
CARD				S	**Sg**	**10 47 31.9**	**-0.3**
GRAM	**Graiana**	**0.31**	**351**	P	**Pg**	**10 47 27.5**	**-0.7**
GRAM				S	**Sg**	**10 47 32.3**	**-0.6**
MAIM	**Mastiano**	**0.37**	**136**	P	**Pg**	**10 47 29.2**	**0.0**
MAIM				S	**Sg**	**10 47 34.6**	**+0.2**
POPM	**Popiglio**	**0.47**	**107**	P	**Pg**	**10 47 30.2**	**-0.7**
POPM				S	**Sg**	**10 47 37.3**	**+0.1**
GORR	**Gorreto**	**0.74**	**305**	P	**Pb**	**10 47 35.3**	**-0.5**
GORR				S	**Sg**	**10 47 46.5**	**+0.8**
PGF	**Pioggiola**	**1.83**	**207**	*e*Pn	**Pn**	**10 47 52.4**	**+0.3**
PGF				*e*Sn	**Sn**	**10 48 14.4**	**-0.5**
	71nm,0.2s						
SBF	**Sospel**	**1.97**	**262**	*e*Pn	**Pn**	**10 47 54.4**	**+0.4**
SBF				*e*Sn	**Sn**	**10 48 17.9**	**-0.4**
	139nm,0.5s						
MBDF	**Montbardon**	**2.47**	**284**	*e*P	**Pn**	**10 48 03.5**	**+2.6**
MBDF	**Montbardon**	**2.47**	**284**	*e*Pg	**Pb**	**10 48 07.2**	**+1.9**
MBDF				*e*Sn	**Sn**	**10 48 29.7**	**-1.0**
MBDF				*e*Sg	**Sg**	**10 48 39.8**	**-1.0**
	58nm,0.6s						
FRF	**La Foret Royal**	**2.60**	**257**	*e*Pn	**Pn**	**10 48 03.1**	**+0.6**
FRF				*e*Sn	**Sn**	**10 48 32.4**	**-1.3**
	45nm,0.3s						
LPG	**La Plagne**	**2.74**	**300**	*e*P	**Pn**	**10 48 07.7**	**+2.9**
LPG				*e*Sn	**Sn**	**10 48 35.5**	**-2.1**
	11nm,0.4s						
LMR	**La Mourre**	**2.76**	**253**	*e*Pn	**Pn**	**10 48 05.1**	**+0.3**
LMR				*e*Sn	**Sn**	**10 48 36.5**	**-1.1**
	14nm,0.2s						
LPL	**La Plagne**	**2.76**	**300**	*e*P	**Pn**	**10 48 07.7**	**+2.7**
LPL				*e*Sn	**Sn**	**10 48 35.6**	**-2.4**
	11nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.13**	**285**	*e*P	**Pn**	**10 48 13.0**	**+3.1**
ORIF				*e*Sn	**Sn**	**10 48 45.3**	**-1.6**
	12nm,0.4s						
SMRF	**Simiane la Rot**	**3.29**	**268**	*e*Pn	**Pn**	**10 48 09.8**	**-2.3**
SMRF				*e*Sn	**Sn**	**10 48 49.2**	**-1.6**
	15nm,0.3s						
CABF	**La Chapelle**	**3.75**	**312**	*e*P	**Pn**	**10 48 21.8**	**+3.4**
CABF				*e*Sn	**Sn**	**10 48 59.8**	**-2.3**
	7.8nm,0.4s						
VIVF	**Saint-Julien-l**	**3.96**	**282**	*e*P	**Pn**	**10 48 24.7**	**+3.4**
VIVF				*e*Sn	**Sn**	**10 49 05.3**	**-2.1**
	2.2nm,0.3s						
HINF	**Hinteralfeld**	**4.29**	**329**	*e*P	**Pn**	**10 48 28.9**	**+3.0**
HINF				*e*Sn	**Sn**	**10 49 12.7**	**-2.8**
	8.0nm,0.2s						
LASF	**Ste Croix**	**4.52**	**271**	*e*P	**Pn**	**10 48 30.3**	**+1.3**
LASF				*e*Sn	**Sn**	**10 49 18.6**	**-2.5**
	8.3nm,0.6s						
HAU	**Haudompre**	**4.64**	**327**	*e*P	**Pn**	**10 48 33.7**	**+3.1**
HAU				*e*Sn	**Sn**	**10 49 20.9**	**-3.2**
	20nm,0.3s						
CDF	**Champ du Feu**	**4.67**	**336**	*e*P	**Pn**	**10 48 33.8**	**+2.7**
CDF				*e*Sn	**Sn**	**10 49 21.9**	**-3.0**
	11nm,0.4s						
SMF	**Signal de Mont**	**5.07**	**301**	*e*P	**Pn**	**10 48 40.3**	**+3.8**
SMF				*e*Sn	**Sn**	**10 49 31.5**	**-3.1**
	11nm,0.4s						
PAGF	**Fort de Pagny**	**5.33**	**327**	*e*P	**Pn**	**10 48 43.7**	**+3.6**
PAGF				*e*Sn	**Sn**	**10 49 37.2**	**-3.8**
	11nm,0.4s,baz=144						
SFTF	**Sexfontaines**	**5.36**	**320**	*e*P	**Pn**	**10 48 44.0**	**+3.6**
	baz=140						
SFTF				*e*Sn	**Sn**	**10 49 38.0**	**-3.6**
	4.7nm,0.4s						
LOR	**Lormes**	**5.37**	**307**	*e*P	**Pn**	**10 48 44.0**	**+3.4**
LOR				*e*Sn	**Sn**	**10 49 38.4**	**-3.6**
	10nm,0.3s						
AVF	**Avril sur Loir**	**5.43**	**301**	*e*P	**Pn**	**10 48 45.0**	**+3.5**
AVF				*e*Sn	**Sn**	**10 49 40.1**	**-3.5**
	1.9nm,0.3s						
SSF	**Saint Saulge**	**5.47**	**304**	*e*P	**Pn**	**10 48 45.6**	**+3.6**
SSF				*e*Sn	**Sn**	**10 49 41.2**	**-3.2**
	7.7nm,0.5s						
BGF	**Bois d'Agland**	**5.66**	**297**	*e*P	**Pn**	**10 48 47.4**	**+2.8**
BGF				*e*Sn	**Sn**	**10 49 45.2**	**-3.9**
	12nm,0.5s						
MTLF	**Montolieu**	**5.80**	**264**	*e*P	**Pn**	**10 48 50.3**	**+3.8**
CAF	**Calviac**	**5.81**	**280**	*e*P	**Pn**	**10 48 48.9**	**+2.1**

*JMA **21** 10:49:07.6±0.2, 24.°21N×121.°92E, h22km, M2.7*
*TAP **21** 10:49:07.8, 24.°29N×121.°93E, h12km, ML3.2, C*
ISC 21 10:49:07.9±0.9, **24.°28N**±0.°02×**121.°95E**±0.°02, **h12**km±7km,
n81, σ0s**76**/147, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.23**	**308**	*e*P	**Pg**	**10 49 12.8**	**0.0**
	baz=310						
NANB				S	**Sg**	**10 49 16.3**	**+0.2**
	baz=310						
ENA	**Nanau**	**0.24**	**307**	P	**Pg**	**10 49 12.9**	**0.0**
	baz=309						
ENA				S	**Sg**	**10 49 16.3**	**0.0**
	baz=309						
EOS1	**EOS1**	**0.31**	**32**	P	**Pb**	**10 49 15.3**	**-0.1**
	baz=31						
EOS1				*i* S	**Sb**	**10 49 20.9**	**+0.4**
	baz=31						
TWC	**Suao**	**0.34**	**344**	*i* P	**Pg**	**10 49 14.8**	**+0.1**
	baz=347						
TWC				*i* S	**Sg**	**10 49 19.6**	**+0.4**
	baz=347						
NACB	**Ninganchiao**	**0.34**	**251**	P	**Pg**	**10 49 14.3**	**-0.5**
	baz=250						
TWD	**Chiawan**	**0.38**	**238**	P	**Pg**	**10 49 15.6**	**+0.2**
	baz=246						
TWD				S	**Sb**	**10 49 21.5**	**-1.0**
	baz=246						
ETLH	**Xiulin Townshi**	**0.43**	**260**	*e*P	**Pg**	**10 49 15.8**	**-0.7**
	baz=271						
ETLH				*e*S	**Sb**	**10 49 23.6**	**-0.5**
	baz=271						
HWA	**Hwalien**	**0.44**	**226**	*e*P	**Pb**	**10 49 17.9**	**+0.3**
	baz=237						
ENLB	**Shoufeng**	**0.49**	**220**	*e*P	**Pg**	**10 49 17.5**	**0.0**
	baz=222						
ENLB				S	**Sb**	**10 49 27.9**	**+2.1**
	baz=222						
ENTT	**Nioudou**	**0.50**	**316**	*i* P	**Pg**	**10 49 17.8**	**+0.2**
	baz=316						
ENTT				*e*S	**Sb**	**10 49 24.7**	**-1.2**
	baz=316						
TWE	**Neicheng**	**0.51**	**330**	P	**Pb**	**10 49 18.0**	**-0.7**
	baz=331						
TWE				S	**Sg**	**10 49 24.7**	**+0.2**
	baz=331						
ILA	**Ilan**	**0.51**	**339**	*e*P	**Pb**	**10 49 18.6**	**-0.3**
	baz=339						
ILA				S	**Sb**	**10 49 25.7**	**-0.6**
	baz=339						
NNSB	**Datong**	**0.54**	**286**	P	**Pb**	**10 49 18.6**	**-0.8**
	baz=287						
NNS	**Nan Shan**	**0.55**	**287**	P	**Pg**	**10 49 18.7**	**+0.1**
	baz=288						
NNS				*e*S	**Sb**	**10 49 26.3**	**-1.1**
	baz=288						
NTC	**Toucheng**	**0.58**	**349**	P	**Pb**	**10 49 19.9**	**-0.1**
	baz=349						
NTC				*e*S	**Sb**	**10 49 28.3**	**+0.1**
	baz=349						
WHF	**Hehuan Shan**	**0.64**	**258**	*e*P	**Pg**	**10 49 20.0**	**-0.4**
	baz=268						
WHF				*e*S	**Sb**	**10 49 29.9**	**-0.4**
	baz=268						
YHNB	**Yeheng**	**0.65**	**306**	*e*P	**Pb**	**10 49 20.7**	**-0.5**
	baz=314						
YHNB				*e*S	**Sg**	**10 49 29.1**	**0.0**
	baz=314						
ESL	**Shilin**	**0.66**	**225**	*e*P	**Pb**	**10 49 20.9**	**-0.5**
	baz=233						
ESL				*e*S	**Sb**	**10 49 31.0**	**+0.3**
	baz=233						
NSK	**Sanguang**	**0.66**	**306**	P	**Pb**	**10 49 21.3**	**-0.2**
	baz=314						
NSK				*e*S	**Sg**	**10 49 29.6**	**0.0**
	baz=314						
TIPB	**Shuangxi**	**0.69**	**351**	*e*P	**Pb**	**10 49 21.9**	**-0.1**
	baz=350						
TIPB				*e*S	**Sg**	**10 49 30.5**	**0.0**
	baz=350						
TWT	**Tachien**	**0.71**	**268**	*e*P	**Pb**	**10 49 22.3**	**+0.1**
	baz=269						
TWT				*e*S	**Sb**	**10 49 31.6**	**-0.4**
	baz=269						
TWB1	**Santiao Chiao**	**0.72**	**3**	*e*P	**Pb**	**10 49 22.2**	**-0.3**
	baz=352						
TWB1				*e*S	**Sb**	**10 49 31.9**	**-0.5**
	baz=352						
CHGB	**Renai**	**0.74**	**253**	P	**Pb**	**10 49 22.5**	**-0.4**
	baz=254						
CHGB				*e*S	**Sb**	**10 49 33.4**	**+0.2**
	baz=254						
TWA	**Mucha**	**0.77**	**334**	*e*P	**Pb**	**10 49 23.0**	**-0.3**
	baz=334						
TWA				S	**Sb**	**10 49 33.7**	**0.0**
	baz=334						
EGFH	**Guangfu**	**0.78**	**218**	*e*P	**Pg**	**10 49 22.7**	**-0.2**
	baz=237						
EGFH				*e*S	**Sn**	**10 49 35.4**	**-0.9**
	baz=237						
NHDH	**Xindian Distri**	**0.78**	**330**	*e*P	**Pb**	**10 49 23.6**	**+0.1**
	baz=330						
NHDH				*e*S	**Sg**	**10 49 33.0**	**-0.2**
	baz=330						
OWD	**Renai**	**0.78**	**245**	*e*P	**Pb**	**10 49 23.0**	**-0.5**
	baz=253						
OWD				*e*S	**Sb**	**10 49 33.7**	**-0.4**
	baz=253						
NWF	**Wu-fen Shan**	**0.80**	**349**	*e*P	**Pb**	**10 49 24.2**	**+0.4**
	baz=339						
NWF				S	**Sb**	**10 49 35.1**	**+0.4**
	baz=339						
WFSB	**Wu-fen Shan**	**0.80**	**349**	*e*P	**Pn**	**10 49 24.4**	**-0.6**
	baz=339						
WFSB				*e*S	**Sb**	**10 49 34.4**	**-0.2**
	baz=339						
TATO	**Taipei**	**0.81**	**329**	*e*P	**Pb**	**10 49 23.9**	**0.0**
	baz=328						
TATO				*e*S	**Sb**	**10 49 34.4**	**-0.4**
	baz=328						
VWDT	**VWDT**	**0.91**	**235**	*e*P	**Pg**	**10 49 25.1**	**-0.3**
	baz=237						
VWDT				*e*S	**Sn**	**10 49 39.2**	**-0.3**
	baz=237						
WHP	**Taichung City**	**0.92**	**270**	*e*P	**Pn**	**10 49 26.3**	**-0.4**
	baz=272						
WHP				*e*S	**Sb**	**10 49 38.2**	**+0.2**
	baz=272						
HGSD	**Ruisui**	**0.92**	**211**	*e*P	**Pg**	**10 49 25.4**	**-0.3**
	baz=214						
HGSD				*e*S	**Sn**	**10 49 40.1**	**+0.1**
	baz=214						
LIOB	**Emei**	**0.92**	**293**	*e*P	**Pn**	**10 49 26.6**	**-0.1**
	baz=294						
LIOB				*e*S	**Sn**	**10 49 38.7**	**-1.3**
	baz=294						
JYNG	**Yonagunijimaku**	**0.92**	**79**	P	**Pg**	**10 49 25.9**	**+0.2**
JYNG				S	**Sb**	**10 49 38.8**	**+0.7**
YM01	**YM01**	**0.93**	**338**	*e*P	**Pn**	**10 49 26.5**	**-0.3**
	baz=329						
YM01				*e*S	**Sb**	**10 49 38.3**	**+0.1**
	baz=329						
NSTT	**Nanjuang**	**0.93**	**292**	*e*P	**Pn**	**10 49 27.2**	**+0.3**
	baz=293						
NSTT				*e*S	**Sb**	**10 49 38.5**	**+0.2**
	baz=293						
YM10	**YM10**	**0.94**	**338**	*e*P	**Pn**	**10 49 26.6**	**-0.3**
	baz=329						
YM10				*e*S	**Sn**	**10 49 39.2**	**-1.2**
	baz=329						
YM04	**YM04**	**0.94**	**337**	*e*P	**Pn**	**10 49 26.5**	**-0.6**
	baz=327						
YM04				*e*S	**Sb**	**10 49 38.7**	**-0.1**
	baz=327						
YM05	**YM05**	**0.94**	**338**	*e*P	**Pn**	**10 49 26.8**	**-0.3**
	baz=330						
YM05				*e*S	**Sn**	**10 49 39.5**	**-1.0**
	baz=330						
TWS1	**Kuangyinshan**	**0.95**	**329**	*e*P	**Pn**	**10 49 27.2**	**+0.1**
	baz=329						
TWS1				*e*S	**Sn**	**10 49 39.4**	**-1.1**
	baz=329						
YM08	**YM08**	**0.96**	**340**	*e*P	**Pn**	**10 49 27.3**	**+0.1**
	baz=341						
EHY	**Hungye**	**0.96**	**217**	*e*P	**Pg**	**10 49 26.1**	**-0.4**
	baz=219						
EHY				*e*S	**Sn**	**10 49 40.6**	**-0.4**
	baz=219						
DPDB	**Guoxing**	**0.97**	**255**	*e*P	**Pb**	**10 49 26.6**	**0.0**
	baz=264						
DPDB				*e*S	**Sb**	**10 49 39.7**	**+0.3**
	baz=264						
YM03	**YM03**	**0.97**	**337**	*e*P	**Pn**	**10 49 26.8**	**-0.6**
	baz=328						
YM03				*e*S	**Sn**	**10 49 40.2**	**-0.9**
	baz=328						
NCUH	**Zhongli**	**0.97**	**315**	*e*S	**Sn**	**10 49 43.0**	**+1.8**
	baz=315						
ANP	**Anpu**	**0.98**	**337**	*e*P	**Pn**	**10 49 27.5**	**-0.1**
	baz=338						
YOJ	**Yonaguni jima**	**0.98**	**79**	*e*P	**Pg**	**10 49 26.8**	**-0.1**
	baz=63						
YOJ				*e*S	**Sn**	**10 49 41.4**	**0.0**
	baz=63						
YOJ	**Yonaguni jima**	**0.98**	**79**	P	**Pg**	**10 49 26.8**	**-0.1**
YOJ				S	**Sb**	**10 49 40.2**	**+0.3**
NTST	**Danshui**	**0.99**	**333**	*e*P	**Pn**	**10 49 28.5**	**+0.9**
	baz=332						
NTST				*e*S	**Sn**	**10 49 40.6**	**-0.9**
	baz=332						
SBCB	**Hsinchu**	**1.01**	**300**	*e*P	**Pn**	**10 49 29.1**	**+1.1**
	baz=307						
SBCB				*e*S	**Sn**	**10 49 44.0**	**+1.8**
	baz=307						
HSN	**Hsinchu**	**1.03**	**300**	*e*S	**Sn**	**10 49 42.6**	**+0.1**
	baz=303						
SSLB	**Suanglung**	**1.03**	**242**	*e*P	**Pb**	**10 49 27.0**	**-0.8**
	baz=252						
SSLB				*e*S	**Sb**	**10 49 41.3**	**-0.1**
	baz=252						
TWY	**Chenhua**	**1.04**	**342**	*e*P	**Pn**	**10 49 28.9**	**+0.6**
	baz=341						
TWY				*e*S	**Sn**	**10 49 42.3**	**-0.5**
	baz=341						
SMLT	**Sun Moon Lake**	**1.04**	**248**	*e*P	**Pb**	**10 49 27.7**	**-0.2**
	baz=250						
SMLT				*e*S	**Sn**	**10 49 42.3**	**-0.7**
	baz=250						
TYC	**Yuchr**	**1.07**	**249**	*e*P	**Pb**	**10 49 27.3**	**-1.0**
	baz=252						
TYC				*e*S	**Sg**	**10 49 42.3**	**0.0**
	baz=252						
YULB	**Yu-li**	**1.07**	**214**	*e*P	**Pb**	**10 49 26.3**	**-2.1**
	baz=218						
YULB				*e*S	**Sn**	**10 49 43.7**	**+0.1**
	baz=218						
TWQ1	**Liyutan**	**1.07**	**274**	*e*P	**Pn**	**10 49 30.2**	**+1.4**
	baz=275						
NMLH	**Miaoli**	**1.08**	**284**	*e*P	**Pn**	**10 49 30.2**	**+1.3**
	baz=284						
NSY	**Sanyi**	**1.09**	**277**	*e*P	**Pn**	**10 49 30.4**	**+1.4**
	baz=278						
TWF1	**Yuli**	**1.10**	**213**	*e*P	**Pb**	**10 49 27.5**	**-1.4**
	baz=232						
TWF1				*e*S	**Sn**	**10 49 44.5**	**+0.1**
	baz=232						
WHYT	**Xinyi Township**	**1.16**	**240**	*e*P	**Pg**	**10 49 30.4**	**+0.2**
	baz=250						
WHYT				*e*S	**Sn**	**10 49 46.1**	**+0.2**
	baz=250						
TCU	**Taichung**	**1.17**	**264**	*e*S	**Sn**	**10 49 49.2**	**+3.1**
	baz=266						
WDJ	**Dajia District**	**1.20**	**273**	*e*S	**Sn**	**10 49 49.0**	**+2.3**
	baz=276						
WJS	**Zhushan**	**1.21**	**248**	*e*P	**Pg**	**10 49 30.9**	**-0.2**
	baz=243						
YUS	**Yu-Shan**	**1.21**	**229**	P	**Pn**	**10 49 30.9**	**-0.2**
	baz=233						
YUS				*e*S	**Sn**	**10 49 48.5**	**+0.8**
	baz=233						
ELDTW	**Lidau**	**1.39**	**218**	*e*P	**Pb**	**10 49 33.4**	**-0.5**
	baz=221						
ELDTW				*e*S	**Sn**	**10 49 51.6**	**+0.1**
	baz=221						
RLNB	**Erlin**	**1.50**	**255**	*e*S	**Sg**	**10 49 57.6**	**+1.3**
	baz=259						
CHN4	**Tsaushan**	**1.55**	**233**	*e*P	**Pg**	**10 49 37.0**	**-0.7**
	baz=238						
CHN4				*e*S	**Sg**	**10 49 59.3**	**+1.5**
	baz=238						
TPUB	**Ta-pu**	**1.56**	**231**	*e*P	**Pb**	**10 49 36.5**	**-0.2**
	baz=222						
TPUB				*e*S	**Sg**	**10 49 57.8**	**-0.2**
	baz=222						
STYT	**Tauyuan**	**1.56**	**225**	*e*P	**Pb**	**10 49 36.3**	**-0.5**
	baz=217						
STYT				*e*S	**Sg**	**10 50 00.0**	**+1.9**
	baz=217						
WTP	**Ta-pu**	**1.60**	**230**	P	**Pb**	**10 49 37.0**	**-0.5**
	baz=221						
WTP				*e*S	**Sg**	**10 50 00.7**	**+1.3**
	baz=221						
IRIF	**Iriomote-Funau**	**1.63**	**88**	P	**Pn**	**10 49 36.2**	**-0.2**
IRIF				S	**Sn**	**10 49 57.5**	**+0.2**
TWK	**Hsinying**	**1.68**	**233**	P	**Pn**	**10 49 37.0**	**-0.2**
	baz=237						
TWK				S	**Sg**	**10 50 03.3**	**+1.4**
	baz=237						
CHN1	**Nanshi**	**1.70**	**230**	*e*P	**Pb**	**10 49 38.7**	**-0.5**
	baz=235						
CHN1				*e*S	**Sg**	**10 50 02.8**	**+0.1**
	baz=235						
SGST	**Jiashian**	**1.73**	**227**	*e*P	**Pb**	**10 49 38.9**	**-0.8**
	baz=218						
SGST				*e*S	**Sg**	**10 50 03.6**	**0.0**
	baz=218						
SLGT	**Liugui**	**1.75**	**223**	*e*P	**Pn**	**10 49 38.9**	**+0.7**
	baz=228						
SLGT				*e*S	**Sg**	**10 50 03.8**	**-0.5**
	baz=228						
JKRS	**Kuro-shima**	**1.88**	**91**	P	**Pn**	**10 49 40.5**	**+0.6**
JKRS				S	**Sn**	**10 50 04.4**	**+0.8**
JIJ	**Ishigaki jima**	**2.00**	**87**	P	**Pn**	**10 49 41.6**	**0.0**
JIJ				S	**Sn**	**10 50 06.0**	**-0.6**
MASBT	**Mashibuluo**	**2.06**	**216**	*e*P	**Pb**	**10 49 44.9**	**-0.3**
	baz=221						
MASBT				*e*S	**Sg**	**10 50 12.2**	**-1.8**
	baz=221						
JISG	**Ishigakijimahi**	**2.17**	**82**	S	**Sb**	**10 50 14.4**	**+0.3**

*JMA **21** 10:49:42.8±0.2, 24.°25N×121.°96E, h0km*
*TAP **21** 10:49:43.5, 24.°33N×121.°92E, h8km, ML2.9, C*
*ISCJB **21** 10:49:44.4±0.4, 24.°32N±0.°02×121.°94E±0.°02, h9km±3km,*
Error ellipse: s-maj=3.7km s-min=2.5km az=34.0
ISC 21 10:49:43.8±1.0, **24.°30N**±0.°02×**121.°94E**±0.°02, **h12**km±8km,
n32, σ0s**52**/58, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.21**	**306**	P	**Pg**	**10 49 48.0**	**-0.3**
	baz=302						
NANB				S	**Sg**	**10 49 51.7**	**+0.2**
	baz=302						
ENA	**Nanau**	**0.22**	**304**	*i* P	**Pg**	**10 49 48.0**	**-0.4**
	baz=302						
ENA				*i* S	**Sg**	**10 49 51.8**	**+0.2**
	baz=302						
EOS1	**EOS1**	**0.30**	**35**	*e*P	**Pg**	**10 49 50.2**	**+0.3**
	baz=40						
EOS1				S	**Sb**	**10 49 56.4**	**+0.4**
	baz=40						
TWC	**Suao**	**0.31**	**345**	*i* P	**Pg**	**10 49 50.1**	**-0.1**
	baz=348						
TWC				*i* S	**Sg**	**10 49 54.8**	**+0.3**
	baz=348						
NACB	**Ninganchiao**	**0.34**	**248**	*e*P	**Pb**	**10 49 50.9**	**-0.9**
	baz=242						
NACB				S	**Sb**	**10 49 56.2**	**-0.9**
	baz=242						
TWD	**Chiawan**	**0.38**	**234**	*e*P	**Pb**	**10 49 51.8**	**-0.8**
	baz=229						
TWD				*e*S	**Sb**	**10 49 59.0**	**+0.6**
	baz=229						
ETLH	**Xiulin Townshi**	**0.43**	**257**	*e*P	**Pb**	**10 49 52.4**	**-0.9**
	baz=253						
ETLH				*e*S	**Sb**	**10 50 00.2**	**+0.4**
	baz=253						
ENTT	**Nioudou**	**0.48**	**315**	P	**Pg**	**10 49 53.2**	**0.0**
	baz=314						
ENTT				S	**Sg**	**10 50 00.1**	**+0.6**
	baz=314						
TWE	**Neicheng**	**0.48**	**329**	*e*P	**Pg**	**10 49 53.1**	**-0.2**
	baz=330						
TWE				S	**Sb**	**10 50 01.7**	**+0.5**
	baz=330						
ENLB	**Shoufeng**	**0.50**	**218**	*e*P	**Pb**	**10 49 55.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=220						
ESL				S	**Sb**	**10 50 07.4**	**+0.7**
	baz=220						
TIPB	**Shuangxi**	**0.67**	**351**	*e*P	**Pg**	**10 49 56.8**	**-0.1**
	baz=352						
TIPB				*e*S	**Sb**	**10 50 06.5**	**-0.2**
	baz=352						
TWT	**Tachien**	**0.70**	**266**	*e*P	**Pb**	**10 49 58.3**	**+0.3**
	baz=263						
TWT				*e*S	**Sb**	**10 50 08.4**	**+0.8**
	baz=263						
TWB1	**Santiao Chiao**	**0.70**	**4**	*e*S	**Sb**	**10 50 07.8**	**+0.2**
	baz=5.0						
CHGB	**Renai**	**0.74**	**251**	*e*P	**Pb**	**10 49 58.6**	**-0.1**
	baz=248						
CHGB				*e*S	**Sb**	**10 50 09.8**	**+1.0**
	baz=248						
TWA	**Mucha**	**0.75**	**334**	*e*P	**Pg**	**10 49 57.6**	**-0.7**
	baz=335						
TWA				*e*S	**Sg**	**10 50 08.4**	**+0.4**
	baz=335						
NWF	**Wu-fen Shan**	**0.78**	**349**	*e*P	**Pg**	**10 49 58.8**	**-0.1**
	baz=350						
NWF				*e*S	**Sb**	**10 50 10.5**	**+0.7**
	baz=350						
WFSB	**Wu-fen Shan**	**0.78**	**349**	*e*P	**Pb**	**10 49 59.0**	**-0.3**
	baz=350						
WFSB				*e*S	**Sb**	**10 50 09.8**	**+0.1**
	baz=350						
OWD	**Renai**	**0.78**	**244**	*e*P	**Pg**	**10 49 58.5**	**-0.4**
	baz=241						
OWD				*e*S	**Sb**	**10 50 10.7**	**+0.8**
	baz=241						
TATO	**Taipei**	**0.78**	**329**	*e*S	**Sb**	**10 50 09.8**	**-0.1**
	baz=329						
YM01	**YM01**	**0.90**	**338**	*e*P	**Pb**	**10 50 01.9**	**+0.5**
	baz=338						
YM01				*e*S	**Sb**	**10 50 13.8**	**+0.4**
	baz=338						
WHP	**Taichung City**	**0.91**	**269**	*e*P	**Pb**	**10 50 01.4**	**-0.1**
	baz=266						
WHP				*e*S	**Sb**	**10 50 14.3**	**+0.8**
	baz=266						
YOJ	**Yonaguni jima**	**0.99**	**81**	P	**Pg**	**10 50 02.3**	**-0.6**
YOJ				*e*S	**Sb**	**10 50 16.7**	**+0.8**
SSLB	**Suanglung**	**1.04**	**240**	*e*S	**Sn**	**10 50 18.6**	**0.0**
	baz=238						
IRIF	**Iriomote-Funau**	**1.64**	**89**	S	**Sg**	**10 50 36.0**	**-0.4**
JIJ	**Ishigaki jima**	**2.01**	**88**	S	**Sb**	**10 50 45.0**	**-0.3**

*ISCJB **21** 10:56:57.2±0.4, 44°.10N±0°.02×10°.08E±0°.02, h3km,3km, Error ellipse: s-maj=3.6km s-min=2.9km az=179.3*
*ROM **21** 10:56:57.5±0.3, 44°.18N±0°.01×10°.17E±0°.02, h5km, ML2.6/7, Error ellipse: s-maj=1.7km s-min=1.3km az=42.0*
*GEN **21** 10:56:57.5, 44°.17N×10°.18E, h3km±2km, Ml2.5*
*LDG **21** 10:56:58.1±0.1, 44°.17N×10°.19E, h3km, Md2.8/2, Ml2.8/19, Error ellipse: s-maj=1.3km s-min=0.9km az=19.0*
ISC 21 10:56:56.9±0.9, **44°.17N**±0°.03×**10.14E**±0°.02, **h13**km±7km, **n48**, σ2±17/76, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.18**	**93**	P	**Pg**	**10 57 01.1**	**0.0**
VLC				S	**Sg**	**10 57 03.6**	**-0.3**
VLC				AML	AML		
	comp=E,7095μm,0.1s						
VLC				AML	AML		
	comp=N,3680μm,0.3s						
VLC				AML	AML		
	comp=E,7960μm,0.1s						
VLC				AML	AML		
	comp=N,3485μm,0.2s						
VLC				AML	AML		
	comp=E,7090μm,0.1s						
VLC				AML	AML		
	comp=N,3675μm,0.3s						
VLC				AML	AML		
	comp=E,7960μm,0.1s						
VLC				AML	AML		
	comp=N,3485μm,0.2s						
VLC				AML	AML		
	comp=N,3485μm,0.2s						
VLC				AML	AML		
	comp=N,3675μm,0.3s						
VLC				AML	AML		
	comp=E,7960μm,0.1s						
VLC				AML	AML		
	comp=E,7090μm,0.1s						
VLC				AML	AML		
	comp=N,3485μm,0.2s						
VLC				AML	AML		
	comp=N,3675μm,0.3s						
VLC				AML	AML		
	comp=E,7960μm,0.1s						
VLC				AML	AML		
	comp=E,7090μm,0.1s						
SARO	**Sassorosso**	**0.19**	**85**	P	**Pg**	**10 57 01.2**	**0.0**
SARO				S	**Sg**	**10 57 03.9**	**-0.5**
ERBM	**Eremo**	**0.32**	**38**	P	**Pb**	**10 57 04.2**	**-0.4**
ERBM				S	**Sb**	**10 57 09.2**	**-0.6**
ERBM				AML	AML		
	comp=E,1690μm,1.2s						
ERBM				AML	AML		
	comp=N,1740μm,0.5s						
ERBM				AML	AML		
	comp=E,1685μm,1.2s						
ERBM				AML	AML		
	comp=N,1740μm,0.5s						
ERBM				AML	AML		
	comp=N,1740μm,0.5s						
ERBM				AML	AML		
	comp=E,1685μm,1.2s						
ERBM				AML	AML		
	comp=N,1740μm,0.5s						
ERBM				AML	AML		
	comp=E,1685μm,1.2s						
GRAM	**Graiana**	**0.33**	**351**	P	**Pb**	**10 57 04.4**	**-0.3**
GRAM				S	**Sb**	**10 57 09.4**	**-0.6**
BDI	**Bagni Di Lucca**	**0.35**	**108**	P	**Pg**	**10 57 04.5**	**+0.5**
BDI				S	**Sg**	**10 57 09.1**	**+0.3**
MAIM	**Mastiano**	**0.36**	**135**	P	**Pg**	**10 57 04.2**	**0.0**
MAIM				S	**Sg**	**10 57 09.5**	**+0.4**
POPM	**Popiglio**	**0.46**	**105**	P	**Pg**	**10 57 06.3**	**+0.2**
POPM				S	**Sg**	**10 57 12.8**	**+0.5**
MSSA	**Maissana**	**0.47**	**289**	P	**Pb**	**10 57 07.2**	**0.0**
ZCCA	**Zocca**	**0.63**	**73**	P	**Pb**	**10 57 10.6**	**+0.7**
ZCCA				AML	AML		
	comp=E,374μm,0.4s						
ZCCA				AML	AML		
	comp=N,394μm,0.5s						
ZCCA				AML	AML		
	comp=E,419μm,0.4s						
ZCCA				AML	AML		
	comp=N,399μm,0.9s						
ZCCA				AML	AML		
	comp=E,418μm,0.4s						
ZCCA				AML	AML		
	comp=N,398μm,0.9s						
ZCCA				AML	AML		
	comp=E,418μm,0.4s						
ZCCA				AML	AML		
	comp=N,398μm,0.9s						
ZCCA				AML	AML		
	comp=E,418μm,0.4s						
ZCCA				AML	AML		
	comp=N,398μm,0.9s						
CRMI	**Carmignano**	**0.71**	**122**	P	**Pn**	**10 57 13.0**	**+0.2**
CRMI				S	**Sb**	**10 57 22.2**	**+1.3**
CRMI				AML	AML		
	comp=E,160μm,0.3s						
CRMI				AML	AML		
	comp=N,317μm,0.8s						
CRMI				AML	AML		
	comp=E,159μm,0.3s						
CRMI				AML	AML		
	comp=N,317μm,0.8s						
CRMI				AML	AML		
	comp=E,159μm,0.3s						
CRMI				AML	AML		
	comp=N,317μm,0.8s						
BOB	**Bobbio (Coli)**	**0.78**	**321**	P	**Pb**	**10 57 12.7**	**+0.4**
RUFI	**Rufina**	**1.04**	**108**	P	**Pn**	**10 57 18.1**	**+0.8**
RUFI				S	**Sn**	**10 57 31.8**	**0.0**
CSNT	**Castellina Chi**	**1.09**	**129**	P	**Pn**	**10 57 18.7**	**+0.8**
CASP	**Castiglione de**	**1.48**	**159**	P	**Pn**	**10 57 23.8**	**+0.6**
CASP				AML	AML		
	comp=E,100μm,1.0s						
CASP				AML	AML		
	comp=N,73μm,1.2s						
CASP				AML	AML		
	comp=N,73μm,1.2s						
CASP				AML	AML		
	comp=E,100μm,1.0s						
CASP				AML	AML		
	comp=N,73μm,1.2s						
CASP				AML	AML		
	comp=E,100μm,1.0s						
SALO	**Salr**	**1.48**	**11**	AML	AML		
	comp=E,227μm,0.4s						
SALO				AML	AML		
	comp=E,227μm,0.4s						
SALO				AML	AML		
	comp=N,470μm,0.7s						
SALO				AML	AML		
	comp=N,470μm,0.7s						
SALO				AML	AML		
	comp=N,470μm,0.7s						
SALO				AML	AML		
	comp=E,227μm,0.4s						
MAGA	**Magasa**	**1.64**	**12**	P	**Pg**	**10 57 28.4**	**-0.1**
MAGA				AML	AML		
	comp=E,447μm,0.6s						
MAGA				AML	AML		
	comp=N,313μm,0.6s						
MAGA				AML	AML		
	comp=N,313μm,0.6s						
MAGA				AML	AML		
	comp=E,447μm,0.6s						
MAGA				AML	AML		
	comp=N,313μm,0.6s						
MAGA				AML	AML		
	comp=E,447μm,0.6s						
PGF	**Pioggiola**	**1.82**	**208**	*e*Pn	**Pn**	**10 57 29.2**	**+1.1**
PGF				*e*Sn	**Sn**	**10 57 50.8**	**-0.3**
	comp=E,11nm,0.3s						
SBF	**Sospel**	**1.97**	**262**	*e*Pn	**Pn**	**10 57 31.6**	**+1.4**
SBF				*e*Sn	**Sn**	**10 57 55.4**	**+0.6**
	comp=E,16nm,0.3s						
MBDF	**Montbardon**	**2.47**	**284**	*e*Pn	**Pn**	**10 57 38.4**	**+1.3**
MBDF	**Montbardon**	**2.47**	**284**	*e*Pg	**Pg**	**10 57 44.8**	**+0.4**
MBDF				*e*Sn	**Sn**	**10 58 07.6**	**+0.3**
	comp=E,7.7nm,0.4s						
FRF	**La Foret Royal**	**2.60**	**258**	*e*Pn	**Pn**	**10 57 39.9**	**+1.2**
FRF				*e*Sn	**Sn**	**10 58 10.5**	**+0.4**
	comp=E,6.1nm,0.3s						
LPG	**La Plagne**	**2.75**	**300**	*e*P	**Pb**	**10 57 45.1**	**-1.1**
LPG				*e*Sn	**Sn**	**10 58 13.9**	**-0.4**
	comp=E,5.5nm,0.4s						
LMR	**La Mourre**	**2.76**	**254**	*e*Pn	**Pn**	**10 57 41.9**	**+1.0**
LMR				*e*Sn	**Sn**	**10 58 14.0**	**0.0**
	comp=E,2.7nm,0.2s						
LPL	**La Plagne**	**2.77**	**300**	*e*P	**Pb**	**10 57 45.6**	**-0.9**
LPL				*e*Sn	**Sn**	**10 58 14.6**	**-0.1**
	comp=E,14nm,0.5s						
FETA	**Feichten**	**2.88**	**8**	Pn	**Pg**	**10 57 49.5**	**-2.7**
	comp=E,0.7nm,0.3s						
ABTA	**Abfaltersbach**	**3.07**	**32**	*e*Pn	**Pb**	**10 57 52.6**	**+1.1**
	comp=E,1.2nm,0.3s						
ABTA				Sn	**Sb**	**10 58 26.7**	**-2.3**
	comp=E,4.6nm,0.5s						
DAVA	**Damuels**	**3.12**	**357**	*e*Pn	**Pb**	**10 57 50.6**	**-1.8**
	comp=E,4.3nm,0.3s						
DAVA				Sn	**Sb**	**10 58 28.7**	**-1.9**
	comp=E,6.2nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.13**	**285**	*e*P	**Pb**	**10 57 49.9**	**-2.7**
ORIF				*e*Sn	**Sn**	**10 58 23.4**	**-0.1**
	comp=E,15nm,0.7s						
SQTA	**Sankt Quirin**	**3.14**	**13**	*e*Pn	**Pb**	**10 57 51.4**	**-1.3**
	comp=E,2.9nm,0.3s						
SQTA				*e*Sn	**Sb**	**10 58 32.3**	**+1.2**
	comp=E,6.5nm,0.3s						
MOTA	**Moosalm**	**3.25**	**12**	*e*Pn	**Pb**	**10 57 52.0**	**-2.5**
	comp=E,2.7nm,0.2s						
WTTA	**Wattenberg**	**3.27**	**18**	*e*Pn	**Pb**	**10 57 53.4**	**-1.5**
	comp=E,3.0nm,0.3s						
WTTA				*e*Sn	**Sb**	**10 58 33.2**	**-1.5**
	comp=E,17nm,0.5s						
SMRF	**Simiane la Rot**	**3.29**	**268**	*e*Pn	**Pn**	**10 57 49.4**	**+1.1**
SMRF				*e*Sn	**Sn**	**10 58 27.4**	**+0.1**
	comp=E,2.9nm,0.3s						
WATA	**Walderalm**	**3.32**	**17**	*e*Pn	**Pb**	**10 57 54.5**	**-1.3**
	comp=E,2.1nm,0.2s						
MYKA	**Terra Mystica**	**3.49**	**44**	*e*Sn	**Sb**	**10 58 37.4**	**-3.5**
	comp=E,0.8nm,0.1s						
CABF	**La Chapelle**	**3.75**	**312**	*e*P	**Pn**	**10 57 58.8**	**+4.1**
CABF				*e*Sn	**Sn**	**10 58 38.2**	**-0.6**
	comp=E,12nm,0.7s						
OBKA	**Obir**	**3.89**	**51**	Sn	**Sb**	**10 58 46.7**	**-5.9**
	comp=E,4.0nm,0.4s						
HINF	**Hinteralfeld**	**4.31**	**329**	*e*P	**Pn**	**10 58 06.4**	**+4.2**
HINF				*e*Sn	**Sn**	**10 58 50.8**	**-1.5**
	comp=E,5.7nm,0.3s						
HAU	**Haudompre**	**4.66**	**327**	*e*P	**Pn**	**10 58 11.5**	**+4.5**
HAU				*e*Sn	**Sn**	**10 58 59.4**	**-1.5**
	comp=E,16nm,0.4s						
MOA	**Molln**	**4.67**	**37**	*e*Pn	Pn	10 58 12.4	+5.2
	comp=E,1.0nm,0.2s						
MOA				*e*Sn	**Sn**	**10 59 04.9**	**+3.6**
	comp=E,1.2nm,0.3s						
CDF	**Champ du Feu**	**4.69**	**336**	*e*P	**Pn**	**10 58 10.1**	**+2.7**
CDF				*e*Sn	**Sn**	**10 59 00.6**	**-1.1**
	comp=E,5.4nm,0.4s						
ARSA	**Arzberg**	**4.87**	**49**	*e*Pn	**Pn**	**10 58 13.8**	**+3.9**
	comp=E,1.4nm,0.2s						
SMF	**Signal de Mont**	**5.08**	**301**	*e*P	**Pn**	**10 58 16.9**	**+4.1**
PAGF	**Fort de Pagny**	**5.34**	**327**	*e*P	**Pn**	**10 58 21.0**	**+4.6**
PAGF				*e*Sn	**Sn**	**10 59 15.4**	**-2.4**
	comp=E,1.6nm,0.2s						
SFTF	**Sexfontaines**	**5.37**	**321**	*e*P	**Pn**	**10 58 21.1**	**+4.3**
LOR	**Lormes**	**5.38**	**307**	*e*P	**Pn**	**10 58 21.2**	**+4.3**
LOR				*e*Sn	**Sn**	**10 59 17.0**	**-1.7**
	comp=E,4.0nm,0.5s						
SSF	**Saint Saulge**	**5.48**	**304**	*e*P	**Pn**	**10 58 22.8**	**+4.6**
SSF				*e*Sn	**Sn**	**10 59 18.8**	**-2.3**
	comp=E,1.5nm,0.3s						
BGF	**Bois d'Agland**	**5.67**	**297**	*e*P	**Pn**	**10 58 25.2**	**+4.4**
TCF	**Toulx Ste Croi**	**5.99**	**294**	*e*P	Pn	10 58 30.3	+5.0
TCF				*e*Sn	**Sn**	**10 59 31.4**	**-2.3**
	comp=E,0.5nm,0.2s						

IDC 21 11:03:14.4±9.7, **13°.66S**×**167°.11E**, **h210**km±103km, **mb3.1**/2, **mb1 3.5**/3, **mb1mx3.1**/25, **mbtmp3.9**/3, **Error ellipse: s-maj=93.8km s-min=37.0km az=154.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.39**	**184**	P	Pn	11 05 14.2	+1.4
	2.1nm,0.3s,baz=5.1,slow=19,SNR=18						
DZM				S	S	11 06 45.7	-1.8
	0.4nm,0.3s,baz=300,slow=20,SNR=2.1						
ASAR	**Alice Springs**	**32.93**	**248**	P	P	11 09 29.2	-0.2
	0.3nm,0.5s,baz=71,slow=9.9,SNR=5.7						
ILAR	**Eielson Array**	**85.56**	**18**	P	P	11 15 27.9	-0.7
	1.4nm,0.9s,baz=237,slow=5.2,SNR=8.7						
ARCES	**ARCESS Array B**	**119.19**	**346**	PKP	PKiKP	11 21 38.8	+0.8
	1.3nm,0.9s,baz=39,slow=3.5,SNR=3.5						

*IDC **21** 11:04:56.7±1.4, 13°.83N×92°.17W, h0km, mb3.9/5, mb1 4.2/8, mb1mx3.9/34, mbtmp3.9/8, ML3.8/3, MS2.6/1, Ms1 2.6/1, ms1mx2.4/33, Error ellipse: s-maj=33.5km s-min=22.7km az=16.0*
*SNET **21** 11:04:58.5±0.8, 14°.07N×92°.28W, h35km±619km, ML3.8*
*GCG **21** 11:05:00.0±1.3, 13°.97N×92°.33W, h58km±55km, MD4.4*
*MEX **21** 11:05:00.7±0.4, 13°.95N×92°.05W, h79km±26km, MD4.1*
*NEIC **21** 11:05:03.9±1.9, 14°.06N×92°.13W, h48km±4km, mb4.1/39, MD4.1(MEX), Error ellipse: s-maj=21.7km s-min=9.3km az=224.0*
*UCR **21** 11:05:09.2±0.6, 14°.24N×91°.66W, h12km±22km, MD4.0, mb4.1(NEIC)*
ISC 21 11:04:59.2±1.8, **13°.94N**±0°.06×**92°.17W**±0°.05, **h15**km±10km, **n93**, σ1±**00**/109, **mb4.2**/30, **1C, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.76**	**49**	*e*P	**Pn**	**11 05 17.0**	**+1.5**
ERG				*e*S	**Sn**	**11 05 29.1**	**+2.4**
STG3	**Santiaguito 3,**	**0.96**	**37**	*e*P	**Pn**	**11 05 18.9**	**+0.6**
THIG		**0.96**	**354**	*e*Pn	**Pg**	**11 05 18.1**	**+0.2**
THIG				*e*Sn	**Sn**	**11 05 31.5**	**-0.2**
THIG		**0.96**	**354**	*e*P	**Pg**	**11 05 18.1**	**+0.2**
THIG				*e*S	**Sn**	**11 05 31.5**	**-0.2**
FUG	**Fuego 3**	**1.38**	**68**	*e*P	**Pn**	**11 05 24.4**	**+0.3**
FUG	**Fuego 3**	**1.38**	**68**	*e*P	**Pn**	**11 05 24.4**	**+0.3**
PCG	**Pacaya**	**1.58**	**73**	*e*P	**Pb**	**11 05 27.8**	**-0.4**
PCG	**Pacaya**	**1.58**	**73**	*e*P	**Pb**	**11 05 27.8**	**-0.4**
IXG	**Ixpaco**	**1.69**	**82**	*e*P	**Pb**	**11 05 30.4**	**+0.3**
IXG	**Ixpaco**	**1.69**	**82**	*e*P	**Pb**	**11 05 30.4**	**+0.3**
NBG	**Las Nubes**	**1.88**	**70**	*e*P	**Pb**	**11 05 33.3**	**-0.1**
NBG	**Las Nubes**	**1.88**	**70**	*e*P	**Pb**	**11 05 33.3**	**-0.1**
APG	**El Apazote**	**1.96**	**57**	Pn	**Pn**	**11 05 33.5**	**+1.4**
	46nm,0.3s,baz=231,slow=10,SNR=366						
APG				LR	LR	11 05 57.2	
	comp=Z,142nm,19.0s,baz=222,slow=30						
APG				Sn	**Sb**	**11 05 58.6**	**-0.4**
	28nm,0.3s,baz=328,slow=11,SNR=4.9						
PCIG		**2.03**	**330**	*e*Pn	**Pn**	**11 05 32.4**	**-0.5**
PCIG				*e*Sn	**Sn**	**11 05 57.3**	**-0.6**
PCIG		**2.03**	**330**	*e*P	**Pn**	**11 05 32.4**	**-0.5**
PCIG				*e*S	**Sn**	**11 05 57.3**	**-0.6**
CCIG	**Comitan**	**2.33**	**1**	*e*Pn	**Pb**	**11 05 40.5**	**-0.5**
CCIG				*e*Sn	**Sn**	**11 06 05.1**	**-0.5**
CCIG	**Comitan**	**2.33**	**1**	*e*P	**Pb**	**11 05 41.0**	**-0.1**
CCIG				*i* S	**Sg**	**11 06 12.9**	**-1.2**
RTR	**El Retiro**	**2.45**	**91**	*e*P	**Pn**	**11 05 38.5**	**-0.4**
SNJE	**San Jose**	**2.49**	**91**	*e*P	**Pn**	**11 05 38.9**	**-0.5**
UNIC	**Santa Ana**	**2.53**	**89**	*e*S	**Sn**	**11 06 10.8**	**+0.3**
MRL	**Marmol**	**2.66**	**64**	*e*P	**Pn**	**11 05 43.8**	**+2.0**
MRL	**Marmol**	**2.66**	**64**	*e*P	**Pn**	**11 05 43.8**	**+2.0**
MTO3	**Montecristo**	**2.76**	**80**	*e*P	**Pn**	**11 05 42.6**	**-0.6**
TGIG		**2.97**	**342**	*e*Pn	**Pn**	**11 05 46.0**	**+0.1**
TGIG				*e*Sn	**Sn**	**11 06 22.1**	**+0.8**
TGIG		**2.97**	**342**	*e*P	**Pn**	**11 05 46.0**	**+0.1**
TGIG				*e*S	**Sn**	**11 06 22.1**	**+0.8**
LFU	**La Fuente**	**2.97**	**93**	*e*P	**Pn**	**11 05 45.4**	**-0.6**
PAVA	**Las Pavas**	**3.14**	**94**	*e*P	**Pn**	**11 05 48.0**	**-0.4**
SNVI	**San Vicente**	**3.25**	**95**	*e*S	**Sn**	**11 06 29.6**	**+1.3**
TECA	**Tecapa**	**3.59**	**97**	*e*P	**Pn**	**11 05 54.8**	**+0.2**
PACA	**Pacayal**	**3.76**	**97**	*e*P	**Pn**	**11 05 56.7**	**-0.2**
LCND	**La Caada**	**4.20**	**98**	*e*P	**Pn**	**11 06 03.0**	**+0.2**
LCND				*e*S	**Sn**	**11 06 51.9**	**+0.1**
CNCH	**Conchagua**	**4.26**	**98**	*e*P	**Pn**	**11 06 03.2**	**-0.6**
CNCH				*e*S	**Sn**	**11 06 54.1**	**+0.7**
CNCH				IAML		11 07 07.3	
	comp=Z,286nm,0.6s						
CSGN	**Cosiguina Volc**	**4.58**	**102**	*e*Pn	**Pn**	**11 06 09.4**	**+1.3**
CSGN				*e*Sn	**Sn**	**11 06 59.5**	**-1.7**
TGUH	**Tegucigalpa,Un**	**4.75**	**88**	*e*Pn	**Pn**	**11 06 12.4**	**+2.1**
TGUH				*e*Sn	**Sn**	**11 07 01.9**	**-3.2**
ESTN	**Estel**	**5.70**	**98**	*e*Pn	**Pn**	**11 06 24.3**	**+0.8**
LVIG	**Laguna Verde**	**7.04**	**325**	*e*Pn	**Pn**	**11 06 42.8**	**+1.0**
TLIG	**Tlapa**	**7.14**	**301**	*e*Pn	**Pn**	**11 06 45.1**	**+1.8**
JTS	**Las Juntas de**	**7.93**	**116**	Pn	**Pn**	**11 06 54.7**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=358,slow=14,SNR=5.2						
JTS				Lg	Lg	11 09 00.6	
	comp=Z,0.4nm,0.3s,baz=200,slow=21,SNR=9.7						
JTS	**Las Juntas de**	**7.93**	**116**	*e*Pn	**Pn**	**11 06 55.4**	**+1.2**
HDC	**Heredia**	**8.80**	**116**	*e*Pn	**Pn**	**11 07 07.5**	**+1.5**
ZAIG	**Zacatecas**	**13.21**	**313**	*e*Pn	**Pn**	**11 08 07.1**	**+0.6**
833A	**Chaparral WMA,**	**15.81**	**336**	*e*Pn	**Pn**	**11 08 41.0**	**-0.4**
	comp=Z,9.4nm,0.8s						
NATX	**Nacogdoches**	**17.88**	**353**	*e*Pn	**Pn**	**11 09 07.7**	**+0.1**
	comp=Z,15nm,0.6s						
555A	**McAlpin**	**18.20**	**26**	*e*P	**P**	**11 09 13.5**	**+1.9**
	comp=Z,42nm,1.0s						
H06E1	**SOCORRO T-PHAS**	**18.63**	**287**	T	T	11 28 26.8	
	SNR=12						
TXAR	**Lajitas Array**	**18.66**	**327**	P	**Pn**	**11 09 19.4**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=156,slow=9.8,SNR=27						
TX31	**Lajitas Ar. Si**	**18.66**	**327**	*e*P	**Pn**	**11 09 17.4**	**+0.2**
	comp=Z,7.3nm,1.1s						
LRAL	**Lakeview Retre**	**19.58**	**13**	*e*P	**Pn**	**11 09 27.7**	**-0.4**
	comp=Z,7.2nm,1.0s						
ROSC	**El Rosal**	**19.78**	**116**	*e*P	**Pn**	**11 09 30.6**	**-0.5**
	comp=Z,7.3nm,0.9s						
152A	**Waverly Hall**	**19.84**	**19**	*e*P	**Pn**	**11 09 30.7**	**-0.5**
	comp=Z,8.8nm,0.9s						
Z50A	**Ashland**	**20.05**	**15**	*e*P	**P**	**11 09 31.6**	**-0.3**
	comp=Z,8.8nm,1.1s						
MIAR	**Mount Ida**	**20.55**	**357**	*e*P	**P**	**11 09 36.6**	**-0.7**
	comp=Z,7.0nm,1.3s						
X48A	**Hartselle**	**20.94**	**12**	*e*P	**P**	**11 09 41.0**	**-0.5**
	comp=Z,6.8nm,0.9s						
MNTX	**Cornudas Mount**	**21.43**	**328**	*e*P	**P**	**11 09 46.9**	**0.0**
	comp=Z,5.9nm,0.9s						
WMOK	**Wichita Mounta**	**21.55**	**345**	*e*P	**P**	**11 09 47.4**	**-0.7**
	comp=Z,3.4nm,0.9s						
MSTX	**Muleshoe**	**22.14**	**336**	*e*P	**P**	**11 09 53.8**	**-0.8**
	comp=Z,13nm,1.3s						
AMTX	**Amarillo**	**22.55**	**339**	*e*P	**P**	**11 09 59.1**	**+0.1**
	comp=Z,16nm,0.6s						
T47A	**Sharon Grove**	**23.39**	**10**	*e*P	**P**	**11 10 05.4**	**-2.1**
	comp=Z,8.7nm,0.9s						
ANMO	**Albuquerque**	**24.57**	**331**	P	**P**	**11 10 20.2**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=146,slow=11,SNR=16						
ANMO	**Albuquerque**	**24.57**	**331**	*e*P	**P**	**11 10 18.1**	**-0.8**
SDCO	**Great Sand Dun**	**26.51**	**336**	*e*P	**P**	**11 10 36.6**	**+0.1**
	comp=Z,2.8nm,1.3s						
S22A	**4UR Ranch, Cre**	**27.06**	**334**	*e*P	**P**	**11 10 41.7**	**+0.1**
	comp=Z,3.7nm,1.0s						
MVCO	**Mesa Verde**	**27.37**	**331**	*e*P	**P**	**11 10 44.4**	**+0.1**
	comp=Z,8.1nm,1.1s						
PV03	**Paradox Valley**	**28.38**	**332**	*e*P	**P**	**11 10 53.4**	**+0.2**
	comp=Z,5.7nm,1.0s						
CCUT	**Cedar City**	**30.14**	**325**	*e*P	**P**	**11 11 09.3**	**+0.3**
	comp=Z,3.0nm,0.9s						
PSUT	**Pine Spring**	**31.12**	**326**	*e*P	**P**	**11 11 18.1**	**+0.6**
	comp=Z,2.2nm,0.9s						
PD31	**Pinedale Array**	**32.41**	**336**	*e*P	**P**	**11 11 28.6**	**-0.2**
	comp=Z,0.8nm,0.9s						
PDAR	**Pinedale Array**	**32.41**	**336**	P	**P**	**11 11 29.7**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=128,slow=12,SNR=3.3						
PDAR				PcP	**PcP**	**11 14 17.0**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=145,slow=3.3,SNR=3.4						
REDW	**Red Top Meadow**	**33.43**	**335**	*e*P	**P**	**11 11 38.4**	**+0.7**
	comp=Z,4.3nm,0.8s						
ELK	**Elko**	**33.45**	**327**	*e*P	**P**	**11 11 38.6**	**+0.6**
	comp=Z,1.4nm,0.8s						
SNOW	**Snow King Moun**	**33.47**	**335**	*e*P	**P**	**11 11 38.3**	**+0.1**
	comp=Z,6.9nm,0.6s						
LOHW	**Long Hollow**	**33.53**	**335**	*e*P	**P**	**11 11 39.0**	**+0.4**
	comp=Z,2.2nm,0.9s						
NV01	**Mina Array Sit**	**33.62**	**321**

WR1	Warramunga Arr	135.22	256	*e*PKPdf	PKPdf	11 24 19.1	-0.1
WRA	Warramunga Arr	135.22	256	PKP	PKPdf	11 24 19.1	-0.1
	comp=Z,0.9nm,0.8s,baz=97,slow=3.5,SNR=2.9						
CMAR	Chiang Mai Arr	145.99	341	PKPbc	PKPdf	11 24 38.3	-0.4
	comp=Z,5.2nm,0.8s,baz=336,slow=3.8,SNR=21						

*ISCJB **21** 11:07:24.8±0.3, 44°.18N±0°.02×10°.18E±0°.02, h11km±2km, Error ellipse: s-maj=3.7km s-min=2.8km az=5.9*
*ROM **21** 11:07:24.8±0.2, 44°.24N±0°.01×10°.25E±0°.02, h10km±1km, ML2.5/10, Error ellipse: s-maj=1.4km s-min=1.0km az=51.0*
*GEN **21** 11:07:25.0, 44°.24N×10°.27E, h11km±1km, Ml2.4*
*LDG **21** 11:07:25.1±0.2, 44°.27N×10°.37E, h10km, Md2.9/2, Ml3.0/23, Error ellipse: s-maj=5.0km s-min=2.3km az=51.0*
*VIE **21** 11:07:25.5±1.3, 44°.12N×10°.58E, h8km, mb2.5/4, ml2.7/12, Error ellipse: s-maj=12.5km s-min=2.6km az=157.0*

ISC 21 11:07:24.9±0.9, 44°.18N±0°.02×10°.18E±0°.02, h9km±6km, n54, σ1s96/88, 1C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.15**	**96**	P	**Pg**	**11 07 28.3**	**+0.1**
VLC				S	**Sg**	**11 07 30.8**	**+0.3**
VLC				AML	AML		
	comp=E,1750μm,0.6s						
VLC				AML	AML		
	comp=N,3525μm,0.8s						
VLC				AML	AML		
	comp=E,1755μm,0.6s						
VLC				AML	AML		
	comp=N,3485μm,0.8s						
VLC				AML	AML		
	comp=E,1755μm,0.1s						
VLC				AML	AML		
	comp=N,3525μm,0.8s						
VLC				AML	AML		
	comp=E,1990μm,0.1s						
VLC				AML	AML		
	comp=N,3485μm,0.8s						
VLC				AML	AML		
	comp=E,1755μm,0.1s						
VLC				AML	AML		
	comp=N,3485μm,0.8s						
VLC				AML	AML		
	comp=N,3525μm,0.8s						
VLC				AML	AML		
	comp=E,1990μm,0.1s						
SARO	**Sassorosso**	**0.16**	**87**	P	**Pg**	**11 07 28.2**	**-0.1**
SARO				S	**Sg**	**11 07 30.5**	**-0.3**
SARO	**Sassorosso**	**0.16**	**87**	P	**Pg**	**11 07 28.2**	**-0.1**
SARO				S	**Sg**	**11 07 30.5**	**-0.3**
CARD	**Cardoso**	**0.26**	**125**	P	**Pg**	**11 07 30.3**	**+0.2**
CARD				S	**Sg**	**11 07 34.8**	**+1.1**
CARD	**Cardoso**	**0.26**	**125**	P	**Pg**	**11 07 30.6**	**+0.4**
CARD				S	**Sg**	**11 07 34.8**	**+1.1**
ERBM	**Eremo**	**0.29**	**34**	P	**Pg**	**11 07 29.8**	**-1.1**
ERBM				S	**Sg**	**11 07 33.5**	**-1.3**
ERBM				AML	AML		
	comp=E,1920μm,0.8s						
ERBM				AML	AML		
	comp=N,2140μm,1.0s						
ERBM				AML	AML		
	comp=N,2140μm,1.0s						
ERBM				AML	AML		
	comp=E,1920μm,0.8s						
BDI	**Bagni Di Lucca**	**0.32**	**111**	P	**Pg**	**11 07 31.2**	**-0.1**
BDI				S	**Sg**	**11 07 35.9**	**+0.4**
BDI				AML	AML		
	comp=E,2375μm,0.7s						
BDI				AML	AML		
	comp=N,1590μm,0.4s						
BDI				AML	AML		
	comp=E,1910μm,0.7s						
BDI				AML	AML		
	comp=N,2150μm,0.7s						
BDI				AML	AML		
	comp=E,2370μm,0.7s						
BDI				AML	AML		
	comp=N,1590μm,0.4s						
BDI				AML	AML		
	comp=E,1910μm,0.7s						
BDI				AML	AML		
	comp=N,2150μm,0.7s						
BDI				AML	AML		
	comp=N,2150μm,0.7s						
BDI				AML	AML		
	comp=E,2370μm,0.7s						
BDI				AML	AML		
	comp=E,1910μm,0.7s						
BDI				AML	AML		
	comp=N,1590μm,0.4s						
GRAM	**Graiana**	**0.33**	**345**	P	**Pg**	**11 07 30.9**	**-0.5**
GRAM				S	**Sg**	**11 07 35.4**	**-0.4**
GRAM	**Graiana**	**0.33**	**345**	P	**Pg**	**11 07 31.0**	**-0.5**
GRAM				S	**Sg**	**11 07 35.4**	**-0.4**
MAIM	**Mastiano**	**0.34**	**139**	P	**Pb**	**11 07 32.1**	**-1.0**
MAIM				S	**Sb**	**11 07 37.7**	**-0.9**
MAIM	**Mastiano**	**0.34**	**139**	P	**Pb**	**11 07 32.1**	**-1.0**
MAIM				S	**Sb**	**11 07 37.7**	**-0.9**
POPM	**Popiglio**	**0.43**	**107**	P	**Pg**	**11 07 33.1**	**-0.2**
POPM				S	**Sg**	**11 07 39.2**	**+0.1**
POPM	**Popiglio**	**0.43**	**107**	P	**Pg**	**11 07 33.2**	**-0.2**
POPM				S	**Sb**	**11 07 39.5**	**-1.8**
MSSA	**Maissana**	**0.50**	**287**	P	**Pg**	**11 07 35.6**	**+1.0**
MSSA				S	**Sg**	**11 07 43.1**	**+1.9**
MSSA				AML	AML		
	comp=E,630μm,1.4s						
MSSA				AML	AML		
	comp=N,784μm,0.5s						
MSSA				AML	AML		
	comp=E,630μm,1.4s						
MSSA				AML	AML		
	comp=N,784μm,0.5s						
MSSA				AML	AML		
	comp=E,630μm,1.4s						
MSSA				AML	AML		
	comp=N,784μm,0.5s						
ZCCA	**Zocca**	**0.60**	**73**	P	**Pg**	**11 07 36.9**	**+0.4**
ZCCA				AML	AML		
	comp=E,836μm,0.9s						
ZCCA				AML	AML		
	comp=N,702μm,0.5s						
ZCCA				AML	AML		
	comp=E,870μm,0.7s						
ZCCA				AML	AML		
	comp=N,756μm,0.5s						
ZCCA				AML	AML		
	comp=E,836μm,0.9s						
ZCCA				AML	AML		
	comp=N,702μm,0.5s						
ZCCA				AML	AML		
	comp=E,870μm,0.7s						
ZCCA				AML	AML		
	comp=N,756μm,0.5s						
ZCCA				AML	AML		
	comp=E,870μm,0.7s						
ZCCA				AML	AML		
	comp=E,836μm,0.9s						
ZCCA				AML	AML		
	comp=N,756μm,0.5s						
ZCCA				AML	AML		
	comp=N,702μm,0.5s						
FNVD	**Fontana Vidola**	**0.68**	**90**	P	**Pg**	**11 07 37.6**	**-0.4**
FNVD				AML	AML		
	comp=E,488μm,0.6s						
FNVD				AML	AML		
	comp=N,418μm,0.5s						
FNVD				AML	AML		
	comp=E,488μm,0.6s						
FNVD				AML	AML		
	comp=N,418μm,0.5s						
FNVD				AML	AML		
	comp=N,418μm,0.5s						
FNVD				AML	AML		
	comp=E,488μm,0.6s						
CRMI	**Carmignano**	**0.69**	**124**	P	**Pb**	**11 07 38.4**	**-0.6**
CRMI				AML	AML		
	comp=E,102μm,0.8s						
CRMI				AML	AML		
	comp=N,178μm,1.3s						
CRMI				AML	AML		
	comp=E,102μm,0.8s						
CRMI				AML	AML		
	comp=N,178μm,1.3s						
CRMI				AML	AML		
	comp=E,102μm,0.8s						
CRMI				AML	AML		
	comp=N,178μm,1.3s						
SEI	**Scarperia**	**0.85**	**98**	P	**Pg**	**11 07 40.7**	**-0.6**
SEI				AML	AML		
	comp=E,482μm,0.5s						
SEI				AML	AML		
	comp=N,936μm,0.5s						
SEI				AML	AML		
	comp=E,482μm,0.5s						
SEI				AML	AML		
	comp=N,936μm,0.5s						
SEI				AML	AML		
	comp=N,936μm,0.5s						
SEI				AML	AML		
	comp=E,482μm,0.5s						
CASP	**Castiglione de**	**1.47**	**160**	AML	AML		
	comp=N,83μm,1.2s						
CASP				AML	AML		
	comp=E,73μm,1.4s						
CASP				AML	AML		
	comp=E,73μm,1.4s						
CASP				AML	AML		
	comp=N,83μm,1.2s						
PGF	**Pioggiola**	**1.84**	**208**	*e*Pn	**Pn**	**11 07 57.2**	**+0.5**
PGF				*e*Sn	**Sn**	**11 08 19.8**	**-0.3**
	comp=N,14nm,0.3s						
SBF	**Sospel**	**2.01**	**262**	*e*Pn	**Pn**	**11 07 59.5**	**+0.5**
SBF				*e*Sn	**Sn**	**11 08 24.2**	**0.0**
	comp=N,84nm,0.5s						
SNTG	**Esanatoglia**	**2.20**	**114**	AML	AML		
	comp=N,28μm,0.4s						
SNTG				AML	AML		
	comp=E,27μm,0.7s						
SNTG				AML	AML		
	comp=N,28μm,0.4s						
SNTG				AML	AML		
	comp=E,27μm,0.7s						
MBDF	**Montbardon**	**2.50**	**284**	*e*Pn	**Pn**	**11 08 06.2**	**+0.3**
MBDF	**Montbardon**	**2.50**	**284**	*e*Pg	**Pg**	**11 08 14.1**	**+1.2**
MBDF				*e*Sn	**Sn**	**11 08 35.7**	**-0.9**
	comp=E,18nm,0.5s						
MBDF				*e*Sg	**Sg**	**11 08 46.8**	**+1.4**
	comp=E,15nm,0.4s						
FRF	**La Foret Royal**	**2.63**	**258**	*e*Pn	**Pn**	**11 08 08.0**	**+0.5**
FRF				*e*Sn	**Sn**	**11 08 39.1**	**-0.4**
	comp=E,33nm,0.3s						
LPG	**La Plagne**	**2.78**	**300**	*e*P	**Pn**	**11 08 12.7**	**+2.9**
LPG				*e*Sn	**Sn**	**11 08 42.5**	**-1.0**
	comp=E,5.8nm,0.3s						
LMR	**La Mourre**	**2.79**	**254**	*e*Pn	**Pn**	**11 08 10.0**	**+0.3**
LMR				*e*Sn	**Sn**	**11 08 41.8**	**-1.6**
	comp=E,12nm,0.3s						
LPL	**La Plagne**	**2.80**	**300**	*e*P	**Pn**	**11 08 13.1**	**+3.1**
LPL				*e*Sn	**Sn**	**11 08 43.1**	**-0.8**
	comp=E,9.4nm,0.4s						
FETA	**Feichten**	**2.87**	**7**	Pn	**Pb**	**11 08 15.3**	**-1.0**
	comp=E,11nm,1.0s						
ABTA	**Abfaltersbach**	**3.05**	**32**	Pn	**Pn**	**11 08 14.8**	**+1.4**
	comp=E,2.5nm,0.5s						
DAVA	**Damuels**	**3.12**	**356**	*e*Pn	**Pn**	**11 08 17.0**	**+2.6**
	comp=E,6.4nm,0.3s						
DAVA				Sn	**Sn**	**11 08 53.2**	**+1.4**
	comp=E,2.5nm,0.3s						
SQTA	**Sankt Quirin**	**3.13**	**13**	*e*Pn	**Pn**	**11 08 17.4**	**+2.9**
	comp=E,3.1nm,0.4s						
SQTA				*e*Sn	**Sn**	**11 08 55.8**	**+3.8**
	comp=E,16nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.17**	**285**	*e*P	**Pn**	**11 08 17.5**	**+2.6**
ORIF				*e*Sn	**Sn**	**11 08 52.5**	**-0.3**
	comp=E,19nm,0.6s						
MOTA	**Moosalm**	**3.23**	**11**	*e*Pn	**Pn**	**11 08 18.5**	**+2.6**
	comp=E,5.5nm,0.4s						
WTTA	**Wattenberg**	**3.25**	**18**	*e*Pn	**Pn**	**11 08 16.6**	**+0.4**
	comp=E,2.2nm,0.3s						
WTTA				Sn	**Sn**	**11 08 58.8**	**+3.8**
	comp=E,15nm,0.5s						
WATA	**Walderalm**	**3.31**	**17**	*e*Pn	**Pn**	**11 08 18.7**	**+1.8**
	comp=E,5.0nm,0.5s						
SMRF	**Simiane la Rot**	**3.33**	**268**	*e*Pn	**Pn**	**11 08 17.5**	**+0.4**
SMRF				*e*Sn	**Sn**	**11 08 56.3**	**-0.4**
	comp=E,5.5nm,0.3s						
KBA	**Koelnbreinsper**	**3.65**	**36**	*e*Sn	**Sn**	**11 09 04.0**	**-0.9**
	comp=E,2.5nm,0.4s						
CABF	**La Chapelle**	**3.78**	**312**	*e*P	**Pn**	**11 08 25.7**	**+2.4**
CABF				*e*Sn	**Sn**	**11 09 05.5**	**-2.4**
	comp=E,3.0nm,0.3s						
OBKA	**Obir**	**3.86**	**51**	*e*Sn	**Sn**	**11 09 11.3**	**+1.3**
	comp=E,5.3nm,0.4s						
VIVF	**Saint-Julien-l**	**4.00**	**282**	*e*P	**Pn**	**11 08 29.9**	**+3.6**
VIVF				*e*Sn	**Sn**	**11 09 11.5**	**-1.8**
	comp=E,2.1nm,0.3s						
HINF	**Hinteralfeld**	**4.32**	**329**	*e*P	**Pn**	**11 08 31.3**	**+0.6**
HINF				*e*Sn	**Sn**	**11 09 18.7**	**-2.5**
	comp=E,4.2nm,0.3s						
MOA	**Molln**	**4.65**	**36**	Sn	**Sn**	**11 09 30.7**	**+1.5**
	comp=E,2.2nm,0.4s						
HAU	**Haudompre**	**4.67**	**326**	*e*P	**Pn**	**11 08 36.5**	**+1.0**
HAU				*e*Sn	**Sn**	**11 09 26.8**	**-3.0**
	comp=E,9.2nm,0.3s						
CDF	**Champ du Feu**	**4.69**	**336**	*e*P	**Pn**	**11 08 35.9**	**0.0**
CDF				*e*Sn	**Sn**	**11 09 27.2**	**-3.3**
	comp=E,5.8nm,0.3s						
SMF	**Signal de Mont**	**5.10**	**301**	*e*P	**Pn**	**11 08 44.4**	**+2.9**
SMF				*e*Sn	**Sn**	**11 09 37.4**	**-3.1**
	comp=E,3.9nm,0.3s						
LOR	**Lormes**	**5.40**	**307**	*e*P	**Pn**	**11 08 50.0**	**+4.4**
LOR				*e*Sn	**Sn**	**11 09 44.2**	**-3.6**
	comp=E,7.1nm,0.4s						
AVF	**Avril sur Loir**	**5.47**	**301**	*e*P	**Pn**	**11 08 48.7**	**+2.2**
AVF				*e*Sn	**Sn**	**11 09 46.3**	**-3.1**
	comp=E,1.6nm,0.3s						
SSF	**Saint Saulge**	**5.50**	**304**	*e*P	**Pn**	**11 08 51.5**	**+4.6**
SSF				*e*Sn	**Sn**	**11 09 46.9**	**-3.4**
	comp=E,1.7nm,0.3s						
BGF	**Bois d'Agland**	**5.69**	**297**	*e*P	**Pn**	**11 08 52.0**	**+2.5**
BGF				*e*Sn	**Sn**	**11 09 51.8**	**-3.2**
	comp=E,5.2nm,0.4s						
MTLF	**Montolieu**	**5.83**	**265**	*e*P	**Pn**	**11 08 56.2**	**+4.8**
TCF	**Toulx Ste Croi**	**6.01**	**293**	*e*Sn	**Sn**	**11 09 59.4**	**-3.5**
	comp=E,2.6nm,0.3s						
VOIR		**10.64**	**78**	‖ *i*P	**Pn**	**11 09 57.1**	**-0.4**
MLR	**Muntele Rosu**	**11.27**	**78**	‖ *i*P	Pn	11 09 57.8	-8.4

*ROM **21** 11:09:53.2±0.2, 44°.19N±0°.01×10°.18E±0°.01, h5km, ML2.4/5, Error ellipse: s-maj=1.5km s-min=0.9km az=23.0*
*LDG **21** 11:09:53.1±0.0, 44°.16N×10°.15E, h2km, Md2.6/2, Ml2.7/21, Error ellipse: s-maj=1.0km s-min=0.7km az=6.0*
*GEN **21** 11:09:53.5, 44°.19N×10°.21E, h2km±1km, Ml2.3*

ISC 21 11:09:53.0±1.0, 44°.20N±0°.03×10°.27E±0°.02, h19km±2km, n38, σ2s53/64, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.10**	**116**	P	**Pg**	**11 09 56.8**	**0.0**
VLC				S	**Sg**	**11 09 59.1**	**-0.2**
VLC				AML	AML		
	comp=E,3605μm,0.7s						
VLC				AML	AML		
	comp=N,5115μm,0.4s						
VLC				AML	AML		
	comp=E,3545μm,0.7s						
VLC				AML	AML		
	comp=N,5505μm,0.4s						
VLC				AML	AML		
	comp=E,3545μm,0.7s						
VLC				AML	AML		
	comp=N,5505μm,0.4s						
VLC				AML	AML		
	comp=E,3605μm,0.7s						
VLC				AML	AML		
	comp=N,5115μm,0.4s						
VLC				AML	AML		
	comp=N,5505μm,0.4s						
VLC				AML	AML		
	comp=E,3545μm,0.7s						
VLC				AML	AML		
	comp=N,5115μm,0.4s						
VLC				AML	AML		
	comp=E,3605μm,0.7s						
SARO	**Sassorosso**	**0.10**	**101**	P	**Pg**	**11 09 56.7**	**-0.2**
SARO				S	**Sg**	**11 09 58.9**	**-0.6**
ERBM	**Eremo**	**0.24**	**26**	P	**Pg**	**11 09 59.5**	**+0.8**
ERBM				S	**Sg**	**11 10 04.0**	**+1.4**
ERBM				AML	AML		
	comp=E,1445μm,1.2s						
ERBM				AML	AML		
	comp=N,2010μm,0.7s						
ERBM				AML	AML		
	comp=N,2010μm,0.7s						
ERBM				AML	AML		
	comp=E,1445μm,1.2s						
ERBM				AML	AML		
	comp=N,2010μm,0.7s						
ERBM				AML	AML		
	comp=E,1445μm,1.2s						
BDI	**Bagni Di Lucca**	**0.28**	**120**	P	**Pb**	**11 10 00.1**	**+0.7**
BDI				S	**Sg**	**11 10 05.0**	**+1.4**
BDI				AML	AML		
	comp=E,1180μm,0.6s						
BDI				AML	AML		
	comp=N,997μm,0.1s						
BDI				AML	AML		
	comp=E,1080μm,0.6s						
BDI				AML	AML		
	comp=N,1175μm,0.1s						
BDI				AML	AML		
	comp=N,1175μm,0.1s						
BDI				AML	AML		
	comp=N,997μm,0.1s						
BDI				AML	AML		
	comp=E,1180μm,0.6s						
BDI				AML	AML		
	comp=E,1080μm,0.6s						
BDI				AML	AML		
	comp=N,1175μm,0.1s						
BDI				AML	AML		
	comp=N,997μm,0.1s						
BDI				AML	AML		
	comp=E,1080μm,0.6s						
BDI				AML	AML		
	comp=E,1180μm,0.6s						
GRAM	**Graiana**	**0.32**	**334**	P	**Pg**	**11 09 59.7**	**-0.3**
GRAM				S	**Sg**	**11 10 04.9**	**+0.1**
POPM	**Popiglio**	**0.39**	**114**	P	**Pb**	**11 10 02.0**	**+0.6**
POPM				S	**Sb**	**11 10 08.4**	**+1.3**
ZCCA	**Zocca**	**0.53**	**74**	P	**Pn**	**11 10 06.5**	**+0.8**
MSSA	**Maissana**	**0.55**	**282**	P	**Pb**	**11 10 03.4**	**-0.6**
MSSA				S	**Sg**	**11 10 11.4**	**-0.1**
MSSA				AML	AML		
	comp=E,406μm,0.7s						
MSSA				AML	AML		
	comp=N,327μm,0.5s						
MSSA				AML	AML		
	comp=E,406μm,0.7s						
MSSA				AML	AML		
	comp=N,327μm,0.5s						
MSSA				AML	AML		
	comp=E,406μm,0.7s						
MSSA				AML	AML		
	comp=N,327μm,0.5s						
CRMI	**Carmignano**	**0.66**	**129**	P	**Pn**	**11 10 08.1**	**+0.8**
CRMI				AML	AML		
	comp=E,171μm,0.5s						
CRMI				AML	AML		
	comp=N,237μm,0.5s						
CRMI				AML	AML		
	comp=N,237μm,0.5s						
CRMI				AML	AML		
	comp=E,171μm,0.5s						
CRMI				AML	AML		
	comp=N,237μm,0.5s						
CRMI				AML	AML		
	comp=E,171μm,0.5s						
RUFI	**Rufina**	**0.97**	**112**	P	**Pg**	**11 10 13.5**	**+1.6**
PGF	**Pioggiola**	**1.89**	**210**	*e*Pn	**Pn**	**11 10 23.8**	**-0.7**
PGF				*e*Sn	**Sn**	**11 10 45.8**	**-2.1**
	comp=E,18nm,0.3s						
SBF	**Sospel**	**2.07**	**262**	*e*Pn	**Pn**	**11 10 26.0**	**-0.8**
SBF				*e*Sn	**Sn**	**11 10 49.6**	**-2.6**
	comp=E,31nm,0.5s						
MBDF	**Montbardon**	**2.56**	**283**	*e*Pn	**Pn**	**11 10 33.0**	**-0.6**
MBDF	**Montbardon**	**2.56**	**283**	*e*Pg	**Pb**	**11 10 40.0**	**+1.6**
MBDF				*e*Sn	**Sn**	**11 11 02.1**	**-2.2**
MBDF				*e*Sg	**Sb**	**11 11 11.4**	**+1.9**
	comp=E,13nm,0.5s						
FRF	**La Foret Royal**	**2.69**	**257**	*e*Pn	**Pn**	**11 10 34.2**	**-1.2**
FRF				*e*Sn	**Sn**	**11 11 04.7**	**-2.8**
	comp=E,5.4nm,0.2s						
LPG	**La Plagne**	**2.81**	**299**	*e*P	**Pn**	**11 10 39.6**	**+2.3**
LPG				*e*Sn	**Sn**	**11 11 09.0**	**-1.9**
	comp=E,7.2nm,0.5s						
LPL	**La Plagne**	**2.83**	**299**	*e*P	**Pn**	**11 10 39.8**	**+2.3**
LPL				*e*Sn	**Sn**	**11 11 08.9**	**-2.4**
	comp=E,4.6nm,0.3s						
FETA	**Feichten**	**2.84**	**6**	*i* Pn	**Pn**	**11 10 36.1**	**-1.4**
	comp=E,0.6nm,0.4s						
LMR	**La Mourre**	**2.86**	**254**	*e*Pn	**Pn**	**11 10 36.5**	**-1.1**
LMR				*e*Sn	**Sn**	**11 11 07.1**	**-4.3**
	comp=E,4.1nm,0.3s						
SQTA	**Sankt Quirin**	**3.09**	**12**	*i* Pn	**Pn**	**11 10 36.6**	**-4.4**
	comp=E,2.7nm,0.2s						
MOTA	**Moosalm**	**3.20**	**10**	*e*Pn	**Pn**	**11 10 38.5**	**-3.9**
	comp=E,1.4nm,0.2s						
WTTA	**Wattenberg**	**3.21**	**17**	*e*Pn	**Pn**	**11 10 39.6**	**-3.0**
	comp=E,1.2nm,0.2s						
WTTA				*e*Sn	**Sn**	**11 11 17.2**	**-3.2**
	comp=E,10nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.21**	**284**	*e*P	**Pn**	**11 10 44.7**	**+2.1**
ORIF				*e*Sn	**Sn**	**11 11 17.7**	**-2.8**
	comp=E,10nm,0.5s						
WATA	**Walderalm**	**3.27**	**16**	*e*Pn	**Pn**	**11 10 40.4**	**-2.9**
	comp=E,2.5nm,0.2s						
SMRF	**Simiane la Rot**	**3.39**	**268**	*e*Pn	**Pn**	**11 10 44.1**	**-0.8**
SMRF				*e*Sn	**Sn**	**11 11 21.6**	**-3.0**
	comp=E,0.9nm,0.2s						
OBKA	**Obir**	**3.80**	**51**	Sn	**Sn**	**11 11 33.1**	**-1.8**
	comp=E,7.5nm,0.7s						
CABF	**La Chapelle**	**3.80**	**311**	*e*P	**Pn**	**11 10 53.8**	**+3.1**
CABF				*e*Sn	**Sn**	**11 11 32.7**	**-2.2**
	comp=E,2.9nm,0.4s						
VIVF	**Saint-Julien-l**	**4.05**	**281**	*e*P	**Pn**	**11 10 57.1**	**+3.0**
VIVF				*e*Sn	**Sn**	**11 11 37.6**	**-3.4**
	comp=E,1.0nm,0.3s						
HINF	**Hinteralfeld**	**4.33**	**328**	*e*P	**Pn**	**11 11 01.3**	**+3.5**
HINF				*e*Sn	**Sn**	**11 11 46.0**	**-1.8**
	comp=E,2.3nm,0.3s						
MOA	**Molln**	**4.59**	**36**	*e*Pn	Pb	11 11 07.9	-5.1
	comp=E,0.5nm,0.1s						
HAU	**Haudompre**	**4.68**	**326**	*e*P	**Pn**	**11 11 06.3**	**+3.7**
HAU				*e*Sn	**Sn**	**11 11 54.1**	**-2.3**
	comp=E,7.3nm,0.3s						
CDF	**Champ du Feu**	**4.69**	**335**	*e*P	**Pn**	**11 11 06.6**	**+3.7**
CDF				*e*Sn	**Sn**	**11 11 55.1**	**-1.7**
	comp=E,7.0nm,0.5s						
SMF	**Signal de Mont**	**5.14**	**301**	*e*P	**Pn**	**11 11 12.4**	**+3.4**
SMF				*e*Sn	**Sn**	**11 12 04.4**	**-3.4**
	comp=E,10nm,0.6s						
PAGF	**Fort de Pagny**	**5.37**	**326**	*e*P	**Pn**	**11 11 15.4**	**+3.3**
LOR	**Lormes**	**5.43**	**307**	*e*P	**Pn**	**11 11 16.6**	**+3.6**
LOR				*e*Sn	**Sn**	**11 12 11.3**	**-3.7**
	comp=E,3.8nm,0.4s						
AVF	**Avril sur Loir**	**5.50**	**300**	*e*P	**Pn**	**11 11 17.5**	**+3.5**
AVF				*e*Sn	**Sn**	**11 12 13.4**	**-3.3**
	comp=E,1.6nm,0.4s						
SSF	**Saint Saulge**	**5.53**	**303**	*e*P	Pn	11 11 19.2	+4.8
SSF				*e*Sn	**Sn**	**11 12 14.1**	**-3.4**
	comp=E,1.1nm,0.3s						
BGF	**Bois d'Agland**	**5.73**	**297**	*e*P	**Pn**	**11 11 20.5**	**+3.4**
BGF				*e*Sn	**Sn**	**11 12 18.3**	**-4.0**
	comp=E,3.5nm,0.4s						

*IDC **21** 11:28:15.2±5.5, 19°.72S×177°.81W, h375km±58km, mb3.4/10, mb1 3.6/11, mb1mx3.4/27, mbtmp4.1/11, Error ellipse: s-maj=30.5km s-min=20.0km az=162.0*
*ISCJB **21** 11:28:16.5±0.7, 19°.7S±0°.2×177°.9W±0°.2, h400km, mb3.6/10, Error ellipse: s-maj=26.1km s-min=14.7km az=44.0*

ISC 21 11:28:17.1±0.8, 19°.8S±0°.2×177°.8W±0°.2, h400km, n15, σ0s81/15, mb3.6/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.96**	**192**	P	**P**	**11 32 11.7**	**+0.1**
	0.6nm,0.3s,baz=0.0,slow=4.0,SNR=3.5						
STKA	**Stephens Creek**	**38.27**	**243**	P	**P**	**11 35 01.6**	**+0.5**
	1.0nm,0.4s,baz=80,slow=11,SNR=3.6						
ASAR	**Alice Springs**	**44.85**	**256**	P	**P**	**11 35 54.0**	**+0.1**
	7.4nm,0.7s,baz=89,slow=8.4,SNR=114						

ASAR				PcP	**PcP**	**11 37 28.0**	**+0.1**
	0.4nm,0.8s,baz=107,slow=3.9,SNR=3.3						
WRA	**Warramunga Arr**	**44.87**	**261**	P	**P**	**11 35 53.4**	**-0.7**
	4.3nm,0.7s,baz=89,slow=7.3,SNR=32						
MJAR	**Matsushiro Arr**	**69.71**	**323**	P	**P**	**11 38 46.5**	**+1.3**
	1.4nm,0.7s,baz=170,slow=5.8,SNR=3.7						
PETK	**Petropavlovsk-**	**75.60**	**345**	P	**P**	**11 39 18.9**	**-0.1**
	3.8nm,0.9s,baz=124,slow=7.8,SNR=3.2						
NVAR	**Mina Array Bea**	**80.37**	**43**	P	**P**	**11 39 46.1**	**+0.5**
	0.7nm,0.6s,baz=223,slow=8.7,SNR=5.6						
TXAR	**Lajitas Array**	**86.52**	**57**	P	**P**	**11 40 17.3**	**+0.7**
	0.7nm,0.7s,baz=230,slow=5.6,SNR=8.7						
ILAR	**Eielson Array**	**87.55**	**13**	P	**P**	**11 40 19.8**	**-0.7**
	0.3nm,0.4s,baz=224,slow=4.3,SNR=7.6						
PDAR	**Pinedale Array**	**88.31**	**43**	P	**P**	**11 40 24.7**	**-0.1**
	0.2nm,0.5s,baz=219,slow=2.3,SNR=3.7						
YKA	**Yellowknife Ar**	**95.77**	**25**	P	**P**	**11 40 58.3**	**-0.1**
	0.3nm,0.8s,baz=248,slow=4.0,SNR=3.5						
ARCES	**ARCESS Array B**	**128.22**	**350**	PKP	**PKiKP**	**11 46 36.4**	**-0.3**
	0.4nm,0.4s,baz=0.0,slow=1.8,SNR=8.4						
AKASG	**Malin Array Be**	**142.44**	**332**	PKhKP	PKPpre	11 46 58.8	
	1.2nm,0.4s,baz=40,slow=4.2,SNR=5.9						
BRTR	**Keskin Array B**	**146.46**	**313**	PKPbc	**PKiKP**	**11 47 12.9**	**-2.0**
	0.9nm,0.8s,baz=85,slow=6.4,SNR=3.2						
GERES	**GERESS Array B**	**149.53**	**345**	PKPbc	**PKiKP**	**11 47 20.6**	**-0.2**
	2.3nm,0.7s,baz=0.0,slow=2.7,SNR=16						

*NNC **21** 11:33:54.9±0.5, 42°.73N×70°.25E, h0^{km}, mpv1.2, Error ellipse: s-maj=5.8km s-min=2.4km az=117.0*
*KRNET **21** 11:33:54.0±0.1, 43°.31N×70°.61E, mb2.6*
*ISCJB **21** 11:33:55.1±1.1, 43°.3N±0°.1×70°.71E±0°.09, h47^{km}±10^{km}, Error ellipse: s-maj=17.9km s-min=10.0km az=12.2*
ISC 21 11:33:55.7±4.0**, 43°.31N**±0°.1×**70°.7E**±0°.2**, h43**^{km}±31^{km}**, n17, σ0^{s}34/34, 26C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK05	**Karatay Array**	**0.20**	**213**	⇑P	**Pn**	**11 34 03.3**	**-0.1**
KK05				⇑S	**Sn**	**11 34 09.1**	**+0.3**
KK09	**Karatay Array**	**0.21**	**217**	⇑P	**Pn**	**11 34 03.5**	**+0.1**
KK09				⇑S	**Sn**	**11 34 09.6**	**+0.7**
KK04	**Karatay Array**	**0.22**	**214**	⇓P	**Pn**	**11 34 03.3**	**-0.2**
KK04				⇓S	**Sn**	**11 34 09.2**	**+0.2**
KK02	**Karatay Array**	**0.22**	**213**	⇑P	**Pn**	**11 34 03.2**	**-0.4**
KK02				⇑S	**Sn**	**11 34 09.1**	**+0.1**
KK31	**Karatay Array**	**0.22**	**213**	⇓P	**Pn**	**11 34 03.1**	**-0.4**
	0.3nm,0.3s,baz=208,slow=28,SNR=16						
KK31				S	**Sn**	**11 34 09.2**	**+0.1**
	3.4nm,0.3s,baz=118,slow=32,SNR=10						
KK01	**Karatay Array**	**0.22**	**214**	⇓P	**Pn**	**11 34 03.3**	**-0.3**
KK01				⇓S	**Sn**	**11 34 09.4**	**+0.4**
KK06	**Karatay Array**	**0.22**	**209**	⇑P	**Pn**	**11 34 03.0**	**-0.5**
KK06				⇑S	**Sn**	**11 34 08.7**	**-0.3**
KK03	**Karatay Array**	**0.23**	**214**	⇑P	**Pn**	**11 34 03.4**	**-0.2**
KK03				⇑S	**Sn**	**11 34 09.2**	**+0.1**
KK08	**Karatay Array**	**0.23**	**217**	⇑P	**Pn**	**11 34 03.6**	**-0.1**
KK08				⇑S	**Sn**	**11 34 09.4**	**+0.2**
KK07	**Karatay Array**	**0.24**	**212**	⇑P	**Pn**	**11 34 03.3**	**-0.4**
KK07				⇑S	**Sn**	**11 34 09.4**	**+0.1**
EKS2	**Erkin-Say**	**2.36**	**104**	⇑*i*P	**Pn**	**11 34 32.5**	**+0.4**
	baz=5.0						
EKS2				⇑*i*S	**Sn**	**11 35 00.5**	**+0.6**
	baz=5.0						
AML	**Almayashu**	**2.51**	**116**	⇑*i*P	**Pn**	**11 34 34.5**	**+0.1**
	baz=16						
AML				⇑*i*S	**Sn**	**11 35 03.7**	**-0.2**
	baz=16						
ARSB	**Arslanbob**	**2.60**	**138**	⇓*i*P	**Pn**	**11 34 35.6**	**+0.1**
	baz=38						
ARSB				⇓*e*S	**Sn**	**11 35 06.0**	**+0.1**
	baz=38						
USP	**Ospenovka**	**2.79**	**89**	⇑*i*P	**Pn**	**11 34 37.9**	**0.0**
	baz=90						
USP				⇑*i*S	**Sn**	**11 35 10.0**	**-0.4**
	baz=90						
UCH	**Uchtor**	**3.02**	**109**	⇑*e*P	**Pn**	**11 34 41.5**	**+0.1**
	baz=9.0						
UCH				⇑*i*S	**Sn**	**11 35 16.1**	**-0.5**
	baz=9.0						
ARLS	**Aral**	**3.05**	**117**	⇑*i*P	**Pn**	**11 34 41.5**	**-0.1**
	baz=16						
ARLS				⇑*i*S	**Sn**	**11 35 16.7**	**-0.2**
	baz=16						
KZA	**Kyzart**	**3.58**	**108**	⇑*e*P	**Pn**	**11 34 49.6**	**+0.5**
	baz=8.0						
KZA				⇑*e*S	**Sn**	**11 35 29.9**	**-0.5**
	baz=8.0						

*ISCJB **21** 11:40:03.8±0.5, 23°.87N±0°.03×122°.66E±0°.02, h23^{km}±4^{km}, Error ellipse: s-maj=4.4km s-min=2.3km az=165.3*
*TAP **21** 11:40:03.4, 23°.86N×122°.72E, h27^{km}±1^{km}, ML3.0, D*
*JMA **21** 11:40:04.4±0.2, 23°.99N×122°.62E, h23^{km}±4^{km}, M2.5*
ISC 21 11:40:03.4±1.2**, 23°.89N**±0°.03×**122°.65E**±0°.02**, h20**^{km}±6^{km}**, n55, σ0^{s}55/94, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.62**	**25**	P	**Pb**	**11 40 15.2**	**-0.4**
JYNG				*e*S	**Sb**	**11 40 22.3**	**-1.5**
YOJ	**Yonaguni jima**	**0.66**	**30**	P	**Pb**	**11 40 15.9**	**-0.3**
	baz=23						
YOJ				S	**Sg**	**11 40 25.2**	**-0.1**
	baz=23						
YOJ	**Yonaguni jima**	**0.66**	**30**	P	**Pb**	**11 40 15.9**	**-0.3**
YOJ				*e*S	**Sb**	**11 40 23.8**	**-1.1**
EOS1	**EOS1**	**0.81**	**324**	P	**Pb**	**11 40 19.1**	**+0.2**
	baz=321						
EOS1				S	**Sn**	**11 40 31.4**	**+0.2**
	baz=321						
NANB	**Nanao**	**0.98**	**303**	P	**Pb**	**11 40 21.9**	**+0.1**
	baz=302						
NANB				*e*S	**Sg**	**11 40 35.6**	**0.0**
	baz=302						
ENA	**Nanau**	**0.99**	**303**	P	**Pb**	**11 40 21.9**	**0.0**
	baz=302						
ENA				S	**Sg**	**11 40 36.1**	**+0.3**
	baz=302						
NACB	**Ninganchiao**	**1.01**	**286**	P	**Pb**	**11 40 22.1**	**-0.1**
	baz=287						
NACB				S	**Sb**	**11 40 35.2**	**+0.1**
	baz=287						
TWC	**Suao**	**1.03**	**314**	P	**Pb**	**11 40 22.5**	**0.0**
	baz=313						
TWC				S	**Sn**	**11 40 36.3**	**-0.3**
	baz=313						
HATJ	**Hateruma jima**	**1.06**	**81**	P	**Pg**	**11 40 24.2**	**0.0**
HATJ				S	**Sg**	**11 40 38.9**	**+0.7**
IRIF	**Iriomote-Funau**	**1.08**	**66**	P	**Pn**	**11 40 23.9**	**+0.5**
IRIF				S	**Sg**	**11 40 38.6**	**0.0**
ETLH	**Xiulin Townshi**	**1.12**	**287**	P	**Pn**	**11 40 23.7**	**-0.4**
	baz=287						
ETLH				*e*S	**Sg**	**11 40 39.7**	**-0.2**
	baz=287						
ESL	**Shilin**	**1.12**	**266**	S	**Sb**	**11 40 37.9**	**-0.4**
	baz=267						
EGFH	**Guangfu**	**1.15**	**259**	*e*S	**Sb**	**11 40 39.2**	**+0.1**
	baz=260						
HGSD	**Ruisui**	**1.20**	**251**	*e*P	**Pn**	**11 40 25.0**	**-0.1**
	baz=252						
HGSD				*e*S	**Sb**	**11 40 41.0**	**+0.5**
	baz=252						
NTC	**Toucheng**	**1.22**	**322**	*e*P	**Pb**	**11 40 25.8**	**0.0**
	baz=320						
NTC				*e*S	**Sg**	**11 40 42.4**	**-0.7**
	baz=320						
TWE	**Neicheng**	**1.22**	**313**	P	**Pb**	**11 40 25.8**	**-0.1**
	baz=312						
TWE				*e*S	**Sn**	**11 40 41.9**	**+0.5**
	baz=312						
ENTT	**Nioudou**	**1.24**	**307**	P	**Pb**	**11 40 26.6**	**+0.4**
	baz=306						
NNSB	**Datong**	**1.28**	**295**	*e*P	**Pn**	**11 40 26.4**	**+0.1**
	baz=294						
NNSB				*e*S	**Sb**	**11 40 42.7**	**-0.3**
	baz=294						
EHY	**Hungye**	**1.28**	**253**	P	**Pn**	**11 40 26.1**	**-0.1**
	baz=254						
EHY				S	**Sn**	**11 40 42.7**	**-0.1**
	baz=254						
JKRS	**Kuro-shima**	**1.29**	**74**	P	**Pb**	**11 40 27.4**	**+0.4**
JKRS				*e*S	**Sg**	**11 40 45.1**	**-0.1**
WHF	**Hehuan Shan**	**1.29**	**282**	P	**Pn**	**11 40 26.9**	**0.0**
	baz=282						
WHF				S	**Sb**	**11 40 43.5**	**-0.3**
	baz=282						
TIPB	**Shuangxi**	**1.31**	**325**	P	**Pn**	**11 40 27.0**	**+0.3**
	baz=323						
TIPB				*e*S	**Sg**	**11 40 45.0**	**-1.2**
	baz=323						
YULB	**Yu-li**	**1.34**	**249**	*e*P	**Pn**	**11 40 27.7**	**+0.7**
	baz=250						
YULB				*e*S	**Sn**	**11 40 44.0**	**-0.3**
	baz=250						
OWD	**Renai**	**1.35**	**273**	*e*P	**Pn**	**11 40 27.4**	**0.0**
	baz=273						
OWD				*e*S	**Sn**	**11 40 43.9**	**-1.0**
	baz=273						
CHGB	**Renai**	**1.36**	**277**	P	**Pn**	**11 40 28.0**	**+0.4**
	baz=278						
CHGB				*e*S	**Sb**	**11 40 45.6**	**+0.1**
	baz=278						
VWDT	**VWDT**	**1.39**	**265**	*e*P	**Pb**	**11 40 28.7**	**-0.1**
	baz=265						
VWDT				*e*S	**Sn**	**11 40 46.1**	**+0.5**
	baz=265						
YHNB	**Yeheng**	**1.40**	**304**	*e*P	**Pn**	**11 40 28.4**	**+0.4**
	baz=303						
YHNB				*e*S	**Sb**	**11 40 46.6**	**+0.1**
	baz=303						
NSK	**Sanguang**	**1.42**	**304**	P	**Pn**	**11 40 28.4**	**+0.2**
	baz=303						
NSK				*e*S	**Sb**	**11 40 46.8**	**-0.2**
	baz=303						
NWF	**Wu-fen Shan**	**1.42**	**326**	*e*P	**Pn**	**11 40 28.1**	**-0.2**
	baz=324						
WFSB	**Wu-fen Shan**	**1.42**	**326**	*e*P	**Pn**	**11 40 28.2**	**+0.1**
	baz=324						
JIJ	**Ishigaki jima**	**1.44**	**71**	P	**Pn**	**11 40 29.0**	**+0.6**
JIJ				*e*S	**Sn**	**11 40 47.1**	**+0.3**
TATO	**Taipei**	**1.52**	**316**	*e*P	**Pn**	**11 40 30.2**	**+0.7**
	baz=314						
TATO				*e*S	**Sb**	**11 40 49.8**	**+0.1**
	baz=314						
SSLB	**Suanglung**	**1.56**	**267**	P	**Pn**	**11 40 31.1**	**+1.0**
	baz=267						
SSLB				*e*S	**Sb**	**11 40 50.8**	**-0.2**
	baz=267						
YM01	**YM01**	**1.59**	**322**	*e*P	**Pn**	**11 40 30.5**	**-0.1**
	baz=320						
SMLT	**Sun Moon Lake**	**1.61**	**270**	*e*P	**Pn**	**11 40 31.1**	**+0.3**
	baz=270						
SMLT				S	**Sn**	**11 40 51.6**	**+0.6**
	baz=270						
WHP	**Taichung City**	**1.61**	**284**	*e*P	**Pb**	**11 40 33.1**	**+0.5**
	baz=284						
YM05	**YM05**	**1.61**	**322**	*e*P	**Pn**	**11 40 31.8**	**+0.9**
	baz=321						
YUS	**Yu-Shan**	**1.61**	**256**	*e*P	**Pn**	**11 40 31.4**	**+0.2**
	baz=257						
YUS				*e*S	**Sn**	**11 40 51.8**	**+0.1**
	baz=257						
YM08	**YM08**	**1.61**	**323**	*e*P	**Pn**	**11 40 31.8**	**+0.9**
	baz=322						
YM04	**YM04**	**1.62**	**321**	*e*P	**Pn**	**11 40 31.8**	**+0.9**
	baz=320						
TYC	**Yuchr**	**1.65**	**271**	P	**Pn**	**11 40 32.2**	**+1.0**
	baz=271						
ELDTW	**Lidau**	**1.66**	**245**	*e*P	**Pn**	**11 40 31.3**	**-0.2**
	baz=246						
ELDTW				*e*S	**Sn**	**11 40 51.8**	**-0.5**
	baz=246						
JISG	**Ishigakijimahi**	**1.66**	**65**	P	**Pn**	**11 40 31.6**	**+0.1**
JISG				S	**Sn**	**11 40 51.6**	**-0.7**
LIOB	**Emei**	**1.67**	**297**	*e*P	**Pn**	**11 40 32.6**	**+0.9**
	baz=296						
TWGBT	**Beinan**	**1.80**	**234**	*e*P	**Pn**	**11 40 32.9**	**-0.5**
	baz=235						
TWGBT				*e*S	**Sn**	**11 40 54.7**	**-1.0**
	baz=235						
TWG	**Pinlang**	**1.80**	**234**	*e*P	**Pn**	**11 40 33.2**	**-0.2**
	baz=235						
TWG				*e*S	**Sn**	**11 40 54.7**	**-1.1**
	baz=235						
TPUB	**Ta-pu**	**1.95**	**253**	*e*P	**Pn**	**11 40 36.1**	**+0.7**
	baz=253						
CHN4	**Tsaushan**	**1.97**	**255**	*e*P	**Pn**	**11 40 36.1**	**+0.4**
	baz=255						
WTP	**Ta-pu**	**1.98**	**251**	*e*P	**Pb**	**11 40 37.7**	**-1.1**
	baz=252						
WTP				*e*S	**Sn**	**11 41 00.3**	**+0.1**
	baz=252						
JTJ	**Tarama**	**2.01**	**68**	P	**Pn**	**11 40 36.7**	**+0.4**
JTJ				S	**Sn**	**11 41 01.6**	**+0.7**
SLGT	**Liugui**	**2.05**	**245**	*e*P	**Pn**	**11 40 37.9**	**+1.1**
	baz=245						
SLGT				*e*S	**Sn**	**11 41 02.2**	**+0.4**
	baz=245						
CHN1	**Nanshi**	**2.07**	**251**	*e*P	**Pn**	**11 40 37.9**	**+0.7**
	baz=251						
CHN1				*e*S	**Sn**	**11 41 02.9**	**+0.4**
	baz=251						
TWK	**Hsinying**	**2.08**	**253**	*e*P	**Pn**	**11 40 37.9**	**+0.6**
	baz=253						
TWK				*e*S	**Sn**	**11 41 03.1**	**+0.3**
	baz=253						
RLNB	**Erlin**	**2.10**	**270**	*e*S	**Sn**	**11 41 04.2**	**+1.1**
	baz=270						
EAST	**Anshuo**	**2.24**	**228**	*e*P	**Pn**	**11 40 39.8**	**+0.3**
	baz=229						

*IDC **21** 11:41:20.6±1.6, 0°.84N×97°.19E, h0^{km}, mb3.7/3, mb1 3.7/5, mb1mx3.5/62, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=29.6km s-min=22.1km az=116.0*
*ISCJB **21** 11:41:22.3±1.1, 0°.96N±0°.08×97°.12E±0°.06, h25^{km}, mb3.7/3, Error ellipse: s-maj=11.9km s-min=7.5km az=32.4*
*DJA **21** 11:41:22.2±1.0, 1°.N±6°.×9°.7E±°., h14^{km}±4^{km}, M3.6/8, MLv3.6/8*
ISC 21 11:41:24.1±1.4**, 1°.00N**±0°.10×**97°.15E**±0°.08**, h25**^{km}**, n17, σ1^{s}05/14, mb3.9/3, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.52**	**55**	P	**Pb**	**11 41 34.2**	**-0.5**
GSI				S	**Sb**	**11 41 41.6**	**-0.2**
SNSI	**Sinabang, Aceh**	**1.62**	**329**	P	**Pn**	**11 41 49.4**	**-1.8**
SNSI				S	**Sn**	**11 42 11.6**	**+0.3**
TPTI		**2.24**	**1**	P	**Pn**	**11 41 59.0**	**-0.7**
MNSI	**Mandailing Nat**	**2.44**	**95**	P	**Pn**	**11 42 01.8**	**-0.5**
PSI	**Prapat**	**2.52**	**45**	Pn	**Pn**	**11 42 02.6**	**-1.0**
	2.4nm,0.3s,baz=266,slow=14,SNR=7.4						
PSI				Lg	Lg	11 42 41.1	
	3.5nm,0.3s,baz=145,slow=22,SNR=6.3						
KCSI	**Kotacane, Aceh**	**2.58**	**14**	P	**Pn**	**11 42 03.7**	**-0.6**
MLSI	**Meulaboh, Aceh**	**3.33**	**347**	P	**Pn**	**11 42 13.8**	**-0.8**
MLSI				S	**Sn**	**11 42 53.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**17.43**	**6**	P	**P**	**11 45 28.2**	**+1.3**
	0.2nm,0.3s,baz=196,slow=11,SNR=5.4						
H08S2	**Diego Garcia H**	**26.05**	**250**	T	T	12 14 08.0	
	baz=71,slow=75,SNR=255						
H08S3	**Diego Garcia H**	**26.05**	**250**	T	T	12 14 08.4	
	baz=71,slow=75,SNR=249						
H08S1	**Diego Carcia H**	**26.07**	**250**	T	T	12 14 09.4	
	baz=71,slow=75,SNR=199						
H01W3	**Cape Leeuwin H**	**39.08**	**158**	T	T	12 30 17.2	
	baz=333						
H01W2	**Cape Leeuwin H**	**39.09**	**158**	T	T	12 30 20.7	
	baz=333						
H01W1	**Cape Leeuwin H**	**39.10**	**158**	T	T	12 30 20.2	
	baz=333						
ASAR	**Alice Springs**	**43.31**	**127**	P	**P**	**11 49 23.7**	**-0.7**
	0.3nm,0.7s,baz=299,slow=7.8,SNR=3.5						
MKAR	**Makanchi Array**	**47.42**	**346**	P	**P**	**11 49 58.0**	**+1.5**
	1.0nm,0.8s,baz=157,slow=7.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**53.74**	**351**	P	**P**	**11 50 45.4**	**+1.2**
	0.8nm,0.3s,baz=151,slow=6.6,SNR=3.5						

*ISCJB **21** 11:43:43.3±0.4, 44°.14N±0°.03×10°.09E±0°.04, h8^{km}±5^{km}, Error ellipse: s-maj=5.9km s-min=3.6km az=42.0*
*ROM **21** 11:43:43.5±0.2, 44°.187N±0°.009×10°.18E±0°.01, h7^{km}±1^{km}, ML2.2/13, Error ellipse: s-maj=1.2km s-min=0.7km az=55.0*
*LDG **21** 11:43:44.1±0.1, 44°.20N×10°.21E, h4^{km}, Md2.7/2, Ml2.6/17, Error ellipse: s-maj=1.4km s-min=0.9km az=22.0*
*GEN **21** 11:43:44.2, 44°.20N×10°.20E, h4^{km}±2^{km}, Ml2.1*
ISC 21 11:43:43.2±0.8**, 44°.19N**±0°.03×**10°.17E**±0°.03**, h13**^{km}±6^{km}**, n39, σ1^{s}51/60, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.16**	**102**	P	**Pg**	**11 43 46.8**	**-0.2**
VLC				S	**Sg**	**11 43 49.1**	**-0.5**
VLC				AML	AML		
	comp=E,853μm,0.2s						
VLC				AML	AML		
	comp=N,1450μm,0.4s						
VLC				AML	AML		
	comp=E,890μm,0.2s						
VLC				AML	AML		
	comp=N,1540μm,0.4s						
VLC				AML	AML		
	comp=E,853μm,0.2s						
VLC				AML	AML		
	comp=N,1450μm,0.4s						
VLC				AML	AML		
	comp=E,890μm,0.2s						
VLC				AML	AML		
	comp=N,1540μm,0.4s						
VLC				AML	AML		
	comp=N,1450μm,0.4s						
VLC				AML	AML		
	comp=E,890μm,0.2s						
VLC				AML	AML		
	comp=E,853μm,0.2s						
VLC				AML	AML		
	comp=N,1540μm,0.4s						
SARO	**Sassorosso**	**0.16**	**93**	P	**Pg**	**11 43 46.9**	**-0.3**
SARO				S	**Sg**	**11 43 49.2**	**-0.7**
SARO	**Sassorosso**	**0.16**	**93**	P	**Pg**	**11 43 46.9**	**-0.3**
SARO				S	**Sg**	**11 43 51.0**	**+1.1**
SARO				AML	AML		
	comp=E,1004μm,1.1s						
SARO				AML	AML		
	comp=N,1785μm,0.4s						
SARO				AML	AML		
	comp=E,1004μm,1.1s						
SARO				AML	AML		
	comp=N,1780μm,0.4s						
SARO				AML	AML		
	comp=E,1004μm,1.1s						
SARO				AML	AML		
	comp=N,1780μm,0.4s						
CARD	**Cardoso**	**0.28**	**127**	P	**Pb**	**11 43 50.4**	**+0.3**
CARD				S	**Sb**	**11 43 54.0**	**-0.6**
CARD	**Cardoso**	**0.28**	**127**	P	**Pb**	**11 43 50.1**	**0.0**
CARD				S	**Sb**	**11 43 54.4**	**-0.3**
ERBM	**Eremo**	**0.28**	**37**	P	**Pb**	**11 43 49.5**	**-0.7**
ERBM				S	**Sb**	**11 43 55.1**	**+0.2**
ERBM				AML	AML		
	comp=E,2040μm,0.8s						
ERBM				AML	AML		
	comp=N,2060μm,1.4s						
ERBM				AML	AML		
	comp=E,2040μm,0.8s						
ERBM				AML	AML		
	comp=N,2055μm,1.4s						
ERBM				AML	AML		
	comp=E,2040μm,0.8s						
ERBM				AML	AML		
	comp=N,2055μm,1.4s						
GRAM	**Graiana**	**0.31**	**345**	P	**Pb**	**11 43 50.1**	**-0.5**
GRAM				S	**Sb**	**11 43 55.4**	**-0.2**
GRAM	**Graiana**	**0.31**	**345**	P	**Pb**	**11 43 50.1**	**-0.5**
GRAM				S	**Sb**	**11 43 55.9**	**+0.3**
GRAM				AML	AML		
	comp=E,3880μm,0.3s						
GRAM				AML	AML		
	comp=N,4240μm,0.8s						
GRAM				AML	AML		
	comp=N,4240μm,0.8s						
GRAM				AML	AML		
	comp=E,3880μm,0.3s						
BDI	**Bagni Di Lucca**	**0.33**	**113**	P	**Pb**	**11 43 51.3**	**+0.3**
BDI				S	**Sb**	**11 43 56.2**	**-0.1**
BDI				AML	AML		
	comp=E,431μm,0.9s						
BDI				AML	AML		
	comp=N,444μm,0.6s						
BDI				AML	AML		
	comp=E,414μm,0.6s						
BDI				AML	AML		
	comp=N,528μm,0.3s						
BDI				AML	AML		
	comp=E,431μm,0.9s						
BDI				AML	AML		
	comp=N,528μm,0.3s						
BDI				AML	AML		
	comp=N,444μm,0.6s						
BDI				AML	AML		
	comp=E,431μm,0.9s						
BDI				AML	AML		
	comp=E,414μm,0.6s						
MAIM	**Mastiano**	**0.36**	**140**	P	**Pb**	**11 43 51.8**	**+0.4**
MAIM				S	**Sb**	**11 43 56.8**	**-0.3**
MAIM	**Mastiano**	**0.36**	**140**	P	**Pb**	**11 43 51.7**	**+0.3**
MAIM				S	**Sb**	**11 43 57.0**	**0.0**
MAIM				AML	AML		
	comp=E,1070μm,0.2s						
MAIM				AML	AML		
	comp=N,886μm,0.5s						
MAIM				AML	AML		
	comp=E,1070μm,0.2s						
MAIM				AML	AML		
	comp=N,886μm,0.5s						
MAIM				AML	AML		
	comp=N,886μm,0.5s						
MAIM				AML	AML		
	comp=E,1070μm,0.2s						
POPM	**Popiglio**	**0.45**	**109**	P	**Pb**	**11 43 52.0**	**-0.9**
POPM				S	**Sb**	**11 43 59.1**	**-0.3**
POPM	**Popiglio**	**0.45**	**109**	P	**Pb**	**11 43 52.0**	**-0.9**
POPM				S	**Sb**	**11 43 59.9**	**+0.4**
POPM				AML	AML		
	comp=E,864μm,0.1s						
POPM				AML	AML		
	comp=N,1138μm,0.2s						
POPM				AML	AML		
	comp=E,864μm,0.1s						
POPM				AML	AML		
	comp=N,1138μm,0.2s						
POPM				AML	AML		
	comp=N,1138μm,0.2s						
POPM				AML	AML		
	comp=E,864μm,0.1s						
MSSA	**Maissana**	**0.49**	**285**	P	**Pb**	**11 43 54.0**	**+0.3**
MSSA				AML	AML		
	comp=E,198μm,0.4s						
MSSA				AML	AML		
	comp=N,155μm,0.7s						
MSSA				AML	AML		
	comp=E,198μm,0.4s						
MSSA				AML	AML		
	comp=N,155μm,0.7s						
MSSA				AML	AML		
	comp=N,155μm,0.7s						
MSSA				AML	AML		
	comp=E,198μm,0.4s						
ZCCA	**Zocca**	**0.60**	**74**	AML	AML		
	comp=E,322μm,0.4s						
ZCCA				AML	AML		
	comp=N,303μm,0.4s						
ZCCA				AML	AML		
	comp=N,303μm,0.4s						
ZCCA				AML	AML		
	comp=E,322μm,0.4s						
CRMI	**Carmignano**	**0.70**	**125**	AML	AML		
	comp=E,130μm,0.4s						
CRMI				AML	AML		
	comp=N,105μm,1.0s						
CRMI				AML	AML		
	comp=E,130μm,0.4s						
CRMI				AML	AML		
	comp=N,105μm,1.0s						
GORR	**Gorreto**	**0.76**	**304**	P	**Pb**	**11 43 58.8**	**+0.6**
BOB	**Bobbio (Coli)**	**0.77**	**318**	P	**Pn**	**11 43 59.4**	**-0.5**
TRIF	**Trifonti**	**1.20**	**154**	AML	AML		
	comp=E,57μm,0.2s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
TRIF				AML	AML		
	comp=N,64μm,0.6s						
TRIF				AML	AML		
	comp=E,57μm,0.2s						
TRIF				AML	AML		
	comp=N,64μm,0.6s						
ASQU	**Asqua**	**1.23**	**108**	P	**Pg**	**11 44 07.1**	**+0.2**
ASQU				AML	AML		
	comp=E,45μm,0.5s						
ASQU				AML	AML		
	comp=N,45μm,1.5s						
ASQU				AML	AML		
	comp=N,45μm,1.5s						
ASQU				AML	AML		
	comp=E,45μm,0.5s						
CASP	**Castiglione de**	**1.49**	**160**	P	**Pn**	**11 44 09.8**	**+0.1**
PGF	**Pioggiola**	**1.85**	**208**	*e*Pn	**Pn**	**11 44 15.5**	**+0.7**
PGF				*e*Sn	**Sn**	**11 44 37.5**	**-0.6**
	comp=E,7.6nm,0.2s						
SBF	**Sospel**	**2.00**	**261**	*e*Pn	**Pn**	**11 44 17.5**	**+0.7**
SBF				*e*Sn	**Sn**	**11 44 41.8**	**+0.1**
	comp=E,15nm,0.2s						
COR1	**Corinaldo**	**2.12**	**104**	AML	AML		
	comp=E,1692μm,1.6s						
COR1				AML	AML		
	comp=N,1234μm,1.6s						
COR1				AML	AML		
	comp=E,1400μm,1.6s						
COR1				AML	AML		
	comp=N,147μm,1.2s						
COR1				AML	AML		
	comp=E,1400μm,1.6s						
COR1				AML	AML		
	comp=N,1234μm,1.6s						
COR1				AML	AML		
	comp=E,1692μm,1.6s						
COR1				AML	AML		
	comp=N,147μm,1.2s						
MBDF	**Montbardon**	**2.49**	**284**	*e*Pn	**Pn**	**11 44 24.1**	**+0.5**
MBDF	**Montbardon**	**2.49**	**284**	*e*Pg	**Pg**	**11 44 31.0**	**0.0**
MBDF				*e*Sn	**Sn**	**11 44 53.3**	**-0.7**
MBDF				*e*Sg	**Sg**	**11 45 03.9**	**+0.6**
	comp=N,12nm,0.7s						
FRF	**La Foret Royal**	**2.63**	**257**	*e*Pn	**Pn**	**11 44 25.8**	**+0.5**
FRF				*e*Sn	**Sn**	**11 44 56.6**	**-0.5**
	comp=N,8.3nm,0.3s						
LPG	**La Plagne**	**2.76**	**299**	*e*P	**Pb**	**11 44 30.3**	**-2.3**
LPG				*e*Sn	**Sn**	**11 44 59.7**	**-1.1**
	comp=N,4.1nm,0.4s						
LPL	**La Plagne**	**2.78**	**300**	*e*P	**Pb**	**11 44 30.7**	**-2.2**
LMR	**La Mourre**	**2.79**	**253**	*e*Pn	**Pn**	**11 44 28.0**	**+0.5**
LMR				*e*Sn	**Sn**	**11 45 00.2**	**-0.8**
	comp=N,4.6nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.15**	**285**	*e*P	**Pn**	**11 44 35.6**	**+3.0**
ORIF				*e*Sn	**Sn**	**11 45 09.1**	**-1.1**
	comp=N,2.1nm,0.3s						
SMRF	**Simiane la Rot**	**3.32**	**268**	*e*P	**Pn**	**11 44 37.4**	**+2.5**
SMRF				*e*Sn	**Sn**	**11 45 13.2**	**-1.0**
	comp=N,3.3nm,0.4s						
VVLD	**Villa Vallelon**	**3.43**	**131**	AML	AML		
	comp=N,17μm,0.2s						
VVLD				AML	AML		
	comp=E,26μm,0.5s						
VVLD				AML	AML		
	comp=E,26μm,0.5s						
VVLD				AML	AML		
	comp=N,17μm,0.2s						
CABF	**La Chapelle**	**3.76**	**311**	*e*P	**Pn**	**11 44 44.6**	**+3.7**
CABF				*e*Sn	**Sn**	**11 45 23.7**	**-1.4**
	comp=N,2.1nm,0.4s						
VIVF	**Saint-Julien-l**	**3.99**	**281**	*e*Sn	**Sn**	**11 45 29.0**	**-1.7**
	comp=N,1.1nm,0.2s						
HINF	**Hinteralfeld**	**4.30**	**329**	*e*P	**Pn**	**11 44 52.2**	**+3.9**
HINF				*e*Sn	**Sn**	**11 45 36.1**	**-2.2**
	comp=N,3.9nm,0.4s						
HAU	**Haudompre**	**4.65**	**326**	*e*P	**Pn**	**11 44 56.9**	**+3.8**
HAU				*e*Sn	**Sn**	**11 45 44.6**	**-2.3**
	comp=N,5.7nm,0.4s						
CDF	**Champ du Feu**	**4.67**	**336**	*e*P	**Pn**	**11 44 57.4**	**+3.9**
CDF				*e*Sn	**Sn**	**11 45 44.8**	**-2.8**
	comp=N,4.4nm,0.4s						
LOR	**Lormes**	**5.38**	**307**	*e*P	Pn	11 45 08.2	+5.0
LOR				*e*Sn	**Sn**	**11 46 02.3**	**-2.7**
	comp=N,1.9nm,0.3s						

MAN 21 11:46:51.7, 6°.15N×124°.82E, h23km, mb3.8, ML2.5, MS2.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.14**	**117**	*e*P	Pn	11 47 00.7	+2.0
GSPH				*i* S	Sb	11 47 09.5	+10

*ISCJB **21** 11:50:40.0±0.3, 44°.09N±0°.02×10°.09E±0°.02, h2km±2km, mb3.6/1, Error ellipse: s-maj=2.8km s-min=1.9km az=171.8*
*GEN **21** 11:50:40.7, 44°.17N×10°.19E, h3km±1km, Ml3.1*
*ROM **21** 11:50:40.5±0.2, 44°.167N±0°.010×10°.19E±0°.01, h9km±1km, ML3.2/47, Error ellipse: s-maj=1.0km s-min=0.7km az=43.0*
*LDG **21** 11:50:40.9±0.1, 44°.14N×10°.19E, h2km, Md3.4/2, Ml3.4/35, Error ellipse: s-maj=2.3km s-min=1.3km az=7.0*
*IDC **21** 11:50:41.6±2.8, 44°.13N×10°.21E, h0km, mb3.5/1, mb1 3.5/5, mb1mx3.3/45, mbtmp3.4/5, ML3.5/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/47, Error ellipse: s-maj=36.2km s-min=26.2km az=106.0*
*PRU **21** 11:50:41.4±0.0, 44°.18N×10°.26E, h0km*
*STR **21** 11:50:44.7±0.7, 44°N±3°×1°0E±°, h0km, MLv3.1/6*
ISC 21 11:50:40.4±1.0, **44°.11N**±0°.02×**10°.09E**±0°.02, **h5**km±8km, **n123**, σ2°**s12**/172, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLC	**Villacollemand**	**0.22**	**78**	P	**Pg**	**11 50 44.1**	**-0.6**
VLC				S	**Sg**	**11 50 46.5**	**-1.1**
VLC				AML	AML		
	comp=E,25150μm,0.7s						
VLC				AML	AML		
	comp=N,12700μm,1.6s						
VLC				AML	AML		
	comp=E,25300μm,0.7s						
VLC				AML	AML		
	comp=N,13750μm,0.7s						
VLC				AML	AML		
	comp=E,25100μm,0.7s						
VLC				AML	AML		
	comp=N,12700μm,1.6s						
VLC				AML	AML		
	comp=E,25300μm,0.7s						
VLC				AML	AML		
	comp=N,13750μm,0.7s						
VLC				AML	AML		
	comp=E,25150μm,0.7s						
VLC				AML	AML		
	comp=N,12700μm,1.6s						
VLC				AML	AML		
	comp=E,25300μm,0.7s						
VLC				AML	AML		
	comp=N,13750μm,0.7s						
VLC				AML	AML		
	comp=N,12700μm,1.6s						
VLC				AML	AML		
	comp=N,13750μm,0.7s						
VLC				AML	AML		
	comp=E,25150μm,0.7s						
VLC				AML	AML		
	comp=E,25300μm,0.7s						
VLC				AML	AML		
	comp=N,12700μm,1.6s						
VLC				AML	AML		
	comp=N,13750μm,0.7s						
VLC				AML	AML		
	comp=E,25150μm,0.7s						
VLC				AML	AML		
	comp=E,25300μm,0.7s						
SARO	**Sassorosso**	**0.24**	**72**	P	**Pg**	**11 50 44.2**	**-0.9**
SARO				S	**Sg**	**11 50 46.2**	**-2.0**
SARO	**Sassorosso**	**0.24**	**72**	P	**Pg**	**11 50 44.2**	**-0.9**
SARO				S	**Sg**	**11 50 46.7**	**-1.5**
SARO				AML	AML		
	comp=E,20650μm,0.3s						
SARO				AML	AML		
	comp=N,17450μm,0.9s						
SARO				AML	AML		
	comp=E,20650μm,0.3s						
SARO				AML	AML		
	comp=N,17450μm,0.9s						
SARO				AML	AML		
	comp=E,20650μm,0.3s						
SARO				AML	AML		
	comp=N,17450μm,0.9s						
SARO				AML	AML		
	comp=E,20650μm,0.3s						
SARO				AML	AML		
	comp=N,17450μm,0.9s						
CARD	**Cardoso**	**0.30**	**107**	P	**Pg**	**11 50 46.1**	**-0.1**
CARD				S	**Sg**	**11 50 50.0**	**0.0**
MAIM	**Mastiano**	**0.35**	**124**	P	**Pg**	**11 50 47.6**	**+0.4**
MAIM				S	**Sg**	**11 50 52.7**	**+0.9**
MAIM	**Mastiano**	**0.35**	**124**	P	**Pg**	**11 50 47.9**	**+0.7**
MAIM				S	**Sg**	**11 50 52.7**	**+0.9**
MAIM				AML	AML		
	comp=E,14300μm,0.3s						
MAIM				AML	AML		
	comp=N,9330μm,0.7s						
MAIM				AML	AML		
	comp=E,14300μm,0.3s						
MAIM				AML	AML		
	comp=N,9330μm,0.7s						
MAIM				AML	AML		
	comp=E,14300μm,0.3s						
MAIM				AML	AML		
	comp=N,9330μm,0.7s						
MAIM				AML	AML		
	comp=E,14300μm,0.3s						
MAIM				AML	AML		
	comp=N,9330μm,0.7s						
MAIM				AML	AML		
	comp=E,14300μm,0.3s						
MAIM				AML	AML		
	comp=N,9330μm,0.7s						
BDI	**Bagni Di Lucca**	**0.37**	**98**	P	**Pg**	**11 50 47.0**	**-0.6**
BDI				S	**Sg**	**11 50 51.8**	**-0.6**
BDI				AML	AML		
	comp=E,7305μm,0.7s						
BDI				AML	AML		
	comp=N,4875μm,1.0s						
BDI				AML	AML		
	comp=E,6675μm,0.4s						
BDI				AML	AML		
	comp=N,4915μm,1.0s						
BDI				AML	AML		
	comp=E,7305μm,0.7s						
BDI				AML	AML		
	comp=N,4875μm,1.0s						
BDI				AML	AML		
	comp=E,6675μm,0.4s						
BDI				AML	AML		
	comp=N,4915μm,1.0s						
BDI				AML	AML		
	comp=N,4915μm,1.0s						
BDI				AML	AML		
	comp=N,4875μm,1.0s						
BDI				AML	AML		
	comp=E,7305μm,0.7s						
BDI				AML	AML		
	comp=E,6675μm,0.4s						
BDI				AML	AML		
	comp=N,4875μm,1.0s						
BDI				AML	AML		
	comp=N,4915μm,1.0s						
BDI				AML	AML		
	comp=E,7305μm,0.7s						
BDI				AML	AML		
	comp=E,6675μm,0.4s						
GRAM	**Graiana**	**0.38**	**358**	P	**Pg**	**11 50 47.4**	**-0.3**
GRAM				S	**Sg**	**11 50 53.0**	**+0.2**
GRAM	**Graiana**	**0.38**	**358**	P	**Pg**	**11 50 47.4**	**-0.3**
GRAM				S	**Sg**	**11 50 53.0**	**+0.2**
GRAM				AML	AML		
	comp=E,32400μm,0.4s						
GRAM				AML	AML		
	comp=N,20350μm,0.4s						
GRAM				AML	AML		
	comp=E,32400μm,0.4s						
GRAM				AML	AML		
	comp=N,20350μm,0.4s						
GRAM				AML	AML		
	comp=E,32400μm,0.4s						
GRAM				AML	AML		
	comp=N,20350μm,0.4s						
GRAM				AML	AML		
	comp=N,20350μm,0.4s						
GRAM				AML	AML		
	comp=E,32400μm,0.4s						
GRAM				AML	AML		
	comp=N,20350μm,0.4s						
GRAM				AML	AML		
	comp=E,32400μm,0.4s						
ERBM	**Eremo**	**0.39**	**37**	P	**Pg**	**11 50 47.0**	**-0.9**
ERBM				S	**Sg**	**11 50 51.5**	**-1.5**
ERBM				AML	AML		
	comp=E,10750μm,0.7s						
ERBM				AML	AML		
	comp=N,13650μm,1.0s						
ERBM				AML	AML		
	comp=E,10750μm,0.7s						
ERBM				AML	AML		
	comp=N,13650μm,1.0s						
ERBM				AML	AML		
	comp=E,10750μm,0.7s						
ERBM				AML	AML		
	comp=N,13700μm,1.0s						
ERBM				AML	AML		
	comp=E,10750μm,0.7s						
ERBM				AML	AML		
	comp=N,13700μm,1.0s						
ERBM				AML	AML		
	comp=E,10750μm,0.7s						
ERBM				AML	AML		
	comp=N,13700μm,1.0s						
MSSA	**Maissana**	**0.46**	**297**	P	**Pb**	**11 50 50.7**	**-0.4**
MSSA				AML	AML		
	comp=E,2985μm,1.0s						
MSSA				AML	AML		
	comp=N,2720μm,1.0s						
MSSA				AML	AML		
	comp=E,2980μm,1.0s						
MSSA				AML	AML		
	comp=N,2720μm,1.0s						
MSSA				AML	AML		
	comp=E,2985μm,1.0s						
MSSA				AML	AML		
	comp=N,2720μm,1.0s						
MSSA				AML	AML		
	comp=N,2720μm,1.0s						
MSSA				AML	AML		
	comp=E,2985μm,1.0s						
MSSA				AML	AML		
	comp=N,2720μm,1.0s						
MSSA				AML	AML		
	comp=E,2985μm,1.0s						
POPM	**Popiglio**	**0.49**	**98**	P	**Pg**	**11 50 49.3**	**-0.5**
POPM				S	**Sg**	**11 50 55.7**	**-0.5**
POPM	**Popiglio**	**0.49**	**98**	P	**Pg**	**11 50 49.3**	**-0.5**
POPM				S	**Sg**	**11 50 55.6**	**-0.5**
POPM				AML	AML		
	comp=E,6210μm,1.1s						
POPM				AML	AML		
	comp=N,10035μm,0.2s						
POPM				AML	AML		
	comp=E,6210μm,1.1s						
POPM				AML	AML		
	comp=N,10035μm,0.2s						
POPM				AML	AML		
	comp=E,6210μm,1.1s						
POPM				AML	AML		
	comp=N,10035μm,0.2s						
POPM				AML	AML		
	comp=E,6210μm,1.1s						
POPM				AML	AML		
	comp=N,10035μm,0.2s						
POPM				AML	AML		
	comp=E,6210μm,1.1s						
NEVI	**Neviano degli**	**0.50**	**19**	P	**Pg**	**11 50 50.1**	**+0.1**
MTCR	**Monte La Croce**	**0.66**	**97**	P	**Pg**	**11 50 52.5**	**-0.6**
MTCR				AML	AML		
	comp=E,5175μm,0.5s						
MTCR				AML	AML		
	comp=N,4175μm,1.2s						
MTCR				AML	AML		
	comp=E,5170μm,0.5s						
MTCR				AML	AML		
	comp=N,4175μm,1.2s						
MTCR				AML	AML		
	comp=E,5170μm,0.5s						
MTCR				AML	AML		
	comp=N,4175μm,1.2s						
MTCR				AML	AML		
	comp=E,5170μm,0.5s						
MTCR				AML	AML		
	comp=N,4175μm,1.2s						
PRMA	**PARMA**	**0.67**	**14**	P	**Pb**	**11 50 54.0**	**-0.6**
ZCCA	**Zocca**	**0.68**	**69**	P	**Pg**	**11 50 53.8**	**+0.3**
ZCCA				AML	AML		
	comp=E,3015μm,0.4s						
ZCCA				AML	AML		
	comp=N,2035μm,0.4s						
ZCCA				AML	AML		
	comp=E,3210μm,0.4s						
ZCCA				AML	AML		
	comp=N,2255μm,0.4s						
ZCCA				AML	AML		
	comp=E,3015μm,0.4s						
ZCCA				AML	AML		
	comp=N,2035μm,0.4s						
ZCCA				AML	AML		
	comp=E,3210μm,0.4s						
ZCCA				AML	AML		
	comp=N,2255μm,0.4s						
ZCCA				AML	AML		
	comp=E,3015μm,0.4s						
ZCCA				AML	AML		
	comp=N,2040μm,0.4s						
ZCCA				AML	AML		
	comp=E,3210μm,0.4s						
ZCCA				AML	AML		
	comp=N,2255μm,0.4s						
ZCCA				AML	AML		
	comp=E,3015μm,0.4s						
ZCCA				AML	AML		
	comp=N,2040μm,0.4s						
ZCCA				AML	AML		
	comp=N,2255μm,0.4s						
ZCCA				AML	AML		
	comp=E,3210μm,0.4s						
ZCCA				AML	AML		
	comp=E,3015μm,0.4s						
ZCCA				AML	AML		
	comp=N,2040μm,0.4s						
ZCCA				AML	AML		
	comp=N,2255μm,0.4s						
ZCCA				AML	AML		
	comp=E,3210μm,0.4s						
CRMI	**Carmignano**	**0.71**	**117**	P	**Pg**	**11 50 54.6**	**+0.5**
CRMI				AML	AML		
	comp=E,2240μm,0.6s						
CRMI				AML	AML		
	comp=N,2755μm,0.7s						
CRMI				AML	AML		
	comp=E,941μm,0.6s						
CRMI				AML	AML		
	comp=N,1170μm,0.7s						
CRMI				AML	AML		
	comp=E,941μm,0.6s						
CRMI				AML	AML		
	comp=N,1170μm,0.7s						
CRMI				AML	AML		
	comp=N,1170μm,0.7s						
CRMI				AML	AML		
	comp=E,941μm,0.6s						
CRMI				AML	AML		
	comp=N,1170μm,0.7s						
CRMI				AML	AML		
	comp=E,941μm,0.6s						
PTF	**Prato**	**0.72**	**102**	P	**Pg**	**11 50 54.1**	**-0.2**
GORR	**Gorreto**	**0.76**	**311**	P	**Pg**	**11 50 55.3**	**+0.4**
GORR				S	**Sb**	**11 51 06.5**	**-0.3**
GORR	**Gorreto**	**0.76**	**311**	P	**Pg**	**11 50 55.3**	**+0.4**
BOB	**Bobbio (Coli)**	**0.80**	**325**	P	**Pg**	**11 50 56.1**	**+0.3**
BOB				AML	AML		
	comp=E,2555μm,1.0s						
BOB				AML	AML		
	comp=N,3350μm,0.5s						
BOB				AML	AML		
	comp=E,2760μm,1.0s						
BOB				AML	AML		
	comp=N,3455μm,0.5s						
BOB				AML	AML		
	comp=E,2555μm,1.0s						
BOB				AML	AML		
	comp=N,3350μm,0.5s						
BOB				AML	AML		
	comp=E,2760μm,1.0s						
BOB				AML	AML		
	comp=N,3455μm,0.5s						
BOB				AML	AML		
	comp=N,3455μm,0.5s						
BOB				AML	AML		
	comp=N,3350μm,0.5s						
BOB				AML	AML		
	comp=E,2555μm,1.0s						
BOB				AML	AML		
	comp=E,2760μm,1.0s						
BOB				AML	AML		
	comp=N,3350μm,0.5s						
BOB				AML	AML		
	comp=N,3455μm,0.5s						
BOB				AML	AML		
	comp=E,2555μm,1.0s						
BOB				AML	AML		
	comp=E,2760μm,1.0s						
SEI	**Scarperia**	**0.92**	**93**	P	**Pg**	**11 50 57.3**	**-0.7**
SEI				AML	AML		
	comp=E,5240μm,0.5s						
SEI				AML	AML		
	comp=N,6505μm,0.5s						
SEI				AML	AML		
	comp=E,5240μm,0.5s						
SEI				AML	AML		
	comp=N,6505μm,0.5s						
SEI				AML	AML		
	comp=E,5240μm,0.5s						
SEI				AML	AML		
	comp=N,6505μm,0.5s						
SEI				AML	AML		
	comp=E,5240μm,0.5s						
SEI				AML	AML		
	comp=N,6505μm,0.5s						
RUFI	**Rufina**	**1.06**	**104**	P	**Pg**	**11 51 00.1**	**-0.7**
RUFI				AML	AML		
	comp=E,920μm,1.2s						
RUFI				AML	AML		
	comp=N,882μm,0.6s						
RUFI				AML	AML		
	comp=E,932μm,1.2s						
RUFI				AML	AML		
	comp=N,880μm,0.6s						
RUFI				AML	AML		
	comp=E,932μm,1.2s						
RUFI				AML	AML		
	comp=N,880μm,0.6s						
RUFI				AML	AML		
	comp=E,932μm,1.2s						
RUFI				AML	AML		
	comp=N,880μm,0.6s						
CSNT	**Castellina Chi**	**1.08**	**126**	AML	AML		
	comp=E,1181μm,0.4s						
CSNT				AML	AML		
	comp=E,1181μm,0.4s						
CSNT				AML	AML		
	comp=N,1305μm,1.4s						
CSNT				AML	AML		
	comp=E,1181μm,0.4s						
CSNT				AML	AML		
	comp=N,1305μm,1.4s						
CSNT				AML	AML		
	comp=E,1181μm,0.4s						
CSNT				AML	AML		
	comp=N,1305μm,1.4s						
CSNT				AML	AML		
	comp=N,1305μm,1.4s						

TRIF	**Trifonti**	**1.16 149**	P	**Pb**	**11 51 03.5 +0.5**
TRIF			AML	AML	
	comp=E,694µm,1.0s				
TRIF			AML	AML	
	comp=N,684µm,0.5s				
TRIF			AML	AML	
	comp=E,694µm,1.0s				
TRIF			AML	AML	
	comp=N,684µm,0.5s				
TRIF			AML	AML	
	comp=E,694µm,1.0s				
TRIF			AML	AML	
	comp=N,684µm,0.5s				
TRIF			AML	AML	
	comp=E,694µm,1.0s				
TRIF			AML	AML	
	comp=N,684µm,0.5s				
PCP	**Piancastagn**	**1.19 292**	P	**Pg**	**11 51 03.5 +0.3**
PCP			AML	AML	
	comp=E,517µm,0.8s				
PCP			AML	AML	
	comp=N,576µm,1.4s				
PCP			AML	AML	
	comp=E,517µm,0.8s				
PCP			AML	AML	
	comp=N,576µm,1.4s				
PCP			AML	AML	
	comp=E,517µm,0.8s				
PCP			AML	AML	
	comp=N,576µm,1.4s				
PCP			AML	AML	
	comp=E,517µm,0.8s				
PCP			AML	AML	
	comp=N,576µm,1.4s				
FROS	**Frosini**	**1.19 139**	AML	AML	
	comp=E,1745µm,0.9s				
FROS			AML	AML	
	comp=E,1745µm,0.9s				
FROS			AML	AML	
	comp=N,1750µm,1.2s				
FROS			AML	AML	
	comp=E,1745µm,0.9s				
FROS			AML	AML	
	comp=N,1750µm,1.2s				
FROS			AML	AML	
	comp=N,1750µm,1.2s				
FROS			AML	AML	
	comp=E,1745µm,0.9s				
FROS			AML	AML	
	comp=N,1750µm,1.2s				
ASQU	**Asqua**	**1.27 104**	AML	AML	
	comp=N,424µm,0.8s				
ASQU			AML	AML	
	comp=E,412µm,1.4s				
ASQU			AML	AML	
	comp=N,424µm,0.8s				
ASQU			AML	AML	
	comp=E,412µm,1.4s				
ASQU			AML	AML	
	comp=E,412µm,1.4s				
ASQU			AML	AML	
	comp=N,424µm,0.8s				
FINB	**Finale Ligure**	**1.27 274**	AML	AML	
	comp=N,470µm,0.3s				
FINB			AML	AML	
	comp=E,491µm,0.3s				
FINB			AML	AML	
	comp=N,470µm,0.3s				
FINB			AML	AML	
	comp=E,491µm,0.3s				
FINB			AML	AML	
	comp=N,470µm,0.3s				
FINB			AML	AML	
	comp=E,491µm,0.3s				
FINB			AML	AML	
	comp=N,470µm,0.3s				
FINB			AML	AML	
	comp=E,491µm,0.3s				
QLNO	**Quiliano**	**1.27 280**	P	**Pg**	**11 51 04.7 -0.1**
QLNO			AML	AML	
	comp=E,516µm,0.6s				
QLNO			AML	AML	
	comp=N,514µm,0.4s				
QLNO			AML	AML	
	comp=E,516µm,0.6s				
QLNO			AML	AML	
	comp=N,514µm,0.4s				
QLNO			AML	AML	
	comp=N,514µm,0.4s				
QLNO			AML	AML	
	comp=E,516µm,0.6s				
QLNO			AML	AML	
	comp=N,514µm,0.4s				
QLNO			AML	AML	
	comp=E,516µm,0.6s				
CASP	**Castiglione de**	**1.44 157**	P	**Pn**	**11 51 07.0 -0.2**
CASP			AML	AML	
	comp=E,477µm,1.1s				
CASP			AML	AML	
	comp=N,407µm,0.4s				
CASP			AML	AML	
	comp=E,478µm,1.1s				
CASP			AML	AML	
	comp=N,407µm,0.4s				
CASP			AML	AML	
	comp=E,478µm,1.1s				
CASP			AML	AML	
	comp=N,407µm,0.4s				
CASP			AML	AML	
	comp=E,478µm,1.1s				
CASP			AML	AML	
	comp=N,407µm,0.4s				
CAFI	**Castiglion Fio**	**1.57 119**	P	**Pn**	**11 51 08.4 -0.6**
CAFI			AML	AML	
	comp=E,268µm,0.6s				
CAFI			AML	AML	
	comp=N,240µm,0.5s				
CAFI			AML	AML	
	comp=E,268µm,0.6s				
CAFI			AML	AML	
	comp=N,240µm,0.5s				
CAFI			AML	AML	
	comp=N,240µm,0.5s				
CAFI			AML	AML	
	comp=E,268µm,0.6s				
CAFI			AML	AML	
	comp=N,240µm,0.5s				
CAFI			AML	AML	
	comp=E,268µm,0.6s				
IMI	**Imperia**	**1.60 263**	P	**Pn**	**11 51 09.4 0.0**
IMI			AML	AML	
	comp=E,263µm,1.4s				
IMI			AML	AML	
	comp=N,476µm,1.2s				
GBOS	**Grotte di Boss**	**1.62 275**	P	**Pn**	**11 51 10.0 +0.2**
GBOS			AML	AML	
	comp=E,156µm,0.7s				
GBOS			AML	AML	
	comp=N,214µm,0.6s				
GBOS			AML	AML	
	comp=E,156µm,0.7s				
GBOS			AML	AML	
	comp=N,214µm,0.6s				
GBOS			AML	AML	
	comp=E,156µm,0.7s				
GBOS			AML	AML	
	comp=N,214µm,0.6s				
GBOS			AML	AML	
	comp=E,156µm,0.7s				
GBOS			AML	AML	
	comp=N,214µm,0.6s				
MGRO	**Montegrosso**	**1.64 268**	P	**Pn**	**11 51 10.3 +0.2**
MGRO			AML	AML	
	comp=E,380µm,0.6s				
MGRO			AML	AML	
	comp=N,295µm,1.1s				
MGRO			AML	AML	
	comp=E,380µm,0.6s				
MGRO			AML	AML	
	comp=N,294µm,1.1s				
MGRO			AML	AML	
	comp=E,380µm,0.6s				
MGRO			AML	AML	
	comp=N,294µm,1.1s				
MGRO			AML	AML	
	comp=E,380µm,0.6s				
MGRO			AML	AML	
	comp=N,294µm,1.1s				

TEOL	**Teolo**	**1.68 42**	AML	AML	
TEOL	comp=N,1660µm,0.6s		AML	AML	
	comp=E,3160µm,1.2s				
TEOL			AML	AML	
	comp=N,1660µm,0.6s				
TEOL			AML	AML	
	comp=E,3160µm,1.2s				
TEOL			AML	AML	
	comp=N,1660µm,0.6s				
TEOL			AML	AML	
	comp=E,3160µm,1.2s				
MAGA	**Magasa**	**1.71 13**	P	**Pn**	**11 51 11.1 +0.1**
MAGA			AML	AML	
	comp=E,2350µm,0.6s				
MAGA			AML	AML	
	comp=N,1215µm,0.4s				
MAGA			AML	AML	
	comp=E,2350µm,0.6s				
MAGA			AML	AML	
	comp=N,1215µm,0.4s				
MAGA			AML	AML	
	comp=E,2350µm,0.6s				
MAGA			AML	AML	
	comp=N,1215µm,0.4s				
MAGA			AML	AML	
	comp=E,2350µm,0.6s				
MAGA			AML	AML	
	comp=N,1215µm,0.4s				
NEGI	**Seborga**	**1.74 262**	AML	AML	
	comp=E,228µm,0.7s				
NEGI			AML	AML	
	comp=E,228µm,0.7s				
NEGI			AML	AML	
	comp=N,336µm,0.6s				
NEGI			AML	AML	
	comp=E,228µm,0.7s				
NEGI			AML	AML	
	comp=N,336µm,0.6s				
NEGI			AML	AML	
	comp=N,336µm,0.6s				
NEGI			AML	AML	
	comp=N,336µm,0.6s				
NEGI			AML	AML	
	comp=E,228µm,0.7s				
PGF	**Pioggiola**	**1.75 207**	*e*Pn	**Pn**	**11 51 11.7 +0.1**
PGF			*e*Sn	**Sn**	**11 51 33.7 -0.7**
	comp=E,101nm,0.3s				
SAOF	**Saorge**	**1.83 267**	Pn	**Pn**	**11 51 13.3 +0.7**
SAOF			Sn	**Sn**	**11 51 36.3 +0.1**
SAOF	**Saorge**	**1.83 267**	P	**Pn**	**11 51 13.1 +0.5**
SAOF			AML	AML	
	comp=E,586µm,0.8s				
SAOF			AML	AML	
	comp=N,670µm,0.7s				
SAOF			AML	AML	
	comp=N,670µm,0.7s				
SAOF			AML	AML	
	comp=E,586µm,0.8s				
SAOF			AML	AML	
	comp=N,670µm,0.7s				
SAOF			AML	AML	
	comp=E,586µm,0.8s				
ATTE	**AVT- Monte Tez**	**1.88 118**	AML	AML	
	comp=N,224µm,1.4s				
ATTE			AML	AML	
	comp=E,265µm,0.6s				
ATTE			AML	AML	
	comp=N,224µm,1.4s				
ATTE			AML	AML	
	comp=E,265µm,0.6s				
ATTE			AML	AML	
	comp=N,224µm,1.4s				
ATTE			AML	AML	
	comp=E,265µm,0.6s				
MGAB	**Montegabbione**	**1.90 128**	AML	AML	
	comp=E,214µm,0.5s				
MGAB			AML	AML	
	comp=E,214µm,0.5s				
MGAB			AML	AML	
	comp=N,163µm,0.6s				
MGAB			AML	AML	
	comp=N,163µm,0.6s				
MGAB			AML	AML	
	comp=E,214µm,0.5s				
MGAB			AML	AML	
	comp=N,163µm,0.6s				
ENR	**Entracque**	**1.92 274**	P	**Pn**	**11 51 14.7 +0.8**
ENR			AML	AML	
	comp=E,172µm,0.8s				
ENR			AML	AML	
	comp=N,360µm,0.5s				
ENR			AML	AML	
	comp=N,360µm,0.5s				
ENR			AML	AML	
	comp=E,172µm,0.8s				
ENR			AML	AML	
	comp=N,360µm,0.5s				
ENR			AML	AML	
	comp=E,172µm,0.8s				
SBF	**Sospel**	**1.93 263**	*e*Pn	**Pn**	**11 51 14.2 +0.2**
SBF			*e*Sn	**Sn**	**11 51 38.3 -0.4**
	comp=E,254nm,0.5s				
MUGIO	**Muggio**	**1.96 338**	AML	AML	
	comp=E,240µm,0.5s				
MUGIO			AML	AML	
	comp=E,240µm,0.5s				
MUGIO			AML	AML	
	comp=N,288µm,0.6s				
MUGIO			AML	AML	
	comp=E,240µm,0.5s				
MUGIO			AML	AML	
	comp=N,288µm,0.6s				
MUGIO			AML	AML	
	comp=N,288µm,0.6s				
ESCA	**l'Escarene**	**1.98 263**	Pn	**Pn**	**11 51 15.1 +0.4**
PESA	**Pesaro**	**1.99 94**	AML	AML	
	comp=E,330µm,0.7s				
PESA			AML	AML	
	comp=E,330µm,0.7s				
PESA			AML	AML	
	comp=N,348µm,0.9s				
PESA			AML	AML	
	comp=E,330µm,0.7s				
PESA			AML	AML	
	comp=N,348µm,0.9s				
PESA			AML	AML	
	comp=N,348µm,0.9s				
SMPL	**Sampolo**	**2.10 197**	Pn	**Pn**	**11 51 17.8 +1.5**
SMPL			Sn	**Sn**	**11 51 43.7 +0.8**
SMPL	**Sampolo**	**2.10 197**	AML	AML	
	comp=E,6750µm,1.4s				
SMPL			AML	AML	
	comp=N,8605µm,1.0s				
SMPL			AML	AML	
	comp=E,6750µm,1.4s				
SMPL			AML	AML	
	comp=N,8605µm,1.0s				
SMPL			AML	AML	
	comp=E,6750µm,1.4s				
SMPL			AML	AML	
	comp=N,8605µm,1.0s				
FOSV	**Fossato di Vic**	**2.10 112**	AML	AML	
	comp=N,134µm,1.4s				
FOSV			AML	AML	
	comp=E,128µm,0.8s				
FOSV			AML	AML	
	comp=N,134µm,1.4s				
FOSV			AML	AML	
	comp=E,128µm,0.8s				
FOSV			AML	AML	
	comp=N,134µm,1.4s				
FOSV			AML	AML	
	comp=E,128µm,0.8s				
CGRP	**Cima Grappa**	**2.15 34**	AML	AML	
	comp=N,514µm,0.6s				
CGRP			AML	AML	
	comp=E,962µm,1.4s				
CGRP			AML	AML	
	comp=E,962µm,1.4s				
CGRP			AML	AML	
	comp=N,514µm,0.6s				
CGRP			AML	AML	
	comp=E,962µm,1.4s				
CGRP			AML	AML	
	comp=N,514µm,0.6s				
TRAV	**Traversella**	**2.18 311**	P	**Pn**	**11 51 18.7 +1.3**
TRAV			AML	AML	

	comp=E,348µm,0.4s				
TRAV			AML	AML	
	comp=N,320µm,0.3s				
TRAV			AML	AML	
	comp=N,320µm,0.3s				
TRAV			AML	AML	
	comp=E,348µm,0.4s				
TRAV			AML	AML	
	comp=N,320µm,0.3s				
TRAV			AML	AML	
	comp=E,348µm,0.4s				
ISO	**Isola**	**2.19 273**	Pn	**Pb**	**11 51 20.3 -0.2**
EILF	**Villa Eilenroc**	**2.21 256**	Pn	**Pn**	**11 51 18.2 +0.4**
CTI	**Castel Tesino**	**2.23 29**	P	**Pn**	**11 51 17.9 -0.2**
CTI			AML	AML	
	comp=E,490µm,0.5s				
CTI			AML	AML	
	comp=N,428µm,0.3s				
CTI			AML	AML	
	comp=N,428µm,0.3s				
CTI			AML	AML	
	comp=E,490µm,0.5s				
CTI			AML	AML	
	comp=N,428µm,0.3s				
CTI			AML	AML	
	comp=E,490µm,0.5s				
CALF	**Calern**	**2.31 262**	Pn	**Pn**	**11 51 20.2 +0.9**
SURF	**Saint Ours**	**2.38 280**	Pn	**Pn**	**11 51 21.0 +0.7**
FDMO	**Fiordimonte**	**2.43 115**	AML	AML	
	comp=N,74µm,0.9s				
FDMO			AML	AML	
	comp=E,80µm,0.4s				
FDMO			AML	AML	
	comp=N,74µm,0.9s				
FDMO			AML	AML	
	comp=E,80µm,0.4s				
FDMO			AML	AML	
	comp=N,74µm,0.9s				
FDMO			AML	AML	
	comp=E,80µm,0.4s				
MBDF	**Montbardon**	**2.45 286**	*e*Pn	**Pn**	**11 51 21.4 +0.1**
MBDF	**Montbardon**	**2.45 286**	*e*Pg	**Pg**	**11 51 28.3 +0.9**
MBDF			*e*Sn	**Sn**	**11 51 51.0 -0.8**
	comp=E,41nm,0.4s				
MBDF			*e*Sg	**Sg**	**11 52 00.7 +1.5**
	comp=E,74nm,0.5s				
NRCA	**Norcia**	**2.55 119**	AML	AML	
	comp=N,309µm,0.9s				
NRCA			AML	AML	
	comp=E,489µm,1.5s				
NRCA			AML	AML	
	comp=N,309µm,0.9s				
NRCA			AML	AML	
	comp=E,489µm,1.5s				
NRCA			AML	AML	
	comp=N,309µm,0.9s				
NRCA			AML	AML	
	comp=E,489µm,1.5s				
FRF	**La Foret Royal**	**2.55 259**	*e*Pn	**Pn**	**11 51 22.9 +0.4**
FRF			*e*Sn	**Sn**	**11 51 53.4 -0.5**
	comp=E,37nm,0.2s				
FRF			*e*Sg	**Sg**	**11 52 05.2 +2.9**
	comp=E,23nm,0.3s				
LNSS	**Leonessa**	**2.63 124**	AML	AML	
	comp=E,183µm,0.5s				
LNSS			AML	AML	
	comp=N,158µm,0.6s				
LNSS			AML	AML	
	comp=N,158µm,0.6s				
LNSS			AML	AML	
	comp=E,183µm,0.5s				
LNSS			AML	AML	
	comp=N,158µm,0.6s				
LNSS			AML	AML	
	comp=E,183µm,0.5s				
DAVOX	**Davos/Dischmat**	**2.67 357**	Pn	**Pn**	**11 51 26.3 +2.0**
	comp=E,5.3nm,0.3s,baz=181,slow=13,SNR=13				
DAVOX			Sn	**Sn**	**11 51 59.0 +1.8**
	comp=E,11nm,0.3s,baz=162,slow=20,SNR=8.0				
DAVOX			LR	LR	11 52 55.8
	comp=E,172nm,19.1s,baz=199,slow=50				
REMY	**Saint-Rhmy-en**	**2.70 311**	AML	AML	
	comp=N,477µm,1.4s				
REMY			AML	AML	
	comp=E,286µm,0.6s				
REMY			AML	AML	
	comp=N,477µm,1.4s				
REMY			AML	AML	
	comp=E,286µm,0.6s				
REMY			AML	AML	
	comp=E,286µm,0.6s				
REMY			AML	AML	
	comp=N,477µm,1.4s				
LMR	**La Mourre**	**2.71 255**	*e*Pn	**Pn**	**11 51 24.9 +0.3**
LMR			*e*Sn	**Sn**	**11 51 57.1 -0.7**
	comp=N,34nm,0.2s				
LPG	**La Plagne**	**2.75 301**	*e*P	**Pb**	**11 51 28.3 -1.9**
LPG			*e*Sn	**Sn**	**11 51 57.9 -1.3**
LPG			*e*Sg	**Sg**	**11 52 09.2 +0.5**
	comp=N,36nm,0.4s				
LPL	**La Plagne**	**2.77 302**	*e*P	**Pn**	**11 51 28.4 +2.7**
LPL			*e*Sn	**Sn**	**11 51 58.1 -1.6**
LPL			*e*Sg	**Sg**	**11 52 09.8 +0.4**
	comp=N,56nm,0.4s				
STAL	**STALIGIAL**	**2.84 40**	AML	AML	
	comp=E,318µm,1.4s				
STAL			AML	AML	
	comp=E,318µm,1.4s				
STAL			AML	AML	
	comp=N,297µm,0.7s				
STAL			AML	AML	
	comp=E,413µm,0.4s				
STAL			AML	AML	
	comp=N,243µm,1.5s				
STAL			AML	AML	
	comp=N,243µm,1.5s				
STAL			AML	AML	
	comp=E,413µm,0.4s				
STAL			AML	AML	
	comp=N,297µm,0.7s				
STAL			AML	AML	
	comp=N,243µm,1.5s				
STAL			AML	AML	
	comp=E,413µm,0.4s				
STAL			AML	AML	
	comp=N,297µm,0.7s				
STAL			AML	AML	
	comp=E,318µm,1.4s				
FETA	**Feichten**	**2.94 9**	*e*Pn	**Pn**	**11 51 30.7 +2.7**
	comp=E,5.8nm,0.6s				
FETA			Sn	**Sn**	**11 52 06.7 +2.9**
	comp=E,32nm,0.9s				
GEPF	**Gemona**	**3.05 44**	AML	AML	
	comp=N,204µm,0.8s				
GEPF			AML	AML	
	comp=E,128µm,0.7s				
GEPF			AML	AML	
	comp=E,128µm,0.7s				
GEPF			AML	AML	
	comp=N,204µm,0.8s				
GEPF			AML	AML	
	comp=E,128µm,0.7s				
GEPF			AML	AML	
	comp=N,204µm,0.8s				
SABO	**M.te Sabotino**	**3.11 52**	AML	AML	
	comp=E,299µm,1.5s				
SABO			AML	AML	
	comp=E,299µm,1.5s				
SABO			AML	AML	
	comp=N,286µm,0.7s				
SABO			AML	AML	
	comp=N,286µm,0.7s				
SABO			AML	AML	
	comp=E,299µm,1.5s				
SABO			AML	AML	
	comp=N,286µm,0.7s				
ORIF	**Oris-en-Rattie**	**3.12 286**	*e*P	**Pn**	**11 51 33.0 +2.7**
ORIF			*e*Sn	**Sn**	**11 52 06.2 -1.8**
ORIF			*e*Sg	**Sg**	**11 52 20.8 +0.3**
	comp=N,54nm,0.6s				
ABTA	**Abfaltersbach**	**3.14 32**	*e*Pn	**Pn**	**11 51 32.7 +2.1**
	comp=N,3.3nm,0.4s				
ABTA			Sn	**Sn**	**11 52 10.7 +2.1**
	comp=N,11nm,0.4s				
DAVA	**Damuels**	**3.18 357**	*e*Pn	**Pn**	**11 51 34.2 +2.9**
	comp=N,11nm,0.4s,SNR=13				
DAVA			*e*Sn	**Sn**	**11 52 12.6 +3.0**
	comp=N,40nm,0.5s				

SQTA	**Sankt Quirin**	**3.21**	**14**	*e*Pn	**Pn**	**11 51 34.8 +3.2**
	comp=N,34nm,0.3s,SNR=16					
SQTA				*e*Sn	**Sb**	**11 52 14.3 -3.0**
	comp=N,61nm,0.5s					
SMRF	**Simiane la Rot**	**3.26**	**269**	*e*Pn	**Pn**	**11 51 34.0 +1.8**
SMRF				*e*Sn	**Sn**	**11 52 11.1 -0.3**
	comp=N,18nm,0.4s					
MOTA	**Moosalm**	**3.31**	**12**	*e*Pn	**Pn**	**11 51 36.0 +2.9**
	comp=N,6.3nm,0.2s,SNR=14					
WTTA	**Wattenberg**	**3.33**	**18**	*e*Pn	**Pn**	**11 51 35.9 +2.5**
	comp=N,13nm,0.2s,SNR=14					
WTTA				*e*Sn	**Sn**	**11 52 17.3 +3.9**
	comp=N,74nm,0.7s					
WATA	**Walderalm**	**3.39**	**17**	*e*Pn	**Pn**	**11 51 36.5 +2.4**
	comp=N,6.7nm,0.3s,SNR=8.0					
RETA	**Reutte**	**3.41**	**8**	Pn	**Pn**	**11 51 35.7 +1.4**
	comp=N,3.4nm,0.3s					
RETA				*e*Sn	**Sb**	**11 52 20.3 -2.8**
	comp=N,24nm,0.4s					
NVLJ	**Novalja**	**3.46**	**81**	*e*Pn	**Pn**	**11 51 35.8 +0.8**
NVLJ				Sn	**Sn**	**11 52 15.0 -1.3**
MYKA	**Terra Mystica**	**3.55**	**44**	*e*Pn	**Pn**	**11 51 38.0 +1.7**
	comp=N,1.4nm,0.2s					
MYKA				*e*Sn	**Sn**	**11 52 21.7 +3.0**
	comp=N,22nm,0.4s					
OG35	**Corcelles**	**3.74**	**303**	Pn	**Pn**	**11 51 41.1 +2.2**
KBA	**Koelnbreinsper**	**3.75**	**36**	*e*Pn	**Pn**	**11 51 42.0 +2.9**
	comp=N,2.5nm,0.2s					
KBA				Sn	**Sn**	**11 52 26.9 +3.3**
	comp=N,23nm,0.7s					
CABF	**La Chapelle**	**3.77**	**313**	*e*P	**Pn**	**11 51 42.0 +2.7**
CABF				*e*Sn	**Sn**	**11 52 21.5 -2.6**
	comp=N,17nm,0.5s					
VIVF	**Saint-Julien-l**	**3.95**	**283**	*e*P	**Pn**	**11 51 43.4 +1.7**
VIVF				*e*Sn	**Sn**	**11 52 26.6 -1.8**
	comp=N,4.9nm,0.3s					
VIVF				*e*Sg	**Sg**	**11 52 46.8 -0.3**
	comp=N,1.9nm,0.3s					
CHMF	**Charmoille**	**3.95**	**324**	Pn	**Pn**	**11 51 43.8 +1.9**
OBKA	**Obir**	**3.96**	**51**	*e*Pn	**Pn**	**11 51 42.9 +1.1**
	comp=N,6.3nm,0.4s					
OBKA				*e*Sn	**Sn**	**11 52 30.5 +1.8**
	comp=N,13nm,0.3s					
LOMF	**Lomont**	**3.96**	**326**	Pn	**Pn**	**11 51 45.2 +3.2**
UDBI	**Udbina**	**4.09**	**82**	*e*Pn	**Pn**	**11 51 47.1 +3.4**
SOKA	**Soboth**	**4.33**	**52**	*e*Pn	**Pn**	**11 51 47.8 +0.8**
	comp=N,4.2nm,0.3s,SNR=10.0					
SOKA				Sn	**Sn**	**11 52 38.7 +0.9**
	comp=N,3.9nm,0.5s					
HINF	**Hinteralfeld**	**4.34**	**330**	*e*P	**Pn**	**11 51 49.3 +2.2**
HINF				*e*Sn	**Sn**	**11 52 34.4 -3.6**
	comp=N,33nm,0.5s					
LASF	**Ste Croix**	**4.49**	**272**	*e*P	**Pn**	**11 51 49.7 +0.6**
LASF				*e*Sn	**Sn**	**11 52 39.6 -2.2**
	comp=N,5.8nm,0.4s					
HAU	**Haudompre**	**4.68**	**328**	*e*P	**Pn**	**11 51 53.7 +1.9**
HAU				*e*Sn	**Sn**	**11 52 43.0 -3.5**
	comp=N,47nm,0.4s					
CDF	**Champ du Feu**	**4.72**	**337**	*e*P	**Pn**	**11 51 53.1 +0.7**
CDF				*e*Sn	**Sn**	**11 52 44.0 -3.6**
	comp=N,43nm,0.4s					
MOA	**Molln**	**4.74**	**36**	*e*Pn	**Pn**	**11 51 54.6 +2.1**
	comp=N,2.0nm,0.1s					
MOA				*e*Sn	**Sn**	**11 52 49.6 +1.8**
	comp=N,14nm,0.5s					
MOA				Sg	**Sg**	**11 53 19.2 +6.7**
	comp=N,7.2nm,0.5s					
ARSA	**Arzberg**	**4.93**	**49**	*e*Pn	**Pn**	**11 51 55.9 +0.6**
	comp=N,6.3nm,0.3s,SNR=13					
ARSA				Sn	**Sn**	**11 52 51.5 -1.2**
	comp=N,3.6nm,0.5s					
ARSA				Sg	Sg	11 53 27.8 +9.0
	comp=N,3.5nm,0.5s					
SMF	**Signal de Mont**	**5.08**	**302**	*e*P	**Pn**	**11 51 59.0 +1.8**
SMF				*e*Sn	**Sn**	**11 52 53.0 -3.2**
	comp=N,13nm,0.3s					
GERES	**GERESS Array B**	**5.35**	**27**	Pn	**Pn**	**11 52 01.8 +0.7**
	comp=N,1.3nm,0.3s,baz=201,slow=13,SNR=15					
GERES				Sn	**Sn**	**11 53 02.7 -0.4**
	comp=N,2.0nm,0.3s,baz=208,slow=21,SNR=6.5					
GERES				Lg	Lg	11 53 29.3
	comp=N,0.7nm,0.3s,baz=214,slow=30,SNR=4.0					
PAGF	**Fort de Pagny**	**5.37**	**327**	*e*P	**Pn**	**11 52 04.0 +2.8**
PAGF				*e*Sn	**Sn**	**11 52 59.5 -4.0**
	comp=N,37nm,0.5s					
LOR	**Lormes**	**5.38**	**308**	*e*P	**Pn**	**11 52 03.5 +2.1**
LOR				*e*Sn	**Sn**	**11 53 00.7 -3.1**
	comp=N,20nm,0.3s					
SFTF	**Sexfontaines**	**5.39**	**321**	*e*P	**Pn**	**11 52 03.7 +2.2**
	baz=134					
SFTF				*e*Sn	**Sn**	**11 53 00.1 -3.8**
	comp=N,23nm,0.6s					
AVF	**Avril sur Loir**	**5.44**	**302**	*e*P	**Pn**	**11 52 04.8 +2.6**
AVF				*e*Sn	**Sn**	**11 53 01.7 -3.5**
	comp=N,8.9nm,0.4s					
SSF	**Saint Saulge**	**5.48**	**305**	*e*P	**Pn**	**11 52 05.5 +2.8**
SSF				*e*Sn	**Sn**	**11 53 02.8 -3.3**
	comp=N,5.4nm,0.3s					
CONA	**Conrad Observa**	**5.54**	**44**	*e*Pn	**Pn**	**11 52 03.8 +0.1**
	comp=N,5.7nm,0.4s,SNR=7.4					
CONA				*e*Sn	**Sn**	**11 53 08.8 +1.0**
	comp=N,14nm,0.6s					
KHC	**Kasperske Hory**	**5.56**	**24**	*e*PN	**Pn**	**11 52 03.7 -0.2**
KHC				*e*SN	**Sn**	**11 53 04.7 -3.6**
KHC				*e*x	x	11 53 34.5
MEZF	**Maizieres J'vi**	**5.61**	**323**	*e*P	**Pn**	**11 52 07.3 +2.9**
	baz=140					
MEZF				*e*Sn	**Sn**	**11 53 04.6 -4.6**
	comp=N,14nm,0.5s					
BGF	**Bois d'Agland**	**5.66**	**298**	*e*P	**Pn**	**11 52 06.9 +1.7**
BGF				*e*Sn	**Sn**	**11 53 07.1 -3.5**
	comp=N,35nm,0.4s					
MTLF	**Montolieu**	**5.75**	**265**	*e*Pn	**Pn**	**11 52 07.2 +0.7**
MTLF				*e*Sn	**Sn**	**11 53 09.5 -3.4**
	comp=N,6.2nm,0.5s					
CAF	**Calviac**	**5.79**	**281**	*e*P	**Pn**	**11 52 08.7 +1.6**
CAF				*e*Sn	**Sn**	**11 53 12.1 -1.8**
	comp=N,2.6nm,0.4s					
TCF	**Toulx Ste Croi**	**5.98**	**294**	*e*P	**Pn**	**11 52 13.7 +4.1**
TCF				*e*Sn	**Sn**	**11 53 14.9 -3.5**
	comp=N,9.6nm,0.6s					
HYF	**Humbligny**	**6.10**	**304**	*e*P	**Pn**	**11 52 14.3 +3.1**
HYF				*e*Sn	**Sn**	**11 53 18.6 -2.7**
MODS	**Modra-Piesok**	**6.56**	**47**	*e*PN	**Pn**	**11 52 17.4 -0.1**
MODS				*e*SN	**Sn**	**11 53 27.4 -5.3**
BRG	**Berggiesshubel**	**7.25**	**20**	SG	**Sn**	**11 53 51.2 +1.6**
	comp=N,3.6nm,0.7s					
VYHS	**Vyhne**	**7.47**	**51**	*e*PN	**Pn**	**11 52 29.9 -0.2**
VYHS				*e*SN	**Sn**	**11 53 51.3 -4.0**
MFF	**Saint Martin d**	**7.63**	**293**	*e*P	**Pn**	**11 52 35.9 +3.7**
MFF				*e*Sn	**Sn**	**11 53 53.4 -5.6**
	comp=N,2.4nm,0.4s					
SGMF	**Saint Gilles**	**9.70**	**300**	*e*P	Pn	11 53 05.5 +5.0
SGMF				*e*Sn	**Sn**	**11 54 43.5 -6.3**
	comp=N,2.0nm,0.3s					
EKA	**Eskdalemuir Ar**	**14.10**	**327**	Pn	**Pn**	**11 54 03.5 +2.9**
	baz=138,slow=15,SNR=3.5					
FINES	**FINESS Array B**	**19.77**	**23**	Pn	**Pn**	**11 55 12.4 -0.2**
	comp=N,0.1nm,0.3s,baz=215,slow=13,SNR=2.9					
MKAR	**Makanchi Array**	**49.06**	**60**	P	**P**	**11 59 29.4 +1.0**
	comp=N,0.4nm,0.6s,baz=287,slow=7.4,SNR=3.7					

IDC 21 11:51:41.2±8.5, 15°.43S×177°.92W, h442km±92km, mb3.4/5, mb1 3.7/5, mbtmp4.2/5, Error ellipse: s-maj=127.7km s-min=25.2km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.27**	**239**	P	P	11 58 37.8	-0.6
	4.0nm,0.8s,baz=86,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**45.59**	**257**	P	P	11 59 20.4	-0.1
	2.8nm,0.5s,baz=86,slow=7.7,SNR=66						
ASAR	**Alice Springs**	**45.95**	**252**	P	P	11 59 23.3	0.0
	17nm,0.6s,baz=86,slow=8.3,SNR=268						
ASAR				PcP	PcP	12 00 51.5	-0.1
	0.4nm,0.7s,baz=83,slow=3.8,SNR=2.6						
NVAR	**Mina Array Bea**	**77.33**	**44**	P	P	12 02 49.3	-0.1
	0.3nm,0.7s,baz=218,slow=6.9,SNR=3.3						
TXAR	**Lajitas Array**	**84.28**	**58**	P	P	12 03 26.2	+0.4
	0.5nm,0.9s,baz=211,slow=7.0,SNR=3.8						
BRTR	**Keskin Array B**	**143.33**	**317**	PKP	PKPbc	12 10 23.4	+0.7
	1.0nm,0.6s,baz=96,slow=4.3,SNR=4.8						

*ISCJB **21** 11:56:01.5±0.4, 44°.12N±0°.02×10°.11E±0°.03, h4km±4km, Error ellipse: s-maj=4.3km s-min=3.1km az=23.1*
*ROM **21** 11:56:01.9±0.2, 44°.176N±0°.009×10°.21E±0°.01, h10km, ML2.5/17, Error ellipse: s-maj=1.3km s-min=0.6km az=47.0*
*GEN **21** 11:56:02.2, 44°.18N×10°.19E, h4km±6km, Ml2.3*
*LDG **21** 11:56:03.0±0.1, 44°.18N×10°.23E, h4km, Md2.6/2, Ml2.7/11, Error ellipse: s-maj=3.1km s-min=1.9km az=11.0*
ISC 21 11:56:01.9±1.0, 44°.13N±0°.02×10°.16E±0°.02, h7km±8km, n47, σ1.933/71, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.17**	**78**	P	**Pg**	**11 56 05.3**	**0.0**
VLC				S	**Sg**	**11 56 07.8**	**+0.1**
VLC				AML	AML		
	comp=E,4115μm,0.6s						
VLC				AML	AML		
	comp=N,3140μm,0.9s						
VLC				AML	AML		
	comp=E,4180μm,0.6s						
VLC				AML	AML		
	comp=N,3295μm,0.9s						
VLC				AML	AML		
	comp=E,4115μm,0.6s						
VLC				AML	AML		
	comp=N,3140μm,0.9s						
VLC				AML	AML		
	comp=E,4180μm,0.6s						
VLC				AML	AML		
	comp=N,3295μm,0.9s						
VLC				AML	AML		
	comp=E,4115μm,0.6s						
VLC				AML	AML		
	comp=E,4180μm,0.6s						
VLC				AML	AML		
	comp=N,3140μm,0.9s						
VLC				AML	AML		
	comp=N,3295μm,0.9s						
VLC				AML	AML		
	comp=E,4115μm,0.6s						
VLC				AML	AML		
	comp=E,4180μm,0.6s						
SARO	**Sassorosso**	**0.18**	**71**	P	**Pg**	**11 56 05.5**	**-0.2**
SARO				S	**Sg**	**11 56 07.9**	**-0.3**
SARO	**Sassorosso**	**0.18**	**71**	P	**Pg**	**11 56 05.5**	**-0.2**
SARO				S	**Sg**	**11 56 08.0**	**-0.3**
SARO				AML	AML		
	comp=E,4785μm,0.4s						
SARO				AML	AML		
	comp=N,5215μm,0.2s						
SARO				AML	AML		
	comp=E,4785μm,0.4s						
SARO				AML	AML		
	comp=N,5215μm,0.2s						
SARO				AML	AML		
	comp=E,4785μm,0.4s						
SARO				AML	AML		
	comp=N,5215μm,0.2s						
SARO				AML	AML		
	comp=E,4785μm,0.4s						
SARO				AML	AML		
	comp=N,5215μm,0.2s						
CARD	**Cardoso**	**0.25**	**113**	P	**Pb**	**11 56 07.9**	**-0.9**
CARD				S	**Sg**	**11 56 11.4**	**+1.1**
CARD	**Cardoso**	**0.25**	**113**	P	**Pg**	**11 56 07.7**	**+0.8**
CARD				S	**Sg**	**11 56 11.2**	**+0.9**
CARD				AML	AML		
	comp=E,2720μm,1.0s						
CARD				AML	AML		
	comp=N,2260μm,0.6s						
CARD				AML	AML		
	comp=E,2715μm,1.0s						
CARD				AML	AML		
	comp=N,2260μm,0.6s						
CARD				AML	AML		
	comp=N,2260μm,0.6s						
CARD				AML	AML		
	comp=E,2715μm,1.0s						
CARD				AML	AML		
	comp=N,2260μm,0.6s						
CARD				AML	AML		
	comp=E,2715μm,1.0s						
MAIM	**Mastiano**	**0.32**	**131**	P	**Pb**	**11 56 09.2**	**-0.7**
MAIM				S	**Sb**	**11 56 14.0**	**-1.3**
MAIM	**Mastiano**	**0.32**	**131**	P	**Pb**	**11 56 09.2**	**-0.7**
MAIM				S	**Sb**	**11 56 13.9**	**-1.3**
MAIM				AML	AML		
	comp=E,2075μm,0.4s						
MAIM				AML	AML		
	comp=N,1530μm,0.9s						
MAIM				AML	AML		
	comp=E,2075μm,0.4s						
MAIM				AML	AML		
	comp=N,1530μm,0.9s						
MAIM				AML	AML		
	comp=E,2075μm,0.4s						
MAIM				AML	AML		
	comp=N,1530μm,0.9s						
MAIM				AML	AML		
	comp=E,2075μm,0.4s						
MAIM				AML	AML		
	comp=N,1530μm,0.9s						
BDI	**Bagni Di Lucca**	**0.32**	**101**	P	**Pg**	**11 56 08.5**	**+0.3**
BDI				S	**Sg**	**11 56 12.9**	**+0.5**
BDI				AML	AML		
	comp=E,1335μm,0.6s						
BDI				AML	AML		
	comp=N,841μm,0.4s						
BDI				AML	AML		
	comp=E,1185μm,0.6s						
BDI				AML	AML		
	comp=N,1066μm,0.7s						
BDI				AML	AML		
	comp=N,1066μm,0.7s						
BDI				AML	AML		
	comp=N,841μm,0.4s						
BDI				AML	AML		
	comp=E,1335μm,0.6s						
BDI				AML	AML		
	comp=E,1185μm,0.6s						
BDI				AML	AML		
	comp=N,1066μm,0.7s						
BDI				AML	AML		
	comp=N,841μm,0.4s						
BDI				AML	AML		
	comp=E,1335μm,0.6s						
BDI				AML	AML		
	comp=E,1185μm,0.6s						
ERBM	**Eremo**	**0.34**	**32**	P	**Pg**	**11 56 08.3**	**-0.4**
ERBM				S	**Sg**	**11 56 13.2**	**-0.1**
ERBM				AML	AML		
	comp=E,2040μm,1.3s						
ERBM				AML	AML		
	comp=N,1900μm,0.7s						
ERBM				AML	AML		
	comp=E,2045μm,1.3s						
ERBM				AML	AML		
	comp=N,1900μm,0.7s						
ERBM				AML	AML		
	comp=N,1900μm,0.7s						
ERBM				AML	AML		
	comp=E,2040μm,1.3s						
ERBM				AML	AML		
	comp=N,1900μm,0.7s						
ERBM				AML	AML		
	comp=E,2040μm,1.3s						
GRAM	**Graiana**	**0.37**	**350**	P	**Pg**	**11 56 08.8**	**-0.5**
GRAM				S	**Sg**	**11 56 13.3**	**-0.8**
GRAM	**Graiana**	**0.37**	**350**	P	**Pg**	**11 56 08.8**	**-0.5**
GRAM				S	**Sg**	**11 56 13.7**	**-0.5**
GRAM				AML	AML		
	comp=E,4935μm,0.4s						
GRAM				AML	AML		
	comp=N,6075μm,0.4s						
GRAM				AML	AML		
	comp=E,4935μm,0.4s						
GRAM				AML	AML		
	comp=N,6070μm,0.4s						
GRAM				AML	AML		
	comp=N,6070μm,0.4s						
GRAM				AML	AML		
	comp=E,4935μm,0.4s						
GRAM				AML	AML		
	comp=N,6070μm,0.4s						
GRAM				AML	AML		
	comp=E,4935μm,0.4s						
POPM	**Popiglio**	**0.44**	**100**	P	**Pg**	**11 56 10.5**	**+0.1**
POPM				S	**Sg**	**11 56 17.0**	**+0.9**
POPM	**Popiglio**	**0.44**	**100**	P	**Pg**	**11 56 10.7**	**+0.3**
POPM				S	**Sg**	**11 56 17.0**	**+0.9**
POPM				AML	AML		
	comp=E,1300μm,0.5s						
POPM				AML	AML		
	comp=N,1925μm,0.5s						
POPM				AML	AML		
	comp=N,1925μm,0.5s						
POPM				AML	AML		
	comp=E,1300μm,0.5s						
POPM				AML	AML		
	comp=N,1925μm,0.5s						
POPM				AML	AML		
	comp=E,1300μm,0.5s						
MSSA	**Maissana**	**0.50**	**293**	P	**Pb**	**11 56 12.5**	**-0.6**
MSSA				AML	AML		
	comp=E,431μm,0.4s						
MSSA				AML	AML		
	comp=N,364μm,0.9s						
MSSA				AML	AML		
	comp=N,364μm,0.9s						
MSSA				AML	AML		
	comp=E,431μm,0.4s						
MSSA				AML	AML		
	comp=N,364μm,0.9s						
MSSA				AML	AML		
	comp=E,431μm,0.4s						
MTCR	**Monte La Croce**	**0.61**	**99**	P	**Pg**	**11 56 13.8**	**+0.1**
ZCCA	**Zocca**	**0.63**	**69**	P	**Pb**	**11 56 14.9**	**-0.3**
ZCCA				AML	AML		
	comp=E,356μm,0.5s						
ZCCA				AML	AML		
	comp=N,424μm,0.4s						
ZCCA				AML	AML		
	comp=E,356μm,0.5s						
ZCCA				AML	AML		
	comp=N,424μm,0.4s						
ZCCA				AML	AML		
	comp=N,424μm,0.4s						
ZCCA				AML	AML		
	comp=E,356μm,0.5s						
ZCCA				AML	AML		
	comp=N,424μm,0.4s						
ZCCA				AML	AML		
	comp=E,356μm,0.5s						
CRMI	**Carmignano**	**0.67**	**120**	P	**Pb**	**11 56 16.1**	**+0.2**
CRMI				AML	AML		
	comp=E,139μm,0.5s						
CRMI				AML	AML		
	comp=N,208μm,0.6s						
CRMI				AML	AML		
	comp=N,208μm,0.6s						
CRMI				AML	AML		
	comp=E,139μm,0.5s						
CRMI				AML	AML		
	comp=N,208μm,0.6s						
CRMI				AML	AML		
	comp=E,139μm,0.5s						
PTF	**Prato**	**0.68**	**104**	P	**Pg**	**11 56 14.9**	**0.0**
GORR	**Gorreto**	**0.79**	**308**	P	**Pg**	**11 56 16.7**	**-0.4**
GORR				AML	AML		
	comp=E,300μm,0.7s						
GORR				AML	AML		
	comp=N,295μm,0.3s						
GORR				AML	AML		
	comp=E,300μm,0.7s						
GORR				AML	AML		
	comp=N,295μm,0.3s						
GORR				AML	AML		
	comp=E,300μm,0.7s						
GORR				AML	AML		
	comp=N,295μm,0.3s						
BOB	**Bobbio (Coli)**	**0.82**	**322**	P	**Pg**	**11 56 17.5**	**-0.2**
BOB				AML	AML		
	comp=E,362μm,0.5s						
BOB				AML	AML		
	comp=N,519μm,0.4s						
BOB				AML	AML		
	comp=E,362μm,0.5s						
BOB				AML	AML		
	comp=N,519μm,0.4s						
BOB				AML	AML		
	comp=E,362μm,0.5s						
BOB				AML	AML		
	comp=N,519μm,0.4s						
SEI	**Scarperia**	**0.86**	**94**	P	**Pg**	**11 56 18.6**	**0.0**
SEI				AML	AML		
	comp=E,524μm,0.5s						
SEI				AML	AML		
	comp=N,720μm,0.5s						
SEI				AML	AML		
	comp=E,524μm,0.5s						
SEI				AML	AML		
	comp=N,720μm,0.5s						
SEI				AML	AML		
	comp=E,524μm,0.5s						
SEI				AML	AML		
	comp=N,720μm,0.5s						
RUFI	**Rufina**	**1.02**	**106**	P	**Pg**	**11 56 21.5**	**+0.1**
PCP	**Piancastagn**	**1.23**	**290**	P	**Pg**	**11 56 25.4**	**-0.1**
CASP	**Castiglione de**	**1.43**	**159**	P	**Pn**	**11 56 28.2**	**0.0**
CASP				AML	AML		
	comp=E,64μm,1.6s						
CASP				AML	AML		
	comp=N,72μm,1.5s						
CASP				AML	AML		
	comp=E,64μm,1.6s						
CASP				AML	AML		
	comp=N,72μm,1.5s						
CASP				AML	AML		
	comp=E,64μm,1.6s						
CASP				AML	AML		
	comp=N,72μm,1.5s						
CAFI	**Castiglion Fio**	**1.53**	**121**	AML	AML		
	comp=E,38μm,0.8s						
CAFI				AML	AML		
	comp=E,38μm,0.8s						
CAFI				AML	AML		
	comp=N,30μm,0.5s						
CAFI				AML	AML		
	comp=N,30μm,0.5s						
CAFI				AML	AML		
	comp=N,30μm,0.5s						
CAFI				AML	AML		
	comp=E,38μm,0.8s						
MCIV	**Monte Civitell**	**1.74**	**140**	AML	AML		
	comp=E,504μm,0.2s						
MCIV				AML	AML		
	comp=E,504μm,0.2s						
MCIV				AML	AML		
	comp=N,929μm,0.7s						
MCIV				AML	AML		
	comp=N,929μm,0.7s						
MCIV				AML	AML		
	comp=N,929μm,0.7s						
MCIV				AML	AML		
	comp=E,504μm,0.2s						
PGF	**Pioggiola**	**1.79**	**209**	*e*Pn	**Pn**	**11 56 34.3**	**+1.0**
PGF				*e*Sn	**Sn**	**11 56 55.5**	**-0.8**
	comp=E,17nm,0.4s						
SBF	**Sospel**	**1.98**	**263**	*e*Pn	**Pn**	**11 56 36.8**	**+0.9**
SBF				*e*Sn	**Sn**	**11 57 01.2**	**+0.2**
	comp=E,7.8nm,0.2s						
MBDF	**Montbardon**	**2.50**	**285**	*e*Pn	**Pn**	**11 56 43.8**	**+0.7**
MBDF	**Montbardon**	**2.50**	**285**	*e*Pg	**Pg**	**11 56 50.4**	**+0.6**
MBDF				*e*Sn	**Sn**	**11 57 14.4**	**+0.5**
MBDF				*e*Sg	**Sg**	**11 57 23.1**	**+0.9**
	comp=E,9.6nm,0.5s						
FRF	**La Foret Royal**	**2.60**	**259**	*e*Pn	**Pn**	**11 56 44.5**	**+0.1**
FRF				*e*Sn	**Sn**	**11 57 14.6**	**-1.6**
	comp=E,7.1nm,0.2s						
LMR	**La Mourre**	**2.76**	**255**	*e*Pn	**Pn**	**11 56 46.4**	**-0.1**
LMR				*e*Sn	**Sn**	**11 57 18.1**	**-2.0**
	comp=E,5.6nm,0.2s						
LPG	**La Plagne**	**2.79**	**301**	*e*P	**Pb**	**11 56 51.9**	**-0.3**
LPL	**La Plagne**	**2.81**	**301**	*e*P	**Pb**	**11 56 51.1**	**-1.4**
LPL				*e*Sg	**Sb**	**11 57 29.7**	**+2.6**
	comp=E,12nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.16**	**286**	*e*P	**Pn**	**11 56 55.3**	**+3.2**
ORIF				*e*Sn	**Sn**	**11 57 29.7**	**-0.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=E,2.8nm,0.4s						
DAVA	**Damuels**	**3.17**	**357**	*e*Pn	**Pn**	**11 56 55.4**	**+3.1**
	comp=E,0.7nm,0.1s						
DAVA				Sn	**Sn**	**11 57 32.2**	**+1.8**
	comp=E,3.6nm,0.3s						
SQTA	**Sankt Quirin**	**3.18**	**13**	Pn	**Pn**	**11 56 55.7**	**+3.2**
	comp=E,2.7nm,0.2s						
SQTA				*e*Sn	**Sb**	**11 57 38.1**	**+0.3**
	comp=E,13nm,0.5s						
MOTA	**Moosalm**	**3.29**	**11**	*e*Pn	**Pn**	**11 56 55.7**	**+1.8**
	comp=E,0.6nm,0.1s						
WTTA	**Wattenberg**	**3.31**	**18**	*e*Pn	**Pn**	**11 56 57.6**	**+3.4**
	comp=E,1.5nm,0.1s						
WTTA				*e*Sn	**Sb**	**11 57 40.4**	**-1.0**
	comp=E,16nm,0.5s						
SMRF	**Simiane la Rot**	**3.31**	**269**	*e*Pn	**Pn**	**11 56 55.4**	**+1.3**
SMRF				*e*Sn	**Sn**	**11 57 32.6**	**-1.1**
	comp=E,4.1nm,0.4s						
WATA	**Walderalm**	**3.36**	**17**	*e*Pn	**Pn**	**11 56 55.6**	**+0.6**
	comp=E,2.4nm,0.3s						
KBA	**Koelnbreinsper**	**3.70**	**36**	*e*Pn	**Pb**	**11 57 04.1**	**-3.6**
	comp=E,0.5nm,0.1s						
CABF	**La Chapelle**	**3.80**	**312**	*e*P	**Pn**	**11 57 03.6**	**+2.7**
CABF				*e*Sn	**Sn**	**11 57 43.0**	**-2.8**
	comp=E,2.9nm,0.4s						
MOA	**Molln**	**4.70**	**36**	*e*Pn	**Pn**	**11 57 14.2**	**+1.0**
	comp=E,0.5nm,0.1s						
HAU	**Haudompre**	**4.70**	**327**	*e*P	**Pn**	**11 57 14.5**	**+1.3**
CDF	**Champ du Feu**	**4.73**	**336**	*e*P	**Pn**	**11 57 13.9**	**+0.2**
BGF	**Bois d'Agland**	**5.70**	**298**	*e*P	**Pn**	**11 57 28.6**	**+1.7**

ISCJB ***21*** *12:03:12.2±0.4, 44°.19N±0°.04×10°.17E±0°.06, h18km±10km, Error ellipse: s-maj=9.6km s-min=4.6km az=138.0*
ROM ***21*** *12:03:12.2±0.1, 44°.200N±0°.004×10°.194E±0°.007, h10km, ML1.9/9, Error ellipse: s-maj=0.6km s-min=0.3km az=51.0*
LDG ***21*** *12:03:15.6±0.5, 44°.16N×9°.99E, h2km, Ml2.5/5, Error ellipse: s-maj=9.7km s-min=5.0km az=48.0*
ISC 21 12:03:12.4±0.9, 44°.19N±0°.05×10°.16E±0°.08, h14km±13km, n13, σ0°68/23, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARO	**Sassorosso**	**0.17**	**93**	P	**Pg**	**12 03 16.1**	**-0.5**
SARO				S	**Sg**	**12 03 18.7**	**-0.8**
SARO				AML	AML		
	comp=E,680μm,0.5s						
SARO				AML	AML		
	comp=N,898μm,0.4s						
SARO				AML	AML		
	comp=E,679μm,0.5s						
SARO				AML	AML		
	comp=N,899μm,0.4s						
SARO				AML	AML		
	comp=N,899μm,0.4s						
SARO				AML	AML		
	comp=E,679μm,0.5s						
SARO				AML	AML		
	comp=N,899μm,0.4s						
SARO				AML	AML		
	comp=E,679μm,0.5s						
CARD	**Cardoso**	**0.28**	**126**	P	**Pg**	**12 03 18.8**	**+0.4**
CARD				S	**Sg**	**12 03 22.5**	**+0.1**
CARD				AML	AML		
	comp=E,581μm,0.2s						
CARD				AML	AML		
	comp=N,583μm,0.6s						
CARD				AML	AML		
	comp=N,583μm,0.6s						
CARD				AML	AML		
	comp=E,581μm,0.2s						
CARD				AML	AML		
	comp=N,583μm,0.6s						
CARD				AML	AML		
	comp=E,581μm,0.2s						
ERBM	**Eremo**	**0.29**	**38**	P	**Pg**	**12 03 18.5**	**0.0**
ERBM				S	**Sg**	**12 03 23.0**	**+0.3**
ERBM				AML	AML		
	comp=E,760μm,0.5s						
ERBM				AML	AML		
	comp=N,664μm,0.2s						
ERBM				AML	AML		
	comp=E,760μm,0.5s						
ERBM				AML	AML		
	comp=N,664μm,0.2s						
ERBM				AML	AML		
	comp=N,664μm,0.2s						
ERBM				AML	AML		
	comp=E,760μm,0.5s						
ERBM				AML	AML		
	comp=N,664μm,0.2s						
ERBM				AML	AML		
	comp=E,760μm,0.5s						
GRAM	**Graiana**	**0.31**	**347**	P	**Pg**	**12 03 19.0**	**+0.1**
GRAM				S	**Sg**	**12 03 23.6**	**+0.4**
GRAM				AML	AML		
	comp=E,3340μm,0.2s						
GRAM				AML	AML		
	comp=N,2600μm,0.4s						
GRAM				AML	AML		
	comp=E,3340μm,0.2s						
GRAM				AML	AML		
	comp=N,2600μm,0.4s						
GRAM				AML	AML		
	comp=E,3340μm,0.2s						
GRAM				AML	AML		
	comp=N,2600μm,0.4s						
BDI	**Bagni Di Lucca**	**0.34**	**113**	P	**Pg**	**12 03 19.3**	**-0.1**
BDI				S	**Sg**	**12 03 24.3**	**+0.2**
BDI				AML	AML		
	comp=E,166μm,0.6s						
BDI				AML	AML		
	comp=N,228μm,0.8s						
BDI				AML	AML		
	comp=E,164μm,0.6s						
BDI				AML	AML		
	comp=N,241μm,0.8s						
BDI				AML	AML		
	comp=E,166μm,0.6s						
BDI				AML	AML		
	comp=N,228μm,0.8s						
BDI				AML	AML		
	comp=E,164μm,0.6s						
BDI				AML	AML		
	comp=N,241μm,0.8s						
BDI				AML	AML		
	comp=N,228μm,0.8s						
BDI				AML	AML		
	comp=N,241μm,0.8s						
BDI				AML	AML		
	comp=E,164μm,0.6s						
BDI				AML	AML		
	comp=E,166μm,0.6s						
BDI				AML	AML		
	comp=N,228μm,0.8s						
BDI				AML	AML		
	comp=N,241μm,0.8s						
BDI				AML	AML		
	comp=E,164μm,0.6s						
BDI				AML	AML		
	comp=E,166μm,0.6s						
MAIM	**Mastiano**	**0.37**	**140**	P	**Pg**	**12 03 19.9**	**+0.1**
MAIM				S	**Sg**	**12 03 25.4**	**+0.5**
MAIM				AML	AML		
	comp=E,324μm,0.3s						
MAIM				AML	AML		
	comp=N,224μm,0.6s						
MAIM				AML	AML		
	comp=E,324μm,0.3s						
MAIM				AML	AML		
	comp=N,224μm,0.6s						
MAIM				AML	AML		
	comp=E,324μm,0.3s						
MAIM				AML	AML		
	comp=N,224μm,0.6s						
MAIM				AML	AML		
	comp=E,324μm,0.3s						
MAIM				AML	AML		
	comp=N,224μm,0.6s						
POPM	**Popiglio**	**0.45**	**109**	P	**Pg**	**12 03 21.2**	**-0.2**
POPM				AML	AML		
	comp=E,260μm,0.5s						
POPM				AML	AML		
	comp=N,297μm,0.5s						
POPM				AML	AML		
	comp=N,297μm,0.5s						
POPM				AML	AML		
	comp=E,260μm,0.5s						
POPM				AML	AML		
	comp=N,297μm,0.5s						
POPM				AML	AML		
	comp=E,260μm,0.5s						
MSSA	**Maissana**	**0.48**	**285**	P	**Pb**	**12 03 22.6**	**-0.1**
MSSA				S	**Sb**	**12 03 29.3**	**-0.3**
MSSA				AML	AML		
	comp=E,117μm,1.5s						
MSSA				AML	AML		
	comp=N,105μm,1.4s						
MSSA				AML	AML		
	comp=E,117μm,1.5s						
MSSA				AML	AML		
	comp=N,105μm,1.4s						
MSSA				AML	AML		
	comp=N,105μm,1.4s						
MSSA				AML	AML		
	comp=E,117μm,1.5s						
MSSA				AML	AML		
	comp=N,105μm,1.4s						
MSSA				AML	AML		
	comp=E,117μm,1.5s						
CRMI	**Carmignano**	**0.71**	**124**	AML	AML		
	comp=E,24μm,0.6s						
CRMI				AML	AML		
	comp=E,24μm,0.6s						
CRMI				AML	AML		
	comp=N,28μm,0.2s						
CRMI				AML	AML		
	comp=E,24μm,0.6s						
CRMI				AML	AML		
	comp=N,28μm,0.2s						
CRMI				AML	AML		
	comp=E,24μm,0.6s						
CRMI				AML	AML		
	comp=N,28μm,0.2s						
CRMI				AML	AML		
	comp=N,28μm,0.2s						
PGF	**Pioggiola**	**1.85**	**208**	*e*Pn	**Pb**	**12 03 45.8**	**-0.2**
PGF				*e*Sn	**Sn**	**12 04 06.9**	**-0.1**
	comp=N,2.7nm,0.2s						
SBF	**Sospel**	**2.00**	**261**	*e*Pn	**Pn**	**12 03 47.1**	**+1.4**
SBF				*e*Sn	**Sn**	**12 04 09.6**	**-0.9**
	comp=N,16nm,0.4s						
FRF	**La Foret Royal**	**2.62**	**257**	*e*Pn	**Pn**	**12 03 55.0**	**+0.7**
FRF				*e*Sn	**Sn**	**12 04 24.6**	**-1.2**
	comp=N,4.1nm,0.2s						
LMR	**La Mourre**	**2.78**	**253**	*e*Pn	**Pn**	**12 03 57.1**	**+0.6**
LMR				*e*Sn	**Sn**	**12 04 28.5**	**-1.3**
	comp=N,2.2nm,0.3s						

BJI ***21*** *12:12:37.4±0.0, 44°.51N×9°.40E, h8km, mb4.6/26, mB5.0/10, Ms4.6/1, Ms7 4.4/2*
ISCJB ***21*** *12:12:39.8±0.2, 44°.17N±0°.01×10°.12E±0°.01, h11km±1km, mb4.5/52, MS3.3/9, Error ellipse: s-maj=2.0km s-min=1.4km az=2.0*
ROM ***21*** *12:12:39.7±0.1, 44°.163N±0°.007×10°.135E±0°.007, h8km±1km, ML4.0/105, Mw4.0, Error ellipse: s-maj=0.7km s-min=0.5km az=197.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.69; $M_{\theta\theta}$0.88; $M_{\phi\phi}$-0.19; $M_{r\theta}$0.69; $M_{\theta\phi}$-0.07; $M_{\phi r}$-0.46; Fault plane solution: $M_0$1.15768×10^{15} NP1:ϕ_s70.00000°, δ28.00000°, λ-132.00000°. NP2:ϕ_s296.00000°, δ70.00000°, λ-70.00000°.*
LDG ***21*** *12:12:39.5±0.1, 44°.17N×10°.15E, h2km, Ml4.2/38 Error ellipse: s-maj=2.6km s-min=1.6km az=4.0*
IDC ***21*** *12:12:39.5±0.7, 44°.21N×10°.04E, h0km, mb4.2/13, mb1 4.2/22, mb1mx4.0/51, mbtmp4.1/22, ML4.1/7, MS3.2/11, Ms1 3.2/11, ms1mx2.9/46, Error ellipse: s-maj=15.5km s-min=11.8km az=133.0*
MED_RC ***21*** *12:12:39.0±0.4, 44°.16N×10°.15E, h12km±2km, MW4.3/9, Moment Tensor Solution.Mantle waves: s9,c9; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.35±.74; $M_{\theta\theta}$2.53±.49; $M_{\phi\phi}$0.82±.40; $M_{r\theta}$-1.20±.48; $M_{\theta\phi}$-1.66±.23; $M_{\phi r}$-1.71±.75; Best double couple: $M_0$3.97000×10^{15} NP1:ϕ_s97.00000°, δ52.00000°, λ-124.00000°. NP2: ϕ_s325.00000°, δ49.00000°, λ-54.00000°. Principal axes: T 3.5500, Plg1.0000°, Azm211.0000°; N 0.8400, Plg26.0000°, Azm120.0000°; P -4.3900, Plg64.0000°, Azm303.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
MOS ***21*** *12:12:40.3±0.9, 44°.32N×10°.16E, h10km, mb4.7/25 Error ellipse: s-maj=7.1km s-min=4.0km az=68.1*
PRU ***21*** *12:12:40.4±0.0, 44°.32N×10°.07E, h0km, M4.5*
GEN ***21*** *12:12:40.3, 44°.19N×10°.14E, h5km±3km, Ml3.9*
STR ***21*** *12:12:41.8±0.7, 44°N±3°.×1°0E±°, h0km, MLv4.1/6*
NEIC ***21*** *12:12:42.3±1.4, 44°.27N×10°.13E, h10km, mb4.5/28, ML4.0(ROM), Error ellipse: s-maj=12.6km s-min=2.9km az=194.0*
ISC 21 12:12:41.0±0.7, 44°.18N±0°.02×10°.10E±0°.02, h8km±4km, n437, σ2^{s}10/502, mb4.6/52, MS3.3/9, 31C-9D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.21**	**96**	*e*Pg	**Pg**	**12 12 44.1**	**-1.1**
VLC	**Villacollemand**	**0.21**	**96**	*e*Pg	**Pg**	**12 12 44.1**	**-1.1**
VLC				*e*Sg	**Sg**	**12 12 47.2**	**-0.8**
VLC	**Villacollemand**	**0.21**	**96**	*e*P	**Pg**	**12 12 44.1**	**-1.1**
VLC				S	**Sg**	**12 12 46.7**	**-1.4**
VLC				AML	AML		
	comp=E,77450μm,1.0s						
VLC				AML	AML		
VLC				AML	AML		
	comp=E,77100μm,1.0s						
VLC				AML	AML		
VLC				AML	AML		
	comp=E,77450μm,1.0s						
VLC				AML	AML		
VLC				AML	AML		
	comp=E,77100μm,1.0s						
VLC				AML	AML		
VLC				AML	AML		
	comp=E,77500μm,1.0s						
VLC				AML	AML		
VLC				AML	AML		
	comp=E,77100μm,1.0s						
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
	comp=E,77500μm,1.0s						
VLC				AML	AML		
	comp=E,77100μm,1.0s						
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
	comp=E,77500μm,1.0s						
VLC				AML	AML		
	comp=E,77100μm,1.0s						
SARO	**Sassorosso**	**0.22**	**89**	P	**Pg**	**12 12 44.3**	**-1.1**
SARO				S	**Sg**	**12 12 46.7**	**-1.7**
SARO	**Sassorosso**	**0.22**	**89**	*e*P	**Pg**	**12 12 44.3**	**-1.1**
SARO				S	**Sg**	**12 12 47.3**	**-1.1**
SARO				AML	AML		
	comp=E,82550μm,0.4s						
SARO				AML	AML		
SARO				AML	AML		
	comp=E,82550μm,0.4s						
SARO				AML	AML		
CODM	**Codolo**	**0.27**	**320**	P	**Pg**	**12 12 46.0**	**-0.5**
CODM				S	**Sg**	**12 12 50.1**	**0.0**
GRAM	**Graiana**	**0.31**	**356**	P	**Pg**	**12 12 46.6**	**-0.6**
GRAM				S	**Sg**	**12 12 51.1**	**-0.2**
GRAM	**Graiana**	**0.31**	**356**	*i* P	**Pg**	**12 12 46.5**	**-0.6**
GRAM				S	**Sg**	**12 12 51.3**	**0.0**
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
CARD	**Cardoso**	**0.32**	**119**	P	**Pg**	**12 12 46.2**	**-1.1**
CARD				S	**Sg**	**12 12 50.2**	**-1.3**
CARD	**Cardoso**	**0.32**	**119**	P	**Pg**	**12 12 46.2**	**-1.1**
CARD				S	**Sg**	**12 12 50.2**	**-1.3**
CARD				AML	AML		
	comp=E,64350μm,0.5s						
CARD				AML	AML		
	comp=N,59250μm,0.6s						
CARD				AML	AML		
	comp=E,64350μm,0.5s						
CARD				AML	AML		
	comp=N,59250μm,0.6s						
CARD				AML	AML		
	comp=E,64350μm,0.5s						
CARD				AML	AML		
	comp=N,59250μm,0.6s						
ERBM	**Eremo**	**0.33**	**44**	*e*P	**Pg**	**12 12 46.5**	**-1.0**
ERBM				S	**Sg**	**12 12 51.3**	**-0.5**
ERBM				AML	AML		
	comp=E,59800μm,1.1s						
ERBM				AML	AML		
	comp=N,55450μm,1.4s						
ERBM				AML	AML		
	comp=E,59750μm,1.1s						
ERBM				AML	AML		
	comp=N,55450μm,1.4s						
ERBM				AML	AML		
	comp=E,59800μm,1.1s						
ERBM				AML	AML		
	comp=N,55450μm,1.4s						
ERBM				AML	AML		
	comp=N,55450μm,1.4s						
ERBM				AML	AML		
	comp=E,59800μm,1.1s						
ERBM				AML	AML		
	comp=N,55450μm,1.4s						
ERBM				AML	AML		
	comp=E,59800μm,1.1s						
BDI	**Bagni Di Lucca**	**0.38**	**108**	P	**Pg**	**12 12 47.2**	**-1.2**
BDI				S	**Sg**	**12 12 52.5**	**-0.9**
BDI				AML	AML		
	comp=E,32850μm,0.4s						
BDI				AML	AML		
	comp=N,27650μm,0.5s						
BDI				AML	AML		
	comp=E,28150μm,0.4s						
BDI				AML	AML		
	comp=N,29950μm,0.8s						
BDI				AML	AML		
	comp=E,32850μm,0.4s						
BDI				AML	AML		
	comp=N,27650μm,0.5s						
BDI				AML	AML		
	comp=E,28150μm,0.4s						
BDI				AML	AML		
	comp=N,29950μm,0.8s						
BDI				AML	AML		
	comp=N,27650μm,0.5s						
BDI				AML	AML		
	comp=N,29950μm,0.8s						
BDI				AML	AML		
	comp=E,28150μm,0.4s						
BDI				AML	AML		
	comp=E,32850μm,0.4s						
BDI				AML	AML		
	comp=N,27650μm,0.5s						
BDI				AML	AML		
	comp=N,29950μm,0.8s						
BDI				AML	AML		
	comp=E,28150μm,0.4s						
BDI				AML	AML		
	comp=E,32850μm,0.4s						
MAIM	**Mastiano**	**0.39**	**133**	P	**Pg**	**12 12 47.8**	**-0.8**
MAIM				S	**Sg**	**12 12 53.0**	**-0.7**
MAIM	**Mastiano**	**0.39**	**133**	P	**Pg**	**12 12 47.7**	**-0.9**
MAIM				S	**Sg**	**12 12 53.0**	**-0.7**
MAIM				AML	AML		
	comp=E,61600μm,0.5s						
MAIM				AML	AML		
	comp=N,40650μm,0.7s						
MAIM				AML	AML		
	comp=E,61600μm,0.5s						
MAIM				AML	AML		
	comp=N,40650μm,0.7s						
MAIM				AML	AML		
	comp=N,40650μm,0.7s						
MAIM				AML	AML		
	comp=E,61600μm,0.5s						
MAIM				AML	AML		
	comp=N,40650μm,0.7s						
MAIM				AML	AML		
	comp=E,61600μm,0.5s						
MSSA	**Maissana**	**0.44**	**288**	*e*P	**Pg**	**12 12 49.6**	**+0.1**
MSSA				S	**Sb**	**12 12 56.5**	**-1.3**
MSSA				AML	AML		
	comp=E,21300μm,1.0s						
MSSA				AML	AML		
	comp=N,20300μm,1.1s						
MSSA				AML	AML		
	comp=E,21300μm,1.0s						
MSSA				AML	AML		
	comp=N,20300μm,1.1s						
MSSA				AML	AML		
	comp=E,21300μm,1.0s						
MSSA				AML	AML		
	comp=N,20300μm,1.1s						
MSSA				AML	AML		
	comp=E,21300μm,1.0s						
MSSA				AML	AML		
	comp=N,20300μm,1.1s						
MSSA				AML	AML		
	comp=E,21300μm,1.0s						
POPM	**Popiglio**	**0.49**	**106**	P	**Pg**	**12 12 49.2**	**-1.3**
POPM				S	**Sg**	**12 12 56.1**	**-0.9**
POPM	**Popiglio**	**0.49**	**106**	*e*P	**Pg**	**12 12 49.2**	**-1.3**
POPM				AML	AML		
	comp=E,30800μm,0.7s						
POPM				AML	AML		
	comp=N,43350μm,0.5s						
POPM				AML	AML		
	comp=E,30800μm,0.7s						
POPM				AML	AML		
	comp=N,43350μm,0.5s						
POPM				AML	AML		
	comp=E,30800μm,0.7s						
POPM				AML	AML		
	comp=N,43350μm,0.5s						
POPM				AML	AML		
	comp=N,43350μm,0.5s						
POPM				AML	AML		
	comp=E,30800μm,0.7s						
POPM				AML	AML		
	comp=N,43350μm,0.5s						
POPM				AML	AML		
	comp=E,30800μm,0.7s						
PRMA	**PARMA**	**0.60**	**15**	*e*P	**Pg**	**12 12 52.6**	**0.0**
PRMA				AML	AML		
	comp=E,40400μm,1.2s						
PRMA				AML	AML		
	comp=N,49350μm,0.7s						
PRMA				AML	AML		
	comp=E,40400μm,1.2s						
PRMA				AML	AML		
	comp=N,49350μm,0.7s						
PRMA				AML	AML		
	comp=E,40400μm,1.2s						
PRMA				AML	AML		
	comp=N,49350μm,0.7s						
PRMA				AML	AML		
	comp=E,40400μm,1.2s						
PRMA				AML	AML		
	comp=N,49350μm,0.7s						
ZCCA	**Zocca**	**0.66**	**75**	P	**Pg**	**12 12 53.6**	**0.0**
ZCCA				AML	AML		
	comp=E,37750μm,0.6s						
ZCCA				AML	AML		
	comp=N,41000μm,0.6s						

ZCCA				AML	AML		
	comp=E,36300µm,0.6s						
ZCCA				AML	AML		
	comp=N,45450µm,0.6s						
ZCCA				AML	AML		
	comp=E,37800µm,0.6s						
ZCCA				AML	AML		
	comp=N,41000µm,0.6s						
ZCCA				AML	AML		
	comp=E,36300µm,0.6s						
ZCCA				AML	AML		
	comp=N,45450µm,0.6s						
ZCCA				AML	AML		
	comp=N,41000µm,0.6s						
ZCCA				AML	AML		
	comp=E,37800µm,0.6s						
ZCCA				AML	AML		
	comp=E,36300µm,0.6s						
ZCCA				AML	AML		
	comp=N,45450µm,0.6s						
ZCCA				AML	AML		
	comp=N,41000µm,0.6s						
ZCCA				AML	AML		
	comp=E,37800µm,0.6s						
ZCCA				AML	AML		
	comp=E,36300µm,0.6s						
ZCCA				AML	AML		
	comp=N,45450µm,0.6s						
MTCR	**Monte La Croce**	**0.67**	**103**	P	**Pg**	**12 12 52.3**	**-1.6**
MTCR				AML	AML		
	comp=E,21200µm,0.4s						
MTCR				AML	AML		
	comp=N,25400µm,0.4s						
MTCR				AML	AML		
	comp=E,21150µm,0.4s						
MTCR				AML	AML		
	comp=N,25400µm,0.4s						
MTCR				AML	AML		
	comp=E,21200µm,0.4s						
MTCR				AML	AML		
	comp=N,25450µm,0.4s						
MTCR				AML	AML		
	comp=N,25450µm,0.4s						
MTCR				AML	AML		
	comp=E,21200µm,0.4s						
MTCR				AML	AML		
	comp=N,25450µm,0.4s						
MTCR				AML	AML		
	comp=E,21200µm,0.4s						
GORR	**Gorreto**	**0.72**	**307**	P	**Pg**	**12 12 54.3**	**-0.4**
GORR				S	**Sg**	**12 13 04.5**	**+0.4**
GORR	**Gorreto**	**0.72**	**307**	P	**Pg**	**12 12 54.3**	**-0.4**
GORR				S	**Sb**	**12 13 05.0**	**-0.8**
GORR				AML	AML		
	comp=E,14700µm,0.7s						
GORR				AML	AML		
	comp=N,14450µm,1.2s						
PTF	**Prato**	**0.74**	**107**	P	**Pg**	**12 12 53.6**	**-1.5**
FNVD	**Fontana Vidola**	**0.74**	**91**	*e*P	**Pg**	**12 12 53.9**	**-1.3**
FNVD				AML	AML		
	comp=E,32650µm,0.6s						
FNVD				AML	AML		
	comp=N,29300µm,0.8s						
FNVD				AML	AML		
	comp=N,29300µm,0.8s						
FNVD				AML	AML		
	comp=E,32650µm,0.6s						
FNVD				AML	AML		
	comp=N,29300µm,0.8s						
FNVD				AML	AML		
	comp=E,32650µm,0.6s						
CRMI	**Carmignano**	**0.74**	**122**	P	**Pg**	**12 12 53.9**	**-1.3**
CRMI				AML	AML		
	comp=E,11400µm,0.6s						
CRMI				AML	AML		
	comp=N,18700µm,0.9s						
CRMI				AML	AML		
	comp=E,4775µm,0.6s						
CRMI				AML	AML		
	comp=N,7885µm,1.0s						
CRMI				AML	AML		
	comp=E,11400µm,0.6s						
CRMI				AML	AML		
	comp=N,18700µm,0.9s						
CRMI				AML	AML		
	comp=E,4775µm,0.6s						
CRMI				AML	AML		
	comp=N,7885µm,1.0s						
CRMI				AML	AML		
	comp=E,4775µm,0.6s						
CRMI				AML	AML		
	comp=E,11400µm,0.6s						
CRMI				AML	AML		
	comp=N,18700µm,0.9s						
CRMI				AML	AML		
	comp=N,7885µm,1.0s						
BOB	**Bobbio (Coli)**	**0.75**	**322**	P	**Pg**	**12 12 55.0**	**-0.4**
BOB				AML	AML		
	comp=E,17350µm,0.4s						
BOB				AML	AML		
	comp=N,23500µm,0.4s						
BOB				AML	AML		
	comp=E,15950µm,0.4s						
BOB				AML	AML		
	comp=N,26500µm,0.4s						
BOB				AML	AML		
	comp=E,17300µm,0.4s						
BOB				AML	AML		
	comp=N,23500µm,0.4s						
BOB				AML	AML		
	comp=N,23500µm,0.4s						
BOB				AML	AML		
	comp=E,17300µm,0.4s						
BOB				AML	AML		
	comp=N,23500µm,0.4s						
BOB				AML	AML		
	comp=E,17300µm,0.4s						
MODE	**Modena**	**0.76**	**53**	AML	AML		
	comp=E,43600µm,1.2s						
MODE				AML	AML		
	comp=E,43600µm,1.2s						
MODE				AML	AML		
	comp=N,51850µm,0.9s						
MODE				AML	AML		
	comp=N,51850µm,0.9s						
MODE				AML	AML		
	comp=N,51850µm,0.9s						
MODE				AML	AML		
	comp=E,43600µm,1.2s						
NOVE	**Novellara**	**0.76**	**35**	P	**Pg**	**12 12 55.4**	**-0.2**
NOVE				AML	AML		
	comp=E,26550µm,1.4s						
NOVE				AML	AML		
	comp=N,37150µm,0.7s						
NOVE				AML	AML		
	comp=E,26600µm,1.4s						
NOVE				AML	AML		
	comp=N,37100µm,0.7s						
NOVE				AML	AML		
	comp=E,26600µm,1.4s						
NOVE				AML	AML		
	comp=N,37100µm,0.7s						
SEI	**Scarperia**	**0.92**	**98**	P	**Pg**	**12 12 56.9**	**-1.6**
SEI				AML	AML		
	comp=E,15850µm,1.2s						
SEI				AML	AML		
	comp=N,31750µm,0.5s						
SEI				AML	AML		
	comp=E,15850µm,1.2s						
SEI				AML	AML		
	comp=N,31750µm,0.5s						
SEI				AML	AML		
	comp=N,31750µm,0.5s						
SEI				AML	AML		
	comp=E,15850µm,1.2s						
SEI				AML	AML		
	comp=N,31750µm,0.5s						
SEI				AML	AML		
	comp=E,15850µm,1.2s						
RAVA	**Ravarino**	**0.93**	**52**	P	**Pn**	**12 13 00.1**	**-0.2**
RAVA				AML	AML		
	comp=E,29550µm,0.8s						
RAVA				AML	AML		
	comp=N,38200µm,1.3s						
RAVA				AML	AML		
	comp=E,32200µm,0.9s						
RAVA				AML	AML		
	comp=N,38150µm,1.3s						
RAVA				AML	AML		
	comp=N,38200µm,1.3s						
RAVA				AML	AML		
	comp=E,32200µm,0.9s						
RAVA				AML	AML		
	comp=N,38200µm,1.3s						
RAVA				AML	AML		
	comp=E,32200µm,0.9s						
BRIS	**BRISIGHELLA**	**1.02**	**91**	AML	AML		
	comp=E,17050µm,0.7s						
BRIS				AML	AML		
	comp=E,17050µm,0.7s						
BRIS				AML	AML		
	comp=N,14850µm,1.2s						
BRIS				AML	AML		
	comp=E,17050µm,0.7s						
BRIS				AML	AML		
	comp=N,14850µm,1.2s						
BRIS				AML	AML		
	comp=N,14850µm,1.2s						
BRIS				AML	AML		
	comp=E,17050µm,0.7s						
BRIS				AML	AML		
	comp=N,14850µm,1.2s						
RUFI	**Rufina**	**1.07**	**108**	P	**Pg**	**12 13 00.0**	**-1.6**
RUFI				AML	AML		
	comp=E,6090µm,0.7s						
RUFI				AML	AML		
	comp=N,6935µm,0.7s						
RUFI				AML	AML		
	comp=N,6935µm,0.7s						
RUFI				AML	AML		
	comp=E,6090µm,0.7s						
RUFI				AML	AML		
	comp=N,6935µm,0.7s						
RUFI				AML	AML		
	comp=E,6090µm,0.7s						
CSNT	**Castellina Chi**	**1.12**	**129**	P	**Pg**	**12 13 01.0**	**-1.4**
CSNT				AML	AML		
	comp=E,7060µm,1.2s						
CSNT				AML	AML		
	comp=N,10600µm,1.6s						
CSNT				AML	AML		
	comp=E,7060µm,1.2s						
CSNT				AML	AML		
	comp=N,10600µm,1.6s						
CSNT				AML	AML		
	comp=E,7060µm,1.2s						
CSNT				AML	AML		
	comp=N,10600µm,1.6s						
PCP	**Piancastagn**	**1.17**	**288**	P	**Pg**	**12 13 02.1**	**-1.3**
PCP				AML	AML		
	comp=E,3445µm,1.2s						
PCP				AML	AML		
	comp=N,4145µm,1.2s						
PCP				AML	AML		
	comp=E,3445µm,1.2s						
PCP				AML	AML		
	comp=N,4145µm,1.2s						
PCP				AML	AML		
	comp=N,4145µm,1.2s						
PCP				AML	AML		
	comp=E,3445µm,1.2s						
PCP				AML	AML		
	comp=N,4145µm,1.2s						
PCP				AML	AML		
	comp=E,3445µm,1.2s						
SERM	**Sermide**	**1.19**	**46**	AML	AML		
	comp=E,7805µm,1.2s						
SERM				AML	AML		
	comp=N,8160µm,1.0s						
SERM				AML	AML		
	comp=E,11825µm,1.4s						
SERM				AML	AML		
	comp=N,10350µm,0.9s						
SERM				AML	AML		
	comp=E,11825µm,1.4s						
SERM				AML	AML		
	comp=E,7805µm,1.2s						
SERM				AML	AML		
	comp=N,8160µm,1.0s						
SERM				AML	AML		
	comp=N,10350µm,0.9s						
SERM				AML	AML		
	comp=E,11825µm,1.4s						
SERM				AML	AML		
	comp=E,7805µm,1.2s						
SERM				AML	AML		
	comp=N,8160µm,1.0s						
SERM				AML	AML		
	comp=N,10350µm,0.9s						
TRIF	**Trifonti**	**1.22**	**151**	P	**Pb**	**12 13 03.3**	**-1.0**
TRIF				AML	AML		
	comp=E,5485µm,0.8s						
TRIF				AML	AML		
	comp=N,5485µm,0.8s						
TRIF				AML	AML		
	comp=E,5490µm,0.8s						
TRIF				AML	AML		
	comp=N,5485µm,0.8s						
TRIF				AML	AML		
	comp=N,5485µm,0.8s						
TRIF				AML	AML		
	comp=E,5490µm,0.8s						
TRIF				AML	AML		
	comp=N,5485µm,0.8s						
TRIF				AML	AML		
	comp=E,5490µm,0.8s						
FROS	**Frosini**	**1.24**	**141**	P	**Pn**	**12 13 03.0**	**-1.6**
FROS				AML	AML		
	comp=E,12100µm,0.8s						
FROS				AML	AML		
	comp=N,12700µm,1.0s						
FROS				AML	AML		
	comp=E,12100µm,0.8s						
FROS				AML	AML		
	comp=N,12700µm,1.0s						
FROS				AML	AML		
	comp=E,12100µm,0.8s						
FROS				AML	AML		
	comp=N,12700µm,1.0s						
FROS				AML	AML		
	comp=E,12100µm,0.8s						
FROS				AML	AML		
	comp=N,12700µm,1.0s						
QLNO	**Quiliano**	**1.27**	**277**	P	**Pn**	**12 13 03.5**	**-1.5**
QLNO				AML	AML		
	comp=E,3905µm,0.6s						
QLNO				AML	AML		
	comp=N,4810µm,0.9s						
QLNO				AML	AML		
	comp=E,3905µm,0.6s						
QLNO				AML	AML		
	comp=N,4810µm,0.9s						
QLNO				AML	AML		
	comp=N,4810µm,0.9s						
QLNO				AML	AML		
	comp=E,3905µm,0.6s						
QLNO				AML	AML		
	comp=N,4810µm,0.9s						
QLNO				AML	AML		
	comp=E,3905µm,0.6s						
FINB	**Finale Ligure**	**1.27**	**270**	P	**Pn**	**12 13 03.6**	**-1.5**
FINB				AML	AML		
	comp=E,3685µm,0.3s						
FINB				AML	AML		
	comp=N,4855µm,0.3s						
FINB				AML	AML		
	comp=E,3690µm,0.3s						
FINB				AML	AML		
	comp=N,4855µm,0.3s						
FINB				AML	AML		
	comp=E,3690µm,0.3s						
FINB				AML	AML		
	comp=N,4855µm,0.3s						
FINB				AML	AML		
	comp=E,3690µm,0.3s						
FINB				AML	AML		
	comp=N,4855µm,0.3s						
ASQU	**Asqua**	**1.28**	**107**	P	**Pn**	**12 13 02.8**	**-2.5**
ASQU				AML	AML		
	comp=E,5835µm,0.6s						
ASQU				AML	AML		
	comp=N,4285µm,0.9s						
ASQU				AML	AML		
	comp=N,4285µm,0.9s						
ASQU				AML	AML		
	comp=E,5835µm,0.6s						
ASQU				AML	AML		
	comp=N,4285µm,0.9s						
ASQU				AML	AML		
	comp=E,5835µm,0.6s						
SFI	**Santa Sofia**	**1.29**	**102**	P	**Pn**	**12 13 02.5**	**-2.9**
SFI				AML	AML		
	comp=E,8425µm,1.1s						
SFI				AML	AML		
	comp=N,4525µm,0.8s						
SFI				AML	AML		
	comp=E,8590µm,1.1s						
SFI				AML	AML		
	comp=N,6000µm,0.8s						
SFI				AML	AML		
	comp=E,8425µm,1.1s						
SFI				AML	AML		
	comp=N,4525µm,0.8s						
SFI				AML	AML		
	comp=E,8590µm,1.1s						
SFI				AML	AML		
	comp=N,6000µm,0.8s						
SFI				AML	AML		
	comp=N,4525µm,0.8s						
SFI				AML	AML		
	comp=E,8425µm,1.1s						
SFI				AML	AML		
	comp=E,8590µm,1.1s						
SFI				AML	AML		
	comp=N,6000µm,0.8s						
CELB	**S.Piero in Cam**	**1.44**	**177**	P	**Pn**	**12 13 05.6**	**-1.8**
CELB				AML	AML		
	comp=E,1460µm,1.6s						
CELB				AML	AML		
	comp=N,1495µm,0.8s						
CELB				AML	AML		
	comp=E,1460µm,1.6s						
CELB				AML	AML		
	comp=N,1495µm,0.8s						
CELB				AML	AML		
	comp=E,1460µm,1.6s						
CELB				AML	AML		
	comp=N,1495µm,0.8s						
RORO	**Rocca Rossa**	**1.46**	**268**	P	**Pn**	**12 13 06.2**	**-1.5**
RORO				AML	AML		
	comp=E,2030µm,1.0s						
RORO				AML	AML		
	comp=N,2210µm,1.5s						
RORO				AML	AML		
	comp=N,2210µm,1.5s						
RORO				AML	AML		
	comp=E,2030µm,1.0s						
RORO				AML	AML		
	comp=N,2210µm,1.5s						
RORO				AML	AML		
	comp=E,2030µm,1.0s						
CASP	**Castiglione de**	**1.50**	**158**	P	**Pn**	**12 13 06.5**	**-1.7**
CASP				AML	AML		
	comp=E,2745µm,1.3s						
CASP				AML	AML		
	comp=N,2970µm,1.2s						
CASP				AML	AML		
	comp=E,2740µm,1.3s						
CASP				AML	AML		
	comp=N,2965µm,1.2s						
CASP				AML	AML		
	comp=N,2965µm,1.2s						
CASP				AML	AML		
	comp=E,2740µm,1.3s						
CASP				AML	AML		
	comp=N,2965µm,1.2s						
CASP				AML	AML		
	comp=E,2740µm,1.3s						
BALD	**Monte Baldo**	**1.59**	**19⇑**	*e*Pg	**Pn**	**12 13 09.2**	**-0.4**
BALD				*e*Sg	**Sg**	**12 13 32.6**	**+0.6**
SSP9	**Sansepolcro**	**1.59**	**112**	AML	AML		
	comp=N,4125µm,1.2s						
SSP9				AML	AML		
	comp=E,3285µm,1.5s						
SSP9				AML	AML		
	comp=N,4125µm,1.2s						
SSP9				AML	AML		
	comp=N,4125µm,1.2s						
SSP9				AML	AML		
	comp=E,3285µm,1.5s						
SSP9				AML	AML		
	comp=E,3285µm,1.5s						
CAFI	**Castiglion Fio**	**1.60**	**122**	P	**Pn**	**12 13 07.6**	**-2.0**
CAFI				AML	AML		
	comp=E,2140µm,0.9s						
CAFI				AML	AML		
	comp=N,1685µm,0.8s						
CAFI				AML	AML		
	comp=E,2225µm,0.9s						
CAFI				AML	AML		
	comp=N,1740µm,0.8s						
CAFI				AML	AML		
	comp=E,2225µm,0.9s						
CAFI				AML	AML		
	comp=N,1685µm,0.8s						
CAFI				AML	AML		
	comp=N,1740µm,0.8s						
CAFI				AML	AML		
	comp=E,2140µm,0.9s						
CAFI				AML	AML		
	comp=E,2225µm,0.9s						
CAFI				AML	AML		
	comp=N,1740µm,0.8s						
CAFI				AML	AML		
	comp=N,1685µm,0.8s						
CAFI				AML	AML		
	comp=E,2140µm,0.9s						
IMI	**Imperia**	**1.61**	**261**	P	**Pn**	**12 13 08.5**	**-1.3**
GBOS	**Grotte di Boss**	**1.62**	**273**	P	**Pn**	**12 13 09.0**	**-1.0**
GBOS				AML	AML		
	comp=E,1605µm,1.0s						
GBOS				AML	AML		
	comp=N,1835µm,0.9s						
GBOS				AML	AML		
	comp=N,1835µm,0.9s						
GBOS				AML	AML		
	comp=E,1605µm,1.0s						
GBOS				AML	AML		
	comp=N,1835µm,0.9s						
GBOS				AML	AML		
	comp=E,1605µm,1.0s						
TEOL	**Teolo**	**1.63**	**43⇑**	*e*Pg	**Pn**	**12 13 09.6**	**-0.4**
TEOL				Sg	**Sg**	**12 13 34.3**	**+1.1**
TEOL	**Teolo**	**1.63**	**43**	*e*P	**Pn**	**12 13 09.1**	**-0.8**
TEOL				AML	AML		
	comp=E,22000µm,0.7s						
TEOL				AML	AML		
	comp=N,15750µm,0.7s						
TEOL				AML	AML		
	comp=N,15750µm,0.7s						
TEOL				AML	AML		
	comp=E,22000µm,0.7s						
TEOL				AML	AML		
	comp=N,15750µm,0.7s						
TEOL				AML	AML		
	comp=E,22000µm,0.7s						
PARC	**Parchiule**	**1.64**	**108**	P	**Pn**	**12 13 07.8**	**-2.3**
PARC				AML	AML		
	comp=E,2810µm,0.7s						
PARC				AML	AML		

	comp=N,2140µm,0.8s					
PARC				AML	AML	
	comp=E,2810µm,0.7s					
PARC				AML	AML	
	comp=N,2140µm,0.8s					
PARC				AML	AML	
	comp=E,2810µm,0.7s					
PARC				AML	AML	
	comp=N,2140µm,0.8s					
MAGA	**Magasa**	**1.64**	**13**	*e*Pg	**Pn**	**12 13 10.0 -0.3**
MAGA				*e*Sg	**Sg**	**12 13 34.4 +0.8**
MAGA	**Magasa**	**1.64**	**13**	P	**Pn**	**12 13 09.7 -0.6**
MAGA				AML	AML	
	comp=E,14150µm,1.6s					
MAGA				AML	AML	
	comp=N,7120µm,1.1s					
MAGA				AML	AML	
	comp=N,7120µm,1.1s					
MAGA				AML	AML	
	comp=E,14150µm,1.6s					
MAGA				AML	AML	
	comp=N,7120µm,1.1s					
MAGA				AML	AML	
	comp=E,14150µm,1.6s					
CPGN	**Carpegna, Ital**	**1.65**	**103**	AML	AML	
	comp=N,3425µm,0.8s					
CPGN				AML	AML	
	comp=E,2950µm,0.9s					
CPGN				AML	AML	
	comp=N,3425µm,0.8s					
CPGN				AML	AML	
	comp=E,2975µm,0.9s					
CPGN				AML	AML	
	comp=N,3475µm,0.8s					
CPGN				AML	AML	
	comp=N,3475µm,0.8s					
CPGN				AML	AML	
	comp=E,2975µm,0.9s					
CPGN				AML	AML	
	comp=E,2950µm,0.9s					
CPGN				AML	AML	
	comp=N,3475µm,0.8s					
CPGN				AML	AML	
	comp=E,2975µm,0.9s					
CPGN				AML	AML	
	comp=N,3425µm,0.8s					
CPGN				AML	AML	
	comp=E,2950µm,0.9s					
MGRO	**Montegrosso**	**1.65**	**266**	P	**Pn**	**12 13 08.5 -2.0**
MGRO				AML	AML	
	comp=E,3865µm,0.5s					
MGRO				AML	AML	
	comp=N,2855µm,1.6s					
MGRO				AML	AML	
	comp=E,3865µm,0.5s					
MGRO				AML	AML	
	comp=N,2855µm,1.6s					
MGRO				AML	AML	
	comp=E,3865µm,0.5s					
MGRO				AML	AML	
	comp=N,2855µm,1.6s					
ARCI	**Arcidosso**	**1.67**	**142**	AML	AML	
	comp=E,1850µm,0.7s					
ARCI				AML	AML	
	comp=E,1850µm,0.7s					
ARCI				AML	AML	
	comp=N,1685µm,0.8s					
ARCI				AML	AML	
	comp=E,1850µm,0.7s					
ARCI				AML	AML	
	comp=N,1685µm,0.8s					
ARCI				AML	AML	
	comp=N,1685µm,0.8s					
ARCI				AML	AML	
	comp=E,1850µm,0.7s					
ARCI				AML	AML	
	comp=N,1685µm,0.8s					
BADI	**Badiali**	**1.69**	**113**	P	**Pn**	**12 13 09.3 -1.6**
BADI				AML	AML	
	comp=E,3010µm,0.8s					
BADI				AML	AML	
	comp=N,3340µm,1.3s					
BADI				AML	AML	
	comp=N,3340µm,1.3s					
BADI				AML	AML	
	comp=E,3010µm,0.8s					
BADI				AML	AML	
	comp=N,3340µm,1.3s					
BADI				AML	AML	
	comp=E,3010µm,0.8s					
CDCA	**Citt' di Caste**	**1.71**	**114**	AML	AML	
	comp=E,4005µm,1.3s					
CDCA				AML	AML	
	comp=E,4005µm,1.3s					
CDCA				AML	AML	
	comp=N,4629µm,1.2s					
CDCA				AML	AML	
	comp=N,4629µm,1.2s					
CDCA				AML	AML	
	comp=E,4005µm,1.3s					
CDCA				AML	AML	
	comp=N,4629µm,1.2s					
NEGI	**Seborga**	**1.76**	**260**	AML	AML	
	comp=E,3025µm,0.4s					
NEGI				AML	AML	
	comp=E,3025µm,0.4s					
NEGI				AML	AML	
	comp=N,3425µm,1.1s					
NEGI				AML	AML	
	comp=N,3425µm,1.1s					
NEGI				AML	AML	
	comp=N,3425µm,1.1s					
NEGI				AML	AML	
	comp=E,3025µm,0.4s					
ATMI	**Monte Miggiano**	**1.79**	**118**	AML	AML	
	comp=E,3790µm,0.8s					
ATMI				AML	AML	
	comp=E,3790µm,0.8s					
ATMI				AML	AML	
	comp=N,8325µm,0.7s					
ATMI				AML	AML	
	comp=N,8325µm,0.7s					
ATMI				AML	AML	
	comp=E,3790µm,0.8s					
ATMI				AML	AML	
	comp=N,8325µm,0.7s					
MONC	**Moncucco Torin**	**1.79**	**301**	AML	AML	
	comp=N,5600µm,1.4s					
MONC				AML	AML	
	comp=E,6105µm,0.5s					
MONC				AML	AML	
	comp=N,5600µm,1.4s					
MONC				AML	AML	
	comp=E,6105µm,0.5s					
MONC				AML	AML	
	comp=N,5600µm,1.4s					
MONC				AML	AML	
	comp=E,6105µm,0.5s					
MCIV	**Monte Civitell**	**1.81**	**140**	AML	AML	
	comp=N,730µm,1.4s					
MCIV				AML	AML	
	comp=E,822µm,0.8s					
MCIV				AML	AML	
	comp=N,730µm,1.4s					
MCIV				AML	AML	
	comp=N,730µm,1.4s					
MCIV				AML	AML	
	comp=E,822µm,0.8s					
MCIV				AML	AML	
	comp=E,822µm,0.8s					
PGF	**Pioggiola**	**1.82**	**206**	*e*Pn	**Pn**	**12 13 10.5 -2.2**
PGF	**Pioggiola**	**1.82**	**206**	*e*P	**Pn**	**12 13 12.1 -0.6**
PGF				*e*Sn	**Sn**	**12 13 32.1 -3.9**
	comp=E,681nm,0.2s					
ATPI	**Pietralunga -**	**1.82**	**113**	P	**Pn**	**12 13 11.1 -1.6**
ATPI				AML	AML	
	comp=E,2305µm,1.0s					
ATPI				AML	AML	
	comp=N,2475µm,1.2s					
ATPI				AML	AML	
	comp=N,2475µm,1.2s					
ATPI				AML	AML	
	comp=E,2305µm,1.0s					
ATPI				AML	AML	
	comp=N,2475µm,1.2s					
ATPI				AML	AML	
	comp=E,2305µm,1.0s					
RNI	**Roncone**	**1.84**	**12⇓**	*e*Pn	**Pn**	**12 13 12.9 -0.2**
SAOF	**Saorge**	**1.84**	**265**	Pn	**Pn**	**12 13 12.2 -0.8**
SAOF				Sn	**Sn**	**12 13 34.6 -1.9**
SAOF	**Saorge**	**1.84**	**265**	P	**Pn**	**12 13 12.2 -0.8**
SAOF				AML	AML	
	comp=E,4600µm,0.6s					
SAOF				AML	AML	
	comp=N,6660µm,0.9s					
SAOF				AML	AML	
	comp=E,4600µm,0.6s					
SAOF				AML	AML	
	comp=N,6660µm,0.9s					
SAOF				AML	AML	
	comp=E,4600µm,0.6s					
SAOF				AML	AML	
	comp=N,6660µm,0.9s					
ATVO	**AVT- Monte Val**	**1.85**	**115**	P	**Pn**	**12 13 11.3 -1.8**
ATVO				AML	AML	
	comp=E,2320µm,1.3s					
ATVO				AML	AML	
	comp=N,2430µm,0.9s					
ATVO				AML	AML	
	comp=E,2320µm,1.3s					
ATVO				AML	AML	
	comp=N,2430µm,0.9s					
ATVO				AML	AML	
	comp=E,2320µm,1.3s					
ATVO				AML	AML	
	comp=N,2430µm,0.9s					
DOSS	**Dosso del Somm**	**1.87**	**24**	*e*Pn	**Pn**	**12 13 13.2 -0.2**
DOSS				*e*Sn	**Sg**	**12 13 40.0 -1.0**
SACS	**San Casciano d**	**1.87**	**135**	AML	AML	
	comp=E,835µm,0.7s					
SACS				AML	AML	
	comp=E,835µm,0.7s					
SACS				AML	AML	
	comp=N,631µm,1.3s					
SACS				AML	AML	
	comp=N,631µm,1.3s					
SACS				AML	AML	
	comp=N,631µm,1.3s					
SACS				AML	AML	
	comp=E,835µm,0.7s					
PIEI	**Pieia**	**1.88**	**109**	P	**Pn**	**12 13 11.6 -1.9**
PIEI				AML	AML	
	comp=E,991µm,0.6s					
PIEI				AML	AML	
	comp=N,1000µm,1.1s					
PIEI				AML	AML	
	comp=E,991µm,0.6s					
PIEI				AML	AML	
	comp=N,1000µm,1.1s					
PIEI				AML	AML	
	comp=E,991µm,0.6s					
PIEI				AML	AML	
	comp=N,1000µm,1.1s					
MUGIO	**Muggio**	**1.90**	**337**	P	**Pn**	**12 13 13.9 +0.2**
MUGIO				AML	AML	
	comp=E,1770µm,1.0s					
MUGIO				AML	AML	
	comp=N,2040µm,0.4s					
MUGIO				AML	AML	
	comp=E,1770µm,1.0s					
MUGIO				AML	AML	
	comp=N,2040µm,0.4s					
MUGIO				AML	AML	
	comp=E,1770µm,1.0s					
MUGIO				AML	AML	
	comp=N,2040µm,0.4s					
MABI	**Malga Bissina**	**1.90**	**9⇑**	*e*Pn	**Pn**	**12 13 13.7 -0.2**
MABI				*e*Sn	**Sg**	**12 13 40.6 -1.3**
MABI	**Malga Bissina**	**1.90**	**9**	*e*P	**Pn**	**12 13 13.6 -0.3**
MABI				AML	AML	
	comp=E,1735µm,1.2s					
MABI				AML	AML	
	comp=N,1155µm,0.6s					
MABI				AML	AML	
	comp=N,1155µm,0.6s					
MABI				AML	AML	
	comp=E,1735µm,1.2s					
MABI				AML	AML	
	comp=N,1155µm,0.6s					
MABI				AML	AML	
	comp=E,1735µm,1.2s					
MAON	**Monte Argentar**	**1.91**	**156**	P	**Pn**	**12 13 12.5 -1.3**
MAON				AML	AML	
	comp=E,1350µm,1.0s					
MAON				AML	AML	
	comp=N,1435µm,0.6s					
MAON				AML	AML	
	comp=N,1435µm,0.6s					
MAON				AML	AML	
	comp=E,1350µm,1.0s					
MAON				AML	AML	
	comp=N,1435µm,0.6s					
MAON				AML	AML	
	comp=E,1350µm,1.0s					
ATTE	**AVT- Monte Tez**	**1.91**	**120**	AML	AML	
	comp=E,1910µm,1.5s					
ATTE				AML	AML	
	comp=N,2065µm,1.0s					
ATTE				AML	AML	
	comp=E,1910µm,1.5s					
ATTE				AML	AML	
	comp=N,2065µm,1.0s					
ATTE				AML	AML	
	comp=E,1910µm,1.5s					
ATTE				AML	AML	
	comp=N,2065µm,1.0s					
VARE	**Varese**	**1.93**	**331**	AML	AML	
	comp=E,2710µm,1.1s					
VARE				AML	AML	
	comp=E,2710µm,1.1s					
VARE				AML	AML	
	comp=N,3520µm,1.0s					
VARE				AML	AML	
	comp=N,3520µm,1.0s					
VARE				AML	AML	
	comp=E,2710µm,1.1s					
VARE				AML	AML	
	comp=N,3520µm,1.0s					
MGAB	**Montegabbione**	**1.94**	**130**	P	**Pn**	**12 13 13.0 -1.2**
SBF	**Sospel**	**1.95**	**262**	*e*Pn	**Pn**	**12 13 13.5 -0.9**
SBF				*e*Sn	**Sn**	**12 13 37.4 -1.7**
	comp=N,1µm,0.3s					
SBF				*e*Sg	**Sg**	**12 13 44.1 +0.6**
ATFO	**Monte Foce - G**	**1.97**	**114**	AML	AML	
	comp=N,2250µm,0.8s					
ATFO				AML	AML	
	comp=E,2375µm,1.1s					
ATFO				AML	AML	
	comp=N,2250µm,0.8s					
ATFO				AML	AML	
	comp=E,2375µm,1.1s					
ATFO				AML	AML	
	comp=N,2250µm,0.8s					
ATFO				AML	AML	
	comp=E,2375µm,1.1s					
MON	**Monaco**	**1.98**	**258**	Pn	**Pn**	**12 13 14.8 0.0**
MON				Sn	**Sn**	**12 13 38.5 -1.3**
MURB	**Monte Urbino**	**1.98**	**117**	AML	AML	
	comp=E,4235µm,0.8s					
MURB				AML	AML	
	comp=E,4235µm,0.8s					
MURB				AML	AML	
	comp=N,3670µm,1.5s					
MURB				AML	AML	
	comp=N,3670µm,1.5s					
MURB				AML	AML	
	comp=E,4235µm,0.8s					
MURB				AML	AML	
	comp=N,3670µm,1.5s					
ESCA	**l'Escarene**	**2.00**	**261**	Pn	**Pn**	**12 13 14.3 -0.8**
ESCA				Sn	**Sn**	**12 13 39.3 -0.9**
GAGG	**Gaggia**	**2.00**	**17⇑**	*e*Pn	**Pn**	**12 13 14.8 -0.4**
GAGG				*e*Sn	**Sg**	**12 13 44.0 -1.2**
MPAG	**Monte Paganucc**	**2.00**	**105**	AML	AML	
	comp=E,1355µm,1.1s					
MPAG				AML	AML	
	comp=N,1535µm,1.3s					
MPAG				AML	AML	
	comp=N,1535µm,1.3s					
MPAG				AML	AML	
	comp=E,1355µm,1.1s					
MPAG				AML	AML	
	comp=N,1535µm,1.3s					
MPAG				AML	AML	
	comp=E,1355µm,1.1s					
DOI	**San Damiano**	**2.07**	**280**	AML	AML	
	comp=N,2635µm,0.6s					
DOI				AML	AML	
	comp=E,2590µm,0.4s					
DOI				AML	AML	
	comp=N,2635µm,0.6s					
DOI				AML	AML	
	comp=E,2590µm,0.4s					
DOI				AML	AML	
	comp=N,2635µm,0.6s					
DOI				AML	AML	
	comp=E,2590µm,0.4s					
CGRP	**Cima Grappa**	**2.08**	**35⇑**	*e*Pn	**Pn**	**12 13 16.7 +0.3**
CGRP				*e*Sn	**Sb**	**12 13 45.7 +0.4**
CGRP	**Cima Grappa**	**2.08**	**35**	P	**Pn**	**12 13 15.0 -1.5**
CGRP				AML	AML	
	comp=E,4025µm,1.5s					
CGRP				AML	AML	
	comp=N,4815µm,1.2s					
CGRP				AML	AML	
	comp=N,4815µm,1.2s					
CGRP				AML	AML	
	comp=E,4025µm,1.5s					
CGRP				AML	AML	
	comp=N,4815µm,1.2s					
CGRP				AML	AML	
	comp=E,4025µm,1.5s					
BHB	**Bricherasio**	**2.13**	**289**	AML	AML	
	comp=N,1365µm,0.7s					
BHB				AML	AML	
	comp=E,1515µm,0.8s					
BHB				AML	AML	
	comp=E,1515µm,0.8s					
BHB				AML	AML	
	comp=N,1365µm,0.7s					
BHB				AML	AML	
	comp=E,1515µm,0.8s					
BHB				AML	AML	
	comp=N,1365µm,0.7s					
TRAV	**Traversella**	**2.14**	**309**	P	**Pn**	**12 13 17.2 +0.1**
TRAV				AML	AML	
	comp=E,2355µm,1.0s					
TRAV				AML	AML	
	comp=N,2195µm,0.3s					
TRAV				AML	AML	
	comp=E,2355µm,1.0s					
TRAV				AML	AML	
	comp=N,2195µm,0.3s					
TRAV				AML	AML	
	comp=E,2355µm,1.0s					
TRAV				AML	AML	
	comp=N,2195µm,0.3s					
MTLO	**Montello**	**2.16**	**40**	*e*Pn	**Pn**	**12 13 17.5 +0.2**
PZZ	**Stroppo**	**2.16**	**280**	P	**Pn**	**12 13 16.1 -1.3**
PZZ				AML	AML	
	comp=E,1970µm,1.2s					
PZZ				AML	AML	
	comp=N,2325µm,0.7s					
PZZ				AML	AML	
	comp=N,2325µm,0.7s					
PZZ				AML	AML	
	comp=E,1970µm,1.2s					
PZZ				AML	AML	
	comp=N,2325µm,0.7s					
PZZ				AML	AML	
	comp=E,1970µm,1.2s					
CTI	**Castel Tesino**	**2.17**	**30**	P	**Pn**	**12 13 16.6 -0.8**
CTI				AML	AML	
	comp=E,3725µm,0.6s					
CTI				AML	AML	
	comp=N,3230µm,0.4s					
CTI				AML	AML	
	comp=E,3725µm,0.6s					
CTI				AML	AML	
	comp=N,3230µm,0.4s					
CTI				AML	AML	
	comp=E,3725µm,0.6s					
CTI				AML	AML	
	comp=N,3230µm,0.4s					
ARVD	**Arcevia**	**2.17**	**107**	AML	AML	
	comp=N,1220µm,1.3s					
ARVD				AML	AML	
	comp=E,930µm,1.2s					
ARVD				AML	AML	
	comp=N,1220µm,1.3s					
ARVD				AML	AML	
	comp=N,1220µm,1.3s					
ARVD				AML	AML	
	comp=E,930µm,1.2s					
ARVD				AML	AML	
	comp=E,930µm,1.2s					
SMPL	**Sampolo**	**2.17**	**196**	Pn	**Pn**	**12 13 17.7 +0.3**
SMPL				Sn	**Sn**	**12 13 43.4 -1.1**
SMPL	**Sampolo**	**2.17**	**196**	P	**Pn**	**12 13 16.9 -0.5**
SMPL				AML	AML	
	comp=E,66150µm,0.7s					
SMPL				AML	AML	
	comp=N,56000µm,0.9s					
SMPL				AML	AML	
	comp=E,66150µm,0.7s					
SMPL				AML	AML	
	comp=N,56000µm,0.9s					
SMPL				AML	AML	
	comp=E,66150µm,0.7s					
SMPL				AML	AML	
	comp=N,56000µm,0.9s					
ISO	**Isola**	**2.19**	**271**	Pn	**Pn**	**12 13 18.1 +0.3**
BERNI	**Berninapass**	**2.23**	**359**	P	**Pn**	**12 13 19.0 +0.4**
BERNI				AML	AML	
	comp=E,1210µm,1.2s					
BERNI				AML	AML	
	comp=N,1008µm,1.4s					
BERNI				AML	AML	
	comp=N,1008µm,1.4s					
BERNI				AML	AML	
	comp=E,1210µm,1.2s					
BERNI				AML	AML	
	comp=N,1008µm,1.4s					
BERNI				AML	AML	
	comp=E,1210µm,1.2s					
RSP	**Reno Superiore**	**2.24**	**297**	AML	AML	
	comp=E,1250µm,0.6s					
RSP				AML	AML	
	comp=N,872µm,0.5s					
RSP				AML	AML	
	comp=E,1250µm,0.6s					
RSP				AML	AML	
	comp=N,872µm,0.5s					
RSP				AML	AML	
	comp=E,1250µm,0.6s					
RSP				AML	AML	
	comp=N,872µm,0.5s					
MOMA	**Monte Martano**	**2.27**	**127**	AML	AML	
	comp=N,919µm,1.2s					
MOMA				AML	AML	
	comp=E,1108µm,0.7s					
MOMA				AML	AML	
	comp=N,919µm,1.2s					
MOMA				AML	AML	
	comp=N,919µm,1.2s					
MOMA				AML	AML	
	comp=E,1108µm,0.7s					
MOMA				AML	AML	
	comp=E,1108µm,0.7s					
CARE	**Lago del Cares**	**2.28**	**10⇑**	*e*Pn	**Pn**	**12 13 19.5 +0.2**
CARE				*e*Sn	**Sb**	**12 13 49.7 -1.5**
BRMO	**Bormio**	**2.30**	**5**	AML	AML	
	comp=N,788µm,0.9s					
BRMO				AML	AML	
	comp=E,736µm,1.3s					
BRMO				AML	AML	
	comp=N,788µm,0.9s					
BRMO				AML	AML	
	comp=E,736µm,1.3s					
BRMO				AML	AML	
	comp=N,788µm,0.9s					
BRMO				AML	AML	
	comp=E,736µm,1.3s					
OZOL	**Ozolo**	**2.32**	**17**	*e*Pn	**Pn**	**12 13 19.9 +0.3**
TUE	**Stuetta**	**2.35**	**347**	*e*Pn	**Pn**	**12 13 20.8 +0.7**
TUE	**Stuetta**	**2.35**	**347**	P	**Pn**	**12 13 20.9 +0.8**
TUE				AML	AML	
	comp=E,1080µm,1.2s					
TUE				AML	AML	
	comp=N,1225µm,0.3s					
TUE				AML	AML	
	comp=E,1400µm,1.2s					

TUE				AML	AML	
	comp=N,1525µm,0.3s					
TUE				AML	AML	
	comp=E,1080µm,1.2s					
TUE				AML	AML	
	comp=N,1525µm,0.3s					
TUE				AML	AML	
	comp=N,1225µm,0.3s					
TUE				AML	AML	
	comp=E,1400µm,1.2s					
TUE				AML	AML	
	comp=E,1080µm,1.2s					
TUE				AML	AML	
	comp=N,1225µm,0.3s					
TUE				AML	AML	
	comp=N,1525µm,0.3s					
TUE				AML	AML	
	comp=E,1400µm,1.2s					
CESX	**Cesi**	**2.40**	**130**	AML	AML	
	comp=N,1078µm,1.4s					
CESX				AML	AML	
	comp=E,882µm,1.6s					
CESX				AML	AML	
	comp=N,1078µm,1.4s					
CESX				AML	AML	
	comp=E,882µm,1.6s					
CESX				AML	AML	
	comp=E,882µm,1.6s					
CESX				AML	AML	
	comp=N,1078µm,1.4s					
MMK	**Mattmark**	**2.40**	**322**	AML	AML	
	comp=N,1835µm,0.6s					
MMK				AML	AML	
	comp=E,1260µm,0.9s					
MMK				AML	AML	
	comp=N,1835µm,0.6s					
MMK				AML	AML	
	comp=E,1260µm,0.9s					
MMK				AML	AML	
	comp=N,1835µm,0.6s					
MMK				AML	AML	
	comp=E,1260µm,0.9s					
FUORN	**Ofenpass-Fuorn**	**2.44**	**3**	*e*Pn	**Pn**	**12 13 22.2 +0.8**
FUORN	**Ofenpass-Fuorn**	**2.44**	**3**	P	**Pn**	**12 13 22.0 +0.6**
FUORN				AML	AML	
	comp=E,1050µm,0.7s					
FUORN				AML	AML	
	comp=N,1136µm,1.6s					
FUORN				AML	AML	
	comp=E,1050µm,0.7s					
FUORN				AML	AML	
	comp=N,1136µm,1.6s					
FUORN				AML	AML	
	comp=E,1050µm,0.7s					
FUORN				AML	AML	
	comp=N,1136µm,1.6s					
MBDF	**Montbardon**	**2.44**	**284**	*e*Pn	**Pn**	**12 13 20.7 -0.6**
MBDF	**Montbardon**	**2.44**	**284**	*e*Pg	**Pb**	**12 13 26.2 +1.0**
MBDF				*e*Sn	**Sn**	**12 13 48.6 -2.9**
MBDF				*e*Sg	**Sg**	**12 13 58.5 -0.9**
	comp=N,523nm,0.4s					
KOSI	**Kohlern**	**2.45**	**21**	P	**Pn**	**12 13 21.6 +0.1**
KOSI				AML	AML	
	comp=E,2735µm,0.8s					
KOSI				AML	AML	
	comp=N,2085µm,0.5s					
KOSI				AML	AML	
	comp=E,2735µm,0.8s					
KOSI				AML	AML	
	comp=N,2085µm,0.5s					
KOSI				AML	AML	
	comp=E,2735µm,0.8s					
KOSI				AML	AML	
	comp=N,2085µm,0.5s					
FDMO	**Fiordimonte**	**2.46**	**117**	P	**Pn**	**12 13 19.8 -1.5**
FDMO				AML	AML	
	comp=E,648µm,0.5s					
FDMO				AML	AML	
	comp=N,629µm,1.2s					
FDMO				AML	AML	
	comp=E,648µm,0.5s					
FDMO				AML	AML	
	comp=N,629µm,1.2s					
FDMO				AML	AML	
	comp=E,648µm,0.5s					
FDMO				AML	AML	
	comp=N,629µm,1.2s					
MOSI	**Grossmontoni**	**2.46**	**7**	AML	AML	
	comp=E,2895µm,1.3s					
MOSI				AML	AML	
	comp=E,2895µm,1.3s					
MOSI				AML	AML	
	comp=N,3990µm,1.2s					
MOSI				AML	AML	
	comp=N,3990µm,1.2s					
MOSI				AML	AML	
	comp=E,2895µm,1.3s					
MOSI				AML	AML	
	comp=N,3990µm,1.2s					
LSD	**Lago del Serru**	**2.46**	**302**	AML	AML	
	comp=E,616µm,0.7s					
LSD				AML	AML	
	comp=N,679µm,0.5s					
LSD				AML	AML	
	comp=N,679µm,0.5s					
LSD				AML	AML	
	comp=E,616µm,0.7s					
LSD				AML	AML	
	comp=N,679µm,0.5s					
LSD				AML	AML	
	comp=E,616µm,0.7s					
CAE	**Caneva**	**2.47**	**41**	*e*Pn	**Pn**	**12 13 21.3 -0.2**
RRL	**Rocca Remolon**	**2.48**	**289**	AML	AML	
	comp=E,711µm,1.6s					
RRL				AML	AML	
	comp=N,876µm,0.7s					
RRL				AML	AML	
	comp=E,711µm,1.6s					
RRL				AML	AML	
	comp=N,876µm,0.7s					
RRL				AML	AML	
	comp=E,711µm,1.6s					
RRL				AML	AML	
	comp=N,876µm,0.7s					
FUSIO	**Fusio**	**2.49**	**337**	AML	AML	
	comp=E,1630µm,0.5s					
FUSIO				AML	AML	
	comp=N,1146µm,1.6s					
FUSIO				AML	AML	
	comp=E,1630µm,0.5s					
FUSIO				AML	AML	
	comp=N,1146µm,1.6s					
FUSIO				AML	AML	
	comp=E,1630µm,0.5s					
FUSIO				AML	AML	
	comp=N,1146µm,1.6s					
CSP1	**Cessapalombo**	**2.50**	**115**	AML	AML	
	comp=N,1920µm,0.7s					
CSP1				AML	AML	
	comp=E,1620µm,0.7s					
CSP1				AML	AML	
	comp=N,1920µm,0.7s					
CSP1				AML	AML	
	comp=N,1920µm,0.7s					
CSP1				AML	AML	
	comp=E,1620µm,0.7s					
CSP1				AML	AML	
	comp=E,1620µm,0.7s					
AGOR	**Agordo**	**2.51**	**33**	AML	AML	
	comp=E,1875µm,0.4s					
AGOR				AML	AML	
	comp=N,1735µm,1.0s					
AGOR				AML	AML	
	comp=N,1735µm,1.0s					
AGOR				AML	AML	
	comp=E,1875µm,0.4s					
AGOR				AML	AML	
	comp=N,1735µm,1.0s					
AGOR				AML	AML	
	comp=E,1875µm,0.4s					
TOLF	**Tolfa**	**2.53**	**146**	AML	AML	
	comp=N,340µm,0.6s					
TOLF				AML	AML	
	comp=E,338µm,1.1s					
TOLF				AML	AML	
	comp=N,340µm,0.6s					
TOLF				AML	AML	
	comp=N,340µm,0.6s					
TOLF				AML	AML	
	comp=E,338µm,1.1s					
TOLF				AML	AML	
	comp=E,338µm,1.1s					
OGAG	**Argentiere**	**2.57**	**277**	Pn	**Pn**	**12 13 24.1 +1.1**
FRF	**La Foret Royal**	**2.57**	**257**	*e*Pn	**Pn**	**12 13 22.1 -0.8**
FRF				*e*Sn	**Sn**	**12 13 52.2 -2.2**
	comp=E,392nm,0.3s					
FRF				*e*Sg	**Sg**	**12 14 03.0 -0.5**
NRCA	**Norcia**	**2.58**	**120**	P	**Pn**	**12 13 21.9 -1.2**
NRCA				AML	AML	
	comp=E,586µm,0.8s					
NRCA				AML	AML	
	comp=N,662µm,0.7s					
NRCA				AML	AML	
	comp=E,586µm,0.8s					
NRCA				AML	AML	
	comp=N,662µm,0.7s					
NRCA				AML	AML	
	comp=E,586µm,0.8s					
NRCA				AML	AML	
	comp=N,662µm,0.7s					
BNI	**Bardonecchia**	**2.59**	**291**	*e*Pn	**Pn**	**12 13 23.8 +0.5**
BNI	**Bardonecchia**	**2.59**	**291**	*e*P	**Pn**	**12 13 23.8 +0.5**
DAVOX	**Davos/Dischmat**	**2.60**	**357**	Pn	**Pn**	**12 13 24.5 +1.0**
	comp=N,90nm,0.3s,baz=210,slow=3.1,SNR=92					
DAVOX				Sn	**Sn**	**12 13 56.9 +1.4**
	comp=N,66nm,0.3s,baz=330,slow=20,SNR=5.1					
DAVOX	**Davos/Dischmat**	**2.60**	**357**	AML	AML	
	comp=E,760µm,0.6s					
DAVOX				AML	AML	
	comp=E,760µm,0.6s					
DAVOX				AML	AML	
	comp=N,1104µm,0.6s					
DAVOX				AML	AML	
	comp=N,1104µm,0.6s					
DAVOX				AML	AML	
	comp=N,1104µm,0.6s					
DAVOX				AML	AML	
	comp=E,760µm,0.6s					
LNSS	**Leonessa**	**2.66**	**125**	AML	AML	
	comp=N,976µm,1.3s					
LNSS				AML	AML	
	comp=E,1245µm,0.7s					
LNSS				AML	AML	
	comp=E,1245µm,0.7s					
LNSS				AML	AML	
	comp=N,976µm,1.3s					
LNSS				AML	AML	
	comp=E,1245µm,0.7s					
LNSS				AML	AML	
	comp=N,976µm,1.3s					
REMY	**Saint-Rhmy-en**	**2.66**	**309**	AML	AML	
	comp=N,2225µm,0.8s					
REMY				AML	AML	
	comp=E,1650µm,0.8s					
REMY				AML	AML	
	comp=N,2225µm,0.8s					
REMY				AML	AML	
	comp=E,1650µm,0.8s					
REMY				AML	AML	
	comp=N,2225µm,0.8s					
REMY				AML	AML	
	comp=E,1650µm,0.8s					
DIX	**Grande Dixence**	**2.69**	**316**	AML	AML	
	comp=N,1725µm,0.8s					
DIX				AML	AML	
	comp=E,764µm,1.0s					
DIX				AML	AML	
	comp=N,1725µm,0.8s					
DIX				AML	AML	
	comp=E,764µm,1.0s					
DIX				AML	AML	
	comp=N,1725µm,0.8s					
DIX				AML	AML	
	comp=E,764µm,1.0s					
ABSI	**Aberstueckl**	**2.69**	**18**	AML	AML	
	comp=N,2580µm,0.6s					
ABSI				AML	AML	
	comp=E,3550µm,0.9s					
ABSI				AML	AML	
	comp=E,3550µm,0.9s					
ABSI				AML	AML	
	comp=N,2580µm,0.6s					
ABSI				AML	AML	
	comp=E,3550µm,0.9s					
ABSI				AML	AML	
	comp=N,2580µm,0.6s					
LPG	**La Plagne**	**2.72**	**300**	*e*P	**Pn**	**12 13 26.3 +1.1**
LPG				*e*Sn	**Sn**	**12 13 55.5 -3.0**
	comp=N,364nm,0.5s					
LMR	**La Mourre**	**2.73**	**253**	*e*Pn	**Pn**	**12 13 24.1 -1.1**
LMR				*e*Sn	**Sn**	**12 13 55.1 -3.3**
	comp=N,255nm,0.2s					
LPL	**La Plagne**	**2.74**	**300**	*e*P	**Pn**	**12 13 26.2 +0.7**
LPL				*e*Sn	**Sn**	**12 13 55.9 -3.0**
	comp=N,296nm,0.4s					
STAL	**STALIGIAL**	**2.78**	**41**	AML	AML	
	comp=E,2400µm,0.8s					
STAL				AML	AML	
	comp=E,1620µm,0.9s					
STAL				AML	AML	
	comp=N,2020µm,1.6s					
STAL				AML	AML	
	comp=N,1940µm,1.4s					
STAL				AML	AML	
	comp=N,2020µm,1.6s					
STAL				AML	AML	
	comp=N,1940µm,1.4s					
STAL				AML	AML	
	comp=E,1620µm,0.9s					
STAL				AML	AML	
	comp=E,2400µm,0.8s					
STAL				AML	AML	
	comp=N,2020µm,1.6s					
STAL				AML	AML	
	comp=N,1940µm,1.4s					
STAL				AML	AML	
	comp=E,1620µm,0.9s					
STAL				AML	AML	
	comp=E,2400µm,0.8s					
FETA	**Feichten**	**2.88**	**9**	Pn	**Pn**	**12 13 28.3 +1.1**
	comp=E,17nm,0.4s,SNR=28					
RSL	**Roselend**	**2.89**	**303**	Pn	**Pn**	**12 13 29.5 +2.0**
ROSI	**Rosskopf**	**2.90**	**18**	AML	AML	
	comp=E,1820µm,0.6s					
ROSI				AML	AML	
	comp=N,2090µm,0.5s					
ROSI				AML	AML	
	comp=N,2090µm,0.5s					
ROSI				AML	AML	
	comp=E,1820µm,0.6s					
ROSI				AML	AML	
	comp=N,2090µm,0.5s					
ROSI				AML	AML	
	comp=E,1820µm,0.6s					
MTCE	**Montecelio**	**2.90**	**137**	AML	AML	
	comp=E,374µm,1.0s					
MTCE				AML	AML	
	comp=N,264µm,0.8s					
MTCE				AML	AML	
	comp=E,374µm,1.0s					
MTCE				AML	AML	
	comp=N,264µm,0.8s					
MTCE				AML	AML	
	comp=E,374µm,1.0s					
MTCE				AML	AML	
	comp=N,264µm,0.8s					
PLONS	**Plons/SG**	**2.91**	**350**	AML	AML	
	comp=N,764µm,0.8s					
PLONS				AML	AML	
	comp=E,893µm,0.8s					
PLONS				AML	AML	
	comp=N,764µm,0.8s					
PLONS				AML	AML	
	comp=E,893µm,0.8s					
PLONS				AML	AML	
	comp=E,893µm,0.8s					
PLONS				AML	AML	
	comp=N,764µm,0.8s					
BNALP	**Bannalp**	**2.94**	**337**	AML	AML	
	comp=E,1028µm,0.5s					
BNALP				AML	AML	
	comp=E,1028µm,0.5s					
BNALP				AML	AML	
	comp=N,882µm,1.1s					
BNALP				AML	AML	
	comp=N,882µm,1.1s					
BNALP				AML	AML	
	comp=E,1028µm,0.5s					
BNALP				AML	AML	
	comp=N,882µm,1.1s					
SENIN	**Lac Senin/Sane**	**2.94**	**319**	*e*Pn	**Pn**	**12 13 30.5 +2.2**
AQU	**L'Aquila**	**3.03**	**126**	*e*Pn	**Pn**	**12 13 31.1 +1.8**
AQU	**L'Aquila**	**3.03**	**126**	*e*P	**Pn**	**12 13 31.1 +1.8**
AQU	**L'Aquila**	**3.03**	**126**	*e*Pn	**Pn**	**12 13 30.4 +1.1**
SABO	**M.te Sabotino**	**3.06**	**53**	AML	AML	
	comp=N,2665µm,0.9s					
SABO				AML	AML	
	comp=E,2485µm,0.7s					
SABO				AML	AML	
	comp=N,2665µm,0.9s					
SABO				AML	AML	
	comp=E,2485µm,0.7s					
SABO				AML	AML	
	comp=E,2485µm,0.7s					
SABO				AML	AML	
	comp=N,2665µm,0.9s					
FVI	**Forni Avoltri**	**3.07**	**37**	AML	AML	
	comp=E,920µm,1.0s					
FVI				AML	AML	
	comp=N,1215µm,0.6s					
FVI				AML	AML	
	comp=E,920µm,1.0s					
FVI				AML	AML	
	comp=N,1215µm,0.6s					
FVI				AML	AML	
	comp=E,920µm,1.0s					
FVI				AML	AML	
	comp=N,1215µm,0.6s					
ABTA	**Abfaltersbach**	**3.08**	**33**	*e*Pn	**Pn**	**12 13 30.3 +0.3**
	comp=N,23nm,0.3s,SNR=45					
ABTA				Sn	**Sn**	**12 14 08.4 +1.4**
	comp=N,104nm,0.4s					
RISI	**Rein**	**3.10**	**26**	AML	AML	
	comp=N,2515µm,0.4s					
RISI				AML	AML	
	comp=E,2275µm,0.5s					
RISI				AML	AML	
	comp=N,2515µm,0.4s					
RISI				AML	AML	
	comp=N,2515µm,0.4s					
RISI				AML	AML	
	comp=E,2275µm,0.5s					
RISI				AML	AML	
	comp=E,2275µm,0.5s					
SKDS	**Skadanscina**	**3.10**	**63**	*i* Pn	**Pn**	**12 13 28.6 -1.6**
SKDS				*i* Sn	**Sn**	**12 14 06.1 -1.4**
	comp=Z,248nm,0.4s					
ORIF	**Oris-en-Rattie**	**3.10**	**285**	*e*P	**Pn**	**12 13 31.7 +1.4**
ORIF				*e*Sn	**Sn**	**12 14 04.3 -3.4**
	comp=Z,409nm,0.6s					
ORIF				*e*Sg	**Sg**	**12 14 20.7 +0.1**
DAVA	**Damuels**	**3.11**	**357**	*i* Pn	**Pn**	**12 13 32.1 +1.6**
	comp=Z,83nm,0.3s,SNR=199					
DAVA				*e*Sn	**Sn**	**12 14 10.1 +2.2**
	comp=Z,421nm,0.7s					
SQTA	**Sankt Quirin**	**3.14**	**14**	*i* Pn	**Pn**	**12 13 32.4 +1.5**
	comp=Z,8.5nm,0.3s,SNR=140					
SQTA				*e*Sn	**Sb**	**12 14 13.9 -1.6**
	comp=Z,139nm,0.3s					
ARTF	**Artigues**	**3.16**	**261**	Pn	**Pn**	**12 13 31.2 +0.2**
PTCC	**Patocco-Chiusa**	**3.20**	**45**	AML	AML	
	comp=N,672µm,0.5s					
PTCC				AML	AML	
	comp=E,1022µm,1.1s					
PTCC				AML	AML	
	comp=N,672µm,0.5s					
PTCC				AML	AML	
	comp=E,1022µm,1.1s					
PTCC				AML	AML	
	comp=N,672µm,0.5s					
PTCC				AML	AML	
	comp=E,1022µm,1.1s					
MOTA	**Moosalm**	**3.24**	**12**	*i* Pn	**Pn**	**12 13 34.2 +1.9**
	comp=E,23nm,0.3s,SNR=148					
SMRF	**Simiane la Rot**	**3.27**	**268**	*e*P	**Pn**	**12 13 33.2 +0.7**
SMRF	**Simiane la Rot**	**3.27**	**268**	*e*Pg	**Pg**	**12 13 43.2 -0.3**
SMRF				*e*Sn	**Sn**	**12 14 08.4 -3.2**
	comp=E,229nm,0.3s					
WTTA	**Wattenberg**	**3.27**	**19**	*e*Pn	**Pn**	**12 13 33.7 +1.1**
	comp=E,9.7nm,0.4s,SNR=109					
WTTA				Sn	**Sb**	**12 14 16.4 -2.9**
	comp=E,422nm,0.7s					
WTTA	**Wattenberg**	**3.27**	**19**	AML	AML	
	comp=N,1225µm,0.9s					
WTTA				AML	AML	
	comp=E,1400µm,0.8s					
WTTA				AML	AML	
	comp=N,1225µm,0.9s					
WTTA				AML	AML	
	comp=E,1400µm,0.8s					
WTTA				AML	AML	
	comp=N,1225µm,0.9s					
WTTA				AML	AML	
	comp=E,1400µm,0.8s					
CADS	**Cadrg**	**3.29**	**50**	*i* Pn	**Pn**	**12 13 31.7 -1.2**
CADS				*i* Sn	**Sn**	**12 14 09.8 -2.4**
	comp=Z,400nm,0.7s					
WATA	**Walderalm**	**3.32**	**18**	*i* Pn	**Pn**	**12 13 34.6 +1.2**
	comp=Z,15nm,0.3s,SNR=69					
RIY	**Rijeka**	**3.33**	**68**	*e*Pn	**Pn**	**12 13 32.0 -1.3**
RETA	**Reutte**	**3.34**	**8**	*i* Pn	**Pn**	**12 13 35.0 +1.4**
	comp=Z,5.9nm,0.3s,SNR=35					
RETA				Sn	**Sn**	**12 14 16.4 +3.0**
	comp=Z,44nm,0.3s					
OG02	**Monnetier-Morn**	**3.38**	**307**	Pn	**Pn**	**12 13 36.2 +2.1**
OGSM	**Saint Maurice**	**3.44**	**296**	Pn	**Pn**	**12 13 36.8 +1.9**
NVLJ	**Novalja**	**3.44**	**82**	*e*Pn	**Pn**	**12 13 34.7 -0.2**
NVLJ				Sn	**Sn**	**12 14 14.1 -1.8**
CEY	**Cerknica**	**3.45**	**62⇑**	*i*Pn	**Pn**	**12 13 33.4 -1.6**
MYKA	**Terra Mystica**	**3.50**	**44**	*e*Pn	**Pn**	**12 13 36.6 +0.9**
	comp=Z,19nm,0.4s					
MYKA				*e*Sn	**Sn**	**12 14 18.6 +1.3**
	comp=Z,46nm,0.3s					
GIMEL	**St. Georges /**	**3.58**	**312**	AML	AML	
	comp=N,303µm,0.9s					
GIMEL				AML	AML	
	comp=E,304µm,0.8s					
GIMEL				AML	AML	
	comp=N,303µm,0.9s					
GIMEL				AML	AML	
	comp=N,303µm,0.9s					
GIMEL				AML	AML	
	comp=E,304µm,0.8s					
GIMEL				AML	AML	
	comp=E,304µm,0.8s					
LJU	**Ljubljana**	**3.65**	**58⇑**	*i*Pn	**Pn**	**12 13 36.9 -0.8**
LJU	**Ljubljana**	**3.65**	**58**	AML	AML	
	comp=E,1790µm,1.4s					
LJU				AML	AML	
	comp=E,1790µm,1.4s					
LJU				AML	AML	
	comp=N,2820µm,0.5s					
LJU				AML	AML	
	comp=N,2820µm,0.5s					
LJU				AML	AML	
	comp=E,1790µm,1.4s					
LJU				AML	AML	
	comp=N,2820µm,0.5s					
KBA	**Koelnbreinsper**	**3.69**	**37**	*e*Pn	**Pn**	**12 13 39.1 +0.7**
	comp=N,7.6nm,0.2s,SNR=32					
KBA				Sn	**Sn**	**12 14 21.3 -0.9**
	comp=N,92nm,0.8s					
OG35	**Corcelles**	**3.71**	**302**	Pn	**Pn**	**12 13 39.7 +1.1**
CABF	**La Chapelle**	**3.73**	**312**	*e*P	**Pn**	**12 13 40.3 +1.4**
CABF				*e*Sn	**Sn**	**12 14 18.9 -4.1**
	comp=N,184nm,0.4s					
BOJS	**Bojanci**	**3.90**	**68**	AML	AML	
	comp=N,448µm,1.5s					
BOJS				AML	AML	
	comp=E,372µm,0.9s					
BOJS				AML	AML	
	comp=N,448µm,1.5s					
BOJS				AML	AML	
	comp=E,372µm,0.9s					
BOJS				AML	AML	
	comp=N,448µm,1.5s					
BOJS				AML	AML	
	comp=E,372µm,0.9s					
OBKA	**Obir**	**3.91**	**52**	*e*Pn	**Pn**	**12 13 41.1 -0.3**
	comp=E,8.0nm,0.2s,SNR=18					
OBKA				Sn	**Sn**	**12 14 28.9 +1.4**
	comp=E,235nm,0.6s					
VIVF	**Saint-Julien-l**	**3.94**	**282**	*e*P	**Pn**	**12 13 42.1 +0.4**

VIVF eSn Sn 12 14 24.0 -4.2
comp=E,51nm,0.3s
OZLJ Ozalj 4.08 68 *i* Pn Pn 12 13 44.7 +1.1
UDBI Udbina 4.08 83 ePn Pn 12 13 44.5 +0.7
UDBI Sn Sn 12 14 31.4 -0.3
SSB Saint Sauveur 4.11 287 ePn Pn 12 13 44.8 +0.7
SSB eSn Sn 12 14 32.5 +0.2
SSB Saint Sauveur 4.11 287 eP Pn 12 13 44.8 +0.7
SSB e 12 14 32.5
CRES Cresnjev 4.14 65⇑*i*Pn Pn 12 13 42.8 -1.7
SOKA Soboth 4.28 53 ePn Pn 12 13 46.2 -0.3
comp=E,41nm,0.5s,SNR=45
SOKA Sn Sn 12 14 36.2 -0.4
comp=E,22nm,0.4s
HINF Hinteralfeld 4.28 329 eP Pn 12 13 47.4 +0.9
HINF eSn Sn 12 14 32.1 -4.5
comp=E,173nm,0.3s
BFO Black Forest 4.33 344 ePn Pn 12 13 47.0 -0.1
BFO eSn Sn 12 14 35.5 -2.3
BFO Black Forest 4.33 344 *i* P Pn 12 13 47.6 +0.5
LASF Ste Croix 4.49 271 eP Pn 12 13 48.8 -0.6
LASF eSn Sn 12 14 37.4 -4.4
comp=E,25nm,0.3s
LASF eSg Sg 12 15 03.2 -2.0
comp=E,289nm,1.3s
ECH Echery 4.52 334 ePn Pn 12 13 49.7 0.0
ECH eSn Sn 12 14 40.9 -1.7
ECH Echery 4.52 334 eP Pn 12 13 49.7 0.0
ECH e 12 14 40.9
HAU Haudompre 4.63 327 eP Pn 12 13 52.5 +1.3
HAU eSn Sn 12 14 40.8 -4.4
comp=E,333nm,0.3s
STU Stuttgart 4.63 353 ePn Pn 12 13 51.3 0.0
STU Stuttgart 4.63 353 eP Pn 12 13 51.3 0.0
CDF Champ du Feu 4.66 336 eP Pn 12 13 51.8 +0.1
CDF eSn Sn 12 14 40.5 -5.6
comp=E,191nm,0.4s
MOA Molln 4.68 37 ePn Pn 12 13 52.2 +0.3
comp=E,14nm,0.3s,SNR=47
MOA Sn Sn 12 14 46.6 +0.2
comp=E,23nm,0.3s
ARSA Arzberg 4.88 49 ePn Pn 12 13 54.1 -0.7
comp=E,25nm,0.4s,SNR=32
ARSA Sn Sn 12 14 52.0 +0.5
comp=E,44nm,0.6s
MGRS Mrkonjic Grad 5.02 85 ePn Pn 12 13 57.5 +0.9
SMF Signal de Mont 5.05 301 eP Pn 12 13 57.5 +0.5
SMF eSn Sn 12 14 51.2 -4.2
comp=E,187nm,0.4s
BLY Banja Luka 5.11 81 ePn Pn 12 13 58.0 +0.3
BLY Banja Luka 5.11 81⇓*i*P Pn 12 13 58.1 +0.3
BLY Banja Luka 5.11 81 ePn Pn 12 13 57.5 -0.2
BEHE Becsehely 5.24 62 EPn Pn 12 13 59.1 -0.5
BEHE EPg 12 14 19.1
BEHE Sn Sn 12 15 04.1 +4.0
GEC2 GERESS Array S 5.29 27 ePn Pn 12 13 59.2 -1.1
GEC2 eSn Sn 12 14 59.1 -2.4
GEC2 GERESS Array S 5.29 27 eP Pn 12 13 59.2 -1.1
GEC2 e 12 14 59.1
GERES GERESS Array B 5.29 27 Pn Pn 12 13 59.2 -1.1
comp=E,10nm,0.3s,baz=201,slow=13,SNR=77
GERES Sn Sn 12 14 59.1 -2.4
comp=E,17nm,0.3s,baz=202,slow=23,SNR=9.0
GERES Lg Lg 12 15 29.2
comp=E,3.1nm,0.3s,baz=218,slow=31,SNR=2.6
GERES LR LR 12 16 30.3
comp=E,250nm,21.9s,baz=255,slow=44
PAGF Fort de Pagny 5.32 327 eP Pn 12 14 02.0 +1.3
baz=146
PAGF eSn Sn 12 14 56.8 -5.3
comp=E,263nm,0.7s
SFTF Sexfontaines 5.34 321 P Pn 12 14 02.6 +1.6
baz=136
SFTF eSn Sn 12 14 57.1 -5.6
LOR Lormes 5.35 307 eP Pn 12 14 02.4 +1.3
LOR eSn Sn 12 14 57.6 -5.3
comp=E,145nm,0.4s
AVF Avril sur Loir 5.41 301 eP Pn 12 14 02.6 +0.7
AVF eSn Sn 12 14 59.4 -5.0
comp=E,41nm,0.4s
SSF Saint Saulge 5.45 304 eP Pn 12 14 02.9 +0.5
SSF eSn Sn 12 15 00.1 -5.2
comp=E,64nm,0.4s
CONA Conrad Observa 5.49 45 ePn Pn 12 14 03.2 +0.1
comp=E,19nm,0.3s,SNR=35
CONA Sn Sn 12 15 05.5 -0.9
comp=E,60nm,0.5s
KHC Kasperske Hory 5.50 25 ePn Pn 12 14 02.4 -0.8
KHC eSn Sn 12 15 03.7 -2.9
KHC Kasperske Hory 5.50 25 eP Pn 12 14 02.6 -0.6
KHC e 12 15 03.6
KHC MLR MLR
comp=Z,600nm,9.6s
KHC Kasperske Hory 5.50 25 ePN Pn 12 14 02.6 -0.6
KHC eSN Sn 12 15 03.6 -3.1
KHC ex x 12 15 41.0
KHC AMS AMS 12 16 30.0
comp=Z,600nm,9.6s
MEZF Maizieres J'vi 5.56 323 P Pn 12 14 05.7 +1.8
baz=141
MEZF eSn Sn 12 15 02.7 -5.2
GRFO Grafenberg 5.57 8 ePn Pn 12 14 05.1 +1.0
GRFO Grafenberg 5.57 8 eP Pn 12 14 05.1 +1.0
GRA1 Grafenberg Arr 5.57 8 ePn Pn 12 14 03.7 -0.4
GRF Grafenberg Arr 5.57 8 eP Pn 12 14 03.7 -0.4
BGF Bois d'Agland 5.63 297 eP Pn 12 14 05.6 +0.6
BGF eSn Sn 12 15 04.8 -5.1
comp=Z,182nm,0.5s
STON Ston 5.68 101 ePn Pn 12 14 05.9 +0.3
STON Ston 5.68 101 ePn Pn 12 14 05.7 +0.1
SOP Sopron 5.71 50 EPn Pn 12 14 06.0 0.0
SOP Sn Sn 12 15 07.1 -4.6
MTLF Montolieu 5.77 264 eP Pn 12 14 06.8 -0.1
MTLF eSn Sn 12 15 07.8 -5.4
comp=Z,20nm,0.4s
CAF Calviac 5.79 280 eP Pn 12 14 07.7 +0.5
CAF eSn Sn 12 15 09.2 -4.6
TCF Toulx Ste Croi 5.95 293 eP Pn 12 14 10.3 +0.9
TCF eSn Sn 12 15 12.3 -5.5
comp=Z,35nm,0.4s
HYF Humbligny 6.06 303 eP Pn 12 14 09.4 -1.5
HYF eSn Sn 12 15 15.7 -4.8
TIH Tihany 6.11 61 EPn Pn 12 14 09.0 -2.6
TIH Sn Sn 12 15 19.0 -2.7
WLF Walferdange 6.11 335 ePn Pn 12 14 12.2 +0.6
WLF Walferdange 6.11 335 eP Pn 12 14 12.2 +0.6
WLF Walferdange 6.11 335⇑Pn Pn 12 14 13.9 +2.3
WLF ⇑Sn Sn 12 15 28.9 +7.2
comp=N,72nm,0.0s
TREB Trebinje 6.18 101 ePn Pn 12 14 13.0 +0.4
RJF Les Rejaudoux 6.21 283 eP Pn 12 14 15.0 +2.0
RJF eSn Sn 12 15 18.6 -5.6
BRY Bratogost 6.27 99 ePn Pn 12 14 15.1 +1.2
ZST Bratislava 6.31 48 eP Pn 12 14 13.5 -0.7
ZST e 12 15 23.5
ZST Bratislava 6.31 48 ePN Pn 12 14 13.5 -0.7
ZST eSN Sn 12 15 23.5 -2.9
HCY Herceg Novi 6.37 103 ePn Pn 12 14 16.2 +1.1
MORH Mrgy, Hungar 6.37 68 ePn Pn 12 14 15.5 +0.4
MORH Mrgy, Hungar 6.37 68 EPn Pg 12 14 40.1 -2.9
HAPS Han Pijesak,BI 6.37 88 ePn Pn 12 14 14.1 -1.2
UPM Unac-Piva 6.46 96 ePn Pn 12 14 16.9 +0.4
MODS Modra-Piesok 6.51 47 eP Pn 12 14 15.8 -1.2
MODS e 12 15 28.1
MODS Modra-Piesok 6.51 47 ePN Pn 12 14 15.8 -1.2
MODS eSN Sn 12 15 28.1 -3.3
KRUC Moravsky 6.53 39 ePN Pn 12 14 15.4 -1.9
KRUC eSN Sn 12 15 28.8 -3.1
CSKK Cskako 6.54 58 EPn Pn 12 14 17.0 -0.3
CSKK Sn Sn 12 15 28.1 -4.0
PRU Pruhonice 6.55 26 eP Pn 12 14 16.4 -1.2
PRU MLR MLR
comp=Z,600nm,8.5s
PRU Pruhonice 6.55 26 ePN Pn 12 14 16.4 -1.2
PRU AMS AMS 12 17 10.0
comp=Z,600nm,8.5s
GOPC GO Pecny, Ondr 6.57 28 eP Pn 12 14 17.3 -0.6
GOPC MLR MLR
comp=Z,700nm,9.4s
GOPC GO Pecny, Ondr 6.57 28 ePN Pn 12 14 17.3 -0.6
GOPC AMS AMS 12 17 10.0
comp=Z,700nm,9.4s
CLF Chambon-Foret 6.67 308 ePn Pn 12 14 20.1 +0.9

BBLS Lazići 6.72 89 ePn Pn 12 14 19.9 -0.1
LFF La Frestale 6.73 280 eP Pn 12 14 19.8 -0.2
LFF eSn Sn 12 15 31.4 -5.4
TEKS Tekeris 6.77 84 ePn Pn 12 14 18.2 -2.5
SRO Srobarova 6.78 55 eSN Sn 12 15 32.5 -5.5
VRAC Vranov 6.80 39 Pn Pn 12 14 19.3 -1.7
comp=Z,0.6nm,0.3s,baz=231,slow=14,SNR=5.8
VRAC Sn Sn 12 15 34.9 -3.6
comp=Z,2.3nm,0.3s,baz=320,slow=17,SNR=3.6
VRAC Lg Lg 12 16 17.5
comp=Z,1.3nm,0.3s,baz=306,slow=20,SNR=5.4
VRAC Vranov 6.80 39⇑*i*P Pn 12 14 21.1 +0.1
VRAC Vranov 6.80 39 ePN Pn 12 14 19.0 -2.0
PDG Podgorica 6.91 102⇓*i*P Pn 12 14 25.4 +2.9
PDG Podgorica 6.91 102 ePn Pn 12 14 23.7 +1.2
TTG Podgorica 6.91 102 ePn Pn 12 14 23.7 +1.2
TTG Podgorica 6.91 102 eP Pn 12 14 23.7 +1.2
GIVF Givet 6.93 331 eP Pn 12 14 25.9 +3.1
GIVF eSn Sn 12 15 34.8 -6.9
comp=Z,74nm,0.7s
DRME Dracevica, Mon 6.94 104 ePn Pn 12 14 21.7 -1.2
MEM Membach 7.00 338⇑Pn Pn 12 14 25.6 +1.8
MEM ⇑Sn Sn 12 15 41.2 -2.4
comp=E,38nm,0.0s
DOU Dourbes 7.00 330⇑Pn Pn 12 14 26.4 +2.6
DOU ⇑Sn Sn 12 15 42.0 -1.6
comp=E,33nm,0.0s
CLTB Caltabellotta 7.01 159 ePn Pn 12 14 28.4 +4.5
JAVC Velka Javorina 7.01 45 ePN Pn 12 14 23.9 -0.1
BCLA Clavier 7.04 334⇓Pn Pn 12 14 26.5 +2.3
TIP Timpagrande 7.06 133 ePn Pn 12 14 27.7 +3.0
BAIF Baives 7.12 328 eP Pn 12 14 28.0 +2.6
BAIF eSn Sn 12 15 40.0 -6.4
DIVS Divibare 7.12 87 ePn Pn 12 14 24.6 -0.9
EPF Esparros 7.17 264 eP Pn 12 14 26.5 +0.3
EPF eSn Sn 12 15 42.0 -6.0
comp=E,9.9nm,0.3s
BRG Berggiesshubel 7.18 20 PN Pn 12 14 25.6 -0.6
BRG SN Sn 12 15 43.7 -4.3
BRG SG Sg 12 16 36.9 +5.5
comp=E,52nm,1.2s
comp=N,521nm,6.9s
comp=E,323nm,10.7s
comp=Z,743nm,8.5s
BRG Berggiesshubel 7.18 20 P Pn 12 14 25.6 -0.6
BRG 12 15 43.7
BRG smax smax
comp=N,52nm,1.2s
BRG MLR MLR
comp=N,521nm,6.9s
BRG MLR MLR
comp=E,323nm,10.7s
BRG MLR MLR
comp=Z,743nm,8.5s
CLL Collm 7.39 14 ePn Pn 12 14 28.0 -1.1
CLL Collm 7.39 14 ePn Pn 12 14 28.0 -1.1
CLL *e* 12 15 04.0
CLL *e* 12 15 10.0
CLL eSn Sn 12 15 31.0 -22
CLL *e* 12 15 53.0
CLL eSg Sg 12 16 32.0 -6.2
comp=Z,97nm,1.3s
CLL Lmax 12 18 00.0
CLL Collm 7.39 14 eP Pn 12 14 28.0 -1.1
VYHS Vyhne 7.43 51 eP Pn 12 14 28.3 -1.3
VYHS *e* 12 15 49.6
VYHS Vyhne 7.43 51 ePN Pn 12 14 28.3 -1.3
VYHS eSN Sn 12 15 49.6 -4.5
DPC Dobruska-Polom 7.48 32 eP Pn 12 14 28.8 -1.6
DPC *e* 12 15 50.4
DPC MLR MLR
comp=Z,400nm,13.6s
DPC Dobruska-Polom 7.48 32 ePN Pn 12 14 28.8 -1.6
DPC eSN Sn 12 15 50.4 -5.0
DPC AMS AMS 12 17 40.0
comp=Z,400nm,13.6s
UPC Upice 7.49 30 eP Pn 12 14 29.1 -1.4
UPC *e* 12 15 51.8
UPC MLR MLR
comp=Z,700nm,9.5s
UPC Upice 7.49 30 ePN Pn 12 14 29.1 -1.4
UPC eSN Sn 12 15 51.8 -3.9
UPC AMS AMS 12 17 40.0
comp=Z,700nm,9.5s
MORC Moravsky Berou 7.56 40 ePn Pn 12 14 30.6 -0.9
MORC Moravsky Berou 7.56 40⇑*i*P Pn 12 14 31.4 -0.1
MORC Moravsky Berou 7.56 40 eP Pn 12 14 30.6 -0.9
MORC Moravsky Berou 7.56 40 ePN Pn 12 14 30.6 -0.9
CHVC Chvalec 7.58 30 ePN Pn 12 14 30.2 -1.5
MFF Saint Martin d 7.61 292 eP Pn 12 14 33.4 +1.3
MFF eSn Sn 12 15 52.0 -6.4
comp=Z,20nm,0.5s
OSTC Ostas 7.61 31 ePN Pn 12 14 31.1 -1.0
OSTC AMS AMS 12 17 40.0
comp=Z,600nm,9.8s
TIR Tirane 7.72 108 ePn Pn 12 14 35.3 +1.6
TIR Tirane 7.72 108⇓*i*P Pn 12 14 36.5 +2.8
TIR Tirane 7.72 108 eP Pn 12 14 35.3 +1.6
PSZ Piszkesteto 7.77 58 ePn Pn 12 14 35.2 +0.8
PSZ Piszkesteto 7.77 58⇑*i*P Pn 12 14 35.9 +1.5
PSZ Piszkesteto 7.77 58 eP Pn 12 14 35.3 +0.8
PSZ Piszkesteto 7.77 58 EPn Pn 12 14 33.0 -1.4
PSZ Sn Sn 12 16 01.1 -1.6
PSZ Piszkesteto 7.77 58⇓EPg 12 16 52.0
ETSF Etsaut 7.85 264 eP Pn 12 14 38.6 +3.1
ETSF eSn Sn 12 15 58.0 -6.5
comp=Z,5.0nm,0.3s
BZS Buzias 8.30 76⇓*i*P Pn 12 14 42.9 +1.2
LDF La Druitiere 8.33 306 eP Pn 12 14 44.9 +2.9
LDF eSn Sn 12 16 09.8 -6.3
comp=Z,24nm,0.6s
MDVR Moldovita 8.33 82⇑*i*P Pn 12 14 42.2 +0.1
KECS Kecovo 8.38 55 eP Pn 12 14 44.7 +2.1
KECS Kecovo 8.38 55 ePN Pn 12 14 44.7 +2.1
KEST Kesra 8.46 184 Pn Pn 12 14 47.3 +3.4
comp=Z,1.1nm,0.3s,baz=20,slow=4.1,SNR=11
KEST Kesra 8.46 184 ePn Pn 12 14 47.8 +3.9
FLN La Foliniere 8.62 306 eP Pn 12 14 47.7 +1.8
baz=125
FLN eSn Sn 12 16 15.7 -7.6
comp=Z,15nm,0.6s
GRR Gorron 8.67 303 eP Pn 12 14 49.0 +2.3
GRR eSn Sn 12 16 17.2 -7.4
comp=Z,18nm,0.5s
HERR Herculane 8.83 81⇑*i*P Pn 12 14 49.1 +0.2
GZR Gura Zlata 9.10 78⇑*i*P Pn 12 14 53.7 +1.1
DRGR 9.24 69⇑*i*P Pn 12 14 55.6 +1.1
SGMF Saint Gilles 9.67 299 eP Pn 12 15 01.1 +0.8
SGMF eSn Sn 12 16 41.3 -7.8
VTS Vitosha 9.69 95 ePn Pn 12 15 01.3 +0.5
VTS Vitosha 9.69 95 eP Pn 12 15 01.3 +0.5
QUIF Quistinic 9.95 297 eP Pn 12 15 04.1 0.0
QUIF eSn Sn 12 16 47.6 -8.3
ROSF Rostrenen 10.15 299 eP Pn 12 15 07.4 +0.5
ROSF eSn Sn 12 16 51.1 -10
comp=Z,7.1nm,0.4s
KWP Kalwaria Pacla 10.20 53 ePn Pn 12 15 08.0 +0.3
KWP Kalwaria Pacla 10.20 53 eP Pn 12 15 08.0 +0.3
ARR Arges 10.41 78⇓*i*P Pn 12 15 12.2 +1.7
VOIR 10.70 78⇑*i*P Pn 12 15 12.5 +0.6
BUR08 Bucovina Ar. S 11.08 66 ePn Pn 12 15 20.9 +1.1
BURAR Bucovina Array 11.08 67⇑*i*P Pn 12 15 20.3 +0.5
MLR Muntele Rosu 11.33 78 Pn Pn 12 15 25.0 +1.7
comp=Z,0.2nm,0.3s,baz=252,slow=6.4,SNR=2.4
MLR Muntele Rosu 11.33 78 ePn Pn 12 15 24.4 +1.1
MLR Muntele Rosu 11.33 78 P Pn 12 15 25.0 +1.7
ESDC Sonseca Array 11.40 252 Pn Pn 12 15 24.4 +0.3
comp=Z,0.5nm,0.3s,baz=67,slow=14,SNR=31
ESLA Sonseca Array 11.40 252 ePn Pn 12 15 25.8 +1.7
PAB San Pablo 11.72 252 ePn Pn 12 15 30.0 +1.5
PAB San Pablo 11.72 252 eP Pn 12 15 30.0 +1.5
SUW Suwalki 13.03 36 ePn Pn 12 15 46.4 +0.2
SUW Suwalki 13.03 36 eP Pn 12 15 46.4 +0.2
EKA Eskdalemuir Ar 14.04 327 Pn Pn 12 15 58.4 -1.7
baz=140,slow=14,SNR=8.9
EKA Sn Sn 12 18 26.8 -9.2
baz=140,slow=29,SNR=5.0
IDI Anoyia 14.42 123 LR LR 12 22 59.8
comp=Z,57nm,18.1s,baz=268,slow=43
AKASG Malin Array Be 14.47 56 Pn Pn 12 16 05.8 -0.2
baz=247,slow=11,SNR=2.6
AKBB Malin Array Si 14.47 56 ePn Pn 12 16 06.1 +0.1
AKBB Malin Array Si 14.47 56 eP Pn 12 16 06.1 +0.1

HFS Hagfors 16.12 6 Pn Pn 12 16 27.3 -0.5
comp=Z,0.0nm,0.3s,baz=190,slow=14,SNR=2.7
HFS LR LR 12 22 21.1
comp=Z,55nm,19.0s,baz=202,slow=36
MDT Midelt 16.14 230 LR LR 12 21 37.4
comp=Z,136nm,20.1s,baz=36,slow=33
NB2 NORSAR Subarra 16.90 2 P P 12 16 39.9 +0.2
comp=Z,14nm,1.4s,baz=183,slow=11
NB200 NORSAR Array S 16.90 2 ePn Pn 12 16 36.6 -1.1
NOA NORSAR Array B 16.90 2 Pn Pn 12 16 36.6 -1.1
comp=Z,0.0nm,0.3s,baz=183,slow=11,SNR=2.7
NC405 NORSAR Array S 16.99 3 ePn Pn 12 16 38.5 -0.3
comp=Z,50nm,1.4s
NC204 NORSAR Array S 17.13 1 ePn Pn 12 16 40.8 +0.2
comp=Z,20nm,1.1s
VSU Vasula 17.60 30*c*eP P 12 16 46.9 -0.5
VSU pmax pmax
comp=Z,91nm,0.8s
BR101 Keskin Array S 18.05 96 ePn P 12 16 52.7 0.0
BRTR Keskin Array B 18.05 96 P P 12 16 52.7 0.0
baz=295,slow=6.7,SNR=5.5
FINES FINESS Array B 19.71 23 P P 12 17 10.3 -0.2
comp=Z,0.4nm,0.3s,baz=208,slow=8.9,SNR=18
FINES PcP PcP 12 21 26.9 -2.0
comp=Z,0.1nm,0.3s,baz=202,slow=2.8,SNR=4.5
FIA1 FINESS Array S 19.71 23 eP P 12 17 10.7 +0.2
comp=Z,32nm,1.5s
OBN Obninsk 20.20 48 P P 12 17 15.9 -0.1
comp=Z,4.5nm,0.4s,baz=304,slow=15,SNR=3.9
OBN Obninsk 20.20 48 eP P 12 17 15.9 -0.1
comp=Z,26nm,0.4s
OBN Obninsk 20.20 48*de*P P 12 17 15.1 -0.9
OBN *SP sP 12 17 20.0 +0.6
OBN PPP PPP 12 17 38.0
OBN *e*SS Sn 12 21 18.3 +13
OBN *e*SSS SSS 12 21 35.7
OBN pmax pmax
comp=Z,10.0nm,0.4s
OBN MLR MLR
comp=Z,96nm,16.0s
VSR Storozhevoye 20.70 60 eP P 12 17 21.0 -0.4
VSR pmax pmax
comp=Z,40nm,1.5s
MOS Moscow 21.00 47 eP P 12 17 19.5 -5.1
MOS pmax pmax
comp=Z,49nm,1.0s
TAM Tamanrasset 21.66 191 eP P 12 17 34.7 +2.5
comp=Z,12nm,1.3s
TAM Tamanrasset 21.66 191 eP P 12 17 34.7 +2.5
TAM pmax pmax
comp=Z,12nm,1.3s
KIV Kislovodsk 23.34 79 eP P 12 17 51.4 +1.7
KIV pmax pmax
comp=Z,39nm,1.1s
KLMR Klimovskoe 24.16 36 eP P 12 17 55.9 -1.4
KLMR pmax pmax
comp=Z,27nm,0.9s
KLMR Klimovskoe 24.16 36 eP P 12 17 55.9 -1.4
KLMR AMP 12 18 00.0
comp=Z,27nm,0.9s
ZEI Tsey 24.47 81 eP P 12 18 01.6 +1.0
ZEI pmax pmax
comp=Z,5.0nm,0.5s
AKH Akhalkalaki 24.57 85 eP P 12 18 02.5 +1.0
comp=Z,15nm,1.1s
AKH Akhalkalaki 24.57 85 eP P 12 18 02.5 +1.0
AKH pmax pmax
comp=Z,15nm,1.1s
ARA0 ARCESS Array S 26.61 12 eP P 12 18 18.4 -1.1
ARCES ARCESS Array B 26.61 12 P P 12 18 18.4 -1.1
comp=Z,7.4nm,0.3s,baz=197,slow=7.6,SNR=5.0
ARCES PcP PcP 12 21 43.8 +0.7
comp=Z,0.7nm,0.8s,baz=186,slow=1.8,SNR=3.8
BORG Borgarnes 27.03 331 LR LR 12 30 33.5
comp=Z,30nm,18.2s,baz=144,slow=40
PRGR Permogore 27.15 37 eP P 12 18 21.8 -2.6
PRGR pmax pmax
comp=Z,14nm,0.6s
KIRV Kirov 27.97 45 LR LR 12 30 37.7
comp=Z,19nm,18.5s,baz=193,slow=39
JMIC Jan Mayen 28.40 347 LR LR 12 30 30.8
comp=Z,22nm,18.6s,baz=94,slow=38
TOA0 Torodi Ar. Sit 31.75 196 eP P 12 19 05.9 +0.2
comp=Z,9.9nm,1.5s
TORD Torodi Ar. Bea 31.75 196 P P 12 19 05.0 -0.6
comp=Z,1.8nm,1.0s,baz=4.2,slow=8.7,SNR=5.1
TORD LR LR 12 31 38.7
comp=Z,69nm,20.3s,baz=330,slow=36
ARU Arti 32.59 51 P P 12 19 11.8 -0.8
comp=Z,3.5nm,0.6s,baz=277,slow=7.4,SNR=15
ARU Arti 32.59 51 eP P 12 19 12.1 -0.6
comp=Z,11nm,0.7s
ARU Arti 32.59 51*c i*P P 12 19 12.0 -0.6
ARU 12 20 15.5
ARU S S 12 24 28.5 +0.3
ARU SS SS 12 26 21.1 -27
ARU pmax pmax
comp=Z,10.0nm,0.7s
AKTO Aktyubinsk 32.62 62 P P 12 19 12.6 -0.3
comp=Z,4.7nm,0.9s,baz=282,slow=12,SNR=11
SVE Sverdlovsk 33.74 50‖*e*P P 12 19 23.2 +0.5
SVE pmax pmax
comp=Z,20nm,1.0s
ABKAR Akbulak array 34.04 63 eP P 12 19 25.0 -0.4
comp=Z,5.0nm,1.0s
GEYT Alibeck 36.33 83 P P 12 19 45.4 +0.2
comp=Z,2.7nm,0.6s,baz=283,slow=9.0,SNR=4.5
GYA0B ALIBECK ARRAY 36.33 83 eP P 12 19 46.1 +0.9
comp=Z,6.6nm,0.9s
SFJD Kangerlussuaq 39.02 327 eP P 12 20 08.2 +0.7
comp=Z,27nm,1.4s
SFJD Kangerlussuaq 39.02 327 eP P 12 20 08.3 +0.7
SFJD pmax pmax
comp=Z,27nm,1.4s
DBIC Dimbokro 39.59 204 LR LR 12 36 19.1
comp=Z,54nm,18.5s,baz=16,slow=36
BRVK Borovoye 39.68 55 eP P 12 20 13.8 +0.5
comp=Z,9.1nm,1.1s
BRVK Borovoye 39.68 55 *i* P P 12 20 12.0 -1.3
BRVK pmax pmax
comp=Z,8.0nm,1.1s
KKAR Karatay Array 42.86 69 eP P 12 20 40.5 +0.9
comp=Z,6.0nm,0.8s
KKAR Karatay Array 42.86 69 eP P 12 20 40.5 +0.9
KKAR pmax pmax
comp=Z,6.0nm,0.8s
ARSB Arslanbob 45.26 71 eP P 12 20 58.2 -0.9
comp=Z,6.9nm,0.9s
KURK Kurchatov 45.29 56 eP P 12 20 58.8 -0.1
comp=Z,5.5nm,0.9s
KURK Kurchatov 45.29 56*c*eP P 12 20 58.4 -0.5
KURK pmax pmax
comp=Z,7.0nm,1.3s
AAK Ala-Archa 45.72 68 eP P 12 21 03.5 +0.8
comp=Z,5.5nm,0.9s
AAK Ala-Archa 45.72 68*c*eP P 12 21 03.0 +0.3
AAK pmax pmax
comp=Z,7.0nm,1.0s
ZAA0 Zalesovo Array 47.76 50 eP P 12 21 18.4 +0.2
comp=Z,3.4nm,1.0s
ZALV Zalesovo Beam 47.76 50 P P 12 21 18.1 -0.2
comp=Z,2.0nm,0.7s,baz=282,slow=9.0,SNR=7.3
ZALV PP PP 12 23 11.2 +1.5
comp=Z,0.4nm,0.3s,baz=289,slow=9.2,SNR=3.6
ZALV LR LR 12 42 18.1
comp=Z,31nm,21.0s,baz=252,slow=37
KSH Kashi 48.12 71 P P 12 21 24.1 +2.7
KSH sP sP 12 21 30.9 +5.8
KSH PcP PcP 12 22 52.4 +3.5
KSH S S 12 28 22.3 +2.0
KSH SS SS 12 31 44.3 -4.7
KSH pmax pmax
comp=Z,17nm,0.9s
KSH LR LR
comp=Z,220nm,14.1s
MK31 Makanchi Array 49.02 60 eP P 12 21 28.1 0.0
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 49.02 60 eP P 12 21 28.1 0.0
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MK32 Makanchi Array 49.02 60 eP P 12 21 29.6 +1.4
MKAR Makanchi Array 49.02 60 P P 12 21 29.6 +1.4
comp=Z,2.8nm,0.7s,baz=299,slow=5.4,SNR=13
NIL Nilore 49.15 80 eP P 12 21 29.5 +0.2
comp=Z,8.0nm,0.9s
NIL Nilore 49.15 80 eP P 12 21 29.5 +0.2

NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DGZ	**Jazzator, Alta**	**50.90**	**55**	*i* P	**P**	**12 21 43.3**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMQ	**Urumqi**	**53.77**	**61**	*e*P	**P**	**12 22 07.3**	**+3.5**
WMQ				pP	sP	12 22 11.8	+4.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,84nm,4.1s						
TLY	**Talaya**	**58.95**	**46**	*e*P	**P**	**12 22 41.2**	**+0.6**
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**58.95**	**46**	*i* P	**P**	**12 22 41.5**	**+0.9**
SONA0	**Songino Array**	**62.61**	**49**	*e*P	**P**	**12 23 06.2**	**+0.5**
SONM	**Songino Array**	**62.61**	**49**	P	**P**	**12 23 06.2**	**+0.5**
	comp=Z,5.9nm,1.0s,baz=311,slow=4.0,SNR=17						
ULN	**Ulaanbaatar**	**62.95**	**49**	*c*e*P*	**P**	**12 23 08.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA	**Gaotai**	**63.77**	**60**	*e*P	**P**	**12 23 16.0**	**+2.4**
GTA				pP	sP	12 23 20.9	+3.6
GTA				sP	pP	12 23 23.1	+6.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
INK	**Inuvik**	**64.57**	**346**	*e*P	**P**	**12 23 18.7**	**+0.6**
	comp=Z,4.6nm,1.1s						
INK	**Inuvik**	**64.57**	**346**	*e*P	**P**	**12 23 18.7**	**+0.6**
INK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
YKA	**Yellowknife Ar**	**64.85**	**335**	P	**P**	**12 23 18.4**	**-1.6**
	comp=Z,3.1nm,1.1s,baz=43,slow=6.5,SNR=13						
YKB5	**Yellowknife Ar**	**64.85**	**335**	*e*P	**P**	**12 23 18.4**	**-1.6**
BILL	**Bilibino**	**66.67**	**10**	*i* P	**P**	**12 23 33.7**	**+2.0**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
EPYK	**Eagle Plains**	**66.87**	**346**	*e*P	**P**	**12 23 33.8**	**+0.7**
	comp=Z,6.3nm,1.2s						
LZH	**Lanzhou**	**68.33**	**60**	*e*P	**P**	**12 23 43.1**	**+0.1**
LZH				pP	sP	12 23 48.8	+2.1
LZH				sP	pP	12 23 51.4	+5.7
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
EGAK	**Eagle**	**69.07**	**347**	*e*P	**P**	**12 23 47.7**	**+0.9**
	comp=Z,4.8nm,1.0s						
DAWY	**Dawson**	**69.44**	**346**	*e*P	**P**	**12 23 49.3**	**+0.1**
	comp=Z,8.3nm,0.9s						
HHC	**Hu-ho-hao-te**	**69.88**	**52**	*e*P	**P**	**12 23 53.0**	**+0.6**
HHC				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC				pmax	pmax		
	comp=Z,27nm,6.6s						
ILAR	**Eielson Array**	**69.90**	**350**	P	**P**	**12 23 53.0**	**+1.1**
	comp=Z,2.4nm,1.1s,baz=9.5,slow=5.6,SNR=12						
ILB	**Eielson Array**	**69.90**	**350**	*e*P	**P**	**12 23 52.5**	**+0.6**
	comp=Z,5.0nm,1.4s						
COLA	**College**	**69.92**	**350**	*i* P	**P**	**12 23 52.3**	**+0.2**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HDA	**Harding Lake**	**70.25**	**350**	*e*P	**P**	**12 23 55.3**	**+1.1**
	comp=Z,4.6nm,1.0s						
DOT	**Dot Lake**	**70.58**	**348**	*e*P	**P**	**12 23 57.6**	**+1.4**
	comp=Z,3.8nm,1.0s						
CD2	**Chengdu**	**71.61**	**65**	P	**P**	**12 24 01.9**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XAN	**Xi'an**	**72.82**	**59**	P	**P**	**12 24 12.5**	**+2.3**
XAN				pP	sP	12 24 17.3	+3.3
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,130nm,4.4s						
XAN	**Xi'an**	**72.82**	**59**	*e*P	**P**	**12 24 10.5**	**+0.3**
	comp=Z,19nm,1.4s						
XAN	**Xi'an**	**72.82**	**59**	*e*P	**P**	**12 24 10.5**	**+0.3**
XAN				pmax	pmax		
	comp=Z,19nm,1.4s						
KLR	**Kul'dur**	**73.92**	**36**	*i* P	**P**	**12 24 17.2**	**+0.8**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KMI	**Kunming**	**74.74**	**70**	P	**P**	**12 24 22.6**	**+0.8**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**76.57**	**77**	P	**P**	**12 24 31.6**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=305,slow=7.1,SNR=6.6						
CMAR	**Chiang Mai Arr**	**76.57**	**77**	*i* P	**P**	**12 24 33.0**	**+0.9**
YSS	**Yuzh-Sakhalins**	**80.10**	**31**	P	**P**	**12 24 48.0**	**-3.1**
YSS				*e*		12 24 54.1	
NJ2	**Nanjing**	**80.19**	**55**	*e*P	**P**	**12 24 51.8**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**81.18**	**45**	LR	LR	13 05 22.0	
	comp=Z,33nm,18.6s,baz=140,slow=39						
TXAR	**Lajitas Array**	**85.10**	**307**	P	**P**	**12 25 17.1**	**-0.7**
	comp=Z,0.6nm,1.0s,baz=87,slow=4.3,SNR=5.9						
ASAR	**Alice Springs**	**130.11**	**85**	PKP	**PKPdf**	**12 31 49.7**	**-1.9**
	comp=Z,0.3nm,0.8s,baz=331,slow=1.2,SNR=3.6						

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*ISCJB **21** 12:18:12.8±0.4, 44°.15N±0°.03×10°.12E±0°.04, h6km±5km, Error ellipse: s-maj=6.2km s-min=3.3km az=32.9*
*ROM **21** 12:18:13.2±0.2, 44°.18N±0°.01×10°.21E±0°.02, h10km, ML2.5/10, Error ellipse: s-maj=1.6km s-min=0.9km az=45.0*
*LDG **21** 12:18:17.1±0.2, 44°.08N×10°.03E, h2km, Md2.5/2, Ml2.5/4, Error ellipse: s-maj=4.0km s-min=2.0km az=65.0*

ISC 21 12:18:13.4±0.9, 44°.16N±0°.03×10.17E±0°.03, h9km±9km, n30, σ0s71/43, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.16**	**88**	P	**Pg**	**12 18 16.5**	**-0.3**
VLC				S	**Sg**	**12 18 18.9**	**-0.2**
VLC				AML	AML		
	comp=E,3065μm,0.6s						
VLC				AML	AML		
	comp=N,2880μm,0.1s						
VLC				AML	AML		
	comp=E,3065μm,0.6s						
VLC				AML	AML		
	comp=N,3015μm,0.4s						
VLC				AML	AML		
	comp=E,3065μm,0.6s						
VLC				AML	AML		
	comp=N,2875μm,0.1s						
VLC				AML	AML		
	comp=E,3065μm,0.6s						
VLC				AML	AML		
	comp=N,3020μm,0.4s						
VLC				AML	AML		
	comp=N,3020μm,0.4s						
VLC				AML	AML		
	comp=N,2875μm,0.1s						
VLC				AML	AML		
	comp=E,3065μm,0.6s						
VLC				AML	AML		
	comp=E,3065μm,0.6s						
SARO	**Sassorosso**	**0.17**	**80**	P	**Pg**	**12 18 16.6**	**-0.4**
SARO				S	**Sg**	**12 18 19.1**	**-0.4**
SARO				AML	AML		
	comp=E,2795μm,0.4s						
SARO				AML	AML		
	comp=N,3685μm,0.2s						
SARO				AML	AML		
	comp=E,2795μm,0.4s						
SARO				AML	AML		
	comp=N,3685μm,0.2s						
SARO				AML	AML		
	comp=N,3685μm,0.2s						
SARO				AML	AML		
	comp=E,2795μm,0.4s						
CARD	**Cardoso**	**0.26**	**120**	P	**Pg**	**12 18 18.8**	**+0.3**
CARD				S	**Sg**	**12 18 22.4**	**+0.3**
CARD				AML	AML		
	comp=E,1500μm,0.7s						
CARD				AML	AML		
	comp=N,1640μm,0.2s						
ERBM	**Eremo**	**0.32**	**33**	P	**Pg**	**12 18 19.5**	**-0.2**
ERBM				S	**Sg**	**12 18 24.2**	**+0.3**
ERBM				AML	AML		
	comp=E,1130μm,0.7s						
ERBM				AML	AML		
	comp=N,1160μm,1.1s						
ERBM				AML	AML		
	comp=E,1130μm,0.7s						
ERBM				AML	AML		
	comp=N,1160μm,1.1s						
ERBM				AML	AML		
	comp=E,1130μm,0.7s						
ERBM				AML	AML		
	comp=N,1160μm,1.1s						
BDI	**Bagni Di Lucca**	**0.32**	**107**	P	**Pg**	**12 18 19.6**	**-0.1**
BDI				S	**Sg**	**12 18 24.3**	**+0.3**
MAIM	**Mastiano**	**0.34**	**136**	P	**Pg**	**12 18 20.3**	**+0.3**
MAIM				S	**Sg**	**12 18 24.9**	**+0.5**
MAIM				AML	AML		
	comp=E,1670μm,0.3s						
MAIM				AML	AML		
	comp=N,940μm,0.5s						
MAIM				AML	AML		
	comp=E,1670μm,0.3s						
MAIM				AML	AML		
	comp=N,940μm,0.5s						
MAIM				AML	AML		
	comp=E,1670μm,0.3s						
MAIM				AML	AML		
	comp=N,940μm,0.5s						
GRAM	**Graiana**	**0.34**	**348**	P	**Pg**	**12 18 20.0**	**-0.2**
GRAM				S	**Sg**	**12 18 25.0**	**+0.2**
GRAM				AML	AML		
	comp=E,2875μm,0.3s						
GRAM				AML	AML		
	comp=N,2110μm,0.3s						
GRAM				AML	AML		
	comp=E,2870μm,0.3s						
GRAM				AML	AML		
	comp=N,2110μm,0.3s						
GRAM				AML	AML		
	comp=E,2870μm,0.3s						
GRAM				AML	AML		
	comp=N,2110μm,0.3s						
POPM	**Popiglio**	**0.44**	**104**	P	**Pg**	**12 18 21.9**	**0.0**
POPM				AML	AML		
	comp=E,1280μm,1.1s						
POPM				AML	AML		
	comp=N,1600μm,0.2s						
POPM				AML	AML		
	comp=E,1280μm,1.1s						
POPM				AML	AML		
	comp=N,1600μm,0.2s						
POPM				AML	AML		
	comp=E,1280μm,1.1s						
POPM				AML	AML		
	comp=N,1600μm,0.2s						
MSSA	**Maissana**	**0.50**	**289**	P	**Pg**	**12 18 22.9**	**-0.2**
MTCR	**Monte La Croce**	**0.61**	**102**	P	**Pg**	**12 18 25.1**	**0.0**
ZCCA	**Zocca**	**0.61**	**71**	P	**Pg**	**12 18 26.1**	**+0.9**
ZCCA				AML	AML		
	comp=E,292μm,0.4s						
ZCCA				AML	AML		
	comp=N,324μm,0.9s						
ZCCA				AML	AML		
	comp=E,292μm,0.4s						
ZCCA				AML	AML		
	comp=N,324μm,0.9s						
PTF	**Prato**	**0.68**	**106**	P	**Pg**	**12 18 26.7**	**+0.2**
CRMI	**Carmignano**	**0.68**	**122**	P	**Pb**	**12 18 27.6**	**+0.1**
CRMI				AML	AML		
	comp=E,88μm,0.3s						
CRMI				AML	AML		
	comp=N,164μm,0.7s						
CRMI				AML	AML		
	comp=E,88μm,0.3s						
FNVD	**Fontana Vidola**	**0.69**	**89**	P	**Pg**	**12 18 26.4**	**-0.2**
BOB	**Bobbio (Coli)**	**0.80**	**320**	P	**Pg**	**12 18 28.5**	**-0.3**
SEI	**Scarperia**	**0.86**	**96**	P	**Pg**	**12 18 29.9**	**0.0**
SEI				AML	AML		
	comp=E,266μm,0.4s						
SEI				AML	AML		
	comp=N,418μm,0.5s						
SEI				AML	AML		
	comp=E,266μm,0.4s						
SEI				AML	AML		
	comp=N,418μm,0.5s						
SEI				AML	AML		
	comp=N,418μm,0.5s						
RUFI	**Rufina**	**1.02**	**108**	P	**Pg**	**12 18 33.4**	**+0.5**
RUFI				AML	AML		
	comp=E,90μm,1.4s						
RUFI				AML	AML		
	comp=N,95μm,1.4s						
RUFI				AML	AML		
	comp=E,90μm,1.4s						
RUFI				AML	AML		
	comp=N,95μm,1.4s						
CSNT	**Castellina Chi**	**1.06**	**130**	P	**Pb**	**12 18 34.6**	**+0.7**
TRIF	**Trifonti**	**1.17**	**153**	P	**Pg**	**12 18 35.8**	**0.0**
FROS	**Frosini**	**1.19**	**143**	P	**Pg**	**12 18 36.5**	**+0.4**
SFI	**Santa Sofia**	**1.23**	**101**	P	**Pg**	**12 18 37.4**	**+0.3**
CASP	**Castiglione de**	**1.46**	**159**	P	**Pn**	**12 18 39.4**	**-0.5**
PGF	**Pioggiola**	**1.82**	**208**	*e*Pn	**Pb**	**12 18 46.5**	**-0.4**
PGF				*e*Sn	**Sn**	**12 19 06.8**	**-1.4**
SBF	**Sospel**	**1.99**	**263**	*e*Pn	**Pn**	**12 18 48.5**	**+1.2**
SBF				*e*Sn	**Sn**	**12 19 11.7**	**-0.8**
	comp=N,6.7nm,0.2s						
MBDF	**Montbardon**	**2.50**	**284**	*e*Pn	**Pn**	**12 18 56.0**	**+1.6**
MBDF	**Montbardon**	**2.50**	**284**	*e*Pg	**Pg**	**12 19 02.5**	**+1.2**
MBDF				*e*Sn	**Sn**	**12 19 24.4**	**-0.7**
MBDF				*e*Sg	**Sg**	**12 19 34.1**	**+0.4**
	comp=N,2.8nm,0.3s						
FRF	**La Foret Royal**	**2.62**	**258**	*e*Pn	**Pn**	**12 18 56.9**	**+1.1**
FRF				*e*Sn	**Sn**	**12 19 26.2**	**-1.5**
	comp=N,6.7nm,0.3s						
LMR	**La Mourre**	**2.78**	**254**	*e*Pn	**Pn**	**12 18 57.8**	**-0.2**
LMR				*e*Sn	**Sn**	**12 19 29.7**	**-1.9**
LPG	**La Plagne**	**2.78**	**300**	*e*P	**Pb**	**12 19 03.1**	**-0.2**
LPL	**La Plagne**	**2.80**	**300**	*e*P	**Pb**	**12 19 03.3**	**-0.4**

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*STR **21** 12:19:57.8±0.8, 44°.N±7°×1°.0E±1°.2, h18km±13km, MLv4.3/6*
*MOS **21** 12:19:58.4±0.8, 44°.23N×10°.13E, h10km, mb4.3/13, Error ellipse: s-maj=5.9km s-min=4.0km az=65.0*
*NEIC **21** 12:19:58.0±0.0, 44°.17N×10°.12E, h4km, mb4.1/11, ML3.8(ROM), After ROM.*
*LDG **21** 12:19:58.9±0.1, 44°.15N×10°.14E, h8km, Ml4.1/43*
*IDC **21** 12:19:58.6±0.9, 44°.18N×10°.04E, h0km, mb3.9/10, mb1 3.9/18, mb1mx3.8/46, mbtmp3.8/18, ML4.0/7, Error ellipse: s-maj=18.7km s-min=14.2km az=121.0*
*PRU **21** 12:19:58.9±0.0, 44°.23N×10°.16E, h0km*
*ISCJB **21** 12:19:59.5±0.2, 44°.15N±0°.01×10°.13E±0°.01, h17km±2km, mb4.1/24, Error ellipse: s-maj=2.2km s-min=1.6km az=0.9*
*ROM **21** 12:19:59.0±0.2, 44°.177N±0°.008×10°.132E±0°.009, h9km±1km, ML3.8/75, Mw3.7, Error ellipse: s-maj=0.7km s-min=0.7km az=192.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; M_{rr}-3.09; $M_{\theta\theta}$2.48; $M_{\phi\phi}$0.62; $M_{r\theta}$1.28; $M_{r\phi}$-1.30; $M_{\theta r}$-1.58; Fault plane solution: M_o3.72473×10^14^ NP1:ϕ_s105.00000°, δ31.00000°, λ-111.00000°. NP2:ϕ_s310.00000°, δ62.00000°, λ-78.00000°.*
*GEN **21** 12:19:59.3, 44°.18N×10°.13E, h6km±3km, Ml3.7*

ISC 21 12:19:59.6±0.7, 44°.17N±0°.02×10°.10E±0°.02, h6km±4km, n372, σ2s05/453, mb4.1/24, 19C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.21**	**94**	*e*Pg	**Pg**	**12 20 03.3**	**-0.5**
VLC	**Villacollemand**	**0.21**	**94**	*e*Pg	**Pg**	**12 20 03.5**	**-0.2**
VLC				*e*Sg	**Sg**	**12 20 06.5**	**0.0**
VLC	**Villacollemand**	**0.21**	**94**	*e*P	**Pg**	**12 20 03.5**	**-0.2**
VLC				S	**Sg**	**12 20 06.1**	**-0.4**
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33050μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33050μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
VLC				AML	AML		
	comp=E,23250μm,0.9s						
VLC				AML	AML		
	comp=N,33100μm,0.7s						
VLC				AML	AML		
	comp=E,23700μm,0.9s						
VLC				AML	AML		
	comp=N,32350μm,0.7s						
SARO	**Sassorosso**	**0.22**	**87**	P	**Pg**	**12 20 03.6**	**-0.4**
SARO				S	**Sg**	**12 20 06.5**	**-0.3**
SARO	**Sassorosso**	**0.22**	**87**	*i* P	**Pg**	**12 20 03.6**	**-0.4**
SARO				S	**Sg**	**12 20 06.6**	**-0.3**
SARO				AML	AML		
	comp=E,28800μm,1.6s						
SARO				AML	AML		
	comp=N,35500μm,0.4s						
SARO				AML	AML		
	comp=E,28800μm,1.6s						
SARO				AML	AML		
	comp=N,35500μm,0.4s						
SARO				AML	AML		
	comp=E,28800μm,1.6s						
SARO				AML	AML		
	comp=N,35500μm,0.4s						
SARO				AML	AML		
	comp=E,28800μm,1.6s						
SARO				AML	AML		
	comp=N,35500μm,0.4s						
SARO				AML	AML		
	comp=E,28800μm,1.6s						
CARD	**Cardoso**	**0.31**	**118**	P	**Pg**	**12 20 05.6**	**-0.2**
CARD				S	**Sg**	**12 20 09.5**	**-0.4**
CARD	**Cardoso**	**0.31**	**118**	*e*P	**Pg**	**12 20 05.5**	**-0.3**
CARD				S	**Sg**	**12 20 09.9**	**0.0**
CARD				AML	AML		
	comp=E,18700μm,0.4s						
CARD				AML	AML		
	comp=N,16800μm,0.5s						
CARD				AML	AML		
	comp=E,18700μm,0.4s						
CARD				AML	AML		
	comp=N,16800μm,0.5s						
CARD				AML	AML		
	comp=E,18700μm,0.4s						
CARD				AML	AML		
	comp=N,16800μm,0.5s						
CARD				AML	AML		
	comp=N,16800μm,0.5s						
CARD				AML	AML		
	comp=E,18700μm,0.4s						
CARD				AML	AML		
	comp=N,16800μm,0.5s						
CARD				AML	AML		
	comp=E,18700μm,0.4s						
GRAM	**Graiana**	**0.32**	**356**	P	**Pg**	**12 20 05.7**	**-0.2**
GRAM				S	**Sg**	**12 20 10.1**	**-0.1**
GRAM	**Graiana**	**0.32**	**356**	P	**Pg**	**12 20 05.8**	**-0.2**
GRAM				S	**Sg**	**12 20 10.1**	**-0.1**
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
ERBM	**Eremo**	**0.33**	**42**	*i* P	**Pg**	**12 20 05.8**	**-0.4**
ERBM				S	**Sg**	**12 20 10.5**	**-0.1**
BDI	**Bagni Di Lucca**	**0.37**	**107**	*i* P	**Pg**	**12 20 06.4**	**-0.5**
BDI				S	**Sg**	**12 20 11.9**	**0.0**
BDI				AML	AML		
	comp=E,12935μm,0.4s						
BDI				AML	AML		
	comp=N,10850μm,0.7s						
BDI				AML	AML		
	comp=E,11800μm,0.5s						
BDI				AML	AML		
	comp=N,13550μm,0.7s						
BDI				AML	AML		
	comp=E,12965μm,0.4s						
BDI				AML	AML		
	comp=N,10900μm,0.7s						
BDI				AML	AML		
	comp=E,11800μm,0.5s						
BDI				AML	AML		
	comp=N,13550μm,0.7s						
BDI				AML	AML		
	comp=E,11800μm,0.5s						
BDI				AML	AML		
	comp=E,12965μm,0.4s						
BDI				AML	AML		
	comp=N,13550μm,0.7s						
BDI				AML	AML		
	comp=N,10900μm,0.7s						
BDI				AML	AML		
	comp=N,13550μm,0.7s						
MAIM	**Mastiano**	**0.38**	**132**	P	**Pg**	**12 20 07.0**	**0.0**
MAIM				S	**Sg**	**12 20 12.4**	**+0.3**
MAIM	**Mastiano**	**0.38**	**132**	*i* P	**Pg**	**12 20 07.0**	**0.0**
MAIM				S	**Sg**	**12 20 12.4**	**+0.3**
MAIM				AML	AML		
	comp=E,21050μm,0.4s						
MAIM				AML	AML		
	comp=N,11190μm,0.5s						
MAIM				AML	AML		
	comp=E,21050μm,0.4s						
MAIM				AML	AML		
	comp=N,11190μm,0.5s						
MAIM				AML	AML		
	comp=E,21050μm,0.4s						
MAIM				AML	AML		
	comp=N,11190μm,0.5s						
MAIM				AML	AML		
	comp=E,21050μm,0.4s						
MAIM				AML	AML		
	comp=N,11190μm,0.5s						
NEVI	**Neviano degli**	**0.44**	**21**	P	**Pg**	**12 20 08.3**	**+0.1**
MSSA	**Maissana**	**0.44**	**289**	*e*P	**Pg**	**12 20 08.8**	**+0.5**
MSSA				S	**Sg**	**12 20 14.8**	**+0.8**
MSSA				AML	AML		
	comp=E,13500μm,1.2s						
MSSA				AML	AML		
	comp=N,11395μm,0.5s						
MSSA				AML	AML		
	comp=E,13500μm,1.2s						
MSSA				AML	AML		
	comp=N,11395μm,0.5s						
MSSA				AML	AML		
	comp=E,13500μm,1.2s						
MSSA				AML	AML		
	comp=N,11395μm,0.5s						
MSSA				AML	AML		
	comp=N,11395μm,0.5s						
MSSA				AML	AML		
	comp=E,13500μm,1.2s						
MSSA				AML	AML		
	comp=N,11395μm,0.5s						
MSSA				AML	AML		
	comp=E,13500μm,1.2s						
POPM	**Popiglio**	**0.49**	**105**	P	**Pg**	**12 20 08.5**	**-0.5**

POPM				S	Sg	12 20 15.1	-0.4
POPM	**Popiglio**	**0.49**	**105**	P	**Pg**	**12 20 08.6**	**-0.5**
POPM				AML	AML		
	comp=E,15300µm,0.4s						
POPM				AML	AML		
	comp=N,11600µm,1.4s						
POPM				AML	AML		
	comp=E,15300µm,0.4s						
POPM				AML	AML		
	comp=N,11600µm,1.4s						
POPM				AML	AML		
	comp=E,15300µm,0.4s						
POPM				AML	AML		
	comp=N,11600µm,1.4s						
POPM				AML	AML		
	comp=N,11600µm,1.4s						
POPM				AML	AML		
	comp=E,15300µm,0.4s						
POPM				AML	AML		
	comp=N,11600µm,1.4s						
POPM				AML	AML		
	comp=E,15300µm,0.4s						
PRMA	**PARMA**	**0.61**	**14**	*e*P	**Pg**	**12 20 12.0**	**+0.6**
PRMA				AML	AML		
	comp=E,26700µm,0.5s						
PRMA				AML	AML		
	comp=N,42850µm,0.4s						
PRMA				AML	AML		
	comp=E,26700µm,0.5s						
PRMA				AML	AML		
	comp=N,42850µm,0.4s						
PRMA				AML	AML		
	comp=E,26700µm,0.5s						
PRMA				AML	AML		
	comp=N,42850µm,0.4s						
PRMA				AML	AML		
	comp=E,26700µm,0.5s						
PRMA				AML	AML		
	comp=N,42850µm,0.4s						
PRMA				AML	AML		
	comp=E,26700µm,0.5s						
ZCCA	**Zocca**	**0.65**	**74**	P	**Pb**	**12 20 13.0**	**-0.5**
ZCCA				AML	AML		
	comp=E,11160µm,0.8s						
ZCCA				AML	AML		
	comp=N,15650µm,0.8s						
ZCCA				AML	AML		
	comp=E,11105µm,0.8s						
ZCCA				AML	AML		
	comp=N,16000µm,0.8s						
ZCCA				AML	AML		
	comp=E,11150µm,0.8s						
ZCCA				AML	AML		
	comp=N,15700µm,0.8s						
ZCCA				AML	AML		
	comp=E,11105µm,0.8s						
ZCCA				AML	AML		
	comp=N,16000µm,0.8s						
ZCCA				AML	AML		
	comp=N,16000µm,0.8s						
ZCCA				AML	AML		
	comp=N,15700µm,0.8s						
ZCCA				AML	AML		
	comp=E,11150µm,0.8s						
ZCCA				AML	AML		
	comp=E,11105µm,0.8s						
ZCCA				AML	AML		
	comp=N,15700µm,0.8s						
ZCCA				AML	AML		
	comp=N,16000µm,0.8s						
ZCCA				AML	AML		
	comp=E,11105µm,0.8s						
ZCCA				AML	AML		
	comp=E,11150µm,0.8s						
MTCR	**Monte La Croce**	**0.66**	**102**	P	**Pg**	**12 20 11.7**	**-0.7**
MTCR				S	**Sb**	**12 20 21.6**	**-1.6**
MTCR				AML	AML		
	comp=E,6120µm,0.4s						
MTCR				AML	AML		
	comp=N,8905µm,0.6s						
MTCR				AML	AML		
	comp=E,6120µm,0.4s						
MTCR				AML	AML		
	comp=N,8905µm,0.6s						
MTCR				AML	AML		
	comp=E,6125µm,0.4s						
MTCR				AML	AML		
	comp=N,8930µm,0.6s						
MTCR				AML	AML		
	comp=E,6125µm,0.4s						
MTCR				AML	AML		
	comp=N,8930µm,0.6s						
MTCR				AML	AML		
	comp=E,6125µm,0.4s						
MTCR				AML	AML		
	comp=N,8930µm,0.6s						
GORR	**Gorreto**	**0.72**	**307**	P	**Pg**	**12 20 13.5**	**0.0**
GORR				S	**Sg**	**12 20 23.6**	**+0.7**
GORR	**Gorreto**	**0.72**	**307**	P	**Pg**	**12 20 13.6**	**0.0**
GORR				AML	AML		
	comp=E,7515µm,0.6s						
GORR				AML	AML		
	comp=N,8870µm,0.6s						
GORR				AML	AML		
	comp=E,7515µm,0.6s						
GORR				AML	AML		
	comp=N,8870µm,0.6s						
GORR				AML	AML		
	comp=E,7515µm,0.6s						
GORR				AML	AML		
	comp=N,8870µm,0.6s						
PTF	**Prato**	**0.73**	**107**	P	**Pg**	**12 20 12.9**	**-0.8**
CRMI	**Carmignano**	**0.73**	**121**	P	**Pg**	**12 20 13.9**	**+0.2**
CRMI				AML	AML		
	comp=E,6800µm,0.4s						
CRMI				AML	AML		
	comp=N,6350µm,1.2s						
CRMI				AML	AML		
	comp=E,2830µm,0.4s						
CRMI				AML	AML		
	comp=N,2620µm,1.2s						
CRMI				AML	AML		
	comp=E,6800µm,0.4s						
CRMI				AML	AML		
	comp=N,6350µm,1.2s						
CRMI				AML	AML		
	comp=E,2830µm,0.4s						
CRMI				AML	AML		
	comp=N,2620µm,1.2s						
CRMI				AML	AML		
	comp=N,6350µm,1.2s						
CRMI				AML	AML		
	comp=N,2620µm,1.2s						
CRMI				AML	AML		
	comp=E,6800µm,0.4s						
CRMI				AML	AML		
	comp=E,2830µm,0.4s						
CRMI				AML	AML		
	comp=N,6350µm,1.2s						
CRMI				AML	AML		
	comp=N,2620µm,1.2s						
CRMI				AML	AML		
	comp=E,6800µm,0.4s						
CRMI				AML	AML		
	comp=E,2830µm,0.4s						
FNVD	**Fontana Vidola**	**0.74**	**90**	*e*P	**Pg**	**12 20 13.1**	**-0.7**
FNVD				AML	AML		
	comp=E,11850µm,0.6s						
FNVD				AML	AML		
	comp=N,10100µm,1.1s						
FNVD				AML	AML		
	comp=E,11850µm,0.6s						
FNVD				AML	AML		
	comp=N,10100µm,1.1s						
FNVD				AML	AML		
	comp=E,11850µm,0.6s						
FNVD				AML	AML		
	comp=N,10100µm,1.1s						
BOB	**Bobbio (Coli)**	**0.76**	**322**	P	**Pg**	**12 20 14.2**	**0.0**
BOB				AML	AML		
	comp=E,10650µm,0.3s						
BOB				AML	AML		
	comp=N,18400µm,0.6s						
BOB				AML	AML		
	comp=E,10700µm,0.4s						
BOB				AML	AML		
	comp=N,19600µm,0.6s						
BOB				AML	AML		
	comp=E,10670µm,0.3s						
BOB				AML	AML		
	comp=N,18400µm,0.6s						
BOB				AML	AML		
	comp=E,10700µm,0.4s						
BOB				AML	AML		
	comp=N,19600µm,0.6s						
BOB				AML	AML		
	comp=E,10700µm,0.4s						
BOB				AML	AML		
	comp=E,10670µm,0.3s						
BOB				AML	AML		
	comp=N,18400µm,0.6s						
BOB				AML	AML		
	comp=N,19600µm,0.6s						
BOB				AML	AML		
	comp=E,10700µm,0.4s						
BOB				AML	AML		
	comp=E,10670µm,0.3s						
BOB				AML	AML		
	comp=N,18400µm,0.6s						
BOB				AML	AML		
	comp=N,19600µm,0.6s						
SEI	**Scarperia**	**0.91**	**97**	P	**Pg**	**12 20 15.9**	**-1.2**
SEI				AML	AML		
	comp=E,7635µm,0.6s						
SEI				AML	AML		
	comp=N,14500µm,0.5s						
SEI				AML	AML		
	comp=E,7635µm,0.6s						
SEI				AML	AML		
	comp=N,14500µm,0.5s						
SEI				AML	AML		
	comp=N,14500µm,0.5s						
SEI				AML	AML		
	comp=E,7635µm,0.6s						
SEI				AML	AML		
	comp=N,14500µm,0.5s						
SEI				AML	AML		
	comp=E,7635µm,0.6s						
RAVA	**Ravarino**	**0.93**	**51**	AML	AML		
	comp=E,20100µm,1.3s						
RAVA				AML	AML		
	comp=E,20100µm,1.3s						
RAVA				AML	AML		
	comp=N,20450µm,0.6s						
RAVA				AML	AML		
	comp=N,20450µm,0.6s						
RAVA				AML	AML		
	comp=N,20450µm,0.6s						
RAVA				AML	AML		
	comp=E,20100µm,1.3s						
RAVA				AML	AML		
	comp=N,20450µm,0.6s						
RAVA				AML	AML		
	comp=E,20100µm,1.3s						
BRIS	**BRISIGHELLA**	**1.01**	**91**	AML	AML		
	comp=N,7705µm,1.5s						
BRIS				AML	AML		
	comp=E,8255µm,0.6s						
BRIS				AML	AML		
	comp=N,7705µm,1.5s						
BRIS				AML	AML		
	comp=E,8255µm,0.6s						
BRIS				AML	AML		
	comp=E,8255µm,0.6s						
BRIS				AML	AML		
	comp=N,7705µm,1.5s						
RUFI	**Rufina**	**1.07**	**108**	P	**Pg**	**12 20 19.4**	**-0.8**
RUFI				AML	AML		
	comp=E,2305µm,0.7s						
RUFI				AML	AML		
	comp=N,2680µm,0.6s						
RUFI				AML	AML		
	comp=E,2303µm,0.7s						
RUFI				AML	AML		
	comp=N,2705µm,0.7s						
RUFI				AML	AML		
	comp=E,2303µm,0.7s						
RUFI				AML	AML		
	comp=N,2705µm,0.7s						
RUFI				AML	AML		
	comp=E,2303µm,0.7s						
RUFI				AML	AML		
	comp=N,2705µm,0.7s						
FIU	**Minerbio Fiu**	**1.10**	**64**	AML	AML		
	comp=E,14250µm,1.0s						
FIU				AML	AML		
	comp=E,14250µm,1.0s						
FIU				AML	AML		
	comp=N,13000µm,0.8s						
FIU				AML	AML		
	comp=E,14250µm,1.0s						
FIU				AML	AML		
	comp=N,13000µm,0.8s						
FIU				AML	AML		
	comp=N,13000µm,0.8s						
CSNT	**Castellina Chi**	**1.11**	**129**	P	**Pg**	**12 20 20.2**	**-0.8**
CSNT				AML	AML		
	comp=E,2250µm,0.6s						
CSNT				AML	AML		
	comp=N,4505µm,0.6s						
CSNT				AML	AML		
	comp=E,2250µm,0.6s						
CSNT				AML	AML		
	comp=N,4505µm,0.6s						
CSNT				AML	AML		
	comp=E,2250µm,0.6s						
CSNT				AML	AML		
	comp=N,4505µm,0.6s						
CSNT				AML	AML		
	comp=E,2250µm,0.6s						
CSNT				AML	AML		
	comp=N,4505µm,0.6s						
PCP	**Piancastagn**	**1.18**	**289**	P	**Pg**	**12 20 21.3**	**-0.9**
PCP				AML	AML		
	comp=E,2635µm,0.6s						
PCP				AML	AML		
	comp=N,3050µm,0.5s						
PCP				AML	AML		
	comp=E,2635µm,0.6s						
PCP				AML	AML		
	comp=N,3050µm,0.5s						
PCP				AML	AML		
	comp=E,2635µm,0.6s						
PCP				AML	AML		
	comp=N,3050µm,0.5s						
PCP				AML	AML		
	comp=E,2635µm,0.6s						
PCP				AML	AML		
	comp=N,3050µm,0.5s						
TRIF	**Trifonti**	**1.21**	**151**	P	**Pb**	**12 20 22.6**	**-0.3**
TRIF				AML	AML		
	comp=E,1700µm,1.6s						
TRIF				AML	AML		
	comp=N,2280µm,0.6s						
TRIF				AML	AML		
	comp=E,1700µm,1.6s						
TRIF				AML	AML		
	comp=N,2280µm,0.6s						
TRIF				AML	AML		
	comp=E,1700µm,1.6s						
TRIF				AML	AML		
	comp=N,2280µm,0.6s						
TRIF				AML	AML		
	comp=E,1700µm,1.6s						
TRIF				AML	AML		
	comp=N,2280µm,0.6s						
FROS	**Frosini**	**1.23**	**141**	P	**Pb**	**12 20 22.8**	**-0.5**
FROS				AML	AML		
	comp=E,3880µm,0.7s						
FROS				AML	AML		
	comp=N,5245µm,1.1s						
FROS				AML	AML		
	comp=E,3880µm,0.8s						
FROS				AML	AML		
	comp=N,5245µm,1.1s						
FROS				AML	AML		
	comp=E,3880µm,0.8s						
FROS				AML	AML		
	comp=N,5245µm,1.1s						
FROS				AML	AML		
	comp=E,3880µm,0.8s						
FROS				AML	AML		
	comp=N,5245µm,1.1s						
QLNO	**Quiliano**	**1.27**	**277**	P	**Pn**	**12 20 23.1**	**-0.8**
QLNO				AML	AML		
	comp=E,3340µm,0.6s						
QLNO				AML	AML		
	comp=N,4765µm,0.7s						
QLNO				AML	AML		
	comp=E,3340µm,0.6s						
QLNO				AML	AML		
	comp=N,4770µm,0.7s						
QLNO				AML	AML		
	comp=N,4770µm,0.7s						
QLNO				AML	AML		
	comp=E,3340µm,0.6s						
QLNO				AML	AML		
	comp=N,4770µm,0.7s						
QLNO				AML	AML		
	comp=E,3340µm,0.6s						
ASQU	**Asqua**	**1.28**	**107**	P	**Pn**	**12 20 22.3**	**-1.7**
ASQU				AML	AML		
	comp=E,2030µm,1.4s						
ASQU				AML	AML		
	comp=N,1430µm,0.7s						
ASQU				AML	AML		
	comp=E,2030µm,1.4s						
ASQU				AML	AML		
	comp=N,1430µm,0.7s						
ASQU				AML	AML		
	comp=E,2030µm,1.4s						
ASQU				AML	AML		
	comp=N,1430µm,0.7s						
FINB	**Finale Ligure**	**1.28**	**271**	P	**Pn**	**12 20 23.1**	**-0.8**
FINB				AML	AML		
	comp=E,2680µm,0.4s						
FINB				AML	AML		
	comp=N,3095µm,0.3s						
FINB				AML	AML		
	comp=E,2680µm,0.4s						
FINB				AML	AML		
	comp=N,3095µm,0.3s						
FINB				AML	AML		
	comp=N,3095µm,0.3s						
FINB				AML	AML		
	comp=E,2680µm,0.4s						
FINB				AML	AML		
	comp=N,3095µm,0.3s						
FINB				AML	AML		
	comp=E,2680µm,0.4s						
CELB	**S.Piero in Cam**	**1.43**	**177**	P	**Pn**	**12 20 24.7**	**-1.4**
CELB				AML	AML		
	comp=E,776µm,0.4s						
CELB				AML	AML		
	comp=N,800µm,0.4s						
CELB				AML	AML		
	comp=E,776µm,0.4s						
CELB				AML	AML		
	comp=N,800µm,0.4s						
CELB				AML	AML		
	comp=E,776µm,0.4s						
CELB				AML	AML		
	comp=N,800µm,0.4s						
RORO	**Rocca Rossa**	**1.47**	**268**	P	**Pn**	**12 20 25.8**	**-0.8**
RORO				AML	AML		
	comp=E,1585µm,1.0s						
RORO				AML	AML		
	comp=N,1560µm,1.2s						
RORO				AML	AML		
	comp=N,1560µm,1.2s						
RORO				AML	AML		
	comp=E,1585µm,1.0s						
RORO				AML	AML		
	comp=N,1560µm,1.2s						
RORO				AML	AML		
	comp=E,1585µm,1.0s						
CASP	**Castiglione de**	**1.49**	**158**	P	**Pn**	**12 20 25.8**	**-1.1**
CASP				AML	AML		
	comp=E,1125µm,0.7s						
CASP				AML	AML		
	comp=N,1036µm,0.6s						
CASP				AML	AML		
	comp=E,1125µm,0.7s						
CASP				AML	AML		
	comp=N,1036µm,0.6s						
CASP				AML	AML		
	comp=N,1036µm,0.6s						
CASP				AML	AML		
	comp=E,1125µm,0.7s						
CASP				AML	AML		
	comp=N,1036µm,0.6s						
CASP				AML	AML		
	comp=E,1125µm,0.7s						
BALD	**Monte Baldo**	**1.59**	**18**	*e*Pg	**Pb**	**12 20 29.1**	**-0.5**
BALD				*e*Sg	**Sg**	**12 20 51.9**	**+1.0**
CAFI	**Castiglion Fio**	**1.59**	**121**	P	**Pn**	**12 20 27.3**	**-1.0**
CAFI				AML	AML		
	comp=E,833µm,0.8s						
CAFI				AML	AML		
	comp=N,938µm,0.6s						
CAFI				AML	AML		
	comp=E,867µm,0.8s						
CAFI				AML	AML		
	comp=N,824µm,0.5s						
CAFI				AML	AML		
	comp=E,866µm,0.8s						
CAFI				AML	AML		
	comp=N,829µm,0.5s						
CAFI				AML	AML		
	comp=N,829µm,0.5s						
CAFI				AML	AML		
	comp=E,866µm,0.8s						
CAFI				AML	AML		
	comp=N,829µm,0.5s						
CAFI				AML	AML		
	comp=E,866µm,0.8s						
IMI	**Imperia**	**1.61**	**261**	P	**Pn**	**12 20 27.8**	**-0.8**
IMI				AML	AML		
	comp=E,2680µm,0.6s						
IMI				AML	AML		
	comp=N,3925µm,0.6s						
IMI				AML	AML		
	comp=E,2680µm,0.6s						
IMI				AML	AML		
	comp=N,3925µm,0.6s						
IMI				AML	AML		
	comp=E,2680µm,0.6s						
IMI				AML	AML		
	comp=N,3925µm,0.6s						
IMI				AML	AML		
	comp=E,2680µm,0.6s						
IMI				AML	AML		
	comp=N,3925µm,0.6s						
GBOS	**Grotte di Boss**	**1.63**	**273**	P	**Pn**	**12 20 28.2**	**-0.6**
GBOS				AML	AML		
	comp=E,959µm,0.5s						
GBOS				AML	AML		
	comp=N,1305µm,0.5s						
GBOS				AML	AML		
	comp=N,1305µm,0.5s						
GBOS				AML	AML		
	comp=E,959µm,0.5s						
GBOS				AML	AML		
	comp=N,1305µm,0.5s						
GBOS				AML	AML		
	comp=E,959µm,0.5s						
TEOL	**Teolo**	**1.63**	**43**	*e*Pg	**Pn**	**12 20 29.2**	**+0.4**
TEOL				*e*Sg	**Sg**	**12 20 52.4**	**+0.4**
TEOL	**Teolo**	**1.63**	**43**	P	**Pn**	**12 20 28.4**	**-0.4**
TEOL				AML	AML		
	comp=E,15350µm,0.8s						
TEOL				AML	AML		
	comp=N,10255µm,0.4s						
TEOL				AML	AML		
	comp=N,10255µm,0.4s						
TEOL				AML	AML		
	comp=E,15350µm,0.8s						
TEOL				AML	AML		
	comp=N,10255µm,0.4s						
TEOL				AML	AML		
	comp=E,15350µm,0.8s						
PARC	**Parchiule**	**1.63**	**108**	P	**Pn**	**12 20 27.4**	**-1.5**
PARC				AML	AML		
	comp=E,1118µm,0.9s						
PARC				AML	AML		
	comp=N,1190µm,0.6s						
PARC				AML	AML		
	comp=N,1190µm,0.6s						

PARC				AML	AML		
	comp=E,1118μm,0.9s						
PARC				AML	AML		
	comp=N,1190μm,0.6s						
PARC				AML	AML		
	comp=E,1118μm,0.9s						
MAGA	**Magasa**	**1.65**	**13**	*e*Pg	**Pn**	**12 20 29.8**	**+0.6**
MAGA				*e*Sg	**Sg**	**12 20 52.9**	**+0.4**
MAGA	**Magasa**	**1.65**	**13**	P	**Pn**	**12 20 28.7**	**-0.4**
MAGA				AML	AML		
	comp=E,12450μm,0.7s						
MAGA				AML	AML		
	comp=N,8610μm,0.5s						
MAGA				AML	AML		
	comp=N,8610μm,0.5s						
MAGA				AML	AML		
	comp=E,12450μm,0.7s						
MAGA				AML	AML		
	comp=N,8610μm,0.5s						
MAGA				AML	AML		
	comp=E,12450μm,0.7s						
MGRO	**Montegrosso**	**1.66 266**		P	**Pn**	**12 20 28.6**	**-0.8**
MGRO				AML	AML		
	comp=E,4040μm,0.8s						
MGRO				AML	AML		
	comp=N,2695μm,0.4s						
MGRO				AML	AML		
	comp=E,4035μm,0.8s						
MGRO				AML	AML		
	comp=N,2695μm,0.4s						
MGRO				AML	AML		
	comp=N,2695μm,0.4s						
MGRO				AML	AML		
	comp=E,4035μm,0.8s						
MGRO				AML	AML		
	comp=N,2695μm,0.4s						
MGRO				AML	AML		
	comp=E,4035μm,0.8s						
NEGI	**Seborga**	**1.76 260**		P	**Pn**	**12 20 29.9**	**-0.8**
NEGI				AML	AML		
	comp=E,2545μm,0.5s						
NEGI				AML	AML		
	comp=N,4590μm,0.5s						
NEGI				AML	AML		
	comp=N,4590μm,0.5s						
NEGI				AML	AML		
	comp=E,2545μm,0.5s						
NEGI				AML	AML		
	comp=N,4590μm,0.5s						
NEGI				AML	AML		
	comp=E,2545μm,0.5s						
MONC	**Moncucco Torin**	**1.79 301**		AML	AML		
	comp=E,4075μm,0.6s						
MONC				AML	AML		
	comp=N,4465μm,0.8s						
MONC				AML	AML		
	comp=N,4465μm,0.8s						
MONC				AML	AML		
	comp=E,4075μm,0.6s						
MONC				AML	AML		
	comp=N,4465μm,0.8s						
MONC				AML	AML		
	comp=E,4075μm,0.6s						
PE3	**Peglio**	**1.79 105**		AML	AML		
	comp=N,3010μm,0.6s						
PE3				AML	AML		
	comp=E,2455μm,0.7s						
PE3				AML	AML		
	comp=N,3010μm,0.6s						
PE3				AML	AML		
	comp=E,2455μm,0.7s						
PE3				AML	AML		
	comp=N,3010μm,0.6s						
PE3				AML	AML		
	comp=E,2455μm,0.7s						
PGF	**Pioggiola**	**1.81 207**		*e*Pn	**Pn**	**12 20 29.0**	**-2.4**
PGF	**Pioggiola**	**1.81 207**		*e*P	**Pn**	**12 20 30.7**	**-0.7**
PGF				*e*Sn	**Sn**	**12 20 51.3**	**-3.4**
	comp=E,490nm,0.3s						
PGF	**Pioggiola**	**1.81 207**		*e*Pn	**Pn**	**12 20 30.7**	**-0.7**
PGF	**Pioggiola**	**1.81 207**		*e*P	**Pn**	**12 20 30.7**	**-0.7**
SAOF	**Saorge**	**1.84 265**		Pn	**Pn**	**12 20 31.4**	**-0.4**
SAOF	**Saorge**	**1.84 265**		AML	AML		
	comp=N,3865μm,0.6s						
SAOF				AML	AML		
	comp=E,3615μm,0.6s						
SAOF				AML	AML		
	comp=E,3615μm,0.6s						
SAOF				AML	AML		
	comp=N,3865μm,0.6s						
SAOF				AML	AML		
	comp=N,3865μm,0.6s						
SAOF				AML	AML		
	comp=E,3615μm,0.6s						
RNI	**Roncone**	**1.84**	**11**	*e*Pn	**Pn**	**12 20 32.6**	**+0.6**
RNI				*e*Sn	**Sb**	**12 20 57.8**	**+0.5**
ATVO	**AVT- Monte Val**	**1.85 115**		AML	AML		
	comp=E,1134μm,0.5s						
ATVO				AML	AML		
	comp=N,1162μm,1.0s						
ATVO				AML	AML		
	comp=N,1162μm,1.0s						
ATVO				AML	AML		
	comp=E,1134μm,0.5s						
ATVO				AML	AML		
	comp=N,1162μm,1.0s						
ATVO				AML	AML		
	comp=E,1134μm,0.5s						
PIEI	**Pieia**	**1.87 109**		AML	AML		
	comp=N,508μm,0.8s						
PIEI				AML	AML		
	comp=E,561μm,1.1s						
PIEI				AML	AML		
	comp=N,508μm,0.8s						
PIEI				AML	AML		
	comp=E,561μm,1.1s						
PIEI				AML	AML		
	comp=N,508μm,0.8s						
PIEI				AML	AML		
	comp=E,561μm,1.1s						
MAON	**Monte Argentar**	**1.90 156**		P	**Pn**	**12 20 31.6**	**-0.9**
MAON				AML	AML		
	comp=E,548μm,0.8s						
MAON				AML	AML		
	comp=N,483μm,0.5s						
MAON				AML	AML		
	comp=E,548μm,0.8s						
MAON				AML	AML		
	comp=N,483μm,0.5s						
MAON				AML	AML		
	comp=E,548μm,0.8s						
MAON				AML	AML		
	comp=N,483μm,0.5s						
ATTE	**AVT- Monte Tez**	**1.90 120**		AML	AML		
	comp=E,714μm,1.5s						
ATTE				AML	AML		
	comp=E,714μm,1.5s						
ATTE				AML	AML		
	comp=N,842μm,1.6s						
ATTE				AML	AML		
	comp=E,714μm,1.5s						
ATTE				AML	AML		
	comp=N,842μm,1.6s						
ATTE				AML	AML		
	comp=N,842μm,1.6s						
MABI	**Malga Bissina**	**1.91**	**9⇑**	*e*Pn	**Pn**	**12 20 32.8**	**-0.1**
MABI	**Malga Bissina**	**1.91**	**9**	P	**Pn**	**12 20 32.7**	**-0.1**
MABI				AML	AML		
	comp=E,1140μm,0.6s						
MABI				AML	AML		
	comp=N,750μm,0.7s						
MABI				AML	AML		
	comp=N,750μm,0.7s						
MABI				AML	AML		
	comp=E,1140μm,0.6s						
MABI				AML	AML		
	comp=N,750μm,0.7s						
MABI				AML	AML		
	comp=E,1140μm,0.6s						
ENR	**Entracque**	**1.93 273**		AML	AML		
	comp=N,1110μm,0.5s						
ENR				AML	AML		
	comp=E,1200μm,0.9s						
ENR				AML	AML		
	comp=E,1200μm,0.9s						
ENR				AML	AML		
	comp=N,1110μm,0.5s						
ENR				AML	AML		
	comp=E,1200μm,0.9s						
ENR				AML	AML		
	comp=N,1110μm,0.5s						
VARE	**Varese**	**1.94 331**		AML	AML		
	comp=E,2785μm,0.5s						
VARE				AML	AML		
	comp=N,2780μm,0.6s						
VARE				AML	AML		
	comp=N,2780μm,0.6s						
VARE				AML	AML		
	comp=E,2785μm,0.5s						
VARE				AML	AML		
	comp=N,2780μm,0.6s						
VARE				AML	AML		
	comp=E,2785μm,0.5s						
SBF	**Sospel**	**1.95 262**		*e*Pn	**Pn**	**12 20 32.7**	**-0.6**
SBF				*e*Sn	**Sn**	**12 20 56.0**	**-2.0**
	comp=E,2μm,0.5s						
SBF	**Sospel**	**1.95 262**		*e*Pn	**Pn**	**12 20 32.7**	**-0.6**
SBF				*e*Sn	**Sn**	**12 20 56.0**	**-2.0**
SBF	**Sospel**	**1.95 262**		*e*P	**Pn**	**12 20 32.7**	**-0.6**
SBF				*e*		12 20 56.0	
MON	**Monaco**	**1.98 258**		Pn	**Pn**	**12 20 33.1**	**-0.6**
GAGG	**Gaggia**	**2.00**	**17**	*e*Pn	**Pn**	**12 20 34.3**	**+0.1**
GAGG				*e*Sn	**Sb**	**12 21 01.9**	**0.0**
PANI	**Panarotta**	**2.07**	**25**	*e*Pn	**Pn**	**12 20 35.2**	**+0.1**
DOI	**San Damiano**	**2.07 280**		AML	AML		
	comp=E,2350μm,0.6s						
DOI				AML	AML		
	comp=N,2510μm,0.5s						
DOI				AML	AML		
	comp=E,2350μm,0.6s						
DOI				AML	AML		
	comp=N,2510μm,0.5s						
DOI				AML	AML		
	comp=E,2350μm,0.6s						
DOI				AML	AML		
	comp=N,2510μm,0.5s						
BHB	**Bricherasio**	**2.14 289**		AML	AML		
	comp=E,1088μm,0.5s						
BHB				AML	AML		
	comp=E,1088μm,0.5s						
BHB				AML	AML		
	comp=N,1024μm,0.5s						
BHB				AML	AML		
	comp=N,1024μm,0.5s						
BHB				AML	AML		
	comp=N,1024μm,0.5s						
BHB				AML	AML		
	comp=E,1088μm,0.5s						
TRAV	**Traversella**	**2.14 309**		P	**Pn**	**12 20 36.3**	**+0.3**
TRAV				AML	AML		
	comp=E,1630μm,0.4s						
TRAV				AML	AML		
	comp=N,1390μm,0.7s						
TRAV				AML	AML		
	comp=E,1630μm,0.4s						
TRAV				AML	AML		
	comp=N,1390μm,0.7s						
TRAV				AML	AML		
	comp=E,1630μm,0.4s						
TRAV				AML	AML		
	comp=N,1390μm,0.7s						
SMPL	**Sampolo**	**2.16 196**		AML	AML		
	comp=N,32100μm,0.7s						
SMPL				AML	AML		
	comp=E,31300μm,0.6s						
SMPL				AML	AML		
	comp=N,32100μm,0.7s						
SMPL				AML	AML		
	comp=E,31300μm,0.6s						
SMPL				AML	AML		
	comp=N,32100μm,0.7s						
SMPL				AML	AML		
	comp=E,31300μm,0.6s						
MTLO	**Montello**	**2.17**	**40**	Pn	**Pn**	**12 20 36.2**	**-0.1**
PZZ	**Stroppo**	**2.17 280**		AML	AML		
	comp=E,1530μm,1.0s						
PZZ				AML	AML		
	comp=N,1970μm,0.9s						
PZZ				AML	AML		
	comp=N,1970μm,0.9s						
PZZ				AML	AML		
	comp=E,1530μm,1.0s						
PZZ				AML	AML		
	comp=N,1970μm,0.9s						
PZZ				AML	AML		
	comp=E,1530μm,1.0s						
CTI	**Castel Tesino**	**2.17**	**30**	P	**Pn**	**12 20 35.8**	**-0.6**
CTI				AML	AML		
	comp=E,3550μm,0.8s						
CTI				AML	AML		
	comp=N,2480μm,0.5s						
CTI				AML	AML		
	comp=N,2480μm,0.5s						
CTI				AML	AML		
	comp=E,3550μm,0.8s						
CTI				AML	AML		
	comp=N,2480μm,0.5s						
CTI				AML	AML		
	comp=E,3550μm,0.8s						
ASSB	**Assisi San Ben**	**2.17 120**		AML	AML		
	comp=N,488μm,0.5s						
ASSB				AML	AML		
	comp=E,585μm,0.9s						
ASSB				AML	AML		
	comp=N,488μm,0.5s						
ASSB				AML	AML		
	comp=N,488μm,0.5s						
ASSB				AML	AML		
	comp=E,585μm,0.9s						
ASSB				AML	AML		
	comp=E,585μm,0.9s						
ISO	**Isola**	**2.19 271**		Pn	**Pn**	**12 20 37.7**	**+1.0**
BERNI	**Berninapass**	**2.24 359**		AML	AML		
	comp=E,953μm,0.4s						
BERNI				AML	AML		
	comp=N,796μm,0.4s						
BERNI				AML	AML		
	comp=E,953μm,0.4s						
BERNI				AML	AML		
	comp=N,796μm,0.4s						
BERNI				AML	AML		
	comp=E,953μm,0.4s						
BERNI				AML	AML		
	comp=N,796μm,0.4s						
CARE	**Lago del Cares**	**2.29**	**10**	*e*Pn	**Pn**	**12 20 38.9**	**+0.7**
CARE				*e*Sn	**Sb**	**12 21 09.0**	**-1.2**
OZOL	**Ozolo**	**2.33**	**16**	*e*Pn	**Pn**	**12 20 39.2**	**+0.6**
CALF	**Calern**	**2.33 261**		Pn	**Pn**	**12 20 38.3**	**-0.3**
TUE	**Stuetta**	**2.36 347**		*e*Pn	**Pn**	**12 20 39.9**	**+0.8**
TUE				*e*Sn	**Sn**	**12 21 08.2**	**-0.2**
TUE	**Stuetta**	**2.36 347**		*e*Pn	**Pn**	**12 20 40.6**	**+1.5**
TUE	**Stuetta**	**2.36 347**		AML	AML		
	comp=E,790μm,0.5s						
TUE				AML	AML		
	comp=N,909μm,0.4s						
TUE				AML	AML		
	comp=E,1040μm,0.5s						
TUE				AML	AML		
	comp=N,1150μm,0.4s						
TUE				AML	AML		
	comp=N,909μm,0.4s						
TUE				AML	AML		
	comp=E,1040μm,0.5s						
TUE				AML	AML		
	comp=E,790μm,0.5s						
TUE				AML	AML		
	comp=N,1150μm,0.4s						
TUE				AML	AML		
	comp=N,909μm,0.4s						
TUE				AML	AML		
	comp=N,1150μm,0.4s						
TUE				AML	AML		
	comp=E,790μm,0.5s						
TUE				AML	AML		
	comp=E,1040μm,0.5s						
SURF	**Saint Ours**	**2.38 279**		Pg	**Pn**	**12 20 39.0**	**-0.3**
SURF				Sn	**Sn**	**12 21 08.6**	**-0.2**
MMK	**Mattmark**	**2.41 322**		AML	AML		
	comp=E,695μm,0.8s						
MMK				AML	AML		
	comp=E,695μm,0.8s						
MMK				AML	AML		
	comp=N,1180μm,0.9s						
MMK				AML	AML		
	comp=N,1180μm,0.9s						
MMK				AML	AML		
	comp=N,1180μm,0.9s						
MMK				AML	AML		
	comp=E,695μm,0.8s						
MBDF	**Montbardon**	**2.45 284**		*e*Pn	**Pn**	**12 20 38.6**	**-1.6**
MBDF	**Montbardon**	**2.45 284**		*e*Pg	**Pb**	**12 20 45.2**	**+1.1**
MBDF				*e*Sn	**Sn**	**12 21 07.5**	**-3.0**
MBDF				*e*Sg	**Sb**	**12 21 17.1**	**+2.6**
	comp=E,768nm,0.6s						
MBDF	**Montbardon**	**2.45 284**		*e*Pn	**Pn**	**12 20 38.6**	**-1.6**
MBDF				*e*Pg	**Pb**	**12 20 45.2**	**+1.1**
MBDF	**Montbardon**	**2.45 284**		*e*P	**Pn**	**12 20 38.6**	**-1.6**
FAU	**Forcella Aurin**	**2.45**	**32**	*e*Pn	**Pn**	**12 20 40.5**	**+0.3**
FDMO	**Fiordimonte**	**2.45 117**		AML	AML		
	comp=E,256μm,1.6s						
FDMO				AML	AML		
	comp=N,255μm,0.6s						
FDMO				AML	AML		
	comp=N,255μm,0.6s						
FDMO				AML	AML		
	comp=E,256μm,1.6s						
FDMO				AML	AML		
	comp=N,255μm,0.6s						
FDMO				AML	AML		
	comp=E,256μm,1.6s						
FUORN	**Ofenpass-Fuorn**	**2.45**	**3**	*e*Pn	**Pn**	**12 20 41.1**	**+0.8**
KOSI	**Kohlern**	**2.46**	**21⇑**	*e*Pn	**Pn**	**12 20 40.8**	**+0.4**
KOSI	**Kohlern**	**2.46**	**21**	AML	AML		
	comp=E,1770μm,0.7s						
KOSI				AML	AML		
	comp=N,1750μm,0.9s						
KOSI				AML	AML		
	comp=N,1750μm,0.9s						
KOSI				AML	AML		
	comp=E,1770μm,0.7s						
KOSI				AML	AML		
	comp=N,1750μm,0.9s						
KOSI				AML	AML		
	comp=E,1770μm,0.7s						
MOSI	**Grossmontoni**	**2.46**	**7**	*e*Pn	**Pn**	**12 20 42.4**	**+1.9**
MOSI	**Grossmontoni**	**2.46**	**7**	AML	AML		
	comp=E,1965μm,0.8s						
MOSI				AML	AML		
	comp=N,2435μm,0.9s						
MOSI				AML	AML		
	comp=E,1965μm,0.8s						
MOSI				AML	AML		
	comp=N,2435μm,0.9s						
MOSI				AML	AML		
	comp=E,1965μm,0.8s						
MOSI				AML	AML		
	comp=N,2435μm,0.9s						
LSD	**Lago del Serru**	**2.47 302**		AML	AML		
	comp=E,416μm,0.7s						
LSD				AML	AML		
	comp=N,401μm,0.6s						
LSD				AML	AML		
	comp=E,416μm,0.7s						
LSD				AML	AML		
	comp=N,401μm,0.6s						
LSD				AML	AML		
	comp=E,416μm,0.7s						
LSD				AML	AML		
	comp=N,401μm,0.6s						
FUSIO	**Fusio**	**2.50 337**		AML	AML		
	comp=E,1103μm,0.9s						
FUSIO				AML	AML		
	comp=E,1103μm,0.9s						
FUSIO				AML	AML		
	comp=N,972μm,1.4s						
FUSIO				AML	AML		
	comp=N,972μm,1.4s						
FUSIO				AML	AML		
	comp=N,972μm,1.4s						
FUSIO				AML	AML		
	comp=E,1103μm,0.9s						
FRF	**La Foret Royal**	**2.57 257**		*e*Pn	**Pn**	**12 20 41.3**	**-0.5**
FRF				*e*Sn	**Sn**	**12 21 10.1**	**-3.2**
	comp=E,489nm,0.4s						
FRF	**La Foret Royal**	**2.57 257**		*e*Pn	**Pn**	**12 20 41.3**	**-0.5**
FRF	**La Foret Royal**	**2.57 257**		*e*P	**Pn**	**12 20 41.3**	**-0.5**
BNI	**Bardonecchia**	**2.60 291**		*e*Pn	**Pn**	**12 20 43.9**	**+1.6**
DAVOX	**Davos/Dischmat**	**2.61 357**		Pn	**Pn**	**12 20 44.1**	**+1.6**
	comp=E,85nm,0.3s,baz=191,slow=7.1,SNR=85						
DAVOX				Sn	**Sn**	**12 21 15.5**	**+0.9**
	comp=E,42nm,0.3s,baz=137,slow=22,SNR=6.8						
DAVOX	**Davos/Dischmat**	**2.61 357**		AML	AML		
	comp=E,630μm,0.5s						
DAVOX				AML	AML		
	comp=E,630μm,0.5s						
DAVOX				AML	AML		
	comp=N,730μm,0.5s						
DAVOX				AML	AML		
	comp=N,730μm,0.5s						
DAVOX				AML	AML		
	comp=E,630μm,0.5s						
DAVOX				AML	AML		
	comp=N,730μm,0.5s						
REMY	**Saint-Rhmy-en**	**2.67 310**		AML	AML		
	comp=E,1056μm,1.3s						
REMY				AML	AML		
	comp=E,1056μm,1.3s						
REMY				AML	AML		
	comp=N,2465μm,0.5s						
REMY				AML	AML		
	comp=N,2465μm,0.5s						
REMY				AML	AML		
	comp=E,1056μm,1.3s						
REMY				AML	AML		
	comp=N,2465μm,0.5s						
LPG	**La Plagne**	**2.73 300**		*e*P	**Pn**	**12 20 45.7**	**+1.5**
LPG				*e*Sn	**Sn**	**12 21 14.2**	**-3.4**
	comp=N,547nm,0.8s						
LPG	**La Plagne**	**2.73 300**		*e*Pn	**Pn**	**12 20 45.7**	**+1.5**
LMR	**La Mourre**	**2.73 253**		*e*Pn	**Pn**	**12 20 43.2**	**-0.8**
LMR				*e*Sn	**Sn**	**12 21 13.9**	**-3.4**
	comp=N,219nm,0.3s						
LMR	**La Mourre**	**2.73 253**		*e*Pn	**Pn**	**12 20 43.2**	**-0.8**
LMR	**La Mourre**	**2.73 253**		*e*P	**Pn**	**12 20 43.2**	**-0.8**
LPL	**La Plagne**	**2.75 300**		*e*P	**Pn**	**12 20 45.6**	**+1.2**
LPL				*e*Sg	**Sb**	**12 21 23.7**	**+0.5**
	comp=N,216nm,0.4s						
LPL	**La Plagne**	**2.75 300**		*e*Pn	**Pn**	**12 20 45.6**	**+1.2**
LPL	**La Plagne**	**2.75 300**		*e*P	**Pn**	**12 20 45.6**	**+1.2**
FETA	**Feichten**	**2.88**	**9**	*e*Pn	**Pn**	**12 20 47.6**	**+1.4**
	comp=N,69nm,0.7s,SNR=16						
FETA				Sn	**Sn**	**12 21 22.6**	**+1.3**
	comp=N,201nm,1.0s						
ROSI	**Rosskopf**	**2.91**	**18**	AML	AML		
	comp=N,1930μm,0.7s						
ROSI				AML	AML		
	comp=E,1365μm,0.8s						
ROSI				AML	AML		
	comp=N,1930μm,0.7s						
ROSI				AML	AML		
	comp=E,1365μm,0.8s						
ROSI				AML	AML		
	comp=E,1365μm,0.8s						
ROSI				AML	AML		
	comp=N,1930μm,0.7s						
PLONS	**Plons/SG**	**2.92 350**		AML	AML		
	comp=E,521μm,0.6s						
PLONS				AML	AML		
	comp=E,521μm,0.6s						
PLONS				AML	AML		
	comp=N,583μm,0.6s						
PLONS				AML	AML		
	comp=N,583μm,0.6s						
PLONS				AML	AML		
	comp=E,521μm,0.6s						
PLONS				AML	AML		
	comp=N,583μm,0.6s						
BNALP	**Bannalp**	**2.94 337**		AML	AML		
	comp=E,510μm,0.4s						
BNALP				AML	AML		
	comp=N,586μm,1.3s						
BNALP				AML	AML		
	comp=E,510μm,0.4s						
BNALP				AML	AML		
	comp=N,586μm,1.3s						
BNALP				AML	AML		
	comp=E,510μm,0.4s						
BNALP				AML	AML		
	comp=N,586μm,1.3s						
SENIN	**Lac Senin/Sane**	**2.95 319**		*e*Pn	**Pn**	**12 20 49.4**	**+2.2**
AQU	**L'Aquila**	**3.02 126**		*e*Pn	**Pn**	**12 20 49.2**	**+1.2**
AQU	**L'Aquila**	**3.02 126**		*e*P	**Pn**	**12 20 49.2**	**+1.2**

AQU L'Aquila 3.02 126 *e*Pn **Pn 12 20 48.6 +0.6**
SABO M.te Sabotino 3.07 53 AML AML
comp=E,1260µm,0.5s
SABO AML AML
comp=N,1930µm,0.6s
SABO AML AML
comp=N,1930µm,0.6s
SABO AML AML
comp=E,1260µm,0.5s
SABO AML AML
comp=N,1930µm,0.6s
SABO AML AML
comp=E,1260µm,0.5s
ABTA Abfaltersbach 3.08 33 *e*Pn **Pn 12 20 49.6 +0.7**
comp=E,139nm,0.7s,SNR=26
ABTA *i* Sn **Sn 12 21 27.9 +1.8**
comp=E,170nm,0.6s
RISI Rein 3.10 26 AML AML
comp=N,2490µm,0.5s
RISI AML AML
comp=E,2035µm,0.6s
RISI AML AML
comp=N,2490µm,0.5s
RISI AML AML
comp=E,2035µm,0.6s
RISI AML AML
comp=N,2490µm,0.5s
RISI AML AML
comp=E,2035µm,0.6s
SKDS Skadanscina 3.10 62 *i* Pn **Pn 12 20 47.9 -1.2**
SKDS *i* Sn **Sn 12 21 25.8 -0.7**
comp=Z,104nm,0.3s
ORIF Oris-en-Rattie 3.11 285 *e*P **Pn 12 20 50.8 +1.6**
ORIF *e*Sn **Sn 12 21 26.8 +0.1**
comp=Z,183nm,0.5s
DAVA Damuels 3.12 357 *i* Pn **Pn 12 20 51.5 +2.1**
comp=Z,252nm,0.5s,SNR=124
DAVA *i* Sn **Sn 12 21 30.1 +3.1**
comp=Z,309nm,0.6s
SQTA Sankt Quirin 3.15 14 *i* Pn **Pn 12 20 51.4 +1.6**
comp=Z,113nm,0.4s,SNR=65
SQTA *e*Sn **Sn 12 21 29.2 +1.5**
comp=Z,243nm,0.7s
ARTF Artigues 3.16 261 Pn **Pn 12 20 50.8 +0.9**
ARTF Sn **Sn 12 21 27.0 -0.9**
ASEAF Site Antares, 3.18 246 Pn **Pn 12 20 49.7 -0.1**
ASEAF Sn **Sn 12 21 25.9 -2.0**
PTCC Patocco-Chiusa 3.20 45 AML AML
comp=E,683µm,1.5s
PTCC AML AML
comp=E,683µm,1.5s
PTCC AML AML
comp=N,589µm,0.7s
PTCC AML AML
comp=N,589µm,0.7s
PTCC AML AML
comp=N,589µm,0.7s
PTCC AML AML
comp=E,683µm,1.5s
BSTF la Bastide-des 3.23 266 Pn **Pn 12 20 51.4 +0.6**
MOTA Moosalm 3.25 12 *i* Pn **Pn 12 20 53.3 +2.0**
comp=E,90nm,0.4s,SNR=80
MOTA *e*Sn **Sn 12 21 32.7 +2.4**
comp=E,126nm,0.7s
SMRF Simiane la Rot 3.27 268 *e*P **Pn 12 20 52.4 +1.0**
SMRF *e*Sn **Sn 12 21 27.7 -2.9**
comp=E,295nm,0.6s
WTTA Wattenberg 3.27 19 *i* Pn **Pn 12 20 52.8 +1.2**
comp=E,109nm,0.4s,SNR=73
WTTA *e*Sn **Sn 12 21 31.9 +0.9**
comp=E,503nm,1.1s
WTTA Wattenberg 3.27 19 AML AML
comp=E,1390µm,0.8s
WTTA AML AML
comp=N,734µm,0.6s
WTTA AML AML
comp=E,1390µm,0.8s
WTTA AML AML
comp=N,734µm,0.6s
WTTA AML AML
comp=E,1390µm,0.8s
WTTA AML AML
comp=N,734µm,0.6s
CADS Cadrg 3.29 50 *i* Pn **Pn 12 20 50.9 -0.8**
CADS *i* Sn **Sn 12 21 30.5 -0.7**
comp=Z,282nm,0.6s
RIY Rijeka 3.33 68 *e*Pn **Pn 12 20 52.4 +0.2**
WATA Walderalm 3.33 18 *i* Pn **Pn 12 20 54.2 +1.9**
comp=Z,89nm,0.4s,SNR=61
WATA *e*Sn **Sb 12 21 36.1 -3.8**
comp=Z,81nm,0.5s
RUSF Rustrel 3.34 268 Pn **Pn 12 20 53.2 +0.9**
RETA Reutte 3.35 8 *i* Pn **Pn 12 20 54.1 +1.6**
comp=Z,16nm,0.2s,SNR=16
RETA *e*Sn **Sn 12 21 35.5 +2.9**
comp=Z,84nm,0.5s
NVLJ Novalja 3.44 82 *e*Pn **Pn 12 20 53.7 0.0**
OGSM Saint Maurice 3.44 296 Pn **Pn 12 20 55.7 +1.9**
CEY Cerknica 3.45 61 *e*Pn **Pn 12 20 52.5 -1.3**
MYKA Terra Mystica 3.50 44 *e*Pn **Pn 12 20 55.1 +0.5**
comp=Z,6.5nm,0.3s
MYKA *e*Sn **Sn 12 21 39.0 +2.6**
comp=Z,75nm,0.7s
LJU Ljubljana 3.65 58 *e*Pn **Pn 12 20 56.1 -0.5**
LJU Ljubljana 3.65 58 AML AML
comp=N,1440µm,0.7s
LJU AML AML
comp=E,1023µm,0.6s
LJU AML AML
comp=N,1440µm,0.7s
LJU AML AML
comp=E,1023µm,0.6s
LJU AML AML
comp=N,1440µm,0.7s
LJU AML AML
comp=E,1023µm,0.6s
KBA Koelnbreinsper 3.69 37 *i* Pn **Pn 12 20 58.3 +1.0**
comp=E,14nm,0.4s,SNR=15
KBA *e*Sn **Sn 12 21 43.2 +2.0**
comp=E,85nm,0.5s
OG35 Corcelles 3.71 302 Pn **Pn 12 20 58.9 +1.4**
OG35 Sn **Sn 12 21 42.0 +0.4**
CABF La Chapelle 3.73 312 *e*P **Pn 12 20 59.3 +1.5**
CABF *e*Sn **Sn 12 21 37.8 -4.3**
comp=E,244nm,0.8s
BOJS Bojanci 3.90 68 AML AML
comp=E,194µm,0.8s
BOJS AML AML
comp=N,254µm,0.7s
BOJS AML AML
comp=E,194µm,0.8s
BOJS AML AML
comp=N,254µm,0.7s
BOJS AML AML
comp=E,194µm,0.8s
BOJS AML AML
comp=N,254µm,0.7s
CHMF Charmoille 3.91 323 Pn **Pn 12 21 02.2 +1.9**
OBKA Obir 3.91 52 *i* Pn **Pn 12 21 00.6 +0.3**
comp=N,14nm,0.3s,SNR=11
OBKA *e*Sn **Sn 12 21 47.7 +1.2**
comp=N,83nm,0.5s
LOMF Lomont 3.92 325 Pn **Pn 12 21 02.5 +2.1**
VIVF Saint-Julien-l 3.94 282 *e*P **Pn 12 21 01.2 +0.6**
VIVF *e*Sn **Sn 12 21 43.4 -3.8**
comp=N,31nm,0.4s
KIZ Kirchzarten 4.08 339 Pn **Pn 12 21 02.6 +0.1**
OZLJ Ozalj 4.08 67 *i* Pn **Pn 12 21 03.6 +1.2**
OZLJ Sn **Sn 12 21 48.3 -2.1**
UDBI Udbina 4.08 83 *i* Pn **Pn 12 21 03.6 +1.0**
SSB Saint Sauveur 4.11 288 *e*Pn **Pn 12 21 03.5 +0.6**
SSB Saint Sauveur 4.11 288 Pn **Pn 12 21 03.6 +0.6**
SSB Saint Sauveur 4.11 288 *e*P **Pn 12 21 03.6 +0.6**
CRES Cresnjev 4.14 65 *e*Pn **Pn 12 21 02.6 -0.8**
MOF Molkenrain 4.22 332 Pn **Pn 12 21 05.9 +1.4**
SOKA Soboth 4.28 52 *i* Pn **Pn 12 21 05.3 -0.1**
comp=N,26nm,0.5s,SNR=18
SOKA *e*Sn **Sn 12 21 54.3 -1.3**
comp=N,45nm,0.6s
HINF Hinteralfeld 4.29 329 *e*P **Pn 12 21 06.6 +1.2**
HINF *e*Sn **Sn 12 21 51.3 -4.5**
comp=N,100nm,0.3s
BFO Black Forest 4.34 344 *e*Pn **Pn 12 21 05.5 -0.5**
BFO *e*Sn **Sn 12 21 55.8 -1.1**
BFO Black Forest 4.34 344 *i* P **Pn 12 21 06.9 +0.9**
LASF Ste Croix 4.50 271 *e*P **Pn 12 21 08.2 -0.1**

LASF *e*Sn **Sn 12 21 56.3 -4.5**
comp=N,48nm,0.4s
OPP Oppenau 4.52 344 Pn **Pn 12 21 09.1 +0.5**
ECH Echery 4.53 334 *e*Pn **Pn 12 21 09.3 +0.6**
ECH *e*Sn **Sn 12 22 00.9 -0.8**
ECH Echery 4.53 334 Pn **Pn 12 21 09.6 +0.9**
ECH Sg **Sn 12 22 00.3 -1.3**
ECH Echery 4.53 334 *e*P **Pn 12 21 09.3 +0.6**
ECH *e* 12 22 00.9
HAU Haudompre 4.64 327 *e*P **Pn 12 21 11.8 +1.6**
HAU *e*Sn **Sn 12 21 59.5 -4.8**
comp=N,292nm,0.4s
STU Stuttgart 4.64 353 *e*Pn **Pn 12 21 09.9 -0.4**
STU *e*Sn **Sn 12 22 03.0 -1.4**
STU Stuttgart 4.64 353 *e*P **Pn 12 21 09.9 -0.4**
STU *e* 12 22 03.0
WLS Welschbruch 4.65 337 Pn **Pn 12 21 10.9 +0.6**
CDF Champ du Feu 4.67 336 *e*P **Pn 12 21 11.1 +0.4**
CDF *e*Sn **Sn 12 22 00.1 -5.1**
comp=N,131nm,0.4s
MOA Molln 4.68 37 *i* Pn **Pn 12 21 11.7 +0.9**
comp=N,25nm,0.4s,SNR=20
MOA *e*Sn **Sn 12 22 06.0 +0.6**
comp=N,55nm,0.7s
ARSA Arzberg 4.89 49 *i* Pn **Pn 12 21 13.4 -0.2**
comp=N,19nm,0.4s,SNR=19
ARSA *e*Sn **Sn 12 22 08.4 -2.1**
comp=N,21nm,0.7s
MGRS Mrkonjic Grad 5.02 85 *e*Pn **Pn 12 21 15.2 -0.2**
SMF Signal de Mont 5.05 301 *e*P **Pn 12 21 17.7 +1.8**
SMF *e*Sn **Sn 12 22 09.6 -4.9**
comp=N,95nm,0.4s
BLY Banja Luka 5.10 81 *e*Pn **Pn 12 21 16.7 +0.1**
BLY Banja Luka 5.10 81 ⇑*i*P **Pn 12 21 17.2 +0.7**
BLY Banja Luka 5.10 81 *e*Pn **Pn 12 21 17.3 +0.7**
GEC2 GERESS Array S 5.29 27 *e*Pn **Pn 12 21 18.6 -0.7**
GEC2 *e*Sn **Sn 12 22 18.5 -2.0**
GEC2 GERESS Array S 5.29 27 *e*P **Pn 12 21 18.6 -0.7**
GEC2 *e* 12 22 18.5
GERES GERESS Array B 5.29 27 Pn **Pn 12 21 18.8 -0.5**
comp=N,5.1nm,0.3s,baz=201,slow=13,SNR=64
GERES Sn **Sn 12 22 18.4 -2.2**
comp=N,8.5nm,0.3s,baz=202,slow=23,SNR=8.6
PAGF Fort de Pagny 5.33 327 *e*P **Pn 12 21 21.7 +2.1**
baz=146
PAGF *e*Sn **Sn 12 22 15.8 -5.5**
comp=N,104nm,0.4s,baz=140
PAGF Fort de Pagny 5.33 327 *e*Sn **Sn 12 22 15.8 -5.5**
SFTF Sexfontaines 5.35 321 *e*P **Pn 12 21 21.8 +1.9**
baz=138
SFTF *e*Sn **Sn 12 22 16.5 -5.3**
comp=N,81nm,0.5s
LOR Lormes 5.36 307 *e*P **Pn 12 21 20.8 +0.8**
LOR *e*Sn **Sn 12 22 16.8 -5.2**
comp=N,64nm,0.4s
AVF Avril sur Loir 5.42 301 *e*P **Pn 12 21 22.5 +1.6**
AVF *e*Sn **Sn 12 22 18.1 -5.4**
comp=N,37nm,0.5s
SSF Saint Saulge 5.45 304 *e*P **Pn 12 21 22.7 +1.3**
SSF *e*Sn **Sn 12 22 18.4 -6.0**
comp=N,85nm,0.5s
CONA Conrad Observa 5.49 45 *i* Pn **Pn 12 21 22.3 +0.3**
comp=N,25nm,0.6s,SNR=25
CONA *e*Sn **Sn 12 22 25.8 +0.3**
comp=N,33nm,0.6s
KHC Kasperske Hory 5.51 25 *e*Pn **Pn 12 21 21.7 -0.5**
KHC *e*Sn **Sn 12 22 24.2 -1.6**
KHC Kasperske Hory 5.51 25 *e*P **Pn 12 21 21.8 -0.3**
KHC *e* 12 22 23.5
KHC MLR MLR
comp=Z,200nm,7.9s
KHC Kasperske Hory 5.51 25 *e*PN **Pn 12 21 21.8 -0.3**
KHC *e*SN **Sn 12 22 23.5 -2.2**
KHC *ex* x 12 23 02.0
KHC AMS AMS 12 23 50.0
comp=Z,200nm,7.9s
MEZF Maizieres J'vi 5.56 323 *e*P **Pn 12 21 24.8 +1.9**
baz=143
MEZF *e*Sn **Sn 12 22 21.5 -5.6**
comp=Z,135nm,0.7s
GRFO Grafenberg 5.57 8 *e*Pn **Pn 12 21 23.7 +0.7**
GRFO Grafenberg 5.57 8 *e*P **Pn 12 21 23.7 +0.7**
GRA1 Grafenberg Arr 5.57 8 *e*Pn **Pn 12 21 23.6 +0.5**
GRF Grafenberg Arr 5.57 8 *e*P **Pn 12 21 23.6 +0.5**
BGF Bois d'Agland 5.64 298 *e*P **Pn 12 21 25.3 +1.4**
BGF *e*Sn **Sn 12 22 23.9 -5.1**
comp=Z,101nm,0.4s
STON Ston 5.68 101 *e*Pn **Pn 12 21 24.9 +0.4**
STON Ston 5.68 101 *e*Pn **Pn 12 21 25.7 +1.3**
MTLF Montolieu 5.77 264 *e*P **Pn 12 21 26.1 +0.4**
MTLF *e*Sn **Sn 12 22 27.1 -5.1**
comp=Z,37nm,0.5s
CAF Calviac 5.79 280 *e*P **Pn 12 21 26.8 +0.7**
CAF *e*Sn **Sn 12 22 27.4 -5.4**
CAF *e*Sg **Sg 12 23 01.4 -4.2**
comp=Z,29nm,0.7s
TCF Toulx Ste Croi 5.96 294 *e*P **Pn 12 21 30.0 +1.6**
TCF *e*Sn **Sn 12 22 31.3 -5.6**
comp=Z,28nm,0.5s
HYF Humbligny 6.07 303 *e*P **Pn 12 21 32.3 +2.4**
HYF *e*Sn **Sn 12 22 34.4 -5.2**
TREB Trebinje 6.18 101 *e*Pn **Pn 12 21 31.1 -0.2**
RJF Les Rejaudoux 6.22 283 *e*P **Pn 12 21 33.7 +1.8**
RJF *e*Sn **Sn 12 22 37.5 -5.7**
comp=Z,23nm,0.7s
RJF *e*Sg **Sg 12 23 14.6 -4.6**
comp=Z,45nm,1.0s
BRY Bratogost 6.26 99 *e*Pn **Pn 12 21 34.3 +1.7**
ZST Bratislava 6.31 48 *e*P **Pn 12 21 33.4 +0.3**
ZST *e* 12 22 40.9
ZST Bratislava 6.31 48 *e*PN **Pn 12 21 33.4 +0.3**
ZST *e*SN **Sn 12 22 40.9 -4.5**
HCY Herceg Novi 6.36 103 *e*Pn **Pn 12 21 35.0 +1.1**
HAPS Han Pijesak,Bl 6.37 88 *e*Pn **Pn 12 21 33.7 -0.4**
MORH Mrgy, Hungar 6.37 68 *e*Pn **Pn 12 21 31.7 -2.3**
UPM Unac-Piva 6.46 96 *e*Pn **Pn 12 21 36.7 +1.4**
MODS Modra-Piesok 6.51 47 *e*P **Pn 12 21 34.7 -1.2**
MODS *e* 12 22 45.2
MODS Modra-Piesok 6.51 47 *e*PN **Pn 12 21 34.6 -1.3**
MODS *e*SN **Sn 12 22 45.2 -5.2**
KRUC Moravsky 6.53 39 *e*PN **Pn 12 21 35.3 -0.9**
KRUC *e*SN **Sn 12 22 48.2 -2.8**
PRU Pruhonice 6.56 26 *e*P **Pn 12 21 35.6 -0.9**
PRU *e* 12 22 48.5
PRU Pruhonice 6.56 26 *e*PN **Pn 12 21 35.6 -0.9**
PRU *e*SN **Sn 12 22 48.5 -3.1**
GOPC GO Pecny, Ondr 6.57 27 *e*P **Pn 12 21 36.1 -0.7**
GOPC GO Pecny, Ondr 6.57 27 *e*PN **Pn 12 21 36.1 -0.7**
CLF Chambon-Foret 6.67 308 *e*Pn **Pn 12 21 39.7 +1.6**
BBLS Lazići 6.72 89 *e*Pn **Pn 12 21 39.1 +0.3**
LFF La Frestale 6.73 280 *e*P **Pn 12 21 41.4 +2.5**
LFF *e*Sn **Sn 12 22 49.7 -6.1**
comp=Z,31nm,0.5s
LFF La Frestale 6.73 280 *e*Pn **Pn 12 21 41.4 +2.5**
LFF La Frestale 6.73 280 *e*P **Pn 12 21 41.4 +2.5**
SRO Srobarova 6.78 55 *e*P **Pn 12 21 40.4 +0.8**
SRO *e* 12 22 53.7
SRO Srobarova 6.78 55 *e*PN **Pn 12 21 40.4 +0.8**
SRO *e*SN **Sn 12 22 53.7 -3.3**
VRAC Vranov 6.80 39 Pn **Pn 12 21 39.1 -0.7**
comp=Z,0.7nm,0.3s,baz=217,slow=20,SNR=2.6
VRAC Sn **Sn 12 22 53.5 -4.0**
comp=Z,1.1nm,0.3s,baz=309,slow=18,SNR=4.1
VRAC Lg Lg 12 23 36.2
comp=Z,1.3nm,0.3s,baz=306,slow=21,SNR=6.6
VRAC Vranov 6.80 39 *e*PN **Pn 12 21 38.6 -1.3**
VRAC *e*SN **Sn 12 22 54.3 -3.3**
PDG Podgorica 6.90 101 ⇑*i*P **Pn 12 21 44.3 +3.0**
TTG Podgorica 6.90 101 *e*Pn **Pn 12 21 43.0 +1.7**
TTG *e*Sn **Sn 12 23 00.4 +0.4**
TTG Podgorica 6.90 101 *e*P **Pn 12 21 43.0 +1.7**
TTG *e* 12 23 00.4
DRME Dracevica, Mon 6.93 104 *e*Pn **Pn 12 21 42.1 +0.4**
GIVF Givet 6.94 331 *e*P **Pn 12 21 44.2 +2.5**
GIVF *e*Sn **Sn 12 22 54.8 -6.1**
comp=Z,39nm,0.7s
GIVF Givet 6.94 331 *e*Pn **Pn 12 21 44.2 +2.5**
GIVF Givet 6.94 331 *e*P **Pn 12 21 44.2 +2.5**
CLTB Caltabellotta 7.00 159 *e*Pn **Pn 12 21 44.4 +1.7**
MEM Membach 7.01 338 ⇑Pn **Pn 12 21 46.3 +3.6**
MEM ⇑Sn **Sn 12 23 00.4 -2.3**
comp=E,25nm,0.0s
DOU Dourbes 7.01 330 ⇑Pn **Pn 12 21 44.9 +2.1**

DOU ⇑Sn **Sn 12 23 01.1 -1.6**
comp=E,19nm,0.0s
JAVC Velka Javorina 7.02 45 *e*PN **Pn 12 21 43.4 +0.5**
DIVS Divibare 7.12 87 *e*Pn **Pn 12 21 42.2 -2.1**
BAIF Baives 7.13 328 *e*P **Pn 12 21 46.7 +2.4**
BAIF *e*Sn **Sn 12 22 59.2 -6.4**
comp=E,29nm,0.7s
BAIF Baives 7.13 328 *e*Pn **Pn 12 21 46.7 +2.4**
TAMR Tamra 7.16 186 *e*Pn **Pn 12 21 45.0 +0.3**
EPF Esparros 7.18 264 *e*P **Pn 12 21 46.2 +1.1**
EPF *e*Sn **Sn 12 23 01.1 -5.8**
comp=E,15nm,0.5s
EPF Esparros 7.18 264 *e*Pn **Pn 12 21 46.2 +1.1**
EPF Esparros 7.18 264 *e*P **Pn 12 21 46.2 +1.1**
BRG Berggiesshubel 7.19 20 PN **Pn 12 21 45.5 +0.3**
BRG SN **Sn 12 23 04.2 -2.9**
BRG SG **Sg 12 23 56.0 +5.7**
comp=E,50nm,1.2s
BRG Berggiesshubel 7.19 20 P **Pn 12 21 45.5 +0.3**
BRG 12 23 04.2
BRG smax smax
comp=N,50nm,1.2s
CLL Collm 7.40 14 *e*Pn **Pn 12 21 47.4 -0.7**
CLL Collm 7.40 14 *e*Pn **Pn 12 21 47.0 -1.1**
CLL *e*Sn Sn 12 22 48.0 -24
CLL *e* 12 23 09.0
CLL *e* 12 23 25.0
CLL *i* 12 23 44.4
CLL *e*Sg **Sg 12 23 52.0 -5.1**
comp=Z,77nm,1.4s
CLL Collm 7.40 14 *e*P **Pn 12 21 47.0 -1.1**
VYHS Vyhne 7.43 51 *e*P **Pn 12 21 47.1 -1.4**
VYHS *e* 12 23 08.9
VYHS Vyhne 7.43 51 *e*PN **Pn 12 21 47.1 -1.4**
VYHS *e*SN **Sn 12 23 08.9 -4.2**
DPC Dobruska-Polom 7.49 32 *e*P **Pn 12 21 47.9 -1.4**
DPC *e* 12 23 09.8
DPC Dobruska-Polom 7.49 32 *e*PN **Pn 12 21 47.9 -1.4**
DPC *e*SN **Sn 12 23 09.8 -4.7**
UPC Upice 7.50 30 *e*P **Pn 12 21 48.7 -0.8**
UPC *e* 12 23 09.5
UPC Upice 7.50 30 *e*PN **Pn 12 21 48.7 -0.8**
UPC *e*SN **Sn 12 23 09.5 -5.2**
MORC Moravsky Berou 7.57 40 *e*Pn **Pn 12 21 49.3 -1.2**
MORC *e*Sn **Sn 12 23 12.9 -3.6**
MORC Moravsky Berou 7.57 40 ⇑*i*P **Pn 12 21 49.6 -0.8**
MORC Moravsky Berou 7.57 40 *e*P **Pn 12 21 49.3 -1.2**
MORC *e* 12 23 12.9
MORC Moravsky Berou 7.57 40 *e*PN **Pn 12 21 49.6 -0.8**
CHVC Chvalec 7.58 30 *e*PN **Pn 12 21 50.6 0.0**
CHVC *e*SN **Sn 12 23 11.9 -4.9**
MFF Saint Martin d 7.61 292 *e*P **Pn 12 21 52.7 +1.7**
MFF *e*Sn **Sn 12 23 10.4 -7.1**
comp=Z,12nm,0.6s
MFF Saint Martin d 7.61 292 *e*Pn **Pn 12 21 52.7 +1.7**
MFF Saint Martin d 7.61 292 *e*P **Pn 12 21 52.7 +1.7**
PSZ Piszkesteto 7.77 58 *e*Pn **Pn 12 21 53.4 +0.1**
PSZ Piszkesteto 7.77 58 ⇓*i*P **Pn 12 21 53.1 -0.2**
PSZ Piszkesteto 7.77 58 *e*P **Pn 12 21 53.4 +0.1**
ETSF Etsaut 7.85 264 *e*P **Pn 12 21 58.7 +4.3**
ETSF *e*Sn **Sn 12 23 17.8 -5.7**
comp=Z,21nm,0.5s
BZS Buzias 8.30 76 ⇑*i*P **Pn 12 22 01.7 +1.2**
MDVR Moldovita 8.33 82 ⇑*i*P **Pn 12 22 01.4 +0.5**
LDF La Druitiere 8.33 306 *e*Sn **Sn 12 23 28.1 -7.1**
comp=Z,14nm,0.5s
KEST Kesra 8.45 184 Pn **Pn 12 22 07.2 +4.6**
comp=Z,1.2nm,0.3s,baz=327,slow=4.0,SNR=12
KEST Kesra 8.45 184 *e*Pn **Pn 12 22 05.0 +2.4**
FLN La Foliniere 8.62 306 *e*P **Pn 12 22 07.6 +2.7**
baz=125
FLN *e*Sn **Sn 12 23 35.1 -7.3**
comp=Z,21nm,0.6s
FLN La Foliniere 8.62 306 *e*Pn **Pn 12 22 07.6 +2.7**
GRR Gorron 8.68 303 *e*P **Pn 12 22 05.9 +0.3**
GRR *e*Sn **Sn 12 23 35.8 -7.9**
comp=Z,12nm,0.6s
GRR Gorron 8.68 303 *e*Pn **Pn 12 22 05.9 +0.3**
GRR Gorron 8.68 303 *e*P **Pn 12 22 05.9 +0.3**
HERR Herculane 8.83 81 ⇑*i*P **Pn 12 22 08.6 +0.9**
OJC Ojcow 8.95 44 *e*Pn **Pn 12 22 08.5 -0.8**
OJC Ojcow 8.95 44 *e*P **Pn 12 22 08.5 -0.8**
GZR Gura Zlata 9.10 78 ⇑*i*P **Pn 12 22 12.2 +0.7**
DRGR 9.24 69 ⇓*i*P **Pn 12 22 13.9 +0.5**
SGMF Saint Gilles 9.68 299 *e*P **Pn 12 22 20.5 +1.2**
SGMF *e*Sn Sn 12 23 59.6 -8.6
comp=Z,7.2nm,0.6s
SGMF Saint Gilles 9.68 299 *e*Pn **Pn 12 22 20.5 +1.2**
SGMF Saint Gilles 9.68 299 *e*P **Pn 12 22 20.5 +1.2**
VTS Vitosha 9.69 95 *e*Pn **Pn 12 22 20.1 +0.5**
VTS *e*Sn **Sn 12 24 07.4 -1.4**
VTS Vitosha 9.69 95 *e*P **Pn 12 22 20.1 +0.5**
VTS *e* 12 24 07.4
ROSF Rostrenen 10.15 299 *e*P **Pn 12 22 26.0 +0.2**
ROSF Rostrenen 10.15 299 *e*Pn **Pn 12 22 26.0 +0.2**
ROSF Rostrenen 10.15 299 *e*P **Pn 12 22 26.0 +0.2**
KWP Kalwaria Pacla 10.21 53 *e*Pn **Pn 12 22 26.8 +0.3**
KWP Kalwaria Pacla 10.21 53 *e*P **Pn 12 22 26.8 +0.3**
MLR Muntele Rosu 11.33 78 *e*Pn **Pn 12 22 41.7 -0.4**
MLR Muntele Rosu 11.33 78 *e*P **Pn 12 22 41.7 -0.4**
ESDC Sonseca Array 11.40 252 Pn **Pn 12 22 43.0 +0.1**
comp=Z,0.4nm,0.3s,baz=65,slow=13,SNR=13
ESLA Sonseca Array 11.40 252 *e*Pn **Pn 12 22 44.1 +1.1**
PAB San Pablo 11.72 252 *e*Pn **Pn 12 22 48.1 +0.7**
PAB San Pablo 11.72 252 *e*P **Pn 12 22 48.1 +0.7**
EKA Eskdalemuir Ar 14.05 327 Pn **Pn 12 23 17.4 -1.6**
baz=138,slow=15,SNR=5.6
AKASG Malin Array Be 14.47 56 Pn **Pn 12 23 25.2 +0.4**
baz=247,slow=13,SNR=2.3
AKBB Malin Array Si 14.47 56 *e*Pn **Pn 12 23 24.9 0.0**
AKBB Malin Array Si 14.47 56 *e*P **Pn 12 23 24.9 0.0**
HFS Hagfors 16.13 6 Pn **Pn 12 23 48.0 +1.3**
comp=Z,0.1nm,0.3s,baz=204,slow=13,SNR=2.8
NC405 NORSAR Array S 17.00 3 *e*P **Pn 12 23 57.8 0.0**
comp=Z,20nm,1.4s
BR231 Keskin MP Arra 17.38 97 *e*P **P 12 24 03.4 -0.8**
comp=Z,21nm,0.8s
ANTO Ankara 17.39 96 *e*P **Pn 12 24 03.2 +0.4**
comp=Z,16nm,0.8s
ANTO Ankara 17.39 96 *e*P **Pn 12 24 03.2 +0.4**
ANTO pmax pmax
comp=Z,16nm,0.8s
VSU Vasula 17.61 30 *ce*P **Pn 12 24 03.0 -2.3**
VSU pmax pmax
comp=Z,56nm,0.8s
BR101 Keskin Array S 18.05 96 *e*P **P 12 24 11.3 -0.3**
BRTR Keskin Array B 18.05 96 P **P 12 24 11.3 -0.3**
comp=Z,0.2nm,0.3s,baz=279,slow=9.5,SNR=6.3
FINES FINESS Array B 19.71 23 P **P 12 24 29.8 +0.3**
comp=Z,0.4nm,0.3s,baz=200,slow=9.5,SNR=17
FIA1 FINESS Array S 19.71 23 *e*P **P 12 24 29.6 +0.2**
comp=Z,12nm,1.3s
OBN Obninsk 20.21 48 ⇓*e*P **P 12 24 34.2 -0.7**
OBN *SP **sP 12 24 38.0 +0.3**
OBN PPP PPP 12 24 56.0
OBN pmax pmax
comp=Z,7.0nm,0.4s
KIV Kislovodsk 23.34 79 *e*P **P 12 25 08.8 +0.3**
KIV pmax pmax
comp=Z,16nm,1.0s
NCK Nalchik 24.08 80 *i* P **P 12 25 15.6 -0.1**
NCK pmax pmax
comp=Z,8.0nm,0.8s
KLMR Klimovskoe 24.17 36 *e*P **P 12 25 15.2 -1.1**
KLMR pmax pmax
comp=Z,12nm,1.1s
KLMR Klimovskoe 24.17 36 *e*P **P 12 25 15.2 -1.1**
KLMR AMP 12 25 19.7
comp=Z,12nm,1.1s
ARA0 ARCESS Array S 26.61 12 *e*P **P 12 25 38.9 +0.5**
ARCES ARCESS Array B 26.61 12 P **P 12 25 38.9 +0.5**
comp=Z,1.2nm,0.9s,baz=178,slow=8.1,SNR=2.6
TOA1 Torodi Ar. Sit 31.74 196 *e*S **S 12 31 38.7 +4.1**
TOA0 Torodi Ar. Sit 31.75 196 *e*P **P 12 26 24.4 0.0**
comp=Z,5.4nm,1.4s
TORD Torodi Ar. Bea 31.75 196 P **P 12 26 24.3 -0.2**
comp=Z,0.6nm,0.6s,baz=8.3,slow=10,SNR=4.0
ARU Arti 32.60 51 P **P 12 26 30.9 -0.7**
comp=Z,0.9nm,0.3s,baz=296,slow=9.9,SNR=5.6
ARU Arti 32.60 51 *e*P **P 12 26 31.2 -0.4**
comp=Z,4.3nm,0.7s
ARU Arti 32.60 51 *d i*P **P 12 26 31.6 0.0**
ARU 12 27 33.0

ARU				S	S	12 31 48.3	+1.0
ARU				pmax	pmax		
comp=Z,5.0nm,0.8s							
AKTO	**Aktyubinsk**	**32.62**	**62**	P	**P**	**12 26 31.8**	**0.0**
comp=Z,1.2nm,0.8s,baz=285,slow=16,SNR=3.5							
ABKAR	**Akbulak array**	**34.04**	**63**	*e*P	**P**	**12 26 44.2**	**-0.1**
comp=Z,1.6nm,0.9s							
GEYT	**Alibeck**	**36.32**	**83**	P	**P**	**12 27 05.7**	**+1.6**
comp=Z,1.8nm,0.6s,baz=293,slow=7.7,SNR=3.8							
BRVK	**Borovoye**	**39.68**	**55**	*e*P	**P**	**12 27 32.2**	**0.0**
comp=Z,2.7nm,0.8s							
BRVK	**Borovoye**	**39.68**	**55**	*i* P	**P**	**12 27 32.5**	**+0.3**
BRVK				pmax	pmax		
comp=Z,3.0nm,0.9s							
KK31	**Karatay Array**	**42.86**	**69**	*e*P	**P**	**12 27 59.2**	**+0.8**
comp=Z,2.5nm,0.8s							
KK31	**Karatay Array**	**42.86**	**69**	*e*P	**P**	**12 27 59.3**	**+0.8**
KK31				pmax	pmax		
comp=Z,3.0nm,0.8s							
KURK	**Kurchatov**	**45.29**	**56***ce*P		**P**	**12 28 16.5**	**-1.3**
KURK				pmax	pmax		
comp=Z,5.0nm,1.7s							
AAK	**Ala-Archa**	**45.72**	**68***ce*P		**P**	**12 28 21.3**	**-0.3**
AAK				pmax	pmax		
comp=Z,3.0nm,1.3s							
ZAA1	**Zalesovo Array**	**47.76**	**50**	*e*P	**P**	**12 28 36.9**	**-0.3**
ZALV	**Zalesovo Beam**	**47.76**	**50**	P	**P**	**12 28 36.9**	**-0.3**
comp=Z,0.5nm,0.4s,baz=270,slow=8.9,SNR=3.9							
MK31	**Makanchi Array**	**49.02**	**60**	*e*P	**P**	**12 28 47.4**	**+0.3**
comp=Z,2.1nm,1.3s							
MK31	**Makanchi Array**	**49.02**	**60**	*e*P	**P**	**12 28 47.4**	**+0.3**
MK31				pmax	pmax		
comp=Z,2.0nm,1.3s							
MK32	**Makanchi Array**	**49.02**	**60**	*e*P	**P**	**12 28 47.1**	**0.0**
MKAR	**Makanchi Array**	**49.02**	**60**	P	**P**	**12 28 47.1**	**0.0**
comp=Z,0.8nm,0.6s,baz=279,slow=5.7,SNR=8.5							
MKAR	**Makanchi Array**	**49.02**	**60***ce*P		**P**	**12 28 47.2**	**+0.2**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
WMQ	**Urumqi**	**53.77**	**61**	*e*P	**P**	**12 29 25.3**	**+2.6**
TLY	**Talaya**	**58.95**	**46**	*i* P	**P**	**12 29 59.7**	**+0.2**
SONA0	**Songino Array**	**62.61**	**49**	*e*P	**P**	**12 30 25.2**	**+0.6**
SONM	**Songino Array**	**62.61**	**49**	P	**P**	**12 30 25.2**	**+0.6**
comp=Z,1.5nm,0.9s,baz=308,slow=8.9,SNR=6.8							
ULN	**Ulaanbaatar**	**62.95**	**49**	*i* P	**P**	**12 30 27.6**	**+0.7**
ULN				pmax	pmax		
comp=Z,2.0nm,1.0s							
YKA	**Yellowknife Ar**	**64.86**	**335**	P	**P**	**12 30 38.4**	**-0.6**
comp=Z,0.4nm,0.5s,baz=44,slow=6.3,SNR=9.1							
YKB5	**Yellowknife Ar**	**64.86**	**335**	*e*P	**P**	**12 30 38.4**	**-0.6**
HHC	**Hu-ho-hao-te**	**69.88**	**52**	*e*P	**P**	**12 31 11.6**	**+0.3**
HHC				pmax	pmax		
comp=Z,16nm,1.2s							
HHC				pmax	pmax		
comp=Z,18nm,6.3s							
ILAR	**Eielson Array**	**69.91**	**350**	P	**P**	**12 31 11.5**	**+0.6**
comp=Z,0.5nm,0.8s,baz=5.9,slow=8.1,SNR=4.8							
ILB	**Eielson Array**	**69.91**	**350**	*e*P	**P**	**12 31 11.3**	**+0.4**
comp=Z,2.7nm,1.4s							
CD2	**Chengdu**	**71.61**	**65**	*e*P	**P**	**12 31 21.0**	**-0.9**
KMI	**Kunming**	**74.74**	**70**	P	**P**	**12 31 43.0**	**+2.3**
KMI				pmax	pmax		
comp=Z,13nm,0.5s							
CMAR	**Chiang Mai Arr**	**76.57**	**77**	P	**P**	**12 31 51.7**	**+0.7**
comp=Z,0.6nm,0.4s,baz=325,slow=7.7,SNR=4.1							
ANMO	**Albuquerque**	**82.43**	**312***ce*P		**P**	**12 32 25.2**	**+2.2**
ANMO				pmax	pmax		
comp=Z,2.0nm,1.7s							
ASAR	**Alice Springs**	**130.11**	**85**	PKP	**PKPdf**	**12 39 08.4**	**-2.1**
comp=Z,0.4nm,0.8s,baz=292,slow=2.2,SNR=4.0							

*ISCJB **21** 12:23:44.7±0.4, 44°.15N±0°.03×10°.08E±0°.04, h10km±5km,*
Error ellipse: s-maj=6.5km s-min=3.9km az=135.0
*ROM **21** 12:23:45.2±0.2, 44°.203N±0°.009×10°.18E±0°.01,*
h10km, ML2.2/8, Error ellipse: s-maj=1.3km s-min=0.6km
az=51.0
*LDG **21** 12:23:46.6±0.3, 44°.11N×10°.13E, h2km, Md2.7/2, Ml2.6/10,*
Error ellipse: s-maj=7.3km s-min=3.5km az=63.0
ISC 21 12:23:45.2±0.9, 44°.18N±0°.04×10°.15E±0°.03, h16km±7km,
n22, σ1§00/38, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.17**	**97**	P	**Pb**	**12 23 49.1**	**-0.9**
VLC				S	**Sg**	**12 23 52.5**	**0.0**
SARO	**Sassorosso**	**0.18**	**88**	P	**Pb**	**12 23 49.1**	**-1.1**
SARO				S	**Sg**	**12 23 52.3**	**-0.5**
SARO				AML	AML		
comp=E,629μm,0.4s							
SARO				AML	AML		
comp=N,1022μm,0.6s							
SARO				AML	AML		
comp=E,630μm,0.4s							
SARO				AML	AML		
comp=N,1021μm,0.6s							
SARO				AML	AML		
comp=E,630μm,0.4s							
SARO				AML	AML		
comp=N,1021μm,0.6s							
CARD	**Cardoso**	**0.28**	**123**	P	**Pg**	**12 23 51.7**	**+0.3**
CARD				S	**Sg**	**12 23 55.6**	**+0.1**
CARD				AML	AML		
comp=E,996μm,0.1s							
CARD				AML	AML		
comp=N,706μm,0.1s							
CARD				AML	AML		
comp=E,994μm,0.1s							
CARD				AML	AML		
comp=N,706μm,0.1s							
CARD				AML	AML		
comp=E,994μm,0.1s							
CARD				AML	AML		
comp=N,706μm,0.1s							
ERBM	**Eremo**	**0.30**	**38**	P	**Pg**	**12 23 51.5**	**-0.2**
ERBM				S	**Sg**	**12 23 56.3**	**+0.1**
ERBM				AML	AML		
comp=E,965μm,0.8s							
ERBM				AML	AML		
comp=N,1040μm,1.4s							
ERBM				AML	AML		
comp=E,965μm,0.8s							
ERBM				AML	AML		
comp=N,1042μm,1.4s							
ERBM				AML	AML		
comp=N,1042μm,1.4s							
ERBM				AML	AML		
comp=E,965μm,0.8s							
GRAM	**Graiana**	**0.32**	**349**	P	**Pb**	**12 23 51.5**	**-1.1**
GRAM				S	**Sg**	**12 23 56.0**	**-0.6**
GRAM				AML	AML		
comp=E,3685μm,0.7s							
GRAM				AML	AML		
comp=N,3515μm,0.1s							
GRAM				AML	AML		
comp=E,3685μm,0.7s							
GRAM				AML	AML		
comp=N,3515μm,0.1s							
GRAM				AML	AML		
comp=N,3515μm,0.1s							
GRAM				AML	AML		
comp=E,3685μm,0.7s							
BDI	**Bagni Di Lucca**	**0.34**	**110**	P	**Pg**	**12 23 52.6**	**+0.2**
BDI				S	**Sg**	**12 23 57.5**	**+0.3**
MAIM	**Mastiano**	**0.36**	**137**	P	**Pg**	**12 23 53.2**	**+0.6**
MAIM				S	**Sg**	**12 23 58.4**	**+0.7**
MAIM				AML	AML		
comp=E,532μm,0.5s							
MAIM				AML	AML		
comp=N,298μm,0.9s							
MAIM				AML	AML		
comp=E,532μm,0.5s							
MAIM				AML	AML		
comp=N,298μm,0.9s							
MAIM				AML	AML		
comp=N,298μm,0.9s							
MAIM				AML	AML		
comp=E,532μm,0.5s							
POPM	**Popiglio**	**0.46**	**107**	P	**Pg**	**12 23 54.6**	**+0.2**
POPM				S	**Sb**	**12 24 01.4**	**0.0**
POPM				AML	AML		
comp=E,399μm,0.4s							
POPM				AML	AML		
comp=N,521μm,0.2s							
POPM				AML	AML		
comp=N,521μm,0.2s							
POPM				AML	AML		
comp=E,399μm,0.4s							
MSSA	**Maissana**	**0.48**	**287**	P	**Pg**	**12 23 54.7**	**-0.1**
MSSA				AML	AML		
comp=E,222μm,0.5s							
MSSA				AML	AML		
comp=N,168μm,1.2s							
MSSA				AML	AML		
comp=E,222μm,0.5s							
MSSA				AML	AML		
comp=N,168μm,1.2s							
MSSA				AML	AML		
comp=E,222μm,0.5s							
MSSA				AML	AML		
comp=N,168μm,1.2s							
GORR	**Gorreto**	**0.75**	**305**	P	**Pn**	**12 24 01.1**	**-0.1**
GORR				AML	AML		
comp=E,134μm,1.1s							
GORR				AML	AML		
comp=N,146μm,0.4s							
GORR				AML	AML		
comp=N,146μm,0.4s							
GORR				AML	AML		
comp=E,134μm,1.1s							
BOB	**Bobbio (Coli)**	**0.78**	**320**	P	**Pn**	**12 24 00.9**	**-0.7**
PGF	**Pioggiola**	**1.83**	**208**	*e*Pn	**Pn**	**12 24 16.5**	**+0.3**
PGF				*e*Sn	**Sn**	**12 24 38.2**	**-0.9**
comp=E,15nm,0.3s							
SBF	**Sospel**	**1.99**	**262**	*e*Pn	**Pn**	**12 24 19.3**	**+1.1**
SBF				*e*Sn	**Sn**	**12 24 42.7**	**-0.1**
comp=E,10nm,0.2s							
MBDF	**Montbardon**	**2.48**	**284**	*e*Pn	**Pn**	**12 24 25.5**	**+0.4**
MBDF	**Montbardon**	**2.48**	**284**	*e*Pg	**Pg**	**12 24 32.8**	**-0.1**
MBDF				*e*Sg	**Sg**	**12 25 05.1**	**0.0**
comp=E,6.6nm,0.4s							
FRF	**La Foret Royal**	**2.61**	**258**	*e*Pn	**Pn**	**12 24 27.2**	**+0.5**
FRF				*e*Sn	**Sn**	**12 24 57.5**	**-0.6**
comp=E,6.2nm,0.2s							
LPG	**La Plagne**	**2.76**	**300**	*e*P	**Pb**	**12 24 34.4**	**+0.1**
LMR	**La Mourre**	**2.77**	**254**	*e*Pn	**Pn**	**12 24 29.1**	**+0.1**
LMR				*e*Sn	**Sn**	**12 25 00.3**	**-1.8**
comp=E,3.9nm,0.2s							
LPL	**La Plagne**	**2.78**	**300**	*e*P	**Pb**	**12 24 33.8**	**-0.8**
LPL				*e*Sn	**Sn**	**12 25 03.4**	**+0.9**
comp=E,3.2nm,0.2s							
ORIF	**Oris-en-Rattie**	**3.14**	**285**	*e*P	**Pn**	**12 24 36.7**	**+2.5**
SMRF	**Simiane la Rot**	**3.31**	**268**	*e*Pn	**Pn**	**12 24 37.2**	**+0.9**
SMRF				*e*Sn	**Sn**	**12 25 14.0**	**-1.3**
comp=E,5.1nm,0.5s							
CABF	**La Chapelle**	**3.76**	**312**	*e*P	**Pn**	**12 24 46.0**	**+3.4**
CABF				*e*Sn	**Sn**	**12 25 27.2**	**+0.7**
comp=E,2.1nm,0.4s							

*ISCJB **21** 12:27:03.3±0.5, 44°.14N±0°.04×10°.08E±0°.05, h10km±6km,*
Error ellipse: s-maj=7.2km s-min=4.2km az=35.8
*ROM **21** 12:27:03.7±0.2, 44°.18N±0°.01×10°.16E±0°.02, h9km±1km,*
ML2.0/9, Error ellipse: s-maj=1.5km s-min=0.8km az=53.0
*GEN **21** 12:27:04.1, 44°.18N×10°.16E, h3km±1km, Ml1.7*
*LDG **21** 12:27:04.3±0.0, 44°.18N×10°.15E, h3km, Md2.2/2, Ml2.5/5,*
Error ellipse: s-maj=1.0km s-min=0.7km az=176.0
ISC 21 12:27:03.8±0.9, 44°.17N±0°.04×10°.14E±0°.04, h13km±8km,
n23, σ0§53/39, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.18**	**94**	P	**Pg**	**12 27 07.7**	**-0.2**
VLC				S	**Sg**	**12 27 10.5**	**-0.2**
VLC				AML	AML		
comp=E,351μm,0.5s							
VLC				AML	AML		
comp=N,506μm,0.7s							
VLC				AML	AML		
comp=E,351μm,0.6s							
VLC				AML	AML		
comp=N,528μm,1.2s							
VLC				AML	AML		
comp=E,351μm,0.5s							
VLC				AML	AML		
comp=N,506μm,0.7s							
VLC				AML	AML		
comp=E,351μm,0.6s							
VLC				AML	AML		
comp=N,528μm,1.2s							
VLC				AML	AML		
comp=N,506μm,0.7s							
VLC				AML	AML		
comp=E,351μm,0.6s							
VLC				AML	AML		
comp=N,528μm,1.2s							
VLC				AML	AML		
comp=E,351μm,0.5s							
SARO	**Sassorosso**	**0.19**	**87**	P	**Pg**	**12 27 07.9**	**-0.2**
SARO				S	**Sg**	**12 27 10.8**	**-0.3**
SARO	**Sassorosso**	**0.19**	**87**	P	**Pg**	**12 27 07.9**	**-0.2**
SARO				S	**Sg**	**12 27 10.8**	**-0.3**
SARO				AML	AML		
comp=E,642μm,0.6s							
SARO				AML	AML		
comp=N,677μm,0.5s							
SARO				AML	AML		
comp=E,642μm,0.6s							
SARO				AML	AML		
comp=N,832μm,0.3s							
SARO				AML	AML		
comp=N,832μm,0.3s							
SARO				AML	AML		
comp=E,642μm,0.6s							
CARD	**Cardoso**	**0.29**	**121**	P	**Pg**	**12 27 09.9**	**+0.3**
CARD				S	**Sg**	**12 27 13.9**	**+0.1**
CARD	**Cardoso**	**0.29**	**121**	P	**Pg**	**12 27 10.0**	**+0.3**
CARD				S	**Sg**	**12 27 13.8**	**+0.1**
CARD				AML	AML		
comp=E,772μm,0.1s							
CARD				AML	AML		
comp=N,682μm,0.1s							
CARD				AML	AML		
comp=E,772μm,0.1s							
CARD				AML	AML		
comp=N,682μm,0.1s							
CARD				AML	AML		
comp=E,772μm,0.1s							
CARD				AML	AML		
comp=N,682μm,0.1s							
ERBM	**Eremo**	**0.31**	**38**	P	**Pg**	**12 27 10.5**	**+0.3**
ERBM				S	**Sg**	**12 27 15.8**	**+1.2**
ERBM				AML	AML		
comp=E,668μm,0.2s							
ERBM				AML	AML		
comp=N,874μm,0.1s							
ERBM				AML	AML		
comp=E,1016μm,0.2s							
ERBM				AML	AML		
comp=N,1015μm,1.1s							
ERBM				AML	AML		
comp=N,1012μm,1.1s							
ERBM				AML	AML		
comp=E,1014μm,0.2s							
GRAM	**Graiana**	**0.32**	**350**	P	**Pg**	**12 27 10.5**	**+0.1**
GRAM				S	**Sg**	**12 27 15.4**	**+0.5**
GRAM	**Graiana**	**0.32**	**350**	P	**Pg**	**12 27 10.5**	**+0.1**
GRAM				S	**Sg**	**12 27 15.3**	**+0.5**
GRAM				AML	AML		
comp=E,1385μm,0.9s							
GRAM				AML	AML		
comp=N,1705μm,0.9s							
GRAM				AML	AML		
comp=E,3440μm,0.2s							
GRAM				AML	AML		
comp=N,3220μm,0.2s							
GRAM				AML	AML		
comp=N,3220μm,0.2s							
GRAM				AML	AML		
comp=E,3445μm,0.2s							
BDI	**Bagni Di Lucca**	**0.35**	**108**	P	**Pg**	**12 27 11.0**	**+0.2**
BDI				S	**Sg**	**12 27 16.1**	**+0.5**
BDI				AML	AML		
comp=E,300μm,0.5s							
BDI				AML	AML		
comp=N,447μm,0.2s							
BDI				AML	AML		
comp=E,295μm,0.7s							
BDI				AML	AML		
comp=N,530μm,0.2s							
BDI				AML	AML		
comp=N,530μm,0.2s							
BDI				AML	AML		
comp=N,447μm,0.2s							
BDI				AML	AML		
comp=E,300μm,0.5s							
BDI				AML	AML		
comp=E,295μm,0.7s							
MAIM	**Mastiano**	**0.36**	**136**	P	**Pg**	**12 27 11.4**	**+0.4**
MAIM				S	**Sg**	**12 27 16.3**	**+0.4**
MAIM	**Mastiano**	**0.36**	**136**	P	**Pg**	**12 27 11.5**	**+0.4**
MAIM				S	**Sg**	**12 27 16.5**	**+0.5**
MAIM				AML	AML		
comp=E,283μm,0.7s							
MAIM				AML	AML		
comp=N,402μm,0.6s							
MAIM				AML	AML		
comp=E,460μm,0.4s							
MAIM				AML	AML		
comp=N,402μm,0.6s							
MAIM				AML	AML		
comp=E,460μm,0.4s							
MAIM				AML	AML		
comp=N,402μm,0.6s							
POPM	**Popiglio**	**0.46**	**106**	P	**Pg**	**12 27 13.0**	**+0.2**
POPM				S	**Sg**	**12 27 19.9**	**+0.8**
POPM	**Popiglio**	**0.46**	**106**	P	**Pg**	**12 27 13.1**	**+0.2**
POPM				AML	AML		
comp=E,504μm,0.1s							
POPM				AML	AML		
comp=N,441μm,0.1s							
POPM				AML	AML		
comp=E,505μm,0.1s							
POPM				AML	AML		
comp=N,524μm,0.1s							
POPM				AML	AML		
comp=N,524μm,0.1s							
POPM				AML	AML		
comp=E,505μm,0.1s							
MSSA	**Maissana**	**0.47**	**288**	P	**Pg**	**12 27 13.6**	**+0.5**
MSSA				AML	AML		
comp=E,200μm,1.3s							
MSSA				AML	AML		
comp=N,99μm,0.9s							
MTCR	**Monte La Croce**	**0.64**	**103**	P	**Pg**	**12 27 16.1**	**-0.1**
PTF	**Prato**	**0.70**	**107**	P	**Pn**	**12 27 19.1**	**-0.4**
CRMI	**Carmignano**	**0.71**	**122**	P	**Pg**	**12 27 18.2**	**+0.7**
CRMI				AML	AML		
comp=E,55μm,0.3s							
CRMI				AML	AML		
comp=N,57μm,0.6s							
CRMI				AML	AML		
comp=N,57μm,0.6s							
CRMI				AML	AML		
comp=E,55μm,0.3s							
SEI	**Scarperia**	**0.88**	**97**	P	**Pg**	**12 27 21.8**	**+0.9**
RUFI	**Rufina**	**1.04**	**108**	P	**Pn**	**12 27 24.2**	**+0.2**
PGF	**Pioggiola**	**1.82**	**208**	*e*Pn	**Pn**	**12 27 35.3**	**+0.4**
PGF				*e*Sn	**Sn**	**12 27 57.1**	**-0.8**
comp=E,5.2nm,0.3s							
SBF	**Sospel**	**1.98**	**262**	*e*Pn	**Pn**	**12 27 37.1**	**+0.1**
SBF				*e*Sn	**Sn**	**12 28 00.9**	**-0.7**
comp=E,6.1nm,0.2s							
FRF	**La Foret Royal**	**2.60**	**258**	*e*Pn	**Pn**	**12 27 45.7**	**+0.2**
FRF				*e*Sn	**Sn**	**12 28 15.8**	**-1.1**
comp=E,3.0nm,0.2s							
LMR	**La Mourre**	**2.76**	**254**	*e*Pn	**Pn**	**12 27 47.6**	**-0.1**
LMR				*e*Sn	**Sn**	**12 28 19.7**	**-1.2**
comp=E,1.5nm,0.2s							

*ISCJB **21** 12:45:27.2±0.4, 44°.19N±0°.04×10°.10E±0°.05, h13km±5km,*
Error ellipse: s-maj=7.5km s-min=4.2km az=137.8
*ROM **21** 12:45:27.5±0.2, 44°.212N±0°.007×10°.16E±0°.01,*
h10km, ML1.9/6, Error ellipse: s-maj=1.1km s-min=0.5km
az=54.0
*GEN **21** 12:45:28.1, 44°.22N×10°.17E, h6km±2km, Ml1.5*
*LDG **21** 12:45:28.1±0.0, 44°.20N×10°.14E, h2km, Md2.5/2, Ml2.5/7,*
Error ellipse: s-maj=1.0km s-min=0.7km az=15.0
ISC 21 12:45:27.1±0.9, 44°.24N±0°.04×10°.28E±0°.04, h25km±6km,
n19, σ1§10/36, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARO	**Sassorosso**	**0.10**	**122**	P	**Pb**	**12 45 31.9**	**-0.1**
SARO				S	**Sb**	**12 45 34.7**	**-0.4**
SARO	**Sassorosso**	**0.10**	**122**	P	**Pb**	**12 45 31.9**	**-0.1**
SARO				S	**Sb**	**12 45 34.8**	**-0.4**
SARO				AML	AML		
comp=E,383μm,0.4s							
SARO				AML	AML		
comp=N,506μm,0.2s							
SARO				AML	AML		
comp=E,383μm,0.4s							
SARO				AML	AML		
comp=N,506μm,0.2s							
SARO				AML	AML		
comp=E,383μm,0.4s							
SARO				AML	AML		
comp=N,506μm,0.2s							
VLC	**Villacollemand**	**0.11**	**136**	P	**Pb**	**12 45 31.8**	**-0.1**
VLC				S	**Sb**	**12 45 34.7**	**-0.4**
ERBM	**Eremo**	**0.20**	**28**	P	**Pn**	**12 45 33.9**	**-0.8**
ERBM				S	**Sb**	**12 45 38.4**	**+1.4**
ERBM				AML	AML		
comp=E,451μm,0.8s							
ERBM				AML	AML		
comp=N,460μm,1.0s							
ERBM				AML	AML		
comp=E,451μm,0.8s							
ERBM				AML	AML		
comp=N,460μm,1.0s							
ERBM				AML	AML		
comp=E,451μm,0.8s							
ERBM				AML	AML		
comp=N,460μm,1.0s							
CARD	**Cardoso**	**0.26**	**145**	P	**Pn**	**12 45 34.4**	**-0.9**
CARD				S	**Sb**	**12 45 38.3**	**+0.3**
CARD				AML	AML		
comp=E,442μm,0.1s							
CARD				AML	AML		
comp=N,289μm,1.1s							
CARD				AML	AML		
comp=E,442μm,0.1s							
CARD				AML	AML		
comp=N,289μm,1.1s							
CARD				AML	AML		
comp=E,442μm,0.1s							
CARD				AML	AML		
comp=N,289μm,1.1s							
BDI	**Bagni Di Lucca**	**0.29**	**127**	P	**Pn**	**12 45 35.2**	**-0.6**
BDI				S	**Sn**	**12 45 40.5**	**-0.9**
GRAM	**Graiana**	**0.30**	**329**	P	**Pb**	**12 45 33.9**	**-0.3**
GRAM				S	**Sb**	**12 45 38.3**	**-0.7**
GRAM	**Graiana**	**0.30**	**329**	P	**Pb**	**12 45 33.9**	**-0.3**
GRAM				S	**Sb**	**12 45 38.1**	**-0.9**
GRAM				AML	AML		
comp=E,2015μm,0.6s							
GRAM				AML	AML		
comp=N,2000μm,0.2s							
GRAM				AML	AML		
comp=E,2015μm,0.6s							
GRAM				AML	AML		
comp=N,2000μm,0.2s							
GRAM				AML	AML		
comp=E,2015μm,0.6s							
GRAM				AML	AML		
comp=N,2000μm,0.2s							
MAIM	**Mastiano**	**0.36**	**155**	P	**Pb**	**12 45 35.7**	**+0.7**
MAIM				S	**Sb**	**12 45 40.7**	**+0.3**
MAIM	**Mastiano**	**0.36**	**155**	P	**Pb**	**12 45 35.7**	**+0.7**
MAIM				S	**Sb**	**12 45 40.8**	**+0.3**
MAIM				AML	AML		
comp=E,203μm,0.4s							
MAIM				AML	AML		
comp=N,129μm,0.8s							
MAIM				AML	AML		
comp=E,203μm,0.4s							
MAIM				AML	AML		
comp=N,129μm,0.8s							
MAIM				AML	AML		
comp=E,203μm,0.4s							

MAIM			AML	AML	
	comp=N,129μm,0.8s				
POPM	**Popiglio**	**0.39 119**	P	**Pn**	**12 45 37.4 +0.1**
POPM			S	**Sn**	**12 45 44.3 +0.4**
MSSA	**Maissana**	**0.55 278**	P	**Pb**	**12 45 37.2 -1.1**
MSSA			AML	AML	
	comp=E,143μm,0.2s				
MSSA			AML	AML	
	comp=N,133μm,1.1s				
MSSA			AML	AML	
	comp=E,143μm,0.2s				
MSSA			AML	AML	
	comp=N,133μm,1.1s				
MSSA			AML	AML	
	comp=E,143μm,0.2s				
MSSA			AML	AML	
	comp=N,133μm,1.1s				
PGF	**Pioggiola**	**1.93 209**	*e*Pn	**Pn**	**12 45 59.2 +0.8**
PGF			*e*Sn	**Sn**	**12 46 21.6 -0.3**
	comp=N,6.5nm,0.2s				
SBF	**Sospel**	**2.08 261**	*e*Pn	**Pn**	**12 46 01.0 +0.5**
SBF			*e*Sn	**Sn**	**12 46 24.8 -0.9**
	comp=N,8.4nm,0.3s				
MBDF	**Montbardon**	**2.56 282**	*e*Pn	**Pn**	**12 46 07.7 +0.6**
MBDF			*e*Sn	**Sn**	**12 46 36.5 -1.0**
	comp=N,4.7nm,0.4s				
FRF	**La Foret Royal**	**2.71 257**	*e*Pn	**Pn**	**12 46 09.5 +0.4**
FRF			*e*Sn	**Sn**	**12 46 39.7 -1.4**
	comp=N,4.5nm,0.3s				
LMR	**La Mourre**	**2.88 253**	*e*Pn	**Pn**	**12 46 11.5 +0.2**
LMR			*e*Sn	**Sn**	**12 46 43.6 -1.5**
	comp=N,3.3nm,0.2s				
ORIF	**Oris-en-Rattie**	**3.22 284**	*e*P	**Pn**	**12 46 19.2 +3.1**
CABF	**La Chapelle**	**3.79 310**	*e*P	**Pn**	**12 46 27.3 +3.4**
CABF			*e*Sn	**Sn**	**12 47 06.8 -0.9**
	comp=N,0.8nm,0.3s				

*ISCJB **21** 12:49:18.9±0.4, 44°.16N±0°.03×10°.08E±0°.04, h10km±5km, Error ellipse: s-maj=6.0km s-min=3.7km az=43.1*
*ROM **21** 12:49:19.4±0.2, 44°.191N±0°.008×10°.17E±0°.01, h10km, ML2.1/3, Error ellipse: s-maj=1.1km s-min=0.5km az=47.0*
*GEN **21** 12:49:19.8, 44°.19N×10°.15E, h5km±2km, Ml2.0*
*LDG **21** 12:49:20.0±0.0, 44°.19N×10°.14E, h2km, Md2.7/2, Ml2.7/11, Error ellipse: s-maj=1.0km s-min=0.6km az=12.0*
ISC 21 12:49:19.1±0.9, 44°.16N±0°.03×10°.11E±0°.03, h12km±7km, n30, σ1s 16/53, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.20**	**91**	P	**Pg**	**12 49 23.5**	**0.0**
VLC				S	**Sg**	**12 49 26.3**	**-0.2**
VLC				AML	AML		
	comp=E,728μm,0.4s						
VLC				AML	AML		
	comp=N,867μm,0.4s						
VLC				AML	AML		
	comp=E,776μm,0.5s						
VLC				AML	AML		
	comp=N,892μm,0.4s						
VLC				AML	AML		
	comp=E,728μm,0.4s						
VLC				AML	AML		
	comp=N,868μm,0.4s						
VLC				AML	AML		
	comp=E,776μm,0.5s						
VLC				AML	AML		
	comp=N,892μm,0.4s						
VLC				AML	AML		
	comp=E,728μm,0.4s						
VLC				AML	AML		
	comp=E,776μm,0.5s						
VLC				AML	AML		
	comp=N,868μm,0.4s						
VLC				AML	AML		
	comp=N,892μm,0.4s						
SARO	**Sassorosso**	**0.21**	**84**	P	**Pg**	**12 49 23.6**	**-0.1**
SARO				S	**Sg**	**12 49 26.5**	**-0.4**
SARO	**Sassorosso**	**0.21**	**84**	P	**Pg**	**12 49 23.6**	**-0.1**
SARO				S	**Sg**	**12 49 26.5**	**-0.4**
SARO				AML	AML		
	comp=E,1170μm,1.2s						
SARO				AML	AML		
	comp=N,2300μm,0.1s						
CARD	**Cardoso**	**0.30**	**117**	P	**Pg**	**12 49 25.6**	**+0.3**
CARD				S	**Sg**	**12 49 29.9**	**+0.5**
CARD	**Cardoso**	**0.30**	**117**	P	**Pg**	**12 49 25.8**	**+0.5**
CARD				S	**Sg**	**12 49 29.8**	**+0.5**
GRAM	**Graiana**	**0.33**	**354**	P	**Pg**	**12 49 26.0**	**+0.1**
GRAM				S	**Sg**	**12 49 30.5**	**+0.1**
GRAM	**Graiana**	**0.33**	**354**	P	**Pg**	**12 49 25.9**	**+0.1**
GRAM				S	**Sg**	**12 49 30.3**	**-0.1**
ERBM	**Eremo**	**0.33**	**40**	P	**Pg**	**12 49 25.9**	**0.0**
ERBM				S	**Sb**	**12 49 30.6**	**-1.8**
ERBM				AML	AML		
	comp=E,1011μm,0.2s						
ERBM				AML	AML		
	comp=N,930μm,0.4s						
ERBM				AML	AML		
	comp=E,1010μm,0.2s						
ERBM				AML	AML		
	comp=N,930μm,0.4s						
ERBM				AML	AML		
	comp=E,1010μm,0.2s						
ERBM				AML	AML		
	comp=N,930μm,0.4s						
ERBM				AML	AML		
	comp=E,1010μm,0.2s						
ERBM				AML	AML		
	comp=N,930μm,0.4s						
BDI	**Bagni Di Lucca**	**0.36**	**106**	P	**Pg**	**12 49 26.6**	**+0.1**
BDI				S	**Sg**	**12 49 31.6**	**+0.3**
MAIM	**Mastiano**	**0.37**	**132**	P	**Pb**	**12 49 27.4**	**-0.1**
MAIM				S	**Sg**	**12 49 32.4**	**+0.9**
MAIM	**Mastiano**	**0.37**	**132**	P	**Pb**	**12 49 27.4**	**-0.1**
MAIM				S	**Sg**	**12 49 32.3**	**+0.8**
MSSA	**Maissana**	**0.45**	**290**	P	**Pg**	**12 49 29.1**	**+1.0**
MSSA				AML	AML		
	comp=E,268μm,1.3s						
MSSA				AML	AML		
	comp=N,200μm,0.9s						
MSSA				AML	AML		
	comp=E,268μm,1.3s						
MSSA				AML	AML		
	comp=N,200μm,0.9s						
MSSA				AML	AML		
	comp=E,268μm,1.3s						
MSSA				AML	AML		
	comp=N,200μm,0.9s						
MSSA				AML	AML		
	comp=E,268μm,1.3s						
MSSA				AML	AML		
	comp=N,200μm,0.9s						
POPM	**Popiglio**	**0.48**	**104**	P	**Pg**	**12 49 28.8**	**+0.3**
POPM				S	**Sb**	**12 49 35.3**	**-1.1**
POPM	**Popiglio**	**0.48**	**104**	P	**Pb**	**12 49 29.0**	**-0.4**
POPM				S	**Sb**	**12 49 35.4**	**-1.1**
ZCCA	**Zocca**	**0.65**	**73**	P	**Pb**	**12 49 32.2**	**-0.1**
GORR	**Gorreto**	**0.74**	**307**	P	**Pg**	**12 49 33.9**	**+0.5**
BOB	**Bobbio (Coli)**	**0.77**	**322**	P	**Pg**	**12 49 34.6**	**+0.5**
SEI	**Scarperia**	**0.90**	**97**	P	**Pg**	**12 49 36.7**	**+0.1**
CASP	**Castiglione de**	**1.48**	**158**	P	**Pn**	**12 49 46.0**	**+0.5**
PGF	**Pioggiola**	**1.81**	**207**	*e*Pn	**Pn**	**12 49 51.0**	**+0.9**
PGF				*e*Sn	**Sn**	**12 50 13.1**	**+0.1**
	comp=N,17nm,0.2s						
SBF	**Sospel**	**1.96**	**262**	*e*Pn	**Pn**	**12 49 52.7**	**+0.6**
SBF				*e*Sn	**Sn**	**12 50 16.8**	**+0.2**
	comp=N,28nm,0.4s						
MBDF	**Montbardon**	**2.46**	**284**	*e*P	**Pb**	**12 50 02.2**	**-1.1**
MBDF				*e*Sn	**Sn**	**12 50 28.4**	**-0.7**
MBDF				*e*Sg	**Sg**	**12 50 38.1**	**0.0**
	comp=N,8.5nm,0.4s						
FRF	**La Foret Royal**	**2.58**	**258**	*e*Pn	**Pn**	**12 50 01.3**	**+0.7**
FRF				*e*Sn	**Sn**	**12 50 31.5**	**-0.4**
	comp=N,7.5nm,0.3s						
LMR	**La Mourre**	**2.74**	**254**	*e*Pn	**Pn**	**12 50 03.4**	**+0.6**
LMR				*e*Sn	**Sn**	**12 50 34.6**	**-1.2**
	comp=N,5.0nm,0.2s						
LPL	**La Plagne**	**2.76**	**301**	*e*P	**Pb**	**12 50 06.2**	**-2.3**
LPL				*e*Sn	**Sn**	**12 50 35.5**	**-1.2**
	comp=N,3.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.12**	**285**	*e*P	**Pn**	**12 50 11.4**	**+3.2**
ORIF				*e*Sn	**Sn**	**12 50 44.3**	**-1.1**
	comp=N,2.3nm,0.3s						
SMRF	**Simiane la Rot**	**3.28**	**268**	*e*Pn	**Pn**	**12 50 11.0**	**+0.7**
SMRF				*e*Sn	**Sn**	**12 50 48.3**	**-0.8**
	comp=N,4.1nm,0.4s						
CABF	**La Chapelle**	**3.75**	**312**	*e*P	**Pn**	**12 50 20.2**	**+3.4**
CABF				*e*Sn	**Sn**	**12 50 59.2**	**-1.6**
	comp=N,1.5nm,0.3s						
HINF	**Hinteralfeld**	**4.30**	**329**	*e*P	**Pn**	**12 50 27.5**	**+3.1**
CDF	**Champ du Feu**	**4.68**	**336**	*e*P	**Pn**	**12 50 32.1**	**+2.5**

*ISCJB **21** 12:51:20.5±0.6, 23°.23N±0°.02×121°.76E±0°.03, h15km±7km, Error ellipse: s-maj=4.8km s-min=2.9km az=27.6*
*JMA **21** 12:51:20.1±0.2, 23°.21N×121°.75E, h18km±4km, M2.7*
*TAP **21** 12:51:22.2, 23°.24N×121°.64E, h25km, ML3.0, D*
ISC 21 12:51:21.1±1.0, 23°.23N±0°.03×121°.71E±0°.03, h22km±4km, n61, σ0s 65/101, 4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.34**	**247**	*e*P	**Pb**	**12 51 28.0**	**-0.5**
CHKT				*e*S	**Sb**	**12 51 33.4**	**0.0**
	baz=236						
HGSD	**Ruisui**	**0.37**	**315**	⇓*e*P	**Pb**	**12 51 29.1**	**+0.2**
HGSD				*e*S	**Sb**	**12 51 34.2**	**0.0**
	baz=326						
TWF1	**Yuli**	**0.40**	**288**	⇓*i*P	**Pb**	**12 51 29.7**	**+0.3**
TWF1				*e*S	**Sb**	**12 51 34.6**	**-0.4**
	baz=290						
YULB	**Yu-li**	**0.41**	**293**	*e*P	**Pb**	**12 51 29.9**	**+0.3**
YULB				*e*S	**Sb**	**12 51 35.7**	**+0.3**
	baz=292						
EHY	**Hungye**	**0.45**	**308**	P	**Pb**	**12 51 30.5**	**+0.2**
EHY				*e*S	**Sb**	**12 51 37.2**	**+0.8**
	baz=313						
EGFH	**Guangfu**	**0.51**	**330**	*e*P	**Pb**	**12 51 31.7**	**+0.4**
EGFH				*e*S	**Sb**	**12 51 38.7**	**+0.5**
	baz=344						
ESL	**Shilin**	**0.63**	**337**	P	**Pb**	**12 51 33.6**	**+0.1**
ESL				*e*S	**Sb**	**12 51 42.0**	**+0.1**
	baz=349						
ELDTW	**Lidau**	**0.64**	**266**	⇓P	**Pb**	**12 51 33.0**	**-0.6**
ELDTW				*e*S	**Sb**	**12 51 40.4**	**-1.8**
	baz=265						
ENLB	**Shoufeng**	**0.68**	**352**	*e*P	**Pb**	**12 51 32.7**	**-1.5**
TWGBT	**Beinan**	**0.71**	**235**	*e*P	**Pb**	**12 51 34.4**	**-0.4**
TWG	**Pinlang**	**0.71**	**235**	P	**Pb**	**12 51 34.4**	**-0.4**
TWG				*e*S	**Sb**	**12 51 43.4**	**-0.8**
	baz=243						
VWDT	**VWDT**	**0.73**	**315**	⇓*e*P	**Pb**	**12 51 35.5**	**+0.4**
VWDT				*e*S	**Sb**	**12 51 44.8**	**0.0**
	baz=327						
YUS	**Yu-Shan**	**0.74**	**290**	P	**Pb**	**12 51 35.4**	**-0.1**
YUS				*e*S	**Sb**	**12 51 44.9**	**-0.5**
	baz=292						
TWD	**Chiawan**	**0.85**	**353**	*e*P	**Pb**	**12 51 37.4**	**+0.2**
TWD				*e*S	**Sb**	**12 51 48.1**	**-0.1**
	baz=8.0						
OWD	**Renai**	**0.87**	**326**	*e*P	**Pb**	**12 51 37.5**	**-0.1**
STYT	**Tauyuan**	**0.88**	**266**	P	**Pb**	**12 51 37.3**	**-0.3**
STYT				*e*S	**Sb**	**12 51 48.0**	**-1.0**
	baz=265						
SSLB	**Suanglung**	**0.89**	**309**	*e*P	**Pb**	**12 51 37.5**	**-0.3**
SSLB				*e*S	**Sb**	**12 51 47.8**	**-1.3**
	baz=311						
WHYT	**Xinyi Township**	**0.91**	**301**	P	**Pn**	**12 51 38.6**	**0.0**
WHYT				*e*S	**Sb**	**12 51 49.9**	**0.0**
	baz=310						
NACB	**Ninganchiao**	**0.94**	**354**	*e*P	**Pb**	**12 51 38.2**	**-0.5**
CHGB	**Renai**	**0.96**	**329**	*e*P	**Pb**	**12 51 39.1**	**0.0**
CHGB				*e*S	**Sb**	**12 51 50.4**	**-1.1**
	baz=333						
SMLT	**Sun Moon Lake**	**0.98**	**311**	P	**Pb**	**12 51 39.5**	**0.0**
SMLT				*e*S	**Sb**	**12 51 52.0**	**-0.1**
	baz=321						
ETLH	**Xiulin Townshi**	**0.99**	**348**	*e*P	**Pb**	**12 51 39.0**	**-0.6**
ETLH				*e*S	**Sb**	**12 51 51.7**	**-0.6**
	baz=352						
TPUB	**Ta-pu**	**0.99**	**274**	*e*P	**Pn**	**12 51 39.8**	**+0.1**
TPUB				*e*S	**Sn**	**12 51 53.0**	**-0.1**
	baz=274						
WHF	**Hehuan Shan**	**0.99**	**336**	P	**Pb**	**12 51 39.4**	**-0.5**
WHF				*e*S	**Sb**	**12 51 51.8**	**-1.0**
	baz=340						
SLGT	**Liugui**	**1.00**	**257**	*e*P	**Pb**	**12 51 39.7**	**-0.1**
SLGT				*e*S	**Sb**	**12 51 51.5**	**-1.1**
	baz=258						
WTP	**Ta-pu**	**1.00**	**271**	P	**Pn**	**12 51 40.0**	**+0.1**
WTP				*e*S	**Sb**	**12 51 52.6**	**0.0**
	baz=262						
CHN4	**Tsaushan**	**1.03**	**277**	P	**Pn**	**12 51 40.6**	**+0.4**
CHN4				*e*S	**Sn**	**12 51 54.6**	**+0.6**
	baz=272						
SGST	**Jiashian**	**1.04**	**262**	*e*P	**Pn**	**12 51 40.5**	**+0.1**
DPDB	**Guoxing**	**1.07**	**318**	*e*P	**Pn**	**12 51 40.7**	**-0.2**
DPDB				*e*S	**Sb**	**12 51 54.2**	**-0.4**
	baz=327						
WJS	**Zhushan**	**1.07**	**303**	*e*P	**Pb**	**12 51 41.9**	**+1.0**
CHN1	**Nanshi**	**1.08**	**268**	P	**Pb**	**12 51 41.6**	**+0.4**
CHN1				*e*S	**Sn**	**12 51 55.9**	**+0.5**
	baz=267						
SSD	**Sandimen**	**1.10**	**244**	*e*P	**Pn**	**12 51 40.7**	**-0.5**
SNST	**Tainan City**	**1.11**	**270**	*e*P	**Pb**	**12 51 42.0**	**+0.4**
SNST				*e*S	**Sn**	**12 51 57.4**	**+1.4**
	baz=269						
TWK	**Hsinying**	**1.12**	**272**	P	**Pb**	**12 51 42.1**	**+0.3**
TWK				*e*S	**Sn**	**12 51 57.2**	**+0.9**
	baz=271						
TWT	**Tachien**	**1.13**	**335**	*e*P	**Pb**	**12 51 42.2**	**+0.2**
TWT				*e*S	**Sb**	**12 51 55.2**	**-1.0**
	baz=337						
TDCB	**Techi**	**1.13**	**334**	*e*P	**Pn**	**12 51 42.0**	**+0.2**
TDCB				*e*S	**Sb**	**12 51 54.9**	**-1.6**
	baz=337						
WNT	**Mingjian**	**1.14**	**305**	*e*P	**Pb**	**12 51 42.9**	**+0.9**
WGK	**Gukeng**	**1.14**	**293**	*e*P	**Pb**	**12 51 43.0**	**+0.9**
EAST	**Anshuo**	**1.16**	**223**	*e*P	**Pn**	**12 51 41.1**	**-0.9**
WDLH	**Douliu**	**1.17**	**293**	*e*P	**Pb**	**12 51 43.4**	**+0.9**
MASBT	**Mashibuluo**	**1.17**	**238**	*e*P	**Pn**	**12 51 41.5**	**-0.5**
	baz=229						
NANB	**Nanao**	**1.19**	**2**	*e*P	**Pn**	**12 51 42.2**	**-0.2**
	baz=4.0						
CHY	**Chiayi**	**1.21**	**283**	*e*P	**Pb**	**12 51 44.3**	**+1.0**
	baz=283						
NNSB	**Datong**	**1.23**	**346**	*e*P	**Pn**	**12 51 42.8**	**-0.2**
	baz=349						
NNSB				*e*S	**Sn**	**12 51 57.7**	**-1.3**
	baz=349						
NNS	**Nan Shan**	**1.24**	**346**	*e*P	**Pn**	**12 51 43.5**	**+0.3**
	baz=348						
WHP	**Taichung City**	**1.25**	**326**	*e*P	**Pb**	**12 51 44.8**	**+0.7**
	baz=335						
WHP				*e*S	**Sn**	**12 51 59.7**	**+0.1**
	baz=335						
SCZT	**Fangliau**	**1.32**	**230**	*e*P	**Pb**	**12 51 46.7**	**+1.6**
	baz=227						
WCHH	**Zhanghua**	**1.35**	**309**	*e*P	**Pb**	**12 51 46.0**	**+0.3**
	baz=310						
ENTT	**Nioudou**	**1.41**	**355**	*e*P	**Pn**	**12 51 45.8**	**+0.4**
	baz=346						
ENTT				*e*S	**Sn**	**12 52 03.1**	**-0.2**
	baz=346						
YHNB	**Yeheng**	**1.46**	**348**	*e*P	**Pn**	**12 51 46.8**	**+0.6**
	baz=351						
YHNB				*e*S	**Sn**	**12 52 03.9**	**-0.9**
	baz=351						
NSK	**Sanguang**	**1.47**	**348**	*e*P	**Pn**	**12 51 46.7**	**+0.3**
	baz=350						
TWE	**Neicheng**	**1.48**	**359**	*e*P	**Pb**	**12 51 48.3**	**+0.4**
	baz=349						
LIOB	**Emei**	**1.54**	**336**	*e*P	**Pb**	**12 51 49.3**	**+0.3**
	baz=350						
YOJ	**Yonaguni jima**	**1.71**	**44**	P	**Pn**	**12 51 49.6**	**+0.1**
YOJ				S	**Sn**	**12 52 10.5**	**-0.2**
TIPB	**Shuangxi**	**1.73**	**4**	*e*P	**Pb**	**12 51 51.8**	**-0.5**
	baz=353						
TIPB				*e*S	**Sn**	**12 52 12.1**	**+0.6**
	baz=353						
HATJ	**Hateruma jima**	**2.09**	**66**	S	**Sn**	**12 52 20.4**	**+0.2**
IRIF	**Iriomote-Funau**	**2.15**	**59**	P	**Pn**	**12 51 56.1**	**+0.4**
IRIF				S	**Sn**	**12 52 22.4**	**+0.7**
JKRS	**Kuro-shima**	**2.33**	**64**	P	**Pn**	**12 51 59.3**	**+1.2**
JKRS				S	**Sn**	**12 52 26.8**	**+0.6**
JIJ	**Ishigaki jima**	**2.50**	**63**	P	**Pn**	**12 52 01.3**	**+0.9**
JIJ				S	**Sn**	**12 52 29.8**	**-0.4**
JISG	**Ishigakijimahi**	**2.74**	**60**	P	**Pn**	**12 52 04.4**	**+0.7**
JISG				*e*S	**Sn**	**12 52 36.0**	**-0.1**
JTJ	**Tarama**	**3.08**	**62**	P	**Pn**	**12 52 08.7**	**+0.3**
JTJ				S	**Sn**	**12 52 44.9**	**+0.4**

*ISCJB **21** 13:01:04.1±0.3, 44°.17N±0°.03×10°.15E±0°.05, h11km±5km, Error ellipse: s-maj=7.3km s-min=3.6km az=135.2*
*ROM **21** 13:01:04.2±0.1, 44°.214N±0°.007×10°.22E±0°.01, h10km, ML2.1/5, Error ellipse: s-maj=1.0km s-min=0.4km az=47.0*
*LDG **21** 13:01:04.7±0.0, 44°.20N×10°.18E, h2km, Md2.6/2, Ml2.6/5, Error ellipse: s-maj=1.1km s-min=0.8km az=20.0*
*GEN **21** 13:01:04.5, 44°.21N×10°.20E, h7km±2km, Ml2.0*
ISC 21 13:01:04.5±0.9, 44°.18N±0°.03×10°.17E±0°.03, h11km±8km, n26, σ0s 97/44, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.15**	**98**	P	**Pg**	**13 01 07.9**	**0.0**
VLC				S	**Sg**	**13 01 10.3**	**-0.1**
VLC				AML	AML		
	comp=E,1075μm,0.6s						
VLC				AML	AML		
	comp=N,1660μm,0.8s						
VLC				AML	AML		
	comp=E,1075μm,0.6s						
VLC				AML	AML		
	comp=N,1660μm,0.8s						
VLC				AML	AML		
	comp=N,1660μm,0.8s						
VLC				AML	AML		
	comp=E,1075μm,0.6s						
SARO	**Sassorosso**	**0.16**	**89**	P	**Pg**	**13 01 07.9**	**-0.2**
SARO				S	**Sg**	**13 01 10.3**	**-0.5**
SARO	**Sassorosso**	**0.16**	**89**	P	**Pg**	**13 01 08.0**	**-0.2**
SARO				S	**Sg**	**13 01 10.3**	**-0.5**
SARO				AML	AML		
	comp=E,2995μm,0.3s						
SARO				AML	AML		
	comp=N,3870μm,0.5s						
SARO				AML	AML		
	comp=E,2995μm,0.3s						
SARO				AML	AML		
	comp=N,3870μm,0.5s						
CARD	**Cardoso**	**0.27**	**125**	P	**Pg**	**13 01 10.1**	**+0.1**
CARD				S	**Sg**	**13 01 14.2**	**+0.5**
CARD	**Cardoso**	**0.27**	**125**	P	**Pg**	**13 01 10.3**	**+0.3**
CARD				S	**Sg**	**13 01 14.2**	**+0.5**
CARD				AML	AML		
	comp=E,1630μm,0.1s						
CARD				AML	AML		
	comp=N,1970μm,0.1s						
ERBM	**Eremo**	**0.29**	**36**	P	**Pg**	**13 01 10.1**	**-0.4**
ERBM				S	**Sg**	**13 01 14.4**	**-0.1**
CODM	**Codolo**	**0.31**	**312**	P	**Pg**	**13 01 10.6**	**-0.2**
CODM				S	**Sg**	**13 01 15.1**	**+0.1**
GRAM	**Graiana**	**0.32**	**346**	P	**Pg**	**13 01 10.5**	**-0.4**
GRAM				S	**Sg**	**13 01 14.9**	**-0.3**
GRAM	**Graiana**	**0.32**	**346**	P	**Pg**	**13 01 10.5**	**-0.4**
GRAM				S	**Sg**	**13 01 14.9**	**-0.3**
BDI	**Bagni Di Lucca**	**0.33**	**111**	P	**Pg**	**13 01 11.2**	**+0.1**
BDI				S	**Sg**	**13 01 15.9**	**+0.5**
BDI				AML	AML		
	comp=E,506μm,0.3s						
BDI				AML	AML		
	comp=N,449μm,0.7s						
BDI				AML	AML		
	comp=E,530μm,0.4s						
BDI				AML	AML		
	comp=N,509μm,0.9s						
BDI				AML	AML		
	comp=E,530μm,0.4s						
BDI				AML	AML		
	comp=N,509μm,0.9s						
BDI				AML	AML		
	comp=E,530μm,0.4s						
BDI				AML	AML		
	comp=N,509μm,0.9s						
MAIM	**Mastiano**	**0.35**	**139**	P	**Pg**	**13 01 11.9**	**+0.4**
MAIM				S	**Sg**	**13 01 17.1**	**+0.9**
MAIM	**Mastiano**	**0.35**	**139**	P	**Pg**	**13 01 11.9**	**+0.4**
MAIM				S	**Sg**	**13 01 17.0**	**+0.9**
POPM	**Popiglio**	**0.44**	**108**	P	**Pg**	**13 01 13.0**	**-0.1**
POPM				S	**Sg**	**13 01 19.1**	**+0.1**
POPM	**Popiglio**	**0.44**	**108**	P	**Pg**	**13 01 13.2**	**0.0**
POPM				S	**Sg**	**13 01 19.5**	**+0.5**
POPM				AML	AML		
	comp=E,660μm,0.3s						
POPM				AML	AML		
	comp=N,547μm,1.0s						
MSSA	**Maissana**	**0.49**	**286**	P	**Pg**	**13 01 14.9**	**+0.8**
MSSA				S	**Sg**	**13 01 21.7**	**+1.1**
ZCCA	**Zocca**	**0.60**	**73**	P	**Pg**	**13 01 15.8**	**-0.4**
CRMI	**Carmignano**	**0.69**	**124**	P	**Pb**	**13 01 18.5**	**-0.1**
CRMI				AML	AML		
	comp=E,50μm,0.5s						
CRMI				AML	AML		
	comp=N,58μm,0.8s						
CRMI				AML	AML		
	comp=N,58μm,0.8s						
CRMI				AML	AML		
	comp=E,50μm,0.5s						
TRIF	**Trifonti**	**1.19**	**153**	AML	AML		
	comp=N,73μm,0.3s						
TRIF				AML	AML		
	comp=E,58μm,1.5s						
TRIF				AML	AML		
	comp=N,73μm,0.3s						
TRIF				AML	AML		
	comp=E,58μm,1.5s						
PGF	**Pioggiola**	**1.84**	**208**	*e*Pn	**Pn**	**13 01 36.0**	**-0.2**
PGF				*e*Sn	**Sn**	**13 01 58.3**	**-1.3**
	comp=E,5.0nm,0.3s						
SBF	**Sospel**	**2.00**	**262**	*e*Pn	**Pn**	**13 01 38.1**	**-0.2**
SBF				*e*Sn	**Sn**	**13 02 02.5**	**-0.9**
	comp=E,9.4nm,0.2s						
MBDF	**Montbardon**	**2.50**	**284**	*e*Pn	**Pn**	**13 01 45.0**	**-0.2**
FRF	**La Foret Royal**	**2.62**	**258**	*e*Pn	**Pn**	**13 01 46.6**	**-0.2**

FRF				*e*Sn	**Sn**	**13 02 17.2 -1.5**
	comp=E,7.0nm,0.3s					
LMR	**La Mourre**	**2.79 254**		*e*Pn	**Pn**	**13 01 48.5 -0.5**
LMR				*e*Sn	**Sn**	**13 02 20.1 -2.6**
	comp=E,2.7nm,0.2s					
ORIF	**Oris-en-Rattie**	**3.16 285**		*e*P	**Pn**	**13 01 56.6 +2.4**
CABF	**La Chapelle**	**3.77 312**		*e*P	**Pn**	**13 02 05.2 +2.6**
HINF	**Hinteralfeld**	**4.31 329**		*e*P	**Pn**	**13 02 12.7 +2.7**

*IDC **21** 13:02:07.4±0.7, 3°.63N×126°.78E, h0km, mb4.0/13, mb1 4.0/14, mb1mx3.8/51, mbtmp4.0/14, ML4.2/1, MS3.0/6, Ms1 3.0/6, ms1mx2.7/50, Error ellipse: s-maj=35.3km s-min=12.6km az=77.0*
*ISCJB **21** 13:02:12.5±0.3, 3°.59N±0°.05×126°.75E±0°.07, h53km, mb4.2/21, Error ellipse: s-maj=11.8km s-min=3.7km az=150.5*
*MAN **21** 13:02:12.5, 3°.50N×126°.26E, h14km, mb5.0, ML3.9, MS3.9*
*NEIC **21** 13:02:12.2±2.4, 3°.63N×126°.57E, h33km±7km, mb4.1/12, Error ellipse: s-maj=19.6km s-min=13.0km az=75.0*

ISC 21 13:02:14.1±0.5, 3°.56N±0°.06×126°.65E±0°.10, h53km, n46, σ1§15/47, mb4.2/21, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.69**	**340**	*e*P	**Pn**	**13 02 55.3**	**+0.3**
DDMP				*e*S	**Sn**	**13 03 28.1**	**+1.6**
TNTI	**Ternate**	**2.86**	**166**	*e*Pn	**Pn**	**13 02 59.0**	**+1.7**
GSPH	**General Santos**	**3.03**	**326**	*e*P	**Pn**	**13 02 60.0**	**+0.3**
SKMP	**Bagumbayan, Su**	**3.61**	**324**	*e*P	**Pn**	**13 03 07.3**	**-0.3**
SKMP				*e*S	**Sn**	**13 03 50.3**	**+1.3**
DAV	**Davao City (W)**	**3.65**	**343**	Lg	Lg	13 04 04.6	
	71nm,0.3s,baz=72,slow=19,SNR=3.2						
BUKP	**Musuan**	**4.57**	**340**	*e*P	**Pn**	**13 03 21.2**	**+0.5**
BUKP				*e*S	**Sn**	**13 04 16.1**	**+3.4**
IPIL	**Ipil**	**5.84**	**316**	*e*P	**Pn**	**13 03 38.4**	**+0.2**
IPIL				*e*S	**Sn**	**13 04 43.5**	**-0.3**
LUWI	**Luwuk**	**6.00**	**220**	*e*Pn	Pn	13 03 35.2	-5.1
SIJI	**Sorong**	**6.37**	**134**	Pn	**Pn**	**13 03 43.9**	**-1.6**
	5.2nm,0.3s,baz=338,slow=22,SNR=11						
SIJI				Sn	**Sn**	**13 04 55.5**	**-1.5**
	1.9nm,0.3s,baz=192,slow=20,SNR=4.2						
SIJI				LR	LR	13 06 29.3	
	comp=Z,117nm,20.1s,baz=183,slow=41						
FAKI	**Fak Fak**	**8.53**	**139**	*e*Pn	**Pn**	**13 04 15.8**	**+0.8**
KKM	**Kota Kinabalu**	**10.69**	**284**	*e*Pn	**Pn**	**13 04 42.6**	**-2.1**
KAPI	**Kappang**	**10.96**	**219**	LR	LR	13 08 27.1	
	comp=Z,32nm,18.6s,baz=301,slow=34						
JAY	**Jayapura**	**15.29**	**113**	Pn	**Pn**	**13 05 47.8**	**+1.1**
	0.3nm,0.3s,baz=123,slow=19,SNR=2.9						
JAY				LR	LR	13 10 28.6	
	comp=Z,69nm,18.9s,baz=265,slow=33						
MTN	**Manton Dam**	**16.89**	**165**	*e*Pn	**Pn**	**13 06 06.0**	**-1.0**
	9.2nm,0.9s						
TPUB	**Ta-pu**	**20.47**	**344**	*e*P	**P**	**13 06 46.1**	**-1.4**
	12nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.55**	**183**	P	**P**	**13 06 59.3**	**+0.2**
	1.7nm,0.5s,baz=28,slow=13,SNR=5.7						
FITZ	**Fitzroy Crossi**	**21.55**	**183**	*e*P	**P**	**13 07 01.1**	**+2.0**
	5.5nm,1.0s						
LEM	**Lembang**	**21.62**	**242**	LR	LR	13 15 50.0	
	comp=Z,39nm,19.2s,baz=74,slow=38						
WRAB	**Tennant Creek**	**24.54**	**162**	*e*P	**P**	**13 07 28.0**	**-1.0**
	6.7nm,0.8s						
WRA	**Warramunga Arr**	**24.55**	**162**	P	**P**	**13 07 28.9**	**-0.1**
	5.9nm,0.8s,baz=349,slow=12,SNR=9.8						
WR1	**Warramunga Arr**	**24.55**	**162**	*e*P	**P**	**13 07 28.9**	**-0.1**
WB2	**Warramunga Arr**	**24.55**	**162**	*e*P	**P**	**13 07 29.1**	**+0.1**
	7.2nm,0.8s						
RABL	**Rabaul**	**26.63**	**107**	*e*P	**P**	**13 07 47.8**	**-0.2**
	34nm,0.4s						
AS31	**Alice Springs**	**27.97**	**166**	*e*P	**P**	**13 08 01.3**	**+1.4**
	1.6nm,1.1s						
ASAR	**Alice Springs**	**27.97**	**166**	P	**P**	**13 08 00.4**	**+0.5**
	0.2nm,0.3s,baz=346,slow=10.0,SNR=11						
ASAR				PcP	**PcP**	**13 11 15.6**	**+1.4**
	0.3nm,0.4s,baz=355,slow=2.3,SNR=4.1						
JNU	**Nakatsue**	**29.67**	**7**	LR	LR	13 19 57.6	
	comp=Z,14nm,20.3s,baz=152,slow=36						
KS15	**Wonju Array Si**	**33.74**	**2**	*e*P	**P**	**13 08 49.2**	**-1.3**
	3.6nm,0.9s						
KSRS	**Korea Array**	**33.75**	**2**	P	**P**	**13 08 49.2**	**-1.4**
	1.4nm,0.7s,baz=185,slow=10,SNR=7.8						
MJAR	**Matsushiro Arr**	**34.50**	**17**	P	**P**	**13 08 57.8**	**+0.5**
	0.8nm,0.4s,baz=216,slow=6.6,SNR=3.8						
MAJO	**Matsushiro**	**34.50**	**17**	*e*P	**P**	**13 08 57.8**	**+0.5**
STKA	**Stephens Creek**	**38.00**	**159**	P	**P**	**13 09 27.2**	**+0.1**
	2.2nm,0.6s,baz=342,slow=10,SNR=6.1						
STKA				LR	LR	13 28 08.1	
	comp=Z,53nm,21.7s,baz=27,slow=41						
STKA	**Stephens Creek**	**38.00**	**159**	*e*P	**P**	**13 09 27.2**	**+0.1**
	0.9nm,0.8s						
ARMA	**Armidale**	**41.37**	**147**	*e*P	**P**	**13 09 57.1**	**+1.8**
	7.3nm,1.0s						
ASAJ	**Asahikawa**	**42.77**	**17**	P	**P**	**13 10 05.5**	**-0.9**
	3.4nm,0.9s,baz=198,slow=6.4,SNR=4.6						
KLR	**Kul'dur**	**45.71**	**5**	P	**P**	**13 10 28.9**	**-0.9**
	2.6nm,0.9s,baz=275,slow=4.4,SNR=4.8						
SONA0	**Songino Array**	**47.43**	**342**	*e*P	**P**	**13 10 43.4**	**-0.1**
SONM	**Songino Array**	**47.43**	**342**	P	**P**	**13 10 43.4**	**-0.1**
	0.3nm,0.3s,baz=146,slow=8.5,SNR=1.6						
PETK	**Petropavlovsk-**	**55.61**	**22**	P	**P**	**13 11 44.5**	**+0.1**
	2.3nm,0.7s,baz=180,slow=2.7,SNR=3.6						
PEA1	**Petropavlovsk-**	**55.62**	**22**	*e*P	**P**	**13 11 44.5**	**0.0**
MK32	**Makanchi Array**	**57.65**	**325**	*e*P	**P**	**13 12 00.1**	**+1.1**
MKAR	**Makanchi Array**	**57.65**	**325**	P	**P**	**13 12 00.1**	**+1.1**
	0.8nm,0.4s,baz=119,slow=8.6,SNR=11						
MAKZ	**Makanchi**	**57.84**	**325**	*e*P	**P**	**13 12 01.8**	**+1.5**
	2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**61.84**	**327**	P	**P**	**13 12 28.9**	**+1.2**
	1.5nm,0.6s,baz=131,slow=6.4,SNR=8.6						
TIXI	**Tiksi**	**68.01**	**1**	P	**P**	**13 13 07.3**	**-0.1**
	0.8nm,0.4s,baz=180,slow=2.0,SNR=2.2						
ARA0	**ARCESS Array S**	**90.58**	**340**	*e*P	**P**	**13 15 10.3**	**+0.1**
ARCES	**ARCESS Array B**	**90.58**	**340**	P	**P**	**13 15 10.3**	**+0.1**
	7.0nm,0.3s,baz=60,slow=11,SNR=1.8						

*ISCJB **21** 13:07:09.4±0.4, 44°.13N±0°.02×10°.13E±0°.03, h8km±4km, Error ellipse: s-maj=4.2km s-min=3.6km az=141.4*
*ROM **21** 13:07:09.5±0.2, 44°.177N±0°.009×10°.21E±0°.01, h9km, ML2.5/15, Error ellipse: s-maj=1.3km s-min=0.7km az=53.0*
*GEN **21** 13:07:09.8, 44°.18N×10°.20E, h3km±1km, Ml2.3*
*LDG **21** 13:07:10.3±0.1, 44°.17N×10°.21E, h2km, Md2.6/2, Ml2.7/22, Error ellipse: s-maj=2.0km s-min=1.5km az=21.0*

ISC 21 13:07:09.1±0.8, 44°.16N±0°.02×10°.20E±0°.02, h14km±6km, n49, σ1§57/80, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.14**	**91**	P	**Pb**	**13 07 13.0**	**-0.5**
VLC				S	**Sg**	**13 07 15.3**	**+0.1**
VLC				AML	AML		
	comp=E,2650μm,0.7s						
VLC				AML	AML		
	comp=N,2505μm,0.2s						
VLC				AML	AML		
	comp=E,2635μm,0.7s						
VLC				AML	AML		
	comp=N,2675μm,0.2s						
VLC				AML	AML		
	comp=E,2650μm,0.7s						
VLC				AML	AML		
	comp=N,2500μm,0.2s						
VLC				AML	AML		
	comp=E,2635μm,0.7s						
VLC				AML	AML		
	comp=N,2675μm,0.2s						
VLC				AML	AML		
	comp=E,2635μm,0.7s						
VLC				AML	AML		
	comp=E,2650μm,0.7s						
VLC				AML	AML		
	comp=N,2500μm,0.2s						
VLC				AML	AML		
	comp=N,2675μm,0.2s						
VLC				AML	AML		
	comp=E,2635μm,0.7s						
VLC				AML	AML		
	comp=N,2675μm,0.2s						
VLC				AML	AML		
	comp=N,2500μm,0.2s						
VLC				AML	AML		
	comp=E,2650μm,0.7s						
SARO	**Sassorosso**	**0.15**	**82**	P	**Pg**	**13 07 13.1**	**+0.1**
SARO				S	**Sg**	**13 07 15.5**	**-0.1**
SARO	**Sassorosso**	**0.15**	**82**	P	**Pg**	**13 07 13.1**	**+0.1**
SARO				S	**Sg**	**13 07 15.5**	**-0.1**
SARO				AML	AML		
	comp=E,3735μm,0.3s						
SARO				AML	AML		
	comp=N,3130μm,0.5s						
SARO				AML	AML		
	comp=E,3735μm,0.3s						
SARO				AML	AML		
	comp=N,3130μm,0.5s						
SARO				AML	AML		
	comp=E,3735μm,0.3s						
SARO				AML	AML		
	comp=N,3130μm,0.5s						
SARO				AML	AML		
	comp=E,3735μm,0.3s						
SARO				AML	AML		
	comp=N,3130μm,0.5s						
CARD	**Cardoso**	**0.25**	**124**	P	**Pb**	**13 07 15.3**	**0.0**
CARD				S	**Sb**	**13 07 18.7**	**-0.7**
CARD	**Cardoso**	**0.25**	**124**	P	**Pb**	**13 07 15.3**	**0.0**
CARD				S	**Sb**	**13 07 19.0**	**-0.5**
CARD				AML	AML		
	comp=E,1605μm,1.0s						
CARD				AML	AML		
	comp=N,2560μm,0.1s						
CARD				AML	AML		
	comp=E,1610μm,1.0s						
CARD				AML	AML		
	comp=N,2560μm,0.1s						
CARD				AML	AML		
	comp=N,2560μm,0.1s						
CARD				AML	AML		
	comp=E,1610μm,1.0s						
CARD				AML	AML		
	comp=N,2560μm,0.1s						
CARD				AML	AML		
	comp=E,1610μm,1.0s						
ERBM	**Eremo**	**0.30**	**31**	P	**Pb**	**13 07 15.9**	**-0.3**
ERBM				S	**Sb**	**13 07 20.6**	**-0.5**
ERBM				AML	AML		
	comp=E,1870μm,1.3s						
ERBM				AML	AML		
	comp=N,1355μm,1.1s						
ERBM				AML	AML		
	comp=E,1870μm,1.3s						
ERBM				AML	AML		
	comp=N,1355μm,1.1s						
ERBM				AML	AML		
	comp=E,1870μm,1.3s						
ERBM				AML	AML		
	comp=N,1355μm,1.1s						
ERBM				AML	AML		
	comp=E,1870μm,1.3s						
ERBM				AML	AML		
	comp=N,1355μm,1.1s						
BDI	**Bagni Di Lucca**	**0.30**	**109**	P	**Pb**	**13 07 16.0**	**-0.3**
BDI				S	**Sb**	**13 07 20.7**	**-0.5**
BDI				AML	AML		
	comp=E,1155μm,0.3s						
BDI				AML	AML		
	comp=N,761μm,1.3s						
BDI				AML	AML		
	comp=E,1060μm,0.5s						
BDI				AML	AML		
	comp=N,900μm,0.7s						
BDI				AML	AML		
	comp=E,1060μm,0.5s						
BDI				AML	AML		
	comp=N,900μm,0.7s						
BDI				AML	AML		
	comp=E,1155μm,0.3s						
BDI				AML	AML		
	comp=N,761μm,1.3s						
BDI				AML	AML		
	comp=E,1060μm,0.5s						
BDI				AML	AML		
	comp=N,900μm,0.7s						
BDI				AML	AML		
	comp=E,1155μm,0.3s						
BDI				AML	AML		
	comp=N,761μm,1.3s						
MAIM	**Mastiano**	**0.33**	**140**	P	**Pb**	**13 07 16.8**	**+0.1**
MAIM				S	**Sb**	**13 07 21.6**	**-0.1**
MAIM	**Mastiano**	**0.33**	**140**	P	**Pb**	**13 07 16.8**	**+0.1**
MAIM				S	**Sb**	**13 07 21.6**	**-0.1**
MAIM				AML	AML		
	comp=E,1630μm,0.2s						
MAIM				AML	AML		
	comp=N,1265μm,0.5s						
MAIM				AML	AML		
	comp=E,1630μm,0.2s						
MAIM				AML	AML		
	comp=N,1265μm,0.5s						
MAIM				AML	AML		
	comp=E,1630μm,0.2s						
MAIM				AML	AML		
	comp=N,1265μm,0.5s						
MAIM				AML	AML		
	comp=E,1630μm,0.2s						
MAIM				AML	AML		
	comp=N,1265μm,0.5s						
GRAM	**Graiana**	**0.34**	**344**	P	**Pb**	**13 07 16.5**	**-0.4**
GRAM				S	**Sg**	**13 07 21.3**	**+0.4**
GRAM	**Graiana**	**0.34**	**344**	P	**Pb**	**13 07 16.6**	**-0.4**
GRAM				S	**Sb**	**13 07 21.4**	**-0.9**
GRAM				AML	AML		
	comp=E,5590μm,0.6s						
GRAM				AML	AML		
	comp=N,6715μm,1.2s						
GRAM				AML	AML		
	comp=E,5595μm,0.6s						
GRAM				AML	AML		
	comp=N,6715μm,1.2s						
GRAM				AML	AML		
	comp=N,6715μm,1.2s						
GRAM				AML	AML		
	comp=E,5595μm,0.6s						
GRAM				AML	AML		
	comp=N,6715μm,1.2s						
GRAM				AML	AML		
	comp=E,5595μm,0.6s						
POPM	**Popiglio**	**0.42**	**106**	P	**Pb**	**13 07 18.2**	**-0.1**
POPM				S	**Sb**	**13 07 24.5**	**0.0**
POPM	**Popiglio**	**0.42**	**106**	P	**Pb**	**13 07 18.3**	**0.0**
POPM				S	**Sb**	**13 07 24.8**	**+0.4**
POPM				AML	AML		
	comp=E,1270μm,0.1s						
POPM				AML	AML		
	comp=N,2620μm,0.2s						
POPM				AML	AML		
	comp=E,1270μm,0.1s						
POPM				AML	AML		
	comp=N,2620μm,0.2s						
POPM				AML	AML		
	comp=N,2620μm,0.2s						
POPM				AML	AML		
	comp=E,1270μm,0.1s						
POPM				AML	AML		
	comp=N,2620μm,0.2s						
POPM				AML	AML		
	comp=E,1270μm,0.1s						
MSSA	**Maissana**	**0.51**	**288**	P	**Pb**	**13 07 20.1**	**+0.2**
MSSA				AML	AML		
	comp=E,446μm,0.5s						
MSSA				AML	AML		
	comp=N,285μm,1.1s						
MSSA				AML	AML		
	comp=E,446μm,0.5s						
MSSA				AML	AML		
	comp=N,285μm,1.1s						
MSSA				AML	AML		
	comp=N,285μm,1.1s						
MSSA				AML	AML		
	comp=E,446μm,0.5s						
MSSA				AML	AML		
	comp=N,285μm,1.1s						
MSSA				AML	AML		
	comp=E,446μm,0.5s						
ZCCA	**Zocca**	**0.59**	**71**	P	**Pn**	**13 07 22.7**	**-0.4**
ZCCA				AML	AML		
	comp=E,434μm,0.4s						
ZCCA				AML	AML		
	comp=N,466μm,0.9s						
ZCCA				AML	AML		
	comp=N,466μm,0.9s						
ZCCA				AML	AML		
	comp=E,434μm,0.4s						
ZCCA				AML	AML		
	comp=N,466μm,0.9s						
ZCCA				AML	AML		
	comp=E,434μm,0.4s						
MTCR	**Monte La Croce**	**0.59**	**103**	P	**Pb**	**13 07 21.5**	**+0.2**
MTCR				S	**Sn**	**13 07 31.4**	**-1.2**
CRMI	**Carmignano**	**0.67**	**124**	P	**Pn**	**13 07 23.5**	**-0.7**
CRMI				AML	AML		
	comp=E,110μm,0.4s						
CRMI				AML	AML		
	comp=N,153μm,0.7s						
CRMI				AML	AML		
	comp=N,153μm,0.7s						
CRMI				AML	AML		
	comp=E,110μm,0.4s						
CRMI				AML	AML		
	comp=N,153μm,0.7s						
CRMI				AML	AML		
	comp=E,110μm,0.4s						
SEI	**Scarperia**	**0.84**	**97**	P	**Pn**	**13 07 26.0**	**-0.5**
SEI				AML	AML		
	comp=E,426μm,0.3s						
SEI				AML	AML		
	comp=N,634μm,0.3s						
SEI				AML	AML		
	comp=E,426μm,0.3s						
SEI				AML	AML		
	comp=N,634μm,0.3s						
SEI				AML	AML		
	comp=E,426μm,0.3s						
SEI				AML	AML		
	comp=N,634μm,0.3s						
RUFI	**Rufina**	**1.00**	**108**	P	**Pn**	**13 07 29.0**	**+0.4**
RUFI				AML	AML		
	comp=E,140μm,1.1s						
RUFI				AML	AML		
	comp=N,130μm,0.6s						
RUFI				AML	AML		
	comp=N,130μm,0.6s						
RUFI				AML	AML		
	comp=E,140μm,1.1s						
RUFI				AML	AML		
	comp=N,130μm,0.6s						
RUFI				AML	AML		
	comp=E,140μm,1.1s						
PCP	**Piancastagn**	**1.25**	**288**	P	**Pg**	**13 07 33.2**	**+0.2**
CASP	**Castiglione de**	**1.46**	**160**	P	**Pb**	**13 07 36.1**	**+0.2**
PGF	**Pioggiola**	**1.84**	**209**	*e*Pn	**Pn**	**13 07 40.9**	**+0.6**
PGF	**Pioggiola**	**1.84**	**209**	*e*Pg	**Pg**	**13 07 44.7**	**+0.4**
PGF				*e*Sn	**Sn**	**13 08 03.3**	**0.0**
	comp=E,7.4nm,0.3s						
SBF	**Sospel**	**2.02**	**262**	*e*Pn	**Pb**	**13 07 44.0**	**-1.5**
SBF				*e*Sn	**Sn**	**13 08 08.2**	**+0.5**
	comp=E,14nm,0.3s						
CTI	**Castel Tesino**	**2.15**	**28**	AML	AML		
	comp=E,89μm,0.5s						
CTI				AML	AML		
	comp=N,78μm,1.3s						
CTI				AML	AML		
	comp=E,89μm,0.5s						
CTI				AML	AML		
	comp=N,78μm,1.3s						
CTI				AML	AML		
	comp=E,89μm,0.5s						
CTI				AML	AML		
	comp=N,78μm,1.3s						
MBDF	**Montbardon**	**2.52**	**284**	*e*P	**Pb**	**13 07 53.9**	**-0.2**
MBDF				*e*Sn	**Sn**	**13 08 20.2**	**0.0**
	comp=N,9.9nm,0.5s						
FRF	**La Foret Royal**	**2.64**	**258**	*e*Pn	**Pn**	**13 07 52.4**	**+1.2**
FRF				*e*Sn	**Sn**	**13 08 22.9**	**-0.1**
	comp=N,5.1nm,0.2s						
LPG	**La Plagne**	**2.79**	**300**	*e*P	**Pb**	**13 07 57.6**	**-1.3**
LPG				*e*Sn	**Sn**	**13 08 28.3**	**+1.1**
	comp=N,1.7nm,0.2s						
LMR	**La Mourre**	**2.80**	**254**	*e*Pn	**Pn**	**13 07 54.3**	**+0.9**
LMR				*e*Sn	**Sn**	**13 08 25.7**	**-1.2**
	comp=N,3.3nm,0.2s						
LPL	**La Plagne**	**2.81**	**300**	*e*P	**Pb**	**13 07 57.8**	**-1.4**
LPL				*e*Sn	**Sn**	**13 08 28.1**	**+0.5**
	comp=N,6.0nm,0.4s						
DAVA	**Damuels**	**3.13**	**356**	*i* Pn	**Pb**	**13 08 04.2**	**-0.4**
DAVA				*i* Sn	**Sb**	**13 08 40.0**	**-2.7**
	comp=N,2.4nm,0.3s						
SQTA	**Sankt Quirin**	**3.14**	**13**	*i* Pn	**Pb**	**13 08 04.1**	**-0.6**
	comp=N,3.0nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.18**	**285**	*e*P	**Pb**	**13 08 02.9**	**-2.5**
ORIF				*e*Sn	**Sn**	**13 08 36.7**	**+0.3**
	comp=N,8.0nm,0.3s						
MOTA	**Moosalm**	**3.25**	**11**	*i* Pn	**Pb**	**13 08 06.2**	**-0.3**
	comp=N,6.1nm,0.4s						
WTTA	**Wattenberg**	**3.26**	**17**	*i* Pn	**Pb**	**13 08 05.7**	**-1.1**
	comp=N,4.5nm,0.4s						
WTTA				*i* Sn	**Sb**	**13 08 43.1**	**-3.3**
	comp=N,2.7nm,0.3s						
SMRF	**Simiane la Rot**	**3.34**	**268**	*e*P	**Pb**	**13 08 04.7**	**-3.3**
SMRF				*e*Sn	**Sn**	**13 08 40.0**	**-0.3**
	comp=N,4.0nm,0.3s						
LATB	**Latina**	**3.35**	**142**	AML	AML		
	comp=N,5.6nm,0.5s						
LATB				AML	AML		
	comp=E,16μm,1.2s						
LATB				AML	AML		
	comp=N,18μm,1.6s						
LATB				AML	AML		
	comp=N,18μm,1.6s						
LATB				AML	AML		
	comp=E,16μm,1.2s						
LATB				AML	AML		
	comp=N,18μm,1.6s						
LATB				AML	AML		
	comp=E,16μm,1.2s						
CABF	**La Chapelle**	**3.79**	**312**	*e*P	**Pn**	**13 08 11.2**	**+4.1**
CABF				*e*Sn	**Sn**	**13 08 52.1**	**+0.5**
	comp=E,1.3nm,0.3s						
VIVF	**Saint-Julien-l**	**4.01**	**282**	*e*P	**Pb**	**13 08 15.5**	**-4.0**
VIVF				*e*Sn	**Sn**	**13 08 56.1**	**-0.8**
	comp=E,1.3nm,0.3s						
HINF	**Hinteralfeld**	**4.33**	**329**	*e*P	Pn	13 08 19.4	+4.9
HINF				*e*Sn	**Sn**	**13 09 04.3**	**-0.5**
	comp=E,2.5nm,0.3s						
LASF	**Ste Croix**	**4.57**	**271**	*e*Pn	**Pn**	**13 08 19.0**	**+1.3**
LASF				*e*Sn	**Sn**	**13 09 09.5**	**-1.1**
	comp=E,2.3nm,0.5s						
HAU	**Haudompre**	**4.68**	**326**	*e*P	**Pn**	**13 08 23.1**	**+3.8**
HAU				*e*Sn	**Sn**	**13 09 15.7**	**+2.3**
	comp=E,8.2nm,0.3s						
CDF	**Champ du Feu**	**4.71**	**336**	*e*P	**Pn**	**13 08 22.4**	**+2.7**
CDF				*e*Sn	**Sn**	**13 09 12.8**	**-1.3**
	comp=E,3.5nm,0.4s						
SMF	**Signal de Mont**	**5.12**	**301**	*e*P	**Pn**	**13 08 29.0**	**+3.7**
SMF				*e*Sn	**Sn**	**13 09 22.7**	**-1.4**
	comp=E,2.7nm,0.3s						
LOR	**Lormes**	**5.42**	**307**	*e*P	**Pn**	**13 08 32.7**	**+3.3**
LOR				*e*Sn	**Sn**	**13 09 30.1**	**-1.4**
	comp=E,3.0nm,0.3s						
AVF	**Avril sur Loir**	**5.48**	**301**	*e*P	**Pn**	**13 08 34.1**	**+3.8**
AVF				*e*Sn	**Sn**	**13 09 31.4**	**-1.7**
	comp=E,4.0nm,0.3s						
SSF	**Saint Saulge**	**5.52**	**304**	*e*Sn	**Sn**	**13 09 32.2**	**-1.7**
	comp=E,2.7nm,0.4s						
BGF	**Bois d'Agland**	**5.71**	**297**	*e*P	**Pn**	**13 08 37.6**	**+4.2**
TIP	**Timpagrande**	**6.99**	**133**	↑*i* P	**Pg**	**13 09 23.6**	**+0.7**

*HLW **21** 13:07:20.9, 37°.83N×26°.81E, h33km±16km, Ml4.0*
*ATH **21** 13:07:23.2, 37°.52N×26°.87E, h22km±1km, ML3.9/9, Error ellipse: s-maj=1.8km s-min=1.0km az=283.0*
*ISCJB **21** 13:07:24.0±0.4, 37°.57N±0°.01×26°.84E±0°.02, h6km±3km, Error ellipse: s-maj=2.5km s-min=2.3km az=161.7*
*ISK **21** 13:07:23.5, 37°.54N×26°.80E, h11km, ML3.9/39*
*DDA **21** 13:07:24.2, 37°.59N×26°.91E, h29km, ML3.9*
*THE **21** 13:07:25.1, 37°.56N×26°.85E, h0km, ML3.9/13, Error ellipse: s-maj=0.9km s-min=0.5km az=87.0*

ISC 21 13:07:24.5±0.8, 37°.53N±0°.02×26°.85E±0°.02, h14km±6km, n160, σ1§20/183, 4C-5D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.18**	**356**	P	**Pg**	**13 07 28.4**	**-0.4**
SMG				S	**Sg**	**13 07 31.1**	**-0.6**
SMG	**Samos**	**0.18**	**356**	P	**Pg**	**13 07 28.4**	**-0.4**

SMG			S	Sg	13 07 31.3	-0.3
SMG			AML	AML	13 07 31.5	
SMG			AML	AML	13 07 32.5	
DIDI	**Didim-Aydin**	**0.34 117**	PG	**Pg**	**13 07 31.6**	**0.0**
DIDI			SG	**Sb**	**13 07 37.4**	**-0.3**
GCAM	**G?zelcaml?**	**0.35 61**	PG	**Pg**	**13 07 31.7**	**+0.1**
GCAM			SG	**Sg**	**13 07 37.6**	**+1.2**
GCAM	**G?zelcaml?**	**0.35 61**	*i* P	**Pb**	**13 07 32.7**	**+0.2**
GCAM			*i* S	**Sb**	**13 07 37.9**	**+0.1**
GCAM			IAML_P			
	comp=Z,135μm,0.1s					
BODT	**Bodrum**	**0.59 142**	PG	**Pg**	**13 07 36.1**	**-0.1**
BODT			SG	**Sb**	**13 07 45.2**	**+0.3**
BODT	**Bodrum**	**0.59 142**	P	**Pb**	**13 07 36.6**	**-0.1**
BODT			S	**Sb**	**13 07 47.0**	**+2.1**
BDRM	**Kayabasi**	**0.66 134**	*i* P	**Pb**	**13 07 38.0**	**+0.2**
AYDN	**Tasoluk**	**0.82 81**	*i* P	**Pb**	**13 07 41.4**	**+0.7**
AYDN			*i* S	**Sg**	**13 07 51.6**	**+0.2**
AYDN			IAML_P			
	comp=Z,42μm,0.1s					
URLA	**Izmir**	**0.85 346**	PG	**Pg**	**13 07 40.0**	**-1.1**
URLA	**Izmir**	**0.85 346**	*i* P	**Pg**	**13 07 40.9**	**-0.1**
URLA			*i* S	**Sb**	**13 07 53.0**	**+0.6**
URLA			IAML_P			
	comp=Z,55μm,0.3s					
BLCB	**Balcova**	**0.86 10**	PG	**Pg**	**13 07 40.7**	**-0.6**
CESE	**eme**	**0.91 331**	PG	**Pg**	**13 07 41.0**	**-1.2**
NISR	**Nisiros**	**0.94 166**	P	**Pn**	**13 07 44.2**	**+0.9**
DAT	**Datca**	**0.99 144**	PG	**Pg**	**13 07 43.5**	**-0.1**
DAT	**Datca**	**0.99 144**	*i* P	**Pb**	**13 07 44.2**	**+0.8**
DAT			IAML_P			
	comp=Z,8μm,0.2s					
DATC	**Datca-Mugla**	**1.00 140**	PG	**Pb**	**13 07 43.9**	**+0.2**
AMGA	**Amorgos Island**	**1.04 228**	P	**Pn**	**13 07 45.1**	**+0.5**
AMGA			S	**Sn**	**13 08 00.4**	**+1.5**
AMGA	**Amorgos Island**	**1.04 228**	P	**Pg**	**13 07 42.8**	**-1.8**
AMGA			S	**Sb**	**13 07 57.4**	**-0.3**
AMGA			AML	AML	13 08 02.2	
	comp=N,18988μm,0.8s					
AMGA			AML	AML	13 08 02.6	
	comp=E,16943μm,0.6s					
CHOS	**Chios island**	**1.06 324**	PG	**Pg**	**13 07 43.8**	**-1.2**
CHOS	**Chios island**	**1.06 324**	P	**Pg**	**13 07 44.2**	**-0.9**
CHOS			S	**Sb**	**13 07 59.8**	**+1.3**
CHOS	**Chios island**	**1.06 324**	P	**Pg**	**13 07 44.2**	**-0.9**
CHOS			S	**Sb**	**13 07 59.2**	**+0.8**
CHOS			AML	AML	13 08 00.8	
	comp=E,14495μm,0.5s					
CHOS			AML	AML	13 08 01.1	
	comp=N,9402μm,0.5s					
KRBN	**Karaburun**	**1.09 348**	PG	**Pg**	**13 07 44.5**	**-1.0**
APE	**Apeiranthos**	**1.15 247**	PN	**Pg**	**13 07 45.4**	**-1.3**
APE	**Apeiranthos**	**1.15 247**	P	**Pg**	**13 07 45.8**	**-0.9**
APE			S	**Sn**	**13 08 04.4**	**+2.6**
APE	**Apeiranthos**	**1.15 247**	P	**Pg**	**13 07 45.1**	**-1.6**
APE			S	**Sn**	**13 08 02.1**	**+0.3**
APE			AML	AML	13 08 05.6	
	comp=N,3815μm,0.4s					
APE			AML	AML	13 08 06.6	
	comp=E,3715μm,0.3s					
FOCM	**Foa**	**1.18 355**	PN	**Pg**	**13 07 45.4**	**-1.9**
YER	**Yerkesik**	**1.21 109**	PN	**Pg**	**13 07 47.4**	**-0.4**
YER	**Yerkesik**	**1.21 109**	P	**Pn**	**13 07 48.4**	**+1.4**
BBRN	**Bozburun-Marma**	**1.28 131**	PN	**Pg**	**13 07 48.0**	**-1.3**
TNSA	**Tinos**	**1.34 271**	P	**Pg**	**13 07 49.5**	**-0.9**
TNSA			AML	AML	13 08 11.2	
	comp=E,2582μm,0.4s					
TNSA			AML	AML	13 08 11.3	
	comp=N,2274μm,0.3s					
MRSB	**Marmaris-Mugla**	**1.35 127**	PN	**Pn**	**13 07 48.8**	**-0.1**
PSRA	**Psara**	**1.43 315**	P	**Pn**	**13 07 50.9**	**+0.8**
GOMA	**Golmarmara-Man**	**1.44 35**	PN	**Pn**	**13 07 50.6**	**+0.4**
ZEDA	**zmir-Bergama**	**1.44 7**	*i* P	**Pn**	**13 07 49.4**	**-0.8**
ZEDA			IAML_P			
	comp=Z,6μm,0.3s					
ANAF	**Anafi Island**	**1.46 217**	P	**Pg**	**13 07 52.2**	**-0.3**
ANAF			S	**Sn**	**13 08 12.6**	**+3.3**
ANAF	**Anafi Island**	**1.46 217**	P	**Pn**	**13 07 50.5**	**+0.1**
ANAF			AML	AML	13 08 16.3	
	comp=E,14224μm,0.4s					
ANAF			AML	AML	13 08 19.2	
	comp=N,18987μm,0.5s					
IOSP	**Ios island**	**1.49 238**	P	**Pg**	**13 07 52.9**	**-0.2**
IOSP			S	**Sg**	**13 08 13.5**	**+1.0**
IOSP	**Ios island**	**1.49 238**	P	**Pn**	**13 07 50.1**	**-0.7**
AKHS	**Akhisar**	**1.54 29**	*i* P	**Pn**	**13 07 51.9**	**+0.3**
AKS	**Akhisar**	**1.54 29**	PN	**Pn**	**13 07 51.9**	**+0.3**
TURN	**Turunc**	**1.54 115**	PN	**Pn**	**13 07 48.9**	**-2.7**
TURN	**Turunc**	**1.54 115**	*i* Pn	**Pn**	**13 07 49.9**	**-1.7**
TURN			*i* S	**Sn**	**13 08 07.5**	**-3.9**
TURN			IAML_P			
	comp=Z,788nm,0.2s					
CMBO	**Columbo, Santo**	**1.57 228**	P	**Pg**	**13 07 53.9**	**-0.8**
CMBO			S	**Sg**	**13 08 15.0**	**-0.1**
CMBO	**Columbo, Santo**	**1.57 228**	P	**Pb**	**13 07 53.1**	**-0.2**
CMBO			AML	AML	13 08 24.1	
	comp=N,12902μm,0.6s					
CMBO			AML	AML	13 08 25.4	
	comp=E,10606μm,0.6s					
THT2	**Imerovigli**	**1.58 227**	P	**Pb**	**13 07 53.5**	**-0.1**
THT2			S	**Sg**	**13 08 16.1**	**+0.5**
DALY	**Dalyan (Mula)**	**1.60 116**	PN	**Pn**	**13 07 53.2**	**+0.8**
DALY	**Dalyan (Mula)**	**1.60 116**	*i* P	**Pn**	**13 07 53.9**	**+1.5**
SANT	**Santorini**	**1.61 224**	PN	**Pn**	**13 07 52.3**	**-0.2**
SAP3	**Santorini-Thir**	**1.63 228**	P	**Pb**	**13 07 54.0**	**-0.3**
MANT	**Manisa**	**1.65 54**	*i* P	**Pn**	**13 07 53.7**	**+0.4**
MANT			*i* S	**Sn**	**13 08 12.4**	**-2.0**
ARG	**Arkhangelos**	**1.66 142**	PN	**Pn**	**13 07 53.7**	**+0.5**
ARG	**Arkhangelos**	**1.66 142**	P	**Pn**	**13 07 53.8**	**+0.5**
ARG			S	**Sb**	**13 08 17.1**	**+1.4**
ARG	**Arkhangelos**	**1.66 142**	P	**Pn**	**13 07 53.6**	**+0.5**
ARG			AML	AML	13 08 27.1	
	comp=E,2839μm,0.6s					
ARG			AML	AML	13 08 27.9	
	comp=N,2040μm,0.7s					
THR9	**Santorini-Faro**	**1.68 226**	P	**Pg**	**13 07 55.5**	**-1.2**
KULA	**Kula-Manisa**	**1.73 55**	PN	**Pn**	**13 07 54.9**	**+0.6**
KULA	**Kula-Manisa**	**1.73 55**	P	**Pn**	**13 07 55.5**	**+1.2**
KULA			S	**Sn**	**13 08 18.8**	**+2.6**
DENT	**Denizli**	**1.75 82**	PN	**Pn**	**13 07 55.1**	**+0.7**
PRK	**Paraskevi**	**1.77 345**	P	**Pn**	**13 07 55.2**	**+0.5**
PRK			S	**Sb**	**13 08 19.9**	**+1.1**
PRK	**Paraskevi**	**1.77 345**	P	**Pn**	**13 07 55.2**	**+0.5**
PRK			AML	AML	13 08 25.6	
	comp=N,5745μm,0.6s					
PRK			AML	AML	13 08 29.1	
	comp=E,6593μm,0.9s					
AYVA	**Ayvalik**	**1.78 356**	*i* P	**Pn**	**13 07 55.2**	**+0.4**
SIGR	**SIGRI**	**1.85 335**	PN	**Pn**	**13 07 55.7**	**-0.1**
SIGR	**SIGRI**	**1.85 335**	P	**Pn**	**13 07 56.7**	**+0.8**
SIGR			S	**Sn**	**13 08 21.3**	**+2.3**
SIGR	**SIGRI**	**1.85 335**	P	**Pn**	**13 07 56.6**	**+0.8**
SERI	**Serifos**	**1.92 260**	P	**Pn**	**13 07 58.4**	**+1.6**
SERI			S	**Sb**	**13 08 23.8**	**+0.6**
STEP	**BALIKESIR_Sava**	**1.96 20**	*i* P	**Pb**	**13 08 00.8**	**+0.7**
FETY	**Fethiye**	**2.00 116**	PN	**Pn**	**13 07 58.7**	**+0.9**
FETY	**Fethiye**	**2.00 116**	P	**Pn**	**13 07 59.7**	**+1.9**
FETY			S	**Sb**	**13 08 26.2**	**+0.9**
FETY	**Fethiye**	**2.00 116**	*i* P	**Pn**	**13 07 60.0**	**+2.2**
FETY			IAML_P			
	comp=Z,8μm,0.3s					
KARP	**Karpathos**	**2.00 173**	PN	**Pn**	**13 07 57.7**	**-0.1**
KARP	**Karpathos**	**2.00 173**	P	**Pn**	**13 07 57.7**	**-0.1**
GPNR	**Gulpinar-Canak**	**2.00 344**	PN	**Pn**	**13 07 57.9**	**0.0**
USAK	**Uak-Merkez**	**2.08 55**	*i* P	**Pn**	**13 07 59.4**	**+0.4**
MHLO	**Agia Marina, M**	**2.13 248**	P	**Pn**	**13 08 00.8**	**+1.1**
MHLO			S	**Sb**	**13 08 29.3**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**2.22 354**	*i* P	**Pn**	**13 08 00.9**	**0.0**
BAYC			IAML_P			
	comp=Z,3μm,0.1s					
KHAL	**Karahalli**	**2.25 67**	*i* P	**Pn**	**13 08 02.8**	**+1.4**
BALB	**Balikesir**	**2.25 21**	PN	**Pn**	**13 08 01.9**	**+0.6**
EZN	**Ezine**	**2.33 350**	PN	**Pn**	**13 08 02.7**	**+0.3**
EZN	**Ezine**	**2.33 350** ⇑	*i* P	**Pg**	**13 08 09.1**	**-0.1**
EZN	**Ezine**	**2.33 350**	S	**Sn**	**13 08 33.6**	**+2.9**
SHAP	**Saphane-Kutahy**	**2.39 51**	PN	**Pn**	**13 08 04.0**	**+0.7**
PTL	**Penteli**	**2.42 283**	P	**Pn**	**13 08 03.8**	**+0.1**
VLY	**Voula,Athens**	**2.45 278**	P	**Pn**	**13 08 04.4**	**+0.3**
VLY	**Voula,Athens**	**2.45 278**	P	**Pn**	**13 08 04.3**	**+0.3**
ATHU	**Athens Univers**	**2.47 281**	P	**Pn**	**13 08 04.6**	**+0.3**
NPS	**Neapolis**	**2.48 204**	P	**Pn**	**13 08 04.4**	**0.0**
BRDR	**BURDUR-Merkez**	**2.55 85**	*i* P	Pn	13 08 00.4	-5.1
AKAS	**Kas**	**2.56 120**	PN	**Pn**	**13 08 06.7**	**+1.0**
AKAS	**Kas**	**2.56 120**	*i* P	**Pn**	**13 08 08.7**	**+3.0**
AKAS			IAML_P			
	comp=Z,5μm,0.4s					
ELL	**Elmali**	**2.56 107**	PN	**Pn**	**13 08 06.8**	**+1.1**
KSL	**Kastellorizon**	**2.59 121**	P	**Pn**	**13 08 07.8**	**+1.9**
GONE	**Gonen-Balikesi**	**2.59 14**	PN	**Pn**	**13 08 06.7**	**+0.7**
LAST	**Lasithi**	**2.61 206**	P	**Pn**	**13 08 06.9**	**+0.5**
LAST	**Lasithi**	**2.61 206**	P	**Pn**	**13 08 06.8**	**+0.5**
LIA	**Limnos Island**	**2.70 332**	P	**Pn**	**13 08 07.6**	**+0.1**
LIA	**Limnos Island**	**2.70 332**	P	**Pn**	**13 08 07.5**	**0.0**
IDI	**Anoyia**	**2.74 216**	P	**Pn**	**13 08 08.4**	**+0.2**
MRKA	**Markates**	**2.83 295**	P	**Pn**	**13 08 09.8**	**+0.5**
VILL	**Villia**	**2.87 284**	P	**Pn**	**13 08 10.5**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.88 354**	PN	**Pn**	**13 08 09.5**	**-0.4**
VIL2	**Platees**	**2.92 285**	P	**Pn**	**13 08 10.5**	**0.0**
EDC	**Edincik**	**2.92 15**	PN	**Pn**	**13 08 11.5**	**+1.0**
KCTX	**Karacabey (Bur**	**2.97 23**	PN	**Pn**	**13 08 11.9**	**+0.7**
ORLT	**Orhaneli**	**2.98 32**	PN	**Pn**	**13 08 12.3**	**+1.0**
AKUM	**Antalya-Kumluc**	**3.04 112**	*i* P	**Pn**	**13 08 12.9**	**+0.7**
SHUT	**Suhut-Afyon**	**3.09 70**	PN	**Pn**	**13 08 14.3**	**+1.3**
LOUT	**Loutraki**	**3.11 280**	P	**Pn**	**13 08 13.6**	**+0.5**
SMTH	**Samothraki Isl**	**3.11 341**	P	**Pn**	**13 08 13.1**	**-0.1**
SMTH	**Samothraki Isl**	**3.11 341**	P	**Pn**	**13 08 12.9**	**-0.3**
ERIK	**Erikli-Kesan**	**3.15 355**	PN	**Pn**	**13 08 13.7**	**+0.1**
BAGO	**Egridir - ISPA**	**3.15 80**	*i* P	**Pn**	**13 08 15.5**	**+1.7**
RKY	**Sarkoy-Tekirda**	**3.16 4**	PN	**Pn**	**13 08 13.7**	**-0.2**
SMIA	**Simia**	**3.17 296**	P	**Pn**	**13 08 15.0**	**+1.0**
ATAL	**Atalanti**	**3.24 292**	P	**Pn**	**13 08 15.5**	**+0.6**
ATAL	**Atalanti**	**3.24 292**	P	**Pn**	**13 08 15.7**	**+0.8**
ENEZ	**Enez**	**3.25 351**	PN	**Pn**	**13 08 15.8**	**+0.8**
KESN	**Edirne-Kesan**	**3.29 358**	*i* P	**Pn**	**13 08 16.7**	**+0.7**
KTHR	**Kythira**	**3.34 249**	P	**Pn**	**13 08 18.5**	**+2.3**
NEO	**Neokhori**	**3.36 303**	P	**Pn**	**13 08 17.1**	**+0.6**
ARMT	**Armutlu**	**3.41 27**	PN	**Pn**	**13 08 18.5**	**+1.2**
ALN	**Alexandroupoli**	**3.42 350**	PN	**Pn**	**13 08 17.3**	**0.0**
ALN	**Alexandroupoli**	**3.42 350**	P	**Pn**	**13 08 17.3**	**0.0**
ALN	**Alexandroupoli**	**3.42 350**	P	**Pn**	**13 08 17.3**	**0.0**
THAS	**Thassos island**	**3.49 332**	P	**Pn**	**13 08 18.4**	**0.0**
OUR	**Ouranopolis**	**3.58 322**	P	**Pn**	**13 08 20.1**	**+0.5**
YLV	**Yalova**	**3.61 32**	PN	**Pn**	**13 08 21.4**	**+1.3**
YLV	**Yalova**	**3.61 32** ⇑	*i* P	**Pg**	**13 08 33.2**	**-0.5**
YLV	**Yalova**	**3.61 32**	S	**Sb**	**13 09 15.4**	**+3.6**
BORA	**Eskisehir**	**3.67 49**	*i* P	**Pg**	**13 08 33.2**	**-1.5**
ADVT	**Abdulvahap**	**3.67 37**	PN	**Pn**	**13 08 22.1**	**+1.3**
RDO	**Rodhopi**	**3.75 345**	P	**Pn**	**13 08 22.3**	**+0.4**
KEPZ	**Antalya-Kepez**	**3.84 98**	*i* P	**Pn**	**13 08 25.7**	**+2.5**
SRCK	**Saricakaya, Es**	**3.87 48**	*i* P	**Pg**	**13 08 37.4**	**-1.2**
KAVA	**Kavala**	**3.91 333**	P	**Pn**	**13 08 24.2**	**+0.1**
PHSR	**Pinarhisar**	**4.13 7**	‖ *i* P	**Pb**	**13 08 35.6**	**-1.3**
KIRK	**Kirklareli**	**4.25 2**	*i* P	**Pn**	**13 08 28.9**	**+0.1**
KDZ	**Kurdzhali**	**4.26 345**	*e* P	**Pn**	**13 08 33.1**	**+4.2**
AUMIH	**MIHALICIK**	**4.31 56**	*i* P	**Pg**	**13 08 46.8**	**-0.2**
RZN	**Rozhen**	**4.47 339**	*e* P	**Pn**	**13 08 32.5**	**+0.5**
SAHE	**Sakarya_HENDEK**	**4.54 42**	*i* P	**Pg**	**13 08 50.8**	**-0.8**
GAZI	**Gazipasa**	**4.57 105**	*i* P	**Pn**	**13 08 34.6**	**+1.4**
YIGI	**Dzce**	**4.95 45**	*i* P	**Pg**	**13 08 57.7**	**-1.5**
KKB	**Krupnik**	**5.21 327**	*e* P	**Pn**	**13 08 43.1**	**+1.0**
STIP	**Stip**	**5.50 321**	*i* Pn	**Pn**	**13 08 46.5**	**+0.5**
PRD	**Provadia**	**5.68 4**	*e* P	**Pn**	**13 08 48.4**	**0.0**
VTS	**Vitosha**	**5.79 332**	‖ *i* P	**Pn**	**13 08 51.6**	**+1.5**
VTS	**Vitosha**	**5.79 332**	*e* P	**Pn**	**13 08 51.4**	**+1.3**
PVL	**Pavlikeni**	**5.80 349**	*e* P	**Pn**	**13 08 49.7**	**-0.3**
TLB	**Topalu**	**7.11 7**	‖ *i* P	Pn	13 09 15.4	+7.4
MLR	**Muntele Rosu**	**7.98 355**	‖ *i* P	Pn	13 09 26.6	+6.5
MDVR	**Moldovita**	**8.21 333**	‖ *i* P	**Pn**	**13 09 24.1**	**+0.8**
PLOR	**Plostina**	**8.31 359**	‖ *i* P	Pn	13 09 31.5	+6.9
VRI	**Vrincioaia**	**8.33 359**	‖ *i* P	Pn	13 09 32.0	+7.2
SWA2		**8.35 188**	P	**Pn**	**13 09 24.7**	**-0.4**
	baz=188					
SWA2			AMP		13 11 00.0	
	baz=188					
HNAT	**Natroun**	**8.48 157**	P	**Pn**	**13 09 27.0**	**+0.1**
	baz=157					
HNAT			S	**Sn**	**13 10 57.7**	**-4.7**
	baz=157					
SHMJ	**Saham**	**8.73 121**	P	Pn	13 09 22.4	-7.9
GLL	**Jalalah**	**8.91 152**	P	**Pn**	**13 09 32.0**	**-0.7**
	baz=152					
SUZ	**Suez**	**9.14 145**	P	**Pn**	**13 09 35.2**	**-0.8**
	baz=146					
HFRF	**Wahat Farafira**	**10.43 173**	P	**Pn**	**13 09 52.5**	**-1.0**
	baz=172					
HKAT	**Jabal Katrina**	**10.79 144**	P	**Pn**	**13 09 58.2**	**-0.6**
	baz=145					

*ISCJB **21** 13:09:15.8±0.4, 44°.14N±0°.03×10°.12E±0°.04, h10km±5km, Error ellipse: s-maj=6.3km s-min=3.7km az=40.6*
*ROM **21** 13:09:15.9±0.1, 44°.198N±0°.006×10°.188E±0°.009, h10km, ML2.1/10, Error ellipse: s-maj=0.8km s-min=0.4km az=46.0*
*LDG **21** 13:09:16.6±0.0, 44°.19N×10°.17E, h2km, Md2.5/2, Ml2.5/13, Error ellipse: s-maj=1.2km s-min=0.8km az=17.0*
*GEN **21** 13:09:16.3, 44°.19N×10°.17E, h5km±2km, Ml2.0*

ISC 21 13:09:16.3±0.9, 44°.17N±0°.03×10°.15E±0°.03, h11km±8km, n32, σ1§64/55, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC
VLC	**Villacollemand**	**0.17**	**93**	P	**Pg**	**13 09 19.8**	**-0.3**
VLC				S	**Sg**	**13 09 22.3**	**-0.5**
VLC				AML	AML		
	comp=E,608μm,0.4s						
VLC				AML	AML		
	comp=N,1118μm,0.6s						
VLC				AML	AML		
	comp=E,674μm,1.1s						
VLC				AML	AML		
	comp=N,1115μm,0.8s						
VLC				AML	AML		
	comp=E,608μm,0.4s						
VLC				AML	AML		
	comp=N,1121μm,0.6s						
VLC				AML	AML		
	comp=E,674μm,1.1s						
VLC				AML	AML		
	comp=N,1115μm,0.8s						
VLC				AML	AML		
	comp=N,1117μm,0.6s						
VLC				AML	AML		
	comp=E,608μm,0.4s						
VLC				AML	AML		
	comp=E,674μm,1.1s						
VLC				AML	AML		
	comp=N,1115μm,0.8s						
VLC				AML	AML		
	comp=N,1117μm,0.6s						
VLC				AML	AML		
	comp=E,608μm,0.4s						
VLC				AML	AML		
	comp=E,674μm,1.1s						
VLC				AML	AML		
	comp=N,1115μm,0.8s						
SARO	**Sassorosso**	**0.18**	**85**	P	**Pg**	**13 09 19.9**	**-0.4**
SARO				S	**Sg**	**13 09 22.6**	**-0.6**
SARO	**Sassorosso**	**0.18**	**85**	P	**Pg**	**13 09 19.9**	**-0.4**
SARO				S	**Sg**	**13 09 22.5**	**-0.6**
SARO				AML	AML		
	comp=E,1425μm,0.3s						
SARO				AML	AML		
	comp=N,2530μm,0.5s					

SMRF				*e*Sn	**Sn**	**13 10 45.8**	**-1.3**
	comp=N,0.7nm,0.2s						
CABF	**La Chapelle**	**3.76**	**312**	*e*P	**Pn**	**13 10 17.3**	**+3.0**
HINF	**Hinteralfeld**	**4.31**	**329**	*e*P	**Pn**	**13 10 24.7**	**+2.9**
HINF				*e*Sn	**Sn**	**13 11 09.6**	**-2.4**
	comp=N,2.9nm,0.4s						
CDF	**Champ du Feu**	**4.69**	**336**	*e*P	**Pn**	**13 10 29.8**	**+2.8**
CDF				*e*Sn	**Sn**	**13 11 17.9**	**-3.5**
	comp=N,3.1nm,0.4s						
LOR	**Lormes**	**5.38**	**307**	*e*P	**Pn**	**13 10 39.0**	**+2.5**
LOR				*e*Sn	**Sn**	**13 11 34.9**	**-3.5**
	comp=N,1.7nm,0.3s						
AVF	**Avril sur Loir**	**5.45**	**301**	*e*P	**Pn**	**13 10 40.0**	**+2.6**
SSF	**Saint Saulge**	**5.49**	**304**	*e*P	**Pn**	**13 10 41.7**	**+3.9**
SSF				*e*Sn	**Sn**	**13 11 37.1**	**-3.8**
	comp=N,1.0nm,0.3s						

*ISCJB **21** 13:11:21.1±0.4, 44°.13N±0°.03×10°.11E±0°.05, h11km±5km, Error ellipse: s-maj=6.5km s-min=4.0km az=136.5*
*ROM **21** 13:11:21.2±0.1, 44°.181N±0°.005×10°.174E±0°.007, h10km, ML2.0/5, Error ellipse: s-maj=0.7km s-min=0.4km az=51.0*
*LDG **21** 13:11:21.9±0.0, 44°.18N×10°.15E, h2km, Md2.5/2, Ml2.5/14, Error ellipse: s-maj=1.1km s-min=0.7km az=14.0*
*GEN **21** 13:11:21.6, 44°.18N×10°.15E, h4km±1km, Ml1.8*
ISC 21 13:11:21.6±0.9, 44°.17N±0°.03×10°.14E±0°.04, h14km±7km, n29, σ1s75/50, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.17**	**92**	P	**Pg**	**13 11 25.2**	**-0.6**
VLC				S	**Sg**	**13 11 28.0**	**-0.6**
VLC				AML	AML		
	comp=E,494μm,0.6s						
VLC				AML	AML		
	comp=N,684μm,0.2s						
VLC				AML	AML		
	comp=E,549μm,0.6s						
VLC				AML	AML		
	comp=N,691μm,0.2s						
VLC				AML	AML		
	comp=E,494μm,0.6s						
VLC				AML	AML		
	comp=N,684μm,0.2s						
VLC				AML	AML		
	comp=E,549μm,0.6s						
VLC				AML	AML		
	comp=N,691μm,0.2s						
VLC				AML	AML		
	comp=N,684μm,0.2s						
VLC				AML	AML		
	comp=N,691μm,0.2s						
VLC				AML	AML		
	comp=E,494μm,0.6s						
VLC				AML	AML		
	comp=E,549μm,0.6s						
VLC				AML	AML		
	comp=N,691μm,0.2s						
VLC				AML	AML		
	comp=N,684μm,0.2s						
VLC				AML	AML		
	comp=E,549μm,0.6s						
VLC				AML	AML		
	comp=E,494μm,0.6s						
SARO	**Sassorosso**	**0.19**	**84**	P	**Pg**	**13 11 25.4**	**-0.7**
SARO				S	**Sg**	**13 11 28.1**	**-0.9**
SARO	**Sassorosso**	**0.19**	**84**	P	**Pg**	**13 11 25.3**	**-0.7**
SARO				S	**Sg**	**13 11 28.1**	**-0.9**
SARO				AML	AML		
	comp=E,770μm,0.4s						
SARO				AML	AML		
	comp=N,905μm,0.4s					

PTF	**Prato**	**0.71 104**	P	**Pg**	**13 36 37.6**	**0.0**	
GORR	**Gorreto**	**0.75 309**	P	**Pg**	**13 36 38.5**	**+0.1**	
GORR			S	**Sg**	**13 36 48.0**	**-0.2**	
GORR	**Gorreto**	**0.75 309**	P	**Pg**	**13 36 38.5**	**+0.1**	
BOB	**Bobbio (Coli)**	**0.79 323**	P	**Pg**	**13 36 39.1**	**0.0**	
BOB	comp=E,992μm,0.9s		AML	AML			
BOB	comp=N,954μm,0.4s		AML	AML			
BOB	comp=E,1075μm,1.6s		AML	AML			
BOB	comp=N,992μm,0.8s		AML	AML			
BOB	comp=E,992μm,0.9s		AML	AML			
BOB	comp=N,954μm,0.4s		AML	AML			
BOB	comp=E,1075μm,1.6s		AML	AML			
BOB	comp=N,996μm,0.8s		AML	AML			
BOB	comp=N,954μm,0.4s		AML	AML			
BOB	comp=N,996μm,0.8s		AML	AML			
BOB	comp=E,992μm,0.9s		AML	AML			
BOB	comp=E,1075μm,1.6s		AML	AML			
BOB	comp=N,954μm,0.4s		AML	AML			
BOB	comp=N,996μm,0.8s		AML	AML			
BOB	comp=E,992μm,0.9s		AML	AML			
BOB	comp=E,1075μm,1.6s		AML	AML			
SEI	**Scarperia**	**0.90 95**	AML	AML			
SEI	comp=E,1630μm,1.5s		AML	AML			
SEI	comp=E,1630μm,1.5s		AML	AML			
SEI	comp=N,3630μm,0.4s		AML	AML			
SEI	comp=E,1630μm,1.5s		AML	AML			
SEI	comp=N,3630μm,0.4s		AML	AML			
SEI	comp=E,1630μm,1.5s		AML	AML			
SEI	comp=N,3630μm,0.4s		AML	AML			
SEI	comp=N,3630μm,0.4s		AML	AML			
BRIS	**BRISIGHELLA**	**1.01 89**	AML	AML			
BRIS	comp=N,899μm,0.7s		AML	AML			
BRIS	comp=E,896μm,0.5s		AML	AML			
BRIS	comp=N,898μm,0.7s		AML	AML			
BRIS	comp=E,896μm,0.5s		AML	AML			
BRIS	comp=N,899μm,0.7s		AML	AML			
BRIS	comp=E,896μm,0.5s		AML	AML			
BRIS	comp=N,899μm,0.7s		AML	AML			
BRIS	comp=E,896μm,0.5s		AML	AML			
RUFI	**Rufina**	**1.05 106**	P	**Pb**	**13 36 43.8**	**-0.2**	
RUFI	comp=E,684μm,0.7s		AML	AML			
RUFI	comp=N,704μm,0.4s		AML	AML			
CSNT	**Castellina Chi**	**1.08 127**	P	**Pb**	**13 36 45.0**	**+0.5**	
CSNT	comp=E,1100μm,0.6s		AML	AML			
CSNT	comp=N,840μm,0.7s		AML	AML			
CSNT	comp=E,1100μm,0.6s		AML	AML			
CSNT	comp=N,840μm,0.7s		AML	AML			
CSNT	comp=N,840μm,0.7s		AML	AML			
CSNT	comp=E,1100μm,0.6s		AML	AML			
CSNT	comp=N,840μm,0.7s		AML	AML			
CSNT	comp=E,1100μm,0.6s		AML	AML			
TRIF	**Trifonti**	**1.17 150**	P	**Pb**	**13 36 46.9**	**+0.9**	
TRIF	comp=E,356μm,0.8s		AML	AML			
TRIF	comp=N,370μm,0.6s		AML	AML			
TRIF	comp=E,356μm,0.7s		AML	AML			
TRIF	comp=N,370μm,0.7s		AML	AML			
TRIF	comp=E,356μm,0.7s		AML	AML			
TRIF	comp=N,370μm,0.7s		AML	AML			
TRIF	comp=E,356μm,0.7s		AML	AML			
TRIF	comp=N,370μm,0.7s		AML	AML			
FROS	**Frosini**	**1.20 140**	AML	AML			
FROS	comp=N,1052μm,0.6s		AML	AML			
FROS	comp=E,1105μm,1.2s		AML	AML			
FROS	comp=N,1052μm,0.6s		AML	AML			
FROS	comp=E,1105μm,1.2s		AML	AML			
FROS	comp=N,1052μm,0.6s		AML	AML			
FROS	comp=N,1052μm,0.6s		AML	AML			
FROS	comp=E,1105μm,1.2s		AML	AML			
FROS	comp=E,1105μm,1.2s		AML	AML			
ASQU	**Asqua**	**1.26 105**	P	**Pn**	**13 36 46.6**	**-0.8**	
ASQU	comp=E,389μm,0.8s		AML	AML			
ASQU	comp=N,332μm,0.7s		AML	AML			
ASQU	comp=N,332μm,0.7s		AML	AML			
ASQU	comp=E,389μm,0.8s		AML	AML			
ASQU	comp=N,332μm,0.7s		AML	AML			
ASQU	comp=E,389μm,0.8s		AML	AML			
SFI	**Santa Sofia**	**1.27 100**	AML	AML			
SFI	comp=N,418μm,0.9s		AML	AML			
SFI	comp=E,360μm,0.9s		AML	AML			
SFI	comp=N,382μm,0.8s		AML	AML			
SFI	comp=E,352μm,0.5s		AML	AML			
SFI	comp=N,419μm,0.9s		AML	AML			
SFI	comp=E,352μm,0.5s		AML	AML			
SFI	comp=N,418μm,0.9s		AML	AML			
SFI	comp=N,418μm,0.9s		AML	AML			
SFI	comp=E,352μm,0.5s		AML	AML			
SFI	comp=E,352μm,0.5s		AML	AML			
FINB	**Finale Ligure**	**1.29 273**	P	**Pn**	**13 36 48.8**	**+1.1**	
FINB	comp=E,147μm,0.3s		AML	AML			
FINB	comp=N,214μm,1.4s		AML	AML			
CELB	**S.Piero in Cam**	**1.39 177**	P	**Pn**	**13 36 49.4**	**+0.2**	
CELB	comp=E,176μm,0.7s		AML	AML			
CELB	comp=N,192μm,0.2s		AML	AML			
CELB	comp=E,176μm,0.7s		AML	AML			
CELB	comp=N,192μm,0.2s		AML	AML			
CASP	**Castiglione de**	**1.45 157**	P	**Pn**	**13 36 50.3**	**+0.3**	
CASP	comp=E,193μm,0.5s		AML	AML			
CASP	comp=N,192μm,0.4s		AML	AML			
RORO	**Rocca Rossa**	**1.47 270**	P	**Pn**	**13 36 51.1**	**+0.8**	
RORO	comp=E,177μm,0.6s		AML	AML			
RORO	comp=N,170μm,0.2s		AML	AML			
RORO	comp=E,177μm,0.6s		AML	AML			
RORO	comp=N,170μm,0.2s		AML	AML			
RORO	comp=E,177μm,0.6s		AML	AML			
RORO	comp=N,170μm,0.2s		AML	AML			
CAFI	**Castiglion Fio**	**1.57 120**	AML	AML			
CAFI	comp=N,172μm,0.9s		AML	AML			
CAFI	comp=E,124μm,0.5s		AML	AML			
CAFI	comp=N,172μm,0.9s		AML	AML			
CAFI	comp=E,124μm,0.5s		AML	AML			
CAFI	comp=N,172μm,0.9s		AML	AML			
CAFI	comp=E,124μm,0.5s		AML	AML			
PARC	**Parchiule**	**1.61 107**	AML	AML			
PARC	comp=E,176μm,1.6s		AML	AML			
PARC	comp=N,222μm,1.1s		AML	AML			
PARC	comp=E,177μm,1.6s		AML	AML			
PARC	comp=N,222μm,1.1s		AML	AML			
PARC	comp=E,177μm,1.6s		AML	AML			
PARC	comp=N,222μm,1.1s		AML	AML			
PARC	comp=E,177μm,1.6s		AML	AML			
PARC	comp=N,222μm,1.1s		AML	AML			
GBOS	**Grotte di Boss**	**1.64 275**	P	**Pn**	**13 36 53.2**	**+0.6**	
GBOS	comp=E,98μm,0.7s		AML	AML			
GBOS	comp=N,114μm,0.3s		AML	AML			
GBOS	comp=E,98μm,0.7s		AML	AML			
GBOS	comp=N,114μm,0.3s		AML	AML			
GBOS	comp=E,98μm,0.7s		AML	AML			
GBOS	comp=N,114μm,0.3s		AML	AML			
TEOL	**Teolo**	**1.65 42**	AML	AML			
TEOL	comp=N,1460μm,1.3s		AML	AML			
TEOL	comp=E,1875μm,0.4s		AML	AML			
TEOL	comp=N,1460μm,1.3s		AML	AML			
TEOL	comp=E,1875μm,0.4s		AML	AML			
TEOL	comp=E,1875μm,0.4s		AML	AML			
TEOL	comp=N,1460μm,1.3s		AML	AML			
MGRO	**Montegrosso**	**1.66 268**	P	**Pn**	**13 36 53.4**	**+0.3**	
MGRO	comp=E,250μm,0.3s		AML	AML			
MGRO	comp=N,282μm,0.3s		AML	AML			
MGRO	comp=E,250μm,0.3s		AML	AML			
MGRO	comp=N,282μm,0.3s		AML	AML			
MGRO	comp=E,250μm,0.3s		AML	AML			
MGRO	comp=N,282μm,0.3s		AML	AML			
MGRO	comp=E,250μm,0.3s		AML	AML			
MGRO	comp=N,282μm,0.3s		AML	AML			
MAGA	**Magasa**	**1.68 12**	P	**Pb**	**13 36 55.1**	**+0.3**	
MAGA	comp=E,1795μm,0.5s		AML	AML			
MAGA	comp=N,904μm,0.4s		AML	AML			
MAGA	comp=E,1795μm,0.5s		AML	AML			
MAGA	comp=N,904μm,0.4s		AML	AML			
MAGA	comp=E,1795μm,0.5s		AML	AML			
MAGA	comp=N,904μm,0.4s		AML	AML			
MAGA	comp=E,1795μm,0.5s		AML	AML			
MAGA	comp=N,904μm,0.4s		AML	AML			
NEGI	**Seborga**	**1.76 261**	AML	AML			
NEGI	comp=N,142μm,0.6s		AML	AML			
NEGI	comp=E,108μm,1.2s		AML	AML			
NEGI	comp=N,142μm,0.6s		AML	AML			
NEGI	comp=E,108μm,1.2s		AML	AML			
NEGI	comp=N,142μm,0.6s		AML	AML			
NEGI	comp=E,108μm,1.2s		AML	AML			
PE3	**Peglio**	**1.78 103**	AML	AML			
PE3	comp=N,378μm,1.4s		AML	AML			
PE3	comp=E,380μm,0.5s		AML	AML			
PE3	comp=N,378μm,1.4s		AML	AML			
PE3	comp=E,380μm,0.5s		AML	AML			
PE3	comp=N,378μm,1.4s		AML	AML			
PE3	comp=E,380μm,0.5s		AML	AML			
PE3	comp=N,378μm,1.4s		AML	AML			
PE3	comp=E,380μm,0.5s		AML	AML			
PGF	**Pioggiola**	**1.78 207**	*e*Pn	**Pn**	**13 36 55.4**	**+0.8**	
PGF	comp=E,37nm,0.4s		*e*Sn	**Sn**	**13 37 16.9**	**-0.3**	
ATVO	**AVT- Monte Val**	**1.83 114**	AML	AML			
ATVO	comp=E,236μm,1.6s		AML	AML			
ATVO	comp=E,236μm,1.6s		AML	AML			
ATVO	comp=N,148μm,0.5s		AML	AML			
ATVO	comp=N,148μm,0.5s		AML	AML			
ATVO	comp=E,236μm,1.6s		AML	AML			
ATVO	comp=N,148μm,0.5s		AML	AML			
SAOF	**Saorge**	**1.85 266**	Pn	**Pn**	**13 36 56.2**	**+0.8**	
SAOF	**Saorge**	**1.85 266**	P	**Pn**	**13 36 55.9**	**+0.5**	
SAOF	comp=E,225μm,0.6s		AML	AML			
SAOF	comp=N,290μm,0.7s		AML	AML			
SAOF	comp=E,225μm,0.6s		AML	AML			
SAOF	comp=N,290μm,0.7s		AML	AML			
SAOF	comp=E,225μm,0.6s		AML	AML			
SAOF	comp=N,290μm,0.7s		AML	AML			
PIEI	**Pieia**	**1.85 108**	P	**Pn**	**13 36 55.2**	**-0.3**	
PIEI	comp=E,106μm,0.4s		AML	AML			
PIEI	comp=N,67μm,0.7s		AML	AML			
PIEI	comp=N,67μm,0.7s		AML	AML			
PIEI	comp=E,106μm,0.4s		AML	AML			
PIEI	comp=N,67μm,0.7s		AML	AML			
PIEI	comp=E,106μm,0.4s		AML	AML			
MGAB	**Montegabbione**	**1.90 129**	AML	AML			
MGAB	comp=E,168μm,0.5s		AML	AML			
MGAB	comp=E,168μm,0.5s		AML	AML			
MGAB	comp=N,94μm,0.5s		AML	AML			
MGAB	comp=N,94μm,0.5s		AML	AML			
MGAB	comp=E,168μm,0.5s		AML	AML			
MGAB	comp=N,94μm,0.5s		AML	AML			
MABI	**Malga Bissina**	**1.94 8**	AML	AML			
MABI	comp=N,120μm,1.5s		AML	AML			
MABI	comp=E,178μm,0.6s		AML	AML			
MABI	comp=E,178μm,0.6s		AML	AML			
MABI	comp=N,120μm,1.5s		AML	AML			
MABI	comp=E,178μm,0.6s		AML	AML			
MABI	comp=N,120μm,1.5s		AML	AML			
SBF	**Sospel**	**1.95 263**	*e*Pn	**Pn**	**13 36 57.4**	**+0.5**	
SBF	comp=N,102nm,0.4s		*e*Sn	**Sn**	**13 37 21.7**	**+0.3**	
MPAG	**Monte Paganucc**	**1.98 104**	AML	AML			
MPAG	comp=E,89μm,0.6s		AML	AML			
MPAG	comp=E,89μm,0.6s		AML	AML			
MPAG	comp=N,129μm,0.8s		AML	AML			
MPAG	comp=N,129μm,0.8s		AML	AML			
MPAG	comp=E,89μm,0.6s		AML	AML			
MPAG	comp=N,129μm,0.8s		AML	AML			
TRAV	**Traversella**	**2.17 310**	AML	AML			
TRAV	comp=E,194μm,0.9s		AML	AML			
TRAV	comp=E,194μm,0.9s		AML	AML			
TRAV	comp=N,244μm,0.3s		AML	AML			
TRAV	comp=N,244μm,0.3s		AML	AML			
TRAV	comp=E,194μm,0.9s		AML	AML			
TRAV	comp=N,244μm,0.3s		AML	AML			
PZZ	**Stroppo**	**2.18 281**	AML	AML			
PZZ	comp=E,162μm,1.3s		AML	AML			
PZZ	comp=E,162μm,1.3s		AML	AML			
PZZ	comp=N,184μm,0.7s		AML	AML			
PZZ	comp=N,184μm,0.7s		AML	AML			
PZZ	comp=N,184μm,0.7s		AML	AML			
PZZ	comp=E,162μm,1.3s		AML	AML			
CTI	**Castel Tesino**	**2.20 29**	AML	AML			
CTI	comp=E,339μm,0.9s		AML	AML			
CTI	comp=E,339μm,0.9s		AML	AML			
CTI	comp=N,348μm,0.2s		AML	AML			
CTI	comp=E,339μm,0.9s		AML	AML			
CTI	comp=N,348μm,0.2s		AML	AML			
CTI	comp=N,348μm,0.2s		AML	AML			
RSP	**Reno Superiore**	**2.27 298**	AML	AML			
RSP	comp=E,108μm,0.6s		AML	AML			
RSP	comp=E,108μm,0.6s		AML	AML			
RSP	comp=N,95μm,0.8s		AML	AML			
RSP	comp=N,95μm,0.8s		AML	AML			
RSP	comp=E,108μm,0.6s		AML	AML			
RSP	comp=N,95μm,0.8s		AML	AML			
TUE	**Stuetta**	**2.40 347**	AML	AML			
TUE	comp=N,168μm,0.5s		AML	AML			
TUE	comp=E,176μm,1.4s		AML	AML			
TUE	comp=N,148μm,0.4s		AML	AML			
TUE	comp=E,223μm,1.4s		AML	AML			
TUE	comp=N,168μm,0.5s		AML	AML			
TUE	comp=N,148μm,0.4s		AML	AML			
TUE	comp=E,223μm,1.4s		AML	AML			
TUE	comp=E,176μm,1.4s		AML	AML			
TUE	comp=N,148μm,0.4s		AML	AML			
TUE	comp=E,176μm,1.4s		AML	AML			
TUE	comp=E,223μm,1.4s		AML	AML			
TUE	comp=N,168μm,0.5s		AML	AML			
FDMO	**Fiordimonte**	**2.42 116**	AML	AML			
FDMO	comp=N,50μm,0.4s		AML	AML			
FDMO	comp=E,58μm,0.5s		AML	AML			
FDMO	comp=N,50μm,0.4s		AML	AML			
FDMO	comp=E,58μm,0.5s		AML	AML			
FDMO	comp=N,50μm,0.4s		AML	AML			
FDMO	comp=E,58μm,0.5s		AML	AML			
MBDF	**Montbardon**	**2.46 285**	*e*Pn	**Pn**	**13 37 04.3**	**+0.3**	
MBDF	**Montbardon**	**2.46 285**	*e*Pg	**Pb**	**13 37 10.9**	**+2.7**	
MBDF			*e*Sn	**Sn**	**13 37 34.2**	**0.0**	
MBDF			*e*Sg	**Sg**	**13 37 44.2**	**+1.2**	
	comp=E,30nm,0.4s						
KOSI	**Kohlern**	**2.49 21**	AML	AML			
KOSI	comp=E,178μm,0.5s		AML	AML			
KOSI	comp=E,178μm,0.5s		AML	AML			
KOSI	comp=N,198μm,0.5s		AML	AML			
KOSI	comp=N,198μm,0.5s		AML	AML			
KOSI	comp=N,198μm,0.5s		AML	AML			
KOSI	comp=E,178μm,0.5s		AML	AML			
FRF	**La Foret Royal**	**2.57 258**	*e*P	**Pn**	**13 37 06.0**	**+0.7**	
FRF			*e*Sn	**Sn**	**13 37 36.1**	**-0.5**	
	comp=E,18nm,0.2s						
LMR	**La Mourre**	**2.73 254**	*e*Pn	**Pn**	**13 37 07.8**	**+0.3**	
LMR			*e*Sn	**Sn**	**13 37 40.1**	**-0.4**	
	comp=E,17nm,0.3s						
LPG	**La Plagne**	**2.75 301**	*e*P	**Pn**	**13 37 11.5**	**+3.4**	
LPG			*e*Sn	**Sn**	**13 37 40.7**	**-0.8**	
	comp=E,42nm,0.5s						
LPL	**La Plagne**	**2.77 301**	*e*P	**Pn**	**13 37 11.6**	**+3.3**	
LPL			*e*Sn	**Sn**	**13 37 41.7**	**-0.2**	
	comp=E,27nm,0.4s						
FETA	**Feichten**	**2.92 8**	*e*Pn	**Pb**	**13 37 13.4**	**-2.5**	
	comp=E,3.0nm,0.4s						

FETA				Sn	Sn	13 37 48.1	+2.7
	comp=E,12nm,0.5s						
ROSI	**Rosskopf**	**2.94**	**18**	AML	AML		
	comp=E,196μm,1.6s						
ROSI				AML	AML		
	comp=E,196μm,1.6s						
ROSI				AML	AML		
	comp=N,238μm,1.6s						
ROSI				AML	AML		
	comp=E,196μm,1.6s						
ROSI				AML	AML		
	comp=N,238μm,1.6s						
ROSI				AML	AML		
	comp=N,238μm,1.6s						
SABO	**M.te Sabotino**	**3.08**	**52**	AML	AML		
	comp=E,138μm,1.2s						
SABO				AML	AML		
	comp=E,138μm,1.2s						
SABO				AML	AML		
	comp=N,226μm,0.6s						
SABO				AML	AML		
	comp=N,226μm,0.6s						
SABO				AML	AML		
	comp=E,138μm,1.2s						
SABO				AML	AML		
	comp=N,226μm,0.6s						
ABTA	**Abfaltersbach**	**3.11**	**32**	*i* Pn	Pn	13 37 14.5	+1.6
	comp=N,3.3nm,0.6s						
ABTA				*e*Sn	Sb	13 37 53.8	-3.4
	comp=N,10nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.13**	**286**	*e*P	Pn	13 37 15.9	+2.8
ORIF				*e*Sn	Sn	13 37 49.9	-0.5
	comp=N,22nm,0.4s						
DAVA	**Damuels**	**3.16**	**357**	*i* Pn	Pn	13 37 16.7	+3.1
	comp=N,28nm,0.6s,SNR=16						
DAVA				*e*Sn	Sb	13 37 55.1	-3.4
	comp=N,42nm,0.5s						
SQTA	**Sankt Quirin**	**3.18**	**14**	*i* Pn	Pn	13 37 17.1	+3.2
	comp=N,13nm,0.2s,SNR=7.7						
SQTA				*i* Sn	Sb	13 37 57.1	-2.0
	comp=N,29nm,0.4s						
SMRF	**Simiane la Rot**	**3.27**	**269**	*e*P	Pn	13 37 17.9	+2.8
SMRF				*e*Sn	Sn	13 37 53.3	-0.7
	comp=N,8.6nm,0.3s						
SMRF				*e*Sg	Sg	13 38 07.8	-1.1
	comp=N,13nm,0.4s						
MOTA	**Moosalm**	**3.29**	**12**	*i* Pn	Pn	13 37 18.8	+3.5
	comp=N,3.6nm,0.2s,SNR=11						
MOTA				*i* Sn	Sb	13 38 00.9	-1.3
	comp=N,4.9nm,0.2s						
WTTA	**Wattenberg**	**3.31**	**18**	*i* Pn	Pn	13 37 18.8	+3.1
	comp=N,12nm,0.3s,SNR=7.9						
WTTA				*i* Sn	Sb	13 38 02.2	-0.7
	comp=N,43nm,0.5s						
WTTA	**Wattenberg**	**3.31**	**18**	AML	AML		
	comp=E,112μm,0.5s						
WTTA				AML	AML		
	comp=N,98μm,0.6s						
WTTA				AML	AML		
	comp=N,98μm,0.6s						
WTTA				AML	AML		
	comp=E,112μm,0.5s						
WTTA				AML	AML		
	comp=N,98μm,0.6s						
WTTA				AML	AML		
	comp=E,112μm,0.5s						
WATA	**Walderalm**	**3.36**	**17**	*e*Pn	Pn	13 37 19.2	+2.9
	comp=E,7.4nm,0.2s						
RETA	**Reutte**	**3.38**	**8**	*i* Pn	Pn	13 37 19.8	+3.2
	comp=E,1.3nm,0.2s						
RETA				*i* Sn	Sb	13 38 01.0	-4.0
ACOM	**Acomizza, Ital**	**3.40**	**44**	AML	AML		
	comp=N,136μm,0.6s						
ACOM				AML	AML		
	comp=E,155μm,0.6s						
ACOM				AML	AML		
	comp=E,155μm,0.6s						
ACOM				AML	AML		
	comp=N,136μm,0.6s						
ACOM				AML	AML		
	comp=E,155μm,0.6s						
ACOM				AML	AML		
	comp=N,136μm,0.6s						
NVLJ	**Novalja**	**3.44**	**81**	*e*Pn	Pn	13 37 18.6	+1.3
NVLJ				Sn	Sn	13 37 58.0	0.0
MYKA	**Terra Mystica**	**3.52**	**44**	*i* Pn	Pn	13 37 20.9	+2.4
	comp=N,2.3nm,0.3s						
MYKA				*i* Sn	Sb	13 38 04.0	-4.9
	comp=N,3.2nm,0.2s						
KBA	**Koelnbreinsper**	**3.72**	**36**	*i* Pn	Pn	13 37 23.7	+2.4
	comp=N,1.5nm,0.2s						
KBA				*e*Sn	Sn	13 38 08.1	+3.0
	comp=N,6.4nm,0.4s						
CABF	**La Chapelle**	**3.76**	**313**	*e*P	Pn	13 37 24.9	+3.1
CABF				*e*Sn	Sn	13 38 04.5	-1.7
	comp=N,10nm,0.4s						
BOJS	**Bojanci**	**3.91**	**68**	AML	AML		
	comp=E,24μm,0.9s						
BOJS				AML	AML		
	comp=N,25μm,1.5s						
BOJS				AML	AML		
	comp=E,24μm,0.9s						
BOJS				AML	AML		
	comp=N,25μm,1.5s						
BOJS				AML	AML		
	comp=E,24μm,0.9s						
BOJS				AML	AML		
	comp=N,25μm,1.5s						
OBKA	**Obir**	**3.93**	**51**	*e*Pn	Pn	13 37 26.8	+2.7
	comp=N,2.0nm,0.2s						
OBKA				*e*Sn	Sn	13 38 12.1	+1.9
	comp=N,6.0nm,0.3s						
CHMF	**Charmoille**	**3.95**	**323**	Pn	Pn	13 37 27.0	+2.7
CHMF				Sn	Sn	13 38 12.9	+2.3
LOMF	**Lomont**	**3.95**	**326**	Sn	Sn	13 38 13.6	+2.8
VIVF	**Saint-Julien-l**	**3.96**	**282**	*e*P	Pn	13 37 28.0	+3.6
VIVF				*e*Sn	Sn	13 38 09.1	-1.7
	comp=N,3.2nm,0.3s						
UDBI	**Udbina**	**4.08**	**82**	*i* Pn	Pn	13 37 28.6	+2.5
KIZ	**Kirchzarten**	**4.12**	**339**	Pn	Pn	13 37 27.9	+1.3
SOKA	**Soboth**	**4.30**	**52**	*e*Sn	Sn	13 38 19.9	+0.5
	comp=N,2.8nm,0.3s						
HINF	**Hinteralfeld**	**4.33**	**329**	*e*P	Pn	13 37 32.2	+2.7
HINF				*e*Sn	Sn	13 38 17.9	-2.0
	comp=N,25nm,0.4s						
LASF	**Ste Croix**	**4.50**	**271**	*e*Pn	Pn	13 37 32.1	+0.2
LASF				*e*Sn	Sn	13 38 22.2	-2.1
	comp=N,3.1nm,0.3s						
OPP	**Oppenau**	**4.56**	**344**	Pn	Pn	13 37 34.0	+1.3
OPP				Sn	Sn	13 38 25.8	+0.1
ECH	**Echery**	**4.57**	**334**	Pn	Pn	13 37 34.4	+1.6
ECH				Sn	Sn	13 38 26.0	+0.1
HAU	**Haudompre**	**4.67**	**327**	*e*P	Pn	13 37 36.8	+2.5
HAU				*e*Sn	Sn	13 38 25.9	-2.6
	comp=N,39nm,0.3s						
WLS	**Welschbruch**	**4.69**	**337**	Pn	Pn	13 37 36.2	+1.7
CDF	**Champ du Feu**	**4.71**	**336**	*e*P	Pn	13 37 36.2	+1.4
CDF				*e*Sn	Sn	13 38 26.0	-3.4
	comp=N,31nm,0.4s						
MOA	**Molln**	**4.71**	**36**	*i* Pn	Pn	13 37 37.0	+2.2
	comp=N,3.2nm,0.3s						
MOA				*i* Sn	Sn	13 38 31.1	+1.8
	comp=N,4.8nm,0.3s						
ARSA	**Arzberg**	**4.91**	**49**	*i* Pn	Pn	13 37 39.6	+2.1
	comp=N,3.1nm,0.2s						
ARSA				*i* Sn	Sn	13 38 33.5	-0.7
	comp=N,0.5nm,0.1s						
SMF	**Signal de Mont**	**5.08**	**302**	*e*P	Pn	13 37 42.7	+2.9
SMF				*e*Sn	Sn	13 38 36.3	-2.2
	comp=N,9.9nm,0.3s						
PAGF	**Fort de Pagny**	**5.36**	**327**	*e*P	Pn	13 37 47.3	+3.6
PAGF				*e*Sn	Sn	13 38 41.7	-3.7
	comp=N,11nm,0.3s						
SFTF	**Sexfontaines**	**5.38**	**321**	*e*P	Pn	13 37 47.2	+3.2
	baz=141						
SFTF				*e*Sn	Sn	13 38 42.8	-3.1
	comp=N,12nm,0.4s						
LOR	**Lormes**	**5.38**	**308**	*e*P	Pn	13 37 46.6	+2.6
	baz=128						
LOR				*e*Sn	Sn	13 38 43.1	-2.9
	comp=N,14nm,0.4s						
AVF	**Avril sur Loir**	**5.45**	**302**	*e*P	Pn	13 37 47.9	+3.1
AVF				*e*Sn	Sn	13 38 44.5	-2.9
SSF	**Saint Saulge**	**5.48**	**305**	*e*P	Pn	13 37 48.2	+2.9
SSF				*e*Sn	Sn	13 38 45.4	-2.9
	comp=N,5.3nm,0.3s						
CONA	**Conrad Observa**	**5.51**	**45**	*e*Pn	Pn	13 37 47.9	+2.0
	comp=N,1.1nm,0.2s						
CONA				*e*Sn	Sn	13 38 51.2	+1.9
	comp=N,5.0nm,0.5s						
KHC	**Kasperske Hory**	**5.54**	**24**	*e*PN	Pn	13 37 47.2	+1.0
KHC				*e*SN	Sn	13 38 47.4	-2.4
KHC				*ex*	x	13 39 19.5	
MEZF	**Maizieres J'vi**	**5.60**	**323**	*e*P	Pn	13 37 50.6	+3.7
	baz=142						
MEZF				*e*Sn	Sn	13 38 48.4	-2.8
	comp=N,8.8nm,0.4s						
STON	**Ston**	**5.66**	**100**	*e*Pn	Pn	13 37 49.1	+1.3
BGF	**Bois d'Agland**	**5.66**	**298**	*e*P	Pn	13 37 51.3	+3.4
BGF				*e*Sn	Sn	13 38 50.2	-2.7
	comp=N,9.2nm,0.4s						
MTLF	**Montolieu**	**5.77**	**265**	*e*Pn	Pn	13 37 49.2	-0.2
MTLF				*e*Sn	Sn	13 38 53.2	-2.4
	comp=N,1.0nm,0.3s						
CAF	**Calviac**	**5.81**	**281**	*e*P	Pn	13 37 53.4	+3.6
TCF	**Toulx Ste Croi**	**5.98**	**294**	*e*P	Pn	13 37 56.4	+4.2
TCF				*e*Sn	Sn	13 38 57.6	-3.1
	comp=N,3.6nm,0.4s						
MODS	**Modra-Piesok**	**6.53**	**47**	*e*PN	Pn	13 38 01.0	+1.2
MODS				*e*SN	Sn	13 39 11.6	-2.6
LFF	**La Frestale**	**6.75**	**280**	*e*P	Pn	13 38 02.6	-0.1
BRG	**Berggiesshubel**	**7.22**	**20**	SG	Sg	13 40 18.2	+2.8
	comp=N,4.6nm,1.1s						

NIED ***21*** *13:38:00,24.°30N×121.°40E,h5km,Mw3.8 Best double couple: M0:4.74000×10^14 NP1:φs:124.00000°,δ46.00000°, λ-73.00000°. NP2:φs:280.00000°,δ46.00000°, λ-107.00000°.*
JMA ***21*** *13:38:06.2±0.1,24.°26N×121.°44E,h0km,M3.5*
TAP ***21*** *13:38:06.7,24.°29N×121.°49E,h5km,ML3.9,C*
IDC ***21*** *13:38:18.6±8.1,25.°19N×120.°57E,h0km,mb3.6/3, mb1 3.6/4,mb1mx3.4/49,mbtmp3.6/4,ML3.1/1,Error ellipse: s-maj=152.8km s-min=37.9km az=132.0*
ISC 21 13:38:07.2±1.0,24.°29N±0.°01×121.°48E±0.°01,h2km±8km, n128,σ1°01/203,mb3.5/3,58C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.09**	**178**	⇑P	Pg	13 38 09.3	+0.4
	baz=187						
ETLH				S	Sg	13 38 10.6	+0.6
	baz=187						
NACB	**Ninganchiao**	**0.16**	**138**	⇑P	Pg	13 38 10.6	+0.3
	baz=140						
NACB				S	Sg	13 38 12.6	+0.3
	baz=140						
NNSB	**Datong**	**0.16**	**327**	⇓P	Pg	13 38 10.8	+0.5
	baz=325						
NNSB				S	Sg	13 38 13.4	+0.9
	baz=325						
NNS	**Nan Shan**	**0.17**	**327**	P	Pg	13 38 11.1	+0.4
	baz=320						
NNS				S	Sg	13 38 13.6	+0.6
	baz=320						
TWD	**Chiawan**	**0.24**	**153**	⇑*i*P	Pg	13 38 12.0	+0.2
	baz=153						
TWD				S	Sg	13 38 15.2	+0.3
	baz=153						
WHF	**Hehuan Shan**	**0.24**	**233**	⇑*i*P	Pg	13 38 12.3	+0.3
	baz=235						
WHF				S	Sg	13 38 15.5	+0.4
	baz=235						
ENA	**Nanau**	**0.27**	**61**	⇑*i*P	Pg	13 38 12.4	0.0
	baz=60						
ENA				*e*S	Sg	13 38 15.9	-0.1
	baz=60						
NANB	**Nanao**	**0.28**	**62**	⇑P	Pg	13 38 12.4	-0.2
	baz=59						
NANB				S	Sg	13 38 15.8	-0.5
	baz=59						
TDCB	**Techi**	**0.29**	**262**	⇑P	Pb	13 38 13.5	-1.8
	baz=255						
TDCB				S	Sg	13 38 17.3	+0.6
	baz=255						
HWA	**Hwalien**	**0.34**	**160**	⇑P	Pg	13 38 14.3	+0.6
	baz=161						
HWA				S	Sg	13 38 18.6	+0.6
	baz=161						
ENTT	**Nioudou**	**0.35**	**13**	⇑*i*P	Pg	13 38 14.4	+0.4
	baz=12						
ENTT				S	Sg	13 38 19.2	+0.5
	baz=12						
CHGB	**Renai**	**0.36**	**230**	⇑P	Pg	13 38 14.5	+0.3
	baz=232						
CHGB				S	Sg	13 38 19.1	+0.2
	baz=232						
YHNB	**Yeheng**	**0.39**	**346**	⇑P	Pg	13 38 15.4	+0.7
	baz=344						
YHNB				S	Sg	13 38 20.2	+0.5
	baz=344						
NSK	**Sanguang**	**0.40**	**344**	⇑*i*P	Pg	13 38 15.6	+0.7
	baz=343						
NSK				S	Sg	13 38 20.5	+0.4
	baz=343						
OWD	**Renai**	**0.44**	**219**	⇑P	Pg	13 38 15.5	-0.1
	baz=221						
OWD				*e*S	Sg	13 38 20.5	-0.7
	baz=221						
TWE	**Neicheng**	**0.46**	**22**	⇑*i*P	Pg	13 38 16.4	+0.4
	baz=22						
TWE				*e*S	Sg	13 38 21.9	-0.1
	baz=22						
TWC	**Suao**	**0.46**	**47**	⇑*i*P	Pg	13 38 16.0	-0.1
	baz=47						
TWC				S	Sg	13 38 21.8	-0.3
	baz=47						
ESL	**Shilin**	**0.48**	**185**	⇑*i*P	Pg	13 38 16.3	-0.1
	baz=174						
ESL				*e*S	Sg	13 38 22.5	-0.1
	baz=174						
SLBB	**Yuanshan**	**0.48**	**17**	⇑P	Pg	13 38 16.9	+0.5
	baz=27						
SLBB				S	Sg	13 38 23.3	+0.6
	baz=27						
WHP	**Taichung City**	**0.49**	**268**	⇑*i*P	Pb	13 38 17.6	-1.0
	baz=268						
WHP				S	Sb	13 38 24.0	-2.2
	baz=268						
ILA	**Ilan**	**0.53**	**28**	P	Pg	13 38 17.6	+0.2
	baz=27						
ILA				S	Sg	13 38 25.6	+1.3
	baz=27						
LIOB	**Emei**	**0.55**	**310**	⇑*i*P	Pb	13 38 19.1	-0.5
	baz=308						
LIOB				S	Sb	13 38 26.6	-1.3
	baz=308						
NSTT	**Nanjuang**	**0.55**	**308**	⇑*i*P	Pb	13 38 19.0	-0.6
	baz=307						
NSTT				*i* S	Sb	13 38 26.4	-1.6
	baz=307						
DPDB	**Guoxing**	**0.57**	**243**	⇑*i*P	Pb	13 38 18.9	-1.1
	baz=244						
WLTB	**Daxi**	**0.59**	**340**	⇑*e*P	Pb	13 38 20.2	-0.2
	baz=338						
WLTB				*e*S	Sb	13 38 27.8	-1.4
	baz=338						
VWDT	**VWDT**	**0.62**	**210**	⇑P	Pg	13 38 18.9	-0.2
	baz=216						
VWDT				S	Sg	13 38 27.1	0.0
	baz=216						
EGFH	**Guangfu**	**0.62**	**184**	⇑P	Pg	13 38 18.9	-0.2
	baz=186						
EGFH				*e*S	Sg	13 38 27.2	-0.1
	baz=186						
NTC	**Toucheng**	**0.64**	**30**	P	Pg	13 38 19.5	-0.1
	baz=29						
NTC				*e*S	Sg	13 38 28.2	+0.2
	baz=29						
EOS1	**EOS1**	**0.65**	**67**	⇑P	Pg	13 38 19.9	+0.3
	baz=54						
EOS1				*e*S	Sg	13 38 29.0	+1.1
	baz=54						
TWQ1	**Liyutan**	**0.65**	**275**	⇑*i*P	Pb	13 38 21.0	-0.2
	baz=275						
TWQ1				*i* S	Sb	13 38 29.5	-1.2
	baz=275						
NSY	**Sanyi**	**0.67**	**281**	⇑P	Pn	13 38 21.9	-1.9
	baz=280						
NSY				*e*S	Sb	13 38 31.3	0.0
	baz=280						
NHDH	**Xindian Distri**	**0.67**	**4**	*e*P	Pg	13 38 20.5	+0.4
	baz=2.0						
NHDH				*e*S	Sg	13 38 29.0	+0.3
	baz=2.0						
SMLT	**Sun Moon Lake**	**0.67**	**232**	⇑*i*P	Pb	13 38 20.4	-1.2
	baz=233						
SBCB	**Hsinchu**	**0.67**	**318**	*e*P	Pb	13 38 21.8	+0.2
	baz=317						
NMLH	**Miaoli**	**0.67**	**291**	⇑P	Pn	13 38 21.9	-1.8
	baz=290						
TATO	**Taipei**	**0.68**	**1**	P	Pb	13 38 21.0	-0.8
	baz=13						
TATO				S	Sg	13 38 29.6	+0.5
	baz=13						
HSN	**Hsinchu**	**0.69**	**318**	*e*P	Pn	13 38 22.2	-1.8
	baz=321						
TYC	**Yuchr**	**0.69**	**236**	⇑*i*P	Pb	13 38 20.6	-1.3
	baz=236						
TYC				*e*S	Sg	13 38 29.0	-0.3
	baz=236						
TWA	**Mucha**	**0.69**	**8**	⇑*i*P	Pg	13 38 21.1	+0.6
	baz=7.0						
TWA				S	Sg	13 38 29.7	+0.2
	baz=7.0						
SSLB	**Suanglung**	**0.69**	**224**	⇑P	Pg	13 38 20.4	-0.2
	baz=234						
SSLB				*e*S	Sg	13 38 28.9	-0.6
	baz=234						
PTSB	**Yuanli**	**0.72**	**282**	⇑*i*P	Pn	13 38 23.2	-1.3
	baz=282						
PTSB				S	Sb	13 38 32.9	0.0
	baz=282						
NCUH	**Zhongli**	**0.72**	**338**	*e*P	Pn	13 38 22.9	-1.6
	baz=338						
NCU	**National Centr**	**0.72**	**339**	P	Pb	13 38 22.8	+0.2
	baz=339						
TAP	**Taipei**	**0.74**	**2**	*e*P	Pb	13 38 22.1	-0.8
	baz=2.0						
TIPB	**Shuangxi**	**0.75**	**25**	⇑*i*P	Pg	13 38 21.5	0.0
	baz=10.0						
TIPB				S	Sg	13 38 30.3	-0.9
	baz=10.0						
TCU	**Taichung**	**0.75**	**259**	⇑*e*P	Pn	13 38 23.4	-1.4
	baz=259						
WDJ	**Dajia District**	**0.77**	**274**	⇑P	Pn	13 38 23.9	-1.1
	baz=274						
EHY	**Hungye**	**0.80**	**190**	⇓*i*P	Pg	13 38 22.0	-0.5
	baz=183						
HGSD	**Ruisui**	**0.80**	**184**	⇑P	Pg	13 38 22.7	+0.2
	baz=195						
TWS1	**Kuangyinshan**	**0.81**	**356**	P	Pn	13 38 24.3	-1.3
	baz=7.0						
TWS1				*e*S	Sn	13 38 37.0	-1.2
	baz=7.0						
NWF	**Wu-fen Shan**	**0.82**	**20**	⇑*i*P	Pg	13 38 23.4	+0.4
	baz=19						
NWF				*e*S	Sb	13 38 35.0	-0.8
	baz=19						
WFSB	**Wu-fen Shan**	**0.82**	**20**	⇑P	Pg	13 38 23.2	+0.3
	baz=19						
WFSB				S	Sg	13 38 34.2	+0.5
	baz=19						
WHYT	**Xinyi Township**	**0.82**	**224**	⇑P	Pg	13 38 22.8	-0.2
	baz=225						
WJS	**Zhushan**	**0.83**	**236**	*e*P	Pb	13 38 24.2	-0.2
	baz=229						
WNT	**Mingjian**	**0.83**	**241**	P	Pn	13 38 24.5	-1.6
	baz=235						
TWB1	**Santiao Chiao**	**0.85**	**33**	*e*P	Pg	13 38 23.1	-0.5
	baz=33						
TWB1				*e*S	Sg	13 38 33.8	-0.8
	baz=33						
YM01	**YM01**	**0.85**	**6**	⇑P	Pb	13 38 24.5	-0.3
	baz=6.0						
YM04	**YM04**	**0.86**	**4**	⇑*i*P	Pb	13 38 24.6	-0.3
	baz=3.0						
YM04				*e*S	Sb	13 38 37.5	+0.6
	baz=3.0						
YM10	**YM10**	**0.86**	**5**	⇑*i*P	Pb	13 38 24.7	-0.3
	baz=5.0						
WCHH	**Zhanghua**	**0.87**	**256**	*e*P	Pn	13 38 26.0	-0.5
	baz=256						
NTST	**Danshui**	**0.87**	**358**	*e*P	Pn	13 38 25.3	-1.1
	baz=13						
YM05	**YM05**	**0.87**	**5**	⇑P	Pb	13 38 24.8	-0.3
	baz=4.0						
YM05				*e*S	Sb	13 38 37.6	+0.4
	baz=4.0						
YM03	**YM03**	**0.88**	**4**	⇑P	Pb	13 38 25.1	-0.2
	baz=3.0						
YM03				*e*S	Sb	13 38 38.0	+0.3
	baz=3.0						
ANP	**Anpu**	**0.89**	**2**	⇑*e*P	Pb	13 38 25.1	-0.4
	baz=3.0						
YM08	**YM08**	**0.90**	**6**	⇑*i*P	Pg	13 38 24.8	+0.4
	baz=7.0						
YULB	**Yu-li**	**0.91**	**191**	P	Pg	13 38 23.7	-1.0
	baz=185						
YULB				*e*S	Sg	13 38 37.1	+0.5
	baz=185						
YUS	**Yu-Shan**	**0.93**	**211**	P	Pg	13 38 24.6	-0.5
	baz=212						
TWF1	**Yuli**	**0.95**	**190**	*e*P	Pg	13 38 24.4	-1.1
	baz=191						
TWF1				*e*S	Sb	13 38 38.8	-0.8
	baz=191						
TWY	**Chenhua**	**0.98**	**6**	*e*P	Pn	13 38 27.4	-0.6
	baz=6.0						
TWY				*e*S	Sn	13 38 41.2	-1.4
	baz=6.0						
CHN5	**Tsauling**	**1.01**	**227**	P	Pn	13 38 27.3	-1.2
	baz=228						
CHN5				*e*S	Sn	13 38 42.7	-0.6
	baz=228						
WGK	**Gukeng**	**1.03**	**234**	⇑P	Pn	13 38 28.3	-0.4
	baz=235						
WDLH	**Douliu**	**1.05**	**235**	⇑*e*P	Pn	13 38 28.5	-0.5
	baz=236						
RLNB	**Erlin**	**1.10**	**249**	⇑P	Pn	13 38 29.1	-0.5
	baz=250						
WTCT	**Ta-ch'eng**	**1.18**	**249**	P	Pn	13 38 30.4	-0.2
	baz=249						
WTCT				S	Sn	13 38 47.6	+0.3
	baz=249						
ELDTW	**Lidau**	**1.18**	**201**	⇑P	Pg	13 38 28.6	-1.2
	baz=202						
ELDTW				*e*S	Sg	13 38 43.3	-1.8
	baz=202						
CHKT	**Chengkung**	**1.19**	**185**	*e*P	Pg	13 38 29.9	-0.2
	baz=185						
CHN4	**Tsaushan**	**1.24**	**221**	⇑*i*P	Pn	13 38 31.3	-0.3
	baz=222						
CHN4				*e*S	Sn	13 38 51.0	+2.1
	baz=222						
CHY	**Chiayi**	**1.25**	**231**	⇑P	Pn	13 38 31.5	-0.2
	baz=232						
TPUB	**Ta-pu**	**1.26**	**218**	⇑P	Pn	13 38 31.4	-0.4
	baz=220						
TPUB				S	Sn	13 38 50.2	+0.8
	baz=220						
STYT	**Tauyuan**	**1.30**	**211**	⇑*i*P	Pn	13 38 31.6	-0.9
	baz=212						
STYT				S	Sn	13 38 49.9	-0.7
	baz=212						
WTP	**Ta-pu**	**1.31**	**217**	⇑*i*P	Pg	13 38 32.2	-0.1
	baz=219						
WTP				S	Sn	13 38 52.0	+1.4
	baz=219						
WSF	**Szhu**	**1.32**	**241**	P	Pg	13 38 32.6	0.0
	baz=241						
WSF				S	Sn	13 38 51.7	+0.8
	baz=241						
JYNG	**Yonagunijimaku**	**1.35**	**83**	P	Pn	13 38 32.7	-0.3
JYNG				S	Sb	13 38 49.4	-1.5
WLGB	**Puzi**	**1.35**	**233**	*e*P	Pn	13 38 32.3	-0.8
	baz=235						
WLGB				*e*S	Sn	13 38 53.5	+1.9
	baz=235						
TWK	**Hsinying**	**1.37**	**222**	P	Pg	13 38 33.2	-0.3
	baz=223						
TWK				*e*S	Sn	13 38 53.3	+1.2
	baz=223						
SNST	**Tainan City**	**1.40**	**220**	*e*P	Pg	13 38 34.0	0.0
	baz=221						
CHN1	**Nanshi**	**1.41**	**218**	⇑*i*P	Pg	13 38 34.3	+0.1
	baz=220						
CHN1				*e*S	Sn	13 38 55.9	+2.9
	baz=220						
YOJ	**Yonaguni jima**	**1.41**	**83**	*e*P	Pn	13 38 33.3	-0.6
	baz=71						

YOJ				*e*S	**Sb**	**13 38 51.1**	**-1.5**
	baz=71						
YOJ	**Yonaguni jima**	**1.41**	**83**	P	**Pn**	**13 38 33.5**	**-0.4**
YOJ				*e*S	**Sb**	**13 38 51.6**	**-1.0**
PCYT	**Pengchaiyu**	**1.44**	**22**	P	**Pn**	**13 38 33.5**	**-0.8**
	baz=23						
SGST	**Jiashian**	**1.46 214**		⇑*i*P	**Pg**	**13 38 35.2**	**0.0**
	baz=216						
SGST				*e*S	**Sg**	**13 38 56.2**	**+2.2**
	baz=216						
CHN8	**Yiju**	**1.50 231**		*e*P	**Pg**	**13 38 36.2**	**+0.3**
	baz=233						
CHN8				*e*S	**Sg**	**13 38 57.0**	**+1.7**
	baz=233						
SLGT	**Liugui**	**1.50 211**		*e*P	**Pb**	**13 38 35.5**	**-0.4**
	baz=201						
SLGT				*e*S	**Sg**	**13 38 57.9**	**+2.4**
	baz=201						
TWG	**Pinlang**	**1.51 194**		P	**Pn**	**13 38 34.8**	**-0.5**
	baz=177						
TWGBT	**Beinan**	**1.51 194**		*e*P	**Pn**	**13 38 34.4**	**-1.0**
	baz=177						
CHN3	**Shinhua**	**1.58 220**		*e*P	**Pg**	**13 38 37.7**	**+0.1**
	baz=222						
SCLT	**Jiali**	**1.62 227**		*e*P	**Pg**	**13 38 37.7**	**-0.6**
	baz=229						
SCLT				*e*S	**Sg**	**13 39 01.4**	**+2.1**
	baz=229						
SSD	**Sandimen**	**1.73 207**		*e*P	**Pb**	**13 38 39.6**	**0.0**
	baz=208						
TWM1	**Shoushan**	**1.75 214**		P	**Pg**	**13 38 40.8**	**-0.1**
	baz=215						
ECL	**Taimali**	**1.76 196**		*e*P	**Pn**	**13 38 38.1**	**-0.5**
	baz=179						
MASBT	**Mashibuluo**	**1.84 205**		⇓P	**Pb**	**13 38 41.3**	**-0.4**
	baz=224						
MASBT				S	**Sg**	**13 39 06.9**	**+0.4**
	baz=224						
SNJT	**Kaohsiung City**	**1.86 215**		*e*P	**Pg**	**13 38 42.5**	**-0.3**
	baz=217						
PNG	**Penghu**	**1.90 248**		*e*P	**Pb**	**13 38 41.6**	**-1.0**
	baz=249						
PHUB	**P'eng-hu**	**1.91 246**		*e*P	**Pn**	**13 38 40.9**	**+0.1**
	baz=248						
WDGT	**Dungji**	**1.96 239**		*e*P	**Pn**	**13 38 41.4**	**-0.1**
	baz=240						
PTTC	**Pingtan**	**1.96 308**		*e*P	**Pn**	**13 38 41.3**	**-0.2**
	baz=310						
SSPT	**Xinbi**	**1.99 205**		*e*P	**Pb**	**13 38 43.9**	**-0.1**
	baz=227						
EAST	**Anshuo**	**1.99 197**		*e*P	**Pb**	**13 38 42.8**	**-1.3**
	baz=182						
IRIF	**Iriomote-Funau**	**2.06**	**88**	P	**Pn**	**13 38 42.9**	**+0.1**
IRIF				S	**Sn**	**13 39 09.8**	**+0.8**
SCZT	**Fangliau**	**2.07 203**		*e*P	**Pb**	**13 38 45.0**	**-0.5**
	baz=206						
SCZT				*e*S	**Sb**	**13 39 11.2**	**-0.5**
	baz=206						
HATJ	**Hateruma jima**	**2.14**	**96**	P	**Pn**	**13 38 43.5**	**-0.4**
HATJ				*e*S	**Sn**	**13 39 11.2**	**+0.1**
VCHM	**Qimei**	**2.17 241**		*e*P	**Pb**	**13 38 45.4**	**-1.8**
	baz=242						
VCHM				*e*S	**Sg**	**13 39 14.7**	**-2.1**
	baz=242						
PTMZ	**Houxiangcun**	**2.27 290**		*e*P	**Pn**	**13 38 44.2**	**-1.6**
	baz=292						
JKRS	**Kuro-shima**	**2.31**	**91**	P	**Pn**	**13 38 46.4**	**+0.1**
JKRS				*e*S	**Sn**	**13 39 15.8**	**+0.5**
MATB	**Ma-tsu**	**2.31 323**		*e*P	**Pn**	**13 38 45.1**	**-1.3**
	baz=324						
JIJ	**Ishigaki jima**	**2.43**	**88**	P	**Pn**	**13 38 47.6**	**-0.4**
JIJ				*e*S	**Sn**	**13 39 17.8**	**-0.5**
JISG	**Ishigakijimahi**	**2.60**	**83**	P	**Pn**	**13 38 49.9**	**-0.4**
JISG				*e*S	**Sn**	**13 39 20.6**	**-1.8**
QZH	**Quanzhou**	**2.71 284**		Pn	**Pn**	**13 38 52.0**	**+0.3**
QZH				Sn	**Sn**	**13 39 22.4**	**-2.7**
QZH				smax	smax		
	comp=N,150nm,0.7s						
QZH				smax	smax		
	comp=E,80nm,0.8s						
KNMB	**Chin-men Tao**	**2.82 274**		*e*P	**Pn**	**13 38 52.2**	**-1.2**
	baz=277						
MHZQ	**Yeshan**	**2.86 310**		*e*P	**Pn**	**13 38 55.3**	**+1.5**
	baz=311						
XPSS	**Dashiqiu**	**2.87 336**		*e*P	**Pn**	**13 38 53.3**	**-0.7**
	baz=336						
JTJ	**Tarama**	**2.96**	**83**	P	**Pn**	**13 38 56.4**	**+1.2**
JTJ				*e*S	**Sn**	**13 39 30.7**	**-0.6**
AXDP	**Jialang**	**3.25 281**		*e*P	**Pn**	**13 38 58.4**	**-0.8**
	baz=284						
ZPLA	**Ao Xicun**	**3.43 265**		*e*P	**Pn**	**13 39 00.7**	**-0.9**
	baz=267						
KSRS	**Korea Array**	**14.23**	**21**	Pn	**P**	**13 41 34.4**	**-3.0**
	comp=E,0.1nm,0.3s,baz=227,slow=11,SNR=3.4						
CMAR	**Chiang Mai Arr**	**21.76 259**		P	**P**	**13 43 05.8**	**+5.4**
	comp=E,0.6nm,0.6s,baz=67,slow=8.3,SNR=4.1						
SONM	**Songino Array**	**26.37 337**		P	**P**	**13 43 46.5**	**+1.5**
	comp=E,0.9nm,0.8s,baz=156,slow=10,SNR=4.8						
MKAR	**Makanchi Array**	**38.45 316**		P	**P**	**13 45 31.4**	**+0.9**
	comp=E,2.2nm,0.8s,baz=111,slow=9.5,SNR=10.0						

NNC 21 13:38:33.4±0.3, 50.01N×78.67E, h0km, mb3.5, mpv3.2, 17C-7D, Error ellipse: s-maj=3.6km s-min=1.9km az=72.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.59**	**351**	⇑P	Pg	13 38 44.8	+0.2
KUR07				⇑S	Sg	13 38 53.4	+1.2
KUR06	**Kurchatov Arra**	**0.60**	**351**	⇑P	Pg	13 38 45.2	+0.2
KUR06				⇓S	Sg	13 38 53.9	+1.0
KUR14	**Kurchatov Arra**	**0.61**	**356**	⇑P	Pg	13 38 45.3	+0.1
KUR14				⇑S	Sg	13 38 54.2	+1.1
KUR15	**Kurchatov Arra**	**0.62**	**354**	⇑P	Pg	13 38 45.3	+0.1
KUR15				⇓S	Sg	13 38 54.3	+1.0
KURBB	**Kurchatov Arra**	**0.62**	**352**	⇑P	Pg	13 38 45.4	0.0
	16nm,0.4s						
KURBB				⇑S	Sg	13 38 54.9	+1.4
	91nm,0.8s						
KUR16	**Kurchatov Arra**	**0.63**	**350**	⇑P	Pg	13 38 45.6	0.0
KUR16				⇓S	Sg	13 38 54.5	+0.8
KUR17	**Kurchatov Arra**	**0.64**	**349**	⇑P	Pg	13 38 45.7	0.0
KUR17				⇑S	Sg	13 38 55.1	+1.1
KUR05	**Kurchatov Arra**	**0.64**	**353**	⇑P	Pg	13 38 45.8	0.0
KUR05				⇑S	Sg	13 38 54.9	+0.7
KUR04	**Kurchatov Arra**	**0.66**	**353**	⇑P	Pg	13 38 46.2	+0.1
KUR04				⇑S	Sg	13 38 55.2	+0.4
SEM	**Semipalatinsk**	**1.09**	**68**	P	Pg	13 38 54.4	-0.1
	3.1nm,0.1s						
SEM				S	Sb	13 39 10.2	-0.1
	75nm,0.4s						
MAKZ	**Makanchi**	**3.88**	**144**	⇓Pg	Pb	13 39 43.4	+0.6
	1.8nm,0.7s						
MAKZ				⇓Lg	Lg	13 40 38.5	
	6.7nm,0.6s						
MK31	**Makanchi Array**	**4.02**	**142**	⇑Pn	Pn	13 39 37.8	+1.6
	0.1nm,0.1s,baz=324,slow=10,SNR=17						
MK31				Pg	Pb	13 39 45.4	+0.3
	1.1nm,0.6s,baz=322,slow=12,SNR=13						
MK31				⇑Lg	Lg	13 40 39.4	
	4.9nm,0.6s,baz=331,slow=26,SNR=12						
OTUK	**Ortayu**	**4.51**	**249**	Pg	Pb	13 39 55.7	+2.2
	0.2nm,0.2s						
OTUK				Lg	Lg	13 40 55.8	
	1.9nm,0.5s						
OTUK	**Ortayu**	**4.51**	**249**	⇓Pn	Pn	13 39 45.1	+2.0
	0.7nm,0.3s						
OTUK				⇓Lg	Lg	13 40 54.4	
	3.5nm,0.7s						
KAPS	**Kapalarasan**	**4.75**	**174**	Pg	Pb	13 40 00.0	+2.5
	1.2nm,0.2s						
KAPS				Lg	Lg	13 41 03.6	
	4.4nm,0.4s						
ZSN	**Zaisan**	**4.83**	**120**	Pg	Pb	13 39 56.5	-2.4
	1.4nm,0.2s						
ZSN				Lg	Lg	13 40 57.3	
	1.8nm,0.7s						
DJR	**Jarkent**	**5.73**	**172**	Pg	Pb	13 40 18.0	+3.8
	1.0nm,0.1s						
DJR				Lg	Lg	13 41 33.9	
	2.1nm,0.4s						
ARXS	**Arharly**	**5.82**	**186**	Pg	Pb	13 40 19.7	+3.8
	8.2nm,0.5s						
ARXS				Lg	Lg	13 41 36.9	
	5.3nm,0.6s						

*ISCJB **21** 13:40:34.9±0.3, 44.17N±0.03×10.13E±0.04, h12km±4km, Error ellipse: s-maj=5.4km s-min=3.4km az=38.6*
*ROM **21** 13:40:34.9±0.2, 44.192N±0.009×10.18E±0.01, h10km, ML2.3/10, Error ellipse: s-maj=1.2km s-min=0.5km az=49.0*
*GEN **21** 13:40:35.2, 44.19N×10.17E, h6km±3km, Ml2.0*
*LDG **21** 13:40:35.9±0.1, 44.19N×10.20E, h2km, Md2.5/2, Ml2.7/14, Error ellipse: s-maj=2.7km s-min=1.5km az=22.0*

ISC 21 13:40:34.7±0.9, 44.14N±0.03×10.16E±0.03, h12km±7km, n34, σ1§28/59, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.17**	**84**	P	**Pg**	**13 40 39.0**	**+0.4**
VLC				S	**Sg**	**13 40 41.4**	**+0.1**
VLC				AML	AML		
	comp=E,811μm,0.7s						
VLC				AML	AML		
	comp=N,777μm,1.1s						
VLC				AML	AML		
	comp=E,802μm,0.7s						
VLC				AML	AML		
	comp=N,765μm,1.1s						
VLC				AML	AML		
	comp=N,777μm,1.1s						
VLC				AML	AML		
	comp=E,811μm,0.7s						
VLC				AML	AML		
	comp=E,802μm,0.7s						
VLC				AML	AML		
	comp=N,765μm,1.1s						
SARO	**Sassorosso**	**0.18**	**77**	P	**Pg**	**13 40 38.9**	**0.0**
SARO				S	**Sg**	**13 40 41.6**	**-0.2**
SARO	**Sassorosso**	**0.18**	**77**	P	**Pg**	**13 40 38.9**	**0.0**
SARO				S	**Sg**	**13 40 41.6**	**-0.2**
SARO				AML	AML		
	comp=E,1163μm,0.2s						
SARO				AML	AML		
	comp=N,1490μm,0.5s						
SARO				AML	AML		
	comp=E,1163μm,0.2s						
SARO				AML	AML		
	comp=N,1490μm,0.5s						
SARO				AML	AML		
	comp=E,1163μm,0.2s						
SARO				AML	AML		
	comp=N,1490μm,0.5s						
CARD	**Cardoso**	**0.26**	**116**	P	**Pb**	**13 40 40.9**	**-0.5**
CARD				S	**Sb**	**13 40 45.0**	**-0.9**
CARD	**Cardoso**	**0.26**	**116**	P	**Pb**	**13 40 41.1**	**-0.3**
CARD				S	**Sb**	**13 40 45.0**	**-0.9**
CARD				AML	AML		
	comp=E,1200μm,0.9s						
CARD				AML	AML		
	comp=N,1555μm,0.1s						
CARD				AML	AML		
	comp=E,1205μm,0.9s						
CARD				AML	AML		
	comp=N,1555μm,0.1s						
CARD				AML	AML		
	comp=N,1555μm,0.1s						
CARD				AML	AML		
	comp=E,1205μm,0.9s						
BDI	**Bagni Di Lucca**	**0.33**	**104**	P	**Pg**	**13 40 41.5**	**+0.1**
BDI				S	**Sb**	**13 40 46.8**	**-1.0**
ERBM	**Eremo**	**0.33**	**34**	P	**Pg**	**13 40 41.2**	**-0.3**
ERBM				S	**Sg**	**13 40 46.1**	**+0.1**
ERBM				AML	AML		
	comp=E,1235μm,1.6s						
ERBM				AML	AML		
	comp=N,1082μm,0.3s						
ERBM				AML	AML		
	comp=N,1082μm,0.3s						
ERBM				AML	AML		
	comp=E,1235μm,1.6s						
MAIM	**Mastiano**	**0.33**	**133**	P	**Pb**	**13 40 42.7**	**+0.1**
MAIM				S	**Sb**	**13 40 47.7**	**-0.3**
MAIM	**Mastiano**	**0.33**	**133**	P	**Pb**	**13 40 42.7**	**+0.1**
MAIM				S	**Sb**	**13 40 47.6**	**-0.3**
MAIM				AML	AML		
	comp=E,858μm,0.4s						
MAIM				AML	AML		
	comp=N,790μm,0.6s						
MAIM				AML	AML		
	comp=E,858μm,0.4s						
MAIM				AML	AML		
	comp=N,790μm,0.6s						
MAIM				AML	AML		
	comp=E,858μm,0.4s						
MAIM				AML	AML		
	comp=N,790μm,0.6s						
GRAM	**Graiana**	**0.35**	**350**	P	**Pg**	**13 40 41.5**	**-0.4**
GRAM				S	**Sg**	**13 40 45.9**	**-0.8**
GRAM	**Graiana**	**0.35**	**350**	P	**Pg**	**13 40 41.5**	**-0.4**
GRAM				S	**Sg**	**13 40 46.2**	**-0.5**
GRAM				AML	AML		
	comp=E,3790μm,0.2s						
GRAM				AML	AML		
	comp=N,3335μm,0.2s						
GRAM				AML	AML		
	comp=E,3790μm,0.2s						
GRAM				AML	AML		
	comp=N,3335μm,0.2s						
GRAM				AML	AML		
	comp=E,3790μm,0.2s						
GRAM				AML	AML		
	comp=N,3335μm,0.2s						
POPM	**Popiglio**	**0.44**	**103**	P	**Pb**	**13 40 44.2**	**-0.3**
POPM				S	**Sb**	**13 40 50.5**	**-0.6**
POPM	**Popiglio**	**0.44**	**103**	P	**Pb**	**13 40 44.3**	**-0.3**
POPM				S	**Sb**	**13 40 50.6**	**-0.6**
POPM				AML	AML		
	comp=E,724μm,0.3s						
POPM				AML	AML		
	comp=N,766μm,0.2s						
POPM				AML	AML		
	comp=E,724μm,0.3s						
POPM				AML	AML		
	comp=N,766μm,0.2s						
POPM				AML	AML		
	comp=N,766μm,0.2s						
POPM				AML	AML		
	comp=E,724μm,0.3s						
MSSA	**Maissana**	**0.49**	**291**	P	**Pb**	**13 40 45.1**	**-0.3**
MSSA				S	**Sg**	**13 40 51.4**	**+0.5**
MSSA				AML	AML		
	comp=E,272μm,0.3s						
MSSA				AML	AML		
	comp=N,247μm,1.5s						
MSSA				AML	AML		
	comp=E,272μm,0.3s						
MSSA				AML	AML		
	comp=N,246μm,1.5s						
MSSA				AML	AML		
	comp=E,272μm,0.3s						
MSSA				AML	AML		
	comp=N,246μm,1.5s						
MTCR	**Monte La Croce**	**0.62**	**101**	P	**Pb**	**13 40 48.2**	**+0.6**
ZCCA	**Zocca**	**0.62**	**70**	P	**Pb**	**13 40 47.5**	**-0.2**
CRMI	**Carmignano**	**0.69**	**121**	P	**Pn**	**13 40 49.5**	**-0.7**
CRMI				AML	AML		
	comp=E,112μm,0.3s						
CRMI				AML	AML		
	comp=N,77μm,0.9s						
CRMI				AML	AML		
	comp=E,112μm,0.3s						
CRMI				AML	AML		
	comp=N,77μm,0.9s						
CRMI				AML	AML		
	comp=E,112μm,0.3s						
CRMI				AML	AML		
	comp=N,77μm,0.9s						
BOB	**Bobbio (Coli)**	**0.80**	**321**	P	**Pg**	**13 40 50.1**	**-0.2**
SEI	**Scarperia**	**0.87**	**95**	AML	AML		
	comp=N,394μm,1.4s						
SEI				AML	AML		
	comp=E,232μm,0.5s						
SEI				AML	AML		
	comp=E,232μm,0.5s						
SEI				AML	AML		
	comp=N,394μm,1.4s						
CASP	**Castiglione de**	**1.45**	**159**	P	**Pb**	**13 41 01.4**	**-0.2**
PGF	**Pioggiola**	**1.80**	**208**	*e*Pn	**Pn**	**13 41 06.9**	**+1.2**
PGF				*e*Sn	**Sn**	**13 41 28.8**	**+0.2**
	comp=N,15nm,0.3s						
SBF	**Sospel**	**1.98**	**263**	*e*Pn	**Pn**	**13 41 09.4**	**+1.2**
SBF				*e*Sn	**Sn**	**13 41 33.6**	**+0.6**
	comp=N,15nm,0.3s						
MBDF	**Montbardon**	**2.49**	**285**	*e*Pn	**Pn**	**13 41 16.4**	**+1.1**
MBDF	**Montbardon**	**2.49**	**285**	*e*Pg	**Pg**	**13 41 23.1**	**+0.6**
MBDF				*e*Sn	**Sn**	**13 41 46.0**	**+0.3**
	comp=N,5.6nm,0.4s						
FRF	**La Foret Royal**	**2.60**	**258**	*e*Pn	**Pn**	**13 41 17.8**	**+1.2**
FRF				*e*Sn	**Sn**	**13 41 47.0**	**-1.2**
	comp=N,8.2nm,0.2s						
LMR	**La Mourre**	**2.76**	**254**	*e*Pn	**Pn**	**13 41 19.2**	**+0.4**
LMR				*e*Sn	**Sn**	**13 41 50.4**	**-1.7**
	comp=N,4.3nm,0.2s						
LPL	**La Plagne**	**2.80**	**301**	*e*P	**Pb**	**13 41 23.4**	**-1.3**
LPL				*e*Sn	**Sn**	**13 41 53.2**	**0.0**
	comp=N,4.2nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.15**	**286**	*e*P	**Pb**	**13 41 28.1**	**-2.7**
ORIF				*e*Sn	**Sn**	**13 42 01.7**	**-0.2**
	comp=N,2.5nm,0.3s						
SMRF	**Simiane la Rot**	**3.31**	**269**	*e*Pn	**Pn**	**13 41 27.5**	**+1.2**
SMRF				*e*Sn	**Sn**	**13 42 07.0**	**+1.4**
	comp=N,3.8nm,0.3s						
CABF	**La Chapelle**	**3.78**	**312**	*e*P	**Pn**	**13 41 36.5**	**+3.6**
HINF	**Hinteralfeld**	**4.33**	**329**	*e*P	**Pn**	**13 41 43.4**	**+2.9**
HINF				*e*Sn	**Sn**	**13 42 29.3**	**-1.6**
	comp=N,1.5nm,0.2s						
LASF	**Ste Croix**	**4.54**	**271**	*e*Pn	**Pn**	**13 41 44.3**	**+1.1**
LASF				*e*Sn	**Sn**	**13 42 34.3**	**-1.6**
	comp=N,0.3nm,0.2s						
CDF	**Champ du Feu**	**4.71**	**336**	*e*P	**Pn**	**13 41 48.0**	**+2.3**
CDF				*e*Sn	**Sn**	**13 42 39.0**	**-1.3**
	comp=N,3.1nm,0.3s						
BGF	**Bois d'Agland**	**5.69**	**298**	*e*P	**Pn**	**13 42 03.6**	**+4.6**
BGF				*e*Sn	**Sn**	**13 43 02.1**	**-2.1**
	comp=N,6.7nm,0.4s						

*IDC **21** 13:47:21.4±2.8, 30.40S×177.74W, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/32, mbtmp4.0/5, ML3.1/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/23, Error ellipse: s-maj=64.2km s-min=43.1km az=127.0*

ISC 21 13:47:21.3±2.8, 30.6S±0.2×177.0W±0.4, h33km, n13, σ0§46/7, mb4.2/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.03**	**211**	Pn	**Pn**	**13 49 29.7**	**+0.4**
	0.2nm,0.3s,baz=177,slow=17,SNR=1.5						
URZ				Sn	**Sn**	**13 51 09.5**	**-0.4**
	0.8nm,0.3s,baz=219,slow=22,SNR=9.4						
CTA	**Charters Tower**	**34.66**	**279**	P	**P**	**13 54 08.2**	**+0.3**
	2.6nm,0.6s,baz=103,slow=4.1,SNR=6.4						
STKA	**Stephens Creek**	**35.25**	**257**	P	**P**	**13 54 13.1**	**+0.2**
	1.7nm,0.6s,baz=117,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**43.94**	**267**	P	**P**	**13 55 24.9**	**-0.5**
	0.5nm,0.5s,baz=106,slow=7.4,SNR=13						
WRA	**Warramunga Arr**	**44.95**	**272**	P	**P**	**13 55 33.2**	**-0.3**
	1.2nm,0.4s,baz=99,slow=8.0,SNR=2.6						
RPN	**Rapa Nui**	**58.57**	**105**	LR	LR	14 19 29.2	
	comp=Z,52nm,18.9s,baz=36,slow=33						
H10S2	**ASCENSION HYDR**	**37.17**	**154**	T	T	16 41 12.2	
	baz=208						
H10S3	**ASCENSION HYDR**	**37.17**	**154**	T	T	16 41 14.3	
	baz=208,slow=74						
H10S1	**ASCENSION HYDR**	**37.19**	**154**	T	T	16 41 09.5	
	baz=208,slow=74						
H10N3	**ASCENSION HYDR**	**38.25**	**153**	T	T	16 42 41.1	
	baz=203,slow=75,SNR=5.0						
H10N1	**ASCENSION HYDR**	**38.25**	**153**	T	T	16 42 38.2	
	baz=203,slow=75,SNR=7.6						
H10N2	**ASCENSION HYDR**	**38.27**	**153**	T	T	16 42 40.5	
	baz=203,slow=75,SNR=4.9						
FINES	**FINESS Array B**	**145.63**	**340**	PKPbc	**PKiKP**	**14 06 59.2**	**-0.3**
	1.2nm,0.4s,baz=60,slow=3.9,SNR=15						

*STR **21** 13:47:27.1±0.9, 44.5N±5.1×1.1E±., h12km±10km, MLv3.5/6*
*ROM **21** 13:47:29.4±0.2, 44.189N±0.009×10.21E±0.01, h10km, ML3.2/53, Error ellipse: s-maj=1.2km s-min=0.5km az=43.0*
*ISCJB **21** 13:47:29.5±0.3, 44.16N±0.02×10.18E±0.02, h12km±2km, Error ellipse: s-maj=2.7km s-min=2.3km az=178.3*
*LDG **21** 13:47:29.5±0.1, 44.21N×10.22E, h2km, Md3.3/2, Ml3.3/25, Error ellipse: s-maj=2.8km s-min=1.6km az=24.0*
*GEN **21** 13:47:29.6, 44.21N×10.22E, h9km±1km, Ml3.0*
*PRU **21** 13:47:31.7±0.0, 44.28N×10.28E, h3km*

ISC 21 13:47:29.6±0.9, 44.16N±0.02×10.17E±0.02, h10km±6km, n124, σ1§69/164, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.15**	**91**	P	**Pg**	**13 47 32.9**	**-0.2**
VLC				S	**Sg**	**13 47 35.3**	**-0.2**
VLC				AML	AML		
	comp=E,14800μm,0.5s						
VLC				AML	AML		
	comp=N,15450μm,0.7s						
VLC				AML	AML		
	comp=E,14400μm,0.5s						
VLC				AML	AML		
	comp=N,16050μm,0.7s						
VLC				AML	AML		
	comp=E,14800μm,0.5s						
VLC				AML	AML		
	comp=N,15500μm,0.7s						
VLC				AML	AML		
	comp=E,14400μm,0.5s						
VLC				AML	AML		
	comp=N,16050μm,0.7s						
VLC				AML	AML		
	comp=N,16050μm,0.7s						
VLC				AML	AML		
	comp=N,15500μm,0.7s						
VLC				AML	AML		
	comp=E,14800μm,0.5s						
VLC				AML	AML		
	comp=E,14400μm,0.5s						
VLC				AML	AML		
	comp=N,15500μm,0.7s						
VLC				AML	AML		
	comp=N,16050μm,0.7s						
VLC				AML	AML		
	comp=E,14800μm,0.5s						
VLC				AML	AML		
	comp=E,14400μm,0.5s						
SARO	**Sassorosso**	**0.17**	**82**	P	**Pg**	**13 47 33.0**	**-0.4**
SARO				S	**Sg**	**13 47 35.3**	**-0.7**
SARO	**Sassorosso**	**0.17**	**82**	P	**Pg**	**13 47 33.0**	**-0.4**
SARO				S	**Sg**	**13 47 35.2**	**-0.7**
SARO				AML	AML		
	comp=E,25650μm,0.2s						
SARO				AML	AML		
	comp=N,54850μm,0.2s						
SARO				AML	AML		
	comp=E,25650μm,0.2s						
SARO				AML	AML		
	comp=N,54850μm,0.2s						
SARO				AML	AML		
	comp=E,25650μm,0.2s						
SARO				AML	AML		
	comp=N,54850μm,0.2s						
SARO				AML	AML		
	comp=E,25650μm,0.2s						
SARO				AML	AML		
	comp=N,54850μm,0.2s						
CARD	**Cardoso**	**0.26**	**121**	P	**Pg**	**13 47 35.1**	**+0.1**
CARD				S	**Sg**	**13 47 39.2**	**+0.7**
CARD	**Cardoso**	**0.26**	**121**	P	**Pg**	**13 47 35.1**	**+0.1**
CARD				S	**Sg**	**13 47 39.2**	**+0.7**
CARD				AML	AML		

	comp=E,13200µm,0.9s						
CARD				AML	AML		
	comp=N,15800µm,0.2s						
CARD				AML	AML		
	comp=E,13200µm,0.9s						
CARD				AML	AML		
	comp=N,15800µm,0.2s						
ERBM	**Eremo**	**0.31**	**34**	P	**Pg**	**13 47 35.0**	**-0.9**
ERBM				S	**Sg**	**13 47 39.1**	**-1.0**
ERBM				AML	AML		
	comp=E,13900µm,0.9s						
ERBM				AML	AML		
	comp=N,15700µm,1.1s						
ERBM				AML	AML		
	comp=E,13850µm,0.9s						
ERBM				AML	AML		
	comp=N,15750µm,1.1s						
ERBM				AML	AML		
	comp=E,13850µm,0.9s						
ERBM				AML	AML		
	comp=N,15750µm,1.1s						
ERBM				AML	AML		
	comp=E,13850µm,0.9s						
ERBM				AML	AML		
	comp=N,15750µm,1.1s						
BDI	**Bagni Di Lucca**	**0.32**	**108**	P	**Pg**	**13 47 36.0**	**-0.1**
BDI				S	**Sg**	**13 47 40.8**	**+0.4**
BDI				AML	AML		
	comp=E,7540µm,0.3s						
BDI				AML	AML		
	comp=N,5570µm,0.2s						
BDI				AML	AML		
	comp=E,7350µm,0.5s						
BDI				AML	AML		
	comp=N,6650µm,0.6s						
BDI				AML	AML		
	comp=E,7540µm,0.3s						
BDI				AML	AML		
	comp=N,5570µm,0.2s						
BDI				AML	AML		
	comp=E,7345µm,0.5s						
BDI				AML	AML		
	comp=N,6650µm,0.6s						
BDI				AML	AML		
	comp=N,5570µm,0.2s						
BDI				AML	AML		
	comp=E,7540µm,0.3s						
BDI				AML	AML		
	comp=E,7345µm,0.5s						
BDI				AML	AML		
	comp=N,6650µm,0.6s						
BDI				AML	AML		
	comp=N,5570µm,0.2s						
BDI				AML	AML		
	comp=E,7540µm,0.3s						
BDI				AML	AML		
	comp=E,7345µm,0.5s						
BDI				AML	AML		
	comp=N,6650µm,0.6s						
GRAM	**Graiana**	**0.34**	**347**	P	**Pg**	**13 47 35.8**	**-0.6**
GRAM				S	**Sg**	**13 47 40.2**	**-0.7**
GRAM	**Graiana**	**0.34**	**347**	P	**Pg**	**13 47 35.8**	**-0.6**
GRAM				S	**Sg**	**13 47 40.2**	**-0.7**
GRAM				AML	AML		
	comp=E,33050µm,0.3s						
GRAM				AML	AML		
	comp=N,37600µm,1.1s						
GRAM				AML	AML		
	comp=E,33050µm,0.3s						
GRAM				AML	AML		
	comp=N,37600µm,1.1s						
MAIM	**Mastiano**	**0.34**	**137**	P	**Pg**	**13 47 36.7**	**+0.3**
MAIM				S	**Sg**	**13 47 42.1**	**+1.3**
MAIM	**Mastiano**	**0.34**	**137**	P	**Pg**	**13 47 36.7**	**+0.3**
MAIM				S	**Sg**	**13 47 42.0**	**+1.1**
MAIM				AML	AML		
	comp=E,4760µm,0.3s						
MAIM				AML	AML		
	comp=N,4580µm,0.4s						
MAIM				AML	AML		
	comp=E,4760µm,0.3s						
MAIM				AML	AML		
	comp=N,4580µm,0.4s						
MAIM				AML	AML		
	comp=E,4760µm,0.3s						
MAIM				AML	AML		
	comp=N,4580µm,0.4s						
MAIM				AML	AML		
	comp=N,4580µm,0.4s						
MAIM				AML	AML		
	comp=E,4760µm,0.3

comp=N,258µm,0.8s
QLNO AML AML
comp=E,254µm,1.0s
QLNO AML AML
comp=N,258µm,0.8s
QLNO AML AML
comp=E,254µm,1.0s
QLNO AML AML
comp=N,258µm,0.8s
FINB Finale Ligure 1.33 271 P Pn 13 47 53.8 -0.4
FINB AML AML
comp=E,262µm,0.4s
FINB AML AML
comp=N,314µm,0.4s
FINB AML AML
comp=E,262µm,0.4s
FINB AML AML
comp=N,314µm,0.4s
FINB AML AML
comp=N,314µm,0.4s
FINB AML AML
comp=E,262µm,0.4s
FINB AML AML
comp=N,314µm,0.4s
FINB AML AML
comp=E,262µm,0.4s
CELB S.Piero in Cam 1.42 179 P Pn 13 47 55.2 -0.3
CELB AML AML
comp=E,284µm,1.2s
CELB AML AML
comp=N,232µm,1.1s
CELB AML AML
comp=E,284µm,1.2s
CELB AML AML
comp=N,232µm,1.1s
CELB AML AML
comp=E,284µm,1.2s
CELB AML AML
comp=N,232µm,1.1s
CASP Castiglione de 1.46 160 P Pn 13 47 55.9 -0.2
CASP AML AML
comp=E,274µm,0.6s
CASP AML AML
comp=N,292µm,0.7s
CASP AML AML
comp=N,292µm,0.7s
CASP AML AML
comp=E,274µm,0.6s
CASP AML AML
comp=N,292µm,0.7s
CASP AML AML
comp=E,274µm,0.6s
CAFI Castiglion Fio 1.54 122 P Pn 13 47 57.0 -0.2
CAFI AML AML
comp=E,172µm,0.5s
CAFI AML AML
comp=N,189µm,0.5s
CAFI AML AML
comp=N,189µm,0.5s
CAFI AML AML
comp=E,172µm,0.5s
CAFI AML AML
comp=N,189µm,0.5s
CAFI AML AML
comp=E,172µm,0.5s
MAGA Magasa 1.65 11 P Pn 13 47 59.0 +0.3
MAGA AML AML
comp=E,2350µm,0.6s
MAGA AML AML
comp=N,1375µm,0.5s
MAGA AML AML
comp=N,1375µm,0.5s
MAGA AML AML
comp=E,2350µm,0.6s
MAGA AML AML
comp=N,1375µm,0.5s
MAGA AML AML
comp=E,2350µm,0.6s
IMI Imperia 1.66 262 P Pn 13 47 58.5 -0.4
GBOS Grotte di Boss 1.68 274 AML AML
comp=N,110µm,0.5s
GBOS AML AML
comp=E,155µm,0.5s
GBOS AML AML
comp=N,110µm,0.5s
GBOS AML AML
comp=E,155µm,0.5s
GBOS AML AML
comp=N,110µm,0.5s
GBOS AML AML
comp=E,155µm,0.5s
MGRO Montegrosso 1.71 267 P Pn 13 47 59.1 -0.5
MGRO AML AML
comp=E,226µm,0.8s
MGRO AML AML
comp=N,192µm,0.5s
MGRO AML AML
comp=E,226µm,0.8s
MGRO AML AML
comp=N,192µm,0.5s
MGRO AML AML
comp=E,226µm,0.8s
MGRO AML AML
comp=N,192µm,0.5s
ATVO AVT- Monte Val 1.80 115 AML AML
comp=E,222µm,0.5s
ATVO AML AML
comp=E,222µm,0.5s
ATVO AML AML
comp=N,198µm,0.5s
ATVO AML AML
comp=N,198µm,0.5s
ATVO AML AML
comp=N,198µm,0.5s
ATVO AML AML
comp=E,222µm,0.5s
NEGI Seborga 1.81 261 AML AML
comp=E,154µm,1.0s
NEGI AML AML
comp=E,154µm,1.0s
NEGI AML AML
comp=N,200µm,0.6s
NEGI AML AML
comp=N,200µm,0.6s
NEGI AML AML
comp=E,154µm,1.0s
NEGI AML AML
comp=N,200µm,0.6s
PGF Pioggiola 1.83 208 *e*Pn **Pn 13 48 01.3 +0.2**
PGF *e*Sn **Sn 13 48 23.8 -0.6**
comp=N,74nm,0.4s
ATTE AVT- Monte Tez 1.85 121 AML AML
comp=N,164µm,0.6s
ATTE AML AML
comp=E,232µm,1.0s
ATTE AML AML
comp=N,164µm,0.6s
ATTE AML AML
comp=N,164µm,0.6s
ATTE AML AML
comp=E,232µm,1.0s
ATTE AML AML
comp=E,232µm,1.0s
SAOF Saorge 1.89 266 P Pn 13 48 01.9 -0.1
SAOF AML AML
comp=E,390µm,0.8s
SAOF AML AML
comp=N,468µm,0.9s
SAOF AML AML
comp=N,468µm,0.9s
SAOF AML AML
comp=E,390µm,0.8s
SAOF AML AML
comp=N,468µm,0.9s
SAOF AML AML
comp=E,390µm,0.8s
SBF Sospel 2.00 262 *e*Pn **Pn 13 48 03.5 0.0**
SBF *e*Sn **Sn 13 48 28.0 -0.5**
comp=E,70nm,0.3s
DOI San Damiano 2.13 280 AML AML
comp=E,210µm,0.4s
DOI AML AML
comp=E,210µm,0.4s
DOI AML AML
comp=N,167µm,0.4s
DOI AML AML
comp=N,167µm,0.4s
DOI AML AML
comp=E,210µm,0.4s
DOI AML AML
comp=N,167µm,0.4s
CTI Castel Tesino 2.16 29 P Pn 13 48 05.6 -0.1
CTI AML AML
comp=E,522µm,0.4s
CTI AML AML
comp=N,540µm,0.2s
CTI AML AML
comp=N,540µm,0.2s
CTI AML AML
comp=E,522µm,0.4s
CTI AML AML
comp=N,540µm,0.2s
CTI AML AML
comp=E,522µm,0.4s
SMPL Sampolo 2.17 198 Pn **Pn 13 48 07.0 +1.3**
BHB Bricherasio 2.19 289 AML AML
comp=N,127µm,1.1s
BHB AML AML
comp=E,96µm,1.4s
BHB AML AML
comp=E,96µm,1.4s
BHB AML AML
comp=N,127µm,1.1s
BHB AML AML
comp=E,96µm,1.4s
BHB AML AML
comp=N,127µm,1.1s
TRAV Traversella 2.19 309 AML AML
comp=E,170µm,1.0s
TRAV AML AML
comp=E,170µm,1.0s
TRAV AML AML
comp=N,204µm,1.3s
TRAV AML AML
comp=N,204µm,1.3s
TRAV AML AML
comp=E,170µm,1.0s
TRAV AML AML
comp=N,204µm,1.3s
SNTG Esanatoglia 2.20 113 AML AML
comp=E,83µm,0.4s
SNTG AML AML
comp=E,83µm,0.4s
SNTG AML AML
comp=N,100µm,0.4s
SNTG AML AML
comp=N,100µm,0.4s
SNTG AML AML
comp=N,100µm,0.4s
SNTG AML AML
comp=E,83µm,0.4s
TUE Stuetta 2.38 346 AML AML
comp=E,202µm,0.3s
TUE AML AML
comp=E,202µm,0.3s
TUE AML AML
comp=N,147µm,0.3s
TUE AML AML
comp=E,255µm,0.3s
TUE AML AML
comp=N,192µm,0.3s
TUE AML AML
comp=E,255µm,0.3s
TUE AML AML
comp=E,202µm,0.3s
TUE AML AML
comp=N,192µm,0.3s
TUE AML AML
comp=N,147µm,0.3s
TUE AML AML
comp=E,255µm,0.3s
TUE AML AML
comp=N,192µm,0.3s
TUE AML AML
comp=N,147µm,0.3s
KOSI Kohlern 2.45 20 AML AML
comp=E,323µm,1.0s
KOSI AML AML
comp=N,351µm,0.6s
KOSI AML AML
comp=E,323µm,1.0s
KOSI AML AML
comp=N,351µm,0.6s
KOSI AML AML
comp=E,323µm,1.0s
KOSI AML AML
comp=N,351µm,0.6s
MBDF Montbardon 2.50 284 *e*Pn **Pn 13 48 13.0 +2.5**
MBDF *e*Sn **Sn 13 48 40.3 -0.8**
comp=N,32nm,0.4s
FUSIO Fusio 2.53 336 AML AML
comp=N,89µm,0.8s
FUSIO AML AML
comp=E,155µm,1.5s
FUSIO AML AML
comp=N,89µm,0.8s
FUSIO AML AML
comp=E,155µm,1.5s
FUSIO AML AML
comp=N,89µm,0.8s
FUSIO AML AML
comp=E,155µm,1.5s
FRF La Foret Royal 2.62 258 *e*Pn **Pn 13 48 12.0 +0.1**
FRF *e*Sn **Sn 13 48 42.8 -1.0**
comp=E,40nm,0.4s
ABSI Aberstueckl 2.69 17 AML AML
comp=N,702µm,0.6s
ABSI AML AML
comp=E,639µm,0.6s
ABSI AML AML
comp=N,702µm,0.6s
ABSI AML AML
comp=E,639µm,0.6s
ABSI AML AML
comp=N,702µm,0.6s
ABSI AML AML
comp=E,639µm,0.6s
LPG La Plagne 2.77 300 *e*P **Pn 13 48 16.8 +2.4**
LPG *e*Sn **Sn 13 48 46.4 -1.7**
comp=E,18nm,0.4s
LMR La Mourre 2.78 254 *e*Pn **Pn 13 48 14.1 0.0**
LMR *e*Sn **Sn 13 48 46.2 -1.5**
comp=E,23nm,0.4s
OGDI Digne 2.79 270 Pn **Pb 13 48 20.8 +1.3**
LPL La Plagne 2.80 300 *e*P **Pn 13 48 17.3 +2.7**
LPL *e*Sn **Sn 13 48 47.0 -1.5**
comp=E,30nm,0.4s
FETA Feichten 2.89 8 Pn **Pn 13 48 17.6 +1.8**
comp=E,2.0nm,0.3s
FETA Sn **Sn 13 48 51.9 +1.3**
comp=E,16nm,0.6s
ROSI Rosskopf 2.90 17 AML AML
comp=N,440µm,0.9s
ROSI AML AML
comp=E,332µm,0.7s
ROSI AML AML
comp=N,440µm,0.9s
ROSI AML AML
comp=N,440µm,0.9s
ROSI AML AML
comp=E,332µm,0.7s
ROSI AML AML
comp=E,332µm,0.7s
RSL Roselend 2.94 302 Pn **Pn 13 48 20.2 +3.6**
RSL Sn **Sb 13 48 58.9 +0.5**
SABO M.te Sabotino 3.03 52 AML AML
comp=E,264µm,0.5s
SABO AML AML
comp=N,406µm,0.6s
SABO AML AML
comp=N,406µm,0.6s
SABO AML AML
comp=E,264µm,0.5s
SABO AML AML
comp=N,406µm,0.6s
SABO AML AML
comp=E,264µm,0.5s
ABTA Abfaltersbach 3.07 32 *i* Pn **Pn 13 48 19.5 +1.3**
comp=E,1.9nm,0.2s
ABTA *e*Sn **Sn 13 48 55.3 +0.3**
comp=E,52nm,0.6s
GDM Grand'Maison 3.07 291 Pn **Pb 13 48 23.8 -0.7**
RISI Rein 3.09 25 AML AML
comp=E,422µm,0.5s
RISI AML AML
comp=E,422µm,0.5s
RISI AML AML
comp=N,440µm,0.5s
RISI AML AML
comp=N,440µm,0.5s
RISI AML AML
comp=N,440µm,0.5s
RISI AML AML
comp=E,422µm,0.5s
DAVA Damuels 3.13 356 *i* Pn **Pn 13 48 21.4 +2.2**
comp=E,18nm,0.3s
DAVA *e*Pg **Pb 13 48 26.9 +1.4**
comp=E,21nm,0.3s,SNR=9.4
DAVA *e*Sn **Sn 13 48 57.5 +0.9**
comp=E,17nm,0.3s
SQTA Sankt Quirin 3.14 13 *i* Pn **Pn 13 48 21.8 +2.5**
comp=E,26nm,0.3s,SNR=9.6
SQTA *i* Sn **Sn 13 48 59.0 +2.1**
comp=E,32nm,0.4s
ORIF Oris-en-Rattie 3.16 285 *e*P **Pn 13 48 22.0 +2.5**
ORIF *e*Sn **Sn 13 48 55.7 -1.6**
comp=E,40nm,0.6s
MOTA Moosalm 3.25 11 *e*Pn **Pn 13 48 22.8 +2.0**
comp=E,12nm,0.3s,SNR=11
MOTA *e*Sn **Sn 13 49 02.0 +2.4**
comp=E,14nm,0.4s
WTTA Wattenberg 3.27 18 *i* Pn **Pn 13 48 23.2 +2.2**
comp=E,6.4nm,0.2s
WTTA *e*Pg **Pg 13 48 31.0 -1.2**
comp=E,8.1nm,0.3s,SNR=14
WTTA *e*Sn **Sn 13 49 02.6 +2.5**
comp=E,42nm,0.5s
WTTA Wattenberg 3.27 18 AML AML
comp=N,125µm,0.8s
WTTA AML AML
comp=E,176µm,0.8s
WTTA AML AML
comp=E,176µm,0.8s
WTTA AML AML
comp=N,125µm,0.8s
WTTA AML AML
comp=E,176µm,0.8s
WTTA AML AML
comp=N,125µm,0.8s
SMRF Simiane la Rot 3.32 268 *e*Pn **Pn 13 48 21.6 0.0**
SMRF *e*Sn **Sn 13 48 59.7 -1.4**
comp=N,21nm,0.5s
WATA Walderalm 3.32 17 *e*Pn **Pn 13 48 24.2 +2.4**
comp=N,3.0nm,0.1s,SNR=10
WATA *i* Sn **Sn 13 49 03.3 +2.0**
comp=N,20nm,0.5s
RETA Reutte 3.35 7 *i* Pn **Pn 13 48 24.2 +2.1**
comp=N,2.3nm,0.2s,SNR=4.2
RETA *i* Sn **Sn 13 49 03.8 +1.9**
comp=N,5.3nm,0.2s
NVLJ Novalja 3.40 82 *e*Pn **Pn 13 48 22.6 0.0**
NVLJ Sn **Sn 13 49 02.8 -0.1**
VVLD Villa Vallelon 3.41 131 AML AML
comp=N,23µm,0.7s
VVLD AML AML
comp=E,20µm,1.3s
VVLD AML AML
comp=N,23µm,0.7s
VVLD AML AML
comp=E,20µm,1.3s
VVLD AML AML
comp=N,23µm,0.7s
VVLD AML AML
comp=E,20µm,1.3s
TORNY Torny/Romont 3.45 320 Pn **Pn 13 48 26.6 +3.1**
MYKA Terra Mystica 3.47 44 *i* Pn **Pn 13 48 25.8 +2.1**
comp=E,1.8nm,0.2s
MYKA *e*Sn **Sn 13 49 02.9 -2.0**
comp=E,15nm,0.4s
OGSM Saint Maurice 3.49 296 Pn **Pn 13 48 28.4 +4.4**
BALST Balsthal 3.62 332 Pn **Pn 13 48 27.0 +1.3**
BALST Sn **Sn 13 49 09.7 +1.3**
GIMEL St. Georges / 3.63 312 Pn **Pn 13 48 29.3 +3.3**
SULZ Cheisacher 3.66 338 Pn **Pn 13 48 28.1 +1.8**
SULZ Sn **Sn 13 49 09.8 +0.3**
KBA Koelnbreinsper 3.67 36 *i* Pn **Pn 13 48 28.5 +2.0**
comp=E,1.9nm,0.1s
CABF La Chapelle 3.78 312 *e*P **Pn 13 48 30.3 +2.3**
CABF *e*Sn **Sn 13 49 10.1 -2.4**
comp=E,15nm,0.5s
BRANT Les Verrieres 3.80 318 Pn **Pn 13 48 30.8 +2.5**
BRANT Sn **Sn 13 49 15.2 +2.1**
BOURR Bourrignon 3.83 329 Pn **Pn 13 48 30.9 +2.2**
OBKA Obir 3.88 51 *i* Pn **Pn 13 48 29.6 +0.2**
comp=E,4.5nm,0.4s
OBKA *e*Sn **Sn 13 49 15.2 +0.2**
comp=E,35nm,0.5s
CHMF Charmoille 3.95 323 Pn **Pn 13 48 32.0 +1.6**
CHMF Sn **Sn 13 49 18.3 +1.6**
LOMF Lomont 3.96 325 Pn **Pn 13 48 31.9 +1.5**
VIVF Saint-Julien-l 3.99 282 *e*P **Pn 13 48 33.9 +3.0**
VIVF *e*Sn **Sn 13 49 15.8 -1.9**
comp=E,4.1nm,0.3s
SOKA Soboth 4.25 52 *i* Pn **Pn 13 48 34.6 +0.2**
comp=E,3.8nm,0.4s
SOKA *e*Sn **Sn 13 49 23.0 -1.0**
comp=E,3.3nm,0.3s
MOF Molkenrain 4.25 331 Pn **Pn 13 48 35.6 +1.1**
HINF Hinteralfeld 4.33 329 *e*P **Pn 13 48 36.5 +1.1**
HINF *e*Sn **Sn 13 49 22.7 -3.2**
comp=E,27nm,0.4s
LASF Ste Croix 4.55 271 *e*Pn **Pn 13 48 38.3 -0.2**
LASF *e*Sn **Sn 13 49 29.0 -2.4**
comp=E,2.6nm,0.3s
OPP Oppenau 4.55 343 Pn **Pn 13 48 38.7 +0.2**
OPP Sn **Sn 13 49 27.6 -3.8**
ECH Echery 4.56 334 Pn **Pn 13 48 39.1 +0.4**
ECH Sn **Sn 13 49 30.6 -1.2**
MOA Molln 4.66 36 *i* Pn **Pn 13 48 41.3 +1.2**
comp=E,3.4nm,0.2s
MOA *e*Sn **Sn 13 49 35.9 +1.7**
comp=E,6.4nm,0.3s
HAU Haudompre 4.67 327 *e*P **Pn 13 48 41.0 +0.8**
HAU *e*Sn **Sn 13 49 30.1 -4.4**
comp=E,36nm,0.4s
CDF Champ du Feu 4.70 336 *e*P **Pn 13 48 40.9 +0.3**
CDF *e*Sn **Sn 13 49 31.3 -3.9**
comp=E,35nm,0.5s
ARSA Arzberg 4.86 49 *i* Pn **Pn 13 48 43.9 +1.1**
comp=E,10nm,0.5s
ARSA *e*Sn **Sn 13 49 37.8 -1.2**
comp=E,2.3nm,0.3s
SMF Signal de Mont 5.10 301 *e*P **Pn 13 48 48.2 +2.1**
SMF *e*Sn **Sn 13 49 41.5 -3.5**
comp=E,22nm,0.4s
PAGF Fort de Pagny 5.36 327 *e*P **Pn 13 48 51.6 +1.9**
SFTF Sexfontaines 5.39 320 *e*P **Pn 13 48 51.7 +1.7**
baz=139
LOR Lormes 5.40 307 *e*P **Pn 13 48 52.3 +2.1**
baz=121
LOR *e*Sn **Sn 13 49 48.8 -3.6**
comp=E,12nm,0.3s
CONA Conrad Observa 5.46 44 *i* Pn **Pn 13 48 52.0 +0.9**
comp=E,1.0nm,0.2s
CONA *i* Sn **Sn 13 49 54.0 0.0**
comp=E,6.5nm,0.4s
AVF Avril sur Loir 5.47 301 *e*P **Pn 13 48 53.2 +2.1**
AVF *e*Sn **Sn 13 49 50.7 -3.3**
comp=E,8.6nm,0.5s
KHC Kasperske Hory 5.50 24 *e*PN **Pn 13 48 51.4 -0.1**
KHC *e*SN **Sn 13 49 51.6 -3.1**
KHC *ex* x 13 50 12.0
SSF Saint Saulge 5.50 304 *e*P **Pn 13 48 53.6 +2.1**
SSF *e*Sn **Sn 13 49 51.4 -3.4**
comp=E,5.7nm,0.3s
MEZF Maizieres J'vi 5.60 323 *e*P **Pn 13 48 54.4 +1.5**
baz=142
BGF Bois d'Agland 5.69 297 *e*P **Pn 13 48 56.5 +2.4**
BGF *e*Sn **Sn 13 49 55.7 -3.8**
comp=E,13nm,0.4s
MTLF Montolieu 5.82 265 *e*Pn **Pn 13 48 55.8 -0.1**
MTLF *e*Sn **Sn 13 49 59.4 -3.3**
comp=E,1.9nm,0.4s
CAF Calviac 5.84 280 *e*P **Pn 13 48 58.1 +1.8**
MODS Modra-Piesok 6.48 47 *e*PN **Pn 13 49 05.0 0.0**
MODS *e*SN **Sn 13 50 15.4 -3.5**
BRG Berggiesshubel 7.18 19 SG Sg 13 51 39.7 +20
comp=E,3.5nm,0.7s
VYHS Vyhne 7.40 51 *e*PN **Pn 13 49 16.9 -0.7**
VYHS *e*SN **Sn 13 50 40.2 -1.3**

*IDC **21** 13:56:53.6±0.9, 35.°59N×73.°63E, h0km, mb3.7/7, mb1 3.7/11, mb1mx3.5/64, mbtmp3.6/11, ML3.2/4, Error ellipse: s-maj=23.9km s-min=19.4km az=46.0*
*ISCJB **21** 13:56:56.6±0.5, 35.°74N±0.°06×74.°0E±0.°1, h37km, mb3.6/8, Error ellipse: s-maj=15.8km s-min=4.2km az=148.4*
ISC 21 13:56:59.0±0.7, 35.°67N±0.°08×73.°8E±0.°1, h37km, n27, σ1§64/30, mb3.7/8, 2D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DHRM	**DHARAMSHALA**	**3.99**	**148**	*e*P	**Pn**	**13 57 56.0**	**-1.8**
DHRM				*e*S	**Sn**	**13 58 43.5**	**+0.1**
DHRM				IAML		13 59 22.0	
	comp=N,60nm,0.6s						
DHRM				IAML		13 59 22.7	
	comp=E,80nm,0.3s						
SMLA	**Simla**	**5.33**	**147**	*e*P	**Pn**	**13 58 18.3**	**+2.3**
SMLA				*e*S	**Sn**	**13 59 17.5**	**+1.4**
SMLA				IAML		13 59 50.4	
	comp=E,37nm,0.4s						
SMLA				IAML		13 59 51.8	
	comp=N,31nm,0.4s						
KK31	**Karatay Array**	**7.85**	**342**	P	**Pn**	**13 58 50.5**	**-0.2**
	comp=N,0.6nm,0.2s,baz=152,slow=11,SNR=21						
KK31				||S	**Sn**	**14 00 19.1**	**+0.9**
	comp=N,2.4nm,0.4s,baz=145,slow=23,SNR=4.4						
PYUN	**Piuthan**	**10.85**	**132**	*e*P	**Pn**	**13 59 30.8**	**-1.2**
	comp=N,18nm,0.5s						
DANN	**Dangsing**	**11.16**	**128**	*e*P	**Pn**	**13 59 35.5**	**-0.7**
	comp=N,15nm,0.4s						
KOLN	**Koldanda**	**11.46**	**131**	*e*P	**Pn**	**13 59 39.1**	**-1.2**
	comp=N,8.1nm,0.3s						
GKN	**Gorkha**	**11.96**	**127**	*e*P	**Pn**	**13 59 45.7**	**-1.4**
	comp=N,10nm,0.2s						
KKN	**Kakani**	**12.52**	**126**	*e*P	**Pn**	**13 59 53.1**	**-1.8**
	comp=N,14nm,0.7s						
DMN	**Daman**	**12.53**	**127**	*e*P	**Pn**	**13 59 52.7**	**-2.3**
	comp=N,6.7nm,0.2s						
PKIN	**Phulchoki**	**12.74**	**126**	*e*P	**Pn**	**13 59 55.5**	**-2.4**
	comp=N,4.1nm,0.3s						
PKI	**Pulchoki**	**12.75**	**126**	*e*P	**Pn**	**13 59 55.7**	**-2.4**
	comp=N,4.6nm,0.2s						
MKAR	**Makanchi Array**	**12.81**	**27**	Pn	**Pn**	**14 00 00.1**	**+1.6**
	comp=N,0.2nm,0.3s,baz=203,slow=11,SNR=12						
GUN	**Gumba**	**12.85**	**124**	*e*P	**Pn**	**13 59 57.2**	**-2.2**
	comp=N,4.6nm,0.2s						
JIRN	**Jiri**	**13.22**	**124**	*e*P	**Pn**	**14 00 01.6**	**-2.9**
	comp=N,20nm,0.3s						
KURBB	**Kurchatov Arra**	**15.34**	**11**	Pn	**Pn**	**14 00 29.3**	**-3.2**
	comp=N,0.0nm,0.3s,baz=198,slow=10,SNR=2.7						
AB31	**Akbulak array**	**16.96**	**327**	||P	**Pn**	**14 00 53.0**	**-0.3**
	comp=N,0.2nm,0.4s,baz=169,slow=5.1,SNR=7.6						
BVAR	**Borovoye Array**	**17.52**	**353**	P	**P**	**14 01 02.8**	**+1.8**
	comp=N,0.1nm,0.3s,baz=168,slow=15,SNR=3.4						
AKTO	**Aktyubinsk**	**18.68**	**327**	P	**P**	**14 01 14.0**	**+0.2**
	comp=N,0.2nm,0.3s,baz=116,slow=12,SNR=5.1						
ZALV	**Zalesovo Beam**	**19.84**	**19**	P	**P**	**14 01 26.5**	**+0.1**
	comp=N,0.6nm,0.3s,baz=208,slow=13,SNR=12						
SONM	**Songino Array**	**26.98**	**53**	P	**P**	**14 02 38.4**	**+1.1**
	comp=N,0.4nm,0.4s,baz=245,slow=9.2,SNR=3.5						
FINES	**FINESS Array B**	**39.44**	**326**	P	**P**	**14 04 25.4**	**+0.2**
	comp=N,0.3nm,0.5s,baz=115,slow=9.0,SNR=3.3						
ARCES	**ARCESS Array B**	**42.78**	**337**	P	**P**	**14 04 53.0**	**+0.4**
	comp=N,2.1nm,1.0s,baz=134,slow=10,SNR=2.7						
HFS	**Hagfors**	**45.12**	**322**	P	**P**	**14 05 11.4**	**-0.1**
	comp=N,1.7nm,0.9s,baz=117,slow=8.3,SNR=3.4						
NOA	**NORSAR Array B**	**46.41**	**323**	P	**P**	**14 05 21.3**	**-0.4**
	comp=N,0.3nm,0.6s,baz=102,slow=7.2,SNR=2.9						
TORD	**Torodi Ar. Bea**	**67.99**	**271**	P	**P**	**14 07 53.1**	**-1.6**
	comp=N,0.4nm,0.5s,baz=77,slow=1.9,SNR=4.0						
WRA	**Warramunga Arr**	**79.63**	**124**	P	**P**	**14 09 03.6**	**+0.9**
	comp=N,1.1nm,0.9s,baz=308,slow=5.0,SNR=3.6						
ASAR	**Alice Springs**	**81.92**	**127**	P	**P**	**14 09 16.1**	**+1.2**
	comp=N,0.4nm,0.6s,baz=306,slow=4.2,SNR=7.0						

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*IDC **21** 13:58:25.2±0.9, 44.°14N×10.°04E, h0km, mb3.6/8, mb1 3.8/18, mb1mx3.6/63, mbtmp3.6/18, ML3.8/9, MS3.1/10, Ms1 3.1/10, ms1mx2.8/45, Error ellipse: s-maj=20.0km s-min=12.5km az=125.0*
*LDG **21** 13:58:26.2±0.1, 44.°13N×10.°12E, h2km, Md3.8/2, Ml4.0/32*
*GEN **21** 13:58:26.2, 44.°17N×10.°15E, h4km±1km, Ml3.5*
*ROM **21** 13:58:26.0±0.1, 44.°159N±0.°008×10.°146E±0.°009, h10km, ML3.7/76, Mw3.6, Error ellipse: s-maj=1.0km s-min=0.6km az=26.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.67; $M_{\theta\theta}$2.79; $M_{\phi\phi}$-1.12; $M_{r\theta}$1.61; $M_{\phi\phi}$-0.04; $M_{\theta\phi}$1.69; Fault plane solution: $M_0$3.37225×10^{14} NP1: ϕ_s123.00000°, δ38.00000°, λ-31.00000°. NP2: ϕ_s238.00000°, δ72.00000°, λ-124.00000°.*
*ISCJB **21** 13:58:26.3±0.2, 44.°11N±0.°02×10.°14E±0.°01, h16km±2km, mb3.6/8, MS3.4/3 Error ellipse: s-maj=2.6km s-min=1.7km az=178.2*
*PRU **21** 13:58:27.2±0.0, 43.°93N×10.°28E, h28km*
*STR **21** 13:58:27.3±0.6, 44.°N±4.°×1.°0E±.°, h0km, MLv3.9/6*
ISC 21 13:58:26.4±0.9, 44.°12N±0.°02×10.°07E±0.°02, h7km±6km, n239, σ1§89/272, mb3.8/8, MS3.3/3, 7C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLC	**Villacollemand**	**0.23**	**81**	P	**Pg**	**13 58 29.9**	**-1.0**
VLC				S	**Sg**	**13 58 32.6**	**-1.5**
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=N,26600μm,0.5s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=N,27500μm,0.5s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=N,26600μm,0.5s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=N,27500μm,0.5s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=N,26600μm,0.5s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=N,27500μm,0.5s						
VLC				AML	AML		
	comp=N,27500μm,0.5s						
VLC				AML	AML		
	comp=N,26600μm,0.5s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=N,27500μm,0.5s						
VLC				AML	AML		
	comp=N,26600μm,0.5s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
VLC				AML	AML		
	comp=E,26350μm,1.1s						
SARO	**Sassorosso**	**0.24**	**76**	P	**Pg**	**13 58 30.1**	**-1.1**
SARO				S	**Sg**	**13 58 33.0**	**-1.6**
SARO	**Sassorosso**	**0.24**	**76**	P	**Pg**	**13 58 30.1**	**-1.1**
SARO				S	**Sg**	**13 58 33.0**	**-1.6**
CARD	**Cardoso**	**0.31**	**108**	P	**Pg**	**13 58 32.1**	**-0.5**
CARD				S	**Sg**	**13 58 35.9**	**-0.8**
CARD	**Cardoso**	**0.31**	**108**	P	**Pg**	**13 58 31.7**	**-0.8**
CARD				S	**Sg**	**13 58 36.1**	**-0.5**
CARD				AML	AML		
	comp=E,27850μm,0.6s						
CARD				AML	AML		
	comp=N,37800μm,0.7s						
CARD				AML	AML		
	comp=E,27850μm,0.6s						
CARD				AML	AML		
	comp=N,37750μm,0.7s						
CARD				AML	AML		
	comp=N,37800μm,0.7s						
CARD				AML	AML		
	comp=E,27900μm,0.6s						
CARD				AML	AML		
	comp=N,37800μm,0.7s						
CARD				AML	AML		
	comp=E,27900μm,0.6s						
GRAM	**Graiana**	**0.37**	**359**	P	**Pg**	**13 58 32.8**	**-0.8**
GRAM				S	**Sg**	**13 58 37.8**	**-0.6**
GRAM	**Graiana**	**0.37**	**359**	P	**Pg**	**13 58 32.8**	**-0.8**
GRAM				S	**Sg**	**13 58 38.1**	**-0.4**
GRAM				AML	AML		
	comp=E,52000μm,0.5s						
GRAM				AML	AML		
	comp=N,49750μm,0.3s						
GRAM				AML	AML		
	comp=E,52000μm,0.5s						
GRAM				AML	AML		
	comp=N,49750μm,0.3s						
GRAM				AML	AML		
	comp=E,52000μm,0.5s						
GRAM				AML	AML		
	comp=N,49750μm,0.3s						
GRAM				AML	AML		
	comp=E,52000μm,0.5s						
GRAM				AML	AML		
	comp=N,49750μm,0.3s						
MAIM	**Mastiano**	**0.37**	**125**	P	**Pg**	**13 58 33.4**	**-0.2**
MAIM				S	**Sg**	**13 58 38.5**	**+0.1**
MAIM	**Mastiano**	**0.37**	**125**	P	**Pg**	**13 58 33.3**	**-0.2**
MAIM				S	**Sg**	**13 58 38.5**	**+0.1**
MAIM				AML	AML		
	comp=E,21500μm,1.0s						
MAIM				AML	AML		
	comp=N,27100μm,0.6s						
MAIM				AML	AML		
	comp=E,21500μm,1.0s						
MAIM				AML	AML		
	comp=N,27100μm,0.6s						
MAIM				AML	AML		
	comp=E,21500μm,1.0s						
MAIM				AML	AML		
	comp=N,27100μm,0.6s						
MAIM				AML	AML		
	comp=E,21500μm,1.0s						
MAIM				AML	AML		
	comp=N,27100μm,0.6s						
MAIM				AML	AML		
	comp=E,21500μm,1.0s						
BDI	**Bagni Di Lucca**	**0.38**	**99**	P	**Pg**	**13 58 32.9**	**-1.0**
BDI				S	**Sg**	**13 58 38.0**	**-0.9**
BDI				AML	AML		
	comp=E,12300μm,1.5s						
BDI				AML	AML		
	comp=N,16050μm,0.6s						
BDI				AML	AML		
	comp=E,11255μm,0.5s						
BDI				AML	AML		
	comp=N,18200μm,0.6s						
BDI				AML	AML		
	comp=E,12300μm,1.5s						
BDI				AML	AML		
	comp=N,16050μm,0.6s						
BDI				AML	AML		
	comp=E,11255μm,0.5s						
BDI				AML	AML		
	comp=N,18200μm,0.6s						
BDI				AML	AML		
	comp=N,16050μm,0.6s						
BDI				AML	AML		
	comp=E,12300μm,1.5s						
BDI				AML	AML		
	comp=E,11255μm,0.5s						
ERBM	**Eremo**	**0.38**	**40**	P	**Pg**	**13 58 32.8**	**-1.1**
ERBM				S	**Sg**	**13 58 38.2**	**-0.7**
ERBM				AML	AML		
	comp=E,28450μm,1.3s						
ERBM				AML	AML		
	comp=N,45900μm,1.2s						
ERBM				AML	AML		
	comp=E,28400μm,1.3s						
ERBM				AML	AML		
	comp=N,45900μm,1.2s						
ERBM				AML	AML		
	comp=E,28400μm,1.3s						
ERBM				AML	AML		
	comp=N,45900μm,1.2s						
ERBM				AML	AML		
	comp=E,28400μm,1.3s						
ERBM				AML	AML		
	comp=N,45900μm,1.2s						
ERBM				AML	AML		
	comp=E,28400μm,1.3s						
ERBM				AML	AML		
	comp=N,45900μm,1.2s						
MSSA	**Maissana**	**0.44**	**296**	P	**Pg**	**13 58 35.5**	**+0.5**
MSSA				S	**Sg**	**13 58 42.3**	**+1.5**
MSSA				AML	AML		
	comp=E,11350μm,0.5s						
MSSA				AML	AML		
	comp=N,6395μm,0.9s						
MSSA				AML	AML		
	comp=E,11350μm,0.5s						
MSSA				AML	AML		
	comp=N,6395μm,0.9s						
MSSA				AML	AML		
	comp=E,11350μm,0.5s						
MSSA				AML	AML		
	comp=N,6390μm,0.9s						
MSSA				AML	AML		
	comp=N,6390μm,0.9s						
MSSA				AML	AML		
	comp=E,11350μm,0.5s						
MSSA				AML	AML		
	comp=N,6390μm,0.9s						
MSSA				AML	AML		
	comp=E,11350μm,0.5s						
NEVI	**Neviano degli**	**0.49**	**21**	P	**Pg**	**13 58 35.6**	**-0.3**
POPM	**Popiglio**	**0.50**	**99**	P	**Pg**	**13 58 35.0**	**-1.0**
POPM				S	**Sg**	**13 58 41.7**	**-0.9**
POPM	**Popiglio**	**0.50**	**99**	P	**Pg**	**13 58 35.2**	**-0.9**
POPM				AML	AML		
	comp=E,19300μm,0.4s						
POPM				AML	AML		
	comp=N,25600μm,0.5s						
POPM				AML	AML		
	comp=E,19300μm,0.4s						
POPM				AML	AML		
	comp=N,25600μm,0.5s						
POPM				AML	AML		
	comp=E,19300μm,0.4s						
POPM				AML	AML		
	comp=N,25600μm,0.5s						
POPM				AML	AML		
	comp=E,19300μm,0.4s						
POPM				AML	AML		
	comp=N,25600μm,0.5s						
POPM				AML	AML		
	comp=E,19300μm,0.4s						
POPM				AML	AML		
	comp=N,25600μm,0.5s						
PRMA	**PARMA**	**0.66**	**15**	P	**Pg**	**13 58 39.1**	**-0.1**
MTCR	**Monte La Croce**	**0.68**	**98**	P	**Pg**	**13 58 38.4**	**-1.0**
MTCR				S	**Sg**	**13 58 48.3**	**+0.1**
MTCR				AML	AML		
	comp=E,6735μm,1.1s						
MTCR				AML	AML		
	comp=N,10155μm,0.3s						
MTCR				AML	AML		
	comp=E,6745μm,1.1s						
MTCR				AML	AML		
	comp=N,10205μm,0.3s						
MTCR				AML	AML		
	comp=E,6740μm,1.1s						
MTCR				AML	AML		
	comp=N,10200μm,0.3s						
MTCR				AML	AML		
	comp=E,6740μm,1.1s						
MTCR				AML	AML		
	comp=N,10200μm,0.3s						
ZCCA	**Zocca**	**0.69**	**70**	P	**Pg**	**13 58 39.8**	**+0.2**
ZCCA				AML	AML		
	comp=E,5195μm,0.6s						
ZCCA				AML	AML		
	comp=N,7945μm,0.9s						
ZCCA				AML	AML		
	comp=E,5385μm,0.6s						
ZCCA				AML	AML		
	comp=N,8485μm,0.9s						
ZCCA				AML	AML		
	comp=E,5200μm,0.6s						
ZCCA				AML	AML		
	comp=N,7945μm,0.9s						
ZCCA				AML	AML		
	comp=E,5390μm,0.6s						
ZCCA				AML	AML		
	comp=N,8485μm,0.9s						
ZCCA				AML	AML		
	comp=E,5195μm,0.6s						
ZCCA				AML	AML		
	comp=N,7950μm,0.9s						
ZCCA				AML	AML		
	comp=E,5385μm,0.6s						
ZCCA				AML	AML		
	comp=N,8480μm,0.9s						
ZCCA				AML	AML		
	comp=E,5385μm,0.6s						
ZCCA				AML	AML		
	comp=E,5195μm,0.6s						
ZCCA				AML	AML		
	comp=N,8480μm,0.9s						
ZCCA				AML	AML		
	comp=N,7950μm,0.9s						
ZCCA				AML	AML		
	comp=E,5385μm,0.6s						
ZCCA				AML	AML		
	comp=E,5195μm,0.6s						
ZCCA				AML	AML		
	comp=N,8480μm,0.9s						
ZCCA				AML	AML		
	comp=N,7950μm,0.9s						
CRMI	**Carmignano**	**0.73**	**117**	P	**Pg**	**13 58 40.2**	**-0.2**
CRMI				S	**Sb**	**13 58 50.6**	**-1.0**
CRMI				AML	AML		
	comp=E,4855μm,1.2s						
CRMI				AML	AML		
	comp=N,6620μm,0.5s						
CRMI				AML	AML		
	comp=E,2020μm,1.2s						
CRMI				AML	AML		
	comp=N,2820μm,0.5s						
CRMI				AML	AML		
	comp=E,4860μm,1.2s						
CRMI				AML	AML		
	comp=N,6620μm,0.5s						
CRMI				AML	AML		
	comp=E,2020μm,1.2s						
CRMI				AML	AML		
	comp=N,2820μm,0.5s						
CRMI				AML	AML		
	comp=E,2020μm,1.2s						
CRMI				AML	AML		
	comp=E,4860μm,1.2s						
CRMI				AML	AML		
	comp=N,2820μm,0.5s						
CRMI				AML	AML		
	comp=N,6620μm,0.5s						
CRMI				AML	AML		
	comp=E,4860μm,1.2s						
CRMI				AML	AML		
	comp=E,2020μm,1.2s						
CRMI				AML	AML		
	comp=N,6620μm,0.5s						
CRMI				AML	AML		
	comp=N,2820μm,0.5s						
GORR	**Gorreto**	**0.74**	**311**	P	**Pg**	**13 58 40.3**	**-0.3**
GORR				S	**Sb**	**13 58 51.6**	**-0.3**
GORR	**Gorreto**	**0.74**	**311**	P	**Pg**	**13 58 40.3**	**-0.3**
GORR				S	**Sg**	**13 58 51.1**	**+0.9**
GORR				AML	AML		
	comp=E,6845μm,0.7s						
GORR				AML	AML		
	comp=N,6670μm,0.7s						
GORR				AML	AML		
	comp=N,6670μm,0.7s						
GORR				AML	AML		
	comp=E,6845μm,0.7s						
GORR				AML	AML		
	comp=N,6670μm,0.7s						
GORR				AML	AML		
	comp=E,6845μm,0.7s						
BOB	**Bobbio (Coli)**	**0.78**	**325**	P	**Pg**	**13 58 41.0**	**-0.4**
NOVE	**Novellara**	**0.82**	**34**	AML	AML		
	comp=E,16100μm,1.0s						
NOVE				AML	AML		
	comp=E,16100μm,1.0s						
NOVE				AML	AML		
	comp=N,15000μm,0.8s						
NOVE				AML	AML		
	comp=E,16100μm,1.0s						
NOVE				AML	AML		
	comp=N,15000μm,0.8s						
NOVE				AML	AML		
	comp=E,16100μm,1.0s						
NOVE				AML	AML		
	comp=N,15000μm,0.8s						
NOVE				AML	AML		
	comp=N,15000μm,0.8s						
SEI	**Scarperia**	**0.93**	**94**	P	**Pg**	**13 58 43.6**	**-0.6**
SEI				AML	AML		
	comp=E,7060μm,0.6s						
SEI				AML	AML		
	comp=N,14450μm,0.5s						
SEI				AML	AML		
	comp=E,7055μm,0.6s						
SEI				AML	AML		
	comp=N,14450μm,0.5s						
SEI				AML	AML		
	comp=E,7055μm,0.6s						
SEI				AML	AML		
	comp=N,14450μm,0.5s						
SEI				AML	AML		
	comp=E,7055μm,0.6s						
SEI				AML	AML		
	comp=N,14450μm,0.5s						
RAVA	**Ravarino**	**0.98**	**50**	AML	AML		
	comp=E,12350μm,0.9s						
RAVA				AML	AML		
	comp=N,15000μm,0.7s						
RAVA				AML	AML		
	comp=N,15000μm,0.7s						
RAVA				AML	AML		
	comp=E,12350μm,0.9s						
RAVA				AML	AML		
	comp=N,15000μm,0.7s						
RAVA				AML	AML		
	comp=E,12350μm,0.9s						
RUFI	**Rufina**	**1.08**	**105**	P	**Pg**	**13 58 45.8**	**-1.3**
RUFI				AML	AML		
	comp=E,2395μm,0.5s						
RUFI				AML	AML		
	comp=N,3260μm,1.6s						
RUFI				AML	AML		
	comp=E,2400μm,0.5s						
RUFI				AML	AML		
	comp=N,3273μm,1.6s						
RUFI				AML	AML		
	comp=N,3273μm,1.6s						
RUFI				AML	AML		
	comp=E,2400μm,0.5s						
RUFI				AML	AML		
	comp=N,3273μm,1.6s						
RUFI				AML	AML		
	comp=E,2400μm,0.5s						
CSNT	**Castellina Chi**	**1.10**	**126**	P	**Pg**	**13 58 46.8**	**-0.6**
CSNT				AML	AML		
	comp=E,4245μm,1.2s						
CSNT				AML	AML		
	comp=N,3495μm,1.3s						
CSNT				AML	AML		
	comp=E,4245μm,1.2s						
CSNT				AML	AML		
	comp=N,3495μm,1.3s						
CSNT				AML	AML		
	comp=E,4245μm,1.2s						

CSNT			AML	AML		
	comp=N,3495μm,1.3s					
CSNT			AML	AML		
	comp=E,4245μm,1.2s					
CSNT			AML	AML		
	comp=N,3495μm,1.3s					
PCP	**Piancastagn**	**1.17 291**	P	**Pb**	**13 58 48.6**	**-0.4**
TRIF	**Trifonti**	**1.18 149**	P	**Pb**	**13 58 49.0**	**0.0**
TRIF			AML	AML		
	comp=E,2295μm,0.6s					
TRIF			AML	AML		
	comp=N,2045μm,0.8s					
TRIF			AML	AML		
	comp=E,2295μm,0.6s					
TRIF			AML	AML		
	comp=N,2045μm,0.8s					
TRIF			AML	AML		
	comp=E,2295μm,0.6s					
TRIF			AML	AML		
	comp=N,2045μm,0.8s					
TRIF			AML	AML		
	comp=E,2295μm,0.6s					
TRIF			AML	AML		
	comp=N,2045μm,0.8s					
FROS	**Frosini**	**1.21 139**	P	**Pb**	**13 58 48.7**	**-0.8**
FROS			AML	AML		
	comp=E,5540μm,0.8s					
FROS			AML	AML		
	comp=N,4090μm,1.4s					
FROS			AML	AML		
	comp=E,5540μm,0.8s					
FROS			AML	AML		
	comp=N,4090μm,1.4s					
FROS			AML	AML		
	comp=E,5540μm,0.8s					
FROS			AML	AML		
	comp=N,4090μm,1.4s					
FROS			AML	AML		
	comp=E,5540μm,0.8s					
FROS			AML	AML		
	comp=N,4090μm,1.4s					
SERM	**Sermide**	**1.25 44**	AML	AML		
	comp=E,6560μm,1.1s					
SERM			AML	AML		
	comp=E,3355μm,1.6s					
SERM			AML	AML		
	comp=N,2810μm,1.3s					
SERM			AML	AML		
	comp=E,6570μm,1.1s					
SERM			AML	AML		
	comp=N,3705μm,0.7s					
SERM			AML	AML		
	comp=E,6560μm,1.1s					
SERM			AML	AML		
	comp=N,3715μm,0.7s					
SERM			AML	AML		
	comp=N,3715μm,0.7s					
SERM			AML	AML		
	comp=E,6560μm,1.1s					
SERM			AML	AML		
	comp=N,3715μm,0.7s					
QLNO	**Quiliano**	**1.26 280**	P	**Pn**	**13 58 50.1**	**-0.3**
QLNO			AML	AML		
	comp=E,2660μm,0.6s					
QLNO			AML	AML		
	comp=N,3535μm,0.7s					
QLNO			AML	AML		
	comp=E,2660μm,0.6s					
QLNO			AML	AML		
	comp=N,3535μm,0.7s					
QLNO			AML	AML		
	comp=E,2660μm,0.6s					
QLNO			AML	AML		
	comp=N,3535μm,0.7s					
FINB	**Finale Ligure**	**1.26 273**	P	**Pn**	**13 58 49.7**	**-0.6**
FINB			AML	AML		
	comp=E,1650μm,0.4s					
FINB			AML	AML		
	comp=N,1860μm,0.5s					
ASQU	**Asqua**	**1.28 104**	P	**Pn**	**13 58 48.4**	**-2.3**
ASQU			AML	AML		
	comp=E,1640μm,0.8s					
ASQU			AML	AML		
	comp=N,1405μm,1.2s					
ASQU			AML	AML		
	comp=E,1640μm,0.8s					
ASQU			AML	AML		
	comp=N,1405μm,1.2s					
ASQU			AML	AML		
	comp=N,1405μm,1.2s					
ASQU			AML	AML		
	comp=E,1640μm,0.8s					
ASQU			AML	AML		
	comp=N,1405μm,1.2s					
ASQU			AML	AML		
	comp=E,1640μm,0.8s					
SFI	**Santa Sofia**	**1.30 99**	P	**Pn**	**13 58 49.5**	**-1.5**
SFI			AML	AML		
	comp=E,1865μm,1.3s					
SFI			AML	AML		
	comp=N,2560μm,1.4s					
SFI			AML	AML		
	comp=E,2795μm,1.3s					
SFI			AML	AML		
	comp=N,2365μm,0.9s					
SFI			AML	AML		
	comp=E,1865μm,1.3s					
SFI			AML	AML		
	comp=N,2590μm,0.9s					
SFI			AML	AML		
	comp=E,2800μm,1.3s					
SFI			AML	AML		
	comp=N,2405μm,0.9s					
SFI			AML	AML		
	comp=E,2800μm,1.3s					
SFI			AML	AML		
	comp=N,2590μm,0.9s					
SFI			AML	AML		
	comp=N,2405μm,0.9s					
SFI			AML	AML		
	comp=E,1865μm,1.3s					
SFI			AML	AML		
	comp=E,2800μm,1.3s					
SFI			AML	AML		
	comp=N,2590μm,0.9s					
SFI			AML	AML		
	comp=N,2405μm,0.9s					
SFI			AML	AML		
	comp=E,1865μm,1.3s					
CELB	**S.Piero in Cam**	**1.38 176**	P	**Pn**	**13 58 51.4**	**-0.7**
RORO	**Rocca Rossa**	**1.45 270**	P	**Pn**	**13 58 52.5**	**-0.4**
RORO			AML	AML		
	comp=E,787μm,1.6s					
RORO			AML	AML		
	comp=N,896μm,0.9s					
RORO			AML	AML		
	comp=E,787μm,1.6s					
RORO			AML	AML		
	comp=N,896μm,0.9s					
RORO			AML	AML		
	comp=E,787μm,1.6s					
RORO			AML	AML		
	comp=N,896μm,0.9s					
CASP	**Castiglione de**	**1.45 156**	AML	AML		
	comp=E,1345μm,1.0s					
CASP			AML	AML		
	comp=E,1345μm,1.0s					
CASP			AML	AML		
	comp=N,1340μm,1.0s					
CASP			AML	AML		
	comp=E,1345μm,1.0s					
CASP			AML	AML		
	comp=N,1340μm,1.0s					
CASP			AML	AML		
	comp=N,1340μm,1.0s					
CASP			AML	AML		
	comp=E,1345μm,1.0s					
CASP			AML	AML		
	comp=N,1340μm,1.0s					
IMI	**Imperia**	**1.59 263**	P	**Pn**	**13 58 54.4**	**-0.5**
IMI			AML	AML		
	comp=E,1184μm,0.7s					
IMI			AML	AML		
	comp=N,381μm,0.5s					
CAFI	**Castiglion Fio**	**1.59 119**	AML	AML		
	comp=N,800μm,1.2s					
CAFI			AML	AML		
	comp=E,565μm,1.0s					
CAFI			AML	AML		
	comp=N,800μm,1.2s					
CAFI			AML	AML		
	comp=E,565μm,1.0s					
CAFI			AML	AML		
	comp=N,800μm,1.2s					
GBOS	**Grotte di Boss**	**1.61 275**	P	**Pn**	**13 58 54.9**	**-0.3**
GBOS			AML	AML		
	comp=E,690μm,0.6s					
GBOS			AML	AML		
	comp=N,682μm,0.9s					
GBOS			AML	AML		
	comp=E,690μm,0.6s					
GBOS			AML	AML		
	comp=N,682μm,0.9s					
GBOS			AML	AML		
	comp=E,690μm,0.6s					
GBOS			AML	AML		
	comp=N,682μm,0.9s					
ARCI	**Arcidosso**	**1.63 141**	AML	AML		
	comp=E,844μm,1.1s					
ARCI			AML	AML		
	comp=E,844μm,1.1s					
ARCI			AML	AML		
	comp=N,995μm,1.4s					
ARCI			AML	AML		
	comp=N,995μm,1.4s					
ARCI			AML	AML		
	comp=E,844μm,1.1s					
ARCI			AML	AML		
	comp=N,995μm,1.4s					
MGRO	**Montegrosso**	**1.63 268**	P	**Pn**	**13 58 55.5**	**-0.2**
MGRO			AML	AML		
	comp=E,2300μm,0.5s					
MGRO			AML	AML		
	comp=N,1745μm,0.7s					
PARC	**Parchiule**	**1.64 106**	AML	AML		
	comp=E,716μm,1.3s					
PARC			AML	AML		
	comp=E,716μm,1.3s					
PARC			AML	AML		
	comp=N,1064μm,0.9s					
PARC			AML	AML		
	comp=E,716μm,1.3s					
PARC			AML	AML		
	comp=N,1065μm,0.9s					
PARC			AML	AML		
	comp=E,716μm,1.3s					
PARC			AML	AML		
	comp=N,1065μm,0.9s					
PARC			AML	AML		
	comp=N,1065μm,0.9s					
TEOL	**Teolo**	**1.68 42**	AML	AML		
	comp=E,10515μm,0.7s					
TEOL			AML	AML		
	comp=N,5275μm,1.2s					
TEOL			AML	AML		
	comp=E,10515μm,0.7s					
TEOL			AML	AML		
	comp=N,5275μm,1.2s					
TEOL			AML	AML		
	comp=E,10515μm,0.7s					
TEOL			AML	AML		
	comp=N,5275μm,1.2s					
MAGA	**Magasa**	**1.70 13**	P	**Pn**	**13 58 55.9**	**-0.7**
MAGA			AML	AML		
	comp=E,7430μm,0.6s					
MAGA			AML	AML		
	comp=N,3565μm,0.7s					
MAGA			AML	AML		
	comp=E,7430μm,0.6s					
MAGA			AML	AML		
	comp=N,3565μm,0.7s					
MAGA			AML	AML		
	comp=N,3565μm,0.7s					
MAGA			AML	AML		
	comp=E,7430μm,0.6s					
MAGA			AML	AML		
	comp=N,3565μm,0.7s					
MAGA			AML	AML		
	comp=E,7430μm,0.6s					
NEGI	**Seborga**	**1.73 262**	AML	AML		
	comp=E,852μm,1.2s					
NEGI			AML	AML		
	comp=N,1395μm,0.3s					
PGF	**Pioggiola**	**1.76 207**	*e*Pn	**Pn**	**13 58 56.6**	**-0.7**
PGF	**Pioggiola**	**1.76 207**	*e*P	**Pb**	**13 58 59.7**	**+0.7**
PGF			*e*Sn	**Sn**	**13 59 18.3**	**-1.7**
	comp=N,128nm,0.3s					
MONC	**Moncucco Torin**	**1.80 303**	AML	AML		
	comp=N,2630μm,1.0s					
MONC			AML	AML		
	comp=E,3020μm,0.5s					
MONC			AML	AML		
	comp=N,2630μm,1.0s					
MONC			AML	AML		
	comp=E,3020μm,0.5s					
MONC			AML	AML		
	comp=N,2630μm,1.0s					
MONC			AML	AML		
	comp=E,3020μm,0.5s					
SAOF	**Saorge**	**1.82 267**	Pn	**Pn**	**13 58 58.4**	**+0.3**
SAOF			Sn	**Sn**	**13 59 20.7**	**-0.7**
SAOF	**Saorge**	**1.82 267**	P	**Pn**	**13 58 58.2**	**+0.2**
SAOF			AML	AML		
	comp=E,2375μm,1.1s					
SAOF			AML	AML		
	comp=N,3290μm,0.7s					
SAOF			AML	AML		
	comp=E,2375μm,1.1s					
SAOF			AML	AML		
	comp=N,3290μm,0.7s					
SAOF			AML	AML		
	comp=E,2375μm,1.1s					
SAOF			AML	AML		
	comp=N,3290μm,0.7s					
ATVO	**AVT- Monte Val**	**1.85 113**	AML	AML		
	comp=N,1088μm,1.0s					
ATVO			AML	AML		
	comp=E,1126μm,1.0s					
ATVO			AML	AML		
	comp=E,1126μm,1.0s					
ATVO			AML	AML		
	comp=N,1088μm,1.0s					
ATVO			AML	AML		
	comp=E,1126μm,1.0s					
ATVO			AML	AML		
	comp=N,1088μm,1.0s					
MAON	**Monte Argentar**	**1.86 155**	P	**Pn**	**13 58 58.2**	**-0.4**
MAON			AML	AML		
	comp=E,880μm,0.8s					
MAON			AML	AML		
	comp=N,793μm,0.6s					
MAON			AML	AML		
	comp=E,880μm,0.8s					
MAON			AML	AML		
	comp=N,793μm,0.6s					
MAON			AML	AML		
	comp=E,880μm,0.8s					
MAON			AML	AML		
	comp=N,793μm,0.6s					
PIEI	**Pieia**	**1.88 107**	AML	AML		
	comp=N,344μm,1.5s					
PIEI			AML	AML		
	comp=E,360μm,1.1s					
PIEI			AML	AML		
	comp=N,344μm,1.5s					
PIEI			AML	AML		
	comp=E,360μm,1.1s					
PIEI			AML	AML		
	comp=N,344μm,1.5s					
PIEI			AML	AML		
	comp=E,360μm,1.1s					
ATTE	**AVT- Monte Tez**	**1.90 118**	AML	AML		
	comp=E,718μm,1.6s					
ATTE			AML	AML		
	comp=E,718μm,1.6s					
ATTE			AML	AML		
	comp=N,958μm,0.6s					
ATTE			AML	AML		
	comp=N,958μm,0.6s					
ATTE			AML	AML		
	comp=E,718μm,1.6s					
ATTE			AML	AML		
	comp=N,958μm,0.6s					
ENR	**Entracque**	**1.91 274**	P	**Pn**	**13 58 59.7**	**+0.3**
MGAB	**Montegabbione**	**1.92 129**	AML	AML		
	comp=N,520μm,0.5s					
MGAB			AML	AML		
	comp=E,614μm,0.9s					
MGAB			AML	AML		
	comp=N,534μm,0.6s					
MGAB			AML	AML		
	comp=E,630μm,1.0s					
MGAB			AML	AML		
	comp=N,520μm,0.5s					
MGAB			AML	AML		
	comp=E,614μm,0.9s					
MGAB			AML	AML		
	comp=N,534μm,0.6s					
MGAB			AML	AML		
	comp=E,630μm,1.0s					
MGAB			AML	AML		
	comp=E,614μm,0.9s					
MGAB			AML	AML		
	comp=N,520μm,0.5s					
MGAB			AML	AML		
	comp=N,534μm,0.6s					
MGAB			AML	AML		
	comp=E,630μm,1.0s					
SBF	**Sospel**	**1.92 263**	*e*Pn	**Pn**	**13 58 59.2**	**-0.3**
SBF			*e*Sn	**Sn**	**13 59 23.0**	**-0.9**
	comp=E,673nm,0.4s					
MUGIO	**Muggio**	**1.94 338**	P	**Pn**	**13 59 00.2**	**+0.4**
MUGIO			AML	AML		
	comp=E,1095μm,0.5s					
MUGIO			AML	AML		
	comp=N,1195μm,0.6s					
MUGIO			AML	AML		
	comp=N,1195μm,0.6s					
MUGIO			AML	AML		
	comp=E,1095μm,0.5s					
MUGIO			AML	AML		
	comp=N,1195μm,0.6s					
MUGIO			AML	AML		
	comp=E,1095μm,0.5s					
ESCA	**l'Escarene**	**1.97 262**	Pn	**Pn**	**13 59 00.3**	**+0.1**
VARE	**Varese**	**1.97 333**	AML	AML		
	comp=E,1710μm,0.7s					
VARE			AML	AML		
	comp=E,1710μm,0.7s					
VARE			AML	AML		
	comp=N,1855μm,0.5s					
VARE			AML	AML		
	comp=N,1855μm,0.5s					
VARE			AML	AML		
	comp=E,1710μm,0.7s					
VARE			AML	AML		
	comp=N,1855μm,0.5s					
MURB	**Monte Urbino**	**1.98 115**	AML	AML		
	comp=N,1605μm,1.2s					
MURB			AML	AML		
	comp=E,1770μm,0.9s					
MURB			AML	AML		
	comp=N,1605μm,1.2s					
MURB			AML	AML		
	comp=E,1770μm,0.9s					
MURB			AML	AML		
	comp=E,1770μm,0.9s					
MURB			AML	AML		
	comp=N,1605μm,1.2s					
REVF	**Revere**	**1.99 260**	Pn	**Pn**	**13 59 01.0**	**+0.5**
REVF			Sn	**Sn**	**13 59 25.4**	**-0.3**
PESA	**Pesaro**	**2.00 94**	AML	AML		
	comp=N,922μm,1.3s					
PESA			AML	AML		
	comp=E,1052μm,0.8s					
PESA			AML	AML		
	comp=N,922μm,1.3s					
PESA			AML	AML		
	comp=E,1052μm,0.8s					
PESA			AML	AML		
	comp=E,1052μm,0.8s					
PESA			AML	AML		
	comp=N,922μm,1.3s					
MPAG	**Monte Paganucc**	**2.01 103**	P	**Pn**	**13 58 59.9**	**-0.8**
MPAG			AML	AML		
	comp=E,598μm,0.6s					
MPAG			AML	AML		
	comp=N,642μm,0.6s					
MPAG			AML	AML		
	comp=N,642μm,0.6s					
MPAG			AML	AML		
	comp=E,598μm,0.6s					
MPAG			AML	AML		
	comp=N,642μm,0.6s					
MPAG			AML	AML		
	comp=E,598μm,0.6s					
DOI	**San Damiano**	**2.06 282**	AML	AML		
	comp=E,1180μm,0.8s					
DOI			AML	AML		
	comp=N,1175μm,0.8s					
DOI			AML	AML		
	comp=E,1180μm,0.8s					
DOI			AML	AML		
	comp=N,1175μm,0.8s					
DOI			AML	AML		
	comp=E,1180μm,0.8s					
DOI			AML	AML		
	comp=N,1175μm,0.8s					
SMPL	**Sampolo**	**2.11 196**	Pn	**Pn**	**13 59 03.6**	**+1.6**
BHB	**Bricherasio**	**2.13 291**	AML	AML		
	comp=E,712μm,0.6s					
BHB			AML	AML		
	comp=E,712μm,0.6s					
BHB			AML	AML		
	comp=N,582μm,0.6s					
BHB			AML	AML		
	comp=N,582μm,0.6s					
BHB			AML	AML		
	comp=E,712μm,0.6s					
BHB			AML	AML		
	comp=N,582μm,0.6s					
CGRP	**Cima Grappa**	**2.14 34**	AML	AML		
	comp=E,1640μm,0.6s					
CGRP			AML	AML		
	comp=E,1640μm,0.6s					
CGRP			AML	AML		
	comp=N,1855μm,1.4s					
CGRP			AML	AML		
	comp=N,1855μm,1.4s					
CGRP			AML	AML		
	comp=E,1640μm,0.6s					
CGRP			AML	AML		
	comp=N,1855μm,1.4s					
TRAV	**Traversella**	**2.16 311**	P	**Pn**	**13 59 03.5**	**+0.7**
TRAV			AML	AML		
	comp=E,1098μm,0.8s					
TRAV			AML	AML		
	comp=N,921μm,0.5s					
TRAV			AML	AML		
	comp=N,921μm,0.5s					
TRAV			AML	AML		
	comp=E,1098μm,0.8s					
TRAV			AML	AML		
	comp=N,921μm,0.5s					
TRAV			AML	AML		
	comp=E,1098μm,0.8s					
ASSB	**Assisi San Ben**	**2.17 119**	AML	AML		
	comp=N,382μm,0.8s					
ASSB			AML	AML		
	comp=E,380μm,1.0s					
ASSB			AML	AML		
	comp=N,382μm,0.8s					
ASSB			AML	AML		
	comp=E,380μm,1.0s					
ASSB			AML	AML		
	comp=N,382μm,0.8s					
ASSB			AML	AML		
	comp=E,380μm,1.0s					
ARVD	**Arcevia**	**2.17 106**	AML	AML		
	comp=E,544μm,0.9s					
ARVD			AML	AML		
	comp=E,544μm,0.9s					
ARVD			AML	AML		
	comp=N,358μm,1.4s					
ARVD			AML	AML		
	comp=N,358μm,1.4s					
ARVD			AML	AML		
	comp=N,358μm,1.4s					
ARVD			AML	AML		
	comp=E,544μm,0.9s					
ISO	**Isola**	**2.18 273**	Pn	**Pn**	**13 59 04.3**	**+1.3**
CTI	**Castel Tesino**	**2.23 30**	P	**Pn**	**13 59 03.1**	**-0.7**

CTI			AML	AML	
	comp=E,1305µm,0.8s				
CTI			AML	AML	
	comp=N,1290µm,0.3s				
CTI			AML	AML	
	comp=E,1305µm,0.8s				
CTI			AML	AML	
	comp=N,1290µm,0.3s				
CTI			AML	AML	
	comp=E,1305µm,0.8s				
CTI			AML	AML	
	comp=N,1290µm,0.3s				
MOMA	**Monte Martano**	**2.25 125**	P	**Pn**	**13 59 03.5 -0.5**
MOMA			AML	AML	
	comp=E,335µm,1.4s				
MOMA			AML	AML	
	comp=N,410µm,1.4s				
MOMA			AML	AML	
	comp=N,410µm,1.4s				
MOMA			AML	AML	
	comp=E,335µm,1.4s				
MOMA			AML	AML	
	comp=N,410µm,1.4s				
MOMA			AML	AML	
	comp=E,335µm,1.4s				
RSP	**Reno Superiore**	**2.25 298**	AML	AML	
	comp=E,638µm,1.1s				
RSP			AML	AML	
	comp=E,638µm,1.1s				
RSP			AML	AML	
	comp=N,534µm,1.1s				
RSP			AML	AML	
	comp=N,534µm,1.1s				
RSP			AML	AML	
	comp=N,534µm,1.1s				
RSP			AML	AML	
	comp=E,638µm,1.1s				
CALF	**Calern**	**2.31 262**	Pn	**Pn**	**13 59 05.2 +0.4**
CALF			Sn	**Sn**	**13 59 32.9 -0.6**
EL6	**Elcito**	**2.34 109**	AML	AML	
	comp=N,763µm,0.8s				
EL6			AML	AML	
	comp=E,670µm,0.8s				
EL6			AML	AML	
	comp=N,763µm,0.8s				
EL6			AML	AML	
	comp=E,670µm,0.8s				
EL6			AML	AML	
	comp=N,763µm,0.8s				
EL6			AML	AML	
	comp=E,670µm,0.8s				
SATI	**Passo dei Sala**	**2.35 319**	AML	AML	
	comp=E,1090µm,0.5s				
SATI			AML	AML	
	comp=N,972µm,1.0s				
SATI			AML	AML	
	comp=E,1090µm,0.5s				
SATI			AML	AML	
	comp=N,972µm,1.0s				
SATI			AML	AML	
	comp=E,1090µm,0.5s				
SATI			AML	AML	
	comp=N,972µm,1.0s				
SURF	**Saint Ours**	**2.37 280**	Pn	**Pn**	**13 59 06.1 +0.4**
TUE	**Stuetta**	**2.40 348**	P	**Pn**	**13 59 07.2 +1.0**
TUE			AML	AML	
	comp=E,613µm,0.5s				
TUE			AML	AML	
	comp=N,604µm,0.6s				
TUE			AML	AML	
	comp=E,794µm,0.5s				
TUE			AML	AML	
	comp=N,746µm,0.6s				
TUE			AML	AML	
	comp=N,746µm,0.6s				
TUE			AML	AML	
	comp=E,794µm,0.5s				
TUE			AML	AML	
	comp=E,613µm,0.5s				
TUE			AML	AML	
	comp=N,604µm,0.6s				
TUE			AML	AML	
	comp=N,604µm,0.6s				
TUE			AML	AML	
	comp=E,794µm,0.5s				
TUE			AML	AML	
	comp=E,613µm,0.5s				
TUE			AML	AML	
	comp=N,746µm,0.6s				
MMK	**Mattmark**	**2.44 323**	AML	AML	
	comp=N,709µm,1.0s				
MMK			AML	AML	
	comp=E,786µm,0.7s				
MMK			AML	AML	
	comp=N,709µm,1.0s				
MMK			AML	AML	
	comp=N,709µm,1.0s				
MMK			AML	AML	
	comp=E,786µm,0.7s				
MMK			AML	AML	
	comp=E,786µm,0.7s				
MBDF	**Montbardon**	**2.44 285**	*e*Pn	**Pn**	**13 59 06.3 -0.4**
MBDF	**Montbardon**	**2.44 285**	*e*Pg	**Pg**	**13 59 12.9 -0.2**
MBDF			*e*Sn	**Sn**	**13 59 35.5 -1.4**
MBDF			*e*Sg	**Sg**	**13 59 45.0 +0.2**
	comp=E,616nm,0.6s				
FDMO	**Fiordimonte**	**2.45 115**	AML	AML	
	comp=E,240µm,0.9s				
FDMO			AML	AML	
	comp=N,296µm,1.2s				
FDMO			AML	AML	
	comp=E,240µm,0.9s				
FDMO			AML	AML	
	comp=N,296µm,1.2s				
FDMO			AML	AML	
	comp=E,240µm,0.9s				
FDMO			AML	AML	
	comp=N,296µm,1.2s				
LSD	**Lago del Serru**	**2.48 304**	P	**Pn**	**13 59 07.7 +0.3**
LSD			AML	AML	
	comp=E,322µm,0.7s				
LSD			AML	AML	
	comp=N,415µm,0.5s				
LSD			AML	AML	
	comp=E,322µm,0.7s				
LSD			AML	AML	
	comp=N,415µm,0.5s				
LSD			AML	AML	
	comp=E,322µm,0.7s				
LSD			AML	AML	
	comp=N,415µm,0.5s				
TOLF	**Tolfa**	**2.50 145**	AML	AML	
	comp=E,236µm,0.9s				
TOLF			AML	AML	
	comp=E,236µm,0.9s				
TOLF			AML	AML	
	comp=N,178µm,0.8s				
TOLF			AML	AML	
	comp=N,178µm,0.8s				
TOLF			AML	AML	
	comp=N,178µm,0.8s				
TOLF			AML	AML	
	comp=E,236µm,0.9s				
CSP1	**Cessapalombo**	**2.50 113**	AML	AML	
	comp=N,745µm,1.3s				
CSP1			AML	AML	
	comp=E,499µm,0.6s				
CSP1			AML	AML	
	comp=N,745µm,1.3s				
CSP1			AML	AML	
	comp=N,745µm,1.3s				
CSP1			AML	AML	
	comp=E,499µm,0.6s				
CSP1			AML	AML	
	comp=E,499µm,0.6s				
KOSI	**Kohlern**	**2.51 21**	AML	AML	
	comp=N,1305µm,1.0s				
KOSI			AML	AML	
	comp=E,1190µm,1.1s				
KOSI			AML	AML	
	comp=N,1305µm,1.0s				
KOSI			AML	AML	
	comp=E,1190µm,1.1s				
KOSI			AML	AML	
	comp=N,1305µm,1.0s				
KOSI			AML	AML	
	comp=E,1190µm,1.1s				
FUSIO	**Fusio**	**2.53 337**	P	**Pn**	**13 59 08.2 +0.2**
FUSIO			AML	AML	
	comp=E,694µm,0.9s				
FUSIO			AML	AML	
	comp=N,562µm,1.4s				
FUSIO			AML	AML	
	comp=E,694µm,0.9s				
FUSIO			AML	AML	
	comp=N,562µm,1.4s				
FUSIO			AML	AML	
	comp=E,694µm,0.9s				
FUSIO			AML	AML	
	comp=N,562µm,1.4s				
FRF	**La Foret Royal**	**2.54 258**	*e*Pn	**Pn**	**13 59 07.4 -0.6**
FRF			*e*Sn	**Sn**	**13 59 37.6 -1.5**
	comp=N,142nm,0.3s				
EMBD	**Embd, Matterta**	**2.62 324**	Pn	**Pn**	**13 59 10.9 +1.7**
LNSS	**Leonessa**	**2.65 124**	AML	AML	
	comp=N,506µm,1.2s				
LNSS			AML	AML	
	comp=E,532µm,0.7s				
LNSS			AML	AML	
	comp=N,506µm,1.2s				
LNSS			AML	AML	
	comp=N,506µm,1.2s				
LNSS			AML	AML	
	comp=E,532µm,0.7s				
LNSS			AML	AML	
	comp=E,532µm,0.7s				
DAVOX	**Davos/Dischmat**	**2.66 357**	Pn	**Pn**	**13 59 11.5 +1.7**
	comp=E,33nm,0.3s,baz=170,slow=12,SNR=43				
DAVOX			Sn	**Sb**	**13 59 45.8 -1.5**
	comp=E,42nm,0.3s,baz=196,slow=15,SNR=5.0				
DAVOX			LR	LR	14 00 31.7
	comp=E,236nm,20.1s,baz=264,slow=48				
DAVOX	**Davos/Dischmat**	**2.66 357**	P	**Pn**	**13 59 11.3 +1.5**
DAVOX			AML	AML	
	comp=E,624µm,0.6s				
DAVOX			AML	AML	
	comp=N,720µm,0.6s				
DAVOX			AML	AML	
	comp=E,624µm,0.6s				
DAVOX			AML	AML	
	comp=N,720µm,0.6s				
DAVOX			AML	AML	
	comp=E,624µm,0.6s				
DAVOX			AML	AML	
	comp=N,720µm,0.6s				
REMY	**Saint-Rhmy-en**	**2.69 311**	P	**Pn**	**13 59 11.2 +1.0**
REMY			AML	AML	
	comp=E,890µm,0.6s				
REMY			AML	AML	
	comp=N,1420µm,0.9s				
REMY			AML	AML	
	comp=N,1420µm,0.9s				
REMY			AML	AML	
	comp=E,890µm,0.6s				
REMY			AML	AML	
	comp=N,1420µm,0.9s				
REMY			AML	AML	
	comp=E,890µm,0.6s				
LMR	**La Mourre**	**2.70 254**	*e*Pn	**Pn**	**13 59 09.8 -0.4**
LMR			*e*Sn	**Sn**	**13 59 41.3 -1.8**
	comp=E,80nm,0.2s				
LPG	**La Plagne**	**2.73 301**	*e*P	**Pn**	**13 59 13.2 +2.3**
LPG			*e*Sn	**Sn**	**13 59 42.7 -1.6**
	comp=E,342nm,0.8s				
ABSI	**Aberstueckl**	**2.75 18**	AML	AML	
	comp=E,1450µm,0.7s				
ABSI			AML	AML	
	comp=E,1450µm,0.7s				
ABSI			AML	AML	
	comp=N,1450µm,0.7s				
ABSI			AML	AML	
	comp=N,1450µm,0.7s				
ABSI			AML	AML	
	comp=E,1450µm,0.7s				
ABSI			AML	AML	
	comp=N,1450µm,0.7s				
LPL	**La Plagne**	**2.75 302**	*e*P	**Pn**	**13 59 13.2 +2.1**
LPL			*e*Sn	**Sn**	**13 59 43.0 -1.7**
FETA	**Feichten**	**2.93 9**	*e*Pn	**Pn**	**13 59 15.1 +1.5**
	comp=N,19nm,0.4s,SNR=36				
FETA			Sn	**Sg**	**13 59 57.8 -2.8**
	comp=N,40nm,0.4s				
ROSI	**Rosskopf**	**2.96 18**	AML	AML	
	comp=N,1315µm,1.3s				
ROSI			AML	AML	
	comp=E,1014µm,0.8s				
ROSI			AML	AML	
	comp=N,1315µm,1.3s				
ROSI			AML	AML	
	comp=E,1014µm,0.8s				
ROSI			AML	AML	
	comp=N,1315µm,1.3s				
ROSI			AML	AML	
	comp=E,1014µm,0.8s				
PLONS	**Plons/SG**	**2.96 351**	AML	AML	
	comp=N,422µm,1.1s				
PLONS			AML	AML	
	comp=E,504µm,1.0s				
PLONS			AML	AML	
	comp=N,422µm,1.1s				
PLONS			AML	AML	
	comp=N,422µm,1.1s				
PLONS			AML	AML	
	comp=E,504µm,1.0s				
PLONS			AML	AML	
	comp=E,504µm,1.0s				
BNALP	**Bannalp**	**2.98 338**	AML	AML	
	comp=N,462µm,1.0s				
BNALP			AML	AML	
	comp=E,449µm,0.7s				
BNALP			AML	AML	
	comp=N,462µm,1.0s				
BNALP			AML	AML	
	comp=E,449µm,0.7s				
BNALP			AML	AML	
	comp=N,462µm,1.0s				
BNALP			AML	AML	
	comp=E,449µm,0.7s				
AQU	**L'Aquila**	**3.01 125**	*e*Pn	**Pn**	**13 59 11.9 -2.6**
GEPF	**Gemona**	**3.05 44**	AML	AML	
	comp=E,432µm,0.6s				
GEPF			AML	AML	
	comp=N,542µm,0.7s				
GEPF			AML	AML	
	comp=E,432µm,0.6s				
GEPF			AML	AML	
	comp=N,542µm,0.7s				
GEPF			AML	AML	
	comp=E,432µm,0.6s				
GEPF			AML	AML	
	comp=N,542µm,0.7s				
ORIF	**Oris-en-Rattie**	**3.10 286**	*e*P	**Pn**	**13 59 17.9 +2.1**
ORIF			*e*Sn	**Sn**	**13 59 51.3 -1.8**
	comp=N,232nm,0.6s				
SABO	**M.te Sabotino**	**3.11 52**	AML	AML	
	comp=E,1056µm,0.9s				
SABO			AML	AML	
	comp=N,948µm,0.7s				
SABO			AML	AML	
	comp=N,948µm,0.7s				
SABO			AML	AML	
	comp=E,1056µm,0.9s				
SABO			AML	AML	
	comp=N,948µm,0.7s				
SABO			AML	AML	
	comp=E,1056µm,0.9s				
ARTF	**Artigues**	**3.13 262**	Pn	**Pn**	**13 59 17.6 +1.4**
ABTA	**Abfaltersbach**	**3.14 32**	*i* Pn	**Pn**	**13 59 16.9 +0.7**
	comp=E,10nm,0.4s,SNR=15				
ABTA			*e*Sn	**Sn**	**13 59 55.7 +1.8**
	comp=E,125nm,0.6s				
ASEAF	**Site Antares,**	**3.14 246**	Pn	**Pn**	**13 59 16.5 +0.6**
DAVA	**Damuels**	**3.17 358**	*i* Pn	**Pn**	**13 59 18.6 +1.9**
	comp=E,94nm,0.5s,SNR=96				
DAVA			*i* Sn	**Sn**	**13 59 57.9 +3.1**
	comp=E,424nm,0.8s				
SQTA	**Sankt Quirin**	**3.20 14**	*i* Pn	**Pn**	**13 59 19.3 +2.2**
	comp=E,74nm,0.5s,SNR=34				
SQTA			*e*Sn	**Sb**	**14 00 00.5 -2.2**
	comp=E,100nm,0.5s				
BSTF	**la Bastide-des**	**3.20 267**	Pn	**Pn**	**13 59 18.1 +1.0**
SMRF	**Simiane la Rot**	**3.25 269**	*e*P	**Pn**	**13 59 19.4 +1.7**
SMRF			*e*Sn	**Sn**	**13 59 54.8 -1.8**
	comp=E,77nm,0.4s				
MOTA	**Moosalm**	**3.30 12**	*i* Pn	**Pn**	**13 59 20.4 +1.8**
	comp=E,54nm,0.7s,SNR=52				
RUSF	**Rustrel**	**3.31 268**	Pn	**Pn**	**13 59 20.2 +1.6**
WTTA	**Wattenberg**	**3.33 19**	*e*Pn	**Pn**	**13 59 20.1 +1.2**
	comp=E,27nm,0.2s,SNR=36				
WTTA			*e*Sn	**Sn**	**14 00 00.6 +1.8**
	comp=E,85nm,0.5s				
WTTA	**Wattenberg**	**3.33 19**	AML	AML	
	comp=E,536µm,0.7s				
WTTA			AML	AML	
	comp=N,372µm,1.3s				
WTTA			AML	AML	
	comp=N,372µm,1.3s				
WTTA			AML	AML	
	comp=E,536µm,0.7s				
WTTA			AML	AML	
	comp=N,372µm,1.3s				
WTTA			AML	AML	
	comp=E,536µm,0.7s				
RIY	**Rijeka**	**3.37 68**	*e*Pn	**Pn**	**13 59 18.8 -0.5**
WATA	**Walderalm**	**3.38 18**	*e*Pn	**Pn**	**13 59 21.0 +1.3**
	comp=E,23nm,0.3s,SNR=36				
RETA	**Reutte**	**3.40 8**	*i* Pn	**Pn**	**13 59 21.3 +1.5**
	comp=E,15nm,0.3s,SNR=13				
RETA			Sn	**Sn**	**14 00 02.3 +1.9**
	comp=E,64nm,0.5s				
ACOM	**Acomizza, Ital**	**3.43 44**	AML	AML	
	comp=E,824µm,0.7s				
ACOM			AML	AML	
	comp=E,824µm,0.7s				
ACOM			AML	AML	
	comp=N,605µm,0.7s				
ACOM			AML	AML	
	comp=N,605µm,0.7s				
ACOM			AML	AML	
	comp=N,605µm,0.7s				
ACOM			AML	AML	
	comp=E,824µm,0.7s				
TORNY	**Torny/Romont**	**3.44 322**	Pn	**Pn**	**13 59 22.9 +2.5**
OGSM	**Saint Maurice**	**3.45 297**	Pn	**Pn**	**13 59 22.7 +2.2**
NVLJ	**Novalja**	**3.47 81**	*e*Pn	**Pn**	**13 59 21.3 +0.6**
CEY	**Cerknica**	**3.49 61**	*e*Pn	**Pn**	**13 59 17.8 -3.2**
INTR	**Introdacqua**	**3.51 126**	AML	AML	
	comp=E,177µm,0.8s				
INTR			AML	AML	
	comp=N,216µm,1.1s				
INTR			AML	AML	
	comp=E,177µm,0.8s				
INTR			AML	AML	
	comp=N,216µm,1.1s				
INTR			AML	AML	
	comp=E,177µm,0.8s				
INTR			AML	AML	
	comp=N,216µm,1.1s				
MYKA	**Terra Mystica**	**3.55 44**	*e*Pn	**Pn**	**13 59 22.9 +1.0**
	comp=N,3.6nm,0.2s				
MYKA			*e*Sn	**Sn**	**14 00 07.3 +3.2**
	comp=N,21nm,0.4s				
GIMEL	**St. Georges /**	**3.61 313**	Pn	**Pn**	**13 59 24.9 +2.2**
BALST	**Balsthal**	**3.62 333**	Pn	**Pn**	**13 59 24.4 +1.6**
SULZ	**Cheisacher**	**3.67 339**	Pn	**Pn**	**13 59 25.8 +2.3**
LJU	**Ljubljana**	**3.69 57**	*e*Pn	**Pn**	**13 59 23.0 -0.8**
OG35	**Corcelles**	**3.72 303**	Pn	**Pn**	**13 59 26.4 +2.2**
KBA	**Koelnbreinsper**	**3.74 37**	*i* Pn	**Pn**	**13 59 25.5 +0.8**
	comp=N,10nm,0.4s,SNR=15				
KBA			*e*Sn	**Sn**	**14 00 10.1 +1.1**
	comp=N,42nm,0.6s				
CABF	**La Chapelle**	**3.75 313**	*e*P	**Pn**	**13 59 26.9 +2.2**
CABF			*e*Sn	**Sn**	**14 00 06.4 -2.7**
	comp=N,84nm,0.6s				
BRANT	**Les Verrieres**	**3.78 319**	Pn	**Pn**	**13 59 27.4 +2.2**
BOURR	**Bourrignon**	**3.83 330**	Pn	**Pn**	**13 59 28.0 +2.2**
VIVF	**Saint-Julien-l**	**3.93 283**	*e*P	**Pn**	**13 59 28.2 +1.1**
VIVF			*e*Sn	**Sn**	**14 00 10.7 -2.8**
	comp=N,14nm,0.3s				
BOJS	**Bojanci**	**3.94 68**	AML	AML	
	comp=E,138µm,0.7s				
BOJS			AML	AML	
	comp=E,138µm,0.7s				
BOJS			AML	AML	
	comp=N,144µm,1.3s				
BOJS			AML	AML	
	comp=E,138µm,0.7s				
BOJS			AML	AML	
	comp=N,144µm,1.3s				
BOJS			AML	AML	
	comp=N,144µm,1.3s				
CHMF	**Charmoille**	**3.94 324**	Pn	**Pn**	**13 59 29.4 +2.1**
LOMF	**Lomont**	**3.95 326**	Pn	**Pn**	**13 59 29.6 +2.2**
OBKA	**Obir**	**3.96 51**	*e*Pn	**Pn**	**13 59 27.7 +0.2**
	comp=N,11nm,0.3s,SNR=7.6				
OBKA			*e*Sn	**Sn**	**14 00 16.4 +2.2**
	comp=N,128nm,0.7s				
UDBI	**Udbina**	**4.11 82**	*i* Pn	**Pn**	**13 59 30.4 +0.9**
SSB	**Saint Sauveur**	**4.11 288**	Pn	**Pn**	**13 59 31.1 +1.6**
CRES	**Cresnjev**	**4.18 64**	*e*Pn	**Pn**	**13 59 30.2 -0.4**
HINF	**Hinteralfeld**	**4.32 330**	*e*P	**Pn**	**13 59 33.9 +1.4**
HINF			*e*Sn	**Sn**	**14 00 19.5 -3.6**
	comp=N,142nm,0.6s				
SOKA	**Soboth**	**4.33 52**	*i* Pn	**Pn**	**13 59 32.8 +0.2**
	comp=N,7.6nm,0.4s,SNR=9.3				
SOKA			*e*Sn	**Sn**	**14 00 23.5 +0.2**
	comp=N,29nm,0.6s				
LASF	**Ste Croix**	**4.48 272**	*e*Pn	**Pn**	**13 59 33.8 -0.8**
LASF			*e*Sn	**Sn**	**14 00 23.8 -3.1**
	comp=N,42nm,0.5s				
HAU	**Haudompre**	**4.67 328**	*e*P	**Pn**	**13 59 38.7 +1.5**
HAU			*e*Sn	**Sn**	**14 00 27.8 -3.8**
	comp=N,407nm,0.6s				
CDF	**Champ du Feu**	**4.71 337**	*e*P	**Pn**	**13 59 38.1 +0.3**
CDF			*e*Sn	**Sn**	**14 00 28.3 -4.4**
	comp=N,127nm,0.5s				
MOA	**Molln**	**4.74 37**	*i* Pn	**Pn**	**13 59 39.1 +0.9**
	comp=N,4.4nm,0.2s,SNR=12				
MOA			*e*Sn	**Sn**	**14 00 35.8 +2.5**
	comp=N,31nm,0.5s				
ARSA	**Arzberg**	**4.94 49**	*i* Pn	**Pn**	**13 59 41.3 +0.4**
	comp=N,5.8nm,0.2s,SNR=11				
MGRS	**Mrkonjic Grad**	**5.04 84**	*e*Pn	**Pn**	**13 59 41.7 -0.7**
SMF	**Signal de Mont**	**5.06 302**	*e*P	**Pn**	**13 59 44.3 +1.7**
SMF			*e*Sn	**Sn**	**14 00 37.7 -3.6**
	comp=N,85nm,0.6s				
BLY	**Banja Luka**	**5.13 81**	*e*Pn	**Pn**	**13 59 44.0 +0.4**
BEHE	**Becsehely**	**5.28 61**	EPn	**Pb**	**14 00 00.1 +1.2**
GERES	**GERESS Array B**	**5.35 27**	Pn	**Pn**	**13 59 46.0 -0.6**
	comp=N,2.6nm,0.3s,baz=199,slow=12,SNR=37				
GERES			Sn	**Sn**	**14 00 45.6 -2.8**
	comp=N,5.0nm,0.3s,baz=202,slow=23,SNR=7.1				
GERES			Lg	Lg	14 01 14.0
	comp=N,0.8nm,0.3s,baz=210,slow=27,SNR=2.3				
GERES			LR	LR	14 01 50.4
	comp=N,29nm,20.9s,baz=236,slow=38				
PAGF	**Fort de Pagny**	**5.36 327**	*e*P	**Pn**	**13 59 49.2 +2.5**
	baz=145				
PAGF			*e*Sn	**Sn**	**14 00 44.1 -4.4**
	comp=N,163nm,0.5s				
LOR	**Lormes**	**5.37 308**	*e*P	**Pn**	**13 59 48.0 +1.2**
	baz=128				
LOR			*e*Sn	**Sn**	**14 00 44.9 -4.0**
	comp=N,54nm,0.4s				
SFTF	**Sexfontaines**	**5.37 321**	*e*P	**Pn**	**13 59 48.8 +1.9**
	baz=139				
SFTF			*e*Sn	**Sn**	**14 00 44.9 -4.1**
	comp=N,124nm,0.7s				
AVF	**Avril sur Loir**	**5.43 302**	*e*P	**Pn**	**13 59 49.3 +1.7**
AVF			*e*Sn	**Sn**	**14 00 46.1 -4.2**
	comp=N,52nm,0.7s				
SSF	**Saint Saulge**	**5.46 305**	*e*P	**Pn**	**13 59 50.0 +1.9**
SSF			*e*Sn	**Sn**	**14 00 47.3 -3.9**
	comp=N,31nm,0.5s				
CONA	**Conrad Observa**	**5.54 45**	*i* Pn	**Pn**	**13 59 49.2 -0.1**
	comp=N,12nm,0.4s,SNR=19				
CONA			*e*Sn	**Sn**	**14 00 54.0 +0.7**
	comp=N,40nm,0.6s				
KHC	**Kasperske Hory**	**5.56 24**	*e*PN	**Pn**	**13 59 48.7 -0.8**
KHC			*e*SN	**Sn**	**14 00 50.9 -2.7**
KHC			*ex*	x	14 01 19.0
KHC			AMS	AMS	14 02 20.0
	comp=N,200nm,14.9s				
MEZF	**Maizieres J'vi**	**5.59 323**	*e*P	**Pn**	**13 59 52.0 +2.1**
	baz=142				
MEZF			*e*Sn	**Sn**	**14 00 49.9 -4.4**
	comp=N,40nm,0.5s				
BGF	**Bois d'Agland**	**5.64 298**	*e*P	**Pn**	**13 59 51.7 +1.1**
BGF			*e*Sn	**Sn**	**14 00 51.8 -3.8**
	comp=N,112nm,0.5s				
STON	**Ston**	**5.69 100**	*e*Pn	**Pn**	**13 59 52.9 +1.7**
STON	**Ston**	**5.69 100**	*e*Pn	**Pn**	**13 59 50.6 -0.6**

MTLF	Montolieu	5.75	265	*e*Pn		Pn	13 59 52.7 +0.7
MTLF				*e*Sn		Sn	14 00 54.2 -3.9
comp=N,29nm,0.5s							
SOP	Sopron	5.76	50	EPn		Pn	13 59 53.0 +0.9
SOP				Sn		Sn	14 00 56.1 -2.3
CAF	Calviac	5.78	281	*e*P		Pn	13 59 53.2 +0.7
CAF				*e*Sn		Sn	14 00 54.4 -4.7
comp=N,23nm,0.7s							
TCF	Toulx Ste Croi	5.96	294	*e*P		Pn	13 59 58.3 +3.3
TCF				*e*Sn		Sn	14 00 59.7 -3.8
comp=N,15nm,0.4s							
HYF	Humbligny	6.08	304	*e*P		Pn	13 59 58.5 +1.9
HYF				*e*Sn		Sn	14 01 02.3 -4.1
TREB	Trebinje	6.19	100	*e*Pn		Pn	13 59 57.4 -0.7
RJF	Les Rejaudoux	6.21	284	*e*P		Pn	14 00 00.6 +2.2
RJF				*e*Sn		Sn	14 01 05.5 -4.1
comp=N,37nm,0.9s							
BRY	Bratogost	6.28	98	*e*Pn		Pn	14 00 00.3 +0.9
ZST	Bratislava	6.36	48	*e*PN		Pn	14 00 00.3 -0.1
ZST				*e*SN		Sn	14 01 11.8 -1.4
HCY	Herceg Novi	6.37	102	*e*Pn		Pn	14 00 00.1 -0.5
HAPS	Han Pijesak,BI	6.39	87	*e*Pn		Pn	14 00 00.3 -0.7
MORH	Mrgy, Hungar	6.41	68	EPn		Pg	14 00 33.1 +4.0
UPM	Unac-Piva	6.47	95	*e*Pn		Pn	14 00 03.0 +0.8
MODS	Modra-Piesok	6.56	47	*e*PN		Pn	14 00 02.8 -0.4
MODS				*e*SN		Sn	14 01 14.1 -4.1
CSKK	Cskako	6.58	58	EPn		Pn	14 00 03.1 -0.4
CSKK				Sn		Sn	14 01 14.0 -4.7
KRUC	Moravsky	6.58	39	*e*PN		Pn	14 00 02.5 -1.0
KRUC				*e*SN		Sn	14 01 15.7 -3.1
PRU	Pruhonice	6.61	26	*e*PN		Pn	14 00 02.8 -1.1
PRU				AMS		AMS	14 02 50.0
comp=N,300nm,8.3s							
GOPC	GO Pecny, Ondr	6.63	27	AMS		AMS	14 03 00.0
comp=N,200nm,9.6s							
LFF	La Frestale	6.72	280	*e*P		Pn	14 00 09.0 +3.6
BBLS	Lazići	6.74	89	*e*Pn		Pn	14 00 05.9 +0.2
VRAC	Vranov	6.85	39	Pn		Pn	14 00 05.4 -1.8
comp=N,0.8nm,0.3s,baz=237,slow=17,SNR=3.6							
VRAC				Sn		Sn	14 01 24.4 -1.0
comp=N,0.7nm,0.3s,baz=301,slow=18,SNR=4.1							
VRAC				Lg		Lg	14 02 04.7
comp=N,0.6nm,0.3s,baz=306,slow=23,SNR=6.4							
VRAC				LR		LR	14 03 29.7
comp=N,100nm,18.9s,baz=242,slow=44							
VRAC	Vranov	6.85	39	*e*PN		Pn	14 00 06.1 -1.1
PDG	Podgorica	6.91	101	⇑/*i*P		Pn	14 00 08.8 +0.8
PDG	Podgorica	6.91	101	*e*Pn		Pn	14 00 09.9 +1.9
DRME	Dracevica, Mon	6.94	103	*e*Pn		Pn	14 00 08.0 -0.4
GIVF	Givet	6.97	331	*e*P		Pn	14 00 11.7 +2.9
GIVF				*e*Sn		Sn	14 01 22.6 -5.6
comp=N,36nm,0.6s							
DOU	Dourbes	7.04	330	⇑Pn		Pn	14 00 11.8 +2.0
DOU				⇓Sn		Sn	14 01 28.2 -1.9
comp=E,20nm,0.0s							
JAVC	Velka Javorina	7.06	45	*e*PN		Pn	14 00 10.6 +0.4
DIVS	Divibare	7.14	87	*e*Pn		Pn	14 00 10.1 -1.2
EPF	Esparros	7.15	265	*e*Pn		Pn	14 00 13.1 +1.7
EPF				*e*Sn		Sn	14 01 29.3 -3.6
BAIF	Baives	7.16	328	*e*P		Pn	14 00 14.8 +3.4
BAIF				*e*Sn		Sn	14 01 28.1 -4.8
comp=E,42nm,0.8s							
BRG	Berggiesshubel	7.24	20	PN		Pn	14 00 12.0 -0.5
BRG				SN		Sn	14 01 33.0 -2.0
BRG				SG		Sg	14 02 23.5 +4.8
comp=E,21nm,1.1s							
comp=N,151nm,10.9s							
comp=E,143nm,7.5s							
comp=Z,227nm,13.0s							
VYHS	Vyhne	7.48	51	*e*PN		Pn	14 00 15.6 -0.2
VYHS				*e*SN		Sn	14 01 37.8 -3.0
DPC	Dobruska-Polom	7.54	32	*e*PN		Pn	14 00 15.0 -1.7
DPC				AMS		AMS	14 03 20.0
comp=Z,200nm,11.7s							
UPC	Upice	7.55	30	*e*PN		Pn	14 00 15.6 -1.2
MORC	Moravsky Berou	7.62	39	⇑/*i*P		Pn	14 00 18.6 +0.8
MORC	Moravsky Berou	7.62	39	*e*PN		Pn	14 00 16.4 -1.4
OSTC	Ostas	7.67	31	AMS		AMS	14 03 30.0
comp=Z,200nm,10.7s							
PSZ	Piszkesteto	7.82	58	EPn		Pn	14 00 23.0 +2.5
PSZ				Sn		Sn	14 01 49.0 -0.2
ETSF	Etsaut	7.83	265	*e*Pn		Pn	14 00 24.9 +4.3
ETSF				*e*Sn		Sn	14 01 47.6 -1.9
SJPF	Ste Jean	8.26	267	*e*P		Pn	14 00 28.2 +1.7
MDVR	Moldovita	8.36	81	⇑/*i*P		Pn	14 00 28.3 +0.4
KEST	Kesra	8.40	184	Pn		Pn	14 00 29.6 +1.0
baz=0.0,slow=5.1,SNR=2.0							
GRR	Gorron	8.69	303	*e*P		Pn	14 00 32.6 +0.2
HERR	Herculane	8.86	81	⇑/*i*P		Pn	14 00 36.8 +2.1
DRGR		9.28	69	⇑/*i*P		Pn	14 00 42.7 +2.2
VTS	Vitosha	9.71	94	⇑/*i*P		Pn	14 00 47.2 +0.7
BURAR	Bucovina Array	11.12	66	⇓/*i*P		Pn	14 01 09.0 +3.2
ESDC	Sonseca Array	11.36	252	Pn		Pn	14 01 10.0 +0.9
comp=Z,0.5nm,0.3s,baz=65,slow=13,SNR=6.1							
EKA	Eskdalemuir Ar	14.08	327	Pn		Pn	14 01 44.3 -1.8
baz=144,slow=15,SNR=3.5							
EKA				Sn		Sn	14 04 17.0 -5.4
baz=137,slow=25,SNR=5.5							
IDI	Anoyia	14.40	123	Pn		Pn	14 01 52.0 +1.3
comp=Z,0.2nm,0.3s,baz=320,slow=17,SNR=1.9							
AKASG	Malin Array Be	14.52	56	Pn		Pn	14 01 51.7 -0.4
comp=Z,0.4nm,0.3s,baz=250,slow=16,SNR=2.5							
MDT	Midelt	16.09	230	LR		LR	14 07 11.5
comp=Z,54nm,20.1s,baz=338,slow=33							
HFS	Hagfors	16.18	7	Pn		Pn	14 02 15.4 +1.4
comp=Z,0.1nm,0.3s,baz=184,slow=17,SNR=4.7							
HFS				LR		LR	14 08 10.0
comp=Z,55nm,18.8s,baz=134,slow=36							
NB2	NORSAR Subarra	16.96	2	P		P	14 02 26.5 +0.7
comp=Z,4.8nm,1.1s,baz=183,slow=11							
NOA	NORSAR Array B	16.96	2	Pn		P	14 02 26.3 +0.4
comp=Z,0.0nm,0.3s,baz=184,slow=12,SNR=2.9							
NOA				LR		LR	14 10 01.6
comp=Z,39nm,18.9s,baz=190,slow=41							
BRTR	Keskin Array B	18.06	96	P		P	14 02 39.4 +1.1
comp=Z,0.1nm,0.3s,baz=305,slow=13,SNR=3.2							
FINES	FINESS Array B	19.77	23	P		P	14 02 56.5 -0.1
comp=Z,0.2nm,0.3s,baz=200,slow=9.9,SNR=8.9							
FINES				LR		LR	14 10 55.3
comp=Z,79nm,18.0s,baz=236,slow=38							
TORD	Torodi Ar. Bea	31.70	196	P		P	14 04 48.7 -1.9
comp=Z,0.5nm,0.9s,baz=9.2,slow=9.6,SNR=2.9							
AKTO	Aktyubinsk	32.66	62	P		P	14 04 59.0 +0.2
comp=Z,0.6nm,0.6s,baz=248,slow=11,SNR=3.4							
NRIK	Noril'sk	45.25	29	LR		LR	14 28 28.7
comp=Z,31nm,18.1s,baz=55,slow=40							
KURBB	Kurchatov Arra	45.31	56	P		P	14 06 44.0 -0.5
comp=Z,0.6nm,0.8s,baz=304,slow=8.5,SNR=5.1							
ZALV	Zalesovo Beam	47.81	50	LR		LR	14 29 51.5
comp=Z,28nm,20.3s,baz=252,slow=39							
MKAR	Makanchi Array	49.06	60	P		P	14 07 14.2 +0.3
comp=Z,0.7nm,0.7s,baz=289,slow=6.6,SNR=8.0							
SONM	Songino Array	62.66	49	P		P	14 08 52.3 +0.8
comp=Z,1.5nm,1.0s,baz=295,slow=7.8,SNR=5.8							
INK	Inuvik	64.62	346	P		P	14 09 03.6 -0.3
comp=Z,0.5nm,0.7s,baz=40,slow=6.2,SNR=3.2							
YKA	Yellowknife Ar	64.90	335	P		P	14 09 05.3 -0.5
comp=Z,0.4nm,0.6s,baz=45,slow=6.0,SNR=7.7							
ILAR	Eielson Array	69.95	350	P		P	14 09 38.1 +0.4
comp=Z,0.4nm,0.8s,baz=14,slow=4.4,SNR=4.5							
PETK	Petropavlovsk-	79.23	19	LR		LR	14 50 29.5
comp=Z,40nm,18.2s,baz=136,slow=39							

*ISK **21** 14:02:31.4, 37.°23N×28.°20E, h5km, ML2.5/10*
*DDA **21** 14:02:32.0, 37.°26N×28.°16E, h7km±3km, ML2.7*
ISC 21 14:02:32.0±1.0, 37.°24N±0.°03×28.°17E±0.°03, h6km±9km, n22, σ1°14/32, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YER	Yerkesik	0.14	141		PG		Pg	14 02 34.3	-0.6
YER					SG		Sg	14 02 36.5	-0.4
AYDN	Tasoluk	0.48	331	*i*P			Pb	14 02 41.9	-0.9
AYDN				*i*S			Sg	14 02 48.4	+1.0
AYDN				IAML_P					
comp=Z,7μm,0.2s									
TURN	Turunc	0.51	137		PG		Pg	14 02 40.5	-1.2
TURN					SG		Sg	14 02 48.9	+0.6
TURN	Turunc	0.51	137	*i*P			Pg	14 02 41.0	-0.8
TURN				*i*S			Sg	14 02 49.0	+0.7
TURN				IAML_P					
comp=Z,5μm,0.5s									
MRSB	Marmaris-Mugla	0.53	178		PG		Pg	14 02 42.6	+0.5
BBRN	Bozburun-Marma	0.57	189		PG		Pb	14 02 43.5	-0.8
DALY	Dalyan (Mula)	0.57	138		PG		Pg	14 02 42.4	-0.6
BDRM	Kayabasi	0.61	253	*i*P			Pg	14 02 43.2	-0.5
BDRM				*i*S			Sb	14 02 53.9	+0.1
BDRM				IAML_P					
comp=Z,2μm,0.4s									
DATC	Datca-Mugla	0.63	220		PG		Pb	14 02 44.9	-0.5
DAT	Datca	0.70	223		PG		Pb	14 02 46.1	-0.5
DAT	Datca	0.70	223	*i*P			Pb	14 02 46.2	-0.5
DAT				*i*S			Sn	14 02 59.1	-0.5
BODT	Bodrum	0.71	255		PG		Pb	14 02 46.5	-0.2
GCAM	G?zelcaml?	0.87	302		PG		Pb	14 02 49.8	+0.3
GCAM	G?zelcaml?	0.87	302	*i*P			Pb	14 02 49.9	+0.4
GCAM				*i*S			Sn	14 03 03.6	-0.1
GCAM				IAML_P					
comp=Z,929nm,0.2s									
FETY	Fethiye	0.95	129		PG		Pb	14 02 50.4	-0.4
ARG	Arkhangelos	1.03	182		PG		Pb	14 02 51.9	-0.2
MANT	Manisa	1.28	14	*i*P			Pg	14 02 56.2	-0.3
MANT				*i*S			Sn	14 03 13.6	-0.6
MANT				IAML_P					
comp=Z,675nm,0.3s									
KULA	Kula-Manisa	1.33	17		PN		Pg	14 02 58.0	+0.6
AKAS	Kas	1.53	131		PN		Pb	14 03 00.6	-0.2
AKAS	Kas	1.53	131	*i*P			Pg	14 03 02.1	+0.8
AKAS				*i*S			Sg	14 03 26.2	+5.0
AKAS				IAML_P					
comp=Z,3μm,0.4s									
KHAL	Karahalli	1.54	43	*i*P			Pn	14 02 59.5	-0.5
KHAL				*i*S			Sg	14 03 22.0	+0.7
KORT	Korkueli	1.76	97		PN		Pb	14 03 03.9	-0.8

*IDC **21** 14:08:41.8±0.5, 15.°78S×172.°75W, h0km, mb4.5/15, mb1 4.8/16, mb1mx4.5/35, mbtmp4.6/16, ML3.9/1, MS3.9/18, Ms1 3.9/18, ms1mx3.8/22, Error ellipse: s-maj=23.0km s-min=13.8km az=133.0*
*ISCJB **21** 14:08:46.0±0.2, 15.°64S±0.°05×172.°90W±0.°05, h35km, mb4.9/56, MS4.0/22, Error ellipse: s-maj=8.8km s-min=4.0km az=44.2*
*NEIC **21** 14:08:47.5±3.0, 15.°72S×172.°77W, h35km, mb4.9/71, Error ellipse: s-maj=18.4km s-min=16.5km az=59.0*
NEIC Felt at Afono, American Samoa.
*GCMT **21** 14:08:53.5±0.3, 15.°64S±0.°02×172.°46W±0.°02, h48km±2km, MW5.0/76, Moment Tensor Solution. s25,c33; s76,c107; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.98±.21; Mθθ3.43±.13; Mφφ-1.46±.15; Mrθ-1.27±.12; Mφθ-0.81±.12; Mφr1.99±.12; Best double couple: M0 3.88300×10^16 NP1:φs131.00000°, δ70.00000°, λ-52.00000°. NP2: φs245.00000°, δ43.00000°, λ-149.00000°. Principal axes: T 4.0120, Plg16.0000°, Azm194.0000°; N -0.2680, Plg36.0000°, Azm296.0000°; P -3.7540, Plg50.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 14:08:47.0±0.3, 15.°75S±0.°06×172.°74W±0.°06, h35km, n196, σ1°33/180, mb4.9/56, MS4.0/22, 1C-1D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIUE	Niue	4.26	141	*e*Pn			Pn	14 09 48.6	-0.8
NIUE				*e*Sn			Sn	14 10 34.5	-3.5
FUNA	Funafuti	10.66	311	*e*Pn			Pn	14 11 18.2	+0.9
FUNA				*e*Sn			Sn	14 13 09.8	-5.8
KNTN	Kanton	12.93	5	*e*Pn			Pn	14 11 45.9	-2.5
RAR	Rarotonga	13.44	116	Pn			Pn	14 11 52.8	-2.5
6.7nm,0.3s,baz=236,slow=6.2,SNR=10.0									
RAR				Sn			Sn	14 14 07.7	-16
2.1nm,0.3s,baz=174,slow=18,SNR=3.5									
RAR				LR			LR	14 15 49.8	
comp=Z,400nm,20.1s,baz=307,slow=32									
RAR	Rarotonga	13.44	116	*e*Pn			Pn	14 11 51.6	-3.7
MARNC	Mare, Loyalty	19.09	250	*e*P			Pn	14 13 08.3	+0.4
241nm,1.0s									
OUENC	Ouen Island, N	20.40	248	*e*P			Pn	14 13 22.8	-0.5
27nm,0.9s									
DZM	Mont Dzumac	20.67	249	*e*LQ			LQ	14 17 35.2	
1μm,28.0s									
DZM				*e*LR			LR	14 18 26.8	
comp=Z,2μm,28.0s									
DZM	Mont Dzumac	20.67	249	P			P	14 13 23.3	-0.8
8.8nm,0.7s,baz=72,slow=9.6,SNR=2.9									
DZM	Mont Dzumac	20.67	249	*e*P			P	14 13 23.3	-0.8
29nm,1.0s									
PAE	Paea	22.26	98	*e*T			T	14 36 31.1	
5.4nm,0.3s									
PPT	Papeete	22.26	98	LR			LR	14 19 51.6	
comp=Z,227nm,19.4s,baz=196,slow=30									
PPT2	Papeete2	22.26	98	*e*LQ			LQ	14 18 04.2	
608nm,26.2s									
PPT2				*e*LR			LR	14 18 45.8	
comp=Z,1μm,27.2s									
PPT2	Papeete2	22.26	98	*e*T			T	14 36 31.8	
8.4nm,0.3s									
TIAR	Tiarei	22.48	98	*e*T			T	14 36 47.6	
4.6nm,0.3s									
TVO	Taravao	22.57	98	*e*T			T	14 36 54.9	
4.1nm,0.3s									
OUZ	Omahuta	22.94	210	*e*P			P	14 13 48.8	+0.6
104nm,1.1s									
MXZ	Makaoa Point	23.13	198	*e*P			P	14 13 54.0	+3.9
315nm,1.4s									
TBI	Tubuai	23.18	113	*e*LQ			LQ	14 18 23.0	
711nm,30.0s									
TBI				*e*LR			LR	14 19 16.9	
comp=Z,1μm,27.8s,baz=289									
URZ	Urewera	24.15	200	P			P	14 14 00.1	+0.3
25nm,0.4s,baz=307,slow=4.8,SNR=29									
URZ				S			S	14 18 15.0	-0.4
4.6nm,0.5s,baz=247,slow=18,SNR=6.7									
URZ				LR			LR	14 21 53.7	
comp=Z,438nm,21.8s,baz=30,slow=33									
URZ	Urewera	24.15	200	*e*P			P	14 14 01.2	+1.4
50nm,0.5s									
BKZ	Black Stump Fm	25.17	200	*e*P			P	14 14 10.2	+1.0
54nm,1.3s									
HIZ	Hauiti	25.18	203	*e*P			P	14 14 12.6	+3.4
196nm,1.3s									
BFZ	Birch Farm	26.63	199	*e*P			P	14 14 23.2	+0.9
43nm,0.9s									
HNR	Honiara	27.37	280	LR			LR	14 24 00.2	
comp=Z,428nm,21.0s,baz=127,slow=34									
HNR	Honiara	27.37	280	*e*P			P	14 14 27.9	-1.3
33nm,0.9s									
THZ	Tophouse	28.74	203	*e*P			P	14 14 44.3	+3.1
47nm,1.3s									
LTZ	Lake Taylor	29.85	202	*e*P			P	14 14 53.0	+1.9
51nm,1.1s									
RPZ	Rata Peaks	31.11	203	P			P	14 15 02.0	-0.1
13nm,1.0s,baz=135,slow=4.3,SNR=3.8									
RPZ	Rata Peaks	31.11	203	*e*P			P	14 15 03.3	+1.2
154nm,1.5s									
FOZ	Fox Glacier	31.44	205	*e*P			P	14 15 06.3	+1.3
94nm,1.4s									
TAOE	Nuku Hiva Isla	32.53	82	*e*LR			LR	14 23 25.6	
comp=Z,756nm,29.3s									
WKZ	Wanaka	32.83	204	*e*P			P	14 15 18.4	+1.1
70nm,1.4s									
MLZ	Mavora Lakes	33.64	205	*e*P			P	14 15 25.6	+1.3
28nm,1.0s									
DCZ	Deep Cove	34.11	206	*e*P			P	14 15 31.4	+3.0
28nm,0.8s									
WHZ	Wether Hill Ro	34.14	204	*e*P			P	14 15 31.3	+2.6
46nm,0.6s									
EIDS	Eidsvold	35.11	248	*e*P			P	14 15 35.6	-1.7
17nm,1.4s									
ARMA	Armidale	35.72	240	*e*P			P	14 15 41.1	-1.5
18nm,1.2s									
CAN	Canberra	39.33	233	*e*P			P	14 16 10.1	-3.0
36nm,1.4s									
H11S2	WAKE ISLAND Hy	39.59	328	T			T	14 57 58.7	
H11S3	WAKE ISLAND Hy	39.60	328	T			T	14 58 02.6	
H11S1	WAKE ISLAND Hy	39.61	328	T			T	14 57 59.5	
H11N3	WAKE ISLAND Hy	40.53	330	T			T	14 59 12.6	
baz=150,slow=76,SNR=21									
H11N1	WAKE ISLAND Hy	40.53	330	T			T	14 59 10.3	
baz=150,slow=76,SNR=77									
H11N2	WAKE ISLAND Hy	40.55	330	T			T	14 59 14.0	
baz=150,slow=76,SNR=18									
TOO	Toolangi	42.75	231	*e*P			P	14 16 41.1	0.0
16nm,1.3s									
STKA	Stephens Creek	44.42	240	P			P	14 16 54.0	-0.7
6.6nm,0.9s,baz=81,slow=12,SNR=8.7									
STKA				LR			LR	14 33 12.3	
comp=Z,144nm,19.8s,baz=46,slow=33									
STKA	Stephens Creek	44.42	240	*e*P			P	14 16 54.6	-0.1
2.1nm,0.9s									
BBOO	Buckleboo	49.20	240	*e*P			P	14 17 31.9	-0.1
22nm,1.1s									
WC3	Warramunga Arr	50.36	257	*e*P			P	14 17 40.4	-0.7
18nm,1.4s									
WB2	Warramunga Arr	50.38	257	*e*P			P	14 17 40.3	-0.9
6.7nm,0.8s									
WRAB	Tennant Creek	50.38	257	*e*P			P	14 17 40.5	-0.7
12nm,1.4s									
WRA	Warramunga Arr	50.39	257	P			P	14 17 39.9	-1.4
1.4nm,0.4s,baz=89,slow=7.3,SNR=34									
ASAR	Alice Springs	50.62	252	P			P	14 17 42.0	-1.0
14nm,0.9s,baz=86,slow=7.8,SNR=118									
ASAR				LR			LR	14 37 54.8	
comp=Z,253nm,20.0s,baz=96,slow=35									
FORT	Forrest	55.83	243	*e*P			P	14 18 20.4	-0.8
40nm,0.9s									
FITZ	Fitzroy Crossi	58.77	258	*e*P			P	14 18 38.5	-3.5
26nm,1.5s									
SBA	Scott Base	62.96	185	*e*P			P	14 19 13.1	+3.5
7.2nm,1.0s									
VNDA	Vanda	63.10	186	P			P	14 19 12.9	+2.3
2.7nm,0.9s,baz=360,slow=6.9,SNR=12									
VNDA				LR			LR	14 42 11.6	
comp=Z,37nm,21.4s,baz=358,slow=32									
VNDA	Vanda	63.10	186	*e*P			P	14 19 12.5	+2.0
PSA00	Pilbara Seismi	63.72	253	*e*P			P	14 19 15.5	-0.1
50nm,1.5s									
PSAA2	Pilbara Seismi	63.72	253	*e*P			P	14 19 14.4	-1.2
28nm,1.3s									
NWAO	Narrogin (SRO)	65.01	241	*e*P			P	14 19 24.2	+0.3
34nm,1.4s									
MJAR	Matsushiro Arr	69.61	320	P			P	14 19 53.4	+0.5
0.6nm,0.6s,baz=164,slow=8.1,SNR=2.8									
MJAR				LR			LR	14 45 11.5	
comp=Z,53nm,21.5s,baz=125,slow=32									
MAJO	Matsushiro	69.62	320	*e*P			P	14 19 53.4	+0.5
BFSC	Mount Baldy Ra	72.20	46	P			P	14 20 08.8	0.0
baz=236									
MONP2	Monument Peak	72.32	47	P			P	14 20 10.2	+0.6
baz=237									
EDW2	Edwards Air Fo	72.33	45	P			P	14 20 09.8	+0.4
baz=236									
IKP	In-Ko-Pah, Jac	72.42	48	P			P	14 20 10.5	+0.5
baz=237									
ISA	Isabella, Lake	72.45	44	P			P	14 20 10.8	+0.6
baz=235									
O02D	Mt. Diablo Mer	72.45	38	P			P	14 20 09.8	-0.3
baz=231									
PFO	Pinyon Flats O	72.69	47	P			P	14 20 11.7	0.0
baz=237									
LRMC	Laurel Mtn Rad	72.88	44	P			P	14 20 13.5	+0.7
baz=236									
N02D	Trinity Center	73.01	37	P			P	14 20 13.3	-0.1
baz=230									
O03E	Paynes Creek	73.11	38	P			P	14 20 14.4	+0.4
baz=231									
PETK	Petropavlovsk-	73.15	342	P			P	14 20 15.6	+1.7
2.5nm,0.6s,baz=122,slow=7.5,SNR=3.1									
PEA1	Petropavlovsk-	73.16	342	*e*P			P	14 20 15.6	+1.7
M02C	Callahan	73.19	37	P			P	14 20 14.8	+0.4
baz=230									
BELC	Belle Mtn. Jos	73.22	47	P			P	14 20 15.6	+0.7
baz=237									
L02E	Cave Junction	73.25	36	P			P	14 20 15.7	+1.0
baz=229									
MPMC	Manual Prospec	73.33	44	P			P	14 20 16.6	+1.0
baz=236									
GSC	Goldstone, Bar	73.37	45	P			P	14 20 16.4	+0.7
baz=236									
HEC	Hector,Ludlow	73.44	46	P			P	14 20 16.7	+0.7
baz=237									
WAKR	Walker	73.48	41	*e*P			P	14 20 17.8	+1.4
6.6nm,0.9s									
YBH	Yreka Blue Hor	73.49	37	*e*P			P	14 20 17.6	+1.4
14nm,1.2s									
GLA	Glamis	73.54	48	P			P	14 20 17.7	+1.1
baz=238									
K02D	Willamette Mer	73.57	36	P			P	14 20 17.6	+1.0
baz=229									
J01E	Myrtle Point	73.72	35	P			P	14 20 18.7	+1.3
baz=229									
GMRC	Granite Mounta	73.88	46	P			P	14 20 19.0	+0.3
baz=237									
IRM	Iron Mountain	73.90	47	P			P	14 20 19.5	+0.8
baz=238									
GRAC	Grapevine Rang	73.95	43	P			P	14 20 19.9	+0.9
baz=236									
FURC	Furnace Creek,	73.98	44	P			P	14 20 20.2	+1.2
baz=236									
M04C	Macdoel	74.02	37	P			P	14 20 20.2	+0.8
baz=231									
L04D	Klamath Falls	74.03	37	P			P	14 20 20.4	+1.0
baz=230									
TUQ	Turquoise Moun	74.05	45	P			P	14 20 20.2	+0.5
baz=237									
SHOC	Shoshone

12nm,0.9s
HLID Hailey 79.49 39 P **P 14 20 51.3 +1.0**
baz=236
MNTX Cornudas Mount 79.92 53 P **P 14 20 53.5 +0.9**
baz=244,SNR=11
TXAR Lajitas Array 80.27 56 P **P 14 20 55.9 +1.2**
6.8nm,1.1s,baz=224,slow=5.2,SNR=28
TXAR LR LR 14 48 25.6
comp=Z,100nm,21.4s,baz=0.0,slow=30
TASM ASL Pad, Albuq 80.53 50 P **P 14 20 56.8 +0.7**
baz=243
TASM ASL Pad, Albuq 80.53 50 P **P 14 20 56.6 +0.5**
baz=243,SNR=5.7
ANMO Albuquerque 80.53 50 P **P 14 20 56.7 +0.6**
baz=243
NEW Newport 80.63 34 P **P 14 20 56.1 0.0**
baz=234,SNR=6.1
NJ2 Nanjing 80.88 307 *e*P **P 14 20 58.3 +0.5**
NJ2 pmax pmax
comp=Z,12nm,0.7s
S22A 4UR Ranch, Cre 81.53 47 P **P 14 21 01.4 -0.1**
baz=243,SNR=13
MSO Missoula 81.58 36 P **P 14 21 01.3 0.0**
baz=236,SNR=5.7
O20A White River Ci 81.68 44 P **P 14 21 02.6 +0.5**
baz=241
BW06 Boulder Array 82.09 42 P **P 14 21 04.5 +0.2**
baz=240,SNR=11
PDAR Pinedale Array 82.09 42 P **P 14 21 04.6 +0.3**
5.5nm,0.8s,baz=217,slow=3.2,SNR=39
PDAR LR LR 14 51 19.4
comp=Z,149nm,19.9s,baz=244,slow=31
BOZ Bozeman (W) 82.26 38 P **P 14 21 06.0 +1.0**
baz=238,SNR=13
SDCO Great Sand Dun 82.47 48 P **P 14 21 06.9 +0.5**
baz=244,SNR=7.3
TCOL CIGO, UAF Yank 82.58 10 P **P 14 21 06.2 +0.2**
baz=204
ILAR Eielson Array 82.66 11 P **P 14 21 06.0 -0.5**
3.6nm,0.7s,baz=227,slow=6.1,SNR=55
ILAR LR LR 14 55 45.6
comp=Z,50nm,18.1s,baz=198,slow=34
MSTX Muleshoe 82.86 52 P **P 14 21 08.6 +0.3**
baz=246
POKR Poker Plat Res 82.88 10 P **P 14 21 07.8 +0.2**
baz=204
T25A Trinidad 82.99 48 P **P 14 21 09.6 +0.6**
baz=244
Q24A Divide 83.26 47 P **P 14 21 11.1 +0.5**
baz=244
RLMT Red Lodge 83.45 40 P **P 14 21 12.2 +1.0**
baz=240,SNR=8.0
N23A Red Feather La 83.58 45 P **P 14 21 12.7 +0.7**
baz=243,SNR=8.0
JCT Junction City 83.81 56 P **P 14 21 14.0 +0.8**
baz=248
K22A Casper 84.00 43 P **P 14 21 14.2 +0.2**
baz=242
AMTX Amarillo 84.06 51 P **P 14 21 14.6 +0.1**
baz=246
EGMT Eagleton 84.62 37 P **P 14 21 17.4 +0.5**
baz=240
ABTX Abilene, Hawle 84.74 54 P **P 14 21 18.4 +0.5**
baz=248
TOLK Toolik Lake Re 85.79 8 P **P 14 21 22.9 +0.6**
baz=202
EPYK Eagle Plains 86.15 14 P **P 14 21 24.5 +0.4**
baz=215
WMOK Wichita Mounta 86.20 52 P **P 14 21 25.1 0.0**
baz=248
RSSD Black Hills 86.28 42 P **P 14 21 25.3 -0.2**
baz=244
MAW Mawson 87.67 198 P **P 14 21 32.0 +0.4**
1.6nm,0.5s,baz=120,slow=8.1,SNR=2.6
MAW LR LR 14 59 33.8
comp=Z,102nm,19.4s,baz=118,slow=35
MAW Mawson 87.67 198 *e*P **P 14 21 32.0 +0.4**
1.3nm,1.1s
INK Inuvik 88.45 14 P **P 14 21 35.0 -0.1**
2.5nm,0.8s,baz=198,slow=4.4,SNR=9.2
HHC Hu-ho-hao-te 89.73 313 *e*P **P 14 21 43.3 +1.4**
HHC pmax pmax
comp=Z,10.0nm,1.2s
HHC pmax pmax
comp=Z,31nm,6.5s
MIAR Mount Ida 90.16 54 P **P 14 21 44.4 +0.5**
baz=251
YKA Yellowknife Ar 90.16 23 P **P 14 21 43.6 +0.4**
1.9nm,0.7s,baz=237,slow=4.8,SNR=28
YKA LR LR 14 54 42.8
comp=Z,10nm,20.8s,baz=237,slow=31
ECSD EROS Data Cent 91.05 45 P **P 14 21 48.7 +0.8**
baz=249
W41B Gary Mavity, V 91.39 54 P **P 14 21 50.4 +0.8**
baz=252
KMI Kunming 91.75 295 P **P 14 21 52.3 +0.5**
KMI pmax pmax
comp=Z,12nm,0.6s
CD2 Chengdu 92.54 301 P **P 14 21 53.4 -1.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CMAR Chiang Mai Arr 93.33 288 LR LR 14 56 57.8
comp=Z,16nm,21.0s,baz=154,slow=31
ULM Lac du Bonnet 93.80 39 LR LR 14 57 17.3
comp=Z,187nm,21.8s,baz=262,slow=31
LZH Lanzhou 93.94 306 *e*P **P 14 22 01.6 0.0**
LZH pP pP 14 22 10.3 -1.4
LZH sP sP 14 22 12.8 -2.5
LZH pmax pmax
comp=Z,18nm,1.0s
LZH LR LR
comp=N,320nm,15.0s
LZH LR LR
comp=E,300nm,14.2s
LZH LR LR
comp=Z,420nm,16.0s
G40A Rib Lake 95.89 45 P **P 14 22 10.8 +0.6**
baz=254
F40A Park Falls 96.12 44 P **P 14 22 11.5 +0.3**
baz=254
LPAZ La Paz 99.09 110 LR LR 14 59 43.2
comp=Z,44nm,18.0s,baz=248,slow=31
ROSC El Rosal 99.38 88 LR LR 14 57 35.6
comp=Z,38nm,19.2s,baz=158,slow=30
KSH Kashi 116.19 307 *e*PKP **PKiKP 14 27 31.8 +4.7**
ARA0 ARCESS Array S 125.04 352 *e*PKPdf **PKPdf 14 27 42.6 -0.4**
ARCES ARCESS Array B 125.04 352 PKP **PKPdf 14 27 42.6 -0.4**
1.3nm,0.7s,baz=33,slow=2.2,SNR=6.3
KOLS Kolonicke sedl 144.69 343 *e*PKP **PKPdf 14 28 19.7 -0.4**
BURAR Bucovina Array 144.92 339 ∥ *i*P **PKPdf 14 28 21.0 +0.4**
BIZ Bicaz 145.17 337 ∥ *i*P **PKPdf 14 28 21.7 +0.7**
KMBO Kilima Mbogo 145.96 243 PKPbc **PKPab 14 28 26.1 +1.2**
1.1nm,0.3s,baz=216,slow=14,SNR=4.7
VYHS Vyhne 145.98 346 *e*PKP **PKPab 14 28 23.7 +0.1**
MLR Muntele Rosu 146.44 336 PKPbc **PKPdf 14 28 22.3 -1.1**
1.3nm,0.4s,baz=122,slow=5.5,SNR=4.7
GERES GERESS Array B 146.57 352 PKPbc **PKPbc 14 28 24.7 -0.2**
1.0nm,0.6s,baz=35,slow=3.6,SNR=3.8
BR101 Keskin Array S 146.83 321 *e*PKPdf **PKPbc 14 28 26.1 +0.1**
BRTR Keskin Array B 146.83 321 PKPbc **PKPbc 14 28 26.1 +0.1**
3.5nm,0.9s,baz=99,slow=3.1,SNR=12
ASF Jabal al Asfar 148.51 307 PKPbc **PKPbc 14 28 30.7 0.0**
0.7nm,0.3s,baz=96,slow=6.0,SNR=4.4
MMAI Mount Meron Ar 149.28 309 PKPbc **PKiKP 14 28 33.6 -0.2**
4.2nm,0.7s,baz=98,slow=2.5,SNR=7.3
EIL Elat 151.04 303 PKPbc **PKPbc 14 28 36.2 -0.7**
5.4nm,0.9s,baz=45,slow=8.6,SNR=4.5
ESDC Sonseca Array 154.22 20 PKPbc **PKiKP 14 28 45.6 +1.8**
0.3nm,0.4s,baz=335,slow=5.7,SNR=3.4
ESDC PKPab **PKPab 14 28 57.9 +0.3**
0.3nm,0.3s,baz=328,slow=2.9,SNR=5.8
TOA1 Torodi Ar. Sit 174.02 115 *e*PKPdf **PKPdf 14 28 52.6 -1.2**
TOA1 *e*PKPab **PKPab 14 30 23.7 -1.3**
TORD Torodi Ar. Bea 174.02 115 PKP **PKPdf 14 28 52.6 -1.2**
1.1nm,0.9s,baz=260,slow=0.9,SNR=3.9
TORD PKPab **PKPab 14 30 23.7 -1.3**
1.8nm,0.9s,baz=275,slow=2.9,SNR=5.3

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*ROM **21** 14:10:36.0±0.2, 44°.190N±0°.007×10°.18E±0°.01, h10km, ML2.1/10, Error ellipse: s-maj=1.0km s-min=0.5km az=48.0*
*ISCJB **21** 14:10:36.0±0.3, 44°.17N±0°.04×10°.16E±0°.06, h18km±8km, Error ellipse: s-maj=8.6km s-min=4.0km az=44.8*
*GEN **21** 14:10:36.5, 44°.19N×10°.17E, h5km±3km, MI1.9*
*LDG **21** 14:10:36.6±0.1, 44°.18N×10°.16E, h2km, MI2.6/6, Error ellipse: s-maj=1.9km s-min=1.3km az=10.0*
ISC 21 14:10:35.7±0.8, **44°.18N**±0°.04×**10°.17E**±0°.03, **h16**km±6km, **n25**, σ0§50/38, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.15**	**97**	P	**Pg**	**14 10 40.0**	**+0.1**
VLC				S	**Sg**	**14 10 42.6**	**+0.1**
VLC				AML	AML		
	comp=E,768μm,0.2s						
VLC				AML	AML		
	comp=N,940μm,0.9s						
VLC				AML	AML		
	comp=E,814μm,0.2s						
VLC				AML	AML		
	comp=N,995μm,0.9s						
VLC				AML	AML		
	comp=E,768μm,0.2s						
VLC				AML	AML		
	comp=N,940μm,0.9s						
VLC				AML	AML		
	comp=E,814μm,0.2s						
VLC				AML	AML		
	comp=N,995μm,0.9s						
VLC				AML	AML		
	comp=E,814μm,0.2s						
VLC				AML	AML		
	comp=N,995μm,0.9s						
VLC				AML	AML		
	comp=N,940μm,0.9s						
VLC				AML	AML		
	comp=E,768μm,0.2s						
SARO	**Sassorosso**	**0.16**	**88**	P	**Pg**	**14 10 40.1**	**0.0**
SARO				S	**Sg**	**14 10 42.8**	**-0.1**
SARO	**Sassorosso**	**0.16**	**88**	P	**Pg**	**14 10 40.1**	**0.0**
SARO				S	**Sg**	**14 10 42.9**	**-0.1**
SARO				AML	AML		
	comp=E,808μm,0.4s						
SARO				AML	AML		
	comp=N,1595μm,0.5s						
SARO				AML	AML		
	comp=E,808μm,0.4s						
SARO				AML	AML		
	comp=N,1595μm,0.5s						
SARO				AML	AML		
	comp=N,1595μm,0.5s						
SARO				AML	AML		
	comp=E,808μm,0.4s						
SARO				AML	AML		
	comp=N,1595μm,0.5s						
SARO				AML	AML		
	comp=E,808μm,0.4s						
CARD	**Cardoso**	**0.27**	**124**	P	**Pb**	**14 10 42.2**	**0.0**
CARD				S	**Sb**	**14 10 46.2**	**-0.4**
CARD	**Cardoso**	**0.27**	**124**	P	**Pb**	**14 10 42.3**	**0.0**
CARD				S	**Sb**	**14 10 46.2**	**-0.4**
CARD				AML	AML		
	comp=E,2135μm,0.1s						
CARD				AML	AML		
	comp=N,2035μm,0.1s						
ERBM	**Eremo**	**0.30**	**35**	P	**Pb**	**14 10 42.5**	**-0.3**
ERBM				S	**Sb**	**14 10 47.4**	**-0.1**
ERBM				AML	AML		
	comp=E,910μm,1.6s						
ERBM				AML	AML		
	comp=N,902μm,1.2s						
ERBM				AML	AML		
	comp=E,1040μm,0.2s						
ERBM				AML	AML		
	comp=N,902μm,1.2s						
ERBM				AML	AML		
	comp=N,902μm,1.2s						
ERBM				AML	AML		
	comp=E,1040μm,0.2s						
ERBM				AML	AML		
	comp=N,902μm,1.2s						
ERBM				AML	AML		
	comp=E,1040μm,0.2s						
GRAM	**Graiana**	**0.32**	**346**	P	**Pg**	**14 10 42.7**	**+0.1**
GRAM				S	**Sg**	**14 10 47.3**	**+0.1**
GRAM	**Graiana**	**0.32**	**346**	P	**Pg**	**14 10 42.7**	**+0.1**
GRAM				S	**Sg**	**14 10 47.5**	**+0.2**
GRAM				AML	AML		
	comp=E,2105μm,0.2s						
GRAM				AML	AML		
	comp=N,2320μm,0.5s						
BDI	**Bagni Di Lucca**	**0.33**	**110**	P	**Pb**	**14 10 43.2**	**-0.1**
BDI				S	**Sb**	**14 10 48.0**	**-0.3**
BDI				AML	AML		
	comp=E,473μm,1.6s						
BDI				AML	AML		
	comp=N,460μm,0.9s						
BDI				AML	AML		
	comp=E,491μm,1.6s						
BDI				AML	AML		
	comp=N,510μm,0.5s						
BDI				AML	AML		
	comp=N,510μm,0.5s						
BDI				AML	AML		
	comp=N,460μm,0.9s						
BDI				AML	AML		
	comp=E,491μm,1.6s						
BDI				AML	AML		
	comp=E,473μm,1.6s						
MAIM	**Mastiano**	**0.35**	**139**	P	**Pb**	**14 10 43.6**	**+0.1**
MAIM				S	**Sb**	**14 10 48.9**	**+0.1**
MAIM	**Mastiano**	**0.35**	**139**	P	**Pb**	**14 10 43.7**	**+0.1**
MAIM				S	**Sb**	**14 10 49.0**	**+0.2**
MAIM				AML	AML		
	comp=E,702μm,0.4s						
MAIM				AML	AML		
	comp=N,580μm,0.6s						
MAIM				AML	AML		
	comp=E,702μm,0.4s						
MAIM				AML	AML		
	comp=N,579μm,0.6s						
MAIM				AML	AML		
	comp=N,579μm,0.6s						
MAIM				AML	AML		
	comp=E,702μm,0.4s						
MAIM				AML	AML		
	comp=N,579μm,0.6s						
MAIM				AML	AML		
	comp=E,702μm,0.4s						
MSSA	**Maissana**	**0.49**	**287**	P	**Pg**	**14 10 45.9**	**+0.3**
MSSA				S	**Sb**	**14 10 53.1**	**0.0**
MSSA				AML	AML		
	comp=E,164μm,0.3s						
MSSA				AML	AML		
	comp=N,120μm,0.7s						
MSSA				AML	AML		
	comp=E,164μm,0.3s						
MSSA				AML	AML		
	comp=N,120μm,0.7s						
MSSA				AML	AML		
	comp=E,164μm,0.3s						
MSSA				AML	AML		
	comp=N,120μm,0.7s						
MSSA				AML	AML		
	comp=E,164μm,0.3s						
MTCR	**Monte La Croce**	**0.61**	**104**	P	**Pg**	**14 10 48.7**	**+0.8**
CRMI	**Carmignano**	**0.69**	**124**	P	**Pn**	**14 10 50.6**	**-0.4**
CRMI				AML	AML		
	comp=E,101μm,0.4s						
CRMI				AML	AML		
	comp=N,84μm,1.1s						
CRMI				AML	AML		
	comp=E,101μm,0.4s						
CRMI				AML	AML		
	comp=N,84μm,1.1s						
CRMI				AML	AML		
	comp=E,101μm,0.4s						
CRMI				AML	AML		
	comp=N,84μm,1.1s						
GORR	**Gorreto**	**0.76**	**305**	P	**Pb**	**14 10 50.6**	**-0.1**
GORR				S	**Sg**	**14 11 01.7**	**+1.0**
SEI	**Scarperia**	**0.86**	**98**	AML	AML		
	comp=E,178μm,0.4s						
SEI				AML	AML		
	comp=E,178μm,0.4s						
SEI				AML	AML		
	comp=N,348μm,0.5s						
SEI				AML	AML		
	comp=E,178μm,0.4s						
SEI				AML	AML		
	comp=N,348μm,0.5s						
SEI				AML	AML		
	comp=N,348μm,0.5s						
TRIF	**Trifonti**	**1.19**	**153**	AML	AML		
	comp=N,76μm,0.9s						
TRIF				AML	AML		
	comp=E,53μm,1.3s						
TRIF				AML	AML		
	comp=N,76μm,0.9s						
TRIF				AML	AML		
	comp=N,76μm,0.9s						
TRIF				AML	AML		
	comp=E,53μm,1.3s						
TRIF				AML	AML		
	comp=E,53μm,1.3s						
MCIV	**Monte Civitell**	**1.77**	**141**	AML	AML		
	comp=N,335μm,0.1s						
MCIV				AML	AML		
	comp=E,445μm,0.1s						
MCIV				AML	AML		
	comp=N,335μm,0.1s						
MCIV				AML	AML		
	comp=E,445μm,0.1s						
MCIV				AML	AML		
	comp=N,335μm,0.1s						
MCIV				AML	AML		
	comp=E,445μm,0.1s						
PGF	**Pioggiola**	**1.84**	**208**	*e*Pn	**Pb**	**14 11 08.4**	**-0.7**
PGF				*e*Sn	**Sn**	**14 11 29.8**	**0.0**
	comp=E,6.4nm,0.2s						
SBF	**Sospel**	**2.00**	**262**	*e*Pn	**Pn**	**14 11 10.0**	**+1.1**
SBF				*e*Sn	**Sn**	**14 11 33.4**	**-0.3**
	comp=E,8.7nm,0.2s						
SSFR	**Montelago di S**	**2.03**	**111**	AML	AML		
	comp=N,173μm,1.4s						
SSFR				AML	AML		
	comp=E,445μm,0.2s						
SSFR				AML	AML		
	comp=N,173μm,1.4s						
SSFR				AML	AML		
	comp=E,445μm,0.2s						
SSFR				AML	AML		
	comp=N,173μm,1.4s						
SSFR				AML	AML		
	comp=E,445μm,0.2s						
MBDF	**Montbardon**	**2.50**	**284**	*e*Pn	**Pb**	**14 11 19.2**	**-1.1**
MBDF				*e*Sn	**Sn**	**14 11 46.4**	**+0.3**
	comp=E,4.4nm,0.3s						
FRF	**La Foret Royal**	**2.62**	**258**	*e*Pn	**Pn**	**14 11 18.0**	**+0.6**
FRF				*e*Sn	**Sn**	**14 11 48.0**	**-0.9**
	comp=E,6.1nm,0.3s						
LMR	**La Mourre**	**2.79**	**254**	*e*Pn	**Pn**	**14 11 19.9**	**+0.2**
LMR				*e*Sn	**Sn**	**14 11 51.6**	**-1.3**
	comp=E,1.7nm,0.2s						
MRB1	**Monte Rocchett**	**4.67**	**129**	AML	AML		
	comp=N,466μm,1.0s						
MRB1				AML	AML		
	comp=E,325μm,1.0s						
MRB1				AML	AML		
	comp=N,466μm,1.0s						
MRB1				AML	AML		
	comp=E,325μm,1.0s						
MRB1				AML	AML		
	comp=N,466μm,1.0s						
MRB1				AML	AML		
	comp=E,325μm,1.0s						

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*ISCJB **21** 14:16:01.2±0.4, 44°.18N±0°.03×10°.18E±0°.05, h16km±7km, Error ellipse: s-maj=6.3km s-min=3.9km az=152.4*
*ROM **21** 14:16:01.6±0.2, 44°.191N±0°.008×10°.24E±0°.01, h10km, ML2.3/16, Error ellipse: s-maj=1.2km s-min=0.6km az=51.0*
*GEN **21** 14:16:01.9, 44°.19N×10°.21E, h4km, Ml2.1*
*LDG **21** 14:16:02.5±0.1, 44°.16N×10°.22E, h2km, Ml2.6/12, Error ellipse: s-maj=3.9km s-min=2.8km az=16.0*
ISC 21 14:16:01.6±0.9, **44°.18N**±0°.03×**10°.19E**±0°.03, **h12**km±6km, **n38**, σ1§49/56, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.14**	**98**	P	**Pg**	**14 16 04.8**	**-0.2**
VLC				S	**Sg**	**14 16 07.1**	**-0.4**
VLC				AML	AML		
	comp=E,2105μm,0.1s						
VLC				AML	AML		
	comp=N,3120μm,0.2s						
VLC				AML	AML		
	comp=E,2065μm,0.2s						
VLC				AML	AML		
	comp=N,3360μm,0.2s						
VLC				AML	AML		
	comp=E,2100μm,0.1s						
VLC				AML	AML		
	comp=N,3120μm,0.2s						
VLC				AML	AML		
	comp=E,2065μm,0.2s						
VLC				AML	AML		
	comp=N,3360μm,0.2s						
VLC				AML	AML		
	comp=N,3120μm,0.2s						
VLC				AML	AML		
	comp=N,3360μm,0.2s						
VLC				AML	AML		
	comp=E,2065μm,0.2s						
VLC				AML	AML		
	comp=E,2100μm,0.1s						
VLC				AML	AML		
	comp=N,3120μm,0.2s						
VLC				AML	AML		
	comp=N,3360μm,0.2s						
VLC				AML	AML		
	comp=E,2065μm,0.2s						
VLC				AML	AML		
	comp=E,2100μm,0.1s						
SARO	**Sassorosso**	**0.15**	**88**	P	**Pg**	**14 16 04.9**	**-0.3**
SARO				S	**Sg**	**14 16 07.1**	**-0.6**
SARO	**Sassorosso**	**0.15**	**88**	P	**Pg**	**14 16 04.9**	**-0.3**
SARO				S	**Sg**	**14 16 07.2**	**-0.6**
SARO				AML	AML		
	comp=E,2050μm,0.2s						
SARO				AML	AML		
	comp=N,3850μm,0.6s						
SARO				AML	AML		
	comp=E,2050μm,0.2s						
SARO				AML	AML		
	comp=N,3850μm,0.6s						
SARO				AML	AML		
	comp=E,2050μm,0.2s						
SARO				AML	AML		
	comp=N,3850μm,0.6s						
SARO				AML	AML		
	comp=E,2050μm,0.2s						
SARO				AML	AML		
	comp=N,3850μm,0.6s						
CARD	**Cardoso**	**0.26**	**126**	P	**Pg**	**14 16 07.1**	**+0.1**
CARD				S	**Sg**	**14 16 10.9**	**+0.3**
CARD	**Cardoso**	**0.26**	**126**	P	**Pg**	**14 16 07.1**	**+0.1**
CARD				S	**Sg**	**14 16 10.9**	**+0.3**
CARD				AML	AML		
	comp=E,1970μm,1.1s						
CARD				AML	AML		
	comp=N,1935μm,0.8s						
CARD				AML	AML		
	comp=E,1970μm,1.1s						
CARD				AML	AML		
	comp=N,1935μm,0.8s						
CARD				AML	AML		
	comp=N,1935μm,0.8s						
CARD				AML	AML		

	comp=E,1970μm,1.1s					
CARD			AML	AML		
	comp=N,1935μm,0.8s					
CARD			AML	AML		
	comp=E,1970μm,1.1s					
ERBM	**Eremo**	**0.29 33**	P	**Pg**	**14 16 07.5 -0.1**	
ERBM			S	**Sg**	**14 16 11.8 +0.3**	
ERBM			AML	AML		
	comp=E,1019μm,1.1s					
ERBM			AML	AML		
	comp=N,1146μm,0.8s					
ERBM			AML	AML		
	comp=E,1021μm,1.1s					
ERBM			AML	AML		
	comp=N,1150μm,0.8s					
ERBM			AML	AML		
	comp=E,1021μm,1.1s					
ERBM			AML	AML		
	comp=N,1147μm,0.8s					
ERBM			AML	AML		
	comp=E,1021μm,1.1s					
ERBM			AML	AML		
	comp=N,1147μm,0.8s					
BDI	**Bagni Di Lucca**	**0.31 112**	P	**Pg**	**14 16 07.9 -0.1**	
BDI			S	**Sg**	**14 16 12.5 +0.3**	
BDI			AML	AML		
	comp=E,578μm,1.0s					
BDI			AML	AML		
	comp=N,622μm,0.2s					
BDI			AML	AML		
	comp=E,621μm,0.3s					
BDI			AML	AML		
	comp=N,721μm,0.2s					
BDI			AML	AML		
	comp=N,721μm,0.2s					
BDI			AML	AML		
	comp=N,622μm,0.2s					
BDI			AML	AML		
	comp=E,621μm,0.3s					
BDI			AML	AML		
	comp=E,578μm,1.0s					
BDI			AML	AML		
	comp=N,721μm,0.2s					
BDI			AML	AML		
	comp=N,622μm,0.2s					
BDI			AML	AML		
	comp=E,621μm,0.3s					
BDI			AML	AML		
	comp=E,578μm,1.0s					
GRAM	**Graiana**	**0.33 344**	P	**Pg**	**14 16 08.2 0.0**	
GRAM			S	**Sg**	**14 16 13.3 +0.6**	
GRAM	**Graiana**	**0.33 344**	P	**Pg**	**14 16 08.2 0.0**	
GRAM			AML	AML		
	comp=E,5070μm,0.2s					
GRAM			AML	AML		
	comp=N,9225μm,0.3s					
GRAM			AML	AML		
	comp=E,5070μm,0.2s					
GRAM			AML	AML		
	comp=N,9225μm,0.3s					
GRAM			AML	AML		
	comp=N,9225μm,0.3s					
GRAM			AML	AML		
	comp=E,5070μm,0.2s					
GRAM			AML	AML		
	comp=N,9225μm,0.3s					
GRAM			AML	AML		
	comp=E,5070μm,0.2s					
MAIM	**Mastiano**	**0.34 141**	P	**Pg**	**14 16 08.7 +0.3**	
MAIM			S	**Sg**	**14 16 13.6 +0.6**	
MAIM	**Mastiano**	**0.34 141**	P	**Pg**	**14 16 08.9 +0.4**	
MAIM			S	**Sg**	**14 16 13.8 +0.8**	
MAIM			AML	AML		
	comp=E,793μm,0.4s					
MAIM			AML	AML		
	comp=N,607μm,0.5s					
MAIM			AML	AML		
	comp=E,793μm,0.4s					
MAIM			AML	AML		
	comp=N,607μm,0.5s					
MAIM			AML	AML		
	comp=E,793μm,0.4s					
MAIM			AML	AML		
	comp=N,607μm,0.5s					
MAIM			AML	AML		
	comp=E,793μm,0.4s					
MAIM			AML	AML		
	comp=N,607μm,0.5s					
POPM	**Popiglio**	**0.43 108**	P	**Pg**	**14 16 10.1 0.0**	
POPM			S	**Sg**	**14 16 16.3 +0.6**	
POPM	**Popiglio**	**0.43 108**	P	**Pg**	**14 16 09.7 -0.3**	
POPM			AML	AML		
	comp=E,797μm,0.2s					
POPM			AML	AML		
	comp=N,1021μm,1.4s					
POPM			AML	AML		
	comp=E,797μm,0.2s					
POPM			AML	AML		
	comp=N,1021μm,1.4s					
POPM			AML	AML		
	comp=E,797μm,0.2s					
POPM			AML	AML		
	comp=N,1021μm,1.4s					
POPM			AML	AML		
	comp=E,797μm,0.2s					
MSSA	**Maissana**	**0.51 286**	P	**Pg**	**14 16 12.1 +0.6**	
MSSA			AML	AML		
	comp=E,248μm,1.3s					
MSSA			AML	AML		
	comp=N,194μm,0.7s					
MSSA			AML	AML		
	comp=E,248μm,1.3s					
MSSA			AML	AML		
	comp=N,194μm,0.7s					
MSSA			AML	AML		
	comp=E,248μm,1.3s					
MSSA			AML	AML		
	comp=N,194μm,0.7s					
ZCCA	**Zocca**	**0.59 73**	P	**Pb**	**14 16 14.1 +0.3**	
ZCCA			AML	AML		
	comp=E,215μm,0.3s					
ZCCA			AML	AML		
	comp=N,254μm,0.4s					
ZCCA			AML	AML		
	comp=N,254μm,0.4s					
ZCCA			AML	AML		
	comp=E,215μm,0.3s					
ZCCA			AML	AML		
	comp=N,254μm,0.4s					
ZCCA			AML	AML		
	comp=E,215μm,0.3s					
MTCR	**Monte La Croce**	**0.60 104**	P	**Pg**	**14 16 13.3 0.0**	
PTF	**Prato**	**0.67 109**	P	**Pg**	**14 16 14.8 +0.2**	
CRMI	**Carmignano**	**0.68 124**	P	**Pg**	**14 16 15.2 +0.4**	
CRMI			AML	AML		
	comp=E,76μm,0.7s					
CRMI			AML	AML		
	comp=N,111μm,0.9s					
CRMI			AML	AML		
	comp=N,111μm,0.9s					
CRMI			AML	AML		
	comp=E,76μm,0.7s					
CRMI			AML	AML		
	comp=N,111μm,0.9s					
CRMI			AML	AML		
	comp=E,76μm,0.7s					
GORR	**Gorreto**	**0.78 304**	P	**Pg**	**14 16 17.3 +0.7**	
GORR			AML	AML		
	comp=E,181μm,0.6s					
GORR			AML	AML		
	comp=N,232μm,1.1s					
GORR			AML	AML		
	comp=E,181μm,0.6s					
GORR			AML	AML		
	comp=N,232μm,1.1s					
GORR			AML	AML		
	comp=E,181μm,0.6s					
GORR			AML	AML		
	comp=N,232μm,1.1s					
BOB	**Bobbio (Coli)**	**0.80 318**	AML	AML		
	comp=N,178μm,0.9s					
BOB			AML	AML		
	comp=E,190μm,0.3s					
BOB			AML	AML		
	comp=N,178μm,0.9s					
BOB			AML	AML		
	comp=E,190μm,0.3s					
BOB			AML	AML		
	comp=N,178μm,0.9s					
BOB			AML	AML		
	comp=E,190μm,0.3s					
SEI	**Scarperia**	**0.85 98**	P	**Pg**	**14 16 17.8 -0.1**	
SEI			AML	AML		
	comp=E,216μm,0.3s					
SEI			AML	AML		
	comp=N,422μm,0.4s					
SEI			AML	AML		
	comp=E,216μm,0.3s					
SEI			AML	AML		
	comp=N,422μm,0.4s					
SEI			AML	AML		
	comp=E,216μm,0.3s					
SEI			AML	AML		
	comp=N,422μm,0.4s					
TRIF	**Trifonti**	**1.18 154**	AML	AML		
	comp=E,63μm,0.6s					
TRIF			AML	AML		
	comp=N,56μm,1.3s					
TRIF			AML	AML		
	comp=E,63μm,0.6s					
TRIF			AML	AML		
	comp=N,56μm,1.3s					
TRIF			AML	AML		
	comp=E,63μm,0.6s					
TRIF			AML	AML		
	comp=N,56μm,1.3s					
PGF	**Pioggiola**	**1.85 209**	*e*Pn	**Pn**	**14 16 33.9 +0.7**	
PGF			*e*Sn	**Sn**	**14 16 55.6 -0.9**	
	comp=N,5.5nm,0.3s					
SBF	**Sospel**	**2.02 262**	*e*Pn	**Pn**	**14 16 35.6 +0.2**	
SBF			*e*Sn	**Sn**	**14 17 00.2 -0.4**	
	comp=N,17nm,0.2s					
FRF	**La Foret Royal**	**2.64 258**	*e*Pn	**Pn**	**14 16 45.1 +1.2**	
FRF			*e*Sn	**Sn**	**14 17 14.3 -1.6**	
	comp=N,6.2nm,0.3s					
LMR	**La Mourre**	**2.80 254**	*e*Pn	**Pn**	**14 16 45.1 -1.0**	
LMR			*e*Sn	**Sn**	**14 17 17.9 -1.9**	
	comp=N,4.1nm,0.3s					
ORIF	**Oris-en-Rattie**	**3.17 285**	*e*P	**Pn**	**14 16 54.2 +2.8**	
ACOM	**Acomizza, Ital**	**3.33 43**	AML	AML		
	comp=N,42μm,0.6s					
ACOM			AML	AML		
	comp=E,23μm,1.5s					
ACOM			AML	AML		
	comp=N,42μm,0.6s					
ACOM			AML	AML		
	comp=E,23μm,1.5s					
ACOM			AML	AML		
	comp=N,42μm,0.6s					
ACOM			AML	AML		
	comp=E,23μm,1.5s					
CABF	**La Chapelle**	**3.78 311**	*e*Pn	**Pn**	**14 17 01.5 +1.8**	
CABF			*e*Sn	**Sn**	**14 17 42.1 -2.0**	
	comp=E,0.8nm,0.2s					
VIVF	**Saint-Julien-l**	**4.01 282**	*e*P	**Pn**	**14 17 06.7 +3.9**	
HAU	**Haudompre**	**4.67 326**	*e*Pn	**Pn**	**14 17 13.7 +1.8**	
HAU			*e*Sn	**Sn**	**14 18 07.3 +1.3**	
	comp=E,5.3nm,0.3s					
CDF	**Champ du Feu**	**4.69 336**	*e*Pn	**Pn**	**14 17 13.7 +1.5**	
CDF			*e*Sn	**Sn**	**14 18 06.2 -0.4**	
	comp=E,1.2nm,0.2s					
SMF	**Signal de Mont**	**5.11 301**	*e*Pn	**Pn**	**14 17 19.1 +1.2**	
SMF			*e*Sn	**Sn**	**14 18 11.3 -5.4**	
	comp=E,1.1nm,0.3s					
LOR	**Lormes**	**5.41 307**	*e*Pn	**Pn**	**14 17 23.7 +1.7**	
LOR			*e*Sn	**Sn**	**14 18 21.1 -3.0**	
	comp=E,1.1nm,0.2s					
AVF	**Avril sur Loir**	**5.47 301**	*e*Pn	**Pn**	**14 17 22.7 -0.2**	
AVF			*e*Sn	**Sn**	**14 18 21.5 -4.2**	
	comp=E,0.6nm,0.3s					
SSF	**Saint Saulge**	**5.51 304**	*e*Pn	**Pn**	**14 17 23.9 +0.6**	
SSF			*e*Sn	Sn	14 18 19.0 -7.5	
	comp=E,1.1nm,0.3s					
BGF	**Bois d'Agland**	**5.70 297**	*e*Pn	**Pn**	**14 17 26.7 +0.7**	
TCF	**Toulx Ste Croi**	**6.02 293**	*e*Pn	**Pn**	**14 17 29.9 -0.5**	

STR ***21*** *14:23:18.3±1.0, 44°N±5°×1°1E±°, h5km, MLv4.1/7*
ROM ***21*** *14:23:22.5±0.2, 44°.156N±0°.008×10°.15E±0°.01, h9km±1km, ML4.0/4, Mw3.5, Error ellipse: s-maj=0.9km s-min=0.6km az=40.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.82; $M_{\theta\theta}$=2.07; $M_{\phi\phi}$=-0.25; $M_{r\theta}$=-0.40; $M_{\theta\phi}$=0.09; $M_{\phi r}$=1.55; Fault plane solution: M_0=2.45490×10^{14} NP1: ϕ_s=242.00000°, δ=47.00000°, λ=-135.00000°. NP2: ϕ_s=117.00000°, δ=59.00000°, λ=-53.00000°.*
GEN ***21*** *14:23:22.8, 44°.17N×10°.15E, h3km±1km, Ml3.6*
ISCJB ***21*** *14:23:23.0±0.3, 44°.13N±0°.02×10°.14E±0°.02, h15km±2km, mb4.1/13, Error ellipse: s-maj=2.6km s-min=1.9km az=8.0*
NEIC ***21*** *14:23:22.0±0.0, 44°.16N×10°.14E, h8km, mb4.5/6, ML4.0(ROM), After ROM.*
IDC ***21*** *14:23:23.4±1.1, 44°.01N×10°.72E, h0km, mb3.6/6, mb1 3.7/12, mb1mx3.5/43, mbtmp3.6/12, ML3.4/5, MS2.8/4, Ms1 2.8/4, ms1mx2.4/47, Error ellipse: s-maj=25.8km s-min=13.0km az=121.0*
LDG ***21*** *14:23:23.5±0.1, 44°.15N×10°.25E, h2km, Ml3.8/22, Error ellipse: s-maj=3.6km s-min=2.2km az=7.0*
PRU ***21*** *14:23:24.9±0.0, 44°.19N×10°.15E, h12km*
ISC 21 14:23:22.7±0.9, **44°.17N**±0°.02×**10°.13E**±0°.02, **h7**km±6km, **n193**, σ1**93**/264, **mb4.0**/13, **4C-6D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.18**	**94**	P	**Pg**	**14 23 26.7**	**+0.2**
VLC				S	**Sg**	**14 23 29.5**	**+0.5**
VLC				AML	AML		
	comp=E,52750μm,0.7s						
VLC				AML	AML		
	comp=N,50150μm,0.2s						
VLC				AML	AML		
	comp=E,52300μm,0.7s						
VLC				AML	AML		
	comp=N,51600μm,0.2s						
VLC				AML	AML		
	comp=E,52750μm,0.7s						
VLC				AML	AML		
	comp=N,50200μm,0.2s						
VLC				AML	AML		
	comp=E,52300μm,0.7s						
VLC				AML	AML		
	comp=N,51600μm,0.2s						
VLC				AML	AML		
	comp=E,52750μm,0.7s						
VLC				AML	AML		
	comp=E,52300μm,0.7s						
VLC				AML	AML		
	comp=N,50150μm,0.2s						
VLC				AML	AML		
	comp=E,52300μm,0.7s						
VLC				AML	AML		
	comp=E,52750μm,0.7s						
VLC				AML	AML		
	comp=N,51600μm,0.2s						
VLC				AML	AML		
	comp=N,50150μm,0.2s						
SARO	**Sassorosso**	**0.20**	**86**	P	**Pg**	**14 23 26.9**	**+0.2**
SARO				S	**Sg**	**14 23 29.1**	**-0.2**
SARO	**Sassorosso**	**0.20**	**86**	P	**Pg**	**14 23 26.9**	**+0.2**
SARO				S	**Sg**	**14 23 29.6**	**+0.2**
SARO				AML	AML		
	comp=E,71850μm,0.4s						
SARO				AML	AML		
	comp=N,49050μm,0.6s						
SARO				AML	AML		
	comp=E,71850μm,0.4s						
SARO				AML	AML		
	comp=N,49050μm,0.6s						
SARO				AML	AML		
	comp=E,71850μm,0.4s						
SARO				AML	AML		
	comp=N,49050μm,0.6s						
CARD	**Cardoso**	**0.29**	**120**	P	**Pg**	**14 23 28.7**	**+0.2**
CARD				S	**Sg**	**14 23 32.4**	**+0.1**
CARD	**Cardoso**	**0.29**	**120**	P	**Pg**	**14 23 28.6**	**+0.1**
CARD				S	**Sg**	**14 23 32.7**	**+0.4**
ERBM	**Eremo**	**0.32**	**39**	P	**Pg**	**14 23 29.5**	**+0.5**
ERBM				S	**Sb**	**14 23 34.7**	**-1.7**
ERBM				AML	AML		
	comp=E,62700μm,0.2s						
ERBM				AML	AML		
	comp=N,71600μm,0.8s						
ERBM				AML	AML		
	comp=E,62700μm,0.2s						
ERBM				AML	AML		
	comp=N,71600μm,0.8s						
ERBM				AML	AML		
	comp=E,62700μm,0.2s						
ERBM				AML	AML		
	comp=N,71600μm,0.8s						
ERBM				AML	AML		
	comp=E,62700μm,0.2s						
ERBM				AML	AML		
	comp=N,71600μm,0.8s						
GRAM	**Graiana**	**0.32**	**352**	P	**Pg**	**14 23 29.6**	**+0.5**
GRAM				S	**Sg**	**14 23 34.6**	**+1.2**
GRAM	**Graiana**	**0.32**	**352**	P	**Pg**	**14 23 29.6**	**+0.5**
GRAM				AML	AML		
	comp=E,41400μm,1.1s						
GRAM				AML	AML		
	comp=N,51500μm,0.3s						
GRAM				AML	AML		
	comp=E,41400μm,1.1s						
GRAM				AML	AML		
	comp=N,51500μm,0.3s						
GRAM				AML	AML		
	comp=N,51500μm,0.3s						
GRAM				AML	AML		
	comp=E,41400μm,1.1s						
GRAM				AML	AML		
	comp=N,51500μm,0.3s						
GRAM				AML	AML		
	comp=E,41400μm,1.1s						
BDI	**Bagni Di Lucca**	**0.35**	**108**	P	**Pg**	**14 23 29.6**	**0.0**
BDI				S	**Sg**	**14 23 34.5**	**+0.2**
MAIM	**Mastiano**	**0.37**	**135**	P	**Pg**	**14 23 30.0**	**+0.1**
MAIM				S	**Sb**	**14 23 35.2**	**-2.4**
MAIM	**Mastiano**	**0.37**	**135**	P	**Pg**	**14 23 29.9**	**+0.1**
MAIM				S	**Sb**	**14 23 35.1**	**-2.4**
NEVI	**Neviano degli**	**0.43**	**18**	P	**Pb**	**14 23 32.2**	**-0.6**
MSSA	**Maissana**	**0.46**	**288**	P	**Pg**	**14 23 32.2**	**+0.5**
MSSA				S	**Sg**	**14 23 39.2**	**+1.4**
PRMA	**PARMA**	**0.61**	**12**	P	**Pb**	**14 23 35.7**	**0.0**
ZCCA	**Zocca**	**0.63**	**73**	P	**Pb**	**14 23 36.1**	**-0.1**
MTCR	**Monte La Croce**	**0.64**	**103**	P	**Pg**	**14 23 35.1**	**0.0**
PTF	**Prato**	**0.71**	**107**	P	**Pb**	**14 23 36.3**	**-1.2**
FNVD	**Fontana Vidola**	**0.71**	**90**	P	**Pg**	**14 23 36.4**	**0.0**
CRMI	**Carmignano**	**0.72**	**122**	P	**Pb**	**14 23 37.1**	**-0.5**
GORR	**Gorreto**	**0.74**	**306**	P	**Pg**	**14 23 37.1**	**0.0**
GORR				S	**Sb**	**14 23 48.1**	**-0.4**
GORR	**Gorreto**	**0.74**	**306**	P	**Pg**	**14 23 37.0**	**0.0**
GORR				S	**Sg**	**14 23 46.7**	**0.0**
NOVE	**Novellara**	**0.75**	**34**	P	**Pn**	**14 23 38.7**	**-1.1**
BOB	**Bobbio (Coli)**	**0.77**	**321**	P	**Pg**	**14 23 37.8**	**+0.2**
SEI	**Scarperia**	**0.89**	**97**	P	**Pb**	**14 23 39.8**	**-0.8**
BRIS	**BRISIGHELLA**	**0.99**	**91**	P	**Pn**	**14 23 46.8**	**+3.6**
RUFI	**Rufina**	**1.05**	**108**	P	**Pb**	**14 23 42.6**	**-0.7**
CSNT	**Castellina Chi**	**1.09**	**129**	P	**Pn**	**14 23 43.6**	**-0.9**
PCP	**Piancastagn**	**1.20**	**289**	P	**Pb**	**14 23 45.2**	**-0.6**
TRIF	**Trifonti**	**1.20**	**152**	P	**Pn**	**14 23 45.2**	**-0.8**
FROS	**Frosini**	**1.22**	**142**	P	**Pn**	**14 23 45.4**	**-0.9**
ASQU	**Asqua**	**1.25**	**107**	P	**Pn**	**14 23 45.3**	**-1.5**
SFI	**Santa Sofia**	**1.27**	**102**	P	**Pn**	**14 23 45.4**	**-1.6**
QLNO	**Quiliano**	**1.29**	**277**	P	**Pn**	**14 23 46.6**	**-0.7**
CELB	**S.Piero in Cam**	**1.43**	**178**	P	**Pn**	**14 23 48.2**	**-1.0**
CASP	**Castiglione de**	**1.48**	**159**	P	**Pn**	**14 23 49.1**	**-0.8**
CAFI	**Castiglion Fio**	**1.57**	**122**	P	**Pn**	**14 23 50.4**	**-0.8**
PARC	**Parchiule**	**1.61**	**108**	P	**Pn**	**14 23 50.7**	**-1.0**
IMI	**Imperia**	**1.63**	**262**	P	**Pn**	**14 23 51.1**	**-0.9**
GBOS	**Grotte di Boss**	**1.65**	**273**	P	**Pn**	**14 23 51.8**	**-0.4**
MGRO	**Montegrosso**	**1.68**	**266**	P	**Pn**	**14 23 52.1**	**-0.7**
PGF	**Pioggiola**	**1.82**	**207**	*e*Pn	**Pn**	**14 23 54.7**	**+0.1**
PGF	**Pioggiola**	**1.82**	**207**	*e*P	**Pg**	**14 23 57.6**	**0.0**
PGF				*e*Sn	**Sn**	**14 24 15.7**	**-2.3**
	comp=E,156nm,0.4s						
ATVO	**AVT- Monte Val**	**1.83**	**115**	P	**Pn**	**14 23 53.6**	**-1.1**
PIEI	**Pieia**	**1.85**	**109**	P	**Pn**	**14 23 53.9**	**-1.1**
PIEI				AML	AML		
	comp=E,602μm,0.4s						
PIEI				AML	AML		
	comp=N,330μm,0.6s						
SAOF	**Saorge**	**1.86**	**265**	Pn	**Pn**	**14 23 55.0**	**-0.2**
SBF	**Sospel**	**1.97**	**262**	*e*Pn	**Pn**	**14 23 56.0**	**-0.6**
SBF				*e*Sn	**Sn**	**14 24 20.7**	**-0.9**
	comp=N,377nm,0.5s						
ESCA	**l'Escarene**	**2.02**	**261**	Pn	**Pn**	**14 23 57.1**	**-0.2**
ISO	**Isola**	**2.22**	**271**	Pn	**Pb**	**14 24 01.6**	**-1.6**
TUE	**Stuetta**	**2.37**	**347**	*e*Pn	**Pb**	**14 24 04.1**	**-1.8**
SURF	**Saint Ours**	**2.40**	**279**	Pn	**Pn**	**14 24 03.7**	**+1.0**
FUORN	**Ofenpass-Fuorn**	**2.45**	**2**	*e*Pn	**Pb**	**14 24 05.7**	**-1.6**
MBDF	**Montbardon**	**2.47**	**284**	*e*Pn	**Pb**	**14 24 05.9**	**-1.7**
MBDF				*e*Sn	**Sn**	**14 24 35.3**	**+1.2**
FRF	**La Foret Royal**	**2.59**	**258**	*e*Pn	**Pn**	**14 24 04.5**	**-0.6**
FRF				*e*Sn	**Sn**	**14 24 34.6**	**-2.3**
	comp=N,64nm,0.3s						
SRES	**S.Oreste - Sor**	**2.60**	**137**	AML	AML		
	comp=E,76μm,0.7s						
SRES				AML	AML		
	comp=N,94μm,0.6s						
DAVOX	**Davos/Dischmat**	**2.62**	**356**	Pn	**Pb**	**14 24 08.2**	**-1.9**
	comp=N,31nm,0.3s,baz=175,slow=9.9,SNR=80						
DAVOX				Sn	**Sb**	**14 24 42.6**	**+0.1**
	comp=N,25nm,0.3s,baz=301,slow=20,SNR=11						
DAVOX				LR	LR	14 25 38.4	
	comp=N,217nm,20.9s,baz=85,slow=-48						
BNI	**Bardonecchia**	**2.62**	**291**	*e*Pn	**Pb**	**14 24 08.5**	**-1.6**
LPG	**La Plagne**	**2.75**	**300**	*e*Pn	**Pb**	**14 24 11.1**	**-1.3**
LMR	**La Mourre**	**2.75**	**254**	*e*Pn	**Pn**	**14 24 06.6**	**-0.8**
LMR				*e*Sn	**Sn**	**14 24 37.7**	**-3.2**
	comp=N,24nm,0.2s						
LPL	**La Plagne**	**2.77**	**300**	*e*Pn	**Pb**	**14 24 10.9**	**-1.8**
LPL				*e*Sg	**Sg**	**14 24 50.5**	**-1.1**
	comp=N,168nm,0.8s						
FETA	**Feichten**	**2.88**	**8**	*e*Pn	**Pb**	**14 24 11.9**	**-2.7**
	comp=N,13nm,0.3s,SNR=20						
FETA				Sn	**Sb**	**14 24 47.5**	**-2.6**
	comp=N,47nm,0.6s						
SENIN	**Lac Senin/Sane**	**2.97**	**319**	*e*Pn	**Pb**	**14 24 14.0**	**-2.1**
AQU	**L'Aquila**	**3.00**	**126**	*e*Pn	**Pn**	**14 24 07.7**	**-3.2**
AQU	**L'Aquila**	**3.00**	**126**	*e*Pn	**Pn**	**14 24 11.8**	**+1.0**
ABTA	**Abfaltersbach**	**3.07**	**32**	*i* Pn	**Pn**	**14 24 13.7**	**+1.9**
	comp=N,22nm,0.4s,SNR=17						
ABTA				*i* Sn	**Sb**	**14 24 52.5**	**-3.1**
	comp=N,141nm,0.6s						
DAVA	**Damuels**	**3.12**	**357**	*i* Pn	**Pb**	**14 24 15.4**	**-3.3**
	comp=N,117nm,0.4s,SNR=78						
DAVA				*e*Sn	**Sb**	**14 24 54.0**	**-3.0**
	comp=N,136nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.13**	**285**	*e*Pn	**Pn**	**14 24 14.4**	**+1.8**
ORIF				*e*Sn	**Sn**	**14 24 50.2**	**-0.1**
	comp=N,142nm,0.7s						
SQTA	**Sankt Quirin**	**3.14**	**14**	*i* Pn	**Pn**	**14 24 15.3**	**+2.4**
	comp=N,61nm,0.4s,SNR=39						
SQTA				*e*Sn	**Sb**	**14 24 55.1**	**-2.4**
	comp=N,132nm,0.4s						
MLYF	**Mely**	**3.15**	**268**	Pn	**Pn**	**14 24 12.7**	**-0.2**
MOTA	**Moosalm**	**3.25**	**12**	*i* Pn	**Pb**	**14 24 17.2**	**-3.6**
	comp=N,94nm,0.8s,SNR=57						
WTTA	**Wattenberg**	**3.27**	**18**	*i* Pn	**Pn**	**14 24 16.9**	**+2.3**
	comp=N,46nm,0.3s,SNR=28						
WTTA				*e*Sn	**Sb**	**14 24 57.7**	**-3.5**
	comp=N,165nm,0.5s						
SMRF	**Simiane la Rot**	**3.29**	**268**	*e*Pn	**Pn**	**14 24 15.9**	**+1.1**
SMRF				*e*Sn	**Sn**	**14 24 51.6**	**-2.6**
	comp=N,56nm,0.6s						
RIY	**Rijeka**	**3.31**	**68**	*e*Pn	**Pn**	**14 24 15.8**	**+0.8**
WATA	**Walderalm**	**3.32**	**17**	*i* Pn	**Pn**	**14 24 18.1**	**+2.8**
	comp=N,34nm,0.3s,SNR=34						
WATA				*i* Sn	**Sn**	**14 24 58.5**	**+3.3**
	comp=N,50nm,0.4s						
RETA	**Reutte**	**3.34**	**7**	*i* Pn	**Pn**	**14 24 18.0**	**+2.4**
	comp=N,9.8nm,0.3s,SNR=18						
RETA				*e*Sn	**Sb**	**14 24 59.7**	**-3.6**
	comp=N,65nm,0.8s						
NVLJ	**Novalja**	**3.42**	**82**	*i* Pn	**Pn**	**14 24 17.6**	**+1.1**
NVLJ				Sn	**Sn**	**14 24 56.9**	**-0.5**
CEY	**Cerknica**	**3.43**	**61**	*e*Pn	**Pn**	**14 24 17.7**	**+1.0**
OGSM	**Saint Maurice**	**3.46**	**296**	Pn	**Pn**	**14 24 18.8**	**+1.7**
MYKA	**Terra Mystica**	**3.49**	**44**	*i* Pn	**Pn**	**14 24 20.3**	**+2.8**

comp=N,6.0nm,0.3s
MYKA eSn Sn 14 25 00.6 +1.5
comp=N,55nm,0.5s
BALST Balsthal 3.59 333 Pn Pn 14 24 20.8 +1.8
GIMEL St. Georges / 3.61 312 Pn Pn 14 24 21.7 +2.5
LJU Ljubljana 3.63 57 ePn Pn 14 24 21.2 +1.8
SULZ Cheisacher 3.64 338 Pn Pn 14 24 21.1 +1.5
KBA Koelnbreinsper 3.68 37 i Pn Pn 14 24 22.9 +2.7
comp=N,16nm,0.4s,SNR=13
KBA eSn Sn 14 25 06.9 +2.9
comp=N,59nm,0.5s
CABF La Chapelle 3.75 312 ePn Pn 14 24 23.5 +2.4
SLE Schleitheim 3.77 343 Pn Pn 14 24 22.2 +0.9
BRANT Les Verrieres 3.77 318 Pn Pn 14 24 24.1 +2.6
BRANT Sn Sn 14 25 08.9 +2.6
BOURR Bourrignon 3.81 329 Pn Pn 14 24 24.5 +2.6
OBKA Obir 3.90 52 i Pn Pn 14 24 24.8 +1.6
comp=N,26nm,0.5s,SNR=17
OBKA eSn Sn 14 25 11.7 +2.5
comp=N,77nm,0.4s
CHMF Charmoille 3.92 323 Pn Pn 14 24 25.8 +2.3
CHMF Sn Sn 14 25 12.6 +2.8
LOMF Lomont 3.93 325 Pn Pn 14 24 26.3 +2.7
VIVF Saint-Julien-l 3.96 282 ePn Pn 14 24 25.0 +1.0
VIVF eSn Sn 14 25 09.2 -1.6
UDBI Udbina 4.06 83 ePn Pn 14 24 27.2 +1.8
KIZ Kirchzarten 4.09 339 Pn Pn 14 24 26.4 +0.8
CRES Cresnjev 4.12 64 ePn Pn 14 24 27.9 +1.7
SSB Saint Sauveur 4.13 287 ePn Pn 14 24 26.8 +0.4
MOF Molkenrain 4.23 331 Pn Pn 14 24 29.4 +1.6
SOKA Soboth 4.26 52 i Pn Pn 14 24 29.8 +1.6
comp=N,14nm,0.4s,SNR=23
SOKA eSn Sn 14 25 18.4 +0.1
comp=N,36nm,0.7s
HINF Hinteralfeld 4.30 329 ePn Pn 14 24 30.0 +1.3
HINF eSn Sn 14 25 19.2 +0.1
comp=N,68nm,0.5s
BFO Black Forest 4.34 344 ePn Pn 14 24 29.9 +0.7
LASF Ste Croix 4.52 271 ePn Pn 14 24 31.9 +0.3
LASF eSn Sn 14 25 21.0 -3.4
ECH Echery 4.54 334 ePn Pn 14 24 33.0 +1.1
ECH Echery 4.54 334 Pn Pn 14 24 33.1 +1.1
STU Stuttgart 4.65 352 ePn Pn 14 24 34.2 +0.8
STU eSn Sn 14 25 30.6 +3.1
HAU Haudompre 4.65 327 ePn Pn 14 24 35.2 +1.8
HAU eSn Sn 14 25 27.5 -0.2
comp=N,201nm,0.5s
MOA Molln 4.67 37 i Pn Pn 14 24 35.7 +2.0
comp=N,13nm,0.3s,SNR=15
MOA i Sn Sn 14 25 29.9 +1.7
comp=N,46nm,0.6s
CDF Champ du Feu 4.68 336 ePn Pn 14 24 34.5 +0.6
CDF eSn Sn 14 25 27.5 -1.0
comp=N,75nm,0.4s
ARSA Arzberg 4.87 49 i Pn Pn 14 24 38.1 +1.6
comp=N,17nm,0.3s,SNR=9.2
MGRS Mrkonjic Grad 5.00 85 ePn Pn 14 24 40.2 +2.0
SMF Signal de Mont 5.07 301 ePn Pn 14 24 41.0 +1.8
SMF eSn Sn 14 25 35.2 -2.9
comp=N,53nm,0.6s
BLY Banja Luka 5.08 81 ePn Pn 14 24 38.8 -0.5
BLY Banja Luka 5.08 81 ePn Pn 14 24 41.0 +1.6
BEHE Becsehely 5.22 62 EPn Pn 14 24 47.0 +5.8
BEHE Sn Sn 14 25 41.1 -0.6
GEC2 GERESS Array S 5.28 27 ePn Pn 14 24 42.8 +0.5
GERES GERESS Array B 5.28 27 Pn Pn 14 24 42.8 +0.5
comp=N,2.8nm,0.3s,baz=200,slow=12,SNR=37
GERES Sn Sn 14 25 43.1 -0.3
comp=N,6.6nm,0.3s,baz=201,slow=23,SNR=8.7
GERES Lg Lg 14 26 14.3
comp=N,1.1nm,0.3s,baz=209,slow=34,SNR=2.7
GERES LR LR 14 27 11.9
comp=N,75nm,19.6s,baz=9.5,slow=44
PAGF Fort de Pagny 5.34 327 ePn Pn 14 24 45.0 +2.1
PAGF eSn Sn 14 25 43.6 -1.0
comp=N,75nm,0.6s
SFTF Sexfontaines 5.36 321 ePn Pn 14 24 45.2 +2.0
baz=134
SFTF eSn Sn 14 25 41.3 -3.9
LOR Lormes 5.37 307 ePn Pn 14 24 45.3 +1.9
baz=123
LOR Lormes 5.37 307 eP Pn 14 24 46.5 +3.1
LOR eSn Sn 14 25 43.4 -2.1
comp=N,21nm,0.4s
AVF Avril sur Loir 5.44 301 ePn Pn 14 24 45.8 +1.6
AVF eSn Sn 14 25 45.0 -2.0
comp=N,23nm,0.6s
SSF Saint Saulge 5.47 304 ePn Pn 14 24 46.0 +1.3
SSF eSn Sn 14 25 46.0 -1.9
comp=N,34nm,0.6s
CONA Conrad Observa 5.48 45 i Pn Pn 14 24 46.1 +1.3
comp=N,11nm,0.4s,SNR=18
CONA eSn Sn 14 25 49.2 +1.0
comp=N,33nm,0.7s
KHC Kasperske Hory 5.50 24 ePn Pn 14 24 45.7 +0.5
KHC Kasperske Hory 5.50 24 ePN Pn 14 24 45.6 +0.5
KHC eSN Sn 14 25 46.4 -2.2
KHC ex x 14 26 03.5
KHC ex x 14 26 18.0
MEZF Maizieres J'vi 5.58 323 ePn Pn 14 24 48.2 +2.1
baz=142
MEZF eSn Sn 14 25 48.3 -2.2
comp=N,53nm,0.7s
STON Ston 5.66 101 ePn Pn 14 24 47.3 +0.1
STON Ston 5.66 101 ePn Pn 14 24 47.5 +0.3
BGF Bois d'Agland 5.66 297 ePn Pn 14 24 48.6 +1.3
BGF eSn Sn 14 25 50.8 -1.7
comp=N,52nm,0.5s
SOP Sopron 5.70 50 EPn Pn 14 24 48.0 +0.3
SOP Sn Sn 14 25 51.1 -2.3
MTLF Montolieu 5.79 265 ePn Pn 14 24 49.5 +0.4
MTLF eSn Sn 14 25 52.7 -3.1
CAF Calviac 5.81 280 ePn Pn 14 24 50.1 +0.7
CAF eSn Sn 14 25 50.6 -5.8
TCF Toulx Ste Croi 5.98 293 ePn Pn 14 24 54.1 +2.4
TCF eSn Sn 14 25 58.5 -2.0
comp=N,10nm,0.5s
WLF Walferdange 6.13 335 ⇓Sn Sn 14 26 05.8 +1.7
TREB Trebinje 6.16 101 ePn Pn 14 24 53.9 -0.2
BRY Bratogost 6.24 99 ePn Pn 14 24 56.5 +1.1
ZST Bratislava 6.29 48 ePn Pn 14 24 57.3 +1.3
ZST eSN Sn 14 26 04.7 -3.4
HCY Herceg Novi 6.34 103 ePn Pn 14 24 57.1 +0.5
HAPS Han Pijesak,BI 6.35 88 ePn Pn 14 24 57.0 +0.1
UPM Unac-Piva 6.44 96 ePn Pn 14 25 00.0 +1.9
MODS Modra-Piesok 6.50 47 ePN Pn 14 24 59.9 +1.1
MODS eSN Sn 14 26 09.2 -3.9
KRUC Moravsky 6.52 39 ePN Pn 14 24 59.5 +0.4
KRUC eSN Sn 14 26 11.3 -2.4
PRU Pruhonice 6.55 26 ePN Pn 14 24 59.7 +0.2
GOPC GO Pecny, Ondr 6.57 27 ePN Pn 14 25 00.0 +0.3
GOPC eSN Sn 14 26 12.5 -2.4
BBLS Lazići 6.70 89 ePn Pn 14 25 03.5 +1.9
VRAC Vranov 6.79 39 Pn Pn 14 25 03.7 +0.9
comp=N,0.4nm,0.3s,baz=217,slow=10,SNR=2.9
VRAC Sn Sn 14 26 17.7 -2.7
comp=N,1.2nm,0.3s,baz=311,slow=15,SNR=5.6
VRAC Lg Lg 14 26 59.6
comp=N,0.1nm,0.3s,baz=135,slow=20,SNR=2.1
VRAC Vranov 6.79 39 eSN Sn 14 26 18.0 -2.4
PDG Podgorica 6.88 101 ⇑iP Pn 14 25 07.1 +3.1
PDG Podgorica 6.88 101 ePn Pn 14 25 06.2 +2.2
TTG Podgorica 6.88 101 ePn Pn 14 25 06.6 +2.5
DRME Dracevica, Mon 6.91 104 ePn Pn 14 25 04.7 +0.2
GIVF Givet 6.95 331 ePn Pn 14 25 08.1 +3.1
GIVF eSn Sn 14 26 22.4 -1.8
FRGS Fruska Gora 6.97 78 ePn Pn 14 25 08.4 +3.1
JAVC Velka Javorina 7.00 45 ePN Pn 14 25 08.6 +2.8
MEM Membach 7.02 338 ⇑Pn Pn 14 25 08.3 +2.4
MEM ⇓Sn Sn 14 26 26.3 +0.3
comp=E,15nm,0.0s
DOU Dourbes 7.03 329 ⇓Pn Pn 14 25 09.0 +3.0
DOU ⇑Sn Sn 14 26 26.6 +0.5
comp=E,15nm,0.0s
BRG Berggiesshubel 7.18 20 PN Pn 14 25 08.7 +0.6
BRG SN Sn 14 26 28.1 -1.9
BRG SG Sg 14 27 18.1 +4.9
comp=E,23nm,1.1s
comp=N,121nm,7.3s
comp=E,103nm,11.4s
comp=Z,169nm,9.0s
EPF Esparros 7.20 264 ePn Pn 14 25 09.2 +0.7
CLL Collm 7.40 14 ePn Pn 14 25 09.7 -1.4
CLL Collm 7.40 14 ePn Pn 14 25 09.0 -2.1

CLL ePg Pg 14 25 42.0 -2.3
CLL e 14 25 50.0
CLL eSn Sn 14 26 16.0 -19
CLL e 14 26 34.0
CLL e 14 26 46.0
CLL e 14 26 54.0
CLL eSg Sg 14 27 19.0 -1.1
comp=Z,37nm,1.1s
CLL eLmax 14 27 46.0
VYHS Vyhne 7.41 51 ePN Pn 14 25 12.2 +0.8
VYHS eSN Sn 14 26 31.4 -4.3
DPC Dobruska-Polom 7.48 32 ePN Pn 14 25 11.5 -0.8
DPC eSN Sn 14 26 33.4 -3.9
UPC Upice 7.49 30 ePN Pn 14 25 12.2 -0.2
MORC Moravsky Berou 7.56 39 ePn Pn 14 25 08.6 -4.8
CHVC Chvalec 7.57 30 ePN Pn 14 25 12.9 -0.7
PSZ Piszkesteto 7.76 58 ePn Pn 14 25 14.1 -2.1
PSZ Piszkesteto 7.76 58 EPn Pn 14 25 18.0 +1.9
PSZ Sn Sn 14 26 43.0 -1.2
MDVR Moldovita 8.31 82 ⇑iP Pn 14 25 25.4 +1.7
KEST Kesra 8.45 184 Pn Pn 14 25 28.7 +3.0
comp=Z,0.3nm,0.3s,baz=0.1,slow=9.2,SNR=3.3
HERR Herculane 8.81 81 ⇓iP Pn 14 25 30.7 +0.2
DRGR 9.22 69 ⇓iP Pn 14 25 39.5 +3.3
VTS Vitosha 9.67 95 ePn Pn 14 25 43.4 +1.0
VTS Vitosha 9.67 95 ⇓iP Pn 14 25 44.5 +2.1
SGMF Saint Gilles 9.70 299 ePn Pn 14 25 43.4 +0.8
SGMF eSn Sn 14 27 23.3 -8.4
ESDC Sonseca Array 11.42 252 Pn Pn 14 26 08.0 +1.7
comp=Z,0.3nm,0.3s,baz=67,slow=14,SNR=4.3
AKASG Malin Array Be 14.46 56 Pn P 14 26 51.1 -3.5
comp=Z,0.8nm,0.3s,baz=245,slow=11,SNR=4.8
HFS Hagfors 16.13 6 Pn P 14 27 12.5 -0.7
comp=Z,0.0nm,0.3s,baz=177,slow=9.5,SNR=3.0
HFS LR LR 14 33 33.8
comp=Z,45nm,18.8s,baz=138,slow=38
NOA NORSAR Array B 16.91 2 P P 14 27 24.0 +2.2
comp=Z,0.0nm,0.3s,baz=181,slow=11,SNR=3.2
NOA LR LR 14 34 40.7
comp=Z,24nm,19.1s,baz=190,slow=40
BRTR Keskin Array B 18.02 96 P P 14 27 34.6 +0.3
comp=Z,0.1nm,0.3s,baz=283,slow=8.7,SNR=2.8
FINES FINESS Array B 19.70 23 P Pn 14 27 53.6 -0.3
comp=Z,0.2nm,0.3s,baz=209,slow=9.0,SNR=9.1
TORD Torodi Ar. Bea 31.75 196 P P 14 29 48.1 +0.5
comp=Z,0.3nm,0.7s,baz=20,slow=9.3,SNR=2.8
ARU Arti 32.58 51 P P 14 29 55.0 +0.5
comp=Z,1.3nm,0.5s,baz=232,slow=2.2,SNR=5.5
ARU Arti 32.58 51 eP P 14 29 54.6 +0.2
comp=Z,4.2nm,0.7s
ABKAR Akbulak array 34.02 63 eP P 14 30 05.9 -1.3
comp=Z,1.6nm,1.1s
SPA0 Spitsbergen Ar 34.21 2 eP P 14 30 08.3 -0.2
comp=Z,9.7nm,1.1s
SFJD Kangerlussuaq 39.04 327 P P 14 30 55.2 +5.5
comp=Z,13nm,0.7s,baz=119,slow=19,SNR=6.9
CHGR Chuyangaron 43.79 76 eP P 14 31 27.1 -2.1
comp=Z,45nm,1.1s
TULEG Thule 44.98 341 eP P 14 31 38.7 +0.6
comp=Z,5.5nm,0.8s
ARSB Arslanbob 45.24 71 eP P 14 31 40.1 -0.7
comp=Z,8.6nm,0.9s
MKAR Makanchi Array 49.00 60 P P 14 32 10.1 +0.1
comp=Z,0.8nm,0.7s,baz=280,slow=7.0,SNR=7.7
SONM Songino Array 62.60 49 P P 14 33 50.7 +3.1
comp=Z,0.4nm,0.4s,baz=327,slow=10,SNR=3.6
INK Inuvik 64.59 346 P P 14 34 02.0 +1.8
comp=Z,0.9nm,0.8s,baz=44,slow=12,SNR=3.2
YKA Yellowknife Ar 64.87 335 P P 14 34 06.2 +4.1
comp=Z,0.2nm,0.4s,baz=40,slow=6.2,SNR=5.9
ILAR Eielson Array 69.91 350 P P 14 34 38.5 +4.5
comp=Z,0.2nm,0.6s,baz=319,slow=33,SNR=3.6
ASAR Alice Springs 130.09 85 PKP PKPdf 14 42 32.7 -0.9
comp=Z,0.3nm,1.0s,baz=291,slow=2.1,SNR=3.2

STR 21 14:27:53.4±0.5, 49°N±2°×°±°, h5km±25km, MLv1.2/6, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTD	**Kalmit**	**0.14**	**341**	Pg	Pg	14 27 56.1	0.0
LANF	**Langenberg**	**0.31**	**227**	Pg	Pg	14 27 58.9	-0.5
LANF				Sg	Sg	14 28 03.3	-0.2
OPP	**Oppenau**	**0.70**	**178**	Pg	Pg	14 28 05.7	-1.1
OPP				Sg	Sg	14 28 16.4	+0.7
ABH	**Alteburg**	**0.79**	**331**	Pg	Pg	14 28 08.4	-0.2
ABH				Sg	Sg	14 28 19.2	+0.3
ECH	**Echery**	**1.18**	**214**	Pg	Pg	14 28 15.7	-0.2
ECH				Sg	Sb	14 28 31.9	+0.1
KIZ	**Kirchzarten**	**1.25**	**187**	Pg	Pg	14 28 16.7	-0.5
KIZ				Sg	Sb	14 28 33.8	0.0

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*KRNET **21** 14:30:09.2±0.1, 39.°11N×71.°14E, mb2.9*

ISC 21 14:30:06.4±3.3, 39.1N±0.2°×71.29E±0.07, h10km, n9, σ1§92/18, 15C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.57**	**44**	⇑iP	Pn	14 30 21.8	+0.9
DRK	baz=54			⇑iS	Sn	14 30 30.6	+0.1
BTK	**Batken**	**1.05**	**340**	⇑eP	Pg	14 30 27.8	+1.2
BTK	baz=45			⇑iS	Sb	14 30 42.0	+1.4
ARSB	**Arslanbob**	**2.60**	**29**	⇑iP	Pb	14 30 55.2	+2.0
ARSB	baz=32			⇑iS	Sb	14 31 28.4	+3.2
AML	**Almayashu**	**3.56**	**30**	⇑iP	Pb	14 31 09.8	0.0
AML	baz=32			⇑iS	Sb	14 31 52.3	-0.9
ARLS	**Aral**	**3.62**	**39**	⇑iP	Pb	14 31 09.7	-1.0
ARLS	baz=40			⇑iS	Sb	14 31 53.9	-0.8
UCH	**Uchtor**	**3.99**	**37**	⇓iP	Pb	14 31 15.8	-1.4
UCH	baz=38			⇓iS	Sb	14 32 03.4	-2.3
KK31	**Karatay Array**	**4.07**	**352**	⇑Pn	Pb	14 31 15.2	-3.0
KK31	0.4nm,0.2s,baz=181,slow=4.5,SNR=7.7			⇑Sn	Sb	14 32 05.6	-1.9
KZA	**Kyzart**	**4.26**	**44**	⇑iP	Pb	14 31 20.3	-1.3
KZA	baz=45			⇑iS	Sb	14 32 10.1	-3.1
AAK	**Ala-Archa**	**4.31**	**33**	⇑Pn	Pb	14 31 21.0	-1.4
AAK	1.8nm,0.5s			⇓Sn	Sb	14 32 15.7	+1.1
	2.5nm,0.7s						

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*ISCJB **21** 14:33:47.2±0.4, 44.°19N±0.°05×10.°12E±0.°06, h18km±10km, Error ellipse: s-maj=10.0km s-min=5.1km az=42.5*
*ROM **21** 14:33:47.2±0.1, 44.°202N±0.°005×10.°138E±0.°006, h10km, ML1.6/4, Error ellipse: s-maj=0.7km s-min=0.3km az=39.0*
*LDG **21** 14:33:48.9±0.5, 44.°19N×10.°05E, h2km, Ml2.6/6, Error ellipse: s-maj=9.7km s-min=4.6km az=49.0*

ISC 21 14:33:47.5±0.9, 44.21N±0.°05×10.14E±0.04, h16km±8km, n11, σ0§60/22, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.18**	**105**	P	Pg	14 33 51.7	-0.3
VLC				S	Sg	14 33 54.9	-0.2
VLC	comp=E,154μm,1.3s			AML	AML		
VLC	comp=N,204μm,0.6s			AML	AML		
VLC	comp=E,148μm,1.4s			AML	AML		
VLC	comp=N,198μm,0.6s			AML	AML		
VLC	comp=E,148μm,1.4s			AML	AML		
VLC	comp=N,198μm,0.6s			AML	AML		
VLC	comp=E,154μm,1.3s			AML	AML		
VLC	comp=N,204μm,0.6s			AML	AML		
SARO	**Sassorosso**	**0.19**	**97**	P	Pg	14 33 51.9	-0.3
SARO				S	Sg	14 33 54.9	-0.4
SARO	comp=E,316μm,0.3s			AML	AML		
SARO	comp=N,412μm,0.6s			AML	AML		
SARO	comp=N,412μm,0.6s			AML	AML		
SARO	comp=E,316μm,0.3s			AML	AML		
ERBM	**Eremo**	**0.29**	**43**	P	Pg	14 33 54.0	+0.2
ERBM				S	Sb	14 33 58.8	-0.1
ERBM	comp=E,525μm,0.2s			AML	AML		
ERBM	comp=N,528μm,1.3s			AML	AML		
ERBM	comp=E,525μm,0.2s			AML	AML		
ERBM	comp=N,528μm,1.3s			AML	AML		
GRAM	**Graiana**	**0.29**	**349**	P	Pg	14 33 53.7	-0.1
GRAM				S	Sg	14 33 58.4	+0.3
CARD	**Cardoso**	**0.30**	**126**	P	Pg	14 33 53.8	-0.2
CARD				S	Sg	14 33 58.9	+0.5
BDI	**Bagni Di Lucca**	**0.36**	**114**	P	Pg	14 33 55.0	+0.1
BDI				S	Sg	14 34 00.4	+0.4
BDI	comp=E,157μm,0.9s			AML	AML		
BDI	comp=N,200μm,0.8s			AML	AML		
BDI	comp=N,200μm,0.8s			AML	AML		
BDI	comp=E,157μm,0.9s			AML	AML		
MSSA	**Maissana**	**0.46**	**284**	P	Pg	14 33 57.0	+0.2
MSSA				S	Sg	14 34 03.2	+0.2
PGF	**Pioggiola**	**1.85**	**207**	ePn	Pn	14 34 20.0	+1.3
PGF				eSn	Sn	14 34 41.1	-0.7
PGF	comp=E,8.5nm,0.3s						
SBF	**Sospel**	**1.98**	**261**	ePn	Pn	14 34 20.5	+0.1
SBF				eSn	Sn	14 34 44.6	-0.3
SBF	comp=E,6.4nm,0.2s						
FRF	**La Foret Royal**	**2.61**	**257**	ePn	Pn	14 34 29.2	+0.3
FRF				eSn	Sn	14 34 59.3	-0.9
FRF	comp=E,5.5nm,0.3s						
LMR	**La Mourre**	**2.77**	**253**	ePn	Pn	14 34 31.4	+0.3
LMR				eSn	Sn	14 35 02.8	-1.4
LMR	comp=E,2.9nm,0.3s						

DJA 21 14:55:05.8±0.5, 7°S±4°×10°6E±°, h10km, M3.8/6, MLv3.8/6, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.20**	**52**	P	Pg	14 55 10.1	0.0
CGJI				S	Sg	14 55 13.5	+0.5
CBJI	**Citeko**	**1.35**	**76**	P	Pb	14 55 31.2	0.0
CBJI				S	Sg	14 55 50.7	+1.4
KASI	**Kota Agung**	**1.59**	**320**	P	Pn	14 55 31.8	-2.2
KASI				S	Sn	14 55 52.4	-2.2
KLI	**Kotabumi**	**1.98**	**340**	P	Pg	14 55 43.3	-0.5
KLI				S	Sb	14 56 06.2	-0.5
LEM	**Lembang**	**2.08**	**92**	P	Pb	14 55 43.2	-0.5
LWLI	**Liwa**	**2.25**	**319**	S	Sn	14 56 09.7	-1.5
CISI	**Cisompet, Garu**	**2.41**	**110**	P	Pn	14 55 44.4	-1.0
CISI				S	Sn	14 56 13.5	-1.5
MDSI	**Maura Dua**	**2.61**	**329**	P	Pn	14 55 49.1	+1.0
MDSI				S	Sb	14 56 23.9	-1.0

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*NEIC **21** 15:01:38.2±0.0, 16.°19N×94.°37W, h70km, mb3.9/14, MD4.0(MEX), After MEX.*

MEX 21 15:01:38.2±0.3, 16.19N×94.37W, h70km±8km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.21**	**113**	ePn	Pn	15 01 58.1	-1.3
PCIG				eSn	Sn	15 02 13.5	-1.8
PCIG		**1.21**	**113**	i P	Pn	15 01 58.1	-1.3
PCIG				i S	Sn	15 02 13.5	-1.8
TGIG		**1.33**	**64**	ePn	Pn	15 01 59.5	-1.6
TGIG				eSn	Sn	15 02 16.6	-1.7
TGIG		**1.33**	**64**	eP	Pn	15 01 59.5	-1.6
TGIG				eS	Sn	15 02 16.6	-1.7
HUIG	**Huatulco**	**1.72**	**256**	ePn	Pn	15 02 04.9	-1.2
HUIG				eSn	Sn	15 02 25.4	-1.9
HUIG	**Huatulco**	**1.72**	**256**	eP	Pn	15 02 04.9	-1.2
HUIG				eS	Sn	15 02 25.4	-1.9
CCIG	**Comitan**	**2.15**	**87**	ePn	Pn	15 02 11.1	-1.0
CCIG				ePn	Pn	15 02 11.1	-1.0
CCIG				eSn	Sn	15 02 33.4	-4.5
CCIG				eSn	Sn	15 02 33.4	-4.5
CCIG	**Comitan**	**2.15**	**87**	eP	Pn	15 02 11.1	-1.0
CCIG				i S	Sn	15 02 33.4	-4.5
CSGN	**Cosiguina Volc**	**7.33**	**115**	ePn	Pn	15 03 25.8	+3.1
ACON	**Acoyapa**	**9.86**	**114**	ePn	Pn	15 04 00.0	+2.8
LNIG	**Linares**	**9.89**	**332**	ePn	Pn	15 03 55.4	-2.2
KVTX	**Kingsville**	**11.76**	**344**	ePn	Pn	15 04 20.5	-2.6
TX31	**Lajitas Ar. Si** 1.2nm,1.0s	**15.63**	**328**	ePn	Pn	15 05 10.6	-3.7
WHTX	**Lake Whitney,** 7.7nm,0.7s	**15.98**	**350**	ePn	Pn	15 05 13.9	-4.8
451A	**Vernon** 90nm,1.0s	**16.39**	**27**	ePn	Pn	15 05 23.9	+0.2
453A	**Whigham** 20nm,0.9s	**17.25**	**30**	ePn	P	15 05 35.3	+0.3
352A	**Blakely** 15nm,0.7s	**17.49**	**28**	ePn	P	15 05 38.3	+0.7
CCAR	**Cane Creek** 16nm,0.7s	**17.81**	**7**	eP	Pn	15 05 41.4	+0.2
MIAR	**Mount Ida** 2.1nm,1.0s	**18.29**	**2**	eP	P	15 05 44.4	-2.0
456A	**Hilliard** 84nm,0.4s	**18.35**	**36**	eP	P	15 05 43.7	-3.5
WMOK	**Wichita Mounta** 1.2nm,0.9s	**18.89**	**349**	eP	P	15 05 49.0	-4.0
TUL1	**Leonard** 7.2nm,0.5s	**19.68**	**357**	eP	P	15 06 00.5	-1.1
SDCO	**Great Sand Dun**	**23.61**	**338**	epP	pP	15 06 59.9	+0.6
ALLY	**Alegheny Colle** 30nm,0.5s	**28.18**	**23**	eP	P	15 07 26.1	+2.1

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*ISCJB **21** 15:13:47.7±0.3, 44.°18N±0.°04×10.°15E±0.°05, h16km±7km, Error ellipse: s-maj=7.6km s-min=4.1km az=138.0*
*ROM **21** 15:13:47.8±0.2, 44.°198N±0.°009×10.20E±0.°01, h10km, ML2.1/10, Error ellipse: s-maj=1.2km s-min=0.6km az=53.0*
*GEN **21** 15:13:48.3, 44.°20N×10.°20E, h4km±1km, Ml2.1*
*LDG **21** 15:13:48.5±0.1, 44.°19N×10.°18E, h2km, Ml2.6/6, Error ellipse: s-maj=2.2km s-min=1.4km az=12.0*

ISC 21 15:13:47.6±0.9, 44.21N±0.°03×10.23E±0.03, h18km±3km, n32, σ1§01/55, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.12**	**113**	P	Pg	15 13 51.5	-0.1
VLC				S	Sg	15 13 54.0	-0.2
VLC	comp=E,1208μm,0.8s			AML	AML		
VLC	comp=N,770μm,1.0s			AML	AML		
VLC	comp=E,1240μm,0.4s			AML	AML		
VLC	comp=N,856μm,0.1s			AML	AML		
VLC	comp=E,1210μm,0.8s			AML	AML		
VLC	comp=N,770μm,1.0s			AML	AML		
VLC	comp=E,1240μm,0.4s			AML	AML		
VLC	comp=N,856μm,0.1s			AML	AML		
VLC	comp=N,856μm,0.1s			AML	AML		
VLC	comp=N,770μm,1.0s			AML	AML		

comp=E,1240μm,0.4s
VLC AML AML
comp=E,1210μm,0.8s
VLC AML AML
comp=N,856μm,0.1s
VLC AML AML
comp=N,770μm,1.0s
VLC AML AML
comp=E,1240μm,0.4s
VLC AML AML
comp=E,1210μm,0.8s
SARO Sassorosso 0.13 101 P **Pg 15 13 51.6 -0.1**
SARO S **Sg 15 13 54.1 -0.3**
SARO Sassorosso 0.13 101 P **Pg 15 13 51.6 -0.1**
SARO S **Sg 15 13 54.1 -0.3**
SARO Sassorosso 0.13 101 P **Pg 15 13 51.6 -0.1**
SARO S **Sg 15 13 54.1 -0.3**
SARO AML AML
comp=E,2745μm,0.4s
SARO AML AML
comp=N,2360μm,0.3s
ERBM Eremo 0.25 32 P **Pg 15 13 54.0 +0.6**
ERBM S **Sg 15 13 58.6 +1.4**
ERBM AML AML
comp=E,1170μm,0.7s
ERBM AML AML
comp=N,972μm,1.4s
ERBM AML AML
comp=E,1165μm,0.7s
ERBM AML AML
comp=N,970μm,1.4s
ERBM AML AML
comp=N,970μm,1.4s
ERBM AML AML
comp=E,1165μm,0.7s
ERBM AML AML
comp=N,970μm,1.4s
ERBM AML AML
comp=E,1165μm,0.7s
CARD Cardoso 0.26 135 P **Pb 15 13 54.2 +0.6**
CARD S **Sb 15 13 57.7 0.0**
CARD Cardoso 0.26 135 P **Pb 15 13 53.8 +0.2**
CARD S **Sb 15 13 57.6 0.0**
CARD Cardoso 0.26 135 P **Pb 15 13 54.2 +0.6**
CARD S **Sb 15 13 57.8 0.0**
CARD AML AML
comp=E,2175μm,1.2s
CARD AML AML
comp=N,1730μm,0.1s
CARD AML AML
comp=E,2170μm,1.2s
CARD AML AML
comp=N,1730μm,0.1s
CARD AML AML
comp=N,1730μm,0.1s
CARD AML AML
comp=E,2170μm,1.2s
CARD AML AML
comp=N,1730μm,0.1s
CARD AML AML
comp=E,2170μm,1.2s
BDI Bagni Di Lucca 0.30 119 P **Pb 15 13 54.7 +0.2**
BDI S **Sb 15 13 59.6 +0.5**
BDI AML AML
comp=E,454μm,0.5s
BDI AML AML
comp=N,342μm,0.4s
BDI AML AML
comp=E,462μm,0.5s
BDI AML AML
comp=N,400μm,0.4s
BDI AML AML
comp=E,453μm,0.5s
BDI AML AML
comp=N,342μm,0.4s
BDI AML AML
comp=E,462μm,0.5s
BDI AML AML
comp=N,400μm,0.4s
BDI AML AML
comp=N,342μm,0.4s
BDI AML AML
comp=N,400μm,0.4s
BDI AML AML
comp=E,462μm,0.5s
BDI AML AML
comp=E,453μm,0.5s
BDI AML AML
comp=N,400μm,0.4s
BDI AML AML
comp=N,342μm,0.4s
BDI AML AML
comp=E,462μm,0.5s
BDI AML AML
comp=E,453μm,0.5s
GRAM Graiana 0.31 338 P **Pg 15 13 54.4 +0.1**
GRAM S **Sg 15 13 59.1 +0.3**
GRAM Graiana 0.31 338 P **Pg 15 13 54.4 +0.1**
GRAM S **Sg 15 13 59.0 +0.2**
GRAM Graiana 0.31 338 P **Pg 15 13 54.4 +0.1**
GRAM S **Sg 15 13 59.2 +0.3**
GRAM AML AML
comp=E,2910μm,0.2s
GRAM AML AML
comp=N,1735μm,1.0s
GRAM AML AML
comp=E,2910μm,0.2s
GRAM AML AML
comp=N,1735μm,1.0s
GRAM AML AML
comp=E,2910μm,0.2s
GRAM AML AML
comp=N,1735μm,1.0s
GRAM AML AML
comp=E,2910μm,0.2s
GRAM AML AML
comp=N,1735μm,1.0s
MAIM Mastiano 0.35 147 P **Pb 15 13 55.5 +0.2**
MAIM S **Sg 15 14 00.5 +0.5**
MAIM Mastiano 0.35 147 P **Pb 15 13 55.6 +0.3**
MAIM S **Sg 15 14 00.5 +0.5**
MAIM Mastiano 0.35 147 P **Pb 15 13 55.6 +0.3**
MAIM S **Sg 15 14 00.5 +0.5**
MAIM AML AML
comp=E,838μm,0.3s
MAIM AML AML
comp=N,746μm,0.5s
MAIM AML AML
comp=E,838μm,0.3s
MAIM AML AML
comp=N,746μm,0.5s
MAIM AML AML
comp=N,746μm,0.5s
MAIM AML AML
comp=E,838μm,0.3s
MAIM AML AML
comp=N,746μm,0.5s
MAIM AML AML
comp=E,838μm,0.3s
MSSA Maissana 0.52 282 P **Pb 15 13 58.0 -0.3**
MSSA S **Sg 15 14 05.4 +0.2**
MSSA AML AML
comp=E,168μm,0.9s
MSSA AML AML
comp=N,108μm,1.2s
MSSA AML AML
comp=E,168μm,0.9s
MSSA AML AML
comp=N,108μm,1.2s
MSSA AML AML
comp=N,108μm,1.2s
MSSA AML AML
comp=E,168μm,0.9s
MSSA AML AML
comp=N,108μm,1.2s
MSSA AML AML
comp=E,168μm,0.9s
ZCCA Zocca 0.56 75 P **Pn 15 14 01.0 +0.4**
ZCCA AML AML
comp=E,196μm,0.4s
ZCCA AML AML
comp=N,163μm,0.5s
ZCCA AML AML
comp=E,196μm,0.4s
ZCCA AML AML
comp=N,163μm,0.5s
ZCCA AML AML
comp=E,196μm,0.4s
ZCCA AML AML
comp=N,163μm,0.5s
MTCR Monte La Croce 0.58 108 P **Pn 15 13 59.8 -1.3**
PTF Prato 0.66 112 P **Pn 15 14 01.6 -0.3**
CRMI Carmignano 0.68 128 P **Pn 15 14 01.7 -0.6**
CRMI AML AML
comp=E,54μm,0.5s
CRMI AML AML
comp=N,57μm,0.4s
CRMI AML AML
comp=E,54μm,0.5s
CRMI AML AML
comp=N,57μm,0.4s
CRMI AML AML
comp=E,54μm,0.5s
CRMI AML AML
comp=N,57μm,0.4s
BOB Bobbio (Coli) 0.79 315 P **Pn 15 14 03.3 -0.6**
BOB AML AML
comp=E,106μm,1.3s
BOB AML AML
comp=N,103μm,1.0s
BOB AML AML
comp=E,106μm,1.3s
BOB AML AML
comp=N,103μm,1.0s
BOB AML AML
comp=E,106μm,1.3s
BOB AML AML
comp=N,103μm,1.0s
RUFI Rufina 0.99 111 P **Pg 15 14 08.3 +1.4**
PGF Pioggiola 1.89 209 *e*Pn **Pb 15 14 22.5 +1.0**
PGF *e*Sn **Sn 15 14 41.9 -0.5**
comp=N,10nm,0.3s
SBF Sospel 2.04 261 *e*Pn **Pn 15 14 22.5 +1.4**
SBF *e*Sn **Sn 15 14 45.5 -0.7**
comp=N,11nm,0.3s
MBDF Montbardon 2.53 283 *e*Pn **Pn 15 14 28.8 +0.9**
FRF La Foret Royal 2.67 257 *e*Pn **Pn 15 14 30.3 +0.6**
FRF *e*Sn **Sn 15 15 00.5 -1.0**
LPG La Plagne 2.79 299 *e*Pn **Pn 15 14 33.0 +1.4**
LPL La Plagne 2.81 299 *e*Pn **Pn 15 14 32.7 +0.9**
LPL *e*Sn **Sn 15 15 04.5 -0.8**
LMR La Mourre 2.83 253 *e*Pn **Pn 15 14 32.1 +0.2**
LMR *e*Sn **Sn 15 15 03.9 -1.6**
comp=N,1.4nm,0.2s
ORIF Oris-en-Rattie 3.19 284 *e*Pn **Pn 15 14 39.1 +2.2**
ORIF *e*Sn **Sn 15 15 12.6 -1.9**
comp=N,4.7nm,0.5s
VIVF Saint-Julien-l 4.03 281 *e*Pn **Pn 15 14 49.2 +0.9**
LASF Ste Croix 4.59 271 *e*Pn **Pn 15 14 55.8 -0.3**
LASF *e*Sn **Sn 15 15 44.3 -4.6**
comp=N,0.8nm,0.3s

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*ISCJB **21** 15:29:34.8±0.7, 33°.58N±0°.03×35°.77E±0°.06, h4km±12km, Error ellipse: s-maj=8.0km s-min=4.5km az=166.6*
*GII **21** 15:29:34.5±0.0, 33°.51N×35°.74E, h1km, MD1.3/3*
*GRAL **21** 15:29:35.3±0.3, 33°.53N×35°.70E, h0km±6km, MD2.8*
ISC 21 15:29:34.8±1.0, 33°.55N±0°.03×35°.73E±0°.04, h5km±8km, n15, σ0s52/22, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRWL	**Qaraoun**	**0.04**	**271**	*e*P	**Pg**	**15 29 35.8**	**-0.4**
RCY	**Rachaya**	**0.10**	**121**	*e*P	**Pg**	**15 29 37.4**	**+0.4**
RCY				*e*S	**Sg**	**15 29 39.0**	**+0.5**
SHBL	**Chebaa**	**0.20**	**178**	*e*P	**Pg**	**15 29 38.6**	**-0.1**
SHBL				*e*S	**Sg**	**15 29 41.0**	**-0.4**
DQRL	**Deir Qamar**	**0.21**	**319**	*e*P	**Pg**	**15 29 39.0**	**0.0**
DQRL				*e*S	**Sg**	**15 29 41.9**	**+0.2**
NATI	**Neve Ativ**	**0.28**	**180**	Pg	**Pg**	**15 29 40.7**	**+0.3**
NATI				Sg	**Sb**	**15 29 46.3**	**-1.2**
GEM	**Giv'at Ha'Em**	**0.34**	**190**	Pg	**Pg**	**15 29 41.8**	**+0.4**
GEM				Sg	**Sb**	**15 29 48.0**	**-1.1**
KSDI	**Kefar Szold**	**0.36**	**190**	Pg	**Pg**	**15 29 41.9**	**+0.1**
KSDI				Sg	**Sb**	**15 29 49.3**	**-0.4**
BHL	**Bhannes**	**0.36**	**349**	*e*P	**Pg**	**15 29 42.0**	**+0.1**
KSHT	**Keshet**	**0.57**	**173**	Pg	**Pb**	**15 29 47.3**	**0.0**
MMA0B	**Mount Meron ar**	**0.60**	**208**	Pg	**Pg**	**15 29 46.6**	**+0.2**
HNTI	**Hanita**	**0.66**	**226**	Pg	**Pb**	**15 29 49.5**	**+0.7**
HNTI				Sg	**Sb**	**15 29 59.0**	**+0.7**
HWQ	**Hawqa**	**0.75**	**14**	*e*P	**Pg**	**15 29 49.2**	**0.0**
OFRI	**`Ofer**	**1.12**	**214**	Pg	**Pn**	**15 29 57.1**	**-0.1**
HMDT	**Nahal Hemdat**	**1.30**	**188**	Pg	**Pn**	**15 29 59.5**	**-0.2**
SLTI	**Sal'it**	**1.43**	**204**	Pn	**Pg**	**15 30 02.5**	**+0.3**

MAN 21 15:33:22.6, 17°.58N×122°.77E, h27km, mb4.4, ML3.3, MS3.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**0.91**	**278**	‖*i*P	Pn	15 33 39.2	-0.4
CVP				*i* S	Sb	15 33 50.6	-0.9
SGCP	**Mt. Cagua**	**0.95**	**314**	*e*P	Pn	15 33 40.3	+0.1
SGCP				*e*S	Sb	15 33 52.3	-0.3
CAUP	**Cauayan**	**1.10**	**235**	*e*P	Pn	15 33 42.6	+0.3
CAUP				*e*S	Sb	15 33 58.4	+1.3
APYP	**Conner**	**1.48**	**281**	*e*P	Pn	15 33 48.1	+0.7
APYP				*e*S	Sn	15 34 06.7	+0.8
ABRA	**Dolores**	**1.96**	**272**	*e*P	Pn	15 33 54.8	+0.7
ABRA				*e*S	Sn	15 34 18.6	+0.8
BALP	**Baler**	**2.16**	**212**	*e*P	Pn	15 33 57.3	+0.5
BALP				*e*S	Sn	15 34 22.9	+0.2

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*KRSC **21** 15:46:49.2±0.9, 52°.37N×158°.68E, h104km±9km, ML4.5*
*ISCJB **21** 15:46:50.2±0.3, 52°.44N±0°.03×158°.48E±0°.07, h110km±2km, mb3.8/16, Error ellipse: s-maj=8.1km s-min=3.5km az=33.5*
*MOS **21** 15:46:50.1±0.8, 52°.40N×158°.47E, h107km, mb4.1/1, Error ellipse: s-maj=14.8km s-min=4.5km az=77.6*
*IDC **21** 15:46:52.7±0.7, 52°.66N×158°.04E, h117km±3km, mb3.5/15, mb1 3.7/18, mb1mx3.5/38, mbtmp3.8/18, MS3.1/1, Ms1 3.1/1, ms1mx2.3/38, Error ellipse: s-maj=17.2km s-min=12.5km az=162.0*
ISC 21 15:46:50.4±0.6, 52°.42N±0°.03×158°.57E±0°.04, h105km±4km, n106, σ1s35/147, mb3.8/16, 1C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.04**	**298**	*i* P	**Pn**	**15 47 05.1**	**+0.3**
RUS				*e*S	**Sn**	**15 47 15.6**	**-0.1**
RUS	**Russkaya**	**0.04**	**298**	PN	**Pn**	**15 47 05.1**	**+0.3**
RUS				S	**Sn**	**15 47 15.6**	**-0.1**
MTVR	**Mutnovka**	**0.24**	**286**	*i* P	**Pn**	**15 47 05.7**	**+0.2**
MTVR				*e*S	**Sn**	**15 47 16.8**	**0.0**
MTVR	**Mutnovka**	**0.24**	**286**	PN	**Pn**	**15 47 05.7**	**+0.2**
MTVR				S	**Sn**	**15 47 16.8**	**0.0**
GRL	**Gorelyy**	**0.33**	**295**	*e*P	**Pn**	**15 47 06.6**	**+0.8**
GRL	**Gorelyy**	**0.33**	**295**	PN	**Pn**	**15 47 06.6**	**+0.8**
ASAK	**Asacha**	**0.41**	**266**	*e*P	**Pn**	**15 47 06.7**	**+0.5**
ASAK				*e*S	**Sn**	**15 47 18.3**	**+0.3**
ASAK	**Asacha**	**0.41**	**266**	PN	**Pn**	**15 47 06.7**	**+0.5**
ASAK				S	**Sn**	**15 47 18.3**	**+0.3**
KRMR	**Karymshinskiy**	**0.49**	**328**	*i* P	**Pn**	**15 47 06.8**	**+0.2**
KRMR				*e*S	**Sn**	**15 47 18.9**	**+0.1**
KRMR	**Karymshinskiy**	**0.49**	**328**	PN	**Pn**	**15 47 06.8**	**+0.2**
KRMR				S	**Sn**	**15 47 18.9**	**+0.1**
PET	**Petropavlovsk**	**0.61**	**5**	*i* P	**Pn**	**15 47 07.9**	**+0.4**
PET	**Petropavlovsk**	**0.61**	**5**	‖*i*PN	**Pn**	**15 47 07.8**	**+0.3**
PET				*e*S	**Sn**	**15 47 19.3**	**-1.0**
PET				pmax	pmax		
	comp=Z,249nm,0.3s						
PET				smax	smax		
	comp=N,4μm,0.5s						
PET				smax	smax		
	comp=E,2μm,0.3s						
DALK	**Dalny**	**0.63**	**10**	*i* P	**Pn**	**15 47 08.2**	**+0.6**
DALK				*e*S	**Sn**	**15 47 20.4**	**-0.1**
DALK	**Dalny**	**0.63**	**10**	PN	**Pn**	**15 47 08.2**	**+0.6**
DALK				S	**Sn**	**15 47 20.4**	**-0.1**
KDTR	**Khodutka, Kamc**	**0.68**	**207**	*i* P	**Pn**	**15 47 08.3**	**+0.3**
KDTR				*e*S	**Sn**	**15 47 21.1**	**-0.2**
KDTR	**Khodutka, Kamc**	**0.68**	**207**	PN	**Pn**	**15 47 08.3**	**+0.3**
KDTR				S	**Sn**	**15 47 21.1**	**-0.2**
UGLR	**Uglovaya**	**0.81**	**11**	*e*P	**Pn**	**15 47 10.4**	**+1.0**
UGLR				*e*S	**Sn**	**15 47 24.7**	**+1.1**
AVH	**Avacha**	**0.86**	**7**	*e*P	**Pn**	**15 47 11.0**	**+1.2**
AVH				*e*S	**Sn**	**15 47 25.8**	**+1.4**
AVH	**Avacha**	**0.86**	**7**	PN	**Pn**	**15 47 11.0**	**+1.2**
AVH				S	**Sn**	**15 47 25.8**	**+1.4**
SMAR	**Somma**	**0.86**	**9**	*e*P	**Pn**	**15 47 10.9**	**+0.9**
SMAR				*e*S	**Sn**	**15 47 25.3**	**+0.6**
SMAR	**Somma**	**0.86**	**9**	PN	**Pn**	**15 47 10.9**	**+0.9**
SMAR				S	**Sn**	**15 47 25.3**	**+0.6**
PETK	**Petropavlovsk-**	**0.87**	**323**	P	**Pn**	**15 47 10.2**	**+0.4**
	comp=E,134nm,0.3s,baz=122,slow=14,SNR=4631						
PETK				S	**Sn**	**15 47 25.2**	**+0.7**
	comp=E,65nm,0.3s,baz=73,slow=25,SNR=20						
KOK	**Koryaka**	**0.88**	**3**	*e*P	**Pn**	**15 47 11.1**	**+1.1**
KOK	**Koryaka**	**0.88**	**3**	PN	**Pn**	**15 47 11.1**	**+1.1**
SDLR	**Sedlovina**	**0.89**	**12**	*e*P	**Pn**	**15 47 10.8**	**+0.7**
SDLR				*e*S	**Sn**	**15 47 25.3**	**+0.3**
SDLR	**Sedlovina**	**0.89**	**12**	PN	**Pn**	**15 47 10.8**	**+0.7**
SDLR				S	**Sn**	**15 47 25.3**	**+0.3**
NLC	**Nalytchevo**	**0.89**	**32**	*e*P	**Pn**	**15 47 10.0**	**0.0**
NLC				*e*S	**Sn**	**15 47 23.8**	**-1.0**
NLC	**Nalytchevo**	**0.89**	**32**	PN	**Pn**	**15 47 10.0**	**0.0**
NLC				S	**Sn**	**15 47 23.8**	**-1.0**
KRER	**Koryakskii**	**0.90**	**7**	*e*P	**Pn**	**15 47 11.3**	**+1.0**
KRER				*e*S	**Sn**	**15 47 26.2**	**+0.9**
KRER	**Koryakskii**	**0.90**	**7**	PN	**Pn**	**15 47 11.3**	**+1.0**
KRER				S	**Sn**	**15 47 26.2**	**+0.9**
KRX	**Arik**	**0.95**	**3**	*e*P	**Pn**	**15 47 11.7**	**+0.9**
KRX	**Arik**	**0.95**	**3**	PN	**Pn**	**15 47 11.7**	**+0.9**
APC	**Apacha**	**1.00**	**301**	*i* P	**Pn**	**15 47 11.5**	**+0.4**
APC				*e*S	**Sn**	**15 47 26.7**	**0.0**
APC	**Apacha**	**1.00**	**301**	PN	**Pn**	**15 47 11.5**	**+0.4**
APC				S	**Sn**	**15 47 26.7**	**0.0**
SPN	**Mys Shipunski**	**1.12**	**52**	*e*P	**Pn**	**15 47 13.5**	**+1.1**
SPN				*e*S	**Sn**	**15 47 29.7**	**+0.6**
SPN	**Mys Shipunski**	**1.12**	**52**	PN	**Pn**	**15 47 13.5**	**+1.1**
SPN				S	**Sn**	**15 47 29.7**	**+0.6**
GNL	**Ganaly**	**1.34**	**344**	*e*P	**Pn**	**15 47 15.4**	**+0.4**
GNL				*e*S	**Sn**	**15 47 33.4**	**-0.3**
GNL	**Ganaly**	**1.34**	**344**	PN	**Pn**	**15 47 15.4**	**+0.4**
GNL				S	**Sn**	**15 47 33.4**	**-0.3**
PAU	**Pauzhetka**	**1.44**	**230**	*i* P	**Pn**	**15 47 17.2**	**+1.0**
PAU				*e*S	**Sn**	**15 47 36.6**	**+0.9**
PAU	**Pauzhetka**	**1.44**	**230**	PN	**Pn**	**15 47 17.2**	**+1.0**
PAU				S	**Sn**	**15 47 36.6**	**+0.9**
SKR	**Severo-Kuril's**	**2.31**	**222**	*e*P	**Pn**	**15 47 28.0**	**+0.9**
SKR				*e*S	**Sn**	**15 47 55.7**	**+0.4**
SKR	**Severo-Kuril's**	**2.31**	**222**	⇑*i*PN	**Pn**	**15 47 28.1**	**+0.9**
SKR				*e*S	**Sn**	**15 47 55.7**	**+0.4**
SKR				pmax	pmax		
	comp=Z,200nm,0.4s						
SKR				smax	smax		
	comp=E,671nm,0.4s						
SKR				smax	smax		
	comp=N,439nm,0.3s						
ALID	**Alaid**	**2.44**	**232**	*e*P	**Pn**	**15 47 29.5**	**+0.6**
ALID	**Alaid**	**2.44**	**232**	PN	**Pn**	**15 47 29.5**	**+0.6**
MKZ	**Mys Kozlova**	**2.86**	**40**	*e*P	**Pn**	**15 47 34.9**	**+0.6**
MKZ				*e*S	**Sn**	**15 48 07.2**	**-0.9**
MKZ	**Mys Kozlova**	**2.86**	**40**	PN	**Pn**	**15 47 34.9**	**+0.6**
MKZ				S	**Sn**	**15 48 07.2**	**-0.9**
KZV	**Kizimen**	**2.89**	**20**	*e*P	**Pn**	**15 47 36.8**	**+1.9**
KZV				*e*S	**Sn**	**15 48 10.5**	**+1.4**
KZV	**Kizimen**	**2.89**	**20**	PN	**Pn**	**15 47 36.8**	**+1.9**
KZV				S	**Sn**	**15 48 10.5**	**+1.4**
TUMD	**Tumrok D**	**3.00**	**21**	*e*P	**Pn**	**15 47 37.7**	**+1.5**
TUMD				*e*S	**Sn**	**15 48 11.8**	**+0.4**
TUMR	**Tumrok**	**3.02**	**17**	*e*P	**Pn**	**15 47 38.9**	**+2.3**
TUMR	**Tumrok**	**3.02**	**17**	PN	**Pn**	**15 47 37.7**	**+1.1**
TUMR				S	**Sn**	**15 48 11.8**	**-0.4**
ESO	**Esso**	**3.52**	**1**	*e*P	**Pn**	**15 47 44.6**	**+1.5**
ESO				*e*S	**Sn**	**15 48 25.1**	**+1.2**
ESO	**Esso**	**3.52**	**1**	PN	**Pn**	**15 47 44.6**	**+1.5**
ESO				S	**Sn**	**15 48 25.1**	**+1.2**
KOZ	**Kozyrevsk**	**3.73**	**11**	*e*P	**Pn**	**15 47 47.8**	**+1.9**
KOZ	**Kozyrevsk**	**3.73**	**11**	PN	**Pn**	**15 47 47.8**	**+1.9**
LGNR	**Loginova**	**3.88**	**18**	*e*P	**Pn**	**15 47 51.5**	**+3.3**
LGNR	**Loginova**	**3.88**	**18**	PN	**Pn**	**15 47 51.5**	**+3.3**
CIRR	**Tsirk**	**3.92**	**18**	*e*P	**Pn**	**15 47 51.6**	**+3.0**
CIRR	**Tsirk**	**3.92**	**18**	PN	**Pn**	**15 47 51.6**	**+3.0**
SRDR	**Sredinnyy**	**3.97**	**9**	*e*P	**Pn**	**15 47 51.3**	**+2.1**
SRDR	**Sredinnyy**	**3.97**	**9**	PN	**Pn**	**15 47 51.3**	**+2.1**
KRSR	**Krestovskiy**	**3.98**	**16**	*e*P	**Pn**	**15 47 50.8**	**+1.3**
KRSR	**Krestovskiy**	**3.98**	**16**	PN	**Pn**	**15 47 50.8**	**+1.3**
KLY	**Klyuchi**	**4.09**	**17**	*e*P	**Pn**	**15 47 52.8**	**+2.0**
KLY	**Klyuchi**	**4.09**	**17**	PN	**Pn**	**15 47 52.8**	**+2.0**
BDR	**Baidarnaya**	**4.44**	**19**	*e*P	**Pn**	**15 47 57.5**	**+2.0**
BDR	**Baidarnaya**	**4.44**	**19**	PN	**Pn**	**15 47 57.5**	**+2.0**
SMKR	**Semkarok**	**4.50**	**21**	*e*P	**Pn**	**15 47 58.0**	**+1.6**
SMKR	**Semkarok**	**4.50**	**21**	PN	**Pn**	**15 47 58.0**	**+1.6**
SRKR	**Sorokina**	**4.51**	**19**	*e*P	**Pn**	**15 47 58.5**	**+2.0**
SRKR	**Sorokina**	**4.51**	**19**	PN	**Pn**	**15 47 58.5**	**+2.0**
KBTR	**Krutoberegovo**	**4.54**	**32**	*e*P	**Pn**	**15 47 58.0**	**+1.1**
KBTR				*e*S	**Sn**	**15 48 47.0**	**-1.5**
KBTR	**Krutoberegovo**	**4.54**	**32**	PN	**Pn**	**15 47 58.0**	**+1.1**
KBTR				S	**Sn**	**15 48 47.0**	**-1.5**
KBG	**Krutoberegovo**	**4.55**	**31**	*e*P	**Pn**	**15 47 58.0**	**+1.1**
KBG	**Krutoberegovo**	**4.55**	**31**	PN	**Pn**	**15 47 58.0**	**+1.1**
BKI	**Bering**	**5.20**	**55**	*e*P	**Pn**	**15 48 06.3**	**+0.6**
BKI				*e*S	**Sn**	**15 48 59.1**	**-5.3**
BKI	**Bering**	**5.20**	**55**	PN	**Pn**	**15 48 06.3**	**+0.6**
MA2	**Magadan**	**8.40**	**332**	P	**Pn**	**15 48 48.2**	**-0.9**
	comp=N,0.5nm,0.3s,baz=149,slow=13,SNR=5.6						
ASAJ	**Asahikawa**	**13.47**	**238**	P	**Pn**	**15 49 58.6**	**+1.5**
	comp=N,0.4nm,0.3s,baz=74,slow=15,SNR=7.7						
USRK	**Ussuriysk Ar.**	**19.41**	**256**	P	**P**	**15 51 07.0**	**-1.1**
	comp=N,0.1nm,0.3s,baz=60,slow=14,SNR=5.8						
USRK	**Ussuriysk Ar.**	**19.41**	**256**	P	**P**	**15 51 07.0**	**-1.1**
MJAR	**Matsushiro Arr**	**21.40**	**230**	P	**P**	**15 51 29.7**	**+0.1**
	comp=N,2.1nm,0.8s,baz=14,slow=8.3,SNR=7.3						
TIXI	**Tiksi**	**23.32**	**337**	P	**P**	**15 51 46.7**	**-2.0**
	comp=N,1.8nm,0.4s,baz=123,slow=12,SNR=10						
ILAR	**Eielson Array**	**29.95**	**44**	P	**P**	**15 52 49.1**	**+0.9**
	comp=N,0.9nm,0.8s,baz=260,slow=7.7,SNR=9.9						
H11N2	**WAKE ISLAND Hy**	**33.26**	**166**	T	T	16 28 33.7	
	baz=351,slow=76,SNR=109						
H11N3	**WAKE ISLAND Hy**	**33.28**	**166**	T	T	16 28 35.8	
	baz=351,slow=76,SNR=214						
H11N1	**WAKE ISLAND Hy**	**33.28**	**166**	T	T	16 28 35.0	
	baz=351,slow=76,SNR=214						
H11S1	**WAKE ISLAND Hy**	**34.43**	**166**	T	T	16 30 01.6	
	baz=351,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**34.45**	**166**	T	T	16 30 05.2	
	baz=351,slow=76,SNR=72						
H11S2	**WAKE ISLAND Hy**	**34.45**	**166**	T	T	16 30 05.8	
	baz=351,slow=76,SNR=23						
ZALV	**Zalesovo Beam**	**42.36**	**303**	P	**P**	**15 54 31.0**	**-2.7**
	comp=N,0.4nm,0.3s,baz=58,slow=8.0,SNR=2.5						
ZALV				PcP	**PcP**	**15 56 24.9**	**-0.2**
	comp=N,0.9nm,0.4s,baz=71,slow=3.1,SNR=4.6						
YKA	**Yellowknife Ar**	**44.29**	**42**	P	**P**	**15 54 50.5**	**+1.4**
	comp=N,1.3nm,0.7s,baz=295,slow=8.2,SNR=7.0						
MKAR	**Makanchi Array**	**47.61**	**295**	P	**P**	**15 55 12.9**	**-2.5**
	comp=N,0.5nm,0.5s,baz=60,slow=5.6,SNR=9.7						
MKAR	**Makanchi Array**	**47.61**	**295**	P	**P**	**15 55 13.0**	**-2.5**
ARCES	**ARCESS Array B**	**53.64**	**341**	P	**P**	**15 55 58.3**	**-2.0**
	comp=N,6.6nm,0.4s,baz=41,slow=8.4,SNR=3.6						
ARCES				LR	LR	16 22 02.4	
	comp=N,17nm,19.7s,baz=78,slow=40						
NVAR	**Mina Array Bea**	**56.85**	**69**	P	**P**	**15 56 27.0**	**+2.9**
	comp=N,0.9nm,0.5s,baz=302,slow=7.4,SNR=9.5						
PDAR	**Pinedale Array**	**58.67**	**60**	P	**P**	**15 56 38.8**	**+2.0**
	comp=N,1.9nm,0.6s,baz=320,slow=2.6,SNR=18						
FINES	**FINESS Array B**	**60.37**	**336**	P	**P**	**15 56 46.4**	**-1.4**
	comp=N,0.8nm,0.8s,baz=45,slow=6.1,SNR=4.7						
NB2	**NORSAR Subarra**	**63.93**	**343**	P	**P**	**15 57 10.4**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=21,slow=6.9						
NOA	**NORSAR Array B**	**63.93**	**343**	P	**P**	**15 57 10.6**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=21,slow=6.7,SNR=5.8						
AKASG	**Malin Array Be**	**68.71**	**328**	P	**P**	**15 57 40.2**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=32,slow=6.6,SNR=2.5						
TXAR	**Lajitas Array**	**71.76**	**66**	P	**P**	**15 58 03.4**	**+2.0**
	comp=Z,1.4nm,0.5s,baz=302,slow=5.1,SNR=16						
GERES	**GERESS Array B**	**74.78**	**337**	P	**P**	**15 58 18.6**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=17,slow=7.2,SNR=3.4						
ASAR	**Alice Springs**	**78.76**	**203**	P	**P**	**15 58 43.0**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=15,slow=5.4,SNR=6.0						
ESDC	**Sonseca Array**	**87.03**	**347**	P	**P**	**15 59 22.6**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=359,slow=3.9,SNR=4.2						
PLCA	**Paso Flores**	**144.93**	**90**	PKPbc	**PKPdf**	**16 06 15.3**	**+0.8**
	comp=Z,5.0nm,1.0s,baz=350,slow=7.9,SNR=2.9						

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*ISCJB **21** 15:47:14.1±0.3, 44°.17N±0°.03×10°.18E±0°.04, h12km±3km,*

Error ellipse: s-maj=5.6km s-min=3.3km az=36.7
*ROM **21** 15:47:14.1±0.1, 44°.197N×0°.008×10°.23E±0°.01, h10km, ML2.5/9, Error ellipse: s-maj=1.1km s-min=0.4km az=41.0*
*LDG **21** 15:47:14.9±0.0, 44°.18N×10°.22E, h2km, Md2.5/2, Ml2.5/12, Error ellipse: s-maj=1.4km s-min=0.8km az=20.0*
*GEN **21** 15:47:14.4, 44°.21N×10°.22E, h6km±2km, Ml2.3*
ISC 21 15:47:14.1±0.8, 44°.17N±0°.03×10°.19E±0°.03, h11km±7km, n33, σ1§30/55, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.14**	**93**	P	**Pg**	**15 47 17.5**	**+0.1**
VLC				S	**Sg**	**15 47 19.7**	**-0.1**
VLC				AML	AML		
	comp=E,3425μm,0.7s						
VLC				AML	AML		
	comp=N,5570μm,0.2s						
VLC				AML	AML		
	comp=E,3340μm,0.4s						
VLC				AML	AML		
	comp=N,5885μm,0.2s						
VLC				AML	AML		
	comp=E,3425μm,0.7s						
VLC				AML	AML		
	comp=N,5565μm,0.2s						
VLC				AML	AML		
	comp=E,3340μm,0.4s						
VLC				AML	AML		
	comp=N,5885μm,0.2s						
VLC				AML	AML		
	comp=N,5565μm,0.2s						
VLC				AML	AML		
	comp=N,5885μm,0.2s						
VLC				AML	AML		
	comp=E,3340μm,0.4s						
VLC				AML	AML		
	comp=E,3425μm,0.7s						
VLC				AML	AML		
	comp=N,5885μm,0.2s						
VLC				AML	AML		
	comp=N,5565μm,0.2s						
VLC				AML	AML		
	comp=E,3340μm,0.4s						
VLC				AML	AML		
	comp=E,3425μm,0.7s						
SARO	**Sassorosso**	**0.15**	**84**	P	**Pg**	**15 47 17.5**	**-0.2**
SARO				S	**Sg**	**15 47 19.7**	**-0.4**
SARO	**Sassorosso**	**0.15**	**84**	P	**Pg**	**15 47 17.5**	**-0.2**
SARO				S	**Sg**	**15 47 19.8**	**-0.4**
CARD	**Cardoso**	**0.26**	**124**	P	**Pg**	**15 47 19.8**	**+0.4**
CARD				S	**Sg**	**15 47 23.7**	**+0.8**
CARD	**Cardoso**	**0.26**	**124**	P	**Pg**	**15 47 19.8**	**+0.4**
CARD				S	**Sg**	**15 47 23.6**	**+0.8**
CARD				AML	AML		
	comp=E,2730μm,0.3s						
CARD				AML	AML		
	comp=N,2655μm,0.1s						
CARD				AML	AML		
	comp=E,2730μm,0.3s						
CARD				AML	AML		
	comp=N,2660μm,0.1s						
CARD				AML	AML		
	comp=N,2660μm,0.1s						
CARD				AML	AML		
	comp=E,2730μm,0.3s						
CARD				AML	AML		
	comp=N,2660μm,0.1s						
CARD				AML	AML		
	comp=E,2730μm,0.3s						
ERBM	**Eremo**	**0.30**	**33**	P	**Pg**	**15 47 19.9**	**-0.3**
ERBM				S	**Sb**	**15 47 24.3**	**-2.2**
ERBM				AML	AML		
	comp=E,1720μm,1.0s						
ERBM				AML	AML		
	comp=N,2625μm,1.0s						
ERBM				AML	AML		
	comp=E,1720μm,1.0s						
ERBM				AML	AML		
	comp=N,2620μm,1.0s						
ERBM				AML	AML		
	comp=E,1720μm,1.0s						
ERBM				AML	AML		
	comp=N,2620μm,1.0s						
ERBM				AML	AML		
	comp=E,1720μm,1.0s						
ERBM				AML	AML		
	comp=N,2620μm,1.0s						
BDI	**Bagni Di Lucca**	**0.31**	**110**	P	**Pg**	**15 47 20.6**	**+0.2**
BDI				S	**Sg**	**15 47 25.2**	**+0.6**
BDI				AML	AML		
	comp=E,1257μm,0.3s						
BDI				AML	AML		
	comp=N,928μm,0.2s						
BDI				AML	AML		
	comp=E,1160μm,0.3s						
BDI				AML	AML		
	comp=N,1070μm,0.3s						
BDI				AML	AML		
	comp=N,928μm,0.2s						
BDI				AML	AML		
	comp=E,1257μm,0.3s						
BDI				AML	AML		
	comp=E,1160μm,0.3s						
BDI				AML	AML		
	comp=N,1070μm,0.3s						
GRAM	**Graiana**	**0.34**	**345**	P	**Pg**	**15 47 20.6**	**-0.2**
GRAM				S	**Sg**	**15 47 25.3**	**0.0**
GRAM	**Graiana**	**0.34**	**345**	P	**Pg**	**15 47 20.6**	**-0.2**
GRAM				S	**Sg**	**15 47 25.4**	**0.0**
GRAM				AML	AML		
	comp=E,4775μm,1.2s						
GRAM				AML	AML		
	comp=N,6260μm,0.2s						
GRAM				AML	AML		
	comp=E,4775μm,1.2s						
GRAM				AML	AML		
	comp=N,6260μm,0.2s						
GRAM				AML	AML		
	comp=E,4775μm,1.2s						
GRAM				AML	AML		
	comp=N,6260μm,0.2s						
MAIM	**Mastiano**	**0.34**	**139**	P	**Pb**	**15 47 21.7**	**-0.4**
MAIM				S	**Sg**	**15 47 26.4**	**+1.2**
MAIM	**Mastiano**	**0.34**	**139**	P	**Pb**	**15 47 21.7**	**-0.4**
MAIM				S	**Sg**	**15 47 26.4**	**+1.2**
MAIM				AML	AML		
	comp=E,1048μm,0.4s						
MAIM				AML	AML		
	comp=N,1036μm,0.5s						
MAIM				AML	AML		
	comp=E,1048μm,0.4s						
MAIM				AML	AML		
	comp=N,1036μm,0.5s						
MAIM				AML	AML		
	comp=E,1048μm,0.4s						
MAIM				AML	AML		
	comp=N,1036μm,0.5s						
MAIM				AML	AML		
	comp=E,1048μm,0.4s						
MAIM				AML	AML		
	comp=N,1036μm,0.5s						
POPM	**Popiglio**	**0.43**	**107**	P	**Pg**	**15 47 22.6**	**+0.1**
POPM				S	**Sb**	**15 47 28.6**	**-1.5**
POPM	**Popiglio**	**0.43**	**107**	P	**Pg**	**15 47 22.7**	**+0.1**
POPM				S	**Sb**	**15 47 28.8**	**-1.3**
POPM				AML	AML		
	comp=E,1120μm,0.2s						
POPM				AML	AML		
	comp=N,1195μm,0.2s						
POPM				AML	AML		
	comp=E,1120μm,0.2s						
POPM				AML	AML		
	comp=N,1195μm,0.2s						
POPM				AML	AML		
	comp=E,1120μm,0.2s						
POPM				AML	AML		
	comp=N,1195μm,0.2s						
POPM				AML	AML		
	comp=E,1120μm,0.2s						
POPM				AML	AML		
	comp=N,1195μm,0.2s						
POPM				AML	AML		
	comp=E,1120μm,0.2s						
POPM				AML	AML		
	comp=N,1195μm,0.2s						
MSSA	**Maissana**	**0.50**	**287**	P	**Pg**	**15 47 24.4**	**+0.5**
MSSA				S	**Sg**	**15 47 32.1**	**+1.5**
MSSA				AML	AML		
	comp=E,152μm,0.8s						
MSSA				AML	AML		
	comp=N,131μm,1.3s						
MSSA				AML	AML		
	comp=N,131μm,1.3s						
MSSA				AML	AML		
	comp=E,152μm,0.8s						
MSSA				AML	AML		
	comp=N,131μm,1.3s						
MSSA				AML	AML		
	comp=E,152μm,0.8s						
ZCCA	**Zocca**	**0.59**	**72**	AML	AML		
	comp=N,770μm,0.4s						
ZCCA				AML	AML		
	comp=E,862μm,0.3s						
ZCCA				AML	AML		
	comp=E,886μm,0.3s						
ZCCA				AML	AML		
	comp=N,701μm,0.4s						
MTCR	**Monte La Croce**	**0.60**	**103**	P	**Pg**	**15 47 25.9**	**+0.1**
MTCR				S	**Sb**	**15 47 34.7**	**-0.5**
PTF	**Prato**	**0.67**	**108**	P	**Pb**	**15 47 27.4**	**-0.4**
FNVD	**Fontana Vidola**	**0.67**	**90**	P	**Pb**	**15 47 27.3**	**-0.6**
CRMI	**Carmignano**	**0.68**	**124**	AML	AML		
	comp=E,116μm,0.4s						
CRMI				AML	AML		
	comp=N,166μm,0.6s						
CRMI				AML	AML		
	comp=N,166μm,0.6s						
CRMI				AML	AML		
	comp=E,116μm,0.4s						
CRMI				AML	AML		
	comp=N,166μm,0.6s						
CRMI				AML	AML		
	comp=E,116μm,0.4s						
GORR	**Gorreto**	**0.78**	**305**	P	**Pb**	**15 47 30.5**	**+0.8**
BOB	**Bobbio (Coli)**	**0.80**	**319**	P	**Pg**	**15 47 29.6**	**+0.1**
PGF	**Pioggiola**	**1.84**	**209**	*e*Pn	**Pn**	**15 47 46.1**	**+0.4**
PGF				*e*Sn	**Sn**	**15 48 08.8**	**-0.1**
	comp=E,11nm,0.4s						
SBF	**Sospel**	**2.01**	**262**	*e*Pn	**Pn**	**15 47 48.6**	**+0.6**
SBF				*e*Sn	**Sn**	**15 48 13.0**	**-0.2**
	comp=E,15nm,0.4s						
MBDF	**Montbardon**	**2.51**	**284**	*e*Pn	**Pn**	**15 47 55.6**	**+0.6**
MBDF				*e*Sn	**Sn**	**15 48 25.0**	**-0.6**
	comp=E,3.4nm,0.3s						
FRF	**La Foret Royal**	**2.63**	**258**	*e*Pn	**Pn**	**15 47 56.9**	**+0.4**
FRF				*e*Sn	**Sn**	**15 48 27.9**	**-0.5**
	comp=E,2.9nm,0.2s						
LPG	**La Plagne**	**2.78**	**300**	*e*P	**Pb**	**15 48 02.0**	**-2.0**
LPG				*e*Sn	**Sn**	**15 48 31.5**	**-1.1**
	comp=E,2.1nm,0.3s						
LMR	**La Mourre**	**2.79**	**254**	*e*Pn	**Pn**	**15 47 58.6**	**-0.1**
LMR				*e*Sn	**Sn**	**15 48 31.3**	**-1.1**
	comp=E,2.4nm,0.3s						
LPL	**La Plagne**	**2.80**	**300**	*e*P	**Pb**	**15 48 02.3**	**-2.0**
LPL				*e*Sn	**Sn**	**15 48 32.1**	**-0.9**
	comp=E,3.8nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.17**	**285**	*e*P	**Pn**	**15 48 07.0**	**+3.0**
ORIF				*e*Sn	**Sn**	**15 48 40.4**	**-1.4**
	comp=E,4.6nm,0.4s						
SMRF	**Simiane la Rot**	**3.33**	**268**	*e*Pn	**Pn**	**15 48 06.6**	**+0.5**
CABF	**La Chapelle**	**3.78**	**312**	*e*P	**Pn**	**15 48 15.7**	**+3.3**
CABF				*e*Sn	**Sn**	**15 48 55.1**	**-1.8**
	comp=E,0.7nm,0.2s						
HAU	**Haudompre**	**4.68**	**327**	*e*P	**Pn**	**15 48 28.4**	**+3.8**
CDF	**Champ du Feu**	**4.70**	**336**	*e*P	**Pn**	**15 48 28.8**	**+3.8**

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*SJA **21** 15:48:40.1±0.6, 23°.73S×68°.03W, h146km±24km, ML2.4, MW2.7*
*ISCJB **21** 15:48:42.1±0.9, 23°.53S±0°.05×68°.12W±0°.06, h140km±14km, Error ellipse: s-maj=9.5km s-min=7.6km az=171.0*
*GUC **21** 15:48:44.1±0.5, 23°.50S×68°.30W, h151km±3km, ML3.8*
ISC 21 15:48:40.7±2.0, 23°.56S±0°.06×68°.07W±0°.06, h153km±19km, n19, σ1§15/31, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.22**	**321**	*e*P	**Pn**	**15 49 09.5**	**+1.3**
LVC	**Limon Verde**	**1.22**	**321**	*e*P	**Pn**	**15 49 09.2**	**+1.1**
LVC				*e*S	**Sn**	**15 49 28.3**	**-0.7**
PB15	**IPOC Station P**	**1.33**	**285**	*e*P	**Pn**	**15 49 09.6**	**+0.6**
PB15	**IPOC Station P**	**1.33**	**285**	*e*P	**Pn**	**15 49 09.8**	**+0.8**
PB15				*e*S	**Sn**	**15 49 29.7**	**-1.0**
PB06	**IPOC Station P**	**1.62**	**301**	*e*P	**Pn**	**15 49 12.6**	**+0.7**
PB06	**IPOC Station P**	**1.62**	**301**	*e*P	**Pn**	**15 49 12.9**	**+1.0**
PB06				*e*S	**Sn**	**15 49 34.7**	**-1.2**
PB06				IAML		15 49 36.6	
	comp=N,2μm,0.1s						
PB09	**IPOC Station P**	**2.06**	**328**	⇓*i*P	**Pn**	**15 49 18.7**	**+1.8**
PB09				*i* S	**Sn**	**15 49 44.8**	**+0.1**
PB09				IAML		15 49 48.4	
	comp=N,284nm,0.7s						
PB05	**IPOC Station P**	**2.08**	**289**	*e*P	**Pn**	**15 49 17.6**	**+0.5**
PB05				*e*S	**Sn**	**15 49 43.2**	**-1.8**
GO02	**Mina Guanaco**	**2.11**	**221**	⇑*i*P	**Pn**	**15 49 19.1**	**+1.5**
GO02				*i* S	**Sn**	**15 49 46.3**	**+0.3**
PB03	**IPOC Station P**	**2.16**	**314**	⇑*i*P	**Pn**	**15 49 19.0**	**+1.0**
PB03				*i* S	**Sn**	**15 49 45.7**	**-1.1**
PB03				IAML		15 49 46.6	
	comp=E,691nm,0.3s						
PB04	**IPOC Station P**	**2.27**	**302**	*e*P	**Pn**	**15 49 20.4**	**+1.0**
PB04				*e*S	**Sn**	**15 49 47.6**	**-1.5**
PB04				IAML		15 49 48.6	
	comp=N,619nm,0.5s						
PB10	**IPOC Station P**	**2.28**	**271**	*e*P	**Pn**	**15 49 20.0**	**+0.7**
PB10	**IPOC Station P**	**2.28**	**271**	*e*P	**Pn**	**15 49 20.1**	**+0.9**
PB10				*e*S	**Sn**	**15 49 47.3**	**-1.7**
HJA	**Humahuaca**	**2.47**	**82**	*e*P	**Pn**	**15 49 22.4**	**+0.5**
HJA				IAML		15 49 26.7	
	comp=Z,34nm,0.3s						
PB07	**IPOC Station P**	**2.48**	**317**	*e*P	**Pn**	**15 49 22.9**	**+1.0**
PB07				*e*S	**Sn**	**15 49 52.2**	**-1.4**
PB07				IAML		15 49 54.0	
	comp=N,612nm,0.4s						
YJA	**Yavi**	**2.73**	**60**	*e*P	**Pn**	**15 49 26.7**	**+1.5**
YJA				IAML		15 49 29.1	
	comp=Z,6.8nm,0.3s						
PB02	**IPOC Station P**	**2.80**	**322**	*e*P	**Pn**	**15 49 26.7**	**+1.0**
PB02				*e*S	**Sn**	**15 49 59.2**	**-1.3**
PB02				IAML		15 50 05.8	
	comp=E,361nm,0.4s						
AZAP	**Zapla**	**2.83**	**104**	*e*P	**Pn**	**15 49 25.5**	**-0.7**
AZAP				IAML		15 49 29.6	
	comp=Z,9.7nm,0.4s						
PB01	**IPOC Station P**	**2.83**	**332**	*e*P	**Pn**	**15 49 26.2**	**+0.1**
PB01				*e*S	**Sn**	**15 50 01.1**	**-0.1**
PB01				IAML		15 50 04.5	
	comp=E,255nm,0.4s						

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*ISCJB **21** 15:53:23.9±0.4, 43°.27N±0°.05×145°.37E±0°.05, h121km±2km, mb4.0/17, Error ellipse: s-maj=8.8km s-min=4.6km az=146.2*
*NEIC **21** 15:53:24.2±1.9, 43°.35N×145°.51E, h110km±11km, mb4.1/11, Error ellipse: s-maj=17.2km s-min=12.0km az=221.0*
*SKHL **21** 15:53:24.8±0.2, 43°.15N×145°.51E, h111km±8km, mb4.3/5, msh5.2/5*
*MOS **21** 15:53:25.0±2.1, 42°.90N×145°.90E, h72km, mb4.0/9, Error ellipse: s-maj=16.6km s-min=11.4km az=101.0*
*JMA **21** 15:53:25.8±0.1, 43°.30N×145°.34E, h108km±1km, M3.4*
*IDC **21** 15:53:26.7±4.8, 45°.63N×144°.39E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.4/32, mbtmp3.8/4, Error ellipse: s-maj=95.3km s-min=26.3km az=110.0*
ISC 21 15:53:24.7±0.7, 43°.28N±0°.05×145°.36E±0°.04, h116km±5km, n62, σ1§08/84, mb3.9/17, 3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.24**	**217**	P	**Pn**	**15 53 41.4**	**+0.5**
JKHN				*e*S	**Sn**	**15 53 53.1**	**+0.1**
NEM2	**Nemuro 2**	**0.30**	**72**	P	**Pn**	**15 53 41.4**	**+0.3**
NEM2				*e*S	**Sn**	**15 53 52.9**	**-0.5**
GLVR	**Golovnino**	**0.48**	**14**	*d i*PN	**Pn**	**15 53 42.6**	**+0.6**
GLVR				*i* S	**Sn**	**15 53 55.8**	**+0.8**
GLVR				pmax	pmax		
	comp=N,107nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,1μm,0.4s						
GLVR				pmax	pmax		
	comp=E,97nm,0.2s						
GLVR				smax	smax		
	comp=N,5μm,0.2s						
GLVR				smax	smax		
	comp=E,3μm,0.3s						
GLVR	**Golovnino**	**0.48**	**14**	*i* P	**Pn**	**15 53 42.0**	**0.0**
GLVR				AMB	AMB	15 53 43.0	
	comp=E,107nm,0.5s						
GLVR				AMB	AMB	15 53 43.0	
	comp=E,97nm,0.5s						
GLVR				AMB	AMB	15 53 43.0	
	comp=E,124nm,0.5s						
GLVR				*i* S	**Sn**	**15 53 55.0**	**0.0**
GLVR				A	A	15 53 56.0	
	comp=E,461nm,0.5s						
GLVR				A	A	15 53 56.0	
	comp=E,343nm,0.5s						
JAK	**Akkeshi**	**0.56**	**240**	P	**Pn**	**15 53 43.0**	**+0.5**
JAK				*e*S	**Sn**	**15 53 55.8**	**-0.1**
JNK	**Nakash**	**0.56**	**304**	P	**Pn**	**15 53 42.5**	**0.0**
JNK				*e*S	**Sn**	**15 53 55.3**	**-0.7**
JRA	**Rausu**	**0.68**	**346**	P	**Pn**	**15 53 43.8**	**+0.4**
JRA				*e*S	**Sn**	**15 53 57.3**	**-0.3**
GRPR	**Tuman**	**0.78**	**23**	*e*PN	**Pn**	**15 53 45.0**	**+0.8**
GRPR				*i* S	**Sn**	**15 53 59.8**	**+0.8**
GRPR				pmax	pmax		
	comp=Z,253nm,0.2s						
GRPR				pmax	pmax		
	comp=N,42nm,0.1s						
GRPR				smax	smax		
	comp=N,3μm,0.3s						
GRPR				smax	smax		
	comp=E,2μm,0.3s						
GRPR	**Tuman**	**0.78**	**23**	*e*P	**Pn**	**15 53 45.0**	**+0.8**
GRPR				AMB	AMB	15 53 45.0	
	comp=E,42nm,0.3s						
GRPR				AMB	AMB	15 53 45.0	
	comp=E,120nm,0.3s						
GRPR				*i* S	**Sn**	**15 53 59.0**	**0.0**
GRPR				A	A	15 53 59.0	
	comp=E,286nm,0.4s						
GRPR				A	A	15 53 59.0	
	comp=E,160nm,0.4s						
LAGR	**Lagunnoye**	**0.84**	**22**	⇓*i*PN	**Pn**	**15 53 46.0**	**+1.2**
LAGR				*i* S	**Sn**	**15 54 01.0**	**+1.0**
LAGR				pmax	pmax		
	comp=N,25nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,200nm,0.1s						
LAGR				smax	smax		
	comp=N,1μm,0.5s						
LAGR				smax	smax		
	comp=E,1μm,0.5s						
LAGR	**Lagunnoye**	**0.84**	**22**	*i* P	**Pn**	**15 53 46.0**	**+1.2**
LAGR				AMB	AMB	15 53 46.0	
	comp=E,25nm,0.4s						
LAGR				AMB	AMB	15 53 46.0	
	comp=E,200nm,0.4s						
LAGR				*i* S	**Sn**	**15 54 01.0**	**+1.0**
LAGR				A	A	15 54 01.0	
	comp=E,1μm,0.5s						
LAGR				A	A	15 54 01.0	
	comp=E,1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**0.84**	**26**	*d i*PN	**Pn**	**15 53 45.6**	**+0.8**
YUK				*i* S	**Sn**	**15 54 00.4**	**+0.4**
YUK				pmax	pmax		
	comp=N,52nm,0.3s						
YUK				pmax	pmax		
	comp=E,53nm,0.3s						
YUK				pmax	pmax		
	comp=Z,317nm,0.3s						
YUK				smax	smax		
	comp=E,429nm,0.1s						
YUK				smax	smax		
	comp=N,122nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**0.84**	**26**	*i* P	**Pn**	**15 53 45.0**	**+0.2**
YUK				AMB	AMB	15 53 45.0	
	comp=N,52nm,0.3s						
YUK				AMB	AMB	15 53 45.0	
	comp=N,53nm,0.3s						
YUK				AMB	AMB	15 53 45.0	
	comp=N,160nm,0.3s						
YUK				*i* S	**Sn**	**15 54 00.0**	**0.0**
YUK				A	A	15 54 01.0	
	comp=N,789nm,0.3s						
YUK				A	A	15 54 01.0	
	comp=N,429nm,0.3s						
JAR	**Ashorobuto**	**1.16**	**272**	P	**Pn**	**15 53 48.7**	**+0.7**
JAR				*e*S	**Sn**	**15 54 05.8**	**+0.2**
JOB	**Onbets**	**1.18**	**252**	P	**Pn**	**15 53 48.9**	**+0.8**
JOB				*e*S	**Sn**	**15 54 06.0**	**+0.1**
JTKR	**Abashiri--Toko**	**1.26**	**304**	P	**Pn**	**15 53 49.6**	**+0.5**
JTKR				*e*S	**Sn**	**15 54 07.1**	**-0.5**
JCH	**Churui**	**1.61**	**246**	P	**Pn**	**15 53 53.7**	**+0.6**
JCH				*e*S	**Sn**	**15 54 14.3**	**-0.4**
JMP	**Maruseppu**	**1.62**	**297**	P	**Pn**	**15 53 53.8**	**+0.5**
JMP				*e*S	**Sn**	**15 54 14.0**	**-1.1**
ERM	**Erimo**	**2.06**	**233**	*e*Pn	**Pn**	**15 54 00.3**	**+1.7**
ERM				*e*Sn	**Sn**	**15 54 26.1**	**+1.6**
ERM	**Erimo**	**2.06**	**233**	*e*PN	**Pn**	**15 54 00.3**	**+1.7**
ERM				*e*		15 54 26.1	
JKA	**Kamikawa-asahi**	**2.17**	**294**	*e*P	**Pn**	**15 54 01.5**	**+1.5**
ASAJ	**Asahikawa**	**2.17**	**294**	Pn	**Pn**	**15 54 01.5**	**+1.4**
	comp=N,8.1nm,0.3s,baz=148,slow=8.2,SNR=40						
ASAJ				Sn	**Sn**	**15 54 27.9**	**+0.8**
	comp=N,2.8nm,0.3s,baz=249,slow=31,SNR=19						
ASAJ	**Asahikawa**	**2.17**	**294**	*e*Pn	**Pn**	**15 54 01.5**	**+1.4**
ASAJ				*e*Sn	**Sn**	**15 54 27.9**	**+0.8**
ASAJ	**Asahikawa**	**2.17**	**294**	PN	**Pn**	**15 54 01.5**	**+1.4**
KUR	**Kuril'sk**	**2.66**	**42**	*e*PN	**Pn**	**15 54 08.0**	**+1.7**
KUR				*i* S	**Sn**	**15 54 40.3**	**+1.9**
KUR				pmax	pmax		
	comp=Z,18nm,0.4s						
KUR				smax	smax		
	comp=N,55nm,0.2s						
KUR				smax	smax		
	comp=E,22nm,0.2s						
KUR	**Kuril'sk**	**2.66**	**42**	*i* P	**Pn**	**15 54 07.4**	**+1.1**
KUR				AMB	AMB	15 54 08.0	
	comp=E,10.0nm,0.3s						
KUR				AMB	AMB	15 54 08.0	
	comp=E,4.0nm,0.3s						
KUR				AMB	AMB	15 54 08.0	
	comp=E,20nm,0.3s						
KUR				*e*S	**Sn**	**15 54 38.7**	**+0.3**
KUR				A	A	15 54 42.0	
	comp=E,156nm,0.4s						
KUR				A	A	15 54 42.0	
	comp=E,236nm,0.4s						
MSHR	**Mys Shultsa**	**10.44**	**271**	*i* PN	**Pn**	**15 55 53.4**	**+2.3**
EKMR	**Ekimchan**	**12.81**	**324**	*e*rx	rx	15 56 13.0	
MA2	**Magadan**	**16.66**	**10**	*i* P	**P**	**15 57 11.3**	**-0.1**
ULN	**Ulaanbaatar**	**27.01**	**293**	*i* P	**P**	**15 58 54.6**	**-1.2**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NACB	**Ninganchiao**	**27.29**	**233**	*e*P	**P**	**15 58 57.9**	**-0.5**
	comp=Z,15nm,0.8s						
SONA0	**Songino Array**	**27.45**	**293**	*e*P	**P**	**15 59 00.4**	**+0.7**
SONM	**Songino Array**	**27.45**	**293**	P	**P**	**15 59 00.4**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=84,slow=9.3,SNR=4.2						
SONM	**Songino Array**	**27.45**	**293**	P	**P**	**15 59 00.4**	**+0.6**
YULB	**Yu-li**	**28.07**	**233**	*e*P	**P**	**15 59 05.1**	**-0.2**
	comp=Z,6.6nm,1.0s						
TPUB	**Ta-pu**	**28.53**	**234**	*e*P	**P**	**15 59 08.3**	**-1.1**
	comp=Z,20nm,1.1s						
TIXI	**Tiksi**	**29.57**	**350**	*e*P	**P**	**15 59 16.6**	**-1.5**
	comp=Z,1.6nm,1.1s						
TIXI	**Tiksi**	**29.57**	**350**	*e*P	**P**	**15 59 16.6**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SPIA	**Saint Paul Isl**	**31.01**	**48**	*e*P	**P**	**15 59 30.3**	**-0.6**
	comp=Z,184nm,1.0s						

ZAA0	**Zalesovo Array**	**40.24**	**307**	*e*P		**P**	**16 00 50.4**	**+0.6**
	comp=Z,1.2nm,0.8s							
ZAA1	**Zalesovo Array**	**40.24**	**307**	*e*P		**P**	**16 00 50.0**	**+0.3**
ZALV	**Zalesovo Beam**	**40.24**	**307**	P		**P**	**16 00 50.1**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=93,slow=10,SNR=3.6							
ZALV	**Zalesovo Beam**	**40.24**	**307**	*i* P		**P**	**16 00 52.0**	**+2.2**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s							
CAST	**Castle Rocks**	**40.41**	**38**	*e*P		**P**	**16 00 49.7**	**-1.4**
	comp=Z,6.3nm,0.9s							
ILB	**Eielson Array**	**42.64**	**36**	*e*P		**P**	**16 01 07.1**	**-2.1**
	comp=Z,1.1nm,0.9s							
MK31	**Makanchi Array**	**43.65**	**297**	*e*P		**P**	**16 01 18.2**	**+0.6**
	comp=Z,0.8nm,0.6s							
MK31	**Makanchi Array**	**43.65**	**297**	*e*P		**P**	**16 01 18.2**	**+0.6**
MK31				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MK32	**Makanchi Array**	**43.65**	**297**	*e*P		**P**	**16 01 18.4**	**+0.8**
MKAR	**Makanchi Array**	**43.65**	**297**	P		**P**	**16 01 18.4**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=81,slow=9.3,SNR=6.8							
MKAR	**Makanchi Array**	**43.65**	**297**	*i* P		**P**	**16 01 20.2**	**+2.6**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**43.65**	**297**	*e*P		**P**	**16 01 20.2**	**+2.6**
MAKZ	**Makanchi**	**43.84**	**298**	*e*P		**P**	**16 01 20.6**	**+1.4**
	comp=Z,1.0nm,0.4s							
MAKZ	**Makanchi**	**43.84**	**298**	*e*P		**P**	**16 01 20.6**	**+1.4**
MAKZ				pmax		pmax		
	comp=Z,1.0nm,0.4s							
KURK	**Kurchatov**	**44.71**	**304**	*e*P		**P**	**16 01 27.4**	**+1.4**
	comp=Z,1.5nm,0.6s							
KURK	**Kurchatov**	**44.71**	**304**	*e*P		**P**	**16 01 27.4**	**+1.4**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.6s							
KURK	**Kurchatov**	**44.71**	**304**	*e*P		**P**	**16 01 27.4**	**+1.4**
AAK	**Ala-Archa**	**50.38**	**295**	*i* P		**P**	**16 02 09.4**	**-0.7**
AAK				pmax		pmax		
	comp=Z,1.0nm,1.0s							
AAK	**Ala-Archa**	**50.38**	**295**	*e*P		**P**	**16 02 09.4**	**-0.7**
FIA0	**FINESS Array S**	**64.70**	**332**	*e*P		**P**	**16 03 50.0**	**+0.1**
FIA0	**FINESS Array S**	**64.70**	**332**	*e*P		**P**	**16 03 50.0**	**+0.1**
FINES	**FINESS Array B**	**64.70**	**332**	P		**P**	**16 03 50.0**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=30,slow=8.0,SNR=7.2							
FINES	**FINESS Array B**	**64.70**	**332**	*i* P		**P**	**16 03 50.4**	**+0.5**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.6s							

*ROM **21** 16:07:26.3±0.1, 44°.152N±0°.007×10°.177E±0°.009, h9km, ML2.5/9, Error ellipse: s-maj=0.9km s-min=0.4km az=38.0*
*GEN **21** 16:07:26.7, 44°.16N×10°.17E, h3km±2km, Ml2.2*
*VIE **21** 16:07:29.0±1.7, 44°.01N×10°.24E, h10km, mb2.3/7, ml2.5/9, Error ellipse: s-maj=20.7km s-min=11.6km az=74.0*
*LDG **21** 16:07:28.3±0.2, 44°.10N×10°.26E, h2km, Ml2.8/16, Error ellipse: s-maj=4.8km s-min=4.0km az=177.0*

ISC 21 16:07:26.7±0.8, 44°.15N±0°.02×10°.20E±0°.02, h13km±6km, n44, σ1§43/68, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.13**	**88**	P	**Pg**	**16 07 30.2**	**+0.1**
VLC				S	**Sg**	**16 07 32.8**	**+0.2**
VLC				AML	AML		
	comp=E,2690μm,0.4s						
VLC				AML	AML		
	comp=N,2840μm,0.1s						
VLC				AML	AML		
	comp=E,2775μm,0.4s						
VLC				AML	AML		
	comp=N,2935μm,0.1s						
VLC				AML	AML		
	comp=E,2690μm,0.4s						
VLC				AML	AML		
	comp=N,2845μm,0.1s						
VLC				AML	AML		
	comp=E,2775μm,0.4s						
VLC				AML	AML		
	comp=N,2935μm,0.1s						
VLC				AML	AML		
	comp=E,2775μm,0.4s						
VLC				AML	AML		
	comp=N,2845μm,0.1s						
VLC				AML	AML		
	comp=N,2935μm,0.1s						
VLC				AML	AML		
	comp=E,2690μm,0.4s						
SARO	**Sassorosso**	**0.15**	**78**	P	**Pg**	**16 07 30.5**	**0.0**
SARO				S	**Sg**	**16 07 33.2**	**+0.2**
SARO	**Sassorosso**	**0.15**	**78**	P	**Pg**	**16 07 30.5**	**0.0**
SARO				S	**Sg**	**16 07 33.2**	**+0.2**
SARO				AML	AML		
	comp=E,3235μm,0.4s						
SARO				AML	AML		
	comp=N,345μm,0.5s						
CARD	**Cardoso**	**0.24**	**122**	P	**Pb**	**16 07 32.5**	**-0.4**
CARD				S	**Sb**	**16 07 36.1**	**-0.9**
CARD	**Cardoso**	**0.24**	**122**	P	**Pb**	**16 07 32.5**	**-0.4**
CARD				S	**Sb**	**16 07 36.1**	**-0.9**
BDI	**Bagni Di Lucca**	**0.30**	**108**	P	**Pb**	**16 07 33.1**	**-0.8**
BDI				S	**Sb**	**16 07 38.0**	**-0.8**
ERBM	**Eremo**	**0.30**	**30**	P	**Pb**	**16 07 33.5**	**-0.6**
ERBM				S	**Sb**	**16 07 38.5**	**-0.6**
ERBM				AML	AML		
	comp=E,1905μm,1.3s						
ERBM				AML	AML		
	comp=N,2085μm,1.0s						
ERBM				AML	AML		
	comp=E,1905μm,1.3s						
ERBM				AML	AML		
	comp=N,2090μm,1.0s						
ERBM				AML	AML		
	comp=N,2090μm,1.0s						
ERBM				AML	AML		
	comp=E,1900μm,1.3s						
MAIM	**Mastiano**	**0.32**	**139**	P	**Pb**	**16 07 33.9**	**-0.4**
MAIM				S	**Sg**	**16 07 38.4**	**+0.8**
MAIM	**Mastiano**	**0.32**	**139**	P	**Pb**	**16 07 33.8**	**-0.4**
MAIM				S	**Sb**	**16 07 38.6**	**-0.7**
MAIM				AML	AML		
	comp=E,1450μm,0.3s						
MAIM				AML	AML		
	comp=N,1036μm,0.5s						
MAIM				AML	AML		
	comp=E,1450μm,0.3s						
MAIM				AML	AML		
	comp=N,1036μm,0.5s						
MAIM				AML	AML		
	comp=N,1036μm,0.5s						
MAIM				AML	AML		
	comp=E,1450μm,0.3s						
GRAM	**Graiana**	**0.35**	**344**	P	**Pg**	**16 07 33.8**	**-0.1**
GRAM				S	**Sg**	**16 07 38.7**	**+0.1**
GRAM	**Graiana**	**0.35**	**344**	P	**Pg**	**16 07 33.8**	**-0.1**
GRAM				S	**Sg**	**16 07 38.8**	**+0.1**
GRAM				AML	AML		
	comp=E,6845μm,0.2s						
GRAM				AML	AML		
	comp=N,5480μm,1.1s						
GRAM				AML	AML		
	comp=E,6845μm,0.2s						
GRAM				AML	AML		
	comp=N,5480μm,1.1s						
GRAM				AML	AML		
	comp=N,5480μm,1.1s						
POPM	**Popiglio**	**0.41**	**105**	P	**Pb**	**16 07 35.5**	**-0.4**
POPM				S	**Sb**	**16 07 42.0**	**-0.1**
POPM	**Popiglio**	**0.41**	**105**	P	**Pb**	**16 07 35.5**	**-0.4**
POPM				S	**Sb**	**16 07 42.0**	**-0.1**
POPM				AML	AML		
	comp=E,777μm,0.4s						
POPM				AML	AML		
	comp=N,998μm,0.3s						
POPM				AML	AML		
	comp=E,777μm,0.4s						
POPM				AML	AML		
	comp=N,998μm,0.3s						
POPM				AML	AML		
	comp=N,998μm,0.3s						
MSSA	**Maissana**	**0.52**	**288**	P	**Pg**	**16 07 36.6**	**-0.3**
MSSA				S	**Sg**	**16 07 43.5**	**-0.4**
MTCR	**Monte La Croce**	**0.59**	**102**	P	**Pb**	**16 07 38.8**	**-0.2**
MTCR				S	**Sn**	**16 07 48.0**	**-2.4**
MTCR				AML	AML		
	comp=E,416μm,0.5s						
MTCR				AML	AML		
	comp=N,561μm,0.7s						
MTCR				AML	AML		
	comp=E,415μm,0.5s						
MTCR				AML	AML		
	comp=N,565μm,0.7s						
MTCR				AML	AML		
	comp=N,565μm,0.7s						
CRMI	**Carmignano**	**0.66**	**123**	AML	AML		
	comp=E,118μm,0.6s						
CRMI				AML	AML		
	comp=E,118μm,0.6s						
CRMI				AML	AML		
	comp=N,181μm,0.8s						
GORR	**Gorreto**	**0.79**	**305**	P	**Pb**	**16 07 41.4**	**-1.0**
BOB	**Bobbio (Coli)**	**0.82**	**319**	P	**Pb**	**16 07 42.2**	**-0.7**
BOB				S	**Sg**	**16 07 54.0**	**+0.7**
CSNT	**Castellina Chi**	**1.04**	**130**	AML	AML		
	comp=E,150μm,0.5s						
CSNT				AML	AML		
	comp=E,150μm,0.5s						
CSNT				AML	AML		
	comp=N,190μm,0.6s						
ARCI	**Arcidosso**	**1.60**	**144**	AML	AML		
	comp=N,44μm,1.0s						
ARCI				AML	AML		
	comp=E,44μm,1.6s						
ARCI				AML	AML		
	comp=N,44μm,1.0s						
ARCI				AML	AML		
	comp=E,44μm,1.6s						
PGF	**Pioggiola**	**1.83**	**209**	*e*Pn		**Pb**	**16 07 59.5**	**-0.6**
PGF				*e*Sn		**Sn**	**16 08 19.8**	**-1.2**
	comp=E,9.3nm,0.3s							
SBF	**Sospel**	**2.02**	**263**	*e*Pn		**Pn**	**16 08 00.6**	**+0.1**
SBF				*e*Sn		**Sn**	**16 08 25.5**	**-0.1**
	comp=E,20nm,0.4s							
ARVD	**Arcevia**	**2.09**	**107**	AML	AML		
	comp=E,18μm,1.3s						
ARVD				AML	AML		
	comp=N,17μm,1.4s						
ARVD				AML	AML		
	comp=N,17μm,1.4s						
ARVD				AML	AML		
	comp=E,18μm,1.3s						
MBDF	**Montbardon**	**2.52**	**284**	*e*Pn		**Pb**	**16 08 13.1**	**+1.1**
MBDF				*e*Sn		**Sn**	**16 08 40.5**	**+2.3**
	comp=E,6.0nm,0.4s							
FRF	**La Foret Royal**	**2.64**	**258**	*e*Pn		**Pn**	**16 08 09.2**	**+0.2**
FRF				*e*Sn		**Sn**	**16 08 39.5**	**-1.4**
	comp=E,3.7nm,0.2s							
LPG	**La Plagne**	**2.80**	**300**	*e*Sn		**Sn**	**16 08 47.8**	**+2.6**
	comp=E,4.4nm,0.4s							
LMR	**La Mourre**	**2.80**	**254**	*e*Pn		**Pn**	**16 08 11.1**	**-0.1**
LMR				*e*Sn		**Sn**	**16 08 42.1**	**-2.7**
	comp=E,1.4nm,0.2s							
LPL	**La Plagne**	**2.82**	**300**	*e*Pn		**Pb**	**16 08 15.4**	**-1.6**
LPL				*e*Sn		**Sn**	**16 08 45.8**	**+0.2**
	comp=E,6.7nm,0.4s							
GEPF	**Gemona**	**2.97**	**43**	AML	AML		
	comp=N,52μm,0.5s						
GEPF				AML	AML		
	comp=E,58μm,0.1s						
GEPF				AML	AML		
	comp=N,52μm,0.5s						
GEPF				AML	AML		
	comp=E,58μm,0.1s						
ABTA	**Abfaltersbach**	**3.06**	**31**	*e*Pn		**Pb**	**16 08 18.0**	**-3.0**
	comp=E,1.0nm,0.4s							
DAVA	**Damuels**	**3.14**	**356**	*i* Pn		**Pb**	**16 08 20.4**	**-2.0**
	comp=E,2.5nm,0.2s							
DAVA				*i* Sn		**Sb**	**16 08 58.7**	**-2.0**
	comp=E,7.4nm,0.3s							
SQTA	**Sankt Quirin**	**3.15**	**13**	*i* Pn		**Pb**	**16 08 21.3**	**-1.3**
	comp=E,4.2nm,0.2s							
SQTA				*i* Sn		**Sb**	**16 09 01.9**	**+1.1**
	comp=E,4.6nm,0.3s							
ORIF	**Oris-en-Rattie**	**3.18**	**285**	*e*Pn		**Pn**	**16 08 19.9**	**+3.3**
ORIF				*e*Sn		**Sn**	**16 08 55.4**	**+1.0**
	comp=E,7.6nm,0.4s							
MOTA	**Moosalm**	**3.25**	**11**	*i* Pn		**Pb**	**16 08 22.1**	**-2.2**
	comp=E,2.1nm,0.3s							
MOTA				*e*Sn		**Sb**	**16 09 02.2**	**-1.8**
	comp=E,2.2nm,0.3s							
WTTA	**Wattenberg**	**3.27**	**17**	*i* Pn		**Pb**	**16 08 23.1**	**-1.5**
	comp=E,1.8nm,0.2s							
WTTA				*e*Sn		**Sb**	**16 09 02.5**	**-1.9**
	comp=E,4.3nm,0.3s							
WATA	**Walderalm**	**3.32**	**16**	*e*Pn		**Pb**	**16 08 22.8**	**-2.8**
	comp=E,2.0nm,0.2s							
RETA	**Reutte**	**3.36**	**6**	*e*Sn		**Sb**	**16 09 05.2**	**-1.6**
	comp=E,2.6nm,0.3s							
HINF	**Hinteralfeld**	**4.34**	**329**	*e*Pn		**Pn**	**16 08 34.7**	**+2.3**
HINF				*e*Sn		**Sn**	**16 09 24.7**	**+1.8**
	comp=E,7.5nm,0.4s							
MOA	**Molln**	**4.66**	**36**	*i* Pn		Pb	16 08 41.6	-6.6
	comp=E,1.1nm,0.2s							
HAU	**Haudompre**	**4.69**	**327**	*e*Pn		**Pn**	**16 08 39.3**	**+2.1**
HAU				*e*Sn		**Sn**	**16 09 33.9**	**+2.4**
	comp=E,15nm,0.4s							
CDF	**Champ du Feu**	**4.72**	**336**	*e*Pn		**Pn**	**16 08 39.0**	**+1.4**
CDF				*e*Sn		**Sn**	**16 09 33.0**	**+0.8**
	comp=E,4.5nm,0.4s							
ARSA	**Arzberg**	**4.84**	**48**	*i* Pn		**Pn**	**16 08 42.7**	**+3.4**
	comp=E,2.3nm,0.3s							
LOR	**Lormes**	**5.42**	**307**	*e*Sn		**Sn**	**16 09 49.6**	**+0.1**
	comp=E,3.5nm,0.4s,baz=125							
SSF	**Saint Saulge**	**5.53**	**304**	*e*Sn		**Sn**	**16 09 51.7**	**-0.3**
	comp=E,1.3nm,0.3s							

*GCG **21** 16:21:20.3±0.3, 13°.65N×90°.95W, h5km±10km, MD3.8*
*SNET **21** 16:21:20.8±1.1, 13°.64N×90°.81W, h13km±7km, ML2.7*

ISC 21 16:21:18.4±2.1, 13°.6N±0°.1×90°.89W±0°.06, h3km±12km, n13, σ0§50/19, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.72**	**37**	*e*P	**Pb**	**16 21 34.8**	**+1.0**
PCG	**Pacaya**	**0.84**	**19**	*e*P	**Pb**	**16 21 36.4**	**+0.6**
FUG	**Fuego 3**	**0.85**	**3**	*e*P	**Pb**	**16 21 36.2**	**+0.2**
ERG	**Entre ros, C**	**1.07**	**322**	*e*P	**Pg**	**16 21 38.7**	**-0.2**
NBG	**Las Nubes**	**1.12**	**28**	*e*P	**Pn**	**16 21 41.4**	**0.0**
NBG				*e*S	**Sn**	**16 21 57.8**	**+0.3**
RTR	**El Retiro**	**1.25**	**76**	*e*P	**Pg**	**16 21 42.8**	**+0.5**
SBLS	**San Blas**	**1.26**	**78**	*e*P	**Pg**	**16 21 42.2**	**-0.3**
SBLS				*e*S	**Sg**	**16 21 58.6**	**-0.2**
SNJE	**San Jose**	**1.28**	**77**	*e*P	**Pg**	**16 21 42.5**	**-0.4**
SNJE				*e*S	**Sg**	**16 21 59.3**	**-0.2**
MTO3	**Montecristo**	**1.69**	**61**	*e*P	**Pn**	**16 21 48.3**	**-0.8**
MTO3				*e*S	**Sb**	**16 22 11.5**	**-0.6**
MTO3				IAML		16 22 13.3	
	comp=Z,96nm,0.3s						
LFU	**La Fuente**	**1.73**	**85**	*e*P	**Pn**	**16 21 49.7**	**+0.2**
LFU				*e*S	**Sn**	**16 22 12.0**	**-0.3**
TECA	**Tecapa**	**2.32**	**92**	*e*P	**Pn**	**16 21 57.8**	**0.0**
LCY	**Lacayo**	**2.53**	**93**	*e*P	**Pn**	**16 22 00.1**	**-0.4**
CNCH	**Conchagua**	**2.99**	**96**	*e*P	**Pn**	**16 22 07.5**	**+0.6**
CNCH				*e*S	**Sn**	**16 22 43.0**	**-0.3**

KRSC 21 16:27:34.4±2.4, 49°.15N×156°.75E, h7km±41km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.59**	**345**	*e*P	Pn	16 28 01.7	-1.2
SKR				*e*S	Sn	16 28 22.2	-1.5
PAU	**Pauzhetka**	**2.32**	**1**	*e*S	Sb	16 28 45.0	-0.4
KDTR	**Khodutka, Kamc**	**2.79**	**17**	*e*P	Pb	16 28 22.4	-2.2
KDTR				*e*S	Sb	16 28 58.2	-0.8
ASAK	**Asacha**	**3.32**	**12**	*e*P	Pb	16 28 30.4	-3.2
RUS	**Russkaya**	**3.47**	**18**	*e*P	Pn	16 28 30.6	+1.8
RUS				*e*S	Sn	16 29 13.0	+2.9
DALK	**Dalny**	**4.08**	**17**	*e*P	Pn	16 28 41.3	+4.0
UGLR	**Uglovaya**	**4.27**	**17**	*e*P	Pn	16 28 44.3	+4.4
KOK	**Koryaka**	**4.31**	**15**	*e*P	Pb	16 28 45.8	-4.8
SMAR	**Somma**	**4.31**	**17**	*e*P	Pb	16 28 46.1	-4.6
SDLR	**Sedlovina**	**4.34**	**17**	*e*P	Pn	16 28 45.0	+4.0
KRX	**Arik**	**4.38**	**15**	*e*P	Pn	16 28 46.2	+4.7
SPN	**Mys Shipunski**	**4.46**	**26**	*e*P	Pn	16 28 47.4	+5.0
GNL	**Ganaly**	**4.61**	**9**	*e*P	Pn	16 28 48.9	+4.3
MKZ	**Mys Kozlova**	**6.23**	**28**	*e*P	Pn	16 29 10.5	+3.8

*ISCJB **21** 16:34:30.7±1.1, 14°.1N±0°.1×92°.26W±0°.08, h84km±9km, Error ellipse: s-maj=20.1km s-min=7.0km az=32.4*
*UCR **21** 16:34:31.7±1.4, 15°.67N×91°.38W, h20km±66km, MD3.5, mb4.2(NEIC)*
*NEIC **21** 16:34:32.8±0.0, 14°.05N×92°.21W, h68km, mb4.2/7, MD4.1(MEX), After MEX.*
*MEX **21** 16:34:32.8±0.6, 14°.05N×92°.21W, h68km±157km, MD4.1*
*GCG **21** 16:34:37.0±0.3, 14°.41N×91°.79W, h70km±23km, MD3.9*

ISC 21 16:34:30.8±1.7, 14°.0N±0°.1×92°.32W±0°.09, h63km±18km, n29, σ1§01/27, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.87**	**57**	*e*P	**Pn**	**16 34 47.7**	**+0.3**
STG3	**Santiaguito 3,**	**1.04**	**44**	*e*P	**Pn**	**16 34 49.3**	**-0.4**
FUG	**Fuego 3**	**1.51**	**71**	*e*P	**Pn**	**16 34 55.0**	**-0.9**
FUG				*e*S	**Sn**	**16 35 14.0**	**-0.8**
FUG	**Fuego 3**	**1.51**	**71**	*e*P	**Pn**	**16 34 55.0**	**-0.9**
PCG	**Pacaya**	**1.71**	**75**	*e*P	**Pn**	**16 34 58.3**	**-0.4**
PCG	**Pacaya**	**1.71**	**75**	*e*P	**Pn**	**16 34 58.3**	**-0.4**
IXG	**Ixpaco**	**1.83**	**83**	*e*P	**Pn**	**16 35 00.3**	**0.0**
IXG				*e*S	**Sn**	**16 35 23.1**	**+0.5**
IXG	**Ixpaco**	**1.83**	**83**	*e*P	**Pn**	**16 35 00.3**	**0.0**
PCIG		**1.94**	**333**	*e*Pn	**Pn**	**16 35 00.3**	**-1.1**
PCIG				*e*Sn	**Sn**	**16 35 24.9**	**+0.1**
PCIG		**1.94**	**333**	*e*P	**Pn**	**16 35 00.3**	**-1.1**
PCIG				*e*S	**Sn**	**16 35 24.9**	**+0.1**
CCIG	**Comitan**	**2.31**	**4**	*e*Pn	Pn	16 35 11.9	+5.1
CCIG				*e*Pn	Pn	16 35 11.9	+5.1
CCIG				*e*Sn	Sn	16 35 44.0	+10
CCIG	**Comitan**	**2.31**	**4**	*e*P	Pn	16 35 11.9	+5.1
CCIG				*e*S	Sn	16 35 44.0	+10
TGIG		**2.90**	**345**	*e*Pn	Pn	16 35 21.0	+6.3
TGIG				*e*Sn	Sn	16 35 55.2	+6.8
TGIG		**2.90**	**345**	*e*P	Pn	16 35 21.0	+6.3
TGIG				*e*S	Sn	16 35 55.2	+6.8
CSGN	**Cosiguina Volc**	**4.73**	**101**	*e*Pn	**Pn**	**16 35 39.0**	**-0.8**
LVIG	**Laguna Verde**	**6.94**	**326**	*e*Pn	**Pn**	**16 36 11.8**	**+1.9**
MYIG	**Mrida**	**7.38**	**19**	*e*Pn	**Pn**	**16 36 15.5**	**-0.4**
JTS	**Las Juntas de**	**8.08**	**116**	*e*Pn	**Pn**	**16 36 26.5**	**+0.9**
FSCY	**Frank Sound, G**	**11.92**	**62**	*e*Pn	Pn	16 37 13.0	-5.1
ZAIG	**Zacatecas**	**13.08**	**313**	*e*Pn	**Pn**	**16 37 34.4**	**+0.3**
BCIP	**Isla Barro Col**	**13.12**	**110**	*e*Pn	Pn	16 37 36.1	+1.6
ETX06	**Route 59 and C**	**17.93**	**354**	*e*P	**P**	**16 38 38.9**	**+3.3**
	33nm,0.3s						
HPIG		**17.95**	**318**	*e*P	**P**	**16 38 36.9**	**+0.7**
WHTX	**Lake Whitney,**	**18.55**	**346**	*e*P	**P**	**16 38 42.5**	**0.0**
	5.8nm,0.6s						
TX31	**Lajitas Ar. Si**	**18.56**	**327**	*e*P	**P**	**16 38 42.5**	**-0.2**
	2.2nm,1.1s						
352A	**Blakely**	**18.71**	**20**	*e*P	**P**	**16 38 43.5**	**-0.8**
	11nm,0.9s						
250A	**Grady**	**18.77**	**16**	*e*P	**P**	**16 38 44.5**	**-0.3**
	46nm,0.4s						
Z41A	**Richland Creek**	**19.21**	**359**	*e*P	**P**	**16 38 49.4**	**-0.4**
	12nm,0.5s						
ABTX	**Abilene, Hawle**	**19.74**	**341**	*e*P	**P**	**16 38 55.1**	**-0.5**
	5.4nm,1.1s						

KRSC 21 17:22:21.8±1.8, 48°.85N×157°.92E, h31km±28km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.17**	**328**	*e*P	Pn	17 22 57.2	+1.4
SKR				*e*S	Sn	17 23 22.8	+1.2
ALID	**Alaid**	**2.53**	**324**	*e*P	Pn	17 23 01.8	+0.9
PAU	**Pauzhetka**	**2.71**	**345**	*e*P	Pb	17 23 06.5	-3.1
PAU				*e*S	Sb	17 23 39.0	-3.4
KDTR	**Khodutka, Kamc**	**2.96**	**2**	*e*P	Pb	17 23 10.5	-3.3
KDTR				*e*S	Sb	17 23 45.4	-4.1
ASAK	**Asacha**	**3.53**	**360**	*e*P	Pn	17 23 19.1	+4.5
RUS	**Russkaya**	**3.60**	**6**	*e*P	Pn	17 23 19.6	+4.1
RUS				*e*S	Sn	17 24 01.5	+4.6
MTVR	**Mutnovka**	**3.64**	**3**	*e*S	Sn	17 24 02.9	+4.9
KRMR	**Karymshinskiy**	**3.98**	**2**	P	Pn	17 23 25.9	+5.2
KRMR				*e*S	Sb	17 24 13.2	-5.7
DALK	**Dalny**	**4.22**	**7**	*e*P	Pn	17 23 28.1	+4.2
DALK				*e*S	Sn	17 24 17.2	+5.2
UGLR	**Uglovaya**	**4.40**	**7**	*e*P	Pn	17 23 30.9	+4.4
AVH	**Avacha**	**4.45**	**6**	*e*P	Pn	17 23 31.7	+4.5
SMAR	**Somma**	**4.45**	**7**	*e*P	Pn	17 23 32.5	+5.2
SPN	**Mys Shipunski**	**4.45**	**17**	*e*S	Sn	17 24 22.0	+4.1
KOK	**Koryaka**	**4.47**	**6**	*e*P	Pn	17 23 32.4	+5.0
SDLR	**Sedlovina**	**4.47**	**7**	*e*P	Pn	17 23 32.1	+4.6
KRER	**Koryakskii**	**4.49**	**6**	*e*S	Sn	17 24 25.8	+6.8
KRX	**Arik**	**4.54**	**6**	*e*P	Pn	17 23 33.4	+5.0
GNL	**Ganaly**	**4.85**	**0**	*e*P	Pn	17 23 38.5	+5.8
MKZ	**Mys Kozlova**	**6.18**	**21**	*e*P	Pn	17 23 55.2	+4.4

*TEH **21** 17:35:37.2, 26°.73N×57°.83E, h12km, ML3.2*
*ISCJB **21** 17:35:38.6±1.3, 26°.60N±0°.05×57°.7E±0°.2, h10km, Error ellipse: s-maj=20.7km s-min=7.5km az=178.6*
*OMAN **21** 17:35:41.5±1.8, 26°.13N×57°.77E, h7km, ml2.5/7, Error ellipse: s-maj=35.4km s-min=11.3km az=229.0*

ISC 21 17:35:37.5±1.7, 26°.56N±0°.04×57°.7E±0°.1, h10km, n12, σ1§50/12, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.92**	**178**	*e*Pg	**Pn**	**17 35 58.7**	**+2.2**
NIAN	**Nian**	**1.27**	**322**	IAMB	IAmb	17 36 06.4	
	comp=Z,0.0nm,0.2s						
NIAN				*e*Pg	**Pn**	**17 36 01.6**	**+0.2**
KHNJ	**Kahnooj**	**1.38**	**359**	*e*Pg	**Pn**	**17 36 00.8**	**-2.1**
BANOM	**Banah**	**1.43**	**244**	P	**Pg**	**17 36 05.7**	**+0.7**
	SNR=70						
GENO	**Geno**	**1.62**	**301**	IAMB	IAmb	17 36 39.3	
	comp=Z,0.0nm,0.3s						
GENO				*e*Pn	**Pb**	**17 36 07.7**	**+0.1**
MDH	**Madha**	**1.80**	**226**	P	**Pn**	**17 36 09.0**	**+0.4**
	SNR=8.9						
HATD	**Hatta, Dubai**	**2.25**	**220**	P	**Pb**	**17 36 16.6**	**-1.7**
ASHO	**Ashiyiah**	**2.40**	**219**	P	**Pn**	**17 36 17.5**	**+0.5**
NAZ	**Nazwa, Dubai**	**2.43**	**230**	P	**Pb**	**17 36 20.0**	**-1.5**
SOHO	**SOHO**	**2.65**	**204**	P	**Pn**	**17 36 19.4**	**-0.9**
	SNR=21						
NGRK	**Negar Kerman**	**3.19**	**344**	*e*Pn	**Pn**	**17 36 29.3**	**+1.1**
NGRK				IAMB	IAmb	17 37 21.0	
	comp=Z,0.0nm,0.3s						
TVBK	**TV Kerman**	**3.52**	**346**	*e*

CARD			S	Sb	17 58 49.3	-0.4
ERBM	**Eremo**	**0.32 40**	P	Pg	17 58 44.7	+0.1
ERBM			S	Sg	17 58 49.4	+0.3
ERBM			AML	AML		
comp=E,1475μm,0.7s						
ERBM			AML	AML		
comp=N,1360μm,0.6s						
ERBM			AML	AML		
comp=E,1475μm,0.7s						
ERBM			AML	AML		
comp=N,1360μm,0.6s						
GRAM	**Graiana**	**0.32 352**	P	Pg	17 58 43.5	-1.1
GRAM			S	Sg	17 58 48.7	-0.4
GRAM	**Graiana**	**0.32 352**	P	Pg	17 58 44.7	+0.1
GRAM			S	Sg	17 58 49.0	-0.2
GRAM			AML	AML		
comp=E,5375μm,0.2s						
GRAM			AML	AML		
comp=N,4445μm,1.4s						
GRAM			AML	AML		
comp=N,4445μm,1.4s						
GRAM			AML	AML		
comp=E,5375μm,0.2s						
BDI	**Bagni Di Lucca**	**0.35 108**	P	Pg	17 58 44.6	-0.5
BDI			S	Sb	17 58 51.1	-0.4
MAIM	**Mastiano**	**0.37 135**	P	Pg	17 58 45.5	+0.2
MAIM			S	Sb	17 58 51.7	-0.1
MAIM	**Mastiano**	**0.37 135**	P	Pg	17 58 45.1	-0.2
MSSA	**Maissana**	**0.46 288**	P	Pg	17 58 47.9	+0.8
MTCR	**Monte La Croce**	**0.64 103**	P	Pg	17 58 50.8	+0.3
GORR	**Gorreto**	**0.74 306**	P	Pg	17 58 52.8	+0.5
GORR			AML	AML		
comp=E,194μm,0.7s						
GORR			AML	AML		
comp=N,252μm,0.4s						
GORR			AML	AML		
comp=E,194μm,0.7s						
GORR			AML	AML		
comp=N,252μm,0.4s						
PGF	**Pioggiola**	**1.82 207**	*e*Pn	Pn	17 59 10.1	+1.2
PGF			*e*Sn	Sn	17 59 32.0	+0.2
comp=N,16nm,0.2s						
SBF	**Sospel**	**1.97 262**	*e*Pn	Pn	17 59 11.4	+0.5
SBF			*e*Sn	Sn	17 59 35.8	+0.4
comp=N,20nm,0.3s						
MBDF	**Montbardon**	**2.47 284**	*e*Pn	Pn	17 59 19.3	+1.5
MBDF			*e*Sn	Sn	17 59 48.7	+0.9
comp=N,8.8nm,0.4s						
FRF	**La Foret Royal**	**2.59 258**	*e*Pn	Pn	17 59 19.9	+0.5
FRF			*e*Sn	Sn	17 59 50.3	-0.3
comp=N,14nm,0.3s						
LPG	**La Plagne**	**2.74 300**	*e*Pn	Pb	17 59 25.1	-1.8
LPG			*e*Sn	Sn	17 59 54.7	-0.1
comp=N,4.0nm,0.3s						
LMR	**La Mourre**	**2.75 254**	*e*Pn	Pn	17 59 21.6	0.0
LMR			*e*Sn	Sn	17 59 53.5	-1.1
comp=N,8.5nm,0.3s						
LPL	**La Plagne**	**2.76 300**	*e*Pn	Pn	17 59 23.1	+1.1
LPL			*e*Sn	Sn	17 59 56.2	+1.0
comp=N,5.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.13 285**	*e*Pn	Pn	17 59 29.8	+3.0
ORIF			*e*Sn	Sn	18 00 02.3	-1.7
comp=N,4.1nm,0.4s						
SMRF	**Simiane la Rot**	**3.29 268**	*e*Pn	Pn	17 59 29.1	+0.1
SMRF			*e*Sn	Sn	18 00 07.7	-0.2
comp=N,4.4nm,0.4s						
CABF	**La Chapelle**	**3.75 312**	*e*Pn	Pn	17 59 38.6	+3.2
VIVF	**Saint-Julien-l**	**3.96 282**	*e*Pn	Pn	17 59 41.3	+3.1
HINF	**Hinteralfeld**	**4.30 329**	*e*Pn	Pn	17 59 45.4	+2.5
HAU	**Haudompre**	**4.65 327**	*e*Pn	Pn	17 59 50.3	+2.6
HAU			*e*Sn	Sn	18 00 41.2	-0.2
comp=N,3.7nm,0.4s						
CDF	**Champ du Feu**	**4.68 336**	*e*Pn	Pn	17 59 50.4	+2.3
CDF			*e*Sn	Sn	18 00 41.0	-1.2
PAGF	**Fort de Pagny**	**5.34 327**	*e*Pn	Pn	17 59 58.8	+1.7
baz=146						
PAGF			*e*Sn	Sn	18 00 56.6	-1.7
baz=146						
SFTF	**Sexfontaines**	**5.36 321**	*e*Sn	Sn	18 00 57.8	-1.1
comp=N,2.4nm,0.3s,baz=138						
LOR	**Lormes**	**5.37 307**	*e*Pn	Pn	17 59 58.2	+0.6
baz=125						
LOR			*e*Sn	Sn	18 00 58.1	-1.1
comp=N,1.4nm,0.3s,baz=123						
SSF	**Saint Saulge**	**5.47 304**	*e*Pn	Pn	17 59 59.8	+0.9
SSF			*e*Sn	Sn	18 01 00.5	-1.1
comp=N,1.8nm,0.4s						
MEZF	**Maizieres J'vi**	**5.58 323**	*e*Pn	Pn	18 00 02.4	+2.0
baz=141						
MEZF			*e*Sn	Sn	18 01 00.4	-3.8
comp=N,2.0nm,0.4s,baz=141						
BAIF	**Baives**	**7.14 328**	*e*Pn	Pn	18 00 25.0	+3.2
BAIF			*e*Sn	Sn	18 01 41.6	-1.0
comp=N,2.2nm,0.2s						

MAN 21 18:11:15.0, 9.′39N×124.°22E, h15km, mb4.1, ML2.8, MS2.5, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.47**	**310**	*e*P	Pb	18 11 24.7	-0.3
TBP				*i* S	Sb	18 11 33.3	+1.5
LLP	**Lapu-Lapu**	**0.96**	**345⇑**	*e*P	Pb	18 11 32.7	-0.7
LLP				*e*S	Sg	18 11 46.3	+0.1
MSLP	**Maasin**	**0.97**	**40**	*e*P	Pb	18 11 32.6	-1.0
MSLP				*e*S	Sg	18 11 47.0	+0.4
SNPH	**Sibulan**	**0.98**	**268⇑**	*e*P	Pn	18 11 34.8	+0.6
SNPH				*i* S	Sn	18 11 49.4	+1.5
CGP	**Cagayan de Oro**	**1.03**	**153⇓**	*e*P	Pb	18 11 32.4	-2.3
CGP				*e*S	Sb	18 11 46.2	-1.8
BUTP	**Butuan**	**1.44**	**107**	*e*P	Pn	18 11 40.4	-0.2
BUTP				*e*S	Sb	18 12 00.1	+0.4
OCLP	**Ormoc**	**1.70**	**13**	*e*P	Pn	18 11 43.6	-0.6
OCLP				*e*S	Sb	18 12 06.6	-0.6
BUKP	**Musuan**	**1.71**	**151**	*e*P	Pn	18 11 43.9	-0.5
BUKP				*e*S	Sb	18 12 08.2	+0.5
GUIM	**Jordan**	**2.03**	**308**	*e*P	Pn	18 11 48.3	-0.4
GUIM				*e*S	Sn	18 12 14.8	+1.0
IPIL	**Ipil**	**2.28**	**226**	*e*P	Pn	18 11 53.5	+1.3
IPIL				*e*S	Sn	18 12 21.6	+1.6

ROM 21 18:26:19.6±0.2, 44.°187N±0.′008×10.°22E±0.′01, h10km, ML1.1/4, Error ellipse: s-maj=1.3km s-min=0.5km az=57.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.12**	**103**	P	Pg	18 26 23.1	+0.5
VLC				S	Sg	18 26 25.2	+0.4
VLC				AML	AML		
comp=E,57μm,0.7s							
VLC				AML	AML		
comp=N,82μm,0.1s							
VLC				AML	AML		
comp=E,158μm,0.1s							
VLC				AML	AML		
comp=N,80μm,0.1s							
VLC				AML	AML		
comp=E,164μm,0.1s							
VLC				AML	AML		
comp=N,82μm,0.1s							
VLC				AML	AML		
comp=E,164μm,0.1s							
VLC				AML	AML		
comp=N,80μm,0.1s							
VLC				AML	AML		
comp=N,82μm,0.1s							
VLC				AML	AML		
comp=E,158μm,0.1s							
VLC				AML	AML		
comp=E,158μm,0.1s							
VLC				AML	AML		
comp=N,80μm,0.1s							
VLC				AML	AML		
comp=N,82μm,0.1s							
VLC				AML	AML		
comp=E,164μm,0.1s							
SARO	**Sassorosso**	**0.13**	**91**	P	Pg	18 26 23.3	+0.5
SARO				S	Sg	18 26 25.8	+0.8
SARO				AML	AML		
comp=E,55μm,0.3s							
SARO				AML	AML		
comp=N,48μm,1.4s							

SARO			AML	AML		
comp=E,154μm,0.4s						
SARO			AML	AML		
comp=N,134μm,0.4s						
SARO			AML	AML		
comp=N,134μm,0.4s						
SARO			AML	AML		
comp=E,154μm,0.4s						
SARO			AML	AML		
comp=N,134μm,0.4s						
SARO			AML	AML		
comp=E,154μm,0.4s						
CARD	**Cardoso**	**0.25 130**	P	Pb	18 26 25.9	-0.4
CARD			S	Sg	18 26 29.4	+1.2
CARD			AML	AML		
comp=E,62μm,0.4s						
CARD			AML	AML		
comp=N,91μm,0.1s						
CARD			AML	AML		
comp=E,62μm,0.4s						
CARD			AML	AML		
comp=N,91μm,0.1s						
CARD			AML	AML		
comp=N,91μm,0.1s						
CARD			AML	AML		
comp=E,62μm,0.4s						
CARD			AML	AML		
comp=N,91μm,0.1s						
CARD			AML	AML		
comp=E,62μm,0.4s						
ERBM	**Eremo**	**0.27 31**	P	Pb	18 26 25.9	-0.7
ERBM			S	Sb	18 26 30.7	-0.7
GRAM	**Graiana**	**0.32 341**	P	Pg	18 26 26.4	+0.2
GRAM			S	Sb	18 26 31.7	-1.2
MAIM	**Mastiano**	**0.34 144**	P	Pb	18 26 27.2	-0.5
MAIM			S	Sg	18 26 31.9	+1.1
MAIM			AML	AML		
comp=E,37μm,0.3s						
MAIM			AML	AML		
comp=N,29μm,1.3s					

MHLO **Agia Marina, M** 2.82 274 P Pn 18 27 24.9 +1.7
MNVG **Manavgat-Antal** 2.84 84 PN Pn 18 27 25.1 +1.7
GDZ **Gediz** 2.85 26⇓ *i*P Pn 18 27 25.0 +1.4
GDZ *i*S Sn 18 27 56.0 -1.0
STEP **BALIKESIR_Sava** 2.85 357⇓ *i*P Pn 18 27 24.1 +0.6
STEP *i*S Sn 18 27 57.6 +0.7
SHUT **Suhut-Afyon** 2.92 45 PN Pn 18 27 25.8 +1.2
SIVA **Sivas** 2.93 240 P Pn 18 27 25.9 +1.2
SIVA S Sn 18 27 57.9 -1.0
SIVA **Sivas** 2.93 240 P Pn 18 27 26.4 +1.7
SIVA S Sn 18 28 00.7 +1.8
SIVA AML AML 18 28 03.5
comp=E,7690µm,0.6s
SIVA AML AML 18 28 04.1
comp=N,6753µm,0.6s
AYVA **Ayvalik** 2.94 341 *i*P Pn 18 27 25.3 +0.6
AFYO **Afyonkarahisar** 2.95 39⇓ *i*P Pn 18 27 27.6 +2.5
AFYO *i*S Sn 18 27 59.7 +0.2
PRNS **Prines Rethymn** 2.99 248 P Pn 18 27 27.5 +2.0
PRNS S Sn 18 28 01.1 +0.7
KEPZ **Antalya-Kepez** 3.00 82⇑ *i*P Pn 18 27 28.5 +2.9
KEPZ *i*S Sn 18 28 04.4 +3.8
PRK **Paraskevi** 3.00 335 P Pn 18 27 27.3 +1.7
PRK AML AML 18 28 14.9
comp=N,968µm,0.8s
PRK AML AML 18 28 17.8
comp=E,852µm,0.8s
DURS **Dursunbey** 3.10 8⇓ *i*P Pn 18 27 28.8 +1.7
DURS *i*S Sn 18 28 03.2 +0.1
BALB **Balikesir** 3.11 360 PN Pn 18 27 27.6 +0.6
BALB **Balikesir** 3.11 360 *e*Pn Pn 18 27 27.8 +0.8
SIGR **SIGRI** 3.13 329 PN Pn 18 27 28.1 +0.8
SIGR **SIGRI** 3.13 329 P Pn 18 27 27.1 -0.2
SIGR **SIGRI** 3.13 329 P Pn 18 27 29.9 +2.6
SIGR AML AML 18 28 16.5
comp=E,242µm,0.8s
SIGR AML AML 18 28 20.1
comp=N,266µm,0.7s
TVSB **Tavsanli** 3.17 22 PN Pn 18 27 28.9 +1.0
VAM **Vamos** 3.21 251 P Pn 18 27 29.4 +1.0
VAM **Vamos** 3.21 251 P Pn 18 27 29.2 +0.9
VAM AML AML 18 28 09.8
comp=E,2064µm,0.6s
VAM AML AML 18 28 10.1
comp=N,1688µm,0.8s
CHAN **Chania** 3.29 253 P Pn 18 27 30.5 +1.0
CHAN S Sn 18 28 06.1 -1.4
ALAN **Alanya-ANTALYA** 3.33 88 PN Pn 18 27 31.6 +1.6
IMMV **Iera Moni Meta** 3.35 253 P Pn 18 27 31.2 +0.8
IMMV S Sn 18 28 08.0 -1.2
IMMV **Iera Moni Meta** 3.35 253 P Pn 18 27 31.2 +0.8
IMMV AML AML 18 28 13.4
comp=N,2482µm,0.6s
IMMV AML AML 18 28 18.7
comp=E,2507µm,0.7s
DOGA **KONYA_Doganhis** 3.39 61 *i*P Pn 18 27 33.8 +2.8
DOGA *i*S Sn 18 28 12.9 +2.7
EZN **Ezine** 3.52 340 *e*Pn Pn 18 27 33.5 +0.9
EZN **Ezine** 3.52 340 P Pn 18 27 33.5 +0.9
EZN **Ezine** 3.52 340⇓ *i*P Pn 18 27 33.5 +0.9
EZN **Ezine** 3.52 340 *e*P Pn 18 27 33.5 +0.9
GVDS **Gavdos** 3.53 243 P Pn 18 27 33.7 +0.9
GVDS S Sn 18 28 13.9 +0.5
GVD **Gavdhos** 3.53 243 *e*Pn Pn 18 27 33.6 +0.8
GVD *e*Sn Sn 18 28 13.2 -0.3
GVD **Gavdhos** 3.53 243 P Pn 18 27 33.6 +0.8
GVD S Sn 18 28 13.2 -0.3
GVD **Gavdhos** 3.53 243 P Pn 18 27 34.2 +1.4
GVD S Sn 18 28 12.5 -1.0
GVD AML AML 18 28 17.3
comp=N,4511µm,0.5s
GVD AML AML 18 28 17.6
comp=E,4332µm,0.4s
VLY **Voula,Athens** 3.54 293 P Pn 18 27 34.8 +2.0
PTL **Penteli** 3.56 296 P Pn 18 27 35.4 +2.2
ATHU **Athens Univers** 3.59 295 P Pn 18 27 33.8 +0.2
ULDT **Uludag** 3.74 15 *i*P Pn 18 27 36.5 +0.8
CIFT **Cifteler, Eski** 3.77 40 *i*P Pn 18 27 37.7 +1.6
CIFT *i*S Sn 18 28 19.8 +0.4
ANKY **Antikythira Is** 3.78 261 *e*Pn Pn 18 27 37.2 +1.0
ANKY **Antikythira Is** 3.78 261 P Pn 18 27 37.2 +1.0
ANKY **Antikythira Is** 3.78 261 P Pn 18 27 37.1 +1.0
ANKY AML AML 18 28 27.5
comp=N,666µm,0.7s
ANKY AML AML 18 28 31.3
comp=E,761µm,0.8s
KYTH **Kithira** 3.93 268 *e*Pn Pn 18 27 38.2 0.0
KYTH **Kithira** 3.93 268 P Pn 18 27 38.2 0.0
KYTH **Kithira** 3.93 268 P Pn 18 27 39.9 +1.7
KYTH AML AML 18 28 26.3
comp=N,527µm,0.5s
KYTH AML AML 18 28 27.2
comp=E,781µm,0.5s
KTHR **Kythira** 3.96 268 P Pn 18 27 39.1 +0.5
PPCY **Paphos** 3.97 113 P Pn 18 27 38.9 +0.2
baz=295
VLI **Veliai** 4.00 274 *e*Pn Pn 18 27 39.8 +0.7
VLI *e*Sn Sn 18 28 22.7 -2.2
VLI **Veliai** 4.00 274 P Pn 18 27 39.8 +0.7
VLI S Sn 18 28 22.7 -2.2
VLI **Veliai** 4.00 274 P Pn 18 27 41.1 +1.9
ALFC **Alefka** 4.05 108 P Pn 18 27 39.6 -0.3
baz=291
ALFC S Sn 18 28 25.4 -0.8
MRKA **Markates** 4.06 304 P Pn 18 27 42.0 +2.1
YLV **Yalova** 4.19 15⇑ *i*P Pn 18 27 43.0 +1.2
LEF **Lefka** 4.29 108⇓ *i*P Pn 18 27 42.4 -0.7
SZAC **Souni** 4.42 112 P Pn 18 27 45.0 +0.1
baz=295
SZAC S Sn 18 28 33.5 -1.7
ALN **Alexandroupoli** 4.60 342 *e*Pn Pn 18 27 48.4 +1.2
ALN **Alexandroupoli** 4.60 342 *e*P Pn 18 27 48.4 +1.2
TRIP **Tripoli** 4.62 284 P Pn 18 27 46.9 -0.7
CSS **Mathiatis** 4.68 108 *e*Pn Pn 18 27 48.0 -0.5
CSS *e*Sn Sn 18 28 35.1 -6.4
CSS **Mathiatis** 4.68 108 P Pn 18 27 48.1 -0.3
baz=291
CSS **Mathiatis** 4.68 108 P Pn 18 27 48.2 -0.2
CSS S Sn 18 28 40.8 -0.7
CSS **Mathiatis** 4.68 108 Pn Pn 18 27 47.5 -0.9
CSS **Mathiatis** 4.68 108 P Pn 18 27 47.6 -0.9
KLYT **Kilyos** 4.80 10⇑ *i*P Pn 18 27 50.8 +0.8
KLV **Kalavryta, Ach** 4.83 290 P Pn 18 27 50.3 -0.2
ITM **Ithomi** 4.84 280 *e*Pn Pn 18 27 50.8 +0.3
ITM *e* 18 27 53.7
ITM **Ithomi** 4.84 280 P Pn 18 27 50.8 +0.3
PYL **PYLOS** 4.96 276 *e*Pn Pn 18 27 52.4 +0.2
PYL **PYLOS** 4.96 276 P Pn 18 27 52.4 +0.2
RDO **Rodhopi** 4.97 339 *e*Pn Pn 18 27 53.3 +1.0
RDO **Rodhopi** 4.97 339 P Pn 18 27 53.3 +1.0
BR231 **Keskin MP Arra** 5.07 48 *e*Pn Pn 18 27 56.5 +2.7
BR231 *e*Sn Sn 18 28 51.9 +0.9
AGG **Agios Georgios** 5.07 301 *e*Pn Pn 18 27 56.2 +2.5
AGG **Agios Georgios** 5.07 301 *e*P Pn 18 27 56.2 +2.5
ANTO **Ankara** 5.09 48 *e*Pn Pn 18 27 56.7 +2.6
ANTO *e*Sn Sn 18 28 51.1 -0.6
ANTO **Ankara** 5.09 48⇑ *i*P Pn 18 27 55.1 +1.0
ANTO **Ankara** 5.09 48 *e*P Pn 18 27 56.7 +2.6
ANTO *e* 18 28 51.1
PHSR **Pinarhisar** 5.10 357⇑ *i*P Pn 18 27 55.7 +1.6
MATC **Matruh** 5.20 186 P Pn 18 27 55.4 -0.1
baz=188
MATC AMP 18 28 00.0
baz=188
SLUM **Salum** 5.50 205 P Pn 18 27 58.8 -0.7
baz=207
SLUM S Sn 18 28 54.9 -6.6
baz=207
BR131 **Keskin Array S** 5.53 53 *e*Pn Pn 18 28 02.0 +1.8
BRTR **Keskin Array B** 5.53 53 P Pn 18 28 01.4 +1.2
comp=E,2.0nm,0.3s,baz=223,slow=14,SNR=94
BRTR S Sn 18 29 03.0 +0.6
comp=E,3.9nm,0.3s,baz=222,slow=26,SNR=18
BRTR LR LR 18 30 52.9
comp=E,77nm,19.9s,baz=254,slow=45
LIT **Litokhoron** 5.55 312 *e*Pn Pn 18 28 02.5 +2.2
LIT **Litokhoron** 5.55 312 *e*P Pn 18 28 02.5 +2.2
KFL **Anninata** 5.89 288 P Pn 18 28 04.3 -0.5
ILGA **Ilgaz** 6.40 43 *e*Pn Pn 18 28 14.4 +2.3
STIP **Stip** 6.81 321 *i*Pn Pn 18 28 19.3 +1.9
DQRL **Deir Qamar** 6.88 112 *e*P Pn 18 28 17.0 -1.5
HNTI **Hanita** 6.90 118 Pn Pn 18 28 17.2 -1.4

OFRI **`Ofer** 7.02 122 Pn Pn 18 28 20.6 +0.3
QRWL **Qaraoun** 7.04 113 *e*P Pn 18 28 19.6 -1.1
VTS **Vitosha** 7.07 331 *e*Pn Pn 18 28 23.2 +2.1
VTS **Vitosha** 7.07 331⇑ *i*P Pn 18 28 23.0 +1.9
VTS **Vitosha** 7.07 331 *e*P Pn 18 28 23.2 +2.1
MMA0B **Mount Meron ar** 7.10 117 Pn Pn 18 28 20.2 -1.2
MMAI **Mount Meron Ar** 7.10 117 P Pn 18 28 20.2 -1.2
comp=E,71nm,0.3s,baz=297,slow=12,SNR=111
MMAI S Sn 18 29 34.8 -5.7
comp=E,75nm,0.3s,baz=315,slow=25,SNR=17
HMYD **Mayadein** 7.14 159 P Pn 18 28 21.4 -0.6
baz=159
RCY **Rachaya** 7.18 113 *e*P Pn 18 28 21.3 -1.3
SHBL **Chebaa** 7.18 114 *e*P Pn 18 28 22.1 -0.5
GEM **Giv'at Ha'Em** 7.18 115 Pn Pn 18 28 21.6 -0.9
KSDI **Kefar Szold** 7.19 115 P Pn 18 28 21.5 -1.1
BZK **Bozkurt** 7.20 39⇑ *i*P Pn 18 28 23.0 +0.4
NATI **Neve Ativ** 7.21 115 Pn Pn 18 28 21.9 -1.0
HNAT **Natroun** 7.24 161 P Pn 18 28 22.6 -0.7
baz=160
SLTI **Sal'it** 7.29 124 Pn Pn 18 28 22.7 -1.2
KOT **Kottamia** 7.36 152 P Pn 18 28 23.7 -1.2
baz=151
KSHT **Keshet** 7.41 116 Pn Pn 18 28 25.1 -0.5
MMLI **Mount Malkishu** 7.43 121 Pn Pn 18 28 25.0 -0.9
MMLI **Mount Malkishu** 7.43 121 P Pn 18 28 25.5 -0.4
HHAG **Hagoal** 7.44 151 P Pn 18 28 25.6 -0.5
baz=150
SHMJ **Saham** 7.51 118 P Sn 18 29 49.8 -0.7
HSAF **As Saff** 7.54 155 P Pn 18 28 26.4 -1.0
baz=154
SWA2 7.55 197 P Pn 18 28 26.6 -1.0
baz=198
HMDT **Nahal Hemdat** 7.61 122 Pn Pn 18 28 28.0 -0.3
GLL **Jalalah** 7.63 154 P Pn 18 28 27.9 -0.8
baz=153
AMAZ **Amatzia** 7.66 129 Pn Pn 18 28 28.3 -0.8
AMAZ **Amatzia** 7.66 129 P Pn 18 28 29.6 +0.5
comp=E,95nm,0.8s,comp=E,1.5nm
AMAZ **Amatzia** 7.66 129 P Sn 18 29 50.5 -3.8
comp=E,1.5nmcomp=E,347nm,0.7s
KZIT **Kziot** 7.79 134 Pn Pn 18 28 30.1 -0.7
KZIT **Kziot** 7.79 134 P Pn 18 28 30.5 -0.3
comp=E,150nm,0.7s,comp=E,2.8nm
KZIT **Kziot** 7.79 134 P Sn 18 29 50.6 -6.8
comp=E,2.8nmcomp=E,1µm,0.8s
YTIR **Yattir** 7.90 129 Pn Pn 18 28 30.9 -1.5
TIRR **Tirgusor** 7.93 3 *e*Pn Pn 18 28 32.5 -0.1
TIRR **Tirgusor** 7.93 3⇓ *i*P Pn 18 28 34.0 +1.4
TIRR **Tirgusor** 7.93 3 *e*P Pn 18 28 32.5 -0.1
DSI **Dead Sea** 7.93 126 Pn Pn 18 28 32.2 -0.5
MZDA **Masada** 8.09 128 Pn Pn 18 28 33.9 -1.0
HSUJ **Al Zarqa** 8.15 120 P Sn 18 29 57.9 -8.4
LISJ **El Lisan** 8.21 128 P Pn 18 28 38.5 +2.0
LISJ **El Lisan** 8.21 128 P Sn 18 29 58.7 -9.0
WALJ **Wala** 8.22 125 P Pn 18 28 37.7 +1.1
WALJ **Wala** 8.22 125 P Sn 18 29 58.9 -9.0
NBNS **Bani Suef** 8.38 159 P Pn 18 28 38.3 -0.7
baz=159
ZFRI **Zfri** 8.50 132 Pn Pn 18 28 39.5 -1.0
PRNI **Paran** 8.55 134 Pn Pn 18 28 39.9 -1.3
KRMI **Paran Flat** 8.57 136 Pn Pn 18 28 40.1 -1.4
ASF **Jabal al Asfar** 8.61 118 P Pn 18 28 43.2 +1.1
comp=E,7.0nm,0.3s,baz=260,slow=3.9,SNR=51
ASF S Sn 18 30 14.1 -3.5
comp=E,2.3nm,0.3s,baz=225,slow=21,SNR=2.4
ASF **Jabal al Asfar** 8.61 118 P Pn 18 28 43.7 +1.6
TLCR 8.68 4⇓ *i*P Pn 18 28 44.8 +2.0
HRFI **Mount Harif** 8.80 135 Pn Pn 18 28 43.7 -1.0
HRFI **Mount Harif** 8.80 135 P Pn 18 28 45.0 +0.3
PDG **Podgorica** 8.91 314⇑ *i*P Pn 18 28 47.3 +1.3
TTG **Podgorica** 8.91 314 *e*Pn Pn 18 28 47.5 +1.6
TTG **Podgorica** 8.91 314 *e*P Pn 18 28 47.6 +1.6
MBRI **Mt Berech** 8.92 137 Pn Pn 18 28 45.0 -1.3
EIL **Elat** 9.04 137 P Pn 18 28 46.9 -0.9
comp=E,2.9nm,0.3s,baz=336,slow=1.0,SNR=18
EIL S Sn 18 30 17.5 -10
comp=E,9.6nm,0.3s,baz=343,slow=14,SNR=14
EIL **Elat** 9.04 137 Pn Pn 18 28 46.5 -1.3
MLR **Muntele Rosu** 9.08 351 P Pn 18 28 50.0 +1.6
comp=E,0.2nm,0.3s,baz=192,slow=4.8,SNR=26
MLR LR LR 18 32 14.7
comp=E,63nm,18.9s,baz=297,slow=37
MLR **Muntele Rosu** 9.08 351 *e*Pn Pn 18 28 49.3 +0.9
MLR **Muntele Rosu** 9.08 351⇑ *i*P Pn 18 28 50.4 +2.0
MLR **Muntele Rosu** 9.08 351 *e*P Pn 18 28 49.3 +0.9
SEVA **Sevastopol** 9.12 27⇑ *i*P Pn 18 28 50.6 +1.8
SEV **Sevastopol'** 9.13 27⇓ *e*P Pn 18 28 50.5 +1.6
SEV *e*S Sn 18 30 25.8 -4.1
VOIR 9.16 347⇑ *i*P Pn 18 28 51.0 +1.6
TIP **Timpagrande** 9.20 290 *e*Pn Pn 18 28 50.4 +0.3
TIP *e*Sn Sn 18 30 26.9 -5.1
TIP **Timpagrande** 9.20 290⇓ *i*P Pn 18 28 50.2 +0.1
YAL **Yalta** 9.26 29 *e*P Pn 18 28 53.1 +2.3
HFRF **Wahat Farafira** 9.36 178 P Pn 18 28 51.0 -1.3
baz=178
PLOR **Plostina** 9.36 355⇑ *i*P Pn 18 28 53.6 +1.4
VRI **Vrincioaia** 9.37 355⇑ *i*P Pn 18 28 53.4 +1.1
HKAT **Jabal Katrina** 9.49 146 P Pn 18 28 53.3 -0.9
baz=145
SIM **Simferopol'** 9.64 27 *e*P Pn 18 28 58.8 +2.9
SIM *e*S Sn 18 30 40.7 -1.7
GZR **Gura Zlata** 9.66 338⇓ *i*P Pn 18 28 58.0 +1.6
CEL **Celeste** 9.71 284 *e*Pn Pn 18 28 56.2 -0.9
SUDU **Sudak** 9.94 31 *e*P Pn 18 29 03.4 +3.5
SUDU *e*S Sn 18 30 48.4 -1.2
TESR **Tescani** 10.02 355⇓ *i*P Pn 18 29 02.2 +1.1
MILM **Milestii Mici** 10.40 3⇑ *i*P Pn 18 29 07.9 +1.6
HHRG **Al Ghardaqah** 10.45 151 P Pn 18 29 08.2 +1.1
baz=151
KIS **Kishinev** 10.48 3 *e*P Pn 18 29 08.0 +0.6
comp=E,110nm,1.0s
KIS **Kishinev** 10.48 3 *e*P Pn 18 29 08.0 +0.6
KIS pmax pmax
comp=Z,110nm,1.0s
BIZ **Bicaz** 10.49 353⇓ *i*P Pn 18 29 08.6 +1.1
VAE **Valguarnera** 10.83 279 S Sn 18 31 04.5 -7.1
comp=Z,2.9nm,0.3s,baz=308,slow=8.6,SNR=2.6
WDD **Wied Dalam** 10.84 270 *e*Pn Pn 18 29 11.3 -1.0
BURAR **Bucovina Array** 11.26 351⇑ *i*P Pn 18 29 20.0 +2.0
KOLS **Kolonicke sedl** 13.06 343 *e*P Pn 18 29 44.7 +2.4
KOLS **Kolonicke sedl** 13.06 343 *e*P Pn 18 29 44.7 +2.4
NEY **Neytrino** 13.20 55 *i*P Pn 18 29 45.7 +1.4
KIV **Kislovodsk** 13.50 52 *e*P Pn 18 29 48.2 +0.1
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,21nm,11.0s
KBZ **Khabaz** 13.53 53 P Pn 18 29 50.6 +2.2
comp=Z,0.1nm,0.3s,baz=238,slow=11,SNR=2.5
VYHS **Vyhne** 13.69 334 *e*P Pn 18 29 52.3 +1.8
VYHS **Vyhne** 13.69 334 *e*P Pn 18 29 52.3 +1.8
GNI **Garni** 13.70 70 LR LR 18 36 37.7
comp=Z,45nm,21.7s,baz=256,slow=43
ZEI **Tsey** 13.81 58 *e*P P 18 29 59.0 +1.1
ZEI pmax pmax
comp=Z,4.0nm,0.4s
NCK **Nalchik** 13.88 55 *i*P Pn 18 29 54.1 +1.0
SOKA **Soboth** 13.97 321 *e*P P 18 29 59.6 +0.2
comp=Z,5.7nm,1.0s
AKASG **Malin Array Be** 14.20 3 P Pn 18 29 58.8 +1.8
comp=Z,3.0nm,0.3s,baz=187,slow=9.9,SNR=22
MYKA **Terra Mystica** 14.67 318 *e*Pn P 18 30 05.4 -1.8
comp=Z,4.9nm,0.7s
KEST **Kesra** 15.02 272 P Pn 18 30 07.7 -0.2
comp=Z,1.0nm,0.3s,baz=50,slow=4.1,SNR=12
KEST **Kesra** 15.02 272 *e*Pn Pn 18 30 08.4 +0.5
TAMR **Tamra** 15.07 278 *e*Pn Pn 18 30 06.8 -1.5
comp=Z,15nm,0.8s
KBA **Koelnbreinsper** 15.11 319 *e*Pn P 18 30 11.2 -1.0
comp=Z,3.6nm,0.5s
GROC **Groznyy** 15.26 59 *e*P Pn 18 30 07.6 -3.1
GROC *e*S Sn 18 32 56.8 -2.1
GROC pmax pmax
comp=Z,9.0nm,0.5s
GERES **GERESS Array B** 16.11 324 P P 18 30 22.3 -0.9
comp=Z,0.5nm,0.3s,baz=134,slow=11,SNR=13
GERES ScP ScP 18 38 35.7 -3.1
comp=Z,0.1nm,0.3s,baz=173,slow=0.8,SNR=3.5
WTTA **Wattenberg** 16.14 317 P P 18 30 26.6 +2.9
comp=Z,8.1nm,1.0s
WATA **Walderalm** 16.22 317 *e*P P 18 30 24.8 +0.3
comp=Z,4.3nm,0.5s
SQTA **Sankt Quirin** 16.36 316 *e*Pn P 18 30 25.9 -0.1
comp=Z,5.0nm,0.5s
KHC **Kasperske Hory** 16.37 325 *e*P P 18 30 26.8 +0.8
comp=Z,1.2nm,0.7s
KHC **Kasperske Hory** 16.37 325 *e*P P 18 30 26.5 +0.5
KHC **Kasperske Hory** 16.37 325 *e*P P 18 30 26.5 +0.5
MOTA **Moosalm** 16.49 316 *e*P P 18 30 28.7 +1.2
comp=Z,16nm,1.5s
FETA **Feichten** 16.52 315 *e*P P 18 30 30.2 +2.4
comp=Z,11nm,0.7s
FUORN **Ofenpass-Fuorn** 16.57 313 *e*P P 18 30 31.5 +2.9
comp=Z,5.3nm,0.7s
VORD **Divnogorie** 16.58 26 *e*P P 18 30 29.9 +1.6
VORD pmax pmax
comp=Z,20nm,0.9s
VSR **Storozhevoye** 16.75 25 *e*P P 18 30 30.5 +0.4
VSR pmax pmax
comp=Z,10.0nm,0.5s
DAVOX **Davos/Dischmat** 16.88 313 P P 18 30 32.6 +0.7
comp=Z,0.5nm,0.3s,baz=133,slow=20,SNR=6.3
DAVA **Damuels** 17.15 314 *e*P P 18 30 37.1 +2.3
comp=Z,6.6nm,0.5s
LPSR **Galich'ya Gora** 17.85 22 *e*P Pn 18 30 43.5 +0.8
LPSR pmax pmax
comp=Z,10.0nm,0.6s
BNI **Bardonecchia** 18.15 305 *e*P Pn 18 30 47.7 +1.2
comp=Z,4.6nm,0.9s
BNI **Bardonecchia** 18.15 305 *e*P Pn 18 30 47.7 +1.2
BNI pmax pmax
comp=Z,5.0nm,0.9s
SENIN **Lac Senin/Sane** 18.26 309 *e*P Pn 18 30 48.4 +0.4
comp=Z,9.3nm,0.8s
BFO **Black Forest** 18.59 315 *e*P Pn 18 30 52.7 +1.0
comp=Z,4.6nm,0.8s
BFO **Black Forest** 18.59 315 *e*P Pn 18 30 52.7 +1.0
BFO pmax pmax
comp=Z,5.0nm,0.8s
ECH **Echery** 19.20 314 *e*P Pn 18 30 58.6 -0.4
comp=Z,6.8nm,0.6s
ECH **Echery** 19.20 314 *e*P Pn 18 30 58.6 -0.4
ECH pmax pmax
comp=Z,7.0nm,0.6s
OBN **Obninsk** 19.52 15 LR LR 18 40 16.5
comp=Z,8.0nm,20.0s,baz=155,slow=42
OBN **Obninsk** 19.52 15⇑ *i*P P 18 31 00.1 -0.4
comp=Z,26nm,0.6s
OBN **Obninsk** 19.52 15⇑ *i*P P 18 31 01.3 +0.9
OBN S S 18 34 38.0 +1.8
OBN pmax pmax
comp=Z,22nm,0.7s
MOS **Moscow** 20.32 16 *e*P P 18 31 08.9 -0.3
MOS pmax pmax
comp=Z,49nm,0.8s
WLF **Walferdange** 20.51 317 *e*P P 18 31 11.7 +0.4
comp=Z,32nm,0.9s
WLF **Walferdange** 20.51 317 *e*P P 18 31 11.7 +0.4
WLF pmax pmax
comp=Z,32nm,0.9s
VSU **Vasula** 21.96 358 *c*eP P 18 31 27.5 +0.9
VSU pmax pmax
comp=Z,33nm,1.7s
TAM **Tamanrasset** 23.71 241 *e*P P 18 31 45.7 +1.1
comp=Z,2.5nm,0.6s
TAM **Tamanrasset** 23.71 241 *e*P P 18 31 45.7 +1.1
TAM pmax pmax
comp=Z,3.0nm,0.6s
GEYT **Alibeck** 24.05 78 P P 18 31 48.0 +0.6
comp=Z,2.2nm,0.4s,baz=286,slow=8.1,SNR=12
GEYT pP pP 18 32 06.7 +0.3
comp=Z,1.2nm,0.5s,baz=270,slow=8.6,SNR=2.1
FIA0 **FINESS Array S** 24.96 358 *e*P P 18 31 54.9 -0.5
FIA0 **FINESS Array S** 24.96 358 *e*P P 18 31 54.9 -0.5
FINES **FINESS Array B** 24.96 358 P P 18 31 54.9 -0.5
comp=Z,1.7nm,0.6s,baz=165,slow=12,SNR=12
FINES pP pP 18 32 14.9 +0.1
comp=Z,0.7nm,0.5s,baz=158,slow=12,SNR=2.0
FINES PcP PcP 18 35 28.0 -0.3
comp=Z,1.4nm,1.1s,baz=203,slow=1.1,SNR=3.7
FINES ScP ScP 18 38 58.9 -0.7
comp=Z,0.8nm,0.6s,baz=173,slow=1.1,SNR=7.5
ESDC **Sonseca Array** 25.20 287 P P 18 31 58.0 +0.1
comp=Z,1.0nm,0.4s,baz=84,slow=9.4,SNR=14
ESDC pP pP 18 32 15.5 -1.5
comp=Z,0.7nm,0.6s,baz=81,slow=9.7,SNR=2.8
ESLA **Sonseca Array** 25.20 287 *e*P P 18 31 58.1 +0.2
comp=Z,2.3nm,0.9s
HFS **Hagfors** 25.33 343 P P 18 31 59.1 +0.4
comp=Z,1.5nm,0.6s,baz=140,slow=9.4,SNR=5.4
HFS pP pP 18 32 17.6 -0.5
comp=Z,2.0nm,0.7s,baz=155,slow=11,SNR=2.1
KLMR **Klimovskoe** 25.45 13 *e*P P 18 31 59.2 -0.5
KLMR pmax pmax
comp=Z,21nm,1.1s
KLMR **Klimovskoe** 25.45 13 *e*P P 18 31 59.2 -0.5
KLMR AMP 18 32 03.5
comp=Z,21nm,1.1s
PAB **San Pablo** 25.51 287 *e*P P 18 32 01.2 +0.5
comp=Z,7.3nm,1.1s
PAB **San Pablo** 25.51 287 *e*P P 18 32 01.2 +0.5
PAB pmax pmax
comp=Z,7.0nm,1.1s
AKTO **Aktyubinsk** 25.68 48 P P 18 32 02.6 +0.6
comp=Z,4.1nm,0.6s,baz=260,slow=7.0,SNR=9.3
KIRV **Kirov** 26.19 26 P P 18 32 06.2 -0.3
comp=Z,6.5nm,0.5s,baz=63,slow=3.2,SNR=3.6
NC602 **NORSAR Array S** 26.38 342 *e*P P 18 32 08.6 +0.4
comp=Z,0.8nm,0.6s
ABKAR **Akbulak array** 26.48 51 *e*P P 18 32 09.2 -0.1
comp=Z,2.9nm,1.0s
NB2 **NORSAR Subarra** 26.72 342 P P 18 32 11.3 0.0
comp=Z,0.6nm,0.9s,baz=159,slow=9.3
NB200 **NORSAR Array S** 26.72 342 *e*P P 18 32 10.9 -0.4
NOA **NORSAR Array B** 26.72 342 P P 18 32 10.9 -0.4
comp=Z,0.4nm,0.7s,baz=156,slow=10,SNR=3.3
NBO00 **NORSAR Array S** 26.82 341 *e*P P 18 32 13.0 +0.8
comp=Z,4.1nm,0.8s
NC303 **NORSAR Array S** 26.84 342 *e*P P 18 32 14.7 +2.3
MDT **Midelt** 26.92 272 P P 18 32 13.6 0.0
comp=Z,3.7nm,0.8s,baz=79,slow=14,SNR=4.1
NC204 **NORSAR Array S** 27.04 342 *e*P P 18 32 14.8 +0.6
comp=Z,0.5nm,0.7s
PRGR **Permogore** 27.49 18 *e*P P 18 32 15.4 -2.7
PRGR *e**SP sP 18 32 48.1 +0.5
PRGR pmax pmax
comp=Z,3.0nm,0.6s
EKA **Eskdalemuir Ar** 28.29 322 P P 18 32 27.6 +2.4
comp=Z,0.5nm,0.6s,baz=122,slow=9.3,SNR=3.9
TOA1 **Torodi Ar. Sit** 33.08 232 *e*P P 18 33 06.5 -1.4
TOA0 **Torodi Ar. Sit** 33.08 232 *e*P P 18 33 08.5 +0.6
comp=Z,10.0nm,1.0s
TORD **Torodi Ar. Bea** 33.08 232 P P 18 33 06.5 -1.4
comp=Z,6.6nm,0.5s,baz=35,slow=7.9,SNR=52
TORD PcP PcP 18 35 49.7 +0.2
comp=Z,0.5nm,0.4s,baz=48,slow=2.1,SNR=4.2
ARA0 **ARCESS Array S** 33.09 358 *e*P P 18 33 07.0 -0.5
ARCES **ARCESS Array B** 33.09 358 P P 18 33 07.0 -0.5
comp=Z,6.3nm,0.3s,baz=191,slow=9.9,SNR=5.5
ARCES pP pP 18 33 25.7 -1.5
comp=Z,0.4nm,0.4s,baz=170,slow=7.2,SNR=1.7
ARCES ScP ScP 18 39 22.3 -2.9
comp=Z,0.3nm,0.4s,baz=176,slow=3.6,SNR=8.2
KK31 **Karatay Array** 33.10 65 *e*P P 18 33 08.4 +0.5
comp=Z,0.9nm,0.5s
KK31 **Karatay Array** 33.10 65 *e*P P 18 33 08.4 +0.5
KK31 pmax pmax
comp=Z,1.0nm,0.5s
KKAR **Karatay Array** 33.10 65 *e*P P 18 33 08.5 +0.6
comp=Z,0.9nm,0.5s
KKAR **Karatay Array** 33.10 65 *e*P P 18 33 08.5 +0.6
KKAR pmax pmax
comp=Z,1.0nm,0.5s
BRVK **Borovoye** 33.73 47 *e*P P 18 33 13.4 +0.2
comp=Z,4.4nm,1.1s
BRVK **Borovoye** 33.73 47 *i*P P 18 33 13.0 -0.2
BRVK pmax pmax
comp=Z,2.0nm,1.0s
AAK **Ala-Archa** 36.06 66 *e*P P 18 33 34.5 +0.9
comp=Z,1.4nm,0.7s
AAK **Ala-Archa** 36.06 66 *i*P P 18 33 34.5 +0.9
AAK pmax pmax
comp=Z,1.0nm,0.8s
NIL **Nilore** 36.96 81 *e*P P 18 33 42.4 +1.2
comp=Z,8.8nm,0.9s
NIL **Nilore** 36.96 81 *e*P P 18 33 42.4 +1.2
NIL pmax pmax
comp=Z,9.0nm,0.9s
KSH **Kashi** 37.63 70 *e*P P 18 33 46.6 -0.3
KURK **Kurchatov** 38.59 52 *e*P P 18 33 55.2 +0.6

comp=Z,7.3nm,0.8s
KURK Kurchatov 38.59 52 *ce*P **P 18 33 54.4 -0.2**
KURK pmax pmax
comp=Z,5.0nm,0.7s
BORG Borgarnes 40.45 330 LR LR 18 54 14.8
comp=Z,18nm,19.5s,baz=292,slow=41
MK31 Makanchi Array 41.16 58 *e*P **P 18 34 16.5 +0.5**
comp=Z,4.2nm,1.1s
MK31 Makanchi Array 41.16 58 *e*P **P 18 34 16.5 +0.5**
MK31 pmax pmax
comp=Z,4.0nm,1.1s
MKAR Makanchi Array 41.16 58 P **P 18 34 16.7 +0.7**
comp=Z,2.0nm,0.5s,baz=269,slow=8.7,SNR=32
MKAR pP **pP 18 34 33.8 -2.5**
comp=Z,0.6nm,0.5s,baz=267,slow=6.4,SNR=3.0
MKAR PcP **PcP 18 36 14.2 +0.4**
comp=Z,0.3nm,0.7s,baz=289,slow=4.4,SNR=1.9
MKAR ScP **ScP 18 39 55.4 -0.5**
comp=Z,0.6nm,0.6s,baz=266,slow=4.3,SNR=5.7
NVS Novosibirsk 41.54 46 *e*P **P 18 34 20.0 +1.0**
NVS pmax pmax
comp=Z,6.0nm,0.1s
NVS pmax pmax
comp=N,3.0nm,0.6s
NVS pmax pmax
comp=E,4.0nm,0.8s
DBIC Dimbokro 42.16 233 P **P 18 34 24.8 +0.3**
comp=E,2.5nm,0.4s,baz=31,slow=8.7,SNR=9.2
DBIC Dimbokro 42.16 233 *e*P **P 18 34 24.6 +0.1**
comp=E,7.1nm,1.1s
DBIC Dimbokro 42.16 233 *e*P **P 18 34 24.6 +0.1**
DBIC pmax pmax
comp=Z,7.0nm,1.1s
TIC Toumodi 42.29 233 *e*PKIKP **P 18 34 25.9 +0.4**
KIC Kosan Boka 42.33 233 *e*PKIKP **P 18 34 25.4 -0.4**
comp=Z,22nm,0.8s
ZAA0 Zalesovo Array 42.45 47 *e*P **P 18 34 26.6 +0.3**
comp=Z,4.1nm,0.6s
ZALV Zalesovo Beam 42.45 47 P **P 18 34 26.7 +0.4**
comp=Z,3.9nm,0.6s,baz=267,slow=8.7,SNR=16
ZALV pP **pP 18 34 45.4 -1.3**
comp=Z,0.5nm,0.3s,baz=267,slow=10,SNR=1.7
ZALV LR LR 18 57 34.4
comp=Z,24nm,18.4s,baz=72,slow=44
LIC Lamto 42.61 233 *e*PKIKP **P 18 34 25.4 -2.7**
comp=Z,52nm,1.3s
DGZ Jazzator, Alta 44.28 53 *i*P **P 18 34 41.6 +0.2**
DGZ pmax pmax
comp=Z,1.0nm,0.8s
NRIK Noril'sk 45.69 25 P **P 18 34 53.1 +1.0**
comp=Z,6.2nm,0.7s,baz=239,slow=2.4,SNR=4.2
TLY Talaya 54.04 48 *ce*P **P 18 35 55.7 +0.1**
TLY pmax pmax
comp=Z,14nm,0.8s
SONM Songino Array 56.89 52 P **P 18 36 16.6 +0.4**
comp=Z,0.5nm,0.3s,baz=306,slow=6.4,SNR=3.5
SONM pP **pP 18 36 37.5 -0.1**
comp=Z,0.4nm,0.3s,baz=302,slow=8.3,SNR=2.4
ULN Ulaanbaatar 57.30 52 *i*P **P 18 36 17.7 -1.5**
ULN pmax pmax
comp=Z,1.0nm,1.0s
CM31 Chiang Mai Arr 64.22 85 *e*P **P 18 37 06.5 +0.1**
comp=Z,3.6nm,1.0s
CMAR Chiang Mai Arr 64.22 85 P **P 18 37 06.8 +0.4**
comp=Z,0.8nm,0.7s,baz=298,slow=8.6,SNR=6.2
CMAR pP **pP 18 37 28.7 +0.9**
comp=Z,0.8nm,0.8s,baz=302,slow=7.3,SNR=3.5
BOSA Boshof 64.84 183 P **P 18 37 10.8 +0.7**
comp=Z,5.9nm,1.0s,baz=355,slow=6.9,SNR=7.6
USRK Ussuriysk Ar. 74.29 46 P **P 18 38 08.2 +0.1**
comp=Z,1.3nm,0.7s,baz=312,slow=5.0,SNR=3.1
KSRS Korea Array 75.68 54 P **P 18 38 16.6 +0.4**
comp=Z,0.8nm,0.7s,baz=283,slow=4.8,SNR=3.5
ILAR Eielson Array 78.95 358 P **P 18 38 33.9 -0.1**
comp=Z,0.3nm,0.6s,baz=345,slow=3.2,SNR=3.6
CCM Cathedral Cave 86.90 316 *e*P **P 18 39 15.3 -0.3**
comp=Z,6.0nm,0.6s
CCM Cathedral Cave 86.90 316 *e*P **P 18 39 15.3 -0.3**
CCM pmax pmax
comp=Z,6.0nm,0.6s

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*GEN **21** 18:26:54.2, 44°.19N×10°.16E, h3km±1km, MI0.8*
ROM 21 18:26:53.9±0.2, 44°.186N±0°.007×10°.17E±0°.01, h9km, ML1.2/3, Error ellipse: s-maj=1.1km s-min=0.5km az=59.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.16**	**100**	P	Pg	18 26 58.0	+0.6
VLC				S	Sg	18 27 00.7	+0.9
VLC				AML	AML		
	comp=E,164μm,0.1s						
VLC				AML	AML		
	comp=N,78μm,0.1s						
VLC				AML	AML		
	comp=E,164μm,0.1s						
VLC				AML	AML		
	comp=N,78μm,0.1s						
SARO	**Sassorosso**	**0.17**	**91**	P	Pg	18 26 58.1	+0.5
SARO				S	Sg	18 27 01.0	+1.0
SARO	**Sassorosso**	**0.17**	**91**	P	Pg	18 26 58.1	+0.6
SARO				S	Sg	18 27 01.0	+0.9
SARO				AML	AML		
	comp=E,154μm,0.4s						
SARO				AML	AML		
	comp=N,134μm,0.4s						
SARO				AML	AML		
	comp=N,134μm,0.4s						
SARO				AML	AML		
	comp=E,154μm,0.4s						
CARD	**Cardoso**	**0.28**	**125**	P	Pg	18 26 59.8	+0.3
CARD				S	Sg	18 27 04.4	+1.2
CARD	**Cardoso**	**0.28**	**125**	P	Pb	18 27 00.4	-0.6
CARD				S	Sg	18 27 04.5	+1.3
ERBM	**Eremo**	**0.29**	**37**	P	Pb	18 27 00.8	-0.5
GRAM	**Graiana**	**0.31**	**347**	P	Pg	18 27 00.6	+0.5
GRAM				S	Sb	18 27 05.7	-1.2
GRAM	**Graiana**	**0.31**	**347**	P	Pg	18 27 00.8	+0.6
GRAM				S	Sb	18 27 05.8	-1.1
MAIM	**Mastiano**	**0.36**	**139**	P	Pb	18 27 02.2	-0.2
MAIM				S	Sg	18 27 06.9	+1.1
MAIM	**Mastiano**	**0.36**	**139**	P	Pb	18 27 02.0	-0.4
MAIM				S	Sb	18 27 07.0	-1.1
MAIM				AML	AML		
	comp=E,37μm,1.6s						
MAIM				AML	AML		
	comp=N,46μm,1.1s						
MAIM				AML	AML		
	comp=N,46μm,1.1s						
MAIM				AML	AML		
	comp=E,37μm,1.6s						
MSSA	**Maissana**	**0.48**	**286**	P	Pg	18 27 03.6	+0.3

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*GEN **21** 18:27:27.6, 44°.21N×10°.19E, h7km±2km, MI0.8*
ROM 21 18:27:27.2±0.2, 44°.208N±0°.007×10°.20E±0°.01, h10km, ML1.4/4, Error ellipse: s-maj=1.1km s-min=0.5km az=55.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.14**	**110**	P	Pg	18 27 31.0	+0.5
VLC				S	Sg	18 27 33.7	+0.9
SARO	**Sassorosso**	**0.15**	**99**	P	Pg	18 27 31.1	+0.5
SARO				S	Sg	18 27 33.5	+0.5
SARO	**Sassorosso**	**0.15**	**99**	P	Pg	18 27 31.1	+0.5
SARO				S	Sg	18 27 33.6	+0.6
SARO				AML	AML		
	comp=E,154μm,0.4s						
SARO				AML	AML		
	comp=N,140μm,0.4s						
SARO				AML	AML		
	comp=E,154μm,0.4s						
SARO				AML	AML		
	comp=N,140μm,0.4s						
ERBM	**Eremo**	**0.26**	**36**	P	Pg	18 27 33.2	+0.7
ERBM				S	Sb	18 27 37.7	-0.9
CARD	**Cardoso**	**0.27**	**132**	P	Pg	18 27 33.3	+0.6
CARD				S	Sg	18 27 37.3	+0.9
CARD	**Cardoso**	**0.27**	**132**	P	Pb	18 27 33.5	-0.7
CARD				S	Sg	18 27 37.3	+0.9
CARD				AML	AML		
	comp=E,156μm,0.1s						
CARD				AML	AML		
	comp=N,144μm,0.9s						
CARD				AML	AML		
	comp=N,144μm,0.9s						
CARD				AML	AML		
	comp=E,156μm,0.1s						
GRAM	**Graiana**	**0.30**	**341**	P	Pg	18 27 33.7	+0.4
GRAM				S	Sg	18 27 38.1	+0.8
GRAM	**Graiana**	**0.30**	**341**	P	Pg	18 27 33.7	+0.4
GRAM				S	Sg	18 27 38.1	+0.8
GRAM				AML	AML		
	comp=E,281μm,0.9s						
GRAM				AML	AML		
	comp=N,225μm,0.4s						
GRAM				AML	AML		
	comp=E,281μm,0.9s						
GRAM				AML	AML		
	comp=N,225μm,0.4s						
CODM	**Codolo**	**0.31**	**306**	P	Pg	18 27 33.6	+0.2
CODM				S	Sg	18 27 37.9	+0.3
MAIM	**Mastiano**	**0.36**	**144**	P	Pb	18 27 35.2	-0.5
MAIM				S	Sg	18 27 40.2	+1.1
MAIM	**Mastiano**	**0.36**	**144**	P	Pb	18 27 35.1	-0.5
MAIM				S	Sg	18 27 40.2	+1.1
MAIM				AML	AML		
	comp=E,37μm,1.6s						
MAIM				AML	AML		
	comp=N,46μm,1.1s						
MAIM				AML	AML		
	comp=N,46μm,1.1s						
MAIM				AML	AML		
	comp=E,37μm,1.6s						
POPM	**Popiglio**	**0.43**	**112**	P	Pg	18 27 36.1	+0.4
POPM				S	Sb	18 27 43.0	-0.5
POPM	**Popiglio**	**0.43**	**112**	P	Pb	18 27 36.6	-0.3
POPM				S	Sb	18 27 43.0	-0.5
MSSA	**Maissana**	**0.50**	**283**	P	Pg	18 27 37.4	+0.4

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*GEN **21** 18:28:06.8, 44°.21N×10°.19E, h7km±2km, MI0.8*
ROM 21 18:28:06.3±0.2, 44°.213N±0°.007×10°.21E±0°.02, h11km, ML1.2/4, Error ellipse: s-maj=1.5km s-min=0.6km az=69.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.14**	**113**	P	Pg	18 28 10.2	+0.6
VLC				S	Sg	18 28 12.6	+0.7
VLC				AML	AML		
	comp=E,50μm,0.7s						
VLC				AML	AML		
	comp=N,88μm,0.7s						
VLC				AML	AML		
	comp=E,50μm,0.7s						
VLC				AML	AML		
	comp=N,88μm,0.7s						
VLC				AML	AML		
	comp=E,50μm,0.7s						
VLC				AML	AML		
	comp=N,88μm,0.7s						
SARO	**Sassorosso**	**0.14**	**102**	P	Pg	18 28 10.2	+0.5
SARO				S	Sg	18 28 12.8	+0.7
SARO	**Sassorosso**	**0.14**	**102**	P	Pg	18 28 10.2	+0.5
SARO				S	Sg	18 28 12.8	+0.7
SARO				AML	AML		
	comp=E,150μm,0.4s						
SARO				AML	AML		
	comp=N,140μm,0.4s						
SARO				AML	AML		
	comp=E,150μm,0.4s						
SARO				AML	AML		
	comp=N,140μm,0.4s						
SARO				AML	AML		
	comp=E,150μm,0.4s						
SARO				AML	AML		
	comp=N,140μm,0.4s						
ERBM	**Eremo**	**0.25**	**35**	P	Pg	18 28 12.2	+0.6
ERBM				S	Sb	18 28 16.5	-0.9
ERBM				AML	AML		
	comp=E,132μm,0.8s						
ERBM				AML	AML		
	comp=N,132μm,0.6s						
ERBM				AML	AML		
	comp=E,132μm,0.8s						
ERBM				AML	AML		
	comp=N,132μm,0.6s						
ERBM				AML	AML		
	comp=E,132μm,0.8s						
ERBM				AML	AML		
	comp=N,132μm,0.6s						
CARD	**Cardoso**	**0.27**	**133**	P	Pb	18 28 12.6	-0.6
CARD				S	Sg	18 28 16.4	+0.8
CARD	**Cardoso**	**0.27**	**133**	P	Pb	18 28 12.7	-0.5
CARD				S	Sg	18 28 16.1	+0.5
CARD				AML	AML		
	comp=E,123μm,0.1s						
CARD				AML	AML		
	comp=N,99μm,0.3s						
CARD				AML	AML		
	comp=E,122μm,0.1s						
CARD				AML	AML		
	comp=N,99μm,0.3s						
CARD				AML	AML		
	comp=N,99μm,0.3s						
CARD				AML	AML		
	comp=E,122μm,0.1s						
GRAM	**Graiana**	**0.30**	**340**	P	Pg	18 28 12.7	+0.3
GRAM				S	Sg	18 28 17.0	+0.6
GRAM	**Graiana**	**0.30**	**340**	P	Pg	18 28 12.7	+0.3
GRAM				S	Sg	18 28 17.2	+0.8
GRAM				AML	AML		
	comp=E,282μm,0.9s						
GRAM				AML	AML		
	comp=N,225μm,0.4s						
GRAM				AML	AML		
	comp=E,281μm,0.9s						
GRAM				AML	AML		
	comp=N,225μm,0.4s						
GRAM				AML	AML		
	comp=E,281μm,0.9s						
GRAM				AML	AML		
	comp=N,225μm,0.4s						
CODM	**Codolo**	**0.31**	**305**	P	Pg	18 28 12.9	+0.2
CODM				S	Sg	18 28 17.3	+0.4
BDI	**Bagni Di Lucca**	**0.32**	**118**	P	Pb	18 28 13.4	-0.7
MAIM	**Mastiano**	**0.36**	**146**	P	Pg	18 28 14.1	+0.6
MAIM				S	Sg	18 28 19.3	+1.0
MAIM	**Mastiano**	**0.36**	**146**	P	Pb	18 28 14.2	-0.5
MAIM				S	Sb	18 28 19.5	-0.9
MTCR	**Monte La Croce**	**0.60**	**108**	P	Pb	18 28 19.0	+0.1

MAN 21 18:30:06.7, 7°.37N×124°.73E, h1km, mb4.2, ML3.0, MS2.7, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.60**	**33**	*e*P	Pg	18 30 18.9	+0.6
BUKP				*e*S	Sn	18 30 32.5	-0.5
SKMP	**Bagumbayan, Su**	**0.86**	**192**	*e*P	Pg	18 30 23.5	+0.3
SKMP				*e*S	Sn	18 30 39.4	+0.1
CGP	**Cagayan de Oro**	**1.08**	**358**	⇑*i*P	Pg	18 30 27.3	-0.1
CGP				*i* S	Sg	18 30 41.9	+0.5
MATI	**Mati**	**1.57**	**105**	*e*P	Pn	18 30 35.3	-0.4
MATI				*e*S	Sg	18 30 58.3	+1.0
DDMP	**Don Marcelino,**	**1.59**	**142**	*e*P	Pn	18 30 35.7	-0.3
DDMP				*e*S	Sb	18 30 57.5	0.0
DCPH	**Dipolog City**	**1.82**	**312**	⇑*e*P	Pg	18 30 41.6	0.0
IPIL	**Ipil**	**2.18**	**281**	*e*P	Pn	18 30 45.3	+1.2
IPIL				*e*S	Sb	18 31 13.7	-0.7

MAN 21 18:33:25.1, 7°.38N×124°.73E, h1km, mb4.6, ML3.5, MS3.4, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.59**	**34**	*e*P	Pg	18 33 36.8	+0.3
BUKP				*e*S	Sn	18 33 50.3	-0.8
DMPH	**Davao City--Mi**	**0.83**	**111**	⇓*e*P	Pb	18 33 42.3	0.0
DMPH				*e*S	Sg	18 33 49.1	-2.6
SKMP	**Bagumbayan, Su**	**0.88**	**192**	*e*P	Pg	18 33 42.2	+0.3
SKMP				*e*S	Sn	18 33 57.1	-0.9
CGP	**Cagayan de Oro**	**1.07**	**358**	⇑*i*P	Pg	18 33 44.8	-0.8
CGP				*i* S	Sg	18 33 58.1	-1.3
GSPH	**General Santos**	**1.30**	**170**	*e*P	Pn	18 33 57.1	+6.5
MATI	**Mati**	**1.58**	**106**	*e*P	Pn	18 33 54.1	-0.1
MATI				*e*S	Sg	18 34 15.9	0.0
DDMP	**Don Marcelino,**	**1.60**	**142**	*e*P	Pn	18 33 54.8	+0.3
DDMP				*e*S	Sn	18 34 15.9	+0.1
BUTP	**Butuan**	**1.81**	**29**	*e*P	Pn	18 33 57.6	+0.2
BUTP				*e*S	Sb	18 34 21.8	-0.4
IPIL	**Ipil**	**2.18**	**281**	*e*P	Pn	18 34 03.8	+1.3
IPIL				*e*S	Sb	18 34 31.5	-1.3
SNPH	**Sibulan**	**2.45**	**323**	*e*P	Pb	18 34 09.2	-0.7

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*IDC **21** 18:40:07.7±3.3, 36°.28N×8°.29W, h0km, mb3.4/1, mb1 3.7/2, mb1mx3.1/39, mbtmp3.5/2, ML4.5/2, MS2.7/2, Ms1 2.7/2, ms1mx2.2/32, Error ellipse: s-maj=79.7km s-min=34.2km az=94.0*
*MDD **21** 18:40:12.8±0.7, 36°.44N×8°.10W, h63km±7km, mb4.2/34, Error ellipse: s-maj=6.8km s-min=3.5km az=25.0, PRXIMO*
*IGIL **21** 18:40:12.1, 36°.34N×8°.11W, h16km, ML4.1*
*INMG **21** 18:40:13.3±2.0, 36°.40N×8°.10W, h19km±4km, MD3.3, ML3.7, Error ellipse: s-maj=4.1km s-min=2.5km az=65.0*
*SFS **21** 18:40:13.0, 36°.50N×8°.00W, ML3.3, GOLFO DE CDIZ*
ISC 21 18:40:11.9±1.2, 36°.40N±0°.04×8°.03W±0°.03, h32km±10km, n114, σ1§97/216, 4C-17D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.84**	**5**	⇓*e*P	**Pn**	**18 40 28.5**	**+0.9**
PBDV				*e*S	**Sn**	**18 40 40.5**	**+1.6**
PBDV				A	A	18 40 45.2	
	2μm,0.7s						
PBDV	**Barranco-do-Ve**	**0.84**	**5**	P	**Pn**	**18 40 28.5**	**+0.9**
PBDV				S	**Sn**	**18 40 40.5**	**+1.6**
	2μm,0.7s						
PFVI	**Vila Bisbo**	**0.97**	**319**	*e*P	**Pn**	**18 40 29.7**	**+0.4**
PFVI				*e*S	**Sn**	**18 40 41.9**	**-0.1**
PFVI				A	A	18 40 44.9	
	2μm,0.3s						
PFVI	**Vila Bisbo**	**0.97**	**319**	P	**Pn**	**18 40 29.7**	**+0.4**
	15nm,0.0s,SNR=336						
PFVI				S	**Sn**	**18 40 42.0**	**0.0**
	3μm,0.1s,SNR=31						
PVAQ	**Vaqueiros**	**1.03**	**14**	⇓*e*P	**Pb**	**18 40 31.1**	**-0.1**
PVAQ				*e*S	**Sn**	**18 40 45.6**	**+2.2**
PVAQ				A	A	18 40 46.4	
	2μm,0.3s						
PVAQ	**Vaqueiros**	**1.03**	**14**	P	**Pb**	**18 40 31.1**	**-0.1**
PVAQ				S	**Sn**	**18 40 45.6**	**+2.2**
	2μm,0.3s						
MORF	**Marmelete**	**1.03**	**331**	*e*P	**Pb**	**18 40 30.6**	**-0.6**
MORF				*e*S	**Sn**	**18 40 44.1**	**+0.5**
MORF				AML	AML	18 40 47.6	
	comp=N,3μm,0.3s						
MORF	**Marmelete**	**1.03**	**331**	⇓*e*P	**Pb**	**18 40 30.6**	**-0.6**
MORF				*e*S	**Sn**	**18 40 44.7**	**+1.1**
MORF				A	A	18 40 46.3	
	comp=N,3μm,0.2s						
MORF	**Marmelete**	**1.03**	**331**	P	**Pb**	**18 40 30.6**	**-0.6**
MORF				S	**Sn**	**18 40 44.1**	**+0.5**
	comp=N,3μm,0.3s						
PCVE	**Castro Verde**	**1.23**	**360**	⇓*i*P	**Pb**	**18 40 34.0**	**-0.5**
PCVE				*e*S	**Sb**	**18 40 48.9**	**-1.1**
PCVE				A	A	18 40 56.8	
	comp=N,692nm,0.2s						
PCVE	**Castro Verde**	**1.23**	**360**	P	**Pb**	**18 40 34.0**	**-0.5**
PCVE				S	**Sb**	**18 40 48.9**	**-1.1**
	comp=N,692nm,0.2s						
PTEO	**Sao Teotonio**	**1.27**	**334**	*e*P	**Pb**	**18 40 34.1**	**-1.1**
PTEO				*e*S	**Sb**	**18 40 50.3**	**-0.9**
PTEO				A	A	18 41 02.7	
	comp=N,664nm,0.4s						
PTEO	**Sao Teotonio**	**1.27**	**334**	P	**Pb**	**18 40 34.1**	**-1.1**
PTEO				S	**Sb**	**18 40 50.3**	**-0.9**
	comp=N,332nm,0.4s						
MESJ	**Messejana**	**1.44**	**354**	*e*P	**Pb**	**18 40 36.7**	**-1.4**
MESJ	**Messejana**	**1.44**	**354**	P	**Pb**	**18 40 36.7**	**-1.4**
SFS	**San Fernando**	**1.47**	**87**	*e*S	**Sb**	**18 40 58.2**	**+1.3**
CNIL	**Conil**	**1.59**	**91**	⇑*i*P	**Pb**	**18 40 40.9**	**+0.3**
CNIL				*e*S	**Sb**	**18 41 01.0**	**+0.7**
PBEJ	**Beja**	**1.63**	**4**	*e*Pn	**Pb**	**18 40 40.0**	**-1.2**
PBEJ				*e*Sn	**Sb**	**18 40 59.0**	**-2.4**
PBEJ				A	A	18 41 09.7	
	comp=N,536nm,0.3s						
PBEJ	**Beja**	**1.63**	**4**	P	**Pb**	**18 40 40.0**	**-1.2**
PBEJ				S	**Sb**	**18 40 59.0**	**-2.4**
	comp=N,268nm,0.3s						
GIBL	**Gibalbin**	**1.71**	**75**	*e*P	**Pb**	**18 40 42.0**	**-0.7**
EMIN	**Mina Concepcio**	**1.74**	**38**	⇑P	**Pn**	**18 40 41.0**	**+1.1**
	comp=N,6.2nm,0.2s,SNR=18						
EMIN				S	**Sn**	**18 41 01.3**	**+0.4**
	comp=N,48nm,0.1s,SNR=4.0						
PNCL	**Nicolau / Gran**	**1.75**	**347**	⇓*e*Pn	**Pn**	**18 40 40.7**	**+0.7**
PNCL				*e*Sg	**Sb**	**18 41 07.3**	**+2.3**
PNCL				A	A	18 41 09.4	
	comp=N,654nm,0.1s						
PNCL	**Nicolau / Gran**	**1.75**	**347**	P	**Pn**	**18 40 40.7**	**+0.7**
PNCL				S	**Sb**	**18 41 07.3**	**+2.3**
	comp=N,654nm,0.1s						
ESPR	**Espera**	**1.81**	**74**	⇓P	**Pb**	**18 40 42.8**	**-1.5**
	comp=N,17nm,0.1s,SNR=18						
ESPR				S	**Sn**	**18 41 04.1**	**+1.5**
	comp=N,293nm,0.2s,SNR=6.6						
ALJ	**Aljibe**	**1.92**	**86**	⇓*i*P	**Pb**	**18 40 45.6**	**-0.6**
ALJ				*e*S	**Sb**	**18 41 10.0**	**+0.2**
PBAR	**Barrancos**	**1.94**	**24**	*e*Pn	**Pn**	**18 40 43.9**	**+1.3**
PBAR				*e*Sg	**Sb**	**18 41 14.0**	**+3.7**
PBAR				A	A	18 41 16.6	
	comp=N,348nm,0.5s						
PBAR	**Barrancos**	**1.94**	**24**	P	**Pn**	**18 40 43.9**	**+1.3**
PBAR				S	**Sb**	**18 41 14.0**	**+3.7**
	comp=N,348nm,0.5s						
EJIF	**Jimena Fronter**	**2.06**	**88**	P	**Pb**	**18 40 47.0**	**-1.7**
	comp=N,12nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**18 41 11.9**	**+2.9**
	comp=N,22nm,0.2s,SNR=7.9						
LIJA	**Lijar**	**2.17**	**76**	*e*P	**Pb**	**18 40 48.2**	**-2.2**
LIJA				*e*S	**Sn**	**18 41 13.6**	**+1.9**
ECEU	**Ceuta**	**2.20**	**102**	⇓P	**Pn**	**18 40 48.9**	**+2.7**
	comp=N,37nm,0.2s,SNR=18						
CEU	**Ceuta**	**2.21**	**102**	⇓P	**Pb**	**18 40 49.5**	**-1.5**
CEU				S	**Sb**	**18 41 16.9**	**-1.1**
CEU	**Ceuta**	**2.21**	**102**	⇓*i*P	**Pb**	**18 40 49.5**	**-1.5**
CEU				*e*S	**Sb**	**18 41 16.9**	**-1.1**
REAL	**Reales**	**2.27**	**87**	*e*P	**Pb**	**18 40 50.5**	**-1.9**
REAL				*e*S	**Sb**	**18 41 17.8**	**-2.3**
LIS	**Lisbon**	**2.48**	**339**	*e*Pn	**Pn**	**18 40 52.0**	**+2.0**
LIS				*e*Sg	**Sb**	**18 41 29.9**	**+4.2**
LIS				A	A	18 41 42.2	
	comp=N,300nm,0.3s						
LIS	**Lisbon**	**2.48**	**339**	P	**Pn**	**18 40 52.0**	**+2.0**
LIS				S	**Sb**	**18 41 29.9**	**+4.2**
	comp=N,300nm,0.3s						
EBAD	**Badajoz**	**2.48**	**19**	P	**Pn**	**18 40 50.9**	**+0.9**
	comp=N,3.2nm,0.1s,SNR=97						
EBAD				S	**Sb**	**18 41 24.0**	**-1.9**
	comp=N,445nm,0.2s,SNR=5.7						
PESTR	**Estremoz**	**2.48**	**8**	*e*Pn	**Pn**	**18 40 51.3**	**+1.2**
PESTR				*e*Sg	**Sb**	**18 41 30.0**	**+4.0**
EMIJ	**Mijas**	**2.63**	**86**	⇓P	**Pn**	**18 40 53.5**	**+1.4**
	comp=N,2.2nm,0.3s,SNR=18						
EMIJ				S	**Sn**	**18 41 24.9**	**+1.9**
	comp=N,14nm,0.2s,SNR=6.3						
PMTG	**Montargil**	**2.67**	**357**	⇓*e*Pn	**Pn**	**18 40 53.4**	**+0.8**
PMTG				*e*Sn	**Sn**	**18 41 23.9**	**+0.1**
PMTG				A	A	18 41 43.7	
	comp=N,256nm,0.4s						
PMTG	**Montargil**	**2.67**	**357**	P	**Pn**	**18 40 53.4**	**+0.8**
PMTG				S	**Sn**	**18 41 23.9**	**+0.1**
	comp=N,256nm,0.4s						
PMAFR	**Mafra**	**2.74**	**339**	*e*Pn	**Pn**	**18 40 54.6**	**+1.1**
PMAFR				*e*Sn	**Sn**	**18 41 25.7**	**+0.2**
PMAFR				A	A	18 41 46.7	
	comp=N,276nm,0.2s						
PMAFR	**Mafra**	**2.74**	**339**	⇑P	**Pn**	**18 40 54.7**	**+1.1**
	comp=N,70nm,0.2s,SNR=18						
PMAFR				S	**Sn**	**18 41 25.8**	**+0.2**
	comp=N,290nm,0.2s,SNR=6.8						
EMAL	**Malaga-Limoner**	**2.92**	**82**	*e*P	**Pn**	**18 40 59.1**	**+3.0**
EMAL				*e*S	**Sn**	**18 41 31.3**	**+1.3**
PMRV	**Marv??o**	**3.06**	**9**	⇓*e*Pn	**Pn**	**18 40 59.0**	**+0.9**
PMRV				*e*Sn	**Sn**	**18 41 34.0**	**+0.4**
PMRV				*e*Sg	**Sb**	**18 41 47.8**	**+5.2**
PMRV				A	A	18 41 55.6	
	comp=N,242nm,0.4s						
PMRV	**Marv??o**	**3.06**	**9**	P	**Pn**	**18 40 59.0**	**+0.9**

PMRV S Sn 18 41 34.0 +0.4
EGOR Sierra Gorda, 3.22 76 P Pn 18 41 03.2 +2.8
comp=N,2.6nm,0.1s,SNR=7.9
EGOR S Sn 18 41 40.2 +2.4
comp=N,10nm,0.2s,SNR=7.9
PTOM Tomar 3.22 355⇓*e*Pn Pn 18 41 01.3 +1.0
PTOM *e*Sn Sn 18 41 37.2 -0.4
PTOM *e*Sg Sb 18 41 51.6 +4.4
PTOM A A 18 41 56.0
comp=N,289nm,0.4s
PTOM Tomar 3.22 355 P Pn 18 41 01.3 +1.0
PTOM S Sn 18 41 37.2 -0.4
EADA Adamuz 3.27 56 ⇓P Pn 18 41 02.5 +1.6
comp=N,26nm,0.2s,SNR=18
EADA S Sn 18 41 38.8 +0.1
comp=N,26nm,0.1s,SNR=6.4
PVLZ Peæn de 3.27 111 *e*P Pn 18 41 01.7 +0.8
PVLZ *e*S Sn 18 41 36.5 -2.1
PCBR Castelo Branco 3.46 7 *e*Pn Pn 18 41 04.5 +1.0
PCBR *e*Sn Sn 18 41 43.2 -0.2
PCBR A A 18 42 10.3
comp=N,108nm,0.4s
PCBR Castelo Branco 3.46 7 P Pn 18 41 04.5 +1.0
PCBR S Sn 18 41 43.2 -0.2
comp=N,54nm,0.4s
PCAS Casmilo, Conde 3.66 354 *e*Pn Pn 18 41 07.2 +0.9
PCAS *e*Sn Sn 18 41 48.2 -0.2
PCAS A A 18 42 12.3
comp=N,111nm,0.6s
PCAS Casmilo, Conde 3.66 354 P Pn 18 41 07.2 +0.9
PCAS S Sn 18 41 48.2 -0.2
comp=N,111nm,0.6s
IFR Ifrane 3.74 140⇓*i*P Pn 18 41 08.7 +1.2
IFR *e*S Sn 18 41 48.4 -2.1
EQUE Quentar 3.77 76 P Pn 18 41 10.4 +2.6
comp=N,8.0nm,0.3s,SNR=26
EQUE S Sn 18 41 52.9 +1.8
comp=N,13nm,0.2s
COI Coimbra 3.81 356 *e*Pn Pn 18 41 09.4 +1.1
COI *e*Sn Sn 18 41 51.2 -0.8
COI A A 18 42 20.8
comp=N,206nm,0.6s
COI Coimbra 3.81 356 P Pn 18 41 09.4 +1.1
COI S Sn 18 41 51.2 -0.8
comp=N,103nm,0.6s
EPLA Plasencia 3.96 22 P Pn 18 41 11.3 +0.8
comp=N,2.6nm,0.1s,SNR=24
EPLA S Sn 18 41 54.4 -1.5
comp=N,25nm,0.2s,SNR=8.1
MTE Manteigas 4.01 5 *e*Pn Pn 18 41 11.9 +0.8
MTE *e*Sn Sn 18 41 55.5 -1.5
MTE A A 18 42 35.2
comp=N,257nm,0.6s
MTE Manteigas 4.01 5 P Pn 18 41 11.9 +0.8
MTE S Sn 18 41 55.5 -1.5
comp=N,128nm,0.6s
GORA Gorafe 4.13 73 P Pn 18 41 15.8 +2.9
comp=N,8.6nm,0.1s,SNR=7.9
GORA S Sn 18 42 01.2 +1.1
comp=N,12nm,0.1s,SNR=7.9
EBER Berja 4.16 82 P Pn 18 41 15.1 +1.8
comp=N,3.0nm,0.2s,SNR=17
EBER S Sn 18 42 02.3 +1.4
comp=N,2.8nm,0.2s
EQES Quesada 4.20 69 P Pn 18 41 15.8 +2.0
comp=N,2.8nm,0.1s,SNR=23
EQES S Sn 18 42 01.4 -0.4
comp=N,5.5nm,0.1s,SNR=6.9
EMEL Melilla 4.26 103 S Sn 18 42 00.8 -2.4
comp=N,44nm,0.1s,SNR=7.9
PAB San Pablo 4.28 42 P Pn 18 41 16.3 +1.4
comp=N,2.2nm,0.1s,SNR=7.9
PAB S Sn 18 42 01.5 -2.2
comp=N,17nm,0.2s,SNR=7.9
MELI Melilla 4.28 103 S Sn 18 42 03.4 -0.2
comp=N,30nm,0.2s,SNR=7.9
PVIS Viseu 4.31 1 *e*Pn Pn 18 41 15.7 +0.5
PVIS *e*Sn Sn 18 42 03.8 -0.6
PVIS A A 18 42 41.6
comp=N,67nm,0.7s
PVIS Viseu 4.31 1 P Pn 18 41 15.7 +0.5
PVIS S Sn 18 42 03.8 -0.6
comp=N,34nm,0.7s
MDT Midelt 4.56 141 Pn Pn 18 41 20.0 +1.3
comp=N,56nm,0.3s,baz=320,slow=7.9,SNR=886
MDT Sn Sn 18 42 08.2 -2.4
comp=N,35nm,0.3s,baz=211,slow=23,SNR=18
ESDC Sonseca Array 4.58 43 Pn Pn 18 41 20.2 +1.3
comp=N,5.4nm,0.3s,baz=229,slow=13,SNR=42
ESDC Sn Sn 18 42 10.0 -1.0
comp=N,9.2nm,0.3s,baz=230,slow=24,SNR=4.3
ESDC Lg Lg 18 42 37.7
comp=N,19nm,0.3s,baz=229,slow=25,SNR=2.8
ESDC LR LR 18 43 06.5
comp=N,17nm,21.5s,baz=140,slow=37
ESDC Sonseca Array 4.58 43 P Pn 18 41 20.3 +1.3
comp=N,5.4nm,0.3s,baz=228,slow=13,SNR=39
ESDC S Sn 18 42 09.8 -1.3
comp=N,5.3nm,0.2s,baz=227,slow=24,SNR=8.5
SESP Santiago Espad 4.70 67 P Pn 18 41 21.8 +1.1
comp=N,5.4nm,0.2s,SNR=7.9
SESP S Sn 18 42 13.2 -0.9
comp=N,6.1nm,0.1s,SNR=7.9
ENIJ Nijar 4.71 81 P Pn 18 41 22.1 +1.3
comp=N,1.3nm,0.1s,SNR=7.9
ENIJ S Sn 18 42 13.5 -0.8
comp=N,8.1nm,0.3s,SNR=7.9
PTO Porto 4.75 355 *e*Pn Pn 18 41 22.1 +0.9
PTO *e*Sn Sn 18 42 12.4 -2.8
PTO Porto 4.75 355 P Pn 18 41 22.1 +0.9
PTO S Sn 18 42 12.4 -2.8
MVO Moncorvo 4.82 9 *e*Pn Pn 18 41 23.0 +0.7
MVO *e*Sn Sn 18 42 14.0 -3.0
MVO A A 18 43 00.0
comp=N,107nm,0.5s
MVO Moncorvo 4.82 9 P Pn 18 41 23.0 +0.7
comp=N,3.0nm,0.1s,SNR=42
MVO S Sn 18 42 14.3 -2.7
comp=N,40nm,0.2s,SNR=11
POLO Lamas de Olo 4.97 2 *e*Pn Pn 18 41 25.0 +0.7
POLO *e*Sn Sn 18 42 18.8 -1.9
POLO A A 18 43 05.4
comp=N,23nm,0.6s
POLO Lamas de Olo 4.97 2 P Pn 18 41 25.0 +0.7
POLO S Sn 18 42 18.8 -1.9
comp=N,23nm,0.6s
GUD Guadarrama 5.21 34 ⇑P Pn 18 41 29.2 +1.5
comp=N,0.0nm,0.1s,SNR=18
GUD S Sn 18 42 24.6 -2.2
comp=N,6.3nm,0.2s,SNR=6.2
PCAB Cabril 5.30 360 *e*Pn Pn 18 41 29.6 +0.8
PCAB *e*Sn Sn 18 42 26.4 -2.4
PCAB A A 18 43 15.6
comp=N,60nm,0.5s
PCAB Cabril 5.30 360 P Pn 18 41 29.6 +0.8
PCAB S Sn 18 42 26.4 -2.4
comp=N,30nm,0.5s
UCM Universidad Co 5.42 43 *e*P Pn 18 41 32.3 +1.9
UCM *e*S Sn 18 42 28.8 -2.9
UCM *e*L L 18 43 03.0
ELOB Lobios 5.46 360 ⇓P Pn 18 41 31.7 +0.7
comp=N,8.1nm,0.2s,SNR=18
ELOB S Sn 18 42 29.5 -3.3
comp=N,28nm,0.3s,SNR=6.5
PBRG Braganca 5.49 10 *e*Pn Pn 18 41 32.1 +0.7
PBRG *e*Sn Sn 18 42 31.2 -2.2
PBRG A A 18 43 27.1
comp=N,41nm,0.6s
PBRG Braganca 5.49 10 P Pn 18 41 32.1 +0.7
PBRG S Sn 18 42 31.2 -2.2
comp=N,21nm,0.6s
PGAV Gavieira, Arco 5.56 358 *e*Pn Pn 18 41 33.0 +0.6
PGAV *e*Sn Sn 18 42 31.7 -3.6
PGAV A A 18 43 19.5
comp=N,32nm,0.5s
PGAV Gavieira, Arco 5.56 358 P Pn 18 41 33.0 +0.6
PGAV S Sn 18 42 31.7 -3.6
comp=N,32nm,0.5s
EMUR La Murta 5.61 73 P Pn 18 41 36.0 +2.9
comp=N,1.8nm,0.2s,SNR=7.4
EMUR S Sn 18 42 35.7 -0.7
comp=N,9.6nm,0.3s
ETOB Tobarra 5.61 65 P Pn 18 41 34.1 +0.9
comp=N,1.4nm,0.2s,SNR=20
ETOB S Sn 18 42 34.5 -2.1
comp=N,3.9nm,0.2s
ECAL Calabor 5.62 10 P Pn 18 41 34.3 +1.0
comp=N,10.0nm,0.2s,SNR=36
ECAL S Sn 18 42 34.1 -2.7
comp=N,21nm,0.3s,SNR=6.7
EZAM Zamans 5.76 355 P Pn 18 41 35.0 -0.1
comp=N,2.4nm,0.1s,SNR=7.9
EZAM S Sn 18 42 36.3 -3.9
comp=N,10.0nm,0.2s,SNR=7.9
ECHE Chera 6.42 58 P Pn 18 41 44.8 +0.6
comp=N,0.6nm,0.2s,SNR=7.9
ECHE S Sn 18 42 54.5 -1.8
comp=N,1.1nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.58 354 P Pn 18 41 46.0 -0.4
comp=N,2.9nm,0.1s,SNR=7.9
EMAZ S Sn 18 42 55.4 -4.8
comp=N,19nm,0.3s,SNR=7.9
EPON Pontenova 6.95 5 P Pn 18 41 51.6 +0.2
comp=N,0.5nm,0.2s,SNR=7.9
EPON S Sn 18 43 08.4 -0.9
comp=N,2.9nm,0.3s,SNR=7.9
EMOS Mosqueruela 7.13 54 P Pn 18 41 55.9 +1.8
comp=N,1.1nm,0.2s,SNR=8.0
EMOS S Sn 18 43 10.9 -3.1
comp=N,1.3nm,0.2s,SNR=8.5
EARI Arriondas 7.22 17 P Pn 18 41 56.9 +1.7
comp=N,2.3nm,0.3s,SNR=6.8
EARI S Sn 18 43 11.7 -4.4
comp=N,0.6nm,0.2s
ELAN Lanestosa 7.68 26 P Pn 18 42 03.2 +1.7
comp=N,0.4nm,0.1s,SNR=6.6
ELAN S Sn 18 43 22.8 -4.6
comp=N,2.2nm,0.2s,SNR=7.9
EIBI Ibiza 7.87 68 P Pn 18 42 05.2 +1.1
comp=N,0.5nm,0.1s,SNR=7.9
EIBI S Sn 18 43 28.3 -3.8
comp=N,1.6nm,0.2s,SNR=7.9
ESAC San Caprasio 7.92 46 P Pn 18 42 06.5 +1.7
comp=N,5.2nm,0.3s,SNR=5.6
ESAC S Sn 18 43 35.2 +1.8
comp=N,5.6nm,0.3s,SNR=7.9
EARA Aranguren 8.07 36 P Pn 18 42 09.3 +2.4
comp=N,2.7nm,0.2s,SNR=4.0
EARA S Sn 18 43 31.8 -5.3
comp=N,1.4nm,0.1s,SNR=4.0
IUNC Unciti 8.10 36 P Pn 18 42 09.2 +1.9
comp=N,4.2nm,0.2s,SNR=7.9
IUNC S Sn 18 43 34.5 -3.2
comp=N,4.2nm,0.2s,SNR=7.9
EORO Oroz-Betelu 8.29 37 P Pn 18 42 12.2 +2.2
comp=N,1.4nm,0.1s,SNR=7.1
EORO S Sn 18 43 39.8 -2.7
comp=N,3.9nm,0.3s,SNR=7.9
EALK Alkurruntz 8.45 34 P Pn 18 42 14.0 +1.8
comp=N,1.9nm,0.2s,SNR=14
EALK S Sn 18 43 42.0 -4.5
comp=N,14nm,0.3s,SNR=7.9
EPOB Poblet 8.65 52 P Pn 18 42 17.2 +2.4
comp=N,0.2nm,0.1s,SNR=7.9
EPOB S Sn 18 43 48.5 -2.8
comp=N,0.5nm,0.3s,SNR=7.9
ATE Arette 8.74 38 P Pn 18 42 17.2 +1.2
comp=N,0.5nm,0.1s,SNR=7.9
ATE S Sn 18 43 49.8 -3.6
comp=N,3.2nm,0.3s,SNR=7.9
CSOR Sort 9.26 47 P Pn 18 42 24.7 +1.4
comp=N,0.7nm,0.1s,SNR=7.9
CSOR S Sn 18 44 02.5 -3.9
comp=N,3.2nm,0.3s,SNR=7.9
CFON Fontmartina 9.73 53 P Pn 18 42 31.7 +2.0
comp=N,0.5nm,0.2s,SNR=4.0
CLLI Llivia 9.83 49 P Pn 18 42 33.0 +2.0
comp=N,1.9nm,0.3s,SNR=7.9
CLLI S Sn 18 44 14.1 -6.2
comp=N,0.7nm,0.2s,SNR=7.9
H07N1 FLORES T-PHASE 18.47 287 T T 19 02 21.5
SNR=29
TORD Torodi Ar. Bea 24.75 157 P P 18 45 29.5 -1.1
comp=N,0.8nm,0.8s,baz=352,slow=8.5,SNR=4.8
NRIK Noril'sk 58.36 25 LR LR 19 18 10.1
comp=N,31nm,19.3s,baz=39,slow=39
ASAR Alice Springs 144.90 80 PKPbc **PKPdf 18 59 47.2 +1.2**
comp=N,0.7nm,0.6s,baz=296,slow=2.8,SNR=8.5

*ISCJB **21** 18:47:00.9±0.4, 44°.19N±0°.03×10°.14E±0°.03, h10km±4km, Error ellipse: s-maj=6.2km s-min=3.0km az=24.7*
*ROM **21** 18:47:00.8±0.1, 44°.217N±0°.009×10°.20E±0°.01, h10km, ML2.1/3, Error ellipse: s-maj=1.2km s-min=0.4km az=40.0*
*GEN **21** 18:47:01.3, 44°.22N×10°.20E, h8km±2km, Ml1.9*
*LDG **21** 18:47:01.5±0.1, 44°.21N×10°.18E, h2km, Ml2.6/5, Error ellipse: s-maj=1.1km s-min=0.9km az=7.0*
ISC 21 18:47:01.2±0.9, **44°.20N**±0°.03×**10°.18E**±0°.03, **h11**km±7km, **n24**, σ0$**84/45**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.15**	**105**	P	**Pg**	**18 47 04.7**	**-0.1**
VLC				S	**Sg**	**18 47 07.1**	**-0.2**
VLC				AML	AML		
	comp=E,1062μm,0.2s						
VLC				AML	AML		
	comp=N,1060μm,0.8s						
VLC				AML	AML		
	comp=E,1146μm,0.2s						
VLC				AML	AML		
	comp=N,1075μm,0.8s						
VLC				AML	AML		
	comp=N,1060μm,0.8s						
VLC				AML	AML		
	comp=E,1146μm,0.2s						
VLC				AML	AML		
	comp=E,1062μm,0.2s						
VLC				AML	AML		
	comp=N,1075μm,0.8s						
VLC				AML	AML		
	comp=N,1075μm,0.8s						
VLC				AML	AML		
	comp=E,1146μm,0.2s						
VLC				AML	AML		
	comp=E,1062μm,0.2s						
VLC				AML	AML		
	comp=N,1060μm,0.8s						
SARO	**Sassorosso**	**0.16**	**96**	P	**Pg**	**18 47 04.7**	**-0.2**
SARO				S	**Sg**	**18 47 07.2**	**-0.4**
SARO	**Sassorosso**	**0.16**	**96**	P	**Pg**	**18 47 04.8**	**-0.2**
SARO				S	**Sg**	**18 47 07.1**	**-0.4**
SARO				AML	AML		
	comp=E,1260μm,0.4s						
SARO				AML	AML		
	comp=N,2370μm,0.5s						
SARO				AML	AML		
	comp=N,2370μm,0.5s						
SARO				AML	AML		
	comp=E,1260μm,0.4s						
SARO				AML	AML		
	comp=N,2370μm,0.5s						
SARO				AML	AML		
	comp=E,1260μm,0.4s						
ERBM	**Eremo**	**0.28**	**37**	P	**Pg**	**18 47 06.8**	**-0.1**
ERBM				S	**Sg**	**18 47 10.8**	**0.0**
ERBM				AML	AML		
	comp=E,742μm,0.7s						
ERBM				AML	AML		
	comp=N,1047μm,1.0s						
ERBM				AML	AML		
	comp=E,742μm,0.7s						
ERBM				AML	AML		
	comp=N,1047μm,1.0s						
ERBM				AML	AML		
	comp=E,742μm,0.7s						
ERBM				AML	AML		
	comp=N,1047μm,1.0s						
CARD	**Cardoso**	**0.28**	**129**	P	**Pg**	**18 47 06.9**	**0.0**
CARD				S	**Sg**	**18 47 11.1**	**+0.3**
CARD	**Cardoso**	**0.28**	**129**	P	**Pg**	**18 47 07.0**	**+0.1**
CARD				S	**Sg**	**18 47 11.0**	**+0.3**
GRAM	**Graiana**	**0.30**	**344**	P	**Pg**	**18 47 07.3**	**-0.1**
GRAM				S	**Sg**	**18 47 11.5**	**0.0**
GRAM	**Graiana**	**0.30**	**344**	P	**Pg**	**18 47 07.3**	**-0.1**
GRAM				S	**Sg**	**18 47 11.8**	**+0.2**
GRAM				AML	AML		
	comp=E,1230μm,0.8s						
GRAM				AML	AML		
	comp=N,1335μm,0.4s						
GRAM				AML	AML		
	comp=E,1230μm,0.8s						
GRAM				AML	AML		
	comp=N,1335μm,0.4s						
BDI	**Bagni Di Lucca**	**0.33**	**114**	P	**Pg**	**18 47 07.7**	**-0.2**
BDI				S	**Sg**	**18 47 12.5**	**+0.1**
MAIM	**Mastiano**	**0.36**	**142**	P	**Pg**	**18 47 08.8**	**+0.3**
MAIM				S	**Sg**	**18 47 14.0**	**+0.7**
MAIM	**Mastiano**	**0.36**	**142**	P	**Pg**	**18 47 08.7**	**+0.3**
MAIM				S	**Sg**	**18 47 14.0**	**+0.7**
POPM	**Popiglio**	**0.44**	**110**	P	**Pg**	**18 47 09.9**	**-0.1**
POPM				S	**Sg**	**18 47 16.2**	**+0.3**
POPM	**Popiglio**	**0.44**	**110**	P	**Pg**	**18 47 09.9**	**-0.1**
POPM				S	**Sg**	**18 47 16.3**	**+0.5**
MSSA	**Maissana**	**0.49**	**284**	P	**Pg**	**18 47 11.1**	**+0.3**
MSSA				S	**Sg**	**18 47 17.9**	**+0.6**
MSSA				AML	AML		
	comp=E,106μm,0.2s						
MSSA				AML	AML		
	comp=N,94μm,0.3s						
MSSA				AML	AML		
	comp=E,106μm,0.2s						
MSSA				AML	AML		
	comp=N,94μm,0.3s						
MSSA				AML	AML		
	comp=E,106μm,0.2s						
MSSA				AML	AML		
	comp=N,94μm,0.3s						
MTCR	**Monte La Croce**	**0.61**	**106**	P	**Pg**	**18 47 13.2**	**0.0**
MTCR				S	**Sb**	**18 47 22.2**	**-0.4**
CRMI	**Carmignano**	**0.70**	**125**	P	**Pb**	**18 47 15.3**	**-0.1**
CRMI				S	**Sg**	**18 47 24.7**	**+0.7**
RUFI	**Rufina**	**1.02**	**110**	S	**Sb**	**18 47 34.7**	**+0.4**
CSNT	**Castellina Chi**	**1.08**	**132**	P	**Pn**	**18 47 23.2**	**+0.9**
CSNT				S	**Sb**	**18 47 36.5**	**+0.4**
PGF	**Pioggiola**	**1.86**	**208**	*e*Pn	**Pn**	**18 47 33.1**	**0.0**
PGF				*e*Sn	**Sn**	**18 47 55.1**	**-1.5**
	comp=N,5.2nm,0.3s						
SBF	**Sospel**	**2.01**	**261**	*e*Pn	**Pn**	**18 47 35.0**	**0.0**
SBF				*e*Sn	**Sn**	**18 47 59.0**	**-1.2**
	comp=N,13nm,0.3s						
FRF	**La Foret Royal**	**2.63**	**257**	*e*Pn	**Pn**	**18 47 43.7**	**+0.1**
FRF				*e*Sn	**Sn**	**18 48 13.9**	**-1.6**
	comp=N,4.2nm,0.3s						
LMR	**La Mourre**	**2.80**	**253**	*e*Pn	**Pn**	**18 47 45.5**	**-0.3**
LMR				*e*Sn	**Sn**	**18 48 17.0**	**-2.5**
	comp=N,2.2nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.16**	**285**	*e*P	**Pn**	**18 47 53.3**	**+2.4**
SMRF	**Simiane la Rot**	**3.33**	**268**	*e*P	**Pn**	**18 47 55.6**	**+2.5**

*IDC **21** 19:05:32.6±1.8, 9°.47S×122°.18E, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.7/27, mbtmp4.0/5, ML3.9/2, MS2.9/2, Ms1 2.9/2, ms1mx2.6/28, Error ellipse: s-maj=218.7km s-min=22.5km az=56.0*
*ISCJB **21** 19:05:36.4±0.9, 9°.3S±0°.2×122°.6E±0°.1, h35km, mb3.9/3, Error ellipse: s-maj=25.0km s-min=10.4km az=31.7*
*DJA **21** 19:05:43.8±0.4, 9°.S±6°.×12°.2E±°, h10km, M3.8/6, MLv3.8/6*
ISC 21 19:05:38.6±1.0, **9°.5S**±0°.1×**122°.5E**±0°.1, **h35**km, **n9**, σ0$**38/8**, **mb3.9/3**, **Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.05**	**314**	P	**Pn**	**19 05 57.9**	**+1.0**
WSI	**Waingapu**	**2.13**	**265**	P	**Pn**	**19 06 11.0**	**-0.6**
PLAI	**Plampang**	**4.66**	**278**	P	**Pn**	**19 06 48.1**	**+1.6**
WRA	**Warramunga Arr**	**15.49**	**133**	Pn	**Pn**	**19 09 14.2**	**-0.4**
	0.6nm,0.3s,baz=312,slow=8.8,SNR=2.3						
WRA				Sn	Sn	19 11 55.1	-10
	0.5nm,0.3s,baz=305,slow=23,SNR=2.6						
DAV	**Davao City (W)**	**16.74**	**11**	LR	LR	19 16 07.0	
	comp=Z,32nm,21.1s,baz=152,slow=38						
ASAR	**Alice Springs**	**17.85**	**144**	P	**P**	**19 09 45.5**	**+0.7**
	0.4nm,0.3s,baz=316,slow=12,SNR=24						
ASAR				S	Sn	19 12 50.4	-12
	0.2nm,0.3s,baz=316,slow=23,SNR=4.1						
ASAR				LR	LR	19 16 56.3	
	comp=Z,46nm,20.4s,baz=54,slow=38						
STKA	**Stephens Creek**	**28.49**	**144**	P	**P**	**19 11 31.3**	**+0.7**
	1.5nm,0.6s,baz=320,slow=11,SNR=5.3						
MKAR	**Makanchi Array**	**66.48**	**331**	P	**P**	**19 16 23.3**	**-1.4**
	0.7nm,0.7s,baz=139,slow=6.9,SNR=7.9						
ZALV	**Zalesovo Beam**	**70.75**	**338**	P	**P**	**19 16 49.5**	**-1.6**
	0.5nm,0.3s,baz=127,slow=5.8,SNR=2.4						

*NIED **21** 19:15:00, 26°.50N×128°.80E, h20km, Mw4.2 Best double couple: M0=2.33000×10^15 NP1:φ=178.00000°, δ17.00000°, λ42.00000°. NP2:φ=48.00000°, δ79.00000°, λ103.00000°.*
*IDC **21** 19:15:29.1±0.8, 26°.48N×128°.24E, h0km, mb4.0/15, mb1 4.1/18, mb1mx4.0/36, mbtmp4.0/18, ML3.5/3, MS3.3/7, Ms1 3.3/7, ms1mx3.1/29, Error ellipse: s-maj=23.6km s-min=10.6km az=99.0*
*ISCJB **21** 19:15:30.8±0.7, 26°.51N±0°.03×128°.76E±0°.04, h32km±4km, mb4.1/33, MS3.4/4, Error ellipse: s-maj=5.9km s-min=5.4km az=11.9*
*JMA **21** 19:15:32.2±0.2, 26°.55N×128°.74E, h22km±3km, M3.9*
JMA Felt I J1.
*NEIC **21** 19:15:32.9±1.8, 26°.51N×128°.59E, h30km±5km, mb4.4/21, Error ellipse: s-maj=9.9km s-min=4.4km az=183.0*
NEIC Recorded [1 JMA] on Okinawa.
ISC 21 19:15:30.8±1.7, **26°.52N**±0°.04×**128°.72E**±0°.04, **h17**km±10km, **n81**, σ0$**47/87**, **mb4.2/33**, **MS3.3/4**, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.50**	**308**	Pn	**Pn**	**19 15 42.2**	**-0.9**
	321nm,0.3s,baz=108,slow=15,SNR=6119						
JOW				Sn	**Sn**	**19 15 49.8**	**-1.7**
	314nm,0.3s,baz=85,slow=21,SNR=29						
JOW	**Kunigami**	**0.50**	**308**	*e*Pg	**Pn**	**19 15 42.2**	**-0.9**
JOW				*e*Sg	**Sb**	**19 15 48.0**	**-0.1**
JOW	**Kunigami**	**0.50**	**308**	P	**Pn**	**19 15 42.2**	**-0.9**
JOW				S	**Sn**	**19 15 49.2**	**-2.2**
JYRO	**Yoronjima**	**0.55**	**335**	P	**Pn**	**19 15 42.8**	**-1.1**
JYRO				S	**Sb**	**19 15 49.8**	**+0.2**
JNTH	**Nagotoyohara**	**0.62**	**270**	P	**Pn**	**19 15 44.6**	**-0.2**
JNTH				*e*S	**Sn**	**19 15 53.2**	**-1.2**
JIH	**Iheya**	**0.84**	**307**	P	**Pn**	**19 15 48.0**	**+0.2**
JIH				*e*S	**Sn**	**19 16 00.0**	**+0.2**
JOKE	**Okinoerabujima**	**0.84**	**351**	P	**Pn**	**19 15 47.7**	**-0.2**
JOKE				*e*S	**Sn**	**19 15 59.0**	**-0.9**
JJT3	**Tamagusuku3**	**0.92**	**246**	P	**Pn**	**19 15 49.6**	**+0.7**
JTK	**Tokunoshima**	**1.27**	**9**	P	**Pn**	**19 15 53.7**	**-0.1**
JTK				*e*S	**Sb**	**19 16 09.1**	**-1.3**
JAGN	**Aguni-jima**	**1.32**	**273**	P	**Pg**	**19 15 55.5**	**-0.8**
JAGN				S	**Sg**	**19 16 14.1**	**+0.5**
JKE	**Kume jima 2**	**1.74**	**264**	P	**Pn**	**19 16 00.4**	**+0.2**
JMZ	**Minamidaito 2**	**2.36**	**107**	P	**Pn**	**19 16 07.2**	**-1.5**
JMZ				S	**Sn**	**19 16 32.7**	**-4.5**
YOJ	**Yonaguni jima**	**5.55**	**250**	*e*Pn	**Pn**	**19 16 52.5**	**-0.1**
JNU	**Nakatsue**	**6.84**	**15**	Pn	**Pn**	**19 17 12.0**	**+1.7**
	2.0nm,0.3s,baz=203,slow=10.0,SNR=16						
JNU				Sn	**Sn**	**19 18 26.0**	**-1.8**
	0.4nm,0.3s,baz=223,slow=22,SNR=1.3						
JNU	**Nakatsue**	**6.84**	**15**	*e*Pn	**Pn**	**19 17 11.8**	**+1.5**
JNU				*e*Sn	**Sn**	**19 18 25.3**	**-2.5**
NACB	**Ninganchiao**	**6.86**	**252**	*e*Pn	**Pn**	**19 17 08.6**	**-1.9**
YHNB	**Yeheng**	**6.88**	**256**	*e*Pn	**Pn**	**19 17 10.5**	**-0.4**
YULB	**Yu-li**	**7.42**	**247**	*e*Pn	**Pn**	**19 17 13.6**	**-4.8**
SSLB	**Suanglung**	**7.54**	**251**	*e*Pn	**Pn**	**19 17 17.6**	**-2.4**
TWG	**Pinlang**	**7.87**	**244**	*e*Pn	**Pn**	**19 17 22.7**	**-1.8**
TPUB	**Ta-pu**	**8.01**	**248**	*e*Pn	**Pn**	**19 17 25.8**	**-0.6**
KS15	**Wonju Array Si**	**10.91**	**356**	*e*Pn	**Pn**	**19 18 09.8**	**+3.7**
KSRS	**Korea Array**	**10.92**	**357**	Pn	**Pn**	**19 18 07.2**	**+1.0**
	0.3nm,0.3s,baz=167,slow=12,SNR=9.0						
KSRS				LR	LR	19 22 41.4	
	comp=Z,201nm,18.8s,baz=174,slow=40						
MJAR	**Matsushiro Arr**	**12.85**	**37**	LR	LR	19 23 24.5	
	comp=Z,68nm,21.5s,baz=205,slow=36						
USRK	**Ussuriysk Ar.**	**17.83**	**8**	P	**P**	**19 19 39.9**	**+1.2**
	0.3nm,0.3s,baz=191,slow=10.0,SNR=4.0						
USRK				LR	LR	19 26 28.8	
	comp=Z,38nm,19.1s,baz=174,slow=37						
XAN	**Xi'an**	**18.65**	**298**	*e*P	**Pn**	**19 19 48.8**	**+0.6**
	11nm,0.7s						
ERM	**Erimo**	**19.48**	**34**	*e*P	**P**	**19 19 56.6**	**-0.1**
	9.9nm,1.0s						
ASAJ	**Asahikawa**	**20.84**	**29**	P	Pn	19 20 13.4	-0.6

3.5nm,0.6s,baz=223,slow=9.3,SNR=6.4
YSS Yuzh-Sakhalins 23.22 25 *eP* **P 19 20 37.7 +0.9**
16nm,0.9s
SLVN Son La 23.24 262 *eP* **P 19 20 37.0 -0.4**
3.6nm,1.2s
SONA0 Songino Array 27.55 326 *eP* **P 19 21 15.6 -1.2**
SONM Songino Array 27.55 326 P **P 19 21 15.6 -1.2**
2.2nm,0.6s,baz=137,slow=10,SNR=11
CMAR Chiang Mai Arr 28.61 260 LR LR 19 34 22.5
comp=Z,67nm,18.6s,baz=95,slow=40
PETK Petropavlovsk- 34.22 31 LR LR 19 38 05.5
comp=Z,28nm,18.9s,baz=256,slow=39
H11N2 WAKE ISLAND Hy 35.66 93 T T 20 00 39.8
baz=290
H11N1 WAKE ISLAND Hy 35.66 93 T T 20 00 36.0
baz=290
H11N3 WAKE ISLAND Hy 35.67 93 T T 20 00 39.4
baz=290
H11S3 WAKE ISLAND Hy 35.87 95 T T 20 00 49.7
baz=290
H11S1 WAKE ISLAND Hy 35.88 95 T T 20 00 50.1
baz=290
H11S2 WAKE ISLAND Hy 35.89 95 T T 20 00 50.9
baz=290
MK31 Makanchi Array 41.66 312 *eP* **P 19 23 17.3 -1.1**
1.6nm,0.9s
MK32 Makanchi Array 41.66 312 *eP* **P 19 23 17.4 -0.9**
MK32 *e*PcP **PcP 19 25 15.0 0.0**
MKAR Makanchi Array 41.66 312 P **P 19 23 17.4 -0.9**
0.6nm,0.3s,baz=92,slow=10.0,SNR=17
MKAR PcP **PcP 19 25 15.0 0.0**
0.3nm,0.5s,baz=101,slow=4.6,SNR=3.0
MKAR LR LR 19 42 57.1
comp=Z,34nm,18.7s,baz=55,slow=40
ZALV Zalesovo Beam 42.28 322 P **P 19 23 21.9 -1.2**
2.0nm,0.4s,baz=108,slow=8.4,SNR=8.4
ZALV PcP **PcP 19 25 16.9 +0.2**
0.5nm,0.3s,baz=130,slow=3.2,SNR=3.0
ZAA1 Zalesovo Array 42.28 322 *eP* **P 19 23 21.9 -1.3**
ZAA1 *e*PcP **PcP 19 25 16.9 +0.1**
KURK Kurchatov 44.91 316 *eP* **P 19 23 42.8 -1.6**
3.5nm,1.3s
TIXI Tiksi 45.16 0 *eP* **P 19 23 45.5 -0.6**
5.0nm,1.4s
WR1 Warramunga Arr 46.51 173 *eP* **P 19 23 57.8 +0.4**
WRA Warramunga Arr 46.51 173 P **P 19 23 57.8 +0.4**
1.3nm,0.6s,baz=0.5,slow=10.0,SNR=7.6
WB2 Warramunga Arr 46.51 173 *eP* **P 19 23 57.8 +0.4**
16nm,1.4s
AAK Ala-Archa 46.66 305 *eP* **P 19 23 58.1 -0.6**
3.7nm,1.3s
ARSB Arslanbob 47.77 303 *eP* **P 19 24 06.4 -0.9**
6.1nm,1.4s
CTAO Charters Tower 49.36 158 *eP* **P 19 24 19.7 +0.2**
11nm,1.1s
KK31 Karatay Array 49.60 305 *eP* **P 19 24 21.5 +0.4**
2.6nm,0.6s
KKAR Karatay Array 49.60 305 *eP* **P 19 24 21.6 +0.5**
2.6nm,0.6s
GAR Garm 49.89 300 *eP* **P 19 24 23.8 +0.2**
6.9nm,1.0s
AS31 Alice Springs 50.15 174 *eP* **P 19 24 26.5 +1.1**
1.6nm,1.0s
ASAR Alice Springs 50.15 174 P **P 19 24 26.6 +1.2**
1.0nm,0.7s,baz=7.0,slow=13,SNR=17
BRVK Borovoye 50.41 318 *eP* **P 19 24 27.0 -0.2**
5.7nm,0.8s
ABKAR Akbulak array 56.76 313 *eP* **P 19 25 13.7 -0.1**
2.0nm,0.5s
ARU Arti 57.43 322 *eP* **P 19 25 17.8 -0.6**
3.3nm,0.7s
GEYT Alibeck 59.52 300 P **P 19 25 32.0 -1.3**
1.0nm,0.5s,baz=90,slow=4.3,SNR=3.2
ILAR Eielson Array 63.97 28 P **P 19 26 06.3 +3.5**
0.2nm,0.6s,baz=269,slow=3.6,SNR=3.1
KBZ Khabaz 69.31 309 P **P 19 26 37.6 +0.4**
2.8nm,0.8s,baz=94,slow=0.9,SNR=5.6
ARA0 ARCESS Array S 69.89 339 *eP* **P 19 26 40.1 -0.3**
ARCES ARCESS Array B 69.89 339 P **P 19 26 40.1 -0.3**
0.8nm,0.8s,baz=78,slow=6.3,SNR=5.0
FIA0 FINESS Array S 72.82 331 *eP* **P 19 26 58.0 -0.2**
FINES FINESS Array B 72.82 331 P **P 19 26 58.0 -0.2**
1.8nm,0.4s,baz=67,slow=5.4,SNR=38
AKSG Malin Array Be 75.59 320 P **P 19 27 13.8 -0.7**
0.5nm,0.3s,baz=55,slow=6.3,SNR=5.9
AKASG LR LR 20 03 07.8
comp=Z,96nm,18.3s,baz=245,slow=38
AKBB Malin Array Si 75.59 320 *eP* **P 19 27 14.2 -0.4**
BR101 Keskin Array S 77.20 308 *eP* **P 19 27 24.1 0.0**
BR131 Keskin Array S 77.20 308 *eP* **P 19 27 23.6 -0.5**
2.2nm,0.8s
BRTR Keskin Array B 77.20 308 P **P 19 27 24.1 0.0**
1.7nm,0.7s,baz=114,slow=2.7,SNR=9.1
YKA Yellowknife Ar 78.08 25 P **P 19 27 32.4 +4.0**
0.2nm,0.5s,baz=300,slow=4.9,SNR=2.9
YKB5 Yellowknife Ar 78.08 25 *eP* **P 19 27 32.4 +4.0**
NB2 NORSAR Subarra 79.24 334 P **P 19 27 34.2 -0.7**
comp=Z,0.4nm,0.7s,baz=52,slow=5.6
NOA NORSAR Array B 79.24 334 P **P 19 27 34.4 -0.5**
comp=Z,1.1nm,0.9s,baz=51,slow=5.5,SNR=5.3
BUR08 Bucovina Ar. S 79.30 318 *eP* **P 19 27 35.9 +0.3**
comp=Z,6.3nm,1.5s
SUMG Summit 80.77 356 *eP* **P 19 27 44.1 +0.7**
comp=Z,6.7nm,1.1s
GERES GERESS Array B 85.23 323 P **P 19 28 06.4 -0.2**
comp=Z,0.4nm,0.5s,baz=46,slow=5.7,SNR=3.7
FFC Flin Flon 88.13 27 *eP* **P 19 28 18.0 -2.5**

*SJA **21** 19:16:20.8±0.5, 24°.15S×66°.96W, h221km±4km, ML2.6, MW3.4*
*ISCJB **21** 19:16:23.0±1.1, 24°.10S±0°.05×67°.06W±0°.04, h196km±11km, Error ellipse: s-maj=8.6km s-min=5.1km az=30.4*
*GUC **21** 19:16:24.2±0.5, 24°.07S×67°.31W, h228km±8km, ML4.0*
ISC 21 19:16:20.9±2.5, 24°.12S±0°.05×67°.00W±0°.05, h218km±21km, n20, σ1°.27/34, 3C, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.49**	**114**	*eP*		**Pn**	**19 16 56.6**	**+0.3**
SLA					IAML		19 16 57.4	
comp=Z,62nm,0.7s								
SLA				*eS*		**S**	**19 17 23.2**	**-0.7**
HJA	**Humahuaca**	**1.71**	**58**	*eP*		**Pn**	**19 16 59.1**	**+0.5**
HJA					IAML		19 17 00.2	
comp=Z,36nm,0.4s								
HJA				*eS*		**S**	**19 17 28.1**	**+0.3**
AZAP	**Zapla**	**1.77**	**94**	*eP*		**Pn**	**19 16 59.1**	**+0.2**
AZAP					IAML		19 16 59.5	
comp=Z,88nm,0.5s								
AZAP				*eS*		**S**	**19 17 27.8**	**-0.5**
FSA	**Cafayete**	**2.19**	**155**	*eP*		**Pn**	**19 17 03.3**	**+0.4**
FSA					IAML		19 17 06.1	
comp=Z,6.6nm,0.2s								
FSA				*eS*		**S**	**19 17 34.6**	**-1.0**
LVC	**Limon Verde**	**2.31**	**310**	*eP*		**Pn**	**19 17 05.6**	**+1.2**
LVC					IAML		19 17 42.3	
comp=Z,30nm,0.3s								
LVC	**Limon Verde**	**2.31**	**310**	*eP*		**Pn**	**19 17 05.8**	**+1.4**
LVC				*eS*		**S**	**19 17 37.2**	**-0.8**
YJA	**Yavi**	**2.37**	**36**	*eP*		**Pn**	**19 17 06.3**	**+1.2**
YJA					IAML		19 17 06.9	
comp=Z,4.0nm,0.3s								
PB15	**IPOC Station P**	**2.44**	**291**	*eP*		**Pn**	**19 17 07.0**	**+1.4**
PB15				*eS*		**S**	**19 17 40.2**	**0.0**
PB15	**IPOC Station P**	**2.44**	**291**	*eP*		**Pn**	**19 17 07.1**	**+1.5**
PB15				*eS*		**S**	**19 17 39.2**	**-1.0**
GO02	**Mina Guanaco**	**2.58**	**246**	*iP*		**Pn**	**19 17 08.6**	**+1.4**
GO02				*i* S		**S**	**19 17 42.9**	**-0.1**
GO02					IAML		19 17 45.3	
comp=N,337nm,0.4s								
PB06	**IPOC Station P**	**2.75**	**300**	*eP*		**Pn**	**19 17 10.2**	**+1.3**
PB06				*eS*		**S**	**19 17 44.6**	**-1.6**
PB06					IAML		19 17 47.2	
comp=E,380nm,0.7s								
PB14	**IPOC Station P**	**3.15**	**260**	*eP*		**Pn**	**19 17 14.8**	**+1.3**
PB05	**IPOC Station P**	**3.20**	**293**	*eP*		**Pn**	**19 17 15.2**	**+1.2**
PB05	**IPOC Station P**	**3.20**	**293**	*eP*		**Pn**	**19 17 14.8**	**+0.8**
PB05				*i* S		**S**	**19 17 53.2**	**-2.2**
PB05					IAML		19 17 57.0	
comp=N,114nm,0.3s								
PB03	**IPOC Station P**	**3.27**	**309**	*iP*		**Pn**	**19 17 16.0**	**+1.2**
PB03				*i* S		**S**	**19 17 55.1**	**-1.7**
PB03					IAML		19 17 57.4	
comp=E,198nm,0.4s								
PB10	**IPOC Station P**	**3.31**	**280**	*eP*		**Pn**	**19 17 16.3**	**+1.1**
PB04	**IPOC Station P**	**3.40**	**301**	*eP*		**Pn**	**19 17 17.9**	**+1.5**
PB04				*i* S		**S**	**19 17 57.5**	**-2.1**
PB07	**IPOC Station P**	**3.57**	**311**	*eP*		**Pn**	**19 17 19.5**	**+1.1**
PB07				*e*S		**S**	**19 18 01.7**	**-1.7**
PB07					IAML		19 18 02.3	
comp=E,200nm,0.3s								
PB01	**IPOC Station P**	**3.83**	**323**	*eP*		**Pn**	**19 17 22.4**	**+1.0**
PB01				*i* S		**S**	**19 18 07.0**	**-1.8**
GO03	**Copiap**	**4.53**	**219**	*eP*		**Pn**	**19 17 30.2**	**+0.3**

TAP 21 19:17:09.7, 24°.79N×121°.94E, h2km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.12**	**304**	*eP*		Pg	19 17 13.2	+1.1
baz=304								
TWC	**Suao**	**0.20**	**204**	P		Pg	19 17 14.4	+0.9
baz=185								
TWC				S		Sg	19 17 17.4	+1.3
baz=185								
TIPB	**Shuangxi**	**0.21**	**331**	P		Pg	19 17 14.8	+1.0
baz=334								
TIPB				S		Sg	19 17 18.1	+1.6
baz=334								
TWE	**Neicheng**	**0.26**	**255**	*eP*		Pb	19 17 16.6	-0.5
baz=251								
EOS1	**EOS1**	**0.29**	**144**	*eP*		Pb	19 17 17.0	-0.8
baz=145								
EOS1				*e*S		Sb	19 17 22.8	-0.4
baz=145								
ENTT	**Nioudou**	**0.37**	**246**	*eP*		Pb	19 17 18.7	-0.3
baz=243								
NANB	**Nanao**	**0.40**	**205**	*eP*		Pb	19 17 19.1	-0.4
baz=202								
ENA	**Nanau**	**0.40**	**206**	*eP*		Pb	19 17 18.9	-0.7
baz=202								

*MOS **21** 19:32:30.8±0.8, 17°.40N×147°.14E, h33km, mb4.6/27, Error ellipse: s-maj=12.8km s-min=6.3km az=105.0*
*ISCJB **21** 19:32:32.6±0.3, 17°.39N±0°.03×147°.15E±0°.06, h48km, mb4.5/76, MS3.5/15, Error ellipse: s-maj=7.7km s-min=4.3km az=11.3*
*NEIC **21** 19:32:33.2±1.8, 17°.45N×147°.16E, h36km±5km, mb4.6/55, Error ellipse: s-maj=14.6km s-min=11.1km az=91.0*
*BJI **21** 19:32:33.1±0.0, 17°.32N×147°.55E, h75km, mb4.6/20, mB5.1/16, Ms4.7/6, Ms7 4.6/4*
*IDC **21** 19:32:34.3±2.5, 17°.38N×147°.14E, h47km±24km, mb4.0/25, mb1 4.1/26, mb1mx4.0/40, mbtmp4.2/26, ML4.6/1, MS3.4/13, Ms1 3.4/13, ms1mx3.1/43, Error ellipse: s-maj=20.6km s-min=10.3km az=89.0*
ISC 21 19:32:34.5±0.4, 17°.39N±0°.05×147°.18E±0°.08, h48km, n151, σ1°.39/142, mb4.5/76, MS3.4/15, 6C-1D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.39**	**211**	P		**Pn**	**19 33 38.9**	**+0.3**
32nm,0.3s,baz=331,slow=1.4,SNR=13								
GUMO				S		**Sn**	**19 34 27.7**	**-0.9**
23nm,0.3s,baz=135,slow=22,SNR=1.9								
PATS	**Pohnpei**	**15.11**	**133**	*eP*		Pn	19 35 53.1	-12
90nm,1.4s								
H11S3	**WAKE ISLAND Hy**	**18.59**	**84**	T		T	19 55 58.0	
baz=275,slow=74,SNR=4.9								
H11S1	**WAKE ISLAND Hy**	**18.61**	**84**	T		T	19 55 49.6	
baz=275,slow=74,SNR=4.2								
H11S2	**WAKE ISLAND Hy**	**18.61**	**84**	T		T	19 55 52.8	
baz=275,slow=74,SNR=4.6								
H11N1	**WAKE ISLAND Hy**	**18.83**	**80**	T		T	19 55 54.3	
baz=264,slow=74,SNR=8.9								
H11N2	**WAKE ISLAND Hy**	**18.84**	**80**	T		T	19 55 55.2	
baz=264,slow=74,SNR=8.7								
H11N3	**WAKE ISLAND Hy**	**18.85**	**80**	T		T	19 55 56.0	
baz=264,slow=74,SNR=8.6								
MANU	**Manus Island**	**19.31**	**179**	*eP*		**Pn**	**19 36 56.5**	**-0.7**
20nm,1.0s								
JOW	**Kunigami**	**19.86**	**302**	*eP*		**P**	**19 36 58.8**	**-2.8**
36nm,1.2s								
INU	**Inuyama**	**20.05**	**335**	*eP*		**P**	**19 37 01.7**	**-1.9**
19nm,0.9s								
MJAR	**Matsushiro Arr**	**20.66**	**339**	P		**P**	**19 37 09.6**	**-0.7**
8.3nm,0.8s,baz=171,slow=9.6,SNR=20								
MAJO	**Matsushiro**	**20.66**	**339**	*eP*		**P**	**19 37 06.6**	**-3.7**
MAJO	**Matsushiro**	**20.66**	**339**	*i* P		**P**	**19 37 06.7**	**-3.7**
MAJO					pmax	pmax		
comp=Z,16nm,0.8s								
MAT	**Matsushiro**	**20.66**	**339**	P		**P**	**19 37 11.2**	**+0.9**
MJB9	**Matsu-Tunnel**	**20.67**	**339**	*eP*		**P**	**19 37 06.2**	**-4.2**
comp=Z,19nm,0.8s								
JAY	**Jayapura**	**20.79**	**199**	P		**P**	**19 37 11.4**	**-0.4**
comp=Z,9.8nm,0.9s,baz=15,slow=14,SNR=3.6								
JNU	**Nakatsue**	**21.46**	**320**	P		**P**	**19 37 18.5**	**-0.5**
comp=Z,4.6nm,0.6s,baz=104,slow=7.2,SNR=5.6								
JNU					LR	LR	19 45 04.4	
comp=Z,70nm,18.7s,baz=170,slow=35								
JNU	**Nakatsue**	**21.46**	**320**	*eP*		**P**	**19 37 17.7**	**-1.3**
comp=Z,11nm,1.1s								
DAV	**Davao City (W)**	**23.44**	**247**	LR		LR	19 47 09.4	
comp=Z,35nm,18.8s,baz=170,slow=37								
SIJI	**Sorong**	**23.98**	**222**	P		**P**	**19 37 43.5**	**-1.3**
comp=Z,9.2nm,0.5s,baz=18,slow=13,SNR=17								
ERM	**Erimo**	**24.78**	**353**	*eP*		**P**	**19 37 52.1**	**+0.3**
comp=Z,11nm,1.0s								
ERM	**Erimo**	**24.78**	**353**	*i* P		**P**	**19 37 51.3**	**-0.5**
ERM					pmax	pmax		
comp=Z,11nm,1.1s								
YULB	**Yu-li**	**24.96**	**288**	*eP*		**P**	**19 37 54.9**	**+1.2**
comp=Z,17nm,1.4s								
FAKI	**Fak Fak**	**24.99**	**218**	*eP*		**P**	**19 37 53.4**	**-0.6**
comp=Z,16nm,1.0s								
YHNB	**Yeheng**	**25.12**	**291**	*eP*		**P**	**19 37 55.1**	**-0.1**
comp=Z,17nm,0.8s								
SSLB	**Suanglung**	**25.34**	**289**	*eP*		**P**	**19 37 57.0**	**-0.1**
comp=Z,48nm,1.6s								
TGY	**Tagaytay City**	**25.46**	**266**	LR		LR	19 46 38.8	
comp=Z,90nm,21.0s,baz=134,slow=33								
KSRS	**Korea Array**	**26.20**	**324**	P		**P**	**19 38 04.2**	**-0.5**
comp=Z,2.7nm,0.5s,baz=148,slow=9.4,SNR=17								
KSRS					LR	LR	19 49 00.6	
comp=Z,139nm,18.1s,baz=141,slow=38								
PMG	**Port Moresby**	**26.63**	**180**	*eP*		**P**	**19 38 09.3**	**+0.5**
comp=Z,28nm,1.0s								
ASAJ	**Asahikawa**	**26.92**	**353**	P		**P**	**19 38 12.2**	**+1.0**
comp=Z,5.9nm,0.6s,baz=172,slow=6.7,SNR=16								
USRK	**Ussuriysk Ar.**	**29.64**	**338**	P		**P**	**19 38 35.2**	**-0.1**
comp=Z,2.1nm,0.5s,baz=159,slow=8.2,SNR=7.2								
USA0B	**Ussuriysk Arra**	**29.64**	**338**	*eP*		**P**	**19 38 36.0**	**+0.6**
comp=Z,4.1nm,0.8s								
USA0B	**Ussuriysk Arra**	**29.64**	**338**	*eP*		**P**	**19 38 36.0**	**+0.6**
USA0B					pmax	pmax		
comp=Z,4.0nm,0.8s								
YSS	**Yuzh-Sakhalins**	**29.71**	**354**	*eP*		**P**	**19 38 36.5**	**+0.6**
COEN	**Coen**	**31.40**	**187**	*eP*		**P**	**19 38 52.1**	**+0.9**
comp=Z,53nm,1.6s								
KKM	**Kota Kinabalu**	**32.29**	**253**	*eP*		**P**	**19 38 59.0**	**-0.3**
comp=Z,39nm,1.3s								
MTN	**Manton Dam**	**33.97**	**209**	*eP*		**P**	**19 39 11.8**	**-1.8**
comp=Z,39nm,1.3s								
KLR	**Kul'dur**	**34.13**	**342**	*i* P		**P**	**19 39 14.2**	**-0.6**
KLR					pmax	pmax		
comp=Z,4.0nm,0.7s								
MIDW	**Midway**	**34.29**	**65**	*eP*		**P**	**19 39 14.8**	**-1.6**
comp=Z,23nm,0.6s								
PETK	**Petropavlovsk-**	**36.58**	**11**	LR		LR	19 54 48.1	
comp=Z,42nm,19.1s,baz=220,slow=36								
SBUM	**Sibu**	**37.40**	**251**	*eP*		**P**	**19 39 43.7**	**+0.5**
comp=Z,3.0nm,0.5s								
WRAB	**Tennant Creek**	**39.17**	**199**	*eP*		**P**	**19 39 57.1**	**-0.8**
comp=Z,19nm,1.0s								
WRAB	**Tennant Creek**	**39.17**	**199**	*eP*		**P**	**19 39 57.2**	**-0.8**
WRAB					pmax	pmax		
comp=Z,19nm,1.0s								
WB2	**Warramunga Arr**	**39.18**	**199**	*eP*		**P**	**19 39 57.2**	**-0.8**
comp=Z,18nm,0.9s								
WR1	**Warramunga Arr**	**39.19**	**199**	*eP*		**P**	**19 39 57.2**	**-0.9**
WR1				*e*PcP		**PcP**	**19 42 06.8**	**0.0**
WRA	**Warramunga Arr**	**39.19**	**199**	P		**P**	**19 39 57.2**	**-0.9**
comp=Z,12nm,0.9s,baz=16,slow=9.5,SNR=45								
WRA				PcP		**PcP**	**19 42 06.8**	**0.0**
comp=Z,0.9nm,0.5s,baz=10,slow=2.8,SNR=3.1								
ZEA	**Zeya**	**39.44**	**341**	*eP*		**P**	**19 40 00.5**	**+0.7**
KSM	**Kuching**	**39.54**	**250**	*eP*		**P**	**19 40 00.5**	**-0.7**
comp=Z,10nm,0.5s								
FITZ	**Fitzroy Crossi**	**41.15**	**212**	*eP*		**P**	**19 40 14.0**	**-0.3**
comp=Z,29nm,1.6s								
AS31	**Alice Springs**	**42.82**	**198**	*eP*		**P**	**19 40 27.9**	**0.0**
comp=Z,1.2nm,0.8s								
ASAR	**Alice Springs**	**42.82**	**198**	P		**P**	**19 40 27.4**	**-0.6**
comp=Z,2.1nm,0.8s,baz=21,slow=11,SNR=17								
ASAR				PcP		**PcP**	**19 42 19.1**	**+0.6**
comp=Z,0.6nm,0.7s,baz=26,slow=3.4,SNR=3.7								
ULN	**Ulaanbaatar**	**44.66**	**322**	*ce*P		**P**	**19 40 41.5**	**-1.2**
ULN					pmax	pmax		
comp=Z,1.0nm,0.5s								
SONM	**Songino Array**	**45.04**	**322**	P		**P**	**19 40 45.4**	**-0.3**
comp=Z,2.2nm,0.6s,baz=135,slow=7.5,SNR=10								
MYKOM	**Kota Tinggi**	**45.30**	**255**	*eP*		**P**	**19 40 48.9**	**+0.9**
comp=Z,16nm,1.5s								
SEY	**Seymchan**	**45.64**	**3**	P		**P**	**19 40 50.8**	**+0.8**
comp=Z,1.8nm,0.7s,baz=176,slow=20,SNR=4.8								
SEY	**Seymchan**	**45.64**	**3**	*i* P		**P**	**19 40 49.2**	**-0.8**
CHTO	**Chiang Mai**	**45.76**	**280**	*eP*		**P**	**19 40 50.4**	**-1.2**
comp=Z,3.1nm,0.9s								
CHTO	**Chiang Mai**	**45.76**	**280**	*eP*		**P**	**19 40 50.4**	**-1.2**
CHTO					pmax	pmax		
comp=Z,3.0nm,0.9s								
CM31	**Chiang Mai Arr**	**45.80**	**279**	*eP*		**P**	**19 40 51.7**	**-0.3**
comp=Z,12nm,1.5s								
CMAR	**Chiang Mai Arr**	**45.80**	**279**	P		**P**	**19 40 52.6**	**+0.7**
comp=Z,3.2nm,0.8s,baz=77,slow=6.4,SNR=18								
CMAR					LR	LR	20 00 22.2	
comp=Z,20nm,18.1s,baz=155,slow=36								
CMAR	**Chiang Mai Arr**	**45.80**	**279**	*ce*P		**P**	**19 40 55.9**	**+3.9**
CMAR					pmax	pmax		
comp=Z,3.0nm,0.6s								
YAK	**Yakutsk**	**46.27**	**349**	*eP*		**P**	**19 40 54.1**	**-0.9**
comp=Z,14nm,0.6s								
YAK	**Yakutsk**	**46.27**	**349**	*eP*		**P**	**19 40 54.0**	**-0.9**
IPM	**Ipoh**	**46.96**	**260**	*eP*		**P**	**19 41 02.1**	**+1.0**
comp=Z,5.5nm,0.9s								
KULM	**Kulim**	**47.05**	**261**	*eP*		**P**	**19 41 03.0**	**+1.2**
comp=Z,5.5nm,0.6s								
ZAK	**Zakamensk**	**48.03**	**323**	*eP*		**P**	**19 41 07.9**	**-1.2**
ZAK					pmax	pmax		
comp=Z,2.0nm,1.1s								
TLY	**Talaya**	**48.44**	**325**	*i* P		**P**	**19 41 11.9**	**-0.1**
TLY					pmax	pmax		
comp=Z,9.0nm,0.8s								
STKA	**Stephens Creek**	**49.28**	**186**	P		**P**	**19 41 18.8**	**+0.2**
comp=Z,1.7nm,0.7s,baz=339,slow=6.7,SNR=3.6								
STKA					LR	LR	20 04 25.1	
comp=Z,32nm,18.1s,baz=25,slow=39								
STKA	**Stephens Creek**	**49.28**	**186**	*eP*		**P**	**19 41 17.1**	**-1.4**
comp=Z,5.4nm,1.6s								
STKA	**Stephens Creek**	**49.28**	**186**	*eP*		**P**	**19 41 17.2**	**-1.4**
STKA					pmax	pmax		
comp=Z,5.0nm,1.6s								
BBOO	**Buckleboo**	**51.04**	**192**	*eP*		**P**	**19 41 32.3**	**+0.3**
comp=Z,83nm,1.6s								
GSI	**Gunungsitoli**	**51.29**	**257**	*eP*		**P**	**19 41 34.4**	**+0.1**
comp=Z,28nm,0.6s								
FORT	**Forrest**	**51.30**	**201**	*eP*		**P**	**19 41 34.5**	**+0.6**
comp=Z,121nm,1.6s								
BILL	**Bilibino**	**52.07**	**9**	*eP*		**P**	**19 41 38.7**	**-0.5**
BILL				*e*			19 41 45.8	
BILL							19 42 53.0	
BILL					PPP	PPP	19 44 47.0	
BILL					pmax	pmax		
comp=Z,3.0nm,1.0s								
BILL					MLR	MLR		
comp=Z,31nm,20.0s								
LSA	**Lhasa**	**52.36**	**294**	*eP*		**P**	**19 41 43.6**	**+1.0**
LSA				*e*pP		**P**	**19 41 43.9**	**+1.2**
LSA	**Lhasa**	**52.36**	**294**	*eP*		**P**	**19 41 43.6**	**+1.0**
TIXI	**Tiksi**	**55.33**	**353**	*eP*		**P**	**19 42 04.0**	**+1.0**
comp=Z,3.0nm,0.9s								
TIXI	**Tiksi**	**55.33**	**353**	*i* P		**P**	**19 42 03.0**	**+0.1**
TIXI					pmax	pmax		
comp=Z,2.0nm,0.9s								
NIUE	**Niue**	**55.59**	**129**	*eP*		**P**	**19 42 06.3**	**+0.7**
DGZ	**Jazzator, Alta**	**57.43**	**318**	*i* P		**P**	**19 42 18.3**	**-0.3**
DGZ					pmax	pmax		
comp=Z,2.0nm,1.2s								
ZAA0	**Zalesovo Array**	**59.90**	**323**	*eP*		**P**	**19 42 36.5**	**+1.1**
comp=Z,3.6nm,0.6s								
ZALV	**Zalesovo Beam**	**59.90**	**323**	P		**P**	**19 42 34.7**	**-0.7**
comp=Z,3.6nm,0.6s,baz=104,slow=7.9,SNR=13								
ZALV					LR	LR	20 09 00.1	
comp=Z,41nm,18.4s,baz=70,slow=36								
MK31	**Makanchi Array**	**60.38**	**314**	*eP*		**P**	**19 42 38.9**	**0.0**
comp=Z,5.6nm,1.4s								
MK31	**Makanchi Array**	**60.38**	**314**	*eP*		**P**	**19 42 38.9**	**0.0**
MK31					pmax	pmax		
comp=Z,6.0nm,1.4s								
MKAR	**Makanchi Array**	**60.38**	**314**	P		**P**	**19 42 38.8**	**-0.1**
comp=Z,1.7nm,0.5s,baz=92,slow=7.4,SNR=31								
MKAR					LR	LR	20 10 07.2	
comp=Z,26nm,18.9s,baz=70,slow=37								
MAKZ	**Makanchi**	**60.59**	**314**	*eP*		**P**	**19 42 40.5**	**+0.1**
comp=Z,3.5nm,0.6s								
MAKZ	**Makanchi**	**60.59**	**314**	*eP*		**P**	**19 42 40.5**	**+0.1**
MAKZ					pmax	pmax		
comp=Z,4.0nm,0.6s								
KURK	**Kurchatov**	**63.18**	**318**	*eP*		**P**	**19 42 57.4**	**-0.2**
comp=Z,13nm,1.3s								
KURK	**Kurchatov**	**63.18**	**318**	*ce*P		**P**	**19 42 57.1**	**-0.5**
KURK					pmax	pmax		
comp=Z,10.0nm,1.3s								
SCM	**Sheep Creek Mo**	**63.29**	**29**	*eP*		**P**	**19 42 59.5**	**+1.3**
comp=Z,8.8nm,1.0s								
SCM	**Sheep Creek Mo**	**63.29**	**29**	*eP*		**P**	**19 42 59.5**	**+1.3**
SCM					pmax	pmax		
comp=Z,9.0nm,1.0s								
NRIK	**Noril'sk**	**63.31**	**340**	P		**P**	**19 42 58.2**	**0.0**
comp=Z,6.2nm,0.6s,baz=110,slow=9.4,SNR=5.3								
WRH	**Wood River Hil**	**63.62**	**26**	*eP*		**P**	**19 43 00.3**	**0.0**
comp=Z,3.6nm,1.0s								
ILAR	**Eielson Array**	**64.19**	**26**	P		**P**	**19 43 03.1**	**-1.0**
comp=Z,1.7nm,0.9s,baz=251,slow=5.4,SNR=9.4								
ILB

comp=Z,53nm,21.5s,baz=162,slow=31
ARU Arti 74.94 325 *e*P **P 19 44 10.1 -0.3**
comp=Z,7.4nm,0.6s
ARU Arti 74.94 325 *d i*P **P 19 44 09.8 -0.6**
ARU S **SKiKP 19 53 37.0 +6.3**
ARU pmax pmax
comp=Z,7.0nm,0.7s
ABKAR Akbulak array 75.25 317 *e*P **P 19 44 11.6 -0.8**
comp=Z,3.0nm,0.6s
YKA Yellowknife Ar 78.48 28 P **P 19 44 30.0 -0.2**
comp=Z,1.4nm,0.5s,baz=283,slow=5.6,SNR=13
YKB5 Yellowknife Ar 78.48 28 *e*P **P 19 44 30.1 -0.2**
NVAR Mina Array Bea 82.83 52 P **P 19 44 54.9 +0.6**
comp=Z,0.5nm,0.6s,baz=272,slow=6.4,SNR=5.4
KLMR Klimovskoe 83.27 332 *e*P **P 19 44 54.5 -1.3**
KLMR pmax pmax
comp=Z,5.0nm,0.6s
KLMR Klimovskoe 83.27 332 *e*P **P 19 44 54.5 -1.3**
KLMR AMP 19 44 56.2
comp=Z,5.0nm,0.6s
ARCES ARCESS Array B 84.16 342 P **P 19 45 00.9 +0.6**
comp=Z,2.5nm,0.6s,baz=62,slow=4.7,SNR=14
ELK Elko 84.41 49 *e*P **P 19 45 03.6 +1.2**
comp=Z,1.9nm,0.9s
ELK Elko 84.41 49 *e*P **P 19 45 03.6 +1.2**
ELK pmax pmax
comp=Z,2.0nm,0.9s
PSUT Pine Spring 86.12 51 *e*P **P 19 45 11.0 0.0**
RLMT Red Lodge 87.05 44 *e*P **P 19 45 16.9 +1.5**
comp=Z,2.6nm,0.8s
OBN Obninsk 87.13 327 LR LR 20 26 31.8
comp=Z,9.4nm,18.7s,baz=75,slow=37
FFC Flin Flon 87.42 33 *i*P **P 19 45 18.8 +2.1**
PDAR Pinedale Array 87.72 46 P **P 19 45 18.6 -0.2**
comp=Z,0.4nm,0.7s,baz=338,slow=1.6,SNR=3.8
KIV Kislovodsk 88.12 316 *e*P **P 19 45 19.7 -0.7**
KIV pmax pmax
comp=Z,12nm,1.0s
FIA0 FINESS Array S 88.65 336 *e*P **P 19 45 21.4 -1.0**
FIA0 FINESS Array S 88.65 336 *e*P **P 19 45 21.4 -1.0**
FINES FINESS Array B 88.65 336 P **P 19 45 21.4 -1.0**
comp=Z,2.9nm,0.5s,baz=69,slow=5.1,SNR=30
FINES FINESS Array B 88.65 336 *i*P **P 19 45 21.3 -1.1**
FINES pmax pmax
comp=Z,3.0nm,0.5s
PV19 Morning Glory 89.78 50 *e*pP pP 19 45 38.1 -3.1
AKASG Malin Array Be 93.17 326 P **P 19 45 42.5 -1.2**
comp=Z,0.2nm,0.3s,baz=55,slow=4.7,SNR=2.7
NOA NORSAR Array B 94.28 340 P **P 19 45 47.6 -1.0**
comp=Z,0.2nm,0.6s,baz=37,slow=4.8,SNR=2.6
NOA LR LR 20 32 09.6
comp=Z,16nm,20.6s,baz=20,slow=38
BRTR Keskin Array B 96.03 315 P **P 19 45 56.0 -1.2**
comp=Z,0.6nm,0.8s,baz=36,slow=4.7,SNR=2.7
BRTR Keskin Array B 96.03 315 P **P 19 45 56.0 -1.2**
MLR Muntele Rosu 97.88 323 LR LR 20 33 14.8
comp=Z,55nm,18.1s,baz=160,slow=37
ABTX Abilene, Hawle 99.07 52 *e*pP pP 19 46 18.9 -4.7
VYHS Vyhne 99.92 328 *e*P **Pdif 19 46 13.1 -1.2**
VYHS Vyhne 99.92 328 *e*PDIF **Pdif 19 46 13.1 -1.2**
CLL Collm 100.74 333 *e*Pdif **Pdif 19 46 23.0 +5.1**
CLL Collm 100.74 333 *e*P **Pdif 19 46 23.0 +5.1**
ROSC El Rosal 133.45 65 PKP **PKPdf 19 51 46.6 -0.4**
comp=Z,6.7nm,0.4s,baz=216,slow=14,SNR=4.0
TOA1 Torodi Ar. Sit 134.37 309 *e*PKPdf **PKPdf 19 51 48.0 -0.1**
TORD Torodi Ar. Bea 134.37 309 PKP **PKPdf 19 51 48.0 -0.2**
comp=Z,0.3nm,0.5s,baz=48,slow=1.6,SNR=7.1
DBIC Dimbokro 143.46 309 PKP PKPbc 19 52 02.5 +0.4
comp=Z,7.3nm,1.1s,baz=56,slow=3.6,SNR=2.9
CFA Coronel Fontan 144.97 121 PKPbc PKPbc 19 52 05.5 -0.9
comp=Z,2.9nm,0.6s,baz=265,slow=5.2,SNR=6.4
LPAZ La Paz 146.21 93 PKPbc **PKPbc 19 52 11.4 +0.1**
comp=Z,1.2nm,0.5s,baz=305,slow=4.9,SNR=5.8
LPAZ La Paz 146.21 93 *e*PKPbc **PKPab 19 52 12.3 +0.2**

MAN 21 19:34:21.1, 7°.41N×124°.74E, h2km, mb4.7, ML3.6, MS3.6, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.57**	**34**	*e*P	Pg	19 34 32.6	+0.5
BUKP				*e*S	Sn	19 34 46.0	-0.4
DMPH	**Davao City--Mi**	**0.83**	**113**	⇓*e*P	Pb	19 34 38.1	-0.2
DMPH				*e*S	Sb	19 34 50.9	+1.0
SKMP	**Bagumbayan, Su**	**0.90**	**192**	*e*P	Pg	19 34 38.4	-0.1
SKMP				*e*S	Sn	19 34 54.0	-0.5
CGP	**Cagayan de Oro**	**1.04**	**358**	⇑*i*P	Pg	19 34 40.6	-0.6
CGP				*i* S	Sg	19 34 54.4	-0.3
MATI	**Mati**	**1.58**	**107**	*e*P	Pn	19 34 49.4	-0.8
MATI				*e*S	Sb	19 35 11.5	0.0
DDMP	**Don Marcelino,**	**1.61**	**143**	*e*P	Pn	19 34 50.3	-0.3
DDMP				*e*S	Sg	19 35 12.9	-0.2
BUTP	**Butuan**	**1.78**	**29**	*e*P	Pn	19 34 53.0	0.0
BUTP				*e*S	Sn	19 35 16.7	+0.5
DCPH	**Dipolog City**	**1.80**	**311**	⇓*e*P	Pg	19 34 56.6	+0.9
DCPH				*e*S	Sb	19 35 18.4	+0.5
IPIL	**Ipil**	**2.18**	**280**	*e*P	Pn	19 34 59.6	+1.1
IPIL				*e*S	Sb	19 35 27.7	-1.2
SNPH	**Sibulan**	**2.43**	**322**	*e*P	Pb	19 35 05.2	-0.5
SNPH				*e*S	Sb	19 35 37.2	+1.1

*ISCJB **21** 19:38:15.7±1.0, 20°.37S±0°.03×69°.37W±0°.10, h116km±8km, Error ellipse: s-maj=15.1km s-min=5.0km az=173.6*
*GUC **21** 19:38:15.7±0.8, 20°.36S×69°.29W, h117km±3km, ML3.0*
*SJA **21** 19:38:17.8±0.7, 20°.58S×69°.63W, h36km±6km, ML2.3, MW2.8*

ISC 21 19:38:16.3±1.8, 20°.36S±0°.04×69°.33W±0°.10, h110km±12km, n20, σ0°37/30, 3C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.28**	**38**	*e*P	**Pn**	**19 38 31.6**	**-0.9**
PB08	**IPOC Station P**	**0.28**	**38**	⇓*i*P	**Pn**	**19 38 32.2**	**-0.2**
PB08				*i* S	**Sn**	**19 38 44.6**	**+0.2**
PB11	**IPOC Station P**	**0.67**	**333**	*e*P	**Pn**	**19 38 34.5**	**-0.1**
PB11	**IPOC Station P**	**0.67**	**333**	⇓*i*P	**Pn**	**19 38 34.6**	**0.0**
PB11				*i* S	**Sn**	**19 38 48.6**	**+0.3**
PB11				IAML		19 38 49.8	
comp=N,818nm,0.1s							
PB01	**IPOC Station P**	**0.70**	**192**	*e*P	**Pn**	**19 38 34.6**	**-0.1**
PB01				*e*S	**Sn**	**19 38 48.2**	**-0.4**
PB01	**IPOC Station P**	**0.70**	**192**	⇑*i*P	**Pn**	**19 38 34.7**	**-0.1**
PB01				*i* S	**Sn**	**19 38 48.4**	**-0.1**
PB01				IAML		19 38 49.5	
comp=N,794nm,0.1s							
GO01	**Chusmiza**	**0.70**	**11**	⇓*i*P	**Pn**	**19 38 35.3**	**0.0**
GO01				*i* S	**Sn**	**19 38 49.7**	**+0.3**
PSGC	**Pisagua**	**1.06**	**315**	⇓*e*P	**Pn**	**19 38 38.1**	**-0.2**
PSGC				*e*S	**Sn**	**19 38 54.9**	**+0.1**
PB02	**IPOC Station P**	**1.09**	**209**	*e*P	**Pn**	**19 38 38.9**	**+0.3**
PB02				*e*S	**Sn**	**19 38 56.0**	**+0.6**
PB02				IAML		19 38 57.9	
comp=E,460nm,0.5s							
MNMC	**Minye Minye**	**1.25**	**349**	*e*P	**Pn**	**19 38 40.8**	**+0.3**
MNMC				*e*S	**Sn**	**19 38 59.2**	**+0.5**
MNMC				IAML		19 39 01.3	
comp=E,787nm,0.3s							
PB09	**IPOC Station P**	**1.43**	**177**	⇑*e*P	**Pn**	**19 38 42.6**	**+0.1**
PB09				*e*S	**Sn**	**19 39 02.7**	**+0.3**
PB09				IAML		19 39 05.5	
comp=E,137nm,0.3s							
PB07	**IPOC Station P**	**1.46**	**201**	*e*P	**Pn**	**19 38 42.8**	**0.0**
PB07				IAML		19 39 04.6	
comp=E,163nm,0.2s							
PB03	**IPOC Station P**	**1.73**	**193**	*e*P	**Pn**	**19 38 46.0**	**0.0**
PB03				*e*S	**Sn**	**19 39 09.1**	**+0.4**
PB12	**IPOC Station P**	**1.97**	**331**	*e*P	**Pn**	**19 38 48.6**	**-0.5**
PB12				*i* S	**Sn**	**19 39 14.1**	**0.0**
PB04	**IPOC Station P**	**2.11**	**201**	*e*P	**Pn**	**19 38 50.6**	**-0.2**
LVC	**Limon Verde**	**2.27**	**170**	*e*P	**Pn**	**19 38 53.5**	**+0.3**
LVC				*e*S	**Sn**	**19 39 21.4**	**+0.1**
PB05	**IPOC Station P**	**2.61**	**198**	⇑*i*P	**Pn**	**19 38 56.5**	**-0.8**
PB05				IAML		19 39 45.7	
comp=E,22nm,0.3s							
PB15	**IPOC Station P**	**2.84**	**183**	⇓*i*P	**Pn**	**19 39 00.1**	**-0.3**
YJA	**Yavi**	**4.00**	**118**	*e*P	Pn	19 39 22.7	+6.7
YJA				IAML		19 39 42.5	
comp=Z,2.8nm,0.2s							
HJA	**Humahuaca**	**4.62**	**129**	*e*P	Pn	19 39 30.8	+6.5
HJA				IAML		19 39 50.8	
comp=Z,3.4nm,0.2s							

ROM 21 19:43:54.0±0.1, 42°.947N±0°.004×12°.592E±0°.005, h8km, ML1.5/8, Error ellipse: s-maj=0.5km s-min=0.1km az=318.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASSB	**Assisi San Ben**	**0.11**	**27**	P	Pg	19 43 57.1	+0.5
ASSB				S	Sg	19 43 59.1	+0.7
ASSB				AML	AML		
comp=E,1240μm,0.3s							
ASSB				AML	AML		
comp=N,872μm,0.9s							
ASSB				AML	AML		
comp=E,1240μm,0.3s							
ASSB				AML	AML		
comp=N,872μm,0.9s							
ASSB				AML	AML		
comp=N,872μm,0.9s							
ASSB				AML	AML		
comp=E,1240μm,0.3s							
MOMA	**Monte Martano**	**0.14**	**187**	P	Pg	19 43 57.9	+0.7
MOMA				S	Sg	19 44 00.7	+1.3
MOMA				AML	AML		
comp=E,1086μm,0.2s							
MOMA				AML	AML		
comp=N,2069μm,1.6s							
MOMA				AML	AML		
comp=E,1205μm,0.2s							
MOMA				AML	AML		
comp=N,898μm,0.4s							
MOMA				AML	AML		
comp=E,1087μm,0.2s							
MOMA				AML	AML		
comp=N,2070μm,1.6s							
MOMA				AML	AML		
comp=E,1205μm,0.2s							
MOMA				AML	AML		
comp=N,897μm,0.4s							
MOMA				AML	AML		
comp=N,897μm,0.4s							
MOMA				AML	AML		
comp=E,1205μm,0.2s							
MOMA				AML	AML		
comp=E,1087μm,0.2s							
MOMA				AML	AML		
comp=N,2070μm,1.6s							
ATTE	**AVT- Monte Tez**	**0.31**	**325**	AML	AML		
comp=N,49μm,0.8s							
ATTE				AML	AML		
comp=E,42μm,0.3s							
ATTE				AML	AML		
comp=N,49μm,0.8s							
ATTE				AML	AML		
comp=E,42μm,0.3s							
ATTE				AML	AML		
comp=N,49μm,0.8s							
ATTE				AML	AML		
comp=E,42μm,0.3s							
MURB	**Monte Urbino**	**0.32**	**351**	AML	AML		
comp=E,596μm,0.3s							
MURB				AML	AML		
comp=E,596μm,0.3s							
MURB				AML	AML		
comp=N,306μm,0.3s							
MURB				AML	AML		
comp=E,596μm,0.3s							
MURB				AML	AML		
comp=N,306μm,0.3s							
MURB				AML	AML		
comp=N,306μm,0.3s							
CESX	**Cesi**	**0.34**	**182**	P	Pg	19 44 01.0	+0.3
CESX				S	Sb	19 44 06.7	-1.0
CESX				AML	AML		
comp=E,118μm,1.4s							
CESX				AML	AML		
comp=N,210μm,0.2s							
MGAB	**Montegabbione**	**0.35**	**265**	P	Pg	19 44 01.5	+0.5
MGAB				S	Sb	19 44 07.7	-0.6
MGAB				AML	AML		
comp=E,93μm,0.2s							
MGAB				AML	AML		
comp=N,100μm,0.6s							
MGAB				AML	AML		
comp=N,100μm,0.6s							
MGAB				AML	AML		
comp=E,93μm,0.2s							
MGAB				AML	AML		
comp=E,93μm,0.2s							
MGAB				AML	AML		
comp=N,100μm,0.6s							
FOSV	**Fossato di Vic**	**0.37**	**19**	P	Pg	19 44 01.8	+0.6
FOSV				S	Sg	19 44 07.4	+1.2
FOSV				AML	AML		
comp=E,130μm,0.5s							
FOSV				AML	AML		
comp=N,89μm,0.3s							
FOSV				AML	AML		
comp=E,130μm,0.5s							
FOSV				AML	AML		
comp=N,90μm,0.3s							
FOSV				AML	AML		
comp=N,90μm,0.3s							
FOSV				AML	AML		
comp=E,130μm,0.5s							
FOSV				AML	AML		
comp=E,130μm,0.5s							
FOSV				AML	AML		
comp=N,89μm,0.3s							
FDMO	**Fiordimonte**	**0.37**	**76**	AML	AML		
comp=E,86μm,0.7s							
FDMO				AML	AML		
comp=E,86μm,0.7s							
FDMO				AML	AML		
comp=N,76μm,0.2s							
FDMO				AML	AML		
comp=N,76μm,0.2s							
NRCA	**Norcia**	**0.40**	**106**	P	Pg	19 44 02.3	+0.5
NRCA				S	Sb	19 44 08.9	-0.8
NRCA				AML	AML		
comp=E,174μm,0.1s							
NRCA				AML	AML		
comp=N,188μm,0.1s							
NRCA				AML	AML		
comp=E,174μm,0.1s							
NRCA				AML	AML		
comp=N,188μm,0.1s							
NRCA				AML	AML		
comp=N,188μm,0.1s							
SNTG	**Esanatoglia**	**0.40**	**39**	P	Pg	19 44 02.2	+0.3
SNTG				S	Sb	19 44 08.6	-1.0
SNTG				AML	AML		
comp=E,66μm,0.4s							
SNTG				AML	AML		
comp=N,78μm,1.1s							
SNTG				AML	AML		
comp=E,66μm,0.4s							
SNTG				AML	AML		
comp=E,78μm,1.1s							
SNTG				AML	AML		
comp=E,66μm,0.4s							
SNTG				AML	AML		
comp=N,78μm,1.1s							
ATMI	**Monte Miggiano**	**0.45**	**329**	P	Pb	19 44 03.7	-0.6
ATMI				AML	AML		
comp=E,90μm,0.8s							
ATMI				AML	AML		
comp=N,103μm,0.3s							
ATMI				AML	AML		
comp=E,90μm,0.8s							
ATMI				AML	AML		
comp=N,103μm,0.3s							
ATMI				AML	AML		
comp=E,90μm,0.8s							
ATMI				AML	AML		
comp=N,103μm,0.3s							
ATVO	**AVT- Monte Val**	**0.46**	**343**	P	Pg	19 44 03.4	+0.5
ATVO				S	Sb	19 44 10.9	-0.4
ATVO				AML	AML		
comp=E,34μm,0.3s							
ATVO				AML	AML		
comp=N,37μm,0.2s							
ATVO				AML	AML		
comp=E,34μm,0.3s							
ATVO				AML	AML		
comp=N,37μm,0.2s							
CSP1	**Cessapalombo**	**0.47**	**72**	P	Pg	19 44 03.6	+0.4
CSP1				S	Sb	19 44 11.4	-0.4
LNSS	**Leonessa**	**0.48**	**136**	P	Pg	19 44 03.7	+0.4
LNSS				S	Sb	19 44 11.5	-0.4
LNSS				AML	AML		
comp=E,70μm,0.9s							
LNSS				AML	AML		
comp=N,112μm,0.2s							
LNSS				AML	AML		
comp=E,70μm,0.9s							
LNSS				AML	AML		
comp=N,112μm,0.2s							
LNSS				AML	AML		
comp=N,112μm,0.2s							
SACS	**San Casciano d**	**0.51**	**259**	P	Pg	19 44 04.4	+0.5
SACS				S	Sb	19 44 12.7	-0.1
SACS				AML	AML		
comp=E,22μm,1.6s							
SACS				AML	AML		
comp=N,33μm,1.4s							
SACS				AML	AML		
comp=N,33μm,1.4s							
SACS				AML	AML		
comp=E,22μm,1.6s							
SACS				AML	AML		
comp=N,33μm,1.4s							
SACS				AML	AML		
comp=E,22μm,1.6s							
EL6	**Elcito**	**0.53**	**44**	P	Pg	19 44 04.7	+0.3
EL6				S	Sb	19 44 13.2	-0.4
FRON	**Frontone**	**0.58**	**10**	P	Pg	19 44 05.3	+0.1
PIEI	**Pieia**	**0.59**	**356**	P	Pg	19 44 06.0	+0.5
CAFI	**Castiglion Fio**	**0.60**	**310**	P	Pg	19 44 06.1	+0.5
CAFI				S	Sb	19 44 15.0	-0.3
CING	**Cingoli**	**0.61**	**46**	P	Pg	19 44 06.1	+0.2
CING				S	Sb	19 44 15.9	+0.1
GUMA	**Gualdo di Mace**	**0.99**	**83**	P	Pg	19 44 05.5	-7.6
GUMA				S	Sg	19 44 14.4	-12
GUMA				AML	AML		
comp=E,98μm,0.9s							
GUMA				AML	AML		
comp=N,104μm,0.5s							
GUMA				AML	AML		
comp=E,98μm,0.9s							
GUMA				AML	AML		
comp=N,104μm,0.5s							
GUMA				AML	AML		
comp=N,104μm,0.5s							
LJU	**Ljubljana**	**3.39**	**23**	AML	AML		
comp=N,66μm,0.4s							
LJU				AML	AML		
comp=E,60μm,0.4s							

*IDC **21** 20:28:12.4±1.8, 14°.21N×56°.40E, h0km, mb3.7/11, mb1 3.7/12, mb1mx3.5/42, mbtmp3.7/12, ML3.4/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/39, Error ellipse: s-maj=41.2km s-min=23.4km az=44.0*
*ISCJB **21** 20:28:14.4±1.4, 14°.4N±0°.2×56°.4E±0°.2, h20km, mb3.8/12, MS2.8/3, Error ellipse: s-maj=29.0km s-min=18.5km az=139.3*

ISC 21 20:28:16.0±1.6, 14°.3N±0°.2×56°.4E±0°.2, h20km, n20, σ0°61/13, mb3.8/12, MS2.9/3, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**9.13**	**13**	Pn	**Pn**	**20 30 26.1**	**-0.6**
0.4nm,0.3s,baz=230,slow=11,SNR=4.4							
WSAR				LR	LR	20 33 47.5	
comp=Z,225nm,19.1s,baz=218,slow=36							
GEYT	**Alibeck**	**23.59**	**3**	P	**P**	**20 33 25.7**	**+0.2**
1.9nm,0.7s,baz=200,slow=12,SNR=5.6							
GEYT				LR	LR	20 42 49.4	
comp=Z,41nm,18.1s,baz=225,slow=37							
PALK	**Pallekele**	**24.83**	**104**	LR	LR	20 41 06.8	
comp=Z,49nm,18.4s,baz=298,slow=31							
H08N2	**Diego Garcia H**	**25.07**	**144**	T	T	20 59 22.9	
baz=325,slow=76,SNR=41							
H08N3	**Diego Garcia H**	**25.09**	**144**	T	T	20 59 24.3	
baz=325,slow=76,SNR=41							
H08N1	**Diego Carcia H**	**25.10**	**144**	T	T	20 59 24.5	
baz=325,slow=76,SNR=44							
BRTR	**Keskin Array B**	**32.28**	**326**	P	**P**	**20 34 44.0**	**+0.4**
0.3nm,0.6s,baz=143,slow=8.8,SNR=2.9							
BRTR				LR	LR	20 49 34.8	
comp=Z,12nm,21.2s,baz=92,slow=40							
AKTO	**Aktyubinsk**	**36.06**	**2**	P	**P**	**20 35 16.4**	**+0.3**
0.8nm,0.4s,baz=193,slow=13,SNR=3.8							
MKAR	**Makanchi Array**	**38.95**	**28**	P	**P**	**20 35 41.2**	**+0.5**
0.5nm,0.7s,baz=222,slow=9.6,SNR=6.3							
KURBB	**Kurchatov Arra**	**40.42**	**22**	P	**P**	**20 35 53.0**	**+0.2**
0.9nm,0.8s,baz=221,slow=7.8,SNR=8.3							
CMAR	**Chiang Mai Arr**	**40.93**	**78**	P	**P**	**20 35 58.3**	**+0.8**
2.1nm,1.1s,baz=275,slow=9.9,SNR=4.8							
ZALV	**Zalesovo Beam**	**45.41**	**23**	P	**P**	**20 36 32.6**	**-0.5**
1.5nm,0.7s,baz=216,slow=7.3,SNR=5.3							
FINES	**FINESS Array B**	**51.89**	**342**	P	**P**	**20 37 22.5**	**-0.4**
1.2nm,0.9s,baz=134,slow=8.2,SNR=4.7							
SONM	**Songino Array**	**53.02**	**40**	P	**P**	**20 37 32.4**	**+0.7**
0.6nm,0.6s,baz=252,slow=5.8,SNR=3.7							
ARCES	**ARCESS Array B**	**58.52**	**348**	P	**P**	**20 38 10.6**	**-0.1**
11nm,0.5s,baz=157,slow=9.8,SNR=3.7							
KSRS	**Korea Array**	**66.83**	**55**	P	**P**	**20 39 05.6**	**-1.0**
0.8nm,0.7s,baz=259,slow=6.5,SNR=3.1							
H01W3	**Cape Leeuwin H**	**73.38**	**134**	T	T	21 59 42.1	
baz=301,slow=75,SNR=7.3							
H01W2	**Cape Leeuwin H**	**73.38**	**134**	T	T	21 59 38.9	
baz=301,slow=75,SNR=7.4							
H01W1	**Cape Leeuwin H**	**73.39**	**134**	T	T	21 59 38.5	
baz=301,slow=75,SNR=6.8							
ASAR	**Alice Springs**	**84.56**	**116**	P	**P**	**20 40 47.9**	**-0.5**
0.2nm,0.7s,baz=290,slow=5.1,SNR=2.8							

*ISCJB **21** 20:30:53.4±0.6, 15°.53N±0°.06×94°.18W±0°.03, h41km±32km, Error ellipse: s-maj=10.8km s-min=4.6km az=17.0*
*MEX **21** 20:30:54.9±1.0, 15°.43N×94°.20W, h16km±12km, MD4.2*
*NEIC **21** 20:30:54.7±0.0, 15°.42N×94°.20W, h16km, MD4.2(MEX), After MEX.*
*UCR **21** 20:30:57.6±0.7, 16°.06N×93°.65W, h19km±999km, MD4.1*
*GCG **21** 20:30:57.6±0.5, 16°.11N×93°.67W, h32km, MD4.4*

ISC 21 20:30:52.7±1.6, 15°.61N±0°.06×94°.21W±0°.03, h26km±16km, n22, σ1°34/40, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.96**	**84**	*e*Pg	**Pn**	**20 31 10.3**	**-0.1**
PCIG				*e*Sn	**Sn**	**20 31 21.4**	**-1.8**
PCIG		**0.96**	**84**	*e*P	**Pn**	**20 31 10.3**	**-0.1**
PCIG				*e*S	**Sn**	**20 31 21.4**	**-1.8**
TGIG		**1.56**	**42**	*e*Pn	**Pb**	**20 31 20.4**	**-0.5**
TGIG				*e*Sn	**Sn**	**20 31 38.6**	**+0.4**
TGIG		**1.56**	**42**	*i* P	**Pb**	**20 31 20.4**	**-0.5**
TGIG				*i* S	**Sb**	**20 31 39.7**	**-0.6**
CMIG	**Matias Romero**	**1.61**	**336**	*e*Pn	**Pb**	**20 31 22.4**	**+0.7**
CMIG				*e*Sn	**Sb**	**20 31 42.2**	**+0.6**
CMIG	**Matias Romero**	**1.61**	**336**	*e*P	**Pb**	**20 31 22.4**	**+0.7**
CMIG				*e*S	**Sb**	**20 31 42.2**	**+0.6**
HUIG	**Huatulco**	**1.84**	**275**	*e*Pn	**Pn**	**20 31 23.3**	**+0.7**
HUIG				*e*Sn	**Sn**	**20 31 44.1**	**-1.0**
HUIG	**Huatulco**	**1.84**	**275**	*e*P	**Pn**	**20 31 23.3**	**+0.7**
HUIG				*e*S	**Sn**	**20 31 44.1**	**-1.0**
CCIG	**Comitan**	**2.10**	**71**	*e*Pn	**Pn**	**20 31 27.2**	**+0.8**
CCIG				*e*Pn	**Pn**	**20 31 27.2**	**+0.8**
CCIG				*e*Sn	**Sn**	**20 31 50.2**	**-1.5**
CCIG	**Comitan**	**2.10**	**71**	*e*P	**Pn**	**20 31 27.2**	**+0.8**
CCIG				*i* S	**Sn**	**20 31 52.3**	**+0.6**
VHO	**Vista Hermosa**	**2.83**	**301**	*e*Pn	**Pb**	**20 31 40.6**	**-2.0**
VHO	**Vista Hermosa**	**2.83**	**301**	*e*P	**Pb**	**20 31 40.6**	**-2.0**
FUG	**Fuego 3**	**3.45**	**109**	*e*P	**Pn**	**20 31 46.6**	**+1.6**
FUG				*e*S	**Sn**	**20 32 24.0**	**-1.1**
FUG	**Fuego 3**	**3.45**	**109**	*e*P	**Pn**	**20 31 46.6**	**+1.6**
FUG				*e*S	**Sn**	**20 32 24.0**	**-1.1**
PCG	**Pacaya**	**3.68**	**109**	*e*P	**Pn**	**20 31 49.6**	**+1.4**
PCG				*e*S	**Sn**	**20 32 30.7**	**-0.3**
PCG	**Pacaya**	**3.68**	**109**	*e*P	**Pn**	**20 31 49.6**	**+1.4**
PCG				*e*S	**Sn**	**20 32 30.7**	**-0.3**
PNIG	**Pinotepa**	**3.85**	**282**	*e*Pn	**Pn**	**20 31 52.2**	**+1.9**
PNIG	**Pinotepa**	**3.85**	**282**	*e*P	**Pn**	**20 31 52.2**	**+1.9**
IXG	**Ixpaco**	**3.91**	**111**	*e*P	**Pn**	**20 31 53.0**	**+1.7**
IXG				*e*S	**Sn**	**20 32 36.4**	**-0.1**

IXG	**Ixpaco**	**3.91 111**	*e*P	**Pn**	**20 31 53.0**	**+1.7**
IXG			*e*S	**Sn**	**20 32 36.4**	**-0.1**
LVIG	**Laguna Verde**	**4.60 333**	*e*Pn	**Pn**	**20 32 02.0**	**+1.5**
LVIG			*e*Sn	**Sn**	**20 32 50.2**	**-2.9**
TLIG	**Tlapa**	**4.61 295**	*e*Pn	**Pn**	**20 32 02.8**	**+2.0**

ISCJB ***21*** *20:31:39.8±0.5, 44°.14N±0°.02×10°.10E±0°.03, h4km±5km, Error ellipse: s-maj=4.8km s-min=3.4km az=136.5*
LDG ***21*** *20:31:39.8, 44°.22N×10°.47E, h30km*
ROM ***21*** *20:31:40.2±0.2, 44°.213N±0°.010×10°.21E±0°.01, h10km, ML2.3/15, Error ellipse: s-maj=1.3km s-min=0.5km az=47.0*
GEN ***21*** *20:31:40.6, 44°.20N×10°.19E, h6km±2km, Ml2.1*
VIE ***21*** *20:31:42.5±0.6, 44°.18N×10°.37E, h10km, mb2.3/2, ml2.6/4, Error ellipse: s-maj=20.0km s-min=3.4km az=79.0*
ISC 21 20:31:37.2±1.0, 44°.24N±0°.03×9°.99E±0°.02, h8km±9km, n45, σ1§34/64, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRAM	**Graiana**	**0.25**	**13**	P	**Pn**	**20 31 46.5**	**-0.9**
GRAM				S	**Sb**	**20 31 51.1**	**+2.4**
GRAM	**Graiana**	**0.25**	**13**	P	**Pn**	**20 31 46.5**	**-0.9**
GRAM				S	**Sb**	**20 31 51.0**	**+2.2**
GRAM				AML	AML		
	comp=E,4660μm,0.2s						
GRAM				AML	AML		
	comp=N,3530μm,0.3s						
GRAM				AML	AML		
	comp=E,4660μm,0.2s						
GRAM				AML	AML		
	comp=N,3530μm,0.3s						
GRAM				AML	AML		
	comp=N,3530μm,0.3s						
GRAM				AML	AML		
	comp=E,4660μm,0.2s						
VLC	**Villacollemand**	**0.30**	**106**	P	**Pg**	**20 31 43.9**	**+0.8**
VLC				S	**Sg**	**20 31 46.5**	**-0.6**
VLC				AML	AML		
	comp=E,1145μm,0.4s						
VLC				AML	AML		
	comp=N,1930μm,0.7s						
VLC				AML	AML		
	comp=E,1200μm,0.3s						
VLC				AML	AML		
	comp=N,1895μm,0.7s						
VLC				AML	AML		
	comp=E,1140μm,0.4s						
VLC				AML	AML		
	comp=N,1925μm,0.7s						
VLC				AML	AML		
	comp=E,1200μm,0.3s						
VLC				AML	AML		
	comp=N,1895μm,0.7s						
VLC				AML	AML		
	comp=E,1200μm,0.3s						
VLC				AML	AML		
	comp=E,1140μm,0.4s						
VLC				AML	AML		
	comp=N,1925μm,0.7s						
SARO	**Sassorosso**	**0.30**	**101**	P	**Pg**	**20 31 44.0**	**+0.8**
SARO				S	**Sg**	**20 31 46.5**	**-0.8**
SARO	**Sassorosso**	**0.30**	**101**	P	**Pg**	**20 31 44.0**	**+0.8**
SARO				S	**Sg**	**20 31 46.5**	**-0.8**
SARO				AML	AML		
	comp=E,4215μm,0.3s						
SARO				AML	AML		
	comp=N,4420μm,0.5s						
SARO				AML	AML		
	comp=E,4215μm,0.3s						
SARO				AML	AML		
	comp=N,4420μm,0.5s						
SARO				AML	AML		
	comp=E,4215μm,0.3s						
SARO				AML	AML		
	comp=N,4420μm,0.5s						
MSSA	**Maissana**	**0.35**	**282**	P	**Pn**	**20 31 50.2**	**+1.5**
MSSA				AML	AML		
	comp=E,272μm,0.5s						
MSSA				AML	AML		
	comp=N,200μm,0.4s						
MSSA				AML	AML		
	comp=E,272μm,0.5s						
MSSA				AML	AML		
	comp=N,200μm,0.4s						
MSSA				AML	AML		
	comp=E,272μm,0.5s						
MSSA				AML	AML		
	comp=N,200μm,0.4s						
ERBM	**Eremo**	**0.35**	**60**	P	**Pb**	**20 31 46.1**	**+0.3**
ERBM				S	**Sb**	**20 31 50.5**	**-1.1**
ERBM				AML	AML		
	comp=E,1310μm,0.7s						
ERBM				AML	AML		
	comp=N,1445μm,0.8s						
ERBM				AML	AML		
	comp=E,1305μm,0.7s						
ERBM				AML	AML		
	comp=N,1445μm,0.8s						
ERBM				AML	AML		
	comp=N,1445μm,0.8s						
ERBM				AML	AML		
	comp=E,1305μm,0.7s						
CARD	**Cardoso**	**0.42**	**121**	P	**Pg**	**20 31 46.1**	**+0.7**
CARD				S	**Sg**	**20 31 50.2**	**-0.6**
CARD	**Cardoso**	**0.42**	**121**	P	**Pg**	**20 31 46.0**	**+0.7**
CARD				S	**Sg**	**20 31 50.2**	**-0.6**
CARD				AML	AML		
	comp=E,1595μm,0.6s						
CARD				AML	AML		
	comp=N,1515μm,1.2s						
CARD				AML	AML		
	comp=E,1595μm,0.6s						
CARD				AML	AML		
	comp=N,1515μm,1.2s						
CARD				AML	AML		
	comp=E,1595μm,0.6s						
CARD				AML	AML		
	comp=N,1515μm,1.2s						
BDI	**Bagni Di Lucca**	**0.47**	**112**	P	**Pg**	**20 31 47.0**	**+0.6**
BDI				S	**Sg**	**20 31 51.8**	**-0.9**
MAIM	**Mastiano**	**0.49**	**132**	P	**Pb**	**20 31 47.9**	**-0.1**
MAIM				S	**Sg**	**20 31 53.1**	**-0.1**
MAIM	**Mastiano**	**0.49**	**132**	P	**Pb**	**20 31 48.0**	**-0.1**
MAIM				S	**Sg**	**20 31 53.0**	**-0.1**
MAIM				AML	AML		
	comp=E,450μm,1.4s						
MAIM				AML	AML		
	comp=N,596μm,0.3s						
MAIM				AML	AML		
	comp=E,450μm,1.4s						
MAIM				AML	AML		
	comp=N,596μm,0.3s						
MAIM				AML	AML		
	comp=N,596μm,0.3s						
MAIM				AML	AML		
	comp=E,450μm,1.4s						
POPM	**Popiglio**	**0.59**	**109**	P	**Pg**	**20 31 49.0**	**+0.4**
POPM				S	**Sg**	**20 31 55.3**	**-1.0**
POPM	**Popiglio**	**0.59**	**109**	P	**Pg**	**20 31 49.0**	**+0.4**
POPM				S	**Sg**	**20 31 55.4**	**-0.9**
POPM				AML	AML		
	comp=E,748μm,0.8s						
POPM				AML	AML		
	comp=N,822μm,1.2s						
POPM				AML	AML		
	comp=E,748μm,0.8s						
POPM				AML	AML		
	comp=N,822μm,1.2s						
POPM				AML	AML		
	comp=N,822μm,1.2s						
POPM				AML	AML		
	comp=E,748μm,0.8s						
GORR	**Gorreto**	**0.62**	**306**	P	**Pn**	**20 31 54.9**	**+2.5**
BOB	**Bobbio (Coli)**	**0.65**	**324**	P	**Pn**	**20 31 55.3**	**+2.5**
ZCCA	**Zocca**	**0.72**	**81**	P	**Pn**	**20 31 53.0**	**-0.7**
ZCCA				AML	AML		
	comp=E,139μm,0.4s						
ZCCA				AML	AML		
	comp=N,174μm,0.6s						
ZCCA				AML	AML		
	comp=E,139μm,0.4s						
ZCCA				AML	AML		
	comp=N,174μm,0.6s						
MTCR	**Monte La Croce**	**0.76**	**106**	P	**Pg**	**20 31 52.2**	**+0.3**
PCP	**Piancastagn**	**1.08**	**287**	P	**Pn**	**20 32 02.7**	**+4.0**
PCP				AML	AML		
	comp=E,56μm,1.1s						
PCP				AML	AML		
	comp=N,61μm,1.0s						
PCP				AML	AML		
	comp=N,61μm,1.0s						
PCP				AML	AML		
	comp=E,56μm,1.1s						
RUFI	**Rufina**	**1.17**	**110**	P	**Pn**	**20 32 00.1**	**+0.1**
CSNT	**Castellina Chi**	**1.22**	**129**	P	**Pg**	**20 32 01.3**	**+0.7**
CSNT				AML	AML		
	comp=E,65μm,1.2s						
CSNT				AML	AML		
	comp=N,93μm,1.3s						
CSNT				AML	AML		
	comp=N,93μm,1.3s						
CSNT				AML	AML		
	comp=E,65μm,1.2s						
TRIF	**Trifonti**	**1.31**	**149**	P	**Pg**	**20 32 03.4**	**+1.1**
TRIF				AML	AML		
	comp=E,62μm,1.3s						
TRIF				AML	AML		
	comp=N,78μm,1.5s						
TRIF				AML	AML		
	comp=N,78μm,1.5s						
TRIF				AML	AML		
	comp=E,62μm,1.3s						
FROS	**Frosini**	**1.34**	**140**	P	**Pg**	**20 32 03.3**	**+0.4**
FROS				AML	AML		
	comp=E,116μm,0.6s						
FROS				AML	AML		
	comp=N,128μm,0.3s						
FROS				AML	AML		
	comp=E,116μm,0.6s						
FROS				AML	AML		
	comp=N,128μm,0.3s						
PGF	**Pioggiola**	**1.84**	**203**	*e*Pn	**Pg**	**20 32 12.5**	**0.0**
PGF				*e*Sn	**Sn**	**20 32 32.7**	**-0.1**
	comp=N,7.7nm,0.3s						
SBF	**Sospel**	**1.88**	**259**	*e*Pn	**Pg**	**20 32 13.5**	**+0.2**
SBF				*e*Sn	**Sg**	**20 32 37.8**	**+0.2**
	comp=N,28nm,0.4s						
SSFR	**Montelago di S**	**2.18**	**111**	AML	AML		
	comp=E,429μm,0.3s						
SSFR				AML	AML		
	comp=E,429μm,0.3s						
SSFR				AML	AML		
	comp=N,208μm,0.1s						
SSFR				AML	AML		
	comp=N,208μm,0.1s						
FRF	**La Foret Royal**	**2.51**	**255**	*e*Pn	**Pb**	**20 32 22.3**	**-0.2**
FRF				*e*Sn	**Sb**	**20 32 52.7**	**-0.9**
	comp=N,9.9nm,0.4s						
LPG	**La Plagne**	**2.62**	**300**	*e*P	**Pg**	**20 32 26.1**	**-1.4**
LPG				*e*Sg	**Sn**	**20 32 53.5**	**+1.2**
	comp=N,3.0nm,0.3s						
LMR	**La Mourre**	**2.68**	**251**	*e*Pn	**Pb**	**20 32 24.6**	**-0.8**
LMR				*e*Sg	**Sb**	**20 32 56.2**	**-2.2**
	comp=N,2.8nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.01**	**284**	*e*P	**Pb**	**20 32 31.9**	**+0.7**
DAVA	**Damuels**	**3.04**	**359**	*i* Pn	**Pb**	**20 32 32.8**	**+1.1**
	comp=N,1.1nm,0.2s						
DAVA				*i* Sn	**Sb**	**20 33 10.1**	**+1.0**
	comp=N,3.4nm,0.3s						
SQTA	**Sankt Quirin**	**3.10**	**16**	*i* Pn	**Pb**	**20 32 32.6**	**-0.1**
	comp=N,2.9nm,0.2s						
SMRF	**Simiane la Rot**	**3.19**	**267**	*e*P	**Pb**	**20 32 33.7**	**-0.5**
SMRF				*e*Sn	**Sb**	**20 33 11.1**	**-2.1**
	comp=N,1.0nm,0.2s						
MOTA	**Moosalm**	**3.20**	**14**	*i* Pn	**Pb**	**20 32 34.5**	**+0.1**
	comp=N,0.3nm,0.1s						
WTTA	**Wattenberg**	**3.23**	**20**	*i* Pn	**Pb**	**20 32 35.0**	**0.0**
	comp=N,0.8nm,0.2s						
WTTA				*e*Sn	**Sn**	**20 33 09.5**	**+2.2**
	comp=N,8.4nm,0.7s						
WATA	**Walderalm**	**3.29**	**19**	*i* Pn	**Pb**	**20 32 34.8**	**-1.1**
	comp=N,0.6nm,0.2s						
CABF	**La Chapelle**	**3.63**	**312**	*e*P	**Pb**	**20 32 41.3**	**-0.3**
HINF	**Hinteralfeld**	**4.19**	**330**	*e*P	**Pb**	**20 32 46.8**	**-4.4**
HINF				*e*Sn	**Sn**	**20 33 29.3**	**-1.3**
	comp=N,2.5nm,0.4s						
HAU	**Haudompre**	**4.53**	**327**	*e*P	Pn	20 32 51.2	+5.0
HAU				*e*Sn	**Sn**	**20 33 37.9**	**-1.2**
	comp=N,5.1nm,0.3s						
CDF	**Champ du Feu**	**4.57**	**337**	*e*P	Pn	20 32 51.6	+4.8
CDF				*e*Sn	**Sn**	**20 33 38.0**	**-2.1**
	comp=N,2.9nm,0.4s						
SMF	**Signal de Mont**	**4.95**	**301**	*e*P	Pb	20 32 58.5	-5.6
SMF				*e*Sn	**Sn**	**20 33 49.5**	**+0.2**
	comp=N,3.0nm,0.4s						
PAGF	**Fort de Pagny**	**5.22**	**327**	*e*P	Pn	20 33 00.8	+5.2
PAGF				*e*Sn	**Sn**	**20 33 54.4**	**-1.6**
	comp=N,1.7nm,0.3s						
LOR	**Lormes**	**5.25**	**307**	*e*P	Pb	20 33 02.6	-6.6
	baz=129						
LOR				*e*Sn	**Sn**	**20 33 56.4**	**-0.3**
	comp=N,3.1nm,0.4s						
AVF	**Avril sur Loir**	**5.31**	**301**	*e*P	Pb	20 33 04.0	-6.3
BGF	**Bois d'Agland**	**5.54**	**297**	*e*P	Pb	20 33 07.1	-7.0

IDC ***21*** *20:45:32.8±2.3, 51°.66N×160°.06E, h0km, mb3.8/8, mb1 3.7/10, mb1mx3.5/53, mbtmp3.8/10, ML3.0/2, Error ellipse: s-maj=43.2km s-min=36.9km az=151.0*
KRSC ***21*** *20:45:36.2±1.4, 51°.85N×160°.25E, h61km±22km, ML4.2*
MOS ***21*** *20:45:39.9±0.9, 51°.96N×160°.01E, h67km, mb3.8/1, Error ellipse: s-maj=11.0km s-min=4.9km az=102.7*
ISC 21 20:45:35.4±2.0, 51°.86N±0°.05×160°.22E±0°.04, h12km±11km, n73, σ1§47/103, mb4.0/8, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.19**	**299**	*i* P	**Pb**	**20 45 57.9**	**-0.1**
RUS				*e*S	**Sb**	**20 46 12.8**	**-0.6**
RUS	**Russkaya**	**1.19**	**299**	PN	**Pb**	**20 45 57.9**	**-0.1**
RUS				S	**Sb**	**20 46 12.8**	**-0.6**
SPN	**Mys Shipunski**	**1.24**	**355**	*e*P	**Pb**	**20 45 59.2**	**+0.4**
SPN				*e*S	**Sg**	**20 46 15.0**	**-0.5**
SPN	**Mys Shipunski**	**1.24**	**355**	PN	**Pb**	**20 45 59.2**	**+0.4**
SPN				S	**Sg**	**20 46 15.0**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.33**	**269**	*e*P	**Pn**	**20 46 00.3**	**+0.5**
KDTR				*e*S	**Sb**	**20 46 17.1**	**-0.1**
KDTR	**Khodutka, Kamc**	**1.33**	**269**	PN	**Pn**	**20 46 00.3**	**+0.5**
KDTR				S	**Sb**	**20 46 17.1**	**-0.1**
MTVR	**Mutnovka**	**1.40**	**297**	*e*P	**Pn**	**20 46 01.5**	**+0.6**
MTVR				*e*S	**Sb**	**20 46 18.9**	**-0.5**
MTVR	**Mutnovka**	**1.40**	**297**	PN	**Pn**	**20 46 01.5**	**+0.6**
MTVR				S	**Sb**	**20 46 18.9**	**-0.5**
NLC	**Nalytchevo**	**1.42**	**338**	*e*P	**Pn**	**20 46 01.9**	**+0.9**
NLC				*e*S	**Sg**	**20 46 20.5**	**-0.5**
NLC	**Nalytchevo**	**1.42**	**338**	PN	**Pn**	**20 46 01.9**	**+0.9**
NLC				S	**Sg**	**20 46 20.5**	**-0.5**
DALK	**Dalny**	**1.47**	**323**	*e*P	**Pn**	**20 46 02.7**	**+0.9**
DALK				*e*S	**Sb**	**20 46 21.3**	**-0.1**
DALK	**Dalny**	**1.47**	**323**	PN	**Pn**	**20 46 02.7**	**+0.9**
DALK				S	**Sb**	**20 46 21.3**	**-0.1**
GRL	**Gorelyy**	**1.49**	**299**	*e*P	**Pb**	**20 46 03.8**	**+0.7**
GRL				*e*S	**Sg**	**20 46 22.9**	**-0.4**
GRL	**Gorelyy**	**1.49**	**299**	PN	**Pb**	**20 46 03.8**	**+0.7**
GRL				S	**Sg**	**20 46 22.9**	**-0.4**
PET	**Petropavlovsk**	**1.51**	**321**	⇑*i*PN	**Pn**	**20 46 02.9**	**+0.7**
PET				*e*S	**Sn**	**20 46 21.3**	**-0.5**
PET				pmax	pmax		
	comp=Z,547nm,0.5s						
PET				smax	smax		
	comp=N,706nm,0.5s						
PET				smax	smax		
	comp=E,347nm,0.4s						
ASAK	**Asacha**	**1.52**	**291**	*e*P	**Pn**	**20 46 03.9**	**+1.4**
ASAK	**Asacha**	**1.52**	**291**	PN	**Pn**	**20 46 03.9**	**+1.4**
UGLR	**Uglovaya**	**1.59**	**328**	*e*P	**Pb**	**20 46 05.1**	**+0.2**
KRMR	**Karymshinskiy**	**1.60**	**308**	*e*P	**Pn**	**20 46 04.5**	**+0.9**
KRMR				*e*S	**Sn**	**20 46 24.0**	**-0.2**
KRMR	**Karymshinskiy**	**1.60**	**308**	PN	**Pn**	**20 46 04.5**	**+0.9**
KRMR				S	**Sn**	**20 46 24.0**	**-0.2**
SDLR	**Sedlovina**	**1.63**	**331**	*e*P	**Pn**	**20 46 05.2**	**+1.1**
SDLR	**Sedlovina**	**1.63**	**331**	PN	**Pn**	**20 46 05.2**	**+1.1**
SMAR	**Somma**	**1.65**	**329**	*e*P	**Pn**	**20 46 05.3**	**+0.9**
SMAR	**Somma**	**1.65**	**329**	PN	**Pn**	**20 46 05.3**	**+0.9**
AVH	**Avacha**	**1.67**	**328**	*e*P	**Pn**	**20 46 05.9**	**+1.3**
AVH	**Avacha**	**1.67**	**328**	PN	**Pn**	**20 46 05.9**	**+1.3**
KRER	**Koryakskii**	**1.70**	**329**	*e*P	**Pn**	**20 46 06.6**	**+1.5**
KRER	**Koryakskii**	**1.70**	**329**	PN	**Pn**	**20 46 06.6**	**+1.5**
KOK	**Koryaka**	**1.73**	**327**	*e*P	**Pn**	**20 46 06.8**	**+1.4**
KOK	**Koryaka**	**1.73**	**327**	PN	**Pn**	**20 46 06.8**	**+1.4**
KRX	**Arik**	**1.78**	**328**	*e*P	**Pn**	**20 46 07.3**	**+1.2**
KRX	**Arik**	**1.78**	**328**	PN	**Pn**	**20 46 07.3**	**+1.2**
PETK	**Petropavlovsk-**	**1.98**	**310**	Pn	**Pn**	**20 46 10.5**	**+1.7**
	comp=E,24nm,0.3s,baz=109,slow=20,SNR=569						
PETK				Sn	**Sb**	**20 46 35.0**	**-1.0**
	comp=E,44nm,0.3s,baz=194,slow=31,SNR=6.7						
APC	**Apacha**	**2.15**	**301**	*e*P	**Pn**	**20 46 13.6**	**+2.5**
APC				*e*S	**Sb**	**20 46 39.9**	**-1.1**
APC	**Apacha**	**2.15**	**301**	PN	**Pn**	**20 46 13.6**	**+2.5**
APC				S	**Sb**	**20 46 39.9**	**-1.1**
PAU	**Pauzhetka**	**2.16**	**261**	*e*P	**Pn**	**20 46 13.0**	**+1.8**
PAU				*e*S	**Sn**	**20 46 38.3**	**+0.5**
PAU	**Pauzhetka**	**2.16**	**261**	PN	**Pn**	**20 46 13.0**	**+1.8**
PAU				S	**Sn**	**20 46 38.3**	**+0.5**
GNL	**Ganaly**	**2.30**	**324**	*e*P	**Pn**	**20 46 15.3**	**+2.1**
GNL	**Ganaly**	**2.30**	**324**	PN	**Pn**	**20 46 15.3**	**+2.1**
SKR	**Severo-Kuril's**	**2.83**	**247**	*e*P	**Pn**	**20 46 22.4**	**+2.0**
SKR				*e*S	**Sn**	**20 46 54.0**	**-0.4**
SKR	**Severo-Kuril's**	**2.83**	**247**	*e*PN	**Pn**	**20 46 22.6**	**+2.2**
SKR				*e*S	**Sn**	**20 46 53.3**	**-1.1**
SKR				pmax	pmax		
	comp=Z,62nm,0.6s						
SKR				smax	smax		
	comp=N,271nm,0.5s						
SKR				smax	smax		
	comp=E,328nm,0.7s						
MKZ	**Mys Kozlova**	**2.85**	**18**	*e*P	**Pn**	**20 46 21.5**	**+0.8**
MKZ				*e*S	**Sn**	**20 46 53.8**	**-1.0**
MKZ	**Mys Kozlova**	**2.85**	**18**	PN	**Pn**	**20 46 21.5**	**+0.8**
MKZ				S	**Sn**	**20 46 53.8**	**-1.0**
ALID	**Alaid**	**3.09**	**253**	*e*P	**Pn**	**20 46 25.4**	**+1.3**
ALID	**Alaid**	**3.09**	**253**	PN	**Pn**	**20 46 25.4**	**+1.3**
KZV	**Kizimen**	**3.26**	**1**	*e*P	**Pn**	**20 46 28.9**	**+2.5**
KZV				*e*S	**Sn**	**20 47 05.6**	**+0.4**
KZV	**Kizimen**	**3.26**	**1**	PN	**Pn**	**20 46 28.9**	**+2.5**
KZV				S	**Sn**	**20 47 05.6**	**+0.4**
TUMD	**Tumrok D**	**3.35**	**2**	*e*P	**Pn**	**20 46 29.7**	**+2.1**
TUMD				*e*S	**Sn**	**20 47 06.6**	**-0.7**
TUMR	**Tumrok**	**3.43**	**359**	*e*P	**Pn**	**20 46 31.4**	**+2.6**
TUMR	**Tumrok**	**3.43**	**359**	PN	**Pn**	**20 46 29.7**	**+0.9**
TUMR				S	**Sn**	**20 47 06.6**	**-2.7**
ESO	**Esso**	**4.17**	**348**	*e*P	**Pn**	**20 46 41.9**	**+3.1**
ESO	**Esso**	**4.17**	**348**	PN	**Pn**	**20 46 41.9**	**+3.1**
SRDR	**Sredinnyy**	**4.47**	**356**	*e*P	**Pn**	**20 46 46.6**	**+3.5**
SRDR	**Sredinnyy**	**4.47**	**356**	PN	**Pn**	**20 46 46.6**	**+3.5**
KBTR	**Krutoberegovo**	**4.62**	**18**	*e*P	**Pn**	**20 46 47.4**	**+2.4**
KBTR	**Krutoberegovo**	**4.62**	**18**	PN	**Pn**	**20 46 47.4**	**+2.4**
KBG	**Krutoberegovo**	**4.64**	**17**	*e*P	**Pn**	**20 46 47.8**	**+2.6**
KBG	**Krutoberegovo**	**4.64**	**17**	PN	**Pn**	**20 46 47.8**	**+2.6**
BKI	**Bering**	**4.79**	**43**	*e*S	**Sn**	**20 47 39.7**	**-3.1**
SRKR	**Sorokina**	**4.83**	**6**	*e*P	**Pn**	**20 46 49.5**	**+1.5**
SRKR	**Sorokina**	**4.83**	**6**	PN	**Pn**	**20 46 49.5**	**+1.5**
ASAJ	**Asahikawa**	**14.09**	**244**	Pn	**Pn**	**20 48 52.8**	**-1.9**
	comp=E,0.1nm,0.3s,baz=91,slow=11,SNR=2.0						
TIXI	**Tiksi**	**24.24**	**336**	P	**P**	**20 50 51.1**	**-0.6**
	comp=E,4.1nm,0.6s,baz=326,slow=0.2,SNR=18						
SPITS	**Spitsbergen Ar**	**48.36**	**351**	P	**P**	**20 54 17.4**	**+1.1**
	comp=E,0.7nm,0.3s,baz=61,slow=9.0,SNR=7.0						
KURK	**Kurchatov**	**48.45**	**303**	P	**P**	**20 54 17.4**	**0.0**
KURBB	**Kurchatov Arra**	**48.56**	**303**	P	**P**	**20 54 17.4**	**-0.7**
	comp=E,0.3nm,0.5s,baz=62,slow=6.9,SNR=3.4						
MKAR	**Makanchi Array**	**48.77**	**297**	P	**P**	**20 54 18.8**	**-1.1**
	comp=E,0.4nm,0.5s,baz=58,slow=6.3,SNR=7.2						
BVAR	**Borovoye Array**	**51.22**	**309**	P	**P**	**20 54 36.7**	**-1.7**
	comp=E,0.3nm,0.4s,baz=66,slow=8.1,SNR=3.4						
FINES	**FINESS Array B**	**61.28**	**337**	P	**P**	**20 55 50.5**	**+0.4**
	comp=E,0.6nm,0.4s,baz=38,slow=9.3,SNR=14						
NB2	**NORSAR Subarra**	**64.75**	**344**	P	**P**	**20 56 13.5**	**+0.4**
	comp=Z,1.4nm,1.0s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**64.75**	**344**	P	**P**	**20 56 14.0**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=14,slow=5.4,SNR=3.0						
NOA	**NORSAR Array B**	**64.75**	**344**	P	**P**	**20 56 14.0**	**+0.9**
AKASG	**Malin Array Be**	**69.71**	**329**	P	**P**	**20 56 44.8**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=29,slow=6.4,SNR=3.2						

SOME ***21*** *20:46:05.8, 43°.18N×79°.28E, h20km*
KRNET ***21*** *20:46:06.2±0.1, 43°.14N×79°.37E, mb2.9*
NNC ***21*** *20:46:06.0±0.3, 43°.24N×79°.24E, h4km±1km, mb3.5, mpv3.5, Error ellipse: s-maj=4.3km s-min=1.5km az=159.0*
ISC 21 20:46:06.7±0.9, 43°.27N±0°.03×79°.24E±0°.02, h9km±7km, n59, σ1§05/108, 22C-15D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**0.19**	**72**	P	**Pg**	**20 46 10.7**	**-0.1**
	133nm,0.1s						
PDGK				S	**Sg**	**20 46 14.0**	**+0.4**
	615nm,0.1s						
PDGK	**Podgornoye**	**0.19**	**72**	⇓P	**Pg**	**20 46 10.6**	**-0.1**
	58nm,0.2s						
PDGK				⇓S	**Sg**	**20 46 13.9**	**+0.4**
	494nm,0.4s						
PDGK	**Podgornoye**	**0.19**	**72**	⇑*i*P	**Pg**	**20 46 10.7**	**-0.1**
	baz=25						
PDGK				⇑*i*S	**Sg**	**20 46 14.0**	**+0.4**
	baz=25						
UZB	**Uzynbulak**	**0.20**	**233**	P	**Pg**	**20 46 10.7**	**-0.1**
	212nm,0.1s						
UZB				S	**Sg**	**20 46 14.0**	**+0.4**
	3μm,0.1s						
UZB	**Uzynbulak**	**0.20**	**233**	*e*P	**Pg**	**20 46 10.7**	**-0.1**
	212nm,0.1s						
UZB				*e*S	**Sg**	**20 46 14.0**	**+0.4**
	3μm,0.1s						
KPKS	**Kokpek**	**0.45**	**296**	*e*P	**Pg**	**20 46 15.3**	**-0.1**
	134nm,0.1s						
KPKS				*e*S	**Sg**	**20 46 22.0**	**+0.6**
	1μm,0.2s						
ZHN	**Zhinishke**	**0.59**	**261**	P	**Pg**	**20 46 17.5**	**-0.7**
	34nm,0.1s						
ZHN				S	**Sg**	**20 46 25.8**	**-0.3**
	168nm,0.1s						
ZHN	**Zhinishke**	**0.59**	**261**	*e*P	**Pg**	**20 46 17.5**	**-0.7**
	39nm,0.1s						
ZHN				*e*S	**Sg**	**20 46 25.8**	**-0.3**
	145nm,0.1s						
SATY	**Saty**	**0.64**	**251**	P	**Pg**	**20 46 18.1**	**-1.0**
	44nm,0.1s						
SATY				S	**Sg**	**20 46 27.1**	**-0.5**
	882nm,0.1s						
SATY	**Saty**	**0.64**	**251**	*e*P	**Pg**	**20 46 18.1**	**-1.0**
	44nm,0.1s						
SATY				*e*S	**Sg**	**20 46 27.1**	**-0.5**
	882nm,0.1s						
KURS	**Kuram**	**0.81**	**286**	P	**Pg**	**20 46 21.9**	**-0.4**
	2.0nm,0.1s						
KURS				S	**Sg**	**20 46 32.9**	**+0.1**
	19nm,0.3s						
KURS	**Kuram**	**0.81**	**286**	*e*P	**Pg**	**20 46 21.4**	**-0.8**
	2.3nm,0.2s						
KURS				*e*S	**Sg**	**20 46 32.9**	**+0.1**
	19nm,0.3s						
KTMS	**Ketmen**	**0.83**	**77**	P	**Pg**	**20 46 21.2**	**-1.5**
	35nm,0.2s						
KTMS				S	**Sg**	**20 46 32.2**	**-1.3**
	174nm,0.1s						
KTMS	**

ARXS S **Sb** **20 46 50.6 -0.3**
110nm,0.2s
ARXS Arharly 1.39 313 *e*P **Pn** **20 46 31.7 -0.7**
10nm,0.2s
ARXS *e*S **Sb** **20 46 50.6 -0.3**
110nm,0.2s
KOTS Kotyrbulak 1.55 269 P **Pn** **20 46 34.6 -0.1**
20nm,0.2s
KOTS S **Sb** **20 46 55.4 -0.2**
216nm,0.3s
KOTS Kotyrbulak 1.55 269 *e*P **Pn** **20 46 34.5 -0.1**
20nm,0.2s
KOTS *e*S **Sn** **20 46 55.1 +0.1**
216nm,0.3s
MDOK Medeo 1.60 267 Pg **Pb** **20 46 35.9 -0.7**
6.4nm,0.3s
MDOK Lg Lg 20 46 57.4
38nm,0.2s
MDOK Medeo 1.60 267 *e*P **Pn** **20 46 34.9 -0.5**
6.4nm,0.3s
MDOK *e*S **Sn** **20 46 56.0 -0.3**
38nm,0.2s
KNDC Almaty 1.66 269 ⇓P **Pn** **20 46 36.0 -0.1**
KNDC ⇑S **Sb** **20 46 59.1 +0.5**
TNSS Tian-Shan 1.69 263 P **Pn** **20 46 36.7 -0.1**
7.9nm,0.1s
TNSS S **Sb** **20 46 59.4 -0.4**
30nm,0.3s
TNSS Tian-Shan 1.69 263 *e*P **Pn** **20 46 36.3 -0.5**
7.9nm,0.1s
TNSS *e*S **Sn** **20 46 58.7 -0.2**
30nm,0.3s
AAA Alma-Ata 1.70 269 P **Pb** **20 46 37.5 -0.6**
20nm,0.2s
AAA S **Sg** **20 47 00.4 -0.8**
48nm,0.2s
AAA Alma-Ata 1.70 269 *e*P **Pn** **20 46 36.5 -0.1**
20nm,0.2s
AAA *e*S **Sb** **20 46 59.1 -0.5**
48nm,0.2s
CHKK Chushkaly 1.74 290 P **Pn** **20 46 37.2 +0.1**
4.8nm,0.1s
CHKK S **Sb** **20 47 00.2 -0.5**
128nm,0.2s
CHKK Chushkaly 1.74 290 *e*P **Pn** **20 46 37.2 +0.1**
4.8nm,0.1s
CHKK ⇓*i*S **Sb** **20 47 00.2 -0.5**
128nm,0.2s
TDK Taldyqorghan 1.83 341 P **Pb** **20 46 39.8 -0.7**
38nm,0.2s
TDK S **Sb** **20 47 04.0 +0.5**
97nm,0.3s
TDK Taldyqorghan 1.83 341 *e*P **Pb** **20 46 39.8 -0.7**
38nm,0.2s
TDK *e*S **Sb** **20 47 04.0 +0.5**
97nm,0.3s
KTBS Karatobe 1.91 284 P **Pb** **20 46 40.6 -1.1**
9.7nm,0.3s
KTBS S **Sb** **20 47 05.8 +0.1**
48nm,0.3s
KTBS Karatobe 1.91 284 *e*P **Pn** **20 46 39.8 +0.3**
3.3nm,0.1s
KTBS *e*S **Sn** **20 47 04.6 +0.8**
48nm,0.3s
KAPS Kapalarasan 2.02 2 Pg **Pb** **20 46 42.8 -0.8**
30nm,0.2s
KAPS Lg Lg 20 47 09.3
102nm,0.2s
KAPS Kapalarasan 2.02 2 *e*P **Pb** **20 46 42.8 -0.8**
30nm,0.2s
KAPS *e*S **Sb** **20 47 09.3 +0.5**
102nm,0.2s
MTBS Maitube 2.06 267 Pg **Pb** **20 46 42.8 -1.5**
8.8nm,0.2s
MTBS Lg Lg 20 47 10.0
32nm,0.4s
MTBS Maitube 2.06 267 *e*P **Pn** **20 46 42.6 +1.0**
8.8nm,0.2s
MTBS *e*S **Sb** **20 47 09.0 -1.0**
32nm,0.4s
KUU Kurty 2.20 288 Pg **Pb** **20 46 45.5 -1.1**
4.0nm,0.1s
KUU Lg Lg 20 47 14.0
61nm,0.3s
KUU Kurty 2.20 288 *e*P **Pb** **20 46 45.5 -1.1**
4.0nm,0.1s
KUU *e*S **Sb** **20 47 14.0 0.0**
61nm,0.3s
KST Kastek 2.41 266 Pg **Pb** **20 46 49.9 -0.3**
9.8nm,0.2s
KST Lg Lg 20 47 21.6
18nm,0.5s
KST Kastek 2.41 266 *e*P **Pb** **20 46 48.8 -1.5**
9.8nm,0.2s
KST *e*S **Sb** **20 47 19.6 -0.5**
18nm,0.5s
ULHL Ulahol 2.43 246 ⇓*i*P **Pn** **20 46 48.0 +1.2**
baz=50
ULHL ⇓*i*S **Sb** **20 47 18.7 -2.2**
baz=50
DGS Degeres 2.53 271 Pg **Pb** **20 46 51.1 -1.3**
2.2nm,0.2s
DGS Lg Lg 20 47 23.5
56nm,0.5s
DGS Degeres 2.53 271 *e*P **Pb** **20 46 51.1 -1.3**
2.2nm,0.2s
DGS *e*S **Sb** **20 47 23.5 -0.2**
56nm,0.5s
BOOM Boomskoye usch 2.54 253 ⇑*i*P **Pn** **20 46 50.1 +1.8**
baz=57
BOOM ⇑*i*S **Sb** **20 47 21.9 -2.2**
baz=57
TKM2 Tokmak 2 2.69 264 ⇓Pn **Pn** **20 46 50.9 +0.5**
4.7nm,0.7s
TKM2 ⇑Lg Lg 20 47 30.6
8.1nm,0.3s
TKM2 Tokmak 2 2.69 264 ⇑*i*P **Pb** **20 46 52.6 -2.5**
baz=67
TKM2 ⇑*i*S **Sb** **20 47 26.4 -1.9**
baz=67
KZA Kyzart 3.17 249 ⇓*i*P **Pn** **20 46 59.1 +1.9**
baz=52
KZA ⇓*i*S **Sn** **20 47 37.2 +1.9**
baz=52
KBK Karagaybulak 3.21 260 ⇑*i*P **Pn** **20 46 59.6 +2.2**
baz=63
KBK ⇑*i*S **Sn** **20 47 38.4 +2.5**
baz=63
AAK Ala-Archa 3.54 261 ⇑Pg **Pb** **20 47 11.1 +1.5**
1.1nm,0.4s
AAK ⇓Lg Lg 20 47 58.6
2.4nm,0.3s
AAK Ala-Archa 3.54 261 ⇑*i*P **Pn** **20 47 04.3 +2.3**
baz=64
AAK ⇑*i*S **Sn** **20 47 46.8 +2.8**
baz=64
UCH Uchtor 3.63 255 ⇑*e*P **Pn** **20 47 05.4 +1.9**
baz=57
UCH ⇑*i*S **Sn** **20 47 48.8 +2.1**
baz=57
ARLS Aral 3.89 251 ⇓*i*P **Pn** **20 47 08.5 +1.7**
baz=53
ARLS ⇓*i*S **Sn** **20 47 53.7 +0.9**
baz=53
MAKZ Makanchi 4.04 28 ⇑Pn **Pn** **20 47 08.7 0.0**
0.4nm,0.2s
MAKZ ⇑Pg **Pb** **20 47 18.6 +0.6**
0.4nm,0.2s
MAKZ ⇓Sn **Sn** **20 47 57.4 +1.2**
0.9nm,0.5s
MAKZ ⇓Lg Lg 20 48 13.2
1.3nm,0.3s
MK31 Makanchi Array 4.14 30 ⇑Pn **Pn** **20 47 10.0 -0.1**
0.1nm,0.2s,baz=216,slow=12,SNR=28
MK31 ⇑Pg **Pb** **20 47 21.4 +1.7**
0.1nm,0.1s,baz=204,slow=12,SNR=10
MK31 ⇓Sn **Sn** **20 47 59.3 +0.8**
0.3nm,0.2s,baz=212,slow=21,SNR=5.1
MK31 ⇑Lg Lg 20 48 16.0
1.8nm,0.4s,baz=213,slow=31,SNR=10.0
OTUK Ortayu 6.93 318 ⇑Lg Lg 20 49 46.2
3.4nm,0.7s
KURBB Kurchatov Arra 7.37 356 ⇑Lg Lg 20 50 00.8
6.3nm,0.7s

IDC ***21*** *20:51:50.2±0.5,36°.87N×73°.21E,h0km,mb4.6/32, mb1 4.7/40,mb1mx4.7/47,mbtmp4.7/40,ML4.3/7,MS3.9/32, Ms1 3.9/32,ms1mx3.7/47,Error ellipse: s-maj=11.9km s-min=9.6km az=0.0*

NNC ***21*** *20:51:54.0±2.4,36°.83N×72°.95E,h23km±17km,mb5.0, mpv4.8,Error ellipse: s-maj=17.5km s-min=12.5km az=149.0*

GCMT ***21*** *20:51:54.2±0.3,37°.00N±0°.04×73°.24E±0°.02,h19km±1km, MW4.8/59,Moment Tensor Solution. s20,c21; s59,c88; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=1.88±.15; Mθθ=0.02±.10; Mφφ 1.89±.10; Mrθ=0.34±.27; Mθφ=0.85±.07; Mφr=0.61±.18; Best double couple: M0=2.18000×10^16^ NP1:φs=355.00000°,δ54.00000°,λ=69.00000°. NP2: φs=142.00000°,δ41.00000°,λ=116.00000°. Principal axes: T 2.2660, Plg6.0000°, Azm70.0000°; N -0.1770, Plg17.0000°, Azm162.0000°; P -2.0940, Plg72.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISCJB ***21*** *20:51:55.5±0.4,36°.89N±0°.02×73°.23E±0°.02,h50km±3km, mb4.8/224,MS3.9/40 Error ellipse: s-maj=3.2km s-min=2.5km az=44.2*

BJI ***21*** *20:51:55.9±0.0,36°.86N×73°.32E,h48km,mb4.9/51, mB5.0/44,ML4.8/4,Ms4.5/41,Ms7 4.2/39*

NEIC ***21*** *20:51:56.2±1.7,36°.89N×73°.13E,h42km±4km,mb4.8/168, Error ellipse: s-maj=10.8km s-min=9.4km az=71.0*

MOS ***21*** *20:51:56.7±1.0,36°.93N×73°.24E,h62km,mb5.0/70, MS4.1/7,Error ellipse: s-maj=5.3km s-min=4.0km az=102.9*

ISC 21 20:51:56.0±0.5,36°.84N±0°.03×73°.14E±0°.03,h42km±4km, n539,σ1°.64/569,mb4.8/227,MS4.0/40,39C-28D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GAR	**Garm**	**3.10**	**315**	*e*Pn			**Pn**	**20 52 45.5**	**+3.0**
GAR	**Garm**	**3.10**	**315**	*e*PN			**Pn**	**20 52 45.5**	**+3.0**
CEP	**Cherat**	**3.17**	**199**	P			**Pn**	**20 52 46.9**	**+3.3**
CHCP	**Chirah Chowk**	**3.18**	**178**	P			Pn	20 52 48.4	+4.9
NIL	**Nilore**	**3.19**	**178**	*e*Pn			**Pn**	**20 52 47.6**	**+4.0**
NIL	**Nilore**	**3.19**	**178**	*e*PN			**Pn**	**20 52 47.6**	**+4.0**
KSH	**Kashi**	**3.48**	**39**	P			**Pn**	**20 52 44.1**	**-3.7**
KSH				S			Sn	20 53 17.6	-10
KSH				smax			smax		
	comp=N,10μm,0.7s								
KSH				smax			smax		
	comp=E,6μm,0.8s								
CHGR	**Chuyangaron**	**3.64**	**301**	*e*P			Pn	20 53 09.5	+20
BTK	**Batken**	**3.69**	**331**	*e*Pn			**Pn**	**20 52 53.4**	**+2.8**
BTK	**Batken**	**3.69**	**331**	*e*PN			**Pn**	**20 52 53.4**	**+2.8**
KBL	**Kabul**	**4.04**	**237**	*e*Pn			**Pn**	**20 52 58.3**	**+2.7**
KBL	**Kabul**	**4.04**	**237**	*e*PN			**Pn**	**20 52 58.3**	**+2.7**
THW	**Thamme Wali**	**4.20**	**196**	P			**Pn**	**20 53 00.1**	**+2.6**
ARSB	**Arslanbob**	**4.48**	**359**	*e*Pn			**Pn**	**20 53 02.8**	**+1.3**
SARP	**Sargodha**	**4.92**	**185**	P			**Pn**	**20 53 10.2**	**+2.8**
DHRM	**DHARAMSHALA**	**5.27**	**149**	*e*P			**Pn**	**20 53 14.7**	**+2.2**
DHRM				*e*S			**Sn**	**20 54 11.1**	**-1.0**
DHRM				IAML				20 54 23.0	
	comp=E,962nm,0.5s								
DHRM				IAML				20 54 25.0	
	comp=N,582nm,0.1s								
AML	**Almayashu**	**5.30**	**5**	P			**Pn**	**20 53 14.6**	**+1.6**
	SNR=179								
KZA	**Kyzart**	**5.48**	**17**	P			**Pn**	**20 53 17.2**	**+1.8**
	SNR=277								
UCH	**Uchtor**	**5.48**	**11**	P			**Pn**	**20 53 17.7**	**+2.2**
	SNR=286								
EKS2	**Erkin-Say**	**5.83**	**5**	P			**Pn**	**20 53 21.9**	**+1.9**
	SNR=195								
AAK	**Ala-Archa**	**5.88**	**10**	Pn			**Pn**	**20 53 23.0**	**+2.3**
	comp=N,8.8nm,0.3s,baz=170,slow=7.7,SNR=104								
AAK				Sn			**Sn**	**20 54 35.9**	**+8.9**
	comp=N,1.8nm,0.3s,baz=343,slow=19,SNR=3.8								
AAK	**Ala-Archa**	**5.88**	**10**	P			**Pn**	**20 53 23.1**	**+2.3**
	SNR=43								
AAK	**Ala-Archa**	**5.88**	**10**	*e*Pn			**Pn**	**20 53 22.9**	**+2.1**
AAK	**Ala-Archa**	**5.88**	**10**	⇑Pn			**Pn**	**20 53 22.8**	**+2.0**
	comp=N,85nm,0.8s								
AAK				⇓Sn			**Sn**	**20 54 27.9**	**+0.9**
	comp=N,200nm,0.8s								
AAK				⇓Lg			Lg	20 55 00.5	
	comp=N,143nm,0.8s								
AAK	**Ala-Archa**	**5.88**	**10**	*i* Pn			**Pn**	**20 53 22.9**	**+2.1**
	SNR=12								
AAK	**Ala-Archa**	**5.88**	**10**	*ce*PN			**Pn**	**20 53 22.8**	**+2.0**
AAK				pmax			pmax		
	comp=Z,39nm,0.6s								
AAK	**Ala-Archa**	**5.88**	**10**	P			**Pn**	**20 53 23.0**	**+2.3**
	SNR=38								
ULHL	**Ulahol**	**5.91**	**23**	P			**Pn**	**20 53 23.1**	**+1.9**
	SNR=74								
KBK	**Karagaybulak**	**5.97**	**13**	P			**Pn**	**20 53 24.3**	**+2.3**
	SNR=96								
BOOM	**Boomskoye usch**	**6.04**	**20**	*e*Pn			**Pn**	**20 53 25.2**	**+2.3**
BOOM	**Boomskoye usch**	**6.04**	**20**	*e*PN			**Pn**	**20 53 25.2**	**+2.3**
FRU1	**Bishkek**	**6.07**	**10**	*e*Pn			**Pn**	**20 53 25.7**	**+2.4**
FRU1	**Bishkek**	**6.07**	**10**	*e*PN			**Pn**	**20 53 25.7**	**+2.4**
CHMS	**Chumysh**	**6.28**	**11**	P			**Pn**	**20 53 27.9**	**+1.9**
	SNR=40								
TKM2	**Tokmak 2**	**6.36**	**17**	P			**Pn**	**20 53 29.4**	**+2.1**
	SNR=102								
TKM2	**Tokmak 2**	**6.36**	**17**	⇑Pn			**Pn**	**20 53 28.3**	**+1.0**
	comp=Z,77nm,0.7s								
TKM2				⇓Lg			Lg	20 55 18.4	
	comp=Z,148nm,1.1s								
USP	**Ospenovka**	**6.50**	**9**	P			**Pn**	**20 53 30.7**	**+1.5**
	SNR=17								
KK31	**Karatay Array**	**6.57**	**343**	*e*Pn			**Pn**	**20 53 30.9**	**+0.9**
KK31	**Karatay Array**	**6.57**	**343**	Pn			**Pn**	**20 53 29.4**	**-0.7**
	comp=Z,13nm,0.3s,baz=171,slow=15,SNR=384								
KK31				⇓Sn			**Sn**	**20 54 43.1**	**-0.6**
	comp=Z,38nm,0.5s,baz=137,slow=22,SNR=4.7								
KK31	**Karatay Array**	**6.57**	**343**	*e*PN			**Pn**	**20 53 30.9**	**+0.9**
KKAR	**Karatay Array**	**6.57**	**343**	*e*Pn			**Pn**	**20 53 30.9**	**+0.9**
KKAR	**Karatay Array**	**6.57**	**343**	*e*PN			**Pn**	**20 53 30.9**	**+0.9**
SMLA	**Simla**	**6.61**	**148**	*e*P			**Pn**	**20 53 31.6**	**+1.1**
SMLA				*e*S			**Sn**	**20 54 39.0**	**-5.6**
SMLA				IAML				20 54 51.0	
	comp=E,3μm,0.4s								
SMLA				IAML				20 54 51.1	
	comp=N,1μm,0.6s								
KNDC	**Almaty**	**7.01**	**24**	⇓Pn			**Pn**	**20 53 37.9**	**+1.8**
KNDC				⇓Pg				20 54 02.0	
KNDC				⇑Lg			Lg	20 55 38.5	
DDI	**Dehra Dun**	**7.69**	**146**	*e*P			**Pn**	**20 53 45.9**	**+0.4**
DDI				*e*S			**Sn**	**20 55 05.3**	**-6.0**
DDI				IAML				20 55 22.4	
	comp=N,474nm,0.7s								
PDGK	**Podgornoye**	**8.10**	**35**	⇓Pn			**Pn**	**20 53 51.5**	**+0.3**
	comp=N,39nm,0.7s								
PDGK				⇑Pg				20 54 25.4	
	comp=N,65nm,0.7s								
PDGK				⇑Lg			Lg	20 56 14.6	
	comp=N,174nm,0.9s								
NDI	**New Delhi**	**8.83**	**156**	*e*P			**Pn**	**20 54 01.0**	**-0.1**
NDI				*e*S			**Sn**	**20 55 33.0**	**-6.2**
OTUK	**Ortayu**	**11.41**	**357**	⇑Pn			**Pn**	**20 54 34.8**	**-1.5**
	comp=N,20nm,0.7s								
OTUK				⇑Lg			Lg	20 57 55.8	
	comp=N,32nm,0.9s								
MAKZ	**Makanchi**	**11.94**	**31**	*e*Pn			**Pn**	**20 54 43.8**	**+0.3**
MAKZ	**Makanchi**	**11.94**	**31**	⇓Pn			**Pn**	**20 54 42.9**	**-0.6**
	comp=N,15nm,0.7s								
MAKZ	**Makanchi**	**11.94**	**31**	*e*P			**Pn**	**20 54 43.8**	**+0.3**
GEYT	**Alibeck**	**12.00**	**280**	Pn			**Pn**	**20 54 42.9**	**-1.5**
	comp=N,4.7nm,0.3s,baz=102,slow=11,SNR=69								
GEYT				Sn			**Sn**	**20 56 54.0**	**-2.9**
	comp=N,0.8nm,0.3s,baz=86,slow=19,SNR=3.2								
GEYT				LR			LR	21 00 38.3	
	comp=N,1μm,20.7s,baz=85,slow=44								
GYA0B	**ALIBECK ARRAY**	**12.00**	**280**	*e*Pn			**Pn**	**20 54 43.0**	**-1.4**
GYA0B	**ALIBECK ARRAY**	**12.00**	**280**	⇓Pn			**Pn**	**20 54 42.6**	**-1.9**
GYA0B				⇑Sn			**Sn**	**20 56 53.4**	**-3.5**
PYUN	**Piuthan**	**12.04**	**134**	*e*P			**Pn**	**20 54 42.3**	**-2.9**
	comp=N,111nm,0.4s								
MK31	**Makanchi Array**	**12.05**	**32**	*e*Pn			**Pn**	**20 54 45.0**	**-0.1**
MK31	**Makanchi Array**	**12.05**	**32**	Pn			**Pn**	**20 54 44.6**	**-0.5**
	comp=N,13nm,0.7s,baz=214,slow=12,SNR=68								
MK31	**Makanchi Array**	**12.05**	**32**	*e*P			**Pn**	**20 54 45.0**	**-0.1**
MK32	**Makanchi Array**	**12.05**	**32**	*e*Pn			**Pn**	**20 54 44.8**	**-0.3**
MK32				*e*				20 58 11.3	
MKAR	**Makanchi Array**	**12.05**	**32**	Pn			**Pn**	**20 54 44.8**	**-0.3**
	comp=N,0.6nm,0.3s,baz=207,slow=12,SNR=64								
MKAR				Lg			Lg	20 58 11.3	
	comp=N,0.1nm,0.3s,baz=216,slow=29,SNR=2.3								
MKAR				LR			LR	20 59 51.5	
	comp=N,940nm,20.1s,baz=216,slow=40								
MKAR	**Makanchi Array**	**12.05**	**32**	*i* P			**Pn**	**20 54 44.7**	**-0.4**
MKAR				pmax			pmax		
	comp=Z,11nm,0.9s								
DANN	**Dangsing**	**12.32**	**130**	*e*P			**Pn**	**20 54 46.6**	**-2.5**
	comp=Z,124nm,0.4s								
KOLN	**Koldanda**	**12.65**	**133**	*e*P			**Pn**	**20 54 51.2**	**-2.3**
	comp=Z,55nm,0.4s								
WMQ	**Urumqi**	**13.11**	**53**	*e*P			**Pn**	**20 55 02.3**	**+2.8**
WMQ				pP			P	20 55 11.4	+2.6
WMQ				sP				20 55 19.5	
WMQ				S			**Sn**	**20 57 26.3**	**+2.4**
WMQ				pmax			pmax		
	comp=Z,35nm,0.9s								
WMQ				pmax			pmax		
	comp=Z,140nm,5.3s								
WMQ				LR			LR		
	comp=Z,640nm,15.9s								
WMQ				LR			LR		
	comp=Z,750nm,16.7s								
WMQ				LR			LR		
	comp=Z,780nm,20.7s								
WMQ	**Urumqi**	**13.11**	**53**	*e*Pn			**Pn**	**20 54 58.3**	**-1.2**
WMQ	**Urumqi**	**13.11**	**53**	*e*P			**Pn**	**20 54 58.3**	**-1.2**
GKN	**Gorkha**	**13.11**	**129**	*e*P			**Pn**	**20 54 56.3**	**-3.4**
	comp=Z,104nm,0.5s								
KKN	**Kakani**	**13.66**	**128**	*e*P			**Pn**	**20 55 03.0**	**-4.3**
	comp=Z,83nm,0.6s								
DMN	**Daman**	**13.68**	**129**	*e*P			**Pn**	**20 55 04.1**	**-3.5**
	comp=Z,97nm,0.7s								
PKIN	**Phulchoki**	**13.88**	**128**	*e*P			Pn	20 55 05.9	-4.5
	comp=Z,49nm,0.5s								
PKI	**Pulchoki**	**13.89**	**128**	*e*P			Pn	20 55 06.1	-4.5
	comp=Z,69nm,0.5s								
GUN	**Gumba**	**13.96**	**126**	*e*P			Pn	20 55 07.0	-4.5
	comp=Z,74nm,0.4s								
BHPL	**Bhopal**	**14.05**	**164**	*e*P			**Pn**	**20 55 11.5**	**-1.0**
BHPL				IAmb			IAmb	20 55 15.1	
	comp=Z,20nm,0.5s								
KURBB	**Kurchatov Arra**	**14.31**	**14**	Pn			**Pn**	**20 55 12.1**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=199,slow=12,SNR=5.0								
KURBB				Lg			Lg	20 59 19.9	
	baz=205,slow=26,SNR=4.7								
KURBB	**Kurchatov Arra**	**14.31**	**14**	⇑Pn			**Pn**	**20 55 12.6**	**-3.2**
	comp=Z,62nm,0.7s								
JIRN	**Jiri**	**14.33**	**126**	*e*P			Pn	20 55 11.4	-5.2
	comp=Z,177nm,0.5s								
KURK	**Kurchatov**	**14.42**	**14**	*e*Pn			**Pn**	**20 55 14.4**	**-2.8**
KURK	**Kurchatov**	**14.42**	**14**	*ce*P			**Pn**	**20 55 14.0**	**-3.3**
KURK				pmax			pmax		
	comp=Z,13nm,0.8s								
KURK	**Kurchatov**	**14.42**	**14**	P			**Pn**	**20 55 13.9**	**-3.3**
	SNR=17								
AB31	**Akbulak array**	**15.68**	**326**	Pn			**Pn**	**20 55 28.6**	**-5.2**
	comp=Z,19nm,0.6s,baz=138,slow=12,SNR=220								
AB31				⇑Sn			**Sn**	**20 58 25.0**	**-1.4**
	comp=Z,11nm,0.7s,baz=131,slow=23,SNR=4.5								
ABKAR	**Akbulak array**	**15.68**	**326**	*e*Pn			**Pn**	**20 55 30.5**	**-3.4**
	comp=Z,27nm,0.6s								
GTK	**Tadong**	**16.17**	**122**	*e*P			**Pn**	**20 55 38.2**	**-2.2**
GTK				IAmb			IAmb	20 55 44.8	
	comp=Z,46nm,0.3s								
BVAR	**Borovoye Array**	**16.30**	**354**	Pn			**Pn**	**20 55 38.8**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=159,slow=12,SNR=36								
BRVK	**Borovoye**	**16.34**	**354**	*e*Pn			**Pn**	**20 55 39.6**	**-2.6**
	comp=Z,27nm,0.9s								
BRVK	**Borovoye**	**16.34**	**354**	⇑Pn			**Pn**	**20 55 41.1**	**-1.1**
	comp=Z,22nm,0.8s								
BRVK	**Borovoye**	**16.34**	**354**	*d* iP			**Pn**	**20 55 38.6**	**-3.6**
BRVK				pmax			pmax		
	comp=Z,21nm,0.9s								
BRVK	**Borovoye**	**16.34**	**354**	P			**Pn**	**20 55 39.5**	**-2.7**
	SNR=13								
NGP	**Nagpur**	**16.46**	**160**	*e*P			**Pn**	**20 55 42.8**	**-1.2**
NGP				AMB			AMB	20 55 52.5	
	comp=Z,84nm,0.8s								
DGZ	**Jazzator, Alta**	**16.50**	**34**	*i* P			**Pn**	**20 55 44.0**	**-0.5**
DGZ				pmax			pmax		
	comp=Z,25nm,0.8s								
LSA	**Lhasa**	**16.65**	**110**	P			**Pn**	**20 55 42.0**	**-4.8**
LSA				pmax			pmax		
	comp=Z,16nm,0.9s								
LSA				LR			LR		
	comp=Z,9μm,14.9s								
LSA				LR			LR		
	comp=Z,5μm,15.7s								
LSA				LR			LR		
	comp=Z,4μm,9.3s								
LSA	**Lhasa**	**16.65**	**110**	*e*Pn			**Pn**	**20 55 43.4**	**-3.3**
LSA				*ep*P			**Pn**	**20 55 43.5**	**-3.3**
LSA	**Lhasa**	**16.65**	**110**	Pn			**Pn**	**20 55 43.5**	**-3.3**
LSA	**Lhasa**	**16.65**	**110**	*e*P			**Pn**	**20 55 43.4**	**-3.3**
BOK	**Bokaro**	**17.01**	**136**	*e*P			**Pn**	**20 55 51.4**	**+0.6**
BOK				IAmb			IAmb	20 55 51.8	
	comp=Z,89nm,1.1s								
AKTO	**Aktyubinsk**	**17.40**	**326**	P			**Pn**	**20 55 53.0**	**-2.5**
	comp=Z,2.3nm,0.3s,baz=130,slow=14,SNR=33								
AKTO				LR			LR	21 03 05.1	
	comp=Z,388nm,20.9s,baz=141,slow=39								
AKTO	**Aktyubinsk**	**17.40**	**326**	⇑Pn			**Pn**	**20 55 52.3**	**-3.2**
	comp=Z,43nm,0.9s								
AKTO				⇑Sn			**Sn**	**20 59 08.3**	**+0.3**
	comp=Z,16nm,0.8s								
AKTO	**Aktyubinsk**	**17.40**	**326**	P			**Pn**	**20 55 53.0**	**-2.5**
SHME	**Shamm**	**18.03**	**238**	Pn			**P**	**20 56 06.7**	**+3.2**
TAWA	**Tawang**	**18.31**	**115**	*e*P			**P**	**20 56 06.5**	**-0.5**
MDH	**Madha**	**18.42**	**236**	P			**Pn**	**20 56 09.3**	**+1.2**
WSAR	**Wadi Sarin**	**18.45**	**227**	P			**Pn**	**20 56 08.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=42,slow=9.2,SNR=4.6								
MSFE	**Esma-Masafi**	**18.47**	**236**	P			**Pn**	**20 56 10.8**	**+2.0**
TURI	**Tura**	**18.49**	**123**	*ex*			**P**	**20 56 04.0**	**-4.6**
TURI				IAmb			IAmb	20 56 09.5	
	comp=Z,38nm,0.8s								
UOSS	**Minazif**	**18.72**	**235**	*e*P			**P**	**20 56 10.7**	**-0.4**
	comp=Z,20nm,0.9s								
UOSS	**Minazif**	**18.72**	**235**	P			**Pn**	**20 56 13.6**	**+1.8**
ZAA0	**Zalesovo Array**	**18.93**	**22**	*e*P			**P**	**20 56 12.1**	**-1.0**
	comp=Z,82nm,0.8s								
ZAA0	**Zalesovo Array**	**18.93**	**22**	⇓Pn			**P**	**20 56 12.1**	**-1.0**
	comp=Z,12nm,0.8s								
ZALV	**Zalesovo Beam**	**18.93**	**22**	P			**P**	**20 56 11.9**	**-1.2**
	comp=Z,5.0nm,0.3s,baz=210,slow=11,SNR=255								
ZALV				LR			LR	21 03 51.4	
	comp=Z,390nm,20.1s,baz=245,slow=38								
ASHO	**Ashiyiah**	**19.00**	**235**	*i* Pn			**Pn**	**20 56 18.0**	**+2.8**
	SNR=9.1								
NVS	**Novosibirsk**	**19.29**	**18**	⇑*i*P			**P**	**20 56 16.4**	**-0.7**
NVS				*e*				20 59 45.4	
ASUD	**Al Ashush, Dub**	**19.52**	**236**	P			**Pn**	**20 56 22.3**	**+0.9**
SHL	**Shillong**	**19.55**	**120**	*e*P			**P**	**20 56 18.0**	**-2.3**
	comp=Z,22nm,0.7s								
SHL	**Shillong**	**19.55**	**120**	*e*P			**P**	**20 56 18.0**	**-2.3**
SHL				pmax			pmax		
	comp=Z,22nm,0.7s								
SHL	**Shillong**	**19.55**	**120**	*e*P			**P**	**20 56 19.5**	**-0.8**
SHL				*e*P			**Pn**	**20 56 21.5**	**-0.4**
SHL				IAmb			IAmb	20 56 22.4	
	comp=Z,7.6nm,0.8s								
TEZP	**TEZPUR**	**19.55**	**116**	*e*P			**P**	**20 56 19.8**	**-0.3**
TEZP				IAmb			IAmb	20 56 26.3	
	comp=Z,37nm,1.0s								
ALNE	**Al Ain**	**19.63**	**234**	*i* Pn			**Pn**	**20 56 24.8**	**+2.1**
	SNR=5.5								
ARQ

comp=Z,37nm,0.7s
KOHI KOHIMA 21.03 116 *ex* **P 20 56 35.8 -0.6**
VIS Vishakhapatnam 21.06 152 *i* P **P 20 56 36.6 0.0**
VIS *i* x x 21 00 42.3
GTA Gaotai 21.12 75 ⇓P **P 20 56 37.6 +0.4**
GTA pP pP 20 56 48.9 +0.2
GTA sP sP 20 56 54.8 +0.3
GTA pmax pmax
comp=Z,13nm,1.1s
GTA pmax pmax
comp=Z,210nm,7.0s
GTA LR LR
comp=Z,480nm,14.0s
GTA LR LR
comp=Z,430nm,14.9s
GTA LR LR
comp=Z,490nm,15.9s
DVE Vedeno 21.55 295 *i* P **P 20 56 44.2 +2.5**
DVE pmax pmax
comp=Z,56nm,0.8s
SVE Sverdlovsk 21.68 341 ⇓*i*P **P 20 56 42.7 -0.2**
SVE pmax pmax
comp=Z,31nm,0.6s
SVE MLR MLR
comp=Z,1μm,10.0s
GROC Groznyy 21.82 295 *e*P **P 20 56 42.8 -1.8**
GROC *e* 20 57 08.1
GROC *e*S **S 21 00 35.8 -7.7**
GROC pmax pmax
comp=Z,41nm,0.8s
ARU Arti 21.91 338 P **P 20 56 44.8 -0.6**
comp=Z,11nm,0.7s,baz=153,slow=8.7,SNR=41
ARU LR LR 21 05 48.4
comp=Z,294nm,21.7s,baz=142,slow=38
ARU Arti 21.91 338 *e*P **P 20 56 44.8 -0.6**
comp=Z,32nm,0.8s
ARU Arti 21.91 338*d i*P **P 20 56 44.7 -0.6**
ARU 20 57 07.8
ARU S **S 21 00 43.6 -1.3**
ARU SS **SnSn 21 01 08.3 -4.0**
ARU pmax pmax
comp=Z,49nm,1.6s
ARU MLR MLR
comp=Z,358nm,15.0s
GNI Garni 22.43 287 P **P 20 56 53.8 +2.5**
comp=Z,36nm,0.8s,baz=287,slow=1.7,SNR=16
GNI LR LR 21 08 19.5
comp=Z,194nm,20.3s,baz=82,slow=44
GNI Garni 22.43 287 *e*P **P 20 56 52.2 +1.0**
comp=Z,47nm,0.8s
GNI Garni 22.43 287 *i* P **P 20 56 53.9 +2.6**
SNR=9.1
GNI Garni 22.43 287*ce*P **P 20 56 54.6 +3.3**
GNI pmax pmax
comp=Z,584nm,1.7s
GNI Garni 22.43 287 P **P 20 56 55.2 +3.9**
SNR=9.9
TBLG Delisi 22.46 291 *e*P **P 20 56 53.0 +1.5**
comp=Z,17nm,0.8s
TBLG Delisi 22.46 291 *e*P **P 20 56 53.0 +1.5**
TBLG pmax pmax
comp=Z,17nm,0.8s
ZEI Tsey 23.16 294 *e*P **P 20 57 01.6 +2.7**
ZEI pmax pmax
comp=Z,15nm,0.6s
AKH Akhalkalaki 23.39 290 *e*P **P 20 57 02.6 +1.5**
comp=Z,42nm,0.9s
AKH Akhalkalaki 23.39 290 *e*P **P 20 57 02.6 +1.5**
AKH pmax pmax
comp=Z,42nm,0.9s
NCK Nalchik 23.45 296 *i* P **P 20 57 02.1 +0.5**
NCK pmax pmax
comp=Z,30nm,0.9s
KARS Kars 23.69 288 *e*P **P 20 57 04.8 +0.8**
KARS Kars 23.69 288 *e*P **P 20 57 04.8 +0.8**
KBZ Khabaz 23.98 296 P **P 20 57 07.2 +0.7**
comp=Z,6.3nm,0.8s,baz=118,slow=7.8,SNR=12
KBZ LR LR 21 08 26.9
comp=Z,324nm,18.3s,baz=94,slow=42
GOF Gofitskoye 24.06 299⇑*e*P **P 20 57 09.6 +2.4**
GOF pmax pmax
comp=Z,41nm,0.9s
NEY Neytrino 24.06 295 *i* P **P 20 57 09.7 +2.2**
KVAR Kislovodsk Arr 24.15 297 P **P 20 57 09.6 +1.3**
comp=Z,4.1nm,0.8s,baz=254,slow=20,SNR=11
KIV Kislovodsk 24.16 297 *e*P **P 20 57 09.1 +0.8**
comp=Z,13nm,0.7s
KIV Kislovodsk 24.16 297 *i* P **P 20 57 09.3 +1.1**
SNR=5.4
KIV Kislovodsk 24.16 297 *e*P **P 20 57 08.9 +0.7**
KIV *e*S **S 21 01 24.5 +1.0**
KIV pmax pmax
comp=Z,48nm,1.0s
KIV MLR MLR
comp=Z,420nm,14.0s
MOY Mondy 24.66 44 *e*P **P 20 57 13.9 +1.2**
MOY pmax pmax
comp=Z,15nm,1.3s
LZH Lanzhou 24.66 82 *e*P **P 20 57 14.4 +1.4**
LZH pP pP 20 57 27.3 +1.8
LZH sP sP 20 57 32.0 +0.9
LZH *e*S **S 21 01 33.8 +2.0**
LZH pmax pmax
comp=Z,37nm,1.1s
LZH pmax pmax
comp=Z,220nm,4.0s
LZH LR LR
comp=Z,920nm,10.8s
LZH LR LR
comp=Z,560nm,10.2s
LZH LR LR
comp=Z,970nm,12.6s
DOMR Dombai 24.86 295 *i* P **P 20 57 16.4 +1.7**
DOMR pmax pmax
comp=Z,8.0nm,0.8s
ZAK Zakamensk 25.48 48 *e*P **P 20 57 20.2 +0.1**
ZAK pmax pmax
comp=Z,14nm,0.9s
CD2 Chengdu 26.04 94 P **P 20 57 24.5 -0.8**
CD2 pmax pmax
comp=Z,20nm,0.6s
TLY Talaya 26.17 46 *e*P **P 20 57 26.9 +0.6**
comp=Z,5.8nm,0.8s
TLY Talaya 26.17 46*d i*P **P 20 57 25.9 -0.4**
KIRV Kirov 26.71 332 P **P 20 57 31.2 +0.2**
comp=Z,36nm,0.8s,baz=138,slow=2.3,SNR=18
KIRV LR LR 21 07 48.1
comp=Z,132nm,20.7s,baz=185,slow=36
SONA0 Songino Array 26.73 55 *e*P **P 20 57 31.9 +0.4**
SONA0 *e*PcP **PcP 21 00 55.0 +1.0**
SONM Songino Array 26.73 55 P **P 20 57 31.9 +0.4**
comp=Z,7.2nm,0.8s,baz=257,slow=9.4,SNR=29
SONM PcP **PcP 21 00 55.0 +1.0**
comp=Z,1.2nm,0.7s,baz=235,slow=5.1,SNR=3.2
SONM LR LR 21 09 32.5
comp=Z,532nm,19.8s,baz=257,slow=40
ULN Ulaanbaatar 27.17 55 *e*P **P 20 57 34.8 -0.8**
comp=Z,6.0nm,0.9s
ULN Ulaanbaatar 27.17 55*ce*P **P 20 57 35.6 +0.1**
ULN pmax pmax
comp=Z,12nm,1.7s
RAYN Ar Rayn 27.21 249 *e*P **P 20 57 36.5 +0.5**
comp=Z,9.0nm,0.9s
RAYN *e*PcP **PcP 21 00 55.6 +0.2**
RAYN Ar Rayn 27.21 249 P **P 20 57 38.6 +2.6**
RAYN Ar Rayn 27.21 249 *e*P **P 20 57 36.5 +0.5**
RAYN *e* 21 00 55.6
RAYN pmax pmax
comp=Z,9.0nm,0.9s
KMI Kunming 27.83 106 P **P 20 57 41.9 +0.2**
KMI pP pP 20 57 53.6 -0.7
KMI sP sP 20 58 02.4 +2.6
KMI PP PP 20 58 30.8 -14
KMI sS sS 21 02 44.6 +1.2
KMI pmax pmax
comp=Z,13nm,0.7s
KMI pmax pmax
comp=Z,110nm,3.5s
KMI LR LR
comp=Z,620nm,14.1s
KMI LR LR
comp=Z,400nm,13.7s
KMI LR LR
comp=Z,280nm,11.8s
VORD Divnogorie 27.89 311 *e*P **P 20 57 42.8 +1.1**
VORD pmax pmax
comp=Z,4.0nm,0.6s
VSR Storozhevoye 28.04 312 *e*P **P 20 57 42.5 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.8s
LPSR Galich'ya Gora 28.63 314 *e*P **P 20 57 48.3 +0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
CHTO Chiang Mai 28.90 121 *e*P **P 20 57 51.7 +0.7**
comp=Z,8.3nm,0.8s
CHTO Chiang Mai 28.90 121 *e*P **P 20 57 51.7 +0.7**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CMMT Chiang Mai 28.90 121 P **P 20 57 55.8 +4.7**
comp=Z,5.9nm,0.8s
CM31 Chiang Mai Arr 29.14 122 *e*P **P 20 57 53.2 0.0**
comp=Z,15nm,1.0s
CMAR Chiang Mai Arr 29.14 122 P **P 20 57 53.5 +0.3**
comp=Z,1.8nm,0.7s,baz=311,slow=10,SNR=11
CMAR PcP **PcP 21 01 01.1 +1.0**
comp=Z,1.2nm,0.6s,baz=297,slow=3.7,SNR=4.5
XAN Xi'an 29.19 85 P **P 20 57 53.1 -0.4**
XAN pP pP 20 58 01.4 -4.8
XAN pmax pmax
comp=Z,12nm,0.9s
XAN pmax pmax
comp=Z,240nm,4.4s
XAN Xi'an 29.19 85 *e*P **P 20 57 53.1 -0.4**
comp=Z,10nm,0.9s
XAN Xi'an 29.19 85 *e*P **P 20 57 53.1 -0.4**
XAN pmax pmax
comp=Z,10.0nm,0.9s
HHC Hu-ho-hao-te 30.03 70 *e*P **P 20 58 02.4 +1.4**
HHC sS sS 21 03 20.3 +2.7
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,20nm,6.0s
HHC LR LR
comp=Z,400nm,14.2s
HHC LR LR
comp=Z,550nm,16.7s
HHC LR LR
comp=Z,95nm,12.2s
NANT Nan 30.12 119 P **P 20 58 01.2 -0.7**
comp=Z,17μm,0.9s
PRGR Permogore 30.19 334 *e*P **P 20 57 59.2 -2.8**
PRGR pmax pmax
comp=Z,17nm,0.6s
GYA Guiyang 30.22 100⇑*i*P **P 20 58 03.1 +0.3**
GYA pP pP 20 58 12.6 -3.0
GYA sP sP 20 58 20.4 -0.7
GYA PP **PnPn 20 59 02.8 +1.3**
GYA S **S 21 02 58.0 -1.6**
GYA SS **ScP 21 04 38.1 -3.8**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,110nm,4.8s
GYA LR LR
comp=Z,210nm,15.4s
GYA LR LR
comp=Z,280nm,14.6s
GYA LR LR
comp=Z,260nm,14.8s
ILGA Ilgaz 30.76 290 *e*P **P 20 58 09.7 +2.1**
comp=Z,12nm,1.0s
OBN Obninsk 30.82 318 *e*P **P 20 58 07.0 -0.5**
comp=Z,28nm,0.7s
OBN Obninsk 30.82 318*d i*P **P 20 58 07.8 +0.2**
OBN *e* 20 59 12.0
OBN *e*S **S 21 03 08.1 +0.1**
OBN SS **ScP 21 04 46.0 +2.9**
OBN pmax pmax
comp=Z,19nm,0.5s
OBN MLR MLR
comp=Z,125nm,15.0s
SLVN Son La 30.84 112 *e*P **P 20 58 08.8 +0.6**
comp=Z,8.7nm,1.0s
ENH Enshi 30.86 92 *e*P **P 20 58 08.4 +0.1**
ENH *e* 20 58 08.8
BR101 Keskin Array S 30.97 288 *e*PcP **PcP 21 01 04.8 0.0**
BR131 Keskin Array S 30.97 288 *e*P **P 20 58 10.2 +0.8**
comp=Z,10nm,0.6s
BR131 Keskin Array S 30.97 288 P **P 20 58 10.6 +1.2**
SNR=7.5
BRTR Keskin Array B 30.97 288 P **P 20 58 10.5 +1.2**
comp=Z,8.9nm,0.6s,baz=106,slow=9.1,SNR=64
BRTR PcP **PcP 21 01 04.8 0.0**
comp=Z,1.0nm,0.8s,baz=109,slow=4.6,SNR=3.2
BRTR LR LR 21 14 26.9
comp=Z,100nm,20.2s,baz=76,slow=44
ANTO Ankara 31.59 288 *e*P **P 20 58 16.2 +1.4**
comp=Z,7.4nm,0.8s
ANTO Ankara 31.59 288 *e*P **P 20 58 16.2 +1.4**
ANTO pmax pmax
comp=Z,7.0nm,0.8s
BR231 Keskin MP Arra 31.61 288 *e*P **P 20 58 16.3 +1.4**
comp=Z,9.9nm,0.6s
PBKT Sadao Pong 31.84 122 P **P 20 58 20.0 +3.0**
comp=Z,3.7nm,0.5s,comp=Z,1μm
KLMR Klimovskoe 32.05 329 *e*P **P 20 58 16.7 -1.6**
KLMR pmax pmax
comp=Z,15nm,0.9s
KLMR Klimovskoe 32.05 329 *e*P **P 20 58 16.7 -1.6**
KLMR AMP 20 58 18.9
comp=Z,15nm,0.8s
NONG Nongkai 32.34 117 P **P 20 58 21.3 -0.1**
comp=Z,0.7nm,0.8s,comp=Z,111nm
CHAI Chaiyaphum 33.00 122 P **P 20 58 28.0 +0.8**
comp=Z,55μm,0.9s
KHON Khomkaen 33.27 120 P **P 20 58 29.8 +0.2**
comp=Z,154μm,0.9s
NRIK Noril'sk 33.50 9 P **P 20 58 30.7 -0.2**
comp=Z,16nm,0.9s,baz=199,slow=6.3,SNR=10
NRIK LR LR 21 13 29.7
comp=Z,220nm,18.2s,baz=212,slow=39
PHET Kaeng Krachan 33.63 128 P **P 20 58 35.0 +2.3**
comp=Z,45μm,0.8s
SKNT Sakolnakorn 33.66 118 P **P 20 58 32.5 -0.4**
comp=Z,86nm,0.9s
PANO Nakornpanom 33.99 117 P **P 20 58 36.5 +0.7**
comp=Z,1.0nm,0.9s,comp=Z,162nm
AKASG Malin Array Be 34.08 308 P **P 20 58 35.9 -0.3**
comp=Z,4.0nm,0.5s,baz=106,slow=9.2,SNR=21
AKASG LR LR 21 14 51.9
comp=Z,98nm,18.5s,baz=220,slow=40
AKBB Malin Array Si 34.08 308 *e*P **P 20 58 35.7 -0.5**
AKBB Malin Array Si 34.08 308 *e*P **P 20 58 35.7 -0.5**
YLV Yalova 34.09 290 ⇓*i*P **P 20 58 38.0 +1.4**
MILM Milestii Mici 34.10 301⇑*i*P **P 20 58 37.5 +1.1**
CFR Carcaliu 34.59 298 ⇓*i*P **P 20 58 41.4 +0.7**
BALB Balikesir 35.37 289 *e*P **P 20 58 49.1 +1.6**
comp=Z,62nm,0.9s
VRI Vrincioaia 35.55 299 ⇓*i*P **P 20 58 51.3 +2.3**
TESR Tescani 35.59 301⇑*i*P **P 20 58 50.6 +1.3**
PLOR Plostina 35.61 299⇑*i*P **P 20 58 51.7 +2.2**
PRAR RASCA 35.86 302 ⇓*i*P **P 20 58 52.9 +1.2**
MLR Muntele Rosu 36.12 299 *e*P **P 20 58 56.0 +2.0**
comp=Z,18nm,0.9s
MLR Muntele Rosu 36.12 299 ⇓*i*P **P 20 58 56.3 +2.3**
MLR Muntele Rosu 36.12 299 *e*P **P 20 58 56.0 +2.0**
MLR pmax pmax
comp=Z,18nm,0.9s
IDID Didziasalis 36.28 316 *e*P **P 20 58 55.2 +0.1**
IDID IAmb IAmb 20 58 56.4
comp=Z,4.2nm,0.6s
DOPR Dopca 36.48 300 ⇓*i*P **P 20 58 58.8 +1.8**
EZN Ezine 36.52 289⇑*i*P **P 20 58 58.9 +1.6**
ALN Alexandroupoli 36.54 291 *e*P **P 20 58 58.9 +1.4**
comp=Z,4.1nm,1.0s
ALN Alexandroupoli 36.54 291 *e*P **P 20 58 58.9 +1.4**
ALN pmax pmax
comp=Z,4.0nm,1.0s
BURAR Bucovina Array 36.55 303⇑*i*P **P 20 58 59.0 +1.4**
BUR08 Bucovina Ar. S 36.56 303 *e*P **P 20 58 58.5 +0.8**
comp=Z,3.8nm,0.8s
IIGN Ignalina 36.58 316 *e*P **P 20 58 57.8 +0.2**
IIGN IAmb IAmb 20 58 59.1
comp=Z,5.3nm,0.6s
VOIR 36.75 299⇑*i*P **P 20 59 00.8 +1.5**
KARP Karpathos 36.85 282 *e*P **P 20 59 00.5 +0.2**
comp=Z,71nm,0.9s
VSU Vasula 37.00 321*ce*P **P 20 59 00.8 -0.4**
VSU pmax pmax
comp=Z,39nm,1.0s
VSU Vasula 37.00 321 *e*P **P 20 59 00.7 -0.4**
VSU IAmb IAmb 20 59 02.0
comp=Z,36nm,0.8s
ARCR ARCALIA 37.15 302⇑*i*P **P 20 59 05.0 +2.4**
NJ2 Nanjing 37.73 83 *e*P **P 20 59 07.5 -0.2**
NJ2 pmax pmax
comp=Z,13nm,0.5s
LVZ Lovozero 37.79 337 *e*P **P 20 59 07.4 -0.4**
comp=Z,20nm,0.8s
LVZ Lovozero 37.79 337*ce*P **P 20 59 07.3 -0.5**
LVZ pmax pmax
comp=Z,50nm,2.5s
PABE Paberze 37.87 315 *e*P **P 20 59 08.3 -0.2**
PABE IAmb IAmb 20 59 09.7
comp=Z,14nm,0.6s
SANT Santorini 37.96 284 *e*P **P 20 59 09.1 -0.6**
comp=Z,49nm,1.0s
APA Apatity 37.99 337 ⇓*i*P **P 20 59 06.5 -3.0**
APA pmax pmax
comp=Z,1.0nm,0.7s
APA MLR MLR
comp=Z,200nm,10.0s
SUW Suwalki 38.13 313 *e*P **P 20 59 10.7 -0.1**
comp=Z,16nm,0.9s
SUW Suwalki 38.13 313 *e*P **P 20 59 10.7 -0.1**
SUW pmax pmax
comp=Z,16nm,0.9s
FIA1 FINESS Array S 38.17 325 *e*P **P 20 59 11.2 +0.2**
comp=Z,16nm,0.8s
FINES FINESS Array B 38.17 325 P **P 20 59 11.2 +0.1**
comp=Z,14nm,0.7s,baz=106,slow=11,SNR=51
FINES LR LR 21 15 39.7
comp=Z,219nm,19.3s,baz=108,slow=37
FINES FINESS Array B 38.17 325 *i* P **P 20 59 11.1 +0.1**
FINES pmax pmax
comp=Z,14nm,0.7s
KWP Kalwaria Pacla 38.20 306 *ep*P **P 20 59 13.3 +1.9**
KWP Kalwaria Pacla 38.20 306 *e*P **P 20 59 11.6 +0.1**
comp=Z,57nm,0.8s
KWP Kalwaria Pacla 38.20 306 *e*P **P 20 59 11.6 +0.1**
KWP pmax pmax
comp=Z,57nm,0.8s
DRGR 38.28 301⇑*i*P **P 20 59 14.1 +1.8**
TRPA Tarpa 38.34 303⇑*i*P **P 20 59 14.2 +1.6**
GZR Gura Zlata 38.35 299⇑*i*P **P 20 59 13.9 +1.1**
VTS Vitosha 38.35 295 *e*P **P 20 59 13.7 +0.7**
comp=Z,3.9nm,0.7s
VTS Vitosha 38.35 295 ⇓*i*P **P 20 59 14.5 +1.5**
VTS Vitosha 38.35 295 *e*P **P 20 59 13.7 +0.7**
VTS pmax pmax
comp=Z,4.0nm,0.7s
KOLS Kolonicke sedl 38.49 305 *e*P **P 20 59 14.8 +0.9**
KOLS *e* 21 00 45.7
KOLS Kolonicke sedl 38.49 305 *e*P **P 20 59 14.8 +0.9**
KOLS *e*PP **PnPn 21 00 45.7 +1.2**
BZS Buzias 39.14 299⇑*i*P **P 20 59 21.1 +1.7**
MDVR Moldovita 39.16 298⇑*i*P **P 20 59 21.2 +1.5**
LIT Litokhoron 39.35 291 *e*P **P 20 59 21.6 +0.3**
comp=Z,7.9nm,0.7s
LIT Litokhoron 39.35 291 *e*P **P 20 59 21.6 +0.3**
LIT pmax pmax
comp=Z,8.0nm,0.7s
AGG Agios Georgios 39.71 289 *e*P **P 20 59 24.8 +0.5**
comp=Z,3.4nm,0.8s
AGG Agios Georgios 39.71 289 *e*P **P 20 59 24.8 +0.5**
AGG pmax pmax
comp=Z,3.0nm,0.8s
OJC Ojcow 40.07 307 *e*P **P 20 59 26.7 -0.4**
comp=Z,15nm,1.2s
OJC Ojcow 40.07 307 *e*P **P 20 59 26.7 -0.4**
OJC pmax pmax
comp=Z,15nm,1.2s
PSZ Piszkesteto 40.12 303 *e*P **P 20 59 28.4 +0.8**
comp=Z,4.7nm,0.9s
PSZ Piszkesteto 40.12 303 *e*P **P 20 59 28.4 +0.8**
PSZ pmax pmax
comp=Z,5.0nm,0.9s
KULM Kulim 40.26 135 *e*P **P 20 59 30.1 +1.1**
comp=Z,4.7nm,0.8s
ITM Ithomi 40.48 286 *e*P **P 20 59 28.7 -1.9**
comp=Z,14nm,1.1s
ZEA Zeya 40.57 48 *e*P **P 20 59 31.8 +0.6**
ZEA pmax pmax
comp=Z,15nm,0.8s
VYHS Vyhne 40.78 304 *e*P **P 20 59 36.0 +3.0**
VYHS Vyhne 40.78 304 *e*P **P 20 59 36.0 +3.0**
IPM Ipoh 41.13 135 *e*P **P 20 59 35.8 -0.4**
comp=Z,11nm,0.8s
PDG Podgorica 41.28 295⇑*i*P **P 20 59 37.7 +0.5**
TTG Podgorica 41.28 295 *e*P **P 20 59 37.2 0.0**
comp=Z,5.2nm,0.7s
TTG Podgorica 41.28 295 *e*P **P 20 59 37.2 0.0**
TTG pmax pmax
comp=Z,5.0nm,0.7s
ARCES ARCESS Array B 41.49 337 P **P 20 59 38.6 +0.1**
comp=Z,24nm,0.7s,baz=113,slow=8.2,SNR=102
ARCES LR LR 21 18 08.4
comp=Z,145nm,19.8s,baz=106,slow=38
ARE0 ARCESS Array S 41.49 337 *e*P **P 20 59 38.8 +0.2**
comp=Z,1.1nm,0.7s
ARE0 ARCESS Array S 41.49 337 *e*P **P 20 59 39.1 +0.5**
MORC Moravsky Berou 41.54 306 *e*P **P 20 59 39.5 +0.2**
comp=Z,3.0nm,0.7s
MORC Moravsky Berou 41.54 306⇑*i*P **P 20 59 40.5 +1.2**
MORC Moravsky Berou 41.54 306 *e*P **P 20 59 39.5 +0.2**
MORC pmax pmax
comp=Z,3.0nm,0.7s
MORC Moravsky Berou 41.54 306 *e*P **P 20 59 38.4 -0.9**
HEF Hetta 41.62 335 *e*P **P 20 59 39.8 +0.1**
GKP Gorka Klasztor 41.63 312 *ep*P **P 20 59 40.6 +0.8**
GSI Gunungsitoli 41.96 142 *e*P **P 20 59 43.4 +0.5**
comp=Z,19nm,0.7s
GSI Gunungsitoli 41.96 142 P **P 20 59 44.9 +2.0**
KTK1 Kautokeino 42.00 336 *e*P **P 20 59 42.7 0.0**
DPC Dobruska-Polom 42.29 307 *e*P **P 20 59 45.8 +0.4**
DPC Dobruska-Polom 42.29 307 *e*P **P 20 59 45.8 +0.4**
DPC *ex* x 20 59 51.3
CHVC Chvalec 42.45 308 *e*P **P 20 59 47.6 +1.0**
UPC Upice 42.48 307 *e*P **P 20 59 47.4 +0.5**
UPC Upice 42.48 307 *e*P **P 20 59 47.4 +0.5**
UPC *ex* x 20 59 53.4
HAMF Hammerfest 42.55 338 *e*P **P 20 59 47.9 +0.9**
YAK Yakutsk 42.69 35 *e*P **P 20 59 47.7 -0.7**
comp=Z,24nm,0.7s
YAK Yakutsk 42.69 35 *e*P **P 20 59 47.1 -1.3**
YAK *e* 21 01 43.1
YAK *e*S **S 21 06 07.4 -1.2**
MDJ Mudanjiang 42.74 61 *e*P **P 20 59 48.5 -0.5**
MDJ *e* 20 59 48.8
CONA Conrad Observa 42.82 304 *e*P **P 20 59 51.0 +1.3**
comp=Z,6.0nm,0.8s
SSLB Suanglung 42.87 94 *e*P **P 20 59 51.6 +1.2**
comp=Z,12nm,0.9s
KS15 Wonju Array Si 43.12 72 *e*P **P 20 59 51.9 -0.3**
comp=Z,3.8nm,0.9s
KSRS Korea Array 43.14 72 P **P 20 59 52.1 -0.2**
comp=Z,2.5nm,0.6s,baz=282,slow=7.4,SNR=11
KSRS PcP **PcP 21 01 41.7 +0.3**
comp=Z,2.2nm,0.8s,baz=294,slow=3.1,SNR=6.2
KSRS LR LR 21 20 01.2
comp=Z,342nm,19.0s,baz=286,slow=39
MNSI Mandailing Nat 43.41 140 P **P 20 59 56.0 +1.3**
PRU Pruhonice 43.46 307 *e*P **P 20 59 55.5 +0.7**
PRU Pruhonice 43.46 307 *e*P **P 20 59 55.5 +0.7**
KLR Kul'dur 43.55 54 P **P 20 59 55.8 +0.2**
comp=Z,6.4nm,0.5s,baz=279,slow=7.5,SNR=24
KLR Kul'dur 43.55 54*d i*P **P 20 59 55.6 +0.1**
KLR pmax pmax
comp=Z,5.0nm,0.8s
TRO Tromso 43.66 336 *e*P **P 20 59 56.2 +0.2**
BRG Berggiesshubel 43.76 308 *i* P **P 20 59 58.1 +0.9**
comp=Z,7.3nm,0.6s
BRG Berggiesshubel 43.76 308 *i* P **P 20 59 58.1 +0.9**
BRG pmax pmax
comp=Z,7.0nm,0.6s
TIP Timpagrande 43.87 291 *e*P **P 20 59 58.2 -0.1**
comp=Z,4.1nm,0.8s
MOA Molln 43.89 304 *i* P **P 20 59 59.1 +0.8**
comp=Z,4.3nm,0.9s
OBKA Obir 43.90 302 *i* P **P 20 59 60.0 +1.5**
comp=Z,3.0nm,0.6s
GEC2 GERESS Array S 44.13 305 *e*P **P 21 00 00.5 +0.2**
comp=Z,1.4nm,0.8s
GEC2 GERESS Array S 44.13 305 *e*P **P 21 00 00.5 +0.2**
GEC2 pmax pmax
comp=Z,1.0nm,0.8s

GERES **GERESS Array B** 44.13 305 P **P** 21 00 01.0 +0.7
comp=Z,0.6nm,0.5s,baz=72,slow=8.6,SNR=7.9
GERES PcP **PcP** 21 01 44.7 -0.1
comp=Z,0.8nm,0.8s,baz=79,slow=5.2,SNR=3.2
KHC Kasperske Hory 44.18 306 *e*P **P** 21 00 01.6 +1.0
comp=Z,1.6nm,1.0s
KHC Kasperske Hory 44.18 306 *e*P **P** 21 00 01.6 +1.0
KHC Kasperske Hory 44.18 306 *e*P **P** 21 00 01.6 +1.0
CLL Collm 44.31 309 *e*P **P** 21 00 00.6 -1.0
comp=Z,4.5nm,0.7s
CLL Collm 44.31 309 *i* P **P** 21 00 00.6 -1.0
comp=Z,5.0nm,0.8s
CLL *e*PP **PcP** 21 01 45.0 -0.2
CLL *e*PPP PPP 21 02 22.0
CLL *e*S **S** 21 06 30.0 -2.6
CLL *e*SS **ScS** 21 09 54.0 -2.0
CLL LmV 21 30 00.0
comp=Z,100nm,18.0s
CLL Collm 44.31 309 *i* P **P** 21 00 00.6 -1.0
CLL pmax pmax
comp=Z,5.0nm,0.8s
MOR8 Moi Rana 44.37 330 *e*P **P** 21 00 01.4 -0.5
STEI Steigen 44.45 333 *e*P **P** 21 00 02.3 -0.1
USA0B Ussuriysk Arra 44.50 61 *e*P **P** 21 00 03.6 +0.4
comp=Z,5.5nm,0.8s
USRK Ussuriysk Ar. 44.50 61 P **P** 21 00 02.5 -0.7
comp=Z,3.8nm,0.7s,baz=272,slow=7.3,SNR=9.5
USRK LR LR 21 21 15.8
comp=Z,117nm,19.3s,baz=279,slow=40
VLA Vladivostok 44.66 63 *i* P **P** 21 00 03.6 -0.8
VLA pmax pmax
comp=Z,19nm,0.8s
TIXI Tiksi 44.82 22 P **P** 21 00 04.9 -0.4
comp=Z,28nm,0.7s,baz=284,slow=7.7,SNR=70
TIXI PcP **PcP** 21 01 45.6 -0.9
comp=Z,5.8nm,0.7s,baz=297,slow=4.2,SNR=3.7
TIXI Tiksi 44.82 22 *e*P **P** 21 00 04.4 -0.9
comp=Z,26nm,0.8s
TIXI *e*PcP **PcP** 21 01 46.0 -0.5
TIXI Tiksi 44.82 22 *e*P **P** 21 00 04.4 -0.9
TIXI *e* 21 01 46.0
TIXI pmax pmax
comp=Z,26nm,0.8s
NC405 NORSAR Array S 44.91 323 *e*P **P** 21 00 06.0 -0.2
comp=Z,30nm,0.9s
MYKOM Kota Tinggi 44.94 134 *e*P **P** 21 00 07.2 +0.2
comp=Z,16nm,0.9s
KONS Konsvik 44.95 331 *e*P **P** 21 00 06.5 0.0
NC602 NORSAR Array S 44.97 322 *e*P **P** 21 00 06.2 -0.5
comp=Z,18nm,1.0s
NC602 NORSAR Array S 44.97 322 *e*P **P** 21 00 06.3 -0.4
NC303 NORSAR Array S 45.08 323 *e*P **P** 21 00 08.0 +0.4
comp=Z,32nm,0.8s
NC303 *e*PcP **PcP** 21 01 48.4 +0.8
NC303 NORSAR Array S 45.08 323 *e*P **P** 21 00 07.8 +0.2
NB201 NORSAR Array S 45.11 323 *e*P **P** 21 00 07.8 0.0
comp=Z,44nm,1.4s
NB201 NORSAR Array S 45.11 323 *e*P **P** 21 00 07.8 0.0
NSS Namsos 45.12 328 *e*P **P** 21 00 08.2 +0.4
NB2 NORSAR Subarra 45.15 323 P **P** 21 00 07.4 -0.8
comp=Z,20nm,1.0s,baz=93,slow=7.9
NB2 NORSAR Subarra 45.15 323 P **P** 21 00 07.4 -0.8
baz=93,slow=7.9
NOA NORSAR Array B 45.15 323 P **P** 21 00 07.7 -0.5
comp=Z,12nm,0.8s,baz=93,slow=7.7,SNR=89
NOA LR LR 21 21 10.4
comp=Z,129nm,19.7s,baz=120,slow=39
ABTA Abfaltersbach 45.24 302 *e*P **P** 21 00 09.2 0.0
comp=Z,3.0nm,1.0s
NAO01 NORSAR Array S 45.30 322 *e*P **P** 21 00 09.0 -0.3
comp=Z,17nm,0.8s
NAO01 NORSAR Array S 45.30 322 *e*P **P** 21 00 08.9 -0.4
PDSI Padang 45.32 140 P **P** 21 00 10.6 +0.6
OSL Oslo 45.34 321 *e*P **P** 21 00 10.2 +0.5
NBO00 NORSAR Array S 45.36 323 *e*P **P** 21 00 09.7 -0.1
comp=Z,20nm,0.7s
NBO00 NORSAR Array S 45.36 323 *e*P **P** 21 00 09.5 -0.3
NC204 NORSAR Array S 45.38 323 *e*P **P** 21 00 09.9 -0.1
comp=Z,17nm,0.6s
NC204 NORSAR Array S 45.38 323 *e*P **P** 21 00 09.9 -0.1
TBLU Trondheim 45.74 326 *e*P **P** 21 00 12.6 -0.1
WTTA Wattenberg 45.74 303 *e*P **P** 21 00 13.5 +0.2
comp=Z,4.7nm,0.8s
WATA Walderalm 45.77 303 *i* P **P** 21 00 13.3 -0.1
comp=Z,3.0nm,0.7s
KONO Kongsberg 45.91 321 *e*P **P** 21 00 14.1 -0.1
comp=Z,14nm,0.8s
KONO Kongsberg 45.91 321 *ce*P **P** 21 00 13.8 -0.3
KONO pmax pmax
comp=Z,23nm,1.7s
KONO Kongsberg 45.91 321 *e*P **P** 21 00 13.7 -0.3
TPRI Tanjung Pinang 46.03 134 P P 21 00 20.4 +4.8
SQTA Sankt Quirin 46.04 303 *e*P **P** 21 00 15.5 0.0
comp=Z,1.7nm,0.4s
MOTA Moosalm 46.09 304 *e*P **P** 21 00 15.6 -0.3
comp=Z,4.7nm,0.7s
DOMB Dombas 46.22 324 *e*P **P** 21 00 17.3 +0.7
RETA Reutte 46.29 304 *i* P **P** 21 00 16.5 -0.9
comp=Z,0.5nm,0.2s,SNR=4.3
FETA Feichten 46.40 303 *e*P **P** 21 00 18.2 -0.1
comp=Z,3.2nm,0.8s
SKAR Skarslia 46.56 322 *e*P **P** 21 00 19.8 +0.5
FUORN Ofenpass-Fuorn 46.79 303 *e*P **P** 21 00 21.7 +0.1
comp=Z,4.1nm,0.7s
KRJI Kerinci 46.84 139 P **P** 21 00 26.3 +4.3
JNU Nakatsue 46.84 77 P **P** 21 00 22.1 +0.1
comp=Z,16nm,0.8s,baz=325,slow=1.4,SNR=11
JNU Nakatsue 46.84 77 *e*P **P** 21 00 21.9 0.0
comp=Z,19nm,0.8s
DAVA Damuels 46.91 304 *i* P **P** 21 00 22.1 -0.3
comp=Z,9.9nm,0.6s
AKN Aaknes 47.20 324 *e*P **P** 21 00 24.5 +0.3
TUE Stuetta 47.44 303 *e*P **P** 21 00 26.5 -0.1
comp=Z,4.7nm,0.8s
BLS5 Blasjo 47.51 320 *e*P **P** 21 00 28.1 +1.4
SPA0 Spitsbergen Ar 47.56 346 *e*P **P** 21 00 27.6 +0.7
comp=Z,12nm,0.9s
STAV Stavanger 47.92 320 *e*P **P** 21 00 30.4 +0.6
BER Bergen 48.03 322 *e*P **P** 21 00 30.8 +0.1
ASK Askoy 48.10 322 *e*P **P** 21 00 31.4 +0.3
KBS Kingsbay 48.66 347 *e*P **P** 21 00 35.8 +0.5
comp=Z,12nm,0.7s
KBS Kingsbay 48.66 347 *e*P **P** 21 00 35.8 +0.5
KBS pmax pmax
comp=Z,12nm,0.7s
SENIN Lac Senin/Sane 48.84 303 *e*P **P** 21 00 37.5 0.0
comp=Z,6.0nm,0.8s
WLF Walferdange 48.88 307 *e*P **P** 21 00 38.6 +1.2
comp=Z,33nm,0.8s
WLF Walferdange 48.88 307 *e*P **P** 21 00 38.6 +1.2
WLF pmax pmax
comp=Z,33nm,0.8s
KSM Kuching 49.14 127 *e*P **P** 21 00 40.1 +0.4
comp=Z,25nm,1.0s
PPBI Pangkal Pinang 49.46 134 P **P** 21 00 43.1 +0.9
BNI Bardonecchia 49.59 301 *e*P **P** 21 00 43.3 +0.2
comp=Z,6.7nm,0.9s
BNI Bardonecchia 49.59 301 *e*P **P** 21 00 43.3 +0.2
BNI pmax pmax
comp=Z,7.0nm,0.9s
SBUM Sibu 49.65 124 *e*P **P** 21 00 44.4 +0.7
comp=Z,4.8nm,0.9s
KKM Kota Kinabalu 49.82 117 *e*P **P** 21 00 45.0 -0.1
comp=Z,18nm,0.9s
MDSI Maura Dua 50.29 138 P **P** 21 00 49.5 +1.0
KMBO Kilima Mbogo 50.34 230 P **P** 21 00 50.9 +1.7
comp=Z,9.8nm,0.9s,baz=34,slow=11,SNR=16
KMBO LR LR 21 23 34.7
comp=Z,92nm,19.1s,baz=94,slow=38
KMBO Kilima Mbogo 50.34 230 *e*P **P** 21 00 50.9 +1.7
KMBO *e* 21 00 51.3
KMBO Kilima Mbogo 50.34 230 *i* P **P** 21 00 50.9 +1.7
SNR=7.9
KMBO Kilima Mbogo 50.34 230 *i* P **P** 21 00 52.2 +3.0
KMBO pmax pmax
comp=Z,10.0nm,0.9s
KEST Kesra 50.55 289 P **P** 21 00 51.3 +0.8
comp=Z,7.6nm,0.7s,baz=189,slow=1.7,SNR=12
KEST Kesra 50.55 289 *e*P **P** 21 00 51.2 +0.8
comp=Z,8.7nm,0.8s
TPI Tanjungpandan 50.82 133 P **P** 21 00 53.5 +1.0
SSB Saint Sauveur 50.99 302 *e*P **P** 21 00 54.0 +0.5
comp=Z,6.3nm,1.1s
SSB Saint Sauveur 50.99 302 *e*P **P** 21 00 54.0 +0.5
SSB pmax pmax
comp=Z,6.0nm,1.1s

YSS Yuzh-Sakhalins 51.22 55 *e*P **P** 21 00 54.8 -0.3
comp=Z,27nm,1.0s
YSS Yuzh-Sakhalins 51.22 55⇑ *e*P **P** 21 00 55.4 +0.3
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=Z,100nm,20.0s
YSS MLR MLR
comp=E,200nm,19.0s
MJB9 Matsu-Tunnel 51.22 70 *e*P **P** 21 00 55.1 -0.3
comp=E,8.9nm,0.8s
MAJO Matsushiro 51.23 70 *e*P **P** 21 00 54.8 -0.6
comp=E,8.7nm,0.8s
MAJO Matsushiro 51.23 70 *i* P **P** 21 00 54.6 -0.8
MAJO pmax pmax
comp=Z,8.0nm,0.8s
MAT Matsushiro 51.23 70 P **P** 21 00 54.7 -0.7
MJAR Matsushiro Arr 51.23 70 P **P** 21 00 55.2 -0.2
comp=Z,6.3nm,0.8s,baz=289,slow=10,SNR=20
MJAR LR LR 21 24 02.7
comp=Z,60nm,21.8s,baz=270,slow=38
CLF Chambon-Foret 51.76 306 *e*P **P** 21 00 60.0 +0.8
comp=Z,8.3nm,0.9s
ASAJ Asahikawa 51.91 59 P **P** 21 00 59.8 -0.6
comp=Z,5.6nm,1.0s,baz=255,slow=9.1,SNR=4.6
ASAJ LR LR 21 25 12.2
comp=Z,168nm,18.0s,baz=290,slow=39
ERM Erimo 52.96 61 *e*P **P** 21 01 08.6 +0.5
comp=Z,9.0nm,0.7s
ERM Erimo 52.96 61 *i* P **P** 21 01 09.3 +1.2
ERM pmax pmax
comp=Z,9.0nm,0.7s
JMIC Jan Mayen 52.97 336 LR LR 21 23 52.8
comp=Z,100nm,21.0s,baz=58,slow=36
MA2 Magadan 53.03 38 LR LR 21 24 40.4
comp=Z,236nm,18.8s,baz=280,slow=37
SEY Seymchan 53.18 34 P **P** 21 01 07.8 -1.7
comp=Z,3.3nm,0.7s,baz=238,slow=7.9,SNR=7.3
SEY PcP **PcP** 21 02 17.3 +0.3
comp=Z,4.0nm,0.8s,baz=264,slow=6.7,SNR=5.7
SEY Seymchan 53.18 34 *i* P **P** 21 01 09.2 -0.2
PBKI Pangkalan Bun 53.21 129 P **P** 21 01 14.9 +4.6
ESK Eskdalemuir 53.26 316 *e*P **P** 21 01 10.4 +0.2
comp=Z,8.9nm,0.9s
ESK Eskdalemuir 53.26 316 *e*P **P** 21 01 10.4 +0.2
ESK pmax pmax
comp=Z,9.0nm,0.9s
JHJ Hachijo jima 2 53.73 73 LR LR 21 25 59.5
comp=Z,166nm,20.3s,baz=275,slow=38
MBAR Mbarara 54.11 236 *e*P **P** 21 01 16.9 -0.2
comp=Z,8.3nm,0.8s
MBAR Mbarara 54.11 236 *e*P **P** 21 01 16.9 -0.2
MBAR pmax pmax
comp=Z,8.0nm,0.8s
LEM Lembang 54.12 136 LR LR 21 26 39.7
comp=Z,66nm,20.7s,baz=262,slow=39
CISI Cisompet, Garu 54.83 136 *e*P **P** 21 01 22.1 0.0
comp=Z,32nm,1.0s
DAG Danmarks Havn 54.89 344⇓ *i*P **P** 21 01 22.0 +0.3
DAG pmax pmax
comp=Z,13nm,0.7s
DAG Danmarks Havn 54.89 344⇓ *i*P **P** 21 01 22.0 +0.3
comp=Z,19nm,0.7s
BILL Bilibino 57.54 26⇑ *e*P **P** 21 01 38.9 -1.9
BILL *SP **sP** 21 01 59.0 -0.8
BILL 21 02 34.0
BILL S S 21 09 25.0 -10
BILL pmax pmax
comp=Z,3.0nm,0.9s
BILL MLR MLR
comp=Z,446nm,21.0s
PEA0B Petropavlovsk- 58.52 45 *e*P **P** 21 01 47.2 -0.7
comp=Z,15nm,1.0s
PETK Petropavlovsk- 58.52 45 P **P** 21 01 46.7 -1.2
comp=Z,2.8nm,0.7s,baz=336,slow=3.2,SNR=5.7
PETK LR LR 21 26 58.3
comp=Z,96nm,20.4s,baz=291,slow=36
ESDC Sonseca Array 58.81 298 P **P** 21 01 49.8 -0.4
comp=Z,4.1nm,0.6s,baz=57,slow=7.2,SNR=35
ESLA Sonseca Array 58.81 298 *e*P **P** 21 01 50.0 -0.1
comp=Z,4.6nm,0.8s
PAB San Pablo 59.13 298 *e*P **P** 21 01 51.9 -0.5
comp=Z,3.7nm,0.9s
PAB San Pablo 59.13 298 *e*P **P** 21 01 51.9 -0.5
PAB pmax pmax
comp=Z,4.0nm,0.9s
BORG Borgarnes 59.17 330 LR LR 21 27 36.7
comp=Z,83nm,21.1s,baz=67,slow=36
BORG Borgarnes 59.17 330 *e*P **P** 21 01 54.5 +2.4
comp=Z,7.6nm,0.9s
BORG Borgarnes 59.17 330 *e*P **P** 21 01 54.5 +2.4
BORG pmax pmax
comp=Z,8.0nm,0.9s
ABPO Ambohimpanom 60.70 208 *e*P **P** 21 02 03.6 +0.2
comp=Z,16nm,1.1s
ABPO Ambohimpanom 60.70 208 *e*P **P** 21 02 03.6 +0.2
ABPO pmax pmax
comp=Z,16nm,1.1s
SUMG Summit 61.29 341 *e*P **P** 21 02 07.3 +0.3
comp=Z,26nm,0.7s
SUMG Summit 61.29 341 *i* P **P** 21 02 08.1 +1.0
SUMG pmax pmax
comp=Z,62nm,0.7s
SUMG Summit 61.29 341 *i* P **P** 21 02 08.1 +1.0
comp=Z,62nm,0.7s
SANI Sanana 62.42 116 P **P** 21 02 18.5 +3.5
PVAQ Vaqueiros 62.44 298 *e*P **P** 21 02 15.0 +0.2
comp=Z,9.2nm,0.9s
TULEG Thule 64.38 351 *e*P **P** 21 02 26.4 -0.6
comp=Z,6.8nm,0.7s
ANGG Ammassalik, Gr 64.85 335 *e*P **P** 21 02 30.2 0.0
comp=Z,18nm,0.7s
ILULI Ilulissat 66.64 341 *e*P **P** 21 02 41.7 0.0
comp=Z,19nm,0.7s
ILULI Ilulissat 66.64 341 *e*P **P** 21 02 41.7 0.0
ILULI pmax pmax
comp=Z,19nm,0.7s
SOEI Soe 66.69 123 *e*P **P** 21 02 42.2 -0.7
comp=Z,70nm,1.0s
LSZ Lusaka 66.94 228 *e*P **P** 21 02 44.5 0.0
comp=Z,4.5nm,0.8s
LSZ Lusaka 66.94 228 *e*P **P** 21 02 44.5 0.0
LSZ pmax pmax
comp=Z,4.0nm,0.8s
TOA1 Torodi Ar. Sit 67.44 270 *e*P **P** 21 02 44.3 -3.4
TOA0 Torodi Ar. Sit 67.44 270 *e*P **P** 21 02 45.7 -2.0
comp=Z,4.1nm,0.6s
TORD Torodi Ar. Bea 67.44 270 P **P** 21 02 44.3 -3.4
comp=Z,3.7nm,0.7s,baz=45,slow=5.7,SNR=30
TORD LR LR 21 36 14.9
comp=Z,82nm,18.6s,baz=355,slow=40
FAKI Fak Fak 67.60 112 P **P** 21 02 53.1 +4.5
RES Resolute Bay 68.47 357 P **P** 21 02 53.2 +0.1
comp=Z,2.1nm,0.5s,baz=25,slow=8.2,SNR=14
RES Resolute Bay 68.47 357 *e*P **P** 21 02 52.8 -0.4
comp=Z,2.9nm,0.6s
RES Resolute Bay 68.47 357 *e*P **P** 21 02 52.8 -0.4
RES pmax pmax
comp=Z,3.0nm,0.6s
TOLK Toolik Lake Re 70.15 15 *e*P **P** 21 03 03.8 0.0
comp=Z,18nm,0.6s
COLD Coldfoot 71.17 16 *e*P **P** 21 03 09.7 -0.2
comp=Z,6.9nm,0.8s
IVI Ivigtut 71.30 334 *e*P **P** 21 03 11.8 +1.1
comp=Z,19nm,0.9s
FYU Fort Yukon 72.81 15 *e*P **P** 21 03 20.2 +0.5
comp=Z,8.2nm,0.7s
PSAD1 Pilbara Seismi 72.81 135 *e*P **P** 21 03 21.2 +0.9
comp=Z,21nm,1.0s
MLY Manley 72.84 18 *e*P **P** 21 03 19.8 -0.2
comp=Z,5.4nm,0.9s
PSAA2 Pilbara Seismi 72.91 135 *e*P **P** 21 03 20.8 -0.1
comp=Z,19nm,1.1s
PSAB2 Pilbara Seismi 72.91 135 *e*P **P** 21 03 20.9 0.0
comp=Z,19nm,1.0s
PSAA1 Pilbara Seismi 72.91 135 *e*P **P** 21 03 23.0 +2.1
comp=Z,15nm,0.9s
PSA00 Pilbara Seismi 72.92 135 *e*P **P** 21 03 20.6 -0.3
comp=Z,19nm,1.0s
PSAA3 Pilbara Seismi 72.92 135 *e*P **P** 21 03 23.4 +2.4
comp=Z,31nm,1.1s
PSAD3 Pilbara Seismi 72.93 135 *e*P **P** 21 03 23.8 +2.8
comp=Z,16nm,1.0s
PSAB3 Pilbara Seismi 72.94 135 *e*P **P** 21 03 23.7 +2.6
comp=Z,25nm,1.1s
PSAC2 Pilbara Seismi 72.94 135 *e*P **P** 21 03 23.9 +2.8
comp=Z,19nm,0.9s

PSAC3 Pilbara Seismi 72.94 135 *e*P **P** 21 03 23.7 +2.6
comp=Z,15nm,1.1s
PSAD2 Pilbara Seismi 73.02 135 *e*P **P** 21 03 23.6 +2.1
comp=Z,19nm,1.0s
INK Inuvik 73.28 10 *e*P **P** 21 03 22.4 0.0
comp=Z,12nm,1.0s
INK Inuvik 73.28 10 *e*P **P** 21 03 22.4 0.0
INK pmax pmax
comp=Z,11nm,1.0s
GENI Genyem 73.39 106 P **P** 21 03 25.8 +1.9
BPAW Bear Paw Mtn. 73.53 19 *e*P **P** 21 03 23.8 -0.3
comp=Z,6.1nm,0.9s
COLA College 73.66 17 *e*P **P** 21 03 24.8 +0.1
comp=Z,18nm,0.8s
COLA College 73.66 17 *d i*P **P** 21 03 24.3 -0.4
COLA pmax pmax
comp=Z,12nm,0.8s
FITZ Fitzroy Crossi 73.73 128 *e*P **P** 21 03 26.7 +0.9
comp=Z,24nm,1.0s
CAST Castle Rocks 73.80 19 *e*P **P** 21 03 25.9 +0.3
comp=Z,10nm,0.9s
CCB Clear Creek Bu 73.86 17 *e*P **P** 21 03 25.3 -0.6
comp=Z,3.0nm,1.0s
WRH Wood River Hil 73.94 17 *e*P **P** 21 03 25.5 -0.9
comp=Z,4.7nm,0.8s
ILAR Eielson Array 73.97 17 P **P** 21 03 25.8 -0.9
comp=Z,4.9nm,0.8s,baz=321,slow=5.0,SNR=43
ILAR PP **PP** 21 06 11.4 +0.1
comp=Z,1.4nm,0.9s,baz=320,slow=8.7,SNR=5.2
ILAR LR LR 21 39 59.5
comp=Z,56nm,18.2s,baz=308,slow=39
ILB Eielson Array 73.97 17 *e*P **P** 21 03 25.7 -0.9
comp=Z,4.6nm,0.8s
KTH Kantishna Hill 74.00 19 *e*P **P** 21 03 26.4 -0.5
comp=Z,11nm,0.9s
PPLA Purkeypile 74.20 20 *e*P **P** 21 03 28.4 +0.2
comp=Z,11nm,1.1s
TRF Thorofare Moun 74.25 19 *e*P **P** 21 03 28.7 +0.3
comp=Z,2.8nm,1.2s
HDA Harding Lake 74.27 17 *e*P **P** 21 03 27.4 -0.9
comp=Z,4.2nm,0.8s
MCK McKinley 74.36 18 *e*P **P** 21 03 28.3 -0.6
comp=Z,6.0nm,0.6s
MCK McKinley 74.36 18 *e*P **P** 21 03 28.3 -0.6
MCK pmax pmax
comp=Z,6.0nm,0.6s
RND Reindeer 74.65 18 *e*P **P** 21 03 29.9 -0.8
comp=Z,6.7nm,0.6s
RND Reindeer 74.65 18 *e*P **P** 21 03 29.9 -0.8
RND pmax pmax
comp=Z,7.0nm,0.6s
EGAK Eagle 75.20 14 *e*P **P** 21 03 32.8 -0.9
comp=Z,4.1nm,0.9s
RIDG Independent Ri 75.32 16 *e*P **P** 21 03 33.9 -0.6
comp=Z,10nm,1.1s
DOT Dot Lake 75.58 16 *e*P **P** 21 03 35.2 -0.7
comp=Z,5.2nm,0.7s
PAX Paxson 75.84 17 *e*P **P** 21 03 37.2 -0.4
comp=Z,9.0nm,0.6s
PAX Paxson 75.84 17 *e*P **P** 21 03 37.2 -0.4
PAX pmax pmax
comp=Z,9.0nm,0.6s
PMR Palmer 76.09 19 *e*P **P** 21 03 38.1 -0.7
comp=Z,8.2nm,0.7s
PMR Palmer 76.09 19 *e*P **P** 21 03 38.1 -0.7
PMR pmax pmax
comp=Z,8.0nm,0.7s
LBTB Lobatse 76.09 224 *e*P **P** 21 03 39.6 +0.2
comp=Z,9.9nm,0.8s
LBTB Lobatse 76.09 224 *e*P **P** 21 03 39.6 +0.2
LBTB pmax pmax
comp=Z,10.0nm,0.8s
SML Sawmill 76.12 19 *e*P **P** 21 03 38.6 -0.5
comp=Z,26nm,0.8s
SML Sawmill 76.12 19 *e*P **P** 21 03 38.6 -0.5
SML pmax pmax
comp=Z,26nm,0.8s
DAWY Dawson 76.19 14 *e*P **P** 21 03 39.2 -0.2
comp=Z,7.4nm,0.8s
RC01 Rabbit Creek A 76.34 20 *e*P **P** 21 03 39.9 -0.4
comp=Z,6.9nm,0.7s
SCM Sheep Creek Mo 76.36 18 *e*P **P** 21 03 40.2 -0.2
comp=Z,18nm,0.6s
KNK Knik Glacier 76.42 19 *e*P **P** 21 03 40.2 -0.6
comp=Z,10nm,0.7s
DBIC Dimbokro 76.43 268 P **P** 21 03 40.0 -1.6
comp=Z,5.4nm,0.9s,baz=15,slow=8.2,SNR=4.1
DBIC LR LR 21 42 13.9
comp=Z,92nm,19.6s,baz=34,slow=40
DBIC Dimbokro 76.43 268 *e*P **P** 21 03 40.0 -1.6
comp=Z,7.5nm,0.9s
DBIC Dimbokro 76.43 268 *e*P **P** 21 03 40.0 -1.6
DBIC pmax pmax
comp=Z,8.0nm,0.9s
EYAK Cordova Ski Ar 77.85 19 *e*P **P** 21 03 49.2 +0.4
comp=Z,8.0nm,0.7s
KDAK Kodiak Island 78.22 23 P **P** 21 03 51.1 +0.2
comp=Z,16nm,0.7s,baz=7.3,slow=2.4,SNR=14
KDAK Kodiak Island 78.22 23 *e*P **P** 21 03 51.1 +0.2
comp=Z,18nm,0.8s
MANU Manus Island 78.65 101 *e*P **P** 21 03 54.7 +0.7
comp=Z,17nm,0.9s
BOSA Boshof 79.13 222 P **P** 21 03 56.2 -0.1
comp=Z,3.1nm,0.6s,baz=105,slow=8.5,SNR=4.9
HYT Haines Junctio 79.50 15 *e*P **P** 21 03 58.2 +0.2
comp=Z,18nm,0.9s
WHY Whitehorse 80.17 14 *e*P **P** 21 04 00.8 -0.9
comp=Z,3.7nm,0.6s
WRA Warramunga Arr 80.73 123 P **P** 21 04 05.2 +0.2
comp=Z,21nm,0.9s,baz=306,slow=5.7,SNR=92
WRAB Tennant Creek 80.73 123 *e*P **P** 21 04 05.2 +0.2
comp=Z,24nm,0.9s
WRAB Tennant Creek 80.73 123 *e*P **P** 21 04 05.2 +0.2
WRAB pmax pmax
comp=Z,24nm,0.9s
WB2 Warramunga Arr 80.74 123 *e*P **P** 21 04 05.4 +0.3
comp=Z,23nm,0.9s
YKW3 Yellowknife Ar 80.74 4 *e*P **P** 21 04 04.2 -0.3
comp=Z,12nm,0.7s
YKA Yellowknife Ar 80.81 4 P **P** 21 04 04.9 +0.1
comp=Z,12nm,0.6s,baz=349,slow=5.4,SNR=110
YKA LR LR 21 42 53.0
comp=Z,6.5nm,19.1s,baz=352,slow=38
BESE Bessie Mountai 82.10 14 *e*P **P** 21 04 13.1 +1.2
comp=Z,6.7nm,0.8s
SCHQ Schefferville 82.44 338 LR LR 21 40 19.9
comp=Z,76nm,21.3s,baz=288,slow=35
PMG Port Moresby 83.05 107 *e*P **P** 21 04 18.3 +0.9
comp=Z,28nm,1.0s
PMG Port Moresby 83.05 107 *e*P **P** 21 04 18.3 +0.9
PMG pmax pmax
comp=Z,28nm,1.0s
AS31 Alice Springs 83.06 126 *e*P **P** 21 04 16.9 -0.3
comp=Z,2.6nm,0.8s
ASAR Alice Springs 83.06 126 P **P** 21 04 17.2 0.0
comp=Z,8.7nm,0.8s,baz=310,slow=5.2,SNR=55
DLBC Dease Lake 83.12 12 *e*P **P** 21 04 17.8 +0.6
comp=Z,9.0nm,0.8s
FCC Fort Churchill 84.16 353 *e*P **P** 21 04 22.7 +0.4
comp=Z,8.2nm,0.8s
FCC Fort Churchill 84.16 353 *e*P **P** 21 04 22.7 +0.4
FCC pmax pmax
comp=Z,8.0nm,0.8s
WRAK Wrangell Islan 84.61 14 *e*P **P** 21 04 25.3 +0.6
comp=Z,12nm,0.8s
FFC Flin Flon 88.70 357 *e*P **P** 21 04 44.9 +0.2
comp=Z,7.4nm,0.8s
FFC Flin Flon 88.70 357 *e*P **P** 21 04 44.9 +0.2
FFC pmax pmax
comp=Z,7.0nm,0.8s
VLDQ Val d'Or 91.44 341 *e*P **P** 21 04 57.9 +0.3
comp=Z,3.9nm,0.9s
ULM Lac du Bonnet 92.74 353 LR LR 21 50 37.1
comp=Z,57nm,18.3s,baz=30,slow=38
LON Longmire 95.71 10 *e*P **P** 21 05 17.1 -0.3
comp=Z,3.0nm,0.9s
LON Longmire 95.71 10 *e*P **P** 21 05 17.1 -0.3
LON pmax pmax
comp=Z,3.0nm,0.9s
E38A The Farm, Brul 95.80 349 *e*P **P** 21 05 16.9 -0.8
comp=Z,10nm,1.1s
PDAR Pinedale Array 100.73 2 P **Pdif** 21 05 40.2 -0.1
comp=Z,0.3nm,0.6s,baz=358,slow=3.2,SNR=3.3
CPUP Villa Florida 136.94 269 PKP **PKPdf** 21 11 14.0 -0.3
comp=Z,2.5nm,0.8s,baz=16,slow=2.8,SNR=4.4
PLCA Paso Flores 151.56 251 PKPbc **PKPbc** 21 11 45.4 -0.1
comp=Z,4.8nm,0.7s,baz=158,slow=1.1,SNR=9.4
PLCA Paso Flores 151.56 251 *e*PKPbc **PKPbc** 21 11 44.7 -0.8

GO05	Huala	151.74	263	*e*PKPbc	PKPbc	21 11 45.6	-0.4

IDC 21 21:17:19.9±1.4, 25°.44S×69°.67E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/44, mbtmp3.8/7, MS3.4/3, Ms1 3.4/3, ms1mx2.9/26, Error ellipse: s-maj=53.8km s-min=25.1km az=28.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	17.90	9	T	T	21 40 07.1	
	baz=189,slow=76,SNR=162						
H08S2	Diego Garcia H	17.90	9	T	T	21 39 56.1	
	baz=189,slow=76,SNR=259						
H08S3	Diego Garcia H	17.92	9	T	T	21 39 59.8	
	baz=189,slow=76,SNR=251						
H01W2	Cape Leeuwin H	39.31	115	T	T	22 06 28.2	
	baz=271,slow=75,SNR=153						
H01W3	Cape Leeuwin H	39.31	115	T	T	22 06 27.9	
	baz=271,slow=75,SNR=161						
H01W1	Cape Leeuwin H	39.33	115	T	T	22 06 29.2	
	baz=271,slow=75,SNR=170						
BOSA	Boshof	39.52	255	LR	LR	21 37 50.5	
	comp=Z,129nm,19.9s,baz=77,slow=31						
ASAR	Alice Springs	57.93	103	P	P	21 27 13.9	-0.5
	0.5nm,0.7s,baz=249,slow=6.0,SNR=5.9						
WRA	Warramunga Arr	59.42	99	P	P	21 27 25.0	+0.2
	2.0nm,1.1s,baz=246,slow=6.3,SNR=2.4						
MKAR	Makanchi Array	72.80	9	P	P	21 28 49.4	-0.7
	0.6nm,0.6s,baz=190,slow=6.2,SNR=8.1						
BRTR	Keskin Array B	73.03	332	P	P	21 28 51.7	0.0
	0.2nm,0.4s,baz=132,slow=8.0,SNR=2.7						
BRTR				LR	LR	21 59 17.6	
	comp=Z,14nm,19.8s,baz=96,slow=34						
TORD	Torodi Ar. Bea	76.48	292	P	P	21 29 12.3	+0.2
	1.0nm,1.0s,baz=108,slow=5.3,SNR=2.7						
SONM	Songino Array	80.07	24	P	P	21 29 32.7	+1.3
	0.8nm,0.8s,baz=205,slow=4.6,SNR=4.1						
ZALV	Zalesovo Beam	80.14	9	P	P	21 29 31.5	0.0
	1.1nm,0.7s,baz=188,slow=4.2,SNR=3.4						
GERES	GERESS Array B	89.23	327	LR	LR	22 09 34.6	
	comp=Z,9.4nm,18.7s,baz=338,slow=35						

JMA ***21*** *21:22:31.7±0.6, 46°.71N×152°.79E, h30km, M4.7*
ISCJB ***21*** *21:22:33.0±0.6, 46°.70N±0°.06×152°.53E±0°.09, h52km, mb3.9/21, MS2.6/1, Error ellipse: s-maj=12.1km s-min=3.5km az=137.8*
SKHL ***21*** *21:22:33.6±0.7, 46°.69N×152°.62E, h52km±7km, mb4.4/8*
MOS ***21*** *21:22:33.4±1.3, 46°.65N×152°.71E, h60km, mb4.3/9, Error ellipse: s-maj=13.4km s-min=8.0km az=50.0*
IDC ***21*** *21:22:37.2±2.7, 46°.79N×152°.56E, h72km±23km, mb3.6/14, mb1 3.8/18, mb1mx3.6/40, mbtmp3.9/18, MS2.8/1, Ms1 2.8/1, ms1mx2.4/34, Error ellipse: s-maj=24.4km s-min=15.1km az=134.0*

ISC 21 21:22:33.4±0.8, 46°.54N±0°.09×152°.67E±0°.09, h52km, n87, σ2§47/96, mb3.9/25, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.60	251	*c iP*N	Pn	21 23 29.1	+2.5
KUR				*i* S	Sn	21 24 10.5	+2.7
KUR				pmax	pmax		
	comp=Z,212nm,0.1s						
KUR				pmax	pmax		
	comp=N,176nm,0.2s						
KUR				pmax	pmax		
	comp=E,81nm,0.1s						
KUR				smax	smax		
	comp=E,488nm,0.6s						
KUR				smax	smax		
	comp=N,277nm,0.3s						
KUR	Kuril'sk	3.60	251	*e*P	Pn	21 23 27.7	+1.1
KUR				AMB	AMB	21 23 29.4	
	comp=N,156nm,0.4s						
KUR				*e*S	Sn	21 24 08.8	+1.0
KUR				A	A	21 24 28.0	
	comp=N,280nm,0.4s						
KUR				A	A	21 24 28.0	
	comp=N,250nm,0.4s						
SKR	Severo-Kuril's	4.74	28	*e*PN	Pn	21 23 41.0	-1.2
SKR				*e*S	Sn	21 24 32.0	-3.7
SKR				pmax	pmax		
	comp=Z,31nm,0.8s						
SKR				smax	smax		
	comp=N,92nm,0.7s						
SKR				smax	smax		
	comp=E,116nm,0.6s						
SKR	Severo-Kuril's	4.74	28	*e*P	Pn	21 23 41.0	-1.2
SKR				AMB	AMB	21 23 42.0	
	comp=E,30nm,0.8s						
SKR				*e*S	Sn	21 24 31.0	-4.7
SKR				A	A	21 24 40.0	
	comp=E,91nm,0.4s						
SKR				A	A	21 24 40.0	
	comp=E,115nm,0.4s						
YUK	Yuzh-Kuril'sk	5.42	245	*i* PN	Pn	21 23 54.6	+3.1
YUK	Yuzh-Kuril'sk	5.42	245	*e*P	Pn	21 23 53.5	+2.0
YUK				AMB	AMB	21 23 58.7	
	comp=E,30nm,0.4s						
YUK				*e*S	Sn	21 24 55.0	+2.5
LAGR	Lagunnoye	5.45	245	PN	Pn	21 23 54.9	+2.9
LAGR				S	Sn	21 24 56.0	+2.6
LAGR				pmax	pmax		
	comp=Z,124nm,0.2s						
LAGR				smax	smax		
	comp=E,456nm,0.4s						
LAGR				smax	smax		
	comp=N,176nm,0.1s						
LAGR	Lagunnoye	5.45	245	*e*P	Pn	21 23 54.0	+2.0
LAGR				AMB	AMB	21 23 58.0	
	comp=N,12nm,0.4s						
LAGR				*e*S	Sn	21 24 56.0	+2.6
LAGR				A	A	21 25 10.0	
	comp=N,176nm,0.5s						
LAGR				A	A	21 25 10.0	
	comp=N,230nm,0.5s						
GRPR	Tuman	5.49	245	*e*S	Sn	21 24 56.0	+1.6
PAU	Pauzhetka	5.64	27	*e*S	Sn	21 24 54.8	-3.0
GLVR	Golovnino	5.78	244	PN	Pn	21 23 58.5	+2.0
GLVR				S	Sn	21 25 04.0	+2.6
GLVR				pmax	pmax		
	comp=N,107nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,207nm,0.4s						
GLVR				pmax	pmax		
	comp=E,61nm,0.1s						
GLVR				smax	smax		
	comp=E,189nm,0.2s						
GLVR				smax	smax		
	comp=E,324nm,0.3s						
GLVR	Golovnino	5.78	244	*e*P	Pn	21 23 58.0	+1.5
GLVR				AMB	AMB	21 24 04.0	
	comp=E,61nm,0.4s						
GLVR				AMB	AMB	21 24 04.0	
	comp=E,21nm,0.4s						
GLVR				*e*S	Sn	21 25 04.0	+2.6
GLVR				A	A	21 25 18.0	
	comp=E,160nm,0.4s						
NEM2	Nemuro 2	5.85	240	P	Pn	21 23 57.6	+0.1
NEM2				*e*S	Sn	21 25 01.1	-2.0
JRA	Rausu	5.93	247	P	Pn	21 24 01.4	+2.9
JNK	Nakash	6.36	245	P	Pn	21 24 06.7	+2.3
JNK				*e*S	Sn	21 25 17.0	+1.3
JAK	Akkeshi	6.69	241	P	Pn	21 24 09.3	+0.4
JAK				*e*S	Sn	21 25 21.3	-2.4
JTKR	Abashiri--Toko	6.70	251	P	Pn	21 24 12.3	+3.3
YSS	Yuzh-Sakhalins	6.83	277	*e*PN	Pn	21 24 16.0	+5.2
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS	Yuzh-Sakhalins	6.83	277	*e*P	Pn	21 24 10.8	0.0
YSS				AMB	AMB	21 24 18.6	
	comp=Z,30nm,0.7s						
JMP	Maruseppu	7.04	252	P	Pn	21 24 17.4	+3.6
JAR	Ashorobuto	7.10	246	P	Pn	21 24 16.8	+2.2
JAR				*e*S	Sn	21 25 36.3	+2.4
JOB	Onbets	7.27	243	P	Pn	21 24 17.9	+1.0
JOB				*e*S	Sn	21 25 37.1	-0.8
PETK	Petropavlovsk-	7.34	24	P	Pn	21 24 18.7	+0.9
	comp=Z,0.3nm,0.3s,baz=182,slow=12,SNR=6.6						
PETK				S	Sn	21 25 57.0	+17
	comp=Z,0.1nm,0.3s,baz=89,slow=19,SNR=2.4						
JKK2	Kamakawa 2	7.50	253	P	Pn	21 24 23.6	+3.5
JKA	Kamikawa-asahi	7.50	255	*e*P	Pn	21 24 24.3	+4.2
ASAJ	Asahikawa	7.50	255	P	Pn	21 24 24.2	+4.2
	comp=Z,1.6nm,0.3s,baz=77,slow=15,SNR=23						
ASAJ				S	Sn	21 26 01.8	+18
	comp=Z,0.6nm,0.3s,baz=49,slow=20,SNR=2.7						
ASAJ	Asahikawa	7.50	255	P	Pn	21 24 24.9	+4.8
JCH	Churui	7.72	243	P	Pn	21 24 23.6	+0.6
JCH				*e*S	Sn	21 25 47.1	-1.9
ERM	Erimo	8.19	240	*i* PN	Pn	21 24 31.2	+1.8
JBT2	Biratori 2	8.25	247	P	Pn	21 24 31.8	+1.4
JBT2				*e*S	Sn	21 26 03.7	+1.6
JNBK	Urakawa-nobuka	8.28	243	P	Pn	21 24 30.5	-0.2
JNB	Noboribetsu	9.25	248	P	Pn	21 24 46.2	+2.1
JNB				*e*S	Sn	21 26 25.8	-0.8
JKB	Kayabe	9.56	245	P	Pn	21 24 47.9	-0.3
JKB				*e*S	Sn	21 26 29.9	-4.3
JYM2	Yakumo 2	9.86	248	P	Pn	21 24 52.8	+0.5
JSR	Shiriuchi	10.14	245	P	Pn	21 24 55.6	-0.6
JTM	Tenmabayashi	10.18	240	P	Pn	21 24 55.4	-1.3
JTM				*e*S	Sn	21 26 41.8	-7.6
JANG	Nango	10.18	237	P	Pn	21 24 54.5	-2.3
JANG				*e*S	Sn	21 26 40.8	-8.6
JOSM	Okushiri--Mats	10.45	250	P	Pn	21 25 01.2	+0.8
KLR	Kul'dur	14.29	288	*i* P	Pn	21 25 46.8	-5.9
KLR	Kul'dur	14.29	288	*e*P	Pn	21 25 46.8	-5.9
EKMR	Ekimchan	14.29	304	*e*P	Pn	21 25 52.0	-0.7
EKMR				AMB	AMB	21 26 03.4	
	comp=Z,4.0nm,0.5s						
MJA0	Matsu Arr-Uro	14.69	232	*e*P	Pn	21 25 59.8	+1.8
MJAR	Matshiro Arr	14.71	232	P	Pn	21 26 00.8	+2.5
	baz=31,slow=10,SNR=5.1						
USRK	Ussuriysk Ar.	14.72	268	P	Pn	21 26 00.4	+2.1
	comp=Z,0.8nm,0.3s,baz=70,slow=12,SNR=13						
SEY	Seymchan	16.43	360	*i* P	P	21 26 31.4	+9.2
BMKR	Bomnak	17.12	307	*e*P	Pn	21 26 26.5	-2.3
BMKR				AMB	AMB	21 26 35.0	
	comp=Z,4.0nm,0.8s						
KROS	Kirovskiy	18.09	305	*e*P	P	21 26 39.0	-1.5
KROS				AMB	AMB	21 26 45.0	
	comp=Z,3.0nm,0.5s						
YAK	Yakutsk	20.34	328	*e*P	Pn	21 27 05.4	-2.0
KSRS	Korea Array	20.44	253	P	Pn	21 27 10.8	+1.9
	comp=Z,1.7nm,0.6s,baz=54,slow=11,SNR=9.9						
KSRS				LR	LR	21 33 34.3	
	comp=Z,29nm,21.0s,baz=110,slow=32						
TIXI	Tiksi	27.59	344	*i* P	P	21 28 17.7	+2.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
H11N2	WAKE ISLAND Hy	29.17	152	T	T	21 59 48.1	
	baz=340,slow=76,SNR=970						
H11N1	WAKE ISLAND Hy	29.19	152	T	T	21 59 58.5	
	baz=340,slow=76,SNR=523						
H11N3	WAKE ISLAND Hy	29.19	152	T	T	21 59 58.7	
	baz=340,slow=76,SNR=529						
H11S1	WAKE ISLAND Hy	30.25	153	T	T	22 01 19.3	
	baz=340,slow=76,SNR=830						
H11S3	WAKE ISLAND Hy	30.26	153	T	T	22 01 17.3	
	baz=340,slow=76,SNR=891						
H11S2	WAKE ISLAND Hy	30.27	153	T	T	22 01 23.5	
	baz=340,slow=76,SNR=781						
ULN	Ulaanbaatar	30.68	289	*i* P	P	21 28 38.4	-4.7
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	36.91	38	P	P	21 29 37.1	+0.4
	comp=Z,0.3nm,0.7s,baz=256,slow=7.3,SNR=3.0						
INK	Inuvik	41.99	32	P	P	21 30 19.8	+0.9
	comp=Z,0.9nm,0.6s,baz=320,slow=7.9,SNR=4.1						
ZALV	Zalesovo Beam	42.49	306	P	P	21 30 21.3	-1.8
	comp=Z,0.5nm,0.4s,baz=86,slow=7.7,SNR=2.4						
ZALV				PcP	PcP	21 32 15.8	+0.8
	comp=Z,0.4nm,0.4s,baz=72,slow=4.7,SNR=2.9						
MKAR	Makanchi Array	46.77	297	P	P	21 30 56.8	-0.6
	comp=Z,0.8nm,0.5s,baz=57,slow=5.7,SNR=12						
MKAR				PcP	PcP	21 32 30.8	+0.9
	comp=Z,0.7nm,0.7s,baz=66,slow=4.4,SNR=5.5						
MKAR	Makanchi Array	46.77	297	*e*P	P	21 30 57.0	-0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	47.23	304	*i* P	P	21 30 57.8	-3.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	Borovoye	50.80	309	*i* P	P	21 31 24.6	-3.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
CMAR	Chiang Mai Arr	52.02	256	P	P	21 31 39.8	+2.1
	comp=Z,0.9nm,0.7s,baz=36,slow=7.1,SNR=6.7						
ARCES	ARCESS Array B	57.95	341	P	P	21 32 19.9	+0.1
	comp=Z,1.6nm,0.9s,baz=43,slow=6.7,SNR=4.5						
ARCES	ARCESS Array B	57.95	341	*e*P	P	21 32 21.8	+2.0
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	64.10	335	P	P	21 33 01.2	-0.3
	comp=Z,2.0nm,0.5s,baz=30,slow=8.1,SNR=30						
GEYT	Alibeck	66.45	301	P	P	21 33 18.1	+0.8
	comp=Z,1.2nm,0.6s,baz=56,slow=5.4,SNR=3.4						
NB2	NORSAR Subarra	68.33	341	P	P	21 33 28.5	-0.2
	comp=Z,1.0nm,0.6s,baz=27,slow=6.5						
NOA	NORSAR Array B	68.33	341	P	P	21 33 28.7	0.0
	comp=Z,1.1nm,0.6s,baz=27,slow=6.4,SNR=11						
AKASG	Malin Array Be	71.55	326	P	P	21 33 48.2	-0.4
	comp=Z,2.7nm,0.4s,baz=38,slow=6.0,SNR=10						
AKASG	Malin Array Be	71.55	326	*e*P	P	21 33 48.4	-0.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ASAR	Alice Springs	71.91	198	P	P	21 33 53.1	+2.2
	comp=Z,0.6nm,0.6s,baz=12,slow=5.5,SNR=9.8						
CLL	Collm	76.53	335	*i* P	P	21 34 16.4	-1.2
	comp=Z,3.0nm,0.7s						
CLL	Collm	76.53	335	*i* P	P	21 34 16.4	-1.2
CLL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TXAR	Lajitas Array	77.86	60	P	P	21 34 27.0	+1.4
	comp=Z,0.3nm,0.5s,baz=347,slow=3.7,SNR=3.0						
KHC	Kasperske Hory	78.30	334	*e*P	P	21 34 23.0	-4.6
KHC	Kasperske Hory	78.30	334	*e*P	P	21 34 23.0	-4.6
BRTR	Keskin Array B	78.34	316	P	P	21 34 29.6	+1.4
	comp=Z,0.6nm,0.7s,baz=68,slow=3.0,SNR=5.2						
GERES	GERESS Array B	78.51	334	P	P	21 34 29.2	+0.4
	comp=Z,0.6nm,0.5s,baz=35,slow=4.9,SNR=6.8						
CONA	Conrad Observa	78.64	332	*e*P	P	21 34 30.2	+0.7
	comp=Z,1.3nm,0.6s						
MOA	Molln	79.22	333	*e*P	P	21 34 33.8	+1.1
	comp=Z,1.6nm,0.7s						
KBA	Koelnbreinsper	80.19	333	*i* PcP	P	21 34 39.8	+1.7
	comp=Z,3.8nm,0.5s						
WATA	Walderalm	80.50	334	*i* PcP	P	21 34 41.2	+1.4
	comp=Z,2.9nm,0.5s						
WTTA	Wettenberg	80.55	334	*e*PcP	P	21 34 41.7	+1.7
	comp=Z,3.5nm,0.5s						
MOTA	Moosalm	80.64	335	*i* PcP	P	21 34 41.8	+1.3

MAN 21 22:11:26.5, 7°.28N×124°.81E, h3km, mb4.2, ML3.0, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.64	23	*e*P	Pg	22 11 39.6	+0.7
BUKP				*e*S	Sn	22 11 52.4	-0.9
SKMP	Bagumbayan, Su	0.80	199	*e*P	Pg	22 11 42.0	+0.1
SKMP				*e*S	Sn	22 11 56.7	-0.5
CGP	Cagayan de Oro	1.17	355	*i*P	Pg	22 11 48.8	-0.1
CGP				*e*S	Sg	22 12 03.6	-0.5
DDMP	Don Marcelino,	1.48	142	*e*P	Pn	22 11 53.6	-0.4
DDMP				*e*S	Sg	22 12 14.4	+0.4
IPIL	Ipil	2.27	283	*e*P	Pn	22 12 04.8	-0.2
IPIL				*e*S	Sb	22 12 35.8	-0.9

IDC ***21*** *22:13:57.3±2.8, 14°.02N×92°.88W, h0km, mb3.7/4, mb1 4.0/7, mb1mx3.7/39, mbtmp3.6/7, ML3.4/3, MS3.5/1, Ms1 3.4/1, ms1mx2.5/32, Error ellipse: s-maj=56.8km s-min=24.8km az=12.0*
ISCJB ***21*** *22:13:59.4±1.4, 13°.9N±0°.1×92°.98W±0°.06, h35km, mb3.7/4, MS3.5/1, Error ellipse: s-maj=20.4km s-min=6.9km az=17.2*
GCG ***21*** *22:14:13.6±0.3, 14°.55N×91°.94W, h57km±31km, MD4.2*

ISC 21 22:14:02.3±1.6, 14°.0N±0°.2×92°.92W±0°.08, h35km, n14, σ1§38/15, mb3.7/4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	1.38	72	*e*P	Pn	22 14 24.0	-0.9
STG3	Santiaguito 3,	1.48	62	*e*P	Pn	22 14 24.9	-1.7
FUG	Fuego 3	2.06	78	*e*P	Pn	22 14 33.0	-1.6
PCG	Pacaya	2.27	80	*e*P	Pn	22 14 36.4	-1.1
IXG	Ixpaco	2.41	86	*e*P	Pn	22 14 38.9	-0.5
APG	El Apazote	2.57	67	Pn	Pn	22 14 40.5	-1.2
	6.3nm,0.3s,baz=259,slow=6.6,SNR=84						
APG				Sn	Sn	22 15 13.3	+1.4
	14nm,0.3s,baz=107,slow=19,SNR=4.5						
CMIG	Matias Romero	3.60	328	Pn	Pn	22 14 53.6	-1.9
	2.7nm,0.3s,baz=165,slow=14,SNR=20						
CMIG				Sn	Sn	22 15 38.6	+1.7
	6.2nm,0.3s,baz=81,slow=19,SNR=6.9						
TXAR	Lajitas Array	18.21	329	P	Pn	22 18 12.5	+0.1
	0.0nm,0.3s,baz=155,slow=8.7,SNR=7.6						
PDAR	Pinedale Array	32.05	337	P	P	22 20 26.8	+0.8
	0.4nm,0.8s,baz=135,slow=9.0,SNR=3.5						
NVAR	Mina Array Bea	33.11	322	P	P	22 20 37.1	+1.9
	0.8nm,0.7s,baz=134,slow=7.7,SNR=1.8						
SCHQ	Schefferville	45.52	21	LR	LR	22 43 10.2	
	comp=Z,49nm,18.5s,baz=158,slow=38						
YKA	Yellowknife Ar	50.81	347	P	P	22 22 58.4	-0.5
	1.8nm,0.8s,baz=148,slow=7.6,SNR=16						
ILAR	Eielson Array	62.48	337	P	P	22 24 21.4	-0.5
	0.4nm,0.7s,baz=107,slow=4.8,SNR=4.2						
CMAR	Chiang Mai Arr	145.68	340	PKPbc	PKPdf	22 33 38.0	+0.1
	0.5nm,0.3s,baz=336,slow=3.4,SNR=5.1						

BJI ***21*** *22:19:00.4±0.0, 12°.24N×143°.93E, h6km, mb4.8/44, mB5.2/39, Ms4.9/48, Ms7 4.7/45*
ISCJB ***21*** *22:19:03.4±1.3, 12°.58N±0°.03×143°.75E±0°.02, h9km±7km, mb5.2/209, MS4.7/41, Error ellipse: s-maj=4.8km s-min=4.0km az=169.4*
GCMT ***21*** *22:19:06.0±0.1, 12°.52N±0°.01×143°.71E±0°.01, h12km, MW5.3/114, Moment Tensor Solution. s64,c96; s114,c169; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.88±.02; $M_{\theta\theta}$-0.09±.02; $M_{\phi\phi}$0.96±.02; $M_{r\theta}$-0.06±.06; $M_{\theta\phi}$-0.68±.01; $M_{r\phi}$0.31±.05; Best double couple: $M_0$1.13600×10^{17} NP1:ϕ_s162.00000°, δ53.00000°, λ-79.00000°. NP2:ϕ_s324.00000°, δ38.00000°, λ-105.00000°. Principal axes: T 1.3410, Plg8.0000°, Azm244.0000°; N -0.4100, Plg9.0000°, Azm336.0000°; P -0.9310, Plg78.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***21*** *22:19:06.7±1.1, 12°.61N×143°.64E, h33km, mb5.3/42, MS4.7/9 Error ellipse: s-maj=10.8km s-min=6.6km az=101.7*
IDC ***21*** *22:19:07.3±2.9, 12°.61N×143°.83E, h21km±18km, mb4.6/28, mb1 4.7/31, mb1mx4.6/42, mbtmp4.7/31, ML3.9/2, MS4.3/9, Ms1 4.3/9, ms1mx4.1/15, Error ellipse: s-maj=13.3km s-min=8.8km az=94.0*
DJA ***21*** *22:19:08.5±3.4, 13°N±7°×14°4E±°, h23km±33km, M5.2/7, mB5.7/6, mb5.2/7, MLv5.1/1, Mw(mB)5.2/6, Mwp5.5/1*
NEIC ***21*** *22:19:09.0±1.3, 12°.54N×143°.73E, h35km±2km, mb5.3/192, Error ellipse: s-maj=15.1km s-min=12.6km az=99.0*

ISC 21 22:19:06.4±0.6, 12°.58N±0°.04×143°.88E±0°.04, h19km±2km, n449, σ1§41/441, mb5.3/217, MS4.8/43, 3C-2D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.40	44	Pn	Pn	22 19 31.2	+0.3
	1μm,0.3s,baz=192,slow=3.0,SNR=491						
GUMO				Sn	Sb	22 19 49.5	+0.1
	1μm,0.3s,baz=232,slow=19,SNR=19						
GUMO	Guam	1.40	44	*e*Pn	Pn	22 19 31.1	+0.2
GUMO	Guam	1.40	44	*e*P	Pn	22 19 31.1	+0.2
JAY	Jayapura	15.32	192	Pn	Pn	22 22 41.8	0.0
	0.3nm,0.3s,baz=360,slow=9.0,SNR=12						
JAY				LR	LR	22 28 00.8	
	comp=Z,2μm,19.3s,baz=15,slow=35						
JAY	Jayapura	15.32	192	P	P	22 22 45.6	-0.9
	432nm,1.2s,10μm						
GENI	Genyem	15.52	194	P	P	22 22 47.8	-0.8
	171nm,1.2s,4μm						
BAKI	Biak	15.70	210	P	Pn	22 22 48.1	+1.3
	170nm,1.8s,4μm						
SIJI	Sorong	18.31	224	P	P	22 23 20.0	+0.4
	0.6nm,0.3s,baz=20,slow=14,SNR=17						
SIJI				LR	LR	22 29 28.7	
	comp=Z,2μm,21.4s,baz=46,slow=34						
DAV	Davao City (W)	18.84	255	P	Pn	22 23 26.8	+0.8
	52nm,0.3s,baz=77,slow=6.3,SNR=6.4						
DAV				LR	LR	22 30 31.4	
	comp=Z,921nm,18.5s,baz=56,slow=36						
DAV	Davao City (W)	18.84	255	*e*P	Pn	22 23 26.8	+0.8
	262nm,0.5s						
FAKI	Fak Fak	19.25	218	*e*P	P	22 23 29.5	-0.4
	126nm,1.0s						
FAKI	Fak Fak	19.25	218	P	Pn	22 23 31.9	+1.0
	129nm,1.0s,3μm5μm						
CGP	Cagayan de Oro	19.30	260	*e*P	Pn	22 23 32.0	+0.4
TNTI	Ternate	20.14	236	*e*P	P	22 23 39.5	-0.1
	142nm,1.4s						
TNTI	Ternate	20.14	236	P	Pn	22 23 43.8	+2.3
JOW	Kunigami	20.38	316	P	Pn	22 23 44.8	+0.4
	4.9nm,0.8s,baz=140,slow=13,SNR=8.3						
JOW	Kunigami	20.38	316	*e*P	P	22 23 42.7	+0.5
	115nm,1.2s						
JHJ	Hachijo jima 2	20.79	350	LR	LR	22 31 20.3	
	comp=Z,1μm,20.0s,baz=184,slow=35						
PMG	Port Moresby	22.08	171	P	P	22 24 00.2	-0.4
	44nm,0.8s,baz=1.6,slow=5.8,SNR=7.3						
PMG	Port Moresby	22.08	171	*e*P	P	22 23 58.8	-1.8
	55nm,0.8s						
PMG	Port Moresby	22.08	171	*i* P	P	22 23 59.8	-0.8
TGY	Tagaytay City	22.37	276	P	P	22 24 04.2	+0.4
	150nm,0.3s,baz=292,slow=3.0,SNR=3.6						
H11N1	WAKE ISLAND Hy	23.20	69	T	T	22 48 29.2	
	baz=255						
H11N2	WAKE ISLAND Hy	23.21	69	T	T	22 48 30.2	
	baz=255						
H11N3	WAKE ISLAND Hy	23.22	69	T	T	22 48 32.9	
	baz=255						
INU	Inuyama	23.51	346	*e*P	P	22 24 16.1	+0.8
	109nm,1.5s						
JNU	Nakatsue	23.65	332	P	P	22 24 17.8	+0.9
	32nm,0.9s,baz=135,slow=5.8,SNR=16						
JNU				LR	LR	22 32 53.2	
	comp=Z,231nm,18.6s,baz=178,slow=35						
JNU	Nakatsue	23.65	332	*e*P	P	22 24 17.3	+0.5
	209nm,1.1s

NJ2				LR	LR	
	comp=Z,960nm,18.9s					
NJ2				LR	LR	
	comp=Z,1μm,24.6s					
YUK	**Yuzh-Kuril'sk**	**31.39**	**3**	P	**P**	**22 25 25.4 -0.8**
YUK						22 26 23.6
YUK				S	**S**	**22 30 31.0 -1.7**
YUK				MLR	MLR	
	comp=Z,539nm,19.0s					
YUK				MLR	MLR	
	comp=Z,357nm,11.0s					
MSHR	**Mys Shultsa**	**31.87 342**	*i*	P	**P**	**22 25 30.3 -0.1**
VLA	**Vladivostok**	**32.15 343**	*i*	P	**P**	**22 25 33.6 +0.7**
VLA				pmax	pmax	
	comp=Z,12nm,1.2s					
CTA	**Charters Tower**	**32.54 176**		P	**P**	**22 25 37.2 +0.7**
	comp=Z,26nm,0.9s,baz=350,slow=10,SNR=18					
CTAO	**Charters Tower**	**32.54 176**	*e*	P	**P**	**22 25 34.2 -2.3**
	comp=Z,48nm,1.0s					
CTAO	**Charters Tower**	**32.54 176**	*e*	P	**P**	**22 25 34.2 -2.3**
CTAO				pmax	pmax	
	comp=Z,48nm,1.0s					
WHN	**Wuhan**	**32.62 308**		P	P	22 25 44.4 +7.3
WHN				S	**S**	**22 30 57.0 +4.9**
WHN				LR	LR	
	comp=N,6μm,14.9s					
WHN				LR	LR	
	comp=E,4μm,14.7s					
WHN				LR	LR	
	comp=Z,4μm,18.1s					
SBUM	**Sibu**	**32.91 255**	*e*	P	**P**	**22 25 39.6 -0.3**
	comp=Z,6.3nm,0.9s					
SBUM	**Sibu**	**32.91 255**		P	**P**	**22 25 40.0 +0.1**
TEY	**Ternei**	**32.94 350**	*e*	P	P	22 25 29.4 -10
USA0B	**Ussuriysk Arra**	**33.13 344**	*e*	P	**P**	**22 25 39.7 -1.7**
	comp=Z,38nm,1.3s					
USRK	**Ussuriysk Ar.**	**33.13 344**		P	**P**	**22 25 43.2 +1.8**
	comp=Z,2.3nm,0.7s,baz=186,slow=9.6,SNR=8.6					
QIZ	**Qiongzhong**	**33.33 285**		P	**P**	**22 25 41.9 -1.6**
QIZ				S	**S**	**22 31 02.3 -1.2**
QIZ				pmax	pmax	
	comp=Z,2μm,2.8s					
QIZ				LR	LR	
	comp=Z,2μm,17.2s					
QIZ				LR	LR	
	comp=Z,2μm,25.5s					
WRAB	**Tennant Creek**	**33.64 196**	*e*	P	**P**	**22 25 45.3 -0.8**
	comp=Z,53nm,0.6s					
WRAB	**Tennant Creek**	**33.64 196**	*i*	P	**P**	**22 25 44.7 -1.4**
WRAB				pmax	pmax	
	comp=Z,28nm,0.7s					
WR1	**Warramunga Arr**	**33.65 196**	*e*	PcP	**PcP**	**22 28 28.0 +1.8**
WRA	**Warramunga Arr**	**33.65 196**		P	**P**	**22 25 46.1 -0.1**
	comp=Z,48nm,0.7s,baz=15,slow=8.1,SNR=236					
WRA				PcP	**PcP**	**22 28 28.0 +1.8**
	comp=Z,4.2nm,0.7s,baz=12,slow=4.3,SNR=2.9					
MDJ	**Mudanjiang**	**34.19 342**		P	**P**	**22 25 55.1 +4.4**
MDJ				PP	**PP**	**22 27 09.4 +1.1**
MDJ				S	**S**	**22 31 20.4 +4.1**
MDJ				pmax	pmax	
	comp=Z,6.0nm,0.5s					
MDJ				pmax	pmax	
	comp=Z,170nm,4.2s					
MDJ				LR	LR	
	comp=Z,780nm,13.3s					
MDJ				LR	LR	
	comp=Z,600nm,15.4s					
MDJ				LR	LR	
	comp=Z,1μm,16.9s					
YSS	**Yuzh-Sakhalins**	**34.28 359**	*e*	P		22 26 03.0 +12
YSS			*e*			22 26 16.8
YSS				pmax	pmax	
	comp=Z,20nm,1.2s					
YSS				MLR	MLR	
	comp=Z,600nm,17.0s					
CN2	**Changchun**	**34.93 336**	*e*	P	P	22 26 05.3 +8.3
CN2			*e*	S	**S**	**22 31 28.0 +0.4**
CN2				LR	LR	
	comp=N,1μm,16.0s					
CN2				LR	LR	
	comp=E,720nm,16.0s					
CN2				LR	LR	
	comp=Z,1μm,18.0s					
KSM	**Kuching**	**35.04 254**	*e*	P	**P**	**22 25 57.2 -1.2**
	comp=Z,23nm,1.0s					
KSM	**Kuching**	**35.04 254**		P	**P**	**22 25 57.0 -1.4**
FITZ	**Fitzroy Crossi**	**35.40 211**		P	**P**	**22 26 01.2 -0.1**
	comp=Z,5.8nm,0.8s,baz=51,slow=9.7,SNR=5.7					
ENH	**Enshi**	**36.34 304**	*e*	P	**P**	**22 26 10.0 +0.6**
	comp=Z,36nm,1.0s					
AS31	**Alice Springs**	**37.32 195**	*e*	P	**P**	**22 26 17.8 +0.1**
	comp=Z,7.2nm,0.4s					
AS31			*e*	PcP	**PcP**	**22 28 37.6 +0.7**
ASAR	**Alice Springs**	**37.32 195**		P	**P**	**22 26 17.8 +0.1**
	comp=Z,5.6nm,0.5s,baz=21,slow=12,SNR=90					
ASAR				PcP	**PcP**	**22 28 37.6 +0.7**
	comp=Z,17nm,1.0s,baz=14,slow=3.5,SNR=8.5					
ASAR				LR	LR	22 42 36.2
	comp=Z,826nm,19.1s,baz=17,slow=38					
GYA	**Guiyang**	**37.54 297**		P	**P**	**22 26 22.3 +2.5**
GYA				PP	**PnPn**	**22 27 50.3 +3.8**
GYA				S	**S**	**22 32 11.8 +3.4**
GYA				ScP	**ScP**	**22 32 27.6 +3.2**
GYA				SS	**SnSn**	**22 34 44.4 -2.5**
GYA				pmax	pmax	
	comp=Z,30nm,1.0s					
GYA				pmax	pmax	
	comp=Z,200nm,4.7s					
GYA				LR	LR	
	comp=Z,430nm,15.0s					
GYA				LR	LR	
	comp=Z,640nm,16.0s					
GYA				LR	LR	
	comp=Z,1μm,15.1s					
TIY	**Taiyuan**	**37.59 317**	*e*	P	P	22 26 25.4 +5.4
TIY				pmax	pmax	
	comp=Z,260nm,4.0s					
TIY				LR	LR	
	comp=Z,600nm,14.3s					
TIY				LR	LR	
	comp=Z,190nm,5.7s					
TIY				LR	LR	
	comp=Z,320nm,19.9s					
KLR	**Kul'dur**	**37.90 347**		P	**P**	**22 26 22.5 +0.2**
	comp=Z,2.7nm,0.7s,baz=100,slow=5.5,SNR=6.8					
KLR	**Kul'dur**	**37.90 347**	*i*	P	**P**	**22 26 22.3 0.0**
PANO	**Nakornpanom**	**38.18 282**		P	P	22 26 33.3 +8.2
	comp=Z,1.0nm,0.9s					
XAN	**Xi'an**	**38.28 310**	*e*	P	**P**	**22 26 26.2 +0.4**
	comp=Z,49nm,1.6s					
XAN	**Xi'an**	**38.28 310**	*e*	P	**P**	**22 26 26.3 +0.4**
XAN				pmax	pmax	
	comp=Z,49nm,1.6s					
EIDS	**Eidsvold**	**38.37 169**	*e*	P	**P**	**22 26 25.9 -0.6**
	comp=Z,100nm,1.6s					
SKNT	**Sakolnakorn**	**38.78 281**		P	P	22 26 37.8 +7.6
	comp=Z,36nm,1.1s					
SLVN	**Son La**	**39.12 288**	*e*	P	**P**	**22 26 34.2 +1.1**
	comp=Z,12nm,1.0s					
NONG	**Nongkai**	**39.60 283**		P	P	22 26 45.2 +8.1
	comp=Z,0.4nm,1.3s,comp=Z,276nm					
KHON	**Khomkaen**	**39.88 280**		P	P	22 26 48.1 +8.7
HHC	**Hu-ho-hao-te**	**39.92 321**	*e*	P	**P**	**22 26 39.9 +0.3**
HHC				S	**S**	**22 32 46.3 +2.4**
HHC				pmax	pmax	
	comp=Z,12nm,1.0s					
HHC				pmax	pmax	
	comp=Z,28nm,5.0s					
HHC				LR	LR	
	comp=Z,700nm,13.4s					
HHC				LR	LR	
	comp=Z,980nm,13.2s					
CHAI	**Chaiyaphum**	**40.69 280**		P	P	22 26 53.5 +7.4
	comp=Z,42μm,0.8s					
KMI	**Kunming**	**40.72 294**		P	**P**	**22 26 48.3 +1.7**
KMI				pP	pP	22 26 51.4 0.0
KMI				pmax	pmax	
	comp=Z,8.0nm,0.6s					
KMI				pmax	pmax	
	comp=Z,150nm,4.1s					
KMI				LR	LR	
	comp=Z,530nm,12.9s					
KMI				LR	LR	
	comp=Z,670nm,14.1s					
KMI				LR	LR	
	comp=Z,630nm,19.2s					
BTO	**Baotou**	**40.75 319**	*e*	P	**P**	**22 26 47.5 +1.1**
LEM	**Lembang**	**40.87 244**		P	**P**	**22 26 49.3 +1.5**
	comp=Z,16nm,0.4s,baz=342,slow=23,SNR=4.3					
DZM	**Mont Dzumac**	**40.94 147**	*e*	P	**P**	**22 26 49.8 +1.7**
	comp=Z,118nm,1.2s					
DZM	**Mont Dzumac**	**40.94 147**	*e*	LR	LR	22 38 17.0
	comp=Z,736nm,28.4s					
DZM	**Mont Dzumac**	**40.94 147**		P	**P**	**22 26 49.6 +1.5**
	comp=Z,36nm,0.7s,baz=325,slow=9.3,SNR=12					
DZM				PcP	**PcP**	**22 28 51.0 +2.5**
	comp=Z,20nm,0.7s,baz=327,slow=5.9,SNR=4.1					
DZM	**Mont Dzumac**	**40.94 147**	*e*	P	**P**	**22 26 47.5 -0.6**
	comp=Z,41nm,0.8s					
DZM			*e*	PcP	**PcP**	**22 28 51.0 +2.5**
CISI	**Cisompet, Garu**	**41.04 243**	*e*	P	**P**	**22 26 46.5 -2.6**
	comp=Z,52nm,0.8s					
MYKOM	**Kota Tinggi**	**41.06 258**		P	**P**	**22 26 50.0 +0.8**
CD2	**Chengdu**	**41.21 303** ‖	*i*	P	**P**	**22 26 50.1 -0.2**
CD2				S	**S**	**22 33 01.3 -2.0**
CD2				sS	sS	22 33 13.9 +3.8
CD2				pmax	pmax	
	comp=Z,60nm,0.7s					
CD2				pmax	pmax	
	comp=Z,390nm,3.7s					
CD2				LR	LR	
	comp=Z,3μm,14.7s					
CD2				LR	LR	
	comp=Z,2μm,16.7s					
CD2				LR	LR	
	comp=Z,2μm,16.3s					
PBKT	**Sadao Pong**	**41.66 281**		P	P	22 27 02.0 +7.9
	comp=Z,11nm,1.0s,comp=Z,1μm					
PET	**Petropavlovsk**	**42.04 13**	*e*	P	**P**	**22 26 54.5 -2.2**
PET			*e*	S	**S**	**22 33 12.6 -2.2**
PET				MLR	MLR	
	comp=Z,600nm,16.0s					
PET				MLR	MLR	
	comp=Z,800nm,14.0s					
UTTA	**Uttaradit**	**42.06 283**		P	P	22 27 05.1 +7.8
	comp=Z,34μm,1.0s,comp=Z,247μm					
LZH	**Lanzhou**	**42.91 310**	*e*	P	**P**	**22 27 04.1 -0.2**
LZH				pP	pP	22 27 08.4 -0.8
LZH				sP	sP	22 27 11.6 +0.7
LZH				S	**S**	**22 33 28.8 +0.3**
LZH				sS	sS	22 33 39.6 +4.7
LZH				SS	**SS**	**22 36 33.8 -6.5**
LZH				pmax	pmax	
	comp=Z,29nm,1.0s					
LZH				pmax	pmax	
	comp=Z,120nm,4.2s					
LZH				LR	LR	
	comp=Z,1μm,14.6s					
LZH				LR	LR	
	comp=Z,1μm,14.6s					
LZH				LR	LR	
	comp=Z,1μm,15.7s					
SKLT	**Songkhla**	**42.91 267**		P	P	22 27 12.5 +8.2
	comp=Z,30nm,0.9s					
LAMP	**Lampang**	**42.95 284**		P	P	22 27 13.0 +8.4
	comp=Z,28μm,1.0s					
ZEA	**Zeya**	**43.13 346**	*e*	P	**P**	**22 27 09.2 +3.7**
ZEA				pmax	pmax	
	comp=Z,46nm,1.4s					
ZEA				MLR	MLR	
	comp=Z,500nm,16.0s					
ZEA				MLR	MLR	
	comp=E,500nm,14.0s					
ZEA				MLR	MLR	
	comp=N,500nm,13.0s					
KULM	**Kulim**	**43.26 264**	*e*	P	**P**	**22 27 07.5 +0.3**
	comp=N,22nm,1.2s					
KULM	**Kulim**	**43.26 264**		P	**P**	**22 27 07.0 -0.2**
ARMA	**Armidale**	**43.39 170**	*e*	P	**P**	**22 27 06.5 -1.5**
	comp=N,49nm,1.1s					
CMAR	**Chiang Mai Arr**	**43.60 284**		P	**P**	**22 27 09.6 -0.4**
	comp=N,2.8nm,0.6s,baz=86,slow=6.4,SNR=14					
CMMT	**Chiang Mai**	**43.61 284**		P	P	22 27 20.0 +10
	comp=N,1.9nm,0.9s					
UMPA	**Umpang Tak**	**43.69 280**		P	P	22 27 21.5 +11
TRTT	**Trang**	**43.70 268**		P	P	22 27 24.4 +14
STKA	**Stephens Creek**	**44.25 183**		P	**P**	**22 27 14.6 -0.3**
	comp=N,24nm,0.9s,baz=352,slow=8.8,SNR=17					
STKA				PcP	**PcP**	**22 29 00.7 +1.5**
	comp=N,8.1nm,0.8s,baz=349,slow=9.5,SNR=3.3					
STKA	**Stephens Creek**	**44.25 183**	*e*	P	**P**	**22 27 13.9 -0.9**
STKA	**Stephens Creek**	**44.25 183**	*e*	P	**P**	**22 27 13.9 -0.9**
PSI	**Prapat**	**45.52 261**		LR	LR	22 47 50.2
	comp=N,325nm,20.5s,baz=74,slow=38					
ULN	**Ulaanbaatar**	**46.67 326**	*e*	P	**P**	**22 27 34.1 0.0**
	comp=N,12nm,0.9s					
ULN	**Ulaanbaatar**	**46.67 326**	*i*	P	**P**	**22 27 33.4 -0.6**
ULN				pmax	pmax	
	comp=Z,4.0nm,1.0s					
SONM	**Songino Array**	**47.01 326**		P	**P**	**22 27 37.2 +0.5**
	comp=Z,2.0nm,0.6s,baz=143,slow=6.3,SNR=6.5					
GTA	**Gaotai**	**47.13 313**	*e*	P	**P**	**22 27 38.0 +0.2**
GTA				pP	pP	22 27 42.0 -0.7
GTA				sP	sP	22 27 45.4 +1.0
GTA				S	**S**	**22 34 28.6 -0.9**
GTA				sS	sS	22 34 37.3 +0.5
GTA				pmax	pmax	
	comp=Z,6.0nm,0.8s					
GTA				pmax	pmax	
	comp=Z,92nm,6.8s					
GTA				LR	LR	
	comp=Z,730nm,17.1s					
GTA				LR	LR	
	comp=Z,510nm,18.4s					
GTA				LR	LR	
	comp=Z,810nm,17.1s					
GSI	**Gunungsitoli**	**47.22 260**	*e*	P	**P**	**22 27 37.2 -1.4**
	comp=Z,50nm,1.5s					
MOKO	**MOKOCHONG**	**48.23 294**	*e*	P	**P**	**22 27 45.2 -1.3**
KOHI	**KOHIMA**	**48.53 293**	*e*	P	**P**	**22 27 45.2 -3.6**
KOHI				IAmb	IAmb	22 27 55.9
	comp=Z,32nm,1.6s					
ZIRO	**ZIRO**	**48.97 296**	*e*	P	**P**	**22 27 51.2 -1.0**
ZIRO				IAmb	IAmb	22 27 60.0
MORW	**Morawa**	**49.37 213**	*e*	P	**P**	**22 27 53.5 -1.4**
	comp=Z,51nm,0.9s					
TEZP	**TEZPUR**	**49.79 294**	*e*	P	**P**	**22 27 56.9 -1.4**
TEZP				IAmb	IAmb	22 27 58.3
TOO	**Toolangi**	**49.90 178**	*e*	P	**P**	**22 27 58.7 -0.2**
	comp=Z,106nm,1.4s					
TOO	**Toolangi**	**49.90 178**	*e*	P	**P**	**22 27 58.7 -0.2**
TOO				pmax	pmax	
	comp=Z,106nm,1.4s					
ZAK	**Zakamensk**	**50.15 327**	*e*	P	**P**	**22 27 59.2 -1.5**
ZAK				pmax	pmax	
	comp=Z,10.0nm,1.2s					
YAK	**Yakutsk**	**50.43 351**	*e*	P	**P**	**22 28 01.5 -1.0**
	comp=Z,27nm,0.7s					
YAK	**Yakutsk**	**50.43 351**	*e*	P	**P**	**22 28 02.2 -0.3**
YAK			*e*	*PP	**sP**	**22 28 10.2 +1.2**
YAK			*e*	S	**S**	**22 35 11.5 -3.4**
SHL	**Shillong**	**50.52 293**	*e*	P	**P**	**22 28 03.3 -0.7**
	comp=Z,24nm,0.8s					
SHL	**Shillong**	**50.52 293**	*e*	P	**P**	**22 28 03.1 -1.0**
SHL				IAmb	IAmb	22 28 11.8
	comp=Z,20nm,0.4s					
SEY	**Seymchan**	**50.65 5**		P	**P**	**22 28 05.5 +1.3**
	comp=Z,3.8nm,0.6s,baz=170,slow=5.4,SNR=8.8					
SEY	**Seymchan**	**50.65 5**	*i*	P	**P**	**22 28 04.1 0.0**
TLY	**Talaya**	**50.70 329**	*e*	P	**P**	**22 28 04.2 -0.6**
	comp=Z,6.3nm,0.9s					
TLY	**Talaya**	**50.70 329**	*i*	P	**P**	**22 28 02.9 -1.9**
TAWA	**Tawang**	**50.72 295**	*e*	P	**P**	**22 28 04.8 -1.0**
TAWA				IAmb	IAmb	22 28 06.0
	comp=Z,13nm,0.3s					
LSA	**Lhasa**	**51.60 298**		P	**P**	**22 28 12.8 +0.3**
LSA				S	**S**	**22 35 38.5 +5.4**
LSA				LR	LR	
	comp=Z,740nm,12.8s					
LSA				LR	LR	
	comp=Z,1μm,21.4s					
LSA				LR	LR	
	comp=Z,1μm,17.1s					
LSA	**Lhasa**	**51.60 298**	*e*	P	**P**	**22 28 13.4 +0.9**
	comp=Z,33nm,1.5s					
LSA	**Lhasa**	**51.60 298**	*e*	P	**P**	**22 28 13.4 +0.9**
LSA				pmax	pmax	
	comp=Z,33nm,1.5s					
NWAO	**Narrogin (SRO)**	**51.91 209**		LR	LR	22 50 34.8
	comp=Z,224nm,20.2s,baz=49,slow=36					
TURI	**Tura**	**51.91 293**	*e*	P	**P**	**22 28 13.8 -0.5**
TURI				IAmb	IAmb	22 28 14.9
	comp=Z,8.7nm,0.4s					
MOY	**Mondy**	**52.06 327**	*e*	P	P	22 28 22.3 +7.2
MOY				pmax	pmax	
	comp=Z,19nm,2.2s					
GTK	**Tadong**	**53.59 295**	*e*	P	**P**	**22 28 26.4 -0.5**
GTK				IAmb	IAmb	22 28 34.6
	comp=Z,31nm,1.5s					
OUZ	**Omahuta**	**55.25 150**	*e*	P	**P**	**22 28 40.9 +2.4**
	comp=Z,113nm,1.2s					
BOK	**Bokaro**	**55.89 290**	*e*	P	**P**	**22 28 41.7 -1.7**
BOK				IAmb	IAmb	22 28 52.0
	comp=Z,56nm,1.1s					
WMQ	**Urumqi**	**57.14 314**		P	**P**	**22 28 52.8 +0.7**
WMQ				sP	pwP	22 29 00.1 -1.2
WMQ				S	**S**	**22 36 47.0 +0.4**
WMQ				pmax	pmax	
	comp=Z,20nm,1.3s					
WMQ				pmax	pmax	
	comp=Z,88nm,4.1s					
WMQ				LR	LR	
	comp=Z,360nm,16.7s					
WMQ				LR	LR	
	comp=Z,430nm,17.9s					
WMQ				LR	LR	
	comp=Z,500nm,18.7s					
BILL	**Bilibino**	**57.32 10** ‖	*e*	P	**P**	**22 28 52.8 0.0**
BILL				*SP	**sP**	**22 29 00.0 +0.5**
BILL						22 29 47.0
BILL				pmax	pmax	
	comp=Z,9.0nm,1.0s					
BILL				MLR	MLR	
	comp=Z,580nm,20.0s					
DGZ	**Jazzator, Alta**	**59.01 321**	*i*	P	**P**	**22 29 04.8 -0.4**
DGZ				pmax	pmax	
	comp=Z,3.0nm,0.9s					
URZ	**Urewera**	**59.37 150**	*e*	P	**P**	**22 29 09.4 +1.8**
	comp=Z,56nm,1.0s					
TIXI	**Tiksi**	**59.74 355**	*i*	P	**P**	**22 29 08.6 -1.0**
TIXI				pmax	pmax	
	comp=Z,3.0nm,1.1s					
RPZ	**Rata Peaks**	**61.26 158**	*e*	P	**P**	**22 29 21.5 +1.1**
	comp=Z,291nm,1.7s					
OXZ	**Oxford**	**61.30 157**	*e*	P	**P**	**22 29 21.5 +0.8**
	comp=Z,70nm,0.7s					
DCZ	**Deep Cove**	**61.48 162**	*e*	P	**P**	**22 29 21.1 -0.7**
	comp=Z,104nm,1.1s					
LBZ	**Lake Benmore**	**61.53 159**	*e*	P	**P**	**22 29 22.6 +0.4**
	comp=Z,108nm,1.2s					
MK31	**Makanchi Array**	**61.55 317**	*e*	P	**P**	**22 29 22.1 -0.4**
	comp=Z,6.9nm,0.8s					
MK31	**Makanchi Array**	**61.55 317**	*e*	P	**P**	**22 29 22.1 -0.4**
MK31				pmax	pmax	
	comp=Z,7.0nm,0.8s					
MKAR	**Makanchi Array**	**61.55 317**		P	**P**	**22 29 22.3 -0.2**
	comp=Z,3.2nm,0.7s,baz=91,slow=8.6,SNR=24					
MKAR				PKP2bc		22 58 42.6
	comp=Z,2.9nm,1.0s,baz=280,slow=2.4,SNR=11					
MKAR	**Makanchi Array**	**61.55 317**	*i*	P	**P**	**22 29 22.5 0.0**
MKAR				pmax	pmax	
	comp=Z,2.0nm,0.6s					
MLZ	**Mavora Lakes**	**61.70 161**	*e*	P	**P**	**22 29 23.6 +0.2**
	comp=Z,118nm,1.0s					
MAKZ	**Makanchi**	**61.76 317**	*e*	P	**P**	**22 29 23.5 -0.4**
	comp=Z,13nm,0.8s					
MAKZ	**Makanchi**	**61.76 317**	*e*	P	**P**	**22 29 23.5 -0.4**
MAKZ				pmax	pmax	
	comp=Z,13nm,0.8s					
ZALV	**Zalesovo Beam**	**61.88 325**		P	**P**	**22 29 24.4 -0.1**
	comp=Z,1.1nm,0.5s,baz=96,slow=7.0,SNR=5.1					
ZALV				PKP2bc		22 58 42.4
	comp=Z,4.6nm,1.0s,baz=298,slow=4.3,SNR=10					
ZALV	**Zalesovo Beam**	**61.88 325**	*i*	P	**P**	**22 29 23.5 -1.0**
ZALV				pmax	pmax	
	comp=Z,1.0nm,0.5s					
NGP	**Nagpur**	**62.27 287**	*e*	P	**P**	**22 29 27.8 0.0**
NGP				IAmb	IAmb	22 29 37.6
	comp=Z,13nm,1.0s					
DDI	**Dehra Dun**	**62.97 298**	*e*	P	**P**	**22 29 31.6 -0.8**
DDI				IAmb	IAmb	22 29 32.0
	comp=Z,403nm,0.1s					
NVS	**Novosibirsk**	**63.04 326**	*e*	P	P	22 29 38.3 +6.1
NVS				pmax	pmax	
	comp=Z,12nm,1.1s					
NVS				pmax	pmax	
	comp=N,3.0nm,1.2s					
NVS				pmax	pmax	
	comp=E,5.0nm,1.2s					
BHPL	**Bhopal**	**63.66 290**	*e*	P	**P**	**22 29 36.7 -0.3**
BHPL				IAmb	IAmb	22 29 44.5
	comp=Z,57nm,1.5s					
SMLA	**Simla**	**63.75 299**	*e*	P	**P**	**22 29 33.4 -3.9**
SMLA				IAmb	IAmb	22 29 45.5
	comp=Z,24nm,0.9s					
DHRM	**DHARAMSHALA**	**64.50 300**	*e*	P	**P**	**22 29 41.2 -1.4**
DHRM				IAmb	IAmb	22 29 50.5
	comp=Z,934nm,4.5s					
KURK	**Kurchatov**	**64.73 320**	*e*	P	**P**	**22 29 42.9 -0.6**
	comp=Z,23nm,0.9s					
KURK	**Kurchatov**	**64.73 320**	*i*	P	**P**	**22 29 42.0 -1.5**
KURK				pmax	pmax	
	comp=Z,25nm,0.9s					
KSH	**Kashi**	**65.09 308**		P	**P**	**22 29 48.1 +1.9**
KSH				sP	pwP	22 29 55.8 +0.3
KSH				PP	**PP**	**22 32 13.3 +3.9**
KSH				S	**S**	**22 38 28.3 +0.2**
KSH				SS	**SS**	**22 42 42.8 +2.4**
KSH				pmax	pmax	
	comp=Z,11nm,1.0s					
KSH				pmax	pmax	
	comp=Z,550nm,5.0s					
KSH				LR	LR	
	comp=Z,370nm,10.1s					
KSH				LR	LR	
	comp=Z,400nm,12.9s					
KSH				LR	LR	
	comp=Z,1μm,20.2s					
AAK	**Ala-Archa**	**66.44 311**	*e*	P	**P**	**22 29 54.4 -0.5**
	comp=Z,4.7nm,1.0s					
AAK	**Ala-Archa**	**66.44 311**	*e*	P	**P**	**22 29 54.4 -0.5**
AAK				pmax	pmax	
	comp=Z,5.0nm,1.0s					
NIL	**Nilore**	**67.08 301**	*e*	P	**P**	**22 29 58.8 -0.2**
	comp=Z,44nm,0.8s					
NIL	**Nilore**	**67.08 301**	*e*	P	**P**	**22 29 58.8 -0.2**
NIL				pmax	pmax	
	comp=Z,44nm,0.8s					
POO	**Poona**	**67.37 285**	*e*	P	**P**	**22 29 59.6 -1.5**
POO				IAmb	IAmb	22 30 08.1
	comp=Z,41nm,0.7s					
ARSB	**Arslanbob**	**67.48 310**	*e*	P	**P**	**22 30 01.4 -0.2**
	comp=Z,94nm,2.0s					
BPAW	**Bear Paw Mtn.**	**68.00 25**	*e*	P	**P**	**22 30 05.4 +1.2**
	comp=Z,10.0nm,1.2s					
SCM	**Sheep Creek Mo**	**69.02 28**	*e*	P	**P**	**22 30 10.7 0.0**
	comp=Z,31nm,1.0s					
SCM	**Sheep Creek Mo**	**69.02 28**	*e*	P	**P**	**22 30 10.7 0.0**
SCM				pmax	pmax	
	comp=Z,31nm,1.0s					
WRH	**Wood River Hil**	**69.31 25**	*e*	P	**P**	**22 30 09.8 -2.5**
	comp=Z,7.1nm,1.0s					
COLA	**College**	**69.52 25**	*e*	P	**P**	**22 30 15.0 +1.4**
COLA				pmax	pmax	
	comp=Z,5.0nm,1.0s					
POKR	**Poker Plat Res**	**69.75 25**		P	**P**	**22 30 14.8 -0.3**
	baz=256					
HDA	**Harding Lake**	**69.78 26**		P	**P**	**22 30 15.0 -0.3**
	baz=257					
ILAR	**Eielson Array**	**69.89 25**		P	**P**	**22 30 14.7 -1.2**
	comp=Z,2.0nm,0.5s,baz=251,slow=6.0,SNR=30					
TOLK	**Toolik Lake Re**	**69.90 21**		P	**P**	**22 30 16.4 +0.4**
	baz=253					
BRVK	**Borovoye**	**70.19 322**	*e*	P	**P**	**22 30 17.1 -0.8**
	comp=Z,15nm,0.8s					
BRVK	**Borovoye**	**70.19 322**	*i*	P	**P**	**22 30 17.5 -0.5**
BRVK				pmax	pmax	
	comp=Z,3.0nm,0.8s					
KBL	**Kabul**	**70.55 302**	*e*	P	**P**	**22 30 20.1 -0.7**
	comp=Z,25nm,1.1s					
KBL	**Kabul**	**70.55 302**	*e*	P	**P**	**22 30 20.1 -0.7**
KBL				pmax	pmax	
	comp=Z,25nm,1.1s					
PPT2	**Papeete2**	**72.20 113**	*e*	P	**P**	**22 30 32.8 +2.0**
	comp=Z,75nm,1.2s					
PPT2			*e*	S	**S**	**22 39 52.1 -1.0**
	comp=Z,162nm,25.5s					
PPT2	**Papeete2**	**72.20 113**	*e*	LR	LR	22 51 49.8
	comp=Z,579nm,28.0s					

PAE	Paea	72.22	113	eP	P	22 30 32.4	+1.6
	comp=Z,16nm,1.3s						
TIAR	Tiarei	72.40	113	eP	P	22 30 33.7	+1.8
	comp=Z,30nm,1.1s						
TVO	Taravao	72.56	113	eP	P	22 30 35.2	+2.3
	comp=Z,25nm,1.0s						
PMOR	Pomariorio Ree	72.89	110	eP	P	22 30 36.1	+1.3
	comp=Z,139nm,1.1s						
DAWY	Dawson	72.97	27	eP	P	22 30 35.9	+1.3
	comp=Z,9.8nm,1.0s						
VAH	Vaihoa	73.20	110	eP	P	22 30 39.0	+2.3
	comp=Z,118nm,1.0s						
HYT	Haines Junctio	73.56	30	eP	P	22 30 38.7	+0.4
	comp=Z,9.7nm,0.8s						
EPYK	Eagle Plains	74.31	24	P	P	22 30 42.1	-0.3
	baz=266						
TBI	Tubuai	74.32	119	eS	S	22 40 14.2	-2.6
	comp=Z,159nm,30.2s						
TBI	Tubuai	74.32	119	eLR	LR	22 52 53.8	
	comp=Z,402nm,32.8s						
WHY	Whitehorse	74.84	30	eP	P	22 30 46.0	+0.3
	comp=Z,7.4nm,1.0s						
INK	Inuvik	75.66	22	P	P	22 30 50.9	+0.8
	comp=Z,6.3nm,0.8s,baz=248,slow=7.4,SNR=9.5						
INK	Inuvik	75.66	22	eP	P	22 30 50.1	0.0
	comp=Z,19nm,1.0s						
INK	Inuvik	75.66	22	eP	P	22 30 50.1	0.0
INK				pmax	pmax		
	comp=Z,19nm,1.0s						
SVE	Sverdlovsk	75.88	326	eP	P	22 30 58.1	+6.5
SVE				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SVE				MLR	MLR		
	comp=Z,569nm,18.0s						
ARU	Arti	77.04	325	eP	P	22 30 58.1	0.0
	comp=Z,8.2nm,0.7s						
ARU	Arti	77.04	325	P	P	22 30 56.8	-1.4
ARU				S	S	22 40 47.5	+1.6
ARU				MLR	MLR		
	comp=Z,363nm,17.0s						
GEYT	Alibeck	79.07	307	P	P	22 31 09.4	-0.5
	comp=Z,3.0nm,0.8s,baz=191,slow=0.8,SNR=9.4						
GYA0B	ALIBECK ARRAY	79.07	307	eP	P	22 31 09.1	-0.8
	comp=Z,13nm,1.0s						
NLWA	Neilton Lookou	82.38	43	eP	P	22 31 28.4	+1.0
	comp=Z,40nm,1.3s						
PGC	Sidney	82.43	42	eP	P	22 31 27.1	-0.4
	comp=Z,46nm,1.4s						
UOSS	Minazif	82.72	294	eP	P	22 31 28.8	-0.8
	comp=Z,25nm,1.1s						
F03A	Seaside	82.85	45	eP	P	22 31 32.2	+2.3
	comp=Z,48nm,1.0s						
D03D	Eldon	82.87	43	P	P	22 31 30.3	+0.4
	baz=281,SNR=6.5						
A04D	Lummi Island	82.90	42	P	P	22 31 28.4	-1.6
	baz=281						
PRGR	Permogore	82.92	332	eP	P	22 31 25.2	-4.6
PRGR				pmax	pmax		
	comp=Z,18nm,0.8s						
I02D	Swisshome	82.98	46	P	P	22 31 30.0	-0.5
	baz=281,SNR=5.9						
J01E	Myrtle Point	83.10	47	P	P	22 31 30.2	-1.0
	baz=281						
D04E	Lakebay	83.15	43	P	P	22 31 30.7	-0.6
	baz=281						
G03D	McMinnville, O	83.19	45	P	P	22 31 31.1	-0.5
	baz=281						
F04D	Rainier, OR	83.20	44	P	P	22 31 30.2	-1.4
	baz=281						
COR	Corvallis	83.28	46	eP	P	22 31 32.4	+0.4
	comp=Z,61nm,1.4s						
COR	Corvallis	83.28	46	eP	P	22 31 32.4	+0.4
COR				pmax	pmax		
	comp=Z,61nm,1.4s						
K02D	Willamette Mer	83.38	48	P	P	22 31 33.2	+0.5
	baz=281						
B05A	Bryant	83.39	42	P	P	22 31 31.9	-0.6
	baz=282						
E04D	Cinebar	83.41	44	P	P	22 31 32.9	+0.2
	baz=281						
KRMB	Red Mountain	83.42	49	eP	P	22 31 35.4	+2.3
	comp=Z,33nm,1.2s						
L02E	Cave Junction	83.53	48	P	P	22 31 33.4	0.0
	baz=281						
D05A	Enumclaw	83.67	43	eP	P	22 31 35.3	+1.3
	comp=Z,30nm,1.0s						
KHMM	Horse Mountain	83.68	50	eP	P	22 31 35.2	+0.8
	comp=Z,37nm,1.0s						
H04D	Lebanon	83.69	46	P	P	22 31 34.1	-0.1
	baz=281						
HUMO	Hull Mountain	83.91	48	eP	P	22 31 36.3	+0.9
	comp=Z,22nm,1.0s						
H04A	Detroit Lake	84.04	46	eP	P	22 31 36.4	+0.3
	comp=Z,24nm,1.1s						
I04A	Tendick Farm,	84.06	47	P	P	22 31 36.3	+0.1
	baz=282,SNR=7.0						
YKA	Yellowknife Ar	84.20	27	P	P	22 31 36.2	-0.1
	comp=Z,3.2nm,0.5s,baz=286,slow=5.1,SNR=22						
M02C	Callahan	84.22	49	P	P	22 31 37.4	+0.3
	baz=282,SNR=9.2						
YBH	Yreka Blue Hor	84.26	49	eP	P	22 31 38.1	+0.8
	comp=Z,26nm,1.0s						
YBH	Yreka Blue Hor	84.26	49	eP	P	22 31 38.1	+0.8
YBH				pmax	pmax		
	comp=Z,26nm,1.0s						
F05D	White Salmon	84.30	44	P	P	22 31 36.6	-0.7
	baz=282						
J04D	Umpqua Nationa	84.39	47	P	P	22 31 37.6	-0.5
	baz=282						
N02D	Trinity Center	84.42	49	P	P	22 31 37.9	-0.3
	baz=282						
L04D	Klamath Falls	84.46	48	P	P	22 31 38.2	-0.2
	baz=282						
O02D	Mt. Diablo Mer	84.52	50	P	P	22 31 38.8	+0.2
	baz=282,SNR=5.7						
G05D	Wamic, OR	84.53	45	P	P	22 31 37.9	-0.6
	baz=282						
WDC	Whiskeytown Da	84.62	50	eP	P	22 31 39.9	+0.9
	comp=Z,27nm,1.1s						
WDC	Whiskeytown Da	84.62	50	eP	P	22 31 39.9	+0.9
WDC				pmax	pmax		
	comp=Z,27nm,1.1s						
I05D	Terrebonne, OR	84.71	46	P	P	22 31 39.6	+0.1
	baz=282						
K04D	Chiloquin, OR	84.77	48	P	P	22 31 39.5	-0.4
	baz=282						
M04C	Macdoel	84.89	48	P	P	22 31 38.8	-1.7
	baz=282,SNR=6.5						
G06A	Carlson Farm,	85.00	45	eP	P	22 31 41.4	+0.5
	comp=Z,46nm,1.8s						
J05D	Fort Rock, OR	85.01	47	P	P	22 31 40.9	-0.3
	baz=283,SNR=10.0						
PINE	Pine Mountain	85.11	46	eP	P	22 31 42.6	+1.0
	comp=Z,63nm,1.1s						
O03E	Paynes Creek	85.23	50	P	P	22 31 41.7	-0.6
	baz=282,SNR=8.0						
HAWA	Hanford	85.49	44	eP	P	22 31 43.8	+0.5
	comp=Z,24nm,1.1s						
D08A	Wollman Farm,	85.75	43	eP	P	22 31 45.2	+0.7
	comp=Z,86nm,1.8s						
E08A	Dider Farm, El	85.79	43	eP	P	22 31 45.6	+0.9
	comp=Z,37nm,1.3s						
KLMR	Klimovskoe	85.98	332	eP	P	22 31 41.6	-3.7
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
KLMR	Klimovskoe	85.98	332	eP	P	22 31 41.7	-3.6
KLMR				AMP		22 31 52.8	
	comp=Z,13nm,1.4s						
MAK	Makhachkala	86.14	313	eP	P	22 31 39.0	-7.5
MAK				eS	SKSac	22 42 00.4	-11
MAK				pmax	pmax		
	comp=Z,19nm,0.6s						
NEW	Newport	86.62	41	P	P	22 31 47.3	-1.6
	baz=285						
PNTR	Pine Nut	87.16	51	eP	P	22 31 52.8	+0.8
	comp=Z,37nm,1.1s						
PAHR	Pah Rah Range	87.17	50	eP	P	22 31 52.8	+0.9
	comp=Z,35nm,1.2s						
WAKR	Walker	87.42	51	eP	P	22 31 53.8	+0.6
	comp=Z,62nm,1.6s						
PAGB	Antelope Grade	87.45	54	eP	P	22 31 54.9	+1.8
	comp=Z,66nm,1.1s						
ARCES	ARCESS Array B	87.74	342	P	P	22 31 53.2	-0.6
	comp=Z,9.1nm,0.4s,baz=68,slow=7.7,SNR=21						
SMMC	Simmler	87.75	54	P	P	22 31 52.9	-1.7
	baz=284						
MDPB	Devils Postpil	87.91	52	eP	P	22 31 56.4	+0.7
	comp=Z,20nm,0.9s						
OMMB	Old Mammoth Mi	87.97	52	eP	P	22 31 57.0	+1.0
	comp=Z,19nm,1.0s						
PKM	Mcpherson Peak	88.00	55	P	P	22 31 56.5	+0.5
	baz=284						
RYN	Ryan	88.09	51	eP	P	22 31 57.6	+1.3
	comp=Z,32nm,1.0s						
NVAR	Mina Array Bea	88.30	51	P	P	22 31 58.5	+1.1
	comp=Z,22nm,0.7s,baz=263,slow=5.9,SNR=119						
NVAR				LR	LR	23 09 47.0	
	comp=Z,92nm,18.1s,baz=270,slow=34						
SCZ2	Santa Cruz Isl	88.35	56	P	P	22 31 56.8	-0.7
	baz=284						
WALA	Waterton Lakes	88.45	40	eP	P	22 31 58.9	+1.1
	comp=Z,43nm,1.5s						
BMN	Battle Mountai	88.60	49	eP	P	22 31 59.5	+0.8
	comp=Z,25nm,0.9s						
BMN	Battle Mountai	88.60	49	eP	P	22 31 59.5	+0.8
BMN				pmax	pmax		
	comp=Z,25nm,0.9s						
SNCC	San Nicolas Is	88.62	56	P	P	22 31 58.3	-0.5
	baz=284						
TIN	Tinemaha, Big	88.71	52	P	P	22 31 59.7	+0.4
	baz=285						
ARVC	Arvin	88.72	54	P	P	22 31 59.2	0.0
	baz=284						
ZEI	Tsey	88.74	314	eP	P	22 32 01.9	+2.5
ZEI				pmax	pmax		
	comp=Z,11nm,1.2s						
NCK	Nalchik	88.76	314	i P	P	22 31 56.5	-2.7
NCK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BLG	Laguna Peak, P	88.78	55	P	P	22 31 59.8	+0.3
	baz=284						
ISA	Isabella, Lake	88.87	54	P	P	22 32 00.3	+0.4
	baz=285						
OSI	Osito Audit: C	88.93	55	P	P	22 31 59.7	-0.5
	baz=285						
LPSR	Galich'ya Gora	88.98	324	eP	P	22 31 59.5	-0.5
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,550nm,19.0s						
CWC	Cottonwood Cre	88.98	53	P	P	22 32 00.9	+0.4
	baz=285						
MSO	Missoula	89.09	42	eP	P	22 32 01.3	+0.4
	comp=Z,25nm,1.7s						
KIV	Kislovodsk	89.27	315	eP	P	22 32 00.9	-0.8
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
VSR	Storozhevoye	89.30	323	eP	P	22 31 59.0	-2.5
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VSR				MLR	MLR		
	comp=Z,390nm,15.0s						
VORD	Divnogorie	89.30	322	eP	P	22 31 58.4	-3.1
VORD				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GRAC	Grapevine Rang	89.39	52	P	P	22 32 02.9	+0.5
	baz=285						
DAC	Darwin (Calif)	89.40	53	eP	P	22 32 04.3	+1.7
	comp=Z,22nm,0.9s						
OBN	Obninsk	89.42	327	eP	P	22 31 59.0	-2.9
OBN				*SP	sP	22 32 09.0	+0.3
OBN				eS	SKSac	22 42 39.0	+7.8
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EDW2	Edwards Air Fo	89.45	54	P	P	22 32 03.5	+0.8
	baz=285						
CIS	Catalina Islan	89.48	56	P	P	22 32 02.6	-0.3
	baz=285						
MPMC	Manual Prospec	89.54	53	P	P	22 32 04.0	+0.7
	baz=285,SNR=18						
MWC	Mount Wilson	89.56	55	eP	P	22 32 03.4	0.0
	comp=Z,107nm,1.6s						
MWC	Mount Wilson	89.56	55	eP	P	22 32 03.4	0.0
MWC				pmax	pmax		
	comp=Z,107nm,1.6s						
HLID	Hailey	89.74	45	P	P	22 32 04.5	+0.5
	baz=287						
FURC	Furnace Creek,	89.92	53	P	P	22 32 04.3	-0.4
	baz=286,SNR=15						
TPNV	Topopah Spring	90.27	52	P	P	22 32 07.4	+0.8
	baz=286,SNR=44						
GSC	Goldstone, Bar	90.28	54	P	P	22 32 07.4	+0.8
	baz=286,SNR=8.0						
R11A	Troy Canyon, C	90.38	51	P	P	22 32 08.0	+0.9
	baz=286,SNR=9.1						
MURC	Murrieta	90.42	56	P	P	22 32 07.0	-0.2
	baz=285						
DLMT	Dillon	90.43	43	eP	P	22 32 07.8	+0.6
	comp=Z,20nm,1.2s						
BBRC	Big Bear Solar	90.46	55	P	P	22 32 07.2	-0.5
	baz=286						
HRY	Holter Researc	90.51	42	eP	P	22 32 07.9	+0.4
VNDA	Vanda	90.53	176	P	P	22 32 07.6	+1.0
	comp=Z,7.2nm,1.0s,baz=319,slow=5.7,SNR=27						
VNDA	Vanda	90.53	176	eP	P	22 32 07.3	+0.7
	comp=Z,17nm,1.1s						
VNDA	Vanda	90.53	176	eP	P	22 32 07.3	+0.7
VNDA				pmax	pmax		
	comp=Z,17nm,1.1s						
SHOC	Shoshone, Teco	90.53	53	P	P	22 32 08.7	+1.0
	baz=286,SNR=6.9						
109C	Camp Elliot, M	90.68	56	P	P	22 32 08.6	+0.2
	baz=286						
CPE	Camp Elliot	90.68	56	eP	P	22 32 09.7	+1.4
	comp=Z,43nm,0.7s						
HEC	Hector,Ludlow	90.78	54	P	P	22 32 09.7	+0.8
	baz=286,SNR=11						
TUQ	Turquoise Moun	90.93	53	P	P	22 32 10.8	+1.1
	baz=286,SNR=9.9						
BOZ	Bozeman (W)	91.00	43	eP	P	22 32 10.5	+0.7
	comp=Z,36nm,1.6s						
BOZ	Bozeman (W)	91.00	43	eP	P	22 32 10.5	+0.7
BOZ				pmax	pmax		
	comp=Z,36nm,1.6s						
BOZ	Bozeman (W)	91.00	43	P	P	22 32 09.8	-0.1
	baz=289						
PFO	Pinyon Flats O	91.01	55	eP	P	22 32 11.0	+0.9
	comp=Z,57nm,1.3s						
PFO	Pinyon Flats O	91.01	55	eP	P	22 32 11.0	+0.9
PFO				pmax	pmax		
	comp=Z,57nm,1.3s						
PFO	Pinyon Flats O	91.01	55	P	P	22 32 10.7	+0.7
	baz=286,SNR=5.5						
BAR	Barrett	91.08	56	eP	P	22 32 10.7	+0.4
	comp=Z,4.1nm,1.0s						
SBA	Scott Base	91.20	175	eP	P	22 32 11.8	+2.1
	comp=Z,40nm,1.4s						
SBA	Scott Base	91.20	175	eP	P	22 32 11.8	+2.1
SBA				pmax	pmax		
	comp=Z,40nm,1.4s						
SHPR	Sheep Range	91.23	52	eP	P	22 32 12.1	+1.1
	comp=Z,17nm,0.9s						
MONP2	Monument Peak	91.23	56	P	P	22 32 10.0	-1.2
	baz=286,SNR=5.1						
BELC	Belle Mtn. Jos	91.27	55	P	P	22 32 12.0	+0.7
	baz=286,SNR=8.4						
GMRC	Granite Mounta	91.32	54	P	P	22 32 12.5	+1.0
	baz=286,SNR=15						
QLMT	Earthquake Lak	91.39	44	eP	P	22 32 13.0	+1.3
EGMT	Eagleton	91.39	40	eP	P	22 32 12.6	+1.1
	comp=Z,22nm,1.3s						
EGMT	Eagleton	91.39	40	P	P	22 32 11.5	0.0
	baz=291						
IKP	In-Ko-Pah, Jac	91.55	56	P	P	22 32 13.5	+1.0
	baz=286						
FINES	FINESS Array B	91.66	335	P	P	22 32 10.3	-1.9
	comp=Z,1.3nm,0.4s,baz=65,slow=4.9,SNR=35						
FINES	FINESS Array B	91.66	335	i P	P	22 32 10.5	-1.8
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SWSC	Sam W. Stewart	91.72	56	P	P	22 32 13.7	+0.5
	baz=286						
YHH	Holmes Hill	91.79	43	eP	P	22 32 14.9	+1.3
	comp=Z,30nm,1.2s						
BC3	Big Chuckawall	91.80	55	P	P	22 32 14.7	+0.9
	baz=286,SNR=5.3						
SPUT	South Promonto	91.81	47	eP	P	22 32 14.2	+0.5
	comp=Z,19nm,1.1s						
DUG	Dugway, Tooele	91.90	48	P	P	22 32 14.5	+0.4
	baz=288						
IRM	Iron Mountain	91.91	55	P	P	22 32 14.7	+0.6
	baz=287,SNR=9.2						
YFT	Old Faithful	91.91	44	eP	P	22 32 16.4	+2.2
	comp=Z,37nm,1.1s						
IMW	Indian Meadow	92.03	44	eP	P	22 32 15.9	+1.1
	comp=Z,17nm,0.9s						
FLWY	Flagg Ranch	92.13	44	eP	P	22 32 16.6	+1.5
	comp=Z,26nm,0.9s						
NEE2	Needles Airpor	92.15	54	P	P	22 32 14.6	-0.5
	baz=287						
TPAW	Teton Pass	92.16	45	eP	P	22 32 16.2	+0.8
	comp=Z,12nm,1.0s						
GCMT	Greycliff	92.23	42	eP	P	22 32 16.7	+1.2
REDW	Red Top Meadow	92.27	45	eP	P	22 32 16.3	+0.5
	comp=Z,14nm,1.0s						
CCUT	Cedar City	92.30	51	eP	P	22 32 17.2	+1.1
	comp=Z,14nm,1.1s						
HWUT	Hardware Ranch	92.34	47	eP	P	22 32 16.8	+0.6
	comp=Z,15nm,1.0s						
LOHW	Long Hollow	92.35	44	eP	P	22 32 16.5	+0.3
	comp=Z,10nm,1.1s						
GLA	Glamis	92.47	56	eP	P	22 32 17.6	+0.8
	comp=Z,34nm,0.8s						
GLA	Glamis	92.47	56	eP	P	22 32 17.6	+0.8
GLA				pmax	pmax		
	comp=Z,34nm,0.8s						
GLA	Glamis	92.47	56	P	P	22 32 16.7	0.0
	baz=287,SNR=6.1						
Y12C	Blythe	92.52	55	eP	P	22 32 17.5	+0.6
Y12C	Blythe	92.52	55	P	P	22 32 17.8	+0.9
	baz=287,SNR=6.0						
LCMT	Little Creek M	92.55	51	eP	P	22 32 18.5	+1.3
	comp=Z,17nm,1.0s						
RAYN	Ar Rayn	92.56	295	eP	P	22 32 15.2	-2.1
	comp=Z,5.0nm,0.7s						
RAYN	Ar Rayn	92.56	295	eP	P	22 32 15.2	-2.1
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ANN	Anapa	92.57	317	eP	P	22 32 13.4	-3.4
ANN				pmax	pmax		
	comp=Z,32nm,1.0s						
ANN				MLR	MLR		
	comp=Z,489nm,19.0s						
TCUT	Toone Canyon	92.62	47	eP	P	22 32 18.0	+0.5
	comp=Z,17nm,0.9s						
W13A	Hualapai Mount	92.63	53	eP	P	22 32 18.6	+0.9
	comp=Z,13nm,0.9s						
PDMCI	Parker Dam,Lak	92.66	54	P	P	22 32 18.2	+0.7
	baz=287						
RLMT	Red Lodge	92.73	43	eP	P	22 32 18.5	+0.6
	comp=Z,33nm,1.4s						
RLMT	Red Lodge	92.73	43	P	P	22 32 17.8	-0.1
	baz=291						
JLU	Jordanelle	92.75	48	eP	P	22 32 18.6	+0.4
	comp=Z,12nm,0.9s						
MPU	Maple Canyon	92.81	48	eP	P	22 32 18.3	-0.1
	comp=Z,14nm,1.2s						
KNB	Kanab	92.87	51	eP	P	22 32 20.1	+1.4
	comp=Z,29nm,1.0s						
MSU	Marysvale	92.89	50	eP	P	22 32 19.5	+0.7
MSU	Marysvale	92.89	50	eP	P	22 32 19.5	+0.7
MTPU	Mount Pierson	93.03	50	eP	P	22 32 17.9	-1.8
	comp=Z,6.0nm,0.7s						
FFC	Flin Flon	93.18	32	eP	P	22 32 19.9	+0.5
	comp=Z,6.7nm,0.9s						
FFC	Flin Flon	93.18	32	eP	P	22 32 19.9	+0.5
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TMUT	Trail Mountain	93.36	49	eP	P	22 32 21.3	+0.3
	comp=Z,14nm,1.2s						
BW06	Boulder Array	93.36	45	P	P	22 32 20.6	-0.3
	baz=290						
PD31	Pinedale Array	93.36	45	eP	P	22 32 20.7	-0.2
	comp=Z,15nm,1.8s						
PDAR	Pinedale Array	93.36	45	P	P	22 32 20.8	-0.2
	comp=Z,1.1nm,0.7s,baz=223,slow=2.9,SNR=11						
113A	Mohawk Valley,	93.41	56	eP	P	22 32 22.0	+1.0
	comp=Z,12nm,0.8s						
U15A	North Rim	93.46	52	eP	P	22 32 22.7	+1.1
	comp=Z,15nm,1.0s						
Q16A	Castle Valley	93.50	49	eP	P	22 32 22.2	+0.6
	comp=Z,19nm,1.2s						
P17A	Butcher Ranch,	93.64	48	eP	P	22 32 23.0	+0.9
	comp=Z,16nm,1.3s						
Y14A	Wickenburg	93.67	54	eP	P	22 32 23.5	+1.2
	comp=Z,26nm,0.8s						
LAO	LASA Array	94.12	40	P	P	22 32 23.1	-1.0
	baz=293						
214A	Organ Pipe Nat	94.42	56	P	P	22 32 26.3	+0.6
	baz=288,SNR=5.2						
WUAZ	Wupatki	94.45	52	eP	P	22 32 26.9	+0.9
	comp=Z,12nm,0.6s						
WUAZ	Wupatki	94.45	52	P	P	22 32 25.5	-0.5
	baz=289						
DGMT	Dagmar	94.65	38	P	P	22 32 26.0	-0.4
	baz=295						
PV09	Paradox Valley	95.15	49	eP	P	22 32 29.6	+0.3
PV23	Carpenter Ridg	95.25	49	eP	P	22 32 29.9	+0.2
	comp=Z,35nm,1.2s						
PV20	West Nyswonger	95.33	49	eP	P	22 32 30.2	+0.2
	comp=Z,32nm,1.3s						
PV16	Nyswonger Mesa	95.37	49	eP	P	22 32 30.6	+0.4
	comp=Z,20nm,0.7s						
PV22	Blue Mesa, Par	95.39	49	eP	P	22 32 30.6	+0.4
	comp=Z,16nm,0.7s						
PV18	Skein Mesa, Pa	95.40	49	eP	P	22 32 30.7	+0.4
	comp=Z,18nm,0.8s						
PV11	David Mesa, Pa	95.41	49	eP	P	22 32 31.0	+0.7
	comp=Z,34nm,0.9s						
PV03	Paradox Valley	95.44	49	eP	P	22 32 31.3	+0.8
	comp=Z,13nm,0.8s						
PV13	Radium Mtn., P	95.50	49	eP	P	22 32 31.2	+0.4
	comp=Z,14nm,0.7s						
PV07	Paradox Valley	95.53	49	eP	P	22 32 32.6	+1.7
	comp=Z,15nm,0.9s						
TUC	Tucson	95.95	55	eP	P	22 32 33.8	+1.0
	comp=Z,9.2nm,1.0s						
TUC	Tucson	95.95	55	eP	P	22 32 33.8	+1.0
TUC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TUC	Tucson	95.95	55	P	P	22 32 32.1	-0.7
	baz=289						
N23A	Red Feather La	96.56	46	eP	P	22 32 37.0	+1.4
	comp=Z,31nm,1.6s						
RSSD	Black Hills	96.56	42	eP	P	22 32 35.5	0.0
	comp=Z,16nm,1.3s						
RSSD	Black Hills	96.56	42	eP	P	22 32 35.5	0.0
RSSD				pmax	pmax		
	comp=Z,16nm,1.3s						
RSSD	Black Hills	96.56	42	P	P	22 32 34.5	-1.0
	baz=295						
BRTR	Keskin Array B	97.05	313	P	Pdif	22 32 39.2	+1.4
	comp=Z,0.7nm,0.7s,baz=76,slow=6.1,SNR=4.2						
NOA	NORSAR Array B	97.64	339	P	P	22 32 38.1	-1.6
	comp=Z,0.3nm,0.6s,baz=47,slow=4.6,SNR=2.4						
MAW	Mawson	98.13	202	P	Pdif	22 32 41.7	+0.1
	comp=Z,3.8nm,0.9s,baz=49,slow=2.3,SNR=3.8						
KOLS	Kolonicke sedl	100.06	325	eP	Pdif	22 32 51.0	+0.2
KOLS	Kolonicke sedl	100.06	325	ePDIF	Pdif	22 32 51.0	+0.2
MNTX	Cornudas Mount	100.46	54	ePdif	Pdif	22 32 53.9	+0.9
OKC	Ostrava-Krasne	101.79	328	AMS	AMS	23 22 20.0	
	comp=Z,500nm,18.5s						
VYHS	Vyhne	102.20	326	eP	Pdif	22 32 59.0	-1.3
VYHS	Vyhne	102.20	326	ePDIF	Pdif	22 32 59.0	-1.3
EYMN	Ely	102.29	34	P	Pdif	22 32 59.1	-1.7
	baz=305						
OSTC	Ostas	102.35	329	AMS	AMS	23 26 30.0	
	comp=Z,300nm,16.9s						
CHVC	Chvalec	102.41	329	AMS	AMS	23 24 10.0	
	comp=Z,400nm,16.6s						
DPC	Dobruska-Polom	102.42	329	AMS	AMS	23 26 20.0	
	comp=Z,300nm,23.4s						
UPC

TORD Torodi Ar. Bea 134.62 303 PKP **PKiKP 22 38 25.5 -0.6**
comp=Z,1.5nm,0.9s,baz=38,slow=2.5,SNR=6.5
PLCA Paso Flores 138.82 139 PKP **PKiKP 22 38 33.7 -0.4**
comp=Z,10.0nm,1.0s,baz=244,slow=3.4,SNR=8.2
ROC1 El Roble 142.22 128 *e*PKPdf **PKPdf 22 38 40.0 +1.5**
PEL Peldehue 142.40 129 *e*PKPdf **PKPdf 22 38 40.0 +1.4**
PEL Peldehue 142.40 129 *e*PKIKP **PKPdf 22 38 40.0 +1.4**
DBIC Dimbokro 143.51 300 PKhKP PKPpre 22 38 37.2
comp=Z,5.0nm,0.7s,baz=144,slow=2.7,SNR=4.8
LCO Las Campanas 143.95 122 *e*PKPdf **PKPdf 22 38 41.4 -0.3**
LCO Las Campanas 143.95 122 *e*PKIKP **PKPdf 22 38 41.4 -0.3**
TRQA Tornquist 145.73 142 *e*PKPdf **PKPab 22 38 46.2 +1.3**
TRQA Tornquist 145.73 142 *e*PKP2 **PKPab 22 38 46.2 +1.3**
GO02 Mina Guanaco 146.05 117 *e*PKPdf **PKPab 22 38 47.2 +0.3**
PB11 IPOC Station P 147.06 107 *e*PKPdf **PKPbc 22 38 48.6 -0.6**
LVC Limon Verde 147.26 112 *e*PKPdf **PKPbc 22 38 49.7 -0.3**
LVC Limon Verde 147.26 112 *e*PKP2 **PKPbc 22 38 49.7 -0.3**
GO01 Chusmiza 147.50 107 *e*PKPdf **PKPbc 22 38 49.7 -1.1**
LPAZ La Paz 148.80 101 PKP **PKPdf 22 38 52.5 +1.8**
comp=Z,19nm,0.8s,baz=288,slow=3.2,SNR=26
LPAZ PKPbc **pPKPdf 22 38 55.8 0.0**
comp=Z,19nm,0.8s,baz=319,slow=2.6,SNR=46
LPAZ La Paz 148.80 101 *e*PKPdf **PKPdf 22 38 51.9 +1.3**
LPAZ La Paz 148.80 101 *e*PKIKP **PKPdf 22 38 51.9 +1.3**
PTGA Pitinga 153.59 65 *e*PKPdf **PKPdf 22 38 58.7 +1.3**
CPUP Villa Florida 155.82 128 PKPbc PKPdf 22 39 09.7 +10
comp=Z,7.7nm,1.1s,baz=293,slow=5.2,SNR=4.9
CPUP PKPab **PKPab 22 39 28.5 +1.8**
comp=Z,11nm,0.8s,baz=256,slow=3.7,SNR=8.9
CPUP Villa Florida 155.82 128 *e*PKPdif PKPdf 22 39 08.7 +8.7
CPUP Villa Florida 155.82 128 *e*PKIKP PKPdf 22 39 08.7 +8.7
BDFB Brasilia 168.07 106 PKP **PKPdf 22 39 13.6 +0.7**
comp=Z,2.3nm,0.7s,baz=90,slow=4.0,SNR=5.0

*ISCJB **21** 22:20:00.4±0.2, 12°.54N±0°.03×143°.77E±0°.03, h27km, mb5.1/137, MS4.5/1, Error ellipse: s-maj=4.8km s-min=3.9km az=23.4*
*NEIC **21** 22:20:03.3±0.1, 12°.58N×143°.80E, h35km, mb5.0/74, Error ellipse: s-maj=3.5km s-min=3.0km az=101.0*
*IDC **21** 22:20:03.4±3.0, 12°.60N×143°.85E, h32km±22km, mb4.5/24, mb1 4.7/25, mb1mx4.5/42, mbtmp4.7/25, ML4.1/1, MS4.5/1, Ms1 4.4/1, ms1mx3.6/11, Error ellipse: s-maj=16.7km s-min=11.2km az=101.0*
ISC 21 22:20:02.1±0.3, 12°.61N±0°.05×143°.81E±0°.06, h27km, n208, σ0°.84/209, mb5.2/137, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.42**	**47**	Pn	**Pn**	**22 20 25.9**	**-0.2**
	3μm,0.3s,baz=208,slow=17,SNR=21						
GUMO				Sn	**Sb**	**22 20 44.8**	**-0.7**
	1μm,0.3s,baz=359,slow=24,SNR=6.6						
GUMO	**Guam**	**1.42**	**47**	*e*Pn	**Pn**	**22 20 25.0**	**-1.0**
GUMO				Sn	**Sb**	**22 20 44.8**	**-0.7**
PATS	**Pohnpei**	**15.40**	**111**	*e*Pn	**Pn**	**22 23 38.0**	**+0.4**
	302nm,1.5s						
SIJI	**Sorong**	**18.29**	**224**	P	**Pn**	**22 24 15.7**	**+1.6**
	0.5nm,0.3s,baz=28,slow=12,SNR=1.9						
DAV	**Davao City (W)**	**18.78**	**255**	*e*P	**P**	**22 24 19.2**	**-0.2**
	617nm,1.4s						
FAKI	**Fak Fak**	**19.23**	**217**	*e*P	**P**	**22 24 25.2**	**+0.8**
	254nm,1.4s						
TNTI	**Ternate**	**20.10**	**235**	*e*P	**P**	**22 24 33.2**	**-0.7**
	457nm,2.0s						
JOW	**Kunigami**	**20.31**	**316**	P	Pn	22 24 38.2	0.0
	9.2nm,0.9s,baz=138,slow=12,SNR=2.2						
JOW	**Kunigami**	**20.31**	**316**	*e*P	**P**	**22 24 36.0**	**-0.1**
	119nm,1.3s						
PMG	**Port Moresby**	**22.13**	**171**	*e*P	**P**	**22 24 55.6**	**0.0**
	86nm,1.3s						
H11S3	**WAKE ISLAND Hy**	**22.79**	**72**	T	T	22 48 46.6	
	baz=258,slow=75,SNR=57						
H11S1	**WAKE ISLAND Hy**	**22.81**	**72**	T	T	22 48 48.1	
	baz=258,slow=75,SNR=49						
H11S2	**WAKE ISLAND Hy**	**22.81**	**72**	T	T	22 48 49.2	
	baz=258,slow=75,SNR=85						
H11N1	**WAKE ISLAND Hy**	**23.25**	**69**	T	T	22 49 18.4	
	baz=255,slow=75,SNR=344						
H11N2	**WAKE ISLAND Hy**	**23.26**	**69**	T	T	22 49 25.4	
	baz=255,slow=75,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	**23.27**	**69**	T	T	22 49 30.1	
	baz=255,slow=75,SNR=300						
INU	**Inuyama**	**23.46**	**346**	*e*P	**P**	**22 25 10.6**	**+1.2**
	106nm,1.3s						
JNU	**Nakatsue**	**23.59**	**332**	P	**P**	**22 25 12.1**	**+1.3**
	95nm,0.9s,baz=125,slow=4.0,SNR=8.4						
JNU	**Nakatsue**	**23.59**	**332**	*e*P	**P**	**22 25 11.7**	**+1.0**
	209nm,1.1s						
KWAJ	**Kwajalein Atol**	**23.69**	**97**	*e*P	**P**	**22 25 11.2**	**-0.7**
	788nm,1.8s						
TWG	**Pinlang**	**23.89**	**298**	*e*P	**P**	**22 25 14.2**	**+0.6**
	103nm,1.1s						
YULB	**Yu-li**	**23.91**	**300**	*e*P	**P**	**22 25 14.9**	**+1.1**
	32nm,1.2s						
SAUI	**Saumlaki**	**23.94**	**212**	*e*P	**P**	**22 25 15.0**	**+0.8**
	540nm,1.0s						
NACB	**Ninganchiao**	**23.97**	**302**	*e*P	**P**	**22 25 15.4**	**+0.9**
	37nm,1.1s						
SSLB	**Suanglung**	**24.35**	**300**	*e*P	**P**	**22 25 19.3**	**+1.3**
	66nm,1.2s						
MJAR	**Matsushiro Arr**	**24.35**	**349**	P	**P**	**22 25 18.7**	**+0.9**
	33nm,1.2s,baz=173,slow=8.6,SNR=3.7						
MJAR				ScP	**ScP**	**22 32 33.3**	**-0.8**
	2.2nm,0.7s,baz=177,slow=3.6,SNR=6.4						
MJAR	**Matsushiro Arr**	**24.35**	**349**	P	**P**	**22 25 18.7**	**+0.9**
MJAR				ScP	**ScP**	**22 32 33.3**	**-0.8**
MAJO	**Matsushiro**	**24.36**	**349**	*e*P	**P**	**22 25 18.6**	**+0.8**
	67nm,1.2s						
MAJO				*e*ScP	**ScP**	**22 32 33.3**	**-0.8**
MJB9	**Matsu-Tunnel**	**24.36**	**349**	*e*P	**P**	**22 25 18.8**	**+0.9**
	68nm,1.2s						
YHNB	**Yeheng**	**24.36**	**303**	*e*P	**P**	**22 25 17.5**	**-0.7**
	86nm,1.4s						
TPUB	**Ta-pu**	**24.44**	**299**	*e*P	**P**	**22 25 18.6**	**-0.2**
	96nm,1.5s						
LUWI	**Luwuk**	**24.90**	**238**	*e*P	**P**	**22 25 23.2**	**+0.2**
	372nm,1.0s						
COEN	**Coen**	**26.41**	**181**	*e*P	**P**	**22 25 36.5**	**-0.1**
	24nm,0.8s						
MTN	**Manton Dam**	**28.24**	**207**	*e*P	**P**	**22 25 52.2**	**-0.9**
	56nm,0.9s						
KSRS	**Korea Array**	**28.53**	**333**	P	**P**	**22 25 57.5**	**+2.1**
	6.1nm,0.9s,baz=142,slow=9.7,SNR=3.1						
KS15	**Wonju Array Si**	**28.54**	**333**	*e*P	**P**	**22 25 56.3**	**+0.8**
	21nm,1.1s						
KSAR	**Wonju Array Be**	**28.54**	**333**	P	**P**	**22 25 57.5**	**+2.0**
ERM	**Erimo**	**29.30**	**359**	*e*P	**P**	**22 26 02.1**	**-0.1**
	19nm,1.0s						
SOEI	**Soe**	**29.51**	**222**	*e*P	**P**	**22 26 04.0**	**-0.5**
	129nm,1.2s						
KAPI	**Kappang**	**29.64**	**235**	P	**P**	**22 26 07.0**	**+1.5**
	5.5nm,0.5s,baz=59,slow=9.9,SNR=3.8						
KAPI	**Kappang**	**29.64**	**235**	*e*P	**P**	**22 26 05.7**	**+0.2**
	28nm,0.9s						
CTAO	**Charters Tower**	**32.58**	**176**	*e*P	**P**	**22 26 30.2**	**-1.2**
	40nm,1.4s						
SBUM	**Sibu**	**32.86**	**255**	*e*P	**P**	**22 26 33.5**	**-0.4**
	9.1nm,1.2s						
USA0B	**Ussuriysk Arra**	**33.07**	**344**	*e*P	**P**	**22 26 35.4**	**-0.1**
	39nm,1.5s						
USRK	**Ussuriysk Ar.**	**33.07**	**344**	P	**P**	**22 26 37.1**	**+1.7**
	4.5nm,0.8s,baz=159,slow=8.8,SNR=4.7						
USRK	**Ussuriysk Ar.**	**33.07**	**344**	P	**P**	**22 26 37.1**	**+1.7**
WRAB	**Tennant Creek**	**33.66**	**196**	*e*P	**P**	**22 26 40.6**	**-0.1**
	40nm,0.6s						
WB2	**Warramunga Arr**	**33.66**	**196**	*e*P	**P**	**22 26 40.5**	**-0.4**
	45nm,0.8s						
WR1	**Warramunga Arr**	**33.67**	**196**	*e*P	**P**	**22 26 40.8**	**-0.1**
WRA	**Warramunga Arr**	**33.67**	**196**	P	**P**	**22 26 40.8**	**-0.1**
	36nm,0.6s,baz=7.5,slow=7.2,SNR=8.3						
WRA	**Warramunga Arr**	**33.67**	**196**	P	**P**	**22 26 40.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**35.39**	**211**	*e*P	**P**	**22 26 55.1**	**-0.7**
ENH	**Enshi**	**36.27**	**304**	*e*P	**P**	**22 27 02.6**	**-0.7**
	81nm,1.5s						
AS31	**Alice Springs**	**37.33**	**195**	*e*P	**P**	**22 27 12.9**	**+0.5**
	6.0nm,0.4s						
AS31				*e*PcP	**PcP**	**22 29 32.5**	**+1.1**
ASAR	**Alice Springs**	**37.34**	**195**	P	**P**	**22 27 12.4**	**0.0**
	6.5nm,0.5s,baz=20,slow=11,SNR=8.7						
ASAR				PcP	**PcP**	**22 29 32.5**	**+1.1**
	6.8nm,0.8s,baz=32,slow=2.9,SNR=6.9						
ASAR	**Alice Springs**	**37.34**	**195**	P	**P**	**22 27 12.4**	**0.0**
ASAR				PcP	**PcP**	**22 29 32.5**	**+1.1**
KLR	**Kul'dur**	**37.85**	**347**	P	**P**	**22 27 17.6**	**+1.1**
	3.7nm,0.7s,baz=189,slow=10,SNR=4.5						
KLR	**Kul'dur**	**37.85**	**347**	*e*P	**P**	**22 27 17.6**	**+1.1**
DZM	**Mont Dzumac**	**41.00**	**147**	PcP	**PcP**	**22 29 45.1**	**+2.0**
	16nm,0.7s,baz=51,slow=6.5,SNR=4.0						
DZM	**Mont Dzumac**	**41.00**	**147**	*e*P	**P**	**22 27 42.7**	**-0.4**
	39nm,1.2s						
DZM				*e*PcP	**PcP**	**22 29 45.1**	**+2.0**
CISI	**Cisompet, Garu**	**41.00**	**243**	*e*P	**P**	**22 27 42.8**	**-0.5**
	39nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.53**	**284**	P	**P**	**22 28 04.0**	**+0.1**
	5.7nm,0.6s,baz=85,slow=6.6,SNR=4.2						
CMAR	**Chiang Mai Arr**	**43.53**	**284**	P	**P**	**22 28 04.0**	**+0.1**
STKA	**Stephens Creek**	**44.29**	**183**	P	**P**	**22 28 09.3**	**-0.3**
	10.0nm,0.7s,baz=345,slow=8.1,SNR=4.6						
STKA				PcP	**PcP**	**22 29 54.8**	**+1.1**
	4.8nm,0.7s,baz=86,slow=2.5,SNR=4.4						
STKA				LR	LR	22 47 39.8	
	comp=Z,610nm,20.1s,baz=352,slow=37						
STKA	**Stephens Creek**	**44.29**	**183**	*e*P	**P**	**22 28 08.7**	**-0.9**
	14nm,1.9s						
STKA				PcP	**PcP**	**22 29 54.8**	**+1.1**
XMIS	**Christmas Isla**	**44.30**	**240**	*e*P	**P**	**22 28 09.6**	**-0.4**
	564nm,2.0s						
SONA0	**Songino Array**	**46.94**	**326**	*e*P	**P**	**22 28 32.3**	**+1.7**
SONM	**Songino Array**	**46.94**	**326**	P	**P**	**22 28 32.3**	**+1.7**
	3.0nm,0.7s,baz=160,slow=4.7,SNR=4.1						
SONM	**Songino Array**	**46.94**	**326**	P	**P**	**22 28 32.3**	**+1.7**
MA2	**Magadan**	**47.16**	**5**	*e*P	**P**	**22 28 32.2**	**+0.2**
	31nm,1.2s						
MORW	**Mowa**	**49.36**	**213**	*e*P	**P**	**22 28 48.8**	**-0.5**
	51nm,0.9s						
TOO	**Toolangi**	**49.94**	**178**	*e*P	**P**	**22 28 53.8**	**+0.1**
	28nm,1.0s						
SHL	**Shillong**	**50.44**	**293**	*e*P	**P**	**22 28 56.8**	**-1.1**
	24nm,1.0s						
BKZ	**Black Stump Fm**	**59.85**	**151**	*e*P	**P**	**22 30 04.4**	**-1.0**
	117nm,1.7s						
THZ	**Tophouse**	**60.38**	**155**	*e*P	**P**	**22 30 09.0**	**0.0**
	150nm,1.7s						
FOZ	**Fox Glacier**	**60.71**	**159**	*e*P	**P**	**22 30 10.6**	**-0.5**
	100nm,1.2s						
BFZ	**Birch Farm**	**60.94**	**152**	*e*P	**P**	**22 30 12.3**	**-0.5**
	256nm,1.5s						
LTZ	**Lake Taylor**	**60.99**	**156**	*e*P	**P**	**22 30 11.9**	**-1.2**
	269nm,1.9s						
RPZ	**Rata Peaks**	**61.32**	**158**	*e*P	**P**	**22 30 14.9**	**-0.4**
	339nm,1.8s						
OXZ	**Oxford**	**61.36**	**157**	*e*P	**P**	**22 30 15.2**	**-0.4**
	57nm,0.9s						
MK31	**Makanchi Array**	**61.48**	**317**	*e*P	**P**	**22 30 16.3**	**-0.2**
	6.0nm,0.9s						
MK32	**Makanchi Array**	**61.48**	**317**	*e*P	**P**	**22 30 16.5**	**0.0**
MKAR	**Makanchi Array**	**61.48**	**317**	P	**P**	**22 30 16.5**	**0.0**
	4.7nm,0.7s,baz=87,slow=7.8,SNR=4.6						
MKAR	**Makanchi Array**	**61.48**	**317**	P	**P**	**22 30 16.5**	**0.0**
DCZ	**Deep Cove**	**61.54**	**162**	*e*P	**P**	**22 30 16.8**	**+0.2**
	45nm,1.1s						
LBZ	**Lake Benmore**	**61.59**	**159**	*e*P	**P**	**22 30 17.4**	**+0.4**
	139nm,1.6s						
MAKZ	**Makanchi**	**61.69**	**317**	*e*P	**P**	**22 30 17.5**	**-0.4**
	19nm,1.4s						
MLZ	**Mavora Lakes**	**61.75**	**161**	*e*P	**P**	**22 30 18.1**	**-0.1**
	69nm,1.0s						
LATR	**Latur**	**64.75**	**285**	*ex*	x	22 29 03.0	
BOOM	**Boomskoye usch**	**65.29**	**311**	*e*P	**P**	**22 30 40.8**	**-1.2**
	10nm,1.2s						
CNPM	**China Poot**	**66.59**	**30**	*e*P	**P**	**22 30 50.4**	**+0.6**
	13nm,0.9s						
NRIK	**Noril'sk**	**66.72**	**341**	P	**P**	**22 30 50.8**	**+0.4**
	4.1nm,0.8s,baz=60,slow=8.1,SNR=4.4						
CAST	**Castle Rocks**	**67.32**	**26**	*e*P	**P**	**22 30 54.9**	**+0.5**
	7.6nm,0.9s						
ARSB	**Arslanbob**	**67.41**	**310**	*e*P	**P**	**22 30 55.4**	**-0.1**
	51nm,1.6s						
RC01	**Rabbit Creek A**	**67.72**	**29**	*e*P	**P**	**22 30 57.2**	**+0.3**
	20nm,1.1s						
BPAW	**Bear Paw Mtn.**	**67.99**	**25**	*e*P	**P**	**22 30 58.4**	**-0.2**
	12nm,1.4s						
TRF	**Thorofare Moun**	**68.10**	**26**	*e*P	**P**	**22 30 59.4**	**-0.1**
	12nm,1.1s						
KKAR	**Karatay Array**	**69.32**	**311**	*e*P	**P**	**22 31 06.9**	**-0.4**
	14nm,1.3s						
GAR	**Garm**	**69.38**	**307**	*e*P	**P**	**22 31 07.6**	**-0.3**
	56nm,1.5s						
EYAK	**Cordova Ski Ar**	**69.50**	**30**	*e*P	**P**	**22 31 08.0**	**-0.1**
	20nm,1.4s						
ILAR	**Eielson Array**	**69.89**	**25**	P	**P**	**22 31 10.4**	**+0.1**
	2.4nm,0.5s,baz=248,slow=6.3,SNR=8.3						
ILAR	**Eielson Array**	**69.89**	**25**	P	**P**	**22 31 10.4**	**+0.1**
TOLK	**Toolik Lake Re**	**69.89**	**21**	*e*P	**P**	**22 31 10.8**	**+0.4**
	12nm,1.1s						
PAX	**Paxson**	**70.11**	**27**	*e*P	**P**	**22 31 12.4**	**+0.6**
	10nm,1.1s						
BRVK	**Borovoye**	**70.12**	**322**	*e*P	**P**	**22 31 12.2**	**+0.2**
	7.4nm,0.7s						
KBL	**Kabul**	**70.48**	**302**	*e*P	**P**	**22 31 14.7**	**-0.1**
	9.4nm,0.9s						
DOT	**Dot Lake**	**70.86**	**27**	*e*P	**P**	**22 31 16.1**	**-0.3**
	9.5nm,0.8s						
YKU2	**Yakutat**	**72.38**	**31**	*e*P	**P**	**22 31 25.4**	**-0.1**
	439nm,0.9s						
DAWY	**Dawson**	**72.97**	**27**	*e*P	**P**	**22 31 28.9**	**-0.1**
	9.8nm,1.0s						
INK	**Inuvik**	**75.66**	**22**	P	**P**	**22 31 45.6**	**+1.1**
	5.1nm,0.8s,baz=286,slow=4.1,SNR=4.1						
INK	**Inuvik**	**75.66**	**22**	*e*P	**P**	**22 31 44.7**	**+0.2**
	12nm,1.1s						
ABKAR	**Akbulak array**	**76.57**	**318**	*e*P	**P**	**22 31 49.9**	**-0.2**
	4.6nm,0.8s						
ARU	**Arti**	**76.98**	**325**	*e*P	**P**	**22 31 52.3**	**+0.1**
	5.8nm,0.8s						
GEYT	**Alibeck**	**79.00**	**307**	P	**P**	**22 32 03.8**	**-0.1**
	4.4nm,0.9s,baz=150,slow=1.2,SNR=3.9						
GEYT	**Alibeck**	**79.00**	**307**	P	**P**	**22 32 03.8**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**79.00**	**307**	*e*P	**P**	**22 32 03.6**	**-0.3**
	18nm,1.3s						
CASY	**Casey**	**82.43**	**193**	*e*P	**P**	**22 32 21.5**	**+0.1**
	81nm,1.8s						
UOSS	**Minazif**	**82.64**	**294**	*e*P	**P**	**22 32 21.9**	**-1.7**
	77nm,1.8s						
LLLB	**Lillooet**	**83.08**	**40**	*e*P	**P**	**22 32 25.7**	**+0.3**
	5.7nm,0.8s						
H04A	**Detroit Lake**	**84.06**	**46**	*e*P	**P**	**22 32 30.6**	**0.0**
	9.9nm,1.0s						
YKW3	**Yellowknife Ar**	**84.17**	**27**	*e*P	**P**	**22 32 31.1**	**+0.4**
	11nm,1.1s						
YKA	**Yellowknife Ar**	**84.19**	**27**	P	**P**	**22 32 30.7**	**0.0**
	2.7nm,0.5s,baz=285,slow=5.0,SNR=6.7						
YKA	**Yellowknife Ar**	**84.19**	**27**	P	**P**	**22 32 30.8**	**0.0**
YKB5	**Yellowknife Ar**	**84.19**	**27**	*e*P	**P**	**22 32 30.7**	**0.0**
RES	**Resolute Bay**	**85.73**	**13**	*e*P	**P**	**22 32 38.5**	**+0.2**
	9.3nm,0.9s						
NEW	**Newport**	**86.64**	**41**	*e*P	**P**	**22 32 43.1**	**-0.3**
	17nm,0.9s						
J08A	**Circle Bar Ran**	**86.97**	**46**	*e*P	**P**	**22 32 45.3**	**+0.1**
	18nm,1.1s						
WVOR	**Wild Horse Val**	**87.08**	**47**	*e*P	**P**	**22 32 46.3**	**+0.5**
	30nm,1.7s						
F10A	**Beach Ranch, E**	**87.17**	**44**	*e*P	**P**	**22 32 45.9**	**-0.2**
	13nm,1.0s						
PNTR	**Pine Nut**	**87.19**	**51**	*e*P	**P**	**22 32 45.4**	**-1.1**
	21nm,1.0s						
PAHR	**Pah Rah Range**	**87.20**	**50**	*e*P	**P**	**22 32 46.4**	**0.0**
	17nm,1.2s						
BMO	**Blue Mountains**	**87.41**	**45**	*e*P	**P**	**22 32 47.3**	**0.0**
	24nm,1.1s						
WAKR	**Walker**	**87.45**	**51**	*e*P	**P**	**22 32 48.3**	**+0.6**
	15nm,1.2s						
PAGB	**Antelope Grade**	**87.48**	**54**	*e*P	**P**	**22 32 47.2**	**-0.5**
	30nm,1.1s						
ARA0	**ARCESS Array S**	**87.69**	**342**	*e*P	**P**	**22 32 47.6**	**-0.4**
ARCES	**ARCESS Array B**	**87.69**	**342**	P	**P**	**22 32 47.6**	**-0.4**
	7.2nm,0.4s,baz=68,slow=7.5,SNR=10						
ARCES	**ARCESS Array B**	**87.69**	**342**	P	**P**	**22 32 47.6**	**-0.4**
NV01	**Mina Array Sit**	**88.33**	**51**	*e*P	**P**	**22 32 53.2**	**+1.2**
NVAR	**Mina Array Bea**	**88.33**	**51**	P	**P**	**22 32 53.2**	**+1.2**
	14nm,0.6s,baz=261,slow=5.7,SNR=11						
NVAR	**Mina Array Bea**	**88.33**	**51**	P	**P**	**22 32 53.2**	**+1.3**
NV11	**Mina Array Sit**	**88.44**	**51**	*e*P	**P**	**22 32 53.5**	**+1.1**
	1.4nm,0.9s						
BMN	**Battle Mountai**	**88.62**	**49**	*e*P	**P**	**22 32 53.8**	**+0.5**
	17nm,1.1s						
GNI	**Garni**	**88.77**	**311**	*e*P	**P**	**22 32 52.1**	**-1.8**
	12nm,0.8s						
KIV	**Kislovodsk**	**89.19**	**315**	*e*P	**P**	**22 32 55.4**	**-0.3**
	11nm,1.4s						
HLID	**Hailey**	**89.76**	**45**	*e*P	**P**	**22 32 58.9**	**+0.3**
	16nm,1.1s						
ELK	**Elko**	**89.99**	**48**	*e*P	**P**	**22 32 59.5**	**-0.2**
	21nm,1.0s						
TPNV	**Topopah Spring**	**90.29**	**52**	*e*P	**P**	**22 33 01.8**	**+0.7**
	22nm,0.9s						
LRM	**Limekiln Ridge**	**90.40**	**43**	*e*P	**P**	**22 33 01.1**	**-0.5**
MCMT	**McKenzie Canyo**	**90.45**	**44**	*e*P	**P**	**22 33 01.6**	**-0.2**
HRY	**Holter Researc**	**90.52**	**42**	*e*P	**P**	**22 33 03.2**	**+1.2**
VNDA	**Vanda**	**90.56**	**176**	P	**P**	**22 33 02.0**	**+0.8**
	4.2nm,0.9s,baz=318,slow=5.3,SNR=4.0						
VNDA	**Vanda**	**90.56**	**176**	*e*P	**P**	**22 33 01.4**	**+0.2**
	19nm,1.4s						
PFO	**Pinyon Flats O**	**91.04**	**55**	*e*P	**P**	**22 33 04.4**	**-0.2**
	29nm,1.3s						
SHPR	**Sheep Range**	**91.26**	**52**	*e*P	**P**	**22 33 06.1**	**+0.5**
	14nm,0.9s						
QLMT	**Earthquake Lak**	**91.41**	**43**	*e*P	**P**	**22 33 06.4**	**+0.2**
FIA1	**FINESS Array S**	**91.60**	**335**	*e*P	**P**	**22 33 04.5**	**-1.9**
	29nm,1.8s						
FIA0	**FINESS Array S**	**91.60**	**335**	*e*P	**P**	**22 33 04.7**	**-1.8**
FINES	**FINESS Array B**	**91.60**	**335**	P	**P**	**22 33 04.7**	**-1.8**
	2.5nm,0.5s,baz=70,slow=5.0,SNR=9.1						
FINES	**FINESS Array B**	**91.60**	**335**	P	**P**	**22 33 04.7**	**-1.8**
PSUT	**Pine Spring**	**91.66**	**50**	*e*P	**P**	**22 33 07.2**	**-0.3**
	12nm,0.9s						
SPUT	**South Promonto**	**91.83**	**47**	*e*P	**P**	**22 33 08.2**	**0.0**
	14nm,1.1s						
DUG	**Dugway, Tooele**	**91.92**	**48**	*e*P	**P**	**22 33 09.0**	**+0.4**
	14nm,1.2s						
CCUT	**Cedar City**	**92.33**	**51**	*e*P	**P**	**22 33 10.9**	**+0.3**
	11nm,1.2s						
RAYN	**Ar Rayn**	**92.48**	**295**	*e*P	**P**	**22 33 09.4**	**-2.0**
	5.0nm,0.7s						
GLA	**Glamis**	**92.51**	**56**	*e*P	**P**	**22 33 11.0**	**-0.3**
	17nm,0.6s						
Y12C	**Blythe**	**92.55**	**55**	*e*P	**P**	**22 33 11.8**	**+0.4**
	13nm,0.8s						
TCUT	**Toone Canyon**	**92.64**	**47**	*e*P	**P**	**22 33 11.8**	**-0.2**
	19nm,1.1s						
W13A	**Hualapai Mount**	**92.66**	**53**	*e*P	**P**	**22 33 12.3**	**+0.1**
	14nm,1.2s						
TCRU	**Three Creeks R**	**92.69**	**50**	*e*P	**P**	**22 33 11.9**	**-0.4**
	14nm,0.3s						
RER	**Riviere de l'E**	**92.70**	**249**	*e*P	**P**	**22 33 11.4**	**-1.0**
	103nm,1.0s						
RLMT	**Red Lodge**	**92.75**	**43**	*e*P	**P**	**22 33 12.9**	**+0.5**
	17nm,1.4s						
JLU	**Jordanelle**	**92.78**	**47**	*e*P	**P**	**22 33 12.3**	**-0.4**
	7.3nm,0.9s						
MSU	**Marysvale**	**92.92**	**50**	*e*P	**P**	**22 33 13.3**	**0.0**
MTPU	**Mount Pierson**	**93.06**	**50**	*e*P	**P**	**22 33 14.9**	**+0.7**
	6.0nm,0.7s						
FFC	**Flin Flon**	**93.18**	**32**	*e*P	**P**	**22 33 13.9**	**0.0**
	155nm,1.8s						
PDAR	**Pinedale Array**	**93.38**	**45**	P	**P**	**22 33 14.6**	**-0.8**
	1.1nm,0.8s,baz=305,slow=3.2,SNR=2.5						
PDAR	**Pinedale Array**	**93.38**	**45**	P	**P**	**22 33 14.6**	**-0.8**
TMUT	**Trail Mountain**	**93.38**	**49**	*e*P	**P**	**22 33 14.4**	**-1.2**
	6.0nm,0.7s						
113A	**Mohawk Valley,**	**93.44**	**56**	*e*P	**P**	**22 33 15.7**	**+0.1**
	11nm,1.0s						
U15A	**North Rim**	**93.49**	**52**	*e*P	**P**	**22 33 16.1**	**+0.1**
	9.1nm,0.8s						
Q16A	**Castle Valley**	**93.53**	**49**	*e*P	**P**	**22 33 16.5**	**+0.4**
	23nm,1.5s						
Y14A	**Wickenburg**	**93.70**	**54**	*e*P	**P**	**22 33 17.4**	**+0.6**
	13nm,0.9s						
SRU	**San Rafael Swe**	**93.94**	**49**	*e*P	**P**	**22 33 18.0**	**0.0**
	11nm,0.6s						
LAO	**LASA Array**	**94.14**	**40**	*e*P	**P**	**22 33 18.7**	**+0.1**
	32nm,1.2s						
WUAZ	**Wupatki**	**94.48**	**52**	*e*P	**P**	**22 33 20.4**	**-0.1**
	12nm,0.6s						
PHWY	**Pilot Hill**	**96.76**	**45**	*e*P	**P**	**22 33 28.7**	**-2.2**
	18nm,0.7s						
NB200

baz=160
Y12C Blythe 1.17 46 *e*Pn **Pb 23 16 17.2 +0.1**
Y12C Blythe 1.17 46 S **Sb 23 16 32.7 +0.9**
baz=227
IRM Iron Mountain 1.25 15 S **Sb 23 16 34.6 +0.1**
baz=195
109C Camp Elliot, M 1.32 268 S **Sb 23 16 36.7 +0.4**
baz=87
CPE Camp Elliot 1.32 268 *e*Pn **Pn 23 16 17.8 -1.2**
113A Mohawk Valley, 1.50 96 *e*Pn **Pn 23 16 21.1 -0.3**
MURC Murrieta 1.54 296 Pg **Pb 23 16 24.5 +1.0**
baz=114,SNR=15
MURC Sb **Sb 23 16 44.2 +1.5**
baz=114
PDMCI Parker Dam,Lak 1.79 40 Sb **Sb 23 16 50.8 +1.1**
baz=221
GMRC Granite Mounta 1.84 357 Pb **Pb 23 16 28.8 +0.2**
baz=177,SNR=12
GMRC Sb **Sb 23 16 53.4 +2.0**
baz=177
Y14A Wickenburg 2.33 64 *e*Pn **Pb 23 16 36.9 -0.1**
MWC Mount Wilson 2.47 302 *e*Pn **Pb 23 16 39.8 +0.6**
W13A Hualapai Mount 2.55 32 *e*Pn **Pg 23 16 43.6 -0.6**

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*ISCJB **21** 23:25:01.3±0.7,35°.04N±0°.04×5°.55W±0°.05,h80km±16km, Error ellipse: s-maj=7.2km s-min=6.0km az=136.2*
*INMG **21** 23:25:01.5±1.4,34°.92N×5°.58W,h22km±5km,ML2.1, Error ellipse: s-maj=4.7km s-min=3.8km az=57.0*
*SFS **21** 23:25:04.0,35°.10N×5°.53W,h40km,ML4.0,KHEMIS BENI AROUSS (MARRUECOS)*
*MDD **21** 23:25:04.3±1.6,35°.20N×5°.54W,h81km±18km,mb2.6/2, Error ellipse: s-maj=12.5km s-min=6.5km az=4.0,PRXIMO*
*IGIL **21** 23:25:04.0,35°.10N×5°.54W,h40km*
ISC 21 23:25:01.8±1.4,34°.97N±0°.05×5°.51W±0°.05,h85km±15km, n43,σ1§31/70,3D,Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECEU	**Ceuta**	**0.93**	**7**	P	**Pn**	**23 25 19.4**	**-1.0**
	2.2nm,0.0s,SNR=6.8						
CEU	**Ceuta**	**0.93**	**7**	⇓P	**Pn**	**23 25 19.4**	**-0.9**
CEU	**Ceuta**	**0.93**	**7**	⇓*i*P	**Pn**	**23 25 19.4**	**-0.9**
CEU				*e*S	**Sn**	**23 25 37.4**	**+3.2**
PVLZ	**Peæn de**	**1.01**	**78**	*e*P	**Pn**	**23 25 20.4**	**-0.9**
PVLZ				*e*S	Sn	23 25 29.8	-6.1
IFR	**Ifrane**	**1.49**	**167**	⇓*i*P	**Pn**	**23 25 27.2**	**-0.1**
IFR				*e*S	**Sn**	**23 25 45.9**	**-0.7**
EMIJ	**Mijas**	**1.70**	**21**	P	**Pn**	**23 25 29.6**	**-0.3**
	0.9nm,0.3s,SNR=5.5						
ESPR	**Espera**	**1.91**	**352**	P	**Pn**	**23 25 32.9**	**+0.2**
	1.0nm,0.1s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.99**	**26**	*e*P	Pn	23 25 29.3	-4.4
EMAL				*e*S	**Sn**	**23 25 57.6**	**-0.5**
EGOR	**Sierra Gorda,**	**2.42**	**28**	P	**Pn**	**23 25 41.4**	**+1.8**
	0.1nm,0.1s,SNR=4.0						
EBER	**Berja**	**2.87**	**47**	P	**Pn**	**23 25 45.5**	**-0.2**
	0.4nm,0.2s,SNR=4.8						
EBER				S	**Sn**	**23 26 17.8**	**-1.5**
	2.9nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.94**	**342**	P	**Pn**	**23 25 45.8**	**-0.7**
	0.6nm,0.1s,SNR=9.0						
EMIN				S	**Sn**	**23 26 18.1**	**-2.8**
	1.2nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**3.00**	**320**	*e*Pn	**Pn**	**23 25 46.7**	**-0.5**
PBDV				*e*Sn	**Sn**	**23 26 20.8**	**-1.4**
PBDV				A	A	23 26 25.3	
	4.4nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.00**	**320**	P	**Pn**	**23 25 46.7**	**-0.5**
PBDV				S	**Sn**	**23 26 20.8**	**-1.4**
	4.4nm,0.4s						
PVAQ	**Vaqueiros**	**3.01**	**324**	*e*Pn	**Pn**	**23 25 46.7**	**-0.7**
PVAQ				*e*Sn	**Sn**	**23 26 21.3**	**-1.2**
PVAQ				A	A	23 26 22.9	
	8.5nm,0.6s						
PVAQ	**Vaqueiros**	**3.01**	**324**	P	**Pn**	**23 25 46.7**	**-0.7**
PVAQ				S	**Sn**	**23 26 21.3**	**-1.2**
	8.5nm,0.6s						
EADA	**Adamuz**	**3.28**	**13**	P	**Pn**	**23 25 51.4**	**+0.4**
	0.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**23 26 27.3**	**-1.7**
	0.4nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**3.35**	**323**	*e*Pn	**Pn**	**23 25 52.0**	**+0.1**
PCVE				*e*Sn	**Sn**	**23 26 29.8**	**-0.9**
PCVE				A	A	23 26 33.8	
	4.1nm,0.4s						
PCVE	**Castro Verde**	**3.35**	**323**	P	**Pn**	**23 25 52.0**	**+0.1**
PCVE				S	**Sn**	**23 26 29.8**	**-0.9**
	4.1nm,0.4s						
PBEJ	**Beja**	**3.59**	**329**	*e*Pn	**Pn**	**23 25 57.5**	**+2.3**
PBEJ				*e*Sn	**Sn**	**23 26 36.4**	**-0.1**
PBEJ				A	A	23 26 38.4	
	3.0nm,1.1s						
PBEJ	**Beja**	**3.59**	**329**	P	**Pn**	**23 25 57.5**	**+2.3**
PBEJ				S	**Sn**	**23 26 36.4**	**-0.1**
	1.5nm,1.1s						
MESJ	**Messejana**	**3.60**	**323**	*e*P	**Pn**	**23 25 54.6**	**-0.7**
MESJ	**Messejana**	**3.60**	**323**	P	**Pn**	**23 25 54.6**	**-0.7**
PTEO	**Sao Teotonio**	**3.65**	**316**	*e*Pn	**Pn**	**23 25 55.8**	**-0.2**
PTEO				*e*Sn	**Sn**	**23 26 37.2**	**-0.8**
PTEO	**Sao Teotonio**	**3.65**	**316**	P	**Pn**	**23 25 55.8**	**-0.2**
PTEO				S	**Sn**	**23 26 37.2**	**-0.8**
EBAD	**Badajoz**	**3.96**	**343**	P	**Pn**	**23 26 00.6**	**+0.3**
	1.0nm,0.1s,SNR=16						
EBAD				S	**Sn**	**23 26 41.4**	**-4.2**
	4.9nm,0.2s,SNR=7.9						
PNCL	**Nicolau / Gran**	**3.96**	**323**	*e*Pn	**Pn**	**23 26 00.0**	**-0.3**
PNCL				*e*Sn	**Sn**	**23 26 44.2**	**-1.4**
PNCL				A	A	23 26 50.4	
	3.2nm,0.7s						
PNCL	**Nicolau / Gran**	**3.96**	**323**	P	**Pn**	**23 26 00.0**	**-0.3**
PNCL				S	**Sn**	**23 26 44.2**	**-1.4**
	3.2nm,0.7s						
PMTG	**Montargil**	**4.63**	**333**	*e*Pn	**Pn**	**23 26 09.7**	**+0.4**
PMTG				*e*Sn	**Sn**	**23 27 01.0**	**-0.8**
PMTG				A	A	23 27 01.7	
	3.2nm,0.9s						
PMTG	**Montargil**	**4.63**	**333**	P	**Pn**	**23 26 09.7**	**+0.4**
PMTG				S	**Sn**	**23 27 01.0**	**-0.8**
	3.2nm,0.9s						
PAB	**San Pablo**	**4.66**	**11**	P	**Pn**	**23 26 11.0**	**+1.2**
	0.0nm,0.1s,SNR=4.0						
PAB				S	**Sn**	**23 26 59.7**	**-3.0**
	0.5nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**4.70**	**342**	*e*Pn	**Pn**	**23 26 10.3**	**+0.1**
PMRV				*e*Sn	**Sn**	**23 27 02.0**	**-1.4**
PMRV	**Marv??o**	**4.70**	**342**	P	**Pn**	**23 26 10.3**	**+0.1**
PMRV				S	**Sn**	**23 27 02.0**	**-1.4**
PCBR	**Castelo Branco**	**5.11**	**343**	*e*Pn	**Pn**	**23 26 16.5**	**+0.7**
PCBR				*e*Sn	**Sn**	**23 27 11.6**	**-1.8**
PCBR	**Castelo Branco**	**5.11**	**343**	P	**Pn**	**23 26 16.5**	**+0.7**
PCBR				S	**Sn**	**23 27 11.6**	**-1.8**
PTOM	**Tomar**	**5.18**	**334**	*e*Pn	**Pn**	**23 26 17.3**	**+0.5**
PTOM	**Tomar**	**5.18**	**334**	P	**Pn**	**23 26 17.3**	**+0.5**
MTE	**Manteigas**	**5.65**	**344**	*e*Pn	**Pn**	**23 26 23.8**	**+0.5**
MTE	**Manteigas**	**5.65**	**344**	P	**Pn**	**23 26 23.8**	**+0.5**
MVO	**Moncorvo**	**6.30**	**350**	*e*Pn	**Pn**	**23 26 33.0**	**+0.9**
MVO				*e*Sn	**Sn**	**23 27 41.8**	**-0.8**
MVO	**Moncorvo**	**6.30**	**350**	P	**Pn**	**23 26 32.5**	**+0.4**
	0.5nm,0.1s,SNR=8.0						
MVO				S	**Sn**	**23 27 39.4**	**-3.2**
	2.6nm,0.4s,SNR=7.9						
POLO	**Lamas de Olo**	**6.64**	**345**	*e*Pn	**Pn**	**23 26 37.5**	**+0.7**
POLO	**Lamas de Olo**	**6.64**	**345**	P	**Pn**	**23 26 37.5**	**+0.7**
ECAL	**Calabor**	**7.03**	**353**	P	**Pn**	**23 26 43.3**	**+1.3**
	0.2nm,0.2s,SNR=7.9						

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*DDA **21** 23:34:29.6,36°.89N×27°.54E,h7km±1km,ML2.1*
ISK 21 23:34:29.5,36°.88N×27°.52E,h10km,ML1.8/9, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.16**	**162**	PG	Pg	23 34 33.5	+0.4
DAT				SG	Sg	23 34 36.4	+0.7
DAT	**Datca**	**0.16**	**162**	*i* P	Pb	23 34 34.0	-0.7
DAT				IAML_P			
	comp=Z,1μm,0.1s						
DATC	**Datca-Mugla**	**0.17**	**137**	PG	Pg	23 34 33.5	+0.3
DATC				SG	Sg	23 34 36.7	+1.0
BDRM	**Kayabasi**	**0.19**	**342**	*i* P	Pb	23 34 34.9	-0.2
BDRM				*i* S	Sg	23 34 37.1	+0.7
BDRM				IAML_P			
	comp=Z,2μm,0.1s						
BODT	**Bodrum**	**0.24**	**317**	PG	Pg	23 34 34.9	+0.3
BODT				SG	Sg	23 34 38.9	+0.9
BBRN	**Bozburun-Marma**	**0.48**	**115**	PG	Pg	23 34 39.3	+0.4
BBRN				SG	Sg	23 34 46.6	-0.5
YER	**Yerkesik**	**0.66**	**67**	PG	Pb	23 34 42.8	-0.4
ARG	**Arkhangelos**	**0.83**	**143**	PG	Pb	23 34 45.9	0.0
AYDN	**Tasoluk**	**0.83**	**20**	*i* P	Pg	23 34 45.5	0.0
AYDN				IAML_P			
	comp=Z,292nm,0.3s						
GCAM	**G?zelcaml?**	**0.85**	**345**	PG	Pb	23 34 46.6	+0.3
TURN	**Turunc**	**0.87**	**90**	PG	Pg	23 34 41.5	-4.8
TURN	**Turunc**	**0.87**	**90**	*i* P	Pg	23 34 41.5	-4.8
TURN				*i* S	Sg	23 34 50.4	-7.2
TURN				IAML_P			
	comp=Z,349nm,0.1s						
DALY	**Dalyan (Mula)**	**0.91**	**94**	PG	Pb	23 34 47.5	+0.1
AYDB	**Zeytinkoy-Aydi**	**1.10**	**16**	PN	Pn	23 34 51.2	+0.1

SAR 21 23:36:38.3±0.5,42°.95N×18°.47E,h4km±3km,ML1.4/2, 2C-1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRY	**Bratogost**	**0.07**	**131**	⇑*i*Pg	Pg	23 36 39.0	0.0
BRY				*e*Sg	Sg	23 36 41.3	+0.4
TREB	**Trebinje**	**0.24**	**201**	⇓*i*Pg	Pg	23 36 43.1	+0.1
TREB				*e*Sg	Sg	23 36 47.2	+1.0
UPM	**Unac-Piva**	**0.41**	**51**	⇑*i*Pg	Pg	23 36 45.7	-0.6
UPM				*e*Sg	Sg	23 36 52.2	+0.6
HCY	**Herceg Novi**	**0.50**	**178**	*e*Pg	Pg	23 36 46.9	-1.0
HCY				*e*Sg	Sg	23 36 55.1	+0.8
STON	**Ston**	**0.57**	**263**	*e*Pg	Pg	23 36 48.5	-0.8
STON				*e*Sg	Sg	23 36 57.0	+0.4
STON	**Ston**	**0.57**	**263**	*e*Pg	Pg	23 36 48.5	-0.7
STON				*e*Sg	Sg	23 36 56.7	+0.1
DRME	**Dracevica, Mon**	**0.93**	**145**	*e*Sg	Sg	23 37 07.8	-0.2

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*IDC **21** 23:47:53.2±1.2,36°.73N×73°.13E,h0km,mb3.7/5, mb1 3.7/12,mb1mx3.5/40,mbtmp3.6/12,ML3.1/7,MS3.2/1, Ms1 3.2/1,ms1mx2.4/30,Error ellipse: s-maj=24.5km s-min=20.0km az=127.0*
*NNC **21** 23:47:56.3±6.4,37°.72N×74°.88E,h0km,mb4.0,mpv3.7, Error ellipse: s-maj=51.0km s-min=38.9km az=126.0*
*ISCJB **21** 23:47:57.1±0.9,36°.77N±0°.07×72°.90E±0°.08,h33km, mb3.8/6,MS3.2/1,Error ellipse: s-maj=11.1km s-min=7.5km az=139.5*
ISC 21 23:47:58.5±1.1,36°.74N±0°.10×73°.06E±0°.09,h35km,n22, σ1§67/24,mb3.7/6,4C-2D,Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.00**	**10**	Pn	**Pn**	**23 49 26.2**	**+1.3**
	0.5nm,0.3s,baz=164,slow=5.6,SNR=4.3						
AAK				Sn	**Sn**	**23 50 34.5**	**+2.1**
	0.4nm,0.3s,baz=15,slow=20,SNR=2.5						
AAK	**Ala-Archa**	**6.00**	**10**	⇑Pg	**Pn**	**23 49 26.2**	**+1.3**
	3.1nm,0.5s						
AAK				⇓Lg	Lg	23 50 30.7	
	12nm,1.0s						
MRKS	**Merke**	**6.00**	**1**	Pg	**Pn**	**23 49 27.1**	**+2.1**
	5.8nm,0.3s						
MRKS				Lg	Lg	23 50 34.8	
	4.5nm,0.5s						
TKM2	**Tokmak 2**	**6.48**	**17**	⇑Pg	**Pn**	**23 49 32.4**	**+0.9**
	4.6nm,0.8s						
TKM2				⇑Lg	Lg	23 50 39.8	
	4.8nm,0.8s						
KK31	**Karatay Array**	**6.66**	**344**	Pn	**Pn**	**23 49 35.7**	**+1.9**
	2.2nm,0.3s,baz=338,slow=41,SNR=9.7						
KK31				⇑Sn	**Sn**	**23 50 47.2**	**-1.2**
	3.1nm,0.5s,baz=162,slow=24,SNR=4.6						
KST	**Kastek**	**6.68**	**19**	Pg	**Pn**	**23 49 36.4**	**+2.1**
	4.7nm,0.4s						
KST				Lg	Lg	23 50 50.9	
	6.9nm,0.5s						
DGS	**Degeres**	**6.82**	**17**	Pg	**Pn**	**23 49 37.8**	**+1.6**
	6.7nm,0.9s						
DGS				Lg	Lg	23 50 53.4	
	5.9nm,0.5s						
GEYT	**Alibeck**	**11.96**	**280**	Pn	**Pn**	**23 50 46.6**	**+0.1**
	0.3nm,0.3s,baz=94,slow=10,SNR=5.1						
GEYT				Sn	**Sn**	**23 52 57.9**	**-0.8**
	0.1nm,0.3s,baz=86,slow=22,SNR=3.2						
MKAR	**Makanchi Array**	**12.18**	**31**	Pn	**Pn**	**23 50 48.0**	**-1.4**
	0.0nm,0.3s,baz=214,slow=16,SNR=2.4						
KURBB	**Kurchatov Arra**	**14.43**	**14**	Pn	**Pn**	**23 51 17.4**	**-2.6**
	0.0nm,0.3s,baz=204,slow=11,SNR=4.0						
AB31	**Akbulak array**	**15.74**	**327**	P	**Pn**	**23 51 35.1**	**-2.3**
	0.7nm,0.6s,baz=130,slow=13,SNR=9.2						
BVAR	**Borovoye Array**	**16.40**	**354**	Pn	**Pn**	**23 51 42.9**	**-2.9**
	0.1nm,0.3s,baz=166,slow=13,SNR=3.0						
AKTO	**Aktyubinsk**	**17.45**	**326**	P	**Pn**	**23 51 58.7**	**-0.3**
	0.2nm,0.3s,baz=144,slow=12,SNR=7.9						
AKTO	**Aktyubinsk**	**17.45**	**326**	⇓P	**Pn**	**23 51 58.8**	**-0.3**
	2.9nm,0.9s						
ZALV	**Zalesovo Beam**	**19.05**	**22**	P	**P**	**23 52 15.8**	**-1.6**
	0.3nm,0.3s,baz=204,slow=13,SNR=7.8						
BRTR	**Keskin Array B**	**30.94**	**288**	P	**P**	**23 54 14.2**	**+1.9**
	0.5nm,0.6s,baz=111,slow=8.0,SNR=5.2						
ARCES	**ARCESS Array B**	**41.57**	**337**	P	**P**	**23 55 43.0**	**+0.6**
	6.0nm,0.3s,baz=118,slow=9.6,SNR=4.6						
KSRS	**Korea Array**	**43.23**	**72**	LR	LR	00 16 08.2	
	comp=Z,30nm,19.1s,baz=230,slow=39						
NOA	**NORSAR Array B**	**45.19**	**323**	P	**P**	**23 56 11.5**	**-0.3**
	0.6nm,0.6s,baz=94,slow=7.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**67.38**	**270**	P	**P**	**23 58 49.1**	**-1.4**
	0.3nm,0.8s,baz=27,slow=7.5,SNR=4.1						
WRA	**Warramunga Arr**	**80.72**	**123**	P	**P**	**00 00 09.1**	**+0.8**
	2.2nm,1.1s,baz=325,slow=5.6,SNR=4.3						
YKA	**Yellowknife Ar**	**80.92**	**4**	P	**P**	**00 00 08.6**	**-0.1**
	0.5nm,0.6s,baz=347,slow=5.6,SNR=4.0						

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*WEL **22** 00:32:14.7±0.8,33°.5×7°.×17°.9W±1°.9,h33km,M4.9/16, mB5.2/8,ML5.0/16,MLv5.2/16,Mw(mB)4.6/8,Error ellipse: s-maj=0.0km s-min=0.0km az=108.3*
*IDC **22** 00:32:14.3±6.2,32°.29S×179°.13W,h75km±51km,mb3.9/5, mb1 4.1/6,mb1mx3.8/24,mbtmp4.3/6,ML4.3/1,Error ellipse: s-maj=41.1km s-min=29.6km az=47.0*
ISC 22 00:32:13.1±0.6,32°.24S±0°.06×179°.1W±0°.2,h61km,n67, σ1§86/70,mb4.2/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.12**	**18**	P	**Pn**	**00 33 02.3**	**+2.4**
GLKZ				S	**Sn**	**00 33 38.7**	**+2.8**
MXZ	**Matakaoa Point**	**5.74**	**201**	P	**Pn**	**00 33 37.4**	**+1.6**
MXZ				S	**Sn**	**00 34 37.1**	**-3.1**
WMGZ	**Waiomatatini S**	**5.95**	**200**	P	**Pn**	**00 33 40.9**	**+2.4**
WMGZ				S	**Sn**	**00 34 44.8**	**-0.5**
HAZ	**Te Kaha**	**6.09**	**204**	P	**Pn**	**00 33 42.3**	**+1.9**
HAZ				S	**Sn**	**00 34 47.1**	**-1.6**
PKGZ	**Pakihiroa**	**6.11**	**202**	P	**Pn**	**00 33 42.2**	**+1.3**
PKGZ				S	**Sn**	**00 34 43.4**	**-6.0**
PUZ	**Puketiti**	**6.23**	**200**	P	**Pn**	**00 33 43.2**	**+0.8**
PUZ				S	**Sn**	**00 34 50.9**	**-1.3**
RUGZ	**Raukumara Rang**	**6.31**	**204**	P	**Pn**	**00 33 44.7**	**+1.0**
RUGZ				S	**Sn**	**00 34 51.9**	**-2.6**
TWGZ	**Tauwhareparae**	**6.41**	**201**	P	**Pn**	**00 33 46.8**	**+1.9**
TWGZ				S	**Sn**	**00 34 54.8**	**-1.9**
CNGZ	**Carnagh Statio**	**6.62**	**199**	P	**Pn**	**00 33 49.2**	**+1.4**
OPRZ	**Ohinepanea**	**6.66**	**212**	P	Pn	00 33 53.2	+4.9
TKGZ	**Te Karaka**	**6.69**	**201**	P	**Pn**	**00 33 52.5**	**+3.8**
MWZ	**Matawai**	**6.70**	**204**	P	**Pn**	**00 33 49.0**	**+0.1**
URZ	**Urewera**	**6.78**	**207**	P	**Pn**	**00 33 49.8**	**-0.1**
	6.5nm,0.3s,baz=9.4,slow=2.3,SNR=37						
URZ				S	**Sn**	**00 35 05.3**	**-0.4**
	21nm,0.3s,baz=159,slow=23,SNR=14						
URZ	**Urewera**	**6.78**	**207**	P	**Pn**	**00 33 50.8**	**+0.8**
OUZ	**Omahuta**	**6.81**	**242**	P	Pn	00 33 59.4	+9.0
RAGZ	**Rawiri**	**6.88**	**204**	P	**Pn**	**00 33 53.0**	**+1.6**
RIGZ	**Rimuhau**	**6.96**	**201**	P	Pn	00 33 56.6	+4.1
TOZ	**Tahuroa Road**	**7.07**	**218**	P	Pn	00 33 58.9	+4.9
MUGZ	**Murupara**	**7.10**	**208**	P	**Pn**	**00 33 55.3**	**+1.0**
RTZ	**Ruatahuna**	**7.14**	**206**	P	**Pn**	**00 33 55.1**	**+0.1**
SNGZ	**Shannon Statio**	**7.16**	**203**	P	**Pn**	**00 33 55.7**	**+0.5**
NMHZ	**Naumai**	**7.63**	**205**	P	**Pn**	**00 34 04.4**	**+2.7**
BKZ	**Black Stump Fm**	**7.81**	**206**	P	**Pn**	**00 34 03.6**	**-0.4**
MCHZ	**McNeill Hill**	**7.98**	**204**	P	Pn	00 34 10.8	+4.4
HIZ	**Hauiti**	**8.00**	**217**	P	Pn	00 34 13.0	+6.4
KWHZ	**Kaweka Forest**	**8.06**	**206**	P	**Pn**	**00 34 10.4**	**+2.8**
WTVZ	**West Tongariro**	**8.13**	**211**	P	**Pn**	**00 34 12.9**	**+4.4**
NGZ	**Ngauruhoe**	**8.18**	**211**	P	Pn	00 34 14.0	+4.8
KAHZ	**Kahuranaki**	**8.23**	**202**	P	**Pn**	**00 34 11.8**	**+1.9**
BHHZ	**Black Hill Sta**	**8.25**	**207**	P	**Pn**	**00 34 12.1**	**+1.9**
FWVZ	**Far West T-bar**	**8.26**	**211**	P	**Pn**	**00 34 13.1**	**+2.6**
MOVZ	**Moawhango**	**8.30**	**209**	P	**Pn**	**00 34 14.6**	**+3.7**
PKVZ	**Pokaka**	**8.38**	**211**	P	**Pn**	**00 34 16.4**	**+4.5**
PNHZ	**Pukenui**	**8.57**	**205**	P	**Pn**	**00 34 16.8**	**+2.3**
DVHZ	**Dannevirke**	**8.92**	**204**	P	**Pn**	**00 34 22.8**	**+3.5**
PKE	**Pukeiti**	**8.96**	**217**	P	Pn	00 34 25.3	+5.6
BFZ	**Birch Farm**	**9.24**	**203**	P	**Pn**	**00 34 25.0**	**+1.4**
TIWZ	**Tintock**	**9.45**	**204**	P	**Pn**	**00 34 26.2**	**-0.3**
TMWZ	**Te Maipa**	**9.74**	**203**	P	**Pn**	**00 34 30.4**	**-0.1**
CTA	**Charters Tower**	**33.26**	**283**	P	**P**	**00 38 44.5**	**-0.3**
	1.8nm,0.5s,baz=90,slow=8.1,SNR=2.8						
ASAR	**Alice Springs**	**42.15**	**269**	P	**P**	**00 39 59.7**	**-0.2**
	1.8nm,0.6s,baz=108,slow=7.7,SNR=16						
ASAR				PcP	**PcP**	**00 41 51.8**	**-1.5**
	0.3nm,0.3s,baz=121,slow=3.8,SNR=3.0						
WRA	**Warramunga Arr**	**43.31**	**275**	P	**P**	**00 40 07.9**	**-1.4**
	2.4nm,0.4s,baz=103,slow=8.9,SNR=19						
WRA				PcP	**PcP**	**00 41 56.4**	**-0.9**
	1.6nm,0.8s,baz=101,slow=2.6,SNR=3.4						
SNAA	**Sanae**	**76.35**	**179**	P	**P**	**00 43 56.5**	**+1.2**
VNA3	**Neumayer Olymp**	**76.54**	**176**	P	**P**	**00 43 56.9**	**+0.6**
VNA1	**Neumayer--Stat**	**77.19**	**177**	P	**P**	**00 44 00.7**	**+0.8**
KSRS	**Korea Array**	**85.17**	**320**	P	**P**	**00 44 41.8**	**-0.8**
	0.6nm,0.5s,baz=151,slow=6.9,SNR=2.5						
PETK	**Petropavlovsk-**	**87.37**	**346**	P	**P**	**00 44 53.1**	**0.0**
	2.5nm,0.9s,baz=109,slow=8.0,SNR=4.3						
MKAR	**Makanchi Array**	**118.25**	**310**	PKP	**PKPdf**	**00 50 52.0**	**-1.2**
	0.4nm,0.6s,baz=220,slow=2.7,SNR=5.0						
ZALV	**Zalesovo Beam**	**118.80**	**318**	PKP	**PKPdf**	**00 50 52.9**	**-1.0**
	1.1nm,0.5s,baz=96,slow=1.5,SNR=4.1						
NRIK	**Noril'sk**	**120.94**	**336**	PKP	**PKPdf**	**00 50 57.3**	**-0.3**
	2.0nm,0.5s,baz=153,slow=4.5,SNR=2.8						
ARCES	**ARCESS Array B**	**140.18**	**347**	PKhKP	PKPpre	00 51 26.5	
	0.6nm,0.5s,baz=48,slow=1.8,SNR=5.3						
ARCES				PKP	**PKPdf**	**00 51 33.7**	**-0.2**
	7.6nm,0.3s,baz=17,slow=0.9,SNR=8.1						
FINES	**FINESS Array B**	**146.53**	**338**	PKPbc	**PKPdf**	**00 51 45.2**	**-0.1**
	9.2nm,0.6s,baz=57,slow=3.4,SNR=61						
NSS	**Namsos**	**146.97**	**351**	*e*PKPbc	**PKPbc**	**00 51 47.8**	**-0.2**
DOMB	**Dombas**	**149.72**	**352**	*e*PKPbc	**PKPbc**	**00 51 55.1**	**-0.2**
AKN	**Aaknes**	**149.79**	**354**	*e*PKPbc	**PKiKP**	**00 51 56.0**	**-0.4**
NB2	**NORSAR Subarra**	**150.41**	**350**	PKP	**PKPbc**	**00 51 56.4**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=15,slow=2.6						
NB2	**NORSAR Subarra**	**150.41**	**350**	PKPab	**PKPbc**	**00 51 56.4**	**-0.6**
	baz=15,slow=2.6						
NOA	**NORSAR Array B**	**150.41**	**350**	PKPbc	**PKPbc**	**00 51 56.8**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=16,slow=4.1,SNR=27						
NC602	**NORSAR Array S**	**150.65**	**349**	*e*PKPbc	**PKPbc**	**00 51 57.5**	**0.0**
SKAR	**Skarslia**	**151.14**	**353**	*e*PKPbc	**PKiKP**	**00 51 59.1**	**-0.1**
ASK	**Askoy**	**151.61**	**356**	*e*PKPbc	**PKiKP**	**00 52 00.3**	**+0.2**
KONO	**Kongsberg**	**151.98**	**351**	*e*PKPbc	**PKPbc**	**00 52 00.4**	**-0.2**
ODD1	**Odda**	**152.06**	**354**	*e*PKPbc	**PKiKP**	**00 52 01.9**	**+0.8**
AKASG	**Malin Array Be**	**152.17**	**320**	PKPbc	**PKPbc**	**00 52 00.4**	**-0.9**
	comp=Z,2.5nm,0.4s,baz=54,slow=2.3,SNR=12						
BRTR	**Keskin Array B**	**152.62**	**295**	PKPbc	**PKPbc**	**00 52 01.6**	**-1.3**
	comp=Z,1.3nm,0.5s,baz=144,slow=4.0,SNR=17						
STAV	**Stavanger**	**153.11**	**355**	*e*PKPbc	**PKPbc**	**00 52 02.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**160.99**	**182**	PKPab	**PKPab**	**00 52 49.2**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=165,slow=1.7,SNR=7.4						

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*ISCJB **22** 00:45:08.8±0.7,34°.36N±0°.06×5°.7W±0°.1,h22km,Error ellipse: s-maj=16.9km s-min=4.7km az=156.1*
*INMG **22** 00:45:09.7±1.1,34°.55N×5°.05W,h16km±7km,ML2.0,Error ellipse: s-maj=12.4km s-min=2.6km az=70.0*
*MDD **22** 00:45:11.4±4.5,34°.58N×5°.73W,h0km,mb3.1/2,Error ellipse: s-maj=29.4km s-min=21.2km az=169.0,PRXIMO*
ISC 22 00:45:09.6±1.1,34°.30N±0°.08×5°.6W±0°.1,h22km,n12, σ1§01/21,Morocco

H11S2 WAKE ISLAND Hy 40.10 72 T T 01 46 19.2
baz=262,slow=75,SNR=81
KLR Kul'dur 40.23 5 P **P 01 03 27.8 +0.6**
0.7nm,0.5s,baz=191,slow=6.4,SNR=3.6
STKA Stephens Creek 43.26 161 P **P 01 03 51.0 -1.2**
2.9nm,0.8s,baz=335,slow=13,SNR=3.0
MKAR Makanchi Array 53.05 323 P **P 01 05 06.6 -1.1**
1.0nm,0.7s,baz=123,slow=8.4,SNR=7.6
ILAR Eielson Array 80.39 26 P **P 01 08 02.1 +0.7**
0.3nm,0.7s,baz=239,slow=5.1,SNR=3.5
TORD Torodi Ar. Bea 120.86 291 PKP **PKiKP 01 14 45.3 +2.0**
1.1nm,1.2s,baz=71,slow=3.0,SNR=2.4

WEL 22 00:58:04.9±0.9, 46°S±4°×16°7E±°, h5km, M3.6/9, ML3.7/9, MLv3.6/9, Error ellipse: s-maj=0.0km s-min=0.0km az=110.8, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.32**	**177**	P	Pg	00 58 12.0	+0.7
PYZ				S	Sg	00 58 16.8	+1.3
DCZ	**Deep Cove**	**0.52**	**43**	P	Pg	00 58 15.1	+0.3
DCZ				S	Sg	00 58 22.1	+0.6
WHZ	**Wether Hill Ro**	**0.90**	**94**	P	Pg	00 58 22.5	+0.2
WHZ				S	Sb	00 58 35.2	-0.2
MLZ	**Mavora Lakes**	**1.13**	**66**	P	Pg	00 58 26.3	-0.3
MLZ				S	Sb	00 58 41.8	-0.2
APZ	**The Paps**	**1.35**	**137**	P	Pn	00 58 28.4	-2.1
MSZ	**Milford Sound**	**1.48**	**38**	P	Pn	00 58 30.1	-2.0
SYZ	**Scrubby Hill**	**1.86**	**113**	P	Pn	00 58 37.4	+0.1
WKZ	**Wanaka**	**1.95**	**59**	P	Pb	00 58 40.5	-0.5
JCZ	**Jackson Bay**	**2.33**	**41**	P	Pn	00 58 45.0	+1.0
LBZ	**Lake Benmore**	**2.89**	**61**	P	Pn	00 58 51.4	-0.2
ODZ	**Otahua Downs**	**2.92**	**76**	P	Pn	00 58 51.4	-0.6

WEL 22 01:26:27.9±1.4, 33°S±37°×18°0E±4°8, h425km±51km, M4.5/8, mB4.5/4, MLv4.7/8, Mw(mB)3.6/4, Error ellipse: s-maj=0.1km s-min=0.0km az=124.2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.77**	**194**	P	P	01 27 49.2	+0.6
MXZ				S	S	01 28 55.1	+0.6
WMGZ	**Waiomatatini S**	**5.00**	**192**	P	P	01 27 51.0	+0.2
WMGZ				S	S	01 28 59.9	+1.2
HAZ	**Te Kaha**	**5.08**	**198**	P	P	01 27 51.8	+0.2
HAZ				S	S	01 29 02.3	+2.3
PUZ	**Puketiti**	**5.27**	**193**	P	P	01 27 53.1	-0.5
PUZ				S	S	01 29 02.6	-1.1
RUGZ	**Raukumara Rang**	**5.30**	**198**	P	P	01 27 53.4	-0.6
RUGZ				S	S	01 29 01.9	-2.6
TWGZ	**Tauwhareparae**	**5.43**	**195**	P	P	01 27 55.9	+0.7
CNGZ	**Carnagh Statio**	**5.68**	**192**	P	P	01 27 58.4	+0.6
URZ	**Urewera**	**5.74**	**201**	P	P	01 27 56.7	-1.6
URZ				S	S	01 29 14.3	+1.9
RAGZ	**Rawiri**	**5.87**	**198**	P	P	01 28 00.4	+0.5
RIGZ	**Rimuhau**	**5.99**	**195**	P	P	01 28 02.4	+1.4
MUGZ	**Murupara**	**6.04**	**203**	P	P	01 28 01.8	+0.2

IDC 22 01:38:12.6±4.6, 4°90S×151°67E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.3/41, mbtmp3.5/2, Error ellipse: s-maj=219.2km s-min=50.4km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.54**	**227**	P	P	01 43 14.7	+0.3
1.6nm,0.8s,baz=50,slow=9.1,SNR=4.7							
ASAR	**Alice Springs**	**25.32**	**221**	P	P	01 43 40.8	-0.5
0.4nm,0.7s,baz=54,slow=9.5,SNR=4.1							
TORD	**Torodi Ar. Bea**	**149.26**	**287**	PKPbc	PKPbc	01 58 04.1	-0.3
0.2nm,0.4s,baz=68,slow=2.2,SNR=6.3							

MEX 22 01:39:31.3±0.5, 16°00N×92°95W, h181km±5km, MD3.6, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.39**	**221**	*e*P	Pn	01 39 54.1	-1.7
PCIG				*e*S	Sn	01 40 12.3	-2.2
TGIG		**0.79**	**348**	*e*P	Pn	01 39 56.9	-0.8
TGIG				*i* S	Sn	01 40 15.0	-3.3
CCIG	**Comitan**	**0.83**	**70**	*e*P	Pn	01 39 57.0	-1.2
CCIG				*e*S	Sn	01 40 17.3	-1.5
CMIG	**Matias Romero**	**2.15**	**301**	*e*P	Pn	01 40 08.8	-1.3

ISCJB ***22*** *01:41:36.8±1.3, 12°57N±0°03×143°72E±0°03, h5km±8km, mb4.8/117, MS4.3/42, Error ellipse: s-maj=5.0km s-min=4.6km az=136.7*
BJI ***22*** *01:41:36.5±0.0, 12°40N×143°74E, h11km, mb4.8/50, mB5.2/37, Ms4.7/40, Ms7 4.4/39*
NEIC ***22*** *01:41:39.1±1.2, 12°57N×143°74E, h10km±2km, mb5.1/140, Error ellipse: s-maj=16.6km s-min=13.1km az=87.0*
DJA ***22*** *01:41:40.1±1.8, 13°N±6°×14°4E±°, h19km±14km, M5.0/17, mb5.0/17, mB5.6/12, MLv4.8/1, Mw(mB)5.1/12*
IDC ***22*** *01:41:40.7±2.9, 12°60N×143°69E, h19km±18km, mb4.4/32, mb1 4.5/35, mb1mx4.4/51, mbtmp4.6/35, ML3.4/1, MS4.2/26, Ms1 4.2/26, ms1mx4.1/33, Error ellipse: s-maj=13.5km s-min=9.4km az=80.0*
MOS ***22*** *01:41:41.4±1.1, 12°54N×143°45E, h33km, mb5.0/35, Error ellipse: s-maj=14.9km s-min=6.8km az=109.4*
GCMT ***22*** *01:41:42.1±0.2, 12°52N±0°01×143°72E±0°01, h17km, MW5.1/98, Moment Tensor Solution. s57,c71; s98,c157; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.44±.18; $M_{\theta\theta}$0.56±.11; $M_{\phi\phi}$4.88±.12; $M_{r\theta}$1.52±.32; $M_{\phi\theta}$-2.14±.08; $M_{r\phi}$0.62±.26; Best double couple: $M_0$5.84100×10^{16} NP1:ϕ_s322.00000°, δ47.00000°, λ-113.00000°. NP2: ϕ_s173.00000°, δ47.00000°, λ-67.00000°. Principal axes: T 5.7600, Plg0.0000°, Azm68.0000°; N 0.1570, Plg16.0000°, Azm338.0000°; P -5.9220, Plg74.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 01:41:42.0±0.9, 12°56N±0°04×143°78E±0°05, h29km±6km, n295, σ1$55/304, mb4.8/117, MS4.3/43, 8C-3D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.47**	**46**	Pn	**Pn**	**01 42 05.2**	**-1.3**
1μm,0.3s,baz=260,slow=2.1,SNR=454							
GUMO				Sn	**Sn**	**01 42 22.8**	**-2.1**
486nm,0.3s,baz=292,slow=22,SNR=8.1							
GUMO				LR	LR	01 42 50.8	
comp=Z,11μm,20.4s,baz=250,slow=46							
GUMO	**Guam**	**1.47**	**46**	*e*Pn	**Pn**	**01 42 04.7**	**-1.8**
GUMO	**Guam**	**1.47**	**46**	*e*P	**Pn**	**01 42 04.7**	**-1.8**
JAY	**Jayapura**	**15.29**	**192**	Pn	**Pn**	**01 45 14.9**	**-1.0**
0.2nm,0.3s,baz=359,slow=8.7,SNR=19							
GENI	**Genyem**	**15.48**	**194**	P	**Pn**	**01 45 18.6**	**+0.3**
148nm,1.6s,4μm							
BAKI	**Biak**	**15.64**	**210**	P	**Pn**	**01 45 20.3**	**-0.2**
86nm,1.5s,2μm							
SIJI	**Sorong**	**18.23**	**224**	P	**Pn**	**01 45 51.7**	**-1.3**
baz=29,slow=13,SNR=9.1							
SIJI				LR	LR	01 51 48.7	
comp=Z,927nm,19.2s,baz=114,slow=33							
DAV	**Davao City (W)**	**18.74**	**255**	P	**Pn**	**01 45 59.5**	**+0.3**
27nm,0.3s,baz=90,slow=16,SNR=2.5							
DAV				LR	LR	01 51 46.0	
comp=Z,930nm,20.7s,baz=131,slow=32							
DAV	**Davao City (W)**	**18.74**	**255**	*e*P	**Pn**	**01 45 59.5**	**+0.3**
244nm,0.4s							
FAKI	**Fak Fak**	**19.18**	**217**	*e*P	**P**	**01 46 03.2**	**-0.2**
93nm,1.3s							
FAKI	**Fak Fak**	**19.18**	**217**	P	**Pn**	**01 46 05.0**	**+0.5**
70nm,1.1s,2μm							
TNTI	**Ternate**	**20.05**	**235**	P	Pn	01 46 26.2	+11
JHJ	**Hachijo jima 2**	**20.79**	**351**	LR	LR	01 52 08.5	
comp=Z,361nm,20.8s,baz=177,slow=30							
MSAI	**Masohi**	**21.62**	**224**	P	**P**	**01 46 31.4**	**+1.5**
45nm,1.2s,893nm							
PMG	**Port Moresby**	**22.08**	**171**	P	**P**	**01 46 35.1**	**+0.3**
14nm,0.6s,baz=43,slow=8.4,SNR=3.7							
PMG	**Port Moresby**	**22.08**	**171**	*i* P	**P**	**01 46 34.5**	**-0.3**
PMG				pmax	pmax		
comp=Z,100nm,1.0s							
TGY	**Tagaytay City**	**22.28**	**277**	P	**P**	**01 46 35.5**	**-1.6**
comp=Z,206nm,0.3s,baz=313,slow=7.7,SNR=3.0							
TGY				LR	LR	01 55 06.1	
comp=Z,856nm,19.6s,baz=55,slow=36							
NLAI	**Namlea**	**22.83**	**228**	P	**P**	**01 46 42.7**	**-0.1**
comp=Z,42nm,1.4s,comp=Z,3μm							
H11S3	**WAKE ISLAND Hy 22.83**	**72**		T	T	02 10 27.6	
baz=258,slow=75,SNR=34							
H11S1	**WAKE ISLAND Hy 22.85**	**72**		T	T	02 10 32.1	
baz=258,slow=75,SNR=26							
H11S2	**WAKE ISLAND Hy 22.85**	**72**		T	T	02 10 31.4	
baz=258,slow=75,SNR=22							
H11N1	**WAKE ISLAND Hy 23.29**	**69**		T	T	02 10 59.0	
baz=255,slow=75,SNR=100							
H11N2	**WAKE ISLAND Hy 23.30**	**69**		T	T	02 11 03.4	
baz=255,slow=75,SNR=55							
H11N3	**WAKE ISLAND Hy 23.31**	**69**		T	T	02 11 03.9	
baz=255,slow=75,SNR=110							
INU	**Inuyama**	**23.50**	**346**	*e*P	**P**	**01 46 47.7**	**-1.7**
comp=Z,45nm,1.0s							
JNU	**Nakatsue**	**23.62**	**332**	P	**P**	**01 46 49.6**	**-1.1**
comp=Z,14nm,0.7s,baz=140,slow=5.5,SNR=12							
JNU	**Nakatsue**	**23.62**	**332**	*e*P	**P**	**01 46 49.9**	**-0.9**
comp=Z,72nm,0.9s							
SSLB	**Suanglung**	**24.35**	**300**	*e*P	**P**	**01 46 57.5**	**-0.1**
comp=Z,21nm,0.9s							
MJAR	**Matsushiro Arr**	**24.40**	**349**	P	**P**	**01 46 56.3**	**-1.6**
comp=Z,10nm,0.8s,baz=177,slow=9.3,SNR=23							
MJAR				ScP	**ScP**	**01 54 13.0**	**-0.4**
comp=Z,3.5nm,0.8s,baz=163,slow=3.0,SNR=6.8							
MJAR				LR	LR	01 55 35.4	
comp=Z,449nm,18.1s,baz=150,slow=34							
MAJO	**Matsushiro**	**24.40**	**349**	*e*P	**P**	**01 46 57.8**	**-0.1**
comp=Z,102nm,1.4s							
MAJO				*e*ScP	**ScP**	**01 54 13.1**	**-0.4**
MAJO	**Matsushiro**	**24.40**	**349**	*i* P	**P**	**01 46 57.2**	**-0.7**
MAJO				pmax	pmax		
comp=Z,15nm,0.9s							
MAT	**Matsushiro**	**24.40**	**349**	P	**P**	**01 46 57.0**	**-0.9**
MAT				S	**S**	**01 51 11.6**	**-4.2**
MJB9	**Matsu-Tunnel**	**24.40**	**349**	*e*P	**P**	**01 46 58.5**	**+0.5**
comp=Z,108nm,1.4s							
LUWI	**Luwuk**	**24.85**	**239**	*e*P	**P**	**01 47 01.2**	**-0.9**
comp=Z,246nm,1.2s							
LUWI	**Luwuk**	**24.85**	**239**	P	**P**	**01 47 00.4**	**-1.7**
comp=Z,189nm,1.1s							
APSI	**Ampana**	**25.72**	**240**	P	**P**	**01 47 09.8**	**-0.3**
comp=Z,48nm,0.9s,comp=Z,830nm							
COEN	**Coen**	**26.35**	**181**	*e*P	**P**	**01 47 16.1**	**+0.4**
comp=Z,58nm,1.1s							
KDI	**Kendari**	**26.67**	**233**	P	**P**	**01 47 18.8**	**+0.1**
comp=Z,53nm,0.8s,comp=Z,952nm							
SSE	**Sheshan**	**27.83**	**315**	*e*P	**P**	**01 47 33.8**	**+4.9**
comp=Z,68nm,0.7s							
TJN	**Taejon**	**27.94**	**331**	*ce*P	**P**	**01 47 28.6**	**-1.2**
MTN	**Manton Dam**	**28.18**	**207**	*e*P	**P**	**01 47 31.6**	**-0.6**
comp=Z,62nm,1.1s							
TTSI	**Tana Toraja**	**28.41**	**238**	P	P	01 47 43.3	+9.1
KSRS	**Korea Array**	**28.56**	**333**	P	**P**	**01 47 35.6**	**+0.3**
comp=Z,3.7nm,0.9s,baz=142,slow=9.6,SNR=11							
KSRS				PcP	**PcP**	**01 50 47.2**	**+0.9**
comp=Z,0.7nm,0.5s,baz=156,slow=3.4,SNR=4.6							
KSRS				ScP	**ScP**	**01 54 26.0**	**+0.3**
comp=Z,0.6nm,0.3s,baz=163,slow=1.9,SNR=7.5							
KS15	**Wonju Array Si**	**28.57**	**333**	*e*P	**P**	**01 47 35.6**	**+0.2**
comp=Z,80nm,1.8s							
KS15				*e*PcP	**PcP**	**01 50 47.2**	**+0.8**
KS15				*e*ScP	**ScP**	**01 54 26.0**	**+0.3**
SPSI	**Sidrap Palu**	**28.96**	**237**	P	**P**	**01 47 41.7**	**+2.6**
comp=Z,7.7nm,1.1s							
ERM	**Erimo**	**29.35**	**359**	*i* P	**P**	**01 47 43.6**	**+1.3**
ERM				pmax	pmax		
comp=Z,3.0nm,0.9s							
KAPI	**Kappang**	**29.58**	**235**	P	**P**	**01 47 43.3**	**-1.4**
comp=Z,14nm,0.8s,baz=29,slow=4.9,SNR=9.8							
KAPI				LR	LR	01 59 11.0	
comp=Z,202nm,20.5s,baz=312,slow=36							
KAPI	**Kappang**	**29.58**	**235**	*e*P	**P**	**01 47 44.0**	**-0.7**
comp=Z,28nm,1.1s							
KAPI	**Kappang**	**29.58**	**235**	*e*P	**P**	**01 47 44.0**	**-0.7**
KAPI				pmax	pmax		
comp=Z,28nm,1.1s							
NJ2	**Nanjing**	**30.00**	**314**	*e*P	**P**	**01 47 48.1**	**-0.1**
NJ2				pmax	pmax		
comp=Z,13nm,0.7s							
BATI	**Baumata**	**30.18**	**222**	LR	LR	01 59 29.9	
comp=Z,417nm,21.5s,baz=62,slow=36							
ASAJ	**Asahikawa**	**31.46**	**358**	LR	LR	02 00 02.1	
comp=Z,243nm,20.2s,baz=186,slow=35							
VLA	**Vladivostok**	**32.14**	**344**	*i* P	**P**	**01 48 06.9**	**0.0**
VLA				pmax	pmax		
comp=Z,12nm,0.8s							
CTAO	**Charters Tower**	**32.53**	**176**	*e*P	**P**	**01 48 10.7**	**+0.1**
comp=Z,17nm,0.9s							
CTAO	**Charters Tower**	**32.53**	**176**	*e*P	**P**	**01 48 10.7**	**+0.1**
CTAO				pmax	pmax		
comp=Z,17nm,0.9s							
WHN	**Wuhan**	**32.55**	**308**	P	**P**	**01 48 10.3**	**-0.4**
WHN				LR	LR		
comp=Z,4μm,13.2s							
WHN				LR	LR		
comp=Z,3μm,12.8s							
WHN				LR	LR		
comp=Z,3μm,23.1s							
DL2	**Dalian**	**32.78**	**327**	P	**P**	**01 48 12.9**	**+0.3**
DL2				S	**S**	**01 53 32.0**	**+4.2**
DL2				pmax	pmax		
comp=Z,25nm,1.0s							
DL2				LR	LR		
comp=Z,380nm,14.5s							
DL2				LR	LR		
comp=Z,280nm,11.0s							
DL2				LR	LR		
comp=Z,430nm,15.3s							
USA0B	**Ussuriysk Arra**	**33.12**	**344**	*e*P	**P**	**01 48 15.7**	**+0.2**
comp=Z,18nm,1.4s							
USRK	**Ussuriysk Ar.**	**33.12**	**344**	P	**P**	**01 48 16.9**	**+1.4**
comp=Z,4.0nm,0.9s,baz=178,slow=9.0,SNR=8.7							
USRK				LR	LR	02 00 16.7	
comp=Z,280nm,18.8s,baz=153,slow=34							
QIZ	**Qiongzhong**	**33.24**	**286**	P	**P**	**01 48 15.0**	**-1.9**
QIZ				S	**S**	**01 53 35.0**	**-0.4**
QIZ				pmax	pmax		
comp=Z,910nm,3.1s							
QIZ				LR	LR		
comp=Z,1μm,3.9s							
QIZ				LR	LR		
comp=Z,1μm,16.2s							
WRAB	**Tennant Creek**	**33.60**	**196**	*ce*P	**P**	**01 48 19.9**	**0.0**
WRAB				pmax	pmax		
comp=Z,27nm,0.8s							
WB2	**Warramunga Arr**	**33.61**	**196**	*e*P	**P**	**01 48 19.8**	**-0.2**
comp=Z,44nm,0.6s							
WR1	**Warramunga Arr**	**33.61**	**196**	*e*P	**P**	**01 48 19.9**	**0.0**
WR1				*e*PcP	**PcP**	**01 51 01.5**	**+1.4**
WRA	**Warramunga Arr**	**33.61**	**196**	P	**P**	**01 48 19.9**	**-0.1**
comp=Z,40nm,0.6s,baz=9.3,slow=9.1,SNR=222							
WRA				PcP	**PcP**	**01 51 01.5**	**+1.4**
comp=Z,4.0nm,0.9s,baz=5.2,slow=0.9,SNR=3.4							
YSS	**Yuzh-Sakhalins**	**34.29**	**359**	*e*P	P	01 48 17.2	-8.4
YSS				MLR	MLR		
comp=Z,400nm,12.0s							
YSS				MLR	MLR		
comp=N,300nm,15.0s							
BJT	**Baijiatuau**	**36.60**	**323**	*e*P	**P**	**01 48 46.0**	**+0.4**
comp=N,16nm,0.8s							
BJT	**Baijiatuau**	**36.60**	**323**	*e*P	**P**	**01 48 46.0**	**+0.4**
BJT				pmax	pmax		
comp=Z,16nm,0.8s							
AS31	**Alice Springs**	**37.28**	**195**	*e*P	**P**	**01 48 51.2**	**-0.4**
comp=Z,6.1nm,0.4s							
AS31				*e*PcP	**PcP**	**01 51 11.2**	**+0.4**
ASAR	**Alice Springs**	**37.28**	**195**	P	**P**	**01 48 51.5**	**0.0**
comp=Z,5.8nm,0.5s,baz=22,slow=12,SNR=77							
ASAR				PcP	**PcP**	**01 51 11.2**	**+0.4**
comp=Z,6.6nm,0.9s,baz=18,slow=3.9,SNR=11							
ASAR				LR	LR	02 04 44.3	
comp=Z,316nm,19.2s,baz=19,slow=37							
GYA	**Guiyang**	**37.47**	**297**	P	**P**	**01 48 53.3**	**0.0**
GYA				PP	**PnPn**	**01 50 21.5**	**+1.5**
GYA				S	**S**	**01 54 42.1**	**+1.7**
GYA				ScP	**ScP**	**01 54 59.8**	**+2.9**
GYA				SS	**SnSn**	**01 57 09.3**	**-10**
GYA				pmax	pmax		
comp=Z,20nm,1.0s							
GYA				pmax	pmax		
comp=Z,120nm,4.7s							
GYA				LR	LR		
comp=Z,330nm,17.0s							
GYA				LR	LR		
comp=Z,440nm,17.5s							
GYA				LR	LR		
comp=Z,590nm,17.1s							
PWJI	**Pagerwojo**	**37.79**	**239**	P	**P**	**01 48 55.2**	**-0.8**
comp=Z,78nm,1.1s							
KLR	**Kul'dur**	**37.89**	**347**	*i* P	**P**	**01 48 55.5**	**-0.9**
KLR				pmax	pmax		
comp=Z,11nm,1.6s							
PANO	**Nakornpanom**	**38.09**	**282**	P	**P**	**01 48 59.7**	**+1.2**
comp=Z,0.8nm,1.6s							
GRNR	**Gornyy**	**38.57**	**353**	*e*P	**P**	**01 49 01.8**	**-0.3**
SKNT	**Sakolnakorn**	**38.69**	**281**	P	**P**	**01 49 04.9**	**+1.3**
comp=Z,22nm,1.5s							
SLVN	**Son La**	**39.04**	**288**	*e*P	**P**	**01 49 06.1**	**-0.5**
comp=Z,10nm,1.1s							
NONG	**Nongkai**	**39.51**	**283**	P	**P**	**01 49 11.8**	**+1.4**
comp=Z,0.4nm,2.2s							
HHC	**Hu-ho-hao-te**	**39.88**	**321**	*e*P	**P**	**01 49 13.8**	**+0.5**
HHC				S	**S**	**01 55 17.1**	**+0.7**
HHC				pmax	pmax		
comp=Z,26nm,1.1s							
HHC				pmax	pmax		
comp=Z,22nm,3.9s							
HHC				LR	LR		
comp=Z,350nm,11.1s							
HHC				LR	LR		
comp=Z,300nm,11.1s							
CHAI	**Chaiyaphum**	**40.60**	**280**	P	**P**	**01 49 21.1**	**+1.6**
comp=Z,26μm,0.9s							
KMI	**Kunming**	**40.64**	**294**	P	**P**	**01 49 20.1**	**+0.1**
KMI				pmax	pmax		
comp=Z,8.0nm,0.5s							
KMI				pmax	pmax		
comp=Z,290nm,5.3s							
KMI				LR	LR		
comp=Z,430nm,11.9s							
KMI				LR	LR		
comp=Z,280nm,11.1s							
KMI				LR	LR		
comp=Z,370nm,12.9s							
DZM	**Mont Dzumac**	**40.97**	**147**	*e*LR	LR	02 00 52.6	
comp=Z,220nm,22.9s							
DZM	**Mont Dzumac**	**40.97**	**147**	P	**P**	**01 49 23.2**	**+0.7**
comp=Z,9.0nm,0.6s,baz=37,slow=5.9,SNR=6.4							
DZM	**Mont Dzumac**	**40.97**	**147**	*e*P	**P**	**01 49 23.2**	**+0.7**
comp=Z,30nm,1.3s							
CD2	**Chengdu**	**41.14**	**303⇑**	*i* P	**P**	**01 49 22.8**	**-1.1**
CD2				S	**S**	**01 55 31.8**	**-3.6**
CD2				pmax	pmax		
comp=Z,80nm,0.9s							
CD2				pmax	pmax		
comp=Z,300nm,4.7s							
CD2				LR	LR		
comp=Z,1μm,17.5s							
CD2				LR	LR		
comp=Z,1μm,13.5s							
CD2				LR	LR		
comp=Z,710nm,23.9s							
PBKT	**Sadao Pong**	**41.57**	**281**	P	**P**	**01 49 28.5**	**+1.1**
comp=Z,8.9nm,1.1s,comp=Z,506nm							
NANT	**Nan**	**41.86**	**284**	P	**P**	**01 49 29.4**	**-0.4**
comp=Z,12μm,0.9s							
PETK	**Petropavlovsk-**	**41.95**	**13**	LR	LR	02 05 32.2	
comp=Z,315nm,20.4s,baz=194,slow=34							
PAYA	**Payao**	**42.67**	**285**	P	**P**	**01 49 37.4**	**+1.0**
comp=Z,25μm,0.9s							
LZH	**Lanzhou**	**42.85**	**310**	*e*P	**P**	**01 49 38.4**	**+0.5**
LZH				pP	pP	01 49 43.9	-1.8
LZH				sP	sP	01 49 45.9	-2.9
LZH				*e*S	**S**	**01 56 07.6**	**+6.8**
LZH				SS	**SS**	**01 59 05.5**	**-7.1**
LZH				pmax	pmax		
comp=Z,38nm,1.1s							
LZH				pmax	pmax		
comp=Z,220nm,4.9s							
LZH				LR	LR		
comp=Z,770nm,13.6s							
LZH				LR	LR		
comp=Z,470nm,14.1s							
LZH				LR	LR		
comp=Z,710nm,15.0s							
ZEA	**Zeya**	**43.12**	**346**	*e*P	**P**	**01 49 44.0**	**+4.4**
ZEA				*e*		01 51 28.2	
ZEA				pmax	pmax		
comp=Z,21nm,1.2s							
ZEA				MLR	MLR		
comp=N,400nm,16.0s							
ZEA				MLR	MLR		
comp=Z,400nm,16.0s							
ARMA	**Armidale**	**43.39**	**170**	*e*P	**P**	**01 49 42.2**	**0.0**
comp=Z,83nm,1.7s							
CM31	**Chiang Mai Arr**	**43.52**	**284**	*e*P	**P**	**01 49 43.5**	**+0.1**
comp=Z,19nm,0.9s							
CMAR	**Chiang Mai Arr**	**43.52**	**284**	P	**P**	**01 49 43.5**	**+0.1**
comp=Z,16nm,1.1s,baz=82,slow=6.2,SNR=32							
CMAR				PcP	**PcP**	**01 51 31.9**	**+0.9**
comp=Z,1.4nm,0.4s,baz=67,slow=2.5,SNR=4.3							
CMAR				LR	LR	02 07 16.4	
comp=Z,408nm,20.4s,baz=87,slow=35							
STKA	**Stephens Creek**	**44.23**	**183**	P	**P**	**01 49 48.1**	**-0.6**
comp=Z,17nm,1.0s,baz=346,slow=9.3,SNR=8.6							
STKA				LR	LR	02 09 20.4	
comp=Z,267nm,20.8s,baz=357,slow=38							
STKA	**Stephens Creek**	**44.23**	**183**	*e*P	**P**	**01 49 47.8**	**-0.9**
comp=Z,6.3nm,1.3s							
STKA	**Stephens Creek**	**44.23**	**183**	*e*P	**P**	**01 49 47.8**	**-0.9**
STKA				pmax	pmax		
comp=Z,6.0nm,1.3s							
ULN	**Ulaanbaatar**	**46.63**	**326**	*e*P	**P**	**01 50 06.6**	**-1.3**
comp=Z,6.3nm,0.6s							
ULN	**Ulaanbaatar**	**46.63**	**326**	*ce*P	**P**	**01 50 07.7**	**-0.1**
ULN				pmax	pmax		
comp=Z,8.0nm,1.0s							
SONA0	**Songino Array**	**46.97**	**326**	*e*P	**P**	**01 50 10.5**	**0.0**
SONM	**Songino Array**	**46.97**	**326**	P	**P**	**01 50 10.5**	**0.0**
comp=Z,2.4nm,0.6s,baz=141,slow=9.7,SNR=8.9							
SONM				LR	LR	02 11 15.8	
comp=Z,280nm,18.3s,baz=102,slow=38							
GTA	**Gaotai**	**47.07**	**313**	*e*P	**P**	**01 50 11.4**	**0.0**
GTA				pP	pP	01 50 15.4	-3.9
GTA				sP	sP	01 50 18.8	-3.6
GTA				pmax	pmax		
comp=Z,9.0nm,1.1s							
GTA				pmax	pmax		
comp=Z,130nm,7.1s							
GTA				LR	LR		
comp=Z,360nm,19.4s							
GTA				LR	LR		
comp=Z,280nm,16.8s							
GTA				LR	LR		
comp=Z,270nm,17.5s							
MORW	**Morawa**	**49.30**	**213**	*e*P	**P**	**01 50 27.9**	**-0.7**
comp=Z,53nm,1.1s							
TOO	**Toolangi**	**49.89**	**178**	*e*P	**P**	**01 50 33.4**	**+0.5

MOY	Mondy	52.02	328	eP		P	01 50 49.6 +0.7
WMQ	Urumqi	57.08	314	eP		P	01 51 26.3 +0.5
WMQ				pP		pP	01 51 31.9 -1.9
WMQ				PcP		PcP	01 52 22.3 +1.9
WMQ				S		S	01 59 19.9 +1.0
WMQ				ScS		ScS	02 01 13.1 -0.2
WMQ				pmax		pmax	
	comp=Z,13nm,1.3s						
WMQ				pmax		pmax	
	comp=Z,65nm,5.1s						
WMQ				LR		LR	
	comp=Z,160nm,17.9s						
WMQ				LR		LR	
	comp=Z,140nm,19.5s						
WMQ				LR		LR	
	comp=Z,220nm,21.7s						
BILL	Bilibino	57.35	10	eP		P	01 51 27.5 +0.4
	comp=Z,8.7nm,1.0s						
BILL	Bilibino	57.35	10	eP		P	01 51 28.5 +1.4
BILL				e			01 52 20.2
BILL				e			01 53 34.6
BILL				pmax		pmax	
	comp=Z,12nm,1.3s						
DGZ	Jazzator, Alta	58.96	321	d iP		P	01 51 39.0 +0.1
DGZ				pmax		pmax	
	comp=Z,6.0nm,0.9s						
URZ	Urewera	59.41	150	P		P	01 51 42.4 +0.6
	comp=Z,16nm,0.8s,baz=348,slow=6.1,SNR=3.9						
TIXI	Tiksi	59.75	355	eP		P	01 51 43.7 0.0
	comp=Z,2.9nm,1.0s						
TIXI	Tiksi	59.75	355	ceP		P	01 51 45.1 +1.4
TIXI				pmax		pmax	
	comp=Z,4.0nm,1.3s						
RPZ	Rata Peaks	61.28	158	P		P	01 51 55.1 +0.5
	comp=Z,16nm,0.5s,baz=334,slow=1.8,SNR=5.8						
DCZ	Deep Cove	61.50	161	eP		P	01 51 55.6 -0.3
	comp=Z,33nm,1.1s						
MK32	Makanchi Array	61.50	317	eP		P	01 51 55.9 -0.3
MKAR	Makanchi Array	61.50	317	P		P	01 51 55.9 -0.3
	comp=Z,4.4nm,0.8s,baz=93,slow=8.7,SNR=28						
MKAR				LR		LR	02 20 00.3
	comp=Z,118nm,19.2s,baz=102,slow=37						
MKAR				PKP2bc			02 21 18.0
	comp=Z,1.1nm,0.9s,baz=294,slow=1.2,SNR=6.1						
MAKZ	Makanchi	61.71	317	eP		P	01 51 57.8 +0.2
	comp=Z,9.2nm,0.9s						
MAKZ	Makanchi	61.71	317	eP		P	01 51 57.8 +0.2
MAKZ				pmax		pmax	
	comp=Z,9.0nm,0.9s						
ZALV	Zalesovo Beam	61.84	325	P		P	01 51 57.5 -0.8
	comp=Z,1.4nm,0.6s,baz=97,slow=8.1,SNR=4.4						
ZALV				PKP2bc			02 21 17.1
	comp=Z,1.8nm,0.8s,baz=298,slow=3.2,SNR=5.4						
NVS	Novosibirsk	63.00	326	eP		P	01 52 06.8 +0.8
KURK	Kurchatov	64.69	320	eP		P	01 52 16.6 -0.6
	comp=Z,20nm,0.9s						
KURK	Kurchatov	64.69	320	ceP		P	01 52 16.9 -0.3
KURK				pmax		pmax	
	comp=Z,23nm,1.0s						
KURBB	Kurchatov Arra	64.73	320	P		P	01 52 16.7 -0.8
	comp=Z,11nm,0.8s,baz=102,slow=6.7,SNR=83						
KSH	Kashi	65.03	308	P		P	01 52 22.0 +2.2
KSH				pP		pP	01 52 26.8 -1.2
KSH				PP		PP	01 54 45.8 +2.8
KSH				S		S	02 01 03.1 +2.7
KSH				ScS		SKSac	02 02 12.8 -0.2
KSH				SS		SS	02 05 15.8 +3.2
KSH				pmax		pmax	
	comp=Z,26nm,1.2s						
KSH				pmax		pmax	
	comp=Z,290nm,4.3s						
KSH				LR		LR	
	comp=Z,340nm,11.2s						
KSH				LR		LR	
	comp=Z,190nm,8.8s						
KSH				LR		LR	
	comp=Z,450nm,14.8s						
AAK	Ala-Archa	66.38	311	P		P	01 52 27.7 -0.8
	comp=Z,0.9nm,0.3s,baz=90,slow=10,SNR=3.9						
AAK	Ala-Archa	66.38	311	ceP		P	01 52 27.0 -1.6
AAK				pmax		pmax	
	comp=Z,5.0nm,1.7s						
NRIK	Noril'sk	66.75	341	P		P	01 52 29.1 -1.1
	comp=Z,1.9nm,0.5s,baz=110,slow=6.0,SNR=2.7						
NRIK				LR		LR	02 23 04.9
	comp=Z,171nm,18.2s,baz=70,slow=37						
NIL	Nilore	67.00	301	eP		P	01 52 32.1 -0.4
	comp=Z,37nm,1.0s						
NIL	Nilore	67.00	301	eP		P	01 52 32.1 -0.4
NIL				pmax		pmax	
	comp=Z,37nm,1.0s						
KK31	Karatay Array	69.33	311	eP		P	01 52 46.7 -0.2
	comp=Z,6.9nm,1.0s						
KK31	Karatay Array	69.33	311	eP		P	01 52 46.7 -0.2
KK31				pmax		pmax	
	comp=Z,7.0nm,1.0s						
COLA	College	69.57	25	i P		P	01 52 51.6 +3.7
COLA				pmax		pmax	
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	69.94	25	P		P	01 52 47.6 -2.6
	comp=Z,1.1nm,0.7s,baz=248,slow=6.1,SNR=8.5						
ILAR				LR		LR	02 22 17.0
	comp=Z,112nm,20.2s,baz=271,slow=35						
BVAR	Borovoye Array	70.08	322	P		P	01 52 50.8 -0.5
	comp=Z,2.9nm,0.5s,baz=104,slow=7.8,SNR=26						
BRVK	Borovoye	70.14	322	eP		P	01 52 51.3 -0.4
	comp=Z,4.9nm,0.8s						
BRVK	Borovoye	70.14	322	d iP		P	01 52 50.6 -1.1
BRVK				pmax		pmax	
	comp=Z,5.0nm,0.9s						
KBL	Kabul	70.48	302	eP		P	01 52 53.3 -1.1
	comp=Z,12nm,1.0s						
KBL	Kabul	70.48	302	eP		P	01 52 53.3 -1.1
KBL				pmax		pmax	
	comp=Z,13nm,1.0s						
PPT	Papeete	72.28	113	LR		LR	02 18 06.9
	comp=Z,253nm,18.6s,baz=300,slow=30						
PPT2	Papeete2	72.28	113	eS		SKiKP	02 02 36.0 -3.7
	comp=Z,106nm,28.5s						
PPT2	Papeete2	72.28	113	eLR		LR	02 14 40.7
	comp=Z,296nm,21.8s,baz=287						
DAWY	Dawson	73.03	27	eP		P	01 53 09.2 +0.3
	comp=Z,8.0nm,1.2s						
HYT	Haines Junctio	73.62	30	eP		P	01 53 12.8 +0.2
	comp=Z,5.8nm,0.9s						
TBI	Tubuai	74.40	119	eLR		LR	02 15 32.5
	comp=Z,269nm,36.5s						
INK	Inuvik	75.72	22	P		P	01 53 24.5 +0.1
	comp=Z,5.3nm,1.0s,baz=281,slow=7.4,SNR=6.2						
INK	Inuvik	75.72	22	eP		P	01 53 24.9 +0.5
	comp=Z,7.6nm,1.1s						
INK	Inuvik	75.72	22	eP		P	01 53 24.9 +0.5
INK				pmax		pmax	
	comp=Z,8.0nm,1.1s						
SVE	Sverdlovsk	75.84	326	eP		P	01 53 25.7 +0.3
ARU	Arti	77.00	325	P		P	01 53 31.6 -0.4
	comp=Z,0.6nm,0.4s						
ARU	Arti	77.00	325	eP		P	01 53 31.6 -0.4
	comp=Z,3.6nm,0.7s						
ARU	Arti	77.00	325	d iP		P	01 53 31.3 -0.7
ARU				S		S	02 03 22.7 +4.3
ARU				SS		SS	02 08 16.3 +1.0
ARU				pmax		pmax	
	comp=Z,9.0nm,1.8s						
DLBC	Dease Lake	77.42	33	P		P	01 53 34.8 +0.5
	comp=Z,2.5nm,1.0s,baz=299,slow=10,SNR=3.9						
AKTO	Aktyubinsk	77.75	319	P		P	01 53 36.3 +0.1
	comp=Z,1.3nm,0.7s,baz=68,slow=6.2,SNR=3.3						
GEYT	Alibeck	79.01	307	P		P	01 53 43.0 -0.6
	comp=Z,7.0nm,1.0s,baz=162,slow=1.4,SNR=15						
GEYT				LR		LR	02 31 32.5
	comp=Z,86nm,20.7s,baz=40,slow=38						
BBB	Bella Bella	79.04	39	P		P	01 53 44.1 +0.8
	comp=Z,7.0nm,1.1s,baz=341,slow=10,SNR=2.6						
PRGR	Permogore	82.89	332	eP		P	01 54 01.5 -2.2
PRGR				e			01 54 10.3
PRGR				pmax		pmax	
	comp=Z,13nm,0.9s						
D03D	Eldon	82.95	43	P		P	01 54 04.4 +0.1
	baz=281						
J01E	Myrtle Point	83.18	47	P		P	01 54 06.0 +0.4
	baz=281						
G03D	McMinnville, O	83.27	45	P		P	01 54 05.8 -0.2
	baz=281						
K02D	Willamette Mer	83.46	48	P		P	01 54 07.4 +0.2
	baz=281						
B05A	Bryant	83.46	42	P		P	01 54 07.4 +0.5
	baz=282						
E04D	Cinebar	83.48	44	P		P	01 54 07.7 +0.7
	baz=281						
I03D	Drain, OR	83.50	47	P		P	01 54 08.0 +0.9
	baz=281						
L02E	Cave Junction	83.61	48	P		P	01 54 08.2 +0.3
	baz=281						
H04D	Lebanon	83.77	46	P		P	01 54 09.9 +1.4
	baz=281						
I04A	Tendick Farm,	84.14	47	P		P	01 54 10.9 +0.3
	baz=282						
YKW3	Yellowknife Ar	84.23	27	eP		P	01 54 10.0 -0.6
	comp=Z,6.1nm,0.9s						
YKA	Yellowknife Ar	84.25	27	P		P	01 54 10.0 -0.6
	comp=Z,2.1nm,0.7s,baz=289,slow=5.3,SNR=13						
YKA				LR		LR	02 32 11.9
	comp=Z,6.3nm,19.6s,baz=287,slow=36						
M02C	Callahan	84.31	49	P		P	01 54 11.7 +0.2
	baz=282						
F05D	White Salmon	84.37	44	P		P	01 54 11.7 0.0
	baz=282						
J04D	Umpqua Nationa	84.47	47	P		P	01 54 12.9 +0.5
	baz=282						
N02D	Trinity Center	84.50	49	P		P	01 54 12.9 +0.4
	baz=282						
L04D	Klamath Falls	84.54	48	P		P	01 54 12.5 -0.2
	baz=282						
O02D	Mt. Diablo Mer	84.60	50	P		P	01 54 13.6 +0.6
	baz=282						
M04C	Macdoel	84.97	48	P		P	01 54 14.3 -0.6
	baz=282						
J05D	Fort Rock, OR	85.08	47	P		P	01 54 15.4 -0.1
	baz=283						
O03E	Paynes Creek	85.31	50	P		P	01 54 16.6 0.0
	baz=282						
MOD	Modoc Plateau	86.06	48	eP		P	01 54 20.5 +0.1
	comp=Z,9.6nm,1.1s						
MAK	Makhachkala	86.08	313	eP		P	01 54 13.0 -7.2
MAK				eS		SKSac	02 04 35.8 -8.6
MAK				pmax		pmax	
	comp=Z,7.0nm,0.3s						
AKT	Akhty	86.26	312	eP		P	01 54 19.3 -2.0
AKT				pmax		pmax	
	comp=Z,7.0nm,1.1s						
NEW	Newport	86.70	41	P		P	01 54 23.5 +0.3
	baz=285						
PAHR	Pah Rah Range	87.26	50	eP		P	01 54 26.4 +0.1
	comp=Z,20nm,1.4s						
ARCES	ARCESS Array B	87.73	342	P		P	01 54 27.7 -0.1
	comp=Z,0.6nm,0.5s,baz=73,slow=8.2,SNR=9.2						
ARCES				LR		LR	02 37 17.0
	comp=Z,44nm,18.3s,baz=88,slow=38						
PKM	Mcpherson Peak	88.08	55	P		P	01 54 29.4 -1.0
	baz=284						
NV01	Mina Array Sit	88.39	51	eP		P	01 54 32.8 +1.0
NVAR	Mina Array Bea	88.39	51	P		P	01 54 32.8 +1.0
	comp=Z,14nm,0.8s,baz=260,slow=6.3,SNR=44						
VES	Vestal, Richgr	88.43	54	P		P	01 54 31.4 -0.4
	baz=284						
NCK	Nalchik	88.71	314	i P		P	01 54 32.8 -0.1
NCK				pmax		pmax	
	comp=Z,4.0nm,1.0s						
ISA	Isabella, Lake	88.95	54	P		P	01 54 33.3 -1.1
	baz=285						
CWC	Cottonwood Cre	89.06	53	P		P	01 54 35.1 +0.2
	baz=285						
KIV	Kislovodsk	89.21	315	eP		P	01 54 34.0 -1.4
KIV				pmax		pmax	
	comp=Z,12nm,1.1s						
OBN	Obninsk	89.38	327	eP		P	01 54 34.4 -1.3
OBN				e			01 58 05.0
OBN				pmax		pmax	
	comp=Z,7.0nm,1.3s						
EDW2	Edwards Air Fo	89.53	54	P		P	01 54 37.1 +0.1
	baz=285						
LRMC	Laurel Mtn Rad	89.62	54	P		P	01 54 38.1 +0.6
	baz=285						
MPMC	Manual Prospec	89.62	53	P		P	01 54 37.8 +0.1
	baz=285						
HLID	Hailey	89.82	45	P		P	01 54 38.2 -0.2
	baz=287						
BFSC	Mount Baldy Ra	89.97	55	P		P	01 54 39.4 +0.2
	baz=285						
FURC	Furnace Creek,	90.00	53	P		P	01 54 39.3 +0.2
	baz=286						
TPNV	Topopah Spring	90.35	52	P		P	01 54 41.3 +0.3
	baz=286						
GSC	Goldstone, Bar	90.36	54	P		P	01 54 41.2 +0.2
	baz=286						
R11A	Troy Canyon, C	90.47	51	P		P	01 54 41.4 -0.1
	baz=286						
MURC	Murrieta	90.50	56	P		P	01 54 42.6 +1.1
	baz=285						
VNDA	Vanda	90.52	176	P		P	01 54 41.1 +0.6
	comp=Z,5.0nm,1.0s,baz=310,slow=5.8,SNR=17						
VNDA				LR		LR	02 35 23.0
	comp=Z,96nm,19.4s,baz=349,slow=36						
VNDA	Vanda	90.52	176	eP		P	01 54 40.6 +0.1
	comp=Z,12nm,1.2s						
VNDA	Vanda	90.52	176	eP		P	01 54 40.6 +0.1
VNDA				pmax		pmax	
	comp=Z,12nm,1.2s						
SHOC	Shoshone, Teco	90.62	53	P		P	01 54 42.7 +0.7
	baz=286						
109C	Camp Elliot, M	90.77	56	P		P	01 54 42.5 -0.2
	baz=286						
HEC	Hector,Ludlow	90.86	54	P		P	01 54 43.7 +0.4
	baz=286						
TUQ	Turquoise Moun	91.02	53	P		P	01 54 44.4 +0.4
	baz=286						
BOZ	Bozeman (W)	91.08	43	P		P	01 54 44.3 +0.1
	baz=289						
PFO	Pinyon Flats O	91.09	55	eP		P	01 54 44.6 +0.2
	comp=Z,32nm,1.3s						
PFO	Pinyon Flats O	91.09	55	P		P	01 54 45.2 +0.7
	baz=286						
TPFO	Pinon Flats	91.10	55	P		P	01 54 44.6 +0.2
	baz=286						
SBA	Scott Base	91.19	175	eP		P	01 54 44.6 +1.0
	comp=Z,40nm,1.6s						
SBA	Scott Base	91.19	175	eP		P	01 54 44.6 +1.0
SBA				pmax		pmax	
	comp=Z,40nm,1.6s						
MONP2	Monument Peak	91.32	56	P		P	01 54 45.3 -0.3
	baz=286						
BELC	Belle Mtn. Jos	91.36	55	P		P	01 54 45.4 -0.2
	baz=286						
GMRC	Granite Mounta	91.41	54	P		P	01 54 45.7 -0.2
	baz=286						
EGMT	Eagleton	91.47	40	P		P	01 54 46.1 +0.3
	baz=291						
IKP	In-Ko-Pah, Jac	91.64	56	P		P	01 54 47.1 +0.2
	baz=286						
FINES	FINESS Array B	91.64	335	P		P	01 54 44.2 -1.9
	comp=Z,1.0nm,0.5s,baz=72,slow=6.1,SNR=18						
FINES	FINESS Array B	91.64	335	i P		P	01 54 44.0 -2.2
FINES				pmax		pmax	
	comp=Z,1.0nm,0.5s						
SWSC	Sam W. Stewart	91.81	56	P		P	01 54 47.5 -0.1
	baz=286						
BC3	Big Chuckawall	91.89	55	P		P	01 54 47.9 -0.2
	baz=286						
DUG	Dugway, Tooele	91.98	48	eP		P	01 54 48.5 +0.1
	comp=Z,29nm,1.9s						
DUG	Dugway, Tooele	91.98	48	eP		P	01 54 48.5 +0.1
DUG				pmax		pmax	
	comp=Z,29nm,1.9s						
DUG	Dugway, Tooele	91.98	48	P		P	01 54 48.4 0.0
	baz=288						
IRM	Iron Mountain	91.99	55	P		P	01 54 49.3 +0.8
	baz=287						
IMW	Indian Meadow	92.10	44	eP		P	01 54 49.6 +0.4
	comp=Z,7.4nm,0.9s						
FXWY	Fox Creek	92.13	45	eP		P	01 54 49.4 +0.2
	comp=Z,17nm,1.7s						
H17A	Grant Village	92.18	44	P		P	01 54 50.2 +0.8
	baz=290						
RAYN	Ar Rayn	92.48	295	eP		P	01 54 48.7 -2.3
	comp=Z,4.4nm,0.9s						
RAYN	Ar Rayn	92.48	295	eP		P	01 54 48.7 -2.3
RAYN				pmax		pmax	
	comp=Z,4.0nm,0.9s						
GLA	Glamis	92.56	56	P		P	01 54 51.2 0.0
	baz=287						
Y12C	Blythe	92.60	55	P		P	01 54 51.9 +0.7
	baz=287						
PDMCI	Parker Dam,Lak	92.75	54	P		P	01 54 52.6 +0.7
	baz=287						
RLMT	Red Lodge	92.81	43	P		P	01 54 52.7 +0.5
	baz=291						
FFC	Flin Flon	93.24	32	i P		P	01 54 56.1 +2.4
BW06	Boulder Array	93.44	45	P		P	01 54 54.9 -0.4
	baz=290						
PDAR	Pinedale Array	93.44	45	P		P	01 54 54.9 -0.4
	comp=Z,0.7nm,0.7s,baz=249,slow=2.0,SNR=6.7						
PDAR				PP		PP	01 58 32.5 -6.8
	comp=Z,0.3nm,0.4s,baz=286,slow=3.7,SNR=5.6						
PDAR				LR		LR	02 30 09.9
	comp=Z,152nm,21.7s,baz=281,slow=31						
Y14A	Wickenburg	93.75	54	eP		P	01 54 57.5 +0.8
	comp=Z,8.4nm,0.8s						
LAO	LASA Array	94.19	40	P		P	01 54 58.1 -0.3
	baz=293						
214A	Organ Pipe Nat	94.51	56	P		P	01 55 01.5 +1.3
	baz=288						
WUAZ	Wupatki	94.54	52	P		P	01 54 59.6 -0.7
	baz=289						
AKASG	Malin Array Be	95.24	324	LR		LR	02 41 45.7
	comp=Z,137nm,18.6s,baz=60,slow=38						
O20A	White River Ci	95.30	47	P		P	01 55 04.5 +0.7
	baz=291						
TUC	Tucson	96.03	55	eP		P	01 55 07.6 +0.5
	comp=Z,18nm,1.9s						
TUC	Tucson	96.03	55	eP		P	01 55 07.6 +0.5
TUC				pmax		pmax	
	comp=Z,18nm,1.9s						
TUC	Tucson	96.03	55	P		P	01 55 07.0 -0.1
	baz=289						
MVCO	Mesa Verde	96.15	50	P		P	01 55 08.2 +0.5
	baz=291						
N23A	Red Feather La	96.64	46	P		P	01 55 10.0 0.0
	baz=293						
BRTR	Keskin Array B	96.99	313	P		P	01 55 09.4 -2.0
	comp=Z,0.6nm,0.8s,baz=68,slow=6.1,SNR=3.6						
NOA	NORSAR Array B	97.62	339	LR		LR	02 40 33.5
	comp=Z,65nm,20.9s,baz=80,slow=36						
MAW	Mawson	98.08	202	LR		LR	02 38 39.8
	comp=Z,139nm,21.3s,baz=86,slow=35						
SDCO	Great Sand Dun	98.17	49	P		P	01 55 15.9 -1.1
	baz=293						
TASM	ASL Pad, Albuq	98.51	51	P		P	01 55 18.4 0.0
	baz=292						
ULM	Lac du Bonnet	98.68	34	LR		LR	02 38 18.2
	comp=Z,108nm,18.6s,baz=316,slow=34						
MNTX	Cornudas Mount	100.55	54	P		Pdif	01 55 28.5 +1.1
	baz=292						
VYHS	Vyhne	102.16	326	eP		Pdif	01 55 33.2 -0.9
VYHS	Vyhne	102.16	326	ePDIF		Pdif	01 55 33.2 -0.9
TXAR	Lajitas Array	102.81	56	P		Pdif	01 55 39.0 +1.4
	comp=Z,0.3nm,0.8s,baz=262,slow=6.3,SNR=3.1						
CLL	Collm	103.42	331	ePP		PKiKP	01 59 59.0 +0.6
CLL				Lm		MLR	02 47 00.0
	comp=N,100nm,20.1s						
CLL				Lm		MLR	02 47 00.0
	comp=E,100nm,19.2s						
CLL				Lm		MLR	02 47 00.0
	comp=Z,200nm,18.9s						
GERES	GERESS Array B	104.66	329	PKKPbc		PKKPbc	02 11 30.4 -0.9
	comp=Z,0.6nm,0.9s,baz=232,slow=3.2,SNR=4.7						
LSZ	Lusaka	117.62	259	ePKPdf		PKiKP	02 00 26.8 +0.5
LSZ	Lusaka	117.62	259	ePKIKP		PKiKP	02 00 26.8 +0.5
VNA3	Neumayer Olymp	119.14	190	P		PKPdf	02 00 27.4 -0.2
VNA1	Neumayer--Stat	119.42	190	P		PKiKP	02 00 28.2 +0.1
TAM	Tamanrasset	126.09	311	ePKPdf		PKPdf	02 00 42.4 -0.1
TAM	Tamanrasset	126.09	311	ePKIKP		PKPdf	02 00 42.4 -0.1
TOA1	Torodi Ar. Sit	134.55	303	ePKPdf		PKPdf	02 00 58.1 -0.5
TORD	Torodi Ar. Bea	134.55	303	PKP		PKPdf	02 00 58.1 -0.5
	comp=Z,2.4nm,1.0s,baz=356,slow=4.9,SNR=8.1						
PLCA	Paso Flores	138.87	139	PKP		PKPdf	02 01 06.6 +0.7
	comp=Z,5.8nm,1.0s,baz=212,slow=5.6,SNR=5.6						
DBIC	Dimbokro	143.44	300	PKhKP		PKPpre	02 01 11.3
	comp=Z,6.6nm,0.9s,baz=46,slow=7.4,SNR=4.7						
KIC	Kosan Boka	143.50	299	eP		PKPab	02 01 11.0 -0.2
	comp=Z,79nm,1.6s						
TIC	Toumodi	143.59	300	eP		PKPbc	02 01 12.8 +0.3
LIC	Lamto	143.81	299	eP		PKPab	02 01 11.8 -0.6
	comp=Z,88nm,1.2s						
LCO	Las Campanas	144.02	122	ePKPdf		PKPdf	02 01 15.0 -0.8
LCO	Las Campanas	144.02	122	ePKIKP		PKPdf	02 01 15.0 -0.8
TRQA	Tornquist	145.77	142	ePKPdf		PKPab	02 01 19.4 +0.4
TRQA	Tornquist	145.77	142	ePKP2		PKPab	02 01 19.4 +0.4
PB11	IPOC Station P	147.14	107	ePKPbc		PKPbc	02 01 23.6 +0.2
MNMC	Minye Minye	147.27	106	ePKPdf		PKPdf	02 01 22.7 +1.2
LVC	Limon Verde	147.34	112	ePKPbc		PKPbc	02 01 24.1 0.0
LVC	Limon Verde	147.34	112	ePKP2		PKPbc	02 01 24.1 0.0
GO01	Chusmiza	147.59	107	ePKPdf		PKPbc	02 01 23.9 -1.1
LPAZ	La Paz	148.89	101	PKPbc		PKiKP	02 01 29.9 -0.1
	comp=Z,9.7nm,0.8s,baz=330,slow=2.8,SNR=32						
LPAZ	La Paz	148.89	101	ePKPdf		PKPdf	02 01 26.2 +1.5
CPUP	Villa Florida	155.89	128	PKPab		PKPab	02 02 02.3 +1.4
	comp=Z,6.5nm,1.0s,baz=223,slow=6.4,SNR=4.7						

*IDC **22** 01:41:44.2±0.8, 15.°10S×173.°79W, h0^{km}, mb4.1/7, mb1 4.4/7, mb1mx4.0/41, mbtmp4.1/7, MS3.6/2, Ms1 3.6/2, ms1mx3.1/19, Error ellipse: s-maj=43.5km s-min=21.9km az=141.0*

*ISCJB **22** 01:41:46.6±0.5, 15.°4S±0.°1×173.°7W±0.°1, h30^{km}, mb4.2/14, MS3.6/1, Error ellipse: s-maj=17.2km s-min=12.4km az=147.7*

*NEIC **22** 01:41:48.8±2.4, 15.°20S×173.°68W, h31^{km}±5^{km}, mb4.3/11, Error ellipse: s-maj=28.5km s-min=22.0km az=135.0*

ISC 22 01:41:48.6±0.7, 15.°3S±0.°1×173.°6W±0.°1, h30^{km}, n30, σ1^{s}01/22, mb4.2/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.15	137	ePn	Pn	01 43 02.4	-1.3
DZM	Mont Dzumac	20.04	247	LR	LR	01 52 52.6	
	comp=Z,159nm,21.3s,baz=123,slow=34						
URZ	Urewera	24.29	198	LR	LR	01 55 00.5	
	comp=Z,189nm,18.9s,baz=36,slow=33						
H11S2	WAKE ISLAND Hy	38.77	329	T	T	02 29 52.9	
	baz=148,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	38.78	329	T	T	02 29 54.0	
	baz=148,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	38.79	329	T	T	02 29 56.2	
	baz=148,slow=76,SNR=5.4						
H11N3	WAKE ISLAND Hy	39.72	331	T	T	02 31 01.2	
	baz=150,slow=76,SNR=4.0						
H11N1	WAKE ISLAND Hy	39.73	331	T	T	02 31 01.2	
	baz=150,slow=76,SNR=3.3						
H11N2	WAKE ISLAND Hy	39.74	331	T	T	02 31 01.2	
	baz=150,slow=76,SNR=3.2						
WR1	Warramunga Arr	49.66	257	eP	P	01 50 37.0	-1.0
WRA	Warramunga Arr	49.66	257	P	P	01 50 37.0	-1.0
	0.8nm,0.3s,baz=91,slow=7.6,SNR=7.7						
AS31	Alice Springs	49.94	252	eP	P	01 50 39.1	-1.0
	1.2nm,1.0s						
ASAR	Alice Springs	49.94	252	P	P	01 50 39.1	-1.0
	3.5nm,0.7s,baz=87,slow=8.2,SNR=11						
VNDA	Vanda	63.45	186	P	P	01 52 17.1	+1.9
	0.9nm,0.8s,baz=21,slow

*NEIC **22** 01:48:40.3±0.0, 16°.00N×95°.88W, h57km, MD4.1(MEX), After MEX.*

MEX 22 01:48:40.3±0.3, 16°.00N×95°.88W, h57km±7km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.31**	**224**	*e*Pn	Pn	01 48 48.8	-1.4
HUIG				*e*Sn	Sn	01 48 55.5	-1.9
HUIG	**Huatulco**	**0.31**	**224**	*e*P	Pn	01 48 48.8	-1.4
HUIG				*e*S	Sn	01 48 55.5	-1.9
VHO	**Vista Hermosa**	**1.34**	**323**	*e*Pn	Pn	01 49 01.1	-2.0
VHO				*e*Sn	Sn	01 49 17.7	-2.3
VHO	**Vista Hermosa**	**1.34**	**323**	*i* P	Pn	01 49 01.1	-2.0
VHO				*e*S	Sn	01 49 17.7	-2.3
CMIG	**Matias Romero**	**1.45**	**41**	*e*Pn	Pn	01 49 02.7	-1.6
CMIG				*e*Sn	Sn	01 49 20.4	-1.9
CMIG	**Matias Romero**	**1.45**	**41**	*e*P	Pn	01 49 02.7	-1.6
CMIG				*e*S	Sn	01 49 20.4	-1.9
TLIG	**Tlapa**	**3.00**	**302**	*e*Pn	Pn	01 49 27.5	+1.9
TLIG	**Tlapa**	**3.00**	**302**	*e*P	Pn	01 49 23.5	-2.1
TLIG				*e*S	Sn	01 49 59.4	-1.1

NEIC 22 01:51:48.8±0.0, 55°.82N×161°.92W, h191km, ML3.5(AEIC), **After AEIC., Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.67**	**177**	*e*Pn	Pn	01 52 15.0	-0.7
DOL				*e*Sn	Sn	01 52 35.9	-0.5
SDPT	**Sand Point**	**0.95**	**119**	*e*Pn	Pn	01 52 16.3	-0.9
SDPT				*e*Sn	Sn	01 52 37.6	-1.5
VNWF	**Veniaminof 8**	**1.37**	**75**	*e*Pn	Pn	01 52 20.3	-0.3
CHGN	**Chignik**	**2.02**	**75**	*e*Pn	Pn	01 52 26.2	-0.6
CHGN				*e*Sn	Sn	01 52 55.0	-1.3
UNV	**Unalaska Valle**	**3.31**	**235**	*e*Pn	Pn	01 52 41.0	-0.5
UNV				*e*Sn	Sn	01 53 21.4	-1.4
MSW	**Makushin Switc**	**3.40**	**238**	*e*Pn	Pn	01 52 42.0	-0.7
MREP	**Makushin Rep't**	**3.44**	**236**	*e*Pn	Pn	01 52 42.7	-0.6
KELA	**Mount Kelaz**	**4.27**	**49**	*e*Pn	Pn	01 52 52.6	-0.9
OKTU	**Okmok Mt. Tuli**	**4.32**	**238**	*e*Pn	Pn	01 52 53.9	-0.3
SII	**Sitkinak Islan**	**4.39**	**77**	*e*Pn	Pn	01 52 53.6	-1.4
KAHC	**Katmai Hardscr**	**4.71**	**50**	*e*Pn	Pn	01 52 58.6	-0.6
NIKH	**Nikolski High**	**4.96**	**238**	*e*Pn	Pn	01 53 01.7	-0.6
OHAK	**Old Harbor**	**4.98**	**70**	*e*Pn	Pn	01 53 00.8	-1.7
FONW	**Fourpeaked Sta**	**5.28**	**52**	*e*Pn	Pn	01 53 06.2	-0.4
KDAK	**Kodiak Island**	**5.50**	**65**	*e*Pn	Pn	01 53 07.6	-1.6
AUW	**Augustine West**	**5.77**	**48**	*e*Pn	Pn	01 53 11.6	-1.1
CNPM	**China Poot**	**6.83**	**53**	*e*Pn	Pn	01 53 24.9	-1.6
SPU	**Mount Spurr**	**7.45**	**40**	*e*Pn	Pn	01 53 34.6	-0.1
TT01	**Tatalina**	**7.72**	**21**	*e*Pn	Pn	01 53 36.5	-1.5
SLKM	**Skilak Lake**	**7.76**	**48**	*e*Pn	Pn	01 53 38.0	-0.8
SEW	**Seward**	**7.90**	**52**	*e*Pn	Pn	01 53 38.4	-2.0
SUA	**Susitna One**	**8.12**	**41**	*e*Pn	Pn	01 53 41.0	-2.5
RC01	**Rabbit Creek A**	**8.28**	**45**	*e*Pn	Pn	01 53 42.9	-2.6
GLI	**Glacier Island**	**9.29**	**51**	*e*Pn	Pn	01 53 56.0	-2.6
ADK	**Adak**	**9.57**	**252**	*e*Pn	Pn	01 54 01.6	-0.8
JPK	**Jack Peak**	**9.58**	**51**	*e*Pn	Pn	01 54 00.5	-2.1
EYAK	**Cordova Ski Ar**	**9.76**	**54**	*e*Pn	Pn	01 54 02.4	-2.3
DIV	**Divide**	**9.98**	**51**	*e*Pn	Pn	01 54 05.1	-2.6
HMT	**Hamilton**	**10.38**	**57**	*e*Pn	Pn	01 54 11.2	-1.6

*SOME **22** 01:54:07.1, 41°.72N×82°.62E, h10km*
*NNC **22** 01:54:11.4±2.2, 41°.81N×82°.41E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=16.4km s-min=9.0km az=153.0*

ISC 22 01:54:16.6±2.4, 41°.9N±0°.1×82°.17E±0°.07, h14km, n24, σ1§31/43, 9C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**2.42**	**306**	Pg	**Pb**	**01 54 59.2**	**-0.9**
	4.5nm,0.2s						
PDGK				Lg	Lg	01 55 36.8	
	24nm,0.3s						
PDGK	**Podgornoye**	**2.42**	**306**	⇑Pn	**Pn**	**01 54 56.1**	**+0.1**
	5.3nm,0.5s						
PDGK				⇓Sn	**Sb**	**01 55 30.4**	**+0.5**
	57nm,0.6s						
UZB	**Uzynbulak**	**2.63**	**299**	Pg	**Pb**	**01 55 02.7**	**-0.9**
	9.6nm,0.2s						
UZB				Lg	Lg	01 55 43.2	
	42nm,0.2s						
UZB	**Uzynbulak**	**2.63**	**299**	*e*P	**Pb**	**01 55 02.8**	**-0.9**
	5.2nm,0.2s						
UZB				*e*S	**Sg**	**01 55 42.6**	**+1.5**
	42nm,0.2s						
DJR	**Jarkent**	**2.97**	**325**	Pg	**Pb**	**01 55 08.8**	**-0.6**
	10nm,0.4s						
DJR				Lg	Lg	01 55 53.0	
	21nm,0.4s						
DJR	**Jarkent**	**2.97**	**325**	*e*P	**Pb**	**01 55 08.7**	**-0.6**
	4.5nm,0.2s						
DJR				*e*S	**Sg**	**01 55 53.0**	**+1.0**
	15nm,0.3s						
KPKS	**Kokpek**	**3.00**	**302**	*e*P	**Pb**	**01 55 09.5**	**-0.3**
	16nm,0.2s						
KPKS				*e*S	**Sg**	**01 55 53.9**	**+1.0**
	59nm,0.3s						
SATY	**Saty**	**3.01**	**293**	Pg	**Pb**	**01 55 10.2**	**+0.2**
	7.6nm,0.2s						
SATY				Lg	Lg	01 55 55.7	
	29nm,0.1s						
SATY	**Saty**	**3.01**	**293**	*e*P	**Pb**	**01 55 10.2**	**+0.2**
	4.0nm,0.1s						
SATY				*e*S	**Sg**	**01 55 55.2**	**+2.0**
	33nm,0.1s						
ARXS	**Arharly**	**3.92**	**307**	Pg	**Pb**	**01 55 25.8**	**+0.3**
	4.8nm,0.5s						
ARXS				Lg	Lg	01 56 22.4	
	12nm,0.7s						
ARXS	**Arharly**	**3.92**	**307**	*e*P	**Pb**	**01 55 25.8**	**+0.3**
	4.8nm,0.5s						
ARXS				*e*S	**Sg**	**01 56 22.4**	**0.0**
	12nm,0.7s						
KOTS	**Kotyrbulak**	**3.96**	**291**	Pg	**Pb**	**01 55 25.4**	**-0.8**
	2.8nm,0.3s						
KOTS				Lg	Lg	01 56 21.5	
	32nm,0.3s						
KOTS	**Kotyrbulak**	**3.96**	**291**	*e*P	**Pb**	**01 55 25.4**	**-0.8**
	2.8nm,0.3s						
KOTS				*e*S	**Sg**	**01 56 21.5**	**-2.3**
	32nm,0.3s						
MDOK	**Medeo**	**3.98**	**290**	*e*P	**Pb**	**01 55 25.2**	**-1.5**
	2.0nm,0.3s						
MDOK				*e*S	**Sg**	**01 56 20.8**	**-3.7**
	11nm,0.5s						
TNSS	**Tian-Shan**	**4.02**	**288**	*e*P	**Pb**	**01 55 28.2**	**+0.8**
	1.6nm,0.2s						
TNSS				*e*S	**Sg**	**01 56 26.1**	**+0.3**
	11nm,0.6s						
CHKK	**Chushkaly**	**4.27**	**299**	*e*P	**Pb**	**01 55 32.1**	**+0.7**
	1.1nm,0.2s						
CHKK				*e*S	**Sg**	**01 56 33.3**	**-0.3**
	16nm,0.3s						
KTBS	**Karatobe**	**4.42**	**296**	Pg	**Pb**	**01 55 34.1**	**+0.2**
	1.9nm,0.5s						
KTBS				Lg	Lg	01 56 36.4	
	20nm,0.3s						
KTBS	**Karatobe**	**4.42**	**296**	*e*P	**Pb**	**01 55 34.1**	**+0.2**
	1.9nm,0.5s						
KTBS				*e*S	**Sg**	**01 56 36.4**	**-1.9**
	20nm,0.3s						
KUU	**Kurty**	**4.71**	**297**	*e*P	**Pb**	**01 55 40.4**	**+1.3**
	1.0nm,0.3s						
KUU				*e*S	**Sg**	**01 56 46.8**	**-1.1**
	10nm,0.5s						
MK31	**Makanchi Array**	**4.87**	**1**	Pn	**Pn**	**01 55 27.7**	**-1.7**
	0.2nm,0.2s,baz=147,slow=37,SNR=22						
MK31				⇑Pg	**Pb**	**01 55 44.3**	**+2.7**
	0.6nm,0.3s,baz=188,slow=15,SNR=7.6						
MK31				⇑Sn	**Sn**	**01 56 27.3**	**+1.8**
	0.2nm,0.2s,baz=22,slow=10,SNR=4.6						
MK31				⇑Lg	Lg	01 56 48.9	
	1.4nm,0.3s,baz=180,slow=27,SNR=4.3						
MAKZ	**Makanchi**	**4.88**	**358**	⇑Pn	**Pn**	**01 55 28.5**	**-1.1**
	1.2nm,0.6s						
MAKZ				⇓Pg	**Pb**	**01 55 40.8**	**-1.1**
	1.1nm,0.5s						
MAKZ				⇑Sn	**Sn**	**01 56 25.1**	**-0.9**
	0.9nm,0.3s						
MAKZ				⇑Lg	Lg	01 56 52.9	
	3.5nm,0.8s						
DGS	**Degeres**	**4.91**	**288**	Pg	**Pb**	**01 55 43.4**	**+1.0**
	1.9nm,0.4s						
DGS				Lg	Lg	01 56 52.5	
	11nm,0.6s						
DGS	**Degeres**	**4.91**	**288**	*e*P	**Pb**	**01 55 43.4**	**+1.0**
	1.9nm,0.4s						
DGS				*e*S	**Sg**	**01 56 52.5**	**-1.5**
	11nm,0.6s						
TKM2	**Tokmak 2**	**4.97**	**284**	⇓Pn	**Pn**	**01 55 30.8**	**-0.1**
	1.0nm,0.5s						
TKM2				⇑Pg	**Pb**	**01 55 45.2**	**+1.7**
	2.5nm,0.6s						
TKM2				⇑Sn	**Sn**	**01 56 29.8**	**+1.5**
	3.5nm,0.8s						
TKM2				⇓Lg	Lg	01 56 56.9	
	7.5nm,0.8s						

*ROM **22** 01:56:12.9±0.1, 44°.158N±0°.007×10°.194E±0°.007, h10km, ML3.4/81, Error ellipse: s-maj=0.8km s-min=0.5km az=23.0*
*ISCJB **22** 01:56:12.6±0.3, 44°.13N±0°.01×10°.15E±0°.01, h7km±2km, Error ellipse: s-maj=2.2km s-min=1.6km az=169.0*
*GEN **22** 01:56:13.1, 44°.18N×10°.20E, h6km±2km, Ml3.4*
*LDG **22** 01:56:13.5±0.1, 44°.16N×10°.17E, h2km, Md3.6/2, Ml3.7/31, Error ellipse: s-maj=2.6km s-min=1.7km az=6.0*
*PRU **22** 01:56:15.8±0.0, 44°.13N×10°.16E, h19km*
*STR **22** 01:56:15.6±0.7, 44°N±4°×1°0E±°, h20km, MLv3.5/7*

ISC 22 01:56:12.4±0.9, 44°.13N±0°.02×10°.12E±0°.02, h6km±8km, n206, σ1§84/261, 1C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.20**	**81**	⇑*i*Pg	**Pg**	**01 56 16.4**	**0.0**
VLC				*i* Sg	**Sg**	**01 56 18.7**	**-0.3**
VLC	**Villacollemand**	**0.20**	**81**	P	**Pg**	**01 56 16.3**	**0.0**
VLC				S	**Sg**	**01 56 18.7**	**-0.3**
VLC				AML	AML		
	comp=E,33200μm,0.7s						
VLC				AML	AML		
	comp=N,34150μm,0.3s						
VLC				AML	AML		
	comp=E,32350μm,0.7s						
VLC				AML	AML		
	comp=N,35750μm,0.3s						
VLC				AML	AML		
	comp=E,33200μm,0.7s						
VLC				AML	AML		
	comp=N,34150μm,0.3s						
VLC				AML	AML		
	comp=E,32350μm,0.7s						
VLC				AML	AML		
	comp=N,35750μm,0.3s						
VLC				AML	AML		
	comp=E,33200μm,0.7s						
VLC				AML	AML		
	comp=N,34150μm,0.3s						
VLC				AML	AML		
	comp=E,32350μm,0.7s						
VLC				AML	AML		
	comp=N,35750μm,0.3s						
VLC				AML	AML		
	comp=E,33200μm,0.7s						
VLC				AML	AML		
	comp=E,32350μm,0.7s						
VLC				AML	AML		
	comp=N,34150μm,0.3s						
VLC				AML	AML		
	comp=N,35750μm,0.3s						
SARO	**Sassorosso**	**0.21**	**75**	P	**Pg**	**01 56 16.4**	**-0.2**
SARO				S	**Sg**	**01 56 18.8**	**-0.7**
SARO	**Sassorosso**	**0.21**	**75**	P	**Pg**	**01 56 16.4**	**-0.2**
SARO				S	**Sg**	**01 56 18.8**	**-0.7**
SARO				AML	AML		
	comp=E,37450μm,0.2s						
SARO				AML	AML		
	comp=N,58450μm,0.2s						
SARO				AML	AML		
	comp=E,37450μm,0.2s						
SARO				AML	AML		
	comp=N,58450μm,0.2s						
SARO				AML	AML		
	comp=E,37450μm,0.2s						
SARO				AML	AML		
	comp=N,58450μm,0.2s						
SARO				AML	AML		
	comp=E,37450μm,0.2s						
SARO				AML	AML		
	comp=N,58450μm,0.2s						
SARO				AML	AML		
	comp=E,37450μm,0.2s						
SARO				AML	AML		
	comp=N,58450μm,0.2s						
CARD	**Cardoso**	**0.28**	**111**	P	**Pg**	**01 56 18.3**	**+0.4**
CARD				S	**Sg**	**01 56 22.4**	**+0.7**
CARD	**Cardoso**	**0.28**	**111**	P	**Pg**	**01 56 18.3**	**+0.4**
CARD				S	**Sg**	**01 56 22.4**	**+0.7**
CARD				AML	AML		
	comp=E,20100μm,0.3s						
CARD				AML	AML		
	comp=N,23450μm,1.1s						
CARD				AML	AML		
	comp=E,20100μm,0.3s						
CARD				AML	AML		
	comp=N,23450μm,1.1s						
CARD				AML	AML		
	comp=E,20100μm,0.3s						
CARD				AML	AML		
	comp=N,23450μm,1.1s						
CARD				AML	AML		
	comp=E,20100μm,0.3s						
CARD				AML	AML		
	comp=N,23450μm,1.1s						
MAIM	**Mastiano**	**0.35**	**128**	P	**Pg**	**01 56 19.7**	**+0.6**
MAIM				S	**Sg**	**01 56 24.8**	**+1.1**
MAIM	**Mastiano**	**0.35**	**128**	P	**Pg**	**01 56 19.8**	**+0.6**
MAIM				S	**Sg**	**01 56 25.0**	**+1.3**
MAIM				AML	AML		
	comp=E,15100μm,0.4s						
MAIM				AML	AML		
	comp=N,10310μm,0.5s						
MAIM				AML	AML		
	comp=E,15100μm,0.4s						
MAIM				AML	AML		
	comp=N,10310μm,0.5s						
MAIM				AML	AML		
	comp=E,15100μm,0.4s						
MAIM				AML	AML		
	comp=N,10310μm,0.5s						
MAIM				AML	AML		
	comp=E,15100μm,0.4s						
MAIM				AML	AML		
	comp=N,10310μm,0.5s						
BDI	**Bagni Di Lucca**	**0.35**	**101**	P	**Pg**	**01 56 19.3**	**0.0**
BDI				S	**Sg**	**01 56 24.1**	**+0.1**
BDI				AML	AML		
	comp=E,12700μm,0.6s						
BDI				AML	AML		
	comp=N,7895μm,0.3s						
BDI				AML	AML		
	comp=E,12650μm,0.6s						
BDI				AML	AML		
	comp=N,9375μm,0.3s						
BDI				AML	AML		
	comp=E,12650μm,0.6s						
BDI				AML	AML		
	comp=E,12700μm,0.6s						
BDI				AML	AML		
	comp=N,9375μm,0.3s						
BDI				AML	AML		
	comp=N,7895μm,0.3s						
BDI				AML	AML		
	comp=E,12650μm,0.6s						
BDI				AML	AML		
	comp=E,12700μm,0.6s						
BDI				AML	AML		
	comp=N,9375μm,0.3s						
BDI				AML	AML		
	comp=N,7895μm,0.3s						
ERBM	**Eremo**	**0.36**	**36**	P	**Pg**	**01 56 19.2**	**-0.2**
ERBM				S	**Sg**	**01 56 23.7**	**-0.5**
ERBM				AML	AML		
	comp=E,13150μm,0.7s						
ERBM				AML	AML		
	comp=N,18500μm,1.2s						
ERBM				AML	AML		
	comp=E,13150μm,0.7s						
ERBM				AML	AML		
	comp=N,18500μm,1.2s						
ERBM				AML	AML		
	comp=E,13150μm,0.7s						
ERBM				AML	AML		
	comp=N,18500μm,1.2s						
ERBM				AML	AML		
	comp=E,13150μm,0.7s						
ERBM				AML	AML		
	comp=N,18500μm,1.2s						
ERBM				AML	AML		
	comp=E,13150μm,0.7s						
ERBM				AML	AML		
	comp=N,18500μm,1.2s						
ERBM				AML	AML		
	comp=E,13150μm,0.7s						
ERBM				AML	AML		
	comp=N,18500μm,1.2s						
GRAM	**Graiana**	**0.36**	**354**	P	**Pg**	**01 56 19.9**	**+0.4**
GRAM				S	**Sg**	**01 56 24.5**	**+0.2**
GRAM	**Graiana**	**0.36**	**354**	P	**Pg**	**01 56 19.9**	**+0.4**
GRAM				AML	AML		
	comp=E,30850μm,0.4s						
GRAM				AML	AML		
	comp=N,37950μm,0.5s						
GRAM				AML	AML		
	comp=E,30850μm,0.4s						
GRAM				AML	AML		
	comp=N,37950μm,0.5s						
GRAM				AML	AML		
	comp=E,30850μm,0.4s						
GRAM				AML	AML		
	comp=N,37950μm,0.5s						
GRAM				AML	AML		
	comp=E,30850μm,0.4s						
GRAM				AML	AML		
	comp=N,37950μm,0.5s						
GRAM				AML	AML		
	comp=E,30850μm,0.4s						
GRAM				AML	AML		
	comp=N,37950μm,0.5s						
MSSA	**Maissana**	**0.47**	**294**	P	**Pb**	**01 56 23.2**	**+0.2**
MSSA				AML	AML		
	comp=E,2815μm,0.7s						
MSSA				AML	AML		
	comp=N,3335μm,1.0s						
MSSA				AML	AML		
	comp=E,2820μm,0.7s						
MSSA				AML	AML		
	comp=N,3335μm,1.0s						
MSSA				AML	AML		
	comp=E,2820μm,0.7s						
MSSA				AML	AML		
	comp=N,3335μm,1.0s						
MSSA				AML	AML		
	comp=E,2820μm,0.7s						
MSSA				AML	AML		
	comp=N,3335μm,1.0s						
POPM	**Popiglio**	**0.47**	**100**	P	**Pg**	**01 56 21.4**	**-0.1**
POPM				S	**Sg**	**01 56 27.7**	**+0.1**
POPM	**Popiglio**	**0.47**	**100**	P	**Pg**	**01 56 21.4**	**-0.1**
POPM				S	**Sg**	**01 56 27.7**	**+0.1**
POPM				AML	AML		
	comp=E,7860μm,0.9s						
POPM				AML	AML		
	comp=N,9545μm,1.3s						
POPM				AML	AML		
	comp=E,7860μm,0.9s						
POPM				AML	AML		
	comp=N,9545μm,1.3s						
POPM				AML	AML		
	comp=E,7860μm,0.9s						
POPM				AML	AML		
	comp=N,9545μm,1.3s						
POPM				AML	AML		
	comp=E,7860μm,0.9s						
POPM				AML	AML		
	comp=N,9545μm,1.3s						
POPM				AML	AML		
	comp=E,7860μm,0.9s						
POPM				AML	AML		
	comp=N,9545μm,1.3s						
NEVI	**Neviano degli**	**0.47**	**18**	P	**Pg**	**01 56 22.1**	**+0.6**
MTCR	**Monte La Croce**	**0.64**	**99**	P	**Pg**	**01 56 24.8**	**0.0**
MTCR				AML	AML		
	comp=E,5860μm,0.3s						
MTCR				AML	AML		
	comp=N,5910μm,1.4s						
MTCR				AML	AML		
	comp=E,5855μm,0.3s						
MTCR				AML	AML		
	comp=N,5915μm,1.4s						
MTCR				AML	AML		
	comp=E,5860μm,0.3s						
MTCR				AML	AML		
	comp=N,5905μm,1.4s						
MTCR				AML	AML		
	comp=E,5860μm,0.3s						
MTCR				AML	AML		
	comp=N,5905μm,1.4s						
MTCR				AML	AML		
	comp=E,5860μm,0.3s						
MTCR				AML	AML		
	comp=N,5905μm,1.4s						
PRMA	**PARMA**	**0.65**	**13**	P	**Pb**	**01 56 25.8**	**-0.2**
ZCCA	**Zocca**	**0.66**	**70**	P	**Pb**	**01 56 26.0**	**-0.3**
ZCCA				AML	AML		
	comp=E,3815μm,0.6s						
ZCCA				AML	AML		
	comp=N,4550μm,0.5s						
ZCCA				AML	AML		
	comp=E,4170μm,0.6s						
ZCCA				AML	AML		
	comp=N,4620μm,0.5s						
ZCCA				AML	AML		
	comp=E,3820μm,0.6s						
ZCCA				AML	AML		
	comp=N,4555μm,0.5s						
ZCCA				AML	AML		
	comp=E,4170μm,0.6s						
ZCCA				AML	AML		
	comp=N,4620μm,0.5s						
ZCCA				AML	AML		
	comp=N,4555μm,0.5s						
ZCCA				AML	AML		
	comp=E,3820μm,0.6s						
ZCCA				AML	AML		
	comp=E,4170μm,0.6s						
ZCCA				AML	AML		
	comp=N,4620μm,0.5s						
ZCCA				AML	AML		
	comp=N,4555μm,0.5s						
ZCCA				AML	AML		
	comp=E,3820μm,0.6s						
ZCCA				AML	AML		
	comp=E,4170μm,0.6s						
ZCCA				AML	AML		
	comp=N,4620μm,0.5s						
CRMI	**Carmignano**	**0.70**	**119**	P	**Pb**	**01 56 26.6**	**-0.4**
CRMI				AML	AML		
	comp=E,1265μm,0.4s						
CRMI				AML	AML		
	comp=N,2155μm,0.7s						
CRMI				AML	AML		
	comp=E,1265μm,0.4s						
CRMI				AML	AML		
	comp=N,2155μm,0.7s						

CRMI				AML	AML	
	comp=N,2155µm,0.7s					
CRMI				AML	AML	
	comp=E,1265µm,0.4s					
CRMI				AML	AML	
	comp=N,2155µm,0.7s					
CRMI				AML	AML	
	comp=E,1265µm,0.4s					
PTF	**Prato**	**0.71**	**104**	P	**Pg**	**01 56 25.9 -0.1**
FNVD	**Fontana Vidola**	**0.73**	**87**	P	**Pg**	**01 56 26.4 0.0**
FNVD				AML	AML	
	comp=E,7255µm,0.4s					
FNVD				AML	AML	
	comp=N,7180µm,1.0s					
FNVD				AML	AML	
	comp=E,7255µm,0.4s					
FNVD				AML	AML	
	comp=N,7180µm,1.0s					
FNVD				AML	AML	
	comp=E,7255µm,0.4s					
FNVD				AML	AML	
	comp=N,7180µm,1.0s					
GORR	**Gorreto**	**0.76**	**309**	P	**Pb**	**01 56 27.8 -0.1**
GORR				S	**Sb**	**01 56 38.9 +0.3**
GORR	**Gorreto**	**0.76**	**309**	P	**Pb**	**01 56 28.0 0.0**
GORR				AML	AML	
	comp=E,3430µm,0.6s					
GORR				AML	AML	
	comp=N,3475µm,0.7s					
GORR				AML	AML	
	comp=E,3430µm,0.6s					
GORR				AML	AML	
	comp=N,3475µm,0.7s					
GORR				AML	AML	
	comp=N,3475µm,0.7s					
GORR				AML	AML	
	comp=E,3430µm,0.6s					
GORR				AML	AML	
	comp=N,3475µm,0.7s					
GORR				AML	AML	
	comp=E,3430µm,0.6s					
NOVE	**Novellara**	**0.79**	**33**	AML	AML	
	comp=N,15650µm,0.6s					
NOVE				AML	AML	
	comp=E,12350µm,0.4s					
NOVE				AML	AML	
	comp=E,12350µm,0.4s					
NOVE				AML	AML	
	comp=N,15650µm,0.6s					
NOVE				AML	AML	
	comp=E,12350µm,0.4s					
NOVE				AML	AML	
	comp=N,15650µm,0.6s					
NOVE				AML	AML	
	comp=E,12350µm,0.4s					
NOVE				AML	AML	
	comp=N,15650µm,0.6s					
BOB	**Bobbio (Coli)**	**0.80**	**323**	P	**Pb**	**01 56 28.5 -0.1**
BOB				AML	AML	
	comp=E,5150µm,0.4s					
BOB				AML	AML	
	comp=N,4250µm,0.4s					
BOB				AML	AML	
	comp=E,5255µm,0.4s					
BOB				AML	AML	
	comp=N,4620µm,0.4s					
BOB				AML	AML	
	comp=E,5150µm,0.4s					
BOB				AML	AML	
	comp=N,4250µm,0.4s					
BOB				AML	AML	
	comp=E,5255µm,0.4s					
BOB				AML	AML	
	comp=N,4615µm,0.4s					
BOB				AML	AML	
	comp=N,4250µm,0.4s					
BOB				AML	AML	
	comp=N,4615µm,0.4s					
BOB				AML	AML	
	comp=E,5255µm,0.4s					
BOB				AML	AML	
	comp=E,5150µm,0.4s					
BOB				AML	AML	
	comp=N,4250µm,0.4s					
BOB				AML	AML	
	comp=N,4615µm,0.4s					
BOB				AML	AML	
	comp=E,5255µm,0.4s					
BOB				AML	AML	
	comp=E,5150µm,0.4s					
SEI	**Scarperia**	**0.90**	**94**	P	**Pg**	**01 56 29.3 -0.3**
SEI				AML	AML	
	comp=E,4945µm,0.4s					
SEI				AML	AML	
	comp=N,8110µm,0.5s					
SEI				AML	AML	
	comp=E,4945µm,0.4s					
SEI				AML	AML	
	comp=N,8110µm,0.5s					
SEI				AML	AML	
	comp=E,4945µm,0.4s					
SEI				AML	AML	
	comp=N,8110µm,0.5s					
RAVA	**Ravarino**	**0.95**	**49**	AML	AML	
	comp=E,5860µm,1.5s					
RAVA				AML	AML	
	comp=N,4395µm,0.6s					
RAVA				AML	AML	
	comp=E,5860µm,1.5s					
RAVA				AML	AML	
	comp=N,4395µm,0.6s					
RAVA				AML	AML	
	comp=E,5860µm,1.5s					
RAVA				AML	AML	
	comp=N,4395µm,0.6s					
RAVA				AML	AML	
	comp=E,5860µm,1.5s					
RAVA				AML	AML	
	comp=N,4395µm,0.6s					
CAVE	**Cavezzo**	**0.97**	**41**	AML	AML	
	comp=N,4610µm,0.5s					
CAVE				AML	AML	
	comp=E,5515µm,0.5s					
CAVE				AML	AML	
	comp=E,5510µm,0.5s					
CAVE				AML	AML	
	comp=N,4615µm,0.5s					
CAVE				AML	AML	
	comp=N,4615µm,0.5s					
CAVE				AML	AML	
	comp=E,5510µm,0.5s					
CAVE				AML	AML	
	comp=N,4615µm,0.5s					
CAVE				AML	AML	
	comp=E,5510µm,0.5s					
BRIS	**BRISIGHELLA**	**1.00**	**88**	AML	AML	
	comp=N,1920µm,0.9s					
BRIS				AML	AML	
	comp=E,2770µm,1.0s					
BRIS				AML	AML	
	comp=N,1920µm,0.9s					
BRIS				AML	AML	
	comp=E,2770µm,1.0s					
BRIS				AML	AML	
	comp=N,1920µm,0.9s					
BRIS				AML	AML	
	comp=E,2770µm,1.0s					
BRIS				AML	AML	
	comp=N,1920µm,0.9s					
BRIS				AML	AML	
	comp=E,2770µm,1.0s					
RUFI	**Rufina**	**1.05**	**106**	P	**Pg**	**01 56 31.9 -0.5**
RUFI				AML	AML	
	comp=E,1835µm,0.6s					
RUFI				AML	AML	
	comp=N,1932µm,0.7s					
CSNT	**Castellina Chi**	**1.08**	**127**	P	**Pb**	**01 56 33.4 0.0**
CSNT				AML	AML	
	comp=E,1495µm,0.8s					
CSNT				AML	AML	
	comp=N,1835µm,0.6s					
CSNT				AML	AML	
	comp=E,1495µm,0.8s					
CSNT				AML	AML	
	comp=N,1835µm,0.6s					
CSNT				AML	AML	
	comp=N,1835µm,0.6s					
CSNT				AML	AML	
	comp=E,1495µm,0.8s					
CSNT				AML	AML	
	comp=N,1835µm,0.6s					
CSNT				AML	AML	
	comp=E,1495µm,0.8s					
TRIF	**Trifonti**	**1.17**	**150**	P	**Pn**	**01 56 35.4 +0.2**
TRIF				AML	AML	
	comp=E,964µm,0.4s					
TRIF				AML	AML	
	comp=N,983µm,0.6s					
TRIF				AML	AML	
	comp=E,964µm,0.4s					
TRIF				AML	AML	
	comp=N,984µm,0.6s					
TRIF				AML	AML	
	comp=E,964µm,0.4s					
TRIF				AML	AML	
	comp=N,984µm,0.6s					
TRIF				AML	AML	
	comp=E,964µm,0.4s					
TRIF				AML	AML	
	comp=N,984µm,0.6s					
FROS	**Frosini**	**1.19**	**140**	P	**Pg**	**01 56 35.3 +0.1**
FROS				AML	AML	
	comp=E,1965µm,1.5s					
FROS				AML	AML	
	comp=N,1990µm,0.7s					
FROS				AML	AML	
	comp=E,1965µm,1.5s					
FROS				AML	AML	
	comp=N,1990µm,0.7s					
FROS				AML	AML	
	comp=N,1990µm,0.7s					
FROS				AML	AML	
	comp=E,1965µm,1.5s					
FROS				AML	AML	
	comp=N,1990µm,0.7s					
FROS				AML	AML	
	comp=E,1965µm,1.5s					
ASQU	**Asqua**	**1.25**	**105**	P	**Pn**	**01 56 35.8 -0.7**
SFI	**Santa Sofia**	**1.27**	**100**	P	**Pn**	**01 56 36.0 -0.6**
SFI				AML	AML	
	comp=E,1089µm,1.2s					
SFI				AML	AML	
	comp=N,718µm,1.5s					
SFI				AML	AML	
	comp=E,1206µm,0.7s					
SFI				AML	AML	
	comp=N,1064µm,1.2s					
SFI				AML	AML	
	comp=E,1206µm,0.7s					
SFI				AML	AML	
	comp=N,1063µm,1.2s					
SFI				AML	AML	
	comp=N,1063µm,1.2s					
SFI				AML	AML	
	comp=E,1206µm,0.7s					
SFI				AML	AML	
	comp=N,1063µm,1.2s					
SFI				AML	AML	
	comp=E,1206µm,0.7s					
QLNO	**Quiliano**	**1.29**	**279**	P	**Pg**	**01 56 37.3 +0.2**
QLNO				AML	AML	
	comp=E,661µm,0.9s					
QLNO				AML	AML	
	comp=N,663µm,0.7s					
QLNO				AML	AML	
	comp=E,661µm,0.9s					
QLNO				AML	AML	
	comp=N,663µm,0.7s					
QLNO				AML	AML	
	comp=E,661µm,0.9s					
QLNO				AML	AML	
	comp=N,663µm,0.7s					
QLNO				AML	AML	
	comp=E,661µm,0.9s					
QLNO				AML	AML	
	comp=N,663µm,0.7s					
FINB	**Finale Ligure**	**1.29**	**273**	P	**Pg**	**01 56 37.4 +0.3**
FINB				AML	AML	
	comp=E,750µm,0.4s					
FINB				AML	AML	
	comp=N,761µm,0.3s					
FINB				AML	AML	
	comp=E,750µm,0.4s					
FINB				AML	AML	
	comp=N,761µm,0.3s					
FINB				AML	AML	
	comp=N,761µm,0.3s					
FINB				AML	AML	
	comp=E,750µm,0.4s					
FINB				AML	AML	
	comp=N,761µm,0.3s					
FINB				AML	AML	
	comp=E,750µm,0.4s					
CELB	**S.Piero in Cam**	**1.39**	**177**	P	**Pb**	**01 56 38.5 -0.2**
CELB				AML	AML	
	comp=E,448µm,0.3s					
CELB				AML	AML	
	comp=N,334µm,1.0s					
CELB				AML	AML	
	comp=E,448µm,0.3s					
CELB				AML	AML	
	comp=N,334µm,1.0s					
CELB				AML	AML	
	comp=E,448µm,0.3s					
CELB				AML	AML	
	comp=N,334µm,1.0s					
CASP	**Castiglione de**	**1.45**	**158**	P	**Pb**	**01 56 39.5 -0.2**
CASP				AML	AML	
	comp=E,566µm,1.1s					
CASP				AML	AML	
	comp=N,373µm,0.7s					
CASP				AML	AML	
	comp=N,373µm,0.7s					
CASP				AML	AML	
	comp=E,566µm,1.1s					
CASP				AML	AML	
	comp=N,373µm,0.7s					
CASP				AML	AML	
	comp=E,566µm,1.1s					
RORO	**Rocca Rossa**	**1.48**	**270**	P	**Pn**	**01 56 39.7 +0.2**
RORO				AML	AML	
	comp=E,298µm,0.8s					
RORO				AML	AML	
	comp=N,373µm,1.0s					
RORO				AML	AML	
	comp=E,298µm,0.8s					
RORO				AML	AML	
	comp=N,372µm,1.0s					
RORO				AML	AML	
	comp=N,372µm,1.0s					
RORO				AML	AML	
	comp=E,298µm,0.8s					
RORO				AML	AML	
	comp=N,372µm,1.0s					
RORO				AML	AML	
	comp=E,298µm,0.8s					
CAFI	**Castiglion Fio**	**1.56**	**120**	P	**Pn**	**01 56 40.5 -0.2**
CAFI				AML	AML	
	comp=E,343µm,0.7s					
CAFI				AML	AML	
	comp=N,348µm,0.8s					
CAFI				AML	AML	
	comp=E,343µm,0.7s					
CAFI				AML	AML	
	comp=N,348µm,0.8s					
CAFI				AML	AML	
	comp=E,343µm,0.7s					
CAFI				AML	AML	
	comp=N,348µm,0.8s					
PARC	**Parchiule**	**1.61**	**107**	P	**Pn**	**01 56 40.9 -0.4**
PARC				AML	AML	
	comp=E,489µm,0.7s					
PARC				AML	AML	
	comp=N,480µm,0.6s					
PARC				AML	AML	
	comp=E,489µm,0.7s					
PARC				AML	AML	
	comp=N,480µm,0.6s					
PARC				AML	AML	
	comp=E,489µm,0.7s					
PARC				AML	AML	
	comp=N,480µm,0.6s					
IMI	**Imperia**	**1.62**	**263**	P	**Pn**	**01 56 42.0 +0.5**
IMI				AML	AML	
	comp=E,468µm,1.6s					
IMI				AML	AML	
	comp=N,668µm,0.3s					
BALD	**Monte Baldo**	**1.63**	**18**	‖ *e*Pg	**Pb**	**01 56 42.9 -0.1**
BALD				*e*Sg	**Sg**	**01 57 06.3 +1.5**
GBOS	**Grotte di Boss**	**1.64**	**275**	P	**Pn**	**01 56 42.4 +0.6**
GBOS				AML	AML	
	comp=E,292µm,0.7s					
GBOS				AML	AML	
	comp=N,352µm,0.4s					
GBOS				AML	AML	
	comp=E,292µm,0.7s					
GBOS				AML	AML	
	comp=N,352µm,0.4s					
GBOS				AML	AML	
	comp=E,292µm,0.7s					
GBOS				AML	AML	
	comp=N,352µm,0.4s					
TEOL	**Teolo**	**1.66**	**41**	*e*Pg	**Pb**	**01 56 43.5 +0.2**
TEOL				*e*Sg	**Sg**	**01 57 06.0 +0.5**
TEOL	**Teolo**	**1.66**	**41**	P	**Pb**	**01 56 42.7 -0.6**
TEOL				AML	AML	
	comp=E,4235µm,0.5s					
TEOL				AML	AML	
	comp=N,2985µm,0.7s					
TEOL				AML	AML	
	comp=N,2985µm,0.7s					
TEOL				AML	AML	
	comp=E,4235µm,0.5s					
TEOL				AML	AML	
	comp=N,2985µm,0.7s					
TEOL				AML	AML	
	comp=E,4235µm,0.5s					
BADI	**Badiali**	**1.66**	**111**	AML	AML	
	comp=E,592µm,0.7s					
BADI				AML	AML	
	comp=E,592µm,0.7s					
BADI				AML	AML	
	comp=N,570µm,0.7s					
BADI				AML	AML	
	comp=N,570µm,0.7s					
BADI				AML	AML	
	comp=E,592µm,0.7s					
BADI				AML	AML	
	comp=N,570µm,0.7s					
MGRO	**Montegrosso**	**1.67**	**268**	P	**Pb**	**01 56 43.0 -0.5**
MGRO				AML	AML	
	comp=E,997µm,0.7s					
MGRO				AML	AML	
	comp=N,512µm,0.3s					
MGRO				AML	AML	
	comp=E,997µm,0.7s					
MGRO				AML	AML	
	comp=N,512µm,0.3s					
MGRO				AML	AML	
	comp=E,997µm,0.7s					
MGRO				AML	AML	
	comp=N,512µm,0.3s					
MAGA	**Magasa**	**1.69**	**12**	*e*Pg	**Pb**	**01 56 43.5 -0.3**
MAGA				*e*Sg	**Sg**	**01 57 07.8 +1.3**
MAGA	**Magasa**	**1.69**	**12**	AML	AML	
	comp=E,3235µm,0.7s					
MAGA				AML	AML	
	comp=N,1770µm,0.6s					
MAGA				AML	AML	
	comp=E,3235µm,0.7s					
MAGA				AML	AML	
	comp=N,1770µm,0.6s					
MAGA				AML	AML	
	comp=E,3235µm,0.7s					
MAGA				AML	AML	
	comp=N,1770µm,0.6s					
MARN	**Marana (Italy)**	**1.70**	**27**	*e*Pg	**Pb**	**01 56 43.8 -0.2**
MARN				*e*Sg	**Sg**	**01 57 07.8 +0.9**
ATMI	**Monte Miggiano**	**1.75**	**116**	P	**Pn**	**01 56 43.9 +0.6**
ATMI				AML	AML	
	comp=E,768µm,0.7s					
ATMI				AML	AML	
	comp=N,1285µm,0.5s					
ATMI				AML	AML	
	comp=E,768µm,0.7s					
ATMI				AML	AML	
	comp=N,1285µm,0.5s					
ATMI				AML	AML	
	comp=E,768µm,0.7s					
ATMI				AML	AML	
	comp=N,1285µm,0.5s					
NEGI	**Seborga**	**1.76**	**262**	P	**Pn**	**01 56 44.3 +0.9**
NEGI				AML	AML	
	comp=E,407µm,0.6s					
NEGI				AML	AML	
	comp=N,428µm,0.6s					
NEGI				AML	AML	
	comp=E,407µm,0.6s					
NEGI				AML	AML	
	comp=N,428µm,0.6s					
NEGI				AML	AML	
	comp=E,407µm,0.6s					
NEGI				AML	AML	
	comp=N,428µm,0.6s					
PE3	**Peglio**	**1.77**	**103**	AML	AML	
	comp=E,884µm,0.7s					
PE3				AML	AML	
	comp=E,884µm,0.7s					
PE3				AML	AML	
	comp=N,829µm,0.5s					
PE3				AML	AML	
	comp=E,884µm,0.7s					
PE3				AML	AML	
	comp=N,829µm,0.5s					
PE3				AML	AML	
	comp=N,829µm,0.5s					
PGF	**Pioggiola**	**1.78**	**208**	*e*Pn	**Pb**	**01 56 44.7 -0.7**
PGF	**Pioggiola**	**1.78**	**208**	*e*P	**Pg**	**01 56 48.5 +2.0**
PGF				*e*Sn	**Sn**	**01 57 06.9 +0.2**
	comp=N,101nm,0.3s					
ATVO	**AVT- Monte Val**	**1.82**	**113**	AML	AML	
	comp=N,544µm,1.1s					
ATVO				AML	AML	
	comp=E,492µm,0.5s					
ATVO				AML	AML	
	comp=N,544µm,1.1s					
ATVO				AML	AML	
	comp=E,492µm,0.5s					
ATVO				AML	AML	
	comp=E,492µm,0.5s					
ATVO				AML	AML	
	comp=N,544µm,1.1s					
MONC	**Moncucco Torin**	**1.83**	**302**	AML	AML	
	comp=E,1745µm,0.4s					
MONC				AML	AML	
	comp=E,1745µm,0.4s					
MONC				AML	AML	
	comp=N,1305µm,0.8s					
MONC				AML	AML	
	comp=E,1745µm,0.4s					
MONC				AML	AML	
	comp=N,1305µm,0.8s					
MONC				AML	AML	
	comp=N,1305µm,0.8s					
PIEI	**Pieia**	**1.85**	**108**	AML	AML	
	comp=E,344µm,0.9s					
PIEI				AML	AML	
	comp=E,344µm,0.9s					
PIEI				AML	AML	
	comp=N,200µm,0.9s					
PIEI				AML	AML	
	comp=N,200µm,0.9s					
PIEI				AML	AML	
	comp=N,200µm,0.9s					
PIEI				AML	AML	
	comp=E,344µm,0.9s					
SAOF	**Saorge**	**1.85**	**266**	Pn	**Pb**	**01 56 47.2 +0.5**
SAOF				Sn	**Sn**	**01 57 09.2 +0.8**
SAOF	**Saorge**	**1.85**	**266**	P	**Pb**	**01 56 45.8 -0.8**
SAOF				S	**Sb**	**01 57 10.3 +0.3**
SAOF				AML	AML	
	comp=E,1066µm,0.6s					
SAOF				AML	AML	
	comp=N,924µm,0.6s					
SAOF				AML	AML	
	comp=E,1066µm,0.6s					
SAOF				AML	AML	
	comp=N,924µm,0.6s					
SAOF				AML	AML	
	comp=E,1066µm,0.6s					
SAOF				AML	AML	
	comp=N,924µm,0.6s					
MAON	**Monte Argentar**	**1.86**	**156**	P	**Pn**	**01 56 45.2 +0.6**

MAON			AML	AML	
	comp=E,224µm,0.8s				
MAON			AML	AML	
	comp=N,222µm,0.4s				
MAON			AML	AML	
	comp=N,222µm,0.4s				
MAON			AML	AML	
	comp=E,224µm,0.8s				
MAON			AML	AML	
	comp=N,222µm,0.4s				
MAON			AML	AML	
	comp=E,224µm,0.8s				
ATTE	**AVT- Monte Tez**	**1.87 119**	P	**Pn**	**01 56 45.2 +0.2**
ATTE			AML	AML	
	comp=E,490µm,1.0s				
ATTE			AML	AML	
	comp=N,382µm,0.6s				
ATTE			AML	AML	
	comp=N,382µm,0.6s				
ATTE			AML	AML	
	comp=E,490µm,1.0s				
ATTE			AML	AML	
	comp=N,382µm,0.6s				
ATTE			AML	AML	
	comp=E,490µm,1.0s				
MGAB	**Montegabbione**	**1.90 129**	P	**Pn**	**01 56 45.6 +0.4**
MGAB			AML	AML	
	comp=E,292µm,0.6s				
MGAB			AML	AML	
	comp=N,253µm,0.6s				
MGAB			AML	AML	
	comp=N,253µm,0.6s				
MGAB			AML	AML	
	comp=E,292µm,0.6s				
MGAB			AML	AML	
	comp=N,253µm,0.6s				
MGAB			AML	AML	
	comp=E,292µm,0.6s				
DOSS	**Dosso del Somm**	**1.91 23**	*e*Pn	**Pb**	**01 56 46.9 -0.7**
ATFO	**Monte Foce - G**	**1.94 112**	AML	AML	
	comp=E,376µm,0.7s				
ATFO			AML	AML	
	comp=N,356µm,0.4s				
ATFO			AML	AML	
	comp=N,356µm,0.4s				
ATFO			AML	AML	
	comp=E,376µm,0.7s				
ATFO			AML	AML	
	comp=N,356µm,0.4s				
ATFO			AML	AML	
	comp=E,376µm,0.7s				
ENR	**Entracque**	**1.94 274**	P	**Pb**	**01 56 47.1 -1.1**
ENR			AML	AML	
	comp=E,312µm,0.6s				
ENR			AML	AML	
	comp=N,411µm,0.5s				
ENR			AML	AML	
	comp=N,411µm,0.5s				
ENR			AML	AML	
	comp=E,312µm,0.6s				
ENR			AML	AML	
	comp=N,411µm,0.5s				
ENR			AML	AML	
	comp=E,312µm,0.6s				
MUGIO	**Muggio**	**1.95 337**	P	**Pn**	**01 56 47.0 +1.0**
MUGIO			AML	AML	
	comp=E,679µm,0.6s				
MUGIO			AML	AML	
	comp=N,610µm,0.6s				
MUGIO			AML	AML	
	comp=N,610µm,0.6s				
MUGIO			AML	AML	
	comp=E,679µm,0.6s				
MUGIO			AML	AML	
	comp=N,610µm,0.6s				
MUGIO			AML	AML	
	comp=E,679µm,0.6s				
MURB	**Monte Urbino**	**1.95 116**	AML	AML	
	comp=N,982µm,0.3s				
MURB			AML	AML	
	comp=E,906µm,1.0s				
MURB			AML	AML	
	comp=N,982µm,0.3s				
MURB			AML	AML	
	comp=E,906µm,1.0s				
MURB			AML	AML	
	comp=N,982µm,0.3s				
MURB			AML	AML	
	comp=E,906µm,1.0s				
SBF	**Sospel**	**1.95 263**	*e*Pn	**Pn**	**01 56 47.1 +1.0**
SBF			*e*Sn	**Sn**	**01 57 11.4 +0.5**
	comp=E,139nm,0.2s				
FRON	**Frontone**	**1.99 107**	AML	AML	
	comp=N,442µm,0.7s				
FRON			AML	AML	
	comp=E,259µm,1.0s				
FRON			AML	AML	
	comp=N,442µm,0.7s				
FRON			AML	AML	
	comp=E,259µm,1.0s				
FRON			AML	AML	
	comp=N,442µm,0.7s				
FRON			AML	AML	
	comp=E,259µm,1.0s				
ESCA	**l'Escarene**	**2.00 262**	Pn	**Pb**	**01 56 48.9 -0.3**
ESCA			Sn	**Sn**	**01 57 12.7 +0.6**
REVF	**Revere**	**2.02 260**	Pn	**Pb**	**01 56 49.2 -0.3**
REVF			Sn	**Sn**	**01 57 12.8 +0.2**
GAGG	**Gaggia**	**2.04 17**	*e*Pn	**Pn**	**01 56 48.5 +1.1**
DOI	**San Damiano**	**2.09 281**	P	**Pn**	**01 56 48.6 +0.6**
DOI			AML	AML	
	comp=E,685µm,0.6s				
DOI			AML	AML	
	comp=N,462µm,0.6s				
DOI			AML	AML	
	comp=N,462µm,0.6s				
DOI			AML	AML	
	comp=E,685µm,0.6s				
DOI			AML	AML	
	comp=N,462µm,0.6s				
DOI			AML	AML	
	comp=E,685µm,0.6s				
PANI	**Panarotta**	**2.10 24**	*e*Pn	**Pn**	**01 56 48.9 +0.6**
CGRP	**Cima Grappa**	**2.12 34**	*e*Pn	**Pb**	**01 56 49.9 -1.3**
CGRP			*e*Sn	**Sb**	**01 57 18.2 +0.3**
SMPL	**Sampolo**	**2.12 197**	Pn	**Pb**	**01 56 50.5 -0.8**
SMPL			Sn	**Sn**	**01 57 15.1 +0.1**
SMPL	**Sampolo**	**2.12 197**	P	**Pb**	**01 56 50.3 -0.9**
SMPL			S	**Sb**	**01 57 16.5 -1.3**
SMPL			AML	AML	
	comp=E,8940µm,1.6s				
SMPL			AML	AML	
	comp=N,12050µm,0.3s				
SMPL			AML	AML	
	comp=N,12050µm,0.3s				
SMPL			AML	AML	
	comp=E,8940µm,1.6s				
SMPL			AML	AML	
	comp=N,12050µm,0.3s				
SMPL			AML	AML	
	comp=E,8940µm,1.6s				
ASSB	**Assisi San Ben**	**2.14 120**	AML	AML	
	comp=E,210µm,0.6s				
ASSB			AML	AML	
	comp=E,210µm,0.6s				
ASSB			AML	AML	
	comp=N,227µm,0.9s				
ASSB			AML	AML	
	comp=E,210µm,0.6s				
ASSB			AML	AML	
	comp=N,227µm,0.9s				
ASSB			AML	AML	
	comp=N,227µm,0.9s				
TRAV	**Traversella**	**2.18 310**	P	**Pn**	**01 56 50.6 +1.4**
TRAV			AML	AML	
	comp=E,748µm,0.3s				
TRAV			AML	AML	
	comp=N,584µm,0.5s				
TRAV			AML	AML	
	comp=E,748µm,0.3s				
TRAV			AML	AML	
	comp=N,584µm,0.5s				
TRAV			AML	AML	
	comp=E,748µm,0.3s				
TRAV			AML	AML	
	comp=N,584µm,0.5s				
PZZ	**Stroppo**	**2.19 281**	P	**Pn**	**01 56 49.8 +0.4**
PZZ			AML	AML	
	comp=E,329µm,0.5s				
PZZ			AML	AML	
	comp=N,365µm,0.5s				
PZZ			AML	AML	
	comp=E,329µm,0.5s				
PZZ			AML	AML	
	comp=N,365µm,0.5s				
PZZ			AML	AML	
	comp=E,329µm,0.5s				
PZZ			AML	AML	
	comp=N,365µm,0.5s				
MTLO	**Montello**	**2.19 39**	*e*Pn	**Pn**	**01 56 50.6 +1.2**
CTI	**Castel Tesino**	**2.20 29**	P	**Pn**	**01 56 49.9 +0.4**
CTI			AML	AML	
	comp=E,716µm,0.7s				
CTI			AML	AML	
	comp=N,626µm,0.3s				
CTI			AML	AML	
	comp=N,626µm,0.3s				
CTI			AML	AML	
	comp=E,716µm,0.7s				
CTI			AML	AML	
	comp=N,626µm,0.3s				
CTI			AML	AML	
	comp=E,716µm,0.7s				
ISO	**Isola**	**2.21 272**	Pn	**Pb**	**01 56 51.7 -1.0**
ISO			Sn	**Sb**	**01 57 18.8 -1.5**
MOMA	**Monte Martano**	**2.23 126**	AML	AML	
	comp=N,210µm,0.3s				
MOMA			AML	AML	
	comp=E,192µm,1.0s				
MOMA			AML	AML	
	comp=N,210µm,0.3s				
MOMA			AML	AML	
	comp=E,192µm,1.0s				
MOMA			AML	AML	
	comp=N,210µm,0.3s				
MOMA			AML	AML	
	comp=E,192µm,1.0s				
CIRO	**Champorcher**	**2.33 310**	P	**Pn**	**01 56 52.5 +1.0**
CALF	**Calern**	**2.34 262**	Pn	**Pb**	**01 56 53.3 -1.7**
CALF			Sn	**Sn**	**01 57 21.2 +0.7**
SATI	**Passo dei Sala**	**2.36 318**	P	**Pb**	**01 56 53.9 -1.6**
SATI			AML	AML	
	comp=E,476µm,0.5s				
SATI			AML	AML	
	comp=N,448µm,0.5s				
SATI			AML	AML	
	comp=N,448µm,0.5s				
SATI			AML	AML	
	comp=E,476µm,0.5s				
SATI			AML	AML	
	comp=N,448µm,0.5s				
SATI			AML	AML	
	comp=E,476µm,0.5s				
OZOL	**Ozolo**	**2.37 16**	*e*Pn	**Pn**	**01 56 53.3 +1.5**
SURF	**Saint Ours**	**2.40 280**	Pn	**Pb**	**01 56 54.5 -1.5**
SURF			Sn	**Sn**	**01 57 23.0 +0.9**
TUE	**Stuetta**	**2.40 347**	AML	AML	
	comp=N,364µm,0.3s				
TUE			AML	AML	
	comp=E,218µm,0.4s				
TUE			AML	AML	
	comp=N,304µm,0.3s				
TUE			AML	AML	
	comp=E,299µm,0.4s				
TUE			AML	AML	
	comp=N,364µm,0.3s				
TUE			AML	AML	
	comp=E,299µm,0.4s				
TUE			AML	AML	
	comp=E,218µm,0.4s				
TUE			AML	AML	
	comp=N,304µm,0.3s				
TUE			AML	AML	
	comp=N,364µm,0.3s				
TUE			AML	AML	
	comp=E,299µm,0.4s				
TUE			AML	AML	
	comp=E,218µm,0.4s				
TUE			AML	AML	
	comp=N,304µm,0.3s				
MBDF	**Montbardon**	**2.47 285**	*e*Pn	**Pn**	**01 56 54.0 +0.8**
MBDF			*e*Sn	**Sn**	**01 57 23.6 -0.2**
MBDF			*e*Sg	**Sg**	**01 57 33.1 +1.4**
	comp=N,166nm,0.5s,SNR=1.0				
FUORN	**Ofenpass-Fuorn**	**2.49 2**	AML	AML	
	comp=E,185µm,0.7s				
FUORN			AML	AML	
	comp=N,222µm,0.9s				
FUORN			AML	AML	
	comp=N,222µm,0.9s				
FUORN			AML	AML	
	comp=E,185µm,0.7s				
FUORN			AML	AML	
	comp=N,222µm,0.9s				
FUORN			AML	AML	
	comp=E,185µm,0.7s				
POLC	**Polcenigo**	**2.54 41**	AML	AML	
	comp=E,588µm,0.6s				
POLC			AML	AML	
	comp=N,583µm,0.5s				
POLC			AML	AML	
	comp=E,588µm,0.6s				
POLC			AML	AML	
	comp=N,583µm,0.5s				
POLC			AML	AML	
	comp=E,588µm,0.6s				
POLC			AML	AML	
	comp=N,583µm,0.5s				
FUSIO	**Fusio**	**2.54 337**	AML	AML	
	comp=E,430µm,0.5s				
FUSIO			AML	AML	
	comp=E,430µm,0.5s				
FUSIO			AML	AML	
	comp=N,299µm,0.6s				
FUSIO			AML	AML	
	comp=N,299µm,0.6s				
FUSIO			AML	AML	
	comp=E,430µm,0.5s				
FUSIO			AML	AML	
	comp=N,299µm,0.6s				
FRF	**La Foret Royal**	**2.57 258**	*e*Pn	**Pn**	**01 56 55.4 +0.9**
FRF			*e*Sn	**Sn**	**01 57 26.0 -0.1**
	comp=N,54nm,0.3s				
LNSS	**Leonessa**	**2.62 125**	AML	AML	
	comp=N,212µm,0.4s				
LNSS			AML	AML	
	comp=E,297µm,1.1s				
LNSS			AML	AML	
	comp=N,212µm,0.4s				
LNSS			AML	AML	
	comp=E,297µm,1.1s				
LNSS			AML	AML	
	comp=N,212µm,0.4s				
LNSS			AML	AML	
	comp=E,297µm,1.1s				
DAVOX	**Davos/Dischmat**	**2.66 356**	AML	AML	
	comp=N,344µm,0.4s				
DAVOX			AML	AML	
	comp=E,217µm,0.8s				
DAVOX			AML	AML	
	comp=N,344µm,0.4s				
DAVOX			AML	AML	
	comp=E,217µm,0.8s				
DAVOX			AML	AML	
	comp=N,344µm,0.4s				
DAVOX			AML	AML	
	comp=E,217µm,0.8s				
REMY	**Saint-Rhmy-en**	**2.71 310**	AML	AML	
	comp=N,760µm,0.8s				
REMY			AML	AML	
	comp=E,588µm,0.5s				
REMY			AML	AML	
	comp=E,588µm,0.5s				
REMY			AML	AML	
	comp=N,760µm,0.8s				
REMY			AML	AML	
	comp=E,588µm,0.5s				
REMY			AML	AML	
	comp=N,760µm,0.8s				
ABSI	**Aberstueckl**	**2.73 18**	AML	AML	
	comp=N,1021µm,0.7s				
ABSI			AML	AML	
	comp=E,761µm,0.6s				
ABSI			AML	AML	
	comp=N,1021µm,0.7s				
ABSI			AML	AML	
	comp=E,761µm,0.6s				
ABSI			AML	AML	
	comp=N,1021µm,0.7s				
ABSI			AML	AML	
	comp=E,761µm,0.6s				
LMR	**La Mourre**	**2.73 254**	*e*Pn	**Pn**	**01 56 57.6 +0.9**
LMR			*e*Sn	**Sn**	**01 57 29.2 -0.8**
	comp=E,30nm,0.2s				
LPG	**La Plagne**	**2.76 301**	*e*P	**Pb**	**01 57 00.7 -1.5**
LPG			*e*Sn	**Sn**	**01 57 30.8 -0.3**
	comp=E,63nm,0.4s				
LPL	**La Plagne**	**2.78 301**	*e*P	**Pb**	**01 57 01.3 -1.2**
LPL			*e*Sn	**Sn**	**01 57 30.6 -0.9**
	comp=E,55nm,0.3s				
STAL	**STALIGIAL**	**2.81 40**	AML	AML	
	comp=E,389µm,1.0s				
STAL			AML	AML	
	comp=N,256µm,0.8s				
STAL			AML	AML	
	comp=E,389µm,1.0s				
STAL			AML	AML	
	comp=N,256µm,0.8s				
STAL			AML	AML	
	comp=E,389µm,1.0s				
STAL			AML	AML	
	comp=N,256µm,0.8s				
FETA	**Feichten**	**2.92 8**	Pn	**Pb**	**01 57 04.0 -0.9**
	comp=N,7.4nm,0.4s				
FETA			Sn	**Sb**	**01 57 38.3 -2.7**
	comp=N,36nm,0.7s				
ROSI	**Rosskopf**	**2.94 18**	AML	AML	
	comp=N,726µm,0.9s				
ROSI			AML	AML	
	comp=E,440µm,0.8s				
ROSI			AML	AML	
	comp=N,726µm,0.9s				
ROSI			AML	AML	
	comp=E,440µm,0.8s				
ROSI			AML	AML	
	comp=N,726µm,0.9s				
ROSI			AML	AML	
	comp=E,440µm,0.8s				
TERO	**Teramo**	**2.96 119**	AML	AML	
	comp=N,57µm,0.9s				
TERO			AML	AML	
	comp=E,42µm,0.6s				
TERO			AML	AML	
	comp=N,57µm,0.9s				
TERO			AML	AML	
	comp=E,42µm,0.6s				
TERO			AML	AML	
	comp=N,57µm,0.9s				
TERO			AML	AML	
	comp=E,42µm,0.6s				
PLONS	**Plons/SG**	**2.96 350**	AML	AML	
	comp=N,194µm,1.0s				
PLONS			AML	AML	
	comp=E,164µm,1.3s				
PLONS			AML	AML	
	comp=N,194µm,1.0s				
PLONS			AML	AML	
	comp=E,164µm,1.3s				
PLONS			AML	AML	
	comp=N,194µm,1.0s				
PLONS			AML	AML	
	comp=E,164µm,1.3s				
AQU	**L'Aquila**	**2.99 125**	*e*Pn	**Pb**	**01 57 03.1 -2.9**
BNALP	**Bannalp**	**2.99 337**	AML	AML	
	comp=N,198µm,1.4s				
BNALP			AML	AML	
	comp=E,185µm,0.5s				
BNALP			AML	AML	
	comp=N,198µm,1.4s				
BNALP			AML	AML	
	comp=E,185µm,0.5s				
BNALP			AML	AML	
	comp=N,198µm,1.4s				
BNALP			AML	AML	
	comp=E,185µm,0.5s				
GEPF	**Gemona**	**3.03 44**	AML	AML	
	comp=N,225µm,0.5s				
GEPF			AML	AML	
	comp=E,240µm,0.7s				
GEPF			AML	AML	
	comp=E,240µm,0.7s				
GEPF			AML	AML	
	comp=N,225µm,0.5s				
GEPF			AML	AML	
	comp=E,240µm,0.7s				
GEPF			AML	AML	
	comp=N,225µm,0.5s				
SABO	**M.te Sabotino**	**3.08 52**	AML	AML	
	comp=N,454µm,0.6s				
SABO			AML	AML	
	comp=E,260µm,0.5s				
SABO			AML	AML	
	comp=E,260µm,0.5s				
SABO			AML	AML	
	comp=N,454µm,0.6s				
SABO			AML	AML	
	comp=E,260µm,0.5s				
SABO			AML	AML	
	comp=N,454µm,0.6s				
ABTA	**Abfaltersbach**	**3.11 32**	*e*Pn	**Pb**	**01 57 05.0 -3.1**
	comp=N,8.1nm,0.3s,SNR=12				
ABTA			*e*Sn	**Sn**	**01 57 41.7 +2.1**
	comp=N,60nm,0.6s				
SKDS	**Skadanscina**	**3.11 62**	*i* Pn	**Pn**	**01 57 01.4 -0.6**
SKDS			*e*Sn	**Sn**	**01 57 38.3 -1.2**
	comp=Z,29nm,0.2s				
ORIF	**Oris-en-Rattie**	**3.13 286**	*e*P	**Pb**	**01 57 05.6 -2.8**
ORIF			*e*Sn	**Sn**	**01 57 39.5 -0.5**
	comp=Z,92nm,0.6s				
FAGN	**Fagnano**	**3.15 125**	AML	AML	
	comp=N,221µm,0.6s				
FAGN			AML	AML	
	comp=E,296µm,0.5s				
FAGN			AML	AML	
	comp=N,221µm,0.6s				
FAGN			AML	AML	
	comp=E,296µm,0.5s				
FAGN			AML	AML	
	comp=N,221µm,0.6s				
FAGN			AML	AML	
	comp=E,296µm,0.5s				
DAVA	**Damuels**	**3.16 357**	*i* Pn	**Pn**	**01 57 05.5 +2.7**
	comp=E,34nm,0.4s,SNR=16				
DAVA			*i* Sn	**Sb**	**01 57 44.2 -3.6**
	comp=E,98nm,0.7s				
ARTF	**Artigues**	**3.17 262**	Pn	**Pn**	**01 57 05.0 +2.3**
ASEAF	**Site Antares,**	**3.17 246**	Pn	**Pn**	**01 57 04.7 +2.2**
ASEAF			Sn	**Sn**	**01 57 40.0 -0.4**
SQTA	**Sankt Quirin**	**3.18 14**	*i* Pn	**Pb**	**01 57 06.5 -2.9**
	comp=E,31nm,0.3s,SNR=32				
SQTA			*e*Sn	**Sn**	**01 57 44.7 +3.3**
	comp=E,103nm,0.5s				
PTCC	**Patocco-Chiusa**	**3.23 44**	AML	AML	
	comp=E,154µm,0.6s				
PTCC			AML	AML	
	comp=E,154µm,0.6s				
PTCC			AML	AML	
	comp=N,126µm,0.6s				
PTCC			AML	AML	
	comp=N,126µm,0.6s				
PTCC			AML	AML	
	comp=N,126µm,0.6s				
PTCC			AML	AML	
	comp=E,154µm,0.6s				
SMRF	**Simiane la Rot**	**3.28 269**	*e*P	**Pn**	**01 57 07.0 +2.8**
SMRF			*e*Sn	**Sn**	**01 57 42.8 -0.7**
	comp=E,23nm,0.3s				
MOTA	**Moosalm**	**3.29 12**	*i* Pn	**Pn**	**01 57 07.5 +2.9**
	comp=E,40nm,0.4s,SNR=63				
CADS	**Cadrg**	**3.31 49**	*e*Pn	**Pn**	**01 57 04.6 -0.1**
CADS			*e*Sn	**Sn**	**01 57 45.0 +0.6**
	comp=Z,25nm,0.2s				
WTTA	**Wattenberg**	**3.31 18**	*i* Pn	**Pn**	**01 57 07.6 +2.7**
	comp=Z,18nm,0.3s,SNR=20				
WTTA			*e*Sn	**Sb**	**01 57 48.9 -3.2**
	comp=Z,162nm,1.3s				
WTTA	**Wattenberg**	**3.31 18**	AML	AML	
	comp=E,278µm,0.7s				
WTTA			AML	AML	
	comp=N,256µm,0.8s				
WTTA			AML	AML	
	comp=E,278µm,0.7s				
WTTA			AML	AML	

comp=N,256μm,0.8s
WTTA AML AML
comp=E,278μm,0.7s
WTTA AML AML
comp=N,256μm,0.8s
RIY Rijeka 3.33 67 *e*Pn **Pn 01 57 06.1 +1.1**
RUSF Rustrel 3.34 268 Pn **Pn 01 57 07.9 +2.7**
RUSF Sn **Sn 01 57 44.7 -0.5**
WATA Walderalm 3.37 17 *i* Pn **Pn 01 57 08.5 +2.9**
comp=N,8.6nm,0.2s,SNR=23
WATA *e*Sn **Sn 01 57 48.7 +2.8**
comp=N,36nm,0.6s
RETA Reutte 3.39 7 *i* Pn **Pn 01 57 08.5 +2.7**
comp=N,15nm,0.4s,SNR=11
RETA *e*Sn **Sb 01 57 50.3 -3.9**
comp=N,22nm,0.7s
ACOM Acomizza, Ital 3.40 44 AML AML
comp=N,278μm,0.6s
ACOM AML AML
comp=E,333μm,0.9s
ACOM AML AML
comp=N,278μm,0.6s
ACOM AML AML
comp=E,333μm,0.9s
ACOM AML AML
comp=N,278μm,0.6s
ACOM AML AML
comp=E,333μm,0.9s
OG02 Monnetier-Morn 3.42 308 Pn **Pn 01 57 09.7 +3.5**
NVLJ Novalja 3.44 81 *e*Pn **Pn 01 57 07.9 +1.5**
NVLJ Sn **Sn 01 57 46.6 -0.8**
CEY Cerknica 3.46 61 *e*Pn **Pn 01 57 07.8 +1.1**
OGSM Saint Maurice 3.47 297 Pn **Pn 01 57 10.5 +3.6**
GORS Gorjuse 3.51 50 *e*Pn **Pn 01 57 07.4 -0.1**
GORS *e*Sn **Sn 01 57 50.7 +1.5**
comp=Z,54nm,0.8s
MYKA Terra Mystica 3.52 44 *i* Pn **Pn 01 57 10.2 +2.5**
comp=Z,5.5nm,0.3s
MYKA *e*Sn **Sn 01 57 51.5 +1.9**
comp=Z,22nm,0.4s
LJU Ljubljana 3.66 57 *e*Pn **Pn 01 57 11.3 +1.8**
LJU Ljubljana 3.66 57 AML AML
comp=N,434μm,0.4s
LJU AML AML
comp=E,343μm,0.4s
LJU AML AML
comp=N,434μm,0.4s
LJU AML AML
comp=N,434μm,0.4s
LJU AML AML
comp=E,343μm,0.4s
LJU AML AML
comp=E,343μm,0.4s
KBA Koelnbreinsper 3.72 36 *e*Pn **Pn 01 57 14.1 +3.6**
comp=E,4.5nm,0.2s,SNR=8.9
KBA *i* Sn **Sn 01 57 57.5 +2.9**
comp=E,16nm,0.3s
CABF La Chapelle 3.77 313 *e*P **Pn 01 57 14.0 +2.9**
CABF *e*Sn **Sn 01 57 53.7 -2.0**
comp=E,27nm,0.4s
OBKA Obir 3.93 51 *i* Pn **Pn 01 57 15.5 +2.3**
comp=E,11nm,0.5s,SNR=9.4
OBKA *e*Sn **Sn 01 58 01.9 +2.3**
comp=E,64nm,0.6s
VIVF Saint-Julien-l 3.96 282 *e*P **Pn 01 57 15.9 +2.2**
VIVF *e*Sn **Sn 01 57 59.0 -1.4**
comp=E,6.9nm,0.3s
UDBI Udbina 4.07 82 *e*Pn **Pn 01 57 16.3 +1.1**
UDBI Sn **Sn 01 58 02.4 -0.8**
CRES Cresnjev 4.15 64 *e*Pn **Pn 01 57 17.4 +1.2**
SOKA Soboth 4.30 52 *i* Pn **Pn 01 57 20.5 +2.2**
comp=E,7.7nm,0.4s,SNR=12
SOKA *e*Sn **Sn 01 58 10.3 +1.5**
comp=E,4.8nm,0.4s
HINF Hinteralfeld 4.33 329 *e*P **Pn 01 57 20.7 +2.0**
HINF *e*Sn **Sn 01 58 07.2 -2.3**
comp=E,37nm,0.3s
LASF Ste Croix 4.51 271 *e*Pn **Pn 01 57 22.1 +1.0**
LASF *e*Sn **Sn 01 58 12.4 -1.5**
comp=E,21nm,0.5s
HAU Haudompre 4.68 327 *e*P **Pn 01 57 25.7 +2.2**
HAU *e*Sn **Sn 01 58 15.1 -3.0**
comp=E,125nm,0.5s
MOA Molln 4.71 36 *i* Pn **Pn 01 57 26.7 +2.7**
comp=E,9.1nm,0.3s,SNR=16
MOA *i* Sn **Sn 01 58 20.4 +1.6**
comp=E,9.5nm,0.4s
CDF Champ du Feu 4.71 336 *e*P **Pn 01 57 25.3 +1.3**
CDF *e*Sn **Sn 01 58 15.9 -3.1**
comp=E,51nm,0.5s
ARSA Arzberg 4.91 49 *e*Pn **Pn 01 57 28.9 +2.2**
comp=E,21nm,0.3s,SNR=16
ARSA *e*Sn **Sn 01 58 25.3 +1.6**
comp=E,4.1nm,0.5s
ARSA Arzberg 4.91 49 AML AML
comp=N,27μm,1.1s
ARSA AML AML
comp=E,22μm,1.4s
ARSA AML AML
comp=N,27μm,1.1s
ARSA AML AML
comp=E,22μm,1.4s
ARSA AML AML
comp=N,27μm,1.1s
ARSA AML AML
comp=E,22μm,1.4s
MGRS Mrkonjic Grad 5.01 84 *e*Pn **Pn 01 57 30.2 +2.1**
SMF Signal de Mont 5.08 302 *e*P **Pn 01 57 31.5 +2.4**
SMF *e*Sn **Sn 01 58 26.1 -1.9**
comp=E,75nm,0.7s
BLY Banja Luka 5.10 81 *e*Pn **Pn 01 57 30.9 +1.7**
PAGF Fort de Pagny 5.37 327 *e*P **Pn 01 57 36.0 +3.1**
baz=146
PAGF *e*Sn **Sn 01 58 31.3 -3.7**
comp=E,46nm,0.5s,baz=149
SFTF Sexfontaines 5.39 321 *e*P **Pn 01 57 36.2 +3.0**
baz=134
SFTF *e*Sn **Sn 01 58 32.6 -2.9**
comp=E,22nm,0.4s
LOR Lormes 5.39 308 *e*P **Pn 01 57 35.7 +2.5**
baz=127
LOR *e*Sn **Sn 01 58 33.2 -2.4**
comp=E,30nm,0.3s
AVF Avril sur Loir 5.45 302 *e*P **Pn 01 57 36.3 +2.3**
AVF *e*Sn **Sn 01 58 34.7 -2.3**
comp=E,13nm,0.4s
SSF Saint Saulge 5.49 305 *e*P **Pn 01 57 37.1 +2.5**
SSF *e*Sn **Sn 01 58 35.4 -2.5**
comp=E,21nm,0.5s
CONA Conrad Observa 5.52 44 *i* Pn **Pn 01 57 37.9 +2.8**
comp=E,7.5nm,0.3s,SNR=14
CONA *e*Sn **Sn 01 58 40.6 +1.9**
comp=E,9.8nm,0.5s
KHC Kasperske Hory 5.54 24 *e*PN **Pn 01 57 35.9 +0.6**
KHC *e*PG **Pg 01 57 57.5 -1.0**
KHC *e*SN **Sn 01 58 36.7 -2.6**
KHC *ex* x 01 59 05.5
MEZF Maizieres J'vi 5.60 323 *e*P **Pn 01 57 39.2 +3.0**
baz=142
MEZF *e*Sn **Sn 01 58 37.6 -3.2**
comp=E,21nm,0.5s,baz=139
STON Ston 5.66 100 *e*Pn **Pn 01 57 38.8 +2.0**
STON Ston 5.66 100 *e*Pn **Pn 01 57 36.7 -0.2**
BGF Bois d'Agland 5.67 298 *e*P **Pn 01 57 39.4 +2.3**
BGF *e*Sn **Sn 01 58 42.8 +0.4**
comp=E,34nm,0.3s
SOP Sopron 5.73 49 EPn **Pn 01 57 39.1 +1.2**
SOP ||Sn **Sn 01 58 41.1 -2.8**
MTLF Montolieu 5.78 265 *e*Pn **Pn 01 57 40.5 +1.9**
MTLF *e*Sn **Sn 01 58 42.2 -2.9**
comp=E,21nm,0.7s
CAF Calviac 5.81 281 *e*P **Pn 01 57 40.8 +1.7**
TCF Toulx Ste Croi 5.99 294 *e*P **Pn 01 57 45.8 +4.3**
TCF *e*Sn **Sn 01 58 47.5 -2.8**
comp=E,8.7nm,0.4s
HYF Humbligny 6.10 304 *e*P **Pn 01 57 46.8 +3.8**
HYF *e*Sn **Sn 01 58 54.8 +1.7**
TREB Trebinje 6.16 100 *e*Pn **Pn 01 57 41.4 -2.4**
RJF Les Rejaudoux 6.24 284 *e*P **Pn 01 57 48.1 +3.2**
BRY Bratogost 6.25 98 *e*Pn **Pn 01 57 46.5 +1.4**
HCY Herceg Novi 6.34 102 *e*Pn **Pn 01 57 48.3 +2.0**
HAPS Han Pijesak,BI 6.36 87 *e*Pn **Pn 01 57 44.1 -2.6**
MORH Mrgy, Hungar 6.38 68 *e*Pn **Pn 01 57 47.0 +0.2**
MORH Mrgy, Hungar 6.38 68 EPn **Pn 01 57 49.1 +2.3**
MORH Sn **Sn 01 58 58.0 -1.8**
UPM Unac-Piva 6.44 95 *e*Pn **Pn 01 57 49.8 +1.9**

MODS Modra-Piesok 6.53 47 *e*PN **Pn 01 57 49.9 +1.0**
MODS *e*SN **Sn 01 59 00.9 -2.7**
KRUC Moravsky 6.56 39 *e*PN **Pn 01 57 50.6 +1.3**
KRUC *e*PG **Pg 01 58 19.0 +1.1**
KRUC *e*SN **Sn 01 59 02.1 -2.2**
KRUC *e*SG **Sg 01 59 48.6 +5.7**
PRU Pruhonice 6.59 26 *e*PN **Pn 01 57 50.3 +0.6**
GOPC GO Pecny, Ondr 6.61 27 *e*PN **Pn 01 57 51.9 +1.9**
BBLS Lazići 6.71 89 *e*Pn **Pn 01 57 50.8 -0.6**
LFF La Frestale 6.75 280 *e*P Pn 01 57 57.3 +5.4
LFF *e*Sn **Sn 01 59 05.7 -3.3**
comp=E,6.6nm,0.4s
VRAC Vranov 6.83 38 *e*PN **Pn 01 57 53.6 +0.6**
VRAC *e*SN **Sn 01 59 07.3 -3.7**
VRAC *e*SG **Sg 01 59 53.5 +2.0**
PDG Podgorica 6.88 101 *e*Pn **Pn 01 57 54.2 +0.5**
DRME Dracevica, Mon 6.91 103 *e*Pn **Pn 01 57 54.4 +0.3**
JAVC Velka Javorina 7.04 45 *e*PN **Pn 01 57 58.7 +2.8**
PVCC Panska Ves 7.08 24 *e*PN **Pn 01 57 57.8 +1.4**
DIVS Divibare 7.11 87 *e*Pn **Pn 01 57 58.1 +1.2**
BAIF Baives 7.17 328 *e*P Pn 01 58 02.6 +5.0
SNR=1.0
BRG Berggiesshubel 7.23 20 PN **Pn 01 57 59.3 +0.9**
BRG SN **Sn 01 59 15.8 -4.9**
BRG SG **Sg 02 00 03.6 -0.6**
comp=E,8.2nm,1.1s
CLL Collm 7.44 14 *e*Pn **Pn 01 58 00.0 -1.3**
CLL *e* 01 58 04.0
CLL *e*Sn Sn 01 59 11.0 -15
CLL *e* 01 59 24.0
CLL *e*Sg **Sg 02 00 11.0 -0.1**
comp=Z,16nm,1.1s
VYHS Vyhne 7.45 51 *e*PN **Pn 01 58 02.3 +0.8**
VYHS *e*SN **Sn 01 59 23.3 -2.9**
MORC Moravsky Berou 7.59 39 *e*PG **Pg 01 58 37.6 -0.1**
MORC *e*SN **Sn 01 59 33.8 +3.9**
MORC Moravsky Berou 7.59 39 *e*SG **Sg 02 00 22.7 +6.7**
MFF Saint Martin d 7.64 292 *e*P **Pn 01 58 07.4 +3.3**
SNR=1.0
OSTC Ostas 7.65 31 *e*PN **Pn 01 58 05.0 +0.8**
PSZ Piszkesteto 7.79 57 EPn **Pn 01 58 07.1 +0.9**
PSZ Sn **Sn 01 59 37.0 +2.4**
GRR Gorron 8.71 303 *e*P **Pn 01 58 22.4 +3.6**
SNR=1.0
QUIF Quistinic 9.98 297 *e*Pn **Pn 01 58 38.0 +1.8**
SNR=1.0

MEX 22 01:59:49.4±0.6, 14°.95N×93°.39W, h50km±14km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.76**	**12**	*e*P	Pn	02 00 02.0	-2.0
PCIG				*i* S	Sn	02 00 12.6	-2.0
THIG		**1.09**	**92**	*i* P	Pn	02 00 05.6	-2.7
THIG				*e*S	Sn	02 00 20.7	-1.6
CCIG	**Comitan**	**1.79**	**42**	*e*P	Pn	02 00 16.5	-1.5
CCIG				*e*S	Sn	02 00 38.0	-1.7
TGIG		**1.83**	**8**	*i* P	Pn	02 00 17.4	-1.2
TGIG				*e*S	Sn	02 00 38.3	-2.3

*NEIC **22** 02:14:13.9±0.0, 15°.79N×95°.41W, h20km, MD4.1(MEX), After MEX.*

MEX 22 02:14:13.9±0.6, 15°.79N×95°.41W, h16km±115km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.67**	**269**	*e*Pn	Pg	02 14 25.0	-2.2
HUIG				*e*Sg	Sg	02 14 33.1	-3.0
HUIG	**Huatulco**	**0.67**	**269**	*e*P	Pg	02 14 25.0	-2.2
HUIG				*i* S	Sg	02 14 33.1	-3.0
CMIG	**Matias Romero**	**1.39**	**21**	*e*Pn	Pn	02 14 34.8	-3.8
CMIG				*e*Sn	Sn	02 14 51.5	-5.2
CMIG	**Matias Romero**	**1.39**	**21**	*e*P	Pn	02 14 34.8	-3.8
CMIG				*e*S	Sn	02 14 51.5	-5.2
VHO	**Vista Hermosa**	**1.80**	**315**	*e*Pn	Pn	02 14 41.7	-2.7
VHO				*e*Sn	Sn	02 15 02.3	-4.8
VHO	**Vista Hermosa**	**1.80**	**315**	*e*P	Pn	02 14 41.7	-2.7
VHO				*i* S	Sn	02 15 02.3	-4.8
PCIG		**2.11**	**92**	*e*Pn	Pn	02 14 45.1	-3.4
PCIG				*e*Sn	Sn	02 15 10.2	-4.2
PCIG		**2.11**	**92**	*i* P	Pn	02 14 45.1	-3.4
PCIG				*i* S	Sn	02 15 10.2	-4.2
TGIG		**2.41**	**66**	*e*Pn	Pn	02 14 51.1	-1.6
TGIG				*e*Sn	Sn	02 15 18.2	-3.6
TGIG		**2.41**	**66**	*i* P	Pn	02 14 51.1	-1.6
TGIG				*e*S	Sn	02 15 18.2	-3.6
CCIG	**Comitan**	**3.19**	**81**	*e*Pn	Pn	02 15 02.9	-0.5
TLIG	**Tlapa**	**3.50**	**301**	*e*Pn	Pn	02 15 10.6	+2.8

MEX 22 02:39:24.7±1.0, 16°.80N×94°.05W, h153km±11km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.85**	**290**	*e*P	Pn	02 39 47.4	-1.1
CMIG				*i* S	Sn	02 40 05.0	-1.7
TGIG		**0.89**	**91**	*i* P	Pn	02 39 47.6	-1.3
TGIG				*i* S	Sn	02 40 04.6	-2.7
PCIG		**1.35**	**144**	*e*P	Pn	02 39 52.1	-0.8
PCIG				*e*S	Sn	02 40 12.8	-1.7
CCIG	**Comitan**	**1.91**	**105**	*e*P	Pn	02 39 58.5	-0.6
CCIG				*e*S	Sn	02 40 23.0	-2.4
HUIG	**Huatulco**	**2.22**	**243**	*i* P	Pn	02 39 59.9	-2.8
HUIG				*e*S	Sn	02 40 29.7	-2.1

*IDC **22** 02:40:25.6±0.8, 15°.42S×173°.18W, h0km, mb3.9/9, mb1 4.2/9, mb1mx4.0/30, mbtmp3.9/9, MS3.6/12, Ms1 3.6/12, ms1mx3.5/20, Error ellipse: s-maj=38.9km s-min=18.3km az=136.0*
*ISCJB **22** 02:40:28.0±0.7, 15°.4S±0°.2×173°.3W±0°.2, h29km, mb3.9/9, MS3.7/15, Error ellipse: s-maj=31.7km s-min=15.1km az=43.2*

ISC 22 02:40:29.7±0.8, 15°.4S±0°.2×173°.3W±0°.2, h29km, n22, σ1§13/11, mb3.8/9, MS3.7/15, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**20.33**	**248**	*e*P	Pn	02 45 12.6	+6.7
	101nm,1.3s						
DZM				*e*LR	LR	02 50 21.4	
	comp=Z,452nm,25.1s						
PPT	**Papeete**	**22.82**	**99**	LR	LR	02 51 47.4	
	comp=Z,108nm,21.3s,baz=290,slow=30						
PPT2	**Papeete2**	**22.82**	**99**	*e*LQ	LQ	02 49 49.0	
	239nm,25.2s						
PPT2				*e*LR	LR	02 50 43.5	
	comp=Z,355nm,24.8s,baz=261						
TBI	**Tubuai**	**23.80**	**113**	*e*LQ	LQ	02 50 18.7	
	256nm,29.2s						
TBI				*e*LR	LR	02 51 16.5	
	comp=Z,370nm,25.8s,baz=291						
URZ	**Urewera**	**24.34**	**199**	P	**P**	**02 45 43.2**	**-1.8**
	4.9nm,0.7s,baz=6.7,slow=17,SNR=2.3						
STKA	**Stephens Creek**	**44.17**	**240**	P	**P**	**02 48 35.6**	**-0.5**
	2.3nm,0.7s,baz=91,slow=8.5,SNR=3.5						
WRA	**Warramunga Arr**	**49.98**	**257**	P	**P**	**02 49 22.1**	**+0.5**
	2.9nm,0.6s,baz=94,slow=6.4,SNR=20						
ASAR	**Alice Springs**	**50.24**	**252**	P	**P**	**02 49 23.9**	**+0.2**
	3.8nm,0.5s,baz=85,slow=8.1,SNR=40						
ASAR				LR	LR	03 09 05.5	
	comp=Z,174nm,20.7s,baz=90,slow=34						
GUMO	**Guam**	**50.42**	**303**	LR	LR	03 07 23.3	
	comp=Z,43nm,20.2s,baz=113,slow=32						
VNDA	**Vanda**	**63.43**	**186**	P	**P**	**02 50 57.7**	**+1.5**
	0.7nm,0.9s,baz=348,slow=4.8,SNR=4.2						
MJAR	**Matsushiro Arr**	**68.99**	**320**	LR	LR	03 15 57.6	
	comp=Z,45nm,21.9s,baz=130,slow=31						
PETK	**Petropavlovsk-**	**72.63**	**342**	LR	LR	03 19 30.9	
	comp=Z,22nm,19.6s,baz=133,slow=32						
NVAR	**Mina Array Bea**	**74.22**	**42**	P	**P**	**02 52 03.4**	**-0.8**
	0.1nm,0.3s,baz=249,slow=7.6,SNR=2.1						
NVAR				LR	LR	03 17 50.8	
	comp=Z,63nm,21.5s,baz=256,slow=30						
KSRS	**Korea Array**	**76.22**	**315**	LR	LR	03 20 27.9	
	comp=Z,14nm,21.4s,baz=105,slow=32						
TXAR	**Lajitas Array**	**80.48**	**56**	P	**P**	**02 52 39.5**	**+0.1**
	0.9nm,1.0s,baz=214,slow=0.5,SNR=4.0						
TXAR				LR	LR	03 21 04.5	
	comp=Z,45nm,20.6s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**82.15**	**42**	P	**P**	**02 52 49.1**	**+1.0**
	0.2nm,0.5s,baz=194,slow=3.3,SNR=2.8						
PDAR				LR	LR	03 23 22.5	
	comp=Z,52nm,19.4s,baz=240,slow=31						
ILAR	**Eielson Array**	**82.38**	**11**	P	**P**	**02 52 47.8**	**-0.7**
	0.3nm,0.7s,baz=232,slow=4.4,SNR=5.1						
PLCA	**Paso Flores**	**89.44**	**132**	LR	LR	03 28 52.0	
	comp=Z,72nm,18.8s,baz=222,slow=32						
CMAR	**Chiang Mai Arr**	**92.72**	**288**	LR	LR	03 30 53.6	
	comp=Z,14nm,22.0s,baz=245,slow=33						
ROSC	**El Rosal**	**99.88**	**88**	LR	LR	03 32 03.6	
	comp=Z,26nm,18.0s,baz=99,slow=31						
GERES	**GERESS Array B**	**146.12**	**352**	PKPbc	**PKiKP**	**03 00 09.7**	**-0.8**
	0.3nm,0.4s,baz=46,slow=3.9,SNR=5.5						
BRTR	**Keskin Array B**	**146.21**	**321**	PKPbc	**PKPab**	**03 00 09.7**	**+1.2**
	2.6nm,0.8s,baz=83,slow=1.5,SNR=18						

IDC 22 02:59:50.7±7.3, 6°.54S×130°.15E, h110km±63km, mb3.5/2, mb1 3.7/4, mb1mx3.4/26, mbtmp3.9/4, Error ellipse: s-maj=116.0km s-min=26.7km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.93**	**163**	P	Pn	03 03 02.1	-1.3
	0.6nm,0.3s,baz=346,slow=13,SNR=17						
WRA				S	Sn	03 05 26.7	-10
	1.6nm,0.3s,baz=336,slow=23,SNR=7.5						
ASAR	**Alice Springs**	**17.41**	**168**	P	Pn	03 03 48.1	+1.3
	0.5nm,0.3s,baz=351,slow=11,SNR=22						
ASAR				S	Sn	03 06 51.2	-10
	0.4nm,0.3s,baz=358,slow=28,SNR=5.9						
MKAR	**Makanchi Array**	**67.92**	**327**	P	P	03 10 37.7	0.0
	0.8nm,0.5s,baz=120,slow=7.9,SNR=9.2						
VNDA	**Vanda**	**72.88**	**173**	P	P	03 11 07.0	-0.2
	0.4nm,0.5s,baz=315,slow=7.3,SNR=3.1						
LPAZ	**La Paz**	**150.99**	**142**	PKPbc	PKPbc	03 19 32.4	-0.1
	0.4nm,0.4s,baz=218,slow=4.6,SNR=4.7						

*ISCJB **22** 03:23:29.7±1.3, 12°.16N±0°.08×87°.25W±0°.05, h62km±13km, Error ellipse: s-maj=14.9km s-min=6.2km az=24.6*
*UCR **22** 03:23:30.5±1.2, 12°.18N×87°.26W, h52km±10km, ML3.4*
*SNET **22** 03:23:30.6±1.0, 12°.26N×87°.30W, h16km±9km, ML3.5*

ISC 22 03:23:29.9±2.2, 12°.1N±0°.1×87°.25W±0°.06, h58km±18km, n24, σ0§71/36, 1C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEL3	**Telica 3**	**0.59**	**43**	*e*P	**Pn**	**03 23 42.8**	**+0.1**
CRIN	**San Cristobal**	**0.59**	**20**	*e*P	**Pn**	**03 23 43.1**	**+0.2**
CRIN				IAML		03 23 54.0	
	comp=Z,1μm,0.2s						
TELN	**Telica**	**0.62**	**42**	*e*P	**Pn**	**03 23 43.3**	**+0.1**
COPN	**Copaltepe**	**0.65**	**86**	*e*P	**Pn**	**03 23 43.6**	**+0.2**
COPN				*e*S	**Sn**	**03 23 53.1**	**-0.2**
COPN				IAML		03 23 54.7	
	comp=Z,1μm,0.3s						
COPN	**Copaltepe**	**0.65**	**86⇑**	*e*P	**Pn**	**03 23 43.5**	**+0.2**
COPN				*e*S	**Sn**	**03 23 53.1**	**-0.2**
CNGN	**Cerro Negro**	**0.65**	**56**	*e*P	**Pn**	**03 23 43.5**	**+0.1**
CNGN				*e*S	**Sn**	**03 23 54.0**	**+0.6**
CNGN				IAML		03 23 55.1	
	comp=N,443nm,0.2s						
CNGN	**Cerro Negro**	**0.65**	**56‖**	*e*P	**Pn**	**03 23 43.5**	**+0.1**
MOMN	**Momotombo**	**0.75**	**69**	*e*P	**Pn**	**03 23 44.4**	**-0.2**
MOMN	**Momotombo**	**0.75**	**69**	*e*P	**Pn**	**03 23 44.4**	**-0.2**
CSGN	**Cosiguina Volc**	**0.89**	**340**	*e*P	**Pn**	**03 23 47.2**	**+0.7**
CSGN				*e*S	**Sn**	**03 23 59.1**	**+0.5**
MGAN	**Managua**	**0.98**	**89**	*e*P	**Pn**	**03 23 48.0**	**+0.3**
MGAN				*e*S	**Sn**	**03 24 01.4**	**+0.7**
BRAN	**Las Pilas**	**1.06**	**57**	*e*P	**Pn**	**03 23 46.9**	**-1.7**
BRAN				*e*S	**Sn**	**03 24 00.0**	**-2.4**
CNCH	**Conchagua**	**1.27**	**334**	*e*P	**Pn**	**03 23 51.3**	**-0.3**
CNCH				*e*S	**Sn**	**03 24 07.3**	**-0.4**
CNCH				IAML		03 24 11.4	
	comp=Z,2μm,0.3s						
CNCH	**Conchagua**	**1.27**	**334**	*e*P	**Pn**	**03 23 51.3**	**-0.3**
CNCH				*e*S	**Sn**	**03 24 07.3**	**-0.4**
CNCH				IAML		03 24 11.4	
	comp=Z,2μm,0.3s						
ESTN	**Estel**	**1.29**	**42**	*e*P	**Pn**	**03 23 52.1**	**+0.3**
ESTN				*e*S	**Sn**	**03 24 09.2**	**+0.9**
ESTN	**Estel**	**1.29**	**42**	*e*P	**Pn**	**03 23 52.1**	**+0.3**
LCND	**La Caada**	**1.32**	**332**	*e*P	**Pn**	**03 23 51.9**	**-0.2**
LCND				*e*S	**Sn**	**03 24 07.8**	**-1.0**
LCND				IAML		03 24 10.5	
	comp=Z,545nm,0.3s						
LCND	**La Caada**	**1.32**	**332**	*e*P	**Pn**	**03 23 51.9**	**-0.2**
LCND				*e*S	**Sn**	**03 24 07.8**	**-1.0**
LCND				IAML		03 24 10.5	
	comp=Z,545nm,0.3s						
MATN	**Matagalpa**	**1.52**	**59**	*e*P	**Pn**	**03 23 54.9**	**+0.1**
MATN				*e*S	**Sn**	**03 24 13.8**	**+0.2**
PACA	**Pacayal**	**1.69**	**322**	*e*P	**Pn**	**03 23 57.6**	**+0.4**
PACA	**Pacayal**	**1.69**	**322**	*e*P	**Pn**	**03 23 57.6**	**+0.4**
RCON	**San Juan de Ri**	**1.72**	**39**	*e*P	**Pn**	**03 23 58.3**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.91**	**359‖**	*e*P	**Pn**	**03 24 00.8**	**+0.8**
TGUH	**Tegucigalpa,Un**	**1.91**	**359‖**	*e*P	**Pn**	**03 24 00.8**	**+0.8**

*NIED **22** 03:28:00, 37°.10N×142°.50E, h8km, Mw3.3 Best double couple: M0 9.83000×10^13 NP1:φ0=243.00000°, δ47.00000°, λ-4.00000°. NP2:φ0=336.00000°, δ87.00000°, λ-136.00000°.*

JMA 22 03:28:15.3±0.5, 37°.15N×142°.51E, h9km±5km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.32**	**280**	P	Pn	03 28 39.5	-0.5
ONAJ	**Iwakimizuishiy**	**1.37**	**268**	P	Pn	03 28 40.0	-0.6
JIKH	**Ishinomakikobu**	**1.42**	**325**	P	Pn	03 28 40.9	-0.4
JMM	**Marumori**	**1.54**	**298**	P	Pn	03 28 43.1	+0.2
JMM				*e*S	Sn	03 29 02.8	-0.3
JFFD	**Fukushimafurud**	**1.56**	**268**	P	Pn	03 28 43.1	-0.1
JFFD				*e*S	Sb	03 29 04.2	0.0
JIO	**Ouri**	**1.59**	**325**	P	Pn	03 28 43.7	0.0
JIO				*e*S	Sn	03 29 04.4	0.0
JFT	**Otama**	**1.77**	**283**	P	Pn	03 28 46.9	+0.8
JOU	**Okura**	**1.90**	**310**	P	Pn	03 28 48.7	+0.8
JMK	**Ichinoseki**	**2.07**	**331**	P	Pb	03 28 51.6	-1.4
JYS	**Shiratake**	**2.21**	**300**	P	Pb	03 28 53.9	-1.6
JYS				*e*S	Sn	03 29 21.3	+1.6
JFY	**Yanaizu**	**2.25**	**277**	P	Pb	03 28 54.8	-1.4
JYK	**Kaneyama**	**2.45**	**317**	P	Pn	03 28 57.4	+2.0
JOM	**Ohasama**	**2.51**	**338**	P	Pb	03 28 58.7	-1.8
JAG	**Ashikaga**	**2.56**	**254**	P	Pn	03 28 57.8	+0.9
BSO1	**Boso 1**	**2.78**	**207**	P	Pn	03 29 01.5	+2.0
MAT	**Matsushiro**	**3.50**	**261**	P	Pn	03 29 12.3	+2.3
MAT				*e*S	Sb	03 29 57.2	-3.0

*ISCJB **22** 04:01:39.6±0.6, 27°.65N±0°.09×142°.0E±0°.2, h39km, mb3.9/14, MS3.2/1, Error ellipse: s-maj=24.9km s-min=12.6km az=171.2*
*IDC **22** 04:01:42.7±3.5, 27°.69N×141°.94E, h51km±30km, mb3.5/13, mb1 3.8/15, mb1mx3.7/32, mbtmp3.9/15, ML3.3/2, MS2.9/2, Ms1 2.9/2, ms1mx2.4/36, Error ellipse: s-maj=30.9km s-min=18.9km az=95.0*

ISC 22 04:01:41.6±0.8, 27°.7N±0°.1×141°.9E±0°.2, h39km, n26, σ1§21/19, mb3.7/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**5.68**	**342**	P	**Pn**	**04 03 05.7**	**+2.3**
	6.1nm,0.3s,baz=21,slow=8.7,SNR=2.1						
JHJ				S	**Sn**	**04 04 04.5**	**-2.9**
	3.9nm,0.3s,baz=68,slow=16,SNR=1.5						
MJAR	**Matsushiro Arr**	**9.33**	**341**	P	**Pn**	**04 03 55.1**	**+1.6**
	0.1nm,0.3s,baz=161,slow=12,SNR=5.3						
KSRS	**Korea Array**	**15.26**	**313**	LR	LR	04 10 36.0	
	comp=Z,25nm,20.6s,baz=132,slow=35						
KLR	**Kul'dur**	**22.86**	**343**	P	**P**	**04 06 41.2**	**-0.1**
	2.4nm,0.5s,baz=135,slow=8.9,SNR=7.7						
H11N2	**WAKE ISLAND Hy**	**24.18**	**104**	T	T	04 31 52.8	
	baz=295,slow=75,SNR=26						
H11N1	**WAKE ISLAND Hy**	**24.18**	**104**	T	T	04 31 48.5	
	baz=295,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**24.20**	**104**	T	T	04 31 49.7	
	baz=295,slow=75,SNR=21						

H11S3 WAKE ISLAND Hy 24.52 107 T T 04 32 06.5
baz=297,slow=75,SNR=63
H11S1 WAKE ISLAND Hy 24.53 107 T T 04 32 12.7
baz=297,slow=75,SNR=19
H11S2 WAKE ISLAND Hy 24.54 107 T T 04 32 14.2
baz=297,slow=75,SNR=16
WRA Warramunga Arr 47.95 190 P **P 04 10 16.0 -0.5**
2.6nm,0.5s,baz=5.4,slow=8.3,SNR=5.6
MKAR Makanchi Array 49.89 309 PcP **PcP 04 11 51.0 -0.2**
0.2nm,0.3s,baz=70,slow=12,SNR=3.5
ASAR Alice Springs 51.68 189 P **P 04 10 44.0 -0.8**
0.3nm,0.6s,baz=13,slow=6.6,SNR=4.8
ILAR Eielson Array 57.27 29 P **P 04 11 24.2 -0.7**
0.4nm,0.6s,baz=282,slow=6.1,SNR=4.4
INK Inuvik 62.55 25 P **P 04 12 01.1 0.0**
0.6nm,0.6s,baz=260,slow=6.1,SNR=3.3
AKTO Aktyubinsk 65.42 316 LR LR 04 40 16.8
comp=Z,14nm,18.3s,baz=212,slow=35
YKA Yellowknife Ar 71.70 28 P **P 04 12 58.6 -0.5**
0.6nm,0.6s,baz=290,slow=6.9,SNR=2.5
ARCES ARCESS Array B 72.87 341 P **P 04 13 06.4 +0.3**
8.8nm,0.4s,baz=61,slow=7.5,SNR=6.0
FINES FINESS Array B 77.28 334 P **P 04 13 31.8 +0.2**
2.1nm,0.5s,baz=68,slow=5.1,SNR=33
NVAR Mina Array Bea 80.31 52 P **P 04 13 49.1 +0.1**
0.3nm,0.6s,baz=294,slow=6.8,SNR=4.1
AKASG Malin Array Be 81.97 324 P **P 04 13 56.7 -0.6**
0.2nm,0.3s,baz=53,slow=5.4,SNR=4.4
NB2 NORSAR Subarra 82.94 338 P **P 04 14 01.8 -0.4**
comp=Z,0.2nm,0.4s,baz=41,slow=5.3
NOA NORSAR Array B 82.94 338 P **P 04 14 01.7 -0.5**
comp=Z,0.5nm,0.7s,baz=41,slow=5.0,SNR=3.8
PDAR Pinedale Array 83.93 45 P **P 04 14 09.3 +1.4**
comp=Z,0.2nm,0.6s,baz=245,slow=3.7,SNR=1.9
BRTR Keskin Array B 85.40 313 P **P 04 14 16.9 +1.6**
comp=Z,0.2nm,0.5s,baz=135,slow=1.6,SNR=1.6
GERES GERESS Array B 90.85 329 P **P 04 14 40.2 -0.8**
comp=Z,0.5nm,0.6s,baz=47,slow=6.0,SNR=6.1

DJA 22 04:12:17.8±1.3, 1°N±9°×12°5E±1°0, h16km±16km, M3.9/6, MLv3.9/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.43**	**263**	P	Pb	04 12 44.3	+0.2
SANI	**Sanana**	**2.85**	**168**	P	Pn	04 13 02.2	-0.5
LUWI	**Luwuk**	**3.18**	**236**	P	Pn	04 13 07.0	-0.2

ISCJB 22 04:19:15.3±0.5, 16°.85S±0°.05×69°.64W±0°.07, h179km±5km, mb3.9/8, Error ellipse: s-maj=10.8km s-min=7.1km az=18.4.
GUC 22 04:19:17.7±0.5, 17°.12S×69°.94W, h182km±4km, ML4.6
IDC 22 04:19:17.3±0.9, 16°.88S×69°.47W, h176km±6km, mb3.7/9, mb1 3.8/13, mb1mx3.6/30, mbtmp4.2/13, Error ellipse: s-maj=16.0km s-min=10.7km az=103.0
ISC 22 04:19:15.4±0.7, 16°.81S±0°.05×69°.69W±0°.06, h164km±6km, n34, σ1§90/48, mb4.1/8, 6C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**1.52**	**174**	*eP*	**Pn**	**04 19 46.9**	**0.0**
PB16	**IPOC Station P**	**1.52**	**174**	⇑*iP*	**Pn**	**04 19 49.8**	**+2.9**
PB16				*eS*	**Sn**	**04 20 14.0**	**+2.8**
LPAZ	**La Paz**	**1.58**	**71**	P	**Pn**	**04 19 50.0**	**+2.5**
49nm,0.3s,baz=304,slow=6.1,SNR=2616							
LPAZ				S	**Sn**	**04 20 13.2**	**+1.0**
50nm,0.3s,baz=353,slow=22,SNR=24							
LPAZ	**La Paz**	**1.58**	**71**	*eP*	**Pn**	**04 19 49.5**	**+2.0**
LPAZ				*eS*	**Sn**	**04 20 12.4**	**+0.3**
PB12	**IPOC Station P**	**1.89**	**199**	*eP*	**Pn**	**04 19 51.1**	**+0.8**
PB12				*eS*	**Sn**	**04 20 16.4**	**-0.9**
PB12	**IPOC Station P**	**1.89**	**199**	⇑*iP*	**Pn**	**04 19 51.0**	**+0.8**
PB12				*eS*	**Sn**	**04 20 16.7**	**-0.6**
MNMC	**Minye Minye**	**2.31**	**178**	⇑*iP*	**Pn**	**04 19 57.1**	**+1.9**
MNMC				*eS*	**Sn**	**04 20 26.8**	**+0.8**
MNMC				IAML		04 20 33.3	
comp=E,2μm,0.3s							
MNMCX	**Minye Minye**	**2.31**	**178**	*eP*	**Pn**	**04 19 54.8**	**-0.4**
PSGC	**Pisagua**	**2.80**	**188**	⇑*iP*	**Pn**	**04 20 01.4**	**+0.5**
PSGC				*i* S	**Sn**	**04 20 34.8**	**-1.5**
PSGCX	**Pisagua**	**2.80**	**188**	*eP*	**Pn**	**04 20 01.3**	**+0.4**
GO01	**Chusmiza**	**2.88**	**171**	*eP*	**Pn**	**04 20 04.6**	**+2.3**
GO01				*eS*	**Sn**	**04 20 40.4**	**+1.7**
GO01				IAML		04 20 45.4	
comp=E,1μm,0.1s							
PB11	**IPOC Station P**	**2.93**	**179**	⇑*iP*	**Pn**	**04 20 03.9**	**+1.3**
PB11				*eS*	**Sn**	**04 20 38.7**	**-0.6**
PB11				IAML		04 20 42.3	
comp=E,1μm,0.2s							
PB08	**IPOC Station P**	**3.35**	**171**	⇑*iP*	**Pn**	**04 20 10.2**	**+2.1**
PB08				*i* S	**Sn**	**04 20 49.8**	**+0.8**
PB08				IAML		04 20 52.2	
comp=E,748nm,0.2s							
PB01	**IPOC Station P**	**4.21**	**177**	*i* P	**Pn**	**04 20 19.5**	**+0.7**
PB01				*i* S	**Sn**	**04 21 05.4**	**-3.0**
LVC	**Limon Verde**	**5.81**	**173**	P	**Pn**	**04 20 41.3**	**+1.2**
comp=E,6.2nm,0.3s,baz=30,slow=8.9,SNR=98							
LVC				S	**Sn**	**04 21 43.2**	**-3.2**
comp=E,22nm,0.3s,baz=5.3,slow=6.5,SNR=22							
YJA	**Yavi**	**6.63**	**144**	*eP*	**Pn**	**04 20 49.1**	**-1.8**
YJA				IAML		04 20 54.5	
comp=Z,2.6nm,0.4s							
SIV	**San Ignacio**	**8.31**	**86**	P	**Pn**	**04 21 11.6**	**-1.3**
comp=Z,11nm,0.3s,baz=270,slow=10,SNR=59							
SIV				S	**Sn**	**04 22 39.6**	**-6.1**
comp=Z,1.1nm,0.3s,baz=282,slow=10,SNR=3.2							
NNA	**Nana**	**8.43**	**304**	P	**Pn**	**04 21 14.8**	**+0.3**
comp=Z,12nm,0.3s,baz=134,slow=12,SNR=20							
NNA				S	**Sn**	**04 22 43.4**	**-5.2**
comp=Z,8.0nm,0.3s,baz=238,slow=19,SNR=11							
AZAP	**Zapla**	**8.55**	**150**	*eP*	**Pn**	**04 21 14.3**	**-1.9**
AZAP				IAML		04 21 16.6	
comp=Z,20nm,0.3s							
CPUP	**Villa Florida**	**14.88**	**132**	P	**Pn**	**04 22 37.5**	**-0.2**
comp=Z,0.1nm,0.3s,baz=338,slow=11,SNR=3.1							
PTGA	**Pitinga**	**18.63**	**32**	P	**P**	**04 23 20.5**	**-0.1**
comp=Z,1.7nm,0.3s,baz=209,slow=14,SNR=14							
BDFB	**Brasilia**	**20.84**	**90**	P	**P**	**04 23 44.3**	**-0.3**
comp=Z,4.8nm,0.5s,baz=268,slow=10,SNR=10							
PLCA	**Paso Flores**	**23.85**	**182**	P	**P**	**04 24 15.5**	**+1.9**
comp=Z,12nm,0.7s,baz=21,slow=11,SNR=28							
MDP	**Montagnes des**	**27.54**	**39**	P	**P**	**04 24 46.9**	**0.0**
comp=Z,5.0nm,0.5s,baz=228,slow=8.3,SNR=14							
TXAR	**Lajitas Array**	**56.40**	**324**	P	**P**	**04 28 41.6**	**+1.6**
comp=Z,0.1nm,0.4s,baz=138,slow=7.2,SNR=3.5							
DBIC	**Dimbokro**	**68.20**	**76**	P	**P**	**04 29 57.9**	**-0.8**
comp=Z,3.2nm,0.4s,baz=230,slow=6.5,SNR=16							
PDAR	**Pinedale Array**	**69.71**	**330**	P	**P**	**04 30 07.4**	**-0.3**
comp=Z,0.1nm,0.3s,baz=139,slow=8.4,SNR=3.2							
TORD	**Torodi Ar. Bea**	**76.53**	**72**	P	**P**	**04 30 47.1**	**-0.9**
comp=Z,4.9nm,0.5s,baz=261,slow=5.3,SNR=94							
ESDC	**Sonseca Array**	**83.05**	**45**	P	**P**	**04 31 23.4**	**+0.7**
comp=Z,0.4nm,0.5s,baz=261,slow=6.0,SNR=3.4							
YKA	**Yellowknife Ar**	**86.54**	**341**	P	**P**	**04 31 40.6**	**+1.1**
comp=Z,0.6nm,0.5s,baz=133,slow=4.8,SNR=6.7							
ASAR	**Alice Springs**	**133.63**	**210**	PKP	**PKiKP**	**04 38 14.4**	**-0.2**
comp=Z,0.4nm,0.6s,baz=126,slow=2.0,SNR=6.8							
WRA	**Warramunga Arr**	**136.51**	**214**	PKP	**PKiKP**	**04 38 20.3**	**-0.2**
comp=Z,1.9nm,1.0s,baz=148,slow=1.4,SNR=8.0							
ZALV	**Zalesovo Beam**	**137.98**	**22**	PKP	**PKPdf**	**04 38 21.2**	**+0.9**
comp=Z,0.5nm,0.4s,baz=325,slow=2.3,SNR=2.9							
SONM	**Songino Array**	**148.90**	**5**	PKPbc	**PKiKP**	**04 38 45.8**	**+0.6**
comp=Z,1.2nm,0.3s,baz=302,slow=1.8,SNR=6.4							

IDC 22 04:38:00.7±4.2, 36°.38N×71°.11E, h186km±29km, mb3.2/3, mb1 3.1/10, mb1mx2.9/43, mbtmp3.7/10, Error ellipse: s-maj=51.7km s-min=23.1km az=144.0
ISCJB 22 04:38:03.0±1.2, 36°.7N±0°.1×70°.9E±0°.1, h188km, mb3.8/4, Error ellipse: s-maj=16.8km s-min=8.4km az=144.8
NNC 22 04:38:02.5±6.1, 37°.00N×70°.57E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=54.5km s-min=36.2km az=158.0
ISC 22 04:38:02.9±1.7, 36°.6N±0°.1×71°.0E±0°.1, h188km, n24, σ1§32/27, mb3.5/4, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.91**	**52**	Pn	Pn	04 39 12.8	-3.2
KSH				Sn	Sn	04 40 03.1	-10
KSH				smax	smax		
comp=N,110nm,0.3s							
KSH				smax	smax		
comp=E,120nm,0.5s							

AML Almayashu 5.92 20 P **Pn 04 39 30.9 +1.7**
SNR=31
UCH Uchtor 6.26 25 P **Pn 04 39 35.3 +1.6**
SNR=12
KZA Kyzart 6.40 30 P **Pn 04 39 36.4 +0.9**
SNR=9.3
KK31 Karatay Array 6.51 357 ⇑P **Pn 04 39 36.0 -0.6**
comp=E,1.6nm,0.6s,baz=184,slow=12,SNR=8.2
KK31 S **Sn 04 40 48.1 -2.5**
comp=E,5.7nm,0.5s,baz=182,slow=23,SNR=13
AAK Ala-Archa 6.62 23 P **Pn 04 39 39.6 +1.4**
comp=E,2.0nm,0.3s,baz=184,slow=6.7,SNR=11
AAK S **Sn 04 40 52.2 -1.3**
comp=E,0.7nm,0.3s,baz=160,slow=12,SNR=4.7
AAK Ala-Archa 6.62 23 P **Pn 04 39 39.8 +1.7**
SNR=5.4
AAK Ala-Archa 6.62 23 ⇑P **Pn 04 39 39.3 +1.2**
comp=E,2.7nm,0.3s
AAK ⇓S **Sn 04 40 51.9 -1.6**
comp=E,13nm,0.6s
ULHL Ulahol 6.97 34 P **Pn 04 39 43.8 +1.1**
SNR=7.5
TKM2 Tokmak 2 7.25 28 P **Pn 04 39 47.9 +1.4**
SNR=9.4
TKM2 Tokmak 2 7.25 28 ⇓P **Pn 04 39 47.6 +1.1**
comp=E,6.0nm,0.5s
TKM2 ⇑S **Sn 04 41 07.3 -1.3**
comp=E,5.6nm,0.7s
GEYT Alibeck 10.32 281 P **Pn 04 40 26.5 0.0**
comp=E,0.5nm,0.3s,baz=94,slow=19,SNR=1.8
MKAR Makanchi Array 13.23 36 P **Pn 04 41 03.9 +0.3**
comp=E,0.2nm,0.3s,baz=216,slow=9.8,SNR=5.6
AB31 Akbulak array 14.98 331 ⇑P **P 04 41 27.4 +1.3**
comp=E,1.1nm,0.6s,baz=147,slow=12,SNR=21
KURBB Kurchatov Arra 15.04 19 P **Pn 04 41 25.2 -0.7**
comp=E,0.0nm,0.3s,baz=206,slow=11,SNR=4.1
BVAR Borovoye Array 16.43 359 P **Pn 04 41 43.8 +1.0**
comp=E,0.3nm,0.3s,baz=179,slow=15,SNR=4.8
AKTO Aktyubinsk 16.68 330 P **Pn 04 41 46.2 +0.5**
comp=E,0.6nm,0.3s,baz=122,slow=9.9,SNR=6.7
AKTO Aktyubinsk 16.68 330 ⇑P **Pn 04 41 47.9 +2.1**
comp=E,1.5nm,0.4s
ZALV Zalesovo Beam 19.84 25 P **P 04 42 18.4 -0.7**
comp=E,0.5nm,0.3s,baz=218,slow=9.1,SNR=2.8
FINES FINESS Array B 37.39 326 P **P 04 44 57.2 0.0**
comp=E,0.6nm,0.4s,baz=120,slow=10,SNR=10
ARCES ARCESS Array B 41.04 338 P **P 04 45 27.7 +0.3**
comp=E,7.1nm,0.3s,baz=107,slow=7.8,SNR=9.1
NB2 NORSAR Subarra 44.28 323 P **P 04 45 53.2 -0.4**
comp=Z,0.7nm,0.5s,baz=96,slow=7.9
NOA NORSAR Array B 44.28 323 P **P 04 45 53.3 -0.3**
comp=Z,0.7nm,0.5s,baz=96,slow=7.7,SNR=6.1
TORD Torodi Ar. Bea 65.69 269 P **P 04 48 25.5 -2.0**
comp=Z,0.4nm,0.9s,baz=48,slow=7.0,SNR=4.4

NEIC 22 05:08:07.2±2.5, 24°.71S×27°.64E, h5km, mb4.2/1, Error ellipse: s-maj=16.6km s-min=10.9km az=90.0
NEIC Felt at Thabazimbi.
PRE 22 05:08:10.1±1.9, 24°.56S×27°.27E, h5km, ML3.2
ISC 22 05:08:07.8±1.5, 24°.57S±0°.04×27°.47E±0°.05, h5km±12km, n27, σ2§50/49, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSR	**Koster**	**1.38**	**202**	*eP*	**Pb**	**05 08 36.1**	**+1.9**
KSR				*eS*	**Sn**	**05 08 54.3**	**+1.6**
KSR				AML	AML	05 08 58.5	
comp=Z,258nm,0.3s							
LBTB	**Lobatse**	**1.76**	**255**	*ePn*	**Pn**	**05 08 40.5**	**+1.5**
LBTB				*eSn*	**Sn**	**05 09 03.2**	**+1.3**
LBTB	**Lobatse**	**1.76**	**255**	*eP*	**Pn**	**05 08 39.3**	**+0.3**
LBTB				*eS*	**Sn**	**05 09 01.5**	**-0.4**
LBTB				AML	AML	05 09 04.2	
comp=Z,348nm,0.2s							
WDLM	**Western Deep L**	**1.85**	**181**	*eP*	**Pg**	**05 08 44.3**	**+1.0**
WDLM				*eS*	**Sg**	**05 09 08.2**	**+0.8**
WDLM				AML	AML	05 09 11.2	
comp=Z,527nm,0.2s							
ERPM	**east rand prop**	**1.91**	**159**	*eP*	**Pg**	**05 08 43.0**	**-1.3**
ERPM				*eS*	**Sg**	**05 09 07.4**	**-1.6**
ERPM				AML	AML	05 09 09.3	
comp=Z,231nm,0.3s							
MSNA	**Messina**	**3.22**	**47**	*i* P	**Pn**	**05 09 00.1**	**+0.9**
MSNA				*i* S	**Sn**	**05 09 36.1**	**-1.9**
MSNA	**Messina**	**3.22**	**47**	*i* P	**Pn**	**05 09 00.1**	**+0.9**
MSNA				*i* S	**Sn**	**05 09 36.1**	**-1.9**
MSNA	**Messina**	**3.22**	**47**	*eP*	**Pb**	**05 09 01.8**	**-3.8**
MSNA				*eS*	**Sb**	**05 09 42.7**	**-2.5**
MSNA				AML	AML	05 09 55.0	
comp=Z,170nm,0.6s							
SWZ	**Schweizer**	**3.24**	**216**	*eP*	**Pn**	**05 09 00.9**	**+1.5**
SWZ				*eS*	**Sn**	**05 09 39.1**	**+0.6**
SWZ				AML	AML	05 09 59.1	
comp=Z,154nm,0.3s							
MATP	**Matopo**	**4.23**	**13**	*i* P	Pn	05 09 18.1	+5.1
MATP				*i* S	**Sn**	**05 10 05.4**	**+2.5**
MATP	**Matopo**	**4.23**	**13**	*i* P	Pn	05 09 18.1	+5.1
MATP				*i* S	**Sn**	**05 10 05.4**	**+2.5**
BOSA	**Boshof**	**4.49**	**206**	*i* P	**Pn**	**05 09 18.2**	**+1.5**
BOSA				*i* S	**Sn**	**05 10 08.8**	**-0.6**
BOSA	**Boshof**	**4.49**	**206**	*ePn*	**Pn**	**05 09 15.9**	**-0.7**
BOSA				*eSn*	**Sn**	**05 10 07.3**	**-2.1**
BOSA				*eSg*	**Sg**	**05 10 28.0**	**-4.1**
BOSA	**Boshof**	**4.49**	**206**	*i* P	**Pn**	**05 09 18.2**	**+1.5**
BOSA				*i* S	**Sn**	**05 10 08.8**	**-0.6**
BOSA	**Boshof**	**4.49**	**206**	*eP*	**Pn**	**05 09 19.8**	**+3.2**
BOSA				*eS*	**Sn**	**05 10 07.7**	**-1.7**
BOSA				AML	AML	05 10 37.9	
comp=Z,60nm,0.4s							
UPI	**Upington**	**6.73**	**234**	*eP*	**Pn**	**05 09 47.6**	**+0.3**
UPI				*eS*	**Sn**	**05 11 00.6**	**-3.9**
UPI				AML	AML	05 11 40.2	
comp=Z,37nm,0.4s							
KEIM	**Keimoes**	**7.13**	**233**	*eP*	**Pn**	**05 09 54.0**	**+1.2**
KEIM				*eS*	**Sn**	**05 11 10.9**	**-3.3**
KEIM				AML	AML	05 11 59.8	
comp=Z,34nm,0.5s							
SOE	**Somerset East**	**8.29**	**191**	*eP*	**Pn**	**05 10 11.0**	**+2.3**
SOE				*eS*	**Sn**	**05 11 40.6**	**-2.2**
SOE				AML	AML	05 12 29.3	
comp=Z,13nm,0.6s							
LSZ	**Lusaka**	**9.27**	**4**	*ePn*	**Pn**	**05 10 24.9**	**+2.6**
CVNA	**Calvinia**	**9.68**	**223**	*eP*	**Pn**	**05 10 28.5**	**+0.6**
CVNA				*eS*	**Sn**	**05 12 12.4**	**-4.8**
CVNA				AML	AML	05 13 01.4	
comp=Z,6.2nm,0.8s							
WIN	**Windhoek**	**9.71**	**280**	*ePn*	**Pn**	**05 10 29.6**	**+1.2**
SUR	**Sutherland**	**9.74**	**215**	*ePn*	**Pn**	**05 10 29.8**	**+1.1**
SUR				*eSn*	**Sn**	**05 12 15.4**	**-3.2**
KOMG	**Komaggas**	**10.30**	**237**	*eP*	**Pn**	**05 10 37.0**	**+0.7**
KOMG				*eS*	**Sn**	**05 12 24.9**	**-7.4**
KOMG				AML	AML	05 13 30.4	
comp=Z,11nm,0.5s							
TSUM	**Tsumeb**	**10.61**	**298**	*i* P	**Pn**	**05 10 42.5**	**+1.8**
TSUM				*i* S	**Sn**	**05 12 36.1**	**-4.0**
TSUM	**Tsumeb**	**10.61**	**298**	*ePn*	**Pn**	**05 10 43.2**	**+2.5**
TSUM	**Tsumeb**	**10.61**	**298**	*i* P	**Pn**	**05 10 42.5**	**+1.8**
TSUM				*i* S	**Sn**	**05 12 36.1**	**-4.0**
TOA0	**Torodi Ar. Sit**	**45.15**	**323**	*eP*	**P**	**05 16 26.0**	**+0.4**
comp=Z,4.3nm,1.3s							

IDC 22 05:13:14.6±1.0, 12°.64N×143°.60E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/47, mbtmp3.8/5, MS2.9/3, Ms1 2.9/3, ms1mx2.6/31, Error ellipse: s-maj=35.4km s-min=20.2km az=113.0
ISCJB 22 05:13:16.9±0.6, 12°.58N±0°.08×143°.7E±0°.1, h27km, mb4.0/7, MS2.7/1, Error ellipse: s-maj=17.3km s-min=8.1km az=35.4
NEIC 22 05:13:16.8±0.7, 12°.64N×143°.75E, h14km±6km, mb4.5/2, Error ellipse: s-maj=31.6km s-min=11.2km az=131.0
ISC 22 05:13:18.7±0.8, 12°.6N±0°.1×143°.8E±0°.2, h27km, n15, σ0§57/13, mb4.3/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.45**	**48**	Pn	**Pn**	**05 13 42.9**	**-0.3**
46nm,0.3s,baz=192,slow=7.9,SNR=27							
GUMO				Sn	**Sn**	**05 14 01.1**	**-0.1**
103nm,0.3s,baz=24,slow=23,SNR=22							
JAY	**Jayapura**	**15.34**	**192**	LR	LR	05 22 37.8	
comp=Z,62nm,18.6s,baz=32,slow=37							
DAV	**Davao City (W)**	**18.73**	**255**	LR	LR	05 23 12.3	
comp=Z,45nm,21.6s,baz=186,slow=32							
JNU	**Nakatsue**	**23.55**	**332**	LR	LR	05 25 36.2	
comp=Z,26nm,21.3s,baz=192,slow=32							
MJAR	**Matsushiro Arr**	**24.33**	**349**	P	**P**	**05 18 34.1**	**-0.1**
1.5nm,0.7s,baz=169,slow=7.9,SNR=4.4							
MAJO	**Matsushiro**	**24.33**	**349**	*eP*	**P**	**05 18 34.1**	**-0.1**
WB2	**Warramunga Arr**	**33.66**	**196**	*eP*	**P**	**05 19 57.4**	**-0.1**
7.6nm,1.1s							
WR1	**Warramunga Arr**	**33.66**	**196**	*eP*	**P**	**05 19 56.5**	**-0.9**
WRA	**Warramunga Arr**	**33.66**	**196**	P	**P**	**05 19 56.5**	**-1.0**
2.4nm,0.6s,baz=4.6,slow=6.9,SNR=15							
ASAR	**Alice Springs**	**37.34**	**195**	P	**P**	**05 20 28.9**	**-0.2**
0.4nm,0.6s,baz=22,slow=11,SNR=5.8							
MORW	**Morawa**	**49.34**	**212**	*eP*	**P**	**05 22 06.4**	**+0.5**
5.5nm,0.9s							
MK32	**Makanchi Array**	**61.43**	**317**	*eP*	**P**	**05 23 32.6**	**-0.2**
MKAR	**Makanchi Array**	**61.43**	**317**	P	**P**	**05 23 32.6**	**-0.2**
0.2nm,0.3s,baz=81,slow=8.9,SNR=4.3							
NV01	**Mina Array Sit**	**88.37**	**51**	*eP*	**P**	**05 26 09.5**	**+0.7**
NVAR	**Mina Array Bea**	**88.37**	**51**	P	**P**	**05 26 09.5**	**+0.7**
1.3nm,0.7s,baz=258,slow=6.0,SNR=12							

NNC 22 05:32:39.5±2.3, 53°.47N×87°.65E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=18.1km s-min=9.6km az=58.0, Suspected Mining explosion.
IDC 22 05:32:40.3±2.5, 53°.49N×87°.60E, h0km, mb1 3.1/3, mb1mx3.0/48, mbtmp3.1/3, ML2.8/3, Error ellipse: s-maj=21.8km s-min=12.7km az=62.0
ISC 22 05:32:38.7±2.8, 53°.6N±0°.1×87°.6E±0°.1, h0km, n9, σ1§46/14, 9C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**283**	*i*		05 43 30.0	
baz=100,slow=306,SNR=2.6							
ZAA0	**Zalesovo Array**	**1.69**	**283**	⇑P	**Pb**	**05 33 10.2**	**-0.4**
1.5nm,0.6s							
ZAA0				⇑S	**Sg**	**05 33 34.8**	**+1.8**
16nm,0.9s							
ZALV	**Zalesovo Beam**	**1.69**	**283**	Pg	**Pg**	**05 33 10.3**	**-0.8**
3.7nm,0.3s,baz=102,slow=15,SNR=35							
ZALV				Lg	Lg	05 33 34.4	
6.3nm,0.3s,baz=106,slow=25,SNR=17							
KURK	**Kurchatov**	**6.25**	**246**	⇑Sn	**Sn**	**05 35 22.9**	**-1.1**
1.8nm,0.6s							
KURK				⇑Lg	Lg	05 35 55.9	
12nm,0.9s							
KURBB	**Kurchatov Arra**	**6.34**	**245**	Pn	**Pn**	**05 34 14.9**	**+1.5**
0.1nm,0.3s,baz=62,slow=14,SNR=11							
KURBB				Sn	**Sn**	**05 35 25.6**	**-0.8**
0.1nm,0.3s,baz=186,slow=35,SNR=2.7							
KURBB				Lg	Lg	05 35 59.1	
0.1nm,0.3s,baz=62,slow=32,SNR=11							
KURBB	**Kurchatov Arra**	**6.34**	**245**	⇑Pn	**Pn**	**05 34 14.8**	**+1.4**
1.5nm,0.4s							
KURBB				⇓Sn	**Sn**	**05 35 27.1**	**+0.6**
5.6nm,0.7s							
KURBB				⇑Lg	Lg	05 36 00.9	
12nm,0.8s							
MK31	**Makanchi Array**	**7.63**	**209**	⇑Pn	**Pn**	**05 34 31.7**	**+0.7**
0.2nm,0.3s,baz=40,slow=14,SNR=8.4							
MK31				⇑Sn	**Sn**	**05 35 58.5**	**+0.3**
1.2nm,0.7s							
MK31				⇑Lg	Lg	05 36 39.0	
3.2nm,0.8s,baz=34,slow=28,SNR=5.7							
MKAR	**Makanchi Array**	**7.63**	**209**	Pn	**Pn**	**05 34 32.5**	**+1.5**
0.2nm,0.3s,baz=30,slow=12,SNR=7.9							
MKAR				Sn	**Sn**	**05 35 56.1**	**-2.1**
0.1nm,0.3s,baz=30,slow=26,SNR=5.0							
MKAR				Lg	Lg	05 36 37.6	
0.2nm,0.3s,baz=40,slow=29,SNR=8.1							
BVAR	**Borovoye Array**	**10.32**	**274**	Pn	**Pn**	**05 35 08.6**	**+0.7**
0.1nm,0.3s,baz=68,slow=16,SNR=1.9							
BVAR				Sn	**Sn**	**05 37 02.0**	**-2.3**
0.3nm,0.3s,baz=76,slow=26,SNR=11							

IDC 22 05:42:33.3±0.4, 8°.30S×115°.90E, h0km, mb5.0/22, mb1 5.2/25, mb1mx5.1/34, mbtmp5.1/25, ML5.1/3, MS4.5/26, Ms1 4.5/26, ms1mx4.4/39, Error ellipse: s-maj=14.5km s-min=10.8km az=74.0
KLM 22 05:42:36.0, 8°.59S×116°.39E, h15km, mb5.3
GCMT 22 05:42:36.8±0.2, 8°.22S±0°.01×115°.93E±0°.01, h35km±1km, MW5.2/100, Moment Tensor Solution. s74,c101; s100,c155; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.27±.02; Mθθ-0.67±.02; Mφφ0.40±.02; Mrθ-0.56±.03; Mrφ0.14±.01; Mθφ0.27±.03; Best double couple: M0.82900×10^17 NP1:φs305.00000°, δ77.00000°, λ121.00000°. NP2:φs56.00000°, δ33.00000°, λ24.00000°. Principal axes: T 0.6800, Plg49.0000°, Azm248.0000°; N 0.2970, Plg30.0000°, Azm117.0000°; P -0.9780, Plg26.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
MOS 22 05:42:36.8±1.1, 8°.26S×116°.02E, h33km, mb5.2/47, MS4.7/4 Error ellipse: s-maj=9.1km s-min=5.6km az=105.6
ISCJB 22 05:42:37.2±0.1, 8°.35S±0°.02×116°.07E±0°.02, h35km, mb5.2/130, MS4.7/45, Error ellipse: s-maj=3.1km s-min=2.3km az=17.0
DJA 22 05:42:37.1±0.2, 8°S±2°×11°6E±°, h16km±2km, M5.2/67, mB5.7/43, mb5.2/67, MLv5.7/23, Mw(mB)5.2/43
NEIC 22 05:42:39.8±2.4, 8°.31S×116°.06E, h46km±4km, mb5.1/71, Error ellipse: s-maj=11.7km s-min=11.1km az=48.0
NEIC At least 50 people injured and 5,370 houses destroyed or damaged in the Gangga-Tanjung-Pemenang area. Felt [IV] at Lombok. Also felt at Mataram. Felt [III] at Denpasar, Gianyar, Karangasem and Kuta, Bali. Also felt at Ubud.
ISC 22 05:42:38.9±0.2, 8°.39S±0°.03×116°.05E±0°.03, h35km, n648, σ1§66/679, mb5.1/130, MS4.6/47, 9C-15D, Sumbawa region

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

BATI	Baumata	7.73	104	P	Pn	05 44 30.3 +1.2
	250nm,0.7s,2μm1.0nm					
KDI	Kendari	7.88	56	P	Pn	05 44 32.7 +1.6
	90nm,1.0s,1μm0.8nm					
CISI	Cisompet, Garu	8.19	275	*e*Pn	Pn	05 44 34.5 -1.0
CISI	Cisompet, Garu	8.19	275	P	Pn	05 44 36.3 +0.8
	570nm,0.8s,19μm					
SOEI	Soe	8.23	100	*e*Pn	Pn	05 44 36.0 -0.1
SOEI	Soe	8.23	100	P	Pn	05 44 37.3 +1.2
	504nm,0.9s,7μm					
LEM	Lembang	8.50	280	LR	LR	05 49 05.7
	comp=Z,6μm,18.2s,baz=76,slow=47					
APSI	Ampana	9.29	37	P	Pn	05 44 52.2 +1.7
	109nm,1.0s,1μm					
LUWI	Luwuk	9.91	43	*e*Pn	Pn	05 44 58.3 -0.7
LUWI	Luwuk	9.91	43	P	Pn	05 45 00.3 +1.4
	126nm,1.0s,7μm					
TPI	Tanjungpandan	10.05	303	P	Pn	05 45 02.2 +1.3
	39nm,1.4s,987nm					
CGJI	Cibinong	10.41	279	P	Pn	05 45 07.0 +1.1
	279nm,1.0s,4μm					
XMIS	Christmas Isla	10.46	258	*e*Pn	Pn	05 45 03.2 -3.4
KSM	Kuching	11.34	329	*e*Pn	Pn	05 45 20.0 +1.3
KSM	Kuching	11.34	329	P	Pn	05 45 22.0 +3.4
SBUM	Sibu	11.42	340	P	Pn	05 45 24.0 +4.3
PPBI	Pangkal Pinang	11.64	302	P	Pn	05 45 23.8 +1.1
	44nm,0.8s,13μm					
SANI	Sanana	11.73	58	P	Pn	05 45 23.1 -0.8
	152nm,1.2s,2μm					
KASI	Kota Agung	11.81	283	P	Pn	05 45 26.2 +1.2
	179nm,1.0s,2μm					
BTM	Bintulu	11.88	345	P	Pn	05 45 29.0 +3.0
NLAI	Namlea	12.13	66	P	Pn	05 45 31.0 +1.7
	66nm,1.3s,5μm					
MDSI	Maura Dua	12.41	287	P	Pn	05 45 34.3 +1.0
	69nm,1.7s					
LHSI	Lahat	13.25	289	P	Pn	05 45 45.8 +1.1
	101nm,1.0s,2μm					
FITZ	Fitzroy Crossi	13.42	137	Pn	Pn	05 45 45.1 -2.0
	3.1nm,0.3s,baz=333,slow=8.6,SNR=46					
FITZ				LR	LR	05 50 42.3
	comp=Z,2μm,21.3s,baz=319,slow=36					
FITZ	Fitzroy Crossi	13.42	137	*e*Pn	Pn	05 45 45.4 -1.7
FITZ				*e*Sn	Sn	05 48 12.9 -2.2
FITZ	Fitzroy Crossi	13.42	137	P	Pn	05 45 45.6 -1.5
	baz=14,SNR=28					
FITZ				S	Sn	05 48 08.3 -6.8
	baz=14					
MNAI	Manna	13.61	286	*e*Pn	Pn	05 45 50.6 +1.0
PSA00	Pilbara Seismi	13.61	165	*e*Pn	Pn	05 45 47.0 -2.6
MSAI	Masohi	13.76	69	P	Pn	05 45 53.0 +1.4
	29nm,0.7s					
GIRL	Giralia	14.28	187	*e*Pn	Pn	05 45 57.9 -0.8
GIRL	Giralia	14.28	187	P	Pn	05 45 57.0 -1.8
	baz=14,SNR=66					
GIRL				S	Sn	05 48 27.5 -8.5
	baz=14					
BNDI	Bandanaira	14.29	75	P	Pn	05 46 01.5 +2.5
	874nm,1.0s,10μm					
KKM	Kota Kinabalu	14.34	1	*e*Pn	P	05 46 06.4 +0.2
KKM	Kota Kinabalu	14.34	1	P	Pn	05 46 02.0 +2.3
KNRA	Kununurra	14.39	121	P	Pn	05 45 59.4 -0.8
	baz=14,SNR=20					
KNRA				S	Sn	05 48 37.7 -0.9
	baz=14					
TNTI	Ternate	14.50	52	*e*Pn	P	05 46 05.2 -2.7
TNTI	Ternate	14.50	52	P	Pn	05 46 02.6 +0.9
TPRI	Tanjung Pinang	14.74	308	P	P	05 46 08.4 -2.3
MTN	Manton Dam	15.47	108	*e*Pn	Pn	05 46 13.7 -1.0
	83nm,0.7s					
MTN	Manton Dam	15.47	108	P	Pn	05 46 13.8 -0.9
	baz=16,SNR=6.5					
MTN				S	Sn	05 48 57.3 -7.8
	baz=16					
KRJI	Kerinci	15.81	293	P	Pn	05 46 17.5 -1.6
MYKOM	Kota Tinggi	15.81	309	*e*Pn	Pn	05 46 21.1 +2.0
	109nm,1.1s					
MYKOM	Kota Tinggi	15.81	309	P	P	05 46 24.0 +1.4
RGRI	Rengat	15.82	300	P	Pn	05 46 21.4 +2.1
SDSI	Sungai Dareh	16.34	296	P	Pn	05 46 25.4 -0.4
	35nm,1.6s,5μm					
KDU	Kakadu	16.70	106	P	Pn	05 46 28.6 -1.8
	baz=17,SNR=9.7					
SWI	Sorong	16.90	65	P	Pn	05 46 32.8 -0.1
	222nm,1.3s,2μm					
SIJI	Sorong	16.90	65	Pn	Pn	05 46 32.8 -0.1
	5.6nm,0.3s,baz=260,slow=6.1,SNR=69					
FAKI	Fak Fak	17.01	72	*e*Pn	Pn	05 46 32.8 -1.5
	86nm,0.8s					
FAKI	Fak Fak	17.01	72	P	Pn	05 46 31.3 -3.0
	152nm,0.9s,2μm					
PDSI	Padang	17.21	295	P	Pn	05 46 35.7 -1.1
	46nm,1.1s,3μm					
BKNI	Bangkinang	17.28	299	P	P	05 46 38.9 +0.1
	134nm,1.0s,2μm					
DAV	Davao City (W)	18.06	32	P	P	05 46 48.9 +1.5
	102nm,0.3s,baz=23,slow=3.2,SNR=6.9					
DAV	Davao City (W)	18.06	32	*e*Pn	P	05 46 48.8 +1.4
	742nm,1.4s					
SISI	Saibi	18.29	292	P	P	05 46 43.9 -6.0
MNSI	Mandailing Nat	18.78	298	P	Pn	05 46 56.8 +0.8
	48nm,1.1s,2μm					
PBSI	Pulau Batu	19.54	294	P	P	05 47 02.9 -0.8
	56nm,1.4s					
IPM	Ipoh	19.69	310	*e*P	Pn	05 47 06.7 -0.3
	55nm,0.9s					
WRKA	Warakurna	20.27	146	P	P	05 47 13.1 +1.5
	baz=20,SNR=274					
PSI	Prapat	20.37	302	P	P	05 47 13.0 +0.1
	57nm,0.9s,baz=164,slow=9.2,SNR=14					
PSI	Prapat	20.37	302	*e*P	P	05 47 12.1 -0.8
	116nm,1.1s					
PSI	Prapat	20.37	302	*e*P	P	05 47 12.1 -0.8
PSI				pmax	pmax	
	comp=Z,118nm,1.1s					
KULM	Kulim	20.50	311	*e*P	Pn	05 47 15.8 -0.7
	comp=Z,44nm,0.9s					
MORW	Morawa	20.57	180	*e*P	P	05 47 16.5 +1.6
	comp=Z,157nm,1.0s					
MORW	Morawa	20.57	180	P	P	05 47 15.7 +0.8
	baz=21,SNR=34					
GSI	Gunungsitoli	20.78	297	*e*P	P	05 47 14.8 -2.4
	comp=Z,31nm,0.8s					
GSI	Gunungsitoli	20.78	297	P	P	05 47 13.4 -3.8
	comp=Z,46nm,1.2s					
TSI	Tuntungan	21.06	303	P	P	05 47 21.4 +1.2
	comp=Z,322nm,1.4s					
WR1	Warramunga Arr	21.10	125	*e*P	P	05 47 20.6 -0.1
WRA	Warramunga Arr	21.10	125	P	P	05 47 20.6 -0.1
	comp=Z,108nm,0.7s,baz=300,slow=12,SNR=59					
WRAB	Tennant Creek	21.11	125	*e*P	P	05 47 20.3 -0.4
	comp=Z,386nm,1.5s					
WRAB	Tennant Creek	21.11	125	*i*P	P	05 47 20.0 -0.7
WRAB				pmax	pmax	
	comp=Z,68nm,0.8s					
WB2	Warramunga Arr	21.11	125	*e*P	P	05 47 20.3 -0.5
	comp=Z,393nm,1.5s					
SRPI	Serui, Papua	21.12	73	P	P	05 47 21.0 +0.1
	comp=Z,226nm,1.0s					
BAKI	Biak	21.22	71	P	P	05 47 21.9 -0.1
	comp=Z,239nm,1.3s,comp=Z,3μm					
DLV	T Lat	21.55	339	*e*P	P	05 47 31.6 +5.9
	comp=Z,51nm,1.0s					
KCSI	Kotacane, Aceh	21.73	302	P	P	05 47 24.7 -2.7
	comp=Z,77nm,1.3s,comp=Z,969nm					
SKLT	Songkhla	21.80	315	P	P	05 47 38.8 +11
TPTI		22.09	301	P	P	05 47 31.4 +0.1
	comp=Z,60nm,1.4s,comp=Z,856nm					
BLDU	Ballidu	22.12	178	P	P	05 47 32.5 +1.0
	baz=22,SNR=35					
SNSI	Sinabang, Aceh	22.40	298	P	P	05 47 35.2 +0.6
	comp=Z,168nm,1.1s					
TGY	Tagaytay City	22.87	12	P	P	05 47 39.8 +0.2
	comp=Z,172nm,0.3s,baz=312,slow=11,SNR=5.1					
AS31	Alice Springs	22.88	134	*e*P	P	05 47 39.2 -0.5
	comp=Z,89nm,1.6s					
ASAR	Alice Springs	22.88	134	P	P	05 47 39.5 -0.1
	comp=Z,35nm,0.7s,baz=304,slow=9.2,SNR=153					
TRTT	Trang	22.92	314	P	P	05 47 42.3 +2.2
	comp=Z,63nm,1.7s,comp=Z,2μm					
MLSI	Meulaboh, Aceh	23.28	302	P	P	05 47 43.9 +0.2
	comp=Z,266nm,1.1s					
LHMI	Lhok Sumawe	23.36	305	*e*P	P	05 47 44.4 -0.2
	comp=Z,201nm,0.8s					
LHMI	Lhok Sumawe	23.36	305	P	P	05 47 45.8 +1.3
	comp=Z,325nm,1.7s,comp=Z,4μm					
MUN	Mundaring	23.47	180	P	P	05 47 46.7 +1.2
	baz=24,SNR=8.4					
KMBL	Kambalda	23.50	167	P	P	05 47 45.8 +0.1
	baz=24,SNR=16					
NWAO	Narrogin (SRO)	24.44	178	P	P	05 47 54.8 +0.2
	comp=Z,90nm,0.8s,baz=354,slow=9.8,SNR=26					
NWAO	Narrogin (SRO)	24.44	178	*e*P	P	05 47 54.8 +0.2
NWAO				*e*P	P	05 47 55.7 +1.2
NWAO	Narrogin (SRO)	24.44	178	P	P	05 47 55.3 +0.8
	baz=25,SNR=20					
GENI	Genyem	24.68	78	P	P	05 47 54.1 -2.8
	comp=Z,191nm,1.2s,comp=Z,5μm					
FORT	Forrest	24.95	155	*e*P	P	05 48 00.3 +1.2
	comp=Z,121nm,0.8s					
FORT	Forrest	24.95	155	P	P	05 48 01.6 +2.5
	baz=25,SNR=14					
JAY	Jayapura	25.22	78	P	P	05 48 01.7 -0.1
	comp=Z,30nm,0.8s,baz=245,slow=6.9,SNR=11					
QIS	Mount Isa	25.77	121	P	P	05 48 07.2 +0.4
	baz=26,SNR=14					
RKGY	Rocky Gully	26.11	178	P	P	05 48 10.8 +1.2
	baz=26,SNR=6.0					
COEN	Coen	27.17	104	*e*P	P	05 48 20.2 +0.7
	comp=Z,71nm,1.0s					
COEN	Coen	27.17	104	P	P	05 48 20.1 +0.7
	baz=27,SNR=11					
PANO	Nakornpanom	27.78	336	P	P	05 48 28.3 +3.6
	comp=Z,0.5nm,2.0s					
KHON	Khomkaen	27.84	332	P	P	05 48 28.0 +2.7
	comp=Z,35μm,0.6s					
CHAI	Chaiyaphum	27.86	330	P	P	05 48 28.4 +2.9
	comp=Z,38μm,0.8s,comp=Z,450μm					
SKNT	Sakolnakorn	27.88	335	P	P	05 48 27.6 +1.9
	comp=Z,33nm,0.9s					
PBKT	Sadao Pong	28.94	329	P	P	05 48 38.0 +2.9
	comp=Z,10nm,1.0s					
NONG	Nongkai	29.21	334	P	P	05 48 39.4 +1.9
	comp=Z,0.4nm,1.2s					
UTTA	Uttaradit	30.14	330	P	P	05 48 48.8 +3.1
	comp=Z,42μm,0.9s					
BBOO	Buckleboo	30.56	145	*e*P	P	05 48 50.5 +1.0
	comp=Z,64nm,0.9s					
BBOO	Buckleboo	30.56	145	P	P	05 48 50.4 +1.0
	baz=31,SNR=8.8					
LAMP	Lampang	31.26	329	P	P	05 48 59.5 +3.8
	comp=Z,30μm,0.9s					
CTA	Charters Tower	31.44	115	P	P	05 48 58.0 +0.7
	comp=Z,9.9nm,0.8s,baz=285,slow=13,SNR=6.1					
CTA	Charters Tower	31.44	115	P	P	05 48 58.0 +0.7
CTAO	Charters Tower	31.44	115	*e*P	P	05 48 58.4 +1.1
	comp=Z,22nm,1.0s					
CTAO	Charters Tower	31.44	115	*e*P	P	05 48 58.4 +1.1
CTAO				pmax	pmax	
	comp=Z,22nm,1.0s					
CM31	Chiang Mai Arr	31.57	328	*e*P	P	05 48 60.0 +1.6
	comp=Z,19nm,0.9s					
CMAR	Chiang Mai Arr	31.57	328	P	P	05 48 58.9 +0.6
	comp=Z,6.7nm,0.9s,baz=155,slow=7.2,SNR=20					
CMAR				LR	LR	06 02 58.4
	comp=Z,2μm,19.6s,baz=162,slow=39					
CMAR	Chiang Mai Arr	31.57	328	*i*P	P	05 49 00.0 +1.6
CMAR				pmax	pmax	
	comp=Z,7.0nm,0.9s					
PAYA	Payao	31.85	330	P	P	05 49 03.7 +2.8
	comp=Z,32μm,0.9s					
SLVN	Son La	31.85	338	*e*P	P	05 49 02.5 +1.6
	comp=Z,12nm,1.0s					
CMMT	Chiang Mai	31.86	328	P	P	05 49 03.8 +2.9
	comp=Z,8.1nm,0.9s					
CHTO	Chiang Mai	31.86	328	*e*P	P	05 49 02.4 +1.4
	comp=Z,7.7nm,0.9s					
CHTO	Chiang Mai	31.86	328	*e*P	P	05 49 02.4 +1.4
CHTO				pmax	pmax	
	comp=Z,8.0nm,0.9s					
SSLB	Suanglung	32.34	8	*e*P	P	05 49 08.2 +3.1
	comp=Z,25nm,1.1s					
HTT	Hallett	32.67	143	P	P	05 49 09.3 +1.3
	baz=33,SNR=5.2					
QZH	Quanzhou	33.22	4	P	P	05 49 16.0 +3.3
QZH				S	S	05 54 33.3 +2.8
QZH				LR	LR	
	comp=Z,970nm,17.7s					
QZH				LR	LR	
	comp=Z,1μm,16.3s					
YHNB	Yeheng	33.27	9	*e*P	P	05 49 12.8 -0.5
	comp=Z,41nm,1.0s					
STKA	Stephens Creek	33.32	138	P	P	05 49 14.4 +0.8
	comp=Z,7.2nm,0.8s,baz=308,slow=8.7,SNR=8.4					
STKA	Stephens Creek	33.32	138	*e*P	P	05 49 14.0 +0.4
	comp=Z,6.6nm,0.9s					
STKA	Stephens Creek	33.32	138	P	P	05 49 14.4 +0.8
	baz=33,SNR=7.7					
TATO	Taipei	33.58	9	*e*P	P	05 49 17.4 +1.5
	comp=Z,96nm,1.0s					
KMI	Kunming	35.74	339	P	P	05 49 37.9 +3.0
KMI				pP	pP	05 49 40.5 -4.1
KMI				sP	sP	05 49 42.6 -6.1
KMI				PP	PP	05 50 57.5 +1.0
KMI				S	S	05 55 15.3 +5.4
KMI				sS	sS	05 55 19.3 -7.3
KMI				pmax	pmax	
	comp=Z,31nm,0.9s					
KMI				pmax	pmax	
	comp=Z,360nm,3.9s					
KMI				LR	LR	
	comp=Z,1μm,15.5s					
KMI				LR	LR	
	comp=Z,1μm,15.1s					
KMI				LR	LR	
	comp=Z,1μm,15.5s					
KMI	Kunming	35.74	339	*e*P	P	05 49 37.2 +2.3
	comp=Z,79nm,1.3s					
KMI	Kunming	35.74	339	*e*P	P	05 49 37.2 +2.3
KMI				pmax	pmax	
	comp=Z,79nm,1.3s					
GYA	Guiyang	35.82	346	P	P	05 49 36.9 +1.5
GYA				PP	PnPn	05 50 54.9 -1.3
GYA				S	S	05 55 12.8 +2.0
GYA				ScP	ScP	05 55 53.9 +7.7
GYA				pmax	pmax	
	comp=Z,20nm,0.8s					
GYA				pmax	pmax	
	comp=Z,180nm,6.7s					
GYA				LR	LR	
	comp=Z,990nm,18.3s					
GYA				LR	LR	
	comp=Z,940nm,15.1s					
GYA				LR	LR	
	comp=Z,1μm,17.6s					
RMQ	Roma	35.86	124	P	P	05 49 36.1 +0.3
	baz=36,SNR=14					
CMSA	Cobar Meteorol	35.93	134	P	P	05 49 37.3 +1.1
	baz=36,SNR=8.3					
ARPS	Mount Arapiles	36.70	144	P	P	05 49 44.1 +1.4
	baz=37,SNR=12					
EIDS	Eidsvold	37.38	121	*e*P	P	05 49 50.1 +1.5
	comp=Z,12nm,0.8s					
WHN	Wuhan	38.74	358	P	P	05 49 59.5 -0.4
WHN				S	S	05 55 56.8 +1.9
WHN				LR	LR	
	comp=Z,1μm,11.0s					
WHN				LR	LR	
	comp=Z,1μm,12.8s					
WHN				LR	LR	
	comp=Z,3μm,15.8s					
ENH	Enshi	38.95	351	*e*P	P	05 50 03.5 +1.7
	comp=Z,67nm,0.9s					
YNG	Young	39.35	136	P	P	05 50 06.0 +0.9
	baz=39,SNR=5.8					
TOO	Toolangi	39.41	142	*e*P	P	05 50 07.8 +2.2
	comp=Z,46nm,1.0s					
TOO	Toolangi	39.41	142	P	P	05 50 07.7 +2.2
	baz=40,SNR=9.0					
TOO	Toolangi	39.41	142	*e*P	P	05 50 07.8 +2.2
TOO				pmax	pmax	
	comp=Z,46nm,1.0s					
ARMA	Armidale	39.81	128	*e*P	P	05 50 11.5 +2.3
	comp=Z,28nm,0.9s					
ARMA	Armidale	39.81	128	P	P	05 50 10.2 +1.0
	baz=40,SNR=10					
NJ2	Nanjing	40.30	4	*e*P	P	05 50 12.8 -0.1
NJ2				pP	pP	05 50 17.3 -5.5
NJ2				sP	sP	05 50 19.9 -6.9
NJ2				S	S	05 56 24.1 +5.8
NJ2				pmax	pmax	
	comp=Z,29nm,0.9s					
NJ2				LR	LR	
	comp=Z,760nm,16.1s					
NJ2				LR	LR	
	comp=Z,590nm,16.1s					
NJ2				LR	LR	
	comp=Z,790nm,14.2s					
CD2	Chengdu	40.81	344⇑	*i*P	P	05 50 17.6 +0.3
CD2				sP	pP	05 50 22.4 -4.7
CD2				S	S	05 56 27.1 +1.0
CD2				sS	sS	05 56 37.1 -5.8
CD2				ScS	ScS	06 00 25.8 +5.8
CD2				pmax	pmax	
	comp=Z,110nm,1.3s					
CD2				pmax	pmax	
	comp=Z,560nm,4.0s					
CD2				LR	LR	
	comp=Z,2μm,17.8s					
CD2				LR	LR	
	comp=Z,3μm,16.5s					
CD2				LR	LR	
	comp=Z,3μm,13.3s					
SHL	Shillong	41.13	326	*e*P	P	05 50 20.0 -0.2
XAN	Xi'an	42.73	351	P	P	05 50 34.0 +1.1
XAN				PP	PP	05 52 15.5 +2.9
XAN				S	S	05 56 52.1 -2.3
XAN				SS	SS	06 00 00.1 -6.0
XAN				pmax	pmax	
	comp=Z,31nm,1.0s					
XAN				LR	LR	
	comp=Z,750nm,20.6s					
XAN				LR	LR	
	comp=Z,590nm,17.7s					
XAN	Xi'an	42.73	351	*e*P	P	05 50 34.1 +1.2
	comp=Z,32nm,1.0s					
XAN	Xi'an	42.73	351	*e*P	P	05 50 34.1 +1.2
XAN				pmax	pmax	
	comp=Z,32nm,1.0s					
JNU	Nakatsue	43.63	18	*e*P	P	05 50 38.8 -1.4
	comp=Z,29nm,1.2s					
LSA	Lhasa	44.81	329	P	P	05 50 51.3 +1.1
LSA				S	S	05 57 23.5 -2.2
LSA				LR	LR	
	comp=Z,2μm,20.6s					
LSA				LR	LR	
	comp=Z,2μm,18.5s					
LSA				LR	LR	
	comp=Z,2μm,17.8s					
LSA	Lhasa	44.81	329	*e*P	P	05 50 51.0 +0.8
	comp=Z,18nm,0.8s					
LSA	Lhasa	44.81	329	*e*P	P	05 50 51.0 +0.8
LSA				pmax	pmax	
	comp=Z,18nm,0.8s					
HYB	Hyderabad	45.06	305	*i*P	P	05 50 50.0 -1.9
LZH	Lanzhou	45.70	346	*e*P	P	05 50 58.3 +1.5
LZH				pP	pP	05 51 03.0 -3.8
LZH				sP	sP	05 51 05.1 -5.7
LZH				S	S	05 57 39.3 +1.5
LZH				sS	sS	05 57 49.5 -5.4
LZH				pmax	pmax	
	comp=Z,35nm,1.2s					
LZH				pmax	pmax	
	comp=Z,250nm,4.3s					
LZH				LR	LR	
	comp=Z,1μm,14.1s					
LZH				LR	LR	
	comp=Z,890nm,14.7s					
LZH				LR	LR	
	comp=Z,960nm,15.2s					
TJN	Taejon	45.78	13⇑	*i*P	P	05 50 56.2 -1.0
TIY	Taiyuan	45.98	356	*e*P	P	05 50 56.4 -2.5
TIY				S	S	05 57 45.8 +4.2
TIY				SS	SS	06 01 00.9 -6.2
TIY				pmax	pmax	
	comp=Z,14nm,0.5s					
TIY				pmax	pmax	
	comp=Z,130nm,5.9s					
TIY				LR	LR	
	comp=Z,490nm,13.8s					
TIY				LR	LR	
	comp=Z,170nm,10.8s					
TIY				LR	LR	
	comp=Z,500nm,14.3s					
JIRN	Jiri	46.03	322	*e*P	P	05 50 59.7 -0.1
	comp=Z,52nm,0.6s					
GUN	Gumba	46.41	322	*e*P	P	05 51 02.4 -0.3
	comp=Z,38nm,0.7s					
PKI	Pulchoki	46.45	321	*e*P	P	05 51 02.1 -0.9
	comp=Z,7.1nm,0.5s					
DMN	Daman	46.66	321	*e*P	P	05 51 04.2 -0.4
KKN	Kakani	46.69	321	*e*P	P	05 51 04.2 -0.6
	comp=Z,17nm,0.7s					
KS15	Wonju Array Si	46.92	13	*e*P	P	05 51 06.5 +0.3
	comp=Z,26nm,1.1s					
KSRS	Korea Array	46.94	13	P	P	05 51 06.0 -0.2
	comp=Z,26nm,1.0s,baz=192,slow=8.1,SNR=77					
KSRS				LR	LR	06 13 12.7
	comp=Z,323nm,20.8s,baz=202,slow=39					
DL2	Dalian	47.34	6	P	P	05 51 08.3 -1.0
DL2				S	S	05 58 00.5 -0.2
DL2				pmax	pmax	
	comp=Z,25nm,0.9s					
DL2				pmax	pmax	
	comp=Z,250nm,5.7s					
DL2				LR	LR	
	comp=Z,540nm,14.8s					
DL2				LR	LR	
	comp=Z,230nm,16.4s					
DL2				LR	LR	
	comp=Z,750nm,15.4s					
KOLN	Koldanda	47.72	320	*e*P	P	05 51 11.9 -0.9
	comp=Z,20nm,0.7s					
INU	Inuyama	47.79	23	*e*P	P	05 51 12.2 -0.8
	comp=Z,37nm,1.1s					
DANN	Dangsing	48.03	321	*e*P	P	05 51 14.5 -0.8
BJT	Baijiatuau	48.16	0	*e*P	P	05 51 15.4 -0.3
	comp=Z,19nm,1.0s					
BJT	Baijiatuau	48.16	0	*e*P	P	05 51 15.4 -0.3
BJT				pmax	pmax	
	comp=Z,19nm,1.0s					
BJI	Beijing	48.18	0⇑	*e*P	P	05 51 15.9 0.0
BJI				S	S	05 58 10.3 -2.4
BJI				pmax	pmax	
	comp=Z,9.0nm,0.9s					
BJI				LR	LR	
	comp=Z,430nm,16.9s					
BJI				LR	LR	
	comp=Z,280nm,17.1s					
BJI				LR	LR	
	comp=Z,250nm,18.6s					
PYUN	Piuthan	48.34	320	*e*P	P	05 51 16.0 -1.6
	comp=Z,36nm,1.1s					
BTO	Baotou	49.06	354	*e*P	P	05 51 23.8 +1.0
HHC	Hu-ho-hao-te	49.17	356	*e*P	P	05 51 25.1 +1.5
HHC				S	S	05 58 26.9 +0.1
HHC				pmax	pmax	
	comp=Z,14nm,0.9s					
HHC				pmax	pmax	
	comp=Z,46nm,4.9s					
HHC				LR	LR	
	comp=Z,560nm,17.0s					
HHC				LR	LR	
	comp=Z,500nm,16.2s					
MAJO	Matsushiro	49.30	24	*e*P	P	05 51 23.4 -1.2
	comp=Z,117nm,1.4s					
MAJO	Matsushiro	49.30	24	*d i*P	P	05 51 23.3 -1.3
MAJO				pmax	pmax	
	comp=Z,88nm,1.4s					
MAT	Matsushiro	49.30	24	P	P	05 51 23.3 -1.3
MAT				S	S	05 58 25.6 -3.1
MJAR	Matsushiro Arr	49.30	24	P	P	05 51 23.4 -1.2
	comp=Z,44nm,1.0s,baz=201,slow=8.1,SNR=63					
MJAR				LR	LR	06 14 19.2
	comp=Z,240nm,18.0s,baz=190,slow=39					
MJB9	Matsu-Tunnel	49.31	24	*e*P	P	05 51 23.4 -1.2
	comp=Z,119nm,1.4s					
GTA	Gaotai	49.88	344	⇓P	P	05 51 30.3 +1.2
GTA				pP	pP	05 51 34.8 -4.4
GTA				sP	sP	05 51 37.4 -5.8
GTA				S	S	05 58 40.6 +3.6
GTA				sS	sS	05 58 47.5 -6.7
GTA				SS	SS	06 02 09.6 -0.7
GTA				pmax	pmax	
	comp=Z,30nm,1.1s					
GTA				pmax	pmax	
	comp=Z,190nm,7.5s					
GTA				LR	LR	
	comp=Z,450nm,18.4s					
GTA				LR	LR	

comp=Z,750nm,18.7s
GTA LR LR
comp=Z,780nm,19.7s
DZM Mont Dzumac 50.27 112 *e*LR LR 06 06 02.5
comp=Z,613nm,21.9s
MSHR Mys Shultsa 52.57 14⇓ *e*P **P 05 51 50.2 +1.2**
CN2 Changchun 52.64 9 *e*P P 05 51 59.3 +10
CN2 *e*S **S 05 59 21.8 +7.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,130nm,4.0s
CN2 LR LR
comp=N,310nm,18.0s
CN2 LR LR
comp=E,250nm,18.0s
CN2 LR LR
comp=Z,390nm,18.0s
VLA Vladivostok 53.25 14⇑ *i*P **P 05 51 54.4 +0.3**
VLA pmax pmax
comp=Z,59nm,1.5s
MDJ Mudanjiang 54.16 12 P **P 05 52 00.8 +0.1**
MDJ pmax pmax
comp=Z,53nm,1.2s
MDJ pmax pmax
comp=Z,200nm,3.1s
MDJ Mudanjiang 54.16 12 *e*P **P 05 52 00.4 -0.3**
comp=Z,60nm,0.9s
USA0B Ussuriysk Arra 54.30 14 *e*P **P 05 52 01.1 -0.6**
comp=Z,53nm,1.0s
USRK Ussuriysk Ar. 54.30 14 P **P 05 52 01.3 -0.4**
comp=Z,31nm,0.9s,baz=194,slow=6.6,SNR=62
ERM Erimo 55.97 24 *e*P **P 05 52 13.9 +0.1**
comp=Z,22nm,0.8s
ERM Erimo 55.97 24⇑ *i*P **P 05 52 14.1 +0.3**
ERM pmax pmax
comp=Z,23nm,0.8s
TEY Ternei 56.31 17⇓ *e*P **P 05 52 16.0 -0.2**
TEY pmax pmax
comp=N,20nm,0.9s
TEY pmax pmax
comp=Z,50nm,0.9s
TEY pmax pmax
comp=E,10.0nm,1.0s
ULN Ulaanbaatar 56.57 353 *e*P **P 05 52 17.8 -0.4**
comp=E,13nm,0.9s
ULN Ulaanbaatar 56.57 353 *d i*P **P 05 52 17.9 -0.3**
ULN pmax pmax
comp=Z,7.0nm,0.7s
SONA0 Songino Array 56.63 352 *e*P **P 05 52 18.5 -0.1**
SONM Songino Array 56.63 352 P **P 05 52 18.5 -0.1**
comp=Z,15nm,0.8s,baz=169,slow=8.5,SNR=38
SONM LR LR 06 18 26.3
comp=Z,555nm,20.7s,baz=238,slow=38
CASY Casey 57.93 183 *e*P **P 05 52 28.2 +0.8**
comp=Z,61nm,1.2s
WMQ Urumqi 57.98 336 P **P 05 52 28.5 +0.4**
WMQ pP pP 05 52 35.0 -3.4
WMQ S **S 06 00 28.8 +2.7**
WMQ SS **SS 06 04 21.0 +3.1**
WMQ pmax pmax
comp=Z,29nm,0.9s
WMQ pmax pmax
comp=Z,200nm,5.9s
WMQ LR LR
comp=Z,150nm,20.7s
WMQ LR LR
comp=Z,380nm,22.1s
WMQ LR LR
comp=Z,610nm,21.3s
KLR Kul'dur 59.01 12 LR LR 06 22 01.1
comp=Z,314nm,18.2s,baz=208,slow=40
KLR Kul'dur 59.01 12 *d i*P **P 05 52 33.9 -1.2**
KLR pmax pmax
comp=Z,28nm,1.9s
RPZ Rata Peaks 59.25 136 P **P 05 52 38.6 +1.6**
comp=Z,27nm,1.0s,baz=8.1,slow=3.0,SNR=3.8
ZAK Zakamensk 59.57 351 *e*P **P 05 52 38.9 -0.2**
ZAK pmax pmax
comp=Z,12nm,1.1s
YSS Yuzh-Sakhalins 60.01 21 *e*P **P 05 52 41.7 -0.3**
YSS *e* 05 52 54.1
YSS *e*S **S 06 00 53.2 +1.0**
YSS *e*PS 06 01 05.4
YSS pmax pmax
comp=Z,10.0nm,0.8s
KSH Kashi 60.41 325 P **P 05 52 44.0 -1.1**
KSH pP pP 05 52 49.4 -6.1
KSH PP **PP 05 55 01.8 +3.1**
KSH S **S 06 00 54.3 -3.6**
KSH SS **SS 06 04 53.8 -2.6**
KSH pmax pmax
comp=Z,24nm,1.1s
KSH pmax pmax
comp=Z,270nm,5.5s
KSH LR LR
comp=Z,380nm,8.7s
KSH LR LR
comp=Z,460nm,12.0s
KSH LR LR
comp=Z,990nm,23.1s
TLY Talaya 60.77 351 *e*P **P 05 52 47.2 0.0**
comp=Z,18nm,0.8s
TLY Talaya 60.77 351 *e*P **P 05 52 47.4 +0.2**
TLY *e* 05 55 02.7
TLY *e*S **S 06 01 03.0 +1.1**
TLY *e*SS **SS 06 05 03.1 +1.6**
TLY pmax pmax
comp=Z,66nm,1.1s
TLY MLR MLR
comp=Z,1μm,14.0s
GRNR Gornyy 61.51 15 *e*P **P 05 52 51.0 -1.2**
GRNR pmax pmax
comp=Z,21nm,1.0s
URZ Urewera 62.21 129 P **P 05 53 01.6 +4.4**
comp=Z,11nm,0.6s,baz=222,slow=1.6,SNR=9.2
BOOM Boomskoye usch 62.47 327 *e*P **P 05 52 58.1 -0.9**
comp=Z,25nm,1.4s
BOOM Boomskoye usch 62.47 327 *e*P **P 05 52 58.1 -0.9**
BOOM pmax pmax
comp=Z,25nm,1.4s
ZEA Zeya 62.61 7 *e*P **P 05 53 00.5 +1.0**
ZEA *e*S **S 06 01 26.5 +1.4**
ZEA pmax pmax
comp=N,98nm,1.6s
ZEA pmax pmax
comp=Z,110nm,1.6s
ZEA smax smax
comp=N,300nm,7.0s
ZEA MLR MLR
comp=Z,600nm,16.0s
ZEA MLR MLR
comp=E,200nm,18.0s
ZEA MLR MLR
comp=N,200nm,17.0s
MK31 Makanchi Array 62.62 335 *e*P **P 05 52 58.6 -1.1**
comp=N,15nm,1.0s
MK31 Makanchi Array 62.62 335 *e*P **P 05 52 58.6 -1.1**
MK31 pmax pmax
comp=Z,15nm,1.0s
MK32 Makanchi Array 62.62 335 *e*P **P 05 52 58.3 -1.5**
MKAR Makanchi Array 62.62 335 P **P 05 52 58.3 -1.5**
comp=Z,8.7nm,0.9s,baz=147,slow=7.2,SNR=35
MKAR LR LR 06 23 32.4
comp=Z,365nm,20.1s,baz=142,slow=39
MAKZ Makanchi 62.76 334 *e*P **P 05 52 59.8 -0.9**
comp=Z,13nm,1.1s
MAKZ Makanchi 62.76 334 *e*P **P 05 52 59.8 -0.9**
MAKZ pmax pmax
comp=Z,13nm,1.1s
DGZ Jazzator, Alta 63.02 340 *ce*P **P 05 53 02.2 -0.3**
DGZ pmax pmax
comp=Z,16nm,0.9s
AAK Ala-Archa 63.35 327 LR LR 06 24 46.6
comp=Z,405nm,18.8s,baz=128,slow=40
AAK Ala-Archa 63.35 327 *e*P **P 05 53 04.4 -0.5**
comp=Z,14nm,1.1s
AAK Ala-Archa 63.35 327⇓ *e*P **P 05 53 03.9 -1.0**
AAK pmax pmax
comp=Z,8.0nm,1.0s
GAR Garm 63.43 321 *e*P **P 05 53 04.4 -1.0**
comp=Z,40nm,1.2s
GAR Garm 63.43 321 *e*P **P 05 53 04.4 -1.0**
GAR pmax pmax
comp=Z,40nm,1.2s
BTK Batken 63.77 323 *e*P **P 05 53 06.3 -1.3**
comp=Z,17nm,1.3s
BTK Batken 63.77 323 *e*P **P 05 53 06.3 -1.3**
BTK pmax pmax
comp=Z,17nm,1.3s
NKL Nikolayevsk 64.78 16 *e*P **P 05 53 13.7 -0.1**
NKL pmax pmax
comp=Z,16nm,0.9s
KURK Kurchatov 67.19 335 *e*P **P 05 53 27.9 -1.4**
comp=Z,14nm,1.1s
KURK Kurchatov 67.19 335⇑ *e*P **P 05 53 28.6 -0.8**
KURK pmax pmax
comp=Z,6.0nm,1.0s
ZAA0 Zalesovo Array 67.47 341 *e*P **P 05 53 29.5 -1.5**
comp=Z,8.2nm,0.8s
ZALV Zalesovo Beam 67.47 341 P **P 05 53 28.8 -2.2**
comp=Z,7.9nm,0.8s,baz=144,slow=3.5,SNR=20
ZALV LR LR 06 27 26.0
comp=Z,263nm,18.4s,baz=81,slow=40
ZAA1 Zalesovo Array 67.47 341 *e*P **P 05 53 28.8 -2.3**
NVS Novosibirsk 68.73 340 *e*P **P 05 53 37.4 -1.5**
MAW Mawson 68.83 199 P **P 05 53 40.4 +1.0**
comp=Z,53nm,1.0s,baz=58,slow=8.1,SNR=44
MAW LR LR 06 18 27.1
comp=Z,486nm,21.0s,baz=40,slow=31
MAW Mawson 68.83 199 *e*P **P 05 53 40.8 +1.4**
comp=Z,17nm,1.1s
MAW Mawson 68.83 199 P **P 05 53 41.0 +1.5**
baz=69,SNR=20
MAW Mawson 68.83 199 *e*P **P 05 53 40.8 +1.4**
MAW pmax pmax
comp=Z,17nm,1.1s
PETK Petropavlovsk- 70.73 25 P **P 05 53 50.7 -0.6**
comp=Z,16nm,1.0s,baz=210,slow=6.0,SNR=8.5
PETK LR LR 06 25 03.3
comp=Z,166nm,21.0s,baz=207,slow=36
PEA1 Petropavlovsk- 70.73 25 *e*P **P 05 53 50.7 -0.6**
GEYT Alibeck 70.93 315 P **P 05 53 52.2 -0.8**
comp=Z,5.4nm,0.8s,baz=142,slow=7.4,SNR=11
GEYT LR LR 06 27 42.1
comp=Z,221nm,20.9s,baz=120,slow=38
GYA0B ALIBECK ARRAY 70.93 315 *e*P **P 05 53 52.4 -0.5**
comp=Z,15nm,1.0s
YAK Yakutsk 71.00 7 *e*P **P 05 53 52.1 -0.7**
comp=Z,34nm,0.9s
YAK Yakutsk 71.00 7 *e*P **P 05 53 51.8 -1.0**
YAK *e**PP **pP 05 53 59.9 -3.6**
YAK *e* 05 54 11.1
YAK *e*S **S 06 03 06.2 +0.1**
YAK *e* 06 03 52.6
YAK *e*SS **SS 06 07 38.2 -1.7**
BRVK Borovoye 72.48 333 *e*P **P 05 54 00.2 -1.7**
comp=Z,15nm,1.3s
BRVK Borovoye 72.48 333 *de*P **P 05 54 00.2 -1.7**
BRVK pmax pmax
comp=Z,9.0nm,1.2s
VNDA Vanda 73.05 171 P **P 05 54 06.0 +1.1**
comp=Z,16nm,0.9s,baz=305,slow=5.7,SNR=58
VNDA LR LR 06 23 43.5
comp=Z,842nm,21.3s,baz=327,slow=34
VNDA Vanda 73.05 171 *e*P **P 05 54 06.0 +1.1**
comp=Z,26nm,1.1s
MA2 Magadan 73.19 18 LR LR 06 25 58.0
comp=Z,136nm,21.9s,baz=161,slow=36
MA2 Magadan 73.19 18 *e*P **P 05 54 06.1 +0.2**
comp=Z,13nm,0.9s
MA2 Magadan 73.19 18⇓ *e*P **P 05 54 06.0 0.0**
MA2 pmax pmax
comp=Z,17nm,1.3s
SBA Scott Base 74.08 170 *e*P **P 05 54 13.0 +2.0**
comp=Z,28nm,1.3s
SBA Scott Base 74.08 170 *e*P **P 05 54 13.0 +2.0**
SBA pmax pmax
comp=Z,28nm,1.3s
DAMY Dhamar 74.61 288 *e*P **P 05 54 15.6 0.0**
comp=Z,86nm,1.1s
ABKAR Akbulak array 75.40 326 *e*P **P 05 54 16.7 -2.3**
comp=Z,12nm,0.9s
RAYN Ar Rayn 75.82 297 *e*P **P 05 54 20.4 -1.7**
comp=Z,16nm,1.0s
RAYN Ar Rayn 75.82 297 *e*P **P 05 54 20.4 -1.7**
RAYN pmax pmax
comp=Z,16nm,1.0s
SEY Seymchan 76.36 16 *ce*P **P 05 54 23.6 -0.6**
AKTO Aktyubinsk 77.08 326 LR LR 06 32 48.7
comp=Z,291nm,20.9s,baz=129,slow=39
SYO Syowa Base 77.37 201⇓ *e*P **P 05 54 29.6 -0.3**
SYO Syowa Base 77.37 201⇓ *i*pP **P 05 54 33.2 +3.3**
SYO Syowa Base 77.37 201⇓ *es*P P 05 54 35.2 +5.3
SYO Syowa Base 77.37 201⇓ *i*PcP **PcP 05 54 39.4 -0.9**
KMBO Kilima Mbogo 78.75 271 P **P 05 54 38.2 -0.8**
comp=Z,9.4nm,0.9s,baz=53,slow=4.3,SNR=14
KMBO LR LR 06 25 49.2
comp=Z,482nm,19.8s,baz=97,slow=33
KMBO Kilima Mbogo 78.75 271 *e*P **P 05 54 38.6 -0.4**
comp=Z,29nm,1.4s
KMBO Kilima Mbogo 78.75 271 *i* P **P 05 54 39.0 0.0**
KMBO pmax pmax
comp=Z,9.0nm,0.9s
SVE Sverdlovsk 79.18 333 *e*P **P 05 54 38.0 -2.1**
AKT Akhty 79.69 315 *e*P **P 05 54 42.4 -0.9**
AKT *e* 05 54 48.8
AKT pmax pmax
comp=Z,9.0nm,0.9s
ARU Arti 79.92 332 LR LR 06 33 58.5
comp=Z,235nm,18.3s,baz=123,slow=39
ARU Arti 79.92 332 *d i*P **P 05 54 42.0 -2.1**
ARU S **S 06 04 45.1 0.0**
ARU pmax pmax
comp=Z,8.0nm,1.3s
ARU MLR MLR
comp=Z,344nm,19.0s
TIXI Tiksi 80.32 4 *e*P **P 05 54 43.3 -2.6**
comp=Z,7.7nm,0.9s
TIXI Tiksi 80.32 4⇓ *e*P **P 05 54 44.0 -1.9**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
MAK Makhachkala 80.37 316 *e*P P 05 54 41.6 -5.2
MAK *e*S **S 06 04 47.0 -3.3**
MAK pmax pmax
comp=Z,40nm,0.3s
ZEI Tsey 82.81 315 *e*P **P 05 54 58.3 -1.7**
ZEI pmax pmax
comp=Z,18nm,1.4s
NEY Neytrino 83.77 315⇓ *e*P **P 05 55 05.5 +0.6**
KBZ Khabaz 83.79 316 P **P 05 55 04.0 -0.8**
comp=Z,2.5nm,0.8s,baz=194,slow=7.2,SNR=4.1
KBZ Khabaz 83.79 316 P **P 05 55 04.0 -0.8**
KIV Kislovodsk 84.01 316 *e*P **P 05 55 04.6 -1.4**
KIV *e*S **S 06 05 26.8 -1.2**
KIV pmax pmax
comp=Z,15nm,1.0s
BILL Bilibino 84.04 17 *e*P **P 05 55 05.8 +0.3**
BILL pmax pmax
comp=Z,3.0nm,1.2s
MBAR Mbarara 85.27 270 *e*P **P 05 55 13.6 +0.4**
comp=Z,15nm,0.9s
MBAR Mbarara 85.27 270 *e*P **P 05 55 13.6 +0.4**
MBAR pmax pmax
comp=Z,15nm,0.9s
SOC Sochi 85.97 315 *e*P **P 05 55 12.5 -3.2**
SOC *e* 05 58 30.0
SOC *e*PPP PPP 06 00 27.6
SOC *e*S S 06 05 37.7 -9.4
SOC *e*SS **SS 06 11 29.1 +3.5**
SOC MLR MLR
comp=Z,141nm,20.0s
BOSA Boshof 86.73 242 P **P 05 55 19.8 -0.2**
comp=Z,28nm,0.8s,baz=87,slow=3.8,SNR=32
BOSA LR LR 06 30 10.1
comp=Z,575nm,18.1s,baz=97,slow=33
BOSA Boshof 86.73 242 *e*P **P 05 55 20.2 +0.1**
comp=Z,51nm,1.0s
BOSA Boshof 86.73 242 *e*P **P 05 55 20.2 +0.1**
BOSA pmax pmax
comp=Z,51nm,1.0s
LBTB Lobatse 86.91 245 *e*P **P 05 55 21.5 +0.5**
comp=Z,43nm,0.8s
LBTB Lobatse 86.91 245 *e*P **P 05 55 21.5 +0.5**
LBTB pmax pmax
comp=Z,43nm,0.8s
ANN Anapa 87.86 316 *e*P P 05 55 12.0 -13
ANN pmax pmax
comp=Z,76nm,1.3s
VORD Divnogorie 88.22 322 *e*P **P 05 55 23.7 -2.7**
VORD pmax pmax
comp=Z,9.0nm,0.7s
VSR Storozhevoye 88.36 322 *e*P **P 05 55 24.5 -2.6**
VSR pmax pmax
comp=Z,10.0nm,0.9s
LPSR Galich'ya Gora 88.87 324 *e*P **P 05 55 27.1 -2.4**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
BR101 Keskin Array S 89.51 310 *e*P **P 05 55 31.2 -1.8**
BR131 Keskin Array S 89.51 310 *e*P **P 05 55 31.3 -1.7**
comp=Z,4.1nm,0.9s
BRTR Keskin Array B 89.51 310 P **P 05 55 31.2 -1.8**
comp=Z,2.3nm,0.8s,baz=125,slow=6.2,SNR=12
BRTR LR LR 06 39 46.0
comp=Z,202nm,20.3s,baz=110,slow=38
BRTR Keskin Array B 89.51 310 *i* P **P 05 55 31.7 -1.3**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
SNAA Sanae 90.79 196 P **P 05 55 39.5 +1.2**
SNAA Sanae 90.79 196 *e*P **P 05 55 39.0 +0.7**
comp=Z,22nm,1.1s
SNAA Sanae 90.79 196 *e*P **P 05 55 39.0 +0.7**
SNAA pmax pmax
comp=Z,22nm,1.1s
TBI Tubuai 90.81 114 *e*LR LR 06 24 48.7
comp=Z,401nm,22.8s
OBN Obninsk 90.85 326 *e*P **P 05 55 38.3 -0.3**
OBN pmax pmax
comp=Z,4.0nm,0.9s
PPT2 Papeete2 91.63 108 *e*LR LR 06 25 10.8
comp=Z,360nm,27.0s
PPT Papeete 91.64 108 LR LR 06 33 31.7
comp=Z,60nm,21.9s,baz=265,slow=33
VNA1 Neumayer--Stat 92.82 196 P **P 05 55 49.1 +1.5**
VNA3 Neumayer Olymp 92.85 195 P **P 05 55 48.3 +0.6**
AKASG Malin Array Be 94.41 320 P **P 05 55 52.5 -2.7**
comp=Z,0.4nm,0.4s,baz=79,slow=4.8,SNR=2.3
AKASG LR LR 06 44 33.3
comp=Z,176nm,21.7s,baz=85,slow=40
AKBB Malin Array Si 94.41 320 *e*P **P 05 55 52.5 -2.7**
comp=Z,1.6nm,0.8s
AKBB Malin Array Si 94.41 320 *e*P **P 05 55 52.6 -2.7**
AKBB pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 97.29 331 LR LR 06 47 09.3
comp=Z,132nm,18.4s,baz=67,slow=40
KDAK Kodiak Island 97.76 33 LR LR 06 35 36.3
comp=Z,159nm,21.7s,baz=268,slow=33
ARCES ARCESS Array B 97.99 339 LR LR 06 46 05.8
comp=Z,282nm,19.1s,baz=92,slow=39
KOLS Kolonicke sedl 98.74 318 *e*P **P 05 56 15.0 +0.1**
KOLS Kolonicke sedl 98.74 318 *e*PDIF **P 05 56 15.0 +0.1**
CLL Collm 104.65 321 *e*PS PS 06 10 12.0 -2.7
CLL *e*PPS PPS 06 11 06.0
CLL *e*SSSS 06 23 30.0
CLL Lm MLR 06 50 00.0
comp=Z,200nm,20.8s
TORD Torodi Ar. Bea 115.48 281 PKP **PKPdf 06 01 16.3 -1.9**
comp=Z,1.7nm,1.0s,baz=127,slow=1.8,SNR=4.5
TOA1 Torodi Ar. Sit 115.48 281 *e*PKPdf **PKPdf 06 01 16.3 -1.9**
SBC Santa Barbara 122.80 54 P **PKPdf 06 01 32.1 +0.3**
baz=283
NV01 Mina Array Sit 122.86 49 *e*PKKPbc PKKPbc 06 11 31.2 +5.8
NVAR Mina Array Bea 122.86 49 PKKPbc PKKPbc 06 11 31.2 +5.8
comp=Z,0.5nm,0.8s,baz=128,slow=6.0,SNR=3.8
ISA Isabella, Lake 123.49 53 P **PKPdf 06 01 33.2 +0.1**
baz=285
HLID Hailey 123.88 42 P **PKPdf 06 01 34.0 +0.2**
baz=293
SCI2 San Clemente I 124.08 56 P **PKPdf 06 01 34.8 +0.6**
baz=283
MPMC Manual Prospec 124.16 52 P **PKPdf 06 01 35.4 +0.8**
baz=286
BOZ Bozeman (W) 124.82 39 P **PKPdf 06 01 35.6 +0.1**
baz=297
GSC Goldstone, Bar 124.90 53 P **PKPdf 06 01 36.4 +0.5**
baz=286
R11A Troy Canyon, C 124.92 49 P **PKPdf 06 01 36.4 +0.4**
baz=289
MURC Murrieta 125.03 55 P **PKPdf 06 01 36.3 +0.1**
baz=285
SHOC Shoshone, Teco 125.14 52 P **PKPdf 06 01 36.5 +0.2**
baz=287
PFO Pinyon Flats O 125.62 55 P **PKPdf 06 01 37.3 -0.1**
baz=285
MONP2 Monument Peak 125.84 55 P **PKPdf 06 01 37.5 -0.5**
baz=285
BELC Belle Mtn. Jos 125.89 54 P **PKPdf 06 01 37.8 -0.1**
baz=286
GMRC Granite Mounta 125.94 53 P **PKPdf 06 01 37.9 -0.1**
baz=287
H17A Grant Village 126.03 40 P **PKPdf 06 01 38.4 +0.4**
baz=297
FXWY Fox Creek 126.08 41 *e*PKPdf **PKPdf 06 01 38.0 -0.1**
REDW Red Top Meadow 126.32 41 *e*PKPdf **PKPdf 06 01 38.0 -0.6**
SNOW Snow King Moun 126.33 41 *e*PKPdf **PKPdf 06 01 38.8 +0.1**
BW06 Boulder Array 127.43 41 P **PKPdf 06 01 40.9 +0.1**
baz=297
O20A White River Ci 129.50 44 P **PKPdf 06 01 45.3 +0.5**
baz=297
SDCO Great Sand Dun 132.48 45 P **PKPdf 06 01 51.2 +0.6**
baz=297
TASM ASL Pad, Albuq 132.99 49 P **PKPdf 06 01 51.8 +0.3**
baz=294
TASM ASL Pad, Albuq 132.99 49 P **PKPdf 06 01 52.1 +0.6**
baz=294
ANMO Albuquerque 132.99 49 P **PKPdf 06 01 52.1 +0.6**
baz=294
OGNE Ogallala 133.20 40 P **PKPdf 06 01 51.9 +0.4**
baz=303
T25A Trinidad 133.53 46 P **PKPdf 06 01 52.8 +0.4**
baz=298
ECSD EROS Data Cent 134.72 33 P **PKPdf 06 01 53.5 -0.8**
baz=311
MNTX Cornudas Mount 135.09 53 *e*PKPdf **PKPdf 06 01 56.6 +1.3**
C40A Isle Royale Na 135.19 24 P **PKPdf 06 01 55.0 0.0**
baz=323
F39A Loretta 136.01 27 P **PKPdf 06 01 57.1 +0.5**
baz=320
D47A Chapleau 138.15 20 P **PKPdf 06 02 01.0 +0.6**
baz=331
E46A Sault Ste Mari 138.33 21 P **PKPdf 06 02 01.3 +0.5**
baz=329
L40A Anamosa 138.73 31 P **PKPdf 06 02 02.5 +0.8**
baz=317
JCT Junction City 139.95 52 *e*PKPdf **PKPdf 06 02 04.0 -0.2**
JCT Junction City 139.95 52 *e*PKIKP **PKPdf 06 02 04.1 -0.2**
BUKO Buck Lake 140.75 17 P **PKiKP 06 02 07.9 0.0**
baz=336
J47A Sunmer 140.77 24 P **PKiKP 06 02 07.5 -0.5**
baz=326
M44A Midewin, Midew 140.82 29 P **PKiKP 06 02 08.0 -0.2**
baz=320
U40A Yellville 141.70 39 P **PKPdf 06 02 09.1 +1.9**
baz=310
H55A Tweed 142.18 15 P **PKiKP 06 02 11.3 +0.5**
baz=338
MIAR Mount Ida 142.35 42 P **PKiKP 06 02 11.2 -0.3**
baz=307
Q45A Warren Harvey, 142.64 32 P **PKPdf 06 02 08.5 -0.3**
baz=318
WCI Wyandotte Cave 144.10 31 *e*PKPdf **PKPab 06 02 08.0 -0.9**
WCI Wyandotte Cave 144.10 31 *e*PKIKP **PKPab 06 02 08.0 -0.9**
WCI Wyandotte Cave 144.10 31 P **PKPab 06 02 08.1 -0.9**
baz=320
X43A Marvell 144.11 40 P **PKPab 06 02 08.1 -1.0**
baz=310
T46A Princeton 144.15 34 P **PKPab 06 02 08.3 -0.9**
baz=317,SNR=7.0
Q49A Aurora 144.18 28 P **PKPab 06 02 08.1 -1.2**
baz=323
R48A Northridge Ran 144.18 30 P **PKPab 06 02 08.3 -1.0**
baz=321
P50A Jamestown 144.19 27 P **PKPab 06 02 07.8 -1.4**
baz=325
M54A Oil Creek Stat 144.20 20 P **PKPab 06 02 07.8 -1.4**
baz=333
O51A Pataskala 144.26 25 P **PKPab 06 02 08.4 -1.1**
baz=327
U46A Springville 144.48 35 P **PKPab 06 02 09.3 -1.1**
baz=316
M55A Ridgway 144.54 19 P **PKPab 06 02 09.7 -0.9**
baz=334
N54A Moraine State 144.57 21 P **PKPab 06 02 09.5 -1.2**
baz=332
O52A Adamsville 144.60 24 P **PKPab 06 02 09.3 -1.4**
baz=328
R49A Shelbyville 144.61 29 P **PKPab 06 02 09.6 -1.3**
baz=322,SNR=7.7

T47A	Sharon Grove	144.61	33	ePKPdf	PKPab	06 02 09.4	-1.5
T47A	Sharon Grove	144.61	33	P	PKPab	06 02 09.9	-1.1
	baz=318						
P51A	Williamsport	144.62	26	P	PKPab	06 02 09.3	-1.6
	baz=326						
S48A	Wiedeman Farm,	144.66	31	P	PKPab	06 02 10.2	-0.9
	baz=320						
BINY	Binghamton	144.69	16	P	PKPab	06 02 09.8	-1.3
	baz=339						
M56A	Emporium	144.71	19	P	PKPab	06 02 09.5	-1.7
	baz=335,SNR=5.1						
O53A	New Philadelph	144.73	23	P	PKPab	06 02 09.8	-1.5
	baz=330						
Q50A	Georgetown	144.73	28	P	PKPab	06 02 09.9	-1.4
	baz=324						
WVT	Waverly	144.84	35	ePKPdf	PKPab	06 02 09.8	-2.0
WVT	Waverly	144.84	35	ePKIKP	PKPab	06 02 09.8	-2.0
WVT	Waverly	144.84	35	P	PKPab	06 02 09.9	-2.0
	baz=316						
Q51A	Peebles	144.87	27	ePKPdf	PKPab	06 02 10.0	-1.8
Q51A	Peebles	144.87	27	P	PKPab	06 02 09.5	-2.3
	baz=325,SNR=8.8						
P52A	Corning	144.89	25	P	PKPab	06 02 09.7	-2.1
	baz=328						
CPUP	Villa Florida	144.89	190	PKP	PKPab	06 02 12.4	+0.2
	comp=Z,27nm,0.9s,baz=170,slow=3.3,SNR=27						
T48A	Bowling Green	144.90	32	P	PKPab	06 02 09.8	-2.2
	baz=319						
V46A	Holladay	144.91	35	P	PKPab	06 02 10.0	-2.0
	baz=315,SNR=7.0						
U47A	Clarksville	144.91	34	P	PKPab	06 02 10.1	-1.9
	baz=317,SNR=12						
S49A	Springfield	144.95	30	P	PKPab	06 02 10.4	-1.7
	baz=321,SNR=9.3						
R50A	Paris	145.02	29	P	PKPab	06 02 10.4	-2.0
	baz=323,SNR=9.4						
OXF	Oxford	145.03	38	ePKPbc	PKPab	06 02 10.8	-1.7
OXF	Oxford	145.03	38	ePKIKP	PKPab	06 02 10.8	-1.7
OXF	Oxford	145.03	38	P	PKPab	06 02 10.5	-2.0
	baz=312,SNR=16						
N55A	Marion Center	145.08	20	ePKPbc	PKPab	06 02 10.3	-2.2
N55A	Marion Center	145.08	20	P	PKPab	06 02 10.5	-2.0
	baz=334,SNR=5.9						
O54A	Avella	145.11	22	P	PKPbc	06 02 11.0	-1.6
	baz=331						
TLIG	Tlapa	145.12	71	ePKPbc	PKPbc	06 02 13.5	+0.1
N56A	West Decatur	145.19	19	P	PKPbc	06 02 11.3	-1.5
	baz=335						
W46A	Michie	145.23	36	P	PKPbc	06 02 11.5	-1.6
	baz=314						
V47A	Nunnelly	145.23	35	P	PKPbc	06 02 11.5	-1.6
	baz=316,SNR=13						
U48A	Cassie Pea, Po	145.27	33	P	PKPbc	06 02 11.6	-1.6
	baz=318,SNR=7.0						
P53A	Whipple	145.32	24	ePKPbc	PKPbc	06 02 12.7	-0.5
P53A	Whipple	145.32	24	P	PKPbc	06 02 12.2	-1.0
	baz=329,SNR=12						
KSPA	Keystone Colle	145.35	16	ePKPbc	PKPbc	06 02 12.2	-1.1
T49A	Edmonton	145.35	31	ePKPbc	PKPbc	06 02 11.7	-1.8
T49A	Edmonton	145.35	31	P	PKPbc	06 02 11.8	-1.6
	baz=320,SNR=15						
R51A	Hillsboro	145.36	28	P	PKPbc	06 02 11.8	-1.6
	baz=324,SNR=5.8						
HRV	Adam Dziewonsk	145.36	10	P	PKPbc	06 02 11.7	-1.6
	baz=347						
Q52A	Bidwell	145.40	26	P	PKPbc	06 02 11.8	-1.7
	baz=327,SNR=8.0						
S50A	Richmond	145.47	29	P	PKPbc	06 02 12.3	-1.5
	baz=323,SNR=12						
O55A	Ligonier	145.48	21	P	PKPbc	06 02 12.7	-1.1
	baz=333						
X46A	Booneville	145.50	37	P	PKPbc	06 02 12.5	-1.5
	baz=314,SNR=8.7						
PLAL	Pickwick Lake	145.51	36	ePKPdf	PKPbc	06 02 12.3	-1.8
N57A	Milroy	145.57	18	P	PKPdf	06 02 12.8	-1.1
	baz=336,SNR=10.0						
SSPA	Standing Stone	145.57	19	ePKPdf	PKPdf	06 02 12.5	-1.4
SSPA	Standing Stone	145.57	19	P	PKPdf	06 02 12.7	-1.2
	baz=335						
P54A	Burton	145.57	23	P	PKPdf	06 02 12.8	-1.2
	baz=330						
W47A	Westpoint	145.60	36	P	PKPdf	06 02 12.6	-1.5
	baz=316,SNR=7.2						
U49A	Red Boiling Sp	145.67	32	P	PKPdf	06 02 13.5	-0.7
	baz=320,SNR=30						
O56A	Blue Knob Stat	145.68	20	ePKPdf	PKPdf	06 02 13.1	-1.0
O56A	Blue Knob Stat	145.68	20	P	PKPdf	06 02 12.9	-1.3
	baz=334,SNR=6.5						
V48A	Smith Brothers	145.69	34	ePKPdf	PKPdf	06 02 13.3	-0.9
V48A	Smith Brothers	145.69	34	P	PKPdf	06 02 12.9	-1.3
	baz=317,SNR=6.5						
CLTN	Cedars of Leba	145.70	33	ePKPdf	PKPdf	06 02 13.5	-0.8
KSCT	Kent School, K	145.74	13	ePKPdf	PKPdf	06 02 13.2	-0.9
R52A	Catlettsburg	145.75	27	P	PKPdf	06 02 13.1	-1.2
	baz=326						
MCWV	Mont Chateau	145.77	22	ePKPdf	PKPdf	06 02 13.9	-0.4
MCWV	Mont Chateau	145.77	22	P	PKPdf	06 02 13.4	-0.8
	baz=331,SNR=5.7						
T50A	Nancy	145.77	30	P	PKPdf	06 02 13.4	-1.0
	baz=321,SNR=9.6						
Q53A	Leroy	145.79	25	P	PKPdf	06 02 13.3	-1.0
	baz=328,SNR=5.2						
S51A	Beattyville	145.88	28	ePKPdf	PKPdf	06 02 13.8	-0.7
S51A	Beattyville	145.88	28	P	PKPdf	06 02 13.8	-0.7
	baz=324,SNR=6.1						
P55A	Reedsville	145.91	22	P	PKPdf	06 02 14.2	-0.4
	baz=331						
N59A	State Game Lan	145.94	16	ePKPdf	PKPdf	06 02 13.7	-0.8
N59A	State Game Lan	145.94	16	P	PKPdf	06 02 14.0	-0.6
	baz=339						
X47A	Russelville	145.96	37	P	PKPdf	06 02 14.6	-0.2
	baz=314						
Q54A	Coxs Mills	145.97	24	ePKPdf	PKPdf	06 02 13.9	-0.7
Q54A	Coxs Mills	145.97	24	P	PKPdf	06 02 14.0	-0.6
	baz=329						
O57A	Amberson	146.04	19	P	PKPdf	06 02 14.3	-0.5
	baz=335						
R53A	Hurricane	146.06	26	P	PKPdf	06 02 14.2	-0.6
	baz=327						
W48A	Pulaski	146.06	35	P	PKPdf	06 02 14.3	-0.6
	baz=316						
M61A	Granite Spring	146.08	13	P	PKPdf	06 02 14.5	-0.2
	baz=342						
ODNJ	Ogdensburg	146.09	15	ePKPdf	PKPdf	06 02 13.4	-1.4
V49A	McMinnville	146.17	33	P	PKPdf	06 02 14.9	-0.2
	baz=319						
U50A	Jamestown	146.23	31	P	PKPdf	06 02 14.9	-0.3
	baz=321,SNR=9.7						
T51A	Gray	146.25	30	P	PKPdf	06 02 14.6	-0.6
	baz=323						
Q55A	Buckhannon	146.25	23	P	PKPdf	06 02 15.0	-0.2
	baz=330						
P56A	Dayton Farm, R	146.27	21	P	PKPdf	06 02 14.4	-0.7
	baz=333						
PAL	Palisades	146.34	14	ePKPdf	PKPdf	06 02 14.8	-0.3
PAL	Palisades	146.34	14	ePKP2	PKPdf	06 02 14.9	-0.3
PAL	Palisades	146.34	14	P	PKPdf	06 02 15.1	-0.1
	baz=342						
O59A	Robesonia	146.39	17	P	PKPdf	06 02 15.1	-0.2
	baz=338						
W49A	Belvidere	146.45	34	P	PKPdf	06 02 15.7	+0.1
	baz=317,SNR=6.1						
X48A	Hartselle	146.49	36	P	PKPdf	06 02 15.1	-0.5
	baz=316						
S53A	Williamson	146.52	27	P	PKPdf	06 02 15.4	-0.2
	baz=326						
Q56A	Snyder Ridge,	146.55	22	P	PKPdf	06 02 15.7	+0.1
	baz=332						
SWET	Sewanee	146.56	34	ePKPdf	PKPdf	06 02 14.4	-1.4
R54A	Victor	146.59	25	P	PKPdf	06 02 15.9	+0.1
	baz=328						
T52A	Hallie	146.60	28	ePKPdf	PKPdf	06 02 15.9	+0.1
T52A	Hallie	146.60	28	P	PKPdf	06 02 16.0	+0.3
	baz=324						
O60A	Telford	146.60	16	P	PKPdf	06 02 15.8	+0.1
	baz=339						
MVL	Millersville	146.63	17	ePKPdf	PKPdf	06 02 15.9	+0.3
V50A	Pikeville	146.67	32	P	PKPdf	06 02 16.2	+0.3
	baz=320						
U51A	La Follette	146.68	30	P	PKPdf	06 02 16.4	+0.5
	baz=322						
S54A	Dingess, Beckl	146.78	26	P	PKPdf	06 02 16.5	+0.4
	baz=328						
TZTN	Tazewell	146.78	30	ePKPbc	PKPdf	06 02 16.9	+0.8
TZTN	Tazewell	146.78	30	P	PKPdf	06 02 16.2	+0.1
	baz=323,SNR=5.7						
Y48A	Jasper	146.79	37	P	PKPdf	06 02 16.7	+0.6
	baz=315						
Q57A	Strasburg	146.84	21	P	PKPdf	06 02 16.5	+0.4
	baz=333						
X49A	Woodville	146.86	35	P	PKPdf	06 02 16.6	+0.4
	baz=317						
T53A	Wise	146.91	28	P	PKPdf	06 02 16.8	+0.4
	baz=325						
W50A	Signal Mountai	146.91	33	ePKPdf	PKPdf	06 02 17.1	+0.7
W50A	Signal Mountai	146.91	33	P	PKPdf	06 02 16.7	+0.3
	baz=319,SNR=5.3						
V51A	Loudon	146.96	31	ePKPbc	PKPdf	06 02 17.7	+1.3
V51A	Loudon	146.96	31	P	PKPdf	06 02 17.1	+0.7
	baz=321,SNR=6.1						
P59A	Jarrettsville	146.96	18	P	PKPdf	06 02 16.9	+0.7
	baz=337						
147A	Livingston	146.96	40	P	PKPdf	06 02 17.4	+0.9
	baz=312						
U52A	Thorn Hill	146.99	29	P	PKPdf	06 02 17.6	+1.1
	baz=323,SNR=6.5						
P60A	Greenville	147.01	17	P	PKPdf	06 02 17.0	+0.7
	baz=338						
S55A	Lewisburg	147.14	25	P	PKPdf	06 02 17.6	+0.9
	baz=329						
CPCT	Cooper Cave	147.14	32	ePKPdf	PKPdf	06 02 17.3	+0.5
W51A	Cleveland	147.24	33	P	PKPdf	06 02 17.5	+0.6
	baz=320						
X50B	Fort Payne	147.27	34	P	PKPdf	06 02 17.8	+0.7
	baz=325						
Y49A	Blount Mountai	147.28	36	ePKPbc	PKPdf	06 02 18.0	+0.9
Y49A	Blount Mountai	147.28	36	P	PKPdf	06 02 17.9	+0.9
	baz=316						
T54A	Tazewell	147.28	27	P	PKPdf	06 02 18.1	+1.1
	baz=326,SNR=5.9						
V52A	Sevierville	147.31	30	ePKPbc	PKPdf	06 02 18.1	+1.1
V52A	Sevierville	147.31	30	P	PKPdf	06 02 18.5	+1.5
	baz=322,SNR=5.0						
U53A	Fall Branch	147.39	29	P	PKPdf	06 02 18.4	+1.2
	baz=324						
148A	Greensboro	147.42	39	P	PKPdf	06 02 18.5	+1.2
	baz=313						
R57A	Stanardsville	147.45	22	P	PKPdf	06 02 18.3	+1.2
	baz=333						
LRAL	Lakeview Retre	147.51	38	ePKPdf	PKPdf	06 02 15.7	-1.7
LRAL	Lakeview Retre	147.51	38	P	PKPdf	06 02 18.6	+1.2
	baz=314						
T55A	Pulaski	147.58	26	P	PKPdf	06 02 18.7	+1.2
	baz=328,SNR=5.4						
S56A	Natural Bridge	147.60	23	P	PKPdf	06 02 19.3	+1.8
	baz=330						
U54A	Nelsons Funny	147.62	27	ePKPbc	PKPdf	06 02 18.5	+0.9
U54A	Nelsons Funny	147.62	27	P	PKPdf	06 02 19.0	+1.4
	baz=326						
X51A	Calhoun	147.63	33	P	PKPbc	06 02 20.2	-0.1
	baz=319						
R58A	Rapidan	147.64	21	P	PKPbc	06 02 19.5	-0.6
	baz=334						
Y50A	Piedmont	147.64	35	P	PKPdf	06 02 18.8	+1.2
	baz=317						
BLA	Blacksburg	147.65	25	P	PKPbc	06 02 20.1	-0.1
	baz=328						
Z49A	Columbiana	147.68	37	P	PKPdf	06 02 19.0	+1.3
	baz=315						
Q60A	Greensboro	147.70	17	P	PKPdf	06 02 19.3	+1.8
	baz=338						
W52A	Murphy	147.73	32	ePKPbc	PKPbc	06 02 20.0	-0.5
W52A	Murphy	147.73	32	P	PKPdf	06 02 19.7	+2.0
	baz=321						
V53A	Saluda	147.84	30	ePKPbc	PKPdf	06 02 19.9	+1.9
V53A	Saluda	147.84	30	P	PKPdf	06 02 19.3	+1.4
	baz=323						
149A	Jones	147.93	38	P	PKPdf	06 02 19.9	+1.8
	baz=314						
CBN	Corbin Frederi	147.94	20	P	PKPdf	06 02 19.1	+1.2
	baz=334						
Q61A	Milford	147.96	17	P	PKPdf	06 02 19.3	+1.3
	baz=338						
T56A	Rocky Mt	147.97	25	P	PKPdf	06 02 20.0	+1.9
	baz=329						
R58B	Mineral	147.98	21	P	PKPdf	06 02 19.8	+1.8
	baz=333						
U55A	TA2, Sparta	147.98	27	P	PKPdf	06 02 19.7	+1.5
	baz=327						
Z50A	Ashland	147.99	36	ePKPbc	PKPdf	06 02 20.2	+1.9
Z50A	Ashland	147.99	36	P	PKPdf	06 02 19.9	+1.6
	baz=316						
Y51A	Rockmart	148.02	34	P	PKPdf	06 02 20.1	+1.9
	baz=318						
R59A	King George, V	148.03	20	P	PKPdf	06 02 19.6	+1.5
	baz=335						
W53A	Cullowhee	148.06	31	P	PKPdf	06 02 20.6	+2.2
	baz=322						
X52A	Dahlonega	148.12	32	P	PKPbc	06 02 20.8	-0.8
	baz=320						
249A	Camden	148.15	39	P	PKPbc	06 02 21.2	-0.6
	baz=313						
V54A	Nebo	148.16	28	P	PKPdf	06 02 20.4	+2.0
	baz=325						
S58A	Poland Farm, P	148.23	22	P	PKPdf	06 02 20.7	+2.3
	baz=333						
S59A	Mechanicsville	148.36	20	P	PKPbc	06 02 21.3	-0.7
	baz=334						
150A	Eclectic	148.39	37	P	PKPbc	06 02 21.6	-0.7
	baz=315						
U56A	King	148.40	26	P	PKPdf	06 02 21.0	+2.2
	baz=328						
V55A	Taylorsville	148.44	27	P	PKPbc	06 02 22.0	-0.4
	baz=326						
X53A	Estanollee	148.51	32	P	PKPbc	06 02 21.8	-0.8
	baz=321						
349A	Repton	148.53	40	P	PKPbc	06 02 21.9	-0.8
	baz=312						
Y52A	Lilburn	148.59	33	ePKPbc	PKPbc	06 02 22.1	-0.7
Y52A	Lilburn	148.59	33	P	PKPbc	06 02 21.7	-1.1
	baz=319						
W54A	Cherokee Point	148.61	30	P	PKPbc	06 02 21.7	-1.1
	baz=324						
S60A	Water View	148.63	20	P	PKPbc	06 02 22.7	0.0
	baz=335						
T58A	Grand View Acr	148.64	23	P	PKPdf	06 02 21.5	+2.4
	baz=332						
250A	Grady	148.68	38	P	PKPdf	06 02 21.9	+2.6
	baz=314						
BRAL	Brewton	148.74	40	P	PKPdf	06 02 21.9	+2.4
	baz=312						
U57A	Blanch	148.77	24	P	PKPdf	06 02 22.0	+2.6
	baz=330						
V56A	Mocksville	148.80	27	P	PKPbc	06 02 22.4	-0.9
	baz=327						
LVC	Limon Verde	148.81	171	ePKPbc	PKPbc	06 02 24.8	+0.6
Y53A	Monroe	148.86	33	P	PKPbc	06 02 22.7	-0.8
	baz=320						
151A	Opelika	148.86	37	P	PKPbc	06 02 22.4	-1.2
	baz=316						
Z52A	Williamson	148.90	35	P	PKPdf	06 02 22.3	+2.7
	baz=318						
X54A	Belton	148.95	30	P	PKPdf	06 02 22.2	+2.5
	baz=323						
KMSC	Kings Mountain	148.97	28	ePKPbc	PKPdf	06 02 21.9	+2.2
KMSC	Kings Mountain	148.97	28	P	PKPbc	06 02 22.6	-1.1
	baz=325						
T59A	Double "B" Far	148.98	21	ePKPbc	PKPbc	06 02 22.9	-0.8
T59A	Double "B" Far	148.98	21	P	PKPbc	06 02 22.5	-1.2
	baz=333						
PAULI	Pauline	149.00	29	ePKPbc	PKPdf	06 02 22.4	+2.6
V57A	Coltrane Farms	149.05	25	P	PKPdf	06 02 22.4	+2.6
	baz=328						
U58A	Oxford	149.11	23	P	PKPbc	06 02 23.0	-1.1
	baz=331						
152A	Waverly Hall	149.11	36	ePKPbc	PKPbc	06 02 23.2	-1.0
152A	Waverly Hall	149.11	36	P	PKPbc	06 02 23.1	-1.0
	baz=317						
T60A	Surry	149.12	20	P	PKPbc	06 02 23.3	-0.7
	baz=335						
251A	Midway	149.12	37	P	PKPbc	06 02 23.4	-0.8
	baz=315						
GOGA	Godfrey	149.26	33	ePKPbc	PKPbc	06 02 23.7	-0.8
GOGA	Godfrey	149.26	33	ePKP2	PKPbc	06 02 23.7	-0.8
GOGA	Godfrey	149.26	33	P	PKPbc	06 02 23.9	-0.6
	baz=320						
450A	Crestview	149.28	40	P	PKPbc	06 02 23.8	-0.9
	baz=312						
Z53A	Monticello	149.30	33	P	PKPbc	06 02 23.9	-0.7
	baz=320						
W56A	Indian Trail	149.32	27	P	PKPbc	06 02 23.7	-1.0
	baz=326						
Y54A	Tignall	149.33	32	P	PKPbc	06 02 23.5	-1.2
	baz=322						
X55A	Gracelyn & Ava	149.37	30	P	PKPbc	06 02 23.6	-1.1
	baz=324						
V58A	Windy Hill, Pi	149.41	25	P	PKPbc	06 02 24.0	-0.8
	baz=330						
U59A	Littleton	149.44	22	P	PKPbc	06 02 23.8	-1.0
	baz=332						
U60A	Pendleton	149.57	21	P	PKPbc	06 02 23.9	-1.2
	baz=334						
W57A	Gilead	149.57	27	P	PKPbc	06 02 24.1	-1.2
	baz=328						
252A	Lumpkin	149.59	37	P	PKPbc	06 02 24.6	-0.8
	baz=316						
X56A	White Oak	149.65	29	P	PKPbc	06 02 24.2	-1.3
	baz=325						
Y55A	Saluda	149.69	30	P	PKPbc	06 02 24.7	-0.9
	baz=323						
Z54A	Sparta	149.73	33	P	PKPbc	06 02 24.7	-1.0
	baz=321						
V59A	Middlesex	149.78	24	P	PKPbc	06 02 24.4	-1.4
	baz=331						
352A	Blakely	149.84	38	P	PKPbc	06 02 25.2	-0.8
	baz=315						
253A	Americus	149.90	36	P	PKPbc	06 02 25.1	-1.1
	baz=317						
451A	Vernon	149.94	40	P	PKPbc	06 02 25.5	-0.8
	baz=313						
W58A	Raeford	150.02	26	P	PKPbc	06 02 25.8	-0.5
	baz=329						
Z55A	Blythe	150.11	32	P	PKPbc	06 02 26.0	-0.7
	baz=322						
Y57A	Sumter	150.34	28	P	PKPbc	06 02 25.7	-1.4
	baz=326						
353A	Camilla	150.36	37	P	PKPbc	06 02 26.0	-1.2
	baz=316						
X58A	Rowland	150.37	26	P	PKPbc	06 02 26.0	-1.2
	baz=328						
CNNC	Cliffs of the	150.38	24	P	PKPbc	06 02 26.2	-1.0
	baz=331						
V61A	Roper	150.38	21	P	PKPbc	06 02 26.1	-1.1
	baz=334						
155A	Kite	150.40	33	P	PKPbc	06 02 26.2	-1.1
	baz=321						
254A	Abbeville	150.46	35	P	PKPbc	06 02 26.6	-0.9
	baz=319						
453A	Whigham	150.65	38	P	PKPbc	06 02 27.1	-0.9
	baz=316						
TIGA	Tifton	150.66	36	P	PKPbc	06 02 26.9	-1.0
	baz=318						
X59A	McDuffie Farm,	150.67	25	P	PKPbc	06 02 26.9	-1.0
	baz=329						
Y58A	Scranton	150.76	27	P	PKPbc	06 02 26.9	-1.2
	baz=327						
Z57A	Bowman	150.78	30	P	PKPbc	06 02 27.3	-0.9
	baz=324						
W61A	Ground Anchor	150.78	22	P	PKPbc	06 02 27.5	-0.6
	baz=333						
V62A	Hyde County Ai	150.81	20	P	PKPbc	06 02 26.9	-1.3
	baz=335						
156A	Sylvania	150.89	32	P	PKPbc	06 02 27.2	-1.3
	baz=322						
255A	Hazlehurst	150.93	34	P	PKPbc	06 02 27.6	-1.0
	baz=320						
355A	Pearson	151.16	35	P	PKPbc	06 02 27.7	-1.4
	baz=319						
Z58A	St. Stephen	151.17	28	P	PKPbc	06 02 27.6	-1.5
	baz=326						
256A	Glennville	151.21	33	P	PKPdf	06 02 27.0	+3.7
	baz=321						
BDFB	Brasilia	151.38	214	PKPbc	PKPbc	06 02 30.4	+0.2
	comp=Z,5.7nm,0.9s,baz=38,slow=1.3,SNR=4.7						
BDFB				PKPab	pPKPdf	06 02 36.6	+1.0
	comp=Z,7.1nm,0.8s,baz=140,slow=4.2,SNR=7.6						
BDFB	Brasilia	151.38	214	ePKPbc	PKPbc	06 02 29.3	-0.9
BDFB				ePKPbc	PKPbc	06 02 30.4	+0.2
BDFB				ePKPab	pPKPdf	06 02 36.6	+1.0
BDFB	Brasilia	151.38	214	ePKIKP	PKPbc	06 02 29.3	-0.9
BDFB				e		06 02 36.6	
PB11	IPOC Station P	151.47	169	ePKPbc	PKPbc	06 02 30.8	+0.4
158A	Hollywood	151.48	30	P	PKPbc	06 02 28.2	-1.7
	baz=325						
Z59A	Georgetown, SC	151.50	28	P	PKPbc	06 02 28.3	-1.6
	baz=327						
455A	Stateville	151.50	36	P	PKPbc	06 02 29.3	-0.7
	baz=318						
GO01	Chusmiza	151.65	170	ePKPbc	PKPbc	06 02 31.8	+0.6
257A	Skidaway Islan	151.67	32	P	PKPbc	06 02 29.0	-1.3
	baz=322						
357A	Townsend	151.86	33	P	PKPbc	06 02 29.4	-1.3
	baz=321						
555A	McAlpin	151.99	37	P	PKPbc	06 02 29.8	-1.3
	baz=317						
MNMC	Minye Minye	152.09	169	ePKPbc	PKPbc	06 02 31.4	-0.6
655A	Horseshoe Beac	152.25	38	P	PKPbc	06 02 30.1	-1.6
	baz=316						
556A	Lake Butler	152.41	36	P	PKPbc	06 02 30.9	-1.2
	baz=318						
658A	Bunnell	153.51	36	P	PKPbc	06 02 32.9	-1.6
	baz=319						
758A	Lake Helen	153.88	36	P	PKPbc	06 02 34.1	-1.2
	baz=318						
LPAZ	La Paz	155.14	170	PKP	PKPdf	06 02 31.4	+1.2
	comp=Z,1.5nm,1.0s,baz=194,slow=4.9,SNR=3.5						
LPAZ				PKPab	pPKPbc	06 02 53.3	+2.8
	comp=Z,5.1nm,0.7s,baz=183,slow=2.5,SNR=12						
LPAZ	La Paz	155.14	170	ePKPdf	PKPdf	06 02 31.4	+1.2
LPAZ				ePKPab	sPKPbc	06 02 55.2	+0.8
SIV	San Ignacio	155.61	187	PKPab	PKPab	06 02 56.6	+0.7
PTGA	Pitinga	170.11	204	ePKPab	PKPab	06 03 59.0	-0.4

BJI ***22*** *05:47:47.5±0.0, 9°.56S×161°.25E, h25km, mb5.1/54, mB5.3/39, Ms5.1/29, Ms7 4.8/26*

MOS ***22*** *05:47:48.4±0.9, 9°.98S×160°.99E, h41km, mb5.3/41, Error ellipse: s-maj=8.7km s-min=6.9km az=79.2*

GCMT ***22*** *05:47:49.3±0.4, 10°.17S±0°.03×161°.03E±0°.03, h39km±1km, MW5.0/62, Moment Tensor Solution. s37,c46; s62,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.10±.30; $M_{\theta\theta}$0.11±.20; $M_{\phi\phi}$-4.21±.18; $M_{r\theta}$-1.91±.18; $M_{\theta\phi}$0.53±.17; $M_{r\phi}$0.56±.17; Best double couple: $M_0$4.61600×10^{16} NP1:ϕ_s333.00000°, δ54.00000°, λ64.00000°. NP2: ϕ_s192.00000°, δ43.00000°, λ121.00000°. Principal axes: T 4.8780, Plg68.0000°, Azm185.0000°; N -0.5260, Plg21.0000°, Azm349.0000°; P -4.3530, Plg6.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISCJB ***22*** *05:47:51.3±0.1, 10°.10S±0°.03×160°.97E±0°.03, h67km, mb4.9/175 Error ellipse: s-maj=4.3km s-min=3.5km az=39.7*

IDC ***22*** *05:47:52.7±1.6, 10°.09S×161°.09E, h71km±12km, mb4.6/21, mb1 4.8/23, mb1mx4.7/28, mbtmp4.9/23, MS4.3/6, Ms1 4.4/6, ms1

OUENC **Ouen Island, N** 13.36 157 *e*Pn Pn 05 50 59.7 +0.9
TARA **Tarawa** 16.34 46 *e*Pn Pn 05 51 37.2 -0.3
117nm,0.6s
CTA **Charters Tower** 17.46 234 P P 05 51 51.4 -0.3
3.4nm,0.3s,baz=68,slow=13,SNR=13
CTAO **Charters Tower** 17.46 234 *e*Pn Pn 05 51 50.8 -0.5
56nm,1.0s
CTAO **Charters Tower** 17.46 234 *e*P Pn 05 51 50.8 -0.5
CTAO pmax pmax
comp=Z,56nm,1.0s
EIDS **Eidsvold** 17.93 211 *e*P Pn 05 51 57.5 +0.6
comp=Z,22nm,0.8s
EIDS **Eidsvold** 17.93 211 P Pn 05 51 59.0 +2.1
baz=18,SNR=5.7
COEN **Coen** 18.01 256 *e*P P 05 51 57.0 -0.7
comp=Z,44nm,1.1s
COEN **Coen** 18.01 256 P P 05 51 56.8 -0.9
baz=18,SNR=5.0
JAY **Jayapura** 21.70 289 P P 05 52 38.5 +0.6
comp=Z,7.7nm,0.5s,baz=89,slow=4.2,SNR=4.8
ARMA **Armidale** 22.05 202 *e*P P 05 52 41.8 +0.2
comp=Z,44nm,1.0s
QIS **Mount Isa** 23.21 241 P P 05 52 52.9 -0.7
baz=23,SNR=3.8
CMSA **Cobar Meteorol** 25.68 212 P P 05 53 16.7 +0.7
baz=26,SNR=11
CNB **Canberra Magne** 27.28 201 P P 05 53 31.0 +0.6
baz=27,SNR=5.8
CAN **Canberra** 27.41 202 *e*P P 05 53 33.5 +1.9
comp=Z,64nm,1.5s
CAN **Canberra** 27.41 202 *e*P P 05 53 33.5 +1.9
CAN pmax pmax
comp=Z,64nm,1.5s
WRAB **Tennant Creek** 27.64 246 *e*P P 05 53 34.1 +0.3
comp=Z,53nm,0.9s
WRAB **Tennant Creek** 27.64 246 *e*P P 05 53 34.1 +0.3
WRAB pmax pmax
comp=Z,53nm,0.9s
WB2 **Warramunga Arr** 27.64 246 *e*P P 05 53 34.3 +0.5
comp=Z,64nm,1.0s
WR1 **Warramunga Arr** 27.65 246 *e*P P 05 53 33.6 -0.3
WRA **Warramunga Arr** 27.65 246 P P 05 53 33.6 -0.3
comp=Z,14nm,0.6s,baz=79,slow=9.3,SNR=6.6
STKA **Stephens Creek** 28.22 217 P P 05 53 39.5 +0.7
comp=Z,15nm,0.7s,baz=56,slow=14,SNR=6.1
STKA **Stephens Creek** 28.22 217 *e*P P 05 53 39.4 +0.7
comp=Z,3.7nm,0.8s
STKA **Stephens Creek** 28.22 217 P P 05 53 39.2 +0.4
baz=28,SNR=7.5
KDU **Kakadu** 28.24 262 P P 05 53 39.0 -0.1
baz=28,SNR=3.5
MILA **Mila** 28.92 200 P P 05 53 46.6 +1.7
baz=29,SNR=3.7
H11S2 **WAKE ISLAND Hy** 28.97 11 T T 06 22 46.2
H11S3 **WAKE ISLAND Hy** 28.97 11 T T 06 23 10.1
baz=191,slow=74,SNR=60
H11S1 **WAKE ISLAND Hy** 28.98 11 T T 06 22 54.7
baz=255,slow=74,SNR=50
AS31 **Alice Springs** 29.28 239 *e*P P 05 53 47.6 -0.8
comp=Z,8.8nm,0.6s
ASAR **Alice Springs** 29.29 239 P P 05 53 47.3 -1.1
comp=Z,19nm,0.9s,baz=64,slow=10,SNR=10
ASAR LR LR 06 05 11.6
comp=Z,2μm,19.4s,baz=36,slow=36
MTN **Manton Dam** 29.56 262 P P 05 53 50.3 -0.6
baz=29,SNR=4.4
H11N1 **WAKE ISLAND Hy** 30.19 11 T T 06 24 16.9
baz=193,slow=76,SNR=48
H11N3 **WAKE ISLAND Hy** 30.20 11 T T 06 24 14.4
baz=193,slow=76,SNR=54
H11N2 **WAKE ISLAND Hy** 30.21 11 T T 06 24 32.7
baz=193,slow=76,SNR=64
TOO **Toolangi** 30.75 205 *e*P P 05 54 01.5 +0.3
comp=Z,26nm,1.1s
TOO **Toolangi** 30.75 205 P P 05 54 02.6 +1.4
baz=31,SNR=6.0
TOO **Toolangi** 30.75 205 *e*P P 05 54 01.5 +0.3
TOO pmax pmax
comp=Z,26nm,1.1s
HTT **Hallett** 30.91 218 P P 05 54 03.3 +0.6
baz=31,SNR=14
MXZ **Matakaoa Point** 31.36 153 *e*P P 05 54 08.1 +1.6
comp=Z,307nm,1.5s
URZ **Urewera** 31.44 156 *e*P P 05 54 09.4 +2.2
comp=Z,39nm,1.4s
BKZ **Black Stump Fm** 31.98 157 *e*P P 05 54 13.7 +1.7
comp=Z,78nm,1.4s
KNRA **Kununurra** 32.05 257 P P 05 54 12.5 -0.2
baz=32,SNR=15
BBOO **Buckleboo** 32.32 222 *e*P P 05 54 15.1 +0.1
comp=Z,126nm,1.3s
BBOO **Buckleboo** 32.32 222 P P 05 54 15.4 +0.3
baz=32,SNR=27
LTZ **Lake Taylor** 33.93 165 *e*P P 05 54 30.0 +1.1
comp=Z,34nm,0.9s
FOZ **Fox Glacier** 34.11 169 *e*P P 05 54 30.9 +0.6
comp=Z,56nm,1.0s
OXZ **Oxford** 34.39 166 *e*P P 05 54 33.8 +1.0
comp=Z,190nm,1.7s
MOO **Moorlands** 34.43 198 P P 05 54 34.4 +1.2
baz=34,SNR=3.3
RPZ **Rata Peaks** 34.53 167 P P 05 54 34.4 +0.2
comp=Z,28nm,0.7s,baz=285,slow=2.5,SNR=5.5
MQZ **McQueen's Vall** 34.90 165 *e*P P 05 54 38.2 +1.0
comp=Z,369nm,1.7s
LBZ **Lake Benmore** 35.00 169 *e*P P 05 54 37.8 -0.3
comp=Z,57nm,1.4s
FITZ **Fitzroy Crossi** 35.31 253 P P 05 54 40.6 -0.5
comp=Z,52nm,0.8s,baz=86,slow=7.5,SNR=16
FITZ **Fitzroy Crossi** 35.31 253 *e*P P 05 54 40.5 -0.5
comp=Z,46nm,0.7s
FITZ **Fitzroy Crossi** 35.31 253 P P 05 54 40.7 -0.5
baz=35,SNR=16
DCZ **Deep Cove** 35.57 173 *e*P P 05 54 44.6 +1.7
comp=Z,32nm,0.8s
WHZ **Wether Hill Ro** 36.10 172 *e*P P 05 54 47.9 +0.5
comp=Z,43nm,1.3s
PSA00 **Pilbara Seismi** 41.23 249 *e*P P 05 55 30.6 -0.3
comp=Z,59nm,0.7s
KAPI **Kappang** 41.35 274 *e*P P 05 55 30.9 -1.0
comp=Z,21nm,0.9s
KAPI **Kappang** 41.35 274 *e*P P 05 55 30.9 -1.0
KAPI pmax pmax
comp=Z,21nm,0.9s
BLDU **Ballidu** 46.02 237 P P 05 56 08.9 -0.4
baz=46,SNR=6.1
MORW **Morawa** 46.17 239 *e*P P 05 56 10.6 +0.2
comp=Z,32nm,0.9s
MORW **Morawa** 46.17 239 P P 05 56 10.5 0.0
baz=46,SNR=5.5
NWAO **Narrogin (SRO)** 46.30 234 *e*P P 05 56 11.4 0.0
comp=Z,34nm,0.9s
NWAO **Narrogin (SRO)** 46.30 234 *e*P P 05 56 11.4 0.0
NWAO pmax pmax
comp=Z,34nm,0.9s
PPT2 **Papeete2** 48.27 104 *e*LR LR 06 10 19.6
comp=Z,357nm,22.5s,baz=276
TBI **Tubuai** 48.83 112 *e*LQ LQ 06 08 33.5
comp=Z,483nm,31.0s
TBI *e*LR LR 06 10 35.0
comp=Z,407nm,28.0s,baz=282
YOJ **Yonaguni jima** 50.70 313 *e*P P 05 56 45.4 +0.2
comp=Z,216nm,1.3s
YOJ **Yonaguni jima** 50.70 313 *e*P P 05 56 45.4 +0.2
YOJ pmax pmax
comp=Z,216nm,1.3s
MJAR **Matsushiro Arr** 51.22 336 P P 05 56 47.4 -1.5
comp=Z,3.2nm,0.5s,baz=171,slow=9.0,SNR=11
MAJO **Matsushiro** 51.22 336 *e*P P 05 56 49.2 +0.2
comp=Z,8.7nm,0.8s
MAJO **Matsushiro** 51.22 336⇑ *e*P P 05 56 49.1 +0.2
MAJO pmax pmax
comp=Z,8.0nm,0.7s
MAT **Matsushiro** 51.22 336 P P 05 56 47.7 -1.3
MJB9 **Matsu-Tunnel** 51.22 336 *e*P P 05 56 49.0 0.0
comp=Z,8.6nm,0.8s
YULB **Yu-li** 51.31 311 *e*P P 05 56 49.3 -0.6
comp=Z,14nm,0.8s
NACB **Ninganchiao** 51.55 312 *e*P P 05 56 51.6 -0.1
comp=Z,26nm,0.8s
KHU **Kahuku** 51.63 56 *e*P P 05 56 54.0 +1.4
comp=Z,225nm,1.3s
KHU **Kahuku** 51.63 56 *e*P P 05 56 54.0 +1.4
KHU pmax pmax
comp=Z,225nm,1.3s
SSLB **Suanglung** 51.79 311 *e*P P 05 56 53.3 -0.2
comp=Z,19nm,0.6s
JNU **Nakatsue** 51.81 327 *e*P P 05 56 52.9 -0.6
comp=Z,21nm,0.9s
AIN **Ainahou** 51.82 56 *e*P P 05 56 54.8 +0.9
comp=Z,329nm,1.5s
HMH **Humu'ula Sheep** 51.92 55 *e*P P 05 56 56.1 +1.3
comp=Z,229nm,1.4s
YHNB **Yeheng** 52.01 312 *e*P P 05 56 55.6 +0.5
comp=Z,37nm,0.8s
LPH **Laupahoehoe** 52.19 55 *e*P P 05 56 58.6 +2.2
CISI **Cisompet, Garu** 52.74 268 *e*P P 05 57 00.3 -0.5
comp=Z,73nm,0.4s
TJN **Taejon** 56.16 327*d i*P P 05 57 25.5 +0.5
ASAJ **Asahikawa** 56.57 344 LR LR 06 19 21.0
comp=Z,365nm,21.8s,baz=177,slow=33
KSRS **Korea Array** 56.68 329 P P 05 57 28.6 -0.2
comp=Z,8.6nm,0.7s,baz=142,slow=7.1,SNR=34
KS15 **Wonju Array Si** 56.69 328 *e*P P 05 57 28.3 -0.5
comp=Z,23nm,1.2s
NJ2 **Nanjing** 58.28 318 *e*P P 05 57 42.0 +1.9
NJ2 pmax pmax
comp=Z,15nm,0.5s
YSS **Yuzh-Sakhalins** 59.17 345 *e*P P 05 57 48.6 +2.6
YSS *e* 05 57 59.0
TEY **Ternei** 59.23 340⇓ *e*P P 05 57 45.5 -0.9
TEY pmax pmax
comp=Z,10.0nm,0.9s
VLA **Vladivostok** 59.36 335⇑ *e*P P 05 57 47.2 -0.2
VLA pmax pmax
comp=Z,28nm,1.2s
USA0B **Ussuriysk Arra** 60.22 336 *e*P P 05 57 53.3 +0.1
comp=Z,35nm,1.1s
USRK **Ussuriysk Ar.** 60.22 336 P P 05 57 53.4 +0.2
comp=Z,20nm,1.0s,baz=146,slow=7.1,SNR=31
WHN **Wuhan** 60.48 314 P P 05 57 54.5 -0.8
MDJ **Mudanjiang** 61.54 335 P P 05 58 02.4 +0.2
MDJ pmax pmax
comp=Z,18nm,0.9s
MDJ pmax pmax
comp=Z,92nm,3.4s
MDJ **Mudanjiang** 61.54 335 *e*P P 05 58 02.1 -0.1
comp=Z,34nm,1.2s
CN2 **Changchun** 62.74 332 *e*P P 05 58 10.0 -0.2
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,310nm,5.0s
CN2 LR LR
comp=Z,540nm,16.0s
CN2 LR LR
comp=Z,390nm,16.0s
CN2 LR LR
comp=Z,510nm,18.0s
PEA0B **Petropavlovsk-** 63.07 358 *e*P P 05 58 12.7 +0.5
comp=Z,52nm,1.4s
PETK **Petropavlovsk-** 63.07 358 P P 05 58 12.3 0.0
comp=Z,9.8nm,0.8s,baz=139,slow=6.0,SNR=13
PEA1 **Petropavlovsk-** 63.07 358 *e*P P 05 58 12.3 0.0
ENH **Enshi** 63.88 311 *e*P P 05 58 16.8 -1.3
comp=Z,32nm,0.9s
GYA **Guiyang** 64.22 306 *e*P P 05 58 22.8 +2.2
GYA pmax pmax
comp=Z,10.0nm,0.8s
GRNR **Gornyy** 64.36 343 *e*P P 05 58 20.6 -0.3
KLR **Kul'dur** 64.53 339*c i*P P 05 58 21.5 -0.4
KLR pmax pmax
comp=Z,25nm,1.3s
BJI **Beijing** 65.01 323 P P 05 58 24.3 -1.0
BJI pP pP 05 58 34.8 -7.9
BJI sP sP 05 58 39.4 -11
BJI pmax pmax
comp=Z,3.0nm,0.9s
XAN **Xi'an** 66.23 314 P P 05 58 32.9 -0.5
XAN pP pP 05 58 47.3 -3.6
XAN pmax pmax
comp=Z,46nm,0.7s
XAN pmax pmax
comp=Z,140nm,5.3s
XAN **Xi'an** 66.23 314 *e*P P 05 58 32.7 -0.7
comp=Z,34nm,0.7s
XAN **Xi'an** 66.23 314 *e*P P 05 58 32.7 -0.7
XAN pmax pmax
comp=Z,34nm,0.7s
KMI **Kunming** 66.84 303 P P 05 58 39.6 +2.0
KMI pmax pmax
comp=Z,15nm,0.6s
KMI pmax pmax
comp=Z,220nm,4.4s
VNDA **Vanda** 67.36 180 P P 05 58 40.6 +0.8
comp=Z,7.3nm,0.6s,baz=340,slow=6.8,SNR=31
VNDA **Vanda** 67.36 180 *e*P P 05 58 40.5 +0.8
comp=Z,10nm,0.7s
VNDA **Vanda** 67.36 180 *e*P P 05 58 40.5 +0.8
VNDA pmax pmax
comp=Z,11nm,0.7s
CM31 **Chiang Mai Arr** 67.65 295 *e*P P 05 58 42.4 -0.2
comp=Z,15nm,0.8s
CMAR **Chiang Mai Arr** 67.65 295 P P 05 58 42.4 -0.2
comp=Z,3.9nm,0.9s,baz=119,slow=5.2,SNR=9.2
SBA **Scott Base** 67.76 179 *e*P P 05 58 44.4 +2.1
comp=Z,18nm,1.3s
SBA **Scott Base** 67.76 179 *e*P P 05 58 44.4 +2.1
SBA pmax pmax
comp=Z,18nm,1.3s
CHTO **Chiang Mai** 67.77 295 *e*P P 05 58 42.6 -0.7
comp=Z,8.1nm,0.9s
CHTO **Chiang Mai** 67.77 295 *e*P P 05 58 42.6 -0.7
CHTO pmax pmax
comp=Z,8.0nm,0.9s
HHC **Hu-ho-hao-te** 68.28 322 *e*P P 05 58 48.9 +2.6
HHC pmax pmax
comp=Z,18nm,1.1s
HHC LR LR
comp=Z,470nm,12.8s
HHC LR LR
comp=Z,410nm,10.2s
CD2 **Chengdu** 68.51 309⇓ *i*P P 05 58 47.5 -0.3
CD2 S S 06 07 47.5 +2.4
CD2 pmax pmax
comp=Z,80nm,0.6s
CD2 pmax pmax
comp=Z,440nm,4.7s
CD2 LR LR
comp=Z,1μm,14.7s
CD2 LR LR
comp=Z,1μm,14.7s
CD2 LR LR
comp=Z,1μm,16.7s
HIA **Hailar** 69.43 332 *e*P P 05 58 53.8 +0.7
comp=Z,38nm,0.6s
HIA **Hailar** 69.43 332*c i*P P 05 58 53.2 +0.1
HIA pmax pmax
comp=Z,223nm,0.7s
ZEA **Zeya** 69.84 339 *e*P P 05 58 55.6 +0.1
ZEA pmax pmax
comp=Z,41nm,1.0s
MA2 **Magadan** 69.98 354 *e*P P 05 58 56.2 0.0
comp=Z,18nm,0.8s
MA2 **Magadan** 69.98 354*ce*P P 05 58 55.5 -0.7
MA2 pmax pmax
comp=Z,7.0nm,0.6s
LZH **Lanzhou** 70.86 314 *e*P P 05 59 02.5 +0.2
LZH pP pP 05 59 12.3 -7.8
LZH sP PcP 05 59 16.0 -6.6
LZH PP PP 06 01 39.8 -0.5
LZH pmax pmax
comp=Z,34nm,1.0s
LZH pmax pmax
comp=Z,120nm,4.5s
LZH LR LR
comp=Z,480nm,14.6s
LZH LR LR
comp=Z,540nm,14.1s
LZH LR LR
comp=Z,610nm,15.3s
SEY **Seymchan** 73.17 356⇑ *e*P P 05 59 15.5 +0.2
ULN **Ulaanbaatar** 74.98 326 *e*P P 05 59 26.8 +0.4
comp=Z,48nm,0.7s
ULN **Ulaanbaatar** 74.98 326*c i*P P 05 59 27.0 +0.6
ULN pmax pmax
comp=Z,48nm,0.7s
GTA **Gaotai** 75.23 315 *e*P P 05 59 28.6 +0.6
GTA pP PcP 05 59 39.3 -1.9
GTA sP pP 05 59 43.5 -2.4
GTA pmax pmax
comp=Z,21nm,1.0s
GTA pmax pmax
comp=Z,130nm,7.1s
GTA LR LR
comp=Z,300nm,18.4s
GTA LR LR
comp=Z,470nm,20.3s
GTA LR LR
comp=Z,180nm,17.8s
SONA0 **Songino Array** 75.33 325 *e*P P 05 59 28.8 +0.4
SONM **Songino Array** 75.33 325 P P 05 59 28.8 +0.4
comp=Z,56nm,0.6s,baz=139,slow=5.4,SNR=212
YAK **Yakutsk** 76.02 345 *e*P P 05 59 31.2 -0.7
comp=Z,53nm,0.6s
YAK **Yakutsk** 76.02 345 *e*P P 05 59 31.1 -0.7
YAK *e* 05 59 39.8
YAK *e**PP pP 05 59 46.7 -2.8
YAK *e* 06 02 20.9
YAK *e*PPP PPP 06 04 10.2
YAK *e*S S 06 09 10.1 +0.5
YAK *e**SS SKSac 06 09 34.9 -1.5
YAK *e* 06 09 41.2
YAK *e*SS SS 06 14 03.2 -0.8
YAK *e*SSS SSS 06 17 26.9
OHAK **Old Harbor** 76.80 24 *e*P P 05 59 36.7 +0.4
comp=Z,32nm,1.1s
KDAK **Kodiak Island** 77.46 23 *e*P P 05 59 41.0 +1.0
comp=Z,33nm,1.1s
KDAK **Kodiak Island** 77.46 23 *i*P P 05 59 40.7 +0.7
BILL **Bilibino** 78.06 2 *e*P P 05 59 43.2 0.0
comp=Z,37nm,1.0s
BILL **Bilibino** 78.06 2*c i*P P 05 59 43.5 +0.3
BILL *e* 05 59 56.1
BILL *e* 06 02 36.8
BILL *e*PPP PPP 06 04 26.4
BILL pmax pmax
comp=Z,24nm,1.0s
ZAK **Zakamensk** 78.43 326 *e*P P 05 59 45.1 -0.6
ZAK pmax pmax
comp=Z,24nm,0.9s
SVW2 **Sparrevohn** 78.72 20 *e*P P 05 59 48.1 +1.1
comp=Z,32nm,0.9s
TLY **Talaya** 78.92 328 *e*P P 05 59 48.0 -0.3
comp=Z,28nm,0.6s
TLY **Talaya** 78.92 328*c i*P P 05 59 48.0 -0.3
CNPM **China Poot** 79.16 23 *e*P P 05 59 50.1 +0.6
comp=Z,28nm,0.9s
RSO **Redoubt South** 79.25 21 *e*P P 05 59 50.3 +0.2
BRLK **Bradley Lake** 79.46 22 *e*P P 05 59 51.6 +0.5
comp=Z,20nm,0.9s
TTA **Tatalina** 79.92 18 *e*P P 05 59 54.2 +0.6
comp=Z,20nm,1.2s
TTA **Tatalina** 79.92 18 *e*P P 05 59 54.2 +0.6
TTA pmax pmax
comp=Z,20nm,1.2s
PMR **Palmer** 81.32 22 *e*P P 06 00 01.4 +0.5
comp=Z,14nm,0.9s
PMR **Palmer** 81.32 22 *e*P P 06 00 01.4 +0.5
PMR pmax pmax
comp=Z,14nm,0.9s
KTH **Kantishna Hill** 82.00 20 *e*P P 06 00 04.3 -0.4
comp=Z,25nm,1.1s
RDOG **Red Dog Mine** 82.09 13 *e*P P 06 00 06.2 +1.3
comp=Z,12nm,0.8s
TRF **Thorofare Moun** 82.14 20 *e*P P 06 00 05.2 -0.2
comp=Z,4.4nm,1.0s
BPAW **Bear Paw Mtn.** 82.35 19 *e*P P 06 00 06.0 -0.4
comp=Z,21nm,1.5s
RND **Reindeer** 82.60 20 *e*P P 06 00 07.3 -0.4
comp=Z,25nm,1.2s
RND **Reindeer** 82.60 20 *e*P P 06 00 07.3 -0.4
RND pmax pmax
comp=Z,25nm,1.2s
MCK **McKinley** 82.78 20 *e*P P 06 00 08.4 -0.2
comp=Z,38nm,0.9s
MCK **McKinley** 82.78 20 *e*P P 06 00 08.4 -0.2
MCK pmax pmax
comp=Z,38nm,0.9s
MLY **Manley** 83.06 19 *e*P P 06 00 10.9 +0.8
comp=Z,14nm,1.0s
WRH **Wood River Hil** 83.55 20 *e*P P 06 00 11.9 -0.6
comp=Z,14nm,1.0s
BALM **Baldy** 83.58 24 *e*P P 06 00 13.3 +0.4
comp=Z,15nm,0.8s
BALM **Baldy** 83.58 24 *e*P P 06 00 13.3 +0.4
BALM pmax pmax
comp=Z,15nm,0.8s
CCB **Clear Creek Bu** 83.75 20 *e*P P 06 00 13.3 -0.3
comp=Z,8.2nm,0.8s
MAW **Mawson** 83.86 202 P P 06 00 15.1 +1.0
comp=Z,20nm,0.9s,baz=88,slow=5.5,SNR=16
MAW **Mawson** 83.86 202 *e*P P 06 00 14.7 +0.6
comp=Z,5.6nm,0.9s
MAW **Mawson** 83.86 202 P P 06 00 14.8 +0.6
baz=84,SNR=7.9
TCOL **CIGO, UAF Yank** 83.88 19 P P 06 00 13.0 -1.2
baz=230
COLA **College** 83.88 19 *e*P P 06 00 13.9 -0.2
comp=Z,18nm,0.7s
COLA **College** 83.88 19*c i*P P 06 00 14.0 -0.2
COLA pmax pmax
comp=Z,18nm,0.8s
HDA **Harding Lake** 83.89 20 *e*P P 06 00 14.4 +0.1
comp=Z,18nm,1.0s
ILAR **Eielson Array** 84.14 20 P P 06 00 15.1 -0.5
comp=Z,2.5nm,0.4s,baz=240,slow=4.8,SNR=45
ILAR LR LR 06 33 13.6
comp=Z,163nm,19.6s,baz=261,slow=32
ILB **Eielson Array** 84.14 20 *e*P P 06 00 15.1 -0.5
comp=Z,8.6nm,0.9s
MENT **Mentasta** 84.14 22 *e*P P 06 00 16.3 +0.7
comp=Z,6.4nm,0.7s
POKR **Poker Plat Res** 84.17 19 P P 06 00 14.5 -1.3
baz=231
RIDG **Independent Ri** 84.21 21 *e*P P 06 00 16.7 +0.7
comp=Z,10nm,0.9s
H02S1 **DAWSON INLET T** 84.38 34 T T 07 33 30.6
SNR=50
TIXI **Tiksi** 84.39 350 *e*P P 06 00 16.0 -0.6
comp=Z,13nm,1.1s
TIXI **Tiksi** 84.39 350⇑ *e*P P 06 00 15.9 -0.8
TIXI pmax pmax
comp=Z,13nm,1.1s
DOT **Dot Lake** 84.43 21 *e*P P 06 00 17.9 +0.8
comp=Z,14nm,0.8s
SCRK **Sand Creek** 84.65 21 *e*P P 06 00 19.2 +0.8
comp=Z,11nm,0.8s
WMQ **Urumqi** 85.30 316 *e*P P 06 00 23.6 +1.6
WMQ LR LR
comp=Z,140nm,19.9s
WMQ LR LR
comp=Z,320nm,18.9s
WMQ LR LR
comp=Z,300nm,16.5s
HYT **Haines Junctio** 85.47 26 *e*P P 06 00 23.0 +0.6
comp=Z,7.4nm,0.9s
TOLK **Toolik Lake Re** 85.83 16 *e*P P 06 00 24.4 +0.4
comp=Z,13nm,1.4s
TOLK **Toolik Lake Re** 85.83 16 P P 06 00 24.3 +0.3
baz=229
L02E **Cave Junction** 86.00 46 P P 06 00 26.1 +0.7
baz=253
O02D **Mt. Diablo Mer** 86.00 48 P P 06 00 25.7 +0.2
baz=253
J01E **Myrtle Point** 86.07 45 P P 06 00 26.3 +0.6
baz=252
K02D **Willamette Mer** 86.11 46 P P 06 00 26.5 +0.4
baz=253,SNR=5.5
EGAK **Eagle** 86.12 21 *e*P P 06 00 26.8 +1.4
comp=Z,18nm,0.9s
N02D **Trinity Center** 86.29 47 P P 06 00 27.9 +0.9
baz=253,SNR=5.5
WDC **Whiskeytown Da** 86.30 48 *e*P P 06 00 28.8 +1.9
comp=Z,10nm,1.4s
WDC **Whiskeytown Da** 86.30 48 *e*P P 06 00 28.8 +1.9
WDC pmax pmax
comp=Z,11nm,1.4s
M02C **Callahan** 86.31 47 P P 06 00 27.7 +0.7
baz=253,SNR=6.0
DAWY **Dawson** 86.38 22 *e*P P 06 00 27.4 +0.6
comp=Z,20nm,1.1s
I02D **Swisshome** 86.41 44 P P 06 00 28.9 +1.5
baz=252
YBH **Yreka Blue Hor** 86.51 47 *e*P P 06 00 29.7 +1.7
comp=Z,8.2nm,1.0s
YBH **Yreka Blue Hor** 86.51 47 *e*P P 06 00 29.7 +1.7
YBH pmax pmax
comp=Z,8.0nm,1.0s
HUMO **Hull Mountain** 86.59 46 *e*P P 06 00 29.4 +1.1
comp=Z,6.1nm,0.8s

I03D	Drain, OR	86.63	45	P		P	06 00 30.0 +1.6
	baz=253						
O03E	Paynes Creek	86.76	48	P		P	06 00 30.0 +0.8
	baz=254						
PKM	Mcpherson Peak	86.86	54	P		P	06 00 30.1 0.0
	baz=256						
L04D	Klamath Falls	86.94	46	P		P	06 00 30.8 +0.7
	baz=254						
AFDM	Forest Hills D	87.01	50	eP		P	06 00 31.5 +1.0
	comp=Z,4.3nm,0.7s						
G03D	McMinnville, O	87.14	43	P		P	06 00 31.7 +0.8
	baz=253						
M04C	Macdoel	87.15	47	P		P	06 00 32.2 +1.0
	baz=254						
H04D	Lebanon	87.30	44	P		P	06 00 33.0 +1.4
	baz=253						
I04A	Tendick Farm,	87.31	45	P		P	06 00 32.9 +1.1
	baz=253						
J04D	Umpqua Nationa	87.36	45	P		P	06 00 33.7 +1.4
	baz=254						
DGZ	Jazzator, Alta	87.37	321	i P		P	06 00 31.4 -0.7
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SCI2	San Clemente I	87.42	56	P		P	06 00 34.1 +1.6
	baz=256						
K04D	Chiloquin, OR	87.44	46	P		P	06 00 34.1 +1.5
	baz=254						
VOG	Valley Oaks Go	87.56	53	P		P	06 00 34.2 +1.1
	baz=256						
CIS	Catalina Islan	87.63	56	P		P	06 00 34.1 +0.5
	baz=256						
H04A	Detroit Lake	87.72	44	eP		P	06 00 34.5 +0.8
	comp=Z,14nm,1.4s						
D03D	Eldon	87.95	41	P		P	06 00 35.7 +1.0
	baz=253						
J05D	Fort Rock, OR	87.99	46	P		P	06 00 35.0 -0.2
	baz=254						
K05A	Summer Lake	88.08	46	eP		P	06 00 37.2 +1.5
	comp=Z,12nm,1.0s						
MWC	Mount Wilson	88.11	55	eP		P	06 00 37.1 +1.1
	comp=Z,12nm,0.9s						
MWC	Mount Wilson	88.11	55	eP		P	06 00 37.1 +1.1
MWC				pmax	pmax		
	comp=Z,12nm,0.9s						
ISA	Isabella, Lake	88.11	53	P		P	06 00 36.5 +0.6
	baz=256						
MDPB	Devils Postpil	88.12	51	eP		P	06 00 37.1 +1.0
	comp=Z,7.2nm,1.1s						
I05D	Terrebonne, OR	88.21	44	P		P	06 00 36.4 +0.3
	baz=254						
MOD	Modoc Plateau	88.28	47	eP		P	06 00 38.1 +1.4
	comp=Z,13nm,1.3s						
EDW2	Edwards Air Fo	88.31	54	P		P	06 00 37.4 +0.6
	baz=257						
PINE	Pine Mountain	88.33	45	eP		P	06 00 39.0 +2.1
	comp=Z,7.2nm,0.9s						
PAHR	Pah Rah Range	88.40	49	eP		P	06 00 38.7 +1.5
	comp=Z,9.1nm,1.3s						
BFSC	Mount Baldy Ra	88.43	55	P		P	06 00 37.6 +0.1
	baz=257						
EPYK	Eagle Plains	88.53	21	eP		P	06 00 38.6 +1.6
	comp=Z,10nm,0.9s						
EPYK	Eagle Plains	88.53	21	P		P	06 00 38.0 +0.9
	baz=241						
A04D	Lummi Island	88.54	40	P		P	06 00 38.2 +0.8
	baz=253						
CWC	Cottonwood Cre	88.61	53	P		P	06 00 39.6 +1.3
	baz=256						
MURC	Murrieta	88.66	56	P		P	06 00 40.0 +1.5
	baz=257						
LRMC	Laurel Mtn Rad	88.70	54	P		P	06 00 40.2 +1.4
	baz=257						
RYN	Ryan	88.78	51	eP		P	06 00 40.8 +1.7
	comp=Z,9.3nm,1.1s						
NV01	Mina Array Sit	88.90	51	eP		P	06 00 41.1 +1.4
NVAR	Mina Array Bea	88.90	51	P		P	06 00 41.1 +1.4
	comp=Z,4.4nm,0.7s,baz=237,slow=6.3,SNR=33						
DAC	Darwin (Calif)	88.95	53	eP		P	06 00 44.1 +4.1
	comp=Z,13nm,1.1s						
MPMC	Manual Prospec	88.98	53	P		P	06 00 41.2 +1.1
	baz=257,SNR=7.9						
NV11	Mina Array Sit	89.02	51	eP		P	06 00 41.6 +1.4
	comp=Z,1.2nm,1.3s						
MONP2	Monument Peak	89.14	57	P		P	06 00 42.5 +1.5
	baz=258						
KVN	Kaiserville	89.21	50	eP		P	06 00 42.8 +1.7
	comp=Z,6.9nm,0.7s						
KVN	Kaiserville	89.21	50	eP		P	06 00 42.8 +1.7
KVN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PFO	Pinyon Flats O	89.27	56	P		P	06 00 42.8 +1.4
	baz=258						
IKP	In-Ko-Pah, Jac	89.34	57	P		P	06 00 43.2 +1.4
	baz=258						
GSC	Goldstone, Bar	89.36	54	eP		P	06 00 43.6 +1.9
	comp=Z,8.3nm,1.1s						
GSC	Goldstone, Bar	89.36	54	P		P	06 00 43.0 +1.2
	baz=257						
I07A	Izee	89.41	45	eP		P	06 00 43.4 +1.6
	comp=Z,6.6nm,0.8s						
LTY	Liberty	89.45	42	eP		P	06 00 42.7 +0.8
	comp=Z,2.6nm,0.8s						
FURC	Furnace Creek,	89.57	53	P		P	06 00 44.1 +1.6
	baz=257,SNR=12						
WVOR	Wild Horse Val	89.62	47	eP		P	06 00 44.6 +1.8
	comp=Z,28nm,1.4s						
HEC	Hector,Ludlow	89.63	55	P		P	06 00 44.0 +0.9
	baz=258						
SWSC	Sam W. Stewart	89.66	57	P		P	06 00 44.6 +1.5
	baz=258						
BELC	Belle Mtn. Jos	89.72	56	P		P	06 00 44.9 +1.3
	baz=258,SNR=11						
MK31	Makanchi Array	89.81	318	eP		P	06 00 43.0 -0.5
	comp=Z,5.5nm,0.8s						
MK31	Makanchi Array	89.81	318	eP		P	06 00 43.0 -0.5
MK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK32	Makanchi Array	89.81	318	eP		P	06 00 43.0 -0.6
MKAR	Makanchi Array	89.81	318	P		P	06 00 43.0 -0.6
	comp=Z,6.7nm,0.6s,baz=103,slow=5.7,SNR=48						
MKAR	Makanchi Array	89.81	318	P		P	06 00 43.0 -0.6
SHOC	Shoshone, Teco	89.91	54	P		P	06 00 45.9 +1.7
	baz=258						
J08A	Circle Bar Ran	89.96	46	eP		P	06 00 46.0 +1.6
	comp=Z,20nm,1.2s						
MAKZ	Makanchi	90.02	318	eP		P	06 00 43.9 -0.6
	comp=Z,7.8nm,1.0s						
MAKZ	Makanchi	90.02	318	eP		P	06 00 43.9 -0.6
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
G08A	Pilot Rock	90.09	44	eP		P	06 00 46.7 +1.7
	comp=Z,12nm,1.4s						
BC3	Big Chuckawall	90.09	56	P		P	06 00 46.8 +1.5
	baz=258,SNR=5.3						
TPNV	Topopah Spring	90.16	53	eP		P	06 00 47.0 +1.4
	comp=Z,8.7nm,0.8s						
TPNV	Topopah Spring	90.16	53	eP		P	06 00 47.0 +1.4
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TPNV	Topopah Spring	90.16	53	P		P	06 00 46.9 +1.4
	baz=258,SNR=12						
GMRC	Granite Mounta	90.16	55	P		P	06 00 46.9 +1.3
	baz=258,SNR=9.1						
BMN	Battle Mountai	90.18	49	eP		P	06 00 47.3 +1.7
	comp=Z,27nm,1.5s						
BMN	Battle Mountai	90.18	49	eP		P	06 00 47.3 +1.7
BMN				pmax	pmax		
	comp=Z,27nm,1.5s						
ZAA0	Zalesovo Array	90.22	325	eP		P	06 00 43.7 -1.5
	comp=Z,3.2nm,0.7s						
ZALV	Zalesovo Beam	90.22	325	P		P	06 00 43.6 -1.6
	comp=Z,2.3nm,0.5s,baz=120,slow=5.0,SNR=8.1						
ZAA1	Zalesovo Array	90.22	325	eP		P	06 00 43.6 -1.6
IRM	Iron Mountain	90.45	56	P		P	06 00 48.4 +1.6
	baz=258,SNR=7.2						
GLA	Glamis	90.48	57	P		P	06 00 48.1 +1.1
	baz=258						
D08A	Wollman Farm,	90.55	42	eP		P	06 00 47.9 +0.9
	comp=Z,6.1nm,0.8s						
Y12C	Blythe	90.87	56	eP		P	06 00 49.1 +0.3
	comp=Z,7.8nm,0.9s						
Y12C	Blythe	90.87	56	P		P	06 00 49.8 +1.1
	baz=259						
SHPR	Sheep Range	90.92	53	eP		P	06 00 50.9 +1.8
	comp=Z,9.6nm,0.9s						
E09A	Wood Farm, Sta	90.94	43	eP		P	06 00 49.7 +0.9
	comp=Z,16nm,1.2s						
R11A	Troy Canyon, C	90.97	51	eP		P	06 00 50.4 +1.1
	comp=Z,6.6nm,1.0s						
R11A	Troy Canyon, C	90.97	51	P		P	06 00 50.7 +1.4
	baz=258,SNR=12						
NEE2	Needles Airpor	91.00	55	P		P	06 00 50.7 +1.4
	baz=258						
BMO	Blue Mountains	91.12	45	eP		P	06 00 50.7 +0.9
	comp=Z,14nm,1.4s						
BMO	Blue Mountains	91.12	45	eP		P	06 00 50.7 +0.9
BMO				pmax	pmax		
	comp=Z,14nm,1.4s						
C09A	Chrisman Ranch	91.16	42	eP		P	06 00 50.2 +0.5
	comp=Z,13nm,1.3s						
H06E1	SOCORRO T-PHAS	91.25	71	T		T	07 41 12.4
	SNR=6.9						
PDMCI	Parker Dam,Lak	91.29	56	P		P	06 00 52.1 +1.4
	baz=259						
113A	Mohawk Valley,	91.30	57	eP		P	06 00 51.8 +1.0
	comp=Z,3.0nm,0.7s						
F10A	Beach Ranch, E	91.43	44	eP		P	06 00 52.0 +0.8
	comp=Z,14nm,0.9s						
W13A	Hualapai Mount	91.65	55	eP		P	06 00 53.0 +0.3
	comp=Z,5.3nm,1.0s						
ELK	Elko	91.72	49	eP		P	06 00 54.3 +1.5
	comp=Z,13nm,1.3s						
214A	Organ Pipe Nat	91.94	58	P		P	06 00 55.2 +1.4
	baz=259						
NEW	Newport	92.01	41	eP		P	06 00 54.2 +0.5
	comp=Z,8.2nm,0.8s						
NEW	Newport	92.01	41	eP		P	06 00 54.2 +0.5
NEW				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NEW	Newport	92.01	41	P		P	06 00 54.9 +1.1
	baz=257						
PLID	Pearl Lake	92.08	45	eP		P	06 00 54.6 +0.2
	comp=Z,6.1nm,0.9s						
PSUT	Pine Spring	92.34	51	eP		P	06 00 56.6 +0.9
	comp=Z,14nm,1.5s						
LCMT	Little Creek M	92.53	53	eP		P	06 00 57.8 +1.3
	comp=Z,7.2nm,1.2s						
CCUT	Cedar City	92.53	52	eP		P	06 00 58.5 +1.9
	comp=Z,15nm,1.5s						
KSH	Kashi	92.70	309	P		P	06 01 00.9 +3.6
KSH				pP	pP		06 01 13.8 -1.5
KSH				PP	PP		06 04 44.3 +4.2
KSH				S	S		06 11 59.3 +2.2
KSH				SS	SS		06 18 14.8 +3.4
KSH				pmax	pmax		
	comp=Z,11nm,0.5s						
KSH				pmax	pmax		
	comp=Z,240nm,7.4s						
KSH				LR	LR		
	comp=Z,190nm,12.9s						
KSH				LR	LR		
	comp=Z,260nm,8.4s						
KSH				LR	LR		
	comp=Z,200nm,15.9s						
LPIG	La Paz	92.73	66	LR		LR	06 35 46.2
	comp=Z,62nm,19.2s,baz=222,slow=31						
KNB	Kanab	92.86	53	eP		P	06 01 00.0 +1.9
	comp=Z,19nm,1.6s						
HLID	Hailey	92.89	46	eP		P	06 00 59.4 +1.4
	comp=Z,17nm,1.4s						
HLID	Hailey	92.89	46	P		P	06 00 59.5 +1.4
	baz=259						
KURK	Kurchatov	93.09	321	eP		P	06 00 57.5 -1.1
	comp=Z,8.1nm,0.9s						
KURK	Kurchatov	93.09	321	⇓i P		P	06 00 57.3 -1.3
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
U15A	North Rim	93.17	54	eP		P	06 01 01.2 +1.5
	comp=Z,5.1nm,0.9s						
BOOM	Boomskoye usch	93.28	312	eP		P	06 00 59.8 -0.1
	comp=Z,3.6nm,0.9s						
BOOM	Boomskoye usch	93.28	312	eP		P	06 00 59.8 -0.1
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MTPU	Mount Pierson	93.54	52	eP		P	06 01 02.9 +1.4
	comp=Z,3.3nm,0.9s						
MSU	Marysvale	93.63	52	eP		P	06 01 04.5 +2.8
MSU	Marysvale	93.63	52	eP		P	06 01 04.5 +2.8
MCMT	McKenzie Canyo	94.23	45	eP		P	06 01 05.5 +1.2
WALA	Waterton Lakes	94.26	41	eP		P	06 01 05.7 +1.5
	comp=Z,4.9nm,0.9s						
AAK	Ala-Archa	94.36	312	⇓eP		P	06 01 04.6 -0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
DLMT	Dillon	94.49	45	eP		P	06 01 06.7 +1.3
	comp=Z,15nm,1.5s						
X18A	Snowflake	94.74	56	eP		P	06 01 07.3 +0.5
	comp=Z,3.3nm,1.0s						
BOZ	Bozeman (W)	95.20	45	eP		P	06 01 09.0 +0.3
	comp=Z,2.7nm,0.8s						
BOZ	Bozeman (W)	95.20	45	eP		P	06 01 09.0 +0.3
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	Bozeman (W)	95.20	45	P		P	06 01 10.1 +1.4
	baz=261						
HRY	Holter Researc	95.24	44	eP		P	06 01 09.9 +1.2
FXWY	Fox Creek	95.32	47	eP		P	06 01 09.8 +0.4
	comp=Z,5.5nm,1.1s						
YHB	Horse Butte	95.38	46	eP		P	06 01 10.7 +1.2
	comp=Z,3.5nm,0.8s						
MOOW	Moose Ponds	95.54	47	eP		P	06 01 11.6 +1.3
	comp=Z,1.9nm,0.9s						
LOHW	Long Hollow	95.62	47	eP		P	06 01 11.2 +0.5
	comp=Z,5.2nm,1.4s						
H17A	Grant Village	95.76	46	P		P	06 01 13.7 +2.4
	baz=262						
YKA	Yellowknife Ar	96.25	28	P		P	06 01 12.4 -0.4
	comp=Z,3.1nm,0.7s,baz=256,slow=4.6,SNR=22						
YKA				LR	LR		06 37 40.5
	comp=Z,11nm,21.8s,baz=286,slow=31						
YKB5	Yellowknife Ar	96.25	28	eP		P	06 01 12.4 -0.4
BW06	Boulder Array	96.26	48	P		P	06 01 14.7 +1.1
	baz=262						
PD31	Pinedale Array	96.26	48	eP		P	06 01 14.2 +0.5
	comp=Z,3.9nm,1.4s						
PDAR	Pinedale Array	96.26	48	P		P	06 01 14.2 +0.5
	comp=Z,0.8nm,0.6s,baz=243,slow=0.7,SNR=8.9						
RLMT	Red Lodge	96.78	45	P		P	06 01 17.3 +1.3
	baz=263						
EGMT	Eagleton	96.83	43	eP		P	06 01 17.0 +1.1
	comp=Z,9.1nm,0.8s						
EGMT	Eagleton	96.83	43	P		P	06 01 16.9 +1.0
	baz=263						
KK31	Karatay Array	97.32	312	i P		Pdif	06 01 25.1 +6.9
KK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TASM	ASL Pad, Albuq	97.65	56	P		Pdif	06 01 20.9 +0.8
	baz=263						
TASM	ASL Pad, Albuq	97.65	56	P		Pdif	06 01 20.7 +0.7
	baz=263						
ANMO	Albuquerque	97.65	56	eP		Pdif	06 01 20.6 +0.5
	comp=Z,1.5nm,0.8s						
ANMO	Albuquerque	97.65	56	⇓eP		Pdif	06 01 21.4 +1.3
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	97.65	56	P		Pdif	06 01 20.9 +0.8
	baz=263						
SNAA	Sanae	97.67	185	P		Pdif	06 01 19.5 +0.2
SNAA	Sanae	97.67	185	⇓eP		Pdif	06 01 22.1 +2.8
BRVK	Borovoye	98.55	322	eP		P	06 01 21.9 -1.5
	comp=Z,5.3nm,1.1s						
BRVK	Borovoye	98.55	322	⇓eP		P	06 01 21.7 -1.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VNA3	Neumayer Olymp	98.57	183	P		P	06 01 22.4 -0.8
N23A	Red Feather La	98.72	50	P		Pdif	06 01 25.6 +0.7
	baz=264						
LAO	LASA Array	99.07	44	P		Pdif	06 01 26.9 +0.9
	baz=265						
VNA1	Neumayer--Stat	99.08	184	P		Pdif	06 01 25.1 -0.4
TXAR	Lajitas Array	99.35	62	P		Pdif	06 01 29.4 +1.7
	comp=Z,0.2nm,0.6s,baz=262,slow=4.4,SNR=2.5						
TXAR				LR	LR		06 38 55.4
	comp=Z,164nm,20.4s,baz=0.0,slow=31						
FFC	Flin Flon	102.15	36	i P		Pdif	06 01 40.7 +1.3
ECSD	EROS Data Cent	105.75	47	P		PKiKP	06 06 06.3 -2.0
	baz=271						
F39A	Loretta	109.67	45	P		PKiKP	06 06 13.8 -1.7
	baz=276						
G40A	Rib Lake	110.23	45	P		PKiKP	06 06 15.1 -1.5
	baz=276						
I42A	Draeger Farm,	111.30	47	P		PKiKP	06 06 16.8 -1.9
	baz=277						
Q45A	Warren Harvey,	112.37	52	P		PKiKP	06 06 19.2 -1.6
	baz=275						
P45A	Graceland, Par	112.63	51	P		PKiKP	06 06 19.8 -1.5
	baz=276						
P46A	Rosedale	113.03	51	P		PKiKP	06 06 19.8 -2.2
	baz=276						
N46A	Monticello	113.25	50	P		PKiKP	06 06 21.0 -1.5
	baz=277						
R47A	Wooly Knot Far	113.69	53	P		PKiKP	06 06 21.6 -1.8
	baz=276						
Q47A	Bedord North L	113.71	52	P		PKiKP	06 06 21.7 -1.6
	baz=276						
LRAL	Lakeview Retre	113.73	58	P		PKiKP	06 06 22.1 -1.5
	baz=273						
O47A	Sheridan	113.75	51	P		PKiKP	06 06 21.8 -1.6
	baz=277						
U48A	Cassie Pea, Po	113.85	55	P		PKiKP	06 06 22.3 -1.5
	baz=275						
149A	Jones	113.92	59	P		PKiKP	06 06 22.6 -1.4
	baz=273						
G46A	Petoskey	113.96	45	P		PKiKP	06 06 23.0 -0.7
	baz=280						
S48A	Wiedeman Farm,	114.13	53	P		PKPdf	06 06 23.6 -0.6
	baz=276						
Y49A	Blount Mountai	114.16	57	P		PKPdf	06 06 22.7 -1.8
	baz=274						
AKT	Akhty	114.19	311	i PKIKP		PKPdf	06 06 24.3 -0.1
AKT				e			06 07 17.4
AKT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
Q48A	North Vernon	114.25	52	P		PKPdf	06 06 22.9 -1.5
	baz=277						
L47A	Sherwood	114.25	49	P		PKPdf	06 06 22.6 -1.7
	baz=279						
K47A	Vermontville	114.29	48	P		PKPdf	06 06 23.0 -1.4
	baz=279						
ARA0	ARCESS Array S	114.30	344	ePKiKP		PKPdf	06 06 22.8 -0.9
ARCES	ARCESS Array B	114.30	344	PKP		PKPdf	06 06 22.8 -0.9
	comp=Z,5.1nm,0.3s,baz=70,slow=2.0,SNR=13						
Q48A	Farmland	114.52	50	P		PKPdf	06 06 23.2 -1.7
	baz=278						
N48A	Decatur	114.54	50	P		PKPdf	06 06 23.6 -1.4
	baz=278						
150A	Eclectic	114.57	59	P		PKPdf	06 06 23.4 -1.8
	baz=274						
Z50A	Ashland	114.61	58	P		PKPdf	06 06 23.9 -1.4
	baz=274						
L48A	N Adams	114.82	48	P		PKiKP	06 06 24.5 -1.0
	baz=279						
K48A	Perry	114.91	47	P		PKiKP	06 06 24.5 -1.1
	baz=280						
451A	Vernon	114.92	61	P		PKPdf	06 06 24.2 -1.7
	baz=273						
W50A	Signal Mountai	114.96	56	P		PKPdf	06 06 24.3 -1.7
	baz=275						
V50A	Pikevile	115.09	55	P		PKPdf	06 06 24.6 -1.6
	baz=276						
251A	Midway	115.12	59	P		PKPdf	06 06 24.9 -1.4
	baz=274						
O49A	Covington	115.15	50	P		PKiKP	06 06 24.5 -1.6
	baz=278						
T50A	Nancy	115.16	54	P		PKiKP	06 06 25.5 -0.8
	baz=276						
N49A	Columbus Grove	115.16	50	P		PKiKP	06 06 25.0 -1.1
	baz=279						
151A	Opelika	115.16	59	P		PKPdf	06 06 25.5 -0.9
	baz=274						
U50A	Jamestown	115.22	55	P		PKiKP	06 06 24.8 -1.6
	baz=276						
M49A	Liberty Center	115.23	49	P		PKiKP	06 06 25.7 -0.5
	baz=279						
L49A	Milan	115.28	48	P		PKiKP	06 06 24.7 -1.6
	baz=280						
S50A	Richmond	115.43	53	P		PKPdf	06 06 26.2 -0.5
	baz=277						
152A	Waverly Hall	115.66	59	P		PKPdf	06 06 26.8 -0.5
	baz=274						
O50A	Cable	115.70	50	P		PKPdf	06 06 26.5 -0.7
	baz=279						
F49A	Sandfield	115.81	44	P		PKPdf	06 06 25.7 -1.5
	baz=283						
T51A	Gray	115.88	54	P		PKPdf	06 06 26.5 -1.1
	baz=277						
S51A	Beattyville	116.07	53	P		PKPdf	06 06 26.3 -1.7
	baz=278						
W52A	Murphy	116.10	56	P		PKPdf	06 06 27.5 -0.6
	baz=276						
X52A	Dahlonega	116.18	56	P		PKPdf	06 06 27.8 -0.5
	baz=276						
V52A	Sevierville	116.29	55	P		PKPdf	06 06 27.2 -1.3
	baz=277						
Y53A	Monroe	116.51	57	P		PKPdf	06 06 27.7 -1.2
	baz=276						
N51A	Ashland	116.52	49	P		PKPdf	06 06 27.5 -1.3
	baz=280						
E50A	Wahnapitae	116.55	43	P		PKPdf	06 06 27.1 -1.5
	baz=284						
Z53A	Monticello	116.57	58	P		PKPdf	06 06 28.6 -0.5
	baz=276						
M51A	Elyria	116.58	49	P		PKPdf	06 06 28.2 -0.7
	baz=280						
W53A	Cullowhee	116.72	56	P		PKPdf	06 06 28.0 -1.4
	baz=277						
BWLO	Walkerton	116.80	46	P		PKPdf	06 06 28.0 -1.2
	baz=283						
NCK	Nalchik	116.85	314	⇑i PKIKP		PKiKP	06 06 29.9 +0.6
P52A	Corning	116.91	51	P		PKPdf	06 06 28.6 -1.0
	baz=280						
V53A	Saluda	116.94	55	P		PKPdf	06 06 28.7 -1.1
	baz=277						
T53A	Wise	117.00	54	P		PKPdf	06 06 29.0 -0.8
	baz=278						
U53A	Fall Branch	117.05	54	P		PKPdf	06 06 29.0 -0.9
	baz=278						
F51A	Arnstein	117.22	43	P		PKPdf	06 06 29.2 -0.7
	baz=284						
Y54A	Tignall	117.25	57	P		PKPdf	06 06 29.7 -0.6
	baz=276						
I52A	Shelburne	117.48	45	P		PKPdf	06 06 29.7 -0.8
	baz=283						
P53A	Whipple	117.50	51	P		PKPdf	06 06 29.5 -1.2
	baz=280						
Q53A	Leroy	117.50	51	P		PKPdf	06 06 29.4 -1.3
	baz=280						
W54A	Cherokee Point	117.52	56	P		PKPdf	06 06 29.2 -1.7
	baz=277						
H52A	Wyevale	117.55	45	P		PKPdf	06 06 29.7 -0.8
	baz=284						
V54A	Nebo	117.63	55	P		PKPdf	06 06 30.1 -1.0
	baz=278						
M53A	Wt Miller and	117.68	48	P		PKPdf	06 06 30.4 -0.6
	baz=282						
N53A	Lisbon	117.68	49	ePKPdf		PKPdf	06 06 30.8 -0.2
N53A	Lisbon	117.68	49	P		PKPdf	06 06 29.7 -1.3
	baz=281						
T54A	Tazewell	117.75	53	P		PKPdf	06 06 29.6 -1.7
	baz=279						
D52A	ZEK Kipawa Sen	117.95	42	P		PKPdf	06 06 30.3 -1.0
	baz=286						
E52A	Mattawa	117.98	43	P		PKPdf	06 06 30.3 -1.1
	baz=286						
Q54A	Coxs Mills	118.02	51	P		PKPdf	06 06 30.1 -1.6
	baz=280						
ERPA	Erie	118.04	48	P		PKPdf	06 06 30.6 -1.0
	baz=282						
X55A	Gracelyn & Ava	118.05	56	P		PKPdf	06 06 31.1 -0.7
	baz=277						
O54A	Avella	118.14	50	P		PKPdf	06 06 31.4 -0.5
	baz=281						
P54A	Burton	118.17	50	P		PKPdf	06 06 30.8 -1.2
	baz=281						
V55A	Taylorsville	118.21	55	P		PKPdf	06 06 31.4 -0.8
	baz=278						
KMSC	Kings Mountain	118.21	56	P		PKPdf	06 06 31.5 -0.7
	ba

baz=283
X56A **White Oak** 118.54 56 P PKPdf 06 06 32.2 -0.6
baz=278
058A **Arcadia** 118.55 65 P PKPdf 06 06 31.6 -1.4
baz=273
Q55A **Buckhannon** 118.59 51 P PKPdf 06 06 31.6 -1.3
baz=281
E53A **Dumoine, Ponti** 118.61 42 P PKPdf 06 06 31.6 -1.0
baz=286
BLA **Blacksburg** 118.63 53 P PKPdf 06 06 32.3 -0.7
baz=280
MCWV **Mont Chateau** 118.65 50 P PKPdf 06 06 31.7 -1.2
baz=281
WLVO **Wesleyville** 118.76 45 P PKPdf 06 06 31.7 -1.2
baz=285
V56A **Mocksville** 118.79 55 P PKPdf 06 06 32.8 -0.5
baz=279
BANO **Bancroft** 118.81 44 P PKPdf 06 06 32.2 -0.8
baz=286
W56A **Indian Trail** 118.82 56 P PKPdf 06 06 32.8 -0.5
baz=278
E54A **Lac Daplat, Po** 118.91 42 P PKPdf 06 06 32.1 -1.1
baz=287
O55A **Ligonier** 118.95 50 P PKPdf 06 06 32.1 -1.4
baz=282
T56A **Rocky Mt** 118.97 53 P PKPdf 06 06 31.9 -1.7
baz=280
D54A **Lac Fusel, La** 119.05 41 P PKPdf 06 06 31.7 -1.8
baz=288
N55A **Marion Center** 119.06 49 P PKPdf 06 06 32.1 -1.6
baz=282
M55A **Ridgway** 119.08 48 P PKPdf 06 06 32.0 -1.7
baz=283
PEMO **Pembroke** 119.09 43 P PKPdf 06 06 32.1 -1.4
baz=286
DELO **Deloro Mine** 119.15 44 P PKPdf 06 06 32.3 -1.3
baz=286
L55A **Hinsdale** 119.15 47 P PKPdf 06 06 32.1 -1.7
baz=284
I55A **Frankford** 119.19 45 P PKPdf 06 06 32.2 -1.6
baz=285
S56A **Natural Bridge** 119.22 52 P PKPdf 06 06 32.4 -1.7
baz=280
FIA0 **FINESS Array S** 119.24 337 *e*PKPdf PKPdf 06 06 32.4 -0.9
FIA0 **FINESS Array S** 119.24 337 *e*PKIKP PKPdf 06 06 32.4 -0.9
FINES **FINESS Array B** 119.24 337 PKP PKPdf 06 06 32.4 -0.9
comp=Z,1.8nm,0.9s,baz=161,slow=24,SNR=4.6
Q56A **Snyder Ridge,** 119.27 51 P PKPdf 06 06 32.4 -1.8
baz=281
W57A **Gilead** 119.29 55 P PKPdf 06 06 32.9 -1.3
baz=279
J55A **Hilton** 119.34 46 P PKPdf 06 06 32.3 -1.7
baz=285
V57A **Coltrane Farms** 119.36 55 P PKPdf 06 06 32.8 -1.6
baz=279
PLVO **Plevna** 119.38 44 P PKPdf 06 06 32.5 -1.6
baz=286
H55A **Tweed** 119.44 44 P PKPdf 06 06 32.8 -1.5
baz=286
O56A **Blue Knob Stat** 119.48 49 P PKPdf 06 06 33.8 -0.7
baz=282
M56A **Emporium** 119.50 48 P PKPdf 06 06 33.5 -1.0
baz=284
N56A **West Decatur** 119.55 49 P PKPdf 06 06 33.0 -1.6
baz=283
G55A **Calabogie** 119.56 43 P PKPdf 06 06 33.0 -1.4
baz=287
CHGQ **Chibougamau** 119.57 38 P PKPdf 06 06 33.1 -1.3
baz=291
T57A **Hurt** 119.59 53 P PKPdf 06 06 33.7 -1.0
baz=280
PECO **Prince Edward** 119.74 45 P PKPdf 06 06 33.7 -1.1
baz=286
Q57A **Strasburg** 119.86 51 P PKPdf 06 06 33.9 -1.4
baz=282
V58A **Windy Hill, Pi** 119.90 55 P PKPdf 06 06 34.8 -0.6
baz=280
SSPA **Standing Stone** 119.91 49 P PKPdf 06 06 34.5 -0.8
baz=283
X58A **Rowland** 119.91 56 P PKPdf 06 06 34.0 -1.4
baz=279
R57A **Stanardsville** 119.92 52 P PKPdf 06 06 34.1 -1.3
baz=281
W58A **Raeford** 119.93 55 P PKPdf 06 06 34.0 -1.4
baz=279
H56A **Elgin** 120.06 44 P PKPdf 06 06 34.3 -1.1
baz=287
P57A **Homestead Farm** 120.07 50 P PKPdf 06 06 34.5 -1.1
baz=282
N57A **Milroy** 120.13 49 P PKPdf 06 06 34.7 -1.0
baz=284
T58A **Grand View Acr** 120.17 53 P PKPdf 06 06 34.8 -1.0
baz=281
O57A **Amberson** 120.19 49 P PKPdf 06 06 34.6 -1.2
baz=283
U58A **Oxford** 120.25 54 P PKPdf 06 06 34.6 -1.4
baz=280
R58A **Rapidan** 120.32 52 P PKPdf 06 06 35.0 -1.1
baz=282
S58A **Poland Farm, P** 120.42 52 P PKPdf 06 06 34.9 -1.4
baz=281
R58B **Mineral** 120.48 52 P PKPdf 06 06 34.7 -1.8
baz=282
VSU **Vasula** 120.74 334 *i*PKIKP PKPdf 06 06 35.4 -0.9
CBN **Corbin Frederi** 120.83 52 P PKPdf 06 06 35.1 -2.0
baz=282
BINY **Binghamton** 120.91 47 P PKPdf 06 06 35.7 -1.5
baz=286
T59A **Double "B" Far** 120.93 53 P PKPdf 06 06 35.7 -1.7
baz=281
CNNC **Cliffs of the** 120.98 55 P PKPdf 06 06 35.9 -1.6
baz=280
X60A **Albert Glenn T** 121.02 56 P PKPdf 06 06 36.6 -1.0
baz=280
R59A **King George, V** 121.02 51 P PKPdf 06 06 36.1 -1.4
baz=282
W60A **Pink Hill** 121.16 55 P PKPdf 06 06 36.5 -1.3
baz=280
LONY **Lake Ozonia** 121.20 44 P PKPdf 06 06 36.6 -1.1
baz=289
P59A **Jarrettsville** 121.23 50 P PKPdf 06 06 36.0 -1.9
baz=284
O59A **Robesonia** 121.25 49 P PKPdf 06 06 36.4 -1.5
baz=284
U60A **Pendleton** 121.34 53 P PKPdf 06 06 36.5 -1.7
baz=281
V60A **Jim Taylor Roa** 121.39 54 P PKPdf 06 06 36.6 -1.7
baz=281
N59A **State Game Lan** 121.40 48 P PKPdf 06 06 37.0 -1.2
baz=285
P60A **Greenville** 121.78 49 P PKPdf 06 06 37.5 -1.4
baz=284
Q60A **Greensboro** 121.82 50 P PKPdf 06 06 38.1 -0.9
baz=284
O60A **Telford** 121.83 49 P PKPdf 06 06 38.0 -1.0
baz=285
BOSA **Boshof** 122.59 227 PKP PKPdf 06 06 40.0 -1.0
comp=Z,4.1nm,0.7s,baz=121,slow=1.8,SNR=8.2
PAL **Palisades** 122.74 48 P PKPdf 06 06 39.4 -1.2
baz=286
M61A **Granite Spring** 122.75 47 P PKPdf 06 06 39.6 -1.1
baz=287
LBNH **Lisbon** 123.12 43 P PKPdf 06 06 40.6 -0.7
baz=290
AKASG **Malin Array Be** 123.61 325 PKP PKPdf 06 06 40.6 -1.5
comp=Z,1.4nm,0.5s,baz=62,slow=2.2,SNR=6.2
AKBB **Malin Array Si** 123.61 325 *e*PKPdf PKPdf 06 06 40.6 -1.5
AKBB **Malin Array Si** 123.61 325 *e*PKIKP PKPdf 06 06 40.6 -1.5
HRV **Adam Dziewonsk** 123.96 45 P PKPdf 06 06 42.2 -0.8
baz=289
PKME **Peaks-Kenny Pk** 124.50 41 P PKPdf 06 06 43.2 -0.7
baz=293
NB2 **NORSAR Subarra** 124.58 343 PKPdf PKPdf 06 06 42.3 -1.4
comp=Z,0.4nm,0.6s,baz=40,slow=1.8
NB200 **NORSAR Array S** 124.58 343 *e*PKPdf PKPdf 06 06 41.8 -1.9
NOA **NORSAR Array B** 124.58 343 PKP PKPdf 06 06 41.8 -1.9
comp=Z,1.9nm,0.9s,baz=40,slow=2.1,SNR=4.7
LPAZ **La Paz** 124.59 118 PKP PKPdf 06 06 45.2 -0.6
comp=Z,1.9nm,0.7s,baz=241,slow=2.2,SNR=5.6
KOLS **Kolonicke sedl** 128.37 326 *e*PKIKP PKPdf 06 06 51.0 -0.3
KOLS **Kolonicke sedl** 128.37 326 *e*PKP PKPdf 06 06 51.0 -0.3
CLL **Collm** 131.40 334 *e*PKPdf PKiKP 06 06 59.0 +1.1
CLL *e* 06 07 07.0
CLL *i* pPKPdf sPKPdf 06 07 19.8 -2.9
OBIP **Obispado Ponce** 133.10 75 *e*PKPdf PKPdf 06 07 00.6 -0.4
SJG **San Juan** 133.53 75 *e*PKPdf PKPdf 06 07 01.8 -0.1
SJG **San Juan** 133.53 75 *e*PKIKP PKPdf 06 07 01.8 -0.1
FUORN **Ofenpass-Fuorn** 136.04 331 *e*PKPdf PKPdf 06 07 06.4 +0.2

KEST **Kesra** 143.89 319 PKP PKPbc 06 07 18.1 -0.2
comp=Z,2.3nm,0.5s,baz=109,slow=2.3,SNR=6.2
KEST **Kesra** 143.89 319 *e*PKPdf PKPbc 06 07 19.0 +0.7
MDP **Montagnes des** 146.12 96 PKPbc PKPbc 06 07 25.9 +0.1
comp=Z,51nm,0.6s,baz=261,slow=4.2,SNR=87
PBRG **Braganca** 146.72 343 *e*PKPbc PKPbc 06 07 26.8 0.0
PGAV **Gavieira, Arco** 146.97 345 *e*PKPbc PKPbc 06 07 28.2 +0.6
MVO **Moncorvo** 147.39 343 *e*PKPbc PKPbc 06 07 28.8 0.0
POLO **Lamas de Olo** 147.40 344 *e*PKPbc PKPbc 06 07 28.9 +0.1
ESDC **Sonseca Array** 147.75 338 PKPbc PKPbc 06 07 29.1 -0.7
comp=Z,1.7nm,0.7s,baz=11,slow=4.5,SNR=10
PAB **San Pablo** 148.00 339 *e*PKPbc PKPbc 06 07 30.1 -0.4
PAB **San Pablo** 148.00 339 *e*PKP2 PKPbc 06 07 30.1 -0.4
PVIS **Viseu** 148.05 344 *e*PKPbc PKPbc 06 07 30.8 +0.3
MTE **Manteigas** 148.25 344 *e*PKPbc PKPbc 06 07 31.1 0.0
MTE **Manteigas** 148.25 344 *e*PKPbc PKPbc 06 07 31.1 0.0
PCBR **Castelo Branco** 148.75 343 *e*PKPbc PKPbc 06 07 32.2 -0.1
PCAS **Casmilo, Conde** 148.83 345 *e*PKPbc PKiKP 06 07 33.7 -0.2
PMRV **Marv??o** 149.10 343 *e*PKPbc PKPbc 06 07 33.2 0.0
PTOM **Tomar** 149.21 344 *e*PKPbc PKPbc 06 07 33.6 +0.1
PMTG **Montargil** 149.67 344 *e*PKPbc PKPbc 06 07 34.4 -0.2
ROSA **Rosais** 150.32 15 *e*PKPbc PKPbc 06 07 36.5 +0.3
PBEJ **Beja** 150.54 342 *e*PKPbc PKiKP 06 07 37.7 +0.2
PNCL **Nicolau / Gran** 150.65 343 *e*PKPbc PKPbc 06 07 37.3 +0.3
PCVE **Castro Verde** 150.95 342 *e*PKPbc PKPbc 06 07 37.9 +0.2
PBDV **Barranco-do-Ve** 151.28 342 *e*PKPbc PKiKP 06 07 39.2 +0.1
MORF **Marmelete** 151.44 343 *e*PKPbc PKiKP 06 07 39.4 0.0
TORD **Torodi Ar. Bea** 159.69 280 PKP PKPdf 06 07 42.5 -1.8
comp=Z,1.7nm,0.9s,baz=103,slow=1.5,SNR=5.0
TOA1 **Torodi Ar. Sit** 159.69 280 *e*PKPdf PKPdf 06 07 42.5 -1.8

ISCJB ***22*** *05:59:24.0±0.3, 44°.16N±0°.03×10°.09E±0°.02, h11km±3km, Error ellipse: s-maj=5.5km s-min=2.5km az=16.7*
ROM ***22*** *05:59:24.4±0.1, 44°.190N±0°.004×10°.158E±0°.006, h8km, ML2.0/8, Error ellipse: s-maj=0.6km s-min=0.3km az=44.0*
GEN ***22*** *05:59:24.9, 44°.19N×10°.16E, h4km±5km, Ml1.8*
LDG ***22*** *05:59:25.5±0.1, 44°.20N×10°.21E, h9km, Md2.5/2, Ml2.4/12, Error ellipse: s-maj=1.4km s-min=0.9km az=19.0*
ISC 22 05:59:24.7±0.8, 44°.19N±0°.03×10.16E±0.03, h14km±6km, n29, σ1§17/57, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.16**	**101**	P	**Pg**	**05 59 28.4**	**-0.3**
VLC				S	**Sg**	**05 59 31.4**	**0.0**
VLC				AML	AML		
	comp=E,362μm,0.1s						
VLC				AML	AML		
	comp=N,500μm,0.2s						
VLC				AML	AML		
	comp=E,410μm,0.1s						
VLC				AML	AML		
	comp=N,499μm,0.2s						
VLC				AML	AML		
	comp=N,500μm,0.2s						
VLC				AML	AML		
	comp=E,362μm,0.1s						
VLC				AML	AML		
	comp=E,410μm,0.1s						
VLC				AML	AML		
	comp=N,499μm,0.2s						
VLC				AML	AML		
	comp=N,500μm,0.2s						
VLC				AML	AML		
	comp=E,362μm,0.1s						
VLC				AML	AML		
	comp=E,410μm,0.1s						
VLC				AML	AML		
	comp=N,499μm,0.2s						
SARO	**Sassorosso**	**0.17**	**92**	P	**Pg**	**05 59 28.5**	**-0.4**
SARO				S	**Sg**	**05 59 31.3**	**-0.4**
SARO	**Sassorosso**	**0.17**	**92**	P	**Pg**	**05 59 28.6**	**-0.4**
SARO				S	**Sb**	**05 59 31.7**	**-1.3**
SARO				AML	AML		
	comp=E,944μm,0.4s						
SARO				AML	AML		
	comp=N,1265μm,0.2s						
SARO				AML	AML		
	comp=E,944μm,0.4s						
SARO				AML	AML		
	comp=N,1265μm,0.2s						
SARO				AML	AML		
	comp=E,944μm,0.4s						
SARO				AML	AML		
	comp=N,1265μm,0.2s						
CARD	**Cardoso**	**0.28**	**125**	P	**Pg**	**05 59 30.6**	**0.0**
CARD				S	**Sg**	**05 59 35.0**	**+0.3**
CARD	**Cardoso**	**0.28**	**125**	P	**Pg**	**05 59 30.7**	**+0.1**
CARD				S	**Sb**	**05 59 35.6**	**-0.5**
CARD				AML	AML		
	comp=E,510μm,0.1s						
CARD				AML	AML		
	comp=N,496μm,0.8s						
CARD				AML	AML		
	comp=E,510μm,0.1s						
CARD				AML	AML		
	comp=N,496μm,0.8s						
CARD				AML	AML		
	comp=E,510μm,0.1s						
CARD				AML	AML		
	comp=N,496μm,0.8s						
ERBM	**Eremo**	**0.29**	**38**	P	**Pb**	**05 59 31.0**	**-0.7**
ERBM				S	**Sb**	**05 59 36.0**	**-0.4**
ERBM				AML	AML		
	comp=E,1100μm,0.2s						
ERBM				AML	AML		
	comp=N,1100μm,0.3s						
ERBM				AML	AML		
	comp=E,1100μm,0.2s						
ERBM				AML	AML		
	comp=N,1100μm,0.3s						
ERBM				AML	AML		
	comp=E,1100μm,0.2s						
ERBM				AML	AML		
	comp=N,1100μm,0.3s						
GRAM	**Graiana**	**0.31**	**347**	P	**Pb**	**05 59 31.1**	**-0.9**
GRAM				S	**Sb**	**05 59 35.7**	**-1.3**
GRAM	**Graiana**	**0.31**	**347**	P	**Pb**	**05 59 31.1**	**-0.9**
GRAM				S	**Sb**	**05 59 36.3**	**-0.6**
GRAM				AML	AML		
	comp=E,2350μm,0.2s						
GRAM				AML	AML		
	comp=N,3080μm,0.2s						
GRAM				AML	AML		
	comp=N,3080μm,0.2s						
GRAM				AML	AML		
	comp=E,2350μm,0.2s						
GRAM				AML	AML		
	comp=N,3080μm,0.2s						
GRAM				AML	AML		
	comp=E,2350μm,0.2s						
BDI	**Bagni Di Lucca**	**0.34**	**112**	P	**Pb**	**05 59 31.8**	**-0.7**
BDI				S	**Sb**	**05 59 37.1**	**-0.6**
MAIM	**Mastiano**	**0.36**	**139**	P	**Pg**	**05 59 32.3**	**+0.2**
MAIM				S	**Sg**	**05 59 37.3**	**+0.2**
MAIM	**Mastiano**	**0.36**	**139**	P	**Pg**	**05 59 32.3**	**+0.2**
MAIM				S	**Sg**	**05 59 37.7**	**+0.7**
MAIM				AML	AML		
	comp=E,206μm,0.4s						
MAIM				AML	AML		
	comp=N,178μm,0.6s						
MAIM				AML	AML		
	comp=N,178μm,0.6s						
MAIM				AML	AML		
	comp=E,206μm,0.4s						
MAIM				AML	AML		
	comp=N,178μm,0.6s						
MAIM				AML	AML		
	comp=E,206μm,0.4s						
POPM	**Popiglio**	**0.45**	**109**	P	**Pb**	**05 59 33.6**	**-0.8**
POPM				S	**Sb**	**05 59 40.3**	**-0.7**
POPM	**Popiglio**	**0.45**	**109**	P	**Pb**	**05 59 33.9**	**-0.5**
POPM				S	**Sb**	**05 59 40.6**	**-0.4**
POPM				AML	AML		
	comp=E,341μm,0.2s						
POPM				AML	AML		
	comp=N,694μm,0.2s						
POPM				AML	AML		
	comp=N,694μm,0.2s						
POPM				AML	AML		
	comp=E,341μm,0.2s						
POPM				AML	AML		
	comp=N,694μm,0.2s						
POPM				AML	AML		
	comp=E,341μm,0.2s						
MSSA	**Maissana**	**0.48**	**285**	P	**Pg**	**05 59 34.2**	**0.0**
MSSA				S	**Sg**	**05 59 41.8**	**+1.1**
MTCR	**Monte La Croce**	**0.62**	**105**	P	**Pb**	**05 59 37.2**	**-0.2**
MTCR				S	**Sb**	**05 59 46.2**	**+0.2**
MTCR				AML	AML		
	comp=E,148μm,0.9s						
MTCR				AML	AML		
	comp=N,195μm,0.3s						
MTCR				AML	AML		
	comp=E,148μm,0.9s						
MTCR				AML	AML		
	comp=N,195μm,0.3s						
MTCR				AML	AML		
	comp=E,148μm,0.9s						
MTCR				AML	AML		
	comp=N,195μm,0.3s						
FNVD	**Fontana Vidola**	**0.69**	**92**	P	**Pb**	**05 59 38.4**	**-0.1**
FNVD				S	**Sb**	**05 59 48.2**	**+0.3**
PTF	**Prato**	**0.69**	**109**	P	**Pb**	**05 59 38.4**	**-0.1**
CRMI	**Carmignano**	**0.71**	**124**	P	**Pb**	**05 59 38.6**	**-0.2**
CRMI				S	**Sb**	**05 59 48.5**	**+0.2**
PGF	**Pioggiola**	**1.85**	**208**	*e*Pn	**Pb**	**05 59 58.6**	**+0.3**
PGF				*e*Sn	**Sn**	**06 00 18.2**	**-1.0**
	comp=N,7.0nm,0.3s						
SBF	**Sospel**	**2.00**	**261**	*e*Pn	**Pn**	**05 59 57.5**	**-0.5**
SBF				*e*Sn	**Sn**	**06 00 22.5**	**-0.3**
	comp=N,13nm,0.3s						
MBDF	**Montbardon**	**2.49**	**284**	*e*Pn	**Pn**	**06 00 05.5**	**+0.7**
MBDF				*e*Sn	**Sn**	**06 00 34.3**	**-0.7**
MBDF				*e*Sg	**Sg**	**06 00 45.8**	**+1.2**
	comp=N,2.3nm,0.3s						
FRF	**La Foret Royal**	**2.62**	**257**	*e*Pn	**Pn**	**06 00 06.8**	**+0.3**
FRF				*e*Sn	**Sn**	**06 00 37.1**	**-1.0**
	comp=N,3.6nm,0.2s						
LMR	**La Mourre**	**2.78**	**253**	*e*Pn	**Pn**	**06 00 08.6**	**-0.1**
LMR				*e*Sn	**Sn**	**06 00 40.6**	**-1.5**
	comp=N,3.1nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.15**	**285**	*e*Pn	**Pn**	**06 00 14.0**	**+0.1**
ORIF	**Oris-en-Rattie**	**3.15**	**285**	*e*Pg	**Pg**	**06 00 24.6**	**-0.4**
ORIF				*e*Sn	**Sn**	**06 00 49.8**	**-1.4**
	comp=N,2.5nm,0.4s						
ORIF				*e*Sg	**Sg**	**06 01 05.4**	**-0.3**
	comp=N,4.5nm,0.5s						
SMRF	**Simiane la Rot**	**3.31**	**268**	*e*Pn	**Pn**	**06 00 16.2**	**+0.1**
SMRF				*e*Sn	**Sn**	**06 00 53.6**	**-1.6**
	comp=N,2.6nm,0.3s						
SMRF				*e*Sg	**Sg**	**06 01 10.9**	**-0.2**
	comp=N,1.0nm,0.2s						
CABF	**La Chapelle**	**3.75**	**312**	*e*P	**Pn**	**06 00 25.9**	**+3.7**
CABF				*e*Sn	**Sn**	**06 01 04.6**	**-1.6**
	comp=N,1.0nm,0.3s						
SMF	**Signal de Mont**	**5.08**	**301**	*e*P	**Pn**	**06 00 44.4**	**+4.0**
AVF	**Avril sur Loir**	**5.45**	**301**	*e*P	**Pn**	**06 00 49.4**	**+4.0**

NIED ***22*** *06:02:00, 38°.00N×143°.80E, h5km, Mw4.0 Best double couple: M0 1.33000×10^15 NP1:φs 24.00000°, δ36.00000°, λ-79.00000°. NP2:φs 191.00000°, δ55.00000°, λ-98.00000°.*
IDC ***22*** *06:02:56.0±0.7, 37°.95N×144°.01E, h0km, mb3.9/10, mb1 4.0/15, mb1mx3.9/38, mbtmp3.9/15, ML3.3/5, Error ellipse: s-maj=19.8km s-min=15.7km az=119.0*
ISCJB ***22*** *06:02:59.1±0.3, 37°.96N±0°.03×143°.83E±0°.03, h33km, mb4.2/20, Error ellipse: s-maj=4.3km s-min=3.5km az=154.6*
JMA ***22*** *06:02:59.3±0.2, 38°.03N×143°.84E, h44km, M4.1*
NEIC ***22*** *06:03:01.2±1.3, 37°.95N×143°.93E, h34km±5km, mb4.5/12, Error ellipse: s-maj=21.0km s-min=11.2km az=119.0*
ISC 22 06:03:01.3±0.6, 37°.99N±0°.05×143°.85E±0°.06, h35km, n59, σ1§48/73, mb4.2/20, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.90**	**280**	P	**Pn**	**06 03 30.1**	**-1.2**
JIKH				*e*S	**Sn**	**06 03 52.4**	**-1.6**
JIO	**Ouri**	**2.02**	**284**	P	**Pn**	**06 03 31.8**	**-1.1**
JIO				*e*S	**Sn**	**06 03 55.5**	**-1.4**
OFUJ	**Ofunato**	**2.02**	**303**	P	**Pn**	**06 03 31.6**	**-1.3**
JKMT	**Kesennumamotoy**	**2.04**	**294**	P	**Pn**	**06 03 31.9**	**-1.2**
JKMT				S	**Sn**	**06 03 56.0**	**-1.3**
JMK	**Ichinoseki**	**2.27**	**296**	P	**Pn**	**06 03 35.5**	**-0.9**
JMK				S	**Sn**	**06 04 02.9**	**-0.2**
JOM	**Ohasama**	**2.49**	**307**	P	**Pn**	**06 03 38.3**	**-1.0**
JOM				S	**Sn**	**06 04 07.4**	**-1.0**
JFT	**Otama**	**2.82**	**261**	P	**Pn**	**06 03 43.7**	**-0.2**
JFT				*e*S	**Sn**	**06 04 16.3**	**-0.4**
JYK	**Kaneyama**	**2.89**	**290**	P	**Pn**	**06 03 44.4**	**-0.4**
JYK				S	**Sn**	**06 04 18.2**	**-0.2**
JANG	**Nango**	**2.99**	**323**	*e*S	**Sn**	**06 04 19.5**	**-1.4**
JAG	**Ashikaga**	**3.84**	**247**	P	**Pn**	**06 03 57.3**	**-0.6**
JOT	**Ohata**	**4.02**	**328**	P	**Pn**	**06 03 59.8**	**-0.5**
JOT				*e*S	**Sn**	**06 04 43.7**	**-2.4**
ERM	**Erimo**	**4.05**	**353**	*e*Pn	**Pn**	**06 03 59.7**	**-1.1**
ERM				*e*Sn	**Sn**	**06 04 44.7**	**-2.4**
BSO1	**Boso 1**	**4.06**	**216**	P	**Pn**	**06 03 58.7**	**-1.7**
BSO1				*e*S	**Sn**	**06 04 45.4**	**-1.0**
JRY	**Ryogami san**	**4.42**	**245**	P	**Pn**	**06 04 05.3**	**-0.6**
JRY				*e*S	**Sn**	**06 04 53.1**	**-3.1**
JKB	**Kayabe**	**4.45**	**332**	P	**Pn**	**06 04 06.5**	**+0.2**
JCH	**Churui**	**4.63**	**356**	P	**Pn**	**06 04 06.6**	**-2.2**
JCH				*e*S	**Sn**	**06 04 57.0**	**-4.3**
JOD2	**Odawara 2**	**4.70**	**236**	*e*S	**Sn**	**06 05 00.3**	**-2.6**
MJAR	**Matsushiro Arr**	**4.72**	**254**	Pn	**Pn**	**06 04 10.1**	**+0.1**
	0.8nm,0.3s,baz=89,slow=14,SNR=25						
MJAR				Sn	**Sn**	**06 05 02.3**	**-1.3**
	0.3nm,0.3s,baz=247,slow=22,SNR=4.7						
MAJO	**Matsushiro**	**4.72**	**254**	*e*Pn	**Pn**	**06 04 10.7**	**+0.6**
MAJO				*e*Sn	**Sn**	**06 05 02.3**	**-1.3**
MAT	**Matsushiro**	**4.72**	**254**	P	**Pn**	**06 04 10.9**	**+0.8**
MAT				S	**Sn**	**06 05 05.1**	**+1.5**
MJB9	**Matsu-Tunnel**	**4.72**	**254**	*e*Pn	**Pn**	**06 04 10.8**	**+0.7**
JHJ2	**Mitsune**	**5.87**	**215**	*e*Pn	**Pn**	**06 04 25.4**	**-0.4**
JHJ	**Hachijo jima 2**	**5.88**	**215**	Pn	**Pn**	**06 04 25.0**	**-1.0**
	6.6nm,0.3s,baz=339,slow=22,SNR=7.9						
JHJ				Sn	**Sn**	**06 05 25.9**	**-6.2**
	13nm,0.3s,baz=38,slow=23,SNR=3.7						
INU	**Inuyama**	**6.09**	**246**	*e*Pn	**Pn**	**06 04 30.7**	**+1.9**
ASAJ	**Asahikawa**	**6.19**	**352**	Pn	**Pn**	**06 04 28.7**	**-1.5**
	1.6nm,0.3s,baz=194,slow=7.7,SNR=9.6						
ASAJ				Sn	**Sn**	**06 05 37.0**	**-2.7**
	1.2nm,0.3s,baz=22,slow=33,SNR=3.9						
USRK	**Ussuriysk Ar.**	**10.88**	**308**	Pn	**Pn**	**06 05 34.4**	**0.0**
	0.2nm,0.3s,baz=109,slow=14,SNR=3.7						
KSRS	**Korea Array**	**12.62**	**272**	Pn	**Pn**	**06 06 00.8**	**+2.5**
	0.1nm,0.3s,baz=87,slow=14,SNR=6.6						
SEY	**Seymchan**	**25.51**	**9**	P	**P**	**06 08 26.4**	**+0.2**
	2.4nm,0.8s,baz=196,slow=13,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**27.05**	**126**	T	T	06 36 55.5	
	SNR=3.0						
H11N1	**WAKE ISLAND Hy**	**27.06**	**126**	T	T	06 36 54.4	
H11N3	**WAKE ISLAND Hy**	**27.07**	**126**	T	T	06 36 54.4	
SONA0	**Songino Array**	**28.89**	**302**	*e*P	**P**	**06 08 58.2**	**+1.4**
SONM	**Songino Array**	**28.89**	**302**	P	**P**	**06 08 58.2**	**+1.4**
	0.3nm,0.3s,baz=90,slow=7.2,SNR=2.8						
ANM	**Nome**	**39.77**	**32**	*e*P	**P**	**06 10 29.7**	**-0.7**
	10nm,1.3s						
KDAK	**Kodiak Island**	**45.09**	**43**	*e*P	**P**	**06 11 14.3**	**+0.6**
	36nm,1.4s						
MK32	**Makanchi Array**	**45.26**	**302**	*e*P	**P**	**06 11 16.2**	**+1.0**
MKAR	**Makanchi Array**	**45.26**	**302**	P	**P**	**06 11 16.2**	**+1.0**
	0.3nm,0.3s,baz=75,slow=11,SNR=5.2						
ILAR	**Eielson Array**	**47.65**	**33**	P	**P**	**06 11 32.5**	**-1.2**
	1.3nm,0.7s,baz=266,slow=6.3,SNR=15						
ILB	**Eielson Array**	**47.65**	**33**	*e*P	**P**	**06 11 34.5**	**+0.8**
	1.4nm,0.7s						
HMT	**Hamilton**	**49.16**	**39**	*e*P	**P**	**06 11 46.9**	**+1.4**
	7.7nm,0.9s						
EGAK	**Eagle**	**50.10**	**33**	*e*P	**P**	**06 11 52.8**	**+0.3**
	3.3nm,1.3s						
INK	**Inuvik**	**52.65**	**28**	*e*P	**P**	**06 12 12.2**	**+0.7**
	5.2nm,1.4s						
WRAB	**Tennant Creek**	**58.30**	**191**	*e*P	**P**	**06 12 52.2**	**-0.4**
	14nm,0.8s						
WB2	**Warramunga Arr**	**58.31**	**191**	*e*P	**P**	**06 12 52.1**	**-0.6**
	12nm,0.8s						
WR1	**Warramunga Arr**	**58.31**	**191**	*e*P	**P**	**06 12 52.2**	**-0.6**
WRA	**Warramunga Arr**	**58.31**	**191**	P	**P**	**06 12 52.2**	**-0.6**
	10nm,0.8s,baz=7.4,slow=8.4,SNR=26						
YKA	**Yellowknife Ar**	**62.00**	**31**	P	**P**	**06 13 17.6**	**+0.1**
	0.7nm,0.7s,baz=311,slow=6.2,SNR=5.1						

YKB5	Yellowknife Ar	62.00	31	*e*P		P	06 13 17.6	+0.1
AS31	Alice Springs	62.04	190	*e*P		P	06 13 17.9	-0.3
	1.4nm,0.8s							
ASAR	Alice Springs	62.04	190	P		P	06 13 17.9	-0.4
	2.1nm,0.7s,baz=13,slow=7.0,SNR=18							
FIA0	FINESS Array S	68.86	333	*e*P		P	06 14 02.0	+0.2
FINES	FINESS Array B	68.86	333	P		P	06 14 02.0	+0.2
	2.7nm,1.0s,baz=43,slow=8.6,SNR=3.7							
FCC	Fort Churchill	72.27	28	*e*P		P	06 14 22.9	+0.2
	9.6nm,1.4s							
NVAR	Mina Array Bea	72.86	55	P		P	06 14 27.4	+0.4
	0.3nm,0.7s,baz=270,slow=8.9,SNR=3.9							
NV01	Mina Array Sit	72.86	55	*e*P		P	06 14 27.4	+0.4
AKASG	Malin Array Be	74.71	323	P		P	06 14 37.4	+0.2
	0.6nm,0.5s,baz=42,slow=6.2,SNR=4.0							
PD31	Pinedale Array	75.61	47	*e*P		P	06 14 43.2	+0.3
	1.8nm,0.9s							
PDAR	Pinedale Array	75.61	47	P		P	06 14 42.9	0.0
	0.8nm,0.6s,baz=287,slow=2.5,SNR=8.1							
SIV	San Ignacio	148.98	52	PKPbc		PKiKP	06 22 46.2	-1.1
	0.8nm,0.7s,baz=31,slow=6.9,SNR=7.1							

VAO 22 06:04:47.6±0.3, 13°.95S×49°.04W, h2km, mb4.2, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEXB	Peixe	1.97	22	*e*P	Pn	06 05 22.6	+0.6
PEXB				*e*S	Sn	06 05 45.6	-1.7
PEXB	Peixe	1.97	22	*e*P	Pn	06 05 22.6	+0.6
PEXB				*e*S	Sn	06 05 45.6	-1.7
PMNB	Patos De Minas	5.20	152	*e*P	Pn	06 06 11.2	+4.6
PMNB				*e*S	Sn	06 07 08.6	+1.4
PMNB	Patos De Minas	5.20	152	*e*P	Pn	06 06 11.2	+4.6
PMNB				*e*S	Sn	06 07 08.6	+1.4
ITRB	Iturama	5.86	192	*e*P	Pn	06 06 16.5	+0.9
ITRB				*e*S	Sn	06 07 23.1	-0.3
ITRB	Iturama	5.86	192	*e*P	Pn	06 06 16.5	+0.9
ITRB				*e*S	Sn	06 07 23.1	-0.3
C2SB	Chapadao do Su	6.02	217	*e*P	Pn	06 06 18.0	+0.3
C2SB				*e*S	Sn	06 07 27.1	-0.2
C2SB	Chapadao do Su	6.02	217	*e*P	Pn	06 06 18.0	+0.3
C2SB				*e*S	Sn	06 07 27.1	-0.2
BB19B	Bebedouro	7.09	176	*e*P	Pn	06 06 33.5	+0.9
BB19B				*e*S	Sn	06 07 53.3	-0.5
BB19B	Bebedouro	7.09	176	*e*P	Pn	06 06 33.5	+0.9
BB19B				*e*S	Sn	06 07 53.3	-0.5
BSCB	Bom Sucesso	8.10	150	*e*P	Pn	06 06 47.4	+0.9
BSCB				*e*S	Sn	06 08 18.6	-0.2
BSCB	Bom Sucesso	8.10	150	*e*P	Pn	06 06 47.4	+0.9
BSCB				*e*S	Sn	06 08 18.6	-0.2
RCLB	Rio Claro- Sao	8.54	171	*e*P	Pn	06 06 52.7	+0.3
RCLB				*e*S	Sn	06 08 30.1	+0.5
RCLB	Rio Claro- Sao	8.54	171	*e*P	Pn	06 06 52.7	+0.3
RCLB				*e*S	Sn	06 08 30.1	+0.5
SJMB	Sao Joao De Ma	8.90	123	*e*P	Pn	06 06 57.6	+0.3
SJMB				*e*S	Sn	06 08 38.0	-0.2
SJMB	Sao Joao De Ma	8.90	123	*e*P	Pn	06 06 57.6	+0.3
SJMB				*e*S	Sn	06 08 38.0	-0.2
AQDB	Aquidauana	9.09	224	*e*P	Pn	06 07 00.1	+0.2
AQDB				*e*S	Sn	06 08 43.1	+0.3
AQDB	Aquidauana	9.09	224	*e*P	Pn	06 07 00.1	+0.2
AQDB				*e*S	Sn	06 08 43.1	+0.3
BSFB	Barra de Sao F	9.24	123	*e*P	Pn	06 07 02.4	+0.5
BSFB				*e*S	Sn	06 08 46.4	-0.2
BSFB	Barra de Sao F	9.24	123	*e*P	Pn	06 07 02.4	+0.5
BSFB				*e*S	Sn	06 08 46.4	-0.2
FRTB	Fartura	9.36	183	*e*P	Pn	06 07 03.8	+0.2
FRTB				*e*S	Sn	06 08 49.3	-0.2
FRTB	Fartura	9.36	183	*e*P	Pn	06 07 03.8	+0.2
FRTB				*e*S	Sn	06 08 49.3	-0.2

DJA 22 06:05:05.3±0.4, 5°.S±4°.×10°.4E±°, h132km±4km, M4.0/13, MLv4.0/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	0.32	172	P	Pn	06 05 24.8	+1.0
KASI				S	Sn	06 05 39.9	+2.2
LWLI	Liwa	0.43	296	P	Pn	06 05 25.6	+1.2
LWLI				S	Sn	06 05 40.4	+1.6
MDSI	Maura Dua	0.77	339	P	Pn	06 05 27.3	+0.9
MDSI				S	Sn	06 05 44.2	+1.8
BLSI	Bandar Lampung	0.81	101	P	Pn	06 05 27.9	+1.2
BLSI				S	Sn	06 05 44.6	+1.7
LHSI	Lahat	1.66	326	P	Pn	06 05 36.4	+1.1
MNAI	Manna	1.71	299	P	Pn	06 05 36.5	+0.5
MNAI				S	Sn	06 06 00.0	+0.6
CGJI	Cibinong	1.86	138	P	Pn	06 05 37.2	-0.5
SBJI	Serang	1.90	118	P	Pn	06 05 38.6	+0.4
PPBI	Pangkal Pinang	3.46	29	P	Pn	06 05 58.1	0.0
TPI	Tanjungpandan	4.02	53	P	Pn	06 06 05.2	-0.2
CISI	Cisompet, Garu	4.08	125	P	Pn	06 06 05.0	-1.2
DSRI	Dabo	4.70	2	P	Pn	06 06 07.0	-7.5
SDSI	Sungai Dareh	5.21	325	P	Pn	06 06 19.7	-1.6
PDSI	Padang	5.84	317	P	Pn	06 06 27.7	-2.0
SISI	Saibi	6.60	306	P	Pn	06 06 35.6	-4.3
MNSI	Mandailing Nat	7.70	321	P	Pn	06 06 48.6	-6.1
GSI	Gunungsitoli	9.44	313	P	Pn	06 07 11.9	-6.2
TPTI		11.11	319	P	Pn	06 07 34.1	-6.5
WHN	Wuhan	36.79	14	P	P	06 11 57.1	-3.3
KSH	Kashi	51.68	332	*e*P	P	06 13 55.0	-4.0

*IDC **22** 06:19:14.9±3.0, 53°.53N×87°.78E, h0km, mb1 3.6/2, mb1mx3.2/46, mbtmp3.6/2, ML3.2/2, Error ellipse: s-maj=29.0km s-min=15.5km az=52.0*
*NNC **22** 06:19:16.2±1.8, 53°.46N×87°.63E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=14.1km s-min=6.4km az=59.0, Suspected Mining explosion.*

ASRS 22 06:19:13.6, 53°.61N×87°.92E, M2.7, 9C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.87	282	*i*		06 30 30.0	
	baz=98,slow=312,SNR=1.8						
ZAA0	Zalesovo Array	1.87	282	⇓P	Pn	06 19 46.6	-0.3
	2.2nm,0.5s						
ZAA0				⇑S	Sn	06 20 11.2	+0.1
	7.6nm,1.0s						
ZALV	Zalesovo Beam	1.87	282	Pg	Pn	06 19 46.9	0.0
	8.8nm,0.3s,baz=104,slow=13,SNR=52						
ZALV				Lg	Lg	06 20 12.0	
	12nm,0.3s,baz=107,slow=24,SNR=19						
KURK	Kurchatov	6.41	247	⇑Pn	Pn	06 20 49.3	+0.1
	3.1nm,0.6s						
KURK				⇑Sn	Sn	06 22 00.3	-2.7
	3.7nm,0.7s						
KURK				⇑Lg	Lg	06 22 33.3	
	16nm,0.8s						
KURBB	Kurchatov Arra	6.51	246	Pn	Pn	06 20 51.2	+0.7
	0.4nm,0.3s,baz=62,slow=14,SNR=42						
KURBB				Lg	Lg	06 22 37.9	
	0.1nm,0.3s,baz=66,slow=33,SNR=8.2						
KURBB	Kurchatov Arra	6.51	246	⇑Pn	Pn	06 20 50.8	+0.3
	6.9nm,0.5s						
KURBB				⇓Sn	Sn	06 22 02.3	-3.1
	8.8nm,0.5s						
KURBB				⇑Lg	Lg	06 22 38.0	
	20nm,0.7s						
MK31	Makanchi Array	7.71	210	⇓Pn	Pn	06 21 08.5	+1.3
	0.1nm,0.2s,baz=28,slow=13,SNR=18						
MK31				⇑Sn	Sn	06 22 33.7	-1.4
	5.0nm,1.2s						
MK31				⇓Lg	Lg	06 23 14.0	
	2.4nm,0.6s,baz=32,slow=30,SNR=6.2						
MKAR	Makanchi Array	7.71	210	Pn	Pn	06 21 08.2	+1.1
	0.5nm,0.3s,baz=27,slow=13,SNR=17						
MKAR				Lg	Lg	06 23 16.0	
	0.2nm,0.3s,baz=32,slow=30,SNR=8.4						
MAKZ	Makanchi	7.79	212	⇑Pn	Pn	06 21 09.5	+1.2
	2.9nm,1.1s						
MAKZ				⇑Sn	Sn	06 22 36.0	-1.2
	3.4nm,1.1s						
MAKZ				⇓Lg	Lg	06 23 16.9	
	11nm,1.1s						
BVAR	Borovoye Array	10.51	274	Pn	Pn	06 21 47.0	+1.6
	0.5nm,0.3s,baz=72,slow=14,SNR=7.0						
BVAR				Sn	Sn	06 23 38.5	-5.1
	0.5nm,0.3s,baz=72,slow=28,SNR=5.4						

MAN 22 06:27:18.2, 17°.69N×120°.41E, h22km, mb3.7, ML2.4, MS1.9, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	Callao Caves	1.35	89	*e*P	Pn	06 27 41.3	-0.4

WEL 22 07:10:45.6±1.1, 36°.S±13°.×17°.8E±1°.5, h185km±20km, M3.5/15, MLv3.5/15, Error ellipse: s-maj=0.0km s-min=0.0km az=121.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.03	183	P	Pn	07 11 23.0	-0.2
MXZ				S	Sn	07 11 53.0	+0.3
HAZ	Te Kaha	2.28	193	P	Pn	07 11 26.1	+0.1
HAZ				S	Sn	07 11 58.1	+0.5
WMGZ	Waiomatatini S	2.29	180	P	Pn	07 11 26.6	+0.6
WMGZ				S	Sn	07 11 57.8	+0.1
RUGZ	Raukumara Rang	2.51	194	P	Pn	07 11 28.5	-0.2
RUGZ				S	Sn	07 12 01.7	-0.7
KUZ	Kuaotunu	2.51	240	P	Pn	07 11 28.6	0.0
PUZ	Puketiti	2.54	183	P	Pn	07 11 29.1	+0.1
PUZ				S	Sn	07 12 02.4	-0.6
TWGZ	Tauwhareparae	2.67	188	P	Pn	07 11 31.0	+0.5
TWGZ				S	Sn	07 12 06.9	+1.3
MWZ	Matawai	2.89	194	P	Pn	07 11 33.5	+0.4
MWZ				S	Sn	07 12 10.7	+0.3
URZ	Urewera	2.92	201	P	Pn	07 11 33.5	0.0
URZ				S	Sn	07 12 11.7	+0.8
TKGZ	Te Karaka	2.94	189	P	Pn	07 11 33.4	-0.2
TKGZ				S	Sn	07 12 11.4	0.0
CNGZ	Carnagh Statio	2.96	183	P	Pn	07 11 34.2	+0.4
RAGZ	Rawiri	3.07	195	P	Pn	07 11 35.4	0.0
MUGZ	Murupara	3.23	204	P	Pn	07 11 37.8	+0.6
SNGZ	Shannon Statio	3.36	195	P	Pn	07 11 38.7	-0.1
SNGZ				S	Sn	07 12 21.0	+0.4
RAHZ	Arahi	3.55	197	P	Pn	07 11 40.4	-0.7
RAHZ				S	Sn	07 12 25.1	+0.4
MTHZ	Maungataniwha	3.55	201	P	Pn	07 11 40.8	-0.4
MRHZ	Matea Rd	3.67	205	P	Pn	07 11 42.4	-0.3
NMHZ	Naumai	3.79	200	P	Pn	07 11 43.8	-0.4
BKZ	Black Stump Fm	3.95	203	P	Pn	07 11 45.2	-0.9
KWHZ	Kaweka Forest	4.21	202	P	Pn	07 11 48.4	-1.0
BHHZ	Black Hill Sta	4.38	205	P	Pn	07 11 49.9	-1.8
KRHZ	Kereru	4.42	201	P	Pn	07 11 50.3	-1.9

*JMA **22** 07:13:10.9±0.5, 44°.89N×149°.82E, h30km, M4.0*
*IDC **22** 07:13:13.7±5.1, 45°.41N×149°.70E, h61km±43km, mb3.6/11, mb1 3.7/12, mb1mx3.4/40, mbtmp3.8/12, ML3.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/33, Error ellipse: s-maj=88.2km s-min=31.3km az=157.0*

ISC 22 07:13:06.8±1.6, 44°.5N±0°.2×150°.2E±0°.1, h51km, n30, σ2°.38/34, mb3.9/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	3.43	253	P	Pn	07 13 59.7	+2.1
NEM2				*e*S	Sn	07 14 35.7	-1.2
JRA	Rausu	3.71	264	P	Pn	07 14 04.8	+3.3
JNK	Nakash	4.07	259	P	Pn	07 14 09.4	+2.9
JNK				*e*S	Sn	07 14 52.7	-0.2
JAK	Akkeshi	4.27	252	P	Pn	07 14 11.6	+2.4
JAK				*e*S	Sn	07 14 56.2	-1.5
JTKR	Abashiri--Toko	4.57	266	P	Pn	07 14 16.4	+3.1
JAR	Ashorobuto	4.82	258	P	Pn	07 14 20.2	+3.5
JAR				*e*S	Sn	07 15 11.6	+0.5
JOB	Onbets	4.90	254	*e*S	Sn	07 15 12.4	-0.7
JMP	Maruseppu	4.96	267	P	Pn	07 14 21.8	+3.1
JCH	Churui	5.33	252	P	Pn	07 14 26.0	+2.3
JCH				*e*S	Sn	07 15 22.1	-1.6
JKK2	Kamakawa 2	5.42	266	P	Pn	07 14 28.7	+3.8
JSE	Soyaes	5.47	278	P	Pn	07 14 28.4	+2.8
ASAJ	Asahikawa	5.49	269	P	Pn	07 14 29.3	+3.4
	2.3nm,0.3s,baz=59,slow=22,SNR=8.6						
JNBK	Urakawa-nobuka	5.87	251	*e*S	Sn	07 15 34.6	-2.5
JBT2	Biratori 2	5.96	256	P	Pn	07 14 34.8	+2.5
JNB	Noboribetsu	6.98	257	P	Pn	07 14 50.1	+3.8
JKB	Kayabe	7.20	252	P	Pn	07 14 51.3	+1.9
JKB				*e*S	Sn	07 16 05.2	-4.5
JANG	Nango	7.64	241	*e*S	Sn	07 16 14.8	-5.6
MA2	Magadan	15.13	1	LR	LR	07 22 42.0	
	comp=Z,39nm,18.3s,baz=315,slow=40						
TIXI	Tiksi	29.15	346	P	P	07 18 59.5	-3.0
	2.2nm,0.5s,baz=160,slow=7.5,SNR=7.3						
ILAR	Eielson Array	39.59	37	P	P	07 20 34.3	+1.6
	0.2nm,0.5s,baz=272,slow=6.2,SNR=2.3						
MKAR	Makanchi Array	46.21	298	P	P	07 21 25.3	-1.2
	0.3nm,0.6s,baz=64,slow=13,SNR=2.1						
KURBB	Kurchatov Arra	47.05	304	P	P	07 21 32.7	-0.3
	0.5nm,0.6s,baz=71,slow=8.7,SNR=3.5						
BVAR	Borovoye Array	50.76	310	P	P	07 22 00.3	-1.0
	0.4nm,0.4s,baz=64,slow=6.6,SNR=2.8						
AKTO	Aktyubinsk	58.73	312	P	P	07 22 59.0	-0.1
	1.0nm,0.6s,baz=70,slow=5.1,SNR=4.5						
FINES	FINESS Array B	65.22	334	P	P	07 23 41.8	-0.6
	1.3nm,0.6s,baz=42,slow=8.9,SNR=7.6						
NB2	NORSAR Subarra	69.71	340	P	P	07 24 10.5	-0.3
	comp=Z,0.5nm,0.5s,baz=28,slow=6.5						
NOA	NORSAR Array B	69.71	340	P	P	07 24 10.2	-0.5
	comp=Z,0.7nm,0.4s,baz=32,slow=6.6,SNR=6.6						
KBZ	Khabaz	70.96	313	P	P	07 24 20.1	+1.5
	comp=Z,2.0nm,0.6s,baz=55,slow=2.3,SNR=4.7						
AKASG	Malin Array Be	72.29	325	P	P	07 24 25.9	-0.6
	comp=Z,0.9nm,0.4s,baz=37,slow=6.0,SNR=6.8						
BRTR	Keskin Array B	78.63	315	P	P	07 25 03.6	+0.4
	comp=Z,0.2nm,0.4s,baz=6.7,slow=4.9,SNR=2.1						

*TEH **22** 07:22:25.8, 26°.74N×57°.85E, h8km, ML3.6*
*ISCJB **22** 07:22:26.2±0.8, 26°.59N±0°.05×57°.82E±0°.09, h10km, mb3.4/5, MS2.8/1, Error ellipse: s-maj=11.8km s-min=5.8km az=20.5*
*DSN **22** 07:22:26.6±2.8, 26°.47N×57°.89E, h10km, ML3.6/9, Error ellipse: s-maj=35.7km s-min=11.4km az=14.0*
*IDC **22** 07:22:27.9±3.0, 26°.64N×57°.41E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.4/34, mbtmp3.6/5, MS2.9/1, Ms1 2.9/1, ms1mx2.4/29, Error ellipse: s-maj=65.0km s-min=30.6km az=151.0*

ISC 22 07:22:28.1±0.9, 26°.60N±0°.05×57°.76E±0°.09, h10km, n24, σ1°.73/24, mb3.5/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	Jask	0.96	179	*e*Pg	Pb	07 22 47.4	+0.7
NIAN	Nian	1.26	320	*e*Pg	Pn	07 22 50.3	-1.5
NIAN				IAMB	IAmb	07 23 15.5	
	comp=Z,0.0nm,0.4s						
KHNJ	Kahnooj	1.34	358	*e*Pg	Pn	07 22 49.3	-3.7
BANOM	Banah	1.47	243	*e*P	Pn	07 22 53.7	-1.0
	SNR=122						
SHME	Shamm	1.55	250	*e*P	Pn	07 22 55.5	-0.3
	SNR=27						
SHME				S	Sn	07 23 17.1	+1.2
GENO	Geno	1.62	300	*e*Pn	Pn	07 22 57.0	+0.1
GENO				IAMB	IAmb	07 23 28.5	
	comp=N,0.0nm,0.4s						
MDH	Madha	1.84	226	*e*P	Pn	07 22 57.5	-2.2
	SNR=12						
MSFE	Esma-Masafi	1.89	230	P	Pn	07 22 58.5	-2.0
UOSS	Minazif	2.16	221	P	Pn	07 23 01.5	-2.7
HATD	Hatta, Dubai	2.29	220	P	Pn	07 23 04.1	-1.9
ASHO	Ashiyiah	2.44	219	*e*P	Pn	07 23 08.0	-0.1
	SNR=10						
NAZ	Nazwa, Dubai	2.48	230	*e*P	Pn	07 23 08.4	-0.1
	SNR=8.8						
FAQ	Al Faqa, Dubai	2.69	227	P	Pn	07 23 10.9	-0.4
ASUD	Al Ashush, Dub	2.94	229	*e*P	Pn	07 23 14.1	-0.8
	SNR=9.2						
NGRK	Negar Kerman	3.17	344	*e*Pn	Pn	07 23 18.0	-0.3
NGRK				IAMB	IAmb	07 24 06.9	
	comp=Z,0.0nm,0.5s						
CHMN	Cheshme madani	3.26	357	IAMB	IAmb	07 24 16.8	
	comp=Z,0.0nm,0.8s						
KHGB	Koh Gabri	3.93	344	*e*Pn	Pn	07 23 30.1	+1.4
KHGB				IAMB	IAmb	07 24 39.3	
	comp=Z,0.0nm,1.3s						
IKOO	Kooshah	5.91	10	*e*Pn	Pn	07 23 55.1	-0.8
IKAZ	Kazeroun	6.11	303	*e*Pn	Pn	07 23 56.2	-2.5
AKTO	Aktyubinsk	23.80	0	P	P	07 27 40.2	-0.8
	comp=Z,1.1nm,0.7s,baz=182,slow=9.0,SNR=4.5						
BRTR	Keskin Array B	23.97	309	P	P	07 27 43.0	+0.1
	comp=Z,1.1nm,0.7s,baz=132,slow=11,SNR=5.2						
MKAR	Makanchi Array	27.97	37	P	P	07 28 22.3	+3.5
	comp=Z,0.3nm,0.8s,baz=241,slow=11,SNR=2.5						
MKAR				LR	LR	07 41 11.7	
	comp=Z,22nm,19.6s,baz=248,slow=40						
FINES	FINESS Array B	40.83	337	P	P	07 30 09.8	+0.3
	comp=Z,1.9nm,0.9s,baz=162,slow=15,SNR=4.7						
TORD	Torodi Ar. Bea	54.01	267	P	P	07 31 51.4	-1.4
	comp=Z,0.7nm,0.8s,baz=58,slow=7.7,SNR=4.8						

*IDC **22** 07:27:52.3±1.4, 34°.37N×25°.05E, h0km, mb3.9/3, mb1 3.8/4, mb1mx3.4/34, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=58.1km s-min=25.7km az=124.0*
*ISCJB **22** 07:27:53.5±1.5, 34°.18N±0°.04×25°.21E±0°.04, h15km±11km, Error ellipse: s-maj=6.5km s-min=4.9km az=7.1*
*ATH **22** 07:27:54.8, 34°.32N×25°.15E, h13km±3km, ML2.9/4, Error ellipse: s-maj=5.0km s-min=1.6km az=353.0*
*THE **22** 07:27:54.8, 34°.33N×25°.18E, h0km, ML2.9/8, Error ellipse: s-maj=1.6km s-min=0.6km az=169.0*

ISC 22 07:27:53.9±1.7, 34°.29N±0°.06×25°.19E±0°.03, h8km±10km, n31, σ0°.81/47, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.79	337	P	Pg	07 28 09.3	+0.3
SIVA				S	Sb	07 28 20.6	-0.1
SIVA	Sivas	0.79	337	P	Pg	07 28 09.4	+0.3
SIVA				S	Sg	07 28 19.5	+0.2
SIVA				AML	AML	07 28 22.9	
	comp=E,4928μm,0.4s						
SIVA				AML	AML	07 28 28.7	
	comp=N,4535μm,0.6s						
TMBK	Timbaki Herakl	0.85	336	P	Pb	07 28 10.8	-0.1
TMBK				S	Sn	07 28 23.7	-1.2
LAST	Lasithi	0.90	15	P	Pb	07 28 11.7	-0.1
LAST				S	Sb	07 28 25.0	+1.0
LAST	Lasithi	0.90	15	P	Pb	07 28 11.6	-0.1
LAST				AML	AML	07 28 31.2	
	comp=E,1179μm,0.6s						
LAST				AML	AML	07 28 35.8	
	comp=N,704μm,0.6s						
KSTL	Kastelli Herak	1.01	354	P	Pg	07 28 11.9	-1.4
KSTL				S	Sg	07 28 25.9	-0.6
IACM	Heraklion	1.01	355	P	Pb	07 28 13.7	0.0
IACM				S	Sn	07 28 28.9	0.0
IDI	Anoyia	1.02	346	P	Pg	07 28 13.3	-0.2
IDI				S	Sb	07 28 27.5	0.0
IDI				AML	AML	07 28 29.3	
	comp=N,608μm,0.3s						
IDI				AML	AML	07 28 29.4	
	comp=E,677μm,0.3s						
NPS	Neapolis	1.03	20	P	Pg	07 28 13.8	+0.2
NPS				S	Sn	07 28 29.3	0.0
NPS	Neapolis	1.03	20	P	Pb	07 28 13.9	0.0
GVD	Gavdhos	1.06	301	P	Pg	07 28 14.3	0.0
GVD				S	Sn	07 28 30.6	+0.6
GVD	Gavdhos	1.06	301	P	Pg	07 28 14.2	0.0
GVD				AML	AML	07 28 38.4	
	comp=E,2460μm,0.3s						
GVD				AML	AML	07 28 38.7	
	comp=N,1633μm,0.5s						
GVDS	Gavdos	1.06	301	P	Pb	07 28 14.7	+0.2
GVDS				S	Sn	07 28 30.8	+0.8
STIA	Sitia Lasithi	1.17	39	P	Pb	07 28 16.4	0.0
STIA				S	Sn	07 28 33.2	+0.4
ZKR	Zakros	1.18	46	P	Pn	07 28 16.9	+0.2
ZKR				S	Sn	07 28 33.6	+0.7
ZKR	Zakros	1.18	46	P	Pn	07 28 17.1	+0.4
PRNS	Prines Rethymn	1.21	332	P	Pg	07 28 17.3	+0.2
PRNS				S	Sn	07 28 34.6	+0.9
VAM	Vamos	1.38	324	P	Pn	07 28 19.6	+0.2
VAM				S	Sg	07 28 38.5	+0.3
VAM	Vamos	1.38	324	P	Pn	07 28 19.6	+0.2
IMMV	Iera Moni Meta	1.53	320	P	Pn	07 28 21.6	+0.1
IMMV				S	Sb	07 28 42.3	+0.2
IMMV	Iera Moni Meta	1.53	320	P	Pb	07 28 22.7	+0.2
KARP	Karpathos	2.05	52	P	Pb	07 28 31.5	+0.2
ANKY	Antikythira Is	2.21	316	P	Pb	07 28 33.1	-0.9
KYTH	Kithira	2.63	319	P	Pn	07 28 38.3	+1.6
TURN	Turunc	3.79	46	*i* P	Pn	07 28 50.9	-1.6
TURN				IAML_P			
	comp=Z,669nm,0.2s						
AYDN	Tasoluk	4.01	32	*i* P	Pn	07 28 58.5	+2.9
AYDN				IAML_P			
	comp=Z,388nm,0.3s						
AKAS	Kas	4.10	61	*i* P	Pn	07 28 58.5	+1.5
AKAS				*i* S	Sn	07 29 44.9	-0.3
AKAS				IAML_P			
	comp=Z,582nm,0.1s						
AKASG	Malin Array Be	16.66	9	Pn	Pn	07 31 46.9	-0.7
	comp=Z,0.6nm,0.3s,baz=199,slow=10,SNR=4.9						
TORD	Torodi Ar. Bea	29.96	231	P	P	07 34 01.6	-1.2
	comp=Z,0.8nm,0.5s,baz=30,slow=9.2,SNR=8.9						
MKAR	Makanchi Array	44.23	56	P	P	07 36 02.9	-0.8
	comp=Z,0.3nm,0.6s,baz=283,slow=6.1,SNR=3.7						
BOSA	Boshof	62.57	180	P	P	07 38 19.3	+0.8
	comp=Z,3.8nm,0.9s,baz=8.2,slow=12,SNR=4.2						

*ISCJB **22** 07:28:28.0±0.6, 24°.66N±0°.04×122°.57E±0°.02, h13km±4km, Error ellipse: s-maj=7.5km s-min=2.6km az=9.9*
*TAP **22** 07:28:28.5, 24°.68N×122°.56E, h11km±1km, ML2.8, C*
*JMA **22** 07:28:28.8±0.1, 24°.56N×122°.56E, h23km±2km, M2.3*

**ISC 22 07:28:27.1±1.1, 24°.64N±0°.05×122°.59E±0°.02, h8km±11km, n33

baz=269
YHNB eS **Sg** **07 29 02.6 -0.3**
baz=269
NNSB Datong 1.12 260 eP **Pg** **07 28 48.8 +0.1**
baz=256
NNSB eS **Sg** **07 29 03.4 0.0**
baz=256
NSK Sanguang 1.12 272 eP **Pg** **07 28 48.7 0.0**
baz=269
NSK eS **Sg** **07 29 02.9 -0.5**
baz=269
NNS Nan Shan 1.13 260 eP **Pb** **07 28 49.2 +0.2**
baz=257
NNS eS **Sg** **07 29 04.0 +0.5**
baz=257
HATJ Hateruma jima 1.25 117 eS **Sn** **07 29 08.7 +0.9**
WHF Hehuan Shan 1.31 248 eP **Pg** **07 28 51.1 -1.2**
baz=245
JKRS Kuro-shima 1.35 107 P **Pb** **07 28 52.2 -0.5**
JKRS S **Sb** **07 29 09.6 -0.5**
CHGB Renai 1.42 246 eP **Pn** **07 28 52.8 -0.6**
baz=243
JIJ Ishigaki jima 1.44 101 P **Pg** **07 28 54.3 -0.4**
JIJ eS **Sn** **07 29 12.2 -0.3**
HGSD Ruisui 1.56 223 eP **Pn** **07 28 54.8 -0.4**
baz=221
JISG Ishigakijimahi 1.56 91 P **Pg** **07 28 56.0 -1.2**
VWDT VWDT 1.59 237 eP **Pn** **07 28 55.8 +0.2**
baz=234
YULB Yu-li 1.71 224 eP **Pn** **07 28 57.1 -0.2**
baz=222
TWF1 Yuli 1.75 223 eP **Pn** **07 28 57.3 -0.4**
baz=220
YUS Yu-Shan 1.89 233 eP **Pn** **07 28 59.9 -0.2**
baz=231

UCR 22 07:29:56.3±2.0, 12°.95N×83°.41W, h16km, MD4.4, ML3.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATN	**Matagalpa**	**2.46**	**270**	eP	Pn	07 30 35.4	-0.4
RCON	**San Juan de Ri**	**2.73**	**282**	eP	Pn	07 30 40.0	+0.4
MGAN	**Managua**	**2.89**	**254**	eP	Pn	07 30 40.4	-1.3
MGAN				eS	Sn	07 31 16.9	+0.9
LAPC	**Finca la Perla**	**2.94**	**223**	i P	Pn	07 30 43.5	+1.0
JTS	**Las Juntas de**	**3.05**	**210**	eP	Pn	07 30 42.2	-1.7
NY14	**Universidad de**	**3.10**	**223**	i P	Pn	07 30 45.0	+0.5
TGUH	**Tegucigalpa,Un**	**3.92**	**287**	eP	Pn	07 30 56.5	+0.5

IDC 22 07:40:01.4±3.3, 53°.66N×88°.10E, h0km, mb1 2.9/2, mb1mx2.9/46, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=29.1km s-min=17.6km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.97**	**280**	i		07 52 31.6	
	baz=96,slow=310,SNR=12						
ZALV	**Zalesovo Beam**	**1.97**	**280**	Pg	Pn	07 40 36.6	+0.7
	0.6nm,0.3s,baz=97,slow=16,SNR=17						
ZALV				Lg	Lg	07 41 04.0	
	4.1nm,0.3s,baz=100,slow=26,SNR=24						
KURBB	**Kurchatov Arra**	**6.63**	**247**	Pn	Pn	07 41 40.4	+0.5
	0.1nm,0.3s,baz=60,slow=13,SNR=3.5						
KURBB				Lg	Lg	07 43 32.7	
	0.0nm,0.3s,baz=60,slow=32,SNR=4.4						
MKAR	**Makanchi Array**	**7.82**	**211**	Pn	Pn	07 41 57.6	+1.3
	0.2nm,0.3s,baz=46,slow=8.3,SNR=6.1						
MKAR				Lg	Lg	07 44 08.3	
	baz=35,slow=30,SNR=5.4						

*ISCJB **22** 07:48:48.9±0.8, 31°.32S±0°.03×69°.56W±0°.05, h109km±9km, Error ellipse: s-maj=7.0km s-min=5.0km az=1.0*
*GUC **22** 07:48:48.9±0.7, 31°.32S×69°.81W, h120km±15km, ML3.0*
*SJA **22** 07:48:49.3±0.5, 31°.44S×69°.43W, h106km±3km, ML3.1, MW3.2*

ISC 22 07:48:49.7±1.6, 31°.33S±0°.04×69°.58W±0°.05, h102km±13km, n15, σ0s88/25, 2C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.52**	**153**	eP	**Pn**	**07 49 06.5**	**+0.2**
RTLS				eS	**Sn**	**07 49 19.3**	**+0.6**
AUSP	**Uspallata**	**0.90**	**170**	eP	**Pn**	**07 49 09.4**	**-0.3**
AUSP				eS	**Sn**	**07 49 24.4**	**-0.2**
AMOG	**MOGNA**	**1.01**	**67**	eP	**Pn**	**07 49 10.5**	**0.0**
AMOG				eS	**Sn**	**07 49 25.9**	**-0.2**
RTCV	**Cerro Valdivia**	**1.03**	**121**	eP	**Pn**	**07 49 09.6**	**-1.1**
GO04	**Tololo Observa**	**1.56**	**317**	||i P	**Pn**	**07 49 16.9**	**-0.3**
GO04				eS	**Sn**	**07 49 38.2**	**+0.3**
LSCH	**La Serena**	**2.02**	**314**	eP	**Pn**	**07 49 21.4**	**-1.2**
LSCH				eS	**Sn**	**07 49 46.6**	**-1.2**
LSCH				IAML		07 49 48.0	
	comp=E,236nm,0.3s						
PEL	**Peldehue**	**2.04**	**207**	eP	**Pn**	**07 49 22.8**	**-0.2**
PEL				eS	**Sn**	**07 49 48.2**	**0.0**
PEL				IAML		07 49 50.6	
	comp=N,78nm,0.5s						
ROCH	**El Roble**	**2.04**	**216**	eP	**Pn**	**07 49 23.1**	**-0.1**
ROCH				i S	**Sn**	**07 49 48.4**	**-0.1**
ROCH				IAML		07 49 52.4	
	comp=N,145nm,0.4s						
AGUA	**GUANDACOL**	**2.06**	**27**	eP	**Pn**	**07 49 24.9**	**+1.5**
FCH	**Farellones**	**2.08**	**197**	||i P	**Pn**	**07 49 24.4**	**0.7**
FCH				eS	**Sn**	**07 49 51.6**	**+1.9**
FCH				IAML		07 49 57.1	
	comp=E,133nm,0.2s						
CLCH	**Cerro Calan**	**2.21**	**201**	eP	**Pn**	**07 49 25.6**	**+0.4**
CLCH				i S	**Sn**	**07 49 52.8**	**+0.4**
ACAN	**Cantantal**	**2.24**	**115**	eP	**Pn**	**07 49 24.7**	**-0.8**
LCO	**Las Campanas**	**2.51**	**337**	||i P	**Pn**	**07 49 29.1**	**-0.2**
LCO				i S	**Sn**	**07 49 59.6**	**-0.1**
LCO				IAML		07 50 04.8	
	comp=E,78nm,0.4s						
VCA	**Vinchina**	**2.85**	**25**	eP	**Pn**	**07 49 35.1**	**+1.4**
VCA				IAML		07 50 13.1	
	comp=Z,72nm,0.2s						
MRA	**San Martin**	**3.46**	**109**	eP	**Pn**	**07 49 40.4**	**-1.3**
MRA				IAML		07 49 40.9	
	comp=Z,26nm,0.3s						

*IDC **22** 07:49:28.9±1.1, 9°.82S×161°.39E, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.0/32, mbtmp4.1/9, MS3.3/3, Ms1 3.3/3, ms1mx2.9/23, Error ellipse: s-maj=25.1km s-min=22.8km az=146.0*
*NEIC **22** 07:49:39.9±1.3, 9°.83S×161°.17E, h80km±8km, mb4.4/15, Error ellipse: s-maj=22.3km s-min=19.9km az=193.0*
*ISCJB **22** 07:49:40.9±0.5, 9°.80S±0°.08×161°.02E±0°.08, h100km, mb4.2/22, Error ellipse: s-maj=13.3km s-min=9.2km az=140.0*

ISC 22 07:49:42.5±0.8, 9°.8S±0°.1×161°.0E±0°.1, h100km, n33, σ1s02/31, mb4.2/22, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.10**	**288**	i P	Pn	07 49 56.0	-8.0
HNR				i S	**Sn**	**07 50 19.0**	**-1.2**
HNR	**Honiara**	**1.10**	**288**	Pn	Pn	07 49 57.1	-6.9
	208nm,0.3s,baz=156,slow=4.3,SNR=14						
HNR				Sn	**Sn**	**07 50 17.5**	**-2.8**
	665nm,0.3s,baz=167,slow=20,SNR=11						
HNR				LR	LR	07 50 35.2	
	comp=Z,480nm,21.4s,baz=350,slow=45						
HNR	**Honiara**	**1.10**	**288**	ePn	Pn	07 49 57.6	-6.5
HNR				eSn	**Sn**	**07 50 19.7**	**-0.5**
CTA	**Charters Tower**	**17.54**	**233**	P	**Pn**	**07 53 42.4**	**+1.6**
	0.3nm,0.3s,baz=64,slow=15,SNR=3.5						
WRAB	**Tennant Creek**	**27.63**	**246**	eP	**P**	**07 55 21.2**	**+0.2**
	7.4nm,1.1s						
WB2	**Warramunga Arr**	**27.63**	**245**	eP	**P**	**07 55 21.8**	**+0.8**
	16nm,1.4s						
WR1	**Warramunga Arr**	**27.64**	**245**	eP	**P**	**07 55 21.7**	**+0.6**
WRA	**Warramunga Arr**	**27.64**	**246**	P	**P**	**07 55 21.7**	**+0.6**
	2.3nm,0.5s,baz=81,slow=9.8,SNR=5.8						
STKA	**Stephens Creek**	**28.41**	**216**	LR	LR	08 06 11.3	
	comp=Z,68nm,18.2s,baz=30,slow=35						
AS31	**Alice Springs**	**29.32**	**239**	eP	**P**	**07 55 35.8**	**-0.3**
	1.6nm,1.2s						
ASAR	**Alice Springs**	**29.32**	**239**	P	**P**	**07 55 35.8**	**-0.3**
	0.8nm,0.4s,baz=63,slow=10,SNR=23						
ASAR				LR	LR	08 06 42.8	
	comp=Z,73nm,18.4s,baz=92,slow=35						
MTN	**Manton Dam**	**29.44**	**261**	eP	**P**	**07 55 36.1**	**-1.0**
	32nm,1.1s						
BBOO	**Buckleboo**	**32.48**	**221**	eP	**P**	**07 56 04.3**	**+0.7**
	61nm,1.5s						
FITZ	**Fitzroy Crossi**	**35.25**	**253**	eP	**P**	**07 56 29.9**	**+2.0**
	12nm,1.1s						
KSRS	**Korea Array**	**56.28**	**329**	P	**P**	**07 59 13.4**	**+0.7**
	0.6nm,0.5s,baz=140,slow=7.1,SNR=4.9						
USRK	**Ussuriysk Ar.**	**59.81**	**336**	P	**P**	**07 59 37.2**	**-0.1**
	2.8nm,0.9s,baz=128,slow=9.3,SNR=2.1						
CMAR	**Chiang Mai Arr**	**67.34**	**295**	P	**P**	**08 00 28.6**	**+1.2**
	1.5nm,0.7s,baz=117,slow=3.6,SNR=4.7						
VNDA	**Vanda**	**67.73**	**180**	P	**P**	**08 00 27.9**	**-0.9**
	0.4nm,0.5s,baz=356,slow=6.4,SNR=3.7						
VNDA	**Vanda**	**67.73**	**180**	eP	**P**	**08 00 28.0**	**-0.9**
VNDA				e		08 00 28.2	
SONA0	**Songino Array**	**74.93**	**325**	eP	**P**	**08 01 13.5**	**+0.7**
SONM	**Songino Array**	**74.93**	**325**	P	**P**	**08 01 13.5**	**+0.7**
	2.2nm,0.8s,baz=146,slow=7.5,SNR=5.9						
QSPA	**South Pole Qui**	**80.22**	**180**	eP	**P**	**08 01 40.3**	**-1.7**
	4.1nm,1.3s						
SUA	**Susitna One**	**80.37**	**21**	eP	**P**	**08 01 42.4**	**-0.4**
	21nm,1.4s						
MCK	**McKinley**	**82.50**	**20**	eP	**P**	**08 01 53.9**	**+0.1**
	8.5nm,0.9s						
CCB	**Clear Creek Bu**	**83.47**	**20**	eP	**P**	**08 01 58.0**	**-0.7**
	7.7nm,1.3s						
HDA	**Harding Lake**	**83.61**	**20**	eP	**P**	**08 01 59.1**	**-0.4**
	2.8nm,0.7s						
ILAR	**Eielson Array**	**83.86**	**20**	P	**P**	**08 01 59.7**	**-1.0**
	1.0nm,0.6s,baz=244,slow=4.9,SNR=18						
ILB	**Eielson Array**	**83.86**	**20**	eP	**P**	**08 02 00.1**	**-0.7**
	2.3nm,0.9s						
DOT	**Dot Lake**	**84.16**	**22**	eP	**P**	**08 02 02.7**	**+0.4**
	3.2nm,0.9s						
SCRK	**Sand Creek**	**84.38**	**21**	eP	**P**	**08 02 04.0**	**+0.4**
	2.7nm,0.8s						
MK32	**Makanchi Array**	**89.43**	**318**	eP	**P**	**08 02 28.6**	**+0.3**
MKAR	**Makanchi Array**	**89.43**	**318**	P	**P**	**08 02 28.6**	**+0.3**
	0.9nm,0.8s,baz=104,slow=5.1,SNR=9.4						
TXAR	**Lajitas Array**	**99.33**	**62**	LR	LR	08 42 28.4	
	comp=Z,9.8nm,19.5s,baz=0.0,slow=32						

*IDC **22** 07:50:25.8±28.0, 22°.56S×173°.06W, h0km, mb4.5/4, mb1 4.6/4, mb1mx3.9/32, mbtmp4.5/4, Error ellipse: s-maj=519.3km s-min=147.2km az=76.0*
*ISCJB **22** 07:50:30.3±1.1, 23°.15±0°.2×173°.1W±0°.2, h33km, mb4.5/13, Error ellipse: s-maj=32.4km s-min=13.5km az=135.1*
*NEIC **22** 07:50:30.1±1.3, 23°.05S×173°.21W, h15km±11km, mb4.6/13, Error ellipse: s-maj=42.4km s-min=26.0km az=126.0*

ISC 22 07:50:32.9±1.3, 23°.0S±0°.2×173°.2W±0°.2, h35km, n18, σ0s95/18, mb4.5/13, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.95**	**38**	ePn	**Pn**	**07 51 44.7**	**-0.1**
SNZO	**South Karori**	**20.90**	**206**	eP	**P**	**07 55 11.5**	**-0.6**
	76nm,0.9s						
ARMA	**Armidale**	**32.20**	**249**	eP	**P**	**07 56 57.4**	**-0.5**
	4.1nm,0.9s						
EIDS	**Eidsvold**	**32.64**	**259**	eP	**P**	**07 57 00.2**	**-1.4**
	4.4nm,1.0s						
CAN	**Canberra**	**35.03**	**241**	eP	**P**	**07 57 23.6**	**+1.1**
	7.0nm,1.0s						
CTA	**Charters Tower**	**37.77**	**267**	P	**P**	**07 57 45.5**	**-0.4**
	6.6nm,0.4s,baz=96,slow=11,SNR=14						
CTAO	**Charters Tower**	**37.77**	**267**	eP	**P**	**07 57 45.8**	**-0.2**
	15nm,1.1s						
TOO	**Toolangi**	**38.22**	**238**	eP	**P**	**07 57 51.7**	**+2.2**
	7.1nm,1.1s						
PMG	**Port Moresby**	**40.28**	**283**	eP	**P**	**07 58 08.1**	**+1.2**
	16nm,0.9s						
STKA	**Stephens Creek**	**40.86**	**247**	P	**P**	**07 58 11.2**	**-0.4**
	2.5nm,0.4s,baz=86,slow=10,SNR=12						
STKA	**Stephens Creek**	**40.86**	**247**	eP	**P**	**07 58 11.2**	**-0.4**
	0.8nm,0.8s						
BBOO	**Buckleboo**	**45.55**	**246**	eP	**P**	**07 58 48.8**	**-0.7**
	12nm,1.1s						
AS31	**Alice Springs**	**48.36**	**258**	eP	**P**	**07 59 10.8**	**-0.8**
	0.8nm,0.8s						
ASAR	**Alice Springs**	**48.36**	**258**	P	**P**	**07 59 11.0**	**-0.6**
	1.2nm,0.5s,baz=94,slow=7.2,SNR=13						
WB2	**Warramunga Arr**	**48.72**	**263**	eP	**P**	**07 59 13.9**	**-0.5**
	7.0nm,1.1s						
WR1	**Warramunga Arr**	**48.73**	**263**	eP	**P**	**07 59 13.7**	**-0.8**
WRA	**Warramunga Arr**	**48.73**	**263**	P	**P**	**07 59 13.7**	**-0.8**
	4.3nm,0.4s,baz=98,slow=8.5,SNR=6.3						
FORT	**Forrest**	**52.48**	**248**	eP	**P**	**07 59 42.5**	**-0.1**
	26nm,0.8s						

*ISCJB **22** 08:32:00.9±0.4, 39°.66N±0°.02×29°.43E±0°.03, h0km, Error ellipse: s-maj=3.6km s-min=2.8km az=167.9*
*DDA **22** 08:32:00.5, 39°.65N×29°.41E, h7km±5km, ML2.8*
*ISK **22** 08:32:00.7, 39°.64N×29°.41E, h7km, ML2.1/10, Suspected Mining explosion.*

ISC 22 08:32:00.8±0.8, 39°.68N±0°.02×29°.41E±0°.03, h0km, n22, σ0s63/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.23**	**171**	PG	**Pg**	**08 32 05.2**	**0.0**
TVSB				SG	**Sg**	**08 32 08.6**	**+0.5**
ULDT	**Uludag**	**0.51**	**336**	i P	**Pg**	**08 32 11.2**	**+0.5**
ULDT				i S	**Sb**	**08 32 20.7**	**-0.3**
ULDT				IAML_P			
	comp=Z,1μm,0.1s						
ORLT	**Orhaneli**	**0.54**	**313**	PG	**Pb**	**08 32 12.3**	**-1.0**
GDZ	**Gediz**	**0.59**	**175**	i P	**Pg**	**08 32 12.5**	**+0.4**
GDZ				i S	**Sb**	**08 32 21.6**	**-1.4**
DURS	**Dursunbey**	**0.73**	**264**	i P	**Pg**	**08 32 14.2**	**-0.6**
DURS				i S	**Sg**	**08 32 25.6**	**+1.4**
DURS				IAML_P			
	comp=Z,2μm,0.1s						
BORA	**Eskisehir**	**0.83**	**75**	i P	**Pg**	**08 32 16.7**	**0.0**
BORA				IAML_P			
	comp=Z,2μm,0.1s						
YLV	**Yalova**	**0.89**	**358**	PG	**Pb**	**08 32 18.8**	**-0.4**
YLV				SG	**Sb**	**08 32 32.2**	**+0.5**
ARMT	**Armutlu**	**0.98**	**335**	PG	**Pb**	**08 32 20.6**	**-0.2**
ARMT				SG	**Sn**	**08 32 35.4**	**-1.2**
KCTX	**Karacabey (Bur**	**1.00**	**306**	PG	**Pb**	**08 32 20.9**	**-0.2**
KCTX				SG	**Sb**	**08 32 35.6**	**+0.7**
SRCK	**Saricakaya, Es**	**1.00**	**68**	PG	**Pb**	**08 32 20.6**	**-0.5**
SRCK				SG	**Sb**	**08 32 35.4**	**+0.6**
SRCK	**Saricakaya, Es**	**1.00**	**68**	i P	**Pg**	**08 32 20.0**	**-0.1**
USAK	**Uak-Merkez**	**1.01**	**198**	i P	**Pb**	**08 32 20.9**	**-0.3**
USAK				i S	**Sn**	**08 32 38.6**	**+1.4**
USAK				IAML_P			
	comp=Z,2μm,0.3s						
GULT	**Gulveren**	**1.13**	**48**	PN	**Pb**	**08 32 23.2**	**-0.2**
HRT	**Hereke**	**1.16**	**10**	PN	**Pb**	**08 32 23.5**	**-0.3**
BALB	**Balikesir**	**1.18**	**269**	PN	**Pb**	**08 32 24.0**	**-0.1**
KHAL	**Karahalli**	**1.30**	**177**	i P	**Pb**	**08 32 26.2**	**-0.1**
KHAL				IAML_P			
	comp=Z,590nm,0.1s						
MANT	**Manisa**	**1.36**	**210**	i P	**Pg**	**08 32 26.2**	**-0.7**
MANT				i S	**Sg**	**08 32 44.7**	**+0.3**
MANT				IAML_P			
	comp=Z,680nm,0.1s						
EDC	**Edincik**	**1.37**	**300**	PN	**Pn**	**08 32 27.1**	**-0.1**
EDC				SN	**Sn**	**08 32 46.0**	**0.0**
GONE	**Gonen-Balikesi**	**1.38**	**286**	PN	**Pg**	**08 32 27.0**	**-0.3**
ISK	**Istanbul-Kandi**	**1.41**	**349**	PN	**Pb**	**08 32 27.9**	**-0.2**
AKHS	**Akhisar**	**1.47**	**238**	i P	**Pb**	**08 32 29.3**	**+0.2**
AKHS				IAML_P			
	comp=Z,1μm,0.2s						
SVRH	**Sivrihisar-ESK**	**1.65**	**97**	PN	**Pn**	**08 32 30.8**	**-0.3**

MAN 22 08:35:57.4, 16°.01N×121°.93E, h46km, mb3.9, ML2.7, MS2.3, Luzon

*IDC **22** 08:37:57.6±1.7, 10°.46S×124°.11E, h44km±15km, mb3.9/4, mb1 4.2/7, mb1mx3.7/41, mbtmp4.2/7, ML4.4/3, MS3.2/6, Ms1 3.2/6, ms1mx2.9/31, Error ellipse: s-maj=44.9km s-min=14.5km az=59.0*

*NEIC **22** 08:37:57.9±2.3, 10°.43S×124°.24E, h46km±6km, mb4.5/12, Error ellipse: s-maj=13.2km s-min=10.7km az=209.0*
*DJA **22** 08:37:58.8±0.7, 11°.S±8°.×12°.4E±°, h35km±11km, M4.8/9, mb5.2/4, mB5.1/4, MLv4.7/9, Mw(mB)4.4/4*

ISC 22 08:37:55.5±0.5, 10°.60S±0°.05×124°.18E±0°.05, h27km, n53, σ2s45/57, mb4.3/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.64**	**307**	P	**Pn**	**08 38 10.7**	**+1.9**
	3μm,0.3s,baz=69,slow=0.5,SNR=3469						
BATI				S	**Sn**	**08 38 18.4**	**+0.4**
	10μm,0.3s,baz=120,slow=22,SNR=63						
BATI				LR	LR	08 38 21.0	
	comp=Z,445nm,19.1s,baz=46,slow=46						
BATI	**Baumata**	**0.64**	**307**	P	**Pn**	**08 38 10.8**	**+2.1**
SOEI	**Soe**	**0.84**	**6**	ePn	**Pn**	**08 38 14.2**	**+2.6**
SOEI	**Soe**	**0.84**	**6**	P	**Pn**	**08 38 14.2**	**+2.6**
MMRI	**Maumere**	**2.73**	**315**	ePn	**Pn**	**08 38 38.9**	**+1.3**
MMRI				eSn	**Sn**	**08 39 10.8**	**+1.1**
MMRI	**Maumere**	**2.73**	**315**	P	**Pn**	**08 38 38.8**	**+1.3**
EDFI	**Ende, Flores**	**3.06**	**307**	P	**Pn**	**08 38 43.0**	**+0.8**
WBSI	**Waikabubak, Su**	**4.81**	**281**	P	**Pn**	**08 39 09.4**	**+3.2**
BSSI	**Bau Bau, Buton**	**5.73**	**320**	P	**Pn**	**08 39 20.7**	**+1.8**
PLAI	**Plampang**	**6.55**	**285**	P	**Pn**	**08 39 31.4**	**+1.3**
BKSI	**Bulukumba**	**6.60**	**322**	P	**Pn**	**08 39 32.1**	**+1.3**
KAPI	**Kappang**	**7.07**	**321**	P	**Pn**	**08 39 39.1**	**+1.9**
	5.6nm,0.3s,baz=146,slow=7.9,SNR=42						
KAPI				LR	LR	08 42 56.7	
	comp=Z,204nm,21.6s,baz=296,slow=43						
KAPI	**Kappang**	**7.07**	**321**	ePn	**Pn**	**08 39 39.7**	**+2.5**
MTN	**Manton Dam**	**7.17**	**109**	ePn	**Pn**	**08 39 42.3**	**+3.6**
MTN				eSn	**Sn**	**08 41 01.2**	**+1.9**
FITZ	**Fitzroy Crossi**	**7.59**	**169**	P	**Pn**	**08 39 48.5**	**+4.1**
	6.3nm,0.3s,baz=4.2,slow=11,SNR=182						
FITZ				S	**Sn**	**08 41 08.6**	**-1.0**
	32nm,0.3s,baz=353,slow=12,SNR=21						
FITZ				LR	LR	08 42 54.6	
	comp=Z,118nm,20.8s,baz=355,slow=38						
FITZ	**Fitzroy Crossi**	**7.59**	**169**	ePn	**Pn**	**08 39 48.9**	**+4.5**
JAGI	**Jajag, Banyuwa**	**10.11**	**281**	ePn	**Pn**	**08 40 15.9**	**-3.0**
FAKI	**Fak Fak**	**11.06**	**47**	ePn	**Pn**	**08 40 31.2**	**-0.8**
PSA00	**Pilbara Seismi**	**11.68**	**200**	ePn	**Pn**	**08 40 44.0**	**+3.6**
WRA	**Warramunga Arr**	**13.50**	**135**	P	**Pn**	**08 41 06.5**	**+1.1**
	1.3nm,0.3s,baz=314,slow=13,SNR=58						
WRA				S	**Sn**	**08 43 27.0**	**-7.7**
WR1	**Warramunga Arr**	**13.50**	**135**	ePn	**Pn**	**08 41 06.5**	**+1.1**
WRAB	**Tennant Creek**	**13.50**	**135**	ePn	**Pn**	**08 41 06.2**	**+0.8**
WB2	**Warramunga Arr**	**13.51**	**135**	ePn	**Pn**	**08 41 06.3**	**+0.8**
WC3	**Warramunga Arr**	**13.54**	**135**	ePn	**Pn**	**08 41 06.9**	**+1.0**
UGM	**Wanagama**	**13.74**	**280**	ePn	**Pn**	**08 41 11.0**	**+2.3**
GIRL	**Giralia**	**15.30**	**217**	ePn	**P**	**08 41 33.1**	**-1.1**
	297nm,1.5s						
AS31	**Alice Springs**	**15.97**	**146**	ePn	**P**	**08 41 40.6**	**-1.2**
	4.4nm,0.6s						
ASAR	**Alice Springs**	**15.97**	**146**	P	**P**	**08 41 40.4**	**-1.4**
	1.3nm,0.3s,baz=319,slow=12,SNR=41						
ASAR				S	**Sn**	**08 44 29.9**	**-4.8**
	3.3nm,0.3s,baz=314,slow=21,SNR=13						
ASAR				LR	LR	08 48 07.3	
	comp=Z,138nm,21.7s,baz=312,slow=38						
CISI	**Cisompet, Garu**	**16.43**	**279**	eP	**P**	**08 41 47.5**	**+0.6**
	60nm,0.9s						
COEN	**Coen**	**18.86**	**102**	eP	**Pn**	**08 42 17.6**	**+3.2**
	48nm,1.5s						
MORW	**Morawa**	**19.89**	**201**	eP	**Pn**	**08 42 28.6**	**+1.9**
	14nm,0.9s						
FORT	**Forrest**	**20.41**	**170**	eP	Pn	08 42 33.3	+0.6
	52nm,1.3s						
PMG	**Port Moresby**	**22.66**	**89**	eP	**P**	**08 42 53.3**	**-1.7**
	24nm,0.9s						
NWAO	**Narrogin (SRO)**	**23.13**	**195**	P	**P**	**08 43 00.6**	**+1.0**
	6.9nm,0.6s,baz=31,slow=9.7,SNR=4.6						
NWAO	**Narrogin (SRO)**	**23.13**	**195**	eP	**P**	**08 43 00.6**	**+1.0**
NWAO				eP	**pP**	**08 43 02.5**	**-4.0**
STKA	**Stephens Creek**	**26.61**	**145**	LR	LR	08 55 02.8	
	comp=Z,106nm,19.9s,baz=18,slow=38						
STKA	**Stephens Creek**	**26.61**	**145**	eP	**P**	**08 43 36.9**	**+5.2**
	1.1nm,0.9s						
GSI	**Gunungsitoli**	**28.98**	**293**	eP	**P**	**08 43 51.8**	**-1.4**
	12nm,1.0s						
CMAR	**Chiang Mai Arr**	**38.12**	**319**	P	**P**	**08 45 11.8**	**-0.7**
	1.8nm,0.6s,baz=145,slow=6.5,SNR=6.6						
CMAR				LR	LR	09 05 10.4	
	comp=Z,27nm,18.5s,baz=193,slow=43						
JNU	**Nakatsue**	**43.94**	**8**	LR	LR	09 06 16.1	
	comp=Z,12nm,18.3s,baz=200,slow=39						
JIRN	**Jiri**	**52.92**	**317**	eP	**P**	**08 47 08.6**	**-1.4**
	17nm,0.6s						
GUN	**Gumba**	**53.29**	**317**	eP	**P**	**08 47 10.9**	**-1.8**
	24nm,0.7s						
PKI	**Pulchoki**	**53.39**	**316**	eP	**P**	**08 47 11.7**	**-1.7**
	11nm,0.5s						
PKIN	**Phulchoki**	**53.40**	**316**	eP	**P**	**08 47 11.5**	**-1.9**
	10.0nm,0.5s						
DANN	**Dangsing**	**55.01**	**316**	eP	**P**	**08 47 23.5**	**-1.7**
	24nm,0.5s						
PYUN	**Piuthan**	**55.38**	**315**	eP	**P**	**08 47 26.3**	**-1.5**
	11nm,0.5s						
SONA0	**Songino Array**	**60.28**	**346**	eP	**P**	**08 48 00.1**	**-1.5**
SONM	**Songino Array**	**60.28**	**346**	P	**P**	**08 48 00.1**	**-1.5**
	0.5nm,0.5s,baz=148,slow=8.5,SNR=2.3						
MK31	**Makanchi Array**	**68.27**	**330**	eP	**P**	**08 48 53.6**	**-0.4**
	3.0nm,1.0s						
MK32	**Makanchi Array**	**68.27**	**330**	eP	**P**	**08 48 53.1**	**-0.9**
MKAR	**Makanchi Array**	**68.27**	**330**	P	**P**	**08 48 53.1**	**-0.9**
	2.0nm,0.8s,baz=138,slow=7.3,SNR=14						
LPAZ	**La Paz**	**150.65**	**155**	PKPbc	**PKPbc**	**08 57 46.9**	**+0.1**
	1.5nm,0.7s,baz=171,slow=3.0,SNR=6.8						
LPAZ	**La Paz**	**150.65**	**155**	ePKPbc	**PKiKP**	**08 57 50.2**	**+2.7**

*BJI **22** 08:41:04.0±0.0, 40°.30N×19°.60E, h10km, mb4.9/28, mB5.1/18, Ms4.7/7, Ms7 4.6/5*
*IDC **22** 08:41:06.3±0.5, 40°.34N×19°.70E, h0km, mb4.5/29, mb1 4.5/42, mb1mx4.4/51, mbtmp4.4/42, ML3.9/13, MS3.6/22, Ms1 3.6/22, ms1mx3.4/53, Error ellipse: s-maj=10.0km s-min=8.9km az=147.0*
*MOS **22**

n744,σ2°11/813,mb4.7/102,MS3.6/21,56C-35D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.27**	**76**	P	**Pb**	**08 41 15.2**	**-0.5**
TPE				S	**Sb**	**08 41 20.3**	**+0.2**
TPE	**Tepelena**	**0.27**	**76**	*i* PG	**Pb**	**08 41 15.1**	**-0.5**
TPE				*i* SG	**Sb**	**08 41 20.1**	**0.0**
VLO	**Vlora**	**0.27**	**331**	P	**Pb**	**08 41 14.6**	**-1.1**
VLO				S	**Sb**	**08 41 19.4**	**-0.7**
VLO	**Vlora**	**0.27**	**331**	*i* PG	**Pb**	**08 41 14.7**	**-1.1**
VLO				*i* SG	**Sb**	**08 41 19.8**	**-0.2**
SRN	**Sarande**	**0.43**	**144**	P	**Pb**	**08 41 18.4**	**+0.2**
SRN				S	**Sb**	**08 41 25.2**	**+1.0**
SRN	**Sarande**	**0.43**	**144**	*i* PG	**Pb**	**08 41 18.5**	**+0.2**
SRN				*i* SG	**Sn**	**08 41 26.2**	**-1.4**
KASA	**Kassiopi**	**0.53**	**157**	P	**Pb**	**08 41 20.0**	**0.0**
KASA				S	**Sn**	**08 41 28.8**	**-1.1**
KASA				AML	AML	08 41 31.5	
	comp=E,38978μm,0.4s						
KASA				AML	AML	08 41 33.3	
	comp=N,39907μm,0.5s						
KEK	**Kerkira**	**0.53**	**169**	P	**Pb**	**08 41 19.6**	**-0.4**
KEK				S	**Sb**	**08 41 28.2**	**+1.0**
KEK	**Kerkira**	**0.53**	**169**	P	**Pb**	**08 41 20.2**	**+0.2**
KEK				S	**Sn**	**08 41 29.1**	**-0.9**
KEK				AML	AML	08 41 34.8	
	comp=E,43387μm,0.2s						
KEK				AML	AML	08 41 36.6	
	comp=N,35381μm,0.4s						
IGT	**Igoumenitsa**	**0.87**	**144**	P	**Pb**	**08 41 25.3**	**-0.4**
IGT				S	**Sn**	**08 41 38.9**	**+0.6**
IGT	**Igoumenitsa**	**0.87**	**144**	*i* Pg	**Pb**	**08 41 25.8**	**+0.1**
IGT				*i* Sg	**Sn**	**08 41 40.6**	**+2.3**
IGT	**Igoumenitsa**	**0.87**	**144**	P	**Pn**	**08 41 26.1**	**-0.2**
IGT				S	**Sn**	**08 41 39.4**	**+1.1**
IGT				AML	AML	08 41 44.3	
	comp=E,22686μm,0.5s						
IGT				AML	AML	08 41 52.8	
	comp=N,27098μm,0.4s						
SCTE	**Santa Cesarea**	**0.94**	**261**	P	**Pn**	**08 41 27.2**	**-0.1**
SCTE				S	**Sn**	**08 41 39.5**	**-0.5**
JAN	**Janina**	**1.07**	**122**	P	**Pn**	**08 41 31.1**	**+1.8**
JAN				S	**Sn**	**08 41 46.8**	**+3.3**
JAN				AML	AML	08 41 50.4	
	comp=N,35668μm,0.8s						
JAN				AML	AML	08 41 50.5	
	comp=E,57588μm,0.5s						
TIR	**Tirane**	**1.12**	**8**	*e*Pg	**Pb**	**08 41 30.3**	**+0.2**
TIR				*e*Sg	**Sn**	**08 41 46.9**	**+2.2**
TIR	**Tirane**	**1.12**	**8**	*e*Pn	**Pb**	**08 41 30.4**	**+0.4**
TIR				*e*Sn	**Sb**	**08 41 44.2**	**-0.1**
TIR	**Tirane**	**1.12**	**8**	P	**Pb**	**08 41 30.0**	**-0.1**
TIR				S	**Sn**	**08 41 46.1**	**+1.4**
TIR	**Tirane**	**1.12**	**8**	||*i*P	**Pb**	**08 41 30.9**	**+0.8**
TIR	**Tirane**	**1.12**	**8**	*i* Pg	**Pb**	**08 41 30.5**	**+0.4**
TIR	**Tirane**	**1.12**	**8**	*e*P	**Pb**	**08 41 30.4**	**+0.4**
TIR				*e*		08 41 44.2	
TIR	**Tirane**	**1.12**	**8**	*i* PG	**Pb**	**08 41 30.7**	**+0.6**
TIR				*i* SG	**Sb**	**08 41 40.6**	**-3.6**
TIR	**Tirane**	**1.12**	**8**	P	**Pb**	**08 41 30.8**	**+0.8**
TIR				S	**Sn**	**08 41 45.2**	**+0.5**
TIR				AML	AML	08 41 55.9	
	comp=E,41189μm,0.5s						
TIR				AML	AML	08 41 59.6	
	comp=N,51002μm,0.6s						
PENT	**Pentalofos**	**1.13**	**91**	P	**Pn**	**08 41 29.9**	**-0.1**
PENT				S	**Sn**	**08 41 46.3**	**+1.4**
PENT	**Pentalofos**	**1.13**	**91**	P	**Pb**	**08 41 30.7**	**+0.6**
PENT				S	**Sn**	**08 41 48.8**	**+3.9**
PENT				AML	AML	08 41 51.5	
	comp=E,36324μm,1.3s						
PENT				AML	AML	08 41 51.8	
	comp=N,38918μm,0.9s						
OHR	**Ohrid**	**1.23**	**44**	*i* Pg	**Pb**	**08 41 31.7**	**-0.2**
OHR				*i* Sg	**Sn**	**08 41 52.1**	**+4.7**
OHR				*e*Lg	Lg	08 41 52.6	
	comp=E,11μm,0.6s						
OHR				*e*Lg	Lg	08 41 53.4	
	comp=N,16μm,0.9s						
MEV	**Metsovon**	**1.28**	**110**	P	**Pb**	**08 41 34.3**	**+1.5**
KPRO	**Kipourio**	**1.33**	**102**	P	**Pn**	**08 41 33.0**	**+0.2**
KPRO				S	**Sb**	**08 41 52.4**	**+2.2**
KPRO	**Kipourio**	**1.33**	**102**	P	**Pb**	**08 41 34.5**	**+0.9**
KPRO				S	**Sb**	**08 41 53.0**	**+2.8**
KPRO				AML	AML	08 42 01.3	
	comp=N,35884μm,0.5s						
KPRO				AML	AML	08 42 02.3	
	comp=E,53687μm,0.8s						
FNA	**Florina**	**1.41**	**67**	P	**Pn**	**08 41 32.8**	**-1.1**
FNA				S	**Sb**	**08 41 54.5**	**+1.9**
FNA	**Florina**	**1.41**	**67**	P	**Pn**	**08 41 34.1**	**+0.2**
FNA				S	**Sb**	**08 41 55.6**	**+3.0**
FNA				AML	AML	08 41 57.3	
	comp=E,43300μm,0.5s						
FNA				AML	AML	08 42 01.1	
	comp=N,54288μm,0.8s						
DSL	**Palaion Diasel**	**1.56**	**134**	P	**Pn**	**08 41 36.4**	**+0.6**
PHP	**Peshkopia**	**1.56**	**22**	P	**Pn**	**08 41 36.4**	**+0.4**
PHP				S	**Sb**	**08 41 57.3**	**+0.3**
PHP	**Peshkopia**	**1.56**	**22**	*i* PN	**Pb**	**08 41 37.3**	**-0.3**
PHP				*i* SN	**Sb**	**08 42 00.1**	**+3.2**
TSLK	**Tsoukalades, L**	**1.60**	**151**	P	**Pb**	**08 41 37.7**	**-0.5**
TSLK				S	**Sb**	**08 41 57.9**	**0.0**
TSLK	**Tsoukalades, L**	**1.60**	**151**	P	**Pb**	**08 41 38.1**	**-0.1**
KZN	**Kozani**	**1.61**	**87**	P	**Pb**	**08 41 38.2**	**-0.2**
KZN				S	**Sb**	**08 41 59.4**	**+1.1**
KZN	**Kozani**	**1.61**	**87**	P	**Pb**	**08 41 39.9**	**+1.5**
KZN				AML	AML	08 42 07.9	
	comp=N,27465μm,0.5s						
KZN				AML	AML	08 42 09.8	
	comp=E,25320μm,0.5s						
LKD2	**Lefkada island**	**1.63**	**152**	P	**Pb**	**08 41 37.9**	**-0.9**
LKD2				S	**Sb**	**08 41 58.4**	**-0.5**
LKD2	**Lefkada island**	**1.63**	**152**	P	**Pb**	**08 41 38.6**	**-0.2**
LKD2				S	**Sb**	**08 42 01.2**	**+2.3**
LKD2				AML	AML	08 42 07.6	
	comp=E,13565μm,0.6s						
LKD2				AML	AML	08 42 11.5	
	comp=N,12872μm,0.6s						
CGL1	**Ceglie Messapi**	**1.73**	**285**	*e*Pn	**Pn**	**08 41 37.6**	**-0.6**
CGL1				Sn	**Sb**	**08 42 05.4**	**+3.8**
ULC	**Ulcinj**	**1.76**	**350**	⇑*i*Pn	**Pn**	**08 41 38.1**	**-0.5**
ULC				*e*Sn	**Sb**	**08 42 03.2**	**+0.6**
ULC	**Ulcinj**	**1.76**	**350**	⇑*i*Pn	**Pn**	**08 41 38.4**	**-0.3**
EVGI	**Lefkada island**	**1.78**	**154**	P	**Pb**	**08 41 40.2**	**-1.1**
MGNA	**Meganis**	**1.80**	**151**	P	**Pb**	**08 41 40.9**	**-0.7**
PUK	**Puka**	**1.82**	**5**	*i* PN	**Pn**	**08 41 40.5**	**+1.1**
PUK				*i* SN	**Sb**	**08 42 06.4**	**+2.1**
TAR1	**Taranto**	**1.84**	**280**	||*i*Pn	**Pn**	**08 41 39.3**	**-0.5**
FASA	**Fasano**	**1.86**	**289**	||*i*Pn	**Pn**	**08 41 39.5**	**-0.5**
FASA				Sn	**Sb**	**08 42 09.4**	**+4.0**
THL	**Klokotos Trika**	**1.92**	**110**	P	**Pb**	**08 41 42.5**	**-1.2**
THL				S	**Sb**	**08 42 06.5**	**-0.7**
THL	**Klokotos Trika**	**1.92**	**110**	P	**Pb**	**08 41 43.6**	**-0.1**
THL				S	**Sb**	**08 42 07.8**	**+0.6**
THL				AML	AML	08 42 19.8	
	comp=N,14117μm,0.6s						
THL				AML	AML	08 42 21.0	
	comp=E,6735μm,0.9s						
MASS	**Massafra**	**1.97**	**283**	||*i*Pn	**Pn**	**08 41 41.0**	**-0.5**
DRME	**Dracevica, Mon**	**1.99**	**350**	⇑*i*Pn	**Pn**	**08 41 41.7**	**0.0**
DRME				*e*Sn	**Sb**	**08 42 08.3**	**-0.8**
DRME	**Dracevica, Mon**	**1.99**	**350**	⇑*i*Pn	**Pn**	**08 41 41.6**	**-0.1**
PDO	**Prodromos**	**2.01**	**144**	P	**Pb**	**08 41 43.9**	**-1.2**
PDO	**Prodromos**	**2.01**	**144**	P	**Pb**	**08 41 44.0**	**-1.2**
NOCI	**Noci**	**2.06**	**286**	P	**Pn**	**08 41 42.4**	**-0.4**
EVR	**Evrytania**	**2.11**	**128**	P	**Pb**	**08 41 45.7**	**-1.3**
EVR	**Evrytania**	**2.11**	**128**	P	**Pb**	**08 41 47.1**	**+0.1**
BUM	**Brajici-Budva**	**2.15**	**344**	||*i*Pn	**Pb**	**08 41 43.7**	**-0.3**
BUM				*e*Sn	**Sb**	**08 42 12.3**	**-1.5**
BCI	**Bajram Curri**	**2.15**	**8**	*i* PN	**Pb**	**08 41 45.9**	**-1.7**
BCI				*i* SN	**Sb**	**08 42 15.7**	**+1.8**
PVO	**Paravola**	**2.16**	**138**	P	**Pb**	**08 41 46.3**	**-1.5**
PVO	**Paravola**	**2.16**	**138**	P	**Pb**	**08 41 46.6**	**-1.2**
LIT	**Litokhoron**	**2.17**	**93**	*e*Pn	**Pb**	**08 41 46.6**	**-1.3**
LIT	**Litokhoron**	**2.17**	**93**	P	**Pn**	**08 41 45.5**	**+1.3**
LIT	**Litokhoron**	**2.17**	**93**	⇑*i*Pn	**Pb**	**08 41 46.8**	**-1.1**
LIT	**Litokhoron**	**2.17**	**93**	P	**Pb**	**08 41 46.5**	**-1.3**
LIT				S	**Sb**	**08 42 14.7**	**+0.5**
LIT				AML	AML	08 42 26.0	
	comp=N,12985μm,0.8s						
LIT				AML	AML	08 42 26.5	
	comp=E,9805μm,0.9s						
LRSO	**Larissa Observ**	**2.17**	**104**	P	**Pb**	**08 41 46.0**	**-1.8**
LRSO	**Larissa Observ**	**2.17**	**104**	P	**Pb**	**08 41 47.0**	**-0.8**
VLS	**Valsamata**	**2.17**	**160**	P	**Pn**	**08 41 44.7**	**+0.4**
VLS	**Valsamata**	**2.17**	**160**	P	**Pn**	**08 41 45.2**	**+0.9**
SKO	**Skopje**	**2.19**	**37**	*e*Pn	**Pn**	**08 41 46.0**	**+1.4**
SKO	**Skopje**	**2.19**	**37**	*i* Pn	**Pn**	**08 41 46.3**	**+1.7**
SKO				*i* Sg	**Sb**	**08 42 20.3**	**+5.2**
GRG	**Griva**	**2.20**	**70**	P	**Pn**	**08 41 45.3**	**+0.6**
GRG	**Griva**	**2.20**	**70**	⇑*i*Pn	**Pb**	**08 41 46.7**	**-1.8**
GRG	**Griva**	**2.20**	**70**	P	**Pb**	**08 41 46.6**	**-1.8**
GRG				AML	AML	08 42 28.9	
	comp=E,7567μm,0.7s						
GRG				AML	AML	08 42 33.7	
	comp=N,9544μm,0.8s						
PDG	**Podgorica**	**2.22**	**352**	*e*Pn	**Pn**	**08 41 44.9**	**0.0**
PDG	**Podgorica**	**2.22**	**352**	||*i*P	**Pn**	**08 41 44.9**	**0.0**
PDG	**Podgorica**	**2.22**	**352**	S	**Sn**	**08 42 12.4**	**+0.7**
PDG	**Podgorica**	**2.22**	**352**	⇑*i*Pn	**Pn**	**08 41 44.8**	**-0.1**
TTG	**Podgorica**	**2.22**	**352**	⇑*i*Pn	**Pn**	**08 41 44.7**	**-0.1**
TTG				*e*Sn	**Sb**	**08 42 13.8**	**-1.9**
TTG	**Podgorica**	**2.22**	**352**	*e*Pn	**Pn**	**08 41 44.8**	**0.0**
TTG				*e*Sn	**Sn**	**08 42 13.1**	**+1.4**
TTG	**Podgorica**	**2.22**	**352**	*e*P	**Pn**	**08 41 44.8**	**-0.1**
TTG				*e*		08 42 13.1	
KFL	**Anninata**	**2.29**	**157**	P	**Pn**	**08 41 46.5**	**+0.6**
KFL	**Anninata**	**2.29**	**157**	P	**Pn**	**08 41 46.9**	**+1.0**
BAI	**Bari**	**2.29**	**293**	*e*Pn	**Pn**	**08 41 45.5**	**-0.4**
BAI				Sn	**Sb**	**08 42 24.5**	**+6.6**
MATE	**Matera**	**2.30**	**281**	||*i*P	**Pn**	**08 41 45.5**	**-0.5**
MATE	**Matera**	**2.30**	**281**	S	**Sb**	**08 42 20.1**	**+2.0**
SG1	**Sgolgore (BA)**	**2.36**	**286**	*e*Pn	**Pn**	**08 41 46.5**	**-0.4**
PVY	**Plav**	**2.37**	**5**	||*i*Pn	**Pn**	**08 41 48.2**	**+1.1**
PVY				*e*Sn	**Sb**	**08 42 18.3**	**-1.9**
CEME	**Cevo**	**2.38**	**347**	⇑*i*Pn	**Pn**	**08 41 46.7**	**-0.5**
CEME				*e*Sn	**Sn**	**08 42 17.7**	**+1.9**
HCY	**Herceg Novi**	**2.38**	**339**	||*i*Pn	**Pn**	**08 41 46.5**	**-0.7**
HCY				*e*Sn	**Sn**	**08 42 17.1**	**+1.3**
HCY	**Herceg Novi**	**2.38**	**339**	*e*Pn	**Pn**	**08 41 46.5**	**-0.7**
AGG	**Agios Georgios**	**2.38**	**120**	*e*Pn	**Pb**	**08 41 50.4**	**-1.2**
AGG	**Agios Georgios**	**2.38**	**120**	P	**Pn**	**08 41 49.2**	**+2.0**
AGG	**Agios Georgios**	**2.38**	**120**	*e*P	**Pb**	**08 41 50.4**	**-1.2**
ANX	**Ano Chora**	**2.39**	**132**	P	**Pn**	**08 41 49.5**	**+2.1**
ANX	**Ano Chora**	**2.39**	**132**	P	**Pb**	**08 41 50.6**	**-1.1**
STIP	**Stip**	**2.40**	**52**	⇑*i*Pn	**Pb**	**08 41 51.4**	**-0.5**
TIP	**Timpagrande**	**2.48**	**246**	*e*Pn	**Pn**	**08 41 48.5**	**-0.1**
TIP				*e*Pg	**Pb**	**08 41 55.8**	**+2.6**
TIP	**Timpagrande**	**2.48**	**246**	P	**Pn**	**08 41 48.0**	**-0.6**
TIP	**Timpagrande**	**2.48**	**246**	||*i*P	**Pn**	**08 41 48.5**	**-0.1**
TIP	**Timpagrande**	**2.48**	**246**	P	**Pn**	**08 41 48.4**	**-0.1**
EFP	**Efpalio**	**2.50**	**135**	P	**Pn**	**08 41 50.5**	**+1.7**
EFP	**Efpalio**	**2.50**	**135**	P	**Pb**	**08 41 51.9**	**-1.7**
THE	**Thessaloniki**	**2.55**	**80**	*i* Pn	**Pn**	**08 41 51.2**	**+1.8**
THE	**Thessaloniki**	**2.55**	**80**	P	**Pn**	**08 41 51.1**	**+1.7**
UPR	**University Cam**	**2.55**	**139**	P	**Pb**	**08 41 53.0**	**-1.4**
RLS	**Riolos of Patr**	**2.58**	**147**	P	**Pn**	**08 41 51.1**	**+1.2**
RLS	**Riolos of Patr**	**2.58**	**147**	P	**Pn**	**08 41 51.9**	**+2.0**
NKME	**Niksic**	**2.59**	**348**	⇑*i*Pn	**Pn**	**08 41 50.1**	**0.0**
NKME				*e*Sn	**Sn**	**08 42 22.7**	**+1.8**
SERG	**Sergoula**	**2.59**	**134**	P	**Pb**	**08 41 53.1**	**-2.0**
VTN	**Vitineika**	**2.60**	**152**	P	**Pn**	**08 41 51.9**	**+1.7**
KOME	**Kolasin**	**2.62**	**358**	⇑*i*Pn	**Pn**	**08 41 50.9**	**+0.4**
KOME				*e*Sn	**Sn**	**08 42 23.4**	**+1.7**
KNT	**Kendrikon**	**2.62**	**68**	P	**Pn**	**08 41 51.7**	**+1.2**
KNT	**Kendrikon**	**2.62**	**68**	⇑*i*Pn	**Pn**	**08 41 52.4**	**+1.8**
KNT	**Kendrikon**	**2.62**	**68**	P	**Pn**	**08 41 52.2**	**+1.6**
NKY	**Niksic**	**2.63**	**349**	||*i*Pn	**Pn**	**08 41 50.7**	**0.0**
NKY				*e*Sn	**Sn**	**08 42 23.6**	**+1.6**
TRIZ	**Trizonia**	**2.64**	**134**	P	**Pb**	**08 41 53.6**	**-2.2**
IVA	**Berane**	**2.64**	**4**	||*i*Pn	**Pn**	**08 41 51.9**	**+1.1**
IVA				*e*Sn	**Sn**	**08 42 25.1**	**+2.8**
FYTO	**Fytoko, Volos**	**2.65**	**107**	P	**Pn**	**08 41 53.0**	**+2.1**
KALE	**Kalithea**	**2.66**	**133**	P	**Pb**	**08 41 54.0**	**-2.3**
TREB	**Trebinje**	**2.67**	**339**	*e*Pn	**Pn**	**08 41 50.4**	**-0.8**
TREB	**Trebinje**	**2.67**	**339**	*e*Pn	**Pn**	**08 41 50.2**	**-1.0**
LAKA	**Lakka**	**2.68**	**137**	P	**Pb**	**08 41 54.8**	**-1.8**
DRO	**Drossia**	**2.78**	**144**	P	**Pn**	**08 41 54.5**	**+1.9**
DRO	**Drossia**	**2.78**	**144**	P	**Pn**	**08 41 54.8**	**+2.1**
AIG1	**Aigion**	**2.79**	**136**	P	**Pn**	**08 41 55.0**	**+2.3**
BRY	**Bratogost**	**2.80**	**343**	||*i*Pn	**Pn**	**08 41 52.4**	**-0.6**
BRY				*e*Sn	**Sn**	**08 42 27.2**	**+1.0**
BRY	**Bratogost**	**2.80**	**343**	*e*Pn	**Pn**	**08 41 52.0**	**-1.0**
DLFA	**Delphi**	**2.81**	**128**	P	**Pb**	**08 41 55.8**	**-2.9**
XOR	**Xorichti**	**2.85**	**107**	P	**Pn**	**08 41 55.3**	**+1.7**
XOR	**Xorichti**	**2.85**	**107**	P	**Pn**	**08 41 55.5**	**+1.9**
DSF	**Desfina**	**2.87**	**128**	P	**Pn**	**08 41 56.3**	**+2.4**
SOH	**Sokhos**	**2.87**	**77**	P	**Pn**	**08 41 55.6**	**+1.7**
SOH	**Sokhos**	**2.87**	**77**	*i* Pn	**Pn**	**08 41 56.0**	**+2.1**
SOH	**Sokhos**	**2.87**	**77**	P	**Pn**	**08 41 56.0**	**+2.1**
NEO	**Neokhori**	**2.89**	**108**	P	**Pn**	**08 41 56.3**	**+2.1**
PLG	**Polygyros**	**2.89**	**86**	P	**Pn**	**08 41 55.5**	**+1.3**
PLG	**Polygyros**	**2.89**	**86**	P	**Pn**	**08 41 55.7**	**+1.5**
KLV	**Kalavryta, Ach**	**2.92**	**138**	P	**Pn**	**08 41 56.9**	**+2.3**
KLV	**Kalavryta, Ach**	**2.92**	**138**	P	**Pn**	**08 41 57.1**	**+2.5**
CUC	**Castrocucco**	**2.96**	**267**	P	**Pn**	**08 41 55.9**	**+0.7**
ATAL	**Atalanti**	**3.02**	**120**	P	**Pn**	**08 41 58.6**	**+2.7**
STON	**Ston**	**3.02**	**331**	*i* Pn	**Pn**	**08 41 55.1**	**-0.8**
STON				Sn	**Sn**	**08 42 28.8**	**-2.7**
STON	**Ston**	**3.02**	**331**	*e*Pn	**Pn**	**08 41 55.1**	**-0.8**
UPM	**Unac-Piva**	**3.02**	**349**	*e*Pn	**Pn**	**08 41 56.3**	**+0.1**
UPM				*e*Sn	**Sn**	**08 42 33.2**	**+1.4**
UPM	**Unac-Piva**	**3.02**	**349**	*e*Pn	**Pn**	**08 41 56.0**	**-0.2**
LKR	**Lokris**	**3.02**	**120**	P	**Pn**	**08 41 58.1**	**+2.1**
LKR	**Lokris**	**3.02**	**120**	P	**Pn**	**08 41 58.7**	**+2.7**
SJES	**Sjenica**	**3.04**	**4**	*e*Pn	**Pn**	**08 41 57.3**	**+1.0**
BARS	**Barje**	**3.04**	**31**	*e*Pn	**Pn**	**08 41 57.3**	**+1.0**
BARS	**Barje**	**3.04**	**31**	*e*Pn	Pb	08 42 11.8	+9.0
SMIA	**Simia**	**3.05**	**115**	P	**Pn**	**08 41 59.0**	**+2.6**
KKB	**Krupnik**	**3.06**	**57**	⇑*i*Pn	**Pn**	**08 41 58.5**	**+2.1**
GUR	**Goura**	**3.10**	**137**	P	**Pn**	**08 41 59.8**	**+2.7**
PLE	**Pljevlja**	**3.10**	**356**	||*i*Pn	**Pn**	**08 41 57.8**	**+0.6**
PLE				*e*Sn	**Sn**	**08 42 34.7**	**+1.0**
SRS	**Serrai**	**3.11**	**72**	P	**Pn**	**08 41 58.4**	**+1.2**
SRS	**Serrai**	**3.11**	**72**	⇑*i*Pn	**Pn**	**08 41 58.5**	**+1.3**
SRS	**Serrai**	**3.11**	**72**	P	**Pn**	**08 41 58.4**	**+1.2**
AMT	**Artemida-Makis**	**3.13**	**149**	P	**Pn**	**08 41 59.1**	**+1.6**
SELS	**Selova**	**3.18**	**20**	*e*Pn	**Pn**	**08 41 58.1**	**0.0**
PROD	**Prodromos**	**3.19**	**127**	P	**Pn**	**08 41 59.9**	**+1.6**
PROD	**Prodromos**	**3.19**	**127**	P	**Pn**	**08 42 00.3**	**+2.0**
THAL	**Thalero**	**3.20**	**132**	P	**Pn**	**08 41 59.9**	**+1.5**
OUR	**Ouranopolis**	**3.30**	**87**	P	**Pn**	**08 42 01.3**	**+1.5**
OUR	**Ouranopolis**	**3.30**	**87**	P	**Pn**	**08 42 01.5**	**+1.7**
IVAS	**Ivanjica**	**3.36**	**6**	*e*Pn	**Pn**	**08 42 00.5**	**-0.2**
MMB	**Musomiste**	**3.36**	**65**	⇑*i*Pn	**Pn**	**08 42 02.6**	**+2.0**
MES3	**Kyparissia**	**3.37**	**152**	P	**Pn**	**08 42 02.9**	**+2.2**
NVR	**Nevrokopi**	**3.37**	**69**	P	**Pn**	**08 42 02.4**	**+1.6**
NVR	**Nevrokopi**	**3.37**	**69**	P	**Pn**	**08 42 02.7**	**+1.8**
TRIP	**Tripoli**	**3.38**	**142**	P	**Pn**	**08 42 03.2**	**+2.2**
TRIP	**Tripoli**	**3.38**	**142**	P	**Pn**	**08 42 03.6**	**+2.7**
MRKA	**Markates**	**3.39**	**115**	P	**Pn**	**08 42 03.7**	**+2.6**
LOUT	**Loutraki**	**3.41**	**130**	P	**Pn**	**08 42 03.0**	**+1.7**
ACOR	**Acrocorinthos**	**3.42**	**132**	P	**Pn**	**08 42 03.1**	**+1.7**
VIL2	**Platees**	**3.45**	**125**	P	**Pn**	**08 42 04.3**	**+2.5**
ITM	**Ithomi**	**3.52**	**149**	*e*Pn	**Pn**	**08 42 05.0**	**+2.1**
ITM	**Ithomi**	**3.52**	**149**	P	**Pn**	**08 42 05.1**	**+2.2**
ITM	**Ithomi**	**3.52**	**149**	P	**Pn**	**08 42 05.1**	**+2.2**
CEL	**Celeste**	**3.53**	**237**	*e*Pn	**Pn**	**08 42 02.9**	**-0.1**
CEL				*e*Sn	**Sn**	**08 42 45.0**	**+0.8**
VLX	**Vlachokerasia**	**3.56**	**143**	P	**Pn**	**08 42 06.0**	**+2.5**
VTS	**Vitosha**	**3.59**	**47**	*e*Pn	**Pn**	**08 42 05.0**	**+1.2**
VTS	**Vitosha**	**3.59**	**47**	*e*Pn	**Pn**	**08 42 05.3**	**+1.4**
VTS	**Vitosha**	**3.59**	**47**	P	**Pn**	**08 42 05.1**	**+1.2**
VTS	**Vitosha**	**3.59**	**47**	⇑*i*P	**Pn**	**08 42 05.4**	**+1.4**
VTS	**Vitosha**	**3.59**	**47**	⇑*i*Pn	**Pn**	**08 42 05.3**	**+1.4**
VTS	**Vitosha**	**3.59**	**47**	*e*P	**Pn**	**08 42 05.3**	**+1.4**
BBLS	**Lazići**	**3.64**	**357**	*e*Pn	**Pn**	**08 42 04.7**	**+0.2**
BBLS	**Lazići**	**3.64**	**357**	⇑*i*Pn	**Pn**	**08 42 04.4**	**-0.1**
PYL	**PYLOS**	**3.71**	**153**	P	**Pn**	**08 42 06.2**	**+0.8**
PYL	**PYLOS**	**3.71**	**153**	P	**Pn**	**08 42 06.6**	**+1.2**
BOVS	**Bovan**	**3.72**	**23**	*e*Pn	**Pn**	**08 42 05.9**	**+0.3**
GRUS	**Gruza**	**3.73**	**12**	*e*Pn	**Pn**	**08 42 06.0**	**+0.2**
EPID	**Epidavros**	**3.75**	**133**	P	**Pn**	**08 42 07.5**	**+1.5**
ZAPS	**Zavoj**	**3.76**	**35**	*e*Pn	**Pn**	**08 42 07.7**	**+1.5**
KAVA	**Kavala**	**3.77**	**77**	P	**Pn**	**08 42 07.3**	**+1.1**
KAVA	**Kavala**	**3.77**	**77**	P	**Pn**	**08 42 07.6**	**+1.4**
DIVS	**Divibare**	**3.87**	**3**	*e*Pn	**Pn**	**08 42 07.3**	**-0.4**
DIVS	**Divibare**	**3.87**	**3**	⇑*i*Pn	**Pn**	**08 42 07.3**	**-0.4**
THAS	**Thassos island**	**3.87**	**83**	P	**Pn**	**08 42 08.5**	**+0.9**
ATH	**Athens Observa**	**3.87**	**124**	P	**Pn**	**08 42 09.3**	**+1.6**
HAPS	**Han Pijesak,Bl**	**3.89**	**352**	*e*Pn	**Pn**	**08 42 07.6**	**-0.4**
HAPS	**Han Pijesak,Bl**	**3.89**	**352**	*e*Pn	**Pn**	**08 42 07.3**	**-0.7**
DID	**Didima**	**3.89**	**133**	P	**Pn**	**08 42 09.2**	**+1.2**
ATHU	**Athens Univers**	**3.92**	**124**	P	**Pn**	**08 42 09.9**	**+1.5**
PTL	**Penteli**	**3.92**	**122**	P	**Pn**	**08 42 10.0**	**+1.6**
PTL	**Penteli**	**3.92**	**122**	P	**Pn**	**08 42 10.0**	**+1.6**
KRND	**KRANIDI**	**3.94**	**135**	P	**Pn**	**08 42 10.0**	**+1.5**
VLY	**Voula,Athens**	**4.00**	**125**	P	**Pn**	**08 42 11.0**	**+1.6**
VLY	**Voula,Athens**	**4.00**	**125**	P	**Pn**	**08 42 11.1**	**+1.8**
TRUS	**Trudelj**	**4.03**	**8**	*e*Pn	**Pn**	**08 42 09.8**	**0.0**
DYR	**Agios Nikonas**	**4.05**	**148**	P	**Pn**	**08 42 11.7**	**+1.6**
ZAGS	**Zajecar**	**4.05**	**27**	*e*Pn	**Pn**	**08 42 11.2**	**+1.0**
SVIS	**Svilajnac**	**4.19**	**15**	*e*Pn	**Pn**	**08 42 11.9**	**-0.1**
PLD	**Plovdiv**	**4.24**	**62**	*e*P	**Pn**	**08 42 15.2**	**+2.6**
LIA	**Limnos Island**	**4.24**	**93**	P	**Pn**	**08 42 14.1**	**+1.4**
TEKS	**Tekeris**	**4.32**	**359**	*e*Pn	**Pn**	**08 42 13.6**	**-0.2**
TEKS	**Tekeris**	**4.32**	**359**	*e*Pn	**Pn**	**08 42 13.1**	**-0.7**
VLI	**Veliai**	**4.35**	**143**	P	**Pn**	**08 42 15.5**	**+1.3**
VLI	**Veliai**	**4.35**	**143**	P	**Pn**	**08 42 15.8**	**+1.6**
KUBS	**Kucevo**	**4.43**	**19**	*e*Pn	**Pn**	**08 42 14.7**	**-0.7**
RDO	**Rodhopi**	**4.55**	**77**	*e*P	**Pn**	**08 42 18.4**	**+1.4**
RDO	**Rodhopi**	**4.55**	**77**	P	**Pn**	**08 42 18.0**	**+1.0**
KDZ	**Kurdzhali**	**4.58**	**70**	*e*P	Pn	08 42 21.9	+4.5
MGRS	**Mrkonjic Grad**	**4.60**	**336**	*e*Pn	**Pn**	**08 42 18.4**	**+0.7**
BEO	**Beograd**	**4.61**	**7**	*e*Pn	**Pn**	**08 42 17.7**	**-0.1**
DOB	**Doboj**	**4.64**	**346**	*e*Pn	**Pn

KULA Kula-Manisa 7.17 101 *eP* Pn 08 42 58.7 +5.6
ISK Istanbul-Kandi 7.19 80 *eP* **Pn 08 42 52.7 -0.5**
ULDT Uludag 7.25 88 *i P* **Pn 08 42 57.3 +3.1**
ULDT IAML_P
comp=Z,529nm,0.8s
SOKA Soboth 7.27 334 *i* Pn **Pn 08 42 53.8 -0.6**
comp=Z,21nm,0.3s,SNR=27
SOKA *i* Sn **Sn 08 44 10.5 -5.8**
comp=Z,57nm,0.6s
ZKR Zakros 7.28 132 *eP* **Pn 08 42 55.8 +1.3**
OBKA Obir 7.30 331 *e*Pn **Pn 08 42 54.9 +0.1**
comp=Z,30nm,0.3s,SNR=23
OBKA *e*Sn **Sn 08 44 13.5 -3.5**
comp=Z,59nm,0.3s
OZUR 7.37 35⇑ *i P* **Pn 08 42 58.3 +2.6**
USAK Uak-Merkez 7.39 99 *i P* Pn 08 43 00.8 +4.8
USAK IAML_P
comp=Z,1µm,0.6s
YER Yerkesik 7.41 112 *eP* Pn 08 43 00.9 +4.5
GRER 7.43 44⇑ *i P* **Pn 08 42 58.4 +1.8**
KARP Karpathos 7.55 126 *eP* **Pn 08 43 00.0 +1.8**
KARP Karpathos 7.55 126 *e*Pn **Pn 08 42 59.7 +1.5**
TLB Topalu 7.57 52⇓ *i P* **Pn 08 43 00.7 +2.3**
TVSB Tavsanli 7.58 93 *eP* **Pn 08 43 01.7 +3.1**
PLOR Plostina 7.59 40⇓ *i P* **Pn 08 43 01.2 +2.4**
ARSA Arzberg 7.63 338 *e*Pn **Pn 08 42 58.6 -0.6**
comp=Z,7.5nm,0.3s
ARSA *e*Sn **Sn 08 44 19.9 -5.2**
comp=Z,15nm,0.4s
SILT Sile 7.63 80 *eP* **Pn 08 43 01.6 +2.3**
SILT Sile 7.63 80⇑ *i P* **Pn 08 43 01.7 +2.4**
SRO Srobarova 7.64 353 *eP* **Pn 08 43 02.4 +3.0**
SRO Srobarova 7.64 353 *e*PN **Pn 08 43 02.4 +3.0**
VRI Vrincioaia 7.64 40⇑ *i P* **Pn 08 43 01.9 +2.5**
PSZ Piszkesteto 7.69 1 *e*Pn **Pn 08 42 59.1 -1.0**
PSZ Piszkesteto 7.69 1 *eP* **Pn 08 42 59.1 -1.0**
PSZ Piszkesteto 7.69 1 EPn **Pn 08 43 02.0 +2.0**
PSZ ESg 08 45 09.1
ADVT Abdulvahap 7.70 85 *eP* Pb 08 43 11.5 -11
TIRR Tirgusor 7.73 54 *e*Pn **Pn 08 43 02.1 +1.5**
TIRR Tirgusor 7.73 54⇓ *i P* **Pn 08 43 02.6 +2.0**
TIRR Tirgusor 7.73 54 *eP* **Pn 08 43 02.1 +1.5**
ODBI Odobesti 7.74 42⇓ *i P* **Pn 08 43 02.2 +1.5**
MYKA Terra Mystica 7.75 328 *e*Pn **Pn 08 43 00.5 -0.5**
comp=Z,3.7nm,0.2s
MYKA *i* Sn **Sn 08 44 24.3 -3.8**
comp=Z,29nm,0.4s
TURN Turunc 7.76 113 *eP* **Pn 08 43 01.3 +0.2**
ARG Arkhangelos 7.77 118 *eP* **Pn 08 43 04.8 +3.6**
SOP Sopron 7.78 344 EPn **Pn 08 43 00.0 -1.2**
SOP ESg 08 45 08.1
DALY Dalyan (Mula) 7.82 113 *eP* Pn 08 43 08.7 +6.8
KHAL Karahalli 7.84 101 *i P* Pn 08 43 07.2 +5.0
KHAL IAML_P
comp=Z,424nm,0.3s
VLC Villacollemand 7.93 303 *e*Pn **Pn 08 43 03.0 -0.4**
CFR Carcaliu 7.95 49⇑ *i P* **Pn 08 43 05.3 +1.6**
KAND Kocaeli-Kandir 8.05 80 *i P* **Pn 08 43 07.4 +2.5**
KAND IAML_P
comp=Z,672nm,0.4s
TESR Tescani 8.07 37⇓ *i P* **Pn 08 43 07.0 +1.7**
TRPA Tarpa 8.16 14 EPn **Pn 08 43 03.1 -3.4**
CONA Conrad Observa 8.17 342 *e*Pn **Pn 08 43 08.0 +1.4**
comp=Z,2.0nm,0.3s
ZST Bratislava 8.17 348 *e*SN **Sn 08 44 31.3 -7.0**
FETY Fethiye 8.21 113 *eP* **Pn 08 43 09.2 +1.9**
KBA Koelnbreinsper 8.23 328 *e*Pn **Pn 08 43 07.9 +0.2**
comp=Z,8.6nm,0.3s,SNR=16
KBA *e*Sn **Sn 08 44 34.6 -5.6**
comp=Z,25nm,0.4s
BORA Eskisehir 8.28 89 *i P* **Pn 08 43 11.3 +3.0**
BORA IAML_P
comp=Z,51nm,0.1s
VYHS Vyhne 8.28 356 *eP* **Pn 08 43 08.6 +0.4**
VYHS *e* 08 44 36.1
VYHS Vyhne 8.28 356 *e*PN **Pn 08 43 08.6 +0.4**
VYHS *e*SN **Sn 08 44 36.1 -5.0**
MODS Modra-Piesok 8.32 349 *eP* **Pn 08 43 09.0 +0.3**
MODS *e* 08 44 36.0
MODS Modra-Piesok 8.32 349 *e*PN **Pn 08 43 09.0 +0.3**
MODS *e*SN **Sn 08 44 36.0 -6.0**
MODS *e*LG Lg 08 45 03.7
ABTA Abfaltersbach 8.33 324 *e*Pn **Pn 08 43 08.4 -0.6**
comp=Z,9.8nm,0.4s,SNR=9.7
ABTA *e*Sn **Sn 08 44 36.7 -5.7**
comp=Z,42nm,0.4s
PGF Pioggiola 8.35 290 *e*Pn **Pn 08 43 10.1 +0.9**
TLCR 8.36 51⇑ *i P* **Pn 08 43 11.8 +2.6**
BURAR Bucovina Array 8.39 27⇑ *i P* **Pn 08 43 12.9 +3.1**
SRCK Saricakaya, Es 8.40 88 *eP* **Pn 08 43 12.2 +2.4**
SRCK Saricakaya, Es 8.40 88 *i P* **Pn 08 43 13.2 +3.4**
SRCK IAML_P
comp=Z,500nm,0.3s
BUR08 Bucovina Ar. S 8.41 26 *e*Pn **Pn 08 43 12.2 +2.2**
SAHE Sakarya_HENDEK 8.54 82 *i P* **Pn 08 43 14.9 +3.1**
SAHE IAML_P
comp=Z,83nm,0.3s
MOA Molln 8.55 335 *i* Pn **Pn 08 43 11.9 0.0**
comp=Z,13nm,0.3s,SNR=20
MOA *i* Sn **Sn 08 44 43.0 -4.7**
comp=Z,21nm,0.3s
UZH Uzhgorod 8.60 12 *eP* **Pn 08 43 12.7 +0.1**
UZH *e*S **Sn 08 44 49.4 +0.5**
UZH MLR MLR
comp=N,100nm,11.0s
UZH MLR MLR
comp=E,70nm,11.0s
UZH MLR MLR
comp=Z,80nm,11.0s
JAVC Velka Javorina 8.74 351 *e*PN **Pn 08 43 15.2 +0.7**
ELL Elmali 8.75 110 *eP* **Pn 08 43 18.5 +3.8**
AKAS Kas 8.78 114 *eP* Pn 08 43 21.1 +6.0
TAMR Tamra 8.85 252 *e*Pn **Pn 08 43 15.9 -0.2**
KOLS Kolonicke sedl 8.89 11 *eP* **Pn 08 43 17.9 +1.3**
KOLS Kolonicke sedl 8.89 11 *e*PN **Pn 08 43 17.9 +1.3**
KORT Korkueli 8.96 108 *eP* Pn 08 43 22.6 +4.9
KORT Korkueli 8.96 108 *i P* Pn 08 43 24.0 +6.3
KORT IAML_P
comp=Z,534nm,0.5s
AUMIH MIHALICIK 9.07 88 *i P* **Pn 08 43 22.6 +3.5**
WTTA Wattenberg 9.12 323 *e*Pn **Pn 08 43 19.5 -0.3**
comp=Z,9.9nm,0.2s,SNR=12
WTTA *e*Sn **Sn 08 44 55.2 -6.6**
comp=Z,66nm,0.7s
KRUC Moravsky 9.13 346 *e*PN **Pn 08 43 19.3 -0.5**
WATA Walderalm 9.20 323 *e*Pn **Pn 08 43 20.6 -0.2**
comp=Z,24nm,0.4s,SNR=20
WATA *e*Sn **Sn 08 44 59.3 -4.4**
comp=Z,30nm,0.5s
STHS Stebnicka Huta 9.25 6 *eP* Pn 08 43 30.5 +9.0
STHS Stebnicka Huta 9.25 6 *e* Pn 08 43 30.5 +9.0
SQTA Sankt Quirin 9.29 322 *e*Pn **Pn 08 43 22.3 +0.3**
comp=Z,15nm,0.3s,SNR=14
SQTA *e*Sn **Sn 08 45 00.8 -5.1**
comp=Z,57nm,0.6s
KEST Kesra 9.30 244 Pn **Pn 08 43 25.6 +3.2**
comp=Z,0.5nm,0.3s,baz=40,slow=2.2,SNR=9.6
KEST LR LR 08 47 44.0
comp=Z,302nm,19.9s,baz=334,slow=42
KEST Kesra 9.30 244 *e*Pn **Pn 08 43 22.6 +0.3**
VRAC Vranov 9.33 347 Pn **Pn 08 43 22.0 -0.6**
comp=Z,0.3nm,0.3s,baz=172,slow=19,SNR=5.1
VRAC Vranov 9.33 347 P **Pn 08 43 22.0 -0.6**
VRAC Vranov 9.33 347 *e*PN **Pn 08 43 24.4 +1.8**
FUORN Ofenpass-Fuorn 9.35 316 *e*Pn **Pn 08 43 22.9 -0.2**
FETA Feichten 9.38 319 *i* Pn **Pn 08 43 23.9 +0.5**
comp=Z,5.4nm,0.4s
FETA *e*Sn **Sn 08 45 03.3 -5.0**
comp=Z,13nm,0.4s
MOTA Moosalm 9.42 322 *i* Pn **Pn 08 43 24.0 0.0**
comp=Z,13nm,0.3s,SNR=26
MOTA *e*Sn **Sn 08 45 06.2 -3.2**
comp=Z,44nm,0.6s
BCAM Yenicaga 9.46 82 *i P* **Pn 08 43 28.9 +4.4**
BCAM IAML_P
comp=Z,397nm,0.5s
KIS Kishinev 9.47 41 *e* Pn 08 43 34.0 +10
KIS LRM MLR 08 47 42.0
comp=Z,700nm,12.0s
KIZT Kizilcal 9.53 94 *eP* **Pn 08 43 28.9 +3.5**
GEC2 GERESS Array S 9.60 336 *e*Pn **Pn 08 43 25.0 -1.4**
GEC2 *e*Sn **Sn 08 45 05.7 -8.0**
GEC2 GERESS Array S 9.60 336 *eP* **Pn 08 43 25.0 -1.4**
GEC2 *e* 08 45 05.7
GERES GERESS Array B 9.60 336 Pn **Pn 08 43 25.0 -1.4**
comp=Z,1.9nm,0.3s,baz=156,slow=13,SNR=30
GERES Sn **Sn 08 45 05.7 -8.0**
comp=Z,1.2nm,0.3s,baz=173,slow=16,SNR=1.3
GERES LR LR 08 47 56.4
comp=Z,182nm,21.5s,baz=150,slow=43
DAVOX Davos/Dischmat 9.66 316 Pn **Pn 08 43 27.0 -0.2**
comp=Z,3.3nm,0.3s,baz=343,slow=22,SNR=12
DAVOX Sn **Sn 08 45 10.8 -4.4**
comp=Z,4.7nm,0.3s,baz=17,slow=21,SNR=4.0
DAVOX LR LR 08 48 12.1
comp=Z,283nm,20.6s,baz=84,slow=44
MORC Moravsky Berou 9.66 352 *e*Pn **Pn 08 43 27.0 -0.1**
MORC Moravsky Berou 9.66 352 *eP* **Pn 08 43 27.0 -0.1**
MORC Moravsky Berou 9.66 352 *e*PN **Pn 08 43 26.3 -0.8**
OKC Ostrava-Krasne 9.66 354 AMS AMS 08 49 10.0
comp=Z,500nm,11.5s
RETA Reutte 9.69 321 *i* Pn **Pn 08 43 27.1 -0.4**
comp=Z,7.6nm,0.3s
RETA *i* Sn **Sn 08 45 11.3 -4.4**
comp=Z,31nm,0.6s
TUE Stuetta 9.76 313 *e*Pn **Pn 08 43 28.2 -0.5**
TUE *e*Sn **Sn 08 45 10.5 -7.3**
SBF Sospel 9.80 296 *e*Pn **Pn 08 43 29.7 +0.7**
SBF *e*Sn **Sn 08 45 10.0 -8.4**
comp=Z,24nm,0.5s
SLUM Salum 9.81 151 P **Pn 08 43 28.1 -1.0**
baz=161
SLUM S Sn 08 45 06.4 -12
baz=161
KHC Kasperske Hory 9.89 336 *e*Pn **Pn 08 43 29.4 -0.9**
KHC Kasperske Hory 9.89 336 *eP* **Pn 08 43 28.9 -1.4**
KHC *e* 08 45 15.3
KHC MLR MLR
comp=Z,1µm,11.1s
KHC Kasperske Hory 9.89 336 *e*PN **Pn 08 43 28.9 -1.4**
KHC *e*SN **Sn 08 45 15.3 -5.4**
KHC *ex* x 08 45 40.5
KHC AMS AMS 08 48 10.0
comp=Z,1µm,11.1s
KEPZ Antalya-Kepez 9.92 106 *i P* Pn 08 43 36.4 +5.7
KEPZ IAML_P
comp=Z,245nm,0.8s
DAVA Damuels 9.99 318 *i* Pn **Pn 08 43 31.9 +0.2**
comp=Z,11nm,0.3s
DAVA *e*Sn **Sn 08 45 17.2 -5.9**
comp=Z,32nm,0.4s
OJC Ojcow 9.99 0 *e*Pn **Pn 08 43 31.8 +0.2**
OJC Ojcow 9.99 0 *eP* **Pn 08 43 31.8 +0.2**
LVV L'vov 10.07 16 *eP* **Pn 08 43 34.2 +1.6**
LVV MLR MLR
comp=Z,200nm,10.0s
KONT Konya--Tatoy 10.13 99 *eP* Pn 08 43 38.3 +4.7
FRF La Foret Royal 10.26 293 *e*Pn **Pn 08 43 36.3 +1.0**
FRF *e*Sn **Sn 08 45 21.7 -8.0**
comp=Z,9.1nm,0.5s
GOPC GO Pecny, Ondr 10.28 342 AMS AMS 08 48 30.0
comp=Z,700nm,10.4s
LMR La Mourre 10.31 292 *e*Pn **Pn 08 43 37.6 +1.7**
LMR *e*Sn **Sn 08 45 22.7 -8.0**
comp=Z,4.7nm,0.4s
DPC Dobruska-Polom 10.39 348 AMS AMS 08 48 40.0
comp=Z,600nm,16.0s
PRU Pruhonice 10.40 341 *eP* **Pn 08 43 36.8 -0.4**
PRU MLR MLR
comp=Z,800nm,12.5s
PRU Pruhonice 10.40 341 *e*PN **Pn 08 43 36.8 -0.4**
PRU AMS AMS 08 48 30.0
comp=Z,800nm,12.5s
MBDF Montbardon 10.53 299 *e*Pn **Pn 08 43 37.7 -1.4**
MBDF *e*Sn **Sn 08 45 28.1 -8.4**
comp=Z,28nm,0.5s
UPC Upice 10.59 347 AMS AMS 08 48 50.0
comp=Z,500nm,11.8s
OSTC Ostas 10.60 348 AMS AMS 08 48 40.0
comp=Z,500nm,13.2s
CHVC Chvalec 10.66 347 AMS AMS 08 48 50.0
comp=Z,500nm,12.9s
ILGA Ilgaz 10.71 81 *e*Pn **Pn 08 43 44.1 +2.4**
BNI Bardonecchia 10.71 301 *e*Pn **Pn 08 43 40.8 -0.8**
BNI Bardonecchia 10.71 301 *eP* **Pn 08 43 40.8 -0.8**
GAZI Gazipasa 10.72 108 *i P* **Pn 08 43 45.7 +4.1**
BR101 Keskin Array S 10.73 88 *e*Pn **Pn 08 43 43.5 +1.5**
BR131 Keskin Array S 10.73 88 *e*Pn **Pn 08 43 44.3 +2.3**
BR131 Keskin Array S 10.73 88 *eP* **Pn 08 43 44.3 +2.3**
BRTR Keskin Array B 10.73 88 Pn **Pn 08 43 43.5 +1.5**
comp=Z,0.3nm,0.3s,baz=277,slow=11,SNR=13
BRTR LR LR 08 48 17.9
comp=Z,207nm,21.6s,baz=272,slow=40
BRTR Keskin Array B 10.73 88 *i P* **Pn 08 43 44.7 +2.7**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
LPG La Plagne 10.84 303 *e*Pn **Pn 08 43 41.2 -2.3**
LPG *e*Sn Sn 08 45 35.3 -9.0
comp=Z,36nm,0.4s
LPL La Plagne 10.86 303 *e*Pn **Pn 08 43 41.3 -2.4**
LPL *e*Sn Sn 08 45 35.7 -8.9
comp=Z,67nm,0.6s
SENIN Lac Senin/Sane 10.89 308 *e*Pn **Pn 08 43 42.8 -1.4**
PVCC Panska Ves 10.90 343 AMS AMS 08 48 50.0
comp=Z,700nm,9.9s
SMRF Simiane la Rot 11.12 294 *e*Pn **Pn 08 43 49.1 +2.0**
ORIF Oris-en-Rattie 11.19 299 *e*Pn **Pn 08 43 47.1 -1.0**
ORIF *e*Sn **Sn 08 45 44.1 -8.5**
comp=Z,45nm,0.8s
BERE Bereket-Mersin 11.34 106 *eP* **Pn 08 43 51.6 +1.4**
STU Stuttgart 11.34 322 *e*Pn **Pn 08 43 48.4 -1.7**
STU Stuttgart 11.34 322 *eP* **Pn 08 43 48.4 -1.7**
BRG Berggiesshubel 11.37 341 *eP* **Pn 08 43 49.9 -0.5**
comp=Z,2.9nm,0.9s
BRG Berggiesshubel 11.37 341 *eP* **Pn 08 43 49.9 -0.5**
BRG pmax pmax
comp=Z,3.0nm,0.9s
BFO Black Forest 11.46 319 *e*Pn **Pn 08 43 50.3 -1.4**
BFO Black Forest 11.46 319 *eP* **Pn 08 43 50.3 -1.4**
SIM Simferopol' 11.64 61 *cP* Pn 08 44 03.5 +9.3
SIM pmax pmax
comp=Z,58nm,0.4s
SIM MLR MLR
comp=Z,100nm,15.5s
CABF La Chapelle 11.75 307 *e*Pn **Pn 08 43 53.0 -2.7**
CABF *e*Sn Sn 08 45 56.7 -9.5
comp=Z,116nm,1.1s
HINF Hinteralfeld 11.93 314 *e*Pn **Pn 08 43 55.6 -2.6**
HINF *e*Sn Sn 08 46 00.4 -10
comp=Z,41nm,0.5s
SWA2 11.95 155 P **Pn 08 43 56.5 -2.0**
baz=163
SWA2 S Sn 08 46 00.5 -11
baz=163
VIVF Saint-Julien-l 11.98 298 *e*Pn **Pn 08 43 58.7 -0.2**
VIVF *e*Sn Sn 08 46 03.2 -8.7
comp=Z,2.3nm,0.4s
ECH Echery 12.00 316 *e*Pn **Pn 08 43 57.9 -1.2**
ECH Echery 12.00 316 *eP* **Pn 08 43 57.9 -1.2**
CLL Collm 12.01 339 *e*Pn **Pn 08 44 01.0 +1.9**
CLL *e* 08 44 10.0
comp=Z,8.0nm,1.0s
CLL *e* 08 44 22.0
CLL *e*Sn **Sn 08 46 10.0 -2.3**
CLL *e* 08 46 42.0
CLL *e*Sb 08 46 57.0
CLL *e*Sg 08 47 36.0
comp=N,200nm,23.5s
CLL *e*Sg 08 47 36.0
comp=E,400nm,24.1s
CLL Lmax 08 49 00.0
CSS Mathiatis 12.04 112 *e*Pn **Pn 08 44 00.4 +0.7**
CSS Mathiatis 12.04 112 Pn **Pn 08 43 59.0 -0.7**
CDF Champ du Feu 12.06 317 *e*Pn **Pn 08 43 57.3 -2.6**
CDF *e*Sn Sn 08 46 04.6 -9.1
comp=E,26nm,0.7s
HAU Haudompre 12.32 314 *e*Pn **Pn 08 44 00.9 -2.5**
HAU *e*Sn Sn 08 46 09.2 -11
comp=E,62nm,0.5s
LASF Ste Croix 12.35 293 *e*Pn **Pn 08 44 01.3 -2.6**
AKASG Malin Array Be 12.42 29 Pn **Pn 08 44 03.6 -1.2**
comp=E,0.6nm,0.3s,baz=216,slow=12,SNR=7.7
AKBB Malin Array Si 12.42 29 *e*Pn **Pn 08 44 04.6 -0.2**
AKBB Malin Array Si 12.42 29 *eP* **Pn 08 44 04.6 -0.2**
PAGF Fort de Pagny 12.97 314 *e*Pn **Pn 08 44 10.7 -1.6**
PAGF *e*Sn Sn 08 46 26.3 -10
comp=E,41nm,0.8s
SMF Signal de Mont 13.16 304 *e*Pn **Pn 08 44 12.2 -2.7**
SMF *e*Sn Sn 08 46 28.1 -12
comp=E,43nm,0.8s
SFTF Sexfontaines 13.16 312 *e*Pn **Pn 08 44 12.6 -2.4**
SFTF *e*Sn Sn 08 46 30.5 -10
comp=E,16nm,0.5s
MEZF Maizieres J'vi 13.31 313 *e*Pn **Pn 08 44 14.4 -2.6**
MEZF *e*Sn Sn 08 46 34.2 -10
comp=E,19nm,0.5s
MTLF Montolieu 13.39 289 *eP*n **Pn 08 44 17.4 -0.7**
LOR Lormes 13.41 307 *eP*n **Pn 08 44 15.5 -2.8**
LOR *e*Sn Sn 08 46 36.3 -10
comp=E,40nm,0.5s
AVF Avril sur Loir 13.52 304 *eP*n **Pn 08 44 17.2 -2.7**
AVF *e*Sn Sn 08 46 37.3 -12
comp=E,15nm,0.6s
SSF Saint Saulge 13.54 306 *eP*n **Pn 08 44 16.9 -3.2**
SSF *e*Sn Sn 08 46 36.2 -14
comp=E,15nm,0.5s
BGF Bois d'Agland 13.76 303 *eP*n **Pn 08 44 20.1 -3.0**
BGF *e*Sn Sn 08 46 44.7 -10
comp=E,19nm,0.4s
CAF Calviac 13.79 296 *eP*n **Pn 08 44 25.6 +2.0**
HNAT Natroun 13.86 136 P Pn 08 44 19.1 -5.4
baz=143
HNAT AMP 08 46 21.7
baz=143
ANN Anapa 13.87 65 *eP* Pn 08 44 16.7 -7.9
ANN *e*SS **Sn 08 47 02.0 +4.1**
ANN pmax pmax
comp=Z,90nm,1.3s
TCF Toulx Ste Croi 14.08 301 *eP*n **Pn 08 44 25.4 -2.1**
TCF *e*Sn Sn 08 46 51.5 -12
comp=Z,7.5nm,0.5s
MEM Membach 14.11 322 PnPn **P 08 44 35.0 -0.3**
MEM x x 08 44 47.5
HNTI Hanita 14.34 115 Pn **Pn 08 44 28.0 -3.1**
GIVF Givet 14.36 318 *eP*n **Pn 08 44 28.6 -2.7**
GIVF *e*Sn Sn 08 46 59.3 -11
comp=Z,5.2nm,0.4s
KLNR Kaliningrad 14.38 1⇓ *eP* **Pn 08 44 29.3 -2.3**
KLNR pmax pmax
comp=Z,29nm,0.7s
DOU Dourbes 14.48 318 pP **P 08 44 42.0 +2.6**
GLL Jalalah 14.49 133 P Pn 08 44 27.2 -6.1
baz=140
MMA0B Mount Meron ar 14.53 115 Pn **Pn 08 44 32.5 -1.3**
MMAI Mount Meron Ar 14.53 115 Pn **Pn 08 44 32.3 -1.5**
comp=Z,3.1nm,0.3s,baz=315,slow=12,SNR=13
MMAI LR LR 08 51 22.1
comp=Z,250nm,18.2s,baz=300,slow=42
GEM Giv'at Ha'Em 14.61 114 Pn **Pn 08 44 32.6 -2.2**
KSDI Kefar Szold 14.61 114 Pn **Pn 08 44 32.7 -2.1**
NATI Neve Ativ 14.63 113 Pn **Pn 08 44 33.6 -1.4**
BAIF Baives 14.65 317 *e*Pn **Pn 08 44 32.7 -2.6**
BRBR Barbar 14.70 112 *eP* **Pn 08 44 37.0 +0.8**
QASN Qassioun 14.87 112 *eP* **Pn 08 44 39.1 +0.7**
MMLI Mount Malkishu 14.88 117 Pn **Pn 08 44 36.1 -2.3**
MMLI Mount Malkishu 14.88 117 P Pn 08 44 29.7 -8.7
comp=Z,24nm,0.9s
NBNS Bani Suef 15.02 137 P **Pn 08 44 35.4 -5.0**
baz=143
HMDT Nahal Hemdat 15.06 117 Pn **Pn 08 44 37.9 -2.9**
TOTH TOTAH 15.06 112 *eP* **Pn 08 44 41.6 +0.6**
KZIT Kziot 15.16 123 Pn **Pn 08 44 38.3 -3.9**
KZIT Sn Sn 08 47 18.4 -11
SOC Sochi 15.29 71 *eP* **Pn 08 44 41.5 -2.4**
SOC *e* 08 47 35.6
SOC MLR MLR
comp=Z,115nm,14.0s
YTIR Yattir 15.33 120 Pn **Pn 08 44 42.1 -2.4**
DSI Dead Sea 15.37 119 Pn **Pn 08 44 40.5 -4.5**
ETSF Etsaut 15.37 287 *eP*n **Pn 08 44 42.4 -2.6**
MZDA Masada 15.52 120 Pn **Pn 08 44 44.1 -2.8**
LISJ El Lisan 15.64 120 P **Pn 08 44 43.8 -4.7**
IIGN Ignalina 15.74 14 *eP* **P 08 44 52.6 -0.9**
IIGN IAmb IAmb 08 44 53.6
comp=Z,22nm,1.0s
IDID Didziasalis 15.81 15 *eP* **P 08 44 52.6 -1.6**
IDID IAmb IAmb 08 44 54.1
comp=Z,20nm,1.0s
SJPF Ste Jean 15.87 287 *eP*n **Pn 08 44 49.7 -1.7**
ZFRI Zfri 15.89 123 Pn **Pn 08 44 48.5 -3.2**
KRMI Paran Flat 15.90 125 Pn **Pn 08 44 47.6 -4.2**
PRNI Paran 15.91 124 Pn **Pn 08 44 47.9 -4.2**
PRNI Sn Sn 08 47 36.3 -12
ISAL Salakas 15.93 13 *eP* **P 08 44 54.5 -1.1**
ISAL IAmb IAmb 08 44 55.8
comp=Z,20nm,0.9s
ASF Jabal al Asfar 16.05 115 Pn **Pn 08 44 53.4 -0.4**
comp=Z,0.3nm,0.3s,baz=262,slow=8.2,SNR=5.4
ASF Jabal al Asfar 16.05 115 P **Pn 08 44 48.6 -5.2**
comp=Z,8.7nm,0.9s
JDRJ Daraweish 16.09 121 P **Pn 08 44 52.1 -2.4**
IZAR Zarasai 16.13 13 *eP* **P 08 44 57.0 -0.7**
IZAR IAmb IAmb 08 44 58.0
comp=Z,18nm,0.7s
HRFI Mount Harif 16.15 124 Pn **Pn 08 44 50.6 -4.5**
HRFI Mount Harif 16.15 124 P **Pn 08 44 50.8 -4.3**
MBRI Mt Berech 16.24 125 Pn **Pn 08 44 52.4 -3.9**
MBRI Sn **Sn 08 47 45.1 -11**
EIL Elat 16.35 125 Pn **Pn 08 44 54.4 -3.2**
comp=Z,0.4nm,0.3s,baz=352,slow=14,SNR=7.0
EIL Elat 16.35 125 Pn **Pn 08 44 53.1 -4.5**
EIL Sn Sn 08 47 47.0 -11
AQBJ Aqaba 16.37 125 P **Pn 08 44 54.8 -3.0**
LDF La Druitiere 16.39 307 *eP*n **Pn 08 44 57.6 -0.4**
GRR Gorron 16.77 306 *eP*n **Pn 08 45 01.6 -1.2**
VORD Divnogorie 17.37 45 *eP* **P 08 45 11.2 -0.3**
VORD pmax pmax
comp=Z,30nm,0.8s
VSR Storozhevoye 17.43 44 *eP* **Pn 08 45 11.4 +0.3**
VSR pmax pmax
comp=Z,80nm,1.7s
NEY Neytrino 17.46 73⇑ *eP* **P 08 45 14.4 +1.6**
KIV Kislovodsk 17.47 70 *eP* **P 08 45 13.4 +0.6**
KIV pmax pmax
comp=Z,36nm,1.1s
KBZ Khabaz 17.61 71 P **P 08 45 14.9 +0.8**
comp=Z,0.8nm,0.3s,baz=281,slow=8.6,SNR=20
KBZ Khabaz 17.61 71 *eP* **P 08 45 15.0 +0.8**
SGMF Saint Gilles 17.79 304 *eP*n **Pn 08 45 15.2 -0.3**
GOF Gofitskoye 17.84 67⇑ *eP* **P 08 45 16.7 0.0**
GOF pmax pmax
comp=Z,51nm,0.7s
AKH Akhalkalaki 18.06 79 *eP*n **P 08 45 20.7 +1.3**
comp=Z,16nm,1.1s
AKH Akhalkalaki 18.06 79 *eP* **P 08 45 20.7 +1.3**
AKH pmax pmax
comp=Z,16nm,1.1s
LPSR Galich'ya Gora 18.08 40 *eP* **Pn 08 45 17.9 -1.1**
LPSR pmax pmax
comp=Z,20nm,0.6s
NCK Nalchik 18.10 72⇓ *eP* **P 08 45 21.7 +2.0**
NCK pmax pmax
comp=Z,27nm,0.6s
ESDC Sonseca Array 18.12 276 P **P 08 45 20.5 +0.5**
comp=Z,0.6nm,0.3s,baz=75,slow=11,SNR=24
ZEI Tsey 18.31 74 *eP* **P 08 45 22.8 +0.6**
ZEI pmax pmax
comp=Z,10.0nm,0.6s
PAB San Pablo 18.44 276 *eP* **P 08 45 23.3 -0.2**
comp=Z,15nm,1.0s
PAB San Pablo 18.44 276 *eP* **P 08 45 23.3 -0.2**
PAB pmax pmax
comp=Z,15nm,1.0s
OBN Obninsk 18.66 31 P **P 08 45 24.4 -1.3**
comp=Z,1.6nm,0.3s,baz=242,slow=20,SNR=6.2
OBN Obninsk 18.66 31 *eP* **P 08 45 24.4 -1.3**
comp=Z,31nm,0.6s
OBN Obninsk 18.66 31 *eP* **P 08 45 24.6 -1.1**
OBN pmax pmax
comp=Z,34nm,0.8s
OBN MLR MLR
comp=Z,127nm,14.0s
VSU Vasula 18.80 12⇓ *eP* **P 08 45 26.8 -0.4**
VSU pmax pmax
comp=Z,129nm,0.7s
VSU Vasula 18.80 12 *eP* **P 08 45 26.7 -0.4**
VSU IAmb IAmb 08 45 28.8
comp=Z,142nm,0.8s
GNI Garni 19.14 82 P **Pn 08 45 32.3 +0.1**
comp=Z,4.0nm,0.3s,baz=333,slow=2.3,SNR=16
GNI Garni 19.14 82 *eP* **Pn 08 45 33.0 +0.7**
comp=Z,50nm,0.8s
GNI Garni 19.14 82 *c i P* **Pn 08 45 32.5 +0.3**

GNI pmax pmax
comp=Z,166nm,0.9s
MOS Moscow 19.53 31 *e*P **P 08 45 32.9 -2.3**
MOS pmax pmax
comp=Z,80nm,0.9s
PBRG Braganca 19.97 283 *e*P **Pn 08 45 41.3 -0.7**
MVO Moncorvo 20.24 281 *e*P **P 08 45 43.7 +0.5**
HFS Hagfors 20.27 351 P **P 08 45 42.3 -0.9**
comp=Z,8.9nm,0.4s,baz=163,slow=11,SNR=29
HFS LR LR 08 55 13.4
comp=Z,91nm,21.3s,baz=172,slow=42
OSL Oslo 20.51 347 *e*P **P 08 45 44.9 -0.9**
MTE Manteigas 20.73 279 *i* LQ LQ 08 45 52.9
PCBR Castelo Branco 20.77 278 *e*P **P 08 45 47.7 -1.1**
PMRV Marv??o 20.77 277 *e*P **P 08 45 49.4 +0.5**
POLO Lamas de Olo 20.79 282 *e*P **P 08 45 49.8 +0.6**
MDT Midelt 20.83 257 P **P 08 45 49.4 -0.2**
comp=Z,2.6nm,0.6s,baz=70,slow=15,SNR=7.4
MDT LR LR 08 53 05.8
comp=Z,140nm,20.8s,baz=69,slow=34
BLS5 Blasjo 20.94 341 *e*P **P 08 45 51.3 +0.7**
PVIS Viseu 20.95 280 *e*P **P 08 45 50.1 -0.7**
MAK Makhachkala 20.96 73 *e*P **P 08 45 47.6 -3.2**
MAK *e*S **S 08 49 39.5 -3.8**
MAK pmax pmax
comp=Z,41nm,0.3s
MAK MLR MLR
comp=Z,103nm,14.0s
PGAV Gavieira, Arco 21.09 284 *i* LQ LQ 08 46 00.5
NC602 NORSAR Array S 21.14 349 *e*P **P 08 45 51.8 -0.8**
comp=Z,28nm,0.8s
NC602 NORSAR Array S 21.14 349 *e*P **P 08 45 51.7 -0.9**
AKT Akhty 21.23 77 *e*P **P 08 45 54.5 +0.6**
AKT *e* 08 46 13.4
AKT pmax pmax
comp=Z,10.0nm,0.5s
NAO01 NORSAR Array S 21.34 348 *e*P **P 08 45 54.0 -0.8**
comp=Z,134nm,1.4s
EKA Eskdalemuir Ar 21.38 323 P **P 08 45 55.4 +0.1**
comp=Z,7.5nm,0.8s,baz=114,slow=12,SNR=11
PBEJ Beja 21.44 273 *e*P **P 08 45 56.2 +0.1**
NB201 NORSAR Array S 21.47 349 *e*P **P 08 45 55.8 -0.5**
comp=Z,32nm,0.8s
NB2 NORSAR Subarra 21.48 349 P **P 08 45 54.9 -1.4**
comp=Z,12nm,0.9s,baz=162,slow=11
NB2 NORSAR Subarra 21.48 349 P **P 08 45 54.9 -1.4**
baz=162,slow=11
NB200 NORSAR Array S 21.48 349 *e*P **P 08 45 55.3 -1.1**
NOA NORSAR Array B 21.48 349 P **P 08 45 55.3 -1.1**
comp=Z,9.0nm,0.7s,baz=164,slow=10,SNR=24
NOA LR LR 08 56 29.2
comp=Z,90nm,18.2s,baz=170,slow=43
PMTG Montargil 21.48 276 *e*P **P 08 45 55.9 -0.6**
PVAQ Vaqueiros 21.49 271 *e*P **P 08 45 56.3 -0.4**
PCAS Casmilo, Conde 21.50 279 *i* LQ LQ 08 46 01.6
PTOM Tomar 21.51 277 *e*P **P 08 45 57.5 +0.7**
NBO00 NORSAR Array S 21.54 348 *e*P **P 08 45 56.5 -0.4**
comp=Z,62nm,0.9s
FIA0 FINESS Array S 21.60 8 *e*P **P 08 45 55.6 -1.9**
FINES FINESS Array B 21.60 8 P **P 08 45 55.6 -1.9**
comp=Z,9.3nm,0.5s,baz=174,slow=10,SNR=52
FINES PcP **PcP 08 49 57.9 -0.8**
comp=Z,1.3nm,0.6s,baz=196,slow=3.4,SNR=3.4
FINES LR LR 08 55 43.3
comp=Z,209nm,18.3s,baz=218,slow=41
FIA1 FINESS Array S 21.60 8 *e*P **P 08 45 55.1 -2.5**
comp=Z,25nm,1.0s
SKAR Skarslia 21.65 345 *e*P **P 08 45 54.1 -4.1**
PCVE Castro Verde 21.68 272 *e*P **P 08 45 58.9 +0.3**
PBDV Barranco-do-Ve 21.70 271 *e*P **P 08 45 59.1 +0.2**
PNCL Nicolau / Gran 21.93 274 *e*P **P 08 46 01.8 +0.5**
BER Bergen 22.06 341 *e*P **P 08 46 05.6 +3.1**
ASK Askoy 22.18 341 *e*P **P 08 46 01.8 -2.0**
HYA Hoyanger 22.54 343 *e*P **P 08 46 07.8 +0.2**
DOMB Dombas 22.77 347 *e*P **P 08 46 11.2 +1.0**
AKN Aaknes 23.28 345 *e*P **P 08 46 17.9 +2.6**
TBLU Trondheim 23.73 349 *e*P **P 08 46 20.5 +0.8**
KLMR Klimovskoe 24.01 24 *e*P **P 08 46 19.8 -2.5**
KLMR pmax pmax
comp=Z,33nm,0.7s
KLMR Klimovskoe 24.01 24 *e*P **P 08 46 19.8 -2.5**
KLMR AMP 08 46 22.6
comp=Z,33nm,0.7s
NSS Namsos 24.75 352 *e*P **P 08 46 27.9 -1.1**
KIRV Kirov 26.34 36 P **P 08 46 41.2 -2.3**
comp=Z,22nm,0.6s,baz=217,slow=6.0,SNR=7.5
KIRV LR LR 08 58 17.7
comp=Z,365nm,18.1s,baz=174,slow=39
PRGR Permogore 26.62 28 *e*P **P 08 46 44.0 -2.1**
PRGR *e* 08 47 24.5
PRGR pmax pmax
comp=Z,24nm,0.7s
RAYN Ar Rayn 27.40 120 *e*P **P 08 46 54.0 +0.5**
comp=Z,12nm,1.4s
RAYN Ar Rayn 27.40 120 *e*P **P 08 46 54.0 +0.5**
RAYN pmax pmax
comp=Z,12nm,1.4s
APA Apatity 28.42 11⇓ *i*P P 08 46 56.3 -5.8
APA pmax pmax
comp=Z,1.0nm,0.6s
APA MLR MLR
comp=Z,100nm,15.0s
AKTO Aktyubinsk 28.53 56 P **P 08 47 02.4 -0.9**
comp=Z,11nm,0.4s,baz=256,slow=7.4,SNR=52
AKTO LR LR 09 00 14.5
comp=Z,125nm,20.3s,baz=259,slow=40
TRO Tromso 29.47 359 *e*P **P 08 47 09.0 -2.3**
ARA0 ARCESS Array S 29.53 4 *e*P **P 08 47 10.3 -1.6**
ARCES ARCESS Array B 29.53 4 P **P 08 47 10.3 -1.6**
comp=Z,6.1nm,0.3s,baz=185,slow=8.5,SNR=21
AB31 Akbulak array 29.69 59 *e*P **P 08 47 12.7 -0.9**
AB31 pmax pmax
comp=Z,2.0nm,0.5s
ABKAR Akbulak array 29.69 59 *e*P **P 08 47 12.3 -1.3**
comp=Z,7.6nm,1.2s
GEYT Alibeck 29.78 82 P **P 08 47 14.7 +0.1**
comp=Z,3.5nm,0.5s,baz=268,slow=8.9,SNR=8.8
GEYT LR LR 09 01 52.8
comp=Z,61nm,20.8s,baz=295,slow=42
ARU Arti 30.01 44 P **P 08 47 15.2 -1.1**
comp=Z,1.8nm,0.4s,baz=226,slow=7.9,SNR=7.5
ARU LR LR 09 00 07.9
comp=Z,118nm,18.4s,baz=149,slow=38
ARU Arti 30.01 44 *e*P **P 08 47 14.9 -1.4**
comp=Z,9.4nm,1.0s
ARU Arti 30.01 44*c i*P **P 08 47 15.4 -0.9**
ARU 08 48 10.8
ARU S **S 08 52 15.5 +2.5**
ARU pmax pmax
comp=Z,10.0nm,1.0s
ARU MLR MLR
comp=Z,115nm,14.0s
SVE Sverdlovsk 31.22 44⇓ *e*P **P 08 47 26.7 -0.3**
SVE pmax pmax
comp=Z,25nm,0.9s
TOA1 Torodi Ar. Sit 31.26 215 *e*P **P 08 47 28.1 +0.4**
TORD Torodi Ar. Bea 31.27 215 P **P 08 47 28.1 +0.3**
comp=Z,2.4nm,1.0s,baz=17,slow=10,SNR=11
JMIC Jan Mayen 34.00 344 P **P 08 47 50.2 -1.0**
comp=Z,33nm,0.4s,baz=170,slow=7.1,SNR=1.5
BRVK Borovoye 36.28 52 *e*P **P 08 48 10.9 -0.1**
comp=Z,17nm,0.8s
BRVK Borovoye 36.28 52*c i*P **P 08 48 11.1 +0.1**
BRVK pmax pmax
comp=Z,17nm,0.8s
KK31 Karatay Array 37.62 69 *e*P **P 08 48 22.1 -0.5**
comp=Z,14nm,0.6s
KK31 Karatay Array 37.62 69 *i* P **P 08 48 21.7 -0.9**
KK31 pmax pmax
comp=Z,7.0nm,0.5s
KKAR Karatay Array 37.62 69 *e*P **P 08 48 22.1 -0.5**
comp=Z,14nm,0.6s
KKAR Karatay Array 37.62 69 *e*P **P 08 48 22.1 -0.5**
KKAR pmax pmax
comp=Z,14nm,0.6s
OTUK Ortayu 37.92 60 P **P 08 48 24.7 -0.4**
OTUK pmax pmax
comp=Z,10.0nm,0.8s
SPA0 Spitsbergen Ar 38.08 359 *e*P **P 08 48 25.8 -0.3**
comp=Z,8.9nm,1.0s
SPITS Spitsbergen Ar 38.08 359 P **P 08 48 25.8 -0.3**
comp=Z,1.7nm,0.5s,baz=152,slow=13,SNR=6.0
GAR Garm 38.60 75 *e*P **P 08 48 30.7 -0.3**
comp=Z,40nm,1.2s
BTK Batken 38.65 73 *e*P **P 08 48 30.2 -1.2**
comp=Z,17nm,0.8s
BTK Batken 38.65 73 *e*P **P 08 48 30.2 -1.2**
BTK pmax pmax
comp=Z,17nm,0.8s
KBS Kingsbay 38.93 358⇑ *e*P **P 08 48 32.6 -0.6**
KBS pmax pmax
comp=Z,52nm,2.5s
ARSB Arslanbob 39.85 70 *e*P **P 08 48 41.1 -0.4**
comp=Z,27nm,0.8s
DBIC Dimbokro 40.00 220 P **P 08 48 43.1 +0.4**
comp=Z,1.8nm,0.3s,baz=18,slow=8.7,SNR=4.9
DBIC LR LR 09 07 18.0
comp=Z,108nm,18.3s,baz=20,slow=39
DBIC Dimbokro 40.00 220 *e*P **P 08 48 43.1 +0.4**
comp=Z,30nm,1.4s
DBIC Dimbokro 40.00 220 *e*P **P 08 48 43.1 +0.4**
DBIC pmax pmax
comp=Z,30nm,1.4s
EKS2 Erkin-Say 40.05 68 P **P 08 48 43.4 +0.3**
SNR=28
TIC Toumodi 40.10 220 *e*PKIKP **P 08 48 47.0 +3.4**
KIC Kosan Boka 40.21 220 *e*PKIKP **P 08 48 46.8 +2.3**
comp=Z,130nm,1.8s
LIC Lamto 40.47 220 *e*PKIKP **P 08 48 46.9 +0.3**
comp=Z,118nm,1.7s
AAK Ala-Archa 40.57 68 P **P 08 48 47.5 +0.1**
comp=Z,10nm,0.6s,baz=241,slow=4.4,SNR=22
AAK Ala-Archa 40.57 68 P **P 08 48 47.7 +0.3**
SNR=8.5
AAK Ala-Archa 40.57 68 *e*P **P 08 48 47.4 -0.1**
comp=Z,10.0nm,0.7s
UCH Uchtor 40.70 69 P **P 08 48 48.9 0.0**
SNR=14
KBK Karagaybulak 40.88 68 P **P 08 48 50.4 +0.4**
SNR=5.9
KZA Kyzart 41.26 69 P **P 08 48 54.0 +0.6**
SNR=27
KURK Kurchatov 41.61 55 *e*P **P 08 48 54.9 -0.8**
comp=Z,8.2nm,1.3s
KURK Kurchatov 41.61 55⇑ *e*P **P 08 48 54.8 -0.8**
KURK pmax pmax
comp=Z,5.0nm,1.0s
ULHL Ulahol 41.92 68 P **P 08 48 58.7 +0.1**
SNR=7.3
KSH Kashi 42.59 72 P **P 08 49 01.4 -2.5**
KSH sP pP 08 49 08.8 -1.9
KSH PcP **PcP 08 50 51.5 -4.5**
KSH S **S 08 55 23.0 -2.6**
KSH SS **SS 08 58 26.0 -9.5**
KSH pmax pmax
comp=Z,18nm,0.7s
KSH pmax pmax
comp=Z,200nm,4.0s
KSH LR LR
comp=Z,240nm,10.6s
KSH LR LR
comp=Z,240nm,10.6s
KSH LR LR
comp=Z,180nm,10.3s
NVS Novosibirsk 43.78 48 *i* P **P 08 49 14.5 +1.3**
PDGK Podgornoye 43.88 66 P **P 08 49 13.2 -1.2**
PDGK pmax pmax
comp=Z,11nm,0.7s
MK31 Makanchi Array 44.82 60 *e*P **P 08 49 20.9 -0.8**
MK31 pmax pmax
comp=Z,6.0nm,0.5s
MK32 Makanchi Array 44.82 60 *e*P **P 08 49 21.1 -0.5**
MK32 *e*PcP **PcP 08 51 02.9 -0.4**
MKAR Makanchi Array 44.82 60 P **P 08 49 21.1 -0.5**
comp=Z,12nm,0.5s,baz=282,slow=7.1,SNR=42
MKAR PcP **PcP 08 51 02.9 -0.4**
comp=Z,1.3nm,0.5s,baz=275,slow=4.2,SNR=2.4
MKAR LR LR 09 12 22.3
comp=Z,81nm,18.7s,baz=294,slow=42
ZAA1 Zalesovo Array 44.84 50 *e*P **P 08 49 20.9 -0.8**
ZALV Zalesovo Beam 44.84 50 P **P 08 49 20.9 -0.8**
comp=Z,9.3nm,0.5s,baz=277,slow=8.3,SNR=18
NRIK Noril'sk 45.27 28 P **P 08 49 24.6 -0.3**
comp=Z,4.0nm,0.5s,baz=174,slow=9.9,SNR=4.1
DGZ Jazzator, Alta 47.36 55⇑ *e*P **P 08 49 42.2 +0.4**
DGZ pmax pmax
comp=Z,2.0nm,0.6s
WMQ Urumqi 49.36 62 *e*P **P 08 50 00.9 +3.7**
WMQ pP sP 08 50 05.4 -1.4
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ pmax pmax
comp=Z,120nm,5.7s
WMQ LR LR
comp=Z,100nm,24.5s
WMQ LR LR
comp=Z,190nm,27.7s
PYUN Piuthan 52.76 83 *e*P **P 08 50 21.7 -1.5**
comp=Z,25nm,0.6s
DANN Dangsing 53.22 82 *e*P **P 08 50 26.2 -0.4**
comp=Z,42nm,0.8s
KOLN Koldanda 53.40 83 *e*P **P 08 50 26.1 -1.7**
comp=Z,11nm,0.5s
PKIN Phulchoki 54.86 82 *e*P **P 08 50 37.6 -1.0**
comp=Z,11nm,0.7s
PKI Pulchoki 54.87 82 *e*P **P 08 50 37.3 -1.4**
comp=Z,4.5nm,0.3s
GUN Gumba 55.05 81 *e*P **P 08 50 39.5 -0.6**
comp=Z,31nm,0.9s
JIRN Jiri 55.41 81 *e*P **P 08 50 41.8 -0.9**
comp=Z,22nm,0.4s
TLY Talaya 56.39 48*de*P **P 08 50 50.4 +1.4**
SCHQ Schefferville 56.51 316 LR LR 09 13 58.4
comp=Z,54nm,18.6s,baz=212,slow=35
TIXI Tiksi 57.96 21⇑ *e*P **P 08 51 02.0 +2.3**
TIXI pmax pmax
comp=Z,2.0nm,0.7s
GTA Gaotai 59.45 62 *e*P **P 08 51 07.3 -3.4**
GTA pP pP 08 51 11.9 -5.6
GTA sP sP 08 51 14.5 -5.8
GTA pmax pmax
comp=Z,5.0nm,0.8s
SONA0 Songino Array 59.68 51 *e*P **P 08 51 11.9 -0.3**
SONM Songino Array 59.68 51 P **P 08 51 11.9 -0.3**
comp=Z,2.1nm,0.3s,baz=269,slow=8.9,SNR=10
SONM LR LR 09 18 48.0
comp=Z,86nm,18.3s,baz=267,slow=38
ULN Ulaanbaatar 60.05 51⇑ *e*P **P 08 51 15.8 +1.0**
ULN pmax pmax
comp=Z,3.0nm,1.0s
LZH Lanzhou 63.88 64 *e*P **P 08 51 42.5 +1.8**
LZH pP pP 08 51 46.5 -1.1
LZH sP sP 08 51 49.6 -0.8
LZH pmax pmax
comp=Z,19nm,1.0s
HHC Hu-ho-hao-te 66.42 56 *e*P **P 08 52 00.5 +3.4**
HHC pmax pmax
comp=Z,13nm,0.9s
CD2 Chengdu 66.63 69 *e*P **P 08 51 59.0 +0.5**
CD2 pmax pmax
comp=Z,20nm,0.5s
BOSA Boshof 68.69 175 P **P 08 52 12.2 +0.9**
comp=Z,2.3nm,0.5s,baz=0.8,slow=8.7,SNR=8.5
BILL Bilibino 69.16 13 *e*P **P 08 52 13.8 +0.1**
BILL *e* 08 52 33.2
BILL *e*PPP PPP 08 56 32.5
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,115nm,20.0s
SEY Seymchan 70.46 21⇑ *e*P **P 08 52 21.9 +0.2**
YKW3 Yellowknife Ar 71.18 339 *e*P **P 08 52 25.9 -0.2**
comp=Z,4.3nm,0.8s
YKA Yellowknife Ar 71.24 339 P **P 08 52 26.3 -0.1**
comp=Z,1.8nm,0.6s,baz=37,slow=5.4,SNR=19
YKB5 Yellowknife Ar 71.24 339 *e*P **P 08 52 26.3 -0.1**
EPYK Eagle Plains 72.18 350 *e*P **P 08 52 32.4 +0.2**
comp=Z,3.7nm,0.8s
COLD Coldfoot 72.59 356 *e*P **P 08 52 35.3 +0.8**
comp=Z,5.3nm,1.0s
MA2 Magadan 72.68 24 *e*P **P 08 52 35.7 +0.5**
comp=Z,8.0nm,0.8s
MA2 Magadan 72.68 24 *e*P **P 08 52 35.7 +0.5**
MA2 pmax pmax
comp=Z,8.0nm,0.8s
KLR Kul'dur 72.71 40⇑ *e*P **P 08 52 35.5 -0.1**
KLR pmax pmax
comp=Z,3.0nm,0.7s
CN2 Changchun 72.96 47 *e*P **P 08 52 36.8 -0.4**
FFC Flin Flon 73.08 329 *e*P **P 08 52 37.8 +0.2**
comp=Z,2.1nm,0.8s
FFC Flin Flon 73.08 329 *e*P **P 08 52 37.8 +0.2**
FFC pmax pmax
comp=Z,2.0nm,0.8s
ULM Lac du Bonnet 73.66 323 P **P 08 52 40.4 -0.8**
comp=Z,4.2nm,0.5s,baz=87,slow=4.8,SNR=3.7
WHN Wuhan 74.25 63 P **P 08 52 48.9 +4.0**
DAWY Dawson 74.73 351 *e*P **P 08 52 47.8 +0.5**
comp=Z,4.4nm,0.6s
ILAR Eielson Array 74.80 354 P **P 08 52 47.9 +0.3**
comp=Z,1.1nm,0.6s,baz=360,slow=4.0,SNR=22
ILB Eielson Array 74.80 354 *e*P **P 08 52 47.9 +0.3**
comp=Z,2.9nm,0.9s
HDA Harding Lake 75.16 354 *e*P **P 08 52 49.7 0.0**
comp=Z,4.8nm,0.8s
SCRK Sand Creek 75.33 353 *e*P **P 08 52 52.0 +1.2**
comp=Z,2.6nm,1.1s
DOT Dot Lake 75.65 353 *e*P **P 08 52 53.1 +0.6**
comp=Z,4.3nm,1.0s
USRK Ussuriysk Ar. 76.24 43 P **P 08 52 55.7 -0.4**
comp=Z,2.1nm,0.6s,baz=268,slow=7.4,SNR=5.1
NJ2 Nanjing 76.35 60 *e*P **P 08 52 56.6 -0.4**
NJ2 pmax pmax
comp=Z,13nm,0.5s
SKT Skwentna 77.89 356 *e*P **P 08 53 03.8 -1.3**
comp=Z,5.2nm,1.0s
T47A Sharon Grove 77.97 308 *e*P **P 08 53 05.6 -0.4**
comp=Z,13nm,1.3s
KS15 Wonju Array Si 78.52 50 *e*P **P 08 53 08.4 -0.6**
comp=Z,8.7nm,0.7s
KSRS Korea Array 78.54 50 P **P 08 53 09.2 +0.1**
comp=Z,8.4nm,0.6s,baz=314,slow=5.0,SNR=53
ECSD EROS Data Cent 78.61 318 *e*P **P 08 53 09.4 0.0**
comp=Z,4.5nm,1.1s
RC01 Rabbit Creek A 78.66 355 *e*P **P 08 53 09.4 0.0**
comp=Z,8.9nm,0.5s
YSS Yuzh-Sakhalins 79.49 36 *e*P **P 08 53 14.7 +0.5**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS MLR MLR
comp=Z,300nm,15.0s
X48A Hartselle 79.61 306 *e*P **P 08 53 18.5 +3.4**
comp=Z,18nm,1.4s
EGMT Eagleton 81.34 328 *e*P **P 08 53 25.3 +1.0**
comp=Z,6.4nm,0.8s
WHAR Wooly Hollow 82.19 310 *e*P **P 08 53 30.6 +1.8**
comp=Z,12nm,1.2s
MIAR Mount Ida 83.47 310 *e*P **P 08 53 37.0 +1.5**
comp=Z,9.1nm,1.3s
MIAR Mount Ida 83.47 310 *e*P **P 08 53 37.0 +1.5**
MIAR pmax pmax
comp=Z,9.0nm,1.3s
BDFB Brasilia 83.82 244 P **P 08 53 39.6 +2.0**
comp=Z,3.9nm,0.9s,baz=348,slow=5.2,SNR=3.7
BOZ Bozeman (W) 84.07 328 *e*P **P 08 53 38.3 -0.3**
comp=Z,5.1nm,1.3s
BOZ Bozeman (W) 84.07 328 *e*P **P 08 53 38.3 -0.3**
BOZ pmax pmax
comp=Z,5.0nm,1.3s
K22A Casper 84.22 323 *e*P **P 08 53 39.8 +0.4**
comp=Z,5.7nm,0.9s
DLMT Dillon 84.65 328 *e*P **P 08 53 43.0 +1.4**
comp=Z,6.5nm,1.2s
C09A Chrisman Ranch 84.72 333 *e*P **P 08 53 43.0 +1.3**
comp=Z,5.8nm,0.9s
PHWY Pilot Hill 84.77 322 *e*P **P 08 53 43.5 +1.0**
comp=Z,3.6nm,0.8s
YPP Pitchstone Pla 84.80 327 *e*P **P 08 53 44.8 +2.3**
comp=Z,6.3nm,1.2s
MAJO Matsushiro 85.02 45 *e*P **P 08 53 42.9 -0.4**
MAJO Matsushiro 85.02 45⇑ *e*P **P 08 53 43.8 +0.4**
MAJO pmax pmax
comp=Z,7.0nm,1.3s
MJAR Matsushiro Arr 85.02 45 P **P 08 53 42.9 -0.4**
comp=Z,5.5nm,0.9s,baz=314,slow=4.8,SNR=12
MJAR LR LR 09 35 14.7
comp=Z,19nm,19.3s,baz=235,slow=38
IMW Indian Meadow 85.16 327 *e*P **P 08 53 46.3 +2.0**
comp=Z,6.1nm,1.5s
PD31 Pinedale Array 85.48 325 *e*P **P 08 53 45.9 0.0**
comp=Z,1.4nm,1.1s
PDAR Pinedale Array 85.48 325 P **P 08 53 45.9 0.0**
comp=Z,0.4nm,0.5s,baz=78,slow=6.7,SNR=8.3
F10A Beach Ranch, E 85.91 331 *e*P **P 08 53 48.0 +0.2**
comp=Z,6.2nm,1.2s
WMOK Wichita Mounta 86.30 313 *e*P **P 08 53 50.6 +0.8**
comp=Z,6.1nm,1.0s
WMOK Wichita Mounta 86.30 313 *e*P **P 08 53 50.6 +0.8**
WMOK pmax pmax
comp=Z,6.0nm,1.0s
BMO Blue Mountains 86.90 331 *e*P **P 08 53 52.7 +0.1**
comp=Z,4.1nm,1.1s
BMO Blue Mountains 86.90 331 *e*P **P 08 53 52.7 +0.1**
BMO pmax pmax
comp=Z,4.0nm,1.1s
PV09 Paradox Valley 88.72 322 *e*P **P 08 54 02.1 +0.4**
PV11 David Mesa, Pa 88.75 322 *e*P **P 08 54 02.1 +0.4**
comp=Z,6.3nm,0.9s
PV16 Nyswonger Mesa 88.76 322 *e*P **P 08 54 01.6 -0.2**
comp=Z,10nm,1.3s
PV14 Lion Creek, Pa 88.76 322 *e*P **P 08 54 02.2 +0.3**
comp=Z,5.0nm,1.0s
SRU San Rafael Swe 88.86 324 *e*P **P 08 54 02.1 -0.2**
comp=Z,3.4nm,0.9s
SRU San Rafael Swe 88.86 324 *e*P **P 08 54 02.1 -0.2**
SRU pmax pmax
comp=Z,3.0nm,0.9s
MTPU Mount Pierson 90.49 324 *e*P **P 08 54 10.7 +0.6**
comp=Z,3.2nm,1.1s
NV01 Mina Array Sit 92.78 328 *e*P **P 08 54 20.4 0.0**
NVAR Mina Array Bea 92.78 328 P **P 08 54 20.4 0.0**
comp=Z,0.3nm,0.7s,baz=45,slow=6.5,SNR=2.5
TX31 Lajitas Ar. Si 93.08 313 *e*P **P 08 54 22.7 +0.8**
comp=Z,3.6nm,0.9s
TXAR Lajitas Array 93.08 313 P **P 08 54 22.6 +0.7**
comp=Z,1.8nm,0.8s,baz=68,slow=4.1,SNR=24
CPUP Villa Florida 97.43 242 LR LR 09 39 36.2
comp=Z,47nm,18.0s,baz=113,slow=36
LPAZ La Paz 98.69 256 LR LR 09 38 34.1
comp=Z,21nm,20.6s,baz=136,slow=35
AS31 Alice Springs 123.02 94 *e*PKPpre PKPpre 08 59 55.0
QSPA South Pole Qui 130.09 180 *e*PKPdf **PKPdf 09 00 16.9 +0.3**
DZM Mont Dzumac 146.55 67 *e*PKPbc **PKPab 09 00 50.8 +0.3**
DCZ Deep Cove 155.70 113 *e*PKPdf **PKPdf 09 00 58.5 -2.6**

ISK ***22*** *08:50:10.1, 34°.13N×24°.82E, h8km, ML4.1/14*
IDC ***22*** *08:50:11.4±0.6, 34°.34N×24°.99E, h0km, mb4.4/24, mb1 4.5/33, mb1mx4.3/54, mbtmp4.4/33, ML4.6/7, MS3.3/13, Ms1 3.4/13, ms1mx3.0/50, Error ellipse: s-maj=12.7km s-min=11.4km az=135.0*
NSSC ***22*** *08:50:11.2±1.2, 35°.61N×25°.32E, h5km±999km, ML3.5*
MOS ***22*** *08:50:14.2±1.3, 34°.37N×25°.00E, h25km, mb4.7/24, Error ellipse: s-maj=6.7km s-min=3.8km az=83.0*
HLW ***22*** *08:50:14.9, 34°.33N×25°.13E, h9km±12km, Md3.5, Ml4.2*
ISCJB ***22*** *08:50:15.5±0.3, 34°.25N±0°.02×25°.11E±0°.02, h40km±2km, mb4.5/73, MS3.2/8, Error ellipse: s-maj=3.4km s-min=2.2km az=35.1*
THE ***22*** *08:50:16.1, 34°.36N×24°.99E, h0km, ML4.0/9, Error ellipse: s-maj=1.5km s-min=0.5km az=175.0*
NEIC ***22*** *08:50:17.1±0.0, 34°.44N×25°.01E, h31km, mb4.4/55, ML4.0(ATH), ML4.0(THE), After ATH.*
ATH ***22*** *08:50:17.1, 34°.44N×25°.01E, h31km±1km, ML4.0/12, Error ellipse: s-maj=2.4km s-min=1.2km az=355.0*
DDA ***22*** *08:50:20.3, 34°.10N×24°.92E, h8km, ML3.9*
GII ***22*** *08:50:23.2±0.0, 34°.00N×25°.76E, h15km±1km, mb4.4/4, MD4.2/4*

ISC 22 08:50:14.7±0.4, 34°.28N±0°.04×25°.04E±0°.02, h20km±3km, n421, σ2°.05/475, mb4.6/73, MS3.2/8, 20C-11D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.76**	**346**	P	**Pb**	**08 50 29.5**	**+0.3**
SIVA				S	**Sb**	**08 50 39.8**	**+0.7**
SIVA	**Sivas**	**0.76**	**346**	P	**Pb**	**08 50 29.8**	**+0.5**
SIVA				S	**Sb**	**08 50 38.2**	**-0.9**
SIVA				AML	AML	08 50 44.5	
SIVA				AML	AML	08 50 48.9	
	comp=N,76612μm,0.8s						
TMBK	**Timbaki Herakl**	**0.82**	**344**	P	**Pn**	**08 50 31.0**	**-0.1**
TMBK				S	**Sn**	**08 50 42.3**	**-0.3**
LAST	**Lasithi**	**0.95**	**22**	P	**Pn**	**08 50 33.2**	**+0.2**
LAST				S	**Sn**	**08 50 48.0**	**+2.0**
LAST	**Lasithi**	**0.95**	**22**	P	**Pn**	**08 50 33.2**	**+0.2**

LAST S Sb 08 50 44.8 0.0
LAST AML AML 08 50 57.7
comp=N,6989µm,0.8s
LAST AML AML 08 50 58.8
comp=E,12397µm,0.7s
GVD Gavdhos 0.96 306 *e*Pn Pn 08 50 33.4 +0.4
GVD *e*Sn Sn 08 50 46.8 +0.7
GVD Gavdhos 0.96 306 P Pn 08 50 33.4 +0.4
GVD S Sn 08 50 46.8 +0.7
GVD Gavdhos 0.96 306 P Pn 08 50 33.4 +0.4
GVD S Sn 08 50 47.1 +1.0
GVD AML AML 08 50 52.5
comp=E,33472µm,0.4s
GVD AML AML 08 50 56.8
comp=N,41041µm,0.5s
GVDS Gavdos 0.96 306 P Pn 08 50 33.7 +0.6
GVDS S Sn 08 50 48.1 +1.9
IDI Anoyia 1.01 353 Pn Pb 08 50 33.4 -0.2
comp=N,155nm,0.3s,baz=179,slow=18,SNR=84
IDI Sn Sn 08 50 47.6 +0.1
comp=N,228nm,0.3s,baz=145,slow=18,SNR=10.0
IDI Anoyia 1.01 353 P Pn 08 50 34.0 +0.2
IDI S Sb 08 50 46.0 -0.6
IDI AML AML 08 50 55.3
comp=N,7661µm,0.6s
IDI AML AML 08 51 03.0
comp=E,10757µm,0.7s
KSTL Kastelli Herak 1.02 1 P Pb 08 50 33.5 -0.2
KSTL S Sn 08 50 47.5 -0.1
IACM Heraklion 1.02 1 P Pn 08 50 34.7 +0.8
IACM S Sn 08 50 48.6 +1.0
IACM Heraklion 1.02 1 P Pn 08 50 35.5 +1.6
IACM S Sb 08 50 46.8 0.0
NPS Neapolis 1.09 26 P Pb 08 50 35.5 +0.7
NPS S Sn 08 50 51.8 +2.5
NPS Neapolis 1.09 26 P Pb 08 50 35.6 +0.7
NPS S Sn 08 50 49.3 0.0
NPS AML AML 08 51 00.9
comp=E,8071µm,0.7s
NPS AML AML 08 51 11.0
comp=N,7360µm,0.7s
PRNS Prines Rethymn 1.17 338 P Pb 08 50 36.8 +0.6
PRNS S Sn 08 50 52.8 +1.6
STIA Sitia Lasithi 1.26 43 P Pb 08 50 39.2 +1.4
STIA S Sb 08 50 56.8 +3.2
ZKR Zakros 1.28 49 *e*Pn Pb 08 50 39.1 +1.0
ZKR *e*Pn Pb 08 50 39.1 +1.0
ZKR *e*Sn Sb 08 50 58.1 +4.0
ZKR *e*Sn Sb 08 50 58.1 +4.0
ZKR Zakros 1.28 49 P Pb 08 50 39.1 +1.0
ZKR S Sb 08 50 58.1 +4.0
ZKR Zakros 1.28 49 P Pb 08 50 39.3 +1.2
ZKR S Sb 08 50 56.5 +2.4
ZKR AML AML 08 51 04.2
comp=E,7827µm,0.8s
ZKR AML AML 08 51 06.6
comp=N,3698µm,0.6s
VAM Vamos 1.32 329 P Pb 08 50 39.2 +0.4
VAM S Sb 08 50 57.0 +1.8
VAM Vamos 1.32 329 P Pb 08 50 39.3 +0.6
VAM S Sb 08 50 55.6 +0.3
VAM AML AML 08 51 07.8
comp=N,14367µm,0.6s
VAM AML AML 08 51 07.9
comp=E,18830µm,0.6s
IMMV Iera Moni Meta 1.46 324 P Pb 08 50 41.6 +0.4
IMMV S Sb 08 51 01.0 +1.6
IMMV Iera Moni Meta 1.46 324 P Pb 08 50 42.0 +0.8
IMMV S Sn 08 50 58.7 +0.2
CHAN Chania 1.48 327 P Pb 08 50 42.2 +0.6
CHAN S Sb 08 51 00.7 +0.8
THR9 Santorini-Faro 2.09 7 P Pn 08 50 49.8 +1.3
THR9 Santorini-Faro 2.09 7 P Pn 08 50 49.9 +1.3
SANT Santorini 2.11 9 *e*Pn Pn 08 50 49.4 +0.5
SANT Santorini 2.11 9 ⇑*i*P Pn 08 50 48.5 -0.4
SANT Santorini 2.11 9 S Sb 08 51 22.5 +4.3
SANT Santorini 2.11 9 P Pn 08 50 49.9 +1.0
ANKY Antikythira Is 2.13 319 *e*Pn Pb 08 50 51.2 -1.4
ANKY *e*Sn Sn 08 51 16.6 +1.7
ANKY Antikythira Is 2.13 319 P Pb 08 50 51.2 -1.4
ANKY S Sn 08 51 16.6 +1.7
ANKY Antikythira Is 2.13 319 P Pb 08 50 51.1 -1.4
ANKY AML AML 08 51 42.7
comp=N,2571µm,1.2s
ANKY AML AML 08 51 46.2
comp=E,6244µm,0.9s
THR5 Thira Island, 2.15 7 P Pn 08 50 50.6 +1.3
KARP Karpathos 2.15 53 *e*Pn Pb 08 50 52.9 -0.1
KARP Karpathos 2.15 53 P Pb 08 50 52.7 -0.3
KARP Karpathos 2.15 53 P Pb 08 50 53.2 +0.2
ANAF Anafi Island 2.16 16 P Pn 08 50 50.0 +0.5
ANAF AML AML 08 51 33.6
comp=E,7014µm,0.5s
ANAF AML AML 08 51 37.0
comp=N,5100µm,0.4s
SAP3 Santorini-Thir 2.17 7 P Pn 08 50 51.4 +1.8
THR2 Thira island, 2.19 8 *e*Pn Pn 08 50 51.3 +1.4
THR2 Thira island, 2.19 8 P Pn 08 50 51.3 +1.4
IOSP Ios island 2.45 5 P Pn 08 50 54.6 +1.1
IOSP Ios island 2.45 5 P Pn 08 50 54.6 +1.1
MHLO Agia Marina, M 2.46 348 P Pn 08 50 54.9 +1.3
MHLO Agia Marina, M 2.46 348 P Pn 08 50 54.2 +0.6
MHLO AML AML 08 51 51.5
comp=E,9209µm,0.6s
MHLO AML AML 08 51 52.3
comp=N,12130µm,0.7s
MHLA Plaka, Milos I 2.51 349 P Pn 08 50 55.0 +0.7
KYTH Kithira 2.56 321 *e*Pn Pn 08 50 57.2 +2.1
KYTH Kithira 2.56 321 P Pn 08 50 57.2 +2.1
KYTH Kithira 2.56 321 P Pn 08 50 57.2 +2.1
KYTH S Sn 08 51 26.8 +1.1
KYTH AML AML 08 51 47.7
comp=E,2894µm,0.8s
KYTH AML AML 08 51 56.1
comp=N,2731µm,0.8s
KTHR Kythira 2.58 320 P Pn 08 50 57.5 +2.1
AMGA Amorgos Island 2.64 15 P Pn 08 50 58.0 +1.9
AMGA Amorgos Island 2.64 15 P Pn 08 50 57.2 +1.0
SLUM Salum 2.79 177 P Pn 08 50 59.9 +1.8
baz=178
SLUM AMP 08 51 00.0
baz=178
SLUM S Sn 08 51 32.5 +1.4
baz=178
APE Apeiranthos 2.81 8 PN Pn 08 50 59.1 +0.6
APE SN Sn 08 51 34.9 +3.1
APE Apeiranthos 2.81 8 *e*Pn Pn 08 51 00.1 +1.6
APE Apeiranthos 2.81 8 P Pn 08 51 00.1 +1.6
APE Apeiranthos 2.81 8 ⇓*i*P Pn 08 50 59.2 +0.7
APE Apeiranthos 2.81 8 S Sb 08 51 39.6 +1.3
APE Apeiranthos 2.81 8 *e*P Pn 08 51 00.1 +1.6
APE Apeiranthos 2.81 8 P Pn 08 50 58.9 +0.4
VLI Veliai 2.98 325 *e*Pn Pn 08 51 01.6 +0.9
VLI Veliai 2.98 325 P Pn 08 51 01.6 +0.9
VLI Veliai 2.98 325 P Pn 08 51 02.3 +1.6
VLI S Sn 08 51 34.8 -1.0
VLI AML AML 08 52 08.2
comp=E,1140µm,0.7s
VLI AML AML 08 52 12.9
comp=N,1369µm,1.1s
ARG Arkhangelos 3.18 52 PN Pn 08 51 05.2 +1.7
ARG SN Sb 08 51 45.5 -3.3
ARG Arkhangelos 3.18 52 *e*Pn Pn 08 51 06.3 +2.8
ARG Arkhangelos 3.18 52 P Pn 08 51 06.3 +2.8
ARG Arkhangelos 3.18 52 *e*P Pn 08 51 06.3 +2.8
ARG Arkhangelos 3.18 52 P Pn 08 51 06.4 +2.9
DAT Datca 3.20 40 PN Pn 08 51 05.4 +1.4
DYR Agios Nikonas 3.32 319 P Pn 08 51 07.8 +2.3
BODT Bodrum 3.34 33 PN Pn 08 51 07.3 +1.6
BODT Bodrum 3.34 33 *e*Pn Pn 08 51 07.3 +1.6
BODT Bodrum 3.34 33 P Pn 08 51 07.3 +1.6
BDRM Kayabasi 3.40 34 *i*P Pn 08 51 08.8 +2.2
BDRM IAML_P
comp=Z,1µm,0.4s
BBRN Bozburun-Marma 3.44 45 PN Pn 08 51 08.8 +1.7
KRND KRANIDI 3.46 334 P Pn 08 51 07.9 +0.6
DID Didima 3.54 336 *e*Pn Pn 08 51 08.7 +0.2
DID Didima 3.54 336 P Pn 08 51 08.7 +0.2
EPID Epidavros 3.67 335 P Pn 08 51 11.7 +1.3
VLY Voula,Athens 3.71 345 P Pn 08 51 11.5 +0.7
SMG Samos 3.72 23 P Pn 08 51 12.2 +1.2
PYL PYLOS 3.75 315 P Pn 08 51 13.4 +2.1

ATHU Athens Univers 3.82 345 P Pn 08 51 13.2 +0.9
ITM Ithomi 3.84 320 *e*Pn Pn 08 51 13.6 +0.9
ITM Ithomi 3.84 320 P Pn 08 51 16.6 +3.9
ITM Ithomi 3.84 320 P Pn 08 51 15.2 +2.5
GCAM G?zelcaml? 3.85 27 PN Pn 08 51 14.7 +2.0
YER Yerkesik 3.88 42 *e*Pn Pn 08 51 15.7 +2.4
YER Yerkesik 3.88 42 P Pn 08 51 15.7 +2.4
YER Yerkesik 3.88 42 *e*P Pn 08 51 15.7 +2.4
DALY Dalyan (Mula) 3.88 48 PN Pn 08 51 15.3 +2.1
TURN Turunc 3.89 47 PN Pn 08 51 11.3 -2.0
TURN Turunc 3.89 47 *i*P Pn 08 51 11.4 -1.9
TURN *i*S Sn 08 51 50.4 -7.9
FETY Fethiye 4.05 53 PN Pn 08 51 17.6 +2.0
FETY Fethiye 4.05 53 *e*Pn Pn 08 51 17.1 +1.5
FETY Fethiye 4.05 53 P Pn 08 51 17.1 +1.5
AYDN Tasoluk 4.08 34 *i*P Pn 08 51 18.1 +2.0
KSL Kastellorizon 4.16 62 P Pn 08 51 18.6 +1.6
VIL2 Platees 4.18 340 P Pn 08 51 17.0 -0.3
CHOS Chios island 4.18 11 PN Pn 08 51 18.7 +1.3
CHOS Chios island 4.18 11 P Pn 08 51 18.5 +1.1
AKAS Kas 4.21 61 PN Pn 08 51 19.9 +2.0
AKAS Kas 4.21 61 *i*P Pn 08 51 19.4 +1.5
AKAS *i*S Sn 08 52 08.7 +2.2
AKAS IAML_P
comp=Z,700nm,0.1s
GUR Goura 4.25 330 *e*Pn Pn 08 51 20.0 +1.6
GUR Goura 4.25 330 P Pn 08 51 20.0 +1.6
URLA Izmir 4.26 17 PN Pn 08 51 20.1 +1.7
URLA Izmir 4.26 17 *i*P Pn 08 51 20.9 +2.5
URLA IAML_P
comp=Z,2µm,0.6s
BLCB Balcova 4.40 21 PN Pn 08 51 22.2 +1.8
KLV Kalavryta, Ach 4.42 329 P Pn 08 51 22.0 +1.3
KLV Kalavryta, Ach 4.42 329 P Pn 08 51 23.1 +2.4
DSF Desfina 4.59 335 P Pn 08 51 25.4 +2.4
ELL Elmali 4.67 57 PN Pn 08 51 26.4 +2.2
AKUM Antalya-Kumluc 4.79 63 *i*P Pn 08 51 28.0 +2.3
AKUM *i*S Sn 08 52 20.4 -0.2
EFP Efpalio 4.85 329 P Pn 08 51 28.9 +2.4
ZEDA zmir-Bergama 4.96 19 *i*P Pn 08 51 29.7 +1.8
ZEDA IAML_P
comp=Z,744nm,0.4s
ANX Ano Chora 4.98 331 P Pn 08 51 29.6 +1.2
SWA2 5.03 176 P Pn 08 51 30.8 +1.8
baz=176
SWA2 S Sn 08 52 26.4 -0.2
baz=176
MANT Manisa 5.07 33 *e*Pn Pn 08 51 31.8 +2.0
MANT Manisa 5.07 33 *i*P Pn 08 51 32.9 +3.1
MANT IAML_P
comp=Z,908nm,0.5s
AKHS Akhisar 5.10 25 *i*P Pn 08 51 32.1 +2.1
AKHS IAML_P
comp=Z,1µm,0.3s
KORT Korkueli 5.11 56 PN Pn 08 51 32.7 +2.5
KULA Kula-Manisa 5.14 34 PN Pn 08 51 32.9 +2.4
AGG Agios Georgios 5.21 336 *e*Pn Pn 08 51 33.0 +1.5
AGG Agios Georgios 5.21 336 *e*P Pn 08 51 33.0 +1.5
XOR Xorichti 5.29 344 P Pn 08 51 33.0 +0.5
KHAL Karahalli 5.44 40 *i*P Pn 08 51 36.0 +1.3
KHAL IAML_P
comp=Z,344nm,0.2s
USAK Uak-Merkez 5.46 35 *i*P Pn 08 51 37.4 +2.4
USAK IAML_P
comp=Z,3µm,0.5s
EZN Ezine 5.63 10 ⇑*i*P Pn 08 51 37.2 0.0
EZN Ezine 5.63 10 S Sn 08 52 49.5 +8.3
BALB Balikesir 5.81 22 *e*Pn Pn 08 51 42.1 +2.4
GDZ Gediz 5.98 35 *i*P Pn 08 51 44.3 +2.1
GDZ IAML_P
comp=Z,1.4nm,0.2s
LIT Litokhoron 6.16 341 *e*Pn Pn 08 51 44.9 +0.5
LIT Litokhoron 6.16 341 *e*P Pn 08 51 44.9 +0.5
LEF Lefka 6.52 80 ⇑*i*P Pn 08 51 42.5 -7.0
LEF Lefka 6.52 80 S Sn 08 53 01.6 -1.6
HMYD Mayadein 6.63 131 P Pn 08 51 52.5 +1.5
baz=131
HNAT Natroun 6.63 133 P Pn 08 51 52.5 +1.5
baz=133
ALN Alexandroupoli 6.65 7 *e*Pn Pn 08 51 50.0 -1.2
ALN Alexandroupoli 6.65 7 *e*P Pn 08 51 50.1 -1.2
CSS Mathiatis 6.87 82 *e*Pn Pn 08 51 53.6 -0.7
CSS *e*Sn Sn 08 53 08.5 -3.4
CSS Mathiatis 6.87 82 Pn Pn 08 51 56.2 +1.9
CSS Mathiatis 6.87 82 P Pn 08 51 53.4 -0.9
comp=Z,8.1nm,0.9s,comp=Z,0.0nm
GLL Jalalah 7.36 128 P Pn 08 52 02.2 +1.2
baz=128
PHSR Pinarhisar 7.60 14 ⇓*i*P Pn 08 52 04.3 +0.1
TIP Timpagrande 8.25 309 *e*Pn Pn 08 52 13.2 -0.1
TIP *e*Sn Sn 08 53 43.6 -2.3
TIP Timpagrande 8.25 309 ⇓*i*P Pn 08 52 08.5 -4.7
BR231 Keskin MP Arra 8.31 46 *e*Pn Pn 08 52 14.9 +0.8
ANTO Ankara 8.34 46 *e*Pn Pn 08 52 14.7 +0.3
ANTO Ankara 8.34 46 *e*P Pn 08 52 14.7 +0.3
VTS Vitosha 8.44 351 *e*Pn Pn 08 52 16.8 +0.8
VTS Vitosha 8.44 351 ⇑*i*P Pn 08 52 15.2 -0.8
VTS Vitosha 8.44 351 *e*P Pn 08 52 16.8 +0.8
OFRI `Ofer 8.47 98 Pn Pn 08 52 16.5 +0.2
KZIT Kziot 8.58 111 Pn Pn 08 52 17.9 +0.1
KZIT Sn Sn 08 53 47.0 -7.0
KZIT Kziot 8.58 111 P Pn 08 52 17.1 -0.7
comp=Z,39nm,0.7s
KZIT Kziot 8.58 111 P Sn 08 53 49.4 -4.6
SLTI Sal'it 8.62 101 Pn Pn 08 52 18.6 +0.3
SLTI Sn Sn 08 53 48.7 -6.2
MMA0B Mount Meron ar 8.73 95 Pn Pn 08 52 20.7 +0.8
MMAI Mount Meron Ar 8.73 95 Pn Pn 08 52 19.1 -0.8
comp=Z,4.8nm,0.3s,baz=267,slow=12,SNR=10.0
MMAI Sn Sn 08 53 52.9 -4.9
comp=Z,7.3nm,0.3s,baz=269,slow=22,SNR=8.6
AMAZ Amatzia 8.74 106 Pn Pn 08 52 20.4 +0.4
AMAZ Sn Sn 08 53 52.2 -5.8
AMAZ Amatzia 8.74 106 P Sn 08 53 54.2 -3.8
comp=Z,0.8nmcomp=Z,140nm,0.7s
WDD Wied Dalam 8.76 283 *e*Pn Pn 08 52 20.4 +0.2
BR131 Keskin Array S 8.76 49 *e*Pn Pn 08 52 21.6 +1.2
BRTR Keskin Array B 8.76 49 Pn Pn 08 52 20.9 +0.5
comp=Z,0.3nm,0.3s,baz=220,slow=18,SNR=9.0
BRTR LR LR 08 56 43.6
comp=Z,157nm,19.5s,baz=239,slow=45
BR101 Keskin Array S 8.77 49 *e*Pn Pn 08 52 20.9 +0.5
MMLI Mount Malkishu 8.88 99 Pn Pn 08 52 22.4 +0.6
MMLI Sn Sn 08 53 55.4 -5.9
MMLI Mount Malkishu 8.88 99 P Sn 08 53 54.1 -7.2
comp=Z,0.1nmcomp=Z,23nm,0.9s
KSDI Kefar Szold 8.91 94 Pn Pn 08 52 22.9 +0.6
GEM Giv'at Ha'Em 8.91 94 Pn Pn 08 52 23.5 +1.2
GEM Sn Sn 08 53 56.6 -5.5
YTIR Yattir 8.96 106 Pn Pn 08 52 23.5 +0.4
YTIR Sn Sn 08 53 57.9 -5.6
HMDT Nahal Hemdat 9.01 100 Pn Pn 08 52 24.6 +1.0
HMDT Sn Sn 08 53 59.6 -4.9
DSI Dead Sea 9.10 104 Pn Pn 08 52 25.9 +1.0
BRBR Barbar 9.12 92 *e*P Pn 08 52 23.5 -1.8
BRBR *e*S Sn 08 53 59.8 -7.6
BRBR AML AML 08 54 07.2
comp=E,35nm,0.5s
BRBR AML AML 08 54 07.9
comp=N,19nm,0.6s
MZDA Masada 9.18 106 Pn Pn 08 52 26.4 +0.5
MZDA Sn Sn 08 54 03.0 -5.6
VAE Valguarnera 9.20 293 Sn Sn 08 54 08.0 -1.1
comp=N,0.9nm,0.3s,baz=265,slow=22,SNR=1.5
KRMI Paran Flat 9.20 114 Pn Pn 08 52 27.5 +1.3
KRMI Sn Sn 08 54 02.1 -7.0
PRNI Paran 9.30 112 Pn Pn 08 52 28.3 +0.7
PRNI Sn Sn 08 54 04.8 -6.8
LISJ El Lisan 9.30 106 P Sn 08 54 08.8 -2.7
comp=N,0.1nmcomp=N,29nm,0.6s
PDG Podgorica 9.32 333 ⇑*i*P Pn 08 52 25.8 -2.0
TTG Podgorica 9.32 333 *e*Pn Pn 08 52 26.2 -1.6
TTG Podgorica 9.32 333 *e*P Pn 08 52 26.2 -1.6
ZFRI Zfri 9.34 111 Pn Pn 08 52 28.3 +0.2
ZFRI Sn Sn 08 54 06.0 -6.6
QASN Qassioun 9.37 91 *e*P Pn 08 52 28.1 -0.6
QASN *e*S Sn 08 54 04.6 -8.9
QASN AML AML 08 54 26.7
comp=E,36nm,0.4s
QASN AML AML 08 54 27.9
comp=N,86nm,0.6s
WALJ Wala 9.45 104 P Pn 08 52 29.4 -0.3

WALJ Wala 9.45 104 P Sn 08 54 12.1 -3.2
comp=N,0.3nmcomp=N,65nm,0.6s
HRFI Mount Harif 9.47 114 Pn Pn 08 52 30.4 +0.5
HRFI Sn Sn 08 54 09.5 -6.4
HRFI Mount Harif 9.47 114 P Pn 08 52 30.5 +0.5
comp=N,27nm,0.5s
HRFI Mount Harif 9.47 114 P Sn 08 54 14.8 -1.1
comp=N,45nm,0.6s
MBRI Mt Berech 9.50 115 Pn Pn 08 52 31.0 +0.6
MBRI Sn Sn 08 54 10.9 -5.7
TOTH TOTAH 9.52 92 *e*P Pn 08 52 29.2 -1.5
TOTH *e*S Sn 08 54 09.5 -7.7
TOTH AML AML 08 54 16.1
comp=N,25nm,0.8s
TOTH AML AML 08 54 24.6
comp=E,28nm,0.5s
EIL Elat 9.59 116 Pn Pn 08 52 31.9 +0.2
comp=E,2.8nm,0.3s,baz=340,slow=2.2,SNR=29
EIL Sn Sn 08 54 13.7 -5.0
comp=E,2.0nm,0.3s,baz=55,slow=23,SNR=2.5
EIL Elat 9.59 116 Pn Pn 08 52 31.8 +0.2
EIL Elat 9.59 116 P Pn 08 52 43.0 +11
EIL Elat 9.59 116 P Sn 08 54 19.8 +1.1
comp=E,25nm,0.7s
AQBJ Aqaba 9.63 115 P Pn 08 52 33.6 +1.4
comp=E,61nm,0.5s
ILGA Ilgaz 9.64 43 *e*Pn Pn 08 52 33.5 +1.1
JDRJ Daraweish 9.65 109 P Sn 08 54 17.2 -3.1
comp=E,54nm,0.4s
HSNJ Maan 9.87 111 P Sn 08 54 23.9 -1.8
comp=E,148nm,0.6s
ASF Jabal al Asfar 10.15 99 Pn Pn 08 52 39.8 +0.4
comp=E,0.4nm,0.3s,baz=259,slow=11,SNR=2.1
ASF Sn Sn 08 54 26.9 -5.7
comp=E,0.4nm,0.3s,baz=304,slow=8.7,SNR=3.6
ASF Jabal al Asfar 10.15 99 P Pn 08 52 40.7 +1.3
comp=E,6.9nm,0.8s
TIRR Tirgusor 10.49 13 *e*Pn Pn 08 52 44.7 +0.8
TIRR Tirgusor 10.49 13 *e*P Pn 08 52 44.7 +0.8
MDVR Moldovita 10.80 347 ⇑*i*P Pn 08 52 48.0 -0.1
VOIR 11.14 0 ⇑*i*P Pn 08 52 51.8 -1.1
MLR Muntele Rosu 11.22 3 Pn Pn 08 52 56.2 +2.3
comp=E,0.3nm,0.3s,baz=206,slow=7.3,SNR=3.5
MLR LR LR 08 57 56.2
comp=E,257nm,20.9s,baz=162,slow=42
MLR Muntele Rosu 11.22 3 *e*Pn Pn 08 52 56.8 +2.8
MLR Muntele Rosu 11.22 3 *e*P Pn 08 52 56.8 +2.8
GZR Gura Zlata 11.23 352 ⇑*i*P Pn 08 52 54.1 0.0
VRI Vrincioaia 11.64 6 ⇑*i*P Pn 08 52 58.6 -1.1
ANN Anapa 14.19 39 *e*P Pn 08 53 28.7 -5.7
ANN *e*S Sn 08 56 04.5 -6.6
ANN pmax pmax
comp=Z,61nm,1.1s
SOKA Soboth 14.52 332 *e*P P 08 53 46.4 +0.9
comp=Z,11nm,0.9s,SNR=5.8
KOLS Kolonicke sedl 14.79 353 *e*P P 08 53 45.9 -2.4
ARSA Arzberg 14.81 334 *i*P P 08 53 49.9 +1.2
comp=Z,6.2nm,0.6s
MODS Modra-Piesok 15.23 340 *e*P P 08 53 52.9 -0.4
MODS Modra-Piesok 15.23 340 *e*P P 08 53 52.9 -0.4
CONA Conrad Observa 15.27 336 *e*P P 08 53 54.5 +0.7
comp=Z,4.1nm,1.2s
KBA Koelnbreinsper 15.54 329 *e*P P 08 53 57.9 +1.1
comp=Z,16nm,1.1s,SNR=7.7
JAVC Velka Javorina 15.56 342 *e*PN P 08 53 57.1 +0.1
ABTA Abfaltersbach 15.65 326 *e*P P 08 53 59.7 +1.6
comp=Z,17nm,0.6s,SNR=10
MOA Molln 15.78 332 *e*P P 08 54 00.0 +0.6
comp=Z,12nm,0.7s,SNR=6.4
KRUC Moravsky 16.10 339 *e*PN Pn 08 54 01.3 +1.6
VRAC Vranov 16.27 340 Pn Pn 08 54 03.2 +1.4
comp=Z,1.3nm,0.3s,baz=137,slow=9.0,SNR=18
VRAC LR LR 09 01 57.3
comp=Z,99nm,19.2s,baz=176,slow=44
VRAC Vranov 16.27 340 *e*PN P 08 54 03.8 -1.0
NEY Neytrino 16.42 52 ⇑*e*P Pn 08 54 04.8 +0.8
NEY pmax pmax
comp=Z,4.0nm,0.9s
WTTA Wattenberg 16.44 326 *e*P P 08 54 09.0 +2.1
comp=Z,14nm,0.8s,SNR=6.2
MORC Moravsky Berou 16.44 343 *e*Pn Pn 08 54 03.1 -1.0
comp=Z,5.9nm,0.9s
MORC Moravsky Berou 16.44 343 *e*P Pn 08 54 03.1 -1.0
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 16.44 343 *e*PN Pn 08 54 05.3 +1.2
WATA Walderalm 16.52 326 *e*P P 08 54 10.3 +2.5
comp=Z,13nm,0.9s
SQTA Sankt Quirin 16.61 325 *e*P P 08 54 10.6 +1.9
comp=Z,9.0nm,0.8s
FUORN Ofenpass-Fuorn 16.65 322 *e*Pn P 08 54 09.8 +0.5
comp=Z,16nm,1.0s
AKASG Malin Array Be 16.69 9 Pn Pn 08 54 05.6 -1.6
comp=Z,5.1nm,0.3s,baz=201,slow=10,SNR=34
AKASG Sn Sn 08 57 11.7 -0.3
baz=142,slow=10,SNR=1.3
AKBB Malin Array Si 16.69 9 *e*Pn Pn 08 54 07.2 0.0
comp=Z,36nm,0.8s
AKBB *e*S S 08 57 24.8 +2.0
AKBB Malin Array Si 16.69 9 *e*P Pn 08 54 07.2 0.0
AKBB pmax pmax
comp=Z,36nm,0.8s
FETA Feichten 16.69 324 *i*P P 08 54 11.8 +2.1
comp=Z,10nm,0.8s
KIV Kislovodsk 16.73 50 *e*Pn Pn 08 54 08.8 +0.9
comp=Z,30nm,1.0s
KIV Kislovodsk 16.73 50 *e*P P 08 54 09.3 -0.7
KIV pmax pmax
comp=Z,73nm,1.1s
KIV MLR MLR
comp=Z,166nm,14.0s
KVAR Kislovodsk Arr 16.74 50 Pn P 08 54 10.3 +0.2
baz=89,slow=22,SNR=6.3
GNI Garni 16.74 64 LR LR 09 01 58.2
comp=Z,226nm,18.0s,baz=275,slow=42
GNI Garni 16.74 64 ⇑*e*P Pn 08 54 07.5 -0.6
GNI pmax pmax
comp=Z,14nm,0.6s
MOTA Moosalm 16.75 325 *e*P P 08 54 11.3 +1.0
comp=Z,7.0nm,0.7s
KBZ Khabaz 16.75 50 Pn P 08 54 10.5 +0.3
comp=Z,0.8nm,0.3s,baz=258,slow=7.6,SNR=23
GEC2 GERESS Array S 16.82 333 *e*Pn P 08 54 10.6 -0.4
comp=Z,23nm,0.7s
GERES GERESS Array B 16.82 333 Pn P 08 54 10.6 -0.4
comp=Z,2.0nm,0.3s,baz=146,slow=12,SNR=110
GERES LR LR 09 02 09.6
comp=Z,200nm,18.8s,baz=148,slow=43
DAVOX Davos/Dischmat 16.95 322 Pn P 08 54 12.6 0.0
comp=Z,0.4nm,0.3s,baz=144,slow=17,SNR=9.4
DAVOX LR LR 09 03 55.5
comp=Z,83nm,18.1s,baz=85,slow=49
ZEI Tsey 17.00 54 *e*P Pn 08 54 12.0 +0.6
ZEI pmax pmax
comp=Z,21nm,1.0s
RETA Reutte 17.01 325 *i*P P 08 54 14.5 +1.4
comp=Z,4.5nm,0.6s
TUE Stuetta 17.03 320 *e*Pn Pn 08 54 12.0 +0.3
comp=Z,6.1nm,0.9s
KHC Kasperske Hory 17.10 334 *e*Pn Pn 08 54 12.9 +0.5
comp=Z,4.7nm,1.0s
KHC Kasperske Hory 17.10 334 *e*P P 08 54 13.7 -0.3
KHC Kasperske Hory 17.10 334 *e*P P 08 54 13.7 -0.3
KHC *ex* x 08 54 34.5
NCK Nalchik 17.10 52 ⇑*e*P Pn 08 54 11.8 -0.6
NCK pmax pmax
comp=Z,16nm,0.4s
DPC Dobruska-Polom 17.28 341 *e*P Pn 08 54 14.6 -0.1
DPC Dobruska-Polom 17.28 341 *e*P Pn 08 54 14.6 -0.1
DAVA Damuels 17.30 323 *i*Pn P 08 54 17.2 +0.9
comp=Z,12nm,0.8s
GOPC GO Pecny, Ondr 17.35 337 *e*P P 08 54 16.2 -0.6
GOPC MLR MLR
comp=Z,1µm,22.8s
GOPC GO Pecny, Ondr 17.35 337 *e*P P 08 54 16.2 -0.6
PRU Pruhonice 17.49 337 *e*P P 08 54 18.0 -0.3
PRU Pruhonice 17.49 337 *e*P P 08 54 18.0 -0.3
SENIN Lac Senin/Sane 18.08 317 *e*Pn P 08 54 27.0 +1.9
comp=Z,6.7nm,1.0s
GRA1 Grafenberg Arr 18.46 331 *e*P P 08 54 28.9 -0.2
comp=Z,18nm,0.8s
GRF Grafenberg Arr 18.46 331 *e*P P 08 54 28.9 -0.2
GRF pmax pmax
comp=Z,18nm,0.8s
GRFO Grafenberg 18.46 331 *e*P P 08 54 28.6 -0.4
comp=Z,22nm,0.8s

GRFO Grafenberg 18.46 331 *e*P P 08 54 28.6 -0.4
GRFO pmax pmax
comp=Z,23nm,0.8s
STU Stuttgart 18.66 326 *e*P P 08 54 31.2 +0.1
comp=Z,12nm,0.6s
STU Stuttgart 18.66 326 *e*P P 08 54 31.3 +0.1
STU pmax pmax
comp=Z,12nm,0.6s
BFO Black Forest 18.77 323 *e*P P 08 54 32.4 -0.1
comp=Z,6.7nm,0.8s
BFO Black Forest 18.77 323 *e*P P 08 54 32.4 -0.1
BFO pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 19.13 336 *e*P P 08 54 35.6 -0.7
CLL *e*Pn **Pn 08 54 36.3 -1.0**
CLL Collm 19.13 336 *e*P P 08 54 35.0 -1.3
CLL *e*pP **pP 08 54 41.0 -0.3**
CLL Lm MLR 09 02 00.0
comp=Z,100nm,19.4s
CLL Collm 19.13 336 *e*P P 08 54 35.0 -1.3
SUW Suwalki 19.77 357 *e*P P 08 54 40.9 -2.4
comp=Z,85nm,0.8s
SUW Suwalki 19.77 357 *e*P P 08 54 40.9 -2.4
SUW pmax pmax
comp=Z,85nm,0.8s
VSR Storozhevoye 19.79 27 *e*P P 08 54 43.7 +0.1
VSR pmax pmax
comp=Z,8.0nm,0.6s
TAM Tamanrasset 20.57 241 *e*P Pn 08 54 55.2 +0.5
comp=Z,8.4nm,1.1s
TAM Tamanrasset 20.57 241 *e*P Pn 08 54 55.3 +0.5
TAM pmax pmax
comp=Z,8.0nm,1.1s
WLF Walferdange 20.73 324 P **P 08 54 54.9 +1.1**
RAYN Ar Rayn 20.84 116 *e*P Pn 08 54 59.1 +1.4
comp=Z,7.3nm,1.1s
RAYN Ar Rayn 20.84 116 *e*P Pn 08 54 59.1 +1.4
RAYN pmax pmax
comp=Z,7.0nm,1.1s
MEM Membach 21.43 325 P **P 08 55 01.9 +0.6**
comp=Z,19nm,0.8s
DOU Dourbes 21.78 323 ⇑P **P 08 54 58.9 -6.2**
OBN Obninsk 22.33 18 LR LR 09 04 31.4
comp=Z,25nm,18.7s,baz=176,slow=39
OBN Obninsk 22.33 18 *e*P P 08 55 10.6 -0.2
OBN *e* 08 55 36.2
OBN *e*PPP PPP 08 55 43.0
OBN *e* 08 59 04.1
OBN pmax pmax
comp=Z,19nm,0.9s
ESDC Sonseca Array 23.73 292 P **P 08 55 25.7 +0.2**
comp=Z,4.2nm,0.9s,baz=82,slow=9.2,SNR=16
VSU Vasula 24.22 2⇓*e*P P 08 55 30.7 +1.0
VSU pmax pmax
comp=Z,66nm,1.5s
MDT Midelt 24.71 275 P **P 08 55 35.4 +0.7**
comp=Z,1.6nm,0.6s,baz=92,slow=12,SNR=4.4
STRU Stroemstad 26.42 344 *e*P P 08 55 48.1 -1.5
HFS Hagfors 26.91 347 P **P 08 55 52.3 -1.9**
comp=Z,2.3nm,0.5s,baz=134,slow=8.5,SNR=12
HFS LR LR 09 07 20.3
comp=Z,72nm,20.8s,baz=137,slow=38
FIA0 FINESS Array S 27.19 1 *e*P P 08 55 55.1 -1.5
FIA0 *e*PcP **PcP 08 59 16.8 +0.4**
FIA0 FINESS Array S 27.19 1 *e*P P 08 55 55.1 -1.5
FIA0 *e* 08 59 16.8
FINES FINESS Array B 27.19 1 P **P 08 55 55.1 -1.5**
comp=Z,2.8nm,0.5s,baz=162,slow=11,SNR=17
FINES PcP **PcP 08 59 16.8 +0.4**
comp=Z,0.7nm,0.4s,baz=171,slow=2.9,SNR=6.5
FINES LR LR 09 07 05.3
comp=Z,73nm,20.8s,baz=224,slow=37
FIA1 FINESS Array S 27.19 1 *e*P P 08 55 55.2 -1.4
comp=Z,14nm,1.1s
NC602 NORSAR Array S 27.88 346 *e*P P 08 56 01.9 -0.9
BLS5 Blasjo 27.98 340 *e*P P 08 56 05.6 +1.8
NAO01 NORSAR Array S 28.11 345 *e*P P 08 56 04.2 -0.8
comp=Z,30nm,1.0s
NAO01 NORSAR Array S 28.11 345 *e*P P 08 56 04.0 -0.9
KLMR Klimovskoe 28.19 15 *e*P P 08 56 02.4 -3.1
KLMR pmax pmax
comp=Z,10.0nm,0.8s
KLMR Klimovskoe 28.19 15 *e*P P 08 56 02.5 -3.1
KLMR AMP 08 56 04.9
comp=Z,10.0nm,0.8s
NB201 NORSAR Array S 28.22 346 *e*P P 08 56 04.7 -1.2
NB2 NORSAR Subarra 28.22 346 P **P 08 56 04.8 -1.1**
comp=Z,6.0nm,1.1s,baz=156,slow=9.3
NB2 NORSAR Subarra 28.22 346 P **P 08 56 04.8 -1.1**
baz=156,slow=9.3
NB200 NORSAR Array S 28.22 346 *e*P P 08 56 04.9 -1.0
NOA NORSAR Array B 28.22 346 P **P 08 56 04.9 -1.0**
comp=Z,3.6nm,1.0s,baz=179,slow=16,SNR=9.9
NOA LR LR 09 09 20.8
comp=Z,38nm,18.4s,baz=155,slow=41
NC303 NORSAR Array S 28.36 346 *e*P P 08 56 06.3 -0.9
NC204 NORSAR Array S 28.53 346 *e*P P 08 56 05.9 -2.8
EKA Eskdalemuir Ar 28.70 326 P **P 08 56 09.6 -0.6**
comp=Z,4.6nm,0.8s,baz=128,slow=8.7,SNR=9.1
AKTO Aktyubinsk 28.93 46 P **P 08 56 12.1 -0.2**
comp=Z,2.7nm,0.7s,baz=228,slow=9.3,SNR=10
KIRV Kirov 29.23 26 LR LR 09 09 02.7
comp=Z,64nm,19.4s,baz=179,slow=39
DOMB Dombas 29.58 345 *e*P P 08 56 17.4 -0.6
ABKAR Akbulak array 29.72 49 *e*P P 08 56 19.3 0.0
comp=Z,5.3nm,1.5s
TOA1 Torodi Ar. Sit 29.85 231 *e*P P 08 56 20.1 -0.7
TOA0 Torodi Ar. Sit 29.85 231 *e*P P 08 56 22.0 +1.2
comp=Z,14nm,0.6s
TORD Torodi Ar. Bea 29.85 231 P **P 08 56 20.1 -0.7**
comp=Z,9.4nm,0.4s,baz=33,slow=8.0,SNR=92
AKN Aaknes 30.17 343 *e*P P 08 56 22.5 -0.7
PRGR Permogore 30.37 19 *e*P P 08 56 21.0 -3.9
PRGR pmax pmax
comp=Z,8.0nm,0.6s
ARU Arti 31.82 36 P **P 08 56 36.2 -1.6**
comp=Z,1.2nm,0.3s,baz=233,slow=6.0,SNR=8.2
ARU Arti 31.82 36 *e*P P 08 56 36.7 -1.1
comp=Z,6.7nm,0.7s
ARU Arti 31.82 36 *e*P P 08 56 36.3 -1.5
ARU 08 57 38.8
ARU S **S 09 01 46.8 -0.1**
APA Apatity 33.68 6⇑*i*P P 08 56 52.0 -1.9
APA pmax pmax
comp=Z,3.0nm,0.7s
APA MLR MLR
comp=Z,100nm,18.0s
LVZ Lovozero 34.11 6 *e*P P 08 56 56.3 -1.4
comp=Z,7.0nm,0.7s
LVZ Lovozero 34.11 6⇑*i*P P 08 56 56.5 -1.2
ARA0 ARCESS Array S 35.31 0 *e*P P 08 57 06.2 -1.7
ARCES ARCESS Array B 35.31 0 P **P 08 57 06.2 -1.7**
comp=Z,11nm,0.6s,baz=176,slow=8.5,SNR=21
ARCES LR LR 09 12 21.5
comp=Z,78nm,20.4s,baz=261,slow=38
ARE0 ARCESS Array S 35.31 0 *e*P P 08 57 06.9 -1.1
comp=Z,0.5nm,1.2s
KK31 Karatay Array 36.20 62 *e*P P 08 57 15.9 0.0
comp=Z,3.8nm,0.7s
KK31 Karatay Array 36.20 62 *e*P P 08 57 15.9 0.0
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 36.20 62 *e*P P 08 57 16.7 +0.8
comp=Z,3.8nm,0.7s
KKAR Karatay Array 36.20 62 *e*P P 08 57 16.7 +0.8
KKAR pmax pmax
comp=Z,4.0nm,0.7s
GAR Garm 36.35 69 *e*P P 08 57 19.2 +1.8
comp=Z,6.0nm,0.6s
GAR Garm 36.35 69 *e*P P 08 57 19.2 +1.8
GAR pmax pmax
comp=Z,6.0nm,0.6s
BRVK Borovoye 36.97 45 *e*P P 08 57 21.8 -0.6
comp=Z,5.0nm,1.1s
BRVK Borovoye 36.97 45⇓*e*P P 08 57 23.0 +0.6
BRVK pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 37.04 159 LR LR 09 15 09.3
comp=Z,51nm,19.5s,baz=84,slow=40
ARSB Arslanbob 38.13 65 *e*P P 08 57 34.3 +1.7
comp=Z,5.7nm,0.9s
DBIC Dimbokro 38.94 232 P **P 08 57 39.2 -0.2**
comp=Z,6.6nm,1.0s,baz=29,slow=9.2,SNR=7.0
DBIC Dimbokro 38.94 232 *e*P P 08 57 39.9 +0.5
comp=Z,31nm,1.5s
DBIC Dimbokro 38.94 232 *e*P P 08 57 39.9 +0.5
DBIC pmax pmax
comp=Z,31nm,1.5s
TIC Toumodi 39.07 232 *e*P P 08 57 44.2 +3.7
KIC Kosan Boka 39.10 232 *e*P P 08 57 41.3 +0.6
comp=Z,58nm,1.2s
AAK Ala-Archa 39.14 63 P **P 08 57 41.3 +0.3**
comp=Z,3.6nm,0.8s,baz=235,slow=6.1,SNR=5.6
AAK Ala-Archa 39.14 63 *e*P P 08 57 40.8 -0.2
comp=Z,3.7nm,0.7s
AAK Ala-Archa 39.14 63 *ce*P P 08 57 42.2 +1.2
AAK pmax pmax
comp=Z,3.0nm,0.8s
LIC Lamto 39.39 232 *e*P P 08 57 43.6 +0.5
comp=Z,84nm,1.5s
KSH Kashi 40.62 67 *e*P P 08 57 52.0 -1.4
KURK Kurchatov 41.81 50 *e*P P 08 58 02.8 0.0
comp=Z,8.6nm,0.7s
KURK Kurchatov 41.81 50 *ce*P P 08 58 03.2 +0.4
KURK pmax pmax
comp=Z,9.0nm,0.8s
MAKZ Makanchi 44.13 56 *e*P P 08 58 22.7 +1.1
comp=Z,3.0nm,0.5s
MAKZ Makanchi 44.13 56 *e*P P 08 58 22.7 +1.1
MAKZ pmax pmax
comp=Z,3.0nm,0.5s
SPA0 Spitsbergen Ar 44.16 357 *e*P P 08 58 20.8 -0.7
comp=Z,17nm,1.0s
MK31 Makanchi Array 44.35 56 *e*P P 08 58 24.1 +0.7
comp=Z,5.1nm,0.6s
MK31 Makanchi Array 44.35 56 *e*P P 08 58 24.1 +0.7
MK31 pmax pmax
comp=Z,5.0nm,0.6s
MK32 Makanchi Array 44.35 56 *e*P P 08 58 24.2 +0.8
MKAR Makanchi Array 44.35 56 P **P 08 58 24.2 +0.8**
comp=Z,5.4nm,0.5s,baz=275,slow=6.9,SNR=52
NVS Novosibirsk 44.78 44 *i*P P 08 58 27.6 +0.9
KBS Kingsbay 45.09 356 *e*P P 08 58 28.9 0.0
comp=Z,13nm,0.7s
KBS Kingsbay 45.09 356 *de*P P 08 58 28.6 -0.2
KBS pmax pmax
comp=Z,27nm,0.7s
ZAA0 Zalesovo Array 45.69 46 *e*P P 08 58 33.7 -0.2
comp=Z,13nm,0.5s
ZAA1 Zalesovo Array 45.69 46 *e*P P 08 58 33.7 -0.2
ZALV Zalesovo Beam 45.69 46 P **P 08 58 33.7 -0.2**
comp=Z,14nm,0.4s,baz=267,slow=8.8,SNR=51
DAG Danmarks Havn 46.88 347⇑*i*P P 08 58 42.6 -0.4
DAG pmax pmax
comp=Z,4.0nm,0.7s
DAG Danmarks Havn 46.88 347⇑*i*P P 08 58 42.6 -0.4
comp=Z,5.3nm,0.7s
DGZ Jazzator, Alta 47.50 51 *de*P P 08 58 49.4 +1.0
DGZ pmax pmax
comp=Z,4.0nm,0.6s
WMQ Urumqi 48.54 59 *e*P P 08 58 58.9 +2.5
PYUN Piuthan 49.39 81 *e*P P 08 59 03.1 -0.2
comp=Z,34nm,1.0s
SUMG Summit 49.76 339 *e*P P 08 59 06.6 +0.8
comp=Z,3.3nm,0.6s
SUMG Summit 49.76 339 *i*P P 08 59 06.0 +0.3
SUMG pmax pmax
comp=Z,8.0nm,0.7s
SUMG Summit 49.76 339 *i*P P 08 59 06.0 +0.3
comp=Z,7.5nm,0.7s
DANN Dangsing 49.93 80 *e*P P 08 59 09.0 +1.5
comp=Z,49nm,0.6s
KOLN Koldanda 50.02 81 *e*P P 08 59 03.0 -5.1
comp=Z,16nm,0.8s
PKIN Phulchoki 51.56 80 *e*P P 08 59 12.7 -7.1
comp=Z,11nm,0.7s
GUN Gumba 51.82 79 *e*P P 08 59 18.7 -3.1
comp=Z,12nm,0.6s
ODAN Odare 53.47 80 *e*P P 08 59 20.0 -14
comp=Z,873nm,0.7s
TLY Talaya 57.28 47⇓*e*P P 09 00 02.9 +2.2
ZAK Zakamensk 57.40 48 *e*P P 09 00 02.6 +0.9
ZAK pmax pmax
comp=Z,6.0nm,0.9s
LBTB Lobatse 58.97 179 *e*P P 09 00 15.6 +2.8
comp=Z,20nm,1.4s
LBTB Lobatse 58.97 179 *e*P P 09 00 15.6 +2.8
LBTB pmax pmax
comp=Z,20nm,1.4s
SONA0 Songino Array 60.12 50 *e*P P 09 00 21.4 +0.7
SONM Songino Array 60.12 50 P **P 09 00 21.4 +0.7**
comp=Z,3.2nm,0.7s,baz=285,slow=10,SNR=9.0
ULN Ulaanbaatar 60.53 50 *e*P P 09 00 23.4 -0.1
comp=Z,3.9nm,0.6s
ULN Ulaanbaatar 60.53 50⇓*e*P P 09 00 23.7 +0.2
ULN pmax pmax
comp=Z,6.0nm,1.1s
TIXI Tiksi 62.02 20⇓*e*P P 09 00 35.8 +2.8
TIXI pmax pmax
comp=Z,2.0nm,0.8s
BOSA Boshof 62.55 180 P **P 09 00 38.4 +1.2**
comp=Z,2.1nm,0.5s,baz=0.2,slow=7.5,SNR=5.2
BOSA Boshof 62.55 180 *e*P P 09 00 39.1 +1.9
comp=Z,25nm,1.5s
SCHQ Schefferville 63.79 320 *e*P P 09 00 45.4 +0.2
comp=Z,5.2nm,0.7s
CD2 Chengdu 64.80 69 *e*P P 09 00 50.5 -1.7
HHC Hu-ho-hao-te 66.21 56 *e*P P 09 01 01.3 +0.1
HHC pmax pmax
comp=Z,9.0nm,1.1s
HHC pmax pmax
comp=Z,43nm,4.6s
BATG Bathurst New B 66.44 312 *e*P P 09 01 03.4 +1.0
comp=Z,5.1nm,0.7s
RCBR Riachuelo 69.90 248 *e*P P 09 01 26.7 +2.1
comp=Z,24nm,1.1s
RCBR Riachuelo 69.90 248 *e*P P 09 01 26.7 +2.1
RCBR pmax pmax
comp=Z,24nm,1.1s
TRQ Mont Tremblant 72.08 314 *e*P P 09 01 38.6 +1.1
D53A Lac Vacive, Po 73.47 316 *e*P P 09 01 46.9 +1.3
comp=Z,8.6nm,1.3s
BILL Bilibino 73.94 14 *e*P P 09 01 46.3 -1.7
BILL *e* 09 02 01.2
BILL pmax pmax
comp=Z,1.0nm,1.1s
PLVO Plevna 74.21 314 *e*P P 09 01 51.9 +1.9
comp=Z,11nm,1.4s
SEY Semchan 74.41 22⇑*e*P P 09 01 51.7 +0.9
KLR Kul'dur 74.50 41⇓*e*P P 09 01 52.2 +0.6
KLR pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 76.47 352 P **P 09 02 00.7 -1.8**
comp=Z,1.0nm,0.6s,baz=27,slow=2.3,SNR=2.4
USA0B Ussuriysk Arra 77.53 45 *e*P P 09 02 09.7 +0.7
comp=Z,6.3nm,0.6s
USRK Ussuriysk Ar. 77.53 45 P **P 09 02 08.7 -0.2**
comp=Z,6.3nm,0.6s,baz=301,slow=5.7,SNR=13
N55A Marion Center 77.74 311 *e*P P 09 02 11.4 +1.2
comp=Z,6.1nm,1.0s
YKA Yellowknife Ar 78.25 342 P **P 09 02 11.8 -0.8**
comp=Z,0.4nm,0.5s,baz=33,slow=5.2,SNR=4.3
YKB5 Yellowknife Ar 78.25 342 *e*P P 09 02 11.8 -0.8
KSRS Korea Array 78.90 52 P **P 09 02 17.2 +0.6**
comp=Z,2.6nm,0.7s,baz=303,slow=4.7,SNR=14
FFC Flin Flon 80.36 332 *e*P P 09 02 24.7 +0.4
comp=Z,1.6nm,0.9s
FFC Flin Flon 80.36 332 *e*P P 09 02 24.7 +0.4
FFC pmax pmax
comp=Z,2.0nm,0.9s
ILAR Eielson Array 81.07 357 P **P 09 02 28.4 +0.5**
comp=Z,0.8nm,0.9s,baz=354,slow=3.9,SNR=9.2
DAWY Dawson 81.21 353 *e*P P 09 02 29.2 +0.4
comp=Z,2.5nm,0.9s
CCB Clear Creek Bu 81.24 357 *e*P P 09 02 29.4 +0.6
comp=Z,2.3nm,0.8s
BPAW Bear Paw Mtn. 81.90 358 *e*P P 09 02 32.5 +0.2
comp=Z,3.1nm,0.8s
DOT Dot Lake 82.02 355 *e*P P 09 02 33.5 +0.6
comp=Z,2.6nm,1.1s
SKT Skwentna 84.04 358 *e*P P 09 02 43.3 -0.1
comp=Z,4.5nm,1.1s
BDFB Brasilia 85.28 248 P **P 09 02 48.8 -1.6**
comp=Z,1.6nm,0.4s,baz=154,slow=5.6,SNR=4.0
ECSD EROS Data Cent 85.92 322 *e*P P 09 02 53.7 +0.5
comp=Z,7.2nm,1.4s
MAJO Matsushiro 85.98 48 *e*P P 09 02 53.7 0.0
MAJO Matsushiro 85.98 48 *e*P P 09 02 53.7 0.0
MJAR Matsushiro Arr 85.99 48 P **P 09 02 53.7 0.0**
comp=Z,2.2nm,0.7s,baz=296,slow=7.2,SNR=7.6
PDAR Pinedale Array 92.80 328 P **P 09 03 25.3 -0.8**
comp=Z,0.3nm,0.7s,baz=270,slow=1.5,SNR=3.5
WR1 Warramunga Arr 116.59 97 *e*PKPdf PKPdf 09 08 57.4 -0.3
WRA Warramunga Arr 116.59 97 PKP **PKPdf 09 08 57.4 -0.3**
comp=Z,0.5nm,0.6s,baz=256,slow=2.4,SNR=1.0
ASAR Alice Springs 117.99 101 PKP **PKiKP 09 09 01.1 +0.8**
comp=Z,0.3nm,0.7s,baz=324,slow=1.5,SNR=2.3

IDC 22 08:55:00.2±2.7, 7°.12S×149°.23E, h94km±20km, mb3.4/3, mb1 3.7/5, mb1mx3.4/35, mbtmp3.8/5, MS3.6/1, Ms1 3.6/1, ms1mx2.6/19, Error ellipse: s-maj=88.7km s-min=18.6km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.06**	**222**	P	Pn	08 55 45.5	-1.1
	49nm,0.3s,baz=52,slow=6.1,SNR=106						
PMG				S	Sn	08 56 23.0	+0.6
	60nm,0.3s,baz=140,slow=19,SNR=16						
WRA	**Warramunga Arr**	**19.26**	**227**	P	P	08 59 18.1	+0.7
	0.5nm,0.3s,baz=52,slow=11,SNR=2.8						
WRA				S	S	09 02 50.6	-0.1
	0.1nm,0.3s,baz=51,slow=20,SNR=2.4						
ASAR	**Alice Springs**	**22.07**	**220**	P	P	08 59 48.6	+1.0
	0.9nm,0.4s,baz=56,slow=9.0,SNR=11						
FITZ	**Fitzroy Crossi**	**25.44**	**242**	P	P	09 00 19.4	-0.1
	3.7nm,0.6s,baz=70,slow=7.4,SNR=8.4						
KLR	**Kul'dur**	**58.16**	**347**	LR	LR	09 28 54.5	
	comp=Z,50nm,18.3s,baz=302,slow=35						
ILAR	**Eielson Array**	**85.65**	**23**	P	P	09 07 27.2	-0.9
	0.2nm,0.6s,baz=270,slow=4.3,SNR=1.9						
TORD	**Torodi Ar. Bea**	**147.50**	**283**	PKPbc	PKPbc	09 14 34.6	+0.1
	0.7nm,0.6s,baz=83,slow=3.7,SNR=7.7						

IDC 22 09:06:34.4±2.3, 6°.14S×129°.83E, h0km, mb3.7/1, mb1 4.1/4, mb1mx3.7/23, mbtmp3.9/4, ML3.9/3, Error ellipse: s-maj=98.3km s-min=28.8km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.57**	**199**	Pn	Pn	09 09 36.2	+1.6
	0.6nm,0.3s,baz=34,slow=9.4,SNR=24						
FITZ				Sn	Sn	09 11 46.9	-8.6
	0.3nm,0.3s,baz=342,slow=7.7,SNR=2.1						
WRA	**Warramunga Arr**	**14.40**	**163**	Pn	Pn	09 09 58.0	-1.7
	0.7nm,0.3s,baz=342,slow=14,SNR=4.8						
WRA				Sn	Sn	09 12 24.6	-16
ASAR	**Alice Springs**	**17.86**	**168**	P	Pn	09 10 44.4	-0.1
	0.4nm,0.3s,baz=343,slow=10.0,SNR=28						
MKAR	**Makanchi Array**	**67.42**	**327**	P	P	09 17 31.8	0.0
	0.4nm,0.4s,baz=124,slow=8.3,SNR=4.7						

IDC 22 09:19:25.5±3.0, 26°.65N×143°.86E, h0km, mb3.9/4, mb1 3.9/6, mb1mx3.6/42, mbtmp3.8/6, ML3.1/2, MS2.8/2, Ms1 2.8/2, ms1mx2.3/37, Error ellipse: s-maj=112.2km s-min=30.0km az=74.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**10.97**	**335**	Pn	Pn	09 22 02.3	-1.5
	0.1nm,0.3s,baz=163,slow=11,SNR=4.8						
GUMO	**Guam**	**13.03**	**176**	LR	LR	09 26 43.7	
	comp=Z,36nm,18.4s,baz=94,slow=34						
KSRS	**Korea Array**	**17.25**	**313**	P	P	09 23 28.7	-0.8
	0.1nm,0.3s,baz=124,slow=12,SNR=6.7						
DAV	**Davao City (W)**	**26.10**	**225**	LR	LR	09 33 35.2	
	comp=Z,18nm,19.4s,baz=338,slow=32						
WRA	**Warramunga Arr**	**47.22**	**192**	P	P	09 27 60.0	-0.4
	1.2nm,0.8s,baz=15,slow=6.9,SNR=1.3						
MKAR	**Makanchi Array**	**51.91**	**310**	P	P	09 28 36.0	+0.1
	0.7nm,0.4s,baz=92,slow=8.8,SNR=6.8						
KURBB	**Kurchatov Arra**	**54.42**	**315**	P	P	09 28 54.1	-0.3
	0.9nm,0.5s,baz=90,slow=8.2,SNR=10						
FINES	**FINESS Array B**	**79.00**	**334**	P	P	09 31 31.6	+0.5
	0.7nm,0.9s,baz=68,slow=5.0,SNR=0.8						

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*ISCJB **22** 09:51:59.2±0.5, 44°.10N±0°.02×10°.07E±0°.03, h1km±4km, Error ellipse: s-maj=4.2km s-min=3.3km az=12.5*
*ROM **22** 09:51:59.6±0.2, 44°.167N±0°.007×10°.16E±0°.01, h5km, ML2.4/13, Error ellipse: s-maj=1.0km s-min=0.4km az=49.0*
*GEN **22** 09:51:59.9, 44°.16N×10°.18E, h2km±2km, Ml2.2*
*LDG **22** 09:52:00.5±0.1, 44°.17N×10°.18E, h2km, Md2.6/2, Ml2.6/19, Error ellipse: s-maj=1.7km s-min=1.0km az=15.0*
ISC 22 09:51:59.5±0.9, 44°.16N±0°.03×10°.14E±0°.02, h8km±6km, n40, σ1§90/70, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T0912	**Minucciano (LU**	**0.06**	**77**	P	**Pg**	**09 52 01.2**	**-0.2**
T0912				S	**Sg**	**09 52 01.9**	**-0.8**
T0912				END			
T0912				END			
VLC	**Villacollemand**	**0.18**	**89**	P	**Pg**	**09 52 03.5**	**+0.2**
VLC				S	**Sg**	**09 52 06.2**	**+0.4**
VLC				AML	AML		
	comp=E,3565μm,0.4s						
VLC				AML	AML		
	comp=N,3770μm,0.1s						
VLC				AML	AML		
	comp=E,3640μm,0.1s						
VLC				AML	AML		
	comp=N,3970μm,0.1s						
VLC				AML	AML		
	comp=E,3565μm,0.4s						
VLC				AML	AML		
	comp=N,3770μm,0.1s						
VLC				AML	AML		
	comp=E,3640μm,0.1s						
VLC				AML	AML		
	comp=N,3970μm,0.1s						
VLC				AML	AML		
	comp=E,3565μm,0.4s						
VLC				AML	AML		
	comp=E,3640μm,0.1s						
VLC				AML	AML		
	comp=N,3770μm,0.1s						
VLC				AML	AML		
	comp=N,3970μm,0.1s						
VLC				AML	AML		
	comp=E,3640μm,0.1s						
VLC				AML	AML		
	comp=E,3565μm,0.4s						
VLC				AML	AML		
	comp=N,3770μm,0.1s						
VLC				AML	AML		
	comp=N,3970μm,0.1s						
VLC				END			
VLC				END			
SARO	**Sassorosso**	**0.19**	**82**	P	**Pg**	**09 52 03.6**	**+0.2**
SARO				S	**Sg**	**09 52 06.4**	**+0.1**
SARO	**Sassorosso**	**0.19**	**82**	P	**Pg**	**09 52 03.7**	**+0.2**
SARO				S	**Sg**	**09 52 06.4**	**+0.1**
SARO				AML	AML		
	comp=E,2725μm,0.4s						
SARO				AML	AML		
	comp=N,3480μm,0.4s						
SARO				AML	AML		
	comp=E,2725μm,0.4s						
SARO				AML	AML		
	comp=N,3480μm,0.4s						
SARO				AML	AML		
	comp=E,2725μm,0.4s						
SARO				AML	AML		
	comp=N,3480μm,0.4s						
SARO				AML	AML		
	comp=E,2725μm,0.4s						
SARO				AML	AML		
	comp=N,3480μm,0.4s						
SARO				END			
SARO				END			
CARD	**Cardoso**	**0.28**	**117**	P	**Pg**	**09 52 05.8**	**+0.7**
CARD				S	**Sg**	**09 52 09.4**	**+0.6**
CARD	**Cardoso**	**0.28**	**117**	P	**Pg**	**09 52 05.8**	**+0.7**
CARD				S	**Sg**	**09 52 09.4**	**+0.6**
CARD				AML	AML		
	comp=E,1885μm,0.2s						
CARD				AML	AML		
	comp=N,1660μm,0.9s						
CARD				AML	AML		
	comp=E,1885μm,0.2s						
CARD				AML	AML		
	comp=N,1665μm,0.9s						
CARD				AML	AML		

comp=N,1665μm,0.9s
CARD AML AML
comp=E,1885μm,0.2s
CARD AML AML
comp=N,1665μm,0.9s
CARD AML AML
comp=E,1885μm,0.2s
ERBM Eremo 0.33 37 P Pb 09 52 06.7 -0.9
ERBM S Sb 09 52 11.8 -1.4
ERBM AML AML
comp=E,1640μm,1.3s
ERBM AML AML
comp=N,1715μm,1.4s
ERBM AML AML
comp=E,1640μm,1.3s
ERBM AML AML
comp=N,1715μm,1.4s
ERBM AML AML
comp=E,1640μm,1.3s
ERBM AML AML
comp=N,1715μm,1.4s
ERBM END
GRAM Graiana 0.34 352 P Pg 09 52 07.0 +0.8
GRAM S Sg 09 52 12.1 +1.4
GRAM Graiana 0.34 352 P Pg 09 52 07.0 +0.8
GRAM S Sb 09 52 12.3 -1.1
GRAM AML AML
comp=E,4495μm,0.6s
GRAM AML AML
comp=N,4055μm,0.3s
GRAM AML AML
comp=E,4495μm,0.6s
GRAM AML AML
comp=N,4060μm,0.3s
GRAM AML AML
comp=E,4495μm,0.6s
GRAM AML AML
comp=N,4060μm,0.3s
GRAM AML AML
comp=E,4495μm,0.6s
GRAM AML AML
comp=N,4060μm,0.3s
BDI Bagni Di Lucca 0.35 106 P Pg 09 52 06.4 +0.1
BDI S Sg 09 52 11.3 +0.5
BDI AML AML
comp=E,758μm,0.7s
BDI AML AML
comp=N,662μm,0.3s
BDI AML AML
comp=E,726μm,0.3s
BDI AML AML
comp=N,802μm,0.8s
BDI AML AML
comp=E,758μm,0.7s
BDI AML AML
comp=N,662μm,0.3s
BDI AML AML
comp=E,726μm,0.3s
BDI AML AML
comp=N,802μm,0.8s
BDI AML AML
comp=E,758μm,0.7s
BDI AML AML
comp=N,662μm,0.3s
BDI AML AML
comp=N,802μm,0.8s
BDI AML AML
comp=E,726μm,0.3s
BDI AML AML
comp=E,758μm,0.7s
BDI AML AML
comp=N,662μm,0.3s
BDI AML AML
comp=N,802μm,0.8s
BDI AML AML
comp=E,726μm,0.3s
MSSA Maissana 0.47 290 P Pb 09 52 09.9 -0.1
MSSA AML AML
comp=E,365μm,1.5s
MSSA AML AML
comp=N,291μm,0.7s
MSSA AML AML
comp=E,365μm,1.5s
MSSA AML AML
comp=N,290μm,0.7s
MSSA AML AML
comp=N,290μm,0.7s
MSSA AML AML
comp=E,365μm,1.5s
MSSA AML AML
comp=N,290μm,0.7s
MSSA AML AML
comp=E,365μm,1.5s
MTCR Monte La Croce 0.64 101 P Pg 09 52 11.9 +0.1
ZCCA Zocca 0.64 72 P Pb 09 52 13.1 +0.2
ZCCA AML AML
comp=E,316μm,1.5s
ZCCA AML AML
comp=N,515μm,0.6s
ZCCA AML AML
comp=E,304μm,0.6s
ZCCA AML AML
comp=N,449μm,0.7s
ZCCA AML AML
comp=E,316μm,1.5s
ZCCA AML AML
comp=N,515μm,0.6s
ZCCA AML AML
comp=E,304μm,0.6s
ZCCA AML AML
comp=N,448μm,0.7s
ZCCA AML AML
comp=N,515μm,0.6s
ZCCA AML AML
comp=N,448μm,0.7s
ZCCA AML AML
comp=E,304μm,0.6s
ZCCA AML AML
comp=E,316μm,1.5s
ZCCA AML AML
comp=N,515μm,0.6s
ZCCA AML AML
comp=N,448μm,0.7s
ZCCA AML AML
comp=E,304μm,0.6s
ZCCA AML AML
comp=E,316μm,1.5s
CRMI Carmignano 0.70 121 P Pb 09 52 13.9 -0.1
CRMI AML AML
comp=E,104μm,0.6s
CRMI AML AML
comp=N,174μm,0.9s
CRMI AML AML
comp=N,174μm,0.9s
CRMI AML AML
comp=E,104μm,0.6s
CRMI AML AML
comp=N,174μm,0.9s
CRMI AML AML
comp=E,104μm,0.6s
BOB Bobbio (Coli) 0.78 321 P Pg 09 52 15.3 +0.7
SEI Scarperia 0.89 96 P Pb 09 52 17.2 +0.1
SEI AML AML
comp=E,348μm,0.4s
SEI AML AML
comp=N,838μm,0.5s
SEI AML AML
comp=N,838μm,0.5s
SEI AML AML
comp=E,348μm,0.4s
SEI AML AML
comp=N,838μm,0.5s
SEI AML AML
comp=E,348μm,0.4s
RUFI Rufina 1.04 107 P Pb 09 52 19.6 -0.1
CSNT Castellina Chi 1.08 129 P Pb 09 52 20.6 +0.2
CSNT AML AML
comp=E,136μm,1.1s
CSNT AML AML
comp=N,176μm,1.4s
CSNT AML AML
comp=N,176μm,1.4s
CSNT AML AML
comp=E,136μm,1.1s
CSNT AML AML
comp=N,176μm,1.4s
CSNT AML AML
comp=E,136μm,1.1s
TRIF Trifonti 1.18 152 P Pn 09 52 22.8 +0.5
TRIF AML AML
comp=E,102μm,0.3s
TRIF AML AML
comp=N,87μm,0.7s
TRIF AML AML
comp=N,87μm,0.7s
TRIF AML AML
comp=E,102μm,0.3s
TRIF AML AML
comp=N,87μm,0.7s
TRIF AML AML
comp=E,102μm,0.3s
PGF Pioggiola 1.81 208 *e*Pn **Pn 09 52 31.6 +0.7**
PGF *e*Sn **Sn 09 52 53.5 -0.6**
comp=E,10nm,0.3s
SBF Sospel 1.97 262 *e*Pn **Pn 09 52 34.0 +0.9**
SBF *e*Sn **Sn 09 52 58.2 +0.2**
comp=E,7.4nm,0.2s
MBDF Montbardon 2.48 285 *e*Pg **Pg 09 52 46.6 -0.3**
MBDF *e*Sn **Sn 09 53 10.3 -0.3**
MBDF *e*Sg **Sg 09 53 19.2 +0.2**
comp=E,3.1nm,0.3s
FRF La Foret Royal 2.59 258 *e*Pn **Pn 09 52 42.4 +0.8**
FRF *e*Sn **Sn 09 53 13.0 -0.3**
comp=E,3.7nm,0.3s
LMR La Mourre 2.75 254 *e*Pn **Pn 09 52 44.4 +0.6**
LMR *e*Sn **Sn 09 53 16.8 -0.4**
comp=E,2.0nm,0.3s
LPG La Plagne 2.76 300 *e*Pn **Pn 09 52 47.3 +3.1**
LPG *e*Sn **Sn 09 53 16.6 -1.1**
comp=E,4.3nm,0.4s
LPL La Plagne 2.78 301 *e*P **Pn 09 52 47.6 +3.2**
LPL *e*Sn **Sn 09 53 17.1 -1.1**
comp=E,4.3nm,0.4s
DAVA Damuels 3.14 357 *i* Pn **Pb 09 52 53.9 -1.6**
comp=E,1.3nm,0.2s
DAVA *i* Sn **Sn 09 53 29.8 +2.9**
comp=E,3.3nm,0.3s
ORIF Oris-en-Rattie 3.14 286 *e*P **Pn 09 52 52.2 +3.0**
ORIF *e*Sn **Sn 09 53 25.8 -1.1**
comp=E,4.6nm,0.5s
WTTA Wattenberg 3.28 18 *i* Pn **Pb 09 52 56.0 -2.0**
comp=E,2.7nm,0.3s
WTTA *e*Sn **Sb 09 53 35.0 -3.2**
comp=E,2.4nm,0.3s
SMRF Simiane la Rot 3.29 268 *e*Pn **Pn 09 52 52.2 +0.9**
SMRF *e*Sn **Sn 09 53 29.7 -0.9**
comp=E,1.0nm,0.3s
WATA Walderalm 3.34 17 *i* Pn **Pb 09 52 56.7 -2.2**
comp=E,0.9nm,0.2s
CABF La Chapelle 3.76 312 *e*P **Pn 09 53 01.1 +3.3**
CABF *e*Sn **Sn 09 53 40.3 -2.0**
comp=E,1.4nm,0.2s
HINF Hinteralfeld 4.32 329 *e*P **Pn 09 53 08.7 +3.3**
HINF *e*Sn **Sn 09 53 53.0 -2.9**
comp=E,7.7nm,0.4s
HAU Haudompre 4.67 327 *e*P **Pn 09 53 13.3 +3.2**
HAU *e*Sn **Sn 09 54 01.3 -3.1**
comp=E,8.1nm,0.4s
CDF Champ du Feu 4.70 336 *e*P **Pn 09 53 12.5 +1.9**
CDF *e*Sn **Sn 09 54 02.3 -3.0**
comp=E,4.0nm,0.4s
SMF Signal de Mont 5.08 302 *e*P **Pn 09 53 20.0 +4.1**
SMF *e*Sn **Sn 09 54 12.1 -2.6**
comp=E,3.9nm,0.3s
SFTF Sexfontaines 5.38 321 *e*P **Pn 09 53 23.9 +4.0**
baz=140
SFTF *e*Sn **Sn 09 54 18.7 -3.2**
comp=E,4.1nm,0.4s
LOR Lormes 5.38 308 *e*P **Pn 09 53 23.7 +3.7**
baz=128
LOR *e*Sn **Sn 09 54 19.2 -3.0**
comp=E,3.4nm,0.4s,baz=139
KHC Kasperske Hory 5.51 24 *e*PN **Pn 09 53 24.5 +2.7**
KHC *e*SN **Sn 09 54 25.0 -0.3**
BGF Bois d'Agland 5.67 298 *e*P **Pn 09 53 27.8 +3.9**

*NNC **22** 09:52:31.8±11.0, 36°.88N×70°.47E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=93.0km s-min=83.8km az=164.0*
*IDC **22** 09:52:32.2±4.5, 36°.38N×71°.63E, h221km±31km, mb3.1/2, mb1 3.1/6, mb1mx2.8/40, mbtmp3.8/6, MS2.9/1, Ms1 2.9/1, ms1mx2.1/39, Error ellipse: s-maj=56.3km s-min=27.4km az=140.0*
*ISCJB **22** 09:52:33.5±1.6, 36°.7N±0°.1×70°.9E±0°.1, h188km, mb3.8/3, Error ellipse: s-maj=20.1km s-min=13.7km az=138.5*
ISC 22 09:52:31.7±1.8, 36°.5N±0°.1×71°.0E±0°.1, h188km, n17, σ1º81/19, mb3.5/3, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=10	**6.01**	**19**	P	**Pn**	**09 54 01.2**	**+2.0**
UCH	**Uchtor** SNR=29	**6.34**	**24**	P	**Pn**	**09 54 05.3**	**+1.7**
KZA	**Kyzart** SNR=7.3	**6.48**	**29**	P	**Pn**	**09 54 06.3**	**+1.0**
KK31	**Karatay Array** 0.9nm,0.5s,baz=177,slow=14,SNR=7.0	**6.63**	**357**	⇑Pn	**Pn**	**09 54 06.5**	**-0.5**
KK31	7.6nm,0.6s,baz=188,slow=25,SNR=12			⇑Sn	**Sn**	**09 55 19.5**	**-2.7**
AAK	**Ala-Archa** 2.6nm,0.3s,baz=178,slow=6.2,SNR=12	**6.71**	**22**	P	**Pn**	**09 54 09.5**	**+1.5**
AAK	0.7nm,0.3s,baz=303,slow=22,SNR=10			S	**Sn**	**09 55 22.1**	**-2.2**
AAK	**Ala-Archa** SNR=6.6	**6.71**	**22**	P	**Pn**	**09 54 10.1**	**+2.0**
AAK	**Ala-Archa** 4.3nm,0.3s	**6.71**	**22**	⇑Pn	**Pn**	**09 54 09.7**	**+1.6**
AAK	10.0nm,0.8s			⇑Sn	**Sn**	**09 55 23.0**	**-1.3**
TKM2	**Tokmak 2** SNR=14	**7.33**	**27**	P	**Pn**	**09 54 17.6**	**+1.3**
TKM2	**Tokmak 2** 6.0nm,0.5s	**7.33**	**27**	⇓Pn	**Pn**	**09 54 17.2**	**+0.9**
GEYT	**Alibeck** 0.3nm,0.3s,baz=98,slow=11,SNR=1.7	**10.40**	**282**	P	**P**	**09 55 02.2**	**-2.0**
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=220,slow=14,SNR=8.3	**13.29**	**36**	P	**Pn**	**09 55 31.2**	**-1.9**
AB31	**Akbulak array** 0.6nm,0.6s,baz=144,slow=12,SNR=11	**15.12**	**331**	⇑Pn	**P**	**09 55 59.0**	**+2.6**
AKTO	**Aktyubinsk** 0.4nm,0.3s,baz=134,slow=12,SNR=4.8	**16.81**	**330**	P	**Pn**	**09 56 17.7**	**+1.6**
GNI	**Garni** comp=Z,30nm,19.1s,baz=118,slow=43	**20.93**	**288**	LR	LR	10 07 44.7	
FINES	**FINESS Array B** 0.9nm,0.7s,baz=106,slow=12,SNR=4.2	**37.52**	**326**	P	**P**	**09 59 28.1**	**+1.0**
ARCES	**ARCESS Array B** 8.3nm,0.4s,baz=116,slow=8.4,SNR=4.3	**41.17**	**338**	P	**P**	**09 59 56.4**	**-0.8**
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,baz=64,slow=5.8,SNR=1.6	**65.74**	**269**	P	**P**	**10 02 56.1**	**-0.6**

*NNC **22** 09:56:40.7±1.4, 53°.46N×87°.80E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=10.7km s-min=5.6km az=58.0, Suspected Mining explosion.*
*IDC **22** 09:56:40.5±3.1, 53°.56N×87°.88E, h0km, mb1 3.3/2, mb1mx3.1/50, mbtmp3.3/2, ML2.8/2, Error ellipse: s-maj=25.8km s-min=15.6km az=59.0*
KRAR 22 09:56:39.7±0.2, 53°.61N×87°.97E, M2.5, 5C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=98,slow=308,SNR=3.5	**1.90**	**282**	*i*		10 08 35.0	
ZAA0	**Zalesovo Array** 2.0nm,0.7s	**1.90**	**282**	⇑P	Pn	09 57 13.1	-0.3
ZAA0	3.7nm,0.8s			⇓S	Sn	09 57 38.1	+0.2
ZALV	**Zalesovo Beam** 4.3nm,0.3s,baz=103,slow=11,SNR=28	**1.90**	**282**	Pg	Pn	09 57 13.8	+0.4
ZALV	3.3nm,0.3s,baz=107,slow=25,SNR=15			Lg	Lg	09 57 39.9	
KURK	**Kurchatov** 2.1nm,0.7s	**6.44**	**247**	⇓Pn	Pn	09 58 15.3	-0.4
KURK	2.2nm,0.7s			⇑Sn	Sn	09 59 28.5	-1.3
KURK	5.3nm,0.8s			⇑Lg	Lg	09 59 59.1	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=62,slow=14,SNR=9.6	**6.54**	**247**	Pn	Pn	09 58 17.5	+0.5
KURBB	0.0nm,0.3s,baz=55,slow=20,SNR=3.1			Sn	Sn	09 59 31.0	-1.3
KURBB	0.1nm,0.3s,baz=63,slow=35,SNR=5.4			Lg	Lg	10 00 05.0	
KURBB	**Kurchatov Arra** 3.0nm,0.5s	**6.54**	**247**	⇑Pn	Pn	09 58 17.2	+0.2
KURBB	5.4nm,0.6s			⇓Sn	Sn	09 59 30.9	-1.4
KURBB	7.2nm,0.6s			⇑Lg	Lg	10 00 02.7	
MK31	**Makanchi Array** 0.1nm,0.2s,baz=24,slow=14,SNR=8.7	**7.73**	**210**	Pn	Pn	09 58 32.0	-1.5
MK31	1.5nm,0.8s,baz=93,slow=28,SNR=3.4			⇓Sn	Sn	09 59 58.8	-3.0
MK31	2.9nm,0.8s,baz=33,slow=30,SNR=4.2			⇓Lg	Lg	10 00 40.9	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=34,slow=14,SNR=4.0	**7.73**	**210**	Pn	Pn	09 58 34.7	+1.2
MKAR	0.1nm,0.3s,baz=24,slow=21,SNR=5.8			Sn	Sn	10 00 00.3	-1.5
MKAR	0.2nm,0.3s,baz=34,slow=31,SNR=7.5			Lg	Lg	10 00 40.9	
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=78,slow=15,SNR=2.5	**10.54**	**274**	Pn	Pn	09 59 14.0	+2.2
BVAR	0.2nm,0.3s,baz=70,slow=26,SNR=3.4			Sn	Sn	10 01 07.3	-3.2

*IDC **22** 10:07:57.7±0.5, 10°.69N×126°.78E, h0km, mb4.2/19, mb1 4.3/21, mb1mx4.2/37, mbtmp4.2/21, ML3.9/2, MS3.2/11, Ms1 3.2/11, ms1mx3.0/37, Error ellipse: s-maj=24.4km s-min=11.6km az=80.0*
*BJI **22** 10:07:58.5±0.0, 10°.35N×126°.84E, h23km, mb4.8/24, mB5.0/18, Ms4.6/3, Ms7 4.5/2*
*ISCJB **22** 10:08:02.1±0.9, 10°.72N±0°.03×126°.89E±0°.05, h45km±7km, mb4.5/46, MS3.2/10, Error ellipse: s-maj=8.0km s-min=4.8km az=161.5*
*NEIC **22** 10:08:02.8±1.2, 10°.68N×126°.82E, h35km±3km, mb4.4/29, Error ellipse: s-maj=18.7km s-min=13.2km az=88.0*
*MAN **22** 10:08:03.1, 10°.83N×126°.79E, h33km, mb5.4, ML4.4, MS4.7*
ISC 22 10:08:03.1±0.5, 10°.77N±0°.04×126°.90E±0°.08, h36km±2km, n94, σ1º72/105, mb4.5/46, MS3.2/10, 2C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.66**	**300**	*e*P	**Pn**	**10 08 29.3**	**-0.3**
BESP				*e*S	**Sn**	**10 08 50.8**	**+1.2**
PLP	**Palo**	**1.93**	**282**	⇓*e*P	**Pn**	**10 08 31.7**	**-1.6**
PLP				*i* S	**Sn**	**10 08 53.6**	**-2.8**
MSLP	**Maasin**	**2.11**	**253**	*e*P	**Pn**	**10 08 36.0**	**+0.2**
MSLP				*e*S	**Sn**	**10 08 59.9**	**-0.9**
BUTP	**Butuan**	**2.19**	**215**	*e*P	**Pn**	**10 08 35.4**	**-1.5**
BUTP				*e*S	**Sn**	**10 09 10.5**	**+7.7**
OCLP	**Ormoc**	**2.27**	**277**	*e*P	**Pn**	**10 08 37.1**	**-1.0**
OCLP				*e*S	**Sn**	**10 09 05.8**	**+1.0**
CNP	**Catarman**	**2.79**	**308**	*e*P	**Pn**	**10 08 42.4**	**-2.9**
CNP				*e*S	**Sn**	**10 09 17.6**	**-0.1**
LLP	**Lapu-Lapu**	**2.92**	**261**	*e*P	**Pn**	**10 08 46.5**	**-0.5**
LLP				*e*S	**Sn**	**10 09 20.9**	**0.0**
CGP	**Cagayan de Oro**	**3.17**	**224**	⇓*e*P	**Pn**	**10 08 49.3**	**-1.1**
CGP				*e*S	**Sn**	**10 09 27.1**	**+0.1**
TBP	**Tagbilaran**	**3.18**	**251**	*e*P	**Pn**	**10 08 51.7**	**+1.2**
TBP				*i* S	Sn	10 09 05.2	-22
BUKP	**Musuan**	**3.40**	**212**	*e*P	**Pn**	**10 08 55.3**	**+1.6**
BUKP				*e*S	**Sn**	**10 09 31.3**	**-1.4**
SNPH	**Sibulan**	**3.88**	**249**	*e*P	**Pn**	**10 09 02.0**	**+1.8**
SNPH				*e*S	**Sn**	**10 09 44.6**	**0.0**
DMPH	**Davao City--Mi**	**3.91**	**201**	⇑*e*P	**Pn**	**10 09 02.4**	**+1.8**
DMPH				*e*S	**Sn**	**10 09 47.5**	**+2.1**
CTBH	**Cotabato--PC H**	**4.39**	**217**	⇑*i*P	**Pn**	**10 09 10.5**	**+3.2**
DDMP	**Don Marcelino,**	**4.78**	**194**	*e*P	**Pn**	**10 09 15.1**	**+2.5**
DDMP				*e*S	**Sn**	**10 10 01.5**	**-5.3**
TNTI	**Ternate**	**9.94**	**177**	*e*Pn	**Pn**	**10 10 22.7**	**-0.9**
SIJI	**Sorong** 0.6nm,0.3s,baz=307,slow=20,SNR=2.5	**12.35**	**159**	Pn	**Pn**	**10 10 54.9**	**-1.6**
SIJI	0.5nm,0.3s,baz=59,slow=11,SNR=1.5			Sn	Sn	10 12 58.5	-14
SBUM	**Sibu** 8.9nm,1.2s	**16.75**	**241**	*e*Pn	**Pn**	**10 11 54.5**	**-0.6**
KAPI	**Kappang** 0.5nm,0.3s,baz=37,slow=14,SNR=4.6	**17.22**	**205**	P	**Pn**	**10 12 00.3**	**-0.6**
KAPI	comp=Z,56nm,18.1s,baz=316,slow=41			LR	LR	10 19 37.6	
KAPI	**Kappang** 18nm,1.3s	**17.22**	**205**	*e*Pn	**Pn**	**10 11 60.0**	**-1.0**
GUMO	**Guam** comp=Z,60nm,20.6s,baz=297,slow=33	**17.78**	**79**	LR	LR	10 17 42.0	
KSM	**Kuching** 14nm,0.9s	**18.89**	**242**	*e*P	**P**	**10 12 18.8**	**-1.8**
NJ2	**Nanjing**	**22.45**	**342**	*e*P	**P**	**10 13 00.3**	**+1.3**
NJ2	comp=Z,13nm,0.5s			pmax	pmax		
JNU	**Nakatsue** comp=Z,58nm,19.0s,baz=164,slow=36	**22.55**	**9**	LR	LR	10 21 34.7	
JNU	**Nakatsue** 6.4nm,1.0s	**22.55**	**9**	*e*P	**P**	**10 13 00.1**	**0.0**
WHN	**Wuhan**	**22.88**	**331**	P	P	10 12 56.3	-7.2
MTN	**Manton Dam** 24nm,0.9s	**23.83**	**170**	*e*P	**P**	**10 13 12.5**	**-0.5**
JHJ	**Hachijo jima 2** comp=Z,19nm,18.5s,baz=102,slow=36	**25.20**	**26**	LR	LR	10 23 11.5	
KS15	**Wonju Array Si** 8.5nm,1.4s	**26.57**	**2**	*e*P	**P**	**10 13 37.9**	**+0.2**
KSRS	**Korea Array** 0.6nm,0.7s,baz=185,slow=10,SNR=3.9	**26.59**	**2**	P	**P**	**10 13 39.0**	**+1.2**
KSRS	comp=Z,48nm,18.4s,baz=186,slow=39			LR	LR	10 25 23.2	
KMI	**Kunming**	**26.99**	**305**	P	**P**	**10 13 43.8**	**+1.8**
KMI	comp=Z,7.0nm,0.5s			pmax	pmax		
KMI	comp=Z,170nm,4.4s			pmax	pmax		
MJAR	**Matsushiro Arr** 2.2nm,1.0s,baz=188,slow=8.3,SNR=5.2	**27.62**	**20**	P	**P**	**10 13 47.1**	**-0.1**
MJAR	comp=Z,66nm,19.4s,baz=210,slow=35			LR	LR	10 23 58.6	
MAJO	**Matsushiro**	**27.62**	**20**	*e*P	**P**	**10 13 47.1**	**-0.1**
CM31	**Chiang Mai Arr** 4.9nm,0.6s	**28.09**	**289**	*e*P	**P**	**10 13 48.0**	**-3.6**
CMAR	**Chiang Mai Arr** 1.7nm,0.7s,baz=108,slow=7.9,SNR=7.7	**28.09**	**289**	P	**P**	**10 13 49.5**	**-2.1**
CMAR	comp=Z,24nm,18.7s,baz=188,slow=37			LR	LR	10 25 08.4	
FITZ	**Fitzroy Crossi** 1.1nm,0.5s,baz=12,slow=12,SNR=2.9	**28.71**	**183**	P	**P**	**10 13 54.5**	**-2.5**
FITZ	**Fitzroy Crossi** 8.7nm,1.1s	**28.71**	**183**	*e*P	**P**	**10 13 56.3**	**-0.7**
CD2	**Chengdu**	**29.37**	**316**	*e*P	**P**	**10 14 02.9**	**0.0**
WRA	**Warramunga Arr** 1.0nm,0.5s,baz=347,slow=11,SNR=6.9	**31.38**	**166**	P	**P**	**10 14 19.8**	**-0.9**
WR1	**Warramunga Arr**	**31.39**	**166**	*e*P	**P**	**10 14 19.8**	**-0.9**
HHC	**Hu-ho-hao-te**	**32.88**	**338**	*e*P	**P**	**10 14 36.3**	**+2.5**
HHC	comp=Z,13nm,0.8s			pmax	pmax		
USRK	**Ussuriysk Ar.** 1.8nm,0.7s,baz=178,slow=5.3,SNR=4.1	**33.60**	**7**	P	**P**	**10 14 40.6**	**+0.7**
AS31	**Alice Springs** 1.6nm,0.4s	**34.90**	**169**	*e*P	**P**	**10 14 50.9**	**-0.5**
ASAR	**Alice Springs** 0.9nm,0.4s,baz=353,slow=7.4,SNR=30	**34.90**	**169**	P	**P**	**10 14 51.2**	**-0.2**
ASAR	1.7nm,0.5s,baz=344,slow=2.7,SNR=12			PcP	**PcP**	**10 17 24.1**	**+0.3**
SHL	**Shillong** 11nm,0.8s	**36.24**	**299**	*e*P	**P**	**10 15 01.7**	**-1.5**
GTA	**Gaotai**	**37.33**	**324**	*e*P	**P**	**10 15 15.8**	**+3.6**
GTA				pP	pP	10 15 20.3	-0.4
GTA				sP	sP	10 15 22.8	-0.9
GTA	comp=Z,5.0nm,1.2s			pmax	pmax		
NWAO	**Narrogin (SRO)** comp=Z,33nm,19.2s,baz=350,slow=39	**44.42**	**192**	LR	LR	10 36 29.4	
STKA	**Stephens Creek** 3.5nm,0.5s,baz=339,slow=9.5,SNR=7.0	**44.68**	**162**	P	**P**	**10 16 12.1**	**-0.5**
STKA	**Stephens Creek** 1.0nm,0.6s	**44.68**	**162**	*e*P	**P**	**10 16 10.9**	**-1.6**
PALK	**Pallekele** comp=Z,23nm,20.5s,baz=104,slow=38	**45.73**	**270**	LR	LR	10 36 50.7	
WMQ	**Urumqi**	**47.22**	**321**	*e*P	**P**	**10 16 35.0**	**+2.4**
WMQ				pP	sP	10 16 44.3	+0.4
WMQ	comp=Z,17nm,0.7s			pmax	pmax		

WMQ pmax pmax
comp=Z,89nm,4.3s
PETK Petropavlovsk- 48.93 24 P **P 10 16 46.7 +1.1**
1.9nm,0.7s,baz=226,slow=5.8,SNR=2.5
PETK LR LR 10 36 53.0
comp=Z,46nm,19.7s,baz=209,slow=35
PEA1 Petropavlovsk- 48.93 24 *e*P **P 10 16 46.7 +1.1**
MK31 Makanchi Array 52.01 322 *e*P **P 10 17 10.0 +1.0**
4.1nm,0.6s
MK32 Makanchi Array 52.01 322 *e*P **P 10 17 09.9 +0.9**
MKAR Makanchi Array 52.01 322 P **P 10 17 09.9 +0.9**
5.4nm,0.6s,baz=119,slow=8.2,SNR=64
MKAR PcP **PcP 10 18 21.6 +0.6**
1.0nm,0.6s,baz=111,slow=4.4,SNR=2.1
MAKZ Makanchi 52.21 322 *e*P **P 10 17 10.5 0.0**
3.7nm,0.4s
KSH Kashi 53.37 312 P **P 10 17 22.0 +2.7**
KSH sP pwP 10 17 36.3 -0.6
KSH PP **PP 10 19 25.8 +6.0**
KSH S **S 10 24 51.0 +2.0**
KSH ScS **ScS 10 27 04.5 -1.9**
KSH SS **SKiKP 10 28 32.4 -1.0**
KSH pmax pmax
comp=Z,19nm,0.9s
KSH pmax pmax
comp=Z,170nm,5.0s
KSH LR LR
comp=N,310nm,10.3s
KSH LR LR
comp=E,250nm,6.9s
KSH LR LR
comp=Z,180nm,12.4s
NIL Nilore 53.97 304 *e*P **P 10 17 23.9 +0.2**
19nm,0.8s
ZALV Zalesovo Beam 54.49 331 P **P 10 17 27.3 +0.3**
1.8nm,0.6s,baz=120,slow=6.8,SNR=8.1
ZAA1 Zalesovo Array 54.49 331 *e*P **P 10 17 27.3 +0.2**
KURK Kurchatov 56.01 325 *e*P **P 10 17 38.1 0.0**
13nm,0.7s
GAR Garm 57.45 310 *e*P **P 10 17 48.3 -0.4**
20nm,1.0s
KK31 Karatay Array 58.35 314 *e*P **P 10 17 55.1 +0.3**
6.6nm,0.9s
KKAR Karatay Array 58.35 314 *e*P **P 10 17 55.0 +0.2**
6.6nm,0.9s
BRVK Borovoye 61.68 325 *e*P **P 10 18 17.5 0.0**
7.7nm,0.7s
NRIK Noril'sk 63.69 345 LR LR 10 50 27.8
comp=Z,24nm,18.2s,baz=190,slow=40
GEYT Alibeck 66.75 307 P **P 10 18 51.8 +0.8**
3.3nm,0.8s,baz=149,slow=3.1,SNR=6.5
ABKAR Akbulak array 66.91 319 *e*P **P 10 18 51.2 -0.5**
6.6nm,1.4s
ARU Arti 69.16 326 *e*P **P 10 19 05.0 -0.7**
5.1nm,0.6s
RAYN Ar Rayn 77.96 292 *e*P **P 10 19 58.1 -0.1**
2.9nm,0.6s
ILAR Eielson Array 78.72 26 P **P 10 20 02.3 +0.8**
0.5nm,0.8s,baz=257,slow=6.4,SNR=3.3
ILB Eielson Array 78.72 26 *e*P **P 10 20 01.8 +0.3**
3.2nm,1.4s
KLMR Klimovskoe 79.41 330 *e*P **P 10 20 04.5 -0.8**
KLMR AMP 10 20 06.2
comp=Z,7.0nm,0.8s
ARA0 ARCESS Array S 83.94 340 *e*P **P 10 20 29.4 +0.3**
ARCES ARCESS Array B 83.94 340 P **P 10 20 29.4 +0.3**
comp=Z,5.8nm,0.4s,baz=76,slow=5.1,SNR=5.3
BR101 Keskin Array S 85.70 309 *e*P **P 10 20 38.4 -0.4**
BR131 Keskin Array S 85.70 309 *e*P **P 10 20 37.5 -1.2**
comp=Z,2.6nm,0.8s
BRTR Keskin Array B 85.70 309 P **P 10 20 38.4 -0.4**
comp=Z,2.0nm,0.7s,baz=104,slow=4.1,SNR=12
FIA0 FINESS Array S 85.75 332 *e*P **P 10 20 38.4 +0.1**
FINES FINESS Array B 85.75 332 P **P 10 20 38.4 +0.1**
comp=Z,1.2nm,0.4s,baz=69,slow=5.0,SNR=18
AKASG Malin Array Be 86.57 321 P **P 10 20 41.9 -0.7**
comp=Z,0.8nm,0.5s,baz=55,slow=4.7,SNR=6.1
AKBB Malin Array Si 86.57 321 *e*P **P 10 20 42.0 -0.6**
comp=Z,3.3nm,0.8s
CSS Mathiatis 86.81 305 *e*P **P 10 20 42.5 -1.6**
comp=Z,11nm,0.6s
BUR08 Bucovina Ar. S 89.89 319 *e*P **P 10 20 58.6 -0.1**
comp=Z,3.6nm,0.7s
VNDA Vanda 90.34 173 P **P 10 21 00.7 +0.8**
comp=Z,0.8nm,0.5s,baz=320,slow=5.9,SNR=6.5
VNDA Vanda 90.34 173 *e*P **P 10 21 00.1 +0.3**
MAW Mawson 90.38 200 P **P 10 21 00.2 +0.1**
comp=Z,2.5nm,0.7s,baz=45,slow=13,SNR=4.2
MAW Mawson 90.38 200 *e*P **P 10 20 59.1 -1.0**
comp=Z,1.3nm,1.1s
NB200 NORSAR Array S 92.59 334 *e*P **P 10 21 08.9 -1.9**
NOA NORSAR Array B 92.59 334 P **P 10 21 08.9 -1.9**
comp=Z,1.0nm,0.8s,baz=64,slow=4.9,SNR=3.9
TOA1 Torodi Ar. Sit 120.66 292 *e*PKPdf **PKPdf 10 26 51.4 -0.7**
TORD Torodi Ar. Bea 120.66 292 PKP **PKPdf 10 26 51.4 -0.7**
comp=Z,0.6nm,0.7s,baz=32,slow=3.6,SNR=3.6
059A Moore Haven 133.65 35 *e*PKPdf **PKPdf 10 27 15.0 -1.7**
PLCA Paso Flores 146.41 156 PKPbc **PKPbc 10 27 40.1 -0.6**
comp=Z,3.5nm,0.9s,baz=339,slow=1.6,SNR=4.5

NEIC ***22*** *10:27:48.4±1.7, 8°.58S×118°.30E, h135km±5km, mb4.5/22, Error ellipse: s-maj=14.6km s-min=9.0km az=80.0*
NEIC Felt [III] at Lombok.
ISCJB ***22*** *10:27:48.6±0.2, 8°.54S±0°.03×118°.36E±0°.02, h152km, mb4.5/36, Error ellipse: s-maj=4.3km s-min=3.1km az=28.6*
BJI ***22*** *10:27:48.6±0.0, 8°.60S×118°.40E, h134km, mb4.9/26, mB4.9/17*
IDC ***22*** *10:27:49.3±1.1, 8°.49S×118°.32E, h136km±9km, mb4.2/15, mb1 4.3/19, mb1mx4.2/34, mbtmp4.7/19, MS2.9/7, Ms1 3.0/7, ms1mx2.7/36, Error ellipse: s-maj=15.0km s-min=8.5km az=79.0*
DJA ***22*** *10:27:51.1±0.3, 9°S±3°×11°8E±°, h88km±6km, M4.8/18, mb4.9/13, mB5.2/7, MLv4.8/18, Mw(mB)4.6/7*
KLM ***22*** *10:27:54.0, 8°.83S×118°.65E, h147km, mb5.0*
ISC 22 10:27:50.5±0.3, 8°.60S±0°.04×118°.40E±0°.04, h152km, n143, σ1°91/164, mb4.4/36, 1D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.66**	**250**	P	**Pn**	**10 28 09.0**	**-4.0**
WBSI	**Waikabubak, Su**	**1.42**	**137**	P	**Pn**	**10 28 15.9**	**-3.6**
WSI	**Waingapu**	**2.15**	**120**	P	**Pn**	**10 28 25.5**	**-2.0**
DNP	**Denpasar**	**3.16**	**268**	P	**Pn**	**10 28 39.6**	**-0.4**
SRBI	**Singaraja**	**3.20**	**279**	P	**Pn**	**10 28 37.7**	**-2.8**
BSSI	**Bau Bau, Buton**	**3.20**	**40**	P	**Pn**	**10 28 39.3**	**-1.2**
EDFI	**Ende, Flores**	**3.25**	**93**	P	**Pn**	**10 28 40.1**	**-1.2**
BKSI	**Bulukumba**	**3.68**	**28**	P	**Pn**	**10 28 45.7**	**-1.0**
MMRI	**Maumere**	**3.79**	**91**	*e*Pn	**Pn**	**10 28 47.3**	**-0.8**
MMRI				*e*Sn	**Sn**	**10 29 33.9**	**+1.0**
MMRI	**Maumere**	**3.79**	**91**	P	**Pn**	**10 28 47.2**	**-0.9**
KAPI	**Kappang**	**3.81**	**21**	P	**Pn**	**10 28 47.5**	**-0.9**
27nm,0.3s,baz=204,slow=8.0,SNR=71							
KAPI				S	**Sn**	**10 29 28.3**	**-4.9**
9.0nm,0.3s,baz=252,slow=23,SNR=4.5							
KAPI				LR	LR	10 30 28.4	
comp=Z,153nm,20.5s,baz=120,slow=43							
KAPI	**Kappang**	**3.81**	**21**	*e*Pn	**Pn**	**10 28 47.7**	**-0.6**
KAPI				*e*Sn	**Sn**	**10 29 27.9**	**-5.4**
JAGI	**Jajag, Banyuwa**	**4.21**	**271**	*e*Pn	**Pn**	**10 28 50.7**	**-2.8**
JAGI				*e*Sn	**Sn**	**10 29 38.6**	**-4.0**
JAGI	**Jajag, Banyuwa**	**4.21**	**271**	P	**Pn**	**10 28 50.7**	**-2.8**
KMMI	**Kalianget**	**4.66**	**289**	P	**Pn**	**10 28 59.0**	**-0.5**
SPSI	**Sidrap Palu**	**4.80**	**16**	P	**Pn**	**10 29 00.7**	**-0.7**
BATI	**Baumata**	**5.43**	**108**	P	**Pn**	**10 29 08.6**	**-1.1**
125nm,0.3s,baz=308,slow=3.1,SNR=64							
BATI				S	**Sn**	**10 30 06.5**	**-5.1**
114nm,0.3s,baz=332,slow=21,SNR=11							
BATI				LR	LR	10 32 04.7	
comp=Z,78nm,20.6s,baz=142,slow=46							
BATI	**Baumata**	**5.43**	**108**	*e*Pn	**Pn**	**10 29 08.6**	**-1.1**
BATI				*e*Pn	**Pn**	**10 29 08.6**	**-1.1**
BATI	**Baumata**	**5.43**	**108**	P	**Pn**	**10 29 08.3**	**-1.4**
TTSI	**Tana Toraja**	**5.70**	**14**	P	**Pn**	**10 29 14.9**	**+1.7**
95nm,0.9s,973nm0.4nm							
SOEI	**Soe**	**5.90**	**102**	*e*Pn	**Pn**	**10 29 15.0**	**-1.1**
SOEI				*e*Sn	**Sn**	**10 30 22.0**	**-1.0**
SOEI	**Soe**	**5.90**	**102**	P	**Pn**	**10 29 15.0**	**-1.1**
PWJI	**Pagerwojo**	**6.56**	**275**	P	**Pn**	**10 29 23.9**	**-0.8**
UGM	**Wanagama**	**7.83**	**274**	*e*Pn	**Pn**	**10 29 42.3**	**+0.5**
UGM				*e*Sn	**Sn**	**10 31 06.0**	**-3.1**
SMRI	**Semarang**	**8.04**	**281**	*e*Pn	**Pn**	**10 29 41.7**	**-2.8**
APSI	**Ampana**	**8.29**	**23**	P	**Pn**	**10 29 50.1**	**+2.2**
32nm,0.9s,696nm0.2nm							
LUWI	**Luwuk**	**8.68**	**30**	*e*Pn	**Pn**	**10 29 51.5**	**-1.5**
LUWI	**Luwuk**	**8.68**	**30**	P	**Pn**	**10 29 56.5**	**+3.5**
46nm,0.9s,0.3nm							
SANI	**Sanana**	**9.97**	**50**	P	**Pn**	**10 30 12.1**	**+2.0**
26nm,1.2s							
NLAI	**Namlea**	**10.16**	**59**	P	**P**	**10 30 21.3**	**-1.3**
CISI	**Cisompet, Garu**	**10.54**	**275**	*e*Pn	**Pn**	**10 30 14.3**	**-3.4**
FITZ	**Fitzroy Crossi**	**11.77**	**144**	P	**Pn**	**10 30 31.8**	**-2.1**
1.9nm,0.3s,baz=333,slow=7.2,SNR=50							
FITZ				S	Sn	10 32 33.6	-10
13nm,0.3s,baz=168,slow=18,SNR=19							
FITZ				LR	LR	10 35 31.8	
comp=Z,44nm,20.9s,baz=330,slow=39							
FITZ	**Fitzroy Crossi**	**11.77**	**144**	P	**Pn**	**10 30 31.9**	**-1.9**
baz=12							
FITZ				S	Sn	10 32 34.7	-9.4
baz=12							
KNRA	**Kununurra**	**12.33**	**126**	P	**Pn**	**10 30 38.8**	**-2.3**
baz=12,SNR=25							
KNRA				S	Sn	10 32 47.2	-10
baz=12							
SBUM	**Sibu**	**12.59**	**330**	*e*Pn	**Pn**	**10 30 41.9**	**-2.6**
SBUM	**Sibu**	**12.59**	**330**	P	**P**	**10 30 53.0**	**+3.1**
KSM	**Kuching**	**12.86**	**321**	*e*Pn	**Pn**	**10 30 46.1**	**-1.8**
KSM	**Kuching**	**12.86**	**321**	P	**P**	**10 30 56.0**	**+3.1**
PSA00	**Pilbara Seismi**	**12.97**	**174**	*e*Pn	**Pn**	**10 30 47.4**	**-1.9**
MTN	**Manton Dam**	**13.20**	**110**	*e*Pn	**Pn**	**10 30 50.5**	**-1.7**
MTN	**Manton Dam**	**13.20**	**110**	P	**Pn**	**10 30 49.3**	**-3.0**
baz=13,SNR=120							
KDU	**Kakadu**	**14.41**	**108**	P	**Pn**	**10 31 05.3**	**-2.2**
baz=14,SNR=56							
GIRL	**Giralia**	**14.53**	**196**	*e*Pn	**Pn**	**10 31 08.5**	**-0.5**
GIRL	**Giralia**	**14.53**	**196**	P	**Pn**	**10 31 08.5**	**-0.5**
baz=14,SNR=42							
KKM	**Kota Kinabalu**	**14.71**	**351**	*e*Pn	**Pn**	**10 31 09.7**	**-1.8**
FAKI	**Fak Fak**	**14.88**	**69**	*e*Pn	**Pn**	**10 31 11.9**	**-1.6**
FAKI				*e*Sn	**Sn**	**10 33 58.5**	**-0.5**
FAKI	**Fak Fak**	**14.88**	**69**	P	**Pn**	**10 31 13.1**	**-0.4**
SIJI	**Sorong**	**14.94**	**60**	P	**Pn**	**10 31 13.9**	**-0.2**
2.6nm,0.3s,baz=238,slow=16,SNR=5.1							
SIJI				LR	LR	10 37 58.1	
comp=Z,32nm,18.0s,baz=34,slow=41							
WRKA	**Warakurna**	**18.87**	**151**	P	**Pn**	**10 32 01.0**	**-0.5**
baz=19,SNR=144							
WR1	**Warramunga Arr**	**19.10**	**128**	*e*P	**P**	**10 32 01.7**	**-0.1**
WR1				*e*ScP	**ScP**	**10 39 42.9**	**+1.3**
WRA	**Warramunga Arr**	**19.10**	**128**	P	**P**	**10 32 01.7**	**-0.1**
5.6nm,0.3s,baz=300,slow=12,SNR=255							
WRA				S	**S**	**10 35 23.4**	**-7.0**
0.4nm,0.3s,baz=317,slow=23,SNR=2.5							
WRA				ScP	**ScP**	**10 39 42.9**	**+1.3**
0.5nm,0.3s,baz=288,slow=2.4,SNR=7.8							
WRAB	**Tennant Creek**	**19.10**	**128**	*e*P	**P**	**10 32 01.8**	**0.0**
49nm,1.0s							
WB2	**Warramunga Arr**	**19.11**	**128**	*e*P	**P**	**10 32 01.9**	**+0.1**
36nm,0.8s							
MORW	**Morawa**	**20.48**	**186**	*e*P	**P**	**10 32 16.8**	**+0.3**
57nm,1.5s							
MORW				*e*S	**S**	**10 35 57.7**	**+0.2**
MORW	**Morawa**	**20.48**	**186**	P	**P**	**10 32 16.9**	**+0.4**
baz=20,SNR=26							
AS31	**Alice Springs**	**21.09**	**137**	*e*P	**P**	**10 32 23.3**	**+0.2**
16nm,0.3s							
AS31				*e*ScP	**ScP**	**10 39 48.5**	**+2.2**
ASAR	**Alice Springs**	**21.09**	**137**	P	**P**	**10 32 23.7**	**+0.6**
25nm,0.4s,baz=312,slow=9.2,SNR=515							
ASAR				S	**S**	**10 36 06.0**	**-3.3**
1.4nm,0.8s,baz=313,slow=15,SNR=2.5							
ASAR				ScP	**ScP**	**10 39 48.5**	**+2.2**
3.2nm,0.7s,baz=326,slow=2.1,SNR=6.7							
ASAR				LR	LR	10 41 00.5	
comp=Z,70nm,20.2s,baz=265,slow=37							
BLDU	**Ballidu**	**21.96**	**184**	P	**P**	**10 32 32.2**	**0.0**
baz=22,SNR=10							
PSI	**Prapat**	**22.48**	**299**	P	**P**	**10 32 36.1**	**-1.5**
3.7nm,0.4s,baz=153,slow=9.0,SNR=3.6							
PSI	**Prapat**	**22.48**	**299**	*e*P	**P**	**10 32 34.4**	**-3.2**
8.8nm,0.9s							
KMBL	**Kambalda**	**22.88**	**172**	P	**P**	**10 32 41.4**	**+0.4**
baz=23,SNR=51							
MUN	**Mundaring**	**23.35**	**185**	P	**P**	**10 32 46.3**	**+1.0**
baz=23,SNR=3.3							
QIS	**Mount Isa**	**23.68**	**122**	P	**P**	**10 32 49.4**	**+1.0**
baz=24,SNR=52							
FORT	**Forrest**	**23.84**	**159**	*e*P	**P**	**10 32 50.4**	**+0.7**
134nm,0.6s							
FORT	**Forrest**	**23.84**	**159**	P	**P**	**10 32 50.7**	**+1.0**
baz=24,SNR=38							
NWAO	**Narrogin (SRO)**	**24.23**	**182**	P	**P**	**10 32 54.2**	**+0.9**
23nm,0.6s,baz=9.1,slow=11,SNR=25							
NWAO				S	S	10 37 18.2	+17
8.7nm,0.8s,baz=278,slow=7.1,SNR=2.4							
NWAO	**Narrogin (SRO)**	**24.23**	**182**	*e*P	**P**	**10 32 54.2**	**+0.9**
NWAO				*e*P	**P**	**10 32 54.6**	**+1.3**
NWAO	**Narrogin (SRO)**	**24.23**	**182**	P	**P**	**10 32 54.2**	**+0.9**
baz=24,SNR=22							
COEN	**Coen**	**24.86**	**105**	*e*P	**P**	**10 32 58.8**	**-0.4**
42nm,0.6s							
COEN	**Coen**	**24.86**	**105**	P	**P**	**10 32 59.7**	**+0.5**
baz=25,SNR=33							
RKGY	**Rocky Gully**	**25.92**	**183**	P	**P**	**10 33 10.6**	**+2.0**
baz=26,SNR=8.6							
BBOO	**Buckleboo**	**29.11**	**148**	P	**P**	**10 33 38.0**	**+0.9**
baz=29,SNR=12							
CTA	**Charters Tower**	**29.25**	**116**	P	**P**	**10 33 39.8**	**+1.4**
4.8nm,0.6s,baz=289,slow=13,SNR=7.1							
CTA				ScP	**ScP**	**10 40 10.4**	**+0.9**
2.6nm,0.8s,baz=14,slow=4.2,SNR=2.6							
HTT	**Hallett**	**31.13**	**145**	P	**P**	**10 33 56.6**	**+1.7**
baz=31,SNR=19							
STKA	**Stephens Creek**	**31.63**	**140**	P	**P**	**10 34 00.3**	**+1.0**
12nm,0.5s,baz=314,slow=9.4,SNR=33							
STKA				ScP	**ScP**	**10 40 18.1**	**+1.0**
2.2nm,0.5s,baz=297,slow=2.3,SNR=6.1							
STKA				LR	LR	10 49 29.4	
comp=Z,30nm,18.1s,baz=46,slow=41							
STKA	**Stephens Creek**	**31.63**	**140**	*e*P	**P**	**10 33 58.9**	**-0.4**
2.9nm,0.6s							
STKA				*e*ScP	**ScP**	**10 40 18.1**	**+1.0**
STKA	**Stephens Creek**	**31.63**	**140**	P	**P**	**10 34 00.7**	**+1.4**
baz=32,SNR=25							
CM31	**Chiang Mai Arr**	**33.04**	**325**	*e*P	**P**	**10 34 10.5**	**-1.2**
7.3nm,1.1s							
CMAR	**Chiang Mai Arr**	**33.04**	**325**	P	**P**	**10 34 11.0**	**-0.7**
1.5nm,0.5s,baz=149,slow=6.6,SNR=7.2							
CMAR				LR	LR	10 47 56.1	
comp=Z,29nm,20.5s,baz=198,slow=37							
RMQ	**Roma**	**33.83**	**126**	P	**P**	**10 34 20.8**	**+2.3**
baz=34,SNR=5.4							
CMSA	**Cobar Meteorol**	**34.13**	**136**	P	**P**	**10 34 23.0**	**+2.0**
baz=34,SNR=14							
ARPS	**Mount Arapiles**	**35.20**	**146**	P	**P**	**10 34 31.9**	**+1.8**
baz=35,SNR=18							
KMI	**Kunming**	**36.83**	**336**	P	**P**	**10 34 47.5**	**+3.1**
KMI				pmax	pmax		
comp=Z,14nm,0.5s							
KMI				pmax	pmax		
comp=Z,85nm,4.1s							
YNG	**Young**	**37.59**	**137**	P	**P**	**10 34 52.6**	**+2.1**
baz=38,SNR=7.4							
TOO	**Toolangi**	**37.84**	**144**	*e*P	**P**	**10 34 51.9**	**-0.6**
13nm,0.8s							
TOO	**Toolangi**	**37.84**	**144**	P	**P**	**10 34 55.3**	**+2.8**
baz=38,SNR=8.7							
ARMA	**Armidale**	**37.87**	**130**	P	**P**	**10 34 56.3**	**+3.4**
baz=38							
CNB	**Canberra Magne**	**38.83**	**138**	P	**P**	**10 35 03.2**	**+2.3**
baz=39,SNR=5.4							
MGCD	**Mangrove Creek**	**38.87**	**134**	P	**P**	**10 35 04.6**	**+3.4**
baz=39,SNR=6.3							
NJ2	**Nanjing**	**40.43**	**1**	*e*P	**P**	**10 35 15.6**	**+1.7**
NJ2				pmax	pmax		
comp=Z,22nm,0.5s							
CD2	**Chengdu**	**41.72**	**341**	P	**P**	**10 35 25.9**	**+1.3**
CD2				pmax	pmax		
comp=Z,30nm,0.6s							
JNU	**Nakatsue**	**43.16**	**15**	*e*P	**P**	**10 35 35.4**	**-0.8**
7.0nm,0.8s							
XAN	**Xi'an**	**43.35**	**349**	P	P	10 35 44.6	+6.9
XAN				pmax	pmax		
comp=Z,7.0nm,1.1s							
XAN				pmax	pmax		
comp=Z,140nm,4.1s							
LZH	**Lanzhou**	**46.52**	**344**	*e*P	P	10 36 07.8	+4.9
LZH				pP	pwP	10 36 37.9	-0.9
LZH				sP	sP	10 36 51.3	-2.0
LZH				pmax	pmax		
comp=Z,18nm,1.0s							
KS15	**Wonju Array Si**	**46.65**	**10**	*e*P	**P**	**10 36 03.5**	**-0.2**
14nm,1.1s							
KS15				*e*ScP	**ScP**	**10 41 16.6**	**+2.2**
KSRS	**Korea Array**	**46.67**	**10**	P	**P**	**10 36 04.2**	**+0.4**
12nm,1.0s,baz=190,slow=8.3,SNR=50							
KSRS				ScP	**ScP**	**10 41 16.6**	**+2.1**
1.4nm,0.8s,baz=184,slow=4.0,SNR=8.1							
BJI	**Beijing**	**48.44**	**358**	*e*P	**P**	**10 36 17.4**	**0.0**
BJI				pmax	pmax		
comp=Z,5.0nm,1.0s							
MAJO	**Matsushiro**	**48.61**	**21**	*e*P	**P**	**10 36 17.2**	**-1.6**
MJAR	**Matsushiro Arr**	**48.61**	**21**	P	**P**	**10 36 17.2**	**-1.6**
1.9nm,0.5s,baz=197,slow=7.8,SNR=9.5							
HHC	**Hu-ho-hao-te**	**49.61**	**353**	*e*P	**P**	**10 36 29.8**	**+3.3**
HHC				pmax	pmax		
comp=Z,17nm,1.0s							
HHC				pmax	pmax		
comp=Z,32nm,4.9s							
USA0B	**Ussuriysk Arra**	**53.98**	**12**	*e*P	**P**	**10 36 58.4**	**-0.2**
8.9nm,1.0s							
USRK	**Ussuriysk Ar.**	**53.98**	**12**	P	**P**	**10 36 58.4**	**-0.2**
4.2nm,0.4s,baz=200,slow=6.5,SNR=21							
SONA0	**Songino Array**	**57.19**	**350**	*e*P	**P**	**10 37 21.4**	**-0.3**
SONM	**Songino Array**	**57.19**	**350**	P	**P**	**10 37 21.4**	**-0.3**
2.7nm,0.5s,baz=168,slow=8.2,SNR=9.5							
WMQ	**Urumqi**	**59.14**	**334**	*e*P	**P**	**10 37 37.5**	**+2.2**
WMQ				LR	LR		
comp=N,60nm,20.9s							
WMQ				LR	LR		
comp=E,110nm,19.9s							
WMQ				LR	LR		
comp=Z,68nm,23.9s							
KSH	**Kashi**	**61.94**	**324**	*e*P	**P**	**10 37 58.5**	**+4.1**
MK31	**Makanchi Array**	**63.84**	**333**	*e*P	**P**	**10 38 05.6**	**-1.1**
2.7nm,0.8s							
MK32	**Makanchi Array**	**63.84**	**333**	*e*P	**P**	**10 38 05.7**	**-1.0**
MKAR	**Makanchi Array**	**63.84**	**333**	P	**P**	**10 38 05.7**	**-1.0**
2.9nm,0.6s,baz=150,slow=7.4,SNR=27							
GAR	**Garm**	**65.06**	**320**	*e*P	**P**	**10 38 13.6**	**-1.4**
6.2nm,0.8s							
KURK	**Kurchatov**	**68.38**	**334**	*e*P	**P**	**10 38 35.0**	**-0.5**
3.8nm,0.6s							
ZAA0	**Zalesovo Array**	**68.46**	**339**	*e*P	**P**	**10 38 33.9**	**-2.0**
3.8nm,0.8s							
ZALV	**Zalesovo Beam**	**68.46**	**339**	P	**P**	**10 38 34.4**	**-1.6**
4.9nm,0.7s,baz=140,slow=4.6,SNR=13							
ZAA1	**Zalesovo Array**	**68.47**	**339**	*e*P	**P**	**10 38 34.4**	**-1.6**
MAW	**Mawson**	**69.41**	**200**	P	**P**	**10 38 43.9**	**+2.4**
5.7nm,0.6s,baz=72,slow=8.0,SNR=14							
MAW	**Mawson**	**69.41**	**200**	*e*P	**P**	**10 38 40.9**	**-0.7**
4.7nm,1.4s							
MAW	**Mawson**	**69.41**	**200**	P	**P**	**10 38 44.0**	**+2.4**
baz=69,SNR=5.7							
PETK	**Petropavlovsk-**	**69.95**	**24**	P	**P**	**10 38 45.2**	**0.0**
3.9nm,0.6s,baz=77,slow=0.2,SNR=9.2							
PEA1	**Petropavlovsk-**	**69.95**	**24**	*e*P	**P**	**10 38 45.2**	**0.0**
VNDA	**Vanda**	**72.47**	**171**	P	**P**	**10 39 01.8**	**+1.8**
3.2nm,0.4s,baz=314,slow=7.1,SNR=32							
VNDA	**Vanda**	**72.47**	**171**	*e*P	**P**	**10 39 02.2**	**+2.3**
3.9nm,0.5s							
ABKAR	**Akbulak array**	**76.90**	**325**	*e*P	**P**	**10 39 24.1**	**-1.8**
1.7nm,0.6s							
TIXI	**Tiksi**	**80.38**	**3**	*e*P	**P**	**10 39 43.9**	**-0.5**
5.6nm,0.8s							
YKA	**Yellowknife Ar**	**114.07**	**24**	PKP	PKPdf	10 46 11.0	-0.2
0.3nm,0.4s,baz=304,slow=1.8,SNR=5.7							
YKB5	**Yellowknife Ar**	**114.07**	**24**	*e*PKiKP	PKPdf	10 46 11.0	-0.2
TORD	**Torodi Ar. Bea**	**117.81**	**280**	PKP	**PKPdf**	**10 46 18.9**	**-0.9**
0.6nm,0.5s,baz=18,slow=2.7,SNR=12							
TOA1	**Torodi Ar. Sit**	**117.81**	**280**	*e*PKPdf	**PKPdf**	**10 46 18.9**	**-0.9**
NV01	**Mina Array Sit**	**121.22**	**50**	*e*PKPdf	**PKiKP**	**10 46 26.4**	**+0.1**
NVAR	**Mina Array Bea**	**121.22**	**50**	PKP	**PKiKP**	**10 46 26.4**	**+0.1**
0.5nm,0.7s,baz=282,slow=1.9,SNR=5.7							
HLID	**Hailey**	**122.44**	**43**	*e*PKPdf	**PKiKP**	**10 46 28.7**	**+0.3**
TXAR	**Lajitas Array**	**135.51**	**57**	PKP	**PKiKP**	**10 46 55.8**	**+0.9**
0.2nm,0.5s,baz=231,slow=1.0,SNR=4.6							
TXAR				SKPbc	**SKPbc**	**10 50 11.7**	**+1.0**
1.2nm,0.8s,baz=242,slow=1.9,SNR=15							
CLTN	**Cedars of Leba**	**144.55**	**36**	*e*PKPdf	**PKPdf**	**10 47 10.3**	**+0.9**
CPUP	**Villa Florida**	**145.03**	**187**	PKPbc	**PKPdf**	**10 47 10.8**	**+0.2**
19nm,0.9s,baz=160,slow=3.0,SNR=17							
Q54A	**Coxs Mills**	**145.16**	**27**	*e*PKPbc	**PKPab**	**10 47 11.8**	**+1.4**
X48A	**Hartselle**	**145.24**	**39**	*e*PKPdf	**PKPab**	**10 47 11.0**	**+0.2**
KSCT	**Kent School, K**	**145.38**	**16**	*e*PKPdf	**PKPab**	**10 47 11.4**	**+0.3**
N59A	**State Game Lan**	**145.44**	**19**	*e*PKPdf	**PKPab**	**10 47 11.9**	**+0.5**
CMIG	**Matias Romero**	**146.51**	**72**	PKPbc	**PKPbc**	**10 47 15.0**	**+0.1**
4.7nm,0.6s,baz=279,slow=3.4,SNR=14							
Z50A	**Ashland**	**146.74**	**39**	*e*PKPdf	**PKPdf**	**10 47 12.8**	**-0.4**
Z50A				*e*PKPbc	**PKPbc**	**10 47 15.6**	**+0.4**
Y52A	**Lilburn**	**147.44**	**36**	*e*PKPbc	**PKPbc**	**10 47 17.3**	**+0.3**
BDFB	**Brasília**	**152.41**	**209**	PKPbc	**PKiKP**	**10 47 30.1**	**+0.1**
2.6nm,0.4s,baz=131,slow=3.0,SNR=3.5							
LPAZ	**La Paz**	**154.44**	**165**	PKPbc	**PKiKP**	**10 47 36.6**	**+1.8**
1.0nm,0.5s,baz=65,slow=3.9,SNR=6.3							
LPAZ				PKPab	**PKPab**	**

SARO	**Sassorosso**	**0.13 104**	P	**Pb**	**10 28 29.0 +0.2**
SARO			S	**Sb**	**10 28 31.3 -0.4**
SARO	**Sassorosso**	**0.13 104**	P	**Pb**	**10 28 29.1 +0.2**
SARO			S	**Sb**	**10 28 31.4 -0.3**
ERBM	**Eremo**	**0.24 33**	P	**Pb**	**10 28 31.7 +1.0**
ERBM			S	**Sb**	**10 28 36.1 +1.1**
ERBM			END		
ERBM			END		
ERBM			END		
CARD	**Cardoso**	**0.26 136**	P	**Pb**	**10 28 31.1 +0.1**
CARD			S	**Sb**	**10 28 35.1 -0.4**
CARD	**Cardoso**	**0.26 136**	P	**Pb**	**10 28 31.3 +0.2**
CARD			S	**Sb**	**10 28 35.6 +0.1**
CARD			AML	AML	
	comp=E,2915μm,0.1s				
CARD			AML	AML	
	comp=N,3225μm,0.2s				
CARD			AML	AML	
	comp=E,2910μm,0.1s				
CARD			AML	AML	
	comp=N,3225μm,0.2s				
CARD			AML	AML	
	comp=N,3225μm,0.2s				
CARD			AML	AML	
	comp=E,2910μm,0.1s				
CARD			AML	AML	
	comp=N,3225μm,0.2s				
CARD			AML	AML	
	comp=E,2910μm,0.1s				
GRAM	**Graiana**	**0.30 337**	P	**Pb**	**10 28 32.4 +0.7**
GRAM			S	**Sb**	**10 28 37.1 +0.4**
GRAM	**Graiana**	**0.30 337**	P	**Pb**	**10 28 32.4 +0.7**
GRAM			S	**Sb**	**10 28 37.6 +0.9**
GRAM			AML	AML	
	comp=E,3880μm,0.2s				
GRAM			AML	AML	
	comp=N,3180μm,0.5s			

comp=Z,0.1nm,0.3s,baz=334,slow=16,SNR=2.1
CPUP Villa Florida 9.95 121 *e*Pn **Pn 11 57 26.2 +1.6**
CFA Coronel Fontan 10.17 187 P **Pn 11 57 27.4 0.0**
comp=Z,1.7nm,0.3s,baz=42,slow=3.5,SNR=6.8
CFA S **S 11 59 13.5 -8.0**
comp=Z,1.9nm,0.3s,baz=184,slow=17,SNR=5.0
TRQA Tornquist 17.05 167 *e*P **Pn 11 58 51.8 -0.3**
comp=Z,11nm,1.2s
GO06 Curarrehue 18.48 191 *e*P **P 11 59 07.0 +0.9**
comp=Z,11nm,0.8s
PLCA Paso Flores 19.46 189 P **P 11 59 17.8 +1.3**
comp=Z,0.3nm,0.3s,baz=4.0,slow=12,SNR=7.3
PLCA Paso Flores 19.46 189 *e*P **P 11 59 17.1 +0.6**
PTGA Pitinga 21.68 19 P **P 11 59 38.5 -1.4**
comp=Z,2.3nm,0.3s,baz=208,slow=15,SNR=7.3
PTGA Pitinga 21.68 19 *e*P **P 11 59 38.5 -1.4**
comp=Z,3.6nm,0.8s
MDP Montagnes des 29.85 29 P **P 12 00 52.2 -1.2**
comp=Z,9.3nm,0.8s,baz=221,slow=11,SNR=3.1
FDF Fort de France 36.41 9 *e*P **P 12 01 50.0 -0.2**
comp=Z,62nm,1.1s
AOPR Arecibo Observ 39.58 0 *e*P **P 12 02 15.2 -1.3**
comp=Z,26nm,1.1s
SNAA Sanae 61.67 161 P **P 12 05 02.7 +2.0**
comp=Z,0.5nm,0.5s,baz=286,slow=3.9,SNR=4.1
TXAR Lajitas Array 61.74 324 P **P 12 05 03.1 +1.3**
comp=Z,0.1nm,0.6s,baz=157,slow=9.6,SNR=2.7
TORD Torodi Ar. Bea 75.53 69 P **P 12 06 27.7 +0.6**
comp=Z,1.0nm,0.5s,baz=253,slow=5.5,SNR=10
BOSA Boshof 81.75 117 P **P 12 07 02.0 +0.9**
comp=Z,3.6nm,1.1s,baz=252,slow=3.2,SNR=3.5
ASAR Alice Springs 130.80 205 PKP **PKiKP 12 13 54.0 +0.9**
comp=Z,0.3nm,0.6s,baz=133,slow=1.8,SNR=5.6
WRA Warramunga Arr 133.92 208 PKP **PKiKP 12 13 59.8 +0.4**
comp=Z,1.5nm,1.0s,baz=170,slow=2.2,SNR=7.6

ISCJB ***22*** *11:57:47.5±0.6,36.°72S±0.°04×146.°07E±0.°07,h10km, Error ellipse: s-maj=7.8km s-min=5.1km az=21.3*
NEIC ***22*** *11:57:48.0±0.0,36.°73S×146.°15E,h11km,ML3.2(AUST), After AUST.*
NEIC Felt at Benalla.
AUST ***22*** *11:57:48.4±0.0,36.°72S×146.°15E,h11km, Error ellipse: s-maj=0.5km s-min=0.2km az=18.0*
IDC ***22*** *11:58:15.8±6.4,35.°08S×144.°70E,h0km,mb1 3.6/3, mb1mx3.4/32,mbtmp3.3/3,ML2.9/3, Error ellipse: s-maj=191.5km s-min=50.2km az=48.0*
ISC 22 11:57:48.9±1.1,**36.°75S**±0.°05×**146.°08E**±0.°08,**h10**km,**n16,** σ**1**§**46**/20,**Victoria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	**Toolangi**	**0.95**	**210**	*e*Pg	**Pg**	**11 58 07.0**	**-0.2**
TOO				*e*Sg	**Sg**	**11 58 19.4**	**-0.1**
TOO	**Toolangi**	**0.95**	**210**	P	**Pg**	**11 58 06.9**	**-0.2**
	baz=1.0,SNR=162						
TOO				S	**Sg**	**11 58 18.9**	**-0.7**
	baz=1.0						
MILA	**Mila**	**2.48**	**98**	P	**Pn**	**11 58 28.2**	**-1.2**
	baz=2.4,SNR=11						
CAN	**Canberra**	**2.76**	**60**	*e*Pn	**Pn**	**11 58 32.1**	**-1.1**
CAN	**Canberra**	**2.76**	**60**	P	**Pn**	**11 58 32.9**	**-0.3**
	baz=2.7						
CNB	**Canberra Magne**	**3.02**	**63**	P	**Pn**	**11 58 36.9**	**+0.1**
	baz=3.0,SNR=4.4						
ARPS	**Mount Arapiles**	**3.41**	**268**	P	**Pn**	**11 58 42.8**	**+0.8**
	baz=3.5,SNR=10						
CMSA	**Cobar Meteorol**	**5.21**	**356**	P	**Pn**	**11 59 07.3**	**+0.5**
	baz=5.2						
STKA	**Stephens Creek**	**6.11**	**321**	Pn	**Pn**	**11 59 20.6**	**+1.4**
	0.5nm,0.3s,baz=137,slow=17,SNR=19						
STKA				Lg	Lg	12 00 26.1	
	3.6nm,0.3s,baz=44,slow=20,SNR=9.4						
STKA	**Stephens Creek**	**6.11**	**321**	*e*Pn	**Pn**	**11 59 20.2**	**+1.0**
STKA				*e*Sn	**Sn**	**12 00 26.9**	**-2.4**
STKA	**Stephens Creek**	**6.11**	**321**	P	**Pn**	**11 59 20.6**	**+1.4**
	baz=6.1,SNR=8.6						
STKA				S	**Sn**	**12 00 27.1**	**-2.2**
	baz=6.1						
TAU	**Tasmania Unive**	**6.23**	**172**	*e*Pn	**Pn**	**11 59 21.5**	**+0.7**
HTT	**Hallett**	**6.74**	**297**	P	**Pn**	**11 59 28.2**	**+0.3**
	baz=6.8						
BBOO	**Buckleboo**	**9.13**	**293**	*e*Pn	**Pn**	**11 59 59.9**	**-0.8**
ASAR	**Alice Springs**	**16.73**	**318**	Pn	**P**	**12 01 44.7**	**-1.1**
	0.0nm,0.3s,baz=142,slow=12,SNR=3.1						
ASAR				Sn	Sn	12 04 32.7	-17
	0.0nm,0.3s,baz=145,slow=22,SNR=2.7						
WRA	**Warramunga Arr**	**19.65**	**325**	P	**Pn**	**12 02 23.0**	**+3.8**
	0.1nm,0.3s,baz=149,slow=12,SNR=2.0						

IDC ***22*** *12:04:58.4±0.5,7.°64N×82.°03W,h0km,mb4.7/24, mb1 4.8/29,mb1mx4.7/45,mbtmp4.7/29,ML3.7/4,MS4.6/20, Ms1 4.6/20,ms1mx4.5/28,Error ellipse: s-maj=11.9km s-min=9.3km az=36.0*
MOS ***22*** *12:04:58.9±1.0,7.°51N×82.°01W,h10km,mb5.3/55, MS4.9/6,Error ellipse: s-maj=9.6km s-min=5.0km az=110.8*
UCR ***22*** *12:04:58.7±2.8,7.°51N×82.°07W,h0km±6km,MD4.6,ML4.9, mb5.1(NEIC)*
ISCJB ***22*** *12:04:60.0±0.1,7.°54N±0.°02×82.°05W±0.°02,h18km, mb5.0/278,MS4.8/41,Error ellipse: s-maj=2.9km s-min=1.7km az=42.8*
NEIC ***22*** *12:05:00.4±1.2,7.°49N×82.°01W,h10km,mb5.1/274,Error ellipse: s-maj=14.8km s-min=12.2km az=224.0*
NEIC Felt at Puerto Armuelles.
BJI ***22*** *12:05:02.7±0.0,7.°50N×82.°00W,h10km,mB5.4/5, Ms5.4/13,Ms7 5.2/13*
GCMT ***22*** *12:05:03.4±0.1,7.°63N±0.°01×82.°05W±0.°01,h12km, MW5.3/101,Moment Tensor Solution. s72,c108; s101,c186; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.89±.02; $M_{\theta\theta}$-0.42±.01; $M_{\phi\phi}$-0.46±.02; $M_{r\theta}$-0.14±.04; $M_{r\phi}$0.65±.01; $M_{\theta\phi}$-0.31±.05; Best double couple: $M_0$1.05800×10^{17} NP1:ϕ_s156.00000°,δ52.00000°, λ117.00000°. NP2:ϕ_s296.00000°,δ45.00000°,λ59.00000°. Principal axes: T 1.0190, Plg68.0000°, Azm127.0000°; N 0.0790, Plg21.0000°, Azm318.0000°; P -1.0970, Plg4.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 12:05:01.8±0.3,**7.°56N**±0.°04×**82.°03W**±0.°03,**h18**km,**n1020,** σ**1**§**48**/1019,**mb5.1**/280,**MS4.8**/41,**9C-11D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.97**	**335**	*e*P	**Pb**	**12 05 16.9**	**-3.1**
DVD				AMP		12 05 23.9	
	comp=Z,34μm,0.4s						
TBS2		**1.37**	**333**	*e*P	**Pn**	**12 05 24.8**	**-1.5**
BRU2	**Volcan**	**1.39**	**332**	*e*P	**Pn**	**12 05 25.4**	**-1.0**
BRU2				AMP		12 05 29.5	
	comp=Z,68μm,0.8s						
EDSV	**San Vito**	**1.56**	**323**	*e*P	**Pn**	**12 05 28.2**	**-0.5**
PTJ1	**Puerto Jimnez**	**1.59**	**308**	*i* P	**Pn**	**12 05 26.6**	**-2.5**
PNME	**Penonome**	**1.92**	**61**	*e*P	**Pn**	**12 05 33.1**	**-0.6**
PNME	**Penonome**	**1.92**	**61**	||*i*P	**Pn**	**12 05 33.0**	**-0.6**
PNME				*i* S	**Sb**	**12 06 00.5**	**+0.5**
EDPN	**Palmar Norte**	**1.98**	**315**	*e*P	**Pn**	**12 05 32.8**	**-1.6**
EDBA	**Buenos Aires**	**2.01**	**322**	*e*P	**Pn**	**12 05 34.3**	**-0.6**
DRK0	**Durika**	**2.08**	**325**	*e*P	**Pn**	**12 05 35.0**	**-0.9**
DRK0				AMP		12 05 37.9	
	comp=Z,300μm,0.2s						
EDLM	**Las Mercedes**	**2.30**	**318**	*e*P	**Pn**	**12 05 38.5**	**-0.4**
EDDO	**Dominical**	**2.47**	**313**	*e*P	**Pn**	**12 05 39.7**	**-1.5**
ZANG	**Zanguenga, Cho**	**2.55**	**57**	*e*P	**Pn**	**12 05 42.8**	**+0.5**
ZANG				*i* S	**Sn**	**12 06 14.8**	**+1.8**
PINA	**Piqa, Costa Ab**	**2.58**	**49**	||*i*P	**Pn**	**12 05 43.8**	**+1.2**
BCIP	**Isla Barro Col**	**2.70**	**54**	*e*Pn	**Pn**	**12 05 44.4**	**+0.1**
BCIP	**Isla Barro Col**	**2.70**	**54**	*e*P	**Pn**	**12 05 44.4**	**+0.1**
BCIP	**Isla Barro Col**	**2.70**	**54**	*e*P	**Pn**	**12 05 46.1**	**+1.8**
BCIP	**Isla Barro Col**	**2.70**	**54**	*e*P	**Pn**	**12 05 44.4**	**+0.1**
FLAM	**Flamenco Islan**	**2.81**	**61**	||*e*P	**Pn**	**12 05 47.8**	**+1.9**
FRIJ	**El Hiral**	**2.82**	**54**	*e*P	**Pn**	**12 05 46.4**	**+0.5**
FRIJ				*e*S	**Sb**	**12 06 24.5**	**-1.3**
LCR2	**La Lucha 2**	**2.92**	**318**	*e*P	**Pn**	**12 05 44.9**	**-2.6**
CVTR	**Volcan Turrial**	**2.98**	**325**	*e*P	**Pn**	**12 05 48.8**	**+0.2**
HDC	**Heredia**	**3.18**	**320**	*e*Pn	**Pn**	**12 05 51.0**	**-0.1**
HDC	**Heredia**	**3.18**	**320**	*e*P	**Pn**	**12 05 50.6**	**-0.5**
CEDE	**Laguna Cedeo**	**3.93**	**318**	*e*P	**Pn**	**12 06 03.4**	**+2.1**
JTS	**Las Juntas de**	**3.96**	**313**	Pn	**Pn**	**12 06 00.3**	**-1.4**
	comp=Z,9.4nm,0.3s,baz=194,slow=4.5,SNR=42						
JTS				Sn	**Sn**	**12 06 48.9**	**+1.1**
	comp=Z,30nm,0.3s,baz=258,slow=20,SNR=1.7						
JTS	**Las Juntas de**	**3.96**	**313**	*e*Pn	**Pn**	**12 06 01.4**	**-0.4**
JTS	**Las Juntas de**	**3.96**	**313**	*c i*P	**Pn**	**12 06 01.3**	**-0.4**
JTS	**Las Juntas de**	**3.96**	**313**	*e*P	**Pn**	**12 06 00.4**	**-1.4**
UPD2	**Meteti**	**4.10**	**76**	*e*P	**Pn**	**12 06 05.1**	**+1.5**
UPD2	**Meteti**	**4.10**	**76**	||*i*P	**Pn**	**12 06 05.0**	**+1.5**
MESS	**Mesas**	**4.44**	**316**	*e*P	**Pn**	**12 06 08.6**	**+0.2**
BUEV	**Buena Vista**	**4.63**	**314**	*e*P	**Pn**	**12 06 13.6**	**+2.6**
GB1A	**Bonnuqen Arri**	**4.64**	**315**	*e*P	**Pn**	**12 06 10.9**	**-0.3**
SOLC	**Bahia Solano**	**4.78**	**106**	*e*P	**Pn**	**12 06 10.9**	**-1.9**
SOLC	**Bahia Solano**	**4.78**	**106**	*e*P	**Pn**	**12 06 11.0**	**-1.9**
ESPN	**Las Esperanzas**	**5.12**	**334**	*e*Pn	**Pn**	**12 06 17.8**	**+0.1**
ESPN	**Las Esperanzas**	**5.12**	**334**	*e*P	**Pn**	**12 06 17.3**	**-0.3**
ACON	**Acoyapa**	**5.37**	**325**	*e*Pn	**Pn**	**12 06 21.2**	**+0.2**
ACON	**Acoyapa**	**5.37**	**325**	*e*P	**Pn**	**12 06 20.4**	**-0.6**
DBBC	**Dabeiba**	**5.80**	**95**	*e*P	**Pn**	**12 06 27.2**	**+0.1**
PRVC	**Isla de Provid**	**5.82**	**6**	*e*P	**Pn**	**12 06 28.7**	**+1.4**
PRVC	**Isla de Provid**	**5.82**	**6**	*e*P	**Pn**	**12 06 29.0**	**+1.8**
MALC	**Bahia Malaga**	**5.85**	**127**	*e*P	**Pn**	**12 06 27.7**	**0.0**
MALC	**Bahia Malaga**	**5.85**	**127**	*e*P	**Pn**	**12 06 27.5**	**-0.2**
PLMC	**San Jos del P**	**6.29**	**114**	*e*P	**Pn**	**12 06 33.0**	**-0.8**
HELC	**Santa Helena**	**6.60**	**101**	*e*P	**Pn**	**12 06 38.6**	**+0.4**
YOTC	**Yotoco, Valle**	**6.68**	**122**	*e*P	**Pn**	**12 06 37.7**	**-1.5**
ESTN	**Estel**	**6.97**	**323**	*e*Pn	**Pn**	**12 06 43.6**	**+0.5**
ESTN	**Estel**	**6.97**	**323**	*e*P	**Pn**	**12 06 45.5**	**+2.4**
GUY2C	**Guyana, Caldas**	**7.02**	**109**	*e*P	**Pn**	**12 06 44.1**	**-0.1**
ZARC	**Zaragoza, Cauc**	**7.11**	**90**	*e*P	**Pn**	**12 06 45.0**	**-0.1**
RCON	**San Juan de Ri**	**7.15**	**326**	*e*P	**Pn**	**12 06 46.8**	**+1.1**
RREF	**El Recreo**	**7.15**	**111**	*e*P	**Pn**	**12 06 47.4**	**+1.3**
BBAC	**Balboa, Cauca**	**7.28**	**139**	*e*P	**Pn**	**12 06 47.4**	**-0.1**
POPC	**Popayan, Colom**	**7.30**	**133**	*e*P	**Pn**	**12 06 47.6**	**-0.2**
CNOCA	**NORCASIA, CALD**	**7.38**	**105**	*e*P	**Pn**	**12 06 49.6**	**+0.9**
NORC	**Norcasia**	**7.39**	**105**	*e*P	**Pn**	**12 06 50.4**	**+1.6**
PTBC	**PUERTO BERRIO,**	**7.59**	**97**	*e*P	**Pn**	**12 06 53.6**	**+2.1**
SOTA	**Rioblanco**	**7.63**	**135**	*e*P	**Pn**	**12 06 55.0**	**+2.4**
PCON	**Cinco Dias**	**7.65**	**133**	*e*P	**Pn**	**12 06 55.6**	**+2.8**
CSGN	**Cosiguina Volc**	**7.65**	**315**	*e*Pn	**Pn**	**12 06 53.1**	**+0.6**
MARP	**Paez Belalcaza**	**7.65**	**127**	*e*P	**Pn**	**12 06 55.0**	**+2.3**
ORTC	**Ortega, Tolima**	**7.66**	**118**	*e*P	**Pn**	**12 06 54.3**	**+1.7**
CRUC	**La Cruz**	**7.81**	**139**	*e*P	**Pn**	**12 06 56.9**	**+1.9**
GCUF	**Volcan Galeras**	**7.83**	**143**	*e*P	**Pn**	**12 06 56.2**	**+0.8**
ARGC	**Ariguani, Magd**	**8.03**	**73**	*e*P	**Pn**	**12 07 00.5**	**+2.8**
OTAV	**Otavalo**	**8.10**	**154**	*e*Pn	**Pn**	**12 06 57.2**	**-1.8**
OTAV	**Otavalo**	**8.10**	**154**	*e*P	**Pn**	**12 06 57.2**	**-1.8**
OTAV	**Otavalo**	**8.10**	**154**	*e*P	**Pn**	**12 06 58.8**	**-0.2**
ROSC	**El Rosal**	**8.13**	**109**	Pn	**Pn**	**12 07 01.2**	**+1.9**
	comp=Z,4.0nm,0.3s,baz=74,slow=1.4,SNR=35						
ROSC				Sn	**Sn**	**12 08 32.8**	**+1.8**
	comp=Z,2.2nm,0.3s,baz=307,slow=20,SNR=1.7						
ROSC				LR	LR	12 09 44.8	
	comp=Z,2μm,20.5s,baz=327,slow=35						
ROSC	**El Rosal**	**8.13**	**109**	*e*Pn	**Pn**	**12 06 58.9**	**-0.4**
ROSC	**El Rosal**	**8.13**	**109**	*e*P	Pn	12 07 04.0	+4.7
BETC	**Betania**	**8.16**	**126**	*e*P	**Pn**	**12 07 01.5**	**+2.0**
CTAB	**Cerro Tablazo,**	**8.18**	**108**	*e*P	**Pn**	**12 07 04.2**	**+4.1**
TGUH	**Tegucigalpa,Un**	**8.26**	**322**	*e*Pn	**Pn**	**12 07 01.5**	**+0.8**
TGUH	**Tegucigalpa,Un**	**8.26**	**322**	*e*P	Pn	12 07 07.0	+6.2
BRRC	**Barranca, Sant**	**8.27**	**93**	*e*P	**Pn**	**12 07 03.8**	**+2.9**
FLOC	**Florencia**	**8.70**	**133**	*e*P	**Pn**	**12 07 09.8**	**+3.0**
CHIC	**Chingaza**	**8.75**	**109**	*e*P	**Pn**	**12 07 11.6**	**+3.7**
CODC	**Agustn Codazz**	**8.81**	**74**	*e*P	**Pn**	**12 07 10.9**	**+2.6**
CCODA	**Codazzi, Cesar**	**8.81**	**74**	*e*P	**Pn**	**12 07 10.3**	**+1.9**
BARC	**Barichara**	**8.84**	**96**	*e*P	**Pn**	**12 07 10.9**	**+2.0**
VILC	**Villavicencio,**	**8.97**	**112**	*e*P	**Pn**	**12 07 13.6**	**+2.9**
TAMC	**Tame, Arauca**	**10.23**	**96**	*e*P	**Pn**	**12 07 28.2**	**+0.4**
URIC	**Uribia, Colomb**	**10.72**	**67**	*e*P	**Pn**	**12 07 32.2**	**-2.3**
APG	**El Apazote**	**11.09**	**313**	Pn	**Pn**	**12 07 41.1**	**+1.3**
	comp=Z,1.3nm,0.3s,baz=164,slow=6.1,SNR=9.9						
SDV	**Santo Domingo**	**11.36**	**83**	Pn	**Pn**	**12 07 44.1**	**+0.6**
	comp=Z,5.6nm,0.3s,baz=259,slow=8.7,SNR=32						
SDV				Sn	**Sn**	**12 09 47.9**	**-2.3**
	baz=264,slow=14,SNR=1.4						
SDV				LR	LR	12 12 48.6	
	comp=Z,4μm,20.9s,baz=260,slow=41						
SDV	**Santo Domingo**	**11.36**	**83**	*e*P	**Pn**	**12 07 45.1**	**+1.7**
SDV	**Santo Domingo**	**11.36**	**83**	*e*P	**Pn**	**12 07 43.9**	**+0.4**
MTDJ	**Mount Denham**	**11.47**	**22**	*e*Pn	**Pn**	**12 07 45.7**	**+0.8**
PAYG	**Puerto Ayora**	**11.60**	**226**	*e*Pn	**Pn**	**12 07 45.5**	**-1.2**
FSCY	**Frank Sound, G**	**11.71**	**4**	*e*Pn	**Pn**	**12 07 47.8**	**-0.3**
DABV	**Dabajuro**	**11.73**	**73**	*e*P	**Pn**	**12 07 50.0**	**+1.6**
CCIG	**Comitan**	**13.14**	**312**	*e*Pn	**Pn**	**12 08 09.1**	**+1.3**
GTBY	**Guantanamo Bay**	**14.01**	**28**	*e*Pn	**Pn**	**12 08 19.9**	**+0.4**
LGNH	**Logne**	**14.23**	**39**	*e*Pn	**Pn**	**12 08 23.6**	**+1.0**
ATAH	**Atahualpa**	**15.04**	**166**	Pn	**Pn**	**12 08 34.8**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=331,slow=23,SNR=7.9						
ATAH				LR	LR	12 13 47.3	
	comp=Z,7μm,18.4s,baz=339,slow=35						
SDDR	**Presa de Saban**	**15.43**	**42**	*e*Pn	**Pn**	**12 08 38.1**	**-0.6**
	comp=Z,145nm,0.8s						
BANI	**BANI**	**15.65**	**45**	*e*Pn	**Pn**	**12 08 42.0**	**+0.3**
CMIG	**Matias Romero**	**15.72**	**308**	Pn	**Pn**	**12 08 42.5**	**0.0**
	comp=Z,0.3nm,0.3s,baz=113,slow=11,SNR=5.0						
062Z	**Marathon**	**17.10**	**3**	P	**Pn**	**12 08 58.6**	**-1.3**
	baz=183						
061Z	**Ochoppi**	**18.24**	**3**	P	**Pn**	**12 09 12.9**	**-1.2**
	baz=184						
OBIP	**Obispado Ponce**	**18.28**	**54**	*e*Pn	**P**	**12 09 14.5**	**-0.2**
	comp=Z,467nm,1.9s						
AOPR	**Arecibo Observ**	**18.33**	**53**	*e*Pn	**P**	**12 09 15.5**	**+0.2**
	comp=Z,250nm,1.4s						
059Z	**Ave Maria**	**18.68**	**2**	P	**P**	**12 09 18.2**	**-0.9**
	baz=182						
SJG	**San Juan**	**18.69**	**54**	P	**P**	**12 09 18.6**	**-0.6**
	baz=235,slow=14,SNR=1.8						
SJG				S	**Sn**	**12 12 49.3**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=145,slow=18,SNR=2.0						
SJG				LR	LR	12 16 18.5	
	comp=Z,3μm,20.7s,baz=225,slow=36						
SJG	**San Juan**	**18.69**	**54**	*e*P	**Pn**	**12 09 19.2**	**-0.4**
	comp=Z,205nm,1.5s						
SJG	**San Juan**	**18.69**	**54**	*e*P	**Pn**	**12 09 19.2**	**-0.4**
SJG				pmax	pmax		
	comp=Z,205nm,1.5s						
060Z	**West Palm Beac**	**18.80**	**4**	P	**P**	**12 09 16.9**	**-3.4**
	baz=184						
TLIG	**Tlapa**	**18.94**	**303**	*e*P	**Pn**	**12 09 22.5**	**-0.3**
	comp=Z,89nm,1.1s						
CBYP	**Canovanas**	**19.01**	**54**	*e*P	**P**	**12 09 22.5**	**-0.3**
	comp=Z,192nm,1.4s						
MTP	**Monte Pirata**	**19.16**	**55**	*e*P	**P**	**12 09 24.2**	**-0.2**
	comp=Z,90nm,1.0s						
059A	**Moore Haven**	**19.32**	**2**	*e*P	**Pn**	**12 09 27.4**	**+0.2**
	comp=Z,382nm,1.6s						
059A	**Moore Haven**	**19.32**	**2**	P	**P**	**12 09 25.4**	**-0.7**
	baz=183						
058A	**Arcadia**	**19.39**	**1**	P	**P**	**12 09 27.0**	**+0.1**
	baz=181						
060A	**Indiantown**	**19.44**	**4**	P	**P**	**12 09 27.4**	**+0.1**
	baz=185						
STVI	**Saint Thomas**	**19.78**	**56**	*e*P	**P**	**12 09 30.7**	**-0.5**
	comp=Z,302nm,1.5s						
959A	**Okeechobee**	**19.89**	**3**	P	**P**	**12 09 31.2**	**-1.1**
	baz=183						
958A	**Wauchula**	**19.92**	**1**	P	**P**	**12 09 30.4**	**-2.3**
	baz=181						
957A	**Wimauma**	**20.00**	**359**	P	Pn	12 09 34.2	-1.1
	baz=179						
NNA	**Nana**	**20.09**	**165**	P	Pn	12 09 35.1	-1.3
	comp=Z,34nm,0.9s,baz=330,slow=12,SNR=6.0						
NNA				LR	LR	12 17 08.1	
	comp=Z,929nm,18.9s,baz=322,slow=36						
NNA	**Nana**	**20.09**	**165**	*e*P	**P**	**12 09 33.3**	**-1.3**
	comp=Z,126nm,1.4s						
NNA	**Nana**	**20.09**	**165**	*i* P	Pn	12 09 36.8	+0.3
859A	**Kempfer Cattle**	**20.42**	**3**	P	**P**	**12 09 37.0**	**-1.1**
	baz=183						
DWPF	**Disney Wildern**	**20.45**	**2**	P	**P**	**12 09 38.5**	**+0.1**
	baz=182						
858A	**St. Cloud**	**20.55**	**2**	P	**P**	**12 09 39.1**	**-0.4**
	baz=182						
GRGR	**Grenville**	**20.58**	**76**	*e*P	**P**	**12 09 40.4**	**+0.4**
	comp=Z,278nm,0.9s						
857A	**Zephyrhills**	**20.60**	**360**	P	**P**	**12 09 39.7**	**-0.3**
	baz=179						
SVB	**Belmont**	**21.20**	**73**	*e*P	**P**	**12 09 46.8**	**+0.1**
	comp=Z,167nm,0.9s						
757A	**Oxford**	**21.27**	**360**	P	**P**	**12 09 46.6**	**-0.6**
	baz=180						
758A	**Lake Helen**	**21.31**	**2**	P	**P**	**12 09 48.0**	**+0.3**
	baz=182						
656A	**Willston**	**21.70**	**359**	P	**P**	**12 09 52.8**	**+0.9**
	baz=179						
658A	**Bunnell**	**21.76**	**2**	*e*P	**P**	**12 09 53.0**	**+0.5**
	comp=Z,191nm,1.3s						
658A	**Bunnell**	**21.76**	**2**	P	**P**	**12 09 52.9**	**+0.4**
	baz=182						
655A	**Horseshoe Beac**	**21.87**	**357**	P	**P**	**12 09 53.8**	**+0.2**
	baz=177						
657A	**Interlachen**	**21.91**	**0**	P	**P**	**12 09 55.1**	**+0.9**
	baz=180						
556A	**Lake Butler**	**22.33**	**359**	P	**P**	**12 09 57.6**	**-1.0**
	baz=179						
557A	**Orange Park**	**22.34**	**1**	P	**P**	**12 09 54.7**	**-4.1**
	baz=181						
554A	**Perry**	**22.46**	**356**	P	**P**	**12 09 58.6**	**-1.4**
	baz=176						
555A	**McAlpin**	**22.46**	**358**	P	**P**	**12 09 58.1**	**-2.0**
	baz=178						
553A	**Crawfordville**	**22.63**	**355**	P	**P**	**12 09 59.4**	**-2.4**
	baz=174						
552A	**Lynn Haven**	**22.67**	**353**	P	**P**	**12 09 60.0**	**-2.2**
	baz=172						
456A	**Hilliard**	**23.05**	**0**	P	**P**	**12 10 04.6**	**-1.6**
	baz=180						
455A	**Stateville**	**23.08**	**358**	P	**P**	**12 10 05.6**	**-1.0**
	baz=177						
454A	**Quitman**	**23.09**	**356**	P	**P**	**12 10 04.1**	**-2.5**
	baz=176						
451A	**Vernon**	**23.20**	**352**	P	**P**	**12 10 07.0**	**-0.8**
	baz=171						
453A	**Whigham**	**23.28**	**355**	P	**P**	**12 10 08.4**	**-0.1**
	baz=174						
452A	**Marianna**	**23.36**	**353**	P	**P**	**12 10 09.0**	**-0.3**
	baz=172						
PTGA	**Pitinga**	**23.50**	**110**	P	**P**	**12 10 10.5**	**-0.5**
	comp=Z,17nm,0.8s,baz=290,slow=12,SNR=14						
PTGA				S	**S**	**12 14 27.5**	**+3.4**
	comp=Z,0.7nm,0.4s,baz=177,slow=17,SNR=1.4						
PTGA	**Pitinga**	**23.50**	**110**	*e*P	**P**	**12 10 10.4**	**-0.5**
	comp=Z,26nm,0.9s						
PTGA	**Pitinga**	**23.50**	**110**	*e*P	**P**	**12 10 11.6**	**+0.6**
449A	**Pace**	**23.59**	**349**	P	**P**	**12 10 10.5**	**-1.1**
	baz=167						
356A	**Blackshear**	**23.65**	**360**	P	**P**	**12 10 11.3**	**-0.9**
	baz=180						
355A	**Pearson**	**23.68**	**358**	P	**P**	**12 10 12.1**	**-0.3**
	baz=178						
357A	**Townsend**	**23.75**	**1**	P	**P**	**12 10 14.2**	**+1.0**
	baz=181						
353A	**Camilla**	**23.76**	**355**	P	**P**	**12 10 12.7**	**-0.5**
	baz=175						
TIGA	**Tifton**	**23.80**	**357**	P	**P**	**12 10 13.1**	**-0.6**
	baz=176						
352A	**Blakely**	**23.95**	**354**	*e*P	**P**	**12 10 15.8**	**+0.8**
	comp=Z,102nm,1.1s						
352A	**Blakely**	**23.95**	**354**	P	**P**	**12 10 14.6**	**-0.5**
	baz=173,SNR=6.1						
BRAL	**Brewton**	**23.95**	**349**	*e*P	**P**	**12 10 14.9**	**-0.2**
	comp=Z,88nm,0.9s						
BRAL	**Brewton**	**23.95**	**349**	P	**P**	**12 10 13.8**	**-1.2**
	baz=168						
LNIG	**Linares**	**23.98**	**318**	*e*P	**P**	**12 10 15.4**	**0.0**
	comp=Z,95nm,1.7s						
350A	**Dozier**	**24.08**	**351**	P	**P**	**12 10 14.6**	**-1.6**
	baz=170						
349A	**Repton**	**24.16**	**349**	P	**P**	**12 10 17.0**	**0.0**
	baz=167,SNR=11						
255A	**Hazlehurst**	**24.25**	**359**	P	**P**	**12 10 17.8**	**-0.1**
	baz=179						
254A	**Abbeville**	**24.29**	**357**	P	**P**	**12 10 18.2**	**-0.1**
	baz=177						
256A	**Glennville**	**24.30**	**0**	P	**P**	**12 10 18.4**	**+0.1**
	baz=180						
257A	**Skidaway Islan**	**24.31**	**2**	P	**P**	**12 10 17.4**	**-1.0**
	baz=182						
252A	**Lumpkin**	**24.45**	**354**	P	**P**	**12 10

baz=170
Y60A Bolivia 26.55 7 P P 12 10 38.5 -0.2
baz=188
Y48A Jasper 26.65 350 P P 12 10 39.4 -0.2
baz=169
X55A Gracelyn & Ava 26.79 1 P P 12 10 40.2 -0.6
baz=181,SNR=5.7
NATX Nacogdoches 26.80 336 P P 12 10 40.3 -0.7
baz=151
X56A White Oak 26.82 2 P P 12 10 42.9 +1.8
baz=182,SNR=5.9
X57A Johnson Farm, 26.84 4 P P 12 10 43.6 +2.4
baz=184
X53A Estanollee 26.84 358 P P 12 10 42.5 +1.2
baz=177
X54A Belton 26.86 359 P P 12 10 41.3 -0.2
baz=179
X52A Dahlonega 26.97 357 P P 12 10 43.4 +0.9
baz=176
X50B Fort Payne 26.98 353 P P 12 10 43.3 +0.7
baz=172
X58A Rowland 26.98 5 P P 12 10 42.6 0.0
baz=186
BIRD Birdtown, Kers 27.00 3 eP P 12 10 43.4 +0.7
comp=Z,55nm,1.4s
X49A Woodville 27.11 352 P P 12 10 44.3 +0.6
baz=171
X60A Albert Glenn T 27.15 7 P P 12 10 44.7 +0.6
baz=189
X48A Hartselle 27.16 351 P P 12 10 46.5 +2.4
baz=169
X47A Russelville 27.36 349 P P 12 10 47.7 +1.7
baz=167,SNR=6.5
W54A Cherokee Point 27.40 360 P P 12 10 46.9 +0.6
baz=180
LPAZ La Paz 27.40 150 P P 12 10 47.3 +0.2
comp=Z,4.8nm,0.9s,baz=332,slow=12,SNR=13
LPAZ LR LR 12 22 53.7
comp=Z,2µm,18.6s,baz=311,slow=39
LPAZ La Paz 27.40 150 eP P 12 10 46.0 -1.1
comp=Z,18nm,1.2s
LPAZ La Paz 27.40 150 eP P 12 10 46.0 -1.1
LPAZ pmax pmax
comp=Z,18nm,1.2s
LPAZ La Paz 27.40 150 eP P 12 10 47.1 0.0
Z41A Richland Creek 27.45 340 eP P 12 10 47.9 +1.1
comp=Z,32nm,0.8s
Z41A Richland Creek 27.45 340 P P 12 10 46.6 -0.2
baz=156
KMSC Kings Mountain 27.46 1 P P 12 10 47.5 +0.6
baz=181
W56A Indian Trail 27.48 3 P P 12 10 50.0 +3.0
baz=183
W53A Cullowhee 27.50 358 P P 12 10 49.0 +1.7
baz=178
W57A Gilead 27.53 4 P P 12 10 46.9 -0.5
baz=184
X46A Booneville 27.54 348 P P 12 10 47.5 0.0
baz=166
W51A Cleveland 27.59 355 P P 12 10 48.6 +0.6
baz=174
OXF Oxford 27.67 347 eP P 12 10 49.4 +0.7
comp=Z,74nm,1.3s
OXF Oxford 27.67 347 eP P 12 10 49.4 +0.7
OXF pmax pmax
comp=Z,73nm,1.3s
OXF Oxford 27.67 347 P P 12 10 49.3 +0.5
baz=164
W50A Signal Mountai 27.68 354 P P 12 10 49.4 +0.5
baz=173
W49A Belvidere 27.70 353 P P 12 10 47.9 -1.2
baz=171
SWET Sewanee 27.76 353 eP P 12 10 50.2 +0.6
comp=Z,23nm,1.0s
W48A Pulaski 27.82 351 P P 12 10 51.9 +1.8
baz=170,SNR=8.5
PLAL Pickwick Lake 27.85 349 eP P 12 10 51.4 +1.0
comp=Z,65nm,1.9s
WLAR White Oak Lake 27.95 340 eP P 12 10 51.5 +0.3
comp=Z,105nm,1.3s
V53A Saluda 27.99 359 P P 12 10 52.2 +0.6
baz=178
W47A Westpoint 28.03 350 P P 12 10 54.0 +2.0
baz=188,SNR=12
X43A Marvell 28.04 344 P P 12 10 54.9 +2.9
baz=161
W46A Michie 28.06 349 P P 12 10 53.9 +1.8
baz=167
V54A Nebo 28.09 0 P P 12 10 53.1 +0.6
baz=180
V50A Pikevile 28.12 355 P P 12 10 51.6 -1.2
baz=174
V56A Mocksville 28.16 3 P P 12 10 54.3 +1.2
baz=183
V55A Taylorsville 28.17 1 P P 12 10 52.7 -0.6
baz=182
V52A Sevierville 28.19 357 P P 12 10 52.8 -0.6
baz=177
V51A Loudon 28.19 356 P P 12 10 52.2 -1.2
baz=175
V58A Windy Hill, Pi 28.23 5 P P 12 10 54.4 +0.7
baz=186,SNR=5.1
JCT Junction City 28.24 326 eP P 12 10 53.8 -0.1
comp=Z,27nm,1.0s
JCT Junction City 28.24 326 eP P 12 10 53.8 -0.1
JCT pmax pmax
comp=Z,27nm,1.0s
JCT Junction City 28.24 326 P P 12 10 54.5 +0.5
baz=140
V57A Coltrane Farms 28.27 4 P P 12 10 55.3 +1.2
baz=185
V59A Middlesex 28.29 7 P P 12 10 56.1 +1.8
baz=188
V49A McMinnville 28.30 353 P P 12 10 55.5 +1.2
baz=172
V48A Smith Brothers 28.39 352 eP P 12 10 55.2 +0.1
comp=Z,31nm,0.9s
V48A Smith Brothers 28.39 352 P P 12 10 54.5 -0.7
baz=170,SNR=15
V60A Jim Taylor Roa 28.41 8 P P 12 10 54.2 -1.1
baz=190
V61A Roper 28.54 9 P P 12 10 58.3 +1.8
baz=191
V47A Nunnelly 28.58 351 P P 12 10 57.1 +0.3
baz=169,SNR=9.3
X40A Basin Creek Fa 28.59 341 eP P 12 10 56.9 -0.1
comp=Z,34nm,1.6s
V46A Holladay 28.66 350 P P 12 10 56.9 -0.7
baz=167,SNR=7.6
CLTN Cedars of Leba 28.67 353 eP P 12 10 57.2 -0.4
comp=Z,12nm,1.1s
U53A Fall Branch 28.68 359 P P 12 10 56.0 -1.8
baz=179
U56A King 28.70 3 P P 12 10 59.7 +1.8
baz=183
UALR University of 28.70 342 eP P 12 10 57.7 -0.2
comp=Z,24nm,0.9s
U52A Thorn Hill 28.73 358 P P 12 10 59.4 +1.2
baz=177
U51A La Follette 28.74 357 P P 12 11 01.3 +3.0
baz=176
U55A TA2, Sparta 28.82 2 P P 12 11 00.8 +1.7
baz=182
U54A Nelsons Funny 28.83 0 P P 12 11 01.5 +2.3
baz=180
U50A Jamestown 28.84 355 P P 12 10 59.8 +0.6
baz=174
U57A Blanch 28.85 5 P P 12 10 59.2 +0.1
baz=186
U58A Oxford 28.88 6 P P 12 11 01.3 +1.8
baz=187
TZTN Tazewell 28.89 357 eP P 12 10 59.9 +0.4
comp=Z,38nm,1.4s
TZTN Tazewell 28.89 357 P P 12 11 03.2 +3.6
baz=177
MIAR Mount Ida 28.89 340 eP P 12 10 59.6 0.0
comp=Z,46nm,1.4s
MIAR Mount Ida 28.89 340 P P 12 10 58.6 -0.9
baz=156,SNR=10
U59A Littleton 28.92 7 eP P 12 11 00.1 +0.3
comp=Z,90nm,1.9s
U59A Littleton 28.92 7 P P 12 11 02.9 +3.0
baz=189
WVT Waverly 28.93 350 eP P 12 10 59.2 -0.7
comp=Z,15nm,0.9s
WVT Waverly 28.93 350 eP P 12 10 59.2 -0.7
WVT pmax pmax
comp=Z,15nm,0.9s
WVT Waverly 28.93 350 P P 12 11 02.3 +2.4
baz=168
U49A Red Boiling Sp 29.02 354 P P 12 11 00.5 -0.3
baz=172,SNR=5.0
W41B Gary Mavity, V 29.04 343 eP P 12 11 00.1 -0.8
comp=Z,25nm,0.9s
W41B Gary Mavity, V 29.04 343 P P 12 10 60.0 -1.0
baz=159,SNR=13
U48A Cassie Pea, Po 29.11 353 P P 12 11 01.6 +0.1
baz=171,SNR=6.4
U47A Clarksville 29.15 351 P P 12 11 03.1 +1.2
baz=169
WHAR Wooly Hollow 29.16 343 eP P 12 11 01.2 -0.8
comp=Z,30nm,0.9s
U46A Springville 29.21 350 P P 12 11 01.7 -0.8
baz=168,SNR=5.5
MNMC Minye Minye 29.22 155 eP P 12 11 01.2 -1.8
comp=Z,69nm,1.2s
T53A Wise 29.29 359 P P 12 11 05.0 +1.8
baz=179
MDP Montagnes des 29.31 93 P P 12 11 03.9 +0.3
comp=Z,20nm,1.0s,baz=276,slow=11,SNR=3.5
MDP LR LR 12 23 26.0
comp=Z,2µm,18.5s,baz=281,slow=38
T51A Gray 29.32 357 P P 12 11 05.9 +2.4
baz=176
T54A Tazewell 29.37 1 P P 12 11 03.3 -0.6
baz=181
T56A Rocky Mt 29.39 3 P P 12 11 04.7 +0.6
baz=184
T57A Hurt 29.41 5 eP P 12 11 05.0 +0.7
comp=Z,20nm,1.0s
T57A Hurt 29.41 5 P P 12 11 06.1 +1.8
baz=186
T58A Grand View Acr 29.43 6 P P 12 11 06.2 +1.8
baz=187
T52A Hallie 29.43 358 P P 12 11 06.2 +1.8
baz=178
T50A Nancy 29.44 355 P P 12 11 06.3 +1.8
baz=174
T55A Pulaski 29.45 2 P P 12 11 05.8 +1.2
baz=182
W39A Magazine 29.55 340 P P 12 11 04.6 -0.8
baz=156,SNR=11
T59A Double "B" Far 29.56 7 eP P 12 11 05.5 -0.1
comp=Z,30nm,1.1s
T59A Double "B" Far 29.56 7 P P 12 11 06.2 +0.7
baz=189
HPIG 29.57 314 eP P 12 11 05.9 -0.2
comp=Z,18nm,1.3s
X37A Clayton 29.57 337 eP P 12 11 06.3 +0.6
comp=Z,49nm,1.5s
T49A Edmonton 29.58 354 P P 12 11 07.6 +1.8
baz=173
T47A Sharon Grove 29.66 352 P P 12 11 07.0 +0.6
baz=170,SNR=7.3
T48A Bowling Green 29.68 353 P P 12 11 06.0 -0.6
baz=171,SNR=6.8
TXAR Lajitas Array 29.73 320 P P 12 11 08.0 +0.7
comp=Z,1.7nm,0.8s,baz=144,slow=7.5,SNR=20
TXAR PcP PcP 12 14 12.2 +1.0
comp=Z,0.7nm,0.6s,baz=152,slow=4.1,SNR=4.0
TXAR LR LR 12 24 26.4
comp=Z,401nm,18.4s,baz=0.0,slow=39
TX31 Lajitas Ar. Si 29.73 320 eP P 12 11 08.2 +0.9
comp=Z,13nm,1.3s
PB11 IPOC Station P 29.76 156 eP P 12 11 06.6 -1.0
comp=Z,47nm,1.1s
ABTX Abilene, Hawle 29.83 329 P P 12 11 07.5 -0.5
baz=143
GO01 Chusmiza 29.86 155 eP P 12 11 07.8 -1.1
comp=Z,49nm,1.1s
T45A Paducah 29.94 349 P P 12 11 09.5 +0.6
baz=167
S51A Beattyville 29.98 358 eP P 12 11 09.6 +0.3
comp=Z,14nm,0.8s
S51A Beattyville 29.98 358 P P 12 11 11.1 +1.8
baz=177
S50A Richmond 30.06 356 P P 12 11 09.4 -0.5
baz=175
S56A Natural Bridge 30.07 4 P P 12 11 09.5 -0.6
baz=185
S55A Lewisburg 30.11 2 P P 12 11 11.7 +1.2
baz=183
S54A Dingess, Beckl 30.11 1 P P 12 11 08.7 -1.8
baz=181
S58A Poland Farm, P 30.14 6 P P 12 11 08.9 -1.7
baz=188
S48A Wiedeman Farm, 30.18 354 P P 12 11 11.1 0.0
baz=172
S57A Dark Hollow, R 30.20 5 P P 12 11 13.0 +1.8
baz=186
H06E1 SOCORRO T-PHAS 30.21 295 T T 12 42 40.4
SNR=7.1
S47A Hartford 30.22 352 P P 12 11 12.0 +0.6
baz=170,SNR=7.8
S49A Springfield 30.23 355 P P 12 11 10.7 -0.8
baz=174,SNR=7.1
U40A Yellville 30.32 343 P P 12 11 12.2 -0.1
baz=158,SNR=15
S60A Water View 30.41 8 P P 12 11 11.0 -2.0
baz=190
S46A Don Dixon Farm 30.43 351 P P 12 11 13.3 0.0
baz=169
R54A Victor 30.50 2 P P 12 11 16.9 +3.0
baz=182
R58B Mineral 30.50 6 P P 12 11 13.9 +0.1
baz=188
HHAR Hobbs 30.59 341 eP P 12 11 14.8 +0.1
comp=Z,18nm,1.4s
R53A Hurricane 30.64 0 eP P 12 11 15.3 +0.2
comp=Z,17nm,1.0s
R53A Hurricane 30.64 0 P P 12 11 18.1 +3.0
baz=180
R51A Hillsboro 30.64 358 P P 12 11 13.9 -1.1
baz=177
R50A Paris 30.66 356 P P 12 11 18.3 +3.0
baz=176
S44A Carbondale 30.71 349 P P 12 11 16.3 +0.6
baz=166
R49A Shelbyville 30.73 355 P P 12 11 15.8 0.0
baz=174,SNR=5.5
R57A Stanardsville 30.77 5 P P 12 11 15.1 -1.1
baz=187
WCI Wyandotte Cave 30.78 353 eP P 12 11 16.3 0.0
comp=Z,24nm,0.9s
WCI Wyandotte Cave 30.78 353 eP P 12 11 16.3 0.0
WCI pmax pmax
comp=Z,24nm,0.9s
WCI Wyandotte Cave 30.78 353 P P 12 11 17.5 +1.2
baz=172
R58A Rapidan 30.82 6 P P 12 11 16.7 0.0
baz=188,SNR=5.9
R59A King George, V 30.83 8 P P 12 11 16.2 -0.5
baz=189
R47A Wooly Knot Far 30.87 353 P P 12 11 17.3 +0.2
baz=171,SNR=9.8
R48A Northridge Ran 30.90 354 P P 12 11 18.0 +0.6
baz=173
TUL1 Leonard 30.90 338 P P 12 11 19.6 +2.1
baz=153
R46A Gibon Southern 30.92 352 P P 12 11 17.6 0.0
baz=169
R60A Leonardtown, M 30.97 8 P P 12 11 20.4 +2.4
baz=190
PB01 IPOC Station P 30.98 157 eP P 12 11 18.3 0.0
comp=Z,72nm,1.4s
R45A Skylar, Fairfi 31.11 350 P P 12 11 18.2 -1.1
baz=168,SNR=8.8
WMOK Wichita Mounta 31.13 333 eP P 12 11 18.8 -0.7
comp=Z,19nm,1.4s
WMOK Wichita Mounta 31.13 333 eP P 12 11 18.8 -0.7
WMOK pmax pmax
comp=Z,19nm,1.4s
WMOK Wichita Mounta 31.13 333 P P 12 11 19.7 +0.2
baz=147
Q53A Leroy 31.17 1 P P 12 11 19.5 -0.2
baz=181,SNR=8.1
Q50A Georgetown 31.20 357 P P 12 11 22.4 +2.4
baz=176
R61A Willards 31.23 10 P P 12 11 19.7 -0.5
baz=193
FVM French Village 31.23 347 eP P 12 11 19.6 -0.7
comp=Z,16nm,0.9s
FVM French Village 31.23 347 eP P 12 11 19.6 -0.7
FVM pmax pmax
comp=Z,16nm,0.9s
Q52A Bidwell 31.27 360 P P 12 11 20.6 0.0
baz=180,SNR=6.3
Q54A Coxs Mills 31.31 2 P P 12 11 21.6 +0.7
baz=182
Q55A Buckhannon 31.35 3 P P 12 11 21.7 +0.3
baz=184,SNR=7.1
Q51A Peebles 31.35 358 eP P 12 11 21.9 +0.5
comp=Z,22nm,1.0s
Q51A Peebles 31.35 358 P P 12 11 20.8 -0.5
baz=178
Q48A North Vernon 31.41 354 P P 12 11 23.7 +1.8
baz=173
Q49A Aurora 31.41 356 P P 12 11 22.6 +0.7
baz=174
Q56A Snyder Ridge, 31.45 4 P P 12 11 20.5 -1.8
baz=185,SNR=8.5
CCM Cathedral Cave 31.49 346 eP P 12 11 21.6 -0.9
comp=Z,22nm,0.9s
CCM Cathedral Cave 31.49 346 eP P 12 11 21.7 -0.9
CCM pmax pmax
comp=Z,22nm,0.9s
CCM Cathedral Cave 31.49 346 P P 12 11 21.9 -0.6
baz=162
Q47A Bedord North L 31.49 353 P P 12 11 23.2 +0.6
baz=172,SNR=7.5
Q57A Strasburg 31.51 5 P P 12 11 23.4 +0.6
baz=187
Q45A Warren Harvey, 31.68 351 P P 12 11 22.7 -1.5
baz=168,SNR=9.7
BLO Bloomington 31.73 353 eP P 12 11 25.5 +0.8
comp=Z,26nm,0.9s
BLO Bloomington 31.73 353 eP P 12 11 25.5 +0.8
BLO pmax pmax
comp=Z,26nm,0.9s
P53A Whipple 31.80 1 P P 12 11 27.7 +2.5
baz=181
P55A Reedsville 31.87 3 P P 12 11 28.4 +2.4
baz=184
CLDB Colider 31.89 125 eP P 12 11 25.2 -1.2
P48A Milroy 31.91 355 P P 12 11 26.9 +0.6
baz=174
P49A Miami Univ. Ec 31.93 356 P P 12 11 26.5 +0.1
baz=175
P54A Burton 31.94 2 P P 12 11 28.4 +1.9
baz=183
P52A Corning 31.94 360 P P 12 11 28.4 +1.9
baz=180
P56A Dayton Farm, R 31.94 5 P P 12 11 27.2 +0.7
baz=186,SNR=6.1
P50A Jamestown 31.95 357 P P 12 11 28.5 +1.8
baz=177
P57A Homestead Farm 31.99 6 P P 12 11 28.2 +1.3
baz=187
P47A Martinsville 32.02 354 P P 12 11 27.8 +0.6
baz=172
SDMD Soldier's Deli 32.05 8 eP P 12 11 28.1 +0.6
comp=Z,12nm,0.9s
P45A Graceland, Par 32.24 352 eP P 12 11 29.3 +0.2
comp=Z,25nm,0.9s
P45A Graceland, Par 32.24 352 P P 12 11 27.9 -1.3
baz=169,SNR=6.9
P59A Jarrettsville 32.31 8 P P 12 11 29.6 -0.1
baz=190,SNR=5.8
MNTX Cornudas Mount 32.41 321 eP P 12 11 30.2 -0.6
comp=Z,53nm,1.8s
MNTX Cornudas Mount 32.41 321 P P 12 11 29.6 -1.2
baz=133,SNR=14
O52A Adamsville 32.42 0 P P 12 11 30.8 +0.1
baz=180
O51A Pataskala 32.45 359 P P 12 11 29.9 -1.1
baz=179
O50A Cable 32.48 358 P P 12 11 31.3 0.0
baz=177
MSTX Muleshoe 32.52 327 eP P 12 11 32.2 +0.3
comp=Z,23nm,1.4s
MSTX Muleshoe 32.52 327 P P 12 11 28.7 -3.1
baz=139
O54A Avella 32.52 2 P P 12 11 31.7 +0.1
baz=183,SNR=6.5
ACSO Alum Creek Sta 32.55 359 eP P 12 11 32.4 +0.6
comp=Z,28nm,1.1s
ACSO Alum Creek Sta 32.55 359 P P 12 11 32.5 +0.6
baz=178
O49A Covington 32.56 357 P P 12 11 30.8 -1.1
baz=176
O53A New Philadelph 32.56 1 P P 12 11 33.2 +1.2
baz=182
O55A Ligonier 32.60 4 P P 12 11 32.4 0.0
baz=185
LVC Limon Verde 32.62 157 eP P 12 11 32.4 -0.7
comp=Z,80nm,1.4s
LVC Limon Verde 32.62 157 eP P 12 11 32.4 -0.7
LVC pmax pmax
comp=Z,80nm,1.4s
LVC Limon Verde 32.62 157 eP P 12 11 34.9 +1.8
P60A Greenville 32.62 9 P P 12 11 33.7 +1.2
baz=192
P43A Skaggs, Pawnee 32.64 349 P P 12 11 32.7 0.0
baz=166,SNR=6.3
O48A Farmland 32.68 356 P P 12 11 33.6 +0.6
baz=174,SNR=5.8
MVL Millersville 32.70 8 eP P 12 11 34.4 +1.2
comp=Z,31nm,1.0s
O56A Blue Knob Stat 32.72 5 P P 12 11 33.5 +0.1
baz=186,SNR=6.3
O47A Sheridan 32.75 354 P P 12 11 31.9 -1.7
baz=172
O57A Amberson 32.75 6 P P 12 11 33.7 0.0
baz=188
O44A Mansfield 32.96 351 P P 12 11 34.3 -1.2
baz=168
SFIN Lafayette 32.99 353 eP P 12 11 36.4 +0.6
comp=Z,17nm,0.9s
SFIN Lafayette 32.99 353 P P 12 11 35.4 -0.3
baz=171,SNR=6.6
O59A Robesonia 33.03 8 P P 12 11 35.0 -1.1
baz=191,SNR=12
N50A Nevada 33.09 358 P P 12 11 37.2 +0.7
baz=178
N53A Lisbon 33.12 2 P P 12 11 38.1 +1.2
baz=182
SSPA Standing Stone 33.15 6 eP P 12 11 38.0 +0.9
comp=Z,26nm,1.0s
SSPA Standing Stone 33.15 6 P P 12 11 38.3 +1.2
baz=187
O60A Telford 33.16 9 P P 12 11 37.5 +0.4
baz=192,SNR=11
N55A Marion Center 33.19 4 eP P 12 11 37.6 0.0
comp=Z,42nm,1.4s
N55A Marion Center 33.19 4 P P 12 11 35.8 -1.8
baz=185
N51A Ashland 33.22 360 P P 12 11 39.0 +1.2
baz=179
N48A Decatur 33.27 356 P P 12 11 37.0 -1.1
baz=175
N49A Columbus Grove 33.28 357 P P 12 11 37.1 -1.1
baz=176
N57A Milroy 33.30 6 P P 12 11 40.2 +1.8
baz=188
N47A Urbana 33.34 355 P P 12 11 36.5 -2.3
baz=173
N56A West Decatur 33.38 5 P P 12 11 40.4 +1.2
baz=187
LUPA Lehigh Univers 33.43 9 eP P 12 11 40.8 +1.2
comp=Z,5.5nm,1.0s
N46A Monticello 33.46 354 P P 12 11 40.4 +0.6
baz=172
HDIL Hopedale 33.49 350 eP P 12 11 40.7 +0.6
comp=Z,26nm,0.8s
HDIL Hopedale 33.49 350 P P 12 11 38.3 -1.8
baz=167,SNR=5.7
N45A Kentland 33.51 352 P P 12 11 40.8 +0.6
baz=170
N44A Piper City 33.54 352 P P 12 11 40.5 0.0
baz=169,SNR=6.5
N59A State Game Lan 33.68 9 P P 12 11 42.8 +1.0
baz=191,SNR=6.0
N43A Stutzman Famil 33.84 350 P P 12 11 41.4 -1.8
baz=167
M54A Oil Creek Stat 33.87 3 eP P 12 11 43.6 +0.1
comp=Z,19nm,1.1s
M54A Oil Creek Stat 33.87 3 P P 12 11 46.4 +3.0
baz=184
M55A Ridgway 33.89 4 P P 12 11 45.4 +1.8
baz=186,SNR=5.9
N41A Harden Midland 33.94 348 eP P 12 11 42.2 -1.7
comp=Z,39nm,0.9s
N41A Harden Midland 33.94 348 P P 12 11 42.8 -1.1
baz=164,SNR=6.2

M56A	Emporium	33.96	5	P	P	12 11 43.1	-1.1	
	baz=187,SNR=8.0							
KSU1	Kansas State U	34.04	340	P	P	12 11 42.9	-2.0	
	baz=154							
PAL	Palisades	34.09	11	eP	P	12 11 46.4	+1.2	
	comp=Z,81nm,1.5s							
PAL	Palisades	34.09	11	eP	P	12 11 46.4	+1.2	
PAL				pmax	pmax			
	comp=Z,81nm,1.5s							
PAL	Palisades	34.09	11	P	P	12 11 44.0	-1.2	
	baz=194							
M44A	Midewin, Midew	34.11	352	P	P	12 11 44.3	-1.2	
	baz=169							
N40A	Mertquake, Sal	34.26	347	P	P	12 11 46.1	-0.7	
	baz=163							
L53A	Girard	34.29	2	P	P	12 11 48.3	+1.2	
	baz=183							
M43A	Waltham Townsh	34.30	351	P	P	12 11 45.9	-1.2	
	baz=168							
KSPA	Keystone Colle	34.31	8	eP	P	12 11 47.6	+0.4	
	comp=Z,41nm,1.0s							
L50A	Kingsville	34.35	359	P	P	12 11 47.6	+0.1	
	baz=179							
L47A	Sherwood	34.39	356	P	P	12 11 48.5	+0.6	
	baz=174,SNR=7.2							
M61A	Granite Spring	34.41	11	P	P	12 11 49.2	+1.2	
	baz=194							
121A	Cookes Peak, D	34.49	320	P	P	12 11 50.4	+1.3	
	baz=131,SNR=7.2							
M41A	Milan	34.52	349	P	P	12 11 48.3	-0.6	
	baz=165							
L54A	Sinclairville	34.62	4	P	P	12 11 51.1	+1.2	
	baz=185							
L55A	Hinsdale	34.63	5	P	P	12 11 50.0	0.0	
	baz=186,SNR=7.9							
GO02	Mina Guanaco	34.71	160	eP	P	12 11 50.2	-1.0	
	comp=Z,126nm,1.7s							
319A	Douglas	34.76	317	eP	P	12 11 51.6	+0.2	
	comp=Z,58nm,1.3s							
BNM	Barren Site	34.85	323	eP	P	12 11 53.2	+0.9	
KSCT	Kent School, K	34.86	11	eP	P	12 11 52.6	+0.6	
	comp=Z,20nm,0.9s							
BINY	Binghamton	34.91	8	eP	P	12 11 53.0	+0.6	
	comp=Z,30nm,1.0s							
BINY	Binghamton	34.91	8	P	P	12 11 53.6	+1.2	
	baz=190,SNR=7.8							
L42A	Oliver, Polo	34.97	350	eP	P	12 11 53.1	+0.3	
	comp=Z,28nm,1.0s							
L42A	Oliver, Polo	34.97	350	P	P	12 11 52.8	0.0	
	baz=167,SNR=8.1							
K54A	Basiliko Farm,	35.03	4	P	P	12 11 52.3	-1.2	
	baz=186							
K47A	Vermontville	35.07	356	P	P	12 11 53.2	-0.6	
	baz=175							
K46A	Dorr	35.14	355	P	P	12 11 53.8	-0.6	
	baz=174							
K48A	Perry	35.15	357	P	P	12 11 55.1	+0.6	
	baz=176							
K55A	Perry	35.20	5	P	P	12 11 54.5	-0.4	
	baz=187,SNR=6.2							
ANMO	Albuquerque	35.31	324	eP	P	12 11 56.6	+0.4	
	comp=Z,12nm,1.0s							
ANMO	Albuquerque	35.31	324	deP	P	12 11 58.6	+2.4	
ANMO				pmax	pmax			
	comp=Z,10.0nm,0.9s							
ANMO	Albuquerque	35.31	324	P	P	12 11 57.6	+1.4	
	baz=135							
TASM	ASL Pad, Albuq	35.31	324	P	P	12 11 55.5	-0.7	
	baz=135,SNR=15							
TASM	ASL Pad, Albuq	35.31	324	P	P	12 11 55.7	-0.4	
	baz=135,SNR=14							
L40A	Anamosa	35.31	348	eP	P	12 11 54.2	-1.7	
	comp=Z,37nm,0.9s							
L40A	Anamosa	35.31	348	P	P	12 11 55.8	-0.1	
	baz=164,SNR=11							
BRYW	Bryant College	35.46	14	eP	P	12 11 57.7	+0.6	
	comp=Z,28nm,0.9s							
J52A	Paris	35.57	2	P	P	12 11 58.1	0.0	
	baz=183							
MEDO	Medina	35.60	4	P	P	12 11 59.0	+0.6	
	baz=186							
SCIA	State Center	35.61	346	eP	P	12 11 58.5	+0.1	
	comp=Z,30nm,0.8s							
J47A	Sumner	35.62	356	P	P	12 11 57.9	-0.6	
	baz=175							
J49A	Marlette	35.67	359	P	P	12 11 57.8	-1.2	
	baz=178							
J54A	Appleton	35.70	4	P	P	12 12 00.4	+1.2	
	baz=186							
J55A	Hilton	35.76	5	eP	P	12 12 00.3	+0.6	
	comp=Z,18nm,1.1s							
T25A	Trinidad	35.79	329	eP	P	12 12 00.1	-0.2	
	comp=Z,10nm,1.0s							
T25A	Trinidad	35.79	329	P	P	12 11 59.6	-0.8	
	baz=140,SNR=5.7							
BCX	Boston College	35.94	14	eP	P	12 12 01.4	+0.2	
	comp=Z,119nm,1.4s							
ACTO	Acton	35.95	2	P	P	12 12 01.3	0.0	
	baz=183							
JFWS	Jewell Farm	35.95	350	P	P	12 11 59.5	-1.8	
	baz=166							
HRV	Adam Dziewonsk	36.02	13	eP	P	12 12 02.8	+1.0	
	comp=Z,36nm,1.1s							
HRV	Adam Dziewonsk	36.02	13	eP	P	12 12 02.8	+1.0	
HRV				pmax	pmax			
	comp=Z,36nm,1.1s							
HRV	Adam Dziewonsk	36.02	13	P	P	12 12 03.0	+1.1	
	baz=198							
I51A	Listowel	36.11	1	P	P	12 12 01.0	-1.8	
	baz=182							
WLVO	Westleyville	36.36	4	P	P	12 12 05.4	+0.6	
	baz=186							
PECO	Prince Edward	36.50	6	P	P	12 12 07.2	+1.2	
	baz=188,SNR=7.1							
I42A	Draeger Farm,	36.69	352	eP	P	12 12 08.1	+0.5	
	comp=Z,34nm,1.0s							
I42A	Draeger Farm,	36.69	352	P	P	12 12 07.6	0.0	
	baz=169,SNR=12							
I55A	Frankford	36.71	5	P	P	12 12 07.8	0.0	
	baz=187,SNR=7.2							
SDCO	Great Sand Dun	36.82	328	eP	P	12 12 09.3	+0.2	
	comp=Z,22nm,1.5s							
SDCO	Great Sand Dun	36.82	328	P	P	12 12 07.8	-1.4	
	baz=139,SNR=9.0							
I41A	Arkdale	37.00	351	eP	P	12 12 10.9	+0.7	
	comp=Z,17nm,0.9s							
HNH	Hanover	37.01	12	eP	P	12 12 11.4	+1.1	
	comp=Z,28nm,0.9s							
H48A	Harrisville	37.02	358	P	P	12 12 09.8	-0.6	
	baz=178							
DELO	Deloro Mine	37.02	5	P	P	12 12 10.3	-0.1	
	baz=187,SNR=5.8							
H55A	Tweed	37.09	6	P	P	12 12 10.7	-0.4	
	baz=188,SNR=7.7							
H43A	Windswept, Lux	37.11	353	eP	P	12 12 11.9	+0.7	
	comp=Z,18nm,0.8s							
H43A	Windswept, Lux	37.11	353	P	P	12 12 10.6	-0.6	
	baz=171							
X18A	Snowflake	37.16	320	eP	P	12 12 13.3	+1.3	
	comp=Z,15nm,1.0s							
H56A	Elgin	37.23	7	P	P	12 12 11.6	-0.6	
	baz=189							
W18A	Petrified Fore	37.40	321	eP	P	12 12 15.0	+1.0	
	comp=Z,46nm,1.1s							
W18A	Petrified Fore	37.40	321	P	P	12 12 14.2	+0.1	
	baz=131,SNR=5.6							
LONY	Lake Ozonia	37.49	9	P	P	12 12 14.0	-0.4	
	baz=192,SNR=6.7							
G47A	Hillman	37.51	358	P	P	12 12 15.2	+0.6	
	baz=177							
VT1	Waterbury	37.52	11	eP	P	12 12 15.1	+0.5	
	comp=Z,70nm,0.9s							
S22A	4UR Ranch, Cre	37.52	327	eP	P	12 12 15.9	+0.8	
	comp=Z,28nm,1.8s							
S22A	4UR Ranch, Cre	37.52	327	P	P	12 12 13.8	-1.4	
	baz=137,SNR=9.1							
G53A	Haliburton	37.54	4	P	P	12 12 17.2	+2.4	
	baz=186							
214A	Organ Pipe Nat	37.55	314	P	P	12 12 12.8	-2.3	
	baz=124,SNR=6.4							
PLVO	Plevna	37.59	6	eP	P	12 12 15.8	+0.6	
PLVO	Plevna	37.59	6	P	P	12 12 14.4	-0.9	
	baz=188,SNR=8.6							
LBNH	Lisbon	37.59	12	eP	P	12 12 16.5	+1.2	
	comp=Z,46nm,1.1s							
LBNH	Lisbon	37.59	12	eP	P	12 12 16.5	+1.2	
LBNH				pmax	pmax			
	comp=Z,46nm,1.1s							
LBNH	Lisbon	37.59	12	P	P	12 12 13.4	-1.9	
	baz=196,SNR=11							
KLBO	Killbear Provi	37.69	2	P	P	12 12 16.7	+0.6	
	baz=183							
OGNE	Ogallala	37.72	335	P	P	12 12 16.0	-0.5	
	baz=146							
BUKO	Buck Lake	37.81	3	P	P	12 12 17.7	+0.6	
	baz=184							
G55A	Calabogie	37.84	6	P	P	12 12 16.9	-0.4	
	baz=188,SNR=9.8							
LCO	Las Campanas	37.96	164	eP	P	12 12 17.9	-1.0	
	comp=Z,125nm,1.8s							
LCO	Las Campanas	37.96	164	ceP	P	12 12 21.3	+2.4	
LCO	Las Campanas	37.96	164	eP	P	12 12 20.1	+1.2	
SMTB	Santa Maria do	38.00	115	eP	P	12 12 19.3	+0.1	
AQDB	Aquidauana	38.03	138	eP	P	12 12 18.5	-0.8	
MVCO	Mesa Verde	38.07	325	eP	P	12 12 19.8	+0.1	
	comp=Z,59nm,1.7s							
MVCO	Mesa Verde	38.07	325	P	P	12 12 19.0	-0.7	
	baz=134,SNR=14							
F45A	CMU Biological	38.10	356	P	P	12 12 16.6	-3.0	
	baz=174							
F48A	Evansville	38.13	359	P	P	12 12 18.6	-1.2	
	baz=179							
F52A	Sundridge	38.17	3	P	P	12 12 17.8	-2.4	
	baz=184							
ORIO	Orleans, Innes	38.17	7	P	P	12 12 20.1	0.0	
	baz=190							
PEMO	Pembroke	38.20	5	P	P	12 12 20.3	-0.1	
	baz=188,SNR=9.1							
ECSD	EROS Data Cent	38.23	343	eP	P	12 12 20.7	0.0	
	comp=Z,20nm,1.1s							
ECSD	EROS Data Cent	38.23	343	P	P	12 12 18.7	-2.0	
	baz=156,SNR=13							
G40A	Rib Lake	38.23	351	eP	P	12 12 20.7	0.0	
	comp=Z,18nm,1.0s							
G40A	Rib Lake	38.23	351	P	P	12 12 21.2	+0.5	
	baz=167,SNR=9.8							
F51A	Arnstein	38.27	2	P	P	12 12 22.2	+1.2	
	baz=183							
ALGO	Algonquin Park	38.41	4	P	P	12 12 22.0	-0.1	
	baz=186,SNR=5.3							
G39A	Holcombe	38.41	350	P	P	12 12 19.9	-2.4	
	baz=165,SNR=9.6							
ISCO	Idaho Springs	38.44	330	eP	P	12 12 24.1	+1.2	
	comp=Z,11nm,1.3s							
ISCO	Idaho Springs	38.44	330	eP	P	12 12 24.1	+1.2	
ISCO				pmax	pmax			
	comp=Z,11nm,1.3s							
ISCO	Idaho Springs	38.44	330	P	P	12 12 21.9	-0.9	
	baz=140							
F55A	Otter Lake	38.45	6	P	P	12 12 22.5	0.0	
	baz=189,SNR=7.2							
MOQ	Mont Orford	38.56	11	eP	P	12 12 24.2	+0.7	
SMCO	Snowmass	38.65	328	eP	P	12 12 25.6	+0.8	
	comp=Z,14nm,1.4s							
113A	Mohawk Valley,	38.67	315	eP	P	12 12 25.8	+1.3	
	comp=Z,55nm,1.4s							
SPMN	Marine on St.	38.67	348	P	P	12 12 23.4	-1.0	
	baz=163,SNR=7.8							
WUAZ	Wupatki	38.68	320	eP	P	12 12 25.7	+0.9	
	comp=Z,20nm,1.1s							
WUAZ	Wupatki	38.68	320	P	P	12 12 25.5	+0.6	
	baz=129,SNR=12							
E52A	Mattawa	38.69	4	P	P	12 12 22.2	-2.4	
	baz=185							
E50A	Wahnapitae	38.74	1	P	P	12 12 24.9	0.0	
	baz=182							
PV01	Paradox Valley	38.76	326	eP	P	12 12 27.2	+1.7	
	comp=Z,15nm,1.4s							
E47A	Iron Bridge	38.77	359	P	P	12 12 27.6	+2.4	
	baz=178							
E48A	Lockeyer	38.78	360	P	P	12 12 27.7	+2.4	
	baz=180							
Y14A	Wickenburg	38.80	317	eP	P	12 12 26.4	+0.7	
	comp=Z,14nm,0.9s							
PEXB	Peixe	38.81	120	eP	P	12 12 25.8	-0.2	
F40A	Park Falls	38.85	351	P	P	12 12 23.8	-2.1	
	baz=167,SNR=9.3							
E53A	Dumoine, Ponti	38.86	5	P	P	12 12 25.9	0.0	
	baz=187							
COWI	Conover	38.89	352	eP	P	12 12 27.1	+0.9	
	comp=Z,6.9nm,0.9s							
E51A	G1948 Merrick	38.90	3	P	P	12 12 25.0	-1.2	
	baz=184							
E43A	Lone Tree Farm	38.91	355	P	P	12 12 25.8	-0.6	
	baz=172							
E54A	Lac Daplat, Po	38.96	5	P	P	12 12 26.2	-0.6	
	baz=188							
F39A	Loretta	38.98	350	P	P	12 12 24.8	-2.1	
	baz=166,SNR=5.6							
GO04	Tololo Observa	39.03	164	eP	P	12 12 26.9	-1.0	
	comp=Z,178nm,1.6s							
TRQ	Mont Tremblant	39.06	8	eP	P	12 12 27.7	0.0	
E44A	Grand Marais A	39.06	356	P	P	12 12 24.7	-3.0	
	baz=174							
F37A	Hinrichs Farm,	39.11	348	P	P	12 12 26.2	-1.9	
	baz=163							
PKME	Peaks-Kenny Pk	39.16	14	P	P	12 12 29.3	+0.9	
	baz=200,SNR=13							
F38A	Pierce - Schro	39.19	349	P	P	12 12 27.8	-1.0	
	baz=164,SNR=7.6							
D46A	Sault St. Mari	39.23	358	P	P	12 12 28.4	-0.6	
	baz=177							
D47A	Chapleau	39.37	359	P	P	12 12 30.8	+0.6	
	baz=178							
D52A	ZEK Kipawa Sen	39.40	4	P	P	12 12 28.1	-2.4	
	baz=186							
N23A	Red Feather La	39.44	331	eP	P	12 12 32.5	+1.2	
	comp=Z,7.5nm,1.1s							
N23A	Red Feather La	39.44	331	P	P	12 12 33.3	+2.1	
	baz=141							
D51A	Lot 18 Range I	39.46	3	P	P	12 12 30.9	0.0	
	baz=184							
D48A	Paudash Townsh	39.48	0	P	P	12 12 31.7	+0.6	
	baz=180,SNR=5.2							
D53A	Lac Vacive, Po	39.55	5	eP	P	12 12 31.8	+0.1	
	comp=Z,14nm,0.9s							
D53A	Lac Vacive, Po	39.55	5	P	P	12 12 31.7	0.0	
	baz=187,SNR=5.6							
GLA	Glamis	39.57	314	eP	P	12 12 32.5	+0.3	
	comp=Z,50nm,1.0s							
GLA	Glamis	39.57	314	eP	P	12 12 32.5	+0.3	
GLA				pmax	pmax			
	comp=Z,51nm,1.0s							
GLA	Glamis	39.57	314	P	P	12 12 30.3	-1.9	
	baz=123,SNR=5.9							
D49A	Beulah Townshi	39.58	1	P	P	12 12 31.9	0.0	
	baz=181							
GGN	Saint George	39.67	17	eP	P	12 12 32.9	+0.2	
	comp=Z,40nm,1.3s							
D54A	Lac Fusel, La	39.72	6	P	P	12 12 33.1	0.0	
	baz=188,SNR=26							
Y12C	Blythe	39.74	316	eP	P	12 12 34.5	+1.0	
	comp=Z,42nm,1.3s							
Y12C	Blythe	39.74	316	P	P	12 12 32.9	-0.5	
	baz=124,SNR=6.3							
D41A	Chassel	39.76	353	P	P	12 12 32.8	-0.6	
	baz=170							
E38A	The Farm, Brul	39.76	350	P	P	12 12 33.9	+0.5	
	baz=165							
PDMCI	Parker Dam,Lak	39.78	317	P	P	12 12 33.8	-0.1	
	baz=125,SNR=15							
U15A	North Rim	39.83	321	eP	P	12 12 35.3	+0.7	
	comp=Z,26nm,1.4s							
O20A	White River Ci	40.02	328	eP	P	12 12 37.0	+1.0	
	comp=Z,24nm,1.5s							
O20A	White River Ci	40.02	328	P	P	12 12 34.9	-1.1	
	baz=137,SNR=8.2							
W13A	Hualapai Mount	40.07	318	eP	P	12 12 37.7	+1.2	
	comp=Z,29nm,1.3s							
SWSC	Sam W. Stewart	40.21	314	P	P	12 12 35.3	-2.1	
	baz=122,SNR=5.5							
IKP	In-Ko-Pah, Jac	40.28	313	P	P	12 12 36.1	-2.0	
	baz=121,SNR=6.5							
BC3	Big Chuckawall	40.33	315	P	P	12 12 39.1	+0.5	
	baz=123,SNR=7.1							
IRM	Iron Mountain	40.39	316	P	P	12 12 37.6	-1.3	
	baz=124,SNR=5.6							
KNB	Kanab	40.53	321	eP	P	12 12 41.7	+1.4	
	comp=Z,74nm,1.8s							
KNB	Kanab	40.53	321	eP	P	12 12 41.7	+1.4	
KNB				pmax	pmax			
	comp=Z,74nm,1.8s							
SRU	San Rafael Swe	40.54	325	eP	P	12 12 41.1	+0.9	
	comp=Z,15nm,1.0s							
SRU	San Rafael Swe	40.54	325	eP	P	12 12 41.1	+0.9	
SRU				pmax	pmax			
	comp=Z,15nm,1.0s							
VLDQ	Val d'Or	40.60	5	eP	P	12 12 42.0	+1.7	
	comp=Z,13nm,1.0s							
MONP2	Monument Peak	40.63	313	P	P	12 12 41.4	+0.3	
	baz=121							
RWWY	Rawlins	40.66	331	eP	P	12 12 42.1	+0.8	
	comp=Z,20nm,1.1s							
C40A	Isle Royale Na	40.67	353	P	P	12 12 41.5	+0.6	
	baz=169							
BAR	Barrett	40.70	313	eP	P	12 12 42.5	+0.9	
	comp=Z,20nm,1.3s							
PQI	Presque Isle	40.79	15	eP	P	12 12 43.1	+1.2	
	comp=Z,50nm,1.2s							
LCMT	Little Creek M	40.80	321	eP	P	12 12 43.6	+1.2	
	comp=Z,12nm,1.2s							
BDFB	Brasilia	40.83	124	P	P	12 12 42.3	-0.5	
	comp=Z,7.4nm,0.9s,baz=282,slow=7.9,SNR=6.3							
BDFB				LR	LR	12 29 57.4		
	comp=Z,1μm,19.3s,baz=311,slow=37							
BDFB	Brasilia	40.83	124	eP	P	12 12 42.2	-0.6	
	comp=Z,41nm,1.4s							
BDFB	Brasilia	40.83	124	eP	P	12 12 42.2	-0.6	
BDFB				pmax	pmax			
	comp=Z,41nm,1.4s							
BELC	Belle Mtn. Jos	40.90	315	P	P	12 12 41.3	-2.0	
	baz=122,SNR=19							
LMN	Caledonia Moun	40.95	18	eP	P	12 12 44.2	+0.9	
	comp=Z,66nm,1.3s							
PFO	Pinyon Flats O	41.02	314	eP	P	12 12 44.7	+0.4	
	comp=Z,34nm,1.3s							
PFO	Pinyon Flats O	41.02	314	eP	P	12 12 44.7	+0.4	
PFO				pmax	pmax			
	comp=Z,34nm,1.3s							
PFO	Pinyon Flats O	41.02	314	P	P	12 12 44.7	+0.4	
	baz=122,SNR=5.4							
EYMN	Ely	41.05	350	eP	P	12 12 44.2	+0.1	
	comp=Z,7.7nm,0.9s							
EYMN	Ely	41.05	350	P	P	12 12 42.2	-1.9	
	baz=166							
SZCU	Shurtz Canyon	41.06	321	eP	P	12 12 45.2	+0.5	
	comp=Z,23nm,1.5s							
GMRC	Granite Mounta	41.09	316	P	P	12 12 42.9	-1.9	
	baz=124,SNR=7.1							
MSU	Marysvale	41.09	323	eP	P	12 12 45.9	+1.0	
CFA	Coronel Fontan	41.12	162	P	P	12 12 45.4	+0.5	
	comp=Z,12nm,0.9s,baz=348,slow=7.8,SNR=13							
109C	Camp Elliot, M	41.12	313	P	P	12 12 43.7	-1.3	
	baz=120							
CPE	Camp Elliot	41.12	313	eP	P	12 12 45.9	+1.0	
	comp=Z,48nm,1.3s							
RSSD	Black Hills	41.18	336	eP	P	12 12 45.6	+0.1	
	comp=Z,19nm,1.1s							
RSSD	Black Hills	41.18	336	eP	P	12 12 45.6	+0.1	
RSSD				pmax	pmax			
	comp=Z,19nm,1.1s							
RSSD	Black Hills	41.18	336	P	P	12 12 43.0	-2.5	
	baz=146							
CCUT	Cedar City	41.20	321	eP	P	12 12 46.9	+1.1	
	comp=Z,16nm,0.4s							
ITRB	Iturama	41.31	131	eP	P	12 12 45.7	-1.0	
CPUP	Villa Florida	41.35	145	eP	P	12 12 46.0	-0.9	
MURC	Murrieta	41.54	314	P	P	12 12 48.4	-0.1	
	baz=121							
LSQQ	Lebel-sur-Quev	41.58	5	P	P	12 12 48.4	0.0	
	baz=188							
HEC	Hector,Ludlow	41.58	316	P	P	12 12 46.9	-1.9	
	baz=123,SNR=12							
TUQ	Turquoise Moun	41.63	317	P	P	12 12 49.8	+0.5	
	baz=124,SNR=13							
ROC1	El Roble	41.65	166	eP	P	12 12 48.8	-0.7	
GBN	Guysborough	41.68	22	eP	P	12 12 50.1	+0.8	
BBRC	Big Bear Solar	41.69	315	P	P	12 12 47.8	-2.1	
	baz=122							
SHPR	Sheep Range	41.73	319	eP	P	12 12 51.5	+1.4	
	comp=Z,24nm,1.3s							
BATG	Bathurst New B	41.87	16	eP	P	12 12 51.2	+0.4	
	comp=Z,49nm,1.2s							
PEL	Peldehue	41.89	166	eP	P	12 12 50.7	-0.5	
	comp=Z,79nm,1.4s							
PEL	Peldehue	41.89	166	eP	P	12 12 50.7	-0.5	
PEL				pmax	pmax			
	comp=Z,79nm,1.4s							
PSUT	Pine Spring	42.12	322	eP	P	12 12 54.1	+0.8	
	comp=Z,18nm,1.2s							
SHOC	Shoshone, Teco	42.12	317	P	P	12 12 52.8	-0.3	
	baz=124,SNR=5.4							
GSC	Goldstone, Bar	42.16	316	eP	P	12 12 54.3	+0.7	
	comp=Z,52nm,1.3s							
GSC	Goldstone, Bar	42.16	316	eP	P	12 12 54.3	+0.7	
GSC				pmax	pmax			
	comp=Z,52nm,1.3s							
GSC	Goldstone, Bar	42.16	316	P	P	12 12 53.5	-0.1	
	baz=123,SNR=18							
MATQ	Matagami	42.22	4	P	P	12 12 52.3	-1.4	
	baz=186,SNR=7.6							
AGMN	Agassiz Nation	42.26	346	eP	P	12 12 53.8	-0.2	
	comp=Z,26nm,1.1s							
AGMN	Agassiz Nation	42.26	346	P	P	12 12 54.5	+0.4	
	baz=159,SNR=7.9							
TCUT	Toone Canyon	42.41	327	eP	P	12 12 56.0	+0.3	
	comp=Z,30nm,1.1s							
MWC	Mount Wilson	42.48	314	eP	P	12 12 57.6	+1.4	
	comp=Z,60nm,1.4s							
DUG	Dugway, Tooele	42.57	325	eP	P	12 12 57.3	+0.4	
	comp=Z,28nm,1.7s							
DUG	Dugway, Tooele	42.57	325	eP	P	12 12 57.3	+0.4	
DUG				pmax	pmax			
	comp=Z,28nm,1.7s							
DUG	Dugway, Tooele	42.57	325	P	P	12 12 56.5	-0.4	
	baz=132							
BW06	Boulder Array	42.62	330	eP	P	12 12 57.1	-0.3	
	comp=Z,10nm,1.0s							
BW06	Boulder Array	42.62	330	P	P	12 12 56.1	-1.3	
	baz=138,SNR=11							
PD31	Pinedale Array	42.62	330	eP	P	12 12 57.8	+0.5	
	comp=Z,10nm,1.1s							
PDAR	Pinedale Array	42.62	330	P	P	12 12 55.2	-2.2	
	comp=Z,4.5nm,1.0s,baz=146,slow=8.2,SNR=24							
PDAR				PcP	PcP	12 14 49.0	-0.5	
	comp=Z,2.5nm,0.8s,baz=131,slow=5.8,SNR=5.8							
DECC	Green Verdugo	42.69	314	P	P	12 12 54.1	-3.7	
	baz=120							
TPNV	Topopah Spring	42.70	318	eP	P	12 12 59.1	+1.2	
	comp=Z,44nm,1.4s							
TPNV	Topopah Spring	42.70	318	eP	P	12 12 59.2	+1.2	
TPNV				pmax	pmax			
	comp=Z,44nm,1.4s							
TPNV	Topopah Spring	42.70	318	P	P	12 12 57.7	-0.2	
	baz=125,SNR=12							
CHGQ	Chibougamau	42.70	7	P	P	12 12 57.1	-0.5	
	baz=191,SNR=7.2							
EDW2	Edwards Air Fo	42.77	315	P	P	12 12 57.7	-0.7	
	baz=121,SNR=5.0							
FURC	Furnace Creek,	42.83	317	P	P	12 12 54.3	-4.5	
	baz=124,SNR=20							
HWUT	Hardware Ranch	42.83	327	eP	P	12 12 59.8	+0.8	
	comp=Z,11nm,1.0s

ISA pmax pmax
ISA Isabella, Lake 43.51 315 P P 12 13 02.1 -2.4
baz=121,SNR=11
CWC Cottonwood Cre 43.64 317 P P 12 13 06.1 +0.4
baz=122
REDW Red Top Meadow 43.70 329 *eP* **P 12 13 06.2 0.0**
comp=Z,24nm,1.1s
TPAW Teton Pass 43.85 329 *eP* **P 12 13 07.8 +0.5**
comp=Z,10nm,0.9s
VES Vestal, Richgr 44.02 315 P **P 12 13 06.7 -1.8**
baz=121,SNR=15
PKM Mcpherson Peak 44.06 314 P **P 12 13 10.6 +1.5**
baz=119
ULM Lac du Bonnet 44.10 347 P **P 12 13 06.1 -2.8**
comp=Z,39nm,0.9s,baz=158,slow=7.3,SNR=22
LAO LASA Array 44.16 336 *eP* **P 12 13 09.5 0.0**
comp=Z,29nm,1.3s
LAO LASA Array 44.16 336 P **P 12 13 09.0 -0.5**
baz=144
RLMT Red Lodge 44.24 332 *eP* **P 12 13 10.2 -0.2**
comp=Z,14nm,1.0s
RLMT Red Lodge 44.24 332 P **P 12 13 08.9 -1.5**
baz=140,SNR=14
H17A Grant Village 44.32 331 *eP* **P 12 13 11.1 0.0**
comp=Z,23nm,1.6s
H17A Grant Village 44.32 331 P **P 12 13 13.1 +2.0**
baz=137
ELK Elko 44.34 323 *eP* **P 12 13 11.2 -0.1**
comp=Z,11nm,1.1s
ELK Elko 44.34 323 *eP* **P 12 13 11.2 -0.1**
ELK pmax pmax
comp=Z,11nm,1.1s
SMMC Simmler 44.40 314 P **P 12 13 13.3 +1.7**
baz=120
YFT Old Faithful 44.49 331 *eP* **P 12 13 13.5 +1.1**
comp=Z,14nm,1.0s
NV11 Mina Array Sit 44.78 319 *eP* **P 12 13 16.1 +1.4**
comp=Z,3.0nm,1.1s
PAGB Antelope Grade 44.79 314 *eP* **P 12 13 15.8 +1.1**
comp=Z,85nm,1.3s
NV01 Mina Array Sit 44.87 319 *eP* **P 12 13 16.1 +0.5**
NVAR Mina Array Bea 44.87 319 P **P 12 13 16.1 +0.5**
comp=Z,7.7nm,0.7s,baz=134,slow=6.9,SNR=32
NVAR PcP **PcP 12 14 57.6 +0.4**
comp=Z,3.3nm,0.8s,baz=146,slow=4.1,SNR=4.2
DGMT Dagmar 44.88 339 *eP* **P 12 13 16.2 +1.0**
comp=Z,36nm,0.8s
DGMT Dagmar 44.88 339 P **P 12 13 15.4 +0.2**
baz=148
OMMB Old Mammoth Mi 44.89 317 *eP* **P 12 13 16.6 +0.8**
comp=Z,22nm,1.0s
GCMT Greycliff 44.94 333 *eP* **P 12 13 16.6 +0.8**
MDPB Devils Postpil 44.95 317 *eP* **P 12 13 16.9 +0.6**
comp=Z,40nm,1.1s
RCLB Rio Claro- Sao 45.05 132 *eP* **P 12 13 15.7 -1.3**
ITAB Concordia 45.11 141 *eP* **P 12 13 16.5 -0.7**
BMN Battle Mountai 45.34 322 *eP* **P 12 13 19.5 +0.3**
comp=Z,30nm,0.8s
BMN Battle Mountai 45.34 322 *eP* **P 12 13 19.5 +0.3**
BMN pmax pmax
comp=Z,30nm,0.8s
WAKR Walker 45.66 318 *eP* **P 12 13 22.8 +1.0**
comp=Z,53nm,1.3s
HLID Hailey 45.70 327 *eP* **P 12 13 22.7 +0.7**
comp=Z,7.1nm,0.7s
HLID Hailey 45.70 327 P **P 12 13 20.6 -1.4**
baz=132,SNR=18
BOZ Bozeman (W) 45.71 331 *eP* **P 12 13 21.8 -0.2**
comp=Z,14nm,1.1s
BOZ Bozeman (W) 45.71 331 *eP* **P 12 13 21.8 -0.2**
BOZ pmax pmax
comp=Z,14nm,1.1s
BOZ Bozeman (W) 45.71 331 P **P 12 13 21.8 -0.2**
baz=137,SNR=12
YERR Yerington 45.79 319 *eP* **P 12 13 24.0 +1.2**
comp=Z,87nm,1.8s
DLMT Dillon 46.01 330 *eP* **P 12 13 24.8 +0.4**
comp=Z,16nm,1.3s
CMB Columbia Colle 46.05 317 *eP* **P 12 13 25.4 +0.7**
comp=Z,57nm,1.9s
CMB Columbia Colle 46.05 317 *eP* **P 12 13 25.4 +0.7**
CMB pmax pmax
comp=Z,57nm,1.9s
PNTR Pine Nut 46.08 319 *eP* **P 12 13 26.1 +1.0**
comp=Z,22nm,0.8s
VCNR Virginia City 46.23 319 *eP* **P 12 13 27.4 +1.2**
comp=Z,44nm,1.7s
BSCB Bom Sucesso 46.31 129 *eP* **P 12 13 26.5 -0.5**
DRLN Deer Lake 46.40 22 *eP* **P 12 13 27.0 -0.1**
comp=Z,66nm,1.0s
EGMT Eagleton 46.69 335 *eP* **P 12 13 29.9 +0.4**
comp=Z,29nm,1.3s
EGMT Eagleton 46.69 335 P **P 12 13 29.5 0.0**
baz=141
BEKR Beckworth 47.00 319 *eP* **P 12 13 32.8 +0.6**
comp=Z,20nm,1.2s
WVOR Wild Horse Val 47.39 323 *eP* **P 12 13 35.1 -0.1**
comp=Z,56nm,1.2s
WVOR Wild Horse Val 47.39 323 *eP* **P 12 13 35.1 -0.1**
WVOR pmax pmax
comp=Z,56nm,1.2s
PLID Pearl Lake 47.57 328 *eP* **P 12 13 37.3 +0.6**
comp=Z,40nm,1.8s
ORV Oroville 47.58 318 *eP* **P 12 13 38.0 +1.4**
comp=Z,49nm,1.2s
ORV Oroville 47.58 318 *eP* **P 12 13 38.0 +1.4**
ORV pmax pmax
comp=Z,49nm,1.2s
MSO Missoula 47.71 331 *eP* **P 12 13 38.7 +1.1**
comp=Z,10nm,1.3s
MSO Missoula 47.71 331 P **P 12 13 36.6 -1.0**
baz=135,SNR=5.6
J08A Circle Bar Ran 47.85 324 *eP* **P 12 13 39.4 +0.6**
comp=Z,20nm,1.3s
GO06 Curarrehue 47.91 169 *eP* **P 12 13 38.9 -0.3**
comp=Z,91nm,1.7s
SJMB Sao Joao De Ma 47.99 123 *eP* **P 12 13 40.0 -0.1**
MOD Modoc Plateau 48.09 322 *eP* **P 12 13 41.3 +0.6**
comp=Z,28nm,1.4s
BMO Blue Mountains 48.12 327 *eP* **P 12 13 40.8 0.0**
comp=Z,4.1nm,0.9s
BMO Blue Mountains 48.12 327 *eP* **P 12 13 40.8 0.0**
BMO pmax pmax
comp=Z,4.0nm,0.9s
O03E Paynes Creek 48.16 319 P **P 12 13 40.3 -0.9**
baz=122,SNR=11
BSFB Barra de Sao F 48.34 123 *eP* **P 12 13 42.5 -0.2**
SCHQ Schefferville 48.69 12 P **P 12 13 43.5 -1.4**
comp=Z,29nm,0.9s,baz=200,slow=6.5,SNR=13
O02D Mt. Diablo Mer 48.75 318 P **P 12 13 45.5 -0.2**
baz=121,SNR=9.2
I07A Izee 48.88 324 *eP* **P 12 13 46.2 -0.5**
comp=Z,15nm,1.4s
RIB01 Linhares ES 48.94 124 *eP* **P 12 13 46.4 -0.9**
M04C Macdoel 48.98 321 P **P 12 13 45.7 -1.8**
baz=123
TRQA Tornquist 49.08 159 *eP* **P 12 13 47.1 -1.0**
comp=Z,80nm,1.5s
TRQA Tornquist 49.08 159 *eP* **P 12 13 47.1 -1.0**
TRQA pmax pmax
comp=Z,80nm,1.5s
N02D Trinity Center 49.10 319 P **P 12 13 47.8 -0.6**
baz=121
PLCA Paso Flores 49.20 168 P **P 12 13 48.4 -0.7**
comp=Z,22nm,1.1s,baz=10,slow=8.3,SNR=14
PLCA LR LR 12 30 55.7
comp=Z,368nm,20.9s,baz=13,slow=32
PLCA Paso Flores 49.20 168 *eP* **P 12 13 48.8 -0.3**
comp=Z,168nm,1.9s
PLCA Paso Flores 49.20 168 *eP* **P 12 13 48.8 -0.3**
PLCA pmax pmax
comp=Z,168nm,1.9s
PLCA Paso Flores 49.20 168 *eP* **P 12 13 49.6 +0.5**
K04D Chiloquin, OR 49.38 322 P **P 12 13 50.6 0.0**
baz=124
M02C Callahan 49.42 320 P **P 12 13 50.8 0.0**
baz=122
J05D Fort Rock, OR 49.44 323 P **P 12 13 48.0 -3.0**
baz=124
YBH Yreka Blue Hor 49.50 320 *eP* **P 12 13 52.3 +0.9**
comp=Z,11nm,1.0s
YBH Yreka Blue Hor 49.50 320 *eP* **P 12 13 52.3 +0.9**
YBH pmax pmax
comp=Z,11nm,1.0s
L04D Klamath Falls 49.51 321 P **P 12 13 52.7 +1.1**
baz=123

PINE Pine Mountain 49.55 323 *eP* **P 12 13 52.5 +0.6**
comp=Z,12nm,0.9s
E09A Wood Farm, Sta 49.64 328 *eP* **P 12 13 52.7 +0.5**
comp=Z,14nm,1.0s
FFC Flin Flon 49.68 345 *i* P **P 12 13 51.1 -1.3**
KHMM Horse Mountain 49.72 319 *eP* **P 12 13 53.5 +0.3**
comp=Z,29nm,0.8s
J04D Umpqua Nationa 49.94 322 P **P 12 13 53.7 -1.2**
baz=124,SNR=12
I05D Terrebonne, OR 50.10 324 P **P 12 13 55.2 -0.7**
baz=125,SNR=6.8
E08A Dider Farm, El 50.11 327 *eP* **P 12 13 56.8 +0.9**
comp=Z,7.8nm,1.0s
G06A Carlson Farm, 50.22 325 *eP* **P 12 13 57.9 +1.1**
comp=Z,29nm,1.4s
NEW Newport 50.26 330 P **P 12 13 55.7 -1.4**
baz=132
L02E Cave Junction 50.29 320 P **P 12 13 56.8 -0.5**
baz=121
HAWA Hanford 50.30 327 *eP* **P 12 13 57.6 +0.3**
comp=Z,15nm,1.3s
I04A Tendick Farm, 50.43 323 P **P 12 13 57.7 -0.8**
baz=124,SNR=12
G05D Wamic, OR 50.61 325 P **P 12 13 59.5 -0.2**
baz=126,SNR=8.8
K02D Willamette Mer 50.61 321 P **P 12 13 58.1 -1.8**
baz=122
H04A Detroit Lake 50.79 324 *eP* **P 12 14 02.4 +1.2**
comp=Z,18nm,0.8s
GO07 Milladeo Hill, 51.00 172 *eP* **P 12 14 01.4 -1.1**
comp=Z,282nm,1.8s
J01E Myrtle Point 51.02 321 P **P 12 14 01.2 -1.6**
baz=122
H04D Lebanon 51.03 323 P **P 12 14 00.1 -2.8**
baz=124
KEBM Edson Butte 51.12 321 *eP* **P 12 14 04.9 +1.2**
comp=Z,89nm,1.2s
LTY Liberty 51.45 327 *eP* **P 12 14 06.5 +0.4**
comp=Z,16nm,1.4s
I02D Swisshome 51.47 322 P **P 12 14 06.6 +0.5**
baz=122,SNR=8.0
G03D McMinnville, O 51.72 324 P **P 12 14 07.7 -0.4**
baz=124
FCC Fort Churchill 51.92 352 *eP* **P 12 14 10.3 +1.1**
comp=Z,23nm,1.2s
FCC Fort Churchill 51.92 352 *eP* **P 12 14 10.3 +1.1**
FCC pmax pmax
comp=Z,23nm,1.2s
D03D Eldon 52.94 326 P **P 12 14 16.7 -0.3**
baz=125,SNR=7.6
NLWA Neilton Lookou 53.29 326 *eP* **P 12 14 21.8 +2.1**
comp=Z,11nm,0.9s
ROSA Rosais 57.35 49 *eS* S 12 22 32.1 -13
ROSA *eLR* LR 12 32 01.3
comp=Z,383nm,20.4s
ROSA Rosais 57.35 49 *eP* **P 12 14 49.7 +0.7**
comp=Z,223nm,1.8s
PGRA Graciosa 57.64 48 *eS* **S 12 22 55.1 +6.4**
PGRA *eLR* LR 12 32 01.3
comp=Z,359nm,24.5s
BBB Bella Bella 58.24 329 *eP* **P 12 14 55.9 +0.9**
comp=Z,43nm,1.6s
PSET Sete Cidades 58.98 50 *eS* **S 12 23 01.7 -4.7**
PSET *eLR* LR 12 32 29.1
comp=Z,581nm,22.5s
PSMN Pico do Norte, 59.27 51 *eS* **S 12 23 01.7 -8.4**
PSMN *eLR* LR 12 32 45.8
comp=Z,418nm,20.4s
YKA Yellowknife Ar 59.76 343 P **P 12 15 03.9 -1.4**
comp=Z,10nm,1.0s,baz=135,slow=6.8,SNR=24
YKA LR LR 12 43 19.8
comp=Z,42nm,18.5s,baz=122,slow=38
YKB5 Yellowknife Ar 59.76 343 *eP* **P 12 15 03.9 -1.4**
YKW3 Yellowknife Ar 59.81 343 *eP* **P 12 15 05.1 -0.6**
comp=Z,19nm,1.1s
RKT Rikitea 60.06 238 *eLR* LR 12 32 53.3
comp=Z,3μm,27.8s
TAOE Nuku Hiva Isla 60.16 255 *eS* **S 12 23 22.7 +0.3**
comp=Z,1μm,26.6s
TAOE *eSS* **SS 12 27 22.8 +3.0**
comp=Z,153nm,25.4s
TAOE *eLR* LR 12 32 53.3
comp=Z,659nm,25.6s
DLBC Dease Lake 62.61 334 *eP* **P 12 15 26.0 +1.1**
comp=Z,21nm,1.0s
ANGG Ammassalik, Gr 65.61 19 *eP* **P 12 15 44.5 +0.2**
comp=Z,21nm,0.9s
HYT Haines Junctio 67.09 334 *eP* **P 12 15 54.9 +0.8**
comp=Z,12nm,1.1s
RES Resolute Bay 67.49 356 *eP* **P 12 15 57.0 +0.7**
comp=Z,18nm,0.9s
RES Resolute Bay 67.49 356 *eP* **P 12 15 57.0 +0.7**
RES pmax pmax
comp=Z,18nm,0.9s
KULLO Kullorsuaq 68.49 7 *iP* **P 12 16 04.3 +1.8**
KULLO pmax pmax
comp=Z,29nm,1.1s
KULLO Kullorsuaq 68.49 7 *iP* **P 12 16 04.3 +1.8**
comp=Z,29nm,1.1s
TULEG Thule 69.32 3 *eP* **P 12 16 08.7 +1.1**
comp=Z,44nm,1.1s
INK Inuvik 69.46 342 P **P 12 16 08.0 -0.6**
comp=Z,18nm,0.9s,baz=120,slow=7.7,SNR=20
INK Inuvik 69.46 342 *eP* **P 12 16 08.8 +0.2**
comp=Z,39nm,1.3s
INK Inuvik 69.46 342 *eP* **P 12 16 08.9 +0.2**
INK pmax pmax
comp=Z,39nm,1.3s
EPYK Eagle Plains 69.48 339 *eP* **P 12 16 09.3 +0.4**
comp=Z,40nm,1.4s
EPYK Eagle Plains 69.48 339 P **P 12 16 08.8 -0.1**
baz=120,SNR=8.0
SUMG Summit 70.06 13 *eP* **P 12 16 11.8 -1.0**
comp=Z,29nm,0.9s
SUMG Summit 70.06 13⇓ *iP* **P 12 16 14.7 +1.9**
SUMG pmax pmax
comp=Z,85nm,1.0s
SUMG Summit 70.06 13⇓ *iP* **P 12 16 14.7 +1.9**
comp=Z,85nm,1.0s
EGAK Eagle 70.36 337 *eP* **P 12 16 15.0 +0.7**
comp=Z,22nm,1.1s
MENT Mentasta 70.65 335 *eP* **P 12 16 16.6 +0.5**
comp=Z,18nm,1.3s
DOT Dot Lake 71.07 335 *eP* **P 12 16 18.9 +0.2**
comp=Z,40nm,1.2s
SCRK Sand Creek 71.16 336 *eP* **P 12 16 19.8 +0.5**
comp=Z,29nm,1.3s
PPT Papeete 71.21 249 LR LR 12 40 49.5
comp=Z,664nm,18.4s,baz=82,slow=30
PPT2 Papeete2 71.22 249 *eS* **S 12 25 38.9 +1.5**
comp=Z,634nm,28.0s
PPT2 *eSS* **SS 12 30 19.6 +7.9**
comp=Z,167nm,26.2s
PPT2 *eLR* LR 12 38 04.5
comp=Z,807nm,26.8s,baz=61
PAX Paxson 71.41 334 *eP* **P 12 16 21.0 +0.2**
comp=Z,45nm,1.8s
PAX Paxson 71.41 334 *eP* **P 12 16 21.0 +0.2**
PAX pmax pmax
comp=Z,45nm,1.8s
RIDG Independent Ri 71.42 335 *eP* **P 12 16 21.3 +0.4**
comp=Z,50nm,1.3s
PMAFR Mafra 71.88 52 *eS* **S 12 25 48.5 +4.2**
PFVI Vila Bisbo 72.09 54 *eS* **SKiKP 12 25 53.9 -7.9**
KNK Knik Glacier 72.23 332 *eP* **P 12 16 26.5 +0.9**
comp=Z,38nm,1.3s
MORF Marmelete 72.25 53 *eS* **SKiKP 12 25 59.2 -2.9**
SEW Seward 72.31 331 *eP* **P 12 16 27.1 +1.0**
comp=Z,16nm,1.0s
PNCL Nicolau / Gran 72.40 53 *eS* **SKiKP 12 26 00.9 -1.3**
HDA Harding Lake 72.53 336 *eP* **P 12 16 27.2 -0.1**
comp=Z,39nm,1.1s
HDA Harding Lake 72.53 336 P **P 12 16 26.4 -1.0**
baz=110
PCAS Casmilo, Conde 72.58 50 *eP* **P 12 16 30.1 +1.9**
comp=Z,53nm,1.6s
PCAS *eS* **S 12 25 55.4 +3.2**
ILAR Eielson Array 72.63 336 P **P 12 16 27.2 -0.8**
comp=Z,5.4nm,0.8s,baz=111,slow=4.5,SNR=26
ILAR PP **PP 12 19 09.1 -0.3**
comp=Z,1.9nm,1.2s,baz=114,slow=6.3,SNR=5.1
ILAR LR LR 12 50 26.1
comp=Z,309nm,20.7s,baz=108,slow=38
ILB Eielson Array 72.63 336 *eP* **P 12 16 28.1 +0.1**
comp=Z,87nm,1.9s
FYU Fort Yukon 72.63 338 *eP* **P 12 16 28.8 +0.9**
comp=Z,46nm,1.4s

TBI Tubuai 72.65 243 *eS* **S 12 25 57.0 +3.5**
comp=Z,719nm,30.5s
TBI Tubuai 72.65 243 *eLR* LR 12 38 49.6
comp=Z,1μm,30.8s,baz=67
COI Coimbra 72.65 50 *eS* **SKiKP 12 26 01.1 -1.4**
PBDV Barranco-do-Ve 72.81 53 *eS* **SKiKP 12 26 04.4 +1.5**
PGAV Gavieira, Arco 72.92 49 *eLR* LR 12 39 25.7
comp=Z,335nm,22.0s
BRLK Bradley Lake 72.92 330 *eP* **P 12 16 30.9 +1.0**
comp=Z,22nm,1.0s
POKR Poker Plat Res 72.96 336 P **P 12 16 28.4 -1.6**
baz=110
PVAQ Vaqueiros 72.99 53 *eS* **SKiKP 12 26 04.1 +1.0**
PVAQ Vaqueiros 72.99 53 *eLR* LR 12 39 09.4
comp=Z,470nm,22.0s
RND Reindeer 73.00 334 *eP* **P 12 16 30.2 -0.1**
comp=Z,38nm,1.2s
RND Reindeer 73.00 334 *eP* **P 12 16 30.2 -0.1**
RND pmax pmax
comp=Z,38nm,1.2s
WRH Wood River Hil 73.02 336 *eP* **P 12 16 31.2 +0.9**
comp=Z,16nm,1.2s
COLA College 73.05 336 *eP* **P 12 16 31.0 +0.6**
comp=Z,12nm,0.9s
COLA College 73.05 336⇓ *eP* **P 12 16 33.1 +2.7**
COLA pmax pmax
comp=Z,28nm,1.9s
TCOL CIGO, UAF Yank 73.05 336 P **P 12 16 31.9 +1.4**
baz=109
MCK McKinley 73.14 335 *eP* **P 12 16 31.9 +0.9**
comp=Z,20nm,1.0s
MCK McKinley 73.14 335 *eP* **P 12 16 31.9 +0.9**
MCK pmax pmax
comp=Z,20nm,1.0s
MTE Manteigas 73.33 50 *eLR* LR 12 39 17.6
comp=Z,868nm,22.0s
PCBR Castelo Branco 73.34 51 *eP* **P 12 16 33.8 +1.1**
comp=Z,34nm,1.6s
PMRV Marv??o 73.38 51 *eLR* LR 12 39 01.3
comp=Z,690nm,22.0s
TRF Thorofare Moun 73.63 334 *eP* **P 12 16 34.4 +0.2**
comp=Z,19nm,1.1s
MVO Moncorvo 73.78 49 *eP* **P 12 16 35.6 +0.3**
comp=Z,39nm,1.8s
MVO *eS* **S 12 26 11.9 +5.9**
MVO Moncorvo 73.78 49 *eLR* LR 12 39 46.0
comp=Z,370nm,20.0s
SKT Skwentna 73.79 333 *eP* **P 12 16 34.7 -0.2**
comp=Z,50nm,1.6s
KTH Kantishna Hill 73.94 334 *eP* **P 12 16 36.9 +1.1**
comp=Z,35nm,1.4s
RSO Redoubt South 74.00 331 *eP* **P 12 16 36.6 +0.2**
BPAW Bear Paw Mtn. 74.11 335 *eP* **P 12 16 36.7 0.0**
comp=Z,28nm,1.2s
MLY Manley 74.27 336 *eP* **P 12 16 37.2 -0.5**
comp=Z,33nm,1.2s
PPLA Purkeypile 74.32 333 *eP* **P 12 16 37.9 -0.2**
comp=Z,98nm,1.9s
COLD Coldfoot 74.70 338 *eP* **P 12 16 40.5 +0.4**
comp=Z,28nm,1.4s
TOLK Toolik Lake Re 74.91 339 *eP* **P 12 16 41.5 +0.2**
comp=Z,16nm,1.4s
TOLK Toolik Lake Re 74.91 339 P **P 12 16 39.1 -2.2**
baz=108
ESDC Sonseca Array 76.04 51 P **P 12 16 47.0 -1.4**
comp=Z,2.8nm,0.7s,baz=272,slow=5.5,SNR=14
ESDC LR LR 12 44 58.5
comp=Z,346nm,21.6s,baz=270,slow=32
ESLA Sonseca Array 76.04 51 *eP* **P 12 16 48.4 0.0**
comp=Z,13nm,1.2s
TIC Toumodi 76.33 85 *eP* **P 12 16 50.5 0.0**
LIC Lamto 76.37 85 *eP* **P 12 16 50.4 -0.3**
comp=Z,61nm,1.0s
DBIC Dimbokro 76.49 85 P **P 12 16 49.9 -1.4**
comp=Z,5.8nm,0.9s,baz=249,slow=6.6,SNR=2.7
DBIC Dimbokro 76.49 85 *eP* **P 12 16 49.9 -1.4**
comp=Z,25nm,1.1s
DBIC Dimbokro 76.49 85 *eP* **P 12 16 49.9 -1.4**
DBIC pmax pmax
comp=Z,25nm,1.1s
KIC Kosan Boka 76.63 85 *eP* **P 12 16 51.9 -0.3**
comp=Z,84nm,1.3s
DAG Danmarks Havn 76.73 12 *i* P **P 12 16 52.3 +0.8**
DAG pmax pmax
comp=Z,10.0nm,1.0s
DAG Danmarks Havn 76.73 12 *i* P **P 12 16 52.3 +0.8**
comp=Z,10nm,1.0s
ESK Eskdalemuir 77.47 35 *i* P **P 12 17 00.3 +4.2**
EKA Eskdalemuir Ar 77.49 35 P **P 12 16 55.0 -1.2**
comp=Z,3.6nm,0.5s,baz=256,slow=4.8,SNR=17
CLF Chambon-Foret 80.62 43 *eP* **P 12 17 13.6 +0.2**
comp=Z,64nm,1.1s
TOA0 Torodi Ar. Sit 82.24 78 *eP* **P 12 17 22.4 -0.3**
comp=Z,56nm,1.8s
TORD Torodi Ar. Bea 82.24 78 P **P 12 17 22.2 -0.6**
comp=Z,3.4nm,0.8s,baz=352,slow=4.5,SNR=10
TORD LR LR 12 54 36.1
comp=Z,193nm,19.4s,baz=310,slow=36
ECH Echery 83.89 42 *eP* **P 12 17 30.3 -0.4**
comp=Z,39nm,1.4s
ECH Echery 83.89 42 *eP* **P 12 17 30.3 -0.4**
ECH pmax pmax
comp=Z,39nm,1.4s
SENIN Lac Senin/Sane 84.13 44 *eP* **P 12 17 32.1 -0.1**
comp=Z,18nm,1.2s
BFO Black Forest 84.66 42 *ceP* **P 12 17 37.8 +3.2**
BFO pmax pmax
comp=Z,1.0nm,1.0s
TAM Tamanrasset 84.87 68 *eP* **P 12 17 36.2 -0.1**
comp=Z,20nm,1.2s
TAM Tamanrasset 84.87 68 *eP* **P 12 17 36.2 -0.1**
TAM pmax pmax
comp=Z,21nm,1.2s
NB2 NORSAR Subarra 85.02 29 P **P 12 17 35.7 -0.4**
comp=Z,44nm,2.5s,baz=274,slow=4.6
NB2 NORSAR Subarra 85.02 29 P **P 12 17 35.7 -0.4**
baz=274,slow=4.6
NB200 NORSAR Array S 85.02 29 *eP* **P 12 17 35.5 -0.6**
NOA NORSAR Array B 85.02 29 P **P 12 17 35.5 -0.6**
comp=Z,4.6nm,1.0s,baz=277,slow=4.6,SNR=5.9
NOA LR LR 12 53 31.9
comp=Z,414nm,19.2s,baz=275,slow=34
TUE Stuetta 85.53 44 *eP* **P 12 17 38.7 -0.5**
comp=Z,15nm,0.8s
DAVA Damuels 85.80 43 *eP* **P 12 17 40.6 0.0**
comp=Z,21nm,0.8s,SNR=9.6
DAVOX Davos/Dischmat 85.86 44 P **P 12 17 39.9 -0.9**
comp=Z,2.1nm,0.4s,baz=255,slow=4.0,SNR=5.1
FUORN Ofenpass-Fuorn 86.14 44 *eP* **P 12 17 41.8 -0.6**
comp=Z,28nm,1.2s
HFS Hagfors 86.35 30 P **P 12 17 38.8 -3.9**
comp=Z,4.0nm,0.9s,baz=306,slow=4.8,SNR=3.1
GRFO Grafenberg 86.40 41 *eP* **P 12 17 43.2 0.0**
comp=Z,56nm,1.5s
GRFO Grafenberg 86.40 41 *eP* **P 12 17 43.2 0.0**
GRFO pmax pmax
comp=Z,57nm,1.5s
FETA Feichten 86.41 43 *eP* **P 12 17 43.7 +0.1**
comp=Z,26nm,1.4s,SNR=5.8
MOTA Moosalm 86.62 43 *eP* **P 12 17 44.8 +0.3**
comp=Z,6.2nm,0.8s
SQTA Sankt Quirin 86.71 43 *eP* **P 12 17 44.5 -0.4**
comp=Z,16nm,1.1s
KEST Kesra 86.76 55 LR LR 12 53 04.9
comp=Z,131nm,19.6s,baz=264,slow=33
WTTA Wattenberg 86.99 43 *eP* **P 12 17 45.7 -0.7**
comp=Z,18nm,1.5s
CLL Collm 87.30 39 *eP* **P 12 17 46.8 -0.7**
comp=Z,47nm,1.7s
CLL Collm 87.30 39 *i* P **P 12 17 46.2 -1.3**
comp=Z,56nm,2.1s
CLL *i* pP **PcP 12 17 49.4 -0.2**
CLL comp=Z,37nm,1.6s *eS* **S 12 28 29.0 +2.0**
CLL *ePS* 12 29 30.0
CLL *ePPS* PPS 12 30 00.0
CLL *e* 12 33 18.0
CLL *eSS* **SS 12 34 06.0 -5.0**
CLL *e* 12 40 18.0
CLL *eSSSS* 12 40 30.0
CLL Lm MLR 12 51 00.0
comp=Z,500nm,20.8s
CLL Collm 87.30 39 *i* P **P 12 17 46.2 -1.3**
CLL *i* 12 17 49.4
CLL *eS* **S 12 28 29.0 +2.0**
CLL pmax pmax
comp=Z,56nm,2.1s

CLL				MLR	MLR			
	comp=Z,500nm,20.8s							
ABTA	**Abfaltersbach**	**87.66**	**43**	*e*P	**P**	**12 17 48.7**	**-0.8**	
	comp=Z,20nm,1.2s							
BRG	**Berggiesshubel**	**87.95**	**39**	*e*P	**P**	**12 17 50.9**	**+0.2**	
	comp=Z,24nm,1.5s							
BRG	**Berggiesshubel**	**87.95**	**39**	S	**S**	**12 28 28.0**	**-5.3**	
BRG				SS	SS	12 34 46.0	+25	
	comp=N,326nm,19.0s							
	comp=E,320nm,16.0s							
	comp=Z,609nm,23.0s							
BRG	**Berggiesshubel**	**87.95**	**39**	*e*P	**P**	**12 17 50.9**	**+0.2**	
BRG				S	**S**	**12 28 28.0**	**-5.3**	
BRG				pmax	pmax			
	comp=Z,24nm,1.5s							
BRG				MLR	MLR			
	comp=N,326nm,19.0s							
BRG				MLR	MLR			
	comp=E,320nm,16.0s							
BRG				MLR	MLR			
	comp=Z,609nm,23.0s							
KHC	**Kasperske Hory**	**88.00**	**41**	*e*P	**P**	**12 17 50.8**	**-0.3**	
	comp=Z,9.6nm,1.4s							
KHC	**Kasperske Hory**	**88.00**	**41**	*e*P	**P**	**12 17 51.0**	**0.0**	
KHC				*e*		12 17 54.4		
KHC				*e*		12 28 30.6		
KHC				MLR	MLR			
	comp=Z,900nm,20.5s							
KHC	**Kasperske Hory**	**88.00**	**41**	*e*P	**P**	**12 17 51.0**	**0.0**	
KHC				*e*pP	**pP**	**12 17 54.4**	**-2.5**	
KHC				*e*S	**S**	**12 28 30.6**	**-3.3**	
KHC				AMS	AMS	12 49 40.0		
	comp=Z,900nm,20.5s							
GEC2	**GERESS Array S**	**88.13**	**41**	*e*P	**P**	**12 17 51.5**	**-0.2**	
	comp=Z,11nm,1.2s							
GEC2	**GERESS Array S**	**88.13**	**41**	*e*P	**P**	**12 17 51.5**	**-0.2**	
GEC2				pmax	pmax			
	comp=Z,11nm,1.2s							
GERES	**GERESS Array B**	**88.13**	**41**	P	**P**	**12 17 50.3**	**-1.4**	
	comp=Z,1.2nm,0.8s,baz=272,slow=3.5,SNR=11							
GERES				LR	LR	12 56 19.1		
	comp=Z,224nm,18.4s,baz=276,slow=35							
KBA	**Koelnbreinsper**	**88.17**	**43**	*e*PcP	**P**	**12 17 52.3**	**+0.2**	
	comp=Z,24nm,1.4s,SNR=8.9							
PVCC	**Panska Ves**	**88.40**	**39**	AMS	AMS	12 50 00.0		
	comp=Z,700nm,25.4s							
MYKA	**Terra Mystica**	**88.44**	**43**	*e*PcP	**PcP**	**12 17 53.7**	**-1.2**	
	comp=Z,14nm,1.0s							
PRU	**Pruhonice**	**88.48**	**40**	*e*P	**P**	**12 17 53.1**	**-0.1**	
PRU				*e*		12 28 38.1		
PRU				MLR	MLR			
	comp=Z,900nm,18.9s							
PRU	**Pruhonice**	**88.48**	**40**	*e*P	**P**	**12 17 53.1**	**-0.1**	
PRU				*e*S	**S**	**12 28 38.1**	**-0.2**	
PRU				AMS	AMS	12 50 00.0		
	comp=Z,900nm,18.9s							
GOPC	**GO Pecny, Ondr**	**88.65**	**40**	*e*SKS	**SKSac**	**12 28 29.4**	**+6.8**	
GOPC				AMS	AMS	12 50 20.0		
	comp=Z,1μm,22.8s							
MOA	**Molln**	**88.66**	**42**	*e*P	**P**	**12 17 54.1**	**0.0**	
	comp=Z,4.0nm,1.1s							
ARCES	**ARCESS Array B**	**89.01**	**20**	LR	LR	12 56 11.2		
	comp=Z,397nm,19.4s,baz=266,slow=35							
UPC	**Upice**	**89.31**	**39**	*e*P	**P**	**12 17 58.8**	**+1.7**	
UPC				MLR	MLR			
	comp=Z,700nm,22.7s							
UPC	**Upice**	**89.31**	**39**	*e*P	**P**	**12 17 58.8**	**+1.7**	
UPC				AMS	AMS	12 50 30.0		
	comp=Z,700nm,22.7s							
CHVC	**Chvalec**	**89.33**	**39**	*e*P	**P**	**12 18 00.3**	**+3.1**	
CHVC				AMS	AMS	12 50 30.0		
	comp=Z,600nm,22.2s							
OSTC	**Ostas**	**89.43**	**39**	*e*P	**P**	**12 17 57.8**	**+0.1**	
OSTC				AMS	AMS	12 53 50.0		
	comp=Z,500nm,20.7s							
ARSA	**Arzberg**	**89.61**	**42**	*e*P	**P**	**12 17 57.5**	**-1.1**	
	comp=Z,4.9nm,1.1s							
CONA	**Conrad Observa**	**89.71**	**42**	*e*PcP	**P**	**12 17 59.1**	**0.0**	
	comp=Z,11nm,1.0s							
KRUC	**Moravsky**	**89.84**	**41**	*e*P	**P**	**12 17 57.8**	**-1.8**	
VRAC	**Vranov**	**89.92**	**40**	P	**P**	**12 17 59.5**	**-0.5**	
	comp=Z,2.2nm,0.8s,baz=283,slow=7.3,SNR=4.4							
VRAC	**Vranov**	**89.92**	**40**	*e*P	**P**	**12 17 59.6**	**-0.4**	
MORC	**Moravsky Berou**	**90.42**	**40**	*e*P	**P**	**12 18 02.3**	**-0.1**	
	comp=Z,12nm,1.5s							
MORC	**Moravsky Berou**	**90.42**	**40**	*e*P	**P**	**12 18 02.3**	**-0.1**	
MORC				pmax	pmax			
	comp=Z,13nm,1.5s							
MORC	**Moravsky Berou**	**90.42**	**40**	*e*P	**P**	**12 18 01.3**	**-1.1**	
MODS	**Modra-Piesok**	**90.55**	**41**	*e*P	**P**	**12 18 05.9**	**+2.9**	
MODS				pmax	pmax			
	comp=Z,26nm,1.5s							
MODS	**Modra-Piesok**	**90.55**	**41**	*e*P	**P**	**12 18 05.9**	**+2.9**	
JAVC	**Velka Javorina**	**90.70**	**41**	*e*P	**P**	**12 18 04.2**	**+0.5**	
OKC	**Ostrava-Krasne**	**90.80**	**40**	AMS	AMS	12 51 20.0		
	comp=Z,800nm,23.0s							
BILL	**Bilibino**	**90.96**	**340**	*e*P	**P**	**12 18 04.5**	**+0.1**	
	comp=Z,45nm,1.6s							
BILL	**Bilibino**	**90.96**	**340**	*e*P	**P**	**12 18 05.0**	**+0.6**	
BILL				*e*		12 21 37.9		
BILL				pmax	pmax			
	comp=Z,23nm,1.3s							
BILL				MLR	MLR			
	comp=Z,294nm,20.0s							
VNA3	**Neumayer Olymp**	**91.52**	**162**	P	**P**	**12 18 05.5**	**-1.4**	
VYHS	**Vyhne**	**91.53**	**41**	*e*P	**P**	**12 18 08.4**	**+0.9**	
VYHS	**Vyhne**	**91.53**	**41**	*e*P	**P**	**12 18 08.4**	**+0.9**	
VNA1	**Neumayer--Stat**	**91.77**	**161**	P	**P**	**12 18 09.1**	**+1.1**	
FINES	**FINESS Array B**	**91.92**	**27**	LR	LR	12 57 22.3		
	comp=Z,382nm,19.5s,baz=251,slow=34							
VSU	**Vasula**	**93.24**	**30⇓**	*e*P	**P**	**12 18 17.4**	**+2.3**	
VSU				pmax	pmax			
	comp=Z,28nm,1.0s							
SNAA	**Sanae**	**93.73**	**162**	P	**P**	**12 18 16.8**	**-0.4**	
SNAA	**Sanae**	**93.73**	**162**	*e*P	**P**	**12 18 16.0**	**-1.2**	
	comp=Z,15nm,1.5s							
SNAA	**Sanae**	**93.73**	**162**	‖*i*P	**P**	**12 18 15.6**	**-1.6**	
MLR	**Muntele Rosu**	**97.03**	**42**	P	**P**	**12 18 32.1**	**-0.8**	
	comp=Z,2.9nm,0.7s,baz=308,slow=7.8,SNR=4.7							
MLR	**Muntele Rosu**	**97.03**	**42**	*e*P	**P**	**12 18 31.8**	**-1.2**	
	comp=Z,7.5nm,1.0s							
MLR	**Muntele Rosu**	**97.03**	**42**	*e*P	**P**	**12 18 31.8**	**-1.2**	
MLR				pmax	pmax			
	comp=Z,8.0nm,1.0s							
AKASG	**Malin Array Be**	**97.34**	**37**	LR	LR	12 58 54.0		
	comp=Z,337nm,20.8s,baz=310,slow=33							
KLMR	**Klimovskoe**	**98.05**	**25**	*e*PP	**PP**	**12 22 36.3**	**+0.8**	
KLMR				AMP		12 22 47.6		
	comp=Z,9.0nm,1.4s							
TIXI	**Tiksi**	**98.37**	**351⇑**	*e*P	Pdif	12 18 40.2	+2.0	
TIXI				pmax	pmax			
	comp=Z,5.0nm,1.0s							
OBN	**Obninsk**	**99.54**	**31**	*e*P	**Pdif**	**12 18 45.2**	**+1.4**	
OBN				*e*PPP	PPP	12 24 55.0		
OBN				pmax	pmax			
	comp=Z,11nm,0.4s							
OBN				MLR	MLR			
	comp=Z,304nm,20.0s							
PRGR	**Permogore**	**100.05**	**23**	*e*P	**Pdif**	**12 18 44.1**	**-1.8**	
PRGR				pmax	pmax			
	comp=Z,8.0nm,1.4s							
NKL	**Nikolayevsk**	**109.54**	**334**	P	**Pdif**	**12 19 38.5**	**+10**	
NKL				*e*		12 24 09.1		
NKL				*e*SS	SS	12 39 30.9	+8.7	
NKL				MLR	MLR			
	comp=Z,369nm,20.0s							
NKL				MLR	MLR			
	comp=N,150nm,16.0s							
NKL				MLR	MLR			
	comp=E,276nm,16.0s							
DZM	**Mont Dzumac**	**112.72**	**249**	*e*S	**SKKSac**	**12 31 18.3**	**-9.5**	
	comp=E,199nm,26.1s							
DZM	**Mont Dzumac**	**112.72**	**249**	*e*LR	LR	12 57 24.8		
	comp=E,197nm,25.8s							
KLR	**Kul'dur**	**116.20**	**336**	‖*i*PKIKP	**PKPdf**	**12 23 46.0**	**+1.8**	
CN2	**Changchun**	**123.14**	**336**	*e*PKP	PKiKP	12 24 05.8	+7.9	
CN2				PP	PP	12 25 48.9	+13	
CN2				AMB	AMB			
	comp=E,210nm,6.0s							
CN2				LR	LR			
	comp=E,290nm,18.0s							
CN2				LR	LR			
	comp=E,310nm,18.0s							
CN2				LR	LR			
	comp=E,300nm,20.0s							
ULN	**Ulaanbaatar**	**124.24**	**353⇑**	*i*PKIKP	**PKiKP**	**12 24 03.3**	**+3.1**	
SONA0	**Songino Array**	**124.35**	**353**	*e*PKPdf	**PKPdf**	**12 23 58.7**	**-1.4**	
SONM	**Songino Array**	**124.35**	**353**	PKP	**PKPdf**	**12 23 58.7**	**-1.4**	
	comp=E,0.8nm,0.6s,baz=354,slow=1.5,SNR=4.6							
SONM				PP	**PP**	**12 25 44.2**	**-0.2**	
	comp=E,1.0nm,1.0s,baz=324,slow=3.9,SNR=3.4							
AAK	**Ala-Archa**	**125.65**	**21⇑**	*e*PKIKP	**PKiKP**	**12 24 03.1**	**-0.1**	
KSRS	**Korea Array**	**127.19**	**330**	PKP	**PKPdf**	**12 24 04.8**	**-0.7**	
	comp=E,1.4nm,0.7s,baz=67,slow=0.9,SNR=8.2							
WMQ	**Urumqi**	**128.02**	**9**	*e*PKP	**PKiKP**	**12 24 07.8**	**+0.1**	
WMQ				LR	LR			
	comp=E,150nm,16.3s							
WMQ				LR	LR			
	comp=E,220nm,21.3s							
WMQ				LR	LR			
	comp=E,370nm,18.3s							
KSH	**Kashi**	**128.92**	**22**	PKP	**PKiKP**	**12 24 11.8**	**+2.1**	
KSH				PP	PP	12 26 24.0	+9.1	
KSH				SKKS		12 33 13.3		
KSH				SS	SS	12 43 43.1	+11	
KSH				LR	LR			
	comp=E,620nm,12.3s							
KSH				LR	LR			
	comp=E,720nm,15.0s							
KSH				LR	LR			
	comp=E,910nm,23.4s							
GTA	**Gaotai**	**133.24**	**358**	*e*PKP	**PKPdf**	**12 24 17.3**	**0.0**	
GTA				LR	LR			
	comp=E,260nm,22.5s							
GTA				LR	LR			
	comp=E,180nm,20.0s							
GTA				LR	LR			
	comp=E,430nm,21.3s							
NJ2	**Nanjing**	**135.85**	**334**	*e*PKP	**PKPdf**	**12 24 20.8**	**-1.3**	
LZH	**Lanzhou**	**136.24**	**353**	*e*PKP	**PKPdf**	**12 24 18.9**	**-4.1**	
LZH				sPKP		12 24 32.4		
LZH				LR	LR			
	comp=E,150nm,14.6s							
LZH				LR	LR			
	comp=E,200nm,16.0s							
LZH				LR	LR			
	comp=E,240nm,17.2s							
XAN	**Xi'an**	**137.35**	**347**	PKP	**PKiKP**	**12 24 31.1**	**+4.3**	
XAN				PP	PP	12 27 16.1	+7.6	
XAN				SS	SS	12 45 25.1	+11	
XAN				AMB	AMB			
	comp=E,150nm,6.8s							
XAN				LR	LR			
	comp=E,550nm,18.6s							
XAN				LR	LR			
	comp=E,190nm,20.6s							
XAN				LR	LR			
	comp=E,500nm,21.6s							
WHN	**Wuhan**	**138.99**	**338**	PKP	**PKiKP**	**12 24 31.1**	**+0.9**	
CD2	**Chengdu**	**141.35**	**352**	PKP	**PKPdf**	**12 24 30.3**	**-2.1**	
ASAR	**Alice Springs**	**142.01**	**241**	PKhKP	PKPpre	12 24 27.1		
	comp=E,4.2nm,0.8s,baz=115,slow=3.7,SNR=22							
WB2	**Warramunga Arr**	**142.67**	**247**	*e*PKPdf	**PKPdf**	**12 24 33.6**	**-1.3**	
WRAB	**Tennant Creek**	**142.68**	**247**	‖*i*PKIKP	**PKPdf**	**12 24 34.3**	**-0.6**	
WR1	**Warramunga Arr**	**142.68**	**247**	*e*PKPpre	PKPpre	12 24 30.5		
WRA	**Warramunga Arr**	**142.68**	**247**	PKhKP	PKPpre	12 24 30.5		
	comp=E,13nm,0.9s,baz=125,slow=1.5,SNR=13							
GYA	**Guiyang**	**145.15**	**346⇑**	*i*PKPbc	**PKPbc**	**12 24 37.6**	**-1.1**	
GYA				PP	**PP**	**12 27 59.6**	**+3.4**	
GYA				AMB	AMB			
	comp=E,190nm,8.0s							
SIJI	**Sorong**	**146.15**	**280**	PKPbc	**PKPdf**	**12 24 39.9**	**-1.2**	
	comp=E,13nm,1.0s,baz=73,slow=1.1,SNR=8.6							
SHL	**Shillong**	**146.55**	**10**	*e*PKPdf	**PKPdf**	**12 24 41.1**	**-0.6**	
SHL	**Shillong**	**146.55**	**10**	*e*PKP2	**PKPdf**	**12 24 41.1**	**-0.6**	
MTN	**Manton Dam**	**146.96**	**258**	*e*PKPdf	**PKPdf**	**12 24 41.0**	**-1.4**	
FITZ	**Fitzroy Crossi**	**151.10**	**246**	*e*PKPdf	**PKPdf**	**12 24 48.0**	**-1.0**	
CMAR	**Chiang Mai Arr**	**154.13**	**358**	PKP	**PKPdf**	**12 24 53.0**	**-0.5**	
	comp=E,0.5nm,0.3s,baz=68,slow=1.2,SNR=5.7							

*IDC **22** 12:09:58.1±1.0, 12°.56N×143°.80E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/59, mbtmp3.7/5, Error ellipse: s-maj=31.1km s-min=17.9km az=121.0*
*ISCJB **22** 12:10:00.3±0.9, 12°.5N±0°.1×143°.7E±0°.2, h27km, mb3.7/5, Error ellipse: s-maj=27.7km s-min=10.4km az=42.3*
ISC 22 12:10:02.1±1.1, 12°.6N±0°.2×143°.9E±0°.2, h27km, n6, σ1§42/7, mb3.8/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.41**	**43**	Pn	**Pn**	**12 10 24.8**	**-1.2**
	44nm,0.3s,baz=356,slow=20,SNR=64						
GUMO				Sn	**Sb**	**12 10 45.4**	**+0.1**
	76nm,0.3s,baz=25,slow=23,SNR=22						
WRA	**Warramunga Arr**	**33.63**	**196**	P	**P**	**12 16 39.6**	**-1.0**
	0.9nm,0.8s,baz=15,slow=8.1,SNR=9.8						
ASAR	**Alice Springs**	**37.30**	**195**	P	**P**	**12 17 12.0**	**-0.1**
	0.2nm,0.5s,baz=21,slow=13,SNR=4.0						
MKAR	**Makanchi Array**	**61.58**	**317**	P	**P**	**12 20 17.6**	**+0.4**
	0.2nm,0.3s,baz=87,slow=8.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**64.80**	**320**	P	**P**	**12 20 37.7**	**-0.8**
	0.3nm,0.3s,baz=101,slow=6.2,SNR=5.3						
NVAR	**Mina Array Bea**	**88.31**	**51**	P	**P**	**12 22 54.1**	**+2.2**
	1.0nm,0.8s,baz=256,slow=6.2,SNR=6.3						

*IDC **22** 12:10:56.5±0.8, 12°.58N×143°.82E, h0km, mb3.8/11, mb1 4.0/11, mb1mx3.7/59, mbtmp3.8/11, MS3.6/3, Ms1 3.6/3, ms1mx3.0/29, Error ellipse: s-maj=21.8km s-min=16.1km az=113.0*
*ISCJB **22** 12:10:58.7±0.4, 12°.54N±0°.05×143°.76E±0°.07, h27km, mb3.9/18, MS3.4/2, Error ellipse: s-maj=10.4km s-min=6.8km az=30.6*
*NEIC **22** 12:11:01.3±1.4, 12°.58N×143°.79E, h35km, mb4.2/8, Error ellipse: s-maj=24.3km s-min=16.1km az=105.0*
ISC 22 12:11:00.3±0.6, 12°.57N±0°.10×143°.81E±0°.10, h27km, n30, σ0§82/29, mb4.0/18, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.45**	**45**	Pn	**Pn**	**12 11 24.8**	**0.0**
	baz=201,slow=11,SNR=4.0						
GUMO				Sn	**Sn**	**12 11 43.1**	**+0.2**
	252nm,0.3s,baz=197,slow=23,SNR=20						
GUMO	**Guam**	**1.45**	**45**	*e*Pn	**Pn**	**12 11 24.6**	**-0.1**
GUMO				*e*Sn	**Sn**	**12 11 42.8**	**-0.1**
PATS	**Pohnpei**	**15.38**	**110**	*e*Pn	**Pn**	**12 14 35.0**	**-0.8**
SIJI	**Sorong**	**18.26**	**224**	LR	LR	12 21 51.9	
	comp=Z,184nm,19.7s,baz=53,slow=36						
TGY	**Tagaytay City**	**22.31**	**277**	LR	LR	12 24 39.0	
	comp=Z,134nm,18.4s,baz=16,slow=37						
JNU	**Nakatsue**	**23.63**	**332**	P	**P**	**12 16 10.4**	**+1.0**
	3.7nm,0.9s,baz=146,slow=7.3,SNR=2.9						
JNU	**Nakatsue**	**23.63**	**332**	*e*P	**P**	**12 16 09.3**	**-0.1**
	3.9nm,0.9s						
MJAR	**Matsushiro Arr**	**24.39**	**349**	P	**P**	**12 16 16.8**	**+0.3**
	2.3nm,0.9s,baz=178,slow=9.8,SNR=5.4						
MAJO	**Matsushiro**	**24.40**	**349**	*e*P	**P**	**12 16 15.3**	**-1.2**
	4.9nm,1.1s						
LUWI	**Luwuk**	**24.88**	**239**	*e*P	**P**	**12 16 20.1**	**-0.9**
	14nm,1.0s						
COEN	**Coen**	**26.36**	**181**	*e*P	**P**	**12 16 35.2**	**+0.7**
	7.6nm,1.1s						
KSRS	**Korea Array**	**28.57**	**333**	P	**P**	**12 16 56.1**	**+2.1**
	0.2nm,0.4s,baz=148,slow=10,SNR=3.1						
BATI	**Baumata**	**30.21**	**222**	LR	LR	12 29 22.1	
	comp=Z,97nm,20.3s,baz=92,slow=37						
WRAB	**Tennant Creek**	**33.62**	**196**	*e*P	**P**	**12 17 38.7**	**0.0**
	6.8nm,0.9s						
WB2	**Warramunga Arr**	**33.62**	**196**	*e*P	**P**	**12 17 38.8**	**0.0**
	3.2nm,0.8s						
WR1	**Warramunga Arr**	**33.63**	**196**	*e*P	**P**	**12 17 39.2**	**+0.4**
WRA	**Warramunga Arr**	**33.63**	**196**	P	**P**	**12 17 39.2**	**+0.4**
	1.7nm,0.5s,baz=8.2,slow=7.6,SNR=19						
AS31	**Alice Springs**	**37.29**	**195**	*e*P	**P**	**12 18 09.9**	**-0.4**
	1.2nm,1.1s						
ASAR	**Alice Springs**	**37.30**	**195**	P	**P**	**12 18 10.7**	**+0.3**
	0.5nm,0.5s,baz=24,slow=12,SNR=11						
CM31	**Chiang Mai Arr**	**43.54**	**284**	*e*P	**P**	**12 19 02.0**	**-0.2**
	3.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.54**	**284**	P	**P**	**12 19 02.1**	**0.0**
	0.5nm,0.3s,baz=64,slow=5.6,SNR=5.6						
MK32	**Makanchi Array**	**61.51**	**317**	*e*P	**P**	**12 21 14.0**	**-0.9**
MKAR	**Makanchi Array**	**61.51**	**317**	P	**P**	**12 21 14.0**	**-0.9**
	0.8nm,0.9s,baz=106,slow=8.2,SNR=5.6						
KURBB	**Kurchatov Arra**	**64.74**	**320**	P	**P**	**12 21 35.8**	**-0.5**
	1.6nm,0.9s,baz=101,slow=6.7,SNR=7.6						
ILAR	**Eielson Array**	**69.92**	**25**	P	**P**	**12 22 07.8**	**-1.1**
	0.3nm,0.7s,baz=244,slow=3.9,SNR=2.9						
YKA	**Yellowknife Ar**	**84.23**	**27**	P	**P**	**12 23 29.0**	**-0.2**
	0.3nm,0.7s,baz=286,slow=5.2,SNR=3.6						
YKB5	**Yellowknife Ar**	**84.23**	**27**	*e*P	**P**	**12 23 29.1**	**-0.2**
NV01	**Mina Array Sit**	**88.36**	**51**	*e*P	**P**	**12 23 51.9**	**+1.5**
NVAR	**Mina Array Bea**	**88.36**	**51**	P	**P**	**12 23 51.9**	**+1.5**
	2.2nm,0.8s,baz=260,slow=6.0,SNR=13						
LPAZ	**La Paz**	**148.87**	**101**	PKPbc	**PKPbc**	**12 30 47.5**	**+0.2**
	1.7nm,0.8s,baz=230,slow=5.0,SNR=5.4						

*IDC **22** 12:11:29.8±0.5, 12°.63N×143°.79E, h0km, mb4.3/19, mb1 4.4/20, mb1mx4.1/58, mbtmp4.3/20, ML4.2/1, Error ellipse: s-maj=17.5km s-min=12.0km az=99.0*
*ISCJB **22** 12:11:32.3±0.4, 12°.57N±0°.06×143°.77E±0°.07, h27km, mb4.3/21, Error ellipse: s-maj=11.5km s-min=7.3km az=32.2*
*BJI **22** 12:11:32.5±0.0, 12°.60N×143°.70E, h10km, mb4.5/10, mB5.0/8, Ms4.7/2*
ISC 22 12:11:33.9±0.5, 12°.59N±0°.08×143°.88E±0°.10, h27km, n34, σ1§03/30, mb4.3/21, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.38**	**44**	Pn	**Pn**	**12 11 57.9**	**+0.5**
	512nm,0.3s,baz=52,slow=1.7,SNR=12						
GUMO				LR	LR	12 12 11.2	
	comp=Z,2μm,21.6s,baz=272,slow=29						
GUMO				Sn	**Sb**	**12 12 16.4**	**+0.1**
	266nm,0.3s,baz=109,slow=21,SNR=6.3						
SIJI	**Sorong**	**18.32**	**224**	P	**P**	**12 15 46.1**	**-0.1**
	0.8nm,0.3s,baz=8.0,slow=8.7,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	**22.73**	**72**	T	T	12 40 22.2	
	baz=258,slow=75						
H11S1	**WAKE ISLAND Hy**	**22.75**	**72**	T	T	12 40 22.1	
	baz=258,slow=75						
H11S2	**WAKE ISLAND Hy**	**22.75**	**72**	T	T	12 40 22.4	
	baz=258,slow=75						
H11N1	**WAKE ISLAND Hy**	**23.19**	**69**	T	T	12 40 53.8	
	baz=255,slow=75						
H11N2	**WAKE ISLAND Hy**	**23.20**	**69**	T	T	12 40 57.7	
	baz=255,slow=75						
H11N3	**WAKE ISLAND Hy**	**23.21**	**69**	T	T	12 41 00.7	
	baz=255,slow=75						
JNU	**Nakatsue**	**23.65**	**332**	P	**P**	**12 16 43.5**	**+0.4**
	11nm,1.0s,baz=150,slow=7.3,SNR=6.4						
MJAR	**Matsushiro Arr**	**24.39**	**349**	P	**P**	**12 16 48.2**	**-1.8**
	3.9nm,0.9s,baz=179,slow=9.7,SNR=7.4						
MAT	**Matsushiro**	**24.39**	**349**	P	**P**	**12 16 50.4**	**+0.4**
KSRS	**Korea Array**	**28.58**	**333**	P	**P**	**12 17 28.5**	**+0.8**
	1.0nm,0.8s,baz=135,slow=9.9,SNR=6.6						
CTA	**Charters Tower**	**32.56**	**176**	P	**P**	**12 18 03.8**	**+0.7**
	4.5nm,0.7s,baz=348,slow=9.9,SNR=3.8						
WHN	**Wuhan**	**32.61**	**308**	P	**P**	**12 18 06.4**	**+3.0**
WRA	**Warramunga Arr**	**33.66**	**196**	P	**P**	**12 18 12.4**	**-0.3**
	24nm,0.6s,baz=12,slow=7.6,SNR=54						
ASAR	**Alice Springs**	**37.33**	**195**	P	**P**	**12 18 44.5**	**+0.2**
	3.8nm,0.5s,baz=23,slow=12,SNR=44						
ASAR				PcP	**PcP**	**12 21 04.5**	**+1.3**
	1.9nm,0.7s,baz=21,slow=3.7,SNR=8.5						
CMAR	**Chiang Mai Arr**	**43.60**	**284**	P	**P**	**12 19 35.2**	**-1.1**
	4.2nm,0.9s,baz=84,slow=5.8,SNR=10						
STKA	**Stephens Creek**	**44.27**	**183**	P	**P**	**12 19 40.8**	**-0.5**
	3.5nm,0.6s,baz=4.3,slow=7.7,SNR=8.5						
SONM	**Songino Array**	**47.00**	**326**	P	**P**	**12 20 02.7**	**-0.2**
	1.2nm,0.6s,baz=148,slow=7.2,SNR=5.8						
GTA	**Gaotai**	**47.13**	**313**	*e*P	**P**	**12 20 04.1**	**0.0**
GTA				pP	pP	12 20 08.5	-2.7
GTA				sP	sP	12 20 11.3	-2.9
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**61.54**	**317**	P	**P**	**12 21 48.6**	**-0.2**
	1.2nm,0.6s,baz=90,slow=9.3,SNR=8.6						
ZALV	**Zalesovo Beam**	**61.88**	**325**	P	**P**	**12 21 50.6**	**-0.2**
	1.1nm,0.6s,baz=116,slow=5.6,SNR=3.5						
KURBB	**Kurchatov Arra**	**64.77**	**320**	P	**P**	**12 22 09.3**	**-0.7**
	3.5nm,0.7s,baz=103,slow=6.8,SNR=14						
ILAR	**Eielson Array**	**69.88**	**25**	P	**P**	**12 22 41.6**	**-0.5**
	0.5nm,0.5s,baz=249,slow=5.8,SNR=10						
INK	**Inuvik**	**75.65**	**22**	P	**P**	**12 23 16.5**	**+0.2**
	1.8nm,1.0s,baz=244,slow=6.7,SNR=3.5						
YKA	**Yellowknife Ar**	**84.18**	**27**	P	**P**	**12 24 02.8**	**+0.2**
	1.0nm,0.6s,baz=287,slow=5.0,SNR=8.8						
ARCES	**ARCESS Array B**	**87.73**	**342**	P	**P**	**12 24 19.5**	**-0.5**
	5.6nm,0.3s,baz=45,slow=8.7,SNR=5.6						
NVAR	**Mina Array Bea**	**88.29**	**51**	P	**P**	**12 24 24.5**	**+0.9**
	5.5nm,0.7s,baz=262,slow=5.8,SNR=25						
VNDA	**Vanda**	**90.54**	**176**	P	**P**	**12 24 33.6**	**+0.8**
	1.4nm,0.7s,baz=317,slow=6.7,SNR=3.9						
FINES	**FINESS Array B**	**91.66**	**335**	P	**P**	**12 24 36.5**	**-2.0**
	0.7nm,0.5s,baz=66,slow=3.3,SNR=6.5						
PDAR	**Pinedale Array**	**93.35**	**45**	P	**P**	**12 24 46.0**	**-1.1**
	0.4nm,0

SARO				AML	AML	
	comp=N,80μm,0.6s					
SARO				AML	AML	
	comp=E,65μm,0.9s					
SARO				AML	AML	
	comp=N,80μm,0.6s					
SARO				AML	AML	
	comp=N,80μm,0.6s					
SARO				AML	AML	
	comp=E,65μm,0.9s					
SARO				AML	AML	
	comp=N,80μm,0.6s					
SARO				AML	AML	
	comp=E,65μm,0.9s					
CARD	**Cardoso**	**0.28**	**118**	P	Pb	12 17 45.9 -0.8
CARD				S	Sg	12 17 49.7 +1.1
CARD	**Cardoso**	**0.28**	**118**	P	Pb	12 17 45.9 -0.8
CARD				S	Sb	12 17 50.3 -1.2
ERBM	**Eremo**	**0.33**	**37**	P	Pb	12 17 47.1 -0.4
ERBM				S	Sb	12 17 52.2 -0.8
GRAM	**Graiana**	**0.34**	**351**	P	Pb	12 17 47.2 -0.5
GRAM				S	Sb	12 17 52.6 -0.7
MSSA	**Maissana**	**0.48**	**290**	P	Pb	12 17 49.4 -0.7
MSSA				S	Sb	12 17 56.2 -1.1
AGOR	**Agordo**	**2.52**	**32**	AML	AML	
	comp=N,196μm,0.4s					
AGOR				AML	AML	
	comp=E,156μm,0.4s					
AGOR				AML	AML	
	comp=N,196μm,0.4s					
AGOR				AML	AML	
	comp=E,156μm,0.4s					
AGOR				AML	AML	
	comp=N,196μm,0.4s					
AGOR				AML	AML	
	comp=E,156μm,0.4s					

UCR 22 12:25:16.7±2.6, 7°.45N×82°.10W, h10km, MD4.4,3D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**1.04**	**340**	‖ *e*P	Pg	12 25 35.2	-1.5
	baz=152,slow=3.7						
TBS2		**1.45**	**337**	‖ *i*P	Pn	12 25 42.4	-0.7
BRU2	**Volcan**	**1.46**	**336**	*e*P	Pn	12 25 42.3	-1.0
PTJ1	**Puerto Jimnez**	**1.61**	**312**	*e*P	Pn	12 25 44.1	-1.1
EDPN	**Palmar Norte**	**2.02**	**318**	*e*P	Pn	12 25 49.8	-1.0
PNME	**Penonome**	**2.03**	**59**	*e*P	Pn	12 25 50.7	-0.3
EDBA	**Buenos Aires**	**2.06**	**326**	*e*P	Pn	12 25 52.0	+0.5
DRK0	**Durika**	**2.13**	**328**	*e*P	Pn	12 25 52.1	-0.4
EDLM	**Las Mercedes**	**2.34**	**321**	*e*P	Pn	12 25 55.5	+0.1
ZANG	**Zanguenga, Cho**	**2.67**	**56**	*e*P	Pn	12 26 00.1	+0.3
BCIP	**Isla Barro Col**	**2.81**	**52**	‖ *e*P	Pn	12 26 01.7	0.0
FLAM	**Flamenco Islan**	**2.92**	**60**	*e*P	Pn	12 26 02.6	-0.6
FLAM				*e*S	Sn	12 26 38.5	+0.1
FRIJ	**El Hiral**	**2.93**	**53**	*e*P	Pn	12 26 04.0	+0.6
LCR2	**La Lucha 2**	**2.96**	**321**	*e*P	Pn	12 26 02.6	-1.4
CVTR	**Volcan Turrial**	**3.04**	**327**	*e*P	Pn	12 26 05.6	+0.4
HDC	**Heredia**	**3.23**	**322**	*e*P	Pn	12 26 07.7	+0.1
ARE1	**Arenal 1**	**3.96**	**319**	*e*P	Pn	12 26 19.6	+2.1
JTS	**Las Juntas de**	**3.99**	**315**	*e*P	Pn	12 26 18.4	+0.4
UPD2	**Meteti**	**4.19**	**75**	*e*P	Pn	12 26 19.1	-1.5

UCR 22 12:33:38.8±2.6, 7°.58N×82°.05W, h10km±12km, MD4.2, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.94**	**335**	*e*P	Pg	12 33 56.6	-0.2
TBS2		**1.35**	**334**	*e*P	Pn	12 34 03.1	-0.8
BRU2	**Volcan**	**1.36**	**332**	*e*P	Pn	12 34 03.0	-1.1
BRU2				*e*S	Sg	12 34 23.3	+0.6
EDSV	**San Vito**	**1.53**	**324**	*e*P	Pg	12 34 08.1	-0.2
PTJ1	**Puerto Jimnez**	**1.56**	**308**	*e*P	Pn	12 34 05.2	-1.4
PTJ1				*e*S	Sn	12 34 27.1	+0.1
PNME	**Penonome**	**1.93**	**62**	*e*P	Pn	12 34 11.4	-0.4
PNME				*e*S	Sn	12 34 35.1	-1.1
EDPN	**Palmar Norte**	**1.95**	**315**	*e*P	Pn	12 34 10.4	-1.7
DRK0	**Durika**	**2.05**	**325**	*e*P	Pn	12 34 13.3	-0.3
DRK0				*i* S	Sn	12 34 36.8	-2.5
ZANG	**Zanguenga, Cho**	**2.56**	**58**	*e*P	Pn	12 34 20.6	+0.2
BCIP	**Isla Barro Col**	**2.70**	**54**	*e*P	Pn	12 34 23.0	+0.6
FRIJ	**El Hiral**	**2.82**	**55**	*e*P	Pn	12 34 25.2	+1.2
LCR2	**La Lucha 2**	**2.89**	**318**	*e*P	Pn	12 34 24.9	-0.2
CVTR	**Volcan Turrial**	**2.95**	**325**	*e*P	Pn	12 34 27.1	+0.9
ARE1	**Arenal 1**	**3.89**	**318**	*e*P	Pn	12 34 42.6	+3.9
CEDE	**Laguna Cedeo**	**3.90**	**318**	*e*P	Pn	12 34 39.6	+0.7
JTS	**Las Juntas de**	**3.93**	**313**	*e*P	Pn	12 34 39.4	+0.1

*ISCJB **22** 12:35:42.8±0.5, 6°.58S±0°.04×128°.97E±0°.05, h200km, mb3.5/8, Error ellipse: s-maj=7.4km s-min=5.6km az=177.2*
*IDC **22** 12:35:43.7±1.6, 6°.49S×128°.85E, h213km±19km, mb3.2/7, mb1 3.6/12, mb1mx3.4/32, mbtmp4.1/12, Error ellipse: s-maj=17.2km s-min=13.3km az=70.0*
*DJA **22** 12:35:44.2±0.4, 7°.3S×12°.9E±°, h212km±10km, M4.2/10, mb4.2/6, mB4.4/1, MLv4.3/10, Mw(mB)3.5/1*
ISC 22 12:35:42.2±0.6, 6°.61S±0°.05×129°.00E±0°.06, h200km, n21, σ2°.86/27, mb3.5/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.66**	**121**	P	**Pn**	**12 36 29.3**	**+1.4**
SAUI				S	**Sn**	**12 37 07.0**	**+3.4**
MSAI	**Masohi**	**3.24**	**359**	P	**Pn**	**12 36 37.0**	**+2.3**
NLAI	**Namlea**	**3.84**	**330**	P	**Pn**	**12 36 46.5**	**+4.5**
FAKI	**Fak Fak**	**4.89**	**42**	P	**Pn**	**12 36 56.8**	**+1.5**
SANI	**Sanana**	**5.43**	**326**	P	**Pn**	**12 37 03.7**	**+1.5**
SOEI	**Soe**	**5.63**	**236**	P	**Pn**	**12 37 07.3**	**+2.4**
SIJI	**Sorong**	**6.13**	**22**	P	**Pn**	**12 37 12.3**	**+1.1**
	10nm,0.3s,baz=188,slow=10,SNR=20						
SIJI				S	**Sn**	**12 38 17.9**	**-3.9**
	4.4nm,0.3s,baz=253,slow=20,SNR=9.1						
SWI	**Sorong**	**6.13**	**22**	P	**Pn**	**12 37 12.7**	**+1.4**
BATI	**Baumata**	**6.38**	**235**	P	**Pn**	**12 37 16.3**	**+1.9**
	7.6nm,0.3s,baz=126,slow=1.4,SNR=4.8						
BATI				S	**Sn**	**12 38 27.9**	**+0.6**
	19nm,0.3s,baz=82,slow=7.1,SNR=9.6						
BATI	**Baumata**	**6.38**	**235**	P	**Pn**	**12 37 17.5**	**+3.1**
FITZ	**Fitzroy Crossi**	**11.88**	**196**	P	**Pn**	**12 38 27.4**	**+1.8**
	1.2nm,0.3s,baz=15,slow=9.8,SNR=43						
FITZ				S	**Sn**	**12 40 31.8**	**-6.4**
	1.1nm,0.3s,baz=42,slow=12,SNR=3.5						
WRA	**Warramunga Arr**	**14.24**	**159**	P	**Pn**	**12 38 56.3**	**+1.2**
	3.1nm,0.3s,baz=334,slow=12,SNR=76						
WRA				S	**S**	**12 41 29.8**	**-3.8**
	1.0nm,0.3s,baz=335,slow=22,SNR=7.1						
ASAR	**Alice Springs**	**17.61**	**165**	P	**Pn**	**12 39 37.0**	**+1.3**
	3.6nm,0.3s,baz=346,slow=11,SNR=146						
ASAR				S	**S**	**12 42 42.7**	**-3.7**
	0.1nm,0.3s,baz=281,slow=22,SNR=3.7						
CTA	**Charters Tower**	**21.45**	**130**	P	**P**	**12 40 17.4**	**+2.3**
	1.2nm,0.4s,baz=176,slow=4.8,SNR=6.8						
STKA	**Stephens Creek**	**27.76**	**157**	P	**P**	**12 41 16.9**	**+4.5**
	2.5nm,0.9s,baz=315,slow=13,SNR=3.4						
CMAR	**Chiang Mai Arr**	**38.72**	**311**	P	**P**	**12 42 45.6**	**-1.6**
	0.3nm,0.4s,baz=129,slow=8.2,SNR=2.8						
MJAR	**Matsushiro Arr**	**43.78**	**11**	P	**P**	**12 43 26.3**	**-1.8**
	0.8nm,0.6s,baz=194,slow=10,SNR=4.0						
KSRS	**Korea Array**	**43.84**	**359**	P	**P**	**12 43 28.2**	**-0.4**
	0.7nm,0.6s,baz=173,slow=10,SNR=5.2						
SONM	**Songino Array**	**57.76**	**342**	P	**P**	**12 45 12.8**	**+0.4**
	0.5nm,0.6s,baz=157,slow=8.6,SNR=2.8						
MKAR	**Makanchi Array**	**67.35**	**327**	P	**P**	**12 46 15.5**	**-0.3**
	2.1nm,0.6s,baz=120,slow=8.6,SNR=22						
ZALV	**Zalesovo Beam**	**70.79**	**334**	P	**P**	**12 46 33.9**	**-2.8**
	0.4nm,0.3s,baz=134,slow=8.4,SNR=3.0						

*ISCJB **22** 12:37:15.9±0.3, 44°.10N±0°.02×10°.10E±0°.02, h5km±3km, Error ellipse: s-maj=3.6km s-min=2.7km az=166.5*
*ROM **22** 12:37:16.0±0.1, 44°.157N±0°.008×10°.17E±0°.01, h6km, ML2.6/18, Error ellipse: s-maj=1.0km s-min=0.5km az=44.0*
*GEN **22** 12:37:16.5, 44°.16N×10°.17E, h4km±1km, Ml2.4*
*LDG **22** 12:37:17.6±0.1, 44°.10N×10°.25E, h2km, Ml3.0/25, Error ellipse: s-maj=3.1km s-min=2.3km az=175.0*
ISC 22 12:37:15.7±0.9, 44°.12N±0°.02×10°.13E±0°.02, h6km±7km, n64, σ1°.60/105, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.07**	**51**	P	**Pg**	**12 37 17.7**	**+0.2**
T0912				S	**Sg**	**12 37 18.4**	**-0.4**
VLC	**Villacollemand**	**0.19**	**78**	P	**Pg**	**12 37 20.0**	**+0.5**
VLC				S	**Sg**	**12 37 22.7**	**+0.7**
VLC				AML	AML		
	comp=E,4435μm,0.6s						
VLC				AML	AML		
	comp=N,3690μm,0.3s						
VLC				AML	AML		
	comp=E,4495μm,0.6s						
VLC				AML	AML		
	comp=N,3790μm,0.3s						
VLC				AML	AML		
	comp=E,4435μm,0.6s						
VLC				AML	AML		
	comp=N,3690μm,0.3s						
VLC				AML	AML		
	comp=E,4495μm,0.6s						
VLC				AML	AML		
	comp=N,3790μm,0.3s						
VLC				AML	AML		
	comp=N,3790μm,0.3s						
VLC				AML	AML		
	comp=N,3690μm,0.3s						
VLC				AML	AML		
	comp=E,4435μm,0.6s						
VLC				AML	AML		
	comp=E,4495μm,0.6s						
VLC				AML	AML		
	comp=N,3790μm,0.3s						
VLC				AML	AML		
	comp=N,3690μm,0.3s						
VLC				AML	AML		
	comp=E,4435μm,0.6s						
VLC				AML	AML		
	comp=E,4495μm,0.6s						
SARO	**Sassorosso**	**0.20**	**72**	P	**Pg**	**12 37 20.2**	**+0.4**
SARO				S	**Sg**	**12 37 23.1**	**+0.4**
SARO	**Sassorosso**	**0.20**	**72**	P	**Pg**	**12 37 20.2**	**+0.4**
SARO				S	**Sg**	**12 37 23.0**	**+0.4**
SARO				AML	AML		
	comp=E,4375μm,0.4s						
SARO				AML	AML		
	comp=N,4615μm,0.4s						
SARO				AML	AML		
	comp=E,4375μm,0.4s						
SARO				AML	AML		
	comp=N,4615μm,0.4s						
SARO				AML	AML		
	comp=E,4375μm,0.4s						
SARO				AML	AML		
	comp=N,4615μm,0.4s						
SARO				AML	AML		
	comp=E,4375μm,0.4s						
SARO				AML	AML		
	comp=N,4615μm,0.4s						
CARD	**Cardoso**	**0.27**	**111**	P	**Pg**	**12 37 21.8**	**+0.8**
CARD				S	**Sg**	**12 37 26.0**	**+1.3**
CARD	**Cardoso**	**0.27**	**111**	P	**Pg**	**12 37 22.2**	**+1.2**
CARD				S	**Sg**	**12 37 25.8**	**+1.1**
CARD				AML	AML		
	comp=E,2110μm,1.0s						
CARD				AML	AML		
	comp=N,2615μm,1.0s						
CARD				AML	AML		
	comp=E,2110μm,1.0s						
CARD				AML	AML		
	comp=N,2615μm,1.0s						
CARD				AML	AML		
	comp=N,2615μm,1.0s						
CARD				AML	AML		
	comp=E,2110μm,1.0s						
CARD				AML	AML		
	comp=N,2615μm,1.0s						
CARD				AML	AML		
	comp=E,2110μm,1.0s						
CARD				AML	AML		
	comp=N,2615μm,1.0s						
BDI	**Bagni Di Lucca**	**0.34**	**100**	P	**Pg**	**12 37 23.0**	**+0.6**
BDI				S	**Sg**	**12 37 27.9**	**+0.9**
BDI				AML	AML		
	comp=E,1330μm,0.8s						
BDI				AML	AML		
	comp=N,1128μm,0.6s						
BDI				AML	AML		
	comp=E,1350μm,0.6s						
BDI				AML	AML		
	comp=N,1110μm,0.4s						
BDI				AML	AML		
	comp=E,1330μm,0.8s						
BDI				AML	AML		
	comp=E,1350μm,0.6s						
BDI				AML	AML		
	comp=N,1110μm,0.4s						
BDI				AML	AML		
	comp=N,1128μm,0.6s						
BDI				AML	AML		
	comp=E,1330μm,0.8s						
BDI				AML	AML		
	comp=E,1350μm,0.6s						
BDI				AML	AML		
	comp=N,1110μm,0.4s						
BDI				AML	AML		
	comp=N,1128μm,0.6s						
ERBM	**Eremo**	**0.36**	**34**	P	**Pg**	**12 37 23.2**	**+0.5**
ERBM				S	**Sb**	**12 37 28.6**	**-2.0**
ERBM				AML	AML		
	comp=E,2365μm,0.8s						
ERBM				AML	AML		
	comp=N,2685μm,0.7s						
ERBM				AML	AML		
	comp=E,2370μm,0.8s						
ERBM				AML	AML		
	comp=N,2680μm,0.7s						
ERBM				AML	AML		
	comp=E,2370μm,0.8s						
ERBM				AML	AML		
	comp=N,2680μm,0.7s						
ERBM				AML	AML		
	comp=E,2370μm,0.8s						
ERBM				AML	AML		
	comp=N,2680μm,0.7s						
GRAM	**Graiana**	**0.37**	**353**	P	**Pg**	**12 37 23.6**	**+0.5**
GRAM				S	**Sg**	**12 37 28.5**	**+0.5**
GRAM	**Graiana**	**0.37**	**353**	P	**Pg**	**12 37 23.6**	**+0.5**
GRAM				S	**Sg**	**12 37 28.6**	**+0.7**
GRAM				AML	AML		
	comp=E,7585μm,0.3s						
GRAM				AML	AML		
	comp=N,7105μm,0.3s						
GRAM				AML	AML		
	comp=E,7585μm,0.3s						
GRAM				AML	AML		
	comp=N,7110μm,0.3s						
GRAM				AML	AML		
	comp=E,7585μm,0.3s						
GRAM				AML	AML		
	comp=N,7110μm,0.3s						
GRAM				AML	AML		
	comp=E,7585μm,0.3s						
GRAM				AML	AML		
	comp=N,7110μm,0.3s						
POPM	**Popiglio**	**0.46**	**99**	P	**Pg**	**12 37 25.2**	**+0.7**
POPM				S	**Sg**	**12 37 31.8**	**+1.2**
POPM	**Popiglio**	**0.46**	**99**	P	**Pg**	**12 37 25.3**	**+0.7**
POPM				S	**Sg**	**12 37 31.6**	**+1.0**
POPM				AML	AML		
	comp=E,1410μm,0.2s						
POPM				AML	AML		
	comp=N,1820μm,0.3s						
MSSA	**Maissana**	**0.48**	**294**	P	**Pg**	**12 37 26.4**	**+1.3**
MSSA				S	**Sg**	**12 37 32.9**	**+1.5**
MSSA				AML	AML		
	comp=E,802μm,1.6s						
MSSA				AML	AML		
	comp=N,762μm,0.7s						
MSSA				AML	AML		
	comp=E,802μm,1.6s						
MSSA				AML	AML		
	comp=N,762μm,0.7s						
MSSA				AML	AML		
	comp=N,762μm,0.7s						
MSSA				AML	AML		
	comp=E,802μm,1.6s						
MSSA				AML	AML		
	comp=N,762μm,0.7s						
MTCR	**Monte La Croce**	**0.63**	**98**	P	**Pg**	**12 37 28.4**	**+0.5**
MTCR				AML	AML		
	comp=E,864μm,0.5s						
MTCR				AML	AML		
	comp=N,1330μm,0.7s						
CRMI	**Carmignano**	**0.69**	**118**	P	**Pg**	**12 37 30.3**	**+1.3**
CRMI				AML	AML		
	comp=E,234μm,0.6s						
CRMI				AML	AML		
	comp=N,305μm,0.8s						
CRMI				AML	AML		
	comp=N,305μm,0.8s						
CRMI				AML	AML		
	comp=E,234μm,0.6s						
CRMI				AML	AML		
	comp=N,305μm,0.8s						
CRMI				AML	AML		
	comp=E,234μm,0.6s						
SEI	**Scarperia**	**0.89**	**94**	AML	AML		
	comp=N,1595μm,0.5s						
SEI				AML	AML		
	comp=E,756μm,0.4s						
SEI				AML	AML		
	comp=N,1595μm,0.5s						
SEI				AML	AML		
	comp=E,756μm,0.4s						
SEI				AML	AML		
	comp=N,1595μm,0.5s						
SEI				AML	AML		
	comp=E,756μm,0.4s						
RUFI	**Rufina**	**1.03**	**105**	P	**Pg**	**12 37 35.7**	**+0.1**
RUFI				AML	AML		
	comp=E,244μm,0.6s						
RUFI				AML	AML		
	comp=N,240μm,0.7s						
RUFI				AML	AML		
	comp=E,244μm,0.6s						
RUFI				AML	AML		
	comp=N,240μm,0.7s						
RUFI				AML	AML		
	comp=E,244μm,0.6s						
RUFI				AML	AML		
	comp=N,240μm,0.7s						
CSNT	**Castellina Chi**	**1.06**	**127**	P	**Pg**	**12 37 37.2**	**+1.1**
CSNT				AML	AML		
	comp=E,276μm,0.5s						
CSNT				AML	AML		
	comp=N,374μm,1.4s						
CSNT				AML	AML		
	comp=E,276μm,0.5s						
CSNT				AML	AML		
	comp=N,374μm,1.4s						
CSNT				AML	AML		
	comp=E,276μm,0.5s						
CSNT				AML	AML		
	comp=N,374μm,1.4s						
QLNO	**Quiliano**	**1.30**	**280**	P	**Pn**	**12 37 41.4**	**+1.0**
QLNO				AML	AML		
	comp=E,114μm,0.3s						
QLNO				AML	AML		
	comp=N,116μm,0.5s						
QLNO				AML	AML		
	comp=E,114μm,0.3s						
QLNO				AML	AML		
	comp=N,116μm,0.5s						
QLNO				AML	AML		
	comp=E,114μm,0.3s						
QLNO				AML	AML		
	comp=N,116μm,0.5s						
FINB	**Finale Ligure**	**1.30**	**273**	P	**Pn**	**12 37 40.9**	**+0.5**
FINB				AML	AML		
	comp=E,116μm,0.5s						
FINB				AML	AML		
	comp=N,137μm,0.7s						
FINB				AML	AML		
	comp=E,116μm,0.5s						
FINB				AML	AML		
	comp=N,137μm,0.7s						
FINB				AML	AML		
	comp=E,116μm,0.5s						
FINB				AML	AML		
	comp=N,137μm,0.7s						
CASP	**Castiglione de**	**1.43**	**158**	P	**Pn**	**12 37 42.8**	**+0.5**
CASP				AML	AML		
	comp=E,98μm,0.5s						
CASP				AML	AML		
	comp=N,108μm,0.6s						
CASP				AML	AML		
	comp=N,108μm,0.6s						
CASP				AML	AML		
	comp=E,98μm,0.5s						
CASP				AML	AML		
	comp=N,108μm,0.6s						
CASP				AML	AML		
	comp=E,98μm,0.5s						
PGF	**Pioggiola**	**1.78**	**208**	*e*Pn	**Pn**	**12 37 48.1**	**+1.0**
PGF				*e*Sn	**Sn**	**12 38 09.5**	**-0.5**
	comp=E,26nm,0.3s						
SAOF	**Saorge**	**1.86**	**267**	P	**Pn**	**12 37 49.2**	**+1.0**
SAOF				AML	AML		
	comp=E,138μm,0.7s						
SAOF				AML	AML		
	comp=N,175μm,0.7s						
SAOF				AML	AML		
	comp=E,138μm,0.7s						
SAOF				AML	AML		
	comp=N,175μm,0.7s						
SAOF				AML	AML		
	comp=E,138μm,0.7s						
SAOF				AML	AML		
	comp=N,175μm,0.7s						
SBF	**Sospel**	**1.96**	**263**	*e*Pn	**Pn**	**12 37 50.3**	**+0.7**
SBF				*e*Sn	**Sn**	**12 38 14.7**	**+0.1**
	comp=N,35nm,0.3s						
VARE	**Varese**	**2.00**	**332**	AML	AML		
	comp=E,156μm,0.5s						
VARE				AML	AML		
	comp=E,156μm,0.5s						
VARE				AML	AML		
	comp=N,141μm,0.6s						
VARE				AML	AML		
	comp=N,141μm,0.6s						
VARE				AML	AML		
	comp=N,141μm,0.6s						
VARE				AML	AML		
	comp=E,156μm,0.5s						
TRAV	**Traversella**	**2.19**	**310**	AML	AML		
	comp=N,78μm,0.4s						
TRAV				AML	AML		
	comp=E,91μm,0.9s						
TRAV				AML	AML		
	comp=N,78μm,0.4s						
TRAV				AML	AML		
	comp=E,91μm,0.9s						
TRAV				AML	AML		
	comp=N,78μm,0.4s						
TRAV				AML	AML		
	comp=E,91μm,0.9s						
MBDF	**Montbardon**	**2.48**	**285**	*e*Pn	**Pn**	**12 37 58.6**	**+1.8**
MBDF				*e*Sn	**Sn**	**12 38 29.3**	**+1.8**
	comp=E,12nm,0.5s						
FRF	**La Foret Royal**	**2.58**	**259**	*e*Pn	**Pn**	**12 37 58.7**	**+0.6**
FRF				*e*Sn	**Sn**	**12 38 29.4**	**-0.4**
	comp=E,9.1nm,0.3s						
LMR	**La Mourre**	**2.74**	**255**	*e*Pn	**Pn**	**12 38 00.8**	**+0.6**
LMR				*e*Sn	**Sn**	**12 38 31.9**	**-1.8**
	comp=E,6.6nm,0.3s						
LPG	**La Plagne**	**2.77**	**301**	*e*Pn	**Pn**	**12 38 02.9**	**+2.0**
LPG	**La Plagne**	**2.77**	**301**	*e*P	**Pb**	**12 38 06.0**	**+0.2**
LPG				*e*Sn	**Sn**	**12 38 36.8**	**+2.0**
	comp=E,9.2nm,0.4s						
LPL	**La Plagne**	**2.79**	**301**	*e*Pn	**Pn**	**12 38 03.3**	**+2.1**
LPL	**La Plagne**	**2.79**	**301**	*e*P	**Pb**	**12 38 05.9**	**-0.2**
LPL				*e*Sn	**Sn**	**12 38 36.9**	**+1.6**
	comp=E,11nm,0.5s						
FETA	**Feichten**	**2.93**	**8**	*e*Pn	**Pn**	**12 38 04.0**	**+1.0**
	comp=E,0.8nm,0.3s						
FETA				Sn	**Sn**	**12 38 41.2**	**+2.6**
	comp=E,3.7nm,0.5s						
ABTA	**Abfaltersbach**	**3.12**	**32**	*i* Pn	**Pb**	**12 38 08.9**	**-2.7**
	comp=E,1.5nm,0.3s						
ABTA				Sn	**Sn**	**12 38 45.3**	**+2.3**
	comp=E,2.3nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.14**	**286**	*e*Pn	**Pn**	**12 38 08.3**	**+2.4**
ORIF				*e*Sn	**Sn**	**12 38 44.3**	**+0.6**

comp=E,9.6nm,0.4s
DAVA Damuels 3.17 357 *i* Pn **Pn 12 38 09.7 +3.4**
comp=E,14nm,0.5s
DAVA *i* Sn **Sb 12 38 48.6 -2.9**
comp=E,12nm,0.4s
SQTA Sankt Quirin 3.19 13 *e*Pn **Pn 12 38 09.8 +3.2**
comp=E,9.9nm,0.3s,SNR=7.1
SQTA *e*Sn **Sb 12 38 49.4 -2.7**
comp=E,7.4nm,0.3s
SMRF Simiane la Rot 3.29 269 *e*Pn **Pn 12 38 09.6 +1.8**
SMRF *e*Sn **Sn 12 38 47.1 -0.1**
comp=E,10nm,0.4s
MOTA Moosalm 3.29 12 *i* Pn **Pb 12 38 11.9 -2.8**
comp=E,4.2nm,0.3s
MOTA *i* Sn **Sb 12 38 52.5 -2.6**
comp=E,4.1nm,0.3s
WTTA Wattenberg 3.31 18 *e*Pn **Pb 12 38 12.4 -2.7**
comp=E,5.0nm,0.3s
WTTA *e*Sn **Sn 12 38 51.4 +3.3**
comp=E,16nm,0.5s
WATA Walderalm 3.37 17 *i* Pn **Pb 12 38 13.3 -2.6**
comp=E,2.4nm,0.2s
NVLJ Novalja 3.43 81 *e*Pn **Pn 12 38 11.8 +2.1**
NVLJ Sn **Sn 12 38 48.8 -1.9**
CABF La Chapelle 3.78 313 *e*Pn **Pn 12 38 16.5 +1.8**
CABF *e*Sn **Sn 12 38 59.9 +0.4**
comp=E,4.4nm,0.3s
VIVF Saint-Julien-l 3.97 283 *e*Pn **Pn 12 38 19.2 +2.0**
VIVF *e*Sn **Sn 12 39 04.5 +0.3**
comp=E,0.9nm,0.2s
HINF Hinteralfeld 4.34 329 *e*Pn **Pn 12 38 24.1 +1.8**
HINF *e*Sn **Sn 12 39 13.0 -0.3**
comp=E,15nm,0.5s
LASF Ste Croix 4.52 272 *e*Pn **Pn 12 38 25.6 +0.9**
LASF *e*Sn **Sn 12 39 17.5 -0.1**
comp=E,0.7nm,0.3s
HAU Haudompre 4.69 327 *e*Pn **Pn 12 38 28.5 +1.4**
HAU *e*Sn **Sn 12 39 20.8 -1.0**
comp=E,21nm,0.4s
MOA Molln 4.71 36 *i* Pn **Pn 12 38 29.8 +2.4**
comp=E,1.0nm,0.2s
MOA *i* Sn **Sn 12 39 24.6 +2.2**
comp=E,0.8nm,0.2s
CDF Champ du Feu 4.72 336 *e*Pn **Pn 12 38 28.6 +1.0**
CDF *e*Sn **Sn 12 39 21.3 -1.5**
comp=E,6.5nm,0.4s
ARSA Arzberg 4.91 48 *i* Pn **Pn 12 38 32.3 +2.3**
comp=E,4.0nm,0.3s
SMF Signal de Mont 5.10 302 *e*Pn **Pn 12 38 34.2 +1.5**
SMF *e*Sn **Sn 12 39 30.4 -1.4**
comp=E,6.2nm,0.3s
PAGF Fort de Pagny 5.38 327 *e*Pn **Pn 12 38 38.0 +1.5**
PAGF Fort de Pagny 5.38 327 *e*P Pn 12 38 41.7 +5.2
PAGF *e*Sn **Sn 12 39 38.4 -0.4**
comp=E,5.3nm,0.4s
SFTF Sexfontaines 5.40 321 *e*Pn **Pn 12 38 39.1 +2.3**
baz=135
SFTF *e*Sn **Sn 12 39 38.1 -1.2**
comp=E,3.5nm,0.3s
LOR Lormes 5.40 308 *e*Pn **Pn 12 38 38.8 +1.9**
baz=132
LOR *e*Sn **Sn 12 39 38.6 -0.8**
comp=E,5.3nm,0.3s
AVF Avril sur Loir 5.46 302 *e*Pn **Pn 12 38 39.3 +1.7**
SSF Saint Saulge 5.50 305 *e*Pn **Pn 12 38 39.9 +1.7**
SSF *e*Sn **Sn 12 39 41.2 -0.5**
comp=E,3.7nm,0.4s
CONA Conrad Observa 5.51 44 *i* Pn **Pn 12 38 41.5 +3.1**
comp=E,0.3nm,0.1s
CONA *e*Sn **Sn 12 39 44.9 +2.7**
comp=E,2.8nm,0.5s
KHC Kasperske Hory 5.54 24 *e*PN **Pn 12 38 39.5 +0.7**
KHC *e*SN **Sn 12 39 43.0 +0.1**
MEZF Maizieres J'vi 5.62 323 *e*Pn **Pn 12 38 41.3 +1.5**
baz=135
MEZF *e*Sn **Sn 12 39 42.7 -1.9**
comp=E,2.6nm,0.3s
BGF Bois d'Agland 5.68 298 *e*Pn **Pn 12 38 42.5 +1.8**
BGF *e*Sn **Sn 12 39 44.2 -2.0**
comp=E,6.9nm,0.3s
MTLF Montolieu 5.79 265 *e*Pn **Pn 12 38 43.2 +1.1**
CAF Calviac 5.82 281 *e*Pn **Pn 12 38 44.2 +1.6**

*ISK **22** 12:38:16.9, 40°.66N×26°.92E, h6km, ML2.1/12*
*DDA **22** 12:38:16.9, 40°.66N×26°.90E, h7km±2km, ML2.7*
*ISCJB **22** 12:38:17.6±0.4, 40°.66N±0°.02×26°.91E±0°.03, h8km±3km,*
Error ellipse: s-maj=4.3km s-min=3.7km az=157.4
ISC 22 12:38:17.3±0.9, 40°.64N±0°.03×26°.91E±0°.02, h13km±8km, n20, σ0s42/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKY	**Sarkoy-Tekirda**	**0.21**	**78**	PG	**Pg**	**12 38 21.4**	**-0.5**
RKY				SG	**Sg**	**12 38 24.6**	**-0.5**
SART	**Tekirdag**	**0.21**	**77**	*i* P	**Pg**	**12 38 22.5**	**+0.6**
SART				*i* S	**Sg**	**12 38 25.0**	**-0.1**
SART	comp=Z,6μm,0.1s			IAML_P			
KESN	**Edirne-Kesan**	**0.25**	**316**	*i* P	**Pg**	**12 38 22.8**	**-0.1**
KESN				*i* S	**Sg**	**12 38 26.6**	**0.0**
KESN	comp=Z,2μm,0.2s			IAML_P			
LPK	**Lapseki**	**0.29**	**203**	PG	**Pg**	**12 38 23.7**	**+0.3**
LPK				SG	**Sb**	**12 38 28.5**	**-0.7**
ERIK	**Erikli-Kesan**	**0.30**	**275**	PG	**Pg**	**12 38 23.7**	**+0.2**
ERIK				SG	**Sg**	**12 38 28.3**	**+0.6**
GELI	**Tayfur-Gelibol**	**0.41**	**234**	PG	**Pg**	**12 38 25.8**	**+0.3**
GELI				SG	**Sb**	**12 38 32.0**	**-0.6**
ENEZ	**Enez**	**0.58**	**279**	PG	**Pg**	**12 38 28.8**	**+0.1**
ALN	**Alexandroupoli**	**0.70**	**291**	PG	**Pg**	**12 38 31.0**	**0.0**
EZN	**Ezine**	**0.93**	**209**	PG	**Pb**	**12 38 35.6**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.94**	**197**	*i* P	**Pg**	**12 38 35.1**	**-0.5**
BAYC				*i* S	**Sg**	**12 38 47.3**	**-0.6**
BAYC	comp=Z,944nm,0.1s			IAML_P			
KIRK	**Kırklareli**	**1.15**	**7**	*i* P	**Pn**	**12 38 39.2**	**+0.2**
KIRK				*i* S	**Sb**	**12 38 53.7**	**-0.1**
KIRK	comp=Z,471nm,0.2s			IAML_P			
RDO	**Rodhopi**	**1.16**	**296**	PN	**Pg**	**12 38 39.5**	**-0.1**
KCTX	**Karacabey (Bur**	**1.17**	**108**	PN	**Pb**	**12 38 39.3**	**0.0**
KCTX				SN	**Sg**	**12 38 55.2**	**+0.3**
EDRB	**Edirne**	**1.21**	**354**	PN	**Pb**	**12 38 40.2**	**+0.2**
BALB	**Balikesir**	**1.25**	**143**	PN	**Pb**	**12 38 40.9**	**+0.2**
AYVA	**Ayvalik**	**1.34**	**187**	*i* P	**Pg**	**12 38 43.2**	**+0.1**
AYVA				*i* S	**Sg**	**12 39 01.3**	**+0.6**
ARMT	**Armutlu**	**1.49**	**92**	PN	**Pb**	**12 38 44.5**	**-0.3**
DURS	**Dursunbey**	**1.59**	**130**	*i* P	**Pg**	**12 38 47.9**	**+0.1**
DURS				*i* S	**Sg**	**12 39 09.4**	**+1.0**
DURS	comp=Z,385nm,0.2s			IAML_P			
SIGR	**SIGRI**	**1.65**	**210**	PN	**Pb**	**12 38 47.1**	**-0.4**
ZEDA	**zmir-Bergama**	**1.68**	**176**	*i* P	**Pg**	**12 38 49.5**	**0.0**
ZEDA				IAML_P			
	comp=Z,720nm,0.2s						

DJA 22 12:40:37.5±0.7, 10°S±6°×12°1E±°, h63km±8km, M3.6/7, MLv3.6/7, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.47**	**289**	P	Pn	12 40 50.7	+1.3
WSI				S	Sn	12 41 01.6	+3.5
WBSI	**Waikabubak, Su**	**1.35**	**277**	P	Pn	12 41 00.4	+0.1
WBSI				S	Sn	12 41 17.4	-0.1
EDFI	**Ende, Flores**	**1.41**	**41**	P	Pn	12 41 01.4	+0.2
EDFI				S	Sn	12 41 19.2	+0.2
MMRI	**Maumere**	**1.88**	**51**	P	Pn	12 41 07.8	+0.4
MMRI				S	Sn	12 41 29.9	-0.3
PLAI	**Plampang**	**3.10**	**288**	P	Pn	12 41 23.5	-0.5
PLAI				S	Sn	12 41 58.5	-1.3

*IDC **22** 12:42:49.6±0.7, 12°.64N×143°.78E, h0km, mb3.8/11,*
mb1 4.1/11, mb1mx3.8/43, mbtmp3.8/11, MS3.4/5,
Ms1 3.4/5, ms1mx3.1/40, Error ellipse: s-maj=20.7km
s-min=15.5km az=115.0
*ISCJB **22** 12:42:51.6±0.4, 12°.56N±0°.06×143°.74E±0°.07, h27km,*
mb4.0/18, MS3.5/2, Error ellipse: s-maj=10.9km
s-min=6.7km az=34.6
*NEIC **22** 12:42:52.5±0.8, 12°.64N×143°.75E, h21km±2km, mb4.3/10,*
Error ellipse: s-maj=23.8km s-min=12.9km az=123.0
ISC 22 12:42:53.2±0.6, 12°.60N±0°.10×143°.84E±0°.09, h27km, n38, σ0s72/32, mb3.7/18, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.40**	**46**	Pn	**Pn**	**12 43 17.3**	**+0.2**
GUMO	comp=Z,128nm,18.3s,baz=9.5,slow=35			Sn	**Sb**	**12 43 35.8**	**-0.4**
JAY	**Jayapura**	**15.34**	**192**	LR	LR	12 51 46.1	
PATS	**Pohnpei**	**15.37**	**111**	*e*Pn	**Pn**	**12 46 26.9**	**-1.5**
SIJI	**Sorong**	**18.30**	**224**	LR	LR	12 53 22.7	
DAV	**Davao City (W)**	**18.81**	**255**	LR	LR	12 54 19.9	
TNTI	**Ternate**	**20.12**	**236**	*e*P	**P**	**12 47 24.4**	**-0.9**
TGY	**Tagaytay City**	**22.33**	**276**	LR	LR	12 56 07.1	
H11N1	**WAKE ISLAND Hy 23.23**	**69**		T	T	13 12 09.9	
H11N2	**WAKE ISLAND Hy 23.23**	**69**		T	T	13 12 10.6	
H11N3	**WAKE ISLAND Hy 23.24**	**69**		T	T	13 12 11.3	
JNU	**Nakatsue**	**23.61**	**332**	P	**P**	**12 48 02.4**	**+0.2**
JNU	**Nakatsue**	**23.61**	**332**	*e*P	**P**	**12 48 02.1**	**-0.1**
MJAR	**Matsushiro Arr**	**24.37**	**349**	P	**P**	**12 48 08.8**	**-0.4**
MAJO	**Matsushiro**	**24.37**	**349**	*e*P	**P**	**12 48 08.8**	**-0.4**
LUWI	**Luwuk**	**24.92**	**239**	*e*P	**P**	**12 48 14.1**	**-0.3**
KSRS	**Korea Array**	**28.55**	**333**	P	**P**	**12 48 48.0**	**+1.2**
WRAB	**Tennant Creek**	**33.66**	**196**	*e*P	**P**	**12 49 31.7**	**-0.2**
WB2	**Warramunga Arr**	**33.66**	**196**	*e*P	**P**	**12 49 31.7**	**-0.3**
WR1	**Warramunga Arr**	**33.67**	**196**	*e*P	**P**	**12 49 32.1**	**+0.1**
WRA	**Warramunga Arr**	**33.67**	**196**	P	**P**	**12 49 32.1**	**+0.1**
AS31	**Alice Springs**	**37.33**	**195**	*e*P	**P**	**12 50 03.7**	**+0.1**
ASAR	**Alice Springs**	**37.34**	**195**	P	**P**	**12 50 03.7**	**+0.1**
ASAR				PcP	**PcP**	**12 52 23.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**43.56**	**284**	P	**P**	**12 50 55.0**	**-0.3**
SONA0	**Songino Array**	**46.97**	**326**	*e*P	**P**	**12 51 21.1**	**-0.9**
SONM	**Songino Array**	**46.97**	**326**	P	**P**	**12 51 21.1**	**-0.9**
MK32	**Makanchi Array**	**61.51**	**317**	*e*P	**P**	**12 53 07.5**	**-0.3**
MKAR	**Makanchi Array**	**61.51**	**317**	P	**P**	**12 53 07.5**	**-0.3**
ILAR	**Eielson Array**	**69.88**	**25**	P	**P**	**12 54 01.5**	**0.0**
ILB	**Eielson Array**	**69.88**	**25**	*e*P	**P**	**12 54 01.5**	**0.0**
YKA	**Yellowknife Ar**	**84.19**	**27**	P	**P**	**12 55 21.7**	**-0.2**
YKB5	**Yellowknife Ar**	**84.19**	**27**	*e*P	**P**	**12 55 21.7**	**-0.2**
BMO	**Blue Mountains**	**87.39**	**45**	*e*P	**P**	**12 55 38.9**	**+0.5**
NV01	**Mina Array Sit**	**88.31**	**51**	*e*P	**P**	**12 55 44.1**	**+1.0**
NVAR	**Mina Array Bea**	**88.31**	**51**	P	**P**	**12 55 44.1**	**+1.0**
NV11	**Mina Array Sit**	**88.43**	**51**	*e*P	**P**	**12 55 44.4**	**+0.9**
ELK	**Elko**	**89.97**	**48**	*e*P	**P**	**12 55 51.9**	**+1.0**
PDAR	**Pinedale Array**	**93.37**	**45**	LR	LR	13 30 11.3	
LPAZ	**La Paz**	**148.84**	**101**	PKPbc	**PKPbc**	**13 02 41.5**	**+1.3**
	comp=Z,35nm,20.9s,baz=2.0,slow=30						
	1.4nm,0.6s,baz=272,slow=1.4,SNR=7.7						

*ISCJB **22** 12:47:21.3±1.1, 25°.60S±0°.04×27°.68E±0°.05, h4km±7km,*
Error ellipse: s-maj=7.3km s-min=5.8km az=154.4
*PRE **22** 12:47:22.6±1.9, 25°.63S×27°.61E, h2km, ML2.5*
ISC 22 12:47:21.9±1.5, 25°.61S±0°.04×27°.64E±0°.05, h3km±12km, n13, σ1s24/26, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSR	**Koster**	**0.72**	**250**	*e*P	**Pg**	**12 47 35.4**	**-0.3**
KSR				*e*S	**Sb**	**12 47 46.0**	**-1.5**
KSR	comp=Z,144nm,0.5s			AML	AML	12 47 47.6	
KLOF	**Kloof**	**0.74**	**182**	*e*P	**Pg**	**12 47 36.9**	**+0.8**
KLOF				*e*S	**Sg**	**12 47 45.3**	**-0.4**
KLOF	comp=Z,573nm,0.1s			AML	AML	12 47 46.3	
WDLM	**Western Deep L**	**0.84**	**194**	*e*P	**Pb**	**12 47 39.0**	**-0.2**
WDLM				*e*S	**Sb**	**12 47 49.9**	**-1.0**
WDLM	comp=Z,56nm,0.2s			AML	AML	12 47 54.9	
ERPM	**east rand prop**	**0.91**	**144**	*e*P	**Pg**	**12 47 38.3**	**-1.0**
ERPM				*e*S	**Sg**	**12 47 51.0**	**-0.2**
ERPM	comp=Z,437nm,0.7s			AML	AML	12 47 55.0	
PRYS	**Parys**	**1.33**	**191**	*e*P	**Pg**	**12 47 47.2**	**-0.3**
PRYS				*e*S	**Sn**	**12 48 06.5**	**+0.4**
PRYS	comp=Z,30nm,0.5s			AML	AML	12 48 09.8	
LBTB	**Lobatse**	**1.94**	**287**	*e*P	**Pb**	**12 47 58.1**	**0.0**
LBTB				*e*S	**Sn**	**12 48 21.7**	**+0.7**
LBTB	comp=Z,53nm,0.8s			AML	AML	12 48 35.2	
SWZ	**Schweizer**	**2.60**	**232**	*e*P	**Pn**	**12 48 06.0**	**+1.0**
SWZ				*e*S	**Sn**	**12 48 36.7**	**-0.5**
SWZ	comp=Z,19nm,0.5s			AML	AML	12 48 49.3	
BOSA	**Boshof**	**3.67**	**215**	*i* P	**Pn**	**12 48 21.0**	**+1.2**
BOSA				*i* S	**Sb**	**12 49 14.1**	**+1.5**
BOSA	**Boshof**	**3.67**	**215**	*i* P	**Pn**	**12 48 21.0**	**+1.2**
BOSA				*i* S	**Sb**	**12 49 14.1**	**+1.5**
BOSA	**Boshof**	**3.67**	**215**	*e*P	**Pn**	**12 48 19.1**	**-0.6**
BOSA				*e*S	**Sn**	**12 49 04.2**	**+0.5**
BOSA	comp=Z,11nm,0.8s			AML	AML	12 49 15.8	
MATP	**Matopo**	**5.22**	**9**	*i* P	**Pn**	**12 48 43.1**	**+2.0**
MATP				*i* S	**Sn**	**12 49 41.5**	**-0.4**
MATP	**Matopo**	**5.22**	**9**	*i* P	**Pn**	**12 48 43.1**	**+2.0**
MATP				*i* S	**Sn**	**12 49 41.5**	**-0.4**
UPI	**Upington**	**6.33**	**243**	*e*P	**Pn**	**12 48 56.1**	**-0.1**
UPI				*e*S	**Sn**	**12 50 06.0**	**-3.1**
UPI	comp=Z,22nm,0.6s			AML	AML	12 50 08.0	

PRU 22 12:48:01.3±0.0, 49°.85N×18°.47E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.21**	**267**	PG	Pg	12 48 05.3	0.0
OKC				SG	Sg	12 48 09.0	+1.0
OKC	**Ostrava-Krasne**	**0.21**	**267**	*e*PG	Pg	12 48 05.3	0.0
OKC				*e*SG	Sg	12 48 07.1	-0.9
MORC	**Moravsky Berou**	**0.60**	**263**	*e*PG	Pg	12 48 12.7	-0.2
MORC	comp=Z,5.5nm,0.3s			*e*SG	Sg	12 48 20.4	-0.3
VRAC	**Vranov**	**1.34**	**247**	*e*PG	Pg	12 48 25.4	-1.5
VRAC				*e*SG	Sg	12 48 42.9	-1.3
KRUC	**Moravsky**	**1.57**	**241**	*e*PG	Pn	12 48 28.5	-1.9
KRUC				*e*SG	Sn	12 48 50.0	-1.4

*IDC **22** 12:53:34.2±0.7, 12°.58N×143°.81E, h0km, mb3.8/11,*
mb1 4.0/11, mb1mx3.8/52, mbtmp3.8/11, MS3.8/1,
Ms1 3.8/1, ms1mx2.9/31, Error ellipse: s-maj=23.1km
s-min=16.4km az=102.0
*ISCJB **22** 12:53:36.3±0.7, 12°.54N±0°.10×143°.83E±0°.10, h27km,*
mb3.8/11, MS3.8/1, Error ellipse: s-maj=17.2km
s-min=9.2km az=43.7
ISC 22 12:53:38.2±0.8, 12°.6N±0°.1×143°.9E±0°.1, h27km, n16, σ0s78/15, mb3.7/11, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.39**	**45**	Pn	**Pn**	**12 54 01.9**	**+0.1**
GUMO	45nm,0.3s,baz=280,slow=3.0,SNR=45			LR	LR	12 54 15.8	
GUMO	comp=Z,149nm,20.4s,baz=236,slow=29			Sn	**Sn**	**12 54 18.6**	**-0.8**
H11N1	**WAKE ISLAND Hy 23.21**	**69**		T	T	13 22 58.0	
H11N2	**WAKE ISLAND Hy 23.22**	**69**		T	T	13 22 59.0	
H11N3	**WAKE ISLAND Hy 23.23**	**69**		T	T	13 22 59.1	
JNU	**Nakatsue**	**23.62**	**332**	P	**P**	**12 58 48.3**	**+1.0**
MJAR	**Matsushiro Arr**	**24.37**	**349**	P	**P**	**12 58 54.7**	**+0.5**
KSRS	**Korea Array**	**28.56**	**333**	P	**P**	**12 59 32.9**	**+1.0**
WRA	**Warramunga Arr**	**33.67**	**196**	P	**P**	**13 00 16.6**	**-0.5**
ASAR	**Alice Springs**	**37.34**	**195**	P	**P**	**13 00 48.3**	**-0.3**
ASAR				PcP	**PcP**	**13 03 08.6**	**+1.0**
ASAR				LR	LR	13 16 34.1	
CMAR	**Chiang Mai Arr**	**43.58**	**284**	P	**P**	**13 01 39.7**	**-0.7**
MKAR	**Makanchi Array**	**61.52**	**317**	P	**P**	**13 03 52.5**	**-0.5**
KURBB	**Kurchatov Arra**	**64.74**	**320**	P	**P**	**13 04 13.5**	**-0.7**
ILAR	**Eielson Array**	**69.88**	**25**	P	**P**	**13 04 46.0**	**-0.4**
YKA	**Yellowknife Ar**	**84.18**	**27**	P	**P**	**13 06 06.4**	**-0.5**
NVAR	**Mina Array Bea**	**88.30**	**51**	P	**P**	**13 06 29.2**	**+1.2**
LPAZ	**La Paz**	**148.82**	**101**	PKPbc	**PKPbc**	**13 13 25.3**	**+0.2**

MAN 22 13:01:58.1, 7°.33N×124°.81E, h3km, mb4.0, ML2.8, MS2.4, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.57**	**259**	‖ *i* P	Pg	13 02 09.5	+0.5
CTBH				*i* S	Sb	13 02 17.8	-1.3
BUKP	**Musuan**	**0.60**	**25**	*e*P	Pg	13 02 10.2	+0.5
BUKP				*e*S	Sb	13 02 20.5	+0.2
DMPH	**Davao City--Mi**	**0.74**	**109**	‖ *e*P	Pn	13 02 17.2	+1.7
DMPH				*e*S	Sn	13 02 28.2	+1.0
SKMP	**Bagumbayan, Su**	**0.85**	**198**	*e*P	Pg	13 02 13.6	-0.7
SKMP				*e*S	Sn	13 02 31.1	+1.2
CGP	**Cagayan de Oro**	**1.12**	**354**	‖ *e*P	Pg	13 02 19.5	-0.2
CGP				*e*S	Sg	13 02 34.2	0.0
GSPH	**General Santos**	**1.24**	**173**	*e*P	Pn	13 02 29.4	+6.8
DCPH	**Dipolog City**	**1.90**	**311**	‖ *e*P	Pg	13 02 41.9	+7.2
DCPH				*e*S	Sg	13 03 02.1	+2.8

UCR 22 13:06:11.0±2.6, 7°.54N×82°.10W, h6km±10km, MD4.2, ML4.1, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBS2		**1.37**	**336**	*e*P	Pn	13 06 36.4	-0.4
BRU2	**Volcan**	**1.38**	**335**	*e*P	Pn	13 06 36.1	-0.8
PTJ1	**Puerto Jimnez**	**1.55**	**310**	*e*P	Pn	13 06 37.6	-1.6
PTJ1				*e*S	Sn	13 06 59.6	-0.1
EDPN	**Palmar Norte**	**1.95**	**317**	*e*P	Pn	13 06 42.8	-2.0
PNME	**Penonome**	**1.99**	**62**	*e*P	Pn	13 06 44.6	-0.6
DRK0	**Durika**	**2.06**	**327**	*e*P	Pn	13 06 46.1	-0.2
DRK0				*e*S	Sn	13 07 11.5	-1.0
ZANG	**Zanguenga, Cho**	**2.62**	**57**	*e*P	Pn	13 06 53.9	0.0
BCIP	**Isla Barro Col**	**2.76**	**54**	*e*P	Pn	13 06 56.4	+0.5
BCIP				AMP		13 06 59.6	
	comp=Z,3μm,0.3s						
FRIJ	**El Hiral**	**2.88**	**54**	*e*P	Pn	13 06 57.7	+0.2
LCR2	**La Lucha 2**	**2.89**	**319**	*e*P	Pn	13 06 57.2	-0.7
CVTR	**Volcan Turrial**	**2.96**	**326**	*e*P	Pb	13 07 02.6	-1.9
ARE1	**Arenal 1**	**3.89**	**319**	*e*P	Pn	13 07 13.8	+2.3
CEDE	**Laguna Cedeo**	**3.90**	**319**	*e*P	Pb	13 07 17.5	-2.8
JTS	**Las Juntas de**	**3.93**	**314**	*e*P	Pn	13 07 11.7	-0.3
JTS				*e*P	Pb	13 07 13.9	-6.9

*IDC **22** 13:06:41.1±1.4, 11°.24S×166°.19E, h0km, mb4.0/4,*
mb1 4.1/6, mb1mx3.8/33, mbtmp4.1/6, ML3.6/2, MS3.3/1,
Ms1 3.3/1, ms1mx2.7/26, Error ellipse: s-maj=35.1km
s-min=29.2km az=141.0
*ISCJB **22** 13:06:47.6±1.2, 11°.5S±0°.1×166°.0E±0°.1, h61km, mb4.0/4,*
Error ellipse: s-maj=22.4km s-min=12.9km az=34.0
ISC 22 13:06:48.8±1.2, 11°.5S±0°.1×166°.0E±0°.1, h61km, n6, σ2s15/8, mb3.9/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.30**	**288**	Pn	**Pn**	**13 08 16.1**	**-3.0**
HNR	4.4nm,0.3s,baz=107,slow=20,SNR=2.4			Sn	**Sn**	**13 09 30.6**	**+0.8**
HNR	2.2nm,0.3s,baz=117,slow=9.0,SNR=1.6			LR	LR	13 10 52.6	
DZM	**Mont Dzumac**	**10.57**	**178**	Pn	**Pn**	**13 09 16.3**	**-1.4**
WRA	**Warramunga Arr**	**31.60**	**251**	P	**P**	**13 13 08.2**	**+2.1**
ASAR	**Alice Springs**	**32.86**	**244**	P	**P**	**13 13 19.2**	**+2.2**
ASAR				PcP	**PcP**	**13 16 01.8**	**+1.0**
ILAR	**Eielson Array**	**83.81**	**18**	P	**P**	**13 19 10.7**	**-0.5**
MKAR	**Makanchi Array**	**94.00**	**317**	P	**P**	**13 20 01.2**	**+1.0**
	0.1nm,0.3s,baz=330,slow=20,SNR=2.0						
	2.4nm,1.0s,baz=80,slow=10,SNR=4.0						
	1.5nm,0.7s,baz=68,slow=10.0,SNR=20						
	0.6nm,0.7s,baz=80,slow=1.8,SNR=6.4						
	0.3nm,0.7s,baz=258,slow=4.5,SNR=5.1						
	1.2nm,0.7s,baz=97,slow=6.1,SNR=9.5						

*IDC **22** 13:27:17.6±7.2, 30°.90S×179°.99W, h0km, mb4.0/2,*
mb1 4.2/2, mb1mx3.7/28, mbtmp4.0/2, Error ellipse:
s-maj=289.6km s-min=60.5km az=157.0
*WEL **22** 13:27:19.9±1.8, 34°S±32°×17°8W±3°6, h204km±54km,*
M4.0/13, mB4.5/6, ML4.5/6, MLv4.3/13, Mw(mB)3.7/6, Error
ellipse: s-maj=0.1km s-min=0.0km az=127.8
ISC 22 13:27:17.2±1.7, 33°.7S±0°.2×179°.1W±0°.3, h10km, n32, σ1s62/38, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.37**	**208**	P	**Pn**	**13 28 23.6**	**0.0**
MXZ				S	**Sn**	**13 29 15.2**	**+0.7**
PKGZ	**Pakihiroa**	**4.74**	**208**	P	**Pn**	**13 28 28.3**	**-0.5**
PKGZ				S	**Sn**	**13 29 24.8**	**+1.0**
HAZ	**Te Kaha**	**4.75**	**212**	P	**Pn**	**13 28 28.7**	**-0.1**
HAZ				S	**Sn**	**13 29 26.1**	**+2.2**
PUZ	**Puketiti**	**4.83**	**206**	P	**Pn**	**13 28 29.4**	**-0.6**
PUZ				S	**Sn**	**13 29 25.5**	**-0.5**
RUGZ	**Raukumara Rang**	**4.97**	**211**	P	**Pn**	**13 28 32.0**	**0.0**
RUGZ				S	**Sn**	**13 29 30.4**	**+0.8**
TWGZ	**Tauwhareparae**	**5.03**	**207**	P	**Pn**	**13 28 32.4**	**-0.3**
TWGZ				S	**Sn**	**13 29 29.5**	**-1.4**
WHRZ	**Whale Island**	**5.21**	**217**	P	**Pn**	**13 28 37.8**	**+2.6**
CNGZ	**Carnagh Statio**	**5.22**	**204**	P	**Pn**	**13 28 34.9**	**-0.4**
TKGZ	**Te Karaka**	**5.31**	**207**	P	**Pn**	**13 28 36.6**	**+0.1**
TKGZ				S	**Sn**	**13 29 36.0**	**-1.7**
MWZ	**Matawai**	**5.34**	**210**	P	**Pn**	**13 28 36.8**	**-0.2**
MWZ				S	**Sn**	**13 29 36.7**	**-1.9**
URZ	**Urewera**	**5.46**	**213**	P	**Pn**	**13 28 38.1**	**-0.5**
RAGZ	**Rawiri**	**5.53**	**210**	P	**Pn**	**13 28 39.8**	**+0.2**
RIGZ	**Rimuhau**	**5.57**	**206**	P	**Pn**	**13 28 39.7**	**-0.5**
KARZ	**Kaharoa**	**5.71**	**220**	P	**Pn**	**13 28 43.1**	**+1.0**
MUGZ	**Murupara**	**5.80**	**214**	P	**Pn**	**13 28 42.4**	**-0.9**
SNGZ	**Shannon Statio**	**5.80**	**209**	P	**Pn**	**13 28 43.3**	**0.0**
RAHZ	**Arahi**	**6.02**	**210**	P	**Pn**	**13 28 45.7**	**-0.7**
MTHZ	**Maungataniwha**	**6.07**	**212**	P	**Pn**	**13 28 45.8**	**-1.2**
NMHZ	**Naumai**	**6.29**	**211**	P	**Pn**	**13 28 48.8**	**-1.3**
BKZ	**Black Stump Fm**	**6.48**	**212**	P	**Pn**	**13 28 50.1**	**-2.6**
MCHZ	**McNeill Hill**	**6.63**	**210**	P	**Pn**	**13 28 53.7**	**-1.0**
KWHZ	**Kaweka Forest**	**6.73**	**211**	P	**Pn**	**13 28 54.3**	**-1.8**
NGZ	**Ngauruhoe**	**6.91**	**217**	P	**

FWVZ	Far West T-bar	7.00	217	P		Pn	13 28 58.7 -1.3
ASAR	Alice Springs	42.13	271	P		P	13 35 04.6 -5.3
	0.4nm,0.3s,baz=109,slow=7.6,SNR=22						
WRA	Warramunga Arr	43.42	276	P		P	13 35 15.1 -5.3
	1.0nm,0.3s,baz=108,slow=8.5,SNR=46						
SNAA	Sanae	74.85	179	P		P	13 38 59.7 +2.1
VNA3	Neumayer Olymp	75.04	176	P		P	13 39 01.3 +2.7
VNA1	Neumayer--Stat	75.70	177	P		P	13 39 05.1 +2.8
FINES	FINESS Array B	147.91	337	PKPbc		PKPdf	13 46 55.0 -3.8
	1.2nm,0.8s,baz=46,slow=4.0,SNR=4.0						

*IDC **22** 13:31:31.7±1.2, 24.°48N×122.°87E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/34, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=73.6km s-min=22.0km az=70.0*
*ISCJB **22** 13:31:40.5±0.9, 25.°0N±0.°1×124.°25E±0.°05, h104km±5km, mb3.4/4, Error ellipse: s-maj=18.6km s-min=5.7km az=164.4*
*JMA **22** 13:31:41.1±0.1, 25.°07N×124.°24E, h96km±3km, M2.6*
ISC 22 13:31:40.1±0.9, 25.°1N±0.°1×124.°22E±0.°05, h101km±10km, n17, σ0.°63/28, mb3.5/4, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	0.56	172	P		Pn	13 31 56.5 +0.1
JISG				S		Sn	13 32 08.2 -0.3
JTJ	Tarama	0.66	139	P		Pn	13 31 57.5 +0.3
JTJ				S		Sn	13 32 10.1 +0.1
JIJ	Ishigaki jima	0.78	185	P		Pn	13 31 58.1 -0.2
JIJ				S		Sn	13 32 11.0 -0.9
JIRB	Irabujima	0.92	110	P		Pn	13 31 59.8 +0.1
JIRB				S		Sn	13 32 13.9 -0.5
IRIF	Iriomote-Funau	0.92	209	P		Pn	13 31 59.8 +0.1
IRIF				eS		Sn	13 32 14.1 -0.3
JKRS	Kuro-shima	0.92	192	P		Pn	13 31 59.9 +0.2
JKRS				eS		Sn	13 32 14.2 -0.2
JIKM	Ikemajima	0.95	103	P		Pn	13 32 00.6 +0.5
JIKM				eS		Sn	13 32 15.2 +0.1
JMJ2	Miyako jima3	1.08	111	P		Pn	13 32 02.0 +0.6
JMJ2				eS		Sn	13 32 17.9 +0.4
JOGS	Gusukube	1.14	109	P		Pn	13 32 02.9 +0.8
JOGS				S		Sn	13 32 19.4 +0.7
HATJ	Hateruma jima	1.14	199	P		Pn	13 32 02.6 +0.4
HATJ				eS		Sn	13 32 18.9 +0.1
YOJ	Yonaguni jima	1.29	239	P		Pn	13 32 04.9 +1.0
YOJ				eS		Sn	13 32 22.1 +0.3
JYNG	Yonagunijimaku	1.35	240	P		Pn	13 32 05.7 +1.2
JYNG				eS		Sn	13 32 23.4 +0.4
KSRS	Korea Array	12.68	14	Pn		P	13 34 44.0 +0.1
	0.1nm,0.3s,baz=197,slow=12,SNR=4.8						
MKAR	Makanchi Array	39.62	314	P		P	13 39 00.3 -1.5
	0.2nm,0.4s,baz=112,slow=6.4,SNR=4.3						
WRA	Warramunga Arr	45.88	167	P		P	13 39 52.6 0.0
	0.8nm,0.8s,baz=341,slow=7.4,SNR=4.2						
ASAR	Alice Springs	49.42	168	P		P	13 40 20.9 +0.9
	0.4nm,0.6s,baz=352,slow=7.7,SNR=13						
NOA	NORSAR Array B	78.66	333	P		P	13 43 36.8 +6.0
	0.4nm,0.7s,baz=58,slow=5.8,SNR=2.4						

*TIF **22** 13:45:05.6, 42.°34N×40.°95E, h29km±5km*
*DDA **22** 13:45:05.9, 42.°31N×41.°12E, h7km±5km, ML3.2*
ISC 22 13:45:04.6±1.3, 42.°41N±0.°03×41.°04E±0.°04, h7km±11km, n17, σ0.°55/32, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	Batumi	0.94	148	P		Pn	13 45 23.6 -0.6
BATM				S		Sn	13 45 36.8 -1.0
DOMR	Dombai	0.99	26	ePg		Pg	13 45 23.0 -0.5
DOMR				eSg		Sg	13 45 35.8 -0.6
DBOC	Borcka	1.16	156	iP		Pg	13 45 27.0 +0.2
DBOC				iS		Sg	13 45 42.3 +0.4
DBOC				IAML_P			
	comp=Z,4μm,0.2s						
ARXR	Arkhyz	1.17	8	ePg		Pb	13 45 27.3 +0.1
ARXR				eSg		Sb	13 45 42.5 -0.1
RPOR	Krasnaya Polya	1.41	337	ePg		Pn	13 45 31.1 +0.3
RPOR				eSg		Sn	13 45 49.4 -0.2
TKB	Tkibuli	1.45	91	P		Pn	13 45 31.6 +0.3
TKB				S		Sg	13 45 51.7 +0.5
DAGI	Agillar	1.48	153	iP		Pn	13 45 31.7 -0.1
DAGI				iS		Sn	13 45 50.9 -0.5
DAGI				IAML_P			
	comp=Z,586nm,0.2s						
NEY	Neytrino	1.50	55	ePg		Pn	13 45 32.5 +0.4
NEY				eSg		Sn	13 45 52.0 0.0
SOC	Sochi	1.52	321	ePg		Pb	13 45 33.2 0.0
SOC				eSg		Sn	13 45 52.5 +0.2
EPOS	Posof	1.55	125	iP		Pb	13 45 34.1 +0.4
EPOS				iS		Sg	13 45 55.0 +0.5
SHA1	Shidzhatmaz	1.78	41	ePg		Pb	13 45 38.2 +0.4
SHA1				eSg		Sb	13 46 00.9 +0.5
ONI	Oni	1.80	83	P		Pb	13 45 38.2 +0.4
ONI				S		Sg	13 46 02.1 -0.2
LZRR	Lazarevskoye	1.95	322	iPg		Pb	13 45 39.9 -0.5
LZRR				eSg		Sb	13 46 06.2 +1.2
KIV0	Kislovodsk Arr	1.97	37	ePg		Pb	13 45 41.0 +0.1
KIV0				eSg		Sb	13 46 06.2 +0.6
AKH	Akhalkalaki	2.08	118	P		Sb	13 46 09.3 +0.3
PYA	Pyatigorsk	2.20	42	ePg		Pb	13 45 43.4 -1.3
PYA				eSg		Sb	13 46 12.6 +0.4
BGD	Bogdanovka	2.23	120	P		Sb	13 46 12.7 -0.5

*KRNET **22** 14:03:45.4±0.1, 39.°18N×77.°24E, mb3.3*
*NNC **22** 14:03:50.3±2.6, 39.°69N×77.°09E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=19.8km s-min=16.3km az=155.0*
ISC 22 14:03:47.3±3.1, 39.°2N±0.°2×77.°17E±0.°08, h25km, n23, σ2.°53/29, 19C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	3.11	347	⇑iP		Pn	14 04 36.4 +1.4
ULHL	baz=46			⇑iS		Sn	14 05 13.6 +2.1
KZA	Kyzart	3.21	334	⇑iP		Pn	14 04 38.0 +1.4
KZA	baz=33			⇑iS		Sn	14 05 16.5 +2.2
BOOM	Boomskoye usch	3.41	345	⇑iP		Pn	14 04 40.4 +1.4
BOOM	baz=44			⇑iS		Sn	14 05 20.3 +1.6
ARLS	Aral	3.42	322	⇑eP		Pn	14 04 41.1 +1.9
ARLS	baz=21			⇑iS		Sn	14 05 21.1 +2.1
UCH	Uchtor	3.63	327	⇓iP		Pn	14 04 43.6 +1.3
UCH	baz=27			⇓iS		Sn	14 05 26.1 +1.6
TNSS	Tian-Shan	3.83	358	Pg		Pb	14 04 49.2 -5.1
TNSS	8.2nm,0.6s			Lg		Lg	14 05 37.1
ARSB	Arslanbob	3.83	305	⇓eP		Pn	14 04 46.7 +1.9
ARSB	baz=5.0			⇓eS		Sn	14 05 31.6 +2.4
TKM2	Tokmak 2	3.89	343	⇑Pn		Pn	14 04 49.4 +3.7
TKM2	2.1nm,0.3s			⇓Lg		Lg	14 05 38.3
TKM2	7.5nm,0.4s	3.89	343	⇑iP		Pn	14 04 47.2 +1.5
TKM2	baz=42			⇑iS		Sn	14 05 32.3 +1.6
AML	Almayashu	3.94	319	⇑iP		Pn	14 04 47.7 +1.3
AML	baz=19			⇑iS		Sn	14 05 33.5 +1.5
KST	Kastek	3.94	347	Pg		Pb	14 04 51.4 -4.6
KST	5.1nm,0.6s			Lg		Lg	14 05 40.0
SATY	10nm,0.4s Saty	3.96	13	Pg		Pb	14 04 53.2 -3.2
SATY	9.8nm,0.4s			Lg		Lg	14 05 43.3
AAK	Ala-Archa	3.98	330	⇑Pn		Pn	14 04 46.4 -0.4
	2.6nm,0.5s						
AAK				⇑Lg		Lg	14 05 46.1
	8.9nm,0.5s						
KOTS	Kotyrbulak	4.02	359	Pg		Pb	14 04 54.1 -3.4
KOTS	6.1nm,0.4s			Lg		Lg	14 05 45.1
DGS	Degeres	4.16	346	Pg		Pb	14 04 55.6 -4.3
DGS	4.8nm,0.5s			Lg		Lg	14 05 47.9
UZB	Uzynbulak	4.18	19	Pg		Pb	14 04 57.8 -2.3
UZB	3.9nm,0.5s			Lg		Lg	14 05 51.1
PDGK	Podgornoye	4.47	22	Pg		Pb	14 05 02.9 -2.3
PDGK	2.1nm,0.5s			Lg		Lg	14 06 00.2
PDGK	Podgornoye	4.47	22	⇑Pn		Pn	14 04 53.4 -0.1
PDGK	4.6nm,0.6s			⇑Lg		Lg	14 05 58.5
KTBS	Karatobe	4.51	356	Pg		Pb	14 05 01.8 -4.0
KTBS	2.6nm,0.3s			Lg		Lg	14 05 57.7
MRKS	Merke	4.62	321	Pg		Pb	14 05 04.0 -3.7
MRKS	4.5nm,0.4s			Lg		Lg	14 06 01.4
MNBS	Baschi	4.95	10	Pg		Pb	14 05 11.8 -1.6
MNBS	1.7nm,0.4s			Lg		Lg	14 06 15.0
KAPS	Kapalarasan	6.29	14	Pg		Pb	14 05 36.3 +0.3
KAPS	1.1nm,0.5s			Lg		Lg	14 06 56.8
KK31	Karatay Array	6.35	310	⇑Pg		Pb	14 05 42.8 +5.7
KK31	0.2nm,0.3s,baz=127,slow=15,SNR=3.6			⇑Lg		Lg	14 06 58.6
	0.9nm,0.5s,baz=125,slow=29,SNR=5.1						

*GUC **22** 14:12:16.7±0.9, 17.°06S×70.°13W, h17km±6km, ML3.9*
*IDC **22** 14:12:26.3±2.5, 17.°35S×69.°85W, h72km±22km, mb3.5/7, mb1 3.8/10, mb1mx3.6/23, mbtmp3.8/10, MS3.2/5, Ms1 3.2/5, ms1mx2.9/18, Error ellipse: s-maj=25.6km s-min=16.1km az=107.0*
ISC 22 14:12:20.3±1.7, 17.°17S±0.°07×69.°96W±0.°07, h19km±6km, n33, σ1.°82/39, mb3.8/7, 2C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	1.24	160	eP		Pn	14 12 41.7 -1.5
PB16	IPOC Station P	1.24	160	⇑eP		Pn	14 12 41.4 -1.7
PB12	IPOC Station P	1.48	194	⇓eP		Pn	14 12 43.6 -2.4
PB12				iS		Sn	14 13 03.6 -1.4
PB12				IAML			14 13 04.5
	comp=N,4μm,0.3s						
LPAZ	La Paz	1.96	64	P		Pg	14 12 57.9 -0.2
	comp=N,33nm,0.3s,baz=243,slow=12,SNR=487						
LPAZ				S		Sg	14 13 22.6 -1.0
	comp=N,16nm,0.3s,baz=66,slow=20,SNR=2.8						
LPAZ	La Paz	1.96	64	eP		Pg	14 12 57.0 -1.1
MNMC	Minye Minye	1.98	170	eP		Pn	14 12 53.2 +0.1
MNMC				eS		Sb	14 13 20.2 -0.3
MNMC				IAML			14 13 26.0
	comp=E,1μm,0.1s						
MNMCX	Minye Minye	1.98	170	eP		Pn	14 12 53.9 +0.7
MNMCX				eS		Sb	14 13 20.4 -0.1
PSGC	Pisagua	2.42	184	eP		Pn	14 12 59.2 +0.2
PSGC				eS		Sn	14 13 30.9 +2.7
PSGC				IAML			14 13 33.0
	comp=E,592nm,0.6s						
PSGCX	Pisagua	2.42	184	eP		Pn	14 13 00.1 +1.1
GO01	Chusmiza	2.59	164	eP		Pb	14 13 05.5 -1.0
GO01				IAML			14 13 46.1
	comp=E,469nm,0.3s						
PB11	IPOC Station P	2.60	174	eP		Pn	14 13 02.4 +0.9
PB11				eS		Sn	14 13 35.4 +2.7
PB11	IPOC Station P	2.60	174	⇑eP		Pn	14 13 02.2 +0.7
PB11				eS		Sb	14 13 36.2 -1.8
PB11				IAML			14 13 39.6
	comp=E,627nm,0.4s						
PB08	IPOC Station P	3.06	166	eP		Pn	14 13 09.4 +1.5
PB08	IPOC Station P	3.06	166	eP		Pn	14 13 10.7 +2.7
PB08				eS		Sb	14 13 52.0 +0.6
PB08				IAML			14 13 58.2
	comp=E,251nm,0.3s						
LVC	Limon Verde	5.51	170	P		Pn	14 13 42.7 +1.0
	comp=E,0.7nm,0.3s,baz=344,slow=9.7,SNR=4.1						
LVC				S		Sn	14 14 47.0 +2.4
	comp=E,1.6nm,0.3s,baz=256,slow=18,SNR=2.4						
YJA	Yavi	6.51	141	IAML			14 13 58.6
	comp=Z,1.1nm,0.3s						
YJA				eP		Pn	14 13 59.2 +3.7
HJA	Humahuaca	7.37	145	eP		Pn	14 14 10.4 +3.0
HJA				IAML			14 14 55.2
	comp=Z,4.5nm,0.3s						
NNA	Nana	8.42	307	LR		LR	14 18 07.7
	comp=Z,163nm,19.1s,baz=111,slow=40						
SIV	San Ignacio	8.60	83	P		Pn	14 14 26.0 +2.1
	comp=Z,1.8nm,0.3s,baz=276,slow=13,SNR=34						
SIV				S		Sn	14 15 56.6 -3.8
	comp=Z,0.4nm,0.3s,baz=24,slow=20,SNR=1.5						
SIV				LR		LR	14 18 41.2
	comp=Z,112nm,21.9s,baz=180,slow=44						
ATAH	Atahualpa	12.93	319	LR		LR	14 21 16.0
	comp=Z,130nm,19.6s,baz=168,slow=40						
CPUP	Villa Florida	14.85	130	LR		LR	14 21 57.8
	comp=Z,60nm,21.0s,baz=176,slow=39						
PTGA	Pitinga	19.06	32	P		Pn	14 16 45.7 +3.2
	comp=Z,0.3nm,0.3s,baz=253,slow=16,SNR=4.6						
PLCA	Paso Flores	23.49	181	P		P	14 17 29.2 +0.2
	comp=Z,2.9nm,1.0s,baz=30,slow=12,SNR=3.1						
TXAR	Lajitas Array	56.53	324	P		P	14 22 01.9 +0.1
	comp=Z,0.4nm,0.7s,baz=146,slow=9.1,SNR=4.3						
PDAR	Pinedale Array	69.88	330	P		P	14 23 30.9 +0.7
	comp=Z,0.5nm,0.8s,baz=142,slow=10,SNR=3.5						
ULM	Lac du Bonnet	70.91	343	LR		LR	14 57 23.1
	comp=Z,28nm,19.3s,baz=31,slow=38						
NVAR	Mina Array Bea	71.49	322	P		P	14 23 41.7 +1.6
	comp=Z,0.2nm,0.5s,baz=113,slow=6.9,SNR=2.8						
TORD	Torodi Ar. Bea	76.89	72	P		P	14 24 10.7 -1.2
	comp=Z,2.1nm,1.0s,baz=235,slow=5.1,SNR=3.5						
YKA	Yellowknife Ar	86.79	341	P		P	14 25 03.5 +0.7
	comp=Z,0.9nm,0.8s,baz=129,slow=4.7,SNR=7.2						
MAW	Mawson	88.75	164	P		P	14 25 10.9 -1.5
	comp=Z,1.5nm,0.7s,baz=216,slow=14,SNR=2.9						
USRK	Ussuriysk Ar.	147.31	330	PKPbc		PKPdf	14 32 00.4 +0.1
	comp=Z,1.5nm,0.8s,baz=27,slow=6.8,SNR=2.5						
MJAR	Matsushiro Arr	148.50	313	PKPbc		PKiKP	14 32 06.4 -1.4
	comp=Z,1.3nm,0.9s,baz=5.6,slow=1.5,SNR=3.9						
SONM	Songino Array	149.27	5	PKPbc		PKPbc	14 32 07.0 -0.9
	comp=Z,0.8nm,0.6s,baz=326,slow=4.0,SNR=5.1						

*ATH **22** 14:12:51.0, 40.°10N×21.°46E, h17km±1km, ML2.5/9, Error ellipse: s-maj=1.7km s-min=1.0km az=307.0*
*THE **22** 14:12:51.9, 40.°10N×21.°46E, h0km±1km, ML2.5/15, Error ellipse: s-maj=1.2km s-min=0.4km az=355.0*
ISC 22 14:12:51.6±0.9, 40.°10N±0.°02×21.°47E±0.°02, h7km±8km, n50, σ0.°62/73, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPRO	Kipourio	0.17	209	P		Pg	14 12 54.8 -0.2
KPRO				S		Sg	14 12 57.8 +0.4
KPRO	Kipourio	0.17	209	P		Pg	14 12 54.8 -0.2
KPRO				S		Sg	14 12 57.8 +0.4
KPRO				AML	AML		14 12 58.0
	comp=E,13693μm,0.5s						
KPRO				AML	AML		14 12 58.4
	comp=N,11115μm,0.3s						
PENT	Pentalofos	0.27	291	P		Pg	14 12 56.8 -0.2
PENT				S		Sg	14 13 00.8 +0.2
PENT	Pentalofos	0.27	291	P		Pg	14 12 56.7 -0.2
PENT				S		Sg	14 13 00.6 0.0
PENT				AML	AML		14 13 01.0
	comp=N,4992μm,0.2s						
PENT				AML	AML		14 13 03.5
	comp=E,3686μm,0.4s						
KZN	Kozani	0.31	48	P		Pg	14 12 57.8 +0.1
KZN				S		Sg	14 13 03.2 +1.3
KZN	Kozani	0.31	48	P		Pg	14 12 57.8 +0.1
KZN				S		Sg	14 13 02.3 +0.4
KZN				AML	AML		14 13 07.9
	comp=N,3302μm,0.3s						
KZN				AML	AML		14 13 08.2
	comp=E,4327μm,0.4s						
MEV	Metsovon	0.36	210	P		Pg	14 12 58.6 -0.1
KTI	Kastanea	0.58	59	P		Pg	14 13 02.6 -0.2
THL	Klokotos Trika	0.68	142	P		Pg	14 13 04.4 -0.3
THL				S		Sb	14 13 14.8 -0.5
THL	Klokotos Trika	0.68	142	P		Pg	14 13 04.3 -0.4
THL				S		Sb	14 13 14.9 -0.4
THL				AML	AML		14 13 18.9
	comp=N,582μm,0.5s						
THL				AML	AML		14 13 19.6
	comp=E,524μm,0.4s						
LIT	Litokhoron	0.78	90	P		Pg	14 13 06.0 -0.7
LIT				S		Sb	14 13 18.6 +0.2
LIT	Litokhoron	0.78	90	P		Pg	14 13 05.8 -0.9
LIT				S		Sg	14 13 17.4 +0.6
LIT				AML	AML		14 13 22.9
	comp=N,932μm,0.2s						
LIT				AML	AML		14 13 23.1
	comp=E,1567μm,0.4s						
LRSO	Larissa Observ	0.83	121	P		Pg	14 13 07.6 +0.1
LRSO				S		Sb	14 13 20.2 +0.6
LRSO	Larissa Observ	0.83	121	P		Pg	14 13 07.7 +0.1
IGT	Igoumenitsa	1.04	237	P		Pg	14 13 10.9 -0.7
IGT				S		Sn	14 13 27.0 -0.4
IGT	Igoumenitsa	1.04	237	P		Pg	14 13 11.3 -0.3
GRG	Griva	1.11	39	P		Pg	14 13 12.6 -0.4
GRG	Griva	1.11	39	P		Pg	14 13 12.9 -0.1
OHR	Ohrid	1.13	333	ePn		Pg	14 13 11.8 -1.6
OHR				iSn		Sn	14 13 32.1 +2.4
SRN	Sarande	1.15	259	P		Pn	14 13 13.8 -0.2
SRN				S		Sn	14 13 30.7 +0.7
EVR	Evrytania	1.21	167	P		Pb	14 13 14.1 -0.8
EVR				S		Sn	14 13 31.9 +0.2
EVR	Evrytania	1.21	167	P		Pb	14 13 12.9 -1.9
EVR				S		Sn	14 13 31.1 -0.6
EVR				AML	AML		14 13 34.0
	comp=N,203μm,0.6s						
EVR				AML	AML		14 13 35.5
	comp=E,173μm,0.6s						
THE	Thessaloniki	1.26	65	P		Pn	14 13 15.0 -0.6
FYTO	Fytoko, Volos	1.33	121	P		Pg	14 13 16.9 -0.2
FYTO	Fytoko, Volos	1.33	121	P		Pg	14 13 16.9 -0.2
KEK	Kerkira	1.34	254	P		Pg	14 13 17.4 +0.1
KEK				S		Sg	14 13 35.9 +1.2
KEK	Kerkira	1.34	254	P		Pg	14 13 17.0 -0.3
KEK				AML	AML		14 13 45.2
	comp=E,275μm,0.7s						
KEK				AML	AML		14 13 48.3
	comp=N,153μm,0.7s						
LKD2	Lefkada island	1.45	206	P		Pb	14 13 18.6 -0.3
LKD2				S		Sg	14 13 39.3 +1.0
PVO	Paravola	1.48	178	P		Pb	14 13 18.9 -0.5
PVO				S		Sg	14 13 40.2 +1.0
PVO	Paravola	1.48	178	P		Pn	14 13 18.8 +0.1
PDO	Prodromos	1.52	188	P		Pn	14 13 19.3 +0.2
PDO	Prodromos	1.52	188	P		Pb	14 13 19.4 -0.6
XOR	Xorichti	1.52	118	P		Pn	14 13 19.1 -0.1
XOR	Xorichti	1.52	118	P		Pn	14 13 18.9 -0.3
PLG	Polygyros	1.54	79	P		Pn	14 13 19.1 -0.3
PLG				S		Sg	14 13 41.5 +0.5
PLG	Polygyros	1.54	79	P		Pn	14 13 19.2 -0.3
PLG				S		Sb	14 13 40.1 0.0
PLG				AML	AML		14 13 42.5
	comp=N,137μm,0.5s						
PLG				AML	AML		14 13 43.0
	comp=E,109μm,0.3s						
ANX	Ano Chora	1.55	167	P		Pb	14 13 20.2 -0.4
ANX	Ano Chora	1.55	167	P		Pb	14 13 20.3 -0.3
NEO	Neokhori	1.57	120	P		Pn	14 13 20.1 +0.2
NEO				AML	AML		14 13 47.9
	comp=E,292μm,0.7s						
NEO				AML	AML		14 13 49.0
	comp=N,336μm,0.7s						
EVGI	Lefkada island	1.61	203	P		Pb	14 13 21.2 -0.3
SOH	Sokhos	1.61	63	P		Pb	14 13 21.1 -0.5
SOH				S		Sg	14 13 43.4 +0.1
SOH	Sokhos	1.61	63	P		Pb	14 13 21.2 -0.4
EFP	Efpalio	1.71	168	P		Pb	14 13 22.9 -0.4
SERG	Sergoula	1.75	165	P		Pn	14 13 22.4 +0.1
SERG				S		Sb	14 13 46.3 +0.2
SERG	Sergoula	1.75	165	P		Pn	14 13 22.3 +0.1
KALE	Kalithea	1.79	163	P		Pn	14 13 23.1 +0.3
TRIZ	Trizonia	1.79	165	P		Pb	14 13 24.2 -0.5
SRS	Serrai	1.91	57	P		Pn	14 13 24.5 0.0
KLV	Kalavryta, Ach	2.12	165	P		Pn	14 13 27.9 +0.4
NVR	Nevrokopi	2.21	55	P		Pn	14 13 28.9 +0.2

WEL 22 14:28:38.6±1.2, 43.°S±10.°×17.°7E±.°, h33km, M3.2/14, ML3.5/13, MLv3.2/14, Error ellipse: s-maj=0.0km s-min=0.0km az=41.4, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMWZ	Te Maipa	1.87	332	P	Pn	14 29 07.7	-0.6
TMWZ				S	Sn	14 29 31.4	+0.6
MSWZ	Moikau Station	1.91	315	P	Pn	14 29 08.5	-0.2
MSWZ				S	Sn	14 29 32.3	+0.8
MTW	Mount Morrison	1.98	324	P	Pn	14 29 09.5	-0.3
MTW				S	Sn	14 29 34.4	+0.9
BFZ	Birch Farm	2.17	344	P	Pn	14 29 13.2	+0.8
TIWZ	Tintock	2.17	336	P	Pn	14 29 13.1	+0.7
TIWZ				S	Sn	14 29 38.9	+0.6
HOWZ	Holdsworth Sta	2.19	328	P	Pn	14 29 12.4	-0.3
HOWZ				S	Sn	14 29 39.1	+0.4
CAW	Cannon Point	2.23	318	P	Pn	14 29 12.9	-0.3
CAW				S	Sn	14 29 40.0	+0.5
ANWZ	Angora Road	2.35	349	P	Pn	14 29 14.9	+0.1
PRWZ	Pori Road	2.36	340	P	Pn	14 29 15.1	+0.2
MRZ	Mangatainoka R	2.38	332	P	Pn	14 29 15.2	-0.1
PRHZ	Porangahau	2.52	353	P	Pn	14 29 16.9	-0.3
DVHZ	Dannevirke	2.56	345	P	Pn	14 29 17.5	-0.2
POWZ	Post Office Ro	2.56	337	P	Pn	14 29 18.1	+0.3
TUWZ	Tuamarina	2.67	299	P	Pn	14 29 19.7	+0.4
WPHZ	Waipukurau	2.74	350	P	Pn	14 29 20.2	0.0
PNHZ	Pukenui	2.92	347	P	Pn	14 29 22.8	0.0
KAHZ	Kahuranaki	2.98	357	P	Pn	14 29 22.9	-0.7
DUWZ	D'Urville Isla	3.06	309	P	Pn	14 29 25.9	+1.3
NNZ	Nelson	3.15	298	P	Pn	14 29 25.0	-0.8
KRHZ	Kereru	3.17	350	P	Pn	14 29 26.6	+0.5
THZ	Tophouse	3.24	287	P	Pn	14 29 25.2	-1.9
BHHZ	Black Hill Sta	3.36	347	P	Pn	14 29 29.0	+0.2
KWHZ	Kaweka Forest	3.38	352	P	Pn	14 29 28.8	-0.2
WAZ	Wanganui	3.39	332	P	Pn	14 29 31.2	+2.0
MOVZ	Moawhango	3.50	343	P	Pn	14 29 31.5	+0.7
LTZ	Lake Taylor	3.52	268	P	Pn	14 29 28.7	-2.2
NMHZ	Naumai	3.67	357	P	Pn	14 29 32.9	-0.2
WTVZ	West Tongariro	3.81	343	P	Pn	14 29 35.7	+0.7
RAHZ	Arahi	3.85	0	P	Pn	14 29 34.5	-0.9
QRZ	Quartz Range	3.90	298	P	Pn	14 29 35.7	-0.4
MTHZ	Maungataniwha	3.92	358	P	Pn	14 29 35.4	-1.0
SNGZ	Shannon Statio	3.99	3	P	Pn	14 29 36.2	-1.2
RIGZ	Rimuhau	4.09	8	P	Pn	14 29 36.8	-2.1
RAGZ	Rawiri	4.28	4	P	Pn	14 29 39.7	-1.8
MUGZ	Murupara	4.29	357	P

ASAR Alice Springs 37.15 195 P P 14 48 44.5 0.0
0.2nm,0.6s,baz=22,slow=10,SNR=4.3
ASAR LR LR 15 06 24.2
comp=Z,31nm,18.6s,baz=60,slow=40
NVAR Mina Array Bea 88.55 51 P P 14 54 27.3 +0.2
1.0nm,0.8s,baz=264,slow=5.1,SNR=6.5

IDC 22 14:50:33.4±2.9, 4°.93S×11°.45W, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/27, mbtmp3.8/4, Error ellipse: s-maj=147.1km s-min=29.7km az=99.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**4.17 226**		T	T	14 55 20.9	
baz=53,slow=74,SNR=151							
H10N1	**ASCENSION HYDR**	**4.18 226**		T	T	14 55 25.4	
baz=53,slow=74,SNR=177							
H10N3	**ASCENSION HYDR**	**4.19 226**		T	T	14 55 27.2	
baz=53,slow=74,SNR=101							
H10S1	**ASCENSION HYDR**	**5.10 218**		T	T	14 56 30.5	
baz=43,slow=75,SNR=19							
H10S2	**ASCENSION HYDR**	**5.11 218**		T	T	14 56 33.0	
baz=43,slow=75,SNR=17							
H10S3	**ASCENSION HYDR**	**5.12 218**		T	T	14 56 31.9	
baz=43,slow=75,SNR=13							
TORD	**Torodi Ar. Bea**	**22.20 36**		P	P	14 55 31.8	+0.2
1.1nm,0.8s,baz=224,slow=9.4,SNR=5.5							
GERES	**GERESS Array B**	**57.88 19**		P	P	15 00 27.6	+0.4
0.8nm,0.8s,baz=198,slow=6.0,SNR=4.5							
AKASG	**Malin Array Be**	**65.50 27**		P	P	15 01 18.0	-0.4
0.7nm,0.5s,baz=224,slow=6.1,SNR=5.2							
MAW	**Mawson**	**79.51 158**		P	P	15 02 41.8	+0.1
1.2nm,0.7s,baz=294,slow=6.9,SNR=2.7							

*SKHL **22** 15:03:18.1±0.1, 44°.43N×150°.05E, h36km±1km, mb3.5/1*
*JMA **22** 15:03:18.1±0.5, 44°.69N×149°.88E, h30km, M3.6*
ISC 22 15:03:14.9±3.9, 44°.16N±0°.09×150°.2E±0°.2, h35km, n23, σ2§51/32, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.01 303**		*i* P	**Pn**	**15 03 45.6**	**-0.6**
KUR				AMB	AMB	15 03 46.0	
16nm,0.3s							
KUR				*i* S	**Sn**	**15 04 06.1**	**-4.0**
KUR				A	A	15 04 13.0	
115nm,0.3s							
KUR				A	A	15 04 13.0	
98nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**3.16 269**		*i* P	**Pn**	**15 04 04.0**	**+1.9**
YUK				*e*S	**Sn**	**15 04 38.5**	**0.0**
YUK				A	A	15 04 41.0	
85nm,0.2s							
YUK				A	A	15 04 41.0	
78nm,0.2s							
LAGR	**Lagunnoye**	**3.21 270**		*e*S	**Sn**	**15 04 39.5**	**-0.3**
GRPR	**Tuman**	**3.23 269**		*e*S	**Sn**	**15 04 39.1**	**-1.1**
NEM2	**Nemuro 2**	**3.35 258**		P	**Pn**	**15 04 05.8**	**+1.0**
NEM2				*e*S	**Sn**	**15 04 41.3**	**-2.0**
GLVR	**Golovnino**	**3.44 265**		*e*S	**Sn**	**15 04 46.0**	**+0.7**
JRA	**Rausu**	**3.70 268**		P	**Pn**	**15 04 12.0**	**+2.5**
JNK	**Nakash**	**4.03 264**		P	**Pn**	**15 04 16.6**	**+2.5**
JNK				*e*S	**Sn**	**15 05 00.6**	**+0.5**
JAK	**Akkeshi**	**4.19 256**		P	**Pn**	**15 04 18.1**	**+1.8**
JAK				*e*S	**Sn**	**15 05 03.1**	**-0.9**
JTKR	**Abashiri--Toko**	**4.57 270**		P	**Pn**	**15 04 23.8**	**+2.4**
JAR	**Ashorobuto**	**4.77 262**		P	**Pn**	**15 04 27.0**	**+2.8**
JAR				*e*S	**Sn**	**15 05 18.4**	**+0.2**
JOB	**Onbets**	**4.82 257**		P	**Pn**	**15 04 27.3**	**+2.3**
JMP	**Maruseppu**	**4.96 271**		P	**Pn**	**15 04 29.5**	**+2.6**
JCH	**Churui**	**5.25 255**		P	**Pn**	**15 04 33.1**	**+2.3**
JCH				*e*S	**Sn**	**15 05 28.9**	**-1.1**
JNBK	**Urakawa-nobuka**	**5.79 254**		P	**Pn**	**15 04 40.1**	**+1.9**
JBT2	**Biratori 2**	**5.90 259**		P	**Pn**	**15 04 42.1**	**+2.4**
JNB	**Noboribetsu**	**6.92 259**		P	**Pn**	**15 04 56.2**	**+2.4**
JNB				*e*S	**Sn**	**15 06 10.0**	**-1.3**
JKB	**Kayabe**	**7.12 255**		P	**Pn**	**15 04 58.6**	**+2.1**
JKB				*e*S	**Sn**	**15 06 12.8**	**-3.3**
JANG	**Nango**	**7.50 243**		*e*S	**Sn**	**15 06 20.1**	**-5.3**
JYM2	**Yakumo 2**	**7.50 258**		P	**Pn**	**15 05 03.9**	**+2.2**
JTM	**Tenmabayashi**	**7.57 247**		*e*S	**Sn**	**15 06 23.1**	**-4.1**
OFUJ	**Ofunato**	**8.18 235**		*e*S	**Sn**	**15 06 38.4**	**-3.9**
JRG	**Rokugo**	**8.61 240**		*e*S	**Sn**	**15 06 49.5**	**-3.3**

*BJI **22** 15:45:49.7±0.0, 17°.22N×147°.91E, h33km, mb4.8/49, mB5.1/34, Ms4.5/26, Ms7 4.3/25*
*IDC **22** 15:45:50.9±0.4, 17°.61N×147°.40E, h0km, mb4.6/32, mb1 4.7/33, mb1mx4.6/48, mbtmp4.6/33, ML4.8/1, MS3.9/18, Ms1 3.9/18, ms1mx3.8/30, Error ellipse: s-maj=14.1km s-min=9.9km az=91.0*
*ISCJB **22** 15:45:53.2±0.2, 17°.54N±0°.03×147°.41E±0°.04, h26km, mb4.9/109, MS4.1/25, Error ellipse: s-maj=6.2km s-min=4.0km az=15.3*
*MOS **22** 15:45:54.5±1.0, 17°.56N×147°.34E, h33km, mb5.1/41, Error ellipse: s-maj=10.8km s-min=5.4km az=106.3*
*NEIC **22** 15:45:55.1±2.7, 17°.49N×147°.32E, h29km±4km, mb4.9/50, Error ellipse: s-maj=14.6km s-min=10.3km az=86.0*
ISC 22 15:45:55.0±0.3, 17°.51N±0°.04×147°.42E±0°.07, h26km, n196, σ1§46/196, **mb4.9**/108, **MS4.1**/27, **11C-11D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.61 213**		Pn	**Pn**	**15 47 04.4**	**+1.3**
39nm,0.3s,baz=31,slow=3.5,SNR=23							
GUMO				Sn	**Sn**	**15 47 55.9**	**+0.1**
39nm,0.3s,baz=315,slow=21,SNR=3.7							
GUMO				LR	LR	15 48 38.8	
comp=Z,614nm,19.8s,baz=36,slow=36							
GUMO	**Guam**	**4.61 213**		*e*Pn	**Pn**	**15 47 05.1**	**+2.0**
GUMO	**Guam**	**4.61 213**		*e*P	**Pn**	**15 47 05.1**	**+2.0**
PATS	**Pohnpei**	**15.03 134**		*e*Pn	**Pn**	**15 49 21.2**	**-4.6**
426nm,1.1s							
H11N1	**WAKE ISLAND Hy**	**18.59 80**		T	T	16 09 03.0	
baz=265,slow=74,SNR=8.8							
H11N2	**WAKE ISLAND Hy**	**18.59 80**		T	T	16 09 04.5	
baz=265,slow=74,SNR=6.2							
H11N3	**WAKE ISLAND Hy**	**18.61 80**		T	T	16 09 06.1	
baz=265,slow=74,SNR=5.9							
INU	**Inuyama**	**20.03 334**		*e*P	**P**	**15 50 25.0**	**-1.1**
53nm,1.1s							
MJAR	**Matsushiro Arr**	**20.63 339**		P	**P**	**15 50 31.7**	**-0.9**
7.5nm,0.7s,baz=166,slow=8.4,SNR=14							
MJAR				S	**S**	**15 54 22.0**	**0.0**
0.8nm,0.8s,baz=151,slow=18,SNR=2.8							
MAJO	**Matsushiro**	**20.63 339**		*e*P	Pn	15 50 34.2	-0.8
28nm,0.9s							
MAJO	**Matsushiro**	**20.63 339**	‖	*e*P	**P**	**15 50 33.2**	**+0.6**
MAT	**Matsushiro**	**20.63 339**		P	**P**	**15 50 31.7**	**-0.9**
MAT				S	**S**	**15 54 24.4**	**+2.4**
MJB9	**Matsu-Tunnel**	**20.64 339**		*e*Pn	Pn	15 50 35.5	+0.5
28nm,0.9s							
JAY	**Jayapura**	**20.97 199**		P	**P**	**15 50 37.1**	**+0.6**
33nm,1.0s,baz=5.6,slow=7.8,SNR=8.8							
JAY	**Jayapura**	**20.97 199**		P	**P**	**15 50 37.2**	**+0.8**
GENI	**Genyem**	**21.22 200**		P	**P**	**15 50 39.6**	**+0.6**
JNU	**Nakatsue**	**21.52 319**		P	**P**	**15 50 39.5**	**-2.7**
16nm,1.0s,baz=109,slow=7.4,SNR=7.1							
JNU	**Nakatsue**	**21.52 319**		*e*P	**P**	**15 50 41.3**	**-0.9**
45nm,1.4s							
BAKI	**Biak**	**21.67 212**		P	**P**	**15 50 45.7**	**+1.8**
RABL	**Rabaul**	**22.07 167**		*e*P	**P**	**15 50 46.4**	**-1.8**
119nm,1.0s							
DAV	**Davao City (W)**	**23.70 247**		P	**P**	**15 51 05.2**	**+0.2**
52nm,0.4s,baz=147,slow=5.7,SNR=3.5							
SIJI	**Sorong**	**24.22 223**		P	**P**	**15 51 08.4**	**-1.5**
40nm,1.1s,baz=26,slow=11,SNR=17							
TJN	**Taejon**	**25.84 321**	⇑	*e*P	**P**	**15 51 24.0**	**-0.4**
KSRS	**Korea Array**	**26.24 323**		P	**P**	**15 51 27.4**	**-0.6**
6.2nm,0.8s,baz=145,slow=9.0,SNR=46							
KS15	**Wonju Array Si**	**26.25 323**		*e*P	**P**	**15 51 26.2**	**-1.9**
18nm,1.2s							
PMG	**Port Moresby**	**26.75 181**		P	**P**	**15 51 33.1**	**+0.4**
8.4nm,0.8s,baz=315,slow=2.9,SNR=2.3							
PMG	**Port Moresby**	**26.75 181**	⇑	*e*P	**P**	**15 51 33.2**	**+0.4**
PMG				pmax	pmax		
comp=Z,111nm,1.8s							
ASAJ	**Asahikawa**	**26.83 352**		P	**P**	**15 51 32.4**	**-0.9**
comp=Z,8.1nm,0.9s,baz=170,slow=12,SNR=3.6							
MSHR	**Mys Shultsa**	**28.57 334**	‖	*e*P	**P**	**15 51 49.7**	**+0.9**
VLA	**Vladivostok**	**28.73 336**	‖	*e*P	**P**	**15 51 51.6**	**+1.3**
VLA				pmax	pmax		
comp=Z,35nm,1.5s							
NJ2	**Nanjing**	**29.58 305**		*e*P	**P**	**15 51 57.1**	**-0.9**
NJ2				pmax	pmax		
comp=Z,22nm,0.5s							
USA0B	**Ussuriysk Arra**	**29.61 337**		*e*P	**P**	**15 51 57.8**	**-0.3**
comp=Z,13nm,1.0s							
USA0B	**Ussuriysk Arra**	**29.61 337**		*e*P	**P**	**15 51 57.8**	**-0.3**
USA0B				pmax	pmax		
comp=Z,13nm,1.0s							
USRK	**Ussuriysk Ar.**	**29.61 337**		P	**P**	**15 51 58.2**	**+0.1**
comp=Z,8.0nm,0.9s,baz=145,slow=10,SNR=10.0							
USRK				LR	LR	16 05 26.8	
comp=Z,214nm,18.1s,baz=143,slow=40							
LUWI	**Luwuk**	**30.48 235**		*e*P	P	15 52 01.0	-5.1
comp=Z,40nm,1.1s							
CN2	**Changchun**	**32.11 329**		*e*P	**P**	**15 52 24.0**	**+3.9**
CN2				*e*S	**S**	**15 57 29.0**	**-1.9**
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s							
CN2				pmax	pmax		
comp=Z,230nm,4.0s							
CN2				LR	LR		
comp=Z,430nm,14.0s							
CN2				LR	LR		
comp=Z,350nm,14.0s							
CN2				LR	LR		
comp=Z,510nm,14.0s							
KKM	**Kota Kinabalu**	**32.54 253**		P	**P**	**15 52 24.0**	**-0.4**
WHN	**Wuhan**	**32.74 299**		P	**P**	**15 52 24.8**	**-1.0**
KLR	**Kul'dur**	**34.09 342**	⇑	*e*P	**P**	**15 52 37.4**	**0.0**
KLR				pmax	pmax		
comp=Z,14nm,1.3s							
GRNR	**Gornyy**	**34.32 348**		*e*P	**P**	**15 52 40.0**	**+0.6**
GRNR				pmax	pmax		
comp=Z,16nm,1.0s							
BJI	**Beijing**	**35.12 316**	⇑	*e*P	**P**	**15 52 46.4**	**+0.1**
BJI				pP	**pwP**	**15 52 58.4**	**+0.3**
BJI				sP	**sP**	**15 53 02.9**	**+7.6**
BJI				pmax	pmax		
comp=Z,6.0nm,1.0s							
NKL	**Nikolayevsk**	**35.95 353**		*e*P	**P**	**15 52 55.7**	**+2.4**
NKL				pmax	pmax		
comp=Z,27nm,1.0s							
NKL				MLR	MLR		
comp=E,300nm,11.0s							
PETK	**Petropavlovsk-**	**36.42 10**		LR	LR	16 11 11.0	
comp=E,225nm,18.1s,baz=195,slow=42							
SBUM	**Sibu**	**37.65 251**		*e*P	**P**	**15 53 09.0**	**+0.7**
comp=E,16nm,1.5s							
SBUM	**Sibu**	**37.65 251**		P	**P**	**15 53 09.0**	**+0.7**
HHC	**Hu-ho-hao-te**	**38.59 315**		*e*P	**P**	**15 53 16.5**	**+0.4**
HHC				pmax	pmax		
comp=E,8.0nm,0.8s							
HHC				pmax	pmax		
comp=E,40nm,4.9s							
HHC				LR	LR		
comp=E,240nm,11.9s							
HHC				LR	LR		
comp=E,140nm,11.1s							
WRAB	**Tennant Creek**	**39.36 200**		*e*P	**P**	**15 53 18.3**	**-4.3**
comp=E,29nm,1.2s							
WRAB	**Tennant Creek**	**39.36 200**	‖	*e*P	**P**	**15 53 22.7**	**+0.1**
WRAB				pmax	pmax		
comp=Z,29nm,1.2s							
WB2	**Warramunga Arr**	**39.37 200**		*e*P	**P**	**15 53 21.6**	**-1.0**
comp=Z,26nm,1.1s							
WR1	**Warramunga Arr**	**39.37 200**		*e*PcP	**PcP**	**15 55 32.0**	**+1.2**
WRA	**Warramunga Arr**	**39.38 200**		P	**P**	**15 53 22.8**	**+0.1**
comp=Z,14nm,1.0s,baz=15,slow=8.0,SNR=31							
WRA				PcP	**PcP**	**15 55 32.0**	**+1.2**
comp=Z,2.6nm,0.9s,baz=14,slow=4.3,SNR=2.5							
ZEA	**Zeya**	**39.40 341**		*e*P	**P**	**15 53 22.0**	**-0.5**
ZEA				*e*S	**S**	**15 59 22.0**	**-0.5**
ZEA				*e*		16 03 26.0	
ZEA				pmax	pmax		
comp=Z,37nm,1.4s							
ZEA				smax	smax		
comp=E,200nm,6.0s							
ZEA				MLR	MLR		
comp=Z,200nm,16.0s							
ZEA				MLR	MLR		
comp=N,200nm,13.0s							
KSM	**Kuching**	**39.79 250**		*e*P	**P**	**15 53 25.3**	**-1.0**
comp=N,27nm,1.2s							
KSM	**Kuching**	**39.79 250**		P	**P**	**15 53 26.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.37 212**		*e*P	**P**	**15 53 39.5**	**+0.4**
comp=N,25nm,1.5s							
CD2	**Chengdu**	**41.73 297**		P	**P**	**15 53 41.0**	**-1.2**
CD2				pmax	pmax		
comp=N,10.0nm,0.6s							
MA2	**Magadan**	**42.08 3**	⇑	*e*P	**P**	**15 53 45.7**	**+1.2**
MA2				pmax	pmax		
comp=Z,30nm,2.4s							
KMI	**Kunming**	**42.15 288**		P	**P**	**15 53 46.0**	**+0.1**
KMI				pmax	pmax		
comp=Z,13nm,0.8s							
KMI				pmax	pmax		
comp=Z,150nm,4.3s							
KHON	**Khomkaen**	**42.60 275**		P	**P**	**15 53 51.0**	**+1.6**
comp=Z,28μm,1.1s							
LZH	**Lanzhou**	**42.66 305**		*e*P	**P**	**15 53 51.1**	**+1.3**
LZH				pP	pwP	15 54 03.8	+2.0
LZH				sP	sP	15 54 08.5	+10
LZH				pmax	pmax		
comp=Z,18nm,1.0s							
AS31	**Alice Springs**	**43.00 198**		*e*P	**P**	**15 53 54.2**	**+1.7**
comp=Z,1.8nm,1.0s							
ASAR	**Alice Springs**	**43.00 198**		P	**P**	**15 53 52.2**	**-0.3**
comp=Z,2.0nm,0.7s,baz=19,slow=6.1,SNR=18							
ASAR				PcP	**PcP**	**15 55 43.9**	**+1.3**
comp=Z,1.5nm,1.0s,baz=25,slow=3.4,SNR=3.1							
ASAR				S	**S**	**16 00 17.5**	**+0.9**
comp=Z,1.8nm,1.1s,baz=17,slow=19,SNR=5.4							
ASAR				LR	LR	16 13 25.4	
comp=Z,172nm,18.0s,baz=21,slow=38							
CHAI	**Chaiyaphum**	**43.46 275**		P	**P**	**15 53 57.6**	**+1.2**
comp=Z,25μm,0.9s							
DZM	**Mont Dzumac**	**43.53 154**		*e*LR	LR	16 05 47.1	
comp=Z,387nm,23.6s							
OUENC	**Ouen Island, N**	**44.00 154**		*e*P	**P**	**15 53 59.5**	**-1.0**
comp=Z,49nm,1.3s							
TPI	**Tanjungpandan**	**44.08 247**		P	**P**	**15 54 00.6**	**-0.7**
PBKT	**Sadao Pong**	**44.33 276**		P	**P**	**15 54 05.2**	**+1.9**
comp=Z,7.4nm,1.5s							
UTTA	**Uttaradit**	**44.57 278**		P	**P**	**15 54 06.4**	**+1.2**
comp=Z,19μm,0.8s							
ULN	**Ulaanbaatar**	**44.71 322**		*e*P	**P**	**15 54 05.5**	**-0.7**
comp=Z,10nm,1.1s							
ULN	**Ulaanbaatar**	**44.71 322**		*c i*P	**P**	**15 54 05.4**	**-0.7**
ULN				pmax	pmax		
comp=Z,9.0nm,1.0s							
SONM	**Songino Array**	**45.08 321**		P	**P**	**15 54 08.7**	**-0.4**
comp=Z,8.9nm,1.0s,baz=130,slow=8.2,SNR=29							
SONM				LR	LR	16 13 44.7	
comp=Z,184nm,18.8s,baz=115,slow=37							
SEY	**Seymchan**	**45.51 3**	⇑	*e*P	**P**	**15 54 13.2**	**+1.2**
MYKOM	**Kota Tinggi**	**45.54 255**		P	**P**	**15 54 14.0**	**+1.0**
CM31	**Chiang Mai Arr**	**46.00 279**		*e*P	**P**	**15 54 14.4**	**-2.3**
comp=Z,16nm,1.1s							
CMAR	**Chiang Mai Arr**	**46.00 279**		P	**P**	**15 54 16.9**	**+0.3**
comp=Z,7.5nm,1.0s,baz=72,slow=6.5,SNR=27							
CMAR	**Chiang Mai Arr**	**46.00 279**		*i* P	**P**	**15 54 17.2**	**+0.6**
CMAR				pmax	pmax		
comp=Z,8.0nm,1.0s							
YAK	**Yakutsk**	**46.19 349**		*e*P	**P**	**15 54 18.1**	**+0.7**
YAK				*e**PP	**sP**	**15 54 26.6**	**-0.1**
YAK				*e*		15 55 49.4	
YAK				*e*		15 56 12.0	
YAK				*e*PPP	PPP	15 56 51.6	
YAK				*e*S	**S**	**16 01 01.9**	**0.0**
YAK				*e**SS	sS	16 01 21.4	+8.6
YAK				*e*		16 04 11.3	
GTA	**Gaotai**	**46.56 308**		*e*P	P	15 54 14.1	-6.8
GTA				pP	pP	15 54 24.8	-2.7
GTA				sP	sP	15 54 28.5	-1.5
GTA				ScP	**ScP**	**15 59 47.3**	**+0.5**
GTA				pmax	pmax		
comp=Z,2.0nm,0.8s							
GTA				pmax	pmax		
comp=Z,140nm,6.5s							
GTA				LR	LR		
comp=N,170nm,16.8s							
GTA				LR	LR		
comp=E,150nm,18.7s							
GTA				LR	LR		
comp=Z,250nm,17.5s							
IPM	**Ipoh**	**47.20 260**		P	**P**	**15 54 27.0**	**+0.9**
KULM	**Kulim**	**47.29 261**		P	**P**	**15 54 28.0**	**+1.2**
TRTT	**Trang**	**47.43 265**		P	**P**	**15 54 30.5**	**+2.7**
comp=Z,26nm,1.2s							
ARMA	**Armidale**	**47.83 175**		*e*P	**P**	**15 54 30.6**	**-0.1**
comp=Z,32nm,1.4s							
MDSI	**Maura Dua**	**47.95 247**		P	**P**	**15 54 30.7**	**-1.1**
ZAK	**Zakamensk**	**48.07 323**		*e*P	**P**	**15 54 31.9**	**-0.5**
ZAK				pmax	pmax		
comp=Z,6.0nm,1.1s							
ZAK				pmax	pmax		
comp=Z,5.0nm,1.5s							
TLY	**Talaya**	**48.47 325**		*e*P	**P**	**15 54 36.0**	**+0.6**
TLY				*e*S	**S**	**16 01 34.1**	**-0.7**
TLY				pmax	pmax		
comp=Z,19nm,0.8s							
TLY				MLR	MLR		
comp=Z,465nm,15.0s							
SDSI	**Sungai Dareh**	**48.84 253**		P	**P**	**15 54 36.7**	**-2.1**
STKA	**Stephens Creek**	**49.42 187**		LR	LR	16 18 03.3	
comp=Z,140nm,19.0s,baz=15,slow=39							
MOY	**Mondy**	**49.93 324**		*e*P	**P**	**15 54 48.0**	**+1.3**
BBOO	**Buckleboo**	**51.20 192**		*e*P	**P**	**15 54 57.1**	**+0.8**
comp=Z,34nm,1.0s							
GSI	**Gunungsitoli**	**51.54 257**		*e*P	**P**	**15 54 57.2**	**-2.0**
comp=Z,65nm,1.2s							
BILL	**Bilibino**	**51.92 9**		*e*P	**P**	**15 55 02.9**	**+1.7**
comp=Z,21nm,1.2s							
BILL	**Bilibino**	**51.92 9**		*e*P	**P**	**15 55 01.7**	**+0.5**
BILL				*e*		15 55 13.2	
BILL				*e*		15 56 14.7	
BILL				*e*		15 57 00.6	
BILL				pmax	pmax		
comp=Z,24nm,1.4s							
LSA	**Lhasa**	**52.52 294**		P	**P**	**15 55 08.1**	**+1.2**
LSA				pmax	pmax		
comp=Z,41nm,0.8s							
LSA	**Lhasa**	**52.52 294**		*e*P	**P**	**15 55 03.2**	**-3.7**
comp=Z,8.1nm,0.9s							
LSA	**Lhasa**	**52.52 294**		*e*P	**P**	**15 55 03.2**	**-3.7**
LSA				pmax	pmax		
comp=Z,8.0nm,0.9s							
FALS	**False Pass**	**52.79 33**		*e*P	**P**	**15 55 09.6**	**+1.8**
comp=Z,109nm,0.4s							
TIXI	**Tiksi**	**55.23 353**		LR	LR	16 19 44.0	
comp=Z,101nm,18.8s,baz=180,slow=37							
TIXI	**Tiksi**	**55.23 353**		*e*P	**P**	**15 55 26.1**	**+0.6**
comp=Z,8.2nm,1.1s							
TIXI	**Tiksi**	**55.23 353**	‖	*e*P	**P**	**15 55 26.0**	**+0.6**
TIXI				pmax	pmax		
comp=Z,7.0nm,1.1s							
WMQ	**Urumqi**	**56.31 311**		*e*P	**P**	**15 55 35.4**	**+1.6**
WMQ				pP	pwP	15 55 47.8	+1.2
WMQ				sP	sP	15 55 53.8	+11
WMQ				pmax	pmax		
comp=Z,22nm,1.3s							
WMQ				pmax	pmax		
comp=Z,95nm,4.5s							
WMQ				LR	LR		
comp=Z,62nm,19.5s							
WMQ				LR	LR		
comp=Z,68nm,17.7s							
WMQ				LR	LR		
comp=Z,140nm,23.5s							
JIRN	**Jiri**	**56.94 292**		*e*P	**P**	**15 55 38.3**	**-0.6**
comp=Z,16nm,0.6s							
GUN	**Gumba**	**57.20 292**		*e*P	**P**	**15 55 41.2**	**+0.5**
comp=Z,17nm,0.5s							
DGZ	**Jazzator, Alta**	**57.49 318**		*d i*P	**P**	**15 55 42.4**	**+0.2**
DGZ				pmax	pmax		
comp=Z,5.0nm,0.9s							
PKI	**Pulchoki**	**57.64 292**		*e*P	**P**	**15 55 42.9**	**-0.8**
comp=Z,45nm,1.4s							
PKIN	**Phulchoki**	**57.65 292**		*e*P	**P**	**15 55 43.2**	**-0.6**
comp=Z,5.5nm,0.6s							
KKN	**Kakani**	**57.73 292**		*e*P	**P**	**15 55 44.3**	**0.0**
comp=Z,14nm,0.9s							
DANN	**Dangsing**	**59.03 293**		*e*P	**P**	**15 55 53.8**	**+0.3**
comp=Z,56nm,0.7s							
KOLN	**Koldanda**	**59.22 292**		*e*P	**P**	**15 55 54.4**	**-0.3**
comp=Z,49nm,1.3s							
PYUN	**Piuthan**	**59.73 293**		*e*P	**P**	**15 55 57.6**	**-0.6**
comp=Z,81nm,1.3s							
ZALV	**Zalesovo Beam**	**59.94 323**		P	**P**	**15 55 58.3**	**-0.6**
comp=Z,3.9nm,0.5s,baz=103,slow=6.4,SNR=13							
ZALV				LR	LR	16 22 16.4	
comp=Z,98nm,18.8s,baz=68,slow=36							
ZALV	**Zalesovo Beam**	**59.94 323**		*i* P	**P**	**15 55 58.2**	**-0.7**
ZALV				pmax	pmax		
comp=Z,4.0nm,0.5s							
ZAA1	**Zalesovo Array**	**59.95 323**		*e*P	**P**	**15 55 58.3**	**-0.6**
MK31	**Makanchi Array**	**60.46 314**		*i* P	**P**	**15 56 02.0**	**-0.6**
MK31				pmax	pmax		
comp=Z,7.0nm,1.0s							
MKAR	**Makanchi Array**	**60.46 314**		P	**P**	**15 56 02.4**	**-0.2**
comp=Z,2.5nm,0.8s,baz=90,slow=8.5,SNR=19							
MKAR				LR	LR	16 23 05.4	
comp=Z,107nm,18.7s,baz=85,slow=37							
CNPM	**China Poot**	**60.62 31**		*e*P	**P**	**15 56 03.7**	**+0.2**
comp=Z,27nm,0.9s							
MAKZ	**Makanchi**	**60.67 314**		*e*P	**P**	**15 56 04.0**	**-0.1**
comp=Z,9.3nm,1.0s							
MAKZ	**Makanchi**	**60.67 314**		*e*P	**P**	**15 56 04.0**	**-0.1**
MAKZ				pmax	pmax		
comp=Z,9.0nm,1.0s							
BRLK	**Bradley Lake**	**60.86 31**		*e*P	**P**	**15 56 04.6**	**-0.6**
comp=Z,18nm,0.9s							
NVS	**Novosibirsk**	**61.03 323**		*i* P	**P**	**15 56 06.5**	**+0.2**
RC01	**Rabbit Creek A**	**61.77 29**		*e*P	**P**	**15 56 09.8**	**-1.4**
comp=Z,20nm,1.1s							
KTH	**Kantishna Hill**	**61.95 27**		*e*P	**P**	**15 56 11.2**	**-1.2**
comp=Z,42nm,1.0s							
PDGK	**Podgornoye**	**62.21 310**		P	**P**	**15 56 12.8**	**-1.9**
PDGK				pmax	pmax		
comp=Z,14nm,0.9s							
SML	**Sawmill**	**62.61 29**		*e*P	**P**	**15 56 16.5**	**-0.4**
comp=Z,40nm,1.0s							
SML	**Sawmill**	**62.61 29**		*e*P	**P**	**15 56 16.5**	**-0.4**
SML				pmax	pmax		
comp=Z,40nm,1.0s		

BRVK pmax pmax
comp=Z,23nm,1.0s
KK31 Karatay Array 68.78 310 *i* P **P 15 56 56.8 -0.2**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
INK Inuvik 69.82 23 P **P 15 57 02.0 -0.9**
comp=Z,5.5nm,0.9s,baz=255,slow=4.9,SNR=8.5
PPT2 Papeete2 71.14 116 *e*LR LR 16 18 32.8
comp=Z,283nm,29.2s
SVE Sverdlovsk 73.78 325⇑ *e*P **P 15 57 27.3 +0.3**
SVE pmax pmax
comp=Z,22nm,1.3s
ARU Arti 74.97 325 *e*P **P 15 57 33.6 -0.3**
comp=Z,18nm,1.1s
ARU Arti 74.97 325*c i*P **P 15 57 33.6 -0.3**
ARU 16 00 18.5
ARU S **S 16 07 09.7 -0.1**
ARU SS **SS 16 11 50.8 -7.3**
ARU pmax pmax
comp=Z,17nm,1.1s
AB31 Akbulak array 75.31 317 *e*P **P 15 57 35.1 -0.9**
AB31 pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 78.26 28 P **P 15 57 51.4 -1.0**
comp=Z,4.2nm,0.9s,baz=287,slow=5.6,SNR=13
YKA LR LR 16 33 02.5
comp=Z,24nm,19.3s,baz=279,slow=36
YBH Yreka Blue Hor 78.47 50 P **P 15 57 54.2 +0.1**
comp=Z,5.0nm,1.1s,baz=308,slow=2.7,SNR=6.6
GEYT Alibeck 78.91 306 P **P 15 57 55.7 -0.8**
comp=Z,4.1nm,1.0s,baz=101,slow=1.5,SNR=9.0
GEYT LR LR 16 35 51.4
comp=Z,41nm,19.8s,baz=40,slow=38
RES Resolute Bay 80.18 14 P **P 15 58 03.0 +0.3**
comp=Z,4.4nm,1.0s,baz=278,slow=5.7,SNR=3.6
RES Resolute Bay 80.18 14 P **P 15 58 03.0 +0.3**
PRGR Permogore 80.23 332 *e*P **P 15 58 00.6 -2.5**
PRGR *e* 15 58 08.8
PRGR pmax pmax
comp=Z,13nm,0.9s
NEW Newport 80.69 42 P **P 15 58 06.4 +0.4**
comp=Z,5.2nm,0.8s,baz=255,slow=6.1,SNR=11
CMB Columbia Colle 81.11 53 *e*P **P 15 58 08.3 -0.1**
comp=Z,6.1nm,1.1s
CMB Columbia Colle 81.11 53 *e*P **P 15 58 08.3 -0.1**
CMB pmax pmax
comp=Z,6.0nm,1.1s
NV01 Mina Array Sit 82.58 52 *e*P **P 15 58 15.7 -0.7**
NVAR Mina Array Bea 82.58 52 P **P 15 58 15.7 -0.7**
comp=Z,1.9nm,0.7s,baz=261,slow=5.6,SNR=13
KLMR Klimovskoe 83.27 332 *e*P **P 15 58 17.3 -1.9**
KLMR pmax pmax
comp=Z,25nm,1.3s
KLMR Klimovskoe 83.27 332 *e*P **P 15 58 17.4 -1.8**
KLMR AMP 15 58 20.1
comp=Z,25nm,1.3s
ARA0 ARCESS Array S 84.11 343 *e*P **P 15 58 23.5 +0.1**
ARCES ARCESS Array B 84.11 343 P **P 15 58 23.5 +0.1**
comp=Z,12nm,0.4s,baz=52,slow=5.8,SNR=5.8
ARCES LR LR 16 42 44.0
comp=Z,76nm,19.6s,baz=84,slow=41
ELK Elko 84.16 49 P **P 15 58 24.2 -0.3**
comp=Z,3.8nm,1.0s,baz=188,slow=3.7,SNR=10
DAG Danmarks Havn 85.54 357 *i*P **P 15 58 31.6 +1.2**
DAG pmax pmax
comp=Z,23nm,1.2s
DAG Danmarks Havn 85.54 357 *i*P **P 15 58 31.6 +1.2**
comp=Z,15nm,1.2s
AKT Akhty 85.60 312 *e*P **P 15 58 33.0 +1.4**
AKT *e* 16 01 51.2
AKT pmax pmax
comp=Z,14nm,1.1s
PSUT Pine Spring 85.87 51 *e*P **P 15 58 32.6 -0.5**
comp=Z,7.6nm,1.0s
VRH Novokhopyorsk 85.98 323 *e*P P 15 58 38.2 +5.1
VRH pmax pmax
comp=Z,10.0nm,0.8s
MOS Moscow 86.33 328 *e*P **P 15 58 32.2 -2.5**
MOS *e* 16 08 58.1
LPSR Galich'ya Gora 86.99 325 *e*P **P 15 58 36.3 -1.7**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 87.15 327 *e*P **P 15 58 38.3 -0.4**
OBN *e* 16 02 02.9
OBN pmax pmax
comp=Z,27nm,1.5s
FFC Flin Flon 87.20 33 *i*P **P 15 58 40.8 +1.8**
VSR Storozhevoye 87.44 323 *e*P **P 15 58 38.1 -2.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 87.48 323 *e*P **P 15 58 38.7 -1.7**
VORD pmax pmax
comp=Z,10.0nm,1.3s
PDAR Pinedale Array 87.48 46 P **P 15 58 39.9 -1.1**
comp=Z,0.3nm,0.5s,baz=209,slow=2.7,SNR=5.0
PDAR LR LR 16 34 03.3
comp=Z,70nm,19.3s,baz=314,slow=33
NCK Nalchik 87.75 315⇓ *e*P **P 15 58 42.6 +0.7**
ZEI Tsey 87.81 314 *e*P **P 15 58 40.9 -1.5**
ZEI pmax pmax
comp=Z,6.0nm,0.5s
KBZ Khabaz 88.13 315 P **P 15 58 42.6 -1.1**
comp=Z,4.5nm,1.0s,baz=294,slow=4.2,SNR=5.9
KBZ LR LR 16 41 36.0
comp=Z,89nm,18.4s,baz=74,slow=38
KIV Kislovodsk 88.19 316 *e*P **P 15 58 43.2 -0.9**
KIV pmax pmax
comp=Z,23nm,1.1s
NEY Neytrino 88.43 315⇓ *e*P **P 15 58 46.5 +1.1**
NEY pmax pmax
comp=Z,1.0nm,0.9s
FIA0 FINESS Array S 88.63 336 *e*P **P 15 58 44.9 -0.8**
FIA0 FINESS Array S 88.63 336 *e*P **P 15 58 44.9 -0.8**
FINES FINESS Array B 88.63 336 P **P 15 58 44.9 -0.8**
comp=Z,1.4nm,0.5s,baz=78,slow=5.1,SNR=9.5
ANMO Albuquerque 92.70 52 P **P 15 59 05.9 +0.5**
comp=Z,1.5nm,0.8s,baz=284,slow=7.7,SNR=5.0
ANMO Albuquerque 92.70 52⇓ *e*P **P 15 59 06.8 +1.3**
ANMO pmax pmax
comp=Z,6.0nm,1.7s
AKASG Malin Array Be 93.20 326 P **P 15 59 04.9 -2.3**
comp=Z,0.3nm,0.3s,baz=41,slow=4.9,SNR=4.7
HFS Hagfors 94.08 339 LR LR 16 44 37.0
comp=Z,66nm,19.2s,baz=36,slow=38
NOA NORSAR Array B 94.24 340 LR LR 16 46 01.3
comp=Z,67nm,20.6s,baz=45,slow=38
BRTR Keskin Array B 96.10 315 P **P 15 59 19.6 -1.3**
comp=Z,3.2nm,1.1s,baz=104,slow=4.0,SNR=9.9
BRTR Keskin Array B 96.10 315 *i*P **P 15 59 20.6 -0.3**
BRTR pmax pmax
comp=Z,4.0nm,1.1s
TXAR Lajitas Array 97.14 56 P Pdif 15 59 26.1 +0.2
comp=Z,0.6nm,0.9s,baz=259,slow=4.6,SNR=3.9
TXAR LR LR 16 42 22.6
comp=Z,123nm,18.0s,baz=0.0,slow=35
BRG Berggiesshubel 100.64 332 *e*(P) **PP 16 03 47.3 0.0**
comp=Z,11nm,1.6s
CLL Collm 100.74 333 *e*PP **PP 16 03 47.0 -1.0**
comp=Z,23nm,2.0s
GERES GERESS Array B 102.19 331 PP **PP 16 03 57.8 -1.3**
comp=Z,0.2nm,0.3s,baz=54,slow=6.7,SNR=6.4
PB11 IPOC Station P 144.84 100 *e*PKPdf **PKPdf 16 05 30.8 0.0**
GO01 Chusmiza 145.28 99 *e*PKPbc **PKPdf 16 05 33.5 +1.6**
LPAZ La Paz 146.00 93 PKPbc **PKPab 16 05 34.7 0.0**
comp=Z,4.1nm,0.7s,baz=296,slow=2.5,SNR=14
LPAZ La Paz 146.00 93 *e*PKPbc **PKPab 16 05 35.8 +1.1**

ISCJB ***22*** *15:57:06.1±0.7, 41°.67S±0°.09×85°.1W±0°.2, h10km, mb4.4/9, MS4.0/9, Error ellipse: s-maj=17.5km s-min=12.9km az=176.5*
IDC ***22*** *15:57:06.2±1.4, 41°.77S×85°.16W, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.9/23, mbtmp3.9/5, MS3.9/8, Ms1 3.9/8, ms1mx3.7/18, Error ellipse: s-maj=59.3km s-min=29.1km az=74.0*
NEIC ***22*** *15:57:07.5±2.3, 41°.79S×85°.03W, h10km, mb4.2/9, Error ellipse: s-maj=26.2km s-min=16.4km az=260.0*
ISC 22 15:57:07.2±0.8, 41°.81S±0°.09×84°.9W±0°.1, h10km, n28, σ1§19/18, mb4.4/9, MS4.0/9, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**10.89**	**89**	LR	LR	16 03 23.7	
	comp=Z,1μm,18.6s,baz=304,slow=34						
GO09	**Cerro Castillo**	**12.82**	**142**	*e*Pn	**Pn**	**16 00 08.8**	**-0.5**
GO10	**Punta Arenas**	**14.70**	**145**	*e*Pn	**P**	**16 00 40.2**	**-1.0**
GO04	**Tololo Observa**	**16.28**	**49**	*e*Pn	**Pn**	**16 00 55.9**	**-0.2**
	19nm,1.1s						
TRQA	**Tornquist**	**17.99**	**86**	*e*Pn	**Pn**	**16 01 14.9**	**-2.5**
	0.1nm,0.7s						
GO03	**Copiap**	**18.60**	**45**	*e*P	**P**	**16 01 24.8**	**+0.2**
	9.0nm,0.8s						
PMSA	**Palmer Station**	**25.92**	**160**	*e*P	**P**	**16 02 40.6**	**+1.6**
	25nm,1.1s						
CPUP	**Villa Florida**	**27.44**	**64**	LR	LR	16 13 16.1	
	comp=Z,421nm,19.7s,baz=239,slow=35						
LPAZ	**La Paz**	**29.26**	**35**	P	**P**	**16 03 11.4**	**+1.2**
	0.8nm,0.5s,baz=208,slow=9.5,SNR=4.1						
LPAZ				LR	LR	16 13 23.3	
	comp=Z,53nm,18.0s,baz=172,slow=33						
BDFB	**Brasilia**	**41.09**	**62**	LR	LR	16 21 32.6	
	comp=Z,252nm,19.6s,baz=222,slow=36						
VNA3	**Neumayer Olymp**	**46.37**	**154**	P	P	16 05 40.1	+7.0
ROSC	**El Rosal**	**47.43**	**14**	LR	LR	16 23 45.4	
	comp=Z,118nm,19.5s,baz=324,slow=34						
SNAA	**Sanae**	**48.50**	**155**	P	P	16 05 56.1	+6.4
SNAA	**Sanae**	**48.50**	**155**	P	**P**	**16 05 51.1**	**+1.3**
	2.9nm,0.9s,baz=248,slow=5.4,SNR=8.5						
SNAA	**Sanae**	**48.50**	**155**	*e*P	**P**	**16 05 51.1**	**+1.3**
	4.6nm,1.0s						
BCIP	**Isla Barro Col**	**50.95**	**6**	*e*P	**P**	**16 06 08.9**	**+0.2**
	22nm,1.1s						
VNDA	**Vanda**	**54.25**	**194**	LR	LR	16 24 42.7	
	comp=Z,75nm,21.9s,baz=125,slow=30						
RCBR	**Riachuelo**	**56.32**	**65**	*e*P	**P**	**16 06 48.2**	**-0.2**
	19nm,1.1s						
TAOE	**Nuku Hiva Isla**	**58.46**	**288**	*e*P	**P**	**16 07 01.5**	**-2.1**
	35nm,0.8s						
PPT2	**Papeete2**	**59.67**	**273**	*e*LR	LR	16 24 46.4	
	comp=Z,309nm,24.2s						
LTX	**Lajitas**	**72.88**	**343**	*e*P	**P**	**16 08 36.4**	**+0.2**
TXAR	**Lajitas Array**	**72.88**	**343**	P	**P**	**16 08 36.4**	**+0.2**
	0.6nm,0.9s,baz=156,slow=8.9,SNR=5.8						
DBIC	**Dimbokro**	**87.06**	**78**	LR	LR	16 45 28.2	
	comp=Z,60nm,18.2s,baz=184,slow=33						
PD31	**Pinedale Array**	**87.07**	**342**	*e*P	**P**	**16 09 53.0**	**+0.1**
	0.8nm,0.9s						
PDAR	**Pinedale Array**	**87.07**	**342**	P	**P**	**16 09 53.0**	**+0.1**
	0.6nm,1.0s,baz=145,slow=3.3,SNR=3.2						
DZM	**Mont Dzumac**	**88.46**	**242**	*e*LR	LR	16 37 44.6	
	comp=Z,203nm,28.9s						
TORD	**Torodi Ar. Bea**	**96.17**	**78**	P	**P**	**16 10 36.5**	**+0.9**
	0.9nm,0.9s,baz=231,slow=6.1,SNR=3.5						
TORD				LR	LR	16 49 46.7	
	comp=Z,44nm,20.7s,baz=310,slow=33						
TOA1	**Torodi Ar. Sit**	**96.17**	**78**	*e*P	**P**	**16 10 36.5**	**+0.9**

MAN 22 16:01:06.2, 8°.29N×122°.95E, h36km, mb4.2, ML3.1, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCPH	**Dipolog City**	**0.49**	**54**⇑	*e*P	Pn	16 01 18.4	+1.8
DCPH				*e*S	Sn	16 01 25.8	+1.9

UCR 22 16:27:24.0±3.4, 7°.47N×82°.04W, h4km±14km, ML3.5, 1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVD	**David**	**1.04**	**337**	*i*P	Pb	16 27 44.5	0.0
DVD				*e*S	Sn	16 27 59.7	-0.7
BRU2	**Volcan**	**1.46**	**334**	*i*P	Pn	16 27 50.4	-1.0
BRU2				*e*S	Sb	16 28 10.3	-0.7
PTJ1	**Puerto Jimnez**	**1.64**	**310**	*e*P	Pn	16 27 52.2	-1.5
EDPN	**Palmar Norte**	**2.04**	**317**	*e*P	Pn	16 27 57.0	-2.2
DRK0	**Durika**	**2.14**	**326**	*i*P	Pn	16 28 00.2	-0.6
DRK0				*e*S	Sb	16 28 30.4	-0.2
ZANG	**Zanguenga, Cho**	**2.60**	**55**⇓	*e*P	Pn	16 28 07.6	+0.7
BCIP	**Isla Barro Col**	**2.75**	**52**	*e*P	Pn	16 28 09.9	+1.0
BCIP				*i*S	Sn	16 28 40.9	-1.7
FLAM	**Flamenco Islan**	**2.86**	**60**	*i*P	Pn	16 28 11.9	+1.5
FLAM				*e*S	Sb	16 28 50.2	-0.7
FRIJ	**El Hiral**	**2.87**	**53**	*i*P	Pn	16 28 12.3	+1.7
LCR2	**La Lucha 2**	**2.98**	**319**	*e*P	Pn	16 28 10.7	-1.6
CVTR	**Volcan Turrial**	**3.05**	**326**	*e*P	Pn	16 28 14.3	+0.9
HDC	**Heredia**	**3.25**	**321**	*e*P	Pn	16 28 15.1	-0.8
ARE1	**Arenal 1**	**3.98**	**318**	*e*P	Pn	16 28 26.1	+0.2
CEDE	**Laguna Cedeo**	**3.99**	**319**	*e*P	Pn	16 28 29.0	+2.9
JTS	**Las Juntas de**	**4.02**	**314**	*e*P	Pn	16 28 27.5	+1.1

DDA ***22*** *16:30:02.6, 39°.10N×34°.27E, h7km±3km, ML3.0*
ISK ***22*** *16:30:03.2, 39°.09N×34°.18E, h5km, ML2.0/9*
ISCJB ***22*** *16:30:04.0±0.6, 39°.09N±0°.04×34°.22E±0°.05, h7km±6km, Error ellipse: s-maj=8.4km s-min=3.8km az=139.2*
ISC 22 16:30:03.0±1.4, 39°.08N±0°.04×34°.25E±0°.03, h7km±12km, n18, σ0§71/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIRS	**Kırehir-Merke**	**0.27**	**282**	*i*P	**Pg**	**16 30 09.0**	**+0.7**
YAYX	**Yaylak**	**0.37**	**248**	PG	**Pg**	**16 30 10.6**	**+0.4**
YAYX				SG	**Sb**	**16 30 16.5**	**-1.4**
SERE	**Sereflikochisa**	**0.55**	**257**	PG	**Pg**	**16 30 13.8**	**+0.1**
SERE				SG	**Sb**	**16 30 22.3**	**-0.9**
CDAG	**Cicekdag**	**0.56**	**10**	*i*P	**Pg**	**16 30 13.8**	**+0.1**
CDAG				*i*S	**Sb**	**16 30 22.8**	**-0.6**
CDAG				IAML_P			
	comp=Z,2μm,0.1s						
AKSY	**AKSARAY - Alti**	**0.57**	**222**	*i*P	**Pb**	**16 30 15.5**	**+0.1**
AKSY				IAML_P			
	comp=Z,474nm,0.1s						
SIRC	**Yozgat**	**0.74**	**69**	*i*P	**Pg**	**16 30 17.1**	**-0.2**
DELI	**KIRIKKALE**	**0.96**	**345**	*i*P	**Pg**	**16 30 20.9**	**-0.5**
DELI				IAML_P			
	comp=Z,993nm,0.1s						
BBAL	**Bala**	**0.99**	**298**	*i*P	**Pb**	**16 30 22.2**	**-0.4**
BBAL				IAML_P			
	comp=Z,2μm,0.2s						
YOZ	**Yozgat**	**1.00**	**55**	PG	**Pn**	**16 30 24.2**	**+0.6**
YOZ				SG	**Sn**	**16 30 39.6**	**+1.5**
KKUL	**Konya-Kulu**	**1.04**	**276**	*i*P	**Pn**	**16 30 25.3**	**+1.2**
KKUL				IAML_P			
	comp=Z,366nm,0.1s						
SULT	**Sultanhani-AKS**	**1.05**	**214**	PG	**Pn**	**16 30 24.2**	**0.0**
SULT				SG	**Sn**	**16 30 39.6**	**+0.5**
CORM	**Corum**	**1.14**	**15**	PN	**Pn**	**16 30 26.2**	**+0.7**
CHBY	**Cihanbeyli**	**1.17**	**246**	PN	**Pn**	**16 30 25.9**	**0.0**
COAL	**Corum-Alaca**	**1.31**	**25**	*i*P	**Pg**	**16 30 28.1**	**0.0**
COAL				*i*S	**Sn**	**16 30 45.5**	**-0.1**
COAL				IAML_P			
	comp=Z,334nm,0.2s						
ANTO	**Ankara**	**1.38**	**306**	PN	**Pg**	**16 30 29.6**	**+0.1**
LOD	**Lodumlu**	**1.41**	**306**	PN	**Pg**	**16 30 30.2**	**+0.2**
KIZT	**Kizilcal**	**1.86**	**265**	PN	**Pb**	**16 30 36.6**	**-0.8**
SVSK	**Karacayir**	**2.29**	**68**	PN	**Pb**	**16 30 44.1**	**-0.4**

TIF ***22*** *16:40:54.8, 42°.37N×41°.01E, h21km±5km*
DDA ***22*** *16:40:56.3, 42°.06N×40°.66E, h7km±5km, ML2.7*
ISC 22 16:40:52.4±6.8, 42°.5N±0°.2×40°.8E±0°.3, h21km±9km, n6, σ0§45/11, Black Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATM	**Batumi**	**1.12**	**141**	P	**Pb**	**16 41 13.5**	**+0.5**
BATM				S	**Sn**	**16 41 26.9**	**-0.6**
DBOC	**Borcka**	**1.32**	**148**	*i*P	**Pb**	**16 41 16.9**	**+0.4**
DBOC				*i*S	**Sn**	**16 41 32.7**	**+0.2**
DBOC				IAML_P			
	comp=Z,455nm,0.1s						
DBAD	**Bademkaya**	**1.62**	**154**	*i*P	**Pb**	**16 41 21.2**	**-0.4**
DBAD				IAML_P			
	comp=Z,341nm,0.1s						
DAGI	**Agillar**	**1.65**	**148**	*i*P	**Pb**	**16 41 21.9**	**-0.2**
DAGI				*i*S	**Sn**	**16 41 40.8**	**0.0**
TKB	**Tkibuli**	**1.67**	**94**	P	**Pb**	**16 41 21.9**	**-0.5**
TKB				S	**Sn**	**16 41 41.5**	**+0.4**
ONI	**Oni**	**2.00**	**86**	P	**Pb**	**16 41 28.4**	**+0.2**
ONI				S	**Sb**	**16 41 52.5**	**-0.1**

BJI ***22*** *16:42:42.0±0.0, 15°.15S×173°.57W, h12km, mb4.8/8, mB5.3/8, Ms5.0/2, Ms7 5.0/1*
ISCJB ***22*** *16:42:45.2±0.2, 15°.34S±0°.05×173°.50W±0°.05, h38km, mb4.7/34, MS4.3/25, Error ellipse: s-maj=7.8km s-min=4.8km az=135.3*
IDC ***22*** *16:42:47.7±0.4, 15°.24S×173°.60W, h39km±2km, mb4.3/21, mb1 4.4/21, mb1mx4.3/36, mbtmp4.5/21, MS4.1/21, Ms1 4.2/21, ms1mx4.1/24, Error ellipse: s-maj=16.4km s-min=10.8km az=129.0*
NEIC ***22*** *16:42:49.1±2.4, 15°.37S×173°.58W, h56km±6km, mb4.9/18, Error ellipse: s-maj=19.0km s-min=13.8km az=115.0*
GCMT ***22*** *16:42:53.1±0.2, 15°.13S±0°.02×173°.21W±0°.02, h64km±3km, MW5.1/96, Moment Tensor Solution. s45,c52; s96,c134; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.93±.19; Mθθ0.37±.20; Mφφ-1.30±.18; Mrθ-4.23±.12; Mrφ2.21±.16; Mθφ1.37±.10; Best double couple: M0:5.09200×10^16 NP1:φs289.00000°, δ84.00000°, λ64.00000°. NP2: φs186.00000°, δ27.00000°, λ166.00000°. Principal axes: T 4.9380, Plg45.0000°, Azm172.0000°; N 0.3110, Plg26.0000°, Azm292.0000°; P -5.2460, Plg34.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 16:42:47.0±0.4, 15°.27S±0°.06×173°.42W±0°.07, h41km±3km, h41km:pP-P, n246, σ1§11/229, mb4.8/34, MS4.3/26, 10C-6D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.04**	**139**	*e*Pn	**Pn**	**16 43 60.0**	**-0.2**
FUNA	**Funafuti**	**9.86**	**312**	*e*Pn	**Pn**	**16 45 03.2**	**-3.1**
KNTN	**Kanton**	**12.53**	**8**	*e*Pn	**Pn**	**16 45 39.1**	**-3.7**
RAR	**Rarotonga**	**14.24**	**117**	Pn	**Pn**	**16 46 04.0**	**-2.1**
	3.1nm,0.3s,baz=319,slow=6.4,SNR=6.4						
RAR				LR	LR	16 50 11.8	
	comp=Z,340nm,19.2s,baz=292,slow=31						
DZM	**Mont Dzumac**	**20.23**	**247**	*e*P	Pn	16 47 24.4	+3.3
	237nm,1.4s						
DZM				*e*LQ	LQ	16 51 26.3	
	1μm,25.8s						
DZM				*e*LR	LR	16 52 17.6	
	comp=Z,3μm,26.1s						
DZM	**Mont Dzumac**	**20.23**	**247**	P	**P**	**16 47 18.6**	**-0.4**
	8.9nm,0.9s,baz=76,slow=14,SNR=3.5						
DZM				LR	LR	16 54 03.6	
	comp=Z,1μm,21.7s,baz=84,slow=34						
DZM	**Mont Dzumac**	**20.23**	**247**	*e*P	**P**	**16 47 19.1**	**+0.2**
	35nm,1.1s						
PAE	**Paea**	**22.98**	**99**	*e*T	T	17 11 04.0	
	12nm,0.3s						
PPT	**Papeete**	**22.98**	**99**	LR	LR	16 54 18.3	
	comp=Z,124nm,19.5s,baz=280,slow=30						
PPT2	**Papeete2**	**22.98**	**99**	*e*S	**S**	**16 51 51.5**	**-4.7**
	207nm,26.2s						
PPT2				*e*LQ	LQ	16 52 27.2	
	814nm,29.5s						
PPT2				*e*LR	LR	16 53 14.4	
	comp=Z,760nm,26.5s,baz=264						
PPT2	**Papeete2**	**22.98**	**99**	*e*T	T	17 11 04.6	
	11nm,0.3s						
OUZ	**Omahuta**	**23.03**	**208**	*e*P	**P**	**16 47 49.0**	**+0.4**
	24nm,1.1s						
TIAR	**Tiarei**	**23.20**	**99**	*e*T	T	17 11 21.5	
	7.6nm,0.4s						
TVO	**Taravao**	**23.30**	**100**	*e*T	T	17 11 28.3	
	4.5nm,0.3s						
TBI	**Tubuai**	**23.97**	**113**	*e*S	**S**	**16 52 09.4**	**-2.6**
	96nm,24.8s						
TBI				*e*LQ	LQ	16 52 53.4	
	712nm,27.0s						
TBI				*e*LR	LR	16 53 50.5	
	comp=Z,703nm,26.8s,baz=283						
TBI	**Tubuai**	**23.97**	**113**	*e*T	T	17 12 18.3	
	30nm,0.3s						
URZ	**Urewera**	**24.38**	**198**	P	**P**	**16 48 01.0**	**-0.3**
	15nm,0.7s,baz=45,slow=5.3,SNR=5.6						
URZ				LR	LR	16 56 21.4	
	comp=Z,1μm,19.2s,baz=32,slow=33						
URZ	**Urewera**	**24.38**	**198**	*e*P	**P**	**16 48 02.5**	**+1.1**
	28nm,0.9s						
PMOR	**Pomariorio Ree**	**24.64**	**93**	*e*T	T	17 13 09.0	
	11nm,0.3s						
VAH	**Vaihoa**	**24.88**	**93**	*e*T	T	17 13 26.6	
	15nm,0.3s						
HNR	**Honiara**	**26.64**	**279**	LR	LR	16 57 36.6	
	comp=Z,160nm,19.1s,baz=124,slow=34						
LTZ	**Lake Taylor**	**30.04**	**201**	*e*P	**P**	**16 48 51.2**	**-1.0**
	45nm,1.2s						
OXZ	**Oxford**	**30.60**	**201**	*e*P	**P**	**16 48 57.2**	**+0.1**
	30nm,0.9s						
CRLZ	**Canterbury Las**	**30.62**	**200**	*e*P	**P**	**16 48 54.1**	**-3.2**
	46nm,1.1s						
FOZ	**Fox Glacier**	**31.60**	**204**	*e*P	**P**	**16 49 04.4**	**-1.5**
	40nm,1.0s						
WKZ	**Wanaka**	**33.00**	**203**	*e*P	**P**	**16 49 18.3**	**+0.1**
	18nm,1.0s						
TAOE	**Nuku Hiva Isla**	**33.13**	**83**	*e*LR	LR	16 58 02.2	
	comp=Z,874nm,25.5s						
TAOE	**Nuku Hiva Isla**	**33.13**	**83**	*e*T	T	17 23 46.6	
	86nm,0.2s						
MLZ	**Mavora Lakes**	**33.80**	**204**	*e*P	**P**	**16 49 23.0**	**-2.2**
	25nm,1.0s						
WHZ	**Wether Hill Ro**	**34.30**	**203**	*e*P	**P**	**16 49 30.2**	**+0.7**
	49nm,0.9s						
ARMA	**Armidale**	**35.39**	**239**	*e*P	**P**	**16 49 39.0**	**-0.3**
	17nm,1.0s						
RKT	**Rikitea**	**37.05**	**108**	*e*T	T	17 28 38.3	
	17nm,0.3s						
CTA	**Charters Tower**	**38.65**	**257**	P	**P**	**16 50 05.3**	**-1.7**
	3.4nm,0.9s,baz=51,slow=13,SNR=3.0						
H11S2	**WAKE ISLAND Hy**	**38.84**	**329**	T	T	17 30 54.8	
	baz=146,slow=76,SNR=50						
H11S3	**WAKE ISLAND Hy**	**38.86**	**329**	T	T	17 30 34.8	
	baz=146,slow=76,SNR=45						
H11S1	**WAKE ISLAND Hy**	**38.86**	**329**	T	T	17 30 56.0	
	baz=146,slow=76,SNR=74						
H11N3	**WAKE ISLAND Hy**	**39.79**	**330**	T	T	17 32 40.7	
	baz=150,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**39.80**	**330**	T	T	17 32 41.1	
	baz=150,slow=76,SNR=20						
H11N2	**WAKE ISLAND Hy**	**39.81**	**330**	T	T	17 32 57.9	
	baz=150,slow=76,SNR=18						
TOO	**Toolangi**	**42.53**	**231**	*e*P	**P**	**16 50 37.8**	**-1.0**
	25nm,1.0s						
STKA	**Stephens Creek**	**44.08**	**240**	P	**P**	**16 50 50.8**	**-0.6**
	8.3nm,0.9s,baz=62,slow=8.6,SNR=9.5						
STKA				pP	**pP**	**16 51 02.5**	**+0.1**
	12nm,0.9s,baz=93,slow=11,SNR=8.0						
STKA				LR	LR	17 06 39.7	
	comp=Z,311nm,21.4s,baz=52,slow=33						
WB2	**Warramunga Arr**	**49.84**	**257**	*e*P	**P**	**16 51 35.7**	**-0.9**
	14nm,0.8s						
WR1	**Warramunga Arr**	**49.85**	**257**	*e*P	**P**	**16 51 35.0**	**-1.6**
WRA	**Warramunga Arr**	**49.85**	**257**	P	**P**	**16 51 35.0**	**-1.6**
	7.6nm,0.9s,baz=85,slow=9.3,SNR=16						
WRA				pP	**pP**	**16 51 47.5**	**-0.3**
	8.7nm,0.7s,baz=88,slow=8.4,SNR=11						
AS31	**Alice Springs**	**50.13**	**252**	*e*P	**P**	**16 51 37.1**	**-1.6**
	12nm,0.7s						
ASAR	**Alice Springs**	**50.13**	**252**	P	**P**	**16 51 36.6**	**-2.1**
	17nm,0.6s,baz=86,slow=8.1,SNR=164						
ASAR				pP	**pP**	**16 51 50.0**	**+0.1**
	45nm,0.7s,baz=86,slow=8.3,SNR=36						
ASAR				LR	LR	17 11 06.5	
	comp=Z,703nm,21.9s,baz=96,slow=34						
VNDA	**Vanda**	**63.50**	**186**	P	**P**	**16 53 14.4**	**+1.9**
	7.7nm,0.9s,baz=4.8,slow=6.3,SNR=46						
VNDA				LR	LR	17 13 42.3	
	comp=Z,58nm,21.8s,baz=23,slow=29						
MJAR	**Matsushiro Arr**	**68.83**	**320**	P	**P**	**16 53 47.5**	**+0.1**

7.8nm,1.1s
MURC Murrieta 72.32 47 P P 16 54 09.5 +0.7
baz=237
BFSC Mount Baldy Ra 72.34 46 P P 16 54 09.6 +0.6
baz=237
EDW2 Edwards Air Fo 72.47 45 P P 16 54 10.2 +0.5
baz=236
O02D Mt. Diablo Mer 72.49 38 P P 16 54 10.7 +1.0
baz=231
MONP2 Monument Peak 72.49 48 P P 16 54 10.3 +0.3
baz=238
PETK Petropavlovsk- 72.50 342 P P 16 54 10.8 +1.5
5.5nm,0.8s,baz=142,slow=7.9,SNR=6.3
PETK pP **pP 16 54 21.3 +0.5**
8.9nm,0.7s,baz=127,slow=8.2,SNR=7.9
PETK LR LR 17 19 01.1
comp=Z,65nm,21.7s,baz=144,slow=30
PEA1 Petropavlovsk- 72.51 342 *eP* **P 16 54 10.8 +1.5**
ISA Isabella, Lake 72.57 44 P P 16 54 11.1 +0.8
baz=236
IKP In-Ko-Pah, Jac 72.59 48 P P 16 54 11.2 +0.7
baz=238
PFO Pinyon Flats O 72.85 47 P P 16 54 12.7 +0.7
baz=238
SWSC Sam W. Stewart 72.97 48 P P 16 54 12.8 +0.2
baz=238
LRMC Laurel Mtn Rad 73.01 45 P P 16 54 13.7 +0.7
baz=236
N02D Trinity Center 73.04 38 P P 16 54 14.0 +1.1
baz=231
O03E Paynes Creek 73.16 39 P P 16 54 14.4 +0.8
baz=232
M02C Callahan 73.21 37 P P 16 54 15.0 +1.0
baz=231,SNR=5.0
L02E Cave Junction 73.26 36 P P 16 54 13.5 -0.6
baz=230
CWC Cottonwood Cre 73.27 44 P P 16 54 14.8 +0.3
baz=236
BELC Belle Mtn. Jos 73.38 47 P P 16 54 15.8 +0.7
baz=238
MLAC Mammoth, Mammo 73.45 42 P P 16 54 16.4 +0.8
baz=235
MPMC Manual Prospec 73.46 44 P P 16 54 16.3 +0.6
baz=236
YBH Yreka Blue Hor 73.51 37 *eP* **P 16 54 17.4 +1.7**
15nm,1.1s
GSC Goldstone, Bar 73.51 45 P P 16 54 16.2 +0.3
baz=237
K02D Willamette Mer 73.57 36 P P 16 54 16.5 +0.4
baz=230,SNR=6.1
HEC Hector,Ludlow 73.58 46 P P 16 54 16.3 0.0
baz=238
BC3 Big Chuckawall 73.58 47 P P 16 54 17.1 +0.7
baz=238
J01E Myrtle Point 73.72 35 P P 16 54 17.6 +0.8
baz=230,SNR=5.2
GLA Glamis 73.72 48 P P 16 54 17.7 +0.6
baz=239
GMRC Granite Mounta 74.03 46 P P 16 54 19.6 +0.6
baz=238
L04D Klamath Falls 74.05 37 P P 16 54 18.2 -0.8
baz=231,SNR=11
M04C Macdoel 74.05 38 P P 16 54 19.3 +0.3
baz=232,SNR=5.5
GRAC Grapevine Rang 74.06 44 P P 16 54 19.3 +0.3
baz=236
IRM Iron Mountain 74.06 47 P P 16 54 18.8 -0.2
baz=238
FURC Furnace Creek, 74.11 44 P P 16 54 19.2 +0.1
baz=237
TUQ Turquoise Moun 74.19 46 P P 16 54 20.0 +0.1
baz=238
SHOC Shoshone, Teco 74.20 45 P P 16 54 20.5 +0.7
baz=237
NV01 Mina Array Sit 74.25 42 *eP* **P 16 54 21.1 +0.8**
NVAR Mina Array Bea 74.25 42 P P 16 54 21.1 +0.8
8.7nm,1.1s,baz=227,slow=8.3,SNR=23
NVAR LR LR 17 19 16.1
comp=Z,362nm,21.7s,baz=232,slow=29
Y12C Blythe 74.30 48 P P 16 54 21.0 +0.6
baz=239
I02D Swisshome 74.38 35 P P 16 54 21.3 +0.8
baz=230
I03D Drain, OR 74.39 35 P P 16 54 21.2 +0.6
baz=230
K04D Chiloquin, OR 74.62 37 P P 16 54 22.1 -0.1
baz=232
214A Organ Pipe Nat 74.65 50 P P 16 54 23.5 +1.0
baz=241
NEE2 Needles Airpor 74.75 47 P P 16 54 23.6 +0.6
baz=239
TPNV Topopah Spring 74.78 44 P P 16 54 23.5 +0.1
baz=237
J04D Umpqua Nationa 74.80 36 P P 16 54 24.3 +0.9
baz=231,SNR=6.8
PDMCI Parker Dam,Lak 74.85 47 P P 16 54 24.3 +0.7
baz=239
I04A Tendick Farm, 74.97 36 P P 16 54 24.7 +0.6
baz=231,SNR=7.2
H04D Lebanon 75.25 35 P P 16 54 26.2 +0.5
baz=230,SNR=6.1
J05D Fort Rock, OR 75.33 37 P P 16 54 27.4 +1.0
baz=232,SNR=21
G03D McMinnville, O 75.41 34 P P 16 54 27.1 +0.6
baz=230
I05D Terrebonne, OR 75.92 36 P P 16 54 30.2 +0.7
baz=232,SNR=6.4
R11A Troy Canyon, C 75.98 43 P P 16 54 30.6 +0.4
baz=237
KSRS Korea Array 76.06 316 P P 16 54 30.8 +0.4
1.1nm,0.9s,baz=125,slow=6.0,SNR=5.8
KSRS LR LR 17 21 53.9
comp=Z,71nm,21.7s,baz=106,slow=31
F04D Rainier, OR 76.10 34 P P 16 54 31.3 +0.9
baz=230
TUC Tucson 76.32 51 P P 16 54 33.1 +0.9
baz=242
G05D Wamic, OR 76.49 35 P P 16 54 32.9 +0.2
baz=232
E04D Cinebar 76.64 33 P P 16 54 34.4 +0.8
baz=230
F05D White Salmon 76.81 34 P P 16 54 35.2 +0.6
baz=231
D04E Lakebay 76.93 33 P P 16 54 35.7 +0.6
baz=230
D03D Eldon 77.00 32 P P 16 54 35.7 +0.2
baz=230
USRK Ussuriysk Ar. 77.27 323 P P 16 54 38.8 +1.7
2.1nm,0.7s,baz=78,slow=18,SNR=6.8
USRK pP **pP 16 54 49.2 +0.7**
4.2nm,1.0s,baz=183,slow=3.8,SNR=4.4
USRK LR LR 17 21 58.7
comp=Z,192nm,22.0s,baz=123,slow=30
WUAZ Wupatki 77.43 48 P P 16 54 39.5 +1.0
baz=241
A04D Lummi Island 77.96 32 P P 16 54 41.4 +0.6
baz=230
B05A Bryant 77.98 32 P P 16 54 41.2 +0.3
baz=230
W18A Petrified Fore 78.41 49 P P 16 54 44.4 +0.4
baz=242
121A Cookes Peak, D 78.68 52 P P 16 54 46.7 +1.2
baz=244,SNR=7.6
DUG Dugway, Tooele 78.78 43 P P 16 54 46.5 +0.7
baz=239,SNR=9.9
HLID Hailey 79.54 39 P P 16 54 50.8 +0.9
baz=237,SNR=24
SCM Sheep Creek Mo 79.58 12 *eP* **P 16 54 51.0 +1.5**
14nm,1.0s
MNTX Cornudas Mount 80.17 53 P P 16 54 54.3 +1.0
baz=245,SNR=12
MVCO Mesa Verde 80.27 47 P P 16 54 54.1 0.0
baz=242
TXAR Lajitas Array 80.56 56 P P 16 54 57.4 +1.7
5.1nm,1.0s,baz=229,slow=5.8,SNR=34
TXAR pP **pwP 16 55 09.8 -0.4**
8.9nm,1.0s,baz=224,slow=5.2,SNR=14
TXAR LR LR 17 24 02.5
comp=Z,171nm,19.4s,baz=0.0,slow=31
LTX Lajitas 80.56 56 *eP* **P 16 54 57.4 +1.8**
NEW Newport 80.61 34 P P 16 54 55.1 -0.3
baz=234
TASM ASL Pad, Albuq 80.73 50 P P 16 54 57.6 +1.0
baz=244,SNR=7.8
TASM ASL Pad, Albuq 80.73 50 P P 16 54 57.6 +1.0
baz=244,SNR=7.4
ANMO Albuquerque 80.73 50 P P 16 54 57.3 +0.8
baz=244

CN2 Changchun 80.98 320 *eP* **P 16 54 58.4 +1.0**
MSO Missoula 81.59 37 P P 16 55 00.5 -0.2
baz=237
S22A 4UR Ranch, Cre 81.70 47 P P 16 55 02.7 +0.9
baz=244
O20A White River Ci 81.80 45 P P 16 55 02.6 +0.4
baz=242
HDA Harding Lake 81.98 11 P P 16 55 01.3 -1.0
baz=206
BW06 Boulder Array 82.18 42 P P 16 55 04.5 +0.4
baz=241,SNR=11
PDAR Pinedale Array 82.18 42 P P 16 55 04.8 +0.7
4.0nm,0.9s,baz=219,slow=2.9,SNR=26
PDAR LR LR 17 26 27.3
comp=Z,247nm,18.7s,baz=239,slow=32
BOZ Bozeman (W) 82.30 39 P P 16 55 05.5 +0.9
baz=239
ILAR Eielson Array 82.32 11 P P 16 55 04.0 0.0
3.9nm,1.1s,baz=220,slow=5.9,SNR=18
ILAR pP **pP 16 55 15.0 -0.8**
5.5nm,1.1s,baz=206,slow=6.3,SNR=13
ILAR LR LR 17 24 48.1
comp=Z,132nm,21.8s,baz=216,slow=31
H17A Grant Village 82.34 40 P P 16 55 06.7 +1.7
baz=240
SEY Seymchan 82.39 345 P P 16 55 05.8 +1.4
2.0nm,0.8s,baz=126,slow=8.8,SNR=3.8
POKR Poker Flat Res 82.54 11 P P 16 55 04.8 -0.4
baz=205
SDCO Great Sand Dun 82.64 48 P P 16 55 07.0 +0.3
baz=244,SNR=6.4
WHN Wuhan 83.01 304 P P 16 55 08.6 +0.2
MSTX Muleshoe 83.09 52 P P 16 55 09.7 +0.8
baz=246
T25A Trinidad 83.17 49 P P 16 55 09.9 +0.5
baz=245
Q24A Divide 83.42 47 P P 16 55 11.7 +1.0
baz=244
ISCO Idaho Springs 83.45 46 P P 16 55 11.4 +0.5
baz=244
RLMT Red Lodge 83.51 40 P P 16 55 11.6 +0.7
baz=241
N23A Red Feather La 83.71 45 P P 16 55 13.1 +1.0
baz=244
JCT Junction City 84.09 56 P P 16 55 14.2 +0.2
baz=248
K22A Casper 84.11 43 P P 16 55 13.9 -0.1
baz=243
EGMT Eagleton 84.64 37 P P 16 55 17.2 +0.8
baz=240
ABTX Abilene, Hawle 85.00 54 P P 16 55 19.1 +0.6
baz=248
EPYK Eagle Plains 85.85 14 P P 16 55 22.6 +0.6
baz=215
LAO LASA Array 86.12 39 P P 16 55 25.1 +1.3
baz=243
RSSD Black Hills 86.38 42 P P 16 55 25.4 0.0
baz=245
WMOK Wichita Mounta 86.44 53 P P 16 55 25.4 -0.3
baz=249
WHTX Lake Whitney, 86.51 56 P P 16 55 26.4 +0.4
baz=250
MAW Mawson 87.91 199 P P 16 55 32.7 +0.6
8.3nm,0.8s,baz=120,slow=6.8,SNR=8.1
MAW pP **pP 16 55 45.4 +1.4**
8.1nm,0.8s,baz=166,slow=8.7,SNR=5.1
MAW LR LR 17 32 23.0
comp=Z,340nm,20.2s,baz=122,slow=34
MAW Mawson 87.91 199 *eP* P 16 55 25.9 -6.2
2.7nm,0.9s
DGMT Dagmar 88.14 39 P P 16 55 34.8 +1.2
baz=244
NATX Nacogdoches 88.67 57 P P 16 55 37.7 +1.3
baz=251
PLCA Paso Flores 89.61 132 LR LR 17 26 11.3
comp=Z,92nm,21.9s,baz=266,slow=29
YKA Yellowknife Ar 89.99 23 P P 16 55 43.5 +1.7
1.7nm,0.9s,baz=239,slow=4.4,SNR=7.8
YKA pP **pP 16 55 53.9 +0.5**
4.0nm,0.9s,baz=236,slow=4.2,SNR=12
YKB5 Yellowknife Ar 89.99 23 *eP* **P 16 55 43.5 +1.7**
MIAR Mount Ida 90.42 54 P P 16 55 44.4 -0.1
baz=252
W39A Magazine 90.46 54 P P 16 55 44.9 +0.3
baz=252
ECSD EROS Data Cent 91.18 45 P P 16 55 47.6 -0.2
baz=250
W41B Gary Mavity, V 91.65 54 P P 16 55 50.3 +0.1
baz=252
CMAR Chiang Mai Arr 92.56 288 LR LR 17 31 24.8
comp=Z,41nm,21.0s,baz=170,slow=32
VNA3 Neumayer Olymp 92.98 175 P P 16 55 56.9 +1.1
SNAA Sanae 93.03 177 P P 16 55 56.9 +0.8
SNAA Sanae 93.03 177 P P 16 55 57.3 +1.2
3.7nm,0.9s,baz=240,slow=3.6,SNR=8.8
SNAA pP **pP 16 56 09.4 +1.5**
4.5nm,1.1s,baz=185,slow=1.9,SNR=5.4
VNA1 Neumayer--Stat 93.68 175 P P 16 56 00.2 +1.2
ULM Lac du Bonnet 93.84 39 LR LR 17 32 56.1
comp=Z,336nm,19.6s,baz=272,slow=32
SONM Songino Array 94.74 318 LR LR 17 39 28.0
comp=Z,38nm,18.8s,baz=83,slow=36
F39A Loretta 95.71 44 P P 16 56 08.5 -0.1
baz=254
MKAR Makanchi Array 110.72 315 PKiKP **PKiKP 17 01 16.5 +0.9**
0.6nm,1.1s,baz=50,slow=2.3,SNR=2.9
KURBB Kurchatov Arra 113.10 319 PKiKP **PKiKP 17 01 20.4 +0.5**
0.4nm,0.8s,baz=93,slow=2.0,SNR=4.2
KSH Kashi 115.38 307 *e*PKP **PKPdf 17 01 24.3 -0.5**
BVAR Borovoye Array 117.77 322 PKP **PKiKP 17 01 29.0 +0.1**
0.7nm,0.8s,baz=343,slow=9.3,SNR=4.9
BVAR pPKP **pPKPdf 17 01 40.9 +0.1**
1.9nm,0.8s,baz=69,slow=2.1,SNR=6.7
ARA0 ARCESS Array S 124.48 352 *e*PKPdf **PKPdf 17 01 41.3 0.0**
ARCES ARCESS Array B 124.48 352 PKP **PKPdf 17 01 41.3 0.0**
7.5nm,0.3s,baz=96,slow=1.2,SNR=9.5
ARCES pPKP **pPKPdf 17 01 54.3 +1.0**
4.8nm,0.9s,baz=22,slow=3.9,SNR=5.2
KLMR Klimovskoe 128.67 340 *e*PKPdf **PKPdf 17 01 47.8 -1.6**
KLMR AMP 17 01 51.3
comp=Z,10.0nm,1.4s
GEYT Alibeck 129.42 307 pPKP pPKPdf 17 02 05.9 +2.2
comp=Z,1.9nm,0.8s,baz=299,slow=3.1,SNR=3.5
FIA0 FINESS Array S 131.81 348 *e*PKPdf **PKiKP 17 01 56.9 +0.4**
FINES FINESS Array B 131.81 348 PKP **PKiKP 17 01 56.9 +0.4**
comp=Z,1.8nm,0.9s,baz=346,slow=4.7,SNR=3.9
NB2 NORSAR Subarra 134.18 357 PKPdf PKiKP 17 02 13.5 +12
comp=Z,2.7nm,1.2s,baz=14,slow=1.8
AKASG Malin Array Be 140.22 338 PKP **PKPdf 17 02 11.6 +0.3**
comp=Z,0.2nm,0.3s,baz=5.7,slow=1.9,SNR=4.0
AKASG pPKP **pPKPdf 17 02 23.6 +0.3**
comp=Z,0.8nm,0.5s,baz=17,slow=2.8,SNR=3.1
CLL Collm 143.69 353 *e*PKiKP **PKiKP 17 02 22.0 +1.1**
CLL *i* 17 02 29.4
comp=Z,5.0nm,0.9s
CLL *e*pPKPdf **sPKPdf 17 02 36.0 +2.3**
CLL Lm MLR 18 07 00.0
comp=N,100nm,19.7s
CLL Lm MLR 18 07 00.0
comp=E,100nm,19.5s
CLL Lm MLR 18 07 00.0
comp=Z,100nm,18.2s
OSTC Ostas 143.95 350 *e*PKP **PKPdf 17 02 17.5 -0.6**
OSTC *ex* x 17 02 30.1
BRG Berggiesshubel 144.00 352 *e*PKP **PKiKP 17 02 21.3 -0.3**
comp=Z,7.0nm,1.4s
BRG *e* 17 02 41.4
comp=Z,5.8nm,0.9s
KOLS Kolonicke sedl 144.05 342 *e*PKP PKiKP 17 02 31.9 +10
DPC Dobruska-Polom 144.13 349 *e*PKP **PKPdf 17 02 17.7 -0.7**
DPC *ex* x 17 02 31.1
BURAR Bucovina Array 144.24 338 ⇑*i*P PKPab 17 02 04.4 -12
OKC Ostrava-Krasne 144.26 347 *e*PKP **PKPdf 17 02 17.8 -0.8**
OKC *ex* x 17 02 30.6
MORC Moravsky Berou 144.45 348 ⇓*i*P PKPbc 17 02 18.0 +0.5
MORC Moravsky Berou 144.45 348 *e*PKP PKPbc 17 02 17.6 +0.1
MORC *e* 17 02 30.6
BIZ Bicaz 144.48 337 ⇑*i*P **PKPab 17 02 15.1 -2.3**
LANS Liptovska Anna 144.60 345 *e*PKP PKiKP 17 02 34.0 +11
PRU Pruhonice 144.78 351 *e*PKP **PKPdf 17 02 19.3 -0.2**
PRU *ex* x 17 02 33.4
PRU AMS AMS 18 05 00.0
comp=Z,300nm,22.6s
GOPC GO Pecny, Ondr 144.81 351 *e*PKP PKPbc 17 02 18.9 +0.3
GOPC *ex* x 17 02 31.9
GOPC AMS AMS 18 05 10.0
comp=Z,200nm,17.6s

VRAC Vranov 145.08 349 ⇑*i*P **PKPdf 17 02 21.2 +1.1**
VRAC Vranov 145.08 349 *e*PKP **PKPdf 17 02 20.1 0.0**
VRAC *e* 17 02 32.8
VRI Vrincioaia 145.12 335 ⇑*i*P **PKPdf 17 02 20.3 +0.1**
JAVC Velka Javorina 145.29 347 *e*PKP **PKPdf 17 02 21.9 +1.4**
JAVC *e* 17 02 34.8
KRUC Moravsky 145.35 349 *e*PKP **PKPdf 17 02 20.8 +0.3**
KRUC *e* 17 02 33.7
VYHS Vyhne 145.37 346 *e*PKP **PKPab 17 02 20.9 +0.3**
VYHS *e* 17 02 33.5
VYHS *e* 17 02 43.1
TIRR Tirgusor 145.51 332 ⇓*i*P **PKPab 17 02 21.2 -0.1**
DOPR Dopca 145.57 337 ⇓*i*P **PKPab 17 02 22.4 +0.9**
KMBO Kilima Mbogo 145.57 244 PKPbc **PKPab 17 02 23.4 +0.7**
comp=Z,1.3nm,0.3s,baz=26,slow=2.8,SNR=4.5
KMBO pPKPbc pPKPab 17 02 36.0 +1.4
comp=Z,1.8nm,0.5s,baz=328,slow=0.5,SNR=1.7
TLB Topalu 145.58 332 ⇑*i*P **PKPab 17 02 22.0 +0.5**
MLR Muntele Rosu 145.75 336 ⇓*i*P **PKPab 17 02 22.7 +0.4**
KHC Kasperske Hory 145.75 352 *e*PKP **PKPab 17 02 22.3 +0.2**
KHC *ex* x 17 02 34.9
MODS Modra-Piesok 145.83 347 *e*PKP **PKPab 17 02 22.4 0.0**
MODS *e* 17 02 34.4
MODS *e* 17 02 44.3
GERES GERESS Array B 146.01 352 PKPbc **PKPbc 17 02 22.6 +0.1**
comp=Z,2.3nm,0.8s,baz=28,slow=3.2,SNR=18
GERES pPKPbc pPKPab 17 02 35.9 +1.0
comp=Z,5.4nm,0.8s,baz=35,slow=3.3,SNR=12
BR101 Keskin Array S 146.05 321 *e*PKPdf **PKPbc 17 02 22.8 -0.3**
BRTR Keskin Array B 146.05 321 PKPbc **PKPbc 17 02 22.8 -0.3**
comp=Z,7.4nm,0.7s,baz=107,slow=2.0,SNR=33
BRTR pPKPbc pPKPbc 17 02 35.3 +0.4
comp=Z,19nm,0.9s,baz=128,slow=2.3,SNR=19
VOIR 146.14 336 ⇓*i*P **PKPab 17 02 24.3 +0.6**
ARR Arges 146.36 337 ⇑*i*P **PKPab 17 02 25.4 +0.9**
CONA Conrad Observa 146.54 349 *e*PKiKP **PKPab 17 02 25.8 +0.6**
comp=Z,18nm,1.8s
MOA Molln 146.90 351 *e*PKPab **PKPbc 17 02 25.1 0.0**
comp=Z,12nm,1.1s
GZR Gura Zlata 147.01 339 ⇑*i*P **PKPbc 17 02 25.0 -0.6**
BZS Buzias 147.21 340 ⇓*i*P **PKPdf 17 02 19.7 -4.1**
ARSA Arzberg 147.26 349 *e*PKPbc **PKPbc 17 02 25.8 -0.4**
comp=Z,7.0nm,1.2s
RETA Reutte 147.69 355 *e*PKPbc **PKPbc 17 02 26.6 -0.8**
comp=Z,13nm,1.4s
WATA Walderalm 147.76 354 *e*PKPab **PKPbc 17 02 28.3 +0.6**
comp=Z,7.6nm,0.9s
KBA Koelnbreinsper 147.79 351 *e*PKPbc **PKPbc 17 02 27.2 -0.6**
comp=Z,6.8nm,1.1s
MOTA Moosalm 147.80 354 *e*PKiKP **PKPbc 17 02 28.4 +0.6**
comp=Z,6.9nm,1.0s
WTTA Wattenberg 147.83 354 *e*PKPbc **PKPbc 17 02 27.8 -0.1**
comp=Z,9.3nm,1.0s,SNR=5.6
SOKA Soboth 147.90 349 *e*PKPbc **PKPbc 17 02 27.3 -0.7**
comp=Z,12nm,1.0s,SNR=7.5
SQTA Sankt Quirin 147.91 354 *e*PKiKP **PKiKP 17 02 29.2 -0.8**
comp=Z,7.2nm,0.9s
MDVR Moldovita 147.91 340 ⇑*i*P **PKPbc 17 02 28.9 +0.8**
DAVA Damuels 147.96 356 *e*PKiKP **PKiKP 17 02 29.4 -0.7**
comp=Z,10.0nm,0.9s
OBKA Obir 148.15 350 *e*PKPbc **PKPbc 17 02 27.3 -1.4**
comp=Z,7.3nm,1.3s
FETA Feichten 148.16 355 *i* PKiKP **PKiKP 17 02 30.0 -0.6**
comp=Z,5.2nm,0.9s
MYKA Terra Mystica 148.18 351 *e*PKPbc **PKPbc 17 02 28.9 +0.2**
comp=Z,8.2nm,0.9s
ABTA Abfaltersbach 148.23 352 *e*PKiKP **PKPbc 17 02 29.4 +0.5**
comp=Z,12nm,1.0s
VTS Vitosha 149.22 336 ⇑*i*P **PKPbc 17 02 31.5 -0.1**
PDG Podgorica 150.82 341 ⇑*i*P **PKPab 17 02 47.4 +5.0**
ESDC Sonseca Array 153.99 19 PKPab **PKPab 17 02 55.9 0.0**
comp=Z,1.2nm,0.6s,baz=334,slow=3.3,SNR=6.8
TOA1 Torodi Ar. Sit 174.81 113 *e*PKPdf **PKPdf 17 02 51.8 -1.7**
TORD Torodi Ar. Bea 174.81 113 PKP **PKPdf 17 02 51.8 -1.7**
comp=Z,1.5nm,1.1s,baz=188,slow=4.4,SNR=3.6

GCG ***22*** *17:35:10.2±3.1, 11°.98N×88°.33W, h0km±999km, MD4.9*
UCR ***22*** *17:35:29.9±2.0, 14°.17N×90°.08W, h245km±5km, MD4.5, ML4.7, mb4.8(NEIC)*
SNET ***22*** *17:35:30.7±0.8, 14°.45N×90°.03W, h230km±4km, ML5.1, MW4.3*
ISCJB ***22*** *17:35:30.2±0.1, 14°.41N±0°.02×90°.00W±0°.02, h249km±1km, mb4.6/335, Error ellipse: s-maj=3.2km s-min=2.1km az=42.9*
MOS ***22*** *17:35:30.4±1.0, 14°.42N×89°.98W, h250km, mb4.6/29, Error ellipse: s-maj=12.1km s-min=5.1km az=109.6*
IDC ***22*** *17:35:30.8±0.4, 14°.51N×89°.81W, h235km±2km, mb4.0/21, mb1 4.2/23, mb1mx4.1/36, mbtmp4.6/23, Error ellipse: s-maj=13.5km s-min=6.5km az=54.0*
GCMT ***22*** *17:35:30.8±0.5, 14°.48N±0°.03×90°.16W±0°.02, h238km±3km, MW5.1/69, Moment Tensor Solution. s21,c23; s69,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.31±.19; $M_{\theta\theta}$-1.51±.19; $M_{\phi\phi}$2.82±.20; $M_{r\theta}$2.20±.16; $M_{\theta\phi}$-0.93±.20; $M_{\phi r}$-3.87±.18; Best double couple: $M_0$5.04700×10^{16} NP1:ϕ_s327.00000°, δ79.00000°, λ-107.00000°. NP2: ϕ_s206.00000°, δ20.00000°, λ-32.00000°. Principal axes: T 5.6740, Plg32.0000°, Azm72.0000°; N -1.2540, Plg17.0000°, Azm331.0000°; P -4.4200, Plg53.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***22*** *17:35:31.8±1.9, 14°.44N×89°.95W, h248km±5km, mb4.8/406, MD4.8(MEX), MD5.0(SNET) Error ellipse: s-maj=11.5km s-min=7.7km az=219.0*
NEIC Felt [II] at San Salvador, El Salvador.
ISC 22 17:35:30.9±0.3, 14°.42N±0°.04×90°.00W±0°.04, h242km±2km, h242km:pP-P, n1130, σ1s11/1386, mb4.6/336, 9C-10D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBG	**Las Nubes**	**0.38**	**296**	*eP*	**Pn**	**17 36 03.3**	**+0.3**
NBG	**Las Nubes**	**0.38**	**296**	*eP*	**Pn**	**17 36 03.3**	**+0.3**
NBG				*eS*	S	17 36 44.1	+16
IXG	**Ixpaco**	**0.49**	**240**	*eP*	**Pn**	**17 36 02.5**	**-0.6**
IXG	**Ixpaco**	**0.49**	**240**	*eP*	**Pn**	**17 36 02.5**	**-0.6**
PCG	**Pacaya**	**0.59**	**267**	*eP*	**Pn**	**17 36 03.2**	**-0.3**
PCG	**Pacaya**	**0.59**	**267**	*eP*	**Pn**	**17 36 03.2**	**-0.3**
PCG				*eS*	S	17 36 44.6	+16
UNIC	**Santa Ana**	**0.60**	**135**	*eP*	**Pn**	**17 36 02.5**	**-0.9**
UNIC				IAML		17 36 03.0	
comp=Z,6μm,0.2s							
UNIC				*eS*	**S**	**17 36 26.6**	**-2.2**
UNIC	**Santa Ana**	**0.60**	**135**	*eP*	**Pn**	**17 36 02.5**	**-0.9**
UNIC				IAML		17 36 03.0	
comp=Z,6μm,0.2s							
UNIC				*eS*	**S**	**17 36 26.6**	**-2.2**
MTO3	**Montecristo**	**0.62**	**92**	⇓*iP*	**Pn**	**17 36 03.1**	**-0.5**
MTO3				IAML		17 36 04.4	
comp=Z,4μm,0.6s							
MTO3				*eS*	**S**	**17 36 28.0**	**-1.1**
MTO3	**Montecristo**	**0.62**	**92**	⇓*iP*	**Pn**	**17 36 03.1**	**-0.5**
MTO3				IAML		17 36 04.4	
comp=Z,4μm,0.6s							
MTO3				*eS*	**S**	**17 36 28.0**	**-1.1**
RTR	**El Retiro**	**0.62**	**147**	*eP*	**Pn**	**17 36 02.8**	**-0.8**
RTR	**El Retiro**	**0.62**	**147**	*eP*	**Pn**	**17 36 02.8**	**-0.8**
SNJE	**San Jose**	**0.67**	**145**	*eP*	**Pn**	**17 36 03.0**	**-0.8**
SNJE	**San Jose**	**0.67**	**145**	*eP*	**Pn**	**17 36 03.0**	**-0.8**
SBLS	**San Blas**	**0.68**	**148**	*eP*	**Pn**	**17 36 03.0**	**-0.9**
SBLS	**San Blas**	**0.68**	**148**	*eP*	**Pn**	**17 36 03.0**	**-0.9**
MRL	**Marmol**	**0.72**	**25**	*eP*	**Pn**	**17 36 04.5**	**+0.5**
MRL	**Marmol**	**0.72**	**25**	*eP*	**Pn**	**17 36 04.5**	**+0.5**
APG	**El Apazote**	**0.74**	**322**	P	**Pn**	**17 36 03.6**	**-0.5**
comp=Z,607nm,0.3s,baz=122,slow=11,SNR=3678							
APG				S	**S**	**17 36 28.5**	**-1.6**
comp=Z,496nm,0.3s,baz=270,slow=22,SNR=6.4							
FUG	**Fuego 3**	**0.82**	**272**	*eP*	**Pn**	**17 36 03.9**	**-0.5**
FUG	**Fuego 3**	**0.82**	**272**	*eP*	**Pn**	**17 36 03.9**	**-0.5**
BOQS	**Boqueron**	**0.97**	**134**	*eP*	**Pn**	**17 36 04.6**	**-0.7**
SNET	**Serv Nac Est T**	**1.04**	**134**	*eP*	**Pn**	**17 36 04.6**	**-0.9**
SNET				*eS*	**S**	**17 36 32.2**	**-0.4**
SNET				IAML		17 36 39.4	
comp=Z,12μm,0.3s							
SNET	**Serv Nac Est T**	**1.04**	**134**	*eP*	**Pn**	**17 36 04.6**	**-0.9**
SNET				*eS*	**S**	**17 36 32.2**	**-0.4**
SNET				IAML		17 36 39.4	
comp=Z,12μm,0.3s							
OPAM	**San Salvador**	**1.04**	**132**	*eP*	**Pn**	**17 36 05.1**	**-0.4**

OPAM	San Salvador	1.04	132	eP	Pn	17 36 05.1	-0.4
LLGN	La Laguna	1.04	104	eP	Pn	17 36 05.0	-0.5
LLGN	La Laguna	1.04	104	eP	Pn	17 36 05.0	-0.5
UESS	San Salvador	1.05	132	IAML		17 36 45.1	
	comp=Z,12µm,0.2s						
UESS	San Salvador	1.05	132	IAML		17 36 45.1	
	comp=Z,12µm,0.2s						
LFU	La Fuente	1.09	128	eP	Pn	17 36 05.2	-0.5
LFU	La Fuente	1.09	128	eP	Pn	17 36 05.2	-0.5
LBRS	Las Brisas	1.15	126	‖ iP	Pn	17 36 05.8	-0.4
LFRS	El Faro	1.21	131	eP	Pn	17 36 05.9	-0.7
PAVA	Las Pavas	1.25	124	eP	Pn	17 36 06.5	-0.3
PAVA	Las Pavas	1.25	124	eP	Pn	17 36 06.5	-0.3
SNVI	San Vicente	1.38	125	eP	Pn	17 36 07.5	-0.3
VICT	Victoria	1.40	109	eP	Pn	17 36 07.6	-0.3
VICT	Victoria	1.40	109	eP	Pn	17 36 07.6	-0.3
VSM	San Miguel	1.94	120	eP	Pn	17 36 12.5	-0.1
THIG		2.25	283	ePn	Pn	17 36 13.7	-1.4
THIG				eS	S	17 36 47.9	-1.9
LCND	La Caada	2.33	118	IAML		17 37 07.2	
	comp=Z,5µm,0.2s						
LCND	La Caada	2.33	118	IAML		17 37 07.2	
	comp=Z,5µm,0.2s						
CNCH	Conchagua	2.39	118	eP	Pn	17 36 16.7	+0.1
TGUH	Tegucigalpa,Un	2.67	97	ePn	Pn	17 36 19.6	0.0
TGUH	Tegucigalpa,Un	2.67	97	eP	Pn	17 36 19.9	+0.5
TGUH	Tegucigalpa,Un	2.67	97	‖ iP	Pn	17 36 20.0	+0.5
TGUH	Tegucigalpa,Un	2.67	97	‖ iP	Pn	17 36 20.0	+0.5
CSGN	Cosiguina Volc	2.77	121	ePn	Pn	17 36 21.2	+0.7
CSGN				eS	S	17 36 58.5	-1.1
CCIG	Comitan	2.77	312	ePn	Pn	17 36 20.5	-0.2
CCIG				ePn	Pn	17 36 20.5	-0.1
CCIG				eS	S	17 36 57.3	-2.5
CCIG				eS	S	17 36 58.9	-0.9
PCIG		3.36	293	ePn	Pn	17 36 25.3	-1.6
ESTN	Estel	3.76	110	ePn	Pn	17 36 32.2	+0.5
TGIG		3.82	308	ePn	Pn	17 36 31.3	-1.0
TGIG				eS	S	17 37 17.1	-3.7
MOMN	Momotombo	3.91	120	eP	Pn	17 36 34.1	+0.7
MOMN				IAML		17 37 24.8	
	comp=Z,587nm,0.5s						
BRAN	Las Pilas	3.93	115	eP	Pn	17 36 39.0	+5.4
COPN	Copaltepe	3.99	123	eP	Pn	17 36 35.1	+0.7
COPN				IAML		17 37 30.9	
	comp=Z,2µm,0.5s						
APYN	Apoyeque	4.16	121	eP	Pn	17 36 38.2	+1.8
MGAN	Managua	4.29	121	eP	Pn	17 36 39.1	+1.2
CONN	Concepcion	5.12	123	eP	Pn	17 36 48.7	+0.7
ACON	Acoyapa	5.29	117	ePn	Pn	17 36 50.6	+0.5
CMIG	Matias Romero	5.40	300	P	Pn	17 36 49.9	-1.6
	comp=Z,103nm,0.3s,baz=105,slow=8.7,SNR=1078						
CMIG				S	S	17 37 48.0	-7.6
	comp=Z,130nm,0.3s,baz=311,slow=18,SNR=11						
CMIG	Matias Romero	5.40	300	ePn	Pn	17 36 48.8	-2.7
CMIG				eS	S	17 37 48.0	-7.6
GB1A	Borinquen Arri	5.74	128	eP	Pn	17 36 56.0	+0.2
BUEV	Buena Vista	5.75	128	eP	Pn	17 36 55.8	-0.1
MESS	Mesas	5.95	127 ⇑	eP	Pn	17 36 58.1	-0.3
ESPN	Las Esperanzas	5.97	111	ePn	Pn	17 36 58.4	-0.2
JTS	Las Juntas de	6.41	129	P	Pn	17 37 04.5	+0.3
	comp=Z,60nm,0.3s,baz=11,slow=7.7,SNR=99						
JTS				S	S	17 38 13.4	-5.3
	comp=Z,236nm,0.3s,baz=20,slow=23,SNR=7.7						
JTS	Las Juntas de	6.41	129	ePn	Pn	17 37 04.2	0.0
JTS				eS	S	17 38 13.2	-5.5
JTS	Las Juntas de	6.41	129 ⇑	eP	Pn	17 37 04.0	-0.2
CEDE	Laguna Cedeo	6.48	126 ⇑	iP	Pn	17 37 05.1	0.0
ARE1	Arenal 1	6.49	127	eP	Pn	17 37 03.8	-1.3
MYIG	Mrida	6.51	2	ePn	Pn	17 37 04.4	-0.9
SRA1	San Ramn	6.90	128 ⇑	eP	Pn	17 37 10.6	+0.1
HDC	Heredia	7.24	127	ePn	Pn	17 37 15.4	+0.7
HDC	Heredia	7.24	127	eP	Pn	17 37 15.5	+0.7
LCR2	La Lucha 2	7.48	128 ⇑	eP	Pn	17 37 18.4	+0.5
CVTR	Volcan Turrial	7.50	125 ⇑	eP	Pn	17 37 18.8	+0.4
EDDO	Dominical	7.90	130	eP	Pn	17 37 22.9	-0.1
LVIG	Laguna Verde	8.09	312	ePn	Pn	17 37 24.5	-0.8
EDBA	Buenos Aires	8.40	128	eP	Pn	17 37 29.7	+0.2
PTJ1	Puerto Jimnez	8.79	131	eP	Pn	17 37 35.8	+1.5
TLIG	Tlapa	8.81	292	ePn	Pn	17 37 34.1	-0.6
BRU2	Volcan	9.08	127	eP	Pn	17 37 38.1	-0.1
FSCY	Frank Sound, G	9.74	59	ePn	Pn	17 37 46.4	+0.1
BCIP	Isla Barro Col	11.23	117	ePn	Pn	17 38 03.3	-1.9
BCIP	Isla Barro Col	11.23	117	eP	Pn	17 38 03.3	-1.9
MCJ	Malvern	12.33	72	‖ iP	P	17 38 21.4	-0.4
CVJ	Coleyville	12.55	71	i P	P	17 38 26.7	+2.4
MTDJ	Mount Denham	12.55	71	ePn	Pn	17 38 22.4	+0.7
BBJ	Bamboo Saint A	12.84	70	i P	P	17 38 26.4	-1.0
STH	Stony Hill	13.18	72	‖ iP	P	17 38 31.3	+0.2
HOJ	Hope	13.21	73	i P	P	17 38 31.6	+0.1
062Z	Marathon	13.27	38	P	P	17 38 31.3	-0.7
	baz=221						
YHJ	Yallahs	13.43	73	i P	P	17 38 34.5	+0.5
LNIG	Linares	13.71	321	eP	P	17 38 37.4	+0.4
061Z	Ochoppi	14.22	35	eP	P	17 38 43.0	+0.4
061Z	Ochoppi	14.22	35	P	P	17 38 43.3	+0.7
	baz=218						
059Z	Ave Maria	14.31	33	P	P	17 38 43.9	+0.4
	baz=215,SNR=20						
ZAIG	Zacatecas	14.52	307	eP	P	17 38 47.8	+1.6
058A	Arcadia	14.72	30	P	P	17 38 49.0	+1.0
	baz=213,SNR=9.0						
060Z	West Palm Beac	14.84	35	P	P	17 38 50.1	+0.6
	baz=218						
059A	Moore Haven	14.97	32	eP	Pn	17 38 52.1	+1.0
059A	Moore Haven	14.97	32	P	Pn	17 38 51.9	+0.8
	baz=215,SNR=9.0						
KVTX	Kingsville	14.99	332	eP	Pn	17 38 53.0	+1.7
PAYG	Puerto Ayora	15.00	181	eP	Pn	17 38 54.6	+3.0
	comp=Z,210nm,1.1s						
957A	Wimauma	15.04	28	P	Pn	17 38 51.9	0.0
	baz=210						
958A	Wauchula	15.19	29	P	Pn	17 38 54.4	+0.7
	baz=212,SNR=9.1						
GTBY	Guantanamo Bay	15.24	67	eP	Pn	17 38 56.0	+1.6
	comp=Z,273nm,1.1s						
DBBC	Dabeiba	15.41	117	eP	Pn	17 38 58.2	+1.7
060A	Indiantown	15.44	34	eP	Pn	17 38 58.1	+1.3
	comp=Z,395nm,0.8s						
060A	Indiantown	15.44	34	P	Pn	17 38 57.0	+0.3
	baz=217,SNR=8.1						
857A	Zephyrhills	15.56	26	P	Pn	17 38 58.8	+0.8
	baz=209,SNR=14						
959A	Okeechobee	15.56	32	P	Pn	17 38 58.4	+0.2
	baz=215						
DWPF	Disney Wildern	15.78	29	eP	Pn	17 39 01.1	+0.4
	comp=Z,134nm,0.6s						
DWPF	Disney Wildern	15.78	29	P	Pn	17 39 01.6	+0.9
	baz=212						
858A	St. Cloud	15.90	29	P	Pn	17 39 01.9	-0.2
	baz=212,SNR=6.8						
859A	Kempfer Cattle	15.99	30	P	Pn	17 39 03.9	+0.6
	baz=214,SNR=7.9						
859A				S	S	17 42 01.4	+3.7
	baz=214						
757A	Oxford	16.21	26	P	Pn	17 39 06.3	+0.4
	baz=208,SNR=12						
552A	Lynn Haven	16.23	15	P	Pn	17 39 06.8	+0.7
	baz=196						
655A	Horseshoe Beac	16.26	21	P	Pn	17 39 06.8	+0.3
	baz=204						
833A	Chaparral WMA,	16.36	329	eP	Pn	17 39 07.0	-0.6
	comp=Z,54nm,0.8s						
833A	Chaparral WMA,	16.36	329	P	Pn	17 39 07.5	-0.1
	baz=146,SNR=9.8						
HKT	Hockley	16.37	342	eP	Pn	17 39 08.1	+0.5
	comp=Z,24nm,1.3s						
HKT	Hockley	16.37	342	eP	Pn	17 39 08.1	+0.5
HKT				pmax	pmax		
	comp=Z,25nm,1.3s						
ZARC	Zaragoza, Cauc	16.37	113	eP	P	17 39 06.1	-0.4
656A	Willston	16.40	24	ePn	Pn	17 39 08.9	+0.8
	comp=Z,114nm,0.8s						
656A	Willston	16.40	24	P	Pn	17 39 08.7	+0.6
	baz=206,SNR=8.4						
HELC	Santa Helena	16.41	118	eP	Pn	17 39 08.2	-0.5
449A	Pace	16.46	8	P	Pn	17 39 09.1	+0.3
	baz=189						
553A	Crawfordville	16.51	17	P	Pn	17 39 09.0	-0.4
	baz=199						
SMLC	San Martn de	16.57	108	eP	P	17 39 09.0	+0.4
451A	Vernon	16.59	13	P	Pn	17 39 10.6	+0.3
	baz=194						
450A	Crestview	16.61	10	P	Pn	17 39 09.5	-1.0
	baz=191						
758A	Lake Helen	16.61	28	P	Pn	17 39 10.5	0.0
	baz=211,SNR=8.4						
554A	Perry	16.64	19	P	Pn	17 39 09.9	-1.0
	baz=202						
CODC	Agustn Codazz	16.78	104	eP	P	17 39 10.9	0.0
657A	Interlachen	16.86	25	P	Pn	17 39 13.3	-0.2
	baz=208,SNR=16						
BRAL	Brewton	16.89	9	eP	Pn	17 39 15.8	+2.0
	comp=Z,90nm,1.1s						
BRAL	Brwton	16.89	9	P	Pn	17 39 13.4	-0.5
	baz=190						
555A	McAlpin	16.92	21	eP	Pn	17 39 14.4	+0.3
	comp=Z,349nm,1.6s						
555A	McAlpin	16.92	21	P	Pn	17 39 14.2	0.0
	baz=204,SNR=5.8						
452A	Marianna	16.94	14	P	Pn	17 39 14.3	-0.1
	baz=196						
658A	Bunnell	16.98	27	eP	Pn	17 39 15.2	+0.3
	comp=Z,120nm,0.9s						
658A	Bunnell	16.98	27	P	Pn	17 39 14.4	-0.5
	baz=210,SNR=5.3						
YOTC	Yotoco, Valle	16.99	126	eP	P	17 39 13.8	+0.5
556A	Lake Butler	17.02	23	P	Pn	17 39 14.9	-0.4
	baz=206,SNR=16						
349A	Repton	17.05	8	P	Pn	17 39 16.0	+0.3
	baz=189,SNR=7.6						
GUY2C	Guyana, Caldas	17.06	121	eP	Pn	17 39 16.1	-0.4
PTBC	PUERTO BERRIO,	17.16	116	eP	P	17 39 14.7	-0.4
LGNH	Logne	17.17	74	eP	Pn	17 39 17.1	-0.1
	comp=Z,210nm,1.4s						
453A	Whigham	17.17	17	eP	Pn	17 39 17.2	+0.1
	comp=Z,130nm,0.6s						
453A	Whigham	17.17	17	P	Pn	17 39 17.3	+0.2
	baz=199,SNR=8.7						
454A	Quitman	17.24	19	P	Pn	17 39 18.3	+0.4
	baz=201,SNR=23						
RREF	El Recreo	17.25	122	eP	Pn	17 39 18.5	-0.4
350A	Dozier	17.25	11	P	Pn	17 39 17.8	-0.2
	baz=192						
351A	Pinckard	17.26	13	P	Pn	17 39 17.3	-0.8
	baz=194						
NORC	Norcasia	17.29	119	eP	P	17 39 17.3	+0.7
557A	Orange Park	17.30	25	P	Pn	17 39 18.0	-0.6
	baz=208,SNR=14						
OCAC	Ocana	17.46	109	eP	P	17 39 18.2	-0.3
455A	Stateville	17.47	20	P	Pn	17 39 19.8	-0.7
	baz=203,SNR=8.2						
352A	Blakely	17.61	14	eP	Pn	17 39 21.7	-0.5
	comp=Z,675nm,1.5s						
352A	Blakely	17.61	14	P	Pn	17 39 21.8	-0.5
	baz=196,SNR=7.8						
353A	Camilla	17.66	17	P	Pn	17 39 22.4	-0.5
	baz=199,SNR=35						
249A	Camden	17.67	8	P	Pn	17 39 22.6	-0.3
	baz=189						
POPC	Popayan, Colom	17.67	131	eP	Pn	17 39 23.5	+0.1
435B	Jarrell	17.72	338	P	Pn	17 39 23.5	-0.1
	baz=155						
VBMS	Vicksburg	17.73	359	eP	Pn	17 39 23.6	+0.1
	comp=Z,111nm,0.9s						
VBMS	Vicksburg	17.73	359	P	Pn	17 39 23.7	+0.1
	baz=178						
URIC	Uribia, Colomb	17.75	97	eP	P	17 39 21.9	+0.5
URIC	Uribia, Colomb	17.75	97	eP	P	17 39 21.5	0.0
NATX	Nacogdoches	17.78	347	eP	Pn	17 39 23.0	-1.3
	comp=Z,106nm,0.8s						
NATX	Nacogdoches	17.78	347	P	Pn	17 39 23.1	-1.1
	baz=165,SNR=12						
250A	Grady	17.81	10	eP	Pn	17 39 23.6	-1.0
	comp=Z,135nm,1.3s						
250A	Grady	17.81	10	P	Pn	17 39 23.8	-0.8
	baz=192						
456A	Hilliard	17.81	23	eP	Pn	17 39 23.4	-1.2
	comp=Z,75nm,0.7s						
456A	Hilliard	17.81	23	P	Pn	17 39 23.8	-0.8
	baz=206						
ETX06	Route 59 and C	17.84	348	eP	Pn	17 39 23.7	-1.3
	comp=Z,64nm,0.9s						
457A	Yulee	17.90	24	P	Pn	17 39 24.6	-1.0
	baz=207						
ORTC	Ortega, Tolima	17.91	124	eP	Pn	17 39 24.7	-1.3
TIGA	Tifton	17.93	18	eP	Pn	17 39 24.5	-1.5
	comp=Z,108nm,0.8s						
TIGA	Tifton	17.93	18	P	Pn	17 39 24.6	-1.4
	baz=200,SNR=6.1						
SOTA	Rioblanco	18.00	131	eP	Pn	17 39 27.3	-0.2
MARP	Paez Belalcaza	18.01	128	eP	Pn	17 39 27.8	+0.3
PCON	Cinco Dias	18.02	131	eP	Pn	17 39 28.2	+0.3
355A	Pearson	18.08	20	P	P	17 39 25.9	+1.0
	baz=203						
251A	Midway	18.09	13	P	Pn	17 39 26.7	-1.2
	baz=194,SNR=10						
GCUF	Volcan Galeras	18.12	135	eP	Pn	17 39 28.9	-0.1
ROSC	El Rosal	18.14	120	P	Pn	17 39 27.7	-1.3
	comp=Z,1.8nm,0.3s,baz=352,slow=4.2,SNR=21						
ROSC	El Rosal	18.14	120	eP	Pn	17 39 27.8	-1.3
	comp=Z,40nm,0.9s						
ROSC	El Rosal	18.14	120	eP	Pn	17 39 28.4	-0.7
OTAV	Otavalo	18.14	140	eP	Pn	17 39 28.4	-0.7
	comp=Z,41nm,1.1s						
OTAV	Otavalo	18.14	140	eP	Pn	17 39 28.5	-0.7
OTAV				pmax	pmax		
	comp=Z,41nm,1.1s						
OTAV	Otavalo	18.14	140	eP	Pn	17 39 29.1	-0.1
CTAB	Cerro Tablazo,	18.14	119	eP	Pn	17 39 28.7	-0.5
252A	Lumpkin	18.15	14	P	Pn	17 39 27.2	-1.3
	baz=196,SNR=50						
CRUC	La Cruz	18.15	134	eP	Pn	17 39 28.5	-0.7
BARC	Barichara	18.26	113	eP	P	17 39 28.0	+0.7
148A	Greensboro	18.28	7	P	Pn	17 39 29.0	-1.2
	baz=187,SNR=21						
PRAC	Prado	18.31	124	eP	P	17 39 28.5	+0.9
356A	Blackshear	18.31	22	P	Pn	17 39 28.6	-1.9
	baz=205,SNR=9.6						
149A	Jones	18.33	9	P	Pn	17 39 29.4	-1.4
	baz=190,SNR=12						
JCT	Junction City	18.36	332	eP	P	17 39 28.8	+0.8
	comp=Z,75nm,0.6s						
JCT	Junction City	18.36	332	eP	P	17 39 28.8	+0.8
JCT				pmax	pmax		
	comp=Z,75nm,0.6s						
JCT	Junction City	18.36	332	P	P	17 39 28.5	+0.6
	baz=148,SNR=30						
253A	Americus	18.36	16	eP	P	17 39 28.9	+1.0
	comp=Z,102nm,1.2s						
253A	Americus	18.36	16	P	P	17 39 29.0	+1.1
	baz=198						
150A	Eclectic	18.46	11	P	Pn	17 39 31.1	-1.2
	baz=192,SNR=54						
SDDR	Presa de Saban	18.48	73	eP	Pn	17 39 31.1	-1.6
	comp=Z,69nm,0.8s						
254A	Abbeville	18.49	18	P	P	17 39 30.1	+0.8
	baz=201,SNR=14						
151A	Opelika	18.52	13	P	Pn	17 39 31.5	-1.5
	baz=194,SNR=23						
CAPV	Capacho	18.52	109	eP	P	17 39 29.7	-0.4
357A	Townsend	18.64	23	P	P	17 39 32.0	+1.1
	baz=206,SNR=5.4						
RUSC	La Rusia	18.67	115	eP	P	17 39 31.7	-0.2
LRAL	Lakeview Retre	18.73	8	eP	Pn	17 39 33.7	-1.7
	comp=Z,66nm,1.2s						
LRAL	Lakeview Retre	18.73	8	P	Pn	17 39 33.8	-1.7
	baz=189,SNR=33						
255A	Hazlehurst	18.74	20	eP	P	17 39 33.2	+1.2
	comp=Z,106nm,1.4s						
255A	Hazlehurst	18.74	20	P	P	17 39 33.0	+1.1
	baz=203						
CHIC	Chingaza	18.75	120	eP	P	17 39 33.6	+0.9
WHTX	Lake Whitney,	18.77	340	eP	P	17 39 33.0	+0.6
	comp=Z,84nm,0.7s						
WHTX	Lake Whitney,	18.77	340	P	P	17 39 32.9	+0.6
	baz=157,SNR=13						
152A	Waverly Hall	18.79	14	eP	P	17 39 34.0	+1.4
	comp=Z,284nm,1.6s						
152A	Waverly Hall	18.79	14	P	P	17 39 34.0	+1.4
	baz=196,SNR=35						
Z41A	Richland Creek	18.93	353	eP	Pn	17 39 37.1	-0.6
	comp=Z,49nm,0.8s						
Z41A	Richland Creek	18.93	353	P	P	17 39 35.4	+1.5
	baz=172,SNR=6.4						
Z49A	Columbiana	18.96	9	P	Pn	17 39 36.3	-1.8
	baz=190,SNR=60						
256A	Glennville	18.99	22	P	P	17 39 35.7	+1.1
	baz=205,SNR=11						
153A	Fort Valley	19.00	16	P	P	17 39 35.5	+0.8
	baz=198						
FLOC	Florencia	19.07	131	eP	Pn	17 39 37.9	-1.7
Z50A	Ashland	19.11	10	eP	P	17 39 37.4	+1.4
	comp=Z,30nm,0.9s						
Z50A	Ashland	19.11	10	P	P	17 39 37.6	+1.6
	baz=192,SNR=21						
154A	Montrose	19.17	18	eP	P	17 39 37.6	+0.9
	comp=Z,307nm,1.6s						
154A	Montrose	19.17	18	P	P	17 39 37.5	+0.9
	baz=200						
DABV	Dabajuro	19.21	98	eP	P	17 39 37.1	-0.1
HPIG		19.21	313	eP	P	17 39 38.5	+1.2
	comp=Z,7.3nm,0.9s						
BANI	BANI	19.25	75	eP	Pn	17 39 40.6	-1.2
GRTK	Grand Turk	19.27	66	eP	Pn	17 39 39.8	-2.1
	comp=Z,604nm,1.5s						
257A	Skidaway Islan	19.30	24	eP	P	17 39 39.5	+1.5
	comp=Z,483nm,1.6s						
257A	Skidaway Islan	19.30	24	P	P	17 39 38.8	+0.7
	baz=207						
Z51A	Franklin	19.32	12	P	P	17 39 39.6	+1.4
	baz=194,SNR=15						
Z52A	Williamson	19.36	14	P	P	17 39 39.7	+1.1
	baz=196,SNR=15						
155A	Kite	19.38	19	P	P	17 39 39.7	+0.9
	baz=202,SNR=13						
WLAR	White Oak Lake	19.39	352	eP	P	17 39 40.3	+1.4
	comp=Z,96nm,0.9s						
CCAR	Cane Creek	19.48	356	eP	P	17 39 41.4	+1.5
	comp=Z,85nm,0.9s						
LTX	Lajitas	19.50	322	epP	pP	17 40 25.0	+6.1
TXAR	Lajitas Array	19.50	322	P	P	17 39 41.8	+1.6
	comp=Z,2.3nm,0.3s,baz=144,slow=11,SNR=145						
TXAR				pP	pP	17 40 25.0	+6.1
	comp=Z,0.2nm,0.3s,baz=144,slow=11,SNR=3.5						
TXAR				sP	sP	17 40 49.4	-0.9
	baz=137,slow=11,SNR=2.2						
TXAR				ScP	ScP	17 47 04.6	+1.6
	comp=Z,0.1nm,0.3s,baz=139,slow=6.0,SNR=3.8						
TX31	Lajitas Ar. Si	19.50	322	eP	P	17 39 41.6	+1.3
	comp=Z,23nm,1.1s						
Y48A	Jasper	19.58	7	P	P	17 39 42.4	+1.5
	baz=188,SNR=47						
Y49A	Blount Mountai	19.62	9	eP	P	17 39 42.7	+1.3
	comp=Z,193nm,0.6s						
Y49A	Blount Mountai	19.62	9	P	P	17 39 42.9	+1.5
	baz=190,SNR=28						
Z53A	Monticello	19.66	16	P	P	17 39 42.6	+0.7
	baz=199,SNR=22						
SDD	Santo Domingo	19.68	75	eP	P	17 39 43.8	+1.7
	comp=Z,845nm,1.4s						
SOCV	Socops	19.73	106	eP	P	17 39 42.5	-0.2
156A	Sylvania	19.74	22	P	P	17 39 43.9	+1.3
	baz=205						
SDV	Santo Domingo	19.74	104	P	P	17 39 42.8	-0.3
	comp=Z,6.9nm,0.3s,baz=297,slow=6.1,SNR=22						
SDV	Santo Domingo	19.74	104	eP	P	17 39 42.1	-1.0
	comp=Z,69nm,0.7s						
SDV	Santo Domingo	19.74	104	eP	P	17 39 43.2	+0.1
Y50A	Piedmont	19.77	11	P	P	17 39 44.0	+1.0
	baz=192,SNR=22						
GOGA	Godfrey	19.82	16	eP	P	17 39 43.8	+0.3
	comp=Z,38nm,1.0s						
GOGA				epP	pP	17 40 23.2	+1.1
GOGA	Godfrey	19.82	16	eP	P	17 39 43.8	+0.3
GOGA				pmax	pmax		
	comp=Z,38nm,1.0s						
GOGA	Godfrey	19.82	16	P	P	17 39 44.3	+0.8
	baz=199,SNR=18						
Z54A	Sparta	19.83	18	P	P	17 39 44.3	+0.7
	baz=201						
Y51A	Rockmart	19.90	12	P	P	17 39 45.6	+1.2
	baz=194,SNR=57						
157A	Early Branch	19.94	23	P	P	17 39 45.7	+0.9
	baz=206						
OXF	Oxford	20.01	1	eP	P	17 39 46.3	+0.8
	comp=Z,76nm,0.8s						
OXF	Oxford	20.01	1	eP	P	17 39 46.3	+0.8
OXF				pmax	pmax		
	comp=Z,76nm,0.8s						
OXF	Oxford	20.01	1	P	P	17 39 46.5	+0.9
	baz=182,SNR=10						
X43A	Marvell	20.03	358	P	P	17 39 47.0	+1.3
	baz=177						
Z55A	Blythe	20.04	20	P	P	17 39 46.3	+0.5
	baz=203						
X46A	Booneville	20.09	3	P	P	17 39 47.6	+1.2
	baz=184,SNR=11						
Y52A	Lilburn	20.09	15	eP	P	17 39 47.0	+0.5
	comp=Z,52nm,0.7s						
Y52A				epP	pP	17 40 25.5	+0.3
Y52A	Lilburn	20.09	15	P	P	17 39 47.3	+0.9
	baz=197,SNR=21						
X47A	Russelville	20.11	5	P	P	17 39 47.7	+1.2
	baz=186,SNR=56						
X48A	Hartselle	20.12	7	eP	P	17 39 47.3	+0.6
	comp=Z,32nm,0.7s						
X48A	Hartselle	20.12	7	P	P	17 39 47.8	+1.0
	baz=188,SNR=27						
ABTX	Abilene, Hawle	20.14	336	eP	P	17 39 46.7	-0.3
	comp=Z,20nm,0.6s						
ABTX				epP	pP	17 40 27.6	+1.8
ABTX	Abilene, Hawle	20.14	336	P	P	17 39 47.1	0.0
	baz=152,SNR=8.0						
X40A	Basin Creek Fa	20.14	353	eP	P	17 39 47.2	+0.2
	comp=Z,31nm,1.1s						
X40A	Basin Creek Fa	20.14	353	P	P	17 39 47.5	+0.5
	baz=172,SNR=14						
Y53A	Monroe	20.21	16	P	P	17 39 48.0	+0.4
	baz=198,SNR=25						
X49A	Woodville	20.28	9	P	P	17 39 49.5	+1.1
	baz=190,SNR=24						
MIAR	Mount Ida	20.30	351	eP	P	17 39 49.0	+0.3
	comp=Z,54nm,0.8s						
MIAR				epP	pP	17 40 25.9	-1.5
MIAR	Mount Ida	20.30

HODGE **Hodges** 20.93 18 eP P 17 39 55.0 -0.3
comp=Z,20nm,0.6s
HODGE epP pP 17 40 35.5 +1.1
W39A Magazine 20.97 351 eP P 17 39 56.2 +0.6
comp=Z,84nm,1.5s
W39A Magazine 20.97 351 P P 17 39 57.3 +1.7
baz=170,SNR=16
Z58A St. Stephen 20.98 24 P P 17 39 56.1 +0.3
baz=208
SWET Sewanee 21.03 9 eP P 17 39 56.7 +0.3
comp=Z,54nm,0.9s
SWET epP pP 17 40 36.4 +0.8
HBAR Harrisburg 21.05 359 eP P 17 39 57.3 +0.8
comp=Z,122nm,0.9s
W50A Signal Mountai 21.12 11 eP P 17 39 57.2 -0.1
comp=Z,15nm,0.7s
W50A Signal Mountai 21.12 11 P P 17 39 57.5 +0.2
baz=192,SNR=12
Z59A Georgetown, SC 21.12 26 P P 17 39 58.1 +0.9
baz=210,SNR=5.1
W51A Cleveland 21.18 12 P P 17 39 58.5 +0.6
baz=194,SNR=31
X54A Belton 21.19 18 P P 17 39 58.3 +0.4
baz=201,SNR=16
JSC Jenkinsville 21.30 20 eP P 17 39 59.1 +0.2
comp=Z,67nm,1.5s
JSC epP pP 17 40 40.1 +1.6
JSC Jenkinsville 21.30 20 eP P 17 39 59.1 +0.2
JSC pmax pmax
comp=Z,67nm,1.5s
W52A Murphy 21.30 14 eP P 17 39 59.3 +0.2
comp=Z,102nm,1.6s
W52A Murphy 21.30 14 P P 17 39 59.7 +0.7
baz=196,SNR=9.2
X55A Gracelyn & Ava 21.35 19 P P 17 39 59.6 +0.2
baz=203,SNR=11
V46A Holladay 21.36 4 P P 17 39 59.5 0.0
baz=185,SNR=40
Y57A Sumter 21.36 22 eP P 17 39 60.0 +0.4
comp=Z,61nm,0.6s
Y57A Sumter 21.36 22 P P 17 40 00.1 +0.5
baz=206
HALT Halls 21.41 1 eP P 17 40 00.8 +0.8
comp=Z,74nm,0.5s
V48A Smith Brothers 21.42 7 eP P 17 40 00.6 +0.5
comp=Z,134nm,1.4s
V48A Smith Brothers 21.42 7 P P 17 40 01.0 +0.9
baz=188,SNR=36
V47A Nunnelly 21.43 6 P P 17 40 01.1 +0.8
baz=186,SNR=54
GNAR Gosnell 21.46 360 eP P 17 40 01.6 +1.2
comp=Z,95nm,0.4s
FCAR Ozark Folk Cen 21.47 355 eP P 17 40 00.6 +0.1
comp=Z,39nm,1.0s
CPCT Cooper Cave 21.51 12 eP P 17 40 01.2 +0.2
comp=Z,36nm,0.7s
CPCT epP pP 17 40 41.5 +0.7
Y58A Scranton 21.54 24 eP P 17 40 01.8 +0.5
comp=Z,74nm,0.6s
Y58A Scranton 21.54 24 P P 17 40 01.8 +0.5
baz=208,SNR=7.9
W53A Cullowhee 21.56 15 P P 17 40 02.0 +0.4
baz=198,SNR=8.2
X56A White Oak 21.57 21 P P 17 40 02.3 +0.8
baz=204,SNR=16
V49A McMinnville 21.57 9 P P 17 40 02.1 +0.5
baz=191,SNR=39
PAULI Pauline 21.61 19 eP P 17 40 02.4 +0.4
comp=Z,23nm,0.9s
PAULI epP pP 17 40 41.9 0.0
V50A Pikevile 21.61 11 P P 17 40 02.5 +0.5
baz=193,SNR=23
WVT Waverly 21.71 5 eP P 17 40 02.4 -0.4
comp=Z,104nm,1.3s
WVT Waverly 21.71 5 P P 17 40 03.3 +0.5
baz=186
WMOK Wichita Mounta 21.73 340 eP P 17 40 01.9 -1.2
comp=Z,37nm,1.2s
WMOK esP sP 17 41 14.6 +0.3
WMOK Wichita Mounta 21.73 340 eP P 17 40 01.9 -1.2
WMOK e*SP sP 17 41 14.6 +0.3
WMOK pmax pmax
comp=Z,37nm,1.2s
WMOK Wichita Mounta 21.73 340 P P 17 40 02.8 -0.3
baz=156,SNR=23
W54A Cherokee Point 21.75 18 P P 17 40 04.0 +0.7
baz=201,SNR=17
GLAT Glass 21.77 2 eP P 17 40 03.5 +0.1
comp=Z,141nm,1.2s
CLNB Carlsbad 21.82 327 eP P 17 40 04.3 +0.2
CLNB epP pP 17 40 46.9 +2.3
CLTN Cedars of Leba 21.83 8 eP P 17 40 04.4 +0.4
comp=Z,42nm,0.9s
CLTN epP pP 17 40 45.2 +0.9
CLTN esP sP 17 41 10.1 -5.2
UTMT University of 21.86 2 eP P 17 40 06.0 +1.8
comp=Z,88nm,0.6s
X57A Johnson Farm, 21.87 22 P P 17 40 05.0 +0.6
baz=206
V51A Loudon 21.89 12 eP P 17 40 04.9 +0.4
comp=Z,25nm,0.7s
V51A epP pP 17 40 45.5 +0.5
V51A Loudon 21.89 12 P P 17 40 05.2 +0.7
baz=195,SNR=11
BIRD Birdtown, Kers 21.90 21 eP P 17 40 05.3 +0.7
comp=Z,103nm,1.4s
BIRD epP pP 17 40 45.6 +0.5
U46A Springville 21.91 4 P P 17 40 05.6 +0.9
baz=185,SNR=31
U40A Yellville 22.00 354 P P 17 40 06.3 +0.8
baz=172,SNR=11
TUL1 Leonard 22.02 347 eP P 17 40 05.5 -0.2
comp=Z,22nm,0.8s
TUL1 epP pP 17 40 46.3 -0.2
TUL1 Leonard 22.02 347 P P 17 40 06.3 +0.5
baz=165
GDL2 Guadalupe Moun 22.03 326 eP P 17 40 05.7 -0.4
GDL2 epP pP 17 40 50.2 +3.3
HHAR Hobbs 22.06 351 eP P 17 40 06.0 -0.1
comp=Z,22nm,1.1s
HHAR epP pP 17 40 47.4 +0.6
KMSC Kings Mountain 22.06 19 eP P 17 40 06.5 +0.4
comp=Z,27nm,0.7s
KMSC epP pP 17 40 48.0 +1.2
KMSC Kings Mountain 22.06 19 P P 17 40 06.7 +0.6
baz=203,SNR=7.6
U47A Clarksville 22.07 6 P P 17 40 06.5 +0.3
baz=187,SNR=42
V52A Sevierville 22.09 14 eP P 17 40 06.2 -0.2
comp=Z,58nm,1.3s
V52A epP pP 17 40 48.3 +1.1
V52A Sevierville 22.09 14 P P 17 40 07.1 +0.7
baz=196,SNR=12
V53A Saluda 22.12 16 eP P 17 40 07.5 +0.7
comp=Z,14nm,0.7s
V53A epP pP 17 40 48.9 +1.2
V53A Saluda 22.12 16 P P 17 40 07.4 +0.7
baz=199,SNR=13
U48A Cassie Pea, Po 22.22 7 P P 17 40 07.8 +0.3
baz=189,SNR=26
MNTX Cornudas Mount 22.23 323 eP P 17 40 07.6 -0.1
comp=Z,16nm,1.0s
MNTX epP pP 17 40 50.9 +1.8
MNTX esP sP 17 41 21.0 +0.9
MNTX Cornudas Mount 22.23 323 P P 17 40 07.8 0.0
baz=137,SNR=16
Y60A Bolivia 22.23 27 P P 17 40 08.3 +0.6
baz=211
X58A Rowland 22.24 24 eP P 17 40 08.1 +0.4
comp=Z,180nm,1.6s
X58A epP pP 17 40 50.5 +1.6
X58A Rowland 22.24 24 P P 17 40 07.7 0.0
baz=208,SNR=7.3
PBMO Poplar Bluff 22.27 359 eP P 17 40 08.9 +0.9
comp=Z,48nm,0.7s
PBMO epP pP 17 40 48.7 -0.5
AGP Aguadilla 22.28 77 eP P 17 40 08.4 +0.1
comp=Z,190nm,1.3s
W56A Indian Trail 22.30 21 P P 17 40 08.6 +0.3
baz=204,SNR=8.3
U49A Red Boiling Sp 22.32 9 P P 17 40 09.0 +0.5
baz=191,SNR=56
U50A Jamestown 22.39 11 P P 17 40 09.8 +0.7
baz=193,SNR=22
V54A Nebo 22.46 17 P P 17 40 10.4 +0.5
baz=201,SNR=18
U51A La Follette 22.51 13 P P 17 40 11.0 +0.7
baz=195,SNR=14
W57A Gilead 22.53 22 eP P 17 40 09.9 -0.5
comp=Z,18nm,0.9s
W57A Gilead 22.53 22 P P 17 40 10.6 +0.3
baz=206,SNR=7.7
T45A Paducah 22.54 3 eP P 17 40 11.4 +0.9
comp=Z,168nm,0.6s
T45A Paducah 22.54 3 P P 17 40 11.2 +0.7
baz=183
X59A McDuffie Farm, 22.55 25 P P 17 40 11.0 +0.4
baz=210,SNR=6.8
T46A Princeton 22.61 4 P P 17 40 11.8 +0.7
baz=185,SNR=23
T47A Sharon Grove 22.62 6 eP P 17 40 12.0 +0.8
comp=Z,153nm,0.6s
T47A epP pP 17 40 47.1 -6.0
T47A Sharon Grove 22.62 6 P P 17 40 12.0 +0.8
baz=187,SNR=60
AOPR Arecibo Observ 22.64 77 eP P 17 40 10.9 -0.7
comp=Z,74nm,1.3s
MSTX Muleshoe 22.64 331 eP P 17 40 11.3 -0.3
comp=Z,63nm,0.9s
MSTX Muleshoe 22.64 331 P P 17 40 11.1 -0.5
baz=146,SNR=25
U52A Thorn Hill 22.67 14 P P 17 40 11.9 +0.2
baz=197,SNR=9.4
W58A Raeford 22.69 23 P P 17 40 12.2 +0.4
baz=208,SNR=25
OBIP Obispado Ponce 22.74 78 eP P 17 40 12.8 +0.3
comp=Z,27nm,0.7s
V55A Taylorsville 22.75 19 P P 17 40 13.1 +0.7
baz=202,SNR=13
TZTN Tazewell 22.78 14 eP P 17 40 12.9 +0.3
comp=Z,29nm,0.7s
TZTN epP pP 17 40 56.1 +1.4
TZTN Tazewell 22.78 14 P P 17 40 13.3 +0.7
baz=196,SNR=13
ICMP Isla Caja de M 22.80 78 eP P 17 40 13.4 +0.3
comp=Z,38nm,0.8s
X60A Albert Glenn T 22.82 26 P P 17 40 13.0 0.0
baz=211,SNR=12
T48A Bowling Green 22.82 7 P P 17 40 13.2 +0.1
baz=189,SNR=18
U53A Fall Branch 22.84 16 P P 17 40 13.8 +0.6
baz=199,SNR=23
AMTX Amarillo 22.94 335 eP P 17 40 14.0 -0.3
comp=Z,43nm,0.9s
AMTX epP pP 17 40 57.2 +0.6
AMTX Amarillo 22.94 335 P P 17 40 14.6 +0.3
baz=150
T49A Edmonton 22.94 9 eP P 17 40 14.4 +0.3
comp=Z,32nm,0.6s
T49A Edmonton 22.94 9 P P 17 40 14.6 +0.5
baz=191,SNR=28
V56A Mocksville 22.95 20 eP P 17 40 14.5 +0.3
comp=Z,23nm,0.9s
V56A Mocksville 22.95 20 P P 17 40 14.5 +0.3
baz=204,SNR=12
T50A Nancy 22.98 11 P P 17 40 14.9 +0.4
baz=193,SNR=14
T51A Gray 23.09 12 P P 17 40 16.3 +0.8
baz=195,SNR=15
W59A Clinton 23.13 25 P P 17 40 16.2 +0.4
baz=209
SJG San Juan 23.18 78 P P 17 40 15.6 -0.9
comp=Z,13nm,0.5s,baz=17,slow=2.8,SNR=5.3
S44A Carbondale 23.19 1 P P 17 40 17.2 +0.9
baz=182,SNR=21
U54A Nelsons Funny 23.19 17 eP P 17 40 16.7 +0.2
comp=Z,33nm,0.7s
U54A epP pP 17 41 00.2 +0.8
U54A Nelsons Funny 23.19 17 P P 17 40 17.0 +0.5
baz=200
S47A Hartford 23.25 6 P P 17 40 17.1 +0.2
baz=188,SNR=19
S46A Don Dixon Farm 23.26 5 P P 17 40 17.7 +0.7
baz=186,SNR=15
V57A Coltrane Farms 23.26 21 P P 17 40 17.5 +0.4
baz=206,SNR=14
U32A Winter Ranch, 23.31 341 eP P 17 40 18.4 +0.9
comp=Z,39nm,1.0s
U32A epP pP 17 41 01.5 +1.0
W60A Pink Hill 23.34 26 P P 17 40 18.1 +0.4
baz=211,SNR=8.2
U55A TA2, Sparta 23.40 18 P P 17 40 19.1 +0.6
baz=202,SNR=8.3
S48A Wiedeman Farm, 23.41 8 P P 17 40 18.5 +0.2
baz=190,SNR=10
V58A Windy Hill, Pi 23.42 23 P P 17 40 18.7 +0.3
baz=207,SNR=25
CNNC Cliffs of the 23.42 26 eP P 17 40 19.5 +1.0
comp=Z,42nm,0.4s
CNNC epP pP 17 41 03.9 +2.1
CNNC Cliffs of the 23.42 26 P P 17 40 18.7 +0.2
baz=211
T53A Wise 23.44 15 P P 17 40 19.0 +0.3
baz=198
T52A Hallie 23.45 14 eP P 17 40 19.0 +0.3
comp=Z,35nm,1.4s
T52A epP pP 17 41 02.6 +0.6
T52A Hallie 23.45 14 P P 17 40 19.4 +0.6
baz=197
HUMP Col San Antoni 23.47 78 eP P 17 40 19.2 +0.1
comp=Z,21nm,1.0s
U56A King 23.47 20 P P 17 40 19.8 +0.8
baz=204
CBYP Canovanas 23.47 77 eP P 17 40 18.5 -0.7
comp=Z,31nm,1.2s
FVM French Village 23.47 359 eP P 17 40 19.2 +0.3
comp=Z,12nm,0.6s
FVM epP pP 17 41 02.7 +0.4
FVM French Village 23.47 359 eP P 17 40 19.2 +0.3
FVM e*PP pP 17 41 02.7 +0.4
FVM pmax pmax
comp=Z,12nm,0.6s
USIN University of 23.54 5 eP P 17 40 20.4 +0.9
comp=Z,119nm,0.8s
CCM Cathedral Cave 23.57 358 eP P 17 40 19.9 +0.1
comp=Z,90nm,1.5s
CCM Cathedral Cave 23.57 358 eP P 17 40 19.9 +0.1
CCM pmax pmax
comp=Z,90nm,1.5s
CCM Cathedral Cave 23.57 358 P P 17 40 20.5 +0.7
baz=177
S49A Springfield 23.64 9 P P 17 40 20.6 +0.1
baz=191,SNR=13
S50A Richmond 23.70 11 P P 17 40 21.3 +0.4
baz=193,SNR=7.2
V59A Middlesex 23.73 24 P P 17 40 21.1 -0.2
baz=209,SNR=7.0
MTP Monte Pirata 23.75 78 eP P 17 40 21.1 -0.5
comp=Z,46nm,1.1s
W61A Ground Anchor 23.76 27 P P 17 40 22.5 +1.0
baz=213
T54A Tazewell 23.77 17 P P 17 40 22.4 +0.7
baz=200
R46A Gibon Southern 23.80 5 P P 17 40 22.6 +0.7
baz=186,SNR=14
S51A Beattyville 23.82 13 eP P 17 40 22.1 +0.1
comp=Z,22nm,0.6s
S51A epP pP 17 41 06.9 +0.9
S51A Beattyville 23.82 13 P P 17 40 21.8 -0.2
baz=195,SNR=9.0
R45A Skylar, Fairfi 23.83 3 P P 17 40 22.7 +0.6
baz=184,SNR=12
U57A Blanch 23.91 22 P P 17 40 23.4 +0.6
baz=206,SNR=12
WCI Wyandotte Cave 23.94 7 eP P 17 40 23.5 +0.3
comp=Z,54nm,0.9s
WCI epP pP 17 41 08.8 +1.4
WCI Wyandotte Cave 23.94 7 eP P 17 40 23.5 +0.3
WCI e*PP pP 17 41 08.8 +1.4
WCI pmax pmax
comp=Z,54nm,0.9s
WCI Wyandotte Cave 23.94 7 P P 17 40 23.9 +0.7
baz=189
S52A Salyersville 23.97 14 P P 17 40 24.1 +0.6
baz=196
R47A Wooly Knot Far 23.98 7 P P 17 40 23.8 +0.3
baz=188,SNR=23
CUPR Culebra, Puert 24.02 77 eP P 17 40 23.5 -0.6
comp=Z,90nm,1.3s
T55A Pulaski 24.05 18 P P 17 40 25.1 +0.8
baz=202
SLM Saint Louis 24.12 360 eP P 17 40 27.6 +2.8
comp=Z,29nm,0.8s
SLM Saint Louis 24.12 360 eP P 17 40 27.6 +2.8
SLM pmax pmax
comp=Z,29nm,0.8s
V60A Jim Taylor Roa 24.14 26 eP P 17 40 25.0 0.0
comp=Z,44nm,0.6s
V60A epP pP 17 41 12.7 +3.2
V60A Jim Taylor Roa 24.14 26 P P 17 40 25.6 +0.6
baz=211
R49A Shelbyville 24.16 9 eP P 17 40 25.4 +0.2
comp=Z,17nm,0.6s
R49A epP pP 17 41 10.3 +0.6
R49A Shelbyville 24.16 9 P P 17 40 25.4 +0.2
baz=191,SNR=8.4
U58A Oxford 24.16 23 P P 17 40 25.3 +0.1
baz=208
R48A Northridge Ran 24.16 8 P P 17 40 25.6 +0.3
baz=190
S53A Williamson 24.20 15 P P 17 40 25.5 -0.1
baz=199,SNR=9.2
T56A Rocky Mt 24.21 20 P P 17 40 26.3 +0.6
baz=204
HSIG 24.23 310 eP P 17 40 25.9 0.0
comp=Z,4.7nm,0.6s
HSIG epP pP 17 41 10.5 -0.4
121A Cookes Peak, D 24.25 321 P P 17 40 26.5 +0.2
baz=134
OLIL Olney 24.28 4 eP P 17 40 27.1 +0.9
comp=Z,52nm,0.7s
OLIL epP pP 17 41 10.5 -0.4
OLIL esP sP 17 41 41.6 +0.3
R50A Paris 24.29 11 eP P 17 40 26.4 +0.1
comp=Z,18nm,0.6s
R50A epP pP 17 41 11.5 +0.4
R50A Paris 24.29 11 P P 17 40 26.6 +0.3
baz=193,SNR=6.3
ATAH Atahualpa 24.31 151 P P 17 40 30.6 +3.3
comp=Z,9.5nm,0.8s,baz=347,slow=4.2,SNR=5.9
STVI Saint Thomas 24.34 77 eP P 17 40 26.3 -0.7
comp=Z,216nm,1.6s
U59A Littleton 24.42 24 epP pP 17 41 13.5 +0.9
U59A Littleton 24.42 24 P P 17 40 27.9 +0.3
baz=210
319A Douglas 24.43 317 eP P 17 40 27.9 0.0
comp=Z,6.9nm,1.0s
319A epP pP 17 41 15.5 +2.2
Q45A Warren Harvey, 24.43 3 P P 17 40 28.3 +0.7
baz=184,SNR=7.4
T57A Hurt 24.44 21 eP P 17 40 28.1 +0.3
comp=Z,31nm,1.2s
T57A epP pP 17 41 13.2 +0.4
T57A Hurt 24.44 21 P P 17 40 28.0 +0.3
baz=206
V61A Roper 24.45 27 P P 17 40 27.9 +0.1
baz=213
R51A Hillsboro 24.46 12 P P 17 40 28.1 +0.2
baz=195,SNR=5.5
S54A Dingess, Beckl 24.53 17 P P 17 40 29.1 +0.5
baz=200
V62A Hyde County Ai 24.54 28 P P 17 40 29.4 +0.7
baz=214
Q46A CEJHS Indians, 24.62 5 P P 17 40 30.0 +0.7
baz=186
Q47A Bedord North L 24.62 7 P P 17 40 29.8 +0.4
baz=188,SNR=9.8
T58A Grand View Acr 24.66 22 P P 17 40 29.7 +0.1
baz=207,SNR=5.1
R52A Catlettsburg 24.70 14 P P 17 40 29.8 -0.3
baz=197
Q48A North Vernon 24.70 8 P P 17 40 30.1 0.0
baz=190,SNR=8.8
S55A Lewisburg 24.74 18 P P 17 40 30.7 +0.2
baz=202
BNM Barren Site 24.74 325 eP P 17 40 31.9 +1.1
BNM epP pP 17 41 20.4 +3.9
BNM esP sP 17 41 47.0 +0.6
U60A Pendleton 24.78 25 P P 17 40 31.0 +0.2
baz=211
BLO Bloomington 24.85 6 eP P 17 40 31.7 +0.3
comp=Z,25nm,0.8s
BLO epP pP 17 41 17.6 +0.5
BLO Bloomington 24.85 6 eP P 17 40 31.7 +0.3
BLO e*PP pP 17 41 17.6 +0.5
BLO pmax pmax
comp=Z,25nm,0.8s
Y22D IRIS PASSCAL I 24.85 325 eP P 17 40 32.6 +1.0
comp=Z,29nm,0.9s
Y22D esP sP 17 41 48.5 +1.1
Y22D IRIS PASSCAL I 24.85 325 P P 17 40 32.1 +0.5
baz=138
R53A Hurricane 24.86 15 eP P 17 40 31.7 +0.2
comp=Z,27nm,1.3s
R53A epP pP 17 41 17.4 +0.2
R53A Hurricane 24.86 15 P P 17 40 31.8 +0.3
baz=199
LPM Los Pinos Moun 24.87 326 eP P 17 40 32.6 +0.8
Q49A Aurora 24.90 9 P P 17 40 31.9 +0.1
baz=192,SNR=6.7
Q50A Georgetown 24.90 11 P P 17 40 32.2 +0.3
baz=194
LENM Lemitar 24.95 325 eP P 17 40 34.2 +1.6
LENM epP pP 17 41 21.0 +2.3
LENM esP sP 17 41 49.7 +1.4
S56A Natural Bridge 24.95 20 P P 17 40 32.7 +0.3
baz=204
U61A Possum Corner 24.97 27 eP P 17 40 33.3 +0.9
comp=Z,130nm,1.5s
U61A epP pP 17 41 23.2 +4.7
U61A Possum Corner 24.97 27 P P 17 40 32.7 +0.3
baz=212
R54A Victor 24.98 17 P P 17 40 32.7 +0.1
baz=201
T59A Double "B" Far 25.05 24 eP P 17 40 33.3 +0.1
comp=Z,20nm,0.6s
T59A epP pP 17 41 20.3 +0.8
T59A Double "B" Far 25.05 24 P P 17 40 33.5 +0.3
baz=209,SNR=10
P45A Graceland, Par 25.09 4 eP P 17 40 34.4 +0.9
comp=Z,70nm,1.5s
P45A epP pP 17 41 19.1 -0.6
P45A Graceland, Par 25.09 4 P P 17 40 34.0 +0.5
baz=185,SNR=5.7
P47A Martinsville 25.19 7 P P 17 40 34.4 0.0
baz=188,SNR=6.2
Q51A Peebles 25.20 12 eP P 17 40 34.9 +0.3
comp=Z,47nm,0.6s
Q51A epP pP 17 41 21.4 +0.4
Q51A Peebles 25.20 12 P P 17 40 35.1 +0.5
baz=195,SNR=15
LAZ Ladron 25.21 325 eP P 17 40 32.6 -2.4
LAZ epP pP 17 41 25.4 +3.9
P46A Rosedale 25.22 5 P P 17 40 35.3 +0.6
baz=186,SNR=11
S57A Dark Hollow, R 25.23 21 eP P 17 40 35.5 +0.6
comp=Z,6.8nm,1.0s
S57A epP pP 17 41 21.5 +0.1
S57A Dark Hollow, R 25.23 21 P P 17 40 35.2 +0.4
baz=206
ANMO Albuquerque 25.25 327 P P 17 40 37.1 +1.8
comp=Z,0.9nm,0.5s,baz=154,slow=12,SNR=5.0
ANMO pP pP 17 41 24.6 +2.6
comp=Z,6.3nm,1.1s,baz=142,slow=12,SNR=5.9
ANMO sP sP 17 41 50.3 -0.8
comp=Z,3.9nm,1.0s,baz=146,slow=10.0,SNR=2.6
ANMO Albuquerque 25.25 327 eP P 17 40 35.7 +0.4
comp=Z,5.2nm,1.3s
ANMO epP pP 17 41 24.2 +2.2
ANMO esP sP 17 41 50.5 -0.6
ANMO Albuquerque 25.25 327 eP P 17 40 35.7 +0.4
ANMO e*PP pP 17 41 24.2 +2.2
ANMO e*SP sP 17 41 50.5 -0.6
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO Albuquerque 25.25 327 P P 17 40 36.0 +0.6
baz=140
TASM ASL Pad, Albuq 25.25 327 P P 17 40 36.1 +0.7
baz=140
TASM ASL Pad, Albuq 25.25 327 P P 17 40 35.9 +0.5
baz=140
KSU1 Kansas State U 25.27 348 P P 17 40 35.5 +0.4
baz=165
P48A Milroy 25.27 8 eP P 17 40 34.7 -0.5
comp=Z,66nm,1.4s
P48A epP pP 17 41 21.1 -0.5
P48A Milroy 25.27 8 P P 17 40 34.7 -0.5
baz=190,SNR=9.1
Q52A Bidwell 25.38 14 P P 17 40 36.4 +0.2
baz=198
S58A Poland Farm, P 25.42 23 eP P 17 40 36.8 +0.2
comp=Z,37nm,1.5s

S58A				*e*P	**pP**	**17 41 24.3**	**+0.8**
S58A	**Poland Farm, P**	**25.42**	**23**	P	**P**	**17 40 36.7**	**+0.1**
	baz=208						
P49A	**Miami Univ. Ec**	**25.45**	**10**	P	**P**	**17 40 36.3**	**-0.4**
	baz=192,SNR=6.2						
Q53A	**Leroy**	**25.47**	**16**	P	**P**	**17 40 37.2**	**+0.2**
	baz=199,SNR=5.9						
T60A	**Surry**	**25.53**	**25**	*e*P	**P**	**17 40 37.1**	**-0.4**
	comp=Z,45nm,0.7s						
T60A				*e*P	**pP**	**17 41 24.5**	**0.0**
P50A	**Jamestown**	**25.68**	**11**	P	**P**	**17 40 39.0**	**+0.2**
	baz=194						
P51A	**Williamsport**	**25.70**	**12**	*e*P	**P**	**17 40 38.5**	**-0.5**
	comp=Z,32nm,0.6s						
P51A				*e*P	**pP**	**17 41 23.3**	**-2.9**
P51A	**Williamsport**	**25.70**	**12**	P	**P**	**17 40 39.3**	**+0.3**
	baz=196,SNR=7.7						
Q54A	**Coxs Mills**	**25.77**	**17**	*e*P	**P**	**17 40 40.0**	**+0.3**
	comp=Z,21nm,0.6s						
Q54A				*e*P	**pP**	**17 41 26.9**	**-0.1**
Q54A	**Coxs Mills**	**25.77**	**17**	P	**P**	**17 40 40.1**	**+0.5**
	baz=201,SNR=13						
CBKS	**Cedar Bluff**	**25.78**	**342**	*e*P	**P**	**17 40 40.0**	**+0.2**
	comp=Z,12nm,0.8s						
CBKS	**Cedar Bluff**	**25.78**	**342**	*e*P	**P**	**17 40 40.0**	**+0.2**
CBKS				pmax	pmax		
	comp=Z,12nm,0.8s						
CBKS	**Cedar Bluff**	**25.78**	**342**	P	**P**	**17 40 40.2**	**+0.4**
	baz=158						
R58B	**Mineral**	**25.80**	**22**	*e*P	**P**	**17 40 39.4**	**-0.5**
	comp=Z,9.3nm,0.6s						
R58B	**Mineral**	**25.80**	**22**	P	**P**	**17 40 40.4**	**+0.4**
	baz=208,SNR=5.9						
O45A	**Potomac**	**25.81**	**4**	P	**P**	**17 40 40.2**	**+0.2**
	baz=185,SNR=6.4						
R57A	**Stanardsville**	**25.86**	**21**	P	**P**	**17 40 40.9**	**+0.4**
	baz=206						
O47A	**Sheridan**	**25.94**	**7**	P	**P**	**17 40 41.1**	**0.0**
	baz=188,SNR=12						
SFIN	**Lafayette**	**25.99**	**5**	*e*P	**P**	**17 40 41.1**	**-0.4**
	comp=Z,61nm,1.5s						
SFIN				*e*P	**pP**	**17 41 27.6**	**-1.5**
SFIN	**Lafayette**	**25.99**	**5**	P	**P**	**17 40 41.6**	**0.0**
	baz=186						
Q55A	**Buckhannon**	**26.00**	**18**	P	**P**	**17 40 42.1**	**+0.4**
	baz=202						
T25A	**Trinidad**	**26.02**	**333**	*e*P	**P**	**17 40 43.2**	**+1.0**
	comp=Z,21nm,0.8s						
T25A				*e*P	**pP**	**17 41 30.4**	**+0.8**
T25A				*es*P	**sP**	**17 41 58.6**	**+0.7**
T25A	**Trinidad**	**26.02**	**333**	P	**P**	**17 40 43.0**	**+0.8**
	baz=147,SNR=21						
HDIL	**Hopedale**	**26.05**	**1**	*e*P	**P**	**17 40 42.4**	**+0.3**
	comp=Z,14nm,0.8s						
HDIL				*e*P	**pP**	**17 41 29.5**	**-0.2**
HDIL	**Hopedale**	**26.05**	**1**	P	**P**	**17 40 42.4**	**+0.3**
	baz=181						
R58A	**Rapidan**	**26.05**	**22**	P	**P**	**17 40 42.7**	**+0.6**
	baz=207						
P52A	**Corning**	**26.05**	**14**	P	**P**	**17 40 42.3**	**+0.1**
	baz=197						
O48A	**Farmland**	**26.09**	**8**	P	**P**	**17 40 42.1**	**-0.4**
	baz=191,SNR=9.5						
P53A	**Whipple**	**26.09**	**15**	*e*P	**P**	**17 40 42.6**	**+0.1**
	comp=Z,21nm,1.1s						
P53A				*e*P	**pP**	**17 41 30.7**	**+0.5**
P53A	**Whipple**	**26.09**	**15**	P	**P**	**17 40 43.0**	**+0.5**
	baz=199						
O49A	**Covington**	**26.15**	**10**	*e*P	**P**	**17 40 42.8**	**-0.2**
	comp=Z,11nm,0.6s						
O49A				*e*P	**pP**	**17 41 30.1**	**-0.6**
O49A	**Covington**	**26.15**	**10**	P	**P**	**17 40 42.9**	**-0.2**
	baz=192						
CBN	**Corbin Frederi**	**26.20**	**23**	*e*P	**P**	**17 40 43.5**	**+0.1**
	comp=Z,31nm,0.6s						
CBN				*e*P	**pP**	**17 41 31.8**	**+0.6**
CBN	**Corbin Frederi**	**26.20**	**23**	P	**P**	**17 40 43.9**	**+0.4**
	baz=208						
N41A	**Harden Midland**	**26.20**	**359**	*e*P	**P**	**17 40 43.3**	**-0.2**
	comp=Z,36nm,1.1s						
N41A				*e*P	**pP**	**17 41 31.0**	**-0.1**
N41A	**Harden Midland**	**26.20**	**359**	P	**P**	**17 40 43.6**	**+0.1**
	baz=178						
O50A	**Cable**	**26.23**	**11**	P	**P**	**17 40 43.9**	**+0.1**
	baz=194,SNR=13						
R59A	**King George, V**	**26.29**	**23**	P	**P**	**17 40 44.8**	**+0.5**
	baz=209						
Q56A	**Snyder Ridge,**	**26.31**	**19**	P	**P**	**17 40 45.5**	**+0.9**
	baz=204,SNR=5.8						
N44A	**Piper City**	**26.33**	**3**	P	**P**	**17 40 44.9**	**+0.2**
	baz=184,SNR=5.2						
N40A	**Mertquake, Sal**	**26.40**	**357**	P	**P**	**17 40 45.4**	**+0.1**
	baz=176,SNR=5.9						
N45A	**Kentland**	**26.42**	**4**	P	**P**	**17 40 45.4**	**0.0**
	baz=185						
N43A	**Stutzman Famil**	**26.43**	**1**	P	**P**	**17 40 45.8**	**+0.2**
	baz=182						
S61A	**Accomac**	**26.43**	**26**	P	**P**	**17 40 46.4**	**+0.8**
	baz=212						
O51A	**Pataskala**	**26.44**	**13**	P	**P**	**17 40 45.9**	**+0.2**
	baz=196,SNR=7.6						
ACSO	**Alum Creek Sta**	**26.44**	**12**	*e*P	**P**	**17 40 45.6**	**-0.1**
	comp=Z,18nm,0.7s						
ACSO				*e*P	**pP**	**17 41 32.5**	**-0.8**
ACSO	**Alum Creek Sta**	**26.44**	**12**	P	**P**	**17 40 45.8**	**+0.2**
	baz=195						
P54A	**Burton**	**26.45**	**17**	P	**P**	**17 40 45.9**	**+0.1**
	baz=201						
N46A	**Monticello**	**26.53**	**6**	P	**P**	**17 40 46.5**	**+0.1**
	baz=187						
P55A	**Reedsville**	**26.55**	**18**	P	**P**	**17 40 46.9**	**+0.3**
	baz=202						
Q57A	**Strasburg**	**26.57**	**20**	P	**P**	**17 40 47.5**	**+0.7**
	baz=206						
O52A	**Adamsville**	**26.58**	**14**	*e*P	**P**	**17 40 46.8**	**-0.1**
	comp=Z,18nm,0.6s						
O52A				*e*P	**pP**	**17 41 34.1**	**-0.6**
O52A	**Adamsville**	**26.58**	**14**	P	**P**	**17 40 46.7**	**-0.2**
	baz=198,SNR=7.0						
N47A	**Urbana**	**26.63**	**7**	P	**P**	**17 40 46.9**	**-0.4**
	baz=189						
MCWV	**Mont Chateau**	**26.68**	**18**	*e*P	**P**	**17 40 48.1**	**+0.3**
	comp=Z,19nm,1.5s						
MCWV				*e*P	**pP**	**17 41 35.6**	**+0.1**
MCWV	**Mont Chateau**	**26.68**	**18**	P	**P**	**17 40 47.8**	**0.0**
	baz=202						
N48A	**Decatur**	**26.70**	**8**	P	**P**	**17 40 47.6**	**-0.3**
	baz=191,SNR=8.4						
P56A	**Dayton Farm, R**	**26.85**	**19**	P	**P**	**17 40 49.6**	**+0.3**
	baz=204						
O53A	**New Philadelph**	**26.86**	**15**	P	**P**	**17 40 49.5**	**+0.1**
	baz=199						
M41A	**Milan**	**26.86**	**359**	P	**P**	**17 40 49.6**	**+0.2**
	baz=179						
N49A	**Columbus Grove**	**26.89**	**10**	*e*P	**P**	**17 40 49.4**	**-0.2**
	comp=Z,9.6nm,0.6s						
N49A				*e*P	**pP**	**17 41 37.5**	**+0.2**
N49A	**Columbus Grove**	**26.89**	**10**	P	**P**	**17 40 49.5**	**-0.2**
	baz=192						
M44A	**Midewin, Midew**	**26.93**	**3**	*e*P	**P**	**17 40 49.5**	**-0.4**
	comp=Z,28nm,1.1s						
M44A				*e*P	**pP**	**17 41 37.0**	**-0.6**
M44A	**Midewin, Midew**	**26.93**	**3**	P	**P**	**17 40 50.1**	**+0.2**
	baz=184						
N50A	**Nevada**	**26.93**	**12**	P	**P**	**17 40 50.1**	**+0.1**
	baz=195						
X18A	**Snowflake**	**26.93**	**322**	*e*P	**P**	**17 40 51.1**	**+0.7**
	comp=Z,3.9nm,0.5s						
X18A				*e*P	**pP**	**17 41 40.6**	**+2.3**
M43A	**Waltham Townsh**	**26.93**	**2**	P	**P**	**17 40 50.7**	**+0.7**
	baz=182,SNR=6.0						
M45A	**Boilermakers S**	**26.98**	**5**	P	**P**	**17 40 50.7**	**+0.3**
	baz=186						
SDCO	**Great Sand Dun**	**27.00**	**332**	*e*P	**P**	**17 40 52.0**	**+0.9**
	comp=Z,10nm,1.1s						
SDCO				*e*P	**pP**	**17 41 39.8**	**+1.1**
SDCO				*es*P	**sP**	**17 42 09.9**	**+2.9**
SDCO	**Great Sand Dun**	**27.00**	**332**	P	**P**	**17 40 51.9**	**+0.9**
	baz=145,SNR=6.4						
O54A	**Avella**	**27.01**	**16**	P	**P**	**17 40 50.8**	**0.0**
	baz=201						
P57A	**Homestead Farm**	**27.10**	**21**	P	**P**	**17 40 52.4**	**+0.9**
	baz=206,SNR=11						
M47A	**Cromwell**	**27.11**	**7**	P	**P**	**17 40 50.9**	**-0.7**
	baz=189,SNR=8.5						
W18A	**Petrified Fore**	**27.21**	**323**	*e*P	**P**	**17 40 51.5**	**-1.3**
	comp=Z,11nm,1.3s						
W18A				*e*P	**pP**	**17 41 43.3**	**+2.7**
W18A				*es*P	**sP**	**17 42 10.6**	**+1.7**
N51A	**Ashland**	**27.23**	**13**	*e*P	**P**	**17 40 52.4**	**-0.2**
	comp=Z,21nm,0.6s						
N51A				*e*P	**pP**	**17 41 40.2**	**-0.1**
N51A	**Ashland**	**27.23**	**13**	P	**P**	**17 40 52.6**	**0.0**
	baz=196						
N52A	**McGinn's Farm,**	**27.28**	**14**	P	**P**	**17 40 52.9**	**-0.2**
	baz=198,SNR=8.2						
O55A	**Ligonier**	**27.34**	**18**	P	**P**	**17 40 53.5**	**-0.3**
	baz=203						
M48A	**Edgerton**	**27.36**	**9**	*e*P	**P**	**17 40 54.0**	**+0.2**
	comp=Z,9.7nm,0.6s						
M48A				*e*P	**pP**	**17 41 42.5**	**+1.0**
SDMD	**Soldier's Deli**	**27.45**	**22**	*e*P	**P**	**17 40 54.9**	**+0.2**
	comp=Z,12nm,0.6s						
SDMD				*e*P	**pP**	**17 41 42.8**	**+0.3**
N53A	**Lisbon**	**27.48**	**15**	*e*P	**P**	**17 40 54.7**	**-0.2**
	comp=Z,15nm,0.6s						
N53A				*e*P	**pP**	**17 41 42.2**	**-0.5**
N53A	**Lisbon**	**27.48**	**15**	P	**P**	**17 40 54.5**	**-0.4**
	baz=199,SNR=6.6						
L42A	**Oliver, Polo**	**27.49**	**1**	*e*P	**P**	**17 40 54.6**	**-0.3**
	comp=Z,17nm,0.7s						
L42A				*e*P	**pP**	**17 41 41.7**	**-0.9**
L42A	**Oliver, Polo**	**27.49**	**1**	P	**P**	**17 40 54.6**	**-0.3**
	baz=181,SNR=7.9						
SCIA	**State Center**	**27.53**	**355**	*e*P	pP	17 41 42.7	-0.4
M50A	**Fremont**	**27.56**	**11**	*e*P	**P**	**17 40 55.4**	**-0.1**
	comp=Z,57nm,0.6s						
M50A				*e*P	**pP**	**17 41 43.0**	**-0.3**
M50A	**Fremont**	**27.56**	**11**	P	**P**	**17 40 55.5**	**-0.1**
	baz=195,SNR=5.8						
L40A	**Anamosa**	**27.57**	**358**	*e*P	**P**	**17 40 55.9**	**+0.2**
	comp=Z,23nm,0.8s						
L40A				*e*P	**pP**	**17 41 42.7**	**-0.6**
L40A	**Anamosa**	**27.57**	**358**	P	**P**	**17 40 55.8**	**+0.2**
	baz=177,SNR=12						
S22A	**4UR Ranch, Cre**	**27.62**	**330**	*e*P	**P**	**17 40 57.8**	**+1.2**
	comp=Z,12nm,0.8s						
S22A				*e*P	**pP**	**17 41 46.4**	**+2.0**
S22A	**4UR Ranch, Cre**	**27.62**	**330**	P	**P**	**17 40 55.6**	**-1.0**
	baz=143,SNR=14						
O56A	**Blue Knob Stat**	**27.63**	**19**	*e*P	**P**	**17 40 56.7**	**+0.4**
	comp=Z,51nm,1.6s						
O56A				*e*P	**pP**	**17 41 46.5**	**+2.4**
O56A	**Blue Knob Stat**	**27.63**	**19**	P	**P**	**17 40 56.3**	**0.0**
	baz=204,SNR=5.5						
M51A	**Elyria**	**27.66**	**13**	P	**P**	**17 40 56.0**	**-0.5**
	baz=196						
L46A	**Eue Claire**	**27.68**	**6**	*e*P	**P**	**17 40 54.9**	**-1.8**
	comp=Z,106nm,1.6s						
L46A				*e*P	**pP**	**17 41 44.1**	**-0.3**
L46A	**Eue Claire**	**27.68**	**6**	P	**P**	**17 40 56.0**	**-0.6**
	baz=188						
L44A	**Lake County Fo**	**27.72**	**3**	P	**P**	**17 40 56.8**	**-0.1**
	baz=184						
L47A	**Sherwood**	**27.77**	**8**	P	**P**	**17 40 56.8**	**-0.7**
	baz=190,SNR=19						
P59A	**Jarrettsville**	**27.78**	**23**	P	**P**	**17 40 57.3**	**-0.3**
	baz=209						
BGNE	**Belgrade**	**27.81**	**347**	*e*P	**P**	**17 40 58.3**	**+0.5**
	comp=Z,23nm,0.8s						
BGNE	**Belgrade**	**27.81**	**347**	P	**P**	**17 40 58.5**	**+0.7**
	baz=163						
L48A	**N Adams**	**27.85**	**9**	P	**P**	**17 40 57.6**	**-0.5**
	baz=192						
N54A	**Moraine State**	**27.85**	**16**	*e*P	**P**	**17 40 58.1**	**-0.1**
	comp=Z,16nm,0.8s						
N54A				*e*P	**pP**	**17 41 48.2**	**+2.1**
N54A	**Moraine State**	**27.85**	**16**	P	**P**	**17 40 58.3**	**+0.1**
	baz=201,SNR=7.1						
Q24A	**Divide**	**27.86**	**334**	*e*P	**P**	**17 40 58.4**	**-0.3**
	comp=Z,14nm,1.0s						
Q24A				*e*P	**pP**	**17 41 48.6**	**+2.1**
Q24A	**Divide**	**27.86**	**334**	P	**P**	**17 40 59.9**	**+1.2**
	baz=147						
O57A	**Amberson**	**27.88**	**21**	P	**P**	**17 40 58.8**	**+0.3**
	baz=206						
N55A	**Marion Center**	**27.97**	**18**	*e*P	**P**	**17 40 58.9**	**-0.4**
	comp=Z,8.8nm,0.9s						
N55A				*e*P	**pP**	**17 41 47.3**	**+0.1**
N55A	**Marion Center**	**27.97**	**18**	P	**P**	**17 40 59.1**	**-0.2**
	baz=203						
PLIO	**Pelee Island,**	**27.97**	**12**	P	**P**	**17 40 59.3**	**+0.1**
	baz=195						
M52A	**Chesterland**	**28.05**	**14**	*e*P	**P**	**17 40 59.3**	**-0.6**
	comp=Z,17nm,0.8s						
M52A				*e*P	**pP**	**17 41 49.7**	**+1.8**
M52A	**Chesterland**	**28.05**	**14**	P	**P**	**17 40 59.9**	**0.0**
	baz=198						
MVCO	**Mesa Verde**	**28.05**	**327**	*e*P	**P**	**17 41 01.8**	**+1.5**
	comp=Z,10nm,1.3s						
MVCO				*e*P	**pP**	**17 41 49.3**	**+1.1**
MVCO	**Mesa Verde**	**28.05**	**327**	P	**P**	**17 41 01.2**	**+0.9**
	baz=139						
L49A	**Milan**	**28.11**	**10**	P	**P**	**17 41 00.3**	**-0.2**
	baz=193						
M53A	**Wt Miller and**	**28.11**	**15**	P	**P**	**17 41 00.6**	**+0.1**
	baz=195						
MVL	**Millersville**	**28.15**	**23**	*e*P	**P**	**17 41 01.1**	**+0.2**
	comp=Z,23nm,1.2s						
MVL				*e*P	**pP**	**17 41 51.4**	**+2.7**
SSPA	**Standing Stone**	**28.18**	**20**	*e*P	**P**	**17 41 00.9**	**-0.2**
	comp=Z,27nm,1.6s						
SSPA				*e*P	**pP**	**17 41 51.9**	**+2.8**
SSPA	**Standing Stone**	**28.18**	**20**	P	**P**	**17 41 01.4**	**+0.3**
	baz=205						
L50A	**Kingsville**	**28.22**	**11**	P	**P**	**17 41 01.6**	**+0.2**
	baz=195						
K43A	**Burlington**	**28.22**	**3**	*e*P	**P**	**17 41 01.3**	**-0.2**
	comp=Z,22nm,1.0s						
K43A				*e*P	**pP**	**17 41 50.1**	**+0.7**
K43A	**Burlington**	**28.22**	**3**	P	**P**	**17 41 01.5**	**+0.1**
	baz=183						
P60A	**Greenville**	**28.26**	**24**	P	**P**	**17 41 01.8**	**0.0**
	baz=210						
N56A	**West Decatur**	**28.30**	**19**	P	**P**	**17 41 02.2**	**0.0**
	baz=204,SNR=7.2						
113A	**Mohawk Valley,**	**28.31**	**314**	*e*P	pP	17 41 51.1	+0.1
AAM	**Ann Arbor**	**28.32**	**10**	*e*P	**P**	**17 41 01.7**	**-0.6**
	comp=Z,24nm,0.4s						
AAM	**Ann Arbor**	**28.32**	**10**	*e*P	**P**	**17 41 01.7**	**-0.6**
AAM				pmax	pmax		
	comp=Z,24nm,0.4s						
AAM	**Ann Arbor**	**28.32**	**10**	P	**P**	**17 41 02.4**	**+0.1**
	baz=193						
JFWS	**Jewell Farm**	**28.40**	**360**	*e*P	**P**	**17 41 02.8**	**-0.2**
	comp=Z,18nm,0.6s						
JFWS				*e*P	**pP**	**17 41 50.9**	**0.0**
JFWS	**Jewell Farm**	**28.40**	**360**	*e*P	**P**	**17 41 02.8**	**-0.2**
JFWS				*e**PP	**pP**	**17 41 50.9**	**0.0**
JFWS				pmax	pmax		
	comp=Z,18nm,0.6s						
JFWS	**Jewell Farm**	**28.40**	**360**	P	**P**	**17 41 03.1**	**+0.1**
	baz=179,SNR=6.2						
N57A	**Milroy**	**28.40**	**20**	P	**P**	**17 41 03.0**	**0.0**
	baz=206						
K46A	**Dorr**	**28.40**	**7**	P	**P**	**17 41 02.3**	**-0.7**
	baz=188						
OGNE	**Ogallala**	**28.43**	**341**	*e*P	**P**	**17 41 03.9**	**+0.4**
	comp=Z,21nm,1.0s						
OGNE				*e*P	**pP**	**17 41 53.4**	**+2.0**
OGNE	**Ogallala**	**28.43**	**341**	P	**P**	**17 41 03.2**	**-0.3**
	baz=155						
M54A	**Oil Creek Stat**	**28.45**	**16**	*e*P	**P**	**17 41 03.6**	**+0.2**
	comp=Z,19nm,1.5s						
M54A				*e*P	**pP**	**17 41 53.1**	**+1.6**
M54A	**Oil Creek Stat**	**28.45**	**16**	P	**P**	**17 41 03.5**	**0.0**
	baz=201						
ALLY	**Alegheny Colle**	**28.45**	**16**	*e*P	**P**	**17 41 03.8**	**+0.3**
	comp=Z,24nm,1.3s						
ALLY				*e*P	**pP**	**17 41 53.2**	**+1.7**
WUAZ	**Wupatki**	**28.46**	**321**	*e*P	**P**	**17 41 04.2**	**+0.4**
	comp=Z,6.4nm,1.0s						
WUAZ				*e*P	**pP**	**17 41 53.9**	**+1.8**
WUAZ	**Wupatki**	**28.46**	**321**	P	**P**	**17 41 04.7**	**+0.8**
	baz=132						
K47A	**Vermontville**	**28.48**	**8**	P	**P**	**17 41 02.9**	**-0.8**
	baz=190,SNR=9.8						
Y14A	**Wickenburg**	**28.48**	**317**	*e*P	**P**	**17 41 03.5**	**-0.4**
	comp=Z,8.6nm,1.5s						
Y14A				*e*P	**pP**	**17 41 54.2**	**+1.7**
M55A	**Ridgway**	**28.66**	**18**	P	**P**	**17 41 04.9**	**-0.5**
	baz=203,SNR=5.9						
L53A	**Girard**	**28.70**	**15**	P	**P**	**17 41 05.5**	**-0.2**
	baz=200						
K48A	**Perry**	**28.73**	**9**	P	**P**	**17 41 05.2**	**-0.7**
	baz=192,SNR=11						
ISCO	**Idaho Springs**	**28.76**	**334**	*e*P	**P**	**17 41 07.8**	**+1.2**
	comp=Z,12nm,0.9s						
ISCO	**Idaho Springs**	**28.76**	**334**	*e*P	**P**	**17 41 07.8**	**+1.2**
ISCO				pmax	pmax		
	comp=Z,12nm,0.9s						
ISCO	**Idaho Springs**	**28.76**	**334**	P	**P**	**17 41 07.5**	**+0.9**
	baz=147,SNR=16						
O60A	**Telford**	**28.79**	**24**	P	**P**	**17 41 06.5**	**0.0**
	baz=210						
K49A	**Clarkson**	**28.82**	**10**	P	**P**	**17 41 06.7**	**0.0**
	baz=193						
SMCO	**Snowmass**	**28.84**	**332**	*e*P	**P**	**17 41 08.5**	**+1.0**
	comp=Z,22nm,1.0s						
M56A	**Emporium**	**28.86**	**19**	P	**P**	**17 41 07.2**	**+0.1**
	baz=204						
PV02	**Paradox Valley**	**28.93**	**328**	*e*P	**P**	**17 41 09.8**	**+1.8**
	comp=Z,21nm,1.5s						
PV02				*e*P	**pP**	**17 41 56.7**	**+0.6**
ERPA	**Erie**	**28.93**	**16**	*e*P	**P**	**17 41 07.6**	**-0.1**
	comp=Z,20nm,0.6s						
ERPA				*e*P	**pP**	**17 41 57.5**	**+1.6**
ERPA	**Erie**	**28.93**	**16**	P	**P**	**17 41 07.4**	**-0.3**
	baz=200						
PV13	**Radium Mtn., P**	**28.93**	**328**	*e*P	**P**	**17 41 09.2**	**+1.1**
	comp=Z,14nm,1.1s						
PV13				*e*P	**pP**	**17 41 58.1**	**+2.0**
K50A	**Casco**	**28.96**	**11**	*e*P	**P**	**17 41 07.8**	**-0.2**
	comp=Z,28nm,0.6s						
K50A				*e*P	**pP**	**17 41 54.8**	**-1.3**
K50A	**Casco**	**28.96**	**11**	P	**P**	**17 41 07.7**	**-0.2**
	baz=195						
PV05	**Paradox Valley**	**29.01**	**328**	*e*P	**P**	**17 41 09.2**	**+0.5**
	comp=Z,33nm,1.6s						
PV05				*e*P	**pP**	**17 41 58.8**	**+2.0**
PV03	**Paradox Valley**	**29.02**	**328**	*e*P	**P**	**17 41 09.8**	**+1.0**
	comp=Z,15nm,0.9s						
PV03				*e*P	**pP**	**17 41 58.7**	**+1.8**
LUPA	**Lehigh Univers**	**29.04**	**23**	*e*P	**P**	**17 41 09.1**	**+0.3**
	comp=Z,1.6nm,0.7s						
LUPA				*e*P	**pP**	**17 41 59.0**	**+2.2**
PV12	**Saucer Basin,**	**29.04**	**329**	*e*P	**P**	**17 41 10.2**	**+1.1**
	comp=Z,40nm,0.9s						
PV18	**Skein Mesa, Pa**	**29.04**	**328**	*e*P	**P**	**17 41 08.7**	**-0.3**
	comp=Z,28nm,1.4s						
PV18				*e*P	**pP**	**17 41 59.3**	**+2.2**
PV07	**Paradox Valley**	**29.06**	**329**	*e*P	**P**	**17 41 10.2**	**+1.0**
	comp=Z,16nm,1.2s						
PV07				*e*P	**pP**	**17 41 58.1**	**+0.9**
J47A	**Sunmer**	**29.06**	**8**	*e*P	**P**	**17 41 08.3**	**-0.6**
	comp=Z,20nm,0.8s						
J47A				*e*P	**pP**	**17 41 56.2**	**-0.7**
J47A	**Sunmer**	**29.06**	**8**	P	**P**	**17 41 08.4**	**-0.5**
	baz=190						
PV11	**David Mesa, Pa**	**29.06**	**328**	*e*P	**P**	**17 41 09.8**	**+0.6**
	comp=Z,17nm,1.1s						
PV11				*e*P	**pP**	**17 41 59.1**	**+1.9**
J45A	**Montague**	**29.08**	**5**	P	**P**	**17 41 08.8**	**-0.2**
	baz=187						
PV16	**Nyswonger Mesa**	**29.10**	**328**	*e*P	**P**	**17 41 10.1**	**+0.6**
	comp=Z,18nm,1.1s						
PV19	**Morning Glory**	**29.13**	**328**	*e*P	**P**	**17 41 10.9**	**+1.1**
	comp=Z,9.8nm,0.8s						
K51A	**Iona Station**	**29.14**	**13**	P	**P**	**17 41 09.4**	**-0.1**
	baz=197						
PV20	**West Nyswonger**	**29.14**	**328**	*e*P	**P**	**17 41 10.7**	**+0.8**
	comp=Z,23nm,1.3s						
PV20				*e*P	**pP**	**17 42 00.2**	**+2.3**
PV04	**Paradox Valley**	**29.15**	**328**	*e*P	**P**	**17 41 11.0**	**+1.0**
	comp=Z,15nm,0.9s						
PV04				*e*P	**pP**	**17 41 59.9**	**+1.8**
N59A	**State Game Lan**	**29.17**	**22**	*e*P	**P**	**17 41 09.9**	**0.0**
	comp=Z,13nm,0.5s						
N59A				*e*P	**pP**	**17 42 01.4**	**+3.4**
N59A	**State Game Lan**	**29.17**	**22**	P	**P**	**17 41 10.3**	**+0.5**
	baz=209,SNR=7.4						
BBSR	**BB Station**	**29.18**	**48**	*e*P	**P**	**17 41 10.8**	**+0.8**
	comp=Z,68nm,1.0s						
PV22	**Blue Mesa, Par**	**29.20**	**329**	*e*P	**P**	**17 41 11.6**	**+1.2**
	comp=Z,10.0nm,1.0s						
PV22				*e*P	**pP**	**17 42 01.3**	**+2.8**
PV10	**Paradox Valley**	**29.21**	**328**	*e*P	**P**	**17 41 10.1**	**-0.4**
	comp=Z,28nm,1.4s						
GLA	**Glamis**	**29.21**	**314**	*e*P	**P**	**17 41 11.3**	**+0.9**
	comp=Z,4.9nm,0.6s						
GLA				*e*P	**pP**	**17 42 00.0**	**+0.8**
GLA	**Glamis**	**29.21**	**314**	*e*P	**P**	**17 41 11.3**	**+0.9**
GLA				*e**PP	**pP**	**17 42 00.0**	**+0.8**
GLA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
L54A	**Sinclairville**	**29.22**	**16**	P	**P**	**17 41 10.2**	**-0.1**
	baz=201						
PV23	**Carpenter Ridg**	**29.25**	**328**	*e*P	**P**	**17 41 11.8**	**+0.8**
	comp=Z,10nm,0.8s						
PV23				*e*P	**pP**	**17 42 01.1**	**+2.0**
J48A	**Bridge Port**	**29.27**	**9**	*e*P	**P**	**17 41 09.8**	**-0.9**
	comp=Z,10nm,0.8s						
J48A	**Bridge Port**	**29.27**	**9**	P	**P**	**17 41 10.8**	**+0.1**
	baz=192						
PV09	**Paradox Valley**	**29.35**	**328**	*e*P	**P**	**17 41 11.5**	**-0.3**
I42A	**Draeger Farm,**	**29.39**	**2**	*e*P	**P**	**17 41 11.9**	**+0.2**
	comp=Z,15nm,0.7s						
I42A				*e*P	**pP**	**17 41 59.0**	**-0.8**
I42A	**Draeger Farm,**	**29.39**	**2**	P	**P**	**17 41 11.8**	**+0.1**
	baz=182						
L55A	**Hinsdale**	**29.42**	**18**	P	**P**	**17 41 12.1**	**+0.1**
	baz=203,SNR=5.6						
BRNJ	**Basking Ridge**	**29.43**	**24**	*e*P	**P**	**17 41 12.3**	**+0.2**
	comp=Z,11nm,0.

baz=184
K55A **Perry** 30.02 18 P P 17 41 17.3 -0.1
baz=203
I49A **Point Hope** 30.05 10 eP P 17 41 17.3 -0.3
comp=Z,36nm,0.6s
I49A **Point Hope** 30.05 10 P P 17 41 17.2 -0.4
baz=194
MMNY **Mt. Morris Dam** 30.08 18 eP P 17 41 18.0 +0.2
comp=Z,50nm,1.6s
MMNY epP pP 17 42 10.8 +4.7
I48A **Sherman Twp** 30.15 9 P P 17 41 18.1 -0.3
baz=192
O20A **White River Ci** 30.19 331 eP P 17 41 19.8 +0.6
comp=Z,28nm,1.0s
O20A **White River Ci** 30.19 331 P P 17 41 20.4 +1.3
baz=143,SNR=12
BINY **Binghamton** 30.22 21 eP P 17 41 19.2 +0.1
comp=Z,18nm,0.6s
BINY epP pP 17 42 06.9 -0.5
BINY **Binghamton** 30.22 21 P P 17 41 18.8 -0.2
baz=208,SNR=12
I51A **Listowel** 30.28 13 P P 17 41 19.1 -0.4
baz=197,SNR=6.2
M61A **Granite Spring** 30.28 25 P P 17 41 19.5 -0.1
baz=212,SNR=5.3
H45A **Beulah** 30.29 6 P P 17 41 19.4 -0.2
baz=188
H46A **Fife Lake** 30.30 7 P P 17 41 19.5 -0.2
baz=189
ACTO **Acton** 30.31 14 P P 17 41 19.6 -0.3
baz=199
MEDO **Medina** 30.32 17 eP P 17 41 20.8 +0.9
comp=Z,18nm,0.8s
MEDO **Medina** 30.32 17 P P 17 41 20.0 +0.1
baz=202
PKCU **Pink Cliffs** 30.32 323 eP P 17 41 21.3 +0.9
comp=Z,18nm,1.3s
PKCU epP pP 17 42 11.3 +2.4
KNB **Kanab** 30.33 322 eP P 17 41 22.1 +1.7
comp=Z,3.8nm,0.8s
KNB epP pP 17 42 10.7 +1.9
KNB esP sP 17 42 37.6 +0.6
KNB **Kanab** 30.33 322 eP P 17 41 22.1 +1.7
KNB e*PP pP 17 42 10.7 +1.9
KNB e*SP sP 17 42 37.7 +0.6
KNB pmax pmax
comp=Z,4.0nm,0.8s
BASO **Ashfield** 30.34 12 P P 17 41 19.9 -0.2
baz=196
J54A **Appleton** 30.36 17 eP P 17 41 19.8 -0.5
comp=Z,20nm,0.6s
J54A **Appleton** 30.36 17 P P 17 41 20.3 0.0
baz=202
SRU **San Rafael Swe** 30.52 328 eP P 17 41 23.0 +0.9
comp=Z,20nm,1.5s
SRU epP pP 17 42 12.7 +2.4
SRU **San Rafael Swe** 30.52 328 eP P 17 41 23.0 +0.9
SRU e*PP pP 17 42 12.7 +2.4
SRU pmax pmax
comp=Z,20nm,1.5s
BWLO **Walkerton** 30.55 13 P P 17 41 21.6 -0.4
baz=197,SNR=11
LCMT **Little Creek M** 30.58 322 eP P 17 41 23.9 +1.4
comp=Z,2.3nm,0.8s
LCMT epP pP 17 42 13.0 +2.0
J55A **Hilton** 30.59 18 eP P 17 41 22.4 +0.1
comp=Z,14nm,0.8s
J55A **Hilton** 30.59 18 P P 17 41 22.0 -0.3
baz=204
GLMI **Grayling** 30.65 8 eP P 17 41 22.6 -0.2
comp=Z,35nm,0.8s
GLMI **Grayling** 30.65 8 P P 17 41 22.2 -0.6
baz=190
MTPU **Mount Pierson** 30.66 324 eP P 17 41 24.9 +1.5
comp=Z,3.8nm,0.7s
MTPU epP pP 17 42 14.0 +2.2
PFO **Pinyon Flats O** 30.66 313 P P 17 41 22.8 -0.5
baz=122
H48A **Harrisville** 30.71 9 eP P 17 41 22.9 -0.5
comp=Z,38nm,0.8s
H48A **Harrisville** 30.71 9 P P 17 41 23.1 -0.2
baz=193
I52A **Shelburne** 30.72 14 P P 17 41 23.2 -0.3
baz=199
Q16A **Castle Valley** 30.72 327 eP P 17 41 24.7 +0.9
comp=Z,9.9nm,1.4s
Q16A epP pP 17 42 12.8 +0.7
G45A **Suttons Bay** 30.74 6 eP P 17 41 22.9 -0.7
comp=Z,92nm,0.6s
G45A **Suttons Bay** 30.74 6 P P 17 41 23.3 -0.3
baz=188,SNR=11
KSCT **Kent School, K** 30.75 25 eP P 17 41 23.9 +0.2
comp=Z,9.7nm,0.6s
G40A **Rib Lake** 30.75 360 eP P 17 41 23.4 -0.3
comp=Z,11nm,1.0s
G40A epP pP 17 42 09.8 -2.2
G40A **Rib Lake** 30.75 360 P P 17 41 23.6 -0.2
baz=180,SNR=8.0
P18A **Preston Nutter** 30.77 329 eP P 17 41 25.1 +0.8
comp=Z,10nm,1.1s
P18A epP pP 17 42 14.1 +1.5
G39A **Holcombe** 30.78 358 P P 17 41 23.7 -0.3
baz=178,SNR=13
SPMN **Marine on St.** 30.80 356 eP P 17 41 23.5 -0.6
comp=Z,39nm,0.6s
SPMN epP pP 17 42 12.3 -0.1
SPMN **Marine on St.** 30.80 356 P P 17 41 23.7 -0.4
baz=175,SNR=13
SZCU **Shurtz Canyon** 30.88 323 eP P 17 41 25.8 +0.6
comp=Z,3.8nm,0.9s
SZCU epP pP 17 42 15.3 +1.5
SUSD **Miller** 30.88 347 P P 17 41 24.9 0.0
baz=163,SNR=14
PKRO **Pickering** 30.89 15 P P 17 41 24.6 -0.4
baz=201
DRWO **Darlington Wes** 30.89 16 P P 17 41 24.4 -0.5
baz=202
P17A **Butcher Ranch,** 30.91 328 eP P 17 41 26.6 +1.2
comp=Z,12nm,0.8s
P17A epP pP 17 42 16.0 +2.3
MSU **Marysvale** 30.98 325 eP P 17 41 25.1 -1.0
MSU **Marysvale** 30.98 325 eP P 17 41 25.1 -1.0
BMRO **Meriville Lake** 30.99 12 P P 17 41 25.5 -0.3
baz=197
RWWY **Rawlins** 31.00 335 eP P 17 41 26.4 +0.2
comp=Z,35nm,0.9s
CCUT **Cedar City** 31.01 322 eP P 17 41 27.6 +1.3
comp=Z,3.3nm,0.9s
CCUT epP pP 17 42 17.4 +2.5
TMUT **Trail Mountain** 31.02 327 eP P 17 41 27.4 +0.9
comp=Z,5.3nm,1.0s
WLVO **Wesleyville** 31.03 16 P P 17 41 25.9 -0.2
baz=202,SNR=9.1
G47A **Hillman** 31.09 8 P P 17 41 25.9 -0.7
baz=192
F42A **Maple Grove Fa** 31.28 3 P P 17 41 27.9 -0.4
baz=183
F37A **Hinrichs Farm,** 31.28 356 P P 17 41 28.5 +0.1
baz=175
H52A **Wyevale** 31.33 14 P P 17 41 28.4 -0.3
baz=199
F45A **CMU Biological** 31.39 6 P P 17 41 29.0 -0.3
baz=188
F40A **Park Falls** 31.40 360 P P 17 41 28.9 -0.5
baz=180,SNR=13
F39A **Loretta** 31.41 359 P P 17 41 29.1 -0.4
baz=178
SHPR **Sheep Range** 31.45 319 epP pP 17 42 20.9 +2.0
PECO **Prince Edward** 31.45 18 eP P 17 41 29.0 -0.8
comp=Z,8.0nm,0.8s
PECO **Prince Edward** 31.45 18 P P 17 41 29.3 -0.5
baz=205
F38A **Pierce - Schro** 31.48 357 P P 17 41 29.7 -0.3
baz=176,SNR=18
I55A **Frankford** 31.50 17 P P 17 41 30.1 -0.2
baz=203,SNR=15
TRY **Troy** 31.53 23 eP P 17 41 31.2 +0.7
comp=Z,14nm,0.7s
K22A **Casper** 31.53 336 eP P 17 41 31.8 +1.0
comp=Z,25nm,1.0s
K22A **Casper** 31.53 336 P P 17 41 31.3 +0.5
baz=148
TOBO **Tobermory, Bru** 31.54 11 P P 17 41 29.9 -0.6
baz=196,SNR=5.7
COWI **Conover** 31.59 1 eP P 17 41 30.4 -0.6
comp=Z,22nm,0.6s
COWI epP pP 17 42 18.1 -1.4

SADO **Sadowa** 31.63 15 P P 17 41 31.3 -0.1
comp=Z,19nm,0.6s,baz=250,slow=6.6,SNR=37
SADO **Sadowa** 31.63 15 eP P 17 41 30.8 -0.5
comp=Z,20nm,0.6s
QUA2 **Belchertown** 31.67 25 eP P 17 41 31.4 -0.4
comp=Z,8.6nm,0.7s
MPU **Maple Canyon** 31.77 327 eP P 17 41 33.1 +0.2
comp=Z,13nm,1.0s
DELO **Deloro Mine** 31.80 17 eP P 17 41 32.6 -0.2
comp=Z,65nm,1.5s
DELO **Deloro Mine** 31.80 17 P P 17 41 32.4 -0.4
baz=203,SNR=12
GSC **Goldstone, Bar** 31.82 316 eP P 17 41 34.6 +1.3
comp=Z,7.0nm,1.4s
GSC epP pP 17 42 22.7 +0.3
GSC **Goldstone, Bar** 31.82 316 eP P 17 41 34.6 +1.3
GSC e*PP pP 17 42 22.7 +0.3
GSC pmax pmax
comp=Z,7.0nm,1.4s
F48A **Evansville** 31.92 10 P P 17 41 33.2 -0.7
baz=194,SNR=9.7
KLBO **Killbear Provi** 31.93 13 P P 17 41 33.0 -1.0
baz=198,SNR=5.4
RSSD **Black Hills** 31.94 341 eP P 17 41 35.3 +1.0
comp=Z,11nm,0.8s
RSSD **Black Hills** 31.94 341 eP P 17 41 35.3 +1.0
RSSD pmax pmax
comp=Z,11nm,0.8s
RSSD **Black Hills** 31.94 341 P P 17 41 34.5 +0.1
baz=154
H55A **Tweed** 31.95 17 P P 17 41 33.8 -0.4
baz=204,SNR=9.3
PSUT **Pine Spring** 31.95 323 eP P 17 41 35.0 +0.4
comp=Z,4.7nm,1.0s
E43A **Lone Tree Farm** 31.96 4 eP P 17 41 33.8 -0.5
comp=Z,27nm,0.6s
E43A **Lone Tree Farm** 31.96 4 P P 17 41 33.6 -0.6
baz=185,SNR=15
F49A **Sandfield** 31.96 11 P P 17 41 33.4 -0.8
baz=195
NLU **North Lily Min** 31.96 327 eP P 17 41 36.4 +1.8
comp=Z,17nm,1.0s
ACCN **Adirondack Com** 32.09 23 eP P 17 41 35.1 -0.3
comp=Z,9.1nm,0.6s
G53A **Haliburton** 32.09 15 P P 17 41 35.0 -0.4
baz=201,SNR=11
JLU **Jordanelle** 32.11 328 eP P 17 41 37.1 +1.2
comp=Z,8.4nm,1.1s
E38A **The Farm, Brul** 32.11 358 eP P 17 41 34.9 -0.7
comp=Z,28nm,0.8s
E38A epP pP 17 42 23.5 -0.6
E38A **The Farm, Brul** 32.11 358 P P 17 41 35.1 -0.5
baz=177,SNR=9.2
BANO **Bancroft** 32.17 16 P P 17 41 35.5 -0.6
baz=202,SNR=5.3
HRV **Adam Dziewonsk** 32.19 26 eP P 17 41 36.6 +0.3
comp=Z,24nm,1.5s
HRV **Adam Dziewonsk** 32.19 26 eP P 17 41 36.6 +0.3
HRV pmax pmax
comp=Z,24nm,1.5s
HRV **Adam Dziewonsk** 32.19 26 P P 17 41 35.9 -0.4
baz=215
BUKO **Buck Lake** 32.20 14 P P 17 41 36.0 -0.3
baz=199,SNR=21
E46A **Sault Ste Mari** 32.20 7 eP P 17 41 36.2 -0.2
comp=Z,15nm,0.8s
E46A **Sault Ste Mari** 32.20 7 P P 17 41 36.0 -0.4
baz=190,SNR=5.5
BCX **Boston College** 32.22 27 eP P 17 41 36.8 +0.3
comp=Z,15nm,0.7s
H56A **Elgin** 32.27 19 P P 17 41 36.5 -0.4
baz=205,SNR=6.8
E44A **Grand Marais A** 32.28 5 eP P 17 41 37.0 0.0
comp=Z,69nm,1.2s
E44A **Grand Marais A** 32.28 5 P P 17 41 36.6 -0.4
baz=187
CTU **Camp Tracy** 32.33 328 eP P 17 41 38.9 +1.2
comp=Z,9.1nm,1.0s
CTU epP pP 17 42 27.8 +1.5
NCB **Newcomb** 32.39 21 eP P 17 41 38.0 0.0
comp=Z,25nm,1.5s
TPNV **Topopah Spring** 32.41 319 eP P 17 41 40.1 +1.6
comp=Z,4.1nm,1.0s
TPNV epP pP 17 42 28.8 +1.4
TPNV **Topopah Spring** 32.41 319 P P 17 41 37.9 -0.6
baz=127
EDW2 **Edwards Air Fo** 32.41 314 P P 17 41 37.5 -0.9
baz=122
PLVO **Plevna** 32.43 17 eP P 17 41 38.1 -0.2
comp=Z,9.9nm,0.8s
PLVO **Plevna** 32.43 17 P P 17 41 38.0 -0.4
baz=204,SNR=6.6
E47A **Iron Bridge** 32.43 9 P P 17 41 38.2 -0.2
baz=192,SNR=6.6
TCUT **Toone Canyon** 32.47 329 eP P 17 41 40.9 +1.7
comp=Z,35nm,1.3s
TCUT epP pP 17 42 27.7 +0.1
DUG **Dugway, Tooele** 32.52 326 eP P 17 41 39.9 +0.5
comp=Z,4.3nm,0.9s
DUG **Dugway, Tooele** 32.52 326 eP P 17 41 39.9 +0.5
DUG pmax pmax
comp=Z,4.0nm,0.9s
DUG **Dugway, Tooele** 32.52 326 P P 17 41 39.5 +0.1
baz=136,SNR=5.2
F51A **Arnstein** 32.54 13 P P 17 41 38.6 -0.6
baz=198
F52A **Sundridge** 32.55 14 P P 17 41 38.7 -0.7
baz=199,SNR=13
D41A **Chassel** 32.56 2 eP P 17 41 39.2 -0.3
comp=Z,13nm,0.7s
D41A epP pP 17 42 27.5 -0.6
D41A **Chassel** 32.56 2 P P 17 41 39.0 -0.4
baz=182
E48A **Lockeyer** 32.63 10 P P 17 41 39.6 -0.5
baz=194,SNR=8.0
G55A **Calabogie** 32.73 17 P P 17 41 40.5 -0.4
baz=204,SNR=8.8
D46A **Sault St. Mari** 32.76 8 P P 17 41 40.6 -0.5
baz=191,SNR=16
LONY **Lake Ozonia** 32.83 20 eP P 17 41 41.3 -0.6
comp=Z,36nm,1.4s
LONY epP pP 17 42 29.6 -0.8
LONY **Lake Ozonia** 32.83 20 P P 17 41 41.6 -0.3
baz=208,SNR=11
E50A **Wahnapitae** 32.84 12 P P 17 41 41.3 -0.6
baz=197
R11A **Troy Canyon, C** 32.86 321 eP P 17 41 42.9 +0.5
comp=Z,2.2nm,0.9s
R11A epP pP 17 42 33.4 +2.2
BW06 **Boulder Array** 32.89 333 eP P 17 41 43.0 +0.3
comp=Z,3.2nm,0.9s
BW06 **Boulder Array** 32.89 333 P P 17 41 43.0 +0.3
baz=143
PD31 **Pinedale Array** 32.89 333 eP P 17 41 43.0 +0.3
comp=Z,4.1nm,1.0s
PDAR **Pinedale Array** 32.89 333 P P 17 41 43.0 +0.3
comp=Z,1.9nm,0.6s,baz=132,slow=10,SNR=17
PDAR ScP ScP 17 47 41.0 -1.1
comp=Z,0.5nm,0.4s,baz=131,slow=4.6,SNR=5.0
HWUT **Hardware Ranch** 32.92 330 eP P 17 41 43.9 +1.0
comp=Z,4.4nm,0.8s
PEMO **Pembroke** 32.97 17 P P 17 41 42.6 -0.4
baz=203,SNR=5.7
ALGO **Algonquin Park** 33.01 15 P P 17 41 42.9 -0.5
baz=202,SNR=18
D47A **Chapleau** 33.04 9 P P 17 41 42.9 -0.7
baz=192,SNR=6.4
SCZ2 **Santa Cruz Isl** 33.13 311 P P 17 41 43.9 -0.8
baz=119
ISA **Isabella, Lake** 33.16 315 eP P 17 41 44.2 -0.7
comp=Z,2.4nm,0.8s
ISA epP pP 17 42 35.4 +1.2
ISA esP PP 17 43 03.3 -2.0
ISA **Isabella, Lake** 33.16 315 eP P 17 41 44.2 -0.7
ISA e*PP pP 17 42 35.4 +1.2
ISA e*SP PP 17 43 03.3 -2.0
ISA pmax pmax
comp=Z,2.0nm,0.8s
BGU **Big Grassy Mou** 33.16 327 eP P 17 41 46.4 +1.4
comp=Z,19nm,1.7s
E52A **Mattawa** 33.17 14 P P 17 41 44.4 -0.3
baz=200
E51A **G1948 Merrick** 33.21 13 P P 17 41 44.8 -0.3
baz=199,SNR=22
ORIO **Orleans, Innes** 33.27 19 P P 17 41 45.4 -0.2
baz=206
PTGA **Pitinga** 33.32 114 eP P 17 41 44.7 -1.7

comp=Z,40nm,0.6s
PTGA **Pitinga** 33.32 114 eP P 17 41 45.3 -1.2
F55A **Otter Lake** 33.36 17 P P 17 41 46.2 -0.2
baz=204
D48A **Paudash Townsh** 33.37 10 P P 17 41 45.8 -0.6
baz=194,SNR=15
FRNY **Flat Rock** 33.37 21 eP P 17 41 46.0 -0.4
comp=Z,8.7nm,0.8s
FRNY epP pP 17 42 34.2 -0.9
C40A **Isle Royale Na** 33.41 1 eP P 17 41 46.3 -0.4
comp=Z,13nm,0.9s
C40A epP pP 17 42 34.5 -0.9
C40A **Isle Royale Na** 33.41 1 P P 17 41 46.3 -0.4
baz=181
EYMN **Ely** 33.45 358 eP P 17 41 46.2 -1.0
comp=Z,17nm,0.7s
EYMN **Ely** 33.45 358 P P 17 41 46.1 -1.0
baz=177,SNR=8.0
LBNH **Lisbon** 33.48 24 P P 17 41 46.8 -0.7
baz=213
E53A **Dumoine, Ponti** 33.50 16 P P 17 41 47.4 -0.2
baz=202,SNR=5.7
D49A **Beulah Townshi** 33.54 11 P P 17 41 47.6 -0.4
baz=195,SNR=19
AHID **Auburn Hatcher** 33.59 331 eP P 17 41 49.5 +0.8
comp=Z,14nm,0.8s
HVU **Hansel Valley** 33.65 328 eP P 17 41 50.2 +1.0
comp=Z,7.1nm,0.9s
HVU epP pP 17 42 39.8 +1.8
HVU **Hansel Valley** 33.65 328 eP P 17 41 50.2 +1.0
HVU e*PP pP 17 42 39.8 +1.8
HVU pmax pmax
comp=Z,7.0nm,0.9s
E54A **Lac Daplat, Po** 33.68 16 P P 17 41 48.9 -0.2
baz=203,SNR=13
D52A **ZEK Kipawa Sen** 33.87 14 P P 17 41 51.0 +0.2
baz=200,SNR=9.2
SNOW **Snow King Moun** 33.97 332 eP P 17 41 53.2 +1.2
comp=Z,30nm,0.8s
SNOW epP pP 17 42 41.0 +0.2
LOHW **Long Hollow** 34.02 333 eP P 17 41 53.5 +1.1
comp=Z,16nm,0.9s
LOHW epP pP 17 42 42.6 +1.4
TPAW **Teton Pass** 34.08 332 eP P 17 41 53.7 +0.7
comp=Z,15nm,0.9s
TPAW epP pP 17 42 42.5 +0.7
AGMN **Agassiz Nation** 34.13 353 eP P 17 41 52.4 -0.5
comp=Z,30nm,0.8s
AGMN epP pP 17 42 40.8 -1.0
AGMN esP sP 17 43 10.6 +0.8
AGMN **Agassiz Nation** 34.13 353 P P 17 41 52.5 -0.5
baz=170,SNR=21
D53A **Lac Vacive, Po** 34.15 15 eP P 17 41 52.9 -0.2
comp=Z,12nm,0.8s
D53A **Lac Vacive, Po** 34.15 15 P P 17 41 53.2 0.0
baz=201,SNR=12
MOOW **Moose Ponds** 34.19 333 eP P 17 41 54.4 +0.5
comp=Z,9.0nm,1.1s
ELK **Elko** 34.23 325 ScP ScP 17 47 45.6 -1.4
comp=Z,1.3nm,0.7s,baz=95,slow=4.7,SNR=5.3
ELK **Elko** 34.23 325 eP P 17 41 55.0 +0.7
comp=Z,3.0nm,0.8s
ELK **Elko** 34.23 325 eP P 17 41 55.0 +0.7
ELK pmax pmax
comp=Z,3.0nm,0.8s
FXWY **Fox Creek** 34.23 332 eP P 17 41 54.6 +0.4
comp=Z,6.5nm,1.1s
FXWY epP pP 17 42 43.8 +0.7
MOQ **Mont Orford** 34.26 22 eP P 17 41 53.7 -0.5
MOQ epP pP 17 42 42.9 -0.2
TRQ **Mont Tremblant** 34.26 19 eP P 17 41 53.8 -0.4
MDND **Maddock** 34.27 348 eP P 17 41 54.4 +0.2
comp=Z,211nm,0.9s
MDND epP pP 17 42 43.0 -0.1
MDND esP sP 17 43 12.8 +1.8
MDND **Maddock** 34.27 348 P P 17 41 54.3 +0.1
baz=163,SNR=45
IMW **Indian Meadow** 34.40 333 eP P 17 41 55.9 +0.2
comp=Z,6.9nm,0.5s
FLWY **Flagg Ranch** 34.44 333 eP P 17 41 56.4 +0.4
comp=Z,23nm,1.4s
MLAC **Mammoth, Mammo** 34.48 317 P P 17 41 55.9 -0.5
baz=124
D54A **Lac Fusel, La** 34.48 16 P P 17 41 55.8 -0.3
baz=203,SNR=14
NV11 **Mina Array Sit** 34.51 319 eP P 17 41 58.0 +1.5
comp=Z,0.3nm,0.9s
NV11 epP pP 17 42 48.3 +2.6
OMMB **Old Mammoth Mi** 34.58 317 eP P 17 41 57.9 +0.5
comp=Z,6.9nm,1.5s
OMMB epP pP 17 42 48.8 +2.0
NVAR **Mina Array Bea** 34.60 319 P P 17 41 59.5 +2.1
comp=Z,4.3nm,0.8s,baz=137,slow=7.8,SNR=24
NVAR pP pP 17 42 47.1 +0.6
comp=Z,12nm,0.9s,baz=132,slow=8.6,SNR=12
NVAR ScP ScP 17 47 48.2 -0.1
comp=Z,1.8nm,0.7s,baz=133,slow=4.3,SNR=8.0
H17A **Grant Village** 34.63 334 eP P 17 41 58.6 +0.9
comp=Z,8.2nm,1.1s
YPP **Pitchstone Pla** 34.63 333 eP P 17 41 58.7 +1.0
comp=Z,9.3nm,1.4s
MDPB **Devils Postpil** 34.64 317 eP P 17 41 59.5 +1.6
comp=Z,5.5nm,1.1s
MDPB epP pP 17 42 49.0 +1.8
MDPB esP sP 17 43 16.9 +1.5
WVL **Waterville** 34.67 26 eP P 17 41 58.3 +0.7
comp=Z,10nm,0.9s
RLMT **Red Lodge** 34.69 336 eP P 17 41 58.6 +0.5
comp=Z,19nm,1.2s
RLMT **Red Lodge** 34.69 336 P P 17 41 58.5 +0.5
baz=146,SNR=12
YFT **Old Faithful** 34.79 333 eP P 17 42 01.7 +2.7
comp=Z,14nm,1.0s
KVN **Kaiserville** 34.84 320 eP P 17 42 00.4 +1.0
comp=Z,3.2nm,0.8s
KVN epP pP 17 42 50.8 +2.1
KVN **Kaiserville** 34.84 320 eP P 17 42 00.4 +1.0
KVN e*PP pP 17 42 50.8 +2.1
KVN pmax pmax
comp=Z,3.0nm,0.8s
RYN **Ryan** 34.85 319 eP P 17 42 00.7 +1.2
comp=Z,3.0nm,1.0s
LAO **LASA Array** 34.92 340 eP P 17 41 59.8 -0.1
comp=Z,25nm,0.9s
LAO **LASA Array** 34.92 340 P P 17 42 00.1 +0.3
baz=152,SNR=12
YMR **Madison River** 35.02 334 eP P 17 42 02.4 +1.5
comp=Z,26nm,0.4s
YHH **Holmes Hill** 35.07 334 eP P 17 42 03.1 +1.7
comp=Z,10.0nm,1.2s
BMN **Battle Mountai** 35.16 323 eP P 17 42 02.8 +0.7
comp=Z,5.2nm,1.1s
BMN epP pP 17 42 53.5 +2.3
BMN **Battle Mountai** 35.16 323 eP P 17 42 02.8 +0.7
BMN e*PP pP 17 42 53.5 +2.3
BMN pmax pmax
comp=Z,5.0nm,1.1s
VLDQ **Val d'Or** 35.17 15 eP P 17 42 00.9 -0.9
comp=Z,22nm,1.5s
YHB **Horse Butte** 35.19 333 eP P 17 42 02.9 +0.5
comp=Z,4.6nm,0.7s
QLMT **Earthquake Lak** 35.35 333 eP P 17 42 03.2 -0.5
QLMT epP pP 17 42 55.3 +2.5
WAKR **Walker** 35.37 318 eP P 17 42 04.2 +0.2
comp=Z,2.5nm,0.8s
WAKR epP pP 17 42 55.4 +1.8
PKME **Peaks-Kenny Pk** 35.39 26 eP P 17 42 02.7 -1.1
comp=Z,30nm,1.6s
PKME epP pP 17 42 51.4 -1.4
PKME **Peaks-Kenny Pk** 35.39 26 P P 17 42 03.7 0.0
baz=216
GCMT **Greycliff** 35.40 336 eP P 17 42 04.2 +0.2
GCMT epP pP 17 42 54.6 +1.5
YERR **Yerington** 35.52 319 eP P 17 42 06.2 +1.0
comp=Z,4.1nm,0.8s
YERR epP pP 17 42 56.7 +2.2
CMB **Columbia Colle** 35.73 317 eP P 17 42 07.6 +0.8
comp=Z,2.3nm,0.9s
CMB epP pP 17 42 57.6 +1.1
CMB **Columbia Colle** 35.73 317 eP P 17 42 07.6 +0.8
CMB e*PP pP 17 42 57.6 +1.1
CMB pmax pmax
comp=Z,2.0nm,0.9s
HLID **Hailey** 35.78 329 eP P 17 42 08.0 +0.6
comp=Z,4.0nm,1.0s
HLID **Hailey** 35.78 329 P P 17 42 07.8 +0.4

	baz=137						
SAO	San Andreas Ge	35.78	314	eP	P	17 42 08.4	+1.1
	comp=Z,18nm,1.1s						
PNTR	Pine Nut	35.80	319	eP	P	17 42 08.8	+1.1
	comp=Z,6.0nm,0.8s						
PNTR				epP	pP	17 42 59.5	+2.4
DGMT	Dagmar	35.92	344	eP	P	17 42 08.9	+0.6
	comp=Z,118nm,0.9s						
DGMT				epP	pP	17 42 57.4	-0.2
DGMT	Dagmar	35.92	344	P	P	17 42 09.1	+0.8
	baz=156,SNR=21						
MCMT	McKenzie Canyo	35.98	332	eP	P	17 42 10.4	+1.3
MCMT				epP	pP	17 43 00.8	+2.5
PAHR	Pah Rah Range	36.03	320	eP	P	17 42 10.7	+1.2
	comp=Z,8.3nm,1.6s						
PAHR				epP	pP	17 43 00.8	+1.9
BOZ	Bozeman (W)	36.05	334	eP	P	17 42 10.5	+0.9
	comp=Z,7.4nm,0.9s						
BOZ				epP	pP	17 43 00.0	+1.2
BOZ	Bozeman (W)	36.05	334	eP	P	17 42 10.5	+0.9
BOZ				e*PP	pP	17 43 00.0	+1.2
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BOZ	Bozeman (W)	36.05	334	P	P	17 42 10.4	+0.9
	baz=143,SNR=15						
ULM	Lac du Bonnet	36.05	354	P	P	17 42 08.7	-0.6
	comp=Z,18nm,0.7s,baz=175,slow=9.5,SNR=15						
ULM				pP	pP	17 42 58.0	-0.5
	comp=Z,24nm,1.1s,baz=179,slow=8.5,SNR=4.3						
ULM	Lac du Bonnet	36.05	354	eP	P	17 42 07.9	-1.4
	comp=Z,26nm,0.8s						
ULM				epP	pP	17 42 57.5	-1.1
ULM				esP	sP	17 43 27.1	+0.7
ULM	Lac du Bonnet	36.05	354	eP	P	17 42 07.9	-1.4
ULM				e*PP	pP	17 42 57.5	-1.1
ULM				e*SP	sP	17 43 27.1	+0.7
ULM				pmax	pmax		
	comp=Z,26nm,0.8s						
LSQQ	Lebel-sur-Quev	36.16	15	P	P	17 42 10.2	-0.1
	baz=202						
DLMT	Dillon	36.28	333	eP	P	17 42 12.6	+1.0
	comp=Z,8.2nm,1.0s						
DLMT				epP	pP	17 43 03.4	+2.5
GGN	Saint George	36.34	28	eP	P	17 42 11.5	-0.3
	comp=Z,20nm,1.4s						
GGN				epP	pP	17 43 01.7	+0.6
LRM	Limekiln Ridge	36.58	333	eP	P	17 42 15.0	+0.9
LRM				epP	pP	17 43 04.7	+1.2
MATQ	Matagami	36.66	13	P	P	17 42 14.3	-0.2
	baz=200,SNR=19						
BEKR	Beckworth	36.73	319	eP	P	17 42 16.5	+1.0
	comp=Z,4.4nm,0.9s						
BEKR				epP	pP	17 43 06.9	+1.8
HRY	Holter Researc	37.02	335	eP	P	17 42 17.8	+0.1
PQI	Presque Isle	37.05	25	eP	P	17 42 17.1	-0.7
	comp=Z,17nm,1.2s						
WVOR	Wild Horse Val	37.26	324	eP	P	17 42 20.6	+0.8
	comp=Z,4.3nm,0.9s						
WVOR				epP	pP	17 43 11.7	+2.4
WVOR	Wild Horse Val	37.26	324	eP	P	17 42 20.6	+0.8
WVOR				e*PP	pP	17 43 11.7	+2.4
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
EGMT	Eagleton	37.29	338	eP	P	17 42 20.8	+0.8
	comp=Z,55nm,1.5s						
EGMT	Eagleton	37.29	338	P	P	17 42 20.4	+0.5
	baz=147,SNR=8.4						
LPAZ	La Paz	37.38	144	P	P	17 42 22.6	+1.0
	comp=Z,5.3nm,0.6s,baz=333,slow=7.3,SNR=22						
LPAZ	La Paz	37.38	144	eP	P	17 42 22.3	+0.7
	comp=Z,5.5nm,0.6s						
LPAZ	La Paz	37.38	144	eP	P	17 42 22.3	+0.7
LPAZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPAZ	La Paz	37.38	144	eP	P	17 42 22.6	+1.0
CHGQ	Chibougamau	37.62	17	P	P	17 42 21.8	-0.7
	baz=205,SNR=6.2						
PLID	Pearl Lake	37.67	329	eP	P	17 42 22.9	-0.4
	comp=Z,6.6nm,0.9s						
J08A	Circle Bar Ran	37.77	325	eP	P	17 42 24.4	+0.4
	comp=Z,4.3nm,0.8s						
J08A				epP	pP	17 43 15.5	+1.8
LMN	Caledonia Moun	37.84	29	eP	P	17 42 23.8	-0.6
	comp=Z,36nm,1.4s						
LMN				epP	pP	17 43 14.3	+0.4
MOD	Modoc Plateau	37.90	322	eP	P	17 42 25.8	+0.6
	comp=Z,2.6nm,0.9s						
MOD				epP	pP	17 43 15.5	+0.5
MSO	Missoula	38.01	333	eP	P	17 42 26.2	+0.3
	comp=Z,6.8nm,1.0s						
MSO	Missoula	38.01	333	P	P	17 42 26.3	+0.4
	baz=140						
BMO	Blue Mountains	38.16	328	eP	P	17 42 26.4	-0.8
	comp=Z,2.8nm,0.8s						
BMO				epP	pP	17 43 17.8	+0.8
BMO	Blue Mountains	38.16	328	eP	P	17 42 26.4	-0.8
BMO				e*PP	pP	17 43 17.8	+0.8
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BATG	Bathurst New B	38.35	26	eP	P	17 42 27.8	-0.8
	comp=Z,47nm,1.7s						
I07A	Izee	38.81	326	eP	P	17 42 31.2	-1.5
	comp=Z,3.3nm,1.1s						
F10A	Beach Ranch, E	38.91	329	eP	P	17 42 33.2	-0.2
	comp=Z,8.6nm,0.8s						
MNMC	Minye Minye	38.92	148	eP	P	17 42 35.3	+1.2
	comp=Z,18nm,0.9s						
GBN	Guysborough	39.15	32	eP	P	17 42 35.0	-0.3
	comp=Z,69nm,1.7s						
L04D	Klamath Falls	39.29	321	P	P	17 42 36.9	+0.3
	baz=125						
G08A	Pilot Rock	39.31	327	eP	P	17 42 37.5	+0.7
	comp=Z,1.6nm,0.8s						
PINE	Pine Mountain	39.43	324	eP	P	17 42 37.9	+0.1
	comp=Z,5.5nm,0.8s						
GO01	Chusmiza	39.58	148	eP	P	17 42 41.6	+2.0
	comp=Z,26nm,1.4s						
WALA	Waterton Lakes	39.73	335	eP	P	17 42 40.6	+0.4
	comp=Z,4.8nm,0.8s						
J04D	Umpqua Nationa	39.77	323	P	P	17 42 41.0	+0.3
	baz=126						
I05D	Terrebonne, OR	39.99	324	P	P	17 42 43.0	+0.7
	baz=128						
I04A	Tendick Farm,	40.27	323	P	P	17 42 45.1	+0.5
	baz=127						
D08A	Wollman Farm,	40.50	329	eP	P	17 42 46.3	-0.1
	comp=Z,2.7nm,0.8s						
NEW	Newport	40.51	332	eP	P	17 42 46.0	-0.5
	comp=Z,2.5nm,0.9s						
NEW	Newport	40.51	332	eP	P	17 42 46.0	-0.5
NEW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NEW	Newport	40.51	332	P	P	17 42 47.2	+0.7
	baz=137						
I03D	Drain, OR	40.77	322	P	P	17 42 49.7	+1.1
	baz=125						
J01E	Myrtle Point	40.81	321	P	P	17 42 50.0	+1.0
	baz=124						
H04D	Lebanon	40.90	324	P	P	17 42 49.6	-0.1
	baz=127						
FFC	Flin Flon	41.29	349	eP	P	17 42 53.2	+0.5
	comp=Z,313nm,1.5s						
FFC	Flin Flon	41.29	349	i P	P	17 42 53.1	+0.5
I02D	Swisshome	41.30	323	P	P	17 42 53.0	+0.2
	baz=125						
G03D	McMinnville, O	41.61	324	P	P	17 42 56.0	+0.6
	baz=127						
LON	Longmire	41.77	327	eP	P	17 42 59.9	+3.1
	comp=Z,2.9nm,0.8s						
LON	Longmire	41.77	327	eP	P	17 42 59.9	+3.1
LON				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LVC	Limon Verde	42.20	150	P	P	17 43 02.9	+2.1
	comp=Z,2.9nm,0.5s,baz=307,slow=4.0,SNR=5.8						
LVC				ScP	ScP	17 48 20.5	+2.8
	comp=Z,3.6nm,0.7s,baz=180,slow=2.0,SNR=2.5						
CLDB	Colider	42.20	125	eP	P	17 42 58.5	-2.1
D03D	Eldon	42.94	327	P	P	17 43 06.3	+0.2
	baz=129						
A04D	Lummi Island	43.51	329	P	P	17 43 11.1	+0.6
	baz=130						
DRLN	Deer Lake	43.75	31	eP	P	17 43 11.7	-0.8
	comp=Z,95nm,1.6s						
SCHQ	Schefferville	44.18	19	P	P	17 43 15.5	-0.3
	comp=Z,19nm,0.4s,baz=222,slow=6.8,SNR=24						
SCHQ	Schefferville	44.18	19	eP	P	17 43 15.5	-0.3
	comp=Z,36nm,0.9s						
LCO	Las Campanas	47.03	157	eP	P	17 43 38.8	0.0
SMTB	Santa Maria do	48.00	116	eP	P	17 43 44.4	-1.8
AQDB	Aquidauana	48.36	135	eP	P	17 43 48.5	-0.2
C2SB	Chapadao do Su	49.27	131	eP	P	17 43 56.0	+0.4
CFA	Coronel Fontan	50.30	156	P	P	17 44 04.5	+1.3
	comp=Z,4.5nm,0.6s,baz=347,slow=6.6						
CFA				ScP	ScP	17 48 53.8	+2.9
	comp=Z,4.2nm,0.7s,baz=316,slow=5.7,SNR=8.7						
YKA	Yellowknife Ar	51.09	346	P	P	17 44 08.3	-0.2
	comp=Z,13nm,0.8s,baz=144,slow=7.8,SNR=60						
YKA				pP	pP	17 45 01.2	0.0
	comp=Z,9.7nm,0.7s,baz=144,slow=7.7,SNR=14						
BDFB	Brasilia	51.13	124	P	P	17 44 08.3	-1.5
	comp=Z,3.5nm,0.4s,baz=289,slow=11,SNR=7.2						
YKW3	Yellowknife Ar	51.15	346	eP	P	17 44 08.7	-0.3
	comp=Z,30nm,1.1s						
CPUP	Villa Florida	51.48	142	P	P	17 44 10.6	-1.5
	comp=Z,7.3nm,1.0s,baz=328,slow=7.5,SNR=4.6						
CPUP	Villa Florida	51.48	142	eP	P	17 44 12.2	+0.2
ITRB	Iturama	51.68	130	eP	P	17 44 13.3	-0.4
GO05	Huala	52.06	161	eP	P	17 44 17.1	+0.8
	comp=Z,21nm,0.9s						
BB19B	Bebedouro	53.87	130	eP	P	17 44 29.2	-0.5
PMNB	Patos De Minas	53.99	126	eP	P	17 44 30.0	-0.6
FRTB	Fartura	54.53	133	eP	P	17 44 34.9	+0.6
RCLB	Rio Claro- Sao	55.42	131	eP	P	17 44 40.7	-0.1
SPB	Sao Paulo	56.21	132	eP	P	17 44 46.8	+0.5
PLCA	Paso Flores	57.76	163	P	P	17 44 57.1	+0.2
	comp=Z,5.9nm,0.8s,baz=8.3,slow=5.8,SNR=12						
PLCA	Paso Flores	57.76	163	eP	P	17 44 57.1	+0.2
	comp=Z,12nm,1.0s						
PLCA	Paso Flores	57.76	163	eP	P	17 44 57.1	+0.2
PLCA				pmax	pmax		
	comp=Z,12nm,1.0s						
RIB01	Linhares ES	59.23	123	eP	P	17 45 06.3	-1.0
CAM01	Campos-RJ	59.54	126	eP	P	17 45 08.4	-1.0
ALF01	Guarapari-ES	59.63	125	eP	P	17 45 09.4	-0.6
RES	Resolute Bay	60.32	359	eP	P	17 45 13.2	-0.7
	comp=Z,15nm,0.9s						
RES	Resolute Bay	60.32	359	eP	P	17 45 13.2	-0.7
RES				pmax	pmax		
	comp=Z,15nm,0.9s						
EPYK	Eagle Plains	60.38	340	P	P	17 45 14.4	-0.1
	baz=126						
INK	Inuvik	60.60	343	eP	P	17 45 15.6	-0.2
	comp=Z,8.1nm,0.8s						
INK				epP	pP	17 46 12.7	+2.2
INK	Inuvik	60.60	343	eP	P	17 45 15.6	-0.2
INK				e*PP	pP	17 46 12.7	+2.2
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DOT	Dot Lake	61.63	336	eP	P	17 45 22.8	-0.1
	comp=Z,5.0nm,1.0s						
DOT				epP	pP	17 46 17.5	-0.3
ANGG	Ammassalik, Gr	61.92	22	eP	P	17 45 23.3	-1.4
	comp=Z,14nm,0.7s						
RIDG	Independent Ri	61.98	336	eP	P	17 45 25.2	0.0
	comp=Z,6.0nm,1.0s						
RIDG				epP	pP	17 46 20.5	+0.3
GHO	Glory Hole Cre	62.91	333	eP	P	17 45 31.2	-0.2
	comp=Z,9.3nm,0.9s						
GHO				epP	pP	17 46 27.9	+1.4
PMR	Palmer	62.93	333	eP	P	17 45 31.0	-0.5
	comp=Z,9.2nm,1.3s						
PMR	Palmer	62.93	333	eP	P	17 45 31.0	-0.5
PMR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PRP	Porcupine Dome	63.03	337	eP	P	17 45 31.6	-0.7
	comp=Z,4.1nm,0.8s						
PRP				epP	pP	17 46 27.2	-0.4
HDA	Harding Lake	63.10	336	eP	P	17 45 31.7	-0.9
	comp=Z,5.0nm,1.0s						
HDA	Harding Lake	63.10	336	P	P	17 45 32.5	-0.1
	baz=114						
TULEG	The	63.11	5	eP	P	17 45 31.9	-0.5
	comp=Z,52nm,1.6s						
ILAR	Eielson Array	63.23	336	P	P	17 45 32.5	-0.8
	comp=Z,4.6nm,0.9s,baz=117,slow=4.5,SNR=32						
ILAR				pP	pP	17 46 27.9	-0.7
	comp=Z,3.6nm,1.0s,baz=119,slow=4.7,SNR=6.8						
ILB	Eielson Array	63.23	336	eP	P	17 45 32.6	-0.8
	comp=Z,6.9nm,1.0s						
ILB				epP	pP	17 46 27.8	-0.7
RND	Reindeer	63.48	335	eP	P	17 45 35.0	-0.1
	comp=Z,9.9nm,1.0s						
RND				epP	pP	17 46 30.1	-0.2
RND	Reindeer	63.48	335	eP	P	17 45 35.0	-0.1
RND				e*PP	pP	17 46 30.1	-0.2
RND				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CCB	Clear Creek Bu	63.54	336	eP	P	17 45 34.6	-0.7
	comp=Z,3.0nm,1.1s						
WRH	Wood River Hil	63.58	336	eP	P	17 45 34.7	-1.0
	comp=Z,6.5nm,1.3s						
BWN	Browne	64.02	335	eP	P	17 45 37.9	-0.6
	comp=Z,32nm,0.9s						
BWN				epP	pP	17 46 33.5	-0.3
TRF	Thorofare Moun	64.10	334	eP	P	17 45 39.0	-0.3
	comp=Z,8.5nm,0.9s						
TRF				epP	pP	17 46 35.8	+1.2
SKT	Skwentna	64.14	333	eP	P	17 45 38.9	-0.5
	comp=Z,8.9nm,1.2s						
KTH	Kantishna Hill	64.40	334	eP	P	17 45 40.5	-0.6
	comp=Z,5.5nm,1.0s						
BPAW	Bear Paw Mtn.	64.62	335	eP	P	17 45 41.2	-1.2
	comp=Z,5.8nm,0.8s						
MLY	Manley	64.84	336	eP	P	17 45 43.4	-0.5
MLY				epP	pP	17 46 39.2	-0.1
SUMG	Summit	65.32	15	eP	P	17 45 47.0	-0.3
	comp=Z,44nm,1.3s						
SUMG				epP	pP	17 46 42.0	-0.7
SUMG	Summit	65.32	15	eP	P	17 45 47.0	-0.3
SUMG				e*PP	pP	17 46 42.0	-0.7
SUMG				pmax	pmax		
	comp=Z,44nm,1.3s						
COLD	Coldfoot	65.46	338	eP	P	17 45 48.0	+0.2
	comp=Z,5.2nm,1.1s						
BORG	Borgarnes	68.00	26	i P	P	17 46 06.0	+2.3
PCAS	Casmilo, Conde	74.42	52	eP	P	17 46 41.3	-1.4
PCAS				epP	pP	17 47 39.6	-0.1
PFVI	Vila Bisbo	74.48	55	eP	P	17 46 43.7	+0.6
PFVI				epP	pP	17 47 41.9	+1.8
PMTG	Montargil	74.74	53	epP	pP	17 47 41.3	-0.3
PBDV	Barranco-do-Ve	75.18	55	eP	P	17 46 47.3	+0.2
PBDV				epP	pP	17 47 44.4	+0.2
PCBR	Castelo Branco	75.23	52	epP	pP	17 47 44.8	+0.4
PVAQ	Vaqueiros	75.33	55	epP	pP	17 47 45.1	+0.1
PMRV	Marv??o	75.34	53	epP	pP	17 47 44.4	-0.7
MVO	Moncorvo	75.42	51	epP	pP	17 47 44.9	-0.7
ESDC	Sonseca Array	77.93	52	P	P	17 47 01.2	-1.4
	comp=Z,1.0nm,0.5s,baz=292,slow=4.4,SNR=12						
ESDC				pP	pP	17 47 59.2	-0.8
	comp=Z,3.8nm,0.8s,baz=286,slow=5.9,SNR=7.2						
ESLA	Sonseca Array	77.93	52	eP	P	17 47 01.0	-1.5
	comp=Z,6.3nm,1.0s						
KBS	Kingsbay	78.23	11	eP	P	17 47 05.0	+1.7
KBS				pmax	pmax		
	comp=Z,99nm,1.6s						
PMSA	Palmer Station	81.39	169	eP	P	17 47 14.4	-5.8
BILL	Bilibino	81.79	338	eP	P	17 47 21.9	-0.6
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NB2	NORSAR Subarra	82.85	29	P	P	17 47 28.6	+0.4
	comp=Z,0.5nm,0.6s,baz=286,slow=5.1						
NOA	NORSAR Array B	82.85	29	P	P	17 47 27.1	-1.1
	comp=Z,0.7nm,0.6s,baz=288,slow=5.2,SNR=4.1						
NOA				pP	pP	17 48 25.9	-0.7
	comp=Z,4.4nm,1.1s,baz=286,slow=5.2,SNR=6.6						
DBIC	Dimbokro	83.68	85	P	P	17 47 31.7	-1.6
	comp=Z,1.6nm,0.3s,baz=266,slow=3.4,SNR=4.6						
DBIC	Dimbokro	83.68	85	eP	P	17 47 31.7	-1.6
	comp=Z,37nm,1.5s						
DBIC	Dimbokro	83.68	85	eP	P	17 47 31.7	-1.6
DBIC				pmax	pmax		
	comp=Z,37nm,1.5s						
ARCES	ARCESS Array B	85.13	19	P	P	17 47 39.5	0.0
	comp=Z,0.8nm,0.6s,baz=289,slow=3.7,SNR=5.0						
ARCES				pP	pP	17 48 37.0	-0.7
	comp=Z,6.0nm,1.0s,baz=317,slow=5.1,SNR=5.5						
FUORN	Ofenpass-Fuorn	86.54	43	eP	P	17 47 46.7	-0.5
	comp=Z,17nm,1.6s						
FUORN				epP	pP	17 48 44.5	-1.3
CLL	Collm	86.80	38	eP	P	17 47 48.0	0.0
CLL				i pP	pP	17 48 46.0	-0.8
CLL				ePP	PP	17 51 14.0	+0.2
CLL	Collm	86.80	38	eP	P	17 47 48.0	0.0
CLL				i *PP	pP	17 48 46.0	-0.8
BRG	Berggiesshubel	87.50	38	ePKP	pP	17 48 49.1	-1.2
	comp=Z,5.7nm,1.0s						
GERES	GERESS Array B	88.04	40	P	P	17 47 52.6	-1.5
	comp=Z,0.4nm,0.6s,baz=284,slow=5.4,SNR=3.4						
GERES				pP	pP	17 48 52.0	-0.8
	comp=Z,1.1nm,0.8s,baz=290,slow=3.8,SNR=5.5						
TOA1	Torodi Ar. Sit	88.39	77	eP	P	17 47 53.1	-3.2
TORD	Torodi Ar. Bea	88.39	77	P	P	17 47 53.1	-3.2
	comp=Z,0.3nm,0.5s,baz=290,slow=4.5,SNR=4.2						
SEY	Seymchan	89.17	336	eP	P	17 47 58.6	-0.3
FINES	FINESS Array B	89.29	26	P	P	17 47 58.0	-1.4
	comp=Z,1.8nm,0.9s,baz=290,slow=9.8,SNR=2.7						
TIXI	Tiksi	90.24	349	eP	P	17 48 02.2	-1.5
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
VSU	Vasula	91.06	28	eP	P	17 48 07.8	0.0
VSU				pmax	pmax		
	comp=Z,59nm,1.8s						
OBN	Obninsk	97.42	28	eP	Pdif	17 48 37.2	+0.3
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GNI	Garni	111.33	36	i PKIKP	PKiKP	17 53 37.0	+0.4
ZALV	Zalesovo Beam	111.76	3	PP	PP	17 54 21.2	-0.7
	comp=Z,3.8nm,0.9s,baz=339,slow=3.7,SNR=11						
KURBB	Kurchatov Arra	114.46	8	PKKPbc	PKKPbc	18 04 21.2	-2.4
	comp=Z,0.6nm,0.9s,baz=189,slow=3.7,SNR=6.3						
MKAR	Makanchi Array	118.68	6	PKKPbc	PKKPbc	18 04 04.8	-4.1
	comp=Z,0.2nm,0.8s,baz=152,slow=5.5,SNR=4.3						
HHC	Hu-ho-hao-te	122.49	341	ePKP	PKiKP	17 53 58.1	+1.9
WMQ	Urumqi	122.01	2	ePKP	PKiKP	17 53 57.3	+0.2
WMQ				AMB	AMB		
	comp=Z,76nm,5.9s						
KSH	Kashi	124.77	13	ePKP	PKiKP	17 54 04.0	+1.2
GTA	Gaotai	125.67	351	ePKP	PKiKP	17 54 06.3	+1.7
GTA				sPKP		17 55 28.8	
NJ2	Nanjing	126.15	330	ePKP	PKPdf	17 54 04.6	-0.5
LZH	Lanzhou	128.09	346	ePKP	PKiKP	17 54 11.6	+2.1
LZH				sPKP		17 55 31.3	
WHN	Wuhan	129.53	333	PKPbc	PKiKP	17 54 19.4	+7.1
STKA	Stephens Creek	129.95	240	PKP	PKPdf	17 54 12.1	-0.2
	comp=Z,3.5nm,0.8s,baz=90,slow=5.1,SNR=3.5						
CD2	Chengdu	133.03	344	PKP	PKPdf	17 54 17.4	-0.9
WRAB	Tennant Creek	137.37	256	ePKIKP	PKPdf	17 54 24.0	-2.5
WR1	Warramunga Arr	137.38	256	ePKPdf	PKPdf	17 54 26.4	-0.1
WRA	Warramunga Arr	137.38	256	PKP	PKPdf	17 54 26.4	-0.1
	comp=Z,4.1nm,0.8s,baz=66,slow=1.8,SNR=9.2						
WRA				SKPbc	SKPbc	17 57 38.3	+1.4
	comp=Z,1.9nm,0.7s,baz=108,slow=1.8,SNR=15						
ASAR	Alice Springs	137.63	251	PKhKP	PKPpre	17 54 14.4	
	comp=Z,1.2nm,0.7s,baz=111,slow=3.9,SNR=18						
ASAR				PKP	PKPdf	17 54 27.6	+0.6
	comp=Z,1.4nm,0.8s,baz=116,slow=2.5,SNR=7.7						
ASAR				SKPbc	SKPbc	17 57 39.0	+1.3
	comp=Z,1.4nm,0.7s,baz=98,slow=2.7,SNR=10						
CMAR	Chiang Mai Arr	146.16	345	PKPbc	PKPdf	17 54 42.6	+0.4
	comp=Z,1.2nm,0.6s,baz=340,slow=3.2,SNR=11						
CMAR				pPKPbc	pPKPab	17 55 44.6	-0.5
	comp=Z,3.3nm,0.8s,baz=338,slow=4.0,SNR=7.8						
CMAR	Chiang Mai Arr	146.16	345	i PKP2	PKPdf	17 54 42.9	+0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PSA00	Pilbara Seismi	150.77	252	ePKPbc	PKPbc	17 54 54.8	-0.6
COCO	West Island	172.99	288	i PKP2	PKPab	17 56 38.2	-2.2

IDC ***22*** *17:46:19.3±0.8,28°.77N×51°.40E,h0km,mb4.0/17, mb1 4.1/21,mb1mx3.9/45,mbtmp3.9/21,ML3.6/4,MS3.2/2, Ms1 3.3/2,ms1mx2.6/39,Error ellipse: s-maj=19.5km s-min=15.9km az=14.0*

ISCJB ***22*** *17:46:21.0±0.2,28°.76N±0°.02×51°.36E±0°.03,h17km, mb3.9/40,MS3.4/3,Error ellipse: s-maj=4.4km s-min=2.2km az=142.1*

TEH ***22*** *17:46:21.4,28°.88N×51°.34E,h10km,ML4.0*

NEIC ***22*** *17:46:21.3±0.0,28°.86N×51°.36E,h10km,mb3.9/18, MN4.0(TEH),After TEH.*

MOS ***22*** *17:46:22.6±1.4,28°.71N×51°.42E,h33km,mb4.1/18,Error ellipse: s-maj=10.3km s-min=6.0km az=98.1*

DSN ***22*** *17:46:25.3±2.3,28°.52N×51°.43E,h10km,ML4.2/10,Error ellipse: s-maj=39.3km s-min=8.4km az=4.0*

OMAN ***22*** *17:46:26.4±4.6,29°.04N×51°.85E,h164km±142km,ml4.2/4, Error ellipse: s-maj=83.4km s-min=54.9km az=69.0*

ISC 22 17:46:22.7±0.4,28°.81N±0°.04×51°.42E±0°.04,h17km,n186,
σ1§72/197,mb4.0/38,MS3.1/3,5C-3D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	Kazeroun	1.03	21	ePg	Pb	17 46 40.2	-2.1
IKAZ	Kazeroun	1.03	21	ePg	Pb	17 46 40.3	-2.1
IKAZ				IAMB	IAmb	17 47 03.9	
	comp=Z,48μm,0.3s						
SHI	Shiraz	1.27	49	ePg	Pb	17 46 46.7	+0.4
SHI				eSg	Sg	17 47 04.5	+0.7
SHI				IAMB	IAmb	17 47 07.3	
	comp=Z,29μm,0.5s						
GHIR	Ghir-Karzin	1.48	110	ePn	Pb	17 46 50.4	+0.5
ISRV	Sarvestan	1.59	69	ePg	Pg	17 46 53.3	-0.1
ISRV	Sarvestan	1.59	69	ePg	Pg	17 46 53.3	-0.1
ISRV				IAMB	IAmb	17 47 30.8	
	comp=Z,29μm,0.8s						
JHRM	Jahrom	1.93	99	ePn	Pb	17 46 57.2	-0.3
LMD1	Lamerd	2.13	133	ePn	Pb	17 46 59.7	-1.2
LMD1				IAMB	IAmb	17 47 49.9	
	comp=Z,0.0nm,0.6s						
KLNJ	Kolanjah	2.19	4	ePn	Pn	17 46 59.8	+1.0
IRAM	Ramesheh	3.10	15	ePn	Pn	17 47 12.1	+1.0
IRAM			

ASUD S Sn 17 48 48.2 +2.8
ASUD Al Ashush, Dub 5.44 139 *e*Pn Pn 17 47 45.7 +2.6
CHMN Cheshme madani 5.45 77 *e*Pn Pn 17 47 45.5 +2.0
MSFE Esma-Masafi 5.45 128 *i* P Pn 17 47 44.1 +0.8
SNR=14
MSFE Esma-Masafi 5.45 128 *e*Pn Pn 17 47 44.4 +1.1
FAQ Al Faqa, Dubai 5.51 136 P Pn 17 47 45.6 +1.6
FAQ Al Faqa, Dubai 5.51 136 P Pn 17 47 45.4 +1.3
SNR=5.3
FAQ S Sn 17 48 48.2 +1.2
FAQ Al Faqa, Dubai 5.51 136 *e*Pn Pn 17 47 46.2 +2.2
ISFB Sefidab 5.57 7 *e*Pn Pn 17 47 45.7 +0.8
MDH Madha 5.59 128 P Pn 17 47 45.7 +0.6
MDH Madha 5.59 128 *e*Pn Pn 17 47 45.9 +0.8
IKFM Kafar-mosalman 5.60 328 *e*Pn Pn 17 47 46.9 +1.6
GHVR GHOM 5.65 359 *e*Pn Pn 17 47 45.7 -0.3
IDOB Doab 5.68 332 *e*Pn Pn 17 47 48.2 +1.6
UOSS Minazif 5.76 131 *e*Pn Pn 17 47 47.8 +0.4
UOSS *e*Sn Sn 17 48 48.8 -4.3
UOSS Minazif 5.76 131 *i* P Pn 17 47 47.9 +0.5
SNR=12
UOSS Minazif 5.76 131 *e*Pn Pn 17 47 48.1 +0.7
HATD Hatta, Dubai 5.79 132 *i* P Pn 17 47 48.8 +0.9
SNR=9.5
HATD Hatta, Dubai 5.79 132 *e*Pn Pn 17 47 49.3 +1.4
ASHO Ashiyiah 5.84 134 *i* P Pn 17 47 49.6 +0.9
SNR=60
ASHO Ashiyiah 5.84 134 P Pn 17 47 49.7 +1.1
SNR=60
ASHO S Sn 17 48 54.1 -1.2
ASHO Ashiyiah 5.84 134 *e*Pn Pn 17 47 49.8 +1.1
HSAM Samen 5.89 337 *e*Pn Pn 17 47 50.1 +0.6
IQOM Qom 6.02 357 *e*Pn Pn 17 47 50.9 -0.3
ALNE Al Ain 6.13 140 *i* P Pn 17 47 53.7 +1.2
SNR=12
ALNE Al Ain 6.13 140 *e*Pn Pn 17 47 54.5 +2.0
IVRN Varamin 6.17 2 *e*Pn Pn 17 47 53.2 0.0
IKOM Komasi 6.30 329 *e*Pn Pn 17 47 56.6 +1.6
SOHO SOHO 6.54 134 P Pn 17 47 58.9 +0.7
SNR=16
SOHO S Sn 17 49 12.6 +0.3
KCHF Cheshme Sefid, 6.60 327 *e*Pn Pn 17 47 59.8 +0.6
IHSB Hasanabad 6.61 359 *e*Pn Pn 17 47 59.6 +0.4
ILAS Lasjerd 6.68 11 *e*Pn Pn 17 48 01.3 +1.0
IRAZ Razeghan 6.69 350 *e*Pn Pn 17 48 01.3 +0.8
IRAZ Razeghan 6.69 350 *e*Pn Pn 17 48 01.3 +0.8
IDMV Damavand 6.76 4 *e*Pn Pn 17 48 01.8 +0.3
IDMV Damavand 6.76 4 *e*Pn Pn 17 48 01.8 +0.3
TNSJ Nastanj 6.79 40 *e*Pn Pn 17 48 02.7 +1.0
TKDS Koohdasht(Taba 6.84 44 *e*Pn Pn 17 48 03.7 +1.3
IVIS Veis 6.90 327 *e*Pn Pn 17 48 03.9 +0.7
IFIR Firoozkooh 6.90 9 *e*Pn Pn 17 48 03.7 +0.3
IFIR Firoozkooh 6.90 9 *e*Pn Pn 17 48 03.7 +0.3
IANJ Anjilo 6.96 17 *e*Pn Pn 17 48 04.9 +0.7
IANJ Anjilo 6.96 17 *e*Pn Pn 17 48 05.0 +0.7
QABG Abgarm-Qazvin 7.05 348 *e*Pn Pn 17 48 05.9 +0.5
ISHM Shahmirzad 7.15 12 *e*Pn Pn 17 48 07.4 +0.6
ILIN Lien 7.17 329 *e*Pn Pn 17 48 06.7 -0.3
IDHR Dehrash 7.26 325 *e*Pn Pn 17 48 07.4 -0.9
HOQ Hoqain 7.43 133 *e*Pn Pn 17 48 11.6 +1.2
RAYN Ar Rayn 7.48 227 *e*Pn Pn 17 48 10.6 -0.6
RAYN *e*Sn Sn 17 49 31.3 -4.4
RAYN Ar Rayn 7.48 227 *i* P Pn 17 48 10.6 -0.6
SNR=23
RAYN Ar Rayn 7.48 227 *e*P Pn 17 48 10.6 -0.6
RAYN *e* 17 49 31.3
BSY Bisya 7.98 138 P Pn 17 48 18.9 +0.9
WSAR Wadi Sarin 8.54 129 Pn Pn 17 48 25.5 -0.2
comp=Z,2.4nm,0.3s,baz=309,slow=12,SNR=23
WSAR Sn Sn 17 49 57.7 -3.9
comp=Z,1.9nm,0.3s,baz=8.5,slow=19,SNR=3.6
GEYT Alibeck 10.68 30 Pn Pn 17 48 54.3 -0.6
comp=Z,0.3nm,0.3s,baz=214,slow=17,SNR=3.5
GROC Groznyy 15.06 344 *e*P Pn 17 49 52.9 -1.7
GROC pmax pmax
comp=Z,33nm,0.8s
ZEI Tsey 15.21 338 *e*P Pn 17 49 57.1 +0.2
ZEI pmax pmax
comp=Z,8.0nm,0.8s
NCK Nalchik 15.94 339⇓ *e*P P 17 50 08.3 -1.5
NCK pmax pmax
comp=Z,10.0nm,0.5s
NEY Neytrino 16.02 336⇓ *e*P P 17 50 09.2 -1.5
NEY pmax pmax
comp=Z,1.0nm,1.0s
KBL Kabul 16.05 65 *e*Pn Pn 17 50 07.5 -0.4
comp=Z,4.9nm,0.8s
KBL Kabul 16.05 65 *e*P Pn 17 50 07.5 -0.4
KBL pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 16.38 338 Pn Pn 17 50 11.8 +0.1
comp=Z,0.1nm,0.3s,baz=160,slow=7.6,SNR=3.9
CSS Mathiatis 16.53 296 *e*P Pn 17 50 14.9 +1.1
comp=Z,7.6nm,0.8s
KIV Kislovodsk 16.65 338 *e*P Pn 17 50 16.2 +0.8
comp=Z,11nm,1.1s
KIV Kislovodsk 16.65 338 *e*P Pn 17 50 16.1 +0.8
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,134nm,14.0s
CHGR Chuyangaron 17.70 52 *e*Pn Pn 17 50 24.0 -4.5
comp=Z,14nm,1.1s
BRTR Keskin Array B 18.25 311 P Pn 17 50 35.2 -0.1
comp=Z,0.1nm,0.3s,baz=131,slow=15,SNR=9.4
BRTR Keskin Array B 18.25 311 *i* P P 17 50 37.5 +2.0
BRTR pmax pmax
comp=Z,3.0nm,1.0s
BR101 Keskin Array S 18.25 311 *e*P Pn 17 50 35.2 -0.1
BR131 Keskin Array S 18.25 311 *e*P Pn 17 50 33.3 -2.1
comp=Z,3.9nm,1.0s
NIL Nilore 19.28 70 *e*P P 17 50 46.1 -0.5
comp=Z,7.6nm,0.6s
ANN Anapa 19.45 329 *e*P P 17 50 48.2 -0.1
ANN *e*S Sn 17 54 23.5 -3.8
ANN pmax pmax
comp=Z,69nm,1.1s
BTK Batken 19.50 50 *e*P P 17 50 45.9 -3.3
comp=Z,3.6nm,0.6s
BTK Batken 19.50 50 *e*P P 17 50 45.9 -3.3
BTK pmax pmax
comp=Z,4.0nm,0.6s
KK31 Karatay Array 20.96 42 *e*P P 17 51 04.9 0.0
comp=Z,3.0nm,1.0s
KK31 Karatay Array 20.96 42 *e*P P 17 51 04.9 0.0
KK31 pmax pmax
comp=Z,3.0nm,1.0s
KKAR Karatay Array 20.96 42 *e*P P 17 51 04.8 -0.1
comp=Z,3.0nm,1.0s
KKAR Karatay Array 20.96 42 *e*P P 17 51 04.8 -0.1
KKAR pmax pmax
comp=Z,3.0nm,1.0s
ABKAR Akbulak array 21.43 15 *e*P P 17 51 09.2 -0.6
comp=Z,3.2nm,0.8s
ARSB Arslanbob 21.55 49 *e*P P 17 51 11.7 +0.3
comp=Z,9.9nm,0.9s
AKTO Aktyubinsk 22.17 11 P P 17 51 17.4 -0.4
comp=Z,2.9nm,0.6s,baz=171,slow=11,SNR=4.4
KSH Kashi 22.89 56 *e*P P 17 51 25.1 -0.6
KSH S S 17 55 25.5 -9.3
KSH pmax pmax
comp=Z,9.0nm,0.9s
KSH pmax pmax
comp=Z,280nm,4.6s
KSH LR LR
comp=N,190nm,8.4s
KSH LR LR
comp=E,320nm,7.4s
KSH LR LR
comp=Z,230nm,10.2s
AAK Ala-Archa 23.17 47 LR LR 18 02 18.6
comp=Z,68nm,18.6s,baz=5.5,slow=41
AAK Ala-Archa 23.17 47 *e*P P 17 51 30.7 +2.1
comp=Z,3.6nm,0.9s
AAK Ala-Archa 23.17 47⇑ *e*P P 17 51 32.9 +4.3
AAK pmax pmax
comp=Z,3.0nm,1.0s
ALN Alexandroupoli 23.96 307 *e*P P 17 51 36.2 0.0
comp=Z,3.0nm,0.9s
ALN Alexandroupoli 23.96 307 *e*P P 17 51 36.2 0.0
ALN pmax pmax
comp=Z,3.0nm,0.9s
BOOM Boomskoye usch 24.05 49 *e*P P 17 51 38.5 +1.3
comp=Z,3.0nm,0.7s
BOOM Boomskoye usch 24.05 49 *e*P P 17 51 38.5 +1.3
BOOM pmax pmax
comp=Z,3.0nm,0.7s
VSR Storozhevoye 24.20 341 *e*P P 17 51 39.4 +1.2
VSR pmax pmax
comp=Z,4.0nm,1.0s
LPSR Galich'ya Gora 25.50 342 *e*P P 17 51 52.2 +2.2
LPSR pmax pmax
comp=Z,10.0nm,0.9s
MLR Muntele Rosu 26.09 317 P P 17 51 57.9 +2.2
comp=Z,1.3nm,0.5s,baz=99,slow=3.8,SNR=4.9
MLR Muntele Rosu 26.09 317 *e*P P 17 51 57.4 +1.7
comp=Z,7.0nm,1.2s
MLR Muntele Rosu 26.09 317 *e*P P 17 51 57.4 +1.7
MLR pmax pmax
comp=Z,7.0nm,1.2s
AKASG Malin Array Be 27.53 329 P P 17 52 07.6 -0.8
comp=Z,0.5nm,0.4s,baz=128,slow=11,SNR=4.8
BUR08 Bucovina Ar. S 27.67 320 *e*P P 17 52 09.4 -0.4
comp=Z,4.7nm,1.3s
PYUN Piuthan 27.73 84 *e*P P 17 52 10.8 +0.1
comp=Z,16nm,0.5s
BVAR Borovoye Array 27.95 25 P P 17 52 12.8 +0.8
comp=Z,0.6nm,0.4s,baz=222,slow=7.2,SNR=7.7
ARU Arti 28.07 8⇑ *e*P P 17 52 15.5 +2.4
ARU pmax pmax
comp=Z,3.0nm,1.3s
DANN Dangsing 28.36 83 *e*P P 17 52 16.9 +0.5
comp=Z,36nm,0.7s
OBN Obninsk 28.38 342 *e*P P 17 52 19.2 +3.3
OBN *e* 17 53 07.8
OBN pmax pmax
comp=Z,5.0nm,0.9s
GKN Gorkha 29.18 83 *e*P P 17 52 23.5 -0.1
comp=Z,13nm,0.4s
KKN Kakani 29.78 84 *e*P P 17 52 28.8 -0.1
comp=Z,10nm,0.5s
KURBB Kurchatov Arra 29.87 36 P P 17 52 30.2 +1.0
comp=Z,1.1nm,0.3s,baz=236,slow=9.1,SNR=3.0
PKIN Phulchoki 29.92 84 *e*P P 17 52 29.8 -0.4
comp=Z,9.2nm,0.7s
PKI Pulchoki 29.93 84 *e*P P 17 52 30.1 -0.3
comp=Z,18nm,0.8s
KURK Kurchatov 29.97 36⇓ *e*P P 17 52 34.5 +4.4
KURK pmax pmax
comp=Z,1.0nm,0.9s
MK31 Makanchi Array 30.02 45 *e*P P 17 52 29.6 -1.0
comp=Z,1.0nm,0.8s
MK31 Makanchi Array 30.02 45 *e*P P 17 52 29.6 -1.0
MK31 pmax pmax
comp=Z,1.0nm,0.8s
MK32 Makanchi Array 30.02 45 *e*P P 17 52 29.7 -0.9
MKAR Makanchi Array 30.02 45 P P 17 52 29.7 -0.9
comp=Z,0.3nm,0.5s,baz=234,slow=7.2,SNR=5.5
MKAR Makanchi Array 30.02 45 *i* P P 17 52 32.2 +1.6
MKAR pmax pmax
comp=Z,1.0nm,0.8s
GUN Gumba 30.28 83 *e*P P 17 52 33.6 +0.1
comp=Z,17nm,0.5s
TIP Timpagrande 30.37 299 *e*P P 17 52 35.0 +1.1
comp=Z,19nm,1.6s
VYHS Vyhne 31.80 317 *e*P P 17 52 50.9 +4.6
VYHS Vyhne 31.80 317 *e*P P 17 52 50.9 +4.6
KLMR Klimovskoe 33.02 349 *e*P P 17 52 57.8 +1.0
KLMR pmax pmax
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 33.02 349 *e*P P 17 52 57.9 +1.1
KLMR AMP 17 53 01.8
comp=Z,5.0nm,0.8s
VSU Vasula 34.21 337⇑ *e*P P 17 53 07.0 -0.1
VSU pmax pmax
comp=Z,36nm,1.3s
ZALV Zalesovo Beam 34.94 35 P P 17 53 13.2 -0.3
comp=Z,0.5nm,0.4s,baz=269,slow=5.8,SNR=3.3
ZAA1 Zalesovo Array 34.94 35 *e*P P 17 53 13.2 -0.3
FIA0 FINESS Array S 36.72 340 *e*P P 17 53 27.6 -1.1
FIA0 FINESS Array S 36.72 340 *e*P P 17 53 27.6 -1.1
FINES FINESS Array B 36.72 340 P P 17 53 27.6 -1.1
comp=Z,1.0nm,0.6s,baz=154,slow=9.7,SNR=8.0
FINES FINESS Array B 36.72 340 *i* P P 17 53 27.8 -0.9
FINES pmax pmax
comp=Z,1.0nm,0.6s
NB200 NORSAR Array S 41.84 332 *e*P P 17 54 10.2 -1.3
NOA NORSAR Array B 41.84 332 P P 17 54 10.2 -1.3
comp=Z,0.3nm,0.4s,baz=121,slow=8.0,SNR=2.8
ARA0 ARCESS Array S 43.41 347 *e*P P 17 54 24.4 +0.3
ARCES ARCESS Array B 43.41 347 P P 17 54 24.4 +0.3
comp=Z,1.1nm,0.8s,baz=148,slow=10.0,SNR=5.2
CMAR Chiang Mai Arr 44.49 93 P P 17 54 33.4 -0.1
comp=Z,0.8nm,0.9s,baz=293,slow=9.4,SNR=4.1
CMAR LR LR 18 16 12.5
comp=Z,22nm,19.3s,baz=255,slow=40
SONA0 Songino Array 46.08 50 *e*P P 17 54 45.1 -0.8
SONM Songino Array 46.08 50 P P 17 54 45.1 -0.8
comp=Z,0.3nm,0.4s,baz=248,slow=7.6,SNR=2.2
ESDC Sonseca Array 46.39 299 P P 17 54 50.7 +2.3
comp=Z,0.2nm,0.4s,baz=74,slow=7.9,SNR=3.7
ULN Ulaanbaatar 46.53 50⇑ *e*P P 17 54 56.2 +6.8
ULN pmax pmax
comp=Z,4.0nm,1.4s
TOA1 Torodi Ar. Sit 48.62 262 *e*P P 17 55 05.6 -0.3
TORD Torodi Ar. Bea 48.62 262 P P 17 55 05.6 -0.3
comp=Z,1.1nm,0.7s,baz=55,slow=8.6,SNR=5.9
DBIC Dimbokro 57.36 259 P P 17 56 09.9 -0.4
comp=Z,5.4nm,0.7s,baz=90,slow=3.0,SNR=4.3
DBIC Dimbokro 57.36 259 P P 17 56 10.0 -0.4
TIXI Tiksi 58.99 21⇑ *e*P P 17 56 25.6 +4.6
TIXI pmax pmax
comp=Z,2.0nm,1.0s
KSRS Korea Array 63.05 60 P P 17 56 48.0 -1.1
comp=Z,1.1nm,0.6s,baz=281,slow=6.9,SNR=9.4
KSRS Korea Array 63.05 60 P P 17 56 48.0 -1.1
BILL Bilibino 72.21 21 *e*P P 17 57 50.8 +4.4
BILL *e* 17 58 09.5
BILL pmax pmax
comp=Z,2.0nm,1.0s
ILAR Eielson Array 85.63 8 P P 17 58 59.0 -1.1
comp=Z,0.4nm,0.7s,baz=5.7,slow=0.9,SNR=2.6
WR1 Warramunga Arr 93.49 111 *e*P P 17 59 36.4 -1.6
WRA Warramunga Arr 93.49 111 P P 17 59 36.4 -1.6
comp=Z,1.1nm,0.9s,baz=299,slow=4.5,SNR=2.9
ASAR Alice Springs 94.95 114 P P 17 59 43.2 -1.4
comp=Z,0.5nm,0.6s,baz=306,slow=4.6,SNR=8.1

GCG 22 17:47:20.7±0.5, 14°.66N×91°.36W, h62km±8km, MD3.6, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.21**	**283**	*e*P	Pn	17 47 31.1	+0.5
FUG	**Fuego 3**	**0.55**	**113**	*e*P	Pn	17 47 33.8	+0.3
PCG	**Pacaya**	**0.78**	**110**	*e*P	Pn	17 47 37.2	+0.9
PCG				*e*S	Sn	17 47 49.5	+1.8
IXG	**Ixpaco**	**1.02**	**119**	*e*P	Pn	17 47 39.5	+0.3
IXG				*e*S	Sn	17 47 54.6	+1.7

GEN ***22*** *17:50:26.8, 44°.18N×10°.17E, h4km, Ml1.5*
ROM 22 17:50:26.3±0.1, 44°.185N±0°.003×10°.175E±0°.004, h6km, ML1.8/9, Error ellipse: s-maj=0.4km s-min=0.1km az=31.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.03**	**124**	P	Pg	17 50 28.0	+0.4
T0912				S	Sg	17 50 28.8	+0.3
T0911	**Castelpoggio (**	**0.10**	**225**	P	Pg	17 50 29.2	+0.6
T0911				S	Sg	17 50 30.9	+0.8
T0911				AML	AML		
	comp=E,962μm,0.5s						
T0911				AML	AML		
	comp=N,1280μm,1.5s						
T0911				AML	AML		
	comp=E,964μm,0.5s						
T0911				AML	AML		
	comp=N,1280μm,1.5s						
T0911				AML	AML		
	comp=E,964μm,0.5s						
T0911				AML	AML		
	comp=N,1280μm,1.5s						
T0911				AML	AML		
	comp=E,964μm,0.5s						
T0911				AML	AML		
	comp=N,1280μm,1.5s						
VLC	**Villacollemand**	**0.15**	**100**	P	Pg	17 50 30.1	+0.6
VLC				S	Sg	17 50 32.8	+1.2
VLC				AML	AML		
	comp=E,652μm,0.4s						
VLC				AML	AML		
	comp=N,1145μm,0.1s						
VLC				AML	AML		
	comp=E,712μm,0.4s						
VLC				AML	AML		
	comp=N,1210μm,0.1s						
VLC				AML	AML		
	comp=E,652μm,0.4s						
VLC				AML	AML		
	comp=N,1145μm,0.1s						
VLC				AML	AML		
	comp=E,712μm,0.4s						
VLC				AML	AML		
	comp=N,1210μm,0.1s						
VLC				AML	AML		
	comp=N,1210μm,0.1s						
VLC				AML	AML		
	comp=N,1145μm,0.1s						
VLC				AML	AML		
	comp=E,712μm,0.4s						
VLC				AML	AML		
	comp=E,652μm,0.4s						
VLC				AML	AML		
	comp=N,1210μm,0.1s						
VLC				AML	AML		
	comp=N,1145μm,0.1s						
VLC				AML	AML		
	comp=E,712μm,0.4s						
VLC				AML	AML		
	comp=E,652μm,0.4s						
SARO	**Sassorosso**	**0.16**	**90**	P	Pg	17 50 30.3	+0.6
SARO				S	Sg	17 50 32.9	+1.0
SARO	**Sassorosso**	**0.16**	**90**	P	Pg	17 50 30.3	+0.6
SARO				S	Sg	17 50 33.0	+1.1
SARO				AML	AML		
	comp=E,560μm,0.3s						
SARO				AML	AML		
	comp=N,714μm,0.4s						
SARO				AML	AML		
	comp=E,560μm,0.3s						
SARO				AML	AML		
	comp=N,714μm,0.4s						
SARO				AML	AML		
	comp=E,560μm,0.3s						
SARO				AML	AML		
	comp=N,714μm,0.4s						
SARO				AML	AML		
	comp=E,560μm,0.3s						
SARO				AML	AML		
	comp=N,714μm,0.4s						
CARD	**Cardoso**	**0.27**	**126**	P	Pg	17 50 32.4	+0.7
CARD				S	Sg	17 50 36.3	+1.0
CARD	**Cardoso**	**0.27**	**126**	P	Pg	17 50 32.3	+0.6
CARD				S	Sg	17 50 36.6	+1.3
CARD				AML	AML		
	comp=E,214μm,0.8s						
CARD				AML	AML		
	comp=N,284μm,0.4s						
CARD				AML	AML		
	comp=E,214μm,0.8s						
CARD				AML	AML		
	comp=N,284μm,0.4s						
CARD				AML	AML		
	comp=E,214μm,0.8s						
CARD				AML	AML		
	comp=N,284μm,0.4s						
CARD				AML	AML		
	comp=E,214μm,0.8s						
CARD				AML	AML		
	comp=N,284μm,0.4s						
ERBM	**Eremo**	**0.29**	**36**	P	Pb	17 50 33.0	-1.0
ERBM				S	Sb	17 50 37.5	-1.6
ERBM				AML	AML		
	comp=E,220μm,1.6s						
ERBM				AML	AML		
	comp=N,230μm,1.2s						
ERBM				AML	AML		
	comp=E,219μm,1.6s						
ERBM				AML	AML		
	comp=N,231μm,1.2s						
ERBM				AML	AML		
	comp=N,231μm,1.2s						
ERBM				AML	AML		
	comp=E,219μm,1.6s						
ERBM				AML	AML		
	comp=N,231μm,1.2s						
ERBM				AML	AML		
	comp=E,219μm,1.6s						
GRAM	**Graiana**	**0.32**	**346**	P	Pg	17 50 33.3	+0.8
GRAM				S	Sg	17 50 38.2	+1.5
GRAM	**Graiana**	**0.32**	**346**	P	Pg	17 50 33.4	+0.9
GRAM				S	Sb	17 50 38.6	-1.3
GRAM				AML	AML		
	comp=E,696μm,0.3s						
GRAM				AML	AML		
	comp=N,754μm,1.4s						
GRAM				AML	AML		
	comp=E,696μm,0.3s						
GRAM				AML	AML		
	comp=N,753μm,1.4s						
GRAM				AML	AML		
	comp=N,753μm,1.4s						
GRAM				AML	AML		
	comp=E,696μm,0.3s						
GRAM				AML	AML		
	comp=N,753μm,1.4s						
GRAM				AML	AML		
	comp=E,696μm,0.3s						
BDI	**Bagni Di Lucca**	**0.33**	**112**	P	Pg	17 50 33.4	+0.7
BDI				S	Sb	17 50 38.8	-1.4
BDI				AML	AML		
	comp=E,136μm,0.4s						
BDI				AML	AML		
	comp=N,88μm,1.5s						
BDI				AML	AML		
	comp=E,136μm,0.4s						
BDI				AML	AML		
	comp=N,88μm,1.5s						
BDI				AML	AML		
	comp=E,136μm,0.4s						
BDI				AML	AML		
	comp=N,88μm,1.5s						
MAIM	**Mastiano**	**0.35**	**140**	P	Pg	17 50 34.0	+0.8
MAIM				S	Sg	17 50 38.8	+1.0
MAIM	**Mastiano**	**0.35**	**140**	P	Pg	17 50 34.0	+0.8
MAIM				S	Sb	17 50 39.9	-0.9
MAIM				AML	AML		
	comp=E,150μm,0.3s						
MAIM				AML	AML		
	comp=N,158μm,0.6s						
MAIM				AML	AML		
	comp=E,150μm,0.3s						
MAIM				AML	AML		
	comp=N,158μm,0.6s						
MAIM				AML	AML		
	comp=E,150μm,0.3s						
MAIM				AML	AML		
	comp=N,158μm,0.6s						
MAIM				AML	AML		
	comp=E,150μm,0.3s						
MAIM				AML	AML		
	comp=N,158μm,0.6s						
MSSA	**Maissana**	**0.49**	**286**	P	Pg	17 50 36.5	+0.7
MSSA				S	Sb	17 50 44.2	-0.6
MTCR	**Monte La Croce**	**0.61**	**105**	P	Pb	17 50 38.9	-0.6
MTCR				S	Sb	17 50 48.5	+0.1
CRMI	**Carmignano**	**0.70**	**124**	P	Pb	17 50 40.6	-0.3
CRMI				S	Sb	17 50 50.8	+0.1
CRMI				AML	AML		
	comp=E,19μm,1.6s						
CRMI				AML	AML		
	comp=N,19μm,0.7s						
CRMI				AML	AML		
	comp=E,19μm,1.6s						
CRMI				AML	AML		
	comp=N,19μm,0.7s						
CRMI				AML	AML		
	comp=E,19μm,1.6s						
CRMI				AML	AML		
	comp=N,19μm,0.7s						

ISCJB ***22*** *17:55:30.7±0.9, 28°.19N±0°.04×51°.56E±0°.09, h24km, Error ellipse: s-maj=12.8km s-min=3.8km az=157.0*

TEH ***22*** *17:55:32.2, 28°.44N×51°.55E, h16km, ML3.3*
DSN ***22*** *17:55:33.9±1.0, 28°.40N±51°.99E, h10km, ML3.5/6, Error ellipse: s-maj=22.2km s-min=6.9km az=18.0*
OMAN ***22*** *17:55:34.2±0.5, 28°.60N×52°.20E, h20km, Error ellipse: s-maj=17.7km s-min=3.5km az=47.0*
ISC 22 17:55:33.3±1.7, 28°.36N±0°.06×51.7E±0°.1, h24km, n33, σ1§01/40, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**1.14**	**93**	*e*Pg	**Pb**	**17 55 54.3**	**-0.2**
IKAZ	**Kazeroun**	**1.42**	**5**	*e*Pg	**Pn**	**17 55 58.1**	**+0.1**
IKAZ	comp=Z,8μm,0.4s			IAMB	IAmb	17 56 22.3	
SHI	**Shiraz**	**1.47**	**29**	*e*Pg	**Pb**	**17 55 59.6**	**-0.5**
SHI				*e*Sg	**Sb**	**17 56 20.8**	**+2.4**
ISRV	**Sarvestan**	**1.61**	**50**	IAMB	IAmb	17 56 13.4	
ISRV	comp=Z,3μm,0.3s			*e*Pn	**Pb**	**17 56 02.4**	**-0.2**
LMD1	**Lamerd**	**1.65**	**128**	*e*Pn	**Pb**	**17 56 04.4**	**+1.3**
JHRM	**Jahrom**	**1.67**	**84**	*e*Pn	**Pb**	**17 56 04.3**	**+0.9**
IPAR	**Pars**	**1.90**	**38**	IAMB	IAmb	17 56 36.3	
IPAR	comp=Z,1μm,0.9s			*e*Pn	**Pb**	**17 56 06.4**	**-1.0**
KLNJ	**Kolanjah**	**2.65**	**358**	*e*Pn	**Pn**	**17 56 15.1**	**+0.3**
IRAM	**Ramesheh**	**3.49**	**10**	*e*Pn	**Pn**	**17 56 26.7**	**+0.3**
IRAM	comp=Z,236nm,0.6s			IAMB	IAmb	17 57 30.0	
ISAD	**Sadrabad**	**3.94**	**25**	*e*Pn	**Pn**	**17 56 34.1**	**+1.5**
ISAD	comp=Z,334nm,0.2s			IAMB	IAmb	17 56 35.1	
IMEH	**Mehriz**	**3.95**	**39**	*e*Pn	**Pn**	**17 56 34.3**	**+1.7**
IMEH	comp=Z,1μm,0.3s			IAMB	IAmb	17 56 35.7	
IZEF	**Zefreh**	**4.56**	**7**	*e*Pn	**Pn**	**17 56 42.2**	**+1.2**
IZEF	comp=Z,246nm,0.2s			IAMB	IAmb	17 56 45.2	
SHME	**Shamm**	**4.58**	**119**	P	**Pn**	**17 56 40.7**	**-0.4**
SHME				S	**Sn**	**17 57 32.5**	**-1.1**
YZKH	**Yazd**	**4.74**	**31**	*e*Pn	**Pn**	**17 56 42.7**	**-0.6**
BANOM	**Banah** SNR=25	**4.77**	**119**	*i* P	**Pn**	**17 56 43.3**	**-0.4**
BANOM	**Banah** SNR=25	**4.77**	**119**	P	**Pn**	**17 56 43.6**	**-0.1**
BANOM				S	**Sn**	**17 57 36.6**	**-1.6**
NAZ	**Nazwa, Dubai**	**4.88**	**132**	P	**Pn**	**17 56 45.8**	**+0.5**
ASUD	**Al Ashush, Dub** SNR=22	**4.94**	**138**	*i* P	**Pn**	**17 56 46.6**	**+0.5**
ASUD	**Al Ashush, Dub** SNR=22	**4.94**	**138**	P	**Pn**	**17 56 46.7**	**+0.7**
ASUD				S	**Sn**	**17 57 42.4**	**-0.1**
IKLH	**Kolahrood**	**4.95**	**359**	*e*Pn	**Pn**	**17 56 46.4**	**0.0**
MSFE	**Esma-Masafi** SNR=9.6	**4.98**	**126**	*i* P	**Pn**	**17 56 46.4**	**-0.2**
MDH	**Madha**	**5.12**	**125**	P	**Pn**	**17 56 47.7**	**-0.8**
MDH	**Madha**	**5.12**	**125**	P	**Pn**	**17 56 47.0**	**-1.5**
MDH				S	**Sn**	**17 57 44.1**	**-2.8**
UOSS	**Minazif**	**5.28**	**129**	P	**Pn**	**17 56 50.0**	**-0.7**
UOSS	**Minazif**	**5.28**	**129**	P	**Pn**	**17 56 49.8**	**-0.8**
HATD	**Hatta, Dubai**	**5.31**	**130**	P	**Pn**	**17 56 50.9**	**-0.2**
HATD	**Hatta, Dubai**	**5.31**	**130**	P	**Pn**	**17 56 50.0**	**-1.1**
ASHO	**Ashiyiah** SNR=13	**5.35**	**132**	*i* P	**Pn**	**17 56 51.7**	**0.0**
ASHO	**Ashiyiah** SNR=13	**5.35**	**132**	P	**Pn**	**17 56 51.8**	**0.0**
ASHO				S	**Sn**	**17 57 51.5**	**-1.3**
KHMZ	**Khomeyn**	**5.57**	**345**	*e*Pn	**Pn**	**17 56 54.4**	**-0.5**
SOHO	**SOHO** SNR=9.3	**6.05**	**133**	P	**Pn**	**17 57 01.0**	**-0.2**
SOHO				S	**Sn**	**17 58 08.9**	**-0.8**
HOQ	**Hoqain**	**6.94**	**132**	P	**Pn**	**17 57 13.0**	**-0.5**
BSY	**Bisya**	**7.48**	**137**	P	**Pn**	**17 57 20.8**	**-0.1**

NNC 22 18:06:54.6±9.7, 37°.57N×71°.01E, h0km, mb3.9, mpv3.6, 4C-2D, Error ellipse: s-maj=78.3km s-min=58.3km az=166.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 6.6nm,0.3s,baz=179,slow=13,SNR=185	**5.54**	**356**	⇓P	Pn	18 08 20.6	+2.3
KK31	2.9nm,0.3s,baz=184,slow=24,SNR=6.7			⇑S	Sn	18 09 25.3	+2.6
AAK	**Ala-Archa** 2.7nm,0.5s	**5.72**	**27**	⇑P	Pn	18 08 21.0	0.0
AAK	6.1nm,0.6s			⇑S	Sn	18 09 27.7	+0.2
TKM2	**Tokmak 2** 1.3nm,0.5s	**6.39**	**32**	⇑P	Pn	18 08 29.8	-0.4
TKM2	5.0nm,1.0s			⇓S	Sn	18 09 42.9	-1.1
AB31	**Akbulak array** 0.3nm,0.3s,baz=155,slow=10,SNR=21	**14.16**	**329**	P	Pn	18 10 14.5	-1.9

IDC 22 18:09:13.1±2.2, 2°.25S×127°.79E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/29, mbtmp3.4/3, ML2.8/1, Error ellipse: s-maj=192.8km s-min=25.9km az=67.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.0nm,0.3s,baz=339,slow=11,SNR=2.9	**18.71**	**160**	P	P	18 13 32.1	-1.2
ASAR	**Alice Springs** 0.1nm,0.5s,baz=345,slow=10,SNR=5.5	**22.10**	**165**	P	P	18 14 10.7	+0.5
MKAR	**Makanchi Array** 0.4nm,0.4s,baz=120,slow=7.7,SNR=8.1	**63.07**	**327**	P	P	18 19 42.4	+0.1

IDC ***22*** *18:26:18.4±8.5, 26°.18N×57°.71E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.2/29, mbtmp3.6/3, Error ellipse: s-maj=172.9km s-min=53.0km az=114.0*
DSN ***22*** *18:26:20.1±2.7, 26°.41N×57°.94E, h10km, ML3.5/9, Error ellipse: s-maj=34.4km s-min=12.4km az=17.0*
TEH ***22*** *18:26:21.3, 26°.78N×57°.73E, h8km, ML3.6*
OMAN ***22*** *18:26:21.7±1.8, 26°.31N×57°.73E, h0km, 9km, ml3.2/11, Error ellipse: s-maj=59.7km s-min=10.0km az=29.0*
ISC 22 18:26:18.0±0.9, 26°.36N±0°.04×58°.00E±0°.05, h10km, n52, σ1§39/54, mb3.6/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.75**	**196**	*e*Pg	Pn	18 26 43.8	+9.2
NIAN	**Nian**	**1.58**	**319**	*e*Pg	**Pn**	**18 26 44.1**	**-2.0**
NIAN	comp=Z,0.0nm,0.4s			IAMB	IAmb	18 27 07.5	
BANOM	**Banah** SNR=586	**1.59**	**254**	*e*P	**Pb**	**18 26 47.0**	**-0.5**
BANOM	SNR=45			*e*P	**Pg**	**18 26 48.7**	**+0.2**
BANOM	**Banah** SNR=45	**1.59**	**254**	P	**Pb**	**18 26 47.0**	**-0.5**
KHNJ	**Kahnooj**	**1.60**	**351**	*e*Pg	**Pn**	**18 26 43.4**	**-3.1**
SHME	**Shamm** SNR=68	**1.70**	**260**	*e*P	**Pb**	**18 26 49.0**	**-0.3**
SHME				S	**Sb**	**18 27 11.4**	**+0.6**
SHME	**Shamm**	**1.70**	**260**	*e*Pn	**Pb**	**18 26 49.1**	**-0.3**
MDH	**Madha** SNR=38	**1.86**	**236**	*e*P	**Pb**	**18 26 51.0**	**-1.1**
MDH	**Madha** SNR=36	**1.86**	**236**	P	**Pb**	**18 26 51.1**	**-1.0**
MDH	**Madha**	**1.86**	**236**	*e*Pn	**Pb**	**18 26 51.1**	**-1.0**
GENO	**Geno**	**1.93**	**303**	*e*Pn	**Pn**	**18 26 50.1**	**-1.0**
GENO	comp=Z,0.0nm,0.5s			IAMB	IAmb	18 27 19.0	
MSFE	**Esma-Masafi** SNR=9.5	**1.93**	**239**	*e*P	**Pn**	**18 26 51.9**	**+1.0**
MSFE	**Esma-Masafi**	**1.93**	**239**	*e*Pn	**Pb**	**18 26 52.5**	**-0.9**
UOSS	**Minazif**	**2.15**	**229**	P	**Pn**	**18 26 55.2**	**+1.2**
UOSS	**Minazif**	**2.15**	**229**	P	**Pn**	**18 26 54.7**	**+0.8**
UOSS	**Minazif**	**2.15**	**229**	*e*Pn	**Pn**	**18 26 55.1**	**+1.2**
UMQ	**Umm Al-Quwin**	**2.26**	**249**	*e*Pn	**Pb**	**18 26 58.6**	**-0.3**
HATD	**Hatta, Dubai** SNR=7.2	**2.27**	**228**	*e*P	**Pn**	**18 26 57.2**	**+1.5**
HATD	**Hatta, Dubai** SNR=7.5	**2.27**	**228**	P	**Pn**	**18 26 57.2**	**+1.5**
HATD	**Hatta, Dubai**	**2.27**	**228**	*e*Pn	**Pb**	**18 26 57.6**	**-1.6**
ASHO	**Ashiyiah** SNR=16	**2.42**	**227**	*e*P	**Pb**	**18 27 00.3**	**-1.4**
ASHO	**Ashiyiah** SNR=16	**2.42**	**227**	P	**Pb**	**18 27 01.2**	**-0.5**
ASHO	**Ashiyiah**	**2.42**	**227**	*e*Pn	**Pb**	**18 27 00.5**	**-1.2**
NAZ	**Nazwa, Dubai** SNR=15	**2.51**	**238**	*e*P	**Pb**	**18 27 01.9**	**-1.3**
NAZ	**Nazwa, Dubai**	**2.51**	**238**	*e*Pn	**Pb**	**18 27 02.9**	**-0.3**
SOHO	**SOHO** SNR=14	**2.58**	**211**	P	**Pb**	**18 27 02.1**	**-2.3**
FAQ	**Al Faqa, Dubai** SNR=11	**2.70**	**234**	*e*P	**Pn**	**18 27 03.8**	**+2.3**
FAQ	**Al Faqa, Dubai**	**2.70**	**234**	P	**Pb**	**18 27 06.0**	**-0.5**
FAQ	**Al Faqa, Dubai**	**2.70**	**234**	*e*Pn	**Pb**	**18 27 04.4**	**-2.1**
BIDO	**Bidbid**	**2.83**	**178**	*e*Pn	**Pg**	**18 27 09.6**	**-2.6**
HOQ	**Hoqain**	**2.83**	**193**	P	**Pb**	**18 27 07.6**	**-1.2**
HOQ	**Hoqain**	**2.83**	**193**	*e*Pn	**Pb**	**18 27 07.7**	**-1.0**
ASUD	**Al Ashush, Dub** SNR=16	**2.97**	**235**	*e*P	**Pb**	**18 27 09.6**	**-1.4**
ASUD	**Al Ashush, Dub** SNR=16	**2.97**	**235**	P	**Pb**	**18 27 10.0**	**-1.0**
ASUD	**Al Ashush, Dub**	**2.97**	**235**	*e*Pn	**Pb**	**18 27 09.6**	**-1.4**
ALNE	**Al Ain**	**3.07**	**222**	*e*Pn	**Pb**	**18 27 11.3**	**-1.4**
WSAR	**Wadi Sarin**	**3.16**	**169**	P	**Pb**	**18 27 14.6**	**+0.3**
WSAR				S	**Sb**	**18 27 52.6**	**-0.2**
CHMN	**Cheshme madani**	**3.51**	**353**	*e*Pn	**Pn**	**18 27 15.0**	**+2.0**
CHMN	comp=N,0.0nm,0.6s			IAMB	IAmb	18 28 16.4	
BSY	**Bisya**	**3.67**	**192**	P	**Pb**	**18 27 21.8**	**-1.2**
TVBK	**TV Kerman**	**3.77**	**343**	*e*Pn	**Pn**	**18 27 17.3**	**+0.7**
TVBK	comp=Z,0.0nm,0.6s			IAMB	IAmb	18 28 17.2	
KHGB	**Koh Gabri**	**4.22**	**342**	*e*Pn	**Pn**	**18 27 23.3**	**+0.7**
KHGB	comp=Z,0.0nm,0.6s			IAMB	IAmb	18 27 35.7	
ISRV	**Sarvestan**	**5.27**	**306**	*e*Pn	**Pn**	**18 27 36.9**	**-0.2**
IMEH	**Mehriz**	**5.83**	**330**	*e*Pn	**Pn**	**18 27 43.6**	**-1.1**
IKOO	**Kooshah**	**6.11**	**8**	*e*Pn	**Pn**	**18 27 50.3**	**+1.7**
IKAZ	**Kazeroun**	**6.42**	**303**	*e*Pn	**Pn**	**18 27 50.7**	**-2.2**
ITEG	**Tejag**	**6.55**	**6**	*e*Pn	**Pn**	**18 27 55.5**	**+0.9**
KLNJ	**Kolanjah**	**7.29**	**311**	*e*Pn	**Pn**	**18 28 04.1**	**-0.8**
IRAM	**Ramesheh**	**7.32**	**319**	*e*Pn	**Pn**	**18 28 03.2**	**-2.0**
IPIR	**Pirpir**	**8.83**	**317**	*e*Pn	**Pn**	**18 28 24.6**	**-1.4**
BRTR	**Keskin Array B** comp=Z,0.7nm,0.8s,baz=129,slow=11,SNR=5.3	**24.29**	**309**	P	**P**	**18 31 37.0**	**+1.3**
FINES	**FINESS Array B** comp=Z,1.3nm,0.8s,baz=151,slow=9.2,SNR=5.3	**41.13**	**337**	P	**P**	**18 34 04.2**	**+2.2**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.5s,baz=54,slow=9.0,SNR=2.3	**54.22**	**267**	P	**P**	**18 35 44.2**	**-0.1**

MEX 22 18:30:35.4±0.4, 16°.75N×93°.63W, h166km±4km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.49**	**86**	*e*P	Pn	18 30 56.9	-1.7
TGIG				*e*S	Sn	18 31 14.1	-2.1
PCIG		**1.11**	**159**	*e*P	Pn	18 31 00.9	-1.6
PCIG				*e*S	Sn	18 31 21.3	-2.2
CMIG	**Matias Romero**	**1.25**	**286**	*i* P	Pn	18 31 02.6	-1.2
CMIG				*i* S	Sn	18 31 23.3	-2.3
CCIG	**Comitan**	**1.50**	**108**	*i* P	Pn	18 31 05.0	-1.4
CCIG				*e*S	Sn	18 31 28.6	-1.6
HUIG	**Huatulco**	**2.57**	**248**	*i* P	Pn	18 31 14.2	-3.9
HUIG				*e*S	Sn	18 31 47.0	-4.3

ISK ***22*** *18:44:28.6, 38°.81N×43°.49E, h3km, ML2.8/8*
DDA ***22*** *18:44:29.1, 38°.77N×43°.50E, h7km±6km, ML2.8*
ISCJB ***22*** *18:44:30.3±0.5, 38°.82N±0°.03×43°.48E±0°.04, h11km±4km, Error ellipse: s-maj=5.9km s-min=4.2km az=15.8*
ISC 22 18:44:29.9±0.9, 38°.81N±0°.03×43°.50E±0°.03, h17km±7km, n17, σ1§13/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.19**	**18**	*i* P	**Pg**	**18 44 33.9**	**-0.9**
VMUR				*i* S	**Sg**	**18 44 39.1**	**+1.1**
VMUR	comp=Z,6μm,0.2s			IAML_P			
VANB	**Van**	**0.23**	**202**	PG	**Pg**	**18 44 35.4**	**+0.1**
VANB				SG	**Sg**	**18 44 40.7**	**+1.7**
ERCV	**ERCIS-VAN**	**0.24**	**329**	PG	**Pg**	**18 44 34.3**	**-1.3**
ERCV				SG	**Sg**	**18 44 38.4**	**-1.1**
TVAN	**Van**	**0.29**	**194**	*i* P	**Pb**	**18 44 35.5**	**-1.2**
TVAN				*i* S	**Sb**	**18 44 41.7**	**+0.3**
CLDR	**Caldiran**	**0.47**	**44**	PG	**Pg**	**18 44 38.6**	**-0.8**
CLDR				SG	**Sg**	**18 44 46.0**	**+0.2**
CLDR	**Caldiran**	**0.47**	**44**	*i* P	**Pb**	**18 44 39.1**	**-0.7**
CLDR				*i* S	**Sb**	**18 44 47.1**	**+0.5**
CLDR	comp=Z,5μm,0.1s			IAML_P			
ADCV	**BITLIS_Adilcev**	**0.60**	**270**	*i* P	**Pb**	**18 44 41.7**	**-0.4**
ADCV				*i* S	**Sb**	**18 44 51.8**	**+1.3**
DYDN	**Diyadin**	**0.75**	**11**	*i* P	**Pn**	**18 44 46.5**	**+0.6**
DYDN	comp=Z,2μm,0.1s			IAML_P			
TUTA	**Tutak**	**0.80**	**318**	*i* P	**Pg**	**18 44 44.5**	**-1.0**
TUTA				*i* S	**Sb**	**18 44 57.3**	**+1.2**
MLAZ	**Malazgirt-MUS**	**0.81**	**294**	PG	**Pb**	**18 44 45.1**	**-0.5**
MLAZ				SG	**Sb**	**18 44 56.7**	**+0.3**
AGRB	**Hanur-Agry**	**0.86**	**333**	PG	**Pg**	**18 44 45.8**	**-0.9**
BLIS	**Bitlis-Merkez**	**1.15**	**250**	*i* P	**Pg**	**18 44 50.6**	**-1.6**
BLIS	comp=Z,1μm,0.2s			IAML_P			
HAKT	**HAKKARI**	**1.26**	**172**	*i* P	**Pg**	**18 44 52.5**	**-1.8**
HAKT	comp=Z,553nm,0.3s			IAML_P			
EATA	**Eleskirt**	**1.31**	**324**	*i* P	**Pg**	**18 44 54.0**	**-1.3**
VRTB	**Varto-Mus**	**1.63**	**283**	PN	**Pb**	**18 44 59.0**	**-0.6**
GNI	**Garni**	**1.65**	**35**	PN	**Pn**	**18 44 59.5**	**+1.3**
KOPR	**Koprukoy-ERZUR**	**1.74**	**313**	PN	**Pn**	**18 45 00.7**	**+1.2**

GCG 22 18:52:54.7±0.6, 13°.50N×91°.33W, h13km±28km, MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.05**	**27**	*e*P	Pb	18 53 13.9	-1.0
FUG				*e*S	Sb	18 53 28.2	-0.5
IXG	**Ixpaco**	**1.09**	**52**	*e*P	Pb	18 53 13.7	-1.8
IXG				*e*S	Sb	18 53 29.4	-0.4
PCG	**Pacaya**	**1.13**	**38**	*e*P	Pb	18 53 15.2	-1.1
STG3	**Santiaguito 3,**	**1.23**	**349**	*e*P	Pn	18 53 16.0	-1.8

SAR ***22*** *19:14:51.0±0.8, 41°.71N×20°.33E, h7km±3km, ML2.4/7*
SKO ***22*** *19:14:52.4, 41°.81N×20°.19E, h31km, M2.0, ML2.3*
PDG ***22*** *19:14:52.4±0.1, 41°.78N×20°.19E, h2km, ML2.6/14, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
ISCJB ***22*** *19:14:53.0±0.5, 41°.73N±0°.03×20°.24E±0°.03, h15km±5km, Error ellipse: s-maj=4.8km s-min=3.8km az=14.2*
BEO ***22*** *19:14:53.6±0.2, 41°.83N×20°.22E, h0km, ML2.0/13*
ISC 22 19:14:52.5±1.1, 41°.81N±0°.03×20°.21E±0°.02, h3km±10km, n50, σ1§06/84, 7C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.53**	**210**	*e*Pg	**Pg**	**19 15 02.9**	**+0.3**
TIR				*e*Sg	**Sg**	**19 15 10.6**	**+1.1**
TIR	**Tirane**	**0.53**	**210**	*e*Pg	**Pg**	**19 15 02.9**	**+0.3**
ULC	**Ulcinj**	**0.74**	**282**	⇑*i*Pg	**Pg**	**19 15 05.8**	**-0.9**
ULC				*e*Sg	**Sg**	**19 15 17.0**	**+0.7**
ULC	**Ulcinj**	**0.74**	**282**	*i* Pg	**Pg**	**19 15 06.3**	**-0.4**
PVY	**Plav**	**0.81**	**347**	⇓*i*Pg	**Pg**	**19 15 07.8**	**-0.2**
PVY				*e*Sg	**Sb**	**19 15 21.1**	**+0.5**
OHR	**Ohrid**	**0.82**	**148**	*e*Pg	**Pg**	**19 15 07.8**	**-0.4**
OHR				*i* Sg	**Sb**	**19 15 20.8**	**-0.2**
OHR	comp=N,60nm,0.3s			*e*Lg	Lg	19 15 22.6	
OHR	comp=E,61nm,0.5s			*e*Lg	Lg	19 15 24.0	
DRME	**Dracevica, Mon**	**0.85**	**297**	⇓*i*Pg	**Pg**	**19 15 08.1**	**-0.8**
DRME				*e*Sg	**Sb**	**19 15 21.5**	**-0.3**
DRME	**Dracevica, Mon**	**0.85**	**297**	*e*Pg	**Pg**	**19 15 07.9**	**-1.0**
DRME				*e*Sg	**Sn**	**19 15 23.0**	**-1.4**
SKO	**Skopje**	**0.93**	**80**	*e*Pg	**Pb**	**19 15 10.9**	**-0.3**
SKO				*e*Sg	**Sg**	**19 15 22.4**	**0.0**
SKO	**Skopje**	**0.93**	**80**	*e*Pg	**Pg**	**19 15 10.2**	**-0.1**
SKO				*i* Sg	**Sb**	**19 15 22.9**	**-1.0**
PDG	**Podgorica**	**0.94**	**311**	*e*Pg	**Pg**	**19 15 10.0**	**-0.6**
PDG				*e*Sg	**Sg**	**19 15 23.0**	**+0.1**
PDG	**Podgorica**	**0.94**	**311**	*e*Pg	**Pg**	**19 15 09.8**	**-0.8**
PDG	**Podgorica**	**0.94**	**311**	*e*Pg	**Pg**	**19 15 09.6**	**-1.0**
PDG				*e*Sg	**Sb**	**19 15 24.8**	**+0.4**
TTG	**Podgorica**	**0.94**	**311**	⇑*i*Pg	**Pg**	**19 15 09.8**	**-0.8**
TTG				*e*Sg	**Sb**	**19 15 24.8**	**+0.4**
IVA	**Berane**	**1.09**	**348**	⇑*i*Pg	**Pg**	**19 15 13.0**	**-0.4**
IVA				*e*Sg	**Sn**	**19 15 30.2**	**-0.1**
BUM	**Brajici-Budva**	**1.10**	**297**	*e*Pg	**Pg**	**19 15 12.8**	**-0.7**
BUM				*e*Sg	**Sn**	**19 15 29.8**	**-0.7**
KOME	**Kolasin**	**1.16**	**334**	⇑*i*Pg	**Pg**	**19 15 14.4**	**-0.4**
KOME				*e*Sg	**Sn**	**19 15 32.8**	**+0.7**
CEME	**Cevo**	**1.21**	**308**	⇑*i*Pg	**Pg**	**19 15 14.5**	**-1.2**
CEME				*e*Sg	**Sn**	**19 15 34.1**	**+0.8**
NKME	**Niksic**	**1.34**	**316**	⇓*i*Pg	**Pn**	**19 15 17.1**	**-1.0**
NKME				*e*Sg	**Sn**	**19 15 38.3**	**+1.9**
NKY	**Niksic**	**1.35**	**318**	⇑*i*Pg	**Pn**	**19 15 17.8**	**-0.5**
NKY				*e*Sg	**Sn**	**19 15 39.0**	**+2.2**
HCY	**Herceg Novi**	**1.43**	**297**	⇑*i*Pg	**Pn**	**19 15 18.5**	**-0.8**
HCY				*e*Sg	**Sg**	**19 15 40.8**	**+2.4**
HCY	**Herceg Novi**	**1.43**	**297**	*e*Pn	**Pn**	**19 15 18.3**	**-1.0**
HCY				*e*Sn	**Sg**	**19 15 39.3**	**+0.9**
SJES	**Sjenica**	**1.46**	**353**	*e*Pg	**Pn**	**19 15 19.3**	**-0.5**
SJES				*e*Sg	**Sg**	**19 15 40.1**	**+0.6**
BARS	**Barje**	**1.56**	**49**	*e*Pg	**Pg**	**19 15 21.9**	**-0.4**
BARS				*e*Sg	**Sb**	**19 15 41.8**	**-0.2**
SELS	**Selova**	**1.56**	**25**	*e*Pn	**Pb**	**19 15 21.7**	**-0.3**
PLE	**Pljevlja**	**1.64**	**338**	⇓*i*Pn	**Pb**	**19 15 23.4**	**0.0**
PLE				*e*Sn	**Sg**	**19 15 48.2**	**+3.1**
BRY	**Bratogost**	**1.65**	**312**	⇓*i*Pn	**Pb**	**19 15 23.0**	**-0.6**
BRY				*e*Sn	**Sg**	**19 15 48.3**	**+2.7**
BRY	**Bratogost**	**1.65**	**312**	*e*Pn	**Pn**	**19 15 22.6**	**+0.1**
BRY				*e*Sn	**Sg**	**19 15 45.3**	**-0.3**
TREB	**Trebinje**	**1.65**	**304**	*e*Pn	**Pn**	**19 15 22.5**	**+0.1**
TREB				*e*Sg	**Sg**	**19 15 46.4**	**+0.8**
TREB	**Trebinje**	**1.65**	**304**	*e*Pn	**Pn**	**19 15 22.3**	**-0.1**
TREB				*e*Sn	**Sb**	**19 15 44.8**	**0.0**
UPM	**Unac-Piva**	**1.70**	**326**	⇓*i*Pn	**Pb**	**19 15 24.5**	**+0.1**
UPM				*e*Sn	**Sg**	**19 15 49.8**	**+2.8**
UPM	**Unac-Piva**	**1.70**	**326**	*e*Pn	**Pn**	**19 15 22.7**	**-0.4**
UPM				*e*Sn	**Sb**	**19 15 46.1**	**-0.1**
IVAS	**Ivanjica**	**1.77**	**359**	*e*Pn	**Pb**	**19 15 24.7**	**-0.8**
IVAS				*e*Sg	**Sg**	**19 15 48.5**	**-0.8**
GRUS	**Gruza**	**2.11**	**10**	*e*Pn	**Pb**	**19 15 30.1**	**-1.3**
BOVS	**Bovan**	**2.13**	**31**	*e*Pn	**Pb**	**19 15 30.1**	**-1.6**
BBLS	**Lazići**	**2.14**	**344**	*e*Pn	**Pb**	**19 15 31.3**	**-0.6**
BBLS	**Lazići**	**2.14**	**344**	*e*Pn	**Pn**	**19 15 29.0**	**-0.1**
BBLS				*e*Sn	**Sn**	**19 15 56.8**	**+0.6**
STON	**Ston**	**2.15**	**301**	*e*Pn	**Pb**	**19 15 30.7**	**-1.2**
STON	**Ston**	**2.15**	**301**	*e*Pn	**Pb**	**19 15 30.2**	**-1.7**
STON	**Ston**	**2.15**	**301**	*e*Pn	**Pn**	**19 15 29.1**	**0.0**
STON				*e*Sn	**Sb**	**19 15 57.2**	**-1.7**
DIVS	**Divibare**	**2.29**	**356**	*e*Pn	**Pb**	**19 15 33.1**	**-1.4**
DIVS	**Divibare**	**2.29**	**356**	*e*Pn	**Pn**	**19 15 31.1**	**-0.1**
DIVS				*e*Sn	**Sn**	**19 16 00.3**	**+0.3**
ZAPS	**Zavoj**	**2.31**	**50**	*e*Pn	**Pb**	**19 15 32.2**	**+0.8**
TRUS	**Trudelj**	**2.42**	**3**	*e*Pn	**Pb**	**19 15 34.5**	**-2.1**
HAPS	**Han Pijesak,Bl**	**2.46**	**338**	*e*Pn	**Pn**	**19 15 34.5**	**+1.0**
HAPS				*e*Sn	**Sn**	**19 16 05.2**	**+1.1**
HAPS	**Han Pijesak,Bl**	**2.46**	**338**	*e*Pn	**Pn**	**19 15 33.6**	**+0.1**
HAPS				*e*Sn	**Sn**	**19 16 04.8**	**+0.7**
FRGS	**Fruska Gora**	**3.36**	**355**	*e*Pn	**Pn**	**19 15 47.5**	**+1.7**
FRGS	**Fruska Gora**	**3.36**	**355**	*e*Pn	**Pn**	**19 15 45.7**	**-0.1**
UDBI	**Udbina**	**4.24**	**311**	*e*Pn	**Pn**	**19 15 59.7**	**+1.8**
NVLJ	**Novalja**	**4.78**	**307**	*i* Pn	**Pn**	**19 16 04.9**	**-0.4**

ISCJB ***22*** *19:38:53.4±0.3, 18°.03S±0°.09×178°.08W±0°.05, h590km, mb4.3/23, Error ellipse: s-maj=11.5km s-min=5.6km az=172.8*
IDC ***22*** *19:38:56.7±1.9, 18°.09S×178°.07W, h612km±24km, mb3.7/16, mb1 3.8/17, mb1mx3.6/30, mbtmp4.6/17, Error ellipse: s-maj=19.5km s-min=10.5km az=160.0*
ISC 22 19:38:54.5±0.5, 18°.18S±0°.1×178°.05W±0°.08, h590km, n133, σ1§10/133, mb4.4/23, 25C-8D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 13nm,0.7s	**15.10**	**252**	*e*P	**P**	**19 42 05.9**	**+1.9**
DZM	**Mont Dzumac** 1.2nm,0.3s,baz=269,slow=21,SNR=8.6	**15.10**	**252**	P	**P**	**19 42 05.4**	**+1.4**
RAR	**Rarotonga** 2.2nm,0.3s,baz=254,slow=15,SNR=2.4	**17.50**	**103**	S	**S**	**19 45 14.9**	**-3.0**
PAE	**Paea** 4.3nm,0.4s	**27.09**	**94**	*e*P	**P**	**19 43 52.9**	**+1.2**
PPT2	**Papeete2** 13nm,0.6s	**27.10**	**93**	*e*P	**P**	**19 43 52.5**	**+0.6**
PPT	**Papeete** 21nm,0.6s,baz=70,slow=9.4,SNR=5.9	**27.10**	**93**	P	**P**	**19 43 52.0**	**+0.2**
TIAR	**Tiarei** 5.7nm,0.

PWJI	Pagerwojo	68.73 268	P		P	19 48 59.8	-1.0
UGM	Wanagama	69.98 268	P		P	19 49 07.0	-1.3
JNU	Nakatsue	70.50 316	P		P	19 49 11.1	+0.1
	2.1nm,0.4s,baz=79,slow=4.2,SNR=7.5						
CISI	Cisompet, Garu	72.65 268	P		P	19 49 22.4	-1.5
CISI			pP		pP	19 51 33.6	+9.1
PETK	Petropavlovsk-	73.93 345	P		P	19 49 30.4	+0.1
	8.5nm,0.7s,baz=111,slow=8.0,SNR=20						
CGJI	Cibinong	74.94 268	P		P	19 49 34.7	-2.1
KSRS	Korea Array	75.06 318	P		P	19 49 38.2	+1.3
	1.2nm,0.7s,baz=131,slow=5.9,SNR=8.6						
PPBI	Pangkal Pinang	75.84 272	P		P	19 49 41.9	+0.1
USRK	Ussuriysk Ar.	76.95 326	P		P	19 49 48.1	+1.0
	1.2nm,0.5s,baz=167,slow=4.2,SNR=5.7						
MDSI	Maura Dua	77.00 269	P		P	19 49 45.1	-3.1
NVAR	Mina Array Bea	79.31 44	P		P	19 50 00.9	+0.7
	0.7nm,0.8s,baz=224,slow=9.8,SNR=2.8						
GSI	Gunungsitoli	85.05 273	P		P	19 50 29.2	-0.3
KCSI	Kotacane, Aceh	85.56 275	P		P	19 50 30.8	-1.1
TXAR	Lajitas Array	85.80 57	P		P	19 50 33.5	+0.7
	1.8nm,0.8s,baz=221,slow=5.9,SNR=18						
ILAR	Eielson Array	85.98 13	P		P	19 50 32.0	-0.7
	1.3nm,0.4s,baz=219,slow=5.0,SNR=24						
PDAR	Pinedale Array	87.24 43	P		P	19 50 40.2	+0.7
	0.2nm,0.5s,baz=236,slow=7.3,SNR=3.0						
CMAR	Chiang Mai Arr	89.26 290	P		P	19 50 50.2	+1.1
	3.2nm,0.9s,baz=113,slow=3.1,SNR=18						
SONM	Songino Array	93.90 319	P		P	19 51 10.7	+0.7
	0.3nm,0.5s,baz=136,slow=6.0,SNR=4.0						
MKAR	Makanchi Array	109.50 314	PKiKP		PKiKP	19 56 17.6	-1.2
	0.6nm,0.5s,baz=108,slow=1.2,SNR=11						
ARCES	ARCESS Array B	126.55 350	PKP		PKPdf	19 56 50.0	-0.7
	1.5nm,0.6s,baz=20,slow=1.1,SNR=8.1						
GEYT	Alibeck	127.42 304	PKP		PKiKP	19 56 54.2	+0.2
	1.3nm,0.6s,baz=184,slow=8.5,SNR=3.7						
FINES	FINESS Array B	133.45 344	PKP		PKPdf	19 57 02.9	-1.1
	1.1nm,0.7s,baz=64,slow=3.5,SNR=8.3						
NOA	NORSAR Array B	136.59 353	PKP		PKPdf	19 57 10.5	+0.6
	0.3nm,0.5s,baz=13,slow=3.7,SNR=2.3						
AKASG	Malin Array Be	140.87 332	PKhKP		PKPpre	19 57 11.5	
	0.7nm,0.4s,baz=49,slow=4.3,SNR=3.3						
DIKM	Dikmen	143.13 317 ⇑	iP		PKPab	19 57 19.7	-0.6
TLCR		144.91 326 ⇑	iP		PKPdf	19 57 24.7	-0.5
BURAR	Bucovina Array	144.93 332 ⇑	iP		PKPab	19 57 26.7	-0.4
BIZ	Bicaz	145.03 331 ⇑	iP		PKPab	19 57 27.3	-0.1
TESR	Tescani	145.08 330 ⇓	iP		PKPbc	19 57 26.7	+0.2
BRTR	Keskin Array B	145.15 315	PKPbc		PKPbc	19 57 26.8	-0.3
	5.5nm,0.7s,baz=130,slow=4.7,SNR=31						
CFR	Carcaliu	145.27 327 ⇑	iP		PKPbc	19 57 27.1	+0.1
VRI	Vrincioaia	145.50 329 ⇑	iP		PKPbc	19 57 27.5	-0.2
PLOR	Plostina	145.55 329 ⇓	iP		PKPbc	19 57 27.4	-0.5
ANTO	Ankara	145.64 316 ⇑	iP		PKPdf	19 57 27.6	+0.8
TRPA	Tarpa	145.65 335 ⇑	iP		PKPbc	19 57 28.4	+0.4
OSTC	Ostas	145.65 344	ePKP		PKPdf	19 57 26.7	+0.3
CHVC	Chvalec	145.67 344	ePKP		PKPbc	19 57 28.4	+0.3
HARR	Harsova	145.70 326 ⇑	iP		PKPbc	19 57 28.3	0.0
CLL	Collm	145.71 348 ⇓	iPKPbc		PKPbc	19 57 28.1	0.0
	comp=Z,17nm,0.8s						
ARCR	ARCALIA	145.71 332 ⇑	iP		PKPbc	19 57 28.3	0.0
TLB	Topalu	145.72 326 ⇑	iP		PKPbc	19 57 28.4	+0.1
OKC	Ostrava-Krasne	145.75 341	ePKP		PKPbc	19 57 28.5	+0.2
UPC	Upice	145.75 344	ePKP		PKPbc	19 57 28.5	+0.2
DPC	Dobruska-Polom	145.81 344	ePKP		PKPbc	19 57 29.0	+0.5
BRG	Berggiesshubel	145.91 346	i PKP		PKPbc	19 57 28.7	0.0
	comp=Z,7.5nm,0.8s						
MANR	Mangalia	145.93 325 ⇓	iP		PKPdf	19 57 24.6	-2.4
MORC	Moravsky Berou	145.98 342 ⇑	iP		PKPbc	19 57 29.0	0.0
MORC	Moravsky Berou	145.98 342	ePKP		PKPbc	19 57 29.0	0.0
DOPR	Dopca	146.08 330 ⇑	iP		PKPbc	19 57 30.3	+0.9
PVCC	Panska Ves	146.09 346	ePKP		PKPbc	19 57 29.6	+0.4
MLR	Muntele Rosu	146.16 329 ⇑	iP		PKPdf	19 57 24.0	-3.5
CJR	Cluj-Napoca	146.33 333 ⇑	iP		PKPbc	19 57 30.5	+0.4
PRU	Pruhonice	146.60 345	ePKP		PKPbc	19 57 30.9	+0.3
PRU			ex		x	19 57 33.8	
GOPC	GO Pecny, Ondr	146.61 345	ePKP		PKPbc	19 57 30.7	0.0
VOIR		146.63 330 ⇓	iP		PKPbc	19 57 31.3	+0.3
DRGR		146.65 334 ⇑	iP		PKPbc	19 57 31.1	+0.1
VRAC	Vranov	146.68 342 ⇑	iP		PKPdf	19 57 29.5	+1.4
VRAC	Vranov	146.68 342	ePKP		PKPbc	19 57 30.9	0.0
JAVC	Velka Javorina	146.76 341	ePKP		PKiKP	19 57 32.3	-0.8
PSZ	Piszkesteto	146.82 338 ⇑	iP		PKPbc	19 57 31.6	+0.2
ARR	Arges	146.88 330 ⇑	iP		PKPbc	19 57 32.5	+0.9
KRUC	Moravsky	146.96 342	ePKP		PKPbc	19 57 31.6	0.0
KHC	Kasperske Hory	147.63 346	ePKP		PKPbc	19 57 33.6	+0.2
KHC			ex		x	19 57 38.0	
GZR	Gura Zlata	147.71 332 ⇑	iP		PKPbc	19 57 33.6	-0.2
LEF	Lefka	147.72 308 ⇓	iP		PKPbc	19 57 33.5	-0.5
GERES	GERESS Array B	147.87 345	PKPbc		PKPbc	19 57 34.2	+0.2
	comp=Z,3.3nm,0.5s,baz=26,slow=3.2,SNR=36						
BZS	Buzias	148.04 333 ⇑	iP		PKPbc	19 57 34.5	0.0
CONA	Conrad Observa	148.13 342	ePKPbc		PKPbc	19 57 35.4	+0.6
	comp=Z,8.2nm,1.2s,SNR=5.3						
HERR	Herculane	148.27 332 ⇑	iP		PKPbc	19 57 35.1	0.0
MDVR	Moldovita	148.66 332 ⇑	iP		PKPbc	19 57 35.2	-0.9
ARSA	Arzberg	148.84 342	ePKPbc		PKiKP	19 57 37.5	0.0
	comp=Z,3.3nm,1.1s						
SOKA	Soboth	149.50 342	i PKPbc		PKPbc	19 57 37.3	-0.9
	comp=Z,7.2nm,1.1s						
VTS	Vitosha	149.58 328 ⇓	iP		PKPbc	19 57 38.3	-0.3
KBA	Koelnbreinsper	149.60 345	i PKPbc		PKPbc	19 57 37.9	-0.6
	comp=Z,4.4nm,0.6s						
WATA	Walderalm	149.77 347	i PKPbc		PKPbc	19 57 38.6	-0.2
	comp=Z,3.4nm,0.5s,SNR=4.4						
EZN	Ezine	149.77 321 ⇑	iP		PKPbc	19 57 38.7	-0.2
WTTA	Wattenberg	149.83 347	i PKPbc		PKPbc	19 57 39.1	+0.1
	comp=Z,9.9nm,0.6s,SNR=10						
MOTA	Moosalm	149.86 348	ePKPbc		PKPbc	19 57 38.9	-0.1
	comp=Z,6.4nm,1.0s						
MYKA	Terra Mystica	149.94 344	ePKPbc		PKPbc	19 57 38.3	-0.8
	comp=Z,4.1nm,0.5s						
SQTA	Sankt Quirin	149.96 347	i PKPbc		PKPbc	19 57 39.4	+0.1
	comp=Z,6.4nm,0.6s						
ABTA	Abfaltersbach	150.11 345	ePKPbc		PKPbc	19 57 39.1	-0.5
	comp=Z,8.8nm,0.6s,SNR=7.1						
DAVA	Damuels	150.15 349	i PKPbc		PKPbc	19 57 39.8	+0.1
	comp=Z,3.7nm,0.5s						
FETA	Feichten	150.25 348	i PKPbc		PKPbc	19 57 40.2	+0.2
	comp=Z,4.6nm,0.7s						
BLY	Banja Luka	150.51 338 ⇑	iP		PKPdf	19 57 35.6	+1.2
PDG	Podgorica	151.61 332 ⇓	iP		PKPdf	19 57 37.0	+0.9

*ISCJB **22** 19:47:08.6±0.2, 13°.49N±0°.03×145°.08E±0°.04, h50km, mb4.5/85, MS3.7/32, Error ellipse: s-maj=6.2km s-min=4.3km az=176.3*

*IDC **22** 19:47:09.5±0.9, 13°.57N×145°.17E, h43km±7km, mb4.1/21, mb1 4.2/21, mb1mx4.1/41, mbtmp4.3/21, MS3.6/31, Ms1 3.6/31, ms1mx3.6/43, Error ellipse: s-maj=18.1km s-min=10.4km az=85.0*

*NEIC **22** 19:47:10.8±1.1, 13°.52N×145°.06E, h56km±5km, mb4.7/72, Error ellipse: s-maj=14.1km s-min=11.5km az=63.0*

NEIC Felt [IV] at Tamuning and [II] at Yigo. Felt in much of Guam.

ISC 22 19:47:10.1±0.3, 13°.52N±0°.05×145°.17E±0°.07, h50km, n143, σ0.98/127, mb4.6/85, MS3.7/32, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.30	283	P	Pn	19 47 19.1	0.0
	2μm,0.3s,baz=225,slow=1.2,SNR=1758						
GUMO	Guam	0.30	283	ePn	Pn	19 47 19.3	+0.2
GUMO				eSn	Sn	19 47 26.3	+0.7
PATS	Pohnpei	14.54	116	ePn	Pn	19 50 31.3	-1.7
MANU	Manus Island	15.62	172	ePn	Pn	19 50 45.9	-1.1
	39nm,1.0s						
JAY	Jayapura	16.54	196	P	P	19 51 01.6	+0.9
	0.2nm,0.3s,baz=347,slow=6.8,SNR=4.9						
JAY				LR	LR	19 56 44.9	
	comp=Z,325nm,19.8s,baz=2.0,slow=35						
RABL	Rabaul	18.92	158	eP	P	19 51 27.3	+0.4
	37nm,0.6s						
SIJI	Sorong	19.86	225	P	Pn	19 51 40.7	+1.6
	0.5nm,0.3s,baz=36,slow=12,SNR=7.6						
SIJI				LR	LR	19 58 48.3	
	comp=Z,105nm,20.3s,baz=62,slow=35						
JHJ	Hachijo jima 2	20.12	347	LR	LR	19 57 08.2	
	comp=Z,78nm,20.7s,baz=184,slow=30						
DAV	Davao City (W)	20.30	254	LR	LR	19 58 20.3	
	comp=Z,61nm,20.0s,baz=69,slow=33						
JOW	Kunigami	20.62	313	P	Pn	19 51 48.5	+0.5
	4.5nm,0.8s,baz=182,slow=13,SNR=5.1						
JOW	Kunigami	20.62	313	eP	P	19 51 44.9	-0.4
	26nm,0.9s						
FAKI	Fak Fak	20.76	219	eP	P	19 51 47.0	0.0
	44nm,1.0s						
H11S3	WAKE ISLAND Hy	21.26	74	T	T	20 14 11.6	
	baz=260,slow=75,SNR=42						
H11S1	WAKE ISLAND Hy	21.28	74	T	T	20 13 50.8	
	baz=260,slow=75,SNR=56						
H11S2	WAKE ISLAND Hy	21.28	74	T	T	20 14 12.6	
	baz=260,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	21.70	71	T	T	20 14 46.9	
	baz=257,slow=75,SNR=62						
H11N2	WAKE ISLAND Hy	21.71	71	T	T	20 14 47.3	
	baz=257,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	21.72	71	T	T	20 14 41.8	
	baz=257,slow=75,SNR=56						
PMG	Port Moresby	22.87	175	P	P	19 52 10.2	+0.8
	15nm,0.6s,baz=28,slow=6.8,SNR=7.2						
PMG	Port Moresby	22.87	175	eP	P	19 52 09.3	-0.1
	22nm,0.8s						
INU	Inuyama	22.94	343	eP	P	19 52 10.9	+0.8
	34nm,1.0s						
JNU	Nakatsue	23.46	329	P	P	19 52 16.0	+0.8
	33nm,1.0s,baz=127,slow=5.1,SNR=26						
JNU				LR	LR	19 59 50.1	
	comp=Z,54nm,18.3s,baz=174,slow=32						
JNU	Nakatsue	23.46	329	eP	P	19 52 15.8	+0.6
	42nm,1.0s						
TGY	Tagaytay City	23.53	274	LR	LR	19 59 34.4	
	comp=Z,118nm,21.4s,baz=58,slow=32						
MJAR	Matsushiro Arr	23.76	346	P	P	19 52 16.5	-1.4
	6.3nm,0.8s,baz=170,slow=10,SNR=21						
MJAR				LR	LR	20 00 44.1	
	comp=Z,224nm,20.5s,baz=170,slow=34						
MAJO	Matsushiro	23.76	346	eP	P	19 52 17.8	-0.2
	12nm,0.8s						
MAT	Matsushiro	23.76	346	P	P	19 52 16.3	-1.6
MAT				S	S	19 56 32.8	+3.0
MJB9	Matsu-Tunnel	23.76	346	eP	P	19 52 17.8	-0.2
	13nm,0.8s						
YULB	Yu-li	24.64	297	eP	P	19 52 25.1	-1.0
	35nm,1.1s						
SSLB	Suanglung	25.07	298	eP	P	19 52 30.4	+0.4
	88nm,1.1s						
HNR	Honiara	27.12	146	LR	LR	20 02 53.3	
	comp=Z,142nm,20.9s,baz=8.0,slow=35						
COEN	Coen	27.37	184	eP	P	19 52 50.9	+0.1
	14nm,0.8s						
KSRS	Korea Array	28.36	330	P	P	19 52 59.3	-0.2
	6.5nm,0.9s,baz=143,slow=11,SNR=22						
KSRS				PcP	PcP	19 56 12.5	+1.3
	1.5nm,1.0s,baz=146,slow=3.1,SNR=5.6						
KS15	Wonju Array Si	28.37	330	eP	P	19 52 59.0	-0.6
	19nm,1.1s						
MTN	Manton Dam	29.66	209	eP	P	19 53 10.3	-0.9
	13nm,1.1s						
NJ2	Nanjing	30.34	312	eP	P	19 53 16.3	-0.8
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
USA0B	Ussuriysk Arra	32.59	342	eP	P	19 53 36.6	-0.1
	4.4nm,0.8s						
USRK	Ussuriysk Ar.	32.59	342	LR	LR	20 05 39.2	
	comp=Z,175nm,21.2s,baz=144,slow=34						
WHN	Wuhan	33.05	306	P	P	19 53 54.6	+14
CTA	Charters Tower	33.42	178	P	P	19 53 44.7	+0.5
	5.0nm,0.7s,baz=12,slow=6.2,SNR=7.9						
CTAO	Charters Tower	33.42	178	eP	P	19 53 44.6	+0.5
	13nm,0.9s						
SBUM	Sibu	34.38	254	eP	P	19 53 51.9	-0.7
	1.4nm,0.7s						
WRAB	Tennant Creek	34.91	198	eP	P	19 53 56.9	-0.2
	8.4nm,0.8s						
WB2	Warramunga Arr	34.92	198	eP	P	19 53 57.1	-0.1
	10nm,0.9s						
WR1	Warramunga Arr	34.92	198	eP	P	19 53 57.4	+0.2
WRA	Warramunga Arr	34.92	198	P	P	19 53 57.4	+0.2
	5.5nm,0.6s,baz=12,slow=6.4,SNR=30						
KSM	Kuching	36.51	254	eP	P	19 54 09.2	-1.8
	6.0nm,1.0s						
BJT	Baijiatuau	36.67	321	eP	P	19 54 10.7	-1.3
	7.0nm,0.6s						
BJI	Beijing	36.67	321	P	P	19 54 13.6	+1.5
BJI				pP	pP	19 54 25.3	+0.2
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FITZ	Fitzroy Crossi	36.85	212	P	P	19 54 14.0	+0.2
	4.1nm,0.7s,baz=38,slow=14,SNR=8.7						
FITZ	Fitzroy Crossi	36.85	212	eP	P	19 54 13.7	-0.1
	5.4nm,1.0s						
ENH	Enshi	36.87	303	eP	P	19 54 12.7	-1.2
	16nm,0.8s						
AS31	Alice Springs	38.57	197	eP	P	19 54 28.1	-0.2
	2.9nm,0.6s						
ASAR	Alice Springs	38.57	197	P	P	19 54 28.2	-0.1
	4.3nm,0.6s,baz=24,slow=11,SNR=80						
ASAR				LR	LR	20 10 41.4	
	comp=Z,146nm,21.2s,baz=29,slow=37						
EIDS	Eidsvold	39.08	171	eP	P	19 54 32.9	+0.4
	4.7nm,0.8s						
HHC	Hu-ho-hao-te	40.01	319	eP	P	19 54 41.5	+1.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,13nm,5.4s						
HHC				LR	LR		
	comp=N,270nm,11.1s						
HHC				LR	LR		
	comp=E,190nm,12.8s						
UGM	Wanagama	40.46	240	eP	P	19 54 43.5	-0.6
	25nm,1.0s						
PETK	Petropavlovsk-	40.73	12	P	P	19 54 46.2	+0.4
	4.9nm,1.0s,baz=160,slow=8.8,SNR=3.1						
PETK				LR	LR	20 09 44.2	
	comp=Z,59nm,20.2s,baz=205,slow=33						
PEA1	Petropavlovsk-	40.73	12	eP	P	19 54 46.2	+0.3
DZM	Mont Dzumac	41.07	149	P	P	19 54 50.4	+1.3
	13nm,0.7s,baz=336,slow=11,SNR=6.8						
DZM				LR	LR	20 08 47.8	
	comp=Z,176nm,19.9s,baz=337,slow=32						
DZM	Mont Dzumac	41.07	149	eP	P	19 54 50.1	+1.0
	18nm,0.9s						
CD2	Chengdu	41.77	301	eP	P	19 54 53.6	-1.3
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
MYKOM	Kota Tinggi	42.49	258	eP	P	19 55 00.4	-0.4
	8.5nm,0.8s						
PSA00	Pilbara Seismi	42.83	216	eP	P	19 55 03.4	0.0
	13nm,1.0s						
ARMA	Armidale	44.13	172	eP	P	19 55 14.0	+0.1
	8.3nm,0.9s						
KULM	Kulim	44.61	264	eP	P	19 55 17.7	-0.2
	5.2nm,0.9s						
CM31	Chiang Mai Arr	44.61	283	eP	P	19 55 17.5	-0.4
	4.2nm,0.8s						
CMAR	Chiang Mai Arr	44.61	283	P	P	19 55 18.1	+0.2
	1.2nm,0.6s,baz=81,slow=6.4,SNR=13						
CMAR				PcP	PP	19 57 01.8	-1.0
	1.2nm,0.8s,baz=93,slow=2.7,SNR=4.1						
CMAR				ScP	ScP	20 00 47.9	-0.5
	0.7nm,0.9s,baz=90,slow=2.0,SNR=4.4						
CMAR				LR	LR	20 12 55.9	
	comp=Z,63nm,21.1s,baz=76,slow=35						
STKA	Stephens Creek	45.27	184	P	P	19 55 22.9	+0.1
	2.5nm,0.5s,baz=6.6,slow=7.6,SNR=10						
STKA				LR	LR	20 15 54.7	
	comp=Z,122nm,18.4s,baz=19,slow=38						
STKA	Stephens Creek	45.27	184	eP	P	19 55 22.5	-0.3
	1.4nm,1.1s						
MA2	Magadan	46.16	4	eP	P	19 55 29.0	-0.5
	6.0nm,0.8s						
LHI	Lord Howe Isla	46.73	164	eP	P	19 55 33.7	-0.6
	76nm,1.1s						
BBOO	Buckleboo	46.89	191	eP	P	19 55 35.6	+0.1
	21nm,0.6s						
SONA0	Songino Array	46.95	325	eP	P	19 55 37.4	+1.3
SONM	Songino Array	46.95	325	P	P	19 55 37.4	+1.3
	1.5nm,0.8s,baz=139,slow=8.2,SNR=9.6						
SONM				ScP	ScP	20 00 56.1	-1.6
	1.0nm,0.7s,baz=131,slow=3.6,SNR=6.1						
SONM				LR	LR	20 15 21.6	
	comp=Z,123nm,20.6s,baz=116,slow=36						
FORT	Forrest	47.02	200	eP	P	19 55 36.8	+0.2
	19nm,0.8s						
GTA	Gaotai	47.43	312	eP	P	19 55 41.5	+1.5
GTA				pP	pP	19 55 54.4	+1.1
GTA				sP	sP	19 55 59.6	+0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,110nm,6.0s						
GTA				LR	LR		
	comp=N,82nm,17.5s						
GTA				LR	LR		
	comp=E,110nm,18.4s						
GTA				LR	LR		
	comp=Z,130nm,19.0s						
GSI	Gunungsitoli	48.62	260	eP	P	19 55 46.9	-2.5
	4.5nm,0.6s						
CAN	Canberra	48.71	176	eP	P	19 55 49.7	+0.1
	10nm,1.1s						
ADK	Adak	48.97	30	eP	P	19 55 51.2	-0.2
	70nm,1.0s						
YAK	Yakutsk	49.70	351	eP	P	19 55 56.0	-0.8
	10nm,0.8s						
ATKA	Atka Island	50.40	31	eP	P	19 56 02.7	+0.4
	73nm,1.2s						
TOO	Toolangi	50.82	180	eP	P	19 56 06.4	+0.7
	18nm,1.0s						
MORW	Morawa	50.84	213	eP	P	19 56 05.2	-0.7
	13nm,1.1s						
BRDH	Bariadhala	51.45	288	LR	LR	20 19 33.0	
	comp=Z,101nm,18.3s,baz=134,slow=38						
WMQ	Urumqi	57.39	314	eP	P	19 56 55.1	+1.5
WMQ				LR	LR		
	comp=E,220nm,24.1s						
WMQ				LR	LR		
	comp=Z,61nm,22.1s						
BKZ	Black Stump Fm	60.02	152	eP	P	19 57 12.4	+0.6
	12nm,0.9s						
MK31	Makanchi Array	61.74	316	eP	P	19 57 23.1	-0.4
	1.2nm,0.6s						
MK32	Makanchi Array	61.74	316	eP	P	19 57 23.2	-0.2
MKAR	Makanchi Array	61.74	316	P	P	19 57 23.2	-0.2
	0.6nm,0.5s,baz=89,slow=8.6,SNR=8.7						
MKAR				LR	LR	20 23 50.9	
	comp=Z,54nm,21.5s,baz=46,slow=36						
MKAR				PKP2bc		20 26 41.0	
	0.5nm,0.9s,baz=282,slow=2.4,SNR=4.3						
ZALV	Zalesovo Beam	61.84	324	LR	LR	20 25 04.2	
	comp=Z,69nm,18.6s,baz=72,slow=37						
MAKZ	Makanchi	61.95	316	eP	P	19 57 24.4	-0.5
	3.6nm,0.8s						
KDAK	Kodiak Island	63.97	32	eP	P	19 57 38.4	+0.3
	7.4nm,1.1s						
KURK	Kurchatov	64.82	320	eP	P	19 57 42.7	-1.0
	11nm,1.0s						
KURBB	Kurchatov Arra	64.86	320	PKP2bc		20 26 32.9	
	0.7nm,0.9s,baz=287,slow=3.0,SNR=5.2						
CNPM	China Poot	65.14	30	eP	P	19 57 45.5	-0.2
	6.9nm,0.6s						
KSH	Kashi	65.51	307	eP	P	19 57 51.8	+3.2
NRIK	Noril'sk	66.29	341	LR	LR	20 27 08.8	
	comp=Z,54nm,18.9s,baz=93,slow=36						
SML	Sawmill	67.13	28	eP	P	19 57 59.6	+1.2
	7.9nm,0.8s						
ILAR	Eielson Array	68.50	25	P	P	19 58 05.0	-2.0
	1.2nm,0.7s,baz=248,slow=5.7,SNR=11						
ILAR				LR	LR	20 26 26.3	
	comp=Z,26nm,20.4s,baz=278,slow=34						
ILB	Eielson Array	68.50	25	eP	P	19 58 04.9	-2.0
	2.6nm,1.0s						
DOT	Dot Lake	69.46	27	eP	P	19 58 12.5	-0.4
	3.5nm,0.9s						
KK31	Karatay Array	69.71	311	eP	P	19 58 13.8	-1.1
	1.2nm,0.8s						
BRVK	Borovoye	70.22	322	eP	P	19 58 17.6	-0.1
	4.3nm,1.1s						
INK	Inuvik	74.32	22	P	P	19 58 42.2	+0.3
	0.8nm,0.6s,baz=240,slow=7.1,SNR=4.5						
INK	Inuvik	74.32	22	eP	P	19 58 42.3	+0.4
	2.6nm,1.0s						
DLBC	Dease Lake	75.88	33	LR	LR	20 30 02.3	
	comp=Z,40nm,18.7s,baz=298,slow=34						
ABKAR	Akbulak array	76.78	318	eP	P	19 58 56.1	-0.3
	1.9nm,0.6s						
BBB	Bella Bella	77.45	39	LR	LR	20 26 57.2	
	comp=Z,45nm,19.5s,baz=224,slow=31						
GEYT	Alibeck	79.52	307	LR	LR	20 38 07.7	
	comp=Z,26nm,19.9s,baz=170,slow=38						
HUMO	Hull Mountain	82.35	48	eP	P	19 59 27.2	+0.3
	5.3nm,1.1s						
YBH	Yreka Blue Hor	82.70	49	eP	P	19 59 30.1	+1.3
	7.0nm,1.0s						
YKA	Yellowknife Ar	82.78	27	P	P	19 59 28.4	-0.2
	1.1nm,0.7s,baz=287,slow=5.5,SNR=3.0						
YKB5	Yellowknife Ar	82.78	27	eP	P	19 59 28.4	-0.2
PINE	Pine Mountain	83.55	47	eP	P	19 59 34.2	+1.0
	16nm,0.9s						
K05A	Summer Lake	83.81	48	eP	P	19 59 35.8	+1.2
	12nm,1.1s						
BEKR	Beckworth	84.84	50	eP	P	19 59 40.6	+0.8
	4.1nm,0.8s						
BMO	Blue Mountains	85.83	45	eP	P	19 59 45.4	+0.8
	8.1nm,1.1s						
NV01	Mina Array Sit	86.74	51	eP	P	19 59 50.5	+1.1
NVAR	Mina Array Bea	86.74	51	P	P	19 59 50.5	+1.1
	1.3nm,0.6s,baz=274,slow=5.8,SNR=14						
NVAR				LR	LR	20 34 43.2	
	comp=Z,20nm,18.1s,baz=307,slow=33						
NV11

DIGO			*i* S	Sg	19 53 18.1	-1.9
DIGO			IAML_P			
	comp=Z,499nm,0.1s					
EAK	**Akyaka**	**1.65 311**	*i* P	Pg	19 52 58.7	0.0
EAK			*i* S	Sg	19 53 20.9	+0.7
EAK			IAML_P			
	comp=Z,585nm,0.2s					
AGRB	**Hanur-Agry**	**1.74 269**	PN	Pb	19 52 58.3	-0.6
BGD	**Bogdanovka**	**2.07 323**	P	Pb	19 53 05.5	+0.9
BGD			S	Sg	19 53 33.2	-0.5
BTNK	**Botanikuri**	**2.10 351**	P	Pb	19 53 05.4	+0.6
BTNK			S	Sg	19 53 33.8	-0.7
EATA	**Eleskirt**	**2.14 278**	*i* P	Pg	19 53 07.4	-0.7
EATA			*i* S	Sg	19 53 39.7	+3.9
EATA			IAML_P			
	comp=Z,62nm,0.3s					
LGD	**Lagodekhi**	**2.34 19**	P	Pg	19 53 11.6	-0.4
LGD			S	Sg	19 53 42.9	+0.5

*IDC **22** 20:11:49.4±3.0, 6°.77N×82°.23W, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.6/36, mbtmp3.7/6, ML3.3/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/22, Error ellipse: s-maj=87.9km s-min=27.0km az=23.0*

*ISCJB **22** 20:11:53.3±1.7, 7°.40N±0°.05×82°.09W±0°.04, h10km±13km, mb3.5/4, MS3.5/2, Error ellipse: s-maj=10.7km s-min=4.3km az=34.0*

*UCR **22** 20:11:53.9±2.9, 7°.50N×82°.05W, h2km±11km, MD3.6*

ISC 22 20:11:53.7±2.1, 7°.42N±0°.08×82°.19W±0°.06, h11km±12km, n42, σ1§84/45, mb3.6/4, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**1.04**	**346**	*eP*	**Pg**	**20 12 13.1**	**-0.7**
DVD				*i* S	**Sb**	**20 12 27.4**	**-0.1**
BRU2	**Volcan**	**1.45**	**340**	*i* P	**Pn**	**20 12 19.9**	**-0.3**
BRU2				*eS*	**Sg**	**20 12 40.9**	**+0.3**
PTJ1	**Puerto Jimnez**	**1.56**	**315**	*eP*	**Pn**	**20 12 21.2**	**-0.3**
PTJ1				*eS*	**Sb**	**20 12 43.6**	**+1.1**
EDPN	**Palmar Norte**	**1.98**	**321**	*eP*	**Pn**	**20 12 28.1**	**+0.8**
EDBA	**Buenos Aires**	**2.04**	**328**	*eP*	**Pb**	**20 12 30.6**	**-0.3**
DRK0	**Durika**	**2.11**	**331**	*eP*	**Pn**	**20 12 30.0**	**+0.8**
EDLM	**Las Mercedes**	**2.31**	**323**	*eP*	**Pn**	**20 12 32.9**	**+1.0**
EDDO	**Dominical**	**2.46**	**318**	*eP*	**Pb**	**20 12 38.2**	**+0.2**
ZANG	**Zanguenga, Cho**	**2.77**	**56**	*eP*	**Pn**	**20 12 37.0**	**-1.1**
BCIP	**Isla Barro Col**	**2.91**	**53**	*eP*	**Pn**	**20 12 39.4**	**-0.6**
BCIP				*eS*	**Sn**	**20 13 15.8**	**+0.8**
BCIP	**Isla Barro Col**	**2.91**	**53**	*eP*	**Pn**	**20 12 39.4**	**-0.6**
BCIP				*eS*	**Sn**	**20 13 12.5**	**-2.5**
LCR2	**La Lucha 2**	**2.92**	**322**	*eP*	**Pn**	**20 12 41.3**	**+0.9**
CVTR	**Volcan Turrial**	**3.01**	**329**	*eP*	**Pn**	**20 12 44.1**	**+2.2**
FLAM	**Flamenco Islan**	**3.02**	**60**	*i* P	**Pn**	**20 12 43.1**	**+1.5**
FRIJ	**El Hiral**	**3.03**	**54**	*i* P	**Pn**	**20 12 38.2**	**-3.5**
UPA	**Univ. de Panam**	**3.06**	**59**	*eP*	**Pn**	**20 12 41.2**	**-0.9**
HDC	**Heredia**	**3.19**	**324**	*eP*	**Pn**	**20 12 46.0**	**+1.9**
HDC				*eS*	**Sb**	**20 13 26.8**	**-2.8**
ARE1	**Arenal 1**	**3.92**	**321**	*eP*	**Pn**	**20 12 57.0**	**+3.0**
JTS	**Las Juntas de**	**3.95**	**317**	Pn	**Pn**	**20 12 56.2**	**+1.8**
	7.6nm,0.3s,baz=4.1,slow=14,SNR=12						
JTS				Sn	**Sb**	**20 13 53.5**	**+2.2**
	6.5nm,0.3s,baz=17,slow=17,SNR=3.8						
PTAC	**Punta Ardita,**	**4.36**	**93**	*eP*	**Pn**	**20 13 00.7**	**+0.7**
SOLC	**Bahia Solano**	**4.90**	**104**	*eP*	**Pn**	**20 13 05.3**	**-2.1**
ESPN	**Las Esperanzas**	**5.18**	**337**	*eP*	**Pn**	**20 13 13.8**	**+2.5**
ACON	**Acoyapa**	**5.39**	**327**	*eP*	**Pn**	**20 13 13.8**	**-0.4**
HELC	**Santa Helena**	**6.73**	**100**	*eP*	**Pn**	**20 13 33.1**	**+0.2**
YOTC	**Yotoco, Valle**	**6.75**	**120**	*eP*	**Pn**	**20 13 30.3**	**-2.6**
GUY2C	**Guyana, Caldas**	**7.13**	**107**	*eP*	**Pn**	**20 13 37.4**	**-1.1**
POPC	**Popayan, Colom**	**7.33**	**131**	*eP*	**Pn**	**20 13 41.6**	**+0.6**
NORC	**Norcasia**	**7.51**	**104**	*eP*	**Pn**	**20 13 45.9**	**+2.5**
MARP	**Paez Belalcaza**	**7.70**	**126**	*eP*	**Pn**	**20 13 48.7**	**+2.5**
ORTC	**Ortega, Tolima**	**7.74**	**116**	*eP*	**Pn**	**20 13 48.7**	**+2.1**
OCAC	**Ocana**	**8.83**	**84**	*eP*	**Pn**	**20 14 04.2**	**+2.6**
RUSC	**La Rusia**	**9.18**	**99**	*eP*	**Pn**	**20 14 08.5**	**+1.8**
SDV	**Santo Domingo**	**11.54**	**82**	Pn	**Pn**	**20 14 38.1**	**-0.6**
	0.3nm,0.3s,baz=343,slow=19,SNR=3.7						
ATAH	**Atahualpa**	**14.94**	**165**	LR	LR	20 20 41.8	
	comp=Z,94nm,18.8s,baz=254,slow=37						
SJG	**San Juan**	**18.90**	**54**	LR	LR	20 22 32.0	
	comp=Z,42nm,21.9s,baz=268,slow=33						
LPAZ	**La Paz**	**27.36**	**149**	LR	LR	20 29 42.0	
	comp=Z,40nm,18.2s,baz=291,slow=40						
NVAR	**Mina Array Bea**	**44.87**	**319**	P	**P**	**20 20 10.3**	**+1.6**
	0.6nm,0.8s,baz=123,slow=11,SNR=4.8						
USHA	**Ushuaia**	**63.08**	**171**	LR	LR	20 47 10.8	
	comp=Z,93nm,20.5s,baz=310,slow=34						
INK	**Inuvik**	**69.55**	**342**	P	**P**	**20 23 02.5**	**+0.1**
	0.3nm,0.4s,baz=148,slow=4.4,SNR=1.8						
ILAR	**Eielson Array**	**72.69**	**336**	P	**P**	**20 23 23.4**	**+1.9**
	0.4nm,0.9s,baz=116,slow=6.1,SNR=3.0						
ESDC	**Sonseca Array**	**76.25**	**51**	P	**P**	**20 23 42.8**	**0.0**
	0.4nm,0.6s,baz=282,slow=6.1,SNR=4.5						
ASAR	**Alice Springs**	**141.81**	**241**	PKP	**PKPdf**	**20 31 21.9**	**-4.6**
	0.5nm,0.8s,baz=125,slow=3.6,SNR=5.5						

IDC 22 20:12:29.0±1.6, 31°.89N×94°.30E, h0km, mb3.4/3, mb1 3.4/5, mb1mx3.2/50, mbtmp3.3/5, ML3.5/2, Error ellipse: s-maj=64.5km s-min=24.6km az=59.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.52**	**332**	P	P	20 16 35.6	-0.2
	0.1nm,0.3s,baz=154,slow=11,SNR=5.8						
SONM	**Songino Array**	**18.40**	**27**	P	Pn	20 16 45.4	-0.1
	0.2nm,0.3s,baz=217,slow=12,SNR=3.0						
KURBB	**Kurchatov Arra**	**22.07**	**333**	P	P	20 17 24.6	-0.8
	1.1nm,1.0s,baz=136,slow=12,SNR=6.2						
BVAR	**Borovoye Array**	**27.29**	**328**	P	P	20 18 15.3	+0.2
	0.5nm,0.7s,baz=126,slow=9.8,SNR=3.6						
ASAR	**Alice Springs**	**66.97**	**141**	P	P	20 23 23.7	0.0
	0.2nm,0.5s,baz=328,slow=6.4,SNR=5.5						

*IDC **22** 20:29:30.9±2.3, 6°.61N×125°.39E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.7/4, Error ellipse: s-maj=221.3km s-min=25.5km az=64.0*

*MAN **22** 20:29:42.5, 7°.76N×125°.57E, h193km, mb4.3, ML3.1, MS2.9*

*ISCJB **22** 20:29:43.1±1.1, 7°.4N±0°.2×125°.4E±0°.1, h200km, mb3.3/4, Error ellipse: s-maj=24.8km s-min=19.2km az=153.0*

ISC 22 20:29:43.3±1.5, 7°.5N±0°.2×125°.6E±0°.1, h200km, n11, σ2§49/11, mb3.5/4, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.44**	**185**	*eP*	**Pn**	**20 30 11.6**	**+1.3**
DMPH				*eS*	**Sn**	**20 30 30.6**	**-0.6**
BUKP	**Musuan**	**0.60**	**306**	*eP*	**Pn**	**20 30 09.8**	**-1.0**
BUKP				*eS*	Sn	20 30 19.7	-13
MATI	**Mati**	**0.91**	**129**	*eP*	**Pn**	**20 30 12.2**	**-0.3**
MATI				*eS*	**Sn**	**20 30 29.9**	**-5.1**
CTBH	**Cotabato--PC H**	**1.33**	**257**	*iP*	Pn	20 30 21.5	+6.0
SKMP	**Bagumbayan, Su**	**1.41**	**225**	*eP*	**Pn**	**20 30 17.2**	**+1.0**
SKMP				*eS*	**Sn**	**20 30 38.5**	**-3.3**
DDMP	**Don Marcelino,**	**1.42**	**173**	*eP*	Pn	20 30 11.7	-4.6
GSPH	**General Santos**	**1.54**	**203**	*eP*	**Pn**	**20 30 16.1**	**-1.5**
WRA	**Warramunga Arr**	**28.63**	**163**	P	**P**	**20 35 21.9**	**+0.6**
	0.6nm,0.4s,baz=341,slow=12,SNR=7.1						
ASAR	**Alice Springs**	**32.05**	**165**	P	**P**	**20 35 52.5**	**+1.0**
	0.5nm,0.5s,baz=344,slow=7.7,SNR=18						
STKA	**Stephens Creek**	**42.07**	**159**	P	**P**	**20 37 17.8**	**+2.2**
	0.9nm,0.5s,baz=352,slow=7.1,SNR=4.7						
MKAR	**Makanchi Array**	**53.80**	**324**	P	P	20 39 00.1	+15
	0.1nm,0.4s,baz=119,slow=6.7,SNR=5.2						

*TIF **22** 20:32:05.4, 41°.29N×43°.63E, h13km*

*DDA **22** 20:32:05.6, 41°.27N×43°.61E, h5km±3km, ML2.6*

*ISCJB **22** 20:32:06.4±0.6, 41°.30N±0°.04×43°.63E±0°.04, h9km±4km, Error ellipse: s-maj=6.9km s-min=4.9km az=176.9*

ISC 22 20:32:05.2±0.9, 41°.31N±0°.05×43°.64E±0°.04, h13km±6km, n8, σ1§02/16, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.05**	**220**	P	**Pg**	**20 32 08.3**	**+0.2**
BGD				S	**Sg**	**20 32 09.4**	**-0.6**
AKH	**Akhalkalaki**	**0.15**	**312**	P	**Pb**	**20 32 09.8**	**-0.3**
AKH				S	**Sg**	**20 32 12.2**	**+0.3**
KZRT	**Kazreti**	**0.57**	**82**	P	**Pb**	**20 32 17.8**	**+0.6**
KZRT				S	**Sb**	**20 32 25.9**	**+0.6**
EAK	**Akyaka**	**0.62**	**183**	*i* P	**Pb**	**20 32 18.3**	**+0.3**
EAK				*i* S	**Sb**	**20 32 27.0**	**+0.4**
EPOS	**Posof**	**0.72**	**286**	*i* P	**Pb**	**20 32 19.9**	**+0.3**
EPOS				*i* S	**Sb**	**20 32 30.4**	**+0.9**
BTNK	**Botanikuri**	**0.95**	**66**	P	**Pn**	**20 32 24.6**	**+0.4**
BTNK				S	**Sn**	**20 32 37.9**	**+0.3**
DBAD	**Bademkaya**	**1.50**	**260**	*i* P	**Pg**	**20 32 34.4**	**+0.4**
DBAD				*i* S	**Sb**	**20 32 52.1**	**+0.2**
DBAD				IAML_P			
	comp=Z,235nm,0.1s						
LGD	**Lagodekhi**	**2.02**	**74**	P	**Pn**	**20 32 36.0**	**-3.0**
LGD				S	**Pn**	**20 32 38.2**	**-0.7**

MAN 22 20:41:14.7, 11°.90N×124°.10E, h17km, mb4.7, ML3.6, MS3.5, 1C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.65**	**314**	⇓*iP*	Pn	20 41 28.8	-0.4
MMPH				*i* S	Sn	20 41 38.6	-0.5
CNP	**Catarman**	**0.81**	**42**	*eP*	Pb	20 41 30.0	-0.5
CNP				*eS*	Sn	20 41 43.0	-0.1
OCLP	**Ormoc**	**0.98**	**150**	*eP*	Pb	20 41 32.1	-1.2
OCLP				*eS*	Sb	20 41 44.5	-1.4
PLP	**Palo**	**1.13**	**130**	⇓*iP*	Pn	20 41 34.4	-1.4
PLP				*i* S	Sg	20 41 51.7	+0.4
BESP	**Borongan**	**1.34**	**103**	*eP*	Pn	20 41 37.6	-1.0
BESP				*eS*	Sg	20 41 57.9	-0.3
LLP	**Lapu-Lapu**	**1.58**	**185**	⇑*eP*	Pn	20 41 40.8	-1.3
LLP				*eS*	Sb	20 42 03.7	+0.4
PVCP	**Virac**	**1.68**	**2**	*eP*	Pn	20 41 43.1	-0.3
PVCP				*eS*	Sn	20 42 03.6	-1.1
MSLP	**Maasin**	**1.91**	**157**	*eP*	Pn	20 41 46.7	+0.2
MSLP				*eS*	Sb	20 42 11.6	-1.0
GUIM	**Jordan**	**1.95**	**230**	*eP*	Pn	20 41 46.3	-0.8
GUIM				*eS*	Sn	20 42 08.8	-2.5
AUQP	**San Andres**	**1.98**	**316**	*eP*	Pb	20 41 49.8	-0.6
AUQP				*eS*	Sg	20 42 18.1	-0.6
OTRP	**Odiongan**	**2.09**	**283**	*eP*	Pn	20 41 49.6	+0.6
OTRP				*eS*	Sn	20 42 16.2	+1.6
TBP	**Tagbilaran**	**2.21**	**186**	*eP*	Pn	20 41 50.0	-0.6
JAP	**San Jose, Anti**	**2.41**	**242**	⇓*eP*	Pb	20 41 56.3	-1.3
SNPH	**Sibulan**	**2.68**	**199**	*eP*	Pn	20 41 56.6	-0.6
SJMP	**San Jose**	**2.97**	**281**	*eP*	Pn	20 42 00.4	-0.7
SJMP				*eS*	Sn	20 42 38.6	+2.2
CUYO	**Cuyo Island**	**3.20**	**251**	*eP*	Pn	20 42 05.2	+0.9
CUYO				*eS*	Sn	20 42 43.5	+1.4

MAN 22 20:47:48.0, 11°.89N×124°.15E, h15km, mb4.6, ML3.5, MS3.4, 3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.69**	**312**	⇓*iP*	Pb	20 48 01.9	0.0
MMPH				*i* S	Sb	20 48 11.8	+0.6
CNP	**Catarman**	**0.79**	**39**	*eP*	Pg	20 48 03.1	-0.3
CNP				*eS*	Sn	20 48 16.1	-0.1
OCLP	**Ormoc**	**0.95**	**152**	*eP*	Pb	20 48 05.2	-1.0
OCLP				*eS*	Sb	20 48 18.3	-0.2
PLP	**Palo**	**1.08**	**132**	⇓*eP*	Pb	20 48 07.4	-1.1
PLP				*i* S	Sn	20 48 24.9	+1.4
BESP	**Borongan**	**1.29**	**103**	*eP*	Pn	20 48 10.7	-0.8
BESP				*eS*	Sb	20 48 27.8	-0.6
LLP	**Lapu-Lapu**	**1.58**	**187**	⇓*eP*	Pn	20 48 14.2	-1.3
LLP				*eS*	Sb	20 48 37.0	+0.3
PVCP	**Virac**	**1.69**	**0**	*eP*	Pn	20 48 16.2	-0.8
PVCP				*eS*	Sn	20 48 36.5	-2.0
MSLP	**Maasin**	**1.88**	**158**	*eP*	Pn	20 48 19.7	+0.1
MSLP				*eS*	Sg	20 48 48.1	-0.4
GUIM	**Jordan**	**1.98**	**231**	*eP*	Pn	20 48 21.9	+0.8
GUIM				*eS*	Sn	20 48 42.8	-2.9
AUQP	**San Andres**	**2.03**	**315**	*eP*	Pn	20 48 22.9	+1.2
AUQP				*eS*	Sg	20 48 53.2	0.0
TBP	**Tagbilaran**	**2.21**	**187**	*eP*	Pn	20 48 22.8	-1.4
TBP				*i* S	Sn	20 48 52.0	+0.9
SNPH	**Sibulan**	**2.69**	**200**	*eP*	Pn	20 48 31.5	+0.7
SNPH				*eS*	Sn	20 49 04.5	+1.3
SJMP	**San Jose**	**3.02**	**281**	*eP*	Pn	20 48 35.6	+0.3
SJMP				*eS*	Sn	20 49 14.0	+2.8

*IDC **22** 20:51:17.9±0.8, 11°.93N×124°.45E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/43, mbtmp3.9/12, ML4.3/1, MS3.4/16, Ms1 3.4/16, ms1mx3.2/35, Error ellipse: s-maj=27.3km s-min=14.5km az=66.0*

*MAN **22** 20:51:20.4, 11°.91N×124°.10E, h21km, mb5.0, ML4.0, MS4.0*

*NEIC **22** 20:51:22.9±1.0, 11°.82N×124°.16E, h43km±4km, mb4.1/22, Error ellipse: s-maj=20.8km s-min=13.5km az=70.0*

NEIC Felt [III PIVS] at Limbuhan and [II PIVS] at Cataingan and Esperanza.

ISC 22 20:51:20.3±1.1, 11°.87N±0°.02×124°.12E±0°.03, h18km±7km, n74, σ1§37/84, mb4.1/28, MS3.2/12, 4C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.68**	**315**	⇑*iP*	**Pg**	**20 51 34.2**	**+0.5**
MMPH				*i* S	**Sg**	**20 51 44.1**	**+1.2**
CNP	**Catarman**	**0.83**	**40**	*eP*	**Pb**	**20 51 35.6**	**-0.6**
CNP				*eS*	**Sn**	**20 51 48.5**	**-0.5**
OCLP	**Ormoc**	**0.95**	**149**	*eP*	**Pb**	**20 51 37.9**	**-0.3**
OCLP				*eS*	**Sn**	**20 51 53.1**	**+1.3**
PLP	**Palo**	**1.10**	**129**	⇑*eP*	**Pn**	**20 51 40.0**	**-0.8**
PLP				*i* S	**Sg**	**20 51 57.2**	**+1.3**
BESP	**Borongan**	**1.32**	**101**	*eP*	**Pn**	**20 51 43.5**	**-0.4**
BESP				*eS*	**Sg**	**20 52 02.7**	**-0.4**
LLP	**Lapu-Lapu**	**1.55**	**185**	⇑*iP*	**Pn**	**20 51 47.5**	**+0.5**
LLP				*eS*	**Sg**	**20 52 09.6**	**-0.7**
PVCP	**Virac**	**1.72**	**1**	*eP*	**Pn**	**20 51 48.8**	**-0.6**
PVCP				*eS*	**Sb**	**20 52 13.5**	**+0.8**
MSLP	**Maasin**	**1.87**	**157**	*eP*	**Pn**	**20 51 52.0**	**+0.5**
MSLP				*eS*	**Sg**	**20 52 20.6**	**0.0**
GUIM	**Jordan**	**1.94**	**231**	*eP*	**Pn**	**20 51 53.2**	**+0.8**
GUIM				*eS*	**Sb**	**20 52 18.1**	**-0.9**
AUQP	**San Andres**	**2.02**	**316**	*eP*	**Pb**	**20 51 55.1**	**-1.3**
AUQP				*eS*	**Sg**	**20 52 25.2**	**-0.1**
OTRP	**Odiongan**	**2.11**	**284**	*eP*	**Pn**	**20 51 53.1**	**-1.6**
OTRP				*eS*	**Sn**	**20 52 21.6**	**+1.2**
TBP	**Tagbilaran**	**2.18**	**187**	*eP*	**Pn**	**20 51 55.4**	**-0.3**
TBP				*i* S	**Sn**	**20 52 24.0**	**+1.8**
JAP	**San Jose, Anti**	**2.40**	**243**	⇑*eP*	**Pb**	**20 52 02.0**	**-1.0**
JAP				*eS*	**Sg**	**20 52 38.0**	**+0.5**
SNPH	**Sibulan**	**2.65**	**199**	*eP*	**Pn**	**20 52 02.6**	**+0.3**
BOAC	**Boac**	**2.72**	**306**	*eP*	**Pn**	**20 52 03.4**	**+0.2**
BOAC				*eS*	**Sn**	**20 52 36.6**	**+0.9**
SJMP	**San Jose**	**2.99**	**282**	*eP*	**Pn**	**20 52 06.2**	**-0.6**
SJMP				*eS*	**Sn**	**20 52 40.6**	**-1.6**
CUYO	**Cuyo Island**	**3.20**	**252**	*eP*	**Pn**	**20 52 10.7**	**+0.9**
CUYO				*eS*	**Sn**	**20 52 49.1**	**+1.6**
CGP	**Cagayan de Oro**	**3.44**	**170**	*eP*	**Pb**	**20 52 20.3**	**-0.5**
POLP	**Polillo Island**	**3.54**	**324**	*eP*	**Pb**	**20 52 19.4**	**-3.1**
POLP				*eS*	**Sb**	**20 53 07.9**	**+2.6**
TGY	**Tagaytay City**	**3.81**	**306**	Pn	**Pn**	**20 52 21.9**	**+3.7**
	20nm,0.3s,baz=196,slow=7.4,SNR=2.5						
TGY				Pg	**Pg**	**20 52 31.1**	**-2.2**
	42nm,0.3s,baz=316,slow=3.3,SNR=10						
TGY				LR	LR	20 54 05.4	
	comp=Z,372nm,18.5s,baz=158,slow=41						
BUSP	**Coron**	**3.83**	**272**	*eP*	**Pn**	**20 52 19.6**	**+1.2**
BUSP				*eS*	**Sn**	**20 52 59.4**	**-3.8**
BUKP	**Musuan**	**4.07**	**167**	*eP*	**Pn**	**20 52 24.2**	**+2.4**
BUKP				*eS*	**Sn**	**20 53 04.6**	**-4.5**
CTBH	**Cotabato--PC H**	**4.62**	**178**	⇓*iP*	**Pn**	**20 52 30.4**	**+1.1**
DAV	**Davao City (W)**	**4.98**	**163**	LR	LR	20 54 56.5	
	comp=Z,674nm,18.2s,baz=338,slow=44						
DAV	**Davao City (W)**	**4.98**	**163**	*ePn*	**Pn**	**20 52 35.5**	**+1.2**
KKM	**Kota Kinabalu**	**9.71**	**234**	*ePn*	**Pn**	**20 53 40.2**	**+0.8**
TWG	**Pinlang**	**11.27**	**345**	*ePn*	**Pn**	**20 54 02.1**	**+1.5**
TNTI	**Ternate**	**11.49**	**163**	*ePn*	**Pn**	**20 54 03.0**	**-0.6**
YOJ	**Yonaguni jima**	**12.57**	**355**	*ePn*	**Pn**	**20 54 19.7**	**+1.4**
SIJI	**Sorong**	**14.51**	**150**	LR	LR	21 01 09.3	
	comp=Z,68nm,19.8s,baz=358,slow=41						
SBUM	**Sibu**	**15.05**	**232**	*ePn*	**Pn**	**20 54 52.8**	**+0.5**
	3.7nm,1.0s						
KAPI	**Kappang**	**17.32**	**195**	LR	LR	21 02 30.5	
	comp=Z,145nm,18.2s,baz=84,slow=38						
KAPI	**Kappang**	**17.32**	**195**	*ePn*	**Pn**	**20 55 21.6**	**+0.2**
	9.9nm,0.7s						
GUMO	**Guam**	**20.32**	**83**	LR	LR	21 02 58.4	
	comp=Z,45nm,18.5s,baz=260,slow=35						
BATI	**Baumata**	**21.93**	**181**	LR	LR	21 05 48.4	
	comp=Z,104nm,21.2s,baz=346,slow=40						
JNU	**Nakatsue**	**22.05**	**15**	P	**P**	**20 56 14.0**	**-0.1**
	3.1nm,0.9s,baz=198,slow=13,SNR=2.8						
JNU				LR	LR	21 03 20.2	
	comp=Z,76nm,21.5s,baz=171,slow=33						
JNU	**Nakatsue**	**22.05**	**15**	*eP*	**P**	**20 56 14.4**	**+0.2**
	8.4nm,1.0s						
MYKOM	**Kota Tinggi**	**22.45**	**245**	*eP*	**P**	**20 56 17.4**	**-1.2**
	9.6nm,1.1s						
ENH	**Enshi**	**22.79**	**326**	*eP*	**P**	**20 56 21.9**	**-0.3**
	5.9nm,1.0s						
LEM	**Lembang**	**24.78**	**222**	LR	LR	21 08 11.1	
	comp=Z,79nm,18.4s,baz=346,slow=40						
CM31	**Chiang Mai Arr**	**25.14**	**288**	*eP*	**P**	**20 56 45.9**	**+1.3**
	7.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**25.14**	**288**	P	**P**	**20 56 49.0**	**+4.3**
	1.8nm,0.8s,baz=99,slow=8.7,SNR=9.9						
CMAR				LR	LR	21 05 43.6	
	comp=Z,46nm,20.6s,baz=170,slow=34						
KS15	**Wonju Array Si**	**25.69**	**7**	*eP*	**P**	**20 56 49.9**	**+0.5**
	4.8nm,0.9s						
KSRS	**Korea Array**	**25.71**	**7**	P	**P**	**20 56 50.4**	**+0.9**
	1.1nm,0.7s,baz=184,slow=9.5,SNR=4.2						
KSRS				LR	LR	21 06 43.0	
	comp=Z,54nm,21.0s,baz=200,slow=36						
XAN	**Xi'an**	**26.06**	**330**	*eP*	**P**	**20 56 52.5**	**-0.4**
	4.2nm,0.6s						
PSI	**Prapat**	**26.53**	**252**	LR	LR	21 07 23.1	
	comp=Z,100nm,20.2s,baz=116,slow=36						
MJAR	**Matsushiro Arr**	**27.66**	**25**	LR	LR	21 08 03.9	
	comp=Z,38nm,18.6s,baz=230,slow=37						
WRA	**Warramunga Arr**	**33.17**	**162**	P	**P**	**20 57 55.3**	**-0.8**
	1.0nm,0.6s,baz=349,slow=11,SNR=11						
WR1	**Warramunga Arr**	**33.17**	**162**	*eP*	**P**	**20 57 55.3**	**-0.8**
WB2	**Warramunga Arr**	**33.18**	**162**	*eP*	**P**	**20 57 55.3**	**-0.8**
	6.0nm,1.1s						
AS31	**Alice Springs**	**36.59**	**165**	*eP*	**P**	**20 58 25.7**	**+0.1**
	1.5nm,0.6s						
ASAR	**Alice Springs**	**36.59**	**165**	P	**P**	**20 58 26.0**	**+0.4**
	1.4nm,0.5s,baz=346,slow=7.1,SNR=41						
ULN	**Ulaanbaatar**	**38.63**	**342**	*eP*	**P**	**20 58 43.0**	**+0.3**
	1.6nm,0.7s						
SONA0	**Songino Array**	**38.81**	**341**	*eP*	**P**	**20 58 44.5**	**+0.2**
SONM	**Songino Array**	**38.81**	**341**	P	**P**	**20 58 44.5**	**+0.2**
	0.7nm,0.7s,baz=150,slow=6.2,SNR=4.2						
SONM				LR	LR	21 15 21.6	
	comp=Z,73nm,18.7s,baz=84,slow=37						
BBOO	**Buckleboo**	**45.87**	**166**	*eP*	**P**	**20 59 39.9**	**-1.8**
	8.1nm,0.9s						
STKA	**Stephens Creek**	**46.61**	**159**	P	**P**	**20 59 48.1**	**+0.6**
	1.8nm,0.6s,baz=338,slow=11,SNR=6.0						
STKA				LR	LR	21 24 03.2	
	comp=Z,54nm,19.1s,baz=214,slow=42						
STKA	**Stephens Creek**	**46.61**	**159**	*eP*	**P**	**20 59 45.8**	**-1.7**
	1.5nm,1.1s						
MK31	**Makanchi Array**	**49.48**	**323**	*eP*	**P**	**21 00 10.0**	**+0.3**
	1.0nm,1.0s						
MKAR	**Makanchi Array**	**49.48**	**323**	P	**P**	**21 00 11.1**	**+1.4**
	0.7nm,0.6s,baz=122,slow=8.5,SNR=8.6						
MAKZ	**Makanchi**	**49.68**	**323**	*eP*	**P**	**21 00 11.6**	**+0.4**
	2.6nm,1.1s						
NIL	**Nilore**	**51.09**	**304**	*eP*	**P**	**21 00 21.9**	**-0.2**
	14nm,0.9s						
ZALV	**Zalesovo Beam**	**52.22**	**332**	P	**P**	**21 00 30.8**	**+0.6**
	0.9nm,0.5s,baz=144,slow=10,SNR=2.8						
KURK	**Kurchatov**	**53.56**	**326**	*eP*	**P**	**21 00 40.8**	**+0.7**
	6.6nm,1.0s						
GAR	**Garm**	**54.65**	**310**	*eP*	**P**	**21 00 47.9**	**-0.5**
	5.2nm,0.8s						
KBL	**Kabul**	**54.69**	**304**	*eP*	**P**	**21 00 48.8**	**-0.1**
	3.3nm,0.6s	

NVAR	Mina Array Bea	62.05	300	LR	LR	21 49 36.9
	comp=Z,164nm,18.8s,baz=80,slow=36					
ILAR	Eielson Array	68.43	334	P	P	21 23 54.1 +0.2
	0.8nm,0.9s,baz=69,slow=4.2,SNR=5.6					
ILAR				LR	LR	21 53 30.5
	comp=Z,62nm,18.6s,baz=100,slow=36					
KMBO	Kilima Mbogo	80.60	97	LR	LR	22 00 02.3
	comp=Z,92nm,20.1s,baz=274,slow=35					
BOSA	Boshof	86.81	126	LR	LR	22 02 31.8
	comp=Z,29nm,19.1s,baz=178,slow=34					
MKAR	Makanchi Array	86.96	35	P	P	21 25 37.9 +0.3
	0.3nm,0.9s,baz=270,slow=1.4,SNR=2.9					

ISCJB ***22*** *21:38:23.3±0.7, 17°.48S±0°.04×178°.83W±0°.04, h531km±9km, mb4.7/88, Error ellipse: s-maj=6.1km s-min=5.2km az=144.6*
MOS ***22*** *21:38:24.6±1.1, 17°.54S×178°.89W, h540km, mb4.6/13, Error ellipse: s-maj=15.1km s-min=12.3km az=16.7*
NEIC ***22*** *21:38:24.2±2.0, 17°.47S×178°.85W, h534km±5km, mb4.5/66, Error ellipse: s-maj=15.8km s-min=13.7km az=135.0*
IDC ***22*** *21:38:26.1±0.7, 17°.45S×178°.92W, h549km±7km, mb3.8/16, mb1 4.0/18, mb1mx3.9/28, mbtmp4.7/18, Error ellipse: s-maj=12.2km s-min=9.1km az=147.0*

ISC 22 21:38:24.9±0.5, 17°.46S±0°.05×178°.82W±0°.06, h543km±5km, h544km; pP-P, n398, σ1906/403, mb4.8/88, 45C-30D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	8.60	102	*e*P	P	21 40 27.7	-0.8
NIUE	Niue	8.60	102	P	P	21 40 29.0	+0.6
	baz=8.6						
FUNA	Funafuti	9.09	347	*e*P	P	21 40 32.1	-1.5
GLKZ	Green Lake	11.78	176	P	P	21 41 00.2	-0.8
MARNC	Mare, Loyalty	13.03	250	*e*P	P	21 41 13.3	-0.9
DZM	Mont Dzumac	14.61	249	P	P	21 41 30.3	-0.4
	1.9nm,0.3s,baz=314,slow=22,SNR=15						
DZM	Mont Dzumac	14.61	249	*e*P	P	21 41 29.8	-0.9
KNTN	Kanton	16.17	26	*e*P	P	21 41 45.2	-1.3
	390nm,1.6s						
RAR	Rarotonga	18.35	105	P	P	21 42 06.2	-0.2
	2.3nm,0.3s,baz=245,slow=1.9,SNR=4.3						
RAR	Rarotonga	18.35	105	*e*P	P	21 42 06.2	-0.2
	122nm,1.4s						
RAR	Rarotonga	18.35	105	*e*P	P	21 42 06.2	-0.2
RAR				pmax	pmax		
	comp=Z,122nm,1.4s						
OUZ	Omahuta	18.94	199	*e*P	P	21 42 13.2	+1.6
	comp=Z,44nm,0.6s						
OUZ	Omahuta	18.94	199	P	P	21 42 14.8	+3.3
WCZ	Waipu Caves	19.38	197	P	P	21 42 18.6	+3.0
GRZ	Great Barrier	19.39	194	P	P	21 42 17.5	+1.8
KUZ	Kuaotunu	19.81	193	P	P	21 42 21.1	+1.6
MXZ	Matakaoa Point	20.19	187	P	P	21 42 21.3	-1.6
WMGZ	Waiomatatini S	20.43	186	P	P	21 42 25.4	+0.3
HAZ	Te Kaha	20.44	188	P	P	21 42 24.6	-0.6
HAZ				S	S	21 45 34.8	-5.0
TGRZ	Tauranga	20.65	191	P	P	21 42 29.3	+2.2
RUGZ	Raukumara Rang	20.66	188	P	P	21 42 25.6	-1.7
PUZ	Puketiti	20.70	187	P	P	21 42 26.9	-0.6
KMRZ	Kaimai	20.83	192	P	P	21 42 30.4	+1.7
TWGZ	Tauwhareparae	20.83	187	P	P	21 42 29.1	+0.3
TWGZ				S	S	21 45 47.6	+1.5
KARZ	Kaharoa	20.94	191	P	P	21 42 29.9	+0.2
OMRZ	Omania	21.00	191	P	P	21 42 31.5	+1.2
URZ	Urewera	21.03	189	P	P	21 42 27.6	-2.9
	comp=Z,26nm,0.3s,baz=300,slow=2.4,SNR=53						
URZ				S	S	21 45 51.8	+2.8
	comp=Z,14nm,0.8s,baz=92,slow=22,SNR=6.9						
URZ	Urewera	21.03	189	*e*P	P	21 42 28.8	-1.7
	comp=Z,37nm,0.7s						
URZ	Urewera	21.03	189	P	P	21 42 28.1	-2.4
URZ				S	S	21 45 53.9	+4.9
MWZ	Matawai	21.04	188	P	P	21 42 29.2	-1.5
TKGZ	Te Karaka	21.11	187	P	P	21 42 31.7	+0.5
CNGZ	Carnagh Statio	21.11	186	P	P	21 42 31.4	+0.2
RRRZ	Republican Roa	21.20	190	P	P	21 42 32.2	+0.1
HSRZ	Hossack Road	21.22	191	P	P	21 42 33.2	+0.9
HRRZ	Handcock Road	21.29	191	P	P	21 42 33.0	+0.1
TLZ	Tolley Road	21.37	192	P	P	21 42 35.2	+1.5
SNGZ	Shannon Statio	21.51	188	P	P	21 42 32.9	-1.9
BKZ	Black Stump Fm	22.01	190	*e*P	P	21 42 38.7	-0.7
	comp=Z,84nm,1.4s						
THZ	Tophouse	25.24	195	*e*P	P	21 43 07.1	-1.0
	comp=Z,178nm,1.9s						
LTZ	Lake Taylor	26.36	195	*e*P	P	21 43 16.2	-1.7
	comp=Z,37nm,0.8s						
OXZ	Oxford	26.93	195	*e*P	P	21 43 21.5	-1.3
	comp=Z,49nm,0.7s						
RPZ	Rata Peaks	27.54	196	P	P	21 43 27.9	-0.3
	comp=Z,12nm,0.4s,baz=330,slow=2.0,SNR=8.6						
FOZ	Fox Glacier	27.72	198	*e*P	P	21 43 27.7	-2.0
	comp=Z,42nm,0.8s						
PAE	Paea	27.86	95	*e*P	P	21 43 31.4	0.0
	comp=Z,4.7nm,0.7s						
PPT2	Papeete2	27.87	95	*e*P	P	21 43 31.7	+0.1
	comp=Z,25nm,0.7s						
PPT	Papeete	27.87	95	P	P	21 43 32.1	+0.6
	comp=Z,36nm,0.6s,baz=41,slow=3.6,SNR=9.0						
PPTF	Pamatai, Papee	27.88	95	*e*P	P	21 43 31.1	-0.6
	comp=Z,51nm,0.9s						
TIAR	Tiarei	28.09	95	*e*P	P	21 43 33.5	+0.1
	comp=Z,8.7nm,0.8s						
TVO	Taravao	28.17	95	*e*P	P	21 43 34.3	+0.2
	comp=Z,9.8nm,0.7s						
EIDS	Eidsvold	29.06	249	*e*P	P	21 43 41.4	-0.4
	comp=Z,25nm,0.8s						
EIDS	Eidsvold	29.06	249	P	P	21 43 41.8	0.0
	baz=29,SNR=12						
WKZ	Wanaka	29.14	198	*e*P	P	21 43 41.2	-0.9
	comp=Z,290nm,1.7s						
PMOR	Pomarrio Ree	29.77	90	*e*P	P	21 43 48.1	+0.1
	comp=Z,65nm,1.0s						
ARMA	Armidale	29.84	239	*e*P	P	21 43 48.8	+0.2
	comp=Z,41nm,0.7s						
ARMA	Armidale	29.84	239	P	P	21 43 49.7	+1.2
	baz=30,SNR=35						
MLZ	Mavora Lakes	29.89	199	*e*P	P	21 43 48.4	-0.3
	comp=Z,66nm,0.7s						
VAH	Vaihoa	29.99	90	*e*P	P	21 43 49.8	-0.1
	comp=Z,46nm,1.1s						
WHZ	Wether Hill Ro	30.42	198	*e*P	P	21 43 52.3	-0.8
	comp=Z,65nm,0.8s						
MGCD	Mangrove Creek	31.24	234	P	P	21 44 01.9	+1.5
	baz=31,SNR=20						
RMQ	Roma	31.31	248	P	P	21 44 02.3	+1.1
	baz=31,SNR=17						
CTAO	Charters Tower	33.14	260	*e*P	P	21 44 15.4	-1.4
	comp=Z,27nm,0.9s						
CTAO	Charters Tower	33.14	260	*e*P	P	21 44 15.4	-1.4
CTAO				pmax	pmax		
	comp=Z,27nm,0.9s						
CNB	Canberra Magne	33.40	232	P	P	21 44 20.1	+1.3
	baz=33,SNR=55						
CAN	Canberra	33.67	232	*e*P	P	21 44 20.9	-0.2
	comp=Z,28nm,0.9s						
CAN	Canberra	33.67	232	*e*P	P	21 44 20.9	-0.2
CAN				pmax	pmax		
	comp=Z,28nm,0.9s						
PMG	Port Moresby	34.00	279	*e*P	P	21 44 23.1	-0.9
	comp=Z,66nm,0.8s						
PMG	Port Moresby	34.00	279	*de*P	P	21 44 25.4	+1.3
PMG				pmax	pmax		
	comp=Z,308nm,0.9s						
MILA	Mila	34.28	229	P	P	21 44 27.4	+1.2
	baz=34,SNR=5.4						
CMSA	Cobar Meteorol	35.04	240	P	P	21 44 33.2	+0.7
	baz=35,SNR=36						
COEN	Coen	36.72	270	*e*P	P	21 44 46.8	+0.2
	comp=Z,51nm,0.7s						
COEN	Coen	36.72	270	P	P	21 44 47.4	+0.8
	baz=37,SNR=54						
TOO	Toolangi	37.16	230	*e*P	P	21 44 50.3	+0.3
	comp=Z,88nm,1.0s						
TOO	Toolangi	37.16	230	P	P	21 44 51.1	+1.1
	baz=37,SNR=26						
TOO	Toolangi	37.16	230	*e*P	P	21 44 50.3	+0.3
TOO				pmax	pmax		
	comp=Z,88nm,1.0s						
MOO	Moorlands	38.16	222	P	P	21 44 59.1	+1.0
	baz=38,SNR=8.4						
STKA	Stephens Creek	38.51	241	P	P	21 45 02.1	+1.1
	comp=Z,36nm,0.8s,baz=92,slow=10,SNR=82						
STKA	Stephens Creek	38.51	241	P	P	21 45 02.2	+1.1
	baz=38,SNR=33						
QIS	Mount Isa	39.36	259	P	P	21 45 07.8	-0.3
	baz=39,SNR=4.7						
ARPS	Mount Arapiles	39.61	233	P	P	21 45 10.4	+0.6
	baz=40,SNR=12						
HTT	Hallett	41.04	239	P	P	21 45 22.1	+0.7
	baz=41,SNR=20						
JAY	Jayapura	42.41	286	P	P	21 45 33.5	+1.1
	comp=Z,413nm,1.0s						
GENI	Geneyem	42.87	286	P	P	21 45 37.2	+1.2
	comp=Z,220nm,0.7s,comp=Z,2μm						
BBOO	Buckleboo	43.29	241	P	P	21 45 39.6	+0.6
	baz=43,SNR=50						
WRAB	Tennant Creek	44.32	259	*e*P	P	21 45 46.7	-0.6
	comp=Z,26nm,0.8s						
WRAB	Tennant Creek	44.32	259	⇓*i*P	P	21 45 46.5	-0.7
WRAB				pmax	pmax		
	comp=Z,25nm,0.7s						
WR1	Warramunga Arr	44.33	259	*e*PcP	PcP	21 47 19.9	+0.2
WRA	Warramunga Arr	44.33	259	P	P	21 45 46.9	-0.5
	comp=Z,23nm,0.6s,baz=89,slow=8.6,SNR=196						
WRA				PcP	PcP	21 47 19.9	+0.2
	comp=Z,5.1nm,0.7s,baz=98,slow=4.3,SNR=3.8						
WRA				S	S	21 51 38.2	-4.2
	comp=Z,2.6nm,0.8s,baz=89,slow=14,SNR=4.3						
AS31	Alice Springs	44.54	254	*e*P	P	21 45 49.1	+0.2
	comp=Z,51nm,0.6s						
AS31				*e*ScP	ScP	21 50 23.0	+2.0
ASAR	Alice Springs	44.54	254	P	P	21 45 49.1	+0.2
	comp=Z,171nm,0.7s,baz=88,slow=8.1,SNR=2142						
ASAR				PcP	PcP	21 47 20.6	+0.2
	comp=Z,9.8nm,0.8s,baz=100,slow=4.0,SNR=8.9						
ASAR				ScP	ScP	21 50 23.0	+2.0
	comp=Z,2.7nm,0.8s,baz=91,slow=4.3,SNR=6.8						
ASAR				S	S	21 51 42.8	-2.5
	comp=Z,5.6nm,0.8s,baz=87,slow=15,SNR=22						
KDU	Kakadu	47.18	269	P	P	21 46 09.2	+0.2
	baz=47,SNR=35						
MTN	Manton Dam	48.42	268	P	P	21 46 18.3	0.0
	baz=48,SNR=11						
WRKA	Warakurna	49.62	252	P	P	21 46 27.4	+0.3
	baz=50,SNR=454						
FORT	Forrest	49.85	244	*e*P	P	21 46 27.9	-0.7
	comp=Z,112nm,0.6s						
FORT	Forrest	49.85	244	P	P	21 46 28.5	-0.1
	baz=50,SNR=46						
FAKI	Fak Fak	50.11	281	P	P	21 46 31.0	+0.2
	comp=Z,26nm,1.0s						
KNRA	Kununurra	50.15	264	P	P	21 46 31.0	-0.1
	baz=50,SNR=28						
FITZ	Fitzroy Crossi	52.72	260	*e*P	P	21 46 49.7	+0.1
FITZ	Fitzroy Crossi	52.72	260	P	P	21 46 50.1	+0.5
	baz=53,SNR=33						
KMBL	Kambalda	55.16	244	P	P	21 47 06.0	-0.6
	baz=55,SNR=19						
SOEI	Soe	55.68	270	*e*P	P	21 47 11.7	+1.0
	comp=Z,136nm,0.8s						
TNTI	Ternate	55.98	283	*e*P	P	21 47 12.8	+0.2
	comp=Z,42nm,0.8s						
TNTI	Ternate	55.98	283	P	P	21 47 13.9	+1.3
	comp=Z,62nm,0.9s,comp=Z,836nm						
PSA00	Pilbara Seismi	57.65	255	*e*P	P	21 47 22.8	-1.1
	comp=Z,64nm,0.8s						
EDFI	Ende, Flores	58.40	270	P	P	21 47 29.1	-0.1
	comp=Z,48nm,0.9s						
NWAO	Narrogin (SRO)	59.08	242	P	P	21 47 33.2	-0.2
	baz=59,SNR=7.1						
BLDU	Ballidu	59.62	244	P	P	21 47 36.8	-0.3
	baz=60,SNR=16						
LUWI	Luwuk	59.65	279	*e*P	P	21 47 37.3	-0.2
	comp=Z,106nm,1.2s						
LUWI	Luwuk	59.65	279	P	P	21 47 36.6	-0.9
MUN	Mundaring	59.98	243	P	P	21 47 39.7	+0.3
	baz=60,SNR=7.1						
MORW	Morawa	60.31	246	P	P	21 47 41.3	-0.3
	baz=60,SNR=7.8						
SBA	Scott Base	60.84	183	*e*P	P	21 47 45.4	+1.1
	comp=Z,14nm,0.9s						
VNDA	Vanda	60.86	185	P	P	21 47 45.9	+1.5
	comp=Z,3.2nm,0.7s,baz=356,slow=7.2,SNR=24						
VNDA	Vanda	60.86	185	*e*P	P	21 47 45.0	+0.7
	comp=Z,4.3nm,0.8s						
VNDA	Vanda	60.86	185	*e*P	P	21 47 45.1	+0.7
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KAPI	Kappang	61.28	274	*e*P	P	21 47 48.0	-0.2
	comp=Z,14nm,0.7s						
KAPI	Kappang	61.28	274	*e*P	P	21 47 48.0	-0.2
KAPI				pmax	pmax		
	comp=Z,14nm,0.7s						
SPSI	Sidrap Palu	61.57	275	P	P	21 47 48.7	-1.4
PLAI	Plampang	62.11	269	P	P	21 47 53.7	0.0
	comp=Z,103nm,0.9s,comp=Z,1μm						
GIRL	Giralia	62.65	253	P	P	21 47 58.2	+1.2
	baz=63,SNR=6.6						
CASY	Casey	66.38	205	*e*P	P	21 48 19.5	-0.2
	comp=Z,23nm,1.0s						
MJAR	Matsushiro Arr	67.32	323	P	P	21 48 25.7	-0.3
	comp=Z,6.3nm,0.7s,baz=163,slow=6.3,SNR=14						
MAJO	Matsushiro	67.32	323	*e*P	P	21 48 26.0	-0.1
	comp=Z,7.5nm,0.8s						
MAJO	Matsushiro	67.32	323	⇓*e*P	P	21 48 25.9	-0.1
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAT	Matsushiro	67.32	323	P	P	21 48 25.7	-0.4
MJB9	Matsu-Tunnel	67.32	323	*e*P	P	21 48 25.8	-0.3
	comp=Z,7.7nm,0.8s						
KKM	Kota Kinabalu	68.26	284	*e*P	P	21 48 32.7	+0.3
	comp=Z,23nm,0.7s						
KKM	Kota Kinabalu	68.26	284	P	P	21 48 34.0	+1.6
UGM	Wanagama	69.28	268	*e*P	P	21 48 38.0	-0.4
	comp=Z,59nm,0.6s						
SBUM	Sibu	70.75	279	P	P	21 48 49.0	+1.8
CISI	Cisompet, Garu	71.95	268	*e*P	P	21 48 53.0	-1.3
	comp=Z,41nm,0.7s						
KSM	Kuning	72.24	277	P	P	21 48 58.0	+2.1
YSS	Yuzh-Sakhalins	72.84	334	*e*P	P	21 48 59.6	+1.0
PETK	Petropavlovsk-	73.15	345	P	P	21 49 00.1	-0.1
	comp=Z,7.2nm,0.8s,baz=123,slow=8.6,SNR=8.5						
CBJI	Citeko	73.19	268	P	P	21 49 01.1	-0.2
	comp=Z,87nm,0.9s						
KSRS	Korea Array	74.11	318	P	P	21 49 07.0	+1.0
	comp=Z,2.1nm,0.7s,baz=133,slow=6.2,SNR=11						
VLA	Vladivostok	75.36	325	⇓*e*P	P	21 49 13.4	+0.5
VLA				pmax	pmax		
	comp=Z,13nm,1.3s						
MSHR	Mys Shultsa	75.41	324	⇓*e*P	P	21 49 14.6	+1.4
KASI	Kota Agung	75.68	269	P	P	21 49 13.3	-2.1
USRK	Ussuriysk Ar.	76.03	326	P	P	21 49 18.4	+1.8
	comp=Z,2.1nm,0.7s,baz=114,slow=3.5,SNR=8.0						
NJ2	Nanjing	77.36	310	*e*P	P	21 49 25.1	+1.0
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
NV01	Mina Array Sit	79.37	44	*e*pP	pP	21 51 33.9	+3.6
NVAR	Mina Array Bea	79.37	44	P	P	21 49 36.0	+0.9
	comp=Z,1.9nm,0.7s,baz=226,slow=8.9,SNR=16						
NVAR				pP	pwP	21 51 33.9	+1.0
	comp=Z,2.0nm,1.0s,baz=228,slow=9.2,SNR=7.4						
CN2	Changchun	79.43	323	*e*P	P	21 49 35.5	+0.5
KVN	Kaiserville	79.84	44	*e*P	P	21 49 37.5	0.0
	comp=Z,1.8nm,0.7s						
KVN	Kaiserville	79.84	44	*e*P	P	21 49 37.5	0.0
KVN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SDSI	Sungai Dareh	79.95	272	P	P	21 49 37.8	-0.6
	comp=Z,16nm,0.8s						
PDSI	Padang	80.88	272	P	P	21 49 43.0	-0.2
	comp=Z,26nm,0.6s						
COCO	West Island	81.12	260	*e*P	P	21 49 41.6	-2.8
	comp=Z,0.2nm,1.0s						
COCO	West Island	81.12	260	*e*P	P	21 49 41.6	-2.8
I07A	Izee	81.70	39	*e*P	P	21 49 48.0	+1.1
	comp=Z,2.2nm,0.9s						
IPM	Ipoh	81.98	277	P	P	21 49 51.0	+2.1
U15A	North Rim	82.51	48	*e*P	P	21 49 52.5	+1.1
	comp=Z,4.0nm,0.8s						
KULM	Kulim	82.59	278	*e*P	P	21 49 50.6	-1.3
	comp=Z,13nm,0.9s						
BJI	Beijing	83.19	316	P	P	21 49 55.5	+1.2
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SKLT	Songkhla	83.21	280	P	P	21 49 56.9	+1.9
	comp=Z,26nm,0.9s,comp=Z,342nm						
SKNT	Sakolnakorn	83.35	290	P	P	21 49 57.3	+1.7
F10A	Beach Ranch, E	84.09	38	*e*P	P	21 49 59.0	+0.3
	comp=Z,10nm,1.6s						
MAW	Mawson	84.15	200	P	P	21 49 59.5	+0.9
	comp=Z,15nm,0.6s,baz=134,slow=6.0,SNR=51						
MAW	Mawson	84.15	200	*e*P	P	21 49 59.1	+0.5
	comp=Z,3.7nm,0.7s						
MAW	Mawson	84.15	200	P	P	21 49 59.5	+0.9
	baz=84,SNR=25						
MAW	Mawson	84.15	200	*e*P	P	21 49 59.1	+0.5
MAW				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TRTT	Trang	84.29	280	P	P	21 50 02.3	+1.9
	comp=Z,46nm,0.9s						
GSI	Gunungsitoli	84.29	273	*e*P	P	21 50 01.3	+0.8
	comp=Z,50nm,0.8s						
ZEA	Zeya	84.61	331	*e*P	P	21 50 01.4	+0.4
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
ILAR	Eielson Array	85.54	13	P	P	21 50 04.3	-1.0
	comp=Z,0.8nm,0.4s,baz=236,slow=6.0,SNR=6.7						
ILAR				pP	pP	21 52 05.5	+2.7
	comp=Z,1.1nm,1.1s,baz=230,slow=8.1,SNR=2.1						
ILB	Eielson Array	85.54	13	*e*pP	pP	21 52 05.5	+2.7
XAN	Xi'an	85.68	308	P	P	21 50 07.9	+1.1
XAN				S	S	21 59 57.4	+3.2
XAN				pmax	pmax		
	comp=Z,23nm,1.1s						
XAN				pmax	pmax		
	comp=Z,150nm,5.1s						
PBKT	Sadao Pong	85.93	289	P	P	21 50 10.5	+2.3
BILL	Bilibino	85.95	354	*e*P	P	21 50 07.4	+0.2
	comp=Z,7.8nm,1.0s						
BILL	Bilibino	85.95	354	*e*P	P	21 50 07.3	+0.2
BILL				*e**PP	pP	21 52 01.8	-2.9
BILL				*e*		21 53 35.4	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PHET	Kaeng Krachan	85.96	285	P	P	21 50 11.0	+2.6
	comp=Z,66μm,0.9s						
RDOG	Red Dog Mine	86.06	6	*e*pP	pP	21 52 07.7	+2.4
TX31	Lajitas Ar. Si	86.08	58	*e*P	P	21 50 09.9	+1.1
	comp=Z,3.8nm,1.1s						
TXAR	Lajitas Array	86.08	58	P	P	21 50 10.8	+1.9
	comp=Z,1.4nm,0.7s,baz=214,slow=6.3,SNR=20						
TXAR				pP	pwP	21 52 09.1	-1.0
	comp=Z,0.8nm,1.1s,baz=224,slow=3.8,SNR=3.5						
ANMO	Albuquerque	86.12	52	⇑*e*P	P	21 50 09.0	0.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MLSI	Meulaboh, Aceh	86.30	276	P	P	21 50 11.2	+1.1
	comp=Z,81nm,0.8s						
HHC	Hu-ho-hao-te	86.68	315	*e*P	P	21 50 11.5	+0.1
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,40nm,4.9s						
PD31	Pinedale Array	87.30	44	*e*pP	pP	21 52 15.2	+2.7
PDAR	Pinedale Array	87.30	44	P	P	21 50 14.8	+0.3
	comp=Z,0.8nm,0.6s,baz=212,slow=3.6,SNR=10						
PDAR				pP	pP	21 52 15.2	+2.7
	comp=Z,1.4nm,0.9s,baz=223,slow=3.4,SNR=6.9						
LAMP	Lampang	87.77	290	P	P	21 50 18.9	+2.0
	comp=Z,25μm,0.9s						
CMAR	Chiang Mai Arr	88.37	290	P	P	21 50 21.1	+1.5
	comp=Z,6.4nm,0.9s,baz=106,slow=2.9,SNR=24						
CMMT	Chiang Mai	88.48	290	P	P	21 50 21.5	+1.3
	comp=Z,6.2nm,1.1s						
CHTO	Chiang Mai	88.48	290	*e*P	P	21 50 20.5	+0.3
	comp=Z,7.1nm,0.8s						
CHTO	Chiang Mai	88.48	290	*e*P	P	21 50 20.5	+0.3
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CD2	Chengdu	88.50	303	*e*P	P	21 50 20.1	0.0
SYO	Syowa Base	89.50	193	⇑*e*P	P	21 50 22.1	-1.8
SYO	Syowa Base	89.50	193	⇓*e*PcP	P	21 50 24.0	+0.1
SNAA	Sanae	91.05	179	P	P	21 50 31.2	0.0
SNAA	Sanae	91.05	179	*e*P	P	21 50 30.5	-0.7
	comp=Z,14nm,1.1s						
SNAA	Sanae	91.05	179	*e*P	P	21 50 30.5	-0.7
SNAA				pmax	pmax		
	comp=Z,14nm,1.1s						
VNA3	Neumayer Olymp	91.21	177	P	P	21 50 32.3	+0.4
VNA2	Neumayer--Watz	91.64	177	P	P	21 50 34.3	+0.4
	baz=189,slow=3.5						
VNA1	Neumayer--Stat	91.87	177	P	P	21 50 35.4	+0.6
ULN	Ulaanbaatar	92.56	320	*e*P	P	21 50 38.7	+0.1
	comp=Z,4.4nm,0.9s						
ULN	Ulaanbaatar	92.56	320	⇑*i*P	P	21 50 39.1	+0.5
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	92.96	319	P	P	21 50 40.4	0.0
	comp=Z,1.3nm,0.9s,baz=146,slow=5.0,SNR=8.2						
GTA	Gaotai	94.45	310	*e*P	P	21 50 48.0	+0.6
GTA				pP	pP	21 52 47.5	+0.3
GTA				sP	sP	21 53 37.9	-3.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZALV	Zalesovo Beam	107.64	322	PKiKP	PKiKP	21 55 49.1	-1.0
	comp=Z,1.0nm,0.5s,baz=255,slow=0.3,SNR=4.8						
MKAR	Makanchi Array	108.55	314	PKiKP	PKiKP	21 55 51.0	-1.1
	comp=Z,0.9nm,0.6s,baz=123,slow=0.3,SNR=14						
MKAR				PKKPbc	PKKPbc	22 07 02.4	-2.0
	comp=Z,0.5nm,0.8s,baz=270,slow=4.3,SNR=4.5						
KURK	Kurchatov	111.23	318	⇑*i*PKIKP	PKiKP	21 55 56.2	-0.8
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KSH	Kashi	112.50	306	*e*PKP	PKiKP	21 55 58.9	-1.1
AAK	Ala-Archa	113.80	309	⇓*i*PKIKP	PKiKP	21 56 02.0	-0.4
AAK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
BRVK	Borovoye	116.31	321	*d i*PKIKP	PK

TESR	Tescani	144.18 330	⇑	*i* P	PKPdf	21 56 59.2	+0.1
BRTR	Keskin Array B	144.19 315		PKP	PKPbc	21 56 59.1	-0.1
	comp=Z,7.1nm,0.8s,baz=124,slow=4.1,SNR=51						
BRTR				SKPbc	SKiKP	21 59 48.4	+0.3
	comp=Z,0.8nm,0.8s,baz=141,slow=3.3,SNR=3.8						
KOLS	Kolonicke sedl	144.24 336		*e*PKIKP	PKPab	21 56 59.6	+0.4
KOLS	Kolonicke sedl	144.24 336		*e*PKP	PKPab	21 56 59.6	+0.4
CFR	Carcaliu	144.35 327	⇑	*i* P	PKPab	21 56 59.9	+0.2
CFR	Carcaliu	144.35 327	⇑	PKIKP	PKPab	21 56 59.9	+0.2
UZH	Uzhgorod	144.47 336		*e*PKIKP	PKPdf	21 56 58.7	-0.8
NIE	Niedzica	144.57 338		*e*PKP	PKPab	21 57 00.5	+0.1
NIE	Niedzica	144.57 338		*e*PKIKP	PKPab	21 57 00.5	+0.1
KSP	Ksiaz	144.57 343		*e*PKP	PKPab	21 57 00.4	+0.1
KSP	Ksiaz	144.57 343		*e*PKIKP	PKPab	21 57 00.4	+0.1
VRI	Vrincioaia	144.60 329	⇑	*i* P	PKPbc	21 57 00.2	+0.1
VRI	Vrincioaia	144.60 329	⇑	PKIKP	PKPbc	21 57 00.2	+0.1
PLOR	Plostina	144.65 329	⇑	*i* P	PKPdf	21 57 00.0	0.0
PLOR	Plostina	144.65 329	⇑	PKIKP	PKPdf	21 57 00.0	0.0
TIRR	Tirgusor	144.68 325		*e*PKPdf	PKPbc	21 57 00.5	+0.2
TIRR	Tirgusor	144.68 325	⇓	*i* P	PKPbc	21 57 00.3	0.0
TIRR	Tirgusor	144.68 325	⇓	PKIKP	PKPbc	21 57 00.3	0.0
ANTO	Ankara	144.69 316		*e*PKPdf	PKPab	21 57 01.2	-0.1
ANTO	Ankara	144.69 316	⇑	*i* P	PKPdf	21 57 00.4	+0.1
ANTO	Ankara	144.69 316	⇑	PKIKP	PKPdf	21 57 00.4	+0.1
HARR	Harsova	144.78 326	⇑	*i* P	PKPab	21 57 01.4	+0.1
HARR	Harsova	144.78 326	⇑	PKIKP	PKPab	21 57 01.4	+0.1
TLB	Topalu	144.79 326	⇓	*i* P	PKPdf	21 57 00.1	-0.1
TLB	Topalu	144.79 326	⇓	PKIKP	PKPdf	21 57 00.1	-0.1
ARCR	ARCALIA	144.82 332	⇑	*i* P	PKPab	21 57 01.8	+0.4
OSTC	Ostas	144.85 343		*e*PKP	PKPab	21 57 01.1	-0.4
MFTR	Murfatlar	144.86 325	⇓	*i* P	PKPab	21 57 02.2	+0.6
CHVC	Chvalec	144.87 343		*e*PKP	PKPab	21 57 01.3	-0.2
OKC	Ostrava-Krasne	144.92 341		*e*PKIKP	PKPab	21 57 01.8	+0.1
OKC	Ostrava-Krasne	144.92 341		*e*PKP	PKPab	21 57 01.8	+0.1
CLL	Collm	144.94 347	⇓	*i* PKPbc	PKPdf	21 57 00.0	-0.2
	comp=Z,36nm,1.0s						
CLL				*i* PKiKP	PKiKP	21 57 03.7	-0.6
CLL	Collm	144.94 347	⇓	*i* PKIKP	PKPdf	21 57 00.0	-0.2
CLL				pmax	pmax		
	comp=Z,36nm,1.0s						
UPC	Upice	144.95 343		*e*PKIKP	PKPab	21 57 01.6	-0.2
UPC	Upice	144.95 343		*e*PKP	PKPab	21 57 01.6	-0.2
MANR	Mangalia	145.00 324	⇑	*i* P	PKPdf	21 56 59.5	-1.1
DPC	Dobruska-Polom	145.01 343		*e*PKP2	PKPab	21 57 02.0	-0.1
DPC	Dobruska-Polom	145.01 343		*e*PKP	PKPab	21 57 02.0	-0.1
LANS	Liptovska Anna	145.08 339		*e*PKP2	PKPab	21 57 02.9	+0.5
LANS	Liptovska Anna	145.08 339		*e*PKP	PKPab	21 57 02.9	+0.5
BRG	Berggiesshubel	145.14 346		*i* PKP	PKPbc	21 57 01.7	+0.2
	comp=Z,16nm,0.8s						
BRG	Berggiesshubel	145.14 346		*i* PKIKP	PKPbc	21 57 01.7	+0.2
BRG				pmax	pmax		
	comp=Z,16nm,0.8s						
MORC	Moravsky Berou	145.16 341	⇑	*i* P	PKPbc	21 57 01.9	+0.2
MORC	Moravsky Berou	145.16 341	⇑	PKIKP	PKPbc	21 57 01.9	+0.2
MORC	Moravsky Berou	145.16 341		*e*PKP	PKPbc	21 57 01.8	+0.1
DOPR	Dopca	145.18 330	⇑	*i* P	PKPbc	21 57 02.3	+0.5
MLR	Muntele Rosu	145.25 329		*e*PKPdf	PKPbc	21 57 02.0	-0.2
MLR	Muntele Rosu	145.25 329	⇑	*i* P	PKPdf	21 57 00.4	-0.8
MLR	Muntele Rosu	145.25 329	⇑	PKIKP	PKPdf	21 57 00.4	-0.8
PVCC	Panska Ves	145.31 345		*e*PKIKP	PKPbc	21 57 02.5	+0.5
PVCC	Panska Ves	145.31 345		*e*PKP	PKPbc	21 57 02.5	+0.5
CJR	Cluj-Napoca	145.44 332	⇑	*i* P	PKPab	21 57 03.5	-0.4
CJR	Cluj-Napoca	145.44 332	⇑	PKP2	PKPab	21 57 03.5	-0.4
VOIR		145.72 330	⇓	*i* P	PKPbc	21 57 03.5	0.0
VOIR		145.72 330	⇓	PKIKP	PKPbc	21 57 03.5	0.0
DRGR		145.77 333	⇑	*i* P	PKPbc	21 57 04.1	+0.5
DRGR		145.77 333	⇑	PKP2	PKPbc	21 57 04.1	+0.5
MBAR	Mbarara	145.81 241		*e*PKPdf	PKPbc	21 57 05.4	+0.6
KDHN	Kadinhani	145.81 314		*i* P	PKPdf	21 57 02.7	+0.4
PRU	Pruhonice	145.81 345		*e*PKIKP	PKPbc	21 57 03.8	+0.3
PRU	Pruhonice	145.81 345		*e*PKP	PKPbc	21 57 03.8	+0.3
GOPC	GO Pecny, Ondr	145.82 344		*e*PKIKP	PKPbc	21 57 03.7	+0.2
GOPC	GO Pecny, Ondr	145.82 344		*e*PKP	PKPbc	21 57 03.7	+0.2
VYHS	Vyhne	145.86 339		*e*PKP2	PKPbc	21 57 04.1	+0.4
VYHS	Vyhne	145.86 339		*e*PKP	PKPbc	21 57 04.1	+0.4
VRAC	Vranov	145.87 342	⇑	*i* P	PKPbc	21 57 03.9	+0.2
VRAC	Vranov	145.87 342	⇑	PKIKP	PKPbc	21 57 03.9	+0.2
VRAC	Vranov	145.87 342		*e*PKP	PKPbc	21 57 04.1	+0.4
JAVC	Velka Javorina	145.93 340		*e*PKP	PKPab	21 57 05.3	-0.5
PSZ	Piszkesteto	145.97 337		*e*PKPdf	PKPbc	21 57 04.4	+0.3
PSZ	Piszkesteto	145.97 337	⇑	*i* P	PKPbc	21 57 03.2	-0.9
PSZ	Piszkesteto	145.97 337	⇑	PKIKP	PKPbc	21 57 03.2	-0.9
ARR	Arges	145.98 330	⇑	*i* P	PKPab	21 57 05.5	-0.6
ERMK	Ermenek	146.12 311		*i* P	PKPab	21 57 06.2	-1.0
KRUC	Moravsky	146.15 342		*e*PKP	PKPbc	21 57 04.7	+0.2
BORA	Eskisehir	146.22 317		*i* P	PKPbc	21 57 05.2	+0.1
DOGA	KONYA_Doganhis	146.32 314		*i* P	PKPbc	21 57 04.5	-1.0
HUMR	Humele	146.42 329	⇑	*i* P	PKPbc	21 57 05.3	0.0
MODS	Modra-Piesok	146.48 340		*e*PKIKP	PKPbc	21 57 05.1	-0.3
MODS	Modra-Piesok	146.48 340		*e*PKP	PKPbc	21 57 05.1	-0.3
CSS	Mathiatis	146.50 308		*e*PKPdf	PKPbc	21 57 05.8	-0.1
YLV	Yalova	146.52 319	⇑	*i* P	PKPdf	21 57 01.2	-2.2
SIRR	Siria	146.63 334	⇑	*i* P	PKPbc	21 57 05.3	-0.6
ZST	Bratislava	146.69 340		*e*PKP2	PKPbc	21 57 06.3	+0.3
ZST	Bratislava	146.69 340		*e*PKP	PKPbc	21 57 06.3	+0.3
MEM	Membach	146.70 354		PKiKP	PKPbc	21 57 06.8	+0.9
GAZI	Gazipasa	146.73 310		*i* P	PKPbc	21 57 06.7	+0.2
LEF	Lefka	146.77 308	⇑	*i* P	PKPbc	21 57 06.4	-0.2
LEF	Lefka	146.77 308		*i* P	PKPbc	21 57 06.9	+0.3
GZR	Gura Zlata	146.82 332	⇑	*i* P	PKPdf	21 57 05.0	+1.3
KHC	Kasperske Hory	146.85 345		*e*PKP2	PKPbc	21 57 06.9	+0.5
KHC	Kasperske Hory	146.85 345		*e*PKP	PKPbc	21 57 06.9	+0.5
ULDT	Uludag	146.91 319		*i* P	PKPbc	21 57 07.3	+0.2
KEPZ	Antalya-Kepez	146.94 312		*i* P	PKPbc	21 57 06.5	-0.6
PHSR	Pinarhisar	147.00 322	⇑	*i* P	PKPbc	21 57 06.1	-0.9
BGES	Gesves	147.00 355		PKPbc	PKPbc	21 57 06.6	-0.1
GEC2	GERESS Array S	147.08 345		*e*PKPbc	PKPbc	21 57 07.1	0.0
GEC2	GERESS Array S	147.08 345		*e*PKP2	PKPbc	21 57 07.1	0.0
GERES	GERESS Array B	147.08 345		PKPbc	PKPbc	21 57 07.3	+0.1
	comp=Z,7.8nm,0.7s,baz=24,slow=3.1,SNR=73						
BMRD	Maredsous	147.11 356		PKPbc	PKPbc	21 57 07.0	0.0
BZS	Buzias	147.16 333	⇑	*i* P	PKPbc	21 57 07.5	+0.2
BZS	Buzias	147.16 333	⇑	PKP2	PKPbc	21 57 07.5	+0.2
CONA	Conrad Observa	147.32 342		*i* PKiKP	PKPbc	21 57 08.2	+0.5
	comp=Z,18nm,0.7s,SNR=15						
DOU	Dourbes	147.33 356		PKiKP	PKPbc	21 57 07.8	+0.3
HERR	Herculane	147.38 331	⇑	*i* P	PKPbc	21 57 08.1	+0.2
WLF	Walferdange	147.62 354		*e*PKPbc	PKPbc	21 57 08.9	+0.5
WLF	Walferdange	147.62 354		*e*PKP2	PKPbc	21 57 08.9	+0.5
WLF	Walferdange	147.62 354		PKPdf	PKPdf	21 57 02.9	-1.9
WLF				PKiKP	PKiKP	21 57 09.2	-0.7
BRDR	BURDUR-Merkez	147.63 314		*i* P	PKPbc	21 57 08.6	-0.3
KHAL	Karahalli	147.66 316		*i* P	PKPbc	21 57 09.7	+0.7
MDVR	Moldovita	147.77 332	⇓	*i* P	PKPbc	21 57 08.8	-0.2
KORT	Korkueli	147.78 313		*i* P	PKPbc	21 57 09.3	0.0
MOA	Molln	147.85 343		*i* PKPbc	PKPbc	21 57 09.2	+0.1
	comp=Z,11nm,1.1s						
MORH	Mrgy, Hungar	147.87 337	⇓	*i* P	PKPbc	21 57 08.9	-0.2
ARSA	Arzberg	148.03 341		*i* PKPbc	PKPbc	21 57 09.4	-0.2
	comp=Z,7.8nm,1.3s						
AKUM	Antalya-Kumluc	148.11 312		*i* P	PKPbc	21 57 10.5	+0.5
MANT	Manisa	148.21 317		*i* P	PKPbc	21 57 11.1	+0.5
FRGS	Fruska Gora	148.29 335	⇓	*i* P	PKPbc	21 57 10.3	+0.1
ALN	Alexandroupoli	148.32 323		*e*PKPbc	PKPbc	21 57 09.4	-1.0
BFO	Black Forest	148.66 351		*e*PKPbc	PKPbc	21 57 11.2	+0.2
AKAS	Kas	148.67 312		*i* P	PKPbc	21 57 11.9	+0.3
VTS	Vitosha	148.67 328		*e*PKPbc	PKPbc	21 57 11.0	-0.5
VTS	Vitosha	148.67 328	⇑	*i* P	PKPbc	21 57 11.0	-0.5
SOKA	Soboth	148.69 342		*i* PKPbc	PKPbc	21 57 10.9	-0.3
	comp=Z,11nm,1.0s,SNR=6.8						
KBA	Koelnbreinsper	148.80 344		*i* PKPbc	PKPbc	21 57 11.0	-0.6
	comp=Z,7.8nm,0.6s,SNR=6.0						
EZN	Ezine	148.83 321	⇓	*i* P	PKPbc	21 57 11.3	-0.4
FETY	Fethiye	148.84 313		*i* P	PKPbc	21 57 12.3	+0.4
OBKA	Obir	148.99 342		*i* PKPbc	PKPbc	21 57 11.0	-1.0
	comp=Z,2.8nm,0.7s						
WATA	Walderalm	149.00 346		*i* PKPbc	PKPbc	21 57 11.9	-0.2
	comp=Z,8.6nm,0.5s,SNR=10						
RETA	Reutte	149.03 347		*i* PKPbc	PKPbc	21 57 12.0	-0.1
	comp=Z,5.6nm,0.5s						
TURN	Turunc	149.05 314		*i* P	PKiKP	21 57 13.4	+0.2
WTTA	Wattenberg	149.05 346		*i* PKiKP	PKPbc	21 57 12.3	+0.1
	comp=Z,33nm,0.8s,SNR=11						
DIVS	Divibare	149.07 333	⇓	*i* P	PKPbc	21 57 12.3	0.0
MOTA	Moosalm	149.10 347		*i* PKPbc	PKPbc	21 57 12.1	-0.2
	comp=Z,5.6nm,0.4s,SNR=11						
AYDN	Tasoluk	149.12 316		*i* P	PKiKP	21 57 13.0	-0.4
MYKA	Terra Mystica	149.14 343		*i* PKPbc	PKPbc	21 57 11.6	-0.7
	comp=Z,12nm,0.6s,SNR=7.5						
SQTA	Sankt Quirin	149.19 347		*i* PKPbc	PKPbc	21 57 12.5	0.0
	comp=Z,19nm,0.6s,SNR=7.2						
ABTA	Abfaltersbach	149.33 345		*i* PKPbc	PKPbc	21 57 12.2	-0.6
	comp=Z,19nm,0.6s,SNR=12						
DAVA	Damuels	149.40 348		*i* PKiKP	PKPbc	21 57 13.2	+0.1
	comp=Z,13nm,0.8s						
FETA	Feichten	149.48 347		*i* PKiKP	PKPbc	21 57 13.4	+0.1
	comp=Z,16nm,1.0s,SNR=6.1						
BBLS	Lazići	149.51 334	⇓	*i* P	PKPbc	21 57 13.5	+0.2
HAPS	Han Pijesak,BI	149.52 334		*e*P	PKPbc	21 57 12.6	-0.8
GCAM	G?zelcami?	149.52 317		*i* P	PKPbc	21 57 13.7	+0.3
JAVS	Javornik	149.69 342		*i* PKPbc	PKPbc	21 57 13.4	-0.3
CEY	Cerknica	149.72 341	⇓	*i* P	PKPbc	21 57 13.5	-0.2
BDRM	Kayabasi	149.73 315		*i* P	PKPbc	21 57 14.2	+0.2
DAT	Datca	149.82 315		*i* P	PKPbc	21 57 13.6	-0.8
RIY	Rijeka	150.07 341		*e*P	PKPbc	21 57 14.2	-0.3
UPM	Unac-Piva	150.26 333		*e*P	PKPbc	21 57 13.8	-1.4
NVLJ	Novalja	150.63 340		P	PKPbc	21 57 15.2	-0.5
BRY	Bratogost	150.66 333		*e*P	PKPbc	21 57 15.4	-0.7
PDG	Podgorica	150.72 332	⇓	*i* P	PKPbc	21 57 15.7	-0.4
PDG	Podgorica	150.72 332		*e*P	PKPbc	21 57 15.2	-0.9
LIT	Litokhoron	150.86 325		*e*PKPbc	PKPbc	21 57 15.6	-0.9
LIT	Litokhoron	150.86 325		*e*PKIKP	PKPbc	21 57 15.6	-0.9
TREB	Trebinje	150.89 333		*e*P	PKPbc	21 57 15.4	-1.1
DRME	Dracevica, Mon	150.95 332		*e*P	PKPbc	21 57 16.2	-0.4
TORD	Torodi Ar. Bea	175.69 187		PKP	PKPdf	21 57 32.6	-1.0
	comp=Z,1.7nm,0.8s,baz=335,slow=2.1,SNR=11						
TORD				PKPab	PKPab	21 59 15.7	+0.4
	comp=Z,1.3nm,0.6s,baz=194,slow=4.6,SNR=10						
TOA1	Torodi Ar. Sit	175.69 187		*e*PKPdf	PKPdf	21 57 32.6	-1.0
TOA1				*e*PKPab	PKPab	21 59 15.7	+0.4

MEX 22 21:39:17.2±0.4, 17°.04N×94°.20W, h143km±6km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.65	275	*i* P	Pn	21 39 37.1	-1.5
CMIG				*i* S	Sn	21 39 53.1	-1.8
TGIG		1.07	104	*i* P	Pn	21 39 40.6	-1.3
TGIG				*e*S	Sn	21 39 58.7	-2.0
PCIG		1.63	144	*e*P	Pn	21 39 46.3	-1.3
PCIG				*e*S	Sn	21 40 08.7	-2.2
HUIG	Huatulco	2.22	236	*e*P	Pn	21 39 50.3	-4.3
HUIG				*i* S	Sn	21 40 19.0	-4.3

MAN 22 21:41:42.0, 11°.91N×124°.11E, h22km, mb4.8, ML3.7, MS3.6, 2C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	Masbate	0.65	313	⇓ *i* P	Pn	21 41 56.0	+0.2
MMPH				*i* S	Sn	21 42 06.5	+1.1
CNP	Catarman	0.81	42	*e*P	Pb	21 41 57.2	-0.1
CNP				*e*S	Sn	21 42 10.3	+1.0
OCLP	Ormoc	0.98	150	*e*P	Pb	21 41 59.0	-1.3
OCLP				*e*S	Sn	21 42 13.8	0.0
PLP	Palo	1.13	131	⇑ *e*P	Pn	21 42 01.3	-1.2
PLP				*i* S	Sn	21 42 18.4	+1.1
BESP	Borongan	1.34	103	*e*P	Pn	21 42 04.8	-0.5
BESP				*e*S	Sn	21 42 21.0	-1.5
LLP	Lapu-Lapu	1.59	185	⇑ *e*P	Pn	21 42 07.8	-0.9
LLP				*e*S	Sb	21 42 30.4	+0.1
MSLP	Maasin	1.91	157	*e*P	Pn	21 42 13.8	+0.6
MSLP				*e*S	Sb	21 42 38.7	-0.9
GUIM	Jordan	1.96	230	*e*P	Pn	21 42 14.9	+1.0
GUIM				*e*S	Sn	21 42 38.8	+1.0
OTRP	Odiongan	2.09	283	*e*P	Pn	21 42 14.9	-0.7
OTRP				*e*S	Sn	21 42 42.7	+1.7
JAP	San Jose, Anti	2.41	242	*e*P	Pb	21 42 23.7	-1.0
SNPH	Sibulan	2.69	199	*e*P	Pn	21 42 24.7	+0.7
BOAC	Boac	2.69	305	*e*P	Pn	21 42 23.4	-0.5
BOAC				*e*S	Sb	21 43 02.1	+0.1
SJMP	San Jose	2.97	281	*e*P	Pn	21 42 28.6	+0.8
SJMP				*e*S	Sn	21 43 05.0	+2.1
CGP	Cagayan de Oro	3.48	170	*e*P	Pb	21 42 44.1	+1.2

ISCJB ***22*** *21:43:25.4±0.8, 35°.63N±0°.05×139°.92E±0°.07, h67km±8km, mb3.4/2, Error ellipse: s-maj=10.0km s-min=8.1km az=149.1*
JMA ***22*** *21:43:26.3±0.2, 35°.70N×139°.92E, h56km±2km, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s=223.00000°, δ=56.00000°, λ=-132.00000°. NP2: ϕ_s=101.00000°, δ=52.00000°, λ=-45.00000°. Principal axes: T Plg2.0000°, Azm341.0000°; N Plg34.0000°, Azm250.0000°; P Plg56.0000°, Azm74.0000°;*
JMA Felt I J1.
IDC ***22*** *21:43:27.3±6.4, 36°.12N×140°.15E, h55km±46km, mb3.3/2, mb1 3.3/2, mb1mx3.0/27, mbtmp3.6/2 Error ellipse: s-maj=71.0km s-min=44.2km az=17.0*

ISC 22 21:43:26.1±1.3, 35°.64N±0°.05×139°.93E±0°.07, h62km±10km, n20, σ0^{s}53/20, 4C-3D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	Tokyo	0.14	290	P	Pn	21 43 35.7	+0.2
JCN	Nagara	0.31	134	⇑ P	Pn	21 43 37.0	+0.4
JOD2	Odawara 2	0.78	242	⇓ P	Pn	21 43 41.3	-0.2
JOD2				S	Sn	21 43 52.2	-0.6
JAG	Ashikaga	0.87	334	⇑ P	Pn	21 43 41.9	-0.8
JRY	Ryogami san	0.91	295	⇓ P	Pn	21 43 43.2	0.0
BSO3	Boso 3	0.96	150	⇑ P	Pn	21 43 43.2	-0.3
JIM2	Oshima 3	1.00	204	P	Pn	21 43 43.6	-0.7
JIM2				S	Sn	21 43 57.2	-0.6
JFNN	Fujinakano	1.10	247	P	Pn	21 43 45.7	+0.1
JFNN				S	Sn	21 43 59.9	-0.2
JYN	Shimob	1.13	263	⇓ P	Pn	21 43 46.1	0.0
JYN				eS	Sn	21 44 00.9	0.0
JKT	Katashina	1.25	334	⇑ P	Pn	21 43 46.8	-0.9
MJAR	Matsushiro Arr	1.66	304	P	Pn	21 43 52.8	-0.2
MJAR	2.2nm,0.3s,baz=103,slow=14,SNR=124			S	Sn	21 44 12.6	-0.8
	3.1nm,0.3s,baz=144,slow=22,SNR=14						
MAT	Matsushiro	1.66	304	P	Pn	21 43 53.3	+0.3
MAT				S	Sn	21 44 13.9	+0.5
H11N2	WAKE ISLAND Hy 28.53	117		T	T	22 18 54.8	
	baz=308,slow=75,SNR=7.6						
H11N1	WAKE ISLAND Hy 28.54	117		T	T	22 18 54.6	
	baz=308,slow=75,SNR=8.9						
H11N3	WAKE ISLAND Hy 28.55	117		T	T	22 19 23.5	
	baz=308,slow=75,SNR=7.0						
H11S1	WAKE ISLAND Hy 29.18	119		T	T	22 19 46.5	
	baz=310,slow=76,SNR=5.5						
H11S3	WAKE ISLAND Hy 29.18	119		T	T	22 19 23.4	
	baz=310,slow=76,SNR=5.5						
H11S2	WAKE ISLAND Hy 29.19	119		T	T	22 19 47.7	
	baz=310,slow=76,SNR=6.6						
ZALV	Zalesovo Beam	41.98	314	P	P	21 51 11.4	+0.6
	0.6nm,0.5s,baz=110,slow=5.4,SNR=3.8						
MKAR	Makanchi Array	43.86	303	P	P	21 51 26.5	+0.4
	0.3nm,0.6s,baz=80,slow=8.6,SNR=4.3						

IDC ***22*** *21:47:07.3±0.8, 11°.73S×73°.43W, h0km, mb3.6/8, mb1 4.0/13, mb1mx3.9/31, mbtmp3.8/13, ML3.8/5, MS2.9/4, Ms1 2.9/4, ms1mx2.6/28, Error ellipse: s-maj=24.8km s-min=12.4km az=38.0*
ISCJB ***22*** *21:47:09.9±0.5, 11°.74S±0°.06×73°.37W±0°.04, h33km, mb3.6/5, MS3.1/1, Error ellipse: s-maj=9.2km s-min=6.1km az=12.2*

ISC 22 21:47:12.1±0.7, 11°.74S±0°.08×73°.36W±0°.07, h35km, n17, σ1^{s}52/18, mb3.6/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	3.42	265	Pn	Pn	21 48 00.6	-2.4
	50nm,0.3s,baz=81,slow=12,SNR=48						
NNA				Sn	Sn	21 48 41.1	-1.1
	36nm,0.3s,baz=20,slow=22,SNR=7.6						
ATAH	Atahualpa	6.75	312	Pn	Pn	21 48 48.9	-0.2
	1.3nm,0.3s,baz=84,slow=3.3,SNR=12						
ATAH				Sn	Sn	21 50 07.3	+2.3
	0.5nm,0.3s,baz=319,slow=20,SNR=2.0						
ATAH				Lg	Lg	21 50 40.6	
	0.7nm,0.3s,baz=270,slow=20,SNR=3.0						
LPAZ	La Paz	6.80	132	Pn	Pn	21 48 51.8	+1.8
	0.3nm,0.3s,baz=316,slow=7.5,SNR=7.4						
LPAZ				Lg	Lg	21 50 44.0	
	1.7nm,0.3s,baz=17,slow=22,SNR=9.5						
LPAZ				LR	LR	21 52 18.9	
	comp=Z,28nm,18.0s,baz=320,slow=46						
SIV	San Ignacio	12.66	111	Pn	Pn	21 50 09.7	-0.1
	0.3nm,0.3s,baz=299,slow=15,SNR=5.0						
SIV				Lg	Lg	21 53 51.9	
	0.8nm,0.3s,baz=5.5,slow=20,SNR=3.4						
ROSC	El Rosal	16.50	357	Lg	Lg	21 55 54.9	
	0.4nm,0.3s,baz=197,slow=19,SNR=2.7						
ROSC				LR	LR	21 58 21.8	
	comp=Z,35nm,21.4s,baz=259,slow=41						
PTGA	Pitinga	17.21	52	P	P	21 51 10.2	-1.0
	0.8nm,0.3s,baz=246,slow=15,SNR=7.2						
PTGA				S	Sn	21 54 17.1	-3.5
	0.5nm,0.3s,baz=319,slow=19,SNR=3.2						
PTGA				Lg	Lg	21 56 19.9	
	0.7nm,0.3s,baz=315,slow=19,SNR=4.5						
PTGA				LR	LR	21 57 07.0	
	comp=Z,56nm,18.5s,baz=201,slow=35						
CFA	Coronel Fontan	20.33	167	P	P	21 51 46.8	+1.4
	4.6nm,0.9s,baz=345,slow=11,SNR=6.5						
SDV	Santo Domingo	20.67	8	P	P	21 51 49.3	0.0
	1.3nm,0.3s,baz=350,slow=18,SNR=2.1						
CPUP	Villa Florida	20.95	136	P	P	21 51 51.0	-1.1
	2.9nm,0.8s,baz=316,slow=12,SNR=4.2						
MDP	Montagnes des	26.55	52	LR	LR	22 03 29.4	
	comp=Z,53nm,18.9s,baz=216,slow=37						
TXAR	Lajitas Array	50.22	325	P	P	21 56 04.8	-0.2
	0.5nm,0.7s,baz=123,slow=9.1,SNR=6.8						
PDAR	Pinedale Array	63.56	331	P	P	21 57 39.4	0.0
	0.1nm,0.4s,baz=116,slow=8.1,SNR=2.7						
NVAR	Mina Array Bea	65.20	322	P	P	21 57 50.5	+0.2
	0.3nm,0.5s,baz=119,slow=7.3,SNR=2.3						
TORD	Torodi Ar. Bea	78.44	74	P	P	21 59 11.0	+1.0
	1.4nm,1.1s,baz=257,slow=4.8,SNR=10						
YKA	Yellowknife Ar	80.62	342	P	P	21 59 21.8	+0.9
	0.7nm,0.6s,baz=135,slow=6.2,SNR=3.3						
KURBB	Kurchatov Arra	134.91	25	PKP	PKPdf	22 06 28.1	+0.7
	0.2nm,0.6s,baz=304,slow=2.2,SNR=2.9						
SONM	Songino Array	144.02	0	PKP	PKPdf	22 06 43.9	-0.4
	0.2nm,0.4s,baz=339,slow=3.6,SNR=2.3						

IDC 22 21:58:55.4±8.6, 31°.49S×178°.33E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/26, mbtmp3.7/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/24, Error ellipse: s-maj=356.6km s-min=65.4km az=159.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	39.93	270	P	P	22 06 29.9	-1.6
	0.4nm,0.6s,baz=112,slow=7.4,SNR=8.3						
WRA	Warramunga Arr	41.02	275	P	P	22 06 41.7	+1.1
	2.1nm,1.0s,baz=108,slow=8.0,SNR=2.2

IDC 22 22:11:39.9±2.4, 6°.19S×129°.92E, h0km, mb3.5/1, mb1 3.9/4, mb1mx3.5/36, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=109.3km s-min=28.6km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.55**	**199**	Pn	Pn	22 14 40.5	+0.6
	0.3nm,0.3s,baz=24,slow=9.0,SNR=22						
FITZ				Sn	Sn	22 16 46.2	-14
	0.3nm,0.3s,baz=264,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**14.34**	**163**	Pn	Pn	22 15 03.7	-0.6
	0.3nm,0.3s,baz=339,slow=14,SNR=9.8						
WRA				Sn	Sn	22 17 26.8	-17
	0.1nm,0.3s,baz=94,slow=20,SNR=2.3						
ASAR	**Alice Springs**	**17.80**	**168**	P	Pn	22 15 49.1	-0.1
	0.2nm,0.3s,baz=341,slow=9.0,SNR=14						
ASAR				S	Sn	22 18 59.4	-9.0
	0.1nm,0.3s,baz=346,slow=23,SNR=3.8						
MKAR	**Makanchi Array**	**67.50**	**327**	P	P	22 22 37.8	0.0
	0.3nm,0.5s,baz=126,slow=8.1,SNR=5.0						

IDC 22 22:23:48.0±2.0, 0°.39N×125°.54E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/30, mbtmp3.5/3, Error ellipse: s-maj=213.1km s-min=24.7km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.96**	**157**	P	P	22 28 42.4	-1.2
	1.0nm,0.6s,baz=335,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.25**	**162**	P	P	22 29 16.9	+0.8
	0.4nm,0.4s,baz=344,slow=11,SNR=12						
MKAR	**Makanchi Array**	**59.65**	**327**	P	P	22 33 54.0	-0.1
	0.1nm,0.3s,baz=142,slow=6.8,SNR=3.8						

*ISCJB **22** 22:40:39.0±0.6, 51°.52N±0°.03×16°.14E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=3.1km az=7.5*
*PRU **22** 22:40:40.7±0.0, 51°.55N×16°.11E, h0km*
*VIE **22** 22:40:43.1±0.9, 51°.35N×16°.08E, h0km, mb2.2/4, ml2.5/5, Error ellipse: s-maj=11.3km s-min=6.4km az=70.0, Suspected Mining induced.*

ISC 22 22:40:41.2±1.2, 51°.48N±0°.05×16°.12E±0°.03, h0km, n24, σ1°22/51, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**170**	*i* Pg	**Pb**	**22 40 54.4**	**-1.0**
KSP				*e*Sg	**Sb**	**22 41 03.6**	**-1.2**
CHVC	**Chvalec**	**0.89**	**183**	*e*PG	**Pb**	**22 40 59.2**	**-0.3**
CHVC				*e*SG	**Sb**	**22 41 11.8**	**-0.2**
	comp=Z,35nm,0.6s						
OSTC	**Ostas**	**0.92**	**176**	*e*PG	**Pb**	**22 40 59.9**	**-0.2**
OSTC				*e*SG	**Sb**	**22 41 12.8**	**-0.1**
	comp=Z,35nm,0.3s						
UPC	**Upice**	**0.97**	**184**	*e*PG	**Pb**	**22 41 00.4**	**-0.5**
UPC				*e*SG	**Sb**	**22 41 14.1**	**-0.2**
DPC	**Dobruska-Polom**	**1.14**	**173**	*e*PG	**Pb**	**22 41 03.2**	**-0.5**
DPC				*e*SG	**Sg**	**22 41 18.2**	**+0.6**
	comp=Z,19nm,0.5s						
PVCC	**Panska Ves**	**1.36**	**226**	*e*PG	**Pn**	**22 41 07.3**	**-0.2**
PVCC				*e*SG	**Sn**	**22 41 26.9**	**+0.7**
	comp=Z,70nm,0.6s						
BRG	**Berggiesshubel**	**1.50**	**247**	PG	**Pg**	**22 41 09.9**	**+0.1**
BRG				SG	**Sb**	**22 41 30.4**	**+1.1**
	53nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.78**	**209**	*e*PN	**Pn**	**22 41 12.8**	**-0.4**
GOPC				*e*PG	**Pb**	**22 41 14.6**	**-0.1**
GOPC				*e*SG	**Sg**	**22 41 39.3**	**+1.0**
	comp=Z,15nm,0.5s						
PRU	**Pruhonice**	**1.79**	**214**	*e*PN	**Pn**	**22 41 13.0**	**-0.4**
PRU				*e*PG	**Pb**	**22 41 14.8**	**-0.1**
PRU				*e*SG	**Sg**	**22 41 39.2**	**+0.4**
	comp=Z,20nm,0.3s						
MORC	**Moravsky Berou**	**1.93**	**151**	*e*PN	**Pn**	**22 41 14.5**	**-0.8**
MORC				*e*SG	**Sn**	**22 41 40.5**	**+0.2**
CLL	**Collm**	**1.96**	**266**	*i* Pn	**Pn**	**22 41 13.3**	**-2.3**
CLL				*i* Pg	**Pb**	**22 41 16.9**	**-0.8**
CLL				*i*		22 41 20.4	
CLL				*e*		22 41 30.0	
CLL				*i* Sg	**Sb**	**22 41 43.3**	**+0.7**
	comp=Z,28nm,0.6s						
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*PN	**Pn**	**22 41 16.1**	**-1.3**
OKC				*e*PG	**Pg**	**22 41 20.3**	**-0.9**
VRAC	**Vranov**	**2.19**	**172**	*e*PN	**Pn**	**22 41 18.9**	**0.0**
VRAC				*e*SG	**Sg**	**22 41 50.5**	**-1.1**
KRUC	**Moravsky**	**2.42**	**176**	*e*PN	**Pn**	**22 41 22.2**	**+0.1**
KRUC				*e*SG	**Sg**	**22 41 58.2**	**-0.8**
OJC	**Ojcow**	**2.65**	**117**	*e*Pg	**Pg**	**22 41 31.0**	**-1.0**
OJC				*e*Sg	**Sg**	**22 42 06.3**	**-0.1**
JAVC	**Velka Javorina**	**2.80**	**159**	*e*PN	**Pn**	**22 41 26.9**	**-0.4**
KHC	**Kasperske Hory**	**2.86**	**216**	*e*PN	**Pn**	**22 41 27.7**	**-0.3**
KHC				*e*PG	**Pb**	**22 41 34.2**	**+1.1**
KHC				*e*SN	**Sn**	**22 42 03.4**	**+0.3**
KHC				*e*SG	**Sg**	**22 42 13.9**	**+1.0**
	comp=Z,8.9nm,0.5s						
LANS	**Liptovska Anna**	**3.17**	**136**	*e*PG	**Pg**	**22 41 41.3**	**-0.6**
LANS				*e*SG	**Sg**	**22 42 24.6**	**+1.7**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*PG	**Pg**	**22 41 41.7**	**-0.7**
MODS				*e*SG	**Sg**	**22 42 23.6**	**-0.2**
VYHS	**Vyhne**	**3.46**	**148**	*e*PN	**Pn**	**22 41 35.8**	**-0.6**
VYHS				*e*PG	**Pg**	**22 41 47.6**	**+0.1**
VYHS				*e*		22 42 39.2	
CONA	**Conrad Observa**	**3.56**	**183**	*i* Pn	**Pn**	**22 41 38.4**	**+0.7**
	comp=Z,0.8nm,0.2s						
CONA				*e*Sg	**Sg**	**22 42 35.1**	**-0.3**
	comp=Z,6.3nm,0.5s						
MOA	**Molln**	**3.82**	**199**	*i* Pn	**Pn**	**22 41 41.7**	**+0.4**
	comp=Z,0.8nm,0.2s						
MOA				Sg	**Sg**	**22 42 44.4**	**+0.4**
	comp=Z,3.5nm,0.3s						
KOLS	**Kolonicke sedl**	**4.70**	**120**	*e*PN	**Pn**	**22 41 52.9**	**-0.5**
KOLS				*e*SG	**Sg**	**22 43 18.8**	**+6.6**
WATA	**Walderalm**	**5.09**	**217**	*i* Pn	**Pn**	**22 41 59.5**	**+0.6**
	comp=Z,0.5nm,0.2s						

MEX 22 22:57:07.5±0.6, 16°.53N×98°.62W, h16km±10km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.03**	**3**	*e*P	Pb	22 57 23.2	-3.9
TLIG				*e*S	Sb	22 57 36.3	-4.1
VHO	**Vista Hermosa**	**1.89**	**73**	*e*P	Pn	22 57 36.3	-3.0
VHO				*e*S	Sn	22 57 57.7	-5.1

*ISCJB **22** 23:00:06.7±0.9, 43°.49N±0°.05×146°.64E±0°.07, h40km±23km, Error ellipse: s-maj=10.9km s-min=6.1km az=137.1*
*JMA **22** 23:00:07.1±0.2, 43°.43N×146°.61E, h46km±2km, M3.0*
*SKHL **22** 23:00:08.7±0.1, 43°.58N×146°.66E, h32km±1km, mb4.0/5*

ISC 22 23:00:05.9±2.5, 43°.47N±0°.07×146°.68E±0°.07, h26km±17km, n15, σ0°70/28, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.69**	**261**	P	**Pn**	**23 00 19.9**	**-0.1**
NEM2				*e*S	**Sb**	**23 00 28.7**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**0.82**	**314**	*i* P	**Pn**	**23 00 22.0**	**+0.3**
YUK				AMB	AMB	23 00 22.0	
	28nm,0.4s						
YUK				AMB	AMB	23 00 22.0	
	51nm,0.4s						
YUK				AMB	AMB	23 00 22.0	
	263nm,0.4s						
YUK				*i* S	**Sb**	**23 00 32.0**	**-0.1**
YUK				A	A	23 00 33.0	
	1μm,0.4s						
YUK				A	A	23 00 33.0	
	2μm,0.4s						
GRPR	**Tuman**	**0.84**	**309**	*i* P	**Pn**	**23 00 22.0**	**0.0**
GRPR				AMB	AMB	23 00 23.0	
	67nm,0.4s						
GRPR				AMB	AMB	23 00 23.0	
	50nm,0.4s						
GRPR				AMB	AMB	23 00 23.0	
	79nm,0.4s						
GRPR				*i* S	**Sb**	**23 00 32.0**	**-0.7**
GRPR				A	A	23 00 33.0	
	860nm,0.4s						
GRPR				A	A	23 00 33.0	
	2μm,0.4s						
LAGR	**Lagunnoye**	**0.87**	**312**	*i* P	**Pn**	**23 00 22.7**	**+0.3**
LAGR				AMB	AMB	23 00 23.0	
	100nm,0.4s						
LAGR				AMB	AMB	23 00 23.0	
	80nm,0.4s						
LAGR				AMB	AMB	23 00 23.0	
	134nm,0.4s						
LAGR				*i* S	**Sb**	**23 00 33.0**	**-0.6**
LAGR				A	A	23 00 34.0	
	758nm,0.4s						
LAGR				A	A	23 00 34.0	
	3μm,0.4s						
GLVR	**Golovnino**	**0.89**	**288**	*i* P	**Pn**	**23 00 23.1**	**+0.5**
GLVR				AMB	AMB	23 00 23.5	
	46nm,0.4s						
GLVR				AMB	AMB	23 00 23.5	
	30nm,0.4s						
GLVR				AMB	AMB	23 00 23.5	
	153nm,0.4s						
GLVR				*i* S	**Sb**	**23 00 34.0**	**0.0**
GLVR				A	A	23 00 35.0	
	959nm,0.4s						
GLVR				A	A	23 00 35.0	
	987nm,0.4s						
JKHN	**Kushirohamanak**	**1.18**	**251**	P	**Pn**	**23 00 26.8**	**+0.2**
JKHN				*e*S	**Sn**	**23 00 41.1**	**-0.7**
JRA	**Rausu**	**1.22**	**293**	P	**Pn**	**23 00 27.6**	**+0.4**
JRA				*e*S	**Sn**	**23 00 42.8**	**-0.1**
JNK	**Nakash**	**1.43**	**275**	P	**Pn**	**23 00 30.3**	**+0.2**
JNK				*e*S	**Sn**	**23 00 46.7**	**-1.4**
JAK	**Akkeshi**	**1.53**	**252**	P	**Pn**	**23 00 31.6**	**+0.2**
KUR	**Kuril'sk**	**1.95**	**25**	*e*P	**Pn**	**23 00 38.0**	**+0.7**
KUR				AMB	AMB	23 00 39.0	
	10.0nm,0.2s						
KUR				AMB	AMB	23 00 39.0	
	28nm,0.2s						
KUR				AMB	AMB	23 00 39.0	
	29nm,0.2s						
KUR				*e*S	**Sn**	**23 01 00.0**	**-1.0**
KUR				A	A	23 01 04.0	
	260nm,0.3s						
KUR				A	A	23 01 04.0	
	190nm,0.3s						
JTKR	**Abashiri--Toko**	**2.07**	**285**	P	**Pn**	**23 00 40.1**	**+1.2**
JTKR				*e*S	**Sn**	**23 01 04.8**	**+0.9**
JAR	**Ashorobuto**	**2.13**	**266**	P	**Pn**	**23 00 40.5**	**+0.8**
JAR				*e*S	**Sn**	**23 01 05.0**	**-0.3**
JOB	**Onbets**	**2.16**	**256**	P	**Pn**	**23 00 40.7**	**+0.6**
JOB				*e*S	**Sn**	**23 01 05.4**	**-0.6**
JMP	**Maruseppu**	**2.47**	**284**	P	**Pn**	**23 00 45.8**	**+1.4**
JCH	**Churui**	**2.58**	**252**	P	**Pn**	**23 00 46.6**	**+0.7**
JCH				*e*S	**Sn**	**23 01 15.9**	**-0.5**

*IDC **22** 23:10:21.9±0.6, 26°.72N×143°.95E, h0km, mb4.0/14, mb1 4.2/17, mb1mx4.0/50, mbtmp4.0/17, ML3.3/3, MS2.7/2, Ms1 2.7/2, ms1mx2.2/36, Error ellipse: s-maj=23.1km s-min=15.0km az=82.0*
*ISCJB **22** 23:10:25.3±0.5, 26°.74N±0°.07×143°.9E±0°.1, h35km, mb4.2/21, MS2.8/1, Error ellipse: s-maj=14.1km s-min=10.0km az=163.3*
*NEIC **22** 23:10:27.3±1.0, 26°.75N×144°.04E, h40km±5km, mb4.5/7, Error ellipse: s-maj=21.8km s-min=18.4km az=57.0*

ISC 22 23:10:27.4±0.7, 26°.88N±0°.09×143°.8E±0°.1, h35km, n37, σ1°52/36, mb4.2/21, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**7.14**	**332**	Pn	**Pn**	**23 12 08.3**	**-1.0**
	1.4nm,0.3s,baz=45,slow=10.0,SNR=2.3						
JHJ				Sn	**Sn**	**23 13 24.6**	**-4.6**
	3.7nm,0.3s,baz=252,slow=19,SNR=2.2						
MJAR	**Matsushiro Arr**	**10.75**	**335**	Pn	**Pn**	**23 12 57.4**	**-1.4**
	0.1nm,0.3s,baz=163,slow=11,SNR=18						
MAJO	**Matsushiro**	**10.75**	**335**	*e*Pn	**Pn**	**23 12 57.4**	**-1.5**
MAT	**Matsushiro**	**10.75**	**335**	P	**Pn**	**23 12 57.1**	**-1.8**
MJB9	**Matsu-Tunnel**	**10.76**	**335**	*e*Pn	**Pn**	**23 12 57.5**	**-1.5**
KSRS	**Korea Array**	**17.07**	**312**	P	**P**	**23 14 25.8**	**+0.9**
	0.2nm,0.3s,baz=116,slow=11,SNR=6.3						
ASAJ	**Asahikawa**	**17.23**	**357**	LR	LR	23 24 39.4	
	comp=Z,14nm,18.1s,baz=160,slow=49						
KLR	**Kul'dur**	**24.20**	**340**	P	**P**	**23 15 43.1**	**+2.7**
	1.1nm,0.6s,baz=167,slow=7.9,SNR=4.0						
DAV	**Davao City (W)**	**26.25**	**225**	LR	LR	23 24 47.4	
	comp=Z,30nm,20.4s,baz=190,slow=33						
SONA0	**Songino Array**	**35.88**	**316**	*e*P	**P**	**23 17 25.8**	**+1.6**
SONM	**Songino Array**	**35.88**	**316**	P	**P**	**23 17 25.8**	**+1.6**
	0.9nm,0.6s,baz=120,slow=7.5,SNR=6.0						
WR1	**Warramunga Arr**	**47.44**	**192**	*e*P	**P**	**23 18 57.4**	**-1.3**
WRA	**Warramunga Arr**	**47.44**	**192**	P	**P**	**23 18 57.4**	**-1.3**
	4.8nm,0.5s,baz=8.8,slow=7.3,SNR=40						
FITZ	**Fitzroy Crossi**	**48.07**	**204**	P	**P**	**23 19 03.1**	**-0.5**
	8.7nm,0.7s,baz=24,slow=12						
CHGN	**Chignik**	**50.29**	**38**	*e*S	**S**	**23 26 28.7**	**-1.6**
ASAR	**Alice Springs**	**51.16**	**192**	P	**P**	**23 19 25.4**	**-1.7**
	0.7nm,0.6s,baz=15,slow=6.7,SNR=11						
MK31	**Makanchi Array**	**51.74**	**310**	*e*P	**P**	**23 19 32.1**	**+0.7**
	2.6nm,0.9s						
MK32	**Makanchi Array**	**51.74**	**310**	*e*P	**P**	**23 19 32.2**	**+0.9**
MKAR	**Makanchi Array**	**51.74**	**310**	P	**P**	**23 19 32.2**	**+0.9**
	1.9nm,0.6s,baz=93,slow=8.6,SNR=18						
MAKZ	**Makanchi**	**51.95**	**310**	*e*P	**P**	**23 19 33.8**	**+0.9**
	7.4nm,1.4s						
KURK	**Kurchatov**	**54.18**	**315**	*e*P	**P**	**23 19 49.3**	**+0.1**
	8.3nm,1.5s						
BOOM	**Boomskoye usch**	**56.54**	**305**	*e*P	**P**	**23 20 07.7**	**+1.1**
	2.9nm,0.8s						
STKA	**Stephens Creek**	**58.47**	**182**	P	**P**	**23 20 17.5**	**-2.4**
	1.4nm,0.7s,baz=321,slow=9.0,SNR=3.2						
KK31	**Karatay Array**	**60.39**	**306**	*e*P	**P**	**23 20 34.2**	**+0.9**
	3.7nm,1.0s						
KKAR	**Karatay Array**	**60.39**	**306**	*e*P	**P**	**23 20 34.4**	**+1.1**
	3.7nm,1.0s						
GAR	**Garm**	**61.35**	**302**	*e*P	**P**	**23 20 40.5**	**+0.6**
	7.7nm,0.7s						
INK	**Inuvik**	**62.62**	**25**	P	**P**	**23 20 48.1**	**+0.3**
	0.7nm,0.7s,baz=282,slow=10.0,SNR=2.7						
FIA0	**FINESS Array S**	**78.78**	**334**	*e*P	**P**	**23 22 27.7**	**+1.4**
FINES	**FINESS Array B**	**78.78**	**334**	P	**P**	**23 22 27.7**	**+1.4**
	0.9nm,0.8s,baz=51,slow=4.4,SNR=5.9						
KBZ	**Khabaz**	**79.22**	**314**	P	**P**	**23 22 30.0**	**+1.1**
	3.8nm,0.7s,baz=96,slow=2.7,SNR=8.7						
NV01	**Mina Array Sit**	**79.50**	**52**	*e*P	**P**	**23 22 30.2**	**-0.7**
NVAR	**Mina Array Bea**	**79.50**	**52**	P	**P**	**23 22 30.2**	**-0.7**
	1.1nm,0.7s,baz=289,slow=6.2,SNR=10						
PDAR	**Pinedale Array**	**83.33**	**45**	P	**P**	**23 22 51.1**	**-0.1**
	0.3nm,0.6s,baz=276,slow=4.0,SNR=4.0						
BR101	**Keskin Array S**	**87.22**	**314**	*e*P	**P**	**23 23 10.3**	**-0.2**
BRTR	**Keskin Array B**	**87.22**	**314**	P	**P**	**23 23 10.3**	**-0.2**
	0.7nm,0.8s,baz=54,slow=4.9,SNR=5.9						
TXAR	**Lajitas Array**	**94.56**	**54**	P	**P**	**23 23 46.7**	**+1.9**
	0.2nm,0.7s,baz=331,slow=5.4,SNR=2.8						
LPAZ	**La Paz**	**148.56**	**77**	PKPbc	**PKPbc**	**23 30 11.5**	**-0.5**
	2.0nm,0.7s,baz=300,slow=3.4,SNR=11						

*IDC **22** 23:11:15.7±1.0, 1°.39N×127°.15E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/42, mbtmp3.8/7, MS3.4/1, Ms1 3.4/1, ms1mx2.3/35, Error ellipse: s-maj=53.6km s-min=18.4km az=80.0*
*ISCJB **22** 23:11:18.9±0.6, 1°.35N±0°.04×127°.12E±0°.08, h35km, mb3.8/7, MS3.4/1, Error ellipse: s-maj=11.6km s-min=6.2km az=174.6*
*DJA **22** 23:11:23.2±0.5, 1°N±4°×12°7E±°, h58km±11km, M4.0/7, mb4.2/4, mB4.7/2, MLv3.9/7, Mw(mB)3.9/2*

ISC 22 23:11:21.8±0.8, 1°.35N±0°.06×126°.95E±0°.09, h35km, n17, σ2°09/18, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.71**	**144**	P	**Pn**	**23 11 38.7**	**+3.2**
TNTI				S	**Sn**	**23 11 49.9**	**+4.7**
SGSI	**Sangihe**	**2.71**	**329**	P	**Pn**	**23 12 05.7**	**+2.7**
SGSI				S	**Sn**	**23 12 36.3**	**+1.7**
SANI	**Sanana**	**3.51**	**196**	P	**Pn**	**23 12 14.4**	**+0.4**
NLAI	**Namlea**	**4.56**	**178**	P	**Pn**	**23 12 28.6**	**+0.2**
NLAI				S	**Sn**	**23 13 19.4**	**-0.9**
LUWI	**Luwuk**	**4.80**	**240**	P	**Pn**	**23 12 34.2**	**+2.4**
APSI	**Ampana**	**5.76**	**247**	P	**Pn**	**23 12 47.0**	**+2.2**
TTSI	**Tana Toraja**	**8.36**	**238**	P	**Pn**	**23 13 20.2**	**-0.4**
SPSI	**Sidrap Palu**	**8.91**	**234**	P	**Pn**	**23 13 28.5**	**+0.4**
BKSI	**Bulukumba**	**9.51**	**226**	P	**Pn**	**23 13 37.5**	**+1.1**
WRA	**Warramunga Arr**	**22.37**	**161**	P	**P**	**23 16 14.5**	**-2.7**
	1.4nm,0.8s,baz=332,slow=12,SNR=9.7						
ASAR	**Alice Springs**	**25.77**	**165**	P	**P**	**23 16 49.1**	**-0.5**
	0.3nm,0.4s,baz=347,slow=12,SNR=7.3						
KSRS	**Korea Array**	**35.93**	**1**	P	**P**	**23 18 18.6**	**-0.4**
	0.5nm,0.5s,baz=177,slow=9.1,SNR=3.7						
MJAR	**Matsushiro Arr**	**36.53**	**15**	P	P	23 18 20.7	-3.5
	0.8nm,0.6s,baz=189,slow=9.2,SNR=4.3						
PALK	**Pallekele**	**46.46**	**279**	LR	LR	23 41 50.6	
	comp=Z,39nm,18.1s,baz=298,slow=39						
SONM	**Songino Array**	**49.61**	**342**	P	**P**	**23 20 09.5**	**-0.3**
	0.6nm,0.7s,baz=154,slow=7.9,SNR=3.6						
PETK	**Petropavlovsk-**	**57.54**	**21**	P	**P**	**23 21 06.7**	**-1.1**
	2.6nm,0.8s,baz=207,slow=9.3,SNR=3.2						
MKAR	**Makanchi Array**	**59.62**	**326**	P	**P**	**23 21 21.6**	**-0.9**
	1.4nm,0.5s,baz=120,slow=8.7,SNR=11						

*IDC **22** 23:16:22.1±0.8, 26°.72N×143°.93E, h0km, mb3.9/10, mb1 4.1/12, mb1mx3.8/46, mbtmp3.9/12, ML3.2/2, MS2.6/1, Ms1 2.6/1, ms1mx2.1/31, Error ellipse: s-maj=28.4km s-min=18.4km az=79.0*
*ISCJB **22** 23:16:26.0±0.7, 26°.6N±0°.1×143°.8E±0°.2, h35km, mb3.9/10, Error ellipse: s-maj=24.5km s-min=14.9km az=163.4*

ISC 22 23:16:27.4±0.9, 26°.8N±0°.1×143°.9E±0°.2, h35km, n14, σ1°30/13, mb3.9/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**10.84**	**335**	Pn	**Pn**	**23 18 57.4**	**-2.7**
	0.1nm,0.3s,baz=164,slow=11,SNR=5.2						
JNU	**Nakatsue**	**12.91**	**302**	LR	LR	23 23 27.5	
	comp=Z,26nm,18.6s,baz=148,slow=33						
KSRS	**Korea Array**	**17.17**	**312**	P	**Pn**	**23 20 24.4**	**-0.1**
	0.2nm,0.3s,baz=118,slow=10,SNR=4.9						
SONM	**Songino Array**	**35.98**	**316**	P	**P**	**23 23 26.0**	**+1.1**
	0.6nm,0.5s,baz=123,slow=7.1,SNR=4.8						
WRA	**Warramunga Arr**	**47.39**	**192**	P	**P**	**23 24 57.2**	**-1.1**
	2.1nm,0.5s,baz=6.9,slow=7.1,SNR=18						
FITZ	**Fitzroy Crossi**	**48.02**	**204**	P	**P**	**23 25 03.0**	**-0.3**
	4.6nm,0.8s,baz=27,slow=12,SNR=6.5						
ASAR	**Alice Springs**	**51.10**	**192**	P	**P**	**23 25 25.6**	**-1.1**
	0.4nm,0.6s,baz=11,slow=6.4,SNR=6.7						
MKAR	**Makanchi Array**	**51.83**	**310**	P	**P**	**23 25 32.5**	**+0.5**
	1.1nm,0.5s,baz=91,slow=8.5,SNR=14						
FINES	**FINESS Array B**	**78.87**	**334**	P	**P**	**23 28 27.9**	**+1.2**
	1.3nm,1.0s,baz=94,slow=7.6,SNR=3.7						
KBZ	**Khabaz**	**79.31**	**314**	P	**P**	**23 28 30.9**	**+1.4**
	2.7nm,0.8s,baz=115,slow=3.9,SNR=5.8						
NVAR	**Mina Array Bea**	**79.50**	**52**	P	**P**	**23 28 32.1**	**+1.2**
	0.5nm,0.6s,baz=299,slow=3.7,SNR=4.2						
PDAR	**Pinedale Array**	**83.34**	**45**	P	**P**	**23 28 51.3**	**+0.1**
	0.3nm,0.6s,baz=298,slow=1.9,SNR=3.0						
BRTR	**Keskin Array B**	**87.31**	**314**	P	**P**	**23 29 10.3**	**-0.6**
	0.6nm,0.9s,baz=77,slow=6.2,SNR=3.8						
LPAZ	**La Paz**	**148.51**	**77**	PKPbc	**PKPbc**	**23 36 11.2**	**-0.8**
	1.0nm,0.8s,baz=339,slow=3.1,SNR=5.6						

NNC 22 23:24:08.7±2.2, 42°.20N×75°.95E, h0km, mb1.6, mpv2.1, 2C-2D, Error ellipse: s-maj=13.0km s-min=8.4km az=149.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**0.77**	**340**	⇑P	Pg	23 24 24.0	+0.5
	1.3nm,0.9s						
TKM2				⇓S	Sg	23 24 34.0	+0.6
	2.8nm,0.8s						
KST	**Kastek**	**0.85**	**1**	P	Pg	23 24 25.3	+0.4
	2.1nm,0.1s						
KST				S	Sn	23 24 40.1	-1.1
	6.9nm,0.2s						
DGS	**Degeres**	**1.05**	**353**	P	Pg	23 24 28.4	-0.5
	0.9nm,0.5s						
DGS				S	Sb	23 24 45.2	+0.9
	2.2nm,0.4s						
TNSS	**Tian-Shan**	**1.12**	**41**	P	Pg	23 24 28.8	-1.3
	1.0nm,0.7s						
TNSS				S	Sb	23 24 45.6	-0.7
	4.5nm,0.7s						
AAK	**Ala-Archa**	**1.17**	**293**	⇑P	Pg	23 24 30.6	-0.4
	1.8nm,0.6s						
AAK				⇓S	Sb	23 24 47.3	-0.3
	0.6nm,0.3s						

KRNET 22 23:24:33.3±0.1, 40°.96N×74°.15E, h12km, mb1.9, 10C-6D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.91**	**8**	⇑*i*P	Pg	23 24 50.8	0.0
	baz=8.0						
ARLS				⇑*i*S	Sb	23 25 03.7	+0.6
	baz=8.0						
ARSB	**Arslanbob**	**0.95**	**293**	⇑*i*P	Pg	23 24 51.6	-0.1
	baz=92						
ARSB				⇑*i*S	Sb	23 25 05.2	+0.7
	baz=92						
AML	**Almayashu**	**1.22**	**344**	⇓*i*P	Pg	23 24 56.6	-0.1
	baz=44						
AML				⇓*i*S	Sn	23 25 13.6	+0.5
	baz=44						
UCH	**Uchtor**	**1.29**	**12**	⇓*i*P	Pg	23 24 58.1	-0.1
	baz=12						
UCH				⇓*i*S	Sn	23 25 16.2	+1.2
	baz=12						
KZA	**Kyzart**	**1.39**	**36**	⇑*i*P	Pg	23 24 59.8	-0.1
	baz=36						
KZA				⇑*i*S	Sg	23 25 18.9	+0.9
	baz=36						
EKS2	**Erkin-Say**	**1.72**	**351**	⇓*i*P	Pg	23 25 05.7	-0.6
	baz=51						
EKS2				⇓*i*S	Sg	23 25 29.3	+0.7
	baz=51

1.4nm,0.3s,baz=304,slow=7.8,SNR=29

*IDC **22** 23:39:51.4±3.5, 4.°96S×68.°95E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.4/32, mbtmp4.0/4, ML4.6/1, Error ellipse: s-maj=99.8km s-min=38.0km az=68.0*
ISC 22 23:39:50.4±3.7, 5.°4S±0.°3×69.°4E±0.°4, h10km, n10, σ0°31/9, mb3.6/3, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**1.84**	**119**	Pn	**Pg**	**23 40 25.9**	**+0.1**
	baz=298,slow=16						
H08N2				T	T	23 42 49.5	
	baz=304						
H08N3	**Diego Garcia H**	**1.85**	**120**	Pn	**Pg**	**23 40 26.0**	**+0.2**
	baz=298,slow=16,SNR=8139						
H08N3				T	T	23 42 53.0	
	baz=304						
H08N1	**Diego Carcia H**	**1.86**	**120**	Pn	**Pg**	**23 40 26.1**	**-0.1**
	baz=298,slow=16,SNR=8117						
H08N1				T	T	23 42 47.3	
	baz=304						
H08S3	**Diego Garcia H**	**3.78**	**126**	Pn	**Pb**	**23 40 57.2**	**0.0**
	baz=308						
H08S3				T	T	23 45 27.5	
	baz=306						
H08S1	**Diego Carcia H**	**3.79**	**126**	Pn	**Pb**	**23 40 57.2**	**0.0**
	baz=308						
H08S1				T	T	23 45 21.0	
	baz=306						
H08S2	**Diego Garcia H**	**3.80**	**126**	Pn	**Pb**	**23 40 57.2**	**-0.3**
	baz=308						
H08S2				T	T	23 45 28.7	
	baz=306						
PALK	**Pallekele**	**16.93**	**42**	Pn	**P**	**23 43 49.6**	**+0.1**
	2.3nm,0.3s,baz=295,slow=5.6,SNR=16						
MKAR	**Makanchi Array**	**53.23**	**11**	P	**P**	**23 49 08.6**	**-0.5**
	0.5nm,0.7s,baz=188,slow=8.7,SNR=5.1						
ZALV	**Zalesovo Beam**	**60.55**	**10**	P	**P**	**23 50 01.3**	**+0.5**
	1.2nm,0.6s,baz=187,slow=7.0,SNR=4.5						
ASAR	**Alice Springs**	**64.53**	**114**	P	P	23 50 34.5	+6.4
	0.2nm,0.8s,baz=297,slow=4.9,SNR=4.9						

*NIED **22** 23:53:00, 24.°00N×122.°40E, h32km, Mw3.9 Best double couple: M0:8.33000×10^14 NP1:φ=6.00000°, δ=20.00000°, λ=178.00000°. NP2:φ=97.00000°, δ=89.00000°, λ=70.00000°.*
*IDC **22** 23:53:45.7±1.6, 23.°86N×121.°82E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/34, mbtmp3.7/4, MS3.0/9, Ms1 3.0/9, ms1mx2.9/29, Error ellipse: s-maj=72.5km s-min=26.5km az=70.0*
*ISCJB **22** 23:53:48.2±0.3, 23.°98N±0.°01×122.°45E±0.°01, h18km±2km, mb3.6/3, MS3.0/5, Error ellipse: s-maj=2.3km s-min=1.7km az=151.4*
*JMA **22** 23:53:48.7±0.1, 23.°97N×122.°41E, h25km±3km, M3.8*
*TAP **22** 23:53:49.3, 24.°05N×122.°43E, h35km, ML3.8, D*
ISC 22 23:53:47.3±1.1, 23.°97N±0.°02×122.°44E±0.°02, h16km±8km, n122, σ0°85/213, mb3.5/3, MS3.0/5, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.65**	**334**	*eP*	**Pb**	**23 54 01.1**	**+0.9**
	baz=326						
EOS1				*eS*	**Sb**	**23 54 09.9**	**+1.0**
	baz=326						
JYNG	**Yonagunijimaku**	**0.67**	**44**	P	**Pb**	**23 54 01.5**	**+0.9**
JYNG				S	**Sb**	**23 54 10.5**	**+0.8**
YOJ	**Yonaguni jima**	**0.72**	**47**	↑*iP*	**Pb**	**23 54 02.6**	**+1.1**
	baz=51						
YOJ				*eS*	**Sb**	**23 54 12.0**	**+0.9**
	baz=51						
YOJ	**Yonaguni jima**	**0.72**	**47**	P	**Pb**	**23 54 02.5**	**+1.1**
YOJ				S	**Sb**	**23 54 12.1**	**+0.9**
ENLB	**Shoufeng**	**0.77**	**266**	*eP*	**Pg**	**23 54 01.9**	**-0.3**
	baz=248						
ENLB				*eS*	**Sb**	**23 54 12.8**	**+0.4**
	baz=248						
TWD	**Chiawan**	**0.78**	**279**	*eP*	**Pb**	**23 54 03.3**	**+0.9**
	baz=272						
TWD				*eS*	**Sb**	**23 54 13.7**	**+1.0**
	baz=272						
NANB	**Nanao**	**0.78**	**306**	*eP*	**Pb**	**23 54 03.2**	**+0.8**
	baz=309						
NANB				*eS*	**Sb**	**23 54 13.9**	**+1.1**
	baz=309						
ENA	**Nanau**	**0.78**	**306**	*eP*	**Pb**	**23 54 03.5**	**+1.0**
	baz=309						
ENA				*eS*	**Sb**	**23 54 14.9**	**+1.9**
	baz=309						
NACB	**Ninganchiao**	**0.80**	**285**	↓*iP*	**Pb**	**23 54 03.4**	**+0.7**
	baz=267						
NACB				*eS*	**Sb**	**23 54 14.0**	**+0.6**
	baz=267						
TWC	**Suao**	**0.83**	**320**	P	**Pg**	**23 54 03.6**	**+0.1**
	baz=308						
TWC				*eS*	**Sg**	**23 54 14.8**	**+0.2**
	baz=308						
ETLH	**Xiulin Townshi**	**0.90**	**286**	P	**Pg**	**23 54 05.1**	**+0.2**
	baz=269						
ETLH				*eS*	**Sb**	**23 54 17.3**	**+0.8**
	baz=269						
ESL	**Shilin**	**0.93**	**261**	*eP*	**Pb**	**23 54 05.4**	**+0.3**
	baz=247						
ESL				*eS*	**Sb**	**23 54 17.8**	**+0.6**
	baz=247						
EGFH	**Guangfu**	**0.97**	**252**	*eP*	**Pg**	**23 54 06.4**	**+0.3**
	baz=247						
EGFH				*eS*	**Sn**	**23 54 19.6**	**-0.1**
	baz=247						
ILA	**Ilan**	**1.01**	**322**	*eP*	**Pb**	**23 54 06.9**	**+0.4**
	baz=310						
ILA				*eS*	**Sb**	**23 54 20.3**	**+0.7**
	baz=310						
TWE	**Neicheng**	**1.03**	**317**	P	**Pb**	**23 54 07.1**	**+0.4**
	baz=314						
TWE				*eS*	**Sb**	**23 54 20.3**	**+0.3**
	baz=314						
ENTT	**Nioudou**	**1.04**	**310**	P	**Pb**	**23 54 07.6**	**+0.7**
	baz=294						
ENTT				*eS*	**Sb**	**23 54 21.2**	**+0.8**
	baz=294						
HGSD	**Ruisui**	**1.04**	**243**	*eP*	**Pg**	**23 54 07.3**	**-0.1**
	baz=238						
HGSD				*eS*	**Sn**	**23 54 22.1**	**+0.7**
	baz=238						
NTC	**Toucheng**	**1.04**	**328**	*eP*	**Pb**	**23 54 07.6**	**+0.7**
	baz=325						
NTC				*eS*	**Sb**	**23 54 20.5**	**0.0**
	baz=325						
NNSB	**Datong**	**1.07**	**296**	P	**Pb**	**23 54 07.7**	**+0.3**
	baz=281						
NNSB				*eS*	**Sb**	**23 54 21.5**	**+0.3**
	baz=281						
NNS	**Nan Shan**	**1.08**	**296**	*eP*	**Pb**	**23 54 08.0**	**+0.3**
	baz=282						
NNS				*eS*	**Sb**	**23 54 21.9**	**+0.3**
	baz=282						
WHF	**Hehuan Shan**	**1.08**	**280**	*eP*	**Pb**	**23 54 08.1**	**+0.1**
	baz=264						
WHF				*eS*	**Sb**	**23 54 22.6**	**+0.6**
	baz=264						
TWB1	**Santiao Chiao**	**1.11**	**339**	*eP*	**Pb**	**23 54 07.9**	**-0.3**
	baz=352						
TWB1				*eS*	**Sb**	**23 54 21.9**	**-0.6**
	baz=352						
EHY	**Hungye**	**1.12**	**246**	*eP*	**Pb**	**23 54 08.6**	**+0.3**
	baz=255						
EHY				*eS*	**Sg**	**23 54 23.6**	**0.0**
	baz=255						
TIPB	**Shuangxi**	**1.15**	**331**	*eP*	**Pn**	**23 54 09.4**	**+0.7**
	baz=329						
TIPB				*eS*	**Sb**	**23 54 23.4**	**0.0**
	baz=329						
OWD	**Renai**	**1.15**	**270**	*eP*	**Pb**	**23 54 09.1**	**+0.1**
	baz=265						
OWD				*eS*	**Sb**	**23 54 24.4**	**+0.7**
	baz=265						
CHGB	**Renai**	**1.16**	**275**	*eP*	**Pb**	**23 54 09.2**	**+0.2**
	baz=270						
CHGB				*eS*	**Sb**	**23 54 24.3**	**+0.3**
	baz=270						
TWT	**Tachien**	**1.19**	**284**	*eP*	**Pg**	**23 54 10.4**	**+0.1**
	baz=269						
TWT				*eS*	**Sb**	**23 54 25.1**	**+0.3**
	baz=269						
YULB	**Yu-li**	**1.19**	**242**	*eP*	**Pb**	**23 54 09.8**	**+0.3**
	baz=252						
YULB				*eS*	**Sb**	**23 54 25.3**	**+0.6**
	baz=252						
YHNB	**Yeheng**	**1.19**	**306**	P	**Pn**	**23 54 09.6**	**+0.2**
	baz=289						
YHNB				*eS*	**Sb**	**23 54 24.0**	**-0.9**
	baz=289						
TDCB	**Techi**	**1.20**	**284**	*eP*	**Pb**	**23 54 10.3**	**+0.5**
	baz=270						
TDCB				*eS*	**Sb**	**23 54 24.9**	**-0.3**
	baz=270						
VWDT	**VWDT**	**1.20**	**260**	*eP*	**Pb**	**23 54 10.2**	**+0.5**
	baz=255						
VWDT				*eS*	**Sn**	**23 54 25.9**	**+0.4**
	baz=255						
TWF1	**Yuli**	**1.21**	**240**	*eP*	**Pb**	**23 54 10.3**	**+0.5**
	baz=226						
TWF1				*eS*	**Sb**	**23 54 25.5**	**+0.3**
	baz=226						
NSK	**Sanguang**	**1.21**	**306**	*eP*	**Pn**	**23 54 09.8**	**+0.1**
	baz=289						
NSK				*eS*	**Sb**	**23 54 24.7**	**-0.7**
	baz=289						
IRIF	**Iriomote-Funau**	**1.24**	**72**	P	**Pg**	**23 54 11.3**	**+0.1**
IRIF				*eS*	**Sn**	**23 54 27.1**	**+0.8**
NWF	**Wu-fen Shan**	**1.25**	**332**	*eP*	**Pn**	**23 54 10.0**	**-0.2**
	baz=330						
NWF				*eS*	**Sb**	**23 54 26.9**	**+0.4**
	baz=330						
WFSB	**Wu-fen Shan**	**1.25**	**332**	*eP*	**Pn**	**23 54 09.9**	**-0.2**
	baz=330						
WFSB				*eS*	**Sb**	**23 54 26.4**	**-0.1**
	baz=330						
HATJ	**Hateruma jima**	**1.25**	**86**	P	**Pg**	**23 54 11.2**	**-0.3**
HATJ				*eS*	**Sn**	**23 54 27.1**	**+0.3**
TWA	**Mucha**	**1.27**	**323**	*eP*	**Pg**	**23 54 11.9**	**+0.1**
	baz=336						
TWA				*eS*	**Sb**	**23 54 27.6**	**+0.4**
	baz=336						
NHDH	**Xindian Distri**	**1.29**	**320**	*eP*	**Pb**	**23 54 11.9**	**+0.6**
	baz=333						
NHDH				*eS*	**Sb**	**23 54 27.8**	**+0.2**
	baz=333						
CHKT	**Chengkung**	**1.31**	**229**	*eP*	**Pn**	**23 54 11.1**	**+0.2**
	baz=216						
CHKT				*eS*	**Sb**	**23 54 26.4**	**-1.6**
	baz=216						
TATO	**Taipei**	**1.32**	**320**	*eP*	**Pn**	**23 54 12.1**	**+0.9**
	baz=316						
TATO				*eS*	**Sb**	**23 54 28.6**	**0.0**
	baz=316						
TAP	**Taipei**	**1.36**	**322**	*eP*	**Pn**	**23 54 12.4**	**+0.8**
	baz=336						
TAP				*eS*	**Sb**	**23 54 30.6**	**+0.9**
	baz=336						
SSLB	**Suanglung**	**1.37**	**263**	*eP*	**Pb**	**23 54 12.9**	**+0.4**
	baz=258						
SSLB				*eS*	**Sn**	**23 54 28.3**	**-1.3**
	baz=258						
DPDB	**Guoxing**	**1.38**	**273**	*eP*	**Pn**	**23 54 11.7**	**-0.3**
	baz=262						
DPDB				*eS*	**Sb**	**23 54 31.0**	**+0.7**
	baz=262						
WHP	**Taichung City**	**1.40**	**283**	*eP*	**Pg**	**23 54 14.4**	**+0.3**
	baz=269						
WHP				*eS*	**Sg**	**23 54 32.3**	**-0.1**
	baz=269						
SMLT	**Sun Moon Lake**	**1.41**	**267**	*eP*	**Pb**	**23 54 13.3**	**+0.1**
	baz=262						
SMLT				*eS*	**Sb**	**23 54 31.8**	**+0.7**
	baz=262						
YM01	**YM01**	**1.42**	**326**	*eP*	**Pn**	**23 54 13.1**	**+0.7**
	baz=338						
YM01				*eS*	**Sn**	**23 54 29.2**	**-1.6**
	baz=338						
YM10	**YM10**	**1.43**	**326**	*eP*	**Pb**	**23 54 13.8**	**+0.2**
	baz=338						
YM10				*eS*	**Sn**	**23 54 30.8**	**-0.4**
	baz=338						
YM05	**YM05**	**1.43**	**327**	*eP*	**Pn**	**23 54 13.0**	**+0.3**
	baz=324						
YM05				*eS*	**Sn**	**23 54 30.0**	**-1.3**
	baz=324						
YM04	**YM04**	**1.44**	**325**	*eP*	**Pn**	**23 54 13.7**	**+1.0**
	baz=337						
YM04				*eS*	**Sn**	**23 54 30.9**	**-0.5**
	baz=337						
YM08	**YM08**	**1.44**	**328**	*eP*	**Pn**	**23 54 11.9**	**-0.9**
	baz=325						
YM08				*eS*	**Sn**	**23 54 32.0**	**+0.6**
	baz=325						
YUS	**Yu-Shan**	**1.44**	**251**	*eP*	**Pb**	**23 54 14.2**	**+0.1**
	baz=247						
TYC	**Yuchr**	**1.45**	**268**	*eP*	**Pb**	**23 54 14.0**	**+0.2**
	baz=263						
TYC				*eS*	**Sn**	**23 54 31.7**	**+0.2**
	baz=263						
YM03	**YM03**	**1.46**	**326**	*eP*	**Pn**	**23 54 13.6**	**+0.5**
	baz=324						
LIOB	**Emei**	**1.46**	**298**	*eP*	**Pb**	**23 54 14.5**	**+0.4**
	baz=294						
LIOB				*eS*	**Sn**	**23 54 32.7**	**+0.8**
	baz=294						
TWS1	**Kuangyinshan**	**1.46**	**321**	*eP*	**Pb**	**23 54 14.5**	**+0.3**
	baz=334						
TWS1				*eS*	**Sn**	**23 54 32.8**	**+0.9**
	baz=334						
JKRS	**Kuro-shima**	**1.46**	**79**	P	**Pg**	**23 54 15.1**	**-0.3**
NSTT	**Nanjuang**	**1.47**	**297**	*eP*	**Pb**	**23 54 14.7**	**+0.5**
	baz=293						
NSTT				*eS*	**Sn**	**23 54 32.9**	**+0.9**
	baz=293						
ANP	**Anpu**	**1.47**	**326**	*eP*	**Pn**	**23 54 13.6**	**+0.3**
	baz=323						
ANP				*eS*	**Sn**	**23 54 31.6**	**-0.7**
	baz=323						
WHYT	**Xinyi Township**	**1.47**	**260**	*eP*	**Pb**	**23 54 15.1**	**+0.7**
	baz=246						
WHYT				*eS*	**Sn**	**23 54 32.9**	**+0.6**
	baz=246						
NTST	**Danshui**	**1.49**	**323**	*eP*	**Pn**	**23 54 14.2**	**+0.7**
	baz=336						
NTST				*eS*	**Sn**	**23 54 32.9**	**+0.2**
	baz=336						
TWY	**Chenhua**	**1.51**	**330**	*eP*	**Pn**	**23 54 14.4**	**+0.7**
	baz=328						
TWY				*eS*	**Sn**	**23 54 33.7**	**+0.7**
	baz=328						
ELDTW	**Lidau**	**1.51**	**240**	*eP*	**Pn**	**23 54 14.7**	**+0.8**
	baz=235						
ELDTW				*eS*	**Sn**	**23 54 34.1**	**+0.8**
	baz=235						
NCUH	**Zhongli**	**1.52**	**311**	*eP*	**Pn**	**23 54 14.9**	**+1.1**
	baz=308						
NCUH				*eS*	**Sb**	**23 54 34.6**	**+0.6**
	baz=308						
ALS	**Alishan**	**1.56**	**253**	*eP*	**Pb**	**23 54 16.5**	**+0.5**
	baz=249						
ALS				*eS*	**Sn**	**23 54 34.9**	**+0.1**
	baz=249						
TWQ1	**Liyutan**	**1.57**	**284**	*eP*	**Pb**	**23 54 16.3**	**+0.4**
	baz=280						
TWQ1				*eS*	**Sn**	**23 54 35.7**	**+1.2**
	baz=280						
WJS	**Zhushan**	**1.57**	**265**	*eP*	**Pb**	**23 54 16.8**	**+0.8**
	baz=261						
WJS				*eS*	**Sg**	**23 54 37.1**	**-0.8**
	baz=261						
NSY	**Sanyi**	**1.59**	**287**	*eP*	**Pb**	**23 54 17.0**	**+0.6**
	baz=282						
NSY				*eS*	**Sb**	**23 54 37.6**	**+1.2**
	baz=282						
NMLH	**Miaoli**	**1.60**	**291**	*eP*	**Pb**	**23 54 16.9**	**+0.3**
	baz=287						
NMLH				*eS*	**Sb**	**23 54 37.0**	**+0.3**
	baz=287						
WNT	**Mingjian**	**1.60**	**267**	*eP*	**Pg**	**23 54 17.8**	**-0.4**
	baz=263						
WNT				*eS*	**Sb**	**23 54 37.7**	**+1.0**
	baz=263						
JIJ	**Ishigaki jima**	**1.61**	**75**	P	**Pn**	**23 54 15.6**	**+0.6**
JIJ				S	**Sn**	**23 54 35.5**	**0.0**
TCU	**Taichung**	**1.62**	**277**	*eP*	**Pb**	**23 54 17.2**	**+0.4**
	baz=272						
TCU				*eS*	**Sg**	**23 54 38.8**	**-0.7**
	baz=272						
CHN5	**Tsauling**	**1.65**	**258**	*eP*	**Pb**	**23 54 17.9**	**+0.4**
	baz=245						
CHN5				*eS*	**Sb**	**23 54 38.6**	**+0.6**
	baz=245						
PTSB	**Yuanli**	**1.65**	**287**	*eP*	**Pb**	**23 54 17.5**	**+0.2**
	baz=283						
PTSB				*eS*	**Sn**	**23 54 37.9**	**+1.3**
	baz=283						
WDJ	**Dajia District**	**1.68**	**283**	*eP*	**Pb**	**23 54 17.7**	**-0.2**
	baz=279						
WDJ				*eS*	**Sb**	**23 54 39.7**	**+0.8**
	baz=279						
PCYT	**Pengchaiyu**	**1.69**	**349**	*eP*	**Pn**	**23 54 16.0**	**-0.2**
	baz=349						
PCYT				*eS*	**Sn**	**23 54 35.8**	**-1.7**
	baz=349						
TWGBT	**Beinan**	**1.69**	**228**	*eP*	**Pn**	**23 54 16.5**	**+0.3**
	baz=236						
TWGBT				*eS*	**Sn**	**23 54 37.0**	**-0.5**
	baz=236						
TWG	**Pinlang**	**1.69**	**228**	*eP*	**Pn**	**23 54 16.6**	**+0.4**
	baz=236						
TWG				*eS*	**Sn**	**23 54 37.0**	**-0.6**
	baz=236						
STYT	**Tauyuan**	**1.73**	**243**	*eP*	**Pb**	**23 54 18.4**	**-0.4**
	baz=230						
STYT				*eS*	**Sb**	**23 54 40.1**	**-0.3**
	baz=230						
WGK	**Gukeng**	**1.74**	**261**	*eP*	**Pb**	**23 54 20.0**	**+1.1**
	baz=257						
WGK				*eS*	**Sb**	**23 54 42.2**	**+1.7**
	baz=257						
WDLH	**Douliu**	**1.76**	**261**	*eP*	**Pb**	**23 54 19.2**	**0.0**
	baz=257						
WDLH				*eS*	**Sb**	**23 54 42.0**	**+1.0**
	baz=257						
CHN4	**Tsaushan**	**1.80**	**250**	*eP*	**Pb**	**23 54 20.6**	**+0.8**
	baz=247						
CHN4				*eS*	**Sb**	**23 54 43.3**	**+1.2**
	baz=247						
JISG	**Ishigakijimahi**	**1.82**	**70**	P	**Pn**	**23 54 18.4**	**+0.5**
JISG				*eS*	**Sn**	**23 54 39.9**	**-0.8**
RLNB	**Erlin**	**1.90**	**268**	*eP*	**Pb**	**23 54 21.7**	**+0.1**
	baz=277						
RLNB				*eS*	**Sb**	**23 54 45.8**	**+0.7**
	baz=277						
CHY	**Chiayi**	**1.90**	**256**	*eP*	**Pb**	**23 54 22.4**	**+0.8**
	baz=252						
CHY				*eS*	**Sn**	**23 54 44.4**	**+1.7**
	baz=252						
SLGT	**Liugui**	**1.91**	**240**	*eP*	**Pb**	**23 54 21.2**	**-0.5**
	baz=229						
SLGT				*eS*	**Sb**	**23 54 45.6**	**+0.3**
	baz=229						
CHN1	**Nanshi**	**1.92**	**246**	*eP*	**Pb**	**23 54 22.0**	**+0.1**
	baz=243						
CHN1				*eS*	**Sb**	**23 54 46.5**	**+0.9**
	baz=243						
SGST	**Jiashian**	**1.92**	**243**	*eP*	**Pb**	**23 54 22.3**	**+0.4**
	baz=229						
SGST				*eS*	**Sb**	**23 54 46.0**	**+0.4**
	baz=229						
ECL	**Taimali**	**1.93**	**225**	*eP*	**Pn**	**23 54 20.1**	**+0.6**
	baz=222						
ECL				*eS*	**Sn**	**23 54 43.1**	**-0.2**
	baz=222						
WTCT	**Ta-ch'eng**	**1.98**	**267**	*eS*	**Sb**	**23 54 47.1**	**-0.2**
	baz=276						
SSD	**Sandimen**	**2.06**	**234**	*eP*	**Pb**	**23 54 23.5**	**-0.8**
	baz=226						
SSD				*eS*	**Sn**	**23 54 47.2**	**+0.7**
	baz=226						
LAY	**Lan-yu**	**2.08**	**203**	*eP*	**Pn**	**23 54 22.4**	**+0.8**
	baz=201						
LAY				*eS*	**Sn**	**23 54 46.7**	**-0.6**
	baz=201						
CHN8	**Yiju**	**2.13**	**254**	*eS*	**Sb**	**23 54 51.3**	**-0.5**
	baz=250						
MASBT	**Mashibuluo**	**2.14**	**231**	*eP*	**Pn**	**23 54 24.2**	**+1.9**
	baz=224						
MASBT				*eS*	**Sn**	**23 54 49.0**	**+0.4**
	baz=224						
EAST	**Anshuo**	**2.15**	**223**	*eP*	**Pn**	**23 54 23.1**	**+0.6**
	baz=220						
EAST				*eS*	**Sn**	**23 54 48.6**	**-0.3**
	baz=220						
JTJ	**Tarama**	**2.17**	**72**	P	**Pn**	**23 54 24.0**	**+1.2**
JTJ				S	**Sn**	**23 54 50.7**	**+1.3**
SSPT	**Xinbi**	**2.27**	**230**	*eP*	**Pn**	**23 54 26.2**	**+2.1**
	baz=222						
SSPT				*eS*	**Sn**	**23 54 53.9**	**+2.3**
	baz=222						
SCZT	**Fangliau**	**2.30**	**227**	*eP*	**Pn**	**23 54 26.6**	**+2.0**
	baz=219						
SCZT				*eS*	**Sn**	**23 54 53.6**	**+1.0**
	baz=219						
TSEB	**Hengchuen, Pin**	**2.50**	**215**	*eP*	**Pb**	**23 54 29.8**	**-2.0**
	baz=220						
TSEB				*eS*	**Sb**	**23 55 00.2**	**-2.1**
	baz=220						
HEN	**Hengchun**	**2.50**	**219**	*eS*	**Sn**	**23 54 59.4**	**+1.8**
	baz=216						
TWKBT	**Hengchun**	**2.51**	**217**	*eP*	**Pn**	**23 54 29.5**	**+2.0**
	baz=214						
TWKBT				*eS*	**Sn**	**23 54 59.9**	**+2.1**
	baz=214						
TWK1	**Hengchun**	**2.51**	**217**	*eS*	**Sn**	**23 54 59.2**	**+1.4**
	baz=214						
JIRB	**Irabujima**	**2.64**	**70**	P	**Pn**	**23 54 30.0**	**+0.8**
JIRB				*eS*	**Sn**	**23 55 01.0**	**+0.1**
PHUB	**P'eng-hu**	**2.66**	**261**	*eP*	**Pn**	**23 54 31.8**	**+2.2**
	baz=272						
PHUB				*eS*	**Sn**	**23 55 01.7**	**+0.2**
	baz=272						
PNG	**Penghu**	**2.67**	**262**	*eP*	**Pn**	**23 54 30.9**	**+1.3**
	baz=259						
PNG				*eS*	**Sn**	**23 55 02.2**	**+0.6**
	baz=259						
JIKM	**Ikemajima**	**2.73**	**69**	P	**Pn**	**23 54 32.4**	**+1.9**
JIKM				*eS*	**Sn**	**23 55 04.2**	**+0.9**
JMJ2	**Miyako jima3**	**2.75**	**73**	*eS*	**Sn**	**23 55 04.6**	**+1.0**
VCHM	**Qimei**	**2.86**	**255**	*eS*	**Sn**	**23 55 08.2**	**+1.9**
	baz=253						
MATB	**Ma-tsu**	**3.14**	**314**	*eP*	**Pn**	**23 54 37.0**	**+0.9**
	baz=300						
MHZQ	**Yeshan**	**3.75**	**305**	*eS*	**Sn**	**23 55 28.5**	**+0.1**
	baz=301						
JNU	**Nakatsue**	**11.75**	**37**	LR	LR	00 01 09.6	
	comp=Z,46nm,21.3s,baz=174,slow=36						
KSRS	**Korea Array**	**14.24**	**18**	Pn	**P**	**23 57 13.8**	**-1.7**
	baz=198,slow=12,SNR=13						
KSRS				LR	LR	00 02 39.3	
	comp=Z,48nm,21.0s,baz=190,slow=37						
DAV	**Davao City (W)**	**17.07**	**169**	LR	LR	00 03 39.7	
	comp=Z,49nm,21.4s,baz=195,slow=35						
MJAR	**Matsushiro Arr**	**18.48**	**44**	LR	LR	00 05 15.9	
	comp=Z,50nm,21.3s,baz=210,slow=36						
CMAR	**Chiang Mai Arr**	**22.56**	**260**	LR	LR	00 07 43.1	
	comp=Z,16nm,21.2s,baz=115,slow=38						
ASAJ	**Asahikawa**	**26.01**	**34**	LR	LR	00 09 24.8	
	comp=Z,46nm,20.6s,baz=108,slow=36						
KLR	**Kul'dur**	**26.26**	**14**	LR	LR	00 10 46.6	
	comp=Z,58nm,18.2s,baz=222,slow=38						
SONM	**Songino Array**	**27.02**	**336**	P	**P**	**23 59 26.8**	**-2.0**
	0.5nm,0.5s,baz=134,slow=8.3,SNR=3.8						
KAPI	**Kappang**	**28.92**	**186**	LR	LR	00 11 01.0	
	comp=Z,23nm,21.1s,baz=296,slow=36						
MKAR	**Makanchi Array**	**39.29**	**316**	P	**P**	**00 01 14.4**	**-1.0**
	1.1nm,0.9s,baz=104,slow=10,SNR=7.2						
ASAR	**Alice Springs**	**48.64**	**166**	P	**P**	**00 02 31.7**	**+1.1**
	0.8nm,0.8s,baz=338,slow=6.5,SNR=6.2						
NRIK	**Noril'sk**	**49.91**	**345**	LR	LR	00 25 15.1	
	comp=Z,38nm,19.8s,baz=70,slow=38						

IDC 23 00:05:03.0±6.6, 26.°72N×143.°76E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.5/29, mbtmp3.5/5, ML2.6/1, Error ellipse: s-maj=251.6km s-min=22.6km az=74.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**10.87**	**336**	Pn	Pn	00 07 39.2	-0.7
	0.0nm,0.3s,baz=156,slow=9.1,SNR=4.2						
SONM	**Songino Array**	**35.96**	**316**	P	P	00 12 04.6	-0.9
	0.3nm,0.3s,baz=113,slow=8.1,SNR=2.8						
WRA	**War

0.2nm,0.6s,baz=11,slow=5.7,SNR=3.9
MKAR Makanchi Array 51.80 310 P P 00 14 13.9 +1.2
0.4nm,0.7s,baz=94,slow=7.9,SNR=4.3

ROM 23 00:33:12.9±0.1, 44°.208N±0°.003×10°.169E±0°.004, h8km, ML1.1/3, Error ellipse: s-maj=0.3km s-min=0.2km az=104.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.05**	**143**	P	Pg	00 33 14.9	+0.3
T0912				S	Sg	00 33 16.1	+0.3
T0912				AML	AML		
	comp=E,811μm,0.3s						
T0912				AML	AML		
	comp=N,1032μm,0.7s						
T0912				AML	AML		
	comp=E,811μm,0.3s						
T0912				AML	AML		
	comp=N,1032μm,0.7s						
T0911	**Castelpoggio (**	**0.12**	**215**	P	Pg	00 33 16.1	+0.6
T0911				S	Sg	00 33 18.1	+0.7
T0911				AML	AML		
	comp=E,107μm,1.6s						
T0911				AML	AML		
	comp=N,135μm,0.2s						
T0911				AML	AML		
	comp=N,135μm,0.2s						
T0911				AML	AML		
	comp=E,107μm,1.6s						
VLC	**Villacollemand**	**0.16**	**107**	P	Pg	00 33 16.8	+0.5
VLC				S	Sg	00 33 19.6	+1.0
VLC				AML	AML		
	comp=E,97μm,0.9s						
VLC				AML	AML		
	comp=N,118μm,1.3s						
VLC				AML	AML		
	comp=N,118μm,1.3s						
VLC				AML	AML		
	comp=E,97μm,0.9s						
SARO	**Sassorosso**	**0.17**	**98**	P	Pg	00 33 16.9	+0.5
SARO				S	Sg	00 33 19.7	+0.9
ERBM	**Eremo**	**0.28**	**40**	P	Pb	00 33 19.3	-0.9
ERBM				S	Sb	00 33 24.1	-0.9
GRAM	**Graiana**	**0.29**	**345**	P	Pg	00 33 19.5	+0.8
GRAM	**Graiana**	**0.29**	**345**	P	Pg	00 33 19.5	+0.8
GRAM				S	Sb	00 33 24.2	-1.3
GRAM				AML	AML		
	comp=E,86μm,0.4s						
GRAM				AML	AML		
	comp=N,83μm,0.5s						
GRAM				AML	AML		
	comp=E,86μm,0.4s						
GRAM				AML	AML		
	comp=N,83μm,0.5s						
POPM	**Popiglio**	**0.45**	**111**	P	Pb	00 33 22.4	-0.7
POPM				S	Sb	00 33 29.4	-0.6

DJA 23 00:33:58.1±3.8, 10°S±6°×11°4E±°, h27km±40km, M3.5/6, MLv3.5/6, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.03**	**359**	P	Pn	00 34 16.8	-0.1
JAGI				S	Sb	00 34 30.6	0.0
SRBI	**Singaraja**	**1.75**	**36**	P	Pn	00 34 27.4	+0.7
PWJI	**Pagerwojo**	**2.77**	**302**	P	Pn	00 34 39.6	-1.1
PLAI	**Plampang**	**3.62**	**80**	P	Pn	00 34 52.0	-0.5

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*GEN **23** 00:34:30.0, 44°.37N×7°.28E, h17km±2km, Ml1.0*
*STR **23** 00:34:30.9±0.6, 44°.N±3°×°±°, h5km±4km, MLv1.4/7*
ROM 23 00:34:29.8±0.2, 44°.356N±0°.010×7°.28E±0°.02, h15km±2km, ML1.3/3, Error ellipse: s-maj=1.5km s-min=1.1km az=235.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.15**	**352**	P	Pb	00 34 34.2	-0.2
DOI				S	Sb	00 34 37.0	-0.4
DOI				AML	AML		
	comp=E,224μm,0.3s						
DOI				AML	AML		
	comp=N,176μm,0.2s						
DOI				AML	AML		
	comp=N,176μm,0.2s						
DOI				AML	AML		
	comp=E,224μm,0.3s						
ENR	**Entracque**	**0.17**	**141**	P	Pb	00 34 34.4	-0.2
ENR				S	Sg	00 34 37.1	+0.4
ENR	**Entracque**	**0.17**	**141**	P	Pb	00 34 34.4	-0.2
ENR				S	Sg	00 34 37.2	+0.5
PZZ	**Stroppo**	**0.19**	**323**	P	Pb	00 34 34.8	-0.3
PZZ				S	Sg	00 34 37.6	+0.2
PZZ	**Stroppo**	**0.19**	**323**	P	Pb	00 34 34.7	-0.3
PZZ				S	Sg	00 34 37.7	+0.2
PZZ				AML	AML		
	comp=E,64μm,0.4s						
PZZ				AML	AML		
	comp=N,72μm,0.9s						
PZZ				AML	AML		
	comp=E,64μm,0.4s						
PZZ				AML	AML		
	comp=N,72μm,0.9s						
ISO	**Isola**	**0.24**	**223**	Pg	Pb	00 34 35.4	-0.4
ISO				Sg	Sg	00 34 38.8	+0.2
SURF	**Saint Ours**	**0.35**	**291**	Pg	Pg	00 34 37.4	+0.3
SURF				Sg	Sg	00 34 42.5	+0.4
GBOS	**Grotte di Boss**	**0.42**	**106**	P	Pg	00 34 38.6	+0.4
GBOS				S	Sg	00 34 44.1	+0.1
GBOS	**Grotte di Boss**	**0.42**	**106**	P	Pg	00 34 38.5	+0.3
GBOS				S	Sg	00 34 44.4	+0.4
SAOF	**Saorge**	**0.42**	**151**	Pg	Pb	00 34 38.7	-0.3
SAOF				Sg	Sg	00 34 44.2	+0.3
BHB	**Bricherasio**	**0.49**	**359**	P	Pg	00 34 38.5	-0.9
BHB				S	Sg	00 34 44.6	-1.4
BHB	**Bricherasio**	**0.49**	**359**	P	Pg	00 34 39.2	-0.2
MGRO	**Montegrosso**	**0.49**	**129**	P	Pg	00 34 39.4	-0.3
MGRO				S	Sg	00 34 46.4	+0.2
ESCA	**l'Escarene**	**0.53**	**172**	Pg	Pb	00 34 40.8	0.0
ESCA				Sg	Sb	00 34 48.0	-0.3
RORO	**Rocca Rossa**	**0.62**	**113**	P	Pg	00 34 41.8	-0.1
RORO				S	Sg	00 34 50.3	+0.3
IMI	**Imperia**	**0.63**	**135**	P	Pg	00 34 41.5	-0.6
IMI				S	Sg	00 34 50.4	0.0
IMI	**Imperia**	**0.63**	**135**	AML	AML		
	comp=E,77μm,1.6s						
IMI				AML	AML		
	comp=E,77μm,1.6s						
IMI				AML	AML		
	comp=N,48μm,1.6s						
IMI				AML	AML		
	comp=N,48μm,1.6s						
CALF	**Calern**	**0.66**	**203**	Pg	Pb	00 34 43.3	+0.3
CALF				Sg	Sg	00 34 51.6	+0.3
BLAF	**les Blancs**	**0.97**	**246**	Pn	Pn	00 34 49.6	+0.7
MLYF	**Mely**	**1.15**	**252**	Pn	Pn	00 34 51.5	+0.1
MLYF				Sg	Sg	00 35 08.4	+1.6
BSTF	**la Bastide-des**	**1.27**	**249**	Pn	Pg	00 34 54.4	+0.3
BSTF				Sg	Sg	00 35 12.1	+1.5
ARTF	**Artigues**	**1.31**	**235**	Pn	Pg	00 34 55.1	+0.1
ARTF				Sg	Sg	00 35 12.1	+0.1

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*ISCJB **23** 00:43:40.4±0.8, 24°.01N±0°.02×122°.40E±0°.02, h12km±6km, Error ellipse: s-maj=3.1km s-min=2.3km az=151.1*
*JMA **23** 00:43:40.2±0.2, 23°.96N×122°.40E, h15km±3km, M2.8*
*TAP **23** 00:43:41.4, 24°.08N×122°.41E, h34km, ML3.0, D*
ISC 23 00:43:40.8±1.1, 24°.02N±0°.03×122°.40E±0°.02, h26km±12km, n53, σ0°.77/96, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.58**	**335**	P	**Pb**	**00 43 52.6**	**+0.1**
	baz=325						
EOS1				S	**Sb**	**00 44 01.1**	**+0.7**
	baz=325						
JYNG	**Yonaguni jima**	**0.66**	**49**	P	**Pb**	**00 43 53.6**	**-0.2**
JYNG				S	**Sb**	**00 44 03.1**	**+0.5**
YOJ	**Yonaguni jima**	**0.71**	**52**	P	**Pb**	**00 43 54.6**	**-0.1**
	baz=55						
YOJ				S	**Sb**	**00 44 03.5**	**-0.6**
	baz=55						
YOJ	**Yonaguni jima**	**0.71**	**52**	P	**Pb**	**00 43 54.5**	**-0.1**
YOJ				S	**Sn**	**00 44 04.7**	**-0.7**
NANB	**Nanao**	**0.72**	**305**	P	**Pb**	**00 43 54.9**	**+0.2**
	baz=308						
NANB				S	**Sb**	**00 44 05.0**	**+0.8**
	baz=308						
ENA	**Nanau**	**0.72**	**304**	P	**Pb**	**00 43 55.1**	**+0.3**
	baz=308						
ENA				S	**Sn**	**00 44 05.4**	**-0.2**
	baz=308						
TWD	**Chiawan**	**0.73**	**275**	*e*S	**Sb**	**00 44 04.6**	**-0.1**
	baz=270						
ENLB	**Shoufeng**	**0.73**	**261**	*e*S	**Sb**	**00 44 04.6**	**-0.1**
	baz=246						
TWC	**Suao**	**0.77**	**320**	P	**Pb**	**00 43 55.4**	**-0.2**
	baz=316						
TWC				*e*S	**Sb**	**00 44 04.3**	**-1.4**
	baz=316						
ETLH	**Xiulin Townshi**	**0.86**	**283**	P	**Pb**	**00 43 56.7**	**-0.5**
	baz=267						
ETLH				*e*S	**Sb**	**00 44 08.4**	**+0.1**
	baz=267						
ESL	**Shilin**	**0.90**	**257**	*e*S	**Sb**	**00 44 10.1**	**+0.6**
	baz=244						
EGFH	**Guangfu**	**0.95**	**249**	*e*S	**Sb**	**00 44 10.4**	**-0.6**
	baz=245						
TWE	**Neicheng**	**0.96**	**317**	*e*P	**Pn**	**00 43 58.8**	**+0.1**
	baz=313						
TWE				*e*S	**Sn**	**00 44 12.1**	**+0.5**
	baz=313						
ENTT	**Nioudou**	**0.98**	**309**	*e*P	**Pb**	**00 43 59.6**	**+0.4**
	baz=305						
ENTT				*e*S	**Sb**	**00 44 11.8**	**+0.2**
	baz=305						
NTC	**Toucheng**	**0.98**	**328**	*e*S	**Sb**	**00 44 11.6**	**-0.1**
	baz=324						
NNSB	**Datong**	**1.01**	**294**	*e*P	**Pn**	**00 43 59.2**	**-0.2**
	baz=290						
NNSB				*e*S	**Sb**	**00 44 12.1**	**-0.6**
	baz=290						
NNS	**Nan Shan**	**1.02**	**294**	*e*P	**Pb**	**00 44 00.6**	**+0.6**
	baz=290						
NNS				*e*S	**Sb**	**00 44 13.1**	**0.0**
	baz=290						
HGSD	**Ruisui**	**1.03**	**240**	*e*P	**Pn**	**00 43 58.9**	**-0.8**
	baz=236						
HGSD				*e*S	**Sb**	**00 44 12.1**	**-1.2**
	baz=236						
WHF	**Hehuan Shan**	**1.04**	**277**	*e*P	**Pn**	**00 43 60.0**	**-0.2**
	baz=262						
WHF				*e*S	**Sb**	**00 44 13.4**	**-0.5**
	baz=262						
TWB1	**Santiao Chiao**	**1.05**	**339**	*e*P	**Pn**	**00 43 59.5**	**-0.4**
	baz=352						
TWB1				*e*S	**Sb**	**00 44 12.9**	**-0.9**
	baz=352						
TIPB	**Shuangxi**	**1.08**	**331**	P	**Pn**	**00 44 00.2**	**-0.2**
	baz=328						
TIPB				S	**Sb**	**00 44 13.9**	**-0.8**
	baz=328						
EHY	**Hungye**	**1.11**	**243**	P	**Pn**	**00 44 00.6**	**-0.1**
	baz=239						
EHY				*e*S	**Sn**	**00 44 14.4**	**-0.7**
	baz=239						
CHGB	**Renai**	**1.12**	**272**	*e*P	**Pn**	**00 44 01.1**	**0.0**
	baz=258						
CHGB				*e*S	**Sn**	**00 44 15.0**	**-0.7**
	baz=258						
OWD	**Renai**	**1.12**	**267**	P	**Pn**	**00 44 00.8**	**-0.1**
	baz=263						
OWD				*e*S	**Sn**	**00 44 14.5**	**-1.1**
	baz=263						
YHNB	**Yeheng**	**1.13**	**305**	*e*P	**Pn**	**00 44 01.4**	**+0.3**
	baz=291						
YHNB				*e*S	**Sn**	**00 44 14.8**	**-1.1**
	baz=291						
NSK	**Sanguang**	**1.15**	**305**	*e*P	**Pn**	**00 44 01.8**	**+0.5**
	baz=290						
VWDT	**VWDT**	**1.18**	**257**	*e*P	**Pn**	**00 44 01.9**	**+0.3**
	baz=254						
VWDT				*e*S	**Sn**	**00 44 16.4**	**-0.5**
	baz=254						
YULB	**Yu-li**	**1.18**	**238**	*e*P	**Pn**	**00 44 01.4**	**-0.3**
	baz=250						
YULB				*e*S	**Sn**	**00 44 15.7**	**-1.3**
	baz=250						
NWF	**Wu-fen Shan**	**1.19**	**332**	*e*P	**Pn**	**00 44 01.7**	**-0.2**
	baz=328						
NWF				*e*S	**Sn**	**00 44 17.2**	**-0.1**
	baz=328						
WFSB	**Wu-fen Shan**	**1.19**	**332**	*e*P	**Pn**	**00 44 01.6**	**-0.2**
	baz=329						
WFSB				*e*S	**Sn**	**00 44 17.1**	**0.0**
	baz=329						
TWF1	**Yuli**	**1.21**	**237**	P	**Pn**	**00 44 01.9**	**-0.1**
	baz=223						
TWF1				*e*S	**Sn**	**00 44 17.4**	**-0.1**
	baz=223						
TWA	**Mucha**	**1.21**	**322**	*e*P	**Pn**	**00 44 02.6**	**+0.5**
	baz=319						
TWA				*e*S	**Sb**	**00 44 19.5**	**+1.1**
	baz=319						
IRIF	**Iriomote-Funau**	**1.26**	**75**	P	**Pb**	**00 44 03.9**	**0.0**
IRIF				*e*S	**Sb**	**00 44 20.6**	**+0.9**
SSLB	**Suanglung**	**1.34**	**260**	*e*P	**Pn**	**00 44 04.6**	**+0.7**
	baz=257						
SSLB				*e*S	**Sn**	**00 44 21.2**	**+0.3**
	baz=257						
WHP	**Taichung City**	**1.35**	**281**	*e*P	**Pb**	**00 44 06.8**	**+1.2**
	baz=269						
SMLT	**Sun Moon Lake**	**1.38**	**265**	*e*P	**Pn**	**00 44 05.2**	**+0.7**
	baz=261						
SMLT				*e*S	**Sn**	**00 44 22.6**	**+0.7**
	baz=261						
NSTT	**Nanjuang**	**1.41**	**296**	*e*S	**Sb**	**00 44 23.7**	**-0.4**
	baz=292						
WHYT	**Xinyi Township**	**1.45**	**258**	*e*P	**Pn**	**00 44 06.4**	**+1.0**
	baz=247						
WHYT				*e*S	**Sn**	**00 44 24.1**	**+0.5**
	baz=247						
JKRS	**Kuro-shima**	**1.49**	**81**	P	**Pb**	**00 44 07.7**	**-0.1**
JKRS				S	**Sb**	**00 44 27.0**	**+0.7**
ELDTW	**Lidau**	**1.51**	**237**	*e*P	**Pn**	**00 44 05.9**	**-0.4**
	baz=234						
ELDTW				*e*S	**Sn**	**00 44 23.3**	**-1.9**
	baz=234						
CHN5	**Tsauling**	**1.63**	**255**	*e*P	**Pb**	**00 44 10.0**	**-0.2**
	baz=244						
CHN5				*e*S	**Sb**	**00 44 30.8**	**+0.4**
	baz=244						
JIJ	**Ishigaki jima**	**1.63**	**77**	P	**Pb**	**00 44 09.0**	**-1.3**
JIJ				*e*S	**Sn**	**00 44 28.1**	**+0.1**
STYT	**Tauyuan**	**1.73**	**241**	*e*P	**Pn**	**00 44 10.1**	**+0.9**
	baz=230						
STYT				*e*S	**Sn**	**00 44 32.0**	**+1.5**
	baz=230						
CHN4	**Tsaushan**	**1.78**	**248**	*e*P	**Pb**	**00 44 12.6**	**-0.2**
	baz=246						
CHN4				*e*S	**Sb**	**00 44 35.5**	**+0.7**
	baz=246						
JISG	**Ishigakijimahi**	**1.84**	**72**	P	**Pn**	**00 44 11.0**	**+0.3**
JISG				*e*S	**Sn**	**00 44 32.8**	**-0.3**
SLGT	**Liugui**	**1.90**	**238**	*e*P	**Pb**	**00 44 13.7**	**-1.2**
	baz=228						
SLGT				*e*S	**Sb**	**00 44 37.7**	**-0.5**
	baz=228						
CHN1	**Nanshi**	**1.90**	**245**	*e*P	**Pb**	**00 44 14.4**	**-0.5**
	baz=242						
CHN1				*e*S	**Sb**	**00 44 38.2**	**-0.1**
	baz=242						
TWK	**Hsinying**	**1.90**	**247**	*e*P	**Pb**	**00 44 13.7**	**-1.2**
	baz=245						
TWK				*e*S	**Sb**	**00 44 37.6**	**-0.7**
	baz=245						
SGST	**Jiashian**	**1.91**	**241**	*e*P	**Pb**	**00 44 14.2**	**-0.8**
	baz=239						
SGST				*e*S	**Sb**	**00 44 38.7**	**+0.3**
	baz=239						
SNST	**Tainan City**	**1.91**	**246**	*e*S	**Sb**	**00 44 37.7**	**-0.9**
	baz=244						
MASBT	**Mashibuluo**	**2.14**	**230**	*e*P	**Pn**	**00 44 16.8**	**+1.9**
	baz=224						
MASBT				*e*S	**Sn**	**00 44 43.0**	**+2.3**
	baz=224						
SSPT	**Xinbi**	**2.27**	**228**	*e*P	**Pb**	**00 44 20.1**	**-1.0**
	baz=221						
SCZT	**Fangliau**	**2.31**	**225**	*e*P	**Pn**	**00 44 18.8**	**+1.6**
	baz=218						
SCZT				*e*S	**Sn**	**00 44 46.8**	**+2.0**
	baz=218						

IDC 23 01:11:37.1±4.3, 6°.85S×150°.33E, h0km, mb3.2/2, mb1 3.6/2, mb1mx3.2/33, mbtmp3.3/2, Error ellipse: s-maj=186.2km s-min=48.8km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.25**	**228**	P	P	01 16 14.7	+0.5
	0.8nm,0.4s,baz=54,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**22.99**	**222**	P	P	01 16 43.1	-0.5
	0.3nm,0.5s,baz=59,slow=10.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**148.50**	**284**	PKPbc	PKPbc	01 31 26.4	-0.6
	0.6nm,1.1s,baz=107,slow=1.5,SNR=2.4						

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*ISCJB **23** 01:16:39.7±1.1, 12°.2N±0°.1×87°.46W±0°.06, h61km±17km, Error ellipse: s-maj=18.8km s-min=5.5km az=27.7*
*UCR **23** 01:16:40.4±1.9, 12°.19N×87°.47W, h46km±32km, ML3.3*
*SNET **23** 01:16:41.7±0.7, 12°.26N×87°.64W, h26km±5km, ML3.5*
ISC 23 01:16:39.3±1.9, 12°.1N±0°.1×87°.50W±0°.06, h49km±36km, n21, σ0°.57/33, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.75**	**36**	*e*P	**Pn**	**01 16 54.0**	**+0.3**
CRIN				*e*S	**Sn**	**01 17 04.6**	**+0.4**
CRIN				IAML		01 17 08.0	
	comp=N,900nm,0.2s						
CNGN	**Cerro Negro**	**0.88**	**62**	*e*P	**Pn**	**01 16 55.5**	**0.0**
CNGN				*e*S	**Sn**	**01 17 06.3**	**-1.0**
CNGN				IAML		01 17 13.5	
	comp=E,363nm,0.2s						
CSGN	**Cosiguina Volc**	**0.89**	**356**	*e*P	**Pn**	**01 16 56.4**	**+0.8**
CSGN				*e*S	**Sn**	**01 17 06.7**	**-0.7**
CSGN	**Cosiguina Volc**	**0.89**	**356**	*e*P	**Pn**	**01 16 56.4**	**+0.8**
CSGN				*e*S	**Sn**	**01 17 06.7**	**-0.7**
COPN	**Copaltepe**	**0.89**	**84**	*e*P	**Pn**	**01 16 56.0**	**+0.4**
MOMN	**Momotombo**	**0.99**	**71**	*e*P	**Pn**	**01 16 57.1**	**+0.2**
TISN	**Laguna Tiscapa**	**1.20**	**87**	*e*P	**Pn**	**01 17 00.3**	**+0.5**
MGAN	**Managua**	**1.22**	**87**	*e*S	**Sn**	**01 17 15.7**	**+0.2**
CNCH	**Conchagua**	**1.23**	**344**	*e*P	**Pn**	**01 17 00.4**	**+0.1**
CNCH				*e*S	**Sn**	**01 17 15.7**	**-0.1**
CNCH	**Conchagua**	**1.23**	**344**	*e*P	**Pn**	**01 17 00.4**	**+0.1**
CNCH				*e*S	**Sn**	**01 17 15.7**	**-0.1**
LCND	**La Caada**	**1.27**	**342**	*e*P	**Pn**	**01 17 00.9**	**+0.1**
LCND	**La Caada**	**1.27**	**342**	*e*P	**Pn**	**01 17 00.9**	**+0.1**
PACA	**Pacayal**	**1.59**	**330**	*e*P	**Pn**	**01 17 05.5**	**+0.3**
PACA				*e*S	**Sn**	**01 17 24.3**	**-0.4**
PACA				IAML		01 17 30.3	
	comp=Z,780nm,0.2s						
PACA	**Pacayal**	**1.59**	**330**	*e*P	**Pn**	**01 17 05.5**	**+0.3**
PACA				*e*S	**Sn**	**01 17 24.3**	**-0.4**
PACA				IAML		01 17 30.3	
	comp=Z,780nm,0.2s						
TECA	**Tecapa**	**1.71**	**325**	*e*P	**Pn**	**01 17 07.1**	**+0.2**
TECA				*e*S	**Sn**	**01 17 27.2**	**-0.5**
TECA	**Tecapa**	**1.71**	**325**	*e*P	**Pn**	**01 17 07.1**	**+0.2**
TECA				*e*S	**Sn**	**01 17 27.2**	**-0.5**
MATN	**Matagalpa**	**1.75**	**61**	*e*P	**Pn**	**01 17 07.5**	**+0.2**
MATN				*e*S	**Sn**	**01 17 27.3**	**-1.2**
RCON	**San Juan de Ri**	**1.91**	**43**	*e*P	**Pn**	**01 17 10.3**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.97**	**6**	*e*P	**Pn**	**01 17 11.0**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.97**	**6**	*e*P	**Pn**	**01 17 11.0**	**+0.7**
LFRS	**El Faro**	**2.16**	**315**	*e*P	**Pn**	**01 17 13.7**	**+0.7**
LFRS				*e*S	**Sn**	**01 17 37.8**	**-0.9**

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*IDC **23** 01:17:45.2±6.1, 20°.45S×178°.41W, h525km±58km, mb2.9/5, mb1 3.1/6, mb1mx2.9/26, mbtmp3.8/6, Error ellipse: s-maj=75.6km s-min=31.2km az=149.0*
*ISCJB **23** 01:17:49.3±2.0, 20°.5S±0°.6×178°.6W±0°.3, h587km, mb3.3/5, Error ellipse: s-maj=81.0km s-min=20.0km az=155.1*
ISC 23 01:17:50.4±1.7, 20°.4S±0°.5×178°.7W±0°.2, h587km, n11, σ1°.12/11, mb3.3/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.95**	**261**	P	**P**	**01 20 47.2**	**-1.9**
	0.2nm,0.3s,baz=51,slow=19,SNR=2.3						
JAY	**Jayapura**	**43.39**	**289**	P	**P**	**01 25 03.9**	**+1.2**
	4.6nm,0.6s,baz=217,slow=14,SNR=5.0						
ASAR	**Alice Springs**	**43.90**	**257**	P	**P**	**01 25 07.8**	**+1.3**
	0.3nm,0.7s,baz=86,slow=8.4,SNR=5.2						
ASAR				PcP	**PcP**	**01 26 40.6**	**+1.2**
	0.3nm,0.5s,baz=106,slow=3.5,SNR=4.9						
WRA	**Warramunga Arr**	**43.96**	**262**	P	**P**	**01 25 07.2**	**+0.2**
	0.4nm,0.3s,baz=90,slow=7.7,SNR=6.2						
ILAR	**Eielson Array**	**88.38**	**13**	P	**P**	**01 29 39.5**	**-0.6**
	0.2nm,0.4s,baz=230,slow=7.8,SNR=4.6						
PDAR	**Pinedale Array**	**89.36**	**43**	P	**P**	**01 29 45.4**	**-0.1**
	0.1nm,0.5s,baz=223,slow=4.7,SNR=2.5						
ARCES	**ARCESS Array B**	**128.72**	**349**	PKP	**PKiKP**	**01 35 52.0**	**+0.2**
	1.3nm,0.8s,baz=9.5,slow=1.1,SNR=4.3						
FINES	**FINESS Array B**	**135.51**	**343**	PKP	**PKPdf**	**01 36 04.3**	**+0.3**
	0.3nm,0.4s,baz=45,slow=0.6,SNR=4.6						
AKASG	**Malin Array Be**	**142.62**	**331**	PKhKP	PKPpre	01 36 15.1	
	1.8nm,0.4s,baz=40,slow=4.2,SNR=12						
BRTR	**Keskin Array B**	**146.29**	**312**	PKPbc	**PKiKP**	**01 36 27.6**	**-1.1**
	0.5nm,0.5s,baz=135,slow=4.8,SNR=5.9						
GERES	**GERESS Array B**	**149.94**	**344**	PKPbc	**PKiKP**	**01 36 36.1**	**+0.1**
	1.0nm,0.4s,baz=5.7,slow=2.0,SNR=5.8						

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*MAN **23** 01:30:02.8, 7°.89N×127°.15E, h198km, mb4.6, ML3.5, MS3.4*
*ISCJB **23** 01:30:06.1±1.3, 7°.83N±0°.09×127°.46E±0°.09, h35km, mb3.5/3, Error ellipse: s-maj=13.3km s-min=12.4km az=12.5*
*IDC **23** 01:30:09.8±2.0, 6°.14N×123°.23E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/27, mbtmp3.5/3, Error ellipse: s-maj=211.5km s-min=27.8km az=63.0*
ISC 23 01:30:09.0±1.3, 7°.83N±0°.09×127°.4E±0°.1, h35km, n9, σ2°.68/12, mb3.4/3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.43**	**232**	*e*P	**Pn**	**01 30 27.9**	**-4.5**
DMPH	**Davao City--Mi**	**2.01**	**249**	⇑*e*P	**Pn**	**01 30 39.5**	**-0.9**
DMPH				*e*S	**Sn**	**01 31 08.7**	**+4.4**
BUTP	**Butuan**	**2.09**	**303**	*e*P	**Pn**	**01 30 40.1**	**-1.4**
BUTP				*e*S	Sn	01 31 13.3	+7.0
BUKP	**Musuan**	**2.31**	**271**	*e*P	**Pn**	**01 30 43.8**	**-0.8**
BUKP				*e*S	**Sn**	**01 31 12.5**	**+0.6**
DDMP	**Don Marcelino,**	**2.39**	**224**	*e*P	**Pn**	**01 30 44.6**	**-1.1**
DDMP				*e*S	**Sn**	**01 31 12.9**	**-0.9**
WRA	**Warramunga Arr**	**28.43**	**166**	P	**P**	**01 36 04.8**	**+4.2**
	0.6nm,0.7s,baz=336,slow=12,SNR=2.6						
ASAR	**Alice Springs**	**31.94**	**169**	P	**P**	**01 36 32.1**	**+0.4**
	0.4nm,0.9s,baz=340,slow=7.2,SNR=2.9						
MKAR	**Makanchi Array**	**54.63**	**323**	P	**P**	**01 39 33.1**	**-1.2**
	0.6nm,0.7s,baz=119,slow=7.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**122.18**	**291**	PKP	**PKiKP**	**01 49 00.6**	**-0.8**
	0.2nm,0.8s,baz=74,slow=2.6,SNR=2.4						

NNC 23 01:30:14.8±1.7, 39°.76N×76°.85E, h0km, mb3.9, mpv3.5, 5C-7D, Error ellipse: s-maj=13.3km s-min=10.9km az=140.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**3.28**	**1**	Pg	Pb	01 31 12.7	-1.4
	25nm,0.6s						
TNSS				Lg	Lg	01 32 00.8	
	63nm,0.9s						
TKM2	**Tokmak 2**	**3.30**	**344**	⇑Pn	Pn	01 31 09.3	+1.4
	4.7n

7.4nm,0.4s
MTBS Lg Lg 01 32 03.8
33nm,0.6s
MDOK Medeo 3.41 2 Pg Pb 01 31 15.0 -1.1
16nm,0.5s
MDOK Lg Lg 01 32 03.8
67nm,0.8s
AAA Alma-Ata 3.45 1 Pg Pb 01 31 16.5 -0.3
15nm,0.2s
AAA Lg Lg 01 32 06.4
58nm,0.6s
KNDC Almaty 3.46 1 ⇓Pn Pn 01 31 12.0 +2.0
13nm,0.5s
KNDC ⇓Lg Lg 01 32 06.1
364nm,0.8s
KOTS Kotyrbulak 3.48 3 Pg Pb 01 31 16.7 -0.6
12nm,0.5s
KOTS Lg Lg 01 32 07.0
316nm,0.6s
SATY Saty 3.50 19 Pg Pb 01 31 17.3 -0.3
18nm,0.6s
SATY Lg Lg 01 32 07.3
32nm,0.8s
DGS Degeres 3.57 347 Pg Pb 01 31 18.6 -0.3
5.3nm,0.6s
DGS Lg Lg 01 32 10.3
46nm,0.6s
KURS Kuram 3.86 14 Pg Pb 01 31 23.4 -0.3
10nm,0.9s
KURS Lg Lg 01 32 18.2
16nm,0.7s
KTBS Karatobe 3.95 358 Pg Pb 01 31 25.0 -0.4
5.2nm,0.5s
KTBS Lg Lg 01 32 21.2
44nm,0.6s
MRKS Merke 4.04 319 Pg Pb 01 31 25.1 -1.8
6.8nm,0.6s
MRKS Lg Lg 01 32 21.0
32nm,0.6s
PDGK Podgornoye 4.08 28 Pg Pb 01 31 28.1 +0.5
3.9nm,0.6s
PDGK Lg Lg 01 32 27.1
14nm,0.6s
PDGK Podgornoye 4.08 28 ⇓Pn Pn 01 31 19.0 +0.4
7.1nm,0.7s
PDGK ⇑Lg Lg 01 32 25.8
25nm,0.7s
CHKK Chushkaly 4.09 1 Pg Pb 01 31 27.4 -0.3
8.4nm,0.5s
CHKK Lg Lg 01 32 25.1
41nm,0.5s
KUU Kurty 4.15 355 Pg Pb 01 31 28.4 -0.2
3.3nm,0.4s
KUU Lg Lg 01 32 26.8
36nm,0.8s
MNBS Baschi 4.47 15 Pg Pb 01 31 35.5 +1.3
5.3nm,0.5s
MNBS Lg Lg 01 32 39.8
11nm,0.5s
ARXS Arharly 4.51 9 Pg Pb 01 31 34.9 0.0
11nm,0.6s
ARXS Lg Lg 01 32 38.2
15nm,0.7s
KTMS Ketmen 4.52 34 Pg Pb 01 31 36.9 +1.8
3.5nm,0.4s
KTMS Lg Lg 01 32 41.9
19nm,0.7s
DJR Jarkent 5.07 25 Pg Pb 01 31 46.5 +2.2
7.2nm,0.7s
DJR Lg Lg 01 32 58.3
6.3nm,0.6s
KK31 Karatay Array 5.82 307 ⇑Pn Pn 01 31 45.8 +3.5
0.3nm,0.4s,baz=136,slow=12,SNR=5.7
KK31 ⇓Pg Pb 01 31 58.7 +1.7
1.2nm,0.6s,baz=130,slow=16,SNR=6.7
KK31 ⇑Lg Lg 01 33 17.5
1.3nm,0.5s,baz=132,slow=28,SNR=3.6
OTUK Ortayu 9.08 341 ⇓Lg Lg 01 35 02.0
7.9nm,0.9s

GCG 23 01:44:37.3±0.6, 14°.98N×92°.58W, h22km±5km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.01**	**105**	*e*P	Pb	01 44 56.0	-0.3
STG3				*e*S	Sn	01 45 10.9	+0.9
FUG	**Fuego 3**	**1.77**	**107**	*e*P	Pn	01 45 06.6	-0.2
PCG	**Pacaya**	**2.00**	**107**	*e*P	Pn	01 45 10.8	+0.8
PCG				*e*S	Sb	01 45 36.5	-1.2
IXG	**Ixpaco**	**2.22**	**111**	*e*P	Pn	01 45 13.7	+0.6
IXG				*e*S	Sn	01 45 41.5	+1.6

IDC ***23*** *01:46:31.7±0.8, 21°.75N×108°.13W, h0km, mb4.4/13, mb1 4.6/21, mb1mx4.3/51, mbtmp4.4/21, ML3.8/7, MS4.2/28, Ms1 4.2/28, ms1mx4.1/41, Error ellipse: s-maj=26.4km s-min=12.0km az=55.0*
MEX ***23*** *01:46:33.2±0.5, 21°.82N×107°.96W, h5km, MD4.7*
ISCJB ***23*** *01:46:33.1±0.3, 21°.82N±0°.03×107°.85W±0°.02, h10km, mb4.7/42, MS4.3/26, Error ellipse: s-maj=4.9km s-min=2.2km az=27.3*
MOS ***23*** *01:46:34.4±1.2, 21°.90N×107°.97W, h16km, mb4.9/17, Error ellipse: s-maj=12.6km s-min=7.6km az=88.9*
GCMT ***23*** *01:46:34.8±0.3, 21°.83N±0°.01×108°.13W±0°.01, h15km±1km, MW5.1/91, Moment Tensor Solution. s43,c54; s91,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.59±.14; $M_{\theta\theta}$=5.76±.16; $M_{\phi\phi}$=-5.16±.14; $M_{r\theta}$=0.28±.25; $M_{\theta\phi}$=-0.47±.13; $M_{\phi r}$=0.57±.25; Best double couple: M_0=5.52100×10^{16} NP1:ϕ_s=228.00000°, δ87.00000°, λ-173.00000°. NP2: ϕ_s=137.00000°, δ83.00000°, λ-3.00000°. Principal axes: T 5.7900, Plg2.0000°, Azm2.0000°; N -0.5330, Plg83.0000°, Azm254.0000°; P -5.2520, Plg7.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***23*** *01:46:34.8±2.0, 21°.83N×108°.00W, h10km±2km, mb4.8/240, MD4.7(MEX) Error ellipse: s-maj=15.1km s-min=7.2km az=46.0*
ISC 23 01:46:34.3±0.4, 21°.84N±0°.05×107°.98W±0°.04, h10km, n465, σ1$39/453, mb4.8/42, MS4.2/26, 5C-3D, Off coast of central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIG	**Mazatlaan**	**1.97**	**47**	*e*Pn	**Pn**	**01 47 04.4**	**-3.3**
MAIG				*e*Sn	**Sn**	**01 47 27.4**	**-5.0**
MAIG	**Mazatlaan**	**1.97**	**47**	*e*P	**Pn**	**01 47 04.4**	**-3.3**
MAIG				*e*S	**Sn**	**01 47 27.4**	**-5.0**
LPIG	**La Paz**	**3.11**	**317**	Pn	**Pn**	**01 47 22.0**	**-1.4**
	11nm,0.3s,baz=269,slow=3.7,SNR=10						
LPIG				Sn	**Sn**	**01 47 53.7**	**-7.0**
	22nm,0.3s,baz=158,slow=17,SNR=4.7						
LPIG	**La Paz**	**3.11**	**317**	*e*Pn	**Pn**	**01 47 20.6**	**-2.9**
LPIG				*e*Sn	**Sn**	**01 47 56.6**	**-4.1**
LPIG	**La Paz**	**3.11**	**317**	*i* P	**Pn**	**01 47 20.6**	**-2.9**
LPIG				*e*S	**Sn**	**01 47 56.6**	**-4.1**
ANIG	**Ahuacatlan**	**3.31**	**103**	*e*Pn	**Pn**	**01 47 23.1**	**-3.3**
ANIG				*e*Sn	**Sn**	**01 48 01.9**	**-4.0**
ANIG	**Ahuacatlan**	**3.31**	**103**	*e*P	**Pn**	**01 47 23.1**	**-3.3**
ANIG				*e*S	**Sn**	**01 48 01.9**	**-4.0**
CJM	**Chamela**	**3.60**	**130**	*e*Pn	**Pn**	**01 47 27.3**	**-2.9**
CJM				*e*Sn	**Sn**	**01 48 08.2**	**-4.6**
CJM	**Chamela**	**3.60**	**130**	*e*P	**Pn**	**01 47 27.3**	**-2.9**
CJM				*e*S	**Sn**	**01 48 08.2**	**-4.6**
H06N1	**SOCORRO T-PHAS**	**4.09**	**224**	T	T	01 51 41.7	
H06N	**Isla Socorro**	**4.09**	**224**	*i* P	**Pn**	**01 47 33.9**	**-3.0**
H06E1	**SOCORRO T-PHAS**	**4.11**	**223**	T	T	01 51 43.6	
ZAIG	**Zacatecas**	**5.10**	**79**	*e*Pn	**Pn**	**01 47 50.2**	**-0.9**
HPIG		**5.49**	**22**	*e*Pn	**Pn**	**01 47 56.6**	**+0.2**
MMIG	**Aquila**	**5.61**	**128**	*e*Pn	**Pn**	**01 47 55.5**	**-2.2**
MMIG				*e*Sn	**Sn**	**01 48 58.2**	**-4.1**
MMIG	**Aquila**	**5.61**	**128**	*e*P	**Pn**	**01 47 55.5**	**-2.2**
MMIG				*e*S	**Sn**	**01 48 58.2**	**-4.1**
HSIG		**7.64**	**340**	*e*Pn	**Pn**	**01 48 27.1**	**+1.4**
LNIG	**Linares**	**8.39**	**67**	*e*Pn	**Pn**	**01 48 37.0**	**+1.0**
TX31	**Lajitas Ar. Si**	**8.42**	**27**	*e*Pn	**Pn**	**01 48 36.7**	**+0.3**
TXAR	**Lajitas Array**	**8.42**	**27**	Pn	**Pn**	**01 48 36.8**	**+0.3**
	5.8nm,0.3s,baz=206,slow=13,SNR=259						
TXAR				Lg	Lg	01 50 56.0	
	baz=178,slow=23,SNR=2.5						
TXAR				LR	LR	01 51 31.8	
	comp=Z,2μm,19.5s,baz=0.0,slow=35						
319A	**Douglas**	**9.57**	**353**	*e*Pn	**Pn**	**01 48 54.0**	**+1.7**
TLIG	**Tlapa**	**9.83**	**114**	*e*Pn	**Pn**	**01 48 58.2**	**+2.3**
MNTX	**Cornudas Mount**	**10.09**	**13**	*e*Pn	**Pn**	**01 49 00.0**	**+0.7**
MNTX	**Cornudas Mount**	**10.09**	**13**	P	**Pn**	**01 48 59.8**	**+0.4**
	baz=194,SNR=38						
833A	**Chaparral WMA,**	**10.11**	**49**	P	**Pn**	**01 49 00.4**	**+0.8**
	baz=232						
121A	**Cookes Peak, D**	**10.65**	**1**	P	**Pn**	**01 49 08.0**	**+0.8**
	baz=181,SNR=19						
GDL2	**Guadalupe Moun**	**10.81**	**17**	*e*Pn	**Pn**	**01 49 10.3**	**+1.0**
214A	**Organ Pipe Nat**	**10.96**	**338**	P	**Pn**	**01 49 13.2**	**+2.0**
	baz=156,SNR=20						
LVIG	**Laguna Verde**	**11.02**	**99**	*e*Pn	**Pn**	**01 49 14.8**	**+2.8**
JCT	**Junction City**	**11.31**	**39**	*e*Pn	**Pn**	**01 49 16.9**	**+0.9**
JCT	**Junction City**	**11.31**	**39**	*e*P	**Pn**	**01 49 16.9**	**+0.9**
JCT	**Junction City**	**11.31**	**39**	P	**Pn**	**01 49 17.3**	**+1.3**
	baz=222,SNR=10						
113A	**Mohawk Valley,**	**12.04**	**336**	*e*Pn	**Pn**	**01 49 29.2**	**+3.3**
Y22D	**IRIS PASSCAL I**	**12.22**	**4**	P	**Pn**	**01 49 31.8**	**+3.2**
	baz=185						
LENM	**Lemitar**	**12.31**	**4**	*e*Pn	**Pn**	**01 49 31.6**	**+1.7**
GLA	**Glamis**	**12.71**	**333**	*e*Pn	**Pn**	**01 49 37.2**	**+1.9**
GLA	**Glamis**	**12.71**	**333**	*e*P	**Pn**	**01 49 37.2**	**+1.9**
GLA	**Glamis**	**12.71**	**333**	P	**Pn**	**01 49 37.1**	**+1.9**
	baz=150						
MSTX	**Muleshoe**	**12.93**	**20**	P	**Pn**	**01 49 40.1**	**+1.8**
	baz=202,SNR=47						
IKP	**In-Ko-Pah, Jac**	**12.96**	**328**	P	**Pn**	**01 49 41.7**	**+3.0**
	baz=144,SNR=10.0						
ABTX	**Abilene, Hawle**	**13.05**	**33**	P	**Pn**	**01 49 40.5**	**+0.7**
	baz=216,SNR=12						
SWSC	**Sam W. Stewart**	**13.06**	**330**	P	**Pn**	**01 49 42.0**	**+2.1**
	baz=146						
ANMO	**Albuquerque**	**13.13**	**6**	Pn	**Pn**	**01 49 41.8**	**+0.8**
	0.2nm,0.3s,baz=184,slow=13,SNR=102						
ANMO				Lg	Lg	01 53 34.7	
	0.1nm,0.3s,baz=56,slow=16,SNR=2.1						
ANMO				LR	LR	01 55 05.8	
	comp=Z,2μm,18.6s,baz=182,slow=39						
ANMO	**Albuquerque**	**13.13**	**6**	*e*Pn	**Pn**	**01 49 43.5**	**+2.5**
ANMO	**Albuquerque**	**13.13**	**6**	*c i*P	**Pn**	**01 49 44.5**	**+3.5**
ANMO				pmax	pmax		
	comp=Z,196nm,2.0s						
TASM	**ASL Pad, Albuq**	**13.13**	**6**	P	**Pn**	**01 49 44.9**	**+3.9**
	baz=186,SNR=86						
TASM	**ASL Pad, Albuq**	**13.13**	**6**	P	**Pn**	**01 49 44.8**	**+3.8**
	baz=186,SNR=77						
Y12C	**Blythe**	**13.20**	**335**	P	**Pn**	**01 49 43.9**	**+2.1**
	baz=153,SNR=34						
CMIG	**Matias Romero**	**13.22**	**109**	Pn	**Pn**	**01 49 42.8**	**+0.6**
	comp=Z,3.5nm,0.3s,baz=288,slow=11,SNR=22						
CMIG				Lg	Lg	01 53 02.5	
	comp=Z,0.2nm,0.3s,baz=196,slow=21,SNR=2.2						
CMIG				LR	LR	01 53 53.9	
	comp=Z,841nm,21.8s,baz=278,slow=33						
MONP2	**Monument Peak**	**13.31**	**328**	P	**Pn**	**01 49 43.7**	**+0.1**
	baz=144,SNR=6.2						
W18A	**Petrified Fore**	**13.32**	**354**	P	**Pn**	**01 49 45.6**	**+2.0**
	baz=173						
BC3	**Big Chuckawall**	**13.50**	**332**	P	**Pn**	**01 49 47.4**	**+1.4**
	baz=149,SNR=16						
PDMCI	**Parker Dam,Lak**	**13.55**	**338**	P	**Pn**	**01 49 49.0**	**+2.4**
	baz=155,SNR=8.1						
HKT	**Hockley**	**13.58**	**51**	*e*Pn	**Pn**	**01 49 47.5**	**+0.5**
HKT	**Hockley**	**13.58**	**51**	*e*P	**Pn**	**01 49 47.5**	**+0.5**
109C	**Camp Elliot, M**	**13.66**	**326**	P	**Pn**	**01 49 50.3**	**+2.2**
	baz=142						
WHTX	**Lake Whitney,**	**13.79**	**41**	*e*Pn	**Pn**	**01 49 50.2**	**+0.3**
WHTX	**Lake Whitney,**	**13.79**	**41**	P	**Pn**	**01 49 49.9**	**+0.1**
	baz=225						
IRM	**Iron Mountain**	**13.80**	**334**	P	**Pn**	**01 49 51.9**	**+1.8**
	baz=151,SNR=18						
PFO	**Pinyon Flats O**	**13.92**	**329**	Pn	**Pn**	**01 49 53.0**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=151,slow=14,SNR=15						
PFO				LR	LR	01 54 50.4	
	comp=Z,2μm,18.9s,baz=169,slow=36						
PFO	**Pinyon Flats O**	**13.92**	**329**	*e*Pn	**Pn**	**01 49 52.4**	**+0.6**
PFO	**Pinyon Flats O**	**13.92**	**329**	*e*P	**Pn**	**01 49 52.4**	**+0.6**
PFO	**Pinyon Flats O**	**13.92**	**329**	P	**Pn**	**01 49 52.6**	**+0.8**
	baz=146,SNR=7.4						
WUAZ	**Wupatki**	**13.95**	**348**	P	**Pn**	**01 49 52.6**	**+0.3**
	baz=167,SNR=6.4						
BELC	**Belle Mtn. Jos**	**14.03**	**331**	P	**Pn**	**01 49 55.5**	**+2.2**
	baz=148,SNR=11						
AMTX	**Amarillo**	**14.12**	**22**	P	**Pn**	**01 49 54.8**	**+0.2**
	baz=205						
NEE2	**Needles Airpor**	**14.14**	**337**	P	**Pn**	**01 49 56.0**	**+1.3**
	baz=154						
MURC	**Murrieta**	**14.27**	**327**	P	**Pn**	**01 49 59.3**	**+2.9**
	baz=143,SNR=6.5						
SCI2	**San Clemente I**	**14.52**	**322**	P	**Pn**	**01 50 01.5**	**+1.6**
	baz=137						
GMRC	**Granite Mounta**	**14.55**	**334**	P	**Pn**	**01 50 02.2**	**+1.7**
	baz=151,SNR=12						
BBRC	**Big Bear Solar**	**14.67**	**329**	P	**Pn**	**01 50 03.9**	**+1.8**
	baz=145						
CIS	**Catalina Islan**	**14.76**	**324**	P	**Pn**	**01 50 04.9**	**+1.7**
	baz=139						
HEC	**Hector,Ludlow**	**14.88**	**332**	P	**Pn**	**01 50 06.5**	**+1.6**
	baz=148,SNR=20						
BFSC	**Mount Baldy Ra**	**15.01**	**327**	P	**Pn**	**01 50 08.3**	**+1.6**
	baz=143,SNR=5.8						
WMOK	**Wichita Mounta**	**15.18**	**30**	P	**Pn**	**01 50 07.8**	**-1.0**
	baz=214,SNR=9.5						
TUQ	**Turquoise Moun**	**15.23**	**335**	P	**Pn**	**01 50 11.5**	**+1.9**
	baz=151,SNR=9.6						
SNCC	**San Nicolas Is**	**15.28**	**320**	P	**Pn**	**01 50 11.7**	**+1.5**
	baz=135						
MVCO	**Mesa Verde**	**15.33**	**358**	P	**Pn**	**01 50 13.5**	**+2.5**
	baz=178,SNR=26						
DECC	**Green Verdugo**	**15.37**	**326**	P	**Pn**	**01 50 13.1**	**+1.8**
	baz=141						
NATX	**Nacogdoches**	**15.45**	**47**	P	**Pn**	**01 50 11.9**	**-0.4**
	baz=233						
GSC	**Goldstone, Bar**	**15.48**	**332**	P	**Pn**	**01 50 14.3**	**+1.4**
	baz=148,SNR=21						
T25A	**Trinidad**	**15.56**	**11**	P	**Pn**	**01 50 16.5**	**+2.5**
	baz=192,SNR=38						
BLG	**Laguna Peak, P**	**15.65**	**324**	P	**Pn**	**01 50 17.3**	**+2.3**
	baz=139						
EDW2	**Edwards Air Fo**	**15.69**	**328**	P	**P**	**01 50 18.1**	**-1.5**
	baz=144,SNR=12						
SHOC	**Shoshone, Teco**	**15.77**	**334**	P	**P**	**01 50 19.1**	**-1.3**
	baz=151,SNR=7.4						
OSI	**Osito Audit: C**	**15.85**	**326**	P	**P**	**01 50 19.9**	**-1.4**
	baz=141						
S22A	**4UR Ranch, Cre**	**15.88**	**3**	P	**Pn**	**01 50 20.4**	**+2.1**
	baz=184,SNR=24						
CCIG	**Comitan**	**15.96**	**108**	*e*Pn	**Pn**	**01 50 20.5**	**+1.3**
	comp=Z,33nm,1.0s						
SDCO	**Great Sand Dun**	**16.00**	**7**	P	**Pn**	**01 50 21.5**	**+1.8**
	baz=188,SNR=77						
LRMC	**Laurel Mtn Rad**	**16.02**	**330**	P	**Pn**	**01 50 21.8**	**+1.8**
	baz=146,SNR=7.6						
ARVC	**Arvin**	**16.30**	**327**	P	**P**	**01 50 25.4**	**-0.9**
	baz=142						
MPMC	**Manual Prospec**	**16.42**	**332**	P	**Pn**	**01 50 26.4**	**+1.4**
	baz=147,SNR=26						
PV16	**Nyswonger Mesa**	**16.44**	**357**	*e*Pn	**Pn**	**01 50 26.5**	**+1.2**
	comp=Z,157nm,1.4s						
FURC	**Furnace Creek,**	**16.50**	**334**	P	**P**	**01 50 28.0**	**-0.5**
	baz=150,SNR=18						
ISA	**Isabella, Lake**	**16.55**	**329**	P	**P**	**01 50 29.1**	**-0.1**
	baz=144						
PKM	**Mcpherson Peak**	**16.64**	**324**	P	**P**	**01 50 30.1**	**-0.2**
	baz=138						
TPNV	**Topopah Spring**	**16.68**	**336**	P	**P**	**01 50 30.6**	**-0.1**
	baz=152,SNR=42						
VES	**Vestal, Richgr**	**16.99**	**328**	P	**P**	**01 50 34.0**	**0.0**
	baz=142,SNR=28						
CWC	**Cottonwood Cre**	**17.00**	**331**	P	**P**	**01 50 35.6**	**+1.4**
	baz=146						
MYIG	**Mrida**	**17.01**	**90**	*e*Pn	**P**	**01 50 34.5**	**+0.3**
	comp=Z,349nm,1.3s						
SMMC	**Simmler**	**17.06**	**325**	P	**P**	**01 50 35.4**	**+0.6**
	baz=139						
GRAC	**Grapevine Rang**	**17.16**	**334**	P	**P**	**01 50 36.6**	**+0.7**
	baz=149						
Q24A	**Divide**	**17.24**	**7**	P	**P**	**01 50 37.9**	**+0.8**
	baz=189						
VOG	**Valley Oaks Go**	**17.52**	**328**	P	**P**	**01 50 40.7**	**+0.9**
	baz=143						
TIN	**Tinemaha, Big**	**17.58**	**332**	P	**P**	**01 50 41.2**	**+0.6**
	baz=147						
TUL1	**Leonard**	**17.60**	**35**	P	**Pn**	**01 50 39.4**	**-0.3**
	baz=220,SNR=9.5						
Z41A	**Richland Creek**	**17.60**	**47**	P	**Pn**	**01 50 38.4**	**-1.3**
	baz=233						
R11A	**Troy Canyon, C**	**17.71**	**340**	P	**P**	**01 50 42.8**	**+0.6**
	baz=156,SNR=20						
MIAR	**Mount Ida**	**17.90**	**42**	*e*Pn	**Pn**	**01 50 43.2**	**-0.2**
	comp=Z,36nm,1.5s						
MIAR	**Mount Ida**	**17.90**	**42**	*e*P	**Pn**	**01 50 43.2**	**-0.2**
MIAR				pmax	pmax		
	comp=Z,36nm,1.5s						
MIAR	**Mount Ida**	**17.90**	**42**	P	**Pn**	**01 50 42.5**	**-1.0**
	baz=229,SNR=7.0						
APG	**El Apazote**	**17.95**	**109**	P	**Pn**	**01 50 45.1**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=289,slow=12,SNR=14						
APG				LR	LR	01 56 42.6	
	comp=Z,2μm,21.6s,baz=282,slow=34						
ISCO	**Idaho Springs**	**18.02**	**6**	P	**P**	**01 50 47.4**	**+1.7**
	baz=187,SNR=52						
W39A	**Magazine**	**18.21**	**40**	P	**Pn**	**01 50 47.7**	**+0.4**
	baz=227,SNR=16						
O20A	**White River Ci**	**18.24**	**359**	P	**P**	**01 50 49.6**	**+1.7**
	baz=179,SNR=20						
MLAC	**Mammoth, Mammo**	**18.32**	**332**	P	**P**	**01 50 50.5**	**+1.6**
	baz=146						
X40A	**Basin Creek Fa**	**18.33**	**43**	P	**Pn**	**01 50 48.2**	**-0.5**
	baz=230,SNR=11						
CBKS	**Cedar Bluff**	**18.34**	**21**	P	**Pn**	**01 50 48.9**	**+0.1**
	baz=205						
VBMS	**Vicksburg**	**18.65**	**53**	P	**P**	**01 50 52.6**	**+0.3**
	baz=240						
DUG	**Dugway, Tooele**	**18.76**	**348**	P	**Pn**	**01 50 55.6**	**+1.6**
	baz=166,SNR=21						
NVAR	**Mina Array Bea**	**18.77**	**334**	P	**P**	**01 50 52.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=159,slow=12,SNR=34						
NVAR				LR	LR	01 58 07.5	
	comp=Z,1μm,18.1s,baz=158,slow=37						
HHAR	**Hobbs**	**18.88**	**37**	*e*P	**P**	**01 50 55.4**	**+0.6**
	comp=Z,55nm,1.4s						
N23A	**Red Feather La**	**19.08**	**5**	P	**Pn**	**01 50 58.5**	**+0.5**
	baz=186,SNR=12						
W41B	**Gary Mavity, V**	**19.14**	**43**	P	**P**	**01 50 58.2**	**+0.5**
	baz=230						
U40A	**Yellville**	**19.56**	**39**	P	**P**	**01 51 02.9**	**+0.7**
	baz=226,SNR=15						
X43A	**Marvell**	**19.63**	**46**	P	**P**	**01 51 03.6**	**+0.6**
	baz=234						
OGNE	**Ogallala**	**19.70**	**13**	P	**Pn**	**01 51 05.6**	**+0.3**
	baz=197						
KSU1	**Kansas State U**	**19.77**	**27**	P	**P**	**01 51 05.8**	**+1.2**
	baz=213,SNR=9.3						
ELK	**Elko**	**19.83**	**344**	P	**P**	**01 51 06.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=161,slow=8.5,SNR=29						
ELK				LR	LR	01 58 21.5	
	comp=Z,1μm,20.8s,baz=170,slow=36						
BMN	**Battle Mountai**	**20.13**	**339**	*e*P	**P**	**01 51 09.5**	**+0.9**
	comp=Z,33nm,1.1s						
BMN	**Battle Mountai**	**20.13**	**339**	*e*P	**P**	**01 51 09.5**	**+0.9**
BMN				pmax	pmax		
	comp=Z,33nm,1.1s						
147A	**Livingston**	**20.54**	**54**	P	**P**	**01 51 12.8**	**-0.2**
	baz=243						
OXF	**Oxford**	**20.63**	**48**	P	**P**	**01 51 14.8**	**+0.9**
	baz=237						
K22A	**Casper**	**20.79**	**3**	*e*P	**P**	**01 51 17.1**	**+1.3**
	comp=Z,68nm,1.1s						
K22A	**Casper**	**20.79**	**3**	P	**P**	**01 51 16.7**	**+0.9**
	baz=184,SNR=28						
349A	**Repton**	**20.83**	**59**	P	**P**	**01 51 16.1**	**0.0**
	baz=248						
BEKR	**Beckworth**	**20.84**	**332**	*e*P	Pn	01 51 18.3	-0.6
	comp=Z,52nm,1.3s						
BRAL	**Brewton**	**20.88**	**59**	P	**P**	**01 51 16.7**	**+0.1**
	baz=248						
BW06	**Boulder Array**	**20.91**	**357**	P	**P**	**01 51 16.8**	**-0.3**
	baz=176,SNR=12						
PDAR	**Pinedale Array**	**20.91**	**357**	P	**P**	**01 51 17.6**	**+0.5**
	comp=Z,14nm,1.0s,baz=170,slow=9.0,SNR=31						
PDAR				LR	LR	01 58 26.4	
	comp=Z,614nm,20.0s,baz=192,slow=34						
AHID	**Auburn Hatcher**	**21.03**	**354**	*e*P	**P**	**01 51 19.2**	**+0.8**
	comp=Z,76nm,1.8s						
148A	**Greensboro**	**21.06**	**55**	P	**P**	**01 51 17.9**	**-0.7**
	baz=244						
249A	**Camden**	**21.13**	**57**	P	**P**	**01 51 18.8**	**-0.6**
	baz=246						
TGUH	**Tegucigalpa,Un**	**21.15**	**108**	*e*P	**P**	**01 51 21.8**	**+2.2**
	comp=Z,187nm,1.6s						
BGNE	**Belgrade**	**21.20**	**21**	P	**P**	**01 51 20.3**	**+0.2**
	baz=206,SNR=9.7						
X46A	**Booneville**	**21.23**	**49**	P	**P**	**01 51 18.9**	**-1.5**
	baz=238						
350A	**Dozier**	**21.54**	**59**	P	**P**	**01 51 23.4**	**-0.4**
	baz=249						
REDW	**Red Top Meadow**	**21.60**	**354**	*e*P	**P**	**01 51 25.3**	**+0.8**
	comp=Z,154nm,1.5s						
CCM	**Cathedral Cave**	**21.66**	**38**	*e*P	**P**	**01 51 25.6**	**+0.6**
	comp=Z,26nm,1.1s						
CCM	**Cathedral Cave**	**21.66**	**38**	*e*P	**P**	**01 51 25.6**	**+0.6**
CCM				pmax	pmax		
	comp=Z,26nm,1.1s						
CCM	**Cathedral Cave**	**21.66**	**38**	P	**P**	**01 51 24.9**	**0.0**
	baz=226						
LRAL	**Lakeview Retre**	**21.66**	**55**	P	**P**	**01 51 25.9**	**+0.8**
	baz=244						
W46A	**Michie**	**21.68**	**48**	P	**P**	**01 51 26.4**	**+1.1**
	baz=237,SNR=5.6						
X47A	**Russelville**	**21.73**	**50**	P	**P**	**01 51 26.7**	**+1.0**
	baz=240,SNR=8.2						
451A	**Vernon**	**21.75**	**62**	P	**P**	**01 51 26.3**	**+0.3**
	baz=252						
250A	**Grady**	**21.80**	**58**	P	**P**	**01 51 26.7**	**+0.1**
	baz=248						
LOHW	**Long Hollow**	**21.82**	**355**	*e*P	**P**	**01 51 27.5**	**+0.5**
	comp=Z,96nm,1.4s						
O03E	**Paynes Creek**	**21.83**	**331**	P	**P**	**01 51 29.7**	**+2.8**
	baz=144,SNR=23						
Z49A	**Columbiana**	**22.09**	**55**	P	**P**	**01 51 30.2**	**+0.6**
	baz=244						
O02D	**Mt. Diablo Mer**	**22.20**	**329**	P	**P**	**01 51 33.3**	**+2.4**
	baz=141						
V46A	**Holladay**	**22.22**	**47**	P	**P**	**01 51 31.2**	**+0.1**
	baz=236,SNR=12						
150A	**Eclectic**	**22.23**	**57**	P	**P**	**01 51 32.3**	**+1.1**
	baz=247						
X48A	**Hartselle**	**22.28**	**51**	P	**P**	**01 51 32.2**	**+0.5**
	baz=241,SNR=5.9						
452A	**Marianna**	**22.28**	**62**	P	**P**	**01 51 31.0**	**-0.7**
	baz=252						
W47A	**Westpoint**	**22.29**	**49**	P	**P**	**01 51 32.9**	**+1.1**
	baz=238						
HLID	**Hailey**	**22.32**	**348**	P	**P**	**01 51 32.8**	**+0.6**
	baz=164,SNR=50						
RSSD	**Black Hills**	**22.46**	**7**	*e*P	**P**	**01 51 34.3**	**+0.5**
	comp=Z,11nm,0.9s						
**RS

Y50A	Piedmont	22.98	54	P	P	01 51 40.1	+0.9
	baz=244						
453A	Whigham	22.99	62	P	P	01 51 39.5	+0.3
	baz=253						
252A	Lumpkin	23.02	59	P	P	01 51 40.6	+1.0
	baz=250						
M04C	Macdoel	23.05	333	P	P	01 51 40.5	+0.6
	baz=146,SNR=8.4						
T46A	Princeton	23.07	45	P	P	01 51 40.0	0.0
	baz=234						
V48A	Smith Brothers	23.08	49	P	P	01 51 40.4	+0.2
	baz=239						
U47A	Clarksville	23.13	46	P	P	01 51 41.0	+0.3
	baz=237						
W49A	Belvidere	23.16	50	P	P	01 51 41.1	+0.1
	baz=241						
Z51A	Franklin	23.17	56	P	P	01 51 40.7	-0.4
	baz=246						
J08A	Circle Bar Ran	23.17	340	eP	P	01 51 41.9	+0.8
	comp=Z,102nm,1.5s						
M02C	Callahan	23.18	331	P	P	01 51 42.7	+1.4
	baz=143						
353A	Camilla	23.22	61	P	P	01 51 41.2	-0.4
	baz=252						
RLMT	Red Lodge	23.25	358	P	P	01 51 42.5	+0.5
	baz=177,SNR=16						
152A	Waverly Hall	23.27	57	P	P	01 51 42.3	+0.2
	baz=248						
X50B	Fort Payne	23.30	53	P	P	01 51 42.0	-0.5
	baz=243						
554A	Perry	23.30	64	P	P	01 51 42.8	+0.3
	baz=255						
YBH	Yreka Blue Hor	23.39	331	P	P	01 51 41.6	-1.8
	comp=Z,0.5nm,0.5s,baz=142,slow=10,SNR=3.4						
YBH				LR	LR	02 00 24.9	
	comp=Z,440nm,21.5s,baz=149,slow=36						
Y51A	Rockmart	23.49	54	P	P	01 51 45.0	+0.6
	baz=245,SNR=17						
N40A	Mertquake, Sal	23.52	32	P	P	01 51 44.8	+0.3
	baz=221						
253A	Americus	23.52	59	P	P	01 51 44.9	+0.2
	baz=250						
SCIA	State Center	23.55	28	P	P	01 51 44.9	+0.1
	baz=216						
T47A	Sharon Grove	23.56	46	eP	P	01 51 45.6	+0.7
	comp=Z,49nm,1.1s						
T47A	Sharon Grove	23.56	46	P	P	01 51 44.9	-0.1
	baz=236						
S46A	Don Dixon Farm	23.56	43	P	P	01 51 44.4	-0.6
	baz=234,SNR=6.5						
R45A	Skylar, Fairfi	23.57	42	P	P	01 51 45.3	+0.2
	baz=231						
L04D	Klamath Falls	23.61	333	P	P	01 51 46.3	+0.8
	baz=145,SNR=7.5						
U48A	Cassie Pea, Po	23.68	47	P	P	01 51 46.0	-0.1
	baz=238						
Z52A	Williamson	23.70	56	P	P	01 51 44.8	-1.6
	baz=247						
K04D	Chiloquin, OR	23.71	334	P	P	01 51 48.0	+1.4
	baz=147						
P43A	Skaggs, Pawnee	23.72	37	P	P	01 51 46.8	+0.3
	baz=227,SNR=5.9						
V49A	McMinnville	23.73	49	P	P	01 51 46.2	-0.5
	baz=240						
SUSD	Miller	23.75	16	P	P	01 51 46.3	-0.4
	baz=201						
N41A	Harden Midland	23.75	34	P	P	01 51 46.7	-0.1
	baz=223						
TIGA	Tifton	23.76	61	P	P	01 51 45.7	-1.2
	baz=252						
ECSD	EROS Data Cent	23.79	21	P	P	01 51 47.0	-0.1
	baz=207,SNR=9.6						
W50A	Signal Mountai	23.89	51	P	P	01 51 48.1	-0.1
	baz=242,SNR=9.5						
BOZ	Bozeman (W)	23.89	354	P	P	01 51 49.1	+0.9
	baz=172,SNR=28						
555A	McAlpin	23.91	65	P	P	01 51 47.1	-1.3
	baz=256						
X51A	Calhoun	23.93	53	P	P	01 51 47.9	-0.7
	baz=244						
OLIL	Olney	23.96	41	eP	P	01 51 49.4	+0.6
	comp=Z,42nm,1.3s						
R46A	Gibon Southern	24.00	43	P	P	01 51 48.6	-0.7
	baz=233						
455A	Stateville	24.02	63	P	P	01 51 48.9	-0.5
	baz=254						
Q45A	Warren Harvey,	24.03	41	P	P	01 51 49.4	0.0
	baz=231						
S47A	Hartford	24.05	45	P	P	01 51 49.4	-0.2
	baz=235						
957A	Wimauma	24.06	71	P	P	01 51 48.9	-1.0
	baz=262						
J05D	Fort Rock, OR	24.07	336	P	P	01 51 50.6	+0.6
	baz=149,SNR=21						
T48A	Bowling Green	24.10	46	P	P	01 51 50.3	+0.2
	baz=237						
656A	Willston	24.11	67	P	P	01 51 49.6	-0.7
	baz=258						
L02E	Cave Junction	24.13	331	P	P	01 51 51.6	+1.2
	baz=142						
254A	Abbeville	24.16	60	P	P	01 51 49.6	-1.1
	baz=251						
857A	Zephyrhills	24.16	69	P	P	01 51 50.3	-0.5
	baz=260						
U49A	Red Boiling Sp	24.20	48	P	P	01 51 50.8	-0.2
	baz=239						
Y52A	Lilburn	24.24	55	eP	P	01 51 52.4	+1.0
	comp=Z,15nm,1.0s						
Y52A	Lilburn	24.24	55	P	P	01 51 51.4	-0.1
	baz=246						
V50A	Pikevile	24.26	50	P	P	01 51 50.9	-0.7
	baz=241						
W51A	Cleveland	24.27	52	P	P	01 51 51.3	-0.4
	baz=243						
355A	Pearson	24.33	62	P	P	01 51 51.8	-0.6
	baz=253						
J04D	Umpqua Nationa	24.37	334	P	P	01 51 53.4	+0.6
	baz=147						
Z53A	Monticello	24.39	57	P	P	01 51 52.0	-0.9
	baz=248						
M41A	Milan	24.41	33	P	P	01 51 52.3	-0.6
	baz=222						
757A	Oxford	24.42	68	P	P	01 51 52.7	-0.5
	baz=259						
958A	Wauchula	24.48	71	P	P	01 51 52.3	-1.4
	baz=262						
HDIL	Hopedale	24.48	36	P	P	01 51 52.8	-0.8
	baz=226						
GOGA	Godfrey	24.52	57	P	P	01 51 53.7	-0.3
	baz=248						
154A	Montrose	24.52	59	P	P	01 51 53.6	-0.5
	baz=250						
K02D	Willamette Mer	24.59	331	P	P	01 51 55.6	+1.0
	baz=143						
L40A	Anamosa	24.59	31	P	P	01 51 54.5	-0.1
	baz=220,SNR=11						
059Z	Ave Maria	24.62	74	P	P	01 51 54.8	-0.2
	baz=265						
S48A	Wiedeman Farm,	24.62	45	P	P	01 51 55.1	+0.2
	baz=236,SNR=8.6						
O44A	Mansfield	24.66	38	P	P	01 51 55.2	0.0
	baz=228						
X52A	Dahlonega	24.67	54	P	P	01 51 55.3	-0.1
	baz=245						
T49A	Edmonton	24.68	47	P	P	01 51 55.3	-0.1
	baz=238						
P45A	Graceland, Par	24.68	40	P	P	01 51 55.1	-0.3
	baz=230						
R47A	Wooly Knot Far	24.68	44	P	P	01 51 55.7	+0.3
	baz=234,SNR=14						
657A	Interlachen	24.72	66	P	P	01 51 54.8	-1.0
	baz=258						
WCI	Wyandotte Cave	24.79	44	eP	P	01 51 57.5	+1.1
	comp=Z,40nm,1.4s						
WCI	Wyandotte Cave	24.79	44	eP	P	01 51 57.5	+1.1
WCI				pmax	pmax		
	comp=Z,40nm,1.4s						
WCI	Wyandotte Cave	24.79	44	P	P	01 51 56.7	+0.3
	baz=235						
U50A	Jamestown	24.80	49	P	P	01 51 56.2	-0.4
	baz=240						
LAO	LASA Array	24.83	3	eP	P	01 51 57.0	+0.2
	comp=Z,58nm,1.1s						
LAO	LASA Array	24.83	3	P	P	01 51 57.3	+0.5
	baz=184						
DWPF	Disney Wildern	24.83	70	P	P	01 51 56.3	-0.6
	baz=261						
JTS	Las Juntas de	24.89	114	P	P	01 51 57.3	-0.2
	comp=Z,9.8nm,0.9s,baz=346,slow=7.0,SNR=4.7						
JTS				LR	LR	02 00 54.9	
	comp=Z,405nm,18.9s,baz=11,slow=35						
JTS	Las Juntas de	24.89	114	eP	P	01 51 59.5	+1.9
	comp=Z,93nm,1.6s						
JTS	Las Juntas de	24.89	114	eP	P	01 52 00.3	+2.8
356A	Blackshear	24.92	62	P	P	01 51 56.8	-0.9
	baz=254						
059A	Moore Haven	24.94	73	P	P	01 51 57.4	-0.5
	baz=264						
Z54A	Sparta	24.95	58	P	P	01 51 57.6	-0.3
	baz=249						
I04A	Tendick Farm,	24.96	335	P	P	01 51 58.4	+0.4
	baz=147,SNR=6.0						
I05D	Terrebonne, OR	25.01	337	P	P	01 51 59.1	+0.7
	baz=150,SNR=6.8						
155A	Kite	25.04	59	P	P	01 51 58.3	-0.4
	baz=251,SNR=8.8						
P46A	Rosedale	25.06	40	P	P	01 51 58.7	-0.1
	baz=231						
X53A	Estanollee	25.07	54	P	P	01 51 57.8	-1.2
	baz=246						
J01E	Myrtle Point	25.08	332	P	P	01 52 00.4	+1.5
	baz=143						
T50A	Nancy	25.11	48	P	P	01 51 59.0	-0.3
	baz=239						
Q47A	Bedord North L	25.12	42	P	P	01 51 59.2	-0.2
	baz=233						
O45A	Potomac	25.16	39	P	P	01 51 59.2	-0.4
	baz=229						
R48A	Northridge Ran	25.16	44	P	P	01 51 59.3	-0.5
	baz=235						
758A	Lake Helen	25.17	68	P	P	01 51 58.8	-1.1
	baz=260						
S49A	Springfield	25.20	46	P	P	01 52 00.5	+0.3
	baz=237						
658A	Bunnell	25.21	67	P	P	01 51 58.7	-1.6
	baz=259						
M43A	Waltham Townsh	25.27	35	P	P	01 51 59.8	-0.9
	baz=225,SNR=9.1						
N44A	Piper City	25.28	37	P	P	01 51 60.0	-0.9
	baz=228						
Y54A	Tignall	25.29	56	P	P	01 51 59.6	-1.4
	baz=248						
256A	Glenville	25.30	61	P	P	01 51 59.7	-1.4
	baz=253						
L42A	Oliver, Polo	25.31	33	P	P	01 52 00.8	-0.3
	baz=223,SNR=6.4						
U51A	La Follette	25.37	50	P	P	01 52 01.1	-0.6
	baz=242						
MSO	Missoula	25.40	350	P	P	01 52 02.4	+0.5
	baz=167,SNR=28						
V52A	Sevierville	25.42	51	P	P	01 52 02.4	+0.2
	baz=243						
Z55A	Blythe	25.50	58	P	P	01 52 02.7	-0.2
	baz=250						
P47A	Martinsville	25.55	42	P	P	01 52 03.2	-0.1
	baz=233						
Q48A	North Vernon	25.55	43	P	P	01 52 03.2	-0.1
	baz=234,SNR=10						
R49A	Shelbyville	25.56	45	P	P	01 52 03.9	+0.6
	baz=236						
SFIN	Lafayette	25.60	39	P	P	01 52 04.0	+0.2
	baz=230						
N45A	Kentland	25.67	38	P	P	01 52 04.2	-0.2
	baz=228						
H04D	Lebanon	25.70	335	P	P	01 52 05.9	+1.3
	baz=147						
T51A	Gray	25.70	49	P	P	01 52 05.4	+0.7
	baz=241,SNR=6.1						
JFWS	Jewell Farm	25.70	31	P	P	01 52 04.9	+0.3
	baz=221						
M44A	Midewin, Midew	25.74	36	P	P	01 52 05.0	+0.1
	baz=227						
S50A	Richmond	25.75	47	P	P	01 52 05.4	+0.3
	baz=239						
TZTN	Tazewell	25.78	50	P	P	01 52 05.4	0.0
	baz=242						
G05D	Wamic, OR	25.78	338	P	P	01 52 06.3	+0.9
	baz=151						
X54A	Belton	25.79	55	P	P	01 52 05.2	-0.4
	baz=247						
I02D	Swisshome	25.80	333	P	P	01 52 06.6	+1.1
	baz=144						
156A	Sylvania	25.82	60	P	P	01 52 05.5	-0.3
	baz=252						
COR	Corvallis	25.97	334	eP	P	01 52 07.3	+0.3
	comp=Z,24nm,0.9s						
COR	Corvallis	25.97	334	eP	P	01 52 07.3	+0.3
COR				pmax	pmax		
	comp=Z,24nm,0.9s						
O47A	Sheridan	26.06	40	P	P	01 52 07.5	-0.4
	baz=232						
N46A	Monticello	26.15	39	P	P	01 52 08.3	-0.3
	baz=230						
EGMT	Eagleton	26.17	357	P	P	01 52 09.4	+0.6
	baz=176,SNR=20						
F05D	White Salmon	26.39	339	P	P	01 52 11.9	+1.0
	baz=151						
SPMN	Marine on St.	26.44	25	P	P	01 52 11.1	-0.2
	baz=213						
G03D	McMinnville, O	26.48	335	P	P	01 52 11.8	+0.2
	baz=147,SNR=7.1						
V54A	Nebo	26.60	53	P	P	01 52 11.9	-1.0
	baz=246						
N47A	Urbana	26.75	40	P	P	01 52 13.5	-0.6
	baz=231						
MDND	Maddock	26.81	13	P	P	01 52 13.7	-1.0
	baz=197						
F37A	Hinrichs Farm,	26.93	24	P	P	01 52 14.9	-0.8
	baz=213						
L46A	Eue Claire	27.12	37	P	P	01 52 17.0	-0.5
	baz=229						
N48A	Decatur	27.13	40	P	P	01 52 16.4	-1.2
	baz=232						
G39A	Holcombe	27.15	27	P	P	01 52 17.2	-0.5
	baz=216						
E04D	Cinebar	27.36	338	P	P	01 52 20.9	+1.4
	baz=150						
NEW	Newport	27.37	347	P	P	01 52 19.1	-0.6
	comp=Z,12nm,1.1s,baz=161,slow=9.1,SNR=15						
NEW	Newport	27.37	347	eP	P	01 52 19.9	+0.2
	comp=Z,18nm,1.3s						
NEW	Newport	27.37	347	eP	P	01 52 19.9	+0.2
NEW				pmax	pmax		
	comp=Z,18nm,1.3s						
NEW	Newport	27.37	347	P	P	01 52 19.2	-0.4
	baz=161,SNR=7.4						
F38A	Pierce - Schro	27.41	25	P	P	01 52 18.8	-1.3
	baz=214,SNR=7.7						
N49A	Columbus Grove	27.68	41	P	P	01 52 22.0	-0.5
	baz=234						
V56A	Mocksville	27.70	54	P	P	01 52 22.1	-0.6
	baz=247						
L47A	Sherwood	27.72	38	P	P	01 52 22.1	-0.8
	baz=231						
F39A	Loretta	27.76	26	P	P	01 52 21.7	-1.5
	baz=216						
K46A	Dorr	27.86	37	P	P	01 52 22.5	-1.5
	baz=229						
ACSO	Alum Creek Sta	28.04	43	P	P	01 52 24.5	-1.3
	baz=236						
E38A	The Farm, Brul	28.08	24	P	P	01 52 25.4	-0.6
	baz=214						
F40A	Park Falls	28.10	27	P	P	01 52 25.1	-1.1
	baz=217						
AGMN	Agassiz Nation	28.13	17	P	P	01 52 25.9	-0.5
	baz=204						
M49A	Liberty Center	28.14	40	P	P	01 52 25.6	-0.9
	baz=233						
K47A	Vermontville	28.28	37	P	P	01 52 27.0	-0.9
	baz=230						
D03D	Eldon	28.38	338	P	P	01 52 28.8	+0.1
	baz=150						
B05A	Bryant	28.69	340	P	P	01 52 31.3	-0.1
	baz=152						
EYMN	Ely	29.22	23	P	P	01 52 34.9	-1.2
	baz=213,SNR=6.7						
I47A	Gladwin	29.43	36	P	P	01 52 37.7	-0.4
	baz=229						
D41A	Chassel	29.66	27	P	P	01 52 39.4	-0.6
	baz=219						
M52A	Chesterland	29.79	43	P	P	01 52 40.5	-0.8
	baz=237						
ULM	Lac du Bonnet	29.91	16	P	P	01 52 41.0	-1.3
	comp=Z,9.5nm,1.0s,baz=216,slow=8.8,SNR=5.0						
ULM				LR	LR	02 05 01.7	
	comp=Z,1µm,19.8s,baz=192,slow=37						
I48A	Sherman Twp	29.98	36	P	P	01 52 42.3	-0.6
	baz=230						
C40A	Isle Royale Na	30.09	26	P	P	01 52 42.7	-1.1
	baz=217,SNR=6.6						
G47A	Hillman	30.55	35	P	P	01 52 46.4	-1.5
	baz=228						
M54A	Oil Creek Stat	30.85	44	P	P	01 52 49.5	-1.2
	baz=239						
I51A	Listowel	31.27	39	P	P	01 52 52.5	-1.9
	baz=234						
J52A	Paris	31.27	41	P	P	01 52 53.5	-0.9
	baz=236						
BWLO	Walkerton	31.39	39	P	P	01 52 55.1	-0.3
	baz=234						
M55A	Ridgway	31.41	45	P	P	01 52 54.7	-1.0
	baz=240						
O57A	Amberson	31.58	48	P	P	01 52 56.2	-0.9
	baz=244						
D46A	Sault St. Mari	31.62	32	P	P	01 52 56.7	-0.7
	baz=226						
E47A	Iron Bridge	31.70	33	P	P	01 52 57.4	-0.7
	baz=228						
F49A	Sandfield	31.90	35	P	P	01 52 58.9	-0.9
	baz=230						
I52A	Shelburne	31.92	39	P	P	01 52 59.2	-0.9
	baz=235						
D47A	Chapleau	32.20	33	P	P	01 53 01.8	-0.7
	baz=227						
E48A	Lockeyer	32.30	34	P	P	01 53 02.5	-0.9
	baz=229						
H52A	Wyevale	32.42	39	P	P	01 53 04.0	-0.4
	baz=235						
KLBO	Killbear Provi	32.66	37	P	P	01 53 06.0	-0.5
	baz=233						
WLVO	Wesleyville	32.91	41	P	P	01 53 07.8	-0.9
	baz=238						
D48A	Paudash Townsh	32.94	34	P	P	01 53 08.2	-0.8
	baz=229						
E50A	Wahnapitae	33.02	36	P	P	01 53 09.0	-0.7
	baz=231						
FFC	Flin Flon	33.15	6	eP	P	01 53 10.4	-0.2
	comp=Z,47nm,0.8s						
FFC	Flin Flon	33.15	6	ceP	P	01 53 10.7	0.0
FFC				pmax	pmax		
	comp=Z,37nm,2.5s						
F51A	Arnstein	33.17	37	P	P	01 53 09.7	-1.3
	baz=233						
BUKO	Buck Lake	33.17	38	P	P	01 53 10.6	-0.4
	baz=234						
D49A	Beulah Townshi	33.23	34	P	P	01 53 10.4	-1.1
	baz=229,SNR=5.5						
F52A	Sundridge	33.42	38	P	P	01 53 11.8	-1.3
	baz=234						
G53A	Haliburton	33.44	39	P	P	01 53 12.3	-1.0
	baz=236						
I55A	Frankford	33.50	41	P	P	01 53 12.3	-1.6
	baz=238,SNR=5.8						
BINY	Binghamton	33.59	45	P	P	01 53 13.8	-1.0
	baz=243						
DELO	Deloro Mine	33.70	41	P	P	01 53 15.2	-0.5
	baz=238						
E51A	G1948 Merrick	33.77	36	P	P	01 53 15.8	-0.4
	baz=233						
PECO	Prince Edward	33.78	42	P	P	01 53 15.6	-0.7
	baz=239						
BANO	Bancroft	33.79	40	P	P	01 53 15.6	-0.8
	baz=237						
H55A	Tweed	33.98	41	P	P	01 53 17.5	-0.6
	baz=238						
E52A	Mattawa	34.08	37	P	P	01 53 17.9	-1.0
	baz=234,SNR=6.3						
ALGO	Algonquin Park	34.24	38	P	P	01 53 20.1	-0.2
	baz=235						
PLVO	Plevna	34.31	40	P	P	01 53 20.1	-0.8
	baz=238,SNR=8.8						
PEMO	Pembroke	34.55	39	P	P	01 53 22.6	-0.3
	baz=237						
H56A	Elgin	34.57	41	P	P	01 53 22.9	-0.3
	baz=239						
D52A	ZEK Kipawa Sen	34.62	36	P	P	01 53 23.4	-0.2
	baz=234						
G55A	Calabogie	34.63	40	P	P	01 53 23.6	-0.1
	baz=238						
E53A	Dumoine, Ponti	34.70	38	P	P	01 53 23.8	-0.4
	baz=235						
D53A	Lac Vacive, Po	35.08	37	P	P	01 53 27.5	-0.1
	baz=234						
F55A	Otter Lake	35.16	40	P	P	01 53 28.2	0.0
	baz=238,SNR=5.4						
ORIO	Orleans, Innes	35.47	41	P	P	01 53 30.5	-0.4
	baz=239						
OTAV	Otavalo	35.91	123	eP	P	01 53 37.8	+2.3
	comp=Z,33nm,1.4s						
OTAV	Otavalo	35.91	123	eP	P	01 53 37.8	+2.3
OTAV				pmax	pmax		
	comp=Z,33nm,1.4s						
LSQQ	Lebel-sur-Quev	36.64	35	P	P	01 53 40.6	-0.3
	baz=233						
ROSC	El Rosal	36.72	113	P	P	01 53 45.1	+2.7
	comp=Z,2.9nm,0.6s,baz=331,slow=13,SNR=6.2						
ROSC				LR	LR	02 11 03.4	
	comp=Z,220nm,18.2s,baz=342,slow=40						
MATQ	Matagami	36.72	33	P	P	01 53 41.3	-0.2
	baz=232						
SDV	Santo Domingo	38.13	104	P	P	01 53 54.9	+0.8
	comp=Z,8.6nm,0.8s,baz=305,slow=4.9,SNR=8.2						
SDV	Santo Domingo	38.13	104	eP	P	01 53 55.2	+1.1
	comp=Z,17nm,1.0s						
CHGQ	Chibougamau	38.52	35	P	P	01 53 56.4	-0.3
	baz=236						
DLBC	Dease Lake	39.87	342	LR	LR	02 09 55.4	
	comp=Z,1µm,21.7s,baz=143,slow=35						
YKA	Yellowknife Ar	40.88	355	P	P	01 54 15.1	-1.2
	comp=Z,5.3nm,1.1s,baz=168,slow=8.2,SNR=13						
YKA				LR	LR	02 11 37.2	
	comp=Z,69nm,21.2s,baz=180,slow=37						
YKW3	Yellowknife Ar	40.95	355	eP	P	01 54 16.8	0.0
	comp=Z,19nm,1.6s						
TAOE	Nuku Hiva Isla	43.89	229	eT	T	02 41 15.2	
	comp=Z,227nm,0.3s						
SCHQ	Schefferville	45.05	33	LR	LR	02 14 35.5	
	comp=Z,514nm,19.6s,baz=299,slow=37						
GLI	Glacier Island	47.53	335	eP	P	01 55 10.6	+1.0
	comp=Z,32nm,1.2s						
GLI				ePcP	PcP	01 56 41.0	+1.5
EPYK	Eagle Plains	48.18	345	P	P	01 55 14.9	+0.3
	baz=143,SNR=10						
INK	Inuvik	49.08	348	eP	P	01 55 21.8	+0.4
	comp=Z,16nm,1.2s						
INK	Inuvik	49.08	348	eP	P	01 55 21.8	+0.4
INK				pmax	pmax		
	comp=Z,16nm,1.2s						
HDA	Harding Lake	49.69	339	P	P	01 55 27.0	+0.8
	baz=130						
ILAR	Eielson Array	49.91	339	P	P	01 55 27.9	+0.1
	comp=Z,2.9nm,0.8s,baz=144,slow=7.1,SNR=25						
ILAR				LR	LR	02 19 11.2	
	comp=Z,181nm,19.7s,baz=140,slow=39						
MCK	McKinley	49.95	338	eP	P	01 55 29.2	+1.0
	comp=Z,20nm,1.3s						
MCK	McKinley	49.95	338	eP	P	01 55 29.2	+1.0
MCK				pmax	pmax		
	comp=Z,20nm,1.3s						
COLA	College	50.29	339	eP	P	01 55 32.7	+2.0
COLA				pmax	pmax		
	comp=Z,16nm,1.9s						
RKT	Rikitea	51.85	212	eT	T	02 51 07.2	
	comp=Z,3.0nm,0.2s						
PTGA	Pitinga	51.92	109	P	P	01 55 42.6	-1.0
	comp=Z,1.1nm,0.4s,baz=320,slow=9.2,SNR=2.4						
GO01	Chusmiza	56.03	135	eP	P	01 56 16.2	+2.1
	comp=Z,51nm,1.8s						
PPT	Papeete	56.51	229	LR	LR	02 13 53.3	
	comp=Z,177nm,18.5s,baz=356,slow=29						
PPT2	Papeete2	56.52	229	eLR	LR	02 12 37.8	
	comp=Z,326nm,25.2s						
RDOG	Red Dog Mine	57.09	339	eP	P	01 56 22.0	+1.5
	comp=Z,25nm,1.2s						
SFJD	Kangerlussuaq	57.52	23	LR	LR	02 20 46.5	
	comp=Z,345nm,20.7s,baz=245,slow=36						
GSTR	Great Sitkin T	59.67	318	eP	P	01 56 39.4	+0.7
GO02	Mina Guanaco	59.77	139	eP	P	01 56 42.6	+2.6
	comp=Z,52nm,1.6s						
TBI	Tubuai	60.40	224	eLQ	LQ	02 11 54.5	
	comp=Z,320nm,30.8s						
TBI				eLR	LR	02 14 29.8	
	comp=Z,337nm,33.5s						
SUMG	Summit	63.22	18	eP	P	01 57 02.7	-0.2

comp=Z,17nm,1.4s
SUMG Summit 63.22 18 *e*P **P 01 57 02.7 -0.2**
SUMG pmax pmax
comp=Z,17nm,1.4s
CFA Coronel Fontan 65.37 143 P **P 01 57 15.9 -1.2**
comp=Z,5.9nm,0.8s,baz=313,slow=6.4,SNR=7.7
BILL Bilibino 68.37 336 *d i*P **P 01 57 37.8 +2.1**
CPUP Villa Florida 68.56 132 LR LR 02 24 42.2
comp=Z,102nm,18.8s,baz=328,slow=33
PLCA Paso Flores 71.32 151 P **P 01 57 53.3 -1.0**
comp=Z,2.8nm,0.9s,baz=354,slow=8.2,SNR=2.9
PLCA LR LR 02 22 16.3
comp=Z,162nm,18.9s,baz=338,slow=30
PLCA Paso Flores 71.32 151 *e*P **P 01 57 53.3 -1.0**
comp=Z,40nm,2.0s
PLCA Paso Flores 71.32 151 *e*P **P 01 57 53.3 -1.0**
PLCA pmax pmax
comp=Z,40nm,2.0s
SEY Seymchan 75.07 332 P **P 01 58 14.9 -1.1**
comp=Z,1.8nm,0.7s,baz=90,slow=2.0,SNR=2.7
SEY Seymchan 75.07 332⇑ *e*P **P 01 58 17.2 +1.2**
MA2 Magadan 76.93 329⇑ *e*P **P 01 58 29.3 +2.5**
MA2 pmax pmax
comp=Z,12nm,1.2s
TIXI Tiksi 79.06 344 *e*P **P 01 58 38.2 -0.1**
comp=Z,9.2nm,1.0s
TIXI Tiksi 79.06 344⇑ *e*P **P 01 58 36.9 -1.4**
TIXI pmax pmax
comp=Z,9.0nm,1.8s
H11S1 WAKE ISLAND Hy 79.13 286 T T 03 25 46.7
baz=62
H11S2 WAKE ISLAND Hy 79.13 286 T T 03 25 52.3
baz=62
H11S3 WAKE ISLAND Hy 79.14 286 T T 03 25 51.7
baz=62
NB2 NORSAR Subarra 84.11 25 P **P 01 59 05.2 -0.1**
comp=Z,7.1nm,1.1s,baz=305,slow=4.8
NB200 NORSAR Array S 84.11 25 *e*P **P 01 59 05.3 -0.1**
NOA NORSAR Array B 84.11 25 P **P 01 59 05.3 -0.1**
comp=Z,1.4nm,0.8s,baz=304,slow=4.8,SNR=5.5
NOA LR LR 02 35 39.8
comp=Z,168nm,21.4s,baz=295,slow=35
ESDC Sonseca Array 86.47 49 LR LR 02 36 53.5
comp=Z,99nm,19.7s,baz=315,slow=35
NRIK Noril'sk 88.39 355 LR LR 02 41 59.1
comp=Z,188nm,18.0s,baz=48,slow=38
FINES FINESS Array B 89.20 20 LR LR 02 40 07.9
comp=Z,256nm,18.5s,baz=319,slow=36
KLMR Klimovskoe 93.50 15 *e*P P 01 59 44.4 -5.7
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 93.50 15 *e*P P 01 59 44.5 -5.6
KLMR AMP 01 59 53.3
comp=Z,9.0nm,1.2s
DZM Mont Dzumac 94.11 248 *e*LR LR 02 30 04.6
comp=Z,234nm,31.5s
USRK Ussuriysk Ar. 94.44 321 LR LR 02 41 54.1
comp=Z,48nm,18.3s,baz=51,slow=35
MJAR Matsushiro Arr 94.75 312 P **P 01 59 55.1 -1.3**
comp=Z,0.5nm,0.4s,baz=64,slow=5.7,SNR=5.1
MJAR LR LR 02 34 57.5
comp=Z,75nm,21.8s,baz=220,slow=31
MAJO Matsushiro 94.75 312 *e*P **P 01 59 55.1 -1.3**
MAJO Matsushiro 94.75 312 *e*P **P 01 59 55.1 -1.3**
VYHS Vyhne 95.40 32 *e*P **P 01 59 59.0 -0.1**
VYHS Vyhne 95.40 32 *e*P **P 01 59 59.0 -0.1**
KEST Kesra 97.58 47 LR LR 02 43 23.9
comp=Z,83nm,18.8s,baz=290,slow=35
DBIC Dimbokro 99.61 79 LR LR 02 46 41.9
comp=Z,71nm,18.2s,baz=284,slow=36
WMQ Urumqi 113.10 348 *e*PKP **PKiKP 02 05 14.4 +2.2**
WMQ LR LR
comp=Z,120nm,29.3s
WMQ LR LR
comp=Z,340nm,29.0s
WMQ LR LR
comp=Z,190nm,21.5s
LZH Lanzhou 115.00 332 PKP **PKiKP 02 05 14.8 -1.4**
LZH LR LR
comp=Z,210nm,17.2s
KSH Kashi 118.85 357 *e*PKP **PKiKP 02 05 25.6 +2.1**
CD2 Chengdu 119.35 329 Pdif **Pdif 02 01 46.6 +0.3**
WR1 Warramunga Arr 122.10 260 *e*PKPdf **PKPdf 02 05 28.4 -1.6**
WRA Warramunga Arr 122.10 260 PKP **PKPdf 02 05 28.4 -1.6**
comp=Z,2.2nm,1.0s,baz=69,slow=2.3,SNR=4.5
AS31 Alice Springs 123.30 255 *e*PKPdf **PKPdf 02 05 30.1 -2.2**
ASAR Alice Springs 123.31 255 PKP **PKPdf 02 05 30.1 -2.2**
comp=Z,0.6nm,0.5s,baz=76,slow=2.4,SNR=7.6

WEL 23 01:56:48.3,39°S±1°×17°6E±°, h49km±2km, M3.3/61, ML3.6/48, MLv3.3/61, Error ellipse: s-maj=0.0km s-min=0.0km az=80.2, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRHZ	**Matea Rd**	**0.17**	**6**	P	Pn	01 56 56.3	0.0
MRHZ				S	Sn	01 57 02.2	+0.1
BKZ	**Black Stump Fm**	**0.18**	**155**	P	Pn	01 56 56.3	-0.2
BKZ				S	Sn	01 57 02.9	+0.6
HATZ	**Hinemaiaia**	**0.26**	**295**	P	Pn	01 56 57.2	+0.3
HATZ				S	Sn	01 57 03.6	+0.5
NMHZ	**Naumai**	**0.34**	**107**	P	Pn	01 56 58.2	+0.5
MTHZ	**Maungataniwha**	**0.38**	**67**	P	Pn	01 56 58.0	-0.1
MTHZ				S	Sn	01 57 05.8	+0.6
RITZ	**Rihia Road**	**0.42**	**273**	P	Pn	01 56 59.0	+0.5
KWHZ	**Kaweka Forest**	**0.42**	**177**	P	Pn	01 56 58.7	+0.1
KWHZ				S	Sn	01 57 07.1	+1.1
ALRZ	**Allen Road**	**0.44**	**355**	P	Pn	01 56 58.8	0.0
WHTZ	**Whakaora**	**0.48**	**314**	P	Pn	01 56 59.8	+0.6
MCHZ	**McNeill Hill**	**0.50**	**152**	P	Pn	01 57 00.7	+1.2
PRRZ	**Plateau Road**	**0.50**	**360**	P	Pn	01 56 59.6	+0.1
RATZ	**Rangitukua**	**0.50**	**285**	P	Pn	01 56 59.8	+0.3
WPRZ	**Whakapapatarin**	**0.51**	**339**	P	Pn	01 56 59.7	+0.1
ARHZ	**Arapoanui**	**0.54**	**119**	P	Pn	01 57 00.8	+0.9
KATZ	**Kakaramea**	**0.55**	**273**	P	Pn	01 57 00.4	+0.3
RAHZ	**Arahi**	**0.55**	**81**	P	Pn	01 57 00.3	+0.2
BHHZ	**Black Hill Sta**	**0.55**	**208**	P	Pn	01 56 59.9	-0.3
KRVZ	**Karewarewa**	**0.59**	**261**	P	Pn	01 57 00.9	+0.1
WATZ	**Wairara**	**0.59**	**299**	P	Pn	01 57 00.7	+0.1
RTZ	**Ruatahuna**	**0.60**	**50**	P	Pn	01 57 00.4	-0.4
MUGZ	**Murupara**	**0.60**	**30**	P	Pn	01 57 00.3	-0.4
HRRZ	**Handcock Road**	**0.62**	**352**	P	Pn	01 57 01.4	+0.5
TUVZ	**Tukino**	**0.63**	**245**	P	Pn	01 57 01.5	+0.2
WTVZ	**West Tongariro**	**0.64**	**259**	P	Pn	01 57 01.4	+0.2
KRHZ	**Kereru**	**0.64**	**182**	P	Pn	01 57 01.5	+0.2
NGZ	**Ngauruhoe**	**0.64**	**254**	P	Pn	01 57 01.5	+0.2
MOVZ	**Moawhango**	**0.64**	**231**	P	Pn	01 57 01.0	-0.3
WHHZ	**Waihua**	**0.66**	**97**	P	Pn	01 57 02.4	+0.9
RRRZ	**Republican Roa**	**0.67**	**8**	P	Pn	01 57 01.4	-0.2
KUTZ	**Kaahu Road**	**0.68**	**319**	P	Pn	01 57 01.9	+0.2
GRRZ	**Galatos Road**	**0.69**	**341**	P	Pn	01 57 02.4	+0.6
HSRZ	**Hossack Road**	**0.70**	**350**	P	Pn	01 57 02.1	+0.1
DRZ	**Dome Shelter**	**0.70**	**247**	P	Pn	01 57 02.5	+0.2
FWVZ	**Far West T-bar**	**0.70**	**249**	P	Pn	01 57 02.2	0.0
TWVZ	**Taurewa**	**0.75**	**264**	P	Pn	01 57 02.5	-0.1
HLRZ	**Highlands Stat**	**0.75**	**358**	P	Pn	01 57 03.7	+1.0
TARZ	**Mount Tarawera**	**0.77**	**7**	P	Pn	01 57 03.1	+0.1
SNGZ	**Shannon Statio**	**0.77**	**74**	P	Pn	01 57 03.8	+0.9
MTVZ	**Mangateitei**	**0.81**	**242**	P	Pn	01 57 03.6	+0.1
UTU	**Utuhina**	**0.84**	**349**	P	Pn	01 57 04.3	+0.5
PKVZ	**Pokaka**	**0.86**	**250**	P	Pn	01 57 04.3	+0.1
KAHZ	**Kahuranaki**	**0.88**	**155**	P	Pn	01 57 04.6	+0.2
OMRZ	**Omania**	**0.89**	**359**	P	Pn	01 57 04.6	0.0
PNHZ	**Pukenui**	**0.92**	**189**	P	Pn	01 57 05.1	+0.1
URZ	**Urewera**	**0.93**	**37**	P	Pn	01 57 04.4	-0.6
EDRZ	**Edgecumbe**	**0.93**	**17**	P	Pn	01 57 05.0	-0.1
RAGZ	**Rawiri**	**0.94**	**58**	P	Pn	01 57 05.6	+0.4
TLZ	**Tolley Road**	**0.95**	**315**	P	Pn	01 57 05.2	-0.1
KARZ	**Kaharoa**	**0.99**	**353**	P	Pn	01 57 06.1	+0.4
KNZ	**Kokohu**	**1.00**	**92**	P	Pn	01 57 06.1	+0.2
WPHZ	**Waipukurau**	**1.06**	**178**	P	Pn	01 57 06.7	-0.1
PXZ	**Pawanui**	**1.09**	**161**	P	Pn	01 57 06.9	-0.2
TSZ	**Takapari Road**	**1.11**	**197**	P	Pn	01 57 07.5	0.0
RIGZ	**Rimuhau**	**1.11**	**75**	P	Pn	01 57 08.3	+0.8
MWZ	**Matawai**	**1.11**	**53**	P	Pn	01 57 07.5	+0.1
OPRZ	**Ohinepanea**	**1.16**	**6**	P	Pn	01 57 08.4	+0.2
PRGZ	**Paritu Road**	**1.16**	**87**	P	Pn	01 57 09.1	+0.9
MHGZ	**Mahia Peninsul**	**1.19**	**98**	P	Pn	01 57 08.8	+0.3
KMRZ	**Kaimai**	**1.21**	**343**	P	Pn	01 57 08.9	+0.1
WHRZ	**Whale Island**	**1.23**	**22**	P	Pn	01 57 09.8	+0.7
TKGZ	**Te Karaka**	**1.27**	**64**	P	Pn	01 57 10.5	+0.9
TGRZ	**Tauranga**	**1.27**	**355**	P	Pn	01 57 09.7	+0.1
PRHZ	**Porangahau**	**1.28**	**172**	P	Pn	01 57 09.2	-0.5
VRZ	**Vera Road**	**1.28**	**264**	P	Pn	01 57 10.2	+0.4
HIZ	**Hauiti**	**1.30**	**292**	P	Pn	01 57 10.2	+0.3
DVHZ	**Dannevirke**	**1.31**	**188**	P	Pn	01 57 09.3	-0.8
WAZ	**Wanganui**	**1.32**	**235**	P	Pn	01 57 11.3	+0.9
RUGZ	**Raukumara Rang**	**1.44**	**45**	P	Pn	01 57 11.9	-0.2
TOZ	**Tahuroa Road**	**1.45**	**331**	P	Pn	01 57 12.0	0.0
ANWZ	**Angora Road**	**1.46**	**178**	P	Pn	01 57 11.4	-0.7
OHWZ	**Ohakea**	**1.46**	**214**	P	Pn	01 57 13.3	+1.0
POWZ	**Post Office Ro**	**1.47**	**199**	P	Pn	01 57 12.0	-0.4
TWGZ	**Tauwhareparae**	**1.49**	**57**	P	Pn	01 57 13.9	+1.2
PRWZ	**Pori Road**	**1.58**	**192**	P	Pn	01 57 13.6	-0.3
LREZ	**Lake Rotokare**	**1.61**	**253**	P	Pn	01 57 15.1	+0.8
HAZ	**Te Kaha**	**1.66**	**42**	P	Pn	01 57 14.6	-0.2
BFZ	**Birch Farm**	**1.68**	**184**	P	Pn	01 57 13.9	-1.4
DREZ	**Durham Road**	**1.72**	**263**	P	Pn	01 57 17.2	+1.5
PUZ	**Puketiti**	**1.73**	**58**	P	Pn	01 57 15.8	-0.1
MRZ	**Mangatainoka R**	**1.77**	**200**	P	Pn	01 57 15.2	-1.2
TIWZ	**Tintock**	**1.81**	**192**	P	Pn	01 57 15.8	-1.3
KHEZ	**Kahui Hut**	**1.87**	**260**	P	Pn	01 57 19.3	+1.4
PKE	**Pukeiti**	**1.88**	**263**	P	Pn	01 57 19.5	+1.5
WMGZ	**Waiomatatini S**	**1.98**	**54**	P	Pn	01 57 20.1	+0.8
HOWZ	**Holdsworth Sta**	**2.01**	**199**	P	Pn	01 57 17.9	-1.8
OGWZ	**Otaki Gorge**	**2.04**	**207**	P	Pn	01 57 19.0	-1.1
TMWZ	**Te Maipa**	**2.14**	**190**	P	Pn	01 57 19.8	-1.7
MTW	**Mount Morrison**	**2.26**	**197**	P	Pn	01 57 21.1	-2.1
CAW	**Cannon Point**	**2.34**	**205**	P	Pn	01 57 23.6	-0.6
ETAZ	**East Tamaki Re**	**2.35**	**330**	P	Pn	01 57 25.1	+0.8
AWAZ	**Awhitu Peninsu**	**2.38**	**324**	P	Pn	01 57 25.3	+0.6
WIAZ	**Waiheke Island**	**2.42**	**335**	P	Pn	01 57 26.2	+0.8
TRWZ	**Traveller**	**2.45**	**192**	P	Pn	01 57 26.3	+0.4
PAWZ	**Paruwai Farm**	**2.49**	**197**	P	Pn	01 57 24.3	-2.0
EPAZ	**Eden Park BICE**	**2.49**	**328**	P	Pn	01 57 25.9	-0.4
WTAZ	**Waiatarua**	**2.52**	**325**	P	Pn	01 57 27.6	+0.9
MBAZ	**Mutapu North**	**2.52**	**332**	P	Pn	01 57 27.5	+0.8
DUWZ	**D'Urville Isla**	**2.62**	**226**	P	Pn	01 57 27.0	-1.1
RVAZ	**Riverhead Bore**	**2.65**	**327**	P	Pn	01 57 29.7	+1.2
PLWZ	**Palliser**	**2.71**	**198**	P	Pn	01 57 26.7	-2.6
TCW	**Tory Channel**	**2.74**	**216**	P	Pn	01 57 30.2	+0.5
TUWZ	**Tuamarina**	**3.07**	**217**	P	Pn	01 57 32.4	-1.8
NNZ	**Nelson**	**3.20**	**225**	P	Pn	01 57 34.4	-1.7
BSWZ	**Blackbirch Sta**	**3.32**	**215**	P	Pn	01 57 37.1	-0.6
WCZ	**Waipu Caves**	**3.46**	**331**	P	Pn	01 57 40.8	+1.2
QRZ	**Quartz Range**	**3.49**	**237**	P	Pn	01 57 41.0	+1.0
THZ	**Tophouse**	**3.83**	**223**	P	Pn	01 57 42.7	-2.1
OUZ	**Omahuta**	**4.39**	**329**	P	Pn	01 57 53.5	+1.2
GVZ	**Greta Valley S**	**4.71**	**212**	P	Pn	01 57 54.8	-1.9
LTZ	**Lake Taylor**	**4.90**	**218**	P	Pn	01 57 57.1	-2.3

MOS ***23*** *01:59:00.0±1.4, 44°.42N×150°.04E, h33km, mb4.3/2, Error ellipse: s-maj=14.7km s-min=9.8km az=16.4*
SKHL ***23*** *01:59:00.4±0.3, 44°.38N×150°.13E, h44km±3km, mb4.4/5*
JMA ***23*** *01:59:01.9±0.6, 44°.69N×149°.79E, h30km, M4.1*
IDC ***23*** *01:59:08.5±3.5, 44°.38N×149°.64E, h93km±23km, mb3.4/12, mb1 3.5/16, mb1mx3.3/58, mbtmp3.7/16, MS3.1/2, Ms1 3.1/2, ms1mx2.6/22, Error ellipse: s-maj=54.2km s-min=18.1km az=167.0*
ISC 23 01:59:03.4±1.6, 44°.14N±0°.07×149°.87E±0°.09, h57km±13km, n64, σ1°98/72, mb3.8/12, 3C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.80**	**308**	*i*PN	**Pn**	**01 59 28.6**	**-3.4**
KUR				*i* S	**Sn**	**01 59 49.1**	**-4.7**
KUR				pmax	pmax		
comp=Z,231nm,0.4s							
KUR				pmax	pmax		
comp=N,115nm,0.3s							
KUR				pmax	pmax		
comp=E,81nm,0.2s							
KUR				smax	smax		
comp=N,482nm,0.3s							
KUR				smax	smax		
comp=E,264nm,0.2s							
KUR	**Kuril'sk**	**1.80**	**308**	*i* P	**Pn**	**01 59 28.0**	**-4.0**
KUR				AMB	AMB	01 59 30.0	
comp=E,140nm,0.3s							
KUR				*i* S	**Sn**	**01 59 49.0**	**-4.7**
KUR				A	A	01 59 52.0	
comp=E,620nm,0.4s							
KUR				A	A	01 59 52.0	
comp=E,680nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**2.89**	**269**⇑	*i*PN	**Pn**	**01 59 47.0**	**+0.1**
YUK				*i* S	**Sn**	**02 00 22.9**	**+2.5**
YUK				pmax	pmax		
comp=Z,242nm,0.2s							
YUK				pmax	pmax		
comp=N,39nm,0.1s							
YUK				pmax	pmax		
comp=E,16nm,0.1s							
YUK				smax	smax		
comp=E,123nm,0.2s							
YUK				smax	smax		
comp=N,237nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**2.89**	**269**	*i* P	**Pn**	**01 59 47.0**	**+0.1**
YUK				AMB	AMB	01 59 48.0	
comp=N,24nm,0.4s							
YUK				*i* S	**Sn**	**02 00 22.0**	**+1.6**
YUK				A	A	02 00 24.0	
comp=N,324nm,0.4s							
YUK				A	A	02 00 24.0	
comp=N,223nm,0.4s							
LAGR	**Lagunnoye**	**2.94**	**270**	*i* S	**Sn**	**02 00 22.9**	**+1.2**
GRPR	**Tuman**	**2.96**	**269**	*i* PN	**Pn**	**01 59 47.2**	**-0.6**
GRPR				*i* S	**Sn**	**02 00 23.0**	**+0.9**
GRPR				pmax	pmax		
comp=Z,64nm,0.3s							
GRPR				pmax	pmax		
comp=N,37nm,0.1s							
GRPR				smax	smax		
comp=E,197nm,0.3s							
GRPR				smax	smax		
comp=N,220nm,0.5s							
GRPR	**Tuman**	**2.96**	**269**	*i* P	**Pn**	**01 59 47.5**	**-0.3**
GRPR				AMB	AMB	01 59 48.0	
comp=N,64nm,0.4s							
GRPR				*i* S	**Sn**	**02 00 22.7**	**+0.6**
GRPR				A	A	02 00 27.0	
comp=N,220nm,0.5s							
GRPR				A	A	02 00 27.0	
comp=N,197nm,0.5s							
NEM2	**Nemuro 2**	**3.09**	**257**	P	**Pn**	**01 59 48.9**	**-0.7**
NEM2				*e*S	**Sn**	**02 00 24.1**	**-1.2**
GLVR	**Golovnino**	**3.17**	**264**	*i* PN	**Pn**	**01 59 50.7**	**0.0**
GLVR				pmax	pmax		
comp=N,36nm,0.3s							
GLVR				pmax	pmax		
comp=E,48nm,0.3s							
GLVR				pmax	pmax		
comp=Z,108nm,0.3s							
GLVR	**Golovnino**	**3.17**	**264**	*i* P	**Pn**	**01 59 50.0**	**-0.7**
GLVR				AMB	AMB	01 59 51.0	
comp=Z,36nm,0.3s							
GLVR				AMB	AMB	01 59 51.0	
comp=Z,48nm,0.3s							
GLVR				AMB	AMB	01 59 51.0	
comp=Z,108nm,0.3s							
GLVR				*i* S	**Sn**	**02 00 27.0**	**-0.2**
GLVR				A	A	02 00 30.0	
comp=Z,236nm,0.3s							
GLVR				A	A	02 00 30.0	
comp=Z,52nm,0.3s							
JRA	**Rausu**	**3.43**	**268**	P	**Pn**	**01 59 54.8**	**+0.5**
JRA				*e*S	**Sn**	**02 00 34.7**	**+1.0**
JNK	**Nakash**	**3.77**	**263**	P	**Pn**	**01 59 58.6**	**-0.3**
JTKR	**Abashiri--Toko**	**4.30**	**270**	P	**Pn**	**02 00 07.0**	**+0.8**
JAR	**Ashorobuto**	**4.50**	**261**	P	**Pn**	**02 00 09.6**	**+0.6**
JCH	**Churui**	**4.98**	**254**	P	**Pn**	**02 00 15.8**	**+0.2**
JKK2	**Kamakawa 2**	**5.15**	**270**	P	**Pn**	**02 00 19.4**	**+1.6**
JKA	**Kamikawa-asahi**	**5.24**	**272**	*e*P	**Pn**	**02 00 21.6**	**+2.6**
ASAJ	**Asahikawa**	**5.24**	**272**	P	**Pn**	**02 00 21.6**	**+2.6**
comp=Z,4.6nm,0.3s,baz=95,slow=12,SNR=23							
ASAJ				S	**Sn**	**02 01 22.3**	**+4.3**
baz=53,slow=8.3,SNR=1.5							
ASAJ				LR	LR	02 02 35.1	
comp=Z,96nm,21.3s,baz=338,slow=41							
ERM	**Erimo**	**5.36**	**249**⇑	*e*PN	**Pn**	**02 00 23.2**	**+2.5**
JFR	**Furan**	**5.37**	**262**	P	**Pn**	**02 00 23.1**	**+2.2**
JBT2	**Biratori 2**	**5.63**	**259**	P	**Pn**	**02 00 25.1**	**+0.7**
JBT2				*e*S	**Sn**	**02 01 29.4**	**+1.6**
YSS	**Yuzh-Sakhalins**	**5.74**	**302**	*e*PN	**Pn**	**02 00 28.4**	**+2.6**
YSS				pmax	pmax		
comp=Z,20nm,0.6s							
YSS				MLR	MLR		
comp=Z,300nm,13.0s							
YSS				MLR	MLR		
comp=E,300nm,15.0s							
YSS	**Yuzh-Sakhalins**	**5.74**	**302**	*e*P	**Pn**	**02 00 25.0**	**-0.8**
YSS				AMB	AMB	02 00 30.0	
comp=E,20nm,0.6s							
JEW	**Eniwo**	**6.26**	**261**	P	**Pn**	**02 00 34.8**	**+1.7**
JNB	**Noboribetsu**	**6.66**	**259**	P	**Pn**	**02 00 39.0**	**+0.5**
JNB				*e*S	**Sn**	**02 01 52.9**	**0.0**
JKB	**Kayabe**	**6.86**	**254**	P	**Pn**	**02 00 41.4**	**+0.2**
JKB				*e*S	**Sn**	**02 01 55.1**	**-2.7**
JANG	**Nango**	**7.25**	**242**	P	**Pn**	**02 00 45.4**	**-1.2**
JANG				*e*S	**Sn**	**02 02 03.0**	**-4.5**
JTH	**Tanohata**	**7.29**	**238**	*e*S	**Sn**	**02 02 01.7**	**-6.8**
JTM	**Tenmabayashi**	**7.32**	**246**	P	**Pn**	**02 00 47.2**	**-0.4**
JSR	**Shiriuchi**	**7.42**	**253**	P	**Pn**	**02 00 49.5**	**+0.6**
JOSM	**Okushiri--Mats**	**7.88**	**258**	P	**Pn**	**02 00 55.6**	**+0.4**
OFUJ	**Ofunato**	**7.96**	**233**	*e*S	**Sn**	**02 02 21.5**	**-3.3**
JRG	**Rokugo**	**8.37**	**239**	*e*S	**Sn**	**02 02 33.8**	**-1.2**
PETK	**Petropavlovsk-**	**10.36**	**27**	P	**Pn**	**02 01 32.3**	**+3.2**
comp=E,0.3nm,0.3s,baz=222,slow=15,SNR=5.1							
USRK	**Ussuriysk Ar.**	**12.84**	**277**	P	**Pn**	**02 02 03.7**	**+0.7**
comp=E,0.5nm,0.3s,baz=84,slow=13,SNR=7.6							
VLA	**Vladivostok**	**13.07**	**272**⇓	*e*PN	**Pn**	**02 02 06.5**	**+0.4**
VLA				pmax	pmax		
comp=Z,11nm,0.9s							
VLA	**Vladivostok**	**13.07**	**272**	*i* P	**Pn**	**02 02 06.5**	**+0.4**
KLR	**Kul'dur**	**13.43**	**299**	P	**Pn**	**02 02 13.2**	**+2.2**
comp=Z,0.1nm,0.3s,baz=114,slow=14,SNR=3.5							
KLR	**Kul'dur**	**13.43**	**299**⇓	*e*PN	**Pn**	**02 02 09.3**	**-1.7**
KLR				pmax	pmax		
comp=Z,4.0nm,1.5s							
H11N2	**WAKE ISLAND Hy**	**28.19**	**144**	T	T	02 35 56.6	
baz=334,slow=75,SNR=32							
H11N1	**WAKE ISLAND Hy**	**28.20**	**144**	T	T	02 35 57.6	
baz=334,slow=75,SNR=26							
H11N3	**WAKE ISLAND Hy**	**28.20**	**144**	T	T	02 35 57.1	
baz=334,slow=75,SNR=27							
H11S1	**WAKE ISLAND Hy**	**29.20**	**146**	T	T	02 37 19.2	
baz=335,slow=76,SNR=34							
H11S3	**WAKE ISLAND Hy**	**29.21**	**146**	T	T	02 37 12.3	
baz=335,slow=76,SNR=19							
H11S2	**WAKE ISLAND Hy**	**29.22**	**146**	T	T	02 37 19.5	
baz=335,slow=76,SNR=30							
SONM	**Songino Array**	**30.14**	**293**	LR	LR	02 18 05.3	
comp=Z,89nm,19.4s,baz=106,slow=38							
ILAR	**Eielson Array**	**40.01**	**37**	P	**P**	**02 06 33.3**	**+1.2**
comp=Z,0.2nm,0.5s,baz=289,slow=8.5,SNR=2.8							
MKAR	**Makanchi Array**	**46.14**	**298**	P	**P**	**02 07 22.0**	**0.0**
comp=Z,1.3nm,0.6s,baz=74,slow=7.6,SNR=15							
MKAR	**Makanchi Array**	**46.14**	**298**	*e*P	**P**	**02 07 22.4**	**+0.5**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**46.14**	**298**	*i* P	**P**	**02 07 22.4**	**+0.5**
KURK	**Kurchatov**	**46.94**	**305**	P	**P**	**02 07 27.8**	**-0.2**
KURK	**Kurchatov**	**46.94**	**305**	*i* P	**P**	**02 07 27.8**	**-0.2**
KURBB	**Kurchatov Arra**	**47.02**	**304**	P	**P**	**02 07 27.8**	**-0.9**
comp=Z,0.4nm,0.4s,baz=74,slow=8.4,SNR=4.8							
RES	**Resolute Bay**	**54.02**	**17**	P	**P**	**02 08 20.9**	**-0.2**
comp=Z,1.0nm,0.5s,baz=330,slow=8.1,SNR=3.7							
ARU	**Arti**	**55.40**	**318**	P	**P**	**02 08 30.3**	**-1.0**
comp=Z,0.6nm,0.3s,baz=90,slow=6.1,SNR=3.4							
FINES	**FINESS Array B**	**65.41**	**334**	P	**P**	**02 09 38.2**	**-1.3**
comp=Z,1.0nm,0.8s,baz=32,slow=11,SNR=9.7							
NOA	**NORSAR Array B**	**69.93**	**340**	P	**P**	**02 10 06.6**	**-1.4**
comp=Z,0.2nm,0.5s,baz=21,slow=4.8,SNR=3.0							
HFS	**Hagfors**	**70.07**	**338**	P	**P**	**02 10 08.0**	**-0.9**
comp=Z,0.9nm,0.4s,baz=29,slow=3.4,SNR=5.8							
AKASG	**Malin Array Be**	**72.41**	**325**	P	**P**	**02 10 23.2**	**+0.1**
comp=Z,0.8nm,0.4s,baz=37,slow=6.0,SNR=5.0							
CLL	**Collm**	**77.85**	**334**	*i* P	**P**	**02 10 53.7**	**-0.7**
CLL				*i* PcP	**PcP**	**02 11 05.4**	**+1.2**
CLL				Lm	MLR	02 40 00.0	
comp=N,200nm,19.0s							
CLL				Lm	MLR	02 40 00.0	
comp=E,100nm,20.3s							
CLL	**Collm**	**77.85**	**334**	*i* P	**P**	**02 10 53.7**	**-0.7**
CLL				*i*		02 11 05.4	
BRTR	**Keskin Array B**	**78.68**	**315**	P	**P**	**02 10 59.2**	**-0.2**
comp=E,0.4nm,0.6s,baz=46,slow=4.2,SNR=2.7							
GERES	**GERESS Array B**	**79.75**	**332**	P	**P**	**02 11 04.3**	**-0.8**
comp=E,0.2nm,0.4s,baz=91,slow=6.3,SNR=3.3							
TXAR	**Lajitas Array**	**80.79**	**58**	P	**P**	**02 11 11.9**	**+1.0**
comp=E,0.1nm,0.5s,baz=293,slow=3.0,SNR=2.3							

SFS ***23*** *02:04:38.0, 36°.30N×3°.10W, ML3.0, ALBORN NORTE*
MDD ***23*** *02:04:38.7±0.6, 36°.45N×3°.17W, h0km±4km, mbLg2.9/18, Error ellipse: s-maj=4.4km s-min=3.8km az=166.0, PRXIMO*
MDD EMS: MOTRIL.
ISCJB ***23*** *02:04:38.8±0.5, 36°.46N±0°.02×3°.22W±0°.03, h24km±5km, Error ellipse: s-maj=3.6km s-min=2.5km az=164.4*
IGIL ***23*** *02:04:38.8, 36°.43N×3°.18W, h2km, ML2.4*
INMG ***23***

SMIR			S	Sn	02 05 34.7	+0.2
AKLM	**AKL**	**2.02 196**	P	Pn	02 05 13.1	+1.6
AKLM			S	Sn	02 05 35.7	-0.7
EADA	**Adamuz**	**2.05 327**	Pn	Pn	02 05 14.0	+2.1
	0.8nm,0.1s,SNR=59					
EADA			Pg	Pb	02 05 16.5	+1.6
	7.9nm,0.2s,SNR=25					
EADA			Sn	Sn	02 05 36.5	-0.6
	8.8nm,0.2s,SNR=6.7					
EADA			Lg	Lg	02 05 42.8	
	47nm,0.2s,SNR=16					
EMUR	**La Murta**	**2.08 47**	Pn	Pn	02 05 12.0	-0.3
	0.6nm,0.1s,SNR=13					
JBK	**JBK**	**2.17 167**	P	Pn	02 05 14.1	+0.4
JBK			S	Sn	02 05 40.7	+0.4
HORN	**Hornachuelos**	**2.17 311**	P	Pb	02 05 17.8	+0.8
HORN			S	Sb	02 05 47.4	+3.7
ESPR	**Espera**	**2.19 282**	Pn	Pn	02 05 16.9	+3.0
	5.2nm,0.2s,SNR=16					
CHEFC	**Chefchaouen**	**2.21 233**	P	Pn	02 05 16.8	+2.6
CHEFC			S	Sb	02 05 44.7	-0.2
ETRV	**Los Montesinos**	**2.48 50**	Pn	Pn	02 05 20.0	+2.1
	19nm,0.3s,SNR=7.9					
ETOB	**Tobarra**	**2.54 30**	Pn	Pn	02 05 21.1	+2.3
	1.8nm,0.2s,SNR=41					
ETOB			Sn	Sn	02 05 49.8	+0.3
	13nm,0.3s,SNR=6.0					
ETOB			Lg	Lg	02 05 57.2	
	37nm,0.5s,SNR=5.0					
RSA	**Sarsar**	**2.66 235**	P	Pn	02 05 23.8	+3.4
RSA			S	Sn	02 05 55.0	+2.7
LCRM	**LCR**	**3.08 207**	P	Pn	02 05 29.7	+3.5
LCRM			S	Sb	02 06 08.0	-2.1
EMIN	**Mina Concepcio**	**3.09 296**	Pn	Pn	02 05 26.6	+0.5
	0.6nm,0.1s,SNR=55					
EMIN			Sn	Sn	02 06 02.8	0.0
	4.8nm,0.2s,SNR=5.0					
OKGL	**Djebel Kef Gue**	**3.11 96**	Pn	Pn	02 05 27.4	+0.8
	5.2nm,0.1s,SNR=7.9					
OKGL			Sn	Sn	02 06 00.6	-2.9
	43nm,0.3s,SNR=7.9					
PAB	**San Pablo**	**3.23 344**	Pn	Pn	02 05 30.6	+2.4
	3.1nm,0.3s,SNR=7.9					
PAB			Pg	Pg	02 05 39.1	-0.8
	1.2nm,0.2s,SNR=7.9					
PAB			Lg	Lg	02 06 19.9	
	19nm,0.5s,SNR=7.9					
ESDC	**Sonseca Array**	**3.28 349**	Pn	Pn	02 05 30.8	+2.0
	0.1nm,0.2s,baz=172,slow=12,SNR=9.6					
ESDC			Pg	Pb	02 05 39.6	+3.6
	0.3nm,0.2s,baz=167,slow=17,SNR=24					
ESDC			Lg	Lg	02 06 22.6	
	17nm,0.5s,baz=165,slow=28,SNR=20					
IFR	**Ifrane**	**3.34 209**	*e*P	Pn	02 05 32.6	+2.8
IFR			*i* S	Sn	02 06 08.6	-0.5
TDRA	**Tendrara**	**3.53 164**	P	Pn	02 05 34.1	+1.6
TDRA			S	Sn	02 06 15.7	+1.7
ECHE	**Chera**	**3.59 28**	Pn	Pn	02 05 35.3	+2.2
	0.0nm,0.0s,SNR=7.9					
ECHE			Lg	Lg	02 06 31.7	
	11nm,0.5s,SNR=7.9					
CZD	**Col de Zad**	**3.74 205**	P	Pn	02 05 36.7	+1.3
CZD			S	Sn	02 06 21.3	+2.1
PVAQ	**Vaqueiros**	**3.76 286**	*e*Pn	Pn	02 05 35.9	+0.5
PVAQ			*e*Sn	Sn	02 06 18.4	-1.0
PVAQ			A	A	02 06 20.4	
	9.0nm,0.5s					
PVAQ	**Vaqueiros**	**3.76 286**	Pn	Pn	02 05 35.9	+0.5
PVAQ			Sn	Sn	02 06 18.4	-1.0
	9.0nm,0.5s					
PVAQ	**Vaqueiros**	**3.76 286**	P	Pn	02 05 37.1	+1.6
PVAQ			S	Sn	02 06 18.7	-0.7
MD31	**MD31**	**3.81 201**	P	Pn	02 05 37.1	+0.9
MD31			S	Sn	02 06 21.0	+0.4
MDT	**Midelt**	**3.81 198**	P	Pn	02 05 36.1	-0.2
MDT			S	Sn	02 06 21.0	+0.2
EBAD	**Badajoz**	**3.82 308**	Pn	Pn	02 05 37.0	+0.8
	0.2nm,0.1s,SNR=27					
EBAD			Sn	Sn	02 06 19.9	-0.9
	6.0nm,0.2s,SNR=5.0					
EBAD			Lg	Lg	02 06 36.2	
	12nm,0.2s,SNR=5.0					
UCM	**Universidad Co**	**3.85 359**	*e*P	Pg	02 05 51.9	+0.1
UCM			*e*S	Sg	02 06 41.4	-0.4
PBDV	**Barranco-do-Ve**	**3.90 283**	*e*Pn	Pn	02 05 38.5	+1.2
PBDV			*e*Sn	Sn	02 06 22.9	+0.2
PBDV			A	A	02 06 29.9	
	7.3nm,0.4s					
PBDV	**Barranco-do-Ve**	**3.90 283**	Pn	Pn	02 05 38.5	+1.2
PBDV			Sn	Sn	02 06 22.9	+0.2
	7.3nm,0.4s					
PBEJ	**Beja**	**4.06 294**	*e*Pn	Pn	02 05 41.7	+2.2
PBEJ			*e*Sn	Sn	02 06 25.8	-1.0
PBEJ			A	A	02 06 27.4	
	5.5nm,0.3s					
PBEJ	**Beja**	**4.06 294**	Pn	Pn	02 05 41.7	+2.2
PBEJ			Sn	Sn	02 06 25.8	-1.0
	2.8nm,0.3s					
PCVE	**Castro Verde**	**4.07 288**	*e*Pn	Pn	02 05 40.6	+1.0
PCVE			*e*Sn	Sn	02 06 26.9	0.0
PCVE			A	A	02 06 36.0	
	6.0nm,0.5s					
PCVE	**Castro Verde**	**4.07 288**	Pn	Pn	02 05 40.6	+1.0
PCVE			Sn	Sn	02 06 26.9	0.0
	6.0nm,0.5s					
ZHG	**ZHG**	**4.13 225**	P	Pn	02 05 43.4	+2.8
ZHG			S	Sn	02 06 29.0	+0.3
GUD	**Guadarrama**	**4.26 350**	Pn	Pn	02 05 43.7	+1.4
	0.0nm,0.1s,SNR=7.9					
GUD			Pg	Pg	02 05 58.7	-0.9
	3.3nm,0.5s,SNR=7.9					
GUD			Lg	Lg	02 06 52.1	
	4.0nm,0.3s,SNR=6.5					
MESJ	**Messejana**	**4.26 290**	*e*P	Pn	02 05 43.0	+0.7
MESJ			*e*S	Sn	02 06 29.6	-2.1
MESJ			AML	AML	02 06 34.8	
	comp=N,8.2nm,0.2s					
MESJ	**Messejana**	**4.26 290**	Pn	Pn	02 05 43.0	+0.7
MESJ			Sn	Sn	02 06 29.6	-2.1
	comp=N,8.2nm,0.2s					
EPLA	**Plasencia**	**4.27 329**	Pn	Pn	02 05 44.3	+1.8
	comp=N,0.2nm,0.1s,SNR=11					
EPLA			Lg	Lg	02 06 52.7	
	comp=N,4.4nm,0.2s,SNR=6.1					
EIBI	**Ibiza**	**4.41 53**	Pn	Pn	02 05 43.9	-0.4
	comp=N,0.6nm,0.1s,SNR=6.0					
EIBI			Sn	Sn	02 06 32.1	-3.3
	comp=N,4.0nm,0.3s,SNR=5.0					
PMRV	**Marv??o**	**4.46 313**	*e*Pn	Pn	02 05 46.6	+1.5
PMRV			*e*Sg	Sg	02 06 58.2	-3.2
PMRV			A	A	02 07 06.8	
	comp=N,12nm,0.6s					
PMRV	**Marv??o**	**4.46 313**	Pn	Pn	02 05 46.6	+1.5
PMRV			Lg	Lg	02 06 58.2	
	comp=N,12nm,0.6s					
MORF	**Marmelete**	**4.47 283**	*e*Pn	Pn	02 05 47.0	+1.8
MORF	**Marmelete**	**4.47 283**	Pn	Pn	02 05 47.0	+1.8
PTEO	**Sao Teotonio**	**4.57 285**	*e*Pn	Pn	02 05 48.1	+1.5
PTEO			*e*Sn	Sn	02 06 38.8	-0.6
PTEO	**Sao Teotonio**	**4.57 285**	Pn	Pn	02 05 48.1	+1.5
PTEO			Sn	Sn	02 06 38.8	-0.6
PNCL	**Nicolau / Gran**	**4.58 293**	*e*Pn	Pn	02 05 47.7	+1.0
PNCL			*e*Sn	Sn	02 06 38.3	-1.2
PNCL			A	A	02 06 47.5	
	comp=N,2.5nm,0.7s					
PNCL	**Nicolau / Gran**	**4.58 293**	Pn	Pn	02 05 47.7	+1.0
PNCL			Sn	Sn	02 06 38.3	-1.2
	comp=N,2.5nm,0.7s					
PFVI	**Vila Bisbo**	**4.59 280**	*e*Pn	Pn	02 05 48.2	+1.4
PFVI			*e*Sn	Sn	02 06 39.8	+0.1
PFVI			A	A	02 07 02.6	
	comp=N,8.9nm,0.6s					
PFVI	**Vila Bisbo**	**4.59 280**	Pn	Pn	02 05 48.7	+1.9
	comp=N,12nm,0.2s,SNR=43					
PFVI			Sn	Sn	02 06 37.3	-2.4
	comp=N,2.3nm,0.2s,SNR=7.9					
PMTG	**Montargil**	**4.78 305**	*e*Pn	Pn	02 05 50.5	+1.1
PMTG			*e*Sn	Sn	02 06 43.6	-0.9
PMTG			A	A	02 07 14.7	
	comp=N,10nm,0.6s					
PMTG	**Montargil**	**4.78 305**	Pn	Pn	02 05 50.5	+1.1
PMTG			Sn	Sn	02 06 43.6	-0.9
	comp=N,10nm,0.6s					
PCBR	**Castelo Branco**	**4.79 316**	*e*Pn	Pn	02 05 51.1	+1.5
PCBR			*e*Sn	Sn	02 06 43.1	-1.6
PCBR			A	A	02 07 16.3	
	comp=N,9.5nm,0.5s					
PCBR	**Castelo Branco**	**4.79 316**	Pn	Pn	02 05 51.1	+1.5
PCBR			Sn	Sn	02 06 43.1	-1.6
	comp=N,4.8nm,0.5s					
PTOM	**Tomar**	**5.20 309**	*e*Pn	Pn	02 05 56.8	+1.6
PTOM			*e*Sg	Sg	02 07 21.2	-3.9
PTOM			A	A	02 07 33.3	
	comp=N,10nm,0.6s					
PTOM	**Tomar**	**5.20 309**	Pn	Pn	02 05 56.8	+1.6
PTOM			Lg	Lg	02 07 21.2	
	comp=N,5.2nm,0.6s					
MTE	**Manteigas**	**5.23 320**	*e*Pn	Pn	02 05 57.4	+1.8
MTE			*e*Sg	Sg	02 07 20.8	-5.0
MTE			A	A	02 07 35.4	
	comp=N,16nm,0.6s					
MTE	**Manteigas**	**5.23 320**	Pn	Pn	02 05 57.4	+1.8
MTE			Lg	Lg	02 07 20.8	
	comp=N,7.9nm,0.6s					
PMAFR	**Mafra**	**5.45 299**	*e*Pn	Pn	02 06 00.8	+2.2
PCAS	**Casmilo, Conde**	**5.52 312**	*e*Pn	Pn	02 06 02.2	+2.6
PCAS			*e*Sn	Sn	02 07 00.2	-2.6
PCAS			*e*Sg	Sg	02 07 33.3	-1.9
PCAS			A	A	02 07 42.0	
	comp=N,8.9nm,0.6s					
PCAS	**Casmilo, Conde**	**5.52 312**	Pn	Pn	02 06 02.2	+2.6
PCAS			Sn	Sn	02 07 00.2	-2.6
PCAS			Lg	Lg	02 07 33.3	
	comp=N,8.9nm,0.6s					
MVO	**Moncorvo**	**5.59 329**	*e*Pn	Pn	02 06 03.0	+2.4
MVO			*e*Sn	Sn	02 07 03.0	-1.5
MVO			*e*Sg	Sg	02 07 34.5	-2.8
MVO			A	A	02 07 48.2	
	comp=N,9.6nm,0.6s					
MVO	**Moncorvo**	**5.59 329**	Pn	Pn	02 06 02.9	+2.4
	comp=N,0.9nm,0.1s,SNR=10					
MVO			Sn	Sn	02 07 02.5	-2.0
	comp=N,1.9nm,0.2s,SNR=5.0					
MVO			Lg	Lg	02 07 36.2	
	comp=N,3.7nm,0.4s,SNR=7.1					
PVIS	**Viseu**	**5.64 320**	*e*Pn	Pn	02 06 02.9	+1.6
PVIS			*e*Sn	Sn	02 07 04.7	-1.0
PVIS			A	A	02 08 04.4	
	comp=N,4.6nm,0.7s					
PVIS	**Viseu**	**5.64 320**	Pn	Pn	02 06 02.9	+1.6
PVIS			Sn	Sn	02 07 04.7	-1.0
	comp=N,2.3nm,0.7s					
ETOS	**Mallorca**	**5.77 53**	Pn	Pn	02 06 05.2	+2.2
	comp=N,0.1nm,0.0s,SNR=5.2					
POLO	**Lamas de Olo**	**6.09 325**	*e*Pn	Pn	02 06 09.9	+2.3
POLO	**Lamas de Olo**	**6.09 325**	Pn	Pn	02 06 09.9	+2.3
ECAL	**Calabor**	**6.14 334**	Pn	Pn	02 06 12.0	+3.8
	comp=N,0.2nm,0.1s,SNR=7.9					
ECAL			Sn	Sn	02 07 16.2	-1.9
	comp=N,1.6nm,0.3s,SNR=7.9					
ECAL			Lg	Lg	02 07 52.1	
	comp=N,3.6nm,0.4s,SNR=7.9					
PCAB	**Cabril**	**6.47 326**	*e*Pn	Pn	02 06 14.8	+2.2
PCAB	**Cabril**	**6.47 326**	Pn	Pn	02 06 14.8	+2.2
ELOB	**Lobios**	**6.61 326**	Pn	Pn	02 06 16.7	+2.1
	comp=N,0.0nm,0.1s,SNR=7.9					
ELOB			Sn	Sn	02 07 24.7	-5.0
	comp=N,1.7nm,0.3s,SNR=7.9					
PGAV	**Gavieira, Arco**	**6.78 326**	*e*Pn	Pn	02 06 19.6	+2.6
PGAV	**Gavieira, Arco**	**6.78 326**	Pn	Pn	02 06 19.6	+2.6

ISK ***23*** *02:10:11.0, 40°.12N×40°.75E, h5km, ML2.1/8*
TIF ***23*** *02:10:12.3, 40°.15N×40°.73E, h12km±3km*
DDA ***23*** *02:10:12.1, 40°.12N×40°.70E, h7km±5km, ML2.1*
ISC 23 02:10:12.2±1.2, 40°.13N±0°.02×40°.72E±0°.03, h6km±12km, n22, σ0§84/31, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KRIK	**Erzurum-spir**	**0.26**	**37**	*i* P		**Pb**	**02 10 18.5**	**-1.1**
KRIK				*i* S		**Sb**	**02 10 23.4**	**-1.0**
AKDA	**Akdag**	**0.49**	**93**	*i* P		**Pb**	**02 10 23.0**	**-0.5**
BAYT	**Aydintepe-Bayb**	**0.52**	**301**	PG		**Pg**	**02 10 22.9**	**+0.6**
ECAT	**Cat-ERZURUM**	**0.56**	**159**	*i* P		**Pb**	**02 10 23.3**	**-1.2**
ECAT				*i* S		**Sb**	**02 10 32.5**	**-0.3**
YEDI	**Yedisu-Bingol**	**0.70**	**191**	PG		**Pg**	**02 10 25.3**	**-0.5**
YEDI				SG		**Sb**	**02 10 36.7**	**-0.3**
KARO	**Karliova-Bingo**	**0.86**	**163**	PG		**Pg**	**02 10 28.2**	**-0.5**
KARO				SG		**Sb**	**02 10 40.9**	**-0.5**
KOPR	**Koprukoy-ERZUR**	**0.88**	**99**	PG		**Pb**	**02 10 29.2**	**-0.8**
EUZM	**Uzumlu**	**0.89**	**242**	*i* P		**Pg**	**02 10 29.2**	**-0.2**
EUZM				IAML_P				
	comp=Z,661nm,0.2s							
ERZN	**Erzincan**	**0.94**	**235**	PG		**Pg**	**02 10 30.5**	**+0.2**
MACK	**Trabzon**	**1.09**	**319**	*i* P		**Pn**	**02 10 33.8**	**-0.3**
MACK				*i* S		**Sn**	**02 10 50.2**	**+0.7**
KELT	**Kelkit**	**1.12**	**272**	*i* P		**Pg**	**02 10 33.7**	**-0.1**
KELT				*i* S		**Sb**	**02 10 49.8**	**+0.7**
KTUT	**Trabzon**	**1.12**	**320**	PN		**Pg**	**02 10 34.0**	**+0.2**
BNGB	**Bingl**	**1.14**	**182**	PN		**Pg**	**02 10 32.7**	**-1.3**
DBAD	**Bademkaya**	**1.16**	**39**	*i* P		**Pg**	**02 10 33.5**	**-1.0**
DBAD				IAML_P				
	comp=Z,379nm,0.2s							
BNGL	**BINGOL**	**1.22**	**164**	*i* P		**Pn**	**02 10 37.5**	**+1.4**
DAGI	**Agillar**	**1.31**	**43**	*i* P		**Pg**	**02 10 37.8**	**+0.3**
DAGI				IAML_P				
	comp=Z,140nm,0.1s							
EATA	**Eleskirt**	**1.39**	**100**	*i* P		**Pg**	**02 10 40.6**	**+1.8**
EATA				IAML_P				
	comp=Z,155nm,0.3s							
DBOC	**Borcka**	**1.41**	**30**	*i* P		**Pb**	**02 10 38.7**	**-0.3**
DBOC				*i* S		**Sg**	**02 10 57.8**	**+0.2**
BCA	**Borcka**	**1.48**	**27**	PN		**Pn**	**02 10 39.7**	**+0.2**
MUSM	**Mu-Merkez**	**1.53**	**156**	*i* P		**Pg**	**02 10 41.1**	**-0.5**
MUSM				*i* S		**Sg**	**02 11 03.1**	**+1.8**
MUSM				IAML_P				
	comp=Z,149nm,0.4s							
BATM	**Batumi**	**1.65**	**26**	PN		**Pb**	**02 10 42.5**	**-0.6**
BATM	**Batumi**	**1.65**	**26**	P		**Pb**	**02 10 42.8**	**-0.3**
BATM				S		**Sg**	**02 11 04.8**	**-0.4**

ISCJB ***23*** *02:26:41.7±0.4, 47°.53N±0°.05×154°.27E±0°.06, h31km, mb4.3/49, MS4.0/1, Error ellipse: s-maj=8.4km s-min=3.3km az=137.5*
MOS ***23*** *02:26:44.5±1.1, 47°.67N×154°.17E, h51km, mb4.3/6, Error ellipse: s-maj=10.4km s-min=7.3km az=79.0*
SKHL ***23*** *02:26:44.9±0.6, 47°.50N×154°.43E, h64km±6km, mb5.3/4, msh4.8/3*
IDC ***23*** *02:26:46.0±2.9, 47°.71N×154°.00E, h49km±26km, mb3.7/17, mb1 3.9/20, mb1mx3.8/42, mbtmp4.0/20, ML4.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/51, Error ellipse: s-maj=22.9km s-min=13.3km az=157.0*
NEIC ***23*** *02:26:46.1±1.2, 47°.73N×154°.04E, h47km±8km, mb4.5/25, Error ellipse: s-maj=24.6km s-min=13.8km az=145.0*
ISC 23 02:26:43.3±0.6, 47°.53N±0°.07×154°.36E±0°.07, h31km, n140, σ1§49/140, mb4.4/49, 19C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.36**	**19**	*e*PN		**Pn**	**02 27 36.0**	**+2.4**
SKR				*e*S		**Sn**	**02 28 13.8**	**+1.4**
SKR				pmax		pmax		
	comp=Z,201nm,0.6s							
SKR				pmax		pmax		
	comp=Z,500nm,2.8s							
SKR				smax		smax		
	comp=E,275nm,0.5s							
SKR				smax		smax		
	comp=N,603nm,0.7s							
SKR				MLR		MLR		
	comp=Z,300nm,11.0s							
SKR	**Severo-Kuril's**	**3.36**	**19**	*e*P		**Pn**	**02 27 34.7**	**+1.1**
SKR				AMB		AMB	02 27 37.0	
	comp=Z,201nm,0.6s							
SKR				AMB		AMB	02 27 37.0	
	comp=Z,500nm,3.0s							
SKR				*e*S		**Sn**	**02 28 12.3**	**-0.1**
SKR				A		A	02 28 15.5	
	comp=Z,620nm,3.0s							
SKR				A		A	02 28 15.5	
	comp=Z,680nm,3.0s							
SKR				A		A	02 28 22.0	
	comp=Z,603nm,0.6s							
SKR				A		A	02 28 22.0	
	comp=Z,275nm,0.6s							
PAU	**Pauzhetka**	**4.25**	**21**	*e*P		**Pn**	**02 27 47.8**	**+1.9**
PAU				AMB		AMB	02 27 52.8	
	comp=Z,126nm,0.8s							
PAU				A		A	02 28 35.0	
	comp=Z,224nm,0.8s							
PAU				A		A	02 28 35.0	
	comp=Z,364nm,0.8s							
PAU				*e*S		**Sn**	**02 28 35.2**	**+0.8**
KUR	**Kuril'sk**	**5.04 245**		*e*PN		**Pn**	**02 27 59.5**	**+2.8**
KUR				*e*S		**Sn**	**02 28 57.0**	**+3.1**
KUR				pmax		pmax		
	comp=Z,90nm,0.5s							
KUR				pmax		pmax		
	comp=N,27nm,0.3s							
KUR				pmax		pmax		
	comp=E,36nm,0.3s							
KUR				smax		smax		
	comp=N,290nm,0.6s							
KUR				smax		smax		
	comp=E,140nm,0.6s							
KUR	**Kuril'sk**	**5.04 245**		*e*P		**Pn**	**02 27 58.6**	**+1.9**
KUR				AMB		AMB	02 28 02.2	
	comp=E,233nm,3.0s							
KUR				AMB		AMB	02 28 06.0	
	comp=E,90nm,0.5s							
KUR				*e*S		**Sn**	**02 28 53.3**	**-0.6**
KUR				A		A	02 28 59.3	
	comp=E,657nm,2.0s							
KUR				A		A	02 28 59.3	
	comp=E,582nm,2.0s							
KUR				A		A	02 29 18.0	
	comp=E,290nm,0.6s							
KUR				A		A	02 29 18.0	
	comp=E,140nm,0.6s							
PEA0B	**Petropavlovsk-**	**5.98**	**20**	*e*Pn		**Pn**	**02 28 10.9**	**+1.3**
PETK	**Petropavlovsk-**	**5.98**	**20**	P		**Pn**	**02 28 11.1**	**+1.5**
	comp=E,4.0nm,0.3s,baz=187,slow=10,SNR=44							
PETK				S		**Sb**	**02 29 34.4**	**-3.3**
	baz=139,slow=17,SNR=1.0							
PETK				LR		LR	02 30 35.9	
	comp=E,252nm,18.1s,baz=192,slow=39							
PEA1	**Petropavlovsk-**	**5.99**	**20**	*e*Pn		**Pn**	**02 28 11.1**	**+1.4**
PET	**Petropavlovsk**	**6.15**	**25**	*e*Pn		**Pn**	**02 28 12.8**	**+0.9**
PET	**Petropavlovsk**	**6.15**	**25**	*e*PN		**Pn**	**02 28 12.2**	**+0.3**
PET	**Petropavlovsk**	**6.15**	**25**	*e*P		**Pn**	**02 28 13.8**	**+1.9**
PET				AMB		AMB	02 28 16.5	
	comp=E,600nm,4.0s							
PET				AMB		AMB	02 28 22.7	
	comp=E,40nm,0.5s							
PET				*e*S		**Sn**	**02 29 21.2**	**+0.1**
PET				A		A	02 29 29.2	
	comp=E,73nm,0.7s							
PET				A		A	02 29 29.2	
	comp=E,89nm,0.7s							
PET				A		A	02 29 30.4	
	comp=E,560nm,4.0s							
PET				A		A	02 29 30.4	
	comp=E,490nm,4.0s							
YUK	**Yuzh-Kuril'sk**	**6.89 243**⇑		*e*PN		Pn	02 28 27.1	+5.0
YUK	**Yuzh-Kuril'sk**	**6.89 243**		*e*P		**Pn**	**02 28 24.0**	**+1.9**
YUK				AMB		AMB	02 28 28.9	
	comp=E,203nm,3.0s							
YUK				*e*S		**Sn**	**02 29 38.2**	**-1.2**
YUK				A		A	02 29 43.1	
	comp=E,430nm,3.0s							
YUK				A		A	02 29 43.1	
	comp=E,170nm,3.0s							
GRPR	**Tuman**	**6.97 243**		*e*rx		rx	02 29 49.0	
GLVR	**Golovnino**	**7.26 242**		*e*rx		rx	02 29 58.0	
YSS	**Yuzh-Sakhalins**	**7.92 270**		*e*PN		**Pn**	**02 28 37.8**	**+1.6**
YSS				*e*S		**Sn**	**02 30 07.1**	**+2.5**
YSS				pmax		pmax		
	comp=Z,20nm,0.7s							
YSS				MLR		MLR		
	comp=Z,200nm,12.0s							
YSS	**Yuzh-Sakhalins**	**7.92 270**		*e*P		**Pn**	**02 28 38.8**	**+2.6**
YSS				AMB		AMB	02 28 39.0	
	comp=Z,20nm,0.7s							
ASAJ	**Asahikawa**	**8.89 252**		P		**Pn**	**02 28 52.4**	**+2.8**
	comp=Z,1.5nm,0.3s,baz=96,slow=13,SNR=6.7							
ERM	**Erimo**	**9.68 239**		*e*Pn		**Pn**	**02 29 01.4**	**+1.1**
ERM	**Erimo**	**9.68 239**⇑		*e*PN		**Pn**	**02 29 02.3**	**+1.9**
NKL	**Nikolayevsk**	**10.39 308**		*c i*PN		**Pn**	**02 29 13.3**	**+3.3**
NKL				pmax		pmax		
	comp=Z,5.0nm,0.7s							
NKL	**Nikolayevsk**	**10.39 308**		*e*P		**Pn**	**02 29 13.3**	**+3.3**
NKL				AMB		AMB	02 29 15.6	
	comp=Z,5.0nm,0.7s							
MA2	**Magadan**	**12.25 351**		P		**Pn**	**02 29 34.2**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=100,slow=3.2,SNR=5.0							
MA2	**Magadan**	**12.25 351**‖		*e*PN		**Pn**	**02 29 37.0**	**+1.5**
MA2				pmax		pmax		
	comp=Z,17nm,1.7s							
MA2	**Magadan**	**12.25 351**		*e*P		**Pn**	**02 29 37.0**	**+1.5**
EKMR	**Ekimchan**	**14.73 300**		*e*P		**Pn**	**02 30 10.0**	**+0.6**
EKMR				AMB		AMB	02 30 19.9	
	comp=Z,7.0nm,0.8s							
KLR	**Kul'dur**	**15.11 285**		P		**P**	**02 30 19.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=88,slow=12,SNR=12							
KLR	**Kul'dur**	**15.11 285**		*e*P		**P**	**02 30 19.0**	**-0.2**
USRK	**Ussuriysk Ar.**	**15.92 266**		P		**Pn**	**02 30 23.7**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=78,slow=13,SNR=3.7							
MAJO	**Matsushiro**	**16.23 233**		*e*Pn		**Pn**	**02 30 26.7**	**-2.2**
MAJO	**Matsushiro**	**16.23 233**		*e*P		**Pn**	**02 30 26.7**	**-2.2**
MAT	**Matsushiro**	**16.23 233**		P		**Pn**	**02 30 28.2**	**-0.7**
MAT				*e*S		**Sn**	**02 33 24.2**	**-3.7**
MJAR	**Matsushiro Arr**	**16.23 233**		P		**Pn**	**02 30 26.7**	**-2.2**
	comp=Z,0.0nm,0.3s,baz=33,slow=12,SNR=6.6							
BMKR	**Bomnak**	**17.49 304**		*e*P		**Pn**	**02 30 44.0**	**-0.6**
BMKR				AMB		AMB	02 30 49.0	
	comp=Z,70nm,0.9s							
ZEA	**Zeya**	**18.21 300**		*e*P		**P**	**02 30 59.7**	**+6.2**
ZEA	**Zeya**	**18.21 300**		*e*rx		rx	02 30 59.7	
KROS	**Kirovskiy**	**18.49 302**		*e*P		**Pn**	**02 30 59.0**	**+2.1**
KROS				AMB		AMB	02 30 59.9	
	comp=Z,5.0nm,0.4s							
BILL	**Bilibino**	**21.45**	**12**	*i* P		**P**	**02 31 25.1**	**-3.5**
BILL				*i*			02 31 46.9	
BILL				pmax		pmax		
	comp=Z,2.0nm

comp=Z,0.7nm,0.4s,baz=67,slow=5.5,SNR=3.0
WMQ Urumqi 45.43 291 *e*P **P 02 35 00.3 +1.1**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,98nm,4.5s
WMQ LR LR
comp=N,230nm,28.5s
WMQ LR LR
comp=E,550nm,18.7s
WMQ LR LR
comp=Z,200nm,23.5s
MK31 Makanchi Array 47.34 297 *e*P **P 02 35 12.3 -1.6**
comp=Z,1.6nm,0.9s
MK31 Makanchi Array 47.34 297 *e*P **P 02 35 12.4 -1.6**
MK31 pmax pmax
comp=Z,2.0nm,0.9s
MK32 Makanchi Array 47.34 297 *e*P **P 02 35 12.3 -1.7**
MKAR Makanchi Array 47.34 297 P **P 02 35 12.3 -1.7**
comp=Z,1.7nm,0.8s,baz=68,slow=7.6,SNR=12
KURK Kurchatov 47.64 304 *e*P **P 02 35 14.3 -1.9**
comp=Z,3.4nm,0.6s
KURK Kurchatov 47.64 304⇑*e*P **P 02 35 14.5 -1.7**
KURK pmax pmax
comp=Z,4.0nm,0.8s
KURK Kurchatov 47.64 304 *e*P **P 02 35 14.5 -1.7**
YKA Yellowknife Ar 49.79 37 P **P 02 35 32.9 +0.3**
comp=Z,0.7nm,0.6s,baz=309,slow=6.8,SNR=3.3
YKB5 Yellowknife Ar 49.79 37 *e*P **P 02 35 32.9 +0.3**
RES Resolute Bay 49.82 19 P **P 02 35 32.3 -0.4**
comp=Z,2.7nm,0.9s,baz=331,slow=10,SNR=3.5
RES Resolute Bay 49.82 19 *e*P **P 02 35 32.3 -0.4**
comp=Z,11nm,1.4s
SHL Shillong 53.24 269 *e*P **P 02 35 58.4 -0.7**
comp=Z,16nm,1.3s
SHL Shillong 53.24 269 *e*P **P 02 35 58.4 -0.7**
SHL pmax pmax
comp=Z,16nm,1.3s
CM31 Chiang Mai Arr 53.38 257 *e*P **P 02 35 59.1 -0.8**
comp=Z,31nm,1.6s
CMAR Chiang Mai Arr 53.38 257 P **P 02 35 59.1 -0.8**
comp=Z,1.3nm,0.4s,baz=36,slow=8.3,SNR=5.2
CMAR Chiang Mai Arr 53.38 257 *e*P **P 02 36 01.0 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
AAK Ala-Archa 54.24 296⇑*e*P **P 02 36 04.6 -1.6**
AAK pmax pmax
comp=Z,1.0nm,0.7s
AAK Ala-Archa 54.24 296 *e*P **P 02 36 04.6 -1.6**
KSH Kashi 55.14 293 *e*P **P 02 36 14.4 +1.7**
PLID Pearl Lake 58.53 56 *e*P **P 02 36 38.3 +1.5**
comp=Z,14nm,1.6s
ABKAR Akbulak array 58.58 310 *e*P **P 02 36 34.9 -1.9**
comp=Z,5.8nm,1.6s
SUMG Summit 59.86 4 *e*P **P 02 36 45.6 -0.2**
comp=Z,7.6nm,0.9s
SUMG Summit 59.86 4 *i*P **P 02 36 44.5 -1.3**
SUMG pmax pmax
comp=Z,18nm,0.9s
SUMG Summit 59.86 4 *i*P **P 02 36 44.5 -1.3**
comp=Z,18nm,0.9s
NIL Nilore 60.46 289 *e*P **P 02 36 50.0 -0.1**
comp=Z,9.7nm,0.6s
NIL Nilore 60.46 289 *e*P **P 02 36 50.0 -0.1**
NIL pmax pmax
comp=Z,10.0nm,0.6s
NVAR Mina Array Bea 61.32 63 P **P 02 36 57.4 +1.3**
comp=Z,0.4nm,0.6s,baz=294,slow=6.8,SNR=3.6
PDAR Pinedale Array 63.60 55 P **P 02 37 12.4 +1.1**
comp=Z,0.5nm,0.8s,baz=326,slow=2.1,SNR=4.5
FINES FINESS Array B 63.69 335 P **P 02 37 09.6 -1.6**
comp=Z,1.4nm,0.4s,baz=37,slow=7.5,SNR=51
NB2 NORSAR Subarra 67.76 342 P **P 02 37 36.5 -1.0**
comp=Z,0.3nm,0.5s,baz=28,slow=6.9
NOA NORSAR Array B 67.76 342 P **P 02 37 36.4 -1.0**
comp=Z,0.6nm,0.6s,baz=30,slow=6.8,SNR=5.3
AKASG Malin Array Be 71.36 327 P **P 02 37 58.3 -1.5**
comp=Z,0.6nm,0.3s,baz=34,slow=6.6,SNR=3.7
AS31 Alice Springs 73.22 200 *e*P **P 02 38 11.7 +0.6**
comp=Z,2.0nm,1.3s
ASAR Alice Springs 73.22 200 P **P 02 38 11.7 +0.5**
comp=Z,0.9nm,0.9s,baz=10,slow=4.6,SNR=6.0
BUR08 Bucovina Ar. S 75.38 327 *e*P **P 02 38 22.9 -0.7**
comp=Z,7.7nm,1.6s
BURAR Bucovina Array 75.40 327⇑*i*P **P 02 38 23.7 -0.1**
BURAR Bucovina Array 75.40 327⇑P **P 02 38 23.7 -0.1**
DPC Dobruska-Polom 76.00 334 *e*P **P 02 38 27.3 +0.2**
DPC *e* 02 48 47.5
DPC Dobruska-Polom 76.00 334 *e*P **P 02 38 27.3 +0.2**
CLL Collm 76.10 336 *i*P **P 02 38 25.7 -1.9**
comp=Z,5.0nm,0.6s
CLL Collm 76.10 336 *i*P **P 02 38 25.7 -1.9**
CLL pmax pmax
comp=Z,5.0nm,0.6s
TXAR Lajitas Array 76.37 62 P **P 02 38 31.0 +1.4**
comp=Z,0.8nm,0.5s,baz=299,slow=4.7,SNR=12
HHAR Hobbs 76.66 50 *e*P **P 02 38 32.2 +1.1**
comp=Z,4.9nm,1.0s
PRU Pruhonice 76.85 335 *e*P **P 02 38 31.7 -0.2**
PRU Pruhonice 76.85 335 *e*P **P 02 38 31.7 -0.2**
VYHS Vyhne 76.85 331 *e*P **P 02 38 31.8 -0.1**
VYHS Vyhne 76.85 331 *e*P **P 02 38 31.8 -0.1**
MLR Muntele Rosu 76.91 326⇑*i*P **P 02 38 32.6 +0.2**
MLR Muntele Rosu 76.91 326⇑P **P 02 38 32.6 +0.2**
VOIR 77.29 326⇑*i*P **P 02 38 34.4 -0.2**
VOIR 77.29 326⇑P **P 02 38 34.4 -0.2**
ARR Arges 77.51 326⇑*i*P **P 02 38 36.8 +1.1**
KHC Kasperske Hory 77.90 335 *e*P **P 02 38 37.1 -0.7**
comp=Z,2.5nm,1.0s
KHC Kasperske Hory 77.90 335 *e*P **P 02 38 37.1 -0.7**
KHC pmax pmax
comp=Z,3.0nm,1.0s
KHC Kasperske Hory 77.90 335 *e*P **P 02 38 37.8 0.0**
GERES GERESS Array B 78.12 335 P **P 02 38 38.6 -0.5**
comp=Z,1.0nm,0.5s,baz=33,slow=6.4,SNR=15
GZR Gura Zlata 78.18 327⇑*i*P **P 02 38 38.9 -0.6**
GZR Gura Zlata 78.18 327⇑P **P 02 38 38.9 -0.6**
CONA Conrad Observa 78.29 333 *e*P **P 02 38 40.2 +0.1**
comp=Z,1.9nm,0.6s
BR131 Keskin Array S 78.39 317 *e*P **P 02 38 40.5 -0.4**
comp=Z,4.0nm,1.1s
BRTR Keskin Array B 78.39 317 P **P 02 38 40.1 -0.7**
comp=Z,1.7nm,0.8s,baz=56,slow=3.8,SNR=10
BRTR Keskin Array B 78.39 317 *e*P **P 02 38 40.9 0.0**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BZS Buzias 78.40 328⇑*i*P **P 02 38 40.4 -0.2**
BZS Buzias 78.40 328⇑P **P 02 38 40.4 -0.2**
MOA Molln 78.85 334 *e*P **P 02 38 43.1 +0.1**
comp=Z,2.0nm,0.8s
SOKA Soboth 79.66 333 *e*P **P 02 38 47.5 -0.2**
comp=Z,1.9nm,0.6s
KBA Koelnbreinsper 79.81 334 *e*P **P 02 38 49.0 +0.5**
comp=Z,6.3nm,0.6s
WATA Walderalm 80.09 335 *e*P **P 02 38 50.3 +0.3**
comp=Z,3.1nm,0.5s,SNR=6.0
WTTA Wattenberg 80.14 335 *e*P **P 02 38 50.9 +0.6**
comp=Z,8.7nm,0.6s,SNR=9.0
RETA Reutte 80.18 336 *e*P **P 02 38 50.7 +0.3**
comp=Z,2.9nm,0.7s,SNR=5.1
MOTA Moosalm 80.22 336 *e*P **P 02 38 51.0 +0.3**
comp=Z,2.0nm,0.5s,SNR=5.5
SQTA Sankt Quirin 80.30 335 *e*P **P 02 38 51.4 +0.3**
comp=Z,4.1nm,0.8s
VTS Vitosha 80.38 326 *e*P **P 02 38 51.5 -0.2**
comp=Z,5.8nm,0.7s
VTS Vitosha 80.38 326⇑*i*P **P 02 38 51.4 -0.2**
VTS Vitosha 80.38 326⇑P **P 02 38 51.4 -0.2**
TUE Stuetta 81.50 336 *e*P **P 02 38 57.8 +0.2**
comp=Z,5.2nm,0.9s
RAYN Ar Rayn 84.79 299 *e*P **P 02 39 14.4 -0.4**
comp=Z,15nm,1.9s
RAYN Ar Rayn 84.79 299 *e*P **P 02 39 14.4 -0.4**
RAYN pmax pmax
comp=Z,15nm,1.9s
CPUP Villa Florida 147.34 61 PKPbc **PKPbc 02 46 23.9 +0.3**
comp=Z,3.6nm,1.0s,baz=315,slow=1.4,SNR=2.5

*ISK **23** 02:34:00.2, 38°.39N×38°.85E, h5km, ML2.4/4*
*DDA **23** 02:34:01.8, 38°.34N×38°.90E, h7km±2km, ML3.0*
ISC 23 02:34:01.5±1.2, 38°.36N±0°.04×38°.88E±0°.03, h10km±10km, n13, σ0°77/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.33**	**86**	PG	**Pg**	**02 34 07.9**	**-0.3**
SVRC				SG	**Sg**	**02 34 13.1**	**+0.4**
AKCD	**Akcadag**	**0.76**	**266**	*i* P	**Pb**	**02 34 17.3**	**+0.4**
AKCD				*i* S	**Sn**	**02 34 28.8**	**-1.2**
AKCD				IAML_P			
	comp=Z,4μm,0.2s						
HEKM	**Malatya_Hekimh**	**0.89**	**306**	*i* P	**Pn**	**02 34 19.8**	**-0.5**
HEKM				IAML_P			
	comp=Z,1μm,0.2s						
URFA	**Urfa**	**0.92**	**183**	PG	**Pb**	**02 34 19.2**	**-0.4**
URFA				SG	**Sb**	**02 34 32.0**	**+0.2**
KEMA	**Kemaliye**	**0.96**	**342**	*i* P	**Pb**	**02 34 20.5**	**+0.1**
KEMA				*i* S	**Sn**	**02 34 35.9**	**+0.9**
ATAB	**Bozova**	**1.00**	**208**	*i* P	**Pn**	**02 34 22.5**	**+0.8**
ATAB				IAML_P			
	comp=Z,6μm,0.1s						
DIYA	**Diyarbakir**	**1.07**	**114**	*i* P	**Pn**	**02 34 22.5**	**-0.1**
DIYA				*i* S	**Sn**	**02 34 37.6**	**+0.1**
DIYA				IAML_P			
	comp=Z,2μm,0.2s						
DYBB	**Diyarbakir**	**1.07**	**112**	PN	**Pg**	**02 34 21.7**	**-0.4**
DARE	**Darende-Malaty**	**1.12**	**281**	PN	**Pg**	**02 34 21.4**	**-1.6**
CUKAN	**kangal_SIVAS**	**1.46**	**311**	*i* P	**Pg**	**02 34 30.4**	**+0.8**
SURC	**SANLIURFA_SURC**	**1.49**	**188**	*i* P	**Pg**	**02 34 30.2**	**+0.1**
SURC				*i* S	**Sg**	**02 34 50.5**	**+1.0**
SURC				IAML_P			
	comp=Z,184nm,0.1s						
MAZI	**Mazidag**	**1.53**	**125**	PN	**Pb**	**02 34 29.5**	**-0.5**
KMRS	**Kahramanmaras**	**1.78**	**242**	PN	**Pn**	**02 34 32.3**	**-0.1**

ROM 23 02:36:06.7±0.1, 44°.199N±0°.007×10°.178E±0°.007, h10km, ML0.7/1, Error ellipse: s-maj=0.8km s-min=0.5km az=193.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T0912	**Minucciano (LU**	**0.04**	**143**	P	Pg	02 36 08.9	+0.2
T0912				S	Sg	02 36 10.1	+0.1
T0911	**Castelpoggio (**	**0.12**	**221**	P	Pg	02 36 10.1	+0.6
T0911				S	Sg	02 36 12.2	+0.7
VLC	**Villacollemand**	**0.15**	**105**	P	Pg	02 36 11.2	+1.0
VLC				S	Sg	02 36 13.5	+1.0
SARO	**Sassorosso**	**0.16**	**95**	P	Pg	02 36 10.9	+0.7
SARO				S	Sg	02 36 13.6	+0.8
SARO				AML	AML		
	comp=E,42μm,1.0s						
SARO				AML	AML		
	comp=N,46μm,0.1s						
SARO				AML	AML		
	comp=N,46μm,0.1s						
SARO				AML	AML		
	comp=E,42μm,1.0s						
CARD	**Cardoso**	**0.28**	**128**	P	Pb	02 36 13.3	-0.6
CARD				S	Sg	02 36 17.1	+1.0
GRAM	**Graiana**	**0.30**	**345**	P	Pg	02 36 13.4	+0.6
GRAM				S	Sb	02 36 18.2	-1.2
GRAM				AML	AML		
	comp=E,86μm,1.5s						
GRAM				AML	AML		
	comp=N,72μm,0.2s						
GRAM				AML	AML		
	comp=E,86μm,1.5s						
GRAM				AML	AML		
	comp=N,72μm,0.2s						
POPM	**Popiglio**	**0.45**	**110**	P	Pg	02 36 16.0	+0.6
POPM				S	Sb	02 36 22.6	-0.8
RAVA	**Ravarino**	**0.87**	**50**	S	Sn	02 36 38.0	+0.1

IDC 23 02:42:21.0±3.2, 12°.56N×143°.77E, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.4/47, mbtmp3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/29, Error ellipse: s-maj=170.8km s-min=19.5km az=125.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.48**	**46**	Pn	Pn	02 42 49.0	0.0
	9.0nm,0.3s,baz=225,slow=11,SNR=12						
GUMO				LR	LR	02 42 55.6	
	comp=Z,12nm,20.7s,baz=78,slow=23						
GUMO				Sn	Sg	02 43 08.4	-0.3
	22nm,0.3s,baz=318,slow=24,SNR=20						
H11N1	**WAKE ISLAND Hy**	**23.31**	**69**	T	T	03 11 47.0	
	baz=256						
H11N2	**WAKE ISLAND Hy**	**23.32**	**69**	T	T	03 11 46.6	
	baz=256						
H11N3	**WAKE ISLAND Hy**	**23.33**	**69**	T	T	03 11 47.8	
	baz=256						
WRA	**Warramunga Arr**	**33.60**	**196**	P	P	02 49 03.1	-0.2
	1.0nm,0.5s,baz=16,slow=7.8,SNR=2.1						
ASAR	**Alice Springs**	**37.27**	**195**	P	P	02 49 34.3	-0.6
	0.2nm,0.7s,baz=20,slow=11,SNR=1.6						
INK	**Inuvik**	**75.72**	**22**	LR	LR	03 22 46.5	
	comp=Z,17nm,21.0s,baz=20,slow=32						
NVAR	**Mina Array Bea**	**88.40**	**51**	P	P	02 55 16.4	+0.8
	0.5nm,0.7s,baz=265,slow=5.6,SNR=4.3						

*IDC **23** 02:57:41.7±0.9, 34°.20N×24°.97E, h0km, mb3.9/10, mb1 4.0/16, mb1mx3.8/48, mbtmp3.8/16, ML4.1/5, MS3.3/1, Ms1 3.3/1, ms1mx2.4/39, Error ellipse: s-maj=17.5km s-min=16.4km az=27.0*
*ISK **23** 02:57:42.5, 34°.05N×25°.11E, h6km, ML3.6/13*
*ATH **23** 02:57:44.2, 34°.17N×25°.15E, h22km±1km, ML3.3/7, Error ellipse: s-maj=2.7km s-min=1.3km az=4.0*
*ISCJB **23** 02:57:44.7±0.8, 34°.10N±0°.03×25°.15E±0°.03, h26km±6km, mb3.7/12, MS3.2/1, Error ellipse: s-maj=5.4km s-min=3.9km az=137.5*
*THE **23** 02:57:45.7, 34°.26N×25°.12E, h0km±1km, ML3.4/5, Error ellipse: s-maj=2.7km s-min=0.7km az=162.0*
*HLW **23** 02:57:47.6, 34°.09N×25°.37E, h10km±9km, Md3.3, Ml3.4*
ISC 23 02:57:43.7±1.2, 34°.13N±0°.03×25°.11E±0°.03, h17km±7km, n95, σ1°70/116, mb3.9/12, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.92**	**344**	P	**Pg**	**02 58 01.3**	**-0.3**
SIVA				S	**Sg**	**02 58 13.1**	**-0.7**
SIVA	**Sivas**	**0.92**	**344**	P	**Pg**	**02 58 01.4**	**-0.3**
SIVA				S	**Sb**	**02 58 14.3**	**+1.1**
SIVA				AML	AML	02 58 19.8	
	comp=E,15460μm,0.5s						
SIVA				AML	AML	02 58 21.2	
	comp=N,11914μm,0.7s						
TMBK	**Timbaki Herakl**	**0.99**	**343**	P	**Pg**	**02 58 02.8**	**0.0**
TMBK				S	**Sn**	**02 58 16.6**	**+0.2**
LAST	**Lasithi**	**1.08**	**16**	P	**Pg**	**02 58 04.0**	**-0.6**
LAST				S	**Sg**	**02 58 18.2**	**-0.5**
LAST	**Lasithi**	**1.08**	**16**	P	**Pg**	**02 58 03.9**	**-0.7**
LAST				S	**Sg**	**02 58 18.1**	**-0.6**
LAST				AML	AML	02 58 25.3	
	comp=E,1333μm,0.7s						
LAST				AML	AML	02 58 27.1	
	comp=N,1864μm,0.6s						
GVD	**Gavdhos**	**1.10**	**310**	PN	**Pn**	**02 58 05.0**	**+0.5**
GVD				SN	**Sn**	**02 58 21.4**	**+2.1**
GVD	**Gavdhos**	**1.10**	**310**	P	**Pn**	**02 58 04.9**	**+0.5**
GVD				S	**Sn**	**02 58 20.8**	**+1.5**
GVD	**Gavdhos**	**1.10**	**310**	P	**Pn**	**02 58 05.0**	**+0.5**
GVD				S	**Sn**	**02 58 20.0**	**+0.7**
GVD				AML	AML	02 58 23.0	
	comp=E,4660μm,0.3s						
GVD				AML	AML	02 58 24.2	
	comp=N,6412μm,0.4s						
GVDS	**Gavdos**	**1.11**	**311**	P	**Pg**	**02 58 05.4**	**+0.3**
GVDS				S	**Sn**	**02 58 21.0**	**+1.7**
IDI	**Anoyia**	**1.17**	**351**	Pn	**Pb**	**02 58 05.4**	**-0.2**
	comp=N,15nm,0.3s,baz=175,slow=19,SNR=114						
IDI				Sn	**Sb**	**02 58 20.8**	**+0.2**
	comp=N,80nm,0.3s,baz=27,slow=15,SNR=17						
IDI				LR	LR	02 58 51.0	
	comp=N,193nm,18.5s,baz=142,slow=64						
IDI	**Anoyia**	**1.17**	**351**	P	**Pb**	**02 58 05.5**	**-0.1**
IDI				S	**Sg**	**02 58 21.3**	**-0.5**
IDI				AML	AML	02 58 28.3	
	comp=E,1906μm,0.5s						
IDI				AML	AML	02 58 28.4	
	comp=N,1338μm,0.6s						
KSTL	**Kastelli Herak**	**1.18**	**358**	P	**Pb**	**02 58 04.5**	**-1.1**
NPS	**Neapolis**	**1.21**	**20**	P	**Pn**	**02 58 05.8**	**-0.1**
NPS	**Neapolis**	**1.21**	**20**	P	**Pg**	**02 58 06.3**	**-0.7**
PRNS	**Prines Rethymn**	**1.33**	**338**	P	**Pb**	**02 58 08.5**	**+0.2**
PRNS				S	**Sg**	**02 58 27.2**	**+0.4**
STIA	**Sitia Lasithi**	**1.34**	**37**	P	**Pg**	**02 58 08.9**	**-0.7**
ZKR	**Zakros**	**1.34**	**42**	PN	**Pg**	**02 58 09.3**	**-0.3**
ZKR				SN	**Sg**	**02 58 28.6**	**+1.5**
ZKR	**Zakros**	**1.34**	**42**	P	**Pb**	**02 58 08.3**	**-0.1**
ZKR	**Zakros**	**1.34**	**42**	P	**Pb**	**02 58 08.4**	**0.0**
ZKR				AML	AML	02 58 38.6	
	comp=N,675μm,0.5s						
ZKR				AML	AML	02 58 39.7	
	comp=E,1970μm,0.5s						
VAM	**Vamos**	**1.48**	**330**	P	**Pb**	**02 58 10.9**	**+0.1**
VAM				S	**Sg**	**02 58 30.6**	**-1.0**
VAM	**Vamos**	**1.48**	**330**	P	**Pb**	**02 58 11.0**	**+0.2**
VAM				S	**Sg**	**02 58 31.0**	**-0.6**
VAM				AML	AML	02 58 39.6	
	comp=N,2039μm,0.4s						
VAM				AML	AML	02 58 44.1	
	comp=E,2150μm,0.5s						
IMMV	**Iera Moni Meta**	**1.62**	**325**	PN	**Pb**	**02 58 13.4**	**+0.2**
IMMV				SN	**Sg**	**02 58 35.7**	**-0.4**
IMMV	**Iera Moni Meta**	**1.62**	**325**	P	**Pn**	**02 58 12.8**	**+1.2**
IMMV				S	**Sb**	**02 58 33.6**	**+0.1**
IMMV	**Iera Moni Meta**	**1.62**	**325**	P	**Pg**	**02 58 14.2**	**-0.7**
CHAN	**Chania**	**1.65**	**328**	P	**Pb**	**02 58 13.9**	**+0.3**
CHAN				S	**Sb**	**02 58 35.0**	**+1.0**
KARP	**Karpathos**	**2.20**	**49**	PN	**Pb**	**02 58 21.4**	**-1.7**
KARP	**Karpathos**	**2.20**	**49**	P	**Pb**	**02 58 22.8**	**-0.3**
KARP	**Karpathos**	**2.20**	**49**	P	**Pb**	**02 58 23.3**	**+0.2**
THR6	**Thira Island,**	**2.24**	**6**	P	**Pn**	**02 58 21.8**	**+1.8**
SANT	**Santorini**	**2.26**	**7**	PN	**Pb**	**02 58 22.4**	**-1.7**
SANT	**Santorini**	**2.26**	**7**	P	**Pn**	**02 58 21.9**	**+1.6**
SANT	**Santorini**	**2.26**	**7**	P	**Pb**	**02 58 22.3**	**-1.8**
ANKY	**Antikythira Is**	**2.29**	**320**	P	**Pn**	**02 58 22.2**	**+1.5**
ANKY	**Antikythira Is**	**2.29**	**320**	P	**Pb**	**02 58 23.4**	**-1.1**
THR3	**Thira Island,**	**2.29**	**6**	P	**Pn**	**02 58 22.4**	**+1.7**
THR5	**Thira Island,**	**2.29**	**5**	P	**Pn**	**02 58 22.4**	**+1.6**
THR2	**Thira island,**	**2.33**	**6**	P	**Pn**	**02 58 22.6**	**+1.3**
IOSP	**Ios island**	**2.59**	**3**	P	**Pn**	**02 58 26.3**	**+1.4**
IOSP	**Ios island**	**2.59**	**3**	P	**Pn**	**02 58 26.3**	**+1.4**
MHLO	**Agia Marina, M**	**2.62**	**347**	P	**Pn**	**02 58 26.3**	**+1.0**
SLUM	**Salum**	**2.63**	**178**	P	**Pb**	**02 58 29.1**	**-1.3**
	baz=183						
SLUM				S	**Sn**	**02 58 59.2**	**+2.3**
	baz=183						
SLUM				AMP		02 59 00.0	
	baz=183						
MHLA	**Plaka, Milos I**	**2.67**	**348**	P	**Pn**	**02 58 27.9**	**+1.9**
KYTH	**Kithira**	**2.72**	**322**	P	**Pn**	**02 58 28.5**	**+1.8**
KYTH	**Kithira**	**2.72**	**322**	P	**Pn**	**02 58 29.6**	**+2.9**
KTHR	**Kythira**	**2.74**	**322**	P	**Pn**	**02 58 29.0**	**+2.0**
AMGA	**Amorgos Island**	**2.77**	**13**	P	**Pn**	**02 58 29.4**	**+1.9**
APE	**Apeiranthos**	**2.96**	**7**	PN	**Pn**	**02 58 31.6**	**+1.7**
APE	**Apeiranthos**	**2.96**	**7**	P	**Pn**	**02 58 31.3**	**+1.4**
VLI	**Veliai**	**3.14**	**326**	P	**Pn**	**02 58 33.9**	**+1.5**
VLI	**Veliai**	**3.14**	**326**	P	**Pn**	**02 58 33.9**	**+1.5**
ARG	**Arkhangelos**	**3.23**	**49**	PN	**Pn**	**02 58 36.4**	**+2.7**
ARG	**Arkhangelos**	**3.23**	**49**	P	**Pn**	**02 58 36.1**	**+2.4**
DAT	**Datca**	**3.29**	**37**	PN	**Pn**	**02 58 36.7**	**+2.2**
DID	**Didima**	**3.70**	**336**	P	**Pn**	**02 58 41.3**	**+1.1**
DID	**Didima**	**3.70**	**336**	P	**Pn**	**02 58 41.6**	**+1.4**
DID				AML	AML	02 59 26.6	
	comp=N,224μm,0.4s						
DID				AML	AML	02 59 27.8	
	comp=E,162μm,0.3s						
SMG	**Samos**	**3.84**	**21**	P	**Pn**	**02 58 43.7**	**+1.7**
VLY	**Voula,Athens**	**3.87**	**344**	P	**Pn**	**02 58 44.4**	**+2.0**
DALY	**Dalyan (Mula)**	**3.94**	**46**	PN	**Pn**	**02 58 46.3**	**+2.8**
TURN	**Turunc**	**3.95**	**45**	PN	**Pn**	**02 58 41.7**	**-1.9**
YER	**Yerkesik**	**3.96**	**40**	PN	**Pn**	**02 58 46.3**	**+2.5**
YER	**Yerkesik**	**3.96**	**40**	P	**Pn**	**02 58 45.9**	**+2.1**
ITM	**Ithomi**	**4.00**	**321**	PN	**Pn**	**02 58 46.9**	**+2.6**
ITM	**Ithomi**	**4.00**	**321**	P	**Pn**	**02 58 46.6**	**+2.3**
PTL	**Penteli**	**4.04**	**346**	P	**Pn**	**02 58 46.2**	**+1.3**
FETY	**Fethiye**	**4.10**	**51**	PN	**Pn**	**02 58 47.5**	**+1.9**
KSL	**Kastellorizon**	**4.18**	**60**	P	**Pn**	**02 58 48.5**	**+1.7**
VIL2	**Platees**	**4.34**	**340**	P	**Pn**	**02 58 49.4**	**+0.4**
GUR	**Goura**	**4.42**	**330**	P	**Pn**	**02 58 52.2**	**+2.1**
AYDB	**Zeytinkoy-Aydi**	**4.43**	**30**	PN	**Pn**	**02 58 52.8**	**+2.6**
KLV	**Kalavryta, Ach**	**4.59**	**329**	P	**Pn**	**02 58 54.4**	**+2.0**
SWA2		**4.88**	**176**	P	**Pn**	**02 58 59.6**	**+3.3**
	baz=179						
SWA2				S	**Sn**	**02 59 53.1**	**+0.8**
	baz=179						
ANX	**Ano Chora**	**5.15**	**331**	P	**Pn**	**02 59 03.0**	**+2.9**
NBNS	**Bani Suef**	**7.62**	**134**	P	**Pn**	**02 59 36.6**	**+2.6**
	baz=135						
MMAI	**Mount Meron Ar**	**8.66**	**94**	Pn	**Pn**	**02 59 50.0**	**+1.7**
	comp=E,1.4nm,0.3s,baz=283,slow=11,SNR=8.8						
MMAI				Sn	**Sn**	**03 01 21.4**	**-4.3**
	comp=E,1.7nm,0.3s,baz=286,slow=27,SNR=4.0						
BRTR	**Keskin Array B**	**8.82**	**48**	Pn	**Pn**	**02 59 53.0**	**+2.4**
	comp=E,0.1nm,0.3s,baz=222,slow=13,SNR=3.6						
VAE	**Valguarnera**	**9.31**	**294**	Sn	**Sn**	**03 01 35.4**	**-6.2**
	comp=E,0.7nm,0.3s,baz=102,slow=19,SNR=2.1						
EIL	**Elat**	**9.47**	**115**	Pn	**Pn**	**03 00 00.5**	**+1.1**
	comp=E,1.1nm,0.3s,baz=221,slow=2.8,SNR=9.9						
EIL				Sn	**Sn**	**03 01 39.5**	**-6.0**
	comp=E,0.5nm,0.3s,baz=308,slow=22,SNR=2.0						
UDBI	**Udbina**	**12.65**	**328**	*e*Pn	**Pn**	**03 00 41.7**	**-1.2**
KBZ	**Khabaz**	**16.81**	**50**	Pn	**P**	**03 01 41.7**	**+1.4**
	comp=E,0.1nm,0.3s,baz=236,slow=12,SNR=4.5						
AKASG	**Malin Array Be**	**16.84**	**9**	Pn	**Pn**	**03 01 37.9**	**-0.6**
	comp=E,1.2nm,0.3s,baz=199,slow=10,SNR=9.0						
GERES	**GERESS Array B**	**16.98**	**333**	Pn	**Pn**	**03 01 41.0**	**+0.6**
	comp=E,0.6nm,0.3s,baz=147,slow=12,SNR=32						
ESDC	**Sonseca Array**	**23.84**	**292**	P	**P**	**03 02 55.9**	**-0.2**
	comp=E,0.1nm,0.4s,baz=83,slow=9.7,SNR=3.0						
HFS	**Hagfors**	**27.07**	**347**	P	**P**	**03 03 24.5**	**-0.6**
	comp=E,1.0nm,0.3s,baz=185,slow=8.3,SNR=12						
FINES	**FINESS Array B**	**27.34**	**1**	P	**P**	**03 03 26.4**	**-1.1**
	comp=E,0.5nm,0.3s,baz=164,slow=11,SNR=14						
NB2	**NORSAR Subarra**	**28.39**	**346**	P	**P**	**03 03 36.6**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=161,slow=11						
NOA	**NORSAR Array B**	**28.39**	**346**	P	**P**	**03 03 36.4**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=150,slow=8.8,SNR=3.7						
EKA	**Eskdalemuir Ar**	**28.87**	**326**	P	**P**	**03 03 40.2**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=119,slow=9.8,SNR=3.1						
TORD	**Torodi Ar. Bea**	**29.80**	**231**	P	**P**	**03 03 50.0**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=35,slow=8.4,SNR=24						
ARCES	**ARCESS Array B**	**35.46**	**0**	P	**P**	**03 04 37.8**	**-1.1**
	comp=Z,8.9nm,0.3s,baz=164,slow=9.4,SNR=9.0						
AAK	**Ala-Archa**	**39.16**	**62**	LR	LR	03 24 11.8	
	comp=Z,38nm,19.7s,baz=272,slow=40						
MKAR	**Makanchi Array**	**44.38**	**56**	P	**P**	**03 05 55.0**	**+1.8**
	comp=

comp=E,33μm,0.5s
MTSN AML AML
comp=N,29μm,1.1s
MTSN AML AML
comp=N,29μm,1.1s
MTSN AML AML
comp=E,33μm,0.5s
SCHR S. Chirico Rap 0.15 115 P Pg 02 59 24.6 +0.4
SCHR S Sg 02 59 27.7 +1.2
SLCN Sala Consilina 0.24 302 P Pg 02 59 26.5 +0.8
SLCN S Sg 02 59 30.9 +1.9
SLCN AML AML
comp=E,42μm,0.6s
SLCN AML AML
comp=N,33μm,1.3s
SLCN AML AML
comp=E,42μm,0.6s
SLCN AML AML
comp=N,33μm,1.3s

IDC 23 02:59:55.2±3.5, 2°.04S×100°.71E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.6/38, mbtmp3.9/5, Error ellipse: s-maj=153.2km s-min=20.9km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.36**	**121**	P	P	03 07 09.5	-0.4
	2.0nm,1.1s,baz=295,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**38.66**	**127**	P	P	03 07 21.1	+0.3
	0.8nm,0.6s,baz=301,slow=8.0,SNR=14						
SONM	**Songino Array**	**49.92**	**5**	P	P	03 08 50.6	-0.2
	0.4nm,0.6s,baz=182,slow=10.0,SNR=2.4						
MKAR	**Makanchi Array**	**51.26**	**344**	P	P	03 09 00.9	+0.1
	1.3nm,0.6s,baz=150,slow=8.4,SNR=13						
ZALV	**Zalesovo Beam**	**57.34**	**349**	P	P	03 09 44.9	-0.1
	0.8nm,0.3s,baz=188,slow=7.5,SNR=4.0						
TXAR	**Lajitas Array**	**144.30**	**38**	PKP	PKPbc	03 19 32.3	-0.1
	0.1nm,0.4s,baz=280,slow=1.3,SNR=4.1						

NIED ***23*** *03:14:00,41°.30N×143°.50E, h23km, Mw4.0 Best double couple: M₀1.12000×10¹⁵ NP1:φs 110.00000°, δ43.00000°, λ-86.00000°. NP2:φs 285.00000°, δ47.00000°, λ-94.00000°.*
ISCJB ***23*** *03:14:52.2±0.7, 41°.22N±0°.04×143°.52E±0°.05, h40km±6km, mb4.0/18, MS3.5/4, Error ellipse: s-maj=8.1km s-min=3.8km az=39.3*
JMA ***23*** *03:14:52.8±0.1, 41°.27N×143°.47E, h59km±3km, M3.9*
IDC ***23*** *03:14:54.9±0.9, 41°.24N×143°.36E, h45km±7km, mb3.7/18, mb1 3.9/21, mb1mx3.7/41, mbtmp3.9/21, ML2.9/2, MS3.2/9, Ms1 3.3/9, ms1mx2.9/52, Error ellipse: s-maj=15.8km s-min=10.2km az=90.0*

ISC 23 03:14:53.2±0.8, 41°.19N±0°.05×143°.52E±0°.05, h35km±3km, n53, σ1§42/62, mb4.1/18, MS3.5/4, 11C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.87**	**342**	⇑P	**Pn**	**03 15 07.9**	**-1.1**
JEM				*e*S	**Sn**	**03 15 18.9**	**-1.5**
JTHR	**Tokachihiroo**	**1.11**	**351**	⇑P	**Pn**	**03 15 11.3**	**-1.0**
JTHR				*e*S	**Sn**	**03 15 24.9**	**-1.5**
JNBK	**Urakawa-nobuka**	**1.23**	**332**	⇑P	**Pn**	**03 15 13.3**	**-0.7**
JCH	**Churui**	**1.43**	**355**	⇑P	**Pn**	**03 15 15.5**	**-1.2**
JCH				*e*S	**Sn**	**03 15 32.1**	**-2.1**
JSHD	**Hidakashinhida**	**1.45**	**327**	P	**Pn**	**03 15 16.6**	**-0.4**
JOB	**Onbets**	**1.73**	**8**	⇑P	**Pn**	**03 15 20.0**	**-0.8**
JOB				*e*S	**Sn**	**03 15 40.7**	**-0.9**
JANG	**Nango**	**1.73**	**242**	⇑P	**Pn**	**03 15 20.5**	**-0.3**
JANG				*e*S	**Sn**	**03 15 41.3**	**-0.4**
JBT2	**Biratori 2**	**1.81**	**332**	⇑P	**Pn**	**03 15 21.7**	**-0.2**
JIAM	**Iburiatsuma**	**1.86**	**321**	P	**Pn**	**03 15 24.1**	**+1.4**
JOT	**Ohata**	**1.87**	**277**	P	**Pn**	**03 15 22.7**	**-0.1**
JOT				*e*S	**Sn**	**03 15 44.4**	**-0.8**
JTM	**Tenmabayashi**	**1.90**	**259**	⇑P	**Pn**	**03 15 23.5**	**+0.3**
JTM				*e*S	**Sn**	**03 15 45.7**	**-0.2**
JKB	**Kayabe**	**1.99**	**291**	⇑P	**Pn**	**03 15 24.4**	**0.0**
JAK	**Akkeshi**	**2.00**	**25**	⇑P	**Pn**	**03 15 23.5**	**-1.1**
JAK				*e*S	**Sn**	**03 15 46.4**	**-2.0**
JFR	**Furan**	**2.09**	**341**	P	**Pn**	**03 15 25.5**	**-0.3**
JAR	**Ashorobuto**	**2.11**	**5**	⇑P	**Pn**	**03 15 24.7**	**-1.4**
JAR				*e*S	**Sn**	**03 15 48.8**	**-2.3**
JKHN	**Kushirohamanak**	**2.25**	**32**	P	**Pn**	**03 15 27.5**	**-0.5**
JKHN				*e*S	**Sn**	**03 15 53.3**	**-1.2**
JNB	**Noboribetsu**	**2.25**	**305**	P	**Pn**	**03 15 27.6**	**-0.4**
JNB				*e*S	**Sn**	**03 15 53.2**	**-1.4**
JEW	**Eniwo**	**2.26**	**318**	P	**Pn**	**03 15 28.6**	**+0.5**
JSR	**Shiriuchi**	**2.36**	**279**	P	**Pn**	**03 15 29.6**	**+0.1**
JSR				*e*S	**Sn**	**03 15 57.3**	**+0.1**
ASAJ	**Asahikawa**	**3.00**	**347**	P	**Pn**	**03 15 38.0**	**-0.3**
	1.4nm,0.3s,baz=207,slow=9.1,SNR=15						
ASAJ				S	**Sn**	**03 16 13.0**	**-0.1**
	12nm,0.3s,baz=72,slow=20,SNR=6.9						
ASAJ				LR	LR	03 17 00.7	
	comp=Z,190nm,20.0s,baz=134,slow=43						
MAT	**Matsushiro**	**6.22**	**223**	P	**Pn**	**03 16 24.3**	**+1.7**
MAT				S	**Sn**	**03 17 34.3**	**+1.8**
MJAR	**Matsushiro Arr**	**6.22**	**223**	P	**Pn**	**03 16 23.7**	**+1.1**
	0.2nm,0.3s,baz=28,slow=13,SNR=32						
MJAR				LR	LR	03 19 18.1	
	comp=Z,167nm,18.3s,baz=50,slow=43						
JHJ	**Hachijo jima 2**	**8.59**	**201**	P	**Pn**	**03 16 53.9**	**-1.2**
	8.4nm,0.3s,baz=360,slow=19,SNR=7.9						
JHJ				S	**Sn**	**03 18 23.2**	**-7.6**
	10nm,0.3s,baz=48,slow=18,SNR=7.7						
USRK	**Ussuriysk Ar.**	**9.01**	**293**	LR	LR	03 20 50.2	
	comp=Z,55nm,20.6s,baz=64,slow=40						
KLR	**Kul'dur**	**11.54**	**318**	LR	LR	03 22 30.0	
	comp=Z,163nm,18.9s,baz=118,slow=40						
KSRS	**Korea Array**	**12.64**	**258**	P	**Pn**	**03 17 52.8**	**+2.3**
	baz=72,slow=13,SNR=5.1						
KSRS				LR	LR	03 22 28.8	
	comp=Z,69nm,18.3s,baz=51,slow=36						
SONM	**Songino Array**	**27.10**	**297**	P	**P**	**03 20 32.8**	**+0.1**
	1.6nm,0.5s,baz=80,slow=7.8,SNR=8.4						
SONM				LR	LR	03 31 15.1	
	comp=Z,76nm,18.3s,baz=64,slow=36						
H11N2	**WAKE ISLAND Hy**	**29.22**	**130**	T	T	03 52 00.1	
	baz=323,slow=75,SNR=161						
H11N1	**WAKE ISLAND Hy**	**29.23**	**130**	T	T	03 52 04.5	
	baz=323,slow=75,SNR=164						
H11N3	**WAKE ISLAND Hy**	**29.24**	**130**	T	T	03 52 02.4	
	baz=323,slow=75,SNR=136						
H11S1	**WAKE ISLAND Hy**	**30.08**	**132**	T	T	03 53 23.4	
	baz=324,slow=76,SNR=183						
H11S3	**WAKE ISLAND Hy**	**30.08**	**132**	T	T	03 53 14.1	
	baz=324,slow=76,SNR=128						
H11S2	**WAKE ISLAND Hy**	**30.09**	**132**	T	T	03 53 15.1	
	baz=324,slow=76,SNR=142						
ZALV	**Zalesovo Beam**	**40.45**	**309**	P	**P**	**03 22 28.3**	**+0.2**
	1.4nm,0.4s,baz=94,slow=9.1,SNR=3.3						
ZALV				pP	**sP**	**03 22 40.5**	**-1.0**
	3.9nm,0.7s,baz=91,slow=7.8,SNR=5.0						
MKAR	**Makanchi Array**	**43.43**	**299**	P	**P**	**03 22 52.2**	**-0.4**
	0.5nm,0.5s,baz=86,slow=9.2,SNR=5.4						
KURBB	**Kurchatov Arra**	**44.85**	**305**	P	**P**	**03 23 03.2**	**-0.6**
	0.8nm,0.4s,baz=78,slow=8.9,SNR=8.3						
KURBB				PcP	**PcP**	**03 24 44.7**	**-0.4**
	0.5nm,0.5s,baz=87,slow=3.5,SNR=3.1						
ILAR	**Eielson Array**	**45.13**	**35**	P	**P**	**03 23 06.7**	**+0.9**
	0.8nm,0.7s,baz=263,slow=5.9,SNR=11						
BVAR	**Borovoye Array**	**49.07**	**310**	P	**P**	**03 23 35.9**	**-0.9**
	0.8nm,0.4s,baz=74,slow=8.7,SNR=8.4						
INK	**Inuvik**	**49.95**	**29**	P	**P**	**03 23 44.5**	**+1.4**
	2.1nm,0.7s,baz=310,slow=6.9,SNR=13						
ARU	**Arti**	**54.38**	**317**	LR	LR	03 50 23.6	
	comp=Z,77nm,18.6s,baz=94,slow=39						
KIRV	**Kirov**	**57.96**	**322**	LR	LR	03 53 10.5	
	comp=Z,63nm,18.4s,baz=145,slow=40						
RES	**Resolute Bay**	**58.17**	**15**	P	**P**	**03 24 43.1**	**+0.1**
	4.8nm,1.0s,baz=316,slow=3.2,SNR=5.2						
WRA	**Warramunga Arr**	**61.41**	**190**	P	**P**	**03 25 05.9**	**-0.1**
	1.2nm,0.5s,baz=6.9,slow=7.2,SNR=10						
WRA				pP	**sP**	**03 25 19.6**	**0.0**
	1.6nm,0.5s,baz=14,slow=7.7,SNR=3.2						
GEYT	**Alibeck**	**63.30**	**298**	P	**P**	**03 25 18.3**	**-0.2**
	2.1nm,0.6s,baz=310,slow=5.0,SNR=5.4						
ASAR	**Alice Springs**	**65.14**	**190**	P	**P**	**03 25 30.8**	**+0.2**
	0.9nm,0.6s,baz=6.8,slow=5.3,SNR=12						
FINES	**FINESS Array B**	**65.91**	**332**	P	**P**	**03 25 34.6**	**-0.5**
	2.7nm,0.5s,baz=51,slow=6.6,SNR=38						
NB2	**NORSAR Subarra**	**70.98**	**338**	P	**P**	**03 26 06.2**	**-0.7**
	comp=Z,3.5nm,1.2s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**70.98**	**338**	P	**P**	**03 26 06.6**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=49,slow=5.7,SNR=2.7						
NOA				LR	LR	04 01 13.3	
	comp=Z,14nm,19.8s,baz=40,slow=39						
NVAR	**Mina Array Bea**	**71.23**	**55**	P	**P**	**03 26 10.7**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=289,slow=5.6,SNR=3.6						
AKASG	**Malin Array Be**	**72.01**	**322**	P	**P**	**03 26 12.7**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=43,slow=6.0,SNR=8.8						
AKASG				pP	**pwP**	**03 26 25.6**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=46,slow=6.0,SNR=3.0						
PDAR	**Pinedale Array**	**73.61**	**47**	P	**P**	**03 26 23.8**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=259,slow=2.3,SNR=6.0						
GERES	**GERESS Array B**	**80.02**	**329**	P	**P**	**03 26 59.2**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=51,slow=6.4,SNR=3.5						
TXAR	**Lajitas Array**	**86.31**	**54**	P	**P**	**03 27 33.1**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=297,slow=3.9,SNR=13						

DDA ***23*** *03:24:46.9, 38°.15N×28°.78E, h7km±2km, ML2.6*
ISK ***23*** *03:24:46.9, 38°.11N×28°.79E, h8km, ML2.2/7*
ISCJB ***23*** *03:24:47.4±0.6, 38°.13N±0°.03×28°.79E±0°.05, h10km, Error ellipse: s-maj=5.6km s-min=4.3km az=38.4*

ISC 23 03:24:47.5±1.0, 38°.16N±0°.03×28°.75E±0°.04, h10km, n14, σ0§51/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULA	**Kula-Manisa**	**0.36**	**348**	PG	**Pb**	**03 24 56.5**	**+0.4**
KULA				SG	**Sb**	**03 25 01.6**	**-0.3**
MANT	**Manisa**	**0.37**	**335**	*i* P	**Pb**	**03 24 55.9**	**-0.3**
MANT				*i* S	**Sg**	**03 25 00.4**	**+0.7**
MANT				IAML_P			
	comp=Z,2μm,0.1s						
USAK	**Uak-Merkez**	**0.59**	**20**	*i* P	**Pg**	**03 24 59.0**	**0.0**
USAK				IAML_P			
	comp=Z,1μm,0.2s						
KHAL	**Karahalli**	**0.62**	**70**	*i* P	**Pg**	**03 24 59.5**	**0.0**
KHAL				*i* S	**Sg**	**03 25 07.4**	**-0.2**
KHAL				IAML_P			
	comp=Z,812nm,0.1s						
AYDB	**Zeytinkoy-Aydi**	**0.71**	**253**	PG	**Pg**	**03 25 00.9**	**-0.4**
AYDB				SG	**Sb**	**03 25 11.9**	**-0.1**
AYDN	**Tasoluk**	**0.85**	**235**	*i* P	**Pb**	**03 25 04.4**	**0.0**
AYDN				IAML_P			
	comp=Z,1μm,0.2s						
SHAP	**Saphane-Kutahy**	**0.94**	**23**	PG	**Pg**	**03 25 05.0**	**-0.5**
YER	**Yerkesik**	**1.09**	**200**	PG	**Pg**	**03 25 07.6**	**-0.8**
GDZ	**Gediz**	**1.09**	**31**	*i* P	**Pg**	**03 25 08.3**	**-0.2**
GDZ				IAML_P			
	comp=Z,624nm,0.2s						
TURN	**Turunc**	**1.29**	**185**	PN	**Pg**	**03 25 13.4**	**+1.2**
DALY	**Dalyan (Mula)**	**1.34**	**183**	PN	**Pb**	**03 25 12.1**	**-0.6**
TVSB	**Tavsanli**	**1.40**	**23**	PN	**Pb**	**03 25 13.7**	**-0.1**
DURS	**Dursunbey**	**1.46**	**351**	*i* P	**Pn**	**03 25 14.3**	**+0.3**
DURS				IAML_P			
	comp=Z,218nm,0.2s						
ULDT	**Uludag**	**2.00**	**8**	*i* P	**Pg**	**03 25 25.7**	**-0.2**
ULDT				IAML_P			
	comp=Z,199nm,0.1s						

ISCJB ***23*** *03:36:45.1±0.9, 7°.37N±0°.06×82°.11W±0°.07, h18km, mb3.5/5, MS2.9/1, Error ellipse: s-maj=11.0km s-min=8.8km az=151.3*
IDC ***23*** *03:36:46.5±3.6, 7°.99N×81°.74W, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/32, mbtmp3.6/6, ML2.4/1, MS2.9/2, Ms1 2.9/2, ms1mx2.7/17, Error ellipse: s-maj=124.3km s-min=28.8km az=27.0*

ISC 23 03:36:47.0±1.0, 7°.44N±0°.08×82°.1W±0°.1, h18km, n27, σ1§53/25, mb3.6/5, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCIP	**Isla Barro Col**	**2.83**	**53**	*e*P	**Pn**	**03 37 30.8**	**-0.5**
BCIP				*e*S	**Sn**	**03 38 06.4**	**+1.4**
PTAC	**Punta Ardita,**	**4.28**	**94**	*e*P	Pn	03 37 46.2	-5.1
SOLC	**Bahia Solano**	**4.82**	**104**	*e*P	**Pn**	**03 37 55.6**	**-3.1**
DBBC	**Dabeiba**	**5.87**	**94**	*e*P	**Pn**	**03 38 11.8**	**-1.4**
HELC	**Santa Helena**	**6.65**	**100**	*e*P	**Pn**	**03 38 24.2**	**-0.1**
YOTC	**Yotoco, Valle**	**6.69**	**121**	*e*P	**Pn**	**03 38 22.4**	**-2.1**
GUY2C	**Guyana, Caldas**	**7.05**	**108**	*e*P	**Pn**	**03 38 29.6**	**-0.4**
RREF	**El Recreo**	**7.18**	**110**	*e*P	**Pn**	**03 38 33.4**	**+1.6**
ZARC	**Zaragoza, Cauc**	**7.19**	**89**	*e*P	**Pn**	**03 38 34.1**	**+2.8**
BBAC	**Balboa, Cauca**	**7.24**	**138**	*e*P	**Pn**	**03 38 31.4**	**-0.8**
POPC	**Popayan, Colom**	**7.28**	**132**	*e*P	**Pn**	**03 38 34.3**	**+1.5**
NORC	**Norcasia**	**7.43**	**104**	*e*P	**Pn**	**03 38 34.8**	**+0.1**
PTBC	**PUERTO BERRIO,**	**7.65**	**96**	*e*P	**Pn**	**03 38 37.6**	**0.0**
ORTC	**Ortega, Tolima**	**7.68**	**117**	*e*P	**Pn**	**03 38 38.6**	**+0.5**
GCUF	**Volcan Galeras**	**7.79**	**142**	*e*P	**Pn**	**03 38 41.4**	**+1.4**
PRAC	**Prado**	**8.09**	**117**	*e*P	**Pn**	**03 38 44.2**	**+0.5**
ROSC	**El Rosal**	**8.16**	**108**	Pn	**Pn**	**03 38 42.7**	**-2.3**
	1.1nm,0.3s,baz=328,slow=15,SNR=2.7						
ROSC				LR	LR	03 41 20.6	
	comp=Z,62nm,19.4s,baz=40,slow=34						
OCAC	**Ocana**	**8.74**	**84**	*e*P	**Pn**	**03 38 53.8**	**+1.0**
CHIC	**Chingaza**	**8.79**	**108**	*e*P	**Pn**	**03 38 55.2**	**+1.6**
VILC	**Villavicencio,**	**9.00**	**111**	*e*P	**Pn**	**03 38 56.9**	**+0.6**
TXAR	**Lajitas Array**	**29.77**	**320**	LR	LR	03 57 49.9	
	comp=Z,28nm,18.3s,baz=0.0,slow=43						
NVAR	**Mina Array Bea**	**44.91**	**319**	P	**P**	**03 45 02.5**	**+1.3**
	0.7nm,0.7s,baz=130,slow=6.9,SNR=5.8						
ILAR	**Eielson Array**	**72.70**	**336**	P	**P**	**03 48 13.0**	**-0.7**
	0.2nm,0.6s,baz=120,slow=5.3,SNR=3.2						
ESDC	**Sonseca Array**	**76.17**	**51**	P	**P**	**03 48 34.2**	**-0.2**
	0.1nm,0.4s,baz=269,slow=5.2,SNR=3.4						
EKA	**Eskdalemuir Ar**	**77.63**	**35**	P	**P**	**03 48 40.1**	**-2.2**
	1.2nm,0.8s,baz=260,slow=4.2,SNR=3.4						
TORD	**Torodi Ar. Bea**	**82.34**	**78**	P	**P**	**03 49 09.3**	**+0.8**
	0.3nm,0.5s,baz=292,slow=4.8,SNR=6.5						
ASAR	**Alice Springs**	**141.89**	**241**	PKhKP	PKPpre	03 56 13.2	
	0.4nm,0.8s,baz=114,slow=3.5,SNR=3.3						

NEIC ***23*** *03:38:19.2±0.8, 5°.36S×147°.24E, h159km±8km, mb4.4/6, Error ellipse: s-maj=29.0km s-min=22.9km az=104.0*
ISCJB ***23*** *03:38:21.5±0.9, 5°.34S±0°.08×147°.12E±0°.08, h195km, mb4.3/6, Error ellipse: s-maj=13.5km s-min=9.4km az=136.5*
IDC ***23*** *03:38:23.1±3.0, 5°.38S×147°.14E, h195km±28km, mb3.9/5, mb1 4.0/8, mb1mx3.5/37, mbtmp4.4/8, MS3.2/2, Ms1 3.2/2, ms1mx2.6/27, Error ellipse: s-maj=22.0km s-min=18.8km az=75.0*

ISC 23 03:38:23.0±0.9, 5°.40S±0°.10×147°.0E±0°.1, h195km, n23, σ0§85/23, mb4.4/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.98**	**178**	*e*Pn	Pn	03 39 18.8	-5.6
JAY	**Jayapura**	**6.94**	**294**	P	**Pn**	**03 40 03.4**	**+0.8**
	1.9nm,0.3s,baz=177,slow=4.9,SNR=9.1						
JAY				S	**Sn**	**03 41 20.5**	**-1.0**
	0.5nm,0.3s,baz=158,slow=19,SNR=2.0						
COEN	**Coen**	**9.32**	**204**	*e*Pn	**Pn**	**03 40 32.0**	**-1.5**
HNR	**Honiara**	**13.40**	**108**	LR	LR	03 46 31.8	
	comp=Z,82nm,19.1s,baz=346,slow=37						
CTA	**Charters Tower**	**14.62**	**183**	P	**P**	**03 41 42.8**	**+0.7**
	0.6nm,0.3s,baz=1.9,slow=16,SNR=6.3						
WRAB	**Tennant Creek**	**19.00**	**219**	*e*P	**P**	**03 42 30.4**	**+0.2**
	29nm,0.6s						
WB2	**Warramunga Arr**	**19.01**	**219**	*e*P	**P**	**03 42 30.4**	**+0.1**
	25nm,0.6s						
WR1	**Warramunga Arr**	**19.02**	**219**	*e*P	**P**	**03 42 30.8**	**+0.4**
WRA	**Warramunga Arr**	**19.02**	**219**	P	**P**	**03 42 30.7**	**+0.4**
	4.7nm,0.3s,baz=46,slow=11,SNR=126						
WRA				S	**S**	**03 45 54.9**	**-1.0**
	0.1nm,0.3s,baz=54,slow=20,SNR=4.7						
AS31	**Alice Springs**	**22.13**	**214**	*e*P	**P**	**03 43 03.7**	**+0.6**
	8.2nm,0.6s						
ASAR	**Alice Springs**	**22.14**	**214**	P	**P**	**03 43 03.6**	**+0.6**
	20nm,0.7s,baz=49,slow=8.4,SNR=155						
ASAR				S	**S**	**03 46 54.5**	**+1.8**
	7.3nm,0.8s,baz=32,slow=23,SNR=20						
FITZ	**Fitzroy Crossi**	**24.42**	**237**	P	**P**	**03 43 25.2**	**+1.3**
	11nm,0.6s,baz=54,slow=9.8,SNR=37						
FITZ	**Fitzroy Crossi**	**24.42**	**237**	*e*P	**P**	**03 43 25.2**	**+1.3**
	10nm,0.6s						
DAV	**Davao City (W)**	**24.75**	**300**	LR	LR	03 53 48.9	
	comp=Z,50nm,18.5s,baz=202,slow=37						
DZM	**Mont Dzumac**	**25.04**	**133**	P	**P**	**03 43 29.4**	**-0.2**
	2.1nm,0.4s,baz=300,slow=20,SNR=3.8						
DZM	**Mont Dzumac**	**25.04**	**133**	*e*P	**P**	**03 43 29.4**	**-0.2**
	42nm,1.8s						
VNDA	**Vanda**	**72.50**	**177**	P	**P**	**03 49 27.9**	**-0.1**
	1.1nm,0.6s,baz=332,slow=6.8,SNR=10						
ILAR	**Eielson Array**	**84.92**	**23**	P	**P**	**03 50 35.4**	**-0.4**
	1.2nm,0.8s,baz=256,slow=5.0,SNR=11						
ILB	**Eielson Array**	**84.92**	**23**	*e*P	**P**	**03 50 35.4**	**-0.4**
	14nm,1.9s						
GEC2	**GERESS Array S**	**121.44**	**326**	*e*PKPdf	**PKiKP**	**03 56 54.0**	**+0.4**
GERES	**GERESS Array B**	**121.44**	**326**	PKP	**PKiKP**	**03 56 54.0**	**+0.4**
	0.4nm,0.6s,baz=64,slow=2.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**144.98**	**285**	PKPbc	**PKPbc**	**03 57 37.4**	**-0.4**
	0.7nm,0.5s,baz=53,slow=4.2,SNR=16						
TOA1	**Torodi Ar. Sit**	**144.98**	**285**	*e*PKPbc	**PKPbc**	**03 57 37.4**	**-0.4**

ISCJB ***23*** *03:48:34.9±0.6, 42°.32N±0°.03×45°.73E±0°.04, h2km±10km, Error ellipse: s-maj=5.9km s-min=4.4km az=143.7*
TIF ***23*** *03:48:34.2, 42°.38N×45°.74E, h19km±4km*
NORS ***23*** *03:48:35.3±0.0, 42°.40N×45°.76E, h16km, MPVA3.5*
DRS ***23*** *03:48:35.4±0.0, 42°.38N×45°.70E, h14km, ML2.0/1*

ISC 23 03:48:33.4±1.4, 42°.31N±0°.04×45°.72E±0°.03, h10km±12km, n17, σ1§04/32, 1C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.51**	**46**	*i* Pg	**Pb**	**03 48 44.7**	**+0.2**
	62nm,0.5s						
BTLR				⇑*e*Sg	**Sb**	**03 48 51.6**	**-0.4**
	115nm,0.7s						
LGD	**Lagodekhi**	**0.62**	**141**	P	**Pn**	**03 48 47.6**	**-0.6**
LGD				S	**Sn**	**03 48 56.2**	**-2.0**
DVE	**Vedeno**	**0.71**	**25**	*e*Pg	**Pn**	**03 48 48.4**	**-1.1**
DVE				*e*Sg	**Sb**	**03 48 57.9**	**+0.2**
XNZR	**Khunzakh**	**0.76**	**72**	*e*Pg	**Pn**	**03 48 50.3**	**-0.1**
XNZR				*e*Sg	**Sn**	**03 49 00.6**	**-1.5**
UNCR	**Uncukul**	**0.89**	**63**	*e*Pg	**Pn**	**03 48 52.0**	**0.0**
	29nm,0.2s						
UNCR				*e*Sg	**Sn**	**03 49 04.0**	**-1.0**
	51nm,0.3s						
GROC	**Groznyy**	**0.89**	**3**	*e*Pg	**Pn**	**03 48 53.1**	**+1.1**
GROC				*e*Sg	**Sn**	**03 49 05.8**	**+0.9**
BTNK	**Botanikuri**	**0.93**	**228**	P	**Pn**	**03 48 53.7**	**+1.1**
BTNK				S	**Sn**	**03 49 07.2**	**+1.1**
GUDG	**Gudauri**	**0.93**	**280**	P	**Pn**	**03 48 52.2**	**-0.6**
GUDG				S	**Sn**	**03 49 06.3**	**0.0**
TBLG	**Delisi**	**0.94**	**232**	P	**Pn**	**03 48 52.9**	**+0.3**
KMGR	**Komgaron**	**0.97**	**320**	*e*Pg	**Pn**	**03 48 54.2**	**+1.0**
KMGR				*e*Sg	**Sn**	**03 49 08.4**	**+1.3**
ARKR	**Arakani**	**0.98**	**73**	*e*Pg	**Pn**	**03 48 54.0**	**+0.7**
	47nm,0.0s						
ARKR				*e*Sg	**Sn**	**03 49 08.0**	**+0.6**
	50nm,0.3s						
KMKR	**Kumukh**	**1.04**	**100**	*e*Pg	**Pn**	**03 48 55.0**	**+0.8**
KMKR				*e*Sg	**Sn**	**03 49 10.0**	**+1.1**
	65nm,0.2s						
DBC	**Dubki**	**1.08**	**49**	*e*Pg	**Pn**	**03 48 56.0**	**+1.4**
DBC				*e*Sg	**Sn**	**03 49 10.3**	**+0.6**
LACR	**Lac**	**1.17**	**296**	*e*Pg	**Pb**	**03 48 55.2**	**-0.6**
LACR				*e*Sg	**Sb**	**03 49 09.7**	**-1.4**
KZRT	**Kazreti**	**1.35**	**227**	P	**Pg**	**03 49 00.2**	**+0.8**
KZRT				S	**Sg**	**03 49 18.7**	**+1.7**
BGD	**Bogdanovka**	**1.90**	**237**	P	**Sg**	**03 49 34.6**	**0.0**
TKB	**Tkibuli**	**2.02**	**272**	P	**Pg**	**03 49 11.2**	**-0.9**
TKB				S	**Sg**	**03 49 37.0**	**-1.4**

GCG 23 03:54:55.8±0.3, 13°.69N×92°.28W, h22km±323km, MD3.7, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.23**	**34**	*e*P	Pb	03 55 18.2	-0.3
STG3				*e*S	Sb	03 55 35.6	+1.6
FUG	**Fuego 3**	**1.58**	**61**	*e*P	Pn	03 55 23.0	+0.3
PCG	**Pacaya**	**1.76**	**66**	*e*S	Sb	03 55 49.3	-0.2
IXG	**Ixpaco**	**1.84**	**75**	*e*S	Sn	03 55 47.7	-1.4

IDC 23 03:56:51.0±7.1, 19°.31S×168°.93E, h110km±58km, mb3.8/3, mb1 4.0/4, mb1mx3.4/26, mbtmp4.1/4, Error ellipse: s-maj=94.9km s-min=54.7km az=142.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.60**	**220**	P	Pn	03 57 45.8	+0.7
	5.3nm,0.3s,baz=30,slow=20,SNR=98						
DZM				S	Sn	03 58 26.9	0.0
	22nm,0.3s,baz=333,slow=21,SNR=15						
STKA	**Stephens Creek**	**27.56**	**238**	P	P	04 02 28.6	+0.8
	2.1nm,0.8s,baz=56,slow=11,SN

140km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK3	**Moose Creek**	**0.53**	**327**	P	Pg	04 45 32.3	-0.9
YUK3				S	Sg	04 45 39.6	-0.7
YUK4	**Talbot Arm**	**0.58**	**88**	P	Pg	04 45 34.3	+0.3
YUK4				S	Sb	04 45 42.9	-0.9
YUK2	**White River**	**0.66**	**314**	P	Pg	04 45 34.6	-1.0
YUK2				S	Sg	04 45 44.4	+0.2
LOGN	**Logan Glacier**	**0.76**	**228**	P	Pg	04 45 36.4	-1.1
LOGN				S	Sg	04 45 46.6	-0.7
YUK6	**Outpost Mounta**	**0.82**	**118**	P	Pg	04 45 37.3	-1.3
YUK6				S	Sg	04 45 48.8	-0.4
YUK1	**Sand Pete Hill**	**0.89**	**339**	P	Pg	04 45 38.6	-1.3
YUK1				S	Sg	04 45 51.1	-0.3
YUK5	**Granite Creek**	**0.98**	**101**	P	Pg	04 45 37.2	-4.4
YUK5				S	Sb	04 45 55.5	+0.2
TABL	**Table Mountain**	**1.10**	**216**	P	Pg	04 45 42.1	-1.8
TABL				S	Sg	04 45 57.5	-0.6
YUK7	**Dusty Glacier**	**1.16**	**133**	P	Pg	04 45 43.5	-1.6
YUK7				S	Sg	04 45 59.5	-0.5
BVCY	**Beaver Creek**	**1.19**	**337**	P	Pb	04 45 44.0	-1.6
BVCY				S	Sg	04 45 59.3	-1.8
HYT	**Haines Junctio**	**1.25**	**113**	P	Pn	04 45 45.1	-1.5
HYT				S	Sg	04 46 01.6	-1.3
BALM	**Baldy**	**1.25**	**257**	P	Pn	04 45 44.5	-2.2
BALM				S	Sb	04 46 01.9	-1.0
PCA	**Pinnacle**	**1.26**	**189**	P	Pn	04 45 46.0	-0.8
PCA				S	Sb	04 46 03.0	-0.1
RKAV	**Rock Avalanche**	**1.27**	**216**	P	Pn	04 45 45.4	-1.7
PTPK	**Patty Peak**	**1.27**	**265**	P	Pn	04 45 45.2	-1.9
PTPK				S	Sb	04 46 02.4	-1.4
KIAG	**Kiagna River**	**1.29**	**253**	P	Pn	04 45 45.4	-1.9
KIAG				S	Sb	04 46 02.7	-1.4
SAMH	**Samovar Hills**	**1.29**	**201**	P	Pn	04 45 46.5	-0.8
MESA	**MESA**	**1.55**	**223**	Pn	Pn	04 45 47.4	-3.5
MESA				Sn	Sb	04 46 11.5	-0.2
MESA				Sg	Sg	04 46 16.2	+3.5
PNL	**Peninsula**	**1.68**	**172**	Pn	Pn	04 45 52.6	+0.1
PNL				Sg	Sb	04 46 15.6	+0.2
WHY	**Whitehorse**	**2.51**	**103**	Pn	Pn	04 46 03.1	-0.9
WHY				Sg	Sb	04 46 40.6	+1.4
PLBC	**Pleasant Camp**	**2.55**	**136**	Pn	Pb	04 46 07.8	-1.1
PLBC				Sg	Sb	04 46 42.0	+1.7
DAWY	**Dawson**	**2.75**	**4**	Pn	Pn	04 46 07.1	-0.1
DAWY				Sg	Sb	04 46 47.5	+1.4
DOT	**Dot Lake**	**3.04**	**322**	Pn	Pn	04 46 10.5	-0.7
DOT				Sg	Sg	04 46 57.5	-2.8
BESE	**Bessie Mountai**	**3.73**	**136**	Sg	Sg	04 47 18.4	-4.1
DLBC	**Dease Lake**	**5.73**	**116**	Sg	Sg	04 48 21.5	-5.2
INK	**Inuvik**	**7.50**	**18**	Pn	Pn	04 47 12.1	-0.2
INK				Sn	Sn	04 48 29.7	-7.7
INK				Sg	Sg	04 49 19.8	-3.4

MEX 23 04:53:53.2±0.6, 15°.02N×92°.80W, h94km±7km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.53**	**102**	*eP*	Pn	04 54 07.4	-1.2
THIG				*i* S	Sn	04 54 18.7	-1.4
PCIG		**0.80**	**329**	*eP*	Pn	04 54 09.9	-1.1
PCIG				*eS*	Sn	04 54 22.6	-1.8
CCIG	**Comitan**	**1.41**	**27**	*eP*	Pn	04 54 15.7	-2.6
CCIG				*eS*	Sn	04 54 36.3	-0.9
TGIG		**1.78**	**350**	*eP*	Pn	04 54 22.0	-0.8
TGIG				*i* S	Sn	04 54 42.9	-2.4

KRSC 23 05:03:03.7±0.8, 55°.02N×162°.34E, h47km±18km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.58**	**217**	*eP*	Pn	05 03 17.5	+1.7
MKZ				*eS*	Sn	05 03 26.4	+2.0
TUMD	**Tumrok D**	**1.13**	**280**	*eP*	Pn	05 03 23.9	+0.8
TUMD				*eS*	Sn	05 03 37.9	+0.4
KZV	**Kizimen**	**1.18**	**275**	*eP*	Pn	05 03 25.2	+1.3
KZV				*eS*	Sn	05 03 39.7	+0.8
KBTR	**Krutoberegovo**	**1.22**	**13**	*eP*	Pn	05 03 26.1	+1.8
KBTR				*eS*	Sn	05 03 41.8	+2.2
KBG	**Krutoberegovo**	**1.25**	**9**	*eP*	Pn	05 03 26.7	+2.0
KBG				*eS*	Sn	05 03 43.2	+2.8
TUMR	**Tumrok**	**1.29**	**283**	*eP*	Pn	05 03 26.9	+1.6
TUMR				*eS*	Sn	05 03 42.3	+0.9
BZGR	**Bezymyannyi-Gr**	**1.31**	**315**	*eP*	Pn	05 03 27.3	+1.6
BZMR	**Bezymyannaya**	**1.40**	**312**	*eP*	Pn	05 03 28.4	+1.6
KMNR	**Kamenistaya**	**1.41**	**302**	*eP*	Pn	05 03 28.8	+1.8
KMNR				*eS*	Sn	05 03 46.1	+1.7
BZWR	**Bezymyannyi-We**	**1.41**	**313**	*eP*	Pn	05 03 28.6	+1.5
LGNR	**Loginova**	**1.42**	**319**	*eP*	Pn	05 03 29.3	+2.0
LGNR				*eS*	Sn	05 03 47.7	+2.8
CIRR	**Tsirk**	**1.42**	**321**	*eP*	Pn	05 03 29.1	+1.9
KIRR	**Kirishev**	**1.47**	**310**	*eP*	Pn	05 03 29.3	+1.4
KIRR				*eS*	Sn	05 03 48.2	+2.2
KPT	**Kopyto**	**1.53**	**309**	*eP*	Pn	05 03 30.2	+1.5
KRSR	**Krestovskiy**	**1.57**	**321**	*eP*	Pn	05 03 30.5	+1.4
KRSR				*eS*	Sn	05 03 49.6	+1.3
KLY	**Klyuchi**	**1.61**	**324**	*eP*	Pn	05 03 30.1	+0.5
KLY				*eS*	Sn	05 03 50.5	+1.3
SMKR	**Semkarok**	**1.64**	**343**	*eP*	Pn	05 03 32.2	+2.1
SMKR				*eS*	Sn	05 03 53.5	+3.4
BDR	**Baidarnaya**	**1.68**	**338**	*eP*	Pn	05 03 33.0	+2.4
KOZ	**Kozyrevsk**	**1.75**	**308**	*eP*	Pn	05 03 33.5	+2.0
SRKR	**Sorokina**	**1.77**	**338**	*eP*	Pn	05 03 34.0	+2.2
SRKR				*eS*	Sn	05 03 56.3	+3.2
SRDR	**Sredinnyy**	**1.97**	**312**	*eP*	Pn	05 03 36.4	+1.7
BKI	**Bering**	**2.09**	**83**	*eP*	Pn	05 03 38.5	+2.3
BKI				*eS*	Sn	05 04 02.0	+1.0
ESO	**Esso**	**2.26**	**295**	*eP*	Pn	05 03 39.9	+1.3
ESO				*eS*	Sn	05 04 04.9	-0.3
SPN	**Mys Shipunski**	**2.36**	**216**	*eP*	Pn	05 03 41.7	+1.8
SPN				*eS*	Sn	05 04 08.9	+1.3
NLC	**Nalytchevo**	**2.56**	**225**	*eP*	Pn	05 03 45.3	+2.7
NLC				*eS*	Sn	05 04 15.6	+3.2
SDLR	**Sedlovina**	**2.68**	**231**	*eP*	Pn	05 03 47.4	+3.0
SDLR				*eS*	Sn	05 04 18.7	+3.1
KRER	**Koryakskii**	**2.72**	**232**	*eP*	Pn	05 03 48.2	+3.1
KRER				*eS*	Sn	05 04 20.0	+3.2
SMAR	**Somma**	**2.73**	**231**	*eP*	Pn	05 03 48.0	+2.9
SMAR				*eS*	Sn	05 04 20.7	+3.8
KRX	**Arik**	**2.73**	**234**	*eP*	Pn	05 03 49.1	+3.9
KRX				*eS*	Sn	05 04 21.7	+4.7
UGLR	**Uglovaya**	**2.75**	**230**	*eP*	Pn	05 03 48.5	+3.1
UGLR				*eS*	Sn	05 04 21.4	+4.0
AVH	**Avacha**	**2.75**	**232**	*eP*	Pn	05 03 48.5	+3.1
AVH				*eS*	Sn	05 04 22.9	+5.5
KOK	**Koryaka**	**2.78**	**233**	*eP*	Pn	05 03 49.1	+3.3
GNL	**Ganaly**	**2.90**	**245**	*eP*	Pn	05 03 50.2	+2.9
DALK	**Dalny**	**2.91**	**228**	*eS*	Sn	05 04 24.5	+3.5
KRMR	**Karymshinskiy**	**3.32**	**230**	*eP*	Pn	05 03 57.1	+4.1
KRMR				*eS*	Sn	05 04 35.7	+4.5
RUS	**Russkaya**	**3.45**	**223**	*eP*	Pn	05 03 57.1	+2.3
RUS				*eS*	Sn	05 04 37.6	+3.3
MTVR	**Mutnovka**	**3.54**	**226**	*eP*	Pn	05 03 59.9	+3.7
MTVR				*eS*	Sn	05 04 39.5	+2.6
ASAK	**Asacha**	**3.73**	**227**	*eP*	Pn	05 04 03.6	+4.8
KDTR	**Khodutka, Kamc**	**4.11**	**220**	*eP*	Pn	05 04 07.9	+4.1
KDTR				*eS*	Sn	05 04 55.2	+4.7

*ISCJB **23** 05:23:28.6±1.1, 46°.9N±0°.2×153°.0E±0°.2, h56km, mb3.4/4, Error ellipse: s-maj=31.1km s-min=10.6km az=143.3*
*IDC **23** 05:23:29.8±3.2, 46°.77N×153°.11E, h56km±30km, mb3.2/5, mb1 3.5/9, mb1mx3.3/49, mbtmp3.6/9, ML3.1/4, Error ellipse: s-maj=42.8km s-min=21.7km az=151.0*
ISC 23 05:23:30.2±1.3, 46°.8N±0°.2×153°.1E±0°.2, h56km, n15, σ0°74/9, mb3.4/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.95**	**24**	P	Pn	05 25 09.7	+0.4
	0.5nm,0.3s,baz=176,slow=12,SNR=10						
ASAJ	**Asahikawa**	**7.84**	**253**	P	Pn	05 25 20.8	-0.8
	1.1nm,0.3s,baz=54,slow=8.7,SNR=6.0						
USRK	**Ussuriysk Ar.**	**15.01**	**268**	P	Pn	05 26 58.7	0.0
	0.4nm,0.3s,baz=70,slow=16,SNR=3.4						
MJAR	**Matsushiro Arr**	**15.11**	**232**	P	Pn	05 27 01.4	+1.3
	0.0nm,0.3s,baz=31,slow=8.0,SNR=5.0						
KSRS	**Korea Array**	**20.79**	**252**	P	P	05 28 06.2	-0.3
	0.3nm,0.3s,baz=56,slow=9.7,SNR=4.9						
H11N2	**WAKE ISLAND Hy 29.31**	**153**		T	T	06 00 46.9	
	baz=340,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy 29.33**	**153**		T	T	06 00 46.9	
	baz=340,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy 29.33**	**153**		T	T	06 00 57.7	
	baz=340,slow=76,SNR=7.8						
H11S1	**WAKE ISLAND Hy 30.40**	**154**		T	T	06 02 09.1	
	baz=341,slow=76,SNR=6.2						
H11S3	**WAKE ISLAND Hy 30.41**	**154**		T	T	06 02 08.4	
	baz=341,slow=76,SNR=8.4						
H11S2	**WAKE ISLAND Hy 30.42**	**154**		T	T	06 02 09.1	
	baz=341,slow=76,SNR=10.0						
FINES	**FINESS Array B**	**63.95**	**335**	P	P	05 33 57.3	+0.4
	0.8nm,0.8s,baz=24,slow=6.0,SNR=4.1						
PDAR	**Pinedale Array**	**64.72**	**54**	P	P	05 34 02.6	0.0
	0.2nm,0.5s,baz=316,slow=5.0,SNR=3.2						
NOA	**NORSAR Array B**	**68.13**	**341**	P	P	05 34 24.0	+0.1
	0.2nm,0.5s,baz=31,slow=6.6,SNR=2.4						
TXAR	**Lajitas Array**	**77.48**	**61**	P	P	05 35 19.1	-0.8
	0.1nm,0.5s,baz=297,slow=4.0,SNR=3.6						

*DJA **23** 05:27:58.9±1.5, 1°.S±6°.×12°.0E±°, h13km±13km, M3.9/7, MLv3.9/7*
*IDC **23** 05:27:59.2±1.4, 1°.06S×120°.39E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/38, mbtmp3.8/5, ML3.5/1, MS2.2/1, Ms1 2.2/1, ms1mx2.1/40, Error ellipse: s-maj=56.2km s-min=21.7km az=68.0*
ISC 23 05:27:57.1±3.0, 0.7S±0°.2×119°.4E±0°.2, h35km, n10, σ0°72/13, mb3.8/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**2.26**	**95**	P	Pn	05 28 32.3	+0.3
APSI				S	Sn	05 28 58.6	-0.1
TTSI	**Tana Toraja**	**2.37**	**170**	P	Pn	05 28 33.3	-0.2
TTSI				S	Sn	05 29 00.2	-1.2
SPSI	**Sidrap Palu**	**3.27**	**173**	P	Pn	05 28 46.5	+0.7
SPSI				S	Sn	05 29 23.8	+0.3
LUWI	**Luwuk**	**3.39**	**96**	P	Pn	05 28 48.2	+0.7
KAPI	**Kappang**	**4.30**	**175**	Pn	Pn	05 29 00.7	+0.6
	3.4nm,0.3s,baz=1.8,slow=10,SNR=10.0						
KAPI				Sn	Sn	05 29 50.2	+1.1
	1.3nm,0.3s,baz=61,slow=19,SNR=2.1						
KAPI				LR	LR	05 30 42.6	
	comp=Z,36nm,20.5s,baz=310,slow=41						
BKSI	**Bulukumba**	**4.65**	**171**	P	Pn	05 29 05.4	+0.5
WRA	**Warramunga Arr**	**24.08**	**144**	P	P	05 33 08.8	-0.6
	3.5nm,0.8s,baz=328,slow=11,SNR=7.8						
ASAR	**Alice Springs**	**26.82**	**149**	P	P	05 33 33.7	-0.7
	0.6nm,0.7s,baz=321,slow=7.8,SNR=7.8						
STKA	**Stephens Creek**	**37.44**	**148**	P	P	05 35 07.1	-0.1
	2.0nm,0.8s,baz=330,slow=14,SNR=3.6						
MKAR	**Makanchi Array**	**57.38**	**331**	P	P	05 37 55.1	+13
	0.5nm,0.7s,baz=140,slow=7.4,SNR=3.4						

*ISCJB **23** 05:52:44.4±0.6, 21°.08S±0°.03×69°.08W±0°.07, h124km±6km, mb3.3/1, Error ellipse: s-maj=10.8km s-min=4.3km az=177.3*
*SJA **23** 05:52:44.2±0.5, 21°.08S×68°.99W, h107km±4km, ML2.4, MW2.7*
*GUC **23** 05:52:45.1±0.6, 21°.08S×69°.05W, h120km±3km, ML3.9*
*IDC **23** 05:52:49.4±3.2, 20°.95S×68°.44W, h132km±43km, mb3.2/1, mb1 3.2/3, mb1mx3.0/18, mbtmp3.5/3, Error ellipse: s-maj=103.0km s-min=24.0km az=103.0*
ISC 23 05:52:45.5±0.9, 21°.07S±0°.03×69°.06W±0°.06, h114km±7km, n28, σ0°60/44, 4C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.40**	**274**	*eP*	Pn	05 53 01.9	-0.4
PB01				*eS*	Sn	05 53 15.0	0.0
PB01	**IPOC Station P**	**0.40**	**274**	⇓*iP*	Pn	05 53 01.9	-0.4
PB01				*eS*	Sn	05 53 14.8	-0.2
PB01				IAML		05 53 15.6	
	comp=E,8μm,0.3s						
PB09	**IPOC Station P**	**0.74**	**193**	*eP*	Pn	05 53 04.7	-0.1
PB09				*eS*	Sn	05 53 20.0	+0.7
PB02	**IPOC Station P**	**0.81**	**252**	⇑*iP*	Pn	05 53 05.6	+0.3
PB02				*eS*	Sn	05 53 20.8	+0.5
PB08	**IPOC Station P**	**0.93**	**355**	*eP*	Pn	05 53 05.8	-0.9
PB08				*eS*	Sn	05 53 22.0	-0.8
PB08	**IPOC Station P**	**0.93**	**355**	⇓*iP*	Pn	05 53 06.7	-0.1
PB08				*eS*	Sn	05 53 23.0	+0.2
PB08				IAML		05 53 23.4	
	comp=E,3μm,0.2s						
PB07	**IPOC Station P**	**1.01**	**230**	*eP*	Pn	05 53 06.9	-0.4
PB07				*eS*	Sn	05 53 23.6	-0.1
PB07	**IPOC Station P**	**1.01**	**230**	*eP*	Pn	05 53 07.2	0.0
PB07				*eS*	Sn	05 53 23.9	+0.1
PB07				IAML		05 53 25.5	
	comp=E,2μm,0.1s						
PB03	**IPOC Station P**	**1.16**	**213**	*eP*	Pn	05 53 08.4	-0.5
PB03	**IPOC Station P**	**1.16**	**213**	*eP*	Pn	05 53 08.8	-0.2
PB03				*eS*	Sn	05 53 26.4	-0.2
PB03				IAML		05 53 27.8	
	comp=E,2μm,0.2s						
GO01	**Chusmiza**	**1.40**	**355**	*eP*	Pn	05 53 12.0	+0.1
GO01				*eS*	Sn	05 53 32.6	+0.7
GO01				IAML		05 53 33.7	
	comp=E,4μm,0.1s						
PB11	**IPOC Station P**	**1.42**	**337**	*eP*	Pn	05 53 11.4	-0.4
PB11	**IPOC Station P**	**1.42**	**337**	⇓*iP*	Pn	05 53 11.6	-0.1
PB11				*i* S	Sn	05 53 31.9	+0.2
LVC	**Limon Verde**	**1.54**	**175**	*eP*	Pn	05 53 13.3	0.0
LVC				*eS*	Sn	05 53 34.9	+0.4
PB04	**IPOC Station P**	**1.61**	**219**	*eP*	Pn	05 53 14.1	+0.1
PB06	**IPOC Station P**	**1.69**	**196**	⇑*iP*	Pn	05 53 14.8	-0.2
PB06				*i* S	Sn	05 53 37.5	0.0
PSGC	**Pisagua**	**1.77**	**326**	⇑*iP*	Pn	05 53 15.3	-0.6
PSGC				*i* S	Sn	05 53 38.9	-0.2
PSGC				IAML		05 53 39.9	
	comp=N,724nm,0.1s						
PSGCX	**Pisagua**	**1.77**	**326**	*eP*	Pn	05 53 15.7	-0.3
MNMC	**Minye Minye**	**2.00**	**345**	⇓*iP*	Pn	05 53 18.9	0.0
MNMC				*i* S	Sn	05 53 45.0	+0.6
PB05	**IPOC Station P**	**2.06**	**211**	⇑*iP*	Pn	05 53 19.2	-0.3
PB12	**IPOC Station P**	**2.72**	**334**	⇓*iP*	Pn	05 53 26.9	-1.1
YJA	**Yavi**	**3.48**	**109**	*eP*	Pn	05 53 38.2	-0.1
YJA				IAML		05 53 42.2	
	comp=Z,4.6nm,0.6s						
HJA	**Humahuaca**	**4.00**	**123**	*eP*	Pn	05 53 44.7	-0.6
HJA				IAML		05 53 48.2	
	comp=Z,6.4nm,0.3s						
LPAZ	**La Paz**	**4.84**	**11**	P	Pn	05 53 58.1	+1.3
	comp=Z,1.3nm,0.3s,baz=195,slow=6.2,SNR=59						
LPAZ				S	Sn	05 54 52.6	+0.5
	comp=Z,0.2nm,0.3s,baz=52,slow=18,SNR=3.7						
AZAP	**Zapla**	**4.84**	**131**	*eP*	Pn	05 53 55.8	-0.7
PLCA	**Paso Flores**	**19.64**	**183**	P	Pn	05 57 09.7	+2.0
	comp=Z,0.1nm,0.3s,baz=25,slow=8.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**77.35**	**70**	P	P	06 04 26.8	-1.3
	comp=Z,0.3nm,0.4s,baz=252,slow=5.9,SNR=4.3						
MKAR	**Makanchi Array**	**145.37**	**35**	PKP	PKPab	06 12 10.2	0.0
	comp=Z,0.2nm,0.3s,baz=298,slow=3.1,SNR=2.6						

*SJA **23** 05:59:07.7±0.6, 21°.57S×68°.85W, h109km±6km, ML1.8, MW2.5*
*ISCJB **23** 05:59:08.3±0.9, 21°.50S±0°.03×68°.89W±0°.08, h112km±10km, Error ellipse: s-maj=11.7km s-min=4.8km az=177.5*
*GUC **23** 05:59:08.4±0.6, 21°.49S×68°.83W, h108km±3km, ML3.3*
ISC 23 05:59:09.4±1.6, 21°.49S±0°.04×68°.88W±0°.06, h101km±12km, n20, σ0°55/34, 8C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.45**	**228**	*eP*	Pn	05 59 24.7	-0.4
PB09				*eS*	Sn	05 59 37.4	+0.4
PB09	**IPOC Station P**	**0.45**	**228**	⇑*iP*	Pn	05 59 24.8	-0.4
PB09				*eS*	Sn	05 59 37.4	+0.4
PB09				IAML		05 59 38.7	
	comp=E,608nm,0.5s						
PB01	**IPOC Station P**	**0.72**	**308**	*eP*	Pn	05 59 26.4	-0.9
PB01	**IPOC Station P**	**0.72**	**308**	*eP*	Pn	05 59 26.5	-0.7
PB01				*eS*	Sn	05 59 40.6	0.0
PB01				IAML		05 59 41.8	
	comp=N,851nm,0.3s						
PB02	**IPOC Station P**	**0.96**	**280**	*eP*	Pn	05 59 29.3	-0.3
PB02				*eS*	Sn	05 59 45.6	+0.8
PB02				IAML		05 59 46.1	
	comp=N,2μm,0.1s						
PB07	**IPOC Station P**	**0.96**	**256**	*eP*	Pn	05 59 29.2	-0.5
PB07	**IPOC Station P**	**0.96**	**256**	⇑*iP*	Pn	05 59 29.4	-0.3
PB07				*eS*	Sn	05 59 45.7	+0.7
PB07				IAML		05 59 46.4	
	comp=E,2μm,0.3s						
PB03	**IPOC Station P**	**0.98**	**235**	*eP*	Pn	05 59 29.5	-0.4
PB03				*eS*	Sn	05 59 45.7	+0.4
PB03	**IPOC Station P**	**0.98**	**235**	⇑*iP*	Pn	05 59 29.7	-0.2
PB03				*eS*	Sn	05 59 45.9	+0.6
PB03				IAML		05 59 46.5	
	comp=N,2μm,0.4s						
LVC	**Limon Verde**	**1.11**	**181**	*eP*	Pn	05 59 31.0	-0.6
LVC				*eS*	Sn	05 59 48.3	+0.1
PB06	**IPOC Station P**	**1.37**	**208**	⇑*iP*	Pn	05 59 34.0	-0.3
PB06				*eS*	Sn	05 59 53.9	+0.8
PB06				IAML		05 59 54.5	
	comp=E,398nm,0.2s						
PB08	**IPOC Station P**	**1.37**	**349**	⇑*iP*	Pn	05 59 34.5	0.0
PB08				*i* S	Sn	05 59 54.3	+0.9
PB08				IAML		05 59 55.6	
	comp=E,526nm,0.3s						
PB04	**IPOC Station P**	**1.45**	**234**	*eP*	Pn	05 59 34.7	-0.5
PB15	**IPOC Station P**	**1.79**	**198**	⇑*iP*	Pn	05 59 39.3	-0.3
PB15				*i* S	Sn	06 00 03.3	+0.8
PB05	**IPOC Station P**	**1.83**	**222**	⇑*iP*	Pn	05 59 39.1	-0.9
GO01	**Chusmiza**	**1.84**	**351**	*eP*	Pn	05 59 40.2	-0.3
GO01				*i* S	Sn	06 00 04.4	+0.4
GO01				IAML		06 00 06.8	
	comp=N,432nm,0.1s						
PB11	**IPOC Station P**	**1.87**	**337**	⇑*iP*	Pn	05 59 40.0	-0.6
PB11				*i* S	Sn	06 00 04.0	-0.2
MNMC	**Minye Minye**	**2.44**	**344**	*eP*	Pn	05 59 47.8	-0.2
MNMC				*i* S	Sn	06 00 18.2	+0.5
YJA	**Yavi**	**3.20**	**103**	*eP*	Pn	05 59 58.1	-0.2
YJA				IAML		06 00 01.3	
	comp=Z,1.6nm,0.6s						
HJA	**Humahuaca**	**3.64**	**119**	*eP*	Pn	06 00 03.7	-0.4
HJA				IAML		06 00 07.9	
	comp=Z,2.3nm,0.6s						

IDC 23 06:08:01.1±1.8, 14°.96S×174°.01W, h0km, mb3.9/6, mb1 4.3/6, mb1mx3.8/30, mbtmp3.9/6, MS3.5/11, Ms1 3.5/11, ms1mx3.3/24, Error ellipse: s-maj=109.9km s-min=22.4km az=151.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.89**	**117**	LR	LR	06 15 24.8	
	comp=Z,130nm,21.9s,baz=324,slow=30						
DZM	**Mont Dzumac**	**19.82**	**246**	*e*LR	LR	06 17 30.0	
	comp=Z,156nm,27.1s						
PPT2	**Papeete2**	**23.60**	**100**	*e*LQ	LQ	06 17 41.8	
	319nm,27.0s						
PPT2				*e*LR	LR	06 18 40.9	
	comp=Z,127nm,29.5s						
PPT2	**Papeete2**	**23.60**	**100**	*e*T	T	06 37 14.7	
	3.0nm,0.4s						
TVO	**Taravao**	**23.92**	**100**	*e*T	T	06 37 37.8	
	1.0nm,0.3s						
TBI	**Tubuai**	**24.62**	**114**	*e*LQ	LQ	06 18 12.0	
	360nm,29.0s						
TBI				*e*LR	LR	06 19 01.9	
	comp=Z,150nm,30.2s						
TBI	**Tubuai**	**24.62**	**114**	*e*T	T	06 38 41.6	
	5.5nm,0.2s						
HNR	**Honiara**	**26.03**	**279**	LR	LR	06 22 22.8	
	comp=Z,103nm,22.0s,baz=134,slow=33						
H11S2	**WAKE ISLAND Hy 38.28**	**330**		T	T	06 55 54.5	
	baz=149,slow=76,SNR=8.9						
H11S3	**WAKE ISLAND Hy 38.30**	**330**		T	T	06 55 58.6	
	baz=149,slow=76,SNR=9.9						
H11S1	**WAKE ISLAND Hy 38.30**	**330**		T	T	06 55 59.1	
	baz=149,slow=76,SNR=6.8						
H11N3	**WAKE ISLAND Hy 39.24**	**331**		T	T	06 57 17.0	
	baz=150,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy 39.24**	**331**		T	T	06 57 10.8	
	baz=150,slow=76,SNR=8.7						
H11N2	**WAKE ISLAND Hy 39.26**	**331**		T	T	06 57 18.3	
	baz=150,slow=76,SNR=10.0						
WRA	**Warramunga Arr**	**49.37**	**256**	P	P	06 16 52.9	0.0
	1.6nm,0.7s,baz=87,slow=7.3,SNR=6.2						
ASAR	**Alice Springs**	**49.69**	**252**	P	P	06 16 55.2	0.0
	4.8nm,0.6s,baz=86,slow=7.9,SNR=48						
MJAR	**Matsushiro Arr**	**68.22**	**320**	LR	LR	06 42 50.8	
	comp=Z,36nm,21.9s,baz=165,slow=31						
PFO	**Pinyon Flats O**	**73.06**	**47**	LR	LR	06 44 22.8	
	comp=Z,65nm,21.7s,baz=92,slow=30						
LPIG	**La Paz**	**73.31**	**59**	LR	LR	06 42 18.3	
	comp=Z,31nm,19.3s,baz=120,slow=28						
NVAR	**Mina Array Bea**	**74

	12nm,0.2s							
DJR				S		Sb	06 14 36.3	-0.1
	11nm,0.3s							
DJR	**Jarkent**	**1.90**	**262**	*e*P		**Pb**	**06 14 12.5**	**-0.1**
	12nm,0.2s							
DJR				*e*S		**Sb**	**06 14 35.8**	**-0.6**
	11nm,0.3s							
KTMS	**Ketmen**	**1.90**	**232**	P		**Pb**	**06 14 11.9**	**-0.7**
	7.8nm,0.3s							
KTMS				S		**Sn**	**06 14 34.8**	**+0.3**
	40nm,0.4s							
KTMS	**Ketmen**	**1.90**	**232**	*e*P		**Pb**	**06 14 11.9**	**-0.7**
	7.8nm,0.3s							
KTMS				*e*S		**Sn**	**06 14 34.8**	**+0.3**
	40nm,0.4s							
MK31	**Makanchi Array**	**2.17**	**358**	⇓Pn		**Pg**	**06 14 19.0**	**-0.3**
	6.6nm,0.3s,baz=189,slow=16,SNR=226							
MK31				⇑Sn		**Sg**	**06 14 47.0**	**-0.5**
	4.7nm,0.3s,baz=183,slow=26,SNR=18							
MAKZ	**Makanchi**	**2.20**	**352**	⇑Pn		**Pb**	**06 14 18.8**	**+1.1**
	3.3nm,0.5s							
MAKZ				⇑Sn		**Sg**	**06 14 47.2**	**-1.3**
	7.9nm,0.3s							
KAPS	**Kapalarasan**	**2.26**	**288**	Pg		**Pb**	**06 14 18.5**	**-0.4**
	4.2nm,0.2s							
KAPS				Lg		Lg	06 14 46.9	
	11nm,0.3s							
KAPS	**Kapalarasan**	**2.26**	**288**	*e*P		**Pb**	**06 14 18.5**	**-0.4**
	4.2nm,0.2s							
KAPS				*e*S		**Sb**	**06 14 46.3**	**-0.6**
	11nm,0.3s							
PDGK	**Podgornoye**	**2.48**	**239**	Pg		**Pb**	**06 14 22.6**	**+0.1**
	2.0nm,0.2s							
PDGK				Lg		Lg	06 14 53.4	
	8.6nm,0.3s							
PDGK	**Podgornoye**	**2.48**	**239**	⇑Pn		**Pb**	**06 14 22.0**	**-0.5**
	1.3nm,0.4s							
PDGK				⇑Sn		**Sb**	**06 14 54.2**	**+1.1**
	12nm,0.5s							
UZB	**Uzynbulak**	**2.86**	**240**	*e*P		**Pb**	**06 14 29.8**	**+0.7**
	2.7nm,0.4s							
UZB				*e*S		**Sb**	**06 15 05.4**	**+1.1**
	5.0nm,0.3s							
KPKS	**Kokpek**	**2.93**	**248**	*e*P		**Pb**	**06 14 30.2**	**0.0**
	12nm,0.2s							
KPKS				*e*S		**Sb**	**06 15 06.5**	**+0.5**
	34nm,0.4s							
MNBS	**Baschi**	**2.93**	**261**	Pg		**Pb**	**06 14 30.0**	**-0.2**
	4.9nm,0.1s							
MNBS				Lg		Lg	06 15 06.2	
	17nm,0.4s							
MNBS	**Baschi**	**2.93**	**261**	*e*P		**Pb**	**06 14 30.0**	**-0.2**
	4.9nm,0.1s							
MNBS				*e*S		**Sb**	**06 15 06.2**	**+0.1**
	17nm,0.4s							
SATY	**Saty**	**3.29**	**243**	Pg		**Pb**	**06 14 36.0**	**-0.5**
	5.6nm,0.2s							
SATY				Lg		Lg	06 15 16.4	
	23nm,0.3s							
SATY	**Saty**	**3.29**	**243**	*e*P		**Pb**	**06 14 36.0**	**-0.5**
	5.6nm,0.2s							
SATY				*e*S		**Sb**	**06 15 16.4**	**-0.3**
	23nm,0.3s							
ARXS	**Arharly**	**3.31**	**264**	Pg		**Pb**	**06 14 37.2**	**+0.6**
	1.4nm,0.3s							
ARXS				Lg		Lg	06 15 18.8	
	16nm,0.4s							
ARXS	**Arharly**	**3.31**	**264**	*e*P		**Pb**	**06 14 37.2**	**+0.6**
	1.4nm,0.3s							
ARXS				*e*S		**Sb**	**06 15 18.8**	**+1.8**
	16nm,0.4s							
CHKK	**Chushkaly**	**3.97**	**261**	Pg		**Pb**	**06 14 48.3**	**+0.4**
	1.9nm,0.2s							
CHKK				Lg		Lg	06 15 37.3	
	7.9nm,0.2s							
CHKK	**Chushkaly**	**3.97**	**261**	*e*P		**Pb**	**06 14 48.3**	**+0.4**
	1.9nm,0.2s							
CHKK				*e*S		**Sb**	**06 15 37.4**	**+1.3**
	7.9nm,0.2s							
KTBS	**Karatobe**	**4.22**	**259**	Pg		**Pb**	**06 14 52.2**	**0.0**
	1.2nm,0.2s							
KTBS				Lg		Lg	06 15 44.1	
	6.5nm,0.5s							
KTBS	**Karatobe**	**4.22**	**259**	*e*P		**Pb**	**06 14 52.2**	**0.0**
	1.2nm,0.2s							
KTBS				*e*S		**Sb**	**06 15 44.1**	**+0.8**
	6.5nm,0.5s							

ISCJB ***23*** *06:16:16.0±0.7,27.°58S±0.°04×69.°39W±0.°08, h100km, Error ellipse: s-maj=10.0km s-min=5.9km az=170.2*
GUC ***23*** *06:16:15.6±0.4,27.°66S×69.°33W, h115km±4km, ML3.7*
SJA ***23*** *06:16:16.8±0.7,28.°45S×66.°70W, h126km±13km, ML3.3, MW3.4*

ISC 23 06:16:16.6±1.3, 27.°57S±0.°05×69.°32W±0.°06, h100km, n10, σ1§10/16, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.81**	**268**	*e*P	**Pn**	**06 16 36.2**	**+0.9**
GO03				*e*S	**Sn**	**06 16 51.8**	**+2.6**
GO03				IAML		06 16 52.4	
	comp=N,3μm,0.2s						
VCA	**Vinchina**	**1.52**	**140**	*e*P	**Pn**	**06 16 43.8**	**+0.5**
VCA				*i* S	**Sn**	**06 17 04.7**	**+1.0**
VCA				IAML		06 17 06.0	
	comp=Z,406nm,0.2s						
VCA	**Vinchina**	**1.52**	**140**	*e*P	**Pn**	**06 16 43.5**	**+0.2**
VCA				*e*S	**Sn**	**06 17 04.6**	**+1.0**
VCA				IAML		06 17 06.7	
	comp=E,865nm,0.5s						
LCO	**Las Campanas**	**1.89**	**220**	*e*P	**Pn**	**06 16 48.1**	**+0.1**
LCO				IAML		06 17 15.5	
	comp=E,409nm,0.4s						
AGUA	**GUANDACOL**	**2.04**	**159**	*e*P	**Pn**	**06 16 50.1**	**+0.1**
AGUA				*e*S	**Sn**	**06 17 15.0**	**-0.3**
GO02	**Mina Guanaco**	**2.41**	**354**	*e*P	**Pn**	**06 16 54.1**	**-0.8**
GO02				*e*S	**Sn**	**06 17 23.4**	**-0.7**
GO02				IAML		06 17 28.2	
	comp=N,440nm,0.1s						
LSCH	**La Serena**	**2.88**	**216**	*e*P	**Pn**	**06 16 59.9**	**-0.9**
LSCH				*e*S	**Sn**	**06 17 33.3**	**-1.5**
RTLS	**Leoncito**	**4.21**	**180**	*e*P	**Pn**	**06 17 18.6**	**-0.5**
RTLS				IAML		06 17 20.2	
	comp=Z,24nm,0.2s						
AUSP	**Uspallata**	**4.64**	**181**	*e*P	**Pn**	**06 17 24.1**	**-0.6**
ASAL	**Salagasta**	**5.02**	**175**	*e*P	**Pn**	**06 17 28.8**	**-0.9**

IDC 23 06:34:22.6±51.0, 16.°03S×176.°24W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/24, mbtmp4.2/3, Error ellipse: s-maj=962.0km s-min=183.3km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.35**	**240**	P	P	06 42 10.4	-0.1
	1.3nm,0.7s,baz=51,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**47.03**	**258**	P	P	06 42 56.1	-0.2
	1.6nm,0.8s,baz=90,slow=8.5,SNR=8.2						
ASAR	**Alice Springs**	**47.31**	**252**	P	P	06 42 58.4	-0.1
	7.7nm,0.6s,baz=89,slow=8.2,SNR=117						

ISCJB ***23*** *06:48:19.3±0.6, 36.°43N±0.°02×10.°97W±0.°04, h35km, Error ellipse: s-maj=5.2km s-min=3.0km az=176.8*
MDD ***23*** *06:48:21.2±1.4, 36.°58N×10.°92W, h0km, mbLg3.0/16, Error ellipse: s-maj=11.7km s-min=7.6km az=57.0, PRXIMO*
INMG ***23*** *06:48:21.9±1.2, 36.°42N×11.°17W, h31km±10km, ML2.6, Error ellipse: s-maj=4.2km s-min=4.1km az=57.0*
IGIL ***23*** *06:48:21.4, 36.°41N×11.°15W, h31km, ML2.5*
CNRM ***23*** *06:48:22.0, 36.°24N×11.°02W, h50km, ml3.5*

ISC 23 06:48:19.6±1.9, 36.°45N±0.°05×11.°11W±0.°09, h35km, n81, σ1§71/138, 4C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.96**	**69**	⇑*i*Pn	**Pn**	**06 48 52.0**	**+1.7**
PFVI				*e*Sn	**Sn**	**06 49 13.7**	**+0.2**
PFVI				A	A	06 49 15.7	
	24nm,0.4s						
PFVI	**Vila Bisbo**	**1.96**	**69**	⇑P	**Pn**	**06 48 52.0**	**+1.7**
	21nm,0.2s,SNR=18						
PFVI				S	**Sn**	**06 49 13.8**	**+0.2**
	52nm,0.1s,SNR=10						
PFVI	**Vila Bisbo**	**1.96**	**69**	P	**Pn**	**06 48 51.9**	**+1.7**
PFVI				S	**Sn**	**06 49 14.4**	**+0.8**
MORF	**Marmelete**	**2.15**	**66**	*e*P	**Pn**	**06 48 54.7**	**+1.7**
MORF				*e*S	**Sn**	**06 49 18.4**	**0.0**
MORF				AML	AML	06 49 20.6	
	comp=N,55nm,0.3s						
MORF	**Marmelete**	**2.15**	**66**	⇑*i*Pn	**Pn**	**06 48 54.7**	**+1.7**
MORF				*e*Sn	**Sn**	**06 49 18.5**	**0.0**
MORF				A	A	06 49 23.9	
	comp=N,35nm,0.1s						
MORF	**Marmelete**	**2.15**	**66**	P	**Pn**	**06 48 54.7**	**+1.7**
MORF				S	**Sn**	**06 49 18.4**	**0.0**
	comp=N,55nm,0.3s						
PTEO	**Sao Teotonio**	**2.20**	**59**	*e*Pn	**Pn**	**06 48 55.5**	**+1.9**
PTEO				*e*Sn	**Sn**	**06 49 20.1**	**+0.5**
PTEO				A	A	06 49 24.5	
	comp=N,21nm,0.3s						
PTEO	**Sao Teotonio**	**2.20**	**59**	P	**Pn**	**06 48 55.5**	**+1.9**
PTEO				S	**Sn**	**06 49 20.1**	**+0.5**
	comp=N,11nm,0.3s						
PNCL	**Nicolau / Gran**	**2.64**	**50**	*e*Pn	**Pn**	**06 49 01.4**	**+1.7**
PNCL				*e*Sn	**Sn**	**06 49 31.4**	**+0.8**
PNCL				A	A	06 49 34.0	
	comp=N,23nm,0.6s						
PNCL	**Nicolau / Gran**	**2.64**	**50**	P	**Pn**	**06 49 01.4**	**+1.7**
PNCL				S	**Sn**	**06 49 31.4**	**+0.8**
	comp=N,23nm,0.6s						
PBDV	**Barranco-do-Ve**	**2.67**	**72**	⇑*e*Pn	**Pn**	**06 49 02.1**	**+2.0**
PBDV				*e*Sn	**Sn**	**06 49 31.6**	**+0.3**
PBDV				A	A	06 49 38.6	
	comp=N,8.8nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.67**	**72**	P	**Pn**	**06 49 02.1**	**+2.0**
PBDV				S	**Sn**	**06 49 31.6**	**+0.3**
	comp=N,8.8nm,0.2s						
MESJ	**Messejana**	**2.69**	**58**	*e*P	**Pn**	**06 49 02.1**	**+1.7**
MESJ				*e*S	**Sn**	**06 49 31.8**	**0.0**
MESJ				AML	AML	06 49 34.6	
	comp=N,12nm,0.2s						
MESJ	**Messejana**	**2.69**	**58**	P	**Pn**	**06 49 02.1**	**+1.7**
MESJ				S	**Sn**	**06 49 31.8**	**0.0**
	comp=N,12nm,0.2s						
PCVE	**Castro Verde**	**2.73**	**63**	*e*Pn	**Pn**	**06 49 02.8**	**+1.9**
PCVE				*e*Sn	**Sn**	**06 49 33.0**	**+0.4**
PCVE				A	A	06 49 47.0	
	comp=N,4.9nm,0.2s						
PCVE	**Castro Verde**	**2.73**	**63**	P	**Pn**	**06 49 02.8**	**+1.9**
PCVE				S	**Sn**	**06 49 33.0**	**+0.4**
	comp=N,4.9nm,0.2s						
PVAQ	**Vaqueiros**	**2.88**	**70**	*e*Pn	**Pn**	**06 49 04.9**	**+1.9**
PVAQ				*e*Sn	**Sn**	**06 49 36.1**	**-0.3**
PVAQ				A	A	06 49 40.2	
	comp=N,13nm,0.1s						
PVAQ	**Vaqueiros**	**2.88**	**70**	P	**Pn**	**06 49 04.9**	**+1.9**
PVAQ				S	**Sn**	**06 49 36.1**	**-0.3**
	comp=N,13nm,0.1s						
PVAQ	**Vaqueiros**	**2.88**	**70**	P	**Pn**	**06 49 05.6**	**+2.6**
PVAQ				S	**Sn**	**06 49 40.1**	**+3.7**
PMAFR	**Mafra**	**2.89**	**29**	*e*Pn	**Pn**	**06 49 05.0**	**+1.8**
PMAFR				*e*Sn	**Sn**	**06 49 36.7**	**0.0**
PMAFR				A	A	06 49 38.1	
	comp=N,35nm,0.2s						
PMAFR	**Mafra**	**2.89**	**29**	P	**Pn**	**06 49 04.5**	**+1.4**
	comp=N,4.8nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**06 49 35.9**	**-0.8**
	comp=N,43nm,0.1s,SNR=18						
PBEJ	**Beja**	**3.03**	**58**	*e*Pn	**Pn**	**06 49 07.7**	**+2.6**
PBEJ				*e*Sn	**Sn**	**06 49 40.7**	**+0.6**
PBEJ				A	A	06 49 42.5	
	comp=N,7.7nm,0.2s						
PBEJ	**Beja**	**3.03**	**58**	P	**Pn**	**06 49 07.7**	**+2.6**
PBEJ				S	**Sn**	**06 49 40.7**	**+0.6**
	comp=N,3.8nm,0.2s						
PMTG	**Montargil**	**3.47**	**40**	*e*Pn	**Pn**	**06 49 12.5**	**+1.3**
PMTG				*e*Sn	**Sn**	**06 49 50.8**	**-0.3**
PMTG				A	A	06 50 06.0	
	comp=N,7.7nm,0.7s						
PMTG	**Montargil**	**3.47**	**40**	P	**Pn**	**06 49 12.5**	**+1.3**
PMTG				S	**Sn**	**06 49 50.8**	**-0.3**
	comp=N,7.7nm,0.7s						
PBAR	**Barrancos**	**3.67**	**61**	*e*Sn	**Sn**	**06 49 55.5**	**-0.5**
PBAR				A	A	06 50 04.0	
	comp=N,24nm,0.6s						
PBAR	**Barrancos**	**3.67**	**61**	S	**Sn**	**06 49 55.5**	**-0.5**
	comp=N,24nm,0.6s						
EMIN	**Mina Concepcio**	**3.78**	**68**	P	**Pn**	**06 49 16.9**	**+1.4**
	comp=N,1.1nm,0.4s,SNR=25						
EMIN				S	**Sn**	**06 49 57.9**	**-0.8**
	comp=N,13nm,0.3s,SNR=49						
PTOM	**Tomar**	**3.81**	**33**	*e*Sn	**Sn**	**06 49 58.7**	**-0.8**
PTOM				A	A	06 50 02.7	
	comp=N,11nm,0.2s						
PTOM	**Tomar**	**3.81**	**33**	S	**Sn**	**06 49 58.7**	**-0.8**
	comp=N,5.4nm,0.2s						
EBAD	**Badajoz**	**3.98**	**53**	P	**Pn**	**06 49 19.5**	**+1.3**
	comp=N,1.3nm,0.3s,SNR=13						
EBAD				S	**Sn**	**06 50 03.3**	**-0.4**
	comp=N,7.2nm,0.1s,SNR=7.2						
PCAS	**Casmilo, Conde**	**4.14**	**29**	*e*Pn	**Pn**	**06 49 22.0**	**+1.6**
PCAS				*e*Sn	**Sn**	**06 50 06.9**	**-0.7**
PCAS				A	A	06 50 09.3	
	comp=N,10nm,0.4s						
PCAS	**Casmilo, Conde**	**4.14**	**29**	P	**Pn**	**06 49 22.0**	**+1.6**
PCAS				S	**Sn**	**06 50 06.9**	**-0.7**
	comp=N,10nm,0.4s						
PMRV	**Marv??o**	**4.18**	**44**	*e*Pn	**Pn**	**06 49 22.1**	**+1.2**
PMRV				*e*Sn	**Sn**	**06 50 07.4**	**-1.1**
PMRV				A	A	06 50 10.2	
	comp=N,8.2nm,0.2s						
PMRV	**Marv??o**	**4.18**	**44**	P	**Pn**	**06 49 22.1**	**+1.2**
PMRV				S	**Sn**	**06 50 07.4**	**-1.1**
	comp=N,8.2nm,0.2s						
ESPR	**Espera**	**4.24**	**83**	P	**Pn**	**06 49 23.9**	**+2.2**
	comp=N,6.8nm,0.3s,SNR=21						
ESPR				S	**Sn**	**06 50 08.9**	**-1.2**
	comp=N,72nm,0.4s,SNR=4.9						
COI	**Coimbra**	**4.31**	**29**	*e*Sn	**Sn**	**06 50 11.2**	**-0.5**
COI	**Coimbra**	**4.31**	**29**	S	**Sn**	**06 50 11.2**	**-0.5**
PCBR	**Castelo Branco**	**4.43**	**39**	*e*Pn	**Pn**	**06 49 25.9**	**+1.5**
PCBR				*e*Sn	**Sn**	**06 50 13.4**	**-1.3**
PCBR				A	A	06 50 16.2	
	comp=N,3.7nm,0.5s						
PCBR	**Castelo Branco**	**4.43**	**39**	P	**Pn**	**06 49 25.9**	**+1.5**
PCBR				S	**Sn**	**06 50 13.4**	**-1.3**
	comp=N,1.9nm,0.5s						
ZHG	**ZHG**	**4.73**	**128**	P	**Pn**	**06 49 28.5**	**-0.1**
ZHG				S	**Sn**	**06 50 21.2**	**-1.0**
SRHM	**Skhour des Reh**	**4.77**	**145**	P	**Pn**	**06 49 30.3**	**+1.2**
SRHM				S	**Sn**	**06 50 22.3**	**-0.9**
MTE	**Manteigas**	**4.84**	**34**	*e*Sn	**Sn**	**06 50 23.5**	**-1.3**
MTE	**Manteigas**	**4.84**	**34**	S	**Sn**	**06 50 23.5**	**-1.3**
HORN	**Hornachuelos**	**4.88**	**72**	P	**Pn**	**06 49 32.7**	**+2.3**
HORN				S	**Sn**	**06 50 26.2**	**+0.5**
PVIS	**Viseu**	**4.95**	**30**	*e*Sn	**Sn**	**06 50 26.4**	**-1.1**
PVIS				A	A	06 50 28.1	
	comp=N,7.2nm,0.1s						
PVIS	**Viseu**	**4.95**	**30**	S	**Sn**	**06 50 26.4**	**-1.1**
	comp=N,3.6nm,0.1s						
PTO	**Porto**	**5.08**	**22**	*e*Sn	**Sn**	**06 50 28.6**	**-1.9**
PTO	**Porto**	**5.08**	**22**	S	**Sn**	**06 50 28.6**	**-1.9**
EMIJ	**Mijas**	**5.11**	**87**	P	**Pn**	**06 49 35.0**	**+1.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**06 50 29.7**	**-1.6**
	comp=N,3.4nm,0.3s,SNR=5.8						
EPLA	**Plasencia**	**5.36**	**46**	P	**Pn**	**06 49 37.9**	**+0.9**
	comp=N,0.7nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**06 50 35.9**	**-1.6**
	comp=N,3.7nm,0.2s,SNR=57						
PMPST	**Porto Santo, M**	**5.46**	**234**	*e*Pn	Pn	06 49 37.6	-0.9
PMPS	**Porto Santo**	**5.47**	**233**	*e*Pn	Pn	06 49 37.9	-0.7
PMPS	**Porto Santo**	**5.47**	**233**	P	Pn	06 49 37.6	-1.0
PMPS				P		06 49 37.9	
EADA	**Adamuz**	**5.48**	**70**	P	**Pn**	**06 49 39.9**	**+1.1**
	comp=N,2.6nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**06 50 38.4**	**-2.2**
	comp=N,4.5nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.56**	**27**	*e*Pn	**Pn**	**06 49 41.0**	**+1.1**
POLO				*e*Sn	**Sn**	**06 50 40.1**	**-2.4**
POLO				A	A	06 50 42.8	
	comp=N,2.4nm,0.7s						
POLO	**Lamas de Olo**	**5.56**	**27**	P	**Pn**	**06 49 41.0**	**+1.1**
POLO				S	**Sn**	**06 50 40.1**	**-2.4**
	comp=N,2.4nm,0.7s						
EGOR	**Sierra Gorda,**	**5.66**	**81**	S	**Sn**	**06 50 44.2**	**-0.9**
	comp=N,3.8nm,0.4s,SNR=7.9						
MVO	**Moncorvo**	**5.69**	**33**	*e*Pn	**Pn**	**06 49 43.3**	**+1.7**
MVO				*e*Sn	**Sn**	**06 50 43.3**	**-2.4**
MVO				A	A	06 50 45.4	
	comp=N,5.7nm,0.4s						
MVO	**Moncorvo**	**5.69**	**33**	P	**Pn**	**06 49 42.5**	**+0.8**
	comp=N,0.3nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**06 50 42.8**	**-2.9**
	comp=N,3.4nm,0.1s,SNR=7.5						
ELOB	**Lobios**	**5.91**	**23**	P	**Pn**	**06 49 45.6**	**+0.9**
	comp=N,0.6nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**06 50 47.4**	**-3.8**
	comp=N,2.2nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.93**	**21**	*e*Sn	**Sn**	**06 50 49.1**	**-2.7**
PGAV				A	A	06 50 53.4	
	comp=N,3.6nm,0.2s						
PGAV	**Gavieira, Arco**	**5.93**	**21**	S	**Sn**	**06 50 49.1**	**-2.7**
	comp=N,3.6nm,0.2s						
EZAM	**Zamans**	**5.99**	**17**	P	**Pn**	**06 49 46.2**	**+0.4**
	comp=N,0.8nm,0.2s,SNR=7.9						
EZAM				S	**Sn**	**06 50 49.9**	**-3.2**
	comp=N,1.6nm,0.1s,SNR=7.9						
CZD	**Col de Zad**	**6.04**	**123**	P	**Pn**	**06 49 46.8**	**0.0**
CZD				S	**Sn**	**06 50 54.3**	**-0.6**
PAB	**San Pablo**	**6.17**	**58**	P	**Pn**	**06 49 49.2**	**+0.9**
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**06 50 55.1**	**-2.5**
	comp=N,0.7nm,0.1s,SNR=7.9						
AKLM	**AKL**	**6.22**	**106**	P	**Pn**	**06 49 49.6**	**+0.6**
AKLM				S	**Sn**	**06 50 57.5**	**-1.4**
TTIG	**Tnine Tigouga,**	**6.29**	**159**	P	Pn	06 49 47.5	-2.6
TTIG				S	**Sn**	**06 50 56.1**	**-4.7**
MD31	**MD31**	**6.33**	**122**	P	**Pn**	**06 49 51.7**	**+1.1**
MD31				S	**Sn**	**06 50 59.9**	**-1.8**
PBRG	**Braganca**	**6.33**	**31**	*e*Sn	**Sn**	**06 50 58.8**	**-2.8**
PBRG	**Braganca**	**6.33**	**31**	S	**Sn**	**06 50 58.8**	**-2.8**
ECAL	**Calabor**	**6.45**	**30**	P	**Pn**	**06 49 53.3**	**+1.2**
	comp=N,0.6nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**06 51 01.3**	**-3.2**
	comp=N,14nm,0.4s,SNR=7.9						
MDT	**Midelt**	**6.47**	**122**	P	**Pn**	**06 49 53.8**	**+1.4**
MDT				S	**Sn**	**06 51 03.8**	**-1.3**
ESDC	**Sonseca Array**	**6.49**	**58**	P	**Pn**	**06 49 53.8**	**+1.1**
	comp=N,0.4nm,0.2s,baz=242,slow=13,SNR=12						
ESDC				S	**Sn**	**06 51 01.4**	**-4.1**
	comp=N,1.3nm,0.4s,baz=242,slow=23,SNR=15						
OUZM	**OUZ**	**6.61**	**145**	P	**Pn**	**06 49 55.2**	**+0.9**
OUZM				S	**Sn**	**06 51 07.0**	**-1.5**
GUD	**Guadarrama**	**6.87**	**50**	P	**Pn**	**06 49 59.8**	**+1.8**
	comp=N,0.0nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**06 51 11.9**	**-3.2**
	comp=N,1.7nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**7.03**	**74**	P	**Pn**	**06 50 01.5**	**+1.4**
	comp=N,0.5nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**06 51 16.6**	**-2.3**
	comp=N,1.4nm,0.1s,SNR=7.9						
JBK	**JBK**	**7.29**	**104**	P	**Pn**	**06 50 05.4**	**+1.7**
JBK				S	**Sn**	**06 51 22.4**	**-2.9**
EPON	**Pontenova**	**7.51**	**23**	P	**Pn**	**06 50 07.0**	**+0.3**
	comp=N,0.7nm,0.2s,SNR=7.9						
EPON				S	**Sn**	**06 51 27.4**	**-3.2**
	comp=N,0.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.90**	**71**	P	**Pn**	**06 50 12.9**	**+0.8**
	comp=N,0.3nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**06 51 37.7**	**-2.6**
	comp=N,0.9nm,0.3s,SNR=7.9						
TDRA	**Tendrara**	**8.21**	**112**	P	**Pn**	**06 50 18.8**	**+2.4**
TDRA				S	**Sn**	**06 51 47.4**	**-0.6**

MEX 23 07:16:50.8±0.4, 16.°84N×100.°29W, h4km±3km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.20**	**7**	*e*P	Pg	07 16 54.6	-0.2
CAIG				*i* S	Sg	07 16 57.5	0.0
ACP2	**Acapulco**	**0.39**	**85**	*i* P	Pg	07 16 57.6	-0.7
ACP2				*i* S	Sg	07 17 03.1	-0.3
MEIG	**Mezcala**	**1.25**	**31**	*e*P	Pg	07 17 11.5	-3.4
MEIG				*i* S	Sg	07 17 27.2	-3.9
ZIIG	**Zihuatanejo**	**1.35**	**304**	*e*P	Pn	07 17 12.6	-3.9
ZIIG				*i* S	Sg	07 17 29.1	-5.3
ARIG	**Puente Sto Nin**	**1.43**	**358**	*e*P	Pn	07 17 14.4	-3.3
ARIG				*i* S	Sb	07 17 31.6	-5.1
PLIG	**Platanillo**	**1.71**	**26**	*e*P	Pn	07 17 18.7	-2.9
PLIG				*e*S	Sn	07 17 39.2	-4.9
TLIG	**Tlapa**	**1.80**	**66**	*e*P	Pn	07 17 19.2	-3.6
TLIG				*e*P	Pb	07 17 19.7	-4.8
TLIG				*i* S	Sn	07 17 41.2	-4.9

IDC ***23*** *07:20:18.1±0.7, 13.°11N×146.°48E, h0km, mb4.4/20, mb1 4.5/20, mb1mx4.2/42, mbtmp4.4/20, MS3.5/6, Ms1 3.5/6, ms1mx3.0/34, Error ellipse: s-maj=17.2km s-min=16.3km az=115.0*
BJI ***23*** *07:20:20.7±0.0, 13.°28N×146.°86E, h35km, mb4.8/32, mB5.0/19, Ms4.7/7, Ms7 4.7/3*
ISCJB ***23*** *07:20:21.7±0.4, 13.°08N±0.°07×146.°44E±0.°05, h33km, mb4.6/68, MS3.7/8, Error ellipse: s-maj=9.5km s-min=6.4km az=173.5*
NEIC ***23*** *07:20:23.7±1.7, 13.°07N×146.°42E, h35km±2km, mb4.8/45, Error ellipse: s-maj=17.8km s-min=10.8km az=198.0*

ISC 23 07:20:20.0±2.5, 13.°1N±0.°1×146.°46E±0.°06, h13km±15km, n116, σ1§45/117, mb4.8/68, MS3.6/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.64**	**289**	Pn	**Pn**	**07 20 48.9**	**+0.5**
	428nm,0.3s,

comp=Z,10.0nm,0.8s
XAN Xi'an 39.94 308 P P 07 27 58.8 +4.6
XAN pP pwP 07 28 04.8 -2.5
XAN pmax pmax
comp=Z,5.0nm,0.9s
HHC Hu-ho-hao-te 41.19 319 *e*P **P 07 28 04.4 -0.1**
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,32nm,6.8s
KMI Kunming 42.84 293 P P 07 28 20.8 +2.4
KMI pmax pmax
comp=Z,9.0nm,0.6s
KMI pmax pmax
comp=Z,120nm,3.9s
CD2 Chengdu 43.09 301 P P 07 28 19.6 -0.5
CD2 pmax pmax
comp=Z,30nm,0.5s
LZH Lanzhou 44.56 309 *e*P **P 07 28 33.9 +1.9**
LZH pP pwP 07 28 43.9 0.0
LZH sP sP 07 28 48.6 +13
LZH pmax pmax
comp=Z,16nm,1.1s
STKA Stephens Creek 44.92 186 LR LR 07 48 56.4
comp=Z,72nm,18.1s,baz=23,slow=38
CM31 Chiang Mai Arr 45.95 283 *e*P **P 07 28 44.6 +1.6**
CM31 *e*PcP **PcP 07 30 21.6 +1.7**
CMAR Chiang Mai Arr 45.95 283 P **P 07 28 44.6 +1.5**
2.9nm,0.3s,baz=85,slow=6.0,SNR=9.5
CMAR PcP **PcP 07 30 21.6 +1.7**
1.1nm,0.3s,baz=122,slow=2.6,SNR=4.3
MA2 Magadan 46.55 3 P **P 07 28 46.8 -0.3**
8.1nm,0.8s,baz=161,slow=12,SNR=3.8
SONA0 Songino Array 48.06 324 *e*P **P 07 28 58.6 -0.7**
SONM Songino Array 48.06 324 P **P 07 28 58.6 -0.7**
2.0nm,0.6s,baz=113,slow=6.0,SNR=4.1
TLY Talaya 51.63 327 *e*P **P 07 29 24.0 -2.3**
2.6nm,0.6s
SHL Shillong 52.66 292 *e*P **P 07 29 34.3 -0.2**
14nm,0.7s
JIRN Jiri 57.84 295 *e*P **P 07 30 13.6 +1.5**
36nm,0.6s
GUN Gumba 58.12 295 *e*P **P 07 30 15.5 +1.4**
27nm,0.6s
PKI Pulchoki 58.53 294 *e*P **P 07 30 17.6 +0.7**
13nm,0.6s
PKIN Phulchoki 58.54 294 *e*P **P 07 30 17.7 +0.8**
9.1nm,0.4s
WMQ Urumqi 58.62 314 *e*P **P 07 30 19.6 +2.6**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,100nm,6.3s
WMQ LR LR
comp=N,310nm,27.5s
WMQ LR LR
comp=E,310nm,25.5s
DMN Daman 58.80 294 *e*P **P 07 30 19.9 +1.2**
15nm,0.5s
TIXI Tiksi 59.53 354 P **P 07 30 23.5 +0.9**
1.3nm,0.4s,baz=206,slow=4.1,SNR=4.0
DANN Dangsing 60.00 295 *e*P **P 07 30 28.2 +1.1**
42nm,0.6s
KOLN Koldanda 60.14 295 *e*P **P 07 30 29.1 +1.2**
23nm,0.8s
PYUN Piuthan 60.68 295 *e*P **P 07 30 32.5 +0.9**
21nm,0.8s
MK31 Makanchi Array 62.95 316 *e*P **P 07 30 47.1 +0.8**
7.7nm,0.6s
MK32 Makanchi Array 62.95 316 *e*P **P 07 30 47.7 +1.4**
MKAR Makanchi Array 62.95 316 P **P 07 30 47.7 +1.4**
9.8nm,0.5s,baz=92,slow=8.8,SNR=108
ZAA0 Zalesovo Array 62.96 324 *e*P **P 07 30 46.5 +0.3**
3.8nm,0.8s
ZALV Zalesovo Beam 62.96 324 P **P 07 30 46.0 -0.1**
3.6nm,0.6s,baz=92,slow=6.7,SNR=9.9
ZALV PcP **PcP 07 31 23.6 -0.5**
2.2nm,0.6s,baz=110,slow=4.1,SNR=5.2
ZAA1 Zalesovo Array 62.96 324 *e*P **P 07 30 46.0 -0.1**
ZAA1 *e*PcP **PcP 07 31 23.6 -0.5**
MAKZ Makanchi 63.16 316 *e*P **P 07 30 47.4 -0.3**
17nm,0.6s
KDAK Kodiak Island 63.71 31 P **P 07 30 51.1 +0.1**
7.9nm,0.8s,baz=207,slow=6.8,SNR=2.4
KDAK Kodiak Island 63.71 31 *e*P **P 07 30 51.1 +0.1**
46nm,1.5s
KURK Kurchatov 65.99 320 *e*P **P 07 31 06.8 +0.8**
26nm,0.8s
KTH Kantishna Hill 66.33 26 *e*P **P 07 31 08.4 +0.3**
20nm,1.2s
BPAW Bear Paw Mtn. 66.49 25 *e*P **P 07 31 10.2 +1.1**
6.8nm,1.0s
GHO Glory Hole Cre 66.67 28 *e*P **P 07 31 10.9 +0.6**
14nm,1.2s
KSH Kashi 66.79 308 P **P 07 31 15.6 +4.0**
KSH PP **PP 07 33 40.4 +1.7**
KSH S **S 07 40 04.4 +0.5**
KSH SS **SS 07 44 22.3 +0.5**
KSH pmax pmax
comp=Z,16nm,0.6s
KSH pmax pmax
comp=Z,210nm,5.2s
KSH LR LR
comp=N,1μm,12.2s
KSH LR LR
comp=E,710nm,13.3s
KSH LR LR
comp=Z,210nm,11.1s
MLY Manley 66.90 24 *e*P **P 07 31 12.3 +0.5**
10nm,1.1s
SML Sawmill 66.94 28 *e*P **P 07 31 12.7 +0.6**
18nm,1.0s
NRIK Noril'sk 67.14 341 P **P 07 31 12.1 -1.0**
1.1nm,0.5s,baz=102,slow=9.3,SNR=2.7
SCM Sheep Creek Mo 67.41 28 *e*P **P 07 31 16.0 +0.9**
21nm,1.1s
WRH Wood River Hil 67.81 25 *e*P **P 07 31 17.9 +0.5**
7.4nm,1.0s
CCB Clear Creek Bu 67.97 25 *e*P **P 07 31 18.4 0.0**
5.5nm,1.2s
HDA Harding Lake 68.26 25 *e*P **P 07 31 20.1 -0.2**
3.2nm,0.7s
ILAR Eielson Array 68.39 25 P **P 07 31 20.6 -0.5**
3.2nm,0.5s,baz=252,slow=5.9,SNR=56
ILB Eielson Array 68.39 25 *e*P **P 07 31 20.6 -0.5**
4.6nm,0.6s
TOLK Toolik Lake Re 68.56 21 *e*P **P 07 31 22.8 +0.7**
3.8nm,0.6s
NIL Nilore 68.98 301 *e*P **P 07 31 27.0 +1.6**
30nm,0.9s
ARSB Arslanbob 69.12 309 *e*P **P 07 31 27.3 +1.0**
24nm,1.3s
MENT Mentasta 69.31 27 *e*P **P 07 31 28.4 +1.5**
4.5nm,0.9s
DOT Dot Lake 69.31 27 *e*P **P 07 31 27.8 +0.9**
7.2nm,0.9s
FYU Fort Yukon 69.53 23 *e*P **P 07 31 28.6 +0.5**
18nm,1.2s
EGAK Eagle 70.78 26 *e*P **P 07 31 37.4 +1.6**
6.9nm,0.8s
KK31 Karatay Array 70.97 311 *e*P **P 07 31 36.4 -1.0**
4.7nm,0.8s
KKAR Karatay Array 70.97 311 *e*P **P 07 31 36.2 -1.2**
4.7nm,0.8s
GAR Garm 71.18 307 *e*P **P 07 31 38.9 -0.1**
23nm,0.6s
BRVK Borovoye 71.37 322 *e*P **P 07 31 40.5 +0.9**
14nm,0.8s
DAWY Dawson 71.42 27 *e*P **P 07 31 40.4 +0.6**
4.7nm,0.9s
HYT Haines Junctio 71.89 30 *e*P **P 07 31 43.6 +0.8**
6.9nm,0.8s
CHGR Chuyangaron 72.10 307 *e*pP pP 07 31 52.5 +5.4
EPYK Eagle Plains 72.84 24 *e*P **P 07 31 48.7 +0.4**
16nm,1.5s
WHY Whitehorse 73.16 30 *e*P **P 07 31 51.9 +1.6**
5.1nm,1.0s
INK Inuvik 74.27 22 P **P 07 31 56.9 +0.4**
4.8nm,0.8s,baz=253,slow=7.3,SNR=17
INK Inuvik 74.27 22 *e*P **P 07 31 56.7 +0.2**
12nm,1.3s
DLBC Dease Lake 75.59 33 *e*P **P 07 32 06.0 +1.5**
4.4nm,0.8s
ABKAR Akbulak array 77.97 318 *e*P **P 07 32 18.2 +0.2**
2.4nm,0.7s
ARU Arti 78.08 325 *e*P **P 07 32 18.7 +0.3**
13nm,1.3s
YKA Yellowknife Ar 82.61 28 P **P 07 32 43.1 +0.4**
1.4nm,0.6s,baz=286,slow=5.3,SNR=9.9
YKB5 Yellowknife Ar 82.61 28 *e*P **P 07 32 43.1 +0.4**
RES Resolute Bay 84.70 14 *e*P **P 07 32 53.5 +0.3**
5.7nm,0.9s
NV01 Mina Array Sit 86.04 52 *e*P **P 07 33 02.0 +1.1**
NVAR Mina Array Bea 86.04 52 P **P 07 33 02.0 +1.1**
0.4nm,0.7s,baz=278,slow=4.7,SNR=4.1
ELK Elko 87.76 49 *e*P **P 07 33 10.6 +1.2**
2.2nm,1.0s
ARA0 ARCESS Array S 88.06 342 *e*P **P 07 33 09.9 +0.1**
ARCES ARCESS Array B 88.06 342 P **P 07 33 09.9 +0.1**
3.6nm,0.9s,baz=49,slow=5.6,SNR=6.8
PFO Pinyon Flats O 88.66 56 LR LR 08 05 26.5
comp=Z,29nm,21.6s,baz=278,slow=31
LOHW Long Hollow 90.24 45 *e*P **P 07 33 21.8 +0.9**
2.8nm,0.4s
JLU Jordanelle 90.57 48 *e*S **S 07 44 14.5 -3.6**
FIA0 FINESS Array S 92.29 335 *e*P **P 07 33 28.2 -1.4**
FINES FINESS Array B 92.29 335 P **P 07 33 28.2 -1.4**
3.6nm,0.6s,baz=64,slow=5.0,SNR=19
NOA NORSAR Array B 98.09 340 LR LR 08 21 34.3
comp=Z,24nm,18.1s,baz=325,slow=38
VYHS Vyhne 103.19 327 *e*PDIF **Pdif 07 34 21.9 +2.7**
TOA1 Torodi Ar. Sit 136.44 305 *e*PKPdf **PKPdf 07 39 42.8 +0.2**
TORD Torodi Ar. Bea 136.44 305 PKP **PKPdf 07 39 42.8 +0.2**
0.8nm,0.9s,baz=29,slow=3.3,SNR=3.8
PB11 IPOC Station P 144.77 106 *e*PKPdf **PKPdf 07 39 57.2 -0.5**
MNMC Minye Minye 144.88 105 *e*PKPbc **PKPdf 07 39 58.2 +0.2**
DBIC Dimbokro 145.41 303 PKPbc **PKPab 07 39 59.1 +0.3**
9.7nm,0.5s,baz=48,slow=4.7,SNR=17
KIC Kosan Boka 145.49 302 *e*PKP1 **PKPab 07 39 59.2 0.0**
66nm,1.3s
TIC Toumodi 145.56 303 *e*PKP1 **PKPbc 07 39 59.3 +0.1**
LIC Lamto 145.81 302 *e*PKP1 **PKPbc 07 40 00.1 +0.1**
90nm,1.6s
LPAZ La Paz 146.41 100 PKPbc **PKPab 07 40 03.2 -0.1**
2.0nm,0.7s,baz=267,slow=3.3,SNR=8.6
LPAZ La Paz 146.41 100 *e*PKPdf **PKPdf 07 40 01.4 +0.3**

IDC 23 07:32:39.9±2.5, 9°.63S×122°.17E, h0km, mb3.3/1, mb1 3.6/3, mb1mx3.4/23, mbtmp3.4/3, ML2.9/2, Error ellipse: s-maj=281.2km s-min=31.1km az=53.0, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.60**	**132**	Pn	Pn	07 36 20.8	-0.4
	0.0nm,0.3s,baz=308,slow=12,SNR=3.0						
WRA				Sn	Sn	07 39 05.1	-10
	0.1nm,0.3s,baz=309,slow=20,SNR=3.2						
ASAR	**Alice Springs**	**17.91**	**143**	P	Pn	07 36 50.9	+0.3
	0.1nm,0.3s,baz=321,slow=12,SNR=5.8						
MKAR	**Makanchi Array**	**66.47**	**331**	P	P	07 43 31.3	0.0
	0.2nm,0.5s,baz=146,slow=8.1,SNR=3.3						

IDC 23 07:36:12.4±1.7, 12°.91N×142°.99E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/27, mbtmp3.8/5, Error ellipse: s-maj=168.3km s-min=22.1km az=111.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy 23.47**	**73**		T	T	08 05 23.2	
	baz=258,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy 23.48**	**73**		T	T	08 05 05.5	
	baz=258,slow=75,SNR=7.4						
H11S2	**WAKE ISLAND Hy 23.49**	**73**		T	T	08 05 04.7	
	baz=258,slow=75,SNR=9.6						
H11N1	**WAKE ISLAND Hy 23.90**	**70**		T	T	08 05 39.3	
	baz=255,slow=75,SNR=38						
H11N2	**WAKE ISLAND Hy 23.91**	**70**		T	T	08 05 45.2	
	baz=255,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy 23.92**	**70**		T	T	08 05 42.9	
	baz=255,slow=75,SNR=31						
WRA	**Warramunga Arr**	**33.74**	**195**	P	P	07 42 55.7	-0.2
	2.1nm,0.5s,baz=9.6,slow=7.7,SNR=23						
ASAR	**Alice Springs**	**37.42**	**194**	P	P	07 43 27.4	-0.1
	0.3nm,0.5s,baz=20,slow=13,SNR=8.1						
ILAR	**Eielson Array**	**69.96**	**25**	P	P	07 47 25.3	-0.2
	0.2nm,0.5s,baz=260,slow=5.3,SNR=3.0						
YKA	**Yellowknife Ar**	**84.30**	**27**	P	P	07 48 46.3	+0.3
	0.2nm,0.5s,baz=290,slow=4.2,SNR=2.7						
NVAR	**Mina Array Bea**	**88.77**	**51**	P	P	07 49 08.5	-0.2
	0.8nm,0.7s,baz=264,slow=5.7,SNR=6.8						
LPAZ	**La Paz**	**149.72**	**100**	PKPbc	PKPbc	07 56 05.8	-0.2
	0.5nm,0.8s,baz=214,slow=3.6,SNR=3.8						

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*ISK **23** 07:37:06.8, 39°.01N×29°.98E, h4km, ML2.0/8*
*ISCJB **23** 07:37:07.3±0.6, 38°.97N±0°.03×29°.98E±0.03, h9km±5km, Error ellipse: s-maj=5.2km s-min=4.6km az=176.2*
*DDA **23** 07:37:07.0, 38°.95N×29°.96E, h7km±2km, ML2.5*
ISC 23 07:37:07.0±1.1, 38°.98N±0°.03×29°.97E±0°.03, h8km±10km, n18, σ0°69/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFYO	**Afyonkarahisar**	**0.32**	**127**	*i* P	**Pb**	**07 37 14.5**	**-0.4**
AFYO				*i* S	**Sg**	**07 37 18.3**	**+0.8**
GDZ	**Gediz**	**0.40**	**286**	*i* P	**Pb**	**07 37 15.8**	**-0.6**
GDZ				*i* S	**Sb**	**07 37 21.5**	**-1.2**
AUKIR	**Kırka- Seyitga**	**0.53**	**55**	*i* P	**Pg**	**07 37 16.6**	**-0.6**
TVSB	**Tavsanli**	**0.62**	**320**	PG	**Pg**	**07 37 18.9**	**0.0**
TVSB				SG	**Sg**	**07 37 27.8**	**+0.8**
KHAL	**Karahalli**	**0.71**	**212**	*i* P	**Pg**	**07 37 20.8**	**+0.1**
KHAL				*i* S	**Sg**	**07 37 30.4**	**+0.3**
KHAL				IAML_P			
comp=Z,1μm,0.1s							
USAK	**Uak-Merkez**	**0.79**	**251**	*i* P	**Pg**	**07 37 22.1**	**-0.1**
USAK				*i* S	**Sg**	**07 37 31.6**	**-0.9**
USAK				IAML_P			
comp=Z,924nm,0.2s							
BORA	**Eskisehir**	**0.97**	**22**	*i* P	**Pg**	**07 37 25.3**	**-0.4**
KULA	**Kula-Manisa**	**1.13**	**246**	PN	**Pn**	**07 37 30.3**	**+1.2**
KULA				SN	**Sn**	**07 37 45.7**	**+0.9**
SRCK	**Saricakaya, Es**	**1.18**	**25**	PN	**Pb**	**07 37 28.9**	**-0.7**
SRCK				SN	**Sn**	**07 37 45.7**	**-0.3**
MANT	**Manisa**	**1.21**	**247**	*i* P	**Pg**	**07 37 30.0**	**-0.2**
MANT				IAML_P			
comp=Z,189nm,0.1s							
SVRH	**Sivrihisar-ESK**	**1.29**	**68**	PN	**Pg**	**07 37 31.8**	**0.0**
DURS	**Dursunbey**	**1.32**	**299**	*i* P	**Pg**	**07 37 32.9**	**+0.5**
ULDT	**Uludag**	**1.33**	**331**	*i* P	**Pg**	**07 37 33.4**	**+0.8**
ULDT				IAML_P			
comp=Z,232nm,0.1s							
KIZT	**Kizilcal**	**1.49**	**93**	PN	**Pb**	**07 37 35.1**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.62**	**329**	PN	**Pb**	**07 37 36.7**	**-0.5**
KCTX	**Karacabey (Bur**	**1.79**	**316**	PN	**Pb**	**07 37 39.5**	**-0.6**
ARMT	**Armutlu**	**1.80**	**332**	PN	**Pn**	**07 37 39.2**	**+0.8**
AYDN	**Tasoluk**	**2.11**	**232**	*i* P	**Pn**	**07 37 42.0**	**-0.5**

IDC 23 07:52:03.9±33.0, 20°.05S×177°.55W, h394km±293km, mb3.6/3, mb1 3.7/3, mb1mx3.0/28, mbtmp4.4/3, Error ellipse: s-maj=191.9km s-min=107.1km az=95.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.36**	**244**	P	P	07 58 49.4	+0.3
	1.7nm,0.7s,baz=63,slow=6.8,SNR=2.8						
ASAR	**Alice Springs**	**45.03**	**256**	P	P	07 59 42.6	0.0
	3.6nm,0.5s,baz=96,slow=7.6,SNR=81						
ASAR				PcP	PcP	08 01 15.0	-0.9
	0.3nm,0.5s,baz=94,slow=4.6,SNR=4.9						
WRA	**Warramunga Arr**	**45.08**	**261**	P	P	07 59 42.4	-0.6
	2.1nm,0.3s,baz=95,slow=7.5,SNR=61						
AKASG	**Malin Array Be**	**142.82**	**332**	PKP	PKPdf	08 10 48.5	-2.4
	2.7nm,0.6s,baz=42,slow=4.0,SNR=7.8						
BRTR	**Keskin Array B**	**146.84**	**313**	PKPbc	PKPbc	08 11 01.4	+0.5
	0.4nm,0.4s,baz=38,slow=2.6,SNR=2.2						

GCG 23 08:00:38.9±0.3, 15°.48N×91°.16W, h125km±37km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.86**	**208**	*e*P	Pn	08 01 00.9	+0.6
STG3				*e*S	Sn	08 01 18.1	+1.5
FUG	**Fuego 3**	**1.07**	**163**	*e*P	Pn	08 01 04.1	+1.8
PCG	**Pacaya**	**1.20**	**154**	*e*S	Sn	08 01 24.5	+2.0
IXG	**Ixpaco**	**1.47**	**152**	*e*P	Pn	08 01 07.2	+0.6

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*SOME **23** 08:20:17.4, 39°.88N×77°.68E, h0km*
*KRNET **23** 08:20:17.6±0.1, 39°.45N×77°.72E, mb3.1*
*NNC **23** 08:20:17.2±2.3, 39°.83N×77°.63E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=15.1km s-min=13.5km az=169.0*
ISC 23 08:20:20.2±2.8, 39°.6N±0°.1×77°.59E±0°.07, h17km, n32, σ2°31/49, 9C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.81**	**339**	⇑*i* P	**Pn**	**08 21 05.3**	**+0.8**
	baz=39						
ULHL				⇑*i* S	**Sn**	**08 21 40.1**	**+2.0**
	baz=39						
KZA	**Kyzart**	**3.02**	**325**	⇓*i* P	**Pn**	**08 21 08.5**	**+0.9**
	baz=25						
KZA				⇓*i* S	**Sn**	**08 21 45.4**	**+1.7**
	baz=25						
BOOM	**Boomskoye usch**	**3.12**	**337**	⇑*i* P	**Pn**	**08 21 09.5**	**+0.7**
	baz=37						
BOOM				⇑*i* S	**Sn**	**08 21 47.8**	**+2.1**
	baz=37						
ARLS	**Aral**	**3.34**	**313**	⇑*i* P	**Pn**	**08 21 12.2**	**+0.5**
	baz=14						
ARLS				⇑*i* S	**Sn**	**08 21 52.7**	**+1.6**
	baz=14						
TNSS	**Tian-Shan**	**3.44**	**352**	Pg	**Pb**	**08 21 17.7**	**-3.2**
	7.3nm,0.3s						
TNSS				Lg	Lg	08 22 01.7	
	17nm,0.4s						
TNSS	**Tian-Shan**	**3.44**	**352**	*e*P	**Pb**	**08 21 17.7**	**-3.2**
	7.3nm,0.3s						
TNSS				*e*S	**Sb**	**08 22 01.3**	**-1.2**
	17nm,0.4s						
SATY	**Saty**	**3.48**	**10**	Pg	**Pn**	**08 21 17.2**	**+3.5**
	12nm,0.6s						
SATY				Lg	Lg	08 22 00.7	
	17nm,0.4s						
SATY	**Saty**	**3.48**	**10**	*e*P	**Pn**	**08 21 17.2**	**+3.5**
	12nm,0.6s						
SATY				*e*S	**Sb**	**08 22 00.1**	**-3.4**
	17nm,0.4s						
UCH	**Uchtor**	**3.49**	**319**	⇓*i* P	**Pn**	**08 21 14.9**	**+0.8**
	baz=20						
UCH				⇓*i* S	**Sn**	**08 21 57.0**	**+1.8**
	baz=20						
MDOK	**Medeo**	**3.56**	**354**	Pg	**Pb**	**08 21 19.7**	**-3.0**
	3.9nm,0.6s						
MDOK				Lg	Lg	08 22 05.0	
	14nm,0.5s						
MDOK	**Medeo**	**3.56**	**354**	*e*P	**Pb**	**08 21 19.8**	**-3.0**
	3.7nm,0.7s						
MDOK				*e*S	**Sb**	**08 22 04.6**	**-1.0**
	13nm,0.5s						
TKM2	**Tokmak 2**	**3.62**	**336**	⇓Pg	**Pn**	**08 21 19.4**	**+3.8**
	1.2nm,0.3s						
TKM2				⇑Lg	Lg	08 22 05.9	
	5.1nm,0.8s						
KOTS	**Kotyrbulak**	**3.62**	**354**	Pg	**Pb**	**08 21 21.1**	**-2.7**
	4.0nm,0.5s						
KOTS				Lg	Lg	08 22 06.9	
	40nm,0.6s						
KOTS	**Kotyrbulak**	**3.62**	**354**	*e*P	**Pb**	**08 21 21.1**	**-2.7**
	4.0nm,0.5s						
KOTS				*e*S	**Sb**	**08 22 06.9**	**-0.6**
	40nm,0.6s						
KST	**Kastek**	**3.62**	**341**	Pg	**Pb**	**08 21 21.5**	**-2.4**
	2.8nm,0.3s						
KST				Lg	Lg	08 22 07.7	
	6.9nm,0.8s						
KST	**Kastek**	**3.62**	**341**	*e*P	**Pb**	**08 21 21.5**	**-2.4**
	2.8nm,0.3s						
KST				*e*S	**Sb**	**08 22 07.7**	**+0.1**
	6.9nm,0.8s						
AAK	**Ala-Archa**	**3.81**	**323**	Pg	**Pn**	**08 21 20.2**	**+2.0**
	2.2nm,0.7s						
AAK				Lg	Lg	08 22 14.3	
	4.7nm,0.6s						
DGS	**Degeres**	**3.86**	**340**	Pg	**Pb**	**08 21 25.3**	**-2.6**
	3.6nm,0.4s						
DGS				Lg	Lg	08 22 14.2	
	6.6nm,0.5s						
DGS	**Degeres**	**3.86**	**340**	*e*P	**Pb**	**08 21 25.3**	**-2.6**
	3.6nm,0.4s						
DGS				*e*S	**Sb**	**08 22 14.2**	**-0.2**
	6.6nm,0.5s						
KURS	**Kuram**	**3.88**	**6**	Pg	**Pb**	**08 21 25.7**	**-2.4**
	4.3nm,0.5s						
KURS				Lg	Lg	08 22 14.7	
	7.9nm,0.7s						
KURS	**Kuram**	**3.88**	**6**	*e*P	**Pb**	**08 21 25.7**	**-2.4**
	4.3nm,0.5s						
KURS				*e*S	**Sb**	**08 22 14.7**	**-0.2**
	7.9nm,0.7s						
KPKS	**Kokpek**	**3.92**	**12**	*e*P	**Pb**	**08 21 25.7**	**-3.2**
	3.5nm,0.4s						
KPKS				*e*S	**Sb**	**08 22 14.8**	**-1.3**
	17nm,0.5s						
PDGK	**Podgornoye**	**3.96**	**20**	Pg	**Pb**	**08 21 26.6**	**-3.0**
	1.4nm,0.3s						
PDGK				Lg	Lg	08 22 16.6	
	3.8nm,0.6s						
PDGK	**Podgornoye**	**3.96**	**20**	⇑Pg	**Pn**	**08 21 22.8**	**+2.5**
	1.1nm,0.3s						
PDGK				⇑Lg	Lg	08 22 11.7	
	5.0nm,0.6s						
KTBS	**Karatobe**	**4.14**	**351**	Pg	**Pb**	**08 21 29.9**	**-2.7**
	3.0nm,0.4s						
KTBS				Lg	Lg	08 22 22.0	
	20nm,0.5s						
KTBS	**Karatobe**	**4.14**	**351**	*e*P	**Pb**	**08 21 29.9**	**-2.7**
	3.0nm,0.4s						
KTBS				*e*S	**Sb**	**08 22 22.0**	**-0.2**
	20nm,0.5s						
CHKK	**Chushkaly**	**4.25**	**354**	Pg	**Pb**	**08 21 31.8**	**-2.6**
	3.2nm,0.4s						
CHKK				Lg	Lg	08 22 25.2	
	9.1nm,0.3s						
CHKK	**Chushkaly**	**4.25**	**354**	*e*P	**Pb**	**08 21 31.8**	**-2.6**
	3.2nm,0.4s						
CHKK				*e*S	**Sb**	**08 22 25.2**	**-0.1**
	9.1nm,0.3s						
KUU	**Kurty**	**4.36**	**348**	Pg	**Pb**	**08 21 33.8**	**-2.6**
	1.3nm,0.1s						
KUU				Lg	Lg	08 22 29.4	
	4.4nm,0.4s						
KUU	**Kurty**	**4.36**	**348**	*e*P	**Pb**	**08 21 33.8**	**-2.6**
	1.3nm,0.1s						
KUU				*e*S	**Sb**	**08 22 29.0**	**+0.3**
	4.4nm,0.4s						
ARXS	**Arharly**	**4.58**	**2**	Pg	**Pb**	**08 21 38.0**	**-2.2**
	2.4nm,0.6s						
ARXS				Lg	Lg	08 22 35.7	
	7.7nm,0.5s						
ARXS	**Arharly**	**4.58**	**2**	*e*P	**Pb**	**08 21 38.0**	**-2.2**
	2.4nm,0.6s						
ARXS				*e*S	**Sb**	**08 22 35.7**	**+0.6**
	7.7nm,0.5s						

ECX 23 08:23:46.6±0.6, 30°.13N×114°.11W, h8km, MD3.3, ML3.5, 4D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.48**	**308**	⇓*e*P	Pn	08 24 12.8	-1.2
SPX				⇓*e*		08 24 35.5	
SPX				IAML		08 24 35.5	
comp=N,625nm,0.5s							
SPIG	**San Pedro Mart**	**1.49**	**308**	*e*P	Pn	08 24 12.8	-1.2
ECBX	**El Chinero**	**1.56**	**329**	*e*P	Pn	08 24 12.9	-1.8
ECBX				*e*S	Sn	08 24 34.6	-0.6
CPBX	**Cerro Prieto**	**2.50**	**336**	*e*P	Pn	08 24 27.7	+0.2
CPBX				IAML		08 25 36.4	
comp=E,554nm,1.1s							
CPBX				⇓*e*		08 25 36.4	
CPBX				⇓*e*		08 25 54.9	
CPBX				IAML		08 25 54.9	
comp=N,568nm,1.5s							
HSIG		**2.96**	**111**	*e*P	Pn	08 24 32.8	-1.2
CBX	**Cerro Bola**	**3.09**	**315**	*e*P	Pn	08 24 35.4	-0.4
CBX				*e*S	Sn	08 25 14.1	+1.1
BAR	**Barrett**	**3.36**	**320**	*e*P	Pn	08 24 39.0	-0.4
MONP2	**Monument Peak**	**3.39**	**325**	*e*P	Pn	08 24 40.1	+0.1

DDA 23 08:35:13.2, 36.°47N×28.°08E, h7km±5km, ML2.3
ISK 23 08:34:57.2, 35.°40N×27.°62E, h5km, ML2.4/8, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.40**	**292**	PG	Pg	08 35 05.9	+0.9
KARP				SG	Sb	08 35 13.2	-0.1
ARG	**Arkhangelos**	**0.91**	**27**	PG	Pn	08 35 16.2	-0.5
ARG				SG	Sn	08 35 29.3	-0.9
DAT	**Datca**	**1.33**	**359**	PN	Pb	08 35 22.8	+0.1
DAT	**Datca**	**1.33**	**359**	*i* P	Pb	08 35 23.1	+0.4
DAT				*i* S	Sn	08 35 42.1	+1.5
DAT				IAML_P			
	comp=Z,297nm,0.1s						
DALY	**Dalyan (Mula)**	**1.64**	**30**	PN	Pg	08 35 28.6	-0.1
DALY	**Dalyan (Mula)**	**1.64**	**30**	*i* P	Pn	08 35 24.8	-1.9
BDRM	**Kayabasi**	**1.67**	**355**	*i* P	Pb	08 35 28.1	-0.4
BDRM				*i* S	Sg	08 35 50.8	-0.1
TURN	**Turunc**	**1.67**	**28**	PN	Pn	08 35 25.7	-1.4
BODT	**Bodrum**	**1.68**	**351**	PN	Pg	08 35 29.1	-0.3
FETY	**Fethiye**	**1.71**	**43**	PN	Pb	08 35 29.4	+0.3
YER	**Yerkesik**	**1.81**	**17**	PN	Pb	08 35 30.8	-0.1
AYDN	**Tasoluk**	**2.27**	**5**	*i* P	Pb	08 35 37.9	-0.7
AYDN				*i* S	Sn	08 35 51.4	-12
AYDN				IAML_P			
	comp=Z,452nm,0.2s						

JMA 23 08:36:55.4±0.2, 37.°36N×144.°33E, h25km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.46**	**294**	P	Pn	08 37 34.9	+1.0
JIO	**Ouri**	**2.60**	**296**	P	Pn	08 37 37.1	+1.3
JIO				*e*S	Sn	08 38 08.0	+1.4
JKMT	**Kesennumamotoy**	**2.68**	**304**	P	Pn	08 37 38.6	+1.7
JKMT				*e*S	Sn	08 38 10.5	+2.0
OFUJ	**Ofunato**	**2.71**	**310**	P	Pn	08 37 38.8	+1.5
OFUJ				*e*S	Sn	08 38 10.7	+1.4
JMK	**Ichinoseki**	**2.92**	**304**	P	Pn	08 37 42.3	+2.1
JMK				*e*S	Sn	08 38 17.0	+2.5
JOM	**Ohasama**	**3.19**	**312**	P	Pn	08 37 45.9	+2.0
JOM				*e*S	Sn	08 38 23.2	+2.2
JRY	**Ryogami san**	**4.56**	**255**	P	Pn	08 38 03.8	+0.9
JRY				*e*S	Sn	08 38 54.3	-0.8
JOT	**Ohata**	**4.75**	**329**	P	Pn	08 38 07.8	+2.4
MAT	**Matsushiro**	**4.97**	**262**	P	Pn	08 38 11.3	+2.8
MAT				*e*S	Sn	08 39 08.3	+3.1
JKB	**Kayabe**	**5.19**	**332**	P	Pn	08 38 13.1	+1.7
JKB				*e*S	Sn	08 39 09.0	-1.4
JCH	**Churui**	**5.30**	**352**	P	Pn	08 38 12.4	-0.5
JCH				*e*S	Sn	08 39 10.0	-3.2
NEM2	**Nemuro 2**	**6.09**	**10**	P	Pn	08 38 20.5	-3.3
NEM2				*e*S	Sn	08 39 25.7	-7.0
JTKR	**Abashiri--Toko**	**6.61**	**357**	P	Pn	08 38 30.0	-0.9
JTKR				*e*S	Sn	08 39 40.6	-4.8

ISCJB 23 08:49:03.7±0.3, 44.°16N±0.°03×10.°10E±0.°03, h13km±3km, Error ellipse: s-maj=5.4km s-min=3.3km az=36.3
ROM 23 08:49:03.9±0.1, 44.°174N±0.°005×10.°156E±0.°005, h10km, ML1.9/7, Error ellipse: s-maj=0.5km s-min=0.4km az=190.0
LDG 23 08:49:04.6±0.0, 44.°18N×10.°14E, h2km, Md2.5/2, Ml2.5/8, Error ellipse: s-maj=1.1km s-min=0.7km az=15.0
GEN 23 08:49:04.6, 44.°19N×10.°15E, h3km, Ml1.8
ISC 23 08:49:03.5±0.8, 44.°19N±0.°03×10.°13E±0.°02, h15km±6km, n28, σ0°61/50, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0911	**Castelpoggio (**	**0.09**	**207**	P	**Pg**	**08 49 06.8**	**+0.1**
T0911				S	**Sg**	**08 49 08.5**	**-0.2**
T0911				AML	AML		
	comp=E,4920μm,0.5s						
T0911				AML	AML		
	comp=N,4875μm,0.5s						
T0911				AML	AML		
	comp=E,4865μm,0.5s						
T0911				AML	AML		
	comp=N,4710μm,0.5s						
T0911				AML	AML		
	comp=E,4920μm,0.5s						
T0911				AML	AML		
	comp=N,4875μm,0.5s						
T0911				AML	AML		
	comp=E,4870μm,0.5s						
T0911				AML	AML		
	comp=N,4710μm,0.5s						
T0911				AML	AML		
	comp=N,4875μm,0.5s						
T0911				AML	AML		
	comp=N,4710μm,0.5s						
T0911				AML	AML		
	comp=E,4920μm,0.5s						
T0911				AML	AML		
	comp=E,4870μm,0.5s						
VLC	**Villacollemand**	**0.19**	**100**	P	**Pg**	**08 49 08.1**	**+0.1**
VLC				S	**Sg**	**08 49 11.0**	**0.0**
VLC				AML	AML		
	comp=E,378μm,1.1s						
VLC				AML	AML		
	comp=N,538μm,1.6s						
VLC				AML	AML		
	comp=E,382μm,0.4s						
VLC				AML	AML		
	comp=N,566μm,1.6s						
VLC				AML	AML		
	comp=E,378μm,1.1s						
VLC				AML	AML		
	comp=N,537μm,1.6s						
VLC				AML	AML		
	comp=E,382μm,0.4s						
VLC				AML	AML		
	comp=N,566μm,1.6s						
VLC				AML	AML		
	comp=N,566μm,1.6s						
VLC				AML	AML		
	comp=N,537μm,1.6s						
VLC				AML	AML		
	comp=E,382μm,0.4s						
VLC				AML	AML		
	comp=E,378μm,1.1s						
SARO	**Sassorosso**	**0.20**	**92**	P	**Pg**	**08 49 08.2**	**+0.1**
SARO				S	**Sg**	**08 49 11.2**	**0.0**
SARO	**Sassorosso**	**0.20**	**92**	P	**Pg**	**08 49 08.2**	**+0.1**
SARO				S	**Sg**	**08 49 11.2**	**0.0**
SARO				AML	AML		
	comp=E,695μm,0.6s						
SARO				AML	AML		
	comp=N,1045μm,0.5s						
SARO				AML	AML		
	comp=E,694μm,0.6s						
SARO				AML	AML		
	comp=N,1045μm,0.5s						
SARO				AML	AML		
	comp=N,1045μm,0.5s						
SARO				AML	AML		
	comp=E,694μm,0.6s						
CODM	**Codolo**	**0.28**	**315**	P	**Pb**	**08 49 10.2**	**-0.2**
CODM				S	**Sb**	**08 49 14.7**	**-0.3**
CARD	**Cardoso**	**0.30**	**123**	P	**Pb**	**08 49 10.3**	**-0.4**
CARD				S	**Sg**	**08 49 14.3**	**+0.1**
CARD	**Cardoso**	**0.30**	**123**	P	**Pb**	**08 49 10.3**	**-0.4**
CARD				S	**Sg**	**08 49 14.5**	**+0.3**
CARD				AML	AML		
	comp=E,428μm,0.7s						
CARD				AML	AML		
	comp=N,414μm,1.5s						
CARD				AML	AML		
	comp=E,428μm,0.7s						
CARD				AML	AML		
	comp=N,414μm,1.5s						
CARD				AML	AML		
	comp=E,428μm,0.7s						
CARD				AML	AML		
	comp=N,414μm,1.5s						
GRAM	**Graiana**	**0.30**	**351**	P	**Pb**	**08 49 10.9**	**+0.1**
GRAM				S	**Sb**	**08 49 15.6**	**-0.1**
GRAM	**Graiana**	**0.30**	**351**	P	**Pb**	**08 49 10.9**	**+0.1**
GRAM				S	**Sb**	**08 49 15.6**	**-0.1**
GRAM				AML	AML		
	comp=E,3195μm,0.3s						
GRAM				AML	AML		
	comp=N,3340μm,0.4s						
GRAM				AML	AML		
	comp=E,3195μm,0.3s						
GRAM				AML	AML		
	comp=N,3340μm,0.4s						
GRAM				AML	AML		
	comp=N,3340μm,0.4s						
GRAM				AML	AML		
	comp=E,3195μm,0.3s						
ERBM	**Eremo**	**0.30**	**42**	P	**Pb**	**08 49 10.9**	**+0.1**
ERBM				S	**Sb**	**08 49 16.1**	**+0.4**
ERBM				AML	AML		
	comp=E,529μm,1.0s						
ERBM				AML	AML		
	comp=N,670μm,1.1s						
BDI	**Bagni Di Lucca**	**0.36**	**111**	P	**Pb**	**08 49 11.2**	**-0.5**
BDI				S	**Sb**	**08 49 16.6**	**-0.6**
BDI				AML	AML		
	comp=E,240μm,0.3s						
BDI				AML	AML		
	comp=N,168μm,0.8s						
BDI				AML	AML		
	comp=E,198μm,0.3s						
BDI				AML	AML		
	comp=N,212μm,0.3s						
BDI				AML	AML		
	comp=N,168μm,0.8s						
BDI				AML	AML		
	comp=N,212μm,0.3s						
BDI				AML	AML		
	comp=E,240μm,0.3s						
BDI				AML	AML		
	comp=E,198μm,0.3s						
MAIM	**Mastiano**	**0.38**	**137**	P	**Pb**	**08 49 11.7**	**-0.3**
MAIM				S	**Sb**	**08 49 16.9**	**-0.8**
MAIM	**Mastiano**	**0.38**	**137**	P	**Pb**	**08 49 11.7**	**-0.3**
MAIM				S	**Sg**	**08 49 16.8**	**+0.4**
MAIM				AML	AML		
	comp=E,284μm,1.5s						
MAIM				AML	AML		
	comp=N,198μm,0.5s						
MAIM				AML	AML		
	comp=E,284μm,1.5s						
MAIM				AML	AML		
	comp=N,198μm,0.5s						
MAIM				AML	AML		
	comp=N,198μm,0.5s						
MAIM				AML	AML		
	comp=E,284μm,1.5s						
MSSA	**Maissana**	**0.46**	**286**	P	**Pb**	**08 49 13.8**	**+0.4**
MSSA				S	**Sb**	**08 49 20.5**	**+0.5**
MSSA				AML	AML		
	comp=E,182μm,0.5s						
MSSA				AML	AML		
	comp=N,250μm,1.5s						
MSSA				AML	AML		
	comp=N,250μm,1.5s						
MSSA				AML	AML		
	comp=E,182μm,0.5s						
MTCR	**Monte La Croce**	**0.65**	**104**	P	**Pb**	**08 49 16.6**	**-0.1**
PGF	**Pioggiola**	**1.84**	**207**	*e*Pn	**Pn**	**08 49 35.4**	**+0.7**
PGF				*e*Sn	**Sn**	**08 49 57.7**	**-0.1**
	comp=E,8.9nm,0.3s						
SBF	**Sospel**	**1.97**	**261**	*e*Pn	**Pn**	**08 49 37.6**	**+1.1**
SBF				*e*Sn	**Sn**	**08 50 01.3**	**+0.3**
	comp=E,19nm,0.3s						
MBDF	**Montbardon**	**2.46**	**284**	*e*Pn	**Pn**	**08 49 44.5**	**+1.1**
MBDF	**Montbardon**	**2.46**	**284**	*e*Pg	**Pg**	**08 49 50.6**	**-0.2**
MBDF				*e*Sn	**Sn**	**08 50 13.0**	**-0.3**
MBDF				*e*Sg	**Sg**	**08 50 22.5**	**-0.2**
	comp=E,8.5nm,0.5s						
FRF	**La Foret Royal**	**2.60**	**257**	*e*Pn	**Pn**	**08 49 46.0**	**+1.0**
FRF				*e*Sn	**Sn**	**08 50 16.2**	**-0.1**
	comp=E,2.9nm,0.2s						
LPG	**La Plagne**	**2.73**	**300**	*e*P	**Pb**	**08 49 51.0**	**-1.3**
LPG				*e*Sn	**Sn**	**08 50 20.0**	**-0.2**
	comp=E,0.9nm,0.2s						
LPL	**La Plagne**	**2.76**	**300**	*e*P	**Pb**	**08 49 51.2**	**-1.5**
LPL				*e*Sn	**Sn**	**08 50 20.4**	**-0.2**
	comp=E,2.6nm,0.3s						
LMR	**La Mourre**	**2.76**	**253**	*e*Pn	**Pn**	**08 49 48.0**	**+0.7**
LMR				*e*Sn	**Sn**	**08 50 19.9**	**-0.4**
	comp=E,3.4nm,0.3s						
DAVA	**Damuels**	**3.10**	**357**	*e*Pn	**Pb**	**08 49 57.5**	**-1.0**
	comp=E,3.0nm,0.5s						
SQTA	**Sankt Quirin**	**3.12**	**14**	*e*Pn	**Pb**	**08 49 58.9**	**+0.1**
	comp=E,1.4nm,0.2s						
MOTA	**Moosalm**	**3.23**	**12**	*e*Pn	**Pb**	**08 49 59.7**	**-1.0**
	comp=E,0.6nm,0.3s						
WTTA	**Wattenberg**	**3.25**	**18**	*e*Pn	**Pb**	**08 50 00.1**	**-1.0**
	comp=E,1.1nm,0.3s						
WATA	**Walderalm**	**3.30**	**17**	*e*Pn	**Pb**	**08 50 00.3**	**-1.6**
	comp=E,0.1nm,0.1s						

ISCJB 23 09:01:18.3±1.3, 0.°57S±0.°02×79.°46W±0.°03, h13km±12km, Error ellipse: s-maj=5.2km s-min=3.8km az=12.2
IGQ 23 09:01:18.1±0.2, 1.°S±1.°×7.°9W±.°, h0km, MLv4.1
ISC 23 09:01:16.0±1.4, 0.°60S±0.°02×79.°49W±0.°04, h5km±12km, n77, σ1°19/84, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQUE	**Quevedo**	**0.44**	**180**	P	**Pn**	**09 01 28.8**	**-0.1**
AQUE				S	**Sb**	**09 01 36.3**	**+3.2**
PECV	**Mancha de Ca P**	**0.59**	**253**	P	Pn	09 01 42.0	+11
ILLI	**Illinizas Sur**	**0.77**	**98**	P	**Pb**	**09 01 32.3**	**+0.2**
ILLI				S	**Sb**	**09 01 42.0**	**-1.1**
GOLV	**Golondrinas**	**0.88**	**24**	P	**Pn**	**09 01 36.1**	**+1.1**
NINA	**Atacazo Ninahu**	**0.90**	**76**	P	**Pb**	**09 01 34.3**	**0.0**
ALAT	**Latacunga**	**0.93**	**110**	P	**Pn**	**09 01 35.7**	**-0.2**
CABP	**Cabo Pasado**	**0.96**	**283**	P	**Pn**	**09 01 37.0**	**+0.8**
TERV	**Terraza Guagua**	**0.98**	**64**	P	**Pb**	**09 01 35.8**	**0.0**
GGP	**Refugio Guagua**	**0.99**	**64**	P	**Pb**	**09 01 36.0**	**+0.1**
BNAS	**Cotopaxi Volca**	**1.01**	**94**	P	**Pn**	**09 01 37.0**	**-0.2**
YANA	**Yana**	**1.03**	**62**	P	**Pb**	**09 01 36.4**	**-0.2**
BMOR	**Cotopaxi Volca**	**1.04**	**97**	P	**Pn**	**09 01 37.3**	**-0.4**
BMOR				S	**Sb**	**09 01 50.4**	**-0.4**
BREF	**Cotopaxi Volca**	**1.05**	**94**	P	**Pn**	**09 01 37.9**	**0.0**
PITA	**Cotopaxi Volc**	**1.06**	**88**	P	**Pn**	**09 01 37.5**	**-0.3**
EPNL	**EPN Laboratori**	**1.07**	**69**	P	**Pb**	**09 01 37.3**	**+0.1**
BVC2	**Cotopaxi Volca**	**1.08**	**93**	P	**Pn**	**09 01 38.0**	**-0.2**
VC1	**Cotopaxi 1**	**1.08**	**92**	P	**Pn**	**09 01 38.2**	**-0.1**
BTAM	**Cotopaxi Volca**	**1.09**	**94**	P	**Pn**	**09 01 38.4**	**-0.1**
AAM2	**Ambato 2 (Merc**	**1.10**	**127**	P	**Pn**	**09 01 38.7**	**+0.4**
PAC1	**Pacto, Paraso**	**1.11**	**39**	P	**Pg**	**09 01 37.1**	**-0.2**
PAC1				S	**Sg**	**09 01 50.2**	**-1.5**
COV1	**Cotopaxi Volc**	**1.15**	**93**	P	**Pg**	**09 01 37.9**	**-0.1**
PULU	**Pululahua**	**1.17**	**58**	P	**Pg**	**09 01 38.3**	**-0.1**
PIS1	**Pisayambo**	**1.19**	**112**	P	**Pn**	**09 01 40.0**	**+0.3**
PISA	**Pisayambo**	**1.19**	**112**	P	**Pn**	**09 01 40.0**	**+0.3**
ANTG	**Antisana-Guama**	**1.24**	**85**	P	**Pb**	**09 01 40.1**	**-0.1**
ANTG				S	**Sg**	**09 01 55.3**	**-0.6**
ANTM	**Antisana-La Mi**	**1.27**	**87**	P	**Pb**	**09 01 40.6**	**0.0**
BIL2	**Estacion Bilba**	**1.30**	**131**	P	**Pg**	**09 01 41.8**	**+0.8**
BBIL	**Ulba Tungurahu**	**1.31**	**130**	P	**Pg**	**09 01 42.0**	**+0.9**
BBIL				S	**Sg**	**09 01 58.3**	**+0.3**
ARIO	**Riobamba**	**1.31**	**143**	P	**Pg**	**09 01 42.3**	**+1.2**
POND	**Pondoa**	**1.32**	**128**	P	**Pg**	**09 01 41.9**	**+0.7**
ANTS	**Antisana-Sarah**	**1.32**	**85**	P	**Pb**	**09 01 41.6**	**0.0**
ANTI	**Antisana**	**1.33**	**83**	P	**Pb**	**09 01 41.9**	**+0.1**
RUN5	**Runtun**	**1.33**	**127**	P	**Pg**	**09 01 42.2**	**+0.6**
RETU	**Refugio**	**1.34**	**129**	P	**Pg**	**09 01 42.6**	**+0.9**
BMAS	**Trigal station**	**1.35**	**132**	P	**Pg**	**09 01 42.4**	**+0.6**
BRUN	**Tungurahua Vol**	**1.35**	**127**	P	**Pb**	**09 01 42.1**	**+0.2**
BRUN				S	**Sb**	**09 01 59.3**	**-0.3**
BULB	**Ulba Tungurahu**	**1.36**	**128**	P	**Pg**	**09 01 42.5**	**+0.4**
BULB				S	**Sb**	**09 01 59.6**	**-0.4**
ARRY	**Arrayan**	**1.37**	**131**	P	**Pb**	**09 01 42.6**	**+0.3**
PAT1	**Patacocha**	**1.38**	**131**	P	**Pg**	**09 01 43.3**	**+0.8**
BPAT	**Tungurahua Vol**	**1.38**	**130**	P	**Pg**	**09 01 43.0**	**+0.5**
CUSE	**Cuicocha Este**	**1.41**	**50**	P	**Pn**	**09 01 42.3**	**-0.4**
CUSW	**Cuicocha Oeste**	**1.44**	**52**	P	**Pb**	**09 01 43.5**	**0.0**
CUIC	**Cuicocha-Domo**	**1.44**	**51**	P	**Pn**	**09 01 43.1**	**0.0**
ACOT	**Cotacachi (Cas**	**1.51**	**54**	P	**Pb**	**09 01 44.4**	**-0.2**
IMBA	**Imbabura, San**	**1.56**	**56**	P	**Pg**	**09 01 45.9**	**0.0**
URCU	**Urcuqui**	**1.61**	**50**	P	**Pn**	**09 01 45.8**	**+0.4**
CAYA	**Cayambe**	**1.64**	**66**	P	**Pn**	**09 01 44.9**	**-1.0**
MILO	**Milagro-Astudi**	**1.67**	**182**	P	**Pn**	**09 01 45.5**	**-0.3**
MILO				S	**Sn**	**09 02 05.5**	**-2.1**
APUY	**Puyo**	**1.72**	**120**	P	**Pg**	**09 01 49.6**	**+0.7**
ATEN	**Tena**	**1.72**	**103**	P	**Pg**	**09 01 48.8**	**-0.2**
ARDO	**Archidona, Ten**	**1.73**	**103**	P	**Pg**	**09 01 49.0**	**-0.2**
ARDO				S	**Sb**	**09 02 10.6**	**+0.2**
LITE1	**Lita**	**1.79**	**39**	P	**Pb**	**09 01 48.9**	**-0.4**
COHC	**Cochancay**	**1.86**	**173**	P	**Pn**	**09 01 49.2**	**+0.7**
LAV4	**Lava4-Reventad**	**1.93**	**75**	P	**Pg**	**09 01 52.5**	**-0.5**
REVS	**Reventador Sur**	**1.93**	**75**	P	**Pb**	**09 01 52.2**	**+0.4**
SALI	**Salinas**	**2.17**	**224**	P	**Pn**	**09 01 54.7**	**+1.9**
MORR	**Playas El Morr**	**2.19**	**203**	P	**Pn**	**09 01 54.3**	**+1.2**
ATUL	**Tulcn**	**2.23**	**52**	P	**Pg**	**09 01 58.4**	**-0.4**
CASC	**Dorado de Casc**	**2.27**	**71**	P	**Pb**	**09 01 58.0**	**+0.5**
GCUF	**Volcan Galeras**	**2.81**	**50**	*e*P	**Pb**	**09 02 07.2**	**+0.2**
CPAS2	**Pasto**	**2.88**	**51**	*e*P	**Pg**	**09 02 10.8**	**-0.4**
BBAC	**Balboa, Cauca**	**3.44**	**41**	*e*P	**Pn**	**09 02 11.2**	**+0.9**
GONZ	**Gonzanam**	**3.61**	**179**	P	**Pb**	**09 02 17.5**	**-3.1**
MCRA	**Macar, Loja**	**3.77**	**187**	P	**Pn**	**09 02 13.7**	**-1.1**
GRGC	**Isla de Gorgon**	**3.82**	**20**	*e*P	**Pn**	**09 02 14.2**	**-1.2**
SOTA	**Rioblanco**	**3.96**	**47**	*e*P	**Pn**	**09 02 21.5**	**+3.6**
POPC	**Popayan, Colom**	**4.20**	**42**	*e*P	**Pn**	**09 02 23.1**	**+2.2**
FLOC	**Florencia**	**4.41**	**60**	*e*P	**Pb**	**09 02 34.0**	**0.0**
PTLC	**Puerto Leguiza**	**4.75**	**81**	*e*P	**Pn**	**09 02 29.4**	**+1.1**
MARP	**Paez Belalcaza**	**4.92**	**46**	*e*P	**Pn**	**09 02 35.2**	**+4.3**
YOTC	**Yotoco, Valle**	**5.53**	**35**	*e*P	**Pn**	**09 02 39.0**	**-0.1**
ORTC	**Ortega, Tolima**	**6.17**	**43**	*e*P	**Pn**	**09 02 51.0**	**+3.1**
MACC	**Macarena, Meta**	**6.26**	**64**	*e*P	Pn	09 02 55.6	+6.5
PRAC	**Prado**	**6.29**	**47**	*e*P	**Pn**	**09 02 52.6**	**+3.1**
PLMC	**San Jos del P**	**6.34**	**30**	*e*P	**Pn**	**09 02 48.9**	**-1.3**
GUY2C	**Guyana, Caldas**	**7.10**	**35**	*e*P	**Pn**	**09 03 03.2**	**+2.2**
VILC	**Villavicencio,**	**7.45**	**51**	*e*P	Pn	09 03 12.6	+7.1

DJA 23 09:11:54.3±0.6, 9.°S±5.°×11.°2E±.°, h64km±8km, M3.8/8, MLv3.8/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WOJI	**Wonogiri, Jawa**	**1.26**	**316**	P	Pn	09 12 15.8	-0.1
WOJI				S	Sn	09 12 32.1	0.0
NGJI	**Ngawi**	**1.42**	**346**	P	Pn	09 12 19.8	+1.8
UGM	**Wanagama**	**1.52**	**303**	P	Pn	09 12 19.5	+0.1
UGM				S	Sn	09 12 38.8	+0.5
YOGI	**Yogyakarta**	**1.76**	**302**	P	Pn	09 12 22.1	-0.6
GRJI	**Gresik**	**1.94**	**20**	P	Pn	09 12 24.9	-0.1
GRJI				S	Sn	09 12 49.1	+0.7
SMRI	**Semarang**	**2.17**	**321**	P	Pn	09 12 29.0	+0.9
JAGI	**Jajag, Banyuwa**	**2.33**	**83**	P	Pn	09 12 30.8	+0.4
JAGI				S	Sn	09 12 57.8	-0.2

MEX 23 09:25:10.4±0.8, 15.°84N×98.°46W, h8km±23km, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.71**	**357**	*e*P	Pn	09 25 36.5	-4.1
TLIG				*e*S	Sn	09 25 58.2	-4.6
VHO	**Vista Hermosa**	**2.06**	**53**	*i* P	Pn	09 25 42.2	-3.3
VHO				*i* S	Sn	09 26 07.2	-4.4
MEIG	**Mezcala**	**2.35**	**332**	*e*P	Pn	09 25 45.6	-3.8
CMIG	**Matias Romero**	**3.65**	**70**	*e*P	Pn	09 26 04.5	-2.7

IDC 23 09:31:27.2±1.2, 9.°57S×122.°14E, h0km, mb4.1/3, mb1 4.0/5, mb1mx3.7/28, mbtmp3.9/5, ML3.3/2, Error ellipse: s-maj=154.0km s-min=22.6km az=55.0
ISCJB 23 09:31:30.4±0.7, 10.°20S±0.°06×121.°58E±0.°08, h33km, mb4.0/3, Error ellipse: s-maj=10.7km s-min=8.6km az=166.1
DJA 23 09:31:31.7±0.4, 10.°S±4.°×12.°1E±.°, h10km, M3.7/8, MLv3.7/8
ISC 23 09:31:32.2±0.9, 10.°10S±0.°07×121.°42E±0.°05, h35km, n13, σ2°35/14, mb4.0/3, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.84**	**262**	P	**Pn**	**09 31 46.5**	**-1.0**
WSI	**Waingapu**	**1.19**	**291**	P	**Pn**	**09 31 55.4**	**+3.0**
EDFI	**Ende, Flores**	**1.37**	**11**	P	**Pn**	**09 31 54.5**	**-0.5**
EDFI				S	**Sn**	**09 32 12.4**	**+0.4**
MMRI	**Maumere**	**1.67**	**29**	P	**Pn**	**09 31 59.1**	**+0.1**
WBSI	**Waikabubak, Su**	**2.05**	**283**	P	**Pn**	**09 32 06.9**	**+2.6**
BATI	**Baumata**	**2.21**	**93**	P	**Pn**	**09 32 08.1**	**+1.6**
SOEI	**Soe**	**2.83**	**83**	P	**Pn**	**09 32 18.7**	**+3.7**
WRA	**Warramunga Arr**	**15.84**	**130**	Pn	**Pn**	**09 35 08.0**	**-4.8**
	0.1nm,0.3s,baz=305,slow=13,SNR=5.8						
WRA				Sn	Sn	09 37 48.9	-18
	0.1nm,0.3s,baz=313,slow=23,SNR=2.9						
ASAR	**Alice Springs**	**18.00**	**140**	P	**Pn**	**09 35 38.9**	**-0.9**
	0.2nm,0.3s,baz=327,slow=13,SNR=16						
ASAR				S	Sn	09 38 44.6	-15
	0.0nm,0.3s,baz=318,slow=24,SNR=3.3						
STKA	**Stephens Creek**	**28.60**	**142**	P	**P**	**09 37 25.8**	**+0.5**
	2.3nm,0.6s,baz=317,slow=9.9,SNR=6.7						
MKAR	**Makanchi Array**	**66.54**	**332**	P	**P**	**09 42 18.6**	**0.0**
	0.6nm,0.5s,baz=144,slow=7.3,SNR=6.8						
ZALV	**Zalesovo Beam**	**70.93**	**338**	P	**P**	**09 42 44.5**	**-1.3**
	0.9nm,0.3s,baz=149,slow=6.9,SNR=3.5						
TORD	**Torodi Ar. Bea**	**121.00**	**279**	PKP	**PKiKP**	**09 50 23.3**	**+1.1**
	0.4nm,0.5s,baz=66,slow=1.9,SNR=6.3						

IDC 23 09:32:55.5±13.0, 28.°40S×75.°20E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.4/36, mbtmp3.6/2, Error ellipse: s-maj=638.6km s-min=53.7km az=31.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.80**	**352**	T	T	09 58 33.4	
	baz=176,slow=76,SNR=9.3						
H08S1	**Diego Carcia H**	**20.80**	**352**	T	T	09 58 33.4	
	baz=176,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**20.82**	**352**	T	T	09 58 33.4	
	baz=176,slow=76,SNR=10						
ASAR	**Alice Springs**	**52.52**	**99**	P	P	09 42 11.5	+0.6
	0.3nm,0.5s,baz=251,slow=6.7,SNR=5.6						
WRA	**Warramunga Arr**	**54.16**	**95**	P	P	09 42 22.2	-0.7
	1.2nm,1.0s,baz=248,slow=8.9,SNR=3.7						
YKA	**Yellowknife Ar**	**145.29**	**8**	PKPbc	PKPbc	09 52 33.5	-0.8
	0.2nm,0.5s,baz=347,slow=2.5,SNR=3.3						

MAN 23 09:33:28.7, 7.°43N×124.°63E, h33km, mb3.7, ML2.4, MS1.9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.43**	**241⇑**	*i* P	Pn	09 33 42.0	+3.3
CTBH				*i* S	Sn	09 33 48.4	+3.0
BUKP	**Musuan**	**0.62**	**44**	*e*P	P

ASAR				S	Sn	09 54 31.4	-18
	0.0nm,0.3s,baz=5.7,slow=22,SNR=3.1						
MKAR	**Makanchi Array**	**66.49**	**327**	P	P	09 57 57.8	+0.1
	0.1nm,0.4s,baz=113,slow=7.8,SNR=2.6						

JMA 23 09:52:12.3±0.3, 25°.15N×128°.94E, h54km, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**1.44**	**314**	P	Pn	09 52 36.9	+0.9
JJT3				S	Sn	09 52 54.2	+0.3
JNTH	**Nagotoyohara**	**1.59**	**329**	P	Pn	09 52 38.6	+0.4
JNTH				S	Sn	09 52 58.4	+0.8
JOW	**Kunigami**	**1.78**	**340**	P	Pn	09 52 41.7	+1.0
JOW				S	Sn	09 53 02.0	-0.2
JYRO	**Yoronjima**	**1.92**	**347**	P	Pn	09 52 43.5	+0.9
JYRO				eS	Sn	09 53 04.8	-0.8
JIH	**Iheya**	**2.07**	**335**	P	Pn	09 52 46.0	+1.4
JIH				S	Sn	09 53 09.4	+0.1
JAGN	**Aguni-jima**	**2.10**	**313**	P	Pn	09 52 45.9	+0.9
JAGN				S	Sn	09 53 09.7	-0.2
JMZ	**Minamidaito 2**	**2.17**	**72**	P	Pn	09 52 46.0	+0.1
JMZ				S	Sn	09 53 10.1	-1.5
JOKE	**Okinoerabujima**	**2.23**	**352**	P	Pn	09 52 48.2	+1.4
JOKE				S	Sn	09 53 12.2	-1.0
JKE	**Kume jima 2**	**2.27**	**302**	P	Pn	09 52 47.8	+0.5
JKE				S	Sn	09 53 12.7	-1.4
JTK	**Tokunoshima**	**2.62**	**0**	P	Pn	09 52 53.4	+1.2
JAMN	**Amaminishikomi**	**3.09**	**4**	P	Pn	09 53 00.2	+1.6
JOGS	**Gusukube**	**3.23**	**264**	P	Pn	09 53 01.3	+0.8
JZK	**Kikaishima**	**3.28**	**16**	P	Pn	09 53 04.5	+3.2
JZK				S	Sn	09 53 39.6	+0.5
JAM	**Amami Oshima**	**3.30**	**10**	P	Pn	09 53 04.1	+2.6
JMJ2	**Miyako jima3**	**3.30**	**264**	P	Pn	09 53 02.2	+0.7
JMJ2				eS	Sn	09 53 38.8	-0.8
JIRB	**Irabujima**	**3.43**	**265**	eS	Sn	09 53 40.8	-2.0
JTJ	**Tarama**	**3.88**	**263**	eS	Sn	09 53 51.5	-2.3
JTAJ	**Takarajima**	**3.99**	**3**	P	Pn	09 53 13.3	+2.3
JISG	**Ishigakijimahi**	**4.24**	**263**	eS	Sn	09 54 00.8	-1.8
JIJ	**Ishigaki jima**	**4.43**	**261**	P	Pn	09 53 16.8	-0.2
JIJ				eS	Sn	09 54 03.1	-4.2
JKRS	**Kuro-shima**	**4.58**	**260**	eS	Sn	09 54 08.1	-2.8

MAN 23 10:00:20.1, 6°.70N×123°.68E, h35km, mb3.8, ML2.6, MS2.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.77**	**47**	||i P	Pn	10 00 32.5	-2.0
CTBH				i S	Sn	10 00 40.1	-4.7
SKMP	**Bagumbayan, Su**	**0.88**	**102**	eP	Pn	10 00 37.0	+1.0
SKMP				eS	Sn	10 00 48.0	+0.4
IPIL	**Ipil**	**1.54**	**315**	eP	Sn	10 01 05.9	+2.0
BUKP	**Musuan**	**1.81**	**49**	eP	Pn	10 00 49.2	+0.3
BUKP				eS	Sn	10 01 11.6	+1.0
SCPH	**Surigao**	**3.55**	**30**	eS	Sn	10 01 48.4	-5.2

DDA ***23*** *10:06:40.9, 38°.51N×30°.77E, h7km±3km, ML2.7*
ISK ***23*** *10:06:40.3, 38°.50N×30°.78E, h5km, ML2.0/9*
ISCJB ***23*** *10:06:41.2±0.5, 38°.51N±0°.02×30°.77E±0°.03, h5km±5km, Error ellipse: s-maj=4.4km s-min=3.7km az=41.4*
ISC 23 10:06:40.9±1.0, 38°.50N±0°.03×30°.77E±0°.03, h9km±9km, n19, σ0°.63/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	**Suhut-Afyon**	**0.18**	**286**	PG	**Pg**	**10 06 44.7**	**-0.1**
SHUT				SG	**Sg**	**10 06 47.8**	**+0.4**
BOLV	**Bolvadin**	**0.26**	**33**	*i* P	**Pb**	**10 06 47.2**	**-0.6**
BOLV				*i* S	**Sb**	**10 06 51.0**	**-1.4**
AFYO	**Afyonkarahisar**	**0.47**	**308**	*i* P	**Pb**	**10 06 50.8**	**-0.6**
BAGO	**Egridir - ISPA**	**0.51**	**178**	*i* P	**Pb**	**10 06 51.4**	**-0.7**
BAGO				*i* S	**Sb**	**10 07 00.1**	**+0.4**
ISP	**Isparta**	**0.71**	**196**	PG	**Pg**	**10 06 54.0**	**-0.6**
ISP				SG	**Sg**	**10 07 04.3**	**+0.5**
DOGA	**KONYA_Doganhis**	**0.81**	**119**	*i* P	**Pg**	**10 06 56.4**	**-0.1**
DOGA				IAML_P			
	comp=Z,1μm,0.1s						
CIFT	**Cifteler, Eski**	**0.89**	**15**	PG	**Pg**	**10 06 57.5**	**-0.5**
CIFT				SG	**Sb**	**10 07 10.1**	**-0.4**
CIFT	**Cifteler, Eski**	**0.89**	**15**	*i* P	**Pg**	**10 06 57.8**	**-0.2**
CIFT				*i* S	**Sg**	**10 07 09.2**	**-0.4**
CIFT				IAML_P			
	comp=Z,1μm,0.2s						
KIZT	**Kizilcal**	**0.95**	**66**	PG	**Pg**	**10 06 58.9**	**-0.2**
KIZT				SG	**Sb**	**10 07 12.7**	**+0.5**
KHAL	**Karahalli**	**1.01**	**263**	*i* P	**Pb**	**10 07 00.5**	**-0.1**
KHAL				*i* S	**Sb**	**10 07 14.7**	**+0.5**
KHAL				IAML_P			
	comp=Z,1μm,0.3s						
KDHN	**Kadinhani**	**1.06**	**89**	*i* P	**Pb**	**10 07 01.6**	**+0.2**
KDHN				*i* S	**Sn**	**10 07 16.6**	**-0.2**
LADK	**Ladik-KONYA**	**1.29**	**103**	PN	**Pg**	**10 07 05.5**	**-0.2**
KONT	**Konya--Tatoy**	**1.37**	**113**	PN	**Pg**	**10 07 07.1**	**-0.1**
KONT	**Konya--Tatoy**	**1.37**	**113**	*i* P	**Pg**	**10 07 08.0**	**+0.8**
KONT				IAML_P			
	comp=Z,641nm,0.3s						
TVSB	**Tavsanli**	**1.39**	**313**	PN	**Pg**	**10 07 07.3**	**-0.3**
BORA	**Eskisehir**	**1.40**	**350**	*i* P	**Pg**	**10 07 08.1**	**+0.4**
BORA				IAML_P			
	comp=Z,578nm,0.1s						
AUMIH	**MIHALICIK**	**1.47**	**22**	*i* P	**Pg**	**10 07 10.9**	**+1.7**
SRCK	**Saricakaya, Es**	**1.54**	**356**	PN	**Pb**	**10 07 09.7**	**+0.1**
KULA	**Kula-Manisa**	**1.66**	**271**	PN	**Pn**	**10 07 10.6**	**+0.4**

NIED ***23*** *10:20:00, 39°.40N×143°.70E, h11km, Mw4.2 Best double couple: M0=2.33000×10^15 NP1:φs=193.00000°, δ36.00000°, λ96.00000°. NP2:φs=5.00000°, δ54.00000°, λ86.00000°.*
IDC ***23*** *10:20:18.0±0.7, 39°.27N×143°.58E, h0km, mb3.9/19, mb1 4.1/27, mb1mx4.0/47, mbtmp4.0/27, ML3.4/8, MS3.1/12, Ms1 3.2/12, ms1mx3.0/37, Error ellipse: s-maj=16.5km s-min=12.9km az=134.0*
ISCJB ***23*** *10:20:18.7±1.1, 39°.39N±0°.03×143°.64E±0°.04, h12km±7km, mb4.3/63, MS3.7/10, Error ellipse: s-maj=6.3km s-min=3.6km az=40.5*
JMA ***23*** *10:20:20.0±0.1, 39°.37N×143°.71E, h35km, M4.6*
MOS ***23*** *10:20:22.9±1.2, 39°.56N×143°.44E, h33km, mb4.6/19, Error ellipse: s-maj=8.8km s-min=5.2km az=99.3*
NEIC ***23*** *10:20:24.1±2.4, 39°.38N×143°.32E, h28km±5km, mb4.5/35, Error ellipse: s-maj=15.2km s-min=6.7km az=103.0*
ISC 23 10:20:22.0±2.2, 39°.43N±0°.05×143°.57E±0°.05, h23km±16km, n158, σ1°.80/165, mb4.4/63, MS3.7/11, 8C-3D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.36**	**277**	P	**Pn**	**10 20 45.2**	**-0.4**
MIYJ				eS	**Sn**	**10 21 03.0**	**+0.1**
JTH	**Tanohata**	**1.41**	**292**	P	**Pn**	**10 20 45.9**	**-0.4**
OFUJ	**Ofunato**	**1.52**	**257**	P	**Pn**	**10 20 47.0**	**-0.7**
JOM	**Ohasama**	**1.76**	**272**	P	**Pn**	**10 20 51.2**	**+0.1**
JANG	**Nango**	**1.84**	**301**	P	**Pn**	**10 20 51.4**	**-0.8**
JMK	**Ichinoseki**	**1.89**	**256**	P	**Pn**	**10 20 52.5**	**-0.3**
JMK				eS	**Sn**	**10 21 16.2**	**+0.3**
JYK	**Kaneyama**	**2.55**	**259**	P	**Pn**	**10 21 02.3**	**+0.4**
JYK				eS	**Sn**	**10 21 33.8**	**+1.6**
ERM	**Erimo**	**2.60**	**353**	ePn	**Pn**	**10 21 02.7**	**0.0**
ERM				eSn	**Sn**	**10 21 33.5**	**0.0**
ERM	**Erimo**	**2.60**	**353**	*ce*P	**Pn**	**10 21 02.5**	**-0.1**
ERM				pmax	pmax		
	comp=Z,31nm,1.3s						
JOT	**Ohata**	**2.74**	**316**	P	**Pn**	**10 21 04.9**	**+0.4**
JNBK	**Urakawa-nobuka**	**2.91**	**348**	P	**Pn**	**10 21 07.3**	**+0.4**
JNBK				eS	**Sn**	**10 21 43.2**	**+2.0**
JKB	**Kayabe**	**3.12**	**323**	P	**Pn**	**10 21 11.1**	**+1.3**
JFT	**Otama**	**3.17**	**234**	P	**Pn**	**10 21 09.8**	**-0.8**
JCH	**Churui**	**3.18**	**357**	P	**Pn**	**10 21 10.5**	**-0.2**
JCH				eS	**Sn**	**10 21 48.5**	**+0.6**
JAW	**Awa shima**	**3.51**	**255**	P	**Pn**	**10 21 15.6**	**+0.5**
JAK	**Akkeshi**	**3.66**	**13**	P	**Pn**	**10 21 16.2**	**-1.0**
JAK				S	**Sn**	**10 21 58.5**	**-1.2**
JNS	**Sasagawa**	**3.70**	**246**	P	**Pn**	**10 21 17.7**	**-0.1**
GLVR	**Golovnino**	**4.54**	**18**	P	**Pn**	**10 21 28.2**	**-1.2**
GLVR				*i* S	**Sn**	**10 22 17.9**	**-3.5**
GLVR				smax	smax		
	comp=E,216nm,0.3s						
GLVR				smax	smax		
	comp=N,573nm,0.4s						
ASAJ	**Asahikawa**	**4.74**	**351**	Pn	**Pn**	**10 21 32.6**	**+0.6**
	comp=N,2.8nm,0.3s,baz=219,slow=15,SNR=29						
ASAJ				Sn	**Sn**	**10 22 24.7**	**-1.5**
	comp=N,3.0nm,0.3s,baz=214,slow=18,SNR=6.6						
YUK	**Yuzh-Kuril'sk**	**4.91**	**20**	||*i* P	**Pn**	**10 21 33.3**	**-1.1**
YUK				*i* S	**Sn**	**10 22 26.3**	**-4.1**
YUK				pmax	pmax		
	comp=Z,81nm,0.3s						
YUK				pmax	pmax		
	comp=N,24nm,0.2s						
YUK				pmax	pmax		
	comp=E,17nm,0.2s						
YUK				smax	smax		
	comp=E,614nm,0.6s						
YUK				smax	smax		
	comp=N,228nm,0.4s						
YUK				MLR	MLR		
	comp=Z,118nm,14.0s						
MJAR	**Matsushiro Arr**	**5.12**	**237**	Pn	**Pn**	**10 21 36.7**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=39,slow=11,SNR=240						
MJAR				LR	LR	10 23 28.7	
	comp=Z,129nm,19.7s,baz=60,slow=38						
MAJO	**Matsushiro**	**5.12**	**237**	*e*Pn	**Pn**	**10 21 38.2**	**+0.8**
MAJO	**Matsushiro**	**5.12**	**237**	*c i* P	**Pn**	**10 21 37.9**	**+0.5**
MAT	**Matsushiro**	**5.12**	**237**	P	**Pn**	**10 21 38.0**	**+0.6**
MAT				S	**Sn**	**10 22 35.2**	**-0.6**
MJB9	**Matsu-Tunnel**	**5.12**	**237**	*e*Pn	**Pn**	**10 21 38.0**	**+0.6**
KUR	**Kuril'sk**	**6.61**	**27**	*i* P	**Pn**	**10 21 57.2**	**-0.6**
KUR				*e*S	**Sn**	**10 23 08.3**	**-4.1**
KUR				pmax	pmax		
	comp=Z,18nm,0.4s						
KUR				pmax	pmax		
	comp=N,4.0nm,0.1s						
KUR				pmax	pmax		
	comp=E,5.0nm,0.1s						
KUR				smax	smax		
	comp=E,76nm,0.5s						
KUR				smax	smax		
	comp=N,89nm,0.4s						
KUR				MLR	MLR		
	comp=Z,189nm,13.0s						
INU	**Inuyama**	**6.62**	**234**	*e*Pn	**Pn**	**10 21 57.6**	**-0.3**
JHJ2	**Mitsune**	**7.00**	**207**	*e*Pn	**Pn**	**10 22 02.2**	**-0.9**
JHJ2				*e*Sn	**Sn**	**10 23 15.6**	**-6.3**
JHJ	**Hachijo jima 2**	**7.00**	**207**	Pn	**Pn**	**10 21 59.6**	**-3.5**
	comp=Z,12nm,0.3s,baz=311,slow=20,SNR=11						
JHJ				Sn	Sn	10 23 12.2	-10
	comp=Z,23nm,0.3s,baz=65,slow=22,SNR=8.7						
YSS	**Yuzh-Sakhalins**	**7.54**	**356**	||*e* P	**Pn**	**10 22 09.1**	**-1.4**
YSS				*e*S	Sn	10 23 27.7	-7.5
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
TEY	**Ternei**	**7.62**	**320**	||*e* P	**Pn**	**10 22 14.6**	**+3.0**
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
TEY				pmax	pmax		
	comp=Z,40nm,0.6s						
USRK	**Ussuriysk Ar.**	**9.87**	**303**	Pn	**Pn**	**10 22 42.5**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=112,slow=14,SNR=15						
USRK				LR	LR	10 26 24.8	
	comp=Z,94nm,18.3s,baz=88,slow=37						
TYV	**Tymovskoe**	**11.45**	**357**	*e*P	**Pn**	**10 23 05.3**	**+1.3**
TYV				pmax	pmax		
	comp=Z,200nm,3.5s						
TYV				MLR	MLR		
	comp=Z,500nm,19.0s						
MDJ	**Mudanjiang**	**11.61**	**301**	P	**Pn**	**10 23 08.8**	**+2.5**
MDJ				pP		10 23 14.3	
MDJ				sP		10 23 18.5	
MDJ				S	**Sn**	**10 25 09.6**	**-5.5**
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.3s						
MDJ				LR	LR		
	comp=Z,380nm,12.1s						
MDJ				LR	LR		
	comp=Z,450nm,12.8s						
MDJ				LR	LR		
	comp=Z,640nm,13.0s						
MDJ	**Mudanjiang**	**11.61**	**301**	*e*Pn	**Pn**	**10 23 04.8**	**-1.4**
JNU	**Nakatsue**	**12.02**	**242**	Pn	**Pn**	**10 23 10.0**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=51,slow=2.1,SNR=5.9						
JNU				LR	LR	10 27 31.1	
	comp=Z,22nm,21.0s,baz=296,slow=36						
JNU	**Nakatsue**	**12.02**	**242**	*e*Pn	**Pn**	**10 23 10.3**	**-1.6**
KSRS	**Korea Array**	**12.43**	**266**	Pn	**Pn**	**10 23 17.9**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=85,slow=13,SNR=16						
KSRS				LR	LR	10 27 45.9	
	comp=Z,119nm,18.6s,baz=92,slow=36						
KS15	**Wonju Array Si**	**12.46**	**266**	*e*Pn	**Pn**	**10 23 20.8**	**+2.9**
KLR	**Kul'dur**	**12.93**	**323**	Pn	**Pn**	**10 23 24.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=138,slow=13,SNR=8.6						
KLR				LR	LR	10 27 59.9	
	comp=Z,30nm,19.4s,baz=118,slow=35						
KLR	**Kul'dur**	**12.93**	**323**	*i* P	**Pn**	**10 23 24.5**	**+0.3**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NKL	**Nikolayevsk**	**13.86**	**353**	*e*P	**Pn**	**10 23 35.3**	**-1.7**
NKL				*e*S	**Sn**	**10 26 05.4**	**-4.6**
NKL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NKL				pmax	pmax		
	comp=E,1.0nm,0.8s						
NKL				pmax	pmax		
	comp=N,3.0nm,0.4s						
PETK	**Petropavlovsk-**	**16.76**	**31**	Pn	**Pn**	**10 24 15.5**	**+0.3**
	comp=N,0.1nm,0.3s,baz=193,slow=5.8,SNR=2.5						
PETK				LR	LR	10 30 05.9	
	comp=N,48nm,21.2s,baz=200,slow=35						
PEA1	**Petropavlovsk-**	**16.77**	**31**	*e*Pn	**Pn**	**10 24 15.5**	**+0.2**
ZEA	**Zeya**	**18.11**	**328**	*e*P	**Pn**	**10 24 29.2**	**-2.7**
ZEA				pmax	pmax		
	comp=Z,15nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
ZEA				MLR	MLR		
	comp=E,300nm,16.0s						
HIA	**Hailar**	**19.60**	**308**	*e*P	**P**	**10 24 47.0**	**-1.5**
	comp=E,9.7nm,0.6s						
HIA	**Hailar**	**19.60**	**308**	*i* P	**P**	**10 24 47.1**	**-1.5**
HIA				pmax	pmax		
	comp=Z,56nm,1.1s						
MA2	**Magadan**	**20.67**	**10**	P	**P**	**10 25 01.5**	**+1.4**
	comp=Z,4.4nm,0.7s,baz=162,slow=20,SNR=2.5						
BJT	**Baijiatuau**	**21.06**	**280**	*e*P	**P**	**10 25 01.8**	**-2.6**
	comp=Z,9.6nm,0.8s						
BJT	**Baijiatuau**	**21.06**	**280**	*e*P	**P**	**10 25 01.8**	**-2.6**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**21.33**	**257**	*e*P	**P**	**10 25 08.8**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YHNB	**Yeheng**	**23.80**	**238**	*e*P	**P**	**10 25 32.2**	**-1.0**
	comp=Z,22nm,1.1s						
SEY	**Seymchan**	**24.13**	**10**	P	**P**	**10 25 36.0**	**+0.1**
	comp=Z,4.9nm,0.9s,baz=185,slow=7.2,SNR=8.0						
SEY	**Seymchan**	**24.13**	**10**	*i* P	**P**	**10 25 37.6**	**+1.7**
YAK	**Yakutsk**	**24.17**	**344**	*e*P	**P**	**10 25 36.7**	**+0.5**
	comp=Z,15nm,0.8s						
YAK	**Yakutsk**	**24.17**	**344**	*e*P	**P**	**10 25 36.5**	**+0.3**
HHC	**Hu-ho-hao-te**	**24.44**	**284**	*e*P	**P**	**10 25 38.6**	**-0.5**
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				LR	LR		
	comp=Z,69nm,9.4s						
HHC				LR	LR		
	comp=Z,270nm,10.6s						
SSLB	**Suanglung**	**24.68**	**238**	*e*P	**P**	**10 25 40.9**	**-0.5**
	comp=Z,12nm,1.0s						
WHN	**Wuhan**	**25.44**	**259**	||P	**P**	**10 25 48.6**	**+0.5**
WHN				S	**S**	**10 30 05.5**	**-8.2**
WHN				pmax	pmax		
	comp=Z,60nm,1.0s						
WHN				LR	LR		
	comp=Z,500nm,11.4s						
BOD	**Bodaibo**	**26.50**	**324**	*e*P	**P**	**10 25 57.6**	**+0.1**
BOD				pmax	pmax		
	comp=Z,590nm,0.7s						
ULN	**Ulaanbaatar**	**27.52**	**300**	*e*P	**P**	**10 26 07.6**	**+0.7**
	comp=Z,6.1nm,1.0s						
ULN	**Ulaanbaatar**	**27.52**	**300**	*ce*P	**P**	**10 26 08.2**	**+1.2**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONA0	**Songino Array**	**27.96**	**300**	*e*P	**P**	**10 26 12.1**	**+1.2**
SONM	**Songino Array**	**27.96**	**300**	P	**P**	**10 26 12.1**	**+1.2**
	comp=Z,2.8nm,0.7s,baz=93,slow=8.4,SNR=9.4						
SONM				LR	LR	10 37 56.1	
	comp=Z,71nm,20.0s,baz=88,slow=38						
H11N2	**WAKE ISLAND Hy**	**28.09**	**128**	T	T	10 55 38.9	
	baz=318,slow=75,SNR=83						
H11N1	**WAKE ISLAND Hy**	**28.10**	**128**	T	T	10 55 38.9	
	baz=318,slow=75,SNR=95						
H11N3	**WAKE ISLAND Hy**	**28.11**	**128**	T	T	10 55 36.7	
	baz=318,slow=75,SNR=90						
XAN	**Xi'an**	**28.17**	**270**	P	**P**	**10 26 14.9**	**+2.2**
XAN				pP	sP	10 26 28.4	+7.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**28.90**	**130**	T	T	10 56 38.6	
	baz=318,slow=76,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**28.91**	**130**	T	T	10 56 34.6	
	baz=318,slow=76,SNR=8.7						
H11S2	**WAKE ISLAND Hy**	**28.92**	**130**	T	T	10 56 35.2	
	baz=318,slow=76,SNR=2.6						
ENH	**Enshi**	**29.28**	**262**	*e*P	**P**	**10 26 22.3**	**-0.3**
	comp=Z,11nm,0.6s						
ZAK	**Zakamensk**	**30.21**	**305**	*e*P	**P**	**10 26 30.9**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL	**Bilibino**	**31.25**	**16**	*i* P	**P**	**10 26 38.9**	**-0.7**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
LZH	**Lanzhou**	**31.41**	**277**	*e*P	**P**	**10 26 42.8**	**+1.3**
LZH				pP	pwP	10 26 53.4	+2.1
LZH				sP	sP	10 26 57.8	+7.7
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
TIXI	**Tiksi**	**33.14**	**352**	*i* P	**P**	**10 26 59.1**	**+3.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CD2	**Chengdu**	**33.42**	**268**	P	**P**	**10 26 58.4**	**-0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
GTA	**Gaotai**	**33.55**	**284**	*e*P	**P**	**10 27 01.8**	**+1.6**
GTA				pP	pP	10 27 07.1	+0.9
GTA				sP	pwP	10 27 10.4	+0.4
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=Z,110nm,9.5s						
GTA				LR	LR		
	comp=Z,190nm,14.6s						
GTA				LR	LR		
	comp=Z,180nm,14.6s						
DGZ	**Jazzator, Alta**	**40.42**	**304**	*i* P	**P**	**10 27 59.2**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WMQ	**Urumqi**	**41.32**	**295**	*e*P	**P**	**10 28 08.0**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.1s						
WMQ				LR	LR		
	comp=Z,500nm,29.0s						
WMQ				LR	LR		
	comp=Z,1μm,29.2s						
ZAA0	**Zalesovo Array**	**41.60**	**310**	*e*P	**P**	**10 28 08.5**	**+0.5**
	comp=Z,4.9nm,0.6s						
ZALV	**Zalesovo Beam**	**41.60**	**310**	P	**P**	**10 28 08.8**	**+0.9**
	comp=Z,5.0nm,0.5s,baz=89,slow=7.4,SNR=15						
NRIK	**Noril'sk**	**41.83**	**334**	LR	LR	10 46 50.4	
	comp=Z,61nm,18.1s,baz=36,slow=38						
NVS	**Novosibirsk**	**42.46**	**312**	*e*P	**P**	**10 28 15.3**	**+0.4**
CM31	**Chiang Mai Arr**	**43.76**	**255**	*e*P	**P**	**10 28 24.7**	**-1.2**
	comp=Z,9.8nm,1.3s						
CMAR	**Chiang Mai Arr**	**43.76**	**255**	P	**P**	**10 28 24.7**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=42,slow=8.4,SNR=4.4						
CMAR				LR	LR	10 46 29.8	
	comp=Z,18nm,19.0s,baz=155,slow=36						
CMAR	**Chiang Mai Arr**	**43.76**	**255**	*ce*P	**P**	**10 28 27.0**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	**Makanchi Array**	**44.33**	**300**	*e*P	**P**	**10 28 30.9**	**+0.7**
	comp=Z,4.3nm,0.9s						
MK31	**Makanchi Array**	**44.33**	**300**	*e*P	**P**	**10 28 30.9**	**+0.7**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	**Makanchi Array**	**44.33**	**300**	P	**P**	**10 28 30.7**	**+0.5**
	comp=Z,3.9nm,0.8s,baz=82,slow=9.9,SNR=24						
MKAR				LR	LR	10 47 21.6	
	comp=Z,29nm,19.4s,baz=109,slow=37						
MAKZ	**Makanchi**	**44.53**	**301**	*e*P	**P**	**10 28 32.4**	**+0.6**
	comp=Z,7.7nm,1.1s						
MAKZ	**Makanchi**	**44.53**	**301**	*e*P	**P**	**10 28 32.4**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	**Kurchatov**	**45.83**	**307**	*e*P	**P**	**10 28 42.1**	**+0.1**
	comp=Z,11nm,0.6s						
KURK	**Kurchatov**	**45.83**	**307**	*ce*P	**P**	**10 28 42.6**	**+0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURBB	**Kurchatov Arra**	**45.90**	**306**	P	**P**	**10 28 43.1**	**+0.5**
	comp=Z,7.8nm,0.7s,baz=81,slow=8.2,SNR=58						
ILAR	**Eielson Array**	**46.56**	**34**	P	**P**	**10 28 49.2**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=251,slow=7.0,SNR=7.6						
ILB	**Eielson Array**	**46.56**	**34**	*e*P	**P**	**10 28 51.8**	**+4.2**
	comp=Z,6.9nm,1.5s						
SCRK	**Sand Creek**	**47.87**	**35**	*e*P	**P**	**10 29 00.9**	**+3.0**
	comp=Z,1.7nm,1.0s						
GUN	**Gumba**	**48.63**	**275**	*e*P	**P**	**10 29 05.3**	**+0.7**
	comp=Z,38nm,0.7s						
EGAK	**Eagle**	**49.01**	**33**	*e*P	**P**	**10 29 10.0**	**+3.5**
	comp=Z,1.9nm,1.3s						
KKN	**Kakani**	**49.15**	**275**	*e*P	**P**	**10 29 09.2**	**+0.8**
	comp=Z,20nm,0.6s						
DMN	**Daman**	**49.37**	**275**	*e*P	**P**	**10 29 11.5**	**+1.3**
	comp=Z,7.2nm,0.5s						
DANN	**Dangsing

comp=Z,491nm,0.9s
KBL Kabul 58.15 291 *e*P **P 10 30 14.1 -0.2**
comp=Z,9.3nm,1.3s
KBL Kabul 58.15 291 *e*P **P 10 30 14.1 -0.2**
KBL pmax pmax
comp=Z,9.0nm,1.3s
WR1 Warramunga Arr 59.69 190 *e*P **P 10 30 22.4 -2.2**
WRA Warramunga Arr 59.69 190 P **P 10 30 22.4 -2.2**
comp=Z,1.1nm,0.7s,baz=6.3,slow=8.4,SNR=6.7
RES Resolute Bay 59.85 15 *e*P **P 10 30 26.5 +1.4**
comp=Z,9.7nm,1.3s
RES Resolute Bay 59.85 15 *e*P **P 10 30 26.5 +1.4**
RES pmax pmax
comp=Z,10.0nm,1.3s
YKA Yellowknife Ar 60.88 31 P **P 10 30 32.4 0.0**
comp=Z,0.1nm,0.4s,baz=303,slow=6.3,SNR=2.8
YKB5 Yellowknife Ar 60.88 31 *e*P **P 10 30 32.4 0.0**
ARCES ARCESS Array B 62.35 339 LR LR 11 04 05.9
comp=Z,52nm,18.0s,baz=278,slow=42
AS31 Alice Springs 63.41 190 *e*P **P 10 30 48.2 -1.6**
comp=Z,1.8nm,1.4s
ASAR Alice Springs 63.42 190 P **P 10 30 48.2 -1.6**
comp=Z,0.6nm,0.8s,baz=14,slow=6.6,SNR=7.6
LON Longmire 65.39 49 *e*P **P 10 31 05.3 +2.6**
comp=Z,7.7nm,1.5s
LON Longmire 65.39 49 *e*P **P 10 31 05.3 +2.6**
LON pmax pmax
comp=Z,8.0nm,1.5s
FIA1 FINESS Array S 67.48 333 *e*P **P 10 31 16.9 +1.3**
comp=Z,8.6nm,1.3s
FINES FINESS Array B 67.48 333 P **P 10 31 14.2 -1.4**
comp=Z,1.8nm,0.8s,baz=82,slow=4.0,SNR=6.0
FINES FINESS Array B 67.48 333 *i*P **P 10 31 15.1 -0.6**
FINES pmax pmax
comp=Z,2.0nm,0.8s
PLID Pearl Lake 69.69 48 *e*P **P 10 31 34.5 +4.5**
comp=Z,7.4nm,1.1s
KIV Kislovodsk 70.61 311 *e*P **P 10 31 36.5 +1.0**
comp=Z,13nm,1.1s
KIV Kislovodsk 70.61 311 *e*P **P 10 31 36.1 +0.5**
KIV pmax pmax
comp=Z,34nm,1.1s
KBZ Khabaz 70.62 311 P **P 10 31 34.6 -0.8**
comp=Z,2.5nm,0.8s,baz=49,slow=5.4,SNR=6.9
NV01 Mina Array Sit 72.21 55 *e*P **P 10 31 46.3 +0.8**
NVAR Mina Array Bea 72.21 55 P **P 10 31 46.3 +0.8**
comp=Z,0.2nm,0.5s,baz=282,slow=7.4,SNR=3.6
NB2 NORSAR Subarra 72.62 338 P **P 10 31 47.7 +0.4**
comp=Z,0.6nm,0.6s,baz=38,slow=5.9
NOA NORSAR Array B 72.62 338 P **P 10 31 45.9 -1.4**
comp=Z,1.3nm,0.8s,baz=38,slow=5.8,SNR=4.0
NOA LR LR 11 07 44.6
comp=Z,26nm,19.6s,baz=285,slow=39
PDAR Pinedale Array 74.78 47 P **P 10 32 01.4 +0.9**
comp=Z,0.4nm,0.7s,baz=326,slow=2.6,SNR=3.4
BUR08 Bucovina Ar. S 77.45 322 *e*P **P 10 32 16.5 +1.0**
comp=Z,1.4nm,0.8s
OJC Ojcow 77.98 327 *e*P **P 10 32 21.2 +3.0**
comp=Z,5.3nm,1.3s
OJC Ojcow 77.98 327 *e*P **P 10 32 21.2 +3.0**
OJC pmax pmax
comp=Z,5.0nm,1.3s
CLL Collm 79.84 331 *e*P **P 10 32 31.0 +2.6**
CLL Collm 79.84 331 *e*P **P 10 32 31.0 +2.6**
VTS Vitosha 82.06 320 *e*P **P 10 32 41.8 +1.1**
comp=Z,2.3nm,0.7s
VTS Vitosha 82.06 320 *e*P **P 10 32 41.8 +1.1**
VTS pmax pmax
comp=Z,2.0nm,0.7s
FUORN Ofenpass-Fuorn 84.71 330 *e*P **P 10 32 56.0 +1.7**
comp=Z,4.4nm,0.8s
TXAR Lajitas Array 87.33 54 P **P 10 33 08.0 +0.6**
comp=Z,0.1nm,0.4s,baz=308,slow=4.4,SNR=2.8
MNMC Minye Minye 144.99 64 *e*PKPbc **PKiKP 10 40 01.2 -0.7**

NEIC ***23*** *10:22:14.7±0.0, 15°.73N×98°.40W, h10km, mb3.7/2, MD4.1(MEX), After MEX.*
MEX 23 10:22:14.7±0.7, 15°.75N×98°.39W, h7km±17km, MD4.1, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.81**	**355**	*e*Pn		Pn	Pn	10 22 43.0	-3.5
TLIG				*e*Sn		Sn	Sn	10 23 07.5	-2.3
TLIG	**Tlapa**	**1.81**	**355**	*e*P		Pn	Pn	10 22 43.0	-3.5
TLIG				*e*S		Sn	Sn	10 23 04.8	-5.0
VHO	**Vista Hermosa**	**2.06**	**50**	*e*Pn		Pn	Pn	10 22 46.6	-3.4
VHO				*e*Sn		Sn	Sn	10 23 11.9	-4.1
VHO	**Vista Hermosa**	**2.06**	**50**	*e*P		Pn	Pn	10 22 46.6	-3.4
VHO				*e*S		Sn	Sn	10 23 11.9	-4.1
CAIG	**El Cayaco**	**2.22**	**306**	*e*Pn		Pb	Pb	10 22 53.7	-1.4
CAIG	**El Cayaco**	**2.22**	**306**	*e*P		Pb	Pb	10 22 53.7	-1.4
CMIG	**Matias Romero**	**3.62**	**68**	*e*Pn		Pn	Pn	10 23 08.7	-2.5
CMIG				*e*Sn		Sn	Sn	10 23 50.3	-3.9
CMIG	**Matias Romero**	**3.62**	**68**	*e*P		Pn	Pn	10 23 08.7	-2.5
CMIG				*e*S		Sn	Sn	10 23 50.3	-3.9
NATX	**Nacogdoches** 6.6nm,0.8s	**16.29**	**11**	*e*Pn		Pn	Pn	10 26 04.7	+0.5
WMOK	**Wichita Mounta** 4.3nm,0.9s	**18.91**	**359**	*e*P		P	P	10 26 33.4	-2.7

DDA ***23*** *10:27:29.0, 36°.93N×42°.77E, h7km±2km, ML3.5*
ISN ***23*** *10:27:30.9±0.3, 36°.92N×42°.82E, h0km, ML2.8*
ISC 23 10:27:29.7±1.4, 36°.91N±0°.04×42°.78E±0°.04, h9km±12km, n10, σ1°67/18, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSL	**Mosul** baz=335	**0.57**	**152**	*e*Pg		**Pn**	**Pn**	**10 27 43.3**	**-0.7**
MSL				AML		AML	AML	10 27 44.2	
comp=Z,682nm,0.3s									
MSL				*e*Sg		**Sb**	**Sb**	**10 27 52.0**	**+1.8**
SIRN	**Sirnak**	**0.65**	**334**	*e*P		**Pg**	**Pg**	**10 27 41.3**	**-1.1**
CUKT	**Cukurca**	**0.75**	**63**	*i*P		**Pb**	**Pb**	**10 27 44.3**	**-0.6**
CUKT				*i*S		**Sb**	**Sb**	**10 27 54.0**	**-1.3**
CUKT				IAML_P					
comp=Z,4μm,0.2s									
HAKT	**HAKKARI**	**0.99**	**49**	*i*P		**Pg**	**Pg**	**10 27 47.7**	**-0.9**
HAKT				*i*S		**Sb**	**Sb**	**10 28 01.2**	**-1.0**
HAKT				IAML_P					
comp=Z,4μm,0.1s									
SRTM	**Siirt_Merkez**	**1.28**	**328**	*i*P		**Pn**	**Pn**	**10 27 54.7**	**+0.9**
SRTM				*i*S		**Sn**	**Sn**	**10 28 13.1**	**+2.0**
SRTM				IAML_P					
comp=Z,3μm,0.1s									
GEVA	**Gevas**	**1.42**	**9**	*i*P		**Pg**	**Pg**	**10 27 57.0**	**0.0**
GEVA				*i*S		**Sg**	**Sg**	**10 28 19.1**	**+3.8**
GEVA				IAML_P					
comp=Z,2μm,0.2s									
BTMN	**Batman**	**1.55**	**310**	*i*P		**Pg**	**Pg**	**10 27 58.9**	**-0.5**
BTMN				*i*S		**Sg**	**Sg**	**10 28 20.5**	**+1.0**
BTMN				IAML_P					
comp=Z,1μm,0.2s									
MARD	**Mardin**	**1.65**	**285**	*i*P		**Pg**	**Pg**	**10 28 00.8**	**-0.5**
MARD				*i*S		**Sg**	**Sg**	**10 28 24.3**	**+1.7**
SVAN	**Silvan-Diyarba**	**1.76**	**315**	*i*P		**Pg**	**Pg**	**10 28 02.4**	**-1.1**
SVAN				IAML_P					
comp=Z,1μm,0.1s									
MUSM	**Mu-Merkez**	**2.07**	**331**	*i*P		**Pb**	**Pb**	**10 28 05.6**	**-1.9**
MUSM				*i*S		**Sb**	**Sb**	**10 28 31.9**	**-1.5**

ISCJB ***23*** *10:48:11.3±0.5, 21°.14S±0°.03×68°.81W±0°.07, h136km±7km, mb3.5/1, Error ellipse: s-maj=10.5km s-min=4.3km az=179.7*
SJA ***23*** *10:48:11.2±0.3, 21°.13S×68°.75W, h125km±3km, ML2.5, MW2.9*
GUC ***23*** *10:48:12.4±0.5, 21°.13S×68°.78W, h128km±2km, ML3.9*
IDC ***23*** *10:48:19.9±8.3, 20°.60S×68°.52W, h189km±58km, mb3.3/2, mb1 3.3/3, mb1mx3.0/23, mbtmp3.8/3, Error ellipse: s-maj=90.0km s-min=48.5km az=31.0*
ISC 23 10:48:11.8±0.9, 21°.14S±0°.03×68°.81W±0°.06, h131km±8km, n27, σ0°52/44, 13C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.64**	**279**	*e*P		**Pn**	**Pn**	**10 48 32.1**	**0.0**
PB01				*e*S		**Sn**	**Sn**	**10 48 47.4**	**+0.1**
PB01	**IPOC Station P**	**0.64**	**279**	⇑*i*P		**Pn**	**Pn**	**10 48 32.0**	**-0.1**
PB01				*e*S		**Sn**	**Sn**	**10 48 46.6**	**-0.7**
PB01				IAML				10 48 48.0	
comp=E,4μm,0.2s									
PB09	**IPOC Station P**	**0.77**	**212**	*e*P		**Pn**	**Pn**	**10 48 32.8**	**-0.3**
PB09				*e*S		**Sn**	**Sn**	**10 48 48.6**	**-0.5**
PB09	**IPOC Station P**	**0.77**	**212**	⇑*i*P		**Pn**	**Pn**	**10 48 33.4**	**+0.3**
PB09				*e*S		**Sn**	**Sn**	**10 48 49.3**	**+0.1**
PB02	**IPOC Station P**	**1.03**	**260**	⇑*i*P		**Pn**	**Pn**	**10 48 35.8**	**+0.6**
PB02				*i*S		**Sn**	**Sn**	**10 48 52.9**	**-0.1**
PB02				IAML				10 48 55.4	
comp=E,6μm,0.3s									
PB08	**IPOC Station P**	**1.05**	**342**	*e*P		**Pn**	**Pn**	**10 48 35.4**	**-0.3**
PB08	**IPOC Station P**	**1.05**	**342**	⇑*i*P		**Pn**	**Pn**	**10 48 36.0**	**+0.3**
PB08				*e*S		**Sn**	**Sn**	**10 48 53.8**	**0.0**
PB07	**IPOC Station P**	**1.16**	**240**	*e*P		**Pn**	**Pn**	**10 48 36.7**	**+0.1**
PB07	**IPOC Station P**	**1.16**	**240**	⇑*i*P		**Pn**	**Pn**	**10 48 37.1**	**+0.5**
PB07				*e*S		**Sn**	**Sn**	**10 48 55.7**	**+0.2**
PB07				IAML				10 48 57.2	
comp=N,3μm,0.2s									
PB03	**IPOC Station P**	**1.26**	**224**	⇑*i*P		**Pn**	**Pn**	**10 48 38.1**	**+0.5**
PB03				*e*S		**Sn**	**Sn**	**10 48 57.2**	**0.0**
PB03				IAML				10 48 59.2	
comp=E,2μm,0.2s									
LVC	**Limon Verde**	**1.47**	**184**	⇓*i*P		**Pn**	**Pn**	**10 48 40.4**	**+0.4**
LVC				*i*S		**Sn**	**Sn**	**10 49 01.8**	**+0.3**
GO01	**Chusmiza**	**1.51**	**346**	⇑*i*P		**Pn**	**Pn**	**10 48 40.9**	**+0.2**
GO01				*e*S		**Sn**	**Sn**	**10 49 02.7**	**+0.1**
GO01				IAML				10 49 05.6	
comp=N,2μm,0.2s									
PB11	**IPOC Station P**	**1.59**	**330**	⇑*e*P		**Pn**	**Pn**	**10 48 41.2**	**0.0**
PB11				*e*S		**Sn**	**Sn**	**10 49 03.6**	**0.0**
PB11				IAML				10 49 05.2	
comp=N,1μm,0.2s									
PB06	**IPOC Station P**	**1.71**	**204**	⇑*i*P		**Pn**	**Pn**	**10 48 43.1**	**+0.5**
PB06				*e*S		**Sn**	**Sn**	**10 49 06.4**	**+0.2**
PB06				IAML				10 49 08.5	
comp=N,827nm,0.2s									
PB04	**IPOC Station P**	**1.72**	**226**	⇑*e*P		**Pn**	**Pn**	**10 48 43.2**	**+0.4**
PB04				*e*S		**Sn**	**Sn**	**10 49 06.8**	**+0.4**
PB04				IAML				10 49 09.1	
comp=E,1μm,0.2s									
PSGC	**Pisagua**	**1.97**	**321**	*e*P		**Pn**	**Pn**	**10 48 45.4**	**-0.3**
PSGC				*e*S		**Sn**	**Sn**	**10 49 11.4**	**-0.1**
PSGCX	**Pisagua**	**1.97**	**321**	*e*P		**Pn**	**Pn**	**10 48 45.8**	**+0.2**
MNMC	**Minye Minye**	**2.13**	**339**	⇑*i*P		**Pn**	**Pn**	**10 48 48.2**	**+0.4**
MNMC				*i*S		**Sn**	**Sn**	**10 49 16.0**	**+0.6**
PB05	**IPOC Station P**	**2.14**	**217**	⇑*i*P		**Pn**	**Pn**	**10 48 48.1**	**+0.4**
YJA	**Yavi**	**3.23**	**109**	*e*P		**Pn**	**Pn**	**10 49 02.2**	**+0.3**
YJA				IAML				10 49 06.5	
comp=Z,13nm,0.7s									
HJA	**Humahuaca**	**3.76**	**124**	*e*P		**Pn**	**Pn**	**10 49 09.2**	**+0.4**
HJA				IAML				10 49 11.9	
comp=Z,7.1nm,0.3s									
GO02	**Mina Guanaco**	**4.07**	**190**	⇑*i*P		**Pn**	**Pn**	**10 49 12.4**	**-0.4**
GO02				*i*S		**Sn**	**Sn**	**10 49 59.8**	**-0.3**
AZAP	**Zapla**	**4.62**	**132**	*e*P		**Pn**	**Pn**	**10 49 20.3**	**+0.2**
LPAZ	**La Paz**	**4.87**	**8**	P		**Pn**	**Pn**	**10 49 25.4**	**+1.6**
comp=Z,2.8nm,0.3s,baz=184,slow=4.5,SNR=82									
LPAZ				S		**Sn**	**Sn**	**10 50 18.2**	**-1.5**
baz=233,slow=20,SNR=1.5									
BDFB	**Brasilia**	**20.47**	**78**	P		**P**	**P**	**10 52 40.0**	**+0.6**
comp=Z,1.7nm,0.6s,baz=216,slow=14,SNR=3.3									
TORD	**Torodi Ar. Bea**	**77.14**	**70**	P		**P**	**P**	**10 59 50.4**	**-1.1**
comp=Z,0.5nm,0.4s,baz=258,slow=6.0,SNR=11									
MKAR	**Makanchi Array**	**145.29**	**36**	PKP		**PKPab**	**PKPab**	**11 07 34.7**	**+0.4**
comp=Z,0.6nm,0.4s,baz=336,slow=3.2,SNR=5.0									

IDC 23 10:55:08.7±3.6, 31°.19N×142°.95E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/46, mbtmp3.4/3, ML2.7/1, MS2.8/4, Ms1 2.8/4, ms1mx2.4/23, Error ellipse: s-maj=86.8km s-min=40.9km az=23.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.64**	**325**	Pn		Pn	Pn	10 56 49.1	+1.6
0.2nm,0.3s,baz=159,slow=11,SNR=18									
MJAR				Sn		Sn	Sn	10 58 01.4	-2.5
baz=118,slow=14,SNR=2.5									
KSRS	**Korea Array**	**13.90**	**301**	LR		LR	LR	11 03 45.5	
comp=Z,6.6nm,21.9s,baz=210,slow=37									
KLR	**Kul'dur**	**19.91**	**338**	LR		LR	LR	11 11 01.8	
comp=Z,26nm,18.1s,baz=210,slow=48									
SEY	**Seymchan**	**32.33**	**8**	LR		LR	LR	11 15 09.0	
comp=Z,71nm,21.4s,baz=322,slow=37									
MKAR	**Makanchi Array**	**48.48**	**307**	P		P	P	11 03 52.6	-0.4
0.2nm,0.3s,baz=89,slow=9.2,SNR=3.6									
MKAR				LR		LR	LR	11 26 32.4	
comp=Z,19nm,18.0s,baz=228,slow=39									
YKA	**Yellowknife Ar**	**68.24**	**29**	P		P	P	11 06 10.8	-0.1
0.1nm,0.5s,baz=304,slow=6.5,SNR=4.6									

ISCJB ***23*** *10:58:13.8±0.4, 37°.8S±0°.1×49°.1E±0°.1, h10km, mb4.4/19, MS3.6/14, Error ellipse: s-maj=18.0km s-min=9.0km az=30.4*
IDC ***23*** *10:58:13.2±0.7, 37°.95S×49°.00E, h0km, mb4.1/9, mb1 4.4/10, mb1mx3.9/46, mbtmp4.2/10, ML5.0/1, MS3.6/14, Ms1 3.6/14, ms1mx3.5/26, Error ellipse: s-maj=35.4km s-min=16.7km az=26.0*
NEIC ***23*** *10:58:16.1±2.2, 37°.87S×49°.08E, h10km, mb4.7/13, Error ellipse: s-maj=28.0km s-min=20.2km az=222.0*
ISC 23 10:58:15.5±0.5, 38°.0S±0°.1×49°.0E±0°.1, h10km, n71, σ1°26/53, mb4.5/19, MS3.7/14, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom** 27nm,1.2s	**18.97**	**355**	*e*P		**Pn**	**Pn**	**11 02 42.9**	**+5.0**
OPO	**Ambohidratompo** 4.1nm,0.3s,baz=184,slow=16,SNR=3.3	**19.42**	**355**	P		**P**	**P**	**11 02 41.9**	**-0.2**
BOSA	**Boshof** 3.9nm,1.0s,baz=107,slow=14,SNR=3.3	**21.89**	**288**	P		**P**	**P**	**11 03 08.5**	**-0.2**
BOSA				LR		LR	LR	11 10 34.9	
comp=Z,84nm,19.1s,baz=122,slow=34									
BOSA	**Boshof** 19nm,1.3s	**21.89**	**288**	*e*P		**P**	**P**	**11 03 11.3**	**+2.6**
SUR	**Sutherland** 42nm,1.4s	**23.65**	**275**	*e*P		**P**	**P**	**11 03 29.3**	**+2.0**
LBTB	**Lobatse** 2.7nm,0.8s,baz=124,slow=5.5,SNR=3.3	**23.70**	**296**	P		**P**	**P**	**11 03 26.1**	**-1.5**
LBTB				LR		LR	LR	11 10 54.2	
comp=Z,120nm,21.1s,baz=128,slow=32									
LBTB	**Lobatse**	**23.70**	**296**	*e*P		**P**	**P**	**11 03 28.0**	**+0.4**
MATP	**Matopo** 3.0nm,0.9s,baz=132,slow=6.4,SNR=6.2	**24.94**	**309**	P		**P**	**P**	**11 03 37.3**	**-1.8**
MATP				LR		LR	LR	11 11 23.3	
comp=Z,112nm,21.3s,baz=143,slow=32									
LSZ	**Lusaka** comp=Z,208nm,18.8s,baz=152,slow=35	**29.16**	**315**	LR		LR	LR	11 15 16.7	
LSZ	**Lusaka** 9.9nm,1.3s	**29.16**	**315**	*e*P		**P**	**P**	**11 04 15.6**	**-1.5**
MAW	**Mawson** comp=Z,176nm,20.8s,baz=358,slow=32	**30.67**	**170**	LR		LR	LR	11 14 25.2	
H08S1	**Diego Carcia H** baz=212,slow=75,SNR=127	**36.94**	**41**	T		T	T	11 44 15.4	
H08S2	**Diego Garcia H** baz=212,slow=75,SNR=53	**36.95**	**41**	T		T	T	11 44 15.4	
H08S3	**Diego Garcia H** baz=212,slow=75,SNR=103	**36.96**	**41**	T		T	T	11 44 16.5	
H08N3	**Diego Garcia H** baz=210,slow=75,SNR=6.1	**37.31**	**38**	T		T	T	11 44 42.0	
H08N1	**Diego Garcia H** baz=210,slow=75,SNR=6.7	**37.32**	**38**	T		T	T	11 44 45.9	
H08N2	**Diego Garcia H** baz=210,slow=75,SNR=7.9	**37.33**	**38**	T		T	T	11 44 46.5	
KMBO	**Kilima Mbogo** comp=Z,100nm,18.3s,baz=92,slow=34	**38.25**	**341**	LR		LR	LR	11 20 07.1	
H01W2	**Cape Leeuwin H** baz=246,slow=75,SNR=18	**51.53**	**108**	T		T	T	12 02 20.9	
H01W3	**Cape Leeuwin H** baz=246,slow=75,SNR=29	**51.54**	**108**	T		T	T	12 02 22.1	
H01W1	**Cape Leeuwin H** baz=246,slow=75,SNR=27	**51.55**	**108**	T		T	T	12 02 23.8	
QSPA	**South Pole Qui**	**52.20**	**180**	*e*P		**P**	**P**	**11 07 27.9**	**+1.7**
VNDA	**Vanda** comp=Z,142nm,21.1s,baz=251,slow=33	**57.89**	**166**	LR		LR	LR	11 30 17.9	
FORT	**Forrest** 45nm,1.4s	**63.83**	**110**	*e*P		**P**	**P**	**11 08 48.9**	**+0.8**
DBIC	**Dimbokro** comp=Z,44nm,18.3s,baz=91,slow=34	**66.91**	**299**	LR		LR	LR	11 36 18.9	
DBIC	**Dimbokro** 20nm,1.4s	**66.91**	**299**	*e*P		**P**	**P**	**11 09 08.3**	**+0.2**
TORD	**Torodi Ar. Bea** 0.6nm,0.8s,baz=132,slow=5.3,SNR=3.2	**67.46**	**309**	P		**P**	**P**	**11 09 11.2**	**-0.4**
TOA1	**Torodi Ar. Sit**	**67.46**	**309**	*e*P		**P**	**P**	**11 09 11.2**	**-0.5**
BBOO	**Buckleboo**	**68.61**	**115**	*e*P		**P**	**P**	**11 09 18.8**	**0.0**
25nm,1.4s									
FITZ	**Fitzroy Crossi** 11nm,1.2s	**68.73**	**97**	*e*P		**P**	**P**	**11 09 20.1**	**+0.4**
ASAR	**Alice Springs** 3.3nm,0.8s,baz=230,slow=5.7,SNR=33	**72.00**	**106**	P		**P**	**P**	**11 09 39.5**	**-0.3**
AS31	**Alice Springs** 1.9nm,1.3s	**72.01**	**106**	*e*P		**P**	**P**	**11 09 39.5**	**-0.2**
STKA	**Stephens Creek** 4.2nm,0.8s,baz=211,slow=4.7,SNR=8.5	**73.04**	**117**	P		**P**	**P**	**11 09 44.5**	**-1.3**
STKA				LR		LR	LR	11 36 52.9	
comp=Z,65nm,19.4s,baz=208,slow=32									
STKA	**Stephens Creek** 2.5nm,1.3s	**73.04**	**117**	*e*P		**P**	**P**	**11 09 45.9**	**+0.1**
CMAR	**Chiang Mai Arr** 1.2nm,0.3s,baz=228,slow=7.1,SNR=4.7	**73.17**	**49**	P		**P**	**P**	**11 09 45.9**	**-0.6**
CMAR				LR		LR	LR	11 39 11.8	
comp=Z,29nm,19.0s,baz=194,slow=34									
WR1	**Warramunga Arr**	**74.45**	**103**	*e*P		**P**	**P**	**11 09 54.2**	**0.0**
WRA	**Warramunga Arr** 7.5nm,0.9s,baz=226,slow=6.8,SNR=20	**74.45**	**103**	P		**P**	**P**	**11 09 54.2**	**0.0**
WB2	**Warramunga Arr** 12nm,1.0s	**74.45**	**103**	*e*P		**P**	**P**	**11 09 54.3**	**+0.1**
BRTR	**Keskin Array B** comp=Z,19nm,18.5s,baz=99,slow=35	**78.62**	**348**	LR		LR	LR	11 44 10.3	
KBZ	**Khabaz** comp=Z,37nm,18.9s,baz=178,slow=36	**81.53**	**356**	LR		LR	LR	11 47 09.1	
KEST	**Kesra** comp=Z,32nm,19.0s,baz=247,slow=35	**82.04**	**328**	LR		LR	LR	11 46 22.0	
VTS	**Vitosha** 3.2nm,1.3s	**83.59**	**341**	*e*P		**P**	**P**	**11 10 41.8**	**-1.9**
EIDS	**Eidsvold** 6.3nm,0.8s	**83.60**	**117**	*e*P		**P**	**P**	**11 10 44.6**	**+0.4**
PLCA	**Paso Flores** 1.6nm,0.9s,baz=167,slow=10,SNR=4.1	**84.12**	**222**	P		**P**	**P**	**11 10 46.8**	**0.0**
SONM	**Songino Array** comp=Z,31nm,19.0s,baz=254,slow=34	**99.57**	**35**	LR		LR	LR	11 54 02.5	
555A	**McAlpin**	**139.80**	**273**	*e*PKPdf		**PKiKP**	**PKiKP**	**11 17 45.3**	**-0.8**
X48A	**Hartselle**	**144.60**	**278**	*e*PKPdf		**PKPdf**	**PKPdf**	**11 17 51.8**	**-0.4**
V48A	**Smith Brothers**	**144.82**	**280**	*e*PKPdf		**PKPdf**	**PKPdf**	**11 17 52.1**	**-0.4**
TOLK	**Toolik Lake Re**	**147.65**	**13**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 00.5**	**-0.8**
PBMO	**Poplar Bluff**	**147.91**	**281**	*e*PKPbc		**PKPbc**	**PKiKP**	**11 18 01.3**	**+0.5**
COLD	**Coldfoot**	**148.78**	**14**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 03.3**	**-0.2**
CCM	**Cathedral Cave**	**148.84**	**283**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 03.9**	**-0.6**
W41B	**Gary Mavity, V**	**148.90**	**277**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 05.4**	**+0.7**
WHAR	**Wooly Hollow**	**148.96**	**277**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 05.5**	**+0.6**
INK	**Inuvik** 1.4nm,0.7s,baz=341,slow=7.0,SNR=11	**149.60**	**2**	PKPbc		**PKPbc**	**PKiKP**	**11 18 02.1**	**-1.9**
INK	**Inuvik**	**149.60**	**2**	*e*PKPbc		**PKPbc**	**PKiKP**	**11 18 04.1**	**+0.1**
PRP	**Porcupine Dome**	**151.16**	**13**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 08.9**	**+0.2**
BPAW	**Bear Paw Mtn.**	**151.26**	**18**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 10.3**	**+1.5**
EPYK	**Eagle Plains**	**151.39**	**5**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 08.8**	**-0.2**
CCB	**Clear Creek Bu**	**151.52**	**15**	*e*PKPbc		**PKPbc**	**PKiKP**	**11 18 08.3**	**-0.4**
ILAR	**Eielson Array** 2.3nm,0.7s,baz=320,slow=3.0,SNR=19	**151.59**	**14**	PKPbc		**PKPbc**	**PKiKP**	**11 18 08.1**	**-0.9**
ILB	**Eielson Array**	**151.59**	**14**	*e*PKPbc		**PKPbc**	**PKiKP**	**11 18 08.3**	**-0.6**
WRH	**Wood River Hil**	**151.61**	**16**	*e*PKPbc		**PKPbc**	**PKiKP**	**11 18 08.7**	**-0.3**
TRF	**Thorofare Moun**	**151.98**	**18**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 10.4**	**0.0**
EGAK	**Eagle**	**152.52**	**9**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 13.4**	**+2.2**
SCRK	**Sand Creek**	**152.84**	**13**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 13.1**	**+1.0**
DAWY	**Dawson**	**153.42**	**8**	*e*PKPbc		**PKiKP**	**PKiKP**	**11 18 15.4**	**+2.1**
YKA	**Yellowknife Ar** 0.5nm,0.7s,baz=37,slow=1.8,SNR=5.3	**153.49**	**343**	PKPbc		**PKPbc**	**PKiKP**	**11 18 11.8**	**-1.4**
YKB5	**Yellowknife Ar**	**153.49**	**343**	*e*PKPbc		**PKPbc**	**PKiKP**	**11 18 11.8**	**-1.4**
TXAR	**Lajitas Array** 0.2nm,0.8s,baz=132,slow=1.3,SNR=2.7	**155.72**	**257**	PKP		**PKPdf**	**PKiKP**	**11 18 09.7**	**-0.2**
PDAR	**Pinedale Array** 0.1nm,0.4s,baz=95,slow=2.1,SNR=2.7	**162.99**	**293**	PKP		**PKPdf**	**PKiKP**	**11 18 17.6**	**-0.4**

GUC ***23*** *11:02:03.1±0.7, 32°.35S×72°.21W, h20km±7km, ML3.1*
SJA ***23*** *11:02:03.0±0.6, 32°.51S×72°.21W, h10km, ML3.1, MW3.1*
ISC 23 11:02:00.5±3.0, 32°.33S±0°.06×72°.2W±0°.1, h4km±20km, n14, σ0°81/21, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**1.19**	**123**	*e*P		**Pb**	**Pb**	**11 02 24.0**	**+0.2**
ROCH	**El Roble**	**1.20**	**123**	*e*P		**Pn**	**Pn**	**11 02 24.4**	**+0.2**
ROCH				*e*S		**Sg**	**Sg**	**11 02 40.4**	**+1.4**
ROCH				IAML				11 02 45.0	
comp=N,532nm,0.6s									
PEL	**Peldehue**	**1.52**	**123**	*e*

EMUR			S		Sn	11 16 15.4	-0.8
	61nm,0.4s,SNR=7.9						
GORA	**Gorafe**	**2.26 324**	P		**Pb**	**11 15 53.9**	**+0.1**
	12nm,0.1s,SNR=7.9						
GORA			S		**Sn**	**11 16 20.2**	**+2.0**
	79nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**2.27 313**	⇑P		**Pb**	**11 15 52.7**	**-1.4**
	7.1nm,0.2s,SNR=18						
EQUE			S		**Sn**	**11 16 19.7**	**+1.2**
	34nm,0.3s,SNR=6.5						
AKLM	**AKL**	**2.35 241**	P		**Pg**	**11 15 57.0**	**-1.1**
AKLM			S		**Sb**	**11 16 23.4**	**-1.0**
ETRV	**Los Montesinos**	**2.40 11**	P		**Pn**	**11 15 53.8**	**+1.6**
	3.0nm,0.3s,SNR=7.9						
ETRV			S		**Sn**	**11 16 22.0**	**+0.5**
	173nm,0.3s,SNR=7.9						
EBNR	**Beni Rached**	**2.43 74**	P		**Pg**	**11 16 00.5**	**+1.0**
PVLZ	**Peæn de**	**2.45 259**	⇓*i*P		**Pn**	**11 15 52.5**	**-0.3**
PVLZ			*e*S		**Sn**	**11 16 18.4**	**-4.3**
EQES	**Quesada**	**2.54 328**	P		**Pb**	**11 15 57.3**	**-1.2**
	22nm,0.5s,SNR=261						
EQES			S		**Sb**	**11 16 28.6**	**-1.2**
	108nm,0.2s,SNR=5.9						
SESP	**Santiago Espad**	**2.63 339**	P		**Pb**	**11 15 58.2**	**-2.0**
	18nm,0.2s,SNR=7.9						
SESP			S		**Sn**	**11 16 30.0**	**+2.6**
	68nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**2.63 339**	P		**Pb**	**11 15 59.0**	**-1.1**
SESP			S		**Sb**	**11 16 33.4**	**+0.9**
EGOR	**Sierra Gorda,**	**2.64 304**	P		**Pn**	**11 15 57.1**	**+1.4**
	3.7nm,0.2s,SNR=7.9						
EGOR			S		**Sn**	**11 16 30.1**	**+2.3**
	38nm,0.3s,SNR=7.9						
TDRA	**Tendrara**	**2.68 192**	P		**Pg**	**11 16 03.5**	**-0.8**
TDRA			S		**Sg**	**11 16 38.2**	**-0.8**
EMAL	**Malaga-Limoner**	**2.71 295**	*e*P		**Pn**	**11 15 56.1**	**-0.3**
EMAL			*e*S		**Sn**	**11 16 28.0**	**-1.2**
EMIJ	**Mijas**	**2.90 289**	P		**Pn**	**11 15 57.8**	**-1.3**
	6.2nm,0.1s,SNR=56						
EMIJ			S		**Sn**	**11 16 31.1**	**-2.9**
	42nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**2.98 357**	P		**Pn**	**11 16 02.5**	**+2.2**
	35nm,0.1s,SNR=169						
ETOB			S		**Sn**	**11 16 38.0**	**+2.0**
	45nm,0.2s,SNR=7.9						
EBEN2	**Beniarda presa**	**3.15 17**	P		**Pn**	**11 16 04.2**	**+1.7**
	13nm,0.3s,SNR=7.9						
EBEN2			S		**Sn**	**11 16 37.8**	**-2.3**
	26nm,0.5s,SNR=7.9						
CEUT	**Ceuta**	**3.23 275**	P		**Pn**	**11 16 02.1**	**-1.5**
CEUT			S		**Sn**	**11 16 40.2**	**-1.8**
SMIR	**Smir Dam**	**3.27 271**	P		**Pn**	**11 16 05.5**	**+1.4**
SMIR			S		**Sn**	**11 16 40.2**	**-2.8**
CHEFC	**Chefchaouen**	**3.29 261**	P		**Pn**	**11 16 05.5**	**+0.9**
CHEFC			S		**Sn**	**11 16 46.1**	**+2.3**
EJIF	**Jimena Fronter**	**3.42 284**	P		**Pn**	**11 16 07.5**	**+1.4**
	3.9nm,0.2s,SNR=7.9						
LIJA	**Lijar**	**3.49 292**	*e*P		**Pn**	**11 16 11.0**	**+3.7**
LIJA			*e*S		**Sb**	**11 16 58.0**	**+0.8**
LCRM	**LCR**	**3.49 237**	P		**Pb**	**11 16 12.4**	**-2.5**
LCRM			S		**Sn**	**11 16 52.3**	**+3.5**
FIGM	**Figuig**	**3.52 179**	P		**Pb**	**11 16 16.9**	**+1.4**
FIGM			S		**Sb**	**11 16 59.8**	**+1.5**
EADA	**Adamuz**	**3.59 315**	P		**Pn**	**11 16 10.3**	**+1.7**
	0.9nm,0.2s,SNR=7.9						
EADA			S		**Sn**	**11 16 52.2**	**+1.3**
	18nm,0.3s,SNR=7.9						
SICH	**Sidi Chahed**	**3.60 246**	P		**Pb**	**11 16 13.1**	**-3.6**
SICH			S		**Sn**	**11 16 54.3**	**+3.0**
RSA	**Sarsar**	**3.73 259**	P		**Pn**	**11 16 14.5**	**+4.0**
RSA			S		**Sn**	**11 16 56.4**	**+1.9**
IFR	**Ifrane**	**3.77 236**	*e*P		**Pg**	**11 16 24.2**	**-1.1**
IFR			*e*S		**Sg**	**11 17 16.6**	**+2.5**
HORN	**Hornachuelos**	**3.81 306**	P		**Pn**	**11 16 12.4**	**+0.8**
HORN			S		**Sn**	**11 16 54.3**	**-2.1**
ESPR	**Espera**	**3.82 290**	P		**Pn**	**11 16 13.6**	**+1.8**
	1.4nm,0.2s,SNR=7.9						
ESPR			S		**Sn**	**11 16 56.1**	**-0.6**
	9.8nm,0.3s,SNR=4.0						
MDT	**Midelt**	**3.91 224**	P		**Pn**	**11 16 15.8**	**+2.8**
MDT			S		**Sn**	**11 17 03.3**	**+4.2**
ECHE	**Chera**	**3.93 4**	P		**Pn**	**11 16 15.5**	**+2.2**
	0.8nm,0.3s,SNR=7.9						
ECHE			S		**Sn**	**11 17 00.0**	**+0.6**
	4.0nm,0.3s,SNR=4.0						
MD31	**MD31**	**3.96 226**	P		**Pn**	**11 16 17.6**	**+3.8**
MD31			S		**Sn**	**11 17 03.9**	**+3.7**
EIBI	**Ibiza**	**3.99 32**	P		**Pn**	**11 16 15.1**	**+1.1**
	13nm,0.2s,SNR=23						
EIBI			S		**Sn**	**11 17 00.1**	**-0.7**
	57nm,0.3s,SNR=7.9						
CZD	**Col de Zad**	**4.02 230**	P		**Pn**	**11 16 16.2**	**+1.5**
CZD			S		**Sn**	**11 17 02.2**	**+0.3**
ESDC	**Sonseca Array**	**4.50 334**	P		**Pn**	**11 16 23.7**	**+2.5**
	3.4nm,0.2s,baz=151,slow=12,SNR=14						
ESDC			S		**Sn**	**11 17 12.7**	**-0.9**
	1.0nm,0.3s,baz=153,slow=22,SNR=7.9						
PAB	**San Pablo**	**4.54 329**	P		**Pn**	**11 16 24.2**	**+2.5**
	3.9nm,0.3s,SNR=7.9						
PAB			S		**Sn**	**11 17 14.2**	**-0.3**
	3.7nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.74 8**	P		**Pn**	**11 16 27.1**	**+2.5**
	2.1nm,0.2s,SNR=5.9						
EMOS			S		**Sn**	**11 17 20.0**	**+0.3**
	3.9nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.75 298**	P		**Pn**	**11 16 24.1**	**-0.5**
	2.1nm,0.2s,SNR=27						
EMIN			S		**Sn**	**11 17 16.1**	**-3.5**
	3.2nm,0.3s,SNR=7.9						
ARF	**Arif**	**4.85 210**	P		**Pn**	**11 16 28.9**	**+2.9**
ARF			S		**Sb**	**11 17 30.4**	**-5.9**
UCM	**Universidad Co**	**4.87 343**	*i*P		**Pn**	**11 16 29.3**	**+3.2**
UCM			*e*S		**Sn**	**11 17 20.5**	**-2.0**
ZHG	**ZHG**	**4.88 245**	P		**Pn**	**11 16 30.6**	**+4.2**
ZHG			S		**Sn**	**11 17 27.3**	**+4.3**
PVAQ	**Vaqueiros**	**5.40 291**	*e*Pn		**Pn**	**11 16 33.7**	**+0.3**
PVAQ			*e*Sn		**Sn**	**11 17 32.5**	**-3.1**
PVAQ			A		A	11 17 41.9	
	6.1nm,0.4s						
PVAQ	**Vaqueiros**	**5.40 291**	P		**Pn**	**11 16 33.7**	**+0.3**
PVAQ			S		**Sn**	**11 17 32.5**	**-3.1**
	6.1nm,0.4s						
PVAQ	**Vaqueiros**	**5.40 291**	P		**Pn**	**11 16 34.4**	**+0.9**
PVAQ			S		**Sn**	**11 17 35.2**	**-0.4**
EBAD	**Badajoz**	**5.46 306**	P		**Pn**	**11 16 35.7**	**+1.4**
	3.8nm,0.2s,SNR=11						
EBAD			S		**Sn**	**11 17 35.2**	**-1.9**
	15nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**5.52 288**	*e*Pn		**Pn**	**11 16 35.5**	**+0.4**
PBDV			*e*Sn		**Sn**	**11 17 36.5**	**-2.1**
PBDV			A		A	11 17 39.0	
	6.0nm,0.3s						
PBDV	**Barranco-do-Ve**	**5.52 288**	P		**Pn**	**11 16 35.5**	**+0.4**
PBDV			S		**Sn**	**11 17 36.5**	**-2.1**
	6.0nm,0.3s						
PCVE	**Castro Verde**	**5.71 292**	*e*Pn		**Pn**	**11 16 38.6**	**+0.9**
PCVE			*e*Sn		**Sn**	**11 17 41.2**	**-2.1**
PCVE			A		A	11 17 47.0	
	4.2nm,1.1s						
PCVE	**Castro Verde**	**5.71 292**	P		**Pn**	**11 16 38.6**	**+0.9**
PCVE			Sn		**Sn**	**11 17 41.2**	**-2.1**
	4.2nm,1.1s						
PBEJ	**Beja**	**5.72 296**	*e*Pn		**Pn**	**11 16 40.1**	**+2.2**
PBEJ			A		A	11 17 48.6	
	3.1nm,0.5s						
PBEJ	**Beja**	**5.72 296**	Pn		**Pn**	**11 16 40.1**	**+2.2**
EPLA	**Plasencia**	**5.76 321**	P		**Pn**	**11 16 40.8**	**+2.4**
	0.8nm,0.4s,SNR=8.7						
EPLA			S		**Sn**	**11 17 42.6**	**-1.9**
	3.5nm,0.3s,SNR=4.0						
MESJ	**Messejana**	**5.92 294**	*e*P		**Pn**	**11 16 39.8**	**-0.7**
MESJ	**Messejana**	**5.92 294**	P		**Pn**	**11 16 39.8**	**-0.7**
PMRV	**Marv??o**	**6.08 310**	*e*Pn		**Pn**	**11 16 44.3**	**+1.4**
PMRV			*e*Sn		**Sn**	**11 17 50.4**	**-2.1**
PMRV			A		A	11 18 19.4	
	6.5nm,0.5s						
PMRV	**Marv??o**	**6.08 310**	P		**Pn**	**11 16 44.3**	**+1.4**
PMRV			S		**Sn**	**11 17 50.4**	**-2.1**
	6.5nm,0.5s						
MORF	**Marmelete**	**6.09 288**	*e*P		**Pn**	**11 16 42.5**	**-0.5**
MORF	**Marmelete**	**6.09 288**	*e*Pn		**Pn**	**11 16 43.0**	**0.0**
MORF			*e*Sn		**Sn**	**11 17 49.8**	**-3.0**
MORF			A		A	11 17 54.0	
	5.3nm,0.5s						
MORF	**Marmelete**	**6.09 288**	P		**Pn**	**11 16 43.0**	**0.0**
MORF			S		**Sn**	**11 17 49.8**	**-3.0**
	5.3nm,0.5s						
PFVI	**Vila Bisbo**	**6.19 286**	*e*Pn		**Pn**	**11 16 44.9**	**+0.5**
PFVI			*e*Sn		**Sn**	**11 17 51.1**	**-4.1**
PFVI			A		A	11 18 20.3	
	8.0nm,0.6s						
PFVI	**Vila Bisbo**	**6.19 286**	P		**Pn**	**11 16 44.8**	**+0.5**
	2.2nm,0.3s,SNR=7.9						
PFVI			S		**Sn**	**11 17 51.0**	**-4.1**
	7.4nm,0.3s,SNR=7.9						
PTEO	**Sao Teotonio**	**6.21 290**	*e*Pn		**Pn**	**11 16 45.9**	**+1.4**
PTEO			*e*Sn		**Sn**	**11 17 54.3**	**-1.2**
PTEO			A		A	11 18 08.6	
	9.3nm,0.6s						
PTEO	**Sao Teotonio**	**6.21 290**	P		**Pn**	**11 16 45.9**	**+1.4**
PTEO			S		**Sn**	**11 17 54.3**	**-1.2**
	4.7nm,0.6s						
PNCL	**Nicolau / Gran**	**6.24 295**	*e*Pn		**Pn**	**11 16 45.6**	**+0.7**
PNCL			*e*Sn		**Sn**	**11 17 52.5**	**-3.7**
PNCL			A		A	11 18 03.1	
	3.8nm,0.9s						
PNCL	**Nicolau / Gran**	**6.24 295**	P		**Pn**	**11 16 45.6**	**+0.7**
PNCL			S		**Sn**	**11 17 52.5**	**-3.7**
	3.8nm,0.9s						
PCBR	**Castelo Branco**	**6.39 313**	*e*Pn		**Pn**	**11 16 48.8**	**+1.8**
PCBR			*e*Sn		**Sn**	**11 17 58.3**	**-1.6**
PCBR			A		A	11 18 01.7	
	3.7nm,0.7s						
PCBR	**Castelo Branco**	**6.39 313**	P		**Pn**	**11 16 48.8**	**+1.8**
PCBR			S		**Sn**	**11 17 58.3**	**-1.6**
	1.9nm,0.7s						
PMTG	**Montargil**	**6.43 304**	*e*Pn		**Pn**	**11 16 48.6**	**+1.0**
PMTG			*e*Sn		**Sn**	**11 17 58.5**	**-2.5**
PMTG			A		A	11 18 00.6	
	3.8nm,0.6s						
PMTG	**Montargil**	**6.43 304**	P		**Pn**	**11 16 48.6**	**+1.0**
PMTG			S		**Sn**	**11 17 58.5**	**-2.5**
	3.8nm,0.6s						
OUZM	**OUZ**	**6.55 225**	P		Pn	11 16 55.7	+6.3
OUZM			S		Sb	11 18 15.4	-10
CFON	**Fontmartina**	**6.77 25**	P		**Pn**	**11 16 54.2**	**+1.8**
	0.6nm,0.4s,SNR=13						
CFON			S		**Sn**	**11 18 06.1**	**-3.4**
	5.0nm,0.3s,SNR=7.9						
OUK	**Oukaimeden**	**7.02 233**	P		Pn	11 17 01.2	+5.2
OUK			S		**Sn**	**11 18 17.1**	**+1.1**
MVO	**Moncorvo**	**7.06 323**	*e*Pn		**Pn**	**11 16 58.8**	**+2.5**
MVO			*e*Sn		**Sn**	**11 18 15.4**	**-1.3**
MVO			A		A	11 19 08.3	
	4.7nm,0.7s						
MVO	**Moncorvo**	**7.06 323**	P		**Pn**	**11 16 58.8**	**+2.5**
	1.3nm,0.1s,SNR=9.1						
MVO			S		**Sn**	**11 18 15.2**	**-1.5**
	13nm,0.6s,SNR=7.9						
IUNC	**Uniciti**	**7.08 359**	P		**Pn**	**11 16 59.9**	**+3.3**
	3.5nm,0.3s,SNR=7.9						
PCAS	**Casmilo, Conde**	**7.14 310**	*e*Pn		**Pn**	**11 16 59.2**	**+1.8**
PCAS			*e*Sn		**Sn**	**11 18 14.9**	**-3.6**
PCAS			A		A	11 18 53.3	
	5.5nm,0.6s						
PCAS	**Casmilo, Conde**	**7.14 310**	P		**Pn**	**11 16 59.2**	**+1.8**
PCAS			S		**Sn**	**11 18 14.9**	**-3.6**
	5.5nm,0.6s						
PVIS	**Viseu**	**7.20 316**	*e*Pn		**Pn**	**11 17 00.0**	**+1.8**
PVIS			*e*Sn		**Sn**	**11 18 17.8**	**-2.2**
PVIS	**Viseu**	**7.20 316**	P		**Pn**	**11 17 00.0**	**+1.8**
PVIS			S		**Sn**	**11 18 17.8**	**-2.2**
ETSF	**Etsaut**	**7.25 5**	*e*Pn		**Pn**	**11 17 01.4**	**+2.5**
ETSF			*e*Sn		**Sn**	**11 18 20.0**	**-1.2**
	1.4nm,0.3s						
ETSF	**Etsaut**	**7.25 5**	P		**Pn**	**11 17 01.4**	**+2.5**
ETSF			S		**Sn**	**11 18 20.0**	**-1.2**
	0.7nm,0.3s						
ATE	**Arette**	**7.43 4**	P		Pn	11 17 05.9	+4.6
	1.7nm,0.3s,SNR=7.9						
SJPF	**Ste Jean**	**7.44 1**	*e*Pn		**Pn**	**11 17 04.2**	**+2.8**
SJPF	**Ste Jean**	**7.44 1**	P		**Pn**	**11 17 04.2**	**+2.8**
EPF	**Esparros**	**7.47 10**	*e*Pn		**Pn**	**11 17 04.7**	**+2.8**
EPF	**Esparros**	**7.47 10**	*e*Pg		**Pg**	**11 17 34.5**	**-1.5**
EPF			*e*Sn		**Sn**	**11 18 25.3**	**-1.4**
	0.5nm,0.2s						
EPF	**Esparros**	**7.47 10**	P		**Pn**	**11 17 04.7**	**+2.8**
EPF			P		**Pg**	**11 17 34.5**	**-1.5**
EPF			S		**Sn**	**11 18 25.3**	**-1.4**
	0.2nm,0.2s						
ECAL	**Calabor**	**7.54 328**	P		**Pn**	**11 17 04.9**	**+2.1**
	1.3nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**7.54 359**	P		**Pn**	**11 17 07.0**	**+4.0**
	5.4nm,0.3s,SNR=6.5						
POLO	**Lamas de Olo**	**7.61 320**	*e*Pn		**Pn**	**11 17 06.1**	**+2.3**
POLO	**Lamas de Olo**	**7.61 320**	P		**Pn**	**11 17 06.1**	**+2.3**
ELAN	**Lanestosa**	**7.72 349**	P		**Pn**	**11 17 08.5**	**+3.2**
	1.6nm,0.4s,SNR=9.2						
ELOB	**Lobios**	**8.10 322**	P		**Pn**	**11 17 12.8**	**+2.2**
	2.0nm,0.3s,SNR=7.9						
ELOB			S		**Sn**	**11 18 39.6**	**-2.7**
	2.9nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**8.18 340**	P		**Pn**	**11 17 13.7**	**+2.0**
	0.4nm,0.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	**8.28 321**	*e*Pn		**Pn**	**11 17 15.6**	**+2.5**
PGAV			*e*Sn		**Sn**	**11 18 45.0**	**-1.6**
PGAV	**Gavieira, Arco**	**8.28 321**	P		**Pn**	**11 17 15.6**	**+2.5**
PGAV			S		**Sn**	**11 18 45.0**	**-1.6**
LASF	**Ste Croix**	**9.31 24**	*e*Pn		**Pn**	**11 17 27.2**	**+0.1**
LASF	**Ste Croix**	**9.31 24**	P		**Pn**	**11 17 27.2**	**+0.1**
LFF	**La Frestale**	**9.40 9**	*e*Pn		**Pn**	**11 17 31.2**	**+2.9**
LFF	**La Frestale**	**9.40 9**	P		**Pn**	**11 17 31.2**	**+2.9**
CAF	**Calviac**	**9.61 15**	*e*Pn		**Pn**	**11 17 33.9**	**+2.6**
CAF	**Calviac**	**9.61 15**	P		**Pn**	**11 17 33.9**	**+2.6**
LMR	**La Mourre**	**9.78 36**	*e*Pn		**Pn**	**11 17 36.0**	**+2.5**
LMR	**La Mourre**	**9.78 36**	*e*P		Pn	11 17 40.2	+6.7
LMR			*e*Sn		**Sn**	**11 19 20.3**	**-2.9**
	0.7nm,0.2s						
LMR	**La Mourre**	**9.78 36**	P		**Pn**	**11 17 36.0**	**+2.5**
LMR			S		**Sn**	**11 19 20.3**	**-2.9**
	0.3nm,0.2s						
FRF	**La Foret Royal**	**10.01 36**	*e*Pn		**Pn**	**11 17 38.3**	**+1.6**
FRF	**La Foret Royal**	**10.01 36**	*e*P		Pn	11 17 43.6	+6.9
FRF			*e*Sn		**Sn**	**11 19 25.9**	**-3.1**
	2.5nm,0.5s						
FRF	**La Foret Royal**	**10.01 36**	P		**Pn**	**11 17 38.3**	**+1.6**
FRF			S		**Sn**	**11 19 25.9**	**-3.1**
	1.2nm,0.5s						
SBF	**Sospel**	**10.62 37**	*e*P		Pn	11 17 52.2	+7.1
SBF	**Sospel**	**10.62 37**	P		Pn	11 17 52.2	+7.1
TCF	**Toulx Ste Croi**	**10.95 13**	*e*Pn		**Pn**	**11 17 52.1**	**+2.6**
TCF	**Toulx Ste Croi**	**10.95 13**	P		**Pn**	**11 17 52.1**	**+2.6**
MFF	**Saint Martin d**	**10.96 4**	*e*Pn		**Pn**	**11 17 52.0**	**+2.3**
MFF	**Saint Martin d**	**10.96 4**	P		**Pn**	**11 17 52.0**	**+2.3**
AVF	**Avril sur Loir**	**11.66 16**	*e*Pn		**Pn**	**11 18 01.7**	**+2.4**
AVF			*e*Sn		**Sn**	**11 20 05.6**	**-3.9**
	0.2nm,0.2s						
AVF	**Avril sur Loir**	**11.66 16**	P		**Pn**	**11 18 01.7**	**+2.4**
AVF			S		**Sn**	**11 20 05.6**	**-3.9**
	0.1nm,0.2s						
QUIF	**Quistinic**	**12.31 354**	*e*Pn		**Pn**	**11 18 10.3**	**+2.1**
QUIF	**Quistinic**	**12.31 354**	P		**Pn**	**11 18 10.3**	**+2.1**
SGMF	**Saint Gilles**	**12.61 356**	*e*Pn		**Pn**	**11 18 15.0**	**+2.8**
SGMF	**Saint Gilles**	**12.61 356**	P		**Pn**	**11 18 15.0**	**+2.8**

*SJA **23** 11:27:13.5±0.6, 20°.84S×68°.88W, h63km±12km, ML2.4, MW2.8*
*ISCJB **23** 11:27:14.1±0.8, 20°.81S±0°.03×69°.09W±0°.08, h114km±8km, Error ellipse: s-maj=11.8km s-min=4.7km az=177.6*
*GUC **23** 11:27:15.0±0.6, 20°.80S×69°.10W, h109km±3km, ML3.2*
ISC 23 11:27:15.6±1.7,**20°.81S**±0°.03×**69°.15W**±0°.10,
h103km±11km,**n21**,σ0°**48**/31,**7C-3D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.39**	**233**	*e*P		**Pn**	**11 27 30.8**	**-0.4**
PB01				*e*S		**Sn**	**11 27 42.7**	**0.0**
PB01	**IPOC Station P**	**0.39**	**233**	⇑*i*P		**Pn**	**11 27 30.7**	**-0.4**
PB01				*e*S		**Sn**	**11 27 42.9**	**+0.2**
PB01				IAML			11 27 43.8	
	comp=E,2μm,0.2s							
PB08	**IPOC Station P**	**0.66**	**360**	⇓*i*P		**Pn**	**11 27 33.2**	**-0.2**
PB08				*e*S		**Sn**	**11 27 46.7**	**0.0**
PB08				IAML			11 27 47.2	
	comp=E,2μm,0.2s							
PB02	**IPOC Station P**	**0.86**	**234**	⇑*i*P		**Pn**	**11 27 35.1**	**+0.2**
PB02				*e*S		**Sn**	**11 27 50.5**	**+1.0**
PB02				IAML			11 27 52.6	
	comp=E,992nm,0.3s							
PB09	**IPOC Station P**	**0.99**	**185**	⇑*i*P		**Pn**	**11 27 36.2**	**-0.2**
PB09				*e*S		**Sn**	**11 27 52.3**	**+0.4**
PB09				IAML			11 27 55.1	
	comp=N,412nm,0.3s							
GO01	**Chusmiza**	**1.13**	**358**	⇓*e*P		**Pn**	**11 27 37.8**	**-0.4**
GO01				*e*S		**Sn**	**11 27 55.4**	**+0.2**
PB11	**IPOC Station P**	**1.14**	**335**	⇑*e*P		**Pn**	**11 27 37.8**	**-0.2**
PB11				*e*S		**Sn**	**11 27 55.5**	**+0.6**
PB07	**IPOC Station P**	**1.14**	**217**	*e*S		**Sn**	**11 27 54.4**	**-0.5**
PB07	**IPOC Station P**	**1.14**	**217**	⇑*i*P		**Pn**	**11 27 38.0**	**0.0**
PB07				*e*S		**Sn**	**11 27 55.3**	**+0.4**
PB07				IAML			11 27 57.6	
	comp=N,761nm,0.6s							
PB03	**IPOC Station P**	**1.36**	**204**	*e*P		**Pn**	**11 27 39.1**	**-1.4**
PB03	**IPOC Station P**	**1.36**	**204**	⇓*e*P		**Pn**	**11 27 40.2**	**-0.2**
PB03				*i*S		**Sn**	**11 27 59.2**	**-0.1**
PB03				IAML			11 28 00.1	
	comp=E,448nm,0.2s							
PSGC	**Pisagua**	**1.51**	**323**	⇑*i*P		**Pn**	**11 27 42.0**	**-0.2**
PSGC				*e*S		**Sn**	**11 28 02.4**	**0.0**
PSGC				IAML			11 28 05.0	
	comp=N,251nm,0.3s							
PSGCX	**Pisagua**	**1.51**	**323**	*e*P		**Pn**	**11 27 42.5**	**+0.2**
MNMC	**Minye Minye**	**1.72**	**346**	*e*P		**Pn**	**11 27 45.1**	**+0.1**
MNMC				*i*S		**Sn**	**11 28 08.0**	**+0.7**
LVC	**Limon Verde**	**1.81**	**173**	*e*P		**Pn**	**11 27 46.2**	**0.0**
LVC				*e*S		**Sn**	**11 28 10.1**	**+0.6**
PB06	**IPOC Station P**	**1.93**	**192**	*e*P		**Pn**	**11 27 47.3**	**-0.3**
PB06				IAML			11 28 12.6	
	comp=E,203nm,0.4s							
PB05	**IPOC Station P**	**2.26**	**205**	*e*P		**Pn**	**11 27 51.6**	**-0.2**
PB05				IAML			11 28 19.2	
	comp=E,95nm,0.4s							
PB15	**IPOC Station P**	**2.41**	**187**	*e*P		**Pn**	**11 27 53.9**	**+0.1**
PB12	**IPOC Station P**	**2.45**	**333**	⇑*i*P		**Pn**	**11 27 53.4**	**-0.8**
YJA	**Yavi**	**3.65**	**113**	*e*P		Pn	11 28 07.8	-2.7
YJA				IAML			11 28 11.0	
	comp=Z,2.9nm,0.6s							
HJA	**Humahuaca**	**4.22**	**125**	*e*P		Pn	11 28 15.1	-3.0
HJA				IAML			11 28 31.2	
	comp=Z,12nm,0.3s							

*ISCJB **23** 11:51:04.5±0.6, 38°.38N±0°.03×27°.98E±0°.04, h10km±5km, Error ellipse: s-maj=4.9km s-min=4.8km az=9.0*
*DDA **23** 11:51:04.1, 38°.39N×28°.04E, h7km±3km, ML2.5*
*ISK **23** 11:51:04.6, 38°.40N×27°.93E, h8km±1km, ML2.5/7*
ISC 23 11:51:04.4±1.1,**38°.38N**±0°.03×**27°.98E**±0°.03,**h12**km±11km,
n16,σ0°**53**/23,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GOMA	**Golmarmara-Man**	**0.33**	**351**		PG	**Pg**	**11 51 11.4**	**+0.3**
GOMA					SG	**Sg**	**11 51 15.6**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.44**	**190**		PG	**Pg**	**11 51 13.3**	**+0.1**
MANT	**Manisa**	**0.46**	**76**	*i*P		**Pg**	**11 51 14.1**	**+0.5**
MANT				*i*S		**Sg**	**11 51 20.0**	**+0.1**
AKHS	**Akhisar**	**0.51**	**345**	*i*P		**Pb**	**11 51 15.6**	**+0.1**
AKHS				*i*S		**Sb**	**11 51 22.4**	**-0.5**
AKHS				IAML_P				
	comp=Z,2μm,0.2s							
AKS	**Akhisar**	**0.51**	**345**	PG		**Pg**	**11 51 14.5**	**0.0**
KULA	**Kula-Manisa**	**0.55**	**76**	PG		**Pb**	**11 51 16.8**	**+0.7**
AYDN	**Tasoluk**	**0.72**	**187**	*i*P		**Pg**	**11 51 16.1**	**+0.4**
AYDN				*i*S		**Sb**	**11 51 29.4**	**+0.4**
AYDN				IAML_P				
	comp=Z,992nm,0.2s							
BLCB	**Balcova**	**0.74**	**271**	PG		**Pg**	**11 51 18.9**	**+0.1**
USAK	**Uak-Merkez**	**0.88**	**67**	*i*P		**Pb**	**11 51 21.5**	**-0.1**
USAK				*i*S		**Sg**	**11 51 32.6**	**-0.2**
USAK				IAML_P				
	comp=Z,1μm,0.2s							
ZEDA	**zmir-Bergama**	**0.92**	**310**	*i*P		**Pb**	**11 51 22.2**	**-0.1**
ZEDA				IAML_P				
	comp=Z,394nm,0.1s							
STEP	**BALIKESIR_Sava**	**1.01**	**348**	*i*P		**Pb**	**11 51 24.2**	**+0.2**
STEP				*i*S		**Sg**	**11 51 36.6**	**-0.6**
STEP				IAML_P				
	comp=Z,1μm,

Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.24**	**37**	*e*Pn	Pg	12 25 56.5	-3.0
VHO				*e*Sg	Sg	12 26 12.3	-3.2
VHO	**Vista Hermosa**	**1.24**	**37**	*e*P	Pg	12 25 56.5	-3.0
VHO				*e*S	Sg	12 26 12.3	-3.2
HUIG	**Huatulco**	**1.38**	**103**	*e*Pn	Pn	12 25 56.4	-5.3
HUIG				*e*Sn	Sb	12 26 14.8	-5.2
HUIG	**Huatulco**	**1.38**	**103**	*i* P	Pn	12 25 56.2	-5.4
HUIG				*i* S	Sb	12 26 13.4	-6.7
TLIG	**Tlapa**	**1.79**	**326**	*e*Pn	Pn	12 26 06.1	-1.3
TLIG				*e*Sn	Sn	12 26 29.8	-0.9
TLIG	**Tlapa**	**1.79**	**326**	*e*P	Pn	12 26 04.2	-3.3
TLIG				*e*S	Sn	12 26 25.9	-4.8
CMIG	**Matias Romero**	**2.71**	**68**	*e*Pn	Pn	12 26 16.0	-4.0
CMIG				*e*Sn	Sb	12 26 57.4	-1.0
CMIG	**Matias Romero**	**2.71**	**68**	*e*P	Pn	12 26 16.0	-4.0
CMIG				*e*S	Sb	12 26 57.4	-1.0
MEIG	**Mezcala**	**2.73**	**313**	*e*Pn	Pn	12 26 20.6	+0.3
MEIG				*e*Sn	Sb	12 26 57.6	-1.4
MEIG	**Mezcala**	**2.73**	**313**	*e*P	Pn	12 26 20.6	+0.3
MEIG				*e*S	Sb	12 26 57.6	-1.4
LVIG	**Laguna Verde**	**3.77**	**16**	*e*Pn	Pn	12 26 34.8	+0.2
TX31	**Lajitas Ar. Si**	**14.36**	**338**	*e*Pn	Pn	12 29 00.3	+0.4

KRSC 23 12:31:54.3±1.8, 49°.74N×159°.24E, h46km±49km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.20**	**341**	*e*P	Pn	12 32 31.0	+2.6
KDTR				*e*S	Sn	12 32 57.8	+3.4
SKR	**Severo-Kuril's**	**2.22**	**297**	*e*S	Sn	12 32 56.5	+1.8
PAU	**Pauzhetka**	**2.32**	**319**	*e*S	Sn	12 33 01.2	+3.9
RUS	**Russkaya**	**2.74**	**351**	*e*P	Pn	12 32 38.8	+3.1
RUS				*e*S	Sn	12 33 10.3	+2.7
ASAK	**Asacha**	**2.78**	**343**	*e*P	Pn	12 32 40.2	+3.8
ASAK				*e*S	Sn	12 33 12.1	+3.3
MTVR	**Mutnovka**	**2.83**	**347**	*e*S	Sn	12 33 14.1	+4.1
KRMR	**Karymshinskiy**	**3.18**	**348**	*e*S	Sn	12 33 23.6	+5.3
DALK	**Dalny**	**3.31**	**355**	*e*P	Pn	12 32 47.4	+3.8
DALK				*e*S	Sn	12 33 24.5	+2.8
UGLR	**Uglovaya**	**3.49**	**356**	*e*P	Pn	12 32 50.7	+4.6
SMAR	**Somma**	**3.54**	**356**	*e*P	Pn	12 32 51.7	+4.8
AVH	**Avacha**	**3.55**	**355**	*e*P	Pn	12 32 50.9	+4.0
SDLR	**Sedlovina**	**3.56**	**357**	*e*P	Pn	12 32 50.8	+3.8
KRX	**Arik**	**3.65**	**354**	*e*P	Pn	12 32 52.2	+3.9
GNL	**Ganaly**	**4.05**	**349**	*e*P	Pn	12 32 58.5	+4.7
MKZ	**Mys Kozlova**	**5.07**	**17**	*e*P	Pn	12 33 10.0	+2.4
TUMR	**Tumrok**	**5.58**	**5**	*e*P	Pn	12 33 19.4	+4.6

ROM 23 13:11:29.6±0.1, 44°.225N±0°.003×10°.171E±0°.004, h6km, Md1.0/5, Error ellipse: s-maj=0.3km s-min=0.2km az=78.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.06**	**192**	P	Pg	13 11 31.6	+0.3
EQUI				S	Sg	13 11 32.8	+0.3
EQUI				END			
EQUI				END			
T0912	**Minucciano (LU**	**0.06**	**154**	P	Pg	13 11 31.7	+0.3
T0912				S	Sg	13 11 33.0	+0.5
T0912				AML	AML		
	comp=E,1200μm,0.1s						
T0912				AML	AML		
	comp=N,1420μm,0.2s						
T0912				AML	AML		
	comp=E,1200μm,0.1s						
T0912				AML	AML		
	comp=N,1420μm,0.2s						
T0912				END			
T0912				END			
T0911	**Castelpoggio (**	**0.13**	**212**	P	Pg	13 11 32.8	+0.4
T0911				S	Sg	13 11 35.1	+0.8
T0911				END			
T0911				END			
VLC	**Villacollemand**	**0.17**	**113**	P	Pg	13 11 33.8	+0.8
VLC				S	Sg	13 11 36.2	+0.9
VLC				END			
VLC				END			
SARO	**Sassorosso**	**0.17**	**104**	P	Pg	13 11 33.6	+0.5
SARO				S	Sg	13 11 36.5	+1.1
SARO				END			
SARO				END			
GRAM	**Graiana**	**0.28**	**344**	P	Pg	13 11 36.0	+0.8
GRAM				S	Sb	13 11 40.5	-1.5

MOS ***23*** *13:13:41.8±1.1, 44°.22N×10°.17E, h10km, mb4.4/16, Error ellipse: s-maj=7.2km s-min=4.0km az=65.5*
ISCJB ***23*** *13:13:41.7±0.2, 44°.16N±0°.01×10°.13E±0°.01, h13km±1km, mb4.1/25, MS3.2/6, Error ellipse: s-maj=2.1km s-min=1.5km az=178.6*
ROM ***23*** *13:13:41.7±0.1, 44°.158N±0°.006×10°.174E±0°.006, h7km, ML3.8/93, Mw3.5, Error ellipse: s-maj=0.7km s-min=0.3km az=20.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.23; $M_{\theta\theta}$1.74; $M_{\phi\phi}$-0.51; $M_{r\theta}$-0.28; $M_{\theta\phi}$1.18; $M_{r\phi}$1.14; Fault plane solution: $M_0$2.27317×10^{14} NP1:ϕ_s101.00000°, δ_s55.00000°, λ_s-35.00000°. NP2:ϕ_s213.00000°, δ_s61.00000°, λ_s-140.00000°.*
IDC ***23*** *13:13:42.0±0.8, 44°.17N×10°.11E, h0km, mb3.7/9, mb1 3.9/19, mb1mx3.7/47, mbtmp3.7/19, ML4.0/9, MS3.0/13, Ms1 3.0/13, ms1mx2.7/53 Error ellipse: s-maj=17.7km s-min=10.6km az=124.0*
LDG ***23*** *13:13:42.5±0.1, 44°.13N×10°.22E, h2km, Ml3.9/33, Error ellipse: s-maj=2.3km s-min=1.3km az=1.0*
GEN ***23*** *13:13:42.2, 44°.17N×10°.19E, h3km±2km, Ml3.8*
STR ***23*** *13:13:43.3±0.8, 44°N±4°×1°0E±°, h20km, mb3.9/2, MLv3.7/6*
NEIC ***23*** *13:13:43.6±1.8, 44°.19N×10°.20E, h12km±3km, mb4.0/5, ML3.8(ROM), Error ellipse: s-maj=9.1km s-min=7.4km az=53.0*
PRU ***23*** *13:13:44.1±0.0, 44°.18N×10°.16E, h10km*
ISC 23 13:13:42.1±0.6, 44°.17N±0°.02×10°.15E±0°.02, h5km±3km, n380, σ1$74/425, mb4.1/25, MS3.1/6, 17C-11D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.00**	**172**	P	**Pg**	**13 13 43.3**	**+0.2**
EQUI				S	**Sg**	**13 13 43.9**	**+0.2**
EQUI	**Equi**	**0.00**	**172**	*i* P	**Pg**	**13 13 43.3**	**+0.2**
EQUI				S	**Sg**	**13 13 44.0**	**+0.2**
T0912	**Minucciano (LU**	**0.04**	**89**	*i* P	**Pg**	**13 13 43.4**	**0.0**
T0912				S	**Sg**	**13 13 44.4**	**0.0**
T0911	**Castelpoggio (**	**0.08**	**225**	P	**Pg**	**13 13 44.7**	**+0.7**
T0911				S	**Sg**	**13 13 46.4**	**+1.2**
T0911				AML	AML		
T0911				AML	AML		
T0911				AML	AML		
T0911				AML	AML		
VLC	**Villacollemand**	**0.17**	**93**	*e*Pg	**Pg**	**13 13 45.6**	**+0.1**
VLC	**Villacollemand**	**0.17**	**93**	‖ *e*Pg	**Pg**	**13 13 45.6**	**+0.1**
VLC				*e*Sg	**Sg**	**13 13 47.8**	**0.0**
VLC	**Villacollemand**	**0.17**	**93**	P	**Pg**	**13 13 45.6**	**+0.1**
VLC				S	**Sg**	**13 13 48.2**	**+0.4**
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
SARO	**Sassorosso**	**0.18**	**85**	P	**Pg**	**13 13 45.7**	**0.0**
SARO				S	**Sg**	**13 13 48.5**	**+0.3**
SARO	**Sassorosso**	**0.18**	**85**	P	**Pg**	**13 13 45.7**	**0.0**
SARO				S	**Sg**	**13 13 48.4**	**+0.3**
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
SARO				AML	AML		
CARD	**Cardoso**	**0.28**	**121**	P	**Pg**	**13 13 47.4**	**-0.1**
CARD				S	**Sg**	**13 13 51.5**	**+0.3**
CARD	**Cardoso**	**0.28**	**121**	P	**Pg**	**13 13 47.4**	**-0.1**
CARD				S	**Sg**	**13 13 51.5**	**+0.3**
CARD				AML	AML		
	comp=E,58250μm,0.7s						
CARD				AML	AML		
	comp=N,53700μm,0.9s						
CARD				AML	AML		
	comp=E,58250μm,0.7s						
CARD				AML	AML		
	comp=N,53700μm,0.9s						
CARD				AML	AML		
	comp=E,58250μm,0.7s						
CARD				AML	AML		
	comp=N,53700μm,0.9s						
CARD				AML	AML		
	comp=N,53700μm,0.9s						
CARD				AML	AML		
	comp=E,58250μm,0.7s						
CARD				AML	AML		
	comp=N,53700μm,0.9s						
CARD				AML	AML		
	comp=E,58250μm,0.7s						
ERBM	**Eremo**	**0.31**	**37**	P	**Pg**	**13 13 48.7**	**+0.4**
ERBM				S	**Sg**	**13 13 53.5**	**+1.1**
ERBM				AML	AML		
	comp=E,52950μm,1.0s						
ERBM				AML	AML		
	comp=N,67400μm,1.0s						
ERBM				AML	AML		
	comp=E,53000μm,1.0s						
ERBM				AML	AML		
	comp=N,67400μm,1.0s						
ERBM				AML	AML		
	comp=E,53000μm,1.0s						
ERBM				AML	AML		
	comp=N,67400μm,1.0s						
ERBM				AML	AML		
	comp=E,53000μm,1.0s						
GRAM	**Graiana**	**0.33**	**349**	P	**Pg**	**13 13 48.9**	**+0.3**
GRAM				S	**Sg**	**13 13 53.8**	**+0.9**
GRAM	**Graiana**	**0.33**	**349**	P	**Pg**	**13 13 48.9**	**+0.3**
GRAM				S	**Sg**	**13 13 54.0**	**+1.1**
GRAM				AML	AML		
	comp=E,81900μm,0.7s						
GRAM				AML	AML		
GRAM				AML	AML		
	comp=E,81900μm,0.7s						
GRAM				AML	AML		
GRAM				AML	AML		
	comp=E,81900μm,0.7s						
GRAM				AML	AML		
GRAM				AML	AML		
	comp=E,81900μm,0.7s						
GRAM				AML	AML		
GRAM				AML	AML		
	comp=E,81900μm,0.7s						
GRAM				AML	AML		
GRAM				AML	AML		
	comp=E,81900μm,0.7s						
BDI	**Bagni Di Lucca**	**0.34**	**108**	P	**Pg**	**13 13 48.7**	**0.0**
BDI				S	**Sg**	**13 13 53.3**	**+0.1**
BDI				AML	AML		
	comp=E,37350μm,0.5s						
BDI				AML	AML		
	comp=N,26650μm,1.5s						
BDI				AML	AML		
	comp=E,33950μm,0.5s						
BDI				AML	AML		
	comp=N,34350μm,0.3s						
BDI				AML	AML		
	comp=E,37400μm,0.5s						
BDI				AML	AML		
	comp=N,26600μm,1.5s						
BDI				AML	AML		
	comp=E,33950μm,0.5s						
BDI				AML	AML		
	comp=N,34350μm,0.3s						
BDI				AML	AML		
	comp=N,34350μm,0.3s						
BDI				AML	AML		
	comp=N,26600μm,1.5s						
BDI				AML	AML		
	comp=E,37400μm,0.5s						
BDI				AML	AML		
	comp=E,33950μm,0.5s						
BDI				AML	AML		
	comp=N,34350μm,0.3s						
BDI				AML	AML		
	comp=N,26600μm,1.5s						
BDI				AML	AML		
	comp=E,37400μm,0.5s						
BDI				AML	AML		
	comp=E,33950μm,0.5s						
MAIM	**Mastiano**	**0.35**	**136**	P	**Pg**	**13 13 48.9**	**-0.1**
MAIM				S	**Sg**	**13 13 54.0**	**+0.4**
MAIM	**Mastiano**	**0.35**	**136**	P	**Pg**	**13 13 48.9**	**-0.1**
MAIM				S	**Sg**	**13 13 54.0**	**+0.4**
MAIM				AML	AML		
	comp=E,67600μm,0.3s						
MAIM				AML	AML		
	comp=N,39750μm,0.6s						
MAIM				AML	AML		
	comp=E,67600μm,0.3s						
MAIM				AML	AML		
	comp=N,39750μm,0.6s						
MAIM				AML	AML		
	comp=E,67600μm,0.3s						
MAIM				AML	AML		
	comp=N,39750μm,0.6s						
MAIM				AML	AML		
	comp=E,67600μm,0.3s						
MAIM				AML	AML		
	comp=N,39750μm,0.6s						
MAIM				AML	AML		
	comp=E,67600μm,0.3s						
NEVI	**Neviano degli**	**0.43**	**16**	P	**Pb**	**13 13 51.5**	**-0.8**
MSSA	**Maissana**	**0.48**	**288**	P	**Pg**	**13 13 51.7**	**+0.3**
MSSA				AML	AML		
	comp=E,11400μm,1.4s						
MSSA				AML	AML		
	comp=N,8280μm,1.6s						
MSSA				AML	AML		
	comp=E,11400μm,1.4s						
MSSA				AML	AML		
	comp=N,8280μm,1.6s						
MSSA				AML	AML		
	comp=E,11400μm,1.4s						
MSSA				AML	AML		
	comp=N,8280μm,1.6s						
PRMA	**PARMA**	**0.61**	**11**	*e*P	**Pb**	**13 13 55.1**	**-0.1**
PRMA				AML	AML		
	comp=E,37650μm,0.3s						
PRMA				AML	AML		
	comp=N,58500μm,0.6s						
PRMA				AML	AML		
	comp=E,37650μm,0.3s						
PRMA				AML	AML		
	comp=N,58500μm,0.6s						
PRMA				AML	AML		
	comp=E,37650μm,0.3s						
PRMA				AML	AML		
	comp=N,58500μm,0.6s						
PRMA				AML	AML		
	comp=E,37650μm,0.3s						
ZCCA	**Zocca**	**0.62**	**73**	P	**Pb**	**13 13 55.3**	**-0.2**
ZCCA				AML	AML		
	comp=E,10245μm,0.9s						
ZCCA				AML	AML		
	comp=N,11350μm,0.4s						
ZCCA				AML	AML		
	comp=E,9460μm,0.9s						
ZCCA				AML	AML		
	comp=N,12000μm,0.4s						
ZCCA				AML	AML		
	comp=E,10250μm,0.9s						
ZCCA				AML	AML		
	comp=N,11350μm,0.4s						
ZCCA				AML	AML		
	comp=E,9460μm,0.9s						
ZCCA				AML	AML		
	comp=N,12000μm,0.4s						
ZCCA				AML	AML		
	comp=N,11350μm,0.4s						
ZCCA				AML	AML		
	comp=E,9460μm,0.9s						
ZCCA				AML	AML		
	comp=E,10250μm,0.9s						
ZCCA				AML	AML		
	comp=N,12000μm,0.4s						
ZCCA				AML	AML		
	comp=N,11350μm,0.4s						
ZCCA				AML	AML		
	comp=E,10250μm,0.9s						
ZCCA				AML	AML		
	comp=E,9460μm,0.9s						
ZCCA				AML	AML		
	comp=N,12000μm,0.4s						
MTCR	**Monte La Croce**	**0.62**	**103**	P	**Pg**	**13 13 53.9**	**-0.2**
MTCR				AML	AML		
	comp=E,16450μm,0.4s						
MTCR				AML	AML		
	comp=N,21300μm,0.6s						
MTCR				AML	AML		
	comp=E,16450μm,0.4s						
MTCR				AML	AML		
	comp=N,21250μm,0.6s						
MTCR				AML	AML		
	comp=N,21250μm,0.6s						
MTCR				AML	AML		
	comp=E,16450μm,0.4s						
MTCR				AML	AML		
	comp=N,21250μm,0.6s						
MTCR				AML	AML		
	comp=E,16450μm,0.4s						
PTF	**Prato**	**0.69**	**107**	P	**Pg**	**13 13 55.1**	**-0.4**
FNVD	**Fontana Vidola**	**0.70**	**90**	*e*P	**Pg**	**13 13 55.4**	**-0.2**
FNVD				AML	AML		
	comp=E,17550μm,0.4s						
FNVD				AML	AML		
	comp=N,14600μm,1.2s						
FNVD				AML	AML		
	comp=E,17550μm,0.4s						
FNVD				AML	AML		
	comp=N,14600μm,1.2s						
FNVD				AML	AML		
	comp=E,17550μm,0.4s						
FNVD				AML	AML		
	comp=N,14600μm,1.2s						
FNVD				AML	AML		
	comp=E,17550μm,0.4s						
FNVD				AML	AML		
	comp=N,14600μm,1.2s						
CRMI	**Carmignano**	**0.70**	**122**	P	**Pb**	**13 13 55.9**	**-1.0**
CRMI				AML	AML		
	comp=E,10795μm,0.3s						
CRMI				AML	AML		
	comp=N,18950μm,0.8s						
CRMI				AML	AML		
	comp=E,4490μm,0.3s						
CRMI				AML	AML		
	comp=N,7995μm,0.7s						
CRMI				AML	AML		
	comp=E,10790μm,0.3s						
CRMI				AML	AML		
	comp=N,18950μm,0.8s						
CRMI				AML	AML		
	comp=E,4490μm,0.3s						
CRMI				AML	AML		
	comp=N,7995μm,0.7s						
CRMI				AML	AML		
	comp=E,10790μm,0.3s						
CRMI				AML	AML		
	comp=N,7995μm,0.7s						
CRMI				AML	AML		
	comp=N,18950μm,0.8s						
CRMI				AML	AML		
	comp=E,4490μm,0.3s						
MODE	**Modena**	**0.73**	**51**	AML	AML		
	comp=N,21650μm,0.7s						
MODE				AML	AML		
	comp=E,24700μm,0.9s						
MODE				AML	AML		
	comp=N,21650μm,0.7s						
MODE				AML	AML		
	comp=E,24700μm,0.9s						
MODE				AML	AML		
	comp=N,21650μm,0.7s						
MODE				AML	AML		
	comp=N,21650μm,0.7s						
MODE				AML	AML		
	comp=E,24700μm,0.9s						
MODE				AML	AML		
	comp=E,24700μm,0.9s						
NOVE	**Novellara**	**0.75**	**32**	P	**Pb**	**13 13 57.5**	**-0.1**
NOVE				AML	AML		
	comp=E,43900μm,0.9s						
NOVE				AML	AML		
	comp=N,58800μm,0.5s						
NOVE				AML	AML		
	comp=E,43900μm,0.9s						
NOVE				AML	AML		
	comp=N,58800μm,0.5s						
NOVE				AML	AML		
	comp=N,58800μm,0.5s						
NOVE				AML	AML		
	comp=E,43900μm,0.9s						
NOVE				AML	AML		
	comp=N,58800μm,0.5s						
NOVE				AML	AML		
	comp=E,43900μm,0.9s						
GORR	**Gorreto**	**0.76**	**306**	P	**Pg**	**13 13 56.6**	**-0.2**
GORR				S	**Sb**	**13 14 07.9**	**-0.5**
GORR	**Gorreto**	**0.76**	**306**	*e*P	**Pg**	**13 13 56.5**	**-0.2**
GORR				AML	AML		
	comp=E,6410μm,0.8s						
GORR				AML	AML		
	comp=N,8520μm,0.7s						
GORR				AML	AML		
	comp=E,6410μm,0.8s						
GORR				AML	AML		
	comp=N,8520μm,0.7s						
GORR				AML	AML		
	comp=E,6410μm,0.8s						
GORR				AML	AML		
	comp=N,8520μm,0.7s						
BOB	**Bobbio (Coli)**	**0.78**	**320**	P	**Pg**	**13 13 57.3**	**+0.1**
BOB				AML	AML		
	comp=E,10200μm,0.8s						
BOB				AML	AML		
	comp=N,7700μm,0.7s						
BOB				AML	AML		
	comp=E,10730μm,0.8s						
BOB				AML	AML		
	comp=N,8425μm,1.6s						
BOB				AML	AML		

	comp=E,10180µm,0.8s						
BOB				AML	AML		
	comp=N,7695µm,0.7s						
BOB				AML	AML		
	comp=E,10735µm,0.8s						
BOB				AML	AML		
	comp=N,8425µm,1.6s						
BOB				AML	AML		
	comp=N,8425µm,1.6s						
BOB				AML	AML		
	comp=E,10735µm,0.8s						
BOB				AML	AML		
	comp=E,10180µm,0.8s						
BOB				AML	AML		
	comp=N,7695µm,0.7s						
BOB				AML	AML		
	comp=N,8425µm,1.6s						
BOB				AML	AML		
	comp=E,10735µm,0.8s						
BOB				AML	AML		
	comp=E,10180µm,0.8s						
BOB				AML	AML		
	comp=N,7695µm,0.7s						
SEI	**Scarperia**	**0.88**	**97**	P	**Pg**	**13 13 58.4**	**-0.5**
SEI				AML	AML		
	comp=E,16000µm,0.4s						
SEI				AML	AML		
	comp=N,30700µm,0.5s						
SEI				AML	AML		
	comp=E,16000µm,0.4s						
SEI				AML	AML		
	comp=N,30700µm,0.5s						
SEI				AML	AML		
	comp=E,16000µm,0.4s						
SEI				AML	AML		
	comp=N,30700µm,0.5s						
SEI				AML	AML		
	comp=E,16000µm,0.4s						
SEI				AML	AML		
	comp=N,30700µm,0.5s						
RAVA	**Ravarino**	**0.91**	**49**	AML	AML		
	comp=N,15750µm,0.9s						
RAVA				AML	AML		
	comp=E,19000µm,0.6s						
RAVA				AML	AML		
	comp=N,15700µm,0.9s						
RAVA				AML	AML		
	comp=E,20250µm,0.6s						
RAVA				AML	AML		
	comp=N,15750µm,0.9s						
RAVA				AML	AML		
	comp=E,20250µm,0.6s						
RAVA				AML	AML		
	comp=N,15750µm,0.9s						
RAVA				AML	AML		
	comp=E,20250µm,0.6s						
MTRZ	**Monterenzio**	**0.97**	**77**	P	**Pb**	**13 14 00.6**	**-0.8**
MTRZ				AML	AML		
	comp=E,7860µm,1.1s						
MTRZ				AML	AML		
	comp=N,8640µm,0.9s						
MTRZ				AML	AML		
	comp=E,8365µm,1.1s						
MTRZ				AML	AML		
	comp=N,8735µm,0.9s						
MTRZ				AML	AML		
	comp=N,8640µm,0.9s						
MTRZ				AML	AML		
	comp=N,8735µm,0.9s						
MTRZ				AML	AML		
	comp=E,8365µm,1.1s						
MTRZ				AML	AML		
	comp=E,7860µm,1.1s						
MTRZ				AML	AML		
	comp=N,8640µm,0.9s						
MTRZ				AML	AML		
	comp=N,8735µm,0.9s						
MTRZ				AML	AML		
	comp=E,7860µm,1.1s						
MTRZ				AML	AML		
	comp=E,8365µm,1.1s						
BRIS	**BRISIGHELLA**	**0.98**	**91**	P	**Pn**	**13 14 04.6**	**+2.1**
BRIS				AML	AML		
	comp=E,4320µm,0.6s						
BRIS				AML	AML		
	comp=N,4170µm,0.5s						
BRIS				AML	AML		
	comp=E,4320µm,0.6s						
BRIS				AML	AML		
	comp=N,4545µm,0.6s						
BRIS				AML	AML		
	comp=E,4320µm,0.6s						
BRIS				AML	AML		
	comp=N,4545µm,0.6s						
BRIS				AML	AML		
	comp=E,4320µm,0.6s						
BRIS				AML	AML		
	comp=N,4545µm,0.6s						
RUFI	**Rufina**	**1.03**	**108**	P	**Pb**	**13 14 01.4**	**-1.1**
RUFI				AML	AML		
	comp=E,4700µm,0.7s						
RUFI				AML	AML		
	comp=N,4220µm,0.8s						
RUFI				AML	AML		
	comp=E,4705µm,0.7s						
RUFI				AML	AML		
	comp=N,4230µm,0.8s						
RUFI				AML	AML		
	comp=E,4705µm,0.7s						
RUFI				AML	AML		
	comp=N,4230µm,0.8s						
RUFI				AML	AML		
	comp=E,4705µm,0.7s						
RUFI				AML	AML		
	comp=N,4230µm,0.8s						
FIU	**Minerbio Fiu**	**1.07**	**63**	AML	AML		
	comp=N,13000µm,0.6s						
FIU				AML	AML		
	comp=E,15500µm,0.9s						
FIU				AML	AML		
	comp=N,13000µm,0.6s						
FIU				AML	AML		
	comp=E,15500µm,0.9s						
FIU				AML	AML		
	comp=E,15500µm,0.9s						
FIU				AML	AML		
	comp=N,13000µm,0.6s						
FIU				AML	AML		
	comp=E,15500µm,0.9s						
FIU				AML	AML		
	comp=N,13000µm,0.6s						
CSNT	**Castellina Chi**	**1.08**	**130**	P	**Pn**	**13 14 02.7**	**-1.2**
CSNT				AML	AML		
	comp=E,5260µm,0.5s						
CSNT				AML	AML		
	comp=N,5245µm,1.6s						
CSNT				AML	AML		
	comp=E,5260µm,0.5s						
CSNT				AML	AML		
	comp=N,5245µm,1.6s						
CSNT				AML	AML		
	comp=E,5260µm,0.5s						
CSNT				AML	AML		
	comp=N,5245µm,1.6s						
CSNT				AML	AML		
	comp=E,5260µm,0.5s						
CSNT				AML	AML		
	comp=N,5245µm,1.6s						
SERM	**Sermide**	**1.17**	**44**	AML	AML		
	comp=N,7235µm,0.8s						
SERM				AML	AML		
	comp=E,7245µm,0.9s						
SERM				AML	AML		
SERM				AML	AML		
	comp=E,15350µm,0.7s						
SERM				AML	AML		
	comp=N,7235µm,0.8s						
SERM				AML	AML		
SERM				AML	AML		
	comp=E,15350µm,0.7s						
SERM				AML	AML		
	comp=N,7235µm,0.8s						
SERM				AML	AML		
	comp=E,7245µm,0.9s						
SERM				AML	AML		
SERM				AML	AML		
	comp=E,15350µm,0.7s						
SERM				AML	AML		
	comp=E,7245µm,0.9s						
TRIF	**Trifonti**	**1.19**	**152**	*e*P	**Pb**	**13 14 04.3**	**-0.7**
TRIF				AML	AML		
	comp=E,4180µm,0.6s						
TRIF				AML	AML		
	comp=N,2685µm,0.8s						
TRIF				AML	AML		
	comp=E,4180µm,0.6s						
TRIF				AML	AML		
	comp=N,2685µm,0.8s						
TRIF				AML	AML		
	comp=E,4180µm,0.6s						
TRIF				AML	AML		
	comp=N,2685µm,0.8s						
TRIF				AML	AML		
	comp=E,4180µm,0.6s						
TRIF				AML	AML		
	comp=N,2685µm,0.8s						
FROS	**Frosini**	**1.20**	**142**	P	**Pg**	**13 14 04.4**	**-0.8**
FROS				AML	AML		
	comp=E,7005µm,1.3s						
FROS				AML	AML		
	comp=N,7410µm,1.0s						
FROS				AML	AML		
	comp=E,7005µm,1.3s						
FROS				AML	AML		
	comp=N,7410µm,1.0s						
FROS				AML	AML		
	comp=E,7005µm,1.3s						
FROS				AML	AML		
	comp=N,7410µm,1.0s						
FROS				AML	AML		
	comp=E,7005µm,1.3s						
FROS				AML	AML		
	comp=N,7410µm,1.0s						
PCP	**Piancastagn**	**1.21**	**288**	P	**Pg**	**13 14 04.9**	**-0.5**
PCP				S	**Sg**	**13 14 20.5**	**-0.6**
PCP	**Piancastagn**	**1.21**	**288**	P	**Pg**	**13 14 04.9**	**-0.5**
PCP				AML	AML		
	comp=E,1795µm,1.2s						
PCP				AML	AML		
	comp=N,2455µm,0.7s						
PCP				AML	AML		
	comp=E,1795µm,1.2s						
PCP				AML	AML		
	comp=N,2455µm,0.7s						
PCP				AML	AML		
	comp=N,2455µm,0.7s						
PCP				AML	AML		
	comp=E,1795µm,1.2s						
PCP				AML	AML		
	comp=N,2455µm,0.7s						
PCP				AML	AML		
	comp=E,1795µm,1.2s						
ASQU	**Asqua**	**1.24**	**107**	P	**Pg**	**13 14 04.2**	**-1.6**
ASQU				AML	AML		
	comp=E,2085µm,1.3s						
ASQU				AML	AML		
	comp=N,2395µm,0.7s						
ASQU				AML	AML		
	comp=E,2085µm,1.3s						
ASQU				AML	AML		
	comp=N,2395µm,0.7s						
ASQU				AML	AML		
	comp=E,2085µm,1.3s						
ASQU				AML	AML		
	comp=N,2395µm,0.7s						
SFI	**Santa Sofia**	**1.25**	**102**	P	**Pg**	**13 14 05.0**	**-1.1**
SFI				AML	AML		
	comp=E,2910µm,1.2s						
SFI				AML	AML		
	comp=N,2955µm,1.1s						
SFI				AML	AML		
	comp=E,2435µm,0.4s						
SFI				AML	AML		
	comp=N,2985µm,1.1s						
SFI				AML	AML		
	comp=N,2955µm,1.1s						
SFI				AML	AML		
	comp=E,2910µm,1.2s						
SFI				AML	AML		
	comp=E,2435µm,0.4s						
SFI				AML	AML		
	comp=N,2985µm,1.1s						
SFI				AML	AML		
	comp=N,2955µm,1.1s						
SFI				AML	AML		
	comp=E,2910µm,1.2s						
SFI				AML	AML		
	comp=E,2435µm,0.4s						
SFI				AML	AML		
	comp=N,2985µm,1.1s						
QLNO	**Quiliano**	**1.31**	**277**	P	**Pn**	**13 14 06.3**	**-0.8**
QLNO				AML	AML		
	comp=E,1780µm,0.7s						
QLNO				AML	AML		
	comp=N,2000µm,0.7s						
QLNO				AML	AML		
	comp=E,1780µm,0.7s						
QLNO				AML	AML		
	comp=N,1995µm,0.7s						
QLNO				AML	AML		
	comp=E,1780µm,0.7s						
QLNO				AML	AML		
	comp=N,1995µm,0.7s						
QLNO				AML	AML		
	comp=E,1780µm,0.7s						
QLNO				AML	AML		
	comp=N,1995µm,0.7s						
FINB	**Finale Ligure**	**1.31**	**271**	P	**Pn**	**13 14 06.1**	**-1.0**
FINB				AML	AML		
	comp=E,1082µm,0.5s						
FINB				AML	AML		
	comp=N,1310µm,0.5s						
FINB				AML	AML		
	comp=E,1082µm,0.5s						
FINB				AML	AML		
	comp=N,1310µm,0.5s						
FINB				AML	AML		
	comp=N,1310µm,0.5s						
FINB				AML	AML		
	comp=E,1082µm,0.5s						
FINB				AML	AML		
	comp=N,1310µm,0.5s						
FINB				AML	AML		
	comp=E,1082µm,0.5s						
CELB	**S.Piero in Cam**	**1.42**	**178**	P	**Pn**	**13 14 07.3**	**-1.3**
CELB				AML	AML		
	comp=E,961µm,0.5s						
CELB				AML	AML		
	comp=N,998µm,0.6s						
CELB				AML	AML		
	comp=N,998µm,0.6s						
CELB				AML	AML		
	comp=E,961µm,0.5s						
CELB				AML	AML		
	comp=N,998µm,0.6s						
CELB				AML	AML		
	comp=E,961µm,0.5s						
ROTM	**Rocchetta Tana**	**1.46**	**299**	P	**Pg**	**13 14 10.6**	**+0.5**
ROTM				S	**Sg**	**13 14 32.2**	**+3.2**
CASP	**Castiglione de**	**1.47**	**159**	P	**Pn**	**13 14 08.2**	**-1.1**
CASP				AML	AML		
	comp=E,1795µm,0.8s						
CASP				AML	AML		
	comp=N,1156µm,0.6s						
CASP				AML	AML		
	comp=N,1156µm,0.6s						
CASP				AML	AML		
	comp=E,1795µm,0.8s						
CASP				AML	AML		
	comp=N,1156µm,0.6s						
CASP				AML	AML		
	comp=E,1795µm,0.8s						
SSP9	**Sansepolcro**	**1.55**	**112**	AML	AML		
	comp=N,2090µm,1.5s						
SSP9				AML	AML		
	comp=E,1734µm,1.4s						
SSP9				AML	AML		
	comp=N,2090µm,1.5s						
SSP9				AML	AML		
	comp=E,1734µm,1.4s						
SSP9				AML	AML		
	comp=N,2090µm,1.5s						
SSP9				AML	AML		
	comp=E,1734µm,1.4s						
CAFI	**Castiglion Fio**	**1.56**	**122**	P	**Pn**	**13 14 09.4**	**-1.1**
CAFI				AML	AML		
	comp=E,1150µm,1.1s						
CAFI				AML	AML		
	comp=N,1120µm,1.3s						
CAFI				AML	AML		
	comp=N,1120µm,1.3s						
CAFI				AML	AML		
	comp=E,1150µm,1.1s						
CAFI				AML	AML		
	comp=N,1120µm,1.3s						
CAFI				AML	AML		
	comp=E,1150µm,1.1s						
BALD	**Monte Baldo**	**1.59**	**17⇑**	*e*Pg	**Pg**	**13 14 12.2**	**-0.4**
BALD				*e*Sg	**Sg**	**13 14 34.2**	**+1.0**
PARC	**Parchiule**	**1.59**	**108**	P	**Pn**	**13 14 09.8**	**-1.2**
PARC				AML	AML		
	comp=E,1160µm,1.0s						
PARC				AML	AML		
	comp=N,1455µm,0.5s						
PARC				AML	AML		
	comp=E,1160µm,1.0s						
PARC				AML	AML		
	comp=N,1455µm,0.5s						
PARC				AML	AML		
	comp=E,1160µm,1.0s						
PARC				AML	AML		
	comp=N,1455µm,0.5s						
TEOL	**Teolo**	**1.61**	**42⇓**	*e*Pg	**Pb**	**13 14 11.4**	**-1.0**
TEOL				*e*Sg	**Sg**	**13 14 34.1**	**+0.3**
TEOL	**Teolo**	**1.61**	**42**	P	**Pb**	**13 14 11.3**	**-1.0**
TEOL				AML	AML		
	comp=E,14400µm,0.5s						
TEOL				AML	AML		
	comp=N,7665µm,0.6s						
TEOL				AML	AML		
	comp=E,14400µm,0.5s						
TEOL				AML	AML		
	comp=N,7665µm,0.6s						
TEOL				AML	AML		
	comp=E,14400µm,0.5s						
TEOL				AML	AML		
	comp=N,7665µm,0.6s						
MAGA	**Magasa**	**1.64**	**12**	*e*Pg	**Pb**	**13 14 12.6**	**-0.4**
BADI	**Badiali**	**1.65**	**113**	AML	AML		
	comp=E,2000µm,0.9s						
BADI				AML	AML		
	comp=N,1585µm,0.4s						
BADI				AML	AML		
	comp=N,1585µm,0.4s						
BADI				AML	AML		
	comp=E,2000µm,0.9s						
BADI				AML	AML		
	comp=N,1585µm,0.4s						
BADI				AML	AML		
	comp=E,2000µm,0.9s						
IMI	**Imperia**	**1.65**	**262**	P	**Pn**	**13 14 10.7**	**-1.1**
GBOS	**Grotte di Boss**	**1.67**	**273**	P	**Pn**	**13 14 11.4**	**-0.6**
GBOS				AML	AML		
	comp=E,417µm,0.5s						
GBOS				AML	AML		
	comp=N,624µm,0.5s						
GBOS				AML	AML		
	comp=E,417µm,0.5s						
GBOS				AML	AML		
	comp=N,624µm,0.5s						
GBOS				AML	AML		
	comp=E,417µm,0.5s						
GBOS				AML	AML		
	comp=N,624µm,0.5s						
MGRO	**Montegrosso**	**1.69**	**267**	P	**Pn**	**13 14 11.6**	**-0.9**
MGRO				AML	AML		
	comp=E,1355µm,0.4s						
MGRO				AML	AML		
	comp=N,936µm,0.5s						
MGRO				AML	AML		
	comp=N,936µm,0.5s						
MGRO				AML	AML		
	comp=E,1355µm,0.4s						
MGRO				AML	AML		
	comp=N,936µm,0.5s						
MGRO				AML	AML		
	comp=E,1355µm,0.4s						
NEGI	**Seborga**	**1.80**	**261**	AML	AML		
	comp=N,848µm,0.6s						
NEGI				AML	AML		
	comp=E,634µm,1.1s						
NEGI				AML	AML		
	comp=N,848µm,0.6s						
NEGI				AML	AML		
	comp=E,634µm,1.1s						
NEGI				AML	AML		
	comp=N,848µm,0.6s						
NEGI				AML	AML		
	comp=E,634µm,1.1s						
ATVO	**AVT- Monte Val**	**1.81**	**115**	P	**Pn**	**13 14 12.7**	**-1.3**
ATVO				AML	AML		
	comp=E,1555µm,0.6s						
ATVO				AML	AML		
	comp=N,1590µm,0.9s						
ATVO				AML	AML		
	comp=N,1590µm,0.9s						
ATVO				AML	AML		
	comp=E,1555µm,0.6s						
ATVO				AML	AML		
	comp=N,1590µm,0.9s						
ATVO				AML	AML		
	comp=E,1555µm,0.6s						
PGF	**Pioggiola**	**1.82**	**208**	*e*Pn	**Pn**	**13 14 13.1**	**-1.1**
PGF	**Pioggiola**	**1.82**	**208**	*e*P	**Pg**	**13 14 16.6**	**-0.5**
PGF				*e*Sn	**Sn**	**13 14 34.7**	**-3.0**
	comp=E,156nm,0.3s						
MONC	**Moncucco Torin**	**1.83**	**300**	AML	AML		
	comp=E,3200µm,0.5s						
MONC				AML	AML		
	comp=N,3420µm,1.0s						
MONC				AML	AML		
	comp=E,3200µm,0.5s						
MONC				AML	AML		
	comp=N,3420µm,1.0s						
MONC				AML	AML		
	comp=E,3200µm,0.5s						
MONC				AML	AML		
	comp=N,3420µm,1.0s						
PIEI	**Pieia**	**1.84**	**109**	P	**Pn**	**13 14 13.1**	**-1.3**
PIEI				AML	AML		
	comp=E,844µm,0.4s						
PIEI				AML	AML		
	comp=N,558µm,1.6s						
PIEI				AML	AML		
	comp=E,844µm,0.4s						
PIEI				AML	AML		
	comp=N,558µm,1.6s						
PIEI				AML	AML		
	comp=E,844µm,0.4s						
PIEI				AML	AML		
	comp=N,558µm,1.6s						
SACS	**San Casciano d**	**1.84**	**135**	AML	AML		
	comp=N,480µm,0.5s						
SACS				AML	AML		
	comp=E,374µm,0.6s						
SACS				AML	AML		
	comp=N,480µm,0.5s						
SACS				AML	AML		
	comp=E,393µm,0.8s						
SACS				AML	AML		
	comp=N,484µm,0.5s						
SACS				AML	AML		
	comp=E,374µm,0.6s						
SACS				AML	AML		
	comp=N,480µm,0.5s						
SACS				AML	AML		
	comp=N,484µm,0.5s						
SACS				AML	AML		
	comp=E,393µm,0.8s						
SACS				AML	AML		
	comp=E,374µm,0.6s						
SACS				AML	AML		
	comp=N,484µm,0.5s						
SACS				AML	AML		
	comp=E,393µm,0.8s						
RNI	**Roncone**	**1.84**	**10⇓**	*e*Pn	**Pb**	**13 14 15.4**	**-1.1**
RNI				*e*Sn	**Sg**	**13 14 41.2**	**-0.2**
DOSS	**Dosso del Somm**	**1.86**	**23**	*e*Pn	**Pb**	**13 14 15.4**	**-1.3**
ATTE	**AVT- Monte Tez**	**1.87**	**121**	AML	AML		
	comp=E,1154µm,0.4s						
ATTE				AML	AML		
	comp=E,1154µm,0.4s						
ATTE				AML	AML		
	comp=N,1250µm,1.0s						

ATTE				AML	AML	
	comp=E,1154µm,0.4s					
ATTE				AML	AML	
	comp=N,1250µm,1.0s					
ATTE				AML	AML	
	comp=N,1250µm,1.0s					
MAON	**Monte Argentar**	**1.88**	**157**	AML	AML	
	comp=N,716µm,0.7s					
MAON				AML	AML	
	comp=E,700µm,0.7s					
MAON				AML	AML	
	comp=N,716µm,0.7s					
MAON				AML	AML	
	comp=N,716µm,0.7s					
MAON				AML	AML	
	comp=E,700µm,0.7s					
MAON				AML	AML	
	comp=E,700µm,0.7s					
SAOF	**Saorge**	**1.88**	**265**	Pn	**Pn**	**13 14 14.6 -0.3**
SAOF				Sn	**Sn**	**13 14 37.7 -1.3**
SAOF	**Saorge**	**1.88**	**265**	AML	AML	
	comp=E,1215µm,0.7s					
SAOF				AML	AML	
	comp=E,1215µm,0.7s					
SAOF				AML	AML	
	comp=N,1870µm,0.8s					
SAOF				AML	AML	
	comp=N,1870µm,0.8s					
SAOF				AML	AML	
	comp=E,1215µm,0.7s					
SAOF				AML	AML	
	comp=N,1870µm,0.8s					
MGAB	**Montegabbione**	**1.90**	**131**	P	**Pn**	**13 14 14.8 -0.3**
MGAB				AML	AML	
	comp=E,738µm,0.5s					
MGAB				AML	AML	
	comp=N,756µm,0.6s					
MGAB				AML	AML	
	comp=E,794µm,0.5s					
MGAB				AML	AML	
	comp=N,678µm,1.4s					
MGAB				AML	AML	
	comp=N,756µm,0.6s					
MGAB				AML	AML	
	comp=N,678µm,1.4s					
MGAB				AML	AML	
	comp=E,794µm,0.5s					
MGAB				AML	AML	
	comp=E,738µm,0.5s					
MGAB				AML	AML	
	comp=N,756µm,0.6s					
MGAB				AML	AML	
	comp=N,678µm,1.4s					
MGAB				AML	AML	
	comp=E,794µm,0.5s					
MGAB				AML	AML	
	comp=E,738µm,0.5s					
MABI	**Malga Bissina**	**1.90**	**8**	*e*Pn	**Pb**	**13 14 16.4 -1.1**
MUGIO	**Muggio**	**1.92**	**336**	P	**Pb**	**13 14 16.5 -1.2**
MUGIO				AML	AML	
	comp=E,1530µm,0.6s					
MUGIO				AML	AML	
	comp=N,1565µm,0.5s					
MUGIO				AML	AML	
	comp=N,1565µm,0.5s					
MUGIO				AML	AML	
	comp=E,1530µm,0.6s					
MUGIO				AML	AML	
	comp=N,1565µm,0.5s					
MUGIO				AML	AML	
	comp=E,1530µm,0.6s					
ATFO	**Monte Foce - G**	**1.93**	**114**	AML	AML	
	comp=E,1495µm,0.6s					
ATFO				AML	AML	
	comp=E,1495µm,0.6s					
ATFO				AML	AML	
	comp=N,980µm,1.1s					
ATFO				AML	AML	
	comp=E,1495µm,0.6s					
ATFO				AML	AML	
	comp=N,980µm,1.1s					
ATFO				AML	AML	
	comp=N,980µm,1.1s					
MURB	**Monte Urbino**	**1.94**	**117**	AML	AML	
	comp=E,2660µm,0.3s					
MURB				AML	AML	
	comp=E,2660µm,0.3s					
MURB				AML	AML	
	comp=N,3030µm,0.3s					
MURB				AML	AML	
	comp=E,2940µm,0.3s					
MURB				AML	AML	
	comp=N,3275µm,0.3s					
MURB				AML	AML	
	comp=E,2940µm,0.3s					
MURB				AML	AML	
	comp=E,2660µm,0.3s					
MURB				AML	AML	
	comp=N,3275µm,0.3s					
MURB				AML	AML	
	comp=N,3030µm,0.3s					
MURB				AML	AML	
	comp=E,2940µm,0.3s					
MURB				AML	AML	
	comp=N,3275µm,0.3s					
MURB				AML	AML	
	comp=N,3030µm,0.3s					
FSSB	**Fossombrone**	**1.96**	**103**	AML	AML	
	comp=E,1810µm,1.3s					
FSSB				AML	AML	
	comp=E,1810µm,1.3s					
FSSB				AML	AML	
	comp=N,3185µm,0.5s					
FSSB				AML	AML	
	comp=N,3185µm,0.5s					
FSSB				AML	AML	
	comp=E,1810µm,1.3s					
FSSB				AML	AML	
	comp=N,3185µm,0.5s					
MPAG	**Monte Paganucc**	**1.96**	**105**	AML	AML	
	comp=E,738µm,0.8s					
MPAG				AML	AML	
	comp=E,738µm,0.8s					
MPAG				AML	AML	
	comp=N,950µm,0.7s					
MPAG				AML	AML	
	comp=N,950µm,0.7s					
MPAG				AML	AML	
	comp=E,738µm,0.8s					
MPAG				AML	AML	
	comp=N,950µm,0.7s					
VARE	**Varese**	**1.96**	**331**	AML	AML	
	comp=N,2125µm,0.6s					
VARE				AML	AML	
	comp=E,2340µm,0.6s					
VARE				AML	AML	
	comp=N,2125µm,0.6s					
VARE				AML	AML	
	comp=N,2125µm,0.6s					
VARE				AML	AML	
	comp=E,2340µm,0.6s					
VARE				AML	AML	
	comp=E,2340µm,0.6s					
ENR	**Entracque**	**1.97**	**273**	P	**Pn**	**13 14 16.1 0.0**
ENR				AML	AML	
	comp=E,474µm,0.6s					
ENR				AML	AML	
	comp=N,713µm,0.5s					
ENR				AML	AML	
	comp=N,713µm,0.5s					
ENR				AML	AML	
	comp=E,474µm,0.6s					
ENR				AML	AML	
	comp=N,713µm,0.5s					
ENR				AML	AML	
	comp=E,474µm,0.6s					
SBF	**Sospel**	**1.98**	**262**	*e*Pn	**Pn**	**13 14 15.7 -0.7**
SBF				*e*Sn	**Sn**	**13 14 39.7 -1.9**
	comp=E,251nm,0.3s					
GAGG	**Gaggia**	**2.00**	**16**	*e*Pn	**Pb**	**13 14 17.4 -1.6**
ESCA	**l'Escarene**	**2.03**	**261**	Pn	**Pn**	**13 14 17.2 +0.2**
ESCA				Sn	**Sn**	**13 14 41.3 -1.5**
PANI	**Panarotta**	**2.06**	**24**	*e*Pn	**Pn**	**13 14 18.2 +0.6**
CGRP	**Cima Grappa**	**2.07**	**34**	*e*Pn	**Pn**	**13 14 18.3 +0.6**
CGRP	**Cima Grappa**	**2.07**	**34**	AML	AML	
	comp=N,2165µm,1.2s					
CGRP				AML	AML	
	comp=E,2390µm,0.8s					
CGRP				AML	AML	
	comp=N,2165µm,1.2s					
CGRP				AML	AML	
	comp=E,2390µm,0.8s					
CGRP				AML	AML	
	comp=E,2390µm,0.8s					
CGRP				AML	AML	
	comp=N,2165µm,1.2s					
FOSV	**Fossato di Vic**	**2.08**	**114**	AML	AML	
	comp=N,852µm,0.7s					
FOSV				AML	AML	
	comp=E,673µm,0.8s					
FOSV				AML	AML	
	comp=N,852µm,0.7s					
FOSV				AML	AML	
	comp=N,852µm,0.7s					
FOSV				AML	AML	
	comp=E,673µm,0.8s					
FOSV				AML	AML	
	comp=E,673µm,0.8s					
MTLO	**Montello**	**2.15**	**39**	*e*Pn	**Pn**	**13 14 18.9 +0.3**
CTI	**Castel Tesino**	**2.16**	**29**	AML	AML	
	comp=E,2555µm,0.7s					
CTI				AML	AML	
	comp=E,2555µm,0.7s					
CTI				AML	AML	
	comp=N,2175µm,0.5s					
CTI				AML	AML	
	comp=N,2175µm,0.5s					
CTI				AML	AML	
	comp=E,2555µm,0.7s					
CTI				AML	AML	
	comp=N,2175µm,0.5s					
SMPL	**Sampolo**	**2.17**	**197**	Pn	**Pn**	**13 14 19.1 +0.3**
SMPL				Sn	**Sn**	**13 14 45.1 -1.0**
TRAV	**Traversella**	**2.18**	**309**	AML	AML	
	comp=E,1180µm,0.3s					
TRAV				AML	AML	
	comp=E,1180µm,0.3s					
TRAV				AML	AML	
	comp=N,1440µm,0.6s					
TRAV				AML	AML	
	comp=E,1180µm,0.3s					
TRAV				AML	AML	
	comp=N,1440µm,0.6s					
TRAV				AML	AML	
	comp=N,1440µm,0.6s					
MOMA	**Monte Martano**	**2.23**	**127**	AML	AML	
	comp=N,579µm,0.3s					
MOMA				AML	AML	
	comp=E,606µm,1.5s					
MOMA				AML	AML	
	comp=N,2256µm,1.5s					
MOMA				AML	AML	
	comp=E,670µm,1.5s					
MOMA				AML	AML	
	comp=N,579µm,0.3s					
MOMA				AML	AML	
	comp=N,2256µm,1.5s					
MOMA				AML	AML	
	comp=E,670µm,1.5s					
MOMA				AML	AML	
	comp=E,606µm,1.5s					
MOMA				AML	AML	
	comp=N,2256µm,1.5s					
MOMA				AML	AML	
	comp=E,606µm,1.5s					
MOMA				AML	AML	
	comp=N,579µm,0.3s					
MOMA				AML	AML	
	comp=E,670µm,1.5s					
ISO	**Isola**	**2.23**	**271**	Pn	**Pn**	**13 14 20.6 +0.8**
ISO				Sn	**Sn**	**13 14 46.8 -0.9**
RSP	**Reno Superiore**	**2.28**	**296**	AML	AML	
	comp=N,524µm,1.0s					
RSP				AML	AML	
	comp=E,696µm,1.4s					
RSP				AML	AML	
	comp=N,524µm,1.0s					
RSP				AML	AML	
	comp=N,524µm,1.0s					
RSP				AML	AML	
	comp=E,696µm,1.4s					
RSP				AML	AML	
	comp=E,696µm,1.4s					
EL6	**Elcito**	**2.30**	**110**	AML	AML	
	comp=N,890µm,1.3s					
EL6				AML	AML	
	comp=E,1360µm,0.8s					
EL6				AML	AML	
	comp=E,1360µm,0.8s					
EL6				AML	AML	
	comp=N,890µm,1.3s					
EL6				AML	AML	
	comp=E,1360µm,0.8s					
EL6				AML	AML	
	comp=N,890µm,1.3s					
CESX	**Cesi**	**2.36**	**131**	AML	AML	
	comp=N,392µm,1.4s					
CESX				AML	AML	
	comp=E,514µm,0.5s					
CESX				AML	AML	
	comp=N,392µm,1.4s					
CESX				AML	AML	
	comp=E,514µm,0.5s					
CESX				AML	AML	
	comp=N,392µm,1.4s					
CESX				AML	AML	
	comp=E,514µm,0.5s					
CALF	**Calern**	**2.37**	**261**	Pn	**Pn**	**13 14 21.4 -0.3**
CALF				Sn	**Sn**	**13 14 49.7 -1.5**
TUE	**Stuetta**	**2.37**	**346**	*e*Pn	**Pn**	**13 14 22.4 +0.6**
TUE	**Stuetta**	**2.37**	**346**	AML	AML	
	comp=N,913µm,0.8s					
TUE				AML	AML	
	comp=E,1375µm,1.4s					
TUE				AML	AML	
	comp=N,739µm,0.8s					
TUE				AML	AML	
	comp=E,1795µm,1.4s					
TUE				AML	AML	
	comp=N,913µm,0.8s					
TUE				AML	AML	
	comp=E,1795µm,1.4s					
TUE				AML	AML	
	comp=N,739µm,0.8s					
TUE				AML	AML	
	comp=E,1375µm,1.4s					
TUE				AML	AML	
	comp=E,1795µm,1.4s					
TUE				AML	AML	
	comp=N,739µm,0.8s					
TUE				AML	AML	
	comp=N,913µm,0.8s					
TUE				AML	AML	
	comp=E,1375µm,1.4s					
FDMO	**Fiordimonte**	**2.41**	**117**	AML	AML	
	comp=N,348µm,1.6s					
FDMO				AML	AML	
	comp=E,472µm,0.9s					
FDMO				AML	AML	
	comp=N,348µm,1.6s					
FDMO				AML	AML	
	comp=E,472µm,0.9s					
FDMO				AML	AML	
	comp=N,348µm,1.6s					
FDMO				AML	AML	
	comp=E,472µm,0.9s					
KOSI	**Kohlern**	**2.45**	**20**	AML	AML	
	comp=E,1525µm,0.6s					
KOSI				AML	AML	
	comp=E,1525µm,0.6s					
KOSI				AML	AML	
	comp=N,1360µm,0.6s					
KOSI				AML	AML	
	comp=N,1360µm,0.6s					
KOSI				AML	AML	
	comp=E,1525µm,0.6s					
KOSI				AML	AML	
	comp=N,1360µm,0.6s					
FUORN	**Ofenpass-Fuorn**	**2.45**	**2**	*e*Pn	**Pn**	**13 14 24.5 +1.4**
FUORN	**Ofenpass-Fuorn**	**2.45**	**2**	AML	AML	
	comp=E,712µm,0.5s					
FUORN				AML	AML	
	comp=N,740µm,0.9s					
FUORN				AML	AML	
	comp=N,740µm,0.9s					
FUORN				AML	AML	
	comp=E,712µm,0.5s					
FUORN				AML	AML	
	comp=N,740µm,0.9s					
FUORN				AML	AML	
	comp=E,712µm,0.5s					
MOSI	**Grossmontoni**	**2.46**	**6**	AML	AML	
	comp=N,2935µm,0.6s					
MOSI				AML	AML	
	comp=E,1975µm,1.0s					
MOSI				AML	AML	
	comp=E,1975µm,1.0s					
MOSI				AML	AML	
	comp=N,2935µm,0.6s					
MOSI				AML	AML	
	comp=E,1975µm,1.0s					
MOSI				AML	AML	
	comp=N,2935µm,0.6s					
MBDF	**Montbardon**	**2.48**	**284**	*e*Pn	**Pn**	**13 14 22.9 -0.5**
MBDF				*e*Sn	**Sn**	**13 14 53.7 -0.4**
	comp=N,192nm,0.4s					
POLC	**Polcenigo**	**2.49**	**41**	AML	AML	
	comp=N,3080µm,0.5s					
POLC				AML	AML	
	comp=E,2245µm,0.8s					
POLC				AML	AML	
	comp=N,3080µm,0.5s					
POLC				AML	AML	
	comp=E,2245µm,0.8s					
POLC				AML	AML	
	comp=E,2245µm,0.8s					
POLC				AML	AML	
	comp=N,3080µm,0.5s					
TOLF	**Tolfa**	**2.50**	**147**	AML	AML	
	comp=E,214µm,0.7s					
TOLF				AML	AML	
	comp=E,214µm,0.7s					
TOLF				AML	AML	
	comp=N,172µm,1.2s					
TOLF				AML	AML	
	comp=N,172µm,1.2s					
TOLF				AML	AML	
	comp=N,172µm,1.2s					
TOLF				AML	AML	
	comp=E,214µm,0.7s					
LSD	**Lago del Serru**	**2.51**	**302**	AML	AML	
	comp=N,364µm,1.4s					
LSD				AML	AML	
	comp=E,384µm,1.6s					
LSD				AML	AML	
	comp=N,364µm,1.4s					
LSD				AML	AML	
	comp=E,384µm,1.6s					
LSD				AML	AML	
	comp=N,364µm,1.4s					
LSD				AML	AML	
	comp=E,384µm,1.6s					
FUSIO	**Fusio**	**2.52**	**336**	AML	AML	
	comp=E,1090µm,0.5s					
FUSIO				AML	AML	
	comp=N,862µm,0.8s					
FUSIO				AML	AML	
	comp=N,862µm,0.8s					
FUSIO				AML	AML	
	comp=E,1090µm,0.5s					
FUSIO				AML	AML	
	comp=N,862µm,0.8s					
FUSIO				AML	AML	
	comp=E,1090µm,0.5s					
RRL	**Rocca Remolon**	**2.52**	**289**	AML	AML	
	comp=E,410µm,1.0s					
RRL				AML	AML	
	comp=E,410µm,1.0s					
RRL				AML	AML	
	comp=N,411µm,1.6s					
RRL				AML	AML	
	comp=E,410µm,1.0s					
RRL				AML	AML	
	comp=N,411µm,1.6s					
RRL				AML	AML	
	comp=N,411µm,1.6s					
NRCA	**Norcia**	**2.53**	**121**	AML	AML	
	comp=N,306µm,0.5s					
NRCA				AML	AML	
	comp=E,354µm,0.5s					
NRCA				AML	AML	
	comp=N,306µm,0.5s					
NRCA				AML	AML	
	comp=E,354µm,0.5s					
NRCA				AML	AML	
	comp=N,306µm,0.5s					
NRCA				AML	AML	
	comp=E,354µm,0.5s					
FRF	**La Foret Royal**	**2.61**	**258**	*e*Pn	**Pn**	**13 14 24.0 -0.9**
FRF				*e*Sn	**Sn**	**13 14 54.6 -2.3**
	comp=E,88nm,0.2s					
DAVOX	**Davos/Dischmat**	**2.62**	**356**	Pn	**Pb**	**13 14 27.6 -2.0**
	comp=E,46nm,0.3s,baz=177,slow=10,SNR=103					
DAVOX				Sn	**Sn**	**13 14 55.9 -1.5**
	comp=E,37nm,0.3s,baz=163,slow=8.3,SNR=4.0					
DAVOX				LR	LR	13 15 47.8
	comp=E,303nm,20.6s,baz=257,slow=48					
DAVOX	**Davos/Dischmat**	**2.62**	**356**	AML	AML	
	comp=N,713µm,0.5s					
DAVOX				AML	AML	
	comp=E,705µm,0.4s					
DAVOX				AML	AML	
	comp=N,713µm,0.5s					
DAVOX				AML	AML	
	comp=E,705µm,0.4s					
DAVOX				AML	AML	
	comp=N,713µm,0.5s					
DAVOX				AML	AML	
	comp=E,705µm,0.4s					
LNSS	**Leonessa**	**2.62**	**126**	AML	AML	
	comp=E,690µm,0.4s					
LNSS				AML	AML	
	comp=E,690µm,0.4s					
LNSS				AML	AML	
	comp=N,922µm,1.3s					
LNSS				AML	AML	
	comp=N,922µm,1.3s					
LNSS				AML	AML	
	comp=E,690µm,0.4s					
LNSS				AML	AML	
	comp=N,922µm,1.3s					
BNI	**Bardonecchia**	**2.63**	**291**	*e*Pn	**Pn**	**13 14 26.6 +1.2**
BNI	**Bardonecchia**	**2.63**	**291**	*e*P	**Pn**	**13 14 26.6 +1.2**
ABSI	**Aberstueckl**	**2.69**	**17**	AML	AML	
	comp=E,5240µm,0.7s					
ABSI				AML	AML	
	comp=E,5240µm,0.7s					
ABSI				AML	AML	
	comp=N,3105µm,0.6s					
ABSI				AML	AML	
	comp=N,3105µm,0.6s					
ABSI				AML	AML	
	comp=E,5240µm,0.7s					
ABSI				AML	AML	
	comp=N,3105µm,0.6s					
LPG	**La Plagne**	**2.76**	**300**	*e*P	**Pb**	**13 14 30.1 -2.0**
LPG				*e*Sn	**Sn**	**13 15 00.1 -1.0**
	comp=N,244nm,0.6s					
STAL	**STALIGIAL**	**2.77**	**40**	AML	AML	
	comp=N,1145µm,0.5s					
STAL				AML	AML	
	comp=E,1019µm,0.9s					
STAL				AML	AML	
	comp=E,1460µm,0.9s					
STAL				AML	AML	
	comp=N,1102µm,0.4s					
STAL				AML	AML	
	comp=E,1460µm,0.9s					
STAL				AML	AML	
	comp=E,1019µm,0.9s					
STAL				AML	AML	
	comp=N,1102µm,0.4s					
STAL				AML	AML	
	comp=N,1145µm,0.5s					
STAL				AML	AML	
	comp=E,1460µm,0.9s					
STAL				AML	AML	
	comp=E,1019µm,0.9s					
STAL				AML	AML	
	comp=N,1145µm,0.5s					
STAL				AML	AML	
	comp=N,1102µm,0.4s					
LMR	**La Mourre**	**2.77**	**254**	*e*Pn	**Pn**	**13 14 26.0 -1.1**
LMR				*e*Sn	**Sn**	**13 14 57.7 -3.1**

comp=N,59nm,0.2s
LPL La Plagne 2.78 300 *e*P **Pb 13 14 30.3 -2.1**
LPL *e*Sn **Sn 13 15 00.7 -0.8**
comp=N,163nm,0.5s
FETA Feichten 2.88 8 Pn **Pb 13 14 31.3 -2.8**
comp=N,9.3nm,0.4s,SNR=28
FETA Sn **Sb 13 15 08.3 -1.4**
comp=N,141nm,0.9s
ROSI Rosskopf 2.90 17 AML AML
comp=E,2115µm,0.6s
ROSI AML AML
comp=N,1960µm,0.9s
ROSI AML AML
comp=N,1960µm,0.9s
ROSI AML AML
comp=E,2115µm,0.6s
ROSI AML AML
comp=N,1960µm,0.9s
ROSI AML AML
comp=E,2115µm,0.6s
PLONS Plons/SG 2.93 350 AML AML
comp=E,558µm,0.4s
PLONS AML AML
comp=E,558µm,0.4s
PLONS AML AML
comp=N,540µm,0.6s
PLONS AML AML
comp=E,558µm,0.4s
PLONS AML AML
comp=N,540µm,0.6s
PLONS AML AML
comp=N,540µm,0.6s
TERO Teramo 2.95 120 AML AML
comp=N,145µm,0.5s
TERO AML AML
comp=E,137µm,0.8s
TERO AML AML
comp=E,137µm,0.8s
TERO AML AML
comp=N,145µm,0.5s
TERO AML AML
comp=E,137µm,0.8s
TERO AML AML
comp=N,145µm,0.5s
SENIN Lac Senin/Sane 2.98 318 *e*Pn **Pb 13 14 32.8 -3.0**
GEPF Gemona 2.98 44 AML AML
comp=E,535µm,0.7s
GEPF AML AML
comp=N,668µm,1.2s
GEPF AML AML
comp=E,535µm,0.7s
GEPF AML AML
comp=N,668µm,1.2s
GEPF AML AML
comp=E,535µm,0.7s
GEPF AML AML
comp=N,668µm,1.2s
AQU L'Aquila 2.99 126 *e*Pn **Pn 13 14 29.9 -0.2**
AQU L'Aquila 2.99 126 *e*P **Pn 13 14 29.9 -0.2**
AQU L'Aquila 2.99 126 *e*Pn **Pn 13 14 30.2 0.0**
SABO M.te Sabotino 3.04 52 AML AML
comp=N,1330µm,0.8s
SABO AML AML
comp=E,1370µm,0.6s
SABO AML AML
comp=N,1330µm,0.8s
SABO AML AML
comp=E,1370µm,0.6s
SABO AML AML
comp=E,1370µm,0.6s
SABO AML AML
comp=N,1330µm,0.8s
FVI Forni Avoltri 3.05 36 AML AML
comp=E,700µm,0.7s
FVI AML AML
comp=E,700µm,0.7s
FVI AML AML
comp=N,714µm,1.2s
FVI AML AML
comp=N,714µm,1.2s
FVI AML AML
comp=E,700µm,0.7s
FVI AML AML
comp=N,714µm,1.2s
ABTA Abfaltersbach 3.07 32 *e*Pn **Pn 13 14 32.8 +1.5**
comp=N,5.4nm,0.2s,SNR=29
ABTA Sn **Sb 13 15 12.0 -3.0**
comp=N,132nm,0.5s
SKDS Skadanscina 3.07 62 *i* Pn **Pn 13 14 30.8 -0.5**
SKDS *e*Sn **Sn 13 15 08.6 +0.2**
comp=Z,100nm,0.3s
RISI Rein 3.09 25 AML AML
comp=E,2225µm,0.5s
RISI AML AML
comp=N,2060µm,0.6s
RISI AML AML
comp=E,2225µm,0.5s
RISI AML AML
comp=N,2060µm,0.6s
RISI AML AML
comp=E,2225µm,0.5s
RISI AML AML
comp=N,2060µm,0.6s
DAVA Damuels 3.12 357 *e*Pn **Pb 13 14 34.8 -3.4**
comp=N,11nm,0.4s,SNR=42
DAVA Sn **Sb 13 15 13.8 -2.9**
comp=N,404nm,0.8s
SQTA Sankt Quirin 3.14 13 *e*Pn **Pb 13 14 35.1 -3.4**
comp=N,48nm,0.2s,SNR=88
SQTA Sn **Sb 13 15 15.7 -1.4**
comp=N,192nm,0.5s
ORIF Oris-en-Rattie 3.15 285 *e*P **Pn 13 14 34.6 +2.2**
ORIF *e*Sn **Sn 13 15 09.6 -0.7**
comp=N,142nm,0.6s
FAGN Fagnano 3.15 126 AML AML
comp=E,760µm,0.5s
FAGN AML AML
comp=E,760µm,0.5s
FAGN AML AML
comp=N,646µm,0.5s
FAGN AML AML
comp=N,646µm,0.5s
FAGN AML AML
comp=E,760µm,0.5s
FAGN AML AML
comp=N,646µm,0.5s
PTCC Patocco-Chiusa 3.18 44 AML AML
comp=E,530µm,0.8s
PTCC AML AML
comp=E,530µm,0.8s
PTCC AML AML
comp=N,400µm,0.5s
PTCC AML AML
comp=E,530µm,0.8s
PTCC AML AML
comp=N,400µm,0.5s
PTCC AML AML
comp=N,400µm,0.5s
ASEAF Site Antares, 3.21 246 Pn **Pn 13 14 33.7 +0.8**
ASEAF Sn **Sn 13 15 09.9 -1.4**
VCEL Villa Celiera 3.22 122 AML AML
comp=E,362µm,1.2s
VCEL AML AML
comp=E,362µm,1.2s
VCEL AML AML
comp=N,473µm,0.9s
VCEL AML AML
comp=N,473µm,0.9s
VCEL AML AML
comp=E,362µm,1.2s
VCEL AML AML
comp=N,473µm,0.9s
MOTA Moosalm 3.25 11 *e*Pn **Pb 13 14 36.8 -3.5**
comp=N,9.8nm,0.2s,SNR=204
CADS Cadrg 3.27 50 *i* Pn **Pn 13 14 33.8 -0.2**
CADS *e*Sn **Sn 13 15 14.3 +1.1**
comp=Z,148nm,0.4s
WTTA Wattenberg 3.27 18 *e*Pn **Pn 13 14 35.9 +1.8**
comp=Z,68nm,0.4s,SNR=54
WTTA Sn **Sb 13 15 19.4 -1.4**
comp=Z,267nm,0.8s
WTTA Wattenberg 3.27 18 AML AML
comp=N,896µm,0.6s
WTTA AML AML
comp=E,994µm,0.7s
WTTA AML AML
comp=N,896µm,0.6s
WTTA AML AML
comp=E,994µm,0.7s
WTTA AML AML
comp=N,896µm,0.6s
WTTA AML AML
comp=E,994µm,0.7s
RIY Rijeka 3.29 68 *e*Pn **Pn 13 14 34.0 -0.3**
SMRF Simiane la Rot 3.31 268 *e*Pn **Pn 13 14 34.8 +0.3**
SMRF *e*Sn **Sn 13 15 12.2 -2.0**
comp=E,82nm,0.5s
WATA Walderalm 3.32 17 *e*Pn **Pn 13 14 37.3 +2.5**
comp=E,14nm,0.2s,SNR=106
RETA Reutte 3.35 7 *e*Pn **Pn 13 14 37.9 +2.8**
comp=E,12nm,0.5s,SNR=12
RETA *e*Sn **Sn 13 15 18.4 +3.1**
comp=E,95nm,0.7s
RUSF Rustrel 3.37 268 Pn **Pn 13 14 36.7 +1.2**
NVLJ Novalja 3.41 82 *i* Pn **Pn 13 14 36.8 +0.9**
CEY Cerknica 3.42 61 *e*Pn **Pn 13 14 35.6 -0.4**
MYKA Terra Mystica 3.48 44 *e*Pn **Pn 13 14 38.5 +1.6**
comp=E,9.8nm,0.3s,SNR=13
MYKA *e*Sn **Sn 13 15 21.8 +3.4**
comp=E,38nm,0.5s
INTR Introdacqua 3.49 127 AML AML
comp=N,372µm,0.7s
INTR AML AML
comp=E,248µm,0.6s
INTR AML AML
comp=N,372µm,0.7s
INTR AML AML
comp=E,248µm,0.6s
INTR AML AML
comp=N,372µm,0.7s
INTR AML AML
comp=E,248µm,0.6s
LJU Ljubljana 3.62 57 *e*Pn **Pn 13 14 39.2 +0.4**
LJU Ljubljana 3.62 57 AML AML
comp=N,1370µm,0.5s
LJU AML AML
comp=E,765µm,0.5s
LJU AML AML
comp=N,1370µm,0.5s
LJU AML AML
comp=E,765µm,0.5s
LJU AML AML
comp=E,765µm,0.5s
LJU AML AML
comp=N,1370µm,0.5s
KBA Koelnbreinsper 3.67 36 *e*Pn **Pn 13 14 41.9 +2.2**
comp=N,6.4nm,0.3s,SNR=14
CABF La Chapelle 3.76 312 *e*Pn **Pn 13 14 41.3 +0.4**
CABF *e*Sn **Sn 13 15 24.3 -1.3**
comp=N,77nm,0.5s
OBKA Obir 3.88 51 *e*Pn **Pn 13 14 43.7 +1.2**
comp=N,18nm,0.2s,SNR=28
OBKA Sn **Sb 13 15 33.1 -5.4**
comp=N,316nm,0.9s
VIVF Saint-Julien-I 3.98 282 *e*Pn **Pn 13 14 44.1 +0.3**
VIVF *e*Sn **Sn 13 15 28.5 -2.3**
comp=N,17nm,0.5s
UDBI Udbina 4.04 83 *e*Pn **Pn 13 14 46.4 +1.7**
CRES Cresnjev 4.11 64 *e*Pn **Pn 13 14 45.9 +0.3**
SSB Saint Sauveur 4.15 287 *e*Pn **Pn 13 14 47.0 +0.9**
SSB Saint Sauveur 4.15 287 *e*P **Pn 13 14 47.0 +0.9**
SOKA Soboth 4.25 52 *e*Pn **Pn 13 14 48.3 +0.7**
comp=N,3.8nm,0.4s,SNR=43
SOKA *e*Sn **Sn 13 15 38.9 +1.2**
comp=N,36nm,0.6s
HINF Hinteralfeld 4.31 329 *e*Pn **Pn 13 14 48.5 +0.1**
HINF *e*Sn **Sn 13 15 37.3 -1.7**
comp=N,130nm,0.4s
BFO Black Forest 4.35 344 *e*Pn **Pn 13 14 49.2 +0.3**
BFO Black Forest 4.35 344 *ce*P **Pn 13 14 50.5 +1.6**
BFO pmax pmax
comp=Z,4.0nm,0.8s
LASF Ste Croix 4.53 271 *e*Pn **Pn 13 14 50.9 -0.5**
LASF *e*Sn **Sn 13 15 41.3 -3.1**
ECH Echery 4.55 334 *e*Pn **Pn 13 14 52.5 +0.9**
ECH Echery 4.55 334 *e*P **Pn 13 14 52.5 +0.9**
STU Stuttgart 4.65 352 *e*Pn **Pn 13 14 53.0 0.0**
STU Stuttgart 4.65 352 *e*P **Pn 13 14 53.0 0.0**
HAU Haudompre 4.66 327 *e*Pn **Pn 13 14 53.2 +0.1**
HAU *e*Sn **Sn 13 15 45.3 -2.3**
comp=Z,351nm,0.5s
MOA Molln 4.67 36 *i* Pn **Pn 13 14 54.6 +1.4**
comp=Z,7.9nm,0.3s,SNR=20
MOA *e*Sn **Sn 13 15 49.8 +2.1**
comp=Z,54nm,0.3s
CDF Champ du Feu 4.69 336 *e*Pn **Pn 13 14 53.4 -0.2**
CDF *e*Sn **Sn 13 15 45.5 -2.9**
comp=Z,140nm,0.5s
ARSA Arzberg 4.86 49 *e*Pn **Pn 13 14 56.3 +0.4**
comp=Z,8.7nm,0.2s,SNR=87
ARSA Sn **Sn 13 15 53.7 +1.2**
comp=Z,24nm,0.6s
MGRS Mrkonjic Grad 4.98 85 *e*Pn **Pn 13 14 58.4 +0.8**
LBL Lubilhac 5.04 285 Pn **Pn 13 14 59.2 +0.8**
BLY Banja Luka 5.07 81 *e*Pn **Pn 13 14 59.3 +0.7**
BLY Banja Luka 5.07 81 ⇑*i*P **Pn 13 15 00.7 +2.0**
BLY Banja Luka 5.07 81 S **Sn 13 16 00.1 +2.6**
BLY Banja Luka 5.07 81 *e*Pn **Pn 13 14 59.7 +1.0**
SMF Signal de Mont 5.09 301 *e*Pn **Pn 13 14 59.1 +0.1**
SMF *e*Sn **Sn 13 15 54.8 -3.3**
comp=Z,136nm,0.5s
BEHE Becsehely 5.21 61 *e*Pn **Pn 13 15 01.4 +0.8**
BEHE Becsehely 5.21 61 EPn **Pn 13 15 01.1 +0.5**
BEHE Sn **Sn 13 15 57.0 -3.9**
GEC2 GERESS Array S 5.28 26 *e*Pn **Pn 13 15 01.6 -0.1**
GEC2 GERESS Array S 5.28 26 *e*P **Pn 13 15 01.6 -0.1**
GERES GERESS Array B 5.28 26 Pn **Pn 13 15 02.1 +0.4**
comp=Z,5.1nm,0.3s,baz=205,slow=13,SNR=67
GERES Sn **Sn 13 16 02.6 -0.3**
comp=Z,8.5nm,0.3s,baz=207,slow=24,SNR=12
GERES LR LR 13 17 31.2
comp=Z,145nm,19.0s,baz=280,slow=43
AGO Saint Agoulin 5.32 293 Pn **Pn 13 15 03.1 +1.0**
PAGF Fort de Pagny 5.35 327 *e*P **Pn 13 15 05.0 +2.4**
baz=139
PAGF *e*Sn **Sn 13 16 02.2 -2.3**
comp=Z,128nm,0.7s
SFTF Sexfontaines 5.38 320 *e*Pn **Pn 13 15 03.0 +0.1**
baz=140
SFTF *e*Sn **Sn 13 16 01.1 -4.1**
comp=Z,58nm,0.5s
LOR Lormes 5.39 307 *e*Pn **Pn 13 15 03.3 +0.2**
baz=125
LOR Lormes 5.39 307 *e*P **Pn 13 15 05.3 +2.2**
LOR *e*Sn **Sn 13 16 02.7 -2.8**
comp=Z,102nm,0.4s
AVF Avril sur Loir 5.45 301 *e*Pn **Pn 13 15 03.8 -0.2**
AVF *e*Sn **Sn 13 16 04.0 -3.0**
comp=Z,29nm,0.5s
CONA Conrad Observa 5.47 45 *e*Pn **Pn 13 15 05.0 +0.7**
SNR=32
CONA Sn **Sn 13 16 09.6 +2.0**
comp=Z,32nm,0.5s
SSF Saint Saulge 5.49 304 *e*Pn **Pn 13 15 04.5 +0.1**
SSF *e*Sn **Sn 13 16 05.0 -2.9**
comp=Z,28nm,0.4s
KHC Kasperske Hory 5.50 24 *e*Pn **Pn 13 15 04.5 -0.1**
KHC Kasperske Hory 5.50 24 *e*P **Pn 13 15 05.1 +0.5**
KHC *e* 13 16 06.1
KHC Kasperske Hory 5.50 24 *e*PN **Pn 13 15 05.1 +0.5**
KHC *e*PG Pg 13 15 33.0 +5.6
KHC *e*SN **Sn 13 16 06.1 -2.0**
KHC *e*x x 13 16 37.0
SJAF Saint Jean de 5.56 255 Pn **Pn 13 15 05.7 +0.1**
GRFO Grafenberg 5.57 7 *e*Pn **Pn 13 15 05.9 +0.3**
GRA1 Grafenberg Arr 5.57 7 *e*Pn **Pn 13 15 05.7 0.0**
GRF Grafenberg Arr 5.57 7 *e*P **Pn 13 15 05.7 0.0**
MEZF Maizieres J'vi 5.59 323 *e*P **Pn 13 15 08.5 +2.6**
baz=152
MEZF *e*Sn **Sn 13 16 07.6 -2.8**
comp=Z,44nm,0.5s
STON Ston 5.64 101 *e*Pn **Pn 13 15 07.4 +0.9**
STON Sn **Sn 13 16 11.7 +0.1**
STON Ston 5.64 101 *e*Pn **Pn 13 15 06.5 0.0**
BGF Bois d'Agland 5.67 297 *e*Pn **Pn 13 15 07.0 0.0**
BGF *e*Sn **Sn 13 16 09.8 -2.7**
comp=Z,67nm,0.4s
SOP Sopron 5.69 50 EPn **Pn 13 15 08.1 +0.9**
SOP Sn **Sn 13 16 09.0 -3.7**
MTLF Montolieu 5.81 265 *e*Pn **Pn 13 15 08.7 -0.2**
MTLF *e*Sn **Sn 13 16 12.3 -3.5**
CAF Calviac 5.83 280 *e*Pn **Pn 13 15 09.1 -0.1**
CAF *e*Sn **Sn 13 16 11.9 -4.5**
comp=Z,14nm,0.5s
TCF Toulx Ste Croi 6.00 293 *e*Pn **Pn 13 15 11.1 -0.4**
TCF *e*Sn **Sn 13 16 17.2 -3.3**
comp=Z,10nm,0.2s
HYF Humbligny 6.11 303 *e*P **Pn 13 15 16.5 +3.6**
HYF *e*Sn **Sn 13 16 19.4 -3.7**
TREB Trebinje 6.14 101 *e*Pn **Pn 13 15 13.7 +0.3**
WLF Walferdange 6.14 335 *e*Pn **Pn 13 15 14.4 +1.0**
WLF Walferdange 6.14 335 *e*P **Pn 13 15 14.4 +1.0**
WLF Walferdange 6.14 335 P **Pn 13 15 16.1 +2.7**
WLF PnPn **PnPn 13 15 24.8 +3.9**
BRY Bratogost 6.23 99 *e*Pn **Pn 13 15 16.0 +1.3**
ZST Bratislava 6.28 48 *e*P **Pn 13 15 16.2 +0.8**
ZST *e* 13 16 22.4
ZST Bratislava 6.28 48 *e*PN **Pn 13 15 16.2 +0.8**
ZST *e*SN **Sn 13 16 22.4 -5.1**
HCY Herceg Novi 6.32 103 *e*Pn **Pn 13 15 16.2 +0.2**
HAPS Han Pijesak,BI 6.33 88 *e*Pn **Pn 13 15 15.9 -0.3**
MORH Mrgy, Hungar 6.34 68 *e*Pn **Pn 13 15 15.6 -0.5**
MORH Mrgy, Hungar 6.34 68 EPn **Pn 13 15 16.0 -0.1**
MORH Sn **Sn 13 16 26.1 -2.8**
UPM Unac-Piva 6.42 96 *e*Pn **Pn 13 15 19.2 +1.8**
MODS Modra-Piesok 6.49 47 *e*P **Pn 13 15 19.2 +1.0**
MODS *e* 13 16 29.2
MODS Modra-Piesok 6.49 47 *e*PN **Pn 13 15 19.2 +1.0**
MODS *e*SN **Sn 13 16 29.2 -3.3**
KRUC Moravsky 6.51 39 *e*PN **Pn 13 15 19.5 +1.0**
KRUC *e*SN **Sn 13 16 31.3 -1.8**
PRU Pruhonice 6.55 26 *e*P **Pn 13 15 19.3 +0.3**
PRU *e* 13 16 31.0
PRU Pruhonice 6.55 26 *e*PN **Pn 13 15 19.3 +0.3**
PRU *e*SN **Sn 13 16 31.0 -3.0**
GOPC GO Pecny, Ondr 6.56 27 *e*P **Pn 13 15 20.0 +0.8**
GOPC GO Pecny, Ondr 6.56 27 *e*PN **Pn 13 15 20.0 +0.8**
BBLS Lazići 6.68 89 *e*Pn **Pn 13 15 21.4 +0.5**
CLF Chambon-Foret 6.71 308 *e*Pn **Pn 13 15 22.3 +1.2**
TEKS Tekeris 6.73 83 *e*Pn **Pn 13 15 20.8 -0.8**
SRO Srobarova 6.75 54 *e*P **Pn 13 15 23.5 +1.7**
SRO *e* 13 16 38.4
SRO Srobarova 6.75 54 *e*PN **Pn 13 15 23.5 +1.7**
SRO *e*SN **Sn 13 16 38.4 -0.6**
SRO2 Moca 6.78 55 *e*SN **Sn 13 16 38.2 -1.3**
VRAC Vranov 6.78 38 Pn **Pn 13 15 22.3 0.0**
comp=Z,2.0nm,0.3s,baz=229,slow=13,SNR=9.5
VRAC Sn **Sn 13 16 37.7 -2.1**
comp=Z,1.7nm,0.3s,baz=122,slow=4.5,SNR=5.1
VRAC Lg Lg 13 17 17.2
comp=Z,0.7nm,0.3s,baz=310,slow=23,SNR=4.7
VRAC LR LR 13 17 44.3
comp=Z,28nm,21.1s,baz=227,slow=36
VRAC Vranov 6.78 38 ||*i*P **Pn 13 15 24.4 +2.2**
VRAC Vranov 6.78 38 *e*PN **Pn 13 15 23.2 +1.0**
VRAC *e*SN **Sn 13 16 37.3 -2.5**
PDG Podgorica 6.87 102 ⇑*i*P **Pn 13 15 24.5 +1.1**
PDG Podgorica 6.87 102 S **Sn 13 16 44.8 +3.0**
PDG Podgorica 6.87 102 *e*Pn **Pn 13 15 24.4 +1.1**
TTG Podgorica 6.87 102 *e*Pn **Pn 13 15 23.9 +0.6**
TTG Podgorica 6.87 102 *e*P **Pn 13 15 23.9 +0.6**
DRME Dracevica, Mon 6.89 104 ⇑*i*Pn **Pn 13 15 23.7 -0.1**
FRGS Fruska Gora 6.96 78 *e*Pn **Pn 13 15 27.8 +3.1**
GIVF Givet 6.96 330 *e*Pn **Pn 13 15 24.9 +0.3**
GIVF *e*Sn **Sn 13 16 40.5 -3.6**
comp=Z,3.7nm,0.2s
CLTB Caltabellotta 6.98 160 *e*Pn **Pn 13 15 28.0 +3.0**
JAVC Velka Javorina 6.99 45 *e*PN **Pn 13 15 27.6 +2.4**
MEM Membach 7.03 338 P **Pn 13 15 27.8 +2.2**
MEM S **Sn 13 16 43.7 -2.2**
DOU Dourbes 7.04 329 ⇑P **Pn 13 15 27.4 +1.8**
DOU S **Sn 13 16 44.9 -1.1**
DIVS Divibare 7.08 87 *e*Pn **Pn 13 15 26.2 -0.2**
BAIF Baives 7.15 328 *e*Pn **Pn 13 15 27.5 +0.2**
BAIF *e*Sn **Sn 13 16 44.9 -3.9**
comp=Z,12nm,0.5s
BRG Berggiesshubel 7.18 20 PN **Pn 13 15 29.0 +1.3**
BRG SN **Sn 13 16 45.9 -3.7**
BRG SG **Sg 13 17 35.5 +2.9**
comp=Z,26nm,0.9s
BRG Berggiesshubel 7.18 20 P **Pn 13 15 29.0 +1.3**
BRG 13 16 45.9
BRG smax smax
comp=N,26nm,0.9s
EPF Esparros 7.21 264 *e*Pn **Pn 13 15 26.6 -1.6**
CLL Collm 7.40 14 *e*Pn **Pn 13 15 29.0 -1.6**
CLL Collm 7.40 14 *e*Pn **Pn 13 15 30.0 -0.6**
CLL *e* 13 15 32.0
CLL *e*Sn Sn 13 16 39.0 -16
CLL *e* 13 16 50.0
CLL *i* 13 17 08.4
CLL *e* 13 17 35.0
CLL *e*Sg **Sg 13 17 40.0 +0.5**
comp=Z,39nm,1.0s
CLL Collm 7.40 14 *e*P **Pn 13 15 30.0 -0.6**
VYHS Vyhne 7.40 51 *e*P **Pn 13 15 30.7 -0.1**
VYHS *e* 13 16 51.0
VYHS Vyhne 7.40 51 *e*PN **Pn 13 15 30.7 -0.1**
VYHS *e*SN **Sn 13 16 51.0 -4.1**
DPC Dobruska-Polom 7.47 32 *e*P **Pn 13 15 31.7 0.0**
DPC Dobruska-Polom 7.47 32 *e*PN **Pn 13 15 31.7 0.0**
UPC Upice 7.49 30 *e*P **Pn 13 15 31.9 0.0**
UPC Upice 7.49 30 *e*PN **Pn 13 15 31.9 0.0**
SNF Seneffe 7.49 330 P **Pn 13 15 33.3 +1.4**
MORC Moravsky Berou 7.55 39 *e*Pn **Pn 13 15 34.0 +1.2**
MORC Moravsky Berou 7.55 39 ⇑*i*P **Pn 13 15 34.9 +2.1**
MORC Moravsky Berou 7.55 39 *e*P **Pn 13 15 34.0 +1.2**
MORC Moravsky Berou 7.55 39 *e*PN **Pn 13 15 34.0 +1.2**
CHVC Chvalec 7.57 30 *e*PN **Pn 13 15 33.1 +0.1**
CHVC *e*SN **Sn 13 16 55.7 -3.4**
OSTC Ostas 7.60 31 *e*PN **Pn 13 15 33.3 -0.2**
MFF Saint Martin d 7.65 292 *e*Pn **Pn 13 15 33.6 -0.5**
MFF *e*Sn **Sn 13 16 55.9 -5.2**
PSZ Piszkesteto 7.75 58 *e*Pn **Pn 13 15 37.2 +1.7**
PSZ Piszkesteto 7.75 58 ||*i*P **Pn 13 15 37.7 +2.2**
PSZ Piszkesteto 7.75 58 S **Sn 13 17 07.0 +3.4**
PSZ Piszkesteto 7.75 58 *e*P **Pn 13 15 37.2 +1.7**
PSZ Piszkesteto 7.75 58 EPn **Pn 13 15 37.1 +1.6**
PSZ Sn **Sn 13 17 07.0 +3.4**
ETSF Etsaut 7.89 264 *e*Pn **Pn 13 15 36.9 -0.6**
LANS Liptovska Anna 8.12 49 *e*P **Pn 13 15 42.4 +1.9**
LANS *e* 13 17 06.4
LANS Liptovska Anna 8.12 49 *e*PN **Pn 13 15 42.4 +1.9**
LANS *e*SN **Sn 13 17 06.4 -6.2**
BZS Buzias 8.27 76 ||*i*P **Pn 13 15 44.5 +1.9**
MDVR Moldovita 8.29 82 ⇑*i*P **Pn 13 15 44.3 +1.3**
SJPF Ste Jean 8.32 267 *e*Pn **Pn 13 15 43.1 -0.3**
KECS Kecovo 8.35 55 *e*P **Pn 13 15 47.2 +3.5**
KECS Kecovo 8.35 55 *e*PN **Pn 13 15 47.2 +3.5**
LDF La Druitiere 8.37 306 *e*Pn **Pn 13 15 43.9 -0.1**
LDF *e*Sn **Sn 13 17 14.3 -4.4**
comp=Z,2.6nm,0.4s
SIRR Siria 8.39 71 ⇑*i*P **Pn 13 15 45.9 +1.6**
SIRR Siria 8.39 71 S **Sn 13 17 17.5 -1.9**
KEST Kesra 8.45 184 Pn **Pn 13 15 47.6 +2.4**
comp=Z,1.1nm,0.3s,baz=352,slow=3.3,SNR=12
KEST LR LR 13 19 13.0
comp=Z,85nm,19.6s,baz=234,slow=39
KEST Kesra 8.45 184 *e*Pn **Pn 13 15 48.6 +3.4**
FLN La Foliniere 8.66 306 *e*P **Pn 13 15 52.0 +4.1**
FLN *e*Sn **Sn 13 17 21.4 -4.5**
comp=Z,2.5nm,0.2s
GRR Gorron 8.71 303 *e*Pn **Pn 13 15 48.5 -0.2**
GRR *e*Sn **Sn 13 17 21.9 -5.3**
comp=Z,6.6nm,0.4s
HERR Herculane 8.79 81 ||*i*P **Pn 13 15 50.9 +1.1**
GZR Gura Zlata 9.06 78 ||*i*P **Pn 13 15 55.2 +1.6**
DRGR 9.21 69 ⇑*i*P **Pn 13 15 57.5 +2.0**
DRGR 9.21 69 S **Sn 13 17 35.7 -3.8**
SRE Strehaia 9.36 82 ⇑*i*P **Pn 13 15 59.9 +2.4**
KOLS Kolonicke sedl 9.61 56 *e*P **Pn 13 16 03.9 +2.9**
KOLS Kolonicke sedl 9.61 56 *e*PN **Pn 13 16 03.9 +2.9**
VTS Vitosha 9.65 95 *e*Pn **Pn 13 16 01.2 -0.5**
VTS Vitosha 9.65 95 ⇑*i*P **Pn 13 16 03.5 +1.8**
VTS Vitosha 9.65 95 *e*P **Pn 13 16 01.2 -0.5**
SGMF Saint Gilles 9.71 299 *e*Pn **Pn 13 16 01.7 -0.7**
QUIF Quistinic 9.99 297 *e*Pn **Pn 13 16 05.7 -0.5**
KWP Kalwaria Pacla 10.18 53 *e*Pn **Pn 13 16 09.9 +1.1**
KWP Kalwaria Pacla 10.18 53 *e*P **Pn 13 16 09.9 +1.1**
BURAR Bucovina Array 11.05 67 ||*i*P **Pn 13 16 23.4 +2.6**
ESDC Sonseca Array 11.43 252 Pn **Pn 13 16 25.9 -0.1**
comp=Z,0.2nm,0.3s,baz=63,slow=14,SNR=8.2
PAB San Pablo 11.76 252 *e*Pn **Pn 13 16 31.2 +0.7**
PAB San Pablo 11.76 252 *e*P **Pn 13 16 31.2 +0.7**

APE	Apeiranthos	13.65	116	*i* P		Pn	13 16 57.7	+1.3
EKA	Eskdalemuir Ar	14.07	327	Pn		Pn	13 17 02.3	+0.3
baz=138,slow=14,SNR=4.9								
AKASG	Malin Array Be	14.45	56	Pn		Pn	13 17 09.6	+2.5
comp=Z,0.5nm,0.3s,baz=248,slow=11,SNR=3.5								
AKBB	Malin Array Si	14.45	56	*e*P		P	13 17 13.3	-0.7
AKBB	Malin Array Si	14.45	56	*e*P		P	13 17 13.3	-0.7
HFS	Hagfors	16.13	6	Pn		Pn	13 17 29.1	-0.2
comp=Z,0.1nm,0.3s,baz=210,slow=8.3,SNR=2.5								
HFS				LR		LR	13 23 45.4	
comp=Z,36nm,19.6s,baz=185,slow=37								
MDT	Midelt	16.16	230	LR		LR	13 22 51.5	
comp=Z,36nm,19.4s,baz=3.0,slow=34								
NOA	NORSAR Array B	16.91	2	LR		LR	13 24 59.4	
comp=Z,51nm,18.9s,baz=180,slow=40								
VSU	Vasula	17.59	30	*i* P		P	13 17 49.7	+0.9
VSU				pmax		pmax		
comp=Z,52nm,0.9s								
BR101	Keskin Array S	18.01	96	*e*P		P	13 17 55.1	+1.4
BRTR	Keskin Array B	18.01	96	P		P	13 17 55.1	+1.4
comp=Z,0.1nm,0.3s,baz=270,slow=8.6,SNR=4.7								
BRTR	Keskin Array B	18.01	96	*i* P		P	13 17 56.0	+2.3
BRTR				pmax		pmax		
comp=Z,1.0nm,0.6s								
ANN	Anapa	19.45	79	*e*P		Pn	13 18 09.4	-1.1
ANN				*e*S		Sn	13 21 46.2	-2.6
ANN				pmax		pmax		
comp=Z,69nm,1.3s								
FIA0	FINESS Array S	19.70	23	*e*P		Pn	13 18 12.6	-0.8
FIA0				*e*PcP		PcP	13 22 28.5	-1.9
FIA0	FINESS Array S	19.70	23	*e*P		Pn	13 18 12.6	-0.8
FINES	FINESS Array B	19.70	23	P		Pn	13 18 12.6	-0.8
comp=Z,0.4nm,0.3s,baz=220,slow=9.5,SNR=18								
FINES				PcP		PcP	13 22 28.5	-1.9
comp=Z,0.0nm,0.3s,baz=180,slow=5.0,SNR=3.6								
FINES				LR		LR	13 26 33.4	
comp=Z,47nm,20.2s,baz=217,slow=39								
OBN	Obninsk	20.18	48	*i* P		Pn	13 18 19.0	-0.1
OBN				*i*			13 18 37.4	
OBN				pmax		pmax		
comp=Z,5.0nm,1.0s								
VSR	Storozhevoye	20.67	60	*e*P		P	13 18 22.5	-0.1
VSR				pmax		pmax		
comp=Z,10.0nm,0.7s								
VORD	Divnogorie	20.71	61	*e*P		P	13 18 22.7	-0.3
VORD				pmax		pmax		
comp=Z,10.0nm,0.9s								
LPSR	Galich'ya Gora	20.78	56	*e*P		P	13 18 23.4	-0.3
LPSR				pmax		pmax		
comp=Z,20nm,0.9s								
VRH	Novokhopyorsk	22.26	60	*e*P		P	13 18 40.1	+0.4
VRH				pmax		pmax		
comp=Z,9.0nm,0.7s								
KIV	Kislovodsk	23.30	79	*e*P		P	13 18 54.1	+3.3
KIV				pmax		pmax		
comp=Z,45nm,1.1s								
KBZ	Khabaz	23.50	80	P		P	13 18 54.6	+2.0
comp=Z,0.9nm,0.5s,baz=282,slow=10,SNR=2.8								
KLMR	Klimovskoe	24.15	36	*e*P		P	13 18 58.0	-0.7
KLMR				pmax		pmax		
comp=Z,9.0nm,0.8s								
KLMR	Klimovskoe	24.15	36	*e*P		P	13 18 58.0	-0.7
KLMR				AMP			13 19 00.2	
comp=Z,9.0nm,0.8s								
ZEI	Tsey	24.43	81	*e*P		P	13 19 03.3	+1.5
ZEI				pmax		pmax		
comp=Z,7.0nm,0.7s								
GNI	Garni	25.84	87	*i* P		P	13 19 16.3	+1.8
GNI				pmax		pmax		
comp=Z,15nm,1.0s								
ARCES	ARCESS Array B	26.61	12	LR		LR	13 29 03.6	
comp=Z,37nm,19.4s,baz=258,slow=35								
BORG	Borgarnes	27.07	331	LR		LR	13 30 05.9	
comp=Z,39nm,19.2s,baz=158,slow=36								
PRGR	Permogore	27.14	37	*e*P		P	13 19 25.6	-0.2
PRGR				pmax		pmax		
comp=Z,7.0nm,0.6s								
JMIC	Jan Mayen	28.42	347	LR		LR	13 30 43.2	
comp=Z,19nm,19.1s,baz=66,slow=36								
TOA1	Torodi Ar. Sit	31.75	196	*e*P		P	13 20 06.6	-0.5
TORD	Torodi Ar. Bea	31.75	196	P		P	13 20 06.6	-0.6
comp=Z,0.8nm,0.9s,baz=8.1,slow=11,SNR=3.5								
TORD				LR		LR	13 32 55.5	
comp=Z,50nm,18.6s,baz=315,slow=36								
ARU	Arti	32.57	51	*e*P		P	13 20 12.9	-1.1
comp=Z,7.4nm,0.5s								
ARU	Arti	32.57	51	*d i*P		P	13 20 13.6	-0.4
ARU				S		S	13 25 29.6	0.0
ARU				SS		SnSn	13 27 19.9	-3.1
ARU				pmax		pmax		
comp=Z,6.0nm,0.6s								
GEYT	Alibeck	36.29	83	P		P	13 20 46.9	+0.5
comp=Z,1.5nm,0.5s,baz=294,slow=11,SNR=5.0								
BRVK	Borovoye	39.65	55	*ce*P		P	13 21 17.0	+2.4
BRVK				pmax		pmax		
comp=Z,13nm,1.7s								
KK31	Karatay Array	42.83	69	*e*P		P	13 21 40.4	-0.4
comp=Z,2.3nm,0.8s								
KK31	Karatay Array	42.83	69	*e*P		P	13 21 40.4	-0.4
KK31				pmax		pmax		
comp=Z,2.0nm,0.8s								
KKAR	Karatay Array	42.83	69	*e*P		P	13 21 40.4	-0.4
comp=Z,2.3nm,0.8s								
KKAR	Karatay Array	42.83	69	*e*P		P	13 21 40.4	-0.4
KKAR				pmax		pmax		
comp=Z,2.0nm,0.8s								
NRIK	Noril'sk	45.18	29	LR		LR	13 43 46.1	
comp=Z,36nm,18.0s,baz=170,slow=40								
KURK	Kurchatov	45.26	56	*i* P		P	13 22 01.7	+1.5
KURK				pmax		pmax		
comp=Z,1.0nm,0.9s								
NVS	Novosibirsk	46.56	50	*e*P		P	13 21 59.4	-11
ZAA1	Zalesovo Array	47.73	50	*e*P		P	13 22 19.8	+0.2
ZALV	Zalesovo Beam	47.74	50	P		P	13 22 19.8	+0.2
comp=Z,0.5nm,0.3s,baz=280,slow=8.6,SNR=3.3								
MAKZ	Makanchi	48.79	60	*e*P		P	13 22 27.6	-0.3
comp=Z,1.8nm,1.0s								
MAKZ	Makanchi	48.79	60	*e*P		P	13 22 27.6	-0.3
MAKZ				pmax		pmax		
comp=Z,2.0nm,1.0s								
MK31	Makanchi Array	48.99	60	*e*P		P	13 22 29.6	+0.2
comp=Z,1.0nm,0.6s								
MK31	Makanchi Array	48.99	60	*e*P		P	13 22 29.7	+0.2
MK31				pmax		pmax		
comp=Z,1.0nm,0.6s								
MK32	Makanchi Array	48.99	60	*e*P		P	13 22 30.4	+0.9
MKAR	Makanchi Array	48.99	60	P		P	13 22 30.4	+0.9
comp=Z,1.9nm,0.7s,baz=283,slow=6.7,SNR=21								
WMQ	Urumqi	53.74	61	*e*P		P	13 23 07.8	+2.7
WMQ				sP		sP	13 23 13.4	+5.4
WMQ				pmax		pmax		
comp=Z,9.0nm,0.7s								
WMQ				pmax		pmax		
comp=Z,120nm,4.1s								
WMQ				LR		LR		
comp=N,71nm,28.9s								
WMQ				LR		LR		
comp=E,310nm,29.0s								
WMQ				LR		LR		
comp=Z,71nm,29.1s								
SONA0	Songino Array	62.59	49	*e*P		P	13 24 08.7	+1.6
SONM	Songino Array	62.59	49	P		P	13 24 08.7	+1.6
comp=Z,0.6nm,0.4s,baz=301,slow=8.5,SNR=5.5								
YKA	Yellowknife Ar	64.88	335	P		P	13 24 21.3	-0.4
comp=Z,0.5nm,0.8s,baz=44,slow=6.6,SNR=6.2								
YKB5	Yellowknife Ar	64.88	335	*e*P		P	13 24 21.3	-0.4
BILL	Bilibino	66.68	10	*i* P		P	13 24 35.3	+2.0
BILL				pmax		pmax		
comp=Z,1.0nm,1.0s								
HHC	Hu-ho-hao-te	69.86	52	*e*P		P	13 24 52.3	-1.5
HHC				pmax		pmax		
comp=Z,15nm,0.8s								
HHC				pmax		pmax		
comp=Z,20nm,4.8s								
ILAR	Eielson Array	69.92	350	P		P	13 24 53.9	+0.2
comp=Z,0.4nm,0.8s,baz=10,slow=5.7,SNR=5.3								
CD2	Chengdu	71.58	65	*e*P		P	13 25 02.9	-1.5
NKL	Nikolayevsk	74.18	28	*d i*P		P	13 25 18.8	-0.5
NKL				*i*			13 25 31.9	
NKL				*i*			13 28 04.7	
NKL				*e*S		S	13 34 55.0	+2.2
NKL				*e*			13 35 30.6	
NKL				*e*SS		SS	13 39 42.3	+5.5
NKL				pmax		pmax		
comp=Z,8.0nm,0.9s								
NKL				pmax		pmax		
comp=E,4.0nm,0.9s								
NKL				pmax		pmax		
comp=N,5.0nm,0.8s								
TXAR	Lajitas Array	85.14	307	P		P	13 26 21.6	+2.1
comp=N,0.2nm,0.6s,baz=56,slow=4.9,SNR=3.3								

JMA 23 13:17:50.3±0.4, 31°.93N×142°.30E, h0km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	2.93	338	P	Pn	13 18 39.5	+1.8
BSO3	Boso 3	3.23	333	*e*S	Sn	13 19 24.2	+3.1
JOD2	Odawara 2	4.27	322	P	Pn	13 18 58.4	+1.8
JYT	Yasato	4.63	338	P	Pn	13 19 04.4	+2.9
JHU	Hanno	4.65	328	P	Pn	13 19 03.7	+1.9
JHU				*e*S	Sn	13 19 58.7	+2.3
JHO	Hitachi	4.88	343	P	Pn	13 19 06.4	+1.4
JRY	Ryogami san	4.96	326	P	Pn	13 19 08.1	+2.0
JAG	Ashikaga	5.07	333	P	Pn	13 19 09.8	+2.3

*IDC **23** 13:31:10.9±0.6, 6°.30S×147°.98E, h0km, mb4.4/16, mb1 4.5/20, mb1mx4.4/31, mbtmp4.4/20, ML4.1/3, MS3.9/20, Ms1 3.9/20, ms1mx3.8/27, Error ellipse: s-maj=21.5km s-min=12.1km az=97.0*

*MOS **23** 13:31:16.4±0.9, 6°.36S×147°.74E, h49km, mb4.7/20, Error ellipse: s-maj=11.5km s-min=6.9km az=96.0*

*BJI **23** 13:31:16.6±0.0, 6°.08S×147°.78E, h41km, mb4.8/30, mB5.1/20, Ms4.6/8, Ms7 4.6/2*

*ISCJB **23** 13:31:17.7±0.3, 6°.40S±0°.03×147°.74E±0°.04, h63km, mb4.6/59, Error ellipse: s-maj=6.4km s-min=4.3km az=19.6*

*NEIC **23** 13:31:19.2±0.6, 6°.39S×147°.73E, h61km±5km, mb4.7/33, Error ellipse: s-maj=6.0km s-min=4.4km az=107.0*

*DJA **23** 13:31:24.9±0.6, 7°.S±4°.×14°.7E±°, h89km±5km, M5.2/37, mB5.3/2, mb4.8/37, MLv5.5/3, Mw(mB)4.7/2*

ISC 23 13:31:20.0±0.4, 6°.39S±0°.05×147°.65E±0°.06, h63km, n150, σ1§14/143, mb4.6/59, 6C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.04	189	Pn	Pn	13 32 03.7	-2.0
42nm,0.3s,baz=48,slow=6.3,SNR=27							
PMG				Sn	Sn	13 32 41.9	+1.1
55nm,0.3s,baz=30,slow=16,SNR=9.0							
MANU	Manus Island	4.33	356	*e*Pn	Pn	13 32 21.6	-1.7
RABL	Rabaul	5.00	64	*e*Pn	Pn	13 32 31.6	-0.9
MMPI	Merauke	7.50	254	P	Pn	13 33 05.7	-1.0
JAY	Jayapura	7.92	299	Pn	Pn	13 33 15.3	+2.7
0.7nm,0.3s,baz=146,slow=18,SNR=3.1							
JAY				LR	LR	13 36 53.6	
comp=Z,2μm,18.4s,baz=180,slow=42							
JAY	Jayapura	7.92	299	P	Pn	13 33 18.1	+5.5
GENI	Genyem	8.36	296	P	Pn	13 33 21.1	+2.6
COEN	Coen	8.72	210	*e*Pn	Pn	13 33 22.2	-1.2
SRPI	Serui, Papua	12.23	291	P	Pn	13 34 14.3	+2.8
HNR	Honiara	12.55	105	P	Pn	13 34 19.0	+3.2
BAKI	Biak	12.62	294	P	Pn	13 34 18.9	+2.1
CTA	Charters Tower	13.69	186	Pn	Pn	13 34 30.1	-1.1
0.2nm,0.3s,baz=352,slow=11,SNR=3.7							
CTAO	Charters Tower	13.69	186	*e*Pn	Pn	13 34 30.4	-0.8
CTAO	Charters Tower	13.69	186	*e*P	Pn	13 34 30.4	-0.8
FAKI	Fak Fak	15.73	282	*e*Pn	Pn	13 34 58.2	+0.3
23nm,0.9s							
FAKI	Fak Fak	15.73	282	P	P	13 34 59.4	-1.3
PATS	Pohnpei	16.90	39	*e*Pn	Pn	13 35 12.2	-0.3
350nm,1.8s							
SIJI	Sorong	17.24	288	P	P	13 35 18.4	+1.0
1.1nm,0.3s,baz=112,slow=8.7,SNR=9.7							
SIJI				LR	LR	13 43 38.6	
comp=Z,451nm,21.1s,baz=138,slow=43							
SWI	Sorong	17.25	288	P	P	13 35 28.3	+11
MTN	Manton Dam	17.50	247	*e*Pn	P	13 35 20.9	+0.7
16nm,0.8s							
WRAB	Tennant Creek	18.66	223	*i* P	Pn	13 35 33.6	-0.4
WB2	Warramunga Arr	18.67	223	*e*P	P	13 35 32.9	-0.2
15nm,0.9s							
WR1	Warramunga Arr	18.68	223	*e*P	P	13 35 32.8	-0.4
WRA	Warramunga Arr	18.68	223	P	P	13 35 32.8	-0.4
0.7nm,0.3s,baz=50,slow=9.7,SNR=23							
MSAI	Masohi	18.90	278	P	Pn	13 35 36.4	-0.4
EIDS	Eidsvold	19.16	171	*e*P	P	13 35 38.4	0.0
16nm,0.9s							
AAI	Ambon	19.57	277	P	Pn	13 35 44.4	-0.3
GUMO	Guam	20.04	352	LR	LR	13 41 48.3	
comp=Z,497nm,21.1s,baz=174,slow=32							
NLAI	Namlea	20.71	278	P	P	13 35 55.8	+0.4
TNTI	Ternate	21.46	289	P	P	13 36 04.5	+1.1
AS31	Alice Springs	21.68	216	*e*P	P	13 36 05.8	+0.1
4.1nm,0.6s							
ASAR	Alice Springs	21.68	216	P	P	13 36 05.6	-0.1
7.8nm,0.7s,baz=53,slow=9.0,SNR=120							
ASAR				S	S	13 40 03.1	+0.7
14nm,1.1s,baz=31,slow=22,SNR=15							
ASAR				ScP	ScP	13 43 42.5	+5.6
1.7nm,0.9s,baz=28,slow=2.7,SNR=5.5							
ASAR				LR	LR	13 45 12.1	
comp=Z,308nm,21.9s,baz=46,slow=38							
SANI	Sanana	22.02	280	P	P	13 36 08.8	-0.6
32nm,0.9s							
SOEI	Soe	23.39	260	P	P	13 36 23.6	0.0
DZM	Mont Dzumac	23.93	133	*e*S	S	13 40 40.4	-0.3
210nm,27.9s							
DZM				*e*LR	LR	13 42 25.9	
comp=Z,964nm,23.4s							
BATI	Baumata	24.03	259	P	P	13 36 30.9	+1.5
26nm,0.7s,baz=248,slow=7.8,SNR=4.7							
BATI				LR	LR	13 48 37.8	
comp=Z,555nm,18.1s,baz=116,slow=43							
BATI	Baumata	24.03	259	P	P	13 36 29.8	+0.4
ARMA	Armidale	24.20	172	*e*P	P	13 36 30.9	+0.1
29nm,0.9s							
FITZ	Fitzroy Crossi	24.42	240	P	P	13 36 33.8	+1.0
21nm,0.7s,baz=64,slow=8.6,SNR=24							
FITZ				LR	LR	13 47 15.6	
comp=Z,290nm,21.6s,baz=61,slow=39							
FITZ	Fitzroy Crossi	24.42	240	*e*P	P	13 36 33.1	+0.3
94nm,1.5s							
KMSI	Cibinong	24.62	285	P	P	13 36 42.3	+7.6
MMRI	Maumere	25.29	263	*e*P	P	13 36 41.4	+0.6
63nm,0.6s							
MMRI	Maumere	25.29	263	P	P	13 36 41.4	+0.6
LUWI	Luwuk	25.38	281	*e*P	P	13 36 42.1	+0.5
88nm,0.8s							
LUWI	Luwuk	25.38	281	P	P	13 36 41.4	-0.2
135nm,1.2s,6μm							
DAV	Davao City (W)	25.76	301	LR	LR	13 47 13.8	
comp=Z,78nm,19.9s,baz=143,slow=37							
EDFI	Ende, Flores	25.84	263	P	P	13 36 44.3	-1.6
25nm,0.8s							
STKA	Stephens Creek	25.98	192	P	P	13 36 46.8	-0.1
9.9nm,0.8s,baz=352,slow=11,SNR=9.6							
STKA				LR	LR	13 47 47.4	
comp=Z,450nm,18.0s,baz=24,slow=38							
STKA	Stephens Creek	25.98	192	*e*P	P	13 36 46.1	-0.8
3.7nm,0.9s							
STKA	Stephens Creek	25.98	192	*e*P	P	13 36 46.1	-0.8
STKA				pmax	pmax		
comp=Z,4.0nm,0.9s							
APSI	Ampana	26.50	281	P	P	13 36 53.2	+1.4
BSSI	Bau Bau, Buton	27.00	269	P	P	13 36 56.9	+0.6
KAPI	Kappang	27.79	271	P	P	13 37 05.8	+2.4
comp=Z,3.0nm,0.3s,baz=151,slow=14,SNR=2.3							
KAPI	Kappang	27.79	271	*e*P	P	13 37 03.9	+0.5
comp=Z,9.8nm,0.8s							
KAPI	Kappang	27.79	271	*e*P	P	13 37 03.9	+0.5
KAPI				pmax	pmax		
comp=Z,10.0nm,0.8s							
KSM	Kuching	38.09	281	*e*P	P	13 38 32.6	-0.4
comp=Z,6.9nm,1.0s							
CISI	Cisompet, Garu	39.55	266	*e*P	P	13 38 45.1	-0.2
comp=Z,31nm,0.8s							
JNU	Nakatsue	42.40	339	*e*P	P	13 39 08.0	-0.5
comp=Z,11nm,0.9s							
MJAR	Matsushiro Arr	43.61	349	P	P	13 39 17.5	-0.6
comp=Z,9.9nm,1.0s,baz=176,slow=8.5,SNR=22							
MJAR				LR	LR	13 57 32.9	
comp=Z,86nm,18.2s,baz=165,slow=36							
MAJO	Matsushiro	43.61	349	*e*P	P	13 39 17.3	-0.9
comp=Z,42nm,1.4s							
MAJO	Matsushiro	43.61	349	*e*P	P	13 39 17.3	-0.9
MAJO				pmax	pmax		
comp=Z,41nm,1.4s							
MAT	Matsushiro	43.61	349	P	P	13 39 16.8	-1.4
MAT				*e*S	S	13 45 43.6	+0.4
MJB9	Matsu-Tunnel	43.62	349	*e*P	P	13 39 17.3	-0.9
comp=Z,40nm,1.4s							
MYKOM	Kota Tinggi	44.48	279	*e*P	P	13 39 25.0	-0.4
comp=Z,13nm,0.8s							
SDSI	Sungai Dareh	46.42	275	P	P	13 39 40.9	0.0
NJ2	Nanjing	47.06	326	*e*P	P	13 39 46.1	+0.6
NJ2				pmax	pmax		
comp=Z,15nm,0.5s							
KSRS	Korea Array	47.34	339	P	P	13 39 47.7	+0.1
comp=Z,3.1nm,0.9s,baz=156,slow=8.7,SNR=14							
KSRS				LR	LR	13 57 24.3	
comp=Z,158nm,21.4s,baz=153,slow=33							
KSAR	Wonju Array Be	47.35	339	P	P	13 39 47.7	+0.1
KSAR	Wonju Array Be	47.35	339	P	P	13 39 47.7	+0.1
PDSI	Padang	47.38	275	P	P	13 39 48.0	-0.4
IPM	Ipoh	47.78	282	*e*P	P	13 39 50.9	-0.6
comp=Z,15nm,1.0s							
KULM	Kulim	48.33	283	*e*P	P	13 39 55.5	-0.2
comp=Z,24nm,1.4s							
PSI	Prapat	49.50	279	*e*P	P	13 40 04.1	-0.7
comp=Z,21nm,1.2s							
PSI	Prapat	49.50	279	*e*P	P	13 40 04.1	-0.7
PSI				pmax	pmax		
comp=Z,21nm,1.2s							
PBSI	Pulau Batu	49.66	275	P	P	13 40 05.2	-0.7
ASAJ	Asahikawa	50.48	355	LR	LR	13 58 12.9	
comp=Z,101nm,21.1s,baz=181,slow=32							
GSI	Gunungsitoli	50.57	277	P	P	13 40 13.1	+0.3
KCSI	Kotacane, Aceh	50.77	280	P	P	13 40 13.7	-0.6
USRK	Ussuriysk Ar.	52.30	346	P	P	13 40 24.1	-1.0
comp=Z,2.9nm,0.7s,baz=97,slow=6.3,SNR=7.4							
USRK				LR	LR	14 01 02.0	
comp=Z,88nm,19.8s,baz=163,slow=34							
CM31	Chiang Mai Arr	54.00	298	*e*P	P	13 40 39.1	+1.0
comp=Z,16nm,1.4s							
CMAR	Chiang Mai Arr	54.00	298	P	P	13 40 39.1	+1.0
comp=Z,0.6nm,0.5s,baz=122,slow=5.6,SNR=4.2							
XAN	Xi'an	54.39	320	P	P	13 40 40.0	-0.8
XAN				pmax	pmax		
comp=Z,9.0nm,1.2s							
CD2	Chengdu	56.01	314	P	P	13 40 52.1	-0.4
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s							
KLR	Kul'dur	57.10	348	LR	LR	14 03 10.5	
comp=Z,55nm,20.6s,baz=178,slow=34							
KLR	Kul'dur	57.10	348	*i* P	P	13 41 00.4	+0.6
KLR				pmax	pmax		
comp=Z,7.0nm,1.3s							
HHC	Hu-ho-hao-te	57.50	328	*e*P	P	13 41 04.3	+1.4
HHC				pmax	pmax		
comp=Z,12nm,0.7s							
HHC				pmax	pmax		
comp=Z,24nm,6.8s							
LZH	Lanzhou	58.92	319	*e*P	P	13 41 15.3	+2.3
LZH				pP	pP	13 41 28.8	-1.7
LZH				sP	sP	13 41 33.5	-4.5
LZH				pmax	pmax		
comp=Z,16nm,1.0s							
PETK	Petropavlovsk-	59.88	7	P	P	13 41 18.2	-0.9
comp=Z,8.2nm,0.8s,baz=163,slow=6.9,SNR=13							
PEA1	Petropavlovsk-	59.88	7	*e*P	P	13 41 18.2	-0.9
HIA	Hailar	60.54	339	*i* P	P	13 41 23.8	+0.1
HIA				pmax	pmax		
comp=Z,60nm,0.9s							
PPT	Papeete	62.16	106	LR	LR	14 05 59.4	
comp=Z,41nm,18.1s,baz=272,slow=34							
PPT2	Papeete2	62.16	106	*e*LR	LR	14 00 11.8	
comp=Z,105nm,26.0s							
ZEA	Zeya	62.32	346	*e*P	P	13 41 35.7	+0.1
ZEA				pmax	pmax		
comp=N,24nm,1.0s							
ZEA				pmax	pmax		
comp=Z,29nm,1.0s							
GTA	Gaotai	63.45	320	*e*P	P	13 41 48.3	+4.7
GTA				pP	pP	13 41 52.5	-8.8
GTA				sP	sP	13 41 55.6	-13
GTA				pmax	pmax		
comp=Z,4.0nm,0.8s							
ULN	Ulaanbaatar	64.76	331	*e*P	P	13 41 51.8	-0.2
comp=Z,8.0nm,1.1s							
ULN	Ulaanbaatar	64.76	331	*ce*P	P	13 41 52.6	+0.6
ULN				pmax	pmax		
comp=Z,11nm,1.7s							
SONM	Songino Array	65.06	331	P	P	13 41 54.4	+0.5
comp=Z,4.5nm,1.0s,baz=147,slow=7.5,SNR=16							
SONM				LR	LR	14 11 04.4	
comp=Z,90nm,19.5s,baz=82,slow=37							
MA2	Magadan	65.80	2	*i* P	P	13 41 56.9	-1.4
MA2				pmax	pmax		
comp=Z,10.0nm,1.2s							
ZAK	Zakamensk	68.29	331	*e*P	P	13 42 14.0	-0.4
ZAK				pmax	pmax		
comp=Z,7.0nm,1.2s							
TLY	Talaya	68.99	332	*ce*P	P	13 42 19.6	+1.0
TLY				pmax	pmax		
comp=Z,12nm,1.7s							
SEY	Seymchan	69.22	2	*i* P	P	13 42 19.6	-0.1
BOD	Bodaibo	69.55	342	*e*P	P	13 42 20.5	-1.4
BOD				pmax	pmax		
comp=Z,4.0nm,1.2s							
YAK	Yakutsk	69.62	351	*e*P	P	13 42 22.0	-0.2
VNDA	Vanda	71.49	177	P	P	13 42 34.5	+1.0
comp=Z,2.7nm,0.6s,baz=337,slow=7.0,SNR=19							
WMQ	Urumqi	73.51	319	*e*P	P	13 42 48.1	+1.9
WMQ				LR	LR		
comp=Z,34nm,28.9s							
WMQ				LR	LR		
comp=Z,290nm,28.8s							
BILL	Bilibino	75.41	7	*e*P	P	13 42 57.6	+1.0
BILL				pmax	pmax		
comp=Z,3.0nm,1.0s							
DGZ	Jazzator, Alta	76.32	325	*i* P	P	13 43 01.7	-0.7
DGZ				pmax	pmax		
comp=Z,1.0nm,0.8s							
MK31	Makanchi Array	78.21	320	*e*P	P	13 43 12.1	-0.7
comp=Z,4.0nm,1.2s							
MK31	Makanchi Array	78.21	320	*e*P	P	13 43 12.1	-0.7
MK31				pmax	pmax		
comp=Z,4.0n

ILAR	**Eielson Array**	**85.58**	**23**	P	**P**	**13 43 49.1**	**-2.0**
	comp=Z,1.1nm,0.7s,baz=249,slow=5.1,SNR=12						
ILAR				LR	LR	14 16 42.5	
	comp=Z,48nm,20.1s,baz=267,slow=32						
ILB	**Eielson Array**	**85.58**	**23**	*e*P	**P**	**13 43 49.1**	**-2.0**
	comp=Z,15nm,1.9s						
NRIK	**Noril'sk**	**85.84**	**342**	P	**P**	**13 43 51.9**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=123,slow=4.2,SNR=5.4						
NRIK				LR	LR	14 23 47.8	
	comp=Z,38nm,19.0s,baz=65,slow=37						
BRVK	**Borovoye**	**87.53**	**324**	*c*eP	**P**	**13 44 00.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,20nm,2.5s						
HYT	**Haines Junctio**	**88.22**	**28**	*e*P	**P**	**13 44 04.0**	**-0.2**
	comp=Z,5.0nm,1.0s						
DAWY	**Dawson**	**88.35**	**25**	*e*P	**P**	**13 44 04.3**	**-0.4**
	comp=Z,13nm,1.8s						
ABKAR	**Akbulak array**	**93.29**	**319**	*e*P	**P**	**13 44 26.2**	**-1.7**
	comp=Z,2.3nm,1.0s						
NVAR	**Mina Array Bea**	**97.09**	**52**	LR	LR	14 22 04.2	
	comp=Z,48nm,20.6s,baz=304,slow=32						
PLCA	**Paso Flores**	**121.44**	**147**	PKP	**PKPdf**	**13 50 05.3**	**-1.5**
	comp=Z,1.8nm,0.9s,baz=225,slow=3.3,SNR=6.6						
GEC2	**GERESS Array S**	**122.59**	**326**	*e*PKPdf	**PKPdf**	**13 50 08.4**	**-0.3**
GEC2	**GERESS Array S**	**122.59**	**326**	*e*PKIKP	**PKPdf**	**13 50 08.4**	**-0.3**
GERES	**GERESS Array B**	**122.59**	**326**	PKP	**PKPdf**	**13 50 08.4**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=79,slow=2.9,SNR=9.1						
LPAZ	**La Paz**	**138.03**	**123**	PKhKP	PKPpre	13 50 33.7	
	comp=Z,1.1nm,0.7s,baz=19,slow=4.4,SNR=5.2						
LPAZ				PKP	**PKPdf**	**13 50 39.4**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=234,slow=3.7,SNR=8.5						
CPUP	**Villa Florida**	**139.44**	**144**	PKP	**PKPdf**	**13 50 41.0**	**0.0**
	comp=Z,1.3nm,0.5s,baz=184,slow=4.9,SNR=3.9						
HUMP	**Col San Antoni**	**145.31**	**67**	*e*PKPbc	**PKPdf**	**13 50 51.3**	**-0.3**
TOA0	**Torodi Ar. Sit**	**145.81**	**284**	*e*PKPdf	**PKPab**	**13 50 53.6**	**0.0**
TORD	**Torodi Ar. Bea**	**145.81**	**284**	PKPbc	**PKPbc**	**13 50 52.9**	**-0.3**
	comp=Z,18nm,0.8s,baz=132,slow=2.1,SNR=71						
TOA1	**Torodi Ar. Sit**	**145.81**	**284**	*e*PKPdf	**PKPbc**	**13 50 52.9**	**-0.3**
STVI	**Saint Thomas**	**146.07**	**66**	*e*PKPdf	**PKPab**	**13 50 53.8**	**-0.8**
KIC	**Kosan Boka**	**152.56**	**271**	*e*PKIKP	**PKiKP**	**13 51 11.2**	**+0.5**
	comp=Z,24nm,0.9s						
DBIC	**Dimbokro**	**152.69**	**272**	PKPbc	**PKiKP**	**13 51 11.6**	**+0.7**
	comp=Z,5.5nm,0.8s,baz=104,slow=3.0,SNR=7.6						
LIC	**Lamto**	**152.84**	**271**	*e*PKIKP	**PKiKP**	**13 51 11.7**	**+0.4**
	comp=Z,85nm,1.5s						
TIC	**Toumodi**	**152.85**	**272**	*e*PKIKP	**PKiKP**	**13 51 11.7**	**+0.4**
BDFB	**Brasilia**	**153.17**	**145**	PKP	**PKPdf**	**13 51 03.6**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=219,slow=0.8,SNR=3.8						
BDFB				PKPbc	**PKiKP**	**13 51 11.6**	**-0.4**
	comp=Z,11nm,0.7s,baz=199,slow=2.9,SNR=14						

MEX 23 13:39:01.2±0.4, 14°.93N×93°.18W, h16km±27km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.77**	**357**	*i* P	Pb	13 39 13.4	-2.9
PCIG				*i* S	Sg	13 39 23.0	-3.6
THIG		**0.89**	**91**	*i* P	Pb	13 39 15.6	-2.6
THIG				*e*S	Sb	13 39 25.4	-4.4
CCIG	**Comitan**	**1.68**	**37**	*e*P	Pn	13 39 26.7	-3.5
CCIG				*e*S	Sn	13 39 46.7	-4.7
TGIG		**1.84**	**2**	*i* P	Pn	13 39 28.9	-3.3
TGIG				*i* S	Sn	13 39 49.9	-5.4

*ISCJB **23** 13:41:20.5±0.5, 4°.34S±0°.05×129°.46E±0°.05, h200km, mb3.1/1, Error ellipse: s-maj=7.3km s-min=6.4km az=176.4*
*IDC **23** 13:41:22.5±2.1, 4°.45S×129°.95E, h200km±28km, mb2.8/1, mb1 3.3/5, mb1mx3.0/28, mbtmp3.8/5, Error ellipse: s-maj=48.4km s-min=14.7km az=79.0*
*DJA **23** 13:41:23.0±0.4, 4°.5S±4°.1×12°.9E±°.1, h163km±5km, M4.2/13, mb4.5/3, mB5.5/1, MLv4.0/13, Mw(mB)5.0/1*
ISC 23 13:41:20.2±0.8, 4°.46S±0°.06×129°.45E±0°.06, h200km, n14, σ2s77/21, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.46**	**97**	P	**Pn**	**13 41 47.0**	**-0.1**
MSAI	**Masohi**	**1.23**	**335**	P	**Pn**	**13 41 50.5**	**-1.1**
MSAI				S	**Sn**	**13 42 11.1**	**-5.0**
AAI	**Ambon**	**1.47**	**302**	P	**Pn**	**13 41 53.0**	**-0.6**
AAI				S	**Sn**	**13 42 16.0**	**-3.6**
NLAI	**Namlea**	**2.64**	**297**	P	**Pn**	**13 42 05.7**	**0.0**
NLAI				S	**Sn**	**13 42 40.6**	**-0.6**
FAKI	**Fak Fak**	**3.19**	**61**	P	**Pn**	**13 42 12.7**	**+0.6**
FAKI				S	**Sn**	**13 42 50.8**	**-1.8**
SAUI	**Saumlaki**	**3.95**	**152**	P	**Pn**	**13 42 24.2**	**+2.8**
SIJI	**Sorong**	**4.00**	**27**	P	**Pn**	**13 42 23.0**	**+0.9**
	16nm,0.3s,baz=90,slow=2.7,SNR=176						
SIJI				S	**Sn**	**13 43 07.8**	**-2.9**
	20nm,0.3s,baz=78,slow=22,SNR=30						
SWI	**Sorong**	**4.01**	**27**	P	**Pn**	**13 42 22.1**	**0.0**
SANI	**Sanana**	**4.21**	**305**	P	**Pn**	**13 42 25.2**	**+0.6**
TNTI	**Ternate**	**5.60**	**338**	P	**Pn**	**13 42 42.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**14.05**	**195**	P	**P**	**13 44 33.9**	**+1.2**
	0.5nm,0.3s,baz=20,slow=11,SNR=8.2						
WRA	**Warramunga Arr**	**16.11**	**163**	P	**Pn**	**13 44 56.6**	**+0.7**
	0.2nm,0.3s,baz=343,slow=12,SNR=11						
WRA				S	**S**	**13 47 46.6**	**-7.5**
	0.1nm,0.3s,baz=340,slow=23,SNR=3.0						
ASAR	**Alice Springs**	**19.57**	**168**	P	**Pn**	**13 45 36.2**	**-0.6**
	0.3nm,0.3s,baz=346,slow=11,SNR=23						
ASAR				S	**S**	**13 49 03.0**	**-0.1**
	0.1nm,0.3s,baz=353,slow=25,SNR=7.3						
MKAR	**Makanchi Array**	**65.82**	**326**	P	**P**	**13 51 48.2**	**+4.1**
	0.2nm,0.4s,baz=134,slow=7.5,SNR=4.0						

*IDC **23** 13:52:13.7±4.8, 35°.71N×140°.44E, h43km±35km, mb3.3/2, mb1 3.5/3, mb1mx3.1/32, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=52.4km s-min=8.4km az=63.0*
*ISCJB **23** 13:52:14.8±0.7, 35°.68N±0°.04×140°.20E±0°.06, h69km±7km, mb3.6/2, Error ellipse: s-maj=8.4km s-min=6.4km az=164.0*
*JMA **23** 13:52:15.8±0.2, 35°.79N×140°.13E, h62km±2km, M2.8*
ISC 23 13:52:15.9±1.1, 35°.71N±0°.04×140°.17E±0°.05, h64km±10km, n16, σ0s98/23, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.33**	**267**	P	**Pn**	**13 52 27.6**	**+1.0**
JIHU	**Itakohorinouch**	**0.39**	**48**	P	**Pn**	**13 52 27.1**	**0.0**
JIHU				S	**Sn**	**13 52 36.1**	**+0.8**
JYT	**Yasato**	**0.52**	**2**	P	**Pn**	**13 52 27.4**	**-1.0**
JYT				S	**Sn**	**13 52 36.2**	**-1.3**
JAG	**Ashikaga**	**0.92**	**321**	P	**Pn**	**13 52 32.2**	**-0.9**
BSO3	**Boso 3**	**0.95**	**163**	P	**Pn**	**13 52 33.6**	**+0.5**
JOD2	**Odawara 2**	**0.99**	**244**	P	**Pn**	**13 52 33.5**	**-0.4**
JOD2				S	**Sn**	**13 52 46.5**	**-0.8**
JRY	**Ryogami san**	**1.07**	**287**	P	**Pn**	**13 52 35.0**	**-0.1**
JIM2	**Oshima 3**	**1.16**	**212**	P	**Pn**	**13 52 35.6**	**-0.6**
JIM2				S	**Sn**	**13 52 50.4**	**-0.9**
BSO1	**Boso 1**	**1.24**	**147**	P	**Pn**	**13 52 37.1**	**+0.4**
JKT	**Katashina**	**1.29**	**325**	P	**Pn**	**13 52 37.2**	**-0.8**
JYN	**Shimoh**	**1.34**	**261**	P	**Pn**	**13 52 38.3**	**-0.3**
MJAR	**Matsushiro Arr**	**1.79**	**298**	P	**Pn**	**13 52 44.4**	**-0.2**
	1.5nm,0.3s,baz=100,slow=14,SNR=152						
MJAR				S	**Sn**	**13 53 08.1**	**+1.8**
	1.0nm,0.3s,baz=82,slow=16,SNR=7.9						
MAT	**Matsushiro**	**1.79**	**298**	P	**Pn**	**13 52 44.6**	**0.0**
MAT				S	**Sn**	**13 53 08.0**	**+1.6**
JHJ	**Hachijo jima 2**	**2.60**	**187**	P	**Pn**	**13 52 55.7**	**+0.1**
	7.5nm,0.3s,baz=96,slow=23,SNR=10						
JHJ				S	**Sn**	**13 53 24.6**	**-1.4**
	16nm,0.3s,baz=97,slow=22,SNR=8.9						
WRA	**Warramunga Arr**	**55.62**	**187**	P	**P**	**14 01 44.4**	**-0.8**
	0.4nm,0.4s,baz=360,slow=6.8,SNR=7.5						
ASAR	**Alice Springs**	**59.35**	**187**	P	**P**	**14 02 12.8**	**+1.4**
	0.3nm,0.8s,baz=354,slow=5.9,SNR=4.2						

*ISCJB **23** 13:53:55.2±0.7, 47°.9N±0°.1×149°.0E±0°.2, h367km, mb3.2/6, Error ellipse: s-maj=25.2km s-min=10.8km az=138.8*
*IDC **23** 13:53:59.2±2.3, 47°.97N×148°.73E, h399km±34km, mb2.9/6, mb1 3.1/10, mb1mx2.8/34, mbtmp3.7/10, Error ellipse: s-maj=34.7km s-min=21.5km az=154.0*
ISC 23 13:53:57.1±0.9, 48°.0N±0°.2×148°.9E±0°.1, h367km, n11, σ0s99/11, mb3.3/6, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**5.90**	**231**	P	**Pn**	**13 55 28.9**	**+1.4**
	0.2nm,0.3s,baz=62,slow=16,SNR=3.8						
KLR	**Kul'dur**	**11.44**	**282**	P	**Pn**	**13 56 32.3**	**+0.5**
	0.4nm,0.3s,baz=88,slow=12,SNR=11						
MAT	**Matsushiro**	**13.95**	**218**	P	**P**	**13 56 58.0**	**-1.5**
MJAR	**Matsushiro Arr**	**13.95**	**218**	P	**P**	**13 56 58.8**	**-0.7**
	0.1nm,0.3s,baz=18,slow=11,SNR=15						
KSRS	**Korea Array**	**18.65**	**243**	P	**P**	**13 57 48.9**	**-1.1**
	baz=41,slow=13,SNR=4.1						
ILAR	**Eielson Array**	**37.33**	**40**	P	**P**	**14 00 35.5**	**+0.3**
	0.4nm,0.8s,baz=276,slow=7.6,SNR=6.4						
INK	**Inuvik**	**42.09**	**33**	P	**P**	**14 01 14.3**	**+0.4**
	0.7nm,0.3s,baz=300,slow=9.8,SNR=21						
YKA	**Yellowknife Ar**	**51.57**	**36**	P	**P**	**14 02 26.7**	**+0.2**
	0.2nm,0.3s,baz=297,slow=6.8,SNR=3.3						
FINES	**FINESS Array B**	**61.62**	**333**	P	**P**	**14 03 35.4**	**-1.1**
	0.9nm,0.7s,baz=32,slow=7.6,SNR=7.3						
PDAR	**Pinedale Array**	**66.23**	**52**	P	**P**	**14 04 06.6**	**-0.2**
	0.3nm,0.5s,baz=267,slow=0.6,SNR=4.7						
TXAR	**Lajitas Array**	**79.27**	**58**	P	**P**	**14 05 23.1**	**+0.3**
	0.4nm,0.8s,baz=270,slow=3.6,SNR=3.1						

MAN 23 14:13:08.9, 20°.45N×122°.00E, h20km, mb4.0, ML2.8, MS2.4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.04**	**249**	*e*P	Pb	14 13 12.9	+0.4
BBP				*e*S	Sb	14 13 19.5	+4.6
SGCP	**Mt. Cagua**	**2.20**	**179**	*e*P	Pn	14 13 44.7	+0.3
SGCP				*e*S	Sb	14 14 16.8	+1.9
APYP	**Conner**	**2.68**	**196**	*e*P	Pn	14 13 51.9	+1.0
APYP				*e*S	Sb	14 14 28.2	-0.4

IDC 23 14:43:12.1±5.5, 1°.86N×101°.41E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/28, mbtmp3.4/3, Error ellipse: s-maj=320.6km s-min=27.6km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.90**	**125**	P	P	14 50 38.9	-0.8
	1.4nm,1.1s,baz=299,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**40.53**	**131**	P	P	14 50 54.0	+0.7
	0.2nm,0.9s,baz=298,slow=7.7,SNR=6.5						
MKAR	**Makanchi Array**	**47.76**	**342**	P	P	14 51 50.9	-0.1
	0.5nm,0.6s,baz=144,slow=10,SNR=6.3						

MAN 23 14:45:14.6, 10°.74N×123°.01E, h65km, mb4.2, ML3.0, MS2.7, 1C, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**1.03**	**114**	*e*P	Pn	14 45 32.4	-1.0
LLP				*e*S	Sn	14 45 49.9	+2.7
JAP	**San Jose, Anti**	**1.04**	**270⇑**	*e*P	Pn	14 45 32.5	-0.9
JAP				*e*S	Sn	14 45 47.6	+0.2
SNPH	**Sibulan**	**1.41**	**171**	*i* P	Pn	14 45 39.2	+0.8
SNPH				*i* S	Sn	14 45 57.4	+1.3

IDC 23 14:50:53.4±2.4, 3°.62S×136°.19E, h0km, mb3.8/2, mb1 4.4/3, mb1mx3.7/28, mbtmp4.2/3, ML4.4/1, Error ellipse: s-maj=83.9km s-min=17.2km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.32**	**186**	Pn	Pn	14 54 45.4	+1.2
	1.4nm,0.3s,baz=7.8,slow=11,SNR=47						
WRA				Sn	Sn	14 57 44.8	-1.2
	0.6nm,0.3s,baz=18,slow=24,SNR=5.3						
ASAR	**Alice Springs**	**20.05**	**186**	P	P	14 55 28.9	+0.6
	12nm,0.9s,baz=17,slow=10.0,SNR=99						
ASAR				S	Sn	14 59 15.6	-0.7
	1.6nm,0.9s,baz=17,slow=25,SNR=5.2						
MKAR	**Makanchi Array**	**69.00**	**324**	P	P	15 02 00.7	-0.1
	0.2nm,0.4s,baz=113,slow=7.3,SNR=3.2						

*AZER **23** 14:52:11.1±0.2, 38°.39N×46°.76E, h10km±2km, ml3.4/27, Error ellipse: s-maj=7.0km s-min=1.5km az=31.0*
*NSSP **23** 14:52:12.7, 38°.47N×46°.82E, h13km, Ms3.4*
*TEH **23** 14:52:13.7, 38°.42N×46°.79E, h14km, ML3.5*
ISC 23 14:52:13.9±1.1, 38°.43N±0°.03×46°.78E±0°.02, h6km±10km, n66, σ1s30/93, 2C-2D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHRS	**Heris**	**0.24**	**118**	*e*Pg	**Pg**	**14 52 18.7**	**+0.1**
IHRS				*e*Sg	**Sg**	**14 52 22.1**	**+0.3**
IHRS				IAMB	IAmb	14 52 22.8	
	comp=Z,31μm,0.3s						
ITBZ	**Tabriz**	**0.53**	**248**	*e*Pg	**Pb**	**14 52 24.8**	**-1.0**
ITBZ				IAMB	IAmb	14 52 33.2	
	comp=Z,28μm,0.2s						
IBST	**Bostanabad**	**0.73**	**173**	*e*Pg	**Pg**	**14 52 26.8**	**-1.2**
ORD	**Ordubad**	**0.79**	**309**	*e*Pg	**Pg**	**14 52 29.1**	**+0.1**
ORD	**Ordubad**	**0.79**	**309**	P	**Pg**	**14 52 29.1**	**+0.1**
	SNR=78						
ORD				S	**Sg**	**14 52 39.9**	**+0.6**
IMRD	**Marand**	**0.89**	**289**	*e*Pg	**Pg**	**14 52 30.8**	**-0.1**
IMRD				*e*Sg	**Sg**	**14 52 42.7**	**+0.2**
IMRD				IAMB	IAmb	14 52 47.5	
	comp=Z,35μm,0.2s						
ISHB	**Shabestar**	**0.92**	**261**	*e*Pg	**Pg**	**14 52 31.9**	**+0.3**
ISHB				IAMB	IAmb	14 52 46.7	
	comp=Z,50μm,0.3s						
ISRB	**Sarab**	**0.93**	**130**	*e*Pg	**Pb**	**14 52 31.0**	**-1.5**
ISRB				IAMB	IAmb	14 52 49.3	
	comp=Z,13μm,0.4s						
GRMI	**Germi**	**0.95**	**66**	*e*Pg	**Pb**	**14 52 31.6**	**-1.3**
IAZR	**Azarshahr**	**0.98**	**220**	*e*Pg	**Pg**	**14 52 32.9**	**+0.2**
IAZR				IAMB	IAmb	14 52 54.1	
	comp=Z,16μm,0.4s						
LRK	**Lerik**	**1.25**	**80**	*e*Pg	**Pb**	**14 52 36.9**	**-1.0**
LRK	**Lerik**	**1.25**	**80**	P	**Pb**	**14 52 37.0**	**-1.0**
	SNR=76						
LRK				S	**Sg**	**14 52 54.3**	**+0.4**
NAX	**Nakhchivan**	**1.25**	**307**	*e*Pg	**Pg**	**14 52 38.0**	**+0.2**
NAX	**Nakhchivan**	**1.25**	**307**	P	**Pg**	**14 52 38.1**	**+0.2**
	SNR=20						
NAX				S	**Sg**	**14 52 55.7**	**+1.8**
SBZ	**Shahbuz**	**1.36**	**316**	*e*Pg	**Pb**	**14 52 39.0**	**-0.8**
SBZ	**Shahbuz**	**1.36**	**316**	P	**Pb**	**14 52 39.0**	**-0.8**
SBZ				S	**Sg**	**14 52 58.7**	**+1.2**
STKZ		**1.38**	**359⇑**	*i* P	Pn	**14 52 38.9**	**-0.9**
STKZ				⇓*i* S	**Sg**	**14 52 58.0**	**-0.3**
GLBA	**Clilabad**	**1.50**	**57**	*e*Pg	**Pb**	**14 52 41.6**	**-0.5**
GLBA	**Clilabad**	**1.50**	**57**	P	**Pb**	**14 52 41.7**	**-0.5**
	SNR=9.3						
GLBA				S	**Sg**	**14 53 05.1**	**+3.0**
ASTR	**Astara**	**1.59**	**85**	*e*Pn	**Pb**	**14 52 42.6**	**-1.0**
ASTR	**Astara**	**1.59**	**85**	P	**Pb**	**14 52 42.6**	**-1.0**
	SNR=20						
ASTR				S	**Sg**	**14 53 06.4**	**+1.5**
LKRN	**Lenkeran, Azer**	**1.59**	**79**	*e*Pn	**Pb**	**14 52 42.7**	**-1.0**
LKRN	**Lenkeran, Azer**	**1.59**	**79**	P	**Pb**	**14 52 42.8**	**-1.0**
	SNR=29						
LKRN				S	**Sg**	**14 53 06.3**	**+1.2**
BRDA	**Brd**	**1.86**	**10**	*e*Pn	**Pb**	**14 52 47.4**	**-0.8**
BRDA	**Brd**	**1.86**	**10**	P	**Pb**	**14 52 47.5**	**-0.8**
BRDA				S	**Sg**	**14 53 15.7**	**+2.2**
MAHB	**Mahabad**	**1.87**	**207**	*e*Pn	**Pg**	**14 52 49.9**	**+0.2**
MAKU	**Maku**	**1.88**	**300**	*e*Pn	**Pb**	**14 52 47.8**	**-0.9**
SAAT	**Saatly**	**1.92**	**41**	S	**Sg**	**14 53 15.2**	**-0.3**
HYR	**Heyderabad**	**1.97**	**311**	*e*Pn	**Pb**	**14 52 48.8**	**-1.5**
HYR	**Heyderabad**	**1.97**	**311**	P	**Pb**	**14 52 48.9**	**-1.5**
HYR				S	**Sg**	**14 53 17.7**	**+0.3**
ZRD	**Zardab**	**1.98**	**21**	*e*Pn	**Pb**	**14 52 48.5**	**-1.8**
ZRD	**Zardab**	**1.98**	**21**	P	**Pb**	**14 52 48.5**	**-1.8**
	SNR=4.5						
ZRD				S	**Sg**	**14 53 19.0**	**+1.7**
KDMR	**Kurdemir**	**2.23**	**29**	S	**Sb**	**14 53 22.3**	**-0.2**
GANJ	**Ganja**	**2.24**	**351**	*e*Pn	**Pb**	**14 52 52.5**	**-2.3**
GANJ	**Ganja**	**2.24**	**351**	P	**Pb**	**14 52 52.5**	**-2.3**
	SNR=31						
GANJ				S	**Sb**	**14 53 22.9**	**+0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIB	**Äli-Bayra**	**2.31**	**48**	*e*Pn	**Pn**	**14 52 52.6**	**+0.1**
ALIB	**Äli-Bayra**	**2.31**	**48**	P	**Pn**	**14 52 52.6**	**+0.1**
	SNR=4.3						
ALIB				S	**Sb**	**14 53 23.9**	**-0.8**
ZNJK	**Zanjan**	**2.32**	**139**	*e*Pn	**Pb**	**14 52 53.9**	**-2.4**
GNI	**Garni**	**2.33**	**318⇑**	*i* P	**Pb**	**14 52 57.0**	**+0.6**
GNI				⇓*i* S	**Sg**	**14 53 29.0**	**+0.2**
MNGR	**Mingechevir, A**	**2.35**	**6**	S	**Sb**	**14 53 24.4**	**-1.6**
GDB	**GEDABAY**	**2.42**	**341**	*e*Pn	**Pn**	**14 52 54.3**	**+0.1**
GDB	**GEDABAY**	**2.42**	**341**	P	**Pn**	**14 52 54.4**	**+0.1**
	SNR=36						
GDB				S	**Sb**	**14 53 27.4**	**-0.8**
IML	**Ismayilli**	**2.60**	**24**	*e*Pn	**Pn**	**14 52 56.7**	**+0.2**
IML	**Ismayilli**	**2.60**	**24**	P	**Pn**	**14 52 56.8**	**+0.2**
IML				S	**Sb**	**14 53 32.7**	**-0.4**
QBL	**Gabala**	**2.64**	**18**	*e*Pn	**Pn**	**14 52 57.9**	**+0.8**
QBL	**Gabala**	**2.64**	**18**	P	**Pn**	**14 52 57.9**	**+0.8**
QBL				S	**Sb**	**14 53 34.4**	**0.0**
GBS	**Qobustan**	**2.69**	**38**	*e*Pn	**Pn**	**14 52 59.0**	**+1.2**
GBS	**Qobustan**	**2.69**	**38**	P	**Pn**	**14 52 59.0**	**+1.2**
GBS				S	**Sb**	**14 53 34.0**	**-1.7**
PQL	**Pirkuli**	**2.74**	**30**	*e*Pn	**Pn**	**14 52 59.8**	**+1.2**
PQL	**Pirkuli**	**2.74**	**30**	P	**Pn**	**14 52 59.9**	**+1.2**
	SNR=4.3						
PQL				S	**Sb**	**14 53 35.5**	**-1.8**
SEKA	**Sheki**	**2.79**	**7**	*e*Pn	**Pn**	**14 53 00.4**	**+1.2**
SEKA	**Sheki**	**2.79**	**7**	P	**Pn**	**14 53 00.4**	**+1.2**
SEKA				S	**Sb**	**14 53 37.1**	**-1.7**
QZX	**Qazax, Azerbai**	**2.84**	**338**	*e*Pn	**Pn**	**14 53 00.7**	**+0.9**
QZX	**Qazax, Azerbai**	**2.84**	**338**	P	**Pn**	**14 53 00.8**	**+0.9**
	SNR=4.9						
QZX				S	**Sb**	**14 53 37.3**	**-2.7**
XNQ	**Khinaliq**	**2.93**	**21**	*e*Pn	**Pn**	**14 53 01.7**	**+0.4**
XNQ	**Khinaliq**	**2.93**	**21**	P	**Pn**	**14 53 01.8**	**+0.4**
	SNR=8.1						
XNQ				S	**Sb**	**14 53 40.6**	**-2.4**
ATGJ	**Altiaghaj**	**2.94**	**34**	*e*Pn	**Pn**	**14 53 01.6**	**+0.3**
ATGJ	**Altiaghaj**	**2.94**	**34**	P	**Pn**	**14 53 01.7**	**+0.3**
	SNR=3.8						
ATGJ				S	**Sb**	**14 53 40.9**	**-2.3**
SIZA	**Siyzn**	**3.11**	**31**	*e*Pn	**Pn**	**14 53 05.1**	**+1.5**
SIZA	**Siyzn**	**3.11**	**31**	P	**Pn**	**14 53 05.1**	**+1.5**
	SNR=5.6						
SIZA				S	**Sb**	**14 53 44.1**	**-3.7**
QUB	**Quba**	**3.19**	**22**	*e*Pn	**Pn**	**14 53 05.2**	**+0.5**
QUBA	**Quba, Azerbaij**	**3.21**	**24**	P	**Pn**	**14 53 05.2**	**+0.3**
QUBA				S	**Sn**	**14 53 44.6**	**+1.1**
ZKTA	**Zakatala**	**3.21**	**358**	P	**Pn**	**14 53 05.6**	**+0.7**
ZKTA				S	**Sn**	**14 53 45.5**	**+2.1**
IGZV	**Ghazvin**	**3.42**	**126**	IAMB	IAmb	14 54 07.1	
	comp=Z,438nm,0.4s						
QABG	**Abgarm-Qazvin**	**3.52**	**140**	*e*Pn	**Pn**	**14 53 11.2**	**+1.8**
QALM	**Alamut, Qazvin**	**3.67**	**122**	*e*Pn	**Pn**	**14 53 14.0**	**+2.5**

*BJI **23** 15:01:31.7±0.0, 44°.33N×9°.62E, h14km, mb4.7/32, mB5.1/24, Ms4.8/11, Ms7 4.5/2*
*MED_RC **23** 15:01:33.0±0.3, 44°.19N×10°.18E, h10km, MW4.7/14, Moment Tensor Solution. Mantle waves: s14,c19; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.87±.06; $M_{\theta\theta}$0.94±.04; $M_{\phi\phi}$-0.07±.05; $M_{r\theta}$-0.48±.16; $M_{\theta\phi}$0.00±.04; $M_{\phi r}$0.58±.18; Best double couple: $M_0$1.17000×10^{16} NP1:ϕ_s117.00000°, δ65.00000°, λ-65.00000°. NP2:ϕ_s249.00000°, δ35.00000°, λ-132.00000°. Principal axes: T 1.0800, Plg16.0000°, Azm189.0000°; N 0.1800, Plg22.0000°, Azm285.0000°; P -1.2600, Plg62.0000°, Azm66.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*IDC **23** 15:01:33.0±0.6, 44°.10N×10°.02E, h0km, mb4.1/21, mb1 4.3/30, mb1mx4.1/60, mbtmp4.1/30, ML4.4/8, MS3.8/40, Ms1 3.8/40, ms1mx3.8/49 Error ellipse: s-maj=12.6km s-min=11.2km az=120.0*
*PRU **23** 15:01:33.8±0.0, 44°.19N×10°.16E, h0km*
*STR **23** 15:01:33.6±0.9, 44°.1N±13°.1×10°.1±1°.8, h11km±21km, MLv4.5/7*
*ROM **23** 15:01:33.9±0.1, 44°.168N±0°.006×10°.201E±0°.006, h9km, ML4.4/133, Mw4.4, Error ellipse: s-maj=0.7km s-min=0.3km az=199.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.77; $M_{\theta\theta}$3.96; $M_{\theta\phi}$-0.19; $M_{r\theta}$0.85; $M_{\phi\phi}$0.70; $M_{\phi r}$2.05; Fault plane solution: $M_0$4.49884×10^{15} NP1:ϕ_s101.00000°, δ41.00000°, λ-55.00000°

CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
ERBM	**Eremo**	**0.28**	**33**	P	**Pg**	**15 01 40.1**	**-0.5**
ERBM				S	**Sg**	**15 01 44.7**	**+0.3**
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
BDI	**Bagni Di Lucca**	**0.31**	**113**	P	**Pg**	**15 01 40.4**	**-0.8**
BDI				S	**Sg**	**15 01 45.1**	**-0.2**
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
GRAM	**Graiana**	**0.32**	**343**	P	**Pg**	**15 01 40.8**	**-0.5**
GRAM				S	**Sg**	**15 01 45.9**	**+0.3**
GRAM	**Graiana**	**0.32**	**343**	P	**Pg**	**15 01 40.8**	**-0.5**
GRAM				S	**Sg**	**15 01 46.1**	**+0.5**
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
MAIM	**Mastiano**	**0.34**	**142**	P	**Pg**	**15 01 41.0**	**-0.8**
MAIM				S	**Sg**	**15 01 46.2**	**0.0**
MAIM	**Mastiano**	**0.34**	**142**	*e*P	**Pg**	**15 01 40.9**	**-0.8**
MAIM				S	**Sg**	**15 01 46.3**	**0.0**
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
NEVI	**Neviano degli**	**0.41**	**12**	P	**Pg**	**15 01 43.1**	**+0.2**
MSSA	**Maissana**	**0.51**	**285**	P	**Pg**	**15 01 44.4**	**-0.4**
MSSA				S	**Sg**	**15 01 51.7**	**+0.3**
MSSA				AML	AML		
	comp=E,40550µm,1.6s						
MSSA				AML	AML		
	comp=N,45050µm,1.2s						
MSSA				AML	AML		
	comp=E,40550µm,1.6s						
MSSA				AML	AML		
	comp=N,45050µm,1.2s						
MSSA				AML	AML		
	comp=N,45050µm,1.2s						
MSSA				AML	AML		
	comp=E,40550µm,1.6s						
MSSA				AML	AML		
	comp=N,45050µm,1.2s						
MSSA				AML	AML		
	comp=E,40550µm,1.6s						
ZCCA	**Zocca**	**0.58**	**73**	*e*P	**Pb**	**15 01 47.0**	**-0.3**
ZCCA				AML	AML		
	comp=E,78850µm,0.4s						
ZCCA				AML	AML		
ZCCA				AML	AML		
	comp=E,95850µm,0.4s						
ZCCA				AML	AML		
ZCCA				AML	AML		
	comp=E,78900µm,0.4s						
ZCCA				AML	AML		
ZCCA				AML	AML		
	comp=E,95850µm,0.4s						
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
	comp=E,95850µm,0.4s						
ZCCA				AML	AML		
	comp=E,78900µm,0.4s						
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
	comp=E,95850µm,0.4s						
ZCCA				AML	AML		
	comp=E,78900µm,0.4s						
ZCCA				AML	AML		
PRMA	**PARMA**	**0.59**	**8**	*e*P	**Pb**	**15 01 46.8**	**-0.5**
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
MTCR	**Monte La Croce**	**0.60**	**105**	P	**Pg**	**15 01 45.8**	**-0.7**
MTCR				AML	AML		
	comp=E,47500µm,0.4s						
MTCR				AML	AML		
	comp=N,73200µm,0.3s						
MTCR				AML	AML		
	comp=E,47500µm,0.4s						
MTCR				AML	AML		
	comp=N,73200µm,0.3s						
MTCR				AML	AML		
	comp=N,73200µm,0.3s						
MTCR				AML	AML		
	comp=E,47500µm,0.4s						
MTCR				AML	AML		
	comp=N,73200µm,0.3s						
MTCR				AML	AML		
	comp=E,47500µm,0.4s						
FNVD	**Fontana Vidola**	**0.67**	**91**	*e*P	**Pg**	**15 01 47.0**	**-0.8**
FNVD				AML	AML		
	comp=E,95100µm,0.4s						
FNVD				AML	AML		
	comp=N,81600µm,1.0s						
FNVD				AML	AML		
	comp=E,95100µm,0.4s						
FNVD				AML	AML		
	comp=N,81600µm,1.0s						
FNVD				AML	AML		
	comp=E,95100µm,0.4s						
FNVD				AML	AML		
	comp=N,81600µm,1.0s						
PTF	**Prato**	**0.67**	**109**	P	**Pg**	**15 01 46.7**	**-1.1**
CRMI	**Carmignano**	**0.68**	**125**	P	**Pg**	**15 01 47.2**	**-0.8**
CRMI				AML	AML		
	comp=E,31800µm,0.7s						
CRMI				AML	AML		
	comp=N,44900µm,1.0s						
CRMI				AML	AML		
	comp=E,13350µm,0.7s						
CRMI				AML	AML		
	comp=N,18850µm,1.0s						
CRMI				AML	AML		
	comp=E,31800µm,0.7s						
CRMI				AML	AML		
	comp=N,44900µm,1.0s						
CRMI				AML	AML		
	comp=E,13350µm,0.7s						
CRMI				AML	AML		
	comp=N,18850µm,1.0s						
CRMI				AML	AML		
	comp=N,18850µm,1.0s						
CRMI				AML	AML		
	comp=N,44900µm,1.0s						
CRMI				AML	AML		
	comp=E,13350µm,0.7s						
CRMI				AML	AML		
	comp=E,31800µm,0.7s						
MODE	**Modena**	**0.70**	**50**	AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
NOVE	**Novellara**	**0.72**	**31**	AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
GORR	**Gorreto**	**0.77**	**303**	P	**Pg**	**15 01 49.0**	**-0.8**
GORR				S	**Sb**	**15 01 60.0**	**-1.1**
GORR	**Gorreto**	**0.77**	**303**	P	**Pg**	**15 01 49.0**	**-0.8**
GORR				AML	AML		
	comp=E,33350µm,0.6s						
GORR				AML	AML		
	comp=N,34000µm,0.8s						
GORR				AML	AML		
	comp=E,33350µm,0.6s						
GORR				AML	AML		
	comp=N,34000µm,0.8s						
GORR				AML	AML		
	comp=N,34000µm,0.8s						
GORR				AML	AML		
	comp=E,33350µm,0.6s						
GORR				AML	AML		
	comp=N,34000µm,0.8s						
GORR				AML	AML		
	comp=E,33350µm,0.6s						
BOB	**Bobbio (Coli)**	**0.79**	**318**	P	**Pg**	**15 01 49.6**	**-0.6**
BOB				AML	AML		
	comp=E,54950µm,0.5s						
BOB				AML	AML		
	comp=N,53550µm,0.5s						
BOB				AML	AML		
	comp=E,55100µm,0.5s						
BOB				AML	AML		
	comp=N,61600µm,0.5s						
BOB				AML	AML		
	comp=E,55000µm,0.5s						
BOB				AML	AML		
	comp=N,53550µm,0.5s						
BOB				AML	AML		
	comp=E,55100µm,0.5s						
BOB				AML	AML		
	comp=N,61600µm,0.5s						
BOB				AML	AML		
	comp=E,55100µm,0.5s						
BOB				AML	AML		
	comp=E,55000µm,0.5s						
BOB				AML	AML		
	comp=N,61600µm,0.5s						
BOB				AML	AML		
	comp=N,53550µm,0.5s						
BOB				AML	AML		
	comp=E,55100µm,0.5s						
BOB				AML	AML		
	comp=E,55000µm,0.5s						
BOB				AML	AML		
	comp=N,61600µm,0.5s						
BOB				AML	AML		
	comp=N,53550µm,0.5s						
SEI	**Scarperia**	**0.84**	**98**	P	**Pg**	**15 01 50.1**	**-1.1**
SEI				AML	AML		
	comp=E,53100µm,0.4s						
SEI				AML	AML		
SEI				AML	AML		
	comp=E,53100µm,0.4s						
SEI				AML	AML		
SEI				AML	AML		
	comp=E,53100µm,0.4s						
SEI				AML	AML		
SEI				AML	AML		
	comp=E,53100µm,0.4s						
SEI				AML	AML		
RAVA	**Ravarino**	**0.87**	**49**	AML	AML		
RAVA				AML	AML		
	comp=E,90450µm,0.9s						
RAVA				AML	AML		
RAVA				AML	AML		
	comp=E,90500µm,0.9s						
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
	comp=E,90500µm,0.9s						
RAVA				AML	AML		
	comp=E,90500µm,0.9s						
CAVE	**Cavezzo**	**0.89**	**40**	P	**Pg**	**15 01 52.1**	**0.0**
CAVE				AML	AML		
CAVE				AML	AML		
	comp=N,75650µm,1.0s						
CAVE				AML	AML		
CAVE				AML	AML		
	comp=N,75650µm,1.0s						
CAVE				AML	AML		
	comp=N,75650µm,1.0s						
CAVE				AML	AML		
CAVE				AML	AML		
	comp=N,75650µm,1.0s						
CAVE				AML	AML		
MTRZ	**Monterenzio**	**0.93**	**78**	AML	AML		
	comp=E,48700µm,0.5s						
MTRZ				AML	AML		
	comp=E,46300µm,0.5s						
MTRZ				AML	AML		
	comp=N,33850µm,0.8s						
MTRZ				AML	AML		
	comp=E,48700µm,0.5s						
MTRZ				AML	AML		
	comp=N,34250µm,0.8s						
MTRZ				AML	AML		
	comp=E,46300µm,0.5s						
MTRZ				AML	AML		
	comp=E,48700µm,0.5s						
MTRZ				AML	AML		
	comp=N,34250µm,0.8s						
MTRZ				AML	AML		
	comp=N,33850µm,0.8s						
MTRZ				AML	AML		
	comp=E,46300µm,0.5s						
MTRZ				AML	AML		
	comp=N,34250µm,0.8s						
MTRZ				AML	AML		
	comp=N,33850µm,0.8s						
BRIS	**BRISIGHELLA**	**0.95**	**92**	AML	AML		
	comp=N,19350µm,0.5s						
BRIS				AML	AML		
	comp=E,24500µm,1.5s						
BRIS				AML	AML		
	comp=N,19350µm,0.5s						
BRIS				AML	AML		
	comp=E,24500µm,1.5s						
BRIS				AML	AML		
	comp=N,19350µm,0.5s						
BRIS				AML	AML		
	comp=E,24500µm,1.5s						
BRIS				AML	AML		
	comp=N,19350µm,0.5s						
BRIS				AML	AML		
	comp=E,24500µm,1.5s						
RUFI	**Rufina**	**1.01**	**109**	P	**Pg**	**15 01 53.2**	**-1.1**
RUFI				AML	AML		
	comp=E,17850µm,0.5s						
RUFI				AML	AML		
	comp=E,17850µm,0.5s						
RUFI				AML	AML		
	comp=N,17700µm,0.6s						
RUFI				AML	AML		
	comp=E,17850µm,0.5s						
RUFI				AML	AML		
	comp=N,17700µm,0.6s						
RUFI				AML	AML		
	comp=E,17850µm,0.5s						
RUFI				AML	AML		
	comp=N,17700µm,0.6s						
FIU	**Minerbio Fiu**	**1.03**	**63**	AML	AML		
	comp=E,89550µm,0.5s						
FIU				AML	AML		
	comp=E,89550µm,0.5s						
FIU				AML	AML		
	comp=N,51750µm,1.2s						
FIU				AML	AML		
	comp=E,89550µm,0.5s						
FIU				AML	AML		
	comp=N,51750µm,1.2s						
FIU				AML	AML		
	comp=N,51750µm,1.2s						
CSNT	**Castellina Chi**	**1.06**	**132**	P	**Pg**	**15 01 54.2**	**-1.1**
CSNT				AML	AML		
	comp=E,21750µm,0.7s						
CSNT				AML	AML		
	comp=N,17050µm,0.5s						
CSNT				AML	AML		
	comp=E,21750µm,0.7s						
CSNT				AML	AML		
	comp=N,17050µm,0.5s						
CSNT				AML	AML		
	comp=N,17050µm,0.5s						
CSNT				AML	AML		
	comp=E,21750µm,0.7s						
CSNT				AML	AML		
	comp=N,17050µm,0.5s						
CSNT				AML	AML		
	comp=E,21750µm,0.7s						
IMOL	**Imola, Italy**	**1.12**	**80**	AML	AML		
	comp=E,21100µm,1.0s						
IMOL				AML	AML		
	comp=N,19950µm,0.8s						
IMOL				AML	AML		
	comp=E,21100µm,1.0s						
IMOL				AML	AML		
	comp=N,19950µm,0.8s						
IMOL				AML	AML		
	comp=E,21100µm,1.0s						
IMOL				AML	AML		
	comp=N,19950µm,0.8s						
CTL8	**Castelleone**	**1.14**	**344**	AML	AML		
	comp=N,16500µm,0.3s						
CTL8				AML	AML		
	comp=E,57600µm,0.5s						
CTL8				AML	AML		
	comp=N,64850µm,0.5s						
CTL8				AML	AML		
	comp=E,16850µm,0.5s						
CTL8				AML	AML		
	comp=N,16500µm,0.3s						
CTL8				AML	AML		
	comp=N,64850µm,0.5s						
CTL8				AML	AML		
	comp=E,16850µm,0.5s						
CTL8				AML	AML		
	comp=E,57600µm,0.5s						
CTL8				AML	AML		
	comp=N,16500µm,0.3s						
CTL8				AML	AML		
	comp=N,64850µm,0.5s						
CTL8				AML	AML		
	comp=E,16850µm,0.5s						
CTL8				AML	AML		
	comp=E,57600µm,0.5s						
SERM	**Sermide**	**1.14**	**43**	AML	AML		
	comp=E,43150µm,0.7s						
SERM				AML	AML		
	comp=E,21400µm,0.9s						
SERM				AML	AML		
	comp=N,18050µm,0.7s						
SERM				AML	AML		
	comp=E,43150µm,0.7s						
SERM				AML	AML		
	comp=N,36200µm,0.9s						
SERM				AML	AML		
	comp=E,21400µm,0.9s						
SERM				AML	AML		
	comp=N,36200µm,0.9s						
SERM				AML	AML		
	comp=E,43150µm,0.7s						
SERM				AML	AML		
	comp=N,18050µm,0.7s						
SERM				AML	AML		
	comp=E,21400µm,0.9s						
SERM				AML	AML		
	comp=N,36200µm,0.9s						
SERM				AML	AML		
	comp=N,18050µm,0.7s						
TRIF	**Trifonti**	**1.19**	**154**	P	**Pb**	**15 01 56.3**	**-1.2**
TRIF				AML	AML		
	comp=E,14350µm,0.8s						
TRIF				AML	AML		
	comp=N,10315µm,0.7s						
TRIF				AML	AML		
	comp=N,10315µm,0.7s						
TRIF				AML	AML		
	comp=E,14350µm,0.8s						
TRIF				AML	AML		
	comp=N,10315µm,0.7s						
TRIF				AML	AML		
	comp=E,14350µm,0.8s						
FROS	**Frosini**	**1.20**	**144**	*e*P	**Pb**	**15 01 56.4**	**-1.3**
FROS				AML	AML		
	comp=E,26200µm,1.1s						
FROS				AML	AML		
	comp=N,22050µm,1.5s						
FROS				AML	AML		
	comp=E,26200µm,1.1s						
FROS				AML	AML		
	comp=N,22050µm,1.5s						
FROS				AML	AML		
	comp=E,26200µm,1.1s						
FROS				AML	AML		
	comp=N,22050µm,1.5s						
SFI	**Santa Sofia**	**1.22**	**103**	P	**Pn**	**15 01 57.0**	**-1.1**
SFI				AML	AML		
	comp=E,12830µm,0.8s						
SFI				AML	AML		
	comp=N,11600µm,0.9s						
SFI				AML	AML		
	comp=E,13600µm,0.7s						
SFI				AML	AML		
	comp=N,13950µm,0.9s						
SFI				AML	AML		
	comp=N,13950µm,0.9s						
SFI				AML	AML		
	comp=N,11600µm,0.9s						
SFI				AML	AML		
	comp=E,13600µm,0.7s						
SFI				AML	AML		
	comp=E,12830µm,0.8s						
SFI				AML	AML		
	comp=N,13950µm,0.9s						
SFI				AML	AML		
	comp=N,11600µm,0.9s						
SFI				AML	AML		
	comp=E,13600µm,0.7s						
SFI				AML	AML		
	comp=E,12830µm,0.8s						
PCP	**Piancastagn**	**1.24**	**287**	P	**Pn**	**15 01 57.0**	**-1.3**
PCP	**Piancastagn**	**1.24**	**287**	P	**Pn**	**15 01 57.0**	**-1.3**
PCP				AML	AML		
	comp=E,9365µm,1.3s						
PCP				AML	AML		
	comp=N,9020µm,0.6s						
PCP				AML	AML		
	comp=E,9365µm,1.3s						
PCP				AML	AML		
	comp=N,9020µm,0.6s						
PCP				AML	AML		
	comp=E,9365µm,1.3s						
PCP				AML	AML		
	comp=N,9020µm,0.6s						

PCP				AML	AML	
	comp=E,9365μm,1.3s					
PCP				AML	AML	
	comp=N,9020μm,0.6s					
QLNO	**Quiliano**	**1.34**	**277**	P	**Pn**	**15 01 58.7 -1.0**
QLNO				AML	AML	
	comp=E,7080μm,0.4s					
QLNO				AML	AML	
	comp=N,8300μm,1.4s					
QLNO				AML	AML	
	comp=E,7080μm,0.4s					
QLNO				AML	AML	
	comp=N,8300μm,1.4s					
QLNO				AML	AML	
	comp=E,7080μm,0.4s					
QLNO				AML	AML	
	comp=N,8300μm,1.4s					
FINB	**Finale Ligure**	**1.35**	**270**	P	**Pn**	**15 01 58.5 -1.2**
FINB				AML	AML	
	comp=E,6925μm,0.8s					
FINB				AML	AML	
	comp=N,5780μm,0.6s					
FINB				AML	AML	
	comp=E,6925μm,0.8s					
FINB				AML	AML	
	comp=N,5780μm,0.6s					
FINB				AML	AML	
	comp=N,5780μm,0.6s					
FINB				AML	AML	
	comp=E,6925μm,0.8s					
FINB				AML	AML	
	comp=N,5780μm,0.6s					
FINB				AML	AML	
	comp=E,6925μm,0.8s					
CNCS	**Concesio**	**1.42**	**1**	AML	AML	
	comp=N,39150μm,0.5s					
CNCS				AML	AML	
	comp=E,52000μm,0.5s					
CNCS				AML	AML	
	comp=N,39150μm,0.5s					
CNCS				AML	AML	
	comp=E,52000μm,0.5s					
CNCS				AML	AML	
	comp=N,39150μm,0.5s					
CNCS				AML	AML	
	comp=E,52000μm,0.5s					
CELB	**S.Piero in Cam**	**1.44**	**180**	P	**Pn**	**15 01 59.8 -1.2**
CELB				AML	AML	
	comp=E,3665μm,0.9s					
CELB				AML	AML	
	comp=N,3650μm,0.9s					
CELB				AML	AML	
	comp=N,3650μm,0.9s					
CELB				AML	AML	
	comp=E,3665μm,0.9s					
CELB				AML	AML	
	comp=N,3650μm,0.9s					
CELB				AML	AML	
	comp=E,3665μm,0.9s					
CASP	**Castiglione de**	**1.48**	**160**	*e*P	**Pn**	**15 02 00.2 -1.3**
CASP				AML	AML	
	comp=E,5855μm,0.7s					
CASP				AML	AML	
	comp=N,5805μm,0.9s					
CASP				AML	AML	
	comp=E,5855μm,0.7s					
CASP				AML	AML	
	comp=N,5805μm,0.9s					
CASP				AML	AML	
	comp=E,5855μm,0.7s					
CASP				AML	AML	
	comp=N,5805μm,0.9s					
VOBA	**Vobarno**	**1.48**	**8**	AML	AML	
	comp=E,46600μm,0.5s					
VOBA				AML	AML	
	comp=N,41800μm,0.7s					
VOBA				AML	AML	
	comp=N,41800μm,0.7s					
VOBA				AML	AML	
	comp=E,46600μm,0.5s					
VOBA				AML	AML	
	comp=N,41800μm,0.7s					
VOBA				AML	AML	
	comp=E,46600μm,0.5s					
ROTM	**Rocchetta Tana**	**1.48**	**297**	P	**Pb**	**15 02 02.2 -0.2**
ROTM				AML	AML	
	comp=E,48350μm,1.4s					
ROTM				AML	AML	
	comp=N,81000μm,0.7s					
ROTM				AML	AML	
	comp=E,48350μm,1.4s					
ROTM				AML	AML	
	comp=N,81000μm,0.7s					
ROTM				AML	AML	
	comp=E,48350μm,1.4s					
ROTM				AML	AML	
	comp=N,81000μm,0.7s					
SSP9	**Sansepolcro**	**1.53**	**113**	AML	AML	
	comp=N,9155μm,1.6s					
SSP9				AML	AML	
	comp=E,10220μm,1.6s					
SSP9				AML	AML	
	comp=N,9155μm,1.6s					
SSP9				AML	AML	
	comp=E,10220μm,1.6s					
SSP9				AML	AML	
	comp=N,9155μm,1.6s					
SSP9				AML	AML	
	comp=E,10220μm,1.6s					
RORO	**Rocca Rossa**	**1.54**	**268**	P	**Pn**	**15 02 00.8 -1.5**
RORO				AML	AML	
	comp=E,3910μm,0.7s					
RORO				AML	AML	
	comp=N,5280μm,1.0s					
RORO				AML	AML	
	comp=E,3910μm,0.7s					
RORO				AML	AML	
	comp=N,5280μm,1.0s					
RORO				AML	AML	
	comp=E,3910μm,0.7s					
RORO				AML	AML	
	comp=N,5280μm,1.0s					
CAFI	**Castiglion Fio**	**1.54**	**123**	*e*P	**Pn**	**15 02 01.3 -1.1**
CAFI				AML	AML	
	comp=E,3935μm,0.8s					
CAFI				AML	AML	
	comp=N,4110μm,1.6s					
CAFI				AML	AML	
	comp=E,4060μm,0.8s					
CAFI				AML	AML	
	comp=N,4390μm,1.6s					
CAFI				AML	AML	
	comp=N,4390μm,1.6s					
CAFI				AML	AML	
	comp=N,4110μm,1.6s					
CAFI				AML	AML	
	comp=E,4060μm,0.8s					
CAFI				AML	AML	
	comp=E,3935μm,0.8s					
CAFI				AML	AML	
	comp=N,4390μm,1.6s					
CAFI				AML	AML	
	comp=N,4110μm,1.6s					
CAFI				AML	AML	
	comp=E,4060μm,0.8s					
CAFI				AML	AML	
	comp=E,3935μm,0.8s					
BALD	**Monte Baldo**	**1.56**	**16⇓**	*e*Pg	**Pb**	**15 02 04.0 0.0**
BALD				*e*Sg	**Sg**	**15 02 26.7 +1.5**
PARC	**Parchiule**	**1.57**	**109**	P	**Pn**	**15 02 01.3 -1.5**
PARC				AML	AML	
	comp=E,4595μm,0.7s					
PARC				AML	AML	
	comp=N,6205μm,0.9s					
PARC				AML	AML	
	comp=N,6205μm,0.9s					
PARC				AML	AML	
	comp=E,4595μm,0.7s					
PARC				AML	AML	
	comp=N,6205μm,0.9s					
PARC				AML	AML	
	comp=E,4595μm,0.7s					
TEOL	**Teolo**	**1.58**	**41⇑**	*e*Pg	**Pn**	**15 02 03.2 +0.3**
TEOL				*e*Sg	**Sg**	**15 02 26.5 +0.9**
TEOL	**Teolo**	**1.58**	**41**	P	**Pn**	**15 02 03.1 +0.2**
TEOL				AML	AML	
	comp=E,68000μm,1.5s					
TEOL				AML	AML	
	comp=N,43800μm,0.5s					
TEOL				AML	AML	
	comp=E,68000μm,1.5s					
TEOL				AML	AML	
	comp=N,43800μm,0.5s					
TEOL				AML	AML	
	comp=E,68000μm,1.5s					
TEOL				AML	AML	
	comp=N,43800μm,0.5s					
CPGN	**Carpegna, Ital**	**1.58**	**103**	AML	AML	
	comp=E,8140μm,1.6s					
CPGN				AML	AML	
	comp=N,6735μm,1.2s					
CPGN				AML	AML	
	comp=E,9685μm,1.6s					
CPGN				AML	AML	
	comp=N,7060μm,1.2s					
CPGN				AML	AML	
	comp=N,7060μm,1.2s					
CPGN				AML	AML	
	comp=E,9685μm,1.6s					
CPGN				AML	AML	
	comp=N,6735μm,1.2s					
CPGN				AML	AML	
	comp=E,8140μm,1.6s					
CPGN				AML	AML	
	comp=N,7060μm,1.2s					
CPGN				AML	AML	
	comp=E,9685μm,1.6s					
CPGN				AML	AML	
	comp=N,6735μm,1.2s					
CPGN				AML	AML	
	comp=E,8140μm,1.6s					
ROVR	**Rover Verones**	**1.59**	**23**	P	**Pb**	**15 02 03.8 -0.7**
ROVR				AML	AML	
	comp=E,13700μm,0.7s					
ROVR				AML	AML	
	comp=N,31400μm,1.3s					
ROVR				AML	AML	
	comp=E,13700μm,0.7s					
ROVR				AML	AML	
	comp=N,31400μm,1.3s					
ROVR				AML	AML	
	comp=E,13700μm,0.7s					
ROVR				AML	AML	
	comp=N,31400μm,1.3s					
MAGA	**Magasa**	**1.62**	**11**	*e*Pg	**Pn**	**15 02 04.0 +0.3**
MAGA	**Magasa**	**1.62**	**11**	*e*P	**Pn**	**15 02 03.7 +0.1**
MAGA				AML	AML	
	comp=E,59650μm,0.5s					
MAGA				AML	AML	
	comp=N,34150μm,0.4s					
MAGA				AML	AML	
	comp=N,34150μm,0.4s					
MAGA				AML	AML	
	comp=E,59650μm,0.5s					
MAGA				AML	AML	
	comp=N,34150μm,0.4s					
MAGA				AML	AML	
	comp=E,59650μm,0.5s					
ARCI	**Arcidosso**	**1.62**	**145**	*e*P	**Pn**	**15 02 02.4 -1.3**
ARCI				AML	AML	
	comp=E,3665μm,0.7s					
ARCI				AML	AML	
	comp=N,3300μm,1.1s					
ARCI				AML	AML	
	comp=N,3300μm,1.1s					
ARCI				AML	AML	
	comp=E,3665μm,0.7s					
ARCI				AML	AML	
	comp=N,3300μm,1.1s					
ARCI				AML	AML	
	comp=E,3665μm,0.7s					
BADI	**Badiali**	**1.63**	**114**	AML	AML	
	comp=N,6070μm,0.9s					
BADI				AML	AML	
	comp=E,6520μm,0.9s					
BADI				AML	AML	
	comp=N,6070μm,0.9s					
BADI				AML	AML	
	comp=E,6520μm,0.9s					
BADI				AML	AML	
	comp=N,6070μm,0.9s					
BADI				AML	AML	
	comp=E,6520μm,0.9s					
CDCA	**Citt' di Caste**	**1.64**	**115**	AML	AML	
	comp=N,20250μm,1.6s					
CDCA				AML	AML	
	comp=E,12650μm,1.3s					
CDCA				AML	AML	
	comp=N,20250μm,1.6s					
CDCA				AML	AML	
	comp=E,9875μm,1.6s					
CDCA				AML	AML	
	comp=N,8205μm,1.6s					
CDCA				AML	AML	
	comp=E,12650μm,1.3s					
CDCA				AML	AML	
	comp=N,8205μm,1.6s					
CDCA				AML	AML	
	comp=E,9875μm,1.6s					
CDCA				AML	AML	
	comp=N,20250μm,1.6s					
CDCA				AML	AML	
	comp=E,12650μm,1.3s					
CDCA				AML	AML	
	comp=N,8205μm,1.6s					
CDCA				AML	AML	
	comp=E,9875μm,1.6s					
IMI	**Imperia**	**1.68**	**261**	*e*P	**Pn**	**15 02 03.0 -1.5**
IMI				AML	AML	
	comp=E,7090μm,0.6s					
IMI				AML	AML	
	comp=N,7355μm,0.5s					
IMI				AML	AML	
	comp=E,7090μm,0.6s					
IMI				AML	AML	
	comp=N,7355μm,0.5s					
IMI				AML	AML	
	comp=E,7090μm,0.6s					
IMI				AML	AML	
	comp=N,7355μm,0.5s					
GBOS	**Grotte di Boss**	**1.69**	**273**	P	**Pn**	**15 02 03.7 -1.0**
GBOS				AML	AML	
	comp=E,2215μm,0.5s					
GBOS				AML	AML	
	comp=N,3140μm,0.6s					
GBOS				AML	AML	
	comp=E,2215μm,0.5s					
GBOS				AML	AML	
	comp=N,3140μm,0.6s					
GBOS				AML	AML	
	comp=E,2215μm,0.5s					
GBOS				AML	AML	
	comp=N,3140μm,0.6s					
ATMI	**Monte Miggiano**	**1.73**	**119**	AML	AML	
	comp=N,14550μm,0.6s					
ATMI				AML	AML	
	comp=E,10700μm,0.5s					
ATMI				AML	AML	
	comp=N,14550μm,0.6s					
ATMI				AML	AML	
	comp=N,14550μm,0.6s					
ATMI				AML	AML	
	comp=E,10700μm,0.5s					
ATMI				AML	AML	
	comp=E,10700μm,0.5s					
MGRO	**Montegrosso**	**1.73**	**266**	AML	AML	
	comp=E,8585μm,0.6s					
MGRO				AML	AML	
	comp=E,8585μm,0.6s					
MGRO				AML	AML	
	comp=N,5860μm,0.6s					
MGRO				AML	AML	
	comp=N,5860μm,0.6s					
MGRO				AML	AML	
	comp=N,5860μm,0.6s					
MGRO				AML	AML	
	comp=E,8585μm,0.6s					
PE3	**Peglio**	**1.73**	**106**	AML	AML	
	comp=E,10500μm,0.6s					
PE3				AML	AML	
	comp=N,11420μm,1.5s					
PE3				AML	AML	
	comp=E,10500μm,0.6s					
PE3				AML	AML	
	comp=N,11420μm,1.5s					
PE3				AML	AML	
	comp=E,10500μm,0.6s					
PE3				AML	AML	
	comp=N,11420μm,1.5s					
ATPI	**Pietralunga -**	**1.76**	**114**	AML	AML	
	comp=E,4195μm,0.9s					
ATPI				AML	AML	
	comp=N,4355μm,0.6s					
ATPI				AML	AML	
	comp=E,4195μm,0.9s					
ATPI				AML	AML	
	comp=N,4355μm,0.6s					
ATPI				AML	AML	
	comp=E,4195μm,0.9s					
ATPI				AML	AML	
	comp=N,4355μm,0.6s					
ATVO	**AVT- Monte Val**	**1.79**	**116**	AML	AML	
	comp=N,5810μm,1.1s					
ATVO				AML	AML	
	comp=E,5825μm,0.7s					
ATVO				AML	AML	
	comp=N,5810μm,1.1s					
ATVO				AML	AML	
	comp=E,5825μm,0.7s					
ATVO				AML	AML	
	comp=E,5825μm,0.7s					
ATVO				AML	AML	
	comp=N,5810μm,1.1s					
PIEI	**Pieia**	**1.81**	**110**	AML	AML	
	comp=N,2675μm,1.6s					
PIEI				AML	AML	
	comp=E,2695μm,0.5s					
PIEI				AML	AML	
	comp=N,2675μm,1.6s					
PIEI				AML	AML	
	comp=N,2675μm,1.6s					
PIEI				AML	AML	
	comp=E,2695μm,0.5s					
PIEI				AML	AML	
	comp=E,2695μm,0.5s					
NARO	**Abbazia di Nar**	**1.82**	**108**	AML	AML	
	comp=E,2170μm,1.1s					
NARO				AML	AML	
	comp=E,2170μm,1.1s					
NARO				AML	AML	
	comp=N,2325μm,0.9s					
NARO				AML	AML	
	comp=N,2325μm,0.9s					
NARO				AML	AML	
	comp=N,2325μm,0.9s					
NARO				AML	AML	
	comp=E,2170μm,1.1s					
RNI	**Roncone**	**1.82**	**9**	*e*Pn	**Pn**	**15 02 07.0 +0.5**
SACS	**San Casciano d**	**1.83**	**136**	*e*P	**Pn**	**15 02 05.8 -0.7**
SACS				AML	AML	
	comp=E,1440μm,1.6s					
SACS				AML	AML	
	comp=N,2115μm,1.6s					
SACS				AML	AML	
	comp=E,1405μm,1.6s					
SACS				AML	AML	
	comp=N,2070μm,1.6s					
SACS				AML	AML	
	comp=N,2115μm,1.6s					
SACS				AML	AML	
	comp=N,2070μm,1.6s					
SACS				AML	AML	
	comp=E,1440μm,1.6s					
SACS				AML	AML	
	comp=E,1405μm,1.6s					
SACS				AML	AML	
	comp=N,2115μm,1.6s					
SACS				AML	AML	
	comp=N,2070μm,1.6s					
SACS				AML	AML	
	comp=E,1440μm,1.6s					
SACS				AML	AML	
	comp=E,1405μm,1.6s					
NEGI	**Seborga**	**1.83**	**260**	P	**Pn**	**15 02 05.3 -1.2**
NEGI				AML	AML	
	comp=E,4705μm,0.8s					
NEGI				AML	AML	
	comp=N,5845μm,0.4s					
NEGI				AML	AML	
	comp=E,4705μm,0.8s					
NEGI				AML	AML	
	comp=N,5845μm,0.4s					
NEGI				AML	AML	
	comp=E,4705μm,0.8s					
NEGI				AML	AML	
	comp=N,5845μm,0.4s					
DOSS	**Dosso del Somm**	**1.84**	**22**	*e*Pn	**Pn**	**15 02 07.2 +0.5**
ATTE	**AVT- Monte Tez**	**1.85**	**121**	AML	AML	
	comp=N,4225μm,1.3s					
ATTE				AML	AML	
	comp=E,6265μm,1.3s					
ATTE				AML	AML	
	comp=N,4225μm,1.3s					
ATTE				AML	AML	
	comp=E,6265μm,1.3s					
ATTE				AML	AML	
	comp=N,4225μm,1.3s					
ATTE				AML	AML	
	comp=E,6265μm,1.3s					
MONC	**Moncucco Torin**	**1.85**	**300**	AML	AML	
	comp=N,15400μm,0.7s					
MONC				AML	AML	
	comp=E,13255μm,0.4s					
MONC				AML	AML	
	comp=E,13255μm,0.4s					
MONC				AML	AML	
	comp=N,15400μm,0.7s					
MONC				AML	AML	
	comp=E,13255μm,0.4s					
MONC				AML	AML	
	comp=N,15400μm,0.7s					
PGF	**Pioggiola**	**1.85**	**209**	*e*Pn	**Pn**	**15 02 05.8 -1.0**
PGF				*e*Sn	**Sn**	**15 02 28.3 -2.1**
	comp=N,496nm,0.2s,SNR=1.0					
PGF	**Pioggiola**	**1.85**	**209**	*e*Pn	**Pn**	**15 02 05.8 -1.0**
PGF				*e*Sn	**Sn**	**15 02 28.3 -2.1**
PGF	**Pioggiola**	**1.85**	**209**	*e*P	**Pn**	**15 02 05.8 -1.0**
PGF				*e*		15 02 28.3
MAON	**Monte Argentar**	**1.88**	**158**	AML	AML	
	comp=E,2835μm,0.8s					
MAON				AML	AML	
	comp=E,2835μm,0.8s					
MAON				AML	AML	
	comp=N,3000μm,1.3s					
MAON				AML	AML	
	comp=N,3000μm,1.3s					
MAON				AML	AML	
	comp=E,2835μm,0.8s					
MAON				AML	AML	
	comp=N,3000μm,1.3s					
MABI	**Malga Bissina**	**1.89**	**7**	*e*Pn	**Pn**	**15 02 07.9 +0.5**
MABI	**Malga Bissina**	**1.89**	**7**	AML	AML	
	comp=N,3630μm,0.8s					
MABI				AML	AML	
	comp=E,5485μm,0.7s					
MABI				AML	AML	
	comp=N,3630μm,0.8s					
MABI				AML	AML	
	comp=N,3630μm,0.8s					
MABI				AML	AML	
	comp=E,5485μm,0.7s					
MABI				AML	AML	
	comp=E,5485μm,0.7s					
MGAB	**Montegabbione**	**1.89**	**132**	*e*P	**Pn**	**15 02 06.4 -0.8**
MGAB				AML	AML	
	comp=E,3675μm,1.1s					
MGAB				AML	AML	
	comp=N,2980μm,0.7s					
MGAB				AML	AML	
	comp=E,3945μm,0.5s					
MGAB				AML	AML	
	comp=N,2995μm,0.8s					
MGAB				AML	AML	
	comp=E,3945μm,0.5s					
MGAB				AML	AML	
	comp=N,2980μm,0.7s					
MGAB				AML	AML	
	comp=N,2995μm,0.8s					
MGAB				AML	AML	
	comp=E,3675μm,1.1s					
MGAB				AML	AML	
	comp=E,3945μm,0.5s					
MGAB				AML	AML	
	comp=N,2980μm,0.7s					

MGAB				AML	AML	
	comp=N,2995μm,0.8s					
MGAB				AML	AML	
	comp=E,3675μm,1.1s					
ATFO	**Monte Foce - G**	**1.91**	**115**	AML	AML	
	comp=N,4115μm,1.5s					
ATFO				AML	AML	
	comp=E,4515μm,0.7s					
ATFO				AML	AML	
	comp=N,4115μm,1.5s					
ATFO				AML	AML	
	comp=E,4515μm,0.7s					
ATFO				AML	AML	
	comp=N,4115μm,1.5s					
ATFO				AML	AML	
	comp=E,4515μm,0.7s					
SAOF	**Saorge**	**1.91**	**265**	Pn	**Pn**	**15 02 07.5 -0.1**
SAOF				Sn	**Sn**	**15 02 31.6 -0.1**
MUGIO	**Muggio**	**1.92**	**335**	AML	AML	
	comp=N,5665μm,0.7s					
MUGIO				AML	AML	
	comp=E,5480μm,0.7s					
MUGIO				AML	AML	
	comp=N,5665μm,0.7s					
MUGIO				AML	AML	
	comp=E,5480μm,0.7s					
MUGIO				AML	AML	
	comp=N,5665μm,0.7s					
MUGIO				AML	AML	
	comp=E,5480μm,0.7s					
PESA	**Pesaro**	**1.92**	**96**	AML	AML	
	comp=E,6725μm,0.8s					
PESA				AML	AML	
	comp=E,6725μm,0.8s					
PESA				AML	AML	
	comp=N,5310μm,0.8s					
PESA				AML	AML	
	comp=E,6725μm,0.8s					
PESA				AML	AML	
	comp=N,5310μm,0.8s					
PESA				AML	AML	
	comp=N,5310μm,0.8s					
MURB	**Monte Urbino**	**1.92**	**118**	AML	AML	
	comp=N,10195μm,0.3s					
MURB				AML	AML	
	comp=E,8520μm,1.4s					
MURB				AML	AML	
	comp=N,9905μm,0.3s					
MURB				AML	AML	
	comp=E,9280μm,0.3s					
MURB				AML	AML	
	comp=N,10195μm,0.3s					
MURB				AML	AML	
	comp=N,9905μm,0.3s					
MURB				AML	AML	
	comp=E,9280μm,0.3s					
MURB				AML	AML	
	comp=N,10195μm,0.3s					
MURB				AML	AML	
	comp=E,8520μm,1.4s					
MURB				AML	AML	
	comp=N,9905μm,0.3s					
MURB				AML	AML	
	comp=E,9280μm,0.3s					
MURB				AML	AML	
	comp=E,8520μm,1.4s					
FSSB	**Fossombrone**	**1.93**	**104**	AML	AML	
	comp=N,9010μm,0.4s					
FSSB				AML	AML	
	comp=E,5345μm,0.9s					
FSSB				AML	AML	
	comp=N,9010μm,0.4s					
FSSB				AML	AML	
	comp=E,5345μm,0.9s					
FSSB				AML	AML	
	comp=E,5345μm,0.9s					
FSSB				AML	AML	
	comp=N,9010μm,0.4s					
MPAG	**Monte Paganucc**	**1.93**	**106**	AML	AML	
	comp=E,2830μm,0.9s					
MPAG				AML	AML	
	comp=N,3965μm,1.6s					
MPAG				AML	AML	
	comp=E,2830μm,0.9s					
MPAG				AML	AML	
	comp=N,3965μm,1.6s					
MPAG				AML	AML	
	comp=E,2830μm,0.9s					
MPAG				AML	AML	
	comp=N,3965μm,1.6s					
VARE	**Varese**	**1.96**	**330**	AML	AML	
	comp=N,10400μm,0.7s					
VARE				AML	AML	
	comp=E,8700μm,0.6s					
VARE				AML	AML	
	comp=N,10400μm,0.7s					
VARE				AML	AML	
	comp=E,8700μm,0.6s					
VARE				AML	AML	
	comp=N,10400μm,0.7s					
VARE				AML	AML	
	comp=E,8700μm,0.6s					
GAGG	**Gaggia**	**1.98**	**16**	*e*Pn	**Pn**	**15 02 09.2 +0.7**
ENR	**Entracque**	**2.00**	**272**	AML	AML	
	comp=E,2975μm,0.7s					
ENR				AML	AML	
	comp=E,2975μm,0.7s					
ENR				AML	AML	
	comp=N,3440μm,0.4s					
ENR				AML	AML	
	comp=N,3440μm,0.4s					
ENR				AML	AML	
	comp=E,2975μm,0.7s					
ENR				AML	AML	
	comp=N,3440μm,0.4s					
SBF	**Sospel**	**2.02**	**262**	*e*Pn	**Pn**	**15 02 08.4 -0.7**
SBF				*e*Sn	**Sn**	**15 02 33.9 -0.5**
SBF	**Sospel**	**2.02**	**262**	*e*Pn	**Pn**	**15 02 08.4 -0.7**
SBF				*e*Sn	**Sn**	**15 02 33.9 -0.5**
SBF	**Sospel**	**2.02**	**262**	*e*P	**Pn**	**15 02 08.4 -0.7**
SBF				*e*		15 02 33.9
CGRP	**Cima Grappa**	**2.04**	**33**	*e*Pn	**Pn**	**15 02 10.2 +0.7**
CGRP	**Cima Grappa**	**2.04**	**33**	AML	AML	
	comp=E,17700μm,0.7s					
CGRP				AML	AML	
	comp=N,11040μm,0.7s					
CGRP				AML	AML	
	comp=E,17700μm,0.7s					
CGRP				AML	AML	
	comp=N,11040μm,0.7s					
CGRP				AML	AML	
	comp=E,17700μm,0.7s					
CGRP				AML	AML	
	comp=N,11040μm,0.7s					
MON	**Monaco**	**2.05**	**258**	Pn	**Pn**	**15 02 09.5 0.0**
FOSV	**Fossato di Vic**	**2.06**	**115**	AML	AML	
	comp=E,2525μm,0.5s					
FOSV				AML	AML	
	comp=N,2790μm,1.6s					
FOSV				AML	AML	
	comp=E,2525μm,0.5s					
FOSV				AML	AML	
	comp=N,2790μm,1.6s					
FOSV				AML	AML	
	comp=E,2525μm,0.5s					
FOSV				AML	AML	
	comp=N,2790μm,1.6s					
ESCA	**l'Escarene**	**2.07**	**261**	Pn	**Pn**	**15 02 09.3 -0.4**
ARVD	**Arcevia**	**2.10**	**108**	AML	AML	
	comp=N,2230μm,0.8s					
ARVD				AML	AML	
	comp=E,2030μm,0.7s					
ARVD				AML	AML	
	comp=N,2230μm,0.8s					
ARVD				AML	AML	
	comp=N,2230μm,0.8s					
ARVD				AML	AML	
	comp=E,2030μm,0.7s					
ARVD				AML	AML	
	comp=E,2030μm,0.7s					
MTLO	**Montello**	**2.12**	**39**	*e*Pn	**Pn**	**15 02 10.6 +0.3**
MTLO				*e*Sn	**Sb**	**15 02 40.4 +0.8**
CTI	**Castel Tesino**	**2.13**	**28**	AML	AML	
	comp=E,12750μm,0.7s					
CTI				AML	AML	
	comp=E,12750μm,0.7s					
CTI				AML	AML	
	comp=N,11070μm,0.3s					
CTI				AML	AML	
	comp=N,11070μm,0.3s					
CTI				AML	AML	
	comp=E,12750μm,0.7s					
CTI				AML	AML	
	comp=N,11070μm,0.3s					
DOI	**San Damiano**	**2.14**	**280**	AML	AML	
	comp=N,6180μm,0.5s					
DOI				AML	AML	
	comp=E,6155μm,0.8s					
DOI				AML	AML	
	comp=N,6180μm,0.5s					
DOI				AML	AML	
	comp=N,6180μm,0.5s					
DOI				AML	AML	
	comp=E,6155μm,0.8s					
DOI				AML	AML	
	comp=E,6155μm,0.8s					
TRAV	**Traversella**	**2.19**	**308**	AML	AML	
	comp=E,5495μm,0.8s					
TRAV				AML	AML	
	comp=E,5495μm,0.8s					
TRAV				AML	AML	
	comp=N,5660μm,0.5s					
TRAV				AML	AML	
	comp=N,5660μm,0.5s					
TRAV				AML	AML	
	comp=N,5660μm,0.5s					
TRAV				AML	AML	
	comp=E,5495μm,0.8s					
SMPL	**Sampolo**	**2.19**	**198**	Pn	**Pn**	**15 02 11.8 +0.4**
SMPL				Sn	**Sn**	**15 02 37.8 -0.8**
SMPL	**Sampolo**	**2.19**	**198**	AML	AML	
SMPL				AML	AML	
SMPL				AML	AML	
SMPL				AML	AML	
SMPL				AML	AML	
SMPL				AML	AML	
SNTG	**Esanatoglia**	**2.20**	**114**	AML	AML	
	comp=N,2420μm,1.1s					
SNTG				AML	AML	
	comp=E,290μm,1.0s					
SNTG				AML	AML	
	comp=N,376μm,1.1s					
SNTG				AML	AML	
	comp=E,1870μm,1.2s					
SNTG				AML	AML	
	comp=E,1870μm,1.2s					
SNTG				AML	AML	
	comp=E,290μm,1.0s					
SNTG				AML	AML	
	comp=N,376μm,1.1s					
SNTG				AML	AML	
	comp=N,2420μm,1.1s					
SNTG				AML	AML	
	comp=E,1870μm,1.2s					
SNTG				AML	AML	
	comp=E,290μm,1.0s					
SNTG				AML	AML	
	comp=N,376μm,1.1s					
SNTG				AML	AML	
	comp=N,2420μm,1.1s					
BHB	**Bricherasio**	**2.20**	**288**	AML	AML	
	comp=N,3385μm,0.6s					
BHB				AML	AML	
	comp=E,3850μm,0.4s					
BHB				AML	AML	
	comp=N,3385μm,0.6s					
BHB				AML	AML	
	comp=E,3850μm,0.4s					
BHB				AML	AML	
	comp=N,3385μm,0.6s					
BHB				AML	AML	
	comp=E,3850μm,0.4s					
MOMA	**Monte Martano**	**2.21**	**128**	AML	AML	
	comp=E,2190μm,0.6s					
MOMA				AML	AML	
	comp=N,2080μm,0.7s					
MOMA				AML	AML	
	comp=E,2205μm,0.7s					
MOMA				AML	AML	
	comp=N,2180μm,0.7s					
MOMA				AML	AML	
	comp=N,2080μm,0.7s					
MOMA				AML	AML	
	comp=E,2205μm,0.7s					
MOMA				AML	AML	
	comp=E,2190μm,0.6s					
MOMA				AML	AML	
	comp=N,2180μm,0.7s					
MOMA				AML	AML	
	comp=N,2080μm,0.7s					
MOMA				AML	AML	
	comp=E,2205μm,0.7s					
MOMA				AML	AML	
	comp=E,2190μm,0.6s					
MOMA				AML	AML	
	comp=N,2180μm,0.7s					
BERNI	**Berninapass**	**2.23**	**357**	AML	AML	
	comp=N,2825μm,0.4s					
BERNI				AML	AML	
	comp=E,2940μm,0.6s					
BERNI				AML	AML	
	comp=N,2825μm,0.4s					
BERNI				AML	AML	
	comp=E,2940μm,0.6s					
BERNI				AML	AML	
	comp=N,2825μm,0.4s					
BERNI				AML	AML	
	comp=E,2940μm,0.6s					
PZZ	**Stroppo**	**2.23**	**279**	AML	AML	
	comp=N,4355μm,0.5s					
PZZ				AML	AML	
	comp=E,3720μm,0.4s					
PZZ				AML	AML	
	comp=N,4355μm,0.5s					
PZZ				AML	AML	
	comp=N,4355μm,0.5s					
PZZ				AML	AML	
	comp=E,3720μm,0.4s					
PZZ				AML	AML	
	comp=E,3720μm,0.4s					
SENI	**Senigallia**	**2.25**	**101**	AML	AML	
	comp=E,8015μm,1.6s					
SENI				AML	AML	
	comp=E,8015μm,1.6s					
SENI				AML	AML	
	comp=N,8790μm,0.8s					
SENI				AML	AML	
	comp=E,4335μm,1.5s					
SENI				AML	AML	
	comp=N,6775μm,1.0s					
SENI				AML	AML	
	comp=E,8015μm,1.6s					
SENI				AML	AML	
	comp=N,6775μm,1.0s					
SENI				AML	AML	
	comp=N,8790μm,0.8s					
SENI				AML	AML	
	comp=E,4335μm,1.5s					
SENI				AML	AML	
	comp=N,6775μm,1.0s					
SENI				AML	AML	
	comp=N,8790μm,0.8s					
SENI				AML	AML	
	comp=E,4335μm,1.5s					
ISO	**Isola**	**2.26**	**271**	Pn	**Pn**	**15 02 12.3 -0.2**
ISO				Sn	**Sn**	**15 02 40.3 -0.2**
CESI	**CESI - Serrava**	**2.29**	**120**	AML	AML	
	comp=N,1045μm,0.5s					
CESI				AML	AML	
	comp=E,393μm,0.9s					
CESI				AML	AML	
	comp=N,1045μm,0.5s					
CESI				AML	AML	
	comp=E,393μm,0.9s					
CESI				AML	AML	
	comp=N,1045μm,0.5s					
CESI				AML	AML	
	comp=E,393μm,0.9s					
BRMO	**Bormio**	**2.30**	**3**	AML	AML	
	comp=E,2225μm,0.7s					
BRMO				AML	AML	
	comp=E,2225μm,0.7s					
BRMO				AML	AML	
	comp=N,2025μm,1.3s					
BRMO				AML	AML	
	comp=N,2025μm,1.3s					
BRMO				AML	AML	
	comp=N,2025μm,1.3s					
BRMO				AML	AML	
	comp=E,2225μm,0.7s					
BRMO				AML	AML	
	comp=E,2225μm,0.7s					
RSP	**Reno Superiore**	**2.30**	**296**	AML	AML	
	comp=E,3215μm,0.8s					
RSP				AML	AML	
	comp=E,3215μm,0.8s					
RSP				AML	AML	
	comp=N,2245μm,0.6s					
RSP				AML	AML	
	comp=N,2245μm,0.6s					
RSP				AML	AML	
	comp=N,2245μm,0.6s					
RSP				AML	AML	
	comp=E,3215μm,0.8s					
CESX	**Cesi**	**2.34**	**131**	AML	AML	
	comp=E,2105μm,0.5s					
CESX				AML	AML	
	comp=E,2105μm,0.5s					
CESX				AML	AML	
	comp=N,1895μm,0.9s					
CESX				AML	AML	
	comp=N,1895μm,0.9s					
CESX				AML	AML	
	comp=E,2105μm,0.5s					
CESX				AML	AML	
	comp=N,1895μm,0.9s					
SATI	**Passo dei Sala**	**2.36**	**317**	AML	AML	
	comp=N,5490μm,0.9s					
SATI				AML	AML	
	comp=E,5835μm,0.7s					
SATI				AML	AML	
	comp=N,5490μm,0.9s					
SATI				AML	AML	
	comp=E,5835μm,0.7s					
SATI				AML	AML	
	comp=N,5490μm,0.9s					
SATI				AML	AML	
	comp=E,5835μm,0.7s					
TUE	**Stuetta**	**2.37**	**346**	*e*Pn	**Pn**	**15 02 15.1 +1.1**
TUE	**Stuetta**	**2.37**	**346**	AML	AML	
	comp=N,5085μm,0.5s					
TUE				AML	AML	
	comp=E,4220μm,0.4s					
TUE				AML	AML	
	comp=N,4195μm,0.5s					
TUE				AML	AML	
	comp=E,5630μm,0.4s					
TUE				AML	AML	
	comp=N,5085μm,0.5s					
TUE				AML	AML	
	comp=E,5630μm,0.4s					
TUE				AML	AML	
	comp=N,5085μm,0.5s					
TUE				AML	AML	
	comp=N,4195μm,0.5s					
TUE				AML	AML	
	comp=E,4220μm,0.4s					
TUE				AML	AML	
	comp=E,5630μm,0.4s					
TUE				AML	AML	
	comp=N,4195μm,0.5s					
TUE				AML	AML	
	comp=E,4220μm,0.4s					
FDMO	**Fiordimonte**	**2.39**	**118**	AML	AML	
	comp=N,1730μm,1.0s					
FDMO				AML	AML	
	comp=E,1650μm,0.7s					
FDMO				AML	AML	
	comp=N,1730μm,1.0s					
FDMO				AML	AML	
	comp=N,1730μm,1.0s					
FDMO				AML	AML	
	comp=E,1650μm,0.7s					
FDMO				AML	AML	
	comp=E,1650μm,0.7s					
KOSI	**Kohlern**	**2.43**	**20**	AML	AML	
	comp=E,9380μm,0.8s					
KOSI				AML	AML	
	comp=E,9380μm,0.8s					
KOSI				AML	AML	
	comp=N,6725μm,0.9s					
KOSI				AML	AML	
	comp=N,6725μm,0.9s					
KOSI				AML	AML	
	comp=N,6725μm,0.9s					
KOSI				AML	AML	
	comp=E,9380μm,0.8s					
FUORN	**Ofenpass-Fuorn**	**2.44**	**1**	*e*Pn	**Pn**	**15 02 16.0 +1.0**
FUORN	**Ofenpass-Fuorn**	**2.44**	**1**	AML	AML	
	comp=N,3520μm,1.3s					
FUORN				AML	AML	
	comp=E,2415μm,1.6s					
FUORN				AML	AML	
	comp=E,2415μm,1.6s					
FUORN				AML	AML	
	comp=N,3520μm,1.3s					
FUORN				AML	AML	
	comp=E,2415μm,1.6s					
FUORN				AML	AML	
	comp=N,3520μm,1.3s					
BOSI	**Bolzano**	**2.44**	**19**	AML	AML	
	comp=N,21700μm,1.2s					
BOSI				AML	AML	
	comp=E,19800μm,0.9s					
BOSI				AML	AML	
	comp=E,19800μm,0.9s					
BOSI				AML	AML	
	comp=N,21700μm,1.2s					
BOSI				AML	AML	
	comp=E,19800μm,0.9s					
BOSI				AML	AML	
	comp=N,21700μm,1.2s					
MOSI	**Grossmontoni**	**2.44**	**6**	AML	AML	
	comp=N,15100μm,0.8s					
MOSI				AML	AML	
	comp=E,7795μm,1.0s					
MOSI				AML	AML	
	comp=N,15100μm,0.8s					
MOSI				AML	AML	
	comp=E,7795μm,1.0s					
MOSI				AML	AML	
	comp=E,7795μm,1.0s					
MOSI				AML	AML	
	comp=N,15100μm,0.8s					
MMK	**Mattmark**	**2.45**	**321**	AML	AML	
	comp=E,2430μm,0.7s					
MMK				AML	AML	
	comp=N,3205μm,0.5s					
MMK				AML	AML	
	comp=E,2430μm,0.7s					
MMK				AML	AML	
	comp=N,3205μm,0.5s					
MMK				AML	AML	
	comp=E,2430μm,0.7s					
MMK				AML	AML	
	comp=N,3205μm,0.5s					
POLC	**Polcenigo**	**2.46**	**41**	AML	AML	
	comp=E,6485μm,0.6s					
POLC				AML	AML	
	comp=N,14200μm,1.2s					
POLC				AML	AML	
	comp=E,6485μm,0.6s					
POLC				AML	AML	
	comp=N,14200μm,1.2s					
POLC				AML	AML	
	comp=E,6485μm,0.6s					
POLC				AML	AML	
	comp=N,14200μm,1.2s					
ARRO	**Arrone**	**2.47**	**130**	AML	AML	
	comp=N,1575μm,1.2s					
ARRO				AML	AML	
	comp=E,1415μm,1.0s					
ARRO				AML	AML	
	comp=N,1575μm,1.2s					
ARRO				AML	AML	
	comp=E,1415μm,1.0s					
ARRO				AML	AML	
	comp=N,1575μm,1.2s					
ARRO				AML	AML	
	comp=E,1415μm,1.0s					
TOLF	**Tolfa**	**2.50**	**147**	AML	AML	
	comp=E,877μm,0.8s					
TOLF				AML	AML	
	comp=N,868μm,0.8s					
TOLF				AML	AML	
	comp=E,877μm,0.8s					

TOLF				AML	AML	
	comp=N,868µm,0.8s					
TOLF				AML	AML	
	comp=E,877µm,0.8s					
TOLF				AML	AML	
	comp=N,868µm,0.8s					
MBDF	**Montbardon**	**2.51 284**	*e*Pn	**Pn**		**15 02 15.6 -0.3**
MBDF			*e*Sn	**Sn**		**15 02 46.7 0.0**
	comp=N,1µm,0.5s					
MBDF	**Montbardon**	**2.51 284**	*e*Pn	**Pn**		**15 02 15.6 -0.3**
MBDF			*e*Sn	**Sn**		**15 02 46.7 0.0**
MBDF	**Montbardon**	**2.51 284**	*e*P	**Pn**		**15 02 15.6 -0.3**
MBDF			*e*			15 02 46.7
FUSIO	**Fusio**	**2.52 335**	AML	AML		
	comp=E,3770µm,0.6s					
FUSIO			AML	AML		
	comp=E,3770µm,0.6s					
FUSIO			AML	AML		
	comp=N,2775µm,0.7s					
FUSIO			AML	AML		
	comp=N,2775µm,0.7s					
FUSIO			AML	AML		
	comp=E,3770µm,0.6s					
FUSIO			AML	AML		
	comp=N,2775µm,0.7s					
NRCA	**Norcia**	**2.52 121**	AML	AML		
	comp=E,1225µm,0.7s					
NRCA			AML	AML		
	comp=E,1225µm,0.7s					
NRCA			AML	AML		
	comp=N,1645µm,0.7s					
NRCA			AML	AML		
	comp=N,1645µm,0.7s					
NRCA			AML	AML		
	comp=N,1645µm,0.7s					
NRCA			AML	AML		
	comp=E,1225µm,0.7s					
LSD	**Lago del Serru**	**2.52 301**	AML	AML		
	comp=E,1685µm,0.7s					
LSD			AML	AML		
	comp=N,1800µm,0.4s					
LSD			AML	AML		
	comp=N,1800µm,0.4s					
LSD			AML	AML		
	comp=E,1685µm,0.7s					
LSD			AML	AML		
	comp=N,1800µm,0.4s					
LSD			AML	AML		
	comp=E,1685µm,0.7s					
RRL	**Rocca Remolon**	**2.54 288**	AML	AML		
	comp=E,2160µm,0.8s					
RRL			AML	AML		
	comp=E,2160µm,0.8s					
RRL			AML	AML		
	comp=N,1760µm,1.0s					
RRL			AML	AML		
	comp=N,1760µm,1.0s					
RRL			AML	AML		
	comp=E,2160µm,0.8s					
RRL			AML	AML		
	comp=N,1760µm,1.0s					
DAVOX	**Davos/Dischmat**	**2.61 355**	Pn	**Pb**		**15 02 19.3 -2.5**
	comp=N,71nm,0.3s,baz=173,slow=10,SNR=153					
DAVOX			Sn	**Sb**		**15 02 52.4 -1.5**
	comp=N,387nm,0.3s,baz=348,slow=19,SNR=12					
DAVOX			LR	LR		15 03 49.4
	comp=N,5µm,19.1s,baz=252,slow=51					
DAVOX	**Davos/Dischmat**	**2.61 355**	AML	AML		
	comp=E,2225µm,0.9s					
DAVOX			AML	AML		
	comp=N,3505µm,1.1s					
DAVOX			AML	AML		
	comp=E,2225µm,0.9s					
DAVOX			AML	AML		
	comp=N,3505µm,1.1s					
DAVOX			AML	AML		
	comp=E,2225µm,0.9s					
DAVOX			AML	AML		
	comp=N,3505µm,1.1s					
LNSS	**Leonessa**	**2.61 126**	AML	AML		
	comp=N,2445µm,1.1s					
LNSS			AML	AML		
	comp=E,3415µm,0.5s					
LNSS			AML	AML		
	comp=N,2445µm,1.1s					
LNSS			AML	AML		
	comp=E,3415µm,0.5s					
LNSS			AML	AML		
	comp=E,3415µm,0.5s					
LNSS			AML	AML		
	comp=N,2445µm,1.1s					
FRF	**La Foret Royal**	**2.64 258**	*e*Pn	**Pn**		**15 02 17.0 -0.6**
FRF			*e*Sn	**Sn**		**15 02 47.8 -1.9**
	comp=N,915nm,0.4s					
FRF	**La Foret Royal**	**2.64 258**	*e*Pn	**Pn**		**15 02 17.0 -0.6**
FRF			*e*Sn	**Sn**		**15 02 47.8 -1.9**
FRF	**La Foret Royal**	**2.64 258**	*e*P	**Pn**		**15 02 17.0 -0.6**
FRF			*e*			15 02 47.8
BNI	**Bardonecchia**	**2.66 290**	*e*Pn	**Pn**		**15 02 18.7 +0.8**
BNI	**Bardonecchia**	**2.66 290**	*e*P	**Pn**		**15 02 18.7 +0.8**
REMY	**Saint-Rhmy-en**	**2.72 309**	AML	AML		
	comp=N,8725µm,0.7s					
REMY			AML	AML		
	comp=E,5360µm,0.8s					
REMY			AML	AML		
	comp=N,8725µm,0.7s					
REMY			AML	AML		
	comp=E,5360µm,0.8s					
REMY			AML	AML		
	comp=N,8725µm,0.7s					
REMY			AML	AML		
	comp=E,5360µm,0.8s					
MRGE	**Morge**	**2.73 307**	AML	AML		
	comp=N,3805µm,0.7s					
MRGE			AML	AML		
	comp=E,2760µm,0.6s					
MRGE			AML	AML		
	comp=E,2760µm,0.6s					
MRGE			AML	AML		
	comp=N,3805µm,0.7s					
MRGE			AML	AML		
	comp=E,2760µm,0.6s					
MRGE			AML	AML		
	comp=N,3805µm,0.7s					
STAL	**STALIGIAL**	**2.73 40**	AML	AML		
	comp=N,3865µm,1.3s					
STAL			AML	AML		
	comp=E,5280µm,0.7s					
STAL			AML	AML		
	comp=N,3660µm,1.6s					
STAL			AML	AML		
	comp=E,7305µm,0.7s					
STAL			AML	AML		
	comp=N,3865µm,1.3s					
STAL			AML	AML		
	comp=N,3865µm,1.3s					
STAL			AML	AML		
	comp=E,5280µm,0.7s					
STAL			AML	AML		
	comp=E,7305µm,0.7s					
STAL			AML	AML		
	comp=N,3660µm,1.6s					
STAL			AML	AML		
	comp=E,5280µm,0.7s					
STAL			AML	AML		
	comp=E,7305µm,0.7s					
STAL			AML	AML		
	comp=N,3660µm,1.6s					
DIX	**Grande Dixence**	**2.74 315**	AML	AML		
	comp=E,3895µm,0.7s					
DIX			AML	AML		
	comp=E,3895µm,0.7s					
DIX			AML	AML		
	comp=N,3935µm,0.7s					
DIX			AML	AML		
	comp=N,3935µm,0.7s					
DIX			AML	AML		
	comp=E,3895µm,0.7s					
DIX			AML	AML		
	comp=N,3935µm,0.7s					
LPG	**La Plagne**	**2.78 299**	*e*Pn	**Pn**		**15 02 21.0 +1.3**
LPG			*e*Sn	**Sn**		**15 02 53.6 +0.1**
	comp=N,1µm,0.6s					
LPG	**La Plagne**	**2.78 299**	*e*Pn	**Pn**		**15 02 21.0 +1.3**
LPG			*e*Sn	**Sn**		**15 02 53.6 +0.1**
LPG	**La Plagne**	**2.78 299**	*e*P	**Pn**		**15 02 21.0 +1.3**
LPG			*e*			15 02 53.6
LPL	**La Plagne**	**2.80 300**	*e*Pn	**Pn**		**15 02 21.7 +1.7**
LPL			*e*Sn	**Sn**		**15 02 54.6 +0.7**
	comp=N,726nm,0.5s					
LPL	**La Plagne**	**2.80 300**	*e*Pn	**Pn**		**15 02 21.7 +1.7**
LPL			*e*Sn	**Sn**		**15 02 54.6 +0.7**
LPL	**La Plagne**	**2.80 300**	*e*P	**Pn**		**15 02 21.7 +1.7**
LPL			*e*			15 02 54.6
LMR	**La Mourre**	**2.80 254**	*e*Pn	**Pn**		**15 02 19.0 -0.8**
LMR			*e*Sn	**Sn**		**15 02 51.7 -1.9**
	comp=N,338nm,0.3s					
LMR	**La Mourre**	**2.80 254**	*e*Pn	**Pn**		**15 02 19.0 -0.8**
LMR			*e*Sn	**Sn**		**15 02 51.7 -1.9**
LMR	**La Mourre**	**2.80 254**	*e*P	**Pn**		**15 02 19.0 -0.8**
LMR			*e*			15 02 51.7
MTCE	**Montecelio**	**2.85 138**	AML	AML		
	comp=E,696µm,0.6s					
MTCE			AML	AML		
	comp=N,453µm,1.5s					
MTCE			AML	AML		
	comp=N,453µm,1.5s					
MTCE			AML	AML		
	comp=E,696µm,0.6s					
MTCE			AML	AML		
	comp=N,453µm,1.5s					
MTCE			AML	AML		
	comp=E,696µm,0.6s					
FETA	**Feichten**	**2.86 7**	Pn	**Pn**		**15 02 22.6 +1.8**
	comp=E,6.5nm,0.4s,SNR=99					
FETA			Sn	**Sb**		**15 03 00.0 -1.2**
	comp=E,462nm,0.9s					
FIAM	**Fiamignano**	**2.87 131**	AML	AML		
	comp=E,1575µm,0.8s					
FIAM			AML	AML		
	comp=E,1575µm,0.8s					
FIAM			AML	AML		
	comp=N,1155µm,0.8s					
FIAM			AML	AML		
	comp=E,1575µm,0.8s					
FIAM			AML	AML		
	comp=N,1155µm,0.8s					
FIAM			AML	AML		
	comp=N,1155µm,0.8s					
ROSI	**Rosskopf**	**2.87 17**	AML	AML		
	comp=N,5845µm,1.3s					
ROSI			AML	AML		
	comp=E,5665µm,0.5s					
ROSI			AML	AML		
	comp=N,5845µm,1.3s					
ROSI			AML	AML		
	comp=E,5665µm,0.5s					
ROSI			AML	AML		
	comp=N,5845µm,1.3s					
ROSI			AML	AML		
	comp=E,5665µm,0.5s					
PLONS	**Plons/SG**	**2.92 349**	AML	AML		
	comp=N,1915µm,1.2s					
PLONS			AML	AML		
	comp=E,1920µm,0.7s					
PLONS			AML	AML		
	comp=N,1915µm,1.2s					
PLONS			AML	AML		
	comp=E,1920µm,0.7s					
PLONS			AML	AML		
	comp=E,1920µm,0.7s					
PLONS			AML	AML		
	comp=N,1915µm,1.2s					
T0104	**Madonna delle**	**2.93 127**	AML	AML		
	comp=E,1855µm,0.8s					
T0104			AML	AML		
	comp=E,1855µm,0.8s					
T0104			AML	AML		
	comp=N,2085µm,0.7s					
T0104			AML	AML		
	comp=E,1830µm,0.8s					
T0104			AML	AML		
	comp=N,2130µm,0.7s					
T0104			AML	AML		
	comp=N,2085µm,0.7s					
T0104			AML	AML		
	comp=E,1855µm,0.8s					
T0104			AML	AML		
	comp=E,1830µm,0.8s					
T0104			AML	AML		
	comp=N,2130µm,0.7s					
T0104			AML	AML		
	comp=N,2085µm,0.7s					
T0104			AML	AML		
	comp=E,1830µm,0.8s					
T0104			AML	AML		
	comp=N,2130µm,0.7s					
GUMA	**Gualdo di Mace**	**2.94 111**	AML	AML		
	comp=N,8960µm,0.5s					
GUMA			AML	AML		
	comp=E,9210µm,0.5s					
GUMA			AML	AML		
	comp=E,11350µm,0.5s					
GUMA			AML	AML		
	comp=N,7860µm,0.7s					
GUMA			AML	AML		
	comp=E,11350µm,0.5s					
GUMA			AML	AML		
	comp=N,7860µm,0.7s					
GUMA			AML	AML		
	comp=E,9210µm,0.5s					
GUMA			AML	AML		
	comp=N,8960µm,0.5s					
GUMA			AML	AML		
	comp=E,11350µm,0.5s					
GUMA			AML	AML		
	comp=N,7860µm,0.7s					
GUMA			AML	AML		
	comp=E,9210µm,0.5s					
GUMA			AML	AML		
	comp=N,8960µm,0.5s					
BNALP	**Bannalp**	**2.96 336**	AML	AML		
	comp=N,2730µm,1.0s					
BNALP			AML	AML		
	comp=E,3200µm,0.8s					
BNALP			AML	AML		
	comp=N,2730µm,1.0s					
BNALP			AML	AML		
	comp=E,3200µm,0.8s					
BNALP			AML	AML		
	comp=E,3200µm,0.8s					
BNALP			AML	AML		
	comp=N,2730µm,1.0s					
AQU	**L'Aquila**	**2.97 127**	*e*Pn	**Pn**		**15 02 23.1 +1.0**
AQU	**L'Aquila**	**2.97 127**	*e*P	**Pn**		**15 02 23.1 +1.0**
AQU	**L'Aquila**	**2.97 127**	*e*Pn	**Pn**		**15 02 23.7 +1.6**
SENIN	**Lac Senin/Sane**	**2.99 318**	*e*Pn	**Pb**		**15 02 25.1 -3.2**
SABO	**M.te Sabotino**	**3.01 52**	AML	AML		
	comp=E,5420µm,1.6s					
SABO			AML	AML		
	comp=N,6050µm,0.6s					
SABO			AML	AML		
	comp=N,6050µm,0.6s					
SABO			AML	AML		
	comp=E,5420µm,1.6s					
SABO			AML	AML		
	comp=N,6050µm,0.6s					
SABO			AML	AML		
	comp=E,5420µm,1.6s					
FVI	**Forni Avoltri**	**3.02 36**	AML	AML		
	comp=N,3160µm,1.4s					
FVI			AML	AML		
	comp=E,2360µm,0.6s					
FVI			AML	AML		
	comp=E,2360µm,0.6s					
FVI			AML	AML		
	comp=N,3160µm,1.4s					
FVI			AML	AML		
	comp=E,2360µm,0.6s					
FVI			AML	AML		
	comp=N,3160µm,1.4s					
SKDS	**Skadanscina**	**3.04 62**	*i* Pn	**Pn**		**15 02 22.4 -0.7**
SKDS			*i* Sn	**Sn**		**15 02 58.5 -0.9**
	comp=Z,444nm,0.4s					
ABTA	**Abfaltersbach**	**3.04 32**	*e*Pn	**Pn**		**15 02 24.7 +1.6**
	comp=Z,70nm,0.3s,SNR=136					
RISI	**Rein**	**3.06 25**	AML	AML		
	comp=N,8660µm,0.4s					
RISI			AML	AML		
	comp=E,8000µm,0.6s					
RISI			AML	AML		
	comp=N,8660µm,0.4s					
RISI			AML	AML		
	comp=E,8000µm,0.6s					
RISI			AML	AML		
	comp=N,8660µm,0.4s					
RISI			AML	AML		
	comp=E,8000µm,0.6s					
DAVA	**Damuels**	**3.11 356**	*e*Pn	**Pn**		**15 02 26.5 +2.3**
	comp=E,380nm,0.5s,SNR=177					
DAVA			*e*Sn	**Sb**		**15 03 05.5 -2.9**
	comp=E,582nm,0.5s					
SQTA	**Sankt Quirin**	**3.12 13**	*e*Pn	**Pn**		**15 02 26.5 +2.2**
	comp=E,97nm,0.2s,SNR=214					
SQTA			Sn	**Sb**		**15 03 08.6 0.0**
	comp=E,497nm,0.3s					
ORIF	**Oris-en-Rattie**	**3.17 285**	*e*Pn	**Pn**		**15 02 26.0 +1.1**
ORIF			*e*Sn	**Sn**		**15 03 02.8 -0.1**
ORIF	**Oris-en-Rattie**	**3.17 285**	*e*Pn	**Pn**		**15 02 26.0 +1.1**
ORIF			*e*Sn	**Sn**		**15 03 02.8 -0.1**
ORIF	**Oris-en-Rattie**	**3.17 285**	*e*P	**Pn**		**15 02 26.0 +1.1**
ORIF			*e*			15 03 02.8
VCEL	**Villa Celiera**	**3.21 123**	AML	AML		
	comp=E,2210µm,0.6s					
VCEL			AML	AML		
	comp=E,2210µm,0.6s					
VCEL			AML	AML		
	comp=N,1705µm,0.9s					
VCEL			AML	AML		
	comp=E,2210µm,0.6s					
VCEL			AML	AML		
	comp=N,1705µm,0.9s					
VCEL			AML	AML		
	comp=N,1705µm,0.9s					
MOTA	**Moosalm**	**3.23 11**	*e*Pn	**Pn**		**15 02 27.9 +2.1**
	comp=N,64nm,0.4s,SNR=484					
ARTF	**Artigues**	**3.23 261**	Pn	**Pn**		**15 02 26.0 +0.3**
CADS	**Cadrg**	**3.23 50**	*i* Pn	**Pn**		**15 02 25.4 -0.3**
CADS			*e*Sn	**Sn**		**15 03 04.6 +0.3**
	comp=Z,1µm,0.7s					
WTTA	**Wattenberg**	**3.24 18**	*i* Pn	**Pn**		**15 02 27.9 +1.9**
	comp=Z,16nm,0.1s,SNR=173					
WTTA			*e*Sn	**Sb**		**15 03 09.5 -2.7**
	comp=Z,763nm,0.4s					
WTTA	**Wattenberg**	**3.24 18**	AML	AML		
	comp=E,4150µm,0.9s					
WTTA			AML	AML		
	comp=N,4310µm,0.9s					
WTTA			AML	AML		
	comp=N,4310µm,0.9s					
WTTA			AML	AML		
	comp=E,4150µm,0.9s					
WTTA			AML	AML		
	comp=N,4310µm,0.9s					
WTTA			AML	AML		
	comp=E,4150µm,0.9s					
ASEAF	**Site Antares,**	**3.25 246**	Pn	**Pn**		**15 02 26.3 +0.8**
ASEAF			Sn	**Sn**		**15 03 03.8 -0.3**
RIY	**Rijeka**	**3.26 68**	*e*Pn	**Pn**		**15 02 25.7 -0.4**
WATA	**Walderalm**	**3.30 17**	*e*Pn	**Pn**		**15 02 28.7 +2.0**
	comp=E,6.7nm,0.2s,SNR=262					
ACOM	**Acomizza, Ital**	**3.33 44**	AML	AML		
	comp=N,4345µm,0.7s					
ACOM			AML	AML		
	comp=E,4610µm,1.2s					
ACOM			AML	AML		
	comp=N,4345µm,0.7s					
ACOM			AML	AML		
	comp=E,4610µm,1.2s					
ACOM			AML	AML		
	comp=E,4610µm,1.2s					
ACOM			AML	AML		
	comp=N,4345µm,0.7s					
RETA	**Reutte**	**3.33 7**	*e*Pn	**Pn**		**15 02 29.4 +2.3**
	comp=N,26nm,0.3s,SNR=53					
RETA			*e*Sn	**Sb**		**15 03 11.0 -3.6**
	comp=N,185nm,0.6s					
SMRF	**Simiane la Rot**	**3.34 268**	*e*Pn	**Pn**		**15 02 27.9 +0.7**
SMRF			*e*Sn	**Sn**		**15 03 06.4 -0.5**
	comp=N,525nm,0.5s					
SMRF	**Simiane la Rot**	**3.34 268**	*e*Pn	**Pn**		**15 02 27.9 +0.7**
SMRF			*e*Sn	**Sn**		**15 03 06.4 -0.5**
NVLJ	**Novalja**	**3.37 82**	*i* Pn	**Pn**		**15 02 28.5 +0.9**
NVLJ			Sn	**Sn**		**15 03 06.1 -1.6**
CEY	**Cerknica**	**3.38 61**	*e*Pn	**Pn**		**15 02 26.7 -1.1**
RUSF	**Rustrel**	**3.41 268**	Pn	**Pn**		**15 02 29.2 +1.1**
MYKA	**Terra Mystica**	**3.44 44**	*e*Pn	**Pn**		**15 02 30.4 +1.7**
	comp=N,45nm,0.4s,SNR=36					
MYKA			Sn	**Sb**		**15 03 15.1 -2.8**
	comp=N,232nm,0.4s					
GIUL	**Giuliano Di Ro**	**3.46 138**	AML	AML		
	comp=E,259µm,1.6s					
GIUL			AML	AML		
	comp=N,297µm,1.6s					
GIUL			AML	AML		
	comp=N,297µm,1.6s					
GIUL			AML	AML		
	comp=E,259µm,1.6s					
GIUL			AML	AML		
	comp=N,297µm,1.6s					
GIUL			AML	AML		
	comp=E,259µm,1.6s					
INTR	**Introdacqua**	**3.48 127**	AML	AML		
	comp=E,991µm,0.9s					
INTR			AML	AML		
	comp=N,1510µm,0.7s					
INTR			AML	AML		
	comp=N,1510µm,0.7s					
INTR			AML	AML		
	comp=E,991µm,0.9s					
INTR			AML	AML		
	comp=N,1510µm,0.7s					
INTR			AML	AML		
	comp=E,991µm,0.9s					
ARBF	**Arbois**	**3.59 261**	Pn	**Pn**		**15 02 31.4 +0.9**
LJU	**Ljubljana**	**3.59 57**	*e*Pn	**Pn**		**15 02 30.6 0.0**
LJU	**Ljubljana**	**3.59 57**	AML	AML		
	comp=E,4465µm,0.7s					
LJU			AML	AML		
	comp=E,4465µm,0.7s					
LJU			AML	AML		
	comp=N,3670µm,0.5s					
LJU			AML	AML		
	comp=N,3670µm,0.5s					
LJU			AML	AML		
	comp=E,4465µm,0.7s					
LJU			AML	AML		
	comp=N,3670µm,0.5s					
GIMEL	**St. Georges /**	**3.63 312**	AML	AML		
	comp=E,875µm,1.6s					
GIMEL			AML	AML		
	comp=E,875µm,1.6s					
GIMEL			AML	AML		
	comp=N,1003µm,1.6s					
GIMEL			AML	AML		
	comp=N,1003µm,1.6s					
GIMEL			AML	AML		
	comp=E,875µm,1.6s					
GIMEL			AML	AML		
	comp=N,1003µm,1.6s					
KBA	**Koelnbreinsper**	**3.64 36**	*e*Pn	**Pn**		**15 02 33.7 +2.2**
	comp=N,47nm,0.3s,SNR=76					
KBA			Sn	**Sb**		**15 03 19.4 -4.3**
	comp=N,200nm,0.4s					
CABF	**La Chapelle**	**3.78 311**	*e*Pn	**Pn**		**15 02 34.4 +1.1**
CABF			*e*Sn	**Sn**		**15 03 17.6 -0.2**
	comp=N,870nm,0.8s					
CABF	**La Chapelle**	**3.78 311**	*e*Pn	**Pn**		**15 02 34.4 +1.1**
CABF			*e*Sn	**Sn**		**15 03 17.6 -0.2**
CABF	**La Chapelle**	**3.78 311**	*e*P	**Pn**		**15 02 34.4 +1.1**
CABF			*e*			15 03 17.6
BOJS	**Bojanci**	**3.83 68**	AML	AML		
	comp=N,1300µm,1.5s					
BOJS			AML	AML		
	comp=E,1045µm,1.3s					
BOJS			AML	AML		
	comp=N,1300µm,1.5s					
BOJS			AML	AML		
	comp=E,1045µm,1.3s					
BOJS			AML	AML		
	comp=N,1300µm,1.5s					
BOJS			AML	AML		
	comp=E,1045µm,1.3s					
OBKA	**Obir**	**3.85 51**	*i* Pn	**Pn**		**15 02 34.6 +0.4**
	comp=E,12nm,0.2s,SNR=74					
OBKA			Sn	**Sb**		**15 03 26.0 -3.6**
	comp=E,1µm,0.7s					
VIVF	**Saint-Julien-l**	**4.01 282**	*e*Pn	**Pn**		**15 02 36.8 +0.4**
VIVF	**Saint-Julien-l**	**4.01 282**	*e*P	**Pn**		**15 02 40.2 +3.8**
VIVF			*e*Sn	**Sn**		**15 03 21.9 -1.5**
	comp=E,60nm,0.3s					
VIVF	**Saint-Julien-l**	**4.01 282**	*e*Pn	**Pn**		**15 02 36.8 +0.4**

VIVF *e*Pg Pb 15 02 40.2 -5.4
VIVF *e*Sn **Sn** **15 03 21.9 -1.5**
VIVF Saint-Julien-l 4.01 282 *e*P **Pn** **15 02 36.8 +0.4**
VIVF *e* 15 03 21.9
UDBI Udbina 4.01 83 *e*Pn **Pn** **15 02 38.3 +1.9**
UDBI Sn **Sn** **15 03 25.0 +1.6**
CRES Cresnjev 4.08 64 *e*Pn **Pn** **15 02 37.4 +0.1**
SSB Saint Sauveur 4.18 287 *e*Pn **Pn** **15 02 38.8 +0.1**
SSB Saint Sauveur 4.18 287 *e*P **Pn** **15 02 38.8 +0.1**
SOKA Soboth 4.22 52 *e*Pn **Pn** **15 02 40.0 +0.6**
comp=E,12nm,0.4s,SNR=83
SOKA Sn **Sn** **15 03 31.9 +3.2**
comp=E,84nm,0.4s
HINF Hinteralfeld 4.32 329 *e*Pn **Pn** **15 02 41.6 +1.0**
HINF *e*Sn **Sn** **15 03 30.7 -0.3**
comp=E,368nm,0.3s
HINF Hinteralfeld 4.32 329 *e*Pn **Pn** **15 02 41.6 +1.0**
HINF *e*Sn **Sn** **15 03 30.7 -0.3**
BFO Black Forest 4.34 343 *e*Pn **Pn** **15 02 40.8 -0.2**
BFO Black Forest 4.34 343 *e*P **Pn** **15 02 40.8 -0.2**
ECH Echery 4.55 333 *e*Pn **Pn** **15 02 43.9 +0.1**
ECH Echery 4.55 333 *e*P **Pn** **15 02 43.9 +0.1**
LASF Ste Croix 4.56 271 *e*Pn **Pn** **15 02 43.0 -1.0**
SNR=1.0
LASF *e*Sn **Sn** **15 03 35.3 -1.8**
comp=E,238nm,0.5s
LASF Ste Croix 4.56 271 *e*Pn **Pn** **15 02 43.0 -1.0**
LASF *e*Sn **Sn** **15 03 35.3 -1.8**
MOA Molln 4.63 36 *i* Pn **Pn** **15 02 46.2 +1.2**
comp=E,40nm,0.3s,SNR=63
MOA *e*Sn **Sn** **15 03 41.5 +2.7**
comp=E,119nm,0.4s
STU Stuttgart 4.64 352 *e*Pn **Pn** **15 02 44.5 -0.5**
STU Stuttgart 4.64 352 *e*P **Pn** **15 02 44.5 -0.5**
HAU Haudompre 4.67 326 *e*Pn **Pn** **15 02 46.7 +1.3**
HAU *e*Sn **Sn** **15 03 39.1 -0.5**
comp=E,685nm,0.3s
HAU Haudompre 4.67 326 *e*Pn **Pn** **15 02 46.7 +1.3**
HAU *e*Sn **Sn** **15 03 39.1 -0.5**
CDF Champ du Feu 4.69 335 *e*Pn **Pn** **15 02 46.4 +0.6**
CDF *e*Sn **Sn** **15 03 39.9 -0.4**
comp=E,298nm,0.3s
CDF Champ du Feu 4.69 335 *e*Pn **Pn** **15 02 46.4 +0.6**
CDF *e*Sn **Sn** **15 03 39.9 -0.4**
CDF Champ du Feu 4.69 335 *e*P **Pn** **15 02 46.4 +0.6**
CDF *e* 15 03 39.9
SGRT San Giovanni R 4.74 119 *i* PN **Pn** **15 02 45.6 -0.8**
SGRT *i* SN **Sn** **15 03 35.0 -6.5**
SGRT San Giovanni R 4.74 119 AML AML
comp=N,408µm,0.6s
SGRT AML AML
comp=E,478µm,0.8s
SGRT AML AML
comp=N,408µm,0.6s
SGRT AML AML
comp=N,408µm,0.6s
SGRT AML AML
comp=E,478µm,0.8s
SGRT AML AML
comp=E,478µm,0.8s
ARSA Arzberg 4.83 49 *e*Pn **Pn** **15 02 47.9 +0.2**
comp=E,7.9nm,0.2s,SNR=298
MRAK Mrakovica 4.86 78 *e*Pn **Pn** **15 02 49.0 +0.9**
MSAG Monte S. Angel 4.87 119 AML AML
comp=E,324µm,0.5s
MSAG AML AML
comp=E,321µm,1.1s
MSAG AML AML
comp=N,565µm,1.6s
MSAG AML AML
comp=N,571µm,1.6s
MSAG AML AML
comp=E,321µm,1.1s
MSAG AML AML
comp=N,571µm,1.6s
MSAG AML AML
comp=N,565µm,1.6s
MSAG AML AML
comp=E,324µm,0.5s
MSAG AML AML
comp=E,321µm,1.1s
MSAG AML AML
comp=N,571µm,1.6s
MSAG AML AML
comp=N,565µm,1.6s
MSAG AML AML
comp=E,324µm,0.5s
MGRS Mrkonjic Grad 4.95 85 *e*Pn **Pn** **15 02 51.1 +1.8**
BLY Banja Luka 5.03 81 *e*Pn **Pn** **15 02 51.0 +0.6**
BLY Banja Luka 5.03 81 ||*i*P **Pn** **15 02 51.1 +0.6**
BLY Banja Luka 5.03 81 *e*Pn **Pn** **15 02 50.2 -0.2**
BLY Banja Luka 5.03 81 AML AML
comp=N,502µm,1.4s
BLY AML AML
comp=E,794µm,1.0s
BLY AML AML
comp=N,521µm,1.4s
BLY AML AML
comp=E,779µm,1.0s
BLY AML AML
comp=N,502µm,1.4s
BLY AML AML
comp=N,521µm,1.4s
BLY AML AML
comp=E,794µm,1.0s
BLY AML AML
comp=E,779µm,1.0s
BLY AML AML
comp=N,502µm,1.4s
BLY AML AML
comp=N,521µm,1.4s
BLY AML AML
comp=E,794µm,1.0s
BLY AML AML
comp=E,779µm,1.0s
SMF Signal de Mont 5.11 301 *e*Pn **Pn** **15 02 52.4 +1.0**
SMF *e*Sn **Sn** **15 03 49.1 -1.4**
comp=E,899nm,0.6s
SMF Signal de Mont 5.11 301 *e*Pn **Pn** **15 02 52.4 +1.0**
SMF *e*Sn **Sn** **15 03 49.1 -1.4**
SMF Signal de Mont 5.11 301 *e*P **Pn** **15 02 52.4 +1.0**
SMF *e* 15 03 49.1
BEHE Becsehely 5.17 61 *e*Pn **Pn** **15 02 52.9 +0.6**
GEC2 GERESS Array S 5.25 26 *e*Pn **Pn** **15 02 53.4 -0.1**
GEC2 *e*Sn **Sn** **15 03 54.0 -0.2**
GEC2 *e*Lg Lg 15 04 25.5
GEC2 GERESS Array S 5.25 26 *e*P **Pn** **15 02 53.4 -0.1**
GEC2 *e* 15 03 54.0
GERES GERESS Array B 5.25 26 Pn **Pn** **15 02 53.6 +0.1**
comp=E,16nm,0.3s,baz=203,slow=13,SNR=164
GERES Sn **Sn** **15 03 54.0 -0.2**
comp=E,39nm,0.3s,baz=209,slow=20,SNR=11
GERES Lg Lg 15 04 25.5
comp=E,12nm,0.3s,baz=210,slow=26,SNR=6.6
GERES LR LR 15 05 22.7
comp=E,2µm,18.8s,baz=229,slow=43
PAGF Fort de Pagny 5.36 326 *e*Pn **Pn** **15 02 56.3 +1.4**
baz=157
PAGF *e*Sn **Sn** **15 03 54.9 -1.7**
comp=E,656nm,0.8s
PAGF Fort de Pagny 5.36 326 *e*Pn **Pn** **15 02 56.3 +1.4**
PAGF *e*Sn **Sn** **15 03 54.9 -1.7**
SFTF Sexfontaines 5.38 320 *e*Pn **Pn** **15 02 56.4 +1.1**
baz=128
SFTF *e*Sn **Sn** **15 03 56.3 -1.0**
comp=E,218nm,0.5s
SFTF Sexfontaines 5.38 320 *e*Pn **Pn** **15 02 56.4 +1.1**
SFTF *e*Sn **Sn** **15 03 56.3 -1.0**
LOR Lormes 5.40 307 *e*Pn **Pn** **15 02 56.3 +0.8**
baz=128
LOR *e*Sn **Sn** **15 03 56.7 -1.1**
comp=E,403nm,0.4s
LOR Lormes 5.40 307 *e*Pn **Pn** **15 02 56.3 +0.8**
LOR *e*Sn **Sn** **15 03 56.7 -1.1**
LOR Lormes 5.40 307 *e*P **Pn** **15 02 56.3 +0.8**
LOR *e* 15 03 56.7
CONA Conrad Observa 5.44 44 *e*Pn **Pn** **15 02 56.8 +0.7**
comp=E,87nm,0.5s,SNR=105
CONA Sn **Sn** **15 04 01.5 +2.7**
comp=E,220nm,0.5s
KHC Kasperske Hory 5.47 24 *e*Pn **Pn** **15 02 56.4 0.0**
KHC Kasperske Hory 5.47 24 *e*P **Pn** **15 02 56.8 +0.4**
KHC *e* 15 03 58.1
KHC MLR MLR
comp=Z,2µm,12.6s
KHC Kasperske Hory 5.47 24 *e*PN **Pn** **15 02 56.8 +0.4**
KHC *ex* x 15 03 23.0
KHC *e*SN **Sn** **15 03 58.1 -1.3**
KHC *ex* x 15 04 27.5
KHC AMS AMS 15 05 30.0
comp=Z,2µm,12.6s
AVF Avril sur Loir 5.47 301 *e*Pn **Pn** **15 02 57.6 +1.2**
AVF *e*Sn **Sn** **15 03 57.8 -1.6**
comp=Z,230nm,0.6s
AVF Avril sur Loir 5.47 301 *e*Pn **Pn** **15 02 57.6 +1.2**
AVF *e*Sn **Sn** **15 03 57.8 -1.6**
SSF Saint Saulge 5.50 304 *e*Pn **Pn** **15 02 58.0 +1.1**
SSF *e*Sn **Sn** **15 03 58.3 -1.9**
comp=Z,96nm,0.3s
SSF Saint Saulge 5.50 304 *e*Pn **Pn** **15 02 58.0 +1.1**
SSF *e*Sn **Sn** **15 03 58.3 -1.9**
GRFO Grafenberg 5.55 7 *e*Pn **Pn** **15 02 58.2 +0.6**
GRFO Grafenberg 5.55 7 *e*P **Pn** **15 02 58.2 +0.6**
GRA1 Grafenberg Arr 5.55 7 *e*Pn **Pn** **15 02 57.5 0.0**
GRF Grafenberg Arr 5.55 7 *e*P **Pn** **15 02 57.6 0.0**
MEZF Maizieres J'vi 5.60 322 *e*Pn **Pn** **15 02 59.2 +1.0**
baz=137
MEZF *e*Sn **Sn** **15 04 00.8 -1.7**
comp=Z,562nm,0.7s
MEZF Maizieres J'vi 5.60 322 *e*Pn **Pn** **15 02 59.2 +1.0**
MEZF *e*Sn **Sn** **15 04 00.8 -1.7**
SOP Sopron 5.65 50 EPn **Pn** **15 03 01.0 +2.1**
SOP Sn **Sn** **15 04 02.1 -1.7**
BGF Bois d'Agland 5.70 297 *e*Pn **Pn** **15 03 00.6 +1.1**
BGF *e*Sn **Sn** **15 04 04.2 -0.8**
comp=Z,294nm,0.4s
BGF Bois d'Agland 5.70 297 *e*Pn **Pn** **15 03 00.6 +1.1**
BGF *e*Sn **Sn** **15 04 04.2 -0.8**
BGF Bois d'Agland 5.70 297 *e*P **Pn** **15 03 00.6 +1.1**
BGF *e* 15 04 04.2
MTLF Montolieu 5.84 264 *e*Pn **Pn** **15 03 01.3 -0.2**
MTLF *e*Sn **Sn** **15 04 05.5 -3.0**
comp=Z,223nm,0.8s
MTLF Montolieu 5.84 264 *e*Pn **Pn** **15 03 01.3 -0.2**
MTLF *e*Sn **Sn** **15 04 05.5 -3.0**
MTLF Montolieu 5.84 264 *e*P **Pn** **15 03 01.3 -0.2**
MTLF *e* 15 04 05.5
CAF Calviac 5.86 280 *e*Pn **Pn** **15 03 02.4 +0.6**
CAF *e*Sn **Sn** **15 04 07.1 -1.9**
comp=Z,86nm,0.6s
CAF Calviac 5.86 280 *e*Pn **Pn** **15 03 02.4 +0.6**
CAF *e*Sn **Sn** **15 04 07.1 -1.9**
CAF Calviac 5.86 280 *e*P **Pn** **15 03 02.4 +0.6**
CAF *e* 15 04 07.1
SCHR S. Chirico Rap 5.91 130 P **Pg** **15 03 24.1 -3.9**
MATE Matera 5.97 124 ⇑*i*P **Pn** **15 03 04.8 +1.5**
MATE Matera 5.97 124 S **Sn** **15 04 12.8 +1.1**
TCF Toulx Ste Croi 6.02 293 *e*Pn **Pn** **15 03 05.0 +1.0**
TCF *e*Sn **Sn** **15 04 11.0 -2.0**
comp=Z,38nm,0.2s
TCF Toulx Ste Croi 6.02 293 *e*Pn **Pn** **15 03 05.0 +1.0**
TCF *e*Sn **Sn** **15 04 11.0 -2.0**
TCF Toulx Ste Croi 6.02 293 *e*P **Pn** **15 03 05.0 +1.0**
TCF *e* 15 04 11.0
TIH Tihany 6.05 61 EPn Pn 15 03 10.1 +5.7
TIH Sn **Sn** **15 04 12.0 -1.6**
NOCI Noci 6.11 121 *i* PN **Pn** **15 03 03.0 -2.2**
NOCI *i* SN Sn 15 04 04.9 -10
TREB Trebinje 6.11 101 *e*Pn **Pn** **15 03 05.5 +0.2**
HYF Humbligny 6.12 303 *e*Pn **Pn** **15 03 07.4 +2.0**
HYF *e*Sn **Sn** **15 04 13.8 -1.7**
HYF Humbligny 6.12 303 *e*Pn **Pn** **15 03 07.4 +2.0**
HYF *e*Sn **Sn** **15 04 13.8 -1.7**
WLF Walferdange 6.14 335 *e*Pn **Pn** **15 03 07.1 +1.5**
WLF Walferdange 6.14 335 *e*P **Pn** **15 03 07.1 +1.5**
WLF Walferdange 6.14 335 P **Pn** **15 03 07.7 +2.0**
WLF S **Sn** **15 04 14.6 -1.3**
BRY Bratogost 6.20 99 ⇑*i*Pn **Pn** **15 03 06.9 +0.3**
BRY *e*Sn **Sn** **15 04 17.8 +0.3**
BRY Bratogost 6.20 99 *e*Pn **Pn** **15 03 07.2 +0.6**
MASS Massafra 6.25 122 *e*Pn **Pn** **15 03 08.1 +1.0**
ZST Bratislava 6.25 48 *e*P **Pn** **15 03 07.2 +0.1**
ZST *e* 15 04 16.3
ZST Bratislava 6.25 48 *e*PN **Pn** **15 03 07.2 +0.1**
ZST *e*SN **Sn** **15 04 16.3 -2.3**
ZST *e*SG **Sg** **15 04 54.3 -1.1**
FASA Fasano 6.27 120 *e*Pn **Pn** **15 03 07.8 +0.4**
FASA Sn **Sn** **15 04 18.2 -0.9**
RJF Les Rejaudoux 6.28 283 *e*Pn **Pn** **15 03 08.3 +0.7**
RJF *e*Sn **Sn** **15 04 18.3 -1.1**
comp=Z,32nm,0.5s
RJF Les Rejaudoux 6.28 283 *e*Pn **Pn** **15 03 08.3 +0.7**
RJF *e*Sn **Sn** **15 04 18.3 -1.1**
RJF Les Rejaudoux 6.28 283 *e*P **Pn** **15 03 08.3 +0.7**
RJF *e* 15 04 18.3
HCY Herceg Novi 6.30 103 ||*i*Pn **Pn** **15 03 09.0 +1.2**
HCY *e*Sn **Sn** **15 04 20.1 +0.3**
HCY Herceg Novi 6.30 103 *e*Pn **Pn** **15 03 09.3 +1.5**
MORH Mrgy, Hungar 6.30 68 *e*Pn **Pn** **15 03 07.7 -0.2**
MORH Mrgy, Hungar 6.30 68 EPn Pb 15 03 18.0 -6.6
MORH ||*e*Sn **Sn** **15 04 16.0 -3.9**
UPM Unac-Piva 6.39 96 ||*i*Pn **Pn** **15 03 10.5 +1.3**
UPM *e*Sn **Sn** **15 04 22.1 -0.2**
UPM Unac-Piva 6.39 96 *e*Pn **Pn** **15 03 10.8 +1.6**
TAR1 Taranto 6.40 122 *e*Pn **Pn** **15 03 13.9 +4.8**
MODS Modra-Piesok 6.45 47 *e*P **Pn** **15 03 09.4 -0.5**
MODS *e* 15 04 22.2
MODS MLR MLR
comp=Z,300nm,1.4s
MODS Modra-Piesok 6.45 47 *e*PN **Pn** **15 03 09.4 -0.5**
MODS *e*SN **Sn** **15 04 22.1 -1.5**
MODS *e*SG **Sg** **15 05 05.4 +3.5**
MODS *e*LG Lg 15 05 27.5
KRUC Moravsky 6.48 39 *e*PN **Pn** **15 03 11.3 +1.0**
KRUC *e*SN **Sn** **15 04 23.3 -1.0**
KRUC *e*SG **Sg** **15 04 55.4 -7.4**
PRU Pruhonice 6.52 26 *e*P **Pn** **15 03 10.6 -0.2**
PRU *e* 15 04 23.6
PRU MLR MLR
comp=Z,2µm,9.9s
PRU Pruhonice 6.52 26 *e*PN **Pn** **15 03 10.6 -0.2**
PRU *e*SN **Sn** **15 04 23.6 -1.6**
PRU AMS AMS 15 06 00.0
comp=Z,2µm,9.9s
NKME Niksic 6.53 99 ||*i*Pn **Pn** **15 03 12.0 +1.0**
NKME *e*Sn **Sn** **15 04 25.9 +0.4**
GOPC GO Pecny, Ondr 6.53 27 *e*P **Pn** **15 03 12.1 +1.1**
GOPC GO Pecny, Ondr 6.53 27 *e*PN **Pn** **15 03 12.1 +1.1**
NKY Niksic 6.54 99 ||*i*Pn **Pn** **15 03 12.8 +1.5**
NKY *e*Sn **Sn** **15 04 26.1 +0.1**
CEME Cevo 6.56 101 ||*i*Pn **Pn** **15 03 12.2 +0.7**
CEME *e*Sn **Sn** **15 04 26.6 +0.1**
MTGR Montagna Grand 6.58 162 P **Pn** **15 03 09.3 -2.4**
BUM Brajici-Budva 6.62 103 ⇑*i*Pn **Pn** **15 03 13.9 +1.5**
BUM *e*Sn **Sn** **15 04 27.8 -0.2**
BBLS Lazići 6.65 90 *e*Pn **Pn** **15 03 13.8 +1.1**
PLE Pljevlja 6.71 94 ⇑*i*Pn **Pn** **15 03 14.4 +0.8**
PLE *e*Sn **Sn** **15 04 30.0 -0.2**
SRO Srobarova 6.72 54 *e*P **Pn** **15 03 14.3 +0.8**
SRO *e* 15 04 28.8
SRO Srobarova 6.72 54 *e*PN **Pn** **15 03 14.3 +0.8**
SRO *e*SN **Sn** **15 04 28.8 -1.3**
CLF Chambon-Foret 6.72 308 *e*Pn **Pn** **15 03 15.1 +1.5**
SRO2 Moca 6.74 55 *e*P **Pn** **15 03 14.8 +1.0**
SRO2 Moca 6.74 55 *e*PN **Pn** **15 03 14.8 +1.0**
VRAC Vranov 6.75 38 Pn **Pn** **15 03 14.3 +0.3**
comp=Z,4.8nm,0.3s,baz=226,slow=13,SNR=22
VRAC Sn **Sn** **15 04 29.8 -1.1**
comp=Z,4.0nm,0.3s,baz=248,slow=11,SNR=4.7
VRAC Lg Lg 15 05 14.5
comp=Z,2.6nm,0.3s,baz=107,slow=23,SNR=5.0
VRAC LR LR 15 06 37.4
comp=Z,968nm,19.6s,baz=226,slow=44
VRAC Vranov 6.75 38 ||*i*P **Pn** **15 03 13.9 -0.1**
VRAC Vranov 6.75 38 *e*PN **Pn** **15 03 14.2 +0.2**
VRAC *e*SN **Sn** **15 04 30.4 -0.5**
VRAC *e*SG **Sg** **15 05 06.5 -4.9**
LFF La Frestale 6.80 280 *e*Pn **Pn** **15 03 15.5 +0.9**
LFF La Frestale 6.80 280 *e*Pn **Pn** **15 03 15.5 +0.9**
LFF La Frestale 6.80 280 *e*P **Pn** **15 03 15.5 +0.9**
PDG Podgorica 6.84 102 ||*i*P **Pn** **15 03 17.5 +2.3**
PDG Podgorica 6.84 102 *e*Pn **Pn** **15 03 17.0 +1.8**
TTG Podgorica 6.84 102 ||*i*Pn **Pn** **15 03 16.3 +1.1**
TTG *e*Sn **Sn** **15 04 32.8 -0.2**
TTG Podgorica 6.84 102 *e*Pn **Pn** **15 03 16.9 +1.7**
TTG Podgorica 6.84 102 *e*P **Pn** **15 03 16.9 +1.7**
MMGO Monte Magaggia 6.85 161 P **Pn** **15 03 19.7 +4.3**
DRME Dracevica, Mon 6.87 104 ⇑*i*Pn **Pn** **15 03 16.5 +0.9**
DRME *e*Sn **Sn** **15 04 34.1 +0.3**
DRME Dracevica, Mon 6.87 104 *e*Pn **Pn** **15 03 14.8 -0.8**
KOME Kolasin 6.91 98 ⇑*i*Pn **Pn** **15 03 17.4 +1.2**
KOME *e*Sn **Sn** **15 04 34.7 -0.2**
FRGS Fruska Gora 6.92 79 *e*Pn **Pn** **15 03 16.0 -0.4**
JAVC Velka Javorina 6.96 45 *e*PN **Pn** **15 03 18.6 +1.7**
GIVF Givet 6.96 330 *e*Pn **Pn** **15 03 17.5 +0.6**
GIVF *e*Sn **Sn** **15 04 33.7 -2.4**
comp=Z,157nm,0.6s
GIVF Givet 6.96 330 *e*Pn **Pn** **15 03 17.5 +0.6**
GIVF *e*Sn **Sn** **15 04 33.7 -2.4**
GIVF Givet 6.96 330 *e*P **Pn** **15 03 17.5 +0.6**
GIVF *e* 15 04 33.7
CLTB Caltabellotta 6.98 160 *e*Pn **Pn** **15 03 20.6 +3.3**
ULC Ulcinj 6.99 105 ||*i*Pn **Pn** **15 03 18.0 +0.7**
ULC *e*Sn **Sn** **15 04 36.4 -0.4**
TIP Timpagrande 7.01 133 *e*Pn **Pn** **15 03 20.9 +3.3**
TIP Timpagrande 7.01 133 ⇑*i*P **Pn** **15 03 21.9 +4.3**
MEM Membach 7.03 338 P **Pn** **15 03 19.2 +1.4**
MEM PnPn **PnPn** **15 03 22.9 -2.4**
MEM S **Sn** **15 04 37.2 -0.5**
DOU Dourbes 7.04 329 P **Pn** **15 03 17.7 -0.3**
DOU S **Sn** **15 04 37.1 -0.9**
DIVS Divibare 7.05 87 *e*Pn **Pn** **15 03 18.7 +0.5**
BCLA Clavier 7.07 334 P **Pn** **15 03 16.1 -2.2**
BCLA S **Sn** **15 04 35.2 -3.5**
BGES Gesves 7.11 333 PnPn Pn 15 03 23.8 +4.9
BGES S **Sn** **15 04 39.8 +0.1**
BSTI Sart Tilman 7.13 336 P **Pn** **15 03 22.8 +3.6**
BSTI S **Sn** **15 04 38.8 -1.4**
BMRD Maredsous 7.15 331 P **Pn** **15 03 22.5 +3.1**
BAIF Baives 7.16 327 *e*Pn **Pn** **15 03 20.5 +1.0**
BAIF *e*Sn **Sn** **15 04 38.3 -2.5**
comp=Z,366nm,1.0s
BAIF Baives 7.16 327 *e*Pn **Pn** **15 03 20.5 +1.0**
BAIF *e*Sn **Sn** **15 04 38.3 -2.5**
BAIF Baives 7.16 327 *e*P **Pn** **15 03 20.5 +1.0**
BAIF *e* 15 04 38.3
BRG Berggiesshubel 7.16 19 PN **Pn** **15 03 19.6 0.0**
BRG SN **Sn** **15 04 37.8 -3.1**
BRG SG **Sg** **15 05 29.0 +4.6**
comp=Z,146nm,1.0s
comp=N,1µm,10.0s
comp=E,1µm,8.3s
comp=Z,2µm,10.0s
BRG Berggiesshubel 7.16 19 P **Pn** **15 03 19.6 0.0**
BRG 15 04 37.8
BRG smax smax
comp=N,146nm,1.0s
BRG MLR MLR
comp=N,1µm,10.0s
BRG MLR MLR
comp=E,1µm,8.3s
BRG MLR MLR
comp=Z,2µm,10.0s
IVA Berane 7.17 97 ⇑*i*Pn **Pn** **15 03 21.0 +1.2**
IVA *e*Sn **Sn** **15 04 40.9 -0.5**
TAMR Tamra 7.18 187 *e*Pn **Pn** **15 03 22.1 +2.2**
EPF Esparros 7.25 264 *e*Pn **Pn** **15 03 21.0 +0.1**
EPF *e*Sn **Sn** **15 04 39.4 -3.9**
comp=Z,60nm,0.6s
EPF Esparros 7.25 264 *e*Pn **Pn** **15 03 21.0 +0.1**
EPF *e*Sn **Sn** **15 04 39.4 -3.9**
EPF Esparros 7.25 264 *e*P **Pn** **15 03 21.0 +0.1**
EPF *e* 15 04 39.4
PVY Plav 7.29 99 ⇑*i*Pn **Pn** **15 03 22.9 +1.4**
PVY *e*Sn **Sn** **15 04 43.3 -1.0**
GMB Gambarie 7.36 143 P **Pn** **15 03 20.1 -2.4**
VYHS Vyhne 7.37 51 *e*P **Pn** **15 03 21.6 -0.9**
VYHS *e* 15 04 43.7
VYHS Vyhne 7.37 51 *e*PN **Pn** **15 03 21.6 -0.9**
VYHS *e*SN **Sn** **15 04 43.7 -2.5**
CLL Collm 7.37 14 *e*Pn **Pn** **15 03 21.4 -1.1**
CLL Collm 7.37 14 *e*Pn **Pn** **15 03 22.0 -0.5**
CLL *e* 15 03 24.0
CLL *e*Pg **Pg** **15 03 53.0 -3.0**
CLL *e* 15 04 09.0
CLL *e*Sn Sn 15 04 25.0 -21
CLL *e* 15 04 44.0
CLL *e*Sb Sb 15 04 57.0 -14
CLL *e* 15 05 20.0
CLL *e*Sg **Sg** **15 05 28.0 -3.4**
comp=Z,169nm,0.9s
CLL *e*Sglp 15 05 35.0
comp=N,600nm,25.9s
CLL *e*Sglp 15 05 35.0
comp=E,900nm,20.7s
CLL *e*Sglp 15 05 35.0
comp=Z,600nm,30.5s
CLL Lmax 15 07 00.0
CLL Collm 7.37 14 *e*P **Pn** **15 03 22.0 -0.5**
VAE Valguarnera 7.42 153 Pn Pn 15 03 28.7 +5.4
comp=Z,1.9nm,0.3s,baz=51,slow=6.5,SNR=2.3
VAE LR LR 15 06 06.5
comp=Z,910nm,18.1s,baz=5.0,slow=37
BCI Bajram Curri 7.43 101 *i* PN **Pn** **15 03 25.3 +1.9**
BCI *i* SN Sn 15 04 31.7 -16
DPC Dobruska-Polom 7.44 32 *e*P **Pn** **15 03 23.1 -0.4**
DPC MLR MLR
comp=Z,2µm,12.0s
DPC Dobruska-Polom 7.44 32 *e*PN **Pn** **15 03 23.1 -0.4**
DPC AMS AMS 15 06 30.0
comp=Z,2µm,12.0s
UPC Upice 7.46 30 *e*P **Pn** **15 03 23.8 +0.1**
UPC *e* 15 04 44.7
UPC MLR MLR
comp=Z,3µm,11.4s
UPC Upice 7.46 30 *e*PN **Pn** **15 03 23.8 +0.1**
UPC *e*SN **Sn** **15 04 44.7 -3.6**
UPC AMS AMS 15 06 30.0
comp=Z,3µm,11.4s
SNF Seneffe 7.49 330 P **Pn** **15 03 25.6 +1.5**
MORC Moravsky Berou 7.52 39 *e*Pn **Pn** **15 03 24.5 0.0**
MORC Moravsky Berou 7.52 39 ||*i*P **Pn** **15 03 25.8 +1.2**
MORC Moravsky Berou 7.52 39 *e*P **Pn** **15 03 24.5 0.0**
MORC Moravsky Berou 7.52 39 *e*PN **Pn** **15 03 25.5 +0.9**
CHVC Chvalec 7.54 30 *e*PN **Pn** **15 03 24.8 0.0**
CHVC AMS AMS 15 06 40.0
comp=Z,2µm,11.7s
OSTC Ostas 7.57 31 *e*PN **Pn** **15 03 25.5 +0.2**
TIR Tirane 7.66 108 *e*Pn **Pn** **15 03 26.9 +0.5**
TIR Tirane 7.66 108 ||*i*P **Pn** **15 03 28.2 +1.7**
TIR Tirane 7.66 108 *e*P **Pn** **15 03 26.9 +0.5**
TIR Tirane 7.66 108 *i* PN **Pn** **15 03 31.1 +4.6**
TIR *i* SN **Sn** **15 04 47.0 -6.2**
MFF Saint Martin d 7.67 292 *e*Pn **Pn** **15 03 27.3 +0.7**
MFF *e*Sn **Sn** **15 04 51.3 -2.3**
comp=Z,70nm,0.6s
MFF Saint Martin d 7.67 292 *e*Pn **Pn** **15 03 27.3 +0.7**
MFF *e*Sn **Sn** **15 04 51.3 -2.3**
PSZ Piszkesteto 7.71 58 *e*Pn **Pn** **15 03 27.7 +0.5**
PSZ Piszkesteto 7.71 58 ||*i*P **Pn** **15 03 29.1 +1.8**
PSZ Piszkesteto 7.71 58 S **Sn** **15 04 53.3 -1.3**
PSZ Piszkesteto 7.71 58 *e*P **Pn** **15 03 27.7 +0.5**
PSZ Piszkesteto 7.71 58 EPn **Pn** **15 03 29.0 +1.8**
PSZ Sn **Sn** **15 04 53.0 -1.6**
KSP Ksiaz 7.83 30 *e*P **Pn** **15 03 29.1 +0.2**
KSP Ksiaz 7.83 30 *e*P **Pn** **15 03 29.1 +0.2**
OKC Ostrava-Krasne 7.84 41 *e*P **Pn** **15 03 30.0 +1.1**
OKC MLR MLR
comp=Z,1µm,13.5s
OKC Ostrava-Krasne 7.84 41 *e*PN **Pn** **15 03 30.0 +1.1**
OKC AMS AMS 15 06 50.0
comp=Z,1µm,13.5s
ETSF Etsaut 7.92 264 *e*Pn **Pn** **15 03 30.1 0.0**
ETSF *e*Sn **Sn** **15 04 55.5 -4.3**
comp=Z,35nm,0.5s
ETSF Etsaut 7.92 264 *e*Pn **Pn** **15 03 30.1 0.0**
ETSF *e*Sn **Sn** **15 04 55.5 -4.3**
ETSF Etsaut 7.92 264 *e*P **Pn** **15 03 30.1 0.0**
ETSF *e* 15 04 55.5
PHP Peshkopia 7.92 105 *i* PN **Pn** **15 03 32.5 +2.3**
PHP *i* SN **Sn** **15 04 52.2 -7.7**
LANS Liptovska Anna 8.08 49 *e*P **Pn** **15 03 34.7 +2.4**
LANS *e* 15 05 04.3
LANS Liptovska Anna 8.08 49 *e*PN **Pn** **15 03 34.7 +2.4**
LANS *e*SN **Sn** **15 05 04.3 +0.6**
BZS Buzias 8.23 76 ||*i*P **Pn** **15 03 34.7 +0.3**
MDVR Moldovita 8.26 82 ⇑*i*P **Pn** **15 03 35.7 +1.0**
KECS Kecovo 8.32 55 *e*P **Pn** **15 03 36.9 +1.4**

KECS e 15 05 06.4
KECS Kecovo 8.32 55 *e*PN **Pn 15 03 36.9 +1.4**
KECS *e*SN **Sn 15 05 06.4 -3.0**
SJPF Ste Jean 8.35 267 *e*Pn **Pn 15 03 35.6 -0.4**
SJPF *e*Sn **Sn 15 05 06.2 -4.2**
comp=Z,5.2nm,0.4s
SJPF Ste Jean 8.35 267 *e*Pn **Pn 15 03 35.6 -0.4**
SJPF *e*Sn **Sn 15 05 06.2 -4.2**
SJPF Ste Jean 8.35 267 *e*P **Pn 15 03 35.6 -0.4**
SJPF *e* 15 05 06.2
SIRR Siria 8.36 72⇑ *i*P **Pn 15 03 37.5 +1.4**
LDF La Druitiere 8.38 305 *e*Pn **Pn 15 03 36.3 -0.1**
LDF *e*Sn **Sn 15 05 06.5 -4.6**
comp=Z,50nm,0.5s
LDF La Druitiere 8.38 305 *e*Pn **Pn 15 03 36.3 -0.1**
LDF *e*Sn **Sn 15 05 06.5 -4.6**
LDF La Druitiere 8.38 305 *e*P **Pn 15 03 36.3 -0.1**
LDF *e* 15 05 06.5
OHR Ohrid 8.40 108 *i* P **Pn 15 03 39.4 +2.8**
KEST Kesra 8.47 185 Pn **Pn 15 03 40.0 +2.3**
comp=Z,5.3nm,0.3s,baz=288,slow=4.6,SNR=34
KEST Sn **Sn 15 05 14.2 +0.9**
comp=Z,0.2nm,0.3s,baz=351,slow=21,SNR=7.4
KEST LR LR 15 07 14.2
comp=Z,605nm,18.9s,baz=310,slow=41
KEST Kesra 8.47 185 *e*Pn **Pn 15 03 41.2 +3.5**
KEST *e*Sn **Sn 15 05 14.2 +0.9**
SKO Skopje 8.52 101 *i* P **Pn 15 03 39.9 +1.5**
FLN La Foliniere 8.67 306 *e*Pn **Pn 15 03 40.4 0.0**
baz=124
FLN *e*Sn **Sn 15 05 15.1 -3.1**
comp=Z,30nm,0.4s
FLN La Foliniere 8.67 306 *e*Pn **Pn 15 03 40.4 0.0**
FLN *e*Sn **Sn 15 05 15.1 -3.1**
FLN La Foliniere 8.67 306 *e*P **Pn 15 03 40.4 0.0**
FLN *e* 15 05 15.1
NIE Niedzica 8.68 49 *e*P **Pn 15 03 43.2 +2.7**
NIE Niedzica 8.68 49 *e*P **Pn 15 03 43.2 +2.7**
GRR Gorron 8.73 303 *e*Pn **Pn 15 03 41.4 +0.2**
GRR *e*Sn **Sn 15 05 14.7 -4.9**
comp=Z,46nm,0.6s
GRR Gorron 8.73 303 *e*Pn **Pn 15 03 41.4 +0.2**
GRR *e*Sn **Sn 15 05 14.7 -4.9**
GRR Gorron 8.73 303 *e*P **Pn 15 03 41.4 +0.2**
GRR *e* 15 05 14.7
HERR Herculane 8.76 81⇓ *i*P **Pn 15 03 42.8 +1.2**
OJC Ojcow 8.89 44 *e*P **Pn 15 03 44.4 +1.0**
OJC Ojcow 8.89 44 *e*Pn **Pn 15 03 43.6 +0.2**
OJC Ojcow 8.89 44 *e*P **Pn 15 03 44.4 +1.0**
GZR Gura Zlata 9.03 78⇑ *i*P **Pn 15 03 46.2 +0.9**
DRGR 9.17 69⇑ *i*P **Pn 15 03 48.5 +1.2**
STHS Stebnicka Huta 9.21 51 *e*P **Pn 15 03 50.2 +2.5**
STHS Stebnicka Huta 9.21 51 *e*PN **Pn 15 03 50.2 +2.5**
SRE Strehaia 9.32 83⇑ *i*P **Pn 15 03 51.0 +1.7**
TRPA Tarpa 9.43 61⇓ *i*P **Pn 15 03 52.5 +1.8**
TRPA Tarpa 9.43 61 EPn **Pn 15 03 51.1 +0.4**
TRPA Sn **Sn 15 05 34.1 -2.6**
UZH Uzhgorod 9.46 58 *e*P **Pn 15 03 53.7 +2.5**
UZH *e*S **Sn 15 05 41.3 +3.7**
UZH MLR MLR
comp=N,270nm,11.0s
UZH MLR MLR
comp=E,120nm,11.0s
UZH MLR MLR
comp=Z,60nm,11.0s
KOLS Kolonicke sedl 9.58 56 *e*P **Pn 15 03 55.5 +2.7**
KOLS Kolonicke sedl 9.58 56 *e*PN **Pn 15 03 55.5 +2.7**
VTS Vitosha 9.62 95 *e*Pn **Pn 15 03 54.1 +0.6**
VTS Vitosha 9.62 95⇓ *i*P **Pn 15 03 54.4 +0.9**
VTS Vitosha 9.62 95 *e*P **Pn 15 03 54.1 +0.6**
VTS Vitosha 9.62 95 *i* P **Pn 15 03 54.1 +0.6**
VTS Vitosha 9.62 95 P **Pn 15 03 55.0 +1.5**
VTS Vitosha 9.62 95 P **Pn 15 03 55.0 +1.5**
KKB Krupnik 9.72 99 *i* P **Pn 15 03 56.1 +1.4**
SGMF Saint Gilles 9.73 299 *e*Pn **Pn 15 03 54.8 0.0**
SGMF *e*Sn **Sn 15 05 39.4 -4.7**
comp=Z,16nm,0.5s
SGMF Saint Gilles 9.73 299 *e*Pn **Pn 15 03 54.8 0.0**
SGMF *e*Sn **Sn 15 05 39.4 -4.7**
SGMF Saint Gilles 9.73 299 *e*P **Pn 15 03 54.8 0.0**
SGMF *e* 15 05 39.4
LIT Litokhoron 10.00 110 *e*Pn **Pn 15 03 59.7 +1.1**
LIT Litokhoron 10.00 110 *e*P **Pn 15 03 59.7 +1.1**
QUIF Quistinic 10.01 297 *e*Pn **Pn 15 03 59.4 +0.7**
QUIF *e*Sn **Sn 15 05 46.0 -5.0**
comp=Z,10.0nm,0.4s
QUIF Quistinic 10.01 297 *e*Pn **Pn 15 03 59.4 +0.7**
QUIF *e*Sn **Sn 15 05 46.0 -5.0**
QUIF Quistinic 10.01 297 *e*P **Pn 15 03 59.4 +0.7**
QUIF *e* 15 05 46.0
KWP Kalwaria Pacla 10.14 53 *e*P **Pn 15 04 02.6 +2.1**
KWP Kalwaria Pacla 10.14 53 *e*Pn **Pn 15 04 01.4 +0.8**
KWP Kalwaria Pacla 10.14 53 *e*P **Pn 15 04 02.6 +2.1**
ROSF Rostrenen 10.21 299 *e*Pn **Pn 15 04 01.8 +0.4**
ROSF *e*Sn **Sn 15 05 51.4 -4.5**
comp=Z,14nm,0.4s
ROSF Rostrenen 10.21 299 *e*Pn **Pn 15 04 01.8 +0.4**
ROSF *e*Sn **Sn 15 05 51.4 -4.5**
MMB Musomiste 10.27 100 *i* P **Pn 15 04 03.1 +0.9**
MMB Musomiste 10.27 100 P **Pn 15 04 04.5 +2.3**
MMB Musomiste 10.27 100 P **Pn 15 04 04.5 +2.3**
ARR Arges 10.34 78⇑ *i*P **Pn 15 04 05.9 +2.7**
VOIR 10.63 78⇑ *i*P **Pn 15 04 09.5 +2.2**
RZN Rozhen 10.94 98 *i* P **Pn 15 04 12.7 +1.2**
RZN Rozhen 10.94 98 P **Pn 15 04 11.0 -0.5**
RZN Rozhen 10.94 98 P **Pn 15 04 11.0 -0.5**
BUR08 Bucovina Ar. S 11.01 66 *e*Pn **Pn 15 04 14.4 +1.9**
BURAR Bucovina Array 11.02 67⇓ *i*P **Pn 15 04 17.1 +4.6**
MLR Muntele Rosu 11.26 78 Pn **Pn 15 04 17.9 +1.9**
comp=Z,0.2nm,0.3s,baz=203,slow=11,SNR=5.6
MLR LR LR 15 09 48.8
comp=Z,335nm,18.7s,baz=274,slow=44
MLR Muntele Rosu 11.26 78 *e*Pn **Pn 15 04 18.4 +2.4**
MLR Muntele Rosu 11.26 78⇑ *i*P **Pn 15 04 17.8 +1.9**
MLR Muntele Rosu 11.26 78 *e*P **Pn 15 04 18.4 +2.4**
KDZ Kurdzhali 11.45 98 P **Pn 15 04 22.5 +4.1**
KDZ Kurdzhali 11.45 98 P **Pn 15 04 22.5 +4.1**
ESDC Sonseca Array 11.47 252 Pn **Pn 15 04 18.1 -0.6**
comp=Z,1.0nm,0.3s,baz=68,slow=14,SNR=10
ESDC LR LR 15 08 49.3
comp=Z,280nm,19.0s,baz=85,slow=38
ESLA Sonseca Array 11.47 252 *e*Pn **Pn 15 04 18.9 +0.2**
PAB San Pablo 11.79 252 *e*Pn **Pn 15 04 24.1 +0.9**
PAB San Pablo 11.79 252 *e*P **Pn 15 04 24.1 +0.9**
ALN Alexandroupoli 12.14 100 *e*Pn **Pn 15 04 28.9 +1.0**
ALN Alexandroupoli 12.14 100 *e*P **Pn 15 04 28.9 +1.0**
KIS Kishinev 13.34 71 *e*P **P 15 04 55.0 +1.1**
comp=Z,130nm,2.0s
KIS Kishinev 13.34 71 *e*PP P 15 05 09.0 +15
KIS *e*S **S 15 07 36.0 -0.8**
KIS *e*Lg Lg 15 08 48.0
KIS LQM 15 09 40.0
comp=Z,600nm,19.0s
KIS LRM MLR 15 11 13.0
comp=Z,600nm,14.0s
KIS Kishinev 13.34 71 *e*P **P 15 04 55.0 +1.1**
KIS pmax pmax
comp=Z,130nm,2.0s
EKA Eskdalemuir Ar 14.08 327 Pn **Pn 15 04 53.0 -1.2**
baz=140,slow=14,SNR=21
EKA Sn **Sn 15 07 23.1 -7.3**
baz=142,slow=25,SNR=8.4
ESK Eskdalemuir 14.08 327 *e*Pn **Pn 15 04 55.5 +1.2**
ESK Eskdalemuir 14.08 327 *e*P **Pn 15 04 55.5 +1.2**
PABE Paberze 14.37 33 *e*P **Pn 15 04 59.3 +1.2**
PABE IAmb IAmb 15 05 00.6
comp=Z,101nm,1.4s
AKASG Malin Array Be 14.41 56 Pn **Pn 15 05 00.6 +1.8**
comp=Z,0.4nm,0.3s,baz=248,slow=12,SNR=4.4
AKASG LR LR 15 11 27.9
comp=Z,401nm,18.5s,baz=270,slow=41
AKBB Malin Array Si 14.41 56 *e*Pn **Pn 15 04 58.6 -0.2**
AKBB Malin Array Si 14.41 56 *e*P **Pn 15 04 58.6 -0.2**
IIGN Ignalina 15.19 37 *e*P **P 15 05 11.8 -2.6**
IIGN IAmb IAmb 15 05 18.4
comp=Z,16nm,1.3s
ISAL Salakas 15.29 36 *e*P **P 15 05 13.4 -2.1**
ISAL IAmb IAmb 15 05 19.4
comp=Z,13nm,1.1s
IDID Didziasalis 15.39 38 *e*P **Pn 15 05 14.0 +2.0**
IDID IAmb IAmb 15 05 20.5
comp=Z,6.8nm,0.6s

MICGM Minsk 15.43 42 *e* **Pn 15 05 12.0 -0.5**
MNK Minsk 15.43 42 *e*P **Pn 15 05 12.0 -0.5**
HFS Hagfors 16.11 6 Pn **P 15 05 23.2 -1.4**
comp=Z,0.1nm,0.3s,baz=170,slow=11,SNR=6.6
HFS LR LR 15 11 57.1
comp=Z,406nm,20.9s,baz=194,slow=38
MDT Midelt 16.19 230 Pn **P 15 05 26.1 +0.3**
comp=Z,0.2nm,0.3s,baz=57,slow=13,SNR=9.4
MDT LR LR 15 11 02.9
comp=Z,183nm,18.1s,baz=36,slow=36
NC602 NORSAR Array S 16.60 2 *e*Pn **P 15 05 28.9 -1.1**
comp=Z,65nm,1.4s
SEVA Sevastopol 16.79 81⇑ *i*P **P 15 05 34.8 +2.6**
NBO00 NORSAR Array S 16.88 1 *e*Pn **Pn 15 05 31.3 +0.3**
comp=Z,117nm,2.0s
NB2 NORSAR Subarra 16.90 2 P **P 15 05 34.9 +1.6**
comp=Z,13nm,1.1s,baz=182,slow=11
NB200 NORSAR Array S 16.90 2 *e*P **P 15 05 33.3 0.0**
NOA NORSAR Array B 16.90 2 Pn **P 15 05 33.3 0.0**
comp=Z,0.0nm,0.3s,baz=183,slow=11,SNR=7.9
NOA LR LR 15 12 52.1
comp=Z,556nm,18.2s,baz=185,slow=40
NC405 NORSAR Array S 16.98 3 *e*P **P 15 05 33.8 -0.5**
comp=Z,135nm,1.7s
VSU Vasula 17.57 30⇑ *i*P **P 15 05 41.5 +0.9**
VSU pmax pmax
comp=Z,216nm,1.0s
VSU Vasula 17.57 30 *e*P **P 15 05 40.2 -0.4**
VSU IAmb IAmb 15 05 46.9
comp=Z,222nm,0.8s
BR101 Keskin Array S 17.98 96 *e*P **P 15 05 47.3 +1.8**
BR101 *e*PcP **PcP 15 10 18.4 -1.7**
BR131 Keskin Array S 17.98 96 *e*Pn **Pn 15 05 44.5 -0.4**
comp=Z,6.0nm,1.0s
BRTR Keskin Array B 17.98 96 P **P 15 05 47.3 +1.8**
comp=Z,0.0nm,0.3s,baz=283,slow=8.9,SNR=12
BRTR PcP **PcP 15 10 18.4 -1.7**
comp=Z,0.1nm,0.3s,baz=229,slow=3.8,SNR=4.3
BRTR LR LR 15 13 09.2
comp=Z,262nm,20.1s,baz=286,slow=38
ANN Anapa 19.41 79 *e*P **P 15 06 00.8 -0.3**
ANN *e*S **Sn 15 09 38.8 -1.1**
ANN pmax pmax
comp=Z,44nm,1.1s
ANN MLR MLR
comp=Z,328nm,14.0s
FIA0 FINESS Array S 19.68 23 *e*P **Pn 15 06 05.2 0.0**
FIA0 *e*PcP **PcP 15 10 21.4 -1.1**
FIA0 FINESS Array S 19.68 23 *e*P **Pn 15 06 05.2 0.0**
FINES FINESS Array B 19.68 23 P **Pn 15 06 05.2 0.0**
comp=Z,0.8nm,0.3s,baz=210,slow=9.3,SNR=32
FINES PcP **PcP 15 10 21.4 -1.1**
comp=Z,0.1nm,0.3s,baz=323,slow=1.0,SNR=4.5
FINES LR LR 15 14 35.5
comp=Z,542nm,18.3s,baz=218,slow=40
FIA1 FINESS Array S 19.68 23 *e*P **Pn 15 06 04.6 -0.6**
comp=Z,19nm,0.9s
PUL Pulkovo 19.80 31⇑ *i*P **Pn 15 06 06.9 +0.3**
OBN Obninsk 20.15 48 P Pn 15 06 10.8 -0.1
comp=Z,3.5nm,0.4s,baz=56,slow=9.3,SNR=8.3
OBN LR LR 15 14 46.5
comp=Z,84nm,20.3s,baz=240,slow=39
OBN Obninsk 20.15 48 *e*P Pn 15 06 10.8 -0.1
comp=Z,25nm,0.7s
OBN Obninsk 20.15 48*c i*P Pn 15 06 10.6 -0.2
OBN *i* 15 06 18.4
OBN *i* 15 06 34.5
OBN *i* S **S 15 09 47.3 -7.7**
OBN pmax pmax
comp=Z,33nm,1.1s
OBN MLR MLR
comp=Z,308nm,19.0s
VSR Storozhevoye 20.63 60 *e*P **P 15 06 14.5 +0.2**
VSR pmax pmax
comp=Z,40nm,0.8s
VSR MLR MLR
comp=Z,360nm,15.0s
VORD Divnogorie 20.68 61 *e*P **P 15 06 15.3 +0.5**
VORD pmax pmax
comp=Z,30nm,1.2s
VORR Voronezh 20.73 59 *e*P Pn 15 06 17.0 -0.7
VORR pmax pmax
comp=Z,250nm,1.6s
LPSR Galich'ya Gora 20.74 56 *e*P **P 15 06 15.8 +0.3**
LPSR pmax pmax
comp=Z,80nm,1.4s
LPSR MLR MLR
comp=Z,160nm,10.0s
MOS Moscow 20.94 47 *e*P **P 15 06 17.1 -0.5**
MOS pmax pmax
comp=Z,52nm,0.9s
SOC Sochi 21.24 81 *e*P **P 15 06 23.2 +2.3**
SOC *e*PPP PPP 15 06 54.4
SOC *e*S Sn 15 10 20.7 -3.2
SOC *e*SSS SSS 15 10 57.7
SOC pmax pmax
comp=Z,35nm,0.8s
SOC MLR MLR
comp=Z,82nm,12.0s
TAM Tamanrasset 21.68 192 *e*P **P 15 06 27.9 +1.9**
comp=Z,23nm,1.3s
TAM Tamanrasset 21.68 192 *e*P **P 15 06 27.9 +1.9**
TAM pmax pmax
comp=Z,23nm,1.3s
VRH Novokhopyorsk 22.23 60 *e*P **P 15 06 32.3 +0.9**
VRH pmax pmax
comp=Z,50nm,1.8s
MMAI Mount Meron Ar 22.55 111 P **P 15 06 36.2 +1.0**
comp=Z,1.4nm,0.6s,baz=308,slow=4.7,SNR=3.1
MMAI LR LR 15 17 15.6
comp=Z,153nm,18.9s,baz=280,slow=42
KIV Kislovodsk 23.27 79 *e*P **P 15 06 44.4 +1.9**
comp=Z,40nm,1.2s
KIV Kislovodsk 23.27 79 *e*P **P 15 06 45.5 +2.9**
KIV pmax pmax
comp=Z,96nm,1.1s
KIV MLR MLR
comp=Z,149nm,15.0s
GOF Gofitskoye 23.31 76⇑ *e*P **P 15 06 43.2 +0.3**
GOF pmax pmax
comp=Z,26nm,0.7s
KBZ Khabaz 23.46 80 P **P 15 06 46.4 +2.0**
comp=Z,2.6nm,0.9s,baz=307,slow=8.7,SNR=4.4
KBZ LR LR 15 19 00.4
comp=Z,72nm,19.0s,baz=296,slow=44
ASF Jabal al Asfar 24.06 111 P **P 15 06 52.1 +1.7**
comp=Z,1.6nm,0.4s,baz=244,slow=6.0,SNR=4.6
KLMR Klimovskoe 24.12 36 *e*P **P 15 06 50.3 -0.2**
KLMR pmax pmax
comp=Z,32nm,0.9s
KLMR Klimovskoe 24.12 36 *e*P **P 15 06 50.4 -0.1**
KLMR AMP 15 06 54.8
comp=Z,32nm,0.9s
ZEI Tsey 24.40 81 *e*P **P 15 06 55.3 +1.7**
ZEI pmax pmax
comp=Z,26nm,1.5s
EIL Elat 24.40 118 P **P 15 06 53.2 -0.3**
comp=Z,1.7nm,0.4s,baz=30,slow=8.4,SNR=4.1
EIL LR LR 15 19 01.9
comp=Z,95nm,21.2s,baz=252,slow=43
AKH Akhalkalaki 24.50 85 *e*P **P 15 06 55.5 +1.1**
comp=Z,24nm,1.0s
AKH Akhalkalaki 24.50 85 *e*P **P 15 06 55.5 +1.1**
AKH pmax pmax
comp=Z,24nm,1.0s
GNI Garni 25.80 87 P **P 15 07 07.6 +1.3**
comp=Z,13nm,0.9s,baz=322,slow=7.7,SNR=4.8
GNI LR LR 15 19 11.1
comp=Z,75nm,19.4s,baz=256,slow=41
GNI Garni 25.80 87⇑ *i*P **P 15 07 09.1 +2.8**
GNI pmax pmax
comp=Z,47nm,0.9s
APA Apatity 26.48 20⇓ *i*P **P 15 07 14.7 +2.9**
APA pmax pmax
comp=Z,3.0nm,1.1s
APA MLR MLR
comp=Z,300nm,14.0s
ARCES ARCESS Array B 26.59 12 P **P 15 07 13.8 +0.9**
comp=Z,9.1nm,0.4s,baz=186,slow=8.5,SNR=8.5
ARCES PcP **PcP 15 10 36.2 -0.5**
comp=Z,1.3nm,0.7s,baz=168,slow=2.2,SNR=3.6
ARA0 ARCESS Array S 26.59 12 *e*P **P 15 07 13.8 +0.9**
ARA0 *e*PcP **PcP 15 10 36.2 -0.5**
BORG Borgarnes 27.07 330 LR LR 15 19 12.3
comp=Z,113nm,18.2s,baz=141,slow=39
PRGR Permogore 27.10 37 *e*P **P 15 07 15.9 -1.6**

PRGR pmax pmax
comp=Z,19nm,0.7s
KIRV Kirov 27.92 45 LR LR 15 18 40.0
comp=Z,113nm,20.9s,baz=203,slow=37
JMIC Jan Mayen 28.41 347 LR LR 15 19 07.3
comp=Z,127nm,18.9s,baz=82,slow=37
TOA1 Torodi Ar. Sit 31.77 196 *e*P **P 15 07 59.2 -0.1**
TORD Torodi Ar. Bea 31.78 196 P **P 15 07 59.2 -0.2**
comp=Z,2.2nm,0.8s,baz=0.4,slow=10,SNR=9.0
TORD LR LR 15 21 21.3
comp=Z,289nm,19.0s,baz=345,slow=38
ARU Arti 32.54 51 *e*P **P 15 08 05.1 -0.6**
comp=Z,10nm,0.7s
ARU Arti 32.54 51*d i*P **P 15 08 05.8 +0.1**
ARU S **S 15 13 20.8 +0.1**
ARU pmax pmax
comp=Z,11nm,0.7s
ARU MLR MLR
comp=Z,401nm,14.0s
SVE Sverdlovsk 33.69 50⇑ *e*P **P 15 08 16.3 +0.5**
SVE pmax pmax
comp=Z,22nm,1.0s
SVE MLR MLR
comp=Z,414nm,14.0s
ABKAR Akbulak array 33.97 63 *e*P **P 15 08 18.3 0.0**
comp=Z,10nm,1.3s
GEYT Alibeck 36.25 83 P **P 15 08 39.4 +1.2**
comp=Z,5.5nm,0.8s,baz=282,slow=8.6,SNR=11
GEYT LR LR 15 27 06.5
comp=Z,20nm,22.0s,baz=325,slow=42
GYA0B ALIBECK ARRAY 36.25 83 *e*P **P 15 08 37.5 -0.7**
comp=Z,8.4nm,0.8s
BRVK Borovoye 39.62 55 *e*P **P 15 09 07.0 +0.7**
comp=Z,10nm,0.9s
BRVK Borovoye 39.62 55⇑ *i*P **P 15 09 08.1 +1.7**
BRVK pmax pmax
comp=Z,9.0nm,0.9s
DBIC Dimbokro 39.62 204 LR LR 15 26 09.3
comp=Z,182nm,18.9s,baz=5.5,slow=37
KK31 Karatay Array 42.79 69 *e*P **P 15 09 33.4 +0.8**
comp=Z,12nm,0.9s
KK31 Karatay Array 42.79 69 *e*P **P 15 09 33.4 +0.8**
KK31 pmax pmax
comp=Z,12nm,0.9s
KKAR Karatay Array 42.79 69 *e*P **P 15 09 33.1 +0.5**
comp=Z,12nm,0.9s
KKAR Karatay Array 42.79 69 *e*P **P 15 09 33.1 +0.5**
KKAR pmax pmax
comp=Z,12nm,0.9s
GAR Garm 44.39 75 *e*P **P 15 09 45.8 +0.1**
comp=Z,17nm,0.5s
GAR Garm 44.39 75 *e*P **P 15 09 45.8 +0.1**
GAR pmax pmax
comp=Z,17nm,0.5s
NRIK Noril'sk 45.15 29 P **P 15 09 51.6 +0.4**
comp=Z,1.0nm,0.4s,baz=282,slow=6.9,SNR=6.3
NRIK LR LR 15 31 21.5
comp=Z,172nm,18.6s,baz=262,slow=40
KURK Kurchatov 45.23 56 *e*P **P 15 09 52.4 +0.4**
KURK Kurchatov 45.23 56⇑ *i*P **P 15 09 52.8 +0.8**
KURK pmax pmax
comp=Z,6.0nm,0.9s
AAK Ala-Archa 45.65 68 *e*P **P 15 09 56.3 +0.5**
comp=Z,9.5nm,1.0s
AAK Ala-Archa 45.65 68⇑ *i*P **P 15 09 57.8 +2.1**
AAK pmax pmax
comp=Z,8.0nm,1.0s
NVS Novosibirsk 46.53 50 *e*P **P 15 10 01.9 -0.3**
NVS pmax pmax
comp=Z,6.0nm,0.7s
NVS pmax pmax
comp=E,3.0nm,0.8s
ZAA1 Zalesovo Array 47.70 50 *e*P **P 15 10 12.2 +0.8**
ZAA0 Zalesovo Array 47.70 50 *e*P **P 15 10 11.9 +0.5**
comp=E,5.2nm,1.1s
ZALV Zalesovo Beam 47.70 50 P **P 15 10 12.2 +0.8**
comp=E,3.2nm,0.8s,baz=289,slow=9.2,SNR=8.0
ZALV LR LR 15 33 07.8
comp=E,140nm,18.8s,baz=250,slow=40
KSH Kashi 48.05 72 P **P 15 10 15.8 +1.3**
KSH sP sP 15 10 22.9 +3.9
KSH PcP **PcP 15 11 42.8 +0.6**
KSH S **S 15 17 11.1 -1.7**
KSH ScS **ScS 15 20 06.8 -1.1**
KSH pmax pmax
comp=E,63nm,1.3s
KSH pmax pmax
comp=E,280nm,4.3s
KSH LR LR
comp=E,260nm,9.6s
KSH LR LR
comp=E,200nm,8.2s
SCHQ Schefferville 48.71 311 LR LR 15 29 21.8
comp=E,85nm,19.7s,baz=94,slow=34
MAKZ Makanchi 48.76 60 *e*P **P 15 10 19.6 -0.1**
comp=E,3.8nm,1.0s
MAKZ Makanchi 48.76 60 *e*P **P 15 10 19.6 -0.1**
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
MK31 Makanchi Array 48.96 60 *e*P **P 15 10 21.5 +0.3**
comp=Z,4.2nm,1.1s
MK31 Makanchi Array 48.96 60 *e*P **P 15 10 21.5 +0.3**
MK31 pmax pmax
comp=Z,4.0nm,1.1s
MK32 Makanchi Array 48.96 60 *e*P **P 15 10 21.9 +0.6**
MKAR Makanchi Array 48.96 60 P **P 15 10 21.9 +0.6**
comp=Z,2.8nm,0.6s,baz=290,slow=5.7,SNR=38
MKAR LR LR 15 32 31.5
comp=Z,179nm,20.0s,baz=293,slow=38
DGZ Jazzator, Alta 50.84 55⇑ *i*P **P 15 10 36.8 +1.1**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
WMQ Urumqi 53.70 61 P **P 15 10 58.4 +1.5**
WMQ sP sP 15 11 06.3 +4.8
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,53nm,3.7s
WMQ LR LR
comp=Z,280nm,28.9s
WMQ LR LR
comp=Z,400nm,29.1s
TIXI Tiksi 56.67 19⇑ *i*P **P 15 11 20.6 +2.8**
TIXI pmax pmax
comp=Z,3.0nm,1.2s
TLY Talaya 58.90 47⇑ *i*P **P 15 11 36.1 +2.3**
TLY pmax pmax
comp=Z,15nm,1.0s
BOD Bodaibo 60.34 37 *e*P **P 15 11 43.2 -0.4**
BOD pmax pmax
comp=Z,15nm,1.0s
SONA0 Songino Array 62.55 49 *e*P **P 15 12 00.7 +1.8**
SONM Songino Array 62.55 49 P **P 15 12 00.7 +1.8**
comp=Z,2.8nm,0.8s,baz=283,slow=10,SNR=15
SONM LR LR 15 42 10.3
comp=Z,195nm,18.4s,baz=294,slow=39
ULN Ulaanbaatar 62.89 49*c i*P **P 15 12 03.2 +2.0**
ULN pmax pmax
comp=Z,4.0nm,1.4s
INK Inuvik 64.59 346 P **P 15 12 12.8 +1.0**
comp=Z,1.7nm,0.5s,baz=16,slow=11,SNR=5.7
INK Inuvik 64.59 346 *e*P **P 15 12 12.8 +1.0**
comp=Z,3.4nm,1.0s
YKA Yellowknife Ar 64.88 335 P **P 15 12 14.1 +0.3**
comp=Z,2.5nm,0.7s,baz=42,slow=6.3,SNR=9.9
YKA LR LR 15 40 29.3
comp=Z,14nm,19.3s,baz=38,slow=36
YKB5 Yellowknife Ar 64.88 335 *e*P **P 15 12 14.2 +0.3**
ULM Lac du Bonnet 66.13 318 LR LR 15 39 25.6
comp=Z,120nm,21.0s,baz=12,slow=34
BILL Bilibino 66.66 10⇑ *i*P **P 15 12 28.8 +3.6**
BILL *i* 15 12 56.4
BILL pmax pmax
comp=Z,2.0nm,1.1s
EPYK Eagle Plains 66.88 346 *e*P **P 15 12 26.8 +0.1**
comp=Z,22nm,1.8s
COLD Coldfoot 67.92 352 *e*P **P 15 12 35.0 +1.8**
comp=Z,16nm,1.9s
LZH Lanzhou 68.27 60 *e*P **P 15 12 36.8 +0.7**
LZH pP sP 15 12 41.5 +0.7
LZH sP pP 15 12 44.6 +5.0
LZH pmax pmax
comp=Z,27nm,1.2s
SEY Seymchan 69.05 17 P **P 15 12 40.8 +0.5**
comp=Z,2.2nm,0.8s,baz=357,slow=6.6,SNR=4.9
EGAK Eagle 69.08 347 *e*P **P 15 12 41.6 +1.1**

comp=Z,3.4nm,0.9s
DAWY Dawson 69.45 346 *e*P **P 15 12 43.8 +0.9**
comp=Z,4.7nm,0.8s
HHC Hu-ho-hao-te 69.82 52 *e*P **P 15 12 44.5 -1.1**
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,28nm,6.6s
HHC LR LR
comp=Z,220nm,14.5s
HHC LR LR
comp=Z,210nm,13.6s
ILAR Eielson Array 69.91 350 P **P 15 12 46.4 +0.8**
comp=Z,0.9nm,0.8s,baz=10,slow=5.7,SNR=10
ILAR LR LR 15 47 17.7
comp=Z,54nm,18.5s,baz=41,slow=39
ILB Eielson Array 69.91 350 *e*P **P 15 12 46.4 +0.8**
comp=Z,17nm,1.9s
HDA Harding Lake 70.26 350 *e*P **P 15 12 48.6 +0.8**
comp=Z,3.8nm,0.7s
DOT Dot Lake 70.59 348 *e*P **P 15 12 51.2 +1.4**
comp=Z,18nm,1.8s
RIDG Independent Ri 70.61 349 *e*P **P 15 12 51.7 +1.6**
comp=Z,11nm,0.9s
CD2 Chengdu 71.54 65 P **P 15 12 54.8 -1.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
MA2 Magadan 71.64 20⇓ *i*P **P 15 12 58.8 +2.6**
MA2 pmax pmax
comp=Z,5.0nm,0.9s
HYT Haines Junctio 72.09 344 *e*P **P 15 12 59.8 +0.7**
comp=Z,8.0nm,1.3s
XAN Xi'an 72.76 59 P **P 15 13 04.0 +0.6**
XAN pmax pmax
comp=Z,17nm,0.8s
XAN pmax pmax
comp=Z,150nm,4.1s
XAN LR LR
comp=Z,180nm,15.2s
XAN LR LR
comp=Z,200nm,13.0s
XAN Xi'an 72.76 59 *e*P **P 15 13 04.1 +0.6**
comp=Z,13nm,0.6s
XAN Xi'an 72.76 59 *e*P **P 15 13 04.1 +0.6**
XAN pmax pmax
comp=Z,13nm,0.6s
BOSA Boshof 73.75 166 LR LR 15 46 53.1
comp=Z,162nm,18.3s,baz=12,slow=37
KLR Kul'dur 73.88 36⇑ *i*P **P 15 13 11.9 +2.2**
KLR pmax pmax
comp=Z,1.0nm,0.6s
NKL Nikolayevsk 74.15 28 *e*P **P 15 13 09.8 -1.4**
NKL *e* 15 13 28.0
NKL *e* 15 15 56.9
NKL *e*S **S 15 22 42.7 -1.4**
NKL *e* 15 23 25.0
NKL *e*SS **SS 15 27 33.3 +5.3**
NKL pmax pmax
comp=Z,11nm,1.1s
NKL pmax pmax
comp=N,3.0nm,0.6s
NKL pmax pmax
comp=E,6.0nm,1.1s
CN2 Changchun 75.12 43 *e*P **P 15 13 16.5 -0.5**
CN2 *es*P sP 15 13 23.5 +1.8
CN2 *e*S **S 15 22 51.5 -3.8**
CN2 pmax pmax
comp=E,10.0nm,0.6s
CN2 pmax pmax
comp=E,200nm,3.0s
CN2 LR LR
comp=E,290nm,21.0s
CN2 LR LR
comp=E,260nm,21.0s
CM31 Chiang Mai Arr 76.50 77 *e*P **P 15 13 25.1 -0.2**
comp=E,38nm,1.9s
CMAR Chiang Mai Arr 76.50 77 P **P 15 13 25.1 -0.2**
comp=E,1.5nm,0.9s,baz=297,slow=8.0,SNR=7.1
CMAR Chiang Mai Arr 76.50 77 *ce*P P 15 13 30.2 +4.9
CMAR pmax pmax
comp=Z,2.0nm,0.9s
KDAK Kodiak Island 77.39 351 *i* P **P 15 13 34.2 +4.6**
USRK Ussuriysk Ar. 77.88 39 LR LR 15 52 07.6
comp=Z,78nm,19.0s,baz=280,slow=39
PDAR Pinedale Array 78.06 319 LR LR 15 47 31.5
comp=Z,76nm,18.6s,baz=34,slow=35
PETK Petropavlovsk- 79.15 19 LR LR 15 53 35.3
comp=Z,93nm,19.0s,baz=247,slow=39
NJ2 Nanjing 80.13 55 *e*P **P 15 13 45.4 +0.2**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
KS15 Wonju Array Si 81.12 46 *e*P **P 15 13 51.0 +0.6**
comp=Z,39nm,1.9s
KSRS Korea Array 81.13 45 P **P 15 13 51.0 +0.5**
comp=Z,1.0nm,0.7s,baz=322,slow=5.7,SNR=6.7
KSRS LR LR 15 54 13.3
comp=Z,129nm,18.6s,baz=175,slow=39
KSRS Korea Array 81.13 45 P **P 15 13 51.0 +0.5**
TXAR Lajitas Array 85.16 307 P **P 15 14 09.3 -2.2**
comp=Z,0.2nm,0.5s,baz=72,slow=2.9,SNR=3.6
TXAR LR LR 15 51 19.4
comp=Z,56nm,20.4s,baz=0.0,slow=35
NVAR Mina Array Bea 85.52 322 LR LR 15 51 38.2
comp=Z,100nm,19.4s,baz=13,slow=35
MAJO Matsushiro 86.85 39 *e*P **P 15 14 19.6 -0.1**
MAJO Matsushiro 86.85 39 *e*P **P 15 14 19.6 -0.1**
MJAR Matsushiro Arr 86.85 39 P **P 15 14 19.6 -0.1**
comp=Z,1.2nm,1.0s,baz=308,slow=4.1,SNR=4.2
LPAZ La Paz 93.08 250 LR LR 15 52 08.4
comp=Z,38nm,22.0s,baz=38,slow=33
SNAA Sanae 115.92 185 *i* PKIKP **PKiKP 15 20 22.9 +6.3**
AS31 Alice Springs 130.04 85 *e*PKPdf **PKPdf 15 20 42.5 -2.5**
ASAR Alice Springs 130.04 85 PKP **PKPdf 15 20 42.5 -2.5**
comp=Z,1.1nm,0.8s,baz=321,slow=1.3,SNR=11
VNDA Vanda 144.65 170 PKP **PKPab 15 21 08.6 -0.4**
comp=Z,1.0nm,0.9s,baz=283,slow=7.7,SNR=3.9

NEIC ***23*** *15:19:24.9±0.1,5.00S×151.33E,mb5.0/113,Error ellipse: s-maj=3.5km s-min=3.0km az=103.0*
MOS ***23*** *15:19:24.5±0.9,4.97S×151.29E,h136km,mb4.9/30,Error ellipse: s-maj=9.3km s-min=6.2km az=97.3*
ISCJB ***23*** *15:19:25.0±0.6,5.01S±0.03×151.32E±0.03,h141km±5km, mb4.9/158,Error ellipse: s-maj=4.9km s-min=4.3km az=19.5*
DJA ***23*** *15:19:25.8±0.6,5.5±3.3×15.1E±.,h119km±6km,M5.4/35, mB5.7/14,mb5.1/35,MLv6.0/1,Mw(mB)5.2/14*
IDC ***23*** *15:19:25.3±0.6,5.05S×151.38E,h133km±4km,mb4.6/23, mb1 4.8/28,mb1mx4.7/34,mbtmp5.1/28,MS3.7/8, Ms1 3.7/8,ms1mx3.5/18,Error ellipse: s-maj=12.3km s-min=8.0km az=72.0*
GCMT ***23*** *15:19:26.9±0.2,5.16S±0.01×151.31E±0.02,h132km±2km, MW5.1/88,Moment Tensor Solution. s26,c31; s88,c137; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.77±.16; Mθθ-4.46±.16; Mφφ3.70±.17; Mrθ-2.74±.12; Mφφ4.05±.18; Mθr~0.99±.13; Best double couple: M0 6.45500×10^16 NP1:φs249.00000°,δ87.00000°,λ27.00000°. NP2: φs157.00000°,δ63.00000°,λ176.00000°. Principal axes: T 6.1380, Plg21.0000°, Azm116.0000°; N 0.6400, Plg62.0000°, Azm255.0000°; P -6.7720, Plg17.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 15:19:26.0±0.4,5.03S±0.04×151.37E±0.05,h139km±3km, h140km:pP-P,n428,σ1.9s19/466,mb5.0/157,10C-4D,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.15**	**43**	*e*Pn	**Pn**	**15 19 51.0**	**-0.2**
MANU	**Manus Island**	**4.98**	**306**	*e*Pn	**Pn**	**15 20 39.1**	**+0.1**
PMG	**Port Moresby**	**6.03**	**224**	P	**Pn**	**15 20 52.3**	**-0.7**
	127nm,0.3s,baz=50,slow=5.1,SNR=253						
PMG				S	**Sn**	**15 21 58.7**	**-2.2**
	472nm,0.3s,baz=121,slow=19,SNR=17						
PMG	**Port Moresby**	**6.03**	**224**	*e*Pn	**Pn**	**15 20 52.1**	**-0.8**
HNR	**Honiara**	**9.56**	**118**	*e*P	**Pn**	**15 21 41.0**	**+0.6**
HNR				*e*S	Sn	15 23 40.0	+14
HNR	**Honiara**	**9.56**	**118**	P	**Pn**	**15 21 40.7**	**+0.3**
	17nm,0.3s,baz=206,slow=1.1,SNR=22						
HNR	**Honiara**	**9.56**	**118**	*e*Pn	**Pn**	**15 21 40.9**	**+0.5**
JAY	**Jayapura**	**10.93**	**283**	P	**Pn**	**15 21 57.7**	**-0.9**
	1.2nm,0.3s,baz=7.6,slow=16,SNR=14						
JAY				LR	LR	15 26 10.5	
	comp=Z,211nm,20.3s,baz=256,slow=37						
JAY	**Jayapura**	**10.93**	**283**	P	**Pn**	**15 21 58.2**	**-0.5**
	746nm,1.3s,8μm						
GENI	**Genyem**	**11.44**	**282**	P	**Pn**	**15 22 05.3**	**0.0**
COEN	**Coen**	**11.99**	**222**	*e*Pn	**Pn**	**15 22 12.6**	**0.0**
PATS	**Pohnpei**	**13.68**	**31**	*e*Pn	**Pn**	**15 22 35.0**	**+0.7**
SRPI	**Serui, Papua**	**15.42**	**281**	P	**Pn**	**15 22 54.9**	**-1.4**
	488nm,0.7s,6μm						
BAKI	**Biak**	**15.71**	**284**	P	**P**	**15 23 00.8**	**-0.1**
	105nm,1.3s						
CTA	**Charters Tower**	**15.77**	**198**	P	**Pn**	**15 23 00.4**	**-0.1**
	2.0nm,0.3s,baz=24,slow=14,SNR=32						
CTAO	**Charters Tower**	**15.77**	**198**	*e*Pn	**Pn**	**15 23 00.4**	**-0.1**
	140nm,1.1s						
CTAO	**Charters Tower**	**15.77**	**198**	*e*P	**Pn**	**15 23 00.4**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,140nm,1.1s						
FAKI	**Fak Fak**	**19.19**	**276**	*e*P	**P**	**15 23 38.4**	**-0.7**
	comp=Z,134nm,0.8s						
FAKI	**Fak Fak**	**19.19**	**276**	P	**P**	**15 23 38.8**	**-0.3**
GUMO	**Guam**	**19.59**	**341**	P	**P**	**15 23 44.0**	**+0.6**
	comp=Z,18nm,0.3s,baz=175,slow=6.9,SNR=15						
GUMO	**Guam**	**19.59**	**341**	*e*P	**P**	**15 23 44.0**	**+0.6**
	comp=Z,741nm,1.0s						
EIDS	**Eidsvold**	**20.22**	**181**	*e*P	**P**	**15 23 51.0**	**+0.9**
	comp=Z,82nm,0.8s						
SIJI	**Sorong**	**20.49**	**281**	P	**P**	**15 23 53.5**	**+0.3**
	comp=Z,193nm,1.0s,baz=81,slow=8.7,SNR=31						
SWI	**Sorong**	**20.50**	**281**	P	**P**	**15 23 54.2**	**+0.9**
BNDI	**Bandanaira**	**21.40**	**270**	P	**P**	**15 24 03.1**	**+0.2**
MTN	**Manton Dam**	**21.43**	**247**	*e*P	**P**	**15 24 03.5**	**+0.3**
	comp=Z,176nm,1.4s						
WRAB	**Tennant Creek**	**22.22**	**227**	*ce*P	**P**	**15 24 10.2**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,87nm,1.0s						
WB2	**Warramunga Arr**	**22.23**	**227**	*e*P	**P**	**15 24 10.2**	**-1.3**
	comp=Z,84nm,0.6s						
WR1	**Warramunga Arr**	**22.24**	**227**	*e*P	**P**	**15 24 10.2**	**-1.4**
WR1				*e*S	**S**	**15 28 06.2**	**-0.3**
WR1				*e*ScP	**ScP**	**15 31 28.0**	**+0.6**
WRA	**Warramunga Arr**	**22.24**	**227**	P	**P**	**15 24 10.2**	**-1.4**
	comp=Z,56nm,0.6s,baz=52,slow=9.3,SNR=233						
WRA				S	**S**	**15 28 06.2**	**-0.3**
	comp=Z,45nm,1.0s,baz=46,slow=18,SNR=15						
WRA				ScP	**ScP**	**15 31 28.0**	**+0.6**
	comp=Z,7.6nm,0.7s,baz=68,slow=0.4,SNR=8.8						
DZM	**Mont Dzumac**	**22.36**	**141**	*e*P	**P**	**15 24 12.9**	**+0.1**
	comp=Z,161nm,1.1s						
DZM	**Mont Dzumac**	**22.36**	**141**	P	**P**	**15 24 13.3**	**+0.5**
	comp=Z,52nm,0.5s,baz=285,slow=7.5,SNR=53						
DZM	**Mont Dzumac**	**22.36**	**141**	*e*P	**P**	**15 24 13.1**	**+0.3**
	comp=Z,62nm,0.6s						
ONTNC	**Ouen Toro**	**22.54**	**141**	*e*P	**P**	**15 24 15.1**	**+0.6**
	comp=Z,124nm,1.1s						
MARNC	**Mare, Loyalty**	**22.99**	**137**	*e*P	**P**	**15 24 19.5**	**+0.8**
	comp=Z,581nm,0.9s						
AAI	**Ambon**	**23.15**	**272**	P	**P**	**15 24 20.3**	**0.0**
TNTI	**Ternate**	**24.66**	**283**	*e*P	**P**	**15 24 34.0**	**0.0**
	comp=Z,39nm,1.1s						
TNTI	**Ternate**	**24.66**	**283**	P	**P**	**15 24 35.3**	**+1.3**
AS31	**Alice Springs**	**25.03**	**221**	*e*P	**P**	**15 24 36.9**	**-0.4**
	comp=Z,21nm,0.6s						
AS31				*e*ScP	**ScP**	**15 31 35.0**	**0.0**
ASAR	**Alice Springs**	**25.03**	**221**	P	**P**	**15 24 37.0**	**-0.4**
	comp=Z,64nm,0.6s,baz=55,slow=8.7,SNR=628						
ASAR				S	**S**	**15 28 58.6**	**+7.2**
	comp=Z,10nm,0.8s,baz=38,slow=20,SNR=8.2						
ASAR				ScP	**ScP**	**15 31 35.0**	**0.0**
	comp=Z,3.0nm,0.7s,baz=35,slow=2.5,SNR=8.0						
ARMA	**Armidale**	**25.25**	**179**	*e*P	**P**	**15 24 40.3**	**+0.9**
	comp=Z,82nm,1.4s						
SANI	**Sanana**	**25.50**	**276**	P	**P**	**15 24 43.3**	**+1.6**
	comp=Z,37nm,1.1s						
KMSI	**Cibinong**	**27.92**	**281**	P	**P**	**15 25 05.7**	**+2.4**
BATI	**Baumata**	**27.93**	**258**	P	**P**	**15 25 05.4**	**+2.0**
STKA	**Stephens Creek**	**28.23**	**198**	P	**P**	**15 25 06.3**	**+0.5**
	comp=Z,6.6nm,0.5s,baz=24,slow=9.5,SNR=14						
STKA				ScP	**ScP**	**15 31 45.0**	**+0.8**
	comp=Z,7.7nm,1.1s,baz=57,slow=9.2,SNR=4.3						
STKA				LR	LR	15 35 50.7	
	comp=Z,211nm,19.8s,baz=8.7,slow=35						
STKA	**Stephens Creek**	**28.23**	**198**	*e*P	**P**	**15 25 05.6**	**-0.3**
	comp=Z,7.6nm,1.0s						
STKA				*e*ScP	**ScP**	**15 31 47.0**	**+2.8**
FITZ	**Fitzroy Crossi**	**28.30**	**241**	*e*P	**P**	**15 25 05.7**	**-0.9**
	comp=Z,53nm,0.8s						
LUWI	**Luwuk**	**28.83**	**277**	*e*P	**P**	**15 25 10.8**	**-0.6**
	comp=Z,107nm,1.3s						
LUWI	**Luwuk**	**28.83**	**277**	P	**P**	**15 25 12.9**	**+1.5**
EDFI	**Ende, Flores**	**29.69**	**261**	P	**P**	**15 25 20.3**	**+1.2**
APSI	**Ampana**	**29.95**	**277**	P	**P**	**15 25 22.1**	**+0.7**
BKSI	**Bulukumba**	**31.12**	**268**	P	**P**	**15 25 33.2**	**+1.6**
WSI	**Waingapu**	**31.15**	**260**	P	**P**	**15 25 31.9**	**0.0**
FORT	**Forrest**	**33.72**	**218**	*e*P	**P**	**15 25 53.1**	**-1.0**
	comp=Z,40nm,0.7s						
OUZ	**Omahuta**	**36.38**	**149**	*e*P	**P**	**15 26 17.3**	**+0.5**
	comp=Z,50nm,0.8s						
SBUM	**Sibu**	**39.81**	**280**	P	**P**	**15 26 48.0**	**+2.1**
URZ	**Urewera**	**40.52**	**148**	P	**P**	**15 26 51.8**	**+0.4**
	comp=Z,21nm,0.7s,baz=303,slow=3.8,SNR=21						
URZ				PcP	**PcP**	**15 28 49.5**	**-1.7**
	comp=Z,10nm,0.7s,baz=337,slow=4.4,SNR=3.5						
URZ	**Urewera**	**40.52**	**148**	*e*P	**P**	**15 26 52.3**	**+0.9**
	comp=Z,29nm,0.8s						
URZ				PcP	**PcP**	**15 28 49.5**	**-1.7**
YULB	**Yu-li**	**40.74**	**315**	*e*P	**P**	**15 26 53.5**	**+0.1**
	comp=Z,26nm,0.8s						
BKZ	**Black Stump Fm**	**40.89**	**150**	*e*P	**P**	**15 26 55.0**	**+0.5**
	comp=Z,21nm,0.8s						
SSLB	**Suanglung**	**41.23**	**315**	*e*P	**P**	**15 26 57.9**	**+0.5**
	comp=Z,139nm,2.0s						
THZ	**Tophouse**	**41.32**	**155**	*e*P	**P**	**15 26 58.4**	**+0.5**
	comp=Z,46nm,1.0s						
YHNB	**Yeheng**	**41.52**	**317**	*e*P	**P**	**15 27 00.3**	**+0.5**
	comp=Z,64nm,0.9s						
KSM	**Kuching**	**41.52**	**278**	*ep*P	pP	15 27 29.4	-1.1
KSM	**Kuching**	**41.52**	**278**	P	**P**	**15 27 01.0**	**+1.0**
LTZ	**Lake Taylor**	**41.92**	**157**	*e*P	**P**	**15 27 03.5**	**+0.7**
	comp=Z,40nm,0.8s						
KHZ	**Kahutara**	**42.12**	**155**	*e*P	**P**	**15 27 04.0**	**-0.3**
	comp=Z,52nm,0.9s						
RPZ	**Rata Peaks**	**42.26**	**159**	P	**P**	**15 27 05.3**	**-0.2**
	comp=Z,82nm,0.6s,baz=300,slow=2.1,SNR=51						
RPZ	**Rata Peaks**	**42.26**	**159**	*e*P	**P**	**15 27 06.5**	**+0.9**
	comp=Z,103nm,0.7s						
OXZ	**Oxford**	**42.29**	**157**	*e*P	**P**	**15 27 05.4**	**-0.3**
	comp=Z,48nm,0.7s						
INU	**Inuyama**	**42.37**	**343**	*e*P	**P**	**15 27 05.6**	**-0.9**
	comp=Z,26nm,0.8s						
JNU	**Nakatsue**	**42.63**	**334**	*e*P	**P**	**15 27 09.2**	**+0.5**
	comp=Z,64nm,1.0s						
MJAR	**Matsushiro Arr**	**43.15**	**344**	P	**P**	**15 27 11.7**	**-1.1**
	comp=Z,14nm,0.8s,baz=169,slow=9.6,SNR=65						
MJAR				PcP	**PcP**	**15 28 59.5**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=167,slow=5.3,SNR=5.7						
MJAR				ScP	**ScP**	**15 32 37.7**	**-0.7**
	comp=Z,3.1nm,0.9s,baz=178,slow=5.1,SNR=7.7						
MAJO	**Matsushiro**	**43.15**	**344**	*e*P	**P**	**15 27 11.7**	**-1.1**
	comp=Z,28nm,0.8s						
MAJO				*e*ScP	**ScP**	**15 32 37.7**	**-0.7**
MAJO	**Matsushiro**	**43.15**	**344**	*e*P	**P**	**15 27 11.7**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,28nm,0.8s						
MAT	**Matsushiro**	**43.15**	**344**	P	**P**	**15 27 11.5**	**-1.3**
MJB9	**Matsu-Tunnel**	**43.16**	**344**	*e*P	**P**	**15 27 11.8**	**-1.1**
	comp=Z,28nm,0.8s						
DLV	**T Lat**	**45.86**	**292**	*ep*P	pP	15 28 05.0	-0.8
TJN	**Taejon**	**46.92**	**333**	*ce*P	**P**	**15 27 43.7**	**+1.1**
KSRS	**Korea Array**	**47.58**	**335**	P	**P**	**15 27 48.5**	**+0.9**
	comp=Z,8.9nm,0.8s,baz=151,slow=8.2,SNR=69						
KSRS				pP	**pP**	**15 28 19.1**	**+0.3**
	comp=Z,5.1nm,1.0s,baz=151,slow=9.3,SNR=4.1						
KSRS				PcP	**PcP**	**15 29 15.1**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=163,slow=4.3,SNR=6.2						
KSRS				ScP	**ScP**	**15 32 57.0**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=140,slow=4.7,SNR=4.0						
KS15	**Wonju Array Si**	**47.59**	**335**	*e*P	**P**	**15 27 46.4**	**-1.3**
	comp=Z,15nm,1.0s						
KS15				*ep*P	**pP**	**15 28 19.1**	**+0.3**
KS15				*e*PcP	**PcP**	**15 29 15.1**	**-0.2**
KS15				*e*ScP	**ScP**	**15 32 57.0**	**+0.4**
KSAR	**Wonju Array Be**	**47.59**	**335**	P	**P**	**15 27 48.5**	**+0.9**
KSAR				pP	**pP**	**15 28 19.1**	**+0.3**
KSAR				PcP	**PcP**	**15 29 15.1**	**-0.2**
KSAR				ScP	**ScP**	**15 32 57.0**	**+0.4**
KSAR	**Wonju Array Be**	**47.59**	**335**	P	**P**	**15 27 48.6**	**+0.9**
KSAR				*PP	**pP**	**15 28 19.1**	**+0.3**
KSAR						15 29 15.1	
NJ2	**Nanjing**	**48.14**	**322**	*e*P	**P**	**15 27 53.6**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
WHN	**Wuhan**	**50.05**	**317**⇑	P	**P**	**15 28 08.3**	**+1.7**
WHN				pmax	pmax		
	comp=Z,200nm,1.7s						
DL2	**Dalian**	**51.66**	**330**	P	**P**	**15 28 19.0**	**+0.5**
DL2				pP	**pwP**	**15 28 52.8**	**-0.1**
DL2				S	**S**	**15 35 31.1**	**+2.0**
DL2				pmax	pmax		
	comp=Z,21nm,1.1s						
USRK	**Ussuriysk Ar.**	**52.02**	**342**	P	**P**	**15 28 21.8**	**+0.7**
	comp=Z,7.3nm,0.8s,baz=162,slow=8.6,SNR=17						
USRK				pP	**pP**	**15 28 52.8**	**+0.1**
	comp=Z,8.0nm,0.8s,baz=165,slow=8.5,SNR=6.2						
TIA	**Tai'an**	**52.07**	**325**	P	**P**	**15 28 22.3**	**+0.7**
TIA				pmax	pmax		
	comp=Z,17nm,0.7s						
NONG	**Nongkai**	**52.80**	**297**	P	**P**	**15 28 29.0**	**+1.7**
	comp=Z,0.6nm,1.6s,comp=Z,174nm						
MDJ	**Mudanjiang**	**53.15**	**341**	*ep*P	pP	15 29 00.5	-0.6
ENH	**Enshi**	**53.28**	**314**	*e*P	**P**	**15 28 29.2**	**-1.4**
	comp=Z,47nm,1.3s						
GYA	**Guiyang**	**53.41**	**308**	*e*P	**P**	**15 28 35.3**	**+3.5**
GYA				pP	pwP	15 29 05.6	-0.6
GYA				PP	**PP**	**15 30 40.0**	**+6.2**
GYA				S	**S**	**15 35 58.1**	**+4.5**
GYA				sS	sS	15 36 49.3	+0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
CN2	**Changchun**	**53.94**	**337**	*e*P	**P**	**15 28 36.8**	**+1.6**
CN2				*e*S	**S**	**15 35 59.8**	**-0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,220nm,18.0s						
CN2				LR	LR		
	comp=Z,160nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,21.0s						
UTTA	**Uttaradit**	**55.01**	**296**	P	**P**	**15 28 45.3**	**+1.9**
	comp=Z,18μm,0.7s						
NANT	**Nan**	**55.24**	**297**	P	**P**	**15 28 46.4**	**+1.4**
	comp=Z,31μm,0.6s,comp=Z,405μm						
BJI	**Beijing**	**55.31**	**327**	P	**P**	**15 28 45.5**	**+0.4**
BJI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
XAN	**Xi'an**	**55.82**	**317**	P	**P**	**15 28 49.5**	**+0.6**
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
XAN				pmax	pmax		
	comp=Z,89nm,3.0s						
XAN				LR	LR		
	comp=Z,170nm,13.0s						
XAN				LR	LR		
	comp=Z,140nm,18.4s						
XAN				LR	LR		
	comp=Z,150nm,18.4s						
XAN	**Xi'an**	**55.82**	**317**	*e*P	**P**	**15 28 48.6**	**-0.4**
	comp=Z,33nm,1.4s						
XAN	**Xi'an**	**55.82**	**317**	*e*P	**P**	**15 28 48.6**	**-0.4**
XAN				pmax	pmax		
	comp=Z,33nm,1.4s						
KMI	**Kunming**	**55.94**	**305**	P	**P**	**15 28 51.8**	**+1.6**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				pmax	pmax		
	comp=Z,160nm,4.6s						
LAMP	**Lampang**	**56.09**	**296**	P	**P**	**15 28 53.6**	**+2.5**
	comp=Z,27μm,0.8s						
PAYA	**Payao**	**56.17**	**297**	P	**P**	**15 28 53.6**	**+1.9**
	comp=Z,36μm,0.8s						
KLR	**Kul'dur**	**56.68**	**345**	*d i*P	**P**	**15 28 54.7**	**0.0**
KLR				pmax	pmax		
	comp=Z,14nm,0.9s						
CM31	**Chiang Mai Arr**	**56.69**	**296**	*e*P	**P**	**15 28 55.1**	**-0.2**
CM31				*ep*P	**pP**	**15 29 26.1**	**-1.5**
CMAR	**Chiang Mai Arr**	**56.69**	**296**	P	**P**	**15 28 57.0**	**+1.7**
	comp=Z,4.1nm,0.8s,baz=125,slow=5.8,SNR=30						
CMAR				pP	**pP**	**15 29 27.2**	**-0.4**
	comp=Z,7.4nm,0.9s,baz=110,slow=5.3,SNR=7.7						
CMAR				LR	LR	15 54 55.2	
	comp=Z,56nm,18.1s,baz=136,slow=38						
CMAR	**Chiang Mai Arr**	**56.69**	**296**	*i* P	**P**	**15 28 57.0**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMMT	**Chiang Mai**	**56.80**	**296**	P	**P**	**15 28 59.2**	**+3.0**
CHTO	**Chiang Mai**	**56.81**	**296**	*e*P	**P**	**15 28 55.2**	**-0.9**
	comp=Z,5.8nm,0.8s						
CHTO	**Chiang Mai**	**56.81**	**296**	*e*P	**P**	**15 28 55.3**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PET	**Petropavlovsk**	**58.16**	**5**	*e*P	**P**	**15 29 05.7**	**+0.7**
PET				*e*S	**S**	**15 36 52.6**	**-2.8**
PET				pmax	pmax		
	comp=Z,34nm,0.6s						
PEA0B	**Petropavlovsk-**	**58.17**	**4**	*e*P	**P**	**15 29 04.7**	**-0.4**
	comp=Z,40nm,0.8s						
PETK	**Petropavlovsk-**	**58.17**	**4**	P	**P**	**15 29 04.9**	**-0.2**
	comp=Z,37nm,0.6s,baz=169,slow=6.7,SNR=69						
HHC	**Hu-ho-hao-te**	**58.41**	**325**	*e*P	**P**	**15 29 08.8**	**+1.6**
HHC				S	**S**	**15 36 57.8**	**-1.6**
HHC				sS	sS	15 37 56.4	+1.0
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,26nm,6.6s						
NKL	**Nikolayevsk**	**58.66**	**352**	*e*P	**P**	**15 29 08.0**	**-0.4**
NKL				pmax	pmax		
	comp=Z,32nm,1.0s						
PPT	**Papeete**	**59.02**	**107**	P	**P**	**15 29 13.1**	**+1.5**
	comp=Z,15nm,0.7s,baz=65,slow=15,SNR=3.8						
PPT2	**Papeete2**	**59.02**	**107**	*e*P	**P**	**15 29 14.3**	**+2.6**
	comp=Z,26nm,1.4s						
PAE	**Paea**	**59.02**	**107**	*e*P	**P**	**15 29 14.0**	**+2.4**
	comp=Z,4.8nm,1.2s						
TIAR	**Tiarei**	**59.23**	**107**	*e*P	**P**	**15 29 15.9**	**+2.8**
	comp=Z,8.4nm,0.8s						
TVO	**Taravao**	**59.34**	**108**	*e*P	**P**	**15 29 16.6**	**+2.7**
	comp=Z,18nm,1.3s						
LZH	**Lanzhou**	**60.41**	**317**	*e*P	**P**	**15 29 24.4**	**+3.4**
LZH				pP	pwP	15 29 56.8	+0.7
LZH				sP	sP	15 30 08.9	+0.3
LZH				sS	sS	15 38 24.8	+3.3
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,160nm,4.3s						
PMOR	**Pomariorio Ree**	**60.46**	**104**	*e*P	**P**	**15 29 24.0**	**+2.5**
	comp=Z,92nm,0.9s						
HIA	**Hailar**	**60.67**	**337**	*e*P	**P**	**15 29 22.6**	**+0.2**
HIA	**Hailar**	**60.67**	**337**	*e*P	**P**

CASY *e*pP **pP** 15 30 37.1 -3.0
SEY Seymchan 67.78 0*ce*P **P** 15 30 08.5 +0.1
YAK Yakutsk 68.93 349 *e*P **P** 15 30 15.2 -0.3
comp=Z,38nm,0.8s
YAK Yakutsk 68.93 349 *e*P **P** 15 30 15.7 +0.2
YAK *e* 15 30 38.8
YAK *e**PP **pP** 15 30 51.4 +2.3
YAK *e* 15 32 48.0
YAK *e*S **S** 15 39 04.6 -3.8
YAK *e* 15 39 49.4
ZAK Zakamensk 68.96 329 *e*P **P** 15 30 15.6 -0.5
ZAK *e* 15 30 48.9
ZAK pmax pmax
comp=Z,9.0nm,1.0s
TLY Talaya 69.57 331 *i*P **P** 15 30 20.6 +0.8
MOY Mondy 70.88 329 *e*P **P** 15 30 28.9 +1.0
VNDA Vanda 72.66 178 P **P** 15 30 38.3 +0.4
comp=Z,1.6nm,0.6s,baz=331,slow=6.6,SNR=22
VNDA pP **pP** 15 31 09.2 -3.2
comp=Z,5.2nm,0.9s,baz=318,slow=5.7,SNR=7.6
SBA Scott Base 73.23 177 *e*pP pP 15 31 14.8 -0.9
BILL Bilibino 73.66 6 *e*P **P** 15 30 43.8 -0.1
comp=Z,26nm,0.9s
BILL Bilibino 73.66 6*d i*P **P** 15 30 43.8 -0.1
BILL pmax pmax
comp=Z,23nm,0.9s
WMQ Urumqi 74.95 318 *e*P **P** 15 30 52.5 +0.5
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ pmax pmax
comp=Z,36nm,4.5s
WMQ LR LR
comp=Z,88nm,29.5s
WMQ LR LR
comp=Z,460nm,29.0s
WMQ LR LR
comp=Z,57nm,20.5s
KDAK Kodiak Island 77.03 27*ce*P **P** 15 31 04.8 +1.5
DGZ Jazzator, Alta 77.41 323 *i*P **P** 15 31 06.1 +0.2
DGZ pmax pmax
comp=Z,6.0nm,0.8s
SVW2 Sparrevohn 77.60 23 *e*P **P** 15 31 06.5 +0.1
comp=Z,11nm,0.6s
TIXI Tiksi 77.94 353 *e*P **P** 15 31 07.8 -0.3
comp=Z,7.4nm,1.0s
TIXI Tiksi 77.94 353 *i*P **P** 15 31 08.4 +0.3
TIXI pmax pmax
comp=Z,8.0nm,1.1s
RSO Redoubt South 78.39 25 *e*P **P** 15 31 10.1 -1.0
TTA Tatalina 78.51 22 *e*P **P** 15 31 11.7 +0.2
comp=Z,10nm,0.7s
TTA Tatalina 78.51 22 *e*P **P** 15 31 11.7 +0.2
TTA pmax pmax
comp=Z,11nm,0.7s
CNPM China Poot 78.54 26 *e*P **P** 15 31 12.1 +0.3
comp=Z,86nm,0.6s
BRLK Bradley Lake 78.82 26 *e*P **P** 15 31 12.9 -0.3
comp=Z,24nm,0.7s
MK31 Makanchi Array 79.57 319 *e*P **P** 15 31 17.2 -0.4
comp=Z,7.1nm,1.2s
MK31 Makanchi Array 79.57 319 *e*P **P** 15 31 17.2 -0.4
MK31 pmax pmax
comp=Z,7.0nm,1.2s
MKAR Makanchi Array 79.57 319 P **P** 15 31 17.8 +0.2
comp=Z,4.1nm,0.9s,baz=110,slow=5.8,SNR=26
MKAR LR LR 16 05 18.9
comp=Z,33nm,21.4s,baz=65,slow=35
MKAR Makanchi Array 79.57 319 *i*P **P** 15 31 17.7 +0.1
MKAR pmax pmax
comp=Z,4.0nm,0.9s
RDOG Red Dog Mine 79.59 16 *e*P **P** 15 31 17.2 0.0
comp=Z,17nm,0.6s
SUA Susitna One 79.75 24 *e*P **P** 15 31 17.1 -1.3
comp=Z,13nm,0.9s
MAKZ Makanchi 79.78 319 *e*P **P** 15 31 17.6 -1.1
comp=Z,9.9nm,1.0s
MAKZ Makanchi 79.78 319 *e*P **P** 15 31 17.6 -1.1
MAKZ pmax pmax
comp=Z,10.0nm,1.0s
PMR Palmer 80.49 25 *e*P **P** 15 31 21.3 -0.8
comp=Z,7.4nm,0.6s
PMR Palmer 80.49 25 *e*P **P** 15 31 21.3 -0.8
PMR pmax pmax
comp=Z,7.0nm,0.6s
ZAA0 Zalesovo Array 80.56 327 *e*P **P** 15 31 21.7 -1.0
comp=Z,9.4nm,0.8s
ZALV Zalesovo Beam 80.56 327 P **P** 15 31 21.9 -0.7
comp=Z,10nm,0.7s,baz=111,slow=4.9,SNR=34
ZALV LR LR 16 06 48.1
comp=Z,37nm,20.9s,baz=70,slow=35
ZALV Zalesovo Beam 80.56 327 P **P** 15 31 22.0 -0.7
GHO Glory Hole Cre 80.66 25 *e*P **P** 15 31 22.8 -0.4
comp=Z,12nm,0.6s
KNK Knik Glacier 80.68 25 *e*P **P** 15 31 22.9 -0.3
comp=Z,52nm,1.8s
KTH Kantishna Hill 80.77 23 *e*P **P** 15 31 22.8 -0.9
comp=Z,17nm,1.0s
SML Sawmill 80.92 25 *e*P **P** 15 31 24.3 -0.2
comp=Z,27nm,0.6s
SML Sawmill 80.92 25 *e*P **P** 15 31 24.3 -0.2
SML pmax pmax
comp=Z,27nm,0.6s
TRF Thorofare Moun 80.96 23 *e*P **P** 15 31 23.8 -1.1
comp=Z,3.1nm,0.8s
GLI Glacier Island 81.01 26 *e*P **P** 15 31 24.5 -0.5
comp=Z,26nm,0.6s
BPAW Bear Paw Mtn. 81.03 22 *e*P **P** 15 31 24.2 -0.9
comp=Z,6.6nm,0.7s
SCM Sheep Creek Mo 81.36 25 *e*P **P** 15 31 26.8 0.0
comp=Z,69nm,1.7s
RND Reindeer 81.50 23 *e*P **P** 15 31 26.8 -0.8
comp=Z,20nm,0.6s
RND Reindeer 81.50 23 *e*P **P** 15 31 26.8 -0.8
RND pmax pmax
comp=Z,20nm,0.6s
MLY Manley 81.61 21 *e*P **P** 15 31 27.8 -0.3
comp=Z,29nm,0.6s
DIV Divide 81.70 26 *e*P **P** 15 31 27.3 -1.4
comp=Z,13nm,0.7s
NVS Novosibirsk 81.75 327 *e*P **P** 15 31 27.5 -1.4
NVS *e**PP **pP** 15 32 04.4 +0.8
NVS *e*S **S** 15 41 23.3 -6.9
NVS pmax pmax
comp=E,7.0nm,1.5s
NVS pmax pmax
comp=Z,14nm,1.5s
NVS smax smax
comp=N,4.0nm,1.0s
KSH Kashi 82.01 311 P **P** 15 31 30.9 0.0
KSH pP pwP 15 32 10.4 +2.9
KSH PP **PP** 15 34 45.1 +4.5
KSH S **S** 15 41 28.3 -5.5
KSH SS **SS** 15 46 54.4 -1.7
KSH pmax pmax
comp=N,17nm,1.2s
KSH pmax pmax
comp=N,310nm,6.8s
KSH LR LR
comp=N,240nm,7.5s
KSH LR LR
comp=N,210nm,8.0s
KSH LR LR
comp=N,250nm,10.1s
WRH Wood River Hil 82.31 22 *e*P **P** 15 31 30.6 -1.1
comp=N,9.0nm,0.7s
CCB Clear Creek Bu 82.50 22 *e*P **P** 15 31 31.4 -1.3
comp=N,15nm,0.6s
TCOL CIGO, UAF Yank 82.59 22 P **P** 15 31 32.1 -1.1
baz=241
COLA College 82.60 22 *e*P **P** 15 31 32.2 -0.9
comp=N,30nm,0.6s
COLA College 82.60 22*d i*P **P** 15 31 32.0 -1.1
COLA pmax pmax
comp=Z,17nm,0.6s
PAX Paxson 82.65 24 *e*P **P** 15 31 33.3 -0.3
comp=Z,15nm,1.5s
PAX Paxson 82.65 24 *e*P **P** 15 31 33.3 -0.3
PAX pmax pmax
comp=Z,15nm,1.5s
HDA Harding Lake 82.72 23 *e*P **P** 15 31 32.4 -1.4
comp=Z,14nm,0.5s
HDA Harding Lake 82.72 23 P **P** 15 31 32.8 -1.1
baz=242
POKR Poker Plat Res 82.87 22 P **P** 15 31 33.4 -1.2
baz=242
ILAR Eielson Array 82.91 22 P **P** 15 31 33.3 -1.6
comp=Z,13nm,0.6s,baz=248,slow=5.1,SNR=317
ILB Eielson Array 82.91 22 *e*P **P** 15 31 33.2 -1.6
comp=Z,17nm,0.6s
COLD Coldfoot 82.95 20 *e*P **P** 15 31 35.3 +0.4
comp=Z,3.7nm,0.6s
KURK Kurchatov 83.08 322 *e*P **P** 15 31 35.2 -0.7
comp=Z,13nm,1.0s
KURK *e*pP **pP** 15 32 09.4 -1.1
KURK Kurchatov 83.08 322*ce*P **P** 15 31 35.4 -0.5
KURK pmax pmax
comp=Z,12nm,1.0s
KZA Kyzart 83.12 313 P **P** 15 31 38.3 +1.3
SNR=11
RIDG Independent Ri 83.24 24 *e*P **P** 15 31 36.1 -0.5
comp=Z,11nm,0.6s
MENT Mentasta 83.36 25 *e*P **P** 15 31 37.4 +0.2
comp=Z,9.2nm,0.6s
DOT Dot Lake 83.52 24 *e*P **P** 15 31 37.8 -0.2
comp=Z,14nm,0.7s
CHMS Chumysh 83.69 314 P **P** 15 31 39.9 +0.5
SNR=5.2
UCH Uchtor 83.69 313 P **P** 15 31 41.2 +1.3
SNR=7.5
AAK Ala-Archa 83.79 314 *e*P **P** 15 31 39.2 -0.8
comp=Z,6.9nm,1.0s
AAK Ala-Archa 83.79 314*ce*P **P** 15 31 40.8 +0.8
AAK pmax pmax
comp=Z,7.0nm,1.0s
TOLK Toolik Lake Re 83.88 18 *e*P **P** 15 31 39.9 +0.2
comp=Z,7.4nm,0.6s
TOLK Toolik Lake Re 83.88 18 P **P** 15 31 40.2 +0.4
baz=239
USP Ospenovka 83.93 314 P **P** 15 31 41.2 +0.7
SNR=9.7
AML Almayashu 84.27 313 P **P** 15 31 44.0 +1.2
SNR=12
EKS2 Erkin-Say 84.31 314 P **P** 15 31 43.4 +0.8
SNR=9.7
FYU Fort Yukon 84.34 21 *e*P **P** 15 31 42.5 +0.4
comp=Z,14nm,0.7s
MAW Mawson 84.81 203 LR LR 16 05 10.4
comp=Z,39nm,21.1s,baz=110,slow=32
HYT Haines Junctio 85.30 28 *e*P **P** 15 31 47.6 +0.5
comp=Z,19nm,0.6s
DAWY Dawson 85.58 24 *e*P **P** 15 31 49.0 +0.6
comp=Z,10.0nm,0.6s
NRIK Noril'sk 85.72 341 P **P** 15 31 48.6 -0.2
comp=Z,9.7nm,0.7s,baz=124,slow=4.7,SNR=26
NRIK LR LR 16 10 40.3
comp=Z,34nm,18.0s,baz=129,slow=36
BESE Bessie Mountai 85.89 30 *e*P **P** 15 31 49.8 -0.3
comp=Z,10.0nm,1.0s
SKAG Skagway 85.91 29 *e*P **P** 15 31 50.8 +0.8
comp=Z,14nm,1.3s
EPYK Eagle Plains 87.42 23 *e*P **P** 15 31 57.3 0.0
comp=Z,10nm,0.6s
EPYK Eagle Plains 87.42 23 P **P** 15 31 57.6 +0.3
baz=252
DLBC Dease Lake 88.31 31 *e*P **P** 15 32 01.7 0.0
comp=Z,11nm,1.2s
BRVK Borovoye 88.64 323*ce*P **P** 15 32 02.2 -1.1
BRVK pmax pmax
comp=Z,11nm,1.7s
INK Inuvik 89.18 21 P **P** 15 32 05.2 -0.3
comp=Z,3.4nm,0.5s,baz=261,slow=3.4,SNR=15
INK Inuvik 89.18 21 *e*P **P** 15 32 04.9 -0.5
comp=Z,11nm,1.3s
INK Inuvik 89.18 21 *e*P **P** 15 32 04.9 -0.5
INK pmax pmax
comp=Z,11nm,1.3s
J01E Myrtle Point 89.54 47 P **P** 15 32 08.9 +1.1
baz=263
L02E Cave Junction 89.66 48 P **P** 15 32 08.5 +0.1
baz=263
K02D Willamette Mer 89.68 47 P **P** 15 32 08.4 -0.1
baz=263,SNR=6.2
I03D Drain, OR 90.03 46 P **P** 15 32 10.7 +0.7
baz=263
O02D Mt. Diablo Mer 90.04 50 P **P** 15 32 10.9 +0.7
baz=264,SNR=7.0
M02C Callahan 90.12 49 P **P** 15 32 11.5 +0.9
baz=264,SNR=8.2
HUMO Hull Mountain 90.19 47 *e*P **P** 15 32 12.0 +1.2
comp=Z,12nm,0.6s
N02D Trinity Center 90.19 49 P **P** 15 32 10.4 -0.5
baz=264
YBH Yreka Blue Hor 90.27 48 P **P** 15 32 11.9 +0.6
comp=Z,3.2nm,0.5s,baz=242,slow=1.7,SNR=20
YBH Yreka Blue Hor 90.27 48 *e*P **P** 15 32 12.2 +1.0
comp=Z,40nm,2.0s
YBH Yreka Blue Hor 90.27 48 *e*P **P** 15 32 12.3 +1.0
YBH pmax pmax
comp=Z,40nm,2.0s
H04D Lebanon 90.56 46 P **P** 15 32 12.1 -0.4
baz=264
L04D Klamath Falls 90.62 48 P **P** 15 32 12.6 -0.4
baz=264,SNR=7.9
D03D Eldon 90.66 43 P **P** 15 32 12.9 +0.1
baz=263
I04A Tendick Farm, 90.72 46 P **P** 15 32 13.2 0.0
baz=264
O03E Paynes Creek 90.80 50 P **P** 15 32 12.8 -1.0
baz=264,SNR=5.5
J04D Umpqua Nationa 90.88 47 P **P** 15 32 13.9 -0.3
baz=264,SNR=6.8
M04C Macdoel 90.92 48 P **P** 15 32 15.0 +0.6
baz=264,SNR=6.6
AFDM Forest Hills D 91.31 51 *e*P **P** 15 32 15.4 -0.7
comp=Z,22nm,1.8s
J05D Fort Rock, OR 91.52 47 P **P** 15 32 17.9 +0.7
baz=265,SNR=11
I05D Terrebonne, OR 91.54 46 P **P** 15 32 17.4 +0.3
baz=265
CMB Columbia Colle 91.68 52 *e*P **P** 15 32 18.6 +0.7
comp=Z,3.9nm,0.8s
CMB Columbia Colle 91.68 52 *e*P **P** 15 32 18.6 +0.7
CMB pmax pmax
comp=Z,4.0nm,0.8s
K05A Summer Lake 91.71 47 *e*P **P** 15 32 18.1 0.0
comp=Z,14nm,0.8s
PINE Pine Mountain 91.78 46 *e*P **P** 15 32 19.4 +1.0
comp=Z,27nm,1.7s
BEKR Beckworth 91.86 50 *e*P **P** 15 32 19.4 +0.6
comp=Z,36nm,1.9s
MOD Modoc Plateau 92.08 48 *e*P **P** 15 32 19.6 -0.1
comp=Z,6.6nm,0.8s
LTY Liberty 92.27 43 *e*P **P** 15 32 20.2 -0.2
comp=Z,3.3nm,0.5s
PNTR Pine Nut 92.38 51 *e*P **P** 15 32 22.0 +0.7
comp=Z,8.3nm,0.7s
WAKR Walker 92.47 52 *e*P **P** 15 32 22.3 +0.6
comp=Z,4.4nm,1.0s
PAHR Pah Rah Range 92.60 51 *e*P **P** 15 32 22.9 +0.7
comp=Z,14nm,1.6s
MDPB Devils Postpil 92.68 53 *e*P **P** 15 32 23.6 +0.9
comp=Z,5.4nm,0.8s
OMMB Old Mammoth Mi 92.74 53 *e*P **P** 15 32 23.7 +0.6
comp=Z,4.1nm,0.9s
I07A Izee 92.83 46 *e*P **P** 15 32 23.9 +0.8
comp=Z,26nm,1.9s
SYO Syowa Base 92.97 200‖ *e*P **P** 15 32 21.8 -1.3
RYN Ryan 93.19 52 *e*P **P** 15 32 25.7 +0.7
comp=Z,4.8nm,0.9s
MWC Mount Wilson 93.27 56 *e*P **P** 15 32 26.9 +1.5
comp=Z,12nm,0.6s
NVAR Mina Array Bea 93.35 52 P **P** 15 32 26.9 +1.1
comp=Z,4.2nm,0.6s,baz=255,slow=6.2,SNR=48
NVAR LR LR 16 08 41.0
comp=Z,53nm,19.8s,baz=325,slow=32
EDW2 Edwards Air Fo 93.36 55 P **P** 15 32 26.1 +0.4
baz=266
CWC Cottonwood Cre 93.40 54 P **P** 15 32 26.5 +0.6
baz=266
NV11 Mina Array Sit 93.46 52 *e*P **P** 15 32 25.9 -0.3
comp=Z,2.2nm,1.8s
J08A Circle Bar Ran 93.53 47 *e*P **P** 15 32 26.7 +0.3
comp=Z,3.2nm,0.7s
KVN Kaiserville 93.55 51 *e*P **P** 15 32 26.4 -0.2
comp=Z,22nm,1.7s
KVN Kaiserville 93.55 51 *e*P **P** 15 32 26.5 -0.2
KVN pmax pmax
comp=Z,22nm,1.7s
BFSC Mount Baldy Ra 93.60 56 P **P** 15 32 27.6 +0.7
baz=266
LRMC Laurel Mtn Rad 93.66 55 P **P** 15 32 28.3 +1.2
baz=266
MPMC Manual Prospec 93.85 54 P **P** 15 32 28.7 +0.6
baz=267,SNR=6.6
E09A Wood Farm, Sta 93.95 44 *e*P **P** 15 32 28.4 +0.3
comp=Z,6.8nm,0.8s
GSC Goldstone, Bar 94.36 55 P **P** 15 32 31.3 +0.9
baz=267
FURC Furnace Creek, 94.38 54 P **P** 15 32 31.1 +0.9
baz=267
BMO Blue Mountains 94.45 46 *e*P **P** 15 32 30.7 +0.2
comp=Z,9.0nm,1.6s
BMO Blue Mountains 94.45 46 *e*P **P** 15 32 30.7 +0.2
BMO pmax pmax
comp=Z,9.0nm,1.6s
MONP2 Monument Peak 94.55 58 P **P** 15 32 32.6 +1.2
baz=267,SNR=5.1
F10A Beach Ranch, E 94.56 44 *e*P **P** 15 32 31.1 +0.1
comp=Z,6.0nm,0.7s
PFO Pinyon Flats O 94.56 57 P **P** 15 32 32.0 +0.6
baz=267
ABKAR Akbulak array 94.71 319 *e*P **P** 15 32 29.4 -2.1
comp=Z,2.1nm,1.0s
HEC Hector,Ludlow 94.72 56 P **P** 15 32 32.9 +0.9
baz=267
IKP In-Ko-Pah, Jac 94.80 58 P **P** 15 32 33.5 +1.1
baz=267
SHOC Shoshone, Teco 94.82 54 P **P** 15 32 33.2 +0.8
baz=267
TPNV Topopah Spring 94.89 53 *e*P **P** 15 32 33.6 +0.8
comp=Z,7.2nm,0.8s
TPNV Topopah Spring 94.89 53 *e*P **P** 15 32 33.6 +0.8
TPNV pmax pmax
comp=Z,7.0nm,0.8s
TPNV Topopah Spring 94.89 53 P **P** 15 32 34.1 +1.2
baz=267,SNR=9.2
BELC Belle Mtn. Jos 94.96 56 P **P** 15 32 34.1 +0.9
baz=267
TUQ Turquoise Moun 95.09 55 P **P** 15 32 34.4 +0.6
baz=268
GMRC Granite Mounta 95.28 56 P **P** 15 32 35.3 +0.7
baz=268,SNR=5.1
BC3 Big Chuckawall 95.40 57 P **P** 15 32 36.0 +0.8
baz=268
R11A Troy Canyon, C 95.48 52 *e*P **P** 15 32 36.0 +0.6
comp=Z,3.9nm,1.1s
R11A Troy Canyon, C 95.48 52 P **P** 15 32 36.1 +0.6
baz=268
IRM Iron Mountain 95.68 56 P **P** 15 32 37.4 +1.1
baz=268
ARU Arti 95.71 326 *i*P **P** 15 32 32.6 -3.3
ARU pmax pmax
comp=Z,4.0nm,1.1s
Y12C Blythe 96.18 57 P **P** 15 32 39.6 +1.0
baz=268
YKW3 Yellowknife Ar 96.29 28 *e*P **P** 15 32 38.2 -0.2
comp=Z,2.7nm,1.0s
YKA Yellowknife Ar 96.29 28 P **P** 15 32 38.5 +0.1
comp=Z,0.7nm,0.3s,baz=272,slow=4.7,SNR=19
HLID Hailey 96.49 47 *e*P **P** 15 32 40.2 +0.3
comp=Z,1.8nm,0.7s
HLID Hailey 96.49 47 P **P** 15 32 40.0 0.0
baz=269
PDMCI Parker Dam,Lak 96.51 56 P **P** 15 32 40.2 +0.2
baz=268
MSO Missoula 96.85 44 P **P** 15 32 42.1 +0.7
baz=270
DUG Dugway, Tooele 97.66 50 P Pdif 15 32 45.7 +0.4
baz=270
U15A North Rim 98.06 54 *e*P Pdif 15 32 48.7 +1.3
comp=Z,5.8nm,1.1s
BOZ Bozeman (W) 98.47 45 P Pdif 15 32 48.9 +0.1
baz=272
EGMT Eagleton 99.66 42 P **Pdif** 15 32 53.8 -0.1
baz=273
BW06 Boulder Array 100.06 48 *e*Pdif **Pdif** 15 32 55.9 -0.1
BW06 Boulder Array 100.06 48 P **Pdif** 15 32 55.9 -0.1
baz=272
PD31 Pinedale Array 100.06 48 *e*Pdif **Pdif** 15 32 55.8 -0.3
PDAR Pinedale Array 100.06 48 P **Pdif** 15 32 56.0 0.0
comp=Z,1.9nm,0.5s,baz=212,slow=1.8,SNR=34
MVCO Mesa Verde 101.09 53 P **Pdif** 15 33 00.4 -0.3
baz=272
O20A White River Ci 101.17 50 P **Pdif** 15 33 00.7 -0.3
baz=273
N23A Red Feather La 102.87 49 P **Pdif** 15 33 08.4 -0.3
baz=275
RSSD Black Hills 103.96 46 P **Pdif** 15 33 13.6 +0.3
baz=277
TXAR Lajitas Array 105.49 61 Pdiff **Pdif** 15 33 23.8 +3.4
comp=Z,0.2nm,0.6s,baz=284,slow=3.6,SNR=3.4
ARCES ARCESS Array B 106.67 343 PKiKP **PKiKP** 15 37 33.7 -0.5
comp=Z,1.3nm,0.8s,baz=120,slow=1.3,SNR=3.7
SUSD Miller 107.52 45 P **PKiKP** 15 37 36.0 -0.5
baz=280
FINES FINESS Array B 110.67 335 PKiKP **PKiKP** 15 37 41.4 -0.5
comp=Z,1.3nm,0.7s,baz=48,slow=2.1,SNR=5.2
U40A Yellville 113.65 53 P **PKiKP** 15 37 48.0 -0.4
baz=282
NB2 NORSAR Subarra116.64 340 PKPdf **PKPdf** 15 37 52.9 -0.5
comp=Z,1.8nm,1.0s,baz=44,slow=1.9
NOA NORSAR Array B 116.64 340 PKP **PKPdf** 15 37 51.9 -1.5
comp=Z,0.9nm,0.7s,baz=48,slow=2.0,SNR=4.4
E46A Sault Ste Mari 116.86 40 P **PKPdf** 15 37 53.6 -0.6
baz=293
D47A Chapleau 117.35 39 P **PKPdf** 15 37 54.7 -0.4
baz=294
H47A Mio 117.60 42 P **PKiKP** 15 37 55.8 +0.1
baz=292
T47A Sharon Grove 117.99 51 P **PKPdf** 15 37 56.3 -0.4
baz=286
R47A Wooly Knot Far 118.06 49 P **PKPdf** 15 37 56.4 -0.4
baz=287
E48A Lockeyer 118.17 39 P **PKiKP** 15 37 56.8 0.0
baz=295
K48A Perry 118.32 44 P **PKPdf** 15 37 57.1 0.0
baz=291
N48A Decatur 118.36 46 P **PKiKP** 15 37 57.3 0.0
baz=290
O48A Farmland 118.46 47 P **PKPdf** 15 37 56.5 -1.0
baz=289
W48A Pulaski 118.61 53 P **PKPdf** 15 37 56.8 -1.1
baz=285
KOLS Kolonicke sedl 118.67 324 *e*PKIKP **PKiKP** 15 37 58.0 +0.3
KOLS Kolonicke sedl 118.67 324 *e*PKP **PKiKP** 15 37 58.0 +0.3
KOLS *e* 15 48 36.7
KOLS *e* 15 49 11.6
LRAL Lakeview Retre 119.09 55 P **PKPdf** 15 37 58.0 -0.8
baz=284
E50A Wahnapitae 119.09 39 P **PKPdf** 15 37 58.0 -0.4
baz=296
V49A McMinnville 119.26 52 P **PKPdf** 15 37 58.5 -0.6
baz=286
D50A G1974 Best Tow 119.31 38 P **PKPdf** 15 37 58.4 -0.5
baz=297
O50A Cable 119.61 46 P **PKPdf** 15 37 59.3 -0.4
baz=290
P50A Jamestown 119.66 47 P **PKPdf** 15 37 59.4 -0.4
baz=290
R50A Paris 119.71 48 P **PKPdf** 15 37 59.1 -0.8
baz=289
T50A Nancy 119.72 50 P **PKPdf** 15 37 59.1 -0.9
baz=288
BWLO Walkerton 119.81 41 P **PKPdf** 15 37 59.4 -0.5
baz=294
F51A Arnstein 119.82 39 P **PKPdf** 15 37 59.7 -0.2
baz=296
KLBO Killbear Provi 119.88 40 P **PKPdf** 15 37 59.3 -0.7
baz=296
U50A Jamestown 119.89 51 P **PKPdf** 15 37 59.4 -0.9
baz=287
Z50A Ashland 119.91 54 P **PKPdf** 15 37 59.4 -1.1
baz=285
V50A Pikevile 119.91 52 P **PKPdf** 15 37 59.5 -0.9
baz=287
150A Eclectic 119.99 55 P **PKPdf** 15 37 59.6 -1.0
baz=284
ACSO Alum Creek Sta 120.03 46 P **PKPdf** 15 37 59.7 -0.8
baz=291
LSQQ Lebel-sur-Quev 120.08 35 P **PKPdf** 15 37 59.2 -1.1
baz=301
Q51A Peebles 120.19 47 P **PKPdf** 15 38 00.1 -0.8
baz=290
F52A Sundridge 120.25 39 P **PKPdf** 15 37 59.8 -0.9
baz=297
D52A ZEK Kipawa Sen 120.26 37 P **PKPdf** 15 37 59.9 -0.8
baz=298
BUKO Buck Lake 120.36 39 P **PKPdf** 15 37 59.7 -1.3
baz=297
E52A Mattawa 120.44 38 P **PKPdf** 15 38 00.4 -0.7
baz=298
PLCA Paso Flores 120.44 144 PKP **PKiKP** 15 38 02.0 +0.5

comp=Z,1.4nm,0.4s,baz=269,slow=3.2,SNR=12

S51A	**Beattyville**	**120.46**	**49**	P	**PKPdf**	**15 38 01.0**	**-0.4**
	baz=289						
Z51A	**Franklin**	**120.50**	**54**	P	**PKPdf**	**15 38 00.8**	**-0.8**
	baz=285						
D53A	**Lac Vacive, Po**	**120.64**	**37**	P	**PKPdf**	**15 38 01.3**	**-0.2**
	baz=299						
VTS	**Vitosha**	**120.86**	**317**	*e*PKPdf	**PKPdf**	**15 38 01.8**	**-0.4**
VTS	**Vitosha**	**120.86**	**317**	*e*PKIKP	**PKPdf**	**15 38 01.8**	**-0.4**
VYHS	**Vyhne**	**120.87**	**325**	*e*PKIKP	**PKPdf**	**15 38 01.5**	**-0.4**
VYHS	**Vyhne**	**120.87**	**325**	*e*PKP	**PKPdf**	**15 38 01.5**	**-0.4**
ALGO	**Algonquin Park**	**120.97**	**38**	P	**PKPdf**	**15 38 00.9**	**-1.2**
	baz=298						
G53A	**Haliburton**	**120.99**	**39**	P	**PKPdf**	**15 38 02.1**	**0.0**
	baz=297						
E53A	**Dumoine, Ponti**	**121.00**	**38**	P	**PKPdf**	**15 38 01.3**	**-0.8**
	baz=299						
V52A	**Sevierville**	**121.03**	**51**	P	**PKPdf**	**15 38 02.1**	**-0.5**
	baz=288						
CHGQ	**Chibougamau**	**121.06**	**33**	P	**PKPdf**	**15 38 01.7**	**-0.4**
	baz=304						
X52A	**Dahlonega**	**121.16**	**52**	P	**PKPdf**	**15 38 02.3**	**-0.6**
	baz=287						
D54A	**Lac Fusel, La**	**121.22**	**36**	P	**PKPdf**	**15 38 01.9**	**-0.7**
	baz=300						
E54A	**Lac Daplat, Po**	**121.26**	**37**	P	**PKPdf**	**15 38 02.2**	**-0.5**
	baz=299						
N53A	**Lisbon**	**121.34**	**45**	P	**PKPdf**	**15 38 02.7**	**-0.3**
	baz=293						
P53A	**Whipple**	**121.45**	**46**	P	**PKPdf**	**15 38 02.5**	**-0.8**
	baz=292						
R53A	**Hurricane**	**121.45**	**48**	P	**PKPdf**	**15 38 02.5**	**-0.8**
	baz=291						
BANO	**Bancroft**	**121.48**	**39**	P	**PKPdf**	**15 38 02.6**	**-0.6**
	baz=298						
W53A	**Cullowhee**	**121.57**	**52**	P	**PKPdf**	**15 38 03.1**	**-0.7**
	baz=288						
Q53A	**Leroy**	**121.58**	**47**	P	**PKPdf**	**15 38 03.3**	**-0.2**
	baz=291						
PEMO	**Pembroke**	**121.59**	**38**	P	**PKPdf**	**15 38 02.1**	**-1.2**
	baz=299						
Y53A	**Monroe**	**121.62**	**53**	P	**PKPdf**	**15 38 03.3**	**-0.5**
	baz=287						
U53A	**Fall Branch**	**121.65**	**50**	P	**PKPdf**	**15 38 03.0**	**-0.8**
	baz=289						
WLVO	**Wesleyville**	**121.68**	**40**	P	**PKPdf**	**15 38 03.3**	**-0.2**
	baz=297						
V53A	**Saluda**	**121.69**	**51**	P	**PKPdf**	**15 38 02.8**	**-1.0**
	baz=288						
J54A	**Appleton**	**121.81**	**41**	P	**PKPdf**	**15 38 03.1**	**-0.7**
	baz=296						
O54A	**Avella**	**121.91**	**45**	P	**PKPdf**	**15 38 03.5**	**-0.6**
	baz=293						
DELO	**Deloro Mine**	**121.91**	**39**	P	**PKPdf**	**15 38 03.3**	**-0.7**
	baz=298						
PLVO	**Plevna**	**122.00**	**39**	P	**PKPdf**	**15 38 03.8**	**-0.3**
	baz=299						
Q54A	**Coxs Mills**	**122.03**	**47**	*e*PKPdf	**PKiKP**	**15 38 04.5**	**0.0**
Q54A	**Coxs Mills**	**122.03**	**47**	P	**PKPdf**	**15 38 04.4**	**0.0**
	baz=292						
P54A	**Burton**	**122.06**	**46**	P	**PKPdf**	**15 38 04.0**	**-0.4**
	baz=293						
S54A	**Dingess, Beckl**	**122.11**	**48**	P	**PKPdf**	**15 38 03.6**	**-1.0**
	baz=291						
BRG	**Berggiesshubel**	**122.16**	**330**	*e*PKP	**PKPdf**	**15 38 04.1**	**-0.1**
	comp=Z,2.9nm,0.8s						
BRG	**Berggiesshubel**	**122.16**	**330**	*e*PKIKP	**PKPdf**	**15 38 04.1**	**-0.1**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
H55A	**Tweed**	**122.17**	**39**	P	**PKPdf**	**15 38 03.5**	**-1.0**
	baz=298						
V54A	**Nebo**	**122.32**	**51**	P	**PKPdf**	**15 38 02.9**	**-2.1**
	baz=289						
Y54A	**Tignall**	**122.34**	**53**	P	**PKPdf**	**15 38 04.2**	**-0.9**
	baz=288						
J55A	**Hilton**	**122.35**	**41**	P	**PKPdf**	**15 38 03.8**	**-1.0**
	baz=297						
CLL	**Collm**	**122.36**	**330**	*e*PKPdf	**PKiKP**	**15 38 05.0**	**+0.2**
	comp=Z,3.0nm,0.8s						
CLL				LmV		16 30 00.0	
	comp=Z,100nm,18.2s						
CLL	**Collm**	**122.36**	**330**	*e*PKIKP	**PKiKP**	**15 38 05.0**	**+0.2**
CLL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
L55A	**Hinsdale**	**122.42**	**42**	P	**PKPdf**	**15 38 04.4**	**-0.7**
	baz=296						
K55A	**Perry**	**122.43**	**42**	P	**PKPdf**	**15 38 03.6**	**-1.4**
	baz=296						
Q55A	**Buckhannon**	**122.57**	**46**	P	**PKPdf**	**15 38 04.5**	**-1.0**
	baz=293						
H56A	**Elgin**	**122.73**	**39**	P	**PKPdf**	**15 38 04.8**	**-0.8**
	baz=299						
ORIO	**Orleans, Innes**	**122.76**	**38**	P	**PKPdf**	**15 38 04.9**	**-0.6**
	baz=300						
M56A	**Emporium**	**122.89**	**43**	P	**PKPdf**	**15 38 05.2**	**-0.8**
	baz=296						
X55A	**Gracelyn & Ava**	**122.98**	**52**	P	**PKPdf**	**15 38 05.2**	**-1.1**
	baz=289						
KMSC	**Kings Mountain**	**123.00**	**51**	P	**PKPdf**	**15 38 05.6**	**-0.8**
	baz=289						
N56A	**West Decatur**	**123.06**	**44**	P	**PKPdf**	**15 38 05.6**	**-0.7**
	baz=295						
O56A	**Blue Knob Stat**	**123.14**	**44**	P	**PKPdf**	**15 38 06.0**	**-0.5**
	baz=295						
P56A	**Dayton Farm, R**	**123.26**	**45**	P	**PKPdf**	**15 38 06.0**	**-0.7**
	baz=294						
SSPA	**Standing Stone**	**123.46**	**44**	P	**PKPdf**	**15 38 06.4**	**-0.7**
	baz=295						
GEC2	**GERESS Array S**	**123.50**	**328**	*e*PKPdf	**PKPdf**	**15 38 06.7**	**-0.3**
GEC2	**GERESS Array S**	**123.50**	**328**	*e*PKIKP	**PKPdf**	**15 38 06.7**	**-0.3**
GERES	**GERESS Array B**	**123.50**	**328**	PKP	**PKPdf**	**15 38 06.7**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=82,slow=1.9,SNR=16						
N57A	**Milroy**	**123.64**	**43**	P	**PKPdf**	**15 38 06.7**	**-0.7**
	baz=296						
R57A	**Stanardsville**	**123.97**	**47**	P	**PKPdf**	**15 38 07.5**	**-0.6**
	baz=293						
W57A	**Gilead**	**124.03**	**51**	P	**PKPdf**	**15 38 07.5**	**-0.8**
	baz=290						
R58A	**Rapidan**	**124.34**	**46**	P	**PKPdf**	**15 38 08.1**	**-0.7**
	baz=294						
N59A	**State Game Lan**	**124.78**	**43**	P	**PKPdf**	**15 38 09.0**	**-0.6**
	baz=297						
P59A	**Jarrettsville**	**124.91**	**44**	P	**PKPdf**	**15 38 09.2**	**-0.6**
	baz=296						
LPAZ	**La Paz**	**135.56**	**119**	PKP	**PKPdf**	**15 38 30.9**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=31,slow=4.0,SNR=7.4						
CPUP	**Villa Florida**	**138.22**	**140**	PKP	**PKPdf**	**15 38 36.0**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=348,slow=5.7,SNR=3.3						
CPUP	**Villa Florida**	**138.22**	**140**	PKIKP	**PKPdf**	**15 38 36.0**	**+0.6**
ESDC	**Sonseca Array**	**138.95**	**331**	PP	PP	15 41 29.6	+0.5
	comp=Z,0.6nm,0.6s,baz=20,slow=7.3,SNR=8.2						
TOA0	**Torodi Ar. Sit**	**149.02**	**287**	*e*PKPbc	**PKPbc**	**15 38 57.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**149.02**	**287**	PKPbc	**PKPbc**	**15 38 57.2**	**-1.4**
	comp=Z,6.0nm,0.9s,baz=49,slow=2.7,SNR=24						
TORD				pPKPbc	**pPKPdf**	**15 39 32.7**	**+0.9**
	comp=Z,6.9nm,0.8s,baz=65,slow=2.9,SNR=4.2						
TOA1	**Torodi Ar. Sit**	**149.02**	**287**	*e*pPKPdf	pPKPdf	15 39 32.7	+0.9
BDFB	**Brasilia**	**151.89**	**137**	PKPbc	**PKPbc**	**15 39 03.9**	**-1.7**
	comp=Z,8.5nm,0.6s,baz=250,slow=0.4,SNR=15						
BDFB				PKPab	**PKPab**	**15 39 15.0**	**-0.1**
	comp=Z,11nm,0.6s,baz=172,slow=7.1,SNR=5.7						
BDFB	**Brasilia**	**151.89**	**137**	*e*PKPbc	**PKPbc**	**15 39 05.7**	**0.0**
BDFB				PKPab	**PKPab**	**15 39 15.0**	**-0.1**

MAN 23 15:50:09.1, 11°.06N×124°.77E, h6km, mb4.2, ML3.0, MS2.7, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.15**	**269**	*e*P	Pg	15 50 11.0	-1.2
OCLP				*e*S	Sg	15 50 16.4	+2.1
OCLP	**Ormoc**	**0.15**	**269**	*e*P	Pg	15 50 11.0	-1.2
OCLP				*e*S	Sg	15 50 16.4	+2.1
BESP	**Borongan**	**0.85**	**50**	*e*P	Pg	15 50 25.3	-0.2
BESP				*e*S	Sb	15 50 38.5	+0.5
BESP	**Borongan**	**0.85**	**50**	*e*P	Pg	15 50 25.3	-0.2
BESP				*e*S	Sb	15 50 38.5	+0.5
MSLP	**Maasin**	**0.92**	**174**	*e*P	Pg	15 50 26.8	+0.1
MSLP				*e*S	Sn	15 50 41.5	-0.5
MSLP	**Maasin**	**0.92**	**174**	*e*P	Pg	15 50 26.8	+0.1
MSLP				*e*S	Sn	15 50 41.5	-0.5
LLP	**Lapu-Lapu**	**1.07**	**227**	*e*P	Pg	15 50 28.2	-1.5
LLP				*e*S	Sg	15 50 43.5	-0.2

*SJA **23** 15:55:09.2±0.4, 21°.92S×68°.54W, h159km±11km, ML2.5,*
MW2.5
*ISCJB **23** 15:55:10.7±0.9, 21°.80S±0°.03×68°.55W±0°.07,*
h138km±12km, Error ellipse: s-maj=11.1km s-min=5.7km
az=175.0
*GUC **23** 15:55:11.5±0.7, 21°.79S×68°.55W, h139km±5km, ML3.4*
ISC 23 15:55:10.8±1.8, 21°.81S±0°.04×68°.54W±0°.07,
h140km±16km, n23, σ0§56/35, 11C-2D, Chile-Bolivia
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.66**	**271**	⇑*i*P	**Pn**	**15 55 32.1**	**0.0**
PB09				*i* S	**Sn**	**15 55 48.0**	**-0.2**
LVC	**Limon Verde**	**0.87**	**203**	*e*P	**Pn**	**15 55 34.0**	**+0.1**
LVC	**Limon Verde**	**0.87**	**203**	*e*P	**Pn**	**15 55 33.6**	**-0.3**
PB03	**IPOC Station P**	**1.16**	**258**	⇑*i*P	**Pn**	**15 55 36.4**	**+0.2**
PB03				*i* S	**Sn**	**15 55 55.1**	**-0.5**
PB03				IAML		15 55 55.6	
	comp=N,575nm,0.3s						
PB01	**IPOC Station P**	**1.17**	**310**	*e*P	**Pn**	**15 55 35.6**	**-0.7**
PB01	**IPOC Station P**	**1.17**	**310**	⇑*i*P	**Pn**	**15 55 36.2**	**-0.1**
PB01				*i* S	**Sn**	**15 55 55.1**	**-0.6**
PB01				IAML		15 55 56.5	
	comp=N,782nm,0.2s						
PB07	**IPOC Station P**	**1.26**	**273**	*e*P	**Pn**	**15 55 38.1**	**+0.9**
PB07	**IPOC Station P**	**1.26**	**273**	⇓*i*P	**Pn**	**15 55 37.1**	**-0.2**
PB07				*i* S	**Sn**	**15 55 57.2**	**-0.1**
PB07				IAML		15 55 58.3	
	comp=N,966nm,0.1s						
PB06	**IPOC Station P**	**1.31**	**227**	*e*P	**Pn**	**15 55 37.6**	**-0.2**
PB06	**IPOC Station P**	**1.31**	**227**	⇑*i*P	**Pn**	**15 55 38.2**	**+0.5**
PB06				*i* S	**Sn**	**15 55 58.4**	**0.0**
PB06				IAML		15 55 59.6	
	comp=E,422nm,0.2s						
PB02	**IPOC Station P**	**1.36**	**291**	*e*P	**Pn**	**15 55 38.9**	**+0.7**
PB02	**IPOC Station P**	**1.36**	**291**	⇑*i*P	**Pn**	**15 55 38.3**	**+0.2**
PB02				*i* S	**Sn**	**15 55 58.7**	**-0.3**
PB02				IAML		15 56 01.9	
	comp=E,537nm,0.2s						
PB04	**IPOC Station P**	**1.59**	**250**	⇑*i*P	**Pn**	**15 55 41.1**	**+0.4**
PB04				*i* S	**Sn**	**15 56 03.6**	**0.0**
PB04				IAML		15 56 06.8	
	comp=N,236nm,0.2s						
PB15	**IPOC Station P**	**1.64**	**212**	⇓*i*P	**Pn**	**15 55 41.9**	**+0.5**
PB15				*i* S	**Sn**	**15 56 05.5**	**+0.7**
PB08	**IPOC Station P**	**1.75**	**341**	⇑*i*P	**Pn**	**15 55 43.8**	**+0.9**
PB08				*i* S	**Sn**	**15 56 07.7**	**+0.4**
PB08				IAML		15 56 09.7	
	comp=E,358nm,0.3s						
PB05	**IPOC Station P**	**1.86**	**236**	⇑*e*P	**Pn**	**15 55 44.2**	**+0.4**
PB05				*i* S	**Sn**	**15 56 08.8**	**-0.3**
PB05				IAML		15 56 11.6	
	comp=E,108nm,0.3s						
GO01	**Chusmiza**	**2.21**	**344**	⇑*i*P	**Pn**	**15 55 48.9**	**+0.5**
GO01				*i* S	**Sn**	**15 56 18.4**	**+1.2**
GO01				IAML		15 56 22.7	
	comp=E,568nm,0.2s						
PB11	**IPOC Station P**	**2.29**	**333**	⇑*i*P	**Pn**	**15 55 49.0**	**0.0**
PB11				*i* S	**Sn**	**15 56 17.6**	**-0.7**
PB11				IAML		15 56 19.4	
	comp=N,451nm,0.3s						
PSGC	**Pisagua**	**2.65**	**326**	⇑*i*P	**Pn**	**15 55 52.6**	**-0.9**
PSGC				*i* S	**Sn**	**15 56 25.4**	**-0.9**
PSGC				IAML		15 56 28.0	
	comp=E,120nm,0.3s						
YJA	**Yavi**	**2.83**	**98**	*e*P	**Pn**	**15 55 56.5**	**+0.6**
YJA				IAML		15 56 00.7	
	comp=Z,6.4nm,0.3s						
MNMC	**Minye Minye**	**2.84**	**339**	IAML		15 56 34.4	
	comp=E,260nm,0.2s						
HJA	**Humahuaca**	**3.21**	**116**	*e*P	**Pn**	**15 56 00.7**	**-0.1**
HJA				IAML		15 56 03.3	
	comp=Z,20nm,0.4s						
AZAP	**Zapla**	**4.00**	**128**	*e*P	**Pn**	**15 56 10.3**	**-0.7**

*IPEC **23** 16:29:13.8±0.4, 51°.58N×16°.16E, h2km±2km, ML2.3/3,*
Error ellipse: s-maj=3.4km s-min=2.2km az=54.0
*PRU **23** 16:29:14.9±0.0, 51°.52N×16°.06E, h0km*
*VIE **23** 16:29:15.3±0.8, 51°.46N×16°.01E, h0km, mb2.1/5, ml2.6/6,*
Error ellipse: s-maj=7.7km s-min=5.9km az=44.0,
Suspected Mining induced.
ISC 23 16:29:10.9±1.6, 51°.70N±0°.07×16°.22E±0°.04, h0km, n25,
σ1§32/52, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.86**	**177**	*e*Pg	**Pb**	**16 29 28.4**	**-0.3**
KSP				*e*Sg	**Sg**	**16 29 37.7**	**-0.8**
CHVC	**Chvalec**	**1.12**	**186**	*e*PG	**Pb**	**16 29 33.0**	**-0.1**
CHVC				*e*SG	**Sg**	**16 29 45.4**	**-1.4**
	comp=Z,50nm,0.3s						
OSTC	**Ostas**	**1.15**	**180**	*e*PG	**Pb**	**16 29 33.7**	**+0.1**
OSTC				*e*SG	**Sg**	**16 29 46.9**	**-0.8**
	comp=Z,101nm,0.4s						
UPC	**Upice**	**1.20**	**186**	*e*PG	**Pb**	**16 29 34.3**	**-0.2**
UPC				*e*SG	**Sg**	**16 29 47.9**	**-1.6**
	comp=Z,202nm,0.3s						
DPC	**Dobruska-Polom**	**1.35**	**177**	*e*PG	**Pb**	**16 29 37.1**	**-0.1**
DPC				*e*SG	**Sg**	**16 29 52.5**	**-1.9**
	comp=Z,38nm,0.3s						
PVCC	**Panska Ves**	**1.57**	**222**	*e*PG	**Pb**	**16 29 40.5**	**-0.3**
PVCC				*e*SG	**Sn**	**16 29 59.5**	**-1.6**
	comp=Z,144nm,0.3s						
BRG	**Berggiesshubel**	**1.66**	**241**	PN	**Pn**	**16 29 40.7**	**-0.5**
BRG				PG	**Pg**	**16 29 42.9**	**+0.3**
BRG				SG	**Sn**	**16 30 02.8**	**-0.4**
	53nm,0.4s						
GOPC	**GO Pecny, Ondr**	**2.01**	**208**	*e*SG	**Sn**	**16 30 12.4**	**+0.5**
PRU	**Pruhonice**	**2.02**	**213**	*e*PN	**Pn**	**16 29 46.5**	**+0.3**
PRU				*e*PG	**Pb**	**16 29 48.4**	**-0.1**
PRU				*e*SG	**Sn**	**16 30 12.4**	**+0.3**
	comp=Z,31nm,0.3s						
CLL	**Collm**	**2.05**	**260**	*e*Pn	**Pn**	**16 29 47.0**	**+0.4**
CLL				*e*Pg	**Pg**	**16 29 50.0**	**-0.2**
CLL				*e*		16 29 54.0	
CLL				*e*Sg	**Sb**	**16 30 16.0**	**+1.0**
	comp=Z,19nm,0.7s						
CLL				*i*		16 30 22.8	
MORC	**Moravsky Berou**	**2.10**	**156**	*e*PN	**Pb**	**16 29 48.7**	**-1.2**
MORC				*e*SG	**Sb**	**16 30 16.7**	**+0.2**
MORC	**Moravsky Berou**	**2.10**	**156**	*e*Pn	**Pb**	**16 29 48.7**	**-1.2**
	baz=335						
MORC				*e*Sg	**Sb**	**16 30 16.7**	**+0.2**
	comp=Z,21nm,0.5s,baz=335						
OKC	**Ostrava-Krasne**	**2.23**	**146**	*e*PG	**Pg**	**16 29 55.2**	**+1.6**
OKC				*e*SG	**Sg**	**16 30 22.1**	**-0.4**
	comp=Z,31nm,0.6s						
VRAC	**Vranov**	**2.41**	**174**	*e*PN	**Pn**	**16 29 52.8**	**+1.2**
VRAC				*e*SG	**Sb**	**16 30 25.3**	**0.0**
VRAC	**Vranov**	**2.41**	**174**	*e*Pn	**Pn**	**16 29 52.7**	**+1.2**
	baz=353						
VRAC				*e*Sg	**Sb**	**16 30 25.3**	**0.0**
	comp=Z,17nm,0.5s,baz=353						
KRUC	**Moravsky**	**2.64**	**178**	*e*PN	**Pn**	**16 29 56.0**	**+1.2**
KRUC				*e*SG	**Sb**	**16 30 33.1**	**+0.9**
KRUC	**Moravsky**	**2.64**	**178**	*e*Pn	**Pn**	**16 29 55.9**	**+1.2**
	baz=357						
KRUC				*e*Sg	**Sb**	**16 30 33.0**	**+0.9**
	comp=Z,13nm,0.4s,baz=357						
KHC	**Kasperske Hory**	**3.08**	**214**	*e*PN	**Pn**	**16 30 01.1**	**+0.3**
KHC				*e*PG	**Pb**	**16 30 07.3**	**+0.7**
KHC				*e*SG	**Sb**	**16 30 45.6**	**+0.9**
	comp=Z,14nm,0.3s						
MODS	**Modra-Piesok**	**3.40**	**168**	*e*SG	**Sb**	**16 30 56.5**	**+2.6**
ZST	**Bratislava**	**3.55**	**170**	*e*SG	**Sb**	**16 31 01.0**	**+2.7**
VYHS	**Vyhne**	**3.62**	**151**	*e*PN	**Pb**	**16 30 13.1**	**-2.7**
VYHS				*e*SG	**Sg**	**16 31 06.2**	**-1.1**
CONA	**Conrad Observa**	**3.78**	**184**	*e*Pn	**Pn**	**16 30 12.7**	**+2.1**
	comp=Z,0.3nm,0.2s						
CONA				Pg	**Pg**	**16 30 22.6**	**-0.8**
	comp=Z,1.2nm,0.3s						
CONA				Sg	**Sg**	**16 31 10.4**	**-2.0**
	comp=Z,8.9nm,0.4s						
MOA	**Molln**	**4.06**	**199**	*e*Pn	**Pn**	**16 30 15.3**	**+1.1**
	comp=Z,1.0nm,0.2s						
MOA				Sg	**Sg**	**16 31 18.6**	**-2.6**
	comp=Z,11nm,0.4s						
ARSA	**Arzberg**	**4.48**	**186**	Pg	**Pg**	**16 30 36.0**	**-0.7**
	comp=Z,0.5nm,0.3s						
ARSA				Sg	**Sg**	**16 31 31.9**	**-2.8**
	comp=Z,2.9nm,0.5s						
KBA	**Koelnbreinsper**	**4.99**	**203**	Pn	**Pn**	**16 30 28.7**	**+1.5**
	comp=Z,0.5nm,0.2s						
KBA				Sg	**Sg**	**16 31 53.9**	**+2.7**
	comp=Z,4.7nm,0.5s						

*ISCJB **23** 16:38:43.0±2.0, 14°.1N±0°.1×92°.12W±0°.09, h35km, Error*
ellipse: s-maj=22.0km s-min=6.5km az=29.8
*MEX **23** 16:38:45.7±0.3, 14°.13N×92°.23W, h17km±823km, MD3.6*
*GCG **23** 16:38:47.2±0.4, 14°.85N×91°.65W, h69km±7km, MD3.7*
ISC 23 16:38:43.0±2.6, 14°.1N±0°.2×92°.1W±0°.1, h35km, n7,
σ1§20/10, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.81**	**351**	*e*P	**Pn**	**16 38 57.6**	**-0.3**
STG3	**Santiaguito 3,**	**0.81**	**42**	*e*P	**Pn**	**16 38 58.2**	**+0.1**
FUG	**Fuego 3**	**1.30**	**75**	*e*P	**Pn**	**16 39 04.6**	**-0.2**
PCG	**Pacaya**	**1.51**	**79**	*e*S	**Sn**	**16 39 24.2**	**-2.1**
IXG	**Ixpaco**	**1.64**	**88**	*e*P	**Pn**	**16 39 11.0**	**+1.5**
IXG				*e*S	**Sn**	**16 39 29.3**	**-0.2**
PCIG		**1.90**	**327**	*e*P	**Pn**	**16 39 13.0**	**+0.1**
PCIG				*i* S	**Sn**	**16 39 34.6**	**-1.1**
CCIG	**Comitan**	**2.16**	**360**	*i* P	**Pn**	**16 39 18.0**	**+1.3**
CCIG				*e*S	**Sn**	**16 39 43.2**	**+0.9**

*IDC **23** 16:49:19.5±0.6, 16°.52N×120°.63E, h0km, mb3.8/17,*
mb1 4.0/19, mb1mx3.9/41, mbtmp3.9/19, ML3.8/2, MS3.4/13,
Ms1 3.4/13, ms1mx3.2/36, Error ellipse: s-maj=22.3km
s-min=13.4km az=75.0
*ISCJB **23** 16:49:21.9±0.6, 16°.44N±0°.02×120°.57E±0°.03, h23km±4km,*
mb4.1/29, MS3.5/13, Error ellipse: s-maj=5.4km
s-min=3.7km az=178.6
*MAN **23** 16:49:22.0, 16°.45N×120°.52E, h9km, mb5.6, ML4.6, MS4.9*
*NEIC **23** 16:49:21.3±3.1, 16°.45N×120°.81E, h10km±1km, mb4.4/15,*
Error ellipse: s-maj=17.8km s-min=7.4km az=89.0
NEIC Felt [IV PIVS] at Baguio City and La Trinidad; [III PIVS] at
Sablan. Also felt at Agbannawag.
ISC 23 16:49:21.8±1.0, 16°.43N±0°.02×120°.62E±0°.03, h12km±7km,
n80, σ1§65/87, mb4.2/29, MS3.4/13, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.28**	**169**	*e*P	**Pg**	**16 49 27.9**	**+0.2**
SMPP				*e*S	**Sg**	**16 49 32.2**	**+0.6**
BOLP	**Bolinao**	**0.68**	**266**	*e*P	**Pg**	**16 49 33.7**	**-1.4**
BOLP				*e*S	**Sn**	**16 49 46.7**	**-1.2**
SCZP	**Santa Cruz**	**0.94**	**227**	*e*P	**Pg**	**16 49 39.6**	**-0.4**
BALP	**Baler**	**1.15**	**127**	*e*P	**Pb**	**16 49 42.6**	**-0.9**
BALP				*e*S	**Sg**	**16 49 58.3**	**-0.4**
ABRA	**Dolores**	**1.21**	**4**	*e*P	**Pb**	**16 49 43.3**	**-1.5**
ABRA				*e*S	**Sn**	**16 50 00.4**	**-0.7**
CAUP	**Cauayan**	**1.26**	**66**	*e*P	**Pg**	**16 49 45.8**	**-0.2**
CAUP				*e*S	**Sn**	**16 50 05.5**	**+3.3**
APYP	**Conner**	**1.54**	**23**	*e*P	**Pn**	**16 49 48.6**	**-0.5**
APYP				*e*S	**Sg**	**16 50 11.2**	**-0.3**
CVP	**Callao Caves**	**1.71**	**42**	⇑*i*P	**Pb**	**16 49 52.2**	**-0.9**
PALP	**Palanan**	**1.84**	**70**	*e*P	**Pb**	**16 49 54.5**	**-0.9**
PALP				*e*S	**Sn**	**16 50 17.0**	**+0.6**
POLP	**Polilio Island**	**2.12**	**143**	*e*P	**Pb**	**16 49 59.7**	**-0.4**
POLP				*e*S	**Sb**	**16 50 26.6**	**+0.2**
SGCP	**Mt. Cagua**	**2.26**	**37**	*e*P	**Pb**	**16 50 01.1**	**-1.5**
SGCP				*e*S	**Sb**	**16 50 31.4**	**+0.9**
TGY	**Tagaytay City**	**2.33**	**173**	Pn	**Pn**	**16 49 59.7**	**-0.4**
	104nm,0.3s,baz=333,slow=3.1,SNR=13						
TGY				Sn	**Sn**	**16 50 29.4**	**+0.6**
	188nm,0.3s,baz=0.8,slow=14,SNR=4.2						
TGY				LR	LR	16 51 11.8	
	comp=Z,1μm,21.4s,baz=89,slow=46						
LUBP	**Lubang**	**2.71**	**188**	*e*P	**Pn**	**16 50 07.4**	**+2.2**
LUBP				*e*S	**Sn**	**16 50 38.7**	**+0.8**
PGP	**Puerto Galera**	**2.93**	**174**	⇑*e*P	**Pn**	**16 50 08.8**	**+0.5**
BOAC	**Boac**	**3.18**	**158**	*e*P	**Pn**	**16 50 13.8**	**+2.0**
BOAC				*e*S	**Sb**	**16 50 58.4**	**+1.3**
AUQP	**San Andres**	**3.67**	**147**	*e*P	**Pn**	**16 50 16.4**	**-2.1**
AUQP				*e*S	**Sg**	**16 51 16.5**	**-3.3**
SJMP	**San Jose**	**3.98**	**173**	*e*P	**Pn**	**16 50 23.6**	**+1.0**
SJMP				*e*S	Sg	16 51 47.6	+18
BUSP	**Coron**	**4.42**	**185**	*e*P	**Pn**	**16 50 26.9**	**-1.8**
BUSP				*e*S	**Sn**	**16 51 17.6**	**-2.7**
TWG	**Pinlang**	**6.37**	**4**	*e*Pn	**Pn**	**16 50 57.0**	**+1.4**
YULB	**Yu-li**	**6.95**	**5**	*e*Pn	**Pn**	**16 51 04.9**	**+1.3**
SSLB	**Suanglung**	**7.33**	**2**	*e*Pn	**Pn**	**16 51 09.6**	**+0.9**
NACB	**Ninganchiao**	**7.76**	**7**	*e*Pn	**Pn**	**16 51 15.0**	**+0.4**
YHNB	**Yeheng**	**8.23**	**5**	*e*Pn	**Pn**	**16 51 23.0**	**+1.8**
DAV	**Davao City (W)**	**10.49**	**152**	LR	LR	16 56 21.8	
	comp=Z,224nm,20.6s,baz=44,slow=40						

2.2nm,0.7s,baz=243,slow=5.7,SNR=8.7
WR1 Warramunga Arr 38.58 159 *e*P **P 16 56 45.1 +0.3**
WRA Warramunga Arr 38.58 159 P **P 16 56 45.1 +0.3**
4.0nm,0.7s,baz=343,slow=10,SNR=15
WMQ Urumqi 39.01 321 *e*P **P 16 56 51.6 +3.2**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,58nm,5.7s
WMQ LR LR
comp=N,180nm,22.1s
WMQ LR LR
comp=E,170nm,24.9s
WMQ LR LR
comp=Z,170nm,19.3s
AS31 Alice Springs 41.91 162 *e*P **P 16 57 13.5 +1.0**
0.8nm,0.8s
ASAR Alice Springs 41.91 162 P **P 16 57 13.5 +1.0**
1.7nm,0.7s,baz=341,slow=6.7,SNR=18
MK31 Makanchi Array 43.82 322 *e*P **P 16 57 29.3 +1.5**
1.6nm,1.0s
MK32 Makanchi Array 43.82 322 *e*P **P 16 57 27.6 -0.1**
MKAR Makanchi Array 43.82 322 P **P 16 57 27.6 -0.1**
0.7nm,0.7s,baz=124,slow=9.6,SNR=8.7
KSH Kashi 45.07 310 *e*P **P 16 57 39.8 +1.8**
KURK Kurchatov 47.91 325 *e*P **P 16 58 01.0 +1.1**
3.2nm,0.8s
GAR Garm 49.17 308 *e*P **P 16 58 10.7 +0.6**
43nm,1.6s
NRIK Noril'sk 56.75 347 P **P 16 59 04.5 -0.8**
1.9nm,0.5s,baz=120,slow=4.2,SNR=4.0
NRIK LR LR 17 26 38.5
comp=Z,46nm,19.6s,baz=190,slow=40
GEYT Alibeck 58.51 305 P **P 16 59 18.1 -0.2**
2.9nm,0.9s,baz=134,slow=4.3,SNR=6.9
GEYT LR LR 17 26 59.3
comp=Z,57nm,18.7s,baz=230,slow=39
ABKAR Akbulak array 58.65 318 *e*P **P 16 59 19.6 +0.6**
1.8nm,0.6s
ARU Arti 61.08 326 *e*P **P 16 59 35.3 -0.3**
5.1nm,0.7s
RAYN Ar Rayn 70.26 290 *e*P **P 17 00 35.5 0.0**
22nm,1.9s
ILAR Eielson Array 76.34 26 P **P 17 01 08.3 -2.3**
0.2nm,0.6s,baz=282,slow=4.5,SNR=3.4
ILB Eielson Array 76.34 26 *e*P **P 17 01 08.3 -2.3**
11nm,1.6s
ARA0 ARCESS Array S 76.52 339 *e*P **P 17 01 11.7 +0.2**
ARCES ARCESS Array B 76.52 339 P **P 17 01 11.7 +0.2**
1.8nm,0.8s,baz=74,slow=12,SNR=2.6
FIA0 FINESS Array S 77.88 331 *e*P **P 17 01 17.6 -1.6**
FINES FINESS Array B 77.88 331 P **P 17 01 17.6 -1.6**
1.3nm,0.9s,baz=50,slow=15,SNR=4.8
AKASG Malin Array Be 78.34 320 P **P 17 01 20.6 -1.5**
0.5nm,0.5s,baz=57,slow=4.0,SNR=5.8
AKBB Malin Array Sti 78.34 320 *e*P **P 17 01 20.6 -1.5**
5.2nm,1.3s
BUR08 Bucovina Ar. S 81.62 317 *e*P **P 17 01 40.3 +0.3**
2.7nm,0.9s
NB2 NORSAR Subarra 84.81 333 P **P 17 01 54.8 -1.3**
comp=Z,7.9nm,1.4s,baz=66,slow=5.1
NB200 NORSAR Array S 84.81 333 *e*P **P 17 01 54.9 -1.3**
NOA NORSAR Array B 84.81 333 P **P 17 01 54.9 -1.3**
comp=Z,1.1nm,0.8s,baz=66,slow=4.8,SNR=4.2
NOA LR LR 17 40 37.2
comp=Z,28nm,19.2s,baz=55,slow=36
GEC2 GERESS Array S 88.48 321 *e*P **P 17 02 14.1 -0.4**
comp=Z,8.0nm,1.6s
GERES GERESS Array B 88.48 321 P **P 17 02 14.1 -0.4**
comp=Z,0.1nm,0.3s,baz=90,slow=2.7,SNR=3.9
YKA Yellowknife Ar 90.29 22 P **P 17 02 20.1 -2.4**
comp=Z,0.2nm,0.3s,baz=312,slow=4.1,SNR=3.1
YKB5 Yellowknife Ar 90.29 22 *e*P **P 17 02 20.1 -2.4**

IDC 23 17:03:21.8±4.2, 6°.60S×143°.36E, h0^{km}, mb3.5/1, mb1 3.7/3, mb1mx3.4/18, mbtmp3.5/3, ML3.2/2, MS3.5/2, Ms1 3.4/2, ms1mx2.8/15, Error ellipse: s-maj=131.4km s-min=35.6km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.90**	**213**	Pn	P	17 07 09.2	-1.8
0.1nm,0.3s,baz=32,slow=12,SNR=6.8							
ASAR	**Alice Springs**	**19.25**	**207**	P	P	17 07 47.3	-0.8
0.1nm,0.3s,baz=38,slow=9.9,SNR=16							
STKA	**Stephens Creek**	**25.20**	**184**	LR	LR	17 19 44.7	
comp=Z,120nm,19.5s,baz=22,slow=39							
JHJ	**Hachijo jima 2**	**39.64**	**355**	LR	LR	17 26 50.1	
comp=Z,45nm,19.3s,baz=59,slow=36							
MKAR	**Makanchi Array**	**75.69**	**322**	P	P	17 15 09.2	+0.1
0.2nm,0.5s,baz=120,slow=5.2,SNR=5.0							

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*HLW **23** 17:04:34.6, 37°.26N×27°.93E, h33^{km}±38^{km}, Ml3.5*
*ISK **23** 17:04:36.7, 36°.93N×27°.97E, h2^{km}, ML3.5/29*
*ATH **23** 17:04:37.6, 36°.92N×27°.92E, h25^{km}±1^{km}, ML3.2/7, Error ellipse: s-maj=1.8km s-min=1.0km az=237.0*
*DDA **23** 17:04:37.4, 36°.96N×27°.96E, h17^{km}±1^{km}, ML3.8*
*THE **23** 17:04:37.6, 36°.93N×27°.98E, h3^{km}±1^{km}, ML3.1/9, Error ellipse: s-maj=1.6km s-min=0.6km az=71.0*
*ISCJB **23** 17:04:37.7±0.3, 36°.93N±0°.02×27°.95E±0°.02, h10^{km}±2^{km}, Error ellipse: s-maj=2.6km s-min=2.3km az=2.5*
*NSSC **23** 17:04:49.7±0.8, 36°.25N×28°.87E, h7^{km}, ML3.0*
ISC 23 17:04:37.4±0.9, 36°.93N±0°.02×27°.98E±0°.01, h13^{km}±7^{km}, n91, σ1^{s}.17/133, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBRN	**Bozburun-Marma**	**0.25**	**166**	PG	**Pg**	**17 04 42.9**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.27**	**141**	PG	**Pg**	**17 04 43.2**	**0.0**
MRSB				SG	**Sg**	**17 04 48.1**	**+1.1**
DATC	**Datca-Mugla**	**0.31**	**237**	PG	**Pg**	**17 04 43.7**	**-0.1**
DATC				SG	**Sg**	**17 04 48.6**	**+0.6**
YER	**Yerkesik**	**0.32**	**49**	PG	**Pg**	**17 04 44.5**	**+0.4**
YER	**Yerkesik**	**0.32**	**49**	P	**Pg**	**17 04 44.4**	**+0.4**
YER				S	**Sb**	**17 04 49.7**	**-0.4**
DAT	**Datca**	**0.38**	**239**	PG	**Pg**	**17 04 44.9**	**-0.2**
DAT				SG	**Sb**	**17 04 51.2**	**-0.7**
DAT	**Datca**	**0.38**	**239**	*i* P	**Pb**	**17 04 45.8**	**-0.2**
DAT				*i* S	**Sg**	**17 04 50.6**	**+0.3**
BDRM	**Kayabasi**	**0.45**	**288**	*i* P	**Pg**	**17 04 46.0**	**-0.4**
BDRM				*i* S	**Sb**	**17 04 53.3**	**-0.6**
BDRM				IAML_P			
comp=Z,9μm,0.2s							
TURN	**Turunc**	**0.50**	**96**	PG	Pg	17 04 42.9	-4.4
TURN				SG	**Sg**	**17 04 47.5**	**-6.5**
DALY	**Dalyan (Mula)**	**0.55**	**101**	PG	**Pg**	**17 04 48.2**	**0.0**
DALY				SG	**Sb**	**17 04 57.1**	**+0.5**
DALY	**Dalyan (Mula)**	**0.55**	**101**	*i* P	**Pg**	**17 04 48.5**	**+0.3**
DALY				*i* S	**Sb**	**17 04 57.6**	**+1.0**
DALY				IAML_P			
comp=Z,25μm,0.2s							
BODT	**Bodrum**	**0.55**	**284**	PG	**Pg**	**17 04 48.3**	**-0.1**
BODT				SG	**Sb**	**17 04 56.8**	**0.0**
BODT	**Bodrum**	**0.55**	**284**	P	**Pg**	**17 04 48.2**	**-0.1**
BODT				S	**Sb**	**17 04 56.8**	**0.0**
ARG	**Arkhangelos**	**0.72**	**171**	PG	**Pb**	**17 04 51.4**	**-0.4**
ARG	**Arkhangelos**	**0.72**	**171**	P	**Pb**	**17 04 51.2**	**-0.6**
ARG				S	**Sn**	**17 05 03.1**	**-1.0**
ARG	**Arkhangelos**	**0.72**	**171**	P	**Pb**	**17 04 51.4**	**-0.4**
ARG				S	**Sn**	**17 05 03.1**	**-1.0**
ARG				AML	AML	17 05 05.8	
comp=N,5907μm,0.5s							
ARG				AML	AML	17 05 06.7	
comp=E,5132μm,0.3s							
AYDN	**Tasoluk**	**0.74**	**354**	*i* P	**Pg**	**17 04 52.1**	**+0.3**
AYDN				*i* S	**Sg**	**17 05 02.0**	**+0.4**
AYDN				IAML_P			
comp=Z,45μm,0.2s							
DIDI	**Didim-Aydin**	**0.74**	**307**	PG	**Pb**	**17 04 51.9**	**-0.3**
NISR	**Nisiros**	**0.75**	**246**	P	**Pg**	**17 04 52.2**	**+0.1**
NISR				S	**Sn**	**17 05 04.0**	**-0.9**
NISR	**Nisiros**	**0.75**	**246**	P	**Pb**	**17 04 51.2**	**-1.2**
NISR				S	**Sg**	**17 05 02.0**	**+0.1**
NISR				AML	AML	17 05 06.4	
comp=E,7461μm,0.3s							
NISR				AML	AML	17 05 08.9	
comp=N,2549μm,0.2s							
FETY	**Fethiye**	**0.93**	**108**	PG	**Pb**	**17 04 55.5**	**+0.1**
FETY	**Fethiye**	**0.93**	**108**	P	**Pb**	**17 04 55.0**	**-0.4**
FETY				S	**Sg**	**17 05 08.6**	**+1.0**
FETY	**Fethiye**	**0.93**	**108**	*i* P	**Pn**	**17 04 56.3**	**+0.1**
FETY				*i* S	**Sn**	**17 05 09.4**	**0.0**
GCAM	**G?zelcaml?**	**0.98**	**323**	PG	**Pn**	**17 04 56.3**	**-0.5**
GCAM	**G?zelcaml?**	**0.98**	**323**	*i* P	**Pg**	**17 04 56.5**	**+0.2**
GCAM				*i* S	**Sn**	**17 05 10.8**	**+0.4**
GCAM				IAML_P			
comp=Z,37μm,0.3s							
AYDB	**Zeytinkoy-Aydi**	**1.02**	**356**	PG	**Pn**	**17 04 57.1**	**-0.4**
DENT	**Denizli**	**1.18**	**45**	PN	**Pg**	**17 05 00.2**	**+0.1**
SMG	**Samos**	**1.20**	**311**	P	**Pb**	**17 05 00.0**	**0.0**
SMG				S	**Sg**	**17 05 16.1**	**-0.1**
SMG	**Samos**	**1.20**	**311**	P	**Pb**	**17 04 60.0**	**0.0**
SMG				S	**Sg**	**17 05 16.5**	**+0.2**
SMG				AML	AML	17 05 23.0	
comp=N,2622μm,0.3s							
SMG				AML	AML	17 05 23.0	
comp=E,2760μm,0.4s							
GMLD	**Gumuldur**	**1.43**	**324**	PN	**Pb**	**17 05 04.3**	**+0.4**
AKAS	**Kas**	**1.48**	**117**	PN	**Pg**	**17 05 05.9**	**0.0**
AKAS	**Kas**	**1.48**	**117**	*i* P	**Pg**	**17 05 07.4**	**+1.5**
AKAS				*i* S	**Sg**	**17 05 28.7**	**+3.6**
KSL	**Kastellorizon**	**1.50**	**121**	P	**Pg**	**17 05 06.3**	**-0.1**
KSL				S	**Sg**	**17 05 26.0**	**+0.1**
KSL				AML	AML	17 05 34.2	
comp=N,1421μm,0.5s							
KSL				AML	AML	17 05 34.4	
comp=E,1443μm,0.4s							
KARP	**Karpathos**	**1.53**	**206**	PN	**Pb**	**17 05 05.1**	**-0.5**
KARP	**Karpathos**	**1.53**	**206**	P	**Pb**	**17 05 04.8**	**-0.8**
KARP				S	**Sb**	**17 05 25.1**	**+0.2**
KARP	**Karpathos**	**1.53**	**206**	P	**Pb**	**17 05 04.8**	**-0.8**
KARP				S	**Sb**	**17 05 25.0**	**+0.2**
KARP				AML	AML	17 05 30.9	
comp=N,2061μm,0.5s							
KARP				AML	AML	17 05 32.2	
comp=E,2008μm,0.5s							
ELL	**Elmali**	**1.56**	**96**	PN	**Pg**	**17 05 07.3**	**0.0**
MANT	**Manisa**	**1.63**	**16**	*i* P	**Pb**	**17 05 07.4**	**-0.1**
MANT				*i* S	**Sn**	**17 05 26.7**	**-0.2**
BLCB	**Balcova**	**1.64**	**333**	PN	**Pb**	**17 05 06.0**	**+0.1**
KULA	**Kula-Manisa**	**1.67**	**19**	PN	**Pb**	**17 05 07.9**	**-0.2**
KULA	**Kula-Manisa**	**1.67**	**19**	P	**Pn**	**17 05 06.8**	**+0.3**
KULA				S	**Sb**	**17 05 28.6**	**-0.5**
AMGA	**Amorgos Island**	**1.68**	**267**	P	**Pn**	**17 05 06.4**	**0.0**
AMGA				S	**Sb**	**17 05 28.1**	**-1.0**
AMGA	**Amorgos Island**	**1.68**	**267**	P	**Pn**	**17 05 06.4**	**0.0**
AMGA				AML	AML	17 05 36.6	
comp=N,530μm,0.4s							
AMGA				AML	AML	17 05 37.1	
comp=E,808μm,0.5s							
URLA	**Izmir**	**1.81**	**323**	PN	**Pn**	**17 05 08.6**	**+0.4**
URLA	**Izmir**	**1.81**	**323**	*i* P	**Pn**	**17 05 08.2**	**0.0**
URLA				*i* S	**Sg**	**17 05 38.3**	**+2.7**
BRDR	**BURDUR-Merkez**	**1.83**	**65**	*i* P	**Pg**	**17 05 12.0**	**-0.6**
BRDR				*i* S	**Sg**	**17 05 36.4**	**+0.1**
KHAL	**Karahalli**	**1.87**	**39**	*i* P	**Pb**	**17 05 11.5**	**-0.1**
KORT	**Korkueli**	**1.90**	**87**	PN	**Pb**	**17 05 11.2**	**-0.8**
KORT	**Korkueli**	**1.90**	**87**	*i* P	**Pg**	**17 05 14.4**	**+0.5**
KORT				*i* S	**Sg**	**17 05 39.3**	**+0.8**
AKHS	**Akhisar**	**1.95**	**356**	*i* P	**Pb**	**17 05 11.4**	**-1.5**
AKHS				IAML_P			
comp=Z,4μm,0.2s							
USAK	**Uak-Merkez**	**1.96**	**24**	*i* P	**Pb**	**17 05 12.2**	**-0.9**
USAK				*i* S	**Sn**	**17 05 32.3**	**-2.6**
APE	**Apeiranthos**	**1.97**	**275**	P	**Pn**	**17 05 10.7**	**+0.2**
AKUM	**Antalya-Kumluc**	**1.99**	**107**	*i* P	**Pg**	**17 05 15.8**	**+0.1**
AKUM				*i* S	**Sb**	**17 05 40.0**	**+1.8**
CHOS	**Chios island**	**2.11**	**314**	PN	**Pn**	**17 05 12.9**	**+0.4**
CHOS	**Chios island**	**2.11**	**314**	P	**Pn**	**17 05 13.0**	**+0.4**
CHOS				S	**Sn**	**17 05 39.1**	**+0.5**
ANTB	**Antalya**	**2.14**	**90**	PN	**Pb**	**17 05 14.7**	**-1.3**
BCK	**Bucak**	**2.15**	**75**	PN	**Pb**	**17 05 14.9**	**-1.3**
ZEDA	**zmir-Bergama**	**2.16**	**341**	*i* P	**Pn**	**17 05 14.0**	**+1.0**
ZEDA				*i* S	**Sb**	**17 05 43.3**	**+0.3**
IOSP	**Ios island**	**2.17**	**265**	P	**Pn**	**17 05 13.7**	**+0.4**
ISP	**Isparta**	**2.21**	**65**	PN	**Pb**	**17 05 15.9**	**-1.4**
ISP	**Isparta**	**2.21**	**65**	P	**Pn**	**17 05 14.8**	**+0.9**
DKL	**Díkili**	**2.30**	**339**	PN	**Pb**	**17 05 16.8**	**-2.0**
ZKR	**Zakros**	**2.31**	**219**	PN	**Pb**	**17 05 17.1**	**-1.7**
ZKR	**Zakros**	**2.31**	**219**	P	**Pn**	**17 05 15.9**	**+0.8**
ZKR				S	**Sn**	**17 05 44.6**	**+1.3**
ZKR	**Zakros**	**2.31**	**219**	P	**Pn**	**17 05 16.2**	**+1.1**
ZKR				AML	AML	17 05 53.4	
comp=E,361μm,0.5s							
ZKR				AML	AML	17 05 55.1	
comp=N,259μm,0.7s							
GEDZ	**Gediz**	**2.40**	**28**	PN	**Pb**	**17 05 18.6**	**-1.9**
STEP	**BALIKESIR_Sava**	**2.46**	**355**	*i* P	**Pn**	**17 05 17.9**	**+0.7**
STEP				*i* S	**Sg**	**17 05 57.8**	**+1.4**
GDZ	**Gediz**	**2.46**	**28**	*i* P	**Pn**	**17 05 18.4**	**+1.1**
GDZ				*i* S	**Sn**	**17 05 48.7**	**+1.4**
NPS	**Neapolis**	**2.54**	**230**	P	**Pn**	**17 05 19.2**	**+0.9**
NPS				S	**Sn**	**17 05 50.5**	**+1.5**
NPS	**Neapolis**	**2.54**	**230**	P	**Pn**	**17 05 19.3**	**+1.0**
PRK	**Paraskevi**	**2.68**	**330**	P	**Pn**	**17 05 20.8**	**+0.6**
LAST	**Lasithi**	**2.69**	**230**	P	**Pn**	**17 05 20.5**	**+0.1**
LAST				S	**Sn**	**17 05 53.0**	**+0.2**
LAST	**Lasithi**	**2.69**	**230**	P	**Pn**	**17 05 21.6**	**+1.2**
DURS	**Dursunbey**	**2.70**	**8**	*i* P	**Pn**	**17 05 21.4**	**+0.8**
DURS				*i* S	**Sn**	**17 05 52.6**	**-0.6**
KEPZ	**Antalya-Kepez**	**2.90**	**89**	*i* P	**Pb**	**17 05 27.7**	**-1.3**
KEPZ				*i* S	**Sb**	**17 06 04.6**	**+0.2**
IDI	**Anoyia**	**2.99**	**238**	P	**Pn**	**17 05 25.9**	**+1.3**
BAYC	**CANAKKALE_Bayr**	**3.03**	**339**	*i* P	**Pn**	**17 05 26.1**	**+1.1**
IMMV	**Iera Moni Meta**	**3.55**	**247**	P	**Pn**	**17 05 33.3**	**+1.1**
GAZI	**Gazipasa**	**3.56**	**100**	*i* P	**Pn**	**17 05 35.8**	**+3.5**
LIA	**Limnos Island**	**3.69**	**324**	P	**Pn**	**17 05 35.3**	**+1.2**
SMTH	**Samothraki Isl**	**4.03**	**332**	P	**Pn**	**17 05 39.7**	**+1.0**
KYTH	**Kithira**	**4.03**	**262**	P	**Pn**	**17 05 40.4**	**+1.7**
BRBR	**Barbar**	**7.41**	**116**	*e*P	**Pn**	**17 06 26.4**	**+1.0**
BRBR				*e*S	Sn	17 07 35.9	-13
BRBR				AML	AML	17 07 49.6	
comp=E,21nm,0.7s							
BRBR				AML	AML	17 07 54.2	
comp=N,11nm,0.6s							
QASN	**Qassioun**	**7.58**	**114**	*e*P	**Pn**	**17 06 28.7**	**+1.0**
QASN				*e*S	Sn	17 07 40.5	-13
QASN				AML	AML	17 08 00.8	
comp=N,60nm,0.7s							
QASN				AML	AML	17 08 03.4	
comp=E,21nm,0.4s							
HNAT	**Natroun**	**7.60**	**162**	S	**Sn**	**17 07 51.5**	**-2.4**
baz=162							
RSH		**7.62**	**140**	P	**Pn**	**17 06 28.5**	**+0.3**
baz=141							
TOTH	**TOTAH**	**7.78**	**115**	*e*P	**Pn**	**17 06 32.4**	**+2.0**
TOTH				*e*S	Sn	17 07 45.5	-13
TOTH				AML	AML	17 08 00.9	
comp=E,36nm,0.5s							
TOTH				AML	AML	17 08 03.4	
comp=N,17nm,0.5s							
SWA2		**7.95**	**196**	P	**Pn**	**17 06 33.4**	**+0.8**
baz=196							
SWA2				S	**Sn**	**17 07 59.2**	**-3.2**
baz=196							
NBNS	**Bani Suef**	**8.74**	**160**	P	**Pn**	**17 06 43.6**	**+0.1**
baz=160							
HFRF	**Wahat Farafira**	**9.75**	**178**	P	**Pn**	**17 06 57.6**	**+0.2**
baz=178							
HKAT	**Jabal Katrina**	**9.79**	**147**	P	**Pn**	**17 06 58.5**	**+0.5**
baz=148							

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*CRAAG **23** 17:09:58.9, 36°.39N×3°.34E, Ml3.9*
*ISCJB **23** 17:10:00.8±0.4, 36°.63N±0°.03×3°.40E±0°.03, h18^{km}, Error ellipse: s-maj=4.1km s-min=3.7km az=164.9*
*MDD **23** 17:10:00.7±0.5, 36°.48N×3°.44E, h0^{km}, mb4.3/14, Error ellipse: s-maj=7.3km s-min=5.1km az=17.0, PRXIMO*
*LDG **23** 17:10:01.6±0.4, 36°.68N×3°.13E, h2^{km}, Ml3.0/8, Error ellipse: s-maj=8.9km s-min=3.6km az=156.0*
ISC 23 17:10:00.2±0.9, 36°.54N±0°.05×3°.44E±0°.03, h18^{km}, n59, σ2^{s}.53/85, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.42**	**309**	P	**Pg**	**17 10 09.2**	**+0.4**
ABA	**Alger-Bouzarea**	**0.42**	**309**	P	**Pg**	**17 10 09.2**	**+0.4**
EBNR	**Beni Rached**	**1.56**	**261**	P	**Pb**	**17 10 28.0**	**-0.6**
SET	**Setif**	**1.62**	**102**	P	**Pb**	**17 10 30.0**	**+0.4**
SET	**Setif**	**1.62**	**102**	P	**Pb**	**17 10 30.0**	**+0.4**
ECHA	**Ech Chlef**	**1.72**	**257**	P	**Pb**	**17 10 31.5**	**+0.3**
ECHF	**Ech Chlef**	**1.74**	**258**	P	**Pb**	**17 10 31.5**	**-0.1**
CKHR	**Kef el Ahmar**	**1.75**	**107**	P	**Pn**	**17 10 30.5**	**+0.7**
CKHR	**Kef el Ahmar**	**1.75**	**107**	P	**Pn**	**17 10 30.5**	**+0.7**
DFRA	**Djebel Bou Aff**	**1.96**	**89**	P	**Pn**	**17 10 34.0**	**+1.3**
DFRA	**Djebel Bou Aff**	**1.96**	**89**	P	**Pn**	**17 10 34.0**	**+1.3**
EANR	**'Ain N'Sour**	**1.98**	**253**	P	**Pb**	**17 10 35.0**	**-0.8**
EANR	**'Ain N'Sour**	**1.98**	**253**	P	**Pb**	**17 10 35.0**	**-0.8**
ETRT	**Tiaret**	**2.08**	**237**	P	**Pn**	**17 10 33.8**	**-0.5**
ETRT	**Tiaret**	**2.08**	**237**	P	**Pn**	**17 10 33.8**	**-0.5**
CASM	**Ain Smara**	**2.48**	**96**	P	**Pn**	**17 10 40.8**	**+1.1**
CASM	**Ain Smara**	**2.48**	**96**	P	**Pn**	**17 10 40.8**	**+1.1**
EIBI	**Ibiza**	**2.98**	**327**	P	**Pn**	**17 10 48.5**	**+1.9**
40nm,0.6s,SNR=21							
EIBI				S	**Sn**	**17 11 23.3**	**+1.3**
46nm,0.7s,SNR=4.8							
CMAH	**Djebel Manchou**	**3.20**	**87**	P	**Pn**	**17 10 50.4**	**+0.7**
CMAH	**Djebel Manchou**	**3.20**	**87**	P	**Pn**	**17 10 50.4**	**+0.7**
ETOS	**Mallorca**	**3.26**	**351**	P	**Pn**	**17 10 52.2**	**+1.8**
22nm,0.6s,SNR=21							
ETOS				S	**Sn**	**17 11 28.6**	**-0.1**
1.5nm,0.1s,SNR=7.9							
EMUR	**La Murta**	**3.96**	**291**	P	**Pn**	**17 11 00.5**	**+0.5**
4.4nm,0.3s,SNR=15							
EMUR				S	**Sn**	**17 11 45.7**	**-0.3**
3.0nm,0.3s,SNR=7.9							
ETOB	**Tobarra**	**4.48**	**299**	P	**Pn**	**17 11 08.9**	**+1.6**
8.7nm,0.4s,SNR=16							
ETOB				S	**Sn**	**17 11 59.9**	**+0.9**
2.3nm,0.3s,SNR=7.9							
ENIJ	**Nijar**	**4.55**	**277**	S	**Sn**	**17 11 59.5**	**-1.2**
8.1nm,0.3s,SNR=7.9							
ECHE	**Chera**	**4.62**	**313**	P	**Pn**	**17 11 11.5**	**+2.3**
SNR=7.9							
EMOS	**Mosqueruela**	**4.90**	**322**	P	**Pn**	**17 11 15.2**	**+2.1**
7.0nm,0.4s,SNR=23							
EMOS				S	**Sn**	**17 12 09.3**	**-0.1**
3.6nm,0.4s,SNR=7.9							
SESP	**Santiago Espad**	**5.02**	**290**	P	**Pn**	**17 11 16.6**	**+1.8**
SNR=7.9							
SESP				S	**Sn**	**17 12 12.1**	**-0.3**
1.3nm,0.1s,SNR=7.9							
SESP	**Santiago Espad**	**5.02**	**290**	P	Pn	17 11 09.8	-5.0
SESP				S	**Sn**	**17 12 13.2**	**+0.7**
EBER	**Berja**	**5.10**	**276**	P	**Pn**	**17 11 15.3**	**-0.5**
2.6nm,0.4s,SNR=5.6							
EBER				S	**Sn**	**17 12 13.8**	**-0.6**
1.2nm,0.2s,SNR=7.9							
EPOB	**Poblet**	**5.14**	**340**	P	**Pn**	**17 11 17.4**	**+1.1**
SNR=4.0							
EPOB				S	**Sn**	**17 12 14.3**	**-1.0**
SNR=7.9							
CFON	**Fontmartina**	**5.27**	**352**	P	**Pn**	**17 11 20.2**	**+2.1**
3.8nm,0.3s,SNR=12							
CFON				S	**Sn**	**17 12 18.2**	**-0.2**
2.8nm,0.2s,SNR=7.9							
EQES	**Quesada**	**5.35**	**286**	P	**Pn**	**17 11 21.3**	**+2.0**
11nm,0.5s,SNR=19							
EQES				S	**Sn**	**17 12 22.7**	**+2.3**
2.1nm,0.3s,SNR=7.9							
JBK	**JBK**	**5.38**	**248**	S	**Sb**	**17 12 34.4**	**-3.6**
EMIR	**Miracle**	**5.57**	**345**	P	**Pn**	**17 11 25.3**	**+3.2**
14nm,0.3s,SNR=22							
EMIR				S	**Sn**	**17 12 26.2**	**+0.4**
20nm,0.5s,SNR=7.9							
TDRA	**Tendrara**	**5.70**	**234**	P	**Pn**	**17 11 22.9**	**-1.1**
TDRA				S	**Sb**	**17 12 44.5**	**-2.7**
EJON	**La Jonquera**	**5.92**	**356**	P	**Pn**	**17 11 29.6**	**+2.7**
6.6nm,0.4s,SNR=12							
EJON				S	**Sn**	**17 12 35.2**	**+1.0**
7.6nm,0.6s,SNR=7.9							
SJAF	**Saint Jean de**	**5.95**	**356**	P	**Pn**	**17 11 30.1**	**+2.7**
1.0nm,0.1s,SNR=7.9							
CLLI	**Llivia**	**6.04**	**350**	P	**Pn**	**17 11 32.3**	**+3.6**
0.8nm,0.3s,SNR=7.9							
CLLI				S	**Sn**	**17 12 37.8**	**+0.4**
1.3nm,0.4s,SNR=7.9							
CSOR	**Sort**	**6.09**	**344**	P	**Pn**	**17 11 32.3**	**+2.9**
3.3nm,0.4s,SNR=5.5							
CSOR				S	**Sn**	**17 12 38.4**	**-0.3**
3.6nm,0.4s,SNR=7.9							
AKLM	**AKL**	**6.29**	**253**	S	**Sn**	**17 12 51.5**	**+7.9**
PAB	**San Pablo**	**6.84**	**298**	P	**Pn**	**17 11 40.5**	**+0.9**
SNR=7.9							
MTLF	**Montolieu**	**6.86**	**353**	*e*P	**Pn**	**17 11 43.1**	**+3.3**
MTLF				*e*Sn	**Sn**	**17 12 51.1**	**-6.2**
0.6nm,0.3s							
MTLF	**Montolieu**	**6.86**	**353**	P	**Pn**	**17 11 43.1**	**+3.3**
MTLF				S	**Sn**	**17 12 51.1**	**-6.2**
0.3nm,0.3s							
EPF	**Esparros**	**6.91**	**341**	*e*P	**Pn**	**17 11 43.6**	**+3.1**
EPF	**Esparros**	**6.91**	**341**	P	**Pn**	**17 11 43.6**	**+3.1**
LMR	**La Mourre**	**7.18**	**18**	*e*Pn	**Pn**	**17 11 45.0**	**+0.8**
LMR				*e*Sn	**Sn**	**17 13 02.0**	**-3.3**
2.5nm,0.3s							
LMR	**La Mourre**	**7.18**	**18**	P	**Pn**	**17 11 45.0**	**+0.8**
LMR				S	**Sn**	**17 13 02.0**	**-3.3**
1.2nm,0.3s							
PGF	**Pioggiola**	**7.38**	**34**	*e*Pn	**Pn**	**17 11 48.3**	**+1.3**
PGF				*e*Sn	**Sn**	**17 13 08.1**	**-2.2**
3.0nm,0.4s							
PGF	**Pioggiola**	**7.38**	**34**	P	**Pn**	**17 11 48.3**	**+1.3**
PGF				S	**Sn**	**17 13 08.1**	**-2.2**
1.5nm,0.4s							
FRF	**La Foret Royal**	**7.43**	**18**	*e*Pn	**Pn**	**17 11 48.6**	**+0.9**
FRF				*e

GRG	**Griva**	**1.71**	**90**	*i* Pg	**Pg**	**17 41 43.6**	**+0.8**
GRG				*i* Sg	**Sg**	**17 42 08.5**	**+3.4**
CEME	**Cevo**	**1.80**	**330** ⇑	*i*Pn	**Pb**	**17 41 43.5**	**+0.1**
CEME				*e*Sn	**Sg**	**17 42 09.4**	**+1.4**
BEY	**Berane**	**1.89**	**354**	*i* Pg	**Pg**	**17 41 45.8**	**-0.5**
IVA	**Berane**	**1.89**	**354** ⇑	*i*Pn	**Pb**	**17 41 45.0**	**+0.2**
IVA				*e*Sn	**Sg**	**17 42 11.0**	**+0.3**
HCY	**Herceg Novi**	**1.91**	**320** ⇑	*i*Pn	**Pb**	**17 41 45.5**	**+0.4**
HCY				*e*Sn	**Sg**	**17 42 12.1**	**+0.7**
KOME	**Kolasin**	**1.91**	**346** ⇓	*i*Pn	**Pb**	**17 41 45.3**	**0.0**
KOME				*e*Sn	**Sg**	**17 42 12.0**	**+0.4**
NKME	**Niksic**	**1.98**	**334** ⇓	*i*Pn	**Pb**	**17 41 46.9**	**+0.5**
NKME				*e*Sn	**Sg**	**17 42 14.0**	**+0.2**
NKY	**Niksic**	**2.01**	**335** ⇓	*i*Pn	**Pb**	**17 41 46.9**	**-0.1**
NKY				*e*Sn	**Sg**	**17 42 13.9**	**-0.8**
BRY	**Bratogost**	**2.25**	**328** ⇓	*i*Pn	**Pb**	**17 41 51.2**	**+0.1**
BRY				*e*Sn	**Sb**	**17 42 20.4**	**+1.3**
KKB	**Krupnik**	**2.38**	**67**	*i* Pg	**Pg**	**17 41 54.8**	**-0.8**
UPM	**Unac-Piva**	**2.39**	**338** ⇑	*i*Pn	**Pb**	**17 41 52.9**	**-0.6**
UPM				*e*Sn	**Sb**	**17 42 23.7**	**+0.5**
STON	**Ston**	**2.62**	**317**	*e*Pn	**Pn**	**17 41 51.7**	**-0.9**
STON				Sn	**Sn**	**17 42 24.7**	**+0.2**

MAN 23 17:42:38.6, 12°.97N×124°.30E, h96km, mb4.1, ML2.8, MS2.5, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataman**	**0.57**	**142**	*e*P	Pn	17 42 56.4	+1.8
CNP				*e*S	Sn	17 43 09.3	+2.8
BESP	**Borongan**	**1.75**	**140**	*e*P	Pn	17 43 08.9	+1.0
BESP				*e*S	Sn	17 43 30.2	0.0
OTRP	**Odiongan**	**2.30**	**255**	*e*P	Pn	17 43 15.6	+0.5
BOAC	**Boac**	**2.44**	**282**	*e*P	Pn	17 43 17.8	+1.0
MSLP	**Maasin**	**2.87**	**169**	*e*P	Pn	17 43 23.8	+1.2

*ISCJB **23** 17:54:09.9±0.3, 25°.66N±0°.04×99°.52E±0°.04, h10km, mb4.0/23, MS2.9/6, Error ellipse: s-maj=6.3km s-min=4.7km az=28.3*
*BJI **23** 17:54:09.5±0.0, 25°.58N×99°.42E, h10km, mb4.2/5, mB4.3/2, ML3.9/11, Ms3.8/6, Ms7 3.6/5*
*IDC **23** 17:54:10.7±0.7, 25°.71N×99°.40E, h0km, mb3.8/12, mb1 3.9/13, mb1mx3.7/40, mbtmp3.8/13, ML4.2/1, MS3.1/7, Ms1 3.1/7, ms1mx2.8/34, Error ellipse: s-maj=27.5km s-min=13.1km az=76.0*
*NEIC **23** 17:54:14.4±2.2, 25°.66N×99°.51E, h31km±5km, mb4.3/13, Error ellipse: s-maj=12.8km s-min=5.8km az=144.0*
ISC 23 17:54:11.4±0.5, 25°.60N±0°.06×99°.49E±0°.05, h10km, n48, σ1s88/50, mb4.2/23, MS2.9/6, 1D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.98**	**99**	Pg	**Pg**	**17 55 08.0**	**-0.5**
KMI				Sg	**Sg**	**17 55 48.1**	**+1.0**
KMI				smax	smax		
	comp=N,1μm,1.0s						
KMI				smax	smax		
	comp=E,790nm,0.9s						
KMI				LR	LR		
	comp=E,1μm,4.9s						
KMI				LR	LR		
	comp=Z,740nm,8.0s						
KMI	**Kunming**	**2.98**	**99**	*e*Pn	**Pn**	**17 54 56.2**	**-2.7**
KMI				*e*Pg	Pb	17 54 56.5	-8.2
SLVN	**Son La**	**5.87**	**135**	*e*Pn	**Pn**	**17 55 39.8**	**+1.2**
GYA	**Guiyang**	**6.51**	**81** ⇓	*i*Pn	**Pn**	**17 55 49.6**	**+2.2**
GYA				Sn	**Sn**	**17 57 04.5**	**+2.7**
GYA				Sg	**Sg**	**17 57 34.5**	**-5.9**
GYA				smax	smax		
	comp=N,10.0nm,0.7s						
GYA				smax	smax		
	comp=E,20nm,0.9s						
CHTO	**Chiang Mai**	**6.77**	**184**	*e*Pn	**Pn**	**17 55 52.3**	**+1.3**
SHL	**Shillong**	**6.87**	**271**	*e*Pn	**Pn**	**17 55 52.8**	**+0.4**
SHL	**Shillong**	**6.87**	**271**	*e*P	**Pn**	**17 55 54.0**	**+1.6**
CM31	**Chiang Mai Arr**	**7.13**	**184**	*e*Pn	**Pn**	**17 55 57.6**	**+1.8**
CMAR	**Chiang Mai Arr**	**7.13**	**184**	Pn	**Pn**	**17 55 57.0**	**+1.3**
	1.1nm,0.3s,baz=359,slow=13,SNR=31						
CMAR				Pg	**Pg**	**17 56 23.3**	**-4.6**
	1.4nm,0.3s,baz=0.4,slow=18,SNR=13						
CMAR				Lg	Lg	17 57 58.2	
	1.5nm,0.3s,baz=357,slow=30,SNR=12						
CMAR				LR	LR	17 58 37.0	
	comp=Z,75nm,19.0s,baz=275,slow=37						
LSA	**Lhasa**	**8.45**	**301**	P	**Pn**	**17 56 15.8**	**+1.5**
LSA	**Lhasa**	**8.45**	**301**	*e*Pn	**Pn**	**17 56 15.8**	**+1.5**
ENH	**Enshi**	**9.99**	**60**	*e*Pn	**Pn**	**17 56 35.1**	**+0.1**
XAN	**Xi'an**	**11.73**	**42**	P	**Pn**	**17 56 58.0**	**-0.9**
XAN				LR	LR		
	comp=N,200nm,6.9s						
XAN				LR	LR		
	comp=E,250nm,7.1s						
XAN				LR	LR		
	comp=Z,120nm,5.9s						
YULB	**Yu-li**	**19.97**	**92**	*e*P	**P**	**17 58 43.5**	**-0.4**
	10.0nm,1.1s						
WMQ	**Urumqi**	**20.56**	**335**	*e*P	Pn	17 58 50.3	-2.2
PSI	**Prapat**	**22.68**	**181**	P	**P**	**17 59 16.9**	**+3.7**
	4.9nm,0.8s,baz=342,slow=8.4,SNR=3.1						
PSI				LR	LR	18 09 53.1	
	comp=Z,76nm,19.6s,baz=316,slow=41						
PSI	**Prapat**	**22.68**	**181**	*e*P	**P**	**17 59 13.9**	**+0.7**
	8.2nm,0.9s						
SONA0	**Songino Array**	**22.85**	**12**	*e*P	**P**	**17 59 15.4**	**+0.5**
SONM	**Songino Array**	**22.85**	**12**	P	**P**	**17 59 15.4**	**+0.5**
	0.8nm,0.5s,baz=198,slow=9.9,SNR=5.8						
SONM				LR	LR	18 09 05.9	
	comp=Z,46nm,19.6s,baz=207,slow=39						
TGY	**Tagaytay City**	**23.15**	**116**	LR	LR	18 08 02.5	
	comp=Z,32nm,21.3s,baz=218,slow=36						
KKM	**Kota Kinabalu**	**25.18**	**138**	*e*P	**P**	**17 59 38.3**	**+1.0**
	9.1nm,1.1s						
MK31	**Makanchi Array**	**25.19**	**331**	*e*P	**P**	**17 59 37.3**	**+0.2**
	4.2nm,1.1s						
MK32	**Makanchi Array**	**25.19**	**331**	*e*P	**P**	**17 59 38.3**	**+1.3**
MKAR	**Makanchi Array**	**25.19**	**331**	P	**P**	**17 59 38.3**	**+1.3**
	2.7nm,0.7s,baz=138,slow=11,SNR=16						
MKAR				LR	LR	18 09 51.4	
	comp=Z,44nm,20.3s,baz=172,slow=38						
KS15	**Wonju Array Si**	**26.82**	**57**	*e*P	**P**	**17 59 52.4**	**+0.5**
	2.6nm,1.0s						
KSRS	**Korea Array**	**26.86**	**57**	P	**P**	**17 59 52.4**	**+0.2**
	0.5nm,0.7s,baz=244,slow=9.9,SNR=2.9						
KSRS				LR	LR	18 10 34.5	
	comp=Z,31nm,18.1s,baz=300,slow=37						
KURBB	**Kurchatov Arra**	**29.73**	**333**	P	**P**	**18 00 17.6**	**0.0**
	0.5nm,0.6s,baz=132,slow=10.0,SNR=6.7						
ZAA0	**Zalesovo Array**	**30.35**	**343**	*e*P	**P**	**18 00 19.9**	**-3.2**
	3.4nm,0.6s						
ZALV	**Zalesovo Beam**	**30.35**	**343**	P	**P**	**18 00 24.1**	**+1.0**
	3.1nm,0.7s,baz=148,slow=7.1,SNR=10						
ZALV				LR	LR	18 13 02.4	
	comp=Z,32nm,18.4s,baz=248,slow=38						
ZAA1	**Zalesovo Array**	**30.35**	**343**	*e*P	**P**	**18 00 24.1**	**+1.0**
MA2	**Magadan**	**48.90**	**32**	*e*P	**P**	**18 02 55.0**	**-2.2**
	3.4nm,0.8s						
TIXI	**Tiksi**	**48.94**	**12**	*e*P	**P**	**18 02 56.9**	**-0.5**
	3.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.34**	**147**	*e*P	**P**	**18 03 10.5**	**+1.9**
	5.7nm,1.0s						
PSA00	**Pilbara Seismi**	**50.89**	**155**	*e*P	**P**	**18 03 12.1**	**-0.7**
	6.6nm,1.1s						
WR1	**Warramunga Arr**	**56.54**	**140**	*e*P	**P**	**18 03 56.3**	**+2.1**
WRA	**Warramunga Arr**	**56.54**	**140**	P	**P**	**18 03 56.3**	**+2.1**
	1.3nm,0.7s,baz=324,slow=7.0,SNR=7.8						
WB2	**Warramunga Arr**	**56.54**	**140**	*e*P	**P**	**18 03 54.3**	**+0.1**
	3.0nm,1.0s						
AS31	**Alice Springs**	**59.24**	**143**	*e*P	**P**	**18 04 14.9**	**+1.8**
	0.9nm,1.1s						
ASAR	**Alice Springs**	**59.24**	**143**	P	**P**	**18 04 16.1**	**+3.0**
	0.5nm,0.8s,baz=326,slow=7.7,SNR=4.0						
FIA1	**FINESS Array S**	**59.95**	**328**	*e*P	**P**	**18 04 16.9**	**-0.6**
	3.9nm,1.0s						
FIA0	**FINESS Array S**	**59.95**	**328**	*e*P	**P**	**18 04 16.1**	**-1.4**
FINES	**FINESS Array B**	**59.95**	**328**	P	**P**	**18 04 16.1**	**-1.4**
	1.2nm,0.7s,baz=66,slow=4.6,SNR=5.4						
NB2	**NORSAR Subarra**	**67.13**	**328**	P	**P**	**18 05 03.7**	**-1.4**
	comp=Z,4.0nm,1.0s,baz=81,slow=6.5						
NB200	**NORSAR Array S**	**67.13**	**328**	*e*P	**P**	**18 05 04.2**	**-0.8**
NOA	**NORSAR Array B**	**67.13**	**328**	P	**P**	**18 05 04.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=80,slow=6.3,SNR=4.3						
GERES	**GERESS Array B**	**68.50**	**315**	P	**P**	**18 05 13.9**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=97,slow=4.2,SNR=4.4						
YKA	**Yellowknife Ar**	**88.08**	**15**	P	**P**	**18 07 00.7**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=328,slow=4.4,SNR=3.4						
YKB5	**Yellowknife Ar**	**88.08**	**15**	*e*P	**P**	**18 07 00.7**	**-1.1**

IDC 23 18:02:25.0±2.4, 22°.71N×12°.74W, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.3/36, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=65.5km s-min=32.0km az=87.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I11CV	**MAIO ISLAND IN**	**12.35**	**235**	*i*		19 17 00.0	
	baz=52,slow=311,SNR=1.1						
TORD	**Torodi Ar. Bea**	**16.69**	**122**	Pn	Pn	18 06 18.4	-2.1
	0.1nm,0.3s,baz=320,slow=14,SNR=5.9						
TORD				Sn	Sn	18 09 23.4	-3.3
	0.1nm,0.3s,baz=312,slow=27,SNR=3.6						
DBIC	**Dimbokro**	**17.67**	**153**	Pn	Pn	18 06 30.6	-2.1
	0.3nm,0.3s,baz=336,slow=16,SNR=4.0						
I42PT	**GRACIOSA ISLAN**	**20.84**	**325**	*i*		20 08 00.0	
	baz=138,slow=319,SNR=1.3						
GERES	**GERESS Array B**	**33.45**	**32**	P	P	18 09 03.7	-2.0
	0.2nm,0.4s,baz=224,slow=8.3,SNR=3.0						
FINES	**FINESS Array B**	**46.97**	**24**	P	P	18 10 57.5	0.0
	0.5nm,0.6s,baz=254,slow=13,SNR=3.7						
ASAR	**Alice Springs**	**149.36**	**98**	PKPbc	PKiKP	18 22 18.6	+0.8
	0.2nm,0.5s,baz=276,slow=2.3,SNR=2.9						

IDC 23 18:05:19.9±1.6, 25°.66N×99°.66E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.2/44, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=50.1km s-min=18.8km az=91.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.20**	**185**	Pn	Pn	18 07 06.3	-0.1
	0.3nm,0.3s,baz=359,slow=13,SNR=13						
CMAR				Pg	Pg	18 07 32.9	-5.0
	0.3nm,0.3s,baz=3.1,slow=17,SNR=7.1						
CMAR				Lg	Lg	18 09 07.5	
	0.4nm,0.3s,baz=1.0,slow=29,SNR=11						
SONM	**Songino Array**	**22.76**	**12**	P	P	18 10 24.5	+0.5
	0.3nm,0.4s,baz=198,slow=9.1,SNR=2.5						
MKAR	**Makanchi Array**	**25.22**	**331**	P	P	18 10 47.5	+0.1
	1.1nm,0.7s,baz=142,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**30.34**	**343**	P	P	18 11 32.4	-0.7
	1.0nm,0.6s,baz=148,slow=8.7,SNR=4.0						

*ISCJB **23** 18:36:58.9±0.4, 4°.00S±0°.04×143°.02E±0°.06, h35km, mb4.2/18, MS3.2/6, Error ellipse: s-maj=9.0km s-min=5.8km az=168.1*
*IDC **23** 18:37:02.2±2.3, 4°.08S×142°.94E, h51km±23km, mb3.8/8, mb1 4.0/12, mb1mx3.8/29, mbtmp4.1/12, ML3.1/2, MS3.2/7, Ms1 3.2/7, ms1mx3.1/18, Error ellipse: s-maj=18.9km s-min=12.9km az=81.0*
*NEIC **23** 18:37:05.5±2.4, 4°.07S×143°.02E, h87km±3km, mb4.3/17, Error ellipse: s-maj=17.1km s-min=14.7km az=63.0*
ISC 23 18:37:01.0±0.6, 4°.06S±0°.06×142°.89E±0°.07, h35km, n39, σ1s67/39, mb4.3/18, MS3.2/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.67**	**305**	P	**Pn**	**18 37 42.6**	**+1.0**
	2.4nm,0.3s,baz=139,slow=12,SNR=9.8						
JAY				LR	LR	18 39 05.5	
	comp=Z,445nm,19.1s,baz=142,slow=45						
MANU	**Manus Island**	**4.90**	**66**	*e*Pn	**Pn**	**18 38 15.2**	**+2.9**
PMG	**Port Moresby**	**6.79**	**142**	P	**Pn**	**18 38 37.3**	**-1.0**
	0.3nm,0.3s,baz=170,slow=11,SNR=2.7						
PMG				S	**Sn**	**18 39 56.5**	**+2.1**
	baz=48,slow=16,SNR=1.6						
PMG	**Port Moresby**	**6.79**	**142**	*e*Pn	**Pn**	**18 38 37.3**	**-1.0**
PMG				*e*		18 38 43.4	
COEN	**Coen**	**9.84**	**178**	*e*Pn	Pn	18 39 26.1	+6.0
SIJI	**Sorong**	**12.04**	**285**	P	**Pn**	**18 39 53.6**	**+3.3**
	0.2nm,0.3s,baz=307,slow=20,SNR=1.9						
MTN	**Manton Dam**	**14.53**	**232**	*e*Pn	**Pn**	**18 40 25.2**	**+0.9**
WB2	**Warramunga Arr**	**17.85**	**207**	*e*P	**Pn**	**18 41 07.7**	**+0.9**
	12nm,0.7s						
WR1	**Warramunga Arr**	**17.85**	**207**	*e*P	**Pn**	**18 41 07.8**	**+1.0**
WRA	**Warramunga Arr**	**17.85**	**207**	P	**Pn**	**18 41 07.8**	**+1.0**
	0.8nm,0.3s,baz=18,slow=10,SNR=48						
WRA				S	**Sn**	**18 44 24.3**	**-0.6**
	0.3nm,0.3s,baz=31,slow=24,SNR=3.3						
SOEI	**Soe**	**19.33**	**252**	*e*P	**P**	**18 41 25.6**	**+2.0**
	77nm,0.9s						
BATI	**Baumata**	**20.02**	**251**	P	**P**	**18 41 33.4**	**+2.2**
	21nm,0.6s,baz=306,slow=2.6,SNR=5.0						
BATI	**Baumata**	**20.02**	**251**	*e*P	**P**	**18 41 33.4**	**+2.2**
BATI				*e*P	**P**	**18 41 33.4**	**+2.2**
AS31	**Alice Springs**	**21.33**	**203**	*e*P	**P**	**18 41 46.8**	**+1.6**
	2.1nm,0.5s						
ASAR	**Alice Springs**	**21.34**	**203**	P	**P**	**18 41 46.1**	**+0.8**
	1.5nm,0.6s,baz=29,slow=13,SNR=21						
ASAR				LR	LR	18 50 54.4	
	comp=Z,188nm,21.3s,baz=51,slow=39						
FITZ	**Fitzroy Crossi**	**21.90**	**229**	*e*P	**P**	**18 41 54.8**	**+3.5**
	9.3nm,0.8s						
EIDS	**Eidsvold**	**22.60**	**160**	*e*P	**P**	**18 41 58.2**	**-0.5**
	13nm,0.9s						
STKA	**Stephens Creek**	**27.70**	**182**	P	**P**	**18 42 46.4**	**+0.4**
	3.8nm,0.8s,baz=4.2,slow=5.2,SNR=7.6						
STKA				LR	LR	18 54 45.2	
	comp=Z,65nm,21.6s,baz=218,slow=38						
STKA	**Stephens Creek**	**27.70**	**182**	*e*P	**P**	**18 42 46.4**	**+0.4**
	0.8nm,0.8s						
BBOO	**Buckleboo**	**29.31**	**192**	*e*P	**P**	**18 43 00.6**	**+0.3**
	5.2nm,0.8s						
FORT	**Forrest**	**30.03**	**206**	*e*P	**P**	**18 43 08.0**	**+1.2**
	17nm,0.6s						
CAN	**Canberra**	**31.61**	**170**	*e*P	**P**	**18 43 17.5**	**-3.2**
	16nm,1.1s						
MORW	**Morawa**	**35.60**	**223**	*e*P	**P**	**18 43 55.4**	**-0.1**
	9.8nm,0.8s						
MJAR	**Matsushiro Arr**	**40.63**	**354**	P	**P**	**18 44 38.0**	**+0.3**
	0.4nm,0.6s,baz=154,slow=6.7,SNR=4.0						
MJAR				LR	LR	18 59 20.0	
	comp=Z,16nm,19.2s,baz=280,slow=33						
MAJO	**Matsushiro**	**40.63**	**354**	*e*P	**P**	**18 44 38.0**	**+0.3**
KSRS	**Korea Array**	**43.59**	**343**	P	**P**	**18 45 01.6**	**-0.2**
	0.7nm,0.5s,baz=167,slow=9.1,SNR=7.2						
KSRS				LR	LR	18 59 57.2	
	comp=Z,18nm,21.2s,baz=150,slow=32						
KS15	**Wonju Array Si**	**43.59**	**343**	*e*P	**P**	**18 45 01.6**	**-0.2**
	3.4nm,1.1s						
CM31	**Chiang Mai Arr**	**48.74**	**299**	*e*P	**P**	**18 45 40.0**	**-2.7**
PETK	**Petropavlovsk-**	**58.31**	**10**	LR	LR	19 13 56.5	
	comp=Z,15nm,18.9s,baz=126,slow=38						
LSA	**Lhasa**	**59.82**	**308**	*e*P	**P**	**18 47 01.8**	**-2.1**
	5.7nm,0.5s						
MK32	**Makanchi Array**	**73.42**	**321**	*e*P	**P**	**18 48 29.9**	**0.0**
MKAR	**Makanchi Array**	**73.42**	**321**	P	**P**	**18 48 29.9**	**0.0**
	3.6nm,0.8s,baz=100,slow=8.3,SNR=25						
ZALV	**Zalesovo Beam**	**75.22**	**329**	P	**P**	**18 48 39.0**	**-1.0**
	1.5nm,0.6s,baz=110,slow=5.3,SNR=5.3						
ZAA1	**Zalesovo Array**	**75.22**	**329**	*e*P	**P**	**18 48 39.0**	**-1.0**
KURK	**Kurchatov**	**77.23**	**324**	*e*P	**P**	**18 48 51.4**	**-0.2**
	2.4nm,0.8s						
NRIK	**Noril'sk**	**82.21**	**343**	LR	LR	19 26 11.8	
	comp=Z,18nm,20.4s,baz=79,slow=36						
BRVK	**Borovoye**	**82.89**	**325**	*e*P	**P**	**18 49 22.2**	**+0.2**
	5.2nm,1.0s						
ILAR	**Eielson Array**	**85.35**	**24**	P	**P**	**18 49 32.1**	**-2.2**
	1.0nm,0.5s,baz=258,slow=4.5,SNR=11						
ILB	**Eielson Array**	**85.35**	**24**	*e*P	**P**	**18 49 32.1**	**-2.2**
	1.4nm,0.6s						

ROM 23 18:41:28.3±0.5, 44°.17N±0°.03×10°.17E±0°.02, h9km±1km, Md1.0/4, Error ellipse: s-maj=4.0km s-min=0.9km az=339.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.01**	**252**	P	Pg	18 41 30.2	+0.2
EQUI				S	Sg	18 41 31.0	-0.2
EQUI				AML	AML		
	comp=E,230μm,0.8s						
EQUI				AML	AML		
	comp=N,276μm,0.1s						
EQUI				AML	AML		
	comp=N,276μm,0.1s						
EQUI				AML	AML		
	comp=E,230μm,0.8s						
EQUI				AML	AML		
	comp=N,276μm,0.1s						
EQUI				AML	AML		
	comp=E,230μm,0.8s						
EQUI				END			
EQUI				END			
EQUI				END			
EQUI				END			
T0912	**Minucciano (LU**	**0.03**	**91**	P	Pg	18 41 30.6	+0.4
T0912				S	Sg	18 41 31.7	+0.3
T0912				AML	AML		
	comp=E,1560μm,0.2s						
T0912				AML	AML		
	comp=N,1890μm,0.4s						
T0912				AML	AML		
	comp=E,1535μm,0.2s						
T0912				AML	AML		
	comp=N,1900μm,0.4s						
T0912				AML	AML		
	comp=E,1560μm,0.2s						
T0912				AML	AML		
	comp=E,1535μm,0.2s						
T0912				AML	AML		
	comp=N,1890μm,0.4s						
T0912				AML	AML		
	comp=N,1900μm,0.4s						
T0912				AML	AML		
	comp=E,1538μm,0.2s						
T0912				AML	AML		
	comp=N,1895μm,0.4s						
T0912				END			
T0912				END			
T0911	**Castelpoggio (**	**0.09**	**229**	P	Pg	18 41 31.5	+0.8
T0911				S	Sg	18 41 33.1	+0.7
T0911				END			
T0911				END			
T0911				END			
T0911				END			
SARO	**Sassorosso**	**0.17**	**85**	P	Pg	18 41 32.9	+0.8
SARO				S	Sg	18 41 35.8	+1.2
SARO				END			
SARO				END			
CARD	**Cardoso**	**0.27**	**122**	P	Pg	18 41 34.0	+0.3
CARD				S	Sb	18 41 39.1	-0.9
CARD				END			
CARD				END			

GEN 23 18:42:13.4, 43°.80N×7°.61E, h7km, MI0.0, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEGI	**Seborga**	**0.08**	**56**	P	Pg	18 42 15.6	+0.2
NEGI				S	Sg	18 42 17.1	+0.3
IMI	**Imperia**	**0.23**	**62**	P	Pg	18 42 18.2	+0.2
IMI				S	Sg	18 42 21.6	+0.4
MGRO	**Montegrosso**	**0.28**	**31**	P	Pg	18 42 19.3	+0.3
MGRO				S	Sg	18 42 23.4	+0.6

IDC 23 19:23:30.9±4.3, 19°.82S×169°.25E, h171km±40km, mb3.5/3, mb1 3.7/4, mb1mx3.2/23, mbtmp4.0/4, Error ellipse: s-maj=98.0km s-min=38.4km az=154.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.45**	**229**	P	Pn	19 24 24.4	-0.5
	7.9nm,0.3s,baz=113,slow=14,SNR=129						
DZM				S	Sn	19 25 07.2	+0.2
	10nm,0.3s,baz=97,slow=23,SNR=9.4						
STKA	**Stephens Creek**	**27.55**	**239**	P	P	19 29 02.6	+0.6
	1.1nm,0.7s,baz=66,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**32.80**	**264**	P	P	19 29 47.5	-0.8
	2.1nm,1.0s,baz=95,slow=8.9,SNR=5.3						
ASAR	**Alice Springs**	**33.01**	**257**	P	P	19 29 50.6	+0.5
	1.4nm,0.6s,baz=84,slow=8.8,SNR=32						
ARCES	**ARCESS Array B**	**125.63**	**345**	PKP	PKPdf	19 42 10.6	-0.6
	1.4nm,0.9s,baz=46,slow=2.6,SNR=4.4						
GERES	**GERESS Array B**	**145.00**	**332**	PKPbc	PKPbc	19 42 46.6	-0.9
	0.2nm,0.6s,baz=43,slow=4.5,SNR=5.2						

*ISCJB **23** 19:44:25.4±0.6, 18°.17S±0°.05×168°.0E±0°.1, h32km, mb4.2/16, MS3.6/8, Error ellipse: s-maj=14.9km s-min=7.2km az=13.0*
*NEIC **23** 19:44:26.8±1.5, 18°.21S×168°.25E, h35km±8km, mb4.4/8, Error ellipse: s-maj=25.0km s-min=17.3km az=99.0*
*IDC **23** 19:44:28.4±3.1, 18°.23S×168°.14E, h45km±29km, mb3.9/11, mb1 4.2/13, mb1mx3.9/42, mbtmp4.3/13, ML4.7/2, MS3.6/8, Ms1 3.6/8, ms1mx3.4/24, Error ellipse: s-maj=29.7km s-min=19.7km az=101.0*
ISC 23 19:44:26.5±0.7, 18°.23S±0°.07×168°.2E±0°.1, h32km, n53, σ0s96/46, mb4.2/16, MS3.6/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.24**	**183**	*e*Pn	**Pn**	**19 45 15.8**	**+0.7**
DZM	**Mont Dzumac**	**4.17**	**203**	*e*Pn	**Pn**	**19 45 29.5**	**+1.4**
	55nm,0.3s						
DZM				*e*Sn	**Sn**	**19 46 16.6**	**+0.9**
	106nm,0.3s						
DZM				*e*LR	LR	19 46 25.4	
	comp=Z,832nm,24.2s						
DZM	**Mont Dzumac**	**4.17**	**203**	P	**Pn**	**19 45 29.7**	**+1.7**
	18nm,0.3s,baz=11,slow=9.8,SNR=75						
DZM				S	**Sn**	**19 46 16.7**	**+0.9**
	9.7nm,0.3s,baz=292,slow=23,SNR=10						
DZM				LR	LR	19 47 02.0	
	comp=Z,506nm,21.2s,baz=68,slow=37						
DZM	**Mont Dzumac**	**4.17**	**203**	*e*Pn	**Pn**	**19 45 29.0**	**+1.0**
HNR	**Honiara**	**11.88**	**316**	P	**Pn**	**19 47 14.4**	**+0.6**
	13nm,0.3s,baz=188,slow=1.9,SNR=5.7						
HNR				LR	LR	19 50 56.3	
	comp=Z,201nm,19.2s,baz=160,slow=33						
CTA	**Charters Tower**	**20.84**	**261**	P	**P**	**19 49 04.5**	**-1.2**
	9.4nm,1.0s,baz=65,slow=14,SNR=2.7						
WHZ	**Wether Hill Ro**	**27.58**	**180**	*e*P	**P**	**19 50 08.0**	**-2.7

2.9nm,0.7s,baz=131,slow=9.2,SNR=4.7
SONA0 **Songino Array** 85.85 323 *e*P P 19 57 03.5 +0.4
SONM **Songino Array** 85.85 323 P P 19 57 03.5 +0.4
3.5nm,1.1s,baz=140,slow=5.4,SNR=11
NV01 **Mina Array Sit** 88.86 49 *e*P P 19 57 18.0 +0.1
NVAR **Mina Array Bea** 88.86 49 P P 19 57 18.0 +0.1
0.4nm,0.5s,baz=226,slow=7.1,SNR=4.5
MK32 **Makanchi Array** 100.36 316 *e*Pdif Pdif 19 58 09.9 -0.2
MKAR **Makanchi Array** 100.36 316 P Pdif 19 58 09.9 -0.2
0.2nm,0.4s,baz=90,slow=6.1,SNR=5.5
ARA0 **ARCESS Array S** 123.86 345 *e*PKPdf PKPdf 20 03 20.0 -0.6
ARCES **ARCESS Array B** 123.86 345 PKP PKPdf 20 03 20.0 -0.6
8.7nm,0.3s,baz=78,slow=1.7,SNR=14
FIA0 **FINESS Array S** 129.30 338 *e*PKPdf PKPdf 20 03 31.0 -0.2
FINES **FINESS Array B** 129.30 338 PKP PKPdf 20 03 31.0 -0.2
0.6nm,0.7s,baz=70,slow=2.2,SNR=5.5
GEC2 **GERESS Array S** 143.16 332 *e*PKPdf PKPbc 20 03 55.3 +0.9
GERES **GERESS Array B** 143.16 332 PKP PKPbc 20 03 55.3 +0.9
0.3nm,0.4s,baz=29,slow=3.0,SNR=4.5
MOA **Molln** 143.62 330 *e*PKPdf PKPbc 20 03 56.0 +0.4
0.9nm,0.5s
SOKA **Soboth** 144.06 328 *e*PKPdf PKPab 20 03 56.9 +0.4
0.8nm,0.4s
KBA **Koelnbreinsper** 144.61 330 *e*PKPdf PKPab 20 03 58.5 -0.2
1.2nm,0.5s
MYKA **Terra Mystica** 144.78 329 *e*PKPdf PKPab 20 03 58.8 -0.4
2.1nm,0.5s
WATA **Walderalm** 145.24 332 *e*PKPdf PKPbc 20 04 00.5 -0.3
2.3nm,0.5s
ABTA **Abfaltersbach** 145.24 330 *e*PKPdf PKPbc 20 03 60.0 -0.8
5.3nm,0.6s
WTTA **Wattenberg** 145.26 332 *e*PKPdf PKPbc 20 04 01.2 +0.2
2.9nm,0.5s
MOTA **Moosalm** 145.44 332 *e*PKPab PKPbc 20 04 01.4 -0.1
3.9nm,0.5s
RETA **Reutte** 145.48 333 *e*PKPab PKPdf 20 04 01.8 +0.3
3.4nm,0.5s
SQTA **Sankt Quirin** 145.49 332 *e*PKPab PKPdf 20 04 01.6 0.0
5.7nm,0.5s
FETA **Feichten** 145.85 332 *e*PKPab PKPbc 20 04 03.1 +0.2
9.8nm,1.1s
DAVA **Damuels** 146.02 333 *e*PKPab PKPab 20 04 03.8 0.0
3.4nm,0.5s

ISCJB ***23*** *19:50:11.0±1.2, 33°.38N±0°.07×141°.6E±0°.1, h41km, mb3.5/4, MS3.1/1, Error ellipse: s-maj=17.1km s-min=9.4km az=167.2*
JMA ***23*** *19:50:11.4±0.6, 33°.41N×141°.57E, h76km, M2.9*
IDC ***23*** *19:50:15.2±1.0, 32°.61N×138°.83E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.3/43, mbtmp3.4/5, ML2.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=22.0km s-min=17.2km az=134.0*

ISC 23 19:50:12.9±1.4, 33°.35N±0°.08×141°.4E±0°.1, h41km, n14, σ1ˢ78/15, mb3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.35**	**344**	P	**Pn**	**19 50 34.8**	**0.0**
JHJ2	**Mitsune**	**1.38**	**260**	P	**Pn**	**19 50 36.4**	**+0.8**
JHCJ	**Hachijojimakas**	**1.40**	**259**	P	**Pn**	**19 50 37.9**	**+1.9**
JHJ	**Hachijo jima 2**	**1.40**	**261**	Pn	**Pn**	**19 50 36.5**	**+0.5**
	36nm,0.3s,baz=125,slow=21,SNR=17						
JHJ				Sn	**Sn**	**19 50 50.9**	**-2.4**
	37nm,0.3s,baz=270,slow=20,SNR=12						
JMKN	**Mikurajimanish**	**1.63**	**290**	P	**Pn**	**19 50 40.1**	**+1.0**
BSO3	**Boso 3**	**1.63**	**332**	P	**Pn**	**19 50 39.1**	**+0.1**
JIM2	**Oshima 3**	**2.15**	**310**	P	**Pn**	**19 50 46.0**	**-0.3**
JAG	**Ashikaga**	**3.47**	**333**	P	**Pn**	**19 51 04.7**	**+0.3**
MJAR	**Matsushiro Arr**	**4.14**	**321**	Pn	**Pn**	**19 51 14.7**	**+1.1**
	0.1nm,0.3s,baz=158,slow=12,SNR=8.4						
MJAR				Sn	**Sn**	**19 52 03.3**	**+2.6**
	0.1nm,0.3s,baz=148,slow=18,SNR=4.0						
SONM	**Songino Array**	**29.99**	**309**	LR	LR	20 07 00.9	
	comp=Z,46nm,18.9s,baz=194,slow=35						
MKAR	**Makanchi Array**	**46.17**	**305**	P	**P**	**19 58 29.7**	**-3.8**
	0.3nm,0.7s,baz=70,slow=7.9,SNR=2.8						
KURBB	**Kurchatov Arra**	**48.34**	**311**	P	**P**	**19 58 51.1**	**+0.8**
	0.3nm,0.4s,baz=90,slow=8.3,SNR=3.8						
WRA	**Warramunga Arr**	**53.43**	**188**	P	**P**	**19 59 28.4**	**-0.5**
	0.9nm,0.9s,baz=6.3,slow=8.4,SNR=5.0						
ASAR	**Alice Springs**	**57.16**	**188**	P	**P**	**19 59 57.5**	**+1.9**
	0.3nm,0.8s,baz=7.8,slow=7.5,SNR=4.3						

UCR ***23*** *20:00:34.9±2.2, 9°.95N×85°.63W, h4km±6km, MD4.0, ML4.7, mb5.2(NEIC)*
MOS ***23*** *20:00:37.1±1.6, 10°.34N×85°.40W, h33km, mb5.3/24, MS5.0/5, Error ellipse: s-maj=13.0km s-min=7.4km az=112.9*
NEIC ***23*** *20:00:37.8±3.0, 10°.15N×85°.48W, h32km±4km, mb5.2/217, MW5.4, MW5.7(UCR), Error ellipse: s-maj=17.4km s-min=10.4km az=216.0, Moment Tensor Solution. s51 Moment tensor: Scale 10^17 Nm; M_{rr}=1.17; $M_{\theta\theta}$=0.81; $M_{\phi\phi}$=-0.37; $M_{r\theta}$=0.56; $M_{\theta\phi}$=0.52; $M_{\phi r}$=-0.43; Best double couple: M_0=1.40000×10^17 NP1:ϕ_s=126.00000°, δ61.00000°, λ92.00000°. NP2:ϕ_s=302.00000°, δ29.00000°, λ87.00000°. Principal axes: T 1.3700, Plg74.0000°, Azm40.0000°; N -0.0200, Plg2.0000°, Azm305.0000°; P -1.3500, Plg16.0000°, Azm214.0000°;*
NEIC Felt [IV] at Samara; [III] at Alajuela, Jaco, Nicoya and Sardinal; [II] at San Jose and Tilaran. Also felt at Atenas, Colima, Concepcion, Liberia, Mercedes, Paquera, San Ramon, Santa Cruz and Santiago.
SNET ***23*** *20:00:38.0±3.6, 10°.10N×85°.53W, h18km, mb5.2(NEIC)*
IDC ***23*** *20:00:39.4±0.9, 10°.38N×85°.28W, h46km±7km, mb4.3/20, mb1 4.5/23, mb1mx4.4/35, mbtmp4.6/23, ML4.2/3, MS5.0/32, Ms1 5.0/32, ms1mx4.9/39, Error ellipse: s-maj=19.4km s-min=10.0km az=51.0*
GCMT ***23*** *20:00:39.8±0.1, 9°.91N±0°.01×85°.78W±0°.01, h28km, MW5.4/117, Moment Tensor Solution. s104,c191; s117,c210; Duration: 1s3 Moment tensor: Scale 1017 Nm; M_{rr}1.26±.02; $M_{\theta\theta}$-0.97±.02; $M_{\phi\phi}$-0.28±.02; $M_{r\theta}$0.88±.03; $M_{\theta\phi}$0.70±.01; $M_{\phi r}$-0.76±.03; Best double couple: $M_0$1.76900×1017 NP1:ϕ_s128.00000°, δ66.00000°, λ96.00000°. NP2:ϕ_s295.00000°, δ25.00000°, λ78.00000°. Principal axes: T 1.7040, Plg69.0000°, Azm49.0000°; N 0.1340, Plg5.0000°, Azm306.0000°; P -1.8340, Plg20.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISCJB ***23*** *20:00:39.1±0.2, 10°.22N±0°.02×85°.48W±0°.02, h67km±1km, mb4.9/62 Error ellipse: s-maj=3.9km s-min=2.4km az=42.3*

ISC 23 20:00:39.4±0.7, 10°.10N±0°.04×85°.51W±0°.04, h51km±5km, n906, σ1ˢ72/908, mb5.1/62, MS5.1/48, 9C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NY14	**Universidad de**	**0.54**	**358**	*i* P	**Pn**	**20 00 49.3**	**-1.9**
JTS	**Las Juntas de**	**0.58**	**71**	P	**Pn**	**20 00 49.8**	**-1.9**
	7μm,0.3s,baz=324,slow=5.8						
JTS				S	**Sn**	**20 00 59.7**	**-1.0**
	7μm,0.3s,baz=323,slow=18,SNR=54						
JTS	**Las Juntas de**	**0.58**	**71**	*e*P	**Pn**	**20 00 50.0**	**-1.8**
COLC	**Colonia**	**0.64**	**29**	*i* P	**Pn**	**20 00 51.4**	**-1.1**
LIM1	**Limonal**	**0.65**	**23**	*i* P	**Pn**	**20 00 51.2**	**-1.4**
LIM1				*i* S	**Sn**	**20 01 02.8**	**+0.7**
CUI	**Cuipilapa**	**0.65**	**32**	*i* P	**Pn**	**20 00 51.4**	**-1.2**
CUI				*i* S	**Sn**	**20 01 02.8**	**+0.6**
GUAB	**Guayabo de Bag**	**0.66**	**25**	*i* P	**Pn**	**20 00 51.4**	**-1.4**
GUAB				*i* S	**Sn**	**20 01 03.0**	**+0.5**
GPS3	**Bodega del ICE**	**0.66**	**13**	*i* P	**Pn**	**20 00 51.3**	**-1.5**
GPS2	**Hotel Rincn d**	**0.67**	**14**	*i* P	**Pn**	**20 00 51.4**	**-1.4**
LAPC	**Finca la Perla**	**0.67**	**7**	*i* P	**Pn**	**20 00 50.9**	**-1.9**
MICM	**Guayabo**	**0.67**	**27**	*i* P	**Pn**	**20 00 51.7**	**-1.2**
GBS3	**Finca Las Img**	**0.68**	**5**	*i* P	**Pn**	**20 00 51.4**	**-1.6**
GBS3				*i* S	**Sn**	**20 01 02.6**	**-0.2**
GPS1	**Guardaparques**	**0.69**	**13**	*i* P	**Pn**	**20 00 51.9**	**-1.3**
GPS1				*i* S	**Sn**	**20 01 03.4**	**+0.3**
HORNC	**Hornillas**	**0.69**	**28**	*i* P	**Pn**	**20 00 52.0**	**-1.2**
HORNC				*i* S	**Sn**	**20 01 03.9**	**+0.8**
BUEV	**Buena Vista**	**0.70**	**9**	*e*P	**Pn**	**20 00 51.7**	**-1.6**
BUEV				*i* S	**Sn**	**20 01 03.4**	**0.0**
ACAL	**Aguas Claras**	**0.71**	**42**	*i* P	**Pn**	**20 00 52.5**	**-0.9**
ACAL				*i* S	**Sn**	**20 01 05.2**	**+1.7**
MESS	**Mesas**	**0.71**	**26**	*e*P	**Pn**	**20 00 51.6**	**-1.8**
MESS				*i* P	**Pn**	**20 00 52.3**	**-1.0**
AMAS	**Alto Masis**	**0.72**	**45**	*i* P	**Pn**	**20 00 52.3**	**-1.2**
GB1A	**Borinquen Arri**	**0.72**	**9**	*e*P	**Pn**	**20 00 51.9**	**-1.6**
GB1A				*i* P	**Pn**	**20 00 52.2**	**-1.4**
GB1A				*i* S	**Sn**	**20 01 04.2**	**+0.3**
BUAI	**Buenos Aires**	**0.79**	**13**	*i* P	**Pn**	**20 00 53.4**	**-1.1**
PTEN	**Parque Tenorio**	**0.80**	**40**	*i* P	**Pn**	**20 00 54.1**	**-0.5**
CASO	**Castillo**	**0.83**	**67**	*i* P	**Pn**	**20 00 54.7**	**-0.3**
CASO				*i* S	**Sn**	**20 01 08.4**	**+2.0**
ARE1	**Arenal 1**	**0.86**	**65**	*e*P	**Pn**	**20 00 55.0**	**-0.3**
CEDE	**Laguna Cedeo**	**0.88**	**64**	*e*P	**Pn**	**20 00 55.6**	**-0.1**
FORC	**Fortuna**	**0.91**	**66**	*i* P	**Pn**	**20 00 55.9**	**0.0**
FORC				*i* S	**Sn**	**20 01 09.6**	**+1.6**
SRA1	**San Ramn**	**1.02**	**91**	*e*P	**Pn**	**20 00 55.5**	**-2.0**
HDC	**Heredia**	**1.38**	**94**	*e*Pn	**Pn**	**20 01 01.9**	**-0.5**
HDC	**Heredia**	**1.38**	**94**	*e*P	**Pn**	**20 01 01.1**	**-1.3**
SJS	**Escuela Geolog**	**1.45**	**96**	*e*P	**Pn**	**20 01 04.2**	**+0.8**
CONN	**Concepcion**	**1.46**	**356**	*e*P	**Pn**	**20 01 02.6**	**-0.7**
LCR2	**La Lucha 2**	**1.53**	**103**	*e*P	**Pn**	**20 01 02.4**	**-2.1**
CVTR	**Volcan Turrial**	**1.73**	**93**	*e*P	**Pn**	**20 01 07.5**	**+0.1**
EDDO	**Dominical**	**1.83**	**117**	*e*P	**Pn**	**20 01 08.6**	**+0.1**
ACON	**Acoyapa**	**1.88**	**10**	*e*Pn	**Pn**	**20 01 08.8**	**-0.4**
ACON	**Acoyapa**	**1.88**	**10**	*e*P	**Pn**	**20 01 08.9**	**-0.2**
ACON				*e*P	**Pn**	**20 01 09.0**	**-0.2**
ACON				*e*S	**Sn**	**20 01 38.4**	**+6.6**
MASN	**Masaya**	**1.98**	**342**	*e*P	**Pn**	**20 01 09.6**	**-0.9**
MASN				*e*P	**Pn**	**20 01 09.8**	**-0.7**
EDLM	**Las Mercedes**	**2.07**	**113**	*e*P	**Pn**	**20 01 14.0**	**+2.3**
MGAN	**Managua**	**2.16**	**341**	*e*P	**Pn**	**20 01 12.3**	**-0.6**
XAVN	**Gruta Xavier**	**2.19**	**339**	*e*P	**Pn**	**20 01 12.8**	**-0.6**
APYN	**Apoyeque**	**2.27**	**339**	*e*P	**Pn**	**20 01 15.0**	**+0.5**
COPN	**Copaltepe**	**2.32**	**333**	*e*P	**Pn**	**20 01 13.7**	**-1.5**
EDPN	**Palmar Norte**	**2.32**	**119**	*e*P	**Pn**	**20 01 14.6**	**-0.5**
DRKO	**Durika**	**2.39**	**110**	*e*P	**Pn**	**20 01 14.9**	**-1.3**
EDBA	**Buenos Aires**	**2.40**	**113**	*e*P	**Pn**	**20 01 14.8**	**-1.5**
ESPN	**Las Esperanzas**	**2.40**	**30**	*e*Pn	**Pn**	**20 01 16.5**	**+0.3**
ESPN	**Las Esperanzas**	**2.40**	**30**	*e*P	**Pn**	**20 01 16.3**	**+0.2**
ESPN				*e*P	**Pn**	**20 01 16.5**	**+0.3**
ESPN				*e*S	**Sn**	**20 01 51.1**	**+6.7**
MOMN	**Momotombo**	**2.50**	**336**	*e*P	**Pn**	**20 01 16.7**	**-1.1**
CNGN	**Cerro Negro**	**2.65**	**334**	*e*P	**Pn**	**20 01 17.6**	**-2.1**
CNGN				*e*P	**Pn**	**20 01 18.5**	**-1.3**
CNGN				IAML		20 02 16.8	
	comp=E,3μm,0.3s						
BRAN	**Las Pilas**	**2.73**	**343**	*e*P	Pn	20 01 14.6	-6.1
TELN	**Telica**	**2.80**	**333**	*e*P	**Pn**	**20 01 21.5**	**-0.3**
EDSV	**San Vito**	**2.81**	**117**	*e*P	Pn	20 01 28.5	+6.5
MATN	**Matagalpa**	**2.84**	**352**	*e*P	**Pn**	**20 01 22.2**	**-0.2**
CRIN	**San Cristobal**	**2.99**	**330**	*e*P	**Pn**	**20 01 23.5**	**-0.9**
CRIN				IAML		20 02 21.2	
	comp=N,8μm,0.7s						
BRU2	**Volcan**	**3.07**	**115**	*e*P	**Pn**	**20 01 24.2**	**-1.4**
ESTN	**Estel**	**3.10**	**344**	*e*Pn	**Pn**	**20 01 25.5**	**-0.3**
ESTN	**Estel**	**3.10**	**344**	*e*P	**Pn**	**20 01 25.6**	**-0.3**
RCON	**San Juan de Ri**	**3.42**	**349**	*e*P	**Pn**	**20 01 30.7**	**+0.4**
CSGN	**Cosiguina Volc**	**3.49**	**325**	*e*Pn	**Pn**	**20 01 31.1**	**-0.1**
CSGN	**Cosiguina Volc**	**3.49**	**325**	*e*P	**Pn**	**20 01 30.6**	**-0.6**
CNCH	**Conchagua**	**3.89**	**324**	*e*P	**Pn**	**20 01 35.5**	**-1.3**
CNCH	**Conchagua**	**3.89**	**324**	*e*P	**Pn**	**20 01 35.5**	**-1.3**
TGUH	**Tegucigalpa,Un**	**4.29**	**337**	*e*Pn	**Pn**	**20 01 43.3**	**+1.1**
PACA	**Pacayal**	**4.33**	**321**	*e*P	**Pn**	**20 01 41.9**	**-1.0**
PACA				*e*S	**Sn**	**20 02 38.9**	**+6.7**
PACA	**Pacayal**	**4.33**	**321**	*e*P	**Pn**	**20 01 41.9**	**-1.0**
PACA				*e*S	**Sn**	**20 02 38.9**	**+6.7**
LFRS	**El Faro**	**4.93**	**316**	*e*P	**Pn**	**20 01 50.3**	**-0.8**
LBRS	**Las Brisas**	**5.00**	**317**	*e*P	**Pn**	**20 01 52.0**	**0.0**
LFU	**La Fuente**	**5.05**	**316**	*e*P	**Pn**	**20 01 52.5**	**-0.3**
LFU	**La Fuente**	**5.05**	**316**	*e*P	**Pn**	**20 01 52.5**	**-0.3**
BOQS	**Boqueron**	**5.16**	**315**	*e*P	**Pn**	**20 01 54.6**	**+0.3**
SBLS	**San Blas**	**5.47**	**313**	*e*P	**Pn**	**20 01 59.2**	**+0.5**
SBLS	**San Blas**	**5.47**	**313**	*e*P	**Pn**	**20 01 59.2**	**+0.5**
SNJE	**San Jose**	**5.48**	**313**	*e*S	**Sn**	**20 03 05.9**	**+5.3**
SNJE	**San Jose**	**5.48**	**313**	*e*S	**Sn**	**20 03 05.9**	**+5.3**
RTR	**El Retiro**	**5.53**	**313**	*e*P	**Pn**	**20 02 00.3**	**+0.9**
RTR	**El Retiro**	**5.53**	**313**	*e*P	**Pn**	**20 02 00.3**	**+0.9**
BCIP	**Isla Barro Col**	**5.67**	**99**	*e*Pn	**Pn**	**20 02 00.5**	**-0.6**
BCIP	**Isla Barro Col**	**5.67**	**99**	*e*P	**Pn**	**20 02 00.5**	**-0.6**
BCIP	**Isla Barro Col**	**5.67**	**99**	*e*P	**Pn**	**20 02 00.3**	**-0.9**
APG	**El Apazote**	**6.86**	**316**	P	**Pn**	**20 02 18.3**	**+0.6**
	comp=N,6.8nm,0.3s,baz=134,slow=8.6,SNR=51						
APG				S	**Sn**	**20 03 39.2**	**+4.6**
	baz=318,slow=18,SNR=1.6						
CCIG	**Comitan**	**8.90**	**314**	*e*Pn	**Pn**	**20 02 46.9**	**+1.3**
DBBC	**Dabeiba**	**9.70**	**108**	*e*P	Pn	20 03 02.6	+6.1
FSCY	**Frank Sound, G**	**10.07**	**24**	*e*Pn	**Pn**	**20 03 03.2**	**+1.8**
TEIG	**Tepich**	**10.41**	**345**	*e*Pn	**Pn**	**20 03 09.5**	**+3.4**
HELC	**Santa Helena**	**10.62**	**111**	*e*P	**Pn**	**20 03 13.6**	**+4.3**
YOTC	**Yotoco, Valle**	**10.94**	**123**	*e*P	**Pn**	**20 03 14.9**	**+1.5**
ARGC	**Ariguani, Magd**	**11.10**	**90**	*e*P	**Pn**	**20 03 15.6**	**+0.1**
PCJ	**Portland Cotta**	**11.11**	**46**	*i* P	**Pn**	**20 03 18.9**	**+3.3**
GUY2C	**Guyana, Caldas**	**11.16**	**115**	*e*P	Pn	20 03 23.2	+6.4
CVJ	**Coleyville**	**11.18**	**43**	*i* P	Pn	20 03 23.2	+6.5
RREF	**El Recreo**	**11.32**	**116**	*e*P	**Pn**	**20 03 20.4**	**+1.3**
CMIG	**Matias Romero**	**11.45**	**308**	P	**Pn**	**20 03 19.9**	**-0.4**
	comp=N,2.9nm,0.3s,baz=123,slow=9.3,SNR=25						
CMIG				S	**Sn**	**20 05 35.5**	**+8.6**
	baz=120,slow=20,SNR=1.9						
BBJ	**Bamboo Saint A**	**11.47**	**43**	*i* P	**Pn**	**20 03 24.0**	**+3.3**
BBAC	**Balboa, Cauca**	**11.48**	**134**	*e*P	Pn	20 03 26.6	+5.6
POPC	**Popayan, Colom**	**11.55**	**130**	*e*P	**Pn**	**20 03 23.7**	**+1.7**
STH	**Stony Hill**	**11.58**	**46**	*i* P	Pn	20 03 28.4	+6.4
SOTA	**Rioblanco**	**11.87**	**131**	*e*P	**Pn**	**20 03 28.7**	**+2.1**
CODC	**Agustn Codazz**	**11.89**	**90**	*e*P	**Pn**	**20 03 26.6**	**+0.3**
PCON	**Cinco Dias**	**11.90**	**130**	*e*P	**Pn**	**20 03 30.8**	**+3.7**
GCUF	**Volcan Galeras**	**11.99**	**137**	*e*P	**Pn**	**20 03 30.8**	**+2.6**
OTAV	**Otavalo**	**12.06**	**144**	*e*P	**Pn**	**20 03 28.8**	**-0.2**
OCAC	**Ocana**	**12.18**	**98**	*e*P	**Pn**	**20 03 28.7**	**-1.8**
ROSC	**El Rosal**	**12.27**	**114**	P	**Pn**	**20 03 36.5**	**+4.6**
	comp=N,1.0nm,0.3s,baz=82,slow=3.9,SNR=10						
ROSC				LR	LR	20 07 39.0	
	comp=N,5μm,20.2s,baz=313,slow=34						
PAMC	**Pamplona, Colo**	**12.96**	**101**	*e*P	**Pn**	**20 03 45.2**	**+3.8**
RUSC	**La Rusia**	**13.00**	**108**	*e*P	**P**	**20 03 50.6**	**-0.5**
TLIG	**Tlapa**	**14.68**	**302**	*e*Pn	**Pn**	**20 04 05.8**	**+1.6**
SDV	**Santo Domingo**	**14.73**	**93**	P	**Pn**	**20 04 06.4**	**+1.5**
	comp=N,0.6nm,0.3s,baz=264,slow=7.7,SNR=14						
SDV				S	**Sn**	**20 06 48.7**	**+1.6**
	comp=N,0.6nm,0.3s,baz=339,slow=14,SNR=2.0						
SDV				LR	LR	20 10 57.1	
	comp=N,7μm,19.8s,baz=358,slow=42						
SDV	**Santo Domingo**	**14.73**	**93**	*e*P	**P**	**20 04 07.8**	**-2.1**
062Z	**Marathon**	**15.15**	**16**	P	**Pn**	**20 04 09.8**	**-0.4**
	baz=197						
061Z	**Ochoppi**	**16.27**	**15**	P	**Pn**	**20 04 25.1**	**+0.5**
	baz=196						
059Z	**Ave Maria**	**16.60**	**13**	P	**Pn**	**20 04 27.6**	**-1.1**
	baz=194						
060Z	**West Palm Beac**	**16.88**	**15**	P	**Pn**	**20 04 31.3**	**-0.8**
	baz=197						
058A	**Arcadia**	**17.22**	**11**	P	**P**	**20 04 37.3**	**0.0**
	baz=192						
059A	**Moore Haven**	**17.27**	**13**	P	**Pn**	**20 04 37.0**	**0.0**
	baz=194						
060A	**Indiantown**	**17.53**	**15**	P	**P**	**20 04 41.4**	**+0.6**
	baz=197						
957A	**Wimauma**	**17.75**	**10**	P	**Pn**	**20 04 42.2**	**-0.7**
	baz=190						
958A	**Wauchula**	**17.75**	**11**	P	**P**	**20 04 44.3**	**+1.2**
	baz=192						
959A	**Okeechobee**	**17.87**	**14**	P	**Pn**	**20 04 43.7**	**-0.7**
	baz=195						
DWPF	**Disney Wildern**	**18.32**	**12**	P	**P**	**20 04 48.7**	**-0.8**
	baz=193						
857A	**Zephyrhills**	**18.33**	**9**	P	**Pn**	**20 04 50.0**	**0.0**
	baz=190						
859A	**Kempfer Cattle**	**18.38**	**13**	P	**Pn**	**20 04 51.5**	**+0.8**
	baz=194,SNR=6.8						
858A	**St. Cloud**	**18.43**	**12**	P	**P**	**20 04 50.4**	**-0.3**
	baz=193						
ATAH	**Atahualpa**	**18.53**	**157**	P	**Pn**	**20 04 54.9**	**+2.0**
	comp=N,0.2nm,0.3s,baz=338,slow=13,SNR=8.6						
ATAH				LR	LR	20 11 14.6	
	comp=N,13μm,18.1s,baz=332,slow=34						
757A	**Oxford**	**19.02**	**9**	P	**Pn**	**20 04 58.2**	**-0.1**
	baz=190,SNR=21						
758A	**Lake Helen**	**19.19**	**12**	P	**Pn**	**20 05 00.4**	**+0.1**
	baz=193						
656A	**Willston**	**19.37**	**8**	*e*P	**Pn**	**20 05 02.2**	**-0.2**
	comp=N,282nm,1.4s						
656A	**Willston**	**19.37**	**8**	P	**Pn**	**20 05 02.1**	**-0.4**
	baz=189,SNR=12						
655A	**Horseshoe Beac**	**19.43**	**6**	P	**Pn**	**20 05 02.5**	**-0.5**
	baz=187,SNR=5.1						
AGP	**Aguadilla**	**19.61**	**63**	*e*P	**P**	**20 05 02.7**	**-1.0**
	comp=N,815nm,1.3s						
658A	**Bunnell**	**19.63**	**11**	P	**Pn**	**20 05 04.7**	**-0.8**
	baz=192						
657A	**Interlachen**	**19.68**	**9**	P	**P**	**20 05 04.8**	**+0.5**
	baz=191						
LNIG	**Linares**	**19.81**	**320**	*e*P	**P**	**20 05 05.8**	**-0.1**
	comp=N,99nm,1.0s						
552A	**Lynn Haven**	**19.93**	**1**	P	**Pn**	**20 05 08.5**	**-0.6**
	baz=180						
AOPR	**Arecibo Observ**	**19.93**	**64**	*e*P	**P**	**20 05 06.0**	**-1.2**
	comp=N,166nm,0.9s						
OBIP	**Obispado Ponce**	**19.95**	**65**	*e*P	**P**	**20 05 07.3**	**-0.1**
	comp=N,358nm,1.4s						
554A	**Perry**	**19.95**	**5**	P	**P**	**20 05 07.8**	**+0.5**
	baz=185						
556A	**Lake Butler**	**20.01**	**8**	P	**P**	**20 05 08.6**	**+0.7**
	baz=189,SNR=12						
553A	**Crawfordville**	**20.01**	**3**	P	**Pn**	**20 05 09.3**	**-0.7**
	baz=183,SNR=5.9						
555A	**McAlpin**	**20.06**	**6**	P	Pn	20 05 09.5	-1.1
	baz=187,SNR=9.0						
557A	**Orange Park**	**20.13**	**10**	P	**P**	**20 05 09.7**	**+0.6**
	baz=191,SNR=10						
SJG	**San Juan**	**20.38**	**65**	P	**P**	**20 05 10.0**	**-2.1**
	comp=N,14nm,0.7s,baz=290,slow=15,SNR=5.8						
SJG				LR	LR	20 11 54.5	
	comp=N,2μm,21.3s,baz=236,slow=34						
451A	**Vernon**	**20.41**	**359**	P	**P**	**20 05 12.8**	**+0.5**
	baz=179						
454A	**Quitman**	**20.58**	**5**	P	Pn	20 05 15.3	-1.5
	baz=185,SNR=11						
449A	**Pace**	**20.62**	**356**	P	Pn	20 05 15.7	-1.5
	baz=175						
450A	**Crestview**	**20.62**	**357**	P	Pn	20 05 16.0	-1.2
	baz=177						
452A	**Marianna**	**20.65**	**1**	P	**P**	**20 05 15.9**	**+1.1**
	baz=181,SNR=10						
HUMP	**Col San Antoni**	**20.66**	**65**	*e*P	**P**	**20 05 15.9**	**+0.9**
	comp=N,550nm,1.8s						
455A	**Stateville**	**20.67**	**6**	P	**P**	**20 05 14.6**	**-0.4**
	baz=187						
453A	**Whigham**	**20.68**	**3**	P	Pn	20 05 16.5	-1.4
	baz=183,SNR=5.2						
457A	**Yulee**	**20.75**	**10**	P	**P**	**20 05 16.6**	**+0.8**
	baz=191						
456A	**Hilliard**	**20.77**	**8**	P	**P**	**20 05 17.0**	**+0.8**
	baz=190						
MTP	**Monte Pirata**	**20.91**	**65**	*e*P	**P**	**20 05 17.9**	**+0.1**
	comp=N,208nm,1.2s						
BRAL	**Brewton**	**21.01**	**356**	P	**P**	**20 05 19.5**	**+0.8**
	baz=176						
351A	**Pinckard**	**21.07**	**360**	P	**P**	**20 05 19.4**	**+0.1**
	baz=180						
353A	**Camilla**	**21.18**	**3**	P	**P**	**20 05 21.1**	**+0.6**
	baz=183,SNR=17						
349A	**Repton**	**21.20**	**356**	P	**P**	**20 05 21.8**	**+1.1**
	baz=175,SNR=12						
349A				S	Sn	20 09 23.8	+0.8
	baz=175						
350A	**Dozier**	**21.23**	**358**	P	**P**	**20 05 21.9**	**+0.9**
	baz=178,SNR=13						
352A	**Blakely**	**21.28**	**1**	P	**P**	**20 05 22.3**	**+0.7**
	baz=182,SNR=16						
355A	**Pearson**	**21.28**	**6**	P	**P**	**20 05 21.9**	**+0.3**
	baz=187,SNR=5.3						
TIGA	**Tifton**	**21.31**	**5**	P	**P**	**20 05 22.7**	**+0.8**
	baz=185						
356A	**Blackshear**	**21.35**	**8**	P	**P**	**20 05 22.2**	**-0.1**
	baz=189						
357A	**Townsend**	**21.54**	**9**	P	**P**	**20 05 24.6**	**+0.1**
	baz=191						
250A	**Grady**	**21.78**	**358**	P	**P**	**20 05 27.4**	**+0.4

Y52A	Lilburn	23.69	3	eP	P	20 05 46.4	-0.1
	comp=Z,68nm,0.8s						
Y52A	Lilburn	23.69	3	P	P	20 05 46.1	-0.4
	baz=184,SNR=45						
Y51A	Rockmart	23.69	1	P	P	20 05 46.2	-0.3
	baz=181,SNR=89						
Y53A	Monroe	23.71	4	P	P	20 05 46.7	0.0
	baz=185,SNR=47						
Z58A	St. Stephen	23.71	12	P	P	20 05 46.7	0.0
	baz=194,SNR=13						
Z59A	Georgetown, SC	23.73	13	P	P	20 05 47.3	+0.4
	baz=195						
Y48A	Jasper	23.75	357	P	P	20 05 46.2	-0.9
	baz=176,SNR=25						
Y54A	Tignall	23.79	6	P	P	20 05 47.2	-0.3
	baz=187,SNR=58						
Y56A	Pelion	23.89	9	P	P	20 05 48.3	-0.1
	baz=190						
Y55A	Saluda	23.96	7	P	P	20 05 48.9	-0.1
	baz=189,SNR=35						
SVB	Belmont	23.96	80	eP	P	20 05 48.2	-1.0
Z41A	Richland Creek	24.00	345	P	P	20 05 47.6	-1.7
	baz=162,SNR=10						
HODGE	Hodges	24.20	7	eP	P	20 05 51.3	+0.1
	comp=Z,100nm,0.9s						
DWS	Wesley	24.20	75	eP	P	20 05 51.9	+0.4
ANWB	Willy Bob	24.21	69	eP	P	20 05 48.8	-2.7
FDF	Fort de France	24.23	77	eP	P	20 05 50.2	-1.5
X50B	Fort Payne	24.25	360	P	P	20 05 51.2	-0.5
	baz=180,SNR=23						
JCT	Junction City	24.25	329	eP	P	20 05 51.8	0.0
	comp=Z,84nm,0.8s						
JCT	Junction City	24.25	329	eP	P	20 05 51.8	0.0
JCT				pmax	pmax		
	comp=Z,83nm,0.8s						
JCT	Junction City	24.25	329	P	P	20 05 50.5	-1.3
	baz=144,SNR=34						
Y57A	Sumter	24.26	10	P	P	20 05 51.2	-0.5
	baz=192						
X48A	Hartselle	24.28	357	eP	P	20 05 52.0	+0.1
	comp=Z,52nm,0.8s						
X48A	Hartselle	24.28	357	P	P	20 05 50.1	-1.8
	baz=176,SNR=31						
Y58A	Scranton	24.29	12	P	P	20 05 51.7	-0.3
	baz=194						
MCLT	Moule a Chique	24.30	79	eP	P	20 05 54.9	+2.6
SLBI	Saint Lucia, B	24.30	78	eP	P	20 05 49.9	-2.4
X49A	Woodville	24.31	358	P	P	20 05 51.6	-0.6
	baz=178,SNR=50						
X51A	Calhoun	24.36	1	eP	P	20 05 52.4	-0.3
	comp=Z,75nm,0.8s						
X51A	Calhoun	24.36	1	P	P	20 05 52.2	-0.4
	baz=182,SNR=33						
X53A	Estanollee	24.37	4	P	P	20 05 52.3	-0.4
	baz=185,SNR=5.2						
JSC	Jenkinsville	24.38	9	eP	P	20 05 53.1	+0.3
	comp=Z,66nm,0.7s						
JSC	Jenkinsville	24.38	9	eP	P	20 05 53.1	+0.3
JSC				pmax	pmax		
	comp=Z,66nm,0.7s						
X47A	Russelville	24.40	355	P	P	20 05 51.9	-1.0
	baz=174,SNR=97						
WHTX	Lake Whitney,	24.43	335	eP	P	20 05 52.4	-0.9
	comp=Z,96nm,0.9s						
WHTX	Lake Whitney,	24.43	335	P	P	20 05 51.7	-1.6
	baz=150,SNR=11						
X52A	Dahlonega	24.43	3	P	P	20 05 52.7	-0.6
	baz=184,SNR=20						
X54A	Belton	24.50	6	P	P	20 05 53.5	-0.4
	baz=187,SNR=26						
X46A	Booneville	24.50	354	P	P	20 05 52.7	-1.2
	baz=173,SNR=17						
X55A	Gracelyn & Ava	24.51	8	P	P	20 05 54.2	+0.2
	baz=189,SNR=37						
OXF	Oxford	24.56	352	eP	P	20 05 53.3	-1.1
	comp=Z,325nm,1.5s						
OXF	Oxford	24.56	352	eP	P	20 05 53.3	-1.1
OXF				pmax	pmax		
	comp=Z,325nm,1.5s						
OXF	Oxford	24.56	352	P	P	20 05 52.5	-2.0
	baz=171						
X56A	White Oak	24.62	9	P	P	20 05 55.1	0.0
	baz=190,SNR=25						
Y60A	Bolivia	24.71	15	P	P	20 05 55.8	-0.1
	baz=197						
X57A	Johnson Farm,	24.75	11	P	P	20 05 55.6	-0.6
	baz=193,SNR=6.6						
X43A	Marvell	24.79	349	P	P	20 05 55.3	-1.3
	baz=167						
PLAL	Pickwick Lake	24.88	355	eP	P	20 05 56.5	-0.8
	comp=Z,47nm,0.8s						
W49A	Belvidere	24.91	359	P	P	20 05 57.0	-0.7
	baz=178,SNR=47						
W52A	Murphy	24.92	3	P	P	20 05 57.8	0.0
	baz=184,SNR=20						
W51A	Cleveland	24.95	1	P	P	20 05 57.9	-0.1
	baz=182,SNR=33						
W48A	Pulaski	24.95	357	P	P	20 05 57.2	-0.9
	baz=177,SNR=110						
W50A	Signal Mountai	24.98	0	P	P	20 05 57.5	-0.9
	baz=180,SNR=24						
X58A	Rowland	24.99	12	P	P	20 05 57.8	-0.5
	baz=194						
W53A	Cullowhee	25.04	5	P	P	20 05 59.1	+0.1
	baz=185,SNR=20						
W46A	Michie	25.05	354	P	P	20 05 57.6	-1.3
	baz=173,SNR=6.0						
W54A	Cherokee Point	25.05	6	P	P	20 05 59.0	0.0
	baz=188,SNR=45						
W47A	Westpoint	25.11	356	P	P	20 05 58.6	-0.9
	baz=175,SNR=113						
X59A	McDuffie Farm,	25.16	14	P	P	20 05 59.5	-0.4
	baz=196,SNR=8.8						
X40A	Basin Creek Fa	25.18	346	P	P	20 05 58.4	-1.7
	baz=163,SNR=25						
KMSC	Kings Mountain	25.21	8	P	P	20 06 00.2	-0.2
	baz=190,SNR=30						
X60A	Albert Glenn T	25.32	15	P	P	20 06 00.6	-0.7
	baz=198						
W56A	Indian Trail	25.32	9	P	P	20 06 01.0	-0.4
	baz=191,SNR=13						
HPIG		25.34	314	eP	P	20 06 03.2	+1.3
	comp=Z,56nm,1.1s						
MIAR	Mount Ida	25.42	344	eP	P	20 06 02.5	+0.2
MIAR	Mount Ida	25.42	344	eP	P	20 06 02.5	+0.2
MIAR	Mount Ida	25.42	344	P	P	20 06 00.7	-1.6
	baz=161,SNR=88						
W57A	Gilead	25.44	11	P	P	20 06 02.4	-0.1
	baz=193,SNR=11						
V50A	Pikevile	25.46	1	P	P	20 06 02.1	-0.5
	baz=181,SNR=22						
W58A	Raeford	25.46	12	P	P	20 06 01.6	-1.0
	baz=194,SNR=8.0						
V48A	Smith Brothers	25.55	358	P	P	20 06 02.6	-0.8
	baz=177,SNR=29						
V49A	McMinnville	25.55	359	P	P	20 06 02.8	-0.7
	baz=179,SNR=30						
V53A	Saluda	25.57	5	P	P	20 06 03.4	-0.3
	baz=186,SNR=31						
LTX	Lajitas	25.58	321	ePcP	PcP	20 09 35.4	+1.3
TXAR	Lajitas Array	25.58	321	P	P	20 06 03.9	-0.1
	comp=Z,44nm,0.8s,baz=141,slow=8.2,SNR=122						
TXAR				PcP	PcP	20 09 35.4	+1.3
	comp=Z,23nm,0.7s,baz=152,slow=4.1,SNR=6.5						
BBGH	Gun Hill	25.60	81	eP	P	20 06 05.6	+1.5
V51A	Loudon	25.61	2	P	P	20 06 03.7	-0.2
	baz=183,SNR=19						
V47A	Nunnelly	25.67	356	P	P	20 06 03.3	-1.3
	baz=175,SNR=36						
V52A	Sevierville	25.68	4	P	P	20 06 04.4	-0.2
	baz=184,SNR=18						
BBSP	Saint Philip	25.69	81	eP	P	20 06 11.9	+7.0
V46A	Holladay	25.69	355	P	P	20 06 02.8	-1.9
	baz=174,SNR=24						
W41B	Gary Mavity, V	25.70	347	P	P	20 06 03.0	-1.8
	baz=164,SNR=18						
V54A	Nebo	25.76	7	P	P	20 06 05.3	-0.1
	baz=188,SNR=25						
W59A	Clinton	25.77	13	P	P	20 06 05.2	-0.2
	baz=196						
W60A	Pink Hill	25.84	15	P	P	20 06 05.5	-0.5
	baz=198						
V55A	Taylorsville	25.93	8	P	P	20 06 06.7	-0.2
	baz=190,SNR=10						
ABTX	Abilene, Hawle	25.93	332	P	P	20 06 05.4	-1.6
	baz=147,SNR=11						
CNNC	Cliffs of the	25.97	14	P	P	20 06 07.5	+0.2
	baz=197						
V56A	Mocksville	26.00	9	P	P	20 06 07.1	-0.4
	baz=191,SNR=7.2						
WVT	Waverly	26.00	356	eP	P	20 06 05.8	-1.7
	comp=Z,48nm,1.1s						
WVT	Waverly	26.00	356	eP	P	20 06 05.8	-1.7
WVT				pmax	pmax		
	comp=Z,48nm,1.1s						
WVT	Waverly	26.00	356	P	P	20 06 05.8	-1.7
	baz=175						
W39A	Magazine	26.09	344	P	P	20 06 06.8	-1.6
	baz=161,SNR=25						
W61A	Ground Anchor	26.14	16	P	P	20 06 08.1	-0.7
	baz=199						
U51A	La Follette	26.19	3	P	P	20 06 08.9	-0.4
	baz=183,SNR=6.9						
V57A	Coltrane Farms	26.19	11	P	P	20 06 08.9	-0.4
	baz=193,SNR=14						
U50A	Jamestown	26.20	1	P	P	20 06 08.7	-0.7
	baz=181,SNR=28						
V58A	Windy Hill, Pi	26.23	12	P	P	20 06 08.9	-0.7
	baz=194,SNR=26						
U52A	Thorn Hill	26.25	4	P	P	20 06 08.8	-1.0
	baz=185,SNR=31						
U46A	Springville	26.25	355	P	P	20 06 08.4	-1.4
	baz=174						
U47A	Clarksville	26.27	357	P	P	20 06 08.4	-1.6
	baz=176,SNR=6.9						
U53A	Fall Branch	26.28	5	P	P	20 06 10.0	-0.1
	baz=186,SNR=32						
U49A	Red Boiling Sp	26.29	360	P	P	20 06 09.1	-1.1
	baz=179,SNR=20						
U48A	Cassie Pea, Po	26.31	358	P	P	20 06 09.2	-1.1
	baz=178,SNR=18						
TZTN	Tazewell	26.38	4	P	P	20 06 10.5	-0.5
	baz=184,SNR=14						
V59A	Middlesex	26.39	13	P	P	20 06 10.5	-0.5
	baz=196,SNR=7.6						
U54A	Nelsons Funny	26.51	7	P	P	20 06 12.2	0.0
	baz=188,SNR=14						
U56A	King	26.54	9	P	P	20 06 12.6	+0.2
	baz=191,SNR=10						
U55A	TA2, Sparta	26.59	8	P	P	20 06 12.5	-0.5
	baz=190,SNR=18						
V60A	Jim Taylor Roa	26.63	15	P	P	20 06 12.9	-0.2
	baz=198						
T51A	Gray	26.78	3	P	P	20 06 13.9	-0.7
	baz=183,SNR=18						
U57A	Blanch	26.80	11	P	P	20 06 13.8	-1.0
	baz=194,SNR=14						
T47A	Sharon Grove	26.81	357	P	P	20 06 12.9	-1.9
	baz=176,SNR=13						
T50A	Nancy	26.81	1	P	P	20 06 14.1	-0.7
	baz=181,SNR=13						
V61A	Roper	26.83	16	P	P	20 06 14.5	-0.5
	baz=200						
T49A	Edmonton	26.88	360	P	P	20 06 14.2	-1.3
	baz=180,SNR=16						
T53A	Wise	26.90	5	P	P	20 06 14.5	-1.2
	baz=186,SNR=11						
T48A	Bowling Green	26.90	358	P	P	20 06 14.2	-1.4
	baz=178,SNR=6.1						
T46A	Princeton	26.91	356	P	P	20 06 14.3	-1.4
	baz=175,SNR=16						
U58A	Oxford	26.93	12	P	P	20 06 15.4	-0.5
	baz=195,SNR=9.1						
T45A	Paducah	26.95	354	P	P	20 06 14.2	-1.9
	baz=173						
U40A	Yellville	26.97	347	P	P	20 06 14.5	-1.8
	baz=164,SNR=14						
T52A	Hallie	26.98	4	P	P	20 06 15.6	-0.8
	baz=185,SNR=9.0						
U59A	Littleton	27.05	14	P	P	20 06 16.1	-0.9
	baz=197						
T54A	Tazewell	27.07	7	P	P	20 06 16.9	-0.4
	baz=188,SNR=29						
T55A	Pulaski	27.23	8	P	P	20 06 18.4	-0.3
	baz=190,SNR=31						
T56A	Rocky Mt	27.26	10	P	P	20 06 18.5	-0.4
	baz=192,SNR=13						
U60A	Pendleton	27.32	15	P	P	20 06 19.0	-0.5
	baz=198						
TUL1	Leonard	27.34	342	P	P	20 06 16.8	-2.8
	baz=158,SNR=7.2						
WMOK	Wichita Mounta	27.36	336	P	P	20 06 17.2	-2.6
	baz=151,SNR=34						
T57A	Hurt	27.37	11	P	P	20 06 19.0	-0.8
	baz=193,SNR=9.5						
U61A	Possum Corner	27.38	16	P	P	20 06 19.7	-0.2
	baz=200						
S47A	Hartford	27.40	358	P	P	20 06 18.7	-1.4
	baz=177						
S48A	Wiedeman Farm,	27.44	359	P	P	20 06 19.2	-1.2
	baz=179,SNR=6.8						
T58A	Grand View Acr	27.46	12	P	P	20 06 20.0	-0.7
	baz=195						
S51A	Beattyville	27.47	3	P	P	20 06 20.3	-0.5
	baz=184,SNR=25						
S50A	Richmond	27.48	2	P	P	20 06 20.0	-0.8
	baz=182,SNR=7.8						
S46A	Don Dixon Farm	27.53	356	P	P	20 06 19.8	-1.5
	baz=175,SNR=5.8						
S52A	Salyersville	27.54	4	P	P	20 06 20.8	-0.6
	baz=185,SNR=10						
S49A	Springfield	27.56	0	P	P	20 06 20.5	-1.1
	baz=180,SNR=13						
PTGA	Pitinga	27.61	111	P	P	20 06 23.6	+1.4
	comp=Z,13nm,0.8s,baz=299,slow=9.9,SNR=22						
PTGA				LR	LR	20 18 24.1	
	comp=Z,3μm,20.0s,baz=296,slow=39						
PTGA	Pitinga	27.61	111	eP	P	20 06 23.9	+1.7
	comp=Z,47nm,1.1s						
S53A	Williamson	27.63	6	P	P	20 06 21.2	-1.0
	baz=187,SNR=14						
S44A	Carbondale	27.68	354	P	P	20 06 21.3	-1.2
	baz=172,SNR=9.7						
T59A	Double "B" Far	27.70	14	P	P	20 06 22.6	-0.2
	baz=197,SNR=6.0						
S54A	Dingess, Beckl	27.84	7	P	P	20 06 23.7	-0.4
	baz=189,SNR=12						
S55A	Lewisburg	27.92	9	P	P	20 06 24.9	+0.1
	baz=190,SNR=27						
S56A	Natural Bridge	27.97	10	P	P	20 06 25.1	-0.2
	baz=192,SNR=5.4						
WCI	Wyandotte Cave	28.02	359	eP	P	20 06 24.4	-1.2
	comp=Z,54nm,0.9s						
WCI	Wyandotte Cave	28.02	359	eP	P	20 06 24.4	-1.2
WCI				pmax	pmax		
	comp=Z,54nm,0.9s						
WCI	Wyandotte Cave	28.02	359	P	P	20 06 24.0	-1.6
	baz=178						
R46A	Gibon Southern	28.05	357	P	P	20 06 24.3	-1.6
	baz=176						
T60A	Surry	28.06	15	P	P	20 06 25.6	-0.4
	baz=198						
R49A	Shelbyville	28.07	1	P	P	20 06 25.0	-1.1
	baz=181,SNR=13						
R50A	Paris	28.08	2	P	P	20 06 25.6	-0.6
	baz=182,SNR=8.8						
R47A	Wooly Knot Far	28.09	358	P	P	20 06 24.9	-1.4
	baz=178,SNR=9.9						
R51A	Hillsboro	28.13	3	P	P	20 06 26.0	-0.6
	baz=184,SNR=27						
S57A	Dark Hollow, R	28.16	11	P	P	20 06 26.5	-0.5
	baz=194,SNR=9.5						
R45A	Skylar, Fairfi	28.18	355	P	P	20 06 25.8	-1.2
	baz=174,SNR=9.9						
R48A	Northridge Ran	28.18	359	P	P	20 06 25.7	-1.4
	baz=179						
S58A	Poland Farm, P	28.20	13	P	P	20 06 26.4	-0.9
	baz=196,SNR=8.0						
R52A	Catlettsburg	28.23	5	P	P	20 06 26.8	-0.8
	baz=186,SNR=6.5						
R54A	Victor	28.25	8	P	P	20 06 27.3	-0.5
	baz=189,SNR=20						
R53A	Hurricane	28.29	6	P	P	20 06 27.1	-0.9
	baz=187,SNR=16						
MNTX	Cornudas Mount	28.30	322	P	P	20 06 26.8	-1.5
	baz=135,SNR=24						
CCM	Cathedral Cave	28.31	350	eP	P	20 06 26.2	-2.0
	comp=Z,34nm,0.8s						
CCM	Cathedral Cave	28.31	350	eP	P	20 06 26.2	-2.0
CCM				pmax	pmax		
	comp=Z,34nm,0.8s						
CCM	Cathedral Cave	28.31	350	P	P	20 06 26.1	-2.1
	baz=168						
S59A	Mechanicsville	28.52	14	P	P	20 06 29.4	-0.6
	baz=197						
MSTX	Muleshoe	28.55	329	P	P	20 06 28.7	-1.8
	baz=142,SNR=12						
R58B	Mineral	28.58	13	P	P	20 06 30.1	-0.5
	baz=196,SNR=6.2						
S60A	Water View	28.62	15	P	P	20 06 30.6	-0.3
	baz=193						
Q50A	Georgetown	28.65	2	P	P	20 06 30.2	-1.1
	baz=183						
Q48A	North Vernon	28.71	360	P	P	20 06 30.1	-1.6
	baz=180,SNR=7.6						
Q47A	Bedord North L	28.72	359	P	P	20 06 30.4	-1.5
	baz=178,SNR=9.9						
AMTX	Amarillo	28.75	332	P	P	20 06 30.4	-1.9
	baz=145						
R57A	Stanardsville	28.77	11	P	P	20 06 32.0	-0.3
	baz=194,SNR=18						
Q45A	Warren Harvey,	28.77	356	P	P	20 06 30.9	-1.3
	baz=174,SNR=7.2						
Q49A	Aurora	28.79	1	P	P	20 06 31.4	-1.0
	baz=181,SNR=8.1						
Q46A	CEJHS Indians,	28.85	357	P	P	20 06 31.4	-1.6
	baz=176						
S61A	Accomac	28.85	16	P	P	20 06 32.4	-0.7
	baz=200						
Q53A	Leroy	28.86	6	P	P	20 06 32.6	-0.5
	baz=188,SNR=21						
Q51A	Peebles	28.87	3	P	P	20 06 32.7	-0.5
	baz=184,SNR=34						
R58A	Rapidan	28.87	12	P	P	20 06 33.1	-0.2
	baz=195,SNR=7.8						
Q52A	Bidwell	28.88	5	P	P	20 06 32.9	-0.4
	baz=187,SNR=20						
CBN	Corbin Frederi	28.92	13	P	P	20 06 33.7	+0.1
	baz=197						
R59A	King George, V	28.98	14	P	P	20 06 34.0	-0.2
	baz=197						
Q54A	Coxs Mills	29.06	8	P	P	20 06 34.8	-0.1
	baz=189,SNR=26						
R60A	Leonardtown, M	29.17	15	P	P	20 06 36.4	+0.5
	baz=198						
Q55A	Buckhannon	29.18	9	P	P	20 06 36.2	+0.2
	baz=191,SNR=29						
P48A	Milroy	29.24	0	P	P	20 06 34.8	-1.6
	baz=180,SNR=9.9						
P47A	Martinsville	29.27	359	P	P	20 06 35.2	-1.6
	baz=178						
P49A	Miami Univ. Ec	29.32	1	P	P	20 06 35.6	-1.6
	baz=182,SNR=6.2						
P51A	Williamsport	29.34	4	P	P	20 06 36.7	-0.6
	baz=185						
Q56A	Snyder Ridge,	29.37	10	P	P	20 06 37.9	+0.3
	baz=193,SNR=19						
P45A	Graceland, Par	29.37	356	P	P	20 06 36.0	-1.6
	baz=176,SNR=8.4						
P50A	Jamestown	29.42	3	P	P	20 06 36.8	-1.3
	baz=183,SNR=7.7						
P46A	Rosedale	29.43	357	P	P	20 06 36.5	-1.6
	baz=177,SNR=10						
P53A	Whipple	29.49	6	P	P	20 06 38.6	-0.1
	baz=188,SNR=25						
Q57A	Strasburg	29.50	11	P	P	20 06 38.8	0.0
	baz=194,SNR=6.1						
R61A	Willards	29.55	16	P	P	20 06 39.8	+0.5
	baz=200						
P52A	Corning	29.56	5	P	P	20 06 38.5	-0.9
	baz=187,SNR=37						
P43A	Skaggs, Pawnee	29.63	354	P	P	20 06 38.4	-1.6
	baz=172						
P54A	Burton	29.72	8	P	P	20 06 40.4	-0.3
	baz=190						
Q59A	Harwood	29.72	14	P	P	20 06 40.5	-0.2
	baz=198						
P55A	Reedsville	29.72	9	P	P	20 06 40.6	-0.2
	baz=191,SNR=24						
MCWV	Mont Chateau	29.86	9	P	P	20 06 41.6	-0.4
	baz=191,SNR=16						
P56A	Dayton Farm, R	29.88	10	P	P	20 06 42.4	+0.3
	baz=193,SNR=12						
O50A	Cable	29.97	3	P	P	20 06 41.8	-1.2
	baz=184,SNR=12						
O49A	Covington	29.98	2	P	P	20 06 41.6	-1.5
	baz=182,SNR=9.3						
P57A	Homestead Farm	30.01	12	P	P	20 06 43.6	+0.3
	baz=195,SNR=18						
O47A	Sheridan	30.02	359	P	P	20 06 41.1	-2.2
	baz=179,SNR=6.3						
O48A	Farmland	30.03	1	P	P	20 06 41.7	-1.8
	baz=181,SNR=12						
O51A	Pataskala	30.03	4	P	P	20 06 42.3	-1.2
	baz=186,SNR=15						
O44A	Mansfield	30.04	355	P	P	20 06 41.5	-2.0
	baz=174						
Q60A	Greensboro	30.05	15	P	P	20 06 43.5	-0.2
	baz=199						
O52A	Adamsville	30.07	6	P	P	20 06 43.1	-0.7
	baz=187,SNR=19						
Q61A	Milford	30.07	16	P	P	20 06 44.8	+1.0
	baz=200						
O45A	Potomac	30.09	357	P	P	20 06 41.8	-2.2
	baz=176,SNR=6.6						
ACSO	Alum Creek Sta	30.09	4	P	P	20 06 43.0	-1.0
	baz=185,SNR=6.3						
SFIN	Lafayette	30.19	358	P	P	20 06 42.9	-1.9
	baz=177,SNR=12						
O53A	New Philadelph	30.27	7	P	P	20 06 44.7	-0.9
	baz=188,SNR=32						
O54A	Avella	30.30	8	P	P	20 06 45.0	-0.9
	baz=190,SNR=7.3						
121A	Cookes Peak, D	30.34	321	P	P	20 06 47.1	+0.5
	baz=132,SNR=11						
P59A	Jarrettsville	30.48	14	P	P	20 06 47.5	+0.1
	baz=198						
O55A	Ligonier	30.48	9	P	P	20 06 46.9	-0.6
	baz=192,SNR=15						
HDIL	Hopedale	30.51	354	P	P	20 06 45.5	-2.2
	baz=173,SNR=6.5						
KSU1	Kansas State U	30.53	343	P	P	20 06 45.8	-2.1
	baz=158,SNR=9.1						
N50A	Nevada	30.62	4	P	P	20 06 47.1	-1.5
	baz=184						
N48A	Decatur	30.64	1	P	P	20 06 47.1	-1.7
	baz=181,SNR=6.1						
N47A	Urbana	30.65	360	P	P	20 06 46.2	-2.7
	baz=180						
N44A	Piper City	30.66	356	P	P	20 06 46.5	-2.5
	baz=175						
O56A	Blue Knob Stat	30.67	10	P	P	20 06 49.1	-0.1
	baz=193,SNR=14						
N45A	Kentland	30.67	357	P	P	20 06 46.9	-2.3
	baz=176						
N46A	Monticello	30.69	358	P	P	20 06 47.2	-2.0
	baz=178,SNR=7.5						
N49A	Columbus Grove	30.72	2	P	P	20 06 48.2	-1.3
	baz=182,SNR=9.3						
N52A	McGinn's Farm,	30.77	6	P	P	20 06 48.9	-1.2
	baz=187,SNR=7.7						
O57A	Amberson	30.79	12	P	P	20 06 50.3	+0.1
	baz=195,SNR=15						
N51A	Ashland	30.82	5	P	P	20 06 49.3	-1.1
	baz=186						
N41A	Harden Midland	30.85	352	P	P	20 06 48.6	-2.1
	baz=170,SNR=10						
N53A	Lisbon	30.86	7	P	P	20 06 49.8	-1.0
	baz=189,SNR=14						
P60A	Greenville	30.87	15	P	P	20 06 50.4	-0.4
	baz=199,SNR=6.2						
N43A	Stutzman Famil	30.88	355	P	P	20 06 49.1	-1.9
	baz=173,SNR=5.6						
Y22D	IRIS PASSCAL I	30.89	324	P	P	20 06 50.9	-0.5
	baz=136						
P61A	Hammonton	30.96	16	P	P	20 06 50.8	-0.9
	baz=201						
N55A	Marion Center	31.10	10	P	P	20 06 52.5	-0.5
	baz=192,SNR=25						
N54A	Moraine State	31.12	8	P	P	20 06 52.1	-1.0
	baz=190,SNR=6.7						
N40A	Mertquake, Sal	31.12	351	P	P	20 06 51.3	-1.8
	baz=168						
M47A	Cromwell	31.13	360	P	P	20 06 50.2	-3.0
	baz=180						
SSPA	Standing Stone	31.15	11	eP	P	20 06 53.2	-0.2
	comp=Z,46nm,0.8s						
SSPA	Standing Stone	31.15	11	P	P	20 06 53.5	+0.1
	baz=194						
M46A	Old House Fiel	31.19	359

M44A	Midewin, Midew	31.24	356	P		P	20 06 51.6	-2.5
	baz=175							
M51A	Elyria	31.24	5	P		P	20 06 52.9	-1.3
	baz=186							
LAZ	Ladron	31.25	324	eP		P	20 06 50.4	-4.1
M50A	Fremont	31.25	4	P		P	20 06 52.2	-2.0
	baz=185							
ANMO	Albuquerque	31.26	326	eP		P	20 06 54.6	-0.1
	comp=Z,13nm,1.0s							
ANMO	Albuquerque	31.26	326	ceP		P	20 06 54.5	-0.1
ANMO				pmax		pmax		
	comp=Z,30nm,2.5s							
ANMO	Albuquerque	31.26	326	P		P	20 06 54.6	-0.1
	baz=137							
TASM	ASL Pad, Albuq	31.26	326	P		P	20 06 54.6	-0.1
	baz=137,SNR=11							
TASM	ASL Pad, Albuq	31.26	326	P		P	20 06 54.4	-0.2
	baz=137,SNR=11							
M48A	Edgerton	31.27	1	P		P	20 06 52.1	-2.2
	baz=181							
M49A	Liberty Center	31.28	2	P		P	20 06 53.2	-1.3
	baz=183							
CBKS	Cedar Bluff	31.30	338	P		P	20 06 52.6	-2.1
	baz=152							
N57A	Milroy	31.33	12	P		P	20 06 54.4	-0.6
	baz=195,SNR=14							
N56A	West Decatur	31.35	11	P		P	20 06 54.5	-0.6
	baz=194,SNR=33							
M43A	Waltham Townsh	31.36	355	P		P	20 06 52.9	-2.3
	baz=173							
LPAZ	La Paz	31.36	147	P		P	20 06 56.3	+0.2
	comp=Z,2.1nm,0.9s,baz=342,slow=10,SNR=5.7							
LPAZ				PcP		PcP	20 09 51.4	+2.1
LPAZ				LR		LR	20 20 23.7	
	comp=Z,5μm,19.2s,baz=312,slow=38							
O60A	Telford	31.40	15	P		P	20 06 54.9	-0.6
	baz=199							
O61A	Allentown	31.42	16	P		P	20 06 55.3	-0.4
	baz=201							
M41A	Milan	31.46	353	P		P	20 06 54.0	-2.1
	baz=170,SNR=5.4							
M53A	WI Miller and	31.50	7	P		P	20 06 55.6	-0.9
	baz=189,SNR=28							
M52A	Chesterland	31.53	6	P		P	20 06 55.4	-1.3
	baz=188							
PLIO	Pelee Island,	31.62	4	P		P	20 06 56.1	-1.4
	baz=185							
M54A	Oil Creek Stat	31.70	8	P		P	20 06 57.2	-1.0
	baz=191,SNR=12							
L48A	N Adams	31.73	2	P		P	20 06 56.3	-2.1
	baz=182							
L47A	Sherwood	31.75	0	P		P	20 06 56.0	-2.6
	baz=180,SNR=7.2							
L46A	Eue Claire	31.79	359	P		P	20 06 55.9	-3.1
	baz=176							
M55A	Ridgway	31.80	10	P		P	20 06 58.4	-0.8
	baz=193,SNR=28							
T25A	Trinidad	31.87	331	P		P	20 06 59.6	-0.4
	baz=143,SNR=7.8							
N59A	State Game Lan	31.88	14	P		P	20 06 59.9	+0.1
	baz=198,SNR=37							
L50A	Kingsville	31.90	4	P		P	20 06 58.1	-1.9
	baz=185							
L49A	Milan	31.92	2	P		P	20 06 58.6	-1.4
	baz=183,SNR=5.1							
M56A	Emporium	31.92	10	P		P	20 06 59.7	-0.5
	baz=194,SNR=42							
L42A	Oliver, Polo	31.99	354	P		P	20 06 58.3	-2.4
	baz=172,SNR=22							
L44A	Lake County Fo	32.02	357	P		P	20 06 58.1	-2.9
	baz=176							
L53A	Girard	32.06	7	P		P	20 07 00.0	-1.3
	baz=190,SNR=28							
AAM	Ann Arbor	32.12	3	P		P	20 06 59.9	-1.9
	baz=183							
L40A	Anamosa	32.23	352	P		P	20 07 00.7	-2.1
	baz=169,SNR=13							
SCIA	State Center	32.40	349	ePcP		PcP	20 09 52.5	+1.6
SCIA	State Center	32.40	349	P		P	20 07 02.1	-2.2
	baz=166							
PAL	Palisades	32.44	16	P		P	20 07 04.1	-0.6
	baz=202							
K47A	Vermontville	32.45	1	P		P	20 07 02.1	-2.6
	baz=181,SNR=5.0							
K46A	Dorr	32.46	360	P		P	20 07 01.7	-3.1
	baz=179							
L54A	Sinclairville	32.47	9	P		P	20 07 03.6	-1.3
	baz=191							
L55A	Hinsdale	32.55	10	P		P	20 07 04.8	-0.9
	baz=193,SNR=19							
K43A	Burlington	32.57	356	P		P	20 07 02.9	-2.9
	baz=175							
K48A	Perry	32.60	2	P		P	20 07 03.7	-2.3
	baz=182,SNR=5.1							
K49A	Clarkson	32.60	3	P		P	20 07 03.5	-2.6
	baz=184							
K50A	Casco	32.65	4	P		P	20 07 04.6	-1.9
	baz=185							
K51A	Iona Station	32.68	5	P		P	20 07 05.1	-1.7
	baz=187							
M61A	Granite Spring	32.77	16	P		P	20 07 06.7	-0.9
	baz=202							
K52A	Tillsonburg	32.82	7	P		P	20 07 06.5	-1.5
	baz=189							
SDCO	Great Sand Dun	32.88	330	P		P	20 07 08.6	-0.4
	baz=142,SNR=31							
K54A	Basiliko Farm,	32.93	9	P		P	20 07 07.9	-1.0
	baz=192,SNR=5.9							
MDP	Montagnes des	32.94	96	LR		LR	20 21 32.7	
	comp=Z,4μm,18.2s,baz=274,slow=38							
JFWS	Jewell Farm	32.95	354	P		P	20 07 06.9	-2.2
	baz=171,SNR=8.2							
J47A	Sunmer	33.02	1	P		P	20 07 07.3	-2.3
	baz=181							
BINY	Binghamton	33.05	13	P		P	20 07 09.5	-0.5
	baz=197,SNR=36							
J48A	Bridge Port	33.10	2	P		P	20 07 08.3	-2.1
	baz=183							
BGNE	Belgrade	33.11	342	P		P	20 07 07.6	-3.0
	baz=157							
J46A	Howard City	33.12	360	P		P	20 07 07.4	-3.2
	baz=180							
K55A	Perry	33.15	10	P		P	20 07 09.8	-1.1
	baz=193,SNR=25							
J49A	Marlette	33.20	3	P		P	20 07 08.9	-2.3
	baz=184							
J45A	Montague	33.22	359	P		P	20 07 08.1	-3.3
	baz=178							
TYNO	Tyneside	33.23	8	P		P	20 07 10.0	-1.6
	baz=190,SNR=6.8							
W18A	Petrified Fore	33.28	322	P		P	20 07 13.2	+0.9
	baz=133,SNR=8.4							
J52A	Paris	33.30	7	P		P	20 07 10.6	-1.6
	baz=189,SNR=7.8							
214A	Organ Pipe Nat	33.32	315	P		P	20 07 14.0	+1.4
	baz=125,SNR=5.2							
STCO	Saint Catharin	33.44	8	P		P	20 07 12.2	-1.2
	baz=191							
MEDO	Medina	33.51	9	P		P	20 07 12.7	-1.2
	baz=193							
S22A	4UR Ranch, Cre	33.55	329	P		P	20 07 13.5	-1.3
	baz=140,SNR=14							
J54A	Appleton	33.58	9	P		P	20 07 13.1	-1.6
	baz=192							
J55A	Hilton	33.71	10	P		P	20 07 14.3	-1.4
	baz=194,SNR=6.1							
I46A	Reed City	33.71	0	P		P	20 07 12.2	-3.6
	baz=180							
ACTO	Acton	33.72	7	P		P	20 07 14.6	-1.2
	baz=190,SNR=14							
I42A	Draeger Farm,	33.79	356	P		P	20 07 14.2	-2.2
	baz=174,SNR=8.7							
I49A	Point Hope	33.79	3	P		P	20 07 14.1	-2.3
	baz=185							
I51A	Listowel	33.80	6	P		P	20 07 14.9	-1.6
	baz=188,SNR=12							
I47A	Gladwin	33.80	1	P		P	20 07 14.0	-2.6
	baz=182							
I45A	Fountain	33.81	359	P		P	20 07 13.5	-3.1
	baz=179							
BASO	Ashfield	33.95	5	P		P	20 07 16.3	-1.5
	baz=187							
M65A	Busby, Falmout	33.96	20	P		P	20 07 17.6	-0.4
	baz=207							
I53A	Kortright Cn E	33.99	8	P		P	20 07 16.4	-1.7
	baz=190							
I48A	Sherman Twp	33.99	2	P		P	20 07 16.2	-2.0
	baz=183							
OGNE	Ogallala	34.02	337	P		P	20 07 17.7	-0.9
	baz=150,SNR=5.3							
MVCO	Mesa Verde	34.04	326	P		P	20 07 19.0	0.0
	baz=137,SNR=8.4							
I41A	Arkdale	34.04	354	P		P	20 07 15.6	-3.0
	baz=172,SNR=5.6							
BWLO	Walkerton	34.10	6	P		P	20 07 17.7	-1.4
	baz=188,SNR=13							
I52A	Shelburne	34.16	7	P		P	20 07 18.0	-1.6
	baz=189,SNR=10							
DRCO	St. Marys Ceme	34.16	9	P		P	20 07 18.5	-1.1
	baz=192							
PKRO	Pickering	34.20	8	P		P	20 07 18.0	-1.9
	baz=191							
BRCO	Bruce Peninsul	34.20	5	P		P	20 07 17.9	-2.0
	baz=187							
WLVO	Wesleyville	34.26	9	P		P	20 07 18.3	-2.2
	baz=192,SNR=7.9							
H43A	Windswept, Lux	34.30	357	P		P	20 07 18.1	-2.7
	baz=176							
H46A	Fife Lake	34.31	0	P		P	20 07 18.0	-2.9
	baz=180							
H47A	Mio	34.39	2	P		P	20 07 18.9	-2.7
	baz=182							
H45A	Beulah	34.40	359	P		P	20 07 18.4	-3.2
	baz=179							
PECO	Prince Edward	34.51	11	P		P	20 07 21.0	-1.6
	baz=195,SNR=15							
HRV	Adam Dziewonsk	34.52	18	P		P	20 07 22.2	-0.6
	baz=205							
H48A	Harrisville	34.52	3	P		P	20 07 20.5	-2.2
	baz=184							
WUAZ	Wupatki	34.55	321	eP		P	20 07 23.8	+0.5
	comp=Z,109nm,1.7s							
WUAZ	Wupatki	34.55	321	P		P	20 07 23.6	+0.2
	baz=131,SNR=6.4							
ISCO	Idaho Springs	34.56	332	P		P	20 07 22.2	-1.4
	baz=143,SNR=7.7							
BMRO	Meriville Lake	34.57	5	P		P	20 07 21.5	-1.7
	baz=187							
GLMI	Grayling	34.60	1	P		P	20 07 20.6	-2.9
	baz=182							
I55A	Frankford	34.66	10	P		P	20 07 22.5	-1.4
	baz=194,SNR=15							
H52A	Wyevale	34.76	7	P		P	20 07 22.6	-2.1
	baz=190							
G45A	Suttons Bay	34.81	360	P		P	20 07 22.2	-3.0
	baz=180							
ECSD	EROS Data Cent	34.87	346	P		P	20 07 23.1	-2.7
	baz=161,SNR=19							
DELO	Deloro Mine	34.96	10	P		P	20 07 24.8	-1.8
	baz=194,SNR=10							
G47A	Hillman	34.97	2	P		P	20 07 24.1	-2.6
	baz=183							
SADO	Sadowa	34.98	8	P		P	20 07 25.1	-1.6
	comp=Z,45nm,0.7s,baz=238,slow=4.4,SNR=56							
SADO				LR		LR	20 22 11.7	
	comp=Z,5μm,18.6s,baz=185,slow=37							
H55A	Tweed	35.07	10	P		P	20 07 25.7	-1.8
	baz=194,SNR=18							
G46A	Petoskey	35.09	1	P		P	20 07 25.2	-2.4
	baz=181							
TOBO	Tobermory, Bru	35.16	5	P		P	20 07 26.1	-2.2
	baz=187,SNR=7.3							
PV10	Paradox Valley	35.18	327	ePcP		PcP	20 10 02.1	+2.8
G40A	Rib Lake	35.27	354	P		P	20 07 26.4	-2.9
	baz=172,SNR=5.7							
H56A	Elgin	35.28	11	P		P	20 07 28.0	-1.3
	baz=196,SNR=32							
GLA	Glamis	35.34	315	P		P	20 07 31.8	+1.7
	baz=124,SNR=9.1							
G39A	Holcombe	35.39	353	P		P	20 07 27.7	-2.5
	baz=170,SNR=27							
G53A	Haliburton	35.40	8	P		P	20 07 28.7	-1.6
	baz=192,SNR=19							
BANO	Bancroft	35.40	9	P		P	20 07 28.4	-1.9
	baz=193							
KLBO	Killbear Provi	35.42	6	P		P	20 07 27.6	-2.9
	baz=189,SNR=6.6							
F45A	CMU Biological	35.45	360	P		P	20 07 28.2	-2.5
	baz=180							
Y12C	Blythe	35.52	316	P		P	20 07 32.9	+1.3
	baz=125,SNR=6.2							
SPMN	Marine on St.	35.55	351	P		P	20 07 28.6	-3.0
	baz=168,SNR=10							
PLVO	Plevna	35.56	10	P		P	20 07 30.1	-1.6
	baz=194,SNR=14							
PDMCI	Parker Dam,Lak	35.58	317	P		P	20 07 32.4	+0.3
	baz=126,SNR=18							
N23A	Red Feather La	35.59	333	P		P	20 07 31.5	-0.9
	baz=144,SNR=7.0							
F42A	Maple Grove Fa	35.60	357	P		P	20 07 29.0	-3.0
	baz=176							
BUKO	Buck Lake	35.60	7	P		P	20 07 30.2	-1.9
	baz=190,SNR=20							
F49A	Sandfield	35.66	4	P		P	20 07 30.0	-2.6
	baz=186							
LONY	Lake Ozonia	35.66	13	P		P	20 07 31.5	-1.1
	baz=199,SNR=35							
F48A	Evansville	35.69	3	P		P	20 07 30.3	-2.5
	baz=185,SNR=7.4							
U15A	North Rim	35.71	321	eP		P	20 07 33.3	-0.2
	comp=Z,39nm,1.4s							
G55A	Calabogie	35.83	11	P		P	20 07 32.1	-1.9
	baz=195,SNR=14							
F40A	Park Falls	35.91	355	P		P	20 07 32.0	-2.7
	baz=172,SNR=7.5							
F52A	Sundridge	35.96	7	P		P	20 07 33.1	-2.1
	baz=190,SNR=14							
SWSC	Sam W. Stewart	35.97	314	P		P	20 07 37.0	+1.6
	baz=122,SNR=7.5							
F39A	Loretta	35.99	354	P		P	20 07 32.4	-3.0
	baz=171,SNR=8.8							
LBNH	Lisbon	35.99	17	P		P	20 07 34.6	-0.8
	baz=203							
F37A	Hinrichs Farm,	36.02	352	P		P	20 07 32.9	-2.7
	baz=168							
F51A	Arnstein	36.02	7	P		P	20 07 33.6	-2.0
	baz=189,SNR=5.7							
IKP	In-Ko-Pah, Jac	36.04	313	P		P	20 07 37.7	+1.6
	baz=122,SNR=6.5							
O20A	White River Ci	36.08	330	P		P	20 07 36.6	+0.2
	baz=140,SNR=6.3							
BC3	Big Chuckawall	36.11	315	P		P	20 07 38.2	+1.4
	baz=124,SNR=10							
SUSD	Miller	36.14	344	P		P	20 07 33.4	-3.2
	baz=157							
F38A	Pierce - Schro	36.14	352	P		P	20 07 33.5	-3.1
	baz=169,SNR=13							
PEMO	Pembroke	36.15	10	P		P	20 07 34.5	-2.2
	baz=194,SNR=10							
E46A	Sault Ste Mari	36.15	1	P		P	20 07 34.3	-2.4
	baz=182							
E43A	Lone Tree Farm	36.17	358	P		P	20 07 34.4	-2.5
	baz=178,SNR=16							
NEE2	Needles Airpor	36.17	317	P		P	20 07 38.2	+1.1
	baz=126							
IRM	Iron Mountain	36.18	316	P		P	20 07 39.0	+1.7
	baz=124,SNR=6.3							
ORIO	Orleans, Innes	36.26	12	P		P	20 07 36.0	-1.6
	baz=197,SNR=13							
E47A	Iron Bridge	36.28	3	P		P	20 07 35.8	-2.0
	baz=184,SNR=11							
ALGO	Algonquin Park	36.29	9	P		P	20 07 36.3	-1.6
	baz=192,SNR=43							
LVC	Limon Verde	36.35	154	eP		P	20 07 39.8	+0.6
E48A	Lockeyer	36.37	4	P		P	20 07 36.7	-1.9
	baz=186,SNR=10.0							
MONP2	Monument Peak	36.39	313	P		P	20 07 39.8	+0.5
	baz=122,SNR=6.9							
E44A	Grand Marais A	36.39	360	P		P	20 07 37.3	-1.5
	baz=179							
E50A	Wahnapitae	36.42	6	P		P	20 07 36.7	-2.3
	baz=188,SNR=6.1							
F55A	Otter Lake	36.46	11	P		P	20 07 37.8	-1.6
	baz=195,SNR=9.0							
E52A	Mattawa	36.53	8	P		P	20 07 38.1	-1.9
	baz=191,SNR=20							
E51A	G1948 Merrick	36.67	7	P		P	20 07 39.7	-1.5
	baz=190,SNR=24							
BELC	Belle Mtn. Jos	36.68	315	P		P	20 07 42.8	+1.1
	baz=123,SNR=9.6							
D46A	Sault St. Mari	36.68	2	P		P	20 07 38.8	-2.5
	baz=182							
E38A	The Farm, Brul	36.74	353	P		P	20 07 39.3	-2.5
	baz=170							
E53A	Dumoine, Ponti	36.77	9	P		P	20 07 40.1	-1.9
	baz=193							
PFO	Pinyon Flats O	36.80	314	eP		P	20 07 44.4	+1.8
	comp=Z,25nm,0.9s							
PFO	Pinyon Flats O	36.80	314	eP		P	20 07 44.4	+1.8
PFO				pmax		pmax		
	comp=Z,25nm,0.9s							
PFO	Pinyon Flats O	36.80	314	P		P	20 07 44.3	+1.8
	baz=122,SNR=6.8							
109C	Camp Elliot, M	36.88	313	P		P	20 07 44.7	+1.6
	baz=121							
D47A	Chapleau	36.88	3	P		P	20 07 40.3	-2.7
	baz=184,SNR=8.8							
GMRC	Granite Mounta	36.88	316	P		P	20 07 44.5	+1.2
	baz=124,SNR=11							
E54A	Lac Daplat, Po	36.90	10	P		P	20 07 41.5	-1.6
	baz=194,SNR=19							
D41A	Chassel	36.92	357	P		P	20 07 40.8	-2.5
	baz=175							
D48A	Paudash Townsh	37.08	4	P		P	20 07 42.6	-2.1
	baz=186,SNR=12							
D49A	Beulah Townshi	37.21	5	P		P	20 07 43.6	-2.2
	baz=187,SNR=18							
D51A	Lot 18 Range I	37.23	7	P		P	20 07 43.3	-2.6
	baz=190							
D52A	ZEK Kipawa Sen	37.24	8	P		P	20 07 44.5	-1.5
	baz=192,SNR=18							
D50A	G1974 Best Tow	37.25	6	P		P	20 07 43.6	-2.5
	baz=189							
K22A	Casper	37.27	334	P		P	20 07 45.7	-0.9
	baz=144							
MURC	Murrieta	37.31	314	P		P	20 07 48.0	+1.2
	baz=122,SNR=11							
HEC	Hector,Ludlow	37.37	316	P		P	20 07 49.1	+1.7
	baz=124							
TUQ	Turquoise Moun	37.43	317	P		P	20 07 48.6	+0.7
	baz=125							
D53A	Lac Vacive, Po	37.44	9	P		P	20 07 46.4	-1.4
	baz=193							
BBRC	Big Bear Solar	37.47	315	P		P	20 07 50.7	+2.3
	baz=122							
RSSD	Black Hills	37.50	338	P		P	20 07 47.9	-0.6
	baz=149							
D54A	Lac Fusel, La	37.68	10	P		P	20 07 48.0	-1.8
	baz=194,SNR=35							
PKME	Peaks-Kenny Pk	37.71	19	P		P	20 07 49.5	-0.5
	baz=207,SNR=7.7							
C40A	Isle Royale Na	37.81	356	P		P	20 07 48.2	-2.6
	baz=174							
RRX	Edison Barstow	37.85	316	P		P	20 07 53.1	+1.7
	baz=123							
SHOC	Shoshone, Teco	37.93	318	P		P	20 07 53.0	+0.9
	baz=125							
GSC	Goldstone, Bar	37.95	316	P		P	20 07 53.9	+1.6
	baz=124							
BFSC	Mount Baldy Ra	37.97	314	P		P	20 07 53.6	+1.0
	baz=122							
SCI2	San Clemente I	37.98	312	P		P	20 07 54.5	+2.1
	baz=119							
EYMN	Ely	38.05	353	P		P	20 07 50.0	-2.9
	baz=170							
CIS	Catalina Islan	38.09	313	P		P	20 07 55.3	+1.9
	baz=120							
FMP	Fort Macarthur	38.15	313	P		P	20 07 55.2	+1.3
	baz=120							
DECC	Green Verdugo	38.46	314	P		P	20 07 58.2	+1.7
	baz=121							
TPNV	Topopah Spring	38.52	319	eP		P	20 07 59.2	+2.0
	comp=Z,45nm,0.8s							
TPNV	Topopah Spring	38.52	319	eP		P	20 07 59.2	+2.0
TPNV				pmax		pmax		
	comp=Z,45nm,0.8s							
TPNV	Topopah Spring	38.52	319	P		P	20 07 59.0	+1.8
	baz=126,SNR=28							
DUG	Dugway, Tooele	38.53	326	P		P	20 07 57.6	+0.4
	baz=134,SNR=6.4							
EDW2	Edwards Air Fo	38.54	315	P		P	20 07 58.2	+0.9
	baz=122,SNR=9.7							
FURC	Furnace Creek,	38.65	318	P		P	20 07 59.6	+1.6
	baz=125,SNR=20							
LRMC	Laurel Mtn Rad	38.65	316	P		P	20 07 59.2	+1.0
	baz=123,SNR=9.4							
LATQ	La Tuque	38.69	14	P		P	20 07 57.5	-0.7
	baz=200							
BW06	Boulder Array	38.73	331	P		P	20 07 57.7	-1.2
	baz=140,SNR=14							
PDAR	Pinedale Array	38.73	331	P		P	20 07 57.6	-1.3
	comp=Z,6.2nm,0.8s,baz=127,slow=10,SNR=21							
PDAR				PcP		PcP	20 10 10.4	+0.5
	comp=Z,2.9nm,0.7s,baz=150,slow=6.4,SNR=4.8							
PDAR				LR		LR	20 26 48.1	
	comp=Z,1μm,21.6s,baz=142,slow=41							
MPMC	Manual Prospec	38.84	317	P		P	20 08 01.0	+1.1
	baz=124,SNR=27							
BLG	Laguna Peak, P	38.91	313	P		P	20 08 01.4	+1.1
	baz=120							
OSI	Osito Audit: C	38.92	314	P		P	20 08 01.6	+1.2
	baz=121							
R11A	Troy Canyon, C	38.95	321	P		P	20 08 01.9	+1.1
	baz=128,SNR=18							
AGMN	Agassiz Nation	39.05	349	P		P	20 07 58.5	-2.8
	baz=164							
ARVC	Arvin	39.26	315	P		P	20 08 04.1	+1.0
	baz=121,SNR=7.3							
SCZ2	Santa Cruz Isl	39.26	313	P		P	20 08 04.1	+0.9
	baz=119							
GRAC	Grapevine Rang	39.28	318	P		P	20 08 05.5	+2.1
	baz=125							
ISA	Isabella, Lake	39.29	316	P		P	20 08 04.5	+1.0
	baz=122							
CWC	Cottonwood Cre	39.44	317	P		P	20 08 05.5	+0.6
	baz=124							
MDND	Maddock	39.46	345	P		P	20 08 02.4	-2.2
	baz=158							
LSQQ	Lebel-sur-Quev	39.48	9	P		P	20 08 02.2	-2.6
	baz=193							
SBC	Santa Barbara	39.54	313	P		P	20 08 05.7	+0.2
	baz=120							
VES	Vestal, Richgr	39.81	315	P		P	20 08 09.6	+1.9
	baz=122,SNR=8.6							
PKM	Mcpherson Peak	39.83	314	P		P	20 08 09.9	+1.7
	baz=120,SNR=6.7							
TIN	Tinemaha, Big	39.88	318	P		P	20 08 10.8	+2.3
	baz=124							
MATQ	Matagami	40.07	8	P		P	20 08 07.4	-2.3
	baz=192,SNR=19							
SMMC	Simmler	40.17	314	P		P	20 08 12.3	+1.5
	baz=120,SNR=7.1							
VOG	Valley Oaks Go	40.26	316	P		P	20 08 11.8	+0.3
	baz=122							
RLMT	Red Lodge	40.43	334	P		P	20 08 10.8	-2.3
	baz=142,SNR=6.5							
H17A	Grant Village	40.45	332	P		P	20 08 12.6	-0.6
	baz=140							
BATG	Bathurst New B	40.55	20	eP		P	20 08 14.2	+0.5
	comp=Z,23nm,0.8s							
MLAC	Mammoth, Mammo	40.60	318	P		P	20 08 14.9	+0.3
	baz=124							
NV01	Mina Array Sit	40.71	319	eP		P	20 08 17.1	+1.7
NV01				ePcP		PcP	20 10 18.2	+2.0
NVAR	Mina Array Bea	40.71	319	P		P	20 08 17.1	+1.7
	comp=Z,45nm,0.7s,baz=128,slow=7.3,SNR=212							
NVAR				PcP		PcP	20 10 18.2	+2.0
	comp=Z,8.6nm,0.7s,baz=136,slow=4.4,SNR=6.8							
NVAR				LR		LR	20 26 50.0	
	comp=Z,2μm,20.1s,baz=140,slow=39							
CHGQ	Chibougamau	40.75	11	P		P	20 08 12.9	-2.4
	baz=197,SNR=8.4							
ULM	Lac du Bonnet	40.93	350	P		P	20 08 13.8	-3.0
	comp=Z,8.9nm,0.8s,baz=163,slow=8.9,SNR=6.9							
ULM				PcP		PcP	20 10 17.1	+0.6
	comp=Z,15nm,0.7s,baz=162,slow=3.8,SNR=7.7	

ORV	Oroville	43.40	319	eP	P	20 08 39.7	+2.6
ORV				pmax	pmax		
comp=Z,30nm,0.8s							
MSO	Missoula	43.84	332	P	P	20 08 39.2	-1.5
baz=137,SNR=7.5							
O03E	Paynes Creek	44.00	319	P	P	20 08 41.7	-0.3
baz=123,SNR=10							
O02D	Mt. Diablo Mer	44.57	319	P	P	20 08 45.4	-1.2
baz=122,SNR=14							
WDC	Whiskeytown Da	44.63	319	eP	P	20 08 46.0	-0.9
comp=Z,5.5nm,0.8s							
WDC	Whiskeytown Da	44.63	319	eP	P	20 08 46.0	-0.9
WDC				pmax	pmax		
comp=Z,6.0nm,0.8s							
M04C	Macdoel	44.85	321	P	P	20 08 48.8	0.0
baz=124,SNR=12							
N02D	Trinity Center	44.95	320	P	P	20 08 47.7	-1.9
baz=123							
BDFB	Brasilia	45.09	124	P	P	20 08 51.7	+0.7
comp=Z,10nm,0.6s,baz=292,slow=12,SNR=18							
BDFB				LR	LR	20 30 05.9	
comp=Z,3μm,18.4s,baz=306,slow=39							
M02C	Callahan	45.27	320	P	P	20 08 50.2	-1.9
baz=123							
K04D	Chiloquin, OR	45.27	322	P	P	20 08 51.4	-0.8
baz=125							
J05D	Fort Rock, OR	45.34	323	P	P	20 08 51.2	-1.6
baz=126							
YBH	Yreka Blue Hor	45.36	321	eP	P	20 08 52.1	-0.7
comp=Z,6.1nm,0.6s							
YBH	Yreka Blue Hor	45.36	321	eP	P	20 08 52.1	-0.7
YBH				pmax	pmax		
comp=Z,6.0nm,0.6s							
L04D	Klamath Falls	45.38	321	P	P	20 08 52.5	-0.5
baz=124,SNR=19							
CPUP	Villa Florida	45.41	143	P	P	20 08 53.2	0.0
comp=Z,3.5nm,0.8s,baz=331,slow=7.9,SNR=4.6							
CPUP				LR	LR	20 30 07.4	
comp=Z,918nm,19.3s,baz=322,slow=39							
CPUP	Villa Florida	45.41	143	eP	P	20 08 54.6	+1.4
ITRB	Iturama	45.56	131	eP	P	20 08 56.4	+1.8
J04D	Umpqua Nationa	45.84	323	P	P	20 08 56.1	-0.6
baz=125							
HUMO	Hull Mountain	45.99	321	eP	P	20 08 57.5	-0.3
comp=Z,9.4nm,1.0s							
I05D	Terrebonne, OR	46.03	324	P	P	20 08 52.8	-5.2
baz=127							
L02E	Cave Junction	46.15	321	P	P	20 08 57.5	-1.5
baz=123							
I04A	Tendick Farm,	46.34	323	P	P	20 08 59.4	-1.1
baz=125,SNR=6.6							
NEW	Newport	46.37	331	P	P	20 08 57.8	-2.8
baz=134							
FFC	Flin Flon	46.39	347	eP	P	20 08 58.4	-2.2
comp=Z,114nm,0.8s							
FFC	Flin Flon	46.39	347	ceP	P	20 08 58.8	-1.8
K02D	Willamette Mer	46.48	321	P	P	20 09 00.1	-1.6
baz=123							
G05D	Wamic, OR	46.56	325	P	P	20 09 02.4	+0.2
baz=128,SNR=6.4							
I03D	Drain, OR	46.84	322	P	P	20 09 03.4	-0.9
baz=124							
J01E	Myrtle Point	46.90	321	P	P	20 09 04.1	-0.6
baz=123							
H04D	Lebanon	46.95	324	P	P	20 09 03.5	-1.6
baz=125							
SCHQ	Schefferville	47.01	15	P	P	20 09 03.2	-2.2
comp=Z,19nm,0.7s,baz=207,slow=5.6,SNR=12							
SCHQ				LR	LR	20 29 39.4	
comp=Z,4μm,18.8s,baz=208,slow=37							
F05D	White Salmon	47.04	326	P	P	20 09 05.7	-0.2
baz=128,SNR=5.4							
I02D	Swisshome	47.37	323	P	P	20 09 08.0	-0.4
baz=124,SNR=5.8							
G03D	McMinnville, O	47.65	324	P	P	20 09 08.9	-1.7
baz=125,SNR=5.1							
BB19B	Bebedouro	47.75	131	eP	P	20 09 12.2	+0.5
PMNB	Patos De Minas	47.92	126	eP	P	20 09 15.2	+2.1
C06D	Leavenworth	48.01	328	P	P	20 09 12.7	-0.7
baz=130							
F04D	Rainier, OR	48.02	325	P	P	20 09 11.8	-1.6
baz=126							
E04D	Cinebar	48.05	326	P	P	20 09 12.7	-1.0
baz=127							
FRTB	Fartura	48.39	134	eP	P	20 09 18.0	+1.3
B05A	Bryant	48.85	328	P	P	20 09 17.5	-2.3
baz=129							
D03D	Eldon	48.93	327	P	P	20 09 19.3	-1.2
baz=127,SNR=7.9							
ITAB	Concordia	49.25	140	eP	P	20 09 25.3	+2.2
A04D	Lummi Island	49.45	328	P	P	20 09 22.6	-1.8
baz=128,SNR=8.5							
PLCA	Paso Flores	52.44	166	P	P	20 09 47.4	+0.4
comp=Z,7.5nm,1.0s,baz=2.1,slow=9.7,SNR=8.2							
PLCA				LR	LR	20 27 49.6	
comp=Z,529nm,19.2s,baz=16,slow=31							
PLCA	Paso Flores	52.44	166	eP	P	20 09 48.3	+1.3
BSFB	Barra de Sao F	52.60	123	eP	P	20 09 51.6	+3.2
DUB01	Friburgo-RJ	53.03	127	eP	P	20 09 52.8	+1.1
RIB01	Linhares ES	53.21	123	eP	P	20 09 55.2	+2.3
ALF01	Guarapari-ES	53.58	125	eP	P	20 09 59.0	+3.3
FRB	Frobisher Bay	54.90	9	LR	LR	20 34 21.1	
comp=Z,5μm,18.1s,baz=200,slow=37							
YKA	Yellowknife Ar	56.37	344	P	P	20 10 13.3	-1.8
comp=Z,4.8nm,0.5s,baz=139,slow=7.2,SNR=54							
YKA				LR	LR	20 36 12.0	
comp=Z,74nm,18.3s,baz=158,slow=38							
YKB5	Yellowknife Ar	56.37	344	eP	P	20 10 13.3	-1.8
TAOE	Nuku Hiva Isla	57.55	253	eS	S	20 18 16.5	-2.5
comp=Z,792nm,24.9s							
TAOE				eLR	LR	20 27 13.0	
comp=Z,1μm,23.7s,baz=76							
RKT	Rikitea	58.59	235	eS	S	20 18 27.6	-4.4
comp=Z,1μm,24.2s							
RKT	Rikitea	58.59	235	eT	T	21 13 25.5	
comp=Z,17nm,0.2s							
SFJD	Kangerlussuaq	61.47	15	LR	LR	20 37 42.6	
comp=Z,4μm,19.5s,baz=222,slow=36							
RES	Resolute Bay	64.77	357	LR	LR	20 39 47.1	
comp=Z,555nm,21.0s,baz=180,slow=36							
EPYK	Eagle Plains	65.91	340	P	P	20 11 18.5	-1.2
baz=123,SNR=20							
INK	Inuvik	66.00	342	eP	P	20 11 19.1	-1.1
comp=Z,16nm,0.8s							
INK	Inuvik	66.00	342	eP	P	20 11 19.1	-1.1
INK				pmax	pmax		
comp=Z,16nm,0.8s							
PMOZ	Porto Moniz, M	66.40	59	eLR	LR	20 31 46.2	
comp=Z,543nm,22.0s							
VAH	Vaihoa	66.48	249	eT	T	21 23 17.5	
comp=Z,22nm,0.3s							
PMOR	Pomariorio Ree	66.65	249	eT	T	21 23 30.4	
comp=Z,16nm,0.3s							
EGAK	Eagle	66.70	337	eP	P	20 11 23.9	-0.9
comp=Z,8.7nm,0.8s							
MEH	Mehetia	67.72	246	eT	T	21 24 51.0	
comp=Z,14nm,0.2s							
SUMG	Summit	68.39	14	eP	P	20 11 32.7	-3.1
SUMG	Summit	68.39	14	i P	P	20 11 32.7	-3.1
TVO	Taravao	68.76	246	eT	T	21 26 08.8	
comp=Z,0.6nm,0.2s							
TIAR	Tiarei	68.78	247	eT	T	21 26 09.9	
comp=Z,3.2nm,0.2s							
HDA	Harding Lake	68.81	336	P	P	20 11 36.9	-1.1
baz=112							
ILAR	Eielson Array	68.92	336	P	P	20 11 37.7	-1.1
comp=Z,8.5nm,0.7s,baz=120,slow=4.7,SNR=106							
ILAR				LR	LR	20 44 48.3	
comp=Z,1μm,21.2s,baz=126,slow=38							
PPT	Papeete	68.99	247	LR	LR	20 36 14.6	
comp=Z,704nm,18.3s,baz=23,slow=31							
PPT2	Papeete2	69.00	247	eS	S	20 20 38.0	-3.6
comp=Z,564nm,23.5s							
PPT2	Papeete2	69.00	247	eLR	LR	20 32 32.1	
comp=Z,1μm,25.0s,baz=59							
POKR	Poker Flat Res	69.27	336	P	P	20 11 39.6	-1.3
baz=112,SNR=7.3							
COLA	College	69.34	336	d iP	P	20 11 40.6	-0.7
COLA				pmax	pmax		
comp=Z,14nm,0.8s							
TCOL	CIGO, UAF Yank	69.35	336	P	P	20 11 38.4	-3.0
baz=111							
KDAK	Kodiak Island	69.35	328	ceP	P	20 11 41.8	+0.3
BORG	Borgarnes	70.04	24	LR	LR	20 40 15.8	
comp=Z,963nm,20.1s,baz=246,slow=34							
TBI	Tubuai	70.81	241	eS	S	20 21 00.6	-1.9
comp=Z,1μm,24.8s							
TBI	Tubuai	70.81	241	eLR	LR	20 33 21.5	
comp=Z,1μm,25.5s,baz=60							
TBI	Tubuai	70.81	241	eT	T	21 28 42.0	
comp=Z,21nm,0.3s							
TOLK	Toolik Lake Re	71.34	340	P	P	20 11 47.3	-6.3
baz=111							
PGAV	Gavieira, Arco	73.84	49	eLR	LR	20 36 04.3	
comp=Z,1μm,22.0s							
PVAQ	Vaqueiros	74.27	54	eLQ	LQ	20 32 08.8	
PVAQ				eLR	LR	20 35 27.1	
comp=Z,2μm,20.0s							
MTE	Manteigas	74.38	51	eLR	LR	20 36 04.3	
comp=Z,2μm,22.0s							
PMRV	Marv??o	74.50	52	eLR	LR	20 35 03.0	
comp=Z,2μm,20.0s							
PMSA	Palmer Station	76.39	171	eP	P	20 12 24.5	+1.6
ESDC	Sonseca Array	77.14	52	P	P	20 12 26.6	-1.4
comp=Z,3.0nm,0.7s,baz=283,slow=5.7,SNR=12							
ESDC				LR	LR	20 41 36.9	
comp=Z,1μm,20.7s,baz=275,slow=32							
TIC	Toumodi	79.54	85	eP	P	20 12 40.7	-0.9
LIC	Lamto	79.59	85	eP	P	20 12 41.2	-0.7
comp=Z,53nm,0.9s							
DBIC	Dimbokro	79.69	85	P	P	20 12 42.7	+0.3
comp=Z,10nm,0.9s,baz=220,slow=5.5,SNR=5.9							
DBIC				LR	LR	20 46 36.7	
comp=Z,428nm,20.8s,baz=256,slow=35							
KIC	Kosan Boka	79.86	85	eP	P	20 12 43.2	-0.1
comp=Z,162nm,1.9s							
NB2	NORSAR Subarra	84.49	29	P	P	20 13 04.8	-1.9
comp=Z,1.1nm,0.8s,baz=280,slow=5.1							
NB200	NORSAR Array S	84.49	29	eP	P	20 13 04.7	-2.0
NOA	NORSAR Array B	84.49	29	P	P	20 13 04.7	-2.0
comp=Z,1.4nm,0.9s,baz=279,slow=4.7,SNR=5.8							
NOA				LR	LR	20 45 58.0	
comp=Z,413nm,21.4s,baz=270,slow=32							
TOA1	Torodi Ar. Sit	85.06	78	eP	P	20 13 08.4	-2.0
TORD	Torodi Ar. Bea	85.06	78	P	P	20 13 08.4	-2.0
comp=Z,1.0nm,0.8s,baz=288,slow=6.1,SNR=4.5							
BILL	Bilibino	87.38	339	eP	P	20 13 20.9	+0.2
comp=Z,9.5nm,0.9s							
BILL	Bilibino	87.38	339	i P	P	20 13 19.5	-1.3
BILL				e		20 13 27.0	
BILL				i S	SKSac	20 23 36.6	-7.4
BILL				pmax	pmax		
comp=Z,37nm,2.0s							
CLL	Collm	87.47	38	eP	P	20 13 20.0	-1.5
comp=Z,7.0nm,0.9s							
CLL				ePP	PP	20 16 43.0	-3.5
CLL				eS	S	20 23 57.0	-1.7
CLL				ePS	PnS	20 25 05.0	+0.2
CLL				e		20 28 48.0	
CLL				eSS	SS	20 29 54.0	+10
CLL				eSSS	SSS	20 33 30.0	
CLL				e(SSSS)		20 36 18.0	
CLL				Lm	MLR	20 56 00.0	
comp=N,300nm,19.6s							
CLL				Lm	MLR	20 56 00.0	
comp=E,400nm,18.1s							
CLL				Lm	MLR	20 56 00.0	
comp=Z,700nm,18.1s							
CLL	Collm	87.47	38	eP	P	20 13 19.0	-2.5
CLL				eS	S	20 23 57.0	-1.7
CLL				pmax	pmax		
comp=Z,7.0nm,0.9s							
CLL				MLR	MLR		
comp=Z,700nm,18.1s							
ARA0	ARCESS Array S	87.77	19	eP	P	20 13 20.4	-2.2
ARCES	ARCESS Array B	87.77	19	P	P	20 13 20.4	-2.2
comp=Z,7.2nm,0.3s,baz=278,slow=4.4,SNR=11							
KEST	Kesra	88.08	54	P	P	20 13 23.9	-1.1
comp=Z,2.8nm,0.7s,baz=302,slow=9.0,SNR=4.7							
KEST				LR	LR	20 52 28.6	
comp=Z,422nm,18.1s,baz=232,slow=35							
BRG	Berggiesshubel	88.15	39	eP	P	20 13 24.1	-0.7
comp=Z,12nm,1.6s							
comp=N,367nm,13.8s							
comp=E,293nm,18.6s							
comp=Z,771nm,16.5s							
BRG	Berggiesshubel	88.15	39	eP	P	20 13 24.1	-0.7
BRG				pmax	pmax		
comp=Z,12nm,1.6s							
BRG				MLR	MLR		
comp=N,367nm,13.8s							
BRG				MLR	MLR		
comp=E,293nm,18.6s							
BRG				MLR	MLR		
comp=Z,771nm,16.5s							
KHC	Kasperske Hory	88.33	40	eP	P	20 13 25.1	-0.6
KHC				MLR	MLR		
comp=Z,700nm,18.6s							
KHC	Kasperske Hory	88.33	40	eP	P	20 13 25.1	-0.6
KHC				ex	x	20 14 05.2	
KHC				AMS	AMS	20 56 50.0	
comp=Z,700nm,18.6s							
GERES	GERESS Array B	88.47	41	P	P	20 13 24.6	-1.9
comp=Z,0.7nm,0.7s,baz=256,slow=5.4,SNR=4.2							
GERES				LR	LR	20 49 52.2	
comp=Z,434nm,19.9s,baz=277,slow=34							
PRU	Pruhonice	88.73	39	AMS	AMS	21 00 00.0	
comp=Z,800nm,16.3s							
GOPC	GO Pecny, Ondr	88.90	40	AMS	AMS	21 00 20.0	
comp=Z,800nm,15.5s							
DPC	Dobruska-Polom	89.75	39	eP	P	20 13 30.8	-1.6
DPC				MLR	MLR		
comp=Z,700nm,20.0s							
DPC	Dobruska-Polom	89.75	39	eP	P	20 13 30.8	-1.6
DPC				ex	x	20 14 10.3	
DPC				eSKS	SKSac	20 24 08.1	+9.2
DPC				AMS	AMS	20 54 20.0	
comp=Z,700nm,20.0s							
OKC	Ostrava-Krasne	91.02	39	AMS	AMS	21 00 20.0	
comp=Z,500nm,19.8s							
FIA0	FINESS Array S	91.22	27	eP	P	20 13 36.8	-2.1
FIA0	FINESS Array S	91.22	27	eP	P	20 13 36.8	-2.1
FINES	FINESS Array B	91.22	27	P	P	20 13 36.8	-2.1
comp=Z,1.2nm,0.7s,baz=101,slow=1.9,SNR=6.1							
FINES				LR	LR	20 50 14.4	
comp=Z,808nm,21.7s,baz=288,slow=33							
LVZ	Lovozero	91.49	19	i P	P	20 13 39.5	-0.6
LVZ				pmax	pmax		
comp=Z,10.0nm,1.1s							
VYHS	Vyhne	91.85	40	eP	P	20 13 44.8	+2.7
VYHS	Vyhne	91.85	40	eP	P	20 13 44.8	+2.7
KOLS	Kolonicke sedl	93.86	39	eP	P	20 13 53.7	+2.3
KOLS	Kolonicke sedl	93.86	39	eP	P	20 13 53.7	+2.3
SEY	Seymchan	94.84	337	i P	P	20 13 57.1	+1.5
TIXI	Tiksi	95.29	350	ceP	P	20 13 57.9	+0.5
TIXI				pmax	pmax		
comp=Z,7.0nm,1.5s							
PET	Petropavlovsk	96.91	327	eP	P	20 14 08.6	+3.4
PET				e		20 18 10.3	
PET				e		20 24 31.6	
PET				eS	S	20 25 24.2	+0.7
PET				pmax	pmax		
comp=Z,100nm,13.5s							
PET				pmax	pmax		
comp=Z,100nm,19.9s							
PET				MLR	MLR		
comp=Z,400nm,23.0s							
KLMR	Klimovskoe	97.17	24	ePP	PP	20 18 03.4	+1.1
KLMR				AMP		20 18 12.5	
comp=Z,18nm,1.6s							
AKASG	Malin Array Be	97.33	36	LR	LR	20 58 33.8	
comp=Z,797nm,18.5s,baz=300,slow=36							
MA2	Magadan	97.36	335	LR	LR	21 06 16.5	
comp=Z,368nm,18.2s,baz=56,slow=40							
MA2	Magadan	97.36	335	i P	P	20 14 06.7	-0.4
MA2				pmax	pmax		
comp=Z,14nm,1.3s							
PETK	Petropavlovsk-	97.38	327	LR	LR	21 01 22.6	
comp=Z,113nm,20.0s,baz=56,slow=38							
DZM	Mont Dzumac	110.37	250	eLR	LR	20 51 39.7	
comp=Z,417nm,22.9s							
SYO	Syowa Base	111.51	162	epPdiff	Pdif	20 15 15.0	+5.2
MAK	Makhachkala	112.01	35	eP	Pdif	20 15 10.8	-1.9
MAK				i		20 19 07.4	
MAK				e		20 19 52.3	
MAK				pmax	pmax		
comp=Z,63nm,1.1s							
ZAA1	Zalesovo Array	115.67	6	ePKPdf	PKiKP	20 19 15.4	-0.5
ZALV	Zalesovo Beam	115.67	6	PKP	PKiKP	20 19 15.4	-0.6
comp=Z,1.7nm,0.6s,baz=289,slow=1.7,SNR=8.0							
KURK	Kurchatov	117.88	11	ePKPdf	PKiKP	20 19 20.6	+0.3
KURK	Kurchatov	117.88	11	c i PKIKP	PKiKP	20 19 21.1	+0.8
KURK				pmax	pmax		
comp=Z,1.0nm,0.7s							
TLY	Talaya	117.96	354	i PKIKP	PKPdf	20 19 20.5	0.0
MJAR	Matsushiro Arr	118.02	321	PKP	PKPdf	20 19 20.0	-1.1
comp=Z,0.9nm,0.5s,baz=108,slow=1.0,SNR=6.5							
MAJO	Matsushiro	118.02	321	ePKPdf	PKPdf	20 19 20.0	-1.1
MAJO	Matsushiro	118.02	321	ePKIKP	PKPdf	20 19 20.0	-1.1
DGZ	Jazzator, Alta	120.13	5	i PKIKP	PKiKP	20 19 25.2	+0.2
ULN	Ulaanbaatar	121.22	350	ePKPdf	PKiKP	20 19 27.7	+0.5
ULN	Ulaanbaatar	121.22	350	i PKIKP	PKiKP	20 19 27.2	0.0
GEYT	Alibeck	121.35	33	PKP	PKiKP	20 19 27.6	0.0
comp=Z,2.4nm,0.7s,baz=318,slow=2.0,SNR=7.4							
SONA0	Songino Array	121.36	351	ePKPdf	PKiKP	20 19 27.5	0.0
SONM	Songino Array	121.36	351	PKP	PKiKP	20 19 27.5	0.0
comp=Z,3.2nm,0.8s,baz=339,slow=1.4,SNR=23							
MAKZ	Makanchi	122.25	10	ePKPdf	PKPdf	20 19 28.0	-0.9
MAKZ	Makanchi	122.25	10	ePKIKP	PKPdf	20 19 28.0	-0.9
MK32	Makanchi Array	122.32	10	ePKPdf	PKPdf	20 19 28.4	-0.6
MKAR	Makanchi Array	122.32	10	PKP	PKPdf	20 19 28.4	-0.6
comp=Z,1.5nm,0.7s,baz=354,slow=2.4,SNR=13							
MKAR	Makanchi Array	122.32	10	c i PKIKP	PKPdf	20 19 28.3	-0.8
MKAR				pmax	pmax		
comp=Z,2.0nm,0.7s							
KSRS	Korea Array	123.26	328	PKP	PkiKP	20 19 31.8	+0.5
comp=Z,14nm,0.7s,baz=6.4,slow=1.8,SNR=97							
AAK	Ala-Archa	124.42	18	c i PKIKP	PKiKP	20 19 34.4	+0.7
AAK				pmax	pmax		
comp=Z,14nm,2.5s							
WMQ	Urumqi	125.98	6	ePKP	PKPdf	20 19 35.5	-0.7
WMQ				LR	LR		
comp=Z,300nm,24.7s							
WMQ				LR	LR		
comp=Z,200nm,26.5s							
WMQ				LR	LR		
comp=Z,1μm,22.7s							
HHC	Hu-ho-hao-te	126.91	344	ePKP	PKPdf	20 19 36.3	-1.8
HHC				LR	LR		
comp=Z,570nm,20.4s							
HHC				LR	LR		
comp=Z,310nm,18.7s							
BTO	Baotou	127.54	345	ePKP	PKPdf	20 19 39.3	0.0
KSH	Kashi	127.72	18	PKP	PkiKP	20 19 41.8	+1.5
KSH				PP	PP	20 21 45.4	+5.1
KSH				SKS	SKSdf	20 26 50.1	+2.5
KSH				SKKS	SKKSac	20 28 37.3	+2.3
KSH				AMB	AMB		
comp=Z,370nm,6.0s							
KSH				LR	LR		
comp=Z,2μm,17.6s							
KSH				LR	LR		
comp=Z,430nm,8.2s							
KSH				LR	LR		
comp=Z,3μm,20.9s							
TIA	Tai'an	129.24	336	PKP	PKiKP	20 19 43.8	+0.5
GTA	Gaotai	130.49	355	PKP	PKPdf	20 19 45.4	+0.4
GTA				LR	LR		
comp=Z,690nm,18.1s							
GTA				LR	LR		
comp=Z,330nm,20.9s							
GTA				LR	LR		
comp=Z,1μm,19.4s							
STKA	Stephens Creek	131.44	236	PKP	PkiKP	20 19 47.9	+0.1
comp=Z,2.5nm,0.8s,baz=230,slow=2.3,SNR=4.5							
NJ2	Nanjing	132.04	332	ePKP	PKPdf	20 19 48.0	0.0
LZH	Lanzhou	133.22	350	ePKP	PKiKP	20 19 53.0	+1.5
LZH				PKS	PKSdf	20 23 22.8	-4.1
LZH				LR	LR		
comp=Z,650nm,15.7s							
LZH				LR	LR		
comp=Z,380nm,16.8s							
LZH				LR	LR		
comp=Z,670nm,17.4s							
XAN	Xi'an	134.01	343	PKP	PKPdf	20 19 52.0	+0.3
XAN				PP	PP	20 22 24.4	+3.5
XAN				PKS	PKSdf	20 23 24.8	-3.4
XAN				LR	LR		
comp=Z,740nm,19.6s							
XAN				LR	LR		
comp=Z,450nm,19.6s							
XAN				LR	LR		
comp=Z,560nm,19.2s							
WHN	Wuhan	135.31	335	⇓PKP	PKiKP	20 19 55.4	-0.3
WHN				AMB	AMB		
comp=Z,790nm,4.3s							
WHN				LR	LR		
comp=Z,1μm,16.0s							
WHN				LR	LR		
comp=Z,920nm,20.7s							
CD2	Chengdu	138.26	348	PKP	PKPdf	20 19 59.3	-0.4
ASAR	Alice Springs	140.09	245	PKhKP	PKPpre	20 19 56.5	
comp=Z,1.0nm,0.8s,baz=97,slow=3.7,SNR=7.9							
ASAR				PKP	PKPdf	20 20 02.5	-0.7
comp=Z,4.1nm,0.7s,baz=113,slow=2.6,SNR=22							
LSA	Lhasa	140.30	5	ePKPpre	PKPpre	20 19 55.8	
LSA	Lhasa	140.30	5	ePKHKP	PKPpre	20 19 55.8	
WB2	Warramunga Arr	140.37	251	ePKPdf	PKiKP	20 20 05.5	-0.8
WR1	Warramunga Arr	140.38	251	ePKPdf	PKPdf	20 20 04.2	+0.4
WRA	Warramunga Arr	140.38	251	PKP	PKPdf	20 20 04.2	+0.4
comp=Z,4.5nm,0.7s,baz=114,slow=1.8,SNR=17							
DANN	Dangsing	140.39	15	eP	PKPdf	20 20 00.8	-3.2
comp=Z,44nm,0.8s							
PYUN	Piuthan	140.43	16	eP	PKPdf	20 20 01.4	-2.5
comp=Z,52nm,1.1s							
KKN	Kakani	141.29	13	eP	PKPdf	20 20 03.2	-2.3
comp=Z,28nm,0.7s							
GUN	Gumba	141.30	12	eP	PKPdf	20 20 04.1	-1.6
comp=Z,31nm,0.7s							
DMN	Daman	141.43	13	eP	PKPdf	20 20 02.8	-3.0
comp=Z,19nm,0.9s							
PKIN	Phulchoki	141.52	13	eP	PKPdf	20 20 03.6	-2.4
comp=Z,14nm,0.8s							
PKI	Pulchoki	141.53	13	eP	PKPdf	20 20 03.6	-2.5
comp=Z,24nm,0.8s							
GYA	Guiyang	141.78	342	PKP	PKPdf	20 20 02.9	-3.4
GYA				AMB	AMB		
comp=Z,140nm,7.8s							
KMI	Kunming	144.07	347	PKP	PKPdf	20 20 09.8	-0.7
SLVN	Son La	147.42	344	ePKPbc	PKPab	20 20 20.0	-0.5
LUWI	Luwuk	150.47	286	ePKPbc	PKiKP	20 20 27.6	+0.3
CMMT	Chiang Mai	150.93	351	P	PKPdf	20 20 23.7	+2.0
comp=Z,22nm,1.6s,comp=Z,394nm							
LAMP	Lampang	151.11	350	P	PkiKP	20 20 28.4	0.0
comp=Z,68μm,0.7s,comp=Z,764μm							
CM31	Chiang Mai Arr	151.28	351	ePKPbc	PKiKP	20 20 28.9	+0.1
CMAR	Chiang Mai Arr	151.28	351	PKP	PKPdf	20 20 23.0	+0.7
comp=Z,4.8nm,0.9s,baz=312,slow=2.1,SNR=26							
CMAR				PKPbc	PKiKP	20 20 28.9	+0.1
comp=Z,26nm,0.7s,baz=318,slow=2.4,SNR=72							
SKNT	Sakolnakorn	151.51	341	P	PkiKP	20 20 29.5	+0.3
UTTA	Uttaradit	151.69	348	P	PkiKP	20 20 29.4	-0.

Ms1 3.8/2,ms1mx3.3/43,Error ellipse: s-maj=28.6km s-min=17.9km az=180.0
*NEIC **23** 20:07:51.2±1.6,31°.63N×40°.90W,h10km,mb4.4/10,Error ellipse: s-maj=23.4km s-min=18.1km az=160.0*
ISC 23 20:07:51.3±0.7,31°.6N±0°.1×40°.86W±0°.08,h14km,n39,σ19°52/31,mb4.1/20,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSA	**Rosais**	**12.52**	**52**	*e*Pn	**Pn**	**20 10 46.8**	**-2.2**
CMLA	**Cha da Macela**	**14.02**	**60**	*e*Pn	**Pn**	**20 11 08.1**	**-1.5**
BBSR	**BB Station**	**20.23**	**278**	*e*P	**P**	**20 12 23.4**	**-2.6**
	7.4nm,0.9s						
STVI	**Saint Thomas**	**25.45**	**244**	*e*P	**P**	**20 13 14.1**	**-4.8**
	32nm,1.1s						
CBYP	**Canovanas**	**26.20**	**245**	*e*P	**P**	**20 13 27.1**	**+1.3**
	52nm,1.1s						
HUMP	**Col San Antoni**	**26.26**	**245**	*e*P	**P**	**20 13 26.1**	**-0.2**
	10nm,1.0s						
GRGR	**Grenville**	**27.26**	**229**	*e*P	**P**	**20 13 36.2**	**+0.9**
	112nm,0.9s						
LBNH	**Lisbon**	**27.39**	**306**	*e*P	**P**	**20 13 36.9**	**+0.7**
	2.2nm,0.8s						
NCB	**Newcomb**	**28.91**	**305**	*e*P	**P**	**20 13 51.3**	**+1.4**
	3.9nm,1.1s						
TOA1	**Torodi Ar. Sit**	**43.10**	**105**	*e*P	**P**	**20 15 51.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**43.10**	**105**	P	**P**	**20 15 51.6**	**+0.3**
	3.5nm,1.1s,baz=262,slow=2.5,SNR=6.6						
JMIC	**Jan Mayen**	**43.19**	**15**	LR	LR	20 27 56.2	
	comp=Z,89nm,19.0s,baz=62,slow=28						
GERES	**GERESS Array B**	**44.08**	**51**	P	**P**	**20 15 59.7**	**+0.7**
	0.5nm,0.6s,baz=278,slow=6.8,SNR=3.5						
H10N2	**ASCENSION HYDR**	**46.62**	**143**	T	T	21 06 07.1	
	baz=329,slow=75,SNR=99						
H10N3	**ASCENSION HYDR**	**46.63**	**143**	T	T	21 05 58.3	
	baz=329,slow=75,SNR=58						
H10N1	**ASCENSION HYDR**	**46.64**	**143**	T	T	21 06 08.8	
	baz=329,slow=75,SNR=114						
H10S1	**ASCENSION HYDR**	**47.49**	**144**	T	T	21 07 09.7	
	baz=329,slow=75,SNR=92						
H10S3	**ASCENSION HYDR**	**47.49**	**144**	T	T	21 06 54.1	
	baz=329,slow=75,SNR=91						
H10S2	**ASCENSION HYDR**	**47.51**	**144**	T	T	21 07 07.8	
	baz=329,slow=75,SNR=114						
BUR08	**Bucovina Ar. S**	**51.80**	**52**	*e*P	**P**	**20 17 00.2**	**+1.4**
	3.0nm,1.0s						
FIA0	**FINESS Array S**	**51.83**	**34**	*e*P	**P**	**20 16 58.7**	**+0.1**
FINES	**FINESS Array B**	**51.83**	**34**	P	**P**	**20 16 58.7**	**+0.1**
	1.3nm,0.8s,baz=248,slow=10,SNR=4.4						
SPITS	**Spitsbergen Ar**	**52.72**	**13**	LR	LR	20 35 21.6	
	comp=Z,108nm,20.1s,baz=305,slow=31						
LTX	**Lajitas**	**53.51**	**285**	*e*P	**P**	**20 17 12.0**	**+0.3**
TXAR	**Lajitas Array**	**53.51**	**285**	P	**P**	**20 17 12.0**	**+0.3**
	0.4nm,0.8s,baz=96,slow=7.7,SNR=3.9						
AKASG	**Malin Array Be**	**54.03**	**48**	P	**P**	**20 17 14.6**	**-0.4**
	1.4nm,0.6s,baz=277,slow=6.5,SNR=9.5						
AKBB	**Malin Array Si**	**54.03**	**48**	*e*P	**P**	**20 17 15.2**	**+0.1**
	3.6nm,0.8s						
LPAZ	**La Paz**	**54.35**	**213**	P	**P**	**20 17 19.4**	**+1.0**
	0.8nm,0.8s,baz=334,slow=7.7,SNR=3.8						
PD31	**Pinedale Array**	**54.47**	**303**	*e*P	**P**	**20 17 19.7**	**+1.0**
	4.7nm,1.1s						
PDAR	**Pinedale Array**	**54.47**	**303**	P	**P**	**20 17 18.3**	**-0.4**
	1.9nm,0.9s,baz=81,slow=9.6,SNR=12						
YKA	**Yellowknife Ar**	**55.05**	**327**	P	**P**	**20 17 23.0**	**+0.8**
	0.2nm,0.4s,baz=89,slow=7.6,SNR=5.5						
YKB5	**Yellowknife Ar**	**55.05**	**327**	*e*P	**P**	**20 17 23.0**	**+0.8**
BR101	**Keskin Array S**	**59.48**	**60**	*e*P	**P**	**20 17 54.3**	**+0.2**
BRTR	**Keskin Array B**	**59.48**	**60**	P	**P**	**20 17 54.3**	**+0.2**
	0.8nm,1.0s,baz=249,slow=5.2,SNR=5.1						
LPIG	**La Paz**	**60.95**	**282**	*e*P	**P**	**20 18 00.5**	**-3.7**
INK	**Inuvik**	**62.00**	**335**	P	**P**	**20 18 11.6**	**+1.0**
	2.3nm,0.9s,baz=337,slow=8.5,SNR=4.1						
NV01	**Mina Array Sit**	**62.06**	**300**	*e*P	**P**	**20 18 12.7**	**+0.9**
NVAR	**Mina Array Bea**	**62.06**	**300**	P	**P**	**20 18 12.7**	**+0.9**
	0.5nm,0.8s,baz=64,slow=6.3,SNR=3.5						
ILAR	**Eielson Array**	**68.26**	**334**	P	**P**	**20 18 51.8**	**+0.4**
	1.1nm,1.0s,baz=57,slow=4.0,SNR=7.3						

UCR 23 20:10:50.4±1.7,9°.91N×85°.66W,h20km±9km,MD4.0,2C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.75**	**10**	*i* P	Pb	20 11 04.5	-0.3
JTS	**Las Juntas de**	**0.80**	**61**	*e*P	Pb	20 11 04.9	-0.7
JTS				*e*S	Sn	20 11 17.4	-0.4
COLC	**Colonia**	**0.88**	**31**	*i* P	Pb	20 11 06.2	-0.8
COLC				*e*S	Sb	20 11 18.3	0.0
LAPC	**Finca la Perla**	**0.89**	**15**	*i* P	Pb	20 11 06.2	-1.0
CUI	**Cuipilapa**	**0.89**	**33**	*i* P	Pb	20 11 06.7	-0.6
CUI				*e*S	Sb	20 11 18.5	-0.3
GBS3	**Finca Las Img**	**0.89**	**13**	*i* P	Pb	20 11 06.3	-1.0
BUEV	**Buena Vista**	**0.92**	**16**	↑*i* P	Pb	20 11 07.1	-0.6
BUEV				*e*S	Sn	20 11 21.6	+0.5
HORNC	**Hornillas**	**0.93**	**31**	*i* P	Pb	20 11 07.2	-0.8
GB1A	**Borinquen Arri**	**0.94**	**16**	*i* P	Pb	20 11 07.3	-0.8
GB1A				*e*S	Sb	20 11 19.7	-0.5
MESS	**Mesas**	**0.95**	**29**	*i* P	Pb	20 11 07.3	-0.9
ACAL	**Aguas Claras**	**0.95**	**40**	*i* P	Pb	20 11 07.7	-0.6
AMAS	**Alto Masis**	**0.96**	**43**	*i* P	Pb	20 11 07.7	-0.7
BUAI	**Buenos Aires**	**1.02**	**18**	*i* P	Pb	20 11 08.4	-1.0
CASO	**Castillo**	**1.05**	**60**	*i* P	Pn	20 11 10.1	0.0
ARE1	**Arenal 1**	**1.08**	**59**	↑*e*P	Pb	20 11 10.2	-0.2
ARE1				*e*S	Sg	20 11 29.0	+3.4
CEDE	**Laguna Cedeo**	**1.10**	**58**	*i* P	Pn	20 11 10.8	0.0
CEDE				*e*S	Sg	20 11 26.1	-0.3
LCR2	**La Lucha 2**	**1.64**	**96**	*e*P	Pn	20 11 18.7	+0.4
LCR2				*e*S	Sn	20 11 39.1	+0.1
ACON	**Acoyapa**	**2.10**	**13**	*e*P	Pn	20 11 25.8	+1.2
DRK0	**Durika**	**2.47**	**105**	*e*P	Pb	20 11 35.0	+0.8
DRK0				*e*S	Sn	20 11 59.7	+0.3

*GEN **23** 20:11:08.2,44°.19N×10°.21E,h5km±2km,Ml1.5*
ROM 23 20:11:07.5±0.1,44°.181N±0°.005×10°.205E±0°.005, h9km,ML1.8/8,Error ellipse: s-maj=0.6km s-min=0.4km az=198.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.01**	**166**	P	Pg	20 11 09.4	+0.3
T0912				S	Sg	20 11 10.3	0.0
EQUI	**Equi**	**0.04**	**248**	P	Pg	20 11 09.6	+0.3
EQUI				S	Sg	20 11 10.6	0.0
EQUI	**Equi**	**0.04**	**248**	P	Pg	20 11 09.6	+0.3
EQUI				S	Sg	20 11 10.6	0.0
T0911	**Castelpoggio (**	**0.12**	**234**	P	Pg	20 11 11.0	+0.8
T0911				S	Sg	20 11 13.1	+0.9
T0911				AML	AML		
	comp=E,732μm,0.3s						
T0911				AML	AML		
	comp=N,656μm,0.8s						
T0911				AML	AML		
	comp=E,744μm,0.3s						
T0911				AML	AML		
	comp=N,610μm,0.5s						
T0911				AML	AML		
	comp=E,732μm,0.3s						
T0911				AML	AML		
	comp=N,656μm,0.8s						
T0911				AML	AML		
	comp=E,747μm,0.3s						
T0911				AML	AML		
	comp=N,615μm,0.5s						
T0911				AML	AML		
	comp=N,656μm,0.8s						
T0911				AML	AML		
	comp=E,732μm,0.3s						
T0911				AML	AML		
	comp=E,747μm,0.3s						
T0911				AML	AML		
	comp=N,615μm,0.5s						
T0911				AML	AML		
	comp=N,615μm,0.5s						
T0911				AML	AML		
	comp=E,747μm,0.3s						
T0911				AML	AML		
	comp=E,732μm,0.3s						
T0911				AML	AML		
	comp=N,656μm,0.8s						
VLC	**Villacollemand**	**0.13**	**99**	P	Pg	20 11 11.2	+0.8
VLC				S	Sg	20 11 13.6	+1.0
VLC				AML	AML		
	comp=E,723μm,0.7s						
VLC				AML	AML		
	comp=N,395μm,0.7s						
VLC				AML	AML		
	comp=E,716μm,0.7s						
VLC				AML	AML		
	comp=N,460μm,0.7s						
VLC				AML	AML		
	comp=E,724μm,0.7s						
VLC				AML	AML		
	comp=N,395μm,0.7s						
VLC				AML	AML		
	comp=E,716μm,0.7s						
VLC				AML	AML		
	comp=N,460μm,0.7s						
VLC				AML	AML		
	comp=N,395μm,0.7s						
VLC				AML	AML		
	comp=E,724μm,0.7s						
VLC				AML	AML		
	comp=N,460μm,0.7s						
VLC				AML	AML		
	comp=E,716μm,0.7s						
VLC				AML	AML		
	comp=E,716μm,0.7s						
VLC				AML	AML		
	comp=N,395μm,0.7s						
VLC				AML	AML		
	comp=E,724μm,0.7s						
VLC				AML	AML		
	comp=N,460μm,0.7s						
SARO	**Sassorosso**	**0.14**	**89**	P	Pg	20 11 11.3	+0.7
SARO				S	Sg	20 11 13.7	+0.8
SARO	**Sassorosso**	**0.14**	**89**	P	Pg	20 11 11.3	+0.7
SARO				S	Sg	20 11 13.7	+0.8
SARO				AML	AML		
	comp=E,601μm,0.4s						
SARO				AML	AML		
	comp=N,695μm,0.4s						
SARO				AML	AML		
	comp=E,601μm,0.4s						
SARO				AML	AML		
	comp=N,694μm,0.4s						
SARO				AML	AML		
	comp=E,601μm,0.4s						
SARO				AML	AML		
	comp=N,694μm,0.4s						
SARO				AML	AML		
	comp=E,601μm,0.4s						
SARO				AML	AML		
	comp=N,694μm,0.4s						
CARD	**Cardoso**	**0.25**	**128**	P	Pb	20 11 13.6	-0.6
CARD				S	Sb	20 11 17.4	-1.3
CARD	**Cardoso**	**0.25**	**128**	P	Pb	20 11 13.5	-0.7
CARD				S	Sg	20 11 17.3	+1.3
CARD				AML	AML		
	comp=E,368μm,0.6s						
CARD				AML	AML		
	comp=N,425μm,0.6s						
CARD				AML	AML		
	comp=E,368μm,0.6s						
CARD				AML	AML		
	comp=N,426μm,0.6s						
CARD				AML	AML		
	comp=N,426μm,0.6s						
CARD				AML	AML		
	comp=E,368μm,0.6s						
CARD				AML	AML		
	comp=N,426μm,0.6s						
CARD				AML	AML		
	comp=E,368μm,0.6s						
ERBM	**Eremo**	**0.28**	**32**	P	Pb	20 11 14.1	-0.6
ERBM				S	Sb	20 11 18.5	-1.1
ERBM				AML	AML		
	comp=E,250μm,1.3s						
ERBM				AML	AML		
	comp=N,362μm,1.2s						
ERBM				AML	AML		
	comp=E,250μm,1.3s						
ERBM				AML	AML		
	comp=N,362μm,1.2s						
ERBM				AML	AML		
	comp=N,362μm,1.2s						
ERBM				AML	AML		
	comp=E,250μm,1.3s						
ERBM				AML	AML		
	comp=N,362μm,1.2s						
ERBM				AML	AML		
	comp=E,250μm,1.3s						
BDI	**Bagni Di Lucca**	**0.31**	**113**	P	Pg	20 11 14.2	+0.6
BDI				S	Sb	20 11 19.2	-1.0
BDI				AML	AML		
	comp=E,148μm,1.2s						
BDI				AML	AML		
	comp=N,149μm,0.3s						
BDI				AML	AML		
	comp=E,138μm,0.4s						
BDI				AML	AML		
	comp=N,174μm,0.4s						
BDI				AML	AML		
	comp=N,149μm,0.3s						
BDI				AML	AML		
	comp=E,148μm,1.2s						
BDI				AML	AML		
	comp=N,174μm,0.4s						
BDI				AML	AML		
	comp=E,138μm,0.4s						
BDI				AML	AML		
	comp=N,149μm,0.3s						
BDI				AML	AML		
	comp=N,174μm,0.4s						
BDI				AML	AML		
	comp=E,148μm,1.2s						
BDI				AML	AML		
	comp=E,138μm,0.4s						
GRAM	**Graiana**	**0.33**	**342**	P	Pg	20 11 14.7	+0.7
GRAM				S	Sg	20 11 19.5	+1.2
GRAM	**Graiana**	**0.33**	**342**	P	Pg	20 11 14.7	+0.7
GRAM				S	Sb	20 11 19.6	-1.2
GRAM				AML	AML		
	comp=E,786μm,1.2s						
GRAM				AML	AML		
	comp=N,934μm,1.2s						
GRAM				AML	AML		
	comp=E,786μm,1.2s						
GRAM				AML	AML		
	comp=N,934μm,1.2s						
GRAM				AML	AML		
	comp=N,934μm,1.2s						
GRAM				AML	AML		
	comp=E,786μm,1.2s						
GRAM				AML	AML		
	comp=N,934μm,1.2s						
GRAM				AML	AML		
	comp=E,786μm,1.2s						
MAIM	**Mastiano**	**0.34**	**142**	P	Pb	20 11 15.2	-0.4
MAIM				S	Sb	20 11 19.9	-1.2
MAIM	**Mastiano**	**0.34**	**142**	P	Pb	20 11 15.2	-0.4
MAIM				S	Sb	20 11 19.9	-1.2
MAIM				AML	AML		
	comp=E,250μm,0.4s						
MAIM				AML	AML		
	comp=N,218μm,0.1s						
MAIM				AML	AML		
	comp=E,250μm,0.4s						
MAIM				AML	AML		
	comp=N,218μm,0.1s						
MAIM				AML	AML		
	comp=N,218μm,0.1s						
MAIM				AML	AML		
	comp=E,250μm,0.4s						
MAIM				AML	AML		
	comp=N,218μm,0.1s						
MAIM				AML	AML		
	comp=E,250μm,0.4s						
MTCR	**Monte La Croce**	**0.59**	**105**	P	Pg	20 11 19.4	+0.5

IGQ 23 20:14:11.0±0.5,3°S±3°×7°8W±°,h10km,MLv3.8, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	**Cochancay**	**1.31**	**284**	P	Pn	20 14 33.9	-1.5
APUY	**Puyo**	**1.32**	**359**	S	Sb	20 14 52.7	-0.2
PAT1	**Patacocha**	**1.35**	**340**	P	Pn	20 14 34.0	-2.4
BPAT	**Tungurahua Vol**	**1.35**	**340**	P	Pn	20 14 34.1	-2.2
ARRY	**Arrayan**	**1.35**	**340**	P	Pn	20 14 33.9	-2.5
BMAS	**Trigal station**	**1.37**	**339**	P	Pn	20 14 33.9	-2.6
RETU	**Refugio**	**1.40**	**341**	P	Pn	20 14 34.9	-2.3
BULB	**Ulba Tungurahu**	**1.40**	**342**	P	Pn	20 14 34.6	-2.4
BBIL	**Ulba Tungurahu**	**1.42**	**339**	P	Pn	20 14 35.2	-2.0
POND	**Pondoa**	**1.43**	**341**	P	Pn	20 14 35.3	-2.1
MILO	**Milagro-Astudi**	**1.65**	**288**	P	Pb	20 14 41.0	-0.6
MILO				S	Sg	20 15 03.4	-0.8
PIS1	**Pisayambo**	**1.76**	**347**	P	Pn	20 14 40.7	-1.3
PIS1				S	Sb	20 15 05.6	-0.5
PISA	**Pisayambo**	**1.76**	**347**	P	Pn	20 14 40.9	-1.2
ARDO	**Archidona, Ten**	**1.79**	**6**	P	Pn	20 14 40.8	-1.2
ARDO				S	Sn	20 15 05.6	+0.7
GONZ	**Gonzanam**	**2.02**	**224**	P	Pn	20 14 45.7	+0.2
BMOR	**Cotopaxi Volca**	**2.09**	**347**	P	Pn	20 14 46.8	+0.1
BTAM	**Cotopaxi Volca**	**2.13**	**349**	P	Pn	20 14 47.5	+0.3
BTAM				S	Sb	20 15 17.8	+0.8
COV1	**Cotopaxi Volc**	**2.14**	**350**	P	Pb	20 14 49.2	-1.1
BREF	**Cotopaxi Volca**	**2.15**	**348**	P	Pn	20 14 48.1	+0.5
BVC2	**Cotopaxi Volca**	**2.15**	**348**	P	Pn	20 14 47.9	+0.3
BNAS	**Cotopaxi Volca**	**2.16**	**347**	P	Pn	20 14 48.1	+0.6
VC1	**Cotopaxi 1**	**2.17**	**349**	P	Pn	20 14 48.0	+0.3
ILLI	**Illinizas Sur**	**2.19**	**340**	P	Pn	20 14 48.4	+0.5
PITA	**Cotopaxi Volc**	**2.26**	**348**	P	Pn	20 14 49.9	+1.0
ANTS	**Antisana-Sarah**	**2.28**	**355**	P	Pn	20 14 49.2	0.0
ANTS				S	Sn	20 15 18.8	+1.1
ANTG	**Antisana-Guama**	**2.28**	**353**	P	Pn	20 14 49.1	-0.1
ANTI	**Antisana**	**2.33**	**356**	P	Pn	20 14 49.9	-0.1
ZUMB	**Zumba**	**2.37**	**209**	P	Pn	20 14 50.3	+0.2
ZUMB				S	Sb	20 15 21.4	-1.9
MCRA	**Macar, Loja**	**2.52**	**231**	P	Pn	20 14 49.6	-2.6

TAP 23 20:41:24.5,24°.32N×121°.41E,h7km,ML1.8,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.11**	**346**	*e*P	Pg	20 41 27.6	+0.6
	baz=345						
NNSB				S	Sg	20 41 29.1	+0.3
	baz=345						
NNS	**Nan Shan**	**0.13**	**343**	P	Pg	20 41 27.9	+0.6
	baz=345						
NNS				*e*S	Sg	20 41 29.6	+0.4
	baz=345						
ETLH	**Xiulin Townshi**	**0.13**	**151**	P	Pg	20 41 27.9	+0.7
	baz=160						
ETLH				*e*S	Sg	20 41 29.9	+0.8
	baz=160						
NACB	**Ninganchiao**	**0.22**	**131**	*e*P	Pg	20 41 29.3	+0.5
	baz=131						
NACB				*e*S	Sg	20 41 32.4	+0.6
	baz=131						
WHF	**Hehuan Shan**	**0.22**	**218**	P	Pg	20 41 29.6	+0.6
	baz=205						
WHF				*e*S	Sg	20 41 32.9	+0.9
	baz=205						
TWT	**Tachien**	**0.23**	**253**	*e*P	Pg	20 41 29.7	+0.7
	baz=252						
TWT				*e*S	Sg	20 41 33.5	+1.4
	baz=252						
TWD	**Chiawan**	**0.29**	**145**	*e*P	Pg	20 41 31.0	+0.8
	baz=144						
TWD				*e*S	Sg	20 41 35.3	+1.3
	baz=144						
ENA	**Nanau**	**0.32**	**70**	*e*P	Pg	20 41 31.2	+0.5
	baz=72						
ENA				*e*S	Sg	20 41 34.8	-0.1
	baz=72						
NANB	**Nanao**	**0.33**	**71**	*e*P	Pg	20 41 30.9	0.0
	baz=72						
NANB				*e*S	Sg	20 41 34.8	-0.4
	baz=72						
CHGB	**Renai**	**0.34**	**220**	P	Pg	20 41 31.7	+0.6
	baz=219						
CHGB				*e*S	Sb	20 41 37.2	-1.5
	baz=219						
YHNB	**Yeheng**	**0.35**	**354**	P	Pg	20 41 32.0	+0.7
	baz=355						
YHNB				*e*S	Sg	20 41 36.4	+0.4
	baz=355						
NSK	**Sanguang**	**0.36**	**352**	P	Pg	20 41 32.3	+0.8
	baz=354						
NSK				S	Sg	20 41 37.0	+0.7
	baz=354						
OWD	**Renai**	**0.42**	**211**	*e*P	Pg	20 41 33.0	+0.3
	baz=210						
OWD				*e*S	Sb	20 41 39.9	-1.1
	baz=210						
WHP	**Taichung City**	**0.43**	**265**	*e*P	Pb	20 41 34.4	0.0
	baz=263						
WHP				*e*S	Sb	20 41 40.1	-1.1
	baz=263						
ENLB	**Shoufeng**	**0.45**	**157**	*e*P	Pb	20 41 35.0	+0.3
	baz=157						
ENLB				S	Sg	20 41 39.7	+0.7
	baz=157						
TWE	**Neicheng**	**0.46**	**30**	*e*P	Pg	20 41 33.9	+0.4
	baz=44						
TWC	**Suao**	**0.49**	**54**	*e*P	Pg	20 41 34.2	+0.2
	baz=48						
ESL	**Shilin**	**0.50**	**178**	*e*P	Pb	20 41 35.0	-0.7
	baz=177						
DPDB	**Guoxing**	**0.53**	**237**	*e*P	Pb	20 41 35.8	-0.3
	baz=227						
WLTB	**Daxi**	**0.55**	**345**	*e*S	Sg	20 41 43.1	+0.8
	baz=354						
VWDT	**VWDT**	**0.61**	**204**	*e*P	Pg	20 41 36.8	+0.5
	baz=208						
VWDT				*e*S	Sb	20 41 46.3	-0.1
	baz=208						
SMLT	**Sun Moon Lake**	**0.64**	**227**	*e*P	Pg	20 41 37.3	+0.5
	baz=225						
EGFH	**Guangfu**	**0.65**	**179**	*e*S	Sb	20 41 47.0	-0.3
	baz=178						
NHDH	**Xindian Distri**	**0.65**	**9**	*e*S	Sg	20 41 45.5	0.0
	baz=22						
TATO	**Taipei**	**0.66**	**6**	*e*S	Sg	20 41 45.2	-0.6
	baz=360						
SSLB	**Suanglung**	**0.68**	**219**	*e*P	Pg	20 41 37.8	+0.3
	baz=219						
TCU	**Taichung**	**0.69**	**256**	*e*S	Sb	20 41 49.4	+0.7
	baz=254						
TIPB	**Shuangxi**	**0.75**	**30**	*e*P	Pg	20 41 39.1	+0.2
	baz=17						
WHYT	**Xinyi Township**	**0.80**	**220**	*e*S	Sg	20 41 50.2	-0.2
	baz=218						
HGSD	**Ruisui**	**0.82**	**179**	*e*P	Pg	20 41 39.9	-0.4
	baz=179						
HGSD				*e*S	Sg	20 41 50.2	-0.8
	baz=179						
YM04	**YM04**	**0.84**	**8**	*e*P	Pg	20 41 39.6	-1.0
	baz=22						
YM03	**YM03**	**0.86**	**8**	*e*P	Pg	20 41 39.6	-1.5
	baz=22						
YULB	**Yu-li**	**0.93**	**187**	*e*P	Pb	20 41 43.0	+0.1
	baz=181						
TWF1	**Yuli**	**0.97**	**186**	*e*P	Pb	20 41 43.9	+0.3
	baz=180						

TAP 23 20:41:31.8,24°.32N×121°.42E,h8km,ML2.3,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.12**	**345**	*e*S	Sg	20 41 36.6	+0.2
	baz=344						
ETLH	**Xiulin Townshi**	**0.12**	**151**	*e*S	Sg	20 41 37.5	+1.0
	baz=161						
NNS	**Nan Shan**	**0.13**	**342**	*e*S	Sg	20 41 37.4	+0.7
	baz=345						
NACB	**Ninganchiao**	**0.22**	**131**	*e*P	Pg	20 41 35.9	-0.3
	baz=131						
NACB				*e*S	Sg	20 41 39.5	+0.4
	baz=131						
WHF	**Hehuan Shan**	**0.22**	**219**	*e*P	Pg	20 41 36.9	+0.5
	baz=206						
WHF				*e*S	Sg	20 41 40.3	+0.8
	baz=206						
TWT	**Tachien**	**0.23**	**254**	*e*P	Pg	20 41 37.9	+1.5
	baz=247						
TWT				*e*S	Sg	20 41 41.1	+1.5
	baz=247						
TWD	**Chiawan**	**0.29**	**145**	*e*P	Pb	20 41 38.8	-0.5
	baz=143						
TWD				*e*S	Sg	20 41 42.6	+1.3
	baz=143						
ENA	**Nanau**	**0.32**	**69**	*e*S	Sg	20 41 42.7	+0.4

	baz=71						
NANB	**Nanao**	**0.32**	**70**	*eP*	Pg	20 41 37.9	-0.3
	baz=71						
NANB				*eS*	Sg	20 41 42.5	0.0
	baz=71						
CHGB	**Renai**	**0.34**	**221**	*eP*	Pg	20 41 38.4	-0.1
	baz=220						
CHGB				*eS*	Sg	20 41 44.1	+1.1
	baz=220						
YHNB	**Yeheng**	**0.35**	**354**	*eP*	Pb	20 41 39.6	-0.8
	baz=344						
YHNB				*eS*	Sg	20 41 43.5	0.0
	baz=344						
NSK	**Sanguang**	**0.36**	**352**	*eP*	Pb	20 41 40.2	-0.3
	baz=355						
NSK				*eS*	Sg	20 41 43.8	0.0
	baz=355						
HWA	**Hwalien**	**0.38**	**153**	*eS*	Sb	20 41 46.1	-0.8
	baz=151						
OWD	**Renai**	**0.42**	**211**	*eP*	Pg	20 41 40.8	+0.7
	baz=210						
OWD				*eS*	Sg	20 41 46.1	+0.5
	baz=210						
WHP	**Taichung City**	**0.43**	**265**	*eP*	Pb	20 41 42.0	+0.2
	baz=263						
WHP				*eS*	Sb	20 41 47.6	-0.9
	baz=263						
ENLB	**Shoufeng**	**0.45**	**158**	*eS*	Sg	20 41 46.2	-0.1
	baz=157						
TWE	**Neicheng**	**0.46**	**30**	*eP*	Pb	20 41 41.7	-0.6
	baz=46						
TWE				*eS*	Sg	20 41 47.6	+0.7
	baz=46						
LIOB	**Emei**	**0.49**	**312**	*eP*	Pb	20 41 42.3	-0.4
	baz=312						
LIOB				*eS*	Sg	20 41 48.6	+0.9
	baz=312						
TWC	**Suao**	**0.49**	**54**	*eP*	Pg	20 41 41.9	+0.6
	baz=48						
TWC				*eS*	Sg	20 41 48.1	+0.4
	baz=48						
TWC	**Suao**	**0.49**	**54**	*eS*	Pg	20 41 41.9	+0.6
	baz=48						
NSTT	**Nanjuang**	**0.49**	**310**	*eP*	Pb	20 41 42.8	0.0
	baz=310						
NSTT				*eS*	Sb	20 41 49.1	-1.0
	baz=310						
ESL	**Shilin**	**0.50**	**178**	*eP*	Pb	20 41 42.8	-0.1
	baz=176						
ESL				*eS*	Sg	20 41 48.6	+0.5
	baz=176						
DPDB	**Guoxing**	**0.53**	**238**	*eP*	Pb	20 41 43.3	-0.1
	baz=228						
DPDB				*eS*	Sg	20 41 49.9	+0.9
	baz=228						
DPDB	**Guoxing**	**0.53**	**238**	*eS*	Pb	20 41 43.1	-0.3
	baz=227						
WLTB	**Daxi**	**0.55**	**344**	*eP*	Pg	20 41 42.5	0.0
	baz=355						
WLTB				*eS*	Sb	20 41 52.4	+0.5
	baz=355						
NMLH	**Miaoli**	**0.61**	**291**	*eS*	Sb	20 41 53.4	-0.2
	baz=290						
VWDT	**VWDT**	**0.61**	**204**	*eP*	Pg	20 41 43.7	0.0
	baz=208						
VWDT				*eS*	Sg	20 41 52.0	+0.3
	baz=208						
SBCB	**Hsinchu**	**0.61**	**320**	*eS*	Sb	20 41 52.9	-0.8
	baz=321						
SMLT	**Sun Moon Lake**	**0.64**	**228**	*eP*	Pb	20 41 45.0	-0.3
	baz=226						
SMLT				*eS*	Sg	20 41 53.4	+0.9
	baz=226						
SMLT	**Sun Moon Lake**	**0.64**	**228**	*eS*	Pb	20 41 45.4	+0.1
	baz=225						
EGFH	**Guangfu**	**0.65**	**179**	*eP*	Pg	20 41 44.8	+0.5
	baz=178						
EGFH				*eS*	Sg	20 41 52.8	+0.1
	baz=178						
NHDH	**Xindian Distri**	**0.65**	**9**	*eP*	Pg	20 41 43.5	-0.8
	baz=22						
NHDH				*eS*	Sg	20 41 53.5	+0.7
	baz=22						
NTC	**Toucheng**	**0.65**	**35**	*eS*	Sg	20 41 53.7	+0.7
	baz=46						
TYC	**Yuchr**	**0.66**	**231**	*eP*	Pb	20 41 45.4	-0.2
	baz=229						
TYC				*eS*	Sg	20 41 53.4	+0.4
	baz=229						
SSLB	**Suanglung**	**0.68**	**219**	*eP*	Pg	20 41 44.7	-0.2
	baz=217						
SSLB				*eS*	Sg	20 41 54.3	+0.6
	baz=217						
TWA	**Mucha**	**0.68**	**13**	*eP*	Pb	20 41 46.0	+0.1
	baz=27						
TWA				*eS*	Sb	20 41 55.1	-0.4
	baz=27						
EOS1	**EOS1**	**0.69**	**70**	*eP*	Pb	20 41 46.0	-0.1
	baz=63						
EOS1				*eS*	Sb	20 41 56.1	+0.3
	baz=63						
EGS		**0.70**	**42**	*eP*	Pg	20 41 44.6	-0.8
	baz=55						
EGS				*eS*	Sg	20 41 54.9	+0.3
	baz=55						
TIPB	**Shuangxi**	**0.75**	**30**	*eP*	Pg	20 41 45.9	-0.4
	baz=20						
TIPB				*eS*	Sg	20 41 56.3	+0.3
	baz=20						
WJS	**Zhushan**	**0.80**	**232**	*eP*	Pn	20 41 50.3	+0.9
	baz=226						
WNT	**Mingjian**	**0.80**	**237**	*eP*	Pn	20 41 50.4	+0.9
	baz=229						
WNT				*eS*	Sb	20 41 59.0	+0.1
	baz=229						
EHY	**Hungye**	**0.81**	**186**	*eP*	Pb	20 41 48.5	+0.3
	baz=179						
EHY				*eS*	Sg	20 41 58.1	+0.1
	baz=179						
HGSD	**Ruisui**	**0.82**	**179**	*eP*	Pg	20 41 47.0	-0.6
	baz=184						
HGSD				*eS*	Sb	20 42 00.5	+0.9
	baz=184						
YM01	**YM01**	**0.84**	**10**	*eP*	Pn	20 41 49.6	-0.5
	baz=10.0						
YM04	**YM04**	**0.84**	**7**	*eP*	Pb	20 41 48.5	-0.2
	baz=23						
YM05	**YM05**	**0.85**	**9**	*eP*	Pn	20 41 49.6	-0.6
	baz=26						
YM05				*eS*	Sb	20 42 00.1	-0.5
	baz=26						
TWB1	**Santiao Chiao**	**0.86**	**37**	*eP*	Pb	20 41 49.3	+0.2
	baz=47						
TWB1				*eS*	Sg	20 41 59.0	-0.7
	baz=47						
YM03	**YM03**	**0.87**	**7**	*eP*	Pb	20 41 49.7	+0.5
	baz=24						
YM03				*eS*	Sb	20 42 01.1	+0.1
	baz=24						
ANP	**Anpu**	**0.87**	**6**	*eP*	Pn	20 41 50.2	-0.3
	baz=22						
YM08	**YM08**	**0.88**	**10**	*eP*	Pn	20 41 50.2	-0.4
	baz=11						
YULB	**Yu-li**	**0.93**	**187**	*eP*	Pb	20 41 50.3	+0.2
	baz=193						
YULB				*eS*	Sb	20 42 02.2	-0.4
	baz=193						
YUS	**Yu-Shan**	**0.93**	**207**	*eP*	Pb	20 41 50.2	-0.2
	baz=213						
YUS				*eS*	Sn	20 42 04.5	-0.9
	baz=213						
TWF1	**Yuli**	**0.97**	**186**	*eP*	Pn	20 41 51.3	-0.4
	baz=191						
TWF1				*eS*	Sb	20 42 04.1	+0.3
	baz=191						
WDLH	**Douliu**	**1.02**	**232**	*eS*	Sn	20 42 08.5	+1.6
	baz=230						
ELDTW	**Lidau**	**1.18**	**198**	*eP*	Pn	20 41 55.3	+0.5
	baz=185						
ELDTW				*eS*	Sn	20 42 10.8	-0.4
	baz=185						
CHKT	**Chengkung**	**1.21**	**182**	*eS*	Sn	20 42 11.6	-0.1
	baz=166						
TWK	**Hsinying**	**1.35**	**219**	*eP*	Pg	20 41 59.2	+1.5
	baz=216						
TWK				*eS*	Sg	20 42 17.8	+2.6
	baz=216						
SNST	**Tainan City**	**1.38**	**218**	*eP*	Pg	20 41 59.8	+1.5
	baz=215						
SNST				*eS*	Sg	20 42 18.3	+2.1
	baz=215						
CHN1	**Nanshi**	**1.39**	**216**	*eP*	Pg	20 42 00.4	+1.9
	baz=213						
CHN1				*eS*	Sg	20 42 19.5	+2.9
	baz=213						
SGST	**Jiashian**	**1.45**	**212**	*eP*	Pg	20 42 01.0	+1.4
	baz=208						
SGST				*eS*	Sg	20 42 20.9	+2.5
	baz=208						
SLGT	**Liugui**	**1.50**	**208**	*eP*	Pg	20 42 02.2	+1.7
	baz=195						
SLGT				*eS*	Sg	20 42 21.9	+2.0
	baz=195						
SSD	**Sandimen**	**1.72**	**205**	*eS*	Sg	20 42 27.8	+0.6
	baz=200						
MASBT	**Mashibuluo**	**1.84**	**203**	*eP*	Pg	20 42 06.6	-0.6
	baz=198						
MASBT				*eS*	Sg	20 42 31.4	+0.4
	baz=198						

*IDC **23** 20:41:38.4±3.5, 4°.84S×153°.54E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/39, mbtmp3.8/5, Error ellipse: s-maj=106.6km s-min=28.4km az=105.0*
*NEIC **23** 20:41:40.0±2.8, 4°.89S×153°.76E, h22km±6km, mb4.4/11, Error ellipse: s-maj=26.1km s-min=8.8km az=217.0*
*ISCJB **23** 20:41:43.2±0.8, 4°.85S±0°.08×153°.5E±0°.1, h56km, Error ellipse: s-maj=18.5km s-min=11.0km az=161.7*

ISC 23 20:41:44.8±1.0, 4°.9S±0°.1×153°.5E±0.2, h56km, n22, σ1§54/21, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.50**	**299**	*ePn*	**Pn**	**20 42 06.9**	**-2.5**
MANU	**Manus Island**	**6.74**	**295**	*ePn*	**Pn**	**20 43 20.2**	**-0.9**
HNR	**Honiara**	**7.83**	**125**	*ePn*	Pn	20 43 26.3	-10
EIDS	**Eidsvold**	**20.46**	**186**	*eP*	**P**	**20 46 17.3**	**-0.6**
	3.0nm,1.0s						
WB2	**Warramunga Arr**	**23.87**	**230**	*eP*	**P**	**20 46 55.0**	**+1.7**
	4.9nm,0.9s						
WR1	**Warramunga Arr**	**23.87**	**230**	*eP*	**P**	**20 46 55.0**	**+1.6**
WRA	**Warramunga Arr**	**23.88**	**230**	P	**P**	**20 46 55.0**	**+1.6**
	3.2nm,0.4s,baz=53,slow=9.6,SNR=25						
AS31	**Alice Springs**	**26.52**	**223**	*eP*	**P**	**20 47 19.1**	**+1.7**
	1.0nm,1.0s						
ASAR	**Alice Springs**	**26.52**	**223**	P	**P**	**20 47 19.1**	**+1.7**
	0.5nm,0.5s,baz=53,slow=9.1,SNR=9.8						
FITZ	**Fitzroy Crossi**	**30.19**	**242**	*eP*	**P**	**20 47 50.5**	**+0.3**
	3.0nm,0.7s						
KKM	**Kota Kinabalu**	**38.77**	**286**	*eP*	**P**	**20 49 03.3**	**-1.1**
	15nm,1.1s						
BKZ	**Black Stump Fm**	**39.96**	**152**	*eP*	**P**	**20 49 11.4**	**-2.5**
	13nm,1.0s						
WHZ	**Wether Hill Ro**	**42.71**	**165**	*eP*	**P**	**20 49 36.7**	**+0.4**
	9.9nm,1.0s						
JNU	**Nakatsue**	**43.48**	**332**	*eP*	**P**	**20 49 41.6**	**-1.2**
	4.7nm,1.0s						
CM31	**Chiang Mai Arr**	**58.54**	**295**	*eP*	**P**	**20 51 36.7**	**+0.6**
	4.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.54**	**295**	P	**P**	**20 51 36.7**	**+0.6**
	0.4nm,0.6s,baz=117,slow=6.3,SNR=4.4						
SONA0	**Songino Array**	**66.79**	**328**	*eP*	**P**	**20 52 32.7**	**+2.1**
SONM	**Songino Array**	**66.79**	**328**	P	**P**	**20 52 32.7**	**+2.1**
	0.3nm,0.3s,baz=142,slow=7.2,SNR=2.8						
MK32	**Makanchi Array**	**80.86**	**319**	*eP*	**P**	**20 53 53.9**	**+0.9**
MKAR	**Makanchi Array**	**80.86**	**319**	P	**P**	**20 53 53.9**	**+0.9**
	0.5nm,0.8s,baz=123,slow=5.3,SNR=2.9						
TORD	**Torodi Ar. Bea**	**150.99**	**288**	PKPbc	**PKiKP**	**21 01 33.7**	**+0.6**
	1.1nm,0.8s,baz=94,slow=3.4,SNR=5.9						
TOA1	**Torodi Ar. Sit**	**150.99**	**288**	*e*PKPbc	**PKiKP**	**21 01 33.7**	**+0.6**

UCR 23 20:44:25.2±1.4, 9°.95N×85°.68W, h12km±5km, MD3.8, 2C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.71**	**12**	*i P*	Pg	20 44 39.0	0.0
JTS	**Las Juntas de**	**0.79**	**65**	*eP*	Pg	20 44 39.7	-0.9
JTS				*eS*	Sb	20 44 51.8	+0.1
LAPC	**Finca la Perla**	**0.84**	**17**	*i P*	Pg	20 44 40.6	-1.0
COLC	**Colonia**	**0.85**	**34**	*i P*	Pg	20 44 40.9	-0.7
COLC				*i S*	Sg	20 44 53.0	+0.2
BUEV	**Buena Vista**	**0.88**	**18**	*eP*	Pg	20 44 41.5	-0.8
BUEV				*eS*	Sb	20 44 54.2	-0.1
GB1A	**Borinquen Arri**	**0.90**	**18**	*i P*	Pg	20 44 41.9	-0.8
GB1A				*eS*	Sg	20 44 54.5	-0.1
MESS	**Mesas**	**0.92**	**31**	*i P*	Pg	20 44 41.9	-1.1
MESS				*eS*	Sg	20 44 55.1	+0.1
ACAL	**Aguas Claras**	**0.93**	**43**	*i P*	Pg	20 44 42.6	-0.6
AMAS	**Alto Masis**	**0.94**	**46**	*i P*	Pg	20 44 42.5	-1.0
ARE1	**Arenal 1**	**1.07**	**62**	*eP*	Pb	20 44 44.9	-0.8
ARE1				*eS*	Sg	20 45 00.3	+0.4
CEDE	**Laguna Cedeo**	**1.10**	**61**	*eP*	Pb	20 44 45.6	-0.6
CEDE				*eS*	Sg	20 45 01.0	+0.3
SRA1	**San Ramn**	**1.19**	**84**	*eP*	Pb	20 44 46.3	-1.5
SRA1				*eS*	Sb	20 45 02.7	-0.5
HDC	**Heredia**	**1.54**	**88**	*eP*	Pn	20 44 52.1	-0.6
HDC				*eS*	Sb	20 45 14.0	+0.5
LCR2	**La Lucha 2**	**1.67**	**97**	*eP*	Pn	20 44 53.3	-1.1
ACON	**Acoyapa**	**2.06**	**14**	*eP*	Pn	20 44 59.4	-0.3
ESPN	**Las Esperanzas**	**2.61**	**31**	*eP*	Pn	20 45 05.7	-1.5

*NIED **23** 20:44:00, 37°.40N×142°.50E, h23km, Mw3.7 Best double couple: M0 4.16000×10^14 NP1:φs189.00000°, δ32.00000°, λ50.00000°. NP2:φs53.00000°, δ66.00000°, λ112.00000°.*
*IDC **23** 20:44:51.4±1.6, 37°.42N×142°.92E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.5/52, mbtmp3.7/8, ML2.9/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/50, Error ellipse: s-maj=38.7km s-min=21.9km az=72.0*
*JMA **23** 20:44:55.7±0.2, 37°.36N×142°.48E, h15km±4km, M3.6*
*NEIC **23** 20:44:57.1±2.2, 37°.50N×142°.85E, h38km±9km, mb4.1/7, Error ellipse: s-maj=19.3km s-min=15.2km az=125.0*

ISC 23 20:44:53.8±3.6, 37°.37N±0°.05×142°.58E±0°.07, h12km±22km, n39, σ1§82/46, mb3.9/13, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.29**	**317**	P	**Pn**	**20 45 18.2**	**+0.5**
JIKH				*eS*	**Sb**	**20 45 34.5**	**-0.1**
JFK	**Kawauchi**	**1.36**	**270**	P	**Pn**	**20 45 18.7**	**0.0**
JFK				*eS*	**Sb**	**20 45 35.1**	**-1.6**
ONAJ	**Iwakimizuishiy**	**1.45**	**260**	P	**Pn**	**20 45 19.9**	**0.0**
ONAJ				*eS*	**Sn**	**20 45 37.5**	**-1.4**
JIO	**Ouri**	**1.46**	**318**	P	**Pn**	**20 45 20.9**	**+0.9**
JIO				*eS*	**Sn**	**20 45 39.2**	**+0.1**
JMM	**Marumori**	**1.51**	**290**	P	**Pn**	**20 45 21.1**	**+0.4**
JMM				*eS*	**Sn**	**20 45 39.6**	**-0.6**
JFT	**Otama**	**1.79**	**275**	P	**Pb**	**20 45 26.1**	**-0.5**
JFT				*eS*	**Sb**	**20 45 48.0**	**-1.1**
JOU	**Okura**	**1.82**	**304**	P	**Pb**	**20 45 26.6**	**-0.4**
JOU				*eS*	**Sb**	**20 45 48.8**	**-1.0**
JMK	**Ichinoseki**	**1.91**	**326**	P	**Pn**	**20 45 27.7**	**+1.5**
JMK				*eS*	**Sn**	**20 45 51.5**	**+1.3**
JYS	**Shirataka**	**2.17**	**294**	P	**Pn**	**20 45 31.5**	**+1.7**
JYS				S	**Sb**	**20 45 59.0**	**-0.9**
JFY	**Yanaizu**	**2.29**	**272**	P	**Pn**	**20 45 33.1**	**+1.6**
JFY				S	**Sb**	**20 46 01.0**	**-2.5**
JYK	**Kaneyama**	**2.34**	**312**	P	**Pn**	**20 45 33.9**	**+1.8**
MJAR	**Matsushiro Arr**	**3.60**	**258**	Pn	**Pn**	**20 45 53.4**	**+4.0**
	0.2nm,0.3s,baz=79,slow=16,SNR=6.1						
MJAR				Sn	**Sb**	**20 46 38.9**	**-2.2**
	0.2nm,0.3s,baz=321,slow=19,SNR=6.0						
MJAR				LR	LR	20 47 25.8	
	comp=Z,72nm,18.5s,baz=100,slow=40						
MAJO	**Matsushiro**	**3.60**	**258**	*ePn*	**Pn**	**20 45 53.7**	**+4.2**
MAJO				*e*Sn	**Sb**	**20 46 38.9**	**-2.3**
MAT	**Matsushiro**	**3.60**	**258**	P	**Pn**	**20 45 53.2**	**+3.7**
MAT				*eS*	**Sn**	**20 46 34.5**	**+2.5**
MJB9	**Matsu-Tunnel**	**3.60**	**258**	*ePn*	**Pn**	**20 45 53.7**	**+4.2**
ERM	**Erimo**	**4.66**	**5**	*ePn*	**Pn**	**20 46 01.4**	**-2.7**
JHJ	**Hachijo jima 2**	**4.82**	**209**	Pn	**Pn**	**20 46 05.9**	**-0.3**
	7.5nm,0.3s,baz=60,slow=20,SNR=3.3						
JHJ				Sn	**Sn**	**20 46 58.6**	**-3.3**
	8.0nm,0.3s,baz=246,slow=20,SNR=3.9						
SSLB	**Suanglung**	**22.95**	**240**	*eP*	**P**	**20 49 59.6**	**+1.5**
	7.6nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**27.53**	**123**	T	T	21 19 27.1	
	baz=315,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**27.54**	**123**	T	T	21 19 27.7	
	baz=315,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	**27.55**	**123**	T	T	21 19 28.8	
	baz=315,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**28.27**	**125**	T	T	21 20 27.8	
	baz=317,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.27**	**125**	T	T	21 20 25.8	
	baz=317,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.29**	**125**	T	T	21 20 28.8	
	baz=317						
SONA0	**Songino Array**	**28.38**	**303**	*eP*	**P**	**20 50 48.1**	**+0.1**
SONM	**Songino Array**	**28.38**	**303**	P	**P**	**20 50 48.1**	**+0.1**
	0.5nm,0.5s,baz=91,slow=7.6,SNR=5.5						
ZAA0	**Zalesovo Array**	**42.38**	**312**	*eP*	**P**	**20 52 46.0**	**-1.8**
	2.0nm,1.1s						
MK32	**Makanchi Array**	**44.73**	**302**	*eP*	**P**	**20 53 07.9**	**+1.0**
MKAR	**Makanchi Array**	**44.73**	**302**	P	**P**	**20 53 07.9**	**+1.0**
	0.5nm,0.7s,baz=75,slow=9.2,SNR=4.9						
CAST	**Castle Rocks**	**46.42**	**34**	*eP*	**P**	**20 53 18.4**	**-1.6**
	3.6nm,1.2s						
KURK	**Kurchatov**	**46.46**	**308**	*eP*	**P**	**20 53 20.9**	**+0.4**
	1.4nm,0.6s						
KURBB	**Kurchatov Arra**	**46.53**	**308**	P	**P**	**20 53 21.8**	**+0.7**
	1.0nm,0.4s,baz=81,slow=8.1,SNR=8.6						
SML	**Sawmill**	**48.17**	**37**	*eP*	P	20 53 30.6	-3.1
	4.3nm,0.8s						
WR1	**Warramunga Arr**	**57.53**	**189**	*eP*	**P**	**20 54 43.0**	**-0.2**
WRA	**Warramunga Arr**	**57.53**	**189**	P	**P**	**20 54 43.0**	**-0.2**
	1.0nm,0.8s,baz=12,slow=7.8,SNR=2.6						
AS31	**Alice Springs**	**61.26**	**189**	*eP*	**P**	**20 55 09.6**	**+0.7**
	0.7nm,0.9s						
ASAR	**Alice Springs**	**61.26**	**189**	P	**P**	**20 55 09.6**	**+0.7**
	0.4nm,0.7s,baz=13,slow=8.4,SNR=4.1						
AKASG	**Malin Array Be**	**74.60**	**323**	P	**P**	**20 56 33.0**	**+0.4**
	0.4nm,0.4s,baz=49,slow=6.2,SNR=4.7						
AKBB	**Malin Array Si**	**74.60**	**323**	*eP*	**P**	**20 56 33.0**	**+0.4**
	1.4nm,0.9s						

UCR 23 20:50:54.5±1.6, 9°.91N×85°.68W, h8km±5km, MD3.7, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.75**	**11**	*i P*	Pg	20 51 09.3	+0.4
JTS	**Las Juntas de**	**0.81**	**62**	*eP*	Pg	20 51 09.7	-0.4
JTS				*eS*	Sb	20 51 22.6	+0.6
COLC	**Colonia**	**0.88**	**32**	*i P*	Pg	20 51 10.9	-0.6
LAPC	**Finca la Perla**	**0.89**	**16**	*i P*	Pg	20 51 10.8	-0.7
LIM1	**Limonal**	**0.89**	**28**	*i P*	Pg	20 51 10.9	-0.7
GBS3	**Finca Las Img**	**0.89**	**14**	*i P*	Pg	20 51 10.8	-0.9
GPS2	**Hotel Rincn d**	**0.90**	**21**	*i P*	Pg	20 51 11.1	-0.6
CUI	**Cuipilapa**	**0.90**	**34**	*i P*	Pg	20 51 11.3	-0.6
GUAB	**Guayabo de Bag**	**0.91**	**29**	*i P*	Pg	20 51 11.1	-0.8
BUEV	**Buena Vista**	**0.92**	**17**	*eP*	Pg	20 51 11.3	-0.9
BUEV				*eS*	Sb	20 51 25.1	-0.2
GB1A	**Borinquen Arri**	**0.94**	**17**	*eP*	Pg	20 51 11.9	-0.8
GB1A				*eS*	Sg	20 51 24.8	-0.1
MESS	**Mesas**	**0.95**	**30**	*eP*	Pg	20 51 12.0	-0.9
MESS				*eS*	Sb	20 51 25.9	-0.3
ACAL	**Aguas Claras**	**0.96**	**41**	*i P*	Pg	20 51 12.3	-0.6
ARE1	**Arenal 1**	**1.09**	**60**	*eP*	Pg	20 51 14.8	-0.7
ARE1				*eS*	Sn	20 51 31.1	-0.5
CEDE	**Laguna Cedeo**	**1.12**	**59**	*eP*	Pg	20 51 15.7	-0.3
CEDE				*eS*	Sg	20 51 30.4	-0.1
LCR2	**La Lucha 2**	**1.66**	**96**	*eP*	Pn	20 51 23.8	-0.4
LCR2				*eS*	Sn	20 51 44.8	-1.1
ACON	**Acoyapa**	**2.10**	**14**	*eP*	Pn	20 51 31.3	+1.2
DRK0	**Durika**	**2.49**	**105**	*eP*	Pb	20 51 39.9	+0.3
DRK0				*eS*	Sn	20 52 05.4	-0.9

WEL 23 20:51:27.0±1.2, 36°S±14°×17°9W±1°6, h33km, M3.7/12, ML3.9/12, MLv3.7/12, Error ellipse: s-maj=0.0km s-min=0.0km az=130.1, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.39**	**228**	P	Pn	20 52 03.0	-0.8
MXZ				S	Sn	20 52 32.0	+0.1
WMGZ	**Waiomatatini S**	**2.50**	**222**	P	Pn	20 52 05.9	+0.6
WMGZ				S	Sn	20 52 36.3	+1.6
PUZ	**Puketiti**	**2.77**	**221**	P	Pn	20 52 08.7	-0.4
PUZ				S	Sn	20 52 41.6	+0.1
HAZ	**Te Kaha**	**2.83**	**231**	P	Pn	20 52 10.4	+0.6
HAZ				S	Sn	20 52 45.3	+2.4
TWGZ	**Tauwhareparae**	**3.00**	**222**	P	Pn	20 52 12.4	+0.2
TWGZ				S	Sn	20 52 48.9	+1.9
RUGZ	**Raukumara Rang**	**3.03**	**228**	P	Pn	20 52 13.1	+0.4
CNGZ	**Carnagh Statio**	**3.12**	**216**	P	Pn	20 52 14.1	+0.4
CNGZ				S	Sn	20 52 51.5	+1.7
MWZ	**Matawai**	**3.36**	**225**	P	Pn	20 52 17.4	+0.1
MWZ				S	Sn	20 52 55.4	-0.6
RAGZ	**Rawiri**	**3.54**	**224**	P	Pn	20 52 19.8	+0.2
RAGZ				S	Sn	20 52 59.8	-0.6
URZ	**Urewera**	**3.56**	**229**	P	Pn	20 52 19.5	-0.4
URZ				S	Sn	20 53 00.6	-0.2
SNGZ	**Shannon Statio**	**3.78**	**221**	P	Pn	20 52 23.2	+0.3
MTHZ	**Maungataniwha**	**4.11**	**225**	P	Pn	20 52 27.2	-0.3
MKAZ	**Moumakai**	**4.47**	**254**	P	Pn	20 52 33.1	+0.6
BHHZ	**Black Hill Sta**	**4.99**	**224**	P	Pn	20 52 38.4	-1.1

*NIED **23** 20:55:00, 27°.10N×143°.90E, h5km, Mw4.0 Best double couple: M0 1.21000×10^15 NP1:φs315.00000°, δ30.00000°, λ-73.00000°. NP2:φs116.00000°, δ62.00000°, λ-99.00000°.*
*IDC **23** 20:55:40.9±0.6, 26°.73N×143°.82E, h0km, mb4.0/17, mb1 4.2/20, mb1mx4.1/42, mbtmp4.0/20, ML3.5/3, Error ellipse: s-maj=18.8km s-min=15.3km az=73.0*
*JMA **23** 20:55:42.6±0.5, 27°.13N×143°.86E, h0km, M4.2*
*ISCJB **23** 20:55:44.1±0.3, 26°.71N±0°.05×143°.86E±0°.06, h35km, mb4.3/41, Error ellipse: s-maj=8.0km s-min=7.3km az=17.9*
*NEIC **23** 20:55:49.6±1.9, 26°.67N×143°.75E, h68km±5km, mb4.3/30, Error ellipse: s-maj=15.9km s-min=14.7km az=71.0*

ISC 23 20:55:46.2±0.5, 26°.85N±0°.06×143°.81E±0°.06, h35km, n67, σ1§92/68, mb4.3/41, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.47**	**280**	P	**Pn**	**20 56 11.2**	**+1

1.8nm,1.0s
CTAO Charters Tower 46.72 177 *e*P **P 21 04 07.3 -4.5**
12nm,1.1s
WB2 Warramunga Arr 47.41 192 *e*P **P 21 04 16.6 -0.7**
8.3nm,0.7s
WR1 Warramunga Arr 47.41 192 *e*P **P 21 04 16.5 -0.8**
WRA Warramunga Arr 47.41 192 P **P 21 04 16.5 -0.8**
6.1nm,0.5s,baz=7.3,slow=8.3,SNR=50
CHGN Chignik 50.32 38 *e*P **P 21 04 38.4 -0.8**
71nm,0.8s
ZALV Zalesovo Beam 50.62 319 P **P 21 04 41.3 -0.3**
1.1nm,0.7s,baz=1.4,slow=6.1,SNR=4.0
ZAA1 Zalesovo Array 50.62 319 *e*P **P 21 04 41.3 -0.3**
AS31 Alice Springs 51.12 192 *e*P **P 21 04 44.5 -1.2**
0.7nm,0.6s
ASAR Alice Springs 51.12 192 P **P 21 04 44.5 -1.2**
0.8nm,0.6s,baz=13,slow=6.4,SNR=18
KEKH Kekaha 51.31 82 *e*P **P 21 04 46.9 -0.4**
95nm,1.1s
MK31 Makanchi Array 51.75 310 *e*P **P 21 04 51.5 +1.3**
3.7nm,0.9s
MK32 Makanchi Array 51.75 310 *e*P **P 21 04 51.0 +0.8**
MKAR Makanchi Array 51.75 310 P **P 21 04 51.0 +0.8**
2.5nm,0.7s,baz=91,slow=8.6,SNR=17
MAKZ Makanchi 51.96 310 *e*P **P 21 04 53.2 +1.4**
4.7nm,0.9s
KURK Kurchatov 54.19 315 *e*P **P 21 05 08.7 +0.6**
2.2nm,0.6s
GLI Glacier Island 56.79 33 *e*P **P 21 05 31.0 +4.3**
12nm,0.6s
ILAR Eielson Array 57.24 28 P **P 21 05 31.1 +1.4**
0.5nm,0.8s,baz=265,slow=6.0,SNR=4.9
ILB Eielson Array 57.24 28 *e*P **P 21 05 31.1 +1.4**
1.9nm,1.1s
STKA Stephens Creek 58.44 182 P **P 21 05 37.1 -1.3**
1.6nm,0.7s,baz=328,slow=11,SNR=2.9
BRVK Borovoye 59.26 318 *e*P **P 21 05 45.2 +1.1**
2.3nm,0.8s
KK31 Karatay Array 60.40 306 *e*P **P 21 05 53.0 +0.9**
4.1nm,0.9s
KKAR Karatay Array 60.40 306 *e*P **P 21 05 53.0 +0.9**
4.1nm,0.9s
ABKAR Akbulak array 66.30 315 *e*P **P 21 06 31.6 +0.7**
2.3nm,0.9s
YKA Yellowknife Ar 71.67 29 P **P 21 07 03.6 -0.4**
0.7nm,0.7s,baz=291,slow=5.8,SNR=7.4
YKB5 Yellowknife Ar 71.67 29 *e*P **P 21 07 03.6 -0.4**
ARA0 ARCESS Array S 74.24 341 *e*P **P 21 07 20.5 +1.2**
ARCES ARCESS Array B 74.24 341 P **P 21 07 20.5 +1.2**
8.7nm,0.4s,baz=49,slow=7.3,SNR=3.0
YBH Yreka Blue Hor 75.09 51 P **P 21 07 26.9 +2.1**
1.2nm,0.6s,baz=20,slow=4.7,SNR=4.3
BEKR Beckworth 77.47 52 *e*P **P 21 07 38.3 -0.2**
4.1nm,0.7s
CMB Columbia Colle 78.21 53 *e*P **P 21 07 42.4 0.0**
2.7nm,0.6s
FIA0 FINESS Array S 78.80 334 *e*P **P 21 07 46.3 +1.2**
FINES FINESS Array B 78.80 334 P **P 21 07 46.3 +1.2**
1.1nm,0.8s,baz=50,slow=6.0,SNR=5.1
KBZ Khabaz 79.23 314 P **P 21 07 49.1 +1.3**
3.6nm,0.7s,baz=78,slow=5.3,SNR=13
NVAR Mina Array Bea 79.53 52 P **P 21 07 49.4 -0.5**
1.9nm,0.7s,baz=289,slow=6.2,SNR=12
PD31 Pinedale Array 83.36 45 *e*P **P 21 08 11.1 +1.0**
2.5nm,0.5s
PDAR Pinedale Array 83.36 45 P **P 21 08 10.7 +0.6**
0.8nm,0.8s,baz=310,slow=3.5,SNR=6.6
AKASG Malin Array Be 83.67 324 P **P 21 08 09.6 -1.5**
0.2nm,0.3s,baz=46,slow=5.5,SNR=4.4
AKBB Malin Array Si 83.67 324 *e*P **P 21 08 09.6 -1.5**
2.2nm,0.8s
PV04 Paradox Valley 86.03 49 *e*pP pP 21 08 40.2 +7.3
BRTR Keskin Array B 87.23 314 P **P 21 08 28.4 -0.9**
0.7nm,0.8s,baz=71,slow=2.9,SNR=5.6
LENM Lemitar 89.58 52 *e*pP pP 21 08 57.0 +7.0
TXAR Lajitas Array 94.58 54 P **P 21 09 05.8 +2.0**
0.1nm,0.4s,baz=332,slow=3.1,SNR=3.0
PLCA Paso Flores 148.48 125 PKPbc **PKPbc 21 15 28.4 -0.9**
0.5nm,0.6s,baz=230,slow=14,SNR=3.0
LPAZ La Paz 148.58 77 PKPbc **PKPbc 21 15 30.7 -0.2**
2.1nm,0.7s,baz=204,slow=5.7,SNR=11

TAP 23 21:07:11.9,24°.49N×121°.95E,h11km±1km,ML2.1,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.15**	**322**	P	Pb	21 07 16.3	-0.4
	baz=324						
TWC				S	Sg	21 07 18.4	+0.8
	baz=324						
EOS1	**EOS1**	**0.17**	**71**	P	Pb	21 07 16.6	-0.6
	baz=71						
EOS1				S	Sg	21 07 19.8	+1.5
	baz=71						
NANB	**Nanao**	**0.19**	**250**	P	Pb	21 07 17.3	-0.2
	baz=249						
NANB				S	Sg	21 07 20.1	+1.3
	baz=249						
ENA	**Nanau**	**0.20**	**251**	P	Pb	21 07 17.4	-0.2
	baz=249						
ENA				S	Sg	21 07 20.4	+1.4
	baz=249						
TWE	**Neicheng**	**0.34**	**312**	*e*P	Pb	21 07 20.1	+0.1
	baz=312						
TWE				*e*S	Sb	21 07 24.9	-0.6
	baz=312						
NACB	**Ninganchiao**	**0.45**	**225**	*e*P	Pb	21 07 21.8	-0.1
	baz=225						
NACB				*e*S	Sb	21 07 28.0	-0.7
	baz=225						
TIPB	**Shuangxi**	**0.49**	**347**	P	Pb	21 07 22.7	+0.1
	baz=346						
TIPB				*e*S	Sb	21 07 29.1	-0.7
	baz=346						
ETLH	**Xiulin Townshi**	**0.51**	**236**	*e*P	Pb	21 07 22.9	-0.1
	baz=236						
TWD	**Chiawan**	**0.52**	**218**	*e*P	Pb	21 07 23.1	0.0
	baz=217						
TWD				*e*S	Sb	21 07 30.7	0.0
	baz=217						
YHNB	**Yeheng**	**0.55**	**289**	*e*P	Pb	21 07 24.2	+0.5
	baz=288						
NSK	**Sanguang**	**0.57**	**289**	*e*P	Pb	21 07 24.4	+0.4
	baz=288						
NSK				*e*S	Sb	21 07 31.5	-0.5
	baz=288						
TWA	**Mucha**	**0.59**	**326**	*e*S	Sg	21 07 31.7	+0.6
	baz=326						
NWF	**Wu-fen Shan**	**0.59**	**345**	*e*P	Pb	21 07 24.6	+0.2
	baz=345						
NWF				*e*S	Sb	21 07 32.8	-0.1
	baz=345						
WFSB	**Wu-fen Shan**	**0.59**	**345**	*e*S	Sb	21 07 32.5	-0.3
	baz=345						
YM01	**YM01**	**0.73**	**332**	*e*P	Pn	21 07 28.0	-0.3
	baz=332						
YM01				*e*S	Sg	21 07 36.2	+0.5
	baz=332						
YM05	**YM05**	**0.75**	**333**	*e*P	Pb	21 07 27.6	+0.5
	baz=332						
YM05				*e*S	Sn	21 07 39.1	-1.0
	baz=332						
YM04	**YM04**	**0.76**	**330**	*e*P	Pn	21 07 28.4	-0.2
	baz=330						
YM04				*e*S	Sn	21 07 38.9	-1.2
	baz=330						
YM03	**YM03**	**0.78**	**332**	*e*S	Sb	21 07 38.7	+0.5
	baz=331						
ANP	**Anpu**	**0.79**	**331**	*e*P	Pb	21 07 27.8	+0.1
	baz=330						
ANP				*e*S	Sg	21 07 37.3	-0.3
	baz=330						
ESL	**Shilin**	**0.82**	**215**	*e*P	Pn	21 07 29.5	0.0
	baz=214						
CHGB	**Renai**	**0.83**	**239**	*e*P	Pb	21 07 28.4	0.0
	baz=238						
CHGB	**Renai**	**0.83**	**239**	*e*P	Pb	21 07 28.6	+0.2
	baz=220						
LIOB	**Emei**	**0.86**	**280**	*e*P	Pb	21 07 28.9	0.0
	baz=280						
OWD	**Renai**	**0.89**	**233**	*e*P	Pb	21 07 29.7	+0.3
	baz=232						
OWD	**Renai**	**0.89**	**233**	*e*P	Pb	21 07 29.8	+0.4
	baz=210						
EGFH	**Guangfu**	**0.95**	**210**	*e*P	Pg	21 07 28.7	-1.5
	baz=210						
EGFH				*e*S	Sg	21 07 42.3	-0.2
	baz=210						
VWDT	**VWDT**	**1.04**	**225**	*e*P	Pg	21 07 31.6	-0.4
	baz=224						
HGSD	**Ruisui**	**1.11**	**206**	*e*S	Sn	21 07 48.7	0.0
	baz=205						
SMLT	**Sun Moon Lake**	**1.13**	**238**	*e*P	Pn	21 07 34.2	+0.3
	baz=237						
SMLT				*e*S	Sb	21 07 47.6	-0.8
	baz=237						
SMLT	**Sun Moon Lake**	**1.13**	**238**	*e*P	Pg	21 07 33.7	0.0
	baz=226						
EHY	**Hungye**	**1.14**	**210**	*e*S	Sb	21 07 48.4	-0.1
	baz=209						
SSLB	**Suanglung**	**1.15**	**232**	*e*P	Pg	21 07 34.5	+0.5
	baz=232						
SSLB	**Suanglung**	**1.15**	**232**	*e*P	Pg	21 07 34.5	+0.5
	baz=218						
TYC	**Yuchr**	**1.16**	**240**	*e*P	Pg	21 07 34.4	+0.2
	baz=239						
YULB	**Yu-li**	**1.25**	**209**	*e*S	Sb	21 07 51.0	-0.6
	baz=208						
YULB	**Yu-li**	**1.25**	**209**	*e*S	Sb	21 07 51.5	-0.2
	baz=186						
TWF1	**Yuli**	**1.28**	**208**	*e*S	Sg	21 07 53.5	+0.2
	baz=207						
CHN5	**Tsauling**	**1.47**	**233**	*e*S	Sn	21 07 57.5	-0.2
	baz=232						
ELDTW	**Lidau**	**1.55**	**213**	*e*S	Sn	21 07 59.5	-0.3
	baz=212						

TAP 23 21:07:20.2,24°.33N×121°.42E,h15km±1km,ML1.9,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.11**	**342**	*e*P	Pb	21 07 24.5	+0.3
	baz=341						
NNSB				*e*S	Sg	21 07 26.1	+0.1
	baz=341						
NNS	**Nan Shan**	**0.12**	**340**	*e*P	Pb	21 07 24.7	+0.3
	baz=342						
NNS				*e*S	Sg	21 07 26.5	+0.3
	baz=342						
ETLH	**Xiulin Townshi**	**0.13**	**154**	P	Pb	21 07 25.0	+0.4
	baz=154						
ETLH				S	Sb	21 07 26.9	-0.5
	baz=154						
ETLH	**Xiulin Townshi**	**0.13**	**154**	*e*S	Sb	21 07 26.9	-0.5
	baz=236						
WHF	**Hehuan Shan**	**0.23**	**218**	P	Pb	21 07 26.6	+0.2
	baz=216						
WHF				S	Sg	21 07 29.8	+0.6
	baz=216						
TWD	**Chiawan**	**0.29**	**147**	*e*P	Pb	21 07 27.9	+0.7
	baz=145						
TWD				*e*S	Sb	21 07 32.3	+0.3
	baz=145						
ENA	**Nanau**	**0.31**	**71**	*e*S	Sb	21 07 31.8	-0.6
	baz=71						
NANB	**Nanao**	**0.32**	**71**	*e*S	Sb	21 07 33.0	+0.3
	baz=71						
YHNB	**Yeheng**	**0.34**	**353**	*e*P	Pb	21 07 29.4	+1.2
	baz=353						
YHNB				*e*S	Sb	21 07 33.7	+0.2
	baz=353						
YHNB	**Yeheng**	**0.34**	**353**	*e*S	Pb	21 07 29.3	+1.1
	baz=288						
CHGB	**Renai**	**0.35**	**220**	*e*S	Sb	21 07 33.7	0.0
	baz=220						
NSK	**Sanguang**	**0.35**	**351**	*e*P	Pb	21 07 29.2	+0.9
	baz=352						
NSK				*e*S	Sb	21 07 33.2	-0.5
	baz=352						
OWD	**Renai**	**0.43**	**211**	*e*S	Sg	21 07 35.0	+0.2
	baz=210						
WHP	**Taichung City**	**0.43**	**264**	*e*P	Pb	21 07 30.6	+0.9
	baz=263						
WHP				*e*S	Sb	21 07 36.8	+0.7
	baz=263						
TWE	**Neicheng**	**0.45**	**30**	*e*P	Pb	21 07 30.4	+0.4
	baz=31						
TWE				*e*S	Sb	21 07 36.5	-0.1
	baz=31						
LIOB	**Emei**	**0.49**	**311**	*e*P	Pb	21 07 30.6	0.0
	baz=311						
LIOB				*e*S	Sb	21 07 37.6	0.0
	baz=311						
NSTT	**Nanjuang**	**0.49**	**309**	*e*P	Pb	21 07 30.4	-0.1
	baz=308						
NSTT				*e*S	Sb	21 07 37.7	+0.2
	baz=308						
ESL	**Shilin**	**0.51**	**179**	*e*P	Pb	21 07 31.9	+1.0
	baz=177						
ESL				*e*S	Sb	21 07 38.0	-0.2
	baz=177						
ILA	**Ilan**	**0.53**	**34**	*e*S	Sb	21 07 40.0	+1.3
	baz=35						
DPDB	**Guoxing**	**0.54**	**237**	*e*P	Pn	21 07 32.5	-1.0
	baz=237						
DPDB				*e*S	Sb	21 07 39.3	+0.3
	baz=237						
VWDT	**VWDT**	**0.62**	**204**	*e*P	Pb	21 07 33.6	+0.7
	baz=204						
VWDT				*e*S	Sb	21 07 41.9	+0.5
	baz=204						
SMLT	**Sun Moon Lake**	**0.65**	**227**	*e*S	Sb	21 07 42.5	+0.3
	baz=226						
EGFH	**Guangfu**	**0.65**	**179**	*e*S	Sb	21 07 43.3	+1.0
	baz=179						
TYC	**Yuchr**	**0.66**	**231**	*e*P	Pb	21 07 33.8	+0.3
	baz=230						
TYC				*e*S	Sb	21 07 42.5	-0.1
	baz=230						
EOS1	**EOS1**	**0.68**	**71**	*e*S	Sn	21 07 46.0	+0.2
	baz=71						
SSLB	**Suanglung**	**0.68**	**219**	S	Sb	21 07 43.8	+0.5
	baz=218						
TIPB	**Shuangxi**	**0.74**	**30**	*e*S	Sb	21 07 45.1	+0.1
	baz=29						
WNT	**Mingjian**	**0.81**	**237**	*e*S	Sb	21 07 47.6	+0.9
	baz=236						
WHYT	**Xinyi Township**	**0.81**	**220**	*e*S	Sn	21 07 49.4	+0.3
	baz=219						
EHY	**Hungye**	**0.82**	**186**	*e*S	Sb	21 07 47.5	+0.3
	baz=185						
HGSD	**Ruisui**	**0.83**	**180**	*e*P	Pb	21 07 36.7	+0.3
	baz=179						
HGSD				*e*S	Sb	21 07 47.9	+0.5
	baz=179						
YULB	**Yu-li**	**0.94**	**187**	*e*P	Pn	21 07 38.8	-0.1
	baz=186						
CHN5	**Tsauling**	**0.99**	**223**	*e*P	Pn	21 07 39.9	+0.1
	baz=223						

ISCJB ***23*** *21:16:32.0±0.1, 48°.06N±0°.01×33°.39E±0°.02, h10km, mb4.4/60, Error ellipse: s-maj=2.1km s-min=1.8km az=19.4*
BJI ***23*** *21:16:32.8±0.0, 48°.10N×33°.40E, h15km, mb4.6/29, mB5.1/16, Ms4.6/5, Ms7 4.2/3*
IDC ***23*** *21:16:32.9±0.4, 47°.99N×33°.43E, h0km, mb4.2/22, mb1 4.2/36, mb1mx4.2/53, mbtmp4.1/36, ML3.5/15, Error ellipse: s-maj=6.7km s-min=5.3km az=29.0*
MOS ***23*** *21:16:33.4±1.2, 48°.04N×33°.33E, h21km, mb4.7/12, Error ellipse: s-maj=5.0km s-min=3.8km az=121.3*
PRU ***23*** *21:16:33.3±0.0, 48°.00N×33°.46E, h0km, M4.6*
NEIC ***23*** *21:16:35.0±2.5, 48°.05N×33°.37E, h15km±3km, mb4.5/51, Error ellipse: s-maj=8.0km s-min=7.2km az=204.0*
NEIC Felt at Kryvyy Rih.
NNC ***23*** *21:16:44.0±1.5, 48°.07N×35°.33E, h0km, mb4.6, Error ellipse: s-maj=21.4km s-min=16.6km az=129.0*
ISC 23 21:16:33.6±0.3, 48°.11N±0°.03×33°.40E±0°.03, h10km, n387, σ2=19/437, mb4.6/60, 31C-37D,
Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIM	**Simferopol'**	**3.20**	**171**	⇓*i*P	**Pn**	**21 17 22.9**	**-1.0**
SIM				*e*S	**Sn**	**21 18 00.9**	**-1.3**
KIS	**Kishinev**	**3.29**	**252**	*e*P	**Pn**	**21 17 26.5**	**+1.3**
KIS				*e*S	**Sb**	**21 18 07.0**	**-5.2**
	7μm,1.0s						
KIS	**Kishinev**	**3.29**	**252**	*e*P	**Pn**	**21 17 26.5**	**+1.3**
KIS				*e*S	**Sb**	**21 18 07.0**	**-5.2**
KIS				smax	smax		
	comp=N,7μm,1.0s						
MILM	**Milestii Mici**	**3.33**	**251**	⇑*i*P	**Pn**	**21 17 27.3**	**+1.7**
FEO	**Feodosiya**	**3.39**	**155**	⇓*e*P	**Pn**	**21 17 27.0**	**+0.6**
FEO				*e*S	**Sn**	**21 18 08.4**	**+1.8**
SUDU	**Sudak**	**3.41**	**160**	⇓*i*P	**Pn**	**21 17 26.6**	**-0.1**
SUDU				*e*S	**Sn**	**21 18 05.8**	**-1.4**
ALU	**Alushta**	**3.50**	**168**	⇓*i*P	**Pn**	**21 17 27.0**	**-1.0**
ALU				*e*S	**Sn**	**21 18 07.5**	**-2.0**
KERU	**Kerch**	**3.51**	**142**	⇓*e*P	**Pn**	**21 17 28.0**	**-0.1**
SEV	**Sevastopol'**	**3.57**	**177**	⇓*e*P	**Pn**	**21 17 27.6**	**-1.4**
SEV				*e*S	**Sn**	**21 18 09.3**	**-2.0**
SEVA	**Sevastopol**	**3.59**	**177**	⇓*i*P	**Pn**	**21 17 28.6**	**-0.6**
YAL	**Yalta**	**3.67**	**171**	⇓*e*P	**Pn**	**21 17 30.0**	**-0.2**
YAL				*e*S	**Sn**	**21 18 13.7**	**+0.2**
AKASG	**Malin Array Be**	**3.76**	**315**	Pn	**Pn**	**21 17 33.0**	**+1.5**
	comp=N,3.9nm,0.3s,baz=135,slow=20,SNR=23						
AKASG				Pg	**Pb**	**21 17 41.5**	**+1.5**
	comp=N,19nm,0.3s,baz=130,slow=17,SNR=37						
AKASG				Lg	Lg	21 18 31.3	
	comp=N,136nm,0.3s,baz=130,slow=29,SNR=19						
AKBB	**Malin Array Si**	**3.76**	**315**	*e*Pn	**Pn**	**21 17 33.1**	**+1.6**
AKBB				*e*Sn	**Sn**	**21 18 14.0**	**-1.8**
AKBB	**Malin Array Si**	**3.76**	**315**	*e*P	**Pn**	**21 17 33.2**	**+1.6**
AKBB				*e*		21 18 14.0	
IAS	**Iasi**	**4.05**	**259**	⇓*i*P	**Pn**	**21 17 38.3**	**+2.8**
TLCR		**4.30**	**229**	⇓*i*P	**Pn**	**21 17 39.4**	**+0.4**
ANN	**Anapa**	**4.33**	**138**	*e*P	**Pn**	**21 17 35.7**	**-3.7**
ANN				*e*S	**Sn**	**21 18 25.3**	**-4.6**
ANN				*e*S	Sb	21 18 26.1	-16
ANN				pmax	pmax		
	comp=Z,68nm,0.5s						
ANN				smax	smax		
	comp=N,129nm,0.4s						
ANN				smax	smax		
	comp=E,81nm,0.4s						
ANN				smax	smax		
	comp=N,118nm,1.2s						
CFR	**Carcaliu**	**4.66**	**233**	⇑*i*P	**Pn**	**21 17 44.2**	**+0.2**
VORD	**Divnogorie**	**4.79**	**51**	*e*P	**Pn**	**21 17 46.8**	**+1.2**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR	**Storozhevoye**	**4.87**	**48**	*e*P	**Pn**	**21 17 47.9**	**+1.1**
VSR				*e*S	**Sn**	**21 18 41.9**	**-1.2**
VSR				pmax	pmax		
	comp=Z,30nm,0.5s						
VSR				smax	smax		
	comp=N,590nm,1.7s						
PRAR	**RASCA**	**4.89**	**264**	⇓*i*P	**Pn**	**21 17 49.0**	**+1.8**
ODBI	**Odobesti**	**4.94**	**244**	⇑*i*P	**Pn**	**21 17 50.2**	**+2.4**
TIRR	**Tirgusor**	**5.03**	**225**	*e*Pn	**Pn**	**21 17 49.6**	**+0.6**
TIRR				*e*Sn	**Sn**	**21 18 44.0**	**-3.1**
TIRR	**Tirgusor**	**5.03**	**225**	⇓*i*P	**Pn**	**21 17 49.5**	**+0.6**
TIRR	**Tirgusor**	**5.03**	**225**	*e*P	**Pn**	**21 17 49.6**	**+0.6**
TIRR				*e*		21 18 44.1	
BIZ	**Bicaz**	**5.08**	**259**	⇑*i*P	**Pn**	**21 17 51.4**	**+1.7**
VRI	**Vrincioaia**	**5.09**	**246**	⇓*i*P	**Pn**	**21 17 51.7**	**+1.9**
TLB	**Topalu**	**5.12**	**228**	⇑*i*P	**Pn**	**21 17 50.7**	**+0.5**
PLOR	**Plostina**	**5.14**	**246**	⇑*i*P	**Pn**	**21 17 52.5**	**+1.9**
EFOR	**EFORIE**	**5.22**	**221**	⇑*i*P	**Pn**	**21 17 52.3**	**+0.7**
MANR	**Mangalia**	**5.45**	**220**	⇑*i*P	**Pn**	**21 17 55.5**	**+0.7**
TSMN	**Mangalia Port-**	**5.46**	**220**	⇓*i*P	**Pn**	**21 17 55.8**	**+0.9**
BURAR	**Bucovina Array**	**5.53**	**268**	⇓*i*P	**Pn**	**21 17 57.7**	**+1.7**
BUR08	**Bucovina Ar. S**	**5.53**	**268**	*e*Pn	**Pn**	**21 17 57.7**	**+1.6**
BUR08				*e*Sn	**Sn**	**21 19 00.4**	**+0.7**
OZUR		**5.57**	**252**	⇑*i*P	**Pn**	**21 17 58.0**	**+1.5**
ICOR	**Ion Corvin**	**5.58**	**226**	⇑*i*P	**Pn**	**21 17 58.4**	**+1.9**
LPSR	**Galich'ya Gora**	**5.72**	**36**	*e*P	**Pn**	**21 17 59.1**	**+0.6**
LPSR				*e*S	**Sn**	**21 19 02.8**	**-1.3**
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
LPSR				smax	smax		
	comp=N,120nm,1.4s						
MLR	**Muntele Rosu**	**5.75**	**246**	Pn	**Pn**	**21 18 01.3**	**+2.3**
	comp=N,1.7nm,0.3s,baz=137,slow=3.0,SNR=75						
MLR				Sn	**Sn**	**21 19 05.2**	**+0.1**
	comp=N,5.0nm,0.3s,baz=252,slow=20,SNR=3.6						
MLR	**Muntele Rosu**	**5.75**	**246**	*e*Pn	**Pn**	**21 18 00.6**	**+1.6**
MLR				*e*Sn	**Sn**	**21 19 05.6**	**+0.6**
MLR	**Muntele Rosu**	**5.75**	**246**	⇓*i*P	**Pn**	**21 18 01.1**	**+2.1**
MLR	**Muntele Rosu**	**5.75**	**246**	*e*P	**Pn**	**21 18 00.6**	**+1.6**
MLR				*e*		21 19 05.6	
DOPR	**Dopca**	**5.88**	**252**	⇓*i*P	**Pn**	**21 18 02.2**	**+1.5**
BZK	**Bozkurt**	**6.17**	**176**	P	**Pn**	**21 18 05.2**	**+0.5**
BZK	**Bozkurt**	**6.17**	**176**	⇓*i*P	**Pn**	**21 18 05.2**	**+0.5**
ARCR	**ARCALIA**	**6.20**	**264**	⇓*i*P	**Pn**	**21 18 07.5**	**+2.4**
VRH	**Novokhopyorsk**	**6.23**	**57**	*e*P	**Pn**	**21 18 06.5**	**+1.1**
VRH				*e*S	**Sn**	**21 19 15.2**	**-1.4**
VRH				pmax	pmax		
	comp=Z,20nm,0.5s						
VRH				smax	smax		
	comp=N,310nm,0.6s						
KURC	**Kurucasile-Bar**	**6.28**	**184**	P	**Pn**	**21 18 06.0**	**-0.3**
SOC	**Sochi**	**6.32**	**133**	*e*P	**Pn**	**21 18 06.3**	**-0.5**
SOC				*e*		21 19 22.3	
SOC				pmax	pmax		
	comp=Z,39nm,0.7s						
SOC				MLR	MLR		
	comp=Z,130nm,12.0s						
VOIR		**6.33**	**248**	⇓*i*P	**Pn**	**21 18 08.1**	**+1.2**
LVV	**L'vov**	**6.40**	**289**	*e*P	**Pn**	**21 18 09.1**	**+1.3**
LVV				*e*S	**Sn**	**21 19 22.5**	**+1.6**
LVV				MLR	MLR		
	comp=Z,1μm,2.2s						
MTUR	**Matau**	**6.42**	**246**	⇑*i*P	**Pn**	**21 18 11.9**	**+3.7**
DIKM	**Dikmen**	**6.60**	**168**	⇓*i*P	**Pn**	**21 18 10.1**	**-0.5**
ARR	**Arges**	**6.62**	**249**	⇓*i*P	**Pn**	**21 18 12.3**	**+1.4**
CJR	**Cluj-Napoca**	**6.79**	**262**	⇓*i*P	**Pn**	**21 18 15.4**	**+2.1**
ILGA	**Ilgaz**	**7.06**	**178**	*e*Pn	**Pn**	**21 18 17.4**	**+0.2**
KWP	**Kalwaria Pacla**	**7.21**	**286**	*e*P	**Pn**	**21 18 23.1**	**+4.1**
KWP	**Kalwaria Pacla**	**7.21**	**286**	*e*Sn	**Sn**	**21 19 39.5**	**-1.4**
KWP	**Kalwaria Pacla**	**7.21**	**286**	*e*P	**Pn**	**21 18 23.1**	**+4.1**
TRPA	**Tarpa**	**7.27**	**274**	⇑*i*P	**Pn**	**21 18 20.7**	**+1.0**
TRPA	**Tarpa**	**7.27**	**274**	EPn	**Pn**	**21 18 20.1**	**+0.3**
TRPA				Sn	**Sn**	**21 19 46.0**	**+3.8**
MICGM	**Minsk**	**7.27**	**334**	*e*Pn	**Pn**	**21 18 18.0**	**-1.7**
MICGM				*e*PP	Pg	21 19 00.0	+7.4
MICGM				*e*Sn	**Sn**	**21 19 38.0**	**-4.2**
MICGM				*e*SS	**Sb**	**21 20 06.0**	**-0.4**
MICGM				*e*LR	LR	21 20 30.0	
MNK	**Minsk**	**7.27**	**334**	*e*P	**Pn**	**21 18 18.0**	**-1.7**
MNK				*e*S	**Sn**	**21 19 38.0**	**-4.2**
KVT	**Kavak**	**7.28**	**164**	P	**Pn**	**21 18 19.7**	**-0.3**
OBN	**Obninsk**	**7.28**	**15**	Pn	**Pn**	**21 18 21.3**	**+1.4**
	comp=Z,1.5nm,0.3s,baz=27,slow=3.9,SNR=6.2						
OBN				Sn	**Sn**	**21 19 41.8**	**-0.8**
	comp=Z,2.1nm,0.3s,baz=203,slow=23,SNR=5.6						
OBN	**Obninsk**	**7.28**	**15**	*e*Pn	**Pn**	**21 18 21.8**	**+1.9**
OBN				*e*Sn	**Sn**	**21 19 41.8**	**-0.8**
OBN	**Obninsk**	**7.28**	**15**	⇓*i*P	**Pn**	**21 18 21.5**	**+1.7**
OBN	**Obninsk**	**7.28**	**15**	*i*P	**Pn**	**21 18 21.6**	**+1.7**
OBN				pmax	pmax		
	comp=Z,14nm,0.8s						
OBN				MLR	MLR		
	comp=Z,64nm,1.0s						
GOF	**Gofitskoye**	**7.32**	**111**	⇓*i*P	**Pn**	**21 18 20.7**	**+0.3**
GOF				*i*S	**Sn**	**21 19 40.2**	**-3.3**
GOF				pmax	pmax		
	comp=Z,107nm,0.6s						
GOF				smax

KVAR Kislovodsk Arr 7.69 119 Pn **Pn 21 18 25.3 -0.4**
baz=287,slow=20,SNR=17
KVAR Sn **Sn 21 19 47.3 -5.6**
baz=330,slow=20,SNR=6.1
KVAR Lg Lg 21 20 34.4
baz=287,slow=14,SNR=6.5
SAUV Serdivan-Sakar 7.69 198 P **Pn 21 18 25.5 -0.1**
ISK Istanbul-Kandi 7.69 205 P **Pn 21 18 24.3 -1.3**
KAVV Kandilli-Istan 7.70 205 P **Pn 21 18 24.3 -1.3**
HRT Hereke 7.76 201 P **Pn 21 18 26.3 -0.3**
GZR Gura Zlata 7.78 253⇑*iP* **Pn 21 18 28.5 +1.6**
MDUB Mudurnu 7.80 192 P **Pn 21 18 27.7 +0.5**
MDUB Mudurnu 7.80 192 *e*Pn **Pn 21 18 27.8 +0.5**
EDRB Edirne 7.84 219 P **Pn 21 18 27.9 +0.3**
KBZ Khabaz 7.94 120 Pn **Pn 21 18 27.3 -1.7**
comp=Z,1.3nm,0.3s,baz=331,slow=3.6,SNR=39
KBZ Sn **Sn 21 19 53.9 -4.9**
comp=Z,5.6nm,0.3s,baz=19,slow=23,SNR=6.0
KBZ Lg Lg 21 20 39.7
comp=Z,2.4nm,0.3s,baz=244,slow=7.5,SNR=4.6
NACGM Naroch 7.95 331 *e* Pg 21 19 12.0 +6.4
GULT Gulveren 7.95 196 P **Pn 21 18 29.5 +0.3**
MOS Moscow 8.07 17 *e*P **Pn 21 18 32.7 +2.0**
MOS *e*S **Sn 21 20 01.6 -0.3**
MOS pmax pmax
comp=Z,50nm,0.6s
YLV Yalova 8.07 202 P **Pn 21 18 30.1 -0.8**
YLV Yalova 8.07 202⇑*iP* **Pn 21 18 30.2 -0.7**
TOKT Tokat 8.11 163 P **Pn 21 18 32.0 +0.6**
ADVT Abdulvahap 8.11 200 P **Pn 21 18 31.2 -0.2**
STHS Stebnicka Huta 8.14 284 *e*P **Pn 21 18 33.9 +2.2**
STHS *e* 21 20 05.2
STHS Stebnicka Huta 8.14 284 *e*PN **Pn 21 18 33.9 +2.2**
STHS *e*SN **Sn 21 20 01.1 -2.6**
NEY Neytrino 8.14 123⇑*iP* **Pn 21 18 33.7 +1.8**
NEY pmax pmax
comp=Z,2.0nm,0.9s
ANTO Ankara 8.25 183 *e*Pn **Pn 21 18 33.5 +0.1**
ANTO Ankara 8.25 183⇓*iP* **Pn 21 18 33.4 +0.1**
ANTO Ankara 8.25 183 *e*P **Pn 21 18 33.5 +0.1**
BR231 Keskin MP Arra 8.28 183 *e*Pn **Pn 21 18 33.6 -0.2**
SRCK Saricakaya, Es 8.31 195 P **Pn 21 18 34.6 +0.5**
BR101 Keskin Array S 8.39 179 *e*Pn **Pn 21 18 34.5 -0.8**
BR101 *e*Sn **Sn 21 20 03.6 -6.5**
BR131 Keskin Array S 8.39 179 *e*Pn **Pn 21 18 34.7 -0.6**
BR131 *e*Sn Sn 21 20 00.2 -10
BR131 Keskin Array S 8.39 179 *e*P **Pn 21 18 34.7 -0.6**
BRTR Keskin Array B 8.39 179 Pn **Pn 21 18 34.5 -0.8**
comp=Z,0.3nm,0.3s,baz=353,slow=12,SNR=9.5
BRTR Sn **Sn 21 20 03.6 -6.5**
comp=Z,1.1nm,0.3s,baz=359,slow=18,SNR=8.6
BZS Buzias 8.45 257⇑*iP* **Pn 21 18 36.7 +0.7**
KTUT Trabzon 8.45 145 P **Pn 21 18 34.6 -1.4**
KTUT Trabzon 8.45 145 *e*Pn **Pn 21 18 34.6 -1.4**
KTUT Trabzon 8.45 145⇓*iP* **Pn 21 18 34.7 -1.3**
NCK Nalchik 8.49 119*c iP* **Pn 21 18 37.3 +0.8**
NCK pmax pmax
comp=Z,5.0nm,0.6s
SVSK Karacayir 8.59 161 P **Pn 21 18 37.8 -0.1**
KECS Kecovo 8.62 277 *e*P **Pn 21 18 40.2 +1.9**
KECS *e* 21 20 17.0
KECS Kecovo 8.62 277 *e*PN **Pn 21 18 40.2 +1.9**
KECS *e*SN **Sn 21 20 17.0 +1.5**
KCTX Karacabey (Bur 8.64 207 P **Pn 21 18 37.6 -1.0**
SUW Suwalki 8.73 316 *e*P **Pn 21 18 39.6 -0.1**
SUW Suwalki 8.73 316 *e*Pn **Pn 21 18 39.7 0.0**
SUW *e*Sn **Sn 21 20 13.8 -4.2**
SUW Suwalki 8.73 316 *e*P **Pn 21 18 39.7 0.0**
SUW *e* 21 20 13.9
NIE Niedzica 8.75 283 *e*P **Pn 21 18 42.7 +2.6**
NIE Niedzica 8.75 283 *e*P **Pn 21 18 42.7 +2.6**
BCA Borcka 8.87 136 *e*Pn **Pn 21 18 40.1 -1.6**
BCA Borcka 8.87 136⇑*iP* **Pn 21 18 40.2 -1.5**
ALN Alexandroupoli 8.92 219 *e*Pn **Pn 21 18 41.9 -0.5**
ALN *e*Sn **Sn 21 20 16.9 -6.0**
ALN Alexandroupoli 8.92 219 *e*P **Pn 21 18 41.9 -0.5**
ALN *e* 21 20 16.9
ERIK Erikli-Kesan 8.92 216 P **Pn 21 18 42.1 -0.3**
ENEZ Enez 9.01 218 P **Pn 21 18 43.3 -0.3**
VTS Vitosha 9.02 236 *e*Pn **Pn 21 18 44.5 +0.6**
VTS *e*Sn **Sn 21 20 23.9 -1.6**
VTS Vitosha 9.02 236⇓*iP* **Pn 21 18 43.6 -0.3**
VTS Vitosha 9.02 236 *e*P **Pn 21 18 44.5 +0.6**
VTS *e* 21 20 23.9
PSZ Piszkesteto 9.05 274 *e*Pn **Pn 21 18 44.5 +0.1**
PSZ *e*Sn **Sn 21 20 21.9 -4.4**
PSZ Piszkesteto 9.05 274⇑*iP* **Pn 21 18 44.4 +0.1**
PSZ Piszkesteto 9.05 274 *e*P **Pn 21 18 44.5 +0.1**
PSZ *e* 21 20 21.9
PSZ Piszkesteto 9.05 274 EPn **Pn 21 18 44.0 -0.3**
PSZ Sn Sn 21 20 35.0 +8.7
LPK Lapseki 9.08 214 P **Pn 21 18 44.4 -0.2**
ZEI Tsey 9.10 122 *e*P **Pn 21 18 46.2 +1.1**
ZEI pmax pmax
comp=Z,5.0nm,0.4s
TVSB Tavsanli 9.11 200 P **Pn 21 18 44.5 -0.7**
OJC Ojcow 9.16 288 *e*P **Pn 21 18 46.9 +1.2**
OJC Ojcow 9.16 288 *e*Pn **Pn 21 18 46.5 +0.9**
OJC *e*Sn **Sn 21 20 24.9 -3.7**
OJC Ojcow 9.16 288 *e*P **Pn 21 18 46.6 +0.9**
OJC *e* 21 20 24.9
LANS Liptovska Anna 9.28 282 *e*P **Pn 21 18 49.1 +1.7**
LANS *e* 21 20 33.1
LANS Liptovska Anna 9.28 282 *e*PN **Pn 21 18 49.1 +1.7**
LANS *e*SN **Sn 21 20 33.1 +1.2**
BALB Balikesir 9.36 207 *e*Pn **Pn 21 18 48.6 +0.2**
BALB *e*Sn **Sn 21 20 27.6 -6.0**
KAVA Kavala 9.52 225 *e*Pn **Pn 21 18 51.6 +0.9**
VYHS Vyhne 9.71 278 *e*P **Pn 21 18 53.7 +0.4**
VYHS *e* 21 20 39.9
VYHS Vyhne 9.71 278 *e*PN **Pn 21 18 53.7 +0.4**
VYHS *e*SN **Sn 21 20 39.9 -2.5**
SHUT Suhut-Afyon 9.78 193 P **Pn 21 18 54.4 +0.1**
AKH Akhalkalaki 9.82 129 *e*Pn **Pn 21 18 55.6 +0.8**
AKH Akhalkalaki 9.82 129 *e*P **Pn 21 18 55.7 +0.8**
SENK Senkaya-Erzuru 9.90 136 P **Pn 21 18 56.9 +0.8**
GROC Groznyy 9.97 115 *e*P **Pn 21 18 55.7 -1.1**
GROC *e*S **Sn 21 20 46.8 -1.9**
GROC pmax pmax
comp=Z,11nm,0.5s
OKC Ostrava-Krasne 10.18 285 *e*P **Pn 21 18 59.7 +0.1**
OKC *e* 21 20 50.0
OKC Ostrava-Krasne 10.18 285 *e*PN **Pn 21 18 59.7 +0.1**
OKC *e*SN **Sn 21 20 50.0 -3.7**
CSKK Cskako 10.23 271 EPn Pn 21 19 08.0 +7.7
MORH Mrgy, Hungar 10.23 265 EPn **Pn 21 19 00.0 -0.2**
MORH Sn **Sn 21 20 59.1 +4.2**
JAVC Velka Javorina 10.47 280 *e*PN **Pn 21 19 04.1 +0.4**
TIH Tihany 10.56 269 EPn Pn 21 18 58.0 -6.9
TIH Tihany 10.56 269 IPn Pn 21 19 00.0 -4.9
MORC Moravsky Berou 10.56 285 *e*Pn **Pn 21 19 04.4 -0.5**
MORC *e*Sn **Sn 21 20 55.3 -7.9**
MORC Moravsky Berou 10.56 285⇑*iP* **Pn 21 19 04.7 -0.2**
MORC Moravsky Berou 10.56 285 *e*P **Pn 21 19 04.4 -0.5**
MORC *e* 21 20 55.3
MORC Moravsky Berou 10.56 285 *e*PN **Pn 21 19 04.7 -0.2**
MORC Moravsky Berou 10.56 285 *e*SN **Sn 21 21 05.3 +2.0**
VSU Vasula 11.10 342*c iP* **Pn 21 19 12.3 +0.1**
VSU pmax pmax
comp=Z,33nm,0.8s
VRAC Vranov 11.17 282 Sn **Sn 21 21 13.7 -4.3**
comp=Z,0.3nm,0.3s,baz=64,slow=17,SNR=2.3
VRAC Lg Lg 21 22 29.7
comp=Z,0.1nm,0.3s,baz=203,slow=13,SNR=3.1
VRAC Vranov 11.17 282 *e*PN **Pn 21 19 13.9 +0.7**
KRUC Moravsky 11.30 281 *e*PN **Pn 21 19 15.3 +0.3**
DPC Dobruska-Polom 11.39 288 *e*P **Pn 21 19 16.3 +0.1**
DPC *e* 21 21 20.0
DPC Dobruska-Polom 11.39 288 *e*PN **Pn 21 19 16.3 +0.1**
DPC *e*SN **Sn 21 21 20.0 -3.4**
BEHE Becsehely 11.41 268 EPn **Pn 21 19 13.1 -3.4**
OSTC Ostas 11.47 289 *e*PN **Pn 21 19 17.7 +0.3**
CHVC Chvalec 11.58 289 *e*PN **Pn 21 19 18.5 -0.3**
UPC Upice 11.60 288 *e*P **Pn 21 19 18.9 -0.2**
UPC Upice 11.60 288 *e*PN **Pn 21 19 18.9 -0.2**
CONA Conrad Observa 11.75 276 *e*Pn **Pn 21 19 22.9 +1.7**
comp=Z,1.6nm,0.6s
AKT Akhty 12.14 118 *e*Pn **Pn 21 19 28.3 +1.7**
AKT Akhty 12.14 118 *e*P **Pn 21 19 28.3 +1.7**
PRU Pruhonice 12.51 286 *e*P **Pn 21 19 31.5 0.0**
PRU Pruhonice 12.51 286 *e*PN **Pn 21 19 31.5 0.0**

SOKA Soboth 12.53 270 *e*P **Pn 21 19 33.8 +1.9**
comp=Z,0.4nm,0.3s
MOA Molln 12.82 276 *e*Pn **Pn 21 19 37.3 +1.5**
comp=Z,2.6nm,0.7s
BRG Berggiesshubel 12.94 290 *e*P **Pn 21 19 37.4 +0.1**
comp=Z,8.7nm,1.1s
BRG Berggiesshubel 12.94 290 *e*P **Pn 21 19 37.4 0.0**
BRG pmax pmax
comp=Z,9.0nm,1.1s
GEC2 GERESS Array S 13.09 281 *e*Pn **Pn 21 19 39.6 +0.1**
GEC2 GERESS Array S 13.09 281 *e*P **Pn 21 19 39.6 +0.1**
GERES GERESS Array B 13.09 281 Pn **Pn 21 19 39.6 +0.1**
comp=Z,0.2nm,0.3s,baz=76,slow=16,SNR=13
GERES Lg Lg 21 23 31.3
comp=Z,0.1nm,0.3s,baz=69,slow=23,SNR=2.4
KHC Kasperske Hory 13.15 282 *e*P **Pn 21 19 40.0 -0.3**
KHC Kasperske Hory 13.15 282 *e*PN **Pn 21 19 40.0 -0.3**
KLMR Klimovskoe 13.24 13 *e*P **Pn 21 19 38.5 -2.9**
KLMR *e* 21 22 03.3
KLMR pmax pmax
comp=Z,15nm,0.9s
KLMR Klimovskoe 13.24 13 *e*Pn **Pn 21 19 38.5 -2.9**
KLMR AMP 21 19 40.1
comp=Z,15nm,0.9s
KLMR *e*Sn **Sn 21 22 03.4 -5.2**
KLMR *e*Sn **Sn 21 22 03.4 -5.2**
KARP Karpathos 13.38 202 *e*Pn **Pn 21 19 42.9 -0.6**
CLL Collm 13.57 291 *e*Pn **Pn 21 19 44.8 -1.2**
CLL Collm 13.57 291 *e*P **Pn 21 19 44.0 -2.0**
CLL *e*PP **PnPn 21 19 52.0 -1.6**
CLL *es*PP 21 19 59.0
CLL *e* 21 22 28.0
CLL *e* 21 23 31.0
CLL Collm 13.57 291 *e*P **Pn 21 19 44.8 -1.2**
FIA0 FINESS Array S 14.00 345 *e*Pn **Pn 21 19 48.0 -3.7**
FIA0 *e* 21 22 13.9
FIA0 FINESS Array S 14.00 345 *e*P **Pn 21 19 48.0 -3.7**
FIA1 FINESS Array S 14.00 345 *e*Pn **Pn 21 19 48.5 -3.2**
FINES FINESS Array B 14.00 345 Pn **Pn 21 19 48.0 -3.7**
comp=Z,0.6nm,0.3s,baz=154,slow=13,SNR=27
FINES Sn Sn 21 22 13.9 -13
comp=Z,1.8nm,0.3s,baz=160,slow=23,SNR=8.3
FINES Lg Lg 21 23 54.1
comp=Z,0.6nm,0.3s,baz=158,slow=30,SNR=3.6
FINES FINESS Array B 14.00 345 *i P* **Pn 21 19 48.5 -3.2**
FINES pmax pmax
comp=Z,4.0nm,0.6s
KIRV Kirov 14.15 36 Pn Pn 21 19 49.4 -4.4
comp=Z,0.4nm,0.3s,baz=236,slow=5.3,SNR=6.8
KIRV Sn Sn 21 22 21.0 -10
comp=Z,1.2nm,0.3s,baz=158,slow=19,SNR=4.2
KIRV Lg Lg 21 23 56.2
comp=Z,0.4nm,0.3s,baz=45,slow=13,SNR=2.7
GRA1 Grafenberg Arr 14.66 284 *e*Pn **Pn 21 19 59.9 -1.0**
GRF Grafenberg Arr 14.66 284 *e*P **Pn 21 19 59.9 -1.0**
WTTA Wattenberg 14.68 275 *e*P **P 21 20 09.3 +1.7**
comp=Z,5.4nm,1.0s
SQTA Sankt Quirin 14.97 275 *e*P **P 21 20 11.5 +0.7**
comp=Z,3.1nm,0.6s
MOTA Moosalm 15.02 275 *e*P **P 21 20 12.1 +0.8**
comp=Z,1.3nm,0.5s
MMAI Mount Meron Ar 15.16 174 Pn **P 21 20 10.9 -1.9**
comp=Z,0.4nm,0.3s,baz=7.8,slow=12,SNR=11
RETA Reutte 15.22 276 *e*P **P 21 20 14.3 +0.8**
comp=Z,3.2nm,0.7s
PRGR Permogore 15.23 23 *e*P **Pn 21 20 02.6 -5.8**
PRGR pmax pmax
comp=Z,13nm,0.8s
FETA Feichten 15.33 274 *e*Pn **Pn 21 20 11.0 +0.9**
comp=Z,5.0nm,0.9s
FUORN Ofenpass-Fuorn 15.73 273 *e*Pn **Pn 21 20 14.5 -0.9**
comp=Z,7.8nm,0.7s
DAVA Damuels 15.84 276 *e*P **P 21 20 21.0 +0.5**
comp=Z,2.2nm,0.6s
DAVOX Davos/Dischmat 15.95 274 Pn **Pn 21 20 18.6 +0.5**
comp=Z,0.3nm,0.3s,baz=96,slow=10,SNR=3.3
ASF Jabal al Asfar 16.14 169 Pn **P 21 20 25.2 +1.3**
comp=Z,0.2nm,0.3s,baz=310,slow=4.7,SNR=18
AKTO Aktyubinsk 16.22 73 Pn **Pn 21 20 15.4 -5.9**
comp=Z,0.5nm,0.3s,baz=266,slow=11,SNR=7.6
AKTO Sn Sn 21 23 06.0 -15
comp=Z,0.3nm,0.3s,baz=150,slow=20,SNR=3.5
AKTO Aktyubinsk 16.22 73 ⇑P **Pn 21 20 16.7 -4.6**
comp=Z,31nm,1.2s
AKTO ⇓S Sn 21 23 06.4 -15
comp=Z,6.7nm,0.7s
HFS Hagfors 16.59 324 Pn **Pn 21 20 19.8 -6.3**
comp=Z,0.7nm,0.3s,baz=126,slow=15,SNR=28
HFS Sn Sn 21 23 17.2 -13
comp=Z,0.5nm,0.3s,baz=120,slow=23,SNR=3.5
HFS Lg Lg 21 25 16.6
comp=Z,0.6nm,0.3s,baz=116,slow=29,SNR=2.2
ARU Arti 17.43 52 Pn **Pn 21 20 30.7 -5.9**
comp=Z,0.0nm,0.3s,baz=245,slow=8.1,SNR=16
ARU Sn Sn 21 23 36.7 -14
comp=Z,0.0nm,0.3s,baz=140,slow=21,SNR=6.0
ARU Lg Lg 21 25 46.1
baz=135,slow=18,SNR=2.4
ARU Arti 17.43 52 *e*Pn **Pn 21 20 31.0 -5.5**
comp=Z,13nm,0.9s
ARU *e*Sn Sn 21 23 36.7 -14
ARU Arti 17.43 52*d iP* **Pn 21 20 31.6 -4.9**
ARU S **Sn 21 23 42.4 -7.9**
ARU pmax pmax
comp=Z,13nm,0.9s
VAE Valguarnera 17.48 240 Lg Lg 21 25 42.2
comp=Z,0.5nm,0.3s,baz=192,slow=21,SNR=4.2
AB31 Akbulak array 17.54 76 ⇓P **Pn 21 20 34.1 -3.9**
comp=Z,8.6nm,0.8s,baz=274,slow=9.4,SNR=68
AB31 ⇓S Sn 21 23 35.4 -18
comp=Z,3.4nm,0.8s,baz=276,slow=23,SNR=3.1
ABKAR Akbulak array 17.54 76 *e*P **Pn 21 20 34.7 -3.3**
comp=Z,8.3nm,0.8s
ABKAR *e*Sn Sn 21 23 36.5 -17
NC602 NORSAR Array S 17.81 323 *e*Pn **Pn 21 20 37.5 -3.8**
NC405 NORSAR Array S 17.97 324 *e*P **Pn 21 20 39.3 -3.9**
comp=Z,17nm,1.1s
KONO Kongsberg 18.05 319 *e*P **Pn 21 20 44.5 +0.3**
comp=Z,14nm,1.2s
KONO Kongsberg 18.05 319 *e*P **Pn 21 20 44.5 +0.3**
KONO pmax pmax
comp=Z,14nm,1.2s
NB201 NORSAR Array S 18.09 324 *e*Pn **Pn 21 20 40.9 -3.9**
comp=Z,37nm,1.4s
NB201 NORSAR Array S 18.09 324 *e*P **Pn 21 20 40.7 -4.1**
NB2 NORSAR Subarra 18.12 324 P **Pn 21 20 40.9 -4.2**
comp=Z,3.9nm,0.6s,baz=126,slow=11
NB2 NORSAR Subarra 18.12 324 P **Pn 21 20 40.9 -4.2**
baz=126,slow=11
NB200 NORSAR Array S 18.12 324 *e*Pn **Pn 21 20 40.2 -4.9**
NB200 *e*Sn Sn 21 23 56.0 -11
NOA NORSAR Array B 18.12 324 Pn **Pn 21 20 40.2 -4.9**
comp=Z,0.0nm,0.3s,baz=216,slow=17,SNR=7.9
NOA Sn Sn 21 23 56.0 -11
comp=Z,0.0nm,0.3s,baz=316,slow=10,SNR=3.1
NAO01 NORSAR Array S 18.14 323 *e*P **Pn 21 20 41.0 -4.3**
comp=Z,24nm,1.0s
NAO01 NORSAR Array S 18.14 323 *e*P **Pn 21 20 40.7 -4.6**
NC303 NORSAR Array S 18.17 324 *e*P **Pn 21 20 41.6 -4.1**
comp=Z,22nm,0.7s
NC303 NORSAR Array S 18.17 324 *e*P **Pn 21 20 41.8 -3.9**
NBO00 NORSAR Array S 18.29 323 *e*P **P 21 20 48.4 +1.1**
LPL La Plagne 18.40 272 *e*P **P 21 20 53.2 +4.3**
NC204 NORSAR Array S 18.43 324 *e*P **P 21 20 49.1 +0.1**
comp=Z,16nm,0.7s
NC204 NORSAR Array S 18.43 324 *e*P **P 21 20 48.5 -0.5**
EIL Elat 18.46 176 P **P 21 20 49.3 0.0**
comp=Z,0.6nm,0.3s,baz=352,slow=9.4,SNR=5.9
CABF La Chapelle 18.53 276 *e*P **Pn 21 20 51.5 +1.2**
BNI Bardonecchia 18.58 270 *e*P **P 21 20 50.0 -0.8**
comp=Z,5.2nm,1.1s
BNI Bardonecchia 18.58 270 *e*P **P 21 20 50.0 -0.8**
BNI pmax pmax
comp=Z,5.0nm,1.1s
SVE Sverdlovsk 18.64 52 *e*P **P 21 20 48.3 -2.8**
SVE *e*S Sn 21 24 08.3 -11
SVE pmax pmax
comp=Z,34nm,0.9s
APA Apatity 19.51 0⇓*iP* **P 21 20 56.9 -3.7**
APA pmax pmax
comp=Z,3.0nm,0.7s
APA MLR MLR
comp=Z,100nm,10.0s
LOR Lormes 19.85 279 *e*P **P 21 21 04.5 0.0**
LVZ Lovozero 19.85 1 *e*P **P 21 21 03.9 -0.5**
comp=Z,17nm,1.0s

LVZ Lovozero 19.85 1 *e*P **P 21 21 03.9 -0.5**
LVZ pmax pmax
comp=Z,17nm,1.0s
SSB Saint Sauveur 19.94 273 *e*P **P 21 21 04.7 -0.8**
comp=Z,8.8nm,1.0s
SSB Saint Sauveur 19.94 273 *e*P **P 21 21 04.7 -0.8**
SSB pmax pmax
comp=Z,9.0nm,1.0s
SSF Saint Saulge 20.13 278 *e*P **P 21 21 07.8 +0.2**
SSF Saint Saulge 20.13 278 *e*P **P 21 21 07.8 +0.2**
AVF Avril sur Loir 20.30 278 *e*P **P 21 21 09.5 +0.1**
AVF Avril sur Loir 20.30 278 *e*P **P 21 21 09.5 +0.1**
ASK Askoy 20.40 318 *e*P Pn 21 21 14.8 +2.5
GEYT Alibeck 20.66 110 P **P 21 21 14.4 +1.0**
comp=Z,11nm,1.1s,baz=301,slow=10,SNR=17
GYA0B ALIBECK ARRAY 20.66 110 *e*Pn Pn 21 21 17.2 +1.5
comp=Z,9.9nm,1.0s
GYA0B ALIBECK ARRAY 20.66 110 ⇑P **P 21 21 12.0 -1.4**
BGF Bois d'Agland 20.70 277 *e*P **P 21 21 13.9 +0.2**
BGF Bois d'Agland 20.70 277 *e*P **P 21 21 13.9 +0.2**
LASF Ste Croix 20.81 270 *e*P **P 21 21 15.5 +0.5**
HEF Hetta 20.93 350 *e*P **P 21 21 15.9 -0.2**
TCF Toulx Ste Croi 21.20 277 *e*P **P 21 21 19.4 +0.3**
TCF Toulx Ste Croi 21.20 277 *e*P **P 21 21 19.4 +0.3**
KONS Konsvik 21.25 337 *e*P **P 21 21 19.8 +0.3**
KTK1 Kautokeino 21.56 350 *e*P **P 21 21 23.9 +1.1**
ARA0 ARCESS Array S 21.83 353 *e*P **P 21 21 26.6 +0.9**
ARA0 *e*S **S 21 25 19.8 -6.9**
ARCES ARCESS Array B 21.83 353 P **P 21 21 26.6 +0.9**
comp=Z,14nm,0.5s,baz=173,slow=9.9,SNR=111
ARCES S **S 21 25 19.8 -6.9**
comp=Z,2.3nm,0.8s,baz=172,slow=14,SNR=2.8
ARE0 ARCESS Array S 21.83 353 *e*P **P 21 21 26.6 +0.9**
comp=Z,1.3nm,0.8s
KIF Kilpisjarvi 21.87 348 *e*P **P 21 21 27.1 +1.1**
RJF Les Rejaudoux 21.96 275 *e*P **P 21 21 29.5 +2.2**
RJF Les Rejaudoux 21.96 275 *e*P **P 21 21 29.5 +2.2**
TRO Tromso 22.72 347 *e*P **P 21 21 35.9 +0.8**
HAMF Hammerfest 23.07 352 *e*P **P 21 21 40.4 +1.6**
EKA Eskdalemuir Ar 23.55 302 P **P 21 21 44.0 +0.2**
comp=Z,2.1nm,0.6s,baz=94,slow=11,SNR=4.5
EKA Eskdalemuir Ar 23.55 302 *e*P **P 21 21 44.0 +0.2**
EPF Esparros 23.58 270 *e*P **P 21 21 42.7 -1.5**
EPF Esparros 23.58 270 *e*P **P 21 21 42.7 -1.5**
BRVK Borovoye 23.75 64 *e*P **P 21 21 45.1 -0.7**
comp=Z,17nm,0.9s
BRVK Borovoye 23.75 64 ⇑P **P 21 21 46.1 +0.3**
comp=Z,16nm,1.0s
BRVK Borovoye 23.75 64*c iP* **P 21 21 46.6 +0.8**
BRVK pmax pmax
comp=Z,11nm,1.0s
BVAR Borovoye Array 23.82 64 P **P 21 21 47.0 +0.6**
comp=Z,3.1nm,0.7s,baz=268,slow=8.3,SNR=18
BVAR Borovoye Array 23.82 64 P **P 21 21 47.0 +0.6**
KK31 Karatay Array 26.27 87 *e*P **P 21 22 10.5 +1.6**
comp=Z,19nm,1.2s
KK31 Karatay Array 26.27 87 *e*P **P 21 22 10.5 +1.6**
KK31 pmax pmax
comp=Z,19nm,1.2s
KKAR Karatay Array 26.27 87 *e*P **P 21 22 10.5 +1.6**
comp=Z,19nm,1.2s
KKAR Karatay Array 26.27 87 *e*P **P 21 22 10.5 +1.6**
KKAR pmax pmax
comp=Z,19nm,1.2s
RAYN Ar Rayn 26.36 154 *e*P **P 21 22 11.5 +1.6**
comp=Z,15nm,1.0s
RAYN Ar Rayn 26.36 154 *e*P **P 21 22 11.5 +1.6**
RAYN pmax pmax
comp=Z,15nm,1.0s
ESDC Sonseca Array 27.98 266 P **P 21 22 25.3 +0.9**
comp=Z,1.0nm,0.7s,baz=52,slow=10,SNR=7.9
GAR Garm 28.03 95 *e*P **P 21 22 27.6 +2.7**
comp=Z,15nm,1.1s
GAR Garm 28.03 95 *e*P **P 21 22 27.6 +2.7**
GAR pmax pmax
comp=Z,15nm,1.1s
AAK Ala-Archa 29.12 85 P **P 21 22 36.4 +1.8**
comp=Z,5.3nm,0.8s,baz=266,slow=7.3,SNR=12
AAK Ala-Archa 29.12 85 *e*P **P 21 22 37.2 +2.6**
comp=Z,18nm,1.3s
AAK Ala-Archa 29.12 85⇑*iP* **P 21 22 37.4 +2.8**
KURBB Kurchatov Arra 29.16 68 P **P 21 22 35.1 +0.5**
comp=Z,0.3nm,0.6s,baz=287,slow=10,SNR=4.7
KURBB PcP **PcP 21 25 43.1 +1.3**
comp=Z,0.3nm,0.6s,baz=282,slow=3.3,SNR=4.9
KURK Kurchatov 29.19 68 *e*P **P 21 22 35.5 +0.6**
comp=Z,3.8nm,1.4s
KURK Kurchatov 29.19 68 P **P 21 22 35.1 +0.2**
KURK 21 25 43.2
BOOM Boomskoye usch 30.15 85 *e*P **P 21 22 41.1 -2.6**
comp=Z,5.7nm,0.8s
BOOM Boomskoye usch 30.15 85 *e*P **P 21 22 41.1 -2.6**
BOOM pmax pmax
comp=Z,6.0nm,0.8s
SPA0 Spitsbergen Ar 30.86 353 *e*P **P 21 22 51.3 +1.8**
comp=Z,18nm,1.1s
SPITS Spitsbergen Ar 30.86 353 P **P 21 22 51.3 +1.8**
comp=Z,6.6nm,0.9s,baz=141,slow=16,SNR=3.9
NVS Novosibirsk 31.19 59 *e*P **P 21 22 54.4 +1.9**
NVS pmax pmax
comp=Z,8.0nm,0.7s
NVS pmax pmax
comp=E,6.0nm,0.8s
KSH Kashi 31.56 90 P **P 21 22 57.4 +1.3**
KSH sP sP 21 23 04.5 +4.0
KSH PcP **PcP 21 25 52.8 +4.3**
KSH S **S 21 28 04.3 -0.4**
KSH SS **SnSn 21 29 49.0 -0.5**
KSH pmax pmax
comp=E,11nm,0.8s
KSH pmax pmax
comp=E,300nm,5.4s
KSH LR LR
comp=E,240nm,11.6s
KSH LR LR
comp=E,280nm,9.8s
WSAR Wadi Sarin 31.92 132 P **P 21 22 58.9 -0.3**
comp=E,6.9nm,0.8s,baz=336,slow=5.5,SNR=4.8
ZAA0 Zalesovo Array 32.25 60 *e*P **P 21 23 03.2 +1.3**
comp=E,9.6nm,0.8s
ZAA1 Zalesovo Array 32.25 60 *e*P **P 21 23 02.4 +0.5**
ZALV Zalesovo Beam 32.25 60 P **P 21 23 02.4 +0.5**
comp=E,9.0nm,0.7s,baz=281,slow=9.9,SNR=29
MK32 Makanchi Array 32.65 74 *e*P **P 21 23 06.3 +0.9**
MKAR Makanchi Array 32.65 74 P **P 21 23 06.3 +0.9**
comp=E,1.0nm,0.7s,baz=272,slow=9.5,SNR=7.9
MKAR Makanchi Array 32.65 74 *e*P **P 21 23 06.9 +1.4**
MKAR Makanchi Array 32.65 74 *e*P **P 21 23 06.9 +1.4**
WMQ Urumqi 37.33 76 *e*P **P 21 23 49.3 +3.4**
WMQ LR LR
comp=E,58nm,20.7s
WMQ LR LR
comp=E,300nm,29.3s
PYUN Piuthan 42.99 99 *e*P **P 21 24 34.4 +1.2**
comp=E,26nm,1.0s
CMLA Cha da Macela 43.38 279 *e*P **P 21 24 34.7 -1.3**
comp=E,202nm,1.5s
CMLA Cha da Macela 43.38 279 *e*P **P 21 24 34.7 -1.3**
CMLA pmax pmax
comp=Z,202nm,1.5s
KOLN Koldanda 43.61 99 *e*P **P 21 24 38.9 +0.7**
TOA1 Torodi Ar. Sit 43.68 228 *e*P **P 21 24 37.4 -1.3**
TOA0 Torodi Ar. Sit 43.68 228 *e*P **P 21 24 38.6 0.0**
comp=Z,8.4nm,0.8s
TORD Torodi Ar. Bea 43.68 228 P **P 21 24 37.4 -1.3**
comp=Z,7.2nm,0.9s,baz=23,slow=9.4,SNR=32
TLY Talaya 43.80 58 *e*P **P 21 24 42.2 +3.0**
comp=Z,3.7nm,0.8s
TLY Talaya 43.80 58⇓*iP* **P 21 24 40.1 +0.9**
KKN Kakani 44.71 98 *e*P **P 21 24 48.0 +1.0**
comp=Z,10nm,0.6s
DMN Daman 44.71 98 *e*P **P 21 24 48.0 +0.9**
comp=Z,22nm,1.1s
PKIN Phulchoki 44.93 98 *e*P **P 21 24 49.6 +0.8**
comp=Z,4.7nm,0.5s
PKI Pulchoki 44.94 98 *e*P **P 21 24 49.7 +0.7**
comp=Z,5.8nm,0.6s
SONA0 Songino Array 47.12 62 *e*P **P 21 25 07.2 +1.5**
SONM Songino Array 47.12 62 P **P 21 25 07.2 +1.5**
comp=Z,2.9nm,1.0s,baz=292,slow=7.8,SNR=15
LSA Lhasa 47.39 91 *e*P **P 21 25 08.3 -0.2**
comp=Z,6.4nm,0.8s
LSA Lhasa 47.39 91 *e*P **P 21 25 08.3 -0.2**
LSA pmax pmax
comp=Z,6.0nm,0.8s

ULN	**Ulaanbaatar**	**47.49**	**61**	*e*P	**P**	**21 25 08.4**	**-0.2**
	comp=Z,3.2nm,1.2s						
ULN	**Ulaanbaatar**	**47.49**	**61**	*i*P	**P**	**21 25 11.0**	**+2.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DBIC	**Dimbokro**	**52.53**	**231**	P	**P**	**21 25 46.6**	**-0.4**
	comp=Z,10nm,0.9s,baz=9.3,slow=9.7,SNR=11						
DBIC	**Dimbokro**	**52.53**	**231**	*e*P	**P**	**21 25 46.6**	**-0.4**
	comp=Z,8.0nm,0.7s						
DBIC	**Dimbokro**	**52.53**	**231**	*e*P	**P**	**21 25 46.6**	**-0.4**
DBIC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIC	**Toumodi**	**52.63**	**231**	*e*P	**P**	**21 25 49.6**	**+1.8**
KIC	**Kosan Boka**	**52.73**	**230**	*e*P	**P**	**21 25 48.1**	**-0.4**
	comp=Z,20nm,0.9s						
LIC	**Lamto**	**52.99**	**231**	*e*P	**P**	**21 25 50.0**	**-0.5**
	comp=Z,37nm,0.8s						
CD2	**Chengdu**	**55.04**	**81**	*e*P	**P**	**21 26 05.3**	**-0.1**
XAN	**Xi'an**	**56.45**	**75**	P	**P**	**21 26 16.9**	**+1.4**
XAN				pP	sP	21 26 22.1	+2.2
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BILL	**Bilibino**	**58.92**	**19**	*i*P	**P**	**21 26 33.8**	**+1.5**
BILL				*i*		21 27 28.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ENH	**Enshi**	**59.23**	**78**	*e*P	**P**	**21 26 36.6**	**+1.6**
	comp=Z,6.3nm,0.8s						
SEY	**Seymchan**	**59.24**	**28**	*e*P	**P**	**21 26 37.3**	**+2.7**
SEY	**Seymchan**	**59.24**	**28**	*i*P	**P**	**21 26 37.2**	**+2.7**
CM31	**Chiang Mai Arr**	**60.21**	**95**	*e*P	**P**	**21 26 42.3**	**+0.5**
	comp=Z,7.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**60.21**	**95**	P	**P**	**21 26 42.3**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=304,slow=7.6,SNR=7.7						
CMAR	**Chiang Mai Arr**	**60.21**	**95**	*e*P	**P**	**21 26 42.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**60.21**	**95**	*e*P	**P**	**21 26 42.8**	**+1.0**
KLR	**Kul'dur**	**60.22**	**48**	*e*P	**P**	**21 26 43.5**	**+1.9**
KLR	**Kul'dur**	**60.22**	**48**	*i*P	**P**	**21 26 43.4**	**+1.9**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**63.66**	**53**	P	**P**	**21 27 06.1**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=323,slow=2.2,SNR=4.4						
NJ2	**Nanjing**	**64.08**	**70**	*e*P	**P**	**21 27 08.8**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
COLD	**Coldfoot**	**64.96**	**2**	*e*P	**P**	**21 27 13.8**	**+0.9**
	comp=Z,3.8nm,0.8s						
FYU	**Fort Yukon**	**65.65**	**359**	*e*P	**P**	**21 27 19.1**	**+1.8**
	comp=Z,3.0nm,0.7s						
KS15	**Wonju Array Si**	**65.95**	**60**	*e*P	**P**	**21 27 19.4**	**-0.3**
	comp=Z,5.1nm,1.2s						
KSRS	**Korea Array**	**65.96**	**60**	P	**P**	**21 27 21.1**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=312,slow=5.7,SNR=9.1						
YKW3	**Yellowknife Ar**	**66.77**	**345**	*e*P	**P**	**21 27 25.9**	**+1.4**
	comp=Z,4.1nm,0.7s						
YKA	**Yellowknife Ar**	**66.83**	**344**	P	**P**	**21 27 26.6**	**+1.7**
	comp=Z,3.6nm,0.7s,baz=20,slow=6.4,SNR=32						
YKB5	**Yellowknife Ar**	**66.83**	**344**	*e*P	**P**	**21 27 26.6**	**+1.7**
COLA	**College**	**67.35**	**1**	*e*P	**P**	**21 27 29.0**	**+0.8**
	comp=Z,31nm,0.3s						
COLA	**College**	**67.35**	**1**	*e*P	**P**	**21 27 29.0**	**+0.8**
COLA				pmax	pmax		
	comp=Z,31nm,0.3s						
ILAR	**Eielson Array**	**67.45**	**0**	P	**P**	**21 27 30.8**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=352,slow=4.9,SNR=9.5						
ILB	**Eielson Array**	**67.45**	**0**	*e*P	**P**	**21 27 29.8**	**+0.9**
	comp=Z,5.5nm,1.4s						
CCB	**Clear Creek Bu**	**67.58**	**1**	*e*P	**P**	**21 27 29.9**	**+0.2**
	comp=Z,1.4nm,0.7s						
WRH	**Wood River Hil**	**67.75**	**1**	*e*P	**P**	**21 27 33.6**	**+2.8**
	comp=Z,3.7nm,0.8s						
DOT	**Dot Lake**	**68.56**	**359**	*e*P	**P**	**21 27 38.6**	**+2.7**
	comp=Z,5.7nm,0.8s						
FFC	**Flin Flon**	**70.86**	**334**	*i*P	**P**	**21 27 52.4**	**+2.2**
E46A	**Sault Ste Mari**	**71.35**	**320**	*e*P	**P**	**21 27 55.5**	**+2.2**
	comp=Z,5.0nm,0.8s						
BOSA	**Boshof**	**76.72**	**187**	P	**P**	**21 28 24.1**	**-0.8**
	comp=Z,4.6nm,1.0s,baz=83,slow=8.2,SNR=3.3						
ECSD	**EROS Data Cent**	**78.52**	**325**	*e*P	**P**	**21 28 37.0**	**+2.2**
	comp=Z,3.4nm,0.8s						
HRY	**Holter Researc**	**80.81**	**337**	*e*P	**P**	**21 28 49.7**	**+2.4**
GCMT	**Greycliff**	**81.05**	**335**	*e*P	**P**	**21 28 51.5**	**+2.8**
DLMT	**Dillon**	**82.26**	**337**	*e*P	**P**	**21 28 57.4**	**+2.3**
	comp=Z,3.0nm,1.0s						
FXWY	**Fox Creek**	**83.41**	**335**	*e*P	**P**	**21 29 04.4**	**+3.2**
	comp=Z,2.6nm,1.0s						
TPAW	**Teton Pass**	**83.53**	**335**	*e*P	**P**	**21 29 05.2**	**+3.3**
	comp=Z,4.7nm,1.0s						
BW06	**Boulder Array**	**83.78**	**333**	*e*P	**P**	**21 29 05.3**	**+2.2**
	comp=Z,1.9nm,0.9s						
PD31	**Pinedale Array**	**83.78**	**333**	*e*P	**P**	**21 29 05.3**	**+2.2**
	comp=Z,1.9nm,1.0s						
PDAR	**Pinedale Array**	**83.78**	**333**	P	**P**	**21 29 03.1**	**0.0**
	comp=Z,1.2nm,0.8s,baz=64,slow=3.4,SNR=8.1						
BMO	**Blue Mountains**	**83.91**	**340**	*e*P	**P**	**21 29 05.3**	**+1.7**
	comp=Z,2.8nm,0.9s						
BMO	**Blue Mountains**	**83.91**	**340**	*e*P	**P**	**21 29 05.3**	**+1.7**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LTX	**Lajitas**	**93.82**	**323**	*e*P	**P**	**21 29 53.5**	**+2.4**
LTX	**Lajitas**	**93.82**	**323**	*e*P	**P**	**21 29 53.5**	**+2.4**
TXAR	**Lajitas Array**	**93.82**	**323**	P	**P**	**21 29 53.5**	**+2.3**
	comp=Z,0.1nm,0.6s,baz=52,slow=7.3,SNR=2.7						
VNDA	**Vanda**	**144.60**	**163**	PKP	PKPbc	21 36 07.6	+0.1
	comp=Z,0.7nm,0.9s,baz=276,slow=5.7,SNR=5.5						

GEN ***23*** *21:17:26.2, 44.°19N×10.°22E, h5km±3km, MI0.6*

ROM 23 21:17:25.6±0.1, 44.°184N±0.°004×10.°223E±0.°004, h10km, ML1.3/2, Error ellipse: s-maj=0.4km s-min=0.3km az=201.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.02**	**211**	P	Pg	21 17 27.7	+0.3
T0912				S	Sg	21 17 28.8	+0.1
EQUI	**Equi**	**0.05**	**250**	P	Pg	21 17 28.0	+0.4
EQUI				S	Sg	21 17 29.0	-0.1
EQUI	**Equi**	**0.05**	**250**	P	Pg	21 17 28.0	+0.4
EQUI				S	Sg	21 17 29.2	+0.1
EQUI				AML	AML		
	comp=E,205μm,0.1s						
EQUI				AML	AML		
	comp=N,127μm,0.6s						
EQUI				AML	AML		
	comp=E,205μm,0.1s						
EQUI				AML	AML		
	comp=N,127μm,0.6s						
EQUI				AML	AML		
	comp=E,205μm,0.1s						
EQUI				AML	AML		
	comp=N,127μm,0.6s						
VLC	**Villacollemand**	**0.12**	**102**	P	Pg	21 17 29.1	+0.6
VLC				S	Sg	21 17 31.4	+0.8
SARO	**Sassorosso**	**0.13**	**90**	P	Pg	21 17 29.2	+0.5
SARO				S	Sg	21 17 31.4	+0.5
SARO	**Sassorosso**	**0.13**	**90**	P	Pg	21 17 29.2	+0.5
SARO				S	Sg	21 17 31.4	+0.6
T0911	**Castelpoggio (**	**0.13**	**236**	P	Pg	21 17 29.4	+0.7
T0911				S	Sg	21 17 31.7	+1.0
CARD	**Cardoso**	**0.24**	**130**	P	Pg	21 17 31.0	+0.5
CARD				S	Sg	21 17 35.0	+1.1
CARD	**Cardoso**	**0.24**	**130**	P	Pg	21 17 31.2	+0.7
CARD				S	Sg	21 17 35.2	+1.2
CARD				AML	AML		
	comp=E,95μm,1.1s						
CARD				AML	AML		
	comp=N,98μm,0.1s						
ERBM	**Eremo**	**0.27**	**30**	P	Pg	21 17 31.8	+0.7
ERBM				S	Sb	21 17 36.5	-0.9
BDI	**Bagni Di Lucca**	**0.30**	**114**	P	Pg	21 17 32.2	+0.7
BDI				S	Sb	21 17 37.1	-0.9
GRAM	**Graiana**	**0.33**	**340**	P	Pg	21 17 32.8	+0.6
GRAM				S	Sg	21 17 37.4	+0.9
GRAM	**Graiana**	**0.33**	**340**	P	Pg	21 17 32.8	+0.6
GRAM				S	Sg	21 17 37.7	+1.2
GRAM				AML	AML		
	comp=E,162μm,0.8s						
GRAM				AML	AML		
	comp=N,148μm,0.3s						
GRAM				AML	AML		
	comp=E,162μm,0.8s						
GRAM				AML	AML		
	comp=N,148μm,0.3s						
GRAM				AML	AML		
	comp=E,162μm,0.8s						
GRAM				AML	AML		
	comp=N,148μm,0.3s						
MAIM	**Mastiano**	**0.33**	**144**	P	Pg	21 17 32.8	+0.7
MAIM				S	Sb	21 17 38.0	-1.0
MAIM	**Mastiano**	**0.33**	**144**	P	Pg	21 17 32.9	+0.7
MAIM				S	Sb	21 17 38.1	-0.9

IDC ***23*** *21:29:05.5±1.7, 7.°58S×103.°65E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.8/36, mbtmp4.0/9, ML3.8/1, Error ellipse: s-maj=57.7km s-min=18.3km az=52.0*

ISCJB ***23*** *21:29:08.8±0.9, 7.°49S±0.°05×103.°85E±0.°04, h39km±8km, mb4.3/24, Error ellipse: s-maj=9.3km s-min=5.0km az=42.3*

DJA ***23*** *21:29:09.8±0.3, 7.°S±3.°×10.°4E±.°, h10km, M4.4/21, mb4.6/12, MLv4.3/21*

NEIC ***23*** *21:29:14.0±2.0, 7.°41S×104.°05E, h64km±7km, mb4.4/19, Error ellipse: s-maj=26.1km s-min=11.0km az=54.0*

ISC 23 21:29:11.0±0.7, 7.°46S±0.°09×103.°88E±0.°10, h39km±4km, n62, σ1°28/71, mb4.2/24, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.98**	**65**	P	**Pn**	**21 29 42.0**	**0.0**
CGJI				S	**Sn**	**21 30 06.0**	**+0.3**
KASI	**Kota Agung**	**2.02**	**18**	P	**Pn**	**21 29 41.5**	**-1.0**
KASI				S	**Sn**	**21 30 05.7**	**-0.8**
LWLI	**Liwa**	**2.43**	**4**	P	**Pn**	**21 29 47.8**	**-0.5**
LWLI				S	**Sn**	**21 30 16.2**	**-0.7**
BLSI	**Bandar Lampung**	**2.48**	**33**	P	**Pn**	**21 29 48.7**	**-0.2**
BLSI				S	**Sn**	**21 30 17.0**	**-0.9**
SBJI	**Serang**	**2.60**	**59**	P	**Pn**	**21 29 50.1**	**-0.4**
SBJI				S	**Sn**	**21 30 22.6**	**+1.7**
KLI	**Kotabumi**	**2.75**	**21**	P	**Pn**	**21 29 52.6**	**-0.1**
KLI				S	**Sn**	**21 30 25.0**	**+0.3**
KLSI		**2.88**	**17**	P	**Pn**	**21 29 53.0**	**-1.3**
MDSI	**Maura Dua**	**2.97**	**6**	P	**Pn**	**21 29 54.4**	**-1.2**
CBJI	**Citeko**	**3.12**	**71**	P	**Pn**	**21 29 58.2**	**+0.5**
CBJI				S	**Sn**	**21 30 36.2**	**+2.4**
MNAI	**Manna**	**3.21**	**343**	P	**Pn**	**21 29 58.8**	**-0.2**
LHSI	**Lahat**	**3.62**	**354**	P	**Pn**	**21 30 04.4**	**-0.2**
LEM	**Lembang**	**3.76**	**81**	Pn	**Pn**	**21 30 09.9**	**+3.3**
	6.0nm,0.3s,baz=332,slow=22,SNR=10.0						
LEM				Sn	**Sn**	**21 30 51.1**	**+1.4**
	5.8nm,0.3s,baz=196,slow=22,SNR=4.1						
LEM	**Lembang**	**3.76**	**81**	P	**Pn**	**21 30 06.3**	**-0.3**
CISI	**Cisompet, Garu**	**3.90**	**92**	*e*Pn	**Pn**	**21 30 07.7**	**-0.8**
CISI				*e*Sn	**Sn**	**21 30 51.0**	**-2.1**
CISI	**Cisompet, Garu**	**3.90**	**92**	P	**Pn**	**21 30 08.8**	**+0.3**
PPBI	**Pangkal Pinang**	**5.72**	**23**	P	**Pn**	**21 30 33.4**	**-0.1**
	15nm,0.9s,0.0nm						
KRJI	**Kerinci**	**5.85**	**336**	P	**Pn**	**21 30 34.2**	**-1.1**
TPI	**Tanjungpandan**	**5.99**	**39**	P	**Pn**	**21 30 35.7**	**-1.5**
YOGI	**Yogyakarta**	**6.37**	**94**	P	**Pn**	**21 30 44.1**	**+1.8**
SMRI	**Semarang**	**6.52**	**87**	*e*Pn	**Pn**	**21 30 44.8**	**+0.3**
SMRI	**Semarang**	**6.52**	**87**	P	**Pn**	**21 30 45.7**	**+1.2**
UGM	**Wanagama**	**6.60**	**94**	*e*Pn	**Pn**	**21 30 46.4**	**+0.8**
UGM				*e*Sn	**Sn**	**21 31 57.8**	**-1.8**
UGM	**Wanagama**	**6.60**	**94**	P	**Pn**	**21 30 46.4**	**+0.8**
NGJI	**Ngawi**	**7.52**	**90**	P	**Pn**	**21 30 58.5**	**+0.4**
PWJI	**Pagerwojo**	**7.87**	**95**	P	**Pn**	**21 31 03.9**	**+0.9**
	85nm,0.9s,0.3nm						
JAGI	**Jajag, Banyuwa**	**10.22**	**96**	*e*Pn	**Pn**	**21 31 32.7**	**-2.5**
GSI	**Gunungsitoli**	**10.74**	**324**	*e*Pn	**Pn**	**21 31 45.3**	**+2.9**
KKM	**Kota Kinabalu**	**18.20**	**43**	*e*P	**P**	**21 33 20.5**	**-0.4**
	12nm,1.0s						
SOEI	**Soe**	**20.29**	**98**	*e*P	**P**	**21 33 42.2**	**-1.5**
	97nm,1.4s						
PSA00	**Pilbara Seismi**	**20.84**	**134**	*e*P	**P**	**21 33 48.2**	**-1.4**
	49nm,1.4s						
BNDI	**Bandanaira**	**26.04**	**85**	P	**P**	**21 34 43.1**	**+2.2**
CM31	**Chiang Mai Arr**	**26.21**	**349**	*e*P	**P**	**21 34 43.6**	**+1.3**
	13nm,1.1s						
CMAR	**Chiang Mai Arr**	**26.21**	**349**	P	**P**	**21 34 43.4**	**+1.1**
	7.0nm,1.1s,baz=183,slow=8.6,SNR=16						
CMMT	**Chiang Mai**	**26.55**	**350**	P	**P**	**21 34 48.4**	**+2.9**
	3.3nm,1.0s						
MTN	**Manton Dam**	**27.34**	**104**	*e*P	**P**	**21 34 49.7**	**-2.9**
	38nm,1.4s						
WRA	**Warramunga Arr**	**32.02**	**116**	P	**P**	**21 35 34.6**	**+0.5**
	0.9nm,0.8s,baz=284,slow=11,SNR=4.2						
WR1	**Warramunga Arr**	**32.02**	**116**	*e*P	**P**	**21 35 34.6**	**+0.5**
AS31	**Alice Springs**	**33.00**	**123**	*e*P	**P**	**21 35 42.6**	**0.0**
	1.6nm,1.3s						
ASAR	**Alice Springs**	**33.00**	**123**	P	**P**	**21 35 42.6**	**0.0**
	0.4nm,0.8s,baz=300,slow=7.4,SNR=3.7						
SHL	**Shillong**	**34.84**	**341**	*e*P	**P**	**21 35 58.3**	**-0.4**
	7.7nm,1.2s						
LSA	**Lhasa**	**38.92**	**342**	*e*P	**P**	**21 36 32.2**	**-1.5**
	4.4nm,1.1s						
STKA	**Stephens Creek**	**42.68**	**130**	P	**P**	**21 37 05.5**	**+1.3**
	1.8nm,0.7s,baz=192,slow=17,SNR=3.8						
STKA	**Stephens Creek**	**42.68**	**130**	*e*P	**P**	**21 37 05.5**	**+1.3**
	0.6nm,1.1s						
PMG	**Port Moresby**	**42.84**	**96**	*e*P	**P**	**21 37 03.3**	**-2.4**
	30nm,1.2s						
KS15	**Wonju Array Si**	**49.99**	**25**	*e*P	**P**	**21 38 01.8**	**+0.4**
	6.9nm,1.2s						
SONA0	**Songino Array**	**55.10**	**2**	*e*P	**P**	**21 38 39.9**	**+0.6**
SONM	**Songino Array**	**55.10**	**2**	P	**P**	**21 38 39.9**	**+0.6**
	1.7nm,0.6s,baz=184,slow=9.1,SNR=10						
LHI	**Lord Howe Isla**	**56.59**	**123**	*e*P	**P**	**21 38 49.8**	**-0.4**
	191nm,1.3s						
MK31	**Makanchi Array**	**57.33**	**343**	*e*P	**P**	**21 38 55.6**	**+0.6**
	2.7nm,1.2s						
MK32	**Makanchi Array**	**57.33**	**343**	*e*P	**P**	**21 38 55.6**	**+0.5**
MKAR	**Makanchi Array**	**57.33**	**343**	P	**P**	**21 38 55.6**	**+0.5**
	2.1nm,0.9s,baz=139,slow=8.0,SNR=9.9						
USRK	**Ussuriysk Ar.**	**57.35**	**24**	P	**P**	**21 38 55.6**	**+0.4**
	0.7nm,0.6s,baz=210,slow=9.1,SNR=4.0						
KK31	**Karatay Array**	**58.75**	**332**	*e*P	**P**	**21 39 05.6**	**+0.5**
	1.4nm,1.3s						
KKAR	**Karatay Array**	**58.75**	**332**	*e*P	**P**	**21 39 05.7**	**+0.5**
	1.4nm,1.3s						
ZAA0	**Zalesovo Array**	**63.26**	**348**	*e*P	**P**	**21 39 33.9**	**-1.5**
	3.7nm,0.9s						
ZALV	**Zalesovo Beam**	**63.26**	**348**	P	**P**	**21 39 35.8**	**+0.3**
	1.6nm,0.6s,baz=151,slow=3.4,SNR=7.5						
ZAA1	**Zalesovo Array**	**63.26**	**348**	*e*P	**P**	**21 39 35.8**	**+0.3**
MAW	**Mawson**	**66.06**	**196**	*e*pP	pP	21 40 10.5	+7.1
BRVK	**Borovoye**	**66.69**	**339**	*e*P	**P**	**21 39 57.1**	**-0.7**
	1.4nm,0.6s						
ABKAR	**Akbulak array**	**68.26**	**331**	*e*P	**P**	**21 40 08.2**	**+0.5**
	3.9nm,1.3s						
CRLZ	**Canterbury Las**	**69.52**	**134**	*e*P	**P**	**21 40 15.8**	**-0.1**
	145nm,1.5s						
TXAR	**Lajitas Array**	**146.16**	**46**	PKPbc	**PKiKP**	**21 48 50.3**	**-0.9**
	1.0nm,0.7s,baz=272,slow=1.9,SNR=9.7						

GCG 23 21:33:31.6±0.3, 13.°79N×91.°76W, h2km±999km, MD3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.94**	**12**	*e*P	Pg	21 33 50.1	+0.5
FUG	**Fuego 3**	**1.11**	**54**	*e*P	Pg	21 33 52.9	0.0
PCG	**Pacaya**	**1.27**	**62**	*e*P	Pg	21 33 55.8	-0.2
IXG	**Ixpaco**	**1.34**	**73**	*e*P	Pg	21 33 56.7	-0.6
NBG	**Las Nubes**	**1.59**	**60**	*e*P	Pn	21 34 01.1	+0.1

ISK ***23*** *21:48:33.9, 38.°56N×43.°83E, h1km, ML2.1/5*

DDA ***23*** *21:48:34.6, 38.°55N×43.°87E, h7km±2km, ML2.5*

ISCJB ***23*** *21:48:35.1±1.0, 38.°56N±0.°04×43.°88E±0.°07, h7km±7km, Error ellipse: s-maj=9.2km s-min=5.9km az=25.5*

ISC 23 21:48:34.8±1.3, 38.°56N±0.°04×43.°85E±0.°05, h18km±9km, n13, σ0°56/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.35**	**266**	*i*P	**Pg**	**21 48 42.6**	**+0.2**
TVAN				*i*S	**Sb**	**21 48 48.2**	**+0.2**
TVAN				IAML_P			
	comp=Z,2μm,0.1s						
VANB	**Van**	**0.36**	**276**	PG	**Pg**	**21 48 41.6**	**-0.9**
VANB				SG	**Sg**	**21 48 47.2**	**-0.6**
VMUR	**Van-Muradiye**	**0.48**	**333**	*i*P	**Pb**	**21 48 45.4**	**+0.4**
VMUR				IAML_P			
	comp=Z,326nm,0.2s						
CLDR	**Caldiran**	**0.59**	**5**	PG	**Pb**	**21 48 46.2**	**-0.6**
CLDR				SG	**Sg**	**21 48 55.2**	**+0.7**
CLDR	**Caldiran**	**0.59**	**5**	*e*P	**Pg**	**21 48 46.8**	**+0.2**
CLDR				IAML_P			
	comp=Z,1μm,0.1s						
GEVA	**Gevas**	**0.67**	**249**	*i*P	**Pg**	**21 48 48.9**	**+0.8**
GEVA				*i*S	**Sn**	**21 48 58.8**	**-1.0**
GEVA				IAML_P			
	comp=Z,760nm,0.2s						
ADCV	**BITLIS_Adilcev**	**0.92**	**286**	*i*P	**Pg**	**21 48 52.6**	**-0.1**
HAKT	**HAKKARI**	**1.00**	**187**	*i*P	**Pn**	**21 48 54.4**	**+0.1**
HAKT				IAML_P			
	comp=Z,609nm,0.1s						
TUTA	**Tutak**	**1.17**	**317**	*i*P	**Pg**	**21 48 57.2**	**-0.3**
TUTA				*i*S	**Sg**	**21 49 13.2**	**+0.3**
MLAZ	**Malazgirt-MUS**	**1.17**	**300**	PN	**Pb**	**21 48 56.9**	**+0.2**
AGRB	**Hanur-Agry**	**1.22**	**327**	PN	**Pb**	**21 48 57.8**	**+0.3**
CUKT	**Cukurca**	**1.32**	**189**	PN	**Pg**	**21 49 00.2**	**-0.2**
SRTM	**Siirt_Merkez**	**1.62**	**250**	*i*P	**Pg**	**21 49 06.6**	**+0.5**
SRTM				IAML_P			
	comp=Z,443nm,0.3s						

ISCJB ***23*** *21:54:46.6±0.5, 41.°64N±0.°03×16.°27E±0.°04, h12km±3km, Error ellipse: s-maj=5.9km s-min=2.7km az=43.8*

ROM ***23*** *21:54:46.7±0.2, 41.°596N±0.°009×16.°23E±0.°01, h6km±1km, ML2.5/31, Error ellipse: s-maj=1.0km s-min=0.8km az=31.0*

ISC 23 21:54:46.8±1.4, 41.°60N±0.°03×16.°23E±0.°03, h8km±11km, n43, σ0°80/53, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAG	**Monte S. Angel**	**0.26**	**295**	P	**Pg**	**21 54 52.6**	**+0.6**
MSAG				S	**Sb**	**21 54 57.4**	**-1.2**
MSAG				AML	AML		
	comp=E,1085μm,0.1s						
MSAG				AML	AML		
	comp=N,1780μm,0.2s						
MSAG				AML	AML		
	comp=E,1210μm,0.2s						
MSAG				AML	AML		
	comp=N,1880μm,0.2s						
MSAG				AML	AML		
	comp=E,1086μm,0.1s						
MSAG				AML	AML		
	comp=N,1780μm,0.2s						
MSAG				AML	AML		
	comp=E,1210μm,0.2s						
MSAG				AML	AML		
	comp=N,1880μm,0.2s						
MSAG				AML	AML		
	comp=E,1085μm,0.1s						
MSAG				AML	AML		
	comp=N,1780μm,0.2s						
MSAG				AML	AML		
	comp=E,1210μm,0.2s						
MSAG				AML	AML		
	comp=N,1880μm,0.2s						
MSAG				AML	AML		
	comp=E,1210μm,0.2s						
MSAG				AML	AML		
	comp=E,1085μm,0.1s						
MSAG				AML	AML		
	comp=N,1780μm,0.2s						
MSAG				AML	AML		
	comp=N,1880μm,0.2s						
SGRT	**San Giovanni R**	**0.39**	**293**	P	**Pg**	**21 54 55.0**	**+0.5**
SGRT				S	**Sb**	**21 55 01.3**	**-1.1**
MRVN	**Minervino Murg**	**0.54**	**183**	P	**Pg**	**21 54 57.4**	**+0.1**
MRVN				S	**Sb**	**21 55 05.9**	**-0.6**
MRVN				AML	AML		
	comp=E,1655μm,0.2s						
MRVN				AML	AML		
	comp=N,556μm,0.5s					

MELA	**Melanico ??? S**	**0.83 278**	P	**Pg**	**21 55 02.8**	**+0.1**
MELA			S	**Sb**	**21 55 15.1**	**+0.2**
MELA			AML	AML		
	comp=E,852μm,0.2s					
MELA			AML	AML		
	comp=N,729μm,0.3s					
MELA			AML	AML		
	comp=E,890μm,0.2s					
MELA			AML	AML		
	comp=N,763μm,0.3s					
MELA			AML	AML		
	comp=E,852μm,0.2s					
MELA			AML	AML		
	comp=N,729μm,0.3s					
MELA			AML	AML		
	comp=E,890μm,0.2s					
MELA			AML	AML		
	comp=N,764μm,0.3s					
MELA			AML	AML		
	comp=E,890μm,0.2s					
MELA			AML	AML		
	comp=N,764μm,0.3s					
MELA			AML	AML		
	comp=E,852μm,0.2s					
MELA			AML	AML		
	comp=N,729μm,0.3s					
MELA			AML	AML		
	comp=E,890μm,0.2s					
MELA			AML	AML		
	comp=N,764μm,0.3s					
MELA			AML	AML		
	comp=E,852μm,0.2s					
MELA			AML	AML		
	comp=N,729μm,0.3s					
SG1	**Sgolgore (BA)**	**0.83 156**	*e*Pg	**Pg**	**21 55 02.8**	**0.0**
SG1			Sg	**Sb**	**21 55 16.1**	**+1.1**
MOCO	**Biccari - m.te**	**0.84 254**	P	**Pb**	**21 55 03.7**	**+0.1**
MOCO			AML	AML		
	comp=E,152μm,0.7s					
MOCO			AML	AML		
	comp=N,70μm,0.6s					
MOCO			AML	AML		
	comp=E,152μm,0.7s					
MOCO			AML	AML		
	comp=N,70μm,0.6s					
MOCO			AML	AML		
	comp=E,152μm,0.7s					
MOCO			AML	AML		
	comp=N,70μm,0.6s					
MOCO			AML	AML		
	comp=E,152μm,0.7s					
MOCO			AML	AML		
	comp=N,70μm,0.6s					
ACER	**Acerenza**	**0.84 195**	P	**Pb**	**21 55 03.6**	**-0.1**
ACER			S	**Sb**	**21 55 14.7**	**-0.5**
ACER			AML	AML		
	comp=E,1850μm,0.9s					
ACER			AML	AML		
	comp=N,710μm,0.3s					
ACER			AML	AML		
	comp=E,1955μm,0.9s					
ACER			AML	AML		
	comp=N,744μm,0.3s					
ACER			AML	AML		
	comp=E,1850μm,0.9s					
ACER			AML	AML		
	comp=N,710μm,0.3s					
ACER			AML	AML		
	comp=E,1955μm,0.9s					
ACER			AML	AML		
	comp=N,744μm,0.3s					
ACER			AML	AML		
	comp=E,1850μm,0.9s					
ACER			AML	AML		
	comp=E,1955μm,0.9s					
ACER			AML	AML		
	comp=N,710μm,0.3s					
ACER			AML	AML		
	comp=N,744μm,0.3s					
CAFE	**Carife**	**0.94 233**	AML	AML		
	comp=E,196μm,1.6s					
CAFE			AML	AML		
	comp=N,160μm,0.3s					
CAFE			AML	AML		
	comp=E,196μm,1.6s					
CAFE			AML	AML		
	comp=N,160μm,0.3s					
CAFE			AML	AML		
	comp=E,196μm,1.6s					
CAFE			AML	AML		
	comp=N,160μm,0.3s					
CAFE			AML	AML		
	comp=E,196μm,1.6s					
CAFE			AML	AML		
	comp=N,160μm,0.3s					
CIGN	**Sant'Elia a Pi**	**0.99 273**	P	**Pg**	**21 55 06.0**	**+0.2**
CIGN			AML	AML		
	comp=E,118μm,0.4s					
CIGN			AML	AML		
	comp=N,122μm,1.5s					
CIGN			AML	AML		
	comp=E,118μm,0.4s					
CIGN			AML	AML		
	comp=N,122μm,1.5s					
CIGN			AML	AML		
	comp=N,122μm,1.5s					
CIGN			AML	AML		
	comp=E,118μm,0.4s					
CIGN			AML	AML		
	comp=N,122μm,1.5s					
CIGN			AML	AML		
	comp=E,118μm,0.4s					
PZUN	**Potenza**	**1.01 199**	AML	AML		
	comp=E,362μm,0.9s					
PZUN			AML	AML		
	comp=N,308μm,1.2s					
PZUN			AML	AML		
	comp=E,346μm,1.0s					
PZUN			AML	AML		
	comp=N,288μm,1.3s					
PZUN			AML	AML		
	comp=E,362μm,0.9s					
PZUN			AML	AML		
	comp=N,308μm,1.2s					
PZUN			AML	AML		
	comp=E,346μm,1.0s					
PZUN			AML	AML		
	comp=N,288μm,1.3s					
PZUN			AML	AML		
	comp=E,346μm,1.0s					
PZUN			AML	AML		
	comp=N,288μm,1.3s					
PZUN			AML	AML		
	comp=N,308μm,1.2s					
PZUN			AML	AML		
	comp=E,362μm,0.9s					
PZUN			AML	AML		
	comp=E,346μm,1.0s					
PZUN			AML	AML		
	comp=N,288μm,1.3s					
PZUN			AML	AML		
	comp=N,308μm,1.2s					
PZUN			AML	AML		
	comp=E,362μm,0.9s					
MIGL	**Miglionico**	**1.01 171**	P	**Pg**	**21 55 05.8**	**-0.4**
MIGL			AML	AML		
	comp=E,1125μm,1.1s					
MIGL			AML	AML		
	comp=N,1199μm,0.3s					
MIGL			AML	AML		
	comp=E,1125μm,1.1s					
MIGL			AML	AML		
	comp=N,1199μm,0.3s					
MIGL			AML	AML		
	comp=E,1125μm,1.1s					
MIGL			AML	AML		
	comp=N,1199μm,0.3s					
MIGL			AML	AML		
	comp=E,1125μm,1.1s					
MIGL			AML	AML		
	comp=N,1199μm,0.3s					
MRLC	**Muro Lucano**	**1.01 214**	P	**Pg**	**21 55 06.1**	**-0.1**
MRLC			AML	AML		
	comp=E,182μm,0.4s					
MRLC			AML	AML		
	comp=N,177μm,0.3s					
MRLC			AML	AML		
	comp=E,182μm,0.4s					
MRLC			AML	AML		
	comp=N,177μm,0.3s					
MRLC			AML	AML		
	comp=N,177μm,0.3s					
MRLC			AML	AML		
	comp=E,182μm,0.4s					
MRLC			AML	AML		
	comp=N,177μm,0.3s					
MRLC			AML	AML		
	comp=E,182μm,0.4s					
MATE	**Matera**	**1.02 159**	P	**Pg**	**21 55 06.0**	**-0.3**
MATE			S	**Sb**	**21 55 20.2**	**0.0**
MATE			AML	AML		
	comp=E,559μm,0.5s					
MATE			AML	AML		
	comp=N,489μm,0.2s					
MATE			AML	AML		
	comp=E,559μm,0.5s					
MATE			AML	AML		
	comp=N,489μm,0.2s					
MATE			AML	AML		
	comp=E,559μm,0.5s					
MATE			AML	AML		
	comp=N,489μm,0.2s					
MATE			AML	AML		
	comp=E,559μm,0.5s					
MATE			AML	AML		
	comp=N,489μm,0.2s					
SNAL	**S. Angelo Dei**	**1.02 229**	P	**Pg**	**21 55 06.3**	**-0.2**
SNAL			AML	AML		
	comp=E,126μm,0.6s					
SNAL			AML	AML		
	comp=N,103μm,0.6s					
SNAL			AML	AML		
	comp=E,126μm,0.6s					
SNAL			AML	AML		
	comp=N,104μm,0.6s					
SNAL			AML	AML		
	comp=N,104μm,0.6s					
SNAL			AML	AML		
	comp=E,126μm,0.6s					
SNAL			AML	AML		
	comp=N,104μm,0.6s					
SNAL			AML	AML		
	comp=E,126μm,0.6s					
NOCI	**Noci**	**1.03 142**	P	**Pg**	**21 55 06.4**	**-0.2**
NOCI			AML	AML		
	comp=E,479μm,1.3s					
NOCI			AML	AML		
	comp=N,804μm,0.2s					
NOCI			AML	AML		
	comp=E,479μm,1.3s					
NOCI			AML	AML		
	comp=N,804μm,0.2s					
NOCI			AML	AML		
	comp=N,804μm,0.2s					
NOCI			AML	AML		
	comp=E,479μm,1.3s					
NOCI			AML	AML		
	comp=N,804μm,0.2s					
NOCI			AML	AML		
	comp=E,479μm,1.3s					
FASA	**Fasano**	**1.16 132**	*e*Pg	**Pg**	**21 55 08.0**	**-1.0**
FASA			Sg	**Sn**	**21 55 25.8**	**+0.5**
MASS	**Massafra**	**1.19 144**	*e*Pg	**Pg**	**21 55 09.0**	**-0.6**
MASS			Sg	**Sn**	**21 55 27.5**	**+1.3**
CRAC	**Craco**	**1.25 173**	P	**Pg**	**21 55 10.3**	**-0.4**
CRAC			AML	AML		
	comp=E,582μm,0.2s					
CRAC			AML	AML		
	comp=N,440μm,0.5s					
CRAC			AML	AML		
	comp=E,583μm,0.2s					
CRAC			AML	AML		
	comp=N,440μm,0.5s					
CRAC			AML	AML		
	comp=N,440μm,0.5s					
CRAC			AML	AML		
	comp=E,583μm,0.2s					
CRAC			AML	AML		
	comp=N,440μm,0.5s					
CRAC			AML	AML		
	comp=E,583μm,0.2s					
SLCN	**Sala Consilina**	**1.29 201**	P	**Pn**	**21 55 10.2**	**-1.0**
MCEL	**Monticello**	**1.32 194**	P	**Pn**	**21 55 11.0**	**-0.6**
MCEL			AML	AML		
	comp=E,124μm,0.8s					
MCEL			AML	AML		
	comp=N,121μm,1.6s					
MCEL			AML	AML		
	comp=E,125μm,0.8s					
MCEL			AML	AML		
	comp=N,121μm,1.6s					
MCEL			AML	AML		
	comp=N,121μm,1.6s					
MCEL			AML	AML		
	comp=E,125μm,0.8s					
MCEL			AML	AML		
	comp=N,121μm,1.6s					
MCEL			AML	AML		
	comp=E,125μm,0.8s					
CGL1	**Ceglie Messapi**	**1.34 135**	*e*Pg	**Pn**	**21 55 11.3**	**-0.5**
CGL1			Sg	**Sn**	**21 55 32.4**	**+2.6**
TAR1	**Taranto**	**1.34 143**	*e*Pg	**Pn**	**21 55 11.3**	**-0.5**
TAR1			Sg	**Sn**	**21 55 32.6**	**+2.8**
MTSN	**Montesano sull**	**1.38 195**	P	**Pn**	**21 55 12.0**	**-0.5**
MTSN			AML	AML		
	comp=E,74μm,1.2s					
MTSN			AML	AML		
	comp=N,94μm,1.4s					
MTSN			AML	AML		
	comp=E,74μm,1.2s					
MTSN			AML	AML		
	comp=N,94μm,1.4s					
MTSN			AML	AML		
	comp=N,94μm,1.4s					
MTSN			AML	AML		
	comp=E,74μm,1.2s					
MTSN			AML	AML		
	comp=N,94μm,1.4s					
MTSN			AML	AML		
	comp=E,74μm,1.2s					
SIRI	**Monte Sirino -**	**1.44 191**	P	**Pn**	**21 55 13.3**	**-0.1**
SIRI			AML	AML		
	comp=E,112μm,0.3s					
SIRI			AML	AML		
	comp=N,101μm,0.2s					
SIRI			AML	AML		
	comp=E,113μm,0.3s					
SIRI			AML	AML		
	comp=N,101μm,0.2s					
SIRI			AML	AML		
	comp=N,101μm,0.2s					
SIRI			AML	AML		
	comp=E,113μm,0.3s					
SIRI			AML	AML		
	comp=N,101μm,0.2s					
SIRI			AML	AML		
	comp=E,113μm,0.3s					
VAGA	**Valle Agricola**	**1.51 264**	P	**Pn**	**21 55 14.6**	**+0.4**
VAGA			AML	AML		
	comp=E,85μm,1.5s					
VAGA			AML	AML		
	comp=N,128μm,0.4s					
VAGA			AML	AML		
	comp=E,85μm,1.5s					
VAGA			AML	AML		
	comp=N,128μm,0.4s					
VAGA			AML	AML		
	comp=E,85μm,1.5s					
VAGA			AML	AML		
	comp=N,128μm,0.4s					
VAGA			AML	AML		
	comp=E,85μm,1.5s					
VAGA			AML	AML		
	comp=N,128μm,0.4s					
CAFR	**Castel Frentan**	**1.54 295**	P	**Pb**	**21 55 15.2**	**-0.3**
CAFR			AML	AML		
	comp=E,457μm,0.3s					
CAFR			AML	AML		
	comp=N,561μm,0.3s					
CAFR			AML	AML		
	comp=E,457μm,0.3s					
CAFR			AML	AML		
	comp=N,561μm,0.3s					
CAFR			AML	AML		
	comp=E,457μm,0.3s					
CAFR			AML	AML		
	comp=N,561μm,0.3s					
MGR	**Morigerati**	**1.55 199**	P	**Pn**	**21 55 14.1**	**-0.6**
MGR			AML	AML		
	comp=E,58μm,0.4s					
MGR			AML	AML		
	comp=N,60μm,0.7s					
MGR			AML	AML		
	comp=E,58μm,0.4s					
MGR			AML	AML		
	comp=N,60μm,0.7s					
MGR			AML	AML		
	comp=N,60μm,0.7s					
MGR			AML	AML		
	comp=E,58μm,0.4s					
MGR			AML	AML		
	comp=N,60μm,0.7s					
MGR			AML	AML		
	comp=E,58μm,0.4s					
CERA	**Filignano**	**1.66 271**	P	**Pb**	**21 55 17.1**	**-0.5**
CERA			AML	AML		
	comp=E,79μm,0.5s					
CERA			AML	AML		
	comp=N,66μm,1.5s					
CERA			AML	AML		
	comp=E,79μm,0.5s					
CERA			AML	AML		
	comp=N,66μm,1.5s					
CERA			AML	AML		
	comp=E,79μm,0.5s					
CERA			AML	AML		
	comp=N,66μm,1.5s					
CERA			AML	AML		
	comp=E,79μm,0.5s					
CERA			AML	AML		
	comp=N,66μm,1.5s					
STON	**Ston**	**1.68 40**	*e*Pn	**Pb**	**21 55 18.2**	**+0.3**
STON	**Ston**	**1.68 40**	P	**Pb**	**21 55 18.3**	**+0.3**
SALB	**San Lorenzo Be**	**1.73 177**	P	**Pn**	**21 55 16.9**	**-0.3**
SALB			AML	AML		
	comp=E,71μm,0.5s					
SALB			AML	AML		
	comp=N,49μm,1.6s					
SALB			AML	AML		
	comp=E,71μm,0.5s					
SALB			AML	AML		
	comp=N,49μm,1.6s					
SALB			AML	AML		
	comp=E,71μm,0.5s					
SALB			AML	AML		
	comp=N,49μm,1.6s					
SALB			AML	AML		
	comp=E,71μm,0.5s					
SALB			AML	AML		
	comp=N,49μm,1.6s					
INTR	**Introdacqua**	**1.78 284**	P	**Pn**	**21 55 18.6**	**+0.5**
INTR			AML	AML		
	comp=E,71μm,1.0s					
INTR			AML	AML		
	comp=N,125μm,0.5s					
INTR			AML	AML		
	comp=N,125μm,0.5s					
INTR			AML	AML		
	comp=E,71μm,1.0s					
INTR			AML	AML		
	comp=N,125μm,0.5s					
INTR			AML	AML		
	comp=E,71μm,1.0s					
VVLD	**Villa Vallelon**	**1.97 279**	P	**Pn**	**21 55 21.0**	**+0.4**
VVLD			AML	AML		
	comp=E,41μm,0.7s					
VVLD			AML	AML		
	comp=N,47μm,0.8s					
VVLD			AML	AML		
	comp=N,47μm,0.8s					
VVLD			AML	AML		
	comp=E,41μm,0.7s					
VVLD			AML	AML		
	comp=N,47μm,0.8s					
VVLD			AML	AML		
	comp=E,41μm,0.7s					
TERO	**Teramo**	**2.20 298**	AML	AML		
	comp=N,17μm,1.2s					
TERO			AML	AML		
	comp=E,15μm,0.3s					
TERO			AML	AML		
	comp=N,17μm,1.2s					
TERO			AML	AML		
	comp=E,15μm,0.3s					
TERO			AML	AML		
	comp=N,17μm,1.2s					
TERO			AML	AML		
	comp=E,15μm,0.3s					
LNSS	**Leonessa**	**2.57 294**	AML	AML		
	comp=N,28μm,0.5s					
LNSS			AML	AML		
	comp=E,37μm,1.0s					
LNSS			AML	AML		
	comp=N,28μm,0.5s					
LNSS			AML	AML		
	comp=N,28μm,0.5s					
LNSS			AML	AML		
	comp=E,37μm,1.0s					
LNSS			AML	AML		
	comp=E,37μm,1.0s					
NRCA	**Norcia**	**2.62 299**	AML	AML		
	comp=N,37μm,0.4s					
NRCA			AML	AML		
	comp=E,34μm,1.4s					
NRCA			AML	AML		
	comp=N,37μm,0.4s					
NRCA			AML	AML		
	comp=N,37μm,0.4s					
NRCA			AML	AML		
	comp=E,34μm,1.4s					
NRCA			AML	AML		
	comp=E,34μm,1.4s					
CING	**Cingoli**	**2.86 309**	AML	AML		
	comp=E,21μm,1.6s					
CING			AML	AML		
	comp=E,21μm,1.6s					
CING			AML	AML		
	comp=N,17μm,1.6s					
CING			AML	AML		
	comp=N,17μm,1.6s					
CING			AML	AML		
	comp=E,21μm,1.6s					
CING			AML	AML		
	comp=N,17μm,1.6s					
NVLJ	**Novalja**	**3.12 342**	*e*Pn	**Pn**	**21 55 35.8**	**-0.5**
NVLJ			Sn	**Sn**	**21 56 12.8**	**-1.0**

IDC 23 21:59:18.0±5.9, 4°.92S×134°.08E, h0km, mb3.5/1, mb1 4.0/3, mb1mx3.5/30, mbtmp3.8/3, ML3.6/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/24, Error ellipse: s-maj=325.1km s-min=33.5km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**7.03**	**70**	LR	LR	22 04 17.8	
	comp=Z,167nm,19.6s,baz=216,slow=43						
WRA	**Warramunga Arr**	**14.93**	**179**	Pn	Pn	22 02 48.9	-1.7
	0.1nm,0.3s,baz=357,slow=14,SNR=1.6						
WRA				Sn	Sn	22 05 32.6	-4.3
	0.4nm,0.3s,baz=7.0,slow=21,SNR=5.8						
ASAR	**Alice Springs**	**18.64**	**181**	P	Pn	22 03 38.0	+0.4
	0.6nm,0.3s,baz=7.3,slow=12,SNR=58						
MKAR	**Makanchi Array**	**68.81**	**325**	P	P	22 10 24.2	0.0
	0.4nm,0.7s,baz=127,slow=6.9,SNR=3.1						

IDC 23 22:04:06.1±3.3, 7°.50S×123°.27E, h291km±29km, mb3.3/1, mb1 3.6/4, mb1mx3.0/32, mbtmp4.2/4, Error ellipse: s-maj=128.0km s-min=33.5km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.71**	**172**	P	Pn	22 05 00.1	+1.6
	21nm,0.3s,baz=15,slow=4.6,SNR=18						

BATI S S 22 05 40.1 0.0
54nm,0.3s,baz=318,slow=20,SNR=22
WRA Warramunga Arr 16.37 140 P P 22 07 37.4 -1.3
1.5nm,0.3s,baz=317,slow=12,SNR=4.0
WRA S S 22 10 35.6 +0.3
0.1nm,0.3s,baz=320,slow=23,SNR=2.6
ASAR Alice Springs 19.04 149 P P 22 08 07.7 +0.2
0.5nm,0.3s,baz=311,slow=9.1,SNR=14
ASAR S S 22 11 29.3 +1.5
0.1nm,0.3s,baz=330,slow=23,SNR=4.2
STKA Stephens Creek 29.66 147 P P 22 09 44.5 -0.9
0.6nm,0.3s,baz=309,slow=14,SNR=2.9

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*SJA **23** 22:21:24.8±0.7,23.˚62S×66.˚72W,h243km±15km,ML3.6, MW3.0*
*ISCJB **23** 22:21:25.7±0.3,23.˚73S±0.˚02×67.˚03W±0.˚04,h221km±4km, Error ellipse: s-maj=5.5km s-min=3.9km az=165.7*
*IDC **23** 22:21:26.0±1.1,23.˚69S×66.˚74W,h190km±9km,mb3.4/7, mb1 3.8/13,mb1mx3.6/23,mbtmp4.1/13,Error ellipse: s-maj=16.6km s-min=14.8km az=19.0*
*NEIC **23** 22:21:26.6±2.4,23.˚68S×67.˚38W,h267km±9km,mb4.1/10, Error ellipse: s-maj=16.7km s-min=10.1km az=92.0*
*GUC **23** 22:21:28.4±0.6,23.˚64S×67.˚30W,h242km±8km,ML4.7*
ISC 23 22:21:26.2±0.7,23.˚74S±0.˚04×66.˚97W±0.˚04,h207km±7km, n59,σ1§74/80,10C-2D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.52**	**70**	*eP*	**Pn**	**22 22 01.9**	**+0.7**
SLA	**San Lorenzo**	**1.65**	**126**	*eP*	**Pn**	**22 22 03.6**	**+1.6**
SLA				IAML		22 22 04.2	
	comp=Z,220nm,0.3s						
SLA				*eS*	**S**	**22 22 32.2**	**+2.6**
SLA	**San Lorenzo**	**1.65**	**126**	⇓*iP*	**Pn**	**22 22 03.9**	**+1.9**
AZAP	**Zapla**	**1.80**	**106**	*eP*	**Pn**	**22 22 04.2**	**+0.7**
YJA	**Yavi**	**2.05**	**41**	*eP*	**Pn**	**22 22 06.5**	**+0.2**
YJA				IAML		22 22 08.0	
	comp=Z,191nm,0.3s						
LVC	**Limon Verde**	**2.12**	**302**	P	**Pn**	**22 22 08.4**	**+1.6**
	comp=Z,93nm,0.3s,baz=129,slow=6.8,SNR=639						
LVC				S	**S**	**22 22 38.7**	**+0.8**
	comp=Z,97nm,0.3s,baz=228,slow=22,SNR=37						
LVC	**Limon Verde**	**2.12**	**302**	⇓*iP*	**Pn**	**22 22 08.4**	**+1.6**
LVC				*i* S	**S**	**22 22 39.1**	**+1.1**
PB15	**IPOC Station P**	**2.36**	**282**	⇑*eP*	**Pn**	**22 22 11.0**	**+1.8**
PB15				*eS*	**S**	**22 22 43.2**	**+0.9**
FSA	**Cafayete**	**2.52**	**159**	*eP*	**Pn**	**22 22 12.3**	**+1.4**
PB06	**IPOC Station P**	**2.61**	**293**	⇑*iP*	**Pn**	**22 22 13.5**	**+1.6**
PB06				*eS*	**S**	**22 22 47.2**	**+0.2**
PB06				IAML		22 22 47.9	
	comp=N,2μm,0.4s						
GO02	**Mina Guanaco**	**2.78**	**239**	*e*Pn	**Pn**	**22 22 16.1**	**+2.1**
GO02				*eS*	**S**	**22 22 52.2**	**+1.4**
GO02	**Mina Guanaco**	**2.78**	**239**	⇑*iP*	**Pn**	**22 22 16.1**	**+2.1**
GO02				*i* S	**S**	**22 22 53.3**	**+2.5**
PB03	**IPOC Station P**	**3.07**	**303**	⇑*iP*	**Pn**	**22 22 18.4**	**+1.1**
PB03				*eS*	**S**	**22 22 55.6**	**-1.0**
PB03				IAML		22 22 58.7	
	comp=N,819nm,0.4s						
PB05	**IPOC Station P**	**3.10**	**286**	⇑*eP*	**Pn**	**22 22 18.7**	**+1.1**
PB05				*eS*	**S**	**22 22 55.7**	**-1.5**
PB05				IAML		22 22 59.7	
	comp=E,653nm,0.3s						
PB04	**IPOC Station P**	**3.25**	**295**	*e*Pn	**Pn**	**22 22 20.4**	**+1.1**
PB04				*eS*	**S**	**22 22 59.8**	**-0.6**
PB04	**IPOC Station P**	**3.25**	**295**	⇑*eP*	**Pn**	**22 22 20.3**	**+1.1**
PB04				*eS*	**S**	**22 22 59.3**	**-1.1**
PB04				IAML		22 23 02.7	
	comp=N,1μm,0.6s						
PB14	**IPOC Station P**	**3.26**	**254**	⇑*iP*	**Pn**	**22 22 21.1**	**+1.5**
PB14				*i* S	**S**	**22 23 01.2**	**+0.4**
PB14				IAML		22 23 03.4	
	comp=E,1μm,0.2s						
PB10	**IPOC Station P**	**3.30**	**273**	*e*Pn	**Pn**	**22 22 21.3**	**+1.6**
PB10				*eS*	**S**	**22 23 00.8**	**-0.3**
PB10	**IPOC Station P**	**3.30**	**273**	⇑*eP*	**Pn**	**22 22 21.1**	**+1.4**
PB10				*eS*	**S**	**22 23 00.1**	**-1.1**
PB10				IAML		22 23 05.5	
	comp=N,652nm,0.3s						
PB07	**IPOC Station P**	**3.36**	**306**	⇑*iP*	**Pn**	**22 22 21.5**	**+0.9**
PB07				*i* S	**S**	**22 23 01.7**	**-1.1**
AHML	**Horco Molle**	**3.37**	**154**	*eP*	**Pn**	**22 22 21.8**	**+1.2**
PB01	**IPOC Station P**	**3.56**	**319**	*e*Pn	**Pn**	**22 22 23.0**	**+0.1**
PB01				*eS*	**S**	**22 23 05.9**	**-1.1**
PB01	**IPOC Station P**	**3.56**	**319**	*eP*	**Pn**	**22 22 23.7**	**+0.7**
PB01				*eS*	**S**	**22 23 05.6**	**-1.3**
PB02	**IPOC Station P**	**3.63**	**311**	*eP*	**Pn**	**22 22 24.2**	**+0.4**
PB02				*eS*	**S**	**22 23 06.8**	**-1.7**
PB08	**IPOC Station P**	**4.12**	**330**	⇑*iP*	**Pn**	**22 22 31.3**	**+1.2**
PB08				*i* S	**S**	**22 23 19.6**	**-0.2**
GO01	**Chusmiza**	**4.55**	**332**	*e*Pn	**Pn**	**22 22 36.2**	**+0.6**
GO01				*eS*	**S**	**22 23 28.8**	**-1.1**
PB11	**IPOC Station P**	**4.68**	**327**	*e*Pn	**Pn**	**22 22 36.4**	**-0.5**
PB11				*eS*	**S**	**22 23 29.8**	**-2.6**
CYA	**Choya**	**4.80**	**168**	*eP*	**Pn**	**22 22 39.5**	**+1.3**
GO03	**Copiap**	**4.84**	**217**	*e*Pn	**Pn**	**22 22 39.0**	**+0.3**
GO03				*eS*	**S**	**22 23 34.6**	**-1.1**
VCA	**Vinchina**	**5.10**	**192**	*eP*	**Pn**	**22 22 44.7**	**+2.6**
MNMC	**Minye Minye**	**5.20**	**331**	*e*Pn	**Pn**	**22 22 44.4**	**+0.8**
MNMC				*eS*	**S**	**22 23 40.0**	**-4.4**
LCO	**Las Campanas**	**6.23**	**212**	*e*Pn	**Pn**	**22 22 55.5**	**-1.2**
LCO				*eS*	**S**	**22 24 05.8**	**-2.4**
GO04	**Tololo Observa**	**7.26**	**207**	*e*Pn	**Pn**	**22 23 09.8**	**-0.3**
GO04				*eS*	**S**	**22 24 29.7**	**-2.8**
LPAZ	**La Paz**	**7.50**	**351**	P	**Pn**	**22 23 13.9**	**+0.4**
	comp=N,3.2nm,0.3s,baz=164,slow=6.7,SNR=84						
LPAZ				S	**S**	**22 24 36.1**	**-2.7**
	comp=N,0.3nm,0.3s,baz=294,slow=16,SNR=5.2						
CFA	**Coronel Fontan**	**7.91**	**188**	P	**Pn**	**22 23 18.6**	**+0.3**
	comp=N,4.3nm,0.3s,baz=7.6,slow=14,SNR=80						
CFA				S	**S**	**22 24 41.3**	**-6.4**
	comp=N,6.4nm,0.3s,baz=146,slow=21,SNR=16						
SIV	**San Ignacio**	**9.49**	**37**	P	**Pn**	**22 23 36.8**	**-2.1**
	comp=N,5.1nm,0.3s,baz=229,slow=10,SNR=114						
SIV				S	S	22 25 07.3	-18
	comp=N,0.2nm,0.3s,baz=245,slow=15,SNR=3.9						
ROC1	**El Roble**	**9.87**	**200**	*e*Pn	Pn	22 23 37.9	-5.9
GO05	**Huala**	**12.03**	**200**	*e*Pn	**Pn**	**22 24 08.3**	**-2.9**
TRQA	**Tornquist**	**14.89**	**165**	*eP*	**Pn**	**22 24 45.4**	**-1.3**
	comp=N,2.9nm,0.8s						
NNA	**Nana**	**14.99**	**320**	*eP*	Pn	22 24 40.8	-7.4
GO06	**Curarrehue**	**16.25**	**193**	*eP*	**P**	**22 24 59.6**	**-2.8**
	comp=N,3.1nm,0.8s						
PLCA	**Paso Flores**	**17.21**	**189**	P	**Pn**	**22 25 15.7**	**+1.2**
	comp=N,0.4nm,0.3s,baz=22,slow=10,SNR=9.7						
PLCA	**Paso Flores**	**17.21**	**189**	*eP*	**P**	**22 25 11.0**	**-1.9**
	comp=N,4.3nm,0.8s						
BDFB	**Brasilia**	**19.56**	**69**	P	**P**	**22 25 38.6**	**0.0**
	comp=N,4.1nm,0.3s,baz=245,slow=11,SNR=63						
BDFB	**Brasilia**	**19.56**	**69**	*eP*	**P**	**22 25 38.9**	**+0.2**
	comp=N,44nm,0.8s						
PTGA	**Pitinga**	**23.86**	**18**	P	**P**	**22 26 20.5**	**-0.4**
	comp=N,3.3nm,0.3s,baz=205,slow=13,SNR=4.1						
RCBR	**Riachuelo**	**34.78**	**64**	*eP*	**P**	**22 27 56.1**	**-1.3**
	comp=N,22nm,1.3s						
061Z	**Ochoppi**	**51.13**	**344**	*eP*	P	22 30 02.3	-5.6
	comp=N,93nm,0.9s						
TLIG	**Tlapa**	**51.36**	**320**	*eP*	P	22 30 00.6	-9.4
	comp=N,10nm,1.3s						
MET	**Memphis--Engin**	**62.46**	**339**	*eP*	P	22 31 21.2	-6.2
	comp=N,154nm,0.6s						
TXAR	**Lajitas Array**	**63.49**	**324**	P	**P**	**22 31 36.3**	**+1.8**
	comp=N,0.2nm,0.4s,baz=146,slow=6.6,SNR=4.2						
DBIC	**Dimbokro**	**67.69**	**72**	P	**P**	**22 32 01.1**	**-0.5**
	comp=N,2.1nm,0.7s,baz=161,slow=5.7,SNR=3.6						
LENM	**Lemitar**	**69.01**	**325**	*eP*	P	22 32 01.9	-7.6
TORD	**Torodi Ar. Bea**	**76.45**	**69**	P	**P**	**22 32 53.6**	**+0.1**
	comp=N,0.7nm,0.4s,baz=263,slow=6.2,SNR=18						
PDAR	**Pinedale Array**	**76.94**	**329**	P	**P**	**22 32 58.5**	**+2.5**
	comp=N,0.2nm,0.5s,baz=99,slow=5.6,SNR=2.3						
NVAR	**Mina Array Bea**	**78.36**	**321**	P	**P**	**22 33 06.8**	**+3.0**
	comp=N,0.2nm,0.3s,baz=78,slow=8.4,SNR=3.3						
YKA	**Yellowknife Ar**	**93.89**	**340**	P	**P**	**22 34 20.6**	**+1.0**
	comp=N,0.2nm,0.5s,baz=126,slow=4.5,SNR=4.3						
ASAR	**Alice Springs**	**128.70**	**205**	PKP	**PKiKP**	**22 40 11.1**	**+0.9**
	comp=N,0.6nm,0.6s,baz=129,slow=1.8,SNR=5.8						
MKAR	**Makanchi Array**	**146.31**	**39**	PKPbc	**PKPab**	**22 40 42.5**	**-1.1**
	comp=N,0.4nm,0.5s,baz=300,slow=2.9,SNR=4.6						

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*IDC **23** 22:21:27.0±1.4,5.˚02N×124.˚66E,h0km,mb3.5/3, mb1 3.8/4,mb1mx3.4/40,mbtmp3.7/4,ML4.4/1,Error ellipse: s-maj=48.0km s-min=20.5km az=87.0*
*NEIC **23** 22:21:31.0±1.3,5.˚08N×124.˚68E,h37km±9km,mb4.6/12, Error ellipse: s-maj=19.0km s-min=13.0km az=72.0*
*ISCJB **23** 22:21:31.3±1.3,5.˚01N±0.˚05×124.˚69E±0.˚10,h59km±14km, Error ellipse: s-maj=17.1km s-min=8.1km az=164.7*
*MAN **23** 22:21:39.0,5.˚91N×126.˚68E,h74km,mb4.5,ML3.4,MS3.2*
ISC 23 22:21:32.2±1.5,5.˚00N±0.˚06×124.˚7E±0.˚1,h51km±17km**, n26,**σ1§45/30**,1C,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.10**	**11**	*eP*	**Sn**	**22 22 07.3**	**+1.5**
DDMP	**Don Marcelino,**	**1.47**	**42**	*eP*	**Pn**	**22 21 58.0**	**+1.6**
DDMP				*eS*	**Sn**	**22 22 13.0**	**-1.5**
SKMP	**Bagumbayan, Su**	**1.52**	**353**	*eP*	**Sn**	**22 22 14.9**	**-0.8**
DMPH	**Davao City--Mi**	**2.21**	**20**	⇑*eP*	**Pn**	**22 22 06.9**	**+0.4**
DMPH				*eS*	**Sn**	**22 22 31.0**	**-1.7**
DAV	**Davao City (W)**	**2.22**	**22**	Pn	**Pn**	**22 22 05.9**	**-0.8**
	106nm,0.3s,baz=8.7,slow=0.2,SNR=7.0						
DAV				Sn	**Sn**	**22 22 33.2**	**+0.2**
	53nm,0.3s,baz=47,slow=22,SNR=5.5						
DAV	**Davao City (W)**	**2.22**	**22**	*e*Pn	**Pn**	**22 22 03.4**	**-3.3**
DAV				*e*Sn	**Sn**	**22 22 32.5**	**-0.5**
MATI	**Mati**	**2.46**	**38**	*eP*	Pn	22 21 59.9	-10
BUKP	**Musuan**	**2.88**	**7**	*eP*	**Pn**	**22 22 17.8**	**+2.0**
BUKP				*eS*	**Sn**	**22 22 51.7**	**+2.6**
TNTI	**Ternate**	**4.96**	**148**	*e*Pn	**Pn**	**22 22 44.1**	**-0.1**
UGM	**Wanagama**	**19.11**	**228**	*eP*	**P**	**22 25 50.1**	**-1.1**
	92nm,1.4s						
YOJ	**Yonaguni jima**	**19.42**	**355**	*eP*	**P**	**22 25 52.6**	**-1.7**
	121nm,1.2s						
WR1	**Warramunga Arr**	**26.53**	**159**	*eP*	**P**	**22 27 07.0**	**+1.7**
WRA	**Warramunga Arr**	**26.53**	**159**	P	**P**	**22 27 07.0**	**+1.7**
	0.4nm,0.3s,baz=338,slow=11,SNR=11						
WB2	**Warramunga Arr**	**26.53**	**159**	*eP*	**P**	**22 27 06.4**	**+1.1**
	14nm,1.4s						
AS31	**Alice Springs**	**29.86**	**163**	*eP*	**P**	**22 27 36.0**	**+0.9**
	2.1nm,1.3s						
ASAR	**Alice Springs**	**29.86**	**163**	P	**P**	**22 27 36.8**	**+1.7**
	0.2nm,0.4s,baz=345,slow=6.9,SNR=4.6						
PBA	**Port Blair**	**32.31**	**284**	*eP*	**P**	**22 27 55.8**	**-0.9**
	222nm,1.3s						
BBOO	**Buckleboo**	**39.11**	**165**	*eP*	**P**	**22 28 55.6**	**+0.9**
	26nm,1.4s						
EIDS	**Eidsvold**	**39.58**	**141**	*eP*	**P**	**22 28 57.5**	**-1.3**
	24nm,1.4s						
MNCI	**Minicoy**	**51.40**	**277**	*eP*	**P**	**22 30 31.8**	**-0.6**
	207nm,1.2s						
MK32	**Makanchi Array**	**55.38**	**326**	*eP*	**P**	**22 31 02.4**	**+1.2**
MKAR	**Makanchi Array**	**55.38**	**326**	P	**P**	**22 31 02.4**	**+1.2**
	0.4nm,0.6s,baz=121,slow=7.8,SNR=5.4						
FUNA	**Funafuti**	**55.95**	**104**	*eP*	**P**	**22 31 06.3**	**+0.5**
	147nm,1.3s						
KURK	**Kurchatov**	**59.61**	**328**	*eP*	**P**	**22 31 30.9**	**+0.1**
	4.0nm,1.5s						
BTK	**Batken**	**59.61**	**314**	*eP*	**P**	**22 31 31.2**	**0.0**
	3.3nm,1.3s						
UOSS	**Minazif**	**68.44**	**295**	*eP*	**P**	**22 32 29.3**	**-0.1**
	11nm,1.3s						

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*IDC **23** 22:43:13.5±0.4,31.˚61N×40.˚96W,h0km,mb4.5/31, mb1 4.7/31,mb1mx4.6/43,mbtmp4.5/31,MS4.6/34, Ms1 4.6/34,ms1mx4.5/40,Error ellipse: s-maj=12.4km s-min=10.8km az=137.0*
*MOS **23** 22:43:13.5±1.6,31.˚60N×40.˚90W,h10km,mb5.2/99, MS4.6/13,Error ellipse: s-maj=5.9km s-min=3.9km az=47.0*
*ISCJB **23** 22:43:15.7±0.1,31.˚68N±0.˚03×40.˚91W±0.˚01,h19km, mb4.9/358,MS4.7/54,Error ellipse: s-maj=3.7km s-min=1.5km az=177.2*
*BJI **23** 22:43:16.0±0.0,31.˚70N×40.˚90W,h14km,mb5.0/8, mB5.5/8,Ms5.2/6,Ms7 4.9/6*
*NEIC **23** 22:43:17.1±2.1,31.˚61N×40.˚90W,h15km±3km,mb5.0/304, Error ellipse: s-maj=13.5km s-min=12.4km az=173.0*
*GCMT **23** 22:43:18.1±0.1,31.˚77N±0.˚01×40.˚88W±0.˚01,h12km, MW5.3/121,Moment Tensor Solution. s64,c87; s121,c220; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.07±.02; $M_{\theta\theta}$0.12±.02; $M_{\phi\phi}$0.94±.01; $M_{r\theta}$0.37±.05; $M_{\theta\phi}$0.41±.01; $M_{\phi r}$-0.08±.04; Best double couple: $M_0$1.15700×10^{17} NP1:ϕ_s220.00000°,δ50.00000°, λ-66.00000°. NP2:ϕ_s5.00000°,δ46.00000°,λ-116.00000°. Principal axes: T 1.1190, Plg2.0000°, Azm293.0000°; N 0.0750, Plg18.0000°, Azm24.0000°; P -1.1950, Plg72.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 22:43:16.0±0.6,31.˚63N±0.˚05×40.˚96W±0.˚04,h9km±3km**, h9**km**:pP-P,n1231,**σ1§41/1260**,mb5.0**/365**,MS4.6**/54, 25C-36D,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**11.34**	**42**	*e*LQ	LQ	22 48 43.5	
PCED	**Cedros**	**12.21**	**52**	*eP*	**Pn**	**22 46 13.0**	**+2.8**
PCED				*e*LQ	LQ	22 48 48.6	
ROSA	**Rosais**	**12.57**	**52**	*eP*	**Pn**	**22 46 14.4**	**-0.6**
ROSA				*e*LQ	LQ	22 48 48.6	
ROSA	**Rosais**	**12.57**	**52**	*e*Pn	**Pn**	**22 46 15.9**	**+0.8**
PMAN	**Manadas**	**12.63**	**53**	*eP*	**Pn**	**22 46 20.2**	**+4.4**
PMAN				*e*LQ	LQ	22 49 05.3	
PGRA	**Graciosa**	**12.90**	**52**	*eP*	**Pn**	**22 46 20.1**	**+0.5**
PGRA				*e*LQ	LQ	22 49 02.1	
PSET	**Sete Cidades**	**13.96**	**60**	*eP*	**Pn**	**22 46 36.5**	**+2.4**
PSET				*e*LQ	LQ	22 49 25.0	
CMLA	**Cha da Macela**	**14.09**	**60**	*eP*	**Pn**	**22 46 32.7**	**-3.0**
CMLA				*e*LQ	LQ	22 49 37.4	
CMLA	**Cha da Macela**	**14.09**	**60**	*e*Pn	**Pn**	**22 46 34.3**	**-1.5**
CMLA	**Cha da Macela**	**14.09**	**60**	*eP*	**Pn**	**22 46 34.3**	**-1.5**
PSMN	**Pico do Norte,**	**14.18**	**63**	*eP*	**Pn**	**22 46 36.5**	**-0.5**
BART	**Pico Bartolome**	**14.35**	**60**	*eP*	**Pn**	**22 46 40.3**	**+0.8**
PMOZ	**Porto Moniz, M**	**20.13**	**80**	*eP*	**P**	**22 47 50.4**	**-0.1**
	304nm,1.6s						
PMOZ				*e*LQ	LQ	22 51 39.0	
PMOZ				*e*LR	LR	22 52 11.0	
	2μm,22.0s						
PMOZ	**Porto Moniz, M**	**20.13**	**80**	*eP*	**P**	**22 47 49.4**	**-1.1**
BBSR	**BB Station**	**20.14**	**278**	*eP*	Pn	22 47 54.0	+1.7
	194nm,1.5s						
PMAR	**Madeira**	**20.37**	**81**	*eP*	Pn	22 47 54.7	-0.6
	232nm,1.5s						
PMPST	**Porto Santo, M**	**20.84**	**79**	*eP*	Pn	22 47 59.5	-1.1
	412nm,1.4s						
PMPS	**Porto Santo**	**20.84**	**80**	*eP*	**P**	**22 47 57.5**	**-0.6**
	397nm,1.4s						
GBN	**Guysborough**	**21.08**	**317**	*eP*	**P**	**22 48 01.9**	**+1.4**
	180nm,1.6s						
MACI	**Morro de la Ar**	**21.44**	**93**	*eP*	**P**	**22 48 05.6**	**+0.8**
	141nm,1.0s						
DRLN	**Deer Lake**	**21.56**	**329**	*eP*	**P**	**22 48 05.2**	**-0.5**
	109nm,0.9s						
SACV	**Santiago Islan**	**22.94**	**132**	*eP*	**P**	**22 48 21.6**	**+0.9**
	307nm,1.4s						
LMN	**Caledonia Moun**	**23.29**	**314**	*eP*	**P**	**22 48 23.4**	**-0.5**
	50nm,1.1s						
H05N1	**Guadeloupe/Mar**	**23.81**	**235**	T	T	23 13 13.9	
GGN	**Saint George**	**24.23**	**311**	*eP*	**P**	**22 48 32.3**	**-0.8**
	41nm,1.3s						
SKI	**Saint Kitts**	**24.34**	**239**	*eP*	**P**	**22 48 31.3**	**-3.0**
	126nm,1.0s						
SKI	**Saint Kitts**	**24.34**	**239**	*eP*	**P**	**22 48 31.3**	**-3.0**
SKI				pmax	pmax		
	comp=Z,126nm,1.0s						
BATG	**Bathurst New B**	**24.74**	**316**	*eP*	**P**	**22 48 38.4**	**+0.6**
	comp=Z,29nm,1.0s						
PQI	**Presque Isle**	**25.64**	**314**	*eP*	**P**	**22 48 45.5**	**-0.3**
	comp=Z,48nm,1.6s						
M65A	**Busby, Falmout**	**25.70**	**301**	P	**P**	**22 48 45.5**	**-0.9**
	baz=103						
WVL	**Waterville**	**25.87**	**308**	*eP*	**P**	**22 48 50.2**	**+2.3**
	comp=Z,14nm,1.0s						
PKME	**Peaks-Kenny Pk**	**25.88**	**310**	P	**P**	**22 48 47.5**	**-0.5**
	baz=112						
SJG	**San Juan**	**26.45**	**245**	LR	LR	22 56 56.0	
	comp=Z,995nm,21.7s,baz=62,slow=31						
HRV	**Adam Dziewonsk**	**26.59**	**303**	P	**P**	**22 48 54.1**	**-0.3**
	baz=104						
PMAFR	**Mafra**	**26.77**	**65**	*eS*	**S**	**22 53 37.0**	**+4.8**
LIS	**Lisbon**	**26.85**	**66**	*eP*	**P**	**22 48 56.0**	**-0.9**
LIS				AMb	AMB	22 49 07.9	
	comp=Z,175nm,1.8s						
LIS	**Lisbon**	**26.85**	**66**	*eP*	**P**	**22 48 55.9**	**-0.9**
PFVI	**Vila Bisbo**	**27.00**	**69**	*eS*	**S**	**22 53 39.3**	**+3.5**
MORF	**Marmelete**	**27.15**	**69**	*eP*	**P**	**22 48 58.8**	**-0.8**
MORF				AMb	AMB	22 49 06.3	
	comp=Z,96nm,1.7s						
MORF				*eS*	**S**	**22 53 36.9**	**-1.4**
MORF	**Marmelete**	**27.15**	**69**	*eP*	**P**	**22 48 58.8**	**-0.8**
MORF				*eS*	**S**	**22 53 36.8**	**-1.4**
LBNH	**Lisbon**	**27.31**	**306**	P	**P**	**22 49 00.5**	**-0.5**
	baz=107						
PCAS	**Casmilo, Conde**	**27.50**	**63**	*eP*	**P**	**22 49 03.0**	**+0.2**
PCAS				*eS*	**S**	**22 53 52.0**	**+8.3**
MESJ	**Messejana**	**27.51**	**68**	*eP*	**P**	**22 49 02.0**	**-0.9**
MESJ				AMb	AMB	22 49 04.5	
	comp=Z,60nm,1.3s						
MESJ				*eS*	**S**	**22 53 43.2**	**-0.7**
MESJ	**Messejana**	**27.51**	**68**	*eP*	**P**	**22 49 01.9**	**-0.9**
MESJ				*eS*	**S**	**22 53 43.2**	**-0.7**
PTOM	**Tomar**	**27.52**	**64**	*eP*	**P**	**22 49 04.1**	**+1.2**
PTO	**Porto**	**27.59**	**61**	*eP*	**P**	**22 49 03.5**	**0.0**
COI	**Coimbra**	**27.59**	**63**	*eS*	**S**	**22 53 48.9**	**+3.9**
PMTG	**Montargil**	**27.60**	**65**	*eP*	**P**	**22 49 04.0**	**+0.4**
PMTG				*eS*	**S**	**22 53 51.0**	**+5.7**
PCVE	**Castro Verde**	**27.65**	**68**	*eP*	**P**	**22 49 05.1**	**+1.0**
PCVE				*eS*	**S**	**22 53 54.1**	**+8.1**
PBDV	**Barranco-do-Ve**	**27.72**	**69**	*eP*	**P**	**22 49 05.9**	**+1.2**
	comp=Z,106nm,1.6s						
PBDV				*eS*	**S**	**22 53 48.4**	**+1.2**
PBEJ	**Beja**	**27.80**	**68**	*eP*	**P**	**22 49 07.7**	**+2.2**
TTIG	**Tnine Tigouga,**	**27.81**	**84**	P	**P**	**22 49 07.0**	**+1.2**
MOQ	**Mont Orford**	**27.86**	**308**	*eP*	**P**	**22 49 04.6**	**-1.3**
PVAQ	**Vaqueiros**	**27.89**	**69**	*eP*	**P**	**22 49 06.1**	**-0.2**
PVAQ				*eS*	**S**	**22 53 58.1**	**+8.2**
PVAQ				*e*LQ	LQ	22 55 11.2	
PVAQ				*e*LR	LR	22 56 02.6	
	comp=Z,4μm,20.0s						
M61A	**Granite Spring**	**27.96**	**299**	P	**P**	**22 49 05.6**	**-1.2**
	baz=100						
PGAV	**Gavieira, Arco**	**27.98**	**59**	*eP*	**P**	**22 49 08.3**	**+1.2**
PGAV				*eS*	**S**	**22 53 58.1**	**+6.7**
PGAV				*e*LQ	LQ	22 55 06.3	
PGAV				*e*LR	LR	22 56 08.6	
	comp=Z,2μm,20.0s						
PAL	**Palisades**	**28.01**	**299**	P	**P**	**22 49 06.5**	**-0.8**
	baz=99						
PVIS	**Viseu**	**28.05**	**62**	*eP*	**P**	**22 49 09.8**	**+2.1**
TRY	**Troy**	**28.15**	**302**	*eP*	**P**	**22 49 07.5**	**-1.0**
	comp=Z,20nm,1.1s						
POLO	**Lamas de Olo**	**28.23**	**61**	*eP*	**P**	**22 49 09.1**	**-0.2**
POLO				*eS*	**S**	**22 54 04.0**	**+8.7**
PCBR	**Castelo Branco**	**28.26**	**64**	*eP*	**P**	**22 49 10.3**	**+0.8**
MTE	**Manteigas**	**28.27**	**63**	*eS*	**S**	**22 54 00.1**	**+4.1**
MTE				*e*LQ	LQ	22 55 33.8	
MTE				*e*LR	LR	22 56 13.2	
	comp=Z,1μm,22.0s						
PMRV	**Marv??o**	**28.28**	**65**	*eP*	**P**	**22 49 09.9**	**+0.2**
	comp=Z,54nm,1.2s						
PMRV				*e*LR	LR	22 56 06.2	
	comp=Z,919nm,22.0s						
ACCN	**Adirondack Com**	**28.30**	**304**	*eP*	**P**	**22 49 11.2**	**+1.4**
	comp=Z,29nm,1.4s						
O61A	**Allentown**	**28.38**	**297**	P	**P**	**22 49 10.2**	**-0.3**
	baz=97						
P61A	**Hammonton**	**28.51**	**296**	P	**P**	**22 49 11.2**	**-0.6**
	baz=96						
MDP	**Montagnes des**	**28.58**	**205**	LR	LR	22 58 04.4	
	comp=Z,604nm,20.3s,baz=10,slow=31						
FRNY	**Flat Rock**	**28.61**	**307**	*eP*	**P**	**22 49 13.5**	**+0.9**
	comp=Z,35nm,1.9s						
MVO	**Moncorvo**	**28.77**	**61**	*eP*	**P**	**22 49 14.4**	**+0.3**
MVO				*eS*	**S**	**22 54 09.8**	**+6.1**
MVO				*e*LQ	LQ	22 55 40.1	
MVO				*e*LR	LR	22 56 27.1	
	comp=Z,1μm,20.0s						
R61A	**Willards**	**28.84**	**293**	P	**P**	**22 49 14.4**	**-0.2**
	baz=93						
LATQ	**La Tuque**	**28.91**	**312**	P	**P**	**22 49 14.4**	**-0.8**
	baz=112						
O60A	**Telford**	**29.05**	**297**	P	**P**	**22 49 16.3**	**-0.3**
	baz=96						
LUPA	**Lehigh Univers**	**29.06**	**298**	*eP*	**P**	**

R58B	Mineral	30.83 292	eP	P	22 49 33.3	+1.0
	comp=Z,21nm,1.2s					
R58B	Mineral	30.83 292	P	P	22 49 32.3	0.0
	baz=91					
CHGQ	Chibougamau	30.85 316	P	P	22 49 32.3	-0.1
	baz=114					
G55A	Calabogie	30.87 306	P	P	22 49 32.6	0.0
	baz=104					
R58A	Rapidan	30.93 293	P	P	22 49 33.0	-0.2
	baz=91					
ESDC	Sonseca Array	30.94 65	P	P	22 49 33.3	-0.1
	comp=Z,4.9nm,0.9s,baz=259,slow=9.0,SNR=14					
ESDC			LR	LR	22 59 52.3	
	comp=Z,555nm,18.7s,baz=260,slow=32					
S58A	Poland Farm, P	30.96 291	eP	P	22 49 36.5	+3.0
	comp=Z,18nm,1.2s					
S58A	Poland Farm, P	30.96 291	P	P	22 49 33.3	-0.2
	baz=90					
SSPA	Standing Stone	30.96 297	eP	P	22 49 34.4	+0.9
	comp=Z,16nm,1.2s					
SSPA	Standing Stone	30.96 297	P	P	22 49 33.8	+0.3
	baz=95					
P57A	Homestead Farm	30.98 295	P	P	22 49 33.9	+0.2
	baz=93					
H55A	Tweed	31.03 305	P	P	22 49 33.2	-0.8
	baz=102					
X60A	Albert Glenn T	31.04 286	P	P	22 49 34.1	0.0
	baz=85					
PLVO	Plevna	31.06 306	P	P	22 49 33.6	-0.7
	baz=103					
V59A	Middlesex	31.17 288	P	P	22 49 35.0	-0.3
	baz=87					
ARF	Arif	31.22 81	P	P	22 49 38.0	+2.0
MMNY	Mt. Morris Dam	31.23 301	eP	P	22 49 37.4	+1.6
	comp=Z,80nm,2.0s					
J55A	Hilton	31.24 302	P	P	22 49 35.7	-0.2
	baz=99					
Q57A	Strasburg	31.27 294	P	P	22 49 36.2	0.0
	baz=92					
M56A	Emporium	31.27 299	P	P	22 49 36.5	+0.3
	baz=96					
Y60A	Bolivia	31.29 284	P	P	22 49 36.5	+0.1
	baz=84					
N56A	West Decatur	31.30 298	P	P	22 49 37.2	+0.7
	baz=95					
I55A	Frankford	31.32 304	P	P	22 49 36.6	+0.1
	baz=101					
D54A	Lac Fusel, La	31.32 310	P	P	22 49 36.5	-0.1
	baz=107,SNR=7.0					
PEMO	Pembroke	31.33 307	P	P	22 49 37.1	+0.5
	baz=104,SNR=5.6					
DELO	Deloro Mine	31.33 305	P	P	22 49 36.9	+0.2
	baz=102					
R57A	Stanardsville	31.34 293	P	P	22 49 37.5	+0.7
	baz=91					
K55A	Perry	31.34 301	P	P	22 49 37.7	+0.9
	baz=98					
T58A	Grand View Acr	31.36 290	P	P	22 49 37.8	+0.8
	baz=88					
W59A	Clinton	31.37 287	P	P	22 49 37.5	+0.4
	baz=86					
U58A	Oxford	31.39 289	P	P	22 49 37.4	+0.1
	baz=88					
O56A	Blue Knob Stat	31.45 297	eP	P	22 49 40.3	+2.4
	comp=Z,24nm,1.3s					
O56A	Blue Knob Stat	31.45 297	P	P	22 49 38.8	+0.9
	baz=94					
E54A	Lac Daplat, Po	31.48 308	P	P	22 49 38.2	+0.2
	baz=105					
L55A	Hinsdale	31.54 300	P	P	22 49 38.7	+0.1
	baz=97					
X59A	McDuffie Farm,	31.55 286	P	P	22 49 39.6	+0.8
	baz=85					
P56A	Dayton Farm, R	31.62 295	P	P	22 49 40.5	+1.2
	baz=92					
BANO	Bancroft	31.65 306	P	P	22 49 39.8	+0.3
	baz=102					
S57A	Dark Hollow, R	31.68 292	eP	P	22 49 43.1	+3.3
	comp=Z,14nm,1.2s					
S57A	Dark Hollow, R	31.68 292	P	P	22 49 39.6	-0.2
	baz=90					
MEDO	Medina	31.69 302	P	P	22 49 40.3	+0.4
	baz=99					
M55A	Ridgway	31.70 299	P	P	22 49 40.9	+0.8
	baz=96					
WLVO	Wesleyville	31.77 303	P	P	22 49 40.3	-0.2
	baz=100					
K54A	Basiliko Farm,	31.78 301	P	P	22 49 41.4	+0.7
	baz=98					
E53A	Dumoine, Ponti	31.78 308	P	P	22 49 40.7	+0.1
	baz=104					
N55A	Marion Center	31.81 297	eP	P	22 49 42.6	+1.7
	comp=Z,48nm,1.8s					
N55A	Marion Center	31.81 297	P	P	22 49 42.0	+1.1
	baz=94					
J54A	Appleton	31.84 302	P	P	22 49 41.9	+0.8
	baz=99					
Q56A	Snyder Ridge,	31.87 294	P	P	22 49 43.1	+1.5
	baz=92					
T57A	Hurt	31.93 290	P	P	22 49 42.9	+0.9
	baz=88					
DRCO	St. Marys Ceme	31.98 303	P	P	22 49 42.8	+0.4
	baz=100					
D53A	Lac Vacive, Po	31.99 309	P	P	22 49 42.1	-0.4
	baz=106					
DRWO	Darlington Wes	32.00 303	P	P	22 49 42.8	+0.3
	baz=100					
O55A	Ligonier	32.01 296	P	P	22 49 43.7	+0.9
	baz=93					
U57A	Blanch	32.02 289	P	P	22 49 43.5	+0.7
	baz=87					
W58A	Raeford	32.03 287	P	P	22 49 43.1	+0.1
	baz=85					
LSQQ	Lebel-sur-Quev	32.12 313	P	P	22 49 43.1	-0.5
	baz=109					
VLDQ	Val d'Or	32.12 311	eP	P	22 49 45.3	+1.8
	comp=Z,30nm,1.6s					
G53A	Haliburton	32.15 306	P	P	22 49 44.2	+0.3
	baz=102,SNR=6.3					
X58A	Rowland	32.16 286	P	P	22 49 44.7	+0.6
	baz=84					
S56A	Natural Bridge	32.16 292	P	P	22 49 44.5	+0.4
	baz=89					
JBK	JBK	32.19 75	P	P	22 49 45.0	+0.4
L54A	Sinclairville	32.19 300	P	P	22 49 44.9	+0.6
	baz=96					
STCO	Saint Catharin	32.21 302	P	P	22 49 44.7	+0.3
	baz=98					
PKRO	Pickering	32.26 303	P	P	22 49 44.5	-0.3
	baz=99					
M54A	Oil Creek Stat	32.38 299	eP	P	22 49 47.0	+1.1
	comp=Z,42nm,1.4s					
M54A	Oil Creek Stat	32.38 299	P	P	22 49 47.1	+1.2
	baz=95,SNR=7.4					
P55A	Reedsville	32.38 295	P	P	22 49 46.0	0.0
	baz=92					
MCWV	Mont Chateau	32.40 295	eP	P	22 49 48.8	+2.7
	comp=Z,28nm,1.5s					
MCWV	Mont Chateau	32.40 295	P	P	22 49 47.5	+1.3
	baz=92					
V57A	Coltrane Farms	32.41 288	P	P	22 49 47.0	+0.8
	baz=86					
E52A	Mattawa	32.43 308	P	P	22 49 46.2	-0.1
	baz=103,SNR=7.9					
D52A	ZEK Kipawa Sen	32.43 309	P	P	22 49 46.0	-0.3
	baz=105					
SADO	Sadowa	32.45 305	eP	P	22 49 46.6	+0.1
	comp=Z,16nm,1.1s					
Y58A	Scranton	32.50 285	P	P	22 49 47.5	+0.5
	baz=83					
T56A	Rocky Mt	32.55 290	P	P	22 49 48.6	+1.1
	baz=88					
Q55A	Buckhannon	32.57 294	P	P	22 49 49.3	+1.6
	baz=91					
N54A	Moraine State	32.58 298	eP	P	22 49 48.9	+1.1
	comp=Z,25nm,1.3s					
N54A	Moraine State	32.58 298	P	P	22 49 49.0	+1.3
	baz=94					
I53A	Kortright Cn E	32.60 303	P	P	22 49 50.0	+2.1
	baz=99					
W57A	Gilead	32.64 287	eP	P	22 49 49.6	+1.3
	comp=Z,39nm,1.2s					
W57A	Gilead	32.64 287	P	P	22 49 48.1	-0.1
	baz=85,SNR=5.7					
Z58A	St. Stephen	32.70 284	P	P	22 49 50.1	+1.4
	baz=82					
TYNO	Tyneside	32.70 302	P	P	22 49 49.4	+0.6
	baz=97					
ALLY	Alegheny Colle	32.75 299	eP	P	22 49 50.3	+1.1
	comp=Z,30nm,1.3s					
BUKO	Buck Lake	32.75 306	P	P	22 49 48.7	-0.4
	baz=101					
MATQ	Matagami	32.76 314	P	P	22 49 48.4	-0.7
	baz=110					
F52A	Sundridge	32.77 307	P	P	22 49 49.7	+0.4
	baz=102					
X57A	Johnson Farm,	32.79 286	P	P	22 49 50.8	+1.2
	baz=84					
O54A	Avella	32.83 296	P	P	22 49 50.7	+0.8
	baz=92					
L53A	Girard	32.86 299	P	P	22 49 51.0	+0.8
	baz=95					
U56A	King	32.87 289	P	P	22 49 51.2	+0.9
	baz=87					
P54A	Burton	32.89 295	P	P	22 49 51.4	+0.9
	baz=92					
S55A	Lewisburg	32.90 292	P	P	22 49 51.4	+0.8
	baz=89					
ACTO	Acton	32.91 303	P	P	22 49 51.0	+0.5
	baz=98					
H52A	Wyevale	32.95 304	P	P	22 49 50.9	0.0
	baz=100					
V56A	Mocksville	33.00 288	eP	P	22 49 53.1	+1.7
	comp=Z,35nm,1.5s					
V56A	Mocksville	33.00 288	P	P	22 49 52.1	+0.7
	baz=86					
NHSC	New Hope	33.03 283	P	P	22 49 52.3	+0.6
	baz=82					
E51A	G1948 Merrick	33.05 308	P	P	22 49 51.6	-0.1
	baz=103					
I52A	Shelburne	33.06 303	P	P	22 49 52.2	+0.3
	baz=99					
BIRD	Birdtown, Kers	33.07 286	eP	P	22 49 55.4	+3.3
	comp=Z,21nm,1.4s					
D51A	Lot 18 Range I	33.10 309	P	P	22 49 52.1	-0.1
	baz=104					
W56A	Indian Trail	33.12 287	P	P	22 49 52.7	+0.2
	baz=85					
M53A	Wl Miller and	33.13 298	P	P	22 49 53.1	+0.6
	baz=94					
T55A	Pulaski	33.15 291	P	P	22 49 53.6	+0.8
	baz=88					
Q54A	Coxs Mills	33.16 294	P	P	22 49 53.5	+0.7
	baz=90					
J52A	Paris	33.16 302	P	P	22 49 52.9	+0.1
	baz=97					
F51A	Arnstein	33.20 307	P	P	22 49 53.7	+0.6
	baz=102					
N53A	Lisbon	33.21 297	eP	P	22 49 54.5	+1.2
	comp=Z,26nm,1.1s					
N53A	Lisbon	33.21 297	P	P	22 49 54.3	+1.0
	baz=93					
K52A	Tillsonburg	33.28 301	P	P	22 49 54.0	+0.2
	baz=96					
R54A	Victor	33.28 293	P	P	22 49 54.8	+0.9
	baz=89					
KLBO	Killbear Provi	33.30 306	P	P	22 49 54.2	+0.3
	baz=100					
U55A	TA2, Sparta	33.39 289	P	P	22 49 55.2	+0.3
	baz=86					
Z57A	Bowman	33.44 284	P	P	22 49 55.5	+0.2
	baz=82					
O53A	New Philadelph	33.47 296	P	P	22 49 56.5	+1.0
	baz=92,SNR=8.4					
S54A	Dingess, Beckl	33.54 292	P	P	22 49 57.0	+0.7
	baz=88					
X56A	White Oak	33.56 286	P	P	22 49 57.2	+0.9
	baz=83					
V55A	Taylorsville	33.57 288	P	P	22 49 57.8	+1.4
	baz=85					
P53A	Whipple	33.59 295	eP	P	22 49 59.1	+2.5
	comp=Z,26nm,1.4s					
P53A	Whipple	33.59 295	P	P	22 49 56.9	+0.3
	baz=91					
I51A	Listowel	33.63 303	P	P	22 49 57.2	+0.3
	baz=98					
M52A	Chesterland	33.65 299	P	P	22 49 57.9	+0.9
	baz=94					
Q53A	Leroy	33.69 294	P	P	22 49 58.1	+0.7
	baz=90					
KMSC	Kings Mountain	33.73 287	eP	P	22 50 01.2	+3.4
	comp=Z,16nm,0.4s					
KMSC	Kings Mountain	33.73 287	P	P	22 49 58.8	+0.9
	baz=84					
BWLO	Walkerton	33.75 303	P	P	22 49 58.1	+0.2
	baz=98					
JSC	Jenkinsville	33.77 286	eP	P	22 50 01.5	+3.4
	comp=Z,20nm,1.3s					
JSC	Jenkinsville	33.77 286	eP	P	22 50 01.5	+3.4
JSC			pmax	pmax		
	comp=Z,20nm,1.3s					
T54A	Tazewell	33.78 291	P	P	22 49 58.6	+0.3
	baz=87					
K51A	Iona Station	33.86 301	P	P	22 49 58.7	-0.1
	baz=96					
N52A	McGinn's Farm,	33.86 297	P	P	22 49 59.6	+0.8
	baz=92					
E50A	Wahnapitae	33.87 307	P	P	22 49 59.2	+0.3
	baz=102,SNR=5.2					
Y56A	Pelion	33.87 285	P	P	22 49 59.8	+0.7
	baz=82					
BMRO	Meriville Lake	33.88 304	P	P	22 49 59.1	+0.1
	baz=98					
257A	Skidaway Islan	33.92 281	P	P	22 50 00.5	+1.0
	baz=80					
O52A	Adamsville	33.95 296	eP	P	22 50 01.1	+1.4
	comp=Z,27nm,1.1s					
O52A	Adamsville	33.95 296	P	P	22 50 00.1	+0.4
	baz=91					
BRCO	Bruce Peninsul	33.99 303	P	P	22 50 00.5	+0.5
	baz=98					
Z56A	Williston	33.99 284	P	P	22 50 00.8	+0.7
	baz=82					
U54A	Nelsons Funny	34.01 290	eP	P	22 50 02.8	+2.5
	comp=Z,21nm,1.3s					
U54A	Nelsons Funny	34.01 290	P	P	22 50 00.1	-0.2
	baz=86					
R53A	Hurricane	34.03 293	P	P	22 50 00.6	+0.2
	baz=89					
X55A	Gracelyn & Ava	34.05 286	P	P	22 50 00.9	+0.3
	baz=83					
BASO	Ashfield	34.12 303	P	P	22 50 01.1	+0.1
	baz=97					
P52A	Corning	34.17 295	P	P	22 50 01.8	+0.2
	baz=90					
V54A	Nebo	34.17 288	P	P	22 50 02.7	+1.0
	baz=85					
TOBO	Tobermory, Bru	34.19 305	P	P	22 50 02.2	+0.6
	baz=99					
S53A	Williamson	34.19 292	P	P	22 50 02.6	+0.7
	baz=88					
156A	Sylvania	34.20 283	P	P	22 50 02.7	+0.9
	baz=80					
M51A	Elyria	34.26 298	P	P	22 50 03.1	+0.8
	baz=93					
Q52A	Bidwell	34.27 294	P	P	22 50 02.1	-0.4
	baz=89					
Y55A	Saluda	34.30 285	P	P	22 50 03.2	+0.4
	baz=82					
N51A	Ashland	34.38 297	P	P	22 50 04.4	+1.0
	baz=92					
357A	Townsend	34.41 281	P	P	22 50 04.2	+0.5
	baz=79					
W54A	Cherokee Point	34.44 287	P	P	22 50 05.1	+1.1
	baz=84					
D49A	Beulah Townshi	34.46 309	P	P	22 50 04.1	+0.2
	baz=102					
060A	Indiantown	34.53 273	P	P	22 50 05.1	+0.3
	baz=73					
O51A	Pataskala	34.54 296	P	P	22 50 04.1	-0.6
	baz=91					
T53A	Wise	34.56 290	P	P	22 50 05.3	+0.2
	baz=86					
R52A	Catlettsburg	34.58 293	P	P	22 50 05.1	0.0
	baz=88					
HODGE	Hodges	34.60 286	eP	P	22 50 06.8	+1.5
	comp=Z,36nm,1.8s					
PLIO	Pelee Island,	34.61 299	P	P	22 50 05.3	0.0
	baz=93					
U53A	Fall Branch	34.63 289	P	P	22 50 05.5	-0.2
	baz=86					
F49A	Sandfield	34.64 306	P	P	22 50 04.5	-1.1
	baz=100					
Z55A	Blythe	34.64 284	P	P	22 50 05.8	+0.1
	baz=81					
256A	Glennville	34.64 282	P	P	22 50 06.6	+0.9
	baz=80					
658A	Bunnell	34.65 277	P	P	22 50 05.3	-0.6
	baz=76					
X54A	Belton	34.65 286	P	P	22 50 06.6	+0.8
	baz=83					
K50A	Casco	34.68 301	P	P	22 50 06.0	+0.1
	baz=95					
859A	Kempfer Cattle	34.70 275	P	P	22 50 07.3	+1.1
	baz=74					
758A	Lake Helen	34.71 276	P	P	22 50 07.5	+1.1
	baz=75					
D48A	Paudash Townsh	34.74 308	P	P	22 50 06.4	0.0
	baz=102,SNR=7.9					
NBMO	Morrinhos-CE	34.76 178	eP	P	22 50 09.4	+2.6
L50A	Kingsville	34.77 299	P	P	22 50 06.5	-0.2
	baz=94					
ACSO	Alum Creek Sta	34.83 296	eP	P	22 50 08.3	+1.0
	comp=Z,46nm,1.3s					
ACSO	Alum Creek Sta	34.83 296	P	P	22 50 07.0	-0.3
	baz=91					
E48A	Lockeyer	34.84 307	P	P	22 50 07.5	+0.2
	baz=100,SNR=6.2					
P51A	Williamsport	34.88 295	eP	P	22 50 09.0	+1.2
	comp=Z,92nm,1.8s					
P51A	Williamsport	34.88 295	P	P	22 50 07.6	-0.2
	baz=90					
V53A	Saluda	34.88 288	eP	P	22 50 10.2	+2.3
	comp=Z,51nm,1.8s					
V53A	Saluda	34.88 288	P	P	22 50 08.5	+0.6
	baz=84					
M50A	Fremont	34.91 298	P	P	22 50 07.3	-0.6
	baz=92					
T52A	Hallie	34.91 291	P	P	22 50 08.2	+0.2
	baz=86					
I49A	Point Hope	34.94 303	P	P	22 50 06.6	-1.5
	baz=96					
S52A	Salyersville	34.95 292	P	P	22 50 06.4	-2.0
	baz=87					
N50A	Nevada	34.97 297	P	P	22 50 08.6	+0.2
	baz=92					
Y54A	Tignall	35.00 285	P	P	22 50 09.3	+0.5
	baz=82					
456A	Hilliard	35.00 280	P	P	22 50 09.7	+0.9
	baz=78					
155A	Kite	35.01 283	P	P	22 50 09.2	+0.3
	baz=80					
F48A	Evansville	35.04 306	P	P	22 50 09.6	+0.5
	baz=99,SNR=7.4					
J49A	Marlette	35.11 302	P	P	22 50 09.7	0.0
	baz=95					
Q51A	Peebles	35.11 294	eP	P	22 50 10.2	+0.5
	comp=Z,39nm,1.4s					
Q51A	Peebles	35.11 294	P	P	22 50 09.7	-0.1
	baz=89					
657A	Interlachen	35.13 278	P	P	22 50 09.6	-0.4
	baz=76					
DWPF	Disney Wildern	35.13 275	P	P	22 50 10.3	+0.2
	baz=74					
255A	Hazlehurst	35.14 282	P	P	22 50 10.2	+0.2
	baz=79					
059A	Moore Haven	35.22 273	P	P	22 50 11.4	+0.7
	baz=73					
Z54A	Sparta	35.22 284	P	P	22 50 11.3	+0.6
	baz=81					
W53A	Cullowhee	35.22 287	P	P	22 50 10.9	0.0
	baz=84					
U52A	Thorn Hill	35.27 290	P	P	22 50 11.6	+0.5
	baz=85					
K49A	Clarkson	35.29 301	P	P	22 50 11.0	-0.2
	baz=94					
BORG	Borgarnes	35.30 14	P	P	22 50 12.4	+1.4
	comp=Z,19nm,1.1s,baz=233,slow=5.1,SNR=3.1					
BORG	Borgarnes	35.30 14	eP	P	22 50 12.4	+1.4
	comp=Z,72nm,1.6s					
BORG	Borgarnes	35.30 14	eP	P	22 50 12.4	+1.4
BORG			pmax	pmax		
	comp=Z,72nm,1.6s					
O50A	Cable	35.31 296	P	P	22 50 11.4	-0.1
	baz=90					
R51A	Hillsboro	35.32 293	P	P	22 50 11.7	+0.2
	baz=88					
S51A	Beattyville	35.36 292	eP	P	22 50 11.9	0.0
	comp=Z,8.7nm,1.0s					
S51A	Beattyville	35.36 292	P	P	22 50 11.7	-0.2
	baz=87					
H48A	Harrisville	35.38 304	P	P	22 50 12.0	0.0
	baz=97					
TZTN	Tazewell	35.40 290	eP	P	22 50 13.2	+0.9
	comp=Z,20nm,1.3s					
TZTN	Tazewell	35.40 290	P	P	22 50 12.8	+0.5
	baz=85					
AAM	Ann Arbor	35.41 300	P	P	22 50 13.2	+1.0
	baz=93					
X53A	Estanollee	35.42 286	P	P	22 50 13.1	+0.7
	baz=82					
P50A	Jamestown	35.45 295	P	P	22 50 13.2	+0.5
	baz=89					
757A	Oxford	35.46 277	P	P	22 50 13.7	+0.9
	baz=75					
L49A	Milan	35.48 299	P	P	22 50 13.8	+0.9
	baz=93					
556A	Lake Butler	35.48 278	P	P	22 50 13.4	+0.4
	baz=76					
V52A	Sevierville	35.50 289	eP	P	22 50 15.6	+2.5
	comp=Z,28nm,1.5s					
V52A	Sevierville	35.50 289	P	P	22 50 13.7	+0.5
	baz=84					
154A	Montrose	35.54 283	P	P	22 50 14.1	+0.6
	baz=80					
958A	Wauchula	35.55 274	P	P	22 50 14.8	+1.1
	baz=73					
355A	Pearson	35.57 281	P	P	22 50 14.1	+0.4
	baz=78					
J48A	Bridge Port	35.57 301	P	P	22 50 07.8	-5.9
	baz=95,SNR=8.4					
D47A	Chapleau	35.58 308	P	P	22 50 13.9	+0.2
	baz=100,SNR=7.0					
I48A	Sherman Twp	35.59 303	P	P	22 50 13.6	-0.2
	baz=96					
E47A	Iron Bridge	35.60 307	P	P	22 50 14.3	+0.5
	baz=99					
M49A	Liberty Center	35.61 298	P	P	22 50 13.9	-0.1
	baz=92					
Q50A	Georgetown	35.61 294	P	P	22 50 13.4	-0.7
	baz=88					
SDV	Santo Domingo	35.67 237	eP	P	22 50 14.8	-0.1
	comp=Z,78nm,1.1s					
SDV	Santo Domingo	35.67 237	eP	P	22 50 14.8	-0.1
T51A	Gray	35.68 291	P	P	22 50 15.8	+1.1
	baz=86					
GOGA	Godfrey	35.71 284	eP	P	22 50 16.0	+1.1
	comp=Z,24nm,1.3s					
GOGA	Godfrey	35.71 284	eP	P	22 50 16.0	+1.1
GOGA			pmax	pmax		
	comp=Z,24nm,1.3s					
GOGA	Godfrey	35.71 284	P	P	22 50 15.6	+0.7
	baz=81					
Y53A	Monroe	35.74 285	P	P	22 50 15.0	-0.1
	baz=82					
N49A	Columbus Grove	35.75 297	P	P	22 50 15.2	0.0
	baz=91					
857A	Zephyrhills	35.77 275	P	P	22 50 16.7	+1.2
	baz=74					
K48A	Perry	35.78 301	P	P	22 50 15.9	+0.5
	baz=94					
U51A	La Follette	35.79 290	P	P	22 50 16.1	+0.5
	baz=85					
G47A	Hillman	35.81 305	P	P	22 50 16.4	+0.7
	baz=97,SNR=7.2					
Z53A	Monticello	35.82 284	P	P	22 50 16.6	+0.8
	baz=81					
254A	Abbeville	35.82 282	P	P	22 50 16.8	+0.9
	baz=79					
455A	Stateville	35.84 280	P	P	22 50 16.9	+0.8
	baz=77					
W52A	Murphy	35.85 287	P	P	22 50 16.6	+0.4
	baz=83					
O49A	Covington	35.86 296	eP	P	22 50 16.8	+0.6
	comp=Z,40nm,1.4s					
O49A	Covington	35.86 296	P	P	22 50 16.7	+0.5
	baz=90					
X52A	Dahlonega	35.89 287	P	P	22 50 17.0	+0.5
	baz=82					
R50A	Paris	35.91 293	eP	P	22 50 17.7	+1.2
	comp=Z,21nm,1.1s					
R50A	Paris	35.91 293	P	P	22 50 17.3	+0.7
	baz=87					
555A	McAlpin	35.93 279	P	P	22 50 16.8	-0.1

	baz=77				
957A	Wimauma	35.94 275	P	P	22 50 16.5 -0.5
	baz=74				
L48A	N Adams	35.97 299	P	P	22 50 16.7 -0.3
	baz=92				
H47A	Mio	35.99 304	P	P	22 50 17.0 -0.2
	baz=96				
S50A	Richmond	36.00 292	P	P	22 50 17.7 +0.4
	baz=86				
V51A	Loudon	36.12 289	eP	P	22 50 19.2 +0.8
	comp=Z,33nm,1.4s				
V51A	Loudon	36.12 289	P	P	22 50 17.4 -1.0
	baz=84				
Y52A	Lilburn	36.13 285	P	P	22 50 18.5 -0.1
	baz=81				
153A	Fort Valley	36.14 283	P	P	22 50 19.4 +0.8
	baz=80				
I47A	Gladwin	36.16 303	P	P	22 50 19.2 +0.6
	baz=95				
P49A	Miami Univ. Ec	36.16 295	P	P	22 50 19.2 +0.5
	baz=89				
M48A	Edgerton	36.17 298	P	P	22 50 19.0 +0.2
	baz=91				
TIGA	Tifton	36.17 281	P	P	22 50 17.7 -1.1
	baz=78				
D46A	Sault St. Mari	36.18 307	P	P	22 50 18.6 -0.2
	baz=99,SNR=7.5				
E46A	Sault Ste Mari	36.29 307	eP	P	22 50 20.6 +0.9
	comp=Z,17nm,1.3s				
E46A	Sault Ste Mari	36.29 307	P	P	22 50 19.7 0.0
	baz=98				
CPCT	Cooper Cave	36.29 288	eP	P	22 50 20.7 +0.8
	comp=Z,21nm,1.6s				
GLMI	Grayling	36.31 304	P	P	22 50 20.4 +0.4
	baz=96				
655A	Horseshoe Beac	36.32 278	P	P	22 50 21.0 +0.9
	baz=76				
Q49A	Aurora	36.32 294	P	P	22 50 20.3 +0.2
	baz=88				
J47A	Sunmer	36.32 301	eP	P	22 50 21.0 +0.9
	comp=Z,27nm,1.0s				
J47A	Sunmer	36.32 301	P	P	22 50 20.1 0.0
	baz=94				
454A	Quitman	36.35 280	P	P	22 50 21.9 +1.4
	baz=77				
N48A	Decatur	36.39 297	P	P	22 50 20.9 +0.2
	baz=90				
T50A	Nancy	36.39 291	P	P	22 50 21.3 +0.6
	baz=85,SNR=9.0				
K47A	Vermontville	36.42 300	P	P	22 50 21.3 +0.3
	baz=93				
U50A	Jamestown	36.45 290	P	P	22 50 21.5 +0.2
	baz=84				
O48A	Farmland	36.49 296	P	P	22 50 21.8 +0.2
	baz=89				
253A	Americus	36.49 282	P	P	22 50 20.9 -0.8
	baz=79				
FRB	Frobisher Bay	36.52 340	P	P	22 50 20.4 -1.0
	comp=Z,25nm,0.9s,baz=137,slow=5.6,SNR=8.3				
W51A	Cleveland	36.52 288	P	P	22 50 22.0 +0.1
	baz=83				
Z52A	Williamson	36.53 284	P	P	22 50 22.4 +0.4
	baz=80,SNR=7.6				
G46A	Petoskey	36.54 305	P	P	22 50 21.7 -0.1
	baz=96				
554A	Perry	36.54 279	P	P	22 50 22.9 +0.8
	baz=76				
L47A	Sherwood	36.54 299	P	P	22 50 22.2 +0.2
	baz=92				
R49A	Shelbyville	36.57 293	eP	P	22 50 23.1 +0.9
	comp=Z,12nm,1.0s				
R49A	Shelbyville	36.57 293	P	P	22 50 22.8 +0.6
	baz=87				
X51A	Calhoun	36.68 287	P	P	22 50 24.0 +0.7
	baz=82				
S49A	Springfield	36.69 292	P	P	22 50 23.3 0.0
	baz=86				
H46A	Fife Lake	36.70 303	P	P	22 50 24.2 +0.9
	baz=95				
353A	Camilla	36.71 281	P	P	22 50 23.8 +0.3
	baz=78				
P48A	Milroy	36.72 295	eP	P	22 50 24.0 +0.5
	comp=Z,24nm,1.3s				
P48A	Milroy	36.72 295	P	P	22 50 23.2 -0.2
	baz=88				
V50A	Pikevile	36.74 289	P	P	22 50 24.0 +0.2
	baz=83				
I46A	Reed City	36.83 302	P	P	22 50 24.2 -0.2
	baz=94				
M47A	Cromwell	36.84 298	P	P	22 50 25.2 +0.7
	baz=91				
152A	Waverly Hall	36.87 284	P	P	22 50 25.5 +0.6
	baz=80				
PTGA	Pitinga	36.89 213	P	P	22 50 24.0 -1.1
	baz=18,slow=12				
PTGA			LR	LR	23 03 10.1
	comp=Z,598nm,21.5s,baz=20,slow=32				
PTGA	Pitinga	36.89 213	eP	P	22 50 25.1 -0.1
	comp=Z,30nm,1.3s				
PTGA	Pitinga	36.89 213	eP	P	22 50 25.4 +0.3
N47A	Urbana	36.90 297	P	P	22 50 25.0 0.0
	baz=90				
J46A	Howard City	36.93 301	P	P	22 50 24.9 -0.4
	baz=93				
T49A	Edmonton	36.94 291	eP	P	22 50 26.9 +1.4
	comp=Z,10nm,1.2s				
T49A	Edmonton	36.94 291	P	P	22 50 26.0 +0.6
	baz=85				
Y51A	Rockmart	36.95 286	P	P	22 50 25.8 +0.2
	baz=81				
W50A	Signal Mountai	36.97 288	P	P	22 50 25.6 -0.1
	baz=83				
Q48A	North Vernon	36.97 294	P	P	22 50 24.8 -0.9
	baz=87				
K46A	Dorr	37.00 300	P	P	22 50 25.0 -0.8
	baz=92				
252A	Lumpkin	37.01 282	P	P	22 50 26.4 +0.3
	baz=79				
F45A	CMU Biological	37.03 305	P	P	22 50 26.3 +0.2
	baz=96				
G45A	Suttons Bay	37.07 304	P	P	22 50 25.5 -0.9
	baz=96				
R48A	Northridge Ran	37.11 293	P	P	22 50 26.8 0.0
	baz=86				
Z51A	Franklin	37.13 285	P	P	22 50 28.5 +1.4
	baz=80				
553A	Crawfordville	37.15 279	P	P	22 50 28.8 +1.6
	baz=76				
U49A	Red Boiling Sp	37.19 290	P	P	22 50 28.5 +0.9
	baz=84				
O47A	Sheridan	37.27 296	P	P	22 50 28.4 +0.2
	baz=89				
352A	Blakely	37.28 282	P	P	22 50 29.0 +0.7
	baz=78				
H45A	Beulah	37.30 303	P	P	22 50 29.1 +0.6
	baz=95				
S48A	Wiedeman Farm,	37.31 292	P	P	22 50 29.3 +0.8
	baz=86				
X50B	Fort Payne	37.34 287	P	P	22 50 28.6 -0.4
	baz=82				
NBPA	Parau_RN	37.35 174	eP	P	22 50 31.0 +2.0
L46A	Eue Claire	37.36 299	P	P	22 50 28.4 -0.5
	baz=91				
P47A	Martinsville	37.37 295	P	P	22 50 29.0 0.0
	baz=88				
V49A	McMinnville	37.37 289	P	P	22 50 28.9 -0.2
	baz=83,SNR=7.9				
M46A	Old House Fiel	37.40 298	P	P	22 50 29.5 +0.3
	baz=90				
I45A	Fountain	37.40 302	P	P	22 50 30.1 +0.9
	baz=94				
151A	Opelika	37.40 283	P	P	22 50 28.9 -0.5
	baz=79				
E44A	Grand Marais A	37.43 307	P	P	22 50 30.2 +0.8
	baz=97				
WCI	Wyandotte Cave	37.45 293	eP	P	22 50 31.2 +1.4
	comp=Z,13nm,1.1s				
WCI	Wyandotte Cave	37.45 293	eP	P	22 50 31.2 +1.4
WCI			pmax	pmax	
	comp=Z,13nm,1.1s				
WCI	Wyandotte Cave	37.45 293	P	P	22 50 30.2 +0.4
	baz=86				
SWET	Sewanee	37.47 288	eP	P	22 50 31.3 +1.3
	comp=Z,12nm,1.2s				
J45A	Montague	37.48 301	P	P	22 50 29.6 -0.3
	baz=93				
Y50A	Piedmont	37.50 286	P	P	22 50 30.9 +0.7
	baz=81				
Q47A	Bedord North L	37.51 294	P	P	22 50 31.0 +0.8
	baz=87				
251A	Midway	37.55 283	P	P	22 50 31.4 +0.7
	baz=78				
RCBR	Riachuelo	37.56 172	eP	P	22 50 32.4 +1.6
BLO	Bloomington	37.58 294	eP	P	22 50 32.6 +1.8
	comp=Z,14nm,1.1s				
BLO	Bloomington	37.58 294	eP	P	22 50 32.6 +1.8
BLO			pmax	pmax	
	comp=Z,14nm,1.1s				
T48A	Bowling Green	37.62 291	P	P	22 50 31.8 +0.6
	baz=85				
452A	Marianna	37.63 281	P	P	22 50 32.3 +1.0
	baz=77				
R47A	Wooly Knot Far	37.63 293	P	P	22 50 31.6 +0.3
	baz=86				
CLTN	Cedars of Leba	37.68 289	eP	P	22 50 33.0 +1.3
	comp=Z,9.4nm,0.9s				
N46A	Monticello	37.69 297	P	P	22 50 31.7 0.0
	baz=89,SNR=5.9				
W49A	Belvidere	37.75 288	P	P	22 50 32.5 +0.2
	baz=82				
Z50A	Ashland	37.76 285	eP	P	22 50 33.5 +1.0
	comp=Z,16nm,1.3s				
Z50A	Ashland	37.76 285	P	P	22 50 33.5 +1.0
	baz=80				
U48A	Cassie Pea, Po	37.80 290	P	P	22 50 33.5 +0.8
	baz=84				
X49A	Woodville	37.89 287	P	P	22 50 33.9 +0.5
	baz=81				
150A	Eclectic	37.96 284	P	P	22 50 35.3 +1.2
	baz=79				
S47A	Hartford	37.96 292	P	P	22 50 34.7 +0.7
	baz=85				
SFIN	Lafayette	37.97 296	eP	P	22 50 34.8 +0.7
	comp=Z,28nm,1.1s				
SFIN	Lafayette	37.97 296	P	P	22 50 34.1 0.0
	baz=88,SNR=5.7				
Y49A	Blount Mountai	38.06 286	eP	P	22 50 36.3 +1.3
	comp=Z,17nm,1.2s				
Y49A	Blount Mountai	38.06 286	P	P	22 50 36.0 +1.0
	baz=80				
M45A	Boilermakers S	38.07 298	P	P	22 50 35.6 +0.6
	baz=90				
P46A	Rosedale	38.09 295	P	P	22 50 35.7 +0.6
	baz=87				
V48A	Smith Brothers	38.12 289	eP	P	22 50 36.5 +1.1
	comp=Z,20nm,1.1s				
V48A	Smith Brothers	38.12 289	P	P	22 50 36.0 +0.5
	baz=83,SNR=6.1				
E43A	Lone Tree Farm	38.13 306	P	P	22 50 34.8 -0.6
	baz=96				
T47A	Sharon Grove	38.20 291	eP	P	22 50 37.1 +0.9
	comp=Z,11nm,1.1s				
T47A	Sharon Grove	38.20 291	P	P	22 50 37.0 +0.9
	baz=84				
Q46A	CEJHS Indians,	38.23 294	P	P	22 50 36.6 +0.3
	baz=86				
SNF	Seneffe	38.26 47	P	P	22 50 33.7 -2.7
SNF	Seneffe	38.26 47	sP	sP	22 50 40.5 +1.4
SNF	Seneffe	38.26 47	PP	PP	22 51 57.5 -6.3
Z49A	Columbiana	38.27 285	P	P	22 50 37.8 +1.0
	baz=80,SNR=6.9				
N45A	Kentland	38.28 297	P	P	22 50 37.3 +0.6
	baz=89				
W48A	Pulaski	38.29 288	P	P	22 50 37.5 +0.7
	baz=82				
250A	Grady	38.29 283	eP	P	22 50 38.6 +1.7
	comp=Z,75nm,1.6s				
250A	Grady	38.29 283	P	P	22 50 37.2 +0.3
	baz=78				
UCC	Uccle	38.37 47	eP	P	22 50 37.4 +0.1
	comp=Z,20nm,1.0s				
UCC	Uccle	38.37 47	eP	P	22 50 37.4 +0.1
UCC			pmax	pmax	
	comp=Z,20nm,1.0s				
U47A	Clarksville	38.41 290	P	P	22 50 37.8 0.0
	baz=83				
R46A	Gibon Southern	38.41 293	P	P	22 50 37.8 0.0
	baz=85				
O45A	Potomac	38.46 296	P	P	22 50 38.5 +0.3
	baz=88				
350A	Dozier	38.47 282	P	P	22 50 39.4 +1.1
	baz=77				
X48A	Hartselle	38.48 287	eP	P	22 50 39.6 +1.1
	comp=Z,37nm,1.6s				
X48A	Hartselle	38.48 287	P	P	22 50 38.4 -0.1
	baz=81				
P45A	Graceland, Par	38.50 295	P	P	22 50 38.9 +0.3
	baz=87				
H43A	Windswept, Lux	38.53 303	P	P	22 50 38.8 0.0
	baz=93				
L44A	Lake County Fo	38.56 299	P	P	22 50 39.0 -0.1
	baz=90				
149A	Jones	38.60 284	P	P	22 50 40.3 +0.8
	baz=79				
S46A	Don Dixon Farm	38.62 292	P	P	22 50 39.2 -0.4
	baz=85				
M44A	Midewin, Midew	38.67 298	P	P	22 50 38.5 -1.4
	baz=89				
V47A	Nunnelly	38.67 289	P	P	22 50 40.7 +0.6
	baz=82,SNR=7.9				
Y48A	Jasper	38.67 286	P	P	22 50 40.1 0.0
	baz=80				
LRAL	Lakeview Retre	38.69 285	eP	P	22 50 41.0 +0.8
	comp=Z,13nm,1.3s				
LRAL	Lakeview Retre	38.69 285	P	P	22 50 40.5 +0.2
	baz=79				
N44A	Piper City	38.75 297	P	P	22 50 40.4 -0.3
	baz=88				
W47A	Westpoint	38.81 288	P	P	22 50 41.1 -0.2
	baz=82				
450A	Crestview	38.81 281	P	P	22 50 42.1 +0.8
	baz=77				
T46A	Princeton	38.82 291	P	P	22 50 41.8 +0.5
	baz=84				
OLIL	Olney	38.83 294	eP	P	22 50 42.3 +0.9
	comp=Z,39nm,1.4s				
Q45A	Warren Harvey,	38.86 294	P	P	22 50 42.0 +0.4
	baz=86				
F42A	Maple Grove Fa	38.87 305	P	P	22 50 41.5 -0.1
	baz=94				
K43A	Burlington	38.88 300	P	P	22 50 41.6 -0.1
	baz=90				
WVT	Waverly	38.88 290	eP	P	22 50 41.7 -0.1
	comp=Z,39nm,1.7s				
WVT	Waverly	38.88 290	eP	P	22 50 41.7 -0.1
WVT			pmax	pmax	
	comp=Z,39nm,1.7s				
WVT	Waverly	38.88 290	P	P	22 50 42.1 +0.3
	baz=83				
249A	Camden	39.00 283	P	P	22 50 44.1 +1.3
	baz=78				
R45A	Skylar, Fairfi	39.01 293	P	P	22 50 43.7 +0.8
	baz=85				
O44A	Mansfield	39.03 296	P	P	22 50 43.0 0.0
	baz=87				
BRAL	Brewton	39.12 282	P	P	22 50 44.2 +0.4
	baz=77				
U46A	Springville	39.13 290	P	P	22 50 44.5 +0.6
	baz=83				
X47A	Russelville	39.14 287	P	P	22 50 44.7 +0.8
	baz=81,SNR=9.7				
V46A	Holladay	39.16 289	P	P	22 50 44.5 +0.4
	baz=82				
349A	Repton	39.20 282	P	P	22 50 45.2 +0.7
	baz=77				
148A	Greensboro	39.24 284	P	P	22 50 45.7 +0.9
	baz=78				
PLAL	Pickwick Lake	39.24 288	eP	P	22 50 45.2 +0.4
	comp=Z,34nm,1.4s				
D41A	Chassel	39.28 307	P	P	22 50 44.7 -0.3
	baz=96				
I42A	Draeger Farm,	39.32 302	P	P	22 50 45.7 +0.2
	baz=92				
449A	Pace	39.35 281	P	P	22 50 46.7 +0.9
	baz=76				
M43A	Waltham Townsh	39.35 298	P	P	22 50 45.8 +0.1
	baz=88				
T45A	Paducah	39.42 291	P	P	22 50 47.0 +0.6
	baz=83				
W46A	Michie	39.46 288	P	P	22 50 46.8 +0.1
	baz=81				
N43A	Stutzman Famil	39.53 297	P	P	22 50 47.8 +0.6
	baz=88				
COWI	Conover	39.59 306	eP	P	22 50 47.5 -0.2
HDIL	Hopedale	39.64 297	P	P	22 50 48.0 -0.1
	baz=87				
SENIN	Lac Senin/Sane	39.66 54	eP	P	22 50 48.7 +0.2
	comp=Z,19nm,1.1s				
X46A	Booneville	39.72 287	P	P	22 50 49.5 +0.6
	baz=80				
ECH	Echery	39.74 51	eP	P	22 50 48.5 -0.4
	comp=Z,47nm,1.7s				
ECH	Echery	39.74 51	eP	P	22 50 48.5 -0.4
ECH			pmax	pmax	
	comp=Z,47nm,1.7s				
C40A	Isle Royale Na	39.76 308	P	P	22 50 48.9 -0.1
	baz=96				
S44A	Carbondale	39.83 292	P	P	22 50 50.0 +0.3
	baz=84				
P43A	Skaggs, Pawnee	39.87 295	P	P	22 50 50.4 +0.4
	baz=86				
L42A	Oliver, Polo	39.87 299	eP	P	22 50 50.7 +0.6
	comp=Z,21nm,0.9s				
L42A	Oliver, Polo	39.87 299	P	P	22 50 50.1 +0.1
	baz=89,SNR=5.9				
I41A	Arkdale	40.02 302	eP	P	22 50 51.9 +0.6
	comp=Z,9.5nm,0.8s				
I41A	Arkdale	40.02 302	P	P	22 50 51.3 +0.1
	baz=91				
F40A	Park Falls	40.27 305	P	P	22 50 53.7 +0.4
	baz=93				
JFWS	Jewell Farm	40.29 301	eP	P	22 50 52.5 -1.0
JFWS	Jewell Farm	40.29 301	eP	P	22 50 52.5 -1.0
JFWS	Jewell Farm	40.29 301	P	P	22 50 53.9 +0.4
	baz=90				
G40A	Rib Lake	40.29 304	eP	P	22 50 53.9 +0.4
	comp=Z,14nm,1.1s				
G40A	Rib Lake	40.29 304	P	P	22 50 53.9 +0.4
	baz=92				
OXF	Oxford	40.40 288	eP	P	22 50 55.0 +0.5
	comp=Z,20nm,0.9s				
OXF	Oxford	40.40 288	P	P	22 50 54.8 +0.3
	baz=80				
BFO	Black Forest	40.53 51	eP	P	22 50 54.6 -0.8
	comp=Z,49nm,1.4s				
BFO	Black Forest	40.53 51	eP	P	22 50 54.7 -0.8
BFO			pmax	pmax	
	comp=Z,49nm,1.4s				
M41A	Milan	40.55 298	P	P	22 50 56.3 +0.7
	baz=88				
SMTB	Santa Maria do	40.76 190	eP	P	22 50 58.7 +1.2
N41A	Harden Midland	40.82 297	P	P	22 50 58.3 +0.4
	baz=86				
F39A	Loretta	40.82 305	P	P	22 50 58.1 +0.3
	baz=92				
PBMO	Poplar Bluff	40.87 291	eP	P	22 50 58.9 +0.5
	comp=Z,38nm,1.4s				
G39A	Holcombe	40.97 304	P	P	22 50 59.2 +0.1
	baz=92				
SUMG	Summit	41.03 1	eP	P	22 50 58.2 -1.4
	comp=Z,28nm,1.1s				
SUMG	Summit	41.03 1	eP	P	22 50 58.2 -1.4
SUMG			pmax	pmax	
	comp=Z,28nm,1.1s				
SUMG	Summit	41.03 1	*i* P	P	22 50 58.3 -1.3
	comp=Z,72nm,1.1s				
L40A	Anamosa	41.03 299	eP	P	22 51 00.3 +0.7
	comp=Z,24nm,1.0s				
L40A	Anamosa	41.03 299	P	P	22 51 00.1 +0.5
	baz=88				
TUE	Stuetta	41.08 54	eP	P	22 51 00.7 +0.4
	comp=Z,98nm,1.8s				
ROSC	El Rosal	41.09 236	LR	LR	23 06 46.4
	comp=Z,836nm,21.6s,baz=46,slow=34				
STU	Stuttgart	41.15 51	eP	P	22 51 02.2 +1.7
	comp=Z,20nm,1.0s				
STU	Stuttgart	41.15 51	eP	P	22 51 02.3 +1.7
STU			pmax	pmax	
	comp=Z,20nm,1.0s				
E38A	The Farm, Brul	41.29 306	eP	P	22 51 01.9 +0.1
	comp=Z,16nm,0.8s				
E38A	The Farm, Brul	41.29 306	P	P	22 51 01.3 -0.4
	baz=93				
EYMN	Ely	41.34 308	eP	P	22 51 01.8 -0.3
	comp=Z,17nm,1.1s				
EYMN	Ely	41.34 308	P	P	22 51 02.1 0.0
	baz=94				
CCM	Cathedral Cave	41.36 293	eP	P	22 51 02.6 +0.2
	comp=Z,50nm,1.8s				
CCM	Cathedral Cave	41.36 293	eP	P	22 51 02.6 +0.2
CCM			pmax	pmax	
	comp=Z,50nm,1.8s				
CCM	Cathedral Cave	41.36 293	P	P	22 51 02.4 +0.1
	baz=83				
N40A	Mertquake, Sal	41.36 298	P	P	22 51 02.3 0.0
	baz=86				
F38A	Pierce - Schro	41.49 305	P	P	22 51 03.3 -0.1
	baz=92				
DAVA	Damuels	41.49 53	eP	P	22 51 02.8 -0.8
	comp=Z,36nm,1.4s				
X43A	Marvell	41.59 288	P	P	22 51 04.8 +0.5
	baz=80				
KEST	Kesra	41.69 70	P	P	22 51 05.0 -0.2
	comp=Z,9.1nm,0.8s,baz=256,slow=7.3,SNR=6.5				
KEST			LR	LR	23 05 06.4
	comp=Z,723nm,21.5s,baz=232,slow=32				
KEST	Kesra	41.69 70	eP	P	22 51 06.1 +0.9
	comp=Z,18nm,1.0s				
TIC	Toumodi	41.75 119	eP	P	22 51 04.2 -1.6
VBMS	Vicksburg	41.76 284	P	P	22 51 06.1 +0.4
	baz=77				
DBIC	Dimbokro	41.86 119	P	P	22 51 04.0 -2.7
	comp=Z,22nm,1.0s,baz=293,slow=8.9,SNR=10				
DBIC			LR	LR	23 07 04.6
	comp=Z,2μm,18.1s,baz=297,slow=34				
DBIC	Dimbokro	41.86 119	eP	P	22 51 04.0 -2.7
	comp=Z,56nm,1.3s				
DBIC	Dimbokro	41.86 119	P	P	22 51 04.0 -2.7
TAM	Tamanrasset	42.01 90	eP	P	22 51 07.6 -0.4
	comp=Z,26nm,1.1s				
TAM	Tamanrasset	42.01 90	eP	P	22 51 07.6 -0.4
TAM			pmax	pmax	
	comp=Z,26nm,1.1s				
F37A	Hinrichs Farm,	42.01 305	P	P	22 51 07.5 -0.1
	baz=91				
LIC	Lamto	42.02 119	eP	P	22 51 06.2 -1.8
	comp=Z,158nm,1.2s				
FETA	Feichten	42.06 53	eP	P	22 51 08.0 -0.2
	comp=Z,11nm,1.3s				
RETA	Reutte	42.10 53	eP	P	22 51 07.8 -0.7
	comp=Z,36nm,2.0s				
SPMN	Marine on St.	42.13 304	eP	P	22 51 09.0 +0.4
	comp=Z,13nm,0.9s				
SPMN	Marine on St.	42.13 304	P	P	22 51 08.7 +0.1
	baz=90				
KIC	Kosan Boka	42.15 119	eP	P	22 51 07.3 -1.7
	comp=Z,159nm,1.2s				
MOTA	Moosalm	42.33 53	eP	P	22 51 09.5 -0.8
	comp=Z,2.0nm,0.7s				
FCAR	Ozark Folk Cen	42.36 290	eP	P	22 51 08.8 -1.7
	comp=Z,20nm,1.1s				
SQTA	Sankt Quirin	42.39 53	eP	P	22 51 10.3 -0.6
	comp=Z,4.2nm,0.5s				
CCAR	Cane Creek	42.43 287	eP	P	22 51 12.6 +1.4
	comp=Z,162nm,1.7s				
SCIA	State Center	42.52 299	eP	P	22 51 12.7 +0.8
	comp=Z,23nm,0.8s				
SCIA	State Center	42.52 299	P	P	22 51 12.3 +0.5
	baz=86				
GRA1	Grafenberg Arr	42.56 49	eP	P	22 51 12.3 +0.3
	comp=Z,44nm,1.3s				
GRF	Grafenberg Arr	42.56 49	eP	P	22 51 12.3 +0.3
GRF			pmax	pmax	
	comp=Z,44nm,1.3s				
W41B	Gary Mavity, V	42.58 289	eP	P	22 51 11.4 -1.0
	comp=Z,19nm,0.9s				
W41B	Gary Mavity, V	42.58 289	P	P	22 51 12.1 -0.2
	baz=80,SNR=9.1				
WHAR	Wooly Hollow	42.59 289	eP	P	22 51 11.3 -1.1
	comp=Z,17nm,0.9s				
WATA	Walderalm	42.65 53	eP	P	22 51 12.3 -0.7
	comp=Z,5.1nm,0.6s,SNR=7.5				
WTTA	Wattenberg	42.69 53	eP	P	22 51 12.2 -1.1
	comp=Z,6.9nm,0.6s				
UALR	University of	42.73 289	eP	P	22 51 13.3 -0.3
	comp=Z,34nm,0.9s				
U40A	Yellville	42.87 291	P	P	22 51 14.9 +0.2
	baz=81,SNR=10				
TOA1	Torodi Ar. Sit	43.18 105	eP	P	22 51 14.8 -2.7
X40A	Basin Creek Fa	43.19 288	eP	P	22 51 17.4 +0.1
	comp=Z,13nm,1.0s				
X40A	Basin Creek Fa	43.19 288	P	P	22 51 17.4 +0.1
	baz=79,SNR=8.6				
TOA0	Torodi Ar. Sit	43.19 105	eP	P	22 51 15.8 -1.8

comp=Z,58nm,1.1s
TOA0 Torodi Ar. Sit 43.19 105 P P 22 51 15.7 -1.8
SNR=13
TORD Torodi Ar. Bea 43.19 105 P P 22 51 14.8 -2.7
comp=Z,44nm,1.2s,baz=305,slow=4.5,SNR=62
TORD LR LR 23 07 02.9
comp=Z,868nm,21.3s,baz=315,slow=33
ABTA Abfaltersbach 43.27 54 eP P 22 51 16.9 -1.0
comp=Z,19nm,1.1s,SNR=7.4
Z41A Richland Creek 43.41 287 P P 22 51 19.5 +0.3
baz=77
KONO Kongsberg 43.55 35 i P P 22 51 19.2 -0.6
KONO pmax pmax
comp=Z,19nm,1.1s
WLAR White Oak Lake 43.57 287 eP P 22 51 21.9 +1.5
comp=Z,66nm,1.3s
HHAR Hobbs 43.74 291 eP P 22 51 22.0 +0.1
comp=Z,48nm,0.4s
MIAR Mount Ida 43.77 289 eP P 22 51 21.5 -0.6
comp=Z,32nm,1.4s
MIAR Mount Ida 43.77 289 eP P 22 51 21.5 -0.6
MIAR pmax pmax
comp=Z,32nm,1.4s
MIAR Mount Ida 43.77 289 P P 22 51 22.7 +0.6
baz=78,SNR=7.5
KULLO Kullorsuaq 43.78 354 i P P 22 51 20.7 -0.8
KULLO pmax pmax
comp=Z,45nm,1.1s
KULLO Kullorsuaq 43.78 354 i P P 22 51 20.7 -0.8
comp=Z,45nm,1.1s
W39A Magazine 43.81 290 eP P 22 51 22.8 +0.4
comp=Z,22nm,1.1s
W39A Magazine 43.81 290 P P 22 51 22.4 +0.1
baz=79,SNR=7.5
CLL Collm 43.84 47 eP P 22 51 20.4 -1.9
comp=Z,15nm,0.9s
CLL Collm 43.84 47 ⇓iP P 22 51 20.0 -2.3
comp=Z,18nm,1.3s
CLL i pP sP 22 51 25.2 +0.2
comp=Z,39nm,1.5s
CLL i 22 51 32.2
CLL eS S 22 57 53.0 -0.2
CLL e(SS) 23 01 13.0
CLL eSSS SSS 23 01 47.0
CLL Collm 43.84 47 ⇓iP P 22 51 20.0 -2.3
CLL i 22 51 25.2
CLL eS S 22 57 53.0 -0.2
CLL pmax pmax
comp=Z,39nm,1.5s
KBA Koelnbreinsper 43.85 53 eP P 22 51 21.5 -1.2
comp=Z,7.7nm,1.1s
AQU L'Aquila 44.05 60 eP P 22 51 25.9 +1.7
comp=Z,37nm,1.1s
AQU L'Aquila 44.05 60 eP P 22 51 23.8 -0.4
MYKA Terra Mystica 44.05 54 eP P 22 51 22.6 -1.6
comp=Z,5.1nm,0.9s
PEXB Peixe 44.05 190 eP P 22 51 25.1 +0.7
KHC Kasperske Hory 44.06 50 eP P 22 51 22.6 -1.6
comp=Z,14nm,1.4s
KHC Kasperske Hory 44.06 50 eP P 22 51 23.1 -1.1
KHC e 22 51 28.4
KHC eS S 22 57 55.0 -1.6
KHC MLR MLR
comp=Z,600nm,16.4s
KHC Kasperske Hory 44.06 50 eP P 22 51 23.1 -1.1
KHC epP sP 22 51 28.4 +1.5
KHC eS S 22 57 55.0 -1.6
KHC AMS AMS 23 09 50.0
comp=Z,600nm,16.4s
CADS Cadrg 44.12 54 eP P 22 51 22.9 -1.8
GEC2 GERESS Array S 44.13 51 eP P 22 51 23.7 -1.2
comp=Z,61nm,1.8s
GEC2 GERESS Array S 44.13 51 eP P 22 51 23.7 -1.2
GEC2 pmax pmax
comp=Z,61nm,1.8s
GERES GERESS Array B 44.13 51 P P 22 51 23.6 -1.2
comp=Z,3.6nm,0.7s,baz=263,slow=6.7,SNR=30
GERES LR LR 23 08 17.8
comp=Z,292nm,18.6s,baz=254,slow=34
AGMN Agassiz Nation 44.28 308 eP P 22 51 26.2 +0.2
comp=Z,14nm,1.1s
AGMN Agassiz Nation 44.28 308 P P 22 51 26.1 +0.2
baz=91
JAVS Javornik 44.35 55 eP P 22 51 25.2 -1.5
ULM Lac du Bonnet 44.37 311 P P 22 51 25.4 -1.1
comp=Z,9.9nm,0.7s,baz=81,slow=7.5,SNR=8.4
ULM LR LR 23 09 53.1
comp=Z,590nm,19.6s,baz=91,slow=36
ULM Lac du Bonnet 44.37 311 eP P 22 51 25.7 -0.9
comp=Z,13nm,0.8s
ULM Lac du Bonnet 44.37 311 eP P 22 51 25.7 -0.9
ULM pmax pmax
comp=Z,13nm,0.8s
BRG Berggiesshubel 44.39 48 eP P 22 51 26.3 -0.5
comp=Z,68nm,1.8s
BRG S S 22 58 04.0 +2.7
BRG SS ScS 23 01 29.0 +3.9
comp=N,368nm,19.3s
comp=E,821nm,17.3s
comp=Z,950nm,17.4s
BRG Berggiesshubel 44.39 48 eP P 22 51 26.3 -0.5
BRG S S 22 58 04.0 +2.7
BRG SS ScS 23 01 29.0 +3.9
BRG pmax pmax
comp=Z,68nm,1.8s
BRG MLR MLR
comp=N,368nm,19.3s
BRG MLR MLR
comp=E,821nm,17.3s
BRG MLR MLR
comp=Z,950nm,17.4s
RGN Rugen 44.41 43 eP P 22 51 26.4 -0.4
RGN IAmb IAmb 22 51 34.1
comp=Z,63nm,0.9s
RUE Ruedersdorf 44.43 46 eP P 22 51 26.2 -0.8
RUE IAmb IAmb 22 51 32.6
comp=Z,22nm,0.7s
MOA Molln 44.48 52 P P 22 51 26.1 -1.5
comp=Z,20nm,1.9s
FCC Fort Churchill 44.59 324 eP P 22 51 28.5 +0.3
comp=Z,27nm,1.1s
FCC Fort Churchill 44.59 324 eP P 22 51 28.5 +0.3
FCC pmax pmax
comp=Z,27nm,1.1s
CLDB Colider 44.59 201 eP P 22 51 28.2 -0.5
CEY Cerknica 44.61 55 eP P 22 51 27.4 -1.2
LJU Ljubljana 44.67 55 eP P 22 51 28.1 -1.0
OBKA Obir 44.68 54 eP P 22 51 27.7 -1.5
comp=Z,21nm,0.7s,SNR=14
NB2 NORSAR Subarra 44.72 33 P P 22 51 28.4 -0.9
comp=Z,66nm,2.0s,baz=253,slow=8.6
NB2 NORSAR Subarra 44.72 33 P P 22 51 28.4 -0.9
baz=253,slow=8.6
NB200 NORSAR Array S 44.72 33 eP P 22 51 27.2 -2.1
NOA NORSAR Array B 44.72 33 P P 22 51 27.2 -2.1
comp=Z,2.6nm,0.9s,baz=255,slow=8.4,SNR=7.1
NOA LR LR 23 06 52.1
comp=Z,344nm,21.5s,baz=250,slow=32
PRU Pruhonice 44.72 49 eP P 22 51 29.2 -0.2
PRU e 22 51 34.0
PRU eS S 22 58 11.4 +5.2
PRU MLR MLR
comp=Z,800nm,15.8s
PRU Pruhonice 44.72 49 eP P 22 51 29.2 -0.2
PRU epP pwP 22 51 34.0 -1.2
PRU eS S 22 58 11.4 +5.2
PRU AMS AMS 23 08 30.0
comp=Z,800nm,15.8s
NB201 NORSAR Array S 44.76 33 eP P 22 51 31.6 +2.0
comp=Z,172nm,1.9s
PVCC Panska Ves 44.77 48 AMS AMS 23 07 30.0
comp=Z,1μm,16.0s
NC303 NORSAR Array S 44.85 33 eP P 22 51 30.3 +0.1
comp=Z,296nm,2.0s
GOPC GO Pecny, Ondr 44.88 49 eP P 22 51 30.8 +0.1
GOPC e 22 51 34.8
GOPC eS S 22 58 11.1 +2.6
GOPC MLR MLR
comp=Z,800nm,14.8s
GOPC GO Pecny, Ondr 44.88 49 eP P 22 51 30.8 +0.1
GOPC epP sP 22 51 34.8 +1.4
GOPC eS S 22 58 11.1 +2.6
GOPC AMS AMS 23 09 10.0
comp=Z,800nm,14.8s
ECSD EROS Data Cent 44.90 302 eP P 22 51 30.6 -0.4
comp=Z,9.9nm,0.9s
ECSD EROS Data Cent 44.90 302 P P 22 51 30.4 -0.5
baz=86,SNR=9.1
SOKA Soboth 45.01 54 eP P 22 51 29.7 -2.2
comp=Z,4.3nm,1.0s
X37A Clayton 45.21 289 eP P 22 51 33.3 -0.3
comp=Z,20nm,0.9s
TUL1 Leonard 45.28 291 eP P 22 51 33.4 -0.7
comp=Z,26nm,0.8s
TUL1 Leonard 45.28 291 P P 22 51 33.6 -0.6
baz=79,SNR=8.0
NATX Nacogdoches 45.29 285 P P 22 51 33.1 -1.1
baz=75
CRES Cresnjev 45.33 55 eP P 22 51 33.1 -1.2
ARSA Arzberg 45.33 53 eP P 22 51 32.3 -2.1
comp=Z,7.7nm,0.9s
KSU1 Kansas State U 45.39 296 P P 22 51 33.9 -0.9
baz=82
CONA Conrad Observa 45.55 52 eP P 22 51 35.7 -0.5
comp=Z,4.4nm,0.8s
UPC Upice 45.69 48 eP P 22 51 36.3 -0.8
UPC eS S 22 58 24.2 +4.1
UPC MLR MLR
comp=Z,1μm,16.0s
UPC Upice 45.69 48 eP P 22 51 36.3 -0.8
UPC eS S 22 58 24.2 +4.1
UPC AMS AMS 23 08 40.0
comp=Z,1μm,16.0s
CHVC Chvalec 45.72 48 eP P 22 51 36.2 -1.2
CHVC epP pwP 22 51 42.0 -1.1
CHVC AMS AMS 23 08 50.0
comp=Z,1μm,16.0s
OSTC Ostas 45.82 48 eP P 22 51 36.8 -1.4
OSTC eS S 22 58 24.0 +1.9
OSTC AMS AMS 23 08 50.0
comp=Z,1μm,15.6s
JTS Las Juntas de 45.85 252 i P P 22 51 42.1 +3.3
JTS pmax pmax
comp=Z,24nm,1.2s
KSP Ksiaz 45.88 48 eP P 22 51 40.8 +2.2
KSP Ksiaz 45.88 48 eP P 22 51 40.8 +2.2
DPC Dobruska-Polom 45.88 49 eP P 22 51 37.8 -0.9
DPC e 22 51 43.0
DPC eS S 22 58 25.7 +2.7
DPC MLR MLR
comp=Z,800nm,16.4s
DPC Dobruska-Polom 45.88 49 eP P 22 51 37.8 -0.9
DPC epP sP 22 51 43.0 +1.6
DPC eS S 22 58 25.7 +2.7
DPC AMS AMS 23 08 20.0
comp=Z,800nm,16.4s
KRUC Moravsky 45.91 50 eP P 22 51 37.6 -1.3
KRUC e 22 51 42.6
SOP Sopron 46.03 52 EP P 22 51 36.1 -3.7
VRAC Vranov 46.04 50 ⇓iP P 22 51 38.4 -1.5
VRAC Vranov 46.04 50 eP P 22 51 38.1 -1.8
VRAC e 22 51 43.9
BEHE Becsehely 46.22 54 ⇑EP P 22 51 40.1 -1.2
BGNE Belgrade 46.25 299 P P 22 51 41.5 -0.2
baz=83
ZST Bratislava 46.38 52 eP P 22 51 41.1 -1.5
ZST Bratislava 46.38 52 eP P 22 51 41.1 -1.5
MODS Modra-Piesok 46.50 51 eP P 22 51 42.7 -0.8
MODS pmax pmax
comp=Z,32nm,1.3s
MODS Modra-Piesok 46.50 51 eP P 22 51 42.7 -0.8
SUSD Miller 46.53 303 P P 22 51 43.2 -0.7
baz=85
JANB Januaria 46.53 184 eP P 22 51 45.1 +1.0
MGRS Mrkonjic Grad 46.56 57 eP P 22 51 43.1 -1.0
GKP Gorka Klasztor 46.58 45 eP P 22 51 46.5 +2.4
GKP Gorka Klasztor 46.58 45 eP P 22 51 46.5 +2.4
BLY Banja Luka 46.61 56 eP P 22 51 44.4 0.0
comp=Z,11nm,1.0s
BLY Banja Luka 46.61 56 ⇑iP P 22 51 44.4 0.0
BLY Banja Luka 46.61 56 eP P 22 51 43.8 -0.6
MORC Moravsky Berou 46.66 49 eP P 22 51 45.3 +0.5
comp=Z,23nm,1.4s
MORC Moravsky Berou 46.66 49 ⇓iP P 22 51 44.0 -0.8
MORC Moravsky Berou 46.66 49 eP P 22 51 45.3 +0.5
MORC pmax pmax
comp=Z,23nm,1.4s
MORC Moravsky Berou 46.66 49 eP P 22 51 43.6 -1.2
MORC e 22 51 49.2
H10N2 ASCENSION HYDR 46.69 143 T T 23 41 14.0
baz=328,slow=75,SNR=505
H10N3 ASCENSION HYDR 46.69 143 T T 23 41 31.2
baz=328,slow=75,SNR=415
H10N1 ASCENSION HYDR 46.71 143 T T 23 41 14.8
baz=328,slow=75,SNR=561
HKT Hockley 46.75 283 eP P 22 51 46.9 +1.3
comp=Z,19nm,1.3s
HKT Hockley 46.75 283 eP P 22 51 46.9 +1.3
HKT pmax pmax
comp=Z,19nm,1.3s
MDND Maddock 46.79 308 P P 22 51 44.7 -1.1
baz=88
TULEG Thule 46.84 351 eP P 22 51 45.5 -0.2
comp=Z,58nm,1.4s
TIH Tihany 46.96 53 EP P 22 51 47.0 -0.1
OKC Ostrava-Krasne 47.05 49 eP P 22 51 47.3 -0.5
OKC eS S 22 58 48.3 +8.6
OKC MLR MLR
comp=Z,500nm,14.4s
OKC Ostrava-Krasne 47.05 49 eP P 22 51 47.3 -0.5
OKC eS S 22 58 48.3 +8.6
OKC AMS AMS 23 10 50.0
comp=Z,500nm,14.4s
STON Ston 47.16 59 eP P 22 51 49.0 +0.3
CSKK Cskako 47.19 53 EP P 22 51 51.1 +2.1
SRO Srobarova 47.21 52 eP P 22 51 49.1 0.0
SRO Srobarova 47.21 52 eP P 22 51 49.1 0.0
OTAV Otavalo 47.24 236 eP P 22 51 49.8 -0.5
SRO2 Moca 47.27 52 eP P 22 51 47.4 -2.1
SRO2 Moca 47.27 52 eP P 22 51 47.4 -2.1
BDFB Brasilia 47.49 189 P P 22 51 50.1 -1.5
comp=Z,9.6nm,1.0s,baz=9.6,slow=7.6,SNR=8.8
BDFB LR LR 23 09 18.2
comp=Z,715nm,18.4s,baz=17,slow=33
BDFB Brasilia 47.49 189 eP P 22 51 50.1 -1.5
BDFB eP P 22 51 52.0 +0.4
MORH Mrgy, Hungar 47.52 54 eP P 22 51 50.0 -1.5
MORH Mrgy, Hungar 47.52 54 ⇑EP P 22 51 50.1 -1.5
WHTX Lake Whitney, 47.53 286 eP P 22 51 53.1 +1.3
comp=Z,47nm,1.2s
WHTX Lake Whitney, 47.53 286 P P 22 51 52.6 +0.8
baz=75
VYHS Vyhne 47.53 51 eP P 22 51 50.1 -1.5
VYHS pmax pmax
comp=Z,14nm,1.4s
VYHS Vyhne 47.53 51 eP P 22 51 50.1 -1.5
H10S1 ASCENSION HYDR 47.55 144 T T 23 42 26.4
baz=329,slow=75,SNR=359
H10S3 ASCENSION HYDR 47.56 144 T T 23 42 18.0
baz=329,slow=75,SNR=637
H10S2 ASCENSION HYDR 47.57 144 T T 23 42 27.7
baz=329,slow=75,SNR=418
CBKS Cedar Bluff 47.84 296 P P 22 51 53.7 -0.5
baz=80
WMOK Wichita Mounta 47.92 290 eP P 22 51 54.2 -0.6
comp=Z,18nm,1.0s
WMOK Wichita Mounta 47.92 290 eP P 22 51 54.2 -0.6
WMOK pmax pmax
comp=Z,18nm,1.0s
WMOK Wichita Mounta 47.92 290 P P 22 51 54.2 -0.6
baz=76,SNR=8.2
LANS Liptovska Anna 47.93 50 eP P 22 51 55.8 +1.1
LANS Liptovska Anna 47.93 50 eP P 22 51 55.8 +1.1
OJC Ojcow 48.11 49 eP P 22 51 55.5 -0.6
OJC Ojcow 48.11 49 eP P 22 51 56.3 +0.3
comp=Z,43nm,1.8s
OJC Ojcow 48.11 49 eP P 22 51 56.3 +0.3
OJC pmax pmax
comp=Z,43nm,1.8s
PSZ Piszkesteto 48.27 52 ⇓iP P 22 51 56.2 -1.2
PSZ Piszkesteto 48.27 52 ⇑EP P 22 51 56.0 -1.4
BBLS Lazići 48.28 57 eP P 22 51 55.5 -2.0
FFC Flin Flon 48.33 317 eP P 22 51 56.8 -0.9
comp=Z,17nm,1.0s
FFC Flin Flon 48.33 317 eP P 22 51 56.8 -0.9
FFC pmax pmax
comp=Z,17nm,1.0s
PDG Podgorica 48.35 59 ⇓iP P 22 51 58.6 +0.6
PDG Podgorica 48.35 59 eP P 22 51 56.7 -1.3
TTG Podgorica 48.35 59 eP P 22 51 59.4 +1.4
comp=Z,14nm,0.9s
FRGS Fruska Gora 48.43 56 eP P 22 51 56.5 -2.1
NIE Niedzica 48.46 50 eP P 22 51 59.0 +0.2
NIE Niedzica 48.46 50 eP P 22 51 59.0 +0.2
DIVS Divibare 48.67 57 eP P 22 51 59.2 -1.4
BEL Belsk 48.71 47 eP P 22 52 00.5 -0.1
BEL Belsk 48.71 47 eP P 22 52 00.5 -0.1
ABTX Abilene, Hawle 49.15 288 eP P 22 52 04.8 +0.5
comp=Z,26nm,1.2s
ABTX Abilene, Hawle 49.15 288 P P 22 52 03.7 -0.6
baz=74
OGNE Ogallala 49.21 299 eP P 22 52 05.8 +1.0
comp=Z,70nm,1.6s
OGNE Ogallala 49.21 299 P P 22 52 03.5 -1.3
baz=80
PBUR Paburg 49.45 41 eP P 22 52 08.1 +1.9
PBUR IAmb IAmb 22 52 12.8
comp=Z,48nm,1.1s
SIRR Siria 49.60 54 ⇓iP P 22 52 06.8 -0.8
BZS Buzias 49.64 55 ⇑iP P 22 52 07.3 -0.6
BZS Buzias 49.64 55 ⇑P P 22 52 07.3 -0.6
KOLS Kolonicke sedl 49.78 50 eP P 22 52 08.3 -0.6
KOLS pmax pmax
comp=Z,19nm,1.6s
KOLS Kolonicke sedl 49.78 50 eP P 22 52 08.3 -0.6
MDVR Moldovita 49.81 56 ⇑iP P 22 52 08.6 -0.7
UZH Uzhgorod 49.82 51 eP P 22 52 07.5 -1.6
UZH e 22 52 09.7
UZH i 22 52 14.1
UZH e 22 54 11.2
UZH eS S 22 59 12.2 -6.5
UZH i SP 22 59 23.6
UZH ePS PKiKP 22 59 33.1 -43
UZH MLR MLR
comp=N,20nm,16.0s
UZH MLR MLR
comp=E,50nm,16.0s
UZH MLR MLR
comp=Z,60nm,16.0s
DGMT Dagmar 49.82 309 eP P 22 52 09.5 +0.2
comp=Z,17nm,0.8s
DGMT Dagmar 49.82 309 P P 22 52 08.9 -0.3
baz=85
JCT Junction City 49.88 285 eP P 22 52 09.3 -0.7
comp=Z,23nm,1.0s
JCT Junction City 49.88 285 eP P 22 52 09.3 -0.7
JCT pmax pmax
comp=Z,23nm,1.0s
JCT Junction City 49.88 285 P P 22 52 09.1 -0.9
baz=73
KWP Kalwaria Pacla 50.02 50 eP P 22 52 10.5 -0.2
KWP Kalwaria Pacla 50.02 50 eP P 22 52 10.5 -0.2
TRPA Tarpa 50.02 51 ⇓iP P 22 52 10.1 -0.6
TRPA Tarpa 50.02 51 ⇑EP P 22 52 10.0 -0.6
SUW Suwalki 50.14 44 eP P 22 52 10.2 -1.3
SUW Suwalki 50.14 44 eP P 22 52 13.1 +1.6
comp=Z,27nm,1.1s
SUW Suwalki 50.14 44 eP P 22 52 10.2 -1.3
PMNB Patos De Minas 50.16 187 eP P 22 52 12.7 +0.6
RSSD Black Hills 50.19 303 eP P 22 52 12.1 -0.3
comp=Z,4.0nm,0.9s
RSSD Black Hills 50.19 303 eP P 22 52 12.1 -0.3
RSSD pmax pmax
comp=Z,4.0nm,0.9s
RSSD Black Hills 50.19 303 P P 22 52 11.8 -0.6
baz=82
AMTX Amarillo 50.20 291 P P 22 52 12.6 +0.1
baz=76
833A Chaparral WMA, 50.21 282 P P 22 52 12.3 -0.2
baz=71
DRGR 50.27 53 ⇓iP P 22 52 11.5 -1.2
DRGR 50.27 53 ⇓P P 22 52 11.5 -1.2
HERR Herculane 50.30 56 ⇓iP P 22 52 12.1 -0.7
RES Resolute Bay 50.46 344 eP P 22 52 13.5 -0.1
comp=Z,35nm,1.1s
RES Resolute Bay 50.46 344 eP P 22 52 13.5 -0.1
RES pmax pmax
comp=Z,35nm,1.1s
GZR Gura Zlata 50.48 55 ⇓iP P 22 52 14.5 +0.2
GZR Gura Zlata 50.48 55 ⇓P P 22 52 14.5 +0.2
DEV Deva 50.51 54 ⇓iP P 22 52 14.1 -0.3
DEV Deva 50.51 54 ⇓P P 22 52 14.1 -0.3
PABE Paberze 50.59 42 eP P 22 52 16.2 +1.3
PABE IAmb IAmb 22 52 19.6
comp=Z,118nm,1.6s
LVV L'vov 50.86 49 eP P 22 52 15.8 -1.2
CJR Cluj-Napoca 50.88 53 ⇓iP P 22 52 16.0 -1.3
CJR Cluj-Napoca 50.88 53 ⇓P P 22 52 16.0 -1.3
SIV San Ignacio 51.14 205 P P 22 52 18.6 -0.8
comp=Z,2.6nm,0.9s,baz=53,slow=6.9,SNR=13
LOT Lotru 51.17 55 ⇓iP P 22 52 18.9 -0.7
VTS Vitosha 51.23 58 eP P 22 52 19.3 -0.8
comp=Z,7.1nm,0.9s
VTS Vitosha 51.23 58 ⇓iP P 22 52 19.6 -0.5
VTS Vitosha 51.23 58 eP P 22 52 19.3 -0.8
VTS pmax pmax
comp=Z,7.0nm,0.9s
MSTX Muleshoe 51.31 290 eP P 22 52 19.9 -0.9
comp=Z,19nm,0.8s
MSTX Muleshoe 51.31 290 P P 22 52 20.5 -0.4
baz=74,SNR=9.4
ARCR ARCALIA 51.35 53 ⇓iP P 22 52 20.9 +0.1
LAO LASA Array 51.37 307 eP P 22 52 21.2 +0.1
comp=Z,15nm,0.9s
LAO LASA Array 51.37 307 P P 22 52 21.1 +0.1
baz=83
LNIG Linares 51.45 278 eP P 22 52 21.4 -0.5
comp=Z,10nm,1.0s
PHWY Pilot Hill 51.70 300 eP P 22 52 23.6 -0.2
comp=Z,7.7nm,1.0s
ARR Arges 51.78 55 ⇑iP P 22 52 23.4 -0.7
T25A Trinidad 51.80 295 P P 22 52 24.5 -0.1
baz=76,SNR=6.6
ISAL Salakas 51.81 42 eP P 22 52 24.2 +0.2
ISAL IAmb IAmb 22 52 29.0
comp=Z,9.3nm,1.1s
FIA0 FINESS Array S 51.86 34 eP P 22 52 22.9 -1.3
FIA0 FINESS Array S 51.86 34 eP P 22 52 23.0 -1.3
FINES FINESS Array B 51.86 34 P P 22 52 22.9 -1.3
comp=Z,4.5nm,0.8s,baz=260,slow=5.5,SNR=18
FINES LR LR 23 13 11.7
comp=Z,287nm,18.1s,baz=254,slow=35
FIA1 FINESS Array S 51.86 34 eP P 22 52 23.9 -0.3
comp=Z,33nm,1.3s
BURAR Bucovina Array 51.87 52 ⇓iP P 22 52 24.8 0.0
BURAR Bucovina Array 51.87 52 ⇓P P 22 52 24.8 0.0
IIGN Ignalina 51.88 42 eP P 22 52 23.3 -1.3
IIGN IAmb IAmb 22 52 29.6
comp=Z,11nm,1.0s
Q24A Divide 51.95 297 P P 22 52 26.2 +0.5
baz=77
VOIR 52.06 55 ⇑iP P 22 52 26.4 +0.2
VOIR 52.06 55 ⇑P P 22 52 26.4 +0.2
VSU Vasula 52.11 38 eP P 22 52 25.9 -0.3
VSU pmax pmax
comp=Z,64nm,1.3s
VSU Vasula 52.11 38 eP P 22 52 25.6 -0.6
VSU IAmb IAmb 22 52 32.5
comp=Z,55nm,0.8s
ISCO Idaho Springs 52.12 298 eP P 22 52 26.8 -0.2
comp=Z,36nm,1.8s
ISCO Idaho Springs 52.12 298 eP P 22 52 26.8 -0.2
ISCO pmax pmax
comp=Z,36nm,1.8s
ISCO Idaho Springs 52.12 298 P P 22 52 27.2 +0.2
baz=78,SNR=7.1
N23A Red Feather La 52.14 300 eP P 22 52 27.2 +0.1
comp=Z,49nm,1.9s
N23A Red Feather La 52.14 300 P P 22 52 27.2 +0.1
baz=78
IDID Didziasalis 52.17 42 eP P 22 52 25.6 -1.2
IDID IAmb IAmb 22 52 31.8
comp=Z,9.8nm,1.1s
DOPR Dopca 52.21 54 ⇓iP P 22 52 26.1 -1.2
K22A Casper 52.22 302 eP P 22 52 26.9 -0.7
comp=Z,7.5nm,0.9s
K22A Casper 52.22 302 P P 22 52 27.1 -0.4
baz=79
SDCO Great Sand Dun 52.50 296 eP P 22 52 31.4 +1.5
comp=Z,7.1nm,1.1s
SDCO Great Sand Dun 52.50 296 P P 22 52 30.0 +0.2
baz=76,SNR=8.0
ARA0 ARCESS Array S 52.53 24 eP P 22 52 27.4 -1.8
ARCES ARCESS Array B 52.53 24 P P 22 52 27.4 -1.8
comp=Z,4.2nm,0.9s,baz=253,slow=7.5,SNR=13

ARCES LR LR 23 11 16.3
comp=Z,214nm,20.9s,baz=256,slow=32
BIZ Bicaz 52.56 53⇓ iP P 22 52 29.6 -0.2
PRAR RASCA 52.58 52⇓ iP P 22 52 28.8 -1.2
MLR Muntele Rosu 52.67 54 eP P 22 52 29.6 -1.2
comp=Z,45nm,1.2s
MLR Muntele Rosu 52.67 54⇓ iP P 22 52 30.1 -0.7
MLR Muntele Rosu 52.67 54 eP P 22 52 29.6 -1.2
MLR pmax pmax
comp=Z,45nm,1.2s
MICGM Minsk 52.88 43⇑ eP P 22 52 35.0 +3.0
MICGM PM 22 52 36.0
comp=Z,0.3nm,2.0s
MICGM eLR LR 23 40 06.0
MNK Minsk 52.88 43⇑ eP P 22 52 35.0 +3.0
MNK pmax pmax
comp=Z,280nm,2.0s
TESR Tescani 52.99 53⇓ iP P 22 52 32.4 -0.6
PLOR Plostina 53.10 54⇑ iP P 22 52 33.3 -0.6
PLOR Plostina 53.10 54 ⇑P P 22 52 33.3 -0.6
VRI Vrincioaia 53.15 54⇓ iP P 22 52 33.7 -0.5
VRI Vrincioaia 53.15 54 ⇓P P 22 52 33.7 -0.5
SMCO Snowmass 53.28 298 eP P 22 52 37.0 +1.2
comp=Z,25nm,1.6s
LTX Lajitas 53.42 285 eP P 22 52 34.6 -1.9
LTX Lajitas 53.42 285 eP P 22 52 34.7 -1.9
TX31 Lajitas Ar. Si 53.42 285 eP P 22 52 35.7 -0.8
comp=Z,6.4nm,1.1s
TXAR Lajitas Array 53.42 285 P P 22 52 34.6 -1.9
comp=Z,1.4nm,0.7s,baz=96,slow=7.4,SNR=14
TXAR LR LR 23 13 22.7
comp=Z,564nm,21.3s,baz=0.0,slow=34
IAS Iasi 53.51 52⇓ iP P 22 52 35.2 -1.5
IAS Iasi 53.51 52 ⇓P P 22 52 35.2 -1.5
S22A 4UR Ranch, Cre 53.52 296 P P 22 52 38.3 +0.9
baz=76
EGMT Eagleton 53.56 309 eP P 22 52 36.2 -1.0
comp=Z,30nm,0.9s
EGMT Eagleton 53.56 309 P P 22 52 37.2 -0.1
baz=81,SNR=24
ALN Alexandroupoli 53.63 60 eP P 22 52 38.8 +1.0
comp=Z,6.0nm,1.1s
ALN Alexandroupoli 53.63 60 eP P 22 52 38.8 +1.0
ALN pmax pmax
comp=Z,6.0nm,1.1s
TLIG Tlapa 53.67 269 eP P 22 52 41.8 +3.3
comp=Z,28nm,1.3s
AQDB Aquidauana 53.71 197 eP P 22 52 38.2 -0.1
RLMT Red Lodge 53.72 305 eP P 22 52 39.0 +0.4
comp=Z,14nm,1.0s
RLMT Red Lodge 53.72 305 P P 22 52 38.7 0.0
baz=80,SNR=12
GCMT Greycliff 53.87 306 eP P 22 52 39.8 +0.2
ANMO Albuquerque 53.97 292 eP P 22 52 40.6 0.0
comp=Z,8.6nm,0.9s
ANMO Albuquerque 53.97 292 ceP P 22 52 41.3 +0.7
ANMO pmax pmax
comp=Z,15nm,1.7s
ANMO Albuquerque 53.97 292 P P 22 52 41.6 +1.0
baz=74
TASM ASL Pad, Albuq 53.97 292 P P 22 52 41.5 +0.8
baz=74,SNR=10.0
TASM ASL Pad, Albuq 53.97 292 P P 22 52 41.3 +0.6
baz=74,SNR=7.8
O20A White River Ci 54.01 299 eP P 22 52 41.5 +0.6
comp=Z,20nm,1.3s
O20A White River Ci 54.01 299 P P 22 52 41.3 +0.4
baz=76
MNTX Cornudas Mount 54.07 288 eP P 22 52 40.8 -0.4
comp=Z,17nm,1.4s
MNTX Cornudas Mount 54.07 288 P P 22 52 40.9 -0.2
baz=72,SNR=6.2
AKASG Malin Array Be 54.08 48 P P 22 52 39.0 -1.8
comp=Z,6.8nm,0.6s,baz=280,slow=6.4,SNR=30
AKASG LR LR 23 14 02.5
comp=Z,517nm,18.2s,baz=275,slow=34
AKBB Malin Array Si 54.08 48 eP P 22 52 39.0 -1.9
comp=Z,30nm,1.2s
AKBB Malin Array Si 54.08 48 eP P 22 52 39.0 -1.9
AKBB pmax pmax
comp=Z,30nm,1.2s
RCLB Rio Claro- Sao 54.11 188 eP P 22 52 42.6 +1.2
LPM Los Pinos Moun 54.29 292 eP P 22 52 43.6 +0.7
TLB Topalu 54.30 55⇓ iP P 22 52 42.2 -0.4
TLB Topalu 54.30 55 ⇓P P 22 52 42.2 -0.4
LPAZ La Paz 54.32 213 P P 22 52 42.2 -1.4
comp=Z,5.2nm,0.8s,baz=20,slow=9.6,SNR=22
LPAZ LR LR 23 14 20.0
comp=Z,673nm,20.7s,baz=11,slow=34
LPAZ La Paz 54.32 213 eP P 22 52 43.4 -0.2
comp=Z,9.2nm,1.0s
LPAZ La Paz 54.32 213 eP P 22 52 43.4 -0.2
LPAZ pmax pmax
comp=Z,9.0nm,1.0s
LPAZ La Paz 54.32 213 eP P 22 52 43.4 -0.2
BNM Barren Site 54.33 292 eP P 22 52 43.4 +0.1
KIS Kishinev 54.38 52 eP P 22 52 42.0 -1.2
comp=Z,130nm,2.0s
KIS Kishinev 54.38 52 ePcP P 22 52 57.5 +14
KIS eS **S 23 00 14.0 -7.5**
KIS eSSS SSS 23 06 28.0
KIS eLR LR 23 13 00.0
comp=Z,600nm,18.0s
KIS Kishinev 54.38 52 eP P 22 52 42.0 -1.2
KIS eS **S 23 00 14.0 -7.5**
KIS e 23 02 35.0
KIS pmax pmax
comp=Z,130nm,2.0s
KIS MLR MLR
comp=Z,600nm,18.0s
KIS MLR MLR
comp=N,300nm,18.0s
PD31 Pinedale Array 54.39 303 eP P 22 52 42.2 -1.4
comp=N,22nm,0.9s
PD31 eS **S 23 00 20.2 -2.0**
PDAR Pinedale Array 54.39 303 P P 22 52 41.9 -1.7
comp=N,14nm,0.9s,baz=78,slow=7.7,SNR=81
PDAR LR LR 23 15 21.9
comp=N,2μm,18.1s,baz=107,slow=35
BW06 Boulder Array 54.39 303 eP P 22 52 42.3 -1.3
comp=N,23nm,0.9s
BW06 Boulder Array 54.39 303 P P 22 52 42.8 -0.8
baz=78,SNR=30
MILM Milestii Mici 54.40 52⇑ iP P 22 52 42.9 -0.3
ESAR Angra dos Reis 54.45 184 eP P 22 52 44.1 +0.4
Y22D IRIŞ PASSCAL I 54.59 292 P P 22 52 45.7 +0.7
baz=73
LENM Lemitar 54.60 292 eP P 22 52 46.4 +1.1
LAZ Ladron 54.66 292 eP P 22 52 46.5 +0.9
PV01 Paradox Valley 54.75 297 eP P 22 52 47.7 +1.4
comp=N,11nm,1.4s
H17A Grant Village 54.77 305 P P 22 52 47.7 +1.3
baz=78
YHH Holmes Hill 54.88 305 eP P 22 52 48.4 +1.2
comp=N,14nm,1.1s
FLWY Flagg Ranch 54.92 304 eP P 22 52 47.8 +0.4
comp=N,33nm,1.4s
MVCO Mesa Verde 54.94 296 eP P 22 52 49.0 +1.3
comp=N,17nm,1.2s
MVCO Mesa Verde 54.94 296 P P 22 52 48.5 +0.9
baz=74
LOHW Long Hollow 54.95 304 eP P 22 52 47.8 +0.1
comp=N,18nm,1.4s
YKA Yellowknife Ar 54.99 327 P P 22 52 45.1 -2.2
comp=N,4.6nm,0.9s,baz=86,slow=7.4,SNR=34
YKA PcP **PcP 22 53 48.6 -0.3**
comp=N,1.2nm,0.7s,baz=89,slow=4.9,SNR=4.2
YKA LR LR 23 15 25.8
comp=N,182nm,20.6s,baz=84,slow=35
YKB5 Yellowknife Ar 54.99 327 eP P 22 52 45.1 -2.2
YKB5 ePcP **PcP 22 53 48.6 -0.3**
YMR Madison River 54.99 305 eP P 22 52 49.5 +1.6
comp=N,86nm,1.4s
YKW3 Yellowknife Ar 54.99 327 eP P 22 52 46.6 -0.7
comp=N,14nm,1.3s
MOOW Moose Ponds 55.03 304 eP P 22 52 48.1 -0.1
comp=N,6.3nm,0.9s
PV09 Paradox Valley 55.08 297 eP P 22 52 48.3 -0.5
SNOW Snow King Moun 55.09 304 eP P 22 52 48.5 -0.3
comp=N,22nm,0.9s
IMW Indian Meadow 55.13 304 eP P 22 52 48.5 -0.5
comp=N,19nm,0.9s
YHB Horse Butte 55.13 305 eP P 22 52 50.5 +1.6
comp=N,37nm,1.1s
HRY Holter Researc 55.18 308 eP P 22 52 48.8 -0.4
REDW Red Top Meadow 55.19 303 eP P 22 52 49.4 +0.1
comp=N,27nm,1.0s
TPAW Teton Pass 55.23 304 eP P 22 52 49.4 -0.3
comp=N,21nm,1.1s
FXWY Fox Creek 55.25 304 eP P 22 52 49.7 -0.1
comp=N,11nm,1.0s
BOZ Bozeman (W) 55.26 306 eP P 22 52 49.6 -0.1
comp=N,6.1nm,1.0s
BOZ Bozeman (W) 55.26 306 eP P 22 52 49.6 -0.1
BOZ pmax pmax
comp=Z,6.0nm,1.0s
BOZ Bozeman (W) 55.26 306 P P 22 52 49.4 -0.3
baz=78,SNR=9.4
SPB Sao Paulo 55.26 187 eP P 22 52 51.7 +2.1
QLMT Earthquake Lak 55.28 305 eP P 22 52 51.0 +1.0
FRTB Fartura 55.28 190 eP P 22 52 51.4 +1.6
BALB Balikesir 55.29 61 eP P 22 52 51.8 +1.9
comp=Z,71nm,1.1s
AHID Auburn Hatcher 55.50 303 eP P 22 52 51.7 +0.1
comp=Z,68nm,1.7s
P18A Preston Nutter 55.63 299 eP P 22 52 53.1 +0.4
comp=Z,64nm,2.0s
121A Cookes Peak, D 55.75 290 P P 22 52 53.7 +0.2
baz=72
KLYT Kilyos 55.75 59⇓ iP P 22 52 52.9 -0.2
LRM Limekiln Ridge 55.78 307 eP P 22 52 53.3 -0.3
HPIG 55.91 283 eP P 22 52 55.7 +0.9
comp=Z,18nm,1.1s
SRU San Rafael Swe 55.97 298 eP P 22 52 55.6 +0.5
comp=Z,46nm,1.8s
SRU San Rafael Swe 55.97 298 eP P 22 52 55.6 +0.5
SRU pmax pmax
comp=Z,46nm,1.8s
DLMT Dillon 55.97 306 eP P 22 52 54.8 -0.1
comp=Z,24nm,1.3s
HWUT Hardware Ranch 56.11 302 eP P 22 52 55.8 -0.2
comp=Z,10nm,0.9s
WALA Waterton Lakes 56.11 311 eP P 22 52 54.4 -1.4
comp=Z,21nm,1.0s
TCUT Toone Canyon 56.11 301 eP P 22 52 56.0 0.0
comp=Z,33nm,1.4s
MCMT McKenzie Canyo 56.27 306 eP P 22 52 58.3 +1.2
JLU Jordanelle 56.27 300 eP P 22 52 57.5 +0.3
comp=Z,24nm,1.4s
W18A Petrified Fore 56.49 294 P P 22 52 59.3 +0.5
baz=72
MPU Maple Canyon 56.56 300 eP P 22 53 00.0 +0.8
comp=Z,8.2nm,1.0s
MSO Missoula 56.58 308 eP P 22 52 59.0 -0.1
comp=Z,18nm,1.3s
MSO Missoula 56.58 308 P P 22 52 58.7 -0.5
baz=78,SNR=7.4
SPUT South Promonto 56.83 301 eP P 22 53 01.6 +0.6
comp=Z,15nm,1.3s
HVU Hansel Valley 56.94 302 eP P 22 53 01.7 -0.1
comp=Z,8.7nm,1.1s
HVU Hansel Valley 56.94 302 eP P 22 53 01.7 -0.1
HVU pmax pmax
comp=Z,9.0nm,1.1s
PTGB Pitanga 57.03 192 eP P 22 53 02.6 +0.2
BGU Big Grassy Mou 57.35 301 eP P 22 53 04.8 0.0
comp=Z,8.2nm,1.0s
MSU Marysvale 57.38 298 eP P 22 53 06.2 +1.1
MSU Marysvale 57.38 298 eP P 22 53 06.2 +1.1
DUG Dugway, Tooele 57.39 300 eP P 22 53 04.4 -0.6
comp=Z,15nm,1.1s
DUG Dugway, Tooele 57.39 300 eP P 22 53 04.4 -0.6
DUG pmax pmax
comp=Z,15nm,1.1s
DUG Dugway, Tooele 57.39 300 P P 22 53 05.1 +0.1
baz=74,SNR=11
MNMC Minye Minye 57.47 213 eP P 22 53 04.1 -1.7
comp=Z,30nm,1.2s
MTPU Mount Pierson 57.52 298 eP P 22 53 07.6 +1.4
comp=Z,8.5nm,1.1s
MDUB Mudurnu 57.53 59 eP P 22 53 07.8 +1.9
comp=Z,82nm,1.2s
WUAZ Wupatki 57.65 295 eP P 22 53 08.3 +1.3
comp=Z,13nm,0.9s
WUAZ Wupatki 57.65 295 P P 22 53 06.3 -0.7
baz=72
HLID Hailey 57.66 304 eP P 22 53 07.2 +0.3
comp=Z,7.0nm,1.1s
HLID Hailey 57.66 304 P P 22 53 07.2 +0.3
baz=75,SNR=9.1
GO01 Chusmiza 57.75 212 eP P 22 53 06.7 -1.3
comp=Z,53nm,1.3s
OBN Obninsk 57.79 42⇑ eP P 22 53 06.8 -0.5
OBN i 22 53 11.7
OBN i 22 54 06.0
OBN pmax pmax
comp=Z,61nm,1.1s
PKCU Pink Cliffs 57.79 297 eP P 22 53 09.8 +1.7
comp=Z,42nm,1.8s
PB11 IPOC Station P 58.04 212 eP P 22 53 07.8 -1.9
comp=Z,33nm,1.0s
U15A North Rim 58.08 296 eP P 22 53 11.4 +1.3
comp=Z,9.3nm,1.0s
SEVA Sevastopol 58.24 54⇓ iP P 22 53 09.2 -1.5
MOS Moscow 58.27 41 eP P 22 53 10.1 -0.6
MOS e 22 53 58.3
MOS eS **S 23 01 09.8 -2.9**
MOS e 23 03 00.1
MOS pmax pmax
comp=Z,40nm,1.2s
MOS MLR MLR
comp=N,300nm,17.0s
MOS MLR MLR
comp=E,400nm,17.0s
MOS MLR MLR
comp=Z,600nm,17.0s
KNB Kanab 58.31 297 eP P 22 53 12.1 +0.6
comp=Z,9.7nm,1.3s
NEW Newport 58.36 310 eP P 22 53 10.3 -1.3
comp=Z,20nm,0.8s
NEW Newport 58.36 310 eP P 22 53 10.3 -1.3
NEW pmax pmax
comp=Z,20nm,0.8s
NEW Newport 58.36 310 P P 22 53 11.0 -0.6
baz=77,SNR=18
PLID Pearl Lake 58.38 307 eP P 22 53 12.0 0.0
comp=Z,15nm,1.0s
KLMR Klimovskoe 58.38 35 eP P 22 53 10.3 -1.2
KLMR pmax pmax
comp=Z,23nm,1.4s
KLMR Klimovskoe 58.38 35 eP P 22 53 10.3 -1.2
KLMR AMP 22 53 17.8
comp=Z,23nm,1.4s
CCUT Cedar City 58.56 297 eP P 22 53 14.3 +1.0
comp=Z,10nm,1.0s
PSUT Pine Spring 58.63 299 eP P 22 53 15.1 +1.2
comp=Z,12nm,1.0s
ANTO Ankara 58.87 60 P P 22 53 13.7 -1.6
F10A Beach Ranch, E 58.99 308 eP P 22 53 15.6 -0.5
comp=Z,12nm,1.1s
ELK Elko 59.01 301 eP P 22 53 16.5 0.0
comp=Z,7.7nm,1.4s
ELK Elko 59.01 301 eP P 22 53 16.5 0.0
ELK pmax pmax
comp=Z,8.0nm,1.4s
C09A Chrisman Ranch 59.22 310 eP P 22 53 17.0 -0.5
comp=Z,48nm,1.9s
BMO Blue Mountains 59.33 307 eP P 22 53 19.4 +0.9
comp=Z,4.9nm,0.8s
BMO Blue Mountains 59.33 307 eP P 22 53 19.4 +0.9
BMO pmax pmax
comp=Z,5.0nm,0.8s
Y14A Wickenburg 59.43 293 eP P 22 53 20.4 +1.1
comp=Z,15nm,1.3s
E09A Wood Farm, Sta 59.46 309 eP P 22 53 19.1 -0.1
comp=Z,16nm,1.2s
ITAB Concordia 59.50 192 eP P 22 53 19.1 -0.4
BR101 Keskin Array S 59.54 60 eP P 22 53 18.6 -1.4
BR131 Keskin Array S 59.54 60 eP P 22 53 18.9 -1.1
comp=Z,9.4nm,0.9s
BR131 Keskin Array S 59.54 60 P P 22 53 18.3 -1.7
SNR=10
BRTR Keskin Array B 59.54 60 P P 22 53 18.6 -1.4
comp=Z,7.3nm,0.9s,baz=273,slow=5.7,SNR=20
BRTR LR LR 23 18 18.7
comp=Z,202nm,18.9s,baz=279,slow=35
LPSR Galich'ya Gora 59.67 44 eP P 22 53 19.1 -1.4
LPSR pmax pmax
comp=Z,50nm,1.2s
CPUP Villa Florida 59.72 197 LR LR 23 16 26.1
comp=Z,168nm,21.2s,baz=19,slow=33
CPUP Villa Florida 59.72 197 eP P 22 53 23.4 +2.4
W13A Hualapai Mount 59.73 295 eP P 22 53 23.0 +1.5
comp=Z,21nm,1.4s
D08A Wollman Farm, 59.84 309 eP P 22 53 21.7 -0.1
comp=Z,42nm,1.6s
214A Organ Pipe Nat 59.95 291 P P 22 53 23.0 +0.1
baz=69
R11A Troy Canyon, C 59.98 299 eP P 22 53 23.6 +0.4
comp=Z,6.0nm,1.1s
R11A Troy Canyon, C 59.98 299 P P 22 53 23.1 -0.1
baz=72,SNR=8.6
VSR Storozhevoye 60.15 46 eP P 22 53 22.0 -1.8
VSR pmax pmax
comp=Z,20nm,1.4s
PDMCI Parker Dam,Lak 60.19 294 P P 22 53 24.7 +0.2
baz=70
LVC Limon Verde 60.22 210 P P 22 53 23.9 -1.1
comp=Z,4.4nm,0.9s,baz=266,slow=15,SNR=2.6
LVC Limon Verde 60.22 210 eP P 22 53 28.7 +3.8
comp=Z,14nm,1.3s
LVC Limon Verde 60.22 210 eP P 22 53 26.4 +1.5
SHPR Sheep Range 60.25 297 eP P 22 53 26.1 +1.1
comp=Z,11nm,1.4s
G08A Pilot Rock 60.34 307 eP P 22 53 25.1 -0.4
comp=Z,14nm,0.9s
NEE2 Needles Airpor 60.41 295 P P 22 53 26.4 +0.4
baz=70
HAWA Hanford 60.42 309 eP P 22 53 26.1 +0.3
comp=Z,21nm,0.8s
BMN Battle Mountai 60.54 302 eP P 22 53 27.0 +0.1
comp=Z,7.2nm,1.0s
BMN Battle Mountai 60.54 302 eP P 22 53 27.0 +0.1
BMN pmax pmax
comp=Z,7.0nm,1.0s
J08A Circle Bar Ran 60.56 305 eP P 22 53 26.7 -0.3
comp=Z,28nm,1.0s
Y12C Blythe 60.68 294 P P 22 53 28.2 +0.5
baz=70
ANN Anapa 60.74 53 eP P 22 53 26.2 -1.8
ANN eS **S 23 01 43.9 -1.1**
ANN pmax pmax
comp=Z,89nm,1.9s
ANN MLR MLR
comp=Z,336nm,15.0s
LLLB Lillooet 60.79 314 eP P 22 53 27.5 -0.8
comp=Z,45nm,1.6s
C06D Leavenworth 60.89 311 P P 22 53 27.6 -1.4
baz=74
LTY Liberty 60.93 310 eP P 22 53 28.8 -0.6
comp=Z,29nm,1.2s
TPNV Topopah Spring 60.93 298 eP P 22 53 31.0 +1.3
comp=Z,16nm,1.1s
TPNV Topopah Spring 60.93 298 P P 22 53 30.5 +0.9
baz=71
WVOR Wild Horse Val 60.95 304 eP P 22 53 30.6 +0.9
comp=Z,19nm,1.3s
WVOR Wild Horse Val 60.95 304 eP P 22 53 30.6 +0.9
WVOR pmax pmax
comp=Z,19nm,1.3s
IRM Iron Mountain 61.02 294 P P 22 53 31.2 +1.1
baz=70
I07A Izee 61.06 306 eP P 22 53 30.6 +0.2
comp=Z,7.2nm,1.1s
PRGR Permogore 61.13 33 eP P 22 53 25.1 -5.2
PRGR pmax pmax
comp=Z,19nm,1.0s
GLA Glamis 61.16 293 P P 22 53 31.6 +0.5
baz=69
TUQ Turquoise Moun 61.19 296 P P 22 53 31.8 +0.4
baz=70
GMRC Granite Mounta 61.21 295 P P 22 53 32.1 +0.6
baz=70
SHOC Shoshone, Teco 61.30 296 P P 22 53 33.0 +1.0
baz=70
BC3 Big Chuckawall 61.44 294 P P 22 53 33.7 +0.6
baz=69
G06A Carlson Farm, 61.49 308 eP P 22 53 33.8 +0.6
comp=Z,34nm,1.3s
FURC Furnace Creek, 61.56 297 P P 22 53 34.7 +1.0
baz=70
B05A Bryant 61.57 311 P P 22 53 33.4 -0.1
baz=73
KVN Kaiserville 61.62 300 eP P 22 53 34.3 0.0
comp=Z,11nm,1.0s
KVN Kaiserville 61.62 300 eP P 22 53 34.3 0.0
KVN pmax pmax
comp=Z,11nm,1.0s
HEC Hector,Ludlow 61.71 295 P P 22 53 35.7 +0.8
baz=70
BELC Belle Mtn. Jos 61.74 294 P P 22 53 34.4 -0.8
baz=69
GRAC Grapevine Rang 61.76 298 P P 22 53 35.3 +0.2
baz=70
LON Longmire 61.82 310 eP P 22 53 34.6 -0.8
comp=Z,4.6nm,0.8s
LON Longmire 61.82 310 eP P 22 53 34.6 -0.8
LON pmax pmax
comp=Z,5.0nm,0.8s
F05D White Salmon 61.85 309 P P 22 53 35.6 +0.1
baz=72,SNR=7.3
NV11 Mina Array Sit 61.87 300 eP P 22 53 35.8 -0.1
comp=Z,0.4nm,0.8s
INK Inuvik 61.95 335 eP P 22 53 35.6 -0.1
comp=Z,28nm,1.0s
INK Inuvik 61.95 335 eP P 22 53 35.6 -0.1
INK pmax pmax
comp=Z,28nm,1.0s
G05D Wamic, OR 61.95 308 P P 22 53 36.6 +0.4
baz=72
SWSC Sam W. Stewart 61.96 293 P P 22 53 36.9 +0.5
baz=69
NV01 Mina Array Sit 61.98 300 eP P 22 53 35.3 -1.5
NVAR Mina Array Bea 61.98 300 P P 22 53 35.3 -1.5
comp=Z,3.7nm,0.8s,baz=75,slow=6.7,SNR=13
NVAR LR LR 23 19 52.3
comp=Z,3μm,19.0s,baz=80,slow=36
MPMC Manual Prospec 62.17 297 P P 22 53 39.3 +1.2
baz=70,SNR=15
DAC Darwin (Calif) 62.17 297 eP P 22 53 41.1 +3.0
comp=Z,14nm,1.0s
DAC Darwin (Calif) 62.17 297 eP P 22 53 41.1 +3.0
DAC pmax pmax
comp=Z,14nm,1.0s
I05D Terrebonne, OR 62.24 307 P P 22 53 39.3 +1.0
baz=72,SNR=12
PFO Pinyon Flats O 62.24 294 P P 22 53 38.4 -0.1
baz=69
MOD Modoc Plateau 62.29 304 eP P 22 53 39.3 +0.6
comp=Z,12nm,1.1s
IKP In-Ko-Pah, Jac 62.31 293 P P 22 53 40.0 +1.0
baz=68
PAHR Pah Rah Range 62.35 301 eP P 22 53 39.5 +0.4
comp=Z,10nm,0.9s
TIN Tinemaha, Big 62.39 298 P P 22 53 39.7 +0.2
baz=70
K05A Summer Lake 62.44 305 eP P 22 53 40.5 +0.7
comp=Z,17nm,0.8s
MONP2 Monument Peak 62.47 293 P P 22 53 39.0 -1.2
baz=68
CWC Cottonwood Cre 62.49 298 P P 22 53 41.4 +1.2
baz=70
J05D Fort Rock, OR 62.50 306 P P 22 53 40.9 +0.8
baz=71,SNR=8.2
LRMC Laurel Mtn Rad 62.52 296 P P 22 53 41.5 +1.1
baz=69
SOC Sochi 62.68 54 eP P 22 53 33.7 -7.4
SOC ePPP PPP 22 57 37.2
SOC eS **S 23 02 08.9 -0.7**
SOC MLR MLR
comp=Z,72nm,7.0s
H04A Detroit Lake 62.71 308 eP P 22 53 41.3 -0.1
comp=Z,21nm,1.3s
GO02 Mina Guanaco 62.76 209 eP P 22 53 46.5 +4.4
comp=Z,32nm,1.4s
OMMB Old Mammoth Mi 62.77 299 eP P 22 53 43.6 +1.4
comp=Z,6.6nm,1.1s
NLWA Neilton Lookou 62.97 311 eP P 22 53 42.8 -0.2
comp=Z,28nm,0.9s
EDW2 Edwards Air Fo 62.97 296 P P 22 53 44.4 +1.1
baz=69
109C Camp Elliot, M 63.01 294 P P 22 53 44.6 +1.1
baz=68
ISA Isabella, Lake 63.06 297 eP P 22 53 45.5 +1.6
comp=Z,17nm,1.3s
ISA Isabella, Lake 63.06 297 eP P 22 53 45.5 +1.6
ISA pmax pmax
comp=Z,17nm,1.3s
ISA Isabella, Lake 63.06 297 P P 22 53 45.1 +1.2
baz=69
K04D Chiloquin, OR 63.07 305 P P 22 53 43.6 -0.3

	baz=71						
J04D	**Umpqua Nationa**	**63.12**	**306**	P	**P**	**22 53 43.7**	**-0.6**
	baz=71						
H04D	**Lebanon**	**63.13**	**307**	P	**P**	**22 53 43.8**	**-0.3**
	baz=71						
I04A	**Tendick Farm,**	**63.15**	**307**	P	**P**	**22 53 43.6**	**-0.7**
	baz=71						
DLBC	**Dease Lake**	**63.18**	**324**	*e*P	**P**	**22 53 45.1**	**+0.8**
	comp=Z,7.8nm,1.1s						
G03D	**McMinnville, O**	**63.26**	**308**	P	**P**	**22 53 44.9**	**0.0**
	baz=71						
M04C	**Macdoel**	**63.41**	**304**	P	**P**	**22 53 46.6**	**+0.4**
	baz=70						
VES	**Vestal, Richgr**	**63.46**	**297**	P	**P**	**22 53 46.4**	**0.0**
	baz=69						
VOG	**Valley Oaks Go**	**63.51**	**298**	P	**P**	**22 53 46.7**	**0.0**
	baz=69						
ARVC	**Arvin**	**63.52**	**296**	P	**P**	**22 53 47.0**	**+0.2**
	baz=69						
L04D	**Klamath Falls**	**63.59**	**305**	P	**P**	**22 53 46.4**	**-1.0**
	baz=70						
OSI	**Osito Audit: C**	**63.63**	**296**	P	**P**	**22 53 48.3**	**+0.7**
	baz=68						
CMB	**Columbia Colle**	**63.65**	**300**	*e*P	**P**	**22 53 48.7**	**+0.9**
	comp=Z,14nm,1.5s						
CMB	**Columbia Colle**	**63.65**	**300**	*e*P	**P**	**22 53 48.7**	**+0.9**
CMB				pmax	pmax		
	comp=Z,14nm,1.5s						
EPYK	**Eagle Plains**	**63.70**	**333**	*e*P	**P**	**22 53 48.1**	**+0.6**
	comp=Z,68nm,1.9s						
EPYK	**Eagle Plains**	**63.70**	**333**	P	**P**	**22 53 47.7**	**+0.2**
	baz=71						
O03E	**Paynes Creek**	**63.90**	**303**	P	**P**	**22 53 48.8**	**-0.6**
	baz=70						
HUMO	**Hull Mountain**	**63.92**	**306**	*e*P	**P**	**22 53 48.1**	**-1.2**
	comp=Z,29nm,1.7s						
I02D	**Swisshome**	**64.02**	**307**	P	**P**	**22 53 49.8**	**-0.1**
	baz=70						
M02C	**Callahan**	**64.26**	**304**	P	**P**	**22 53 50.2**	**-1.5**
	baz=70						
N02D	**Trinity Center**	**64.30**	**304**	P	**P**	**22 53 50.5**	**-1.5**
	baz=69						
K02D	**Willamette Mer**	**64.38**	**306**	P	**P**	**22 53 52.1**	**-0.4**
	baz=70						
GOF	**Gofitskoye**	**64.44**	**51⇑**	*e*P	**P**	**22 53 52.6**	**-0.1**
KIV	**Kislovodsk**	**64.58**	**53**	*e*P	**P**	**22 53 55.9**	**+2.1**
	comp=Z,18nm,1.2s						
KIV	**Kislovodsk**	**64.58**	**53**	*e*P	**P**	**22 53 52.3**	**-1.5**
KIV				*e*S	**S**	**23 02 32.5**	**-1.0**
KIV				pmax	pmax		
	comp=Z,38nm,1.1s						
KIV				pmax	pmax		
	comp=Z,90nm,4.9s						
KIV				MLR	MLR		
	comp=Z,421nm,17.0s						
KIV	**Kislovodsk**	**64.58**	**53**	P	**P**	**22 53 50.5**	**-3.3**
	SNR=6.2						
KIV				P	**P**	**22 53 50.5**	**-3.3**
	SNR=6.2						
KBZ	**Khabaz**	**64.80**	**53**	P	**P**	**22 53 55.4**	**+0.3**
	comp=Z,9.1nm,1.0s,baz=295,slow=6.5,SNR=12						
KBZ				LR	LR	23 22 37.4	
	comp=Z,140nm,18.4s,baz=299,slow=36						
WHY	**Whitehorse**	**64.82**	**327**	*e*P	**P**	**22 53 56.2**	**+1.1**
	comp=Z,11nm,1.3s						
NEY	**Neytrino**	**64.85**	**53**	*e*P	**P**	**22 53 59.3**	**+3.6**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NCK	**Nalchik**	**65.36**	**53**	*e*P	**P**	**22 54 00.5**	**+1.7**
NCK				pmax	pmax		
	comp=Z,17nm,1.1s						
BESE	**Bessie Mountai**	**65.53**	**325**	*e*P	**P**	**22 54 02.0**	**+2.3**
	comp=Z,6.7nm,1.0s						
DAWY	**Dawson**	**65.56**	**331**	*e*P	**P**	**22 54 00.1**	**+0.4**
	comp=Z,17nm,1.0s						
ZEI	**Tsey**	**65.83**	**53**	*e*P	**P**	**22 54 02.7**	**+0.7**
ZEI				pmax	pmax		
	comp=Z,28nm,1.1s						
HYT	**Haines Junctio**	**65.96**	**328**	*e*P	**P**	**22 54 03.2**	**+0.7**
	comp=Z,10nm,1.2s						
AKH	**Akhalkalaki**	**66.05**	**55**	*e*P	**P**	**22 54 03.1**	**-0.4**
	comp=Z,32nm,1.2s						
AKH	**Akhalkalaki**	**66.05**	**55**	*e*P	**P**	**22 54 03.1**	**-0.4**
AKH				pmax	pmax		
	comp=Z,32nm,1.2s						
TBLG	**Delisi**	**66.79**	**54**	*e*P	**P**	**22 54 10.3**	**+2.3**
	comp=Z,62nm,1.7s						
TBLG	**Delisi**	**66.79**	**54**	*e*P	**P**	**22 54 10.3**	**+2.3**
TBLG				pmax	pmax		
	comp=Z,62nm,1.7s						
GROC	**Groznyy**	**66.96**	**52**	*e*P	P	22 54 02.1	-6.9
GROC				*e*		22 54 34.1	
GROC				*e*		22 56 33.5	
GROC				pmax	pmax		
	comp=Z,27nm,1.3s						
TOLK	**Toolik Lake Re**	**67.30**	**338**	P	**P**	**22 54 09.3**	**-1.5**
	baz=61						
GNI	**Garni**	**67.40**	**56**	*e*P	**P**	**22 54 13.5**	**+1.4**
	comp=Z,55nm,1.4s						
GNI	**Garni**	**67.40**	**56**	*ce*P	**P**	**22 54 12.5**	**+0.4**
GNI				pmax	pmax		
	comp=Z,327nm,1.7s						
GNI	**Garni**	**67.40**	**56**	P	**P**	**22 54 10.5**	**-1.6**
	SNR=6.6						
DOT	**Dot Lake**	**67.62**	**332**	*e*P	**P**	**22 54 13.4**	**+0.6**
	comp=Z,11nm,0.9s						
RIDG	**Independent Ri**	**67.89**	**332**	*e*P	**P**	**22 54 15.4**	**+0.8**
	comp=Z,18nm,0.9s						
CFA	**Coronel Fontan**	**68.00**	**205**	P	**P**	**22 54 14.3**	**-1.3**
	comp=Z,4.7nm,1.1s,baz=347,slow=4.1,SNR=5.0						
BALM	**Baldy**	**68.04**	**329**	*e*P	**P**	**22 54 16.3**	**+0.6**
	comp=Z,30nm,1.6s						
BALM	**Baldy**	**68.04**	**329**	*e*P	**P**	**22 54 16.3**	**+0.6**
BALM				pmax	pmax		
	comp=Z,30nm,1.6s						
COLD	**Coldfoot**	**68.20**	**337**	*e*P	**P**	**22 54 17.3**	**+0.9**
	comp=Z,11nm,1.0s						
ILAR	**Eielson Array**	**68.21**	**334**	P	**P**	**22 54 16.9**	**+0.3**
	comp=Z,6.7nm,0.9s,baz=54,slow=4.4,SNR=18						
ILAR				LR	LR	23 23 53.2	
	comp=Z,1μm,19.8s,baz=80,slow=36						
ILB	**Eielson Array**	**68.21**	**334**	*e*P	**P**	**22 54 17.3**	**+0.8**
	comp=Z,16nm,0.9s						
MAK	**Makhachkala**	**68.21**	**52**	*e*P	P	22 54 11.4	-5.5
MAK				*e*		22 56 45.6	
MAK				*e*S	**S**	**23 03 09.4**	**-7.9**
MAK				*e*SS	**SS**	**23 07 35.5**	**-4.1**
MAK				pmax	pmax		
	comp=Z,50nm,0.9s						
MAK				MLR	MLR		
	comp=Z,324nm,17.0s						
POKR	**Poker Plat Res**	**68.25**	**334**	P	**P**	**22 54 16.9**	**+0.1**
	baz=62						
HDA	**Harding Lake**	**68.40**	**333**	*e*P	**P**	**22 54 18.3**	**+0.6**
HDA	**Harding Lake**	**68.40**	**333**	P	**P**	**22 54 18.0**	**+0.2**
	baz=62						
COLA	**College**	**68.52**	**334**	*i*P	**P**	**22 54 19.1**	**+0.7**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CCB	**Clear Creek Bu**	**68.62**	**334**	*e*P	**P**	**22 54 19.3**	**+0.3**
	comp=Z,24nm,1.0s						
WRH	**Wood River Hil**	**68.81**	**334**	*e*P	**P**	**22 54 20.6**	**+0.4**
	comp=Z,36nm,1.1s						
ARU	**Arti**	**69.17**	**36**	*e*P	**P**	**22 54 21.4**	**-1.2**
	comp=Z,37nm,1.5s						
ARU	**Arti**	**69.17**	**36**	*c i*P	**P**	**22 54 23.2**	**+0.6**
ARU				S	**S**	**23 03 29.7**	**+1.4**
ARU				pmax	pmax		
	comp=Z,25nm,2.1s						
MCK	**McKinley**	**69.50**	**333**	*e*P	**P**	**22 54 24.9**	**+0.3**
	comp=Z,25nm,1.0s						
MCK	**McKinley**	**69.50**	**333**	*e*P	**P**	**22 54 24.9**	**+0.3**
MCK				pmax	pmax		
	comp=Z,25nm,1.0s						
RND	**Reindeer**	**69.63**	**333**	*e*P	**P**	**22 54 26.2**	**+0.7**
	comp=Z,18nm,1.1s						
RND	**Reindeer**	**69.63**	**333**	*e*P	**P**	**22 54 26.2**	**+0.7**
RND				pmax	pmax		
	comp=Z,18nm,1.1s						
SVE	**Sverdlovsk**	**70.02**	**35**	*e*P	**P**	**22 54 26.2**	**-1.7**
SVE				pmax	pmax		
	comp=Z,30nm,1.5s						
BPAW	**Bear Paw Mtn.**	**70.09**	**334**	*e*P	**P**	**22 54 28.1**	**-0.1**
	comp=Z,12nm,1.0s						
KTH	**Kantishna Hill**	**70.35**	**333**	*e*P	**P**	**22 54 30.5**	**+0.6**
	comp=Z,33nm,1.1s						
PMR	**Palmer**	**70.66**	**331**	*e*P	**P**	**22 54 32.0**	**+0.3**
	comp=Z,20nm,1.2s						
PMR	**Palmer**	**70.66**	**331**	*e*P	**P**	**22 54 32.0**	**+0.3**
PMR				pmax	pmax		
	comp=Z,20nm,1.2s						
RC01	**Rabbit Creek A**	**71.17**	**331**	*e*P	**P**	**22 54 35.0**	**+0.2**
	comp=Z,27nm,1.2s						
PPLA	**Purkeypile**	**71.19**	**333**	*e*P	**P**	**22 54 37.4**	**+2.3**
	comp=Z,84nm,1.9s						
SUA	**Susitna One**	**71.39**	**332**	*e*P	**P**	**22 54 37.2**	**+0.9**
	comp=Z,20nm,1.2s						
SKT	**Skwentna**	**71.43**	**332**	*e*P	**P**	**22 54 37.1**	**+0.6**
	comp=Z,20nm,1.2s						
TRQA	**Tornquist**	**72.05**	**197**	*e*P	**P**	**22 54 42.6**	**+2.3**
NRIK	**Noril'sk**	**72.58**	**17**	P	**P**	**22 54 43.0**	**-0.2**
	comp=Z,14nm,1.1s,baz=328,slow=3.4,SNR=12						
NRIK	**Noril'sk**	**72.58**	**17**	P	**P**	**22 54 43.0**	**-0.2**
RSO	**Redoubt South**	**72.76**	**331**	*e*P	**P**	**22 54 46.4**	**+1.7**
ABKAR	**Akbulak array**	**73.22**	**42**	*e*P	**P**	**22 54 47.0**	**-0.4**
	comp=Z,22nm,1.7s						
H09N1	**TRISTAN DA CUN**	**73.41**	**156**	T	T	00 14 41.7	
	SNR=5.4						
H09W1	**TRISTAN DA CUN**	**73.43**	**156**	T	T	00 15 05.8	
	SNR=13						
SVW2	**Sparrevohn**	**73.53**	**333**	*e*P	**P**	**22 54 49.3**	**+0.3**
	comp=Z,18nm,1.2s						
KDAK	**Kodiak Island**	**74.20**	**329**	LR	LR	23 27 43.8	
	comp=Z,2μm,20.2s,baz=71,slow=36						
MBAR	**Mbarara**	**74.78**	**100**	*e*P	**P**	**22 54 58.7**	**+1.5**
	comp=Z,13nm,1.2s						
MBAR	**Mbarara**	**74.78**	**100**	*e*P	**P**	**22 54 58.7**	**+1.5**
MBAR				pmax	pmax		
	comp=Z,13nm,1.2s						
RAYN	**Ar Rayn**	**75.20**	**71**	*e*P	**P**	**22 55 00.6**	**+1.2**
	comp=Z,7.7nm,1.1s						
RAYN	**Ar Rayn**	**75.20**	**71**	*e*P	**P**	**22 55 00.6**	**+1.2**
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRVK	**Borovoye**	**76.73**	**35**	*i*P	**P**	**22 55 07.9**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRVK	**Borovoye**	**76.73**	**35**	P	**P**	**22 55 05.9**	**-1.6**
BRVK				P	**P**	**22 55 05.9**	**-1.6**
TIXI	**Tiksi**	**76.75**	**3**	*e*P	**P**	**22 55 09.9**	**+2.6**
	comp=Z,18nm,1.2s						
TIXI	**Tiksi**	**76.75**	**3**	*ce*P	**P**	**22 55 08.1**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,16nm,1.7s						
PLCA	**Paso Flores**	**77.03**	**203**	P	**P**	**22 55 04.7**	**-4.5**
	comp=Z,4.0nm,1.1s,baz=23,slow=7.9,SNR=4.8						
PLCA				LR	LR	23 29 00.1	
	comp=Z,188nm,20.8s,baz=43,slow=36						
PLCA	**Paso Flores**	**77.03**	**203**	*e*P	**P**	**22 55 09.5**	**+0.2**
	comp=Z,16nm,1.4s						
PLCA	**Paso Flores**	**77.03**	**203**	*e*P	**P**	**22 55 09.5**	**+0.2**
PLCA				pmax	pmax		
	comp=Z,16nm,1.4s						
PLCA	**Paso Flores**	**77.03**	**203**	*e*P	**P**	**22 55 08.9**	**-0.4**
GEYT	**Alibeck**	**77.70**	**53**	P	**P**	**22 55 11.8**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=270,slow=5.8,SNR=2.7						
BILL	**Bilibino**	**78.56**	**350**	*e*P	**P**	**22 55 17.2**	**-0.3**
	comp=Z,11nm,1.1s						
BILL	**Bilibino**	**78.56**	**350**	*i*P	**P**	**22 55 16.9**	**-0.6**
BILL				*i*		22 55 24.2	
BILL				*i*		22 58 16.5	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KMBO	**Kilima Mbogo**	**80.56**	**97**	P	**P**	**22 55 30.4**	**+0.8**
	comp=Z,2.9nm,1.0s,baz=25,slow=17,SNR=3.0						
KMBO				LR	LR	23 30 22.5	
	comp=Z,2μm,20.2s,baz=276,slow=35						
KMBO	**Kilima Mbogo**	**80.56**	**97**	*e*P	**P**	**22 55 30.4**	**+0.8**
	comp=Z,19nm,1.7s						
LSZ	**Lusaka**	**81.00**	**114**	*e*P	**P**	**22 55 31.3**	**-0.3**
	comp=Z,27nm,1.3s						
LSZ	**Lusaka**	**81.00**	**114**	*e*P	**P**	**22 55 31.3**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,27nm,1.3s						
LSZ	**Lusaka**	**81.00**	**114**	P	**P**	**22 55 30.1**	**-1.5**
NVS	**Novosibirsk**	**81.46**	**29**	*e*P	**P**	**22 55 33.6**	**+0.2**
NVS				pmax	pmax		
	comp=Z,24nm,1.6s						
KURK	**Kurchatov**	**82.23**	**34**	*e*P	**P**	**22 55 36.8**	**-0.7**
	comp=Z,17nm,1.3s						
KURK	**Kurchatov**	**82.23**	**34**	*ce*P	**P**	**22 55 37.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,18nm,2.5s						
KURK	**Kurchatov**	**82.23**	**34**	P	**P**	**22 55 36.3**	**-1.2**
	SNR=6.2						
KURK				P	**P**	**22 55 36.3**	**-1.2**
	SNR=6.2						
NAZ	**Nazwa, Dubai**	**82.53**	**65**	P	**P**	**22 55 38.1**	**-1.5**
NAZ				P	**P**	**22 55 38.1**	**-1.5**
BANOM	**Banah**	**82.54**	**64**	P	**P**	**22 55 37.3**	**-2.4**
BANOM				P	**P**	**22 55 37.3**	**-2.4**
ZAA1	**Zalesovo Array**	**82.75**	**29**	*e*P	**P**	**22 55 39.8**	**-0.3**
ZAA0	**Zalesovo Array**	**82.75**	**29**	*e*P	**P**	**22 55 40.1**	**0.0**
	comp=Z,13nm,1.1s						
ZALV	**Zalesovo Beam**	**82.75**	**29**	P	**P**	**22 55 39.8**	**-0.4**
	comp=Z,2.3nm,0.9s,baz=302,slow=8.5,SNR=5.1						
ZALV				LR	LR	23 30 31.3	
	comp=Z,206nm,21.8s,baz=254,slow=34						
UOSS	**Minazif**	**82.97**	**65**	*e*P	**P**	**22 55 41.0**	**-0.8**
	comp=Z,20nm,0.8s						
ASHO	**Ashiyiah**	**82.99**	**65**	P	**P**	**22 55 40.2**	**-1.8**
ASHO				P	**P**	**22 55 40.2**	**-1.8**
SOHO	**SOHO**	**83.65**	**66**	P	**P**	**22 55 43.6**	**-1.7**
SOHO				P	**P**	**22 55 43.6**	**-1.7**
BTK	**Batken**	**84.74**	**46**	*e*P	**P**	**22 55 53.9**	**+3.1**
	comp=Z,17nm,1.4s						
BTK	**Batken**	**84.74**	**46**	*e*P	**P**	**22 55 53.9**	**+3.1**
BTK				pmax	pmax		
	comp=Z,17nm,1.4s						
GAR	**Garm**	**85.07**	**47**	*e*P	**P**	**22 55 55.8**	**+3.3**
	comp=Z,44nm,1.4s						
GAR	**Garm**	**85.07**	**47**	*e*P	**P**	**22 55 55.8**	**+3.3**
GAR				pmax	pmax		
	comp=Z,44nm,1.4s						
SEY	**Seymchan**	**85.16**	**354**	*ce*P	**P**	**22 55 52.3**	**0.0**
AAK	**Ala-Archa**	**85.31**	**42**	*i*P	**P**	**22 55 54.6**	**+0.9**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MAKZ	**Makanchi**	**86.52**	**35**	*e*P	**P**	**22 56 01.9**	**+2.5**
	comp=Z,6.7nm,1.1s						
MAKZ	**Makanchi**	**86.52**	**35**	*e*P	**P**	**22 56 01.9**	**+2.5**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MK32	**Makanchi Array**	**86.68**	**35**	*e*P	**P**	**22 55 59.8**	**-0.4**
MKAR	**Makanchi Array**	**86.68**	**35**	P	**P**	**22 55 59.8**	**-0.4**
	comp=Z,2.2nm,1.0s,baz=321,slow=5.2,SNR=8.6						
MKAR				LR	LR	23 34 00.5	
	comp=Z,485nm,19.2s,baz=308,slow=35						
BOSA	**Boshof**	**86.91**	**126**	P	**P**	**22 56 00.2**	**-1.3**
	comp=Z,5.2nm,1.0s,baz=105,slow=5.0,SNR=4.6						
BOSA				LR	LR	23 28 23.5	
	comp=Z,533nm,21.8s,baz=320,slow=31						
KSH	**Kashi**	**88.17**	**44**	*e*P	**P**	**22 56 06.9**	**-0.8**
BOD	**Bodaibo**	**88.44**	**13**	*e*P	**P**	**22 56 06.6**	**-1.8**
BOD				pmax	pmax		
	comp=Z,13nm,1.6s						
WMQ	**Urumqi**	**91.46**	**34**	*e*P	**P**	**22 56 24.6**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,85nm,3.8s						
WMQ				LR	LR		
	comp=Z,200nm,15.1s						
WMQ				LR	LR		
	comp=Z,320nm,19.3s						
WMQ				LR	LR		
	comp=Z,340nm,20.7s						
ZAK	**Zakamensk**	**92.42**	**22**	*e*P	**P**	**22 56 25.8**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
PETK	**Petropavlovsk-**	**94.06**	**349**	LR	LR	23 37 20.1	
	comp=Z,260nm,21.5s,baz=32,slow=34						
SONA0	**Songino Array**	**95.64**	**21**	*e*P	**P**	**22 56 41.2**	**-0.9**
SONM	**Songino Array**	**95.64**	**21**	P	**P**	**22 56 41.2**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=274,slow=4.0,SNR=2.7						
SONM				LR	LR	23 42 12.2	
	comp=Z,118nm,18.8s,baz=338,slow=37						
PMSA	**Palmer Station**	**97.78**	**190**	*e*P	Pdif	22 56 53.1	+2.3
KLR	**Kul'dur**	**99.24**	**5**	LR	LR	23 40 53.8	
	comp=Z,133nm,18.5s,baz=6.5,slow=35						
CD2	**Chengdu**	**109.37**	**32**	Pdif	**Pdif**	**22 57 41.4**	**-2.3**
PPT2	**Papeete2**	**114.62**	**264**	*e*SP	SP	23 12 29.1	-3.2
	comp=Z,100nm,24.0s						
PPT2				*e*SS	**SS**	**23 18 50.5**	**+1.3**
	comp=Z,131nm,28.2s						
PPT2	**Papeete2**	**114.62**	**264**	*e*LR	LR	23 36 28.3	
	comp=Z,496nm,29.0s						
TBI	**Tubuai**	**117.03**	**258**	*e*LR	LR	23 37 29.0	
	comp=Z,310nm,24.2s						
CM31	**Chiang Mai Arr**	**117.07**	**43**	*e*PKPdf	**PKPdf**	**23 02 01.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**117.07**	**43**	PKP	**PKPdf**	**23 02 01.3**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=318,slow=1.2,SNR=3.0						
MAW	**Mawson**	**124.07**	**153**	PKP	**PKPdf**	**23 02 12.9**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=304,slow=7.5,SNR=2.8						
VNDA	**Vanda**	**132.88**	**187**	PKP	**PKPdf**	**23 02 29.4**	**-1.1**
	comp=Z,1.4nm,1.0s,baz=282,slow=3.4,SNR=6.2						
VNDA	**Vanda**	**132.88**	**187**	*e*PKPdf	**PKPdf**	**23 02 30.7**	**+0.2**
VNDA	**Vanda**	**132.88**	**187**	*e*PKIKP	**PKPdf**	**23 02 30.7**	**+0.2**
DZM	**Mont Dzumac**	**153.82**	**285**	*e*LR	LR	23 54 39.5	
	comp=Z,510nm,23.3s						
WR1	**Warramunga Arr**	**167.61**	**21**	*e*PKPdf	**PKPdf**	**23 03 22.4**	**-0.8**
WRA	**Warramunga Arr**	**167.61**	**21**	PKP	**PKPdf**	**23 03 22.4**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=270,slow=3.3,SNR=3.1						
AS31	**Alice Springs**	**170.85**	**31**	*e*PKPdf	**PKPdf**	**23 03 24.2**	**-0.9**
AS31				*e*PKPab	**PKPab**	**23 04 41.9**	**-1.5**
ASAR	**Alice Springs**	**170.85**	**31**	PKP	**PKPdf**	**23 03 24.2**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=20,slow=0.6,SNR=9.4						
ASAR				PKPab	**PKPab**	**23 04 41.9**	**-1.5**
	comp=Z,2.4nm,0.8s,baz=332,slow=4.4,SNR=10						

*GUC **23** 22:43:44.0±0.8, 31°.47S×72°.17W, h49km±9km, ML3.4*
*SJA **23** 22:43:48.1±0.6, 31°.34S×71°.96W, h11km±21km, ML3.4, MW3.7*

ISC 23 22:43:43.1±2.3, 31°.48S±0°.04×72°.10W±0°.10, h3km±14km, n17, σ0°72/19, 1C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.98**	**74**	⇓*i*P	**Pn**	**22 44 03.9**	**0.0**
CO02				*i* S	**Sn**	**22 44 18.3**	**0.0**
GO04	**Tololo Observa**	**1.71**	**41**	*e*P	**Pg**	**22 44 17.0**	**+1.0**
GO04				*e*S	**Sg**	**22 44 38.5**	**+0.3**
GO04	**Tololo Observa**	**1.71**	**41**	⇓*i*P	**Pb**	**22 44 14.7**	**-0.7**
GO04				*i* S	**Sg**	**22 44 37.5**	**-0.7**
LSCH	**La Serena**	**1.73**	**25**	IAML		22 44 46.6	
	comp=N,216nm,0.7s						
ROCH	**El Roble**	**1.75**	**149⇑**	*i*P	**Pn**	**22 44 15.3**	**+0.6**
ROCH				IAML		22 44 48.1	
	comp=E,657nm,0.6s						
PEL	**Peldehue**	**2.05**	**145**	*e*P	**Pn**	**22 44 18.4**	**-0.2**
PEL				*i* S	**Sn**	**22 44 45.0**	**+0.3**
PEL				IAML		22 44 55.4	
	comp=N,385nm,0.6s						
CLCH	**Cerro Calan**	**2.33**	**146**	IAML		22 45 08.8	
	comp=E,482nm,0.7s						
FCH	**Farellones**	**2.40**	**141**	*e*P	**Pn**	**22 44 24.5**	**+0.9**
FCH				IAML		22 45 06.0	
	comp=E,145nm,0.7s						
RTLS	**Leoncito**	**2.41**	**98**	*e*P	**Pg**	**22 44 29.0**	**-0.4**
RTLS				IAML		22 45 05.3	
	comp=Z,261nm,0.5s						
AUSP	**Uspallata**	**2.42**	**109**	*e*P	**Pg**	**22 44 29.7**	**+0.1**
AUSP				*e*S	**Sg**	**22 45 00.7**	**-0.3**
LCO	**Las Campanas**	**2.74**	**27**	*e*P	**Pn**	**22 44 28.7**	**+0.4**
LCO				IAML		22 45 17.0	
	comp=E,172nm,0.4s						
LMEL	**Las Melosas**	**2.85**	**146**	IAML		22 45 20.9	
	comp=E,140nm,0.3s						
ASAL	**Salagasta**	**2.98**	**113**	*e*P	**Pb**	**22 44 37.5**	**+0.5**
ARCO	**CERRO ARCO**	**3.01**	**118**	*e*P	**Pb**	**22 44 38.4**	**+0.9**
ARCO				IAML		22 45 26.4	
	comp=Z,100nm,0.6s						
RTCV	**Cerro Valdivia**	**3.06**	**98**	*e*P	**Pb**	**22 44 37.4**	**-0.8**
AMOG	**MOGNA**	**3.13**	**81**	*e*P	**Pb**	**22 44 38.5**	**-1.0**
GO05	**Huala**	**3.53**	**178**	⇓*i*P	**Pn**	**22 44 37.9**	**-1.0**

DJA 23 22:48:45.3±0.2, 1°S±2°×120°0E±°, h10km, M3.9/13, mb4.2/5, mbB4.3/1, MLv3.8/13, Mw(mB)3.5/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.76**	**92**	P	Pn	22 49 15.5	-0.4
APSI				S	Sn	22 49 39.0	+0.7
TTSI	**Tana Toraja**	**2.17**	**182**	P	Pn	22 49 22.0	+0.5
TTSI				S	Sn	22 49 49.7	+1.2
SGKI	**Sangatta, Kali**	**2.31**	**278**	P	Pn	22 49 23.7	+0.3
SGKI				S	Sn	22 49 52.9	+0.9
SMKI	**Samarinda**	**2.71**	**279**	P	Pn	22 49 29.0	0.0
LUWI	**Luwuk**	**2.89**	**94**	P	Pn	22 49 32.2	+0.8
LUWI				S	Sn	22 50 07.4	+1.2
BKB	**Balikpapan**	**3.02**	**262**	P	Pn	22 49 33.7	+0.5
SPSI	**Sidrap Palu**	**3.09**	**182**	P	Pn	22 49 34.0	-0.1
SPSI				S	Sn	22 50 11.8	+0.7
KDI	**Kendari**	**4.11**	**138**	P	Pn	22 49 48.5	+0.3
BKSI	**Bulukumba**	**4.44**	**177**	P	Pn	22 49 52.4	-0.3
BSSI	**Bau Bau, Buton**	**5.28**	**174**	P	Pn	22 50 04.3	-0.1
BBSI	**Bau Bau**	**5.32**	**150**	P	Pn	22 50 04.1	-0.8
SANI	**Sanana**	**6.21**	**101**	P	Pn	22 50 16.2	-0.9
WSI	**Waingapu**	**8.76**	**177**	P	Pn	22 50 55.4	+3.3

MAN 23 22:58:29.1, 7°34N×124°81E, h2km, mb4.5, ML3.3, MS3.1, 3C-1D, Mindanao

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

LPAZ La Paz 54.29 213 P **P 23 44 28.3 +0.3**
0.8nm,0.6s,baz=37,slow=9.5,SNR=4.7
PDAR Pinedale Array 54.42 303 P **P 23 44 28.8 +0.4**
0.8nm,0.9s,baz=53,slow=5.7,SNR=6.1
YKA Yellowknife Ar 55.03 327 P **P 23 44 30.0 -2.0**
0.2nm,0.7s,baz=92,slow=7.1,SNR=3.1
BRTR Keskin Array B 59.54 60 P **P 23 45 04.8 +0.2**
0.8nm,0.9s,baz=258,slow=6.2,SNR=4.8
NVAR Mina Array Bea 62.01 300 P **P 23 45 20.2 -1.3**
0.3nm,0.6s,baz=49,slow=10.0,SNR=3.2
ILAR Eielson Array 68.25 334 P **P 23 46 02.8 +1.5**
0.9nm,1.0s,baz=48,slow=4.1,SNR=5.3
ASAR Alice Springs 170.88 31 PKPab **PKPab 23 56 27.7 -0.2**
0.9nm,0.8s,baz=320,slow=4.2,SNR=5.1

IDC 23 23:42:00.6±6.3, 30°.83N×42°.05W, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/42, mbtmp3.5/5, Error ellipse: s-maj=197.8km s-min=36.9km az=176.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GERES	**GERESS Array B**	**45.36**	**50**	P	P	23 50 20.3	-0.4
	0.5nm,0.6s,baz=253,slow=5.8,SNR=5.7						
FINES	**FINESS Array B**	**53.05**	**34**	P	P	23 51 19.4	+0.3
	1.1nm,0.8s,baz=285,slow=5.3,SNR=2.4						
PDAR	**Pinedale Array**	**54.04**	**303**	P	P	23 51 26.9	-0.1
	0.2nm,0.5s,baz=85,slow=10,SNR=2.1						
AKASG	**Malin Array Be**	**55.31**	**47**	P	P	23 51 35.5	-0.3
	1.0nm,0.6s,baz=276,slow=6.5,SNR=5.7						
BRTR	**Keskin Array B**	**60.75**	**59**	P	P	23 52 14.7	+0.2
	0.3nm,0.7s,baz=274,slow=8.8,SNR=2.3						

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*ISCJB **23** 23:42:29.7±1.2, 31°.3N±0°.2×40°.9W±0°.1, h14km, mb3.9/15, MS3.7/2, Error ellipse: s-maj=32.8km s-min=14.2km az=0.1*
*IDC **23** 23:42:29.4±1.5, 31°.31N×40°.85W, h0km, mb3.8/14, mb1 4.0/14, mb1mx3.8/43, mbtmp3.8/14, MS3.7/2, Ms1 3.7/2, ms1mx3.1/22, Error ellipse: s-maj=43.8km s-min=18.8km az=4.0*
ISC 23 23:42:31.4±1.4, 31°.3N±0°.3×40°.9W±0°.1, h14km, n31, σ0s85/23, mb3.9/15, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**43.02**	**105**	P	P	**23 50 30.2**	**-0.6**
	2.6nm,1.0s,baz=316,slow=6.2,SNR=4.9						
KHC	**Kasperske Hory**	**44.25**	**50**	*e*P	P	**23 50 43.4**	**+3.1**
GERES	**GERESS Array B**	**44.32**	**50**	P	P	**23 50 40.7**	**-0.2**
	0.9nm,0.8s,baz=261,slow=6.6,SNR=6.5						
BRG	**Berggiesshubel**	**44.60**	**48**	*e*P	P	**23 50 42.8**	**-0.2**
	3.3nm,0.9s						
BRG				*e*		23 50 47.8	
	6.4nm,1.1s						
PRU	**Pruhonice**	**44.92**	**49**	*e*P	P	**23 50 46.3**	**+0.7**
PRU				*ex*	x	23 50 51.4	
NB2	**NORSAR Subarra**	**45.00**	**33**	P	P	**23 50 45.7**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=252,slow=7.9						
NOA	**NORSAR Array B**	**45.00**	**33**	P	P	**23 50 45.4**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=253,slow=7.9,SNR=3.8						
UPC	**Upice**	**45.89**	**48**	*e*P	P	**23 50 53.4**	**+0.1**
UPC				*ex*	x	23 50 59.0	
CHVC	**Chvalec**	**45.92**	**48**	*e*P	P	**23 50 53.2**	**-0.3**
CHVC				*ex*	x	23 50 58.8	
OSTC	**Ostas**	**46.02**	**48**	*e*P	P	**23 50 54.6**	**+0.3**
OSTC				*ex*	x	23 50 59.8	
DPC	**Dobruska-Polom**	**46.08**	**48**	*e*P	P	**23 50 54.8**	**0.0**
DPC				*ex*	x	23 50 59.8	
H10N2	**ASCENSION HYDR**	**46.35**	**143**	T	T	00 40 36.5	
	baz=328,slow=75,SNR=59						
H10N3	**ASCENSION HYDR**	**46.35**	**143**	T	T	00 40 36.7	
	baz=328,slow=75,SNR=36						
H10N1	**ASCENSION HYDR**	**46.37**	**143**	T	T	00 40 37.9	
	baz=328,slow=75,SNR=71						
H10S1	**ASCENSION HYDR**	**47.21**	**143**	T	T	00 41 42.9	
	baz=329,slow=75,SNR=80						
H10S3	**ASCENSION HYDR**	**47.21**	**144**	T	T	00 41 43.1	
	baz=329,slow=75,SNR=112						
H10S2	**ASCENSION HYDR**	**47.23**	**143**	T	T	00 41 44.1	
	baz=329,slow=75,SNR=115						
FINES	**FINESS Array B**	**52.13**	**34**	P	P	**23 51 40.3**	**-0.6**
	comp=Z,3.0nm,0.9s,baz=253,slow=5.8,SNR=6.1						
TXAR	**Lajitas Array**	**53.59**	**285**	P	P	**23 51 52.7**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=98,slow=6.7,SNR=2.9						
LPAZ	**La Paz**	**54.04**	**213**	LR	LR	00 13 25.4	
	comp=Z,43nm,19.9s,baz=38,slow=34						
AKASG	**Malin Array Be**	**54.28**	**47**	P	P	**23 51 56.0**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=277,slow=6.2,SNR=8.2						
PDAR	**Pinedale Array**	**54.65**	**303**	P	P	**23 51 59.6**	**-0.5**
	comp=Z,1.7nm,1.0s,baz=89,slow=10,SNR=8.4						
YKA	**Yellowknife Ar**	**55.34**	**327**	P	P	**23 52 03.9**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=92,slow=7.5,SNR=4.0						
BRTR	**Keskin Array B**	**59.67**	**59**	P	P	**23 52 35.6**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=273,slow=5.6,SNR=5.3						
ILAR	**Eielson Array**	**68.58**	**334**	P	P	**23 53 33.9**	**+0.5**
	comp=Z,1.6nm,1.1s,baz=55,slow=4.5,SNR=8.3						
NRIK	**Noril'sk**	**72.92**	**17**	P	P	**23 53 59.9**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=35,slow=2.2,SNR=3.3						
BVAR	**Borovoye Array**	**77.07**	**35**	LR	LR	00 27 11.8	
	comp=Z,59nm,18.9s,baz=0.0,slow=35						
GEYT	**Alibeck**	**77.87**	**53**	P	P	**23 54 29.6**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=316,slow=4.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**83.05**	**29**	P	P	**23 54 56.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=327,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**86.95**	**35**	P	P	**23 55 15.8**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=33,slow=2.9,SNR=4.2						
ASAR	**Alice Springs**	**171.14**	**33**	PKPab	PKPab	**00 03 59.6**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=346,slow=4.8,SNR=6.6						

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*ISCJB **23** 23:58:51.1±0.3, 36°.56N±0°.03×55°.46E±0°.03, h10km, Error ellipse: s-maj=4.2km s-min=3.8km az=41.4*
*TEH **23** 23:58:51.5, 36°.47N×55°.49E, h16km, ML3.7*
ISC 23 23:58:51.1±0.9, 36°.50N±0°.05×55°.49E±0°.05, h10km, n58, σ2s92/58, 1C-1D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMND	**Minoodasht**	**0.76**	**355**	IAMB	IAmb	23 59 28.1	
	comp=Z,0.0nm,0.5s						
IMND				*e*Pg	**Pg**	**23 59 05.7**	**0.0**
MRVT	**Maraveh tapeh**	**1.25**	**22**	*e*Pg	**Pg**	**23 59 16.4**	**+1.3**
IANJ	**Anjilo**	**1.64**	**231**	*e*Pn	**Pg**	**23 59 22.5**	**-0.1**
IANJ				IAMB	IAmb	23 59 51.2	
	comp=Z,9μm,0.4s						
SBZV	**Sabzevar**	**1.72**	**93**	*e*Pn	**Pn**	**23 59 22.1**	**+0.9**
ISHM	**Shahmirzad**	**1.91**	**249**	*e*Pn	**Pb**	**23 59 25.8**	**-0.3**
ISHM				IAMB	IAmb	23 59 54.9	
	comp=Z,10μm,0.4s						
ISFR	**Sfrayin**	**2.09**	**74**	*e*Pn	**Pb**	**23 59 28.6**	**-0.6**
ISFR				IAMB	IAmb	00 00 10.5	
	comp=Z,7μm,0.7s						
IFIR	**Firoozkooh**	**2.38**	**250**	*e*Pn	**Pn**	**23 59 32.5**	**+2.2**
IFIR				IAMB	IAmb	00 00 08.5	
	comp=Z,6μm,0.3s						
IKRD	**Kardeh**	**2.45**	**83**	*e*Pn	Pg	23 59 44.9	+6.9
IKRD				IAMB	IAmb	00 00 53.7	
	comp=Z,742nm,0.6s						
IPRN	**Peran**	**2.56**	**265**	*e*Pn	**Pb**	**23 59 35.4**	**-1.7**
IAKL	**Akhelmad**	**2.63**	**87**	*e*Pn	**Pn**	**23 59 34.9**	**+1.0**
IAKL				IAMB	IAmb	00 00 23.3	
	comp=Z,1μm,0.6s						
IEMG	**Emamgholi**	**2.69**	**69**	*e*Pn	**Pn**	**23 59 37.0**	**+2.3**
IEMG				IAMB	IAmb	00 00 25.8	
	comp=Z,1μm,0.5s						
IPAY	**Payeh**	**2.83**	**90**	*e*Pn	**Pn**	**23 59 38.2**	**+1.7**
IPAY				IAMB	IAmb	00 00 39.6	
	comp=Z,1μm,0.5s						
IDMV	**Damavand**	**2.95**	**253**	*e*Pn	**Pn**	**23 59 41.1**	**+2.9**
IDMV				IAMB	IAmb	23 59 49.6	
	comp=Z,2μm,0.3s						
DAMV	**Damavand**	**2.98**	**254**	*e*Pn	**Pn**	**23 59 40.7**	**+2.1**
TABS	**Tabas**	**3.15**	**154**	*e*Pn	**Pn**	**23 59 42.0**	**+1.2**
TKDS	**Koohdasht(Taba**	**3.18**	**155**	*e*Pn	**Pn**	**23 59 42.4**	**+1.1**
IVRN	**Varamin**	**3.41**	**245**	*e*Pn	**Pn**	**23 59 45.7**	**+1.3**
ISFB	**Sefidab**	**3.41**	**232**	*e*Pn	**Pn**	**23 59 44.9**	**+0.5**
ISFB				IAMB	IAmb	00 00 46.4	
	comp=Z,1μm,0.4s						
ANAR	**Anarak**	**3.61**	**204**	*e*Pn	**Pn**	**23 59 47.7**	**+0.5**
IMYA	**Miami**	**3.73**	**91**	*e*Pn	**Pn**	**23 59 51.2**	**+2.4**
IMYA				IAMB	IAmb	00 01 16.3	
	comp=Z,419nm,0.6s						
KRSH	**Karshahi**	**3.73**	**228**	*e*Pn	**Pn**	**23 59 49.8**	**+0.9**
QALM	**Alamut, Qazvin**	**3.90**	**270**	*e*Pn	**Pn**	**23 59 54.4**	**+3.1**
GHVR	**GHOM**	**3.97**	**241**	*e*Pn	**Pn**	**23 59 54.4**	**+2.3**
YZKH	**Yazd**	**4.17**	**190**	*e*Pn	**Pn**	**23 59 55.9**	**+1.1**
IGZV	**Ghazvin**	**4.25**	**270**	*e*Pn	**Pn**	**23 59 59.4**	**+3.3**
IGZV				IAMB	IAmb	00 01 19.4	
	comp=Z,1μm,0.9s						
IZEF	**Zefreh**	**4.44**	**217**	*e*Pn	**Pn**	**00 00 00.1**	**+1.4**
IZEF				IAMB	IAmb	00 01 21.2	
	comp=Z,402nm,0.4s						
ITEG	**Tejag**	**4.49**	**142**	IAMB	IAmb	00 00 01.9	
	comp=Z,514nm,0.3s						
ITEG				*e*Pn	**Pn**	**00 00 01.0**	**+1.7**
IKLH	**Kolahrood**	**4.52**	**226**	*e*Pn	**Pn**	**00 00 01.1**	**+1.3**
IKLH				IAMB	IAmb	00 01 23.3	
	comp=Z,591nm,0.6s						
IRAZ	**Razeghan**	**4.64**	**258**	IAMB	IAmb	00 00 19.5	
	comp=Z,617nm,0.8s						
IRAZ				*e*Pn	**Pn**	**00 00 05.3**	**+3.9**
ISAD	**Sadrabad**	**4.81**	**199**	*e*Pn	**Pn**	**00 00 04.2**	**+0.3**
ISAD				IAMB	IAmb	00 01 41.0	
	comp=Z,319nm,0.5s						
QABG	**Abgarm-Qazvin**	**4.85**	**262**	*e*Pn	**Pn**	**00 00 07.9**	**+3.6**
IGAR	**Gharneh**	**4.98**	**216**	IAMB	IAmb	00 00 34.7	
	comp=Z,213nm,0.4s						
IGAR				*e*Pn	**Pn**	**00 00 08.1**	**+2.0**
IKOO	**Kooshah**	**5.00**	**143**	*e*Pn	**Pn**	**00 00 07.0**	**+0.6**
IKOO				IAMB	IAmb	00 01 46.4	
	comp=E,440nm,0.8s						
IMEH	**Mehriz**	**5.15**	**188**	*e*Pn	**Pn**	**00 00 09.3**	**+0.8**
IMEH				IAMB	IAmb	00 01 38.2	
	comp=Z,250nm,0.6s						
IRAM	**Ramesheh**	**5.34**	**210**	*e*Pn	**Pn**	**00 00 12.0**	**+0.9**
IRAM				IAMB	IAmb	00 00 13.8	
	comp=Z,193nm,0.4s						
IPIR	**Pirpir**	**5.37**	**226**	*e*Pn	**Pn**	**00 00 15.4**	**+3.8**
IPIR				IAMB	IAmb	00 00 16.4	
	comp=Z,465nm,0.3s						
ASTR	**Astara**	**5.70**	**293**	*e*Pn	**Pn**	**00 00 16.5**	**+0.7**
LKRN	**Lenkeran, Azer**	**5.76**	**294**	*e*Pn	**Pn**	**00 00 18.0**	**+1.4**
ZNGN	**Zangian**	**5.82**	**223**	*e*Pn	**Pn**	**00 00 20.3**	**+2.6**
LRK	**Lerik**	**6.07**	**293**	*e*Pn	**Pn**	**00 00 21.5**	**+0.6**
GLBA	**Clilabad**	**6.24**	**298**	*e*Pn	**Pn**	**00 00 24.1**	**+0.9**
KLNJ	**Kolanjah**	**6.37**	**212**	*e*Pn	**Pn**	**00 00 27.5**	**+2.2**
GBS	**Qobustan**	**6.52**	**310**	*e*Pn	**Pn**	**00 00 28.9**	**+1.8**
ATGJ	**Altiaghaj**	**6.72**	**312**	*e*Pn	**Pn**	**00 00 31.3**	**+1.4**
SIZA	**Siyzn**	**6.88**	**314**	*e*Pn	**Pn**	**00 00 34.2**	**+2.2**
PQL	**Pirkuli**	**6.88**	**311**	*e*Pn	**Pn**	**00 00 34.2**	**+2.0**
IML	**Ismayilli**	**7.14**	**309**	*e*Pn	**Pn**	**00 00 37.9**	**+2.3**
QUB	**Quba**	**7.38**	**313**	*e*Pn	**Pn**	**00 00 39.5**	**+0.5**
XNQ	**Khinaliq**	**7.39**	**311**	*e*Pn	**Pn**	**00 00 40.6**	**+1.4**
QBL	**Gabala**	**7.44**	**309**	*e*Pn	**Pn**	**00 00 41.0**	**+1.2**
QSAR	**Qusar**	**7.53**	**314**	*e*Pn	**Pn**	**00 00 42.9**	**+2.0**
ORD	**Ordubad**	**7.90**	**291**	*e*Pn	**Pn**	**00 00 47.0**	**+0.9**
SEKA	**Sheki**	**7.99**	**309**	*e*Pn	**Pn**	**00 00 48.1**	**+0.8**
GANJ	**Ganja**	**8.28**	**303**	*e*Pn	**Pn**	**00 00 51.2**	**-0.1**
SBZ	**Shahbuz**	**8.36**	**293**	*e*Pn	**Pn**	**00 00 54.3**	**+1.9**
GDB	**GEDABAY**	**8.70**	**302**	*e*Pn	**Pn**	**00 00 57.8**	**+0.6**
QZX	**Qazax, Azerbai**	**9.11**	**303**	*e*Pn	**Pn**	**00 01 03.7**	**+1.1**
AB31	**Akbulak array**	**13.15**	**13**	⇓P	**Pn**	**00 01 58.3**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=200,slow=12,SNR=7.4						
AB31				⇑S	**Sn**	**00 04 17.0**	**-7.1**
	comp=Z,0.8nm,0.5s,baz=199,slow=22						

IDC 24 00:13:42.8±2.0, 14°.63S×177°.38W, h0km, mb3.7/5, mb1 4.1/5, mb1mx3.8/28, mbtmp3.7/5, Error ellipse: s-maj=125.8km s-min=25.7km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.29**	**256**	P	P	00 22 09.4	-1.3
	0.9nm,0.7s,baz=103,slow=5.3,SNR=4.1						
ASAR	**Alice Springs**	**46.71**	**251**	P	P	00 22 14.9	+1.0
	0.7nm,0.3s,baz=84,slow=8.3,SNR=10						
ILAR	**Eielson Array**	**82.48**	**13**	P	P	00 26 06.8	-0.1
	0.4nm,0.6s,baz=208,slow=6.0,SNR=5.6						
TXAR	**Lajitas Array**	**83.41**	**58**	P	P	00 26 13.4	+0.8
	0.4nm,0.7s,baz=233,slow=6.1,SNR=4.3						
PDAR	**Pinedale Array**	**84.30**	**43**	P	P	00 26 16.2	-0.8
	0.2nm,0.5s,baz=217,slow=5.7,SNR=2.5						

KRSC 24 00:24:28.0±1.1, 51°.09N×158°.15E, h47km±15km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.72**	**357**	*i*P	Pn	00 24 43.5	+1.5
KDTR				*e*S	Sn	00 24 53.6	+1.5
PAU	**Pauzhetka**	**0.92**	**295**	*e*P	Pn	00 24 46.3	+1.7
PAU				*e*S	Sn	00 24 58.8	+2.1
ASAK	**Asacha**	**1.31**	**353**	*e*P	Pn	00 24 51.9	+2.0
SKR	**Severo-Kuril's**	**1.35**	**253**	*e*P	Pn	00 24 51.6	+1.3
SKR				*e*S	Sn	00 25 08.3	+1.3
RUS	**Russkaya**	**1.37**	**9**	*e*P	Pn	00 24 52.2	+1.5
RUS				*e*S	Sn	00 25 09.2	+1.6
MTVR	**Mutnovka**	**1.40**	**1**	*e*P	Pn	00 24 53.3	+2.1
MTVR				*e*S	Sn	00 25 10.5	+1.9
GRL	**Gorelyy**	**1.47**	**358**	*e*P	Pn	00 24 54.3	+2.1
GRL				*e*S	Sn	00 25 12.2	+1.9
ALID	**Alaid**	**1.66**	**263**	*i*P	Pn	00 24 56.6	+1.9
ALID				*e*S	Sn	00 25 16.1	+1.3
KRMR	**Karymshinskiy**	**1.75**	**360**	*e*P	Pn	00 24 58.6	+2.8
KRMR				*e*S	Sn	00 25 20.0	+3.1
APC	**Apacha**	**1.94**	**342**	*e*P	Pn	00 25 01.2	+2.7
DALK	**Dalny**	**1.98**	**11**	*e*P	Pn	00 25 01.4	+2.3
DALK				*e*S	Sn	00 25 24.5	+1.8
UGLR	**Uglovaya**	**2.17**	**11**	*e*P	Pn	00 25 04.8	+3.1
AVH	**Avacha**	**2.21**	**9**	*e*P	Pn	00 25 05.6	+3.3
NLC	**Nalytchevo**	**2.22**	**19**	*e*P	Pn	00 25 04.4	+2.2
NLC				*e*S	Sn	00 25 29.3	+0.9
SMAR	**Somma**	**2.22**	**10**	*e*P	Pn	00 25 05.5	+3.0
KOK	**Koryaka**	**2.23**	**8**	*e*S	Sn	00 25 32.9	+4.0
SDLR	**Sedlovina**	**2.24**	**11**	*e*P	Pn	00 25 04.9	+2.2
KRER	**Koryakskii**	**2.25**	**9**	*e*P	Pn	00 25 06.0	+3.0
KRX	**Arik**	**2.30**	**8**	*e*P	Pn	00 25 06.5	+3.0
SPN	**Mys Shipunski**	**2.33**	**29**	*e*P	Pn	00 25 06.3	+2.6
SPN				*e*S	Sn	00 25 33.8	+2.7
GNL	**Ganaly**	**2.62**	**357**	*e*P	Pn	00 25 11.0	+3.1
KZV	**Kizimen**	**4.24**	**17**	P	Pn	00 25 34.9	+4.8
TUMD	**Tumrok D**	**4.34**	**17**	*e*S	Sn	00 26 25.6	+4.9
KBTR	**Krutoberegovo**	**5.83**	**27**	*e*P	Pn	00 25 55.1	+3.2

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*SOME **24** 00:50:05.9, 41°.45N×77°.05E, h10km*
*KRNET **24** 00:50:05.5±0.1, 41°.52N×76°.93E, h15km, mb2.3*
*NNC **24** 00:50:08.4±1.5, 41°.57N×76°.92E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=10.4km s-min=6.2km az=178.0*
ISC 24 00:50:04.6±1.9, 41°.45N±0°.07×76°.94E±0°.04, h6km±12km, n37, σ0s84/63, 21C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.95**	**327**	⇑*i*P	**Pg**	**00 50 22.8**	**0.0**
	baz=25						
ULHL				⇑*i*S	**Sb**	**00 50 35.4**	**-1.0**
	baz=25						
BOOM	**Boomskoye usch**	**1.27**	**325**	⇓*i*P	**Pb**	**00 50 28.9**	**-0.2**
	baz=23						
BOOM				⇓*i*S	**Sn**	**00 50 46.0**	**-0.6**
	baz=23						
KZA	**Kyzart**	**1.41**	**297**	⇓*i*P	**Pn**	**00 50 31.4**	**+0.2**
	baz=95						
KZA				⇓*i*S	**Sg**	**00 50 51.1**	**+1.2**
	baz=95						
TNSS	**Tian-Shan**	**1.58**	**0**	S	**Sg**	**00 50 56.3**	**+0.7**
	3.1nm,0.1s						
TNSS	**Tian-Shan**	**1.58**	**0**	*e*P	**Pg**	**00 50 35.1**	**+0.1**
	4.4nm,0.1s						
TNSS				*e*S	**Sg**	**00 50 56.3**	**+0.7**
	3.3nm,0.3s						
MDOK	**Medeo**	**1.71**	**3**	Pg	**Pb**	**00 50 36.9**	**+0.3**
	4.0nm,0.2s						
MDOK				Lg	Lg	00 50 59.3	
	2.5nm,0.4s						
MDOK	**Medeo**	**1.71**	**3**	*e*P	**Pb**	**00 50 37.0**	**+0.3**
	4.0nm,0.4s						
MDOK				*e*S	**Sg**	**00 50 59.3**	**-0.4**
	3.7nm,0.4s						
KST	**Kastek**	**1.75**	**336**	S	**Sg**	**00 51 01.5**	**+0.8**
	3.0nm,0.2s						
KST	**Kastek**	**1.75**	**336**	*e*P	**Pg**	**00 50 38.5**	**+0.5**
	2.6nm,0.1s						
KST				*e*S	**Sg**	**00 51 01.9**	**+1.2**
	3.0nm,0.2s						
TKM2	**Tokmak 2**	**1.77**	**326**	⇑P	**Pb**	**00 50 38.2**	**+0.6**
	0.6nm,0.3s						
TKM2				⇑S	**Sg**	**00 51 01.8**	**+0.2**
	2.0nm,0.5s						
TKM2	**Tokmak 2**	**1.77**	**326**	⇑*i*P	**Pb**	**00 50 37.7**	**+0.1**
	baz=25						
TKM2				⇑*i*S	**Sg**	**00 51 01.5**	**-0.1**
	baz=25						
KOTS	**Kotyrbulak**	**1.79**	**4**	S	**Sg**	**00 51 01.0**	**-1.0**
	14nm,0.2s						
KOTS	**Kotyrbulak**	**1.79**	**4**	*e*P	**Pb**	**00 50 37.8**	**0.0**
	6.2nm,0.2s						
KOTS				*e*S	**Sg**	**00 51 01.0**	**-1.0**
	14nm,0.2s						
KBK	**Karagaybulak**	**1.91**	**310**	⇑*i*P	**Pb**	**00 50 40.4**	**+0.5**
	baz=8.0						
KBK				⇑*i*S	**Sg**	**00 51 05.6**	**-0.3**
	baz=8.0						
SATY	**Saty**	**1.94**	**34**	*e*P	**Pb**	**00 50 40.4**	**0.0**
	3.5nm,0.3s						
SATY				*e*S	**Sb**	**00 51 05.3**	**+0.3**
	6.9nm,0.2s						
UCH	**Uchtor**	**1.97**	**294**	⇑*i*P	**Pb**	**00 50 41.8**	**+0.7**
	baz=92						
UCH				⇑*i*S	**Sg**	**00 51 08.5**	**+0.6**
	baz=92						
DGS	**Degeres**	**1.98**	**335**	Pg	**Pg**	**00 50 42.3**	**-0.4**
	3.4nm,0.2s						
DGS				Lg	Lg	00 51 08.7	
	4.3nm,0.3s						
DGS	**Degeres**	**1.98**	**335**	*e*P	**Pg**	**00 50 42.6**	**0.0**
	3.4nm,0.2s						
DGS				*e*S	**Sg**	**00 51 09.4**	**+1.0**
	4.3nm,0.3s						
ARLS	**Aral**	**2.00**	**283**	⇑*i*P	**Pb**	**00 50 42.3**	**+0.8**
	baz=81						
ARLS				⇑*i*S	**Sg**	**00 51 09.2**	**+0.4**
	baz=81						
AAK	**Ala-Archa**	**2.17**	**304**	⇓Pn	**Pb**	**00 50 43.9**	**-0.5**
	0.9nm,0.3s						
AAK				⇑Sn	**Sg**	**00 51 14.4**	**0.0**
	4.1nm,0.5s						
CHMS	**Chumysh**	**2.24**	**314**	⇑*i*P	**Pb**	**00 50 45.2**	**-0.3**
	baz=13						
CHMS				⇑*i*S	**Sg**	**00 51 14.7**	**-1.9**
	baz=13						
KTBS	**Karatobe**	**2.27**	**355**	Pg	**Pb**	**00 50 46.9**	**+0.9**
	5.2nm,0.3s						
KTBS				Lg	Lg	00 51 16.5	
	7.8nm,0.3s						
KTBS	**Karatobe**	**2.27**	**355**	*e*P	**Pg**	**00 50 47.5**	**-0.5**
	5.2nm,0.4s						
KTBS				*e*S	**Sg**	**00 51 17.5**	**+0.1**
	7.9nm,0.3s						
CHKK	**Chushkaly**	**2.40**	**1**	Pg	**Pb**	**00 50 48.9**	**+0.7**
	3.5nm,0.3s						
CHKK				Lg	Lg	00 51 20.6	
	6.7nm,0.2s						
CHKK	**Chushkaly**	**2.40**	**1**	*e*P	**Pb**	**00 50 49.1**	**+0.9**
	3.5nm,0.3s						
CHKK				*e*S	**Sg**	**00 51 20.6**	**-1.1**
	6.7nm,0.2s						
KUU	**Kurty**	**2.48**	**350**	Pg	**Pb**	**00 50 50.6**	**+1.0**
	1.8nm,0.4s						
KUU				Lg	Lg	00 51 22.8	
	2.9nm,0.1s						
KUU	**Kurty**	**2.48**	**350**	*e*P	**Pb**	**00 50 50.6**	**+1.0**
	1.8nm,0.4s						
KUU				*e*S	**Sg**	**00 51 22.8**	**-1.4**
	2.9nm,0.1s						
AML	**Almayashu**	**2.52**	**287**	⇑*i*P	**Pb**	**00 50 50.1**	**-0.3**
	baz=85						
AML				⇑*i*S	**Sb**	**00 51 21.9**	**+0.1**
	baz=85						
USP	**Ospenovka**	**2.56**	**316**	⇓*e*P	**Pb**	**00 50 49.6**	**-1.3**
	baz=15						
USP				⇓*i*S	**Sb**	**00 51 22.1**	**-0.5**
	baz=15						
PDGK	**Podgornoye**	**2.66**	**44**	Pg	**Pb**	**00 50 53.4**	**+0.6**
	1.1nm,0.4s						
PDGK				Lg	Lg	00 51 27.6	
	1.9nm,0.5s						
PDGK	**Podgornoye**	**2.66**	**44**	⇑Pn	**Pb**	**00 50 52.4**	**-0.4**
	9.2nm,1.7s						
PDGK				⇑Sn	**Sb**	**00 51 27.4**	**+1.6**
	5.2nm,0.9s						
PDGK	**Podgornoye**	**2.66**	**44**	⇑*i*P	**Pb**	**00 50 51.6**	**-1.2**
	baz=45						
PDGK				⇑*i*S	**Sb**	**00 51 24.9**	**-0.9**
	baz=45						
ARXS	**Arharly**	**2.84**	**13**	Pg	**Pb**	**00 50 56.9**	**+1.2**
	1.9nm,0.6s						
ARXS				Lg	Lg	00 51 33.7	
	7.7nm,0.4s						
ARXS	**Arharly**	**2.84**	**13**	*e*P	**Pb**	**00 50 56.9**	**+1.2**
	1.9nm,0.6s						
ARXS				*e*S	**Sg**	**00 51 33.7**	**-2.0**
	7.7nm,0.4s						
MNBS	**Baschi**	**2.84**	**22**	Pg	**Pb**	**00 50 56.1**	**+0.3**
	0.3nm,0.1s						
MNBS				Lg	Lg	00 51 32.4	
	3.2nm,0.2

GSPH	General Santos	3.67	202	eP		Pn	00 51 49.6 -11
TGY	Tagaytay City	7.00	311	P		Pn	00 52 46.0 +0.3
	35nm,0.3s,baz=128,slow=18,SNR=3.7						
TGY					LR	LR	00 55 44.6
	comp=Z,420nm,19.6s,baz=232,slow=40						
TNTI	Ternate	8.74	173	ePn		Pn	00 53 11.2 +1.8
SBUM	Sibu	15.70	244	ePn		P	00 54 54.8 +8.9
	26nm,1.4s						
JAY	Jayapura	18.63	129	P		Pn	00 55 20.1 +0.8
	2.5nm,0.3s,baz=90,slow=23,SNR=24						
KS15	Wonju Array Si	27.84	3	eP		P	00 56 50.0 +1.0
	15nm,1.6s						
KS15				e			01 10 40.0
KSRS	Korea Array	27.86	3	P		P	00 56 50.0 +0.9
	2.6nm,0.7s,baz=185,slow=10.0,SNR=16						
KSRS					LR	LR	01 10 40.0
	comp=Z,38nm,18.5s,baz=155,slow=42						
CMAR	Chiang Mai Arr	28.01	291	P		P	00 56 52.0 +1.2
	0.9nm,0.3s,baz=108,slow=5.8,SNR=4.2						
CMAR					LR	LR	01 08 56.1
	comp=Z,54nm,18.4s,baz=275,slow=38						
PSI	Prapat	28.06	258	P		P	00 56 52.2 +0.8
	11nm,1.1s,baz=75,slow=12,SNR=3.2						
PSI	Prapat	28.06	258	eP		P	00 56 52.2 +0.8
	15nm,1.3s						
MAJO	Matsushiro	28.98	20	eP		P	00 56 58.2 -1.0
MJAR	Matsushiro Arr	28.98	20	P		P	00 56 58.2 -1.0
	0.8nm,0.3s,baz=182,slow=7.8,SNR=4.0						
WR1	Warramunga Arr	30.30	165	eP		P	00 57 10.3 -0.7
WRA	Warramunga Arr	30.30	165	P		P	00 57 10.3 -0.7
	1.4nm,0.4s,baz=346,slow=9.1,SNR=3.3						
ASAR	Alice Springs	33.79	167	P		P	00 57 40.5 -1.1
	0.6nm,0.3s,baz=352,slow=6.7,SNR=11						
ASAR					pP	sP	00 58 02.9 -1.3
	1.2nm,0.4s,baz=345,slow=7.1,SNR=6.7						
USRK	Ussuriysk Ar.	34.91	7	P		P	00 57 51.8 +0.8
	3.3nm,0.8s,baz=189,slow=10,SNR=8.5						
FORT	Forrest	40.09	178	eP		P	00 58 35.3 +0.4
	24nm,0.8s						
H11N1	WAKE ISLAND Hy	40.42	71	T		T	01 42 08.9
	baz=265,slow=74,SNR=102						
H11N2	WAKE ISLAND Hy	40.43	71	T		T	01 42 12.8
	baz=265,slow=74,SNR=79						
H11N3	WAKE ISLAND Hy	40.44	71	T		T	01 42 10.3
	baz=265,slow=74,SNR=96						
SONA0	Songino Array	41.76	340	eP		P	00 58 48.3 -0.4
SONA0				ePcP		PcP	01 00 44.1 +0.1
SONM	Songino Array	41.76	340	P		P	00 58 48.3 -0.4
	0.4nm,0.4s,baz=160,slow=8.8,SNR=3.3						
SONM				PcP		PcP	01 00 44.1 +0.1
	0.6nm,0.5s,baz=175,slow=2.5,SNR=3.9						
JIRN	Jiri	41.89	301	eP		P	00 58 50.2 -0.1
	20nm,0.4s						
PKI	Pulchoki	42.52	301	eP		P	00 58 54.8 -0.6
	4.8nm,0.5s						
PKIN	Phulchoki	42.53	301	eP		P	00 58 54.8 -0.7
	8.1nm,0.7s						
STKA	Stephens Creek	43.66	161	P		P	00 59 03.7 -0.4
	1.1nm,0.3s,baz=338,slow=11,SNR=2.6						
STKA	Stephens Creek	43.66	161	eP		P	00 59 03.7 -0.4
	4.4nm,1.5s						
KOLN	Koldanda	44.12	300	eP		P	00 59 07.5 -0.7
	16nm,0.8s						
DANN	Dangsing	44.14	301	eP		P	00 59 07.8 -0.7
	15nm,0.6s						
PYUN	Piuthan	44.73	300	eP		P	00 59 12.6 -0.4
	26nm,0.8s						
PETK	Petropavlovsk-	50.29	24	P		P	00 59 56.6 +1.0
	3.8nm,0.5s,baz=185,slow=4.2,SNR=9.8						
PEA1	Petropavlovsk-	50.30	24	eP		P	00 59 56.6 +1.0
MK31	Makanchi Array	52.68	323	eP		P	01 00 13.2 -0.4
	3.2nm,0.8s						
MK32	Makanchi Array	52.68	323	eP		P	01 00 13.0 -0.5
MK32				ePcP		PcP	01 01 22.8 +0.2
MKAR	Makanchi Array	52.68	323	P		P	01 00 13.0 -0.5
	2.8nm,0.5s,baz=127,slow=7.8,SNR=38						
MKAR				PcP		PcP	01 01 22.8 +0.1
	0.9nm,0.7s,baz=95,slow=5.9,SNR=2.6						
MAKZ	Makanchi	52.87	323	eP		P	01 00 14.4 -0.6
	13nm,1.3s						
NIL	Nilore	54.23	305	eP		P	01 00 25.0 -0.1
	13nm,0.8s						
ZALV	Zalesovo Beam	55.33	332	P		P	01 00 31.2 -1.4
	0.8nm,0.4s,baz=136,slow=5.8,SNR=4.4						
ZALV				PcP		PcP	01 01 30.6 -1.9
	0.5nm,0.3s,baz=108,slow=4.7,SNR=2.4						
ZAA1	Zalesovo Array	55.33	332	eP		P	01 00 31.2 -1.4
ZAA1				ePcP		PcP	01 01 30.6 -1.9
KURK	Kurchatov	56.74	326	eP		P	01 00 42.4 -0.4
	4.3nm,0.7s						
KK31	Karatay Array	58.84	315	eP		P	01 00 57.2 -0.5
	34nm,0.5s						
KKAR	Karatay Array	58.84	315	eP		P	01 00 57.2 -0.4
	34nm,0.5s						
NRIK	Noril'sk	64.77	346	P		P	01 01 36.9 0.0
	2.3nm,0.5s,baz=138,slow=8.9,SNR=3.8						
ARU	Arti	69.90	327	eP		P	01 02 08.7 -1.0
	5.5nm,0.6s						
CASY	Casey	76.48	187	eP		P	01 02 48.4 +0.3
	3.1nm,0.7s						
RAYN	Ar Rayn	77.93	292	eP		P	01 02 56.2 -1.1
	4.0nm,0.6s						
BPAW	Bear Paw Mtn.	78.30	26	eP		P	01 02 59.4 +0.9
	4.2nm,0.7s						
MLY	Manley	78.44	25	eP		P	01 03 00.6 +1.3
	3.0nm,0.7s						
ILAR	Eielson Array	80.08	26	P		P	01 03 08.4 +0.2
	1.2nm,0.6s,baz=234,slow=5.0,SNR=22						
ILB	Eielson Array	80.08	26	eP		P	01 03 08.4 +0.2
	16nm,2.0s						
HYT	Haines Junctio	84.76	29	eP		P	01 03 33.9 +1.1
	4.3nm,0.7s						
SPA0	Spitsbergen Ar	84.77	349	eP		P	01 03 33.0 +0.6
ARA0	ARCESS Array S	84.93	340	eP		P	01 03 33.2 -0.2
ARCES	ARCESS Array B	84.93	340	P		P	01 03 33.2 -0.2
	5.4nm,0.5s,baz=80,slow=6.9,SNR=56						
ARE0	ARCESS Array S	84.93	340	eP		P	01 03 33.2 -0.2
HAMF	Hammerfest	85.26	341	eP		P	01 03 34.5 -0.4
KTK1	Kautokeino	85.84	339	eP		P	01 03 38.2 +0.3
HEF	Hetta	85.86	339	eP		P	01 03 37.5 -0.4
WHY	Whitehorse	86.05	29	eP		P	01 03 39.8 +0.5
	45nm,0.9s						
BR101	Keskin Array S	86.07	309	eP		P	01 03 38.8 -1.0
BRTR	Keskin Array B	86.08	309	P		P	01 03 38.8 -1.0
	0.7nm,0.8s,baz=108,slow=4.0,SNR=5.6						
SKAG	Skagway	86.09	30	eP		P	01 03 40.4 +1.2
	153nm,0.8s						
FIA0	FINESS Array S	86.59	332	eP		P	01 03 41.3 -0.4
FINES	FINESS Array B	86.59	332	P		P	01 03 41.3 -0.4
	3.0nm,0.6s,baz=80,slow=4.9,SNR=41						
KIF	Kilpisjarvi	86.69	340	eP		P	01 03 41.3 -0.7
TRO	Tromso	87.11	340	eP		P	01 03 43.5 -0.6
AKASG	Malin Array Be	87.20	321	P		P	01 03 44.3 -0.6
	0.3nm,0.5s,baz=62,slow=4.7,SNR=3.8						
SALU	Saltoluokta	88.03	338	eP		P	01 03 47.7 -0.8
STEI	Steigen	88.99	339	eP		P	01 03 51.5 -1.4
MAW	Mawson	89.02	200	P		P	01 03 53.2 +0.2
	1.1nm,0.4s,baz=42,slow=15,SNR=3.4						
VNDA	Vanda	89.17	173	P		P	01 03 54.0 +0.4
	0.8nm,0.7s,baz=325,slow=5.9,SNR=8.9						
KMBO	Kilima Mbogo	89.30	269	P		P	01 03 56.4 +0.5
	2.0nm,1.0s,baz=54,slow=8.7,SNR=3.3						
LOF	Lofoten	89.49	340	eP		P	01 03 53.4 -2.0
NSS	Namsos	91.61	337	eP		P	01 04 04.3 -1.0
NB2	NORSAR Subarra	93.47	334	P		P	01 04 12.2 -1.8
	comp=Z,0.6nm,0.5s,baz=67,slow=4.4						
NB2	NORSAR Subarra	93.47	334	P		P	01 04 12.2 -1.8
	baz=67,slow=4.4						
NOA	NORSAR Array B	93.47	334	P		P	01 04 12.8 -1.2
	comp=Z,0.9nm,0.7s,baz=65,slow=4.5,SNR=8.0						
YKA	Yellowknife Ar	94.41	24	P		P	01 04 19.5 +1.3
	comp=Z,1.5nm,0.7s,baz=300,slow=4.5,SNR=20						
YKB5	Yellowknife Ar	94.41	24	eP		P	01 04 19.6 +1.3
TXAR	Lajitas Array	118.26	49	PKP		PKiKP	01 09 47.2 +0.8
	comp=Z,0.2nm,0.5s,baz=42,slow=1.5,SNR=2.5						
TORD	Torodi Ar. Bea	120.62	291	PKP		PKPdf	01 09 50.7 -0.4
	comp=Z,0.4nm,0.4s,baz=84,slow=2.0,SNR=12						
TOA1	Torodi Ar. Sit	120.62	291	ePKPdf		PKPdf	01 09 50.7 -0.5
PLCA	Paso Flores	145.48	157	PKPbc		PKPab	01 10 37.7 +0.6
	comp=Z,2.9nm,0.8s,baz=271,slow=2.4,SNR=11						

NNC ***24*** *00:59:55.4±0.6,42°.18N×76°.06E,h0km±3km,mb4.2,*
mpv4.3,Error ellipse: s-maj=3.6km s-min=1.8km az=166.0
SOME ***24*** *00:59:55.4,42°.13N×76°.10E,h15km*
KRNET ***24*** *00:59:55.4±0.1,42°.15N×76°.07E,h18km,mb4.2*

KNET ***24*** *00:59:55.3±0.5,42°.18N×76°.05E,h12km±4km,ml3.1,Error*
ellipse: s-maj=4.3km s-min=4.0km az=73.0
BJI ***24*** *01:00:06.2±0.0,41°.89N×76°.55E,h5km,ML3.1/5*
ISC 24 00:59:55.2±1.1,42°.13N±0°.03×76°.05E±0°.02,h5km±9km,
n88,σ1°06/147,42C-63D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	0.18	51	⇑P	Pg	00 59 58.9	0.0
	1μm,0.1s,SNR=6046						
ULHL				⇓S	Sg	01 00 01.3	+0.1
	16μm,0.3s						
ULHL	Ulahol	0.18	51	⇓iP	Pg	00 59 58.9	0.0
	baz=53						
ULHL				⇓iS	Sg	01 00 01.6	+0.3
	baz=53						
BOOM	Boomskoye usch	0.37	347	⇑iP	Pg	01 00 02.6	+0.2
BOOM				⇑iS	Sg	01 00 07.2	0.0
	baz=44						
KZA	Kyzart	0.60	265	P	Pg	01 00 07.4	+0.6
	431nm,0.2s,SNR=2204						
KZA				⇓S	Sb	01 00 16.3	-1.1
	913nm,0.2s						
KZA	Kyzart	0.60	265	⇓iP	Pg	01 00 07.5	+0.6
	baz=63						
KZA				⇓iS	Sg	01 00 16.1	+1.4
	baz=63						
TKM2	Tokmak 2	0.86	337	⇓P	Pg	01 00 11.5	-0.1
	177nm,0.2s,SNR=156						
TKM2				⇓S	Sg	01 00 23.4	+0.6
	566nm,0.1s						
TKM2	Tokmak 2	0.86	337	⇑P	Pg	01 00 11.5	-0.1
	40nm,0.2s						
TKM2				⇓S	Sg	01 00 23.2	+0.4
	325nm,0.3s						
TKM2	Tokmak 2	0.86	337	⇓iP	Pg	01 00 11.6	-0.1
	baz=36						
TKM2				⇓iS	Sb	01 00 23.5	-1.1
	baz=36						
KST	Kastek	0.91	356	P	Pg	01 00 12.4	-0.3
	284nm,0.2s						
KST				S	Sg	01 00 24.2	-0.4
	649nm,0.3s						
KST	Kastek	0.91	356	⇓iP	Pg	01 00 12.4	-0.3
	baz=55						
KST				⇓iS	Sg	01 00 24.9	+0.3
	baz=55						
KST	Kastek	0.91	356	⇓iP	Pg	01 00 12.4	-0.3
	284nm,0.2s						
KST				⇓iS	Sg	01 00 24.9	+0.3
	601nm,0.3s						
KBK	Karagaybulak	0.97	303	⇑P	Pg	01 00 14.0	+0.2
	112nm,0.1s,SNR=44						
KBK				⇑S	Sb	01 00 28.3	+0.5
	280nm,0.1s						
KBK	Karagaybulak	0.97	303	⇓iP	Pg	01 00 13.9	0.0
	baz=2.0						
KBK				⇓iS	Sb	01 00 27.4	-0.4
	baz=2.0						
MTBS	Maitube	1.03	15	P	Pg	01 00 14.3	-0.8
	161nm,0.2s						
MTBS				S	Sg	01 00 27.4	-1.1
	387nm,0.2s						
MTBS	Maitube	1.03	15	⇓iP	Pg	01 00 14.3	-0.8
	baz=15						
MTBS				⇓iS	Sg	01 00 28.1	-0.4
	baz=15						
MTBS	Maitube	1.03	15	⇓iP	Pg	01 00 14.3	-0.8
	198nm,0.3s						
MTBS				⇓iS	Sg	01 00 28.1	-0.4
	408nm,0.2s						
TNSS	Tian-Shan	1.12	36	P	Pg	01 00 15.8	-0.8
	853nm,0.2s						
TNSS				S	Sg	01 00 30.8	-0.4
	350nm,0.4s						
TNSS	Tian-Shan	1.12	36	⇓iP	Pg	01 00 15.9	-0.8
	baz=36						
TNSS				⇓iS	Sg	01 00 30.8	-0.4
	baz=36						
TNSS	Tian-Shan	1.12	36	⇓iP	Pg	01 00 15.9	-0.8
	853nm,0.1s						
TNSS				⇓iS	Sg	01 00 30.8	-0.4
	332nm,0.4s						
DGS	Degeres	1.13	349	P	Pg	01 00 16.7	-0.2
	87nm,0.1s						
DGS				S	Sg	01 00 31.4	0.0
	1.6nm,0.2s						
DGS	Degeres	1.13	349	⇓iP	Pg	01 00 16.4	-0.4
	baz=49						
DGS				⇓iS	Sb	01 00 31.8	-0.4
	baz=49						
DGS	Degeres	1.13	349	⇓iP	Pg	01 00 16.4	-0.4
	110nm,0.1s						
DGS				⇓iS	Sb	01 00 31.9	-0.4
	600nm,0.2s						
UCH	Uchtor	1.15	275	⇓P	Pg	01 00 17.0	-0.3
	47nm,0.2s,SNR=71						
UCH				⇑S	Sb	01 00 33.2	0.0
	198nm,0.2s						
UCH	Uchtor	1.15	275	⇓iP	Pg	01 00 17.0	-0.3
	baz=74						
UCH				⇓iS	Sb	01 00 33.0	-0.2
	baz=74						
AAA	Alma-Ata	1.25	30	P	Pn	01 00 18.6	-0.7
	1μm,0.2s						
AAA				S	Sg	01 00 35.2	-0.1
	559nm,0.2s						
AAA	Alma-Ata	1.25	30	⇓iP	Pn	01 00 18.7	-0.7
	baz=30						
AAA				⇑iS	Sg	01 00 35.4	0.0
	baz=30						
AAA	Alma-Ata	1.25	30	⇓iP	Pn	01 00 18.7	-0.7
	1μm,0.2s						
AAA				⇑iS	Sg	01 00 35.4	0.0
	563nm,0.2s						
FRU1	Bishkek	1.25	303	⇑iP	Pn	01 00 19.1	-0.3
	baz=2.0						
FRU1				⇑iS	Sg	01 00 35.5	+0.1
	baz=2.0						
AAK	Ala-Archa	1.26	294	⇑P	Pn	01 00 19.0	-0.7
	44nm,0.1s,SNR=52						
AAK				⇓S	Sb	01 00 35.8	-0.3
	300nm,0.2s						
AAK	Ala-Archa	1.26	294	⇓P	Pn	01 00 18.9	-0.7
	9.0nm,0.2s						
AAK				⇑S	Sb	01 00 35.6	-0.5
	129nm,0.3s						
AAK	Ala-Archa	1.26	294	⇑iP	Pn	01 00 18.9	-0.7
	baz=93						
AAK				⇑iS	Sb	01 00 35.9	-0.3
	baz=93						
MDOK	Medeo	1.26	35	Pg	Pn	01 00 18.3	-1.4
	334nm,0.1s						
MDOK				Lg	Lg	01 00 34.3	
	176nm,0.4s						
MDOK	Medeo	1.26	35	⇑iP	Pn	01 00 18.3	-1.4
	baz=35						
MDOK				⇓iS	Sb	01 00 34.5	-1.7
	baz=35						
MDOK	Medeo	1.26	35	⇑iP	Pn	01 00 18.3	-1.4
	334nm,0.1s						
MDOK				⇓iS	Sb	01 00 34.5	-1.7
	176nm,0.4s						
KNDC	Almaty	1.27	32	⇑P	Pn	01 00 18.8	-0.9
	174nm,0.1s						
KNDC				⇑S	Sg	01 00 36.1	-0.1
	499nm,0.5s						
CHMS	Chumysh	1.29	312	⇑P	Pn	01 00 19.5	-0.5
	57nm,0.2s,SNR=78						
CHMS	Chumysh	1.29	312	⇓iP	Pn	01 00 19.7	-0.3
	baz=11						
CHMS				⇓iS	Sn	01 00 37.2	-0.5
	baz=11						
ARLS	Aral	1.32	259	⇓iP	Pn	01 00 19.7	-0.7
	baz=58						
ARLS				⇓iS	Sn	01 00 38.0	-0.5
	baz=58						
KOTS	Kotyrbulak	1.35	35	P	Pn	01 00 20.0	-0.8
	139nm,0.3s						
KOTS				S	Sb	01 00 37.3	-1.3
KOTS	Kotyrbulak	1.35	35	⇓iP	Pn	01 00 20.1	-0.8
	baz=35						
KOTS				⇑eS	Sb	01 00 37.6	-1.1
	baz=35						
KOTS	Kotyrbulak	1.35	35	⇓iP	Pn	01 00 20.1	-0.8
	222nm,0.2s						
KOTS				⇑eS	Sb	01 00 37.5	-1.1
	327nm,0.3s						
USP	Ospenovka	1.61	315	⇓P	Pb	01 00 25.3	-0.2
	70nm,0.1s,SNR=373						
USP				⇑S	Sg	01 00 47.3	+0.3
	208nm,0.1s						
USP	Ospenovka	1.61	315	⇑iP	Pb	01 00 25.1	-0.4
	baz=14						
USP				⇑iS	Sg	01 00 46.7	-0.3
	baz=14						
KTBS	Karatobe	1.64	16	P	Pn	01 00 25.0	+0.2
	226nm,0.2s						
KTBS				S	Sn	01 00 45.8	-0.6
	407nm,0.3s						
KTBS	Karatobe	1.64	16	⇓iP	Pb	01 00 25.3	-0.7
	baz=11						
KTBS				⇑iS	Sb	01 00 47.1	+0.1
	baz=11						
KTBS	Karatobe	1.64	16	⇓iP	Pb	01 00 25.3	-0.7
	226nm,0.2s						
KTBS				⇑iS	Sb	01 00 47.1	+0.1
	884nm,0.3s						
AML	Almayashu	1.75	271	⇓P	Pb	01 00 27.9	-0.1
	62nm,0.2s,SNR=291						
AML	Almayashu	1.75	271	⇓iP	Pb	01 00 28.0	-0.1
	baz=70						
AML				⇓iS	Sg	01 00 51.4	-0.2
	baz=70						
EKS2	Erkin-Say	1.77	288	⇑P	Pb	01 00 28.6	+0.4
	48nm,0.2s,SNR=67						
EKS2	Erkin-Say	1.77	288	⇑iP	Pb	01 00 28.2	0.0
	baz=87						
EKS2				⇑iS	Sg	01 00 51.7	-0.3
	baz=87						
CHKK	Chushkaly	1.85	21	S	Sb	01 00 52.8	-0.2
	460nm,0.2s						
CHKK	Chushkaly	1.85	21	⇓iP	Pb	01 00 29.0	-0.5
	baz=21						
CHKK				⇑eS	Sb	01 00 52.8	-0.2
	baz=21						
CHKK	Chushkaly	1.85	21	⇓iP	Pb	01 00 29.0	-0.5
	150nm,0.3s						
CHKK				⇑eS	Sb	01 00 52.8	-0.2
	550nm,0.2s						
SATY	Saty	1.97	61	S	Sb	01 00 55.4	-1.1
	626nm,0.2s						
SATY	Saty	1.97	61	eP	Pb	01 00 30.7	-0.9
	290nm,0.3s						
SATY				eS	Sb	01 00 56.1	-0.3
	826nm,0.4s						
ZHN	Zhinishke	2.04	59	eP	Pb	01 00 31.6	-1.2
	baz=59						
ZHN				eS	Sb	01 00 58.3	-0.2
	baz=59						
ZHN	Zhinishke	2.04	59	eP	Pb	01 00 31.6	-1.2
	129nm,0.2s						
ZHN				eS	Sb	01 00 58.3	-0.2
	396nm,0.2s						
KURS	Kuram	2.06	48	Pg	Pb	01 00 32.3	-0.8
	109nm,0.5s						
KURS				Lg	Lg	01 00 58.4	
	268nm,0.7s						
KURS	Kuram	2.06	48	eP	Pb	01 00 32.1	-1.1
	baz=48						
KURS				eS	Sb	01 00 58.8	-0.3
	baz=48						
KURS	Kuram	2.06	48	eP	Pb	01 00 32.1	-1.1
	109nm,0.5s						
KURS				eS	Sb	01 00 58.8	-0.3
	268nm,0.7s						
MRKS	Merke	2.18	287	Pg	Pb	01 00 36.0	+0.8
	61nm,0.3s						
MRKS				Lg	Lg	01 01 04.6	
	161nm,0.2s						
MRKS	Merke	2.18	287	eP	Pb	01 00 36.1	+0.9
	62nm,0.3s						
MRKS				eS	Sg	01 01 05.0	-0.3
	140nm,0.4s						
ARSB	Arslanbob	2.44	252	⇑iP	Pb	01 00 37.9	-1.7
	baz=51						
ARSB				⇑iS	Sb	01 01 08.8	-1.2
	baz=51						
ARXS	Arharly	2.45	31	Pg	Pb	01 00 38.8	-1.0
	251nm,0.4s						
ARXS				Lg	Lg	01 01 09.9	
	266nm,0.3s						
ARXS	Arharly	2.45	31	eP	Pb	01 00 38.8	-1.0
	275nm,0.4s						
ARXS				eS	Sb	01 01 09.5	-0.8
	320nm,0.4s						
MNBS	Baschi	2.59	41	Pg	Pb	01 00 41.5	-0.7
	85nm,0.2s						
MNBS				Lg	Lg	01 01 14.7	
	160nm,0.3s						
MNBS	Baschi	2.59	41	eP	Pb	01 00 41.4	-0.9
	76nm,0.5s						
MNBS				eS	Sb	01 01 14.7	+0.2
	184nm,0.2s						
KSH	Kashi	2.62	181	Pn	Pg	01 00 52.0	+6.7
KSH				Sn	Sg	01 01 32.6	+13
KSH				smax	smax		
	comp=N,420nm,0.7s						
KSH				smax	smax		
	comp=E,380nm,0.6s						
PDGK	Podgornoye	2.80	64	⇓Pn	Pn	01 00 42.1	+1.4
	21nm,0.4s						
PDGK				⇑Lg	Lg	01 01 17.8	
	69nm,0.4s						
PDGK	Podgornoye	2.80	64	⇓iP	Pn	01 00 42.0	+1.3
	baz=64						
PDGK				⇓iS	Sn	01 01 16.6	+1.7
	baz=64						
ARK	Arkit	3.07	265	⇓iP	Pn	01 00 46.2	+1.8
	baz=64						
ARK				⇓iS	Sn	01 01 23.2	+1.6
	baz=64						
BTLS	Baital	3.25	334	Lg	Lg	01 01 35.3	
	125nm,0.2s						
BTLS	Baital	3.25	334	eP	Pb	01 00 54.0	+0.6
	12nm,0.3s						
BTLS				eS	Sg	01 01 36.4	-3.2
	125nm,0.3s						
KTMS	Ketmen	3.42	66	Lg	Lg	01 01 38.6	
	74nm,0.4s						
KTMS	Ketmen	3.42	66	eP	Pb	01 00 55.6	-0.9
	34nm,0.3s						
KTMS				eS	Sb	01 01 38.7	+0.3
	74nm,0.4s						
DJR	Jarkent	3.50	50	Lg	Lg	01 01 42.2	
	83nm,0.3s						
DJR	Jarkent	3.50	50	eP	Pb	01 00 57.6	-0.2
	28nm,0.2s						
DJR				eS	Sb	01 01 42.2	+1.6
	83nm,0.3s						
KAPS	Kapalarasan	3.96	36	Pg	Pb	01 01 07.6	+2.2
	54nm,0.4s						
KAPS				Lg	Lg	01 01 59.0	
	22nm,0.2s						
KAPS	Kapalarasan	3.96	36	eP	Pb	01 01 07.7	+2.2
	54nm,0.4s						
KAPS				eS	Sg	01 01 59.2	-3.0
	26nm,0.6s						
KK31	Karatay Array	4.20	285	⇑Pg	Pb	01 01 11.3	+1.7
	4.9nm,0.6s,baz=92,slow=14,SNR=66						
KK31				⇓Lg	Lg	01 02 06.9	
	29nm,0.7s,baz=99,slow=30						
IUG	Iuzhnay	4.48	272	Lg	Lg	01 02 16.7	
	52nm,0.8s						
IUG	Iuzhnay	4.48	272	eP	Pg	01 01 18.1	-2.9
	3.5nm,0.3s						
IUG				eS	Sg	01 02 17.6	-1.4

26nm,0.7s
KURBB **Kurchatov Arra** **8.66 11** ⇓Pn **Pn** **01 02 03.7 +2.6**
2.3nm,0.9s
KURBB ⇓Lg Lg 01 04 27.1
39nm,0.8s
KURK Kurchatov **8.76 11** ⇓Pn Pn 01 02 06.8 +4.3
5.8nm,1.8s
KURK ⇓Lg Lg 01 04 26.1
16nm,0.8s

ROM 24 01:01:41.6±0.1, 43°.418N±0°.003×12°.467E±0°.005, h8km±1km, ML1.2/11, Error ellipse: s-maj=0.4km s-min=0.0km az=93.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.06**	**305**	P	Pg	01 01 43.5	+0.1
ATPI				S	Sg	01 01 44.8	0.0
ATPI				AML	AML		
	comp=E,284μm,0.4s						
ATPI				AML	AML		
	comp=N,418μm,0.3s						
ATPI				AML	AML		
	comp=E,284μm,0.4s						
ATPI				AML	AML		
	comp=N,419μm,0.3s						
ATPI				AML	AML		
	comp=N,419μm,0.3s						
ATPI				AML	AML		
	comp=E,284μm,0.4s						
ATFO	**Monte Foce - G**	**0.09**	**124**	P	Pg	01 01 44.1	+0.2
ATFO				S	Sg	01 01 46.0	+0.5
ATFO				AML	AML		
	comp=E,294μm,0.2s						
ATFO				AML	AML		
	comp=N,414μm,0.8s						
ATFO				AML	AML		
	comp=E,294μm,0.2s						
ATFO				AML	AML		
	comp=N,414μm,0.8s						
ATFO				AML	AML		
	comp=E,294μm,0.2s						
PIEI	**Pieia**	**0.13**	**23**	P	Pg	01 01 45.0	+0.5
PIEI				S	Sg	01 01 47.7	+1.3
PIEI				AML	AML		
	comp=E,260μm,0.4s						
PIEI				AML	AML		
	comp=N,241μm,0.3s						
PIEI				AML	AML		
	comp=E,260μm,0.4s						
PIEI				AML	AML		
	comp=N,240μm,0.3s						
PIEI				AML	AML		
	comp=E,260μm,0.4s						
PIEI				AML	AML		
	comp=N,240μm,0.3s						
MURB	**Monte Urbino**	**0.16**	**165**	P	Pg	01 01 45.7	+0.7
MURB				S	Sg	01 01 48.7	+1.4
MURB				AML	AML		
	comp=E,624μm,0.3s						
MURB				AML	AML		
	comp=N,492μm,0.9s						
MURB				AML	AML		
	comp=E,624μm,0.3s						
MURB				AML	AML		
	comp=N,492μm,0.9s						
MURB				AML	AML		
	comp=N,492μm,0.9s						
MURB				AML	AML		
	comp=E,624μm,0.3s						
ATMI	**Monte Miggiano**	**0.17**	**240**	P	Pg	01 01 46.0	+0.9
ATMI				S	Sg	01 01 48.8	+1.3
ATMI				AML	AML		
	comp=E,172μm,0.6s						
ATMI				AML	AML		
	comp=N,134μm,1.0s						
ATMI				AML	AML		
	comp=E,172μm,0.6s						
ATMI				AML	AML		
	comp=N,134μm,1.0s						
ATMI				AML	AML		
	comp=E,172μm,0.6s						
ATMI				AML	AML		
	comp=N,134μm,1.0s						
NARO	**Abbazia di Nar**	**0.21**	**23**	P	Pg	01 01 46.3	+0.5
NARO				S	Sg	01 01 50.0	+1.2
NARO				AML	AML		
	comp=E,60μm,0.9s						
NARO				AML	AML		
	comp=N,51μm,1.5s						
NARO				AML	AML		
	comp=E,60μm,0.9s						
NARO				AML	AML		
	comp=N,51μm,1.5s						
NARO				AML	AML		
	comp=N,51μm,1.5s						
NARO				AML	AML		
	comp=E,60μm,0.9s						
FRON	**Frontone**	**0.21**	**62**	P	Pg	01 01 46.4	+0.5
FRON				S	Sg	01 01 50.3	+1.4
FRON				AML	AML		
	comp=E,48μm,0.8s						
FRON				AML	AML		
	comp=N,102μm,1.4s						
FRON				AML	AML		
	comp=E,48μm,0.8s						
FRON				AML	AML		
	comp=N,102μm,1.4s						
ATTE	**AVT- Monte Tez**	**0.23**	**201**	P	Pg	01 01 47.0	+0.7
ATTE				S	Sg	01 01 50.6	+1.1
ATTE				AML	AML		
	comp=E,65μm,1.4s						
ATTE				AML	AML		
	comp=N,52μm,0.3s						
FOSV	**Fossato di Vic**	**0.25**	**120**	P	Pg	01 01 47.0	+0.4
FOSV				S	Sg	01 01 51.8	+1.9
PE3	**Peglio**	**0.28**	**4**	P	Pg	01 01 47.9	+0.7
PE3				S	Sb	01 01 52.7	-1.1
PE3				AML	AML		
	comp=E,92μm,1.4s						
PE3				AML	AML		
	comp=N,81μm,1.2s						
PE3				AML	AML		
	comp=E,92μm,1.4s						
PE3				AML	AML		
	comp=N,81μm,1.2s						
PARC	**Parchiule**	**0.28**	**324**	P	Pg	01 01 48.0	+0.7
PARC				S	Sb	01 01 53.3	-0.6
ARVD	**Arcevia**	**0.35**	**77**	AML	AML		
	comp=N,27μm,1.3s						
ARVD				AML	AML		
	comp=E,26μm,1.3s						
ARVD				AML	AML		
	comp=E,26μm,1.3s						
ARVD				AML	AML		
	comp=N,27μm,1.3s						
ARVD				AML	AML		
	comp=E,26μm,1.3s						
ARVD				AML	AML		
	comp=N,27μm,1.3s						
CAFI	**Castiglion Fio**	**0.38**	**257**	AML	AML		
	comp=N,28μm,1.6s						
CAFI				AML	AML		
	comp=E,27μm,1.2s						
CAFI				AML	AML		
	comp=N,28μm,1.6s						
CAFI				AML	AML		
	comp=E,27μm,1.2s						
SNTG	**Esanatoglia**	**0.38**	**115**	AML	AML		
	comp=N,60μm,0.2s						
SNTG				AML	AML		
	comp=E,57μm,1.4s						
SNTG				AML	AML		
	comp=N,60μm,0.2s						
SNTG				AML	AML		
	comp=E,57μm,1.4s						

GEN 24 01:01:47.7, 44°.20N×10°.21E, h2km±1km, Ml0.4, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.06**	**231**	P	Pg	01 01 49.3	+0.5
EQUI				S	Sg	01 01 50.4	+0.8
SARO	**Sassorosso**	**0.14**	**97**	P	Pg	01 01 50.9	+0.6
SARO				S	Sg	01 01 53.2	+1.0
CARD	**Cardoso**	**0.26**	**132**	P	Pg	01 01 53.3	+0.6
CARD				S	Sg	01 01 57.0	+1.0
MAIM	**Mastiano**	**0.35**	**145**	P	Pg	01 01 53.5	-0.9
MAIM				S	Sg	01 01 59.6	+0.7

*NEIC **24** 01:05:23.7±0.0, 58°.30N×133°.46W, h14km, ML2.4(AEIC), ML2.7(OTT), After AEIC.*

PGC 24 01:05:25.6±3.1, 58°.32N×133°.56W, h1km, ML2.7/8, 50km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.44**	**265**	*e*Pg	Pg	01 05 33.6	-0.4
BESE	**Bessie Mountai**	**0.73**	**292**	*e*Pg	Pg	01 05 38.7	-0.9
BESE	**Bessie Mountai**	**0.73**	**292**	P	Pg	01 05 38.4	-1.1
SKAG	**Skagway**	**1.47**	**322**	*e*Pn	Pn	01 05 51.7	-1.5
SKAG				*e*Sn	Sg	01 06 10.9	-1.8
SIT	**Sitka**	**1.58**	**218**	*e*Pn	Pn	01 05 53.8	-1.0
PLBC	**Pleasant Camp**	**1.85**	**309**	*e*Pn	Pn	01 05 58.6	+0.2
PLBC				*e*Sn	Sb	01 06 23.4	-0.4
PLBC	**Pleasant Camp**	**1.85**	**309**	Pg	Pn	01 05 58.6	+0.2
PLBC				Sg	Sb	01 06 23.4	-0.4
DLBC	**Dease Lake**	**1.87**	**85**	*e*Pn	Pn	01 05 58.2	-0.6
DLBC				*e*Sn	Sn	01 06 23.6	+0.6
DLBC	**Dease Lake**	**1.87**	**85**	Pn	Pn	01 05 57.2	-1.6
DLBC				Pg	Pb	01 05 59.3	-1.3
DLBC				Sn	Sn	01 06 21.8	-1.2
DLBC				Sg	Sb	01 06 23.6	-0.8
WRAK	**Wrangell Islan**	**2.02**	**160**	*e*Pn	Pn	01 05 59.5	-1.2
WHY	**Whitehorse**	**2.44**	**345**	*e*Pn	Pn	01 06 05.8	-1.0
WHY				*e*Sn	Sn	01 06 33.4	-3.9
WHY	**Whitehorse**	**2.44**	**345**	Pn	Pn	01 06 05.8	-1.0
WHY				Pg	Pb	01 06 09.3	-1.1
WHY				Sg	Sb	01 06 41.1	+0.1
CRAG	**Craig**	**2.87**	**175**	*e*Pn	Pn	01 06 11.3	-1.1
HYT	**Haines Junctio**	**3.21**	**323**	*e*Pn	Pn	01 06 17.3	0.0
HYT				*e*Sn	Sn	01 06 55.3	-1.0
HYT	**Haines Junctio**	**3.21**	**323**	Pn	Pn	01 06 16.2	-1.1
HYT				Pg	Pb	01 06 23.2	-0.4
HYT				Sg	Sb	01 07 04.7	+1.5
YUK7	**Dusty Glacier**	**3.22**	**315**	*e*Pg	Pb	01 06 23.7	-0.1
YUK7				*e*Sg	Sg	01 07 07.2	-1.9
YUK7	**Dusty Glacier**	**3.22**	**315**	Pg	Pb	01 06 23.7	-0.1
YUK7				Sg	Sg	01 07 07.2	-1.9
PNL	**Peninsula**	**3.31**	**297**	*e*Pg	Pb	01 06 25.6	+0.6
PNL				*e*Sg	Sg	01 07 08.8	-3.0
PNL	**Peninsula**	**3.31**	**297**	Pg	Pb	01 06 25.6	+0.6
PNL				Sg	Sg	01 07 08.8	-3.0
BCPM	**Bancas Point**	**3.53**	**300**	*e*Pn	Pn	01 06 19.1	-2.5
YUK6	**Outpost Mounta**	**3.59**	**319**	*e*Pg	Pb	01 06 29.5	-0.5
YUK6				*e*Sg	Sg	01 07 17.6	-3.2
YUK6	**Outpost Mounta**	**3.59**	**319**	Pg	Pb	01 06 29.5	-0.5
YUK6				Sg	Sg	01 07 17.6	-3.2
YUK4	**Talbot Arm**	**3.97**	**322**	Sg	Sg	01 07 30.2	-3.0
RUBB	**Prince Rupert**	**4.41**	**154**	Sg	Sb	01 07 42.1	+4.7
YUK2	**White River**	**5.04**	**317**	Sg	Sg	01 08 02.6	-4.7
FNBB	**Fort Nelson**	**5.55**	**80**	Sg	Sb	01 08 15.9	+5.8
DAWY	**Dawson**	**6.41**	**336**	Sg	Sg	01 08 43.7	-7.7

*NIED **24** 01:05:00, 44°.50N×149°.80E, h17km, Mw4.3 Best double couple: M0=2.86000×10^15 NP1:φ0=233.00000°, δ49.00000°, λ124.00000°. NP2:φ0=7.00000°, δ51.00000°, λ57.00000°.*
*IDC **24** 01:05:38.2±0.6, 44°.30N×149°.71E, h0km, mb4.3/20, mb1 4.4/28, mb1mx4.3/43, mbtmp4.2/28, ML3.2/6, MS3.8/7, Ms1 3.8/7, ms1mx3.3/34, Error ellipse: s-maj=17.6km s-min=12.5km az=158.0*
*BJI **24** 01:05:39.3±0.0, 44°.52N×149°.61E, h15km, mb4.8/27, mB4.9/20, Ms4.5/14, Ms7 4.2/11*
*SKHL **24** 01:05:39.4±0.1, 44°.07N×149°.92E, h30km±9km, mb4.6/7*
*JMA **24** 01:05:40.0±0.6, 44°.49N×149°.76E, h30km, M4.3*
*ISCJB **24** 01:05:40.2±0.3, 44°.16N±0°.04×149°.73E±0°.04, h29km, mb4.5/81, MS4.0/9, Error ellipse: s-maj=6.6km s-min=2.9km az=154.4*
*MOS **24** 01:05:40.6±1.0, 44°.30N×149°.68E, h27km, mb5.0/34, Error ellipse: s-maj=7.3km s-min=5.2km az=118.6*
*NEIC **24** 01:05:42.5±1.6, 44°.18N×149°.78E, h34km±4km, mb4.7/64, Error ellipse: s-maj=18.3km s-min=13.1km az=146.0*

ISC 24 01:05:40.3±0.7, 44°.14N±0°.05×149°.81E±0°.05, h20km±2km, h20km:pP,n287,σ1≑45/318, mb4.7/91, MS3.9/9, 15C-29D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.77**	**309**	*c i*PN	**Pn**	**01 06 08.9**	**-0.8**
KUR				*i* S	**Sb**	**01 06 33.2**	**-0.6**
KUR				pmax	pmax		
	comp=Z,764nm,0.6s						
KUR				pmax	pmax		
	comp=N,258nm,0.4s						
KUR				smax	smax		
	comp=N,864nm,0.6s						
KUR				smax	smax		
	comp=E,2μm,0.6s						
KUR				smax	smax		
	comp=E,6μm,1.5s						
KUR				smax	smax		
	comp=N,4μm,1.3s						
KUR	**Kuril'sk**	**1.77**	**309**	*i* P	**Pn**	**01 06 09.0**	**-0.8**
KUR				AMB	AMB	01 06 11.0	
	comp=N,226nm,0.5s						
KUR				AMB	AMB	01 06 11.0	
	comp=N,372nm,0.5s						
KUR				AMB	AMB	01 06 11.0	
	comp=N,670nm,0.5s						
KUR				*i* S	**Sn**	**01 06 31.3**	**-0.4**
KUR				A	A	01 06 35.0	
	comp=N,3μm,0.6s						
KUR				A	A	01 06 35.0	
	comp=N,3μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.85**	**269**	*c i*PN	**Pn**	**01 06 23.7**	**-0.9**
YUK				*e*S	**Sn**	**01 06 59.4**	**+1.1**
YUK				pmax	pmax		
	comp=E,106nm,0.4s						
YUK				pmax	pmax		
	comp=Z,181nm,0.4s						
YUK				pmax	pmax		
	comp=N,50nm,0.2s						
YUK				smax	smax		
	comp=E,335nm,0.5s						
YUK				smax	smax		
	comp=N,234nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.85**	**269**	*i* P	**Pn**	**01 06 24.0**	**-0.6**
YUK				AMB	AMB	01 06 26.0	
	comp=N,50nm,0.4s						
YUK				AMB	AMB	01 06 26.0	
	comp=N,106nm,0.4s						
YUK				AMB	AMB	01 06 26.0	
	comp=N,181nm,0.4s						
YUK				*e*S	**Sn**	**01 06 57.4**	**-0.9**
YUK				A	A	01 07 01.0	
	comp=N,487nm,0.4s						
YUK				A	A	01 07 01.0	
	comp=N,900nm,0.4s						
LAGR	**Lagunnoye**	**2.90**	**270**	*e*S	**Sn**	**01 07 01.0**	**+1.4**
GRPR	**Tuman**	**2.92**	**269**	*i* PN	**Pn**	**01 06 24.6**	**-1.0**
GRPR				S	**Sn**	**01 07 01.3**	**+1.3**
GRPR				pmax	pmax		
	comp=Z,161nm,0.5s						
GRPR				smax	smax		
	comp=E,142nm,0.3s						
GRPR				smax	smax		
	comp=N,473nm,0.4s						
GRPR	**Tuman**	**2.92**	**269**	*i* P	**Pn**	**01 06 25.0**	**-0.6**
GRPR				AMB	AMB	01 06 32.0	
	comp=N,161nm,0.5s						
GRPR				*e*S	**Sn**	**01 07 00.5**	**+0.5**
GRPR				A	A	01 07 12.0	
	comp=N,473nm,0.4s						
GRPR				A	A	01 07 12.0	
	comp=N,142nm,0.4s						
NEM2	**Nemuro 2**	**3.05**	**257**	P	**Pn**	**01 06 26.2**	**-1.2**
NEM2				*e*S	**Sn**	**01 06 59.5**	**-3.8**
GLVR	**Golovnino**	**3.13**	**264**	⇑*i*PN	**Pn**	**01 06 27.8**	**-0.6**
GLVR				*e*S	**Sn**	**01 07 06.8**	**+1.6**
GLVR				pmax	pmax		
	comp=Z,234nm,0.4s						
GLVR				pmax	pmax		
	comp=N,44nm,0.5s						
GLVR				pmax	pmax		
	comp=E,35nm,0.2s						
GLVR				smax	smax		
	comp=E,449nm,0.3s						
GLVR				smax	smax		
	comp=N,200nm,0.2s						
GLVR	**Golovnino**	**3.13**	**264**	*i* P	**Pn**	**01 06 28.0**	**-0.4**
GLVR				AMB	AMB	01 06 29.0	
	comp=N,44nm,0.5s						
GLVR				AMB	AMB	01 06 29.0	
	comp=N,35nm,0.5s						
GLVR				AMB	AMB	01 06 29.0	
	comp=N,234nm,0.5s						
GLVR				*e*S	**Sn**	**01 07 05.5**	**+0.3**
GLVR				A	A	01 07 08.0	
	comp=N,200nm,0.3s						
GLVR				A	A	01 07 08.0	
	comp=N,449nm,0.3s						
JRA	**Rausu**	**3.39**	**268**	P	**Pn**	**01 06 32.5**	**+0.5**
JNK	**Nakash**	**3.73**	**263**	P	**Pn**	**01 06 36.0**	**-0.7**
JAK	**Akkeshi**	**3.89**	**255**	P	**Pn**	**01 06 37.9**	**-1.0**
JTKR	**Abashiri--Toko**	**4.26**	**270**	P	**Pn**	**01 06 44.3**	**+0.3**
JAR	**Ashorobuto**	**4.46**	**261**	P	**Pn**	**01 06 45.0**	**-1.8**
JAR				*e*S	**Sn**	**01 07 36.1**	**-2.0**
JOB	**Onbets**	**4.52**	**256**	P	**Pn**	**01 06 45.5**	**-2.1**
JMP	**Maruseppu**	**4.65**	**271**	P	**Pn**	**01 06 50.2**	**+0.8**
JCH	**Churui**	**4.94**	**254**	P	**Pn**	**01 06 53.3**	**-0.1**
JCH				*e*S	**Sn**	**01 07 47.3**	**-2.7**
JKK2	**Kamakawa 2**	**5.10**	**269**	P	**Pn**	**01 06 55.8**	**+0.2**
JKA	**Kamikawa-asahi**	**5.19**	**272**	*e*P	**Pn**	**01 06 57.8**	**+1.0**
ASAJ	**Asahikawa**	**5.19**	**272**	Pn	**Pn**	**01 06 57.8**	**+0.9**
	comp=N,0.9nm,0.3s,baz=20,slow=30,SNR=6.0						
ASAJ				LR	LR	01 09 28.3	
	comp=N,768nm,18.0s,baz=151,slow=45						
ASAJ	**Asahikawa**	**5.19**	**272**	P	**Pn**	**01 06 58.3**	**+1.4**
ERM	**Erimo**	**5.32**	**249**	*e*Pn	**Pn**	**01 06 59.6**	**+1.1**
ERM				*e*Sn	**Sn**	**01 07 53.8**	**-5.3**
ERM	**Erimo**	**5.32**	**249**	*e*PN	**Pn**	**01 06 59.6**	**+1.1**
JFR	**Furan**	**5.33**	**262**	P	**Pn**	**01 06 59.3**	**+0.6**
JNBK	**Urakawa-nobuka**	**5.48**	**253**	P	**Pn**	**01 07 00.7**	**-0.1**
JBT2	**Biratori 2**	**5.59**	**259**	P	**Pn**	**01 07 01.6**	**-0.7**
YSS	**Yuzh-Sakhalins**	**5.70**	**302**	*e*Pn	**Pn**	**01 07 04.2**	**+0.4**
YSS	**Yuzh-Sakhalins**	**5.70**	**302**	*e*PN	**Pn**	**01 07 06.5**	**+2.7**
YSS				*e*S	**Sn**	**01 08 13.0**	**+4.4**
YSS				MLR	MLR		
	comp=Z,600nm,13.0s						
YSS				MLR	MLR		
	comp=E,700nm,17.0s						
YSS	**Yuzh-Sakhalins**	**5.70**	**302**	*e*P	**Pn**	**01 07 05.7**	**+1.9**
JNB	**Noboribetsu**	**6.62**	**258**	P	**Pn**	**01 07 16.4**	**0.0**
JKB	**Kayabe**	**6.82**	**254**	P	**Pn**	**01 07 18.6**	**-0.5**
JKB				*e*S	**Sn**	**01 08 30.3**	**-5.8**
JTM	**Tenmabayashi**	**7.28**	**246**	P	**Pn**	**01 07 24.3**	**-1.2**
SKR	**Severo-Kuril's**	**7.82**	**31**	*e*PN	**Pn**	**01 07 32.8**	**0.0**
SKR				pmax	pmax		
	comp=Z,39nm,0.9s						
SKR				pmax	pmax		
	comp=Z,300nm,3.8s						
SKR				MLR	MLR		
	comp=Z,600nm,18.0s						
SKR	**Severo-Kuril's**	**7.82**	**31**	*e*P	**Pn**	**01 07 32.8**	**0.0**
SKR				AMB	AMB	01 07 34.0	
	comp=Z,39nm,0.9s						
SKR				*e*S	**Sn**	**01 08 56.7**	**-4.0**
SKR				A	A	01 09 02.0	
	comp=Z,35nm,1.1s						
SKR				A	A	01 09 02.0	
	comp=Z,80nm,1.1s						
OFUJ	**Ofunato**	**7.92**	**233**	P	**Pn**	**01 07 32.4**	**-1.9**
OFUJ				*e*S	Sn	01 08 54.2	-9.1
JRG	**Rokugo**	**8.33**	**239**	P	**Pn**	**01 07 38.8**	**-1.2**
TEY	**Ternei**	**9.47**	**280**	⇑*e*PN	**Pn**	**01 07 57.3**	**+1.8**
TEY				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TEY	**Ternei**	**9.47**	**280**	*i* P	**Pn**	**01 07 57.3**	**+1.8**
TEY				AMB	AMB	01 07 58.4	
	comp=Z,10.0nm,0.7s						
PEA0B	**Petropavlovsk-**	**10.38**	**27**	*e*Pn	**Pn**	**01 08 10.1**	**+2.2**
PETK	**Petropavlovsk-**	**10.38**	**27**	Pn	**Pn**	**01 08 08.4**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=184,slow=11,SNR=5.4						
PEA1	**Petropavlovsk-**	**10.38**	**27**	*e*Pn	**Pn**	**01 08 08.4**	**+0.5**
PET	**Petropavlovsk**	**10.64**	**30**	*e*Pn	**Pn**	**01 08 08.9**	**-2.6**
PET	**Petropavlovsk**	**10.64**	**30**	*e*PN	**Pn**	**01 08 08.9**	**-2.6**
NKL	**Nikolayevsk**	**10.85**	**329**	*e*PN	**Pn**	**01 08 10.7**	**-3.6**
NKL				pmax	pmax		
	comp=N,3.0nm,0.6s						
NKL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NKL				pmax	pmax		
	comp=E,1.0nm,0.5s						
MAJO	**Matsushiro**	**11.65**	**233**	*e*Pn	**Pn**	**01 08 22.9**	**-2.6**
MJAR	**Matsushiro Arr**	**11.65**	**233**	Pn	**Pn**	**01 08 27.4**	**+2.0**
	baz=21,slow=16,SNR=4.3						
MJB9	**Matsu-Tunnel**	**11.65**	**233**	*e*Pn	**Pn**	**01 08 23.1**	**-2.4**
USRK	**Ussuriysk Ar.**	**12.80**	**276**	Pn	**Pn**	**01 08 41.3**	**+0.2**
	comp=E,0.4nm,0.3s,baz=86,slow=14,SNR=11						
KLR	**Kul'dur**	**13.40**	**299**	Pn	**Pn**	**01 08 49.0**	**-0.2**
	comp=E,0.1nm,0.3s,baz=325,slow=15,SNR=2.2						
KLR				LR	LR	01 13 48.7	
	comp=E,124nm,20.2s,baz=99,slow=37						
KLR	**Kul'dur**	**13.40**	**299**	PN	**Pn**	**01 08 49.0**	**-0.2**
JHJ2	**Mitsune**	**13.49**	**219**	*e*Pn	**Pn**	**01 08 47.5**	**-3.0**
EKMR	**Ekimchan**	**14.26**	**315**	*e*P	**Pn**	**01 09 00.2**	**-0.8**
EKMR				AMB	AMB	01 09 06.0	
	comp=E,7.0nm,0.8s						
MDJ	**Mudanjiang**	**14.47**	**279**	*e*Pn	**Pn**	**01 09 04.6**	**+0.7**
MA2	**Magadan**	**15.47**	**2**	Pn	**Pn**	**01 09 15.3**	**-1.9**
	baz=144,slow=12,SNR=2.3						
BMKR	**Bomnak**	**17.19**	**315**	*e*P	**Pn**	**01 09 36.0**	**-3.1**
BMKR				AMB	AMB	01 09 41.5	
	comp=E,12nm,0.3s						
ZEA	**Zeya**	**17.59**	**311**	*e*P	**Pn**	**01 09 42.4**	**-1.7**
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
ZEA				MLR	MLR		
	comp=E,200nm,15.0s						
ZEA	**Zeya**	**17.59**	**311**	*e*P	**Pn**	**01 09 42.4**	**-1.7**
ZEA				AMB	AMB	01 09 45.8	
	comp=E,17nm,1.0s						
KSRS	**Korea Array**	**17.84**	**256**	P	**Pn**	**01 09 47.4**	**+0.1**
	comp=E,0.4nm,0.3s,baz=60,slow=11,SNR=8.5						
KS15	**Wonju Array Si**	**17.87**	**256**	*e*Pn	**Pn**	**01 09 47.4**	**-0.3**
	comp=E,8.6nm,1.1s						
KROS	**Kirovskiy**	**18.03**	**313**	*e*P	**Pn**	**01 09 49.4**	**-0.1**
KROS				AMB	AMB	01 09 50.8	
	comp=E,5.0nm,0.5s						
KROS				AMB	AMB	01 09 50.8	
	comp=E,10.0nm,0.5s						
TJN	**Taejon**	**18.77**	**253**	⇑*i*P	**Pn**	**01 10 00.0**	**+1.4**
SEY	**Seymchan**	**18.89**	**4**	P	**P**	**01 09 58.0**	**-1.2**
	comp=E,0.3nm,0.3s,baz=171,slow=8.3,SNR=13						
SEY	**Seymchan**	**18.89**	**4**	⇑*i*P	**P**	**01 09 58.4**	**-0.8**
SEY	**Seymchan**	**18.89**	**4**	*e*P	**P**	**01 09 58.4**	**-0.8**
YAK	**Yakutsk**	**21.45**	**334**	*e*P	**P**	**01 10 24.2**	**-2.8**
YAK	**Yakutsk**	**21.45**	**334**	*e*P	**P**	**01 10 24.2**	**-2.8**
BJT	**Baijiatuau**	**25.20**	**272**	*e*P	**P**	**01 11 05.1**	**+0.6**
	comp=E,9.1nm,0.9s						
BJT	**Baijiatuau**	**25.20**	**272**	*e*P	**P**	**01 11 05.1**	**+0.6**
BJT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BILL	**Bilibino**	**25.48**	**14**	*e*P	**P**	**01 11 05.2**	**-1.5**
	comp=Z,6.6nm,1.1s						
BILL	**Bilibino**	**25.48**	**14**	⇑*i*P	**P**	**01 11 06.4**	**-0.4**
BILL				*e*		01 11 10.7	
BILL				*e*S	**S**	**01 15 32.3**	**-0.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,210nm,17.0s						
BILL	**Bilibino**	**25.48**	**14**	*i* P	**P**	**01 11 06.4**	**-0.4**
BOD	**Bodaibo**	**26.01**	**314**	*e*P	**P**	**01 11 07.9**	**-3.8**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TIA	**Tai'an**	**26.07**	**264**	P	**P**	**01 11 13.3**	**+0.8**
TIA				pmax	pmax		
	comp=Z,23nm,0.9s						
NJ2	**Nanjing**	**27.02**	**254**	*e*P	**P**	**01 11 26.6**	**+5.5**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
H11S1	**WAKE ISLAND Hy**	**29.22**	**146**	T	T	01 43 54.4	

baz=335,slow=76,SNR=19
H11S3 WAKE ISLAND Hy 29.23 146 T T 01 43 59.3
baz=335,slow=76,SNR=6.0
H11S2 WAKE ISLAND Hy 29.24 146 T T 01 44 01.0
baz=335,slow=76,SNR=12
ULN Ulaanbaatar 29.65 292 *e*P **P** **01 11 44.5 0.0**
comp=Z,9.4nm,0.9s
ULN Ulaanbaatar 29.65 292 ⇓*i*P **P** **01 11 44.8 +0.2**
ULN pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 29.65 292 *i* P **P** **01 11 44.8 +0.2**
SONA0 Songino Array 30.10 293 *e*P **P** **01 11 48.5 +0.1**
SONM Songino Array 30.10 293 P **P** **01 11 48.5 +0.1**
comp=Z,7.3nm,0.9s,baz=78,slow=8.7,SNR=27
SONM LR LR 01 25 08.3
comp=Z,180nm,18.1s,baz=92,slow=39
TLY Talaya 31.41 300 ⇓*i*P **P** **01 11 59.9 +0.1**
TLY Talaya 31.41 300 *i* P **P** **01 11 59.9 +0.1**
ZAK Zakamensk 31.76 298 *e*P **P** **01 12 02.2 -0.9**
ZAK *e* 01 12 14.4
ZAK pmax pmax
comp=Z,5.0nm,1.0s
XAN Xi'an 33.00 266 P **P** **01 12 13.9 -0.1**
XAN pP sP 01 12 21.1 +1.7
XAN pmax pmax
comp=Z,6.0nm,1.2s
LZH Lanzhou 35.68 273 *e*P **P** **01 12 38.3 +1.0**
LZH pP sP 01 12 43.5 +0.8
LZH sP pP 01 12 45.4 +4.1
LZH pmax pmax
comp=Z,23nm,1.4s
LZH pmax pmax
comp=Z,86nm,5.5s
LZH LR LR
comp=Z,370nm,17.2s
LZH LR LR
comp=Z,390nm,17.0s
LZH LR LR
comp=Z,380nm,19.8s
GTA Gaotai 37.12 280 *e*P **P** **01 12 49.3 -0.3**
GTA pP pP 01 12 53.6 0.0
GTA sP sP 01 12 56.4 +1.4
GTA pmax pmax
comp=Z,3.0nm,0.4s
ILAR Eielson Array 40.03 37 P **P** **01 13 13.6 0.0**
comp=Z,0.6nm,0.7s,baz=272,slow=9.5,SNR=8.9
ILB Eielson Array 40.03 37 *e*P **P** **01 13 13.6 0.0**
comp=Z,2.2nm,0.9s
DIV Divide 40.74 42 *e*P **P** **01 13 18.8 -0.7**
comp=Z,5.0nm,0.8s
DIV *e*PcP **PcP** **01 15 18.0 -2.6**
ZAA1 Zalesovo Array 42.30 307 *e*P **P** **01 13 31.3 -0.9**
ZAA1 *e*PcP **PcP** **01 15 25.6 -0.1**
ZAA0 Zalesovo Array 42.30 307 *e*P **P** **01 13 30.9 -1.4**
comp=Z,2.2nm,1.0s
ZALV Zalesovo Beam 42.30 307 P **P** **01 13 31.3 -0.9**
comp=Z,1.0nm,0.3s,baz=99,slow=8.8,SNR=3.5
ZALV PcP **PcP** **01 15 25.6 -0.1**
comp=Z,3.0nm,0.7s,baz=48,slow=2.8,SNR=9.6
ZALV LR LR 01 32 14.8
comp=Z,96nm,18.2s,baz=70,slow=38
HYT Haines Junctio 44.77 42 *e*P **P** **01 13 53.9 +1.6**
comp=Z,10nm,1.0s
INK Inuvik 45.09 31 P **P** **01 13 54.8 +0.3**
comp=Z,1.6nm,0.8s,baz=143,slow=3.5,SNR=2.6
MK31 Makanchi Array 46.10 298 *i* P **P** **01 14 02.2 -0.7**
MK31 pmax pmax
comp=Z,19nm,0.8s
MK32 Makanchi Array 46.10 298 *e*P **P** **01 14 02.9 -0.1**
MKAR Makanchi Array 46.10 298 P **P** **01 14 02.9 -0.1**
comp=Z,15nm,0.8s,baz=73,slow=8.0,SNR=101
MKAR LR LR 01 34 44.9
comp=Z,201nm,18.0s,baz=66,slow=38
MAKZ Makanchi 46.30 298 *e*P **P** **01 14 04.4 0.0**
comp=Z,14nm,0.8s
MAKZ Makanchi 46.30 298 *e*P **P** **01 14 04.4 0.0**
MAKZ pmax pmax
comp=Z,14nm,0.8s
KURK Kurchatov 46.90 304 *e*P **P** **01 14 08.8 -0.3**
comp=Z,7.7nm,1.0s
KURK Kurchatov 46.90 304 ⇓*i*P **P** **01 14 08.7 -0.3**
KURK pmax pmax
comp=Z,6.0nm,0.9s
KURK Kurchatov 46.90 304 *i* P **P** **01 14 08.7 -0.3**
PDGK Podgornoye 49.35 295 P **P** **01 14 26.9 -1.4**
PDGK pmax pmax
comp=Z,8.0nm,0.9s
CM31 Chiang Mai Arr 49.48 256 *e*P **P** **01 14 31.4 +2.0**
comp=Z,8.8nm,1.0s
CMAR Chiang Mai Arr 49.48 256 P **P** **01 14 31.4 +2.0**
comp=Z,0.7nm,0.3s,baz=55,slow=7.8,SNR=4.7
BRVK Borovoye 50.78 310 *e*P **P** **01 14 38.0 -0.8**
comp=Z,3.3nm,0.8s
BRVK Borovoye 50.78 310 ⇑*i*P **P** **01 14 38.5 -0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 50.78 310 *i* P **P** **01 14 38.5 -0.3**
OTUK Ortayu 51.65 304 P **P** **01 14 44.5 -0.9**
OTUK pmax pmax
comp=Z,10.0nm,0.8s
ULHL Ulahol 51.97 295 P **P** **01 14 48.9 +0.7**
SNR=6.3
TKM2 Tokmak 2 52.07 296 P **P** **01 14 49.7 +0.8**
SNR=6.3
USP Ospenovka 52.60 297 P **P** **01 14 53.1 +0.4**
SNR=11
KBK Karagaybulak 52.61 296 P **P** **01 14 53.6 +0.7**
SNR=10
KZA Kyzart 52.70 296 P **P** **01 14 54.7 +0.9**
SNR=12
JIRN Jiri 52.83 274 *e*P **P** **01 14 55.0 +0.1**
comp=Z,14nm,0.4s
GUN Gumba 52.91 275 *e*P **P** **01 14 55.3 -0.1**
comp=Z,7.6nm,0.3s
AAK Ala-Archa 52.91 297 LR LR 01 39 16.5
comp=Z,76nm,18.4s,baz=43,slow=38
AAK Ala-Archa 52.91 297 *e*P **P** **01 14 54.6 -0.5**
comp=Z,6.2nm,0.8s
AAK Ala-Archa 52.91 297 ⇑*i*P **P** **01 14 54.9 -0.2**
AAK pmax pmax
comp=Z,7.0nm,1.0s
AAK Ala-Archa 52.91 297 *i* P **P** **01 14 54.9 -0.2**
EKS2 Erkin-Say 53.36 297 P **P** **01 14 59.0 +0.7**
SNR=6.3
PKI Pulchoki 53.44 275 *e*P **P** **01 14 59.6 +0.2**
PKIN Phulchoki 53.45 275 *e*P **P** **01 14 59.5 +0.2**
comp=Z,5.0nm,0.5s
KSH Kashi 53.50 292 P **P** **01 15 04.0 +4.6**
KSH PP **PP** **01 17 05.8 +6.0**
KSH S **S** **01 22 34.6 +3.4**
KSH ScS **ScS** **01 24 53.3 +5.4**
KSH pmax pmax
comp=Z,14nm,0.7s
KSH pmax pmax
comp=Z,380nm,4.6s
KSH LR LR
comp=Z,210nm,8.8s
KSH LR LR
comp=Z,300nm,7.0s
KSH LR LR
comp=Z,360nm,13.3s
AML Almayashu 53.68 296 P **P** **01 15 01.7 +0.7**
SNR=6.1
RES Resolute Bay 54.03 17 *e*P **P** **01 15 03.1 +0.5**
comp=Z,11nm,1.0s
RES Resolute Bay 54.03 17 *e*P **P** **01 15 03.1 +0.5**
RES pmax pmax
comp=Z,11nm,1.0s
DANN Dangsing 54.17 277 *e*P **P** **01 15 05.2 +0.6**
comp=Z,21nm,0.7s
SVE Sverdlovsk 54.17 317 *e*P **P** **01 15 03.8 -0.1**
SVE pmax pmax
comp=Z,9.0nm,0.9s
SVE Sverdlovsk 54.17 317 *e*P **P** **01 15 03.8 -0.1**
YKA Yellowknife Ar 54.40 35 P **P** **01 15 06.3 +0.8**
comp=Z,1.5nm,0.8s,baz=298,slow=6.8,SNR=11
YKB5 Yellowknife Ar 54.40 35 *e*P **P** **01 15 06.3 +0.8**
KOLN Koldanda 54.62 276 *e*P **P** **01 15 07.9 +0.1**
comp=Z,23nm,1.0s
PYUN Piuthan 54.86 277 *e*P **P** **01 15 10.2 +0.6**
comp=Z,46nm,1.0s
KK31 Karatay Array 55.22 299 *i* P **P** **01 15 10.8 -1.0**
KK31 pmax pmax
comp=Z,3.0nm,0.6s
ARU Arti 55.37 318 *e*P **P** **01 15 12.0 -0.5**
comp=Z,8.6nm,0.8s
ARU Arti 55.37 318 *d i*P **P** **01 15 12.1 -0.5**
ARU S **S** **01 22 55.9 +0.3**
ARU SS **SS** **01 26 33.8 -5.7**
ARU pmax pmax
comp=Z,9.0nm,0.8s
ARU Arti 55.37 318 *i* P **P** **01 15 12.0 -0.5**
PRGR Permogore 58.30 327 *e*P **P** **01 15 31.7 -1.5**
PRGR *e**PP **sP** **01 15 39.8 +1.1**
PRGR pmax pmax
comp=Z,6.0nm,0.5s
AB31 Akbulak array 58.31 310 *i* P **P** **01 15 33.1 -0.4**
AB31 pmax pmax
comp=Z,7.0nm,0.7s
NIL Nilore 58.51 288 *e*P **P** **01 15 35.3 +0.1**
comp=Z,15nm,0.8s
NIL Nilore 58.51 288 *e*P **P** **01 15 35.3 +0.1**
NIL pmax pmax
comp=Z,15nm,0.8s
KLMR Klimovskoe 61.13 328 *e*P **P** **01 15 50.6 -2.1**
KLMR pmax pmax
comp=Z,11nm,0.9s
KLMR Klimovskoe 61.13 328 *e*P **P** **01 15 50.7 -2.0**
KLMR AMP 01 15 53.3
comp=Z,11nm,0.9s
SUMG Summit 63.44 3 *e*P **P** **01 16 07.6 -1.0**
comp=Z,9.6nm,0.9s
SUMG Summit 63.44 3 *i* P **P** **01 16 08.3 -0.3**
SUMG *i* 01 16 20.9
SUMG pmax pmax
comp=Z,29nm,1.0s
SUMG Summit 63.44 3 *i* P **P** **01 16 08.3 -0.3**
comp=Z,29nm,1.0s
SUMG *i* 01 16 20.9
FFC Flin Flon 64.23 38 *e*P **P** **01 16 14.0 +0.5**
comp=Z,3.8nm,0.8s
FFC Flin Flon 64.23 38 *i* P **P** **01 16 14.8 +1.3**
YERR Yerington 64.81 59 *e*P **P** **01 16 16.7 -1.2**
comp=Z,2.6nm,0.9s
MOS Moscow 65.26 325 *e*P **P** **01 16 18.9 -1.3**
MOS pmax pmax
comp=Z,24nm,0.8s
WR1 Warramunga Arr 65.32 196 *e*P **P** **01 16 22.1 +1.2**
WRA Warramunga Arr 65.32 196 P **P** **01 16 22.1 +1.2**
comp=Z,3.4nm,1.0s,baz=1.3,slow=7.5,SNR=4.4
FIA0 FINESS Array S 65.39 334 *e*P **P** **01 16 20.2 -0.7**
FIA0 FINESS Array S 65.39 334 *e*P **P** **01 16 20.2 -0.7**
FINES FINESS Array B 65.39 334 P **P** **01 16 20.2 -0.7**
comp=Z,9.8nm,0.6s,baz=38,slow=7.9,SNR=55
FINES FINESS Array B 65.39 334 *i* P **P** **01 16 20.5 -0.4**
FINES pmax pmax
comp=Z,10.0nm,0.6s
NV01 Mina Array Sit 65.73 59 *e*P **P** **01 16 25.5 +1.6**
NVAR Mina Array Bea 65.73 59 P **P** **01 16 25.5 +1.6**
comp=Z,0.7nm,0.7s,baz=292,slow=7.7,SNR=6.0
GEYT Alibeck 65.92 300 P **P** **01 16 25.2 +0.4**
comp=Z,2.1nm,0.7s,baz=50,slow=2.3,SNR=7.8
OBN Obninsk 66.12 325 ⇓*i*P **P** **01 16 25.6 -0.2**
OBN *i* *PP **pwP** **01 16 36.0 -2.3**
OBN *e*S **S** **01 25 12.4 -0.5**
OBN pmax pmax
comp=Z,20nm,1.0s
OBN MLR MLR
comp=Z,64nm,16.0s
OBN Obninsk 66.12 325 *i* P **P** **01 16 25.5 -0.2**
VRH Novokhopyorsk 66.50 319 *e*P **P** **01 16 27.5 -0.7**
VRH *SP **pwP** **01 16 39.4 -1.4**
VRH pmax pmax
comp=Z,10.0nm,0.6s
LPSR Galich'ya Gora 66.83 322 *e*P **P** **01 16 30.0 -0.4**
LPSR *e**SP **pwP** **01 16 42.5 -0.5**
LPSR pmax pmax
comp=Z,20nm,0.9s
VSU Vasula 67.43 332 ⇓*i*P **P** **01 16 34.1 +0.1**
VSU pmax pmax
comp=Z,32nm,0.9s
VSU Vasula 67.43 332 *e*P **P** **01 16 33.3 -0.8**
VSU IAmb IAmb 01 16 34.1
comp=Z,32nm,0.8s
VSR Storozhevoye 67.67 320 *e*P **P** **01 16 35.4 -0.3**
VSR *e**SP **pwP** **01 16 47.6 -0.7**
VSR pmax pmax
comp=Z,20nm,0.7s
VORD Divnogorie 67.79 320 *e*P **P** **01 16 35.9 -0.5**
VORD *e**SP **pwP** **01 16 48.3 -0.7**
VORD pmax pmax
comp=Z,20nm,1.0s
PD31 Pinedale Array 68.18 51 *e*P **P** **01 16 39.4 0.0**
comp=Z,1.4nm,0.9s
PDAR Pinedale Array 68.18 51 P **P** **01 16 40.1 +0.8**
comp=Z,0.5nm,0.6s,baz=255,slow=2.9,SNR=7.3
AS31 Alice Springs 69.03 196 *e*P **P** **01 16 44.0 -0.4**
comp=Z,0.9nm,0.8s
ASAR Alice Springs 69.03 196 P **P** **01 16 46.0 +1.5**
comp=Z,4.9nm,0.3s,baz=18,slow=6.2,SNR=5.8
IZAR Zarasai 69.68 330 *e*P **P** **01 16 47.5 -0.6**
IZAR IAmb IAmb 01 16 49.2
comp=Z,8.0nm,0.8s
LCMT Little Creek M 69.74 58 *e*P **P** **01 16 48.8 -0.3**
comp=Z,2.5nm,0.8s
IDID Didziasalis 69.83 329 *e*P **P** **01 16 51.9 +2.8**
IDID IAmb IAmb 01 16 53.3
comp=Z,12nm,0.8s
AKT Akhty 69.84 308 ⇓*i*P **P** **01 16 50.1 +0.6**
AKT *e* 01 17 12.2
AKT pmax pmax
comp=Z,11nm,0.9s
ISAL Salakas 69.86 330 *e*P **P** **01 16 49.0 -0.3**
ISAL IAmb IAmb 01 16 50.6
comp=Z,10.0nm,0.9s
NB2 NORSAR Subarra 69.92 340 P **P** **01 16 48.8 -0.8**
comp=Z,9.4nm,0.8s,baz=29,slow=6.5
NOA NORSAR Array B 69.92 340 P **P** **01 16 49.2 -0.3**
comp=Z,7.4nm,0.7s,baz=31,slow=6.2,SNR=42
IIGN Ignalina 69.99 330 *e*P **P** **01 16 50.0 -0.1**
IIGN IAmb IAmb 01 16 51.4
comp=Z,12nm,0.8s
PABE Paberze 70.68 331 *e*P **P** **01 16 54.0 -0.3**
PABE IAmb IAmb 01 16 55.2
comp=Z,26nm,0.8s
KIV Kislovodsk 70.92 313 *e*P **P** **01 16 56.8 +0.7**
comp=Z,12nm,0.9s
KIV Kislovodsk 70.92 313 ⇓*i*P **P** **01 16 58.3 +2.2**
KIV Kislovodsk 70.92 313 *e*P **P** **01 16 58.0 +1.9**
KIV pmax pmax
comp=Z,40nm,0.9s
KBZ Khabaz 70.96 313 P **P** **01 16 57.0 +0.8**
comp=Z,10nm,0.8s,baz=50,slow=3.7,SNR=28
KBZ LR LR 01 52 46.9
comp=Z,185nm,18.6s,baz=52,slow=40
KBZ Khabaz 70.96 313 P **P** **01 16 57.0 +0.8**
PBUR Paburg 70.97 332 *e*P **P** **01 16 55.7 -0.3**
PBUR IAmb IAmb 01 16 56.8
comp=Z,21nm,0.8s
ZEI Tsey 71.07 312 *e*P **P** **01 16 56.3 -0.9**
ZEI pmax pmax
comp=Z,8.0nm,0.9s
ZEI Tsey 71.07 312 *e*P **P** **01 16 56.3 -0.9**
SUW Suwalki 72.14 330 *e*P **P** **01 17 02.7 -0.4**
SUW Suwalki 72.14 330 *e*P **P** **01 17 02.7 -0.4**
AKASG Malin Array Be 72.39 325 P **P** **01 17 04.1 -0.5**
comp=Z,5.4nm,0.8s,baz=38,slow=6.6,SNR=26
AKASG Malin Array Be 72.39 325 *i* P **P** **01 17 04.0 -0.6**
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 72.39 325 *e*P **P** **01 17 04.2 -0.5**
comp=Z,8.8nm,0.8s
AKBB Malin Array Si 72.39 325 *e*P **P** **01 17 04.2 -0.5**
AKBB pmax pmax
comp=Z,9.0nm,0.8s
BEL Belsk 74.76 330 *e*P **P** **01 17 19.0 +0.5**
BEL Belsk 74.76 330 *e*P **P** **01 17 19.0 +0.5**
ANMO Albuquerque 75.21 56 P **P** **01 17 23.1 +1.4**
comp=Z,0.9nm,0.8s,baz=310,slow=9.7,SNR=3.8
ANMO Albuquerque 75.21 56 *e*P **P** **01 17 21.3 -0.4**
comp=Z,2.2nm,1.1s
ANMO Albuquerque 75.21 56 ⇑*i*P **P** **01 17 23.7 +2.0**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
OJC Ojcow 76.44 330 *e*P **P** **01 17 28.6 +0.3**
OJC Ojcow 76.44 330 *e*P **P** **01 17 28.6 +0.3**
BURAR Bucovina Array 76.44 325 ⇓*i*P **P** **01 17 28.9 +0.5**
BURAR Bucovina Array 76.44 325 ⇓P **P** **01 17 28.9 +0.5**
KOLS Kolonicke sedl 76.56 327 *e*P **P** **01 17 29.2 +0.2**
KOLS pmax pmax
comp=Z,3.0nm,0.8s
KOLS Kolonicke sedl 76.56 327 *e*P **P** **01 17 29.2 +0.2**
BIZ Bicaz 76.61 324 ⇓*i*P **P** **01 17 30.0 +0.7**
TESR Tescani 76.71 324 ⇓*i*P **P** **01 17 30.1 +0.2**
UZH Uzhgorod 76.80 327 *e*P **P** **01 17 28.3 -2.0**
UZH *e* 01 17 35.8
UZH *e* 01 17 41.6
NIE Niedzica 76.92 329 *e*P **P** **01 17 32.0 +1.0**
NIE Niedzica 76.92 329 *e*P **P** **01 17 32.0 +1.0**
CFR Carcaliu 77.10 322 ⇓*i*P **P** **01 17 31.5 -0.6**
CFR Carcaliu 77.10 322 ⇓P **P** **01 17 31.5 -0.6**
TRPA Tarpa 77.11 327 ⇓*i*P **P** **01 17 33.1 +1.1**
LANS Liptovska Anna 77.44 329 *e*P **P** **01 17 35.5 +1.5**
LANS Liptovska Anna 77.44 329 *e*P **P** **01 17 35.5 +1.5**
UPC Upice 77.53 332 *e*P **P** **01 17 35.2 +0.8**
UPC Upice 77.53 332 *e*P **P** **01 17 35.2 +0.8**
DPC Dobruska-Polom 77.56 332 *e*P **P** **01 17 35.5 +0.9**
DPC *e* 01 17 48.1
DPC Dobruska-Polom 77.56 332 *e*P **P** **01 17 35.5 +0.9**
DPC *e*pP **pwP** **01 17 48.1 +0.9**
DPC *e*x x 01 17 59.4
ILGA Ilgaz 77.61 316 *e*P **P** **01 17 36.3 +1.0**
comp=Z,7.7nm,0.8s
MORC Moravsky Berou 77.62 331 ⇑*i*P **P** **01 17 35.2 +0.2**
MORC Moravsky Berou 77.62 331 ⇑P **P** **01 17 35.2 +0.2**
MORC Moravsky Berou 77.62 331 *e*P **P** **01 17 35.1 +0.1**
MLR Muntele Rosu 77.82 323 ⇓*i*P **P** **01 17 37.8 +1.5**
MLR Muntele Rosu 77.82 323 ⇓P **P** **01 17 37.8 +1.5**
CLL Collm 77.83 334 ⇑*i*P **P** **01 17 34.7 -1.4**
comp=Z,16nm,0.9s
CLL *e* 01 17 41.0
CLL *e*pP **PcP** **01 17 46.0 +0.1**
CLL *i* sPcP 01 17 58.9
comp=Z,9.0nm,0.9s
CLL Collm 77.83 334 ⇑*i*P **P** **01 17 34.7 -1.4**
CLL *e* 01 17 41.0
CLL *e* 01 17 46.0
CLL pmax pmax
comp=Z,16nm,0.9s
BRG Berggiesshubel 77.91 333 *e*P **P** **01 17 37.5 +1.0**
comp=Z,7.4nm,1.2s
BRG Berggiesshubel 77.91 333 *e*P **P** **01 17 37.5 +1.0**
BRG pmax pmax
comp=Z,7.0nm,1.2s
PVCC Panska Ves 78.00 333 *e*P **P** **01 17 37.8 +0.8**
PVCC Panska Ves 78.00 333 *e*P **P** **01 17 37.8 +0.8**
DRGR 78.12 326 ⇓*i*P **P** **01 17 38.3 +0.4**
DRGR 78.12 326 ⇓P **P** **01 17 38.3 +0.4**
VYHS Vyhne 78.22 329 *e*P **P** **01 17 38.5 +0.2**
VYHS pmax pmax
comp=Z,3.0nm,0.9s
VYHS Vyhne 78.22 329 *e*P **P** **01 17 38.5 +0.2**
VOIR 78.24 324 ⇓*i*P **P** **01 17 39.3 +0.7**
VOIR 78.24 324 ⇓P **P** **01 17 39.3 +0.7**
JAVC Velka Javorina 78.34 330 *e*P **P** **01 17 40.5 +1.5**
VRAC Vranov 78.35 331 ⇓*i*P **P** **01 17 40.1 +1.1**
VRAC Vranov 78.35 331 ⇓P **P** **01 17 40.1 +1.1**
VRAC Vranov 78.35 331 *e*P **P** **01 17 39.5 +0.5**
GOPC GO Pecny, Ondr 78.45 332 *e*P **P** **01 17 39.3 -0.2**
GOPC GO Pecny, Ondr 78.45 332 *e*P **P** **01 17 39.3 -0.2**
PRU Pruhonice 78.47 332 *e*P **P** **01 17 40.4 +0.8**
PRU Pruhonice 78.47 332 *e*P **P** **01 17 40.4 +0.8**
PRU *e*x x 01 18 03.6
ARR Arges 78.47 324 ⇓*i*P **P** **01 17 41.8 +2.0**
KRUC Moravsky 78.62 331 *e*P **P** **01 17 40.8 +0.3**
BR101 Keskin Array S 78.65 315 *e*P **P** **01 17 41.0 0.0**
BRTR Keskin Array B 78.65 315 P **P** **01 17 41.0 0.0**
comp=Z,6.6nm,1.0s,baz=86,slow=3.9,SNR=14
BRTR Keskin Array B 78.65 315 *i* P **P** **01 17 41.5 +0.5**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
MODS Modra-Piesok 78.89 330 *e*P **P** **01 17 43.4 +1.4**
MODS pmax pmax
comp=Z,11nm,1.1s
MODS Modra-Piesok 78.89 330 *e*P **P** **01 17 43.3 +1.3**
GZR Gura Zlata 79.23 325 ⇓*i*P **P** **01 17 44.1 +0.1**
GZR Gura Zlata 79.23 325 ⇓P **P** **01 17 44.1 +0.1**
KHC Kasperske Hory 79.53 332 *e*P **P** **01 17 45.9 +0.4**
KHC *e* 01 17 58.7
KHC Kasperske Hory 79.53 332 *e*P **P** **01 17 45.9 +0.4**
KHC *e*pP **pwP** **01 17 58.7 +0.7**
KHC *e*x x 01 18 09.2
GEC2 GERESS Array S 79.73 332 *e*P **P** **01 17 46.3 -0.4**
comp=Z,2.6nm,0.8s
GEC2 GERESS Array S 79.73 332 *e*P **P** **01 17 46.3 -0.4**
GEC2 pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B 79.73 332 P **P** **01 17 46.6 -0.1**
comp=Z,2.3nm,0.9s,baz=36,slow=5.0,SNR=15
CONA Conrad Observa 79.78 331 *i* P **P** **01 17 47.8 +0.9**
comp=Z,4.4nm,0.9s
MDVR Moldovita 80.17 325 ⇓*i*P **P** **01 17 49.0 0.0**
MOA Molln 80.40 331 PcP **P** **01 17 52.4 +2.2**
comp=Z,3.1nm,0.9s
ARSA Arzberg 80.47 330 P **P** **01 17 50.2 -0.4**
comp=Z,3.7nm,0.8s
TXAR Lajitas Array 80.82 58 P **P** **01 17 53.9 +1.0**
comp=Z,2.0nm,0.7s,baz=301,slow=4.0,SNR=21
SOKA Soboth 81.14 330 P **P** **01 17 54.5 +0.2**
comp=Z,6.6nm,1.2s
VTS Vitosha 81.29 323 ⇓*i*P **P** **01 17 56.0 +0.8**
VTS Vitosha 81.29 323 ⇓P **P** **01 17 56.0 +0.8**
KBA Koelnbreinsper 81.38 332 *e*PcP **P** **01 17 56.8 +1.2**
comp=Z,14nm,1.0s
MYKA Terra Mystica 81.67 331 P **P** **01 17 54.1 -2.9**
comp=Z,2.7nm,0.4s
WATA Walderalm 81.75 333 P **P** **01 17 57.4 -0.1**
comp=Z,14nm,1.3s
WTTA Wattenberg 81.80 333 *e*P **P** **01 17 58.3 +0.5**
comp=Z,12nm,1.2s
RETA Reutte 81.89 333 PcP **P** **01 17 59.7 +1.5**
comp=Z,6.2nm,1.1s
MOTA Moosalm 81.90 333 P **P** **01 17 58.6 +0.3**
comp=Z,12nm,1.2s
SQTA Sankt Quirin 81.97 333 PcP **P** **01 17 59.6 +0.9**
comp=Z,12nm,1.3s
FETA Feichten 82.31 333 P **P** **01 18 00.8 +0.3**
comp=Z,3.9nm,1.0s
DAVA Damuels 82.34 334 P **P** **01 17 59.0 -1.7**
comp=Z,12nm,1.4s
PDG Podgorica 83.11 325 ⇑*i*P **P** **01 18 04.3 -0.2**
TOA1 Torodi Ar. Sit 116.02 325 *e*PKPdf **PKPdf** **01 24 21.9 -0.3**
TORD Torodi Ar. Bea 116.02 325 PKP **PKPdf** **01 24 21.9 -0.3**
comp=Z,0.6nm,1.1s,baz=16,slow=3.4,SNR=2.8
TORD PP **PP** **01 25 20.7 -5.0**
comp=Z,1.0nm,1.1s,baz=12,slow=7.7,SNR=3.7
BDFB Brasilia 147.81 34 PKPbc **PKPbc** **01 25 25.0 +0.8**
comp=Z,2.5nm,0.7s,baz=324,slow=19,SNR=4.1
BDFB Brasilia 147.81 34 PKP2 **PKPbc** **01 25 25.0 +0.8**
PLCA Paso Flores 150.23 98 PKPbc **PKiKP** **01 25 31.1 +0.7**
comp=Z,2.0nm,0.9s,baz=62,slow=21,SNR=3.2
PLCA Paso Flores 150.23 98 *e*PKPbc **PKPbc** **01 25 30.0 +0.5**

MAN 24 01:12:25.8, 7°.22N×126°.87E, h30km, mb4.6, ML3.5, MS3.3, Mindanao

ROM 24 01:15:59.1±0.1, 42°.774N±0°.003×13°.402E±0°.005, h9km, ML1.4/8, Error ellipse: s-maj=0.4km s-min=0.3km az=230.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.15**	**199**	P	Pg	01 16 03.1	+0.6
SMA1				S	Sg	01 16 05.8	+1.1
SMA1				AML	AML		
	comp=E,578μm,0.1s						
SMA1				AML	AML		
	comp=N,646μm,0.1s						
SMA1				AML	AML		
	comp=E,578μm,0.1s						
SMA1				AML	AML		
	comp=N,646μm,0.1s						
SMA1				AML	AML		
	comp=E,578μm,0.1s						
SMA1				AML	AML		
	comp=N,646μm,0.1s						
TERO	**Teramo**	**0.21**	**135**	P	Pg	01 16 04.1	+0.6
TERO				S	Sg	01 16 07.7	+1.3

TERO				AML	AML	
	comp=E,105μm,0.3s					
TERO				AML	AML	
	comp=N,131μm,0.4s					

BRTR			LR	LR	02 19 15.2	
	comp=Z,29nm,21.5s,baz=94,slow=36					
VNDA	**Vanda**	**77.77 169**	P	**P**	**01 44 39.7**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=311,slow=6.5,SNR=13					
AKASG	**Malin Array Be**	**84.00 322**	P	**P**	**01 45 14.3**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=88,slow=4.0,SNR=2.8					
AKASG			LR	LR	02 27 07.2	
	comp=Z,31nm,19.4s,baz=155,slow=39					
AKBB	**Malin Array Si**	**84.00 322**	*e*P	**P**	**01 45 14.3**	**-0.1**
	comp=Z,1.8nm,0.8s					
FIA0	**FINESS Array S**	**88.70 332**	*e*P	**P**	**01 45 38.8**	**+1.6**
FINES	**FINESS Array B**	**88.70 332**	P	**P**	**01 45 38.8**	**+1.6**
	comp=Z,1.0nm,0.9s,baz=108,slow=4.5,SNR=2.7					
VYHS	**Vyhne**	**90.08 319**	*e*P	**P**	**01 45 44.2**	**+0.1**
ARCES	**ARCESS Array B**	**91.02 340**	LR	LR	02 31 08.9	
	comp=Z,62nm,19.8s,baz=106,slow=38					
NOA	**NORSAR Array B**	**95.73 331**	LR	LR	02 35 16.6	
	comp=Z,17nm,18.9s,baz=45,slow=39					
TXAR	**Lajitas Array**	**146.42 43**	PKPbc	**PKPab**	**01 52 27.1**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=299,slow=1.0,SNR=14					

ISCJB ***24*** *01:32:55.1±0.8, 28°.19N±0°.04×51°.73E±0°.08, h10km, Error ellipse: s-maj=10.6km s-min=3.4km az=158.1*
TEH ***24*** *01:32:55.3, 28°.21N×51°.63E, h14km, ML3.3*
DSN ***24*** *01:32:58.1±0.8, 28°.34N×52°.05E, h10km, ML3.7/8, Error ellipse: s-maj=17.7km s-min=5.4km az=25.0*
OMAN ***24*** *01:32:59.5±1.2, 28°.14N×51°.78E, h19km, ml3.7/8, Error ellipse: s-maj=18.0km s-min=8.1km az=35.0*

ISC 24 01:32:55.7±2.0, 28°.16N±0°.06×51°.6E±0°.1, h10km, n44, σ1§00/54, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**1.62**	**7**	*e*Pg	**Pn**	**01 33 24.8**	**+0.1**
IKAZ				IAMB	IAmb	01 33 51.5	
	comp=Z,4μm,0.5s						
SHI	**Shiraz**	**1.67**	**28**	*e*Pn	**Pn**	**01 33 25.1**	**-0.2**
SHI				*e*Sg	**Sn**	**01 33 47.7**	**+0.8**
JHRM	**Jahrom**	**1.77**	**78**	*e*Pn	**Pn**	**01 33 27.5**	**+1.0**
ISRV	**Sarvestan**	**1.79**	**47**	*e*Pn	**Pn**	**01 33 28.1**	**+1.0**
ISRV				IAMB	IAmb	01 33 59.6	
	comp=N,5μm,0.6s						
IPAR	**Pars**	**2.10**	**37**	*e*Pn	**Pn**	**01 33 32.3**	**+1.1**
KLNJ	**Kolanjah**	**2.83**	**360**	*e*Pn	**Pn**	**01 33 41.2**	**-0.2**
IRAM	**Ramesheh**	**3.69**	**10**	*e*Pn	**Pn**	**01 33 52.4**	**-0.7**
IRAM				IAMB	IAmb	01 35 05.9	
	comp=Z,179nm,0.5s						
ZNGN	**Zangian**	**3.99**	**351**	*e*Pn	**Pn**	**01 33 55.8**	**-1.5**
IMEH	**Mehriz**	**4.14**	**38**	*e*Pn	**Pn**	**01 33 59.7**	**+0.4**
IMEH				IAMB	IAmb	01 34 02.7	
	comp=Z,770nm,0.5s						
IPIR	**Pirpir**	**4.55**	**352**	IAMB	IAmb	01 35 02.7	
	comp=Z,114nm,0.6s						
SHME	**Shamm**	**4.56**	**116**	P	**Pn**	**01 34 04.1**	**-0.7**
SHME				S	**Sn**	**01 34 55.9**	**-2.0**
SHME	**Shamm**	**4.56**	**116**	*e*Pn	**Pn**	**01 34 04.7**	**-0.1**
NIAN	**Nian**	**4.67**	**96**	*e*Pn	**Pn**	**01 34 06.8**	**+0.5**
NGRK	**Negar Kerman**	**4.73**	**71**	*e*Pn	**Pn**	**01 34 07.4**	**-0.1**
BANOM	**Banah**	**4.74**	**117**	*i* P	**Pn**	**01 34 07.7**	**+0.3**
	SNR=29						
BANOM	**Banah**	**4.74**	**117**	P	**Pn**	**01 34 07.7**	**+0.3**
BANOM				S	**Sn**	**01 35 01.5**	**-1.0**
IZEF	**Zefreh**	**4.76**	**7**	*e*Pn	**Pn**	**01 34 07.4**	**-0.4**
NAZ	**Nazwa, Dubai**	**4.81**	**130**	*i* P	**Pn**	**01 34 09.6**	**+1.3**
	SNR=6.8						
NAZ	**Nazwa, Dubai**	**4.81**	**130**	P	**Pn**	**01 34 09.4**	**+1.1**
NAZ				S	**Sn**	**01 35 05.2**	**+1.0**
NAZ	**Nazwa, Dubai**	**4.81**	**130**	*e*Pn	**Pn**	**01 34 09.6**	**+1.3**
ASUD	**Al Ashush, Dub**	**4.85**	**136**	*i* P	**Pn**	**01 34 10.1**	**+1.2**
	SNR=9.0						
ASUD	**Al Ashush, Dub**	**4.85**	**136**	P	**Pn**	**01 34 10.3**	**+1.4**
ASUD				S	**Sn**	**01 35 07.2**	**+2.1**
ASUD	**Al Ashush, Dub**	**4.85**	**136**	*e*Pn	**Pn**	**01 34 09.2**	**+0.4**
FAQ	**Al Faqa, Dubai**	**4.94**	**133**	P	**Pn**	**01 34 11.6**	**+1.6**
MSFE	**Esma-Masafi**	**4.94**	**123**	P	**Pn**	**01 34 10.4**	**+0.3**
MSFE				S	**Sn**	**01 35 06.0**	**-1.2**
MSFE	**Esma-Masafi**	**4.94**	**123**	*e*Pn	**Pn**	**01 34 11.1**	**+1.1**
MDH	**Madha**	**5.07**	**123**	P	**Pn**	**01 34 13.2**	**+1.3**
MDH				S	**Sn**	**01 35 09.6**	**-1.0**
MDH	**Madha**	**5.07**	**123**	*e*Pn	**Pn**	**01 34 11.9**	**0.0**
UOSS	**Minazif**	**5.22**	**127**	P	**Pn**	**01 34 14.2**	**+0.3**
UOSS	**Minazif**	**5.22**	**127**	P	**Pn**	**01 34 13.9**	**+0.1**
UOSS	**Minazif**	**5.22**	**127**	*e*Pn	**Pn**	**01 34 14.2**	**+0.3**
HATD	**Hatta, Dubai**	**5.24**	**128**	P	**Pn**	**01 34 15.1**	**+0.9**
HATD	**Hatta, Dubai**	**5.24**	**128**	P	**Pn**	**01 34 15.0**	**+0.7**
HATD	**Hatta, Dubai**	**5.24**	**128**	*e*Pn	**Pn**	**01 34 15.3**	**+1.1**
ASHO	**Ashiyiah**	**5.29**	**130**	*i* P	**Pn**	**01 34 15.2**	**+0.4**
	SNR=12						
ASHO	**Ashiyiah**	**5.29**	**130**	P	**Pn**	**01 34 14.2**	**-0.7**
	SNR=12						
ASHO				S	**Sn**	**01 35 16.2**	**+0.3**
ASHO	**Ashiyiah**	**5.29**	**130**	*e*Pn	**Pn**	**01 34 15.6**	**+0.8**
KRSH	**Karshahi**	**5.80**	**4**	*e*Pn	**Pn**	**01 34 21.6**	**-0.5**
SOHO	**SOHO**	**5.97**	**131**	P	**Pn**	**01 34 25.0**	**+0.7**
	SNR=9.5						
SOHO				S	**Sn**	**01 35 32.9**	**+0.1**
ARQ	**Araqi**	**6.54**	**136**	P	**Pn**	**01 34 33.3**	**+1.2**
HOQ	**Hoqain**	**6.87**	**130**	P	**Pn**	**01 34 37.0**	**+0.4**
HOQ				S	**Sn**	**01 35 53.3**	**-1.6**
BSY	**Bisya**	**7.39**	**136**	P	**Pn**	**01 34 44.2**	**+0.4**
BSY				S	**Sn**	**01 36 05.6**	**-2.2**
SMDO	**Samad**	**7.72**	**130**	P	**Pn**	**01 34 49.8**	**+1.5**
WSAR	**Wadi Sarin**	**8.01**	**126**	P	**Pn**	**01 34 51.8**	**-0.5**

IDC 24 02:04:14.8±3.8, 6°.73S×149°.81E, h0km, mb3.6/1, mb1 3.9/2, mb1mx3.4/19, mbtmp3.6/2, ML3.7/1, Error ellipse: s-maj=153.4km s-min=45.1km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.96**	**227**	P	P	02 08 47.9	-0.8
	0.2nm,0.3s,baz=53,slow=10,SNR=6.8						
ASAR	**Alice Springs**	**22.75**	**221**	P	P	02 09 18.9	0.0
	1.6nm,0.6s,baz=54,slow=9.1,SNR=18						
TORD	**Torodi Ar. Bea**	**147.98**	**284**	PKPbc	PKPbc	02 24 03.0	-0.4
	2.8nm,0.6s,baz=62,slow=1.9,SNR=35						

ISCJB ***24*** *02:16:47.5±0.4, 24°.26N±0°.02×121°.99E±0°.02, h3km±3km, Error ellipse: s-maj=3.0km s-min=2.1km az=42.9*
JMA ***24*** *02:16:48.1±0.1, 24°.22N×121°.92E, h15km±3km, M3.2*
TAP ***24*** *02:16:48.2, 24°.29N×121°.93E, h15km, ML3.6, B*

ISC 24 02:16:48.0±1.0, 24°.26N±0°.02×121°.97E±0°.02, h7km±9km, n103, σ0§72/139, 13C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.26**	**310**	⇑P	**Pg**	**02 16 53.3**	**+0.1**
	baz=317						
NANB				S	**Sg**	**02 16 56.8**	**+0.1**
	baz=317						
ENA	**Nanau**	**0.27**	**309**	⇑*i*P	**Pg**	**02 16 53.3**	**0.0**
	baz=316						
ENA				*i* S	**Sg**	**02 16 56.9**	**+0.1**
	baz=316						
EOS1	**EOS1**	**0.33**	**27**	⇑P	**Pb**	**02 16 55.7**	**-0.5**
	baz=44						
EOS1				S	**Sb**	**02 17 01.2**	**-0.4**
	baz=44						
NACB	**Ninganchiao**	**0.35**	**256**	⇓P	**Pg**	**02 16 54.7**	**-0.1**
	baz=251						
NACB				S	**Sg**	**02 17 00.4**	**+0.9**
	baz=251						
TWC	**Suao**	**0.36**	**343**	⇑*i*P	**Pg**	**02 16 55.3**	**+0.2**
	baz=356						
TWC				S	**Sg**	**02 17 00.0**	**0.0**
	baz=356						
TWD	**Chiawan**	**0.38**	**242**	*e*P	**Pg**	**02 16 55.5**	**+0.1**
	baz=243						
HWA	**Hwalien**	**0.43**	**230**	*e*P	**Pb**	**02 16 58.4**	**+0.3**
	baz=234						
HWA				*e*S	**Sb**	**02 17 07.0**	**+2.2**
	baz=234						
ETLH	**Xiulin Townshi**	**0.45**	**263**	P	**Pg**	**02 16 56.6**	**-0.1**
	baz=267						
ETLH				*e*S	**Sg**	**02 17 03.0**	**+0.4**
	baz=267						
ENLB	**Shoufeng**	**0.49**	**223**	*e*P	**Pg**	**02 16 57.4**	**0.0**
	baz=220						
ENLB				*e*S	**Sb**	**02 17 08.1**	**+1.8**
	baz=220						
ENTT	**Nioudou**	**0.53**	**316**	⇑*i*P	**Pg**	**02 16 58.3**	**+0.1**
	baz=317						
ENTT				S	**Sg**	**02 17 05.1**	**0.0**
	baz=317						
TWE	**Neicheng**	**0.54**	**329**	⇑*i*P	**Pg**	**02 16 58.5**	**+0.1**
	baz=332						
TWE				S	**Sg**	**02 17 05.4**	**0.0**
	baz=332						
ILA	**Ilan**	**0.54**	**338**	P	**Pg**	**02 16 59.1**	**+0.6**
	baz=341						
ILA				*e*S	**Sg**	**02 17 05.9**	**+0.3**
	baz=341						
NNSB	**Datong**	**0.56**	**288**	*e*P	**Pg**	**02 16 58.8**	**-0.1**
	baz=287						
NNS	**Nan Shan**	**0.57**	**289**	*e*P	**Pg**	**02 16 59.2**	**+0.1**
	baz=288						
SLBB	**Yuanshan**	**0.58**	**329**	⇑P	**Pg**	**02 16 59.5**	**+0.4**
	baz=330						
SLBB				S	**Sg**	**02 17 06.9**	**+0.1**
	baz=330						
EGS		**0.58**	**357**	*e*P	**Pg**	**02 16 59.8**	**+0.5**
	baz=355						
EGS				*e*S	**Sg**	**02 17 07.2**	**+0.3**
	baz=355						
NTC	**Toucheng**	**0.61**	**348**	*e*P	**Pg**	**02 16 59.7**	**0.0**
	baz=350						
NTC				*e*S	**Sg**	**02 17 07.8**	**+0.2**
	baz=350						
WHF	**Hehuan Shan**	**0.65**	**260**	⇓P	**Pg**	**02 17 00.5**	**-0.1**
	baz=265						
WHF				*e*S	**Sb**	**02 17 10.3**	**-1.2**
	baz=265						
ESL	**Shilin**	**0.66**	**228**	P	**Pg**	**02 17 01.3**	**+0.6**
	baz=232						
ESL				*e*S	**Sb**	**02 17 12.4**	**+1.1**
	baz=232						
YHNB	**Yeheng**	**0.68**	**307**	⇑P	**Pg**	**02 17 01.1**	**0.0**
	baz=312						
YHNB				*e*S	**Sg**	**02 17 08.4**	**-1.5**
	baz=312						
NSK	**Sanguang**	**0.69**	**307**	⇑*i*P	**Pg**	**02 17 01.3**	**-0.1**
	baz=312						
NSK				*e*S	**Sg**	**02 17 09.1**	**-1.3**
	baz=312						
TIPB	**Shuangxi**	**0.72**	**350**	*e*P	**Pg**	**02 17 02.0**	**+0.1**
	baz=351						
TIPB				S	**Sg**	**02 17 11.4**	**0.0**
	baz=351						
TDCB	**Techi**	**0.74**	**270**	*e*P	**Pg**	**02 17 02.8**	**+0.5**
	baz=268						
TDCB				S	**Sg**	**02 17 12.7**	**+0.9**
	baz=268						
TWB1	**Santiao Chiao**	**0.75**	**1**	*e*P	**Pg**	**02 17 02.2**	**-0.2**
	baz=355						
TWB1				S	**Sg**	**02 17 11.4**	**-0.7**
	baz=355						
CHGB	**Renai**	**0.75**	**255**	P	**Pg**	**02 17 02.4**	**-0.1**
	baz=253						
CHGB				S	**Sb**	**02 17 13.6**	**-0.6**
	baz=253						
EGFH	**Guangfu**	**0.77**	**220**	*e*P	**Pg**	**02 17 03.2**	**+0.5**
	baz=230						
OWD	**Renai**	**0.78**	**247**	⇑P	**Pg**	**02 17 03.4**	**+0.3**
	baz=252						
OWD				S	**Sb**	**02 17 14.8**	**-0.2**
	baz=252						
NHDH	**Xindian Distri**	**0.81**	**330**	*e*P	**Pg**	**02 17 03.8**	**+0.2**
	baz=332						
NWF	**Wu-fen Shan**	**0.83**	**348**	⇑P	**Pg**	**02 17 04.3**	**+0.4**
	baz=351						
WFSB	**Wu-fen Shan**	**0.83**	**348**	*e*P	**Pg**	**02 17 04.4**	**+0.5**
	baz=351						
TATO	**Taipei**	**0.84**	**329**	P	**Pg**	**02 17 04.0**	**-0.1**
	baz=324						
WLTB	**Daxi**	**0.88**	**312**	*e*P	**Pn**	**02 17 06.5**	**-0.4**
	baz=313						
TAP	**Taipei**	**0.88**	**332**	*e*P	**Pb**	**02 17 05.8**	**+0.1**
	baz=334						
VWDT	**VWDT**	**0.91**	**237**	⇑P	**Pg**	**02 17 05.5**	**+0.1**
	baz=235						
VWDT				*e*S	**Sn**	**02 17 20.7**	**+0.1**
	baz=235						
HGSD	**Ruisui**	**0.91**	**213**	P	**Pg**	**02 17 06.0**	**+0.5**
	baz=194						
JYNG	**Yonagunijimaku**	**0.91**	**78**	P	**Pg**	**02 17 06.0**	**+0.4**
WHP	**Taichung City**	**0.93**	**271**	*e*P	**Pb**	**02 17 06.6**	**0.0**
	baz=270						
LIOB	**Emei**	**0.95**	**294**	*e*P	**Pb**	**02 17 07.0**	**+0.2**
	baz=295						
EHY	**Hungye**	**0.95**	**218**	*e*P	**Pg**	**02 17 05.5**	**-0.8**
	baz=215						
NSTT	**Nanjuang**	**0.95**	**293**	⇓*e*P	**Pb**	**02 17 07.1**	**+0.1**
	baz=293						
NSTT				*e*S	**Sb**	**02 17 20.0**	**+0.1**
	baz=293						
YM01	**YM01**	**0.95**	**338**	P	**Pb**	**02 17 07.0**	**0.0**
	baz=340						
YM10	**YM10**	**0.97**	**338**	*e*P	**Pg**	**02 17 07.1**	**+0.5**
	baz=339						
YM05	**YM05**	**0.97**	**338**	*e*P	**Pg**	**02 17 07.2**	**+0.4**
	baz=340						
YOJ	**Yonaguni jima**	**0.97**	**78**	*e*P	**Pb**	**02 17 07.2**	**-0.1**
	baz=67						
YOJ				*e*S	**Sg**	**02 17 20.1**	**+0.7**
	baz=67						
YOJ	**Yonaguni jima**	**0.97**	**78**	P	**Pb**	**02 17 07.0**	**-0.2**
YOJ				*e*S	**Sb**	**02 17 21.1**	**+0.8**
YM04	**YM04**	**0.97**	**336**	*e*P	**Pg**	**02 17 07.2**	**+0.4**
	baz=338						
TWS1	**Kuangyinshan**	**0.98**	**329**	*e*P	**Pn**	**02 17 08.2**	**0.0**
	baz=332						
DPDB	**Guoxing**	**0.98**	**257**	P	**Pg**	**02 17 06.9**	**+0.1**
	baz=263						
DPDB				S	**Sb**	**02 17 20.8**	**+0.3**
	baz=263						
YM08	**YM08**	**0.99**	**340**	*e*P	**Pg**	**02 17 07.2**	**+0.2**
	baz=342						
YM03	**YM03**	**1.00**	**337**	*e*P	**Pn**	**02 17 08.0**	**-0.6**
	baz=339						
NCU	**National Centr**	**1.00**	**315**	*e*P	**Pn**	**02 17 08.4**	**-0.2**
	baz=317						
NCUH	**Zhongli**	**1.00**	**315**	*e*P	**Pn**	**02 17 08.8**	**+0.2**
	baz=317						
ANP	**Anpu**	**1.01**	**336**	*e*P	**Pg**	**02 17 08.0**	**+0.6**
	baz=338						
SSLB	**Suanglung**	**1.04**	**243**	⇑P	**Pb**	**02 17 07.4**	**-1.0**
	baz=252						
SSLB				S	**Sg**	**02 17 22.3**	**+0.9**
	baz=252						
SBCB	**Hsinchu**	**1.04**	**301**	*e*P	**Pn**	**02 17 09.0**	**-0.1**
	baz=302						
SMLT	**Sun Moon Lake**	**1.04**	**249**	*e*P	**Pb**	**02 17 07.9**	**-0.7**
	baz=249						
SMLT				*e*S	**Sn**	**02 17 22.9**	**-1.3**
	baz=249						
HSN	**Hsinchu**	**1.06**	**301**	*e*P	**Pn**	**02 17 09.1**	**-0.2**
	baz=304						
YULB	**Yu-li**	**1.06**	**216**	*e*P	**Pb**	**02 17 06.7**	**-2.0**
	baz=212						
TWY	**Chenhua**	**1.07**	**342**	*e*P	**Pb**	**02 17 08.6**	**-0.3**
	baz=345						
TWF1	**Yuli**	**1.09**	**214**	*e*P	**Pb**	**02 17 07.2**	**-2.1**
	baz=227						
TWQ1	**Liyutan**	**1.09**	**275**	P	**Pn**	**02 17 09.5**	**-0.3**
	baz=275						
TWQ1				*e*S	**Sn**	**02 17 25.8**	**+0.5**
	baz=275						
NMLH	**Miaoli**	**1.11**	**285**	*e*P	**Pn**	**02 17 10.2**	**+0.1**
	baz=285						
NSY	**Sanyi**	**1.11**	**278**	*e*P	**Pn**	**02 17 10.4**	**+0.3**
	baz=278						
WHYT	**Xinyi Township**	**1.16**	**241**	*e*P	**Pb**	**02 17 09.8**	**-0.8**
	baz=230						
PTSB	**Yuanli**	**1.17**	**280**	*e*P	**Pg**	**02 17 11.7**	**+1.3**
	baz=280						
PTSB				*e*S	**Sn**	**02 17 28.3**	**+1.3**
	baz=280						
TCU	**Taichung**	**1.18**	**265**	*e*P	**Pg**	**02 17 12.6**	**+1.8**
	baz=264						
WJS	**Zhushan**	**1.21**	**249**	*e*P	**Pn**	**02 17 11.1**	**-0.4**
	baz=240						
WDJ	**Dajia District**	**1.21**	**274**	*e*P	**Pg**	**02 17 12.1**	**+0.8**
	baz=275						
WCHH	**Zhanghua**	**1.30**	**262**	*e*P	**Pg**	**02 17 13.3**	**+0.3**
	baz=262						
PCYT	**Pengchaiyu**	**1.37**	**4**	*e*P	**Pn**	**02 17 13.2**	**-0.5**
	baz=7.0						
ELDTW	**Lidau**	**1.38**	**219**	*e*P	**Pn**	**02 17 12.3**	**-1.5**
	baz=216						
WDLH	**Douliu**	**1.43**	**247**	*e*P	**Pn**	**02 17 14.3**	**-0.1**
	baz=246						
RLNB	**Erlin**	**1.51**	**256**	*e*P	**Pb**	**02 17 16.2**	**-0.3**
	baz=256						
CHN4	**Tsaushan**	**1.55**	**235**	*e*P	**Pb**	**02 17 16.9**	**-0.2**
	baz=234						
STYT	**Tauyuan**	**1.56**	**226**	*e*P	**Pn**	**02 17 15.7**	**-0.5**
	baz=208						
IRIF	**Iriomote-Funau**	**1.61**	**87**	P	**Pn**	**02 17 16.6**	**-0.3**
TWGBT	**Beinan**	**1.65**	**210**	*e*P	**Pn**	**02 17 14.7**	**-2.8**
	baz=192						
TWG	**Pinlang**	**1.65**	**210**	*e*P	**Pn**	**02 17 16.7**	**-0.8**
	baz=192						
TWK	**Hsinying**	**1.68**	**234**	*e*P	**Pb**	**02 17 18.5**	**-0.7**
	baz=233						
HATJ	**Hateruma jima**	**1.69**	**96**	P	**Pn**	**02 17 18.4**	**+0.4**
CHN1	**Nanshi**	**1.70**	**231**	*e*P	**Pb**	**02 17 19.0**	**-0.7**
	baz=230						
SNST	**Tainan City**	**1.70**	**233**	*e*P	**Pn**	**02 17 18.7**	**+0.6**
	baz=232						
SGST	**Jiashian**	**1.73**	**228**	*e*P	**Pn**	**02 17 19.2**	**+0.7**
	baz=212						
SLGT	**Liugui**	**1.75**	**224**	*e*P	**Pb**	**02 17 19.6**	**-0.8**
	baz=222						
JKRS	**Kuro-shima**	**1.86**	**90**	P	**Pn**	**02 17 20.9**	**+0.5**
JKRS				S	**Sn**	**02 17 44.6**	**+0.4**
SSD	**Sandimen**	**1.94**	**219**	*e*P	**Pb**	**02 17 22.6**	**-1.2**
	baz=216						
JIJ	**Ishigaki jima**	**1.99**	**87**	P	**Pn**	**02 17 22.0**	**-0.1**
JIJ				S	**Sn**	**02 17 46.5**	**-0.8**
MASBT	**Mashibuluo**	**2.05**	**217**	P	**Pn**	**02 17 23.9**	**+1.0**
	baz=217						
MASBT				*e*S	**Sb**	**02 17 52.2**	**+1.0**
	baz=217						
EAST	**Anshuo**	**2.13**	**209**	*e*P	**Pn**	**02 17 24.2**	**+0.1**
	baz=191						
JISG	**Ishigakijimahi**	**2.16**	**81**	P	**Pn**	**02 17 24.1**	**-0.4**
JISG				*e*S	**Sn**	**02 17 50.6**	**-1.0**
SCZT	**Fangliau**	**2.25**	**214**	*e*P	**Pn**	**02 17 26.7**	**+1.0**
	baz=196						
PNG	**Penghu**	**2.31**	**253**	*e*P	**Pn**	**02 17 27.0**	**+0.4**
	baz=254						
PHUB	**P'eng-hu**	**2.31**	**252**	*e*P	**Pn**	**02 17 26.8**	**+0.2**
	baz=253						
WDGT	**Dungji**	**2.34**	**245**	*e*P	**Pn**	**02 17 26.1**	**-0.8**
	baz=247						
JTJ	**Tarama**	**2.52**	**81**	P	**Pn**	**02 17 29.9**	**+0.4**
VCHM	**Qimei**	**2.55**	**246**	*e*P	**Pn**	**02 17 30.5**	**+0.7**
	baz=248						
MATB	**Ma-tsu**	**2.63**	**316**	*e*P	**Pn**	**02 17 29.8**	**-1.1**
	baz=318						
PTMZ	**Houxiangcun**	**2.71**	**287**	*e*P	**Pn**	**02 17 31.4**	**-0.6**
	baz=287						
LYJJ	**Jianjiangzhen**	**3.03**	**319**	*e*P	**Pn**	**02 17 36.5**	**0.0**
	baz=321						
XPSS	**Dashiqiu**	**3.11**	**329**	*e*P	**Pn**	**02 17 36.6**	**-0.9**
	baz=331						
MHZQ	**Yeshan**	**3.23**	**305**	*e*P	**Pn**	**02 17 39.0**	**-0.3**
	baz=308						
KNMB	**Chin-men Tao**	**3.27**	**274**	*e*P	**Pn**	**02 17 38.8**	**-1.0**
	baz=273						
AXDP	**Jialang**	**3.69**	**281**	*e*P	**Pn**	**02 17 45.0**	**-0.6**
	baz=280						

GUC 24 02:18:12.0±0.6, 37°.55S×74°.09W, h24km±7km, ML3.6, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.05**	**48**	*e*P	Pn	02 18 29.9	-1.3
CCSP				*e*S	Sb	02 18 43.2	-1.6
CCSP				IAML		02 18 52.4	
	comp=N,2μm,0.5s						
COCH	**Cobquecura**	**1.76**	**37**	*e*P	Pn	02 18 38.6	-2.3
CCHI	**Chillan**	**1.86**	**60**	*e*P	Pn	02 18 42.5	+0.1
CCHI				*e*S	Sn	02 19 06.1	+0.9
CCHI				IAML		02 19 20.8	
	comp=E,1μm,0.6s						

ROM ***24*** *02:35:57.7±0.1, 44°.178N±0°.007×10°.199E±0°.007, h10km, ML3.1/57, Error ellipse: s-maj=0.8km s-min=0.5km az=198.0*
GEN ***24*** *02:35:58.1, 44°.20N×10°.20E, h7km±1km, Ml3.0*
ISCJB ***24*** *02:35:58.0±0.3, 44°.19N±0°.01×10°.18E±0°.01, h15km±2km, Error ellipse: s-maj=2.2km s-min=1.7km az=158.1*
LDG ***24*** *02:35:59.0±0.1, 44°.16N×10°.20E, h2km, Ml3.3/28, Error ellipse: s-maj=2.5km s-min=1.8km az=13.0*
PRU ***24*** *02:35:59.0±0.0, 44°.14N×10°.27E, h2km*
STR ***24*** *02:35:59.3±0.6, 44°.N±4°.×1°.0E±°., h20km, mb3.8/4, MLv3.6/6*
IDC ***24*** *02:35:59.4±2.2, 44°.29N×10°.39E, h0km, mb1 3.4/5, mb1mx3.2/39, mbtmp3.3/5, ML3.1/5, Error ellipse: s-maj=34.7km s-min=18.4km az=94.0*

ISC 24 02:35:57.9±0.8, 44°.17N±0°.02×10°.16E±0°.02, h11km±4km, n154, σ1§42/202, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.01**	**227**	P	**Pg**	**02 35 59.8**	**-0.1**
EQUI				S	**Sg**	**02 36 01.1**	**-0.2**
EQUI	**Equi**	**0.01**	**227**	*e*P	**Pg**	**02 35 59.8**	**-0.1**
EQUI				S	**Sg**	**02 36 01.1**	**-0.2**
EQUI				AML	AML		
	comp=E,23150μm,0.3s						
EQUI				AML	AML		
	comp=N,23200μm,0.4s						
EQUI				AML	AML		
	comp=E,23150μm,0.3s						
EQUI				AML	AML		
	comp=N,23200μm,0.4s						
T0912	**Minucciano (LU**	**0.03**	**99**	*e*P	**Pg**	**02 35 59.7**	**-0.4**
T0912				S	**Sg**	**02 36 01.0**	**-0.6**
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0911	**Castelpoggio (**	**0.09**	**227**	P	**Pg**	**02 36 01.2**	**+0.6**
T0911				S	**Sg**	**02 36 03.4**	**+0.9**
T0911				AML	AML		
	comp=E,14990μm,0.2s						
T0911				AML	AML		
	comp=N,15600μm,0.2s						
T0911				AML	AML		
	comp=E,14760μm,0.2s	

	comp=N,10480μm,0.3s						
VLC				AML	AML		
	comp=E,16050μm,1.0s						
VLC				AML	AML		
	comp=N,11150μm,0.2s						
VLC				AML	AML		
	comp=N,10480μm,0.3s						
VLC				AML	AML		
	comp=N,11150μm,0.2s						
VLC				AML	AML		
	comp=E,16050μm,1.0s						
VLC				AML	AML		
	comp=E,16050μm,1.0s						
VLC				AML	AML		
	comp=E,16050μm,1.0s						
VLC				AML	AML		
	comp=N,10480μm,0.3s						
VLC				AML	AML		
	comp=N,11150μm,0.2s						
VLC				AML	AML		
	comp=E,16050μm,1.0s						
SARO	**Sassorosso**	**0.17**	**86**	P	**Pg**	**02 36 01.4**	**-0.4**
SARO				S	**Sg**	**02 36 03.8**	**-0.7**
SARO	**Sassorosso**	**0.17**	**86**	*i* P	**Pg**	**02 36 01.4**	**-0.4**
SARO				S	**Sg**	**02 36 03.8**	**-0.7**
SARO				AML	AML		
	comp=E,14450μm,1.2s						
SARO				AML	AML		
	comp=N,34300μm,0.4s						
SARO				AML	AML		
	comp=E,14450μm,1.2s						
SARO				AML	AML		
	comp=N,34300μm,0.4s						
SARO				AML	AML		
	comp=E,14450μm,1.2s						
SARO				AML	AML		
	comp=N,34350μm,0.4s						
SARO				AML	AML		
	comp=E,14450μm,1.2s						
SARO				AML	AML		
	comp=N,34350μm,0.4s						
SARO				AML	AML		
	comp=E,14450μm,1.2s						
SARO				AML	AML		
	comp=N,34350μm,0.4s						
CARD	**Cardoso**	**0.27**	**123**	P	**Pg**	**02 36 03.3**	**-0.1**
CARD				S	**Sg**	**02 36 07.3**	**+0.1**
CARD	**Cardoso**	**0.27**	**123**	P	**Pg**	**02 36 03.4**	**-0.1**
CARD				S	**Sg**	**02 36 07.4**	**+0.2**
CARD				AML	AML		
	comp=E,13050μm,0.6s						
CARD				AML	AML		
	comp=N,12400μm,0.2s						
CARD				AML	AML		
	comp=E,13050μm,0.6s						
CARD				AML	AML		
	comp=N,12400μm,0.2s						
CARD				AML	AML		
	comp=E,13050μm,0.6s						
CARD				AML	AML		
	comp=N,12400μm,0.2s						
CARD				AML	AML		
	comp=N,12400μm,0.2s						
CARD				AML	AML		
	comp=E,13050μm,0.6s						
CARD				AML	AML		
	comp=N,12400μm,0.2s						
CARD				AML	AML		
	comp=E,13050μm,0.6s						
ERBM	**Eremo**	**0.30**	**36**	P	**Pg**	**02 36 03.9**	**-0.2**
ERBM				S	**Sg**	**02 36 08.2**	**0.0**
ERBM				AML	AML		
	comp=E,7835μm,0.5s						
ERBM				AML	AML		
	comp=N,7540μm,1.3s						
ERBM				AML	AML		
	comp=E,7840μm,0.5s						
ERBM				AML	AML		
	comp=N,7535μm,1.3s						
ERBM				AML	AML		
	comp=E,7835μm,0.5s						
ERBM				AML	AML		
	comp=N,7535μm,1.3s						
ERBM				AML	AML		
	comp=E,7835μm,0.5s						
ERBM				AML	AML		
	comp=N,7535μm,1.3s						
ERBM				AML	AML		
	comp=E,7835μm,0.5s						
ERBM				AML	AML		
	comp=N,7535μm,1.3s						
GRAM	**Graiana**	**0.33**	**347**	P	**Pg**	**02 36 04.5**	**-0.1**
GRAM				S	**Sg**	**02 36 09.0**	**+0.1**
GRAM	**Graiana**	**0.33**	**347**	P	**Pg**	**02 36 04.5**	**-0.1**
GRAM				S	**Sg**	**02 36 09.4**	**+0.4**
GRAM				AML	AML		
	comp=E,13700μm,0.2s						
GRAM				AML	AML		
	comp=N,12950μm,0.7s						
GRAM				AML	AML		
	comp=E,13700μm,0.2s						
GRAM				AML	AML		
	comp=N,12950μm,0.7s						
GRAM				AML	AML		
	comp=E,13700μm,0.2s						
GRAM				AML	AML		
	comp=N,12950μm,0.7s						
GRAM				AML	AML		
	comp=N,12950μm,0.7s						
GRAM				AML	AML		
	comp=E,13700μm,0.2s						
GRAM				AML	AML		
	comp=N,12950μm,0.7s						
GRAM				AML	AML		
	comp=E,13700μm,0.2s						
BDI	**Bagni Di Lucca**	**0.33**	**109**	P	**Pg**	**02 36 04.3**	**-0.3**
BDI				S	**Sg**	**02 36 09.3**	**+0.3**
BDI				AML	AML		
	comp=E,4245μm,0.7s						
BDI				AML	AML		
	comp=N,3940μm,0.2s						
BDI				AML	AML		
	comp=E,3955μm,0.3s						
BDI				AML	AML		
	comp=N,4555μm,0.3s						
BDI				AML	AML		
	comp=E,4245μm,0.7s						
BDI				AML	AML		
	comp=N,3940μm,0.2s						
BDI				AML	AML		
	comp=E,3955μm,0.3s						
BDI				AML	AML		
	comp=N,4555μm,0.3s						
BDI				AML	AML		
	comp=E,3955μm,0.3s						
BDI				AML	AML		
	comp=E,4245μm,0.7s						
BDI				AML	AML		
	comp=N,4555μm,0.3s						
BDI				AML	AML		
	comp=N,3940μm,0.2s						
BDI				AML	AML		
	comp=E,3955μm,0.3s						
BDI				AML	AML		
	comp=E,4245μm,0.7s						
BDI				AML	AML		
	comp=N,4555μm,0.3s						
BDI				AML	AML		
	comp=N,3940μm,0.2s						
MAIM	**Mastiano**	**0.35**	**138**	P	**Pg**	**02 36 04.9**	**0.0**
MAIM				S	**Sg**	**02 36 10.1**	**+0.5**
MAIM	**Mastiano**	**0.35**	**138**	*e*P	**Pg**	**02 36 04.9**	**0.0**
MAIM				S	**Sg**	**02 36 10.3**	**+0.7**
MAIM				AML	AML		
	comp=E,7925μm,0.3s						
MAIM				AML	AML		
	comp=N,6445μm,0.5s						
MAIM				AML	AML		
	comp=E,7925μm,0.3s						
MAIM				AML	AML		
	comp=N,6445μm,0.5s						
MAIM				AML	AML		
	comp=E,7925μm,0.3s						
MAIM				AML	AML		
	comp=N,6445μm,0.5s						
MSSA	**Maissana**	**0.49**	**287**	P	**Pg**	**02 36 07.9**	**+0.5**
MSSA				AML	AML		
	comp=E,1675μm,0.3s						
MSSA				AML	AML		
	comp=N,1540μm,0.6s						
MSSA				AML	AML		
	comp=E,1675μm,0.3s						
MSSA				AML	AML		
	comp=N,1540μm,0.6s						
MSSA				AML	AML		
	comp=N,1540μm,0.6s						
MSSA				AML	AML		
	comp=E,1675μm,0.3s						
MSSA				AML	AML		
	comp=N,1540μm,0.6s						
MSSA				AML	AML		
	comp=E,1675μm,0.3s						
PRMA	**PARMA**	**0.60**	**10**	P	**Pg**	**02 36 10.7**	**+1.1**
ZCCA	**Zocca**	**0.61**	**73**	P	**Pb**	**02 36 11.0**	**+0.4**
ZCCA				AML	AML		
	comp=E,1845μm,0.4s						
ZCCA				AML	AML		
	comp=N,2480μm,0.6s						
ZCCA				AML	AML		
	comp=E,1985μm,0.4s						
ZCCA				AML	AML		
	comp=N,2510μm,1.6s						
ZCCA				AML	AML		
	comp=E,1845μm,0.4s						
ZCCA				AML	AML		
	comp=N,2480μm,0.6s						
ZCCA				AML	AML		
	comp=E,1985μm,0.4s						
ZCCA				AML	AML		
	comp=N,2510μm,1.6s						
ZCCA				AML	AML		
	comp=E,1845μm,0.4s						
ZCCA				AML	AML		
	comp=N,2510μm,1.6s						
ZCCA				AML	AML		
	comp=N,2480μm,0.6s						
ZCCA				AML	AML		
	comp=E,1985μm,0.4s						
ZCCA				AML	AML		
	comp=E,1845μm,0.4s						
ZCCA				AML	AML		
	comp=N,2510μm,1.6s						
ZCCA				AML	AML		
	comp=N,2480μm,0.6s						
ZCCA				AML	AML		
	comp=E,1985μm,0.4s						
MTCR	**Monte La Croce**	**0.62**	**103**	P	**Pg**	**02 36 09.7**	**-0.2**
MTCR				AML	AML		
	comp=E,3370μm,0.5s						
MTCR				AML	AML		
	comp=N,4600μm,0.3s						
MTCR				AML	AML		
	comp=E,3370μm,0.5s						
MTCR				AML	AML		
	comp=N,4605μm,0.3s						
MTCR				AML	AML		
	comp=E,3370μm,0.5s						
MTCR				AML	AML		
	comp=N,4605μm,0.3s						
MTCR				AML	AML		
	comp=E,3370μm,0.5s						
MTCR				AML	AML		
	comp=N,4605μm,0.3s						
PTF	**Prato**	**0.69**	**108**	P	**Pg**	**02 36 10.8**	**-0.5**
CRMI	**Carmignano**	**0.70**	**123**	P	**Pg**	**02 36 11.7**	**+0.3**
CRMI				AML	AML		
	comp=E,1495μm,0.4s						
CRMI				AML	AML		
	comp=N,2065μm,0.6s						
CRMI				AML	AML		
	comp=E,636μm,0.4s						
CRMI				AML	AML		
	comp=N,856μm,0.6s						
CRMI				AML	AML		
	comp=E,1495μm,0.4s						
CRMI				AML	AML		
	comp=N,2065μm,0.6s						
CRMI				AML	AML		
	comp=E,636μm,0.4s						
CRMI				AML	AML		
	comp=N,856μm,0.6s						
CRMI				AML	AML		
	comp=E,636μm,0.4s						
CRMI				AML	AML		
	comp=E,1495μm,0.4s						
CRMI				AML	AML		
	comp=N,2065μm,0.6s						
CRMI				AML	AML		
	comp=N,856μm,0.6s						
CRMI				AML	AML		
	comp=E,1495μm,0.4s						
CRMI				AML	AML		
	comp=E,636μm,0.4s						
CRMI				AML	AML		
	comp=N,2065μm,0.6s						
CRMI				AML	AML		
	comp=N,856μm,0.6s						
NOVE	**Novellara**	**0.74**	**32**	P	**Pb**	**02 36 13.4**	**+0.6**
NOVE				AML	AML		
	comp=E,3475μm,0.5s						
NOVE				AML	AML		
	comp=N,5010μm,0.6s						
NOVE				AML	AML		
	comp=E,3475μm,0.5s						
NOVE				AML	AML		
	comp=N,5010μm,0.6s						
NOVE				AML	AML		
	comp=E,3475μm,0.5s						
NOVE				AML	AML		
	comp=N,5010μm,0.6s						
NOVE				AML	AML		
	comp=E,3475μm,0.5s						
NOVE				AML	AML		
	comp=N,5010μm,0.6s						
GORR	**Gorreto**	**0.76**	**305**	P	**Pg**	**02 36 12.5**	**-0.1**
GORR				S	**Sg**	**02 36 23.4**	**+0.8**
GORR	**Gorreto**	**0.76**	**305**	P	**Pg**	**02 36 12.2**	**-0.4**
GORR				AML	AML		
	comp=E,1310μm,0.4s						
GORR				AML	AML		
	comp=N,1250μm,0.3s						
GORR				AML	AML		
	comp=E,1310μm,0.4s						
GORR				AML	AML		
	comp=N,1250μm,0.3s						
GORR				AML	AML		
	comp=E,1310μm,0.4s						
GORR				AML	AML		
	comp=N,1250μm,0.3s						
GORR				AML	AML		
	comp=E,1310μm,0.4s						
GORR				AML	AML		
	comp=N,1250μm,0.3s						
BOB	**Bobbio (Coli)**	**0.78**	**319**	P	**Pg**	**02 36 13.1**	**0.0**
BOB				AML	AML		
	comp=E,1915μm,1.5s						
BOB				AML	AML		
	comp=N,2100μm,0.3s						
SEI	**Scarperia**	**0.87**	**97**	P	**Pg**	**02 36 14.1**	**-0.6**
SEI				AML	AML		
	comp=E,2475μm,0.4s						
SEI				AML	AML		
	comp=N,4295μm,0.4s						
SEI				AML	AML		
	comp=E,2475μm,0.4s						
SEI				AML	AML		
	comp=N,4295μm,0.4s						
SEI				AML	AML		
	comp=E,2475μm,0.4s						
SEI				AML	AML		
	comp=N,4295μm,0.4s						
SEI				AML	AML		
	comp=E,2475μm,0.4s						
SEI				AML	AML		
	comp=N,4295μm,0.4s						
RAVA	**Ravarino**	**0.90**	**49**	AML	AML		
	comp=E,2700μm,0.5s						
RAVA				AML	AML		
	comp=N,2555μm,0.8s						
RAVA				AML	AML		
	comp=N,2555μm,0.8s						
RAVA				AML	AML		
	comp=E,2700μm,0.5s						
RAVA				AML	AML		
	comp=N,2555μm,0.8s						
RAVA				AML	AML		
	comp=E,2700μm,0.5s						
BRIS	**BRISIGHELLA**	**0.97**	**91**	AML	AML		
	comp=E,1023μm,1.1s						
BRIS				AML	AML		
	comp=E,1023μm,1.1s						
BRIS				AML	AML		
	comp=N,1245μm,0.7s						
BRIS				AML	AML		
	comp=E,1023μm,1.1s						
BRIS				AML	AML		
	comp=N,1245μm,0.7s						
BRIS				AML	AML		
	comp=N,1245μm,0.7s						
RUFI	**Rufina**	**1.03**	**108**	P	**Pg**	**02 36 16.7**	**-0.9**
RUFI				AML	AML		
	comp=E,634μm,0.8s						
RUFI				AML	AML		
	comp=N,532μm,0.7s						
CSNT	**Castellina Chi**	**1.08**	**130**	P	**Pg**	**02 36 18.3**	**-0.3**
CSNT				AML	AML		
	comp=E,816μm,0.4s						
CSNT				AML	AML		
	comp=N,1034μm,1.4s						
CSNT				AML	AML		
	comp=E,816μm,0.4s						
CSNT				AML	AML		
	comp=N,1034μm,1.4s						
CSNT				AML	AML		
	comp=E,816μm,0.4s						
CSNT				AML	AML		
	comp=N,1034μm,1.4s						
CSNT				AML	AML		
	comp=E,816μm,0.4s						
CSNT				AML	AML		
	comp=N,1034μm,1.4s						
TRIF	**Trifonti**	**1.19**	**153**	P	**Pg**	**02 36 20.1**	**-0.6**
TRIF				AML	AML		
	comp=E,545μm,0.3s						
TRIF				AML	AML		
	comp=N,500μm,0.7s						
TRIF				AML	AML		
	comp=E,545μm,0.3s						
TRIF				AML	AML		
	comp=N,500μm,0.6s						
TRIF				AML	AML		
	comp=E,545μm,0.3s						
TRIF				AML	AML		
	comp=N,500μm,0.6s						
TRIF				AML	AML		
	comp=E,545μm,0.3s						
TRIF				AML	AML		
	comp=N,500μm,0.6s						
FROS	**Frosini**	**1.20**	**143**	P	**Pg**	**02 36 20.3**	**-0.7**
FROS				AML	AML		
	comp=E,1390μm,0.3s						
FROS				AML	AML		
	comp=N,988μm,1.1s						
FROS				AML	AML		
	comp=E,1390μm,0.3s						
FROS				AML	AML		
	comp=N,988μm,1.1s						
FROS				AML	AML		
	comp=N,988μm,1.1s						
FROS				AML	AML		
	comp=E,1390μm,0.3s						
FROS				AML	AML		
	comp=N,988μm,1.1s						
FROS				AML	AML		
	comp=E,1390μm,0.3s						
PCP	**Piancastagn**	**1.22**	**288**	P	**Pn**	**02 36 20.7**	**-0.3**
PCP				AML	AML		
	comp=E,385μm,0.6s						
PCP				AML	AML		
	comp=N,378μm,0.2s						
PCP				AML	AML		
	comp=E,385μm,0.6s						
PCP				AML	AML		
	comp=N,378μm,0.2s						
PCP				AML	AML		
	comp=N,378μm,0.2s						
PCP				AML	AML		
	comp=E,385μm,0.6s						
PCP				AML	AML		
	comp=N,378μm,0.2s						
PCP				AML	AML		
	comp=E,385μm,0.6s						
ASQU	**Asqua**	**1.23**	**107**	P	**Pg**	**02 36 20.5**	**-1.1**
ASQU				AML	AML		
	comp=E,368μm,0.8s						
ASQU				AML	AML		
	comp=N,416μm,0.4s						
ASQU				AML	AML		
	comp=E,368μm,0.8s						
ASQU				AML	AML		
	comp=N,416μm,0.4s						
ASQU				AML	AML		
	comp=E,368μm,0.8s						
ASQU				AML	AML		
	comp=N,416μm,0.4s						
ASQU				AML	AML		
	comp=E,368μm,0.8s						
ASQU				AML	AML		
	comp=N,416μm,0.4s						
QLNO	**Quiliano**	**1.31**	**277**	P	**Pn**	**02 36 22.0**	**-0.2**
QLNO				AML	AML		
	comp=E,278μm,0.7s						
QLNO				AML	AML		
	comp=N,386μm,0.5s						
QLNO				AML	AML		
	comp=E,278μm,0.7s						
QLNO				AML	AML		
	comp=N,386μm,0.5s						
QLNO				AML	AML		
	comp=E,278μm,0.7s						
QLNO				AML	AML		
	comp=N,386μm,0.5s						
QLNO				AML	AML		
	comp=E,278μm,0.7s						
FINB	**Finale Ligure**	**1.32**	**271**	P	**Pn**	**02 36 22.1**	**-0.2**
FINB				AML	AML		
	comp=E,283μm,0.3s						
FINB				AML	AML		
	comp=N,350μm,0.3s						
FINB				AML	AML		
	comp=E,283μm,0.3s						
FINB				AML	AML		
	comp=N,350μm,0.3s						
FINB				AML	AML		
	comp=N,350μm,0.3s						
FINB				AML	AML		
	comp=E,283μm,0.3s						
FINB				AML	AML		
	comp=N,350μm,0.3s						
FINB				AML	AML		
	comp=E,283μm,0.3s						
ROTM	**Rocchetta Tana**	**1.46**	**298**	P	**Pn**	**02 36 26.2**	**+2.0**
ROTM				AML	AML		
	comp=E,1620μm,0.9s						
ROTM				AML	AML		
	comp=N,2460μm,0.6s						
ROTM				AML	AML		
	comp=E,1620μm,0.9s						
ROTM				AML	AML		
	comp=N,2460μm,0.6s						
ROTM				AML	AML		
	comp=E,1620μm,0.9s						
ROTM				AML	AML		
	comp=N,2460μm,0.6s						
CASP	**Castiglione de**	**1.47**	**160**	P	**Pn**	**02 36 24.1**	**-0.3**
CASP				AML	AML		
	comp=E,363μm,0.4s						
CASP				AML	AML		
	comp=N,283μm,1.2s						
CASP				AML	AML		
	comp=E,363μm,0.4s						
CASP				AML	AML		
	comp=N,283μm,1.2s						
CASP				AML	AML		
	comp=E,363μm,0.4s						
CASP				AML	AML		
	comp=N,283μm,1.2s						

CAFI	**Castiglion Fio**	**1.56 122**	P	**Pn**	**02 36 25.6 +0.1**
CAFI			AML	AML	
	comp=E,166μm,0.6s				
CAFI			AML	AML	
	comp=N,164μm,1.2s				
CAFI			AML	AML	
	comp=N,164μm,1.2s				
CAFI			AML	AML	
	comp=E,166μm,0.6s				
CAFI			AML	AML	
	comp=N,164μm,1.2s				
CAFI			AML	AML	
	comp=E,166μm,0.6s				
BALD	**Monte Baldo**	**1.58 17**	*e*Pg	**Pn**	**02 36 27.5 +1.5**
BALD			*e*Sg	**Sg**	**02 36 50.7 +1.9**
PARC	**Parchiule**	**1.59 109**	P	**Pn**	**02 36 25.9 -0.1**
PARC			AML	AML	
	comp=E,140μm,1.5s				
PARC			AML	AML	
	comp=N,256μm,0.4s				
PARC			AML	AML	
	comp=N,256μm,0.4s				
PARC			AML	AML	
	comp=E,140μm,1.5s				
PARC			AML	AML	
	comp=N,256μm,0.4s				
PARC			AML	AML	
	comp=E,140μm,1.5s				
TEOL	**Teolo**	**1.60 42**	*e*Pg	**Pn**	**02 36 27.2 +1.1**
TEOL			*e*Sg	**Sg**	**02 36 51.0 +1.6**
TEOL	**Teolo**	**1.60 42**	P	**Pn**	**02 36 26.8 +0.6**
TEOL			AML	AML	
	comp=E,1405μm,0.9s				
TEOL			AML	AML	
	comp=N,1230μm,0.6s				
TEOL			AML	AML	
	comp=E,1405μm,0.9s				
TEOL			AML	AML	
	comp=N,1230μm,0.6s				
TEOL			AML	AML	
	comp=E,1405μm,0.9s				
TEOL			AML	AML	
	comp=N,1230μm,0.6s				
MAGA	**Magasa**	**1.64 11**	*e*Pg	**Pn**	**02 36 28.6 +1.9**
MAGA			*e*Sg	**Sg**	**02 36 52.8 +2.2**
MAGA	**Magasa**	**1.64 11**	P	**Pn**	**02 36 27.8 +1.0**
MAGA			AML	AML	
	comp=E,2475μm,0.6s				
MAGA			AML	AML	
	comp=N,892μm,0.6s				
MAGA			AML	AML	
	comp=N,892μm,0.6s				
MAGA			AML	AML	
	comp=E,2475μm,0.6s				
MAGA			AML	AML	
	comp=N,892μm,0.6s				
MAGA			AML	AML	
	comp=E,2475μm,0.6s				
MARN	**Marana (Italy)**	**1.64 27**	*e*Pg	**Pn**	**02 36 28.2 +1.5**
MARN			*e*Sg	**Sg**	**02 36 52.4 +1.7**
GBOS	**Grotte di Boss**	**1.67 273**	P	**Pn**	**02 36 27.2 0.0**
GBOS			AML	AML	
	comp=E,121μm,1.5s				
GBOS			AML	AML	
	comp=N,122μm,1.0s				
GBOS			AML	AML	
	comp=E,121μm,1.5s				
GBOS			AML	AML	
	comp=N,122μm,1.0s				
GBOS			AML	AML	
	comp=E,121μm,1.5s				
GBOS			AML	AML	
	comp=N,122μm,1.0s				
MGRO	**Montegrosso**	**1.70 266**	P	**Pn**	**02 36 27.7 +0.1**
MGRO			AML	AML	
	comp=E,432μm,1.2s				
MGRO			AML	AML	
	comp=N,269μm,1.6s				
MGRO			AML	AML	
	comp=N,269μm,1.6s				
MGRO			AML	AML	
	comp=E,432μm,1.2s				
MGRO			AML	AML	
	comp=N,269μm,1.6s				
MGRO			AML	AML	
	comp=E,432μm,1.2s				
ATVO	**AVT- Monte Val**	**1.81 115**	AML	AML	
	comp=E,179μm,0.6s				
ATVO			AML	AML	
	comp=E,179μm,0.6s				
ATVO			AML	AML	
	comp=N,158μm,0.9s				
ATVO			AML	AML	
	comp=N,158μm,0.9s				
ATVO			AML	AML	
	comp=N,158μm,0.9s				
ATVO			AML	AML	
	comp=E,179μm,0.6s				
PGF	**Pioggiola**	**1.83 208**	*e*Pn	**Pn**	**02 36 30.1 +0.7**
PGF			*e*Sn	**Sn**	**02 36 51.5 -1.1**
	comp=E,60nm,0.3s				
MONC	**Moncucco Torin**	**1.83 300**	AML	AML	
	comp=N,640μm,0.4s				
MONC			AML	AML	
	comp=E,746μm,0.7s				
MONC			AML	AML	
	comp=N,640μm,0.4s				
MONC			AML	AML	
	comp=N,640μm,0.4s				
MONC			AML	AML	
	comp=E,746μm,0.7s				
MONC			AML	AML	
	comp=E,746μm,0.7s				
RNI	**Roncone**	**1.83 10**	*e*Pn	**Pn**	**02 36 31.2 +1.6**
DOSS	**Dosso del Somm**	**1.85 23**	*e*Pn	**Pn**	**02 36 31.7 +1.9**
ATTE	**AVT- Monte Tez**	**1.86 121**	P	**Pn**	**02 36 30.3 +0.5**
ATTE			AML	AML	
	comp=E,170μm,0.3s				
ATTE			AML	AML	
	comp=N,182μm,1.0s				
ATTE			AML	AML	
	comp=E,170μm,0.3s				
ATTE			AML	AML	
	comp=N,182μm,1.0s				
ATTE			AML	AML	
	comp=E,170μm,0.3s				
ATTE			AML	AML	
	comp=N,182μm,1.0s				
SAOF	**Saorge**	**1.89 265**	Pn	**Pn**	**02 36 30.8 +0.7**
SAOF			Sn	**Sn**	**02 36 54.2 +0.2**
MUGIO	**Muggio**	**1.92 336**	P	**Pn**	**02 36 31.8 +1.2**
MUGIO			AML	AML	
	comp=E,186μm,0.6s				
MUGIO			AML	AML	
	comp=N,250μm,0.4s				
MUGIO			AML	AML	
	comp=N,250μm,0.4s				
MUGIO			AML	AML	
	comp=E,186μm,0.6s				
MUGIO			AML	AML	
	comp=N,250μm,0.4s				
MUGIO			AML	AML	
	comp=E,186μm,0.6s				
FSSB	**Fossombrone**	**1.95 103**	AML	AML	
	comp=E,253μm,0.7s				
FSSB			AML	AML	
	comp=E,253μm,0.7s				
FSSB			AML	AML	
	comp=N,289μm,0.7s				
FSSB			AML	AML	
	comp=N,289μm,0.7s				
FSSB			AML	AML	
	comp=N,289μm,0.7s				
FSSB			AML	AML	
	comp=E,253μm,0.7s				
GAGG	**Gaggia**	**1.99 16**	*e*Pn	**Pn**	**02 36 33.1 +1.5**
SBF	**Sospel**	**1.99 262**	*e*Pn	**Pn**	**02 36 31.8 +0.2**
SBF			*e*Sn	**Sn**	**02 36 53.9 -2.6**
	comp=E,86nm,0.3s				
ESCA	**l'Escarene**	**2.04 261**	Pn	**Pn**	**02 36 33.0 +0.7**
ESCA			Sn	**Sn**	**02 36 58.3 +0.6**
PANI	**Panarotta**	**2.05 23**	*e*Pn	**Pn**	**02 36 33.5 +1.0**
DOI	**San Damiano**	**2.12 280**	P	**Pn**	**02 36 33.5 +0.2**
DOI			AML	AML	
	comp=E,274μm,0.5s				
DOI			AML	AML	
	comp=N,208μm,0.6s				
DOI			AML	AML	
	comp=E,274μm,0.5s				
DOI			AML	AML	
	comp=N,208μm,0.6s				
SMPL	**Sampolo**	**2.18 198**	Pn	**Pn**	**02 36 35.3 +1.3**
TRAV	**Traversella**	**2.18 309**	AML	AML	
	comp=E,250μm,0.5s				
TRAV			AML	AML	
	comp=E,250μm,0.5s				
TRAV			AML	AML	
	comp=N,236μm,0.4s				
TRAV			AML	AML	
	comp=E,250μm,0.5s				
TRAV			AML	AML	
	comp=N,236μm,0.4s				
TRAV			AML	AML	
	comp=N,236μm,0.4s				
PZZ	**Stroppo**	**2.21 280**	P	**Pn**	**02 36 34.4 -0.3**
PZZ			AML	AML	
	comp=E,204μm,0.4s				
PZZ			AML	AML	
	comp=N,185μm,0.3s				
PZZ			AML	AML	
	comp=E,204μm,0.4s				
PZZ			AML	AML	
	comp=N,185μm,0.3s				
PZZ			AML	AML	
	comp=E,204μm,0.4s				
PZZ			AML	AML	
	comp=N,185μm,0.3s				
SNTG	**Esanatoglia**	**2.21 114**	AML	AML	
	comp=E,85μm,0.6s				
SNTG			AML	AML	
	comp=E,85μm,0.6s				
SNTG			AML	AML	
	comp=N,92μm,1.6s				
SNTG			AML	AML	
	comp=N,92μm,1.6s				
SNTG			AML	AML	
	comp=E,85μm,0.6s				
SNTG			AML	AML	
	comp=N,92μm,1.6s				
ISO	**Isola**	**2.24 271**	Pn	**Pn**	**02 36 35.9 +0.9**
BERNI	**Berninapass**	**2.24 357**	AML	AML	
	comp=N,94μm,0.4s				
BERNI			AML	AML	
	comp=E,102μm,1.0s				
BERNI			AML	AML	
	comp=N,94μm,0.4s				
BERNI			AML	AML	
	comp=N,94μm,0.4s				
BERNI			AML	AML	
	comp=E,102μm,1.0s				
BERNI			AML	AML	
	comp=E,102μm,1.0s				
RSP	**Reno Superiore**	**2.29 296**	AML	AML	
	comp=E,107μm,0.5s				
RSP			AML	AML	
	comp=E,107μm,0.5s				
RSP			AML	AML	
	comp=N,90μm,0.4s				
RSP			AML	AML	
	comp=N,90μm,0.4s				
RSP			AML	AML	
	comp=E,107μm,0.5s				
RSP			AML	AML	
	comp=N,90μm,0.4s				
SATI	**Passo dei Sala**	**2.35 317**	AML	AML	
	comp=E,184μm,0.7s				
SATI			AML	AML	
	comp=N,156μm,1.5s				
SATI			AML	AML	
	comp=N,156μm,1.5s				
SATI			AML	AML	
	comp=E,184μm,0.7s				
SATI			AML	AML	
	comp=N,156μm,1.5s				
SATI			AML	AML	
	comp=E,184μm,0.7s				
TUE	**Stuetta**	**2.37 346**	AML	AML	
	comp=N,139μm,0.5s				
TUE			AML	AML	
	comp=E,190μm,1.3s				
TUE			AML	AML	
	comp=N,139μm,0.5s				
TUE			AML	AML	
	comp=E,262μm,1.3s				
TUE			AML	AML	
	comp=N,170μm,0.5s				
TUE			AML	AML	
	comp=E,190μm,1.3s				
TUE			AML	AML	
	comp=E,262μm,1.3s				
TUE			AML	AML	
	comp=N,170μm,0.5s				
TUE			AML	AML	
	comp=E,190μm,1.3s				
TUE			AML	AML	
	comp=E,262μm,1.3s				
TUE			AML	AML	
	comp=N,139μm,0.5s				
TUE			AML	AML	
	comp=N,170μm,0.5s				
CALF	**Calern**	**2.38 261**	Pn	**Pn**	**02 36 37.7 +0.7**
CALF			Sn	**Sn**	**02 37 06.2 0.0**
FDMO	**Fiordimonte**	**2.41 117**	AML	AML	
	comp=N,54μm,0.7s				
FDMO			AML	AML	
	comp=E,52μm,0.8s				
FDMO			AML	AML	
	comp=N,54μm,0.7s				
FDMO			AML	AML	
	comp=E,52μm,0.8s				
FDMO			AML	AML	
	comp=E,52μm,0.8s				
FDMO			AML	AML	
	comp=N,54μm,0.7s				
KOSI	**Kohlern**	**2.44 20**	AML	AML	
	comp=N,240μm,0.5s				
KOSI			AML	AML	
	comp=E,233μm,0.5s				
KOSI			AML	AML	
	comp=E,233μm,0.5s				
KOSI			AML	AML	
	comp=N,240μm,0.5s				
KOSI			AML	AML	
	comp=E,233μm,0.5s				
KOSI			AML	AML	
	comp=N,240μm,0.5s				
MBDF	**Montbardon**	**2.49 284**	*e*Pn	**Pn**	**02 36 38.9 +0.4**
MBDF			*e*Sn	**Sn**	**02 37 08.9 -0.1**
	comp=N,23nm,0.3s				
FUSIO	**Fusio**	**2.52 336**	AML	AML	
	comp=N,88μm,1.2s				
FUSIO			AML	AML	
	comp=E,136μm,0.6s				
FUSIO			AML	AML	
	comp=N,88μm,1.2s				
FUSIO			AML	AML	
	comp=E,136μm,0.6s				
FUSIO			AML	AML	
	comp=N,88μm,1.2s				
FUSIO			AML	AML	
	comp=E,136μm,0.6s				
DAVOX	**Davos/Dischmat**	**2.62 356**	Pn	**Pn**	**02 36 43.1 +2.9**
	comp=E,6.0nm,0.3s,baz=165,slow=10,SNR=38				
DAVOX			Lg	Lg	02 37 16.5
	comp=E,9.1nm,0.3s,baz=338,slow=19,SNR=12				
DAVOX	**Davos/Dischmat**	**2.62 356**	AML	AML	
	comp=N,122μm,0.4s				
DAVOX			AML	AML	
	comp=E,99μm,0.5s				
DAVOX			AML	AML	
	comp=N,122μm,0.4s				
DAVOX			AML	AML	
	comp=E,99μm,0.5s				
DAVOX			AML	AML	
	comp=N,122μm,0.4s				
DAVOX			AML	AML	
	comp=E,99μm,0.5s				
FRF	**La Foret Royal**	**2.62 258**	*e*Pn	**Pn**	**02 36 40.4 +0.3**
FRF			*e*Sn	**Sn**	**02 37 11.1 -0.7**
	comp=E,40nm,0.3s				
REMY	**Saint-Rhmy-en**	**2.71 309**	AML	AML	
	comp=E,184μm,0.4s				
REMY			AML	AML	
	comp=E,184μm,0.4s				
REMY			AML	AML	
	comp=N,330μm,0.7s				
REMY			AML	AML	
	comp=N,330μm,0.7s				
REMY			AML	AML	
	comp=E,184μm,0.4s				
REMY			AML	AML	
	comp=N,330μm,0.7s				
LPG	**La Plagne**	**2.77 300**	*e*Pn	**Pn**	**02 36 43.6 +1.2**
LMR	**La Mourre**	**2.78 254**	*e*Pn	**Pn**	**02 36 42.4 +0.1**
LMR			*e*Sn	**Sn**	**02 37 13.9 -1.9**
	comp=N,18nm,0.2s				
LPL	**La Plagne**	**2.79 300**	*e*Pn	**Pn**	**02 36 43.9 +1.3**
FETA	**Feichten**	**2.88 8**	Pn	**Pn**	**02 36 45.5 +1.7**
	comp=N,1.9nm,0.3s				
FETA			Sn	**Sn**	**02 37 17.2 -1.3**
	comp=N,7.3nm,0.5s				
ROSI	**Rosskopf**	**2.89 17**	AML	AML	
	comp=E,240μm,0.5s				
ROSI			AML	AML	
	comp=N,168μm,0.6s				
ROSI			AML	AML	
	comp=E,240μm,0.5s				
ROSI			AML	AML	
	comp=N,168μm,0.6s				
ROSI			AML	AML	
	comp=E,240μm,0.5s				
ROSI			AML	AML	
	comp=N,168μm,0.6s				
PLONS	**Plons/SG**	**2.93 349**	AML	AML	
	comp=E,67μm,0.4s				
PLONS			AML	AML	
	comp=E,67μm,0.4s				
PLONS			AML	AML	
	comp=N,69μm,0.6s				
PLONS			AML	AML	
	comp=N,69μm,0.6s				
PLONS			AML	AML	
	comp=E,67μm,0.4s				
PLONS			AML	AML	
	comp=N,69μm,0.6s				
BNALP	**Bannalp**	**2.96 336**	AML	AML	
	comp=N,65μm,1.5s				
BNALP			AML	AML	
	comp=E,89μm,0.9s				
BNALP			AML	AML	
	comp=N,65μm,1.5s				
BNALP			AML	AML	
	comp=E,89μm,0.9s				
BNALP			AML	AML	
	comp=E,89μm,0.9s				
BNALP			AML	AML	
	comp=N,65μm,1.5s				
SABO	**M.te Sabotino**	**3.03 52**	AML	AML	
	comp=E,295μm,0.3s				
SABO			AML	AML	
	comp=E,295μm,0.3s				
SABO			AML	AML	
	comp=N,240μm,1.0s				
SABO			AML	AML	
	comp=N,240μm,1.0s				
SABO			AML	AML	
	comp=N,240μm,1.0s				
SABO			AML	AML	
	comp=E,295μm,0.3s				
ABTA	**Abfaltersbach**	**3.06 32**	Pn	**Pn**	**02 36 45.1 -1.2**
	comp=E,0.4nm,0.2s				
ABTA			*e*Sn	**Sn**	**02 37 23.1 +0.2**
	comp=E,19nm,0.6s				
SKDS	**Skadanscina**	**3.06 62**	*i* Pn	**Pn**	**02 36 46.3 +0.1**
SKDS			*e*Sn	**Sn**	**02 37 23.1 +0.3**
	comp=Z,18nm,0.2s				
DAVA	**Damuels**	**3.12 356**	*e*Pn	**Pn**	**02 36 49.6 +2.4**
	comp=Z,3.4nm,0.4s,SNR=11				
DAVA			*e*Sn	**Sn**	**02 37 23.1 -1.3**
	comp=Z,26nm,0.4s				
SQTA	**Sankt Quirin**	**3.13 13**	*e*Pn	**Pn**	**02 36 46.4 -0.9**
	comp=Z,13nm,0.2s,SNR=12				
SQTA			*e*Sn	**Sn**	**02 37 24.0 -0.7**
	comp=Z,36nm,0.4s				
ORIF	**Oris-en-Rattie**	**3.15 285**	*e*Pn	**Pn**	**02 36 49.5 +2.0**
ORIF			*e*Sn	**Sn**	**02 37 24.1 -1.1**
	comp=Z,47nm,0.4s				
MLYF	**Mely**	**3.17 268**	Pn	**Pn**	**02 36 50.0 +2.2**
ARTF	**Artigues**	**3.21 261**	Pn	**Pn**	**02 36 49.9 +1.6**
ASEAF	**Site Antares,**	**3.22 246**	Pn	**Pn**	**02 36 49.3 +1.2**
MOTA	**Moosalm**	**3.24 11**	*e*Pn	**Pn**	**02 36 49.9 +1.1**
	comp=Z,3.0nm,0.2s,SNR=12				
MOTA			*e*Sn	**Sn**	**02 37 27.4 0.0**
	comp=Z,5.5nm,0.4s				
CADS	**Cadrg**	**3.25 50**	*i* Pn	**Pn**	**02 36 49.7 +0.8**
CADS			*e*Sn	**Sn**	**02 37 29.5 +1.9**
	comp=Z,21nm,0.2s				
WTTA	**Wattenberg**	**3.26 18**	*e*Pn	**Pn**	**02 36 47.5 -1.6**
	comp=Z,3.9nm,0.2s,SNR=6.9				
WTTA			*e*Sn	**Sn**	**02 37 28.5 +0.6**
	comp=Z,37nm,0.6s				
WTTA	**Wattenberg**	**3.26 18**	AML	AML	
	comp=E,125μm,0.7s				
WTTA			AML	AML	
	comp=E,125μm,0.7s				
WTTA			AML	AML	
	comp=N,88μm,1.0s				
WTTA			AML	AML	
	comp=N,88μm,1.0s				
WTTA			AML	AML	
	comp=E,125μm,0.7s				
WTTA			AML	AML	
	comp=N,88μm,1.0s				
BSTF	**la Bastide-des**	**3.27 266**	Pn	**Pn**	**02 36 50.6 +1.4**
SMRF	**Simiane la Rot**	**3.31 268**	*e*Pn	**Pn**	**02 36 50.8 +1.1**
SMRF			*e*Sn	**Sn**	**02 37 29.0 -0.1**
	comp=N,24nm,0.4s				
WATA	**Walderalm**	**3.31 17**	*e*Pn	**Pn**	**02 36 48.8 -1.0**
	comp=N,3.4nm,0.2s,SNR=14				
WATA			*e*Sn	**Sn**	**02 37 30.3 +1.1**
	comp=N,1.3nm,0.2s				
RETA	**Reutte**	**3.34 7**	*e*Pn	**Pn**	**02 36 52.6 +2.5**
	comp=N,0.7nm,0.1s				
RETA			Sn	**Sn**	**02 37 29.8 0.0**
	comp=N,14nm,0.5s				
RUSF	**Rustrel**	**3.38 268**	Pn	**Pn**	**02 36 52.5 +1.9**
NVLJ	**Novalja**	**3.40 82**	*e*Pn	**Pn**	**02 36 52.6 +1.9**
NVLJ			Sn	**Sn**	**02 37 31.2 +0.2**
MYKA	**Terra Mystica**	**3.47 44**	*e*Pn	**Pn**	**02 36 50.6 -1.3**
	comp=N,1.9nm,0.3s				
MYKA			*e*Sn	**Sn**	**02 37 31.9 -1.0**
	comp=N,4.3nm,0.4s				
ARBF	**Arbois**	**3.56 261**	Pn	**Pn**	**02 36 54.9 +1.8**
LJU	**Ljubljana**	**3.61 57**	AML	AML	
	comp=N,270μm,0.5s				
LJU			AML	AML	
	comp=E,248μm,0.3s				
LJU			AML	AML	
	comp=N,270μm,0.5s				
LJU			AML	AML	
	comp=E,248μm,0.3s				
LJU			AML	AML	
	comp=N,270μm,0.5s				
LJU			AML	AML	
	comp=E,248μm,0.3s				
GIMEL	**St. Georges /**	**3.62 312**	AML	AML	
	comp=N,39μm,1.6s				
GIMEL			AML	AML	
	comp=E,48μm,1.5s				
GIMEL			AML	AML	
	comp=N,39μm,1.6s				
GIMEL			AML	AML	
	comp=N,39μm,1.6s				
GIMEL			AML	AML	
	comp=E,48μm,1.5s				
GIMEL			AML	AML	
	comp=E,48μm,1.5s				
KBA	**Koelnbreinsper**	**3.66 36**	*e*Pn	**Pn**	**02 36 54.5 -0.2**
	comp=E,0.6nm,0.1s				
KBA			*e*Sn	**Sn**	**02 37 38.4 +0.5**
	comp=E,13nm,0.5s				
CABF	**La Chapelle**	**3.77 312**	*e*Pn	**Pn**	**02 36 57.8 +1.8**
CABF			*e*Sn	**Sn**	**02 37 37.8 -2.5**
	comp=E,40nm,0.7s				
OBKA	**Obir**	**3.87 51**	*e*Pn	**Pn**	**02 36 59.2 +1.7**
	comp=E,1.8nm,0.2s				
OBKA			*e*Sn	**Sn**	**02 37 42.0 -1.0**
	comp=E,4.9nm,0.2s				
CHMF	**Charmoille**	**3.94 323**	Pn	**Pn**	**02 37 00.6 +2.3**

LOMF	Lomont	3.94	325	Pn		Pn	02 37 00.6 +2.2
VIVF	Saint-Julien-l	3.99	282	ePn		Pn	02 36 59.8 +0.8
VIVF				eSn		Sn	02 37 46.0 +0.3
	comp=E,2.5nm,0.2s						
UDBI	Udbina	4.03	83	i Pn		Pn	02 37 02.1 +2.5
KIZ	Kirchzarten	4.09	338	Pn		Pn	02 37 02.1 +1.7
SSB	Saint Sauveur	4.16	287	Pn		Pn	02 37 02.6 +1.3
MOF	Molkenrain	4.24	331	Pn		Pn	02 37 04.6 +2.1
SOKA	Soboth	4.24	52	ePn		Pn	02 37 03.8 +1.2
	comp=E,1.6nm,0.3s						
SOKA				eSn		Sn	02 37 52.5 +0.4
	comp=E,3.9nm,0.6s						
HINF	Hinteralfeld	4.31	329	ePn		Pn	02 37 03.8 +0.4
HINF				eSn		Sn	02 37 51.5 -2.2
	comp=E,20nm,0.4s						
OPP	Oppenau	4.54	343	Pn		Pn	02 37 07.8 +1.3
LASF	Ste Croix	4.54	271	ePn		Pn	02 37 07.3 +0.7
LASF				eSn		Sn	02 37 57.4 -1.9
	comp=E,15nm,0.7s						
ECH	Echery	4.55	334	Pn		Pn	02 37 08.2 +1.5
MOA	Molln	4.66	36	ePn		Pn	02 37 10.3 +2.2
	comp=E,1.0nm,0.2s						
MOA				eSn		Sn	02 38 02.0 -0.1
	comp=E,8.1nm,0.5s						
HAU	Haudompre	4.66	327	ePn		Pn	02 37 08.6 +0.4
HAU				eSn		Sn	02 38 00.0 -2.3
	comp=E,27nm,0.3s						
WLS	Welschbruch	4.67	336	Pn		Pn	02 37 09.8 +1.5
CDF	Champ du Feu	4.69	336	ePn		Pn	02 37 09.5 +0.9
CDF				eSn		Sn	02 38 00.6 -2.4
	comp=E,14nm,0.4s						
ARSA	Arzberg	4.85	49	ePn		Pn	02 37 12.5 +1.7
	comp=E,1.1nm,0.2s,SNR=6.3						
ARSA				eSn		Sn	02 38 05.7 -1.3
	comp=E,0.6nm,0.3s						
LBL	Lubilhac	5.04	285	Pn		Pn	02 37 15.1 +1.6
SMF	Signal de Mont	5.09	301	ePn		Pn	02 37 14.8 +0.7
SMF				eSn		Sn	02 38 10.5 -2.4
	comp=E,30nm,0.5s						
GERES	GERESS Array B	5.27	26	Pn		Pn	02 37 17.2 +0.6
	comp=E,1.0nm,0.3s,baz=201,slow=14,SNR=20						
GERES				Sn		Sn	02 38 16.3 -1.1
	comp=E,1.6nm,0.3s,baz=205,slow=22,SNR=10						
PAGF	Fort de Pagny	5.35	327	ePn		Pn	02 37 18.6 +0.9
	baz=146						
PAGF				eSn		Sn	02 38 16.2 -3.0
	comp=E,13nm,0.4s,baz=138						
SFTF	Sexfontaines	5.38	320	ePn		Pn	02 37 18.4 +0.4
	baz=137						
SFTF				eSn		Sn	02 38 17.2 -2.7
	comp=E,5.1nm,0.3s,baz=140						
LOR	Lormes	5.39	307	ePn		Pn	02 37 18.7 +0.5
LOR				eSn		Sn	02 38 17.3 -2.9
	comp=E,11nm,0.4s						
AVF	Avril sur Loir	5.46	301	ePn		Pn	02 37 20.4 +1.3
AVF				eSn		Sn	02 38 19.5 -2.3
	comp=E,10nm,0.5s						
CONA	Conrad Observa	5.46	45	i Pn		Pn	02 37 20.7 +1.5
	comp=E,0.6nm,0.2s						
CONA				eSn		Sn	02 38 21.7 -0.4
	comp=E,2.6nm,0.4s						
KHC	Kasperske Hory	5.49	24	ePN		Pn	02 37 20.5 +0.9
KHC				eSN		Sn	02 38 22.3 -0.3
SSF	Saint Saulge	5.49	304	ePn		Pn	02 37 20.0 +0.4
SSF				eSn		Sn	02 38 19.9 -2.8
	comp=E,5.6nm,0.4s						
MEZF	Maizieres J'vi	5.59	323	ePn		Pn	02 37 21.8 +0.9
	baz=142						
MEZF				eSn		Sn	02 38 22.1 -3.0
	comp=E,7.8nm,0.4s,baz=144						
STON	Ston	5.63	101	ePn		Pn	02 37 22.9 +1.4
BGF	Bois d'Agland	5.68	297	ePn		Pn	02 37 23.3 +1.1
BGF				eSn		Sn	02 38 25.2 -2.2
	comp=E,25nm,0.4s						
MTLF	Montolieu	5.82	265	ePn		Pn	02 37 24.7 +0.7
MTLF				eSn		Sn	02 38 28.7 -2.0
	comp=E,2.5nm,0.4s						
CAF	Calviac	5.84	280	ePn		Pn	02 37 25.1 +0.7
CAF				eSn		Sn	02 38 28.3 -3.0
	comp=E,1.2nm,0.3s						
TCF	Toulx Ste Croi	6.00	293	ePn		Pn	02 37 27.7 +1.1
TCF				eSn		Sn	02 38 32.0 -3.3
	comp=E,6.4nm,0.4s						
HYF	Humbligny	6.11	303	ePn		Pn	02 37 28.1 0.0
HYF				eSn		Sn	02 38 35.2 -2.7
MODS	Modra-Piesok	6.47	47	ePN		Pn	02 37 34.7 +1.6
MODS				eSN		Sn	02 38 50.0 +3.1
VRAC	Vranov	6.77	38	Pn		Pn	02 37 36.5 -0.7
	comp=E,0.3nm,0.3s,baz=211,slow=19,SNR=2.6						
BRG	Berggiesshubel	7.17	20	SG		Sg	02 39 41.0 -7.0
	comp=E,1.3nm,0.7s						
VYHS	Vyhne	7.39	51	ePN		Pn	02 37 45.9 +0.2
VYHS				eSN		Sn	02 39 08.4 -1.1
KEST	Kesra	8.46	185	Pn		Pn	02 38 03.7 +3.4
	comp=E,0.2nm,0.3s,baz=9.5,slow=6.1,SNR=2.6						
FINES	FINESS Array B	19.69	23	P		Pn	02 40 29.0 +0.7
	comp=E,0.1nm,0.3s,baz=221,slow=11,SNR=3.8						

GCG 24 02:41:00.4±0.5, 13°.71N×91°.72W, h11^{km}±17^{km}, MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	1.12	49	eP	Pb	02 41 20.8	-1.2
FUG				eS	Sn	02 41 37.3	-0.6
IXG	Ixpaco	1.33	70	eP	Pn	02 41 24.7	-0.4
IXG				eS	Sn	02 41 43.0	+0.1
NBG	Las Nubes	1.59	57	eP	Pn	02 41 29.0	+0.2

*ISCJB **24** 02:57:02.5±0.4, 31°.68N±0°.08×40°.99W±0°.07, h14^{km}, mb4.0/29, MS3.4/12, Error ellipse: s-maj=11.8km s-min=7.9km az=167.3*
*IDC **24** 02:57:02.1±0.6, 31°.63N×40°.92W, h0^{km}, mb3.8/18, mb1 4.0/18, mb1mx3.9/46, mbtmp3.8/18, MS3.4/12, Ms1 3.4/12, ms1mx3.2/35, Error ellipse: s-maj=20.4km s-min=14.7km az=156.0*
*NEIC **24** 02:57:03.5±1.3, 31°.68N×40°.99W, h10^{km}±2^{km}, mb4.2/15, Error ellipse: s-maj=16.0km s-min=9.1km az=203.0*
ISC 24 02:57:04.1±0.5, 31°.7N±0°.1×40°.97W±0°.08, h14^{km}, n51, σ0°89/42, mb4.0/29, MS3.4/12, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKME	Peaks-Kenny Pk	25.85	310	eP	P	03 02 34.1	-1.0
	8.9nm,1.1s						
SJG	San Juan	26.44	245	LR	LR	03 11 14.2	
	comp=Z,27nm,19.6s,baz=78,slow=32						
MDP	Montagnes des	28.59	205	LR	LR	03 11 39.5	
	comp=Z,92nm,19.7s,baz=90,slow=31						
GRTK	Grand Turk	28.72	257	eP	P	03 02 58.9	-2.2
	112nm,1.1s						
LUPA	Lehigh Univers	29.04	298	eP	P	03 03 03.3	-0.4
	0.8nm,1.1s						
SCHQ	Schefferville	29.55	329	LR	LR	03 14 18.6	
	comp=Z,202nm,19.9s,baz=102,slow=35						
ESDC	Sonseca Array	30.95	65	P	P	03 03 21.2	+0.5
	1.4nm,1.0s,baz=302,slow=7.4,SNR=3.4						
SDV	Santo Domingo	35.66	237	eP	P	03 04 03.4	+1.2
	18nm,1.0s						
PTGA	Pitinga	36.90	213	P	P	03 04 12.3	-0.2
	1.2nm,0.5s,baz=166,slow=4.2,SNR=4.1						
DAVOX	Davos/Dischmat	41.47	54	P	P	03 04 51.2	+0.6
	1.1nm,0.5s,baz=247,slow=13,SNR=3.7						
DBIC	Dimbokro	41.88	119	LR	LR	03 20 16.4	
	comp=Z,98nm,18.1s,baz=293,slow=33						
TAM	Tamanrasset	42.02	90	eP	P	03 04 54.2	-1.2
	2.2nm,0.7s						
TOA1	Torodi Ar. Sit	43.20	105	eP	P	03 05 05.1	+0.2
TORD	Torodi Ar. Bea	43.21	105	P	P	03 05 05.1	+0.2
	3.4nm,1.0s,baz=312,slow=9.4,SNR=11						
TORD				LR	LR	03 21 03.0	
	comp=Z,25nm,21.2s,baz=315,slow=33						
CLL	Collm	43.84	47	eP	P	03 05 10.0	+0.4
GEC2	GERESS Array S	44.13	51	eP	P	03 05 11.7	-0.4
	0.9nm,0.7s						
GERES	GERESS Array B	44.13	51	P	P	03 05 11.7	-0.4
	0.7nm,0.6s,baz=258,slow=6.3,SNR=7.4						
ULM	Lac du Bonnet	44.34	311	LR	LR	03 21 23.4	
	comp=Z,48nm,21.1s,baz=52,slow=33						
NOA	NORSAR Array B	44.71	33	LR	LR	03 20 06.9	
	comp=Z,14nm,21.4s,baz=5.0,slow=31						
H10N2	ASCENSION HYDR	46.71	143	T	T	03 55 07.6	
	baz=328,slow=75,SNR=39						
H10N3	ASCENSION HYDR	46.72	143	T	T	03 55 03.3	
	baz=328,slow=75,SNR=20						
H10N1	ASCENSION HYDR	46.73	143	T	T	03 55 09.1	
	baz=328,slow=75,SNR=56						
OTAV	Otavalo	47.24	236	eP	P	03 05 37.8	+0.4
	4.5nm,0.8s						
BDFB	Brasilia	47.50	189	P	P	03 05 39.5	+0.5
	1.4nm,0.6s,baz=326,slow=11,SNR=3.0						
H10S1	ASCENSION HYDR	47.58	144	T	T	03 56 07.9	
	baz=330,slow=75,SNR=28						
H10S3	ASCENSION HYDR	47.58	144	T	T	03 56 11.3	
	baz=330,slow=75,SNR=39						
H10S2	ASCENSION HYDR	47.59	144	T	T	03 56 09.7	
	baz=330,slow=75,SNR=34						
FIA0	FINESS Array S	51.85	34	eP	P	03 06 12.3	+0.8
FINES	FINESS Array B	51.85	34	P	P	03 06 12.3	+0.8
	1.4nm,0.9s,baz=298,slow=4.1,SNR=3.8						
BUR08	Bucovina Ar. S	51.85	52	eP	P	03 06 11.7	-0.2
	2.8nm,1.1s						
TXAR	Lajitas Array	53.41	285	P	P	03 06 24.6	+0.9
	0.6nm,0.8s,baz=82,slow=9.2,SNR=6.3						
TXAR				LR	LR	03 26 58.2	
	comp=Z,30nm,21.8s,baz=0.0,slow=34						
AKASG	Malin Array Be	54.08	48	P	P	03 06 27.1	-1.0
	1.9nm,0.6s,baz=281,slow=6.6,SNR=9.5						
AKASG				LR	LR	03 25 58.6	
	comp=Z,25nm,20.8s,baz=270,slow=32						
AKBB	Malin Array Si	54.08	48	eP	P	03 06 27.1	-1.0
	2.6nm,0.6s						
LPAZ	La Paz	54.33	213	P	P	03 06 31.1	+0.1
	1.7nm,0.7s,baz=345,slow=6.4,SNR=7.6						
LPAZ	La Paz	54.33	213	eP	P	03 06 31.9	+0.9
	1.9nm,0.9s						
BW06	Boulder Array	54.37	302	eP	P	03 06 30.7	0.0
	2.5nm,0.9s						
PD31	Pinedale Array	54.37	302	eP	P	03 06 30.7	0.0
	2.2nm,0.9s						
PD31				ePcP	PcP	03 07 31.6	-2.9
PDAR	Pinedale Array	54.37	302	P	P	03 06 31.4	+0.7
	1.6nm,0.8s,baz=81,slow=9.2,SNR=14						
PDAR				LR	LR	03 29 16.6	
	comp=Z,99nm,18.1s,baz=94,slow=36						
YKA	Yellowknife Ar	54.97	327	P	P	03 06 35.1	+0.7
	0.3nm,0.9s,baz=89,slow=7.5,SNR=4.0						
YKA				PcP	PcP	03 07 35.3	-0.8
	0.2nm,0.6s,baz=89,slow=5.2,SNR=3.4						
YKA				LR	LR	03 28 25.5	
	comp=Z,8.2nm,21.9s,baz=65,slow=34						
YKB5	Yellowknife Ar	54.97	327	eP	P	03 06 35.1	+0.7
YKB5				ePcP	PcP	03 07 35.3	-0.8
IMW	Indian Meadow	55.11	304	eP	P	03 06 36.0	-0.2
	4.3nm,1.1s						
BRTR	Keskin Array B	59.54	60	P	P	03 07 06.9	-0.4
	0.8nm,0.8s,baz=274,slow=3.8,SNR=6.8						
J08A	Circle Bar Ran	60.54	305	eP	P	03 07 13.7	-0.4
	3.6nm,1.0s						
NV01	Mina Array Sit	61.96	300	eP	P	03 07 24.0	+0.1
NVAR	Mina Array Bea	61.96	300	P	P	03 07 24.0	+0.1
	0.4nm,0.6s,baz=79,slow=8.0,SNR=3.8						
NVAR				LR	LR	03 33 18.7	
	comp=Z,141nm,19.3s,baz=89,slow=35						
ILAR	Eielson Array	68.19	334	P	P	03 08 04.8	+1.1
	0.9nm,1.0s,baz=59,slow=3.4,SNR=5.5						
ILB	Eielson Array	68.19	334	eP	P	03 08 04.8	+1.1
	1.6nm,1.1s						
BVAR	Borovoye Array	76.79	35	P	P	03 08 55.0	-0.1
	0.3nm,0.4s,baz=289,slow=4.4,SNR=2.7						
KURBB	Kurchatov Arra	82.24	34	P	P	03 09 24.8	0.0
	0.4nm,0.5s,baz=313,slow=5.6,SNR=5.2						
MK32	Makanchi Array	86.67	35	eP	P	03 09 48.1	+0.7
MKAR	Makanchi Array	86.67	35	P	P	03 09 48.1	+0.7
	0.1nm,0.3s,baz=297,slow=7.6,SNR=3.1						

*SJA **24** 03:26:08.5±0.5, 23°.49S×68°.98W, h114^{km}±5^{km}, ML2.8, MW4.0*
*ISCJB **24** 03:26:09.4±0.9, 23°.45S±0°.04×69°.02W±0°.07, h118^{km}±10^{km}, Error ellipse: s-maj=10.1km s-min=6.1km az=8.9*
*GUC **24** 03:26:09.3±0.7, 23°.47S×68°.98W, h116^{km}±3^{km}, ML3.7*
ISC 24 03:26:10.2±1.6, 23°.45S±0°.04×69°.00W±0°.06, h109^{km}±12^{km}, n19, σ0°42/34, 1C-9D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.49	299	i P	Pn	03 26 27.1	-0.2
PB15	IPOC Station P	0.49	299	⇓iP	Pn	03 26 27.1	-0.2
PB15				eS	Sn	03 26 40.2	+0.2
LVC	Limon Verde	0.84	6	i P	Pn	03 26 29.7	-0.6
LVC				i S	Sn	03 26 46.0	+0.8
LVC	Limon Verde	0.84	6	eP	Pn	03 26 29.7	-0.6
LVC				eS	Sn	03 26 44.9	-0.4
PB06	IPOC Station P	0.91	325	i P	Pn	03 26 30.6	-0.1
PB06				i S	Sn	03 26 46.7	+0.7
PB06	IPOC Station P	0.91	325	⇓iP	Pn	03 26 30.6	-0.1
PB06				eS	Sn	03 26 45.9	-0.2
PB06				IAML		03 26 47.3	
	comp=E,2μm,0.1s						
PB05	IPOC Station P	1.25	298	⇓iP	Pn	03 26 34.2	-0.1
PB05				eS	Sn	03 26 52.3	-0.2
PB05				IAML		03 26 55.2	
	comp=E,1μm,0.3s						
PB10	IPOC Station P	1.43	267	⇓iP	Pn	03 26 36.2	+0.1
PB10				i S	Sn	03 26 55.8	0.0
PB04	IPOC Station P	1.54	316	i P	Pn	03 26 37.5	-0.1
PB04				i S	Sn	03 26 59.4	+1.0
PB04	IPOC Station P	1.54	316	⇓iP	Pn	03 26 37.5	-0.1
PB04				eS	Sn	03 26 58.9	+0.4
PB04				IAML		03 27 01.0	
	comp=N,1μm,0.3s						
PB03	IPOC Station P	1.56	333	i P	Pn	03 26 37.7	-0.3
PB03				i S	Sn	03 26 59.9	+0.9
PB03	IPOC Station P	1.56	333	⇓iP	Pn	03 26 37.9	-0.1
PB03				eS	Sn	03 26 59.1	+0.2
PB03				IAML		03 27 00.1	
	comp=E,2μm,0.2s						
PB14	IPOC Station P	1.73	227	eP	Pn	03 26 40.0	-0.2
PB14				i S	Sn	03 27 02.9	0.0
GO02	Mina Guanaco	1.79	197	⇑iP	Pn	03 26 40.5	-0.3
GO02				eS	Sn	03 27 04.2	+0.1
GO02				IAML		03 27 07.2	
	comp=N,762nm,0.4s						
PB07	IPOC Station P	1.90	334	⇓iP	Pn	03 26 41.9	-0.3
PB07				i S	Sn	03 27 06.5	0.0
PB07				IAML		03 27 07.6	
	comp=E,569nm,0.2s						
PB02	IPOC Station P	2.28	339	⇓iP	Pn	03 26 46.5	-0.4
PB01	IPOC Station P	2.44	349	⇓iP	Pn	03 26 48.4	-0.6
PB01				i S	Sn	03 27 18.4	-0.3
PB01				IAML		03 27 22.4	
	comp=N,444nm,0.5s						
HJA	Humahuaca	3.31	86	i P	Pn	03 27 00.8	0.0
HJA				IAML		03 27 02.5	
	comp=Z,74nm,0.5s						
YJA	Yavi	3.46	69	i P	Pn	03 27 03.1	+0.3
YJA				IAML		03 27 04.2	
	comp=Z,4.9nm,0.6s						

*ISCJB **24** 03:37:18.2±0.5, 4°.88S±0°.08×152°.19E±0°.08, h100^{km}, mb4.1/12, Error ellipse: s-maj=12.9km s-min=8.9km az=141.1*
*IDC **24** 03:37:20.8±2.8, 4°.96S×152°.22E, h113^{km}±26^{km}, mb3.9/12, mb1 4.1/14, mb1mx3.7/47, mbtmp4.3/14, MS3.2/2, Ms1 3.2/2, ms1mx2.7/36, Error ellipse: s-maj=19.9km s-min=16.5km az=174.0*
ISC 24 03:37:19.7±0.6, 4°.9S±0°.1×152°.22E±0°.09, h100^{km}, n19, σ0°99/19, mb4.1/11, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.75	228	P	Pn	03 38 57.9	+1.7
	2.0nm,0.3s,baz=61,slow=19,SNR=2.0						
PMG				S	Sn	03 40 10.2	-1.4
	5.6nm,0.3s,baz=69,slow=20,SNR=5.6						
HNR	Honiara	8.90	121	P	Pn	03 39 26.6	+1.1
	37nm,0.3s,baz=305,slow=4.6,SNR=4.0						
HNR				LR	LR	03 42 27.6	
	comp=Z,112nm,18.0s,baz=330,slow=35						
SIJI	Sorong	21.30	280	P	P	03 41 59.5	+0.9
	9.2nm,0.5s,baz=65,slow=4.6,SNR=4.3						
DZM	Mont Dzumac	21.96	142	P	P	03 42 04.4	-1.1
	3.3nm,0.6s,baz=121,slow=22,SNR=4.6						
WRA	Warramunga Arr	22.97	228	P	P	03 42 15.0	-0.9
	5.6nm,0.4s,baz=53,slow=9.8,SNR=45						
ASAR	Alice Springs	25.71	222	P	P	03 42 40.0	-0.9
	1.7nm,0.5s,baz=55,slow=9.1,SNR=22						
DAV	Davao City (W)	29.11	294	LR	LR	03 54 34.4	
	comp=Z,48nm,18.0s,baz=343,slow=36						
KSRS	Korea Array	47.80	334	P	P	03 45 48.0	+0.9
	14nm,0.9s,baz=248,slow=38,SNR=28						
CMAR	Chiang Mai Arr	57.38	295	P	P	03 46 58.4	+0.2
	0.8nm,0.4s,baz=111,slow=5.0,SNR=3.1						
ZALV	Zalesovo Beam	80.89	326	P	P	03 49 21.5	-1.1
	0.8nm,0.4s,baz=108,slow=8.2,SNR=3.2						
ILAR	Eielson Array	82.44	22	P	P	03 49 29.6	-1.0
	1.1nm,0.8s,baz=250,slow=5.3,SNR=12						
BVAR	Borovoye Array	88.95	323	P	P	03 50 02.7	-0.4
	0.6nm,0.4s,baz=91,slow=7.2,SNR=2.8						
NVAR	Mina Array Bea	92.58	52	P	P	03 50 20.4	-0.1
	1.0nm,0.7s,baz=251,slow=6.3,SNR=6.9						
YKA	Yellowknife Ar	95.75	28	P	P	03 50 34.3	+0.1
	0.3nm,0.7s,baz=270,slow=4.7,SNR=5.8						
PDAR	Pinedale Array	99.32	48	P	Pdif	03 50 50.2	-0.9
	0.6nm,0.7s,baz=191,slow=1.5,SNR=6.6						
GERES	GERESS Array B	123.81	328	PKP	PKPdf	03 56 06.7	+0.5
	0.6nm,0.6s,baz=132,slow=2.0,SNR=4.3						
LPAZ	La Paz	134.89	119	PKP	PKPdf	03 56 29.7	+0.9
	0.7nm,0.5s,baz=183,slow=1.9,SNR=3.8						
TORD	Torodi Ar. Bea	149.78	288	PKPbc	PKPbc	03 56 58.4	-0.7
	2.2nm,0.7s,baz=74,slow=2.3,SNR=17						
BDFB	Brasilia	151.42	136	PKPbc	PKPbc	03 57 02.5	-0.6
	4.0nm,0.8s,baz=228,slow=4.4,SNR=4.5						

*BJI **24** 03:44:21.2±0.0, 39°.43N×95°.48E, h5^{km}, ML3.9/7*
*IDC **24** 03:44:22.3±1.6, 39°.79N×95°.35E, h0^{km}, mb3.7/8, mb1 3.8/12, mb1mx3.6/48, mbtmp3.7/12, ML3.7/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/43, Error ellipse: s-maj=38.0km s-min=18.4km az=7.0*
*NNC **24** 03:44:32.7±8.2, 40°.24N×94°.52E, h0^{km}, mb4.4, Error ellipse: s-maj=118.1km s-min=77.0km az=53.0*
ISC 24 03:44:22.4±1.1, 39°.7N±0°.2×95°.42E±0°.06, h10^{km}, n21, σ1°78/24, mb3.8/9, 5C-2D, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	Gaotai	3.41	93	Pg	Pb	03 45 20.8	-2.1
GTA				Sg	Sb	03 46 04.3	-0.1
GTA				smax	smax		
	comp=N,260nm,0.7s						
GTA				smax	smax		
	comp=E,93nm,0.8s						
WMQ	Urumqi	7.12	308	Pn	Pn	03 46 10.1	+3.5
WMQ				Sn	Sn	03 47 29.8	+2.2
SONM	Songino Array	11.39	41	Pn	Pn	03 47 05.5	+0.4
	0.5nm,0.3s,baz=225,slow=14,SNR=4.1						
SONM				Lg	Lg	03 50 18.8	
	0.4nm,0.3s,baz=236,slow=31,SNR=5.1						
MK31	Makanchi Array	11.94	311	Pn	Pn	03 47 12.8	+0.3
	0.7nm,0.3s,baz=121,slow=14,SNR=24						
MK31				⇑Sn	Sn	03 49 17.0	-8.7
	2.7nm,0.5s						
MK31				⇓Lg	Lg	03 50 43.5	
	6.1nm,0.8s						
MKAR	Makanchi Array	11.94	311	Pn	Pn	03 47 10.6	-2.0
	1.0nm,0.3s,baz=121,slow=14,SNR=17						
MKAR				Sn	Sn	03 49 21.7	-4.0
	0.4nm,0.3s,baz=120,slow=24,SNR=6.4						
MKAR				Lg	Lg	03 50 38.2	
	baz=148,slow=32,SNR=2.2						
MKAR				LR	LR	03 52 36.2	
	comp=Z,41nm,18.5s,baz=235,slow=42						
MAKZ	Makanchi	12.13	311	Pn	Pn	03 47 15.3	+0.2
PDGK	Podgornoye	12.50	292	⇑Pn	Pn	03 47 19.4	-0.9
	18nm,0.5s						
PDGK				⇑Sn	Sn	03 49 38.3	-1.3
	5.0nm,0.6s						
PDGK				⇓Lg	Lg	03 50 55.5	
	28nm,1.4s						
AAK	Ala-Archa	16.04	287	Pn	Pn	03 48 05.8	-2.3
	0.5nm,0.3s,baz=86,slow=16,SNR=3.8						
KURBB	Kurchatov Arra	16.16	318	Pn	Pn	03 48 06.9	-2.5
	0.1nm,0.3s,baz=125,slow=13,SNR=12						
KURK	Kurchatov	16.16	319	⇑Pn	Pn	03 48 07.6	-1.8
	2.8nm,0.6s						
KURK				⇑Lg	Lg	03 53 01.8	
	7.6nm,1.1s						
BVAR	Borovoye Array	21.71	316	P	P	03 49 13.6	+0.2
	1.9nm,0.6s,baz=126,slow=7.4,SNR=11						
KSRS	Korea Array	25.44	85	P	P	03 49 52.8	+2.6
	1.2nm,0.6s,baz=280,slow=9.6,SNR=9.9						
MA2	Magadan	39.60	41	LR	LR	04 08 23.8	
	comp=Z,1μm,20.7s,baz=348,slow=36						
AKASG	Malin Array Be	46.48	307	P	P	03 52 49.4	0.0
	0.2nm,0.3s,baz=64,slow=7.1,SNR=3.3						
FINES	FINESS Array B	46.51	322	P	P	03 52 50.2	+0.7
	1.9nm,0.8s,baz=99,slow=8.3,SNR=6.8						
ARCES	ARCESS Array B	46.51	333	P	P	03 52 50.0	+0.6
	10nm,0.5s,baz=80,slow=10,SNR=5.1						
BRTR	Keskin Array B	46.68	291	P	P	03 52 51.5	+0.2
	0.6nm,0.7s,baz=99,slow=7.6,SNR=5.6						
NB2	NORSAR Subarra	53.62	323	P	P	03 53 43.3	-0.2
	comp=Z,0.4nm,0.5s,baz=71,slow=7.4						
NOA	NORSAR Array B	53.62	323	P	P	03 53 43.6	+0.1
	comp=Z,0.6nm,0.6s,baz=72,slow=7.2,SNR=4.3						
ESDC	Sonseca Array	72.12	307	P	P	03 55 47.5	+0.4
	comp=Z,0.6nm,0.7s,baz=53,slow=5.9,SNR=4.6						
YKA	Yellowknife Ar	75.37	14	P	P	03 56 05.8	+0.2
	comp=Z,0.2nm,0.9s,baz=345,slow=3.8,SNR=3.7						

*DSN **24** 03:48:41.7±2.0, 26°.59N×58°.35E, h10^{km}, ML3.7/9, Error ellipse: s-maj=28.7km s-min=9.1km az=10.0*
*OMAN **24** 03:48:

	SNR=6.2						
ASUD	**Al Ashush, Dub**	**3.00**	**231**	P	**Pb**	**03 49 37.6**	**-2.0**
ASUD	**Al Ashush, Dub**	**3.00**	**231**	*e*Pn	**Pb**	**03 49 37.3**	**-2.3**
HOQ	**Hoqain**	**3.01**	**190**	P	**Pn**	**03 49 34.4**	**+0.6**
HOQ	**Hoqain**	**3.01**	**190**	*e*Pn	**Pn**	**03 49 34.8**	**+1.0**
BIDO	**Bidbid**	**3.03**	**176**	P	**Pn**	**03 49 35.6**	**+1.4**
BIDO				S	**Sn**	**03 50 12.9**	**+2.4**
NGRK	**Negar Kerman**	**3.23**	**342**	*e*Pn	**Pn**	**03 49 37.6**	**+0.4**
NGRK				IAMB	IAmb	03 50 28.4	
	comp=Z,0.0nm,0.4s						
CHMN	**Cheshme madani**	**3.30**	**355**	*e*Pn	**Pn**	**03 49 39.9**	**+1.8**
CHMN				IAMB	IAmb	03 50 37.9	
	comp=Z,0.0nm,1.0s						
WSAR	**Wadi Sarin**	**3.38**	**168**	P	**Pn**	**03 49 40.2**	**+1.3**
WSAR				S	**Sn**	**03 50 19.9**	**+0.9**
ARQ	**Araqi**	**3.44**	**201**	P	**Pn**	**03 49 42.6**	**+2.9**
SMDO	**Samad**	**3.49**	**177**	P	**Pn**	**03 49 41.8**	**+1.3**
SMDO				S	**Sn**	**03 50 23.3**	**+1.4**
TVBK	**TV Kerman**	**3.55**	**344**	*e*Pn	**Pn**	**03 49 43.6**	**+2.0**
TVBK				IAMB	IAmb	03 49 53.5	
	comp=Z,0.0nm,0.2s						
BSY	**Bisya**	**3.85**	**189**	P	**Pb**	**03 49 50.1**	**-4.0**
	SNR=12						
BSY				S	**Sb**	**03 50 36.7**	**-4.1**
ZHSF	**Zahedan**	**3.97**	**39**	*e*Pn	**Pn**	**03 49 48.1**	**+0.9**
KHGB	**Koh Gabri**	**4.00**	**342**	*e*Pn	**Pn**	**03 49 47.7**	**+0.1**
KHGB				IAMB	IAmb	03 49 59.6	
	comp=Z,0.0nm,0.6s						
GHIR	**Ghir-Karzin**	**4.67**	**293**	*e*Pn	**Pn**	**03 49 56.0**	**-0.8**
ISRV	**Sarvestan**	**5.06**	**305**	*e*Pn	**Pn**	**03 50 03.1**	**+0.8**
BSRN	**Basiran**	**5.50**	**11**	*e*Pn	**Pn**	**03 50 08.4**	**+0.3**
ITEG	**Tejag**	**6.36**	**7**	*e*Pn	**Pn**	**03 50 20.4**	**+0.4**
YZKH	**Yazd**	**6.48**	**335**	*e*Pn	**Pn**	**03 50 21.3**	**-0.2**
KLNJ	**Kolanjah**	**7.07**	**310**	*e*Pn	**Pn**	**03 50 30.0**	**0.0**

WEL 24 03:52:14.9, 42°S±2°×17°3E±°, h59km±5km, M3.6/21, ML3.8/17, MLv3.6/21, Error ellipse: s-maj=0.0km s-min=0.0km az=70.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.42**	**11**	P	Pn	03 52 26.7	+0.6
THZ				S	Sn	03 52 35.1	+1.0
KHZ	**Kahutara**	**0.60**	**114**	P	Pn	03 52 28.5	+0.6
KHZ				S	Sn	03 52 38.1	+0.7
LTZ	**Lake Taylor**	**0.72**	**212**	P	Pn	03 52 30.0	+0.6
GVZ	**Greta Valley S**	**0.81**	**167**	P	Pn	03 52 31.2	+0.7
DSZ	**Denniston Nort**	**0.85**	**300**	P	Pn	03 52 31.7	+0.6
DSZ				S	Sn	03 52 43.2	+0.3
BSWZ	**Blackbirch Sta**	**0.93**	**61**	P	Pn	03 52 33.1	+1.1
AMCZ	**Amberley**	**1.01**	**186**	P	Pn	03 52 33.4	+0.5
AMCZ				S	Sn	03 52 47.2	+0.8
NNZ	**Nelson**	**1.05**	**25**	P	Pn	03 52 34.6	+1.1
TUWZ	**Tuamarina**	**1.14**	**49**	P	Pn	03 52 35.8	+1.1
CMWZ	**Cape Campbell**	**1.14**	**69**	P	Pn	03 52 36.2	+1.4
INZ	**Inchbonnie**	**1.14**	**241**	P	Pn	03 52 35.6	+0.8
OXZ	**Oxford**	**1.28**	**206**	P	Pn	03 52 36.3	-0.3
QRZ	**Quartz Range**	**1.36**	**351**	P	Pn	03 52 38.3	+0.6
CRLZ	**Canterbury Las**	**1.40**	**185**	P	Pn	03 52 37.7	-0.6
TCW	**Tory Channel**	**1.47**	**49**	P	Pn	03 52 39.5	+0.4
MQZ	**McQueen's Vall**	**1.53**	**184**	P	Pn	03 52 39.2	-0.8
OKCZ	**Okains Bay**	**1.56**	**173**	P	Pn	03 52 40.3	-0.1
DUWZ	**D'Urville Isla**	**1.61**	**32**	P	Pn	03 52 42.7	+1.6
AKCZ	**Akaroa Harbour**	**1.70**	**177**	P	Pn	03 52 42.0	-0.2
BHW	**Baring Head**	**1.73**	**64**	P	Pn	03 52 42.4	-0.3
WVZ	**Waitaha Valley**	**1.77**	**239**	P	Pn	03 52 43.7	+0.6
PLWZ	**Palliser**	**1.93**	**73**	P	Pn	03 52 44.6	-0.9
MSWZ	**Moikau Station**	**1.99**	**68**	P	Pn	03 52 45.4	-0.7
RPZ	**Rata Peaks**	**2.00**	**219**	P	Pn	03 52 46.7	+0.3
CAW	**Cannon Point**	**2.01**	**59**	P	Pn	03 52 46.1	-0.3
PAWZ	**Paruwai Farm**	**2.12**	**69**	P	Pn	03 52 47.2	-0.9
OGWZ	**Otaki Gorge**	**2.24**	**54**	P	Pn	03 52 49.4	-0.2
MTW	**Mount Morrison**	**2.27**	**64**	P	Pn	03 52 48.8	-1.2
HOWZ	**Holdsworth Sta**	**2.41**	**59**	P	Pn	03 52 51.0	-0.9
TMWZ	**Te Maipa**	**2.55**	**66**	P	Pn	03 52 52.5	-1.5
FOZ	**Fox Glacier**	**2.58**	**237**	P	Pn	03 52 54.9	+0.8
MRZ	**Mangatainoka R**	**2.58**	**55**	P	Pn	03 52 53.5	-0.8
TIWZ	**Tintock**	**2.71**	**60**	P	Pn	03 52 55.0	-1.1
POWZ	**Post Office Ro**	**2.86**	**52**	P	Pn	03 52 57.3	-0.8
NMEZ	**Namu Road**	**2.88**	**17**	P	Pn	03 53 00.6	+2.3
PRWZ	**Pori Road**	**2.89**	**57**	P	Pn	03 52 57.3	-1.2
LBZ	**Lake Benmore**	**2.92**	**220**	P	Pn	03 52 58.7	-0.2
WAZ	**Wanganui**	**2.93**	**35**	P	Pn	03 53 00.6	+1.5
LREZ	**Lake Rotokare**	**2.97**	**25**	P	Pn	03 53 02.2	+2.6
BFZ	**Birch Farm**	**2.99**	**61**	P	Pn	03 52 58.0	-1.9
PREZ	**Palmer Road**	**3.01**	**21**	P	Pn	03 53 02.5	+2.2
NBEZ	**Newall Road No**	**3.02**	**16**	P	Pn	03 53 02.4	+2.2
KHEZ	**Kahui Hut**	**3.02**	**18**	P	Pn	03 53 02.5	+2.1
PKE	**Pukeiti**	**3.11**	**17**	P	Pn	03 53 03.8	+2.2
DVHZ	**Dannevirke**	**3.16**	**55**	P	Pn	03 53 00.9	-1.3
DREZ	**Durham Road**	**3.17**	**20**	P	Pn	03 53 04.3	+2.0
TSZ	**Takapari Road**	**3.19**	**50**	P	Pn	03 53 01.5	-1.2
ANWZ	**Angora Road**	**3.26**	**59**	P	Pn	03 53 05.6	+2.1
ODZ	**Otahua Downs**	**3.27**	**208**	P	Pn	03 53 03.0	-0.6
VRZ	**Vera Road**	**3.39**	**27**	P	Pn	03 53 03.6	-1.8
PNHZ	**Pukenui**	**3.42**	**50**	P	Pn	03 53 04.3	-1.5
MTVZ	**Mangateitei**	**3.45**	**37**	P	Pn	03 53 07.6	+1.4
PKVZ	**Pokaka**	**3.47**	**35**	P	Pn	03 53 07.7	+1.1
JCZ	**Jackson Bay**	**3.50**	**236**	P	Pn	03 53 06.2	-0.6
MOVZ	**Moawhango**	**3.56**	**40**	P	Pn	03 53 07.6	-0.1
FWVZ	**Far West T-bar**	**3.59**	**37**	P	Pn	03 53 09.0	+0.7
TUVZ	**Tukino**	**3.63**	**38**	P	Pn	03 53 08.7	+0.8
BHHZ	**Black Hill Sta**	**3.65**	**44**	P	Pn	03 53 08.4	-0.5
NGZ	**Ngauruhoe**	**3.68**	**36**	P	Pn	03 53 09.8	+0.4
KRHZ	**Kereru**	**3.71**	**48**	P	Pn	03 53 08.6	-1.1
WTVZ	**West Tongariro**	**3.72**	**36**	P	Pn	03 53 10.2	+0.2
WKZ	**Wanaka**	**3.82**	**225**	P	Pn	03 53 11.0	-0.2
KAHZ	**Kahuranaki**	**3.90**	**54**	P	Pn	03 53 10.8	-1.6
HIZ	**Hauiti**	**3.98**	**24**	P	Pn	03 53 14.2	+0.8
BKZ	**Black Stump Fm**	**4.12**	**44**	P	Pn	03 53 17.8	+2.4
TLZ	**Tolley Road**	**4.38**	**30**	P	Pn	03 53 19.6	+0.7
MLZ	**Mavora Lakes**	**4.65**	**225**	P	Pn	03 53 23.7	+1.1
TOZ	**Tahuroa Road**	**4.90**	**26**	P	Pn	03 53 27.8	+1.7
MWZ	**Matawai**	**5.28**	**45**	P	Pn	03 53 32.0	+0.9
AWAZ	**Awhitu Peninsu**	**5.30**	**16**	P	Pn	03 53 34.0	+2.5
RUGZ	**Raukumara Rang**	**5.63**	**43**	P	Pn	03 53 35.1	-1.0
TWGZ	**Tauwhareparae**	**5.63**	**47**	P	Pn	03 53 36.2	+0.2
MBAZ	**Motutapu North**	**5.64**	**17**	P	Pn	03 53 38.6	+2.4
WIAZ	**Waiheke Island**	**5.67**	**19**	P	Pn	03 53 38.3	+1.8
HAZ	**Te Kahu**	**5.84**	**43**	P	Pn	03 53 38.1	-0.8
WCZ	**Waipu Caves**	**6.34**	**11**	P	Pn	03 53 47.6	+1.9
OUZ	**Omahuta**	**6.97**	**5**	P	Pn	03 53 56.2	+1.8

NIED ***24*** *04:08:00, 33°40N×141°00E, h50km, Mw4.0 Best double couple: M0=1.03000×10^15 NP1:φ=208.00000°, δ=44.00000°, λ=132.00000°. NP2:φ=336.00000°, δ=59.00000°, λ=57.00000°.*
ISCJB ***24*** *04:08:22.2±0.8, 33°42N±0°03×140°96E±0°06, h58km±6km, mb4.0/7, Error ellipse: s-maj=9.0km s-min=4.8km az=10.9*
JMA ***24*** *04:08:22.0±0.1, 33°43N×140°97E, h62km±3km, M3.8*
IDC ***24*** *04:08:24.6±2.8, 33°29N×140°73E, h58km±20km, mb3.6/6, mb1 3.7/8, mb1mx3.4/64, mbtmp3.9/8, ML3.4/2, MS2.7/2, Ms1 2.7/2, ms1mx2.4/30, Error ellipse: s-maj=36.3km s-min=11.9km az=81.0*

ISC 24 08:22.9±1.5, 33°40N±0°05×140°98E±0°08, h49km±13km, n35, σ0°98/45, mb3.8/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.01**	**254**	P	**Pn**	**04 08 40.8**	**0.0**
JHJ2				S	**Sn**	**04 08 54.6**	**+0.6**
JHJ	**Hachijo jima 2**	**1.04**	**255**	P	**Pn**	**04 08 40.8**	**-0.4**
	1μm,0.3s,baz=43,slow=19,SNR=878						
JHJ				S	**Sn**	**04 08 52.2**	**-2.4**
	2μm,0.3s,baz=94,slow=19,SNR=16						
JHCJ	**Hachijojimakas**	**1.04**	**252**	P	**Pn**	**04 08 40.9**	**-0.3**
JHCJ				S	**Sn**	**04 08 54.6**	**-0.1**
BSO1	**Boso 1**	**1.25**	**360**	P	**Pn**	**04 08 43.3**	**-0.3**
BSO1				*e*S	**Sn**	**04 08 59.6**	**+0.5**
JMKN	**Mikurajimanish**	**1.26**	**294**	P	**Pn**	**04 08 43.7**	**-0.4**
JMKN				*e*S	**Sn**	**04 08 59.4**	**-0.6**
BSO2	**Boso 2**	**1.37**	**352**	*e*S	**Sn**	**04 09 01.9**	**-0.2**
JAOM	**Aogashimamukai**	**1.38**	**228**	P	**Pn**	**04 08 45.7**	**-0.1**
JAOM				*e*S	**Sn**	**04 09 03.0**	**0.0**
BSO3	**Boso 3**	**1.46**	**345**	P	**Pn**	**04 08 46.3**	**-0.3**
BSO3				*e*S	**Sn**	**04 09 03.8**	**-0.6**
JIM2	**Oshima 3**	**1.84**	**316**	P	**Pn**	**04 08 51.4**	**-0.7**
JIM2				*e*S	**Sn**	**04 09 12.5**	**-1.8**
JIZS	**Izushimoda**	**2.19**	**308**	P	**Pn**	**04 08 56.8**	**0.0**
JIZS				*e*S	**Sn**	**04 09 22.2**	**-0.5**
JOD2	**Odawara 2**	**2.43**	**320**	P	**Pn**	**04 08 59.8**	**-0.4**
JOD2				*e*S	**Sn**	**04 09 26.4**	**-2.4**
JFNN	**Fujinakano**	**2.61**	**314**	P	**Pn**	**04 09 03.6**	**+0.9**
JFNN				*e*S	**Sn**	**04 09 33.1**	**-0.1**
TK02	**Tokai 2**	**2.74**	**282**	P	**Pn**	**04 09 05.1**	**+0.9**
TK04	**Tokai 4**	**2.77**	**292**	P	**Pn**	**04 09 05.6**	**+1.0**
TK04				*e*S	**Sn**	**04 09 37.4**	**+0.7**
SHZ3	**Shizuoka 3**	**2.84**	**307**	P	**Pn**	**04 09 06.8**	**+1.0**
JYN	**Shimob**	**2.91**	**317**	P	**Pn**	**04 09 07.2**	**+0.4**
JYN				*e*S	**Sn**	**04 09 40.6**	**+0.1**
JRY	**Ryogami san**	**3.13**	**327**	P	**Pn**	**04 09 09.8**	**+0.1**
JRY				*e*S	**Sn**	**04 09 44.2**	**-1.6**
MJAR	**Matsushiro Arr**	**3.88**	**325**	P	**Pn**	**04 09 21.1**	**+1.1**
	2.1nm,0.3s,baz=151,slow=12,SNR=71						
MJAR				S	**Sn**	**04 10 04.8**	**+0.5**
	1.2nm,0.3s,baz=182,slow=33,SNR=5.4						
MJAR				LR	LR	04 11 01.7	
	comp=Z,84nm,19.8s,baz=135,slow=41						
MAT	**Matsushiro**	**3.88**	**325**	P	**Pn**	**04 09 21.1**	**+1.1**
MAT				S	**Sn**	**04 10 04.4**	**+0.1**
JNU	**Nakatsue**	**8.46**	**271**	P	**Pn**	**04 10 22.9**	**0.0**
	0.5nm,0.3s,baz=78,slow=20,SNR=3.0						
KSRS	**Korea Array**	**11.39**	**294**	P	**Pn**	**04 11 05.7**	**+2.7**
	0.2nm,0.3s,baz=111,slow=14,SNR=6.6						
KSRS				LR	LR	04 15 17.8	
	comp=Z,49nm,19.1s,baz=148,slow=37						
H11N2	**WAKE ISLAND Hy**	**26.79**	**114**	T	T	04 42 52.2	
	baz=306,slow=75,SNR=68						
H11N1	**WAKE ISLAND Hy**	**26.80**	**114**	T	T	04 42 51.4	
	baz=306,slow=75,SNR=81						
H11N3	**WAKE ISLAND Hy**	**26.81**	**114**	T	T	04 42 40.7	
	baz=306,slow=75,SNR=86						
H11S3	**WAKE ISLAND Hy**	**27.37**	**116**	T	T	04 43 36.1	
	baz=307,slow=75,SNR=7.1						
H11S1	**WAKE ISLAND Hy**	**27.37**	**116**	T	T	04 43 33.2	
	baz=307,slow=75,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**27.38**	**116**	T	T	04 43 37.2	
	baz=307,slow=75,SNR=4.3						
SONM	**Songino Array**	**29.67**	**309**	P	**P**	**04 14 23.8**	**-0.3**
	0.4nm,0.4s,baz=99,slow=8.9,SNR=2.2						
MKAR	**Makanchi Array**	**45.83**	**305**	P	**P**	**04 16 39.5**	**-0.6**
	0.6nm,0.5s,baz=87,slow=9.6,SNR=6.3						
KURBB	**Kurchatov Arra**	**48.03**	**311**	P	**P**	**04 16 56.8**	**-0.3**
	1.0nm,0.5s,baz=88,slow=8.1,SNR=9.8						
BVAR	**Borovoye Array**	**52.81**	**314**	P	**P**	**04 17 34.7**	**+1.5**
	0.4nm,0.4s,baz=82,slow=10,SNR=2.8						
WRA	**Warramunga Arr**	**53.42**	**188**	P	**P**	**04 17 37.5**	**-0.4**
	5.2nm,0.3s,baz=356,slow=6.5,SNR=71						
ASAR	**Alice Springs**	**57.14**	**188**	P	**P**	**04 18 04.4**	**-0.3**
	2.9nm,0.4s,baz=5.4,slow=6.9,SNR=47						
FINES	**FINESS Array B**	**71.87**	**333**	P	**P**	**04 19 41.1**	**+0.7**
	0.3nm,0.4s,baz=46,slow=6.0,SNR=4.2						
LPAZ	**La Paz**	**148.72**	**64**	PKPbc	**PKiKP**	**04 28 06.5**	**-1.1**
	0.7nm,0.4s,baz=308,slow=2.0,SNR=4.8						

KRSC ***24*** *04:13:36.0±1.6, 52°06N×151°66E, h626km±25km, ML4.8*
ISCJB ***24*** *04:13:35.6±0.2, 52°14N±0°03×151°54E±0°04, h631km±2km, mb4.2/13, Error ellipse: s-maj=5.4km s-min=3.2km az=153.1*
MOS ***24*** *04:13:35.6±1.0, 52°24N×151°42E, h624km, mb4.3/23, Error ellipse: s-maj=8.2km s-min=5.9km az=92.2*
SKHL ***24*** *04:13:35.6±0.6, 52°14N×151°60E, h617km±8km, mb5.4/3, msh4.8/3*
NEIC ***24*** *04:13:36.4±2.0, 52°16N×151°45E, h625km±8km, mb4.3/115, Error ellipse: s-maj=19.3km s-min=12.3km az=141.0*
IDC ***24*** *04:13:37.8±0.6, 52°26N×151°32E, h641km±7km, mb3.7/40, mb1 3.8/45, mb1mx3.7/66, mbtmp4.7/45, Error ellipse: s-maj=8.3km s-min=6.0km az=153.0*

ISC 24 04:13:36.3±0.4, 52°10N±0°05×151°59E±0°04, h628km±4km, n304, σ1°46/360, mb4.3/113, 16C-32D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.17**	**115**	*e*P	**P**	**04 14 58.8**	**+0.2**
SKR				pmax	pmax		
	comp=Z,256nm,0.7s						
SKR				pmax	pmax		
	comp=Z,300nm,1.4s						
SKR	**Severo-Kuril's**	**3.17**	**115**	*e*P	**P**	**04 14 58.7**	**+0.2**
SKR				AMB	AMB	04 14 59.7	
	comp=Z,132nm,0.3s						
SKR				AMB	AMB	04 15 00.0	
	comp=Z,300nm,1.0s						
SKR				*e*S	**S**	**04 16 03.0**	**-2.8**
SKR				A	A	04 16 05.0	
	comp=Z,150nm,0.2s						
SKR				A	A	04 16 05.0	
	comp=Z,63nm,0.2s						
PAU	**Pauzhetka**	**3.31**	**99**	*e*P	**P**	**04 15 00.0**	**+0.7**
PAU	**Pauzhetka**	**3.31**	**99**	P	**P**	**04 15 00.0**	**+0.7**
PAU	**Pauzhetka**	**3.31**	**99**	*e*P	**P**	**04 14 59.9**	**+0.7**
PAU				AMB	AMB	04 15 01.5	
	comp=Z,383nm,0.6s						
PAU				*e*S	**S**	**04 16 06.0**	**-1.2**
PAU				A	A	04 16 06.5	
	comp=Z,220nm,0.6s						
PAU				A	A	04 16 06.5	
	comp=Z,170nm,0.6s						
APC	**Apacha**	**3.50**	**74**	*e*P	**P**	**04 15 00.9**	**+0.5**
APC				*e*S	**S**	**04 16 07.9**	**-1.4**
APC	**Apacha**	**3.50**	**74**	P	**P**	**04 15 00.9**	**+0.5**
APC				S	**S**	**04 16 07.9**	**-1.4**
PEA0B	**Petropavlovsk-**	**3.86**	**72**	*e*P	**P**	**04 15 03.2**	**+0.5**
PEA0B				*e*S	**S**	**04 16 09.0**	**-4.4**
PETK	**Petropavlovsk-**	**3.86**	**72**	P	**P**	**04 15 03.1**	**+0.4**
	comp=Z,39nm,0.3s,baz=290,slow=2.0,SNR=680						
KDTR	**Khodutka, Kamc**	**4.02**	**92**	*e*P	**P**	**04 15 03.3**	**-0.4**
KDTR				*e*S	**S**	**04 16 12.2**	**-3.2**
KDTR	**Khodutka, Kamc**	**4.02**	**92**	P	**P**	**04 15 03.3**	**-0.4**
KDTR				S	**S**	**04 16 12.2**	**-3.2**
KRMR	**Karymshinskiy**	**4.07**	**77**	*e*P	**P**	**04 15 04.6**	**+0.6**
KRMR				*e*S	**S**	**04 16 14.7**	**-1.2**
KRMR	**Karymshinskiy**	**4.07**	**77**	P	**P**	**04 15 04.6**	**+0.6**
KRMR				S	**S**	**04 16 14.7**	**-1.2**
RUS	**Russkaya**	**4.27**	**83**	*e*P	**P**	**04 15 05.2**	**-0.2**
RUS				*e*S	**S**	**04 16 14.7**	**-3.7**
RUS	**Russkaya**	**4.27**	**83**	P	**P**	**04 15 05.2**	**-0.2**
RUS				S	**S**	**04 16 14.7**	**-3.7**
RUS	**Russkaya**	**4.27**	**83**	*e*P	**P**	**04 15 05.2**	**-0.2**
PET	**Petropavlovsk**	**4.41**	**75**	*e*P	**P**	**04 15 06.5**	**+0.1**
PET				*e*S	**S**	**04 16 17.5**	**-2.6**
PET	**Petropavlovsk**	**4.41**	**75**	⇓*i*P	**P**	**04 15 06.4**	**+0.1**
PET				*e*S	**S**	**04 16 17.1**	**-3.1**
PET				pmax	pmax		
	comp=Z,500nm,0.8s						
PET				pmax	pmax		
	comp=Z,525nm,0.6s						
PET				smax	smax		
	comp=E,91nm,0.9s						
PET				smax	smax		
	comp=N,105nm,0.8s						
PET	**Petropavlovsk**	**4.41**	**75**	*e*P	**P**	**04 15 06.5**	**+0.1**
PET				AMB	AMB	04 15 08.2	
	comp=N,520nm,0.6s						
PET				AMB	AMB	04 15 08.7	
	comp=N,419nm,0.5s						
PET				*e*S	**S**	**04 16 17.5**	**-2.6**
PET				A	A	04 16 17.8	
	comp=N,111nm,3.0s						
PET				A	A	04 16 17.8	
	comp=N,113nm,3.0s						
PET				A	A	04 16 20.0	
	comp=N,104nm,0.8s						
PET				A	A	04 16 20.0	
	comp=N,91nm,0.8s						
DALK	**Dalny**	**4.47**	**75**	*e*P	**P**	**04 15 06.9**	**+0.1**
DALK				*e*S	**S**	**04 16 18.3**	**-2.6**
DALK	**Dalny**	**4.47**	**75**	P	**P**	**04 15 06.9**	**+0.1**
DALK				S	**S**	**04 16 18.3**	**-2.6**
AVH	**Avacha**	**4.50**	**72**	*e*P	**P**	**04 15 07.8**	**+0.7**
AVH	**Avacha**	**4.50**	**72**	P	**P**	**04 15 07.8**	**+0.7**
AVH	**Avacha**	**4.50**	**72**	*e*P	**P**	**04 15 07.8**	**+0.7**
NLC	**Nalytchevo**	**4.84**	**74**	*e*P	**P**	**04 15 09.6**	**+0.1**
NLC	**Nalytchevo**	**4.84**	**74**	P	**P**	**04 15 09.6**	**+0.1**
NLC	**Nalytchevo**	**4.84**	**74**	*e*P	**P**	**04 15 09.6**	**+0.1**
SPN	**Mys Shipunski**	**5.24**	**76**	*e*P	**P**	**04 15 11.5**	**-1.0**
SPN				*e*S	**S**	**04 16 25.7**	**-5.7**
SPN	**Mys Shipunski**	**5.24**	**76**	P	**P**	**04 15 11.5**	**-1.0**
SPN				S	**S**	**04 16 25.7**	**-5.7**
SPN	**Mys Shipunski**	**5.24**	**76**	*e*P	**P**	**04 15 11.5**	**-1.0**
OKH	**Okha**	**5.45**	**289**	*c i*P	**P**	**04 15 16.1**	**+2.0**
OKH				*e*S	**S**	**04 16 30.2**	**-4.2**
OKH				pmax	pmax		
	comp=Z,1μm,0.8s						
OKH				smax	smax		
	comp=N,800nm,3.7s						
OKH	**Okha**	**5.45**	**289**	*i* P	**P**	**04 15 16.2**	**+2.1**
OKH				AMB	AMB	04 15 16.5	
	comp=N,115nm,0.5s						
OKH				*e*S	**S**	**04 16 30.0**	**-4.4**
OKH				A	A	04 16 30.5	
	comp=N,840nm,2.0s						
ESO	**Esso**	**5.67**	**45**	*e*P	**P**	**04 15 17.1**	**+1.1**
ESO				*e*S	**S**	**04 16 38.3**	**+0.5**
ESO	**Esso**	**5.67**	**45**	P	**P**	**04 15 17.1**	**+1.1**
ESO				S	**S**	**04 16 38.3**	**+0.5**
ESO	**Esso**	**5.67**	**45**	*e*P	**P**	**04 15 17.1**	**+1.1**
TYV	**Tymovskoe**	**5.72**	**261**	*e*P	**P**	**04 15 18.1**	**+1.7**
TYV				*e*S	**S**	**04 16 38.6**	**+0.1**
TYV				pmax	pmax		
	comp=Z,389nm,0.8s						
TYV				smax	smax		
	comp=E,22nm,0.6s						
TYV	**Tymovskoe**	**5.72**	**261**	*e*P	**P**	**04 15 16.5**	**+0.1**
TYV				AMB	AMB	04 15 18.6	
	comp=E,388nm,0.8s						
TYV				*e*S	**S**	**04 16 35.6**	**-2.9**
TYV				A	A	04 16 40.6	
	comp=E,22nm,0.6s						
TUMR	**Tumrok**	**6.00**	**55**	P	**P**	**04 15 19.3**	**+0.6**
TUMR				S	**S**	**04 16 43.7**	**+0.9**
TUMD	**Tumrok D**	**6.09**	**56**	*e*P	**P**	**04 15 19.3**	**-0.1**
TUMD				*e*S	**S**	**04 16 43.7**	**-0.3**
NKL	**Nikolayevsk**	**6.72**	**283**	*i* P	**P**	**04 15 25.5**	**+0.7**
NKL				pmax	pmax		
	comp=N,30nm,0.7s						
NKL				pmax	pmax		
	comp=E,110nm,0.7s						
NKL				pmax	pmax		
	comp=Z,140nm,0.7s						
NKL	**Nikolayevsk**	**6.72**	**283**	*e*P	**P**	**04 15 25.5**	**+0.7**
NKL				AMB	AMB	04 15 26.4	
	comp=Z,30nm,0.7s						
NKL				AMB	AMB	04 15 26.4	
	comp=Z,110nm,0.7s						
NKL				AMB	AMB	04 15 26.4	
	comp=Z,140nm,0.7s						
UGL	**Uglegorsk**	**6.78**	**247**	*e*P	**P**	**04 15 27.0**	**+1.6**
UGL				*e*S	**S**	**04 16 53.5**	**-1.4**
UGL				pmax	pmax		
	comp=Z,800nm,1.0s						
UGL				pmax	pmax		
	comp=Z,571nm,0.9s						
UGL				pmax	pmax		
	comp=N,259nm,0.6s						
UGL				smax	smax		
	comp=N,195nm,0.5s						
UGL				smax	smax		
	comp=E,800nm,1.6s						
UGL				smax	smax		
	comp=E,310nm,1.1s						
KUR	**Kuril'sk**	**7.30**	**201**	*e*P	**P**	**04 15 31.2**	**+1.0**
KUR				AMB	AMB	04 15 32.5	
	comp=E,30nm,0.4s						
KUR				AMB	AMB	04 15 32.5	
	comp=E,20nm,0.4s						
MA2	**Magadan**	**7.50**	**357**	P	**P**	**04 15 30.7**	**-1.0**
	comp=E,0.8nm,0.3s,baz=138,slow=21,SNR=4.2						
MA2				S	**S**	**04 17 06.6**	**+0.1**
	comp=E,1.1nm,0.3s,baz=107,slow=19,SNR=4.2						
YSS	**Yuzh-Sakhalins**	**7.72**	**232**	*e*P	**P**	**04 15 35.0**	**+1.1**
YSS	**Yuzh-Sakhalins**	**7.72**	**232**	⇑*i*P	**P**	**04 15 35.1**	**+1.1**
YSS				*e*S	**S**	**04 17 07.5**	**-2.8**
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.72**	**232**	*i* P	**P**	**04 15 34.8**	**+0.9**
YSS				AMB	AMB	04 15 36.0	
	comp=Z,40nm,0.8s						
KBG	**Krutoberegovo**	**7.73**	**53**	*e*S	**S**	**04 17 05.5**	**-4.8**
BKI	**Bering**	**9.09**	**64**	*e*P	**P**	**04 15 48.6**	**+2.1**
BKI				*e*S	**S**	**04 17 32.7**	**-0.8**
BKI	**Bering**	**9.09**	**64**	P	**P**	**04 15 48.6**	**+2.

MAJO	Matsushiro	18.22	217	eP	P	04 17 12.2	-0.4
	comp=Z,18nm,0.7s						
MAJO	Matsushiro	18.22	217	c iP	P	04 17 14.1	+1.4
MAT	Matsushiro	18.22	217	P	P	04 17 13.5	+0.8
MAT				S	S	04 20 08.8	+0.8
MJAR	Matsushiro Arr	18.22	217	P	P	04 17 13.4	+0.8
	comp=Z,0.3nm,0.3s,baz=18,slow=8.1,SNR=31						
KIWB	Kanaga Island	19.19	78	eP	P	04 17 20.8	-0.4
ADK	Adak	19.46	78	eP	P	04 17 23.4	-0.2
	comp=Z,50nm,1.1s						
ADK	Adak	19.46	78	eP	P	04 17 23.4	-0.2
ADK				pmax	pmax		
	comp=Z,50nm,1.1s						
INU	Inuyama	19.72	218	eP	P	04 17 25.1	-1.2
	comp=Z,13nm,1.1s						
HIA	Hailar	20.29	275	i P	P	04 17 31.7	+0.5
HIA				pmax	pmax		
	comp=Z,54nm,0.9s						
ATKA	Atka Island	20.88	76	eP	P	04 17 36.7	+0.3
	comp=Z,69nm,1.2s						
TIK	Tiksi	22.05	341	eP	P	04 17 46.1	-0.3
TIXI	Tiksi	22.06	341	P	P	04 17 46.1	-0.4
	comp=Z,1.2nm,0.3s,baz=122,slow=6.3,SNR=2.7						
TIXI				S	S	04 21 05.1	-2.6
	comp=Z,2.9nm,0.5s,baz=21,slow=14,SNR=4.1						
TIXI				PcP	PcP	04 21 17.8	-0.2
	comp=Z,2.1nm,0.3s,baz=48,slow=3.3,SNR=3.1						
KSRS	Korea Array	22.15	238	P	P	04 17 49.5	+1.6
	comp=Z,9.2nm,0.8s,baz=42,slow=8.8,SNR=54						
KSRS				PcP	PcP	04 21 19.2	+0.5
	comp=Z,3.1nm,0.8s,baz=345,slow=1.4,SNR=14						
KS15	Wonju Array Si	22.18	238	eP	P	04 17 48.9	+0.8
	comp=Z,13nm,0.9s						
SPIA	Saint Paul Isl	22.44	62	eP	P	04 17 51.7	+1.6
	comp=Z,126nm,1.2s						
JNU	Nakatsue	24.18	226	P	P	04 18 07.3	+1.3
	comp=Z,7.3nm,0.4s,baz=14,slow=4.2,SNR=12						
JNU	Nakatsue	24.18	226	eP	P	04 18 07.4	+1.5
	comp=Z,11nm,0.8s						
UNV	Unalaska Valle	25.04	69	eP	P	04 18 11.6	-1.5
	comp=Z,31nm,1.2s						
SDPT	Sand Point	28.10	64	eP	P	04 18 40.0	+0.2
	comp=Z,16nm,0.9s						
ULN	Ulaanbaatar	28.60	279	i P	P	04 18 44.9	+0.5
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	28.60	279	eP	P	04 18 44.9	+0.5
CHGN	Chignik	29.01	62	eP	P	04 18 47.8	+0.2
	comp=Z,1.2nm,0.9s						
SONM	Songino Array	29.01	280	P	P	04 18 48.1	+0.1
	comp=Z,0.7nm,0.4s,baz=68,slow=7.0,SNR=5.7						
SONM				PcP	PcP	04 21 34.7	-0.3
	comp=Z,3.2nm,0.6s,baz=84,slow=2.6,SNR=9.8						
SONM				ScP	ScP	04 24 16.6	-1.3
	comp=Z,1.6nm,0.7s,baz=91,slow=2.6,SNR=4.7						
TTA	Tatalina	29.30	48	eP	P	04 18 51.3	+1.2
	comp=Z,11nm,1.0s						
TTA	Tatalina	29.30	48	eP	P	04 18 51.3	+1.2
TTA				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	Hu-ho-hao-te	29.41	264	eP	P	04 18 53.1	+1.7
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,24nm,4.7s						
SVW2	Sparrevohn	29.65	51	eP	P	04 18 55.0	+1.9
	comp=Z,12nm,0.7s						
PPLA	Purkeypile	31.04	48	eP	P	04 19 07.4	+2.4
	comp=Z,8.2nm,1.0s						
BPAW	Bear Paw Mtn.	31.46	45	eP	P	04 19 09.9	+1.4
	comp=Z,6.1nm,0.8s						
KTH	Kantishna Hill	31.54	46	eP	P	04 19 10.3	+1.1
	comp=Z,14nm,1.0s						
KTH				ePcP	PcP	04 21 39.0	-2.5
COLD	Coldfoot	31.62	39	eP	P	04 19 10.9	+1.1
	comp=Z,2.5nm,0.8s						
KDAK	Kodiak Island	31.76	57	P	P	04 19 11.5	+0.5
	comp=Z,16nm,0.6s,baz=284,slow=7.2,SNR=16						
KDAK	Kodiak Island	31.76	57	i P	P	04 19 11.4	+0.4
TRF	Thorofare Moun	31.84	46	eP	P	04 19 12.9	+1.1
	comp=Z,2.0nm,0.5s						
TOLK	Toolik Lake Re	31.86	36	eP	P	04 19 12.4	+0.6
	comp=Z,4.3nm,0.6s						
SUA	Susitna One	31.91	50	eP	P	04 19 12.3	-0.2
	comp=Z,6.2nm,0.6s						
COLA	College	32.73	43	i P	P	04 19 20.7	+1.6
COLA				pmax	pmax		
	comp=Z,11nm,0.9s						
ILAR	Eielson Array	33.15	44	P	P	04 19 23.2	+0.6
	comp=Z,8.3nm,0.7s,baz=268,slow=7.2,SNR=94						
ILB	Eielson Array	33.15	44	eP	P	04 19 23.6	+1.0
	comp=Z,9.9nm,0.6s						
WHN	Wuhan	34.75	246	⇑P	P	04 19 36.8	+0.4
WHN				pmax	pmax		
	comp=Z,54nm,0.9s						
XAN	Xi'an	35.40	256	P	P	04 19 39.5	-2.2
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LZH	Lanzhou	37.10	264	⇑P	P	04 19 56.9	+1.1
LZH				PP	PP	04 21 41.0	-1.3
LZH				pP	pP	04 21 41.8	+3.1
LZH				sP	sP	04 22 52.1	+2.1
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,73nm,4.0s						
GTA	Gaotai	37.50	271	eP	P	04 20 00.0	+1.1
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ENH	Enshi	37.75	251	eP	P	04 20 01.1	+0.1
	comp=Z,41nm,0.9s						
INK	Inuvik	37.77	36	P	P	04 20 01.0	+0.5
	comp=Z,6.1nm,0.6s,baz=291,slow=8.8,SNR=20						
INK				PcP	PcP	04 21 59.9	+0.2
	comp=Z,1.8nm,0.5s,baz=119,slow=2.3,SNR=4.3						
INK	Inuvik	37.77	36	eP	P	04 20 01.6	+1.1
	comp=Z,4.7nm,0.6s						
ZALV	Zalesovo Beam	38.86	300	PcP	PcP	04 22 03.1	-0.4
	comp=Z,3.2nm,0.4s,baz=86,slow=3.2,SNR=4.6						
DGZ	Jazzator, Alta	39.36	293	i P	P	04 20 13.6	-0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GYA	Guiyang	42.24	250	⇑iP	P	04 20 37.3	+0.6
GYA				pmax	pmax		
	comp=Z,30nm,0.7s						
WMQ	Urumqi	42.31	285	eP	P	04 20 39.3	+2.4
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.1s						
WMQ				LR	LR		
	comp=N,200nm,29.2s						
WMQ				LR	LR		
	comp=E,310nm,29.0s						
WMQ				LR	LR		
	comp=Z,35nm,18.7s						
DLBC	Dease Lake	42.71	49	P	P	04 20 41.2	+1.3
	comp=Z,6.0nm,0.8s,baz=286,slow=5.9,SNR=9.0						
KURK	Kurchatov	43.74	298	P	P	04 20 47.5	-0.3
KURK						04 22 19.4	
KURK	Kurchatov	43.74	298	eP	P	04 20 47.6	-0.3
MKAR	Makanchi Array	43.80	292	P	P	04 20 47.6	-0.8
	comp=Z,7.7nm,0.5s,baz=61,slow=6.9,SNR=26						
MKAR				PcP	PcP	04 22 20.0	-0.4
	comp=Z,3.9nm,1.0s,baz=66,slow=5.6,SNR=4.2						
KURBB	Kurchatov Arra	43.84	298	P	P	04 20 47.5	-1.0
	comp=Z,13nm,0.6s,baz=64,slow=7.6,SNR=17						
KURBB				PcP	PcP	04 22 19.4	-0.9
	comp=Z,6.0nm,0.6s,baz=57,slow=3.1,SNR=11						
BVAR	Borovoye Array	46.82	305	P	P	04 21 10.3	-0.8
	comp=Z,6.6nm,0.6s,baz=63,slow=8.4,SNR=6.7						
BBB	Bella Bella	46.82	56	P	P	04 21 12.1	+1.0
	comp=Z,3.9nm,0.9s,baz=306,slow=7.3,SNR=3.0						
BRVK	Borovoye	46.85	305	d iP	P	04 21 11.1	-0.3
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRVK	Borovoye	46.85	305	eP	P	04 21 11.1	-0.3
YKA	Yellowknife Ar	47.30	39	P	P	04 21 15.2	+0.6
	comp=Z,1.9nm,0.7s,baz=304,slow=7.1,SNR=26						
YKA				PcP	PcP	04 22 32.6	+0.2
	comp=Z,0.6nm,0.6s,baz=318,slow=3.5,SNR=8.1						
YKA				pP	pP	04 23 06.6	+1.1
	comp=Z,0.4nm,0.7s,baz=312,slow=7.5,SNR=1.8						
YKA				ScP	ScP	04 25 27.0	-0.2
	comp=Z,1.1nm,0.8s,baz=304,slow=3.9,SNR=13						
ARU	Arti	50.48	314	P	P	04 21 37.4	-0.5
	comp=Z,8.8nm,0.3s,baz=46,slow=3.8,SNR=7.1						
PANO	Nakornpanom	50.73	245	P	P	04 21 42.0	+1.7
AAK	Ala-Archa	50.74	292	P	P	04 21 39.7	-0.5
	baz=117,slow=6.8						
AAK	Ala-Archa	50.74	292	d iP	P	04 21 40.2	0.0
AAK				pmax	pmax		
	comp=Z,14nm,0.8s						
AAK	Ala-Archa	50.74	292	eP	P	04 21 40.2	0.0
SKNT	Sakolnakorn	51.22	245	P	P	04 21 45.1	+1.3
LVZ	Lovozero	51.48	334	i P	P	04 21 44.3	-0.7
LVZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SHL	Shillong	51.77	263	eP	P	04 21 47.6	-0.3
	comp=Z,28nm,0.5s						
SHL	Shillong	51.77	263	eP	P	04 21 47.6	-0.3
SHL				pmax	pmax		
	comp=Z,29nm,0.5s						
KSH	Kashi	51.88	288	P	P	04 21 52.8	+4.4
KSH				pP	pP	04 23 45.1	+2.6
KSH				S	S	04 28 30.8	+5.1
KSH	Kashi	51.88	288	SS	SS	04 32 21.5	+7.2
KSH				pmax	pmax		
	comp=Z,46nm,1.0s						
KSH				pmax	pmax		
	comp=Z,290nm,6.5s						
KSH				LR	LR		
	comp=N,310nm,7.4s						
KSH				LR	LR		
	comp=E,320nm,10.6s						
KSH				LR	LR		
	comp=Z,220nm,11.9s						
APA	Apatity	52.04	335	⇓iP	P	04 21 44.5	-4.5
APA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,100nm,16.0s						
PRGR	Permogore	52.37	325	eP	P	04 21 49.2	-2.1
PRGR				pmax	pmax		
	comp=Z,11nm,0.4s						
ARCES	ARCESS Array B	52.48	339	P	P	04 21 51.5	-0.5
	comp=Z,3.5nm,0.6s,baz=29,slow=8.2,SNR=24						
CHTO	Chiang Mai	52.64	251	eP	P	04 21 52.6	-1.4
CHTO	Chiang Mai	52.64	251	eP	P	04 21 52.6	-1.4
CMAR	Chiang Mai Arr	52.92	251	P	P	04 21 56.6	+0.7
	comp=Z,12nm,0.8s,baz=24,slow=6.7,SNR=24						
CMAR				PcP	PcP	04 22 54.3	+0.1
	comp=Z,4.1nm,0.6s,baz=1.7,slow=3.5,SNR=7.2						
LTY	Liberty	53.64	58	eP	P	04 22 00.2	-0.5
	comp=Z,2.3nm,0.5s						
NEW	Newport	54.80	55	P	P	04 22 09.5	+0.7
	comp=Z,2.8nm,0.7s,baz=207,slow=4.5,SNR=4.3						
KLMR	Klimovskoe	55.05	326	eP	P	04 22 08.0	-2.1
KLMR				pmax	pmax		
	comp=Z,11nm,0.6s						
KLMR	Klimovskoe	55.05	326	eP	P	04 22 08.0	-2.1
KLMR				AMP		04 22 10.5	
	comp=Z,11nm,0.7s						
SUMG	Summit	55.42	4	eP	P	04 22 12.2	-0.8
	comp=Z,14nm,1.1s						
SUMG	Summit	55.42	4	eP	P	04 22 12.3	-0.8
SUMG				pmax	pmax		
	comp=Z,15nm,1.1s						
SIJI	Sorong	55.49	205	P	P	04 22 15.2	+1.3
	comp=Z,6.5nm,0.3s,baz=14,slow=11,SNR=4.7						
YBH	Yreka Blue Hor	56.18	64	P	P	04 22 20.3	+1.9
	comp=Z,6.0nm,0.7s,baz=11,slow=5.1,SNR=20						
FINES	FINESS Array B	58.79	333	P	P	04 22 35.0	-0.5
	comp=Z,10nm,0.4s,baz=36,slow=7.0,SNR=30						
FINES				S	S	04 29 51.5	-2.3
	comp=Z,0.8nm,0.9s,baz=39,slow=12,SNR=4.1						
FINES	FINESS Array B	58.79	333	P	P	04 22 35.0	-0.5
SBUM	Sibu	59.35	227	eP	P	04 22 41.2	+1.3
	comp=Z,9.8nm,0.7s						
BOZ	Bozeman (W)	59.38	54	eP	P	04 22 40.6	+0.6
	comp=Z,3.7nm,0.7s						
BOZ	Bozeman (W)	59.38	54	eP	P	04 22 40.6	+0.6
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PAHR	Pah Rah Range	59.41	64	eP	P	04 22 41.4	+1.1
	comp=Z,7.3nm,0.8s						
NVAR	Mina Array Bea	60.90	64	P	P	04 22 52.0	+1.9
	comp=Z,4.9nm,0.7s,baz=301,slow=6.7,SNR=32						
NVAR				pP	pP	04 24 53.7	+3.1
	comp=Z,0.4nm,0.5s,baz=300,slow=8.2,SNR=3.3						
ELK	Elko	60.93	60	eP	P	04 22 50.9	+0.6
	comp=Z,1.3nm,0.6s						
ELK	Elko	60.93	60	eP	P	04 22 50.9	+0.6
ELK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VSU	Vasula	61.03	330	i P	P	04 22 50.0	-0.3
VSU				pmax	pmax		
	comp=Z,25nm,0.9s						
FXWY	Fox Creek	61.07	55	eP	P	04 22 52.1	+0.9
	comp=Z,1.9nm,0.6s						
KSM	Kuching	61.09	229	eP	P	04 22 51.5	+0.1
	comp=Z,20nm,1.1s						
PDAR	Pinedale Array	62.44	55	P	P	04 23 01.1	+1.0
	comp=Z,2.4nm,0.6s,baz=345,slow=1.7,SNR=34						
PDAR				pP	pP	04 25 04.3	+2.9
	comp=Z,0.4nm,0.6s,baz=304,slow=2.3,SNR=3.9						
DUG	Dugway, Tooele	62.62	59	eP	P	04 23 03.2	+2.1
	comp=Z,2.5nm,0.8s						
DUG	Dugway, Tooele	62.62	59	eP	P	04 23 03.2	+2.1
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NC405	NORSAR Array S	62.67	339	eP	P	04 23 00.7	-0.2
	comp=Z,9.1nm,1.0s						
NB2	NORSAR Subarra	62.84	340	P	P	04 23 01.4	-0.7
	comp=Z,3.8nm,0.5s,baz=25,slow=6.5						
NOA	NORSAR Array B	62.84	340	P	P	04 23 01.8	-0.3
	comp=Z,5.2nm,0.5s,baz=28,slow=6.6,SNR=43						
KAPI	Kappang	63.02	216	ceP	P	04 23 06.8	+3.0
KAPI				pmax	pmax		
	comp=Z,15nm,1.7s						
GEYT	Alibeck	63.11	298	P	P	04 23 03.8	-0.4
	comp=Z,12nm,0.6s,baz=35,slow=5.4,SNR=4.9						
HYB	Hyderabad	66.05	268	i P	P	04 23 22.0	-0.9
NCK	Nalchik	66.35	311	ceP	P	04 23 25.4	+1.1
NCK				pmax	pmax		
	comp=Z,16nm,0.8s						
KIV	Kislovodsk	66.41	312	eP	P	04 23 24.8	0.0
KIV				pmax	pmax		
	comp=Z,34nm,1.0s						
KIV	Kislovodsk	66.41	312	eP	P	04 23 24.8	0.0
KBZ	Khabaz	66.49	312	P	P	04 23 25.4	+0.3
	comp=Z,13nm,0.8s,baz=30,slow=3.6,SNR=9.7						
AKASG	Malin Array Be	66.58	324	P	P	04 23 24.4	-1.1
	comp=Z,4.0nm,0.4s,baz=33,slow=6.3,SNR=22						
AKASG	Malin Array Be	66.58	324	i P	P	04 23 24.3	-1.2
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NEY	Neytrino	66.94	311	i P	P	04 23 27.4	-0.8
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GNI	Garni	68.38	308	i P	P	04 23 38.0	+1.1
GNI				pmax	pmax		
	comp=Z,15nm,0.8s						
SCHQ	Schefferville	68.75	23	P	P	04 23 38.3	-0.4
	comp=Z,1.7nm,0.4s,baz=0.0,slow=12,SNR=3.4						
KWP	Kalwaria Pacla	69.74	327	eP	P	04 23 44.9	+0.2
KWP	Kalwaria Pacla	69.74	327	eP	P	04 23 44.9	+0.2
ANMO	Albuquerque	69.89	59	P	P	04 23 47.0	+1.0
	comp=Z,0.5nm,0.4s,baz=309,slow=8.5,SNR=4.2						
ANMO	Albuquerque	69.89	59	P	P	04 23 47.0	+1.0
OJC	Ojcow	70.17	329	eP	P	04 23 47.0	-0.2
OJC	Ojcow	70.17	329	eP	P	04 23 47.0	-0.2
KOLS	Kolonicke sedl	70.49	327	eP	P	04 23 48.9	-0.2
KOLS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KOLS	Kolonicke sedl	70.49	327	eP	P	04 23 48.9	-0.2
BURAR	Bucovina Array	70.60	325	⇓iP	P	04 23 49.4	-0.5
BURAR	Bucovina Array	70.60	325	⇓P	P	04 23 49.4	-0.5
KSP	Ksiaz	70.68	332	eP	P	04 23 49.1	-1.0
KSP	Ksiaz	70.68	332	eP	P	04 23 49.2	-1.0
NIE	Niedzica	70.71	329	eP	P	04 23 50.6	+0.2
NIE	Niedzica	70.71	329	eP	P	04 23 50.6	+0.2
BIZ	Bicaz	70.86	324	⇓iP	P	04 23 50.8	-0.4
UPC	Upice	71.06	332	eP	P	04 23 52.3	-0.1
UPC	Upice	71.06	332	eP	P	04 23 52.3	-0.1
TRPA	Tarpa	71.09	327	⇓iP	P	04 23 52.6	+0.1
DPC	Dobruska-Polom	71.11	332	eP	P	04 23 53.0	+0.3
DPC	Dobruska-Polom	71.11	332	eP	P	04 23 53.0	+0.3
CLL	Collm	71.19	334	⇓iP	P	04 23 51.5	-1.6
	comp=Z,10.0nm,0.6s						
CLL				ePcP	PcP	04 24 08.0	-0.4
CLL	Collm	71.19	334	⇓iP	P	04 23 51.5	-1.6
CLL				e		04 24 08.0	
CLL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LANS	Liptovska Anna	71.21	329	eP	P	04 23 54.2	+0.9
LANS	Liptovska Anna	71.21	329	eP	P	04 23 54.2	+0.9
MORC	Moravsky Berou	71.26	331	eP	P	04 23 53.5	-0.1
TLCR		71.31	321	⇓iP	P	04 23 53.3	-0.6
TLCR		71.31	321	⇓P	P	04 23 53.3	-0.6
PVCC	Panska Ves	71.46	333	eP	P	04 23 54.5	-0.2
PVCC	Panska Ves	71.46	333	eP	P	04 23 54.5	-0.2
DIKM	Dikmen	71.57	315	⇓iP	P	04 23 56.1	+0.6
CFR	Carcaliu	71.58	322	⇓iP	P	04 23 54.9	-0.5
CFR	Carcaliu	71.58	322	⇓P	P	04 23 54.9	-0.5
OZUR		71.69	324	⇓iP	P	04 23 56.4	+0.3
GOPC	GO Pecny, Ondr	71.95	332	eP	P	04 23 57.3	-0.2
GOPC	GO Pecny, Ondr	71.95	332	eP	P	04 23 57.3	-0.2
PRU	Pruhonice	71.95	332	eP	P	04 23 57.5	0.0
PRU				MLR	MLR		
	comp=Z,1μm,22.6s						
PRU	Pruhonice	71.95	332	eP	P	04 23 57.5	0.0
VRAC	Vranov	71.96	331	⇓iP	P	04 23 57.9	+0.3
VRAC	Vranov	71.96	331	⇓P	P	04 23 57.9	+0.3
VRAC	Vranov	71.96	331	eP	P	04 23 57.9	+0.3
VYHS	Vyhne	71.99	329	eP	P	04 23 58.0	+0.2
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VYHS	Vyhne	71.99	329	eP	P	04 23 58.0	+0.2
JAVC	Velka Javorina	72.03	330	eP	P	04 23 59.2	+1.1
CTA	Charters Tower	72.03	185	P	P	04 23 59.2	+0.9
	comp=Z,1.4nm,0.5s,baz=44,slow=6.4,SNR=4.0						
TLB	Topalu	72.12	321	⇓iP	P	04 23 58.3	-0.2
TLB	Topalu	72.12	321	⇓P	P	04 23 58.3	-0.2
MLR	Muntele Rosu	72.14	323	⇑iP	P	04 23 59.6	+0.7
MLR	Muntele Rosu	72.14	323	⇑P	P	04 23 59.6	+0.7
DRGR		72.19	326	⇓iP	P	04 23 58.7	-0.3
DRGR		72.19	326	⇓P	P	04 23 58.7	-0.3
KRUC	Moravsky	72.24	331	eP	P	04 23 59.3	+0.1
VOIR		72.52	324	⇓iP	P	04 24 01.1	+0.1
VOIR		72.52	324	⇓P	P	04 24 01.1	+0.1
MODS	Modra-Piesok	72.58	330	eP	P	04 24 00.9	-0.3
MODS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MODS	Modra-Piesok	72.58	330	eP	P	04 24 00.9	-0.3
ARR	Arges	72.73	324	⇓iP	P	04 24 03.4	+1.2
KHC	Kasperske Hory	73.00	333	eP	P	04 24 03.7	+0.1
KHC	Kasperske Hory	73.00	333	eP	P	04 24 03.7	+0.1
KHC				ex	x	04 24 09.4	
GERES	GERESS Array B	73.22	332	P	P	04 24 04.3	-0.6
	comp=Z,4.0nm,0.6s,baz=38,slow=6.0,SNR=29						
WB2	Warramunga Arr	73.30	197	eP	P	04 24 06.5	+0.9
	comp=Z,23nm,0.7s						
WRA	Warramunga Arr	73.31	197	P	P	04 24 06.6	+1.0
	comp=Z,17nm,0.7s,baz=11,slow=6.7,SNR=78						
GZR	Gura Zlata	73.37	325	⇓iP	P	04 24 05.3	-0.5
GZR	Gura Zlata	73.37	325	⇓P	P	04 24 05.3	-0.5
CONA	Conrad Observa	73.41	331	P	P	04 24 06.3	+0.3
	comp=Z,3.9nm,0.6s						
BZS	Buzias	73.58	326	⇓iP	P	04 24 06.2	-0.7
BZS	Buzias	73.58	326	⇓P	P	04 24 06.2	-0.7
BR131	Keskin Array S	73.85	315	eP	P	04 24 08.6	-0.2
	comp=Z,8.7nm,1.1s						
BRTR	Keskin Array B	73.85	315	P	P	04 24 08.5	-0.2
	comp=Z,6.8nm,0.9s,baz=60,slow=3.2,SNR=19						
UOSS	Minazif	73.88	290	eP	P	04 24 07.9	-1.1
	comp=Z,15nm,0.8s						
HERR	Herculane	73.94	325	⇓iP	P	04 24 08.0	-0.9
MOA	Molln	73.96	332	eP	P	04 24 07.9	-1.1
	comp=Z,5.7nm,0.8s						
ARSA	Arzberg	74.12	331	eP	P	04 24 10.0	+0.1
	comp=Z,6.6nm,1.4s						
MDVR	Moldovita	74.28	325	⇓iP	P	04 24 09.7	-1.2
TRQ	Mont Tremblant	74.35	31	eP	P	04 24 10.2	-1.1
SOKA	Soboth	74.78	331	eP	P	04 24 13.8	+0.1
	comp=Z,8.9nm,1.0s,SNR=4.6						
KBA	Koelnbreinsper	74.92	332	eP	P	04 24 14.9	+0.3
	comp=Z,16nm,0.6s						
OBKA	Obir	75.08	331	eP	P	04 24 15.4	0.0
	comp=Z,4.2nm,0.6s						
WATA	Walderalm	75.19	333	i P	P	04 24 16.0	-0.1
	comp=Z,5.6nm,0.5s,SNR=4.5						
MYKA	Terra Mystica	75.24	331	eP	P	04 24 16.1	-0.2
	comp=Z,3.3nm,0.5s						
WTTA	Wattenberg	75.24	333	i P	P	04 24 16.4	+0.1
	comp=Z,18nm,0.7s,SNR=9.6						
RETA	Reutte	75.28	334	i P	P	04 24 16.2	-0.3
	comp=Z,6.5nm,0.8s						
MOTA	Moosalm	75.31	333	eP	P	04 24 17.0	+0.2
	comp=Z,11nm,0.8s						
SQTA	Sankt Quirin	75.40	333	i P	P	04 24 17.0	-0.1
	comp=Z,16nm,1.4s						
ABTA	Abfaltersbach	75.46	332	i P	P	04 24 17.2	-0.3
	comp=Z,10nm,1.2s						
ECH	Echery	75.55	336	eP	P	04 24 16.5	-1.3
	comp=Z,8.7nm,1.0s						
ECH	Echery	75.55	336	eP	P	04 24 16.5	-1.3
ECH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VTS	Vitosha	75.61	323	eP	P	04 24 18.0	-0.5
	comp=Z,13nm,0.7s						
VTS	Vitosha	75.61	323	⇑iP	P	04 24 18.3	-0.2
VTS	Vitosha	75.61	323	⇑P	P	04 24 18.3	-0.2
DAVA	Damuels	75.70	334	i P	P	04 24 18.7	-0.1
	comp=Z,13nm,1.0s						
TXAR	Lajitas Array	75.72	61	P	P	04 24 20.7	+1.5
	comp=Z,0.8nm,0.5s,baz=293,slow=4.8,SNR=21						

*IDC **24** 04:15:11.4±0.7,35.°85N×70.°88E,h101km±5km,mb4.2/30, mb1 4.3/35,mb1mx4.2/61,mbtmp4.6/35,MS3.1/9, Ms1 3.1/9,ms1mx3.0/29,Error ellipse: s-maj=11.2km s-min=8.9km az=177.0*

*NNC **24** 04:15:15.8±3.5,36.°34N×70.°74E,h163km±45km,mb4.0, mpv5.1,Error ellipse: s-maj=31.1km s-min=21.6km az=19.0*

ISC 24 04:15:10.6±0.4,35.°91N±0.°03×70.°99E±0.°03,h94km±3km, h94km:pP-P,n244,σ1°69/269,mb4.5/60,27C-18D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.10**	**230**	*e*Pn	**Pn**	**04 15 44.2**	**-0.2**
KBL				*e*Sn	**Sn**	**04 16 03.3**	**-6.9**
KBL	**Kabul**	**2.10**	**230**	*e*PN	**Pn**	**04 15 44.2**	**-0.2**
CEP	**Cherat**	**2.22**	**160**	⇓P	**Pn**	**04 15 47.4**	**+1.4**
CEP				S	**Sn**	**04 16 15.0**	**+2.0**
CHCP	**Chirah Chowk**	**2.93**	**140**	P	**Pn**	**04 15 56.9**	**+1.6**
NIL	**Nilore**	**2.93**	**140**	*e*Pn	**Pn**	**04 15 57.3**	**+2.0**
NIL	**Nilore**	**2.93**	**140**	*e*PN	**Pn**	**04 15 57.3**	**+2.0**
CHGR	**Chuyangaron**	**3.10**	**333**	*e*Sn	Sn	04 16 12.6	-21
GAR	**Garm**	**3.13**	**350**	*e*Pn	**Pn**	**04 15 58.5**	**+0.5**
GAR				*e*Sn	Sn	04 16 22.1	-12
GAR	**Garm**	**3.13**	**350**	*e*PN	**Pn**	**04 15 58.5**	**+0.5**
THW	**Thamme Wali**	**3.17**	**168**	⇓P	**Pn**	**04 15 59.5**	**+0.9**
BTK	**Batken**	**4.14**	**358**	*e*Pn	**Pn**	**04 16 13.5**	**+1.9**
BTK				*e*Sn	**Sn**	**04 16 52.1**	**-6.8**
BTK	**Batken**	**4.14**	**358**	*e*PN	**Pn**	**04 16 13.5**	**+1.9**
SARP	**Sargodha**	**4.22**	**160**	P	**Pn**	**04 16 12.4**	**-0.3**
KSH	**Kashi**	**5.34**	**46**	P	**Pn**	**04 16 25.4**	**-2.6**
KSH				S	**Sn**	**04 17 21.1**	**-7.2**
KSH	comp=N,2μm,0.7s			smax	smax		
KSH	comp=E,770nm,0.7s			smax	smax		
DHRM	**DHARAMSHALA**	**5.73**	**128**	*e*P	**Pn**	**04 16 33.8**	**+0.5**
DHRM				*e*S	**Sn**	**04 17 36.5**	**-1.3**
IUG	**Iuzhnay**	**6.27**	**353**	Pg	**Pn**	**04 16 40.5**	**0.0**
	32nm,0.2s						
AML	**Almayashu**	**6.56**	**18**	P	**Pn**	**04 16 45.8**	**+1.1**
	SNR=450						
UCH	**Uchtor**	**6.88**	**22**	P	**Pn**	**04 16 50.5**	**+1.4**
	SNR=76						
KZA	**Kyzart**	**6.99**	**27**	P	**Pn**	**04 16 51.9**	**+1.2**
	SNR=65						
SMLA	**Simla**	**7.03**	**131**	*e*P	**Pn**	**04 16 50.4**	**-0.4**
SMLA				*e*S	**Sn**	**04 18 06.2**	**-3.0**
SMLA				IAML		04 18 10.4	
	comp=E,278nm,0.2s						
SMLA				IAML		04 18 10.6	
	comp=N,201nm,0.5s						
MRKS	**Merke**	**7.04**	**14**	Pg	**Pn**	**04 16 51.4**	**+0.4**
	comp=N,144nm,0.5s						
EKS2	**Erkin-Say**	**7.08**	**17**	P	**Pn**	**04 16 52.9**	**+1.4**
	SNR=75						
BRLS	**Borolday**	**7.16**	**353**	Lg	Lg	04 18 01.2	
	comp=N,38nm,0.4s						
KK31	**Karatay Array**	**7.19**	**357**	*e*Pn	**Pn**	**04 16 52.8**	**-0.2**
KK31				*e*Sn	Sn	04 18 00.3	-13
KK31	**Karatay Array**	**7.19**	**357**	⇓P	**Pn**	**04 16 52.8**	**-0.2**
	comp=N,43nm,0.3s,baz=179,slow=11,SNR=759						
KK31				⇑S	**Sn**	**04 18 08.2**	**-4.9**
	comp=N,202nm,0.6s						
KK31	**Karatay Array**	**7.19**	**357**	*e*PN	**Pn**	**04 16 52.8**	**-0.2**
KKAR	**Karatay Array**	**7.19**	**357**	*e*Pn	**Pn**	**04 16 52.8**	**-0.2**
KKAR	**Karatay Array**	**7.19**	**357**	*e*PN	**Pn**	**04 16 52.8**	**-0.2**
AAK	**Ala-Archa**	**7.25**	**21**	P	**Pn**	**04 16 54.8**	**+0.9**
	comp=N,32nm,0.3s,baz=192,slow=8.9,SNR=156						
AAK				S	**Sn**	**04 18 14.7**	**+0.1**
	comp=N,9.7nm,0.3s,baz=336,slow=21,SNR=9.1						
AAK	**Ala-Archa**	**7.25**	**21**	P	**Pn**	**04 16 55.5**	**+1.6**
	SNR=73						
AAK	**Ala-Archa**	**7.25**	**21**	*e*Pn	**Pn**	**04 16 55.3**	**+1.4**
AAK	**Ala-Archa**	**7.25**	**21**	⇓P	**Pn**	**04 16 55.3**	**+1.4**
	comp=N,65nm,0.5s						
AAK				⇓S	**Sn**	**04 18 14.4**	**-0.2**
	comp=N,125nm,0.7s						
AAK	**Ala-Archa**	**7.25**	**21**	Pn	**Pn**	**04 16 55.4**	**+1.6**
AAK	**Ala-Archa**	**7.25**	**21**	*d i*PN	**Pn**	**04 16 55.4**	**+1.6**
KBK	**Karagaybulak**	**7.40**	**23**	P	**Pn**	**04 16 58.1**	**+2.1**
	SNR=33						
FRU1	**Bishkek**	**7.44**	**21**	*e*Pn	**Pn**	**04 16 58.4**	**+1.9**
FRU1	**Bishkek**	**7.44**	**21**	*e*PN	**Pn**	**04 16 58.4**	**+1.9**
ULHL	**Ulahol**	**7.53**	**31**	P	**Pn**	**04 16 59.8**	**+2.0**
	SNR=9.3						
BOOM	**Boomskoye usch**	**7.61**	**29**	*e*Pn	**Pn**	**04 16 59.8**	**+0.9**
BOOM	**Boomskoye usch**	**7.61**	**29**	*e*PN	**Pn**	**04 16 59.8**	**+0.9**
CHMS	**Chumysh**	**7.65**	**21**	P	**Pn**	**04 17 00.6**	**+1.3**
	SNR=55						
KKR	**Kurukshetra**	**7.70**	**139**	*ex*	Pn	04 16 51.2	-8.7
USP	**Ospenovka**	**7.83**	**19**	P	**Pn**	**04 17 02.6**	**+0.9**
	SNR=38						
TKM2	**Tokmak 2**	**7.85**	**26**	P	**Pn**	**04 17 03.6**	**+1.4**
	SNR=66						
TKM2	**Tokmak 2**	**7.85**	**26**	⇑P	**Pn**	**04 17 03.3**	**+1.1**
	comp=N,42nm,0.7s						
KST	**Kastek**	**8.09**	**27**	Lg	Lg	04 18 31.3	
	comp=N,70nm,0.7s						
NDI	**New Delhi**	**8.93**	**142**	*e*P	**Pn**	**04 17 18.0**	**+1.3**
NDI				*e*S	**Sn**	**04 18 48.0**	**-7.6**
JOSI	**Joshimath**	**8.95**	**124**	*e*P	**Pn**	**04 17 17.4**	**+0.3**
JOSI				*e*S	**Sn**	**04 18 52.9**	**-3.4**
JOSI				IAML		04 18 58.0	
	comp=E,185nm,0.4s						
JOSI				IAML		04 18 58.0	
	comp=N,1μm,1.0s						
KUDL	**Kundal**	**9.04**	**147**	*e*P	Pn	04 17 06.6	-12
KUDL				*e*S	Sn	04 18 37.4	-21
KUDL				IAML		04 18 45.6	
	comp=E,68nm,0.3s						
PDGK	**Podgornoye**	**9.89**	**39**	⇑P	**Pn**	**04 17 30.3**	**+0.5**
	comp=E,12nm,0.7s						
GEYT	**Alibeck**	**10.50**	**285**	P	**Pn**	**04 17 35.1**	**-3.0**
	comp=E,3.7nm,0.3s,baz=123,slow=11,SNR=18						
GEYT				S	Sn	04 19 23.6	-10
	comp=E,6.2nm,0.3s,baz=152,slow=16,SNR=6.4						
GEYT				LR	LR	04 22 34.3	
	comp=E,61nm,18.1s,baz=65,slow=42						
GYA0B	**ALIBECK ARRAY**	**10.50**	**285**	*e*Pn	**Pn**	**04 17 36.1**	**-2.0**
GYA0B				*e*Sn	Sn	04 19 17.9	-16
OTUK	**Ortayu**	**12.36**	**4**	⇑P	**Pn**	**04 18 00.7**	**-2.4**
	comp=E,10nm,0.6s						
BHJ	**Bhuj**	**12.67**	**186**	*e*P	Pn	04 17 59.7	-7.5
PYUN	**Piuthan**	**12.82**	**124**	*e*P	**Pn**	**04 18 06.1**	**-3.3**
	comp=E,25nm,0.3s						
PYUN				*e*S	Sn	04 20 20.6	-10
DANN	**Dangsing**	**13.18**	**121**	*e*P	**Pn**	**04 18 12.0**	**-2.4**
	comp=E,43nm,0.4s						
KOLN	**Koldanda**	**13.44**	**124**	*e*P	**Pn**	**04 18 14.2**	**-3.4**
	comp=E,17nm,0.4s						
MAKZ	**Makanchi**	**13.64**	**34**	*e*Pn	**Pn**	**04 18 18.8**	**-1.2**
MAKZ	**Makanchi**	**13.64**	**34**	⇑P	**Pn**	**04 18 19.6**	**-0.4**
	comp=E,4.3nm,0.5s						
MAKZ	**Makanchi**	**13.64**	**34**	*e*P	**Pn**	**04 18 18.8**	**-1.2**
MK31	**Makanchi Array**	**13.78**	**34**	*e*Pn	**Pn**	**04 18 22.2**	**+0.5**
MK31	**Makanchi Array**	**13.78**	**34**	P	**Pn**	**04 18 21.4**	**-0.3**
	comp=E,2.8nm,0.5s,baz=220,slow=14,SNR=15						
MK31	**Makanchi Array**	**13.78**	**34**	*e*P	**Pn**	**04 18 22.2**	**+0.5**
MK32	**Makanchi Array**	**13.78**	**34**	*e*Pn	**Pn**	**04 18 22.0**	**+0.3**
MKAR	**Makanchi Array**	**13.78**	**34**	P	**Pn**	**04 18 22.0**	**+0.3**
	comp=E,0.2nm,0.3s,baz=215,slow=14,SNR=10						
MKAR				LR	LR	04 23 32.5	
	comp=E,52nm,18.0s,baz=196,slow=36						
MKAR	**Makanchi Array**	**13.78**	**34**	*i* P	**Pn**	**04 18 22.3**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BHPL	**Bhopal**	**13.81**	**154**	*e*P	**Pn**	**04 18 20.1**	**-2.3**
DMN	**Daman**	**14.58**	**121**	*e*P	**Pn**	**04 18 29.9**	**-2.5**
	comp=Z,27nm,0.5s						
KKN	**Kakani**	**14.59**	**120**	*e*P	**Pn**	**04 18 30.6**	**-1.9**
	comp=Z,20nm,0.4s						
PKIN	**Phulchoki**	**14.80**	**120**	*e*P	**Pn**	**04 18 33.2**	**-2.1**
	comp=Z,23nm,0.4s						
PKI	**Pulchoki**	**14.81**	**120**	*e*P	**Pn**	**04 18 33.2**	**-2.3**
	comp=Z,35nm,0.6s						
GUN	**Gumba**	**14.94**	**118**	*e*P	**Pn**	**04 18 36.2**	**-1.0**
	comp=Z,30nm,0.4s						
WMQ	**Urumqi**	**15.05**	**53**	*e*P	**P**	**04 18 41.8**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,83nm,4.7s						
WMQ				LR	LR		
	comp=Z,36nm,29.1s						
WMQ				LR	LR		
	comp=Z,210nm,28.9s						
WMQ				LR	LR		
	comp=Z,69nm,28.1s						
WMQ	**Urumqi**	**15.05**	**53**	*e*Pn	**Pn**	**04 18 36.8**	**-1.4**
	comp=Z,9.4nm,0.5s						
WMQ	**Urumqi**	**15.05**	**53**	*e*P	**Pn**	**04 18 36.8**	**-1.4**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JIRN	**Jiri**	**15.31**	**118**	*e*P	**Pn**	**04 18 40.5**	**-1.4**
	comp=Z,20nm,0.3s						
AB31	**Akbulak array**	**15.59**	**332**	P	**Pn**	**04 18 42.7**	**-2.2**
	comp=Z,13nm,0.3s,baz=159,slow=12,SNR=395						
AB31				⇑S	Sn	04 21 20.8	-16
	comp=Z,70nm,1.0s						
ABKAR	**Akbulak array**	**15.59**	**332**	*e*Pn	**Pn**	**04 18 42.9**	**-1.9**
	comp=Z,50nm,0.6s						
ABKAR				*e*Sn	Sn	04 21 19.9	-17
KURBB	**Kurchatov Arra**	**15.68**	**18**	P	**Pn**	**04 18 43.7**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=21						
KURBB	**Kurchatov Arra**	**15.68**	**18**	⇑P	**Pn**	**04 18 42.8**	**-3.1**
	comp=Z,9.0nm,0.6s						
KURK	**Kurchatov**	**15.79**	**18**	*e*Pn	**Pn**	**04 18 45.5**	**-1.8**
	comp=Z,6.6nm,0.8s						
KURK	**Kurchatov**	**15.79**	**18**	⇑P	**P**	**04 18 49.6**	**+0.3**
	comp=Z,20nm,0.9s						
KURK	**Kurchatov**	**15.79**	**18**	⇓*i*P	**Pn**	**04 18 47.4**	**+0.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BANOM	**Banah**	**16.04**	**236**	*i* P	**P**	**04 18 52.4**	**0.0**
	SNR=7.5						
SHME	**Shamm**	**16.07**	**236**	P	**P**	**04 18 53.4**	**+0.8**
WSAR	**Wadi Sarin**	**16.56**	**224**	P	**Pn**	**04 18 56.5**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=58,slow=17,SNR=7.2						
UOSS	**Minazif**	**16.77**	**233**	Pn	**Pn**	**04 18 59.0**	**-0.7**
ASHO	**Ashiyiah**	**17.05**	**233**	P	**P**	**04 19 04.4**	**+1.0**
NAZ	**Nazwa, Dubai**	**17.10**	**235**	P	**P**	**04 19 06.4**	**+2.5**
BVAR	**Borovoye Array**	**17.11**	**359**	P	**Pn**	**04 19 03.3**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=165,slow=12,SNR=17						
BVAR				S	**Sn**	**04 22 05.1**	**-8.5**
	comp=Z,1.5nm,0.3s,baz=165,slow=23,SNR=5.7						
BRVK	**Borovoye**	**17.15**	**359**	*e*Pn	**Pn**	**04 19 02.8**	**-1.3**
	comp=Z,12nm,0.9s						
BRVK	**Borovoye**	**17.15**	**359**	⇑P	**Pn**	**04 19 03.2**	**-0.9**
	comp=Z,18nm,1.3s						
BRVK	**Borovoye**	**17.15**	**359**	⇓*i*P	**P**	**04 19 04.4**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,15nm,1.1s						
AKTO	**Aktyubinsk**	**17.29**	**331**	P	**P**	**04 19 06.0**	**+0.2**
	comp=Z,3.0nm,0.3s,baz=144,slow=14,SNR=74						
AKTO				S	Sn	04 22 04.4	-13
	comp=Z,0.9nm,0.3s,baz=51,slow=14,SNR=5.6						
AKTO	**Aktyubinsk**	**17.29**	**331**	⇑P	**Pn**	**04 19 05.5**	**-0.3**
	comp=Z,37nm,0.8s						
AKTO				⇑S	Sn	04 22 03.0	-15
	comp=Z,43nm,0.8s						
AKTO	**Aktyubinsk**	**17.29**	**331**	P	**P**	**04 19 06.0**	**+0.2**
ASUD	**Al Ashush, Dub**	**17.57**	**234**	Pn	**Pn**	**04 19 09.3**	**-0.1**
BOK	**Bokaro**	**17.66**	**129**	*e*P	**Pn**	**04 19 11.0**	**+0.4**
LSA	**Lhasa**	**18.04**	**104**	*e*P	**P**	**04 19 13.4**	**-1.3**
	comp=Z,5.0nm,0.6s						
LSA	**Lhasa**	**18.04**	**104**	*e*P	**P**	**04 19 13.4**	**-1.3**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
DGZ	**Jazzator, Alta**	**18.26**	**36**	⇓*i*P	**P**	**04 19 16.6**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZAA0	**Zalesovo Array**	**20.45**	**24**	*e*P	**P**	**04 19 41.2**	**+0.9**
	comp=Z,16nm,0.6s						
ZALV	**Zalesovo Beam**	**20.45**	**24**	P	**P**	**04 19 41.0**	**+0.6**
	comp=Z,10nm,0.3s,baz=229,slow=11,SNR=23						
ZALV	**Zalesovo Beam**	**20.45**	**24**	*i* P	**P**	**04 19 41.2**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ZAA1	**Zalesovo Array**	**20.46**	**24**	*e*P	**P**	**04 19 41.0**	**+0.6**
SHL	**Shillong**	**20.67**	**114**	*e*P	**P**	**04 19 43.7**	**+0.6**
	comp=Z,10.0nm,0.7s						
SHL	**Shillong**	**20.67**	**114**	*e*P	**P**	**04 19 43.7**	**+0.6**
SHL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SHL	**Shillong**	**20.67**	**114**	*e*P	Pn	04 19 48.7	+2.4
NVS	**Novosibirsk**	**20.73**	**20**	*e*P	**P**	**04 19 44.5**	**+1.2**
NVS				*e*S	**S**	**04 23 29.9**	**+0.5**
NVS				pmax	pmax		
	comp=Z,24nm,1.1s						
NVS				smax	smax		
	comp=N,8.0nm,1.0s						
GNI	**Garni**	**21.07**	**289**	P	**P**	**04 19 48.2**	**+0.9**
	comp=N,52nm,0.8s,baz=77,slow=2.5,SNR=24						
GNI	**Garni**	**21.07**	**289**	*e*P	**P**	**04 19 48.3**	**+0.9**
	comp=N,57nm,0.8s						
GNI	**Garni**	**21.07**	**289**	*i* P	**P**	**04 19 49.7**	**+2.4**
	SNR=5.4						
GNI	**Garni**	**21.07**	**289**	⇓*i*P	**P**	**04 19 48.8**	**+1.5**
GNI				pmax	pmax		
	comp=Z,177nm,1.0s						
ZEI	**Tsey**	**21.98**	**296**	*e*P	**P**	**04 19 56.7**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKH	**Akhalkalaki**	**22.11**	**293**	*e*P	**P**	**04 19 59.6**	**+1.2**
	comp=Z,42nm,0.8s						
AKH	**Akhalkalaki**	**22.11**	**293**	*e*P	**P**	**04 19 59.6**	**+1.2**
AKH				pmax	pmax		
	comp=Z,43nm,0.8s						
ARU	**Arti**	**22.18**	**342**	P	**P**	**04 20 00.1**	**+1.4**
	comp=Z,3.8nm,0.2s,baz=170,slow=7.8,SNR=11						
ARU				S	**S**	**04 23 58.4**	**+1.5**
	comp=Z,3.8nm,0.2s,baz=342,slow=19,SNR=4.2						
ARU	**Arti**	**22.18**	**342**	*e*P	**P**	**04 19 60.0**	**+1.2**
	comp=Z,17nm,1.0s						
ARU				*e*S	**S**	**04 23 58.4**	**+1.5**
ARU	**Arti**	**22.18**	**342**	*d i*P	**P**	**04 19 59.8**	**+1.0**
ARU				*PP	**pP**	**04 20 19.7**	**+1.5**
ARU						04 20 26.2	
ARU				S	**S**	**04 23 59.2**	**+2.3**
ARU				SS	**SnSn**	**04 24 37.3**	**+4.5**
ARU				pmax	pmax		
	comp=Z,13nm,0.8s						
KBZ	**Khabaz**	**22.86**	**299**	P	**P**	**04 20 05.9**	**0.0**
	comp=Z,6.4nm,0.8s,baz=124,slow=6.3,SNR=13						
KBZ				LR	LR	04 29 41.6	
	comp=Z,37nm,21.0s,baz=91,slow=38						
NEY	**Neytrino**	**22.91**	**297**	⇑*i*P	**P**	**04 20 08.1**	**+1.5**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	**Kislovodsk**	**23.06**	**299**	*e*P	**P**	**04 20 05.3**	**-2.6**
	comp=Z,6.9nm,0.6s						
KIV	**Kislovodsk**	**23.06**	**299**	*e*P	**P**	**04 20 08.4**	**+0.5**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,67nm,14.0s						
RAYN	**Ar Rayn**	**25.26**	**248**	*e*P	**P**	**04 20 27.4**	**-0.7**
	comp=Z,15nm,0.8s						
RAYN	**Ar Rayn**	**25.26**	**248**	*i* P	**P**	**04 20 27.6**	**-0.5**
	SNR=14						
RAYN	**Ar Rayn**	**25.26**	**248**	*e*P	**P**	**04 20 27.4**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,15nm,0.8s						
VRH	**Novokhopyorsk**	**25.91**	**315**	*e*P	**P**	**04 20 36.3**	**+2.7**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ANN	**Anapa**	**26.91**	**300**	*e*P	**P**	**04 20 42.7**	**0.0**
ANN				pmax	pmax		
	comp=Z,37nm,1.0s						
VSR	**Storozhevoye**	**27.40**	**314**	*e*P	**P**	**04 20 45.6**	**-1.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TLY	**Talaya**	**28.06**	**46**	*e*P	**P**	**04 20 51.6**	**-1.3**
	comp=Z,3.7nm,1.1s						
TLY	**Talaya**	**28.06**	**46**	⇓*i*P	**P**	**04 20 52.0**	**-0.9**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LPSR	**Galich'ya Gora**	**28.07**	**317**	*e*P	**P**	**04 20 52.4**	**-0.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONA0	**Songino Array**	**28.68**	**54**	*e*P	**P**	**04 21 00.1**	**+1.5**
SONM	**Songino Array**	**28.68**	**54**	P	**P**	**04 21 00.1**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=268,slow=9.7,SNR=5.3						
SONM				pP	**pP**	**04 21 22.9**	**+1.8**
	comp=Z,3.9nm,0.9s,baz=256,slow=10,SNR=7.6						
ULN	**Ulaanbaatar**	**29.12**	**55**	*e*P	**P**	**04 21 01.4**	**-1.2**
	comp=Z,2.6nm,0.5s						
ULN	**Ulaanbaatar**	**29.12**	**55**	*e*P	**P**	**04 21 01.4**	**-1.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KMI	**Kunming**	**29.27**	**103**	P	**P**	**04 21 02.8**	**-1.4**
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI	**Kunming**	**29.27**	**103**	*e*P	**P**	**04 21 01.8**	**-2.4**
	comp=Z,13nm,1.0s						
BRTR	**Keskin Array B**	**29.61**	**289**	P	**P**	**04 21 07.3**	**+0.4**
	comp=Z,7.1nm,0.7s,baz=99,slow=8.7,SNR=52						
BRTR	**Keskin Array B**	**29.61**	**289**	*e*P	**P**	**04 21 07.5**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.19**	**118**	LR	LR	04 36 56.0	
	comp=Z,37nm,18.6s,baz=185,slow=43						
PRGR	**Permogore**	**30.30**	**336**	*e*P	**P**	**04 21 11.7**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,11nm,0.8s						
OBN	**Obninsk**	**30.38**	**320**	⇑*i*P	**P**	**04 21 13.3**	**0.0**
OBN				*i* *PP	**pP**	**04 21 35.9**	**-0.1**
OBN				*e*		04 22 16.3	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
EIL	**Elat**	**30.80**	**269**	P	**P**	**04 21 17.4**	**0.0**
	comp=Z,4.5nm,0.6s,baz=25,slow=8.6,SNR=6.8						
HHC	**Hu-ho-hao-te**	**31.98**	**69**	*e*P	**P**	**04 21 30.0**	**+2.2**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,24nm,6.0s						
KLMR	**Klimovskoe**	**31.99**	**331**	*e*P	**P**	**04 21 26.4**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	**Klimovskoe**	**31.99**	**331**	*e*P	**P**	**04 21 26.4**	**-1.0**
KLMR				AMP		04 21 28.4	
	comp=Z,10.0nm,0.8s						
AKASG	**Malin Array Be**	**33.31**	**310**	P	**P**	**04 21 38.7**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=76,slow=7.2,SNR=9.7						
AKBB	**Malin Array Si**	**33.31**	**310**	*e*P	**P**	**04 21 38.7**	**-0.4**
	comp=Z,3.3nm,0.5s						
AKBB	**Malin Array Si**	**33.31**	**310**	*e*P	**P**	**04 21 38.7**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NRIK	**Noril'sk**	**34.70**	**10**	P	**P**	**04 21 52.4**	**+1.5**
	comp=Z,3.4nm,0.5s,baz=152,slow=5.5,SNR=4.3						
BIZ	**Bicaz**	**34.97**	**302**	⇑*i*P	**P**	**04 21 54.9**	**+1.4**
MLR	**Muntele Rosu**	**35.06**	**300**	⇑*i*P	**P**	**04 21 56.4**	**+1.9**
MLR	**Muntele Rosu**	**35.06**	**300**	⇑P	**P**	**04 21 56.4**	**+1.9**
DOPR	**Dopca**	**35.45**	**301**	⇓*i*P	**P**	**04 21 59.0**	**+1.3**
BURAR	**Bucovina Array**	**35.60**	**304**	⇓*i*P	**P**	**04 21 59.9**	**+0.9**
BURAR	**Bucovina Array**	**35.60**	**304**	⇓P	**P**	**04 21 59.9**	**+0.9**
VOIR		**35.69**	**300**	⇑*i*P	**P**	**04 22 00.4**	**+0.6**
VOIR		**35.69**	**300**	⇑P	**P**	**04 22 00.5**	**+0.6**
ARR	**Arges**	**35.98**	**300**	⇑*i*P	**P**	**04 22 03.1**	**+0.8**
VSU	**Vasula**	**36.64**	**322**	⇓*i*P	**P**	**04 22 08.0**	**+0.4**
VSU				pmax	pmax		
	comp=Z,43nm,0.9s						
VTS	**Vitosha**	**37.17**	**295**	⇑*i*P	**P**	**04 22 13.5**	**+1.0**
VTS	**Vitosha**	**37.17**	**295**	⇑P	**P**	**04 22 13.5**	**+1.0**
IDI	**Anoyia**	**37.22**	**283**	P	**P**	**04 22 12.7**	**-0.2**
	comp=Z,5.2nm,0.7s,baz=74,slow=7.6,SNR=8.0						
DRGR		**37.30**	**302**	⇑*i*P	**P**	**04 22 14.5**	**+1.1**
DRGR		**37.30**	**302**	⇑P	**P**	**04 22 14.5**	**+1.1**
UZH	**Uzhgorod**	**37.59**	**305**	*e*P	**P**	**04 22 12.7**	**-3.0**
FIA0	**FINESS Array S**	**37.96**	**327**	*e*P	**P**	**04 22 19.4**	**+0.7**
FIA1	**FINESS Array S**	**37.96**	**327**	*e*P	**P**	**04 22 19.1**	**+0.3**
	comp=Z,15nm,0.8s						
FINES	**FINESS Array B**	**37.96**	**327**	P	**P**	**04 22 19.4**	**+0.7**
	comp=Z,12nm,0.6s,baz=111,slow=10,SNR=60						
FINES				LR	LR	04 37 56.2	
	comp=Z,37nm,18.1s,baz=87,slow=36						
LVZ	**Lovozero**	**38.00**	**339**	*e*P	**P**	**04 22 18.2**	**-0.8**
	comp=Z,8.3nm,0.7s						
LVZ	**Lovozero**	**38.00**	**339**	*e*P	**P**	**04 22 18.3**	**-0.8**
LVZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDVR	**Moldovita**	**38.08**	**299**	⇓*i*P	**P**	**04 22 20.9**	**+0.9**
BZS	**Buzias**	**38.09**	**300**	⇑*i*P	**P**	**04 22 20.9**	**+0.8**
BZS	**Buzias**	**38.09**	**300**	⇑P	**P**	**04 22 20.9**	**+0.8**
NJ2	**Nanjing**	**39.57**	**81**	*e*P	**P**	**04 22 34.3**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARA0	**ARCESS Array S**	**41.68**	**338**	*e*P	**P**	**04 22 50.1**	**+0.7**
ARCES	**ARCESS Array B**	**41.68**	**338**	P	**P**	**04 22

NKL				*e*		04 25 14.4	
NKL				*e*		04 25 55.0	
NKL				*e*S	**S**	**04 31 04.0**	**-1.6**
NKL				*e*		04 33 40.6	
NKL				*e*SS	**SS**	**04 34 38.5**	**-1.8**
NKL				pmax	pmax		
	comp=N,3.0nm,0.5s						
NKL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NKL				pmax	pmax		
	comp=E,7.0nm,1.0s						
MAJO	**Matsushiro**	**53.18**	**68**	*e*P	**P**	**04 24 19.9**	**+0.9**
MAJO	**Matsushiro**	**53.18**	**68**	*e*P	**P**	**04 24 19.9**	**+0.9**
MJAR	**Matsushiro Arr**	**53.18**	**68**	P	**P**	**04 24 19.9**	**+0.9**
	comp=E,0.7nm,0.3s,baz=291,slow=10,SNR=3.7						
MJAR				pP	**pP**	**04 24 44.0**	**+0.7**
	comp=E,3.0nm,0.7s,baz=286,slow=9.4,SNR=3.1						
ESDC	**Sonseca Array**	**57.72**	**298**	P	**P**	**04 24 50.4**	**-1.1**
	comp=E,3.2nm,0.7s,baz=65,slow=7.6,SNR=20						
BILL	**Bilibino**	**59.14**	**26**	⇑*i*P	**P**	**04 25 01.2**	**+0.3**
BILL				*e*PP	**pP**	**04 25 27.8**	**+2.3**
BILL				*e*		04 27 11.8	
BILL				*e*S	**S**	**04 33 00.1**	**-0.5**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TOA1	**Torodi Ar. Sit**	**65.69**	**269**	*e*P	**P**	**04 25 43.0**	**-2.3**
TOA0	**Torodi Ar. Sit**	**65.69**	**269**	*e*P	**P**	**04 25 43.5**	**-1.8**
	comp=Z,3.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.69**	**269**	P	**P**	**04 25 43.0**	**-2.3**
	comp=Z,3.2nm,0.6s,baz=45,slow=6.2,SNR=43						
LBTB	**Lobatse**	**74.24**	**222**	*e*P	**P**	**04 26 38.9**	**+1.4**
	comp=Z,18nm,0.8s						
LBTB	**Lobatse**	**74.24**	**222**	*e*P	**P**	**04 26 38.9**	**+1.4**
LBTB				pmax	pmax		
	comp=Z,18nm,0.8s						
INK	**Inuvik**	**74.48**	**9**	P	**P**	**04 26 38.6**	**+0.4**
	comp=Z,9.8nm,0.5s,baz=327,slow=4.3,SNR=25						
COLA	**College**	**75.04**	**16**	⇓*i*P	**P**	**04 26 42.7**	**+1.2**
COLA				pmax	pmax		
	comp=Z,11nm,0.8s						
ILAR	**Eielson Array**	**75.35**	**16**	P	**P**	**04 26 43.3**	**0.0**
	comp=Z,3.0nm,0.8s,baz=316,slow=4.7,SNR=27						
BOSA	**Boshof**	**77.29**	**220**	P	**P**	**04 26 54.3**	**-0.5**
	comp=Z,16nm,0.7s,baz=31,slow=4.0,SNR=32						
BOSA	**Boshof**	**77.29**	**220**	*e*P	**P**	**04 26 55.9**	**+1.1**
	comp=Z,20nm,1.0s						
BOSA	**Boshof**	**77.29**	**220**	*e*P	**P**	**04 26 55.9**	**+1.1**
BOSA				pmax	pmax		
	comp=Z,20nm,1.0s						
KDAK	**Kodiak Island**	**79.75**	**22**	P	**P**	**04 27 07.6**	**-0.2**
	comp=Z,9.7nm,0.6s,baz=349,slow=2.5,SNR=7.9						
KDAK	**Kodiak Island**	**79.75**	**22**	*e*P	**P**	**04 27 07.6**	**-0.2**
	comp=Z,18nm,1.1s						
KDAK	**Kodiak Island**	**79.75**	**22**	*i*P	**P**	**04 27 08.5**	**+0.7**
WR1	**Warramunga Arr**	**81.69**	**122**	*e*P	**P**	**04 27 19.2**	**+0.4**
WRA	**Warramunga Arr**	**81.69**	**122**	P	**P**	**04 27 19.2**	**+0.4**
	comp=Z,5.0nm,0.4s,baz=313,slow=5.5,SNR=26						
YKA	**Yellowknife Ar**	**81.83**	**3**	P	**P**	**04 27 19.2**	**+0.4**
	comp=Z,4.5nm,0.6s,baz=351,slow=5.4,SNR=90						
YKA				pP	**pP**	**04 27 44.5**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=349,slow=5.4,SNR=5.1						
YKB5	**Yellowknife Ar**	**81.83**	**3**	*e*P	**P**	**04 27 19.2**	**+0.4**
AS31	**Alice Springs**	**83.93**	**125**	*e*P	**P**	**04 27 30.2**	**0.0**
	comp=Z,1.8nm,0.6s						
ASAR	**Alice Springs**	**83.93**	**125**	P	**P**	**04 27 30.9**	**+0.7**
	comp=Z,5.6nm,0.8s,baz=317,slow=5.4,SNR=27						
ASAR	**Alice Springs**	**83.93**	**125**	P	**P**	**04 27 31.0**	**+0.7**
DLBC	**Dease Lake**	**84.37**	**11**	P	**P**	**04 27 33.1**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=340,slow=5.9,SNR=4.5						
DLBC	**Dease Lake**	**84.37**	**11**	*e*P	**P**	**04 27 33.1**	**+0.9**
	comp=Z,4.3nm,1.1s						
VNDA	**Vanda**	**124.94**	**165**	PKP	**PKPdf**	**04 33 55.9**	**-2.5**
	comp=Z,1.5nm,1.0s,baz=283,slow=4.8,SNR=6.0						

MAN 24 04:43:03.4, 6°.50N×124°.08E, h11km, mb3.7, ML2.4, MS1.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.46**	**87**	*e*P	Pg	04 43 12.2	-0.1
SKMP				*e*S	Sg	04 43 17.8	-0.6
CTBH	**Cotabato--PC H**	**0.74**	**13**	⇑*i*P	Pb	04 43 18.0	-0.2
CTBH				*i*S	Sb	04 43 28.0	-0.3
GSPH	**General Santos**	**0.95**	**115**	*e*P	Sn	04 43 39.7	+3.2
DDMP	**Don Marcelino,**	**1.67**	**103**	*e*P	Pn	04 43 32.6	+0.1
DDMP				*e*S	Sn	04 43 54.5	+0.6
BUKP	**Musuan**	**1.68**	**35**	*e*P	Pn	04 43 32.9	+0.1
BUKP				*e*S	Sn	04 43 54.3	-0.1
IPIL	**Ipil**	**1.97**	**311**	*e*P	Pn	04 43 37.1	+0.3
IPIL				*e*S	Sn	04 44 01.7	+0.2

*ISCJB **24** 04:52:23.1±0.7, 19°.67S±0°.03×71°.10W±0°.05, h49km±7km, mb4.2/15, MS3.4/1, Error ellipse: s-maj=8.6km s-min=4.3km az=10.1*
*SJA **24** 04:52:23.1±0.5, 19°.63S×70°.98W, h49km±13km, ML3.7, MW4.3*
*NEIC **24** 04:52:25.0±0.0, 19°.56S×70°.90W, h46km, mb4.4/16, ML4.4(GUC), After GUC.*
NEIC Felt [III] at Alto Hospicio and Iquique and [II] at Codpa and Mamina.
*GUC **24** 04:52:25.5±0.7, 19°.61S×71°.01W, h55km±15km, ML4.4*
*IDC **24** 04:52:26.7±0.7, 19°.50S×70°.68W, h42km±6km, mb3.9/12, mb1 4.0/15, mb1mx3.8/39, mbtmp4.1/15, ML3.9/3, MS3.2/6, Ms1 3.3/6, ms1mx3.1/23, Error ellipse: s-maj=21.8km s-min=9.2km az=64.0*
ISC 24 04:52:25.0±0.6, 19°.65S±0°.03×71°.02W±0°.05, h49km±6km, n75, σ2°17/88, mb4.4/16, 7C-6D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.85**	**87**	⇓*i*P	**Pn**	**04 52 39.8**	**-1.0**
PSGC				*e*S	**Sn**	**04 52 50.6**	**-1.6**
PSGC				IAML		04 52 51.4	
	comp=N,20μm,0.6s						
PSGCX	**Pisagua**	**0.85**	**87**	*i*P	**Pn**	**04 52 39.2**	**-1.6**
PSGCX				*i*S	**Sn**	**04 51 52.2**	**-1.1**
PB12	**IPOC Station P**	**1.22**	**33**	*i*P	**Pn**	**04 52 44.6**	**-1.2**
PB12	**IPOC Station P**	**1.22**	**33**	⇑*i*P	**Pn**	**04 52 45.0**	**-0.8**
PB12				*e*S	**Sn**	**04 52 59.7**	**-1.6**
PB11	**IPOC Station P**	**1.29**	**95**	*e*Pn	**Pn**	**04 52 46.7**	**0.0**
PB11	**IPOC Station P**	**1.29**	**95**	*i*P	**Pn**	**04 52 45.8**	**-1.0**
PB11	**IPOC Station P**	**1.29**	**95**	⇓*i*P	**Pn**	**04 52 46.8**	**0.0**
PB11				*e*S	**Sn**	**04 53 02.8**	**-0.3**
PB11				IAML		04 53 04.3	
	comp=E,17μm,0.3s						
MNMC	**Minye Minye**	**1.44**	**69**	*e*Pn	**Pn**	**04 52 49.0**	**0.0**
MNMC	**Minye Minye**	**1.44**	**69**	⇓*i*P	**Pn**	**04 52 49.0**	**0.0**
MNMC				*e*S	**Sn**	**04 53 06.7**	**-0.2**
MNMC				IAML		04 53 08.1	
	comp=N,18μm,0.4s						
MNMCX	**Minye Minye**	**1.44**	**69**	*i*P	**Pn**	**04 52 47.9**	**-1.0**
GO01	**Chusmiza**	**1.72**	**91**	*e*Pn	**Pn**	**04 52 53.3**	**+0.3**
GO01	**Chusmiza**	**1.72**	**91**	⇓*i*P	**Pn**	**04 52 53.2**	**+0.3**
GO01				*e*S	**Sn**	**04 53 14.7**	**+0.6**
GO01				IAML		04 53 16.7	
	comp=N,7μm,0.3s						
PB08	**IPOC Station P**	**1.82**	**106**	⇓*i*P	**Pn**	**04 52 54.7**	**+0.4**
PB08				*e*S	**Sn**	**04 53 17.2**	**+0.7**
PB08				IAML		04 53 19.8	
	comp=N,3μm,0.4s						
PB16	**IPOC Station P**	**1.94**	**48**	⇑*i*P	**Pn**	**04 52 56.1**	**+0.1**
PB16				*i*S	**Sn**	**04 53 19.7**	**+0.2**
PB02	**IPOC Station P**	**1.97**	**148**	*i*P	**Pn**	**04 52 56.1**	**0.0**
PB02	**IPOC Station P**	**1.97**	**148**	⇑*i*P	**Pn**	**04 52 56.7**	**+0.6**
PB02				*e*S	**Sn**	**04 53 19.1**	**-0.5**
PB01	**IPOC Station P**	**2.00**	**134**	*e*Pn	**Pn**	**04 52 57.3**	**+0.9**
PB01				*e*Sn	**Sn**	**04 53 19.8**	**-0.6**
PB01	**IPOC Station P**	**2.00**	**134**	⇑*i*P	**Pn**	**04 52 57.0**	**+0.6**
PB01				*i*S	**Sn**	**04 53 19.9**	**-0.4**
PB07	**IPOC Station P**	**2.32**	**153**	⇑*i*P	**Pn**	**04 53 01.4**	**+0.4**
PB03	**IPOC Station P**	**2.66**	**154**	⇑*i*P	**Pn**	**04 53 06.1**	**+0.4**
PB04	**IPOC Station P**	**2.79**	**163**	*e*Pn	**Pn**	**04 53 07.2**	**-0.2**
PB04				*e*Sn	**Sn**	**04 53 37.8**	**-2.1**
PB04	**IPOC Station P**	**2.79**	**163**	*i*P	**Pn**	**04 53 07.5**	**+0.1**
PB04	**IPOC Station P**	**2.79**	**163**	⇑*i*P	**Pn**	**04 53 07.5**	**+0.1**
LVC	**Limon Verde**	**3.54**	**147**	P	**Pn**	**04 53 19.6**	**+1.8**
	comp=N,47nm,0.3s,baz=332,slow=14,SNR=979						
LVC				S	**Sn**	**04 53 59.7**	**+1.0**
	comp=N,107nm,0.3s,baz=155,slow=23,SNR=12						
LVC				LR	LR	04 54 52.7	
	comp=N,474nm,18.0s,baz=296,slow=42						
PB10	**IPOC Station P**	**3.87**	**174**	*e*Pn	**Pn**	**04 53 21.4**	**-0.6**
PB10				*e*Sn	**Sn**	**04 54 01.5**	**-4.7**
LPAZ	**La Paz**	**4.33**	**40**	P	**Pn**	**04 53 31.8**	**+2.9**
	comp=N,3.0nm,0.3s,baz=232,slow=7.8,SNR=69						
LPAZ				LR	LR	04 55 24.0	
	comp=N,154nm,19.3s,baz=246,slow=44						
LPAZ	**La Paz**	**4.33**	**40**	*e*Pn	**Pn**	**04 53 31.2**	**+2.3**
GO02	**Mina Guanaco**	**5.64**	**167**	*e*Pn	**Pn**	**04 53 46.6**	**0.0**
GO02				*e*Sn	**Sn**	**04 54 49.2**	**-1.1**
HJA	**Humahuaca**	**6.31**	**125**	*i*P	**Pn**	**04 53 56.6**	**+0.7**
HJA				IAML		04 54 18.9	
	comp=Z,18nm,0.5s						
GO03	**Copiap**	**7.94**	**175**	*e*Pn	**Pn**	**04 54 16.0**	**-1.9**
LCO	**Las Campanas**	**9.32**	**178**	*e*Pn	**Pn**	**04 54 34.9**	**-2.2**
NNA	**Nana**	**9.46**	**323**	P	**Pn**	**04 54 43.0**	**+4.3**
	comp=Z,0.8nm,0.3s,baz=156,slow=10.0,SNR=3.1						
NNA				S	**Sn**	**04 56 18.5**	**-5.3**
	comp=Z,6.3nm,0.3s,baz=234,slow=12,SNR=13						
NNA				LR	LR	04 58 24.3	
	comp=Z,87nm,20.5s,baz=152,slow=38						
NNA	**Nana**	**9.46**	**323**	*e*Pn	**Pn**	**04 54 40.3**	**+1.5**
NNA				*e*Sn	**Sn**	**04 56 18.1**	**-5.7**
SIV	**San Ignacio**	**10.15**	**71**	P	**Pn**	**04 54 46.5**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=267,slow=13,SNR=16						
SIV				LR	LR	04 59 15.7	
	comp=Z,225nm,18.5s,baz=268,slow=42						
GO04	**Tololo Observa**	**10.48**	**179**	*e*Pn	**Pn**	**04 54 50.1**	**-2.8**
CFA	**Coronel Fontan**	**12.16**	**169**	P	**Pn**	**04 55 13.4**	**-2.3**
	comp=Z,1.4nm,0.3s,baz=345,slow=15,SNR=45						
CFA				S	Sn	04 57 21.7	-8.2
	comp=Z,0.2nm,0.3s,baz=180,slow=18,SNR=4.2						
ROC1	**El Roble**	**13.27**	**180**	*e*Pn	**Pn**	**04 55 29.1**	**-1.9**
CPUP	**Villa Florida**	**14.25**	**120**	LR	LR	05 01 49.0	
	comp=Z,125nm,20.1s,baz=298,slow=40						
GO05	**Huala**	**15.32**	**183**	*e*Pn	**Pn**	**04 55 52.4**	**-5.7**
	comp=Z,14nm,1.1s						
GO06	**Curarrehue**	**19.87**	**181**	*e*P	**Pn**	**04 56 55.0**	**+0.9**
	comp=Z,15nm,1.0s						
TRQA	**Tornquist**	**19.96**	**159**	*e*P	**P**	**04 56 48.6**	**-4.4**
	comp=Z,20nm,0.7s						
PLCA	**Paso Flores**	**21.02**	**179**	P	**P**	**04 57 08.0**	**+3.4**
	comp=Z,9.6nm,0.8s,baz=22,slow=12,SNR=33						
PLCA	**Paso Flores**	**21.02**	**179**	*e*P	**P**	**04 57 01.8**	**-2.8**
	comp=Z,13nm,0.9s						
PTGA	**Pitinga**	**21.70**	**31**	P	**P**	**04 57 10.9**	**-1.1**
	comp=Z,6.2nm,0.4s,baz=204,slow=13,SNR=23						
PTGA	**Pitinga**	**21.70**	**31**	*e*P	**P**	**04 57 06.3**	**-5.6**
	comp=Z,7.4nm,0.5s						
BDFB	**Brasilia**	**22.28**	**83**	P	**P**	**04 57 17.6**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=256,slow=9.9,SNR=3.4						
BDFB	**Brasilia**	**22.28**	**83**	*e*P	**P**	**04 57 15.1**	**-3.3**
	comp=Z,8.3nm,1.1s						
BDFB				*e*P	**P**	**04 57 17.6**	**-0.7**
ROSC	**El Rosal**	**24.55**	**352**	P	**P**	**04 57 43.7**	**+3.0**
	comp=Z,6.6nm,0.6s,baz=130,slow=14,SNR=6.0						
ROSC	**El Rosal**	**24.55**	**352**	*e*P	**P**	**04 57 38.0**	**-2.8**
	comp=Z,4.9nm,0.6s						
SDV	**Santo Domingo**	**28.36**	**1**	*e*P	**P**	**04 58 10.9**	**-4.0**
	comp=Z,4.1nm,1.1s						
APG	**El Apazote**	**39.39**	**330**	LR	LR	05 14 30.3	
	comp=Z,55nm,20.6s,baz=212,slow=34						
TXAR	**Lajitas Array**	**57.99**	**326**	P	**P**	**05 02 15.1**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=139,slow=7.2,SNR=3.0						
TXAR				pP	**pP**	**05 02 27.4**	**+1.7**
	comp=Z,0.8nm,0.6s,baz=150,slow=8.2,SNR=8.6						
T49A	**Edmonton**	**58.09**	**346**	*e*P	**P**	**05 02 12.6**	**-0.7**
	comp=Z,7.4nm,1.0s						
N55A	**Marion Center**	**60.58**	**353**	*e*P	**P**	**05 02 30.4**	**-0.1**
	comp=Z,6.7nm,0.8s						
SADO	**Sadowa**	**64.53**	**354**	P	**P**	**05 02 57.0**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=216,slow=1.8,SNR=7.9						
SADO	**Sadowa**	**64.53**	**354**	*e*P	**P**	**05 02 56.3**	**-0.4**
	comp=Z,5.8nm,0.8s						
SNAA	**Sanae**	**64.66**	**161**	P	**P**	**05 03 00.5**	**+3.1**
	comp=Z,2.4nm,0.8s,baz=297,slow=7.4,SNR=8.8						
SNAA				pP	**pP**	**05 03 13.1**	**+2.8**
	comp=Z,1.4nm,0.8s,baz=296,slow=7.5,SNR=3.0						
SNAA	**Sanae**	**64.66**	**161**	*e*P	**P**	**05 02 57.6**	**+0.1**
	comp=Z,3.9nm,0.9s						
DBIC	**Dimbokro**	**70.14**	**75**	P	**P**	**05 03 33.3**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=256,slow=4.2,SNR=3.7						
DBIC	**Dimbokro**	**70.14**	**75**	*e*P	**P**	**05 03 32.7**	**-0.2**
	comp=Z,10nm,1.1s						
PDAR	**Pinedale Array**	**71.54**	**331**	P	**P**	**05 03 44.6**	**+3.5**
	comp=Z,0.2nm,0.5s,baz=121,slow=8.5,SNR=2.5						
NVAR	**Mina Array Bea**	**72.83**	**323**	P	**P**	**05 03 52.8**	**+3.9**
	comp=Z,0.6nm,0.8s,baz=157,slow=4.9,SNR=4.0						
TOA0	**Torodi Ar. Sit**	**78.62**	**72**	*e*P	**P**	**05 04 22.8**	**+0.6**
	comp=Z,4.4nm,0.8s						
TOA1	**Torodi Ar. Sit**	**78.62**	**72**	*e*P	**P**	**05 04 22.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**78.62**	**72**	P	**P**	**05 04 22.1**	**-0.1**
	comp=Z,3.1nm,0.6s,baz=252,slow=5.3,SNR=44						
SYO	**Syowa Base**	**78.92**	**160**	⇓*e*X	**P**	**05 04 25.0**	**+2.1**
YKA	**Yellowknife Ar**	**88.80**	**341**	P	**P**	**05 05 15.4**	**+2.2**
	comp=Z,2.3nm,0.7s,baz=135,slow=4.8,SNR=47						
YKA				pP	**pP**	**05 05 27.9**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=134,slow=4.9,SNR=13						
H11S2	**WAKE ISLAND Hyl**	**25.66**	**279**	T	T	07 30 44.5	
	baz=101,slow=74,SNR=45						
H11S1	**WAKE ISLAND Hyl**	**25.67**	**279**	T	T	07 30 46.5	
	baz=101,slow=74,SNR=49						
H11S3	**WAKE ISLAND Hyl**	**25.68**	**279**	T	T	07 30 42.6	
	baz=101,slow=74,SNR=56						
H11N3	**WAKE ISLAND Hyl**	**25.70**	**281**	T	T	07 31 05.5	
	baz=101,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hyl**	**25.72**	**281**	T	T	07 30 44.0	
	baz=101,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hyl**	**25.72**	**281**	T	T	07 31 02.1	
	baz=101,slow=75,SNR=12						
KSH	**Kashi**	**145.41**	**48**	*e*PKPbc	**PKPbc**	**05 11 56.3**	**-1.6**
CD2	**Chengdu**	**167.84**	**22**	PKP	**PKPdf**	**05 12 24.1**	**-2.4**

*ISK **24** 04:58:29.9, 40°.65N×27°.40E, h15km, ML1.8/12*
*ISCJB **24** 04:58:30.4±0.5, 40°.67N±0°.03×27°.42E±0°.04, h7km±5km, Error ellipse: s-maj=5.7km s-min=4.5km az=17.2*
*DDA **24** 04:58:31.0, 40°.55N×27°.27E, h7km±2km, ML2.6*
ISC 24 04:58:30.5±0.9, 40°.65N±0°.04×27°.41E±0°.03, h14km±7km, n16, σ0°32/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SART	**Tekirdag**	**0.18**	**282**	*i*P	**Pb**	**04 58 35.8**	**+0.2**
SART				*i*S	**Sg**	**04 58 37.8**	**+0.1**
SART				IAML_P			
	comp=Z,31μm,0.1s						
RKY	**Sarkoy-Tekirda**	**0.18**	**281**	PG	**Pg**	**04 58 34.8**	**0.0**
RKY				SG	**Sg**	**04 58 37.7**	**0.0**
EDC	**Edincik**	**0.46**	**131**	PG	**Pg**	**04 58 39.5**	**-0.2**
EDC				SG	**Sb**	**04 58 46.8**	**-0.2**
LPK	**Lapseki**	**0.57**	**241**	PG	**Pg**	**04 58 41.4**	**-0.2**
LPK				SG	**Sb**	**04 58 50.1**	**0.0**
GELI	**Tayfur-Gelibol**	**0.76**	**251**	PG	**Pg**	**04 58 45.1**	**-0.1**
KCTX	**Karacabey (Bur**	**0.82**	**118**	PG	**Pg**	**04 58 45.8**	**-0.6**
ENEZ	**Enez**	**0.96**	**275**	PG	**Pb**	**04 58 48.6**	**-0.2**
CTKS	**Kestanelik-??a**	**1.02**	**55**	PG	**Pg**	**04 58 50.2**	**+0.1**
ALN	**Alexandroupoli**	**1.06**	**284**	PG	**Pb**	**04 58 50.5**	**-0.1**
ARMT	**Armutlu**	**1.11**	**94**	PN	**Pn**	**04 58 51.6**	**0.0**
BAYC	**CANAKKALE_Bayr**	**1.12**	**216**	*i*P	**Pg**	**04 58 52.5**	**+0.4**
BAYC				*i*S	**Sn**	**04 59 07.0**	**0.0**
KIRK	**Kırklareli**	**1.15**	**348**	*i*P	**Pn**	**04 58 52.3**	**+0.1**
KIRK				*i*S	**Sn**	**04 59 07.9**	**+0.2**
KIRK				IAML_P			
	comp=Z,162nm,0.1s						
BGKT	**Bogazkoy**	**1.16**	**62**	PN	**Pn**	**04 58 51.9**	**-0.3**
EZN	**Ezine**	**1.17**	**225**	PN	**Pn**	**04 58 52.1**	**-0.3**
DURS	**Dursunbey**	**1.33**	**142**	*i*P	**Pg**	**04 58 56.1**	**0.0**
DURS				*i*S	**Sg**	**04 59 14.4**	**+1.0**
KLYT	**Kilyos**	**1.38**	**64**	PN	**Pn**	**04 58 55.2**	**0.0**

*IDC **24** 05:02:00.7±0.5, 44°.36N×84°.23E, h0km, mb4.3/34, mb1 4.4/41, mb1mx4.4/57, mbtmp4.4/41, ML4.1/7, MS3.4/18, Ms1 3.4/18, ms1mx3.3/40, Error ellipse: s-maj=10.2km s-min=7.1km az=36.0*
*BJI **24** 05:02:01.0±0.0, 44°.32N×84°.14E, h15km, mb4.5/33, mB4.6/24, ML4.8/11, Ms4.3/29, Ms7 4.0/20*
*NEIC **24** 05:02:02.3±1.6, 44°.35N×84°.25E, h10km±1km, mb4.7/70, Error ellipse: s-maj=12.4km s-min=6.3km az=46.0*
*SOME **24** 05:02:02.6, 44°.12N×84°.03E, h10km, MS4.0*
*MOS **24** 05:02:03.9±1.1, 44°.28N×84°.22E, h33km, mb5.0/37, MS4.0/4, Error ellipse: s-maj=6.2km s-min=5.1km az=123.1*
*ISCJB **24** 05:02:05.8±0.5, 44°.30N±0°.03×84°.29E±0°.03, h50km±5km, mb4.6/103, MS3.7/25, Error ellipse: s-maj=5.0km s-min=3.4km az=11.6*
*NNC **24** 05:02:05.7±1.6, 44°.40N×83°.80E, h4km±6km, mb5.1, mpv4.8, Error ellipse: s-maj=13.4km s-min=4.3km az=120.0*
ISC 24 05:02:02.0±0.7, 44°.30N±0°.03×84°.20E±0°.02, h8km±4km, n330, σ1°96/370, mb4.6/103, MS3.8/25, 42C-26D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.56**	**100**	*e*Pn	**Pn**	**05 02 46.3**	**+2.4**
WMQ				Sn	**Sg**	**05 03 23.3**	**-1.1**
WMQ				smax	smax		
	comp=N,1μm,0.9s						
WMQ				smax	smax		
	comp=E,2μm,0.7s						
WMQ	**Urumqi**	**2.56**	**100**	*e*Pn	**Pb**	**05 02 46.4**	**-1.9**
WMQ				*e*Sn	**Sn**	**05 03 15.0**	**-0.3**
WMQ	**Urumqi**	**2.56**	**100**	*e*PN	**Pb**	**05 02 46.4**	**-1.9**
WMQ				*e*		05 03 15.0	
MK31	**Makanchi Array**	**2.83**	**332**	*e*Pn	**Pn**	**05 02 48.7**	**+1.1**
MK31				*e*Sn	**Sn**	**05 03 19.0**	**-2.9**
MK31	**Makanchi Array**	**2.83**	**332**	⇓Pn	**Pn**	**05 02 48.7**	**+1.1**
	9.6nm,0.3s,baz=144,slow=14,SNR=1931						
MK31				⇓Pg	**Pb**	**05 02 53.5**	**+0.7**
	122nm,0.3s,baz=141,slow=17,SNR=9.4						
MK31				⇓Lg	Lg	05 03 28.7	
	2μm,0.6s						
MK31	**Makanchi Array**	**2.83**	**332**	*e*PN	**Pn**	**05 02 48.7**	**+1.1**
MK32	**Makanchi Array**	**2.83**	**332**	*e*Pn	**Pn**	**05 02 49.0**	**+1.3**
MK32				*e*Pg	**Pb**	**05 02 52.5**	**-0.4**
MKAR	**Makanchi Array**	**2.83**	**332**	Pn	**Pn**	**05 02 48.9**	**+1.3**
	24nm,0.3s,baz=148,slow=14,SNR=113						
MKAR				Pg	**Pb**	**05 02 52.5**	**-0.4**
	119nm,0.3s,baz=148,slow=17,SNR=231						
MKAR				Lg	Lg	05 03 29.1	
	295nm,0.3s,baz=135,slow=22,SNR=9.8						
KTMS	**Ketmen**	**2.91**	**254**	Pg	**Pb**	**05 02 53.3**	**-1.0**
	503nm,0.3s						
KTMS				Lg	Lg	05 03 30.7	
	2μm,0.3s						
KTMS	**Ketmen**	**2.91**	**254**	*e*P	**Pb**	**05 02 53.4**	**-0.9**
	503nm,0.3s						
KTMS				*e*S	**Sb**	**05 03 30.7**	**+0.6**
	3μm,0.7s						
MAKZ	**Makanchi**	**2.96**	**329**	*e*Pn	**Pn**	**05 02 50.4**	**+1.1**
MAKZ				*e*Sn	**Sn**	**05 03 23.8**	**-1.1**
MAKZ	**Makanchi**	**2.96**	**329**	⇓Pn	**Pn**	**05 02 50.3**	**+1.1**
	33nm,0.7s						
MAKZ				⇑Pg	**Pb**	**05 02 55.6**	**+0.6**
	229nm,0.6s						
MAKZ				⇓Lg	Lg	05 03 34.2	
	3μm,1.2s						
MAKZ	**Makanchi**	**2.96**	**329**	*e*PN	**Pn**	**05 02 50.4**	**+1.1**
DJR	**Jarkent**	**3.17**	**272**	*e*P	**Pb**	**05 02 59.0**	**+0.4**
	760nm,0.7s						
DJR				*e*S	**Sb**	**05 03 40.0**	**+2.6**
	2μm,0.4s						
ZSN	**Zaisan**	**3.19**	**8**	Pg	**Pg**	**05 03 02.1**	**-1.0**
	267nm,1.0s						
ZSN				Lg	Lg	05 03 45.2	
	1μm,0.8s						
ZSN	**Zaisan**	**3.19**	**8**	*e*P	**Pg**	**05 03 02.7**	**-0.3**
	267nm,1.0s						
ZSN				*e*S	**Sg**	**05 03 46.0**	**+1.7**
	1μm,0.8s						
PDGK	**Podgornoye**	**3.54**	**256**	Pg	**Pb**	**05 03 04.1**	**-1.0**
	152nm,0.3s						
PDGK				Lg	Lg	05 03 48.7	
	2μm,0.6s						
PDGK	**Podgornoye**	**3.54**	**256**	⇑Pn	**Pn**	**05 02 58.3**	**+0.8**
PDGK				Pg	**Pb**	**05 03 06.9**	**+1.8**
	513nm,0.8s						
PDGK				⇓Lg	Lg	05 03 49.0	
	3μm,0.6s						
KAPS	**Kapalarasan**	**3.59**	**288**	*e*P	**Pb**	**05 03 07.3**	**+1.6**
	164nm,0.2s

KST	**Kastek**	**6.11 261**	*e*P		**Pb**	**05 03 51.8 +3.2**
	150nm,0.8s					
KST			*e*S		**Sb**	**05 05 10.4 +8.5**
	434nm,0.8s					
ULHL	**Ulahol**	**6.16 253**	P		**Pn**	**05 03 34.6 +1.1**
	SNR=16					
DGS	**Degeres**	**6.19 263**	*e*P		**Pb**	**05 03 54.6 +4.4**
	111nm,0.8s					
DGS			*e*S		**Sg**	**05 05 14.8 -6.0**
	764nm,0.7s					
TKM2	**Tokmak 2**	**6.40 261**	P		**Pn**	**05 03 40.5 +3.8**
	SNR=30					
TKM2	**Tokmak 2**	**6.40 261**	⇓Pn		**Pn**	**05 03 39.0 +2.3**
	39nm,0.7s					
TKM2			⇑Pg		**Pg**	**05 04 00.7 -3.8**
	109nm,0.8s					
TKM2			⇓Lg		Lg	05 05 18.5
	572nm,1.1s					
SEM	**Semipalatinsk**	**6.67 338**	*e*P		**Pg**	**05 04 08.7 -1.0**
	104nm,0.6s					
SEM			*e*S		**Sg**	**05 05 37.9 +1.7**
	844nm,0.8s					
KZA	**Kyzart**	**6.91 254**	P		**Pn**	**05 03 45.9 +1.9**
	SNR=37					
KBK	**Karagaybulak**	**6.93 260**	P		**Pn**	**05 03 45.9 +1.9**
	SNR=32					
CHMS	**Chumysh**	**6.98 263**	P		**Pn**	**05 03 45.9 +1.4**
	SNR=6.2					
USP	**Ospenovka**	**7.10 265**	P		**Pn**	**05 03 50.5 +4.3**
	SNR=24					
FRU1	**Bishkek**	**7.11 261**	*e*Pn		**Pn**	**05 03 48.0 +1.6**
FRU1	**Bishkek**	**7.11 261**	*e*PN		**Pn**	**05 03 48.0 +1.6**
AAK	**Ala-Archa**	**7.25 260**	Pn		**Pn**	**05 03 50.0 +1.5**
	2.9nm,0.3s,baz=95,slow=7.9,SNR=13					
AAK			Lg		Lg	05 05 50.1
	7.2nm,0.3s,baz=348,slow=13,SNR=3.6					
AAK	**Ala-Archa**	**7.25 260**	P		**Pn**	**05 03 51.3 +2.8**
	SNR=9.5					
AAK	**Ala-Archa**	**7.25 260**	*e*Pn		**Pn**	**05 03 49.2 +0.7**
AAK	**Ala-Archa**	**7.25 260**	⇓Pn		**Pn**	**05 03 50.4 +1.9**
	17nm,0.8s					
AAK			⇑Pg		**Pb**	**05 04 10.1 +1.8**
	102nm,0.8s					
AAK			⇓Lg		Lg	05 05 45.7
	416nm,1.1s					
AAK	**Ala-Archa**	**7.25 260**	*ce*P		**Pn**	**05 03 51.0 +2.5**
AAK			pmax		pmax	
	comp=Z,8.0nm,0.6s					
UCH	**Uchtor**	**7.37 257**	P		**Pn**	**05 03 52.2 +1.9**
	SNR=27					
KURBB	**Kurchatov Arra**	**7.40 331**	Pn		**Pn**	**05 03 49.4 -0.9**
	comp=Z,2.2nm,0.3s,baz=146,slow=13,SNR=93					
KURBB			Sn		**Sn**	**05 05 12.1 -2.2**
	comp=Z,4.5nm,0.3s,baz=149,slow=20,SNR=5.3					
KURBB			Lg		Lg	05 05 51.3
	comp=Z,4.6nm,0.3s,baz=144,slow=32,SNR=6.7					
KURBB	**Kurchatov Arra**	**7.40 331**	⇓Pn		**Pn**	**05 03 50.0 -0.3**
	comp=Z,21nm,0.5s					
KURBB			⇑Pg		Pb	05 03 54.2 -16
	comp=Z,39nm,0.4s					
KURBB			⇑Lg		Lg	05 05 56.7
	comp=Z,1μm,0.7s					
KURK	**Kurchatov**	**7.45 332**	*e*Pn		**Pn**	**05 03 50.6 -0.3**
KURK			*e*Sn		**Sn**	**05 05 11.6 -3.9**
KURK	**Kurchatov**	**7.45 332**	⇑Pn		**Pn**	**05 03 50.3 -0.6**
	comp=Z,14nm,0.5s					
KURK			⇑Lg		Lg	05 05 54.3
	comp=Z,1μm,1.0s					
KURK	**Kurchatov**	**7.45 332**	*ce*P		**Pn**	**05 03 50.5 -0.4**
KURK			pmax		pmax	
	comp=Z,16nm,0.6s					
KSH	**Kashi**	**7.78 235**	P		Pn	05 04 05.9 +10
KSH			smax		smax	
	comp=Z,250nm,0.8s					
KSH			smax		smax	
	comp=Z,280nm,1.0s					
OTUK	**Ortayu**	**9.11 300**	⇓Pn		**Pn**	**05 04 13.4 -0.4**
	comp=Z,23nm,0.7s					
OTUK			⇑Lg		Lg	05 06 48.4
	comp=Z,279nm,1.0s					
ZAA0	**Zalesovo Array**	**9.67 2**	*e*Pn		**Pn**	**05 04 20.2 -1.1**
ZAA0			*e*Sn		Sn	05 06 01.0 -9.0
ZALV	**Zalesovo Beam**	**9.67 2**	Pn		**Pn**	**05 04 20.6 -0.7**
	comp=Z,5.3nm,0.3s,baz=187,slow=15,SNR=51					
ZALV			Sn		**Sn**	**05 06 04.1 -5.9**
	comp=Z,7.6nm,0.3s,baz=187,slow=21,SNR=12					
ZALV			Lg		Lg	05 07 06.2
	baz=177,slow=27,SNR=2.2					
ZALV			LR		LR	05 07 53.9
	comp=Z,60nm,19.3s,baz=115,slow=37					
ZAA1	**Zalesovo Array**	**9.67 2**	*e*Pn		**Pn**	**05 04 20.6 -0.8**
ZAA1			*e*Sn		**Sn**	**05 06 04.1 -6.0**
KK31	**Karatay Array**	**9.99 268**	*e*Pn		**Pn**	**05 04 27.0 +1.2**
KK31	**Karatay Array**	**9.99 268**	⇑Pn		**Pn**	**05 04 27.9 +2.0**
	comp=Z,2.7nm,0.5s,baz=82,slow=14,SNR=40					
KK31			⇓Pg			05 05 06.0
	comp=Z,24nm,0.7s,baz=74,slow=16,SNR=5.3					
KK31			⇓Lg		Lg	05 07 12.6
	comp=Z,100nm,0.7s					
KK31	**Karatay Array**	**9.99 268**	*e*P		**Pn**	**05 04 27.0 +1.2**
KKAR	**Karatay Array**	**9.99 268**	*e*Pn		**Pn**	**05 04 27.0 +1.2**
KKAR	**Karatay Array**	**9.99 268**	*e*P		**Pn**	**05 04 27.0 +1.2**
NVS	**Novosibirsk**	**10.57 357**	*e*P		**Pn**	**05 04 30.3 -3.4**
NVS			*e*			05 06 25.6
BTK	**Batken**	**10.80 252**	*e*Pn		**Pn**	**05 04 38.2 +1.2**
BTK	**Batken**	**10.80 252**	*e*P		**Pn**	**05 04 38.2 +1.2**
GAR	**Garm**	**11.65 248**	*e*Pn		**Pn**	**05 04 50.0 +1.3**
GAR	**Garm**	**11.65 248**	*e*P		**Pn**	**05 04 50.0 +1.3**
CHGR	**Chuyangaron**	**12.61 249**	*e*Pn		**Pn**	**05 05 02.4 +0.7**
BVAR	**Borovoye Array**	**12.61 319**	Pn		**Pn**	**05 05 00.1 -1.5**
	comp=Z,1.9nm,0.3s,baz=116,slow=13,SNR=17					
BVAR			Lg		Lg	05 08 35.0
	comp=Z,1.6nm,0.3s,baz=127,slow=31,SNR=5.5					
GTA	**Gaotai**	**12.62 107**	*e*P		**Pn**	**05 05 00.8 -1.1**
GTA			pP			05 05 05.1
GTA			sP			05 05 08.3
GTA			S		**Sn**	**05 07 18.4 -4.3**
GTA			pmax		pmax	
	comp=Z,91nm,6.7s					
GTA			LR		LR	
	comp=Z,520nm,10.8s					
GTA			LR		LR	
	comp=Z,450nm,8.9s					
GTA			LR		LR	
	comp=Z,370nm,10.8s					
BRVK	**Borovoye**	**12.68 319**	*e*Pn		**Pn**	**05 05 02.9 +0.3**
BRVK	**Borovoye**	**12.68 319**	⇑Pn		**Pn**	**05 05 01.5 -1.1**
	comp=Z,8.6nm,0.5s					
BRVK			⇑Sn		**Sn**	**05 07 17.9 -6.0**
	comp=Z,31nm,0.9s					
BRVK			⇓Lg		Lg	05 08 40.4
	comp=Z,323nm,1.5s					
BRVK	**Borovoye**	**12.68 319**	*i* P		**Pn**	**05 05 02.5 -0.1**
MOY	**Mondy**	**13.43 51**	*e*P		**P**	**05 05 24.0 +1.6**
CHCP	**Chirah Chowk**	**13.60 222**	P		**Pn**	**05 05 14.3 -0.9**
NIL	**Nilore**	**13.61 222**	*e*Pn		**Pn**	**05 05 15.6 +0.2**
NIL	**Nilore**	**13.61 222**	*e*P		**Pn**	**05 05 15.6 +0.2**
CEP	**Cherat**	**14.15 226**	P		**Pn**	**05 05 22.2 -0.6**
ZAK	**Zakamensk**	**14.28 58**	*e*P		**Pn**	**05 05 25.4 +0.9**
ZAK			pmax		pmax	
	comp=Z,10.0nm,0.8s					
TLY	**Talaya**	**14.94 54**	*i* P		**P**	**05 05 36.7 -2.4**
THW	**Thamme Wali**	**15.04 224**	P		**Pn**	**05 05 33.6 -1.3**
KBL	**Kabul**	**15.21 235**	*e*Pn		**Pn**	**05 05 38.7 +1.3**
	comp=Z,11nm,0.8s					
KBL	**Kabul**	**15.21 235**	*e*P		**Pn**	**05 05 38.7 +1.3**
KBL			pmax		pmax	
	comp=Z,11nm,0.8s					
LSA	**Lhasa**	**15.58 157**	P		**P**	**05 05 49.5 +2.7**
LSA	**Lhasa**	**15.58 157**	*e*Pn		**Pn**	**05 05 41.4 -1.0**
	comp=Z,13nm,1.0s					
LSA	**Lhasa**	**15.58 157**	*e*P		**Pn**	**05 05 41.4 -1.0**
LSA			pmax		pmax	
	comp=Z,13nm,1.0s					
SONA0	**Songino Array**	**15.79 69**	*e*Pn		**Pn**	**05 05 44.9 +0.1**
SONM	**Songino Array**	**15.79 69**	Pn		**Pn**	**05 05 44.9 +0.1**
	comp=Z,2.3nm,0.3s,baz=264,slow=11,SNR=65					
SONM			Lg		Lg	05 10 20.4
	comp=Z,0.1nm,0.3s,baz=261,slow=28,SNR=3.7					
SONM			LR		LR	05 12 24.1
	comp=Z,499nm,20.8s,baz=270,slow=40					
PYUN	**Piuthan**	**16.20 184**	*e*P		**Pn**	**05 05 51.1 +1.0**
	comp=Z,252nm,1.2s					
ULN	**Ulaanbaatar**	**16.24 69**	*e*Pn		**Pn**	**05 05 49.4 -1.1**
	comp=Z,17nm,1.5s					
ULN	**Ulaanbaatar**	**16.24 69**	*i* P		**P**	**05 05 53.7 0.0**
ULN			pmax		pmax	
	comp=Z,13nm,1.5s					
GUN	**Gumba**	**16.41 175**	*e*P		**Pn**	**05 05 54.2 +1.2**
	comp=Z,122nm,1.1s					
KOLN	**Koldanda**	**16.50 182**	*e*P		**Pn**	**05 05 53.3 -0.8**
	comp=Z,48nm,1.1s					
JIRN	**Jiri**	**16.68 174**	*e*P		**Pn**	**05 05 56.6 +0.1**
	comp=Z,60nm,0.7s					
PKIN	**Phulchoki**	**16.72 176**	*e*P		**Pn**	**05 05 56.1 -0.7**
	comp=Z,38nm,0.7s					
PKI	**Pulchoki**	**16.72 176**	*e*P		**Pn**	**05 05 56.1 -0.9**
	comp=Z,108nm,1.1s					
LZH	**Lanzhou**	**17.07 112**	*e*P		**Pn**	**05 06 01.4 +0.2**
LZH			sP		sP	05 06 09.3 +2.7
LZH			pP		pP	05 06 10.4 +5.0
LZH			PP		**PnPn**	**05 06 16.0 +5.2**
LZH			pmax		pmax	
	comp=Z,33nm,1.3s					
LZH			pmax		pmax	
	comp=Z,180nm,4.9s					
LZH			LR		LR	
	comp=Z,820nm,11.9s					
LZH			LR		LR	
	comp=Z,500nm,12.5s					
LZH			LR		LR	
	comp=Z,520nm,14.1s					
AB31	**Akbulak array**	**17.31 295**	P		**Pn**	**05 06 01.4 -2.5**
	comp=Z,1.8nm,0.4s,baz=101,slow=20,SNR=114					
ABKAR	**Akbulak array**	**17.31 295**	*e*Pn		**Pn**	**05 06 01.6 -2.3**
	comp=Z,12nm,0.8s					
AKTO	**Aktyubinsk**	**18.71 298**	P		**Pn**	**05 06 21.7 +0.6**
	comp=Z,0.4nm,0.3s,baz=105,slow=16,SNR=8.1					
AKTO			Lg		Lg	05 11 55.3
	comp=Z,0.2nm,0.3s,baz=179,slow=19,SNR=3.7					
AKTO			LR		LR	05 12 43.6
	comp=Z,64nm,20.0s,baz=110,slow=34					
AKTO	**Aktyubinsk**	**18.71 298**	⇑P		**Pn**	**05 06 21.9 +0.8**
	comp=Z,13nm,0.8s					
SHL	**Shillong**	**19.70 159**	*e*P		**P**	**05 06 31.6 -0.4**
	comp=Z,18nm,0.9s					
SHL	**Shillong**	**19.70 159**	*e*P		**P**	**05 06 31.6 -0.4**
SHL			pmax		pmax	
	comp=Z,19nm,0.9s					
ARU	**Arti**	**20.23 316**	P		Pn	05 06 38.2 -1.0
	comp=Z,2.8nm,0.4s,baz=95,slow=15,SNR=4.5					
ARU			Lg		Lg	05 12 43.1
	comp=Z,3.1nm,0.2s,baz=75,slow=20,SNR=2.9					
ARU			LR		LR	05 14 08.4
	comp=Z,129nm,20.9s,baz=107,slow=36					
ARU	**Arti**	**20.23 316**	*e*P		**P**	**05 06 38.0 +0.7**
	comp=Z,14nm,0.7s					
ARU	**Arti**	**20.23 316**	*c i*P		Pn	05 06 38.9 -0.3
ARU						05 06 52.4
ARU			S		Sn	05 10 27.7 +0.9
ARU			SS		**SnSn**	**05 10 41.4 +0.3**
ARU			pmax		pmax	
	comp=Z,20nm,1.3s					
ARU			MLR		MLR	
	comp=Z,154nm,11.0s					
CD2	**Chengdu**	**20.40 124**	P		Pn	05 06 42.3 +0.9
CD2			pmax		pmax	
	comp=Z,40nm,0.5s					
CD2			LR		LR	
	comp=Z,620nm,7.4s					
HHC	**Hu-ho-hao-te**	**20.41 90**	*e*P		**P**	**05 06 40.0 +0.5**
HHC			S		**S**	**05 10 22.4 -5.8**
HHC			pmax		pmax	
	comp=Z,16nm,0.8s					
HHC			pmax		pmax	
	comp=Z,23nm,5.3s					
HHC			LR		LR	
	comp=Z,390nm,9.4s					
HHC			LR		LR	
	comp=Z,400nm,6.3s					
GEYT	**Alibeck**	**20.61 261**	P		Pn	05 06 43.4 -0.5
	comp=Z,9.5nm,0.7s,baz=63,slow=11,SNR=12					
GEYT			LR		LR	05 15 15.2
	comp=Z,46nm,20.9s,baz=215,slow=38					
GYA0B	**ALIBECK ARRAY**	**20.61 261**	*e*P		**P**	**05 06 42.2 +0.5**
	comp=Z,11nm,0.6s					
XAN	**Xi'an**	**21.66 110**	P		**P**	**05 06 51.8 -1.2**
XAN			pP		sP	05 06 57.8 +1.2
XAN			S		**S**	**05 10 57.4 +4.5**
XAN			pmax		pmax	
	comp=Z,14nm,1.2s					
XAN			pmax		pmax	
	comp=Z,100nm,7.4s					
XAN			LR		LR	
	comp=Z,320nm,10.8s					
XAN			LR		LR	
	comp=Z,430nm,10.8s					
XAN			LR		LR	
	comp=Z,290nm,11.3s					
XAN	**Xi'an**	**21.66 110**	*e*P		**P**	**05 06 51.6 -1.2**
	comp=Z,12nm,0.9s					
XAN	**Xi'an**	**21.66 110**	*e*P		**P**	**05 06 51.7 -1.2**
XAN			pmax		pmax	
	comp=Z,12nm,0.9s					
BOD	**Bodaibo**	**22.87 43**	*e*P		**P**	**05 07 04.4 -1.2**
BOD			pmax		pmax	
	comp=Z,20nm,1.3s					
KMI	**Kunming**	**24.36 136**	P		**P**	**05 07 21.0 +0.3**
KMI			pmax		pmax	
	comp=Z,7.0nm,0.7s					
ENH	**Enshi**	**24.39 117**	*e*P		**P**	**05 07 20.8 0.0**
	comp=Z,9.1nm,0.6s					
NRIK	**Noril'sk**	**25.16 3**	P		**P**	**05 07 27.4 0.0**
	comp=Z,14nm,0.4s,baz=176,slow=6.1,SNR=18					
GYA	**Guiyang**	**25.41 127**	⇑*i*P		**P**	**05 07 30.6 +0.5**
GYA			PP		**PnPn**	**05 08 09.3 +4.3**
GYA			S		**S**	**05 11 56.4 -0.7**
GYA			SS		**SnSn**	**05 12 53.8 +5.0**
GYA			pmax		pmax	
	comp=Z,20nm,0.9s					
GYA			pmax		pmax	
	comp=Z,60nm,3.0s					
GYA			LR		LR	
	comp=Z,240nm,15.2s					
GYA			LR		LR	
	comp=Z,260nm,15.8s					
GYA			LR		LR	
	comp=Z,220nm,15.2s					
KIRV	**Kirov**	**25.61 316**	P		**P**	**05 07 32.9 +1.4**
	comp=Z,61nm,1.2s,baz=105,slow=22,SNR=8.1					
KIRV			LR		LR	05 18 00.2
	comp=Z,137nm,21.1s,baz=153,slow=38					
AKT	**Akhty**	**26.73 277**	*e*P		**P**	**05 07 44.2 +2.2**
AKT			*e*			05 08 25.4
AKT			pmax		pmax	
	comp=Z,24nm,0.9s					
WHN	**Wuhan**	**27.43 110**	⇓P		**P**	**05 07 48.3 +0.1**
WHN			S		**S**	**05 12 30.1 +1.5**
WHN			LR		LR	
	comp=Z,1μm,11.0s					
WHN			LR		LR	
	comp=Z,710nm,12.2s					
WHN			LR		LR	
	comp=Z,880nm,12.3s					
CM31	**Chiang Mai Arr**	**28.58 150**	*e*P		**P**	**05 07 59.6 +1.0**
	comp=Z,24nm,1.5s					
CMAR	**Chiang Mai Arr**	**28.58 150**	P		**P**	**05 07 59.2 +0.7**
	comp=Z,1.1nm,0.4s,baz=322,slow=10,SNR=7.1					
CMAR			LR		LR	05 20 33.4
	comp=Z,46nm,20.6s,baz=330,slow=39					
GNI	**Garni**	**29.32 276**	P		**P**	**05 08 07.7 +2.6**
	comp=Z,11nm,0.7s,baz=104,slow=4.8,SNR=5.5					
GNI			LR		LR	05 20 02.0
	comp=Z,67nm,21.6s,baz=60,slow=37					
GNI	**Garni**	**29.32 276**	*e*P		**P**	**05 08 06.0 +0.9**
	comp=Z,14nm,0.9s					
GNI	**Garni**	**29.32 276**	*i* P		P	05 08 10.1 +4.9
GNI			pmax		pmax	
	comp=Z,32nm,0.9s					
ZEA	**Zeya**	**29.36 56**	*e*P		**P**	**05 08 05.8 +0.6**
ZEA			pmax		pmax	
	comp=Z,23nm,1.0s					
ZEA			MLR		MLR	
	comp=Z,300nm,13.0s					
ZEA			MLR		MLR	
	comp=E,200nm,15.0s					
CN2	**Changchun**	**29.43 76**	*e*P		**P**	**05 08 05.4 -0.5**
KBZ	**Khabaz**	**29.49 284**	P		**P**	**05 08 06.9 +0.5**
	comp=E,3.2nm,0.7s,baz=103,slow=10,SNR=7.3					
KBZ			LR		LR	05 20 36.1
	comp=E,151nm,19.5s,baz=58,slow=38					
KIV	**Kislovodsk**	**29.57 284**	*e*P		**P**	**05 08 09.8 +2.5**
KIV			pmax		pmax	
	comp=Z,16nm,0.9s					
KIV			MLR		MLR	
	comp=Z,322nm,15.0s					
NJ2	**Nanjing**	**29.64 102**	*e*P		**P**	**05 08 07.1 -0.8**
NJ2			pmax		pmax	
	comp=Z,6.0nm,0.5s					
NEY	**Neytrino**	**29.74 283**	*i* P		**P**	**05 08 12.4 +3.5**
NEY			pmax		pmax	
	comp=Z,1.0nm,0.9s					
VORD	**Divnogorie**	**30.60 299**	*e*P		**P**	**05 08 18.9 +2.7**
VORD			pmax		pmax	
	comp=Z,7.0nm,0.8s					
VSR	**Storozhevoye**	**30.66 299**	*e*P		**P**	**05 08 16.7 0.0**
VSR			pmax		pmax	
	comp=Z,10.0nm,0.6s					
LPSR	**Galich'ya Gora**	**30.71 302**	*e*P		**P**	**05 08 17.1 0.0**
LPSR			pmax		pmax	
	comp=Z,10.0nm,0.6s					
KLMR	**Klimovskoe**	**31.04 318**	*e*P		**P**	**05 08 20.6 +0.7**
KLMR			pmax		pmax	
	comp=Z,16nm,1.0s					
KLMR	**Klimovskoe**	**31.04 318**	*e*P		**P**	**05 08 20.6 +0.7**
KLMR			AMP			05 08 25.6
	comp=Z,16nm,1.0s					
SOC	**Sochi**	**31.75 285**	*e*P		**P**	**05 08 29.1 +2.7**
SOC			*e*PPP		PPP	05 09 44.7
SOC			*e*S		**S**	**05 13 38.9 +2.6**
SOC			pmax		pmax	
	comp=Z,12nm,0.5s					
SOC			MLR		MLR	
	comp=Z,169nm,11.0s					
OBN	**Obninsk**	**32.04 307**	LR		LR	05 22 48.0
	comp=Z,8.4nm,21.6s,baz=174,slow=39					
OBN	**Obninsk**	**32.04 307**	*e*P		**P**	**05 08 31.5 +2.7**
OBN			pmax		pmax	
	comp=Z,39nm,1.4s					
KLR	**Kul'dur**	**32.51 64**	P		**P**	**05 08 32.5 -0.5**
	comp=Z,2.8nm,0.7s,baz=285,slow=7.0,SNR=7.5					
KLR	**Kul'dur**	**32.51 64**	*i* P		**P**	**05 08 37.1 +4.1**
KLR			pmax		pmax	
	comp=Z,9.0nm,1.9s					
KS15	**Wonju Array Si**	**33.42 86**	*e*P		**P**	**05 08 41.0 -0.1**
	comp=Z,9.0nm,1.2s					
KSRS	**Korea Array**	**33.44 86**	P		**P**	**05 08 40.9 -0.4**
	comp=Z,1.3nm,0.5s,baz=283,slow=8.9,SNR=16					
KSRS			LR		LR	05 23 35.7
	comp=Z,78nm,19.1s,baz=293,slow=39					
USRK	**Ussuriysk Ar.**	**33.85 73**	P		**P**	**05 08 45.0 +0.3**
	comp=Z,4.5nm,0.9s,baz=296,slow=9.8,SNR=5.9					
USRK			LR		LR	05 24 31.7
	comp=Z,201nm,19.0s,baz=270,slow=40					
TIXI	**Tiksi**	**34.72 23**	*i* P		**P**	**05 08 53.7 +1.7**
TIXI			pmax		pmax	
	comp=Z,5.0nm,1.0s					
LVZ	**Lovozero**	**34.86 330**	*e*P		**P**	**05 08 52.9 -0.4**
	comp=Z,29nm,1.5s					
LVZ	**Lovozero**	**34.86 330**	*e*P		**P**	**05 08 52.9 -0.4**
LVZ			pmax		pmax	
	comp=Z,29nm,1.5s					
ILGA	**Ilgaz**	**36.78 283**	*e*P		**P**	**05 09 09.8 -0.5**
	comp=Z,10nm,0.8s					
AKASG	**Malin Array Be**	**36.95 300**	P		**P**	**05 09 11.2 -0.1**
	comp=Z,4.5nm,0.6s,baz=63,slow=8.5,SNR=17					
AKBB	**Malin Array Si**	**36.95 300**	*e*P		**P**	**05 09 10.5 -0.8**
	comp=Z,8.1nm,0.8s					
AKBB	**Malin Array Si**	**36.95 300**	*e*P		**P**	**05 09 10.5 -0.8**
AKBB			pmax		pmax	
	comp=Z,8.0nm,0.8s					
VSU	**Vasula**	**37.34 313**	*ce*P		**P**	**05 09 18.4 +3.9**
VSU			pmax		pmax	
	comp=Z,43nm,2.5s					
BR101	**Keskin Array S**	**37.36 281**	*e*P		**P**	**05 09 15.7 +0.5**
BR131	**Keskin Array S**	**37.36 281**	*e*P		**P**	**05 09 15.6 +0.4**
	comp=Z,7.8nm,0.8s					
BRTR	**Keskin Array B**	**37.36 281**	P		**P**	**05 09 15.7 +0.4**
	comp=Z,4.6nm,0.6s,baz=89,slow=7.1,SNR=19					
BRTR			LR		LR	05 26 16.2
	comp=Z,59nm,19.3s,baz=34,slow=39					
NKL	**Nikolayevsk**	**37.40 56**	*e*P		**P**	**05 09 16.0 +0.9**
NKL			*e*			05 11 36.4
NKL			*e*S		**S**	**05 15 04.1 +0.9**
NKL			*e*			05 15 23.1
NKL			pmax		pmax	
	comp=Z,9.0nm,0.7s					
NKL			pmax		pmax	
	comp=E,291nm,16.7s					
NKL			pmax		pmax	
	comp=N,386nm,22.9s					
NKL			pmax		pmax	
	comp=Z,28nm,2.5s					
FIA0	**FINESS Array S**	**37.57 318**	*e*P		**P**	**05 09 16.8 +0.3**
FIA0			*e*PcP		**PcP**	**05 11 33.5 -0.6**
FIA0	**FINESS Array S**	**37.57 318**	*e*P		**P**	**05 09 16.8 +0.3**
FIA0			*e*			05 11 33.6
FINES	**FINESS Array B**	**37.57 318**	P		**P**	**05 09 16.8 +0.3**
	comp=Z,0.6nm,0.3s,baz=87,slow=6.7,SNR=7.5					
FINES			PcP		**PcP**	**05 11 33.5 -0.6**
	comp=Z,2.8nm,0.5s,baz=82,slow=4.0,SNR=3.8					
FINES			LR		LR	05 25 10.8
	comp=Z,142nm,19.8s,baz=92,slow=37					
FINES	**FINESS Array B**	**37.57 318**	*i* P		**P**	**05 09 20.3 +3.8**
FINES			pmax		pmax	
	comp=Z,1.0nm,0.3s					
JNU	**Nakatsue**	**37.63 91**	P		**P**	**05 09 16.8 -0.6**
	comp=Z,2.3nm,0.8s,baz=126,slow=2.4,SNR=3.9					
JNU	**Nakatsue**	**37.63 91**	*e*P		**P**	**05 09 17.2 -0.2**
	comp=Z,10nm,1.1s					
RAYN	**Ar Rayn**	**37.76 250**	*e*P		**P**	**05 09 18.5 -0.1**
	comp=Z,13nm,0.8s					
RAYN	**Ar Rayn**	**37.76 250**	*e*P		**P**	**05 09 18.5 -0.1**
RAYN			pmax		pmax	
	comp=Z,13nm,0.8s					
ARA0	**ARCESS Array S**	**38.49 331**	*e*P		**P**	**05 09 24.8 +0.6**
ARCES	**ARCESS Array B**	**38.49 331**	P		**P**	**05 09 24.8 +0.6**
	comp=Z,5.5nm,0.5s,baz=98,slow=7.6,SNR=32					
ARE0	**ARCESS Array S**	**38.49 331**	*e*P		**P**	**05 09 24.5 +0.3**
ASF	**Jabal al Asfar**	**38.58 268**	P		**P**	**05 09 26.9 +1.5**
	comp=Z,1.4nm,0.3s,baz=119,slow=4.3,SNR=3.6					
TLCR		**38.69 291**	⇓*i*P		**P**	**05 09 25.6 -0.5**
TLCR		**38.69 291**	⇓P		**P**	**05 09 25.6 -0.5**
HEF	**Hetta**	**38.99 329**	*e*P		**P**	**05 09 28.1 -0.2**
CFR	**Carcaliu**	**39.15 292**	⇓*i*P		**P**	**05 09 30.6 +0.7**
CFR	**Carcaliu**	**39.15 292**	⇓P		**P**	**05 09 30.6 +0.7**
KTK1	**Kautokeino**	**39.21 330**	*e*P		**P**	**05 09 31.0 +0.8**
JOW	**Kunigami**	**39.34 101**	*e*P		**P**	**05 09 30.0 -1.7**
	comp=Z,4nm,1.0s					
TESR	**Tescani**	**39.70 294**	⇑*i*P		**P**	**05 09 35.2 +0.6**
PRAR	**RASCA**	**39.71 296**	⇑*i*P		**P**	**05 09 35.8 +1.1**
CSS	**Mathiatis**	**39.72 274**	*e*P		**P**	**05 09 35.7 +0.9**
	comp=Z,11nm,0.8s					
ICOR	**Ion Corvin**	**39.73 290**	⇑*i*P		**P**	**05 09 33.8 -1.1**
VRI	**Vrincioaia**	**39.85 293**	⇑*i*P		**P**	**05 09 35.2 -0.7**
VRI	**Vrincioaia**	**39.85 293**	⇑P		**P**	**05 09 35.2 -0.7**
SUW	**Suwalki**	**39.90 306**	*e*P		**P**	**05 09 35.9 -0.2**
	comp=Z,25nm,0.9s					
SUW	**Suw

VOIR		**41.11 293**	⇑P		**P**	**05 09 47.7**	**+1.4**
MJAR	**Matsushiro Arr**	**41.20 82**	LR		LR	05 27 59.1	
comp=Z,76nm,19.4s,baz=305,slow=38							
KWP	**Kalwaria Pacla**	**41.27 300**	*e*P		**P**	**05 09 48.1**	**+0.6**
comp=Z,255nm,1.1s							
KWP	**Kalwaria Pacla**	**41.27 300**	*e*P		**P**	**05 09 48.1**	**+0.6**
KWP			pmax	pmax			
comp=Z,255nm,1.1s							
EIL	**Elat**	**41.35 266**	P		**P**	**05 09 50.1**	**+1.8**
comp=Z,6.3nm,0.9s,baz=11,slow=9.3,SNR=4.2							
ARR	**Arges**	**41.41 293**	⇑*i*P		**P**	**05 09 49.7**	**+0.9**
HUMR	**Humele**	**41.48 292**	⇑*i*P		**P**	**05 09 48.7**	**-0.6**
MA2	**Magadan**	**41.89 44**	P		**P**	**05 09 51.8**	**-0.6**
comp=Z,4.6nm,0.4s,baz=167,slow=18,SNR=3.1							
DRGR		**42.17 296**	⇓*i*P		**P**	**05 09 55.7**	**+0.7**
DRGR		**42.17 296**	⇓P		**P**	**05 09 55.7**	**+0.7**
SEY	**Seymchan**	**42.18 39**	P		**P**	**05 09 54.5**	**-0.3**
comp=Z,0.8nm,0.3s,baz=179,slow=24,SNR=4.7							
LOF	**Lofoten**	**42.74 329**	*e*P		**P**	**05 10 02.4**	**+3.1**
OJC	**Ojcow**	**42.89 302**	*e*P		**P**	**05 10 00.4**	**-0.3**
comp=Z,11nm,1.0s							
OJC	**Ojcow**	**42.89 302**	*e*P		**P**	**05 10 00.4**	**-0.3**
OJC			pmax	pmax			
comp=Z,11nm,1.0s							
BZS	**Buzias**	**43.30 295**	⇓*i*P		**P**	**05 10 05.9**	**+1.8**
BZS	**Buzias**	**43.30 295**	⇓P		**P**	**05 10 05.9**	**+1.8**
VTS	**Vitosha**	**43.38 290**	*e*P		**P**	**05 10 06.5**	**+1.5**
comp=Z,6.9nm,0.9s							
VTS	**Vitosha**	**43.38 290**	⇑*i*P		**P**	**05 10 06.4**	**+1.4**
VTS	**Vitosha**	**43.38 290**	⇑P		**P**	**05 10 06.4**	**+1.4**
VYHS	**Vyhne**	**44.05 300**	*e*P		**P**	**05 10 13.4**	**+3.3**
VYHS	**Vyhne**	**44.05 300**	*e*P		**P**	**05 10 13.4**	**+3.3**
GSI	**Gunungsitoli**	**44.43 161**	*e*P		**P**	**05 10 14.5**	**+1.1**
comp=Z,28nm,0.7s							
NC405	**NORSAR Array S**	**44.49 319**	*e*P		**P**	**05 10 13.6**	**+0.1**
comp=Z,42nm,1.1s							
NC602	**NORSAR Array S**	**44.66 318**	*e*P		**P**	**05 10 14.4**	**-0.3**
comp=Z,30nm,1.0s							
NC602	**NORSAR Array S**	**44.66 318**	*e*P		**P**	**05 10 14.3**	**-0.5**
NB201	**NORSAR Array S**	**44.70 319**	*e*P		**P**	**05 10 14.6**	**-0.6**
comp=Z,34nm,1.4s							
NB201	**NORSAR Array S**	**44.70 319**	*e*P		**P**	**05 10 15.8**	**+0.6**
NB2	**NORSAR Subarra**	**44.74 319**	P		**P**	**05 10 14.9**	**-0.6**
comp=Z,2.0nm,0.6s,baz=75,slow=7.9							
NB2	**NORSAR Subarra**	**44.74 319**	P		**P**	**05 10 14.9**	**-0.6**
baz=75,slow=7.9							
NB200	**NORSAR Array S**	**44.74 319**	*e*P		**P**	**05 10 15.3**	**-0.2**
NOA	**NORSAR Array B**	**44.74 319**	P		**P**	**05 10 15.3**	**-0.2**
comp=Z,3.4nm,0.7s,baz=77,slow=7.8,SNR=17							
NOA			LR	LR		05 29 12.4	
comp=Z,72nm,19.8s,baz=90,slow=36							
NAO01	**NORSAR Array S**	**44.94 318**	*e*P		**P**	**05 10 16.7**	**-0.4**
comp=Z,29nm,1.1s							
NAO01	**NORSAR Array S**	**44.94 318**	*e*P		**P**	**05 10 16.7**	**-0.4**
DPC	**Dobruska-Polom**	**44.96 303**	*e*P		**P**	**05 10 18.5**	**+1.1**
DPC			MLR	MLR			
comp=Z,200nm,13.6s							
DPC	**Dobruska-Polom**	**44.96 303**	*e*P		**P**	**05 10 18.5**	**+1.1**
DPC			*e*pP		**sP**	**05 10 22.2**	**+1.0**
DPC			AMS	AMS		05 29 20.0	
comp=Z,200nm,13.6s							
UPC	**Upice**	**45.09 303**	*e*P		**P**	**05 10 23.1**	**+4.7**
UPC			*e*			05 17 07.1	
UPC			smax	smax			
comp=N,11nm,1.0s							
UPC			MLR	MLR			
comp=Z,1μm,25.9s							
UPC			MLR	MLR			
comp=Z,1μm,25.2s							
UPC			smax	smax			
comp=N,3.0nm,0.5s							
UPC	**Upice**	**45.09 303**	*e*P		**P**	**05 10 23.1**	**+4.7**
KONO	**Kongsberg**	**45.86 317**	*ce*P		**P**	**05 10 27.5**	**+3.2**
KONO			pmax	pmax			
comp=Z,32nm,2.5s							
GOPC	**GO Pecny, Ondr**	**46.03 303**	AMS		AMS	05 30 10.0	
comp=Z,200nm,14.5s							
PDG	**Podgorica**	**46.13 292**	⇑*i*P		**P**	**05 10 27.1**	**+0.4**
TTG	**Podgorica**	**46.13 292**	*e*P		**P**	**05 10 26.0**	**-0.7**
comp=Z,8.3nm,0.9s							
TTG	**Podgorica**	**46.13 292**	*e*P		**P**	**05 10 26.0**	**-0.7**
TTG			pmax	pmax			
comp=Z,8.0nm,0.9s							
PRU	**Pruhonice**	**46.16 303**	AMS		AMS	05 30 10.0	
comp=Z,200nm,15.3s							
BLY	**Banja Luka**	**46.52 295**	*e*P		**P**	**05 10 30.0**	**+0.2**
comp=Z,8.5nm,1.2s							
CLL	**Collm**	**46.60 305**	*e*P		**P**	**05 10 29.3**	**-1.0**
comp=Z,6.3nm,0.5s							
CLL	**Collm**	**46.60 305**	*i* P		**P**	**05 10 29.8**	**-0.5**
comp=Z,6.0nm,0.7s							
CLL			*e*pP		**pP**	**05 10 33.0**	**-0.1**
CLL			*e*			05 12 13.0	
CLL	**Collm**	**46.60 305**	*i* P		**P**	**05 10 29.8**	**-0.5**
CLL			pmax	pmax			
comp=Z,6.0nm,0.7s							
BILL	**Bilibino**	**46.99 31**	*e*P		**P**	**05 10 34.4**	**+1.3**
comp=Z,8.0nm,1.4s							
BILL	**Bilibino**	**46.99 31**	*i* P		**P**	**05 10 33.8**	**+0.7**
BILL			pmax	pmax			
comp=Z,3.0nm,1.1s							
GEC2	**GERESS Array S**	**47.09 302**	*e*P		**P**	**05 10 33.3**	**-1.0**
comp=Z,7.1nm,1.5s							
GEC2	**GERESS Array S**	**47.09 302**	*e*P		**P**	**05 10 33.3**	**-1.0**
GEC2			pmax	pmax			
comp=Z,7.0nm,1.5s							
GERES	**GERESS Array B**	**47.09 302**	P		**P**	**05 10 34.8**	**+0.5**
comp=Z,0.3nm,0.4s,baz=70,slow=7.7,SNR=4.3							
PEA1	**Petropavlovsk-**	**47.29 52**	*e*P		**P**	**05 10 35.4**	**-0.2**
PETK	**Petropavlovsk-**	**47.29 52**	P		**P**	**05 10 35.4**	**-0.3**
comp=Z,5.4nm,0.9s,baz=295,slow=8.0,SNR=6.2							
TIP	**Timpagrande**	**49.31 289**	*e*P		**P**	**05 10 53.3**	**+1.8**
comp=Z,15nm,1.0s							
TUE	**Stuetta**	**50.75 301**	*e*P		**P**	**05 11 02.9**	**+0.4**
comp=Z,5.9nm,0.7s							
BNI	**Bardonecchia**	**53.06 300**	*e*P		**P**	**05 11 19.4**	**-0.3**
comp=Z,20nm,1.4s							
BNI	**Bardonecchia**	**53.06 300**	*e*P		**P**	**05 11 19.4**	**-0.3**
BNI			pmax	pmax			
comp=Z,20nm,1.4s							
KEST	**Kesra**	**56.13 289**	P		**P**	**05 11 42.7**	**+0.7**
comp=Z,3.5nm,0.7s,baz=217,slow=3.3,SNR=3.7							
KEST	**Kesra**	**56.13 289**	*e*P		**P**	**05 11 40.8**	**-1.2**
comp=Z,5.8nm,0.8s							
TOLK	**Toolik Lake Re**	**60.52 20**	*e*P		**P**	**05 12 08.5**	**-3.7**
comp=Z,9.9nm,1.1s							
KIWB	**Kanaga Island**	**61.38 44**	*e*P		**P**	**05 12 17.9**	**-0.3**
COLD	**Coldfoot**	**61.42 21**	*e*P		**P**	**05 12 18.6**	**+0.3**
comp=Z,3.6nm,0.7s							
ESDC	**Sonseca Array**	**62.59 300**	P		**P**	**05 12 26.2**	**-0.4**
comp=Z,0.6nm,0.5s,baz=53,slow=6.6,SNR=5.6							
BPAW	**Bear Paw Mtn.**	**63.56 24**	*e*P		**P**	**05 12 32.5**	**-0.2**
comp=Z,7.7nm,1.0s							
KTH	**Kantishna Hill**	**63.99 24**	*e*P		**P**	**05 12 35.8**	**+0.2**
comp=Z,13nm,1.2s							
CCB	**Clear Creek Bu**	**64.03 22**	*e*P		**P**	**05 12 35.6**	**-0.1**
comp=Z,10nm,1.4s							
WRH	**Wood River Hil**	**64.09 22**	*e*P		**P**	**05 12 35.6**	**-0.5**
comp=Z,3.4nm,0.9s							
PPLA	**Purkeypile**	**64.11 25**	*e*P		**P**	**05 12 36.9**	**+0.5**
comp=Z,9.1nm,0.7s							
ILAR	**Eielson Array**	**64.18 22**	P		**P**	**05 12 36.0**	**-0.6**
comp=Z,3.1nm,0.7s,baz=316,slow=5.1,SNR=38							
ILB	**Eielson Array**	**64.18 22**	*e*P		**P**	**05 12 35.3**	**-1.3**
comp=Z,3.4nm,0.8s							
INK	**Inuvik**	**64.22 15**	P		**P**	**05 12 36.6**	**-0.2**
comp=Z,1.9nm,0.5s,baz=346,slow=6.4,SNR=4.4							
INK	**Inuvik**	**64.22 15**	*e*P		**P**	**05 12 35.0**	**-1.8**
comp=Z,3.6nm,0.9s							
INK	**Inuvik**	**64.22 15**	*e*P		**P**	**05 12 35.0**	**-1.8**
INK			pmax	pmax			
comp=Z,4.0nm,0.9s							
EGAK	**Eagle**	**65.63 20**	*e*P		**P**	**05 12 45.8**	**-0.2**
comp=Z,3.9nm,0.9s							
PAX	**Paxson**	**66.00 22**	*e*P		**P**	**05 12 48.0**	**-0.6**
comp=Z,9.9nm,1.4s							
PAX	**Paxson**	**66.00 22**	*e*P		**P**	**05 12 48.0**	**-0.6**
PAX			pmax	pmax			
comp=Z,10.0nm,1.4s							
SML	**Sawmill**	**66.10 24**	*e*P		**P**	**05 12 49.2**	**-0.1**
comp=Z,29nm,1.5s							
SML	**Sawmill**	**66.10 24**	*e*P		**P**	**05 12 49.2**	**-0.1**
SML			pmax	pmax			
comp=Z,29nm,1.5s							
SCM	**Sheep Creek Mo**	**66.38 24**	*e*P		**P**	**05 12 50.5**	**-0.5**
comp=Z,14nm,0.6s							
SCM	**Sheep Creek Mo**	**66.38 24**	*e*P		**P**	**05 12 50.6**	**-0.5**
SCM			pmax	pmax			
comp=Z,15nm,0.6s							
DAWY	**Dawson**	**66.64 19**	*e*P		**P**	**05 12 52.5**	**-0.2**
comp=Z,1.8nm,0.6s							
KDAK	**Kodiak Island**	**67.85 29**	*e*P		**P**	**05 13 00.8**	**+0.4**
comp=Z,24nm,1.3s							
KDAK	**Kodiak Island**	**67.85 29**	*e*P		**P**	**05 13 00.8**	**+0.4**
KDAK			pmax	pmax			
comp=Z,25nm,1.3s							
OHAK	**Old Harbor**	**68.03 30**	*e*P		**P**	**05 13 00.1**	**-1.4**
comp=Z,33nm,1.2s							
BALM	**Baldy**	**68.43 22**	*e*P		**P**	**05 13 01.8**	**-2.3**
BALM	**Baldy**	**68.43 22**	*e*P		**P**	**05 13 01.8**	**-2.3**
HYT	**Haines Junctio**	**69.88 20**	*e*P		**P**	**05 13 12.4**	**-0.7**
comp=Z,4.9nm,0.8s							
YKW3	**Yellowknife Ar**	**72.42 9**	*e*P		**P**	**05 13 27.4**	**-0.9**
comp=Z,4.0nm,1.1s							
YKA	**Yellowknife Ar**	**72.49 9**	P		**P**	**05 13 27.4**	**-1.3**
comp=Z,1.1nm,0.8s,baz=342,slow=5.9,SNR=15							
YKB5	**Yellowknife Ar**	**72.49 9**	*e*P		**P**	**05 13 27.4**	**-1.3**
TOA1	**Torodi Ar. Sit**	**75.61 274**	*e*P		**P**	**05 13 46.8**	**-0.9**
TOA0	**Torodi Ar. Sit**	**75.61 274**	*e*P		**P**	**05 13 46.8**	**-0.9**
comp=Z,9.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**75.61 274**	P		**P**	**05 13 46.8**	**-0.9**
comp=Z,5.8nm,0.7s,baz=36,slow=5.9,SNR=20							
MORW	**Morawa**	**78.60 152**	*e*P		**P**	**05 14 04.1**	**+0.1**
comp=Z,34nm,1.6s							
WR1	**Warramunga Arr**	**78.64 133**	*e*P		**P**	**05 14 03.7**	**-0.8**
WRA	**Warramunga Arr**	**78.64 133**	P		**P**	**05 14 03.7**	**-0.8**
comp=Z,4.5nm,0.6s,baz=320,slow=5.3,SNR=32							
WB2	**Warramunga Arr**	**78.65 133**	*e*P		**P**	**05 14 03.7**	**-0.8**
comp=Z,14nm,1.3s							
FFC	**Flin Flon**	**81.21 4**	*e*P		**P**	**05 14 17.5**	**-0.5**
comp=Z,3.2nm,0.7s							
FFC	**Flin Flon**	**81.21 4**	*e*P		**P**	**05 14 17.5**	**-0.5**
FFC			pmax	pmax			
comp=Z,3.0nm,0.7s							
AS31	**Alice Springs**	**81.49 135**	*e*P		**P**	**05 14 19.4**	**-0.5**
comp=Z,1.2nm,0.8s							
ASAR	**Alice Springs**	**81.49 135**	P		**P**	**05 14 19.0**	**-0.9**
comp=Z,2.5nm,0.7s,baz=329,slow=5.1,SNR=24							
DBIC	**Dimbokro**	**84.72 274**	P		**P**	**05 14 35.8**	**-1.1**
comp=Z,3.3nm,0.8s,baz=40,slow=5.8,SNR=3.6							
DBIC	**Dimbokro**	**84.72 274**	*e*P		**P**	**05 14 35.9**	**-0.9**
comp=Z,28nm,1.4s							
DBIC	**Dimbokro**	**84.72 274**	*e*P		**P**	**05 14 35.9**	**-0.9**
DBIC			pmax	pmax			
comp=Z,28nm,1.4s							
YPP	**Pitchstone Pla**	**90.81 11**	*e*P		**P**	**05 15 05.0**	**-1.1**
comp=Z,2.3nm,1.1s							
STKA	**Stephens Creek**	**92.10 134**	P		**P**	**05 15 10.2**	**-1.4**
comp=Z,0.7nm,0.2s,baz=345,slow=10,SNR=3.3							
STKA	**Stephens Creek**	**92.10 134**	*e*P		**P**	**05 15 10.9**	**-0.7**
comp=Z,1.2nm,1.0s							
STKA	**Stephens Creek**	**92.10 134**	*e*P		**P**	**05 15 10.9**	**-0.7**
STKA			pmax	pmax			
comp=Z,1.0nm,1.0s							
PDAR	**Pinedale Array**	**92.45 10**	P		**P**	**05 15 12.5**	**-1.1**
comp=Z,0.2nm,0.4s,baz=5.7,slow=2.7,SNR=3.1							
PDAR			LR	LR		06 01 59.5	
comp=Z,31nm,19.3s,baz=360,slow=39							
ELK	**Elko**	**93.55 15**	P		**P**	**05 15 19.1**	**+0.3**
comp=Z,0.7nm,0.5s,baz=328,slow=4.8,SNR=3.6							
LPAZ	**La Paz**	**143.58 311**	PKP		**PKPdf**	**05 21 37.5**	**-1.0**
comp=Z,1.3nm,0.7s,baz=59,slow=2.1,SNR=4.0							
CPUP	**Villa Florida**	**144.25 287**	PKP		**PKPab**	**05 21 36.4**	**0.0**
comp=Z,2.8nm,0.9s,baz=342,slow=3.2,SNR=3.6							

*IDC **24** 05:20:20.6±1.0, 52°.31N×171°.35W, h0km, mb3.6/7, mb1 3.9/10, mb1mx3.6/38, mbtmp3.7/10, ML3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/41, Error ellipse: s-maj=35.2km s-min=16.8km az=173.0*

*ISCJB **24** 05:20:25.4±0.8, 52°.4N±0°.2×171°.3W±0°.1, h47km, mb3.7/8, MS2.9/1, Error ellipse: s-maj=24.5km s-min=11.5km az=169.6*

ISC 24 05:20:27.0±1.0, 52°.3N±0°.2×171°.3W±0°.1, h47km, n18, σ0°39/11, mb3.7/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**12.03**	**56**	Pn		**Pn**	**05 23 15.0**	**-0.5**
1.1nm,0.3s,baz=260,slow=7.2,SNR=5.3								
ILAR	**Eielson Array**	**17.67**	**36**	P		**P**	**05 24 29.6**	**0.0**
0.1nm,0.3s,baz=229,slow=9.7,SNR=7.7								
PETK	**Petropavlovsk-**	**18.70**	**285**	P		**Pn**	**05 24 41.9**	**0.0**
0.3nm,0.3s,baz=70,slow=14,SNR=3.7								
YKA	**Yellowknife Ar**	**31.17**	**49**	P		**P**	**05 26 41.2**	**+0.3**
0.3nm,0.5s,baz=272,slow=7.8,SNR=9.9								
ASAJ	**Asahikawa**	**31.31**	**273**	LR		LR	05 37 59.5	
comp=Z,30nm,21.5s,baz=322,slow=34								
H11N2	**WAKE ISLAND Hy**	**36.70**	**216**	T		T	06 06 35.3	
baz=22,slow=75,SNR=24								
H11N3	**WAKE ISLAND Hy**	**36.71**	**216**	T		T	06 06 30.8	
baz=22,slow=75,SNR=25								
H11N1	**WAKE ISLAND Hy**	**36.72**	**216**	T		T	06 06 24.8	
baz=22,slow=75,SNR=26								
H11S1	**WAKE ISLAND Hy**	**37.90**	**215**	T		T	06 08 17.9	
baz=22,slow=76,SNR=102								
H11S2	**WAKE ISLAND Hy**	**37.91**	**215**	T		T	06 08 17.2	
baz=22,slow=76,SNR=107								
H11S3	**WAKE ISLAND Hy**	**37.92**	**215**	T		T	06 08 16.9	
baz=22,slow=76,SNR=91								
NVAR	**Mina Array Bea**	**38.87**	**89**	P		**P**	**05 27 48.3**	**+0.5**
0.8nm,0.9s,baz=287,slow=8.6,SNR=4.4								
PDAR	**Pinedale Array**	**41.59**	**78**	P		**P**	**05 28 10.8**	**+0.6**
0.8nm,0.6s,baz=291,slow=4.5,SNR=9.7								
SONM	**Songino Array**	**50.27**	**300**	P		**P**	**05 29 18.4**	**0.0**
0.4nm,0.5s,baz=37,slow=7.4,SNR=3.0								
TXAR	**Lajitas Array**	**53.95**	**87**	P		**P**	**05 29 45.5**	**-0.4**
0.5nm,0.7s,baz=324,slow=5.6,SNR=4.9								
FINES	**FINESS Array B**	**65.72**	**351**	P		**P**	**05 31 06.2**	**+0.1**
0.5nm,0.5s,baz=69,slow=4.6,SNR=3.3								
CMAR	**Chiang Mai Arr**	**75.44**	**281**	P		**P**	**05 32 06.1**	**+0.1**
1.0nm,0.4s,baz=24,slow=7.0,SNR=5.1								
ASAR	**Alice Springs**	**89.46**	**228**	P		**P**	**05 33 18.4**	**-0.3**
1.1nm,0.8s,baz=37,slow=4.4,SNR=7.8								

UCR 24 06:24:49.2±1.8, 11°.52N×85°.93W, h155km±6km, MD4.0, ML2.6, 1C-3D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CONN	**Concepcion**	**0.30**	**82**	*e*P		Pn	06 25 10.8	+0.5
MGAN	**Managua**	**0.69**	**333**	*e*P		Pn	06 25 12.4	+0.2
MGAN				*e*S		Sn	06 25 31.0	+1.1
TISN	**Laguna Tiscapa**	**0.70**	**331**	*e*P		Pn	06 25 11.4	-0.9
XAVN	**Gruta Xavier**	**0.73**	**328**	*e*P		Pn	06 25 12.4	-0.1
ACON	**Acoyapa**	**0.86**	**59**	*e*P		Pn	06 25 13.6	+0.2
ACON				*e*S		Sn	06 25 32.5	+0.7
ACON				IAML			06 25 33.2	
comp=N,32nm,0.8s								
BUAI	**Buenos Aires**	**0.87**	**138**	⇑*i*P		Pn	06 25 14.1	+0.6
GB1A	**Borinquen Arri**	**0.87**	**144**	*e*P		Pn	06 25 14.6	+1.0
GB1A				*e*S		Sn	06 25 32.6	+0.3
BUEV	**Buena Vista**	**0.88**	**145**	*i* P		Pn	06 25 14.3	+0.7
BUEV				*i* S		Sn	06 25 33.3	+1.0
LAPC	**Finca la Perla**	**0.89**	**147**	*i* P		Pn	06 25 13.9	+0.2
COPN	**Copaltepe**	**0.92**	**315**	*e*P		Pn	06 25 13.2	-0.6
COPN				IAML			06 25 35.2	
comp=Z,150nm,0.2s								
GPS1	**Guardaparques**	**0.94**	**143**	*i* P		Pn	06 25 14.8	+0.7
GPS1				*i* S		Sn	06 25 33.9	+0.8
NY14	**Universidad de**	**0.95**	**156**	*i* P		Pn	06 25 14.9	+0.8
MESS	**Mesas**	**1.06**	**137**	*e*P		Pn	06 25 15.7	+0.7
MOMN	**Momotombo**	**1.06**	**326**	*e*P		Pn	06 25 14.7	-0.4
CUI	**Cuipilapa**	**1.14**	**139**	*i* P		Pn	06 25 16.5	+0.7
PTEN	**Parque Tenorio**	**1.22**	**131**	*i* P		Pn	06 25 17.3	+0.7
CNGN	**Cerro Negro**	**1.23**	**322**	*e*P		Pn	06 25 16.1	-0.5
CNGN				IAML			06 25 40.5	
comp=Z,74nm,0.2s								
BRAN	**Las Pilas**	**1.26**	**341**	*e*P		Pn	06 25 13.0	-3.8
MATN	**Matagalpa**	**1.40**	**0**	⇓*i*P		Pn	06 25 18.2	0.0
MATN				*e*S		Sn	06 25 40.7	+0.1
JTS	**Las Juntas de**	**1.55**	**142**	*e*P		Pn	06 25 20.1	+0.3
JTS				*e*S		Sn	06 25 43.1	-0.2
ARE1	**Arenal 1**	**1.59**	**132**	*e*P		Pn	06 25 21.1	+1.0
ESTN	**Estel**	**1.63**	**345**	⇓*i*P		Pn	06 25 20.9	+0.3
ESTN				*e*S		Sn	06 25 45.5	+0.7
ESTN				IAML			06 25 46.3	
comp=N,24nm,1.0s								
ESPN	**Las Esperanzas**	**1.73**	**67**	*e*P		Pn	06 25 21.6	+0.1
RCON	**San Juan de Ri**	**1.96**	**353**	*e*P		Pn	06 25 24.7	+0.3
SRA1	**San Ramn**	**2.02**	**135**	*e*P		Pn	06 25 26.5	+1.5
SRA1				*e*S		Sn	06 25 53.8	+1.3
CSGN	**Cosiguina Volc**	**2.15**	**312**	⇓*e*P		Pn	06 25 27.1	+0.6
LCR2	**La Lucha 2**	**2.59**	**133**	*e*P		Pn	06 25 32.5	+0.6
LCR2				*e*S		Sn	06 26 05.2	+0.3
EDLM	**Las Mercedes**	**3.20**	**134**	*e*P		Pn	06 25 41.3	+1.9
DRK0	**Durika**	**3.46**	**130**	*e*P		Pn	06 25 44.0	+1.1
DRK0				*e*S		Sn	06 26 23.1	-1.4

*IDC **24** 06:34:47.6±0.6, 44°.33N×84°.19E, h0km, mb4.2/20, mb1 4.3/27, mb1mx4.1/56, mbtmp4.2/27, ML3.8/7, MS3.4/15, Ms1 3.4/15, ms1mx3.1/45, Error ellipse: s-maj=12.1km s-min=7.8km az=44.0*

*BJI **24** 06:34:48.4±0.0, 44°.39N×84°.12E, h15km, mb4.3/24, mB4.5/18, ML4.4/10, Ms4.1/12, Ms7 3.8/11*

*NEIC **24** 06:34:49.8±1.8, 44°.36N×84°.22E, h10km±1km, mb4.5/58, Error ellipse: s-maj=12.7km s-min=2.9km az=196.0*

NEIC Felt at Karamay.

*SOME **24** 06:34:50.6, 44°.32N×83°.97E, h10km, MS3.7*

*MOS **24** 06:34:51.0±1.1, 44°.40N×84°.19E, h33km, mb4.7/19, Error ellipse: s-maj=7.2km s-min=5.6km az=103.1*

*NNC **24** 06:34:52.0±1.4, 44°.39N×83°.91E, h5km±6km, mb4.7, mpv4.5, Error ellipse: s-maj=12.0km s-min=4.8km az=122.0*

ISC 24 06:34:50.2±1.1, 44°.35N±0°.03×84°.28E±0°.02, h17km±7km, n229, σ1°93/264, mb4.5/73, MS3.3/14, 15C-20D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.52**	**101**	Pn		**Pb**	**06 35 33.8**	**-1.1**
WMQ				Sg		**Sb**	**06 36 06.5**	**+0.9**
WMQ				smax	smax			
comp=N,16μm,0.6s								
WMQ				smax	smax			
comp=E,11μm,0.5s								
WMQ	**Urumqi**	**2.52**	**101**	*e*Pn		**Pb**	**06 35 33.6**	**-1.4**
WMQ				*e*Sn		**Sg**	**06 36 10.5**	**-0.5**
WMQ	**Urumqi**	**2.52**	**101**	*e*PN		**Pb**	**06 35 33.6**	**-1.4**
WMQ				*e*			06 36 10.5	
MK31	**Makanchi Array**	**2.82**	**331**	*e*Pn		**Pn**	**06 35 36.3**	**+1.8**
MK31				*e*Sn		**Sn**	**06 36 07.3**	**-0.9**
MK31	**Makanchi Array**	**2.82**	**331**	⇓Pn		**Pn**	**06 35 35.9**	**+1.3**
10.0nm,0.3s,baz=147,slow=13,SNR=4326								
MK31				⇑Pg		**Pb**	**06 35 40.9**	**+0.8**
87nm,0.3s,baz=151,slow=17,SNR=6.3								
MK31				⇑Lg		Lg	06 36 15.9	
479nm,0.3s,baz=144,slow=28								
MK31	**Makanchi Array**	**2.82**	**331**	*e*PN		**Pn**	**06 35 36.3**	**+1.8**
MK31				*e*			06 36 07.3	
MK32	**Makanchi Array**	**2.82**	**331**	*e*Pn		**Pn**	**06 35 35.9**	**+1.3**
MK32				*e*Pg		**Pb**	**06 35 39.3**	**-0.8**
MKAR	**Makanchi Array**	**2.82**	**331**	Pn		**Pn**	**06 35 35.9**	**+1.3**
20nm,0.3s,baz=151,slow=14,SNR=168								
MKAR				Pg		**Pb**	**06 35 39.3**	**-0.8**
104nm,0.3s,baz=148,slow=17,SNR=238								
MKAR				LR	LR		06 36 14.9	
comp=Z,237nm,18.2s,baz=9.0,slow=31								
MKAR				Lg		Lg	06 36 16.8	
385nm,0.3s,baz=153,slow=26,SNR=16								
MAKZ	**Makanchi**	**2.95**	**328**	*e*Pn		**Pn**	**06 35 38.0**	**+1.8**
MAKZ				*e*Sn		**Sn**	**06 36 11.1**	**-0.2**
MAKZ	**Makanchi**	**2.95**	**328**	⇓Pn		**Pn**	**06 35 37.4**	**+1.1**
7.7nm,0.3s								
MAKZ				⇑Pg		**Pb**	**06 35 42.1**	**-0.1**
143nm,0.5s								
MAKZ				⇑Lg		Lg	06 36 21.3	
1μm,1.0s								
MAKZ	**Makanchi**	**2.95**	**328**	*e*PN		**Pn**	**06 35 38.1**	**+1.8**
MAKZ				*e*			06 36 11.1	
KTMS	**Ketmen**	**2.98**	**254**	Pg		**Pb**	**06 35 40.7**	**-2.2**
216nm,0.4s								
KTMS				L

803nm,0.6s
KOTS Kotyrbulak 5.31 260 *e*P **Pb 06 36 23.1 +0.5**
43nm,0.5s
KOTS *e*S **Sb 06 37 29.8 +3.7**
803nm,0.6s
MDOK Medeo 5.37 260 Pg **Pb 06 36 25.6 +2.0**
39nm,0.5s
MDOK Lg Lg 06 37 34.1
372nm,0.6s
MDOK Medeo 5.37 260 *e*P **Pb 06 36 25.6 +2.0**
39nm,0.5s
MDOK *e*S **Sb 06 37 34.1 +6.2**
372nm,0.6s
KNDC Almaty 5.42 261 ⇑Pg **Pb 06 36 26.2 +1.8**
110nm,0.8s
KNDC ⇑Lg Lg 06 37 35.3
494nm,0.8s
TNSS Tian-Shan 5.48 259 *e*P **Pb 06 36 29.6 +3.9**
54nm,0.6s
TNSS *e*S **Sg 06 37 40.8 -5.1**
233nm,0.6s
KTBS Karatobe 5.52 266 Pg **Pb 06 36 28.1 +2.1**
39nm,0.6s
KTBS Lg Lg 06 37 38.4
741nm,0.6s
KTBS Karatobe 5.52 266 *e*P **Pb 06 36 28.1 +2.1**
39nm,0.6s
KTBS *e*S **Sb 06 37 38.4 +6.4**
741nm,0.6s
KUU Kurty 5.74 268 Pg **Pb 06 36 31.9 +2.1**
49nm,0.8s
KUU Lg Lg 06 37 44.9
233nm,0.4s
KUU Kurty 5.74 268 *e*P **Pb 06 36 31.9 +2.1**
49nm,0.8s
KUU *e*S **Sb 06 37 44.9 +6.6**
233nm,0.4s
DGZ Jazzator, Alta 5.77 21 *i*PN **Pn 06 36 17.0 +1.8**
MTBS Maitube 5.82 261 Pg **Pb 06 36 33.3 +2.1**
34nm,0.4s
MTBS Lg Lg 06 37 47.3
145nm,0.4s
MTBS Maitube 5.82 261 *e*P **Pb 06 36 33.3 +2.1**
34nm,0.4s
MTBS *e*S **Sb 06 37 47.3 +6.6**
145nm,0.4s
KST Kastek 6.17 261 *e*P **Pb 06 36 40.7 +3.5**
45nm,0.4s
KST *e*S **Sb 06 37 59.5 +8.7**
196nm,0.7s
ULHL Ulahol 6.23 253 P **Pn 06 36 22.3 +0.8**
SNR=17
BOOM Boomskoye usch 6.35 256 *e*Pn **Pn 06 36 24.6 +1.4**
BOOM Boomskoye usch 6.35 256 *e*PN **Pn 06 36 24.6 +1.4**
TKM2 Tokmak 2 6.46 260 P **Pn 06 36 28.3 +3.6**
SNR=20
TKM2 Tokmak 2 6.46 260 ⇓Pn **Pn 06 36 27.7 +3.0**
13nm,0.7s
TKM2 ⇑Pg Pb 06 36 48.2 +5.9
42nm,0.8s
TKM2 ⇑Lg Lg 06 38 06.0
116nm,0.7s
SEM Semipalatinsk 6.65 337 *e*P Pg 06 36 53.8 -3.7
61nm,0.3s
SEM *e*S **Sg 06 38 22.8 -0.8**
482nm,0.9s
KZA Kyzart 6.98 254 P **Pn 06 36 33.8 +1.8**
SNR=26
KBK Karagaybulak 6.99 259 P **Pn 06 36 33.9 +1.9**
SNR=20
USP Ospenovka 7.16 265 P **Pn 06 36 35.1 +0.9**
SNR=7.3
FRU1 Bishkek 7.17 261 *e*Sn **Sn 06 37 53.1 -2.4**
AAK Ala-Archa 7.32 260 Pn **Pn 06 36 38.6 +2.2**
1.0nm,0.3s,baz=82,slow=11,SNR=8.6
AAK Lg Lg 06 38 36.6
2.1nm,0.3s,baz=40,slow=20,SNR=4.0
AAK LR LR 06 39 37.9
comp=Z,194nm,21.2s,baz=88,slow=40
AAK Ala-Archa 7.32 260 *e*Pn **Pn 06 36 37.5 +1.0**
AAK Ala-Archa 7.32 260 ⇓Pn **Pn 06 36 40.5 +4.0**
3.4nm,0.5s
AAK ⇑Pg Pb 06 37 02.3 +5.4
23nm,0.7s
AAK ⇓Lg Lg 06 38 35.5
149nm,0.9s
AAK Ala-Archa 7.32 260 *i*P **Pn 06 36 37.7 +1.2**
KURBB Kurchatov Arra 7.39 330 Pn **Pn 06 36 37.3 +0.1**
1.2nm,0.3s,baz=146,slow=13,SNR=76
KURBB Sn **Sn 06 37 59.2 -1.4**
3.4nm,0.3s,baz=129,slow=31,SNR=5.4
KURBB Lg Lg 06 38 42.0
3.8nm,0.3s,baz=140,slow=29,SNR=8.5
KURBB Kurchatov Arra 7.39 330 ⇓Pn **Pn 06 36 36.8 -0.4**
15nm,0.4s
KURBB ⇓Sn **Sn 06 37 59.2 -1.4**
172nm,0.7s
KURBB ⇓Lg Lg 06 38 45.0
742nm,0.7s
KURK Kurchatov 7.43 331 *e*Pn **Pn 06 36 37.2 -0.6**
KURK *e*Sg **Sg 06 38 47.0 -1.5**
KURK Kurchatov 7.43 331 ⇑Pn **Pn 06 36 37.1 -0.7**
6.8nm,0.4s
KURK ⇓Pg **Pb 06 37 02.1 +3.4**
29nm,0.7s
KURK ⇓Lg Lg 06 38 43.0
684nm,1.1s
KURK Kurchatov 7.43 331 *i*P **Pn 06 36 37.2 -0.6**
UCH Uchtor 7.43 257 P **Pn 06 36 42.7 +4.4**
SNR=11
KSH Kashi 7.85 235 P Pn 06 36 49.6 +5.9
KSH pP Pb 06 36 53.1 -13
KSH S Sn 06 38 23.1 +11
KSH pmax pmax
comp=Z,11nm,0.5s
KSH pmax pmax
comp=Z,260nm,4.8s
KSH LR LR
comp=N,1μm,9.0s
KSH LR LR
comp=E,1μm,6.9s
KSH LR LR
comp=Z,600nm,11.1s
OTUK Ortayu 9.14 299 ⇓Pn **Pn 06 37 03.5 +2.2**
10nm,0.7s
OTUK ⇓Lg Lg 06 39 37.1
113nm,1.0s
ZAA0 Zalesovo Array 9.62 2 *e*Pn **Pn 06 37 07.8 +0.1**
ZAA0 *e*Sn **Sn 06 38 52.7 -2.6**
ZAA0 Zalesovo Array 9.62 2 ⇓Pn **Pn 06 37 07.3 -0.5**
1.5nm,0.5s
ZAA0 ⇓Sn **Sn 06 38 50.9 -4.4**
5.5nm,0.5s
ZAA0 ⇑Lg Lg 06 39 54.4
36nm,1.6s
ZALV Zalesovo Beam 9.62 2 Pn **Pn 06 37 07.6 -0.1**
3.6nm,0.3s,baz=185,slow=16,SNR=24
ZALV Sn **Sn 06 38 51.4 -3.9**
9.8nm,0.3s,baz=185,slow=21,SNR=15
ZALV Lg Lg 06 39 53.5
3.5nm,0.3s,baz=179,slow=23,SNR=2.3
ZAA1 Zalesovo Array 9.62 2 *e*Pn **Pn 06 37 07.6 -0.2**
ZAA1 *e*Sn **Sn 06 38 51.4 -4.1**
KK31 Karatay Array 10.05 268 *e*Pn **Pn 06 37 14.4 +0.8**
KK31 Karatay Array 10.05 268 ⇓Pn **Pn 06 37 16.8 +3.1**
1.1nm,0.4s,baz=69,slow=14,SNR=22
KK31 ⇓Pg 06 37 59.6
9.4nm,0.8s,baz=68,slow=17,SNR=6.2
KK31 ⇑Lg Lg 06 39 57.2
46nm,0.8s,baz=59,slow=30
KK31 Karatay Array 10.05 268 *e*P **Pn 06 37 14.5 +0.8**
KKAR Karatay Array 10.05 268 *e*Pn **Pn 06 37 14.9 +1.2**
KKAR Karatay Array 10.05 268 *e*P **Pn 06 37 14.9 +1.2**
NVS Novosibirsk 10.53 357 *e*P **Pn 06 37 19.3 -0.9**
NVS *e* 06 39 13.7
BTK Batken 10.87 251 *e*Pn **Pn 06 37 25.5 +0.5**
BTK Batken 10.87 251 *e*P **Pn 06 37 25.5 +0.5**
GAR Garm 11.72 248 *e*Pn **Pn 06 37 38.5 +1.7**
GAR Garm 11.72 248 *e*P **Pn 06 37 38.5 +1.7**
GTA Gaotai 12.58 108 *e*P Pn 06 37 43.5 -5.0
GTA pP 06 37 47.8
GTA sP 06 37 50.9
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,120nm,5.4s
GTA smax smax
comp=N,39nm,1.1s
GTA smax smax
comp=E,36nm,1.0s
GTA LR LR
comp=N,260nm,10.8s
GTA LR LR
comp=E,310nm,14.9s
GTA LR LR
comp=Z,230nm,8.3s
BVAR Borovoye Array 12.62 318 Pn **Pn 06 37 47.2 -1.6**
comp=Z,0.9nm,0.3s,baz=114,slow=12,SNR=13
BVAR Lg Lg 06 41 20.6
comp=Z,1.5nm,0.3s,baz=117,slow=30,SNR=5.7
CHGR Chuyangaron 12.68 249 *e*Pn **Pn 06 37 49.9 +0.1**
BRVK Borovoye 12.69 318 *e*Pn **Pn 06 37 47.3 -2.5**
BRVK Borovoye 12.69 318 ⇑Pn **Pn 06 37 48.8 -0.9**
comp=Z,4.6nm,0.6s
BRVK ⇓Sn **Sn 06 40 05.1 -5.4**
comp=Z,14nm,0.9s
BRVK ⇓Lg Lg 06 41 26.9
comp=Z,145nm,1.7s
BRVK Borovoye 12.69 318 *i*P **Pn 06 37 46.9 -2.8**
NIL Nilore 13.68 222 *e*Pn **Pn 06 38 04.3 +0.9**
NIL Nilore 13.68 222 *e*P **Pn 06 38 04.3 +0.9**
ZAK Zakamensk 14.20 58 *e*P **P 06 38 17.8 -0.1**
ZAK pmax pmax
comp=Z,7.0nm,0.8s
SONA0 Songino Array 15.72 69 *e*Pn **Pn 06 38 31.9 +0.9**
SONM Songino Array 15.72 69 Pn **Pn 06 38 31.8 +0.9**
comp=Z,0.3nm,0.3s,baz=276,slow=13,SNR=4.8
SONM Lg Lg 06 43 09.0
comp=Z,0.6nm,0.3s,baz=259,slow=23,SNR=2.9
SONM LR LR 06 45 48.3
comp=Z,141nm,19.7s,baz=270,slow=42
ULN Ulaanbaatar 16.17 69 *e*Pn **Pn 06 38 33.7 -2.9**
comp=Z,9.4nm,1.4s
ULN Ulaanbaatar 16.17 69 *i*P **Pn 06 38 36.6 0.0**
PYUN Piuthan 16.25 184 *e*P **P 06 38 42.0 +1.2**
comp=Z,129nm,1.2s
GUN Gumba 16.45 175 *e*P **P 06 38 42.9 -0.4**
comp=Z,30nm,0.8s
PKIN Phulchoki 16.76 177 *e*P **Pn 06 38 45.0 +0.6**
comp=Z,27nm,1.0s
PKI Pulchoki 16.77 177 *e*P **Pn 06 38 45.2 +0.7**
comp=Z,48nm,1.1s
LZH Lanzhou 17.04 112 *e*P **Pn 06 38 48.8 +1.0**
LZH pP pP 06 38 53.8 -0.7
LZH sP sP 06 38 57.6 +0.8
LZH *e*PP **PnPn 06 39 04.0 +6.6**
LZH pmax pmax
comp=Z,20nm,1.1s
LZH pmax pmax
comp=Z,62nm,4.8s
LZH LR LR
comp=Z,350nm,12.0s
LZH LR LR
comp=Z,370nm,12.3s
LZH LR LR
comp=Z,400nm,14.2s
AB31 Akbulak array 17.34 295 P **Pn 06 38 47.6 -3.7**
comp=Z,2.6nm,0.6s,baz=103,slow=11,SNR=31
ABKAR Akbulak array 17.34 295 *e*Pn **Pn 06 38 47.8 -3.4**
comp=Z,6.0nm,1.0s
AKTO Aktyubinsk 18.74 298 P **P 06 39 08.3 +0.3**
comp=Z,0.2nm,0.3s,baz=94,slow=16,SNR=3.4
AKTO Lg Lg 06 44 42.3
comp=Z,0.2nm,0.3s,baz=180,slow=14,SNR=3.0
AKTO Aktyubinsk 18.74 298 ⇑P **P 06 39 09.0 +1.0**
comp=Z,5.6nm,0.8s
SHL Shillong 19.73 159 *e*P **Pn 06 39 21.4 +0.8**
comp=Z,14nm,1.1s
SHL Shillong 19.73 159 *e*P **Pn 06 39 21.4 +0.8**
SHL pmax pmax
comp=Z,14nm,1.1s
ARU Arti 20.23 316 P **P 06 39 24.4 +0.2**
comp=Z,3.0nm,0.2s,baz=311,slow=20,SNR=3.6
ARU LR LR 06 47 42.2
comp=Z,88nm,21.2s,baz=88,slow=38
ARU Arti 20.23 316 *e*P **P 06 39 24.1 -0.2**
comp=Z,6.5nm,0.6s
ARU Arti 20.23 316*c i*P **P 06 39 23.1 -1.1**
ARU 06 39 36.7
ARU S **S 06 43 12.1 +1.7**
ARU SS **SnSn 06 43 28.6 +0.8**
ARU pmax pmax
comp=Z,6.0nm,1.4s
HHC Hu-ho-hao-te 20.35 90 *e*P Pn 06 39 28.4 +0.5
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,21nm,5.8s
GEYT Alibeck 20.67 261 P **P 06 39 28.9 -0.3**
comp=Z,1.0nm,0.4s,baz=78,slow=13,SNR=2.6
GEYT LR LR 06 47 29.2
comp=Z,41nm,18.8s,baz=355,slow=37
GYA0B ALIBECK ARRAY 20.67 261 *e*P **P 06 39 28.1 -1.2**
comp=Z,4.8nm,0.8s
XAN Xi'an 21.62 110 P **P 06 39 41.9 +2.5**
XAN pP sP 06 39 47.6 +0.9
XAN S Sn 06 43 44.9 -2.3
XAN pmax pmax
comp=Z,10.0nm,1.0s
XAN pmax pmax
comp=Z,83nm,6.3s
XAN LR LR
comp=Z,170nm,11.8s
XAN LR LR
comp=Z,160nm,11.3s
XAN LR LR
comp=Z,180nm,11.0s
BOD Bodaibo 22.80 43 *e*P **P 06 39 52.6 +0.8**
BOD pmax pmax
comp=Z,14nm,1.5s
ENH Enshi 24.36 117 *e*P **P 06 40 10.9 +3.6**
comp=Z,8.4nm,0.4s
NRIK Noril'sk 25.11 3 P **P 06 40 14.5 +0.7**
comp=Z,8.8nm,0.4s,baz=182,slow=7.0,SNR=23
GYA Guiyang 25.39 127 *e*P **P 06 40 17.9 +1.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
WHN Wuhan 27.39 110 ⇓P **P 06 40 35.3 +0.7**
CM31 Chiang Mai Arr 28.59 150 *e*P **P 06 40 43.3 -2.1**
comp=Z,14nm,1.4s
CMAR Chiang Mai Arr 28.59 150 P **P 06 40 43.9 -1.6**
comp=Z,1.1nm,0.5s,baz=322,slow=8.6,SNR=4.7
CMAR Chiang Mai Arr 28.59 150 *i*P **P 06 40 46.7 +1.2**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
GNI Garni 29.37 276 *i*P **P 06 40 52.9 +0.5**
GNI pmax pmax
comp=Z,19nm,0.9s
KIV Kislovodsk 29.62 284 *e*P **P 06 40 51.5 -3.1**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,133nm,15.0s
VSR Storozhevoye 30.68 299 *e*P **P 06 41 04.0 +0.3**
VSR pmax pmax
comp=Z,5.0nm,0.5s
LPSR Galich'ya Gora 30.74 302 *e*P **P 06 41 02.1 -2.1**
LPSR pmax pmax
comp=Z,7.0nm,0.6s
KLMR Klimovskoe 31.04 318 *e*P **P 06 41 05.7 -1.1**
KLMR pmax pmax
comp=Z,4.0nm,0.6s
KLMR Klimovskoe 31.04 318 *e*P **P 06 41 05.7 -1.1**
KLMR AMP 06 41 11.4
comp=Z,4.0nm,0.6s
KLR Kul'dur 32.44 64 P **P 06 41 20.2 +1.0**
comp=Z,1.3nm,0.5s,baz=270,slow=11,SNR=7.0
KLR Kul'dur 32.44 64 *i*P **P 06 41 17.7 -1.5**
KS15 Wonju Array Si 33.36 87 *e*P **P 06 41 28.1 +0.7**
comp=Z,9.5nm,1.3s
KSRS Korea Array 33.38 87 P **P 06 41 28.1 +0.6**
comp=Z,1.3nm,0.7s,baz=283,slow=8.5,SNR=9.8
KSRS LR LR 06 56 19.6
comp=Z,44nm,18.5s,baz=261,slow=39
USRK Ussuriysk Ar. 33.78 73 P **P 06 41 32.0 +1.1**
comp=Z,2.4nm,0.8s,baz=328,slow=7.8,SNR=4.6
TIXI Tiksi 34.66 23 *e*P **P 06 41 38.7 +0.5**
comp=Z,4.9nm,0.8s
TIXI Tiksi 34.66 23 *i*P **P 06 41 37.3 -0.9**
TIXI pmax pmax
comp=Z,7.0nm,1.1s
LVZ Lovozero 34.85 330 *e*P **P 06 41 39.6 -0.4**
comp=Z,33nm,1.5s
LVZ Lovozero 34.85 330 *e*P **P 06 41 39.6 -0.4**
LVZ pmax pmax
comp=Z,33nm,1.5s
YULB Yu-li 36.74 112 *e*P **P 06 41 58.1 +1.4**
comp=Z,39nm,1.5s
AKASG Malin Array Be 36.97 300 P **P 06 41 58.2 -0.2**
comp=Z,1.2nm,0.6s,baz=63,slow=8.3,SNR=6.5
AKBB Malin Array Si 36.97 300 *e*P **P 06 41 59.0 +0.6**
comp=Z,4.7nm,0.9s
AKBB Malin Array Si 36.97 300 *e*P **P 06 41 59.0 +0.6**
AKBB pmax pmax
comp=Z,5.0nm,0.9s
TWG Pinlang 36.99 113 *e*P **P 06 41 59.3 +0.5**
comp=Z,91nm,0.9s
BR101 Keskin Array S 37.41 281 *e*P **P 06 42 03.2 +0.8**
BR131 Keskin Array S 37.41 281 *e*P **P 06 42 04.0 +1.6**
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 37.41 281 P **P 06 42 03.2 +0.9**
comp=Z,2.2nm,0.7s,baz=99,slow=8.8,SNR=8.9
BRTR LR LR 06 59 31.6
comp=Z,25nm,18.4s,baz=84,slow=40
BRTR Keskin Array B 37.41 281 *i*P **P 06 42 04.5 +2.1**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
FIA0 FINESS Array S 37.58 318 *e*P **P 06 42 04.7 +1.4**
FIA0 *e*PcP **PcP 06 44 20.6 -0.2**
FIA0 FINESS Array S 37.58 318 *e*P **P 06 42 04.7 +1.4**
FIA0 *e* 06 44 20.6
FINES FINESS Array B 37.58 318 P **P 06 42 04.7 +1.4**
comp=Z,0.4nm,0.5s,baz=49,slow=6.4,SNR=3.3
FINES PcP **PcP 06 44 20.6 -0.2**
comp=Z,1.2nm,0.6s,baz=94,slow=4.2,SNR=4.6
FINES LR LR 06 56 34.1
comp=Z,44nm,18.3s,baz=72,slow=35
RAYN Ar Rayn 37.83 250 *e*P **P 06 42 06.8 +0.9**
comp=Z,6.0nm,0.8s
RAYN Ar Rayn 37.83 250 *e*P **P 06 42 06.9 +0.9**
RAYN pmax pmax
comp=Z,6.0nm,0.8s
ARA0 ARCESS Array S 38.47 331 *e*P **P 06 42 11.6 +0.7**
ARCES ARCESS Array B 38.47 331 P **P 06 42 11.6 +0.7**
comp=Z,6.4nm,0.3s,baz=98,slow=7.5,SNR=15
ARCES LR LR 06 59 01.4
comp=Z,48nm,18.7s,baz=78,slow=38
ARE0 ARCESS Array S 38.47 331 *e*P **P 06 42 12.7 +1.8**
comp=Z,0.8nm,1.4s
BUR08 Bucovina Ar. S 40.32 296 *e*P **P 06 42 27.5 +0.9**
comp=Z,1.6nm,0.8s
MLR Muntele Rosu 40.53 293 *e*P **P 06 42 28.7 +0.3**
comp=Z,3.4nm,0.8s
MLR Muntele Rosu 40.53 293 *e*P **P 06 42 28.7 +0.3**
MLR pmax pmax
comp=Z,3.0nm,0.8s
ASAJ Asahikawa 41.01 69 P **P 06 42 32.9 +0.7**
comp=Z,5.0nm,0.5s,baz=312,slow=14,SNR=4.4
MJAR Matsushiro Arr 41.13 82 LR LR 07 01 20.4
comp=Z,43nm,18.7s,baz=75,slow=39
SEY Seymchan 42.11 39 P **P 06 42 41.8 +0.7**
comp=Z,1.3nm,0.5s,baz=232,slow=5.9,SNR=5.0
SEY Seymchan 42.11 39 *i*P **P 06 42 41.1 +0.1**
ERM Erimo 42.19 72 *e*P **P 06 42 42.7 +0.8**
comp=Z,24nm,1.3s
ERM Erimo 42.19 72 *e*P **P 06 42 42.7 +0.8**
ERM pmax pmax
comp=Z,24nm,1.3s
OJC Ojcow 42.91 302 *e*P **P 06 42 48.1 +0.4**
comp=Z,6.9nm,1.0s
OJC Ojcow 42.91 302 *e*P **P 06 42 48.1 +0.4**
OJC pmax pmax
comp=Z,7.0nm,1.0s
VTS Vitosha 43.42 290 *e*P **P 06 42 50.2 -1.9**
comp=Z,4.6nm,1.1s
VTS Vitosha 43.42 290 *e*P **P 06 42 50.2 -1.9**
VTS pmax pmax
comp=Z,5.0nm,1.1s
JHJ Hachijo jima 2 43.96 85 LR LR 07 03 52.4
comp=Z,36nm,18.0s,baz=317,slow=40
GSI Gunungsitoli 44.45 161 *e*P **P 06 42 58.5 -1.9**
comp=Z,45nm,1.3s
NC405 NORSAR Array S 44.49 319 *e*P **P 06 43 00.3 +0.1**
comp=Z,0.9nm,0.4s
NC303 NORSAR Array S 44.63 319 *e*P **P 06 43 01.2 -0.2**
NC602 NORSAR Array S 44.66 318 *e*P **P 06 43 02.3 +0.7**
NB201 NORSAR Array S 44.71 319 *e*P **P 06 43 03.6 +1.6**
comp=Z,13nm,1.2s
NB2 NORSAR Subarra 44.75 319 P **P 06 43 02.0 -0.3**
comp=Z,1.2nm,0.7s,baz=77,slow=7.9
NB200 NORSAR Array S 44.75 319 *e*P **P 06 43 02.3 0.0**
NOA NORSAR Array B 44.75 319 P **P 06 43 02.3 0.0**
comp=Z,3.2nm,0.9s,baz=77,slow=7.8,SNR=7.6
NOA LR LR 07 00 43.9
comp=Z,29nm,18.3s,baz=90,slow=35
NAO01 NORSAR Array S 44.95 318 *e*P **P 06 43 04.2 +0.3**
CLL Collm 46.62 305 *e*P **P 06 43 16.0 -1.2**
CLL LmH 07 00 00.0
comp=N,100nm,22.0s
CLL LmH 07 00 00.0
comp=E,100nm,20.0s
CLL Collm 46.62 305 *e*P **P 06 43 16.0 -1.2**
ANM Nome 58.63 28 *e*P **P 06 44 47.9 +2.0**
comp=E,29nm,1.4s
ANM Nome 58.63 28 *e*P **P 06 44 47.9 +2.0**
ANM pmax pmax
comp=Z,29nm,1.4s
GUMO Guam 59.65 101 LR LR 07 11 50.8
comp=Z,78nm,21.9s,baz=314,slow=37
TOLK Toolik Lake Re 60.45 20 *e*P **P 06 44 59.5 +1.0**
comp=Z,6.0nm,1.0s
COLD Coldfoot 61.36 21 *e*P **P 06 45 05.7 +1.1**
comp=Z,3.0nm,0.7s
ESDC Sonseca Array 62.62 300 P **P 06 45 13.1 -0.5**
comp=Z,0.3nm,0.4s,baz=66,slow=7.3,SNR=2.9
FYU Fort Yukon 63.12 20 *e*P **P 06 45 17.1 +0.7**
comp=Z,1.8nm,1.1s
BPAW Bear Paw Mtn. 63.49 24 *e*P **P 06 45 19.7 +0.8**
comp=Z,2.7nm,0.9s
KTH Kantishna Hill 63.93 24 *e*P **P 06 45 22.6 +0.8**
comp=Z,3.5nm,0.8s
CCB Clear Creek Bu 63.97 22 *e*P **P 06 45 22.0 0.0**
comp=Z,1.6nm,0.7s
WRH Wood River Hil 64.03 22 *e*P **P 06 45 22.4 0.0**
comp=Z,4.1nm,1.2s
PPLA Purkeypile 64.04 25 *e*P **P 06 45 23.5 +0.8**
comp=Z,6.0nm,0.6s
ILAR Eielson Array 64.12 22 P **P 06 45 23.2 +0.2**
comp=Z,2.3nm,0.7s,baz=313,slow=5.0,SNR=31
ILB Eielson Array 64.12 22 *e*P **P 06 45 23.5 +0.5**
comp=Z,3.2nm,0.8s
INK Inuvik 64.16 15 *e*P **P 06 45 24.4 +1.2**
comp=Z,1.5nm,0.8s
INK Inuvik 64.16 15 *e*P **P 06 45 24.4 +1.2**
INK pmax pmax
comp=Z,1.0nm,0.8s
TRF Thorofare Moun 64.19 24 *e*P **P 06 45 25.5 +1.8**
comp=Z,8.2nm,1.4s
SVW2 Sparrevohn 64.29 28 *e*P **P 06 45 23.1 -1.1**
comp=Z,2.7nm,1.1s
SKT Skwentna 64.94 26 *e*P **P 06 45 29.5 +1.1**
comp=Z,6.8nm,1.4s
EGAK Eagle 65.56 20 *e*P **P 06 45 33.0 +0.6**
comp=Z,2.5nm,1.0s
SUA Susitna One 65.57 26 *e*P **P 06 45 34.1 +1.4**
comp=Z,7.2nm,0.9s
GHO Glory Hole Cre 65.89 25 *e*P **P 06 45 36.4 +1.8**
comp=Z,8.8nm,1.2s
PAX Paxson 65.93 22 *e*P **P 06 45 35.1 +0.2**
comp=Z,2.3nm,0.8s
PAX Paxson 65.93 22 *e*P **P 06 45 35.1 +0.2**
PAX pmax pmax
comp=Z,2.0nm,0.8s
SML Sawmill 66.04 24 *e*P **P 06 45 36.4 +0.8**
comp=Z,6.0nm,0.6s
SML Sawmill 66.04 24 *e*P **P 06 45 36.4 +0.8**
SML pmax pmax
comp=Z,6.0nm,0.6s
SCM Sheep Creek Mo 66.31 24 *e*P **P 06 45 38.1 +0.7**
comp=Z,10nm,0.7s
SCM Sheep Creek Mo 66.31 24 *e*P **P 06 45 38.1 +0.7**
SCM pmax pmax
comp=Z,10.0nm,0.7s
DAWY Dawson 66.58 19 *e*P **P 06 45 39.8 +0.8**
comp=Z,1.6nm,0.8s
CNPM China Poot 66.90 27 *e*P **P 06 45 42.4 +1.3**
comp=Z,30nm,1.5s
GLI Glacier Island 67.14 25 *e*P **P 06 45 43.2 +0.6**
comp=Z,6.4nm,0.9s
KDAK Kodiak Island 67.78 29 *e*P **P 06 45 46.8 +0.2**
comp=Z,57nm,1.5s

KDAK	Kodiak Island	67.78	29	eP	P	06 45 46.8	+0.2
KDAK				pmax	pmax		
	comp=Z,57nm,1.5s						
HYT	Haines Junctio	69.81	20	eP	P	06 46 00.4	+1.0
	comp=Z,3.1nm,0.8s						
BESE	Bessie Mountai	72.43	20	eP	P	06 46 16.1	+0.8
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	72.44	9	P	P	06 46 15.2	+0.1
	comp=Z,0.6nm,0.7s,baz=339,slow=6.0,SNR=11						
YKB5	Yellowknife Ar	72.44	9	eP	P	06 46 15.2	+0.1
DLBC	Dease Lake	73.70	18	LR	LR	07 22 07.1	
	comp=Z,69nm,18.1s,baz=312,slow=38						
CRAG	Craig	75.64	21	eP	P	06 46 36.3	+2.4
	comp=Z,6.0nm,1.3s						
TOA1	Torodi Ar. Sit	75.66	274	eP	P	06 46 34.0	-0.8
TOA0	Torodi Ar. Sit	75.66	274	eP	P	06 46 33.9	-0.8
	comp=Z,4.4nm,0.8s						
TORD	Torodi Ar. Bea	75.66	274	P	P	06 46 34.0	-0.8
	comp=Z,3.6nm,0.8s,baz=31,slow=7.1,SNR=7.6						
WR1	Warramunga Arr	78.63	133	eP	P	06 46 50.9	-0.2
WRA	Warramunga Arr	78.63	133	P	P	06 46 50.9	-0.2
	comp=Z,3.1nm,0.6s,baz=320,slow=5.5,SNR=25						
WB2	Warramunga Arr	78.64	133	eP	P	06 46 51.0	-0.2
	comp=Z,12nm,1.4s						
FFC	Flin Flon	81.16	4	eP	P	06 47 04.7	+0.2
	comp=Z,30nm,0.6s						
FFC	Flin Flon	81.16	4	eP	P	06 47 04.7	+0.2
FFC				pmax	pmax		
	comp=Z,30nm,0.6s						
AS31	Alice Springs	81.48	135	eP	P	06 47 06.0	-0.5
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	81.48	135	P	P	06 47 06.3	-0.2
	comp=Z,1.7nm,0.6s,baz=331,slow=5.3,SNR=21						
ASAR				LR	LR	07 25 36.2	
	comp=Z,75nm,21.3s,baz=188,slow=37						

*SOME **24** 06:56:18.4, 44°.38N×84°.05E, h10km*
*NNC **24** 06:56:19.7±1.3, 44°.36N×83°.97E, h0km, mb3.9, mpv3.5,*
Error ellipse: s-maj=11.5km s-min=5.0km az=126.0

ISC 24 06:56:20.2±1.6, 44°.41N±0°.06×83°.93E±0°.08, h10km, n35, σ2s44/55, 8C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	2.64	335	Pn	Pn	06 57 05.2	+2.4
	0.1nm,0.1s,baz=141,slow=14,SNR=252						
MK31				⇓Pg	Pb	06 57 08.7	+1.1
	1.3nm,0.2s,baz=147,slow=17,SNR=17						
MK31				⇑Lg	Lg	06 57 44.6	
	14nm,0.2s,baz=154,slow=25						
KTMS	Ketmen	2.76	251	Pg	Pb	06 57 08.9	-0.7
	29nm,0.3s						
KTMS				Lg	Lg	06 57 45.9	
	223nm,0.4s						
KTMS	Ketmen	2.76	251	eP	Pb	06 57 09.5	-0.1
	29nm,0.3s						
KTMS				eS	Sb	06 57 45.9	+2.4
	223nm,0.4s						
MAKZ	Makanchi	2.76	331	⇑Pn	Pn	06 57 06.4	+1.9
	3.3nm,0.3s						
MAKZ				⇓Pg	Pg	06 57 20.9	+7.9
	9.0nm,0.5s						
MAKZ				⇑Lg	Lg	06 57 48.5	
	26nm,0.5s						
DJR	Jarkent	2.97	270	Pg	Pb	06 57 14.9	+1.7
	10.0nm,0.2s						
DJR				Lg	Lg	06 57 55.5	
	87nm,0.3s						
DJR	Jarkent	2.97	270	eP	Pb	06 57 14.8	+1.7
	10.0nm,0.2s						
DJR				eS	Sg	06 57 55.5	+0.1
	87nm,0.3s						
ZSN	Zaisan	3.11	12	Pg	Pb	06 57 16.2	+0.7
	6.5nm,0.2s						
ZSN				Lg	Lg	06 57 58.2	
	40nm,0.7s						
ZSN	Zaisan	3.11	12	eP	Pb	06 57 15.4	-0.1
	3.9nm,0.2s						
ZSN				eS	Sb	06 57 56.7	+3.3
	31nm,0.5s						
KAPS	Kapalarasan	3.36	287	Pg	Pg	06 57 23.5	-1.1
	4.1nm,0.2s						
KAPS				Lg	Lg	06 58 10.4	
	18nm,0.2s						
KAPS	Kapalarasan	3.36	287	eP	Pb	06 57 22.5	+2.6
	4.1nm,0.2s						
KAPS				eS	Sg	06 58 08.9	+0.8
	18nm,0.2s						
PDGK	Podgornoye	3.39	253	Pg	Pb	06 57 19.6	-0.7
	4.1nm,0.2s						
PDGK				Lg	Lg	06 58 03.9	
	56nm,0.5s						
PDGK	Podgornoye	3.39	253	Pn	Pn	06 57 14.9	+1.7
	1.2nm,0.3s						
PDGK				⇑Pg	Pg	06 57 28.7	+3.7
	6.8nm,0.4s						
PDGK				⇓Lg	Lg	06 58 00.4	
	100nm,0.6s						
UZB	Uzynbulak	3.77	252	eP	Pb	06 57 26.7	-0.2
	2.3nm,0.2s						
UZB				eS	Sb	06 58 15.7	+3.1
	23nm,0.6s						
TDK	Taldyqorghan	3.98	280	Pg	Pg	06 57 34.3	-2.1
	50nm,0.5s						
TDK				Lg	Lg	06 58 29.1	
	54nm,0.5s						
TDK	Taldyqorghan	3.98	280	eP	Pg	06 57 34.3	-2.1
	50nm,0.5s						
TDK				eS	Sg	06 58 29.1	+1.2
	54nm,0.5s						
MNBS	Baschi	3.98	267	Pg	Pb	06 57 30.9	+0.4
	3.5nm,0.2s						
MNBS				Lg	Lg	06 58 23.9	
	67nm,0.5s						
MNBS	Baschi	3.98	267	eP	Pb	06 57 30.9	+0.4
	3.5nm,0.2s						
MNBS				eS	Sg	06 58 23.9	-4.1
	67nm,0.5s						
ZHN	Zhinishke	4.17	255	eP	Pb	06 57 35.9	+2.3
	5.2nm,0.1s						
ZHN				eS	Sg	06 58 31.4	-2.5
	14nm,0.2s						
SATY	Saty	4.22	253	Pg	Pb	06 57 37.2	+2.7
	9.0nm,0.2s						
SATY	Saty	4.22	253	eP	Pb	06 57 37.2	+2.7
	9.0nm,0.2s						
SATY				eS	Sg	06 58 34.1	-1.6
	35nm,0.3s						
KURS	Kuram	4.26	259	Pg	Pg	06 57 39.3	-2.4
	7.3nm,0.5s						
KURS	Kuram	4.26	259	eP	Pg	06 57 39.3	-2.4
	7.3nm,0.5s						
KURS				eS	Sg	06 58 37.5	+0.6
	22nm,0.6s						
ARXS	Arharly	4.38	270	Pg	Pg	06 57 41.5	-2.6
	11nm,0.4s						
ARXS				Lg	Lg	06 58 41.2	
	40nm,0.3s						
ARXS	Arharly	4.38	270	eP	Pg	06 57 41.5	-2.6
	11nm,0.4s						
ARXS				eS	Sg	06 58 41.2	+0.4
	40nm,0.3s						
CHKK	Chushkaly	5.03	266	Pg	Pb	06 57 51.3	+3.1
	6.1nm,0.3s						
CHKK				Lg	Lg	06 58 58.0	
	31nm,0.3s						
CHKK	Chushkaly	5.03	266	eP	Pb	06 57 51.3	+3.1
	6.1nm,0.3s						
CHKK				eS	Sg	06 58 58.0	-3.4
	31nm,0.3s						
KOTS	Kotyrbulak	5.07	259	Pg	Pg	06 57 53.2	-4.0
	4.4nm,0.2s						
KOTS	Kotyrbulak	5.07	259	eP	Pg	06 57 53.2	-4.0
	4.4nm,0.2s						
KOTS				eS	Sg	06 59 01.3	-1.6
	85nm,0.6s						
MDOK	Medeo	5.13	258	Pg	Pb	06 57 53.1	+3.0
	3.9nm,0.4s						
MDOK				Lg	Lg	06 59 01.5	
	16nm,0.5s						
MDOK	Medeo	5.13	258	eP	Pb	06 57 53.1	+3.0
	3.9nm,0.4s						
MDOK				eS	Sg	06 59 01.5	-3.4
	16nm,0.5s						
KTBS	Karatobe	5.27	265	Pg	Pg	06 57 56.7	-4.3
	2.8nm,0.6s						
KTBS				eS	Sg	06 59 07.2	-2.0
	42nm,0.5s						
KUU	Kurty	5.48	267	eP	Pg	06 58 02.2	-2.9
	2.0nm,0.2s						
KUU				eS	Sg	06 59 16.6	+0.5
	14nm,0.3s						
KURBB	Kurchatov Arra	7.21	331	⇑Pn	Pn	06 58 02.4	-3.1
	1.1nm,0.4s						
KURBB				⇓Sn	Sn	06 59 25.2	-2.1
	7.4nm,0.6s						
KURBB				⇑Lg	Lg	07 00 07.0	
	38nm,0.7s						
KURK	Kurchatov	7.25	332	⇑Pn	Pn	06 58 05.9	-0.3
	6.5nm,1.8s						
KURK				⇓Sn	Sn	06 59 27.7	-0.8
	2.7nm,0.7s						
KURK				⇑Lg	Lg	07 00 10.7	
	18nm,0.7s						

*IDC **24** 06:57:06.0±0.8, 10°.49N×126°.87E, h0km, mb3.9/10,*
mb1 4.0/10, mb1mx3.8/45, mbtmp3.9/10, Error ellipse:
s-maj=48.4km s-min=16.6km az=78.0
*ISCJB **24** 06:57:07.7±0.4, 10°.61N±0°.05×126°.92E±0°.05, h20km,*
mb4.2/18, Error ellipse: s-maj=7.0km s-min=6.6km
az=40.8
*NEIC **24** 06:57:07.6±1.6, 10°.52N×126°.82E, h10km±1km, mb4.4/7,*
Error ellipse: s-maj=37.8km s-min=5.8km az=71.0
*MAN **24** 06:57:09.3, 10°.97N×126°.27E, h175km, mb4.6, ML3.5,*
MS3.4

ISC 24 06:57:08.9±0.6, 10°.48N±0°.05×126°.78E±0°.07, h20km, n34, σ1s28/39, mb4.2/18, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.45	242	⇓eP	Pb	06 57 44.2	+9.1
SCPH				eS	Sb	06 58 04.4	+11
BESP	Borongan	1.73	310	eP	Pn	06 57 36.1	-1.7
BESP				eS	Sn	06 57 58.9	-0.3
BUTP	Butuan	1.88	217	eP	Pb	06 57 52.4	+10
BUTP				eS	Sb	06 58 08.6	+2.8
PLP	Palo	1.90	291	⇑eP	Pn	06 57 40.1	0.0
PLP				eS	Sn	06 58 02.5	-1.0
MSLP	Maasin	1.92	260	eP	Pb	06 57 42.9	-0.4
MSLP				eS	Sb	06 58 08.2	+1.3
BUKP	Musuan	3.09	213	eP	Pb	06 58 01.8	-1.5
BUKP				eS	Sb	06 58 43.2	+2.7
LUWI	Luwuk	12.12	199	ePn	Pn	06 59 55.8	-4.8
LUWI				eSn	Sn	07 02 15.6	+0.4
KSRS	Korea Array	26.88	2	P	P	07 02 48.2	-0.2
	0.4nm,0.3s,baz=170,slow=8.0,SNR=3.5						
WRA	Warramunga Arr	31.13	166	P	P	07 03 26.1	-0.3
	1.1nm,0.9s,baz=0.0,slow=11,SNR=4.1						
WR1	Warramunga Arr	31.13	166	eP	P	07 03 26.1	-0.3
USRK	Ussuriysk Ar.	33.90	7	P	P	07 03 50.7	+0.2
	1.6nm,0.8s,baz=165,slow=6.0,SNR=3.5						
ASAR	Alice Springs	34.64	168	P	P	07 03 56.7	-0.4
	0.4nm,0.5s,baz=350,slow=7.3,SNR=7.6						
ASAR				PcP	PcP	07 06 31.6	+0.3
	0.3nm,0.5s,baz=342,slow=2.7,SNR=4.9						
KLR	Kul'dur	38.85	5	P	P	07 04 32.6	0.0
	1.1nm,0.5s,baz=180,slow=12,SNR=4.6						
SONA0	Songino Array	41.00	339	eP	P	07 04 51.5	+0.8
SONM	Songino Array	41.00	339	P	P	07 04 51.5	+0.8
	0.3nm,0.4s,baz=156,slow=14,SNR=2.6						
BBOO	Buckleboo	43.95	169	eP	P	07 05 16.6	+1.9
	76nm,2.0s						
MK31	Makanchi Array	52.17	322	eP	P	07 06 17.9	-0.3
	1.8nm,0.8s						
MK32	Makanchi Array	52.17	322	eP	P	07 06 19.0	+0.8
MKAR	Makanchi Array	52.17	322	P	P	07 06 19.0	+0.8
	2.3nm,0.8s,baz=107,slow=7.8,SNR=14						
MAKZ	Makanchi	52.36	322	eP	P	07 06 21.0	+1.3
	4.9nm,0.5s						
KURK	Kurchatov	56.18	325	eP	P	07 06 47.4	+0.1
	2.9nm,0.9s						
ABKAR	Akbulak array	67.05	319	eP	P	07 08 01.1	+0.4
	2.2nm,1.1s						
CASY	Casey	77.48	187	eP	P	07 09 03.5	+0.9
	13nm,1.6s						
ARA0	ARCESS Array S	84.17	340	eP	P	07 09 38.7	+0.3
ARCES	ARCESS Array B	84.17	340	P	P	07 09 38.7	+0.3
	9.1nm,0.3s,baz=78,slow=6.3,SNR=7.2						
ARE0	ARCESS Array S	84.17	340	eP	P	07 09 39.0	+0.6
	2.9nm,1.8s						
BR101	Keskin Array S	85.79	309	eP	P	07 09 47.7	+0.3
BRTR	Keskin Array B	85.79	309	P	P	07 09 47.7	+0.3
	1.1nm,0.7s,baz=116,slow=3.3,SNR=6.2						
FIA0	FINESS Array S	85.95	332	eP	P	07 09 47.7	+0.2
FINES	FINESS Array B	85.95	332	P	P	07 09 47.7	+0.2
	1.0nm,0.4s,baz=70,slow=3.4,SNR=13						
YKA	Yellowknife Ar	93.36	24	P	P	07 10 21.7	-0.7
	0.3nm,0.7s,baz=296,slow=4.6,SNR=5.1						
YKB5	Yellowknife Ar	93.36	24	eP	P	07 10 21.7	-0.7
PLCA	Paso Flores	146.19	156	PKPbc	PKPab	07 16 49.4	+0.4
	2.0nm,1.0s,baz=296,slow=2.9,SNR=7.4						
PLCA	Paso Flores	146.19	156	ePKPdf	PKPab	07 16 49.9	+0.9

JMA 24 07:03:38.8±0.2, 31°.98N×140°.86E, h8km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.41	321	P	Pn	07 04 04.5	-0.3
JHCJ				eS	Sb	07 04 22.9	-0.7
JHJ2	Mitsune	1.43	322	P	Pn	07 04 05.1	0.0
JHJ2				S	Sn	07 04 23.7	-0.4
BSO1	Boso 1	2.67	2	P	Pn	07 04 22.3	+0.7
BSO1				S	Sn	07 04 54.7	+0.9
BSO3	Boso 3	2.83	354	P	Pn	07 04 25.1	+1.0
BSO3				S	Sn	07 04 59.2	+1.0

IDC 24 07:08:27.2±3.9, 20°.57S×167°.94E, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.7/29, mbtmp3.8/3, ML3.1/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/22, Error ellipse: s-maj=100.8km s-min=33.0km az=123.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.04	223	Pn	Pn	07 09 02.0	-1.0
	7.5nm,0.3s,baz=90,slow=9.9,SNR=199						
DZM				Sn	Sn	07 09 29.1	-0.2
	59nm,0.3s,baz=139,slow=20,SNR=12						
DZM				LR	LR	07 09 49.5	
	comp=Z,137nm,19.5s,baz=68,slow=40						
WRA	Warramunga Arr	31.50	265	P	P	07 14 51.4	+0.3
	0.7nm,0.7s,baz=89,slow=8.4,SNR=3.5						
ASAR	Alice Springs	31.64	258	P	P	07 14 52.8	+0.4
	1.9nm,0.6s,baz=86,slow=9.0,SNR=24						
GERES	GERESS Array B	145.05	330	PKPbc	PKPbc	07 28 04.9	-1.1
	0.3nm,0.2s,baz=33,slow=2.3,SNR=4.1						

*ISCJB **24** 07:11:36.9±0.4, 24°.27N±0°.01×121°.98E±0°.02, h4km±2km,*
Error ellipse: s-maj=2.9km s-min=2.0km az=25.6
*TAP **24** 07:11:36.5, 24°.29N×121°.92E, h5km, ML3.6, C*
*JMA **24** 07:11:36.7±0.2, 24°.20N×121°.93E, h20km, M3.0*

ISC 24 07:11:36.3±1.1, 24°.26N±0°.02×122°.00E±0°.02, h8km±9km, n58, σ0s46/108, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	Nanao	0.28	307	eP	Pg	07 11 41.8	-0.1
	baz=311						
NANB				eS	Sg	07 11 45.6	-0.1
	baz=311						
ENA	Nanau	0.29	306	i P	Pg	07 11 41.8	-0.4
	baz=310						
ENA				S	Sg	07 11 45.5	-0.5
	baz=310						
EOS1	EOS1	0.31	22	eP	Pb	07 11 44.2	0.0
	baz=35						
EOS1				eS	Sb	07 11 49.7	+0.2
	baz=35						
TWC	Suao	0.38	339	P	Pg	07 11 43.9	+0.2
	baz=349						
TWC				S	Sg	07 11 48.9	+0.2
	baz=349						
TWD	Chiawan	0.41	244	eP	Pg	07 11 44.7	+0.3
	baz=234						
TWD				eS	Sg	07 11 50.4	+0.7
	baz=234						
ETLH	Xiulin Townshi	0.48	264	eP	Pg	07 11 45.2	-0.4
	baz=258						
ETLH				eS	Sg	07 11 52.5	+0.6
	baz=258						
ENLB	Shoufeng	0.51	226	eP	Pg	07 11 46.1	-0.1
	baz=217						
ENLB				eS	Sb	07 11 56.1	+1.0
	baz=217						
ENTT	Nioudou	0.55	314	P	Pg	07 11 47.0	0.0
	baz=317						
ENTT				eS	Sg	07 11 53.9	-0.3
	baz=317						
TWE	Neicheng	0.55	327	i P	Pg	07 11 47.0	0.0
	baz=332						
TWE				eS	Sg	07 11 54.6	+0.3
	baz=332						
ILA	Ilan	0.56	336	eP	Pb	07 11 47.7	-0.7
	baz=342						
ILA				eS	Sb	07 11 55.8	-0.7
	baz=342						
EGS		0.59	354	eP	Pb	07 11 48.5	-0.4
	baz=1.0						
EGS				eS	Sb	07 11 56.9	-0.5
	baz=1.0						
NNS	Nan Shan	0.60	288	P	Pg	07 11 47.9	-0.1
	baz=286						
NNS				S	Sg	07 11 56.6	+0.8
	baz=286						
NTC	Toucheng	0.61	345	eP	Pb	07 11 48.8	-0.6
	baz=351						
NTC				eS	Sb	07 11 58.1	0.0
	baz=351						
WHF	Hehuan Shan	0.68	261	P	Pg	07 11 49.1	-0.4
	baz=256						
WHF				eS	Sg	07 11 59.1	+0.6
	baz=256						
ESL	Shilin	0.68	230	P	Pb	07 11 50.1	-0.5
	baz=222						
ESL				eS	Sb	07 12 00.4	+0.3
	baz=222						
NSK	Sanguang	0.72	306	P	Pg	07 11 50.1	-0.1
	baz=307						
NSK				eS	Sg	07 11 59.9	+0.3
	baz=307						
TIPB	Shuangxi	0.73	347	eP	Pb	07 11 50.9	-0.4
	baz=352						
TIPB				eS	Sg	07 12 00.7	+0.8
	baz=352						
TWB1	Santiao Chiao	0.75	359	eP	Pb	07 11 51.4	-0.3
	baz=5.0						
TWB1				eS	Sg	07 12 01.1	+0.7
	baz=5.0						
EGFH	Guangfu	0.79	222	eP	Pb	07 11 52.0	-0.3
	baz=216						
EGFH				eS	Sb	07 12 03.6	+0.4
	baz=216						
OWD	Renai	0.81	248	eP	Pg	07 11 51.9	0.0
	baz=243						
OWD				eS	Sb	07 12 03.5	-0.6
	baz=243						
TWA	Mucha	0.81	332	eP	Pb	07 11 53.0	+0.2
	baz=336						
TWA				eS	Sb	07 12 04.9	+0.9
	baz=336						
NHDH	Xindian Distri	0.82	328	eP	Pb	07 11 52.8	-0.2
	baz=331						
NHDH				eS	Sg	07 12 02.9	0.0
	baz=331						
NWF	Wu-fen Shan	0.83	346	eP	Pb	07 11 53.3	+0.1
	baz=350						
NWF				eS	Sb	07 12 04.3	-0.3
	baz=350						
JYNG	Yonagunijimaku	0.88	77	P	Pn	07 11 54.9	-0.2
JYNG				eS	Sn	07 12 09.0	+0.8
WLTB	Daxi	0.90	311	eP	Pn	07 11 55.0	-0.4
	baz=312						
WLTB				eS	Sb	07 12 07.2	+0.7
	baz=312						
YOJ	Yonaguni jima	0.94	77	P	Pn	07 11 55.7	-0.3
WHP	Taichung City	0.96	271	eP	Pb	07 11 55.1	-0.3
	baz=269						
WHP				eS	Sb	07 12 07.8	-0.5
	baz=269						
YM01	YM01	0.97	336	eP	Pb	07 11 55.6	+0.2
	baz=339						
YM01				eS	Sb	07 12 08.3	-0.1
	baz=339						
EHY	Hungye	0.97	220	eP	Pg	07 11 54.3	-0.8
	baz=214						
LIOB	Emei	0.98	293	eP	Pb	07 11 55.7	+0.1
	baz=293						
LIOB				eS	Sg	07 12 07.4	-0.5
	baz=293						
YM10	YM10	0.98	336	eP	Pb	07 11 56.0	+0.3
	baz=339						
YM10				eS	Sb	07 12 08.3	-0.5
	baz=339						
NSTT	Nanjuang	0.98	292	eP	Pb	07 11 55.5	-0.2
	baz=292						
NSTT				eS	Sg	07 12 08.2	+0.2
	baz=292						
YM05	YM05	0.98	336	eP	Pn	07 11 56.1	-0.5
	baz=339						
YM05				eS	Sg	07 12 08.2	0.0
	baz=339						
YM04	YM04	0.99	335	eP	Pb	07 11 56.1	+0.3
	baz=337						
YM04				eS	Sb	07 12 09.1	+0.1
	baz=337						
TWS1	Kuangyinshan	0.99	328	eP	Pn	07 11 56.5	-0.1
	baz=330						
TWS1				eS	Sb	07 12 09.1	0.0
	baz=330						
YM08	YM08	1.00	338	eP	Pb	07 11 56.2	+0.2
	baz=341						
DPDB	Guoxing	1.01	257	eP	Pg	07 11 55.1	-0.6
	baz=254						
DPDB				eS	Sg	07 12 08.3	-0.4
	baz=254						
YM03	YM03	1.01	336	eP	Pn	07 11 56.5	-0.4
	baz=338						
YM03				eS	Sb	07 12 09.5	-0.1
	baz=338						
ANP	Anpu	1.02	335	eP	Pn	07 11 57.3	+0.2
	baz=338						
SMLT	Sun Moon Lake	1.07	250	eP	Pg	07 11 56.9	0.0
	baz=246						
SMLT				eS	Sb	07 12 11.8	+0.3
	baz=246						
TWY	Chenhua	1.08	340	eP	Pn	07 11 57.9	+0.1
	baz=343						
TWY				eS	Sb	07 12 11.8	+0.3
	baz=343						
TYC	Yuchr	1.10	252	eP	Pg	07 11 57.4	-0.2
	baz=248						
TYC				eS	Sb	07 12 12.6	+0.3
	baz=248						
NMLH	Miaoli	1.14	284	eP	Pb	07 11 58.2	-0.1
	baz=283						
NMLH				eS	Sn	07 12 14.4	-0.1
	baz=283						
NSY	Sanyi	1.14	278	eP	Pb	07 11 58.4	0.0
	baz=276						
NSY				eS	Sn	07 12 14.1	-0.5
	baz=276						
YUS	Yu-Shan	1.23	232	eP	Pg	07 11 59.3	-0.7
	baz=227						
YUS				eS	Sn	07 12 17.2	-0.1
	baz=227						
WJS	Zhushan	1.24	250	eP	Pg	07 12 00.1	-0.1
	baz=246						
WJS				eS	Sn	07 12 17.2	+0.2
	baz=246						
WDJ	Dajia District	1.24	274	eP	Pg	07 12 01.0	+0.8
	baz=272						
ALS	Alishan	1.32	236	eP	Pn	07 12 01.3	-0.2
	baz=232						
ALS				eS	Sn	07 12 19.5	0.0
	baz=232						
CHN5	Tsauling	1.38	242	P	Pn	07 12 02.0	0.0
	baz=238						
CHN5				eS	Sg	07 12 22.3	+1.6
	baz=238						
CHN4	Tsaushan	1.57	235	eP	Pb	07 12 05.6	-0.2
	baz=232						
CHN4				eS	Sb	07 12 25.8	0.0

baz=232
STYT Tauyuan 1.58 227 *e*P Pn 07 12 04.9 +0.1
baz=223
IRIF Iriomote-Funau 1.58 87 P Pb 07 12 05.3 -0.6
TWG Pinlang 1.67 211 P Pb 07 12 06.6 -0.7
baz=207
TWG *e*S Sb 07 12 29.0 +0.5
baz=207
CHN1 Nanshi 1.72 232 *e*P Pb 07 12 07.8 -0.5
baz=229
CHN1 *e*S Sg 07 12 31.4 -0.3
baz=229
SNST Tainan City 1.72 233 *e*P Pb 07 12 08.1 -0.2
baz=230
SNST *e*S Sb 07 12 30.6 +0.5
baz=230
SGST Jiashian 1.75 228 *e*P Pb 07 12 08.2 -0.5
baz=225
SGST *e*S Sb 07 12 31.5 +0.6
baz=225
JKRS Kuro-shima 1.83 90 P Pb 07 12 09.4 -0.8
JKRS *e*S Sb 07 12 33.2 -0.1
JIJ Ishigaki jima 1.96 86 P Pn 07 12 10.9 +1.0

MEX 24 07:12:35.2±0.7,**16°.07N**×**93°.97W**,**h107**km±10km,**MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.81**	**116**	*e*P	Pn	07 12 53.2	-1.0
PCIG				*e*S	Sn	07 13 07.0	-1.6
TGIG		**1.08**	**49**	*i* P	Pn	07 12 55.7	-1.4
TGIG				*i* S	Sn	07 13 11.5	-2.2
CMIG	**Matias Romero**	**1.34**	**319**	*i* P	Pn	07 12 59.3	-0.7
CMIG				*i* S	Sn	07 13 17.3	-1.5
CCIG	**Comitan**	**1.78**	**83**	*e*P	Pn	07 13 04.3	-1.1
CCIG				*i* S	Sn	07 13 26.7	-1.8
THIG		**2.01**	**125**	*i* P	Pn	07 13 01.1	-7.1
THIG				*i* S	Sn	07 13 31.9	-1.5
HUIG	**Huatulco**	**2.08**	**262**	*i* P	Pn	07 13 07.3	-1.8
HUIG				*i* S	Sn	07 13 33.6	-1.4

JMA 24 07:14:00.8±0.3,**31°.77N**×**142°.40E**,**h14**km,**M4.1, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.34**	**288**	P	Pn	07 14 39.7	+0.8
JHCJ	**Hachijojimakas**	**2.56**	**301**	P	Pn	07 14 43.2	+1.4
JHCJ				S	Sn	07 15 14.1	+1.4
BSO1	**Boso 1**	**3.11**	**338**	P	Pn	07 14 51.0	+2.0
JMKN	**Mikurajimanish**	**3.17**	**313**	*e*S	Sn	07 15 29.6	+1.6
BSO3	**Boso 3**	**3.41**	**333**	P	Pn	07 14 55.4	+2.0
JOD2	**Odawara 2**	**4.45**	**322**	P	Pn	07 15 09.5	+1.6
JRY	**Ryogami san**	**5.14**	**326**	P	Pn	07 15 19.0	+1.6
JAG	**Ashikaga**	**5.25**	**333**	P	Pn	07 15 20.8	+2.0
JAG				S	Sn	07 16 20.7	+1.6

NEIC ***24*** *07:49:00.6±2.2,6°.80S×104°.74E,h35km,mb4.7/14, Error ellipse: s-maj=19.3km s-min=11.3km az=223.0*
ISCJB ***24*** *07:49:02.7±0.8,6°.60S±0°.07×104°.94E±0°.06,h69km±6km, mb4.3/22, Error ellipse: s-maj=13.9km s-min=4.2km az=40.8*
DJA ***24*** *07:49:03.0±0.8,7°.S±5°.×10°.5E±°,h11km±5km,M4.4/9, MLv4.4/9*
IDC ***24*** *07:49:05.7±3.3,6°.34S×105°.03E,h75km±28km,mb3.9/10, mb1 4.0/11,mb1mx3.7/34,mbtmp4.2/11,MS3.9/1, Ms1 3.9/1,ms1mx2.9/45, Error ellipse: s-maj=30.6km s-min=14.9km az=51.0*
ISC 24 07:49:02.2±1.1,**6°.71S**±0°.05×**104°.86E**±0°.05,**h51**km±10km, **n72**,σ**1°31/73**,**mb4.4**/22,**Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.83**	**83**	P	Pn	07 49 17.3	-0.4
CGJI				S	Sn	07 49 27.0	-2.1
KASI	**Kota Agung**	**1.24**	**343**	P	Pn	07 49 23.5	+0.4
KASI				S	Sn	07 49 37.8	-0.9
BLSI	**Bandar Lampung**	**1.39**	**16**	P	Pn	07 49 24.7	-0.6
BLSI				S	Sn	07 49 40.8	-1.7
SBJI	**Serang**	**1.39**	**65**	P	Pn	07 49 24.8	-0.5
KLI	**Kotabumi**	**1.84**	**360**	P	Pn	07 49 32.0	+0.6
KLI				S	Sn	07 49 54.2	+0.7
LWLI	**Liwa**	**1.86**	**335**	P	Pn	07 49 34.0	+2.2
MDSI	**Maura Dua**	**2.31**	**343**	P	Pn	07 49 39.3	+1.4
MDSI				S	Sn	07 50 07.0	+1.9
LEM	**Lembang**	**2.74**	**93**	P	Pn	07 49 44.2	+0.4
45nm,0.3s,baz=23,slow=20,SNR=9.6							
LEM				S	Sn	07 50 18.2	+2.3
39nm,0.3s,baz=166,slow=21,SNR=4.4							
LEM	**Lembang**	**2.74**	**93**	P	Pn	07 49 45.4	+1.5
MNAI	**Manna**	**3.01**	**321**	*e*Pn	Pn	07 49 49.3	+1.9
MNAI				*e*Sn	Sn	07 50 22.2	-0.1
MNAI	**Manna**	**3.01**	**321**	P	Pn	07 49 49.8	+2.4
CISI	**Cisompet, Garu**	**3.05**	**106**	*e*Pn	Pn	07 49 49.0	+1.0
CISI				*e*Sn	Sn	07 50 23.5	+0.2
CISI	**Cisompet, Garu**	**3.05**	**106**	P	Pn	07 49 49.7	+1.7
XMIS	**Christmas Isla**	**3.82**	**168**	*e*Pn	Pn	07 49 57.8	-0.9
XMIS				*e*Sn	Sn	07 50 39.9	-2.4
TPI	**Tanjungpandan**	**4.82**	**35**	P	Pn	07 50 11.9	-0.3
UGM	**Wanagama**	**5.74**	**102**	*e*Pn	Pn	07 50 27.6	+2.6
MYKOM	**Kota Tinggi**	**8.51**	**353**	*e*Pn	Pn	07 51 03.7	+0.9
JAGI	**Jajag, Banyuwa**	**9.38**	**101**	*e*Pn	Pn	07 51 15.8	+1.1
GSI	**Gunungsitoli**	**10.78**	**317**	*e*Pn	Pn	07 51 33.5	-0.5
BATI	**Baumata**	**18.92**	**102**	P	P	07 53 20.2	+1.3
13nm,0.3s,baz=326,slow=7.3,SNR=4.0							
SOEI	**Soe**	**19.44**	**100**	*e*P	P	07 53 25.6	+0.8
37nm,0.9s							
CMAR	**Chiang Mai Arr**	**25.68**	**347**	P	P	07 54 26.0	-1.6
1.3nm,0.3s,baz=183,slow=9.0,SNR=2.6							
MTN	**Manton Dam**	**26.58**	**105**	*e*P	P	07 54 38.1	+2.3
41nm,1.4s							
H01W3	**Cape Leeuwin H**	**29.31**	**164**	T	T	08 25 29.9	
baz=343,slow=76,SNR=15							
H01W1	**Cape Leeuwin H**	**29.32**	**164**	T	T	08 25 55.5	
baz=343,slow=76,SNR=16							
H01W2	**Cape Leeuwin H**	**29.32**	**164**	T	T	08 25 35.1	
baz=343,slow=76,SNR=23							
WR1	**Warramunga Arr**	**31.48**	**118**	*e*P	P	07 55 19.7	+0.3
WRA	**Warramunga Arr**	**31.48**	**118**	P	P	07 55 19.7	+0.3
1.2nm,0.3s,baz=297,slow=11,SNR=28							
WB2	**Warramunga Arr**	**31.49**	**118**	*e*P	P	07 55 20.1	+0.7
2.2nm,0.9s							
H08S2	**Diego Garcia H**	**32.12**	**266**	T	T	08 29 45.5	
baz=90,slow=76,SNR=64							
H08S3	**Diego Garcia H**	**32.13**	**266**	T	T	08 29 41.0	
baz=90,slow=76,SNR=67							
H08S1	**Diego Carcia H**	**32.14**	**266**	T	T	08 29 40.1	
baz=90,slow=76,SNR=79							
AS31	**Alice Springs**	**32.59**	**124**	*e*P	P	07 55 29.6	+0.4
0.9nm,0.9s							
ASAR	**Alice Springs**	**32.59**	**124**	P	P	07 55 30.8	+1.7
0.5nm,0.4s,baz=301,slow=7.7,SNR=8.8							
COEN	**Coen**	**38.33**	**104**	*e*P	P	07 56 18.3	-0.2
21nm,1.2s							
JIRN	**Jiri**	**38.65**	**333**	*e*P	P	07 56 21.0	-0.3
16nm,0.5s							
BBOO	**Buckleboo**	**38.91**	**136**	*e*P	P	07 56 23.3	+0.2
30nm,1.5s							
GUN	**Gumba**	**39.00**	**333**	*e*P	P	07 56 23.8	-0.5
12nm,0.4s							
KOLN	**Koldanda**	**39.97**	**330**	*e*P	P	07 56 31.6	-0.6
15nm,0.6s							
DANN	**Dangsing**	**40.37**	**331**	*e*P	P	07 56 35.1	-0.5
20nm,0.6s							
PYUN	**Piuthan**	**40.55**	**330**	*e*P	P	07 56 36.6	-0.3
11nm,0.4s							
PMG	**Port Moresby**	**41.95**	**97**	P	P	07 56 48.4	0.0
22nm,0.4s,baz=252,slow=14							
PMG	**Port Moresby**	**41.95**	**97**	*e*P	P	07 56 49.1	+0.7
67nm,1.4s							
STKA	**Stephens Creek**	**42.42**	**131**	P	P	07 56 53.8	+1.8
1.9nm,0.5s,baz=304,slow=11,SNR=6.1							
STKA	**Stephens Creek**	**42.42**	**131**	*e*P	P	07 56 52.0	0.0
2.1nm,1.3s							
NIL	**Nilore**	**50.09**	**325**	*e*P	P	07 57 51.8	-0.5
6.5nm,0.8s							
KSH	**Kashi**	**53.19**	**332**	*e*P	P	07 58 20.4	+4.9
WSAR	**Wadi Sarin**	**54.09**	**305**	LR	LR	08 19 42.4	
comp=Z,117nm,18.9s,baz=72,slow=34							
USRK	**Ussuriysk Ar.**	**56.28**	**23**	P	P	07 58 35.8	-1.7
1.4nm,0.5s,baz=218,slow=7.2,SNR=4.8							
MK31	**Makanchi Array**	**56.92**	**342**	*e*P	P	07 58 41.0	-1.1
2.9nm,1.4s							
MK32	**Makanchi Array**	**56.92**	**342**	*e*P	P	07 58 40.7	-1.4
MKAR	**Makanchi Array**	**56.92**	**342**	P	P	07 58 40.7	-1.4
1.4nm,0.3s,baz=155,slow=7.8,SNR=19							
ZALV	**Zalesovo Beam**	**62.75**	**347**	P	P	07 59 19.7	-2.2
1.6nm,0.3s,baz=160,slow=5.7,SNR=6.4							
ZAA1	**Zalesovo Array**	**62.75**	**347**	*e*P	P	07 59 19.7	-2.3
ABKAR	**Akbulak array**	**68.09**	**330**	*e*P	P	07 59 56.2	-0.4
7.7nm,0.6s							
BKZ	**Black Stump Fm**	**71.56**	**129**	*e*P	P	08 00 19.1	+0.9
43nm,1.4s							
BOSA	**Boshof**	**77.71**	**242**	P	P	08 00 57.4	+3.2
2.2nm,0.7s,baz=110,slow=3.8,SNR=5.9							
BR101	**Keskin Array S**	**80.06**	**312**	*e*P	P	08 01 07.3	+0.5
BRTR	**Keskin Array B**	**80.06**	**312**	P	P	08 01 07.3	+0.5
0.7nm,0.6s,baz=122,slow=9.2,SNR=5.0							
BUR08	**Bucovina Ar. S**	**87.99**	**318**	*e*P	P	08 01 48.7	+1.7
4.9nm,1.4s							
FIA0	**FINESS Array S**	**90.52**	**332**	*e*P	P	08 01 58.1	-0.2
FINES	**FINESS Array B**	**90.52**	**332**	P	P	08 01 58.1	-0.2
1.3nm,0.8s,baz=72,slow=8.2,SNR=5.0							
ARA0	**ARCESS Array S**	**92.53**	**340**	*e*P	P	08 02 07.1	-0.5
ARCES	**ARCESS Array B**	**92.53**	**340**	P	P	08 02 07.1	-0.5
6.6nm,0.3s,baz=110,slow=6.8,SNR=6.1							
YKA	**Yellowknife Ar**	**117.31**	**19**	PKP	**PKiKP**	**08 07 41.2**	**-0.4**
0.1nm,0.5s,baz=331,slow=2.7,SNR=3.7							
YKB5	**Yellowknife Ar**	**117.31**	**19**	*e*PKPdf	**PKiKP**	**08 07 41.2**	**-0.4**
TX31	**Lajitas Ar. Si**	**144.94**	**47**	*e*PKPbc	**PKPdf**	**08 08 34.2**	**-0.3**
TXAR	**Lajitas Array**	**144.94**	**47**	PKP	**PKPdf**	**08 08 34.2**	**-0.4**
0.7nm,0.6s,baz=288,slow=1.1,SNR=13							
CCM	**Cathedral Cave**	**145.55**	**23**	*e*PKPdf	**PKPab**	**08 08 34.7**	**-0.9**
MIAR	**Mount Ida**	**147.50**	**29**	*e*PKPbc	**PKPab**	**08 08 41.5**	**-1.7**
WVT	**Waverly**	**148.50**	**20**	*e*PKPbc	**PKiKP**	**08 08 43.6**	**-1.7**
V52A	**Sevierville**	**149.99**	**14**	*e*PKPbc	**PKiKP**	**08 08 47.1**	**-1.4**

ATH ***24*** *07:56:56.2,35°.33N×27°.65E,h11km±3km,ML2.4/3, Error ellipse: s-maj=5.3km s-min=1.4km az=331.0*
THE ***24*** *07:56:56.5,35°.42N×27°.64E,h0km±1km,ML2.5/3, Error ellipse: s-maj=2.3km s-min=0.8km az=147.0*
ISK ***24*** *07:56:57.8,35°.44N×27°.59E,h10km,ML2.7/11*
ISCJB ***24*** *07:56:58.1±1.0,35°.44N±0°.05×27°.61E±0°.05,h10km±5km, Error ellipse: s-maj=10.4km s-min=4.4km az=144.2*
ISC 24 07:56:56.0±1.4,**35°.36N**±0°.06×**27°.69E**±0°.04,**h15**km±9km, **n26**,σ**0°74**/39,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.47**	**294**	PG	**Pg**	**07 57 04.8**	**-0.5**
KARP				SG	**Sg**	**07 57 11.5**	**-0.1**
KARP	**Karpathos**	**0.47**	**294**	P	**Pg**	**07 57 04.7**	**-0.5**
KARP				S	**Sb**	**07 57 12.2**	**-0.5**
KARP	**Karpathos**	**0.47**	**294**	P	**Pg**	**07 57 04.8**	**-0.5**
KARP				S	**Sb**	**07 57 11.9**	**-0.9**
KARP				AML	AML	07 57 13.5	
comp=E,1549μm,0.2s							
KARP				AML	AML	07 57 15.7	
comp=N,1427μm,0.3s							
ARG	**Arkhangelos**	**0.93**	**23**	PG	**Pn**	**07 57 15.4**	**+0.9**
ARG				SG	**Sn**	**07 57 27.9**	**+0.3**
ARG	**Arkhangelos**	**0.93**	**23**	P	**Pg**	**07 57 14.3**	**+0.4**
ARG				S	**Sn**	**07 57 28.0**	**+0.3**
ARG	**Arkhangelos**	**0.93**	**23**	P	**Pn**	**07 57 14.6**	**+0.1**
ARG				S	**Sn**	**07 57 27.7**	**+0.1**
ARG				AML	AML	07 57 35.0	
comp=E,556μm,0.3s							
ARG				AML	AML	07 57 35.8	
comp=N,486μm,0.7s							
ZKR	**Zakros**	**1.23**	**259**	P	**Pn**	**07 57 18.9**	**+0.2**
ZKR				S	**Sg**	**07 57 36.8**	**+1.2**
ZKR	**Zakros**	**1.23**	**259**	P	**Pn**	**07 57 18.8**	**+0.2**
ZKR				AML	AML	07 57 47.8	
comp=E,325μm,0.7s							
ZKR				AML	AML	07 57 48.1	
comp=N,145μm,0.4s							
BBRN	**Bozburun-Marma**	**1.35**	**13**	PN	**Pg**	**07 57 22.4**	**+0.4**
DAT	**Datca**	**1.37**	**356**	PN	**Pg**	**07 57 22.3**	**-0.1**
DAT				SN	**Sg**	**07 57 40.0**	**-0.2**
DAT	**Datca**	**1.37**	**356**	*i* P	**Pg**	**07 57 22.2**	**-0.1**
DAT				*i* S	**Sg**	**07 57 41.8**	**+1.5**
DAT				IAML_P			
comp=Z,532nm,0.2s							
MRSB	**Marmaris-Mugla**	**1.42**	**17**	PN	**Pg**	**07 57 23.5**	**+0.3**
DALY	**Dalyan (Mula)**	**1.65**	**28**	PN	**Pg**	**07 57 27.4**	**-0.3**
DALY	**Dalyan (Mula)**	**1.65**	**28**	*i* P	**Pg**	**07 57 28.4**	**+0.7**
DALY				*i* S	**Sg**	**07 57 50.1**	**+0.8**
DALY				IAML_P			
comp=Z,652nm,0.2s							
TURN	**Turunc**	**1.68**	**26**	PN	**Pn**	**07 57 24.6**	**-0.3**
TURN	**Turunc**	**1.68**	**26**	*i* P	**Pn**	**07 57 23.0**	**-1.9**
TURN				*i* S	**Sn**	**07 57 46.5**	**+0.3**
TURN				IAML_P			
comp=Z,347nm,0.2s							
NPS	**Neapolis**	**1.70**	**267**	P	**Pb**	**07 57 27.6**	**+0.6**
FETY	**Fethiye**	**1.71**	**41**	PN	**Pg**	**07 57 28.4**	**-0.3**
BDRM	**Kayabasi**	**1.71**	**354**	*i* P	**Pb**	**07 57 27.3**	**+0.1**
BDRM				*i* S	**Sb**	**07 57 47.6**	**-1.0**
BDRM				IAML_P			
comp=Z,446nm,0.1s							
BODT	**Bodrum**	**1.73**	**350**	PN	**Pb**	**07 57 27.2**	**-0.2**
AKAS	**Kas**	**1.79**	**60**	PN	**Pg**	**07 57 30.2**	**-0.1**
LAST	**Lasithi**	**1.82**	**264**	P	**Pb**	**07 57 29.3**	**+0.3**
YER	**Yerkesik**	**1.84**	**15**	PN	**Pb**	**07 57 29.4**	**+0.1**
IDI	**Anoyia**	**2.29**	**269**	P	**Pb**	**07 57 35.7**	**-1.3**
AYDN	**Tasoluk**	**2.30**	**4**	*i* P	**Pb**	**07 57 36.2**	**-1.1**
AYDN				*i* S	**Sn**	**07 58 02.0**	**+0.4**
AYDN				IAML_P			
comp=Z,895nm,0.3s							
APE	**Apeiranthos**	**2.44**	**315**	PN	**Pn**	**07 57 36.8**	**+1.5**

ISCJB ***24*** *08:01:38.0±0.8,6°.42S±0°.02×148°.68E±0°.03,h10km±4km, mb5.3/122,MS5.5/649, Error ellipse: s-maj=4.3km s-min=3.6km az=18.1*
BJI ***24*** *08:01:38.0±0.0,6°.50S×148°.70E,h10km,mb5.0/45, mB5.4/42,Ms5.4/51,Ms7 5.2/49*
NEIC ***24*** *08:01:39.4±1.3,6°.45S×148°.68E,h10km±1km,mb5.4/104, MS5.6/653,MW5.5,MW5.7, Error ellipse: s-maj=11.2km s-min=7.5km az=138.0, Moment Tensor Solution. s48 Moment tensor: Scale 10^{17}Nm; M_{rr}1.11; $M_{\theta\theta}$-1.69; $M_{\phi\phi}$0.59; $M_{r\theta}$1.51; $M_{\theta\phi}$0.03; $M_{\phi r}$-0.65; Best double couple: $M_0$2.20000×10^{17} NP1:ϕ_s111.00000°, δ72.00000°, λ109.00000°. NP2:ϕ_s243.00000°, δ26.00000°, λ45.00000°. Principal axes: T 2.0100, Plg59.0000°, Azm48.0000°; N 0.3700, Plg18.0000°, Azm285.0000°; P -2.3800, Plg24.0000°, Azm186.0000°;*
NEIC ***24*** *08:01:40.0±0.0,6°.50S×148°.43E,h15km, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}2.64; $M_{\theta\theta}$-2.76; $M_{\phi\phi}$0.11; $M_{r\theta}$4.07; $M_{\theta\phi}$0.27; $M_{\phi r}$-1.31; Best double couple: $M_0$5.00000×10^{17} NP1:ϕ_s106.00000°, δ74.00000°, λ96.00000°. NP2:ϕ_s264.00000°, δ17.00000°, λ69.00000°. Principal axes: T 5.0400, Plg60.0000°, Azm24.0000°; N 0.0400, Plg5.0000°, Azm284.0000°; P -5.0800, Plg28.0000°, Azm190.0000°;*
MOS ***24*** *08:01:41.3±0.9,6°.42S×148°.59E,h33km,mb5.2/17, MS5.4/17 Error ellipse: s-maj=10.2km s-min=5.9km az=87.7*
IDC ***24*** *08:01:41.7±1.6,6°.42S×148°.72E,h27km±10km,mb4.6/27, mb1 4.7/33,mb1mx4.6/52,mbtmp4.8/33,ML4.9/4,MS5.2/13, Ms1 5.2/13,ms1mx4.9/26, Error ellipse: s-maj=12.3km s-min=10.3km az=91.0*
GCMT ***24*** *08:01:47.4±0.1,6°.70S±0°.01×148°.67E±0°.01,h24km, MW5.7/115, Moment Tensor Solution. s115,c225; s115,c261; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.36±.04; $M_{\theta\theta}$-3.17±.04; $M_{\phi\phi}$0.81±.04; $M_{r\theta}$2.69±.08; $M_{\theta\phi}$0.10±.03; $M_{\phi r}$-1.56±.07; Best double couple: $M_0$4.21400×10^{17} NP1:ϕ_s114.00000°, δ71.00000°, λ110.00000°. NP2:ϕ_s246.00000°, δ27.00000°, λ46.00000°. Principal axes: T 4.0710, Plg59.0000°, Azm52.0000°; N 0.2860, Plg19.0000°, Azm287.0000°; P -4.3570, Plg23.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
DJA ***24*** *08:01:56.5±0.8,7°.S±5°.×14°.8E±°,h115km±5km,M5.3/54, mB5.8/35,mb5.5/54,MLv5.5/1,Mw(mB)5.3/35,Mwp5.7/1*
ISC 24 08:01:42.8±0.6,**6°.49S**±0°.03×**148°.70E**±0°.04,**h33**km±2km, **h33**km:**pP-P**,**n1254**,σ**1°20**/751,**mb5.4**/120,**MS5.6**/649, **7C-7D**,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.28**	**208**	Pn	**Pn**	**08 02 32.9**	**+1.0**
426nm,0.3s,baz=349,slow=4.7,SNR=431							
PMG				Sn	**Sn**	**08 03 13.3**	**+3.5**
584nm,0.3s,baz=333,slow=7.5,SNR=5.5							
PMG				LR	LR	08 03 35.7	
comp=Z,18μm,18.4s,baz=358,slow=34							
PMG	**Port Moresby**	**3.28**	**208**	*d* P	**Pn**	**08 02 33.3**	**+1.4**
RABL	**Rabaul**	**4.13**	**57**	*e*Pn	**Pn**	**08 02 44.0**	**+0.3**
MANU	**Manus Island**	**4.61**	**343**	*e*Pn	**Pn**	**08 02 49.3**	**-0.9**
JAY	**Jayapura**	**8.89**	**296**	Pn	**Pn**	**08 03 49.8**	**+0.7**
0.4nm,0.3s,baz=137,slow=18,SNR=2.7							
JAY	**Jayapura**	**8.89**	**296**	P	Pn	08 04 00.4	+11
COEN	**Coen**	**9.20**	**216**	*e*Pn	**Pn**	**08 03 52.5**	**-0.8**
COEN				*e*Sn	**Sn**	**08 05 33.3**	**-2.5**
COEN	**Coen**	**9.20**	**216**	P	**Pn**	**08 03 53.4**	**+0.1**
baz=9.2,SNR=64							
GENI	**Genyem**	**9.34**	**294**	P	Pn	08 04 08.0	+13
HNR	**Honiara**	**11.52**	**105**	P	**Pn**	**08 04 28.0**	**+3.0**
HNR				S	Sn	08 06 44.0	+11
HNR	**Honiara**	**11.52**	**105**	P	**Pn**	**08 04 23.7**	**-1.3**
4.6nm,0.3s,baz=204,slow=20,SNR=2.0							
HNR	**Honiara**	**11.52**	**105**	*e*Pn	**Pn**	**08 04 24.2**	**-0.8**
HNR	**Honiara**	**11.52**	**105**	*e*P	**Pn**	**08 04 24.2**	**-0.8**
SRPI	**Serui, Papua**	**13.24**	**290**	P	P	08 05 09.0	+11
BAKI	**Biak**	**13.62**	**292**	P	**P**	**08 05 04.1**	**+1.9**
CTA	**Charters Tower**	**13.73**	**190**	Pn	**Pn**	**08 04 55.7**	**+0.5**
1.6nm,0.3s,baz=13,slow=12,SNR=20							
CTA				LR	LR	08 10 31.2	
comp=Z,11μm,19.1s,baz=12,slow=38							
CTA	**Charters Tower**	**13.73**	**190**	P	**Pn**	**08 04 57.0**	**+1.8**
baz=14							
CTAO	**Charters Tower**	**13.73**	**190**	*e*Pn	**Pn**	**08 04 55.8**	**+0.5**
CTAO	**Charters Tower**	**13.73**	**190**	*e*P	**Pn**	**08 04 55.8**	**+0.5**
PATS	**Pohnpei**	**16.34**	**36**	*e*Pn	**Pn**	**08 05 30.8**	**+0.9**
559nm,1.3s							
QIS	**Mount Isa**	**16.54**	**211**	P	**Pn**	**08 05 32.7**	**+0.3**
baz=16,SNR=91							
FAKI	**Fak Fak**	**16.77**	**281**	*e*Pn	**Pn**	**08 05 35.6**	**+0.3**
63nm,0.9s							
FAKI	**Fak Fak**	**16.77**	**281**	P	**P**	**08 05 40.7**	**+3.4**
KDU	**Kakadu**	**17.14**	**248**	P	**Pn**	**08 05 38.9**	**-1.1**
baz=17,SNR=25							
SIJI	**Sorong**	**18.27**	**287**	P	**P**	**08 05 52.4**	**-1.4**
1.4nm,0.3s,baz=73,slow=8.4,SNR=3.7							
MTN	**Manton Dam**	**18.43**	**249**	*e*P	**P**	**08 05 53.3**	**-2.3**
64nm,0.8s							
MTN	**Manton Dam**	**18.43**	**249**	P	**P**	**08 05 55.5**	**0.0**
baz=18,SNR=9.8							
EIDS	**Eidsvold**	**18.91**	**173**	*e*P	**P**	**08 06 01.1**	**+0.3**
724nm,1.8s							
EIDS	**Eidsvold**	**18.91**	**173**	P	**Pn**	**08 06 01.9**	**+0.2**
baz=19,SNR=72							
WRAB	**Tennant Creek**	**19.31**	**225**	*d* P	**P**	**08 06 04.7**	**-0.6**
WB2	**Warramunga Arr**	**19.32**	**225**	*e*P	**P**	**08 06 04.9**	**-0.4**
244nm,1.0s							
WR1	**Warramunga Arr**	**19.32**	**225**	*e*P	**P**	**08 06 04.8**	**-0.6**
WRA	**Warramunga Arr**	**19.33**	**225**	P	**P**	**08 06 04.8**	**-0.6**
12nm,0.3s,baz=59,slow=12,SNR=186							
WRA				S	**S**	**08 09 37.4**	**-5.1**
1.3nm,0.3s,baz=47,slow=22,SNR=5.0							
WRA				ScP	**ScP**	**08 14 01.5**	**+0.6**
0.3nm,0.3s,baz=62,slow=2.1,SNR=6.2							
RMQ	**Roma**	**19.89**	**180**	P	**Pn**	**08 06 13.1**	**-0.2**
baz=20,SNR=52							
MSAI	**Masohi**	**19.94**	**278**	P	**Pn**	**08 06 19.7**	**+5.6**
GUMO	**Guam**	**20.30**	**349**	P	**P**	**08 06 15.3**	**-0.7**
68nm,0.7s,baz=189,slow=16,SNR=4.6							
GUMO				LR	LR	08 13 14.1	
comp=Z,5μm,19.7s,baz=161,slow=34							
GUMO	**Guam**	**20.30**	**349**	*e*P	**P**	**08 06 15.9**	**-0.2**
1μm,1.8s							
GUMO				LR	LR		
comp=Z,5μm,20.0s							
AAI	**Ambon**	**20.61**	**277**	P	Pn	08 06 22.3	+0.4
KNRA	**Kununurra**	**21.57**	**243**	P	**P**	**08 06 29.2**	**-0.6**
baz=22,SNR=56							
AS31	**Alice Springs**	**22.23**	**218**	*e*P	**P**	**08 06 36.8**	**0.0**
comp=Z,58nm,0.8s							
AS31				*e*S	**S**	**08 10 40.0**	**+0.1**
AS31				LR	LR		
comp=Z,200nm,19.0s							
ASAR	**Alice Springs**	**22.23**	**218**	P	**P**	**08 06 36.5**	**-0.4**
comp=Z,85nm,0.7s,baz=52,slow=9.5,SNR=878							
ASAR				S	**S**	**08 10 37.7**	**-2.1**
comp=Z,18nm,0.8s,baz=34,slow=23,SNR=4.3							
ASAR				ScP	**ScP**	**08 14 08.7**	**+0.9**
comp=Z,16nm,1.0s,baz=35,slow=2.3,SNR=4.3							
ASAR				LR	LR	08 15 57.0	
comp=Z,13μm,18.9s,baz=44,slow=38							
TNTI	**Ternate**	**22.48**	**288**	PFAKE		08 06 50.0	+10
TNTI				LR	LR		
comp=Z,2μm,21.0s							
SANI	**Sanana**	**23.07**	**280**	P	**P**	**08 06 46.2**	**+0.4**
DZM	**Mont Dzumac**	**23.10**	**134**	*e*P	**P**	**08 06 46.6**	**+0.5**
comp=Z,264nm,1.1s							
DZM				*e*S	**S**	**08 10 53.9**	**-1.4**
comp=Z,6μm,30.9s							
DZM		

MMRI	Maumere	26.32 264	P	P	08 07 17.3	+1.5
	comp=Z,356nm,1.4s,comp=Z,6μm					
LUWI	Luwuk	26.42 281	eP	P	08 07 17.3	+0.5
	comp=Z,360nm,1.1s					
LUWI	Luwuk	26.42 281	P	P	08 07 18.7	+1.9
	comp=Z,367nm,1.4s,comp=Z,7μm					
MGCD	Mangrove Creek	26.68 176	P	P	08 07 21.8	+2.9
	baz=27,SNR=9.7					
DAV	Davao City (W)	26.71 300	PFAKE		08 07 30.0	+11
DAV			LR	LR		
	comp=Z,3μm,19.0s					
DAV	Davao City (W)	26.71 300	‖eP	P	08 07 19.3	0.0
EDFI	Ende, Flores	26.86 263	P	P	08 07 19.9	-1.0
	comp=Z,110nm,0.8s,comp=Z,3μm					
WRKA	Warakurna	26.87 224	P	P	08 07 20.5	-0.3
	baz=27,SNR=207					
APSI	Ampana	27.55 280	P	P	08 07 29.2	+2.3
	comp=Z,94nm,1.0s,comp=Z,1μm					
BSSI	Bau Bau, Buton	28.04 269	P	P	08 07 32.6	+1.3
	comp=Z,182nm,1.0s,comp=Z,3μm					
BASI	Baing, Sumba	28.06 260	P	P	08 07 33.8	+2.3
HTT	Hallett	28.31 197	P	P	08 07 33.8	+0.3
	baz=28,SNR=70					
BKSI	Bulukumba	28.45 271	P	P	08 07 34.9	-0.1
CAN	Canberra	28.70 179	eP	P	08 07 37.7	+0.7
	comp=Z,178nm,2.0s					
CAN			LR	LR		
	comp=Z,6μm,18.0s					
CAN	Canberra	28.70 179	eP	P	08 07 37.7	+0.7
CAN			pmax	pmax		
	comp=Z,178nm,2.0s					
CAN			MLR	MLR		
	comp=Z,6μm,18.0s					
BBOO	Buckleboo	28.71 203	eP	P	08 07 37.0	-0.1
	comp=Z,83nm,1.1s					
BBOO			LR	LR		
	comp=Z,9μm,18.0s					
BBOO	Buckleboo	28.71 203	P	P	08 07 37.0	-0.1
	baz=29,SNR=11					
KAPI	Kappang	28.84 271	P	P	08 07 38.9	+0.5
	comp=Z,73nm,1.0s,baz=72,slow=5.3,SNR=33					
KAPI			S	S	08 12 27.6	+1.1
	comp=Z,2.1nm,0.3s,baz=119,slow=19,SNR=5.1					
KAPI			ScP	ScP	08 14 26.1	-0.9
	comp=Z,7.0nm,0.4s,baz=141,slow=4.8,SNR=7.8					
KAPI	Kappang	28.84 271	eP	P	08 07 38.3	-0.1
	comp=Z,108nm,1.1s					
SPSI	Sidrap Palu	28.92 274	P	P	08 07 39.1	0.0
	comp=Z,29nm,1.1s,comp=Z,483nm					
TTSI	Tana Toraja	28.98 275	P	P	08 07 41.1	+1.4
	comp=Z,68nm,1.2s,comp=Z,1μm					
WBSI	Waikabubak, Su	29.18 262	P	P	08 07 41.1	-0.4
PLAI	Plampang	30.73 264	P	P	08 07 54.0	-1.2
	comp=Z,91nm,0.7s,comp=Z,1μm					
ARPS	Mount Arapiles	30.79 191	P	P	08 07 55.5	+0.1
	baz=31,SNR=5.6					
FORT	Forrest	30.97 216	eP	P	08 07 56.9	-0.2
	comp=Z,160nm,1.0s					
FORT			LR	LR		
	comp=Z,10μm,19.0s					
FORT	Forrest	30.97 216	P	P	08 07 57.6	+0.6
	baz=31,SNR=25					
TOO	Toolangi	31.08 185	eP	P	08 07 58.6	+0.6
	comp=Z,73nm,1.0s					
TOO			LR	LR		
	comp=Z,4μm,20.0s					
TOO	Toolangi	31.08 185	P	P	08 07 58.9	+0.8
	baz=31,SNR=9.8					
TOO	Toolangi	31.08 185	eP	P	08 07 58.6	+0.6
TOO			pmax	pmax		
	comp=Z,73nm,1.0s					
TOO			MLR	MLR		
	comp=Z,4μm,20.0s					
WAKE	Wake Island	31.12 34	PFAKE		08 08 10.0	+12
WAKE			LR	LR		
	comp=Z,5μm,20.0s					
PSAD2	Pilbara Seismi	31.59 239	PFAKE		08 08 10.0	+7.3
PSAD2			LR	LR		
	comp=Z,10μm,20.0s					
MBWA	Marble Bar	31.60 240	PFAKE		08 08 10.0	+7.2
MBWA			LR	LR		
	comp=Z,8μm,22.0s					
PSAC2	Pilbara Seismi	31.62 239	PFAKE		08 08 20.0	+17
PSAC2			LR	LR		
	comp=Z,9μm,20.0s					
PSAD1	Pilbara Seismi	31.64 239	PFAKE		08 08 20.0	+17
PSAD1			LR	LR		
	comp=Z,9μm,20.0s					
PSAB2	Pilbara Seismi	31.65 239	PFAKE		08 08 20.0	+17
PSAB2			LR	LR		
	comp=Z,9μm,19.0s					
PSAA2	Pilbara Seismi	31.66 239	PFAKE		08 08 20.0	+17
PSAA2			LR	LR		
	comp=Z,9μm,19.0s					
PSAA3	Pilbara Seismi	31.66 239	PFAKE		08 08 20.0	+17
PSAA3			LR	LR		
	comp=Z,9μm,18.0s					
PSA00	Pilbara Seismi	31.67 239	eP	P	08 08 03.8	+0.4
	comp=Z,141nm,1.3s					
PSA00			LR	LR		
	comp=Z,9μm,19.0s					
PSAB3	Pilbara Seismi	31.67 239	PFAKE		08 08 20.0	+17
PSAB3			LR	LR		
	comp=Z,9μm,19.0s					
PSAA1	Pilbara Seismi	31.68 239	PFAKE		08 08 20.0	+17
PSAA1			LR	LR		
	comp=Z,9μm,19.0s					
PSAC1	Pilbara Seismi	31.68 239	PFAKE		08 08 20.0	+16
PSAC1			LR	LR		
	comp=Z,10μm,19.0s					
PSAB1	Pilbara Seismi	31.69 239	PFAKE		08 08 20.0	+16
PSAB1			LR	LR		
	comp=Z,10μm,19.0s					
PSAC3	Pilbara Seismi	31.70 239	PFAKE		08 08 20.0	+16
PSAC3			LR	LR		
	comp=Z,9μm,20.0s					
PSAD3	Pilbara Seismi	31.75 239	PFAKE		08 08 20.0	+16
PSAD3			LR	LR		
	comp=Z,10μm,20.0s					
JAGI	Jajag, Banyuwa	34.30 265	eP	P	08 08 24.5	-2.0
	comp=Z,143nm,1.0s					
JAGI			LR	LR		
	comp=Z,2μm,21.0s					
KKM	Kota Kinabalu	34.73 290	PFAKE		08 08 40.0	+10
KKM			LR	LR		
	comp=Z,1μm,21.0s					
KMBL	Kambalda	35.24 222	P	P	08 08 34.6	+0.1
	baz=35,SNR=48					
MOO	Moorlands	35.83 182	P	P	08 08 41.1	+1.8
	baz=36,SNR=9.6					
TAU	Tasmania Unive	36.30 182	eP	P	08 08 44.5	+1.4
	comp=Z,73nm,1.1s					
TAU			LR	LR		
	comp=Z,7μm,20.0s					
TAU	Tasmania Unive	36.30 182	eP	P	08 08 44.6	+1.4
TAU			pmax	pmax		
	comp=Z,73nm,1.1s					
TAU			MLR	MLR		
	comp=Z,7μm,20.0s					
PWJI	Pagerwojo	36.63 265	P	P	08 08 45.8	-0.7
	comp=Z,80nm,1.2s					
OUZ	Omahuta	36.64 145	PFAKE		08 09 00.0	+14
OUZ			LR	LR		
	comp=Z,4μm,20.0s					
GIRL	Giralia	36.89 241	PFAKE		08 09 00.0	+11
GIRL			LR	LR		
	comp=Z,9μm,21.0s					
NGJI	Ngawi	36.97 266	P	P	08 08 51.1	+1.7
PBKI	Pangkalan Bun	37.09 274	P	P	08 08 53.4	+2.9
	comp=Z,314nm,1.2s					
WOJI	Wonogiri, Jawa	37.50 266	P	P	08 08 54.2	+0.3
	comp=Z,154nm,0.9s					
UGM	Wanagama	37.90 265	eP	P	08 08 57.2	-0.1
	comp=Z,336nm,1.2s					
UGM			LR	LR		
	comp=Z,2μm,21.0s					
UGM	Wanagama	37.90 265	P	P	08 08 58.5	+1.2
SMRI	Semarang	37.99 267	eP	P	08 08 57.5	-0.5
	comp=Z,240nm,1.2s					
SMRI			LR	LR		
	comp=Z,2μm,20.0s					
MORW	Morawa	38.13 230	eP	P	08 08 59.2	+0.1
	comp=Z,241nm,1.4s					
MORW			LR	LR		
	comp=Z,11μm,20.0s					
MORW	Morawa	38.13 230	P	P	08 08 59.5	+0.4
	baz=38,SNR=13					
BLDU	Ballidu	38.43 227	P	P	08 09 02.0	+0.5
	baz=38,SNR=14					
NWAO	Narrogin (SRO)	39.33 224	P	P	08 09 09.4	+0.4
	comp=Z,14nm,0.5s,baz=58,slow=8.9,SNR=11					
NWAO	Narrogin (SRO)	39.33 224	eP	P	08 09 08.8	-0.3
	comp=Z,166nm,1.5s					
NWAO			LR	LR		
	comp=Z,13μm,18.0s					
NWAO	Narrogin (SRO)	39.33 224	P	P	08 09 09.4	+0.4
	baz=39					
NWAO	Narrogin (SRO)	39.33 224	eP	P	08 09 08.8	-0.3
NWAO			pmax	pmax		
	comp=Z,166nm,1.5s					
NWAO			MLR	MLR		
	comp=Z,13μm,18.0s					
MUN	Mundaring	39.52 226	P	P	08 09 11.3	+0.7
	baz=40,SNR=5.9					
KNTN	Kanton	39.61 87	eP	P	08 09 10.9	-0.7
	comp=Z,247nm,0.9s					
YOJ	Yonaguni jima	39.66 322	PFAKE		08 09 20.0	+8.1
YOJ			LR	LR		
	comp=Z,4μm,20.0s					
HIZ	Hauiti	39.71 147	PFAKE		08 09 20.0	+7.9
HIZ			LR	LR		
	comp=Z,4μm,20.0s					
TWG	Pinlang	39.74 318	PFAKE		08 09 20.0	+7.5
TWG			LR	LR		
	comp=Z,7μm,19.0s					
YULB	Yu-li	39.98 319	PFAKE		08 09 30.0	+15
YULB			LR	LR		
	comp=Z,2μm,20.0s					
JCJI	Jatiwangi	40.16 268	P	P	08 09 18.1	+1.9
	comp=Z,350nm,0.4s					
JHJ2	Mitsune	40.27 348	PFAKE		08 09 30.0	+13
JHJ2			LR	LR		
	comp=Z,5μm,19.0s					
NACB	Ninganchiao	40.34 320	PFAKE		08 09 30.0	+12
NACB			LR	LR		
	comp=Z,2μm,21.0s					
TPUB	Ta-pu	40.36 318	PFAKE		08 09 30.0	+12
TPUB			LR	LR		
	comp=Z,3μm,19.0s					
RKGY	Rocky Gully	40.48 222	P	P	08 09 20.9	+2.3
	baz=40,SNR=9.3					
SSLB	Suanglung	40.48 319	eP	P	08 09 16.4	-2.3
	comp=Z,13nm,0.9s					
SSLB			LR	LR		
	comp=Z,2μm,19.0s					
CISI	Cisompet, Garu	40.58 266	eP	P	08 09 19.4	-0.4
	comp=Z,728nm,1.4s					
CISI			LR	LR		
	comp=Z,2μm,20.0s					
CISI	Cisompet, Garu	40.58 266	P	P	08 09 19.2	-0.6
URZ	Urewera	40.78 145	P	P	08 09 21.6	+0.6
	comp=Z,13nm,0.9s,baz=225,slow=2.9,SNR=4.0					
URZ			LR	LR	08 25 10.2	
	comp=Z,4μm,19.0s,baz=323,slow=34					
URZ	Urewera	40.78 145	PFAKE		08 09 30.0	+9.0
URZ			LR	LR		
	comp=Z,5μm,18.0s					
LEM	Lembang	40.80 267	P	P	08 09 21.6	-0.1
	comp=Z,95nm,0.8s,baz=77,slow=8.0,SNR=7.6					
YHNB	Yeheng	40.84 320	PFAKE		08 09 30.0	+8.3
YHNB			LR	LR		
	comp=Z,2μm,20.0s					
TATO	Taipei	40.98 321	PFAKE		08 09 30.0	+7.2
TATO			LR	LR		
	comp=Z,2μm,20.0s					
BKZ	Black Stump Fm	41.06 147	PFAKE		08 09 40.0	+17
BKZ			LR	LR		
	comp=Z,4μm,20.0s					
TPI	Tanjungpandan	41.07 273	P	P	08 09 24.9	+1.2
THZ	Tophouse	41.19 152	eP	P	08 09 25.3	+0.9
	comp=Z,35nm,0.9s					
CBJI	Citeko	41.58 268	P	P	08 09 27.4	-0.5
SNZO	South Karori	41.70 150	PFAKE		08 09 40.0	+11
SNZO			LR	LR		
	comp=Z,4μm,19.0s					
LTZ	Lake Taylor	41.71 154	eP	P	08 09 29.0	+0.4
	comp=Z,193nm,1.8s					
LTZ			LR	LR		
	comp=Z,6μm,20.0s					
RPZ	Rata Peaks	41.96 156	LR	LR	08 25 01.0	
	comp=Z,2μm,22.0s,baz=324,slow=33					
KHZ	Kahutara	42.00 152	eP	P	08 09 31.2	+0.3
	comp=Z,247nm,2.0s					
BFZ	Birch Farm	42.02 148	eP	P	08 09 30.4	-0.8
	comp=Z,221nm,1.8s					
MLZ	Mavora Lakes	42.25 160	eP	P	08 09 33.6	+0.6
	comp=Z,99nm,1.4s					
MQZ	McQueen's Vall	42.62 154	eP	P	08 09 36.0	0.0
	comp=Z,127nm,1.4s					
PPBI	Pangkal Pinang	42.65 274	P	P	08 09 37.9	+1.3
KNMB	Chin-men Tao	42.65 317	PFAKE		08 09 50.0	+14
KNMB			LR	LR		
	comp=Z,2μm,19.0s					
CGJI	Cibinong	42.72 267	P	P	08 09 37.3	+0.1
	comp=Z,163nm,1.1s,comp=Z,2μm					
QZH	Quanzhou	42.84 318	eP	P	08 09 40.8	+2.9
QZH			S	S	08 15 59.5	-0.9
QZH			LR	LR		
	comp=Z,710nm,17.5s					
QZH			LR	LR		
	comp=Z,2μm,19.4s					
QZH			LR	LR		
	comp=Z,1μm,16.1s					
JNU	Nakatsue	42.88 338	eP	P	08 09 37.7	-0.5
	comp=Z,53nm,0.9s					
JNU			LR	LR		
	comp=Z,2μm,19.0s					
INU	Inuyama	43.04 346	eP	P	08 09 39.6	+0.2
	comp=Z,91nm,1.3s					
INU			LR	LR		
	comp=Z,2μm,18.0s					
MJAR	Matsushiro Arr	43.92 348	P	P	08 09 45.6	-0.9
	comp=Z,4.1nm,0.8s,baz=171,slow=8.6,SNR=11					
MJAR			ScP	ScP	08 15 19.7	-2.0
	comp=Z,4.6nm,1.1s,baz=180,slow=5.4,SNR=5.5					
MJAR			LR	LR	08 26 52.6	
	comp=Z,2μm,18.9s,baz=165,slow=34					
MAJO	Matsushiro	43.92 348	eP	P	08 09 45.8	-0.7
	comp=Z,394nm,1.9s					
MAJO			LR	LR		
	comp=Z,4μm,18.0s					
MAJO	Matsushiro	43.92 348	i P	P	08 09 44.9	-1.6
MAJO			pmax	pmax		
	comp=Z,8.0nm,1.0s					
MAT	Matsushiro	43.92 348	P	P	08 09 45.5	-1.0
MAT			S	S	08 16 15.0	-0.9
MJB9	Matsu-Tunnel	43.92 348	eP	P	08 09 46.1	-0.4
	comp=Z,403nm,1.9s					
MJB9			LR	LR		
	comp=Z,4μm,18.0s					
KASI	Kota Agung	43.96 269	P	P	08 09 46.6	-0.7
	comp=Z,135nm,1.0s,comp=Z,2μm					
HKPS	Hong Kong Po S	44.30 311	PFAKE		08 10 00.0	+10
HKPS			LR	LR		
	comp=Z,2μm,22.0s					
MDSI	Maura Dua	44.35 270	P	P	08 09 50.2	-0.2
	comp=Z,86nm,1.1s,comp=Z,2μm					
LWLI	Liwa	44.43 269	P	P	08 09 52.3	+1.1
	comp=Z,67nm,0.8s,comp=Z,27μm					
LHSI	Lahat	45.06 271	P	P	08 09 57.0	+1.0
	comp=Z,85nm,0.9s					
MYKOM	Kota Tinggi	45.52 279	P	P	08 10 02.0	+2.3
MNAI	Manna	45.58 270	PFAKE		08 10 10.0	+10
MNAI			LR	LR		
	comp=Z,2μm,18.0s					
SSE	Sheshan	45.71 326	PFAKE		08 10 10.0	+9.2
SSE			LR	LR		
	comp=Z,3μm,20.0s					
QIZ	Qiongzhong	45.92 304	PFAKE		08 10 10.0	+7.2
QIZ			LR	LR		
	comp=Z,2μm,19.0s					
JOHN	Johnston Islan	47.31 60	PFAKE		08 10 30.0	+16
JOHN			LR	LR		
	comp=Z,9μm,20.0s					
SDSI	Sungai Dareh	47.47 275	P	P	08 10 15.2	+0.2
	comp=Z,40nm,1.1s,comp=Z,2μm					
MIDW	Midway	47.56 42	PFAKE		08 10 30.0	+15
MIDW			LR	LR		
	comp=Z,5μm,21.0s					
NJ2	Nanjing	47.73 325	eP	P	08 10 18.6	+1.9
NJ2			S	S	08 17 13.5	+2.6
NJ2			sS	pS	08 17 23.5	+1.1
NJ2			pmax	pmax		
	comp=Z,15nm,0.7s					
NJ2			pmax	pmax		
	comp=Z,380nm,4.1s					
NJ2			LR	LR		
	comp=Z,2μm,18.9s					
NJ2			LR	LR		
	comp=Z,1μm,20.8s					
NJ2			LR	LR		
	comp=Z,2μm,19.9s					
KSRS	Korea Array	47.83 338	P	P	08 10 16.5	-0.8
	comp=Z,7.8nm,0.7s,baz=155,slow=8.2,SNR=46					
KSRS			ScP	ScP	08 15 36.9	-1.0
	comp=Z,0.5nm,0.4s,baz=140,slow=5.1,SNR=4.5					
KS15	Wonju Array Si	47.83 338	eP	P	08 10 16.9	-0.5
	comp=Z,29nm,1.0s					
BKNI	Bangkinang	48.04 276	eP	P	08 10 18.4	-1.0
	comp=Z,42nm,0.7s					
ERM	Erimo	48.53 354	PFAKE		08 10 30.0	+7.3
ERM			LR	LR		
	comp=Z,4μm,22.0s					
ERM	Erimo	48.53 354	i P	P	08 10 21.1	-1.6
ERM			pmax	pmax		
	comp=Z,8.0nm,0.9s					
IPM	Ipoh	48.83 282	eP	P	08 10 25.3	-0.2
	comp=Z,30nm,1.0s					
IPM			LR	LR		
	comp=Z,800nm,19.0s					
IPM	Ipoh	48.83 282	P	P	08 10 27.0	+1.5
KULM	Kulim	49.37 283	eP	P	08 10 29.1	-0.5
	comp=Z,15nm,0.9s					
KULM			LR	LR		
	comp=Z,1μm,22.0s					
KULM	Kulim	49.37 283	P	P	08 10 31.0	+1.4
WHN	Wuhan	49.38 320	⇑P	P	08 10 29.3	-0.1
WHN			S	S	08 17 36.1	+1.9
WHN			LR	LR		
	comp=Z,2μm,14.2s					
WHN			LR	LR		
	comp=Z,810nm,13.5s					
WHN			LR	LR		
	comp=Z,3μm,19.3s					
MNSI	Mandailing Nat	49.56 277	P	P	08 10 31.7	+0.6
YUK	Yuzh-Kuril'sk	50.35 357	c iP	P	08 10 37.0	+0.5
YUK			i		08 11 55.4	
YUK			i		08 12 32.7	
YUK			i S	S	08 17 50.8	+3.5
YUK			i		08 20 28.3	
YUK			pmax	pmax		
	comp=Z,509nm,1.2s					
YUK			pmax	pmax		
	comp=N,284nm,1.0s					
YUK			pmax	pmax		
	comp=E,125nm,0.3s					
YUK			pmax	pmax		
	comp=Z,580nm,1.4s					
PSI	Prapat	50.55 279	P	P	08 10 38.5	-0.3
	comp=Z,6.3nm,0.4s,baz=146,slow=1.7,SNR=4.6					
PSI	Prapat	50.55 279	eP	P	08 10 38.5	-0.3
	comp=Z,47nm,1.2s					
PSI			LR	LR		
	comp=Z,2μm,20.0s					
KUR	Kuril'sk	51.49 359	c iP	P	08 10 45.2	+0.2
KUR			eS	S	08 18 07.5	+4.5
KUR			pmax	pmax		
	comp=Z,1μm,3.2s					
KUR			pmax	pmax		
	comp=Z,201nm,1.7s					
KUR			MLR	MLR		
	comp=N,600nm,15.0s					
KUR			MLR	MLR		
	comp=E,600nm,15.0s					
KUR			MLR	MLR		
	comp=Z,1μm,15.0s					
GSI	Gunungsitoli	51.61 277	eP	P	08 10 46.5	-0.1
	comp=Z,60nm,0.9s					
DL2	Dalian	51.67 333	P	P	08 10 43.9	-2.7
DL2			S	S	08 18 03.8	-2.0
DL2			sS	pS	08 18 16.3	-0.9
DL2			pmax	pmax		
	comp=Z,15nm,1.0s					
DL2			pmax	pmax		
	comp=Z,260nm,10.0s					
DL2			LR	LR		
	comp=Z,2μm,20.5s					
DL2			LR	LR		
	comp=Z,2μm,20.5s					
DL2			LR	LR		
	comp=Z,3μm,21.1s					
KCSI	Kotacane, Aceh	51.81 280	P	P	08 10 47.5	-0.6
	comp=Z,42nm,0.8s					
SLVN	Son La	51.92 303	PFAKE		08 11 00.0	+11
SLVN			LR	LR		
	comp=Z,1μm,20.0s					
GYA	Guiyang	52.28 311	⇑iP	P	08 10 51.6	+0.1
GYA			S	S	08 18 16.0	+1.2
GYA			SS	SS	08 21 49.1	-3.8
GYA			pmax	pmax		
	comp=Z,30nm,0.7s					
GYA			pmax	pmax		
	comp=Z,140nm,4.9s					
GYA			LR	LR		
	comp=Z,2μm,21.2s					
GYA			LR	LR		
	comp=Z,1μm,20.7s					
GYA			LR	LR		
	comp=Z,1μm,21.5s					
USA0B	Ussuriysk Arra	52.66 345	eP	P	08 10 53.4	-0.4
	comp=Z,24nm,1.0s					
USRK	Ussuriysk Ar.	52.66 345	P	P	08 10 52.6	-1.2
	comp=Z,2.0nm,0.8s,baz=172,slow=7.6,SNR=6.4					
SNY	Shenyang	53.28 337	‖P	P	08 10 56.8	-1.6
SNY			S	S	08 18 29.8	+2.1
SNY			pmax	pmax		
	comp=Z,10.0nm,0.4s					
SNY			pmax	pmax		
	comp=Z,390nm,4.2s					
SNY			LR	LR		
	comp=Z,2μm,17.8s					
SNY			LR	LR		
	comp=Z,1μm,15.7s					
SNY			LR	LR		
	comp=Z,3μm,16.2s					
YSS	Yuzh-Sakhalins	53.47 355	eP	P	08 11 00.2	+0.6
	comp=Z,57nm,1.4s					
YSS			LR	LR		
	comp=Z,2μm,21.0s					
YSS	Yuzh-Sakhalins	53.47 355	eP	P	08 10 55.9	-3.8
YSS			e		08 11 12.0	
YSS			eS	S	08 18 28.3	-1.7
YSS			ePS	PKiKP	08 18 43.2	-0.1
NANT	Nan	53.56 299	P	P	08 11 04.3	+3.3
	comp=Z,12μm,0.8s					
MDJ	Mudanjiang	53.70 343	P	P	08 11 00.0	-1.5
MDJ			PcP	PcP	08 12 09.0	+1.6
MDJ			PP	PP	08 12 59.5	-3.2
MDJ			ScP	ScP	08 16 04.8	+1.8
MDJ			PcS	PcS	08 16 07.0	+0.6
MDJ			S	S	08 18 29.9	-3.4
MDJ			ScS	ScS	08 20 47.8	-0.6
MDJ			SS	SKiKP	08 22 10.9	-3.0
MDJ			pmax	pmax		
	comp=Z,11nm,1.7s					
MDJ			pmax	pmax		
	comp=Z,480nm,9.1s					
MDJ			LR	LR		
	comp=Z,2μm,22.8s					
MDJ			LR	LR		
	comp=Z,1μm,22.8s					
MDJ			LR	LR		
	comp=Z,4μm,28.5s					
MDJ	Mudanjiang	53.70 343	PFAKE		08 11 10.0	+8.5
MDJ			LR	LR		
	comp=Z,2μm,19.0s					
CN2	Changchun	54.29 339	eP	P	08 11 04.8	-1.0
CN2			eS	S	08 18 40.6	-0.8
CN2			pmax	pmax		
	comp=Z,10.0nm,0.8s					
CN2			pmax	pmax		
	comp=Z,280nm,5.0s					
CN2			LR	LR		
	comp=Z,2μm,20.0s					
CN2			LR	LR		
	comp=Z,1μm,20.0s					
CN2			LR	LR		
	comp=Z,3μm,20.0s					
XMAS	Kiritimati	54.42 83	eP	P	08 11 07.9	+0.6
	comp=Z,110nm,0.9s					

XMAS LR LR
comp=Z,4μm,18.0s
KMI Kunming 54.63 307 P **P** **08 11 10.9 +1.9**
KMI pP pP 08 11 14.4 -3.4
KMI sP sP 08 11 16.1 -4.7
KMI S **S** **08 18 45.6 -1.5**
KMI SS **SS** **08 22 27.5 -3.0**
KMI pmax pmax
comp=Z,23nm,0.5s
KMI pmax pmax
comp=Z,250nm,4.3s
KMI LR LR
comp=Z,1μm,25.2s
KMI LR LR
comp=Z,710nm,22.8s
KMI LR LR
comp=Z,960nm,16.8s
CMAR Chiang Mai Arr 54.97 298 P **P** **08 11 10.5 -0.7**
comp=Z,1.3nm,0.2s,baz=128,slow=5.8,SNR=5.0
CMAR PKP2bc 08 41 42.0
comp=Z,0.8nm,0.3s,baz=297,slow=2.8,SNR=4.6
CHTO Chiang Mai 55.10 298 PFAKE 08 11 20.0 +7.8
CHTO LR LR
comp=Z,700nm,20.0s
XAN Xi'an 55.14 320 P **P** **08 11 15.3 +3.1**
XAN S **S** **08 18 50.6 -2.6**
XAN SS **SS** **08 22 40.1 +2.3**
XAN pmax pmax
comp=Z,23nm,1.5s
XAN pmax pmax
comp=Z,180nm,6.4s
XAN LR LR
comp=Z,1μm,20.1s
XAN LR LR
comp=Z,1μm,18.6s
XAN LR LR
comp=Z,2μm,20.6s
XAN Xi'an 55.14 320 PFAKE 08 11 20.0 +7.8
XAN LR LR
comp=Z,2μm,20.0s
BJT Baijiatuau 55.15 330 PFAKE 08 11 20.0 +7.9
BJT LR LR
comp=Z,4μm,22.0s
TIY Taiyuan 55.46 325 *e*P **P** **08 11 14.9 +0.4**
TIY S **S** **08 18 58.0 +0.6**
TIY pmax pmax
comp=Z,200nm,5.8s
TIY LR LR
comp=Z,2μm,19.1s
TIY LR LR
comp=Z,470nm,17.2s
TIY LR LR
comp=Z,1μm,19.1s
SKR Severo-Kuril's 57.30 6 *e*P P 08 11 21.0 -6.2
TYV Tymovskoe 57.36 355 *e*P **P** **08 11 27.5 -0.1**
TYV *e* 08 19 29.2
TYV pmax pmax
comp=Z,10.0nm,1.8s
TYV MLR MLR
comp=N,1μm,20.0s
TYV MLR MLR
comp=Z,2μm,20.0s
KLR Kul'dur 57.43 347 *c i*P **P** **08 11 28.1 -0.1**
KEKH Kekaha 57.91 59 PFAKE 08 11 40.0 +7.9
KEKH LR LR
comp=Z,7μm,20.0s
GRNR Gornyy 58.00 351 *e*P **P** **08 11 34.0 +1.8**
HHC Hu-ho-hao-te 58.14 327 *e*P **P** **08 11 36.6 +3.1**
HHC sP sP 08 11 46.1 +0.9
HHC S **S** **08 19 32.1 -0.7**
HHC sS sS 08 19 47.4 +0.4
HHC pmax pmax
comp=Z,11nm,0.9s
HHC LR LR
comp=Z,2μm,18.4s
HHC LR LR
comp=Z,2μm,16.7s
KIP Kipapa 59.15 60 PFAKE 08 11 50.0 +9.2
KIP LR LR
comp=Z,6μm,20.0s
OPA Opana 59.25 60 PFAKE 08 11 50.0 +8.5
OPA LR LR
comp=Z,6μm,19.0s
LZH Lanzhou 59.69 319 ⇑P **P** **08 11 44.6 +0.2**
LZH pP pP 08 11 47.9 -5.4
LZH sP sP 08 11 49.5 -6.6
LZH S **S** **08 19 53.3 +0.1**
LZH sS pS 08 20 03.5 -1.5
LZH SS **SS** **08 23 52.1 +2.6**
LZH pmax pmax
comp=Z,34nm,1.3s
LZH pmax pmax
comp=Z,310nm,7.0s
LZH LR LR
comp=Z,1μm,16.0s
LZH LR LR
comp=Z,1μm,16.3s
LZH LR LR
comp=Z,2μm,19.0s
NKL Nikolayevsk 59.80 354 *e*P **P** **08 11 44.3 -0.2**
NKL *e* 08 12 27.5
NKL *e*S **S** **08 19 54.3 +0.8**
NKL *e* 08 21 33.8
NKL *e*SS **SS** **08 23 52.0 +1.8**
NKL pmax pmax
comp=Z,6.0nm,0.7s
NKL pmax pmax
comp=N,9.0nm,1.6s
NKL pmax pmax
comp=E,93nm,18.1s
NKL pmax pmax
comp=Z,67nm,2.0s
NKL MLR MLR
comp=Z,405nm,17.0s
PEA0B Petropavlovsk- 59.86 6 *e*P **P** **08 11 45.5 +0.5**
comp=Z,146nm,1.3s
PEA0B LR LR
comp=Z,4μm,22.0s
PETK Petropavlovsk- 59.86 6 P **P** **08 11 44.9 -0.1**
comp=Z,12nm,0.6s,baz=167,slow=6.3,SNR=20
PETK LR LR 08 33 46.7
comp=Z,3μm,22.0s,baz=201,slow=32
PEA1 Petropavlovsk- 59.86 6 *e*P **P** **08 11 44.9 -0.1**
PET Petropavlovsk 59.88 7 *e*P **P** **08 11 45.8 +0.6**
comp=Z,172nm,1.9s
PET LR LR
comp=Z,2μm,20.0s
PET Petropavlovsk 59.88 7 *d i*P **P** **08 11 44.6 -0.5**
PET *e*S **S** **08 19 51.2 -3.4**
PET *e*SS **SS** **08 23 51.6 0.0**
PET pmax pmax
comp=Z,500nm,16.6s
PET pmax pmax
comp=Z,400nm,10.3s
PET pmax pmax
comp=Z,38nm,1.0s
PET MLR MLR
comp=Z,2μm,20.0s
PET MLR MLR
comp=Z,2μm,15.0s
KHLU Kahalu`u 60.36 63 PFAKE 08 12 00.0 +11
KHLU LR LR
comp=Z,5μm,20.0s
HLK Haleakala 60.45 62 PFAKE 08 12 00.0 +10
HLK LR LR
comp=Z,8μm,20.0s
KHU Kahuku 60.49 64 PFAKE 08 12 00.0 +10
KHU LR LR
comp=Z,3μm,20.0s
MLOA Mauna Loa Obse 60.62 63 *e*P **P** **08 11 50.0 -1.4**
comp=Z,311nm,1.6s
MLOA LR LR
comp=Z,5μm,20.0s
HPAH Hawaii Prepara 60.68 63 PFAKE 08 12 00.0 +8.6
HPAH LR LR
comp=Z,6μm,20.0s
POHA Pohakuloa 60.74 63 PFAKE 08 12 00.0 +8.0
POHA LR LR
comp=Z,5μm,20.0s
LPH Laupahoehoe 60.93 63 *e*P **P** **08 11 54.4 +1.4**
HIA Hailar 61.00 339 PFAKE 08 12 10.0 +17
HIA LR LR
comp=Z,2μm,20.0s
PPT Papeete 61.14 106 LR LR 08 35 13.9
comp=Z,223nm,20.2s,baz=270,slow=33
PPT2 Papeete2 61.14 106 *e*P **P** **08 11 57.0 +2.4**
comp=Z,53nm,0.6s
PPT2 *e*S **S** **08 20 15.0 +2.8**
comp=Z,3μm,25.8s
PPT2 *e*LQ LQ 08 27 21.9
comp=Z,5μm,31.5s
PPT2 *e*LR LR 08 30 06.9
comp=Z,1μm,24.2s
TIAR Tiarei 61.35 106 *e*P **P** **08 11 58.4 +2.4**
comp=Z,36nm,1.3s
TBI Tubuai 61.62 113 *e*S **S** **08 20 20.9 +2.8**
comp=Z,2μm,26.9s
TBI *e*LQ LQ 08 27 37.8
comp=Z,1μm,29.2s
TBI *e*LR LR 08 30 17.6
comp=Z,669nm,21.8s
ZEA Zeya 62.67 346 *e*P **P** **08 12 03.5 -0.5**
ZEA *e*S **S** **08 20 31.0 +0.9**
ZEA *e*PS **PnS** **08 20 47.0 -1.8**
ZEA pmax pmax
comp=N,200nm,2.0s
ZEA pmax pmax
comp=Z,300nm,2.0s
ZEA pmax pmax
comp=N,160nm,1.8s
ZEA pmax pmax
comp=Z,240nm,1.8s
ZEA smax smax
comp=N,300nm,8.0s
PMOR Pomariorio Ree 62.69 103 *e*P **P** **08 12 07.5 +2.6**
SMY Shemya 62.82 17 PFAKE 08 12 20.0 +15
SMY LR LR
comp=Z,3μm,21.0s
VAH Vaihoa 62.95 104 *e*P **P** **08 12 08.8 +2.1**
comp=Z,70nm,1.2s
SHL Shillong 63.70 303 *e*S **S** **08 20 40.0 -4.4**
KIWB Kanaga Island 65.04 23 *e*P **P** **08 12 20.2 +0.5**
ADK Adak 65.24 23 PFAKE 08 12 30.0 +9.0
ADK LR LR
comp=Z,2μm,20.0s
CASY Casey 65.25 196 *e*P **P** **08 12 21.1 +0.2**
comp=Z,95nm,2.0s
CASY LR LR
comp=Z,4μm,19.0s
ULN Ulaanbaatar 65.35 331 *e*P **P** **08 12 22.3 +0.3**
comp=Z,28nm,1.3s
ULN LR LR
comp=Z,3μm,22.0s
ULN Ulaanbaatar 65.35 331 *i* P **P** **08 12 21.5 -0.5**
ULN pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 65.66 330 P **P** **08 12 24.6 +0.6**
comp=Z,1.2nm,0.7s,baz=165,slow=6.0,SNR=3.2
SONM S **S** **08 21 04.0 -3.6**
comp=Z,0.4nm,0.4s,baz=130,slow=38,SNR=2.1
SONM LR LR 08 40 02.3
comp=Z,4μm,21.7s,baz=126,slow=35
SONM PKP2bc 08 41 17.6
comp=Z,3.7nm,1.1s,baz=316,slow=4.0,SNR=6.6
MA2 Magadan 65.87 1 S **S** **08 21 08.1 -1.4**
comp=Z,1.8nm,0.3s,baz=184,slow=19,SNR=2.0
MA2 Magadan 65.87 1 *e*P **P** **08 12 25.2 +0.3**
comp=Z,126nm,1.8s
MA2 LR LR
comp=Z,2μm,19.0s
MA2 Magadan 65.87 1 *i* P **P** **08 12 24.9 0.0**
MA2 pmax pmax
comp=Z,22nm,1.2s
LSA Lhasa 65.89 306 PFAKE 08 12 40.0 +14
LSA LR LR
comp=Z,599nm,19.0s
ATKA Atka Island 66.47 24 PFAKE 08 12 40.0 +11
ATKA LR LR
comp=Z,2μm,20.0s
PALK Pallekele 69.19 280 P **P** **08 12 47.0 +0.1**
comp=Z,25nm,0.8s,baz=117,slow=6.5,SNR=4.6
PALK Pallekele 69.19 280 P **P** **08 12 47.0 +0.1**
NIKH Nikolski High 69.26 26 PFAKE 08 13 00.0 +14
NIKH LR LR
comp=Z,3μm,22.0s
SEY Seymchan 69.28 2 *i* P **P** **08 12 46.7 +0.4**
TLY Talaya 69.56 332 *e*P **P** **08 12 48.8 +0.4**
comp=Z,12nm,1.1s
TLY LR LR
comp=Z,2μm,21.0s
TLY Talaya 69.56 332 *e*P **P** **08 12 48.8 +0.4**
TLY pmax pmax
comp=Z,12nm,1.1s
TLY MLR MLR
comp=Z,2μm,21.0s
YAK Yakutsk 69.88 351 PFAKE 08 13 00.0 +10
YAK LR LR
comp=Z,1μm,22.0s
YAK Yakutsk 69.88 351 *e*P **P** **08 12 50.3 +0.2**
YAK *e**PP **sP** **08 13 01.8 -0.1**
YAK *e* 08 13 11.8
YAK *e*S **S** **08 21 58.7 +1.3**
YAK *e**SS sS 08 22 19.5 +8.0
YAK *e* 08 22 38.0
UNV Unalaska Valle 70.89 26 PFAKE 08 13 10.0 +14
UNV LR LR
comp=Z,3μm,22.0s
VNDA Vanda 71.34 177 P **P** **08 12 59.3 +0.6**
comp=Z,5.8nm,1.0s,baz=330,slow=7.6,SNR=19
VNDA Vanda 71.34 177 *e*P **P** **08 12 59.4 +0.6**
comp=Z,26nm,1.2s
VNDA Vanda 71.34 177 *e*P **P** **08 12 59.4 +0.6**
VNDA pmax pmax
comp=Z,26nm,1.2s
SBA Scott Base 71.95 176 *e*P **P** **08 13 02.9 +0.4**
comp=Z,34nm,1.4s
SBA Scott Base 71.95 176 *e*P **P** **08 13 02.9 +0.4**
SBA pmax pmax
comp=Z,34nm,1.4s
WMQ Urumqi 74.26 319 *e*P **P** **08 13 19.4 +2.5**
WMQ S **S** **08 22 46.9 -1.7**
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ pmax pmax
comp=Z,140nm,8.9s
WMQ LR LR
comp=Z,150nm,29.7s
WMQ LR LR
comp=Z,340nm,21.5s
WMQ LR LR
comp=Z,700nm,26.9s
WMQ Urumqi 74.26 319 PFAKE 08 13 30.0 +13
WMQ LR LR
comp=Z,800nm,21.0s
SDPT Sand Point 74.55 27 PFAKE 08 13 30.0 +12
SDPT LR LR
comp=Z,2μm,20.0s
RKT Rikitea 74.92 112 *e*LQ LQ 08 33 12.8
comp=Z,2μm,30.0s
BILL Bilibino 75.38 7 *e*P **P** **08 13 23.6 +0.9**
comp=Z,23nm,1.0s
BILL LR LR
comp=Z,2μm,21.0s
BILL Bilibino 75.38 7 *c i*P **P** **08 13 22.3 -0.4**
BILL pmax pmax
comp=Z,5.0nm,0.9s
CHGN Chignik 76.05 27 PFAKE 08 13 40.0 +13
CHGN LR LR
comp=Z,2μm,20.0s
DGZ Jazzator, Alta 77.01 324 *i* P **P** **08 13 33.1 +0.6**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
ANM Nome 78.62 18 PFAKE 08 13 50.0 +9.0
ANM LR LR
comp=Z,2μm,20.0s
OHAK Old Harbor 78.92 28 PFAKE 08 13 50.0 +7.3
OHAK LR LR
comp=Z,2μm,22.0s
MKAR Makanchi Array 78.95 320 P **P** **08 13 42.0 -1.3**
comp=Z,5.6nm,0.8s,baz=97,slow=6.7,SNR=6.5
MKAR Makanchi Array 78.95 320 *i* P **P** **08 13 43.5 +0.3**
MKAR pmax pmax
comp=Z,6.0nm,0.8s
TIXI Tiksi 79.07 354 *e*P **P** **08 13 42.7 -0.6**
comp=Z,11nm,0.9s
TIXI LR LR
comp=Z,1μm,22.0s
TIXI Tiksi 79.07 354 *i* P **P** **08 13 42.4 -0.9**
TIXI pmax pmax
comp=Z,5.0nm,0.8s
MAKZ Makanchi 79.16 320 PFAKE 08 14 00.0 +16
MAKZ LR LR
comp=Z,1μm,22.0s
KDAK Kodiak Island 79.53 28 PFAKE 08 14 00.0 +14
KDAK LR LR
comp=Z,2μm,19.0s
SVW2 Sparrevohn 79.99 24 *e*P **P** **08 13 48.9 +0.3**
comp=Z,17nm,1.2s
SVW2 LR LR
comp=Z,2μm,21.0s
ZAA0 Zalesovo Array 80.33 327 PFAKE 08 14 00.0 +10
ZAA0 LR LR
comp=Z,2μm,21.0s
ZALV Zalesovo Beam 80.33 327 P **P** **08 13 48.5 -2.0**
comp=Z,1.7nm,0.4s,baz=100,slow=7.6,SNR=4.5
ZALV LR LR 08 48 57.9
comp=Z,2μm,21.2s,baz=87,slow=35
TTA Tatalina 80.84 22 PFAKE 08 14 00.0 +6.8
TTA LR LR
comp=Z,2μm,19.0s
HOM Homer 80.90 26 PFAKE 08 14 00.0 +6.6
HOM LR LR
comp=Z,2μm,20.0s
KSH Kashi 80.96 312 P **P** **08 13 57.8 +3.4**
KSH sP pP 08 14 04.1 +1.0
KSH PP **PP** **08 17 03.8 +4.3**
KSH S **S** **08 24 05.1 +3.7**
KSH pmax pmax
comp=Z,130nm,2.0s
KSH pmax pmax
comp=Z,550nm,7.6s
KSH LR LR
comp=Z,830nm,14.2s
KSH LR LR
comp=Z,2μm,16.9s
KSH LR LR
comp=Z,1μm,16.9s
CNPM China Poot 81.01 27 PFAKE 08 14 10.0 +16
CNPM LR LR
comp=Z,2μm,20.0s
BRLK Bradley Lake 81.28 26 PFAKE 08 14 10.0 +14
BRLK LR LR
comp=Z,2μm,20.0s
NIL Nilore 81.58 305 *e*P **P** **08 13 58.0 +0.3**
comp=Z,19nm,0.8s
NIL Nilore 81.58 305 *e*P **P** **08 13 58.1 +0.3**
NIL pmax pmax
comp=Z,19nm,0.8s
RDOG Red Dog Mine 81.72 16 PFAKE 08 14 10.0 +12
RDOG LR LR
comp=Z,2μm,22.0s
BOOM Boomskoye usch 81.82 314 PFAKE 08 14 10.0 +11
BOOM LR LR
comp=Z,900nm,22.0s
SEW Seward 82.08 26 PFAKE 08 14 10.0 +10
SEW LR LR
comp=Z,2μm,20.0s
SKT Skwentna 82.11 24 PFAKE 08 14 10.0 +10
SKT LR LR
comp=Z,3μm,20.0s
SUA Susitna One 82.18 25 PFAKE 08 14 10.0 +10
SUA LR LR
comp=Z,3μm,22.0s
PPLA Purkeypile 82.30 23 PFAKE 08 14 10.0 +9.0
PPLA LR LR
comp=Z,2μm,19.0s
RC01 Rabbit Creek A 82.42 26 PFAKE 08 14 10.0 +8.5
RC01 LR LR
comp=Z,2μm,21.0s
MAW Mawson 82.45 203 P **P** **08 14 01.1 -0.4**
comp=Z,5.2nm,1.0s,baz=152,slow=2.1,SNR=6.3
MAW Mawson 82.45 203 *e*P **P** **08 14 01.9 +0.4**
comp=Z,15nm,1.8s
MAW Mawson 82.45 203 *e*P **P** **08 14 01.9 +0.4**
MAW pmax pmax
comp=Z,15nm,1.8s
KURK Kurchatov 82.61 323 PFAKE 08 14 10.0 +7.3
KURK LR LR
comp=Z,1μm,19.0s
FRU1 Bishkek 82.84 315 PFAKE 08 14 20.0 +16
FRU1 LR LR
comp=Z,600nm,20.0s
AAK Ala-Archa 82.89 314 PFAKE 08 14 20.0 +15
AAK LR LR
comp=Z,800nm,19.0s
PMR Palmer 82.92 25 PFAKE 08 14 20.0 +16
PMR LR LR
comp=Z,2μm,22.0s
GHO Glory Hole Cre 83.09 25 PFAKE 08 14 20.0 +15
GHO LR LR
comp=Z,3μm,21.0s
KNK Knik Glacier 83.12 26 PFAKE 08 14 20.0 +15
KNK LR LR
comp=Z,3μm,22.0s
KTH Kantishna Hill 83.13 23 PFAKE 08 14 20.0 +15
KTH LR LR
comp=Z,2μm,20.0s
TRF Thorofare Moun 83.33 23 PFAKE 08 14 20.0 +14
TRF LR LR
comp=Z,2μm,20.0s
SML Sawmill 83.35 25 PFAKE 08 14 20.0 +14
SML LR LR
comp=Z,2μm,20.0s
BPAW Bear Paw Mtn. 83.38 23 PFAKE 08 14 20.0 +14
BPAW LR LR
comp=Z,2μm,22.0s
GLI Glacier Island 83.47 26 PFAKE 08 14 20.0 +13
GLI LR LR
comp=Z,2μm,20.0s
QSPA South Pole Qui 83.48 180 *e*P **P** **08 14 07.8 +0.6**
comp=Z,104nm,1.5s
QSPA LR LR
comp=Z,2μm,18.0s
SCM Sheep Creek Mo 83.79 25 PFAKE 08 14 20.0 +11
SCM LR LR
comp=Z,2μm,22.0s
RND Reindeer 83.88 24 PFAKE 08 14 20.0 +11
RND LR LR
comp=Z,3μm,20.0s
EYAK Cordova Ski Ar 83.93 27 PFAKE 08 14 20.0 +11
EYAK LR LR
comp=Z,2μm,20.0s
MLY Manley 83.93 22 PFAKE 08 14 20.0 +11
MLY LR LR
comp=Z,2μm,22.0s
BWN Browne 84.00 23 PFAKE 08 14 20.0 +10
BWN LR LR
comp=Z,1μm,19.0s
MCK McKinley 84.00 23 PFAKE 08 14 20.0 +10
MCK LR LR
comp=Z,2μm,20.0s
DIV Divide 84.17 26 PFAKE 08 14 20.0 +9.5
DIV LR LR
comp=Z,2μm,21.0s
HMT Hamilton 84.52 27 PFAKE 08 14 20.0 +7.7
HMT LR LR
comp=Z,2μm,19.0s
WRH Wood River Hil 84.67 23 PFAKE 08 14 20.0 +7.1
WRH LR LR
comp=Z,1μm,20.0s
MDM Murphy Dome 84.84 22 PFAKE 08 14 30.0 +16
MDM LR LR
comp=Z,1μm,21.0s
CCB Clear Creek Bu 84.86 23 PFAKE 08 14 30.0 +16
CCB LR LR
comp=Z,2μm,20.0s
TCOL CIGO, UAF Yank 84.94 23 P **P** **08 14 14.2 0.0**
baz=243
COLA College 84.94 23 PFAKE 08 14 30.0 +16
COLA LR LR
comp=Z,2μm,20.0s
COLA College 84.94 23 *i* P **P** **08 14 14.7 +0.5**
COLA pmax pmax
comp=Z,11nm,0.9s
PAX Paxson 85.06 25 PFAKE 08 14 30.0 +15
PAX LR LR
comp=Z,2μm,20.0s
HDA Harding Lake 85.08 23 PFAKE 08 14 30.0 +15
HDA LR LR
comp=Z,1μm,22.0s
HDA Harding Lake 85.08 23 P **P** **08 14 14.9 -0.1**
baz=244
KBL Kabul 85.19 305 PFAKE 08 14 30.0 +14
KBL LR LR
comp=Z,500nm,21.0s
COLD Coldfoot 85.20 20 PFAKE 08 14 30.0 +14
COLD LR LR
comp=Z,2μm,22.0s

POKR Poker Plat Res 85.21 22 P P 08 14 15.9 +0.3
baz=244
ILAR Eielson Array 85.27 23 P P 08 14 13.8 -2.2
comp=Z,4.6nm,0.8s,baz=253,slow=5.2,SNR=37
MENT Mentasta 85.78 25 PFAKE 08 14 30.0 +11
MENT LR LR
comp=Z,2μm,20.0s
DOT Dot Lake 85.92 24 PFAKE 08 14 30.0 +11
DOT LR LR
comp=Z,3μm,21.0s
TOLK Toolik Lake Re 86.10 19 PFAKE 08 14 30.0 +10
TOLK LR LR
comp=Z,4μm,21.0s
TOLK Toolik Lake Re 86.10 19 P P 08 14 20.5 +0.5
baz=241
PRP Porcupine Dome 86.11 22 PFAKE 08 14 30.0 +10
PRP LR LR
comp=Z,1μm,20.0s
PCA Pinnacle 86.29 28 PFAKE 08 14 30.0 +8.8
PCA LR LR
comp=Z,1μm,20.0s
BCPM Bancas Point 86.54 29 PFAKE 08 14 30.0 +7.7
BCPM LR LR
comp=Z,1μm,20.0s
FYU Fort Yukon 86.65 21 PFAKE 08 14 30.0 +7.3
FYU LR LR
comp=Z,2μm,21.0s
EGAK Eagle 87.52 24 PFAKE 08 14 40.0 +13
EGAK LR LR
comp=Z,3μm,22.0s
SIT Sitka 87.84 32 PFAKE 08 14 40.0 +11
SIT LR LR
comp=Z,2μm,19.0s
DAWY Dawson 88.00 25 PFAKE 08 14 40.0 +11
DAWY LR LR
comp=Z,4μm,22.0s
BRVK Borovoye 88.23 324 PFAKE 08 14 40.0 +9.4
BRVK LR LR
comp=Z,2μm,22.0s
SKAG Skagway 88.48 30 PFAKE 08 14 40.0 +8.4
SKAG LR LR
comp=Z,1μm,21.0s
DIB Dawson Inlet, 88.50 36 PFAKE 08 14 40.0 +8.2
DIB LR LR
comp=Z,2μm,19.0s
CRAG Craig 88.64 34 PFAKE 08 14 40.0 +7.5
CRAG LR LR
comp=Z,3μm,19.0s
JIS Juneau Island 88.65 31 PFAKE 08 14 40.0 +7.6
JIS LR LR
comp=Z,2μm,20.0s
MOBC Moresby Island 88.78 36 PFAKE 08 14 40.0 +6.7
MOBC LR LR
comp=Z,3μm,18.0s
WHY Whitehorse 89.01 29 PFAKE 08 14 50.0 +16
WHY LR LR
comp=Z,1μm,19.0s
WRAK Wrangell Islan 89.28 33 PFAKE 08 14 50.0 +15
WRAK LR LR
comp=Z,2μm,20.0s
EPYK Eagle Plains 89.78 23 PFAKE 08 14 50.0 +12
EPYK LR LR
comp=Z,2μm,22.0s
EPYK Eagle Plains 89.78 23 P P 08 14 37.5 -0.2
baz=253
SYO Syowa Base 90.72 200 || *i*P P 08 14 41.0 -1.0
SYO Syowa Base 90.72 200 || *e*P P 08 14 46.8 +4.8
BBB Bella Bella 90.91 38 PFAKE 08 14 50.0 +6.9
BBB LR LR
comp=Z,2μm,20.0s
DLBC Dease Lake 90.92 31 P P 08 14 42.8 -0.4
comp=Z,0.8nm,0.5s,baz=146,slow=11,SNR=2.1
DLBC Dease Lake 90.92 31 PFAKE 08 14 50.0 +6.8
DLBC LR LR
comp=Z,2μm,19.0s
INK Inuvik 91.49 21 P P 08 14 45.5 0.0
comp=Z,5.9nm,0.9s,baz=241,slow=7.2,SNR=8.8
INK Inuvik 91.49 21 PFAKE 08 15 00.0 +15
INK LR LR
comp=Z,2μm,22.0s
JCC Jacoby Creek, 92.13 49 PFAKE 08 15 00.0 +11
JCC LR LR
comp=Z,2μm,20.0s
KEBM Edson Butte 92.14 47 PFAKE 08 15 00.0 +11
KEBM LR LR
comp=Z,2μm,20.0s
KMRM Mail Ridge 92.30 50 PFAKE 08 15 00.0 +10
KMRM LR LR
comp=Z,3μm,19.0s
KCPM Cahto Peak 92.34 51 PFAKE 08 15 00.0 +10
KCPM LR LR
comp=Z,3μm,20.0s
KHMM Horse Mountain 92.36 49 PFAKE 08 15 00.0 +10
KHMM LR LR
comp=Z,2μm,18.0s
HOPS Hopland Field 92.66 51 PFAKE 08 15 00.0 +8.4
HOPS LR LR
comp=Z,3μm,19.0s
MCCM Marconi Confer 92.72 52 PFAKE 08 15 00.0 +8.1
MCCM LR LR
comp=Z,2μm,20.0s
GDXM Geysers 92.85 51 PFAKE 08 15 00.0 +7.4
GDXM LR LR
comp=Z,4μm,20.0s
NLWA Neilton Lookou 92.98 43 PFAKE 08 15 00.0 +7.0
NLWA LR LR
comp=Z,1μm,20.0s
O02D Mt. Diablo Mer 93.00 50 P P 08 14 53.1 -0.2
baz=264
COR Corvallis 93.08 46 PFAKE 08 15 00.0 +6.6
COR LR LR
comp=Z,3μm,20.0s
HUMO Hull Mountain 93.12 48 PFAKE 08 15 00.0 +6.3
HUMO LR LR
comp=Z,3μm,21.0s
YBH Yreka Blue Hor 93.22 49 P P 08 14 54.7 +0.4
comp=Z,1.5nm,0.9s,baz=252,slow=12,SNR=3.6
YBH Yreka Blue Hor 93.22 49 PFAKE 08 15 10.0 +16
YBH LR LR
comp=Z,4μm,21.0s
WDC Whiskeytown Da 93.23 50 PFAKE 08 15 10.0 +16
WDC LR LR
comp=Z,2μm,19.0s
SAO San Andreas Ge 93.72 54 PFAKE 08 15 10.0 +13
SAO LR LR
comp=Z,3μm,19.0s
H04A Detroit Lake 93.88 46 PFAKE 08 15 10.0 +13
H04A LR LR
comp=Z,2μm,20.0s
ORV Oroville 93.93 51 PFAKE 08 15 10.0 +13
ORV LR LR
comp=Z,2μm,20.0s
D05A Enumclaw 94.24 43 PFAKE 08 15 10.0 +11
D05A LR LR
comp=Z,1μm,19.0s
AFDM Forest Hills D 94.28 51 PFAKE 08 15 10.0 +11
AFDM LR LR
comp=Z,2μm,20.0s
LON Longmire 94.32 44 PFAKE 08 15 10.0 +11
LON LR LR
comp=Z,2μm,22.0s
LLLB Lilloet 94.59 40 PFAKE 08 15 10.0 +10
LLLB LR LR
comp=Z,2μm,20.0s
PAGB Antelope Grade 94.59 55 PFAKE 08 15 10.0 +9.4
PAGB LR LR
comp=Z,2μm,19.0s
CMB Columbia Colle 94.67 52 *e*P P 08 15 00.6 -0.3
comp=Z,11nm,1.7s
CMB LR LR
comp=Z,2μm,19.0s
CMB Columbia Colle 94.67 52 *e*P P 08 15 00.6 -0.3
CMB pmax pmax
comp=Z,11nm,1.7s
CMB MLR MLR
comp=Z,2μm,19.0s
B06A Marblemount 94.69 42 PFAKE 08 15 10.0 +9.3
B06A LR LR
comp=Z,1μm,19.0s
PINE Pine Mountain 94.70 47 PFAKE 08 15 10.0 +8.8
PINE LR LR
comp=Z,3μm,19.0s
BEKR Beckworth 94.83 51 PFAKE 08 15 10.0 +8.2
BEKR LR LR
comp=Z,3μm,20.0s
RUBR Rubicon Trail 94.92 51 PFAKE 08 15 10.0 +7.7
RUBR LR LR
comp=Z,2μm,20.0s
SNCC San Nicolas Is 94.99 57 PFAKE 08 15 10.0 +7.5
SNCC LR LR
comp=Z,4μm,20.0s
G06A Carlson Farm, 95.02 45 PFAKE 08 15 10.0 +7.6
G06A LR LR
comp=Z,2μm,20.0s
MOD Modoc Plateau 95.02 49 PFAKE 08 15 10.0 +7.4
MOD LR LR
comp=Z,3μm,21.0s
VCNR Virginia City 95.33 51 PFAKE 08 15 20.0 +16
VCNR LR LR
comp=Z,2μm,20.0s
PNTR Pine Nut 95.36 51 PFAKE 08 15 20.0 +16
PNTR LR LR
comp=Z,2μm,20.0s
ARU Arti 95.43 326 PFAKE 08 15 20.0 +16
ARU LR LR
comp=Z,1μm,20.0s
WAKR Walker 95.44 52 PFAKE 08 15 20.0 +15
WAKR LR LR
comp=Z,2μm,20.0s
F07A Phinny Hill Vi 95.56 45 PFAKE 08 15 20.0 +15
F07A LR LR
comp=Z,2μm,20.0s
PAHR Pah Rah Range 95.57 51 PFAKE 08 15 20.0 +15
PAHR LR LR
comp=Z,2μm,20.0s
YERR Yerington 95.63 52 PFAKE 08 15 20.0 +14
YERR LR LR
comp=Z,2μm,20.0s
MDPB Devils Postpil 95.67 53 PFAKE 08 15 20.0 +14
MDPB LR LR
comp=Z,2μm,18.0s
OMMB Old Mammoth Mi 95.73 53 PFAKE 08 15 20.0 +14
OMMB LR LR
comp=Z,3μm,18.0s
I07A Izee 95.75 46 PFAKE 08 15 20.0 +14
I07A LR LR
comp=Z,3μm,20.0s
OSI Osito Audit: C 95.75 56 PFAKE 08 15 20.0 +14
OSI LR LR
comp=Z,2μm,20.0s
HAWA Hanford 95.86 44 PFAKE 08 15 20.0 +14
HAWA LR LR
comp=Z,1μm,21.0s
RYN Ryan 96.17 52 PFAKE 08 15 20.0 +12
RYN LR LR
comp=Z,1μm,19.0s
PASC Pasadena Art C 96.17 56 PFAKE 08 15 20.0 +12
PASC LR LR
comp=Z,2μm,20.0s
E08A Dider Farm, El 96.20 44 PFAKE 08 15 20.0 +12
E08A LR LR
comp=Z,1μm,20.0s
G08A Pilot Rock 96.21 45 PFAKE 08 15 20.0 +12
G08A LR LR
comp=Z,2μm,20.0s
MWC Mount Wilson 96.28 56 PFAKE 08 15 20.0 +11
MWC LR LR
comp=Z,2μm,20.0s
WVOR Wild Horse Val 96.29 48 PFAKE 08 15 20.0 +12
WVOR LR LR
comp=Z,3μm,20.0s
D08A Wollman Farm, 96.32 43 PFAKE 08 15 20.0 +12
D08A LR LR
comp=Z,1μm,22.0s
NVAR Mina Array Bea 96.33 52 P P 08 15 09.3 +0.6
comp=Z,1.4nm,0.7s,baz=249,slow=6.1,SNR=14
NVAR PKiKP PKiKP 08 19 48.2 +1.5
comp=Z,0.4nm,0.6s,baz=251,slow=2.8,SNR=3.6
NV11 Mina Array Sit 96.44 52 *e*P P 08 15 08.5 -0.7
comp=Z,0.5nm,1.2s
NV11 LR LR
comp=Z,100nm,19.0s
J08A Circle Bar Ran 96.46 47 PFAKE 08 15 20.0 +11
J08A LR LR
comp=Z,2μm,20.0s
KVN Kaiserville 96.52 51 PFAKE 08 15 20.0 +10
KVN LR LR
comp=Z,2μm,21.0s
DAC Darwin (Calif) 96.78 54 PFAKE 08 15 20.0 +9.2
DAC LR LR
comp=Z,4μm,20.0s
C09A Chrisman Ranch 96.79 43 PFAKE 08 15 20.0 +10
C09A LR LR
comp=Z,1μm,20.0s
E09A Wood Farm, Sta 96.83 44 PFAKE 08 15 20.0 +9.5
E09A LR LR
comp=Z,1μm,18.0s
CPE Camp Elliot 97.00 58 PFAKE 08 15 20.0 +8.4
CPE LR LR
comp=Z,4μm,20.0s
BMN Battle Mountai 97.26 50 PFAKE 08 15 20.0 +7.0
BMN LR LR
comp=Z,2μm,20.0s
BAR Barrett 97.35 58 PFAKE 08 15 20.0 +6.7
BAR LR LR
comp=Z,4μm,20.0s
BMO Blue Mountains 97.36 46 PFAKE 08 15 20.0 +6.8
BMO LR LR
comp=Z,2μm,20.0s
GSC Goldstone, Bar 97.37 55 PFAKE 08 15 20.0 +6.6
GSC LR LR
comp=Z,2μm,20.0s
F10A Beach Ranch, E 97.45 45 PFAKE 08 15 20.0 +6.4
F10A LR LR
comp=Z,2μm,21.0s
PFO Pinyon Flats O 97.57 57 PFAKE 08 15 30.0 +16
PFO LR LR
comp=Z,4μm,20.0s
NEW Newport 97.58 42 PFAKE 08 15 30.0 +16
NEW LR LR
comp=Z,2μm,19.0s
TPNV Topopah Spring 97.89 54 PFAKE 08 15 30.0 +14
TPNV LR LR
comp=Z,2μm,19.0s
PLID Pearl Lake 98.29 45 PFAKE 08 15 30.0 +12
PLID LR LR
comp=Z,2μm,22.0s
R11A Troy Canyon, C 98.46 52 PFAKE 08 15 30.0 +12
R11A LR LR
comp=Z,2μm,18.0s
LDFC Landfair 98.75 56 PFAKE 08 15 30.0 +10
LDFC LR LR
comp=Z,2μm,20.0s
SHPR Sheep Range 98.75 54 PFAKE 08 15 30.0 +10
SHPR LR LR
comp=Z,2μm,19.0s
ELK Elko 98.78 50 PFAKE 08 15 30.0 +10
ELK LR LR
comp=Z,2μm,20.0s
YKW3 Yellowknife Ar 98.80 28 PFAKE 08 15 30.0 +11
YKW3 LR LR
comp=Z,2μm,21.0s
YKA Yellowknife Ar 98.81 28 P Pdif 08 15 19.7 +0.7
comp=Z,0.5nm,0.7s,baz=277,slow=4.4,SNR=6.8
YKA PKiKP PKiKP 08 19 50.7 +0.7
comp=Z,0.7nm,0.6s,baz=269,slow=1.4,SNR=9.0
YKA PKKPbc PKKPbc 08 31 45.6 -3.6
comp=Z,0.5nm,0.8s,baz=89,slow=2.9,SNR=7.3
GLA Glamis 98.92 58 PFAKE 08 15 30.0 +10
GLA LR LR
comp=Z,4μm,20.0s
Y12C Blythe 99.19 57 PFAKE 08 15 30.0 +8.5
Y12C LR LR
comp=Z,3μm,20.0s
HLID Hailey 99.42 47 PFAKE 08 15 30.0 +7.5
HLID LR LR
comp=Z,2μm,22.0s
WALA Waterton Lakes 99.70 41 PFAKE 08 15 40.0 +16
WALA LR LR
comp=Z,2μm,22.0s
MSO Missoula 99.73 44 PFAKE 08 15 40.0 +16
MSO LR LR
comp=Z,1μm,22.0s
W13A Hualapai Mount 99.75 56 PFAKE 08 15 40.0 +16
W13A LR LR
comp=Z,2μm,22.0s
SNAA Sanae 99.78 189 P Pdif 08 15 23.5 +0.1
SNAA Sanae 99.78 189 P Pdif 08 15 23.1 -0.3
comp=Z,5.9nm,1.1s,baz=117,slow=4.7,SNR=8.1
SNAA Sanae 99.78 189 PFAKE 08 15 40.0 +17
SNAA LR LR
comp=Z,4μm,19.0s
SNAA Sanae 99.78 189 *i*P Pdif 08 15 22.2 -1.2
113A Mohawk Valley, 99.80 58 PFAKE 08 15 40.0 +16
113A LR LR
comp=Z,3μm,20.0s
Y14A Wickenburg 100.46 57 PFAKE 08 15 40.0 +13
Y14A LR LR
comp=Z,3μm,20.0s
DUG Dugway, Tooele 100.63 50 PFAKE 08 15 40.0 +12
DUG LR LR
comp=Z,2μm,20.0s
DLMT Dillon 100.69 45 PFAKE 08 15 40.0 +12
DLMT LR LR
comp=Z,2μm,20.0s
U15A North Rim 101.06 54 PFAKE 08 15 40.0 +10
U15A LR LR
comp=Z,1μm,19.0s
VNA2 Neumayer--Watz 101.11 188 P Pdif 08 15 30.2 +0.9
baz=173,slow=1.8
BOZ Bozeman (W) 101.37 45 PFAKE 08 15 40.0 +8.9
BOZ LR LR
comp=Z,1μm,20.0s
VNA1 Neumayer--Stat 101.48 188 P Pdif 08 15 30.9 +0.1
HWUT Hardware Ranch 101.55 49 PFAKE 08 15 40.0 +8.0
HWUT LR LR
comp=Z,900nm,19.0s
WUAZ Wupatki 101.81 55 PFAKE 08 15 40.0 +6.7
WUAZ LR LR
comp=Z,2μm,20.0s
AHID Auburn Hatcher 101.86 48 PFAKE 08 15 40.0 +6.6
AHID LR LR
comp=Z,3μm,18.0s
IMW Indian Meadow 101.93 47 PFAKE 08 15 50.0 +16
IMW LR LR
comp=Z,2μm,20.0s
TPAW Teton Pass 101.94 47 PFAKE 08 15 50.0 +16
TPAW LR LR
comp=Z,2μm,18.0s
REDW Red Top Meadow 102.02 47 PFAKE 08 15 50.0 +16
REDW LR LR
comp=Z,2μm,22.0s
MOOW Moose Ponds 102.08 47 PFAKE 08 15 50.0 +16
MOOW LR LR
comp=Z,2μm,20.0s
SNOW Snow King Moun 102.08 47 PFAKE 08 15 50.0 +16
SNOW LR LR
comp=Z,2μm,22.0s
FLWY Flagg Ranch 102.09 46 PFAKE 08 15 50.0 +16
FLWY LR LR
comp=Z,2μm,19.0s
HSIG 102.15 62 PFAKE 08 15 50.0 +15
HSIG LR LR
comp=Z,2μm,20.0s
H17A Grant Village 102.17 46 PFAKE 08 15 50.0 +15
H17A LR LR
comp=Z,3μm,20.0s
TUC Tucson 102.31 58 PFAKE 08 15 50.0 +15
TUC LR LR
comp=Z,3μm,21.0s
EGMT Eagleton 102.51 42 PFAKE 08 15 50.0 +14
EGMT LR LR
comp=Z,1μm,19.0s
X18A Snowflake 102.99 56 PFAKE 08 15 50.0 +11
X18A LR LR
comp=Z,3μm,20.0s
BW06 Boulder Array 102.99 48 PFAKE 08 15 50.0 +12
BW06 LR LR
comp=Z,2μm,20.0s
PDAR Pinedale Array 102.99 48 P Pdif 08 15 37.0 -1.5
comp=Z,0.3nm,0.6s,baz=186,slow=1.5,SNR=4.2
PDAR PKiKP PKiKP 08 19 57.5 -1.0
comp=Z,0.3nm,0.7s,baz=242,slow=1.9,SNR=2.4
RES Resolute Bay 103.04 14 PFAKE 08 15 50.0 +12
RES LR LR
comp=Z,1μm,22.0s
RLMT Red Lodge 103.06 45 PFAKE 08 15 50.0 +11
RLMT LR LR
comp=Z,1μm,18.0s
W18A Petrified Fore 103.15 56 PFAKE 08 15 50.0 +11
W18A LR LR
comp=Z,3μm,20.0s
319A Douglas 103.60 59 PFAKE 08 15 50.0 +8.7
319A LR LR
comp=Z,2μm,22.0s
PV14 Lion Creek, Pa 103.62 52 PFAKE 08 15 50.0 +8.6
PV14 LR LR
comp=Z,3μm,20.0s
PV21 Cone Mtn., Par 103.65 52 PFAKE 08 15 50.0 +8.5
PV21 LR LR
comp=Z,2μm,20.0s
PV19 Morning Glory 103.65 52 PFAKE 08 15 50.0 +8.5
PV19 LR LR
comp=Z,2μm,19.0s
PV20 West Nyswonger 103.66 52 PFAKE 08 15 50.0 +8.5
PV20 LR LR
comp=Z,2μm,20.0s
PV16 Nyswonger Mesa 103.70 52 PFAKE 08 15 50.0 +8.3
PV16 LR LR
comp=Z,2μm,20.0s
PV18 Skein Mesa, Pa 103.71 52 PFAKE 08 15 50.0 +8.2
PV18 LR LR
comp=Z,2μm,19.0s
PV03 Paradox Valley 103.76 52 PFAKE 08 15 50.0 +8.0
PV03 LR LR
comp=Z,2μm,20.0s
PV13 Radium Mtn., P 103.79 52 PFAKE 08 15 50.0 +7.9
PV13 LR LR
comp=Z,2μm,20.0s
PV12 Saucer Basin, 103.79 52 PFAKE 08 15 50.0 +7.9
PV12 LR LR
comp=Z,3μm,19.0s
PV07 Paradox Valley 103.91 52 PFAKE 08 15 50.0 +7.4
PV07 LR LR
comp=Z,2μm,20.0s
MVCO Mesa Verde 104.08 53 PFAKE 08 16 00.0 +17
MVCO LR LR
comp=Z,2μm,19.0s
O20A White River Ci 104.13 50 PFAKE 08 16 00.0 +16
O20A LR LR
comp=Z,1μm,20.0s
KBS Kingsbay 104.48 352 PFAKE 08 16 00.0 +16
KBS LR LR
comp=Z,600nm,19.0s
RAYN Ar Rayn 104.64 293 PFAKE 08 16 00.0 +14
RAYN LR LR
comp=Z,500nm,20.0s
RWWY Rawlins 104.80 49 PFAKE 08 16 00.0 +13
RWWY LR LR
comp=Z,2μm,19.0s
LVZ Lovozero 104.90 339 PFAKE 08 16 00.0 +14
LVZ LR LR
comp=Z,1μm,20.0s
LAO LASA Array 105.03 43 PFAKE 08 20 10.0 +8.1
LAO LR LR
comp=Z,2μm,20.0s
K22A Casper 105.23 48 PFAKE 08 20 10.0 +7.5
K22A LR LR
comp=Z,2μm,19.0s
S22A 4UR Ranch, Cre 105.38 53 PFAKE 08 20 10.0 +6.9
S22A LR LR
comp=Z,2μm,20.0s
DAMY Dhamar 105.42 283 PFAKE 08 20 20.0 +16
DAMY LR LR
comp=Z,600nm,20.0s
Y22D IRIS PASSCAL I 105.51 57 PFAKE 08 20 20.0 +17
Y22D LR LR
comp=Z,3μm,22.0s
AKH Akhalkalaki 105.67 311 PFAKE 08 20 20.0 +17
AKH LR LR
comp=Z,800nm,19.0s
N23A Red Feather La 105.82 49 PFAKE 08 20 20.0 +16
N23A LR LR
comp=Z,2μm,20.0s
TASM ASL Pad, Albuq 105.84 56 P PKiKP 08 20 03.2 -0.8
baz=273
ANMO Albuquerque 105.85 56 PKiKP PKiKP 08 20 02.3 -1.6
comp=Z,0.3nm,0.3s,baz=243,slow=2.3,SNR=3.4
ANMO Albuquerque 105.85 56 PFAKE 08 20 20.0 +16
ANMO LR LR
comp=Z,2μm,20.0s
KIV Kislovodsk 106.00 314 PFAKE 08 20 20.0 +16
KIV LR LR
comp=Z,500nm,21.0s
PHWY Pilot Hill 106.15 49 PFAKE 08 20 20.0 +16
PHWY LR LR
comp=Z,2μm,20.0s

DGMT	**Dagmar**	**106.16**	**41**	PFAKE		08 20 20.0	+16
DGMT				LR	LR			
	comp=Z,1µm,19.0s							
ISCO	**Idaho Springs**	**106.17**	**51**	PFAKE		08 20 20.0	+15
ISCO				LR	LR			
	comp=Z,2µm,19.0s							
FFC	**Flin Flon**	**106.39**	**35**	PFAKE		08 20 20.0	+16
FFC				LR	LR			
	comp=Z,2µm,18.0s							
SDCO	**Great Sand Dun**	**106.43**	**53**	PFAKE		08 20 20.0	+15
SDCO				LR	LR			
	comp=Z,2µm,19.0s							
Q24A	**Divide**	**106.60**	**51**	PFAKE		08 20 20.0	+15
Q24A				LR	LR			
	comp=Z,2µm,20.0s							
HPIG		**106.83**	**64**	PFAKE		08 20 20.0	+14
HPIG				LR	LR			
	comp=Z,5µm,20.0s							
RSSD	**Black Hills**	**106.87**	**46**	PFAKE		08 20 20.0	+14
RSSD				LR	LR			
	comp=Z,2µm,20.0s							
MNTX	**Cornudas Mount**	**106.92**	**59**	PFAKE		08 20 20.0	+14
MNTX				LR	LR			
	comp=Z,2µm,20.0s							
MNTX	**Cornudas Mount**	**106.92**	**59**	P	**PKiKP**	**08 20 05.5**	**-0.3**
	baz=273							
TULEG	**Thule**	**107.08**	**9**	PFAKE		08 20 20.0	+15
TULEG				LR	LR			
	comp=Z,2µm,22.0s							
ARCES	**ARCESS Array B**	**107.24**	**342**	PKiKP	**PKiKP**	**08 20 05.5**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=27,slow=0.4,SNR=4.3							
T25A	**Trinidad**	**107.35**	**53**	PFAKE		08 20 20.0	+13
T25A				LR	LR			
	comp=Z,1µm,21.0s							
OBN	**Obninsk**	**107.88**	**326**	PFAKE		08 20 20.0	+13
OBN				LR	LR			
	comp=Z,1µm,20.0s							
TXAR	**Lajitas Array**	**108.51**	**61**	PKiKP	**PKiKP**	**08 20 09.4**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=329,slow=1.1,SNR=8.1							
TXAR				PKKPbc	**PKKPbc**	**08 31 17.8**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=131,slow=3.6,SNR=2.6							
OGNE	**Ogallala**	**108.76**	**49**	PFAKE		08 20 20.0	+11
OGNE				LR	LR			
	comp=Z,1µm,20.0s							
MSTX	**Muleshoe**	**108.95**	**56**	PFAKE		08 20 20.0	+10
MSTX				LR	LR			
	comp=Z,2µm,21.0s							
MDND	**Maddock**	**109.29**	**42**	PFAKE		08 20 20.0	+10
MDND				LR	LR			
	comp=Z,1µm,20.0s							
ZAIG	**Zacatecas**	**109.74**	**68**	PFAKE		08 20 20.0	+8.4
ZAIG				LR	LR			
	comp=Z,3µm,20.0s							
AMTX	**Amarillo**	**109.77**	**55**	PFAKE		08 20 20.0	+8.9
AMTX				LR	LR			
	comp=Z,2µm,20.0s							
FURI	**Furi**	**110.70**	**277**	PFAKE		08 20 30.0	+16
FURI				LR	LR			
	comp=Z,600nm,20.0s							
CBKS	**Cedar Bluff**	**110.81**	**51**	PFAKE		08 20 20.0	+7.1
CBKS				LR	LR			
	comp=Z,2µm,20.0s							
FINES	**FINESS Array B**	**110.84**	**334**	PKiKP	**PKiKP**	**08 20 12.1**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=93,slow=3.8,SNR=5.3							
ULM	**Lac du Bonnet**	**111.09**	**38**	PFAKE		08 20 20.0	+7.0
ULM				LR	LR			
	comp=Z,2µm,20.0s							
KMBO	**Kilima Mbogo**	**111.17**	**266**	PFAKE		08 20 30.0	+15
KMBO				LR	LR			
	comp=Z,600nm,21.0s							
BGNE	**Belgrade**	**111.58**	**48**	PFAKE		08 20 30.0	+16
BGNE				LR	LR			
	comp=Z,2µm,20.0s							
NAI	**Nairobi**	**111.59**	**266**	PFAKE		08 20 30.0	+15
NAI				LR	LR			
	comp=Z,800nm,22.0s							
AGMN	**Agassiz Nation**	**111.62**	**40**	PFAKE		08 20 30.0	+16
AGMN				LR	LR			
	comp=Z,1µm,19.0s							
ABTX	**Abilene, Hawle**	**111.69**	**58**	PFAKE		08 20 30.0	+15
ABTX				LR	LR			
	comp=Z,1µm,18.0s							
ABTX	**Abilene, Hawle**	**111.69**	**58**	P	**PKiKP**	**08 20 15.0**	**+0.3**
	baz=276							
U32A	**Winter Ranch,**	**111.75**	**54**	PFAKE		08 20 30.0	+15
U32A				LR	LR			
	comp=Z,2µm,21.0s							
JCT	**Junction City**	**111.78**	**60**	PFAKE		08 20 30.0	+15
JCT				LR	LR			
	comp=Z,3µm,22.0s							
JCT	**Junction City**	**111.78**	**60**	P	**PKiKP**	**08 20 14.3**	**-0.7**
	baz=275							
WMOK	**Wichita Mounta**	**112.15**	**55**	PFAKE		08 20 30.0	+14
WMOK				LR	LR			
	comp=Z,2µm,20.0s							
WMOK	**Wichita Mounta**	**112.15**	**55**	P	**PKiKP**	**08 20 15.0**	**-0.6**
	baz=278							
ECSD	**EROS Data Cent**	**112.22**	**45**	PFAKE		08 20 30.0	+15
ECSD				LR	LR			
	comp=Z,2µm,20.0s							
ECSD	**EROS Data Cent**	**112.22**	**45**	P	**PKiKP**	**08 20 15.0**	**-0.4**
	baz=283							
833A	**Chaparral WMA,**	**112.32**	**62**	PFAKE		08 20 30.0	+14
833A				LR	LR			
	comp=Z,3µm,22.0s							
LNIG	**Linares**	**112.49**	**66**	PFAKE		08 20 30.0	+14
LNIG				LR	LR			
	comp=Z,4µm,19.0s							
KSU1	**Kansas State U**	**113.17**	**50**	PFAKE		08 20 30.0	+13
KSU1				LR	LR			
	comp=Z,2µm,20.0s							
AKASG	**Malin Array Be**	**113.42**	**323**	PKiKP	**PKiKP**	**08 20 15.3**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=50,slow=2.1,SNR=4.0							
TLIG	**Tlapa**	**113.58**	**74**	PFAKE		08 20 30.0	+11
TLIG				LR	LR			
	comp=Z,3µm,20.0s							
WHTX	**Lake Whitney,**	**113.61**	**58**	PFAKE		08 20 30.0	+12
WHTX				LR	LR			
	comp=Z,2µm,22.0s							
KVTX	**Kingsville**	**113.71**	**63**	PFAKE		08 20 30.0	+11
KVTX				LR	LR			
	comp=Z,2µm,20.0s							
SUMG	**Summit**	**113.83**	**2**	PFAKE		08 20 30.0	+12
SUMG				LR	LR			
	comp=Z,900nm,22.0s							
ANTO	**Ankara**	**113.94**	**311**	PFAKE		08 20 30.0	+11
ANTO				LR	LR			
	comp=Z,400nm,21.0s							
TUL1	**Leonard**	**114.39**	**54**	PFAKE		08 20 30.0	+10
TUL1				LR	LR			
	comp=Z,2µm,22.0s							
CSS	**Mathiatis**	**114.44**	**305**	PFAKE		08 20 30.0	+10
CSS				LR	LR			
	comp=Z,500nm,19.0s							
SPMN	**Marine on St.**	**114.48**	**43**	PFAKE		08 20 30.0	+10
SPMN				LR	LR			
	comp=Z,2µm,21.0s							
EYMN	**Ely**	**114.53**	**40**	PFAKE		08 20 30.0	+10
EYMN				LR	LR			
	comp=Z,2µm,20.0s							
KIS	**Kishinev**	**114.88**	**319**	*e*		08 30 10.0	
KIS				*e*LR	LR	09 05 50.0	
	comp=Z,900nm,22.0s							
F38A	**Pierce - Schro**	**114.89**	**42**	P	**PKiKP**	**08 20 19.9**	**-0.4**
	baz=288							
E38A	**The Farm, Brul**	**114.91**	**41**	PFAKE		08 20 30.0	+10
E38A				LR	LR			
	comp=Z,1µm,21.0s							
MDUB	**Mudurnu**	**115.00**	**312**	PFAKE		08 20 30.0	+9.1
MDUB				LR	LR			
	comp=Z,1µm,22.0s							
SCIA	**State Center**	**115.08**	**47**	PFAKE		08 20 30.0	+9.1
SCIA				LR	LR			
	comp=Z,1µm,20.0s							
HKT	**Hockley**	**115.25**	**60**	PFAKE		08 20 30.0	+8.6
HKT				LR	LR			
	comp=Z,4µm,20.0s							
F39A	**Loretta**	**115.54**	**42**	P	**PKiKP**	**08 20 21.1**	**-0.6**
	baz=288							
SUW	**Suwalki**	**115.55**	**328**	PFAKE		08 20 30.0	+8.6
SUW				LR	LR			
	comp=Z,1µm,20.0s							
LVIG	**Laguna Verde**	**115.56**	**71**	PFAKE		08 20 30.0	+7.6
LVIG				LR	LR			
	comp=Z,1µm,20.0s							
G39A	**Holcombe**	**115.57**	**43**	P	**PKiKP**	**08 20 20.9**	**-0.8**
	baz=288							
HHAR	**Hobbs**	**115.79**	**53**	PFAKE		08 20 30.0	+7.6
HHAR				LR	LR			
	comp=Z,2µm,20.0s							
SCO	**Scoresbysund**	**115.80**	**357**	PFAKE		08 20 30.0	+8.6
SCO				LR	LR			
	comp=Z,600nm,22.0s							
TIRR	**Tirgusor**	**115.93**	**317**	PFAKE		08 20 30.0	+7.6
TIRR				LR	LR			
	comp=Z,2µm,20.0s							
NATX	**Nacogdoches**	**115.99**	**58**	PFAKE		08 20 30.0	+7.1
NATX				LR	LR			
	comp=Z,2µm,22.0s							
ILULI	**Ilulissat**	**116.01**	**8**	PFAKE		08 20 30.0	+8.2
ILULI				LR	LR			
	comp=Z,1µm,19.0s							
C40A	**Isle Royale Na**	**116.02**	**39**	PFAKE		08 20 30.0	+7.5
C40A				LR	LR			
	comp=Z,2µm,20.0s							
F40A	**Park Falls**	**116.07**	**42**	P	**PKPdf**	**08 20 22.2**	**-0.5**
	baz=289							
W39A	**Magazine**	**116.13**	**54**	PFAKE		08 20 40.0	+17
W39A				LR	LR			
	comp=Z,2µm,21.0s							
W39A	**Magazine**	**116.13**	**54**	P	**PKPdf**	**08 20 22.8**	**-0.3**
	baz=281							
ETX06	**Route 59 and C**	**116.15**	**58**	PFAKE		08 20 40.0	+17
ETX06				LR	LR			
	comp=Z,800nm,21.0s							
G40A	**Rib Lake**	**116.22**	**42**	PFAKE		08 20 30.0	+7.0
G40A				LR	LR			
	comp=Z,2µm,20.0s							
G40A	**Rib Lake**	**116.22**	**42**	P	**PKiKP**	**08 20 23.5**	**+0.5**
	baz=289							
MIAR	**Mount Ida**	**116.42**	**55**	PFAKE		08 20 40.0	+16
MIAR				LR	LR			
	comp=Z,2µm,20.0s							
MIAR	**Mount Ida**	**116.42**	**55**	P	**PKiKP**	**08 20 24.1**	**+0.5**
	baz=281							
L40A	**Anamosa**	**116.47**	**46**	PFAKE		08 20 40.0	+16
L40A				LR	LR			
	comp=Z,2µm,20.0s							
L40A	**Anamosa**	**116.47**	**46**	P	**PKPdf**	**08 20 23.1**	**-0.5**
	baz=286							
U40A	**Yellville**	**116.64**	**53**	P	**PKPdf**	**08 20 23.2**	**-0.9**
	baz=282							
COWI	**Conover**	**116.66**	**41**	PFAKE		08 20 40.0	+16
COWI				LR	LR			
	comp=Z,1µm,21.0s							
D41A	**Chassel**	**116.69**	**40**	PFAKE		08 20 40.0	+16
D41A				LR	LR			
	comp=Z,2µm,21.0s							
I41A	**Arkdale**	**116.83**	**44**	PFAKE		08 20 40.0	+16
I41A				LR	LR			
	comp=Z,2µm,19.0s							
JFWS	**Jewell Farm**	**116.92**	**45**	PFAKE		08 20 40.0	+16
JFWS				LR	LR			
	comp=Z,2µm,19.0s							
JFWS	**Jewell Farm**	**116.92**	**45**	P	**PKPdf**	**08 20 23.8**	**-0.6**
	baz=287							
WLAR	**White Oak Lake**	**116.95**	**56**	PFAKE		08 20 40.0	+15
WLAR				LR	LR			
	comp=Z,2µm,19.0s							
X40A	**Basin Creek Fa**	**117.03**	**55**	PFAKE		08 20 40.0	+15
X40A				LR	LR			
	comp=Z,2µm,20.0s							
NB2	**NORSAR Subarra**	**117.03**	**338**	PKPdf	**PKPdf**	**08 20 23.3**	**-0.8**
	comp=Z,3.0nm,1.1s,baz=44,slow=1.9							
NOA	**NORSAR Array B**	**117.03**	**338**	PKP	**PKPdf**	**08 20 22.4**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=52,slow=2.0,SNR=4.4							
N41A	**Harden Midland**	**117.11**	**47**	PFAKE		08 20 40.0	+15
N41A				LR	LR			
	comp=Z,1µm,18.0s							
N41A	**Harden Midland**	**117.11**	**47**	P	**PKPdf**	**08 20 24.4**	**-0.4**
	baz=286							
LSZ	**Lusaka**	**117.23**	**249**	PFAKE		08 20 40.0	+14
LSZ				LR	LR			
	comp=Z,900nm,18.0s							
MLR	**Muntele Rosu**	**117.25**	**318**	PKP	**PKPdf**	**08 20 24.4**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=108,slow=9.6,SNR=3.2							
MLR	**Muntele Rosu**	**117.25**	**318**	PFAKE		08 20 40.0	+15
MLR				LR	LR			
	comp=Z,800nm,20.0s							
Z41A	**Richland Creek**	**117.29**	**56**	PFAKE		08 20 40.0	+15
Z41A				LR	LR			
	comp=Z,2µm,21.0s							
WHAR	**Wooly Hollow**	**117.31**	**54**	PFAKE		08 20 40.0	+15
WHAR				LR	LR			
	comp=Z,2µm,20.0s							
FCAR	**Ozark Folk Cen**	**117.31**	**53**	*e*PKPdf	**PKPdf**	**08 20 24.6**	**-0.7**
FCAR				LR	LR			
	comp=Z,2µm,20.0s							
W41B	**Gary Mavity, V**	**117.36**	**54**	PFAKE		08 20 40.0	+15
W41B				LR	LR			
	comp=Z,2µm,20.0s							
W41B	**Gary Mavity, V**	**117.36**	**54**	P	**PKPdf**	**08 20 24.4**	**-1.1**
	baz=282							
UALR	**University of**	**117.37**	**54**	PFAKE		08 20 40.0	+14
UALR				LR	LR			
	comp=Z,3µm,21.0s							
CCM	**Cathedral Cave**	**117.50**	**50**	*e*PKPdf	**PKPdf**	**08 20 24.8**	**-0.9**
CCM				LR	LR			
	comp=Z,2µm,20.0s							
CCM	**Cathedral Cave**	**117.50**	**50**	*e*PKIKP	**PKPdf**	**08 20 24.8**	**-0.9**
CCM				MLR	MLR			
	comp=Z,2µm,20.0s							
CCM	**Cathedral Cave**	**117.50**	**50**	P	**PKPdf**	**08 20 24.9**	**-0.7**
	baz=284							
I42A	**Draeger Farm,**	**117.54**	**44**	PFAKE		08 20 40.0	+14
I42A				LR	LR			
	comp=Z,1µm,19.0s							
I42A	**Draeger Farm,**	**117.54**	**44**	P	**PKPdf**	**08 20 25.2**	**-0.3**
	baz=289							
L42A	**Oliver, Polo**	**117.60**	**46**	PFAKE		08 20 40.0	+14
L42A				LR	LR			
	comp=Z,2µm,21.0s							
L42A	**Oliver, Polo**	**117.60**	**46**	P	**PKPdf**	**08 20 24.9**	**-0.8**
	baz=287							
MBAR	**Mbarara**	**117.69**	**266**	PFAKE		08 20 40.0	+13
MBAR				LR	LR			
	comp=Z,600nm,21.0s							
KWP	**Kalwaria Pacla**	**117.71**	**324**	PFAKE		08 20 40.0	+14
KWP				LR	LR			
	comp=Z,10µm,19.0s							
E43A	**Lone Tree Farm**	**117.95**	**40**	PFAKE		08 20 40.0	+14
E43A				LR	LR			
	comp=Z,1µm,20.0s							
CCAR	**Cane Creek**	**118.01**	**55**	PFAKE		08 20 40.0	+13
CCAR				LR	LR			
	comp=Z,2µm,19.0s							
H43A	**Windswept, Lux**	**118.12**	**43**	PFAKE		08 20 40.0	+13
H43A				LR	LR			
	comp=Z,2µm,20.0s							
SFJD	**Kangerlussuaq**	**118.15**	**8**	PFAKE		08 20 40.0	+14
SFJD				LR	LR			
	comp=Z,2µm,22.0s							
KOLS	**Kolonicke sedl**	**118.26**	**323**	*e*PKIKP	**PKiKP**	**08 20 27.8**	**+1.0**
KOLS	**Kolonicke sedl**	**118.26**	**323**	*e*PKP	**PKiKP**	**08 20 27.8**	**+1.0**
M43A	**Waltham Townsh**	**118.27**	**46**	P	**PKPdf**	**08 20 26.4**	**-0.6**
	baz=288							
HDIL	**Hopedale**	**118.29**	**47**	PFAKE		08 20 40.0	+13
HDIL				LR	LR			
	comp=Z,2µm,20.0s							
K43A	**Burlington**	**118.32**	**45**	PFAKE		08 20 40.0	+13
K43A				LR	LR			
	comp=Z,1µm,21.0s							
P43A	**Skaggs, Pawnee**	**118.38**	**48**	P	**PKiKP**	**08 20 27.4**	**+0.1**
	baz=286							
PBMO	**Poplar Bluff**	**118.44**	**52**	PFAKE		08 20 40.0	+12
PBMO				LR	LR			
	comp=Z,2µm,20.0s							
E44A	**Grand Marais A**	**118.54**	**40**	PFAKE		08 20 40.0	+13
E44A				LR	LR			
	comp=Z,1µm,20.0s							
HBAR	**Harrisburg**	**118.55**	**53**	PFAKE		08 20 40.0	+12
HBAR				LR	LR			
	comp=Z,1µm,20.0s							
KONO	**Kongsberg**	**118.56**	**338**	PFAKE		08 20 40.0	+13
KONO				LR	LR			
	comp=Z,600nm,20.0s							
X43A	**Marvell**	**118.60**	**54**	PFAKE		08 20 40.0	+12
X43A				LR	LR			
	comp=Z,2µm,20.0s							
X43A	**Marvell**	**118.60**	**54**	P	**PKiKP**	**08 20 28.0**	**+0.1**
	baz=283							
ALN	**Alexandroupoli**	**118.66**	**313**	PFAKE		08 20 40.0	+12
ALN				LR	LR			
	comp=Z,200nm,20.0s							
M44A	**Midewin, Midew**	**118.94**	**46**	PFAKE		08 20 40.0	+12
M44A				LR	LR			
	comp=Z,1µm,21.0s							
M44A	**Midewin, Midew**	**118.94**	**46**	P	**PKPdf**	**08 20 28.0**	**-0.3**
	baz=288							
GNAR	**Gosnell**	**118.96**	**52**	PFAKE		08 20 40.0	+11
GNAR				LR	LR			
	comp=Z,2µm,21.0s							
PARMO	**Parma**	**119.00**	**52**	PFAKE		08 20 40.0	+11
PARMO				LR	LR			
	comp=Z,2µm,20.0s							
O44A	**Mansfield**	**119.01**	**47**	P	**PKPdf**	**08 20 27.6**	**-0.9**
	baz=287							
PVMO	**Portageville**	**119.10**	**52**	PFAKE		08 20 40.0	+11
PVMO				LR	LR			
	comp=Z,2µm,20.0s							
S44A	**Carbondale**	**119.11**	**50**	P	**PKPdf**	**08 20 28.1**	**-0.6**
	baz=286							
MET	**Memphis--Engin**	**119.22**	**53**	PFAKE		08 20 40.0	+11
MET				LR	LR			
	comp=Z,2µm,21.0s							
I45A	**Fountain**	**119.30**	**43**	PFAKE		08 20 40.0	+11
I45A				LR	LR			
	comp=Z,2µm,20.0s							
I45A	**Fountain**	**119.30**	**43**	P	**PKiKP**	**08 20 29.2**	**+0.2**
	baz=291							
G45A	**Suttons Bay**	**119.32**	**41**	PFAKE		08 20 40.0	+11
G45A				LR	LR			
	comp=Z,1µm,20.0s							
VBMS	**Vicksburg**	**119.38**	**57**	PFAKE		08 20 40.0	+11
VBMS				LR	LR			
	comp=Z,1µm,20.0s							
J45A	**Montague**	**119.41**	**43**	PFAKE		08 20 40.0	+11
J45A				LR	LR			
	comp=Z,1µm,19.0s							
GLAT	**Glass**	**119.46**	**52**	PFAKE		08 20 40.0	+10
GLAT				LR	LR			
	comp=Z,2µm,20.0s							
HALT	**Halls**	**119.50**	**52**	PFAKE		08 20 40.0	+10
HALT				LR	LR			
	comp=Z,1µm,20.0s							
Q45A	**Warren Harvey,**	**119.61**	**49**	P	**PKPdf**	**08 20 28.9**	**-0.8**
	baz=287							
D46A	**Sault St. Mari**	**119.62**	**39**	P	**PKPdf**	**08 20 29.1**	**-0.4**
	baz=295							
E46A	**Sault Ste Mari**	**119.67**	**40**	PFAKE		08 20 40.0	+10
E46A				LR	LR			
	comp=Z,2µm,20.0s							
E46A	**Sault Ste Mari**	**119.67**	**40**	P	**PKPdf**	**08 20 29.2**	**-0.4**
	baz=294							
R45A	**Skylar, Fairfi**	**119.69**	**49**	P	**PKPdf**	**08 20 29.1**	**-0.7**
	baz=287							
OLIL	**Olney**	**119.70**	**49**	PFAKE		08 20 40.0	+10
OLIL				LR	LR			
	comp=Z,1µm,19.0s							
P45A	**Graceland, Par**	**119.73**	**48**	PFAKE		08 20 40.0	+10
P45A				LR	LR			
	comp=Z,2µm,18.0s							
P45A	**Graceland, Par**	**119.73**	**48**	P	**PKPdf**	**08 20 29.2**	**-0.7**
	baz=288							
G46A	**Petoskey**	**119.73**	**41**	P	**PKPdf**	**08 20 28.8**	**-0.9**
	baz=293							
CCIG	**Comitan**	**119.75**	**75**	PFAKE		08 20 40.0	+9.2
CCIG				LR	LR			
	comp=Z,2µm,22.0s							
T45A	**Paducah**	**119.76**	**51**	PFAKE		08 20 40.0	+10
T45A				LR	LR			
	comp=Z,2µm,20.0s							
OXF	**Oxford**	**119.79**	**54**	PFAKE		08 20 40.0	+10
OXF				LR	LR			
	comp=Z,2µm,20.0s							
SFIN	**Lafayette**	**119.94**	**47**	PFAKE		08 20 40.0	+10
SFIN				LR	LR			
	comp=Z,2µm,19.0s							
L46A	**Eue Claire**	**119.97**	**45**	PFAKE		08 20 40.0	+10
L46A				LR	LR			
	comp=Z,2µm,20.0s							
N46A	**Monticello**	**120.03**	**46**	P	**PKPdf**	**08 20 29.7**	**-0.8**
	baz=289							
GLMI	**Grayling**	**120.08**	**41**	PFAKE		08 20 40.0	+9.5
GLMI				LR	LR			
	comp=Z,1µm,20.0s							
VTS	**Vitosha**	**120.08**	**316**	PFAKE		08 20 40.0	+9.2
VTS				LR	LR			
	comp=Z,600nm,21.0s							
K46A	**Dorr**	**120.09**	**44**	P	**PKPdf**	**08 20 29.5**	**-1.0**
	baz=291							
PSZ	**Piszkesteto**	**120.13**	**323**	PFAKE		08 20 40.0	+9.4
PSZ				LR	LR			
	comp=Z,1µm,19.0s							
D47A	**Chapleau**	**120.13**	**38**	P	**PKPdf**	**08 20 29.1**	**-1.3**
	baz=296							
M46A	**Old House Fiel**	**120.14**	**45**	PFAKE		08 20 40.0	+9.3
M46A				LR	LR			
	comp=Z,1µm,20.0s							
RGN	**Rugen**	**120.22**	**332**	PFAKE		08 20 40.0	+10
RGN				LR	LR			
	comp=Z,1µm,21.0s							
USIN	**University of**	**120.25**	**50**	PFAKE		08 20 40.0	+9.0
USIN				LR	LR			
	comp=Z,2µm,20.0s							
OKC	**Ostrava-Krasne**	**120.25**	**325**	AMS	AMS	09 13 00.0	
	comp=Z,1µm,19.9s							
E47A	**Iron Bridge**	**120.28**	**39**	P	**PKPdf**	**08 20 29.8**	**-1.0**
	baz=295							
U46A	**Springville**	**120.30**	**52**	P	**PKPdf**	**08 20 30.1**	**-1.0**
	baz=286							
T46A	**Princeton**	**120.33**	**51**	P	**PKPdf**	**08 20 30.7**	**-0.4**
	baz=286							
G47A	**Hillman**	**120.44**	**41**	P	**PKPdf**	**08 20 30.9**	**-0.2**
	baz=294							
I47A	**Gladwin**	**120.47**	**42**	PFAKE		08 20 40.0	+8.7
I47A				LR	LR			
	comp=Z,2µm,21.0s							
I47A	**Gladwin**	**120.47**	**42**	P	**PKPdf**	**08 20 31.0**	**-0.1**
	baz=293							
V46A	**Holladay**	**120.49**	**52**	P	**PKPdf**	**08 20 30.4**	**-1.0**
	baz=285							
VYHS	**Vyhne**	**120.50**	**324**	*e*PKIKP	**PKiKP**	**08 20 31.5**	**+0.3**
VYHS	**Vyhne**	**120.50**	**324**	*e*PKP	**PKiKP**	**08 20 31.5**	**+0.3**
J47A	**Sunmer**	**120.55**	**43**	PFAKE		08 20 40.0	+8.5
J47A				LR	LR			
	comp=Z,1µm,20.0s							
J47A	**Sunmer**	**120.55**	**43**	P	**PKPdf**	**08 20 30.6**	**-0.7**
	baz=292							
MORC	**Moravsky Berou**	**120.62**	**325**	PFAKE		08 20 40.0	+8.5
MORC				LR	LR			
	comp=Z,1µm,20.0s							
WVT	**Waverly**	**120.63**	**52**	*e*PKPdf	**PKPdf**	**08 20 30.8**	**-0.9**
WVT				LR	LR			
	comp=Z,2µm,20.0s							
WVT	**Waverly**	**120.63**	**52**	*e*PKIKP	**PKPdf**	**08 20 30.8**	**-0.9**
WVT				MLR	MLR			
	comp=Z,2µm,20.0s							
WVT	**Waverly**	**120.63**	**52**	P	**PKPdf**	**08 20 30.6**	**-1.1**
	baz=286							
K47A	**Vermontville**	**120.64**	**44**	P	**PKPdf**	**08 20 30.5**	**-1.1**
	baz=292							
O47A	**Sheridan**	**120.66**	**47**	P	**PKPdf**	**08 20 30.5**	**-1.2**
	baz=289							
M47A	**Cromwell**	**120.67**	**45**	P	**PKPdf**	**08 20 30.9**	**-0.8**
	baz=290							
PLAL	**Pickwick Lake**	**120.74**	**53**	PFAKE		08 20 40.0	+7.9
PLAL				LR	LR			
	comp=Z,2µm,20.0s							
BLO	**Bloomington**	**120.74**	**48**	PFAKE		08 20 40.0	+8.0
BLO				LR	LR			
	comp=Z,1µm,18.0s							
L47A	**Sherwood**	**120.75**	**45**	P	**PKPdf**	**08 20 30.9**	**-0.9**
	baz=291							
PLCA	**Paso Flores**	**120.78**	**146**	PKP	**PKiKP**	**08 20 32.2**	**0.0**

baz=286
T47A Sharon Grove 120.95 51 PFAKE 08 20 40.0 +7.6
T47A LR LR
comp=Z,2μm,20.0s
T47A Sharon Grove 120.95 51 P **PKPdf 08 20 31.9 -0.4**
baz=287
F48A Evansville 120.96 40 P **PKPdf 08 20 31.5 -0.5**
baz=295
E48A Lockeyer 120.96 39 P **PKPdf 08 20 31.5 -0.6**
baz=296
OSTC Ostas 120.97 327 *ex* **SS 08 38 32.9 +2.4**
OSTC AMS AMS 09 10 50.0
comp=Z,1μm,27.2s
U47A Clarksville 120.97 51 P **PKPdf 08 20 31.8 -0.6**
baz=286
H48A Harrisville 120.98 41 PFAKE 08 20 40.0 +7.8
H48A LR LR
comp=Z,2μm,20.0s
H48A Harrisville 120.98 41 P **PKPdf 08 20 31.7 -0.5**
baz=294
R47A Wooly Knot Far 121.01 49 P **PKPdf 08 20 31.9 -0.5**
baz=288
DPC Dobruska-Polom 121.01 326 *e*SS SS 08 38 36.9 +5.7
DPC AMS AMS 09 10 40.0
comp=Z,1μm,23.3s
W47A Westpoint 121.05 53 P **PKPdf 08 20 31.4 -1.2**
baz=285
UPC Upice 121.10 327 *e*SS SS 08 38 42.7 +11
UPC AMS AMS 09 11 10.0
comp=Z,1μm,25.9s
D49A Beulah Townshi 121.11 38 P **PKPdf 08 20 31.5 -0.8**
baz=297
IDI Anoyia 121.12 307 PKP **PKPdf 08 20 31.2 -1.6**
comp=Z,3.4nm,0.7s,baz=27,slow=2.3,SNR=4.9
147A Livingston 121.14 56 PFAKE 08 20 40.0 +7.1
147A LR LR
comp=Z,2μm,19.0s
147A Livingston 121.14 56 P **PKPdf 08 20 32.1 -0.6**
baz=283
K48A Perry 121.19 43 P **PKPdf 08 20 32.3 -0.3**
baz=292
WCI Wyandotte Cave 121.20 49 *e*PKPdf **PKPdf 08 20 32.6 -0.1**
WCI LR LR
comp=Z,1μm,18.0s
WCI Wyandotte Cave 121.20 49 *e*PKIKP **PKPdf 08 20 32.7 -0.1**
WCI MLR MLR
comp=Z,1μm,18.0s
WCI Wyandotte Cave 121.20 49 P **PKPdf 08 20 32.2 -0.5**
baz=288
J48A Bridge Port 121.23 43 PFAKE 08 20 50.0 +17
J48A LR LR
comp=Z,1μm,20.0s
J48A Bridge Port 121.23 43 P **PKiKP 08 20 33.5 +0.8**
baz=293
M48A Edgerton 121.27 45 PFAKE 08 20 40.0 +7.1
M48A LR LR
comp=Z,2μm,20.0s
N48A Decatur 121.27 46 P **PKPdf 08 20 32.6 -0.2**
baz=290
L48A N Adams 121.30 44 P **PKPdf 08 20 32.4 -0.5**
baz=292
F49A Sandfield 121.35 39 P **PKPdf 08 20 32.4 -0.5**
baz=296
O48A Farmland 121.38 46 P **PKPdf 08 20 32.3 -0.7**
baz=290
Q48A North Vernon 121.40 48 P **PKPdf 08 20 32.7 -0.4**
baz=289
P48A Milroy 121.45 47 PFAKE 08 20 50.0 +17
P48A LR LR
comp=Z,1μm,20.0s
P48A Milroy 121.45 47 P **PKPdf 08 20 32.6 -0.6**
baz=289
T48A Bowling Green 121.46 50 P **PKPdf 08 20 32.7 -0.6**
baz=287
R48A Northridge Ran 121.47 49 P **PKPdf 08 20 33.0 -0.3**
baz=288
V48A Smith Brothers 121.52 52 PFAKE 08 20 50.0 +16
V48A LR LR
comp=Z,2μm,19.0s
V48A Smith Brothers 121.52 52 P **PKPdf 08 20 32.6 -0.8**
baz=286
U48A Cassie Pea, Po 121.53 51 P **PKPdf 08 20 32.6 -0.8**
baz=287
S48A Wiedeman Farm, 121.56 50 P **PKPdf 08 20 32.9 -0.6**
baz=288
W48A Pulaski 121.60 53 P **PKPdf 08 20 32.7 -1.0**
baz=286
I49A Point Hope 121.61 42 PFAKE 08 20 50.0 +16
I49A LR LR
comp=Z,2μm,20.0s
I49A Point Hope 121.61 42 P **PKPdf 08 20 32.8 -0.6**
baz=294
X48A Hartselle 121.69 53 PFAKE 08 20 50.0 +16
X48A LR LR
comp=Z,2μm,21.0s
X48A Hartselle 121.69 53 P **PKPdf 08 20 32.8 -1.0**
baz=285
L49A Milan 121.70 44 P **PKPdf 08 20 33.2 -0.4**
baz=292
AAM Ann Arbor 121.70 44 PFAKE 08 20 50.0 +16
AAM LR LR
comp=Z,1μm,20.0s
148A Greensboro 121.72 56 P **PKPdf 08 20 33.1 -0.8**
baz=284
Y48A Jasper 121.73 54 P **PKPdf 08 20 33.0 -0.9**
baz=285
MYIG Mrida 121.73 69 PFAKE 08 20 50.0 +16
MYIG LR LR
comp=Z,1μm,18.0s
M49A Liberty Center 121.79 45 P **PKPdf 08 20 33.0 -0.8**
baz=292
N49A Columbus Grove 121.84 45 PFAKE 08 20 50.0 +16
N49A LR LR
comp=Z,2μm,20.0s
N49A Columbus Grove 121.84 45 P **PKPdf 08 20 33.6 -0.4**
baz=291
PVCC Panska Ves 121.87 327 AMS AMS 09 18 20.0
comp=Z,800nm,16.5s
E50A Wahnapitae 121.87 38 P **PKPdf 08 20 33.2 -0.6**
baz=297
TOBO Tobermory, Bru 121.92 40 P **PKPdf 08 20 33.7 -0.2**
baz=296
P49A Miami Univ. Ec 121.95 47 P **PKPdf 08 20 33.9 -0.3**
baz=290
Q49A Covington 122.00 46 PFAKE 08 20 50.0 +16
O49A LR LR
comp=Z,1μm,21.0s
O49A Covington 122.00 46 P **PKPdf 08 20 33.7 -0.5**
baz=291
BRG Berggiesshubel 122.01 328 *e*PKP **PKPdf 08 20 34.0 0.0**
comp=Z,4.4nm,1.0s
BRG *e* 08 20 48.2
comp=Z,11nm,1.3s
BRG PP **PP 08 22 11.0 +3.0**
BRG SS SS 08 38 56.0 +12
comp=N,865nm,21.5s
comp=E,708nm,17.3s
comp=Z,1μm,20.4s
BRG Berggiesshubel 122.01 328 *e*PKIKP **PKPdf 08 20 34.0 0.0**
BRG *e* 08 20 48.2
BRG 08 22 11.0
BRG SS SS 08 38 56.0 +12
BRG pmax pmax
comp=Z,4.0nm,1.0s
BRG pmax pmax
comp=Z,11nm,1.3s
BRG MLR MLR
comp=N,865nm,21.5s
BRG MLR MLR
comp=E,708nm,17.3s
BRG MLR MLR
comp=Z,1μm,20.4s
R49A Shelbyville 122.02 49 PFAKE 08 20 50.0 +15
R49A LR LR
comp=Z,1μm,20.0s
R49A Shelbyville 122.02 49 P **PKPdf 08 20 33.7 -0.7**
baz=289
MATQ Matagami 122.03 34 P **PKPdf 08 20 34.1 +0.1**
baz=302
FNA Florina 122.04 315 PFAKE 08 20 50.0 +15
FNA LR LR
comp=Z,500nm,21.0s
LRAL Lakeview Retre 122.09 55 PFAKE 08 20 50.0 +15
LRAL LR LR
comp=Z,1μm,19.0s
LRAL Lakeview Retre 122.09 55 P **PKPdf 08 20 34.2 -0.4**
baz=284,SNR=7.5

S49A Springfield 122.10 49 P **PKPdf 08 20 34.2 -0.3**
baz=288
U49A Red Boiling Sp 122.11 51 P **PKPdf 08 20 34.0 -0.6**
baz=287
T49A Edmonton 122.12 50 PFAKE 08 20 50.0 +15
T49A LR LR
comp=Z,3μm,21.0s
T49A Edmonton 122.12 50 P **PKPdf 08 20 34.0 -0.6**
baz=288
W49A Belvidere 122.13 52 P **PKPdf 08 20 33.8 -0.9**
baz=286
PRU Pruhonice 122.18 327 *e*SS SS 08 38 51.6 +5.7
PRU AMS AMS 09 11 50.0
comp=Z,1μm,22.6s
K50A Casco 122.22 43 PFAKE 08 20 50.0 +15
K50A LR LR
comp=Z,1μm,19.0s
V49A McMinnville 122.23 52 P **PKPdf 08 20 33.9 -1.0**
baz=287
249A Camden 122.24 56 P **PKPdf 08 20 34.4 -0.6**
baz=284,SNR=10
X49A Woodville 122.25 53 P **PKPdf 08 20 34.1 -0.8**
baz=286
CLL Collm 122.26 329 PFAKE 08 20 50.0 +15
CLL LR LR
comp=Z,2μm,20.0s
CLL Collm 122.26 329 *e*PKPdf **PKPdf 08 20 33.0 -1.4**
CLL *e* 08 20 41.0
CLL *e* 08 20 46.0
CLL *e*PP **PP 08 22 12.0 +2.4**
CLL *e*PPP PPP 08 24 48.0
CLL *e*SKKSac SKKSac 08 28 59.0 -7.8
CLL *e*Sdif **Sdif 08 30 02.0 -0.7**
CLL *e*SP **SP 08 31 54.0 -5.7**
CLL *e*PPS PPS 08 33 30.0
CLL *e*PPPrev 08 38 06.0
CLL *e*SS **SS 08 38 48.0 +1.2**
CLL *e*SSS SSS 08 43 18.0
CLL *e* 08 44 54.0
CLL *e*SSSS 08 46 48.0
CLL *e* 08 51 24.0
CLL LmH 09 14 00.0
comp=N,900nm,21.5s
CLL LmH 09 14 00.0
comp=E,1μm,21.6s
CLL LmV 09 16 00.0
comp=Z,2μm,19.9s
CLL Collm 122.26 329 *e*PKIKP **PKPdf 08 20 33.0 -1.4**
CLL *e* 08 20 41.0
CLL *e* 08 20 46.0
CLL MLR MLR
comp=Z,2μm,19.9s
349A Repton 122.33 57 P **PKPdf 08 20 34.8 -0.4**
baz=283,SNR=5.3
BASO Ashfield 122.34 41 P **PKPdf 08 20 34.5 -0.3**
baz=295
Y49A Blount Mountai 122.36 54 PFAKE 08 20 50.0 +15
Y49A LR LR
comp=Z,2μm,20.0s
Y49A Blount Mountai 122.36 54 P **PKPdf 08 20 34.5 -0.7**
baz=285,SNR=5.6
149A Jones 122.37 55 P **PKPdf 08 20 34.9 -0.2**
baz=284,SNR=11
SWET Sewanee 122.37 52 PFAKE 08 20 50.0 +15
SWET LR LR
comp=Z,2μm,20.0s
L50A Kingsville 122.38 44 P **PKPdf 08 20 34.3 -0.6**
baz=293
D51A Lot 18 Range I 122.38 37 P **PKPdf 08 20 34.5 -0.2**
baz=299
BMRO Meriville Lake 122.39 40 P **PKPdf 08 20 34.9 +0.1**
baz=296
Z49A Columbiana 122.43 55 P **PKPdf 08 20 34.9 -0.3**
baz=285,SNR=5.3
M50A Fremont 122.46 44 PFAKE 08 20 50.0 +15
M50A LR LR
comp=Z,2μm,20.0s
BRAL Brewton 122.49 57 PFAKE 08 20 50.0 +14
BRAL LR LR
comp=Z,1μm,21.0s
CONA Conrad Observa 122.51 324 PKPdf **PKPdf 08 20 34.5 -0.6**
comp=Z,2.9nm,0.6s
O50A Cable 122.52 46 P **PKPdf 08 20 35.0 -0.3**
baz=291
E51A G1948 Merrick 122.58 38 P **PKPdf 08 20 34.2 -0.9**
baz=299
P50A Jamestown 122.59 47 P **PKPdf 08 20 34.4 -1.0**
baz=291
F51A Arnstein 122.61 38 P **PKPdf 08 20 34.4 -0.8**
baz=298
N50A Nevada 122.63 45 P **PKPdf 08 20 34.7 -0.7**
baz=292
BWLO Walkerton 122.64 41 P **PKPdf 08 20 35.2 -0.2**
baz=296
R50A Paris 122.65 48 PFAKE 08 20 50.0 +14
R50A LR LR
comp=Z,2μm,19.0s
R50A Paris 122.65 48 P **PKPdf 08 20 34.4 -1.1**
baz=290
T50A Nancy 122.68 50 P **PKPdf 08 20 34.9 -0.7**
baz=288
KLBO Killbear Provi 122.68 39 P **PKPdf 08 20 34.6 -0.8**
baz=297
Q50A Georgetown 122.72 48 P **PKPdf 08 20 34.9 -0.8**
baz=290
LSQQ Lebel-sur-Quev 122.77 34 P **PKPdf 08 20 34.9 -0.5**
baz=302
S50A Richmond 122.80 49 P **PKPdf 08 20 35.4 -0.5**
baz=289
X50B Fort Payne 122.80 53 P **PKPdf 08 20 35.0 -1.0**
baz=286,SNR=9.3
I51A Listowel 122.85 41 P **PKPdf 08 20 35.3 -0.4**
baz=296
W50A Signal Mountai 122.86 52 PFAKE 08 20 50.0 +14
W50A LR LR
comp=Z,2μm,20.0s
W50A Signal Mountai 122.86 52 P **PKPdf 08 20 35.2 -0.9**
baz=287,SNR=10.0
U50A Jamestown 122.86 51 P **PKPdf 08 20 35.6 -0.4**
baz=288
TTG Podgorica 122.88 317 PFAKE 08 20 50.0 +14
TTG LR LR
comp=Z,600nm,22.0s
V50A Pikevile 122.89 51 P **PKPdf 08 20 35.3 -0.8**
baz=287
TIR Tirane 122.89 316 PFAKE 08 20 50.0 +14
TIR LR LR
comp=Z,600nm,20.0s
Y50A Piedmont 122.89 54 P **PKPdf 08 20 35.6 -0.6**
baz=286
Z50A Ashland 122.91 54 PFAKE 08 20 50.0 +14
Z50A LR LR
comp=Z,2μm,20.0s
Z50A Ashland 122.91 54 P **PKPdf 08 20 35.8 -0.4**
baz=285,SNR=9.0
ACSO Alum Creek Sta 122.95 46 PFAKE 08 20 50.0 +14
ACSO LR LR
comp=Z,1μm,22.0s
ACSO Alum Creek Sta 122.95 46 P **PKPdf 08 20 35.8 -0.3**
baz=292
250A Grady 122.95 56 PFAKE 08 20 50.0 +13
250A LR LR
comp=Z,2μm,21.0s
250A Grady 122.95 56 P **PKPdf 08 20 36.0 -0.3**
baz=284
K51A Iona Station 122.99 42 P **PKPdf 08 20 35.7 -0.3**
baz=295
150A Eclectic 122.99 55 P **PKPdf 08 20 36.1 -0.2**
baz=285,SNR=7.9
VLDQ Val d'Or 123.00 35 *e*PKPdf **PKPdf 08 20 34.4 -1.4**
VLDQ LR LR
comp=Z,1μm,21.0s
D52A ZEK Kipawa Sen 123.01 37 P **PKPdf 08 20 35.3 -0.7**
baz=300,SNR=7.4
350A Dozier 123.03 57 P **PKiKP 08 20 36.7 0.0**
baz=284,SNR=6.8
F52A Sundridge 123.03 38 P **PKPdf 08 20 35.6 -0.5**
baz=298
ARSA Arzberg 123.05 324 PKiKP **PKiKP 08 20 37.3 +1.0**
comp=Z,0.5nm,0.5s
M51A Elyria 123.09 44 P **PKPdf 08 20 35.7 -0.6**
baz=293
N51A Ashland 123.12 45 PFAKE 08 20 50.0 +13
N51A LR LR
comp=Z,1μm,18.0s
N51A Ashland 123.12 45 P **PKPdf 08 20 35.9 -0.5**
baz=293
Q51A Peebles 123.12 47 PFAKE 08 20 50.0 +13
Q51A LR LR
comp=Z,2μm,19.0s
Q51A Peebles 123.12 47 P **PKPdf 08 20 35.9 -0.6**
baz=291
BUKO Buck Lake 123.15 39 P **PKPdf 08 20 35.8 -0.5**
baz=298
P51A Williamsport 123.16 47 PFAKE 08 20 50.0 +13
P51A LR LR
comp=Z,1μm,20.0s
P51A Williamsport 123.16 47 P **PKPdf 08 20 35.6 -0.9**
baz=291
TEIG Tepich 123.17 70 PFAKE 08 20 50.0 +13
TEIG LR LR
comp=Z,1μm,20.0s
KHC Kasperske Hory 123.17 326 *e*PKPdf **PKPdf 08 20 36.2 -0.1**
KHC LR LR
comp=Z,600nm,21.0s
KHC Kasperske Hory 123.17 326 *e*PKIKP **PKPdf 08 20 36.2 -0.1**
KHC *e* 08 20 49.5
KHC MLR MLR
comp=Z,1μm,20.6s
KHC Kasperske Hory 123.17 326 *e*PKP **PKPdf 08 20 36.2 -0.1**
KHC *ex* x 08 20 49.5
KHC *ex* x 08 21 05.9
KHC *ex* x 08 39 08.3
KHC AMS AMS 09 14 40.0
comp=Z,1μm,20.6s
R51A Hillsboro 123.20 48 P **PKPdf 08 20 36.0 -0.6**
baz=290
E52A Mattawa 123.21 38 P **PKPdf 08 20 35.9 -0.5**
baz=299
H52A Wyevale 123.22 40 P **PKPdf 08 20 35.6 -0.9**
baz=297
BLY Banja Luka 123.23 320 PFAKE 08 20 50.0 +13
BLY LR LR
comp=Z,1μm,20.0s
O51A Pataskala 123.25 46 P **PKPdf 08 20 36.1 -0.5**
baz=292
GEC2 GERESS Array S 123.26 326 *e*PKPdf **PKPdf 08 20 36.6 +0.1**
GEC2 LR LR
comp=Z,1μm,22.0s
GEC2 GERESS Array S 123.26 326 *e*PKIKP **PKPdf 08 20 36.6 +0.1**
GEC2 MLR MLR
comp=Z,1μm,22.0s
GERES GERESS Array B 123.26 326 PKP **PKPdf 08 20 35.1 -1.5**
comp=Z,2.5nm,0.7s,baz=70,slow=1.6,SNR=16
GERES SKP 08 24 10.5
comp=Z,0.3nm,0.4s,baz=40,slow=2.3,SNR=3.5
W51A Cleveland 123.30 52 P **PKPdf 08 20 36.4 -0.5**
baz=287
T51A Gray 123.37 50 P **PKPdf 08 20 36.6 -0.4**
baz=289
D53A Lac Vacive, Po 123.38 36 PFAKE 08 20 50.0 +13
D53A LR LR
comp=Z,2μm,20.0s
D53A Lac Vacive, Po 123.38 36 P **PKPdf 08 20 36.0 -0.7**
baz=301
X51A Calhoun 123.40 53 PFAKE 08 20 50.0 +13
X51A LR LR
comp=Z,1μm,21.0s
CPCT Cooper Cave 123.40 52 PFAKE 08 20 50.0 +13
CPCT LR LR
comp=Z,2μm,19.0s
S51A Beattyville 123.41 49 PFAKE 08 20 50.0 +13
S51A LR LR
comp=Z,2μm,21.0s
S51A Beattyville 123.41 49 P **PKPdf 08 20 36.8 -0.3**
baz=290
Y51A Rockmart 123.42 53 P **PKPdf 08 20 36.3 -0.9**
baz=286
V51A Loudon 123.43 51 PFAKE 08 20 50.0 +13
V51A LR LR
comp=Z,3μm,20.0s
V51A Loudon 123.43 51 P **PKPdf 08 20 35.6 -1.5**
baz=288
J52A Paris 123.46 42 P **PKPdf 08 20 36.4 -0.6**
baz=296
MOA Molln 123.47 325 PKiKP **PKiKP 08 20 37.6 +0.5**
comp=Z,1.9nm,0.7s
Z51A Franklin 123.50 54 P **PKPdf 08 20 37.0 -0.4**
baz=286,SNR=6.7
U51A La Follette 123.50 50 P **PKPdf 08 20 37.1 -0.2**
baz=289
ACTO Acton 123.57 41 P **PKPdf 08 20 36.8 -0.3**
baz=296
M52A Chesterland 123.58 44 PFAKE 08 20 50.0 +13
M52A LR LR
comp=Z,2μm,20.0s
M52A Chesterland 123.58 44 P **PKPdf 08 20 37.2 -0.1**
baz=294
151A Opelika 123.58 55 P **PKPdf 08 20 37.4 -0.1**
baz=285,SNR=15
251A Midway 123.63 56 P **PKPdf 08 20 37.6 0.0**
baz=285,SNR=11
SOKA Soboth 123.63 323 *i* PKiKP **PKiKP 08 20 37.8 +0.3**
comp=Z,2.5nm,0.6s
SADO Sadowa 123.63 39 *e*PKPdf **PKiKP 08 20 37.7 +0.2**
SADO LR LR
comp=Z,3μm,21.0s
N52A McGinn's Farm, 123.64 45 P **PKPdf 08 20 37.1 -0.3**
baz=293
CHGQ Chibougamau 123.70 32 P **PKPdf 08 20 36.3 -0.9**
baz=305
451A Vernon 123.71 57 PFAKE 08 20 50.0 +12
451A LR LR
comp=Z,1μm,20.0s
ALGO Algonquin Park 123.74 38 P **PKPdf 08 20 37.0 -0.4**
baz=300
E53A Dumoine, Ponti 123.76 37 P **PKPdf 08 20 36.7 -0.7**
baz=300
P52A Corning 123.78 46 P **PKPdf 08 20 37.3 -0.3**
baz=292
I53A Kortright Cn E 123.78 41 P **PKPdf 08 20 36.9 -0.7**
baz=297
S52A Salyersville 123.78 49 P **PKPdf 08 20 37.2 -0.6**
baz=290
G53A Haliburton 123.79 39 P **PKPdf 08 20 37.1 -0.4**
baz=299,SNR=6.7
O52A Adamsville 123.80 45 PFAKE 08 20 50.0 +12
O52A LR LR
comp=Z,2μm,20.0s
O52A Adamsville 123.80 45 P **PKPdf 08 20 37.3 -0.4**
baz=293
TZTN Tazewell 123.81 50 PFAKE 08 20 50.0 +12
TZTN LR LR
comp=Z,2μm,20.0s
TZTN Tazewell 123.81 50 P **PKPdf 08 20 37.9 0.0**
baz=289
R52A Catlettsburg 123.88 48 P **PKPdf 08 20 36.4 -1.5**
baz=291
TYNO Tyneside 123.92 41 P **PKPdf 08 20 36.9 -0.9**
baz=296
Q52A Bidwell 123.93 47 P **PKPdf 08 20 37.0 -1.0**
baz=292
D54A Lac Fusel, La 123.96 36 P **PKPdf 08 20 36.7 -1.1**
baz=302,SNR=6.1
IVI Ivigtut 123.96 10 PFAKE 08 20 50.0 +12
IVI LR LR
comp=Z,1μm,22.0s
W52A Murphy 123.97 52 PFAKE 08 20 50.0 +11
W52A LR LR
comp=Z,3μm,20.0s
W52A Murphy 123.97 52 P **PKPdf 08 20 37.2 -1.1**
baz=288,SNR=7.1
U52A Thorn Hill 124.00 50 P **PKPdf 08 20 37.9 -0.3**
baz=289
V52A Sevierville 124.00 51 PFAKE 08 20 50.0 +11
V52A LR LR
comp=Z,2μm,20.0s
V52A Sevierville 124.00 51 P **PKPdf 08 20 38.0 -0.2**
baz=289,SNR=6.0
SCHQ Schefferville 124.01 24 PKP **PKPdf 08 20 37.3 -0.4**
comp=Z,3.4nm,0.6s,baz=291,slow=8.6,SNR=3.4
SCHQ Schefferville 124.01 24 PFAKE 08 20 50.0 +12
SCHQ LR LR
comp=Z,2μm,22.0s
E54A Lac Daplat, Po 124.02 37 P **PKPdf 08 20 37.2 -0.7**
baz=301,SNR=5.7
152A Waverly Hall 124.04 55 PFAKE 08 20 50.0 +11
152A LR LR
comp=Z,2μm,20.0s
152A Waverly Hall 124.04 55 P **PKPdf 08 20 37.9 -0.5**
baz=286,SNR=12
PKRO Pickering 124.05 40 P **PKPdf 08 20 37.7 -0.3**
baz=298

T52A	Hallie	124.05	49		PFAKE		08 20 50.0	+11
T52A					LR	LR		
	comp=Z,2μm,22.0s							
BOJS	Bojanci	124.08	322	*i*	PKPdf	PKPdf	08 20 37.9	-0.1
M53A	Wl Miller and	124.08	44		P	PKPdf	08 20 37.7	-0.5
	baz=294,SNR=5.8							
GRA1	Grafenberg Arr	124.12	328		PFAKE		08 20 50.0	+12
GRA1					LR	LR		
	comp=Z,2μm,19.0s							
452A	Marianna	124.12	57		P	PKPdf	08 20 38.5	-0.1
	baz=284							
GRFO	Grafenberg	124.12	328		PFAKE		08 20 50.0	+12
GRFO					LR	LR		
	comp=Z,1μm,20.0s							
Z52A	Williamson	124.14	54		P	PKPdf	08 20 38.1	-0.5
	baz=286,SNR=7.5							
X52A	Dahlonega	124.15	52		P	PKPdf	08 20 38.3	-0.3
	baz=288,SNR=12							
352A	Blakely	124.18	56		PFAKE		08 20 50.0	+11
352A					LR	LR		
	comp=Z,2μm,21.0s							
352A	Blakely	124.18	56		P	PKPdf	08 20 38.5	-0.2
	baz=285							
VISS	Visnje	124.18	322	*e*	PKPdf	PKPdf	08 20 38.3	0.0
O53A	New Philadelph	124.19	45		P	PKPdf	08 20 37.8	-0.7
	baz=293							
252A	Lumpkin	124.20	56		P	PKPdf	08 20 38.4	-0.3
	baz=285							
N53A	Lisbon	124.23	44		PFAKE		08 20 50.0	+11
N53A					LR	LR		
	comp=Z,1μm,20.0s							
N53A	Lisbon	124.23	44		P	PKPdf	08 20 38.5	0.0
	baz=294,SNR=9.5							
Y52A	Lilburn	124.23	53		PFAKE		08 20 50.0	+11
Y52A					LR	LR		
	comp=Z,2μm,21.0s							
Y52A	Lilburn	124.23	53		P	PKPdf	08 20 37.9	-0.8
	baz=287,SNR=10.0							
BANO	Bancroft	124.27	39		P	PKPdf	08 20 38.4	-0.1
	baz=299							
P53A	Whipple	124.36	46		PFAKE		08 20 50.0	+11
P53A					LR	LR		
	comp=Z,1μm,21.0s							
P53A	Whipple	124.36	46		P	PKPdf	08 20 38.4	-0.5
	baz=293,SNR=5.5							
PEMO	Pembroke	124.36	38		P	PKPdf	08 20 37.7	-0.8
	baz=300							
R53A	Hurricane	124.39	47		PFAKE		08 20 50.0	+11
R53A					LR	LR		
	comp=Z,2μm,19.0s							
R53A	Hurricane	124.39	47		P	PKPdf	08 20 38.0	-0.9
	baz=292							
KBA	Koelnbreinsper	124.41	324	*i*	PKPdf	PKPdf	08 20 37.7	-1.2
	comp=Z,3.9nm,1.0s							
NRS	Narsarsuaq	124.43	8		PFAKE		08 20 50.0	+11
NRS					LR	LR		
	comp=Z,2μm,22.0s							
T53A	Wise	124.43	49		P	PKPdf	08 20 39.0	-0.2
	baz=290							
S53A	Williamson	124.49	48		P	PKPdf	08 20 38.4	-0.8
	baz=291							
WLVO	Wesleyville	124.50	40		P	PKiKP	08 20 39.1	0.0
	baz=298							
Q53A	Leroy	124.50	47		P	PKPdf	08 20 38.4	-0.7
	baz=292							
TGUH	Tegucigalpa,Un	124.52	77		PFAKE		08 20 50.0	+10
TGUH					LR	LR		
	comp=Z,1μm,18.0s							
WIN	Windhoek	124.54	237		PFAKE		08 20 50.0	+10
WIN					LR	LR		
	comp=Z,3μm,20.0s							
W53A	Cullowhee	124.55	51		P	PKPdf	08 20 39.4	0.0
	baz=288,SNR=7.3							
JAVS	Javornik	124.61	323	*i*	PKPdf	PKiKP	08 20 39.5	0.0
U53A	Fall Branch	124.61	50		P	PKPdf	08 20 39.3	-0.1
	baz=290,SNR=7.9							
Y53A	Monroe	124.62	53		P	PKPdf	08 20 39.3	-0.1
	baz=287,SNR=6.5							
J54A	Appleton	124.64	41		PFAKE		08 20 50.0	+10
J54A					LR	LR		
	comp=Z,2μm,20.0s							
X53A	Estanollee	124.64	52		P	PKPdf	08 20 39.4	-0.1
	baz=288,SNR=5.8							
V53A	Saluda	124.66	51		PFAKE		08 20 50.0	+10
V53A					LR	LR		
	comp=Z,2μm,20.0s							
V53A	Saluda	124.66	51		P	PKPdf	08 20 38.6	-1.0
	baz=289,SNR=5.6							
L54A	Sinclairville	124.66	42		P	PKPdf	08 20 38.4	-0.9
	baz=296							
253A	Americus	124.68	55		PFAKE		08 20 50.0	+10
253A					LR	LR		
	comp=Z,1μm,20.0s							
253A	Americus	124.68	55		P	PKPdf	08 20 39.0	-0.6
	baz=286							
DELO	Deloro Mine	124.70	39		PFAKE		08 20 50.0	+10
DELO					LR	LR		
	comp=Z,2μm,22.0s							
DELO	Deloro Mine	124.70	39		P	PKPdf	08 20 38.9	-0.4
	baz=299							
M54A	Oil Creek Stat	124.75	43		PFAKE		08 20 50.0	+10
M54A					LR	LR		
	comp=Z,2μm,20.0s							
M54A	Oil Creek Stat	124.75	43		P	PKPdf	08 20 39.1	-0.4
	baz=296,SNR=5.0							
N54A	Moraine State	124.75	44		PFAKE		08 20 50.0	+10
N54A					LR	LR		
	comp=Z,2μm,21.0s							
N54A	Moraine State	124.75	44		P	PKPdf	08 20 39.0	-0.6
	baz=295							
PLVO	Plevna	124.78	38		PFAKE		08 20 50.0	+10
PLVO					LR	LR		
	comp=Z,2μm,20.0s							
PLVO	Plevna	124.78	38		P	PKPdf	08 20 38.7	-0.8
	baz=300							
Z53A	Monticello	124.79	54		P	PKPdf	08 20 39.8	0.0
	baz=287,SNR=6.7							
353A	Camilla	124.80	56		P	PKPdf	08 20 39.6	-0.3
	baz=285							
O54A	Avella	124.80	45		P	PKPdf	08 20 39.6	0.0
	baz=294,SNR=7.6							
MEDO	Medina	124.81	41		PFAKE		08 20 50.0	+10
MEDO					LR	LR		
	comp=Z,2μm,19.0s							
MEDO	Medina	124.81	41		P	PKPdf	08 20 38.4	-1.2
	baz=298							
GOGA	Godfrey	124.84	54		PFAKE		08 20 50.0	+10
GOGA					LR	LR		
	comp=Z,2μm,21.0s							
GOGA	Godfrey	124.84	54		P	PKPdf	08 20 39.6	-0.2
	baz=287,SNR=5.8							
453A	Whigham	124.84	57		PFAKE		08 20 50.0	+10
453A					LR	LR		
	comp=Z,1μm,20.0s							
453A	Whigham	124.84	57		P	PKPdf	08 20 39.6	-0.3
	baz=285							
G55A	Calabogie	124.90	38		P	PKPdf	08 20 39.2	-0.4
	baz=300,SNR=6.8							
K54A	Basiliko Farm,	124.91	41		P	PKPdf	08 20 39.4	-0.4
	baz=297							
Q54A	Coxs Mills	124.95	46		PFAKE		08 20 50.0	+10
Q54A					LR	LR		
	comp=Z,2μm,22.0s							
Q54A	Coxs Mills	124.95	46		P	PKPdf	08 20 39.0	-0.9
	baz=293,SNR=6.6							
H55A	Tweed	124.96	39		P	PKPdf	08 20 39.3	-0.4
	baz=300,SNR=5.2							
S54A	Dingess, Beckl	125.05	48		P	PKPdf	08 20 39.6	-0.7
	baz=292,SNR=5.5							
ABTA	Abfaltersbach	125.07	324	*i*	PKPdf	PKPdf	08 20 38.2	-1.9
	comp=Z,6.4nm,0.8s							
T54A	Tazewell	125.12	49		P	PKPdf	08 20 39.5	-1.0
	baz=291							
U54A	Nelsons Funny	125.13	49		PFAKE		08 20 50.0	+9.2
U54A					LR	LR		
	comp=Z,2μm,19.0s							
U54A	Nelsons Funny	125.13	49		P	PKPdf	08 20 39.6	-0.9
	baz=290							
R54A	Victor	125.15	47		P	PKPdf	08 20 39.5	-0.9
	baz=292							
J55A	Hilton	125.18	40		PFAKE		08 20 50.0	+9.4
J55A					LR	LR		
	comp=Z,2μm,19.0s							
J55A	Hilton	125.18	40		P	PKPdf	08 20 39.5	-0.7
	baz=298							
K55A	Perry	125.27	41		P	PKPdf	08 20 39.5	-1.0
	baz=298							
L55A	Hinsdale	125.27	42		P	PKPdf	08 20 40.2	-0.4
	baz=297,SNR=6.4							
V54A	Nebo	125.28	50		P	PKPdf	08 20 40.8	+0.1
	baz=290							
WTTA	Wattenberg	125.29	325	*i*	PKPdf	PKPdf	08 20 40.0	-0.6
	comp=Z,6.1nm,0.6s							
TIGA	Tifton	125.29	56		PFAKE		08 20 50.0	+8.8
TIGA					LR	LR		
	comp=Z,2μm,20.0s							
TIGA	Tifton	125.29	56		P	PKPdf	08 20 41.0	+0.2
	baz=286							
Y54A	Tignall	125.33	53		P	PKPdf	08 20 40.8	0.0
	baz=288,SNR=7.6							
W54A	Cherokee Point	125.33	51		P	PKPdf	08 20 40.7	-0.1
	baz=289							
X54A	Belton	125.36	52		P	PKPdf	08 20 40.2	-0.7
	baz=289							
154A	Montrose	125.36	54		PFAKE		08 20 50.0	+8.7
154A					LR	LR		
	comp=Z,2μm,20.0s							
154A	Montrose	125.36	54		P	PKPdf	08 20 40.2	-0.7
	baz=287							
MMNY	Mt. Morris Dam	125.37	41		PFAKE		08 20 50.0	+9.0
MMNY					LR	LR		
	comp=Z,2μm,20.0s							
M55A	Ridgway	125.37	43		P	PKPdf	08 20 39.7	-1.0
	baz=296							
PECO	Prince Edward	125.38	39		PFAKE		08 20 50.0	+9.0
PECO					LR	LR		
	comp=Z,3μm,20.0s							
PECO	Prince Edward	125.38	39		P	PKPdf	08 20 39.9	-0.7
	baz=299							
MCWV	Mont Chateau	125.39	45		PFAKE		08 20 50.0	+8.9
MCWV					LR	LR		
	comp=Z,1μm,20.0s							
MCWV	Mont Chateau	125.39	45		P	PKPdf	08 20 39.8	-0.9
	baz=294							
Z54A	Sparta	125.39	54		P	PKPdf	08 20 40.1	-0.8
	baz=288							
254A	Abbeville	125.40	55		P	PKPdf	08 20 40.5	-0.5
	baz=286							
ESTN	Estel	125.42	79		PFAKE		08 20 50.0	+8.0
ESTN					LR	LR		
	comp=Z,1μm,20.0s							
454A	Quitman	125.45	57		P	PKPdf	08 20 40.0	-1.1
	baz=285							
P55A	Reedsville	125.47	45		P	PKPdf	08 20 40.3	-0.6
	baz=294							
Q55A	Buckhannon	125.49	46		P	PKPdf	08 20 40.0	-1.0
	baz=294							
H56A	Elgin	125.51	38		P	PKPdf	08 20 39.8	-1.0
	baz=300							
TSUM	Tsumeb	125.51	241		PFAKE		08 20 50.0	+7.9
TSUM					LR	LR		
	comp=Z,2μm,22.0s							
N55A	Marion Center	125.52	44		PFAKE		08 20 50.0	+8.6
N55A					LR	LR		
	comp=Z,2μm,18.0s							
N55A	Marion Center	125.52	44		P	PKPdf	08 20 40.3	-0.7
	baz=296							
ORIO	Orleans, Innes	125.52	37		P	PKPdf	08 20 40.3	-0.5
	baz=302							
MOTA	Moosalm	125.54	326	*i*	PKPdf	PKPdf	08 20 40.2	-0.8
	comp=Z,6.4nm,0.8s							
O55A	Ligonier	125.54	44		P	PKPdf	08 20 40.6	-0.5
	baz=295							
SQTA	Sankt Quirin	125.55	326	*i*	PKPdf	PKPdf	08 20 39.7	-1.3
	comp=Z,1.8nm,0.4s							
554A	Perry	125.57	58		P	PKPdf	08 20 41.1	-0.2
	baz=285							
RETA	Reutte	125.65	326	*i*	PKiKP	PKiKP	08 20 41.8	+0.3
	comp=Z,3.8nm,1.0s							
S55A	Lewisburg	125.66	48		P	PKiKP	08 20 41.8	0.0
	baz=292							
T55A	Pulaski	125.69	48		P	PKPdf	08 20 41.2	-0.3
	baz=292							
PAULI	Pauline	125.71	51		PFAKE		08 20 50.0	+8.1
PAULI					LR	LR		
	comp=Z,4μm,20.0s							
U55A	TA2, Sparta	125.72	49		P	PKPdf	08 20 41.6	0.0
	baz=291							
STU	Stuttgart	125.74	328		PFAKE		08 20 50.0	+8.4
STU					LR	LR		
	comp=Z,1μm,20.0s							
M56A	Emporium	125.76	43		P	PKPdf	08 20 40.9	-0.6
	baz=297							
V55A	Taylorsville	125.82	50		P	PKPdf	08 20 41.4	-0.4
	baz=290							
155A	Kite	125.87	54		P	PKPdf	08 20 41.8	-0.1
	baz=287							
N56A	West Decatur	125.93	43		P	PKPdf	08 20 41.1	-0.7
	baz=296							
TIP	Timpagrande	125.93	314		PFAKE		08 20 50.0	+7.7
TIP					LR	LR		
	comp=Z,800nm,22.0s							
FETA	Feichten	125.93	326	*i*	PKiKP	PKiKP	08 20 42.1	-0.1
	comp=Z,1.9nm,0.5s							
455A	Stateville	125.94	57		P	PKPdf	08 20 41.9	-0.2
	baz=286							
Y55A	Saluda	125.96	52		P	PKPdf	08 20 41.7	-0.3
	baz=289							
Z55A	Blythe	125.96	53		P	PKPdf	08 20 41.4	-0.6
	baz=288							
X55A	Gracelyn & Ava	125.96	52		P	PKPdf	08 20 42.1	+0.1
	baz=289,SNR=7.0							
KMSC	Kings Mountain	125.97	51		PFAKE		08 20 50.0	+7.6
KMSC					LR	LR		
	comp=Z,2μm,19.0s							
O56A	Blue Knob Stat	126.03	44		PFAKE		08 20 50.0	+7.5
O56A					LR	LR		
	comp=Z,1μm,22.0s							
O56A	Blue Knob Stat	126.03	44		P	PKPdf	08 20 42.0	-0.1
	baz=296,SNR=6.4							
255A	Hazlehurst	126.07	55		PFAKE		08 20 50.0	+7.3
255A					LR	LR		
	comp=Z,2μm,22.0s							
255A	Hazlehurst	126.07	55		P	PKPdf	08 20 42.1	-0.2
	baz=287							
555A	McAlpin	126.16	57		PFAKE		08 20 50.0	+7.1
555A					LR	LR		
	comp=Z,1μm,19.0s							
555A	McAlpin	126.16	57		P	PKPdf	08 20 41.7	-0.8
	baz=285							
P56A	Dayton Farm, R	126.16	45		P	PKPdf	08 20 41.8	-0.5
	baz=295							
DAVA	Damuels	126.25	326	*i*	PKPdf	PKPdf	08 20 41.5	-0.9
	comp=Z,7.4nm,0.8s							
U56A	King	126.27	49		P	PKPdf	08 20 41.7	-0.9
	baz=292							
T56A	Rocky Mt	126.28	48		P	PKPdf	08 20 42.0	-0.6
	baz=292							
JSC	Jenkinsville	126.31	52		PFAKE		08 20 50.0	+6.9
JSC					LR	LR		
	comp=Z,3μm,20.0s							
SSPA	Standing Stone	126.33	43	*e*	PKPdf	PKiKP	08 20 42.9	-0.1
SSPA					LR	LR		
	comp=Z,2μm,21.0s							
SSPA	Standing Stone	126.33	43		P	PKPdf	08 20 41.8	-0.7
	baz=296							
EKA	Eskdalemuir Ar	126.35	340		PKP	PKPdf	08 20 41.5	-0.7
	comp=Z,1.6nm,0.7s,baz=23,slow=3.9,SNR=3.8							
S56A	Natural Bridge	126.38	47		P	PKPdf	08 20 42.1	-0.7
	baz=293							
V56A	Mocksville	126.38	50		PFAKE		08 20 50.0	+6.8
V56A					LR	LR		
	comp=Z,2μm,20.0s							
V56A	Mocksville	126.38	50		P	PKPdf	08 20 42.1	-0.7
	baz=291							
X56A	White Oak	126.42	52		P	PKPdf	08 20 42.4	-0.5
	baz=290							
FUORN	Ofenpass-Fuorn	126.42	325	*e*	PKPdf	PKiKP	08 20 43.1	-0.2
FUORN					LR	LR		
	comp=Z,2μm,22.0s							
Y56A	Pelion	126.44	52		P	PKPdf	08 20 42.5	-0.4
	baz=289							
BFO	Black Forest	126.46	328		PFAKE		08 20 50.0	+6.9
BFO					LR	LR		
	comp=Z,1μm,18.0s							
N57A	Milroy	126.51	43		P	PKPdf	08 20 42.7	-0.1
	baz=297							
LONY	Lake Ozonia	126.52	38		PFAKE		08 20 50.0	+6.7
LONY					LR	LR		
	comp=Z,2μm,21.0s							
LONY	Lake Ozonia	126.52	38		P	PKPdf	08 20 43.0	+0.2
	baz=302							
356A	Blackshear	126.53	56		P	PKPdf	08 20 43.3	+0.1
	baz=287							
256A	Glennville	126.53	55		P	PKPdf	08 20 43.0	-0.2
	baz=287							
Z56A	Williston	126.54	53		PFAKE		08 21 00.0	+16
Z56A					LR	LR		
	comp=Z,1μm,19.0s							
Z56A	Williston	126.54	53		P	PKPdf	08 20 43.1	-0.1
	baz=289							
DAVOX	Davos/Dischmat	126.55	326		PKP	PKPdf	08 20 42.8	-0.2
	comp=Z,4.8nm,0.6s,baz=124,slow=8.1,SNR=6.5							
W56A	Indian Trail	126.55	51		P	PKPdf	08 20 42.3	-0.8
	baz=290							
ACON	Acoyapa	126.61	80		PFAKE		08 21 00.0	+16
ACON					LR	LR		
	comp=Z,300nm,20.0s							
556A	Lake Butler	126.66	57		P	PKPdf	08 20 42.3	-1.1
	baz=286							
Q57A	Strasburg	126.66	45		P	PKPdf	08 20 42.9	-0.3
	baz=295							
O57A	Amberson	126.69	44		P	PKPdf	08 20 42.8	-0.5
	baz=296							
656A	Willston	126.71	58		PFAKE		08 21 00.0	+16
656A					LR	LR		
	comp=Z,1μm,21.0s							
656A	Willston	126.71	58		P	PKPdf	08 20 43.3	-0.3
	baz=285							
WLF	Walferdange	126.72	330		PFAKE		08 20 50.0	+6.5
WLF					LR	LR		
	comp=Z,9μm,20.0s							
P57A	Homestead Farm	126.75	45		P	PKPdf	08 20 42.6	-0.7
	baz=296							
456A	Hilliard	126.78	56		PFAKE		08 21 00.0	+16
456A					LR	LR		
	comp=Z,1μm,20.0s							
AQU	L'Aquila	126.79	319		PFAKE		08 21 00.0	+16
AQU					LR	LR		
	comp=Z,1μm,22.0s							
S57A	Dark Hollow, R	126.79	47		PFAKE		08 21 00.0	+16
S57A					LR	LR		
	comp=Z,2μm,21.0s							
UCC	Uccle	126.80	332		PFAKE		08 20 50.0	+6.4
UCC					LR	LR		
	comp=Z,2μm,22.0s							
BIRD	Birdtown, Kers	126.81	51		PFAKE		08 21 00.0	+16
BIRD					LR	LR		
	comp=Z,3μm,20.0s							
JTS	Las Juntas de	126.83	82	*e*	PKPdf	PKiKP	08 20 44.8	+0.1
JTS					LR	LR		
	comp=Z,900nm,21.0s							
JTS	Las Juntas de	126.83	82	*e*	PKIKP	PKiKP	08 20 44.8	+0.1
JTS					MLR	MLR		
	comp=Z,900nm,21.0s							
T57A	Hurt	126.87	48		PFAKE		08 21 00.0	+16
T57A					LR	LR		
	comp=Z,2μm,20.0s							
T57A	Hurt	126.87	48		P	PKPdf	08 20 43.1	-0.6
	baz=293							
BINY	Binghamton	126.87	41		PFAKE		08 21 00.0	+16
BINY					LR	LR		
	comp=Z,2μm,19.0s							
BINY	Binghamton	126.87	41		P	PKPdf	08 20 43.0	-0.6
	baz=299							
R57A	Stanardsville	126.89	46		P	PKPdf	08 20 43.5	-0.2
	baz=294							
V57A	Coltrane Farms	126.90	49		P	PKPdf	08 20 43.4	-0.4
	baz=292							
W57A	Gilead	127.00	50		PFAKE		08 21 00.0	+16
W57A					LR	LR		
	comp=Z,2μm,20.0s							
W57A	Gilead	127.00	50		P	PKPdf	08 20 43.9	0.0
	baz=291							
FRNY	Flat Rock	127.00	37		PFAKE		08 21 00.0	+16
FRNY					LR	LR		
	comp=Z,2μm,20.0s							
U57A	Blanch	127.03	49		P	PKPdf	08 20 43.4	-0.6
	baz=292							
TUE	Stuetta	127.03	326		PFAKE		08 21 00.0	+16
TUE					LR	LR		
	comp=Z,2μm,22.0s							
157A	Early Branch	127.04	54		P	PKPdf	08 20 43.2	-0.9
	baz=288							
Z57A	Bowman	127.07	53		P	PKPdf	08 20 43.2	-1.0
	baz=289							
Y57A	Sumter	127.08	52		PFAKE		08 21 00.0	+15
Y57A					LR	LR		
	comp=Z,3μm,20.0s							
Y57A	Sumter	127.08	52		P	PKPdf	08 20 44.1	0.0
	baz=290							
NCB	Newcomb	127.08	38		PFAKE		08 21 00.0	+16
NCB					LR	LR		
	comp=Z,1μm,19.0s							
ECH	Echery	127.15	329		PFAKE		08 21 00.0	+16
ECH					LR	LR		
	comp=Z,2μm,21.0s							
X57A	Johnson Farm,	127.16	51		P	PKPdf	08 20 43.8	-0.5
	baz=290							
457A	Yulee	127.19	56		P	PKPdf	08 20 44.0	-0.5
	baz=287							
657A	Interlachen	127.22	58		P	PKPdf	08 20 43.8	-0.7
	baz=286							
257A	Skidaway Islan	127.23	55		PFAKE		08 21 00.0	+15
257A					LR	LR		
	comp=Z,2μm,21.0s							
857A	Zephyrhills	127.25	59		P	PKPdf	08 20 44.3	-0.3
	baz=284							
R58A	Rapidan	127.26	46		P	PKPdf	08 20 43.8	-0.5
	baz=295							
KSPA	Keystone Colle	127.33	41		PFAKE		08 21 00.0	+15
KSPA					LR	LR		
	comp=Z,2μm,19.0s							
957A	Wimauma	127.39	60		PFAKE		08 21 00.0	+15
957A					LR	LR		
	comp=Z,1μm,21.0s							
T58A	Grand View Acr	127.42	48		P	PKPdf	08 20 44.5	-0.2
	baz=293							
V58A	Windy Hill, Pi	127.43	49		P	PKPdf	08 20 44.5	-0.2
	baz=292							
ESPN	Las Esperanzas	127.46	80		PFAKE		08 21 00.0	+14
ESPN					LR	LR		
	comp=Z,600nm,19.0s							
R58B	Mineral	127.49	46		PFAKE		08 21 00.0	+15
R58B					LR	LR		
	comp=Z,2μm,21.0s							
S58A	Poland Farm, P	127.51	47		PFAKE		08 21 00.0	+15
S58A					LR	LR		
	comp=Z,2μm,18.0s							
S58A	Poland Farm, P	127.51	47		P	PKPdf	08 20 44.9	0.0
	baz=294							
NHSC	New Hope	127.55	53		PFAKE		08 21 00.0	+14
NHSC					LR	LR		
	comp=Z,2μm,22.0s							
NHSC	New Hope	127.55	53		P	PKPdf	08 20 44.9	-0.2
	baz=289							
SDMD	Soldier's Deli	127.60	44		PFAKE		08 21 00.0	+14
SDMD					LR	LR		
	comp=Z,900nm,20.0s							
U58A	Oxford	127.63	48		P	PKPdf	08 20 45.0	-0.1
	baz=293							
W58A	Raeford	127.63	50		P	PKPdf	08 20 45.0	-0.1
	baz=292							
N59A	State Game Lan	127.63	42		PFAKE		08 21 00.0	+14
N59A					LR	LR		
	comp=Z,1μm,19.0s							
N59A	State Game Lan	127.63	42		P	PKPdf	08 20 44.6	-0.4
	baz=299							
O59A	Robesonia	127.64	43		P	PKPdf	08 20 43.7	-1.3
	baz=298							
HDC	Heredia	127.66	82		PFAKE		08 21 00.0	+13
HDC					LR	LR		
	comp=Z,1μm,19.0s							
Y58A	Scranton	127.69	52		PFAKE		08 21 00.0	+14
Y58A					LR	LR		
	comp=Z,3μm,20.0s							
Y58A	Scranton	127.69	52		P	PKPdf	08 20 45.5	+0.2
	baz=290							
X58A	Rowland	127.71	51		PFAKE		08 21 00.0	+14
X58A					LR	LR		
	comp=Z,4μm,20.0s							
ACCN	Adirondack Com	127.74	38		PFAKE		08 21 00.0	+14
ACCN					LR	LR		
	comp=Z,2μm,19.0s							
CBN	Corbin Frederi	127.75	46		PFAKE		08 21 00.0	+14
CBN					LR	LR		
	comp=Z,1μm,20.0s							
Z58A	St. Stephen	127.77	52		P	PKPdf	08 20 45.4	-0.1
	baz=290							
658A	Bunnell	127.78	58		PFAKE		08 21 00.0	+14

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658A                                   LR      LR
     comp=Z,2μm,22.0s
VT1  Waterbury        127.78  37  PFAKE                  08 21 00.0 +14
VT1                                    LR      LR
     comp=Z,2μm,18.0s
P59A Jarrettsville    127.79  44  P       PKPdf          08 20 45.4 +0.1
     baz=297
958A Wauchula         127.82  60  P       PKPdf          08 20 45.8  0.0
     baz=284
758A Lake Helen       127.95  58  P       PKPdf          08 20 45.9 -0.1
     baz=286
DWPF Disney Wildern   127.97  59  PFAKE                  08 21 00.0 +13
DWPF                                   LR      LR
     comp=Z,1μm,20.0s
DWPF Disney Wildern   127.97  59  P       PKPdf          08 20 45.7 -0.3
     baz=285
LUPA Lehigh Univers   128.05  42  PFAKE                  08 21 00.0 +14
LUPA                                   LR      LR
     comp=Z,100nm,20.0s
TRY  Troy             128.08  39  PFAKE                  08 21 00.0 +14
TRY                                    LR      LR
     comp=Z,2μm,20.0s
V59A Middlesex        128.10  49  P       PKPdf          08 20 46.1 +0.1
     baz=293
T59A Double "B" Far   128.13  47  PFAKE                  08 21 00.0 +13
T59A                                   LR      LR
     comp=Z,2μm,20.0s
T59A Double "B" Far   128.13  47  P       PKPdf          08 20 45.8 -0.2
     baz=294
O60A Telford          128.16  43  P       PKPdf          08 20 45.9 -0.1
     baz=299
U59A Littleton        128.20  48  PFAKE                  08 21 00.0 +13
U59A                                   LR      LR
     comp=Z,2μm,20.0s
SENIN Lac Senin/Sane  128.23 327  PFAKE                  08 21 00.0 +13
SENIN                                  LR      LR
     comp=Z,1μm,20.0s
P60A Greenville       128.24  43  P       PKPdf          08 20 45.9 -0.3
     baz=298
CFA  Coronel Fontan   128.25 139  PKP     PKPdf          08 20 44.2 -2.3
     comp=Z,2.7nm,0.7s,baz=265,slow=3.9,SNR=5.0
R60A Leonardtown, M   128.28  45  P       PKPdf          08 20 45.0 -1.3
     baz=296
ODNJ Ogdensburg       128.32  41  PFAKE                  08 21 00.0 +13
ODNJ                                   LR      LR
     comp=Z,2μm,20.0s
LBNH Lisbon           128.32  37  PFAKE                  08 21 00.0 +13
LBNH                                   LR      LR
     comp=Z,2μm,20.0s
LBNH Lisbon           128.32  37  P       PKPdf          08 20 46.1 -0.1
     baz=305
HNH  Hanover          128.41  37  PFAKE                  08 21 00.0 +13
HNH                                    LR      LR
     comp=Z,2μm,21.0s
859A Kempfer Cattle   128.44  59  P       PKPdf          08 20 45.2 -1.7
     baz=285
Q60A Greensboro       128.47  44  P       PKPdf          08 20 45.9 -0.7
     baz=297
059A Moore Haven      128.50  61  PFAKE                  08 21 00.0 +12
059A                                   LR      LR
     comp=Z,1μm,18.0s
BRNJ Basking Ridge    128.54  42  PFAKE                  08 21 00.0 +13
BRNJ                                   LR      LR
     comp=Z,2μm,19.0s
CNNC Cliffs of the    128.57  50  PFAKE                  08 21 00.0 +12
CNNC                                   LR      LR
     comp=Z,2μm,22.0s
T60A Surry            128.66  47  PFAKE                  08 21 00.0 +12
T60A                                   LR      LR
     comp=Z,2μm,19.0s
X60A Albert Glenn T   128.75  50  P       PKiKP          08 20 47.9  0.0
     baz=292
M61A Granite Spring   128.75  41  P       PKPdf          08 20 46.9 -0.3
     baz=301
Y60A Bolivia          128.78  51  PFAKE                  08 21 00.0 +12
Y60A                                   LR      LR
     comp=Z,3μm,20.0s
PAL  Palisades        128.82  41  PFAKE                  08 21 00.0 +12
PAL                                    LR      LR
     comp=Z,2μm,21.0s
V60A Jim Taylor Roa   128.83  49  PFAKE                  08 21 00.0 +12
V60A                                   LR      LR
     comp=Z,1μm,22.0s
FFD  Franklin Falls   128.92  37  PFAKE                  08 21 00.0 +12
FFD                                    LR      LR
     comp=Z,2μm,21.0s
061Z Ochoppi          128.96  62  PFAKE                  08 21 00.0 +11
061Z                                   LR      LR
     comp=Z,2μm,21.0s
PQI  Presque Isle     129.04  32  PFAKE                  08 21 00.0 +12
PQI                                    LR      LR
     comp=Z,2μm,20.0s
QUA2 Belchertown      129.15  39  PFAKE                  08 21 00.0 +11
QUA2                                   LR      LR
     comp=Z,2μm,21.0s
060A Indiantown       129.16  60  PFAKE                  08 21 00.0 +11
060A                                   LR      LR
     comp=Z,1μm,20.0s
S61A Accomac          129.19  46  PFAKE                  08 21 00.0 +11
S61A                                   LR      LR
     comp=Z,2μm,20.0s
U61A Possum Corner    129.21  48  PFAKE                  08 21 00.0 +11
U61A                                   LR      LR
     comp=Z,2μm,20.0s
PKME Peaks-Kenny Pk   129.23  34  PFAKE                  08 21 00.0 +11
PKME                                   LR      LR
     comp=Z,1μm,20.0s
YLE  Yale             129.29  40  PFAKE                  08 21 00.0 +11
YLE                                    LR      LR
     comp=Z,3μm,20.0s
V61A Roper            129.33  48  PFAKE                  08 21 00.0 +11
V61A                                   LR      LR
     comp=Z,2μm,21.0s
WVL  Waterville       129.45  35  PFAKE                  08 21 00.0 +11
WVL                                    LR      LR
     comp=Z,2μm,20.0s
HRV  Adam Dziewonsk   129.51  38  PFAKE                  08 21 00.0 +11
HRV                                    LR      LR
     comp=Z,2μm,19.0s
BATG Bathurst New B   129.65  30  PFAKE                  08 21 00.0 +11
BATG                                   LR      LR
     comp=Z,2μm,22.0s
CLF  Chambon-Foret    129.72 331  PFAKE                  08 21 00.0 +10
CLF                                    LR      LR
     comp=Z,3μm,21.0s
WES  Weston           129.73  38  PFAKE                  08 21 00.0 +10
WES                                    LR      LR
     comp=Z,2μm,18.0s
BCX  Boston College   129.85  38  PFAKE                  08 21 00.0 +10
BCX                                    LR      LR
     comp=Z,2μm,22.0s
BRYW Bryant College   129.85  39  PFAKE                  08 21 00.0 +10
BRYW                                   LR      LR
     comp=Z,2μm,20.0s
V62A Hyde County Ai   129.89  48  PFAKE                  08 21 00.0 +10
V62A                                   LR      LR
     comp=Z,2μm,21.0s
EMMW East Machias     130.60  34  PFAKE                  08 21 00.0 +8.6
EMMW                                   LR      LR
     comp=Z,1μm,19.0s
GGN  Saint George     130.67  33  PFAKE                  08 21 00.0 +8.5
GGN                                    LR      LR
     comp=Z,2μm,20.0s
ATAH Atahualpa        131.11 105  PKP     PKiKP          08 20 54.2 +0.4
     comp=Z,9.3nm,0.7s,baz=178,slow=6.6,SNR=6.0
ATAH                                   SKPbc   SKPab      08 24 18.8 +3.3
     comp=Z,11nm,1.0s,baz=255,slow=3.1,SNR=5.4
NNA  Nana             131.13 112  SKPbc   SKPab          08 24 15.7 +0.6
     comp=Z,3.3nm,0.5s,baz=238,slow=7.1,SNR=3.6
LMN  Caledonia Moun   131.25  31  PFAKE                  08 21 00.0 +7.3
LMN                                    LR      LR
     comp=Z,2μm,21.0s
BCIP Isla Barro Col   131.87  84  PFAKE                  08 21 10.0 +15
BCIP                                   LR      LR
     comp=Z,900nm,19.0s
DRLN Deer Lake        131.98  23  PFAKE                  08 21 00.0 +6.0
DRLN                                   LR      LR
     comp=Z,2μm,20.0s
OTAV Otavalo          132.55  96  PFAKE                  08 21 10.0 +13
OTAV                                   LR      LR
     comp=Z,500nm,20.0s
KEST Kesra            132.74 314  SKPbc   SKPbc          08 24 20.4 +0.4
     comp=Z,3.4nm,0.8s,baz=325,slow=12,SNR=2.2
GBN  Guysborough      133.20  29  PFAKE                  08 21 10.0 +13
GBN                                    LR      LR
     comp=Z,3μm,22.0s
GCUF Volcan Galeras   133.78  95  eP      PKiKP          08 20 60.0 +0.6
BBAC Balboa, Cauca    133.98  93  eP      PKiKP          08 20 58.9 -0.6
PB11 IPOC Station P   134.12 125  ePKPdf  PKPdf          08 20 58.5 +0.4
GO01 Chusmiza         134.54 126  ePKPdf  PKiKP          08 21 01.2 +0.5
SOTA Rioblanco        134.63  93  eP      PKiKP          08 21 00.9 -0.2
PCON Cinco Dias       134.86  93  eP      PKiKP          08 21 05.5 +3.8
YOTC Yotoco, Valle    135.08  91  eP      PKiKP          08 21 01.6  0.0
GTBY Guantanamo Bay   135.45  68  PFAKE                  08 21 10.0 +8.1
GTBY                                   LR      LR
     comp=Z,800nm,20.0s
FLOC Florencia        135.51  94  eP      PKiKP          08 21 02.0 -0.2
HELC Santa Helena     136.05  88  eP      PKiKP          08 21 03.5 -0.3
PTLC Puerto Leguiza   136.15  97  eP      PKPdf          08 21 02.7 +0.8
RREF El Recreo        136.15  90  eP      PKiKP          08 21 03.5 -0.8
GUY2C Guyana, Caldas  136.16  89  eP      PKiKP          08 21 03.7 -0.4
ORTC Ortega, Tolima   136.17  91  eP      PKPdf          08 21 02.6 +0.6
NORC Norcasia         136.67  89  eP      PKPdf          08 21 03.5 +0.6
ZARC Zaragoza, Cauc   136.76  86  eP      PKPdf          08 21 03.5 +0.5
LPAZ La Paz           137.10 122  PKP     PKPdf          08 21 02.0 -2.3
     comp=Z,6.7nm,0.7s,baz=274,slow=7.1,SNR=10
LPAZ                                   SKP             08 24 38.7
     comp=Z,7.8nm,0.9s,baz=230,slow=1.1,SNR=8.7
LPAZ La Paz           137.10 122  ePKPdf  PKPdf          08 21 03.5 -0.8
LPAZ La Paz           137.10 122  PKIKP   PKPdf          08 21 02.0 -2.3
PTBC PUERTO BERRIO    137.13  87  eP      PKPdf          08 21 03.5 -0.2
ROSC El Rosal         137.17  90  PKhKP   PKPpre         08 21 00.1
     comp=Z,3.3nm,0.4s,baz=54,slow=19,SNR=3.4
ROSC El Rosal         137.17  90  ePKPpre PKPpre         08 20 52.2
ROSC                                   ePKPdf  PKiKP      08 21 05.6 -0.5
ROSC                                   LR      LR
     comp=Z,500nm,19.0s
ROSC El Rosal         137.17  90  eP      PKiKP          08 21 05.9 -0.2
CTAB Cerro Tablazo,   137.29  90  eP      PKPdf          08 21 04.3 -0.3
MACC Macarena, Meta   137.37  94  eP      PKPdf          08 21 04.6 +0.4
ARGC Ariguani, Magd   137.38  83  eP      PKPdf          08 21 03.6 -0.5
CODC Agustn Codazz    138.17  82  eP      PKiKP          08 21 06.9 -0.7
OCAC Ocana            138.30  85  eP      PKPdf          08 21 03.5 -2.5
BARC Barichara        138.40  87  eP      PKPdf          08 21 00.1 -6.2
RUSC La Rusia         138.46  88  eP      PKPdf          08 20 57.1 -10
GRTK Grand Turk       138.72  65  PFAKE                  08 21 20.0 +11
GRTK                                   LR      LR
     comp=Z,1μm,22.0s
CPUP Villa Florida    138.75 143  PKP     PKPdf          08 21 04.3 -2.1
     comp=Z,3.4nm,1.0s,baz=222,slow=1.5
ESDC Sonseca Array    138.82 327  PKP     PKPdf          08 21 03.7 -2.5
     comp=Z,0.2nm,0.3s,baz=58,slow=2.2,SNR=4.2
ESDC                                   SKPbc   SKPbc      08 24 36.8 -1.9
     comp=Z,1.4nm,0.9s,baz=34,slow=4.1,SNR=5.6
ESLA Sonseca Array    138.82 327  PFAKE                  08 21 20.0 +12
ESLA                                   LR      LR
     comp=Z,2μm,21.0s
PAB  San Pablo        139.12 328  PFAKE                  08 21 20.0 +11
PAB                                    LR      LR
     comp=Z,1μm,20.0s
SDDR Presa de Saban   139.18  68  PFAKE                  08 21 20.0 +10
SDDR                                   LR      LR
     comp=Z,1μm,20.0s
URIC Uribia, Colomb   139.51  80  eP      PKPdf          08 21 09.1 +1.1
BBSR BB Station       139.62  46  PFAKE                  08 21 20.0 +10
BBSR                                   LR      LR
     comp=Z,1μm,21.0s
MTE  Manteigas        140.09 331  PFAKE                  08 21 20.0 +9.1
MTE                                    LR      LR
     comp=Z,2μm,21.0s
SDV  Santo Domingo    140.96  84  ePKPdf  PKPdf          08 21 11.7 +0.8
SDV                                    LR      LR
     comp=Z,800nm,20.0s
TAM  Tamanrasset      141.01 298  PFAKE                  08 21 20.0 +6.6
TAM                                    LR      LR
     comp=Z,300nm,20.0s
SIV  San Ignacio      143.02 127  PKhKP   PKPpre         08 21 10.8
     comp=Z,5.9nm,0.8s,baz=235,slow=1.9,SNR=21
OBIP Obispado Ponce   143.71  68  ePKPpre PKPpre         08 21 12.8
SJG  San Juan         144.12  68  PKP     PKPbc          08 21 14.8 +0.7
     comp=Z,13nm,0.6s,baz=333,slow=7.6,SNR=3.4
SJG  San Juan         144.12  68  PFAKE                  08 21 30.0 +10
SJG                                    LR      LR
     comp=Z,900nm,20.0s
MTP  Monte Pirata     144.67  68  ePKPdf  PKPab          08 21 15.5 -0.3
STVI Saint Thomas     145.16  67  ePKPbc  PKPbc          08 21 17.5  0.0
TOC2 Torodi Ar. Sit   146.82 284  PFAKE                  08 21 30.0 +4.7
TOC2                                   LR      LR
     comp=Z,600nm,19.0s
TOC3 Torodi Ar. Sit   146.83 284  PFAKE                  08 21 30.0 +4.7
TOC3                                   LR      LR
     comp=Z,600nm,19.0s
TOC1 Torodi Ar. Sit   146.84 284  PFAKE                  08 21 30.0 +4.6
TOC1                                   LR      LR
     comp=Z,800nm,19.0s
TOB3 Torodi Ar. Sit   146.84 284  PFAKE                  08 21 30.0 +4.6
TOB3                                   LR      LR
     comp=Z,600nm,19.0s
TOA2 Torodi Ar. Sit   146.84 284  PFAKE                  08 21 30.0 +4.6
TOA2                                   LR      LR
     comp=Z,600nm,19.0s
TOC4 Torodi Ar. Sit   146.85 284  PFAKE                  08 21 30.0 +4.6
TOC4                                   LR      LR
     comp=Z,700nm,20.0s
TOA0 Torodi Ar. Sit   146.85 284  ePKPdf  PKPdf          08 21 20.9  0.0
TOA0                                   LR      LR
     comp=Z,600nm,19.0s
TORD Torodi Ar. Bea   146.85 284  PKPbc   PKPdf          08 21 20.8 -0.1
     comp=Z,37nm,1.0s,baz=204,slow=11,SNR=107
TORD                                   SKPbc   SKiKP      08 24 59.9 +0.5
     comp=Z,4.3nm,1.0s,baz=57,slow=3.1,SNR=3.7
TOA1 Torodi Ar. Sit   146.85 284  PFAKE                  08 21 30.0 +4.6
TOA1                                   LR      LR
     comp=Z,700nm,20.0s
TOB4 Torodi Ar. Sit   146.86 284  PFAKE                  08 21 30.0 +4.6
TOB4                                   LR      LR
     comp=Z,600nm,19.0s
TOB5 Torodi Ar. Sit   146.86 284  PFAKE                  08 21 30.0 +4.6
TOB5                                   LR      LR
     comp=Z,700nm,20.0s
TOC7 Torodi Ar. Sit   146.86 284  PFAKE                  08 21 30.0 +4.6
TOC7                                   LR      LR
     comp=Z,700nm,19.0s
TOC5 Torodi Ar. Sit   146.87 284  PFAKE                  08 21 30.0 +4.6
TOC5                                   LR      LR
     comp=Z,700nm,19.0s
SMRT St. Maarten      146.96  67  ePKPdf  PKPdf          08 21 20.6 -0.4
SMRT                                   ePKPbc  PKPbc      08 21 23.2 +0.2
SMRT                                   LR      LR
     comp=Z,1μm,21.0s
SMRT St. Maarten      146.96  67  e                      08 20 11.4
SEUS St. Eustatius    147.19  68  PFAKE                  08 21 30.0 +4.0
SEUS                                   LR      LR
     comp=Z,1μm,20.0s
SEUS St. Eustatius    147.19  68  e       PKPdf          08 21 20.4 -1.0
SKI  Saint Kitts      147.46  68  e       PKPbc          08 21 24.4 -0.1
MLYT Lee's Yard       148.12  69  e       PKiKP          08 21 27.5 -0.5
ANWB Willy Bob        148.24  67  PFAKE                  08 21 30.0 +0.5
ANWB                                   LR      LR
     comp=Z,1μm,21.0s
DWS  Wesley           149.23  70  e       PKPdf          08 21 17.4 -7.4
FDF  Fort de France   149.57  72  ePKPbc  PKiKP          08 21 31.0  0.0
SVB  Belmont          149.75  75  e       PKPbc          08 21 30.8 +0.4
SLBI Saint Lucia, B   149.88  73  e       PKPdf          08 21 23.9 -1.9
PTGA Pitinga          150.50 103  PKP     PKPdf          08 21 25.2 -1.7
     comp=Z,6.5nm,0.8s,baz=319,slow=20,SNR=14
PTGA                                   PKPbc   PKiKP      08 21 33.2 +0.2
     comp=Z,52nm,0.7s,baz=230,slow=3.2,SNR=58
PTGA Pitinga          150.50 103  ePKPdf  PKPdf          08 21 26.8 -0.2
PTGA                                   ePKPbc  PKiKP      08 21 32.9 -0.1
BDFB Brasilia         152.48 143  PKP     PKPdf          08 21 30.0 +0.1
     comp=Z,4.6nm,0.8s,baz=210,slow=0.5,SNR=6.3
BDFB                                   PKPbc   PKiKP      08 21 37.5 +0.4
     comp=Z,6.3nm,0.8s,baz=268,slow=2.6,SNR=7.5
BDFB                                   PKPab   pPKPbc     08 21 45.1 -0.9
     comp=Z,11nm,0.7s,baz=181,slow=1.1,SNR=12
BDFB Brasilia         152.48 143  ePKPdf  PKPdf          08 21 30.9 +0.9
KIC  Kosan Boka       153.61 271  ePKP1   PKiKP          08 21 39.6 +0.2
     comp=Z,163nm,1.2s
DBIC Dimbokro         153.73 272  PKP     PKPdf          08 21 31.5 -0.2
     comp=Z,8.7nm,1.1s,baz=88,slow=5.3,SNR=3.3
DBIC                                   PKPbc   pPKPdf     08 21 40.2 -0.8
     comp=Z,18nm,0.8s,baz=83,slow=4.2,SNR=13
DBIC Dimbokro         153.73 272  ePKPdf  PKPdf          08 21 32.5 +0.9
DBIC                                   ePKPbc  PKiKP      08 21 40.0 +0.3
DBIC                                   ePKPab  PKPab      08 21 53.1 +0.6
DBIC Dimbokro         153.73 272  ePKIKP  PKPdf          08 21 32.6 +0.9
DBIC                                   e                  08 21 40.0
LIC  Lamto            153.89 271  ePKP1   PKiKP          08 21 40.0  0.0
     comp=Z,168nm,1.7s
TIC  Toumodi          153.89 272  ePKP1   PKiKP          08 21 40.8 +0.8
ASCN Ascension        157.85 230  PFAKE                  08 21 50.0 +13
ASCN                                   LR      LR
     comp=Z,33μm,21.0s
```

*IDC **24** 08:04:09.0±4.1,6°.54S×149°.21E,h0km,mb4.7/1,*
mb1 5.0/3,mb1mx4.0/49,mbtmp4.8/3,ML4.6/1,Error
ellipse: s-maj=173.5km s-min=35.3km az=116.0
*NEIC **24** 08:04:15.7±2.2,6°.87S×148°.65E,h10km,mb4.2/3,Error*
ellipse: s-maj=51.0km s-min=15.5km az=316.0
ISC 24 08:04:09.9±1.0,6°.6S±0°.2×149°.1E±0°.2,h10km,n14,
σ2°35/17,New Britain region

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Code Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op    ISC         h m s     ISC
PMG  Port Moresby     3.41 214  Pn    Pn          08 05 04.4 +1.2
     baz=270,slow=20,SNR=2.3
PMG                                 Sn    Sn          08 05 46.8 +3.2
     62nm,0.3s,baz=342,slow=20,SNR=3.9
PMG  Port Moresby     3.41 214  ePn   Pn          08 05 03.8 +0.6
PMG                               ePg   Pb          08 05 04.4 -6.1
PMG                               eSn   Sn          08 05 36.8 -6.9
PMG                               eLg   Lg          08 05 46.9
RABL Rabaul           3.87  53  ePn   Pg          08 05 22.5 -1.6
RABL                              eSn   Sg          08 06 15.2 +0.9
COEN Coen             9.37 218  ePn   Pn          08 06 24.7 -0.4
CTAO Charters Tower  13.72 191  ePn   Pn          08 07 23.5 -1.2
EIDS Eidsvold        18.80 174  eP    Pn          08 08 32.1 +2.0
     9.2nm,0.7s
WB2  Warramunga Arr  19.53 226  eP    P           08 08 35.8 -2.0
     41nm,0.9s
WR1  Warramunga Arr  19.54 226  eP    Pn          08 08 39.6 +0.4
WRA  Warramunga Arr  19.54 226  P     Pn          08 08 39.6 +0.4
     1.7nm,0.3s,baz=52,slow=10,SNR=3.2
AS31 Alice Springs   22.41 219  eP    P           08 09 09.4 +0.5
     7.0nm,0.8s
ASAR Alice Springs   22.41 219  P     P           08 09 10.7 +1.8
     8.6nm,0.6s,baz=52,slow=8.9,SNR=3.4
FITZ Fitzroy Crossi  25.57 241  eP    P           08 09 39.7 +0.3
TORD Torodi Ar. Bea  147.24 284 PKPbc PKPbc       08 23 55.0 +0.2
     7.4nm,0.6s,baz=63,slow=3.0,SNR=9.4
TOA1 Torodi Ar. Sit  147.24 284 ePKPdf PKPbc      08 23 55.0 +0.2
```

*IDC **24** 08:05:21.1±0.8,37°.23N×69°.39E,h0km,mb4.3/27,*
mb1 4.4/33,mb1mx4.3/69,mbtmp4.3/33,ML4.1/6,MS3.6/9,
Ms1 3.6/9,ms1mx3.3/48,Error ellipse: s-maj=17.6km
s-min=10.4km az=168.0
*BJI **24** 08:05:23.9±0.0,37°.70N×69°.16E,h25km,mb4.6/28,*
mB4.8/22,ML4.8/4,Ms4.3/19,Ms7 4.1/14
*ISCJB **24** 08:05:24.3±0.2,37°.40N±0°.03×69°.33E±0°.02,h27km,*
mb4.5/77,MS3.9/11,Error ellipse: s-maj=3.7km
s-min=2.6km az=10.0
*MOS **24** 08:05:25.0±1.3,37°.42N×69°.32E,h33km,mb4.9/28,Error*
ellipse: s-maj=6.0km s-min=4.4km az=103.5
*NNC **24** 08:05:27.6±2.4,37°.52N×69°.75E,h0km±8km,mb5.1,*
mpv4.9,Error ellipse: s-maj=19.8km s-min=14.3km
az=73.0
*NEIC **24** 08:05:28.0±1.3,37°.41N×69°.25E,h42km±8km,mb4.5/32,*
Error ellipse: s-maj=12.1km s-min=9.3km az=137.0
ISC 24 08:05:25.3±0.3,37°.37N±0°.04×69°.28E±0°.03,h27km,n256,
σ2°04/272,mb4.5/78,MS3.7/12,39C-12D,
Afghanistan-Tajikistan border region

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Code Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op    ISC         h m s     ISC
GAR  Garm             1.82  26  ePn   Pb          08 05 56.8 -1.3
GAR                               eSn   Sb          08 06 20.5 -0.1
GAR  Garm             1.82  26  ePn   Pb          08 05 56.8 -1.3
GAR                               e                 08 06 20.5
KBL  Kabul            2.83 184  ePn   Pn          08 06 11.8 +2.9
KBL                               eSn   Sb          08 06 48.4 -1.1
KBL  Kabul            2.83 184  ePN   Pn          08 06 11.8 +2.9
KBL                               e                 08 06 48.4
BTK  Batken           2.94  24  ePn   Pn          08 06 13.0 +2.6
BTK  Batken           2.94  24  ePN   Pn          08 06 13.0 +2.6
CEP  Cherat           4.14 148  P     Pn          08 06 30.5 +3.6
IUG  Iuzhnay          4.81   7  Pg    Pb          08 06 51.5 +2.6
     47nm,0.3s
IUG                               Lg    Lg          08 07 54.6
     848nm,0.3s
CHCP Chirah Chowk     4.93 138  P     Pn          08 06 41.7 +4.0
NIL  Nilore           4.93 138  ePn   Pn          08 06 40.5 +2.9
NIL  Nilore           4.93 138  ePN   Pn          08 06 40.5 +2.9
THW  Thamme Wali      4.99 155  P     Pn          08 06 41.6 +3.1
KSH  Kashi            5.68  66  Pn    Pn          08 06 44.8 -3.2
KSH                               Sn    Sn          08 07 42.6 -10
KSH                               smax  smax
     comp=N,1μm,0.5s
KSH                               smax  smax
     comp=E,1μm,0.8s
KK31 Karatay Array    5.80   9  ePn   Pn          08 06 51.1 +1.4
KK31 Karatay Array    5.80   9  Pg    Pn          08 06 51.8 +2.1
     24nm,0.7s,baz=186,slow=11,SNR=194
KK31                              ⇑Sn   Sn          08 07 59.3 +4.0
     78nm,0.4s
KK31                              ⇑Lg   Lg          08 08 24.2
     245nm,0.5s
KK31 Karatay Array    5.80   9  ePN   Pn          08 06 51.1 +1.4
KKAR Karatay Array    5.80   9  ePn   Pn          08 06 51.1 +1.4
KKAR Karatay Array    5.80   9  ePN   Pn          08 06 51.1 +1.4
AML  Almayashu        5.85  34  P     Pn          08 06 52.0 +1.4
     SNR=200
MRKS Merke            6.17  28  Pg    Pb          08 07 14.7 +2.7
     148nm,0.5s
MRKS                              Lg    Lg          08 08 33.9
     199nm,0.7s
UCH  Uchtor           6.31  38  P     Pn          08 06 58.5 +1.5
     SNR=262
EKS2 Erkin-Say        6.31  32  P     Pn          08 06 59.2 +2.5
     SNR=59
KZA  Kyzart           6.58  43  P     Pn          08 07 02.2 +1.5
     SNR=344
AAK  Ala-Archa        6.61  36  Pn    Pn          08 07 03.0 +2.2
     66nm,0.3s,baz=201,slow=8.1,SNR=462
AAK                               Sn    Sn          08 08 14.9 -0.5
     8.2nm,0.3s,baz=243,slow=4.5,SNR=2.9
AAK                               Lg    Lg          08 08 50.4
     11nm,0.3s,baz=342,slow=20,SNR=2.6
AAK                               LR    LR          08 10 14.9
     comp=Z,374nm,20.0s,baz=173,slow=44
AAK  Ala-Archa        6.61  36  P     Pn          08 07 03.3 +2.4
     SNR=265
AAK  Ala-Archa        6.61  36  ePn   Pn          08 07 02.7 +1.8
AAK  Ala-Archa        6.61  36  ⇓Pn   Pn          08 07 02.6 +1.8
     239nm,0.6s
AAK                               ⇓Sn   Sn          08 08 14.3 -1.1
     128nm,0.6s
AAK                               ⇓Lg   Lg          08 08 50.4
     403nm,1.1s
AAK  Ala-Archa        6.61  36c iPN   Pn          08 07 02.9 +2.0
AAK                               pmax  pmax
     comp=Z,265nm,0.6s
FRU1 Bishkek          6.81  35  ePn   Pn          08 07 05.9 +2.4
FRU1 Bishkek          6.81  35  ePN   Pn          08 07 05.9 +2.4
KBK  Karagaybulak     6.84  38  P     Pn          08 07 06.1 +2.0
     SNR=199
CHMS Chumysh          7.01  35  P     Pn          08 07 08.4 +2.1
     SNR=48
USP  Ospenovka        7.12  32  P     Pn          08 07 09.3 +1.6
     SNR=67
BOOM Boomskoye usch   7.24  43  ePn   Pn          08 07 11.0 +1.5
BOOM Boomskoye usch   7.24  43  ePN   Pn          08 07 11.0 +1.5
ULHL Ulahol           7.24  46  P     Pn          08 07 10.8 +1.2
     SNR=34
TKM2 Tokmak 2         7.36  39  P     Pn          08 07 12.4 +1.2
     SNR=180
TKM2 Tokmak 2         7.36  39  ⇑Pn   Pn          08 07 12.3 +1.2
     comp=Z,93nm,0.6s
TKM2                              ⇓Sn   Sn          08 08 34.1 +0.2
     comp=Z,101nm,0.8s
TKM2                              ⇓Lg   Lg          08 09 12.7
     comp=Z,192nm,1.2s
DHRM DHARAMSHALA      7.71 129  eP    Pn          08 07 16.5 +0.5
DHRM                              eS    Sn          08 08 36.4 -6.2
DHRM                              IAML              08 08 46.9
     comp=N,252nm,0.2s
DHRM                              IAML              08 08 49.8
     comp=E,226nm,0.5s
KUU  Kurty            8.44  37  Pg    Pb          08 07 57.4 +6.7
     comp=E,28nm,0.9s
```

KUU Lg Lg 08 09 46.7
comp=E,74nm,0.9s
GEYT Alibeck 8.87 277 Pn **Pn 08 07 30.5 -1.3**
comp=E,2.1nm,0.3s,baz=106,slow=12,SNR=13
GEYT Sn **Sn 08 09 06.9 -3.9**
comp=E,11nm,0.3s,baz=110,slow=13,SNR=9.0
GEYT Lg Lg 08 10 15.0
baz=83,slow=25,SNR=3.2
GEYT LR LR 08 12 15.5
comp=E,424nm,19.7s,baz=120,slow=46
GYA0B ALIBECK ARRAY 8.87 277 *e*Pn **Pn 08 07 31.0 -0.8**
GYA0B *e*Sn **Sn 08 09 10.6 -0.1**
GYA0B ALIBECK ARRAY 8.87 277 ⇑Pn **Pn 08 07 29.8 -2.0**
SMLA Simla 9.02 131 *e*P **Pn 08 07 34.8 +1.0**
SMLA *e*S **Sn 08 09 09.0 -5.5**
DDI Dehra Dun 10.13 131 *e*S **Sn 08 09 35.0 -6.9**
DDI IAML 08 10 08.8
comp=E,184nm,0.1s
DDI IAML 08 10 09.3
comp=N,150nm,0.4s
JOSI Joshimath 10.91 126 *e*x Pn 08 08 06.4 +6.6
JOSI *e*S Sn 08 09 51.6 -10
JOSI IAML 08 10 27.5
comp=N,104nm,0.2s
JOSI IAML 08 10 29.7
comp=E,90nm,0.8s
KUDL Kundal 11.02 145 *e*P Pn 08 07 44.6 -17
KUDL *e*S Sn 08 09 46.0 -18
OTUK Ortayu 11.10 11 ⇑Pn **Pn 08 08 01.3 -0.9**
comp=E,8.3nm,1.0s
OTUK ⇑Sn **Sn 08 09 57.5 -7.9**
comp=E,26nm,0.6s
OTUK ⇑Lg Lg 08 11 11.1
comp=E,179nm,1.2s
MAKZ Makanchi 13.32 41 *e*Pn **Pn 08 08 32.1 -0.5**
MAKZ Makanchi 13.32 41 ⇓Pn **Pn 08 08 31.1 -1.6**
comp=E,30nm,1.3s
MAKZ ⇑Lg Lg 08 12 27.5
comp=E,45nm,1.6s
MAKZ Makanchi 13.32 41 *e*P **Pn 08 08 32.1 -0.5**
MK31 Makanchi Array 13.48 42 *e*Pn **Pn 08 08 34.1 -0.6**
MK31 Makanchi Array 13.48 42 ⇑Pn **Pn 08 08 33.6 -1.1**
comp=E,22nm,0.7s,baz=226,slow=9.1,SNR=182
MK31 ⇑Lg Lg 08 12 42.5
comp=E,14nm,0.8s
MK31 Makanchi Array 13.48 42 *e*P **Pn 08 08 34.1 -0.6**
MK32 Makanchi Array 13.48 42 *e*Pn **Pn 08 08 33.7 -1.1**
MKAR Makanchi Array 13.48 42 Pn **Pn 08 08 33.7 -1.1**
comp=E,1.4nm,0.3s,baz=233,slow=14,SNR=123
MKAR Lg Lg 08 12 35.7
comp=E,0.5nm,0.3s,baz=251,slow=23,SNR=3.1
MKAR LR LR 08 14 20.0
comp=E,364nm,18.2s,baz=224,slow=40
AB31 Akbulak array 13.67 333 P **Pn 08 08 35.2 -2.1**
comp=E,18nm,0.6s,baz=153,slow=12,SNR=500
AB31 ⇑S Sn 08 10 57.1 -11
comp=E,25nm,0.7s
ABKAR Akbulak array 13.67 333 *e*Pn **Pn 08 08 35.0 -2.3**
PYUN Piuthan 14.77 125 *e*P **Pn 08 08 49.3 -3.4**
comp=E,213nm,1.1s
KURBB Kurchatov Arra 14.81 24 Pn **Pn 08 08 48.6 -4.2**
comp=E,0.4nm,0.3s,baz=214,slow=12,SNR=35
KURBB Lg Lg 08 13 18.6
comp=E,0.2nm,0.3s,baz=215,slow=31,SNR=6.8
KURBB Kurchatov Arra 14.81 24 ⇓Pn **Pn 08 08 49.2 -3.6**
comp=E,8.7nm,0.6s
KURBB ⇑Lg Lg 08 13 07.1
comp=E,94nm,0.8s
KURK Kurchatov 14.92 24 *e*Pn **Pn 08 08 51.0 -3.3**
KURK Kurchatov 14.92 24 ⇑Pn **Pn 08 08 50.6 -3.7**
comp=E,14nm,1.4s
KURK ⇑Lg Lg 08 13 01.5
comp=E,95nm,1.1s
KURK Kurchatov 14.92 24 *i* P **Pn 08 08 49.9 -4.4**
AKTO Aktyubinsk 15.35 332 Pn **Pn 08 08 57.7 -2.3**
comp=E,2.5nm,0.3s,baz=147,slow=14,SNR=67
AKTO Sn **Sn 08 11 38.6 -10**
comp=E,0.8nm,0.3s,baz=6.5,slow=18,SNR=2.7
AKTO Lg Lg 08 13 34.4
comp=E,0.3nm,0.3s,baz=112,slow=19,SNR=2.1
AKTO LR LR 08 14 55.1
comp=E,248nm,20.2s,baz=146,slow=37
AKTO Aktyubinsk 15.35 332 ⇑P **Pn 08 08 58.4 -1.6**
comp=E,70nm,0.8s
WMQ Urumqi 15.39 60 *e*P **P 08 09 03.3 -1.7**
WMQ pP pP 08 09 08.1 -4.3
WMQ pmax pmax
comp=E,21nm,0.9s
WMQ pmax pmax
comp=E,44nm,4.3s
WMQ LR LR
comp=E,630nm,24.1s
WMQ LR LR
comp=E,610nm,24.1s
WMQ LR LR
comp=E,400nm,24.7s
KOLN Koldanda 15.39 124 *e*P **Pn 08 08 58.5 -2.4**
comp=E,106nm,1.1s
BVAR Borovoye Array 15.68 2 Pn **Pn 08 09 01.4 -2.8**
comp=E,0.3nm,0.3s,baz=179,slow=17,SNR=5.6
BRVK Borovoye 15.71 2 *e*Pn **Pn 08 09 02.8 -1.8**
comp=E,12nm,0.8s
BRVK Borovoye 15.71 2 ⇑Pn **Pn 08 09 04.0 -0.6**
comp=E,18nm,0.9s
BRVK Borovoye 15.71 2 *e*P **P 08 09 06.7 -1.7**
BHPL Bhopal 15.73 151 *e*P **Pn 08 09 06.8 +1.6**
BHPL IAmb IAmb 08 09 16.8
comp=Z,25nm,0.9s
DMN Daman 16.51 122 *e*P **Pn 08 09 14.3 -0.9**
comp=Z,54nm,0.9s
KKN Kakani 16.51 121 *e*P **Pn 08 09 14.1 -1.1**
comp=Z,49nm,0.6s
PKIN Phulchoki 16.72 121 *e*P **Pn 08 09 17.0 -1.0**
comp=Z,33nm,0.6s
PKI Pulchoki 16.74 121 *e*P **Pn 08 09 17.0 -1.2**
comp=Z,59nm,0.9s
GUN Gumba 16.85 119 *e*P **Pn 08 09 18.7 -0.9**
comp=Z,100nm,0.8s
AKT Akhty 17.14 291 *e*P **P 08 09 25.0 +0.6**
AKT pmax pmax
comp=Z,9.0nm,0.7s
JIRN Jiri 17.22 119 *e*P **Pn 08 09 23.7 -0.6**
comp=Z,50nm,0.4s
MAK Makhachkala 17.53 295 *e*P **Pn 08 09 25.9 -1.8**
MAK *e*S **Sn 08 12 39.6 -2.5**
MAK pmax pmax
comp=Z,122nm,1.0s
MAK MLR MLR
comp=Z,185nm,13.0s
DGZ Jazzator, Alta 17.98 41 *c i*P **Pn 08 09 30.4 -2.9**
GROC Groznyy 18.81 295 *e*P **P 08 09 42.3 -0.4**
GROC *e*S **Sn 08 13 13.8 +0.9**
GROC pmax pmax
comp=Z,28nm,0.4s
GTK Tadong 19.13 116 *e*P **P 08 09 45.7 -0.8**
GTK IAmb IAmb 08 09 47.0
comp=Z,349nm,0.2s
GNI Garni 19.32 286 P **Pn 08 09 51.8 +2.1**
comp=Z,0.8nm,0.3s,baz=111,slow=3.1,SNR=12
GNI LR LR 08 20 20.2
comp=Z,163nm,19.0s,baz=112,slow=46
GNI Garni 19.32 286 *e*P **P 08 09 49.2 +0.7**
comp=Z,31nm,1.0s
GNI Garni 19.32 286 *i* P **P 08 09 48.5 0.0**
TBLG Delisi 19.39 291 *e*P **P 08 09 49.5 +0.4**
comp=Z,30nm,0.8s
TBLG Delisi 19.39 291 *e*P **P 08 09 49.6 +0.4**
TBLG pmax pmax
comp=Z,30nm,0.8s
LSA Lhasa 19.75 106 *e*P **P 08 09 53.3 -0.3**
comp=Z,10nm,0.6s
LSA Lhasa 19.75 106 *e*P **P 08 09 53.3 -0.3**
LSA pmax pmax
comp=Z,10.0nm,0.6s
ZAA0 Zalesovo Array 19.75 28 *e*P **P 08 09 52.0 -0.9**
comp=Z,17nm,0.9s
ZALV Zalesovo Beam 19.75 28 P **P 08 09 51.8 -1.1**
comp=Z,2.0nm,0.3s,baz=223,slow=10,SNR=20
NVS Novosibirsk 19.91 24 *e*P **P 08 09 53.6 -1.0**
NVS *e* 08 13 36.0
ZEI Tsey 20.12 294 *e*P **P 08 09 57.6 +0.3**
ZEI pmax pmax
comp=Z,28nm,1.4s
AKH Akhalkalaki 20.30 289 *e*P Pn 08 10 01.0 -0.4
comp=Z,25nm,0.8s
ARU Arti 20.38 343 P **P 08 10 00.7 +0.9**
comp=Z,2.9nm,0.3s,baz=166,slow=10,SNR=12
ARU LR LR 08 18 04.7
comp=Z,228nm,18.0s,baz=144,slow=37
ARU Arti 20.38 343 *e*P **P 08 09 60.0 +0.3**
comp=Z,30nm,0.8s
ARU Arti 20.38 343 *d i*P Pn 08 10 01.4 -0.5
ARU 08 10 16.7
ARU S Sn 08 13 49.4 -1.1
ARU SS **SnSn 08 14 08.1 +2.9**
ARU pmax pmax
comp=Z,29nm,0.8s
NCK Nalchik 20.44 295 ⇑*i*P **P 08 10 01.9 +1.3**
NCK pmax pmax
comp=Z,57nm,0.8s
KBZ Khabaz 20.98 296 P **P 08 10 07.0 +0.7**
comp=Z,18nm,0.7s,baz=126,slow=8.6,SNR=37
KBZ LR LR 08 20 34.5
comp=Z,131nm,19.8s,baz=89,slow=43
KBZ Khabaz 20.98 296 P **P 08 10 07.0 +0.7**
GOF Gofitskoye 21.11 300 ⇓*i*P **P 08 10 09.4 +1.6**
GOF pmax pmax
comp=Z,78nm,0.8s
KIV Kislovodsk 21.16 296 *e*P **P 08 10 08.5 +0.1**
comp=Z,20nm,0.7s
KIV Kislovodsk 21.16 296 *e*P **P 08 10 07.7 -0.7**
KIV *e*S **S 08 14 00.6 -1.8**
KIV pmax pmax
comp=Z,77nm,1.0s
KIV MLR MLR
comp=Z,355nm,14.0s
TAWA Tawang 21.36 111 *e*P **P 08 10 12.4 +1.4**
TURI Tura 21.43 117 *e*P **P 08 10 12.6 +1.3**
SHL Shillong 22.53 115 *e*P **P 08 10 24.3 +1.0**
comp=Z,56nm,1.2s
SHL Shillong 22.53 115 *e*P **P 08 10 24.3 +1.0**
SHL pmax pmax
comp=Z,56nm,1.2s
SHL Shillong 22.53 115 *e*P **P 08 10 24.4 +1.0**
SHL Shillong 22.53 115 *e*P **P 08 10 25.0 +1.7**
TEZP TEZPUR 22.59 112 *e*P **P 08 10 25.3 +1.6**
ZIRO ZIRO 22.89 108 *e*P **P 08 10 27.7 +0.6**
SOC Sochi 23.25 295 *e*P **P 08 10 27.7 -2.7**
SOC *e*PP **pP 08 10 38.8 +0.6**
SOC *e*S **S 08 14 39.6 -1.2**
SOC *e*SS **SnSn 08 15 15.0 -0.7**
SOC pmax pmax
comp=Z,10.0nm,0.5s
SOC MLR MLR
comp=Z,120nm,11.0s
VRH Novokhopyorsk 23.91 314 *e*P **P 08 10 43.8 +7.0**
VRH pmax pmax
comp=Z,100nm,0.7s
GTA Gaotai 23.97 76 *e*P **P 08 10 40.1 +2.5**
GTA pP pP 08 10 44.5 -1.1
GTA sP sP 08 10 47.5 -1.5
GTA pmax pmax
comp=Z,4.0nm,0.8s
GTA pmax pmax
comp=Z,94nm,5.7s
GTA LR LR
comp=Z,520nm,24.8s
GTA LR LR
comp=Z,470nm,20.6s
GTA LR LR
comp=Z,620nm,21.6s
KOHI KOHIMA 24.07 112 *e*x **P 08 10 33.4 -5.3**
KOHI IAmb IAmb 08 10 35.6
comp=Z,84nm,0.1s
IMP Imphal 24.46 114 *e*P **P 08 10 44.1 +1.9**
IMP IAmb IAmb 08 10 50.6
comp=Z,10nm,0.5s
RAYN Ar Rayn 24.62 243 *e*P **P 08 10 44.0 +0.4**
comp=Z,11nm,1.4s
RAYN Ar Rayn 24.62 243 *e*P **P 08 10 44.0 +0.4**
RAYN pmax pmax
comp=Z,11nm,1.4s
KIRV Kirov 24.86 335 P **P 08 10 46.1 +0.8**
comp=Z,17nm,0.8s,baz=78,slow=8.4,SNR=4.4
ANN Anapa 25.01 297 *e*P **P 08 10 47.0 +0.2**
ANN *e*S **S 08 15 10.5 +1.5**
ANN pmax pmax
comp=Z,26nm,0.7s
ANN MLR MLR
comp=Z,339nm,25.0s
VORD Divnogorie 25.23 312 *e*P **P 08 10 49.6 +0.8**
VORD pmax pmax
comp=Z,20nm,0.6s
SAIH SAIHA 25.25 119 *e*P **P 08 10 51.2 +1.9**
VSR Storozhevoye 25.40 313 *e*P **P 08 10 51.0 +0.7**
VSR pmax pmax
comp=Z,40nm,0.7s
LPSR Galich'ya Gora 26.07 315 *e*P **P 08 10 56.6 +0.3**
LPSR pmax pmax
comp=Z,30nm,1.0s
SIM Simferopol' 27.37 297 *e*P **P 08 11 07.7 -0.5**
SIM *e*SS SS 08 17 05.0 -37
SIM pmax pmax
comp=Z,15nm,0.8s
BZK Bozkurt 27.41 291 ⇑*i*P **P 08 11 10.4 +1.8**
ZAK Zakamensk 27.49 51 *e*P **P 08 11 09.8 +0.5**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
LZH Lanzhou 27.65 82 *e*P **P 08 11 12.9 +1.9**
LZH pP sP 08 11 23.5 +1.1
LZH sP pP 08 11 28.0 +9.0
LZH *e*PP **PnPn 08 12 01.4 +4.6**
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,78nm,4.2s
BR131 Keskin Array S 27.86 286 *e*P **P 08 11 13.8 +1.0**
comp=Z,6.4nm,0.6s
BRTR Keskin Array B 27.86 286 P **P 08 11 14.5 +1.7**
comp=Z,4.3nm,0.6s,baz=103,slow=9.5,SNR=28
BRTR Keskin Array B 27.86 286 *i* P **P 08 11 14.6 +1.7**
BRTR pmax pmax
comp=Z,5.0nm,0.6s
MMAI Mount Meron Ar 27.93 271 LR LR 08 24 33.1
comp=Z,54nm,19.3s,baz=180,slow=41
OBN Obninsk 28.38 319 P **P 08 11 18.2 +1.2**
comp=Z,7.5nm,0.5s,baz=104,slow=5.9,SNR=5.9
OBN Obninsk 28.38 319 *e*P **P 08 11 17.7 +0.7**
comp=Z,44nm,0.5s
OBN Obninsk 28.38 319 *ce*P **P 08 11 17.5 +0.5**
OBN *e* 08 12 07.2
OBN pmax pmax
comp=Z,10.0nm,0.4s
OBN MLR MLR
comp=Z,111nm,22.0s
SONA0 Songino Array 29.00 57 *e*P **P 08 11 21.4 -1.5**
SONM Songino Array 29.00 57 P **P 08 11 21.4 -1.5**
comp=Z,0.6nm,0.4s,baz=290,slow=8.9,SNR=2.2
CD2 Chengdu 29.15 92 P **P 08 11 25.3 +1.1**
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 pmax pmax
comp=Z,670nm,15.3s
CD2 LR LR
comp=Z,4μm,27.0s
CD2 LR LR
comp=Z,2μm,18.4s
CD2 LR LR
comp=Z,3μm,19.6s
ULN Ulaanbaatar 29.44 57 *ce*P **P 08 11 25.8 -1.0**
ULN pmax pmax
comp=Z,7.0nm,2.5s
EIL Elat 29.51 265 LR LR 08 25 22.4
comp=Z,165nm,19.7s,baz=68,slow=41
KLMR Klimovskoe 30.05 331 *e*P **P 08 11 30.6 -1.2**
KLMR pmax pmax
comp=Z,4.0nm,0.6s
KLMR Klimovskoe 30.05 331 *e*P **P 08 11 30.6 -1.2**
KLMR AMP 08 11 32.7
comp=Z,4.0nm,0.7s
YLV Yalova 31.00 288 ⇓*i*P **P 08 11 42.5 +1.9**
AKASG Malin Array Be 31.32 308 P **P 08 11 43.8 +0.6**
comp=Z,3.7nm,0.7s,baz=89,slow=7.6,SNR=18
AKBB Malin Array Si 31.32 308 *e*P **P 08 11 43.6 +0.4**
comp=Z,3.4nm,0.8s
AKBB Malin Array Si 31.32 308 *e*P **P 08 11 43.6 +0.4**
AKBB pmax pmax
comp=Z,3.0nm,0.8s
CFR Carcaliu 31.61 297 ⇑*i*P **P 08 11 47.4 +1.6**
BTO Baotou 31.64 71 *e*P **P 08 11 49.8 +3.6**
CMAR Chiang Mai Arr 32.08 118 P **P 08 11 48.5 -1.7**
comp=Z,6.6nm,0.9s,baz=116,slow=4.9,SNR=6.0
VRI Vrincioaia 32.60 299 ⇑*i*P **P 08 11 57.3 +2.8**
PLOR Plostina 32.65 299 ⇑*i*P **P 08 11 57.5 +2.5**
TESR Tescani 32.65 300 ⇑*i*P **P 08 11 55.0 0.0**
HHC Hu-ho-hao-te 32.77 71 *e*P **P 08 11 58.6 +2.5**
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,37nm,5.9s
BIZ Bicaz 33.03 301 ⇓*i*P **P 08 12 00.2 +1.9**
MLR Muntele Rosu 33.15 298 P **P 08 12 01.6 +2.2**
comp=Z,18nm,0.9s,baz=153,slow=1.9,SNR=24
MLR Muntele Rosu 33.15 298 *e*P **P 08 12 01.4 +1.9**
comp=Z,20nm,0.9s
MLR Muntele Rosu 33.15 298 ⇑*i*P **P 08 12 02.5 +3.0**
EZN Ezine 33.42 288 ⇑*i*P **P 08 12 04.3 +2.6**
DOPR Dopca 33.53 299 ⇑*i*P **P 08 12 05.1 +2.5**
NRIK Noril'sk 33.54 12 P **P 08 12 03.5 +1.1**
comp=Z,4.1nm,0.7s,baz=204,slow=4.4,SNR=6.7
BURAR Bucovina Array 33.65 302 ⇓*i*P **P 08 12 05.5 +1.7**
BUR08 Bucovina Ar. S 33.66 302 *e*P **P 08 12 05.0 +1.1**
comp=Z,5.4nm,1.1s
VOIR 33.78 298 ⇑*i*P **P 08 12 06.3 +1.4**
ARR Arges 34.08 298 ⇑*i*P **P 08 12 09.8 +2.3**
LVV L'vov 34.53 306 *e*P **P 08 12 12.7 +1.5**
APE Apeiranthos 34.60 283 ⇑*i*P **P 08 12 14.0 +1.9**
VSU Vasula 34.64 321 *ce*P **P 08 12 12.1 0.0**
VSU pmax pmax
comp=Z,33nm,1.0s
VTS Vitosha 35.32 293 *e*P **P 08 12 19.4 +1.1**
comp=Z,5.5nm,0.8s
VTS Vitosha 35.32 293 *e*P **P 08 12 19.4 +1.1**
VTS pmax pmax
comp=Z,6.0nm,0.8s
DRGR 35.36 300 ⇑*i*P **P 08 12 20.7 +2.2**
GZR Gura Zlata 35.38 298 ⇑*i*P **P 08 12 20.0 +1.3**
BOD Bodaibo 35.57 40 *e*P **P 08 12 20.3 +0.3**
BOD pmax pmax
comp=Z,11nm,1.4s
IDI Anoyia 35.57 280 P **P 08 12 21.9 +1.4**
comp=Z,1.6nm,0.5s,baz=52,slow=17,SNR=2.3
KOLS Kolonicke sedl 35.65 304 *e*P **P 08 12 23.0 +2.1**
KOLS pmax pmax
comp=Z,6.0nm,0.8s
KOLS Kolonicke sedl 35.65 304 *e*P **P 08 12 23.0 +2.1**
FIA1 FINESS Array S 35.99 326 *e*P **P 08 12 24.2 +0.6**
comp=Z,6.6nm,1.0s
FINES FINESS Array B 35.99 326 P **P 08 12 24.7 +1.1**
comp=Z,2.2nm,0.5s,baz=111,slow=10,SNR=16
SIRR Siria 36.11 300 ⇑*i*P **P 08 12 27.4 +2.5**
LVZ Lovozero 36.15 339 *e*P **P 08 12 26.0 +1.1**
comp=Z,10nm,1.0s
LVZ Lovozero 36.15 339 *e*P **P 08 12 26.0 +1.1**
LVZ pmax pmax
comp=Z,10.0nm,1.0s
MDVR Moldovita 36.18 297 ⇑*i*P **P 08 12 27.8 +2.2**
BZS Buzias 36.18 299 ⇑*i*P **P 08 12 27.6 +2.1**
KECS Kecovo 36.83 303 *e*P **P 08 12 33.0 +2.0**
KECS Kecovo 36.83 303 *e*P **P 08 12 33.0 +2.0**
OJC Ojcow 37.28 306 *e*P **P 08 12 35.8 +1.0**
comp=Z,8.8nm,0.6s
OJC Ojcow 37.28 306 *e*P **P 08 12 35.8 +1.0**
OJC pmax pmax
comp=Z,9.0nm,0.6s
VYHS Vyhne 37.93 303 *e*P **P 08 12 42.9 +2.6**
VYHS Vyhne 37.93 303 *e*P **P 08 12 42.9 +2.6**
MORH Mrgy, Hungar 38.20 300 EP **P 08 12 44.0 +1.5**
MORC Moravsky Berou 38.73 306 *e*P **P 08 12 47.6 +0.5**
comp=Z,6.4nm,1.0s
MORC Moravsky Berou 38.73 306 *e*P **P 08 12 47.6 +0.5**
MORC pmax pmax
comp=Z,6.0nm,1.0s
VRAC Vranov 39.37 305 P **P 08 12 54.3 +2.0**
comp=Z,3.1nm,0.7s,baz=100,slow=9.4,SNR=4.7
DPC Dobruska-Polom 39.51 307 *e*P **P 08 12 55.6 +2.1**
DPC Dobruska-Polom 39.51 307 *e*P **P 08 12 55.6 +2.1**
ARCES ARCESS Array B 39.82 338 P **P 08 12 57.0 +1.2**
comp=Z,5.9nm,0.8s,baz=116,slow=8.2,SNR=19
ARE0 ARCESS Array S 39.82 338 *e*P **P 08 12 56.4 +0.6**
comp=Z,1.0nm,1.4s
CONA Conrad Observa 39.95 303 *i* P **P 08 12 57.9 +0.6**
comp=Z,8.4nm,1.2s
SOKA Soboth 40.64 301 *i* P **P 08 13 04.7 +1.7**
comp=Z,8.5nm,1.2s
NJ2 Nanjing 40.73 82 *e*P **P 08 13 05.0 +1.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.8s
BRG Berggiesshubel 41.00 307 *e*P **P 08 13 07.7 +1.9**
comp=Z,6.7nm,0.8s
BRG Berggiesshubel 41.00 307 *e*P **P 08 13 07.7 +1.9**
BRG pmax pmax
comp=Z,7.0nm,0.8s
MOA Molln 41.02 303 *i* P **P 08 13 07.9 +1.7**
comp=Z,9.8nm,1.5s
GEC2 GERESS Array S 41.30 304 *e*P **P 08 13 09.3 +0.9**
comp=Z,2.1nm,0.7s
GEC2 GERESS Array S 41.30 304 *e*P **P 08 13 09.3 +0.9**
GEC2 pmax pmax
comp=Z,2.0nm,0.7s
GERES GERESS Array B 41.30 304 P **P 08 13 10.0 +1.5**
comp=Z,0.3nm,0.3s,baz=81,slow=8.6,SNR=6.4
GERES PP **PnPn 08 14 46.9 -1.7**
comp=Z,0.4nm,0.2s,baz=81,slow=9.6,SNR=4.0
GERES GERESS Array B 41.30 304 P **P 08 13 10.0 +1.5**
HFS Hagfors 41.53 321 P **P 08 13 11.0 +0.9**
comp=Z,14nm,0.5s,baz=98,slow=11,SNR=66
HFS Hagfors 41.53 321 P **P 08 13 11.0 +0.9**
CLL Collm 41.57 308 *e*P **P 08 13 11.0 +0.5**
CLL *e*PP **PnPn 08 14 50.0 -1.5**
CLL Collm 41.57 308 *e*P **P 08 13 11.0 +0.5**
ABTA Abfaltersbach 42.35 301 *e*P **P 08 13 18.9 +1.9**
comp=Z,5.6nm,1.1s
CN2 Changchun 42.44 63 *e*P **P 08 13 20.0 +2.3**
NC303 NORSAR Array S 42.80 323 *e*P **P 08 13 21.4 +0.9**
comp=Z,19nm,0.8s
NB201 NORSAR Array S 42.82 323 *e*P **P 08 13 21.3 +0.7**
comp=Z,4.7nm,0.5s
NB2 NORSAR Subarra 42.85 323 P **P 08 13 21.1 +0.2**
comp=Z,3.4nm,0.6s,baz=97,slow=8.6
NOA NORSAR Array B 42.85 323 P **P 08 13 20.9 0.0**
comp=Z,6.4nm,0.7s,baz=98,slow=8.2,SNR=28
WTTA Wattenberg 42.86 302 *i* P **P 08 13 22.0 +0.7**
comp=Z,4.2nm,0.7s
NBO00 NORSAR Array S 43.06 323 *e*P **P 08 13 23.1 +0.5**
comp=Z,7.2nm,0.9s
MOTA Moosalm 43.21 302 *i* P **P 08 13 24.6 +0.5**
comp=Z,4.3nm,0.8s
RETA Reutte 43.42 303 *i* P **P 08 13 27.1 +1.4**
comp=Z,8.3nm,1.3s
FETA Feichten 43.51 302 *i* P **P 08 13 25.7 -0.9**
comp=Z,7.0nm,1.4s
DAVA Damuels 44.04 303 *i* P **P 08 13 31.5 +0.7**
comp=Z,15nm,1.4s
DAVOX Davos/Dischmat 44.13 302 P **P 08 13 32.2 +0.7**
comp=Z,4.3nm,0.6s,baz=85,slow=6.9,SNR=5.5
TIXI Tiksi 45.49 23 *ce*P **P 08 13 41.5 -0.3**
TIXI pmax pmax
comp=Z,10.0nm,1.3s
KS15 Wonju Array Si 45.88 71 *e*P **P 08 13 45.6 +0.3**
comp=Z,11nm,1.1s
KSRS Korea Array 45.91 71 P **P 08 13 45.9 +0.4**
comp=Z,2.6nm,0.8s,baz=270,slow=6.2,SNR=9.6
SPITS Spitsbergen Ar 46.33 347 P **P 08 13 49.4 +1.0**
comp=Z,2.4nm,0.7s,baz=126,slow=13,SNR=4.6
KMBO Kilima Mbogo 48.43 225 *i* P **P 08 14 02.5 -3.2**
KMBO pmax pmax
comp=Z,1.0nm,0.4s
NKL Nikolayevsk 50.55 48 *e*P **P 08 14 21.0 -0.1**
NKL *e* 08 15 38.2
NKL *e* 08 16 16.2
NKL *e*S **S 08 21 35.2 +1.8**
NKL *e* 08 24 11.4
NKL *e*SS **SS 08 25 07.5 +0.3**
NKL pmax pmax
comp=Z,14nm,1.2s
NKL pmax pmax
comp=E,8.0nm,1.3s
NKL pmax pmax
comp=N,967nm,20.6s
NKL pmax pmax
comp=Z,44nm,4.1s
NKL MLR MLR
comp=Z,1μm,20.0s
EKA Eskdalemuir Ar 50.70 315 P **P 08 14 22.7 +0.5**
comp=Z,2.1nm,0.6s,baz=90,slow=8.3,SNR=5.3
DAG Danmarks Havn 53.51 343 *e*P **P 08 14 43.8 +1.0**

DAG	Danmarks Havn	53.51	343	*i* P	P	08 14 43.8	+1.0
MAJO	Matsushiro	53.92	68	*e*P	P	08 14 45.8	-0.7
MAJO	Matsushiro	53.92	68	*e*P	P	08 14 45.8	-0.7
MJAR	Matsushiro Arr	53.92	68	P	P	08 14 45.8	-0.7
	comp=Z,1.0nm,0.5s,baz=287,slow=9.4,SNR=4.0						
ESDC	Sonseca Array	55.83	297	P	P	08 15 00.4	0.0
	comp=Z,0.2nm,0.3s,baz=41,slow=8.5,SNR=5.0						
SUMG	Summit	59.79	341	*i* P	P	08 15 39.1	+11
PEA1	Petropavlovsk-	60.30	44	*e*P	P	08 15 31.8	+0.5
PETK	Petropavlovsk-	60.30	44	P	P	08 15 31.8	+0.5
	comp=Z,1.1nm,0.8s,baz=270,slow=0.7,SNR=2.4						
TOA1	Torodi Ar. Sit	64.37	267	*e*P	P	08 15 59.2	+0.1
TOA0	Torodi Ar. Sit	64.37	267	*e*P	P	08 16 00.1	+1.0
	comp=Z,9.2nm,1.4s						
TORD	Torodi Ar. Bea	64.37	267	P	P	08 15 59.2	+0.1
	comp=Z,1.1nm,0.8s,baz=17,slow=9.5,SNR=5.3						
INK	Inuvik	73.26	9	P	P	08 16 54.2	+0.6
	comp=Z,1.8nm,0.6s,baz=348,slow=6.1,SNR=3.5						
INK	Inuvik	73.26	9	*e*P	P	08 16 54.4	+0.8
	comp=Z,4.1nm,0.9s						
INK	Inuvik	73.26	9	*e*P	P	08 16 54.4	+0.8
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DBIC	Dimbokro	73.37	266	P	P	08 16 55.6	+0.4
	comp=Z,3.8nm,0.9s,baz=18,slow=6.4,SNR=2.4						
SML	Sawmill	76.58	17	*e*P	P	08 17 13.9	+0.9
	comp=Z,17nm,1.0s						
SML	Sawmill	76.58	17	*e*P	P	08 17 13.9	+0.9
SML				pmax	pmax		
	comp=Z,17nm,1.0s						
SCM	Sheep Creek Mo	76.79	17	*e*P	P	08 17 15.1	+0.9
	comp=Z,26nm,1.5s						
SCM	Sheep Creek Mo	76.79	17	*e*P	P	08 17 15.1	+0.9
SCM				pmax	pmax		
	comp=Z,26nm,1.5s						
YKW3	Yellowknife Ar	80.36	2	*e*P	P	08 17 34.6	+0.8
	comp=Z,5.8nm,1.0s						
YKA	Yellowknife Ar	80.43	2	P	P	08 17 35.0	+0.9
	comp=Z,1.3nm,0.6s,baz=351,slow=5.4,SNR=27						
YKB5	Yellowknife Ar	80.43	2	*e*P	P	08 17 35.0	+0.9
ULM	Lac du Bonnet	91.78	351	LR	LR	09 02 54.8	
	comp=Z,2μm,18.9s,baz=295,slow=38						

*IDC **24** 08:12:39.3±0.6, 6°.37S×148°.68E, h0km, mb4.1/17, mb1 4.3/20, mb1mx4.2/43, mbtmp4.2/20, ML4.0/3, MS4.3/2, Ms1 4.3/2, ms1mx3.8/34, Error ellipse: s-maj=21.5km s-min=12.6km az=99.0*
*ISCJB **24** 08:12:40.2±0.3, 6°.41S±0°.04×148°.59E±0°.05, h10km, mb4.6/47, MS4.7/2, Error ellipse: s-maj=8.2km s-min=4.6km az=20.4*
*BJI **24** 08:12:40.7±0.0, 6°.66S×148°.73E, h12km, mb4.8/15, mB5.1/13, Ms5.0/5, Ms7 4.7/4*
*NEIC **24** 08:12:41.8±1.8, 6°.41S×148°.57E, h10km, mb4.7/33, Error ellipse: s-maj=15.7km s-min=5.7km az=296.0*
*GCMT **24** 08:12:47.8±0.4, 6°.78S±0°.02×148°.73E±0°.03, h31km±1km, MW5.1/70, Moment Tensor Solution. s19,c24; s70,c105; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr5.40±.56; Mθθ-5.43±.31; Mφφ0.03±.30; Mrθ2.57±.27; Mrφ-0.77±.19; Mθr-0.95±.42; Best double couple: M0 6.11600×10^16 NP1:φs94.00000°, δ58.00000°, λ103.00000°. NP2: φs250.00000°, δ34.00000°, λ70.00000°. Principal axes: T 6.1740, Plg73.0000°, Azm38.0000°; N -0.1150, Plg11.0000°, Azm267.0000°; P -6.0580, Plg12.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 08:12:41.8±0.3, 6°.47S±0°.05×148°.60E±0°.06, h10km, n83, σ19°50/97, mb4.6/47, 1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.25	206	Pn	Pn	08 13 34.4	+1.6
	164nm,0.3s,baz=40,slow=6.1,SNR=104						
PMG				Sn	Sn	08 14 14.0	+2.4
	142nm,0.3s,baz=330,slow=20,SNR=20						
PMG				LR	LR	08 14 28.2	
	comp=Z,3μm,19.5s,baz=342,slow=32						
PMG	Port Moresby	3.25	206	*e*Pn	Pn	08 13 36.4	+3.5
PMG				*e*Sn	Sn	08 14 14.0	+2.4
PMG				*e*Sg	Sb	08 14 16.0	-3.2
RABL	Rabaul	4.21	58	*e*Pn	Pn	08 13 48.5	+2.4
MANU	Manus Island	4.56	344	*e*Pn	Pn	08 13 52.1	+1.1
COEN	Coen	9.16	215	*e*Pn	Pn	08 14 55.8	+1.7
COEN				*e*Sn	Sn	08 16 36.4	-0.9
CTA	Charters Tower	13.73	189	Pn	Pn	08 15 57.0	+0.3
	0.2nm,0.3s,baz=26,slow=13,SNR=3.8						
CTA				LR	LR	08 21 33.2	
	comp=Z,2μm,18.7s,baz=352,slow=39						
CTAO	Charters Tower	13.73	189	*e*Pn	Pn	08 15 59.3	+2.7
FAKI	Fak Fak	16.67	281	*e*Pn	P	08 16 39.1	+1.0
	15nm,0.9s						
EIDS	Eidsvold	18.94	173	*e*P	Pn	08 17 04.4	+0.6
	16nm,0.7s						
WB2	Warramunga Arr	19.26	225	*e*P	P	08 17 07.2	+0.5
	19nm,0.8s						
WR1	Warramunga Arr	19.27	225	*e*P	P	08 17 07.1	+0.4
WR1				*e*Sn	Sn	08 20 43.8	-0.1
WR1				*e*ScP	ScP	08 25 04.8	-1.2
WRA	Warramunga Arr	19.27	225	P	P	08 17 07.1	+0.4
	2.9nm,0.3s,baz=55,slow=11,SNR=144						
WRA				S	Sn	08 20 43.8	-0.1
	0.3nm,0.3s,baz=50,slow=21,SNR=3.9						
WRA				ScP	ScP	08 25 04.9	-1.2
	0.1nm,0.3s,baz=58,slow=2.7,SNR=3.9						
AS31	Alice Springs	22.18	218	*e*P	P	08 17 38.9	+0.5
	15nm,1.2s						
AS31				*e*S	S	08 21 38.8	-4.0
ASAR	Alice Springs	22.18	218	P	P	08 17 39.1	+0.8
	15nm,0.8s,baz=57,slow=8.9,SNR=54						
ASAR				S	S	08 21 39.9	-3.0
	2.3nm,0.6s,baz=32,slow=24,SNR=6.9						
ASAR				ScP	ScP	08 25 14.0	+0.9
	2.0nm,0.9s,baz=46,slow=3.1,SNR=6.8						
DZM	Mont Dzumac	23.19	134	P	P	08 17 48.0	-1.0
	19nm,1.0s,baz=349,slow=0.9,SNR=7.0						
DZM	Mont Dzumac	23.19	134	*e*P	P	08 17 49.2	+0.2
	37nm,1.3s						
ARMA	Armidale	23.99	174	*e*P	P	08 17 56.7	-0.1
	17nm,1.2s						
SOEI	Soe	24.30	261	*e*P	P	08 18 00.8	+0.8
	42nm,1.2s						
BATI	Baumata	24.94	260	P	P	08 18 06.0	+0.3
	25nm,0.3s,baz=198,slow=3.2,SNR=2.7						
FITZ	Fitzroy Crossi	25.20	241	*e*P	P	08 18 09.3	+1.5
	36nm,0.8s						
STKA	Stephens Creek	26.11	194	P	P	08 18 15.5	-0.5
	10nm,1.0s,baz=355,slow=9.9,SNR=9.3						
STKA	Stephens Creek	26.11	194	*e*P	P	08 18 16.1	+0.1
	11nm,1.4s						
LUWI	Luwuk	26.32	281	*e*P	P	08 18 17.5	-0.6
	37nm,1.1s						
BBOO	Buckleboo	28.69	202	*e*P	P	08 18 38.9	-0.2
	20nm,1.4s						
FORT	Forrest	30.92	216	*e*P	P	08 18 59.6	+0.7
	26nm,0.9s						
PSA00	Pilbara Seismi	31.59	239	*e*P	P	08 19 05.0	0.0
	57nm,1.4s						
JAGI	Jajag, Banyuwa	34.20	264	*e*P	P	08 19 27.0	-0.9
	36nm,1.0s						
TAU	Tasmania Unive	36.31	182	*e*P	P	08 19 45.9	+0.2
	14nm,1.1s						
MORW	Morawa	38.06	230	*e*P	P	08 20 01.6	+0.8
	3.6nm,0.6s						
RAO	Raoul Island	38.86	130	*e*P	P	08 20 08.4	+0.9
	476nm,0.4s						
NWAO	Narrogin (SRO)	39.27	224	P	P	08 20 11.6	+0.8
	13nm,1.1s,baz=129,slow=13,SNR=3.0						
NWAO	Narrogin (SRO)	39.27	224	*e*P	P	08 20 11.5	+0.6
	14nm,0.9s						
KNTN	Kanton	39.71	87	*e*P	P	08 20 14.5	-0.3
	98nm,1.1s						
JNU	Nakatsue	42.82	338	*e*P	P	08 20 40.0	-0.1
	13nm,1.1s						
MJAR	Matsushiro Arr	43.88	348	P	P	08 20 48.0	-0.6
	3.2nm,1.0s,baz=174,slow=9.0,SNR=6.1						
MJAR				ScP	ScP	08 26 24.0	-2.8
	4.5nm,1.2s,baz=165,slow=5.0,SNR=4.6						
MAJO	Matsushiro	43.88	348	*e*P	P	08 20 48.0	-0.6
MAJO				*e*sP	P	08 20 48.1	-0.5
NJ2	Nanjing	47.66	325	*e*P	P	08 21 21.3	+2.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KSRS	Korea Array	47.77	338	P	P	08 21 18.6	-0.7
	2.5nm,0.6s,baz=149,slow=9.0,SNR=16						
KS15	Wonju Array Si	47.77	338	*e*P	P	08 21 19.2	0.0
	4.7nm,1.0s						
USRK	Ussuriysk Ar.	52.62	345	P	P	08 21 53.1	-2.8
	0.7nm,0.6s,baz=188,slow=8.4,SNR=3.5						
CN2	Changchun	54.24	339	*e*P	P	08 22 12.3	+4.5
CMAR	Chiang Mai Arr	54.87	298	P	P	08 22 11.8	-1.2
	0.7nm,0.4s,baz=100,slow=17,SNR=3.1						
HHC	Hu-ho-hao-te	58.07	327	*e*P	P	08 22 39.4	+3.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,29nm,5.7s						
LZH	Lanzhou	59.60	319	*e*P	P	08 22 49.9	+3.6
LZH				pP	pwP	08 22 53.1	-1.3
LZH				sP	sP	08 22 54.8	+6.2
LZH				*e*PP	PP	08 25 05.3	+7.3
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,79nm,7.4s						
LZH				LR	LR		
	comp=N,350nm,16.1s						
LZH				LR	LR		
	comp=E,360nm,16.0s						
LZH				LR	LR		
	comp=Z,410nm,18.2s						
PEA0B	Petropavlovsk-	59.85	6	*e*P	P	08 22 47.5	+0.1
	9.7nm,0.8s						
PETK	Petropavlovsk-	59.85	6	P	P	08 22 46.8	-0.7
	4.0nm,0.7s,baz=167,slow=4.9,SNR=4.7						
SONA0	Songino Array	65.59	330	*e*P	P	08 23 26.0	0.0
SONM	Songino Array	65.59	330	P	P	08 23 26.0	0.0
	0.6nm,0.5s,baz=134,slow=6.2,SNR=2.4						
UNV	Unalaska Valle	70.92	26	*e*P	P	08 23 59.1	+0.1
	69nm,1.4s						
VNDA	Vanda	71.36	177	P	P	08 24 02.0	+0.5
	0.6nm,0.8s,baz=335,slow=9.0,SNR=2.9						
VNDA	Vanda	71.36	177	*e*P	P	08 24 02.6	+1.2
WMQ	Urumqi	74.18	319	*e*P	P	08 24 22.4	+3.5
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.3s						
WMQ				LR	LR		
	comp=N,410nm,28.9s						
WMQ				LR	LR		
	comp=E,630nm,28.9s						
WMQ				LR	LR		
	comp=Z,250nm,14.5s						
MK32	Makanchi Array	78.87	320	*e*P	P	08 24 43.7	-1.7
MKAR	Makanchi Array	78.87	320	P	P	08 24 43.7	-1.7
	0.3nm,0.4s,baz=98,slow=7.9,SNR=6.6						
KSH	Kashi	80.87	312	*e*P	P	08 25 00.1	+3.6
KURK	Kurchatov	82.54	323	*e*P	P	08 25 04.2	-0.6
	5.9nm,1.3s						
KURBB	Kurchatov Arra	82.56	323	P	P	08 25 03.7	-1.3
	0.2nm,0.4s,baz=99,slow=5.7,SNR=3.6						
QSPA	South Pole Qui	83.50	180	*e*P	P	08 25 09.8	+0.1
	7.7nm,1.3s						
RND	Reindeer	83.90	24	*e*P	P	08 25 11.3	-0.5
	6.5nm,1.0s						
CCB	Clear Creek Bu	84.88	23	*e*P	P	08 25 16.7	+0.1
	2.9nm,1.0s						
ILAR	Eielson Array	85.29	23	P	P	08 25 17.4	-1.2
	2.9nm,1.1s,baz=249,slow=4.3,SNR=11						
ILB	Eielson Array	85.29	23	*e*P	P	08 25 18.2	-0.4
	4.4nm,1.1s						
DOT	Dot Lake	85.95	24	*e*P	P	08 25 22.1	+0.2
	5.7nm,1.2s						
EGAK	Eagle	87.55	24	*e*P	P	08 25 29.8	0.0
	5.0nm,1.1s						
HYT	Haines Junctio	87.85	28	*e*P	P	08 25 31.1	-0.3
	8.8nm,1.1s						
DAWY	Dawson	88.03	25	*e*P	P	08 25 32.8	+0.7
	6.8nm,1.4s						
BVAR	Borovoye Array	88.08	324	P	P	08 25 30.6	-2.0
	0.4nm,0.4s,baz=99,slow=6.4,SNR=3.4						
SYO	Syowa Base	90.70	200	⇓*e*pP	pP	08 25 51.2	+5.0
NV01	Mina Array Sit	96.40	52	*e*P	P	08 26 10.5	-1.2
NVAR	Mina Array Bea	96.40	52	P	P	08 26 10.5	-1.2
	0.3nm,0.6s,baz=218,slow=4.2,SNR=3.2						
YKA	Yellowknife Ar	98.84	28	P	P	08 26 20.3	-1.5
	0.5nm,1.1s,baz=275,slow=5.6,SNR=3.0						
YKA				PKiKP	PKiKP	08 30 52.8	+0.1
	0.2nm,0.6s,baz=266,slow=1.4,SNR=6.5						
FINES	FINESS Array B	110.78	334	PKiKP	PKiKP	08 31 14.4	-0.3
	0.4nm,0.6s,baz=336,slow=3.0,SNR=2.3						
PLCA	Paso Flores	120.86	146	PKP	PKPdf	08 31 33.5	-1.4
	0.2nm,0.4s,baz=246,slow=6.1,SNR=2.0						
PLCA	Paso Flores	120.86	146	*e*PKPdf	PKPdf	08 31 35.0	0.0
GEC2	GERESS Array S	123.19	326	*e*PKPdf	PKPdf	08 31 38.2	-0.9
GERES	GERESS Array B	123.19	326	PKP	PKPdf	08 31 37.0	-2.1
	0.7nm,0.6s,baz=48,slow=2.0,SNR=5.6						
LPAZ	La Paz	137.20	122	PKP	PKPdf	08 32 05.3	-1.9
	1.4nm,0.9s,baz=277,slow=2.2,SNR=2.0						
LPAZ	La Paz	137.20	122	*e*PKPdf	PKiKP	08 32 08.9	-0.1
TORD	Torodi Ar. Bea	146.75	284	PKPbc	PKPdf	08 32 23.7	+0.2
	18nm,0.5s,baz=34,slow=4.1,SNR=162						
TOA1	Torodi Ar. Sit	146.75	284	*e*PKPdf	PKPdf	08 32 23.7	+0.2
PTGA	Pitinga	150.61	103	*e*PKPdf	PKPdf	08 32 29.2	-0.6
PTGA				*e*PKPbc	PKPbc	08 32 35.6	+0.4
BDFB	Brasilia	152.55	143	PKP	PKPdf	08 32 31.3	-1.5
	0.7nm,0.3s,baz=222,slow=12,SNR=1.6						
DBIC	Dimbokro	153.63	272	PKP	PKPdf	08 32 33.7	-0.6
	4.5nm,1.0s,baz=130,slow=17,SNR=2.3						
DBIC				PKPbc	PKPbc	08 32 40.5	-1.6
	1.5nm,0.5s,baz=17,slow=6.1,SNR=6.3						

*NEIC **24** 08:21:30.3±0.0, 19°.29N×68°.47W, h93km, MD3.4(RSPR), After RSPR.*

RSPR 24 08:21:30.3, 19°.29N×68°.47W, h93km±3km, MD3.4/11, 10C-2D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.99	240	⇑*e*P	Pn	08 21 49.3	-0.9
DR12				*e*S	Sn	08 22 04.8	-0.2
AGPR	Aguadilla, PR	1.52	122	⇓*e*P	Pn	08 21 55.5	-0.9
AGPR	Aguadilla, PR	1.52	122	*e*S	Sn	08 22 16.0	-0.4
AGP	Aguadilla	1.53	124	*e*Pn	Pn	08 21 54.2	-2.4
AGP				*e*Sn	Sn	08 22 14.1	-2.5
SDD	Santo Domingo	1.59	239	*e*Pn	Pn	08 21 59.8	+2.5
SDD				*e*Sn	Sn	08 22 17.4	-0.5
MPR	Mayaguez	1.65	130	*e*Pn	Pn	08 21 56.5	-1.6
MPR				*e*Sn	Sn	08 22 17.7	-1.5
LSP	Las Mesas	1.72	130	⇑*e*P	Pn	08 21 58.5	-0.5
LSP	Las Mesas	1.72	130	*e*S	Sn	08 22 20.5	-0.3
LSP	Las Mesas	1.72	130	*e*Pn	Pn	08 21 58.5	-0.5
LSP				*e*Sn	Sn	08 22 20.5	-0.3
CRPR	Cabo Rojo, PR	1.81	134	⇑*e*P	Pn	08 21 59.7	-0.5
CRPR	Cabo Rojo, PR	1.81	134	*e*S	Sn	08 22 22.6	-0.2
CRPR	Cabo Rojo, PR	1.81	134	*e*Pn	Pn	08 21 57.2	-2.9
CRPR				*e*Sn	Sn	08 22 16.8	-6.1
AOPR	Arecibo Observ	1.88	120	⇑*e*P	Pn	08 22 00.5	-0.5
AOPR	Arecibo Observ	1.88	120	*e*S	Sn	08 22 24.4	-0.1
AOPR	Arecibo Observ	1.88	120	*e*Pn	Pn	08 21 59.5	-1.5
AOPR				*e*Sn	Sn	08 22 23.4	-1.0
MLPR	Magueyes Islan	1.88	134	⇑*e*P	Pn	08 22 00.9	-0.2
MLPR	Magueyes Islan	1.88	134	*e*S	Sn	08 22 24.0	-0.5
EMPR	Esperanza - Ma	2.01	113	⇑*e*P	Pn	08 22 02.0	-0.7
EMPR	Esperanza - Ma	2.01	113	*e*S	Sn	08 22 27.6	+0.2
EMPR	Esperanza - Ma	2.01	113	*e*Pn	Pn	08 22 02.5	-0.1
EMPR				*e*Sn	Sn	08 22 29.9	+2.5
OBIP	Obispado Ponce	2.16	125	*e*S	Sn	08 22 30.9	-0.1
OBIP	Obispado Ponce	2.16	125	⇑*e*P	Pn	08 22 04.5	-0.2
OBIP	Obispado Ponce	2.16	125	*e*Pn	Pn	08 22 04.4	-0.3
OBIP				*e*Sn	Sn	08 22 29.3	-1.7
ICMP	Isla Caja de M	2.31	127	*e*Pn	Pn	08 22 05.4	-1.3
ICMP				*e*Sn	Sn	08 22 35.7	+1.2
SJG	San Juan	2.49	118	*e*S	Sn	08 22 38.5	-0.3
SJG	San Juan	2.49	118	⇓*e*P	Pn	08 22 08.0	-0.3
SJG	San Juan	2.49	118	*e*Pn	Pn	08 22 08.3	-0.7
SJG				*e*Sn	Sn	08 22 36.4	-2.4
IGPR	InterUniversit	2.60	120	⇑*e*P	Pn	08 22 10.5	0.0
IGPR				*e*S	Sn	08 22 41.0	-0.4
CBYP	Canovanas	2.67	112	⇑*e*P	Pn	08 22 11.6	0.0
CBYP	Canovanas	2.67	112	*e*S	Sn	08 22 43.0	-0.3
CBYP	Canovanas	2.67	112	*e*Pn	Pn	08 22 11.1	-0.5
CBYP				*e*Sn	Sn	08 22 42.3	-1.0
SDDR	Presa de Saban	2.68	264	*e*Pn	Pn	08 22 14.6	+3.0
HUMP	Col San Antoni	2.73	114	⇑*e*P	Pn	08 22 12.0	-0.3
HUMP	Col San Antoni	2.73	114	*e*S	Sn	08 22 45.0	+0.4
HUMP	Col San Antoni	2.73	114	*e*Pn	Pn	08 22 12.3	0.0
HUMP				*e*Sn	Sn	08 22 43.8	-0.9
MTP	Monte Pirata	3.01	113	*e*Pn	Pn	08 22 15.9	-0.1
MTP				*e*Sn	Sn	08 22 52.2	+1.0
CUPR	Culebra, Puert	3.17	107	*e*Pn	Pn	08 22 18.0	-0.2
CUPR				*e*Sn	Sn	08 22 51.2	-4.0
GRTK	Grand Turk	3.34	312	*e*Pn	Pn	08 22 23.1	+2.7
GRTK				*e*Sn	Sn	08 23 00.5	+1.4
STVI	Saint Thomas	3.46	105	*e*Pn	Pn	08 22 21.3	-0.7
STVI				*e*Sn	Sn	08 22 58.8	-3.3

*IDC **24** 08:25:46.7±3.9, 6°.59S×149°.32E, h0km, mb4.7/1, mb1 4.5/2, mb1mx3.6/28, mbtmp4.2/2, ML4.0/1, Error ellipse: s-maj=144.3km s-min=47.5km az=115.0*
*NEIC **24** 08:25:50.0±0.8, 6°.17S×148°.61E, h10km, mb4.4/9, Error ellipse: s-maj=42.5km s-min=16.8km az=313.0*
*ISCJB **24** 08:25:53.5±0.7, 6°.2S±0°.1×148°.5E±0°.1, h53km, mb4.3/7, Error ellipse: s-maj=21.6km s-min=9.0km az=37.9*

ISC 24 08:25:55.2±0.8, 6°.3S±0°.1×148°.6E±0°.2, h53km, n16, σ19°38/18, mb4.4/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.43	204	*e*Pn	Pn	08 26 46.4	+0.1
PMG				*e*Sn	Sn	08 27 26.8	+1.1
RABL	Rabaul	4.11	60	*e*Pn	Pn	08 26 54.9	-0.7
COEN	Coen	9.32	214	*e*Pn	Pn	08 28 05.7	-1.3
COEN				*e*Sn	Sn	08 29 46.1	-4.4
WC3	Warramunga Arr	19.39	224	*e*P	P	08 30 16.5	-0.6
	19nm,1.5s						
WB2	Warramunga Arr	19.40	224	*e*P	P	08 30 17.0	-0.1
	8.9nm,1.3s						
WR1	Warramunga Arr	19.40	224	*e*P	P	08 30 17.1	0.0
WRA	Warramunga Arr	19.41	224	P	P	08 30 17.1	0.0
	0.5nm,0.3s,baz=53,slow=10,SNR=32						
AS31	Alice Springs	22.34	218	*e*P	P	08 30 49.0	+0.2
	3.7nm,1.5s						
ASAR	Alice Springs	22.34	218	P	P	08 30 48.9	0.0
	1.0nm,0.5s,baz=51,slow=9.6,SNR=17						
FITZ	Fitzroy Crossi	25.29	240	*e*P	P	08 31 18.3	+1.3
	18nm,1.4s						
JAGI	Jajag, Banyuwa	34.21	264	*e*P	P	08 32 36.6	+0.4
	43nm,0.9s						
TAU	Tasmania Unive	36.52	182	*e*P	P	08 32 56.5	+1.0
	4.6nm,0.9s						
QSPA	South Pole Qui	83.71	180	*e*P	P	08 38 19.4	+1.0
	4.5nm,1.4s						
SIT	Sitka	87.72	32	*e*P	P	08 38 37.6	-0.5
	3.7nm,1.1s						
TORD	Torodi Ar. Bea	146.68	284	PKPbc	PKPbc	08 45 33.1	+0.8
	0.7nm,0.4s,baz=80,slow=2.3,SNR=7.5						
TOA1	Torodi Ar. Sit	146.68	284	*e*PKPdf	PKPbc	08 45 33.1	+0.8

*KRAR **24** 08:30:00.3±0.5, 53°.49N×87°.60E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **24** 08:30:03.6±2.5, 53°.40N×87°.67E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=17.1km s-min=12.2km az=88.0, Suspected Mining explosion.*
*IDC **24** 08:30:04.0±2.7, 53°.50N×87°.73E, h0km, mb1 3.2/3, mb1mx3.0/42, mbtmp3.2/3, ML3.0/3, Error ellipse: s-maj=25.4km s-min=13.6km az=64.0*

ISC 24 08:30:04.6±3.9, 53°.5N±0°.1×87°.6E±0°.2, h0km, n8, σ0°80/10, 4C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.72	286	*i*		08 41 13.4	
	baz=99,slow=315,SNR=2.3						
ZAA0	Zalesovo Array	1.72	286	⇓P	Pn	08 30 35.3	-0.4
	0.6nm,0.3s,baz=101,slow=14						
ZAA0				⇑S	Sb	08 30 59.5	+0.4
	0.9nm,0.3s,baz=108,slow=23						
ZALV	Zalesovo Beam	1.72	286	Pg	Pn	08 30 35.4	-0.3
	5.0nm,0.3s,baz=103,slow=13,SNR=34						
ZALV				Lg	Lg	08 31 00.1	
	4.5nm,0.3s,baz=98,slow=25,SNR=12						
KURK	Kurchatov	6.20	247	⇓Pn	Pn	08 31 36.0	-1.4
	2.7nm,1.1s						
KURK				⇑Lg	Lg	08 33 20.2	
	6.5nm,1.7s						
KURBB	Kurchatov Arra	6.30	246	Pn	Pn	08 31 39.1	+0.5
	0.1nm,0.3s,baz=62,slow=14,SNR=9.5						
KURBB				Lg	Lg	08 33 23.9	
	0.0nm,0.3s,baz=64,slow=33,SNR=6.7						
KURBB	Kurchatov Arra	6.30	246	⇑Pn	Pn	08 31 38.5	-0.1
	1.7nm,0.6s						
KURBB				⇑Sn	Sn	08 32 50.6	-0.6
	2.0nm,0.7s						
KURBB				⇓Lg	Lg	08 33 23.8	
	6.2nm,0.8s						
MKAR	Makanchi Array	7.54	209	Pn	Pn	08 31 56.4	+0.7
	0.4nm,0.3s,baz=28,slow=14,SNR=15						
MKAR				Sn	Sn	08 33 22.3	+0.5
	0.1nm,0.3s,baz=24,slow=28,SNR=3.4						
MKAR				Lg	Lg	08 34 01.9	
	0.1n

ARMA	Armidale	23.97	174	eP	P	08 37 34.4	+0.2
	48nm,1.4s						
MARNC	Mare, Loyalty	23.97	130	eP	P	08 37 33.8	-0.4
	117nm,1.0s						
STKA	Stephens Creek	26.09	194	P	P	08 37 53.8	+0.4
	7.2nm,0.7s,baz=10,slow=10,SNR=14						
STKA				LR	LR	08 49 56.6	
	comp=Z,562nm,18.1s,baz=39,slow=40						
STKA	Stephens Creek	26.09	194	eP	P	08 37 54.3	+0.9
	11nm,1.4s						
BBOO	Buckleboo	28.67	202	eP	P	08 38 17.4	+0.8
	17nm,1.1s						
KAPI	Kappang	28.75	271	P	P	08 38 17.4	-0.1
	2.0nm,0.3s,baz=90,slow=19,SNR=4.4						
KAPI	Kappang	28.75	271	eP	P	08 38 17.5	-0.1
	11nm,1.1s						
FORT	Forrest	30.91	216	eP	P	08 38 36.8	+0.3
	33nm,0.8s						
TOO	Toolangi	31.07	185	eP	P	08 38 38.2	+0.5
	10nm,1.0s						
PSAD2	Pilbara Seismi	31.51	239	eP	P	08 38 41.9	0.0
	57nm,1.4s						
TAU	Tasmania Unive	36.28	182	eP	P	08 39 23.6	+0.6
	12nm,0.9s						
MORW	Morawa	38.06	230	eP	P	08 39 38.8	+0.5
	15nm,1.0s						
NWAO	Narrogin (SRO)	39.27	224	eP	P	08 39 48.8	+0.4
	25nm,1.1s						
CISI	Cisompet, Garu	40.50	266	eP	P	08 39 59.0	+0.1
	69nm,1.1s						
JNU	Nakatsue	42.85	338	eP	P	08 40 17.4	-0.5
	8.8nm,1.1s						
MJAR	Matsushiro Arr	43.91	348	P	P	08 40 24.9	-1.5
	1.9nm,0.8s,baz=166,slow=8.8,SNR=5.3						
MJAR				LR	LR	08 57 31.2	
	comp=Z,190nm,18.4s,baz=120,slow=35						
MAJO	Matsushiro	43.91	348	eP	P	08 40 24.9	-1.5
NJ2	Nanjing	47.69	325	eP	P	08 40 57.6	+1.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KSRS	Korea Array	47.80	338	P	P	08 40 56.2	-0.8
	1.6nm,0.7s,baz=151,slow=8.3,SNR=11						
ASAJ	Asahikawa	50.67	354	LR	LR	09 01 13.8	
	comp=Z,157nm,19.8s,baz=170,slow=34						
CN2	Changchun	54.27	339	eP	P	08 41 48.8	+3.2
KMI	Kunming	54.57	307	P	P	08 41 50.8	+2.3
KMI				pP	pwP	08 41 54.3	-2.5
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
CM31	Chiang Mai Arr	54.90	298	eP	P	08 41 49.7	-1.0
	9.9nm,1.1s						
HHC	Hu-ho-hao-te	58.10	327	eP	P	08 42 15.9	+2.6
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,27nm,7.2s						
LZH	Lanzhou	59.63	319	eP	P	08 42 25.3	+1.2
LZH				pP	pwP	08 42 28.5	-4.0
LZH				sP	sP	08 42 30.1	+3.8
LZH				eP	P	08 44 39.3	+3.4
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,7.2s						
LZH				LR	LR		
	comp=N,350nm,15.9s						
LZH				LR	LR		
	comp=E,360nm,16.2s						
LZH				LR	LR		
	comp=Z,400nm,18.3s						
PETK	Petropavlovsk-	59.87	6	P	P	08 42 21.5	-3.7
	2.5nm,1.0s,baz=175,slow=5.2,SNR=2.6						
PETK				LR	LR	09 09 44.1	
	comp=Z,64nm,18.0s,baz=249,slow=38						
PEA1	Petropavlovsk-	59.88	6	eP	P	08 42 21.5	-3.7
SONA0	Songino Array	65.62	330	eP	P	08 43 02.7	-1.1
SONM	Songino Array	65.62	330	P	P	08 43 02.7	-1.1
	0.4nm,0.5s,baz=152,slow=6.5,SNR=2.2						
VNDA	Vanda	71.33	177	P	P	08 43 39.2	+0.3
	1.1nm,1.1s,baz=300,slow=6.6,SNR=5.3						
VNDA	Vanda	71.33	177	eP	P	08 43 40.0	+1.1
WMQ	Urumqi	74.21	319	eP	P	08 43 58.8	+2.1
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,40nm,3.9s						
WMQ				LR	LR		
	comp=N,660nm,28.8s						
WMQ				LR	LR		
	comp=E,750nm,29.3s						
WMQ				LR	LR		
	comp=Z,220nm,22.3s						
MK32	Makanchi Array	78.90	320	eP	P	08 44 21.3	-1.8
MKAR	Makanchi Array	78.90	320	P	P	08 44 21.3	-1.8
	0.2nm,0.5s,baz=116,slow=3.4,SNR=3.0						
KSH	Kashi	80.90	312	eP	P	08 44 37.6	+3.3
KSH				PP	PP	08 47 45.5	+6.6
KSH				S	S	08 54 42.3	-1.0
KSH				SS	SS	09 00 01.1	+3.6
KSH				pmax	pmax		
	comp=Z,43nm,1.0s						
KSH				pmax	pmax		
	comp=Z,310nm,5.0s						
KSH				LR	LR		
	comp=Z,410nm,19.0s						
QSPA	South Pole Qui	83.48	180	eP	P	08 44 47.4	+0.2
	11nm,1.1s						
ILAR	Eielson Array	85.31	23	P	P	08 44 54.5	-1.7
	2.0nm,0.9s,baz=260,slow=4.9,SNR=15						
ILB	Eielson Array	85.31	23	eP	P	08 44 55.8	-0.5
	3.1nm,1.1s						
DOT	Dot Lake	85.96	24	eP	P	08 44 58.3	-1.3
	4.1nm,1.1s						
EGAK	Eagle	87.56	24	eP	P	08 45 07.7	+0.3
	2.5nm,1.0s						
HYT	Haines Junctio	87.87	28	eP	P	08 45 09.0	-0.1
	5.4nm,1.0s						
DAWY	Dawson	88.04	25	eP	P	08 45 09.9	+0.2
	4.3nm,1.1s						
YKA	Yellowknife Ar	98.86	28	P	P	08 45 56.9	-2.6
	0.4nm,1.0s,baz=265,slow=5.4,SNR=4.1						
YKA				PKiKP	PKiKP	08 50 27.8	-2.6
	0.1nm,0.5s,baz=286,slow=1.5,SNR=3.1						
TXAR	Lajitas Array	108.59	61	PKiKP	PKiKP	08 50 49.0	-0.3
	0.3nm,0.9s,baz=250,slow=1.8,SNR=3.7						
GERES	GERESS Array B	123.22	326	PKP	PKPdf	08 51 15.5	-1.2
	0.4nm,0.2s,baz=106,slow=2.9,SNR=3.8						
LPAZ	La Paz	137.17	122	PKP	PKPdf	08 51 41.1	-3.6
	1.4nm,0.9s,baz=225,slow=8.6,SNR=3.0						
LPAZ	La Paz	137.17	122	ePKPdf	PKPdf	08 51 43.2	-1.5
TORD	Torodi Ar. Bea	146.77	284	PKPbc	PKPdf	08 52 01.1	0.0
	19nm,1.0s,baz=85,slow=3.0,SNR=54						
TOA1	Torodi Ar. Sit	146.77	284	ePKPdf	PKPdf	08 52 01.1	0.0
BDFB	Brasilia	152.52	143	PKPab	PKPab	08 52 25.1	-2.3
	1.5nm,0.5s,baz=202,slow=5.4,SNR=2.4						
DBIC	Dimbokro	153.65	272	PKPbc	PKPbc	08 52 18.8	-0.9
	6.4nm,1.0s,baz=27,slow=6.8,SNR=3.4						

*NNC **24** 08:41:45.8±3.6, 37°.57N×69°.05E, h15km±19km, mb3.9, mpv3.7, Error ellipse: s-maj=37.6km s-min=25.7km az=80.0*

ISC 24 08:41:43.2±3.6, 37°.5N±0°.2×68°.8E±0°.1, h10km, n12, σ2°51/15, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.80	13	⇑Pn	Pn	08 43 10.2	+1.0
	0.7nm,0.3s,baz=181,slow=11,SNR=12						
KK31				⇓Pg	Pb	08 43 28.9	+4.6
	1.4nm,0.4s,baz=190,slow=15,SNR=3.5						
KK31				⇓Sn	Sn	08 44 14.5	-1.3
	3.7nm,0.4s						
KK31				⇑Lg	Lg	08 44 43.7	
	25nm,0.8s						
AML	Almayashu	6.02	38	P	Pn	08 43 11.7	-0.9
	SNR=22						
UCH	Uchtor	6.50	41	P	Pn	08 43 17.5	-1.8
	SNR=19						
AAK	Ala-Archa	6.79	39	P	Pn	08 43 22.1	-0.9
	SNR=13						
AAK	Ala-Archa	6.79	39	⇑P	Pn	08 43 21.5	-1.4
	10nm,0.4s						
KZA	Kyzart	6.80	45	P	Pn	08 43 20.9	-2.4
	SNR=18						
KBK	Karagaybulak	7.03	40	P	Pn	08 43 25.6	-0.7
	SNR=6.6						
CHMS	Chumysh	7.18	38	P	Pn	08 43 27.4	-0.9
	SNR=9.6						
USP	Ospenovka	7.27	35	P	Pn	08 43 28.1	-1.3
	SNR=5.1						
TKM2	Tokmak 2	7.56	42	P	Pn	08 43 31.8	-1.8
	SNR=11						
TKM2	Tokmak 2	7.56	42	⇑P	Pn	08 43 31.8	-1.8
	5.5nm,0.6s						
AB31	Akbulak array	13.41	334	P	Pn	08 44 54.2	+0.8
	0.5nm,0.4s,baz=157,slow=12,SNR=21						
AB31				⇓S	Sn	08 47 17.1	-5.4
	1.1nm,0.7s						

IDC 24 08:47:14.6±3.7, 6°.41S×149°.42E, h0km, mb3.0/1, mb1 3.5/2, mb1mx3.2/31, mbtmp3.2/2, ML3.3/1, Error ellipse: s-maj=135.9km s-min=47.7km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.88	226	P	P	08 51 46.8	-0.9
	0.1nm,0.3s,baz=52,slow=11,SNR=3.9						
ASAR	Alice Springs	22.73	219	P	P	08 52 18.6	+0.1
	0.2nm,0.3s,baz=53,slow=9.0,SNR=6.1						
TORD	Torodi Ar. Bea	147.52	284	PKPbc	PKPbc	09 07 01.4	-0.4
	0.6nm,0.5s,baz=57,slow=4.1,SNR=8.2						

*ISK **24** 08:55:04.3, 37°.23N×28°.19E, h4km, ML2.4/6*
*DDA **24** 08:55:05.6, 37°.28N×28°.22E, h7km±5km, ML2.5*

ISC 24 08:55:05.0±1.1, 37°.24N±0°.04×28°.18E±0°.04, h5km±12km, n13, σ0°50/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.14	142	PG	Pg	08 55 07.5	-0.4
YER				SG	Sg	08 55 09.7	0.0
AYDN	Tasoluk	0.48	330	i P	Pb	08 55 15.6	-0.4
AYDN				i S	Sb	08 55 22.9	-0.4
TURN	Turunc	0.50	137	PG	Pg	08 55 13.9	-0.8
TURN				SG	Sg	08 55 20.8	-0.4
DALY	Dalyan (Mula)	0.57	138	PG	Pg	08 55 15.9	-0.1
DALY				SG	Sg	08 55 24.1	+0.7
DALY	Dalyan (Mula)	0.57	138	i P	Pg	08 55 16.3	+0.3
DALY				IAML_P			
	comp=Z,933nm,0.2s						
BDRM	Kayabasi	0.61	253	i P	Pb	08 55 18.5	+0.3
BDRM				IAML_P			
	comp=Z,660nm,0.1s						
DAT	Datca	0.70	223	PG	Pg	08 55 18.5	0.0
DAT	Datca	0.70	223	i P	Pb	08 55 20.2	+0.5
DAT				i S	Sn	08 55 32.2	-0.7
BODT	Bodrum	0.72	256	PG	Pg	08 55 18.9	+0.1
AYDB	Zeytinkoy-Aydi	0.74	342	PG	Pg	08 55 19.5	+0.3
ARG	Arkhangelos	1.03	182	PG	Pg	08 55 24.5	-0.2
MANT	Manisa	1.28	13	i P	Pn	08 55 30.0	+0.3
MANT				IAML_P			
	comp=Z,661nm,0.2s						
AKAS	Kas	1.53	131	i P	Pg	08 55 35.1	+0.8
AKAS				IAML_P			
	comp=Z,1μm,0.4s						

IDC 24 09:12:11.5±3.8, 6°.36S×148°.54E, h0km, mb3.1/1, mb1 3.6/3, mb1mx3.4/30, mbtmp3.4/3, ML2.7/2, Error ellipse: s-maj=129.9km s-min=34.9km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.32	204	Pn	Pn	09 13 05.8	+1.1
	8.1nm,0.3s,baz=26,slow=16,SNR=18						
PMG				Sn	Sn	09 13 45.1	+0.1
	6.2nm,0.3s,baz=330,slow=20,SNR=8.5						
WRA	Warramunga Arr	19.30	224	P	P	09 16 38.6	+0.3
	0.1nm,0.3s,baz=48,slow=11,SNR=6.2						
ASAR	Alice Springs	22.23	218	P	P	09 17 09.3	-0.7
	0.7nm,0.9s,baz=56,slow=9.1,SNR=8.7						
TORD	Torodi Ar. Bea	146.67	284	PKPbc	PKPbc	09 31 55.6	-0.8
	0.4nm,0.4s,baz=93,slow=3.3,SNR=7.3						

*ISK **24** 09:19:32.2, 37°.00N×37°.45E, h11km, ML1.9/4*
*DDA **24** 09:19:33.8, 37°.15N×37°.47E, h7km±6km, ML2.8*
*ISCJB **24** 09:19:34.3±0.8, 37°.10N±0°.05×37°.43E±0°.04, h10km±6km, Error ellipse: s-maj=8.5km s-min=5.2km az=15.6*

ISC 24 09:19:33.0±1.4, 37°.05N±0°.06×37°.43E±0°.03, h9km±11km, n12, σ0°55/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.21	305	PG	Pg	09 19 37.9	+0.5
GZT	Gaziantep	0.32	19	i P	Pg	09 19 38.9	-0.6
GZT				IAML_P			
	comp=Z,10μm,0.3s						
KUZU	Kuzuini	0.40	226	i P	Pn	09 19 44.2	-0.8
KUZU				IAML_P			
	comp=Z,2μm,0.2s						
KMRS	Kahramanmaras	0.62	317	PG	Pb	09 19 45.7	-0.4
KMRS				SG	Sb	09 19 55.5	+0.6
SURC	SANLIURFA_SURC	0.96	100	i P	Pn	09 19 53.8	+1.0
SURC				i S	Sn	09 20 06.6	0.0
SURC				IAML_P			
	comp=Z,458nm,0.1s						
ANDN	Andirin	1.01	302	i P	Pg	09 19 52.6	+0.1
URFA	Urfa	1.18	70	PN	Pb	09 19 55.2	-0.4
URFA				SN	Sn	09 20 12.1	+0.1
SANL	SANLIURFA_Merk	1.25	84	i P	Pg	09 19 57.0	-0.1
SANL				i S	Sn	09 20 14.2	+0.4
SANL				IAML_P			
	comp=Z,814nm,0.3s						
ELBS	KAHRAMANMARAS	1.29	350	i P	Pg	09 19 58.2	+0.3
AKCD	Akcadag	1.30	17	i P	Pg	09 19 57.8	-0.2
AKCD				i S	Sn	09 20 15.2	0.0
AKCD				IAML_P			
	comp=Z,1μm,0.2s						
KOZT	Kozan	1.35	289	PN	Pn	09 19 58.0	-0.1
KOZT				SN	Sg	09 20 16.9	+0.5
DARE	Darende-Malaty	1.52	2	PN	Pb	09 20 00.6	-0.8

*TRN **24** 09:19:53.0, 15°.04N×60°.41W, h29km, MD3.9*
*ISCJB **24** 09:19:53.6±0.5, 15°.05N±0°.02×60°.36W±0°.05, h62km±5km, mb3.5/6, Error ellipse: s-maj=9.0km s-min=2.7km az=167.9*
*IDC **24** 09:19:54.8±1.1, 14°.99N×60°.61W, h50km±7km, mb3.3/6, mb1 3.7/9, mb1mx3.5/32, mbtmp3.7/9, Error ellipse: s-maj=26.3km s-min=4.4km az=85.0*

ISC 24 09:19:54.6±1.0, 15°.04N±0°.03×60°.43W±0°.07, h51km±10km, n66, σ1°22/86, mb3.6/6, 11D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	Ilet Lapin Mar	0.51	239	‖eP	Pn	09 20 05.5	-0.5
MVM	Montagne Vaucl	0.66	223	‖eP	Pn	09 20 07.5	-0.4
LPMF	Morne Lapointe	0.70	229	‖eP	Pn	09 20 07.6	-0.8
MPOM	Morne Pois Mar	0.72	215	‖eP	Pn	09 20 08.2	-0.5
H05S1	Guadeloupe/Mar	0.73	213	P	Pn	09 20 08.5	-0.3
H05S1				S	Sn	09 20 18.3	-0.7
BAMF	Morne Balai	0.73	252	‖eP	Pn	09 20 08.6	-0.3
ZAM	Aeronautique	0.74	232	eP	Pn	09 20 08.3	-0.7
CXM	Morne La Croix	0.75	253	‖eP	Pn	09 20 09.0	-0.2
GBMF	Grand Be	0.75	252	‖eP	Pn	09 20 08.8	-0.4
FDF	Fort de France	0.76	247	eP	Pn	09 20 08.8	-0.5
FDF				eS	Sn	09 20 19.1	-0.9
PML	Morne Lenard	0.78	251	‖eP	Pn	09 20 09.2	-0.3
TRMF	Trois Ilets	0.79	231	‖eP	Pn	09 20 09.1	-0.4
PCM	Pelee Case Pet	0.79	254	‖eP	Pn	09 20 09.3	-0.3
BIM	Bigot	0.81	230	‖eP	Pn	09 20 09.6	-0.3
DSTT	Stowe	0.87	284	eP	Pn	09 20 11.5	+0.9
DSTT				eS	Sn	09 20 25.6	+3.2
DBCT	Belle View Cho	0.92	285	eP	Pn	09 20 12.1	+0.8
DBCT				eS	Sn	09 20 25.4	+1.8
DSHT	Scott's Head	0.93	281	eP	Pn	09 20 11.9	+0.4
DPMT	Pointe Michel	0.94	284	eP	Pn	09 20 12.6	+1.0
DPMT				eS	Sn	09 20 27.1	+3.0
MDN	Morne-Daniel	0.97	287	eP	Pn	09 20 12.8	+0.8
MDN				eS	Sn	09 20 27.4	+2.6
DWS	Wesley	1.00	302	eP	Pn	09 20 12.1	-0.3
DWS				eS	Sn	09 20 27.3	+1.8
SLW	Petit Monier	1.13	206	eP	Pn	09 20 14.6	+0.4
SLW				eS	Sn	09 20 28.6	0.0
SLBI	Saint Lucia, B	1.14	208	eP	Pn	09 20 13.8	-0.4
SLBI	Saint Lucia, B	1.14	208	e	Pn	09 20 28.4	+14
SLBI				eS	Sn	09 20 31.2	+2.3
MAGL	Barre de l'ile	1.23	318	eP	Pn	09 20 15.2	-0.2
SLPA	Patience	1.27	202	eP	Pn	09 20 16.9	+0.9
SLPA				eS	Sn	09 20 32.9	+0.9
SLB	Belfond	1.34	206	eP	Pn	09 20 17.9	+0.8
SLB				eS	Sn	09 20 35.2	+1.3
SLDE	Delcer	1.37	207	eP	Pn	09 20 18.4	+1.0
SLDE				eS	Sn	09 20 35.0	+0.5
DEG	La Desirade	1.41	334	eP	Pn	09 20 18.8	+0.8
DEG				eS	Sn	09 20 36.7	+1.3
H05N1	Guadeloupe/Mar	1.41	335	P	Pn	09 20 18.1	+0.2
H05N1				S	Sn	09 20 35.1	-0.3
	SNR=758						
MCLT	Moule a Chique	1.41	201	eP	Pn	09 20 18.3	+0.3
MCLT				eS	Sn	09 20 36.4	+0.9
TDBA	Terre de Bas,	1.42	305	eP	Pn	09 20 18.0	0.0
CBE	Ff, Capester	1.53	312	eP	Pn	09 20 19.8	+0.2
ABD	La Joyeuse, An	1.76	325	eP	Pn	09 20 23.2	+0.5
SFAN	Fancy Village	1.80	204	eP	Pn	09 20 24.3	+1.0
SFAN				eS	Sn	09 20 45.3	+0.4
SSV	Crater Summit	1.86	204	eP	Pn	09 20 25.4	+1.3
SVV	Soufriere Volc	1.88	204	eP	Pn	09 20 25.7	+1.4
SVV				eS	Sn	09 20 49.7	+2.9
SVCV	St. Vincent, C	1.89	202	eP	Pn	09 20 24.7	+0.2
SVB	Belmont	1.93	205	eP	Pn	09 20 25.7	+0.7
SVB				eS	Sn	09 20 50.0	+1.8
FCV	Fort Charlotte	2.03	203	eP	Pn	09 20 27.6	+1.1
FCV				eS	Sn	09 20 51.6	+0.9
BBGH	Gun Hill	2.06	156	eP	Pn	09 20 27.5	+0.6
MLYT	Lee's Yard	2.38	315	eP	Pn	09 20 33.4	+2.1
MLYT				eS	Sn	09 21 01.1	+1.7
ANWB	Willy Bob	2.92	334	eP	Pn	09 20 39.6	+1.0
ANWB				eS	Sn	09 21 12.7	+0.2
NVBH	Bath Hotel, Ne	2.95	315	eP	Pn	09 20 40.3	+1.3
NVBH				eS	Sn	09 21 14.4	+1.2
GRSS	Sisters	2.96	203	eP	Pn	09 20 40.5	+1.4
GRSS				eS	Sn	09 21 14.0	+0.6
NVRH	Round Hill, Ne	2.99	316	eP	Pn	09 20 40.3	+0.8
NVRH				eS	Sn	09 21 14.9	+0.8
GRHS	Sauteurs	3.04	203	eP	Pn	09 20 42.1	+1.9
GRHS				eS	Sn	09 21 17.6	+2.2
SKI	Saint Kitts	3.19	316	eP	Pn	09 20 43.8	+1.6
SKI				eS	Sn	09 21 19.8	+0.8
BSK	Brimstone Hill	3.26	315	eP	Pn	09 20 44.1	+0.8
SKDB	Saint Kitts 2	3.28	316	eP	Pn	09 20 45.8	+2.3
TOSP	Speyside	3.72	182	eP	Pn	09 20 50.6	+1.0
SMRT	St. Maarten	3.93	320	eS	Sn	09 21 37.8	+0.5
SJG	San Juan	6.28	300	P	Pn	09 21 24.8	+0.1
	3.3nm,0.3s,baz=142,slow=19,SNR=3.3						
SJG				S	Sn	09 22 32.1	-3.0
	3.4nm,0.3s,baz=18,slow=19,SNR=2.3						
MDP	Montagnes des	12.49	141	P	Pn	09 22 49.8	0.0
	0.1nm,0.3s,baz=326,slow=18,SNR=2.9						
MDP				S	Sn	09 24 49.2	-18
	0.2nm,0.3s,baz=240,slow=20,SNR=2.2						
PTGA	Pitinga	15.68	178	P	Pn	09 23 30.9	-1.4
	0.3nm,0.3s,baz=319,slow=19,SNR=3.2						
PTGA				S	Sn	09 26 13.7	-11
	0.3nm,0.3s,baz=307,slow=20,SNR=3.4						
LPAZ	La Paz	32.04	194	P	P	09 26 17.6	+0.3
	0.8nm,0.7s,baz=27,slow=6.8,SNR=3.1						
TXAR	Lajitas Array	42.25	297	P	P	09 27 42.5	-0.8
	0.1nm,0.5s,baz=102,slow=8.4,SNR=3.3						
PDAR	Pinedale Array	50.21	314	P	P	09 28 44.8	-1.0
	0.3nm,0.6s,baz=128,slow=11,SNR=5.5						
H10N3	ASCENSION HYDR	50.88	113	T	T	10 24 06.9	
	baz=296,slow=75,SNR=32						
H10N2	ASCENSION HYDR	50.89	113	T	T	10 24 01.1	
	baz=296,slow=75,SNR=40						
H10N1	ASCENSION HYDR	50.90	113	T	T	10 24 02.0	
	baz=296,slow=75,SNR=46						
H10S3	ASCENSION HYDR	51.24	115	T	T	10 24 30.8	
	baz=297,slow=75,SNR=17						
H10S1	ASCENSION HYDR	51.25	115	T	T	10 24 31.4	
	baz=297,slow=75,SNR=14						
H10S2	ASCENSION HYDR	51.26	115	T	T	10 24 32.2	
	baz=297,slow=75,SNR=14						
NVAR	Mina Array Bea	55.73	306	P	P	09 29 26.2	-0.3
	0.5nm,0.7s,baz=120,slow=5.3,SNR=4.0						
PLCA	Paso Flores	56.28	189	P	P	09 29 30.0	0.0
	1.0nm,0.4s,baz=34,slow=7.1,SNR=7.5						
YKA	Yellowknife Ar	60.60	334	P	P	09 29 59.3	-0.5
	0.2nm,0.5s,baz=104,slow=7.4,SNR=10						

*ISK **24** 09:25:25.5, 39°.59N×29°.31E, h18km, ML1.8/5*
*DDA **24** 09:25:26.0, 39°.66N×29°.44E, h7km±3km, ML2.8*

ISC 24 09:25:26.2±1.1, 39°.67N±0°.04×29°.43E±0°.04, h12km±9km, n14, σ1°16/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.22	174	PG	Pg	09 25 30.3	-0.6
TVSB				SG	Sg	09 25 34.0	-0.1
ULDT	Uludag	0.53	334	i P	Pg	09 25 36.8	+0.3
ULDT				i S	Sb	09 25 45.0	-0.1
DURS	Dursunbey	0.74	265	i P	Pb	09 25 39.9	-1.2
DURS				IAML_P			
	comp=Z,1μm,0.1s						
BORA	Eskisehir	0.81	74	i P	Pg	09 25 41.9	0.0
BORA				IAML_P			
	comp=Z,2μm,0.1s						
YLV	Yalova	0.90	357	PG	Pn	09 25 44.9	+0.2
YLV				SG	Sn	09 25 59.1	+1.4
SRCK	Saricakaya, Es	0.99	67	PN	Pn	09 25 46.7	+0.8
ARMT	Armutlu	1.00	334	PG	Pn	09 25 45.8	-0.2
USAK	Uak-Merkez	1.00	199	i P	Pn	09 25 46.1	0.0
USAK				IAML_P			
	comp=Z,1μm,0.1s						
KCTX	Karacabey (Bur	1.02	306	PG	Pg	09 25 45.5	-0.3
KCTX				SG	Sn	09 25 59.7	-0.9
KHAL	Karahalli	1.29	178	i P	Pg	09 25 51.1	+0.1
KHAL				i S	Sg	09 26 10.6	+2.7
KHAL				IAML_P			
	comp=Z,354nm,0.1s						
MANT	Manisa	1.36	210	i P	Pg	09 25 52.7	+0.4
MANT				IAML_P			
	comp=Z,352nm,0.1s						
STEP	BALIKESIR_Sava	1.36	258	i P	Pg	09 25 51.7	-0.6
STEP				i S	Sg	09 26 12.0	+2.1
STEP				IAML_P			
	comp=Z,343nm,0.1s						
AUMIH	MIHALICIK	1.59	82	i P	Pn	09 25 52.6	-1.7
KORT	Korkueli	2.76	165	i P	Pg	09 26 24.8	+5.8
KORT				i S	Sn	09 26 28.4	-15

JMA 24 09:37:52.8, 36°.59N×140°.96E, h18km±1km, M3.6, Near east coast of eastern Honshu

| Code | Station Name | Δ° | AZ° |

ISC 24 09:38:15.8±0.8, 6°62S±0°09×130°0E±0°1, h146km, n10, σ2°18/11, mb3.8/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.84**	**12**	P	Pn	09 39 34.5	-6.0
	17nm,0.3s,baz=198,slow=20,SNR=60						
SIJI				S	Sn	09 40 31.1	-15
	19nm,0.3s,baz=217,slow=20,SNR=9.0						
JAY	**Jayapura**	**11.38**	**70**	P	**Pn**	**09 40 53.2**	**-1.0**
	1.0nm,0.3s,baz=263,slow=8.1,SNR=3.9						
WRA	**Warrumanga Arr**	**13.89**	**163**	P	**Pn**	**09 41 26.3**	**-0.3**
	0.7nm,0.3s,baz=341,slow=12,SNR=50						
WRA				S	**Sn**	**09 43 57.4**	**-3.0**
	3.7nm,0.3s,baz=334,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.35**	**168**	P	**Pn**	**09 42 12.5**	**+3.3**
	2.1nm,0.3s,baz=345,slow=9.7,SNR=182						
ASAR				S	**S**	**09 45 20.0**	**-1.8**
	0.8nm,0.3s,baz=0.5,slow=28,SNR=11						
CTA	**Charters Tower**	**20.66**	**132**	P	**P**	**09 42 46.5**	**+2.2**
	1.1nm,0.4s,baz=280,slow=11,SNR=1.9						
STKA	**Stephens Creek**	**27.35**	**158**	P	**P**	**09 43 50.1**	**+2.9**
	1.1nm,0.5s,baz=328,slow=10,SNR=3.9						
CMAR	**Chiang Mai Arr**	**39.52**	**310**	P	**P**	**09 45 31.7**	**-1.0**
	1.7nm,0.6s,baz=135,slow=6.7,SNR=5.6						
MKAR	**Makanchi Array**	**67.93**	**327**	P	**P**	**09 48 58.6**	**-0.2**
	2.0nm,0.4s,baz=116,slow=7.0,SNR=20						
KURBB	**Kurchatov Arra**	**72.21**	**328**	P	**P**	**09 49 24.6**	**-0.1**
	0.8nm,0.5s,baz=128,slow=4.9,SNR=6.9						
BVAR	**Borovoye Array**	**77.77**	**328**	P	**P**	**09 49 56.5**	**-0.1**
	0.5nm,0.4s,baz=132,slow=8.0,SNR=3.2						

MEX 24 09:39:45.2±0.7, 14°83N×93°18W, h53km±37km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PCIG		**0.87**	**358**	*e*P	Pn	09 39 59.9	-1.5
PCIG				*i* S	Sn	09 40 11.1	-2.1
THIG		**0.89**	**85**	*e*P	Pn	09 40 00.6	-1.0
THIG				*i* S	Sn	09 40 11.6	-2.0
CCIG	**Comitan**	**1.77**	**35**	*i* P	Pn	09 40 12.3	-1.3
CCIG				*e*S	Sn	09 40 34.3	-0.7
TGIG		**1.94**	**2**	*e*P	Pn	09 40 11.8	-4.0
TGIG				*e*S	Sn	09 40 35.2	-4.0

BJI ***24*** *09:55:42.3±0.0, 6°45S×148°75E, h33km, mb5.1/31, mB5.3/48, Ms5.2/59, Ms7 5.1/55*

ISCJB ***24*** *09:55:42.2±0.9, 6°41S±0°02×148°59E±0°02, h22km±6km, mb5.1/130, MS5.4/603, Error ellipse: s-maj=4.2km s-min=3.9km az=23.6*

NEIC ***24*** *09:55:44.6±1.8, 6°45S×148°58E, h29km±3km, mb5.3/96, MS5.4/594, MW5.5, MWS 5.7, Error ellipse: s-maj=10.9km s-min=2.8km az=154.0, Moment Tensor Solution. s57 Moment tensor: Scale 10^{17}Nm; M_{rr}0.76; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$0.21; $M_{r\theta}$1.78; $M_{\theta\phi}$-0.45; $M_{\phi r}$-0.28; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s96.00000°, δ78.00000°, λ106.00000°. NP2:ϕ_s222.00000°, δ20.00000°, λ37.00000°. Principal axes: T 2.0000, Plg54.0000°, Azm26.0000°; N 0.1000, Plg16.0000°, Azm273.0000°; P -2.1000, Plg31.0000°, Azm173.0000°;*

IDC ***24*** *09:55:44.2±1.3, 6°32S×148°53E, h24km±7km, mb4.7/35, mb1 4.8/41, mb1mx4.7/47, mbtmp4.8/41, ML4.1/5, MS5.0/22, Ms1 5.0/22, ms1mx4.8/35 Error ellipse: s-maj=12.6km s-min=9.3km az=83.0*

MOS ***24*** *09:55:44.0±1.4, 6°42S×148°53E, h33km, mb5.2/31, MS5.2/27, Error ellipse: s-maj=11.4km s-min=6.5km az=96.5*

NEIC ***24*** *09:55:44.0±0.0, 6°69S×148°62E, h25km, Moment Tensor Solution. s44 Moment tensor: Scale 10^{17}Nm; M_{rr}3.04; $M_{\theta\theta}$-3.07; $M_{\phi\phi}$0.03; $M_{r\theta}$2.02; $M_{\theta\phi}$-0.39; $M_{\phi r}$-0.79; Best double couple: $M_0$3.80000×10^{17} NP1:ϕ_s98.00000°, δ63.00000°, λ105.00000°. NP2:ϕ_s249.00000°, δ31.00000°, λ64.00000°. Principal axes: T 3.8500, Plg68.0000°, Azm37.0000°; N -0.1600, Plg12.0000°, Azm271.0000°; P -3.6800, Plg16.0000°, Azm177.0000°;*

GCMT ***24*** *09:55:50.6±0.1, 6°78S±0°01×148°66E±0°01, h22km, MW5.7/118, Moment Tensor Solution. s118,c231; s114,c266; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.58±.04; $M_{\theta\theta}$-3.00±.03; $M_{\phi\phi}$0.41±.03; $M_{r\theta}$2.61±.07; $M_{\theta\phi}$-0.17±.03; $M_{\phi r}$-0.93±.07; Best double couple: $M_0$3.94800×10^{17} NP1:ϕ_s103.00000°, δ68.00000°, λ104.00000°. NP2:ϕ_s249.00000°, δ26.00000°, λ59.00000°. Principal axes: T 3.8590, Plg64.0000°, Azm37.0000°; N 0.1730, Plg13.0000°, Azm278.0000°; P -4.0380, Plg22.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

DJA ***24*** *09:55:51.3±0.5, 7°S±3°×14°9E±°, h67km±4km, M5.5/49, mB5.9/35, mb5.5/49, MLv6.1/1, Mw(mB)5.5/35, Mwp5.7/3*

ISC 24 09:55:45.7±0.5, 6°48S±0°03×148°56E±0°03, h34km±1km, h35km:pP-P, n1358, σ126/938, mb5.2/129, MS5.4/604, 31C-3D, New Britain region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.22**	**205**	Pn	**Pn**	**09 56 34.2**	**+0.4**
	575nm,0.3s,baz=18,slow=5.8,SNR=576						
PMG				Sn	**Sn**	**09 57 12.8**	**+1.8**
	183nm,0.3s,baz=120,slow=20,SNR=3.8						
PMG				LR	LR	09 57 38.2	
	comp=Z,13μm,18.9s,baz=334,slow=34						
PMG	**Port Moresby**	**3.22**	**205**	*e*Pn	**Pn**	**09 56 34.6**	**+0.7**
PMG				*e*Sn	**Sn**	**09 57 13.6**	**+2.6**
PMG	**Port Moresby**	**3.22**	**205**	*e*P	**Pn**	**09 56 34.6**	**+0.7**
PMG				e		09 57 13.6	
RABL	**Rabaul**	**4.25**	**58**	*e*Pn	**Pn**	**09 56 48.2**	**+0.1**
MANU	**Manus Island**	**4.56**	**345**	*e*Pn	**Pn**	**09 56 52.4**	**0.0**
JAY	**Jayapura**	**8.76**	**296**	Pn	**Pn**	**09 57 48.3**	**-1.8**
	0.3nm,0.3s,baz=147,slow=18,SNR=1.8						
COEN	**Coen**	**9.12**	**215**	*e*Pn	**Pn**	**09 57 54.6**	**-0.5**
COEN				*e*Sn	**Sn**	**09 59 34.6**	**-1.9**
COEN	**Coen**	**9.12**	**215**	P	**Pn**	**09 57 56.2**	**+1.1**
	baz=9.1,SNR=83						
COEN				S	**Sn**	**09 59 33.2**	**-3.4**
	baz=9.1						
GENI	**Genyem**	**9.21**	**294**	P	Pn	09 58 04.6	+8.4
HNR	**Honiara**	**11.66**	**105**	*e*P	**Pn**	**09 58 31.0**	**+1.3**
HNR				*e*S	**Sn**	**10 00 41.0**	**+2.3**
HNR	**Honiara**	**11.66**	**105**	Pn	**Pn**	**09 58 31.3**	**+1.5**
	6.2nm,0.3s,baz=276,slow=16,SNR=11						
HNR				Sn	**Sn**	**10 00 41.9**	**+3.1**
	6.0nm,0.3s,baz=216,slow=8.7,SNR=2.1						
HNR				LR	LR	10 02 47.2	
	comp=Z,3μm,18.4s,baz=284,slow=36						
HNR	**Honiara**	**11.66**	**105**	*e*Pn	**Pn**	**09 58 29.3**	**-0.4**
HNR	**Honiara**	**11.66**	**105**	*e*P	**Pn**	**09 58 29.3**	**-0.4**
SRPI	**Serui, Papua**	**13.11**	**290**	P	P	09 59 04.7	+5.4
BAKI	**Biak**	**13.48**	**292**	P	**P**	**09 59 02.6**	**-0.9**
CTA	**Charters Tower**	**13.71**	**189**	Pn	**Pn**	**09 58 59.0**	**+1.2**
	1.1nm,0.3s,baz=9.9,slow=13,SNR=15						
CTA				LR	LR	10 04 33.0	
	comp=Z,9μm,19.3s,baz=13,slow=38						
CTAO	**Charters Tower**	**13.71**	**189**	*e*Pn	**Pn**	**09 58 57.0**	**-0.8**
CTAO	**Charters Tower**	**13.71**	**189**	*e*P	**Pn**	**09 58 57.0**	**-0.8**
PATS	**Pohnpei**	**16.43**	**37**	*e*Pn	**Pn**	**09 59 33.7**	**-0.1**
	176nm,1.2s						
PATS	**Pohnpei**	**16.43**	**37**	P	**P**	**09 59 37.9**	**+1.7**
	baz=17,SNR=7.8						
QIS	**Mount Isa**	**16.47**	**211**	P	**Pn**	**09 59 34.7**	**+0.4**
	baz=16,SNR=58						
FAKI	**Fak Fak**	**16.63**	**282**	*e*Pn	**P**	**09 59 38.0**	**-0.5**
	94nm,1.0s						
FAKI	**Fak Fak**	**16.63**	**282**	P	**P**	**09 59 40.3**	**+1.8**
KDU	**Kakadu**	**17.01**	**248**	P	**Pn**	**09 59 41.4**	**+0.3**
	baz=17,SNR=40						
SIJI	**Sorong**	**18.13**	**287**	P	**Pn**	**09 59 52.7**	**-2.2**
	0.8nm,0.3s,baz=90,slow=19,SNR=4.0						
SIJI				S	**S**	**10 03 19.6**	**-1.5**
	baz=164,slow=18,SNR=1.3						
MTN	**Manton Dam**	**18.30**	**248**	*e*P	**Pn**	**09 59 57.4**	**+0.4**
	153nm,1.3s						
MTN	**Manton Dam**	**18.30**	**248**	P	**Pn**	**09 59 59.1**	**+2.1**
	baz=18,SNR=8.9						
EIDS	**Eidsvold**	**18.94**	**173**	*e*P	**P**	**10 00 03.6**	**-0.2**
	154nm,0.9s						
EIDS	**Eidsvold**	**18.94**	**173**	P	**P**	**10 00 04.2**	**+0.3**
	baz=19,SNR=56						
WRAB	**Tennant Creek**	**19.21**	**225**	*ce*P	**Pn**	**10 00 07.7**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,113nm,1.3s						
WB2	**Warrumunga Arr**	**19.22**	**225**	*e*P	**P**	**10 00 07.4**	**+0.4**
	comp=Z,262nm,0.9s						
WB2	**Warrumunga Arr**	**19.22**	**225**	P	**Pn**	**10 00 07.6**	**-0.6**
	baz=19						
WR1	**Warrumunga Arr**	**19.23**	**225**	*e*P	**P**	**10 00 07.6**	**+0.5**
WRA	**Warrumunga Arr**	**19.23**	**225**	P	**P**	**10 00 07.6**	**+0.5**
	comp=Z,20nm,0.3s,baz=54,slow=11,SNR=156						
WRA				S	**Sn**	**10 03 35.9**	**-7.0**
	comp=Z,1.0nm,0.3s,baz=42,slow=22,SNR=5.4						
WRA				ScP	**ScP**	**10 08 05.1**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=100,slow=1.0,SNR=3.3						
MSAI	**Masohi**	**19.80**	**278**	P	Pn	10 00 23.7	+8.6
RMQ	**Roma**	**19.89**	**179**	P	**Pn**	**10 00 15.5**	**-0.6**
	baz=20,SNR=22						
GUMO	**Guam**	**20.27**	**350**	P	**P**	**10 00 15.9**	**-2.5**
	comp=Z,70nm,1.0s,baz=209,slow=19,SNR=2.1						
GUMO				LR	LR	10 07 17.3	
	comp=Z,4μm,19.6s,baz=158,slow=34						
GUMO	**Guam**	**20.27**	**350**	*e*P	**P**	**10 00 18.5**	**0.0**
	comp=Z,378nm,1.4s						
GUMO				LR	LR		
	comp=Z,4μm,19.0s						
GUMO	**Guam**	**20.27**	**350**	*e*P	**P**	**10 00 18.5**	**0.0**
GUMO				pmax	pmax		
	comp=Z,378nm,1.4s						
GUMO				MLR	MLR		
	comp=Z,4μm,19.0s						
AAI	**Ambon**	**20.47**	**277**	P	Pn	10 00 25.9	+2.9
KNRA	**Kununurra**	**21.45**	**243**	P	**P**	**10 00 31.7**	**+0.5**
	baz=22,SNR=20						
NLAI	**Namlea**	**21.62**	**278**	P	**P**	**10 00 34.6**	**+1.5**
AS31	**Alice Springs**	**22.14**	**218**	*e*P	**P**	**10 00 39.3**	**+0.6**
	comp=Z,211nm,0.8s						
AS31				LR	LR		
	comp=Z,100nm,19.0s						
ASAR	**Alice Springs**	**22.15**	**218**	P	**P**	**10 00 39.0**	**+0.3**
	comp=Z,99nm,0.6s,baz=56,slow=8.9,SNR=1120						
ASAR				S	**S**	**10 04 39.1**	**-1.8**
	comp=Z,138nm,1.0s,baz=34,slow=20,SNR=17						
ASAR				ScP	**ScP**	**10 08 12.2**	**+2.0**
	comp=Z,10.0nm,1.2s,baz=13,slow=1.7,SNR=3.7						
ASAR				LR	LR	10 10 08.1	
	comp=Z,9μm,18.5s,baz=42,slow=39						
TNTI	**Ternate**	**22.34**	**288**	PFAKE		10 00 50.0	+9.1
TNTI				LR	LR		
	comp=Z,2μm,22.0s						
SANI	**Sanana**	**22.93**	**280**	P	**P**	**10 00 48.8**	**+1.8**
DZM	**Mont Dzumac**	**23.21**	**134**	*e*P	**P**	**10 00 51.2**	**+1.3**
	comp=Z,283nm,1.2s						
DZM				*e*S	**S**	**10 04 53.9**	**-5.8**
	comp=Z,7μm,25.6s						
DZM				*e*LR	LR	10 06 29.0	
	comp=Z,9μm,21.7s						
DZM	**Mont Dzumac**	**23.21**	**134**	P	**P**	**10 00 49.6**	**-0.3**
	comp=Z,32nm,0.8s,baz=305,slow=12,SNR=30						
DZM				S	S	10 04 46.8	-13
	comp=Z,6.5nm,0.5s,baz=338,slow=23,SNR=7.3						
DZM	**Mont Dzumac**	**23.21**	**134**	*e*P	**P**	**10 00 48.7**	**-1.2**
	comp=Z,131nm,1.1s						
DZM				LR	LR		
	comp=Z,8μm,20.0s						
ARMA	**Armidale**	**23.99**	**173**	*e*P	**P**	**10 00 56.6**	**-0.7**
	comp=Z,188nm,0.9s						
ARMA				LR	LR		
	comp=Z,8μm,18.0s						
ARMA	**Armidale**	**23.99**	**173**	P	**P**	**10 00 56.8**	**-0.6**
	baz=24,SNR=45						
SOEI	**Soe**	**24.26**	**261**	*e*P	**P**	**10 00 57.8**	**-2.2**
	comp=Z,328nm,1.3s						
SOEI				LR	LR		
	comp=Z,4μm,21.0s						
SOEI	**Soe**	**24.26**	**261**	P	**P**	**10 01 03.2**	**+3.2**
KWAJ	**Kwajalein Atol**	**24.32**	**52**	PFAKE		10 01 10.0	+10
KWAJ				LR	LR		
	comp=Z,6μm,18.0s						
BATI	**Baumata**	**24.90**	**260**	P	**P**	**10 01 06.0**	**+0.2**
	comp=Z,79nm,0.6s,baz=98,slow=7.1,SNR=10						
BATI				S	**S**	**10 05 28.6**	**+1.6**
	comp=Z,17nm,0.5s,baz=17,slow=14,SNR=2.4						
BATI	**Baumata**	**24.90**	**260**	P	**P**	**10 01 09.3**	**+3.5**
CMSA	**Cobar Meteorol**	**25.07**	**186**	P	**P**	**10 01 06.9**	**-0.2**
	baz=25,SNR=36						
FITZ	**Fitzroy Crossi**	**25.15**	**241**	*e*P	**P**	**10 01 09.2**	**+1.3**
FITZ	**Fitzroy Crossi**	**25.15**	**241**	P	**P**	**10 01 09.4**	**+1.4**
	baz=25,SNR=129						
TARA	**Tarawa**	**25.54**	**73**	PFAKE		10 01 20.0	+8.5
TARA				LR	LR		
	comp=Z,7μm,18.0s						
KDI	**Kendari**	**25.95**	**274**	P	**P**	**10 01 16.4**	**+1.2**
STKA	**Stephens Creek**	**26.09**	**194**	P	**P**	**10 01 16.2**	**-0.2**
	comp=Z,52nm,0.9s,baz=6.1,slow=11,SNR=33						
STKA				S	**S**	**10 05 45.0**	**-0.4**
	comp=Z,13nm,1.1s,baz=13,slow=19,SNR=2.4						
STKA				LR	LR	10 12 44.6	
	comp=Z,9μm,18.1s,baz=11,slow=39						
STKA	**Stephens Creek**	**26.09**	**194**	*e*P	**P**	**10 01 16.1**	**-0.2**
	comp=Z,80nm,1.5s						
STKA				LR	LR		
	comp=Z,2μm,18.0s						
STKA	**Stephens Creek**	**26.09**	**194**	P	**P**	**10 01 16.0**	**-0.3**
	baz=26,SNR=40						
STKA	**Stephens Creek**	**26.09**	**194**	*e*P	**P**	**10 01 16.1**	**-0.2**
STKA				pmax	pmax		
	comp=Z,80nm,1.5s						
STKA				MLR	MLR		
	comp=Z,2μm,18.0s						
MMRI	**Maumere**	**26.18**	**264**	*e*P	**P**	**10 01 17.4**	**+0.2**
	comp=Z,502nm,0.9s						
MMRI	**Maumere**	**26.18**	**264**	P	**P**	**10 01 17.3**	**0.0**
LUWI	**Luwuk**	**26.28**	**281**	*e*P	**P**	**10 01 18.6**	**+0.3**
	comp=Z,295nm,1.0s						
LUWI	**Luwuk**	**26.28**	**281**	P	**P**	**10 01 21.7**	**+3.5**
DAV	**Davao City (W)**	**26.58**	**300**	PFAKE		10 01 30.0	+9.0
DAV				LR	LR		
	comp=Z,3μm,20.0s						
MGCD	**Mangrove Creek**	**26.70**	**175**	P	**P**	**10 01 22.5**	**+0.7**
	baz=27,SNR=9.5						
EDFI	**Ende, Flores**	**26.72**	**263**	P	**P**	**10 01 22.7**	**+0.4**
WRKA	**Warakurna**	**26.77**	**224**	P	**P**	**10 01 23.0**	**+0.4**
	baz=27,SNR=218						
RIV	**Riverview**	**27.32**	**175**	P	**P**	**10 01 30.2**	**+2.9**
	baz=27						
APSI	**Ampana**	**27.41**	**281**	P	**P**	**10 01 30.1**	**+1.7**
BSSI	**Bau Bau, Buton**	**27.90**	**269**	P	**P**	**10 01 34.2**	**+1.4**
WSI	**Waingapu**	**28.15**	**262**	P	P	10 01 49.1	+14
HTT	**Hallett**	**28.27**	**197**	P	**P**	**10 01 36.1**	**+0.2**
	baz=28,SNR=42						
BKSI	**Bulukumba**	**28.30**	**271**	P	**P**	**10 01 37.8**	**+1.4**
BBOO	**Buckleboo**	**28.66**	**202**	*e*P	**P**	**10 01 38.7**	**-0.7**
	comp=Z,150nm,1.2s						
BBOO				LR	LR		
	comp=Z,7μm,18.0s						
BBOO	**Buckleboo**	**28.66**	**202**	P	**P**	**10 01 39.6**	**+0.2**
	baz=29,SNR=17						
KAPI	**Kappang**	**28.70**	**271**	P	**P**	**10 01 40.5**	**+0.6**
	comp=Z,51nm,1.1s,baz=80,slow=3.0,SNR=26						
KAPI				S	**S**	**10 06 29.1**	**+2.1**
	comp=Z,2.0nm,0.3s,baz=104,slow=18,SNR=5.0						
KAPI				ScP	**ScP**	**10 08 30.1**	**+1.1**
	comp=Z,22nm,0.9s,baz=120,slow=1.2,SNR=9.6						
CAN	**Canberra**	**28.70**	**179**	PFAKE		10 01 50.0	+10
CAN				LR	LR		
	comp=Z,6μm,18.0s						
SPSI	**Sidrap Palu**	**28.77**	**274**	P	**P**	**10 01 41.5**	**+0.9**
TTSI	**Tana Toraja**	**28.84**	**275**	P	**P**	**10 01 43.5**	**+2.4**
WBSI	**Waikabubak, Su**	**29.04**	**262**	P	**P**	**10 01 44.6**	**+1.6**
PLAI	**Plampang**	**30.59**	**264**	P	**P**	**10 01 58.6**	**+1.9**
ARPS	**Mount Arapiles**	**30.77**	**191**	P	**P**	**10 01 58.3**	**+0.4**
	baz=31,SNR=6.9						
FORT	**Forrest**	**30.89**	**216**	*e*P	**P**	**10 01 59.9**	**+0.8**
	comp=Z,268nm,0.8s						
FORT				LR	LR		
	comp=Z,6μm,19.0s						
FORT	**Forrest**	**30.89**	**216**	P	**P**	**10 01 59.8**	**+0.8**
	baz=31,SNR=9.5						
TOO	**Toolangi**	**31.07**	**185**	*e*P	**P**	**10 02 00.4**	**-0.3**
	comp=Z,69nm,0.9s						
TOO				LR	LR		
	comp=Z,4μm,19.0s						
TOO	**Toolangi**	**31.07**	**185**	P	**P**	**10 02 01.5**	**+0.8**
	baz=31,SNR=4.6						
TOO	**Toolangi**	**31.07**	**185**	*e*P	**P**	**10 02 00.4**	**-0.3**
TOO				pmax	pmax		
	comp=Z,69nm,0.9s						
TOO				MLR	MLR		
	comp=Z,4μm,19.0s						
PSAD2	**Pilbara Seismi**	**31.47**	**239**	PFAKE		10 02 20.0	+16
PSAD2				LR	LR		
	comp=Z,8μm,19.0s						
MBWA	**Marble Bar**	**31.48**	**240**	PFAKE		10 02 20.0	+16
MBWA				LR	LR		
	comp=Z,6μm,21.0s						
PSAC2	**Pilbara Seismi**	**31.50**	**239**	PFAKE		10 02 20.0	+15
PSAC2				LR	LR		
	comp=Z,7μm,20.0s						
PSAD1	**Pilbara Seismi**	**31.51**	**239**	PFAKE		10 02 20.0	+15
PSAD1				LR	LR		
	comp=Z,7μm,20.0s						
PSAB2	**Pilbara Seismi**	**31.53**	**239**	PFAKE		10 02 20.0	+15
PSAB2				LR	LR		
	comp=Z,7μm,20.0s						
PSAA2	**Pilbara Seismi**	**31.54**	**239**	PFAKE		10 02 20.0	+15
PSAA2				LR	LR		
	comp=Z,6μm,20.0s						
PSAA3	**Pilbara Seismi**	**31.54**	**239**	PFAKE		10 02 20.0	+15
PSAA3				LR	LR		
	comp=Z,7μm,21.0s						
PSA00	**Pilbara Seismi**	**31.55**	**239**	PFAKE		10 02 20.0	+15
PSA00				LR	LR		
	comp=Z,6μm,19.0s						
PSAB3	**Pilbara Seismi**	**31.55**	**239**	PFAKE		10 02 20.0	+15
PSAB3				LR	LR		
	comp=Z,7μm,20.0s						
PSAA1	**Pilbara Seismi**	**31.56**	**239**	PFAKE		10 02 20.0	+15
PSAA1				LR	LR		
	comp=Z,6μm,20.0s						
PSAC1	**Pilbara Seismi**	**31.56**	**239**	PFAKE		10 02 20.0	+15
PSAC1				LR	LR		
	comp=Z,7μm,20.0s						
PSAB1	**Pilbara Seismi**	**31.57**	**239**	PFAKE		10 02 20.0	+15
PSAB1				LR	LR		
	comp=Z,6μm,20.0s						
PSAC3	**Pilbara Seismi**	**31.58**	**239**	PFAKE		10 02 20.0	+15
PSAC3				LR	LR		
	comp=Z,7μm,20.0s						
PSAD3	**Pilbara Seismi**	**31.63**	**239**	PFAKE		10 02 20.0	+14
PSAD3				LR	LR		
	comp=Z,7μm,20.0s						
JAGI	**Jajag, Banyuwa**	**34.16**	**264**	*e*P	**P**	**10 02 27.5**	**-0.5**
	comp=Z,80nm,0.7s						
JAGI				LR	LR		
	comp=Z,900nm,18.0s						
JAGI	**Jajag, Banyuwa**	**34.16**	**264**	P	**P**	**10 02 31.6**	**+3.6**
KKM	**Kota Kinabalu**	**34.59**	**290**	PFAKE		10 02 40.0	+8.2
KKM				LR	LR		
	comp=Z,1μm,22.0s						
KMBL	**Kambalda**	**35.15**	**222**	P	**P**	**10 02 37.1**	**+0.7**
	baz=35,SNR=102						
MOO	**Moorlands**	**35.83**	**182**	P	**P**	**10 02 43.3**	**+1.3**
	baz=36,SNR=9.6						
TAU	**Tasmania Unive**	**36.30**	**182**	*e*P	**P**	**10 02 45.8**	**-0.2**
	comp=Z,80nm,1.0s						
TAU				LR	LR		
	comp=Z,7μm,19.0s						
TAU	**Tasmania Unive**	**36.30**	**182**	*e*P	**P**	**10 02 45.8**	**-0.2**
TAU				pmax	pmax		
	comp=Z,80nm,1.0s						
TAU				MLR	MLR		
	comp=Z,7μm,19.0s						
PWJI	**Pagerwojo**	**36.48**	**265**	P	**P**	**10 02 49.9**	**+1.9**
	comp=Z,70nm,0.7s						
OUZ	**Omahuta**	**36.73**	**145**	*e*P	**P**	**10 02 49.7**	**-0.1**
	comp=Z,27nm,1.0s						
OUZ				LR	LR		
	comp=Z,3μm,20.0s						
GIRL	**Giralia**	**36.77**	**240**	*e*P	**P**	**10 02 51.7**	**+1.4**
	comp=Z,916nm,1.2s						
GIRL				LR	LR		
	comp=Z,8μm,19.0s						
PBKI	**Pangkalan Bun**	**36.95**	**274**	P	P	10 02 57.3	+5.3
	comp=Z,401nm,1.2s						
UGM	**Wanagama**	**37.75**	**265**	*e*P	**P**	**10 02 58.4**	**-0.5**
	comp=Z,258nm,1.2s						
MORW	**Morawa**	**38.02**	**230**	*e*P	**P**	**10 03 00.6**	**-0.4**
	comp=Z,433nm,1.4s						
MORW				LR	LR		
	comp=Z,9μm,18.0s						
MORW	**Morawa**	**38.02**	**230**	P	**P**	**10 03 02.2**	**+1.3**
	baz=38,SNR=14						
BLDU	**Ballidu**	**38.32**	**227**	P	**P**	**10 03 04.4**	**+1.0**
	baz=38,SNR=7.1						
KSM	**Kuching**	**38.99**	**280**	P	**P**	**10 03 11.0**	**+1.8**
NWAO	**Narrogin (SRO)**	**39.23**	**224**	P	**P**	**10 03 11.7**	**+0.7**
	comp=Z,9.3nm,0.5s,baz=45,slow=8.7,SNR=12						
NWAO	**Narrogin (SRO)**	**39.23**	**224**	*e*P	**P**	**10 03 09.1**	**-1.9**
	comp=Z,187nm,1.3s						
NWAO				LR	LR		
	comp=Z,9μm,18.0s						
NWAO	**Narrogin (SRO)**	**39.23**	**224**	P	**P**	**10 03 12.1**	**+1.1**
	baz=39,SNR=3.6						
NWAO	**Narrogin (SRO)**	**39.23**	**224**	*e*P	**P**	**10 03 09.1**	**-1.9**
NWAO				pmax	pmax		
	comp=Z,187nm,1.3s						
NWAO				MLR	MLR		
	comp=Z,9μm,18.0s						
MUN	**Mundaring**	**39.42**	**226**	P	**P**	**10 03 14.1**	**+1.6**
	baz=39,SNR=4.7						
YOJ	**Yonaguni jima**	**39.57**	**322**	PFAKE		10 03 30.0	+16
YOJ				LR	LR		
	comp=Z,4μm,20.0s						
TWG	**Pinlang**	**39.64**	**318**	PFAKE		10 03 30.0	+16
TWG				LR	LR		
	comp=Z,8μm,18.0s						
KNTN	**Kanton**	**39.76**	**87**	*e*P	**P**	**10 03 16.5**	**+0.9**
	comp=Z,402nm,1.3s						
HIZ	**Hauiti**	**39.79**	**147**	PFAKE		10 03 30.0	+14
HIZ				LR	LR		
	comp=Z,4μm,20.0s						
YULB	**Yu-li**	**39.89**	**319**	PFAKE		10 03 30.0	+13
YULB				LR	LR		
	comp=Z,2μm,20.0s						
JCJI	**Jatiwangi**	**40.02**	**268**	P	P

comp=Z,4μm,20.0s
BFZ Birch Farm 42.10 148 PFAKE 10 03 50.0 +15
BFZ LR LR
comp=Z,8μm,19.0s
OXZ Oxford 42.12 154 PFAKE 10 03 50.0 +15
OXZ LR LR
comp=Z,5μm,20.0s
PPBI Pangkal Pinang 42.50 274 P **P** **10 03 40.9 +2.7**
KNMB Chin-men Tao 42.55 317 PFAKE 10 03 50.0 +12
KNMB LR LR
comp=Z,2μm,19.0s
CGJI Cibinong 42.57 267 P **P** **10 03 40.5 +1.7**
QZH Quanzhou 42.74 318 *e*P **P** **10 03 39.3 -0.6**
QZH S **S** **10 10 04.3 +2.8**
QZH LR LR
comp=Z,790nm,17.1s
QZH LR LR
comp=Z,2μm,17.1s
QZH LR LR
comp=Z,1μm,18.9s
JNU Nakatsue 42.82 338 P **P** **10 03 38.9 -1.6**
comp=Z,36nm,0.8s,baz=136,slow=3.8,SNR=26
JNU ScP **ScP** **10 09 18.1 -1.9**
comp=Z,3.3nm,0.9s,baz=149,slow=5.6,SNR=2.0
JNU Nakatsue 42.82 338 *e*P **P** **10 03 40.5 +0.1**
comp=Z,40nm,0.9s
JNU LR LR
comp=Z,2μm,22.0s
INU Inuyama 43.00 346 *e*P **P** **10 03 41.4 -0.5**
comp=Z,56nm,1.2s
INU LR LR
comp=Z,2μm,22.0s
KASI Kota Agung 43.82 269 P **P** **10 03 49.3 +0.5**
MJAR Matsushiro Arr 43.88 348 P **P** **10 03 47.3 -1.7**
comp=Z,19nm,1.0s,baz=176,slow=8.8,SNR=33
MJAR ScP **ScP** **10 09 23.6 -0.5**
comp=Z,2.0nm,0.8s,baz=191,slow=3.8,SNR=5.0
MJAR LR LR 10 20 55.9
comp=Z,2μm,18.6s,baz=170,slow=35
MAJO Matsushiro 43.88 348 *e*P **P** **10 03 48.4 -0.6**
comp=Z,137nm,1.4s
MAJO LR LR
comp=Z,3μm,18.0s
MAJO Matsushiro 43.88 348 *i* P **P** **10 03 47.3 -1.7**
MAJO pmax pmax
comp=Z,27nm,1.0s
MAT Matsushiro 43.88 348 P **P** **10 03 47.7 -1.3**
MAT S **S** **10 10 17.6 -0.4**
MJB9 Matsu-Tunnel 43.89 348 PFAKE 10 04 00.0 +11
MJB9 LR LR
comp=Z,3μm,19.0s
MDSI Maura Dua 44.21 270 P **P** **10 03 52.3 +0.3**
DSRI Dabo 44.28 276 P **P** **10 03 55.4 +2.9**
comp=Z,274nm,1.0s,comp=Z,5μm
LWLI Liwa 44.29 269 P **P** **10 03 56.0 +3.2**
comp=Z,49nm,0.7s,comp=Z,8μm
LHSI Lahat 44.92 271 P **P** **10 03 58.8 +1.2**
QIZ Qiongzhong 45.80 304 PFAKE 10 04 20.0 +15
QIZ LR LR
comp=Z,2μm,19.0s
TJN Taejon 47.04 337 *i* P **P** **10 04 14.0 0.0**
SDSI Sungai Dareh 47.33 275 P **P** **10 04 17.6 +1.0**
comp=Z,76nm,1.6s,comp=Z,2μm
JOHN Johnston Islan 47.43 60 PFAKE 10 04 30.0 +13
JOHN LR LR
comp=Z,6μm,20.0s
NJ2 Nanjing 47.65 325 *e*P **P** **10 04 20.5 +1.8**
NJ2 pmax pmax
comp=Z,25nm,0.7s
NJ2 pmax pmax
comp=Z,190nm,5.0s
NJ2 LR LR
comp=Z,2μm,17.5s
NJ2 LR LR
comp=Z,1μm,20.3s
NJ2 LR LR
comp=Z,2μm,18.9s
KSRS Korea Array 47.77 338 P **P** **10 04 19.3 -0.3**
comp=Z,16nm,0.9s,baz=153,slow=8.6,SNR=78
KSRS ScP **ScP** **10 09 39.6 -0.6**
comp=Z,1.3nm,0.8s,baz=136,slow=5.7,SNR=4.8
ERM Erimo 48.51 355 *e*P **P** **10 04 24.9 -0.4**
comp=Z,60nm,1.6s
ERM LR LR
comp=Z,3μm,22.0s
ERM Erimo 48.51 355 *i* P **P** **10 04 24.4 -0.9**
ERM pmax pmax
comp=Z,11nm,1.1s
IPM Ipoh 48.68 282 *e*P **P** **10 04 26.4 -0.8**
comp=Z,32nm,0.8s
KULM Kulim 49.23 283 *e*P **P** **10 04 31.4 +0.1**
comp=Z,21nm,0.7s
KULM LR LR
comp=Z,1μm,22.0s
KULM Kulim 49.23 283 P **P** **10 04 34.0 +2.7**
WHN Wuhan 49.28 320 ⇑P P 10 04 25.8 -5.6
WHN S S 10 11 25.9 -10
WHN pmax pmax
comp=Z,22nm,0.4s
WHN pmax pmax
comp=Z,640nm,4.7s
WHN LR LR
comp=N,2μm,14.3s
WHN LR LR
comp=E,600nm,11.7s
WHN LR LR
comp=Z,3μm,18.6s
MNSI Mandailing Nat 49.41 277 P **P** **10 04 33.9 +1.2**
comp=Z,30nm,0.8s,comp=Z,3μm
CHBT CHBT 49.75 293 P **P** **10 04 32.9 -2.3**
comp=Z,62nm,0.5s,comp=Z,3μm
SKNT Sakolnakorn 49.84 299 P P 10 04 47.5 +12
YUK Yuzh-Kuril'sk 50.34 357 *c i*P **P** **10 04 35.5 -3.7**
YUK *e* 10 05 58.8
YUK *i* S **S** **10 11 44.7 -5.0**
YUK *e*SS **SS** **10 15 21.5 -2.5**
YUK pmax pmax
comp=Z,262nm,1.0s
YUK pmax pmax
comp=E,188nm,1.3s
YUK pmax pmax
comp=N,201nm,1.0s
YUK pmax pmax
comp=Z,208nm,1.8s
PSI Prapat 50.40 279 *e*P **P** **10 04 40.4 0.0**
comp=Z,66nm,1.1s
PSI LR LR
comp=Z,2μm,22.0s
PSI Prapat 50.40 279 *e*P **P** **10 04 40.4 0.0**
PSI pmax pmax
comp=Z,66nm,1.1s
PSI MLR MLR
comp=Z,2μm,22.0s
ASAJ Asahikawa 50.65 354 P **P** **10 04 40.4 -1.1**
comp=Z,17nm,1.1s,baz=180,slow=17,SNR=3.8
GSI Gunungsitoli 51.47 277 *e*P **P** **10 04 47.4 -0.9**
comp=Z,50nm,0.8s
KUR Kuril'sk 51.48 359 *e*P **P** **10 04 48.7 +1.0**
KUR S **S** **10 12 07.4 +1.9**
KUR pmax pmax
comp=Z,208nm,1.2s
KUR pmax pmax
comp=Z,700nm,3.0s
DL2 Dalian 51.60 333 P **P** **10 04 48.4 -0.4**
DL2 sP **pwP** **10 05 01.5 -2.1**
DL2 PcS **PcS** **10 09 59.1 -1.1**
DL2 S **S** **10 12 09.0 +1.6**
DL2 pmax pmax
comp=Z,280nm,11.8s
DL2 LR LR
comp=Z,1μm,20.7s
DL2 LR LR
comp=Z,1μm,18.8s
DL2 LR LR
comp=Z,2μm,20.9s
VLA Vladivostok 51.64 344 *i* P **P** **10 04 48.2 -0.7**
VLA pmax pmax
comp=Z,14nm,1.0s
KCSI Kotacane, Aceh 51.67 280 P **P** **10 04 50.4 +0.6**
comp=Z,70nm,1.1s
TIA Tai'an 51.70 327 P **P** **10 04 48.8 -0.8**
SLVN Son La 51.79 304 PFAKE 10 05 00.0 +9.4
SLVN LR LR
comp=Z,1μm,22.0s
GYA Guiyang 52.16 311 ⇑*i*P **P** **10 04 53.8 +0.4**
GYA PP **PP** **10 06 50.3 -1.8**
GYA S **S** **10 12 19.8 +3.9**
GYA pmax pmax
comp=Z,30nm,0.5s
GYA pmax pmax
comp=Z,150nm,5.0s
GYA LR LR
comp=Z,940nm,20.8s
GYA LR LR
comp=Z,730nm,18.0s
GYA LR LR
comp=Z,710nm,20.5s
TPTI 52.20 279 P P 10 05 08.7 +15
USA0B Ussuriysk Arra 52.62 345 PFAKE 10 05 10.0 +14
USA0B LR LR
comp=Z,1μm,20.0s
USRK Ussuriysk Ar. 52.62 345 P **P** **10 04 54.8 -1.5**
comp=Z,6.0nm,0.8s,baz=181,slow=7.2,SNR=13
USRK S **S** **10 12 26.7 +5.5**
comp=Z,0.8nm,0.4s,baz=140,slow=41,SNR=2.6
USRK LR LR 10 26 20.2
comp=Z,1μm,18.8s,baz=144,slow=35
MLSI Meulaboh, Aceh 53.15 280 P P 10 05 07.7 +7.0
SNY Shenyang 53.22 337 ⇓P P 10 05 09.1 +8.4
SNY S S 10 13 03.3 +34
SNY pmax pmax
comp=Z,17nm,0.5s
SNY pmax pmax
comp=Z,170nm,5.1s
SNY LR LR
comp=N,1μm,17.5s
SNY LR LR
comp=E,1μm,17.5s
SNY LR LR
comp=Z,2μm,20.1s
YSS Yuzh-Sakhalins 53.45 355 PFAKE 10 05 10.0 +7.7
YSS LR LR
comp=Z,1μm,21.0s
YSS Yuzh-Sakhalins 53.45 355 *e*P **P** **10 05 02.1 -0.2**
YSS *e**PP **sP** **10 05 14.6 -0.2**
YSS *e* 10 07 05.2
YSS *e* 10 08 12.6
YSS *e*S **S** **10 12 32.0 -0.4**
YSS *e*PS **PKiKP** **10 12 47.1 +1.1**
YSS MLR MLR
comp=Z,600nm,15.0s
YSS MLR MLR
comp=N,400nm,16.0s
YSS MLR MLR
comp=E,400nm,14.0s
MDJ Mudanjiang 53.65 343 P **P** **10 05 03.9 0.0**
MDJ pP pP 10 05 13.5 +0.6
MDJ sP pwP 10 05 17.6 -1.2
MDJ PP **PP** **10 07 04.4 -0.6**
MDJ ScP **ScP** **10 10 05.6 +0.2**
MDJ PcS **PcS** **10 10 09.4 +0.5**
MDJ S **S** **10 12 32.3 -3.0**
MDJ sS pS 10 12 47.3 -0.3
MDJ ScS **ScS** **10 14 51.0 +0.3**
MDJ SS **SS** **10 16 12.9 -3.6**
MDJ pmax pmax
comp=E,18nm,1.0s
MDJ pmax pmax
comp=E,400nm,7.8s
MDJ LR LR
comp=E,1μm,25.6s
MDJ LR LR
comp=E,550nm,24.2s
MDJ LR LR
comp=E,2μm,26.3s
CN2 Changchun 54.24 340 *e*P **P** **10 05 07.3 -0.8**
CN2 *e*sP pwP 10 05 27.3 +4.3
CN2 *e*S **S** **10 12 41.3 -1.9**
CN2 pmax pmax
comp=E,330nm,10.0s
CN2 LR LR
comp=E,1μm,20.0s
CN2 LR LR
comp=E,940nm,20.0s
CN2 LR LR
comp=E,2μm,20.0s
KMI Kunming 54.52 307 P **P** **10 05 13.8 +3.0**
KMI pP pwP 10 05 24.8 -0.2
KMI sP sP 10 05 30.1 +7.1
KMI PP **PP** **10 07 10.3 -3.1**
KMI S **S** **10 12 51.5 +3.4**
KMI sS sS 10 13 09.1 +6.2
KMI SS **SS** **10 16 29.9 -1.3**
KMI pmax pmax
comp=E,18nm,0.8s
KMI pmax pmax
comp=E,360nm,9.3s
KMI LR LR
comp=E,1μm,20.1s
KMI LR LR
comp=E,530nm,19.7s
KMI LR LR
comp=E,950nm,23.1s
CMAR Chiang Mai Arr 54.84 298 P **P** **10 05 13.6 +0.5**
comp=E,2.8nm,0.8s,baz=121,slow=5.8,SNR=11
CMAR ScP **ScP** **10 10 10.6 -0.6**
comp=E,0.7nm,0.4s,baz=140,slow=3.2,SNR=3.3
XAN Xi'an 55.04 320 P **P** **10 05 13.1 -1.1**
XAN pP sP 10 05 25.9 -0.5
XAN S **S** **10 12 54.8 +0.3**
XAN SS **SS** **10 16 39.1 +0.2**
XAN pmax pmax
comp=E,390nm,7.4s
XAN LR LR
comp=E,1μm,20.6s
XAN LR LR
comp=E,780nm,19.6s
XAN LR LR
comp=E,1μm,20.1s
XAN Xi'an 55.04 320 *e*P **P** **10 05 13.2 -1.0**
comp=E,19nm,1.0s
XAN LR LR
comp=Z,2μm,20.0s
XAN Xi'an 55.04 320 *e*P **P** **10 05 13.2 -1.0**
XAN pmax pmax
comp=Z,19nm,1.0s
XAN MLR MLR
comp=Z,2μm,20.0s
BJI Beijing 55.08 330 P **P** **10 05 13.5 -0.8**
BJI S **S** **10 12 53.4 -1.3**
BJI LR LR
comp=Z,950nm,21.4s
BJI LR LR
comp=Z,750nm,19.4s
BJI LR LR
comp=Z,1μm,23.0s
TIY Taiyuan 55.37 325 *e*P **P** **10 05 17.3 +0.7**
TIY S **S** **10 12 58.5 -0.3**
TIY pmax pmax
comp=Z,10.0nm,0.5s
TIY pmax pmax
comp=Z,270nm,11.2s
TIY LR LR
comp=Z,2μm,21.9s
TIY LR LR
comp=Z,1μm,18.7s
CD2 Chengdu 56.72 314 P **P** **10 05 26.6 +0.2**
CD2 pP sP 10 05 37.8 -0.7
CD2 PcP **PcP** **10 06 22.1 -0.1**
CD2 S **S** **10 13 14.3 -2.7**
CD2 sS sS 10 13 32.8 +1.1
CD2 pmax pmax
comp=Z,40nm,0.4s
CD2 pmax pmax
comp=Z,750nm,10.2s
CD2 LR LR
comp=Z,3μm,19.6s
CD2 LR LR
comp=Z,3μm,19.3s
CD2 LR LR
comp=Z,3μm,18.8s
TYV Tymovskoe 57.34 356 *e*P **P** **10 05 29.9 -0.3**
TYV *e* 10 13 31.2
TYV pmax pmax
comp=Z,13nm,1.8s
TYV pmax pmax
comp=Z,400nm,6.1s
TYV MLR MLR
comp=Z,800nm,21.0s
KLR Kul'dur 57.39 347 *c i*P **P** **10 05 30.4 -0.3**
comp=Z,9.7nm,1.1s,baz=166,slow=6.6,SNR=11
KLR S S 10 13 38.5 +14
comp=Z,0.3nm,0.3s,baz=201,slow=17,SNR=2.1
KLR Kul'dur 57.39 347 *c i*P **P** **10 05 30.6 -0.1**
KLR pmax pmax
comp=Z,11nm,1.1s
HHC Hu-ho-hao-te 58.06 327 *e*P **P** **10 05 38.8 +3.1**
HHC S **S** **10 13 38.3 +3.9**
HHC sS sS 10 13 49.8 +0.3
HHC LR LR
comp=Z,1μm,18.9s
HHC LR LR
comp=Z,1μm,17.8s
LZH Lanzhou 59.59 319 *e*P **P** **10 05 45.5 -1.0**
LZH pP sP 10 05 56.9 -1.8
LZH sP pwP 10 06 00.8 -0.2
LZH S **S** **10 13 54.0 -0.5**
LZH SS **SS** **10 17 51.5 +0.9**
LZH pmax pmax
comp=Z,39nm,1.3s
LZH pmax pmax
comp=Z,270nm,7.2s
LZH LR LR
comp=Z,990nm,15.7s
LZH LR LR
comp=Z,930nm,16.0s
LZH LR LR
comp=Z,2μm,18.0s
NKL Nikolayevsk 59.78 355 *e*P **P** **10 05 49.7 +2.5**
NKL *e* 10 06 30.9
NKL *e* 10 07 56.5
NKL *e*S **S** **10 13 55.5 -0.4**
NKL *e* 10 15 32.3
NKL *e*SS **SS** **10 17 51.0 -1.6**
NKL pmax pmax
comp=Z,14nm,1.2s
NKL pmax pmax
comp=N,403nm,17.2s
NKL pmax pmax
comp=E,178nm,12.4s
NKL pmax pmax
comp=Z,53nm,4.6s
PEA0B Petropavlovsk- 59.87 6 *e*P **P** **10 05 45.5 -2.3**
comp=Z,156nm,1.5s
PEA0B LR LR
comp=Z,2μm,22.0s
PETK Petropavlovsk- 59.87 6 P **P** **10 05 45.4 -2.5**
comp=Z,7.2nm,1.1s,baz=182,slow=30,SNR=6.4
PETK LR LR 10 28 01.1
comp=Z,1μm,21.8s,baz=201,slow=32
PEA1 Petropavlovsk- 59.87 6 *e*P **P** **10 05 45.4 -2.5**
PET Petropavlovsk 59.89 7 *e*P **P** **10 05 47.5 -0.5**
comp=Z,24nm,1.0s
PET LR LR
comp=Z,1μm,19.0s
PET Petropavlovsk 59.89 7 *e*P **P** **10 05 47.6 -0.4**
PET *e*S **S** **10 13 55.3 -2.1**
PET *e*SS **SS** **10 17 50.4 -4.0**
PET pmax pmax
comp=Z,500nm,5.9s
PET pmax pmax
comp=Z,400nm,15.0s
PET pmax pmax
comp=Z,22nm,1.0s
PET MLR MLR
comp=Z,1μm,20.0s
PET MLR MLR
comp=Z,1μm,19.0s
KHLU Kahalu`u 60.49 63 PFAKE 10 06 00.0 +7.1
KHLU LR LR
comp=Z,3μm,21.0s
HLK Haleakala 60.58 62 PFAKE 10 06 10.0 +16
HLK LR LR
comp=Z,5μm,20.0s
MLOA Mauna Loa Obse 60.75 63 PFAKE 10 06 10.0 +15
MLOA LR LR
comp=Z,3μm,20.0s
HPAH Hawaii Prepara 60.81 63 PFAKE 10 06 10.0 +15
HPAH LR LR
comp=Z,4μm,19.0s
POHA Pohakuloa 60.87 63 PFAKE 10 06 10.0 +14
POHA LR LR
comp=Z,4μm,20.0s
HIA Hailar 60.95 339 PFAKE 10 06 10.0 +15
HIA LR LR
comp=Z,1μm,20.0s
PPT Papeete 61.28 106 LR LR 10 30 11.8
comp=Z,293nm,18.0s,baz=270,slow=34
PPT2 Papeete2 61.28 106 *e*P **P** **10 06 00.3 +2.1**
comp=Z,55nm,1.3s
PPT2 *e*S **S** **10 14 12.6 -4.0**
comp=Z,2μm,25.8s
PPT2 *e*LQ LQ 10 21 31.0
comp=Z,4μm,32.8s
PPT2 *e*LR LR 10 24 06.4
comp=Z,1μm,24.0s
TIAR Tiarei 61.49 106 *e*P **P** **10 06 01.5 +1.8**
comp=Z,14nm,1.0s
TBI Tubuai 61.76 113 *e*S **S** **10 14 19.2 -3.2**
comp=Z,1μm,25.8s
TBI *e*SS **SS** **10 18 25.2 +0.6**
comp=Z,478nm,28.2s
TBI *e*LQ LQ 10 21 40.8
comp=Z,1μm,30.8s
TBI *e*LR LR 10 24 18.9
comp=Z,608nm,32.8s
ZEA Zeya 62.63 346 *e*P **P** **10 06 06.0 -0.5**
ZEA *e*S **S** **10 14 36.5 +4.3**
ZEA pmax pmax
comp=Z,200nm,2.0s
ZEA pmax pmax
comp=Z,140nm,1.8s
ZEA smax smax
comp=N,500nm,13.0s
PMOR Pomariorio Ree 62.84 103 *e*P **P** **10 06 10.0 +1.4**
comp=N,206nm,1.3s
SMY Shemya 62.85 17 PFAKE 10 06 20.0 +12
SMY LR LR
comp=Z,1μm,20.0s
VAH Vaihoa 63.09 104 *e*P **P** **10 06 11.5 +1.2**
comp=Z,44nm,1.0s
SHL Shillong 63.58 303 *e*P **P** **10 06 13.8 +0.2**
comp=Z,22nm,1.1s
SHL Shillong 63.58 303 *e*P **P** **10 06 13.8 +0.2**
SHL pmax pmax
comp=Z,22nm,1.1s
GTA Gaotai 64.10 320 *e*P P 10 06 11.5 -5.3
GTA pP pP 10 06 15.8 -10
GTA sP sP 10 06 19.1 -10
GTA pmax pmax
comp=Z,3.0nm,0.6s
KIWB Kanaga Island 65.09 23 *e*P **P** **10 06 22.3 -0.4**
CASY Casey 65.21 196 *e*P **P** **10 06 22.9 -0.5**
comp=Z,19nm,0.8s
CASY LR LR
comp=Z,3μm,18.0s
ULN Ulaanbaatar 65.28 331 *e*P **P** **10 06 24.3 +0.1**
comp=Z,5.0nm,0.7s
ULN LR LR
comp=Z,2μm,22.0s
ULN Ulaanbaatar 65.28 331 *c i*P **P** **10 06 23.8 -0.5**
ULN pmax pmax
comp=Z,4.0nm,1.0s
ADK Adak 65.29 23 PFAKE 10 06 40.0 +16
ADK LR LR
comp=Z,2μm,20.0s
SONM Songino Array 65.58 330 P **P** **10 06 25.3 -0.9**
comp=Z,2.9nm,0.7s,baz=145,slow=8.5,SNR=8.4
SONM LR LR 10 34 05.4
comp=Z,3μm,21.6s,baz=145,slow=35
MA2 Magadan 65.87 1 P **P** **10 06 26.5 -1.1**
comp=Z,10.0nm,0.9s,baz=170,slow=9.7,SNR=5.8
MA2 Magadan 65.87 1 *e*P **P** **10 06 28.8 +1.1**
comp=Z,63nm,1.5s
MA2 LR LR
comp=Z,1μm,20.0s
MA2 Magadan 65.87 1 *c e*P **P** **10 06 28.0 +0.4**
MA2 pmax pmax
comp=Z,22nm,1.7s
ATKA Atka Island 66.52 24 *e*P **P** **10 06 31.8 -0.1**
comp=Z,152nm,1.6s
ZAK Zakamensk 68.81 331 *e*P **P** **10 06 44.9 -1.7**
ZAK pmax pmax
comp=Z,15nm,1.2s
JIRN Jiri 69.08 303 *e*P **P** **10 06 49.3 +0.2**
comp=Z,36nm,0.7s
SEY Seymchan 69.28 2 P **P** **10 06 47.9 -1.2**
comp=Z,6.3nm,1.0s,baz=179,slow=7.5,SNR=8.1

SEY Seymchan 69.28 2 *ce*P **P 10 06 49.6 +0.5**
NIKH Nikolski High 69.32 26 PFAKE 10 07 00.0 +10
NIKH LR LR
comp=Z,2μm,21.0s
GUN Gumba 69.42 303 *e*P **P 10 06 50.3 -0.9**
comp=Z,36nm,0.7s
TLY Talaya 69.49 332 PFAKE 10 07 00.0 +9.3
TLY LR LR
comp=Z,2μm,21.0s
TLY Talaya 69.49 332 *e*P P 10 06 55.5 +4.8
TLY *e* 10 09 24.6
TLY *e*S **S 10 16 02.9 +7.0**
TLY *e* 10 16 48.0
TLY pmax pmax
comp=Z,34nm,1.6s
TLY MLR MLR
comp=Z,2μm,19.0s
PKI Pulchoki 69.71 302 *e*P **P 10 06 53.6 +0.7**
comp=Z,53nm,1.2s
PKIN Phulchoki 69.72 302 *e*P **P 10 06 52.8 -0.1**
comp=Z,8.3nm,0.6s
YAK Yakutsk 69.86 351 *e*P **P 10 06 53.0 +0.4**
comp=Z,17nm,0.5s
YAK LR LR
comp=Z,699nm,20.0s
YAK Yakutsk 69.86 351 *e*P **P 10 06 50.6 -2.0**
YAK *e**PP **pP 10 07 02.2 +0.3**
YAK *e* 10 07 11.4
YAK *e*S **S 10 15 59.5 -0.1**
YAK *e**SS **sS 10 16 19.3 +4.1**
YAK *e* 10 16 39.9
YAK *e*SS **SS 10 20 32.4 +3.3**
BOD Bodaibo 69.92 341 *e*P **P 10 06 52.3 -0.9**
BOD pmax pmax
comp=Z,10.0nm,1.8s
DMN Daman 69.97 302 *e*P **P 10 06 54.8 +0.3**
comp=Z,49nm,0.9s
MOY Mondy 70.74 331 *e*P **P 10 06 58.4 -0.1**
MOY pmax pmax
comp=Z,34nm,3.1s
KOLN Koldanda 71.29 302 *e*P **P 10 07 02.0 -0.4**
comp=Z,36nm,0.8s
DANN Dangsing 71.34 303 *e*P **P 10 07 01.3 -1.5**
comp=Z,63nm,1.2s
VNDA Vanda 71.35 177 P **P 10 07 02.2 +0.6**
comp=Z,6.2nm,0.9s,baz=320,slow=6.5,SNR=26
VNDA LR LR 10 36 10.1
comp=Z,1μm,18.9s,baz=353,slow=34
VNDA Vanda 71.35 177 *e*P **P 10 07 01.8 +0.2**
VNDA *e*pP **P 10 07 02.7 +1.1**
VNDA Vanda 71.35 177 *e*P **P 10 07 01.8 +0.2**
PYUN Piuthan 71.91 302 *e*P **P 10 07 05.9 -0.2**
HYB Hyderabad 73.08 290 *i* P **P 10 07 15.0 +1.9**
WMQ Urumqi 74.17 319 *e*P **P 10 07 20.5 +1.5**
WMQ pmax pmax
comp=Z,86nm,3.7s
WMQ LR LR
comp=Z,230nm,23.5s
WMQ LR LR
comp=Z,130nm,18.5s
WMQ LR LR
comp=Z,490nm,21.9s
BILL Bilibino 75.39 7 *ce*P **P 10 07 25.1 -0.4**
BILL *e* 10 07 37.4
BILL *e*S **S 10 17 05.8 +3.1**
BILL *e*SS **SS 10 21 56.2 +2.5**
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,634nm,18.0s
DGZ Jazzator, Alta 76.92 324 *i* P **P 10 07 32.9 -1.9**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
ANM Nome 78.66 18 PFAKE 10 08 00.0 +16
ANM LR LR
comp=Z,1μm,20.0s
MK31 Makanchi Array 78.85 320 *e*P **P 10 07 43.0 -2.4**
comp=Z,8.4nm,1.1s
MK31 Makanchi Array 78.85 320 *e*P **P 10 07 43.0 -2.4**
MK31 pmax pmax
comp=Z,8.0nm,1.1s
MKAR Makanchi Array 78.85 320 P **P 10 07 43.9 -1.5**
comp=Z,2.3nm,0.7s,baz=100,slow=3.7,SNR=17
MKAR LR LR 10 42 57.8
comp=Z,557nm,20.8s,baz=86,slow=36
MKAR Makanchi Array 78.85 320 *i* P **P 10 07 44.5 -0.9**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
TIXI Tiksi 79.05 354 P **P 10 07 43.5 -2.4**
comp=Z,0.5nm,0.3s,baz=250,slow=9.4,SNR=2.5
TIXI Tiksi 79.05 354 PFAKE 10 08 00.0 +14
TIXI LR LR
comp=Z,700nm,21.0s
MAKZ Makanchi 79.06 320 *e*P **P 10 07 45.5 -1.1**
comp=Z,10nm,1.0s
MAKZ LR LR
comp=Z,800nm,22.0s
MAKZ Makanchi 79.06 320 *e*P **P 10 07 45.5 -1.1**
MAKZ pmax pmax
comp=Z,11nm,1.0s
MAKZ MLR MLR
comp=Z,800nm,22.0s
KDAK Kodiak Island 79.60 28 PFAKE 10 08 00.0 +11
KDAK LR LR
comp=Z,1μm,18.0s
SVW2 Sparrevohn 80.04 24 PFAKE 10 08 00.0 +8.4
SVW2 LR LR
comp=Z,2μm,21.0s
ZAA0 Zalesovo Array 80.24 327 PFAKE 10 08 00.0 +7.2
ZAA0 LR LR
comp=Z,2μm,20.0s
ZALV Zalesovo Beam 80.24 327 P **P 10 07 50.6 -2.2**
comp=Z,3.3nm,0.7s,baz=112,slow=5.2,SNR=9.7
ZALV LR LR 10 43 00.8
comp=Z,2μm,21.1s,baz=76,slow=35
KSH Kashi 80.85 312 P **P 10 07 58.1 +1.5**
KSH sP pwP 10 08 12.3 +1.2
KSH S **S 10 18 03.1 +0.3**
KSH SS **SS 10 23 21.1 +3.9**
KSH pmax pmax
comp=Z,450nm,8.4s
KSH LR LR
comp=Z,1μm,13.5s
KSH LR LR
comp=Z,2μm,19.4s
KSH LR LR
comp=Z,1μm,21.6s
TTA Tatalina 80.89 22 PFAKE 10 08 10.0 +14
TTA LR LR
comp=Z,10μm,19.0s
CNPM China Poot 81.07 27 PFAKE 10 08 10.0 +13
CNPM LR LR
comp=Z,2μm,19.0s
BRLK Bradley Lake 81.34 26 PFAKE 10 08 10.0 +11
BRLK LR LR
comp=Z,1μm,20.0s
NIL Nilore 81.46 305 *e*P **P 10 07 59.7 -0.1**
comp=Z,58nm,1.4s
NIL Nilore 81.46 305 *e*P **P 10 07 59.7 -0.1**
NIL pmax pmax
comp=Z,58nm,1.4s
BOOM Boomskoye usch 81.71 314 *e*P **P 10 08 01.0 -0.1**
comp=Z,5.9nm,0.8s
BOOM Boomskoye usch 81.71 314 *e*P **P 10 08 01.0 -0.1**
BOOM pmax pmax
comp=Z,6.0nm,0.8s
RDOG Red Dog Mine 81.75 17 PFAKE 10 08 10.0 +9.4
RDOG LR LR
comp=Z,2μm,22.0s
SEW Seward 82.14 27 PFAKE 10 08 10.0 +7.3
SEW LR LR
comp=Z,2μm,22.0s
SKT Skwentna 82.16 24 PFAKE 10 08 10.0 +7.2
SKT LR LR
comp=Z,2μm,20.0s
SUA Susitna One 82.23 25 PFAKE 10 08 10.0 +6.7
SUA LR LR
comp=Z,2μm,22.0s
PPLA Purkeypile 82.36 23 PFAKE 10 08 10.0 +6.0
PPLA LR LR
comp=Z,1μm,20.0s
MAW Mawson 82.40 203 P **P 10 08 04.4 +0.4**
comp=Z,3.5nm,0.8s,baz=111,slow=6.1,SNR=6.4
MAW LR LR 10 44 58.3
comp=Z,999nm,18.1s,baz=76,slow=36
MAW Mawson 82.40 203 *e*P **P 10 08 03.9 -0.1**
comp=Z,1.9nm,1.4s
MAW Mawson 82.40 203 *e*P **P 10 08 03.9 -0.1**
MAW pmax pmax
comp=Z,2.0nm,1.4s
RC01 Rabbit Creek A 82.48 26 PFAKE 10 08 20.0 +16
RC01 LR LR
comp=Z,1μm,22.0s
KURK Kurchatov 82.52 323 *e*P **P 10 08 03.9 -1.0**
comp=Z,9.4nm,1.0s
KURK LR LR
comp=Z,800nm,18.0s
KURK Kurchatov 82.52 323 *ce*P **P 10 08 03.4 -1.5**
KURK pmax pmax
comp=Z,10.0nm,1.7s
KURBB Kurchatov Arra 82.54 323 P **P 10 08 02.9 -2.2**
comp=Z,1.5nm,0.8s,baz=110,slow=4.2,SNR=13
FRU1 Bishkek 82.73 315 PFAKE 10 08 20.0 +14
FRU1 LR LR
comp=Z,600nm,21.0s
AAK Ala-Archa 82.78 314 P **P 10 08 05.8 -0.9**
comp=Z,4.6nm,0.2s,baz=124,slow=4.2,SNR=4.0
AAK LR LR 10 48 10.2
comp=Z,456nm,18.1s,baz=101,slow=38
AAK Ala-Archa 82.78 314 *i* P **P 10 08 06.3 -0.4**
AAK pmax pmax
comp=Z,5.0nm,0.8s
PMR Palmer 82.97 25 *e*P **P 10 08 05.0 -2.0**
comp=Z,11nm,1.1s
PMR LR LR
comp=Z,2μm,22.0s
PMR Palmer 82.97 25 *e*P **P 10 08 05.0 -2.0**
PMR pmax pmax
comp=Z,11nm,1.1s
PMR MLR MLR
comp=Z,2μm,22.0s
GHO Glory Hole Cre 83.14 25 PFAKE 10 08 20.0 +12
GHO LR LR
comp=Z,2μm,20.0s
KNK Knik Glacier 83.18 26 PFAKE 10 08 20.0 +12
KNK LR LR
comp=Z,2μm,22.0s
KTH Kantishna Hill 83.18 23 *e*P **P 10 08 07.6 -0.6**
comp=Z,17nm,1.2s
KTH LR LR
comp=Z,2μm,20.0s
TRF Thorofare Moun 83.38 23 PFAKE 10 08 20.0 +11
TRF LR LR
comp=Z,400nm,20.0s
SML Sawmill 83.41 25 *e*P **P 10 08 11.1 +1.7**
comp=Z,34nm,1.1s
SML LR LR
comp=Z,1μm,21.0s
BPAW Bear Paw Mtn. 83.43 23 PFAKE 10 08 20.0 +11
BPAW LR LR
comp=Z,700nm,20.0s
QSPA South Pole Qui 83.49 180 *e*P **P 10 08 10.5 +0.6**
comp=Z,55nm,1.1s
QSPA LR LR
comp=Z,2μm,20.0s
GLI Glacier Island 83.53 26 *e*P **P 10 08 10.6 +0.7**
comp=Z,19nm,0.9s
GLI LR LR
comp=Z,900nm,19.0s
SCM Sheep Creek Mo 83.85 25 *e*P **P 10 08 12.4 +0.7**
comp=Z,28nm,1.1s
SCM LR LR
comp=Z,2μm,22.0s
RND Reindeer 83.93 24 PFAKE 10 08 20.0 +8.0
RND LR LR
comp=Z,2μm,20.0s
MLY Manley 83.98 22 *e*P **P 10 08 13.1 +0.8**
comp=Z,13nm,1.0s
MLY LR LR
comp=Z,1μm,21.0s
EYAK Cordova Ski Ar 83.99 27 PFAKE 10 08 20.0 +7.7
EYAK LR LR
comp=Z,1μm,20.0s
BWN Browne 84.05 23 PFAKE 10 08 20.0 +7.5
BWN LR LR
comp=Z,1μm,19.0s
MCK McKinley 84.05 23 *e*P **P 10 08 10.9 -1.6**
comp=Z,32nm,1.0s
MCK LR LR
comp=Z,1μm,20.0s
MCK McKinley 84.05 23 *e*P **P 10 08 11.0 -1.6**
MCK pmax pmax
comp=Z,32nm,1.0s
MCK MLR MLR
comp=Z,1μm,20.0s
DIV Divide 84.22 26 PFAKE 10 08 20.0 +6.4
DIV LR LR
comp=Z,1μm,20.0s
WRH Wood River Hil 84.72 23 PFAKE 10 08 30.0 +14
WRH LR LR
comp=Z,800nm,20.0s
CCB Clear Creek Bu 84.91 23 PFAKE 10 08 30.0 +13
CCB LR LR
comp=Z,1μm,20.0s
TCOL CIGO, UAF Yank 84.99 23 P **P 10 08 17.0 -0.2**
baz=243
COLA College 84.99 23 *e*P **P 10 08 15.6 -1.6**
comp=Z,14nm,0.8s
COLA LR LR
comp=Z,1μm,20.0s
COLA College 84.99 23 *i* P **P 10 08 16.3 -0.9**
COLA pmax pmax
comp=Z,15nm,1.1s
KBL Kabul 85.06 305 PFAKE 10 08 30.0 +11
KBL LR LR
comp=Z,300nm,21.0s
PAX Paxson 85.12 25 PFAKE 10 08 30.0 +12
PAX LR LR
comp=Z,1μm,20.0s
HDA Harding Lake 85.13 23 *e*P **P 10 08 18.2 +0.2**
comp=Z,9.2nm,1.1s
HDA LR LR
comp=Z,800nm,22.0s
HDA Harding Lake 85.13 23 P **P 10 08 17.3 -0.7**
baz=244
COLD Coldfoot 85.25 20 *e*P **P 10 08 19.7 +1.2**
comp=Z,4.1nm,0.8s
COLD LR LR
comp=Z,2μm,22.0s
ILAR Eielson Array 85.32 23 P **P 10 08 17.0 -1.9**
comp=Z,12nm,1.1s,baz=257,slow=4.6,SNR=36
ILAR LR LR 10 44 02.8
comp=Z,487nm,19.9s,baz=249,slow=34
KK31 Karatay Array 85.73 314 *e*P **P 10 08 20.7 -0.8**
comp=Z,21nm,1.3s
KK31 Karatay Array 85.73 314 *e*P **P 10 08 20.7 -0.8**
KK31 pmax pmax
comp=Z,21nm,1.3s
KKAR Karatay Array 85.73 314 *e*P **P 10 08 21.1 -0.4**
comp=Z,15nm,1.1s
KKAR Karatay Array 85.73 314 *e*P **P 10 08 21.1 -0.4**
KKAR pmax pmax
comp=Z,15nm,1.1s
MENT Mentasta 85.84 25 PFAKE 10 08 30.0 +8.4
MENT LR LR
comp=Z,1μm,20.0s
DOT Dot Lake 85.97 24 PFAKE 10 08 30.0 +7.8
DOT LR LR
comp=Z,1μm,20.0s
TOLK Toolik Lake Re 86.14 19 *e*P **P 10 08 23.8 +0.8**
comp=Z,12nm,1.0s
TOLK LR LR
comp=Z,2μm,20.0s
TOLK Toolik Lake Re 86.14 19 P **P 10 08 23.3 +0.3**
baz=241
PRP Porcupine Dome 86.16 22 PFAKE 10 08 30.0 +6.8
PRP LR LR
comp=Z,900nm,20.0s
NRIK Noril'sk 86.21 342 P **P 10 08 22.2 -1.0**
comp=Z,4.2nm,0.6s,baz=79,slow=5.2,SNR=2.3
NRIK LR LR 10 45 45.6
comp=Z,548nm,21.5s,baz=126,slow=35
FYU Fort Yukon 86.70 22 PFAKE 10 08 40.0 +14
FYU LR LR
comp=Z,900nm,19.0s
EGAK Eagle 87.58 24 PFAKE 10 08 40.0 +10
EGAK LR LR
comp=Z,2μm,22.0s
HYT Haines Junctio 87.88 28 PFAKE 10 08 40.0 +8.3
HYT LR LR
comp=Z,1μm,19.0s
SIT Sitka 87.92 32 PFAKE 10 08 40.0 +8.3
SIT LR LR
comp=Z,1μm,18.0s
DAWY Dawson 88.06 25 PFAKE 10 08 40.0 +7.6
DAWY LR LR
comp=Z,2μm,22.0s
BVAR Borovoye Array 88.07 324 P **P 10 08 30.6 -2.0**
comp=Z,4.8nm,0.8s,baz=119,slow=5.2,SNR=16
BRVK Borovoye 88.14 324 *e*P **P 10 08 31.4 -1.5**
comp=Z,4.9nm,1.0s
BRVK LR LR
comp=Z,801nm,20.0s
BRVK Borovoye 88.14 324 *i* P **P 10 08 31.4 -1.5**
BRVK pmax pmax
comp=Z,4.0nm,0.9s
SKAG Skagway 88.55 30 PFAKE 10 08 50.0 +15
SKAG LR LR
comp=Z,800nm,21.0s
CRAG Craig 88.72 34 PFAKE 10 08 50.0 +14
CRAG LR LR
comp=Z,2μm,19.0s
JIS Juneau Island 88.72 31 PFAKE 10 08 50.0 +15
JIS LR LR
comp=Z,1μm,20.0s
MOBC Moresby Island 88.86 36 PFAKE 10 08 50.0 +14
MOBC LR LR
comp=Z,2μm,19.0s
WHY Whitehorse 89.08 29 *e*P **P 10 08 34.4 -2.9**
comp=Z,14nm,1.4s
WRAK Wrangell Islan 89.36 33 PFAKE 10 08 50.0 +11
WRAK LR LR
comp=Z,2μm,19.0s
EPYK Eagle Plains 89.83 23 *e*P **P 10 08 39.1 -1.6**
comp=Z,15nm,0.9s
EPYK LR LR
comp=Z,1μm,22.0s
EPYK Eagle Plains 89.83 23 P **P 10 08 40.5 -0.2**
baz=253
SYO Syowa Base 90.67 200⇑ *e*P P 10 08 39.0 -5.5
SYO Syowa Base 90.67 200⇓ *e*P **P 10 08 46.6 +2.1**
SYO Syowa Base 90.67 200⇓ *e*P P 10 08 56.2 +12
BBB Bella Bella 90.99 38 PFAKE 10 09 00.0 +14
BBB LR LR
comp=Z,2μm,20.0s
DLBC Dease Lake 91.00 31 PFAKE 10 09 00.0 +14
DLBC LR LR
comp=Z,1μm,18.0s
INK Inuvik 91.54 21 P **P 10 08 47.1 -1.3**
comp=Z,9.7nm,1.1s,baz=239,slow=5.2,SNR=8.3
INK Inuvik 91.54 21 *e*P **P 10 08 46.5 -2.0**
comp=Z,10nm,1.0s
INK LR LR
comp=Z,1μm,22.0s
INK Inuvik 91.54 21 *e*P **P 10 08 46.5 -2.0**
INK pmax pmax
comp=Z,10.0nm,1.0s
INK MLR MLR
comp=Z,1μm,22.0s
KEBM Edson Butte 92.25 47 PFAKE 10 09 00.0 +7.6
KEBM LR LR
comp=Z,1μm,20.0s
KMRM Mail Ridge 92.41 50 PFAKE 10 09 00.0 +6.7
KMRM LR LR
comp=Z,2μm,19.0s
KCPM Cahto Peak 92.45 51 PFAKE 10 09 00.0 +6.5
KCPM LR LR
comp=Z,2μm,20.0s
KHMM Horse Mountain 92.47 49 PFAKE 10 09 00.0 +6.4
KHMM LR LR
comp=Z,1μm,19.0s
HOPS Hopland Field 92.77 51 PFAKE 10 09 10.0 +15
HOPS LR LR
comp=Z,2μm,20.0s
MCCM Marconi Confer 92.83 52 PFAKE 10 09 10.0 +15
MCCM LR LR
comp=Z,2μm,20.0s
GDXM Geysers 92.96 51 PFAKE 10 09 10.0 +14
GDXM LR LR
comp=Z,3μm,20.0s
O02D Mt. Diablo Mer 93.11 50 P **P 10 08 56.0 -0.5**
baz=264
COR Corvallis 93.18 46 PFAKE 10 09 10.0 +13
COR LR LR
comp=Z,2μm,20.0s
HUMO Hull Mountain 93.22 48 PFAKE 10 09 10.0 +13
HUMO LR LR
comp=Z,2μm,21.0s
N02D Trinity Center 93.25 49 P **P 10 08 57.4 +0.3**
baz=264
YBH Yreka Blue Hor 93.32 49 PFAKE 10 09 10.0 +13
YBH LR LR
comp=Z,2μm,20.0s
WDC Whiskeytown Da 93.33 50 PFAKE 10 09 10.0 +13
WDC LR LR
comp=Z,1μm,20.0s
SAO San Andreas Ge 93.83 54 PFAKE 10 09 10.0 +10
SAO LR LR
comp=Z,2μm,20.0s
O03E Paynes Creek 93.87 50 P **P 10 08 58.4 -1.6**
baz=265
ABKAR Akbulak array 93.95 319 *e*P **P 10 08 58.4 -1.7**
comp=Z,8.0nm,1.5s
H04A Detroit Lake 93.98 46 PFAKE 10 09 10.0 +10
H04A LR LR
comp=Z,1μm,20.0s
ORV Oroville 94.03 51 PFAKE 10 09 10.0 +9.3
ORV LR LR
comp=Z,1μm,20.0s
GEYT Alibeck 94.28 308 P **P 10 09 01.6 -0.3**
comp=Z,2.1nm,0.6s,baz=108,slow=1.9,SNR=4.1
D05A Enumclaw 94.33 43 PFAKE 10 09 10.0 +8.1
D05A LR LR
comp=Z,700nm,21.0s
AFDM Forest Hills D 94.39 51 PFAKE 10 09 10.0 +7.6
AFDM LR LR
comp=Z,2μm,20.0s
LON Longmire 94.42 44 PFAKE 10 09 10.0 +7.6
LON LR LR
comp=Z,1μm,22.0s
LLLB Lillooet 94.68 40 PFAKE 10 09 10.0 +6.6
LLLB LR LR
comp=Z,1μm,19.0s
PAGB Antelope Grade 94.71 55 *e*P **P 10 09 03.5 -0.4**
comp=Z,8.8nm,0.9s
PAGB LR LR
comp=Z,1μm,18.0s
K05A Summer Lake 94.75 48 PFAKE 10 09 10.0 +5.8
K05A LR LR
comp=Z,2μm,20.0s
CMB Columbia Colle 94.78 52 *e*P **P 10 09 04.0 -0.2**
comp=Z,4.9nm,1.1s
CMB LR LR
comp=Z,1μm,19.0s
CMB Columbia Colle 94.78 52 *e*P **P 10 09 04.0 -0.2**
CMB pmax pmax
comp=Z,5.0nm,1.1s
CMB MLR MLR
comp=Z,1μm,19.0s
B06A Marblemount 94.78 42 PFAKE 10 09 10.0 +6.2
B06A LR LR
comp=Z,800nm,18.0s
PINE Pine Mountain 94.80 47 PFAKE 10 09 20.0 +16
PINE LR LR
comp=Z,2μm,20.0s
BEKR Beckworth 94.94 51 PFAKE 10 09 20.0 +15
BEKR LR LR
comp=Z,2μm,20.0s
RUBR Rubicon Trail 95.03 51 PFAKE 10 09 20.0 +14
RUBR LR LR
comp=Z,2μm,20.0s
SNCC San Nicolas Is 95.11 57 PFAKE 10 09 20.0 +14
SNCC LR LR
comp=Z,2μm,21.0s
G06A Carlson Farm, 95.12 45 PFAKE 10 09 20.0 +14
G06A LR LR
comp=Z,1μm,20.0s
MOD Modoc Plateau 95.13 49 PFAKE 10 09 20.0 +14
MOD LR LR
comp=Z,2μm,20.0s
LTY Liberty 95.23 43 PFAKE 10 09 20.0 +14
LTY LR LR
comp=Z,600nm,20.0s
AKTO Aktyubinsk 95.29 320 P **P 10 09 06.0 -0.1**
comp=Z,0.6nm,0.3s,baz=127,slow=7.2,SNR=3.3
AKTO LR LR 10 51 50.7
comp=Z,504nm,21.3s,baz=78,slow=35
ARU Arti 95.35 326 PFAKE 10 09 20.0 +14
ARU LR LR

comp=Z,900nm,20.0s
ARU Arti 95.35 326 P P 10 09 05.0 -1.3
ARU 10 12 55.5
ARU S **SKSac 10 19 37.9 -1.6**
ARU MLR MLR
comp=Z,737nm,19.0s
VCNR Virginia City 95.44 51 PFAKE 10 09 20.0 +13
VCNR LR LR
comp=Z,2μm,20.0s
PNTR Pine Nut 95.47 51 PFAKE 10 09 20.0 +12
PNTR LR LR
comp=Z,2μm,20.0s
WAKR Walker 95.56 52 PFAKE 10 09 20.0 +12
WAKR LR LR
comp=Z,1μm,19.0s
F07A Phinny Hill Vi 95.66 45 PFAKE 10 09 20.0 +12
F07A LR LR
comp=Z,1μm,18.0s
PAHR Pah Rah Range 95.68 51 *e*P **P 10 09 08.9 +0.5**
comp=Z,4.6nm,1.1s
PAHR LR LR
comp=Z,2μm,20.0s
YERR Yerington 95.74 52 PFAKE 10 09 20.0 +11
YERR LR LR
comp=Z,2μm,20.0s
MDPB Devils Postpil 95.78 53 PFAKE 10 09 20.0 +11
MDPB LR LR
comp=Z,1μm,19.0s
OMMB Old Mammoth Mi 95.84 53 PFAKE 10 09 20.0 +11
OMMB LR LR
comp=Z,2μm,19.0s
I07A Izee 95.85 46 PFAKE 10 09 20.0 +11
I07A LR LR
comp=Z,2μm,20.0s
OSI Osito Audit: C 95.87 56 PFAKE 10 09 20.0 +11
OSI LR LR
comp=Z,2μm,20.0s
HAWA Hanford 95.96 44 PFAKE 10 09 20.0 +11
HAWA LR LR
comp=Z,1μm,21.0s
ISA Isabella, Lake 96.14 55 PFAKE 10 09 20.0 +9.5
ISA LR LR
comp=Z,1μm,19.0s
RYN Ryan 96.28 52 *e*P **P 10 09 10.3 -0.9**
comp=Z,3.9nm,1.0s
RYN LR LR
comp=Z,1μm,19.0s
PASC Pasadena Art C 96.29 56 PFAKE 10 09 20.0 +8.9
PASC LR LR
comp=Z,2μm,20.0s
E08A Dider Farm, El 96.29 44 PFAKE 10 09 20.0 +9.2
E08A LR LR
comp=Z,800nm,20.0s
G08A Pilot Rock 96.31 45 PFAKE 10 09 20.0 +8.9
G08A LR LR
comp=Z,1μm,20.0s
MWC Mount Wilson 96.40 56 *e*P **P 10 09 11.5 -0.3**
comp=Z,21nm,1.0s
MWC LR LR
comp=Z,2μm,20.0s
MWC Mount Wilson 96.40 56 *e*P **P 10 09 11.5 -0.3**
MWC pmax pmax
comp=Z,21nm,1.0s
MWC MLR MLR
comp=Z,2μm,20.0s
WVOR Wild Horse Val 96.40 48 PFAKE 10 09 20.0 +8.4
WVOR LR LR
comp=Z,2μm,20.0s
D08A Wollman Farm, 96.42 43 PFAKE 10 09 20.0 +8.6
D08A LR LR
comp=Z,900nm,21.0s
NVAR Mina Array Bea 96.44 52 P P 10 09 12.6 +0.6
comp=Z,1.4nm,0.8s,baz=250,slow=7.4,SNR=12
NVAR LR LR 10 48 42.7
comp=Z,744nm,18.6s,baz=272,slow=33
EDW2 Edwards Air Fo 96.49 56 P **P 10 09 12.0 0.0**
baz=267
CWC Cottonwood Cre 96.51 54 P P 10 09 11.8 -0.5
baz=267
NV11 Mina Array Sit 96.56 52 *e*P **P 10 09 11.8 -0.7**
comp=Z,0.3nm,1.0s
NV11 LR LR
comp=Z,100nm,19.0s
J08A Circle Bar Ran 96.56 47 PFAKE 10 09 20.0 +7.7
J08A LR LR
comp=Z,1μm,20.0s
KVN Kaiserville 96.63 51 PFAKE 10 09 20.0 +7.2
KVN LR LR
comp=Z,1μm,20.0s
C09A Chrisman Ranch 96.88 43 PFAKE 10 09 20.0 +6.5
C09A LR LR
comp=Z,900nm,19.0s
DAC Darwin (Calif) 96.89 54 PFAKE 10 09 20.0 +6.0
DAC LR LR
comp=Z,2μm,20.0s
E09A Wood Farm, Sta 96.93 44 PFAKE 10 09 20.0 +6.3
E09A LR LR
comp=Z,900nm,18.0s
MPMC Manual Prospec 96.96 55 P P 10 09 13.8 -0.6
baz=267
CPE Camp Elliot 97.11 58 PFAKE 10 09 30.0 +15
CPE LR LR
comp=Z,2μm,21.0s
BMN Battle Mountai 97.37 50 PFAKE 10 09 30.0 +14
BMN LR LR
comp=Z,1μm,20.0s
BMO Blue Mountains 97.46 46 PFAKE 10 09 30.0 +14
BMO LR LR
comp=Z,1μm,20.0s
BAR Barrett 97.47 58 PFAKE 10 09 30.0 +13
BAR LR LR
comp=Z,2μm,21.0s
GSC Goldstone, Bar 97.48 55 PFAKE 10 09 30.0 +13
GSC LR LR
comp=Z,1μm,20.0s
FURC Furnace Creek, 97.49 54 P Pdif 10 09 16.9 +0.4
baz=268
F10A Beach Ranch, E 97.55 45 PFAKE 10 09 30.0 +13
F10A LR LR
comp=Z,800nm,20.0s
NEW Newport 97.67 42 PFAKE 10 09 30.0 +13
NEW LR LR
comp=Z,1μm,20.0s
MONP2 Monument Peak 97.69 58 P P 10 09 16.3 -1.5
baz=267
PFO Pinyon Flats O 97.69 57 PFAKE 10 09 30.0 +12
PFO LR LR
comp=Z,2μm,20.0s
PFO Pinyon Flats O 97.69 57 P P 10 09 17.0 -0.6
baz=267
TPNV Topopah Spring 98.00 54 PFAKE 10 09 30.0 +11
TPNV LR LR
comp=Z,1μm,19.0s
TPNV Topopah Spring 98.00 54 P P 10 09 18.4 -0.6
baz=268
BELC Belle Mtn. Jos 98.09 57 P P 10 09 18.8 -0.6
baz=268
GMRC Granite Mounta 98.40 56 P P 10 09 20.2 -0.6
baz=268
BC3 Big Chuckawall 98.53 57 P P 10 09 19.7 -1.7
baz=268
R11A Troy Canyon, C 98.57 52 PFAKE 10 09 30.0 +8.4
R11A LR LR
comp=Z,1μm,19.0s
R11A Troy Canyon, C 98.57 52 P P 10 09 21.0 -0.6
baz=268
IRM Iron Mountain 98.81 57 P P 10 09 21.6 -0.9
baz=268
SHPR Sheep Range 98.86 54 PFAKE 10 09 30.0 +7.1
SHPR LR LR
comp=Z,1μm,19.0s
LDFC Landfair 98.86 56 PFAKE 10 09 30.0 +7.1
LDFC LR LR
comp=Z,1μm,20.0s
YKW3 Yellowknife Ar 98.86 28 PFAKE 10 09 30.0 +8.0
YKW3 LR LR
comp=Z,1μm,20.0s
YKA Yellowknife Ar 98.87 28 P Pdif 10 09 23.0 +0.9
comp=Z,1.2nm,0.9s,baz=276,slow=4.8,SNR=14
YKA PKiKP **PKiKP 10 13 53.8 +1.0**
comp=Z,1.0nm,0.9s,baz=271,slow=1.4,SNR=9.5
YKA PKKPbc **PKKPbc 10 25 49.2 -2.6**
comp=Z,0.9nm,0.7s,baz=86,slow=2.9,SNR=17
YKA LR LR 10 51 16.8
comp=Z,104nm,20.3s,baz=286,slow=34
ELK Elko 98.89 50 PFAKE 10 09 30.0 +7.0
ELK LR LR
comp=Z,2μm,20.0s
GLA Glamis 99.03 58 PFAKE 10 09 30.0 +6.4
GLA LR LR
comp=Z,2μm,20.0s
Y12C Blythe 99.31 57 PFAKE 10 09 40.0 +15
Y12C LR LR
comp=Z,2μm,19.0s
HLID Hailey 99.52 47 PFAKE 10 09 40.0 +14
HLID LR LR
comp=Z,1μm,20.0s
SNAA Sanae 99.77 189 P Pdif 10 09 25.5 -0.5
SNAA Sanae 99.77 189 *i* P **Pdif 10 09 25.0 -1.1**
WALA Waterton Lakes 99.80 41 PFAKE 10 09 40.0 +13
WALA LR LR
comp=Z,800nm,18.0s
MSO Missoula 99.82 44 PFAKE 10 09 40.0 +13
MSO LR LR
comp=Z,700nm,19.0s
W13A Hualapai Mount 99.87 56 PFAKE 10 09 40.0 +13
W13A LR LR
comp=Z,1μm,20.0s
113A Mohawk Valley, 99.92 58 PFAKE 10 09 40.0 +13
113A LR LR
comp=Z,2μm,21.0s
Y14A Wickenburg 100.58 57 PFAKE 10 09 40.0 +10
Y14A LR LR
comp=Z,2μm,20.0s
DUG Dugway, Tooele 100.74 50 PFAKE 10 09 40.0 +8.9
DUG LR LR
comp=Z,1μm,20.0s
DLMT Dillon 100.79 45 PFAKE 10 09 40.0 +8.7
DLMT LR LR
comp=Z,900nm,21.0s
VNA3 Neumayer Olymp 101.09 187 P Pdif 10 09 32.4 +0.5
VNA2 Neumayer--Watz 101.09 188 P Pdif 10 09 34.0 +2.1
SRIG Santa Rosalia 101.10 64 PFAKE 10 09 40.0 +7.2
SRIG LR LR
comp=Z,3μm,20.0s
U15A North Rim 101.17 54 PFAKE 10 09 40.0 +6.7
U15A LR LR
comp=Z,900nm,22.0s
BOZ Bozeman (W) 101.47 45 PFAKE 10 09 50.0 +16
BOZ LR LR
comp=Z,800nm,20.0s
BOZ Bozeman (W) 101.47 45 P Pdif 10 09 33.8 -0.4
baz=272
HWUT Hardware Ranch 101.66 49 PFAKE 10 09 50.0 +15
HWUT LR LR
comp=Z,600nm,20.0s
WUAZ Wupatki 101.92 55 PFAKE 10 09 50.0 +13
WUAZ LR LR
comp=Z,1μm,20.0s
AHID Auburn Hatcher 101.96 48 PFAKE 10 09 50.0 +13
AHID LR LR
comp=Z,2μm,20.0s
IMW Indian Meadow 102.03 47 PFAKE 10 09 50.0 +13
IMW LR LR
comp=Z,1μm,20.0s
TPAW Teton Pass 102.04 47 PFAKE 10 09 50.0 +13
TPAW LR LR
comp=Z,1μm,18.0s
REDW Red Top Meadow 102.12 47 PFAKE 10 09 50.0 +13
REDW LR LR
comp=Z,1μm,18.0s
MOOW Moose Ponds 102.18 47 PFAKE 10 09 50.0 +12
MOOW LR LR
comp=Z,1μm,20.0s
SNOW Snow King Moun 102.18 47 PFAKE 10 09 50.0 +12
SNOW LR LR
comp=Z,1μm,18.0s
FLWY Flagg Ranch 102.19 46 PFAKE 10 09 50.0 +12
FLWY LR LR
comp=Z,2μm,20.0s
H17A Grant Village 102.27 46 PFAKE 10 09 50.0 +12
H17A LR LR
comp=Z,2μm,20.0s
HSIG 102.28 62 PFAKE 10 09 50.0 +12
HSIG LR LR
comp=Z,2μm,20.0s
TUC Tucson 102.43 58 PFAKE 10 09 50.0 +11
TUC LR LR
comp=Z,2μm,22.0s
EGMT Eagleton 102.61 42 PFAKE 10 09 50.0 +11
EGMT LR LR
comp=Z,800nm,20.0s
RES Resolute Bay 103.07 14 PFAKE 10 09 50.0 +10
RES LR LR
comp=Z,900nm,22.0s
BW06 Boulder Array 103.09 48 PFAKE 10 09 50.0 +8.3
BW06 LR LR
comp=Z,2μm,20.0s
BW06 Boulder Array 103.09 48 P Pdif 10 09 40.7 -1.0
baz=273
PDAR Pinedale Array 103.10 48 Pdiff **Pdif 10 09 41.8 +0.1**
comp=Z,0.6nm,0.9s,baz=141,slow=0.9,SNR=5.2
PDAR PKiKP **PKiKP 10 14 02.6 +1.2**
comp=Z,0.5nm,0.8s,baz=200,slow=4.8,SNR=3.2
X18A Snowflake 103.11 56 PFAKE 10 09 50.0 +8.2
X18A LR LR
comp=Z,2μm,20.0s
RLMT Red Lodge 103.16 45 PFAKE 10 09 50.0 +8.2
RLMT LR LR
comp=Z,800nm,19.0s
W18A Petrified Fore 103.27 56 PFAKE 10 09 50.0 +7.5
W18A LR LR
comp=Z,2μm,20.0s
PV05 Paradox Valley 103.68 53 PFAKE 10 10 00.0 +16
PV05 LR LR
comp=Z,2μm,21.0s
PV10 Paradox Valley 103.72 52 PFAKE 10 10 00.0 +15
PV10 LR LR
comp=Z,2μm,19.0s
319A Douglas 103.72 59 PFAKE 10 10 00.0 +15
319A LR LR
comp=Z,1μm,22.0s
PV14 Lion Creek, Pa 103.73 52 PFAKE 10 10 00.0 +15
PV14 LR LR
comp=Z,2μm,20.0s
PV23 Carpenter Ridg 103.73 52 PFAKE 10 10 00.0 +15
PV23 LR LR
comp=Z,900nm,21.0s
PV21 Cone Mtn., Par 103.76 52 PFAKE 10 10 00.0 +15
PV21 LR LR
comp=Z,2μm,22.0s
PV19 Morning Glory 103.76 52 PFAKE 10 10 00.0 +15
PV19 LR LR
comp=Z,2μm,20.0s
PV17 East Wray Mesa 103.78 52 PFAKE 10 10 00.0 +15
PV17 LR LR
comp=Z,2μm,19.0s
PV18 Skein Mesa, Pa 103.82 52 PFAKE 10 10 00.0 +15
PV18 LR LR
comp=Z,2μm,20.0s
PV03 Paradox Valley 103.87 52 PFAKE 10 10 00.0 +15
PV03 LR LR
comp=Z,2μm,20.0s
PV12 Saucer Basin, 103.90 52 PFAKE 10 10 00.0 +15
PV12 LR LR
comp=Z,2μm,20.0s
PV07 Paradox Valley 104.02 52 PFAKE 10 10 00.0 +14
PV07 LR LR
comp=Z,2μm,20.0s
MVCO Mesa Verde 104.20 53 PFAKE 10 10 00.0 +13
MVCO LR LR
comp=Z,900nm,20.0s
O20A White River Ci 104.24 50 PFAKE 10 10 00.0 +13
O20A LR LR
comp=Z,1μm,20.0s
KBS Kingsbay 104.46 352 PFAKE 10 10 00.0 +13
KBS LR LR
comp=Z,400nm,20.0s
LVZ Lovozero 104.84 339 PFAKE 10 10 00.0 +11
LVZ LR LR
comp=Z,800nm,20.0s
RWWY Rawlins 104.91 49 PFAKE 10 10 00.0 +10
RWWY LR LR
comp=Z,1μm,19.0s
LAO LASA Array 105.12 43 PFAKE 10 14 20.0 +15
LAO LR LR
comp=Z,900nm,20.0s
LAO LASA Array 105.12 43 P PKiKP 10 14 05.0 +0.2
baz=277
K22A Casper 105.33 48 PFAKE 10 14 20.0 +15
K22A LR LR
comp=Z,900nm,19.0s
APA Apatity 105.40 339 ⇑ *i*P **Pdif 10 09 59.0 +8.0**
APA pmax pmax
comp=Z,1.0nm,1.0s
S22A 4UR Ranch, Cre 105.49 53 PFAKE 10 14 20.0 +14
S22A LR LR
comp=Z,1μm,20.0s
S22A 4UR Ranch, Cre 105.49 53 P PKiKP 10 14 05.6 -0.4
baz=274
AKH Akhalkalaki 105.55 311 PFAKE 10 14 20.0 +14
AKH LR LR
comp=Z,600nm,19.0s
Y22D IRIS PASSCAL I 105.63 57 PFAKE 10 14 20.0 +14
Y22D LR LR
comp=Z,1μm,20.0s
KIV Kislovodsk 105.89 314 PFAKE 10 14 20.0 +14
KIV LR LR
comp=Z,400nm,21.0s
N23A Red Feather La 105.93 49 PFAKE 10 14 20.0 +13
N23A LR LR
comp=Z,1μm,20.0s
TASM ASL Pad, Albuq 105.96 56 P PKiKP 10 14 07.2 +0.4
baz=273
TASM ASL Pad, Albuq 105.96 56 P PKiKP 10 14 07.6 +0.7
baz=273
ANMO Albuquerque 105.96 56 PFAKE 10 14 20.0 +13
ANMO LR LR
comp=Z,1μm,20.0s
ANMO Albuquerque 105.96 56 P PKiKP 10 14 07.6 +0.7
baz=273
DGMT Dagmar 106.25 41 PFAKE 10 14 20.0 +13
DGMT LR LR
comp=Z,900nm,20.0s
PHWY Pilot Hill 106.25 49 PFAKE 10 14 20.0 +13
PHWY LR LR
comp=Z,1μm,20.0s
ISCO Idaho Springs 106.28 51 PFAKE 10 14 20.0 +13
ISCO LR LR
comp=Z,1μm,19.0s
ISCO Idaho Springs 106.28 51 P PKiKP 10 14 07.1 -0.4
baz=275
FFC Flin Flon 106.47 35 PFAKE 10 14 20.0 +13
FFC LR LR
comp=Z,1μm,19.0s
SDCO Great Sand Dun 106.54 53 PFAKE 10 14 20.0 +12
SDCO LR LR
comp=Z,1μm,18.0s
SDCO Great Sand Dun 106.54 53 P PKiKP 10 14 08.3 +0.3
baz=275
Q24A Divide 106.71 51 PFAKE 10 14 20.0 +12
Q24A LR LR
comp=Z,1μm,21.0s
HPIG 106.96 64 PFAKE 10 14 20.0 +11
HPIG LR LR
comp=Z,3μm,20.0s
RSSD Black Hills 106.97 46 PFAKE 10 14 20.0 +12
RSSD LR LR
comp=Z,2μm,20.0s
MNTX Cornudas Mount 107.04 59 PFAKE 10 14 20.0 +11
MNTX LR LR
comp=Z,2μm,21.0s
MNTX Cornudas Mount 107.04 59 P PKiKP 10 14 09.2 +0.5
baz=273
TULEG Thule 107.10 9 PFAKE 10 14 20.0 +12
TULEG LR LR
comp=Z,1μm,21.0s
T25A Trinidad 107.46 53 PFAKE 10 14 20.0 +10
T25A LR LR
comp=Z,600nm,20.0s
OBN Obninsk 107.79 326 PFAKE 10 14 20.0 +11
OBN LR LR
comp=Z,1μm,22.0s
TXAR Lajitas Array 108.64 61 Pdiff **Pdif 10 10 10.9 +4.5**
comp=Z,0.2nm,0.8s,baz=202,slow=1.7,SNR=2.7
TXAR PKiKP **PKiKP 10 14 12.2 +0.4**
comp=Z,2.2nm,0.9s,baz=241,slow=0.9,SNR=17
TXAR PKKPbc **PKKPbc 10 25 20.8 -0.8**
comp=Z,0.2nm,0.6s,baz=79,slow=4.7,SNR=2.7
TXAR PKKP **PKKPdf 10 25 36.4 -0.1**
comp=Z,0.6nm,0.7s,baz=122,slow=7.1,SNR=6.2
OGNE Ogallala 108.87 49 PFAKE 10 14 20.0 +8.1
OGNE LR LR
comp=Z,1μm,19.0s
MSTX Muleshoe 109.07 56 PFAKE 10 14 20.0 +7.4
MSTX LR LR
comp=Z,1μm,21.0s
MSTX Muleshoe 109.07 56 P PKiKP 10 14 12.3 -0.3
baz=275
MDND Maddock 109.38 42 PFAKE 10 14 20.0 +7.4
MDND LR LR
comp=Z,800nm,20.0s
FCC Fort Churchill 109.49 29 PFAKE 10 14 20.0 +7.6
FCC LR LR
comp=Z,900nm,21.0s
ZAIG Zacatecas 109.87 68 PFAKE 10 14 30.0 +15
ZAIG LR LR
comp=Z,2μm,20.0s
AMTX Amarillo 109.88 55 PFAKE 10 14 30.0 +16
AMTX LR LR
comp=Z,1μm,20.0s
FINES FINESS Array B 110.78 334 PKiKP **PKiKP 10 14 14.2 -0.6**
comp=Z,1.0nm,0.7s,baz=63,slow=4.7,SNR=5.4
CBKS Cedar Bluff 110.92 51 PFAKE 10 14 30.0 +14
CBKS LR LR
comp=Z,1μm,20.0s
KMBO Kilima Mbogo 111.02 266 PFAKE 10 14 30.0 +13
KMBO LR LR
comp=Z,600nm,19.0s
ULM Lac du Bonnet 111.18 38 PKiKP **PKiKP 10 14 14.3 -1.6**
comp=Z,4.2nm,0.7s,baz=259,slow=1.0,SNR=3.4
ULM Lac du Bonnet 111.18 38 PFAKE 10 14 30.0 +14
ULM LR LR
comp=Z,1μm,20.0s
NAI Nairobi 111.45 266 PFAKE 10 14 30.0 +12
NAI LR LR
comp=Z,700nm,21.0s
BGNE Belgrade 111.68 48 PFAKE 10 14 30.0 +13
BGNE LR LR
comp=Z,1μm,20.0s
AGMN Agassiz Nation 111.72 40 PFAKE 10 14 30.0 +13
AGMN LR LR
comp=Z,600nm,20.0s
AGMN Agassiz Nation 111.72 40 P PKiKP 10 14 16.5 -0.4
baz=285
ABTX Abilene, Hawle 111.81 58 PFAKE 10 14 30.0 +12
ABTX LR LR
comp=Z,900nm,19.0s
ABTX Abilene, Hawle 111.81 58 P PKiKP 10 14 18.2 +0.5
baz=276
U32A Winter Ranch, 111.86 53 PFAKE 10 14 30.0 +12
U32A LR LR
comp=Z,1μm,20.0s
JCT Junction City 111.90 60 PFAKE 10 14 30.0 +12
JCT LR LR
comp=Z,2μm,20.0s
JCT Junction City 111.90 60 P PKiKP 10 14 18.0 +0.1
baz=276
WMOK Wichita Mounta 112.27 55 PFAKE 10 14 30.0 +12
WMOK LR LR
comp=Z,1μm,20.0s
WMOK Wichita Mounta 112.27 55 P PKiKP 10 14 18.3 -0.2
baz=278
ECSD EROS Data Cent 112.32 45 PFAKE 10 14 30.0 +12
ECSD LR LR
comp=Z,1μm,20.0s
ECSD EROS Data Cent 112.32 45 P PKiKP 10 14 18.0 -0.2
baz=283
833A Chaparral WMA, 112.44 62 PFAKE 10 14 30.0 +11
833A LR LR
comp=Z,2μm,21.0s
833A Chaparral WMA, 112.44 62 P PKiKP 10 14 18.6 -0.3
baz=275
LNIG Linares 112.62 66 PFAKE 10 14 30.0 +11
LNIG LR LR
comp=Z,2μm,19.0s
ILGA Ilgaz 112.90 312 PFAKE 10 14 30.0 +10
ILGA LR LR
comp=Z,400nm,22.0s
BRTR Keskin Array B 113.22 310 PKiKP **PKiKP 10 14 19.9 -0.3**
comp=Z,0.9nm,0.7s,baz=90,slow=2.5,SNR=5.6
KSU1 Kansas State U 113.28 50 PFAKE 10 14 30.0 +10
KSU1 LR LR
comp=Z,1μm,20.0s
KSU1 Kansas State U 113.28 50 P PKiKP 10 14 20.2 0.0
baz=281
AKASG Malin Array Be 113.33 323 PKiKP **PKiKP 10 14 19.6 -0.4**

comp=Z,3.9nm,0.8s,baz=52,slow=2.1,SNR=8.4
TLIG Tlapa 113.71 74 PFAKE 10 14 30.0 +8.2
TLIG LR LR
comp=Z,2μm,20.0s
WHTX Lake Whitney, 113.73 58 PFAKE 10 14 30.0 +8.7
WHTX LR LR
comp=Z,1μm,18.0s
WHTX Lake Whitney, 113.73 58 P **PKiKP 10 14 20.3 -0.9**
baz=277
ANTO Ankara 113.83 311 PFAKE 10 14 30.0 +8.6
ANTO LR LR
comp=Z,400nm,22.0s
SUMG Summit 113.83 2 PFAKE 10 14 30.0 +9.2
SUMG LR LR
comp=Z,700nm,22.0s
KVTX Kingsville 113.84 63 PFAKE 10 14 30.0 +8.4
KVTX LR LR
comp=Z,2μm,20.0s
CSS Mathiatis 114.32 305 PFAKE 10 14 30.0 +7.6
CSS LR LR
comp=Z,400nm,19.0s
TUL1 Leonard 114.50 54 PFAKE 10 14 30.0 +7.3
TUL1 LR LR
comp=Z,1μm,21.0s
TUL1 Leonard 114.50 54 P PKPdf 10 14 22.2 -0.5
baz=280
F37A Hinrichs Farm, 114.55 42 P PKPdf 10 14 21.6 -0.9
baz=287
SPMN Marine on St. 114.58 43 PFAKE 10 14 30.0 +7.5
SPMN LR LR
comp=Z,1μm,20.0s
SPMN Marine on St. 114.58 43 P PKPdf 10 14 21.2 -1.3
baz=286
EYMN Ely 114.61 40 PFAKE 10 14 30.0 +7.5
EYMN LR LR
comp=Z,1μm,20.0s
EYMN Ely 114.61 40 P **PKiKP 10 14 21.7 -0.9**
baz=289
F38A Pierce - Schro 114.98 42 P **PKiKP 10 14 22.8 -0.5**
baz=288
E38A The Farm, Brul 115.00 41 PFAKE 10 14 30.0 +6.7
E38A LR LR
comp=Z,800nm,21.0s
E38A The Farm, Brul 115.00 41 P **PKiKP 10 14 22.8 -0.5**
baz=288
SCIA State Center 115.18 47 PFAKE 10 14 40.0 +16
SCIA LR LR
comp=Z,700nm,18.0s
HKT Hockley 115.37 60 PFAKE 10 14 40.0 +16
HKT LR LR
comp=Z,3μm,20.0s
SUW Suwalki 115.47 328 PFAKE 10 14 40.0 +16
SUW LR LR
comp=Z,900nm,20.0s
F39A Loretta 115.64 42 P **PKiKP 10 14 23.7 -0.9**
baz=288
G39A Holcombe 115.66 43 P **PKiKP 10 14 23.0 -1.6**
baz=288
LVIG Laguna Verde 115.70 71 PFAKE 10 14 40.0 +15
LVIG LR LR
comp=Z,800nm,19.0s
SCO Scoresbysund 115.78 356 PFAKE 10 14 40.0 +16
SCO LR LR
comp=Z,400nm,21.0s
TIRR Tirgusor 115.82 317 PFAKE 10 14 40.0 +15
TIRR LR LR
comp=Z,1μm,20.0s
HHAR Hobbs 115.90 53 *e*PKPdf **PKPdf 10 14 24.0 -1.4**
HHAR LR LR
comp=Z,1μm,20.0s
ILULI Ilulissat 116.03 8 PFAKE 10 14 40.0 +15
ILULI LR LR
comp=Z,700nm,20.0s
TLB Topalu 116.04 317 ⇑*i*P **PKiKP 10 14 25.7 +0.4**
TLB Topalu 116.04 317 ⇑PKIKP **PKiKP 10 14 25.7 +0.4**
C40A Isle Royale Na 116.11 39 PFAKE 10 14 40.0 +15
C40A LR LR
comp=Z,2μm,20.0s
C40A Isle Royale Na 116.11 39 P **PKPdf 10 14 24.2 -1.2**
baz=291
NATX Nacogdoches 116.11 58 PFAKE 10 14 40.0 +14
NATX LR LR
comp=Z,800nm,19.0s
F40A Park Falls 116.16 42 P **PKPdf 10 14 24.7 -0.9**
baz=289
W39A Magazine 116.24 54 PFAKE 10 14 40.0 +14
W39A LR LR
comp=Z,1μm,20.0s
W39A Magazine 116.24 54 P **PKPdf 10 14 25.0 -1.0**
baz=281
ETX06 Route 59 and C 116.27 58 PFAKE 10 14 40.0 +14
ETX06 LR LR
comp=Z,500nm,20.0s
G40A Rib Lake 116.32 42 *e*PKPdf **PKiKP 10 14 26.0 +0.1**
G40A LR LR
comp=Z,1μm,20.0s
G40A Rib Lake 116.32 42 P **PKPdf 10 14 25.4 -0.5**
baz=289
VRI Vrincioaia 116.51 318 ⇑*i*P **PKiKP 10 14 26.9 +0.6**
VRI Vrincioaia 116.51 318 ⇑PKIKP **PKiKP 10 14 26.9 +0.6**
MIAR Mount Ida 116.53 55 PFAKE 10 14 40.0 +13
MIAR LR LR
comp=Z,1μm,20.0s
MIAR Mount Ida 116.53 55 P **PKPdf 10 14 26.0 -0.6**
baz=281
L40A Anamosa 116.57 46 *e*PKPdf **PKPdf 10 14 26.2 -0.2**
L40A LR LR
comp=Z,1μm,20.0s
L40A Anamosa 116.57 46 P **PKPdf 10 14 25.0 -1.4**
baz=286
HFS Hagfors 116.61 337 PKP **PKPdf 10 14 24.9 -1.1**
comp=Z,2.0nm,0.8s,baz=270,slow=1.4,SNR=4.8
N40A Mertquake, Sal 116.63 47 P **PKPdf 10 14 25.0 -1.6**
baz=286
U40A Yellville 116.75 53 P **PKPdf 10 14 26.3 -0.7**
baz=282
COWI Conover 116.75 41 PFAKE 10 14 40.0 +13
COWI LR LR
comp=Z,900nm,20.0s
D41A Chassel 116.78 40 PFAKE 10 14 40.0 +13
D41A LR LR
comp=Z,900nm,19.0s
D41A Chassel 116.78 40 P **PKPdf 10 14 25.7 -1.0**
baz=291
BURAR Bucovina Array 116.88 321 ⇑*i*P **PKiKP 10 14 27.7 +0.7**
BURAR Bucovina Array 116.88 321 ⇑PKIKP **PKiKP 10 14 27.7 +0.7**
I41A Arkdale 116.92 44 PFAKE 10 14 40.0 +13
I41A LR LR
comp=Z,1μm,19.0s
NB2 NORSAR Subarra 116.98 338 PKPdf **PKPdf 10 14 26.2 -0.5**
comp=Z,6.2nm,1.2s,baz=44,slow=1.9
NB2 NORSAR Subarra 116.98 338 PKPdf **PKPdf 10 14 26.2 -0.5**
baz=44,slow=1.9
NOA NORSAR Array B 116.98 338 PKP **PKPdf 10 14 25.0 -1.7**
comp=Z,2.2nm,0.9s,baz=52,slow=1.9,SNR=5.7
NOA PKKPbc **PKKPbc 10 24 53.3 -1.2**
comp=Z,0.1nm,0.3s,baz=231,slow=3.6,SNR=3.7
NOA PKKP **PKKPdf 10 25 19.5 -1.8**
comp=Z,0.5nm,0.7s,baz=47,slow=3.4,SNR=2.2
JFWS Jewell Farm 117.01 45 PFAKE 10 14 40.0 +13
JFWS LR LR
comp=Z,900nm,20.0s
JFWS Jewell Farm 117.01 45 P **PKPdf 10 14 26.6 -0.7**
baz=288
LSZ Lusaka 117.10 249 PFAKE 10 14 40.0 +12
LSZ LR LR
comp=Z,900nm,18.0s
X40A Basin Creek Fa 117.14 55 PFAKE 10 14 40.0 +12
X40A LR LR
comp=Z,1μm,20.0s
X40A Basin Creek Fa 117.14 55 P **PKPdf 10 14 25.8 -1.9**
baz=281
MLR Muntele Rosu 117.16 318 PFAKE 10 14 40.0 +12
MLR LR LR
comp=Z,600nm,20.0s
MLR Muntele Rosu 117.16 318 ⇑*i*P PKPdf 10 14 16.1 -12
MLR Muntele Rosu 117.16 318 ⇑PKIKP PKPdf 10 14 16.1 -12
N41A Harden Midland 117.21 47 PFAKE 10 14 40.0 +12
N41A LR LR
comp=Z,800nm,20.0s
N41A Harden Midland 117.21 47 P **PKPdf 10 14 25.5 -2.2**
baz=286
M41A Milan 117.25 47 P **PKPdf 10 14 26.8 -1.0**
baz=286
DOPR Dopca 117.36 319 ⇑*i*P **PKiKP 10 14 29.4 +1.5**
Z41A Richland Creek 117.41 56 PFAKE 10 14 40.0 +12
Z41A LR LR
comp=Z,1μm,20.0s
Z41A Richland Creek 117.41 56 P **PKPdf 10 14 26.8 -1.5**
baz=281
WHAR Wooly Hollow 117.42 54 PFAKE 10 14 40.0 +12
WHAR LR LR
comp=Z,1μm,20.0s
FCAR Ozark Folk Cen 117.42 53 PFAKE 10 14 40.0 +12
FCAR LR LR
comp=Z,1μm,20.0s
W41B Gary Mavity, V 117.48 54 PFAKE 10 14 40.0 +12
W41B LR LR
comp=Z,1μm,20.0s
W41B Gary Mavity, V 117.48 54 P **PKPdf 10 14 27.9 -0.4**
baz=282
UALR University of 117.48 54 PFAKE 10 14 40.0 +12
UALR LR LR
comp=Z,1μm,20.0s
MBAR Mbarara 117.55 266 PFAKE 10 14 40.0 +11
MBAR LR LR
comp=Z,500nm,21.0s
CCM Cathedral Cave 117.61 50 *e*PKPdf **PKPdf 10 14 27.9 -0.7**
CCM LR LR
comp=Z,2μm,20.0s
CCM Cathedral Cave 117.61 50 *e*PKIKP **PKPdf 10 14 27.9 -0.7**
CCM MLR MLR
comp=Z,2μm,20.0s
CCM Cathedral Cave 117.61 50 P **PKPdf 10 14 27.8 -0.8**
baz=284
KWP Kalwaria Pacla 117.62 323 PFAKE 10 14 40.0 +12
KWP LR LR
comp=Z,8μm,18.0s
I42A Draeger Farm, 117.63 43 PFAKE 10 14 40.0 +12
I42A LR LR
comp=Z,1μm,19.0s
I42A Draeger Farm, 117.63 43 P **PKPdf 10 14 27.5 -0.9**
baz=289
L42A Oliver, Polo 117.70 46 PFAKE 10 14 40.0 +11
L42A LR LR
comp=Z,900nm,21.0s
L42A Oliver, Polo 117.70 46 P **PKPdf 10 14 27.8 -0.9**
baz=288
E43A Lone Tree Farm 118.04 40 PFAKE 10 14 40.0 +11
E43A LR LR
comp=Z,900nm,20.0s
E43A Lone Tree Farm 118.04 40 P **PKPdf 10 14 28.3 -0.9**
baz=292
CCAR Cane Creek 118.12 55 PFAKE 10 14 40.0 +10
CCAR LR LR
comp=Z,1μm,20.0s
KOLS Kolonicke sedl 118.17 323 *e*PKIKP **PKiKP 10 14 31.0 +1.6**
KOLS Kolonicke sedl 118.17 323 *e*PKP **PKiKP 10 14 31.0 +1.6**
H43A Windswept, Lux 118.21 43 PFAKE 10 14 40.0 +10
H43A LR LR
comp=Z,1μm,20.0s
SLM Saint Louis 118.23 49 PFAKE 10 14 40.0 +10
SLM LR LR
comp=Z,700nm,20.0s
UZH Uzhgorod 118.28 323 *e*PKIKP **PKiKP 10 14 34.1 +4.5**
UZH *e* 10 14 42.3
UZH *e* 10 14 48.5
M43A Waltham Townsh 118.37 46 P **PKPdf 10 14 28.9 -1.0**
baz=288
HDIL Hopedale 118.39 47 PFAKE 10 14 40.0 +10
HDIL LR LR
comp=Z,1μm,20.0s
HDIL Hopedale 118.39 47 P **PKPdf 10 14 29.5 -0.5**
baz=287
K43A Burlington 118.42 45 PFAKE 10 14 40.0 +10
K43A LR LR
comp=Z,1μm,20.0s
K43A Burlington 118.42 45 P **PKPdf 10 14 28.7 -1.3**
baz=289
P43A Skaggs, Pawnee 118.49 48 P **PKPdf 10 14 30.0 -0.2**
baz=286
PBMO Poplar Bluff 118.55 52 PFAKE 10 14 40.0 +10
PBMO LR LR
comp=Z,1μm,20.0s
ALN Alexandroupoli 118.55 313 PFAKE 10 14 40.0 +10
ALN LR LR
comp=Z,200nm,22.0s
E44A Grand Marais A 118.63 40 PFAKE 10 14 40.0 +10
E44A LR LR
comp=Z,1μm,20.0s
HBAR Harrisburg 118.66 53 PFAKE 10 14 40.0 +9.3
HBAR LR LR
comp=Z,700nm,19.0s
X43A Marvell 118.72 54 PFAKE 10 14 40.0 +9.2
X43A LR LR
comp=Z,1μm,20.0s
X43A Marvell 118.72 54 P **PKPdf 10 14 29.6 -1.2**
baz=283
L44A Lake County Fo 118.88 45 P **PKPdf 10 14 29.7 -1.1**
baz=289
M44A Midewin, Midew 119.04 46 PFAKE 10 14 40.0 +8.7
M44A LR LR
comp=Z,600nm,20.0s
M44A Midewin, Midew 119.04 46 P **PKPdf 10 14 30.8 -0.4**
baz=288
GNAR Gosnell 119.07 52 PFAKE 10 14 40.0 +8.5
GNAR LR LR
comp=Z,1μm,20.0s
PARMO Parma 119.11 52 PFAKE 10 14 40.0 +8.5
PARMO LR LR
comp=Z,1μm,22.0s
O44A Mansfield 119.11 47 P **PKPdf 10 14 30.8 -0.6**
baz=288
N44A Piper City 119.16 47 P **PKPdf 10 14 31.3 -0.2**
baz=288
PVMO Portageville 119.21 52 PFAKE 10 14 40.0 +8.3
PVMO LR LR
comp=Z,2μm,20.0s
S44A Carbondale 119.22 50 P **PKPdf 10 14 31.6 -0.1**
baz=286
F45A CMU Biological 119.26 41 P **PKPdf 10 14 30.9 -0.6**
baz=293
GZR Gura Zlata 119.27 319 ⇑*i*P **PKiKP 10 14 32.4 +0.7**
GZR Gura Zlata 119.27 319 ⇑PKIKP **PKiKP 10 14 32.4 +0.7**
MET Memphis--Engin 119.34 53 PFAKE 10 14 40.0 +8.0
MET LR LR
comp=Z,1μm,19.0s
I45A Fountain 119.40 43 PFAKE 10 14 40.0 +8.1
I45A LR LR
comp=Z,1μm,20.0s
G45A Suttons Bay 119.41 41 PFAKE 10 14 40.0 +8.1
G45A LR LR
comp=Z,800nm,20.0s
VBMS Vicksburg 119.50 57 PFAKE 10 14 40.0 +7.6
VBMS LR LR
comp=Z,600nm,20.0s
VBMS Vicksburg 119.50 57 P **PKiKP 10 14 32.4 0.0**
baz=282
J45A Montague 119.51 43 PFAKE 10 14 40.0 +7.9
J45A LR LR
comp=Z,1μm,19.0s
GLAT Glass 119.57 52 PFAKE 10 14 40.0 +7.5
GLAT LR LR
comp=Z,1μm,19.0s
N45A Kentland 119.59 46 P **PKPdf 10 14 32.1 -0.2**
baz=289
HALT Halls 119.62 52 PFAKE 10 14 40.0 +7.4
HALT LR LR
comp=Z,800nm,20.0s
O45A Potomac 119.63 47 P **PKPdf 10 14 32.1 -0.3**
baz=288
SIRR Siria 119.64 320 ⇑*i*P **PKiKP 10 14 32.7 +0.4**
D46A Sault St. Mari 119.71 39 P **PKPdf 10 14 32.1 -0.3**
baz=295
Q45A Warren Harvey, 119.72 49 P **PKPdf 10 14 32.1 -0.5**
baz=287
LANS Liptovska Anna 119.73 324 *e*PKIKP **PKiKP 10 14 33.6 +1.1**
LANS Liptovska Anna 119.73 324 *e*PKP **PKiKP 10 14 33.6 +1.1**
E46A Sault Ste Mari 119.76 39 PFAKE 10 14 40.0 +7.5
E46A LR LR
comp=Z,1μm,20.0s
E46A Sault Ste Mari 119.76 39 P **PKPdf 10 14 31.7 -0.7**
baz=294
R45A Skylar, Fairfi 119.80 49 P **PKPdf 10 14 31.8 -1.0**
baz=287
OLIL Olney 119.81 49 PFAKE 10 14 40.0 +7.2
OLIL LR LR
comp=Z,700nm,19.0s
G46A Petoskey 119.82 41 P **PKPdf 10 14 32.0 -0.6**
baz=293
P45A Graceland, Par 119.83 48 PFAKE 10 14 40.0 +7.1
P45A LR LR
comp=Z,1μm,18.0s
P45A Graceland, Par 119.83 48 P **PKPdf 10 14 32.2 -0.7**
baz=288
T45A Paducah 119.87 51 PFAKE 10 14 40.0 +7.0
T45A LR LR
comp=Z,1μm,20.0s
CCIG Comitan 119.89 75 PFAKE 10 14 40.0 +6.2
CCIG LR LR
comp=Z,800nm,21.0s
OXF Oxford 119.90 54 PFAKE 10 14 40.0 +6.8
OXF LR LR
comp=Z,1μm,20.0s
OXF Oxford 119.90 54 P **PKPdf 10 14 32.0 -1.1**
baz=284
BZS Buzias 119.93 320 ⇑*i*P **PKPdf 10 14 32.5 -0.3**
BZS Buzias 119.93 320 ⇑PKIKP **PKPdf 10 14 32.5 -0.3**
VTS Vitosha 119.98 316 *e*PKPdf **PKiKP 10 14 33.3 0.0**
VTS Vitosha 119.98 316 ⇑*i*P **PKiKP 10 14 33.6 +0.3**
VTS Vitosha 119.98 316 ⇑PKIKP **PKiKP 10 14 33.6 +0.3**
PSZ Piszkesteto 120.04 323 PFAKE 10 14 40.0 +6.9
PSZ LR LR
comp=Z,800nm,19.0s
SFIN Lafayette 120.04 47 PFAKE 10 14 40.0 +6.7
SFIN LR LR
comp=Z,900nm,18.0s
SFIN Lafayette 120.04 47 P **PKPdf 10 14 33.0 -0.2**
baz=289
L46A Eue Claire 120.07 45 PFAKE 10 14 40.0 +6.7
L46A LR LR
comp=Z,1μm,21.0s
N46A Monticello 120.14 46 P **PKPdf 10 14 31.7 -1.7**
baz=289
RGN Rugen 120.14 332 PFAKE 10 14 40.0 +7.0
RGN LR LR
comp=Z,900nm,21.0s
OKC Ostrava-Krasne 120.17 325 AMS AMS 11 08 20.0
comp=Z,700nm,18.3s
GLMI Grayling 120.17 41 PFAKE 10 14 40.0 +6.6
GLMI LR LR
comp=Z,1μm,21.0s
GLMI Grayling 120.17 41 P **PKPdf 10 14 32.1 -1.3**
baz=293
K46A Dorr 120.19 44 P **PKPdf 10 14 31.5 -1.9**
baz=291
MDVR Moldovita 120.20 319 ⇑*i*P **PKiKP 10 14 33.5 0.0**
P46A Rosedale 120.20 48 P **PKPdf 10 14 33.3 -0.2**
baz=288
D47A Chapleau 120.22 38 P **PKPdf 10 14 32.9 -0.5**
baz=296
M46A Old House Fiel 120.24 45 PFAKE 10 14 40.0 +6.4
M46A LR LR
comp=Z,1μm,20.0s
M46A Old House Fiel 120.24 45 P **PKPdf 10 14 33.2 -0.3**
baz=290
USIN University of 120.36 50 PFAKE 10 14 50.0 +16
USIN LR LR
comp=Z,1μm,21.0s
E47A Iron Bridge 120.37 39 P **PKPdf 10 14 33.2 -0.5**
baz=295
S46A Don Dixon Farm 120.40 50 P **PKPdf 10 14 33.5 -0.4**
baz=287
VYHS Vyhne 120.41 324 *e*PKIKP **PKiKP 10 14 33.8 0.0**
VYHS Vyhne 120.41 324 *e*PKP **PKiKP 10 14 33.8 0.0**
U46A Springville 120.41 51 P **PKPdf 10 14 33.5 -0.5**
baz=286
T46A Princeton 120.44 51 P **PKPdf 10 14 34.0 0.0**
baz=286
G47A Hillman 120.53 41 P **PKPdf 10 14 33.8 -0.2**
baz=294
MORC Moravsky Berou 120.54 325 PFAKE 10 14 50.0 +16
MORC LR LR
comp=Z,700nm,21.0s
MORC Moravsky Berou 120.54 325 ⇑*i*P **PKiKP 10 14 35.4 +1.4**
MORC Moravsky Berou 120.54 325 ⇑PKIKP **PKiKP 10 14 35.4 +1.4**
MORC Moravsky Berou 120.54 325 *e*PKP **PKiKP 10 14 35.2 +1.2**
X46A Booneville 120.55 54 P **PKPdf 10 14 33.7 -0.7**
baz=284
I47A Gladwin 120.56 42 PFAKE 10 14 50.0 +16
I47A LR LR
comp=Z,1μm,20.0s
V46A Holladay 120.60 52 P **PKPdf 10 14 33.2 -1.2**
baz=285
J47A Sunmer 120.65 43 PFAKE 10 14 50.0 +16
J47A LR LR
comp=Z,1μm,20.0s
J47A Sunmer 120.65 43 P **PKiKP 10 14 34.3 -0.1**
baz=292
K47A Vermontville 120.74 44 P **PKPdf 10 14 33.9 -0.6**
baz=292
WVT Waverly 120.74 52 *e*PKPdf **PKPdf 10 14 34.1 -0.6**
WVT LR LR
comp=Z,1μm,20.0s
WVT Waverly 120.74 52 *e*PKIKP **PKPdf 10 14 34.1 -0.6**
WVT MLR MLR
comp=Z,1μm,20.0s
WVT Waverly 120.74 52 P **PKPdf 10 14 33.7 -0.9**
baz=286
O47A Sheridan 120.76 47 P **PKPdf 10 14 33.8 -0.8**
baz=289
M47A Cromwell 120.77 45 P **PKPdf 10 14 34.4 -0.2**
baz=290
BLO Bloomington 120.84 48 PFAKE 10 14 50.0 +15
BLO LR LR
comp=Z,800nm,18.0s
L47A Sherwood 120.85 44 P **PKPdf 10 14 34.2 -0.5**
baz=291
PLAL Pickwick Lake 120.85 53 PFAKE 10 14 50.0 +15
PLAL LR LR
comp=Z,1μm,21.0s
PLCA Paso Flores 120.87 146 PKP **PKiKP 10 14 35.6 +0.6**
comp=Z,1.9nm,0.7s,baz=282,slow=1.2,SNR=3.3
OSTC Ostas 120.88 327 AMS AMS 11 05 00.0
comp=Z,900nm,24.0s
N47A Urbana 120.89 46 P **PKPdf 10 14 34.2 -0.6**
baz=290
JAVC Velka Javorina 120.91 324 *e*PKP **PKiKP 10 14 36.8 +2.0**
DPC Dobruska-Polom 120.93 326 *e*PKIKP **PKiKP 10 14 35.9 +1.1**
DPC MLR MLR
comp=Z,800nm,23.1s
DPC Dobruska-Polom 120.93 326 *e*PKP **PKiKP 10 14 35.9 +1.1**
DPC *ex* x 10 26 02.3
DPC AMS AMS 11 05 00.0
comp=Z,800nm,23.1s
P47A Martinsville 120.93 48 P **PKPdf 10 14 34.5 -0.4**
baz=289
D48A Paudash Townsh 120.96 38 P **PKPdf 10 14 34.1 -0.6**
baz=297
Q47A Bedord North L 120.99 48 P **PKPdf 10 14 34.9 -0.1**
baz=288
UPC Upice 121.02 327 *e*PS PS 10 25 59.9 +3.3
UPC AMS AMS 11 05 00.0
comp=Z,1μm,25.2s
I48A Sherman Twp 121.03 42 P **PKPdf 10 14 34.9 -0.1**
baz=294
E48A Lockeyer 121.05 39 P **PKPdf 10 14 34.8 -0.2**
baz=296
F48A Evansville 121.05 39 P **PKPdf 10 14 34.5 -0.5**
baz=295
S47A Hartford 121.06 50 P **PKPdf 10 14 34.3 -0.9**
baz=287
T47A Sharon Grove 121.06 51 PFAKE 10 14 50.0 +15
T47A LR LR
comp=Z,1μm,20.0s
T47A Sharon Grove 121.06 51 P **PKPdf 10 14 34.8 -0.5**
baz=287
V47A Nunnelly 121.06 52 P **PKPdf 10 14 34.8 -0.5**
baz=286
H48A Harrisville 121.07 41 PFAKE 10 14 50.0 +15
H48A LR LR
comp=Z,1μm,21.0s
H48A Harrisville 121.07 41 P **PKPdf 10 14 34.8 -0.2**
baz=294
U47A Clarksville 121.08 51 P **PKPdf 10 14 35.0 -0.3**
baz=286
R47A Wooly Knot Far 121.11 49 P **PKPdf 10 14 34.7 -0.6**
baz=288
X47A Russelville 121.14 53 P **PKPdf 10 14 34.8 -0.7**
baz=285
W47A Westpoint 121.16 53 P **PKPdf 10 14 35.0 -0.5**
baz=285
D49A Beulah Townshi 121.19 38 P **PKPdf 10 14 34.6 -0.6**
baz=297
147A Livingston 121.25 56 PFAKE 10 14 50.0 +14
147A LR LR
comp=Z,900nm,18.0s
147A Livingston 121.25 56 P **PKPdf 10 14 35.0 -0.7**

baz=283
K48A Perry 121.29 43 P **PKPdf 10 14 34.9 -0.6**
baz=292
VRAC Vranov 121.31 325 *e*PKP **PKiKP 10 14 36.1 +0.6**
WCI Wyandotte Cave 121.31 49 *e*PKPdf **PKPdf 10 14 35.6 -0.1**
WCI LR LR
comp=Z,700nm,18.0s
WCI Wyandotte Cave 121.31 49 P **PKiKP 10 14 35.8 0.0**
baz=288
J48A Bridge Port 121.32 43 PFAKE 10 14 50.0 +14
J48A LR LR
comp=Z,1μm,20.0s
J48A Bridge Port 121.32 43 P **PKiKP 10 14 35.6 -0.1**
baz=293
M48A Edgerton 121.36 45 PFAKE 10 14 50.0 +14
M48A LR LR
comp=Z,1μm,20.0s
N48A Decatur 121.37 46 P **PKPdf 10 14 35.2 -0.5**
baz=291
L48A N Adams 121.39 44 P **PKPdf 10 14 35.6 -0.2**
baz=292
F49A Sandfield 121.44 39 P **PKPdf 10 14 35.4 -0.4**
baz=296
O48A Farmland 121.48 46 P **PKPdf 10 14 35.7 -0.2**
baz=290
Q48A North Vernon 121.51 48 P **PKPdf 10 14 35.9 -0.1**
baz=289
KRUC Moravsky 121.55 325 *e*PKP **PKiKP 10 14 36.7 +0.7**
P48A Milroy 121.56 47 *e*PKPdf **PKPdf 10 14 35.4 -0.7**
P48A LR LR
comp=Z,900nm,18.0s
P48A Milroy 121.56 47 P **PKPdf 10 14 35.7 -0.4**
baz=290
R48A Northridge Ran 121.57 49 P **PKPdf 10 14 35.8 -0.4**
baz=288
T48A Bowling Green 121.57 50 P **PKPdf 10 14 35.8 -0.5**
baz=287
U48A Cassie Pea, Po 121.64 51 P **PKPdf 10 14 35.6 -0.8**
baz=287
V48A Smith Brothers 121.64 52 *e*PKPdf **PKPdf 10 14 35.6 -0.8**
V48A LR LR
comp=Z,1μm,20.0s
V48A Smith Brothers 121.64 52 P **PKPdf 10 14 35.0 -1.4**
baz=286
S48A Wiedeman Farm, 121.66 49 P **PKPdf 10 14 36.1 -0.3**
baz=288
I49A Point Hope 121.71 42 PFAKE 10 14 50.0 +14
I49A LR LR
comp=Z,1μm,21.0s
I49A Point Hope 121.71 42 P **PKPdf 10 14 36.1 -0.2**
baz=294
W48A Pulaski 121.71 53 P **PKPdf 10 14 36.0 -0.5**
baz=286
J49A Marlette 121.73 42 P **PKPdf 10 14 35.7 -0.7**
baz=294
PVCC Panska Ves 121.79 327 AMS AMS 11 11 20.0
comp=Z,600nm,19.2s
L49A Milan 121.79 44 P **PKPdf 10 14 36.1 -0.4**
baz=292
AAM Ann Arbor 121.80 44 PFAKE 10 14 50.0 +13
AAM LR LR
comp=Z,900nm,19.0s
X48A Hartselle 121.81 53 PFAKE 10 14 50.0 +13
X48A LR LR
comp=Z,1μm,20.0s
X48A Hartselle 121.81 53 P **PKPdf 10 14 35.8 -0.9**
baz=285,SNR=6.4
148A Greensboro 121.83 56 P **PKPdf 10 14 36.5 -0.4**
baz=284
Y48A Jasper 121.85 54 P **PKPdf 10 14 36.1 -0.7**
baz=285
MYIG Mrida 121.87 69 PFAKE 10 14 50.0 +13
MYIG LR LR
comp=Z,600nm,19.0s
M49A Liberty Center 121.89 45 P **PKPdf 10 14 36.5 -0.2**
baz=292
CLTN Cedars of Leba 121.92 51 PFAKE 10 14 50.0 +13
CLTN LR LR
comp=Z,900nm,20.0s
BRG Berggiesshubel 121.93 328 *i* PKP **PKiKP 10 14 37.7 +1.0**
comp=Z,12nm,0.9s
comp=N,545nm,25.4s
comp=E,523nm,20.5s
comp=Z,1μm,22.0s
BRG Berggiesshubel 121.93 328 *i* PKIKP **PKiKP 10 14 37.7 +1.0**
BRG pmax pmax
comp=Z,12nm,1.0s
BRG MLR MLR
comp=N,545nm,25.4s
BRG MLR MLR
comp=E,523nm,20.5s
BRG MLR MLR
comp=Z,1μm,22.0s
N49A Columbus Grove 121.94 45 PFAKE 10 14 50.0 +13
N49A LR LR
comp=Z,1μm,20.0s
N49A Columbus Grove 121.94 45 P **PKiKP 10 14 37.0 0.0**
baz=291
E50A Wahnapitae 121.96 38 P **PKPdf 10 14 36.7 0.0**
baz=298
GOPC GO Pecny, Ondr 122.00 327 *e*PKIKP **PKiKP 10 14 37.3 +0.4**
GOPC MLR MLR
comp=Z,900nm,19.4s
GOPC GO Pecny, Ondr 122.00 327 *e*PKP **PKiKP 10 14 37.3 +0.4**
GOPC AMS AMS 11 08 20.0
comp=Z,900nm,19.4s
TOBO Tobermory, Bru 122.00 40 P **PKPdf 10 14 36.4 -0.4**
baz=296
P49A Miami Univ. Ec 122.05 47 P **PKPdf 10 14 37.0 -0.1**
baz=290
PRU Pruhonice 122.09 327 *e*PKIKP **PKiKP 10 14 37.2 +0.2**
PRU *e* 10 14 50.1
PRU *e* 10 26 05.4
PRU MLR MLR
comp=Z,900nm,23.0s
PRU Pruhonice 122.09 327 *e*PKP **PKiKP 10 14 37.2 +0.2**
PRU *ex* x 10 14 50.1
PRU *e*PS **PS 10 26 05.4 -0.8**
PRU AMS AMS 11 08 20.0
comp=Z,900nm,23.0s
O49A Covington 122.10 46 PFAKE 10 14 50.0 +13
O49A LR LR
comp=Z,800nm,21.0s
O49A Covington 122.10 46 P **PKPdf 10 14 37.0 -0.2**
baz=291
Q49A Aurora 122.10 48 P **PKPdf 10 14 37.1 -0.1**
baz=290
MATQ Matagami 122.10 34 P **PKPdf 10 14 36.2 -0.7**
baz=302,SNR=7.6
R49A Shelbyville 122.13 49 PFAKE 10 14 50.0 +13
R49A LR LR
comp=Z,900nm,21.0s
R49A Shelbyville 122.13 49 P **PKPdf 10 14 37.1 -0.1**
baz=289
CLL Collm 122.18 329 *e*PKPdf **PKPdf 10 14 34.2 -2.7**
CLL LR LR
comp=Z,1μm,20.0s
CLL Collm 122.18 329 *i* PKPdf **PKPdf 10 14 36.4 -0.5**
comp=Z,11nm,0.8s
CLL *es*PKPdf **sPKPdf 10 14 49.0 -0.8**
CLL *e*PP **PP 10 16 12.0 +0.2**
CLL *e*PPP PPP 10 18 42.0
CLL *e*PPPP 10 20 36.0
CLL *e*SKKSac SKKSac 10 23 12.0 +3.1
CLL *e*PS **PS 10 26 00.0 -6.8**
CLL *e*PPS PPS 10 27 24.0
CLL *e*PPPrev 10 32 12.0
CLL *e*SS **SS 10 32 50.0 +1.6**
CLL *e*SSS SSS 10 37 21.0
CLL *e* 10 38 55.0
CLL *e*SSSS 10 40 48.0
CLL *e* 10 45 24.0
CLL LmH 11 08 00.0
comp=N,600nm,21.0s
CLL LmH 11 08 00.0
comp=E,800nm,21.3s
CLL LmV 11 10 00.0
comp=Z,1μm,20.0s
CLL Collm 122.18 329 *i* PKIKP **PKPdf 10 14 36.4 -0.5**
CLL *e* 10 14 49.0
CLL pmax pmax
comp=Z,11nm,0.8s
CLL MLR MLR
comp=Z,1μm,20.0s
S49A Springfield 122.20 49 P **PKPdf 10 14 37.2 -0.3**
baz=289

LRAL Lakeview Retre 122.21 55 PFAKE 10 14 50.0 +12
LRAL LR LR
comp=Z,700nm,18.0s
LRAL Lakeview Retre 122.21 55 P **PKPdf 10 14 37.2 -0.4**
baz=284,SNR=17
U49A Red Boiling Sp 122.22 51 P **PKPdf 10 14 37.1 -0.4**
baz=288
T49A Edmonton 122.23 50 *e*PKPdf **PKPdf 10 14 36.9 -0.7**
T49A LR LR
comp=Z,2μm,21.0s
T49A Edmonton 122.23 50 P **PKPdf 10 14 36.6 -0.9**
baz=288
W49A Belvidere 122.25 52 P **PKPdf 10 14 36.6 -1.0**
baz=286,SNR=17
K50A Casco 122.31 43 PFAKE 10 14 50.0 +12
K50A LR LR
comp=Z,800nm,19.0s
V49A McMinnville 122.34 52 P **PKPdf 10 14 37.4 -0.3**
baz=287,SNR=12
249A Camden 122.36 56 P **PKiKP 10 14 38.4 +0.4**
baz=284,SNR=13
X49A Woodville 122.36 53 P **PKPdf 10 14 37.2 -0.6**
baz=286,SNR=6.8
CONA Conrad Observa 122.42 324 *i* PKiKP **PKPdf 10 14 37.5 -0.1**
comp=Z,5.9nm,0.7s,SNR=5.1
BASO Ashfield 122.44 41 P **PKPdf 10 14 37.5 -0.2**
baz=295
D51A Lot 18 Range I 122.47 37 P **PKPdf 10 14 36.7 -0.9**
baz=299
Y49A Blount Mountai 122.47 54 PFAKE 10 14 50.0 +12
Y49A LR LR
comp=Z,1μm,20.0s
Y49A Blount Mountai 122.47 54 P **PKPdf 10 14 37.8 -0.3**
baz=285
BMRO Meriville Lake 122.47 40 P **PKPdf 10 14 37.5 -0.2**
baz=296
L50A Kingsville 122.48 44 P **PKPdf 10 14 37.6 -0.2**
baz=293
SWET Sewanee 122.48 52 PFAKE 10 14 50.0 +12
SWET LR LR
comp=Z,1μm,20.0s
149A Jones 122.48 55 P **PKPdf 10 14 38.0 -0.1**
baz=284,SNR=14
Z49A Columbiana 122.55 55 P **PKPdf 10 14 38.1 -0.1**
baz=285,SNR=12
M50A Fremont 122.56 44 *e*PKPdf **PKiKP 10 14 38.3 +0.1**
M50A LR LR
comp=Z,1μm,20.0s
M50A Fremont 122.56 44 P **PKPdf 10 14 37.6 -0.4**
baz=293
BRAL Brewton 122.61 57 PFAKE 10 14 50.0 +11
BRAL LR LR
comp=Z,800nm,22.0s
O50A Cable 122.62 46 P **PKPdf 10 14 38.1 -0.1**
baz=291
E51A G1948 Merrick 122.67 38 P **PKPdf 10 14 37.7 -0.3**
baz=299,SNR=8.6
P50A Jamestown 122.69 47 P **PKPdf 10 14 38.0 -0.3**
baz=291
F51A Arnstein 122.69 38 P **PKPdf 10 14 38.0 -0.1**
baz=298
PLIO Pelee Island, 122.72 44 P **PKPdf 10 14 38.0 -0.2**
baz=293
N50A Nevada 122.73 45 P **PKPdf 10 14 38.4 0.0**
baz=292
BWLO Walkerton 122.73 41 P **PKPdf 10 14 37.9 -0.4**
baz=296
R50A Paris 122.76 48 PFAKE 10 14 50.0 +11
R50A LR LR
comp=Z,1μm,21.0s
R50A Paris 122.76 48 P **PKPdf 10 14 38.1 -0.4**
baz=290
KLBO Killbear Provi 122.77 39 P **PKPdf 10 14 38.0 -0.3**
baz=297
TTG Podgorica 122.78 317 PFAKE 10 14 50.0 +11
TTG LR LR
comp=Z,500nm,19.0s
T50A Nancy 122.78 50 P **PKPdf 10 14 38.5 -0.1**
baz=288
TIR Tirane 122.78 316 PFAKE 10 14 50.0 +11
TIR LR LR
comp=Z,400nm,19.0s
Q50A Georgetown 122.82 48 P **PKPdf 10 14 38.3 -0.3**
baz=290
LSQQ Lebel-sur-Quev 122.84 34 P **PKPdf 10 14 37.5 -0.8**
baz=302
S50A Richmond 122.90 49 P **PKPdf 10 14 38.6 -0.2**
baz=289
X50B Fort Payne 122.91 53 P **PKPdf 10 14 38.4 -0.5**
baz=286,SNR=11
I51A Listowel 122.95 41 P **PKPdf 10 14 38.4 -0.3**
baz=296
ARSA Arzberg 122.96 324 *i* PKPdf **PKPdf 10 14 37.3 -1.3**
comp=Z,1.8nm,0.5s
U50A Jamestown 122.97 51 P **PKPdf 10 14 38.7 -0.3**
baz=288,SNR=20
W50A Signal Mountai 122.97 52 PFAKE 10 14 50.0 +11
W50A LR LR
comp=Z,1μm,20.0s
W50A Signal Mountai 122.97 52 P **PKPdf 10 14 38.6 -0.4**
baz=287,SNR=17
V50A Pikevile 123.00 51 P **PKPdf 10 14 38.8 -0.2**
baz=288,SNR=9.7
Y50A Piedmont 123.00 54 P **PKPdf 10 14 38.8 -0.3**
baz=286
Z50A Ashland 123.02 54 PFAKE 10 14 50.0 +11
Z50A LR LR
comp=Z,1μm,20.0s
Z50A Ashland 123.02 54 P **PKPdf 10 14 38.8 -0.3**
baz=285,SNR=12
ACSO Alum Creek Sta 123.05 46 *e*PKPdf **PKPdf 10 14 37.9 -1.1**
ACSO LR LR
comp=Z,700nm,19.0s
ACSO Alum Creek Sta 123.05 46 P **PKPdf 10 14 38.5 -0.5**
baz=292
250A Grady 123.06 56 *e*PKPdf **PKPdf 10 14 38.9 -0.4**
250A LR LR
comp=Z,1μm,21.0s
250A Grady 123.06 56 P **PKPdf 10 14 39.1 -0.1**
baz=284
VLDQ Val d'Or 123.08 35 PFAKE 10 14 50.0 +11
VLDQ LR LR
comp=Z,1μm,21.0s
K51A Iona Station 123.08 42 P **PKPdf 10 14 38.6 -0.3**
baz=295
KHC Kasperske Hory 123.09 326 *e*PKPdf **PKPdf 10 14 37.7 -1.1**
KHC LR LR
comp=Z,400nm,21.0s
KHC Kasperske Hory 123.09 326 *e*PKIKP **PKPdf 10 14 38.6 -0.2**
KHC *e* 10 14 52.1
KHC *e* 10 26 19.4
KHC MLR MLR
comp=Z,1μm,20.1s
KHC Kasperske Hory 123.09 326 *e*PKP **PKPdf 10 14 38.6 -0.2**
KHC *ex* x 10 14 52.1
KHC *ex* x 10 15 19.8
KHC *ex* x 10 26 19.4
KHC AMS AMS 11 08 40.0
comp=Z,1μm,20.1s
D52A ZEK Kipawa Sen 123.10 37 P **PKPdf 10 14 38.4 -0.5**
baz=300,SNR=12
150A Eclectic 123.11 55 P **PKPdf 10 14 39.3 0.0**
baz=285,SNR=10
F52A Sundridge 123.12 38 P **PKPdf 10 14 39.0 0.0**
baz=298,SNR=9.8
BLY Banja Luka 123.14 320 PFAKE 10 14 50.0 +11
BLY LR LR
comp=Z,700nm,21.0s
350A Dozier 123.14 57 P **PKPdf 10 14 38.5 -0.9**
baz=284,SNR=7.5
GEC2 GERESS Array S 123.17 326 *e*PKPdf **PKPdf 10 14 38.0 -1.1**
GEC2 LR LR
comp=Z,900nm,21.0s
GEC2 GERESS Array S 123.17 326 *e*PKIKP **PKPdf 10 14 38.0 -1.1**
GEC2 MLR MLR
comp=Z,900nm,21.0s
GERES GERESS Array B 123.17 326 PKP **PKPdf 10 14 38.6 -0.5**
comp=Z,5.7nm,0.8s,baz=69,slow=1.9,SNR=35
M51A Elyria 123.19 44 P **PKPdf 10 14 38.7 -0.5**
baz=293
N51A Ashland 123.21 45 *e*PKPdf **PKPdf 10 14 35.6 -3.7**
N51A LR LR
comp=Z,900nm,20.0s
N51A Ashland 123.21 45 P **PKPdf 10 14 38.7 -0.6**
baz=293
Q51A Peebles 123.22 47 PFAKE 10 14 50.0 +10
Q51A LR LR
comp=Z,800nm,19.0s
Q51A Peebles 123.22 47 P **PKPdf 10 14 39.0 -0.4**
baz=291
BUKO Buck Lake 123.24 39 P **PKPdf 10 14 38.9 -0.2**
baz=298
P51A Williamsport 123.27 47 *e*PKPdf **PKPdf 10 14 38.2 -1.3**
P51A LR LR
comp=Z,900nm,19.0s
P51A Williamsport 123.27 47 P **PKPdf 10 14 38.7 -0.7**
baz=291
E52A Mattawa 123.29 38 P **PKPdf 10 14 39.0 -0.2**
baz=299,SNR=7.8
R51A Hillsboro 123.30 48 P **PKPdf 10 14 39.2 -0.4**
baz=290
TEIG Tepich 123.30 70 PFAKE 10 14 50.0 +10
TEIG LR LR
comp=Z,500nm,20.0s
H52A Wyevale 123.30 40 P **PKPdf 10 14 38.9 -0.4**
baz=297
O51A Pataskala 123.34 46 P **PKPdf 10 14 39.4 -0.1**
baz=292
MOA Molln 123.38 325 *i* PKiKP **PKPdf 10 14 39.2 -0.2**
comp=Z,2.9nm,0.7s
W51A Cleveland 123.41 52 P **PKPdf 10 14 39.5 -0.4**
baz=287,SNR=7.1
D53A Lac Vacive, Po 123.47 36 *e*PKPdf **PKPdf 10 14 38.7 -0.9**
D53A LR LR
comp=Z,1μm,20.0s
D53A Lac Vacive, Po 123.47 36 P **PKPdf 10 14 39.6 0.0**
baz=301
T51A Gray 123.48 50 P **PKiKP 10 14 40.1 -0.1**
baz=289,SNR=8.4
X51A Calhoun 123.51 53 *e*PKPdf **PKPdf 10 14 39.6 -0.4**
X51A LR LR
comp=Z,1μm,18.0s
X51A Calhoun 123.51 53 P **PKPdf 10 14 39.5 -0.6**
baz=287
CPCT Cooper Cave 123.51 52 PFAKE 10 14 50.0 +10
CPCT LR LR
comp=Z,2μm,20.0s
S51A Beattyville 123.52 49 PFAKE 10 14 50.0 +10
S51A LR LR
comp=Z,1μm,21.0s
S51A Beattyville 123.52 49 P **PKPdf 10 14 40.0 0.0**
baz=290,SNR=17
V51A Loudon 123.54 51 PFAKE 10 14 50.0 +10
V51A LR LR
comp=Z,2μm,20.0s
V51A Loudon 123.54 51 P **PKPdf 10 14 39.8 -0.2**
baz=288,SNR=6.1
Y51A Rockmart 123.54 53 P **PKPdf 10 14 39.6 -0.5**
baz=286,SNR=6.1
SOKA Soboth 123.54 323 *i* PKiKP **PKPdf 10 14 39.9 +0.1**
comp=Z,9.8nm,0.9s,SNR=7.6
J52A Paris 123.55 41 P **PKPdf 10 14 39.6 -0.2**
baz=296
Z51A Franklin 123.61 54 P **PKPdf 10 14 39.9 -0.4**
baz=286,SNR=9.5
U51A La Follette 123.61 50 P **PKiKP 10 14 40.4 0.0**
baz=289
ACTO Acton 123.66 41 P **PKPdf 10 14 39.8 -0.2**
baz=296
M52A Chesterland 123.67 44 PFAKE 10 14 50.0 +10
M52A LR LR
comp=Z,1μm,19.0s
M52A Chesterland 123.67 44 P **PKPdf 10 14 40.1 -0.1**
baz=294
151A Opelika 123.70 55 P **PKiKP 10 14 40.6 -0.1**
baz=285,SNR=13
SADO Sadowa 123.72 39 PFAKE 10 14 50.0 +10
SADO LR LR
comp=Z,2μm,21.0s
N52A McGinn's Farm, 123.73 45 P **PKPdf 10 14 40.1 -0.2**
baz=293,SNR=5.2
251A Midway 123.74 56 P **PKPdf 10 14 40.5 -0.1**
baz=285,SNR=12
CHGQ Chibougamau 123.77 32 P **PKPdf 10 14 39.2 -0.9**
baz=306
ALGO Algonquin Park 123.82 38 P **PKPdf 10 14 39.7 -0.6**
baz=300,SNR=12
451A Vernon 123.83 57 PFAKE 10 14 50.0 +9.0
451A LR LR
comp=Z,800nm,22.0s
451A Vernon 123.83 57 P **PKiKP 10 14 41.0 0.0**
baz=284
E53A Dumoine, Ponti 123.84 37 P **PKPdf 10 14 40.0 -0.3**
baz=300
G53A Haliburton 123.87 39 P **PKPdf 10 14 40.2 -0.2**
baz=299,SNR=10
P52A Corning 123.88 46 P **PKPdf 10 14 40.3 -0.3**
baz=292,SNR=5.8
O52A Adamsville 123.90 45 PFAKE 10 14 50.0 +9.1
O52A LR LR
comp=Z,900nm,20.0s
O52A Adamsville 123.90 45 P **PKPdf 10 14 40.3 -0.3**
baz=293
OBKA Obir 123.91 323 *i* PKiKP **PKiKP 10 14 41.2 +0.4**
comp=Z,2.9nm,0.6s
TZTN Tazewell 123.92 50 PFAKE 10 14 50.0 +8.9
TZTN LR LR
comp=Z,1μm,21.0s
TZTN Tazewell 123.92 50 P **PKiKP 10 14 41.1 0.0**
baz=289,SNR=6.2
IVI Ivigtut 123.98 10 PFAKE 10 14 50.0 +10
IVI LR LR
comp=Z,800nm,21.0s
R52A Catlettsburg 123.98 48 P **PKPdf 10 14 40.1 -0.8**
baz=291
BOJS Bojanci 123.99 322 *i* PKPdf **PKiKP 10 14 41.7 +0.8**
TYNO Tyneside 124.01 41 P **PKPdf 10 14 40.5 -0.2**
baz=296
Q52A Bidwell 124.03 47 P **PKPdf 10 14 40.5 -0.4**
baz=292,SNR=5.8
D54A Lac Fusel, La 124.04 36 P **PKPdf 10 14 39.8 -0.9**
baz=302,SNR=14
GRA1 Grafenberg Arr 124.04 328 PFAKE 10 14 50.0 +9.1
GRA1 LR LR
comp=Z,1μm,20.0s
SCHQ Schefferville 124.07 24 PKP **PKiKP 10 14 41.3 +0.5**
comp=Z,8.5nm,0.9s,baz=335,slow=0.7,SNR=7.4
SCHQ Schefferville 124.07 24 PFAKE 10 14 50.0 +9.2
SCHQ LR LR
comp=Z,1μm,21.0s
W52A Murphy 124.08 52 PFAKE 10 14 50.0 +8.5
W52A LR LR
comp=Z,2μm,20.0s
W52A Murphy 124.08 52 P **PKiKP 10 14 41.3 -0.1**
baz=286,SNR=11
VISS Visnje 124.09 322 *i* PKPdf **PKiKP 10 14 41.5 +0.4**
E54A Lac Daplat, Po 124.10 37 P **PKPdf 10 14 40.5 -0.3**
baz=301,SNR=11
U52A Thorn Hill 124.11 50 P **PKiKP 10 14 41.7 +0.3**
baz=289,SNR=13
V52A Sevierville 124.11 51 PFAKE 10 14 50.0 +8.6
V52A LR LR
comp=Z,2μm,20.0s
V52A Sevierville 124.11 51 P **PKiKP 10 14 41.6 +0.1**
baz=289,SNR=11
PKRO Pickering 124.14 40 P **PKiKP 10 14 41.1 -0.1**
baz=298
152A Waverly Hall 124.15 55 PFAKE 10 14 50.0 +8.4
152A LR LR
comp=Z,1μm,20.0s
152A Waverly Hall 124.15 55 P **PKPdf 10 14 41.3 -0.1**
baz=286,SNR=14
T52A Hallie 124.16 49 PFAKE 10 14 50.0 +8.5
T52A LR LR
comp=Z,1μm,20.0s
T52A Hallie 124.16 49 P **PKiKP 10 14 41.6 0.0**
baz=290
M53A WI Miller and 124.18 43 P **PKPdf 10 14 40.9 -0.2**
baz=295,SNR=5.9
452A Marianna 124.24 57 P **PKiKP 10 14 42.2 +0.4**
baz=284
L53A Girard 124.25 43 P **PKPdf 10 14 41.0 -0.2**
baz=295
Z52A Williamson 124.25 54 P **PKPdf 10 14 41.6 0.0**
baz=286,SNR=12
X52A Dahlonega 124.26 52 P **PKiKP 10 14 41.8 -0.1**
baz=288,SNR=23
O53A New Philadelph 124.29 45 P **PKiKP 10 14 41.5 -0.1**
baz=293,SNR=5.2
352A Blakely 124.30 56 PFAKE 10 14 50.0 +8.1
352A LR LR
comp=Z,800nm,19.0s
352A Blakely 124.30 56 P **PKiKP 10 14 42.3 +0.4**
baz=285

252A	Lumpkin	124.32	56	P		PKiKP	10 14 41.8	-0.2
	baz=285							
552A	Lynn Haven	124.32	58	P		PKiKP	10 14 42.0	0.0
	baz=284							
KBA	Koelnbreinsper	124.32	324	*i* PKiKP		PKPdf	10 14 41.5	+0.1
	comp=Z,8.7nm,1.3s							
N53A	Lisbon	124.33	44	PFAKE			10 14 50.0	+8.3
N53A				LR	LR			
	comp=Z,1μm,21.0s							
N53A	Lisbon	124.33	44	P		PKiKP	10 14 41.7	0.0
	baz=294,SNR=8.8							
Y52A	Lilburn	124.34	53	PFAKE			10 14 50.0	+8.0
Y52A				LR	LR			
	comp=Z,1μm,20.0s							
Y52A	Lilburn	124.34	53	P		PKiKP	10 14 42.1	+0.1
	baz=287,SNR=14							
BANO	Bancroft	124.36	39	P		PKPdf	10 14 41.3	0.0
	baz=299,SNR=12							
MYKA	Terra Mystica	124.39	324	*i* PKiKP		PKPdf	10 14 41.0	-0.4
	comp=Z,4.5nm,0.7s							
CSGN	Cosiguina Volc	124.41	79	PFAKE			10 14 50.0	+7.3
CSGN				LR	LR			
	comp=Z,500nm,20.0s							
WIN	Windhoek	124.42	237	PFAKE			10 14 50.0	+7.3
WIN				LR	LR			
	comp=Z,2μm,20.0s							
NRS	Narsarsuaq	124.44	8	PFAKE			10 14 50.0	+8.7
NRS				LR	LR			
	comp=Z,800nm,20.0s							
PEMO	Pembroke	124.45	38	P		PKPdf	10 14 41.0	-0.4
	baz=300,SNR=11							
ALLY	Alegheny Colle	124.45	43	PFAKE			10 14 50.0	+8.0
ALLY				LR	LR			
	comp=Z,2μm,22.0s							
P53A	Whipple	124.46	46	PFAKE			10 14 50.0	+8.0
P53A				LR	LR			
	comp=Z,800nm,21.0s							
P53A	Whipple	124.46	46	P		PKPdf	10 14 41.8	0.0
	baz=293,SNR=9.8							
R53A	Hurricane	124.49	47	PFAKE			10 14 50.0	+7.9
R53A				LR	LR			
	comp=Z,1μm,18.0s							
R53A	Hurricane	124.49	47	P		PKPdf	10 14 41.8	0.0
	baz=292							
JAVS	Javornik	124.51	323	*i* PKPdf		PKiKP	10 14 42.4	+0.3
T53A	Wise	124.54	49	P		PKiKP	10 14 42.5	+0.1
	baz=290,SNR=9.3							
WLVO	Wesleyville	124.59	40	P		PKPdf	10 14 41.5	-0.3
	baz=298,SNR=6.2							
S53A	Williamson	124.60	48	P		PKPdf	10 14 41.9	-0.2
	baz=291							
Q53A	Leroy	124.61	47	P		PKPdf	10 14 41.8	-0.2
	baz=292,SNR=8.1							
W53A	Cullowhee	124.66	51	P		PKiKP	10 14 43.0	+0.3
	baz=289,SNR=18							
TGUH	Tegucigalpa,Un	124.66	77	PFAKE			10 14 50.0	+6.8
TGUH				LR	LR			
	comp=Z,700nm,19.0s							
U53A	Fall Branch	124.72	50	P		PKiKP	10 14 43.0	+0.3
	baz=290,SNR=21							
Y53A	Monroe	124.73	53	P		PKiKP	10 14 42.7	0.0
	baz=287,SNR=6.2							
J54A	Appleton	124.73	41	PFAKE			10 14 50.0	+7.6
J54A				LR	LR			
	comp=Z,1μm,21.0s							
J54A	Appleton	124.73	41	P		PKPdf	10 14 41.9	-0.2
	baz=298							
X53A	Estanollee	124.76	52	P		PKiKP	10 14 43.1	+0.3
	baz=288,SNR=6.5							
L54A	Sinclairville	124.76	42	P		PKPdf	10 14 42.0	-0.2
	baz=296,SNR=6.1							
V53A	Saluda	124.77	51	PFAKE			10 14 50.0	+7.2
V53A				LR	LR			
	comp=Z,1μm,20.0s							
V53A	Saluda	124.77	51	P		PKiKP	10 14 42.8	0.0
	baz=289,SNR=11							
DELO	Deloro Mine	124.79	39	PFAKE			10 14 50.0	+7.5
DELO				LR	LR			
	comp=Z,1μm,20.0s							
DELO	Deloro Mine	124.79	39	P		PKPdf	10 14 42.0	-0.2
	baz=299,SNR=5.0							
253A	Americus	124.80	55	PFAKE			10 14 50.0	+7.1
253A				LR	LR			
	comp=Z,800nm,20.0s							
253A	Americus	124.80	55	P		PKPdf	10 14 42.5	-0.1
	baz=286							
M54A	Oil Creek Stat	124.84	43	PFAKE			10 14 50.0	+7.3
M54A				LR	LR			
	comp=Z,1μm,20.0s							
M54A	Oil Creek Stat	124.84	43	P		PKPdf	10 14 42.1	-0.3
	baz=296,SNR=11							
N54A	Moraine State	124.85	44	PFAKE			10 14 50.0	+7.2
N54A				LR	LR			
	comp=Z,1μm,20.0s							
N54A	Moraine State	124.85	44	P		PKPdf	10 14 42.3	-0.1
	baz=295,SNR=5.7							
PLVO	Plevna	124.87	38	PFAKE			10 14 50.0	+7.3
PLVO				LR	LR			
	comp=Z,1μm,20.0s							
PLVO	Plevna	124.87	38	P		PKPdf	10 14 42.2	-0.1
	baz=300,SNR=12							
I55A	Frankford	124.90	39	P		PKPdf	10 14 42.0	-0.4
	baz=299							
MEDO	Medina	124.90	41	PFAKE			10 14 50.0	+7.2
MEDO				LR	LR			
	comp=Z,1μm,21.0s							
MEDO	Medina	124.90	41	P		PKPdf	10 14 42.0	-0.4
	baz=298							
O54A	Avella	124.90	45	P		PKPdf	10 14 42.5	-0.1
	baz=294,SNR=9.8							
F55A	Otter Lake	124.91	37	P		PKPdf	10 14 42.2	-0.2
	baz=301							
Z53A	Monticello	124.91	54	P		PKiKP	10 14 42.9	-0.2
	baz=287							
353A	Camilla	124.92	56	P		PKiKP	10 14 43.3	+0.2
	baz=285							
GOGA	Godfrey	124.95	54	PFAKE			10 14 50.0	+6.8
GOGA				LR	LR			
	comp=Z,1μm,20.0s							
GOGA	Godfrey	124.95	54	P		PKiKP	10 14 43.2	0.0
	baz=287							
453A	Whigham	124.96	57	PFAKE			10 14 50.0	+6.8
453A				LR	LR			
	comp=Z,900nm,22.0s							
453A	Whigham	124.96	57	P		PKiKP	10 14 43.4	+0.1
	baz=285							
ABTA	Abfaltersbach	124.98	324	*i* PKiKP		PKPdf	10 14 42.3	-0.3
	comp=Z,13nm,0.9s							
G55A	Calabogie	124.98	38	P		PKPdf	10 14 42.4	-0.1
	baz=301,SNR=8.3							
K54A	Basiliko Farm,	125.00	41	P		PKPdf	10 14 42.5	-0.2
	baz=297							
H55A	Tweed	125.05	39	P		PKPdf	10 14 42.6	-0.1
	baz=300,SNR=7.7							
Q54A	Coxs Mills	125.06	46	PFAKE			10 14 50.0	+6.8
Q54A				LR	LR			
	comp=Z,1μm,19.0s							
Q54A	Coxs Mills	125.06	46	P		PKPdf	10 14 42.9	0.0
	baz=293,SNR=12							
P54A	Burton	125.06	45	P		PKPdf	10 14 43.0	+0.1
	baz=294							
S54A	Dingess, Beckl	125.16	48	P		PKPdf	10 14 43.1	-0.1
	baz=292,SNR=6.1							
WATA	Walderalm	125.19	325	*i* PKiKP		PKPdf	10 14 43.0	0.0
	comp=Z,9.1nm,0.9s							
WTTA	Wattenberg	125.20	325	*i* PKiKP		PKiKP	10 14 43.4	-0.1
	comp=Z,21nm,0.9s,SNR=8.1							
T54A	Tazewell	125.23	49	P		PKPdf	10 14 43.4	0.0
	baz=291,SNR=7.0							
U54A	Nelsons Funny	125.23	49	PFAKE			10 14 50.0	+6.3
U54A				LR	LR			
	comp=Z,1μm,19.0s							
U54A	Nelsons Funny	125.23	49	P		PKPdf	10 14 43.2	-0.2
	baz=290							
R54A	Victor	125.25	47	P		PKPdf	10 14 42.6	-0.7
	baz=292,SNR=7.4							
J55A	Hilton	125.27	40	PFAKE			10 14 50.0	+6.5
J55A				LR	LR			
	comp=Z,2μm,19.0s							
J55A	Hilton	125.27	40	P		PKPdf	10 14 42.7	-0.4
	baz=298,SNR=5.7							
K55A	Perry	125.36	41	P		PKPdf	10 14 43.2	-0.2
	baz=298,SNR=6.0							
L55A	Hinsdale	125.36	42	P		PKPdf	10 14 43.1	-0.3
	baz=297,SNR=8.3							
TSUM	Tsumeb	125.39	241	*e*PKPdf		PKPdf	10 14 42.3	-1.9
TSUM				LR	LR			
	comp=Z,1μm,20.0s							
V54A	Nebo	125.39	50	P		PKiKP	10 14 44.0	0.0
	baz=290,SNR=10							
TIGA	Tifton	125.41	56	PFAKE			10 14 50.0	+5.9
TIGA				LR	LR			
	comp=Z,1μm,20.0s							
TIGA	Tifton	125.41	56	P		PKiKP	10 14 44.2	+0.1
	baz=286							
Y54A	Tignall	125.44	53	P		PKiKP	10 14 44.1	0.0
	baz=288							
W54A	Cherokee Point	125.44	51	P		PKiKP	10 14 44.4	+0.3
	baz=289,SNR=8.0							
MOTA	Moosalm	125.45	326	*i* PKiKP		PKPdf	10 14 43.7	+0.1
	comp=Z,12nm,0.8s							
M55A	Ridgway	125.47	43	P		PKPdf	10 14 43.5	-0.2
	baz=296,SNR=5.6							
SQTA	Sankt Quirin	125.47	325	*i* PKiKP		PKiKP	10 14 43.9	0.0
	comp=Z,16nm,0.9s							
X54A	Belton	125.47	52	P		PKiKP	10 14 44.2	+0.1
	baz=289							
PECO	Prince Edward	125.47	39	*e*PKPdf		PKPdf	10 14 43.1	-0.4
PECO				LR	LR			
	comp=Z,2μm,20.0s							
PECO	Prince Edward	125.47	39	P		PKPdf	10 14 43.3	-0.2
	baz=300							
154A	Montrose	125.47	54	PFAKE			10 15 00.0	+16
154A				LR	LR			
	comp=Z,1μm,19.0s							
MCWV	Mont Chateau	125.49	45	PFAKE			10 14 50.0	+5.9
MCWV				LR	LR			
	comp=Z,600nm,21.0s							
Z54A	Sparta	125.50	54	P		PKiKP	10 14 44.3	+0.1
	baz=288							
254A	Abbeville	125.52	55	P		PKiKP	10 14 44.2	-0.1
	baz=286							
ESTN	Estel	125.56	79	PFAKE			10 15 00.0	+15
ESTN				LR	LR			
	comp=Z,500nm,21.0s							
P55A	Reedsville	125.56	45	P		PKiKP	10 14 44.0	-0.2
	baz=294							
RETA	Reutte	125.56	326	*i* PKPdf		PKPdf	10 14 42.4	-1.2
	comp=Z,10nm,1.2s							
454A	Quitman	125.57	57	P		PKiKP	10 14 44.6	+0.2
	baz=285							
Q55A	Buckhannon	125.59	46	P		PKiKP	10 14 44.2	-0.2
	baz=294,SNR=7.6							
ORIO	Orleans, Innes	125.61	37	P		PKPdf	10 14 43.2	-0.4
	baz=302							
N55A	Marion Center	125.61	44	PFAKE			10 15 00.0	+16
N55A				LR	LR			
	comp=Z,700nm,20.0s							
N55A	Marion Center	125.61	44	P		PKPdf	10 14 43.6	-0.4
	baz=296							
O55A	Ligonier	125.64	44	P		PKiKP	10 14 44.2	-0.2
	baz=295							
STU	Stuttgart	125.66	328	PFAKE			10 14 50.0	+5.9
STU				LR	LR			
	comp=Z,800nm,19.0s							
HODGE	Hodges	125.66	52	PFAKE			10 15 00.0	+15
HODGE				LR	LR			
	comp=Z,1μm,20.0s							
554A	Perry	125.69	58	P		PKPdf	10 14 44.4	+0.1
	baz=285							
S55A	Lewisburg	125.76	48	P		PKPdf	10 14 44.1	-0.2
	baz=292							
T55A	Pulaski	125.80	48	P		PKPdf	10 14 44.3	-0.1
	baz=292							
PAULI	Pauline	125.82	51	PFAKE			10 15 00.0	+15
PAULI				LR	LR			
	comp=Z,2μm,20.0s							
U55A	TA2, Sparta	125.82	49	P		PKPdf	10 14 44.5	0.0
	baz=291,SNR=8.4							
TIP	Timpagrande	125.83	314	PFAKE			10 15 00.0	+15
TIP				LR	LR			
	comp=Z,500nm,22.0s							
FETA	Feichten	125.85	325	*i* PKiKP		PKiKP	10 14 45.0	+0.2
	comp=Z,12nm,0.9s							
M56A	Emporium	125.85	42	P		PKPdf	10 14 44.3	-0.1
	baz=297,SNR=7.8							
V55A	Taylorsville	125.93	50	P		PKiKP	10 14 45.0	0.0
	baz=291							
155A	Kite	125.99	54	P		PKPdf	10 14 44.9	+0.1
	baz=287							
N56A	West Decatur	126.03	43	P		PKPdf	10 14 44.7	0.0
	baz=296							
355A	Pearson	126.04	56	P		PKiKP	10 14 45.1	-0.2
	baz=286							
455A	Stateville	126.06	57	P		PKiKP	10 14 45.5	0.0
	baz=286							
Y55A	Saluda	126.07	52	P		PKiKP	10 14 45.6	+0.2
	baz=289							
X55A	Gracelyn & Ava	126.07	52	P		PKiKP	10 14 45.9	+0.5
	baz=289							
Z55A	Blythe	126.07	53	P		PKPdf	10 14 44.6	-0.3
	baz=288							
KMSC	Kings Mountain	126.08	51	PFAKE			10 15 00.0	+15
KMSC				LR	LR			
	comp=Z,1μm,19.0s							
KMSC	Kings Mountain	126.08	51	P		PKPdf	10 14 45.1	+0.2
	baz=290							
LATQ	La Tuque	126.11	34	P		PKPdf	10 14 43.8	-0.8
	baz=306							
O56A	Blue Knob Stat	126.12	44	PFAKE			10 15 00.0	+15
O56A				LR	LR			
	comp=Z,800nm,21.0s							
O56A	Blue Knob Stat	126.12	44	P		PKiKP	10 14 45.4	0.0
	baz=296,SNR=6.2							
DAVA	Damuels	126.17	326	*i* PKiKP		PKPdf	10 14 44.7	-0.3
	comp=Z,13nm,0.9s							
255A	Hazlehurst	126.19	55	PFAKE			10 15 00.0	+14
255A				LR	LR			
	comp=Z,900nm,20.0s							
255A	Hazlehurst	126.19	55	P		PKPdf	10 14 44.6	-0.6
	baz=287							
Q56A	Snyder Ridge,	126.21	46	P		PKPdf	10 14 45.2	+0.1
	baz=294							
P56A	Dayton Farm, R	126.26	45	P		PKPdf	10 14 45.3	+0.1
	baz=295,SNR=5.7							
555A	McAlpin	126.28	57	P		PKPdf	10 14 45.5	+0.1
	baz=285							
FUORN	Ofenpass-Fuorn	126.34	325	PFAKE			10 15 00.0	+14
FUORN				LR	LR			
	comp=Z,900nm,21.0s							
U56A	King	126.38	49	P		PKPdf	10 14 45.6	+0.1
	baz=292							
BFO	Black Forest	126.38	328	PFAKE			10 15 00.0	+14
BFO				LR	LR			
	comp=Z,900nm,19.0s							
BFO	Black Forest	126.38	328	*i* PKIKP		PKiKP	10 14 46.3	+0.7
T56A	Rocky Mt	126.39	48	P		PKiKP	10 14 45.8	-0.2
	baz=292							
JSC	Jenkinsville	126.43	52	PFAKE			10 15 00.0	+14
JSC				LR	LR			
	comp=Z,2μm,20.0s							
SSPA	Standing Stone	126.43	43	*e*PKPdf		PKiKP	10 14 45.6	-0.2
SSPA				LR	LR			
	comp=Z,1μm,19.0s							
SSPA	Standing Stone	126.43	43	P		PKPdf	10 14 45.4	-0.1
	baz=297							
S56A	Natural Bridge	126.48	47	P		PKPdf	10 14 45.5	-0.2
	baz=293							
V56A	Mocksville	126.49	50	*e*PKPdf		PKPdf	10 14 45.0	-0.7
V56A				LR	LR			
	comp=Z,1μm,21.0s							
V56A	Mocksville	126.49	50	P		PKiKP	10 14 46.0	-0.2
	baz=291							
X56A	White Oak	126.53	52	P		PKiKP	10 14 46.4	+0.1
	baz=290							
Y56A	Pelion	126.55	52	P		PKiKP	10 14 46.5	+0.2
	baz=289							
N57A	Milroy	126.60	43	P		PKPdf	10 14 45.7	-0.1
	baz=297							
LONY	Lake Ozonia	126.61	37	PFAKE			10 15 00.0	+14
LONY				LR	LR			
	comp=Z,800nm,20.0s							
LONY	Lake Ozonia	126.61	37	P		PKPdf	10 14 45.2	-0.5
	baz=302							
356A	Blackshear	126.64	56	P		PKiKP	10 14 46.6	0.0
	baz=287							
WLF	Walferdange	126.64	330	PFAKE			10 15 00.0	+14
WLF				LR	LR			
	comp=Z,8μm,21.0s							
Z56A	Williston	126.65	53	PFAKE			10 15 00.0	+13
Z56A				LR	LR			
	comp=Z,800nm,19.0s							
Z56A	Williston	126.65	53	P		PKPdf	10 14 45.4	-0.6
	baz=289							
W56A	Indian Trail	126.66	51	P		PKiKP	10 14 46.3	-0.2
	baz=291							
156A	Sylvania	126.76	54	P		PKiKP	10 14 46.7	-0.1
	baz=288							
Q57A	Strasburg	126.76	45	P		PKiKP	10 14 46.4	-0.2
	baz=295							
556A	Lake Butler	126.78	57	P		PKPdf	10 14 46.5	+0.1
	baz=286							
O57A	Amberson	126.79	44	P		PKPdf	10 14 46.3	+0.1
	baz=296							
656A	Willston	126.83	58	PFAKE			10 15 00.0	+13
656A				LR	LR			
	comp=Z,700nm,20.0s							
656A	Willston	126.83	58	P		PKiKP	10 14 46.9	-0.1
	baz=285							
P57A	Homestead Farm	126.85	45	P		PKPdf	10 14 46.2	-0.1
	baz=296							
S57A	Dark Hollow, R	126.89	47	PFAKE			10 15 00.0	+13
S57A				LR	LR			
	comp=Z,1μm,21.0s							
S57A	Dark Hollow, R	126.89	47	P		PKPdf	10 14 46.4	-0.1
	baz=294							
456A	Hilliard	126.90	56	PFAKE			10 15 00.0	+13
456A				LR	LR			
	comp=Z,800nm,19.0s							
BIRD	Birdtown, Kers	126.92	51	PFAKE			10 15 00.0	+13
BIRD				LR	LR			
	comp=Z,2μm,20.0s							
BINY	Binghamton	126.96	41	PFAKE			10 15 00.0	+13
BINY				LR	LR			
	comp=Z,1μm,20.0s							
BINY	Binghamton	126.96	41	P		PKPdf	10 14 46.3	-0.2
	baz=299							
JTS	Las Juntas de	126.97	82	*e*PKPdf		PKPdf	10 14 47.4	+0.2
JTS	Las Juntas de	126.97	82	*e*PKIKP		PKPdf	10 14 47.4	+0.2
T57A	Hurt	126.97	48	PFAKE			10 15 00.0	+13
T57A				LR	LR			
	comp=Z,1μm,21.0s							
T57A	Hurt	126.97	48	P		PKPdf	10 14 46.7	+0.1
	baz=293							
R57A	Stanardsville	126.99	46	P		PKiKP	10 14 46.9	-0.2
	baz=294							
V57A	Coltrane Farms	127.00	49	P		PKPdf	10 14 46.9	+0.2
	baz=292							
ECH	Echery	127.07	328	PFAKE			10 15 00.0	+13
ECH				LR	LR			
	comp=Z,1μm,21.0s							
FRNY	Flat Rock	127.09	37	*e*PKPdf		PKPdf	10 14 46.4	-0.2
FRNY				LR	LR			
	comp=Z,1μm,20.0s							
W57A	Gilead	127.11	50	PFAKE			10 15 00.0	+13
W57A				LR	LR			
	comp=Z,1μm,20.0s							
W57A	Gilead	127.11	50	P		PKiKP	10 14 47.4	+0.1
	baz=291							
U57A	Blanch	127.13	49	P		PKPdf	10 14 47.1	+0.2
	baz=292							
157A	Early Branch	127.15	54	P		PKiKP	10 14 47.8	+0.3
	baz=288							
NCB	Newcomb	127.17	38	*e*PKPdf		PKPdf	10 14 46.9	+0.1
NCB				LR	LR			
	comp=Z,900nm,21.0s							
Z57A	Bowman	127.19	53	P		PKiKP	10 14 47.9	+0.3
	baz=289							
Y57A	Sumter	127.19	52	PFAKE			10 15 00.0	+12
Y57A				LR	LR			
	comp=Z,2μm,20.0s							
Y57A	Sumter	127.19	52	P		PKiKP	10 14 47.8	+0.2
	baz=290							
X57A	Johnson Farm,	127.27	51	P		PKiKP	10 14 47.9	+0.1
	baz=290							
557A	Orange Park	127.34	57	P		PKiKP	10 14 47.9	-0.1
	baz=286							
757A	Oxford	127.34	58	P		PKPdf	10 14 47.6	+0.1
	baz=285							
657A	Interlachen	127.34	58	P		PKPdf	10 14 47.5	0.0
	baz=286							
257A	Skidaway Islan	127.35	54	PFAKE			10 15 00.0	+12
257A				LR	LR			
	comp=Z,1μm,20.0s							
R58A	Rapidan	127.36	46	P		PKPdf	10 14 46.9	-0.4
	baz=295							
857A	Zephyrhills	127.37	59	P		PKPdf	10 14 47.7	+0.1
	baz=284							
KSPA	Keystone Colle	127.42	41	*e*PKPdf		PKPdf	10 14 46.6	-0.7
KSPA				LR	LR			
	comp=Z,1μm,19.0s							
957A	Wimauma	127.51	60	PFAKE			10 15 00.0	+12
957A				LR	LR			
	comp=Z,600nm,20.0s							
T58A	Grand View Acr	127.53	48	P		PKPdf	10 14 47.7	0.0
	baz=294							
V58A	Windy Hill, Pi	127.54	49	P		PKPdf	10 14 47.6	-0.1
	baz=292							
R58B	Mineral	127.59	46	PFAKE			10 15 00.0	+12
R58B				LR	LR			
	comp=Z,1μm,21.0s							
R58B	Mineral	127.59	46	P		PKPdf	10 14 47.7	0.0
	baz=295							
MOQ	Mont Orford	127.60	36	*e*PKPdf		PKiKP	10 14 48.0	-0.1
ESPN	Las Esperanzas	127.60	80	PFAKE			10 15 00.0	+11
ESPN				LR	LR			
	comp=Z,500nm,20.0s							
S58A	Poland Farm, P	127.61	47	PFAKE			10 15 00.0	+12
S58A				LR	LR			
	comp=Z,900nm,21.0s							
S58A	Poland Farm, P	127.61	47	P		PKPdf	10 14 47.7	-0.1
	baz=294							
NHSC	New Hope	127.67	53	PFAKE			10 15 00.0	+11
NHSC				LR	LR			
	comp=Z,900nm,18.0s							
SDMD	Soldier's Deli	127.70	44	PFAKE			10 15 00.0	+12
SDMD				LR	LR			
	comp=Z,600nm,20.0s							
N59A	State Game Lan	127.72	42	PFAKE			10 15 00.0	+11
N59A				LR	LR			
	comp=Z,1μm,20.0s							
N59A	State Game Lan	127.72	42	P		PKiKP	10 14 48.3	-0.2
	baz=299							
U58A	Oxford	127.73	48	P		PKPdf	10 14 48.2	+0.2
	baz=293							
O59A	Robesonia	127.73	43	P		PKPdf	10 14 48.1	+0.2
	baz=298							
W58A	Raeford	127.73	50	P		PKPdf	10 14 48.2	+0.2
	baz=292							
Y58A	Scranton	127.80	52	PFAKE			10 15 00.0	+11
Y58A				LR	LR			
	comp=Z,2μm,20.0s							
Y58A	Scranton	127.80	52	P		PKiKP	10 14 48.6	-0.2
	baz=290							
X58A	Rowland	127.82	51	PFAKE			10 15 00.0	+11
X58A				LR	LR			
	comp=Z,2μm,20.0s							
ACCN	Adirondack Com	127.82	38	PFAKE			10 15 00.0	+11
ACCN				LR	LR			
	comp=Z,1μm,20.0s							
CBN	Corbin Frederi	127.85	46	PFAKE			10 15 00.0	+11
CBN				LR	LR			
	comp=Z,900nm,20.0s							
CBN	Corbin Frederi	127.85	46	P		PKPdf	10 14 48.2	0.0
	baz=295							
VT1	Waterbury	127.86	37	PFAKE			10 15 00.0	+11
VT1				LR	LR			
	comp=Z,1μm,19.0s							
Z58A	St. Stephen	127.88	52	P		PKiKP	10 14 48.9	-0.1
	baz=290							
P59A	Jarrettsville	127.89	44	P		PKiKP	10 14 48.5	-0.3
	baz=297							
658A	Bunnell	127.89	58	PFAKE			10 15 00.0	+11
658A				LR	LR			
	comp=Z,900nm,21.0s							
658A	Bunnell	127.89	58	P		PKiKP	10 14 48.8	-0.3
	baz=286							
958A	Wauchula	127.95	60	P		PKiKP	10 14 49.4	+0.1
	baz=284							
758A	Lake Helen	128.07	58	P		PKiKP	10 14 49.3	-0.2
	baz=286							
DWPF	Disney Wildern	128.09	59	PFAKE			10 15 00.0	+10
DWPF				LR	LR			
	comp=Z,800nm,21.0s							
DWPF	Disney Wildern

TRY	**Troy**	**128.17**	**39**	PFAKE		10 15 00.0	+11
TRY				LR	LR		
comp=Z,2μm,19.0s							
V59A	**Middlesex**	**128.21**	**49**	P	**PKPdf**	**10 14 49.0**	**+0.1**
baz=293							
T59A	**Double "B" Far**	**128.23**	**47**	PFAKE		10 15 00.0	+10
T59A				LR	LR		
comp=Z,1μm,20.0s							
T59A	**Double "B" Far**	**128.23**	**47**	P	**PKiKP**	**10 14 49.4**	**-0.2**
baz=294							
O60A	**Telford**	**128.25**	**43**	P	**PKiKP**	**10 14 49.4**	**-0.1**
baz=299							
W59A	**Clinton**	**128.28**	**50**	P	**PKPdf**	**10 14 48.8**	**-0.3**
baz=292							
LCO	**Las Campanas**	**128.31**	**135**	*e*P	**PKiKP**	**10 14 54.6**	**+4.2**
U59A	**Littleton**	**128.31**	**48**	PFAKE		10 15 00.0	+10
U59A				LR	LR		
comp=Z,1μm,21.0s							
U59A	**Littleton**	**128.31**	**48**	P	**PKPdf**	**10 14 49.0**	**-0.1**
baz=294							
P60A	**Greenville**	**128.34**	**43**	P	**PKPdf**	**10 14 49.3**	**+0.2**
baz=298							
CFA	**Coronel Fontan**	**128.35**	**139**	PKP	**PKiKP**	**10 14 50.1**	**0.0**
comp=Z,7.3nm,0.8s,baz=249,slow=4.5,SNR=9.8							
X59A	**McDuffie Farm,**	**128.38**	**51**	P	**PKPdf**	**10 14 49.3**	**0.0**
baz=292							
LBNH	**Lisbon**	**128.40**	**37**	PFAKE		10 15 00.0	+10
LBNH				LR	LR		
comp=Z,1μm,19.0s							
LBNH	**Lisbon**	**128.40**	**37**	P	**PKiKP**	**10 14 49.7**	**-0.1**
baz=305							
ODNJ	**Ogdensburg**	**128.41**	**41**	PFAKE		10 15 00.0	+10
ODNJ				LR	LR		
comp=Z,1μm,19.0s							
HNH	**Hanover**	**128.49**	**37**	PFAKE		10 15 00.0	+10
HNH				LR	LR		
comp=Z,1μm,20.0s							
059Z	**Ave Maria**	**128.51**	**61**	P	**PKPdf**	**10 14 49.2**	**-0.6**
baz=284							
859A	**Kempfer Cattle**	**128.56**	**59**	P	**PKiKP**	**10 14 50.4**	**-0.1**
baz=285							
Q60A	**Greensboro**	**128.57**	**44**	P	**PKPdf**	**10 14 49.8**	**+0.3**
baz=297							
059A	**Moore Haven**	**128.62**	**61**	PFAKE		10 15 00.0	+9.4
059A				LR	LR		
comp=Z,700nm,18.0s							
BRNJ	**Basking Ridge**	**128.64**	**42**	PFAKE		10 15 00.0	+10
BRNJ				LR	LR		
comp=Z,900nm,20.0s							
CNNC	**Cliffs of the**	**128.67**	**49**	PFAKE		10 15 00.0	+9.5
CNNC				LR	LR		
comp=Z,1μm,22.0s							
U60A	**Pendleton**	**128.73**	**48**	P	**PKPdf**	**10 14 49.9**	**0.0**
baz=294							
T60A	**Surry**	**128.76**	**47**	PFAKE		10 15 00.0	+9.4
T60A				LR	LR		
comp=Z,1μm,19.0s							
T60A	**Surry**	**128.76**	**47**	P	**PKiKP**	**10 14 50.3**	**-0.4**
baz=295							
KSCT	**Kent School, K**	**128.81**	**40**	PFAKE		10 15 00.0	+9.4
KSCT				LR	LR		
comp=Z,2μm,20.0s							
M61A	**Granite Spring**	**128.84**	**41**	P	**PKiKP**	**10 14 50.3**	**-0.4**
baz=301							
X60A	**Albert Glenn T**	**128.86**	**50**	P	**PKiKP**	**10 14 50.7**	**-0.2**
baz=292							
W60A	**Pink Hill**	**128.88**	**50**	P	**PKiKP**	**10 14 50.6**	**-0.3**
baz=293							
Y60A	**Bolivia**	**128.89**	**51**	PFAKE		10 15 00.0	+9.0
Y60A				LR	LR		
comp=Z,2μm,20.0s							
PAL	**Palisades**	**128.91**	**41**	PFAKE		10 15 00.0	+9.2
PAL				LR	LR		
comp=Z,1μm,21.0s							
PAL	**Palisades**	**128.91**	**41**	P	**PKiKP**	**10 14 50.4**	**-0.4**
baz=301							
V60A	**Jim Taylor Roa**	**128.94**	**49**	PFAKE		10 15 00.0	+9.0
V60A				LR	LR		
comp=Z,900nm,21.0s							
V60A	**Jim Taylor Roa**	**128.94**	**49**	P	**PKPdf**	**10 14 50.4**	**+0.1**
baz=294							
FFD	**Franklin Falls**	**129.00**	**37**	PFAKE		10 15 00.0	+9.1
FFD				LR	LR		
comp=Z,900nm,20.0s							
CLTB	**Caltabellotta**	**129.02**	**314**	PFAKE		10 15 00.0	+8.7
CLTB				LR	LR		
comp=Z,600nm,20.0s							
061Z	**Ochoppi**	**129.09**	**62**	PFAKE		10 15 00.0	+8.4
061Z				LR	LR		
comp=Z,800nm,21.0s							
PQI	**Presque Isle**	**129.11**	**32**	PFAKE		10 15 00.0	+8.9
PQI				LR	LR		
comp=Z,1μm,21.0s							
QUA2	**Belchertown**	**129.23**	**39**	PFAKE		10 15 00.0	+8.6
QUA2				LR	LR		
comp=Z,900nm,20.0s							
S61A	**Accomac**	**129.29**	**46**	PFAKE		10 15 00.0	+8.3
S61A				LR	LR		
comp=Z,1μm,20.0s							
U61A	**Possum Corner**	**129.31**	**48**	PFAKE		10 15 00.0	+8.2
U61A				LR	LR		
comp=Z,2μm,20.0s							
PKME	**Peaks-Kenny Pk**	**129.31**	**34**	PFAKE		10 15 00.0	+8.5
PKME				LR	LR		
comp=Z,800nm,20.0s							
PKME	**Peaks-Kenny Pk**	**129.31**	**34**	P	**PKiKP**	**10 14 51.2**	**-0.3**
baz=308							
V61A	**Roper**	**129.44**	**48**	PFAKE		10 15 00.0	+8.0
V61A				LR	LR		
comp=Z,1μm,21.0s							
V61A	**Roper**	**129.44**	**48**	P	**PKPdf**	**10 14 51.4**	**+0.1**
baz=294							
WVL	**Waterville**	**129.53**	**35**	PFAKE		10 15 00.0	+8.0
WVL				LR	LR		
comp=Z,1μm,19.0s							
HRV	**Adam Dziewonsk**	**129.60**	**38**	PFAKE		10 15 00.0	+7.8
HRV				LR	LR		
comp=Z,1μm,19.0s							
CLF	**Chambon-Foret**	**129.65**	**331**	PFAKE		10 15 00.0	+7.9
CLF				LR	LR		
comp=Z,2μm,19.0s							
BATG	**Bathurst New B**	**129.72**	**30**	PFAKE		10 15 00.0	+7.7
BATG				LR	LR		
comp=Z,1μm,22.0s							
WES	**Weston**	**129.81**	**38**	PFAKE		10 15 00.0	+7.4
WES				LR	LR		
comp=Z,1μm,19.0s							
BRYW	**Bryant College**	**129.94**	**39**	PFAKE		10 15 00.0	+7.1
BRYW				LR	LR		
comp=Z,1μm,19.0s							
V62A	**Hyde County Ai**	**129.99**	**48**	PFAKE		10 15 00.0	+6.9
V62A				LR	LR		
comp=Z,1μm,21.0s							
EMMW	**East Machias**	**130.67**	**34**	PFAKE		10 15 00.0	+5.8
EMMW				LR	LR		
comp=Z,700nm,20.0s							
GGN	**Saint George**	**130.74**	**33**	PFAKE		10 15 00.0	+5.6
GGN				LR	LR		
comp=Z,1μm,20.0s							
ATAH	**Atahualpa**	**131.25**	**105**	PKP	**PKiKP**	**10 14 58.7**	**+1.9**
comp=Z,27nm,0.9s,baz=248,slow=4.1,SNR=10							
ATAH				SKPbc	**SKPab**	**10 18 19.9**	**+1.2**
comp=Z,10nm,1.0s,baz=174,slow=1.5,SNR=5.3							
NNA	**Nana**	**131.27**	**112**	PKP	**PKiKP**	**10 14 57.0**	**+0.7**
comp=Z,12nm,0.9s,baz=203,slow=13,SNR=2.5							
LMN	**Caledonia Moun**	**131.32**	**31**	PFAKE		10 15 10.0	+14
LMN				LR	LR		
comp=Z,1μm,21.0s							
DRLN	**Deer Lake**	**132.03**	**23**	PFAKE		10 15 10.0	+13
DRLN				LR	LR		
comp=Z,2μm,19.0s							
KEST	**Kesra**	**132.63**	**314**	PKP	**PKiKP**	**10 14 59.0**	**+0.4**
comp=Z,4.0nm,0.7s,baz=14,slow=4.2,SNR=3.3							
KEST				SKPbc	**SKPbc**	**10 18 22.6**	**+0.4**
comp=Z,7.2nm,1.0s,baz=90,slow=17,SNR=4.4							
OTAV	**Otavalo**	**132.69**	**96**	PFAKE		10 15 10.0	+10
OTAV				LR	LR		
comp=Z,300nm,19.0s							
OTAV	**Otavalo**	**132.69**	**96**	*e*P	**PKiKP**	**10 15 03.8**	**+4.0**
GBN	**Guysborough**	**133.27**	**29**	PFAKE		10 15 10.0	+11
GBN				LR	LR		
comp=Z,2μm,22.0s							
LVC	**Limon Verde**	**133.31**	**129**	SKPab	**SKPab**	**10 18 28.5**	**+1.3**
comp=Z,1.5nm,0.5s,baz=241,slow=8.3,SNR=3.3							
LVC	**Limon Verde**	**133.31**	**129**	*e*P	**PKiKP**	**10 15 03.2**	**+2.5**
GCUF	**Volcan Galeras**	**133.93**	**95**	*e*P	**PKiKP**	**10 15 02.9**	**+0.5**
BBAC	**Balboa, Cauca**	**134.13**	**93**	*e*P	**PKPdf**	**10 15 01.6**	**+0.5**
MNMC	**Minye Minye**	**134.61**	**125**	*e*PKPdf	PKPpre	10 14 57.2	
POPC	**Popayan, Colom**	**134.75**	**93**	*e*P	**PKPdf**	**10 15 02.5**	**+0.2**
SOTA	**Rioblanco**	**134.77**	**93**	*e*P	**PKiKP**	**10 15 04.3**	**+0.2**
YOTC	**Yotoco, Valle**	**135.23**	**91**	*e*P	**PKiKP**	**10 15 04.2**	**-0.4**
MARP	**Paez Belalcaza**	**135.50**	**93**	*e*P	**PKiKP**	**10 15 05.2**	**-0.1**
HELC	**Santa Helena**	**136.19**	**88**	*e*P	**PKiKP**	**10 15 06.0**	**-0.8**
PTLC	**Puerto Leguiza**	**136.29**	**97**	*e*P	**PKiKP**	**10 15 06.5**	**-0.1**
GUY2C	**Guyana, Caldas**	**136.30**	**89**	*e*P	**PKiKP**	**10 15 06.7**	**-0.4**
ORTC	**Ortega, Tolima**	**136.31**	**91**	*e*P	**PKiKP**	**10 15 05.9**	**-0.7**
PRAC	**Prado**	**136.65**	**91**	*e*P	**PKPdf**	**10 15 05.8**	**+0.2**
LPAZ	**La Paz**	**137.22**	**122**	PKP	**PKiKP**	**10 15 08.2**	**-0.9**
comp=Z,5.1nm,0.8s,baz=262,slow=0.9,SNR=5.5							
LPAZ				SKPbc	**SKPbc**	**10 18 38.8**	**+0.7**
comp=Z,4.3nm,1.2s,baz=245,slow=4.6,SNR=1.7							
LPAZ	**La Paz**	**137.22**	**122**	*e*PKPpre	PKPpre	10 15 00.8	
LPAZ	**La Paz**	**137.22**	**122**	*e*PKIKP	PKPpre	10 15 00.8	
LPAZ	**La Paz**	**137.22**	**122**	*e*P	**PKiKP**	**10 15 10.9**	**+1.8**
PTBC	**PUERTO BERRIO**	**137.28**	**87**	*e*P	**PKPdf**	**10 15 05.8**	**-0.9**
ROSC	**El Rosal**	**137.31**	**90**	PKP	**PKPdf**	**10 15 07.7**	**+0.4**
comp=Z,26nm,0.8s,baz=224,slow=7.0,SNR=9.3							
ROSC	**El Rosal**	**137.31**	**90**	*e*PKPdf	**PKPdf**	**10 15 06.2**	**-1.0**
ROSC	**El Rosal**	**137.31**	**90**	*e*P	**PKPdf**	**10 15 03.8**	**-3.4**
MACC	**Macarena, Meta**	**137.51**	**94**	*e*P	**PKPdf**	**10 15 07.7**	**+0.5**
OCAC	**Ocana**	**138.45**	**85**	*e*P	**PKiKP**	**10 15 11.1**	**0.0**
RUSC	**La Rusia**	**138.61**	**88**	*e*P	PKPpre	10 15 04.5	
ESDC	**Sonseca Array**	**138.74**	**327**	PKP	**PKPdf**	**10 15 07.3**	**-1.4**
comp=Z,0.3nm,0.4s,baz=3.6,slow=5.9,SNR=3.1							
ESDC				SKPbc	**SKPbc**	**10 18 38.9**	**-2.2**
comp=Z,0.4nm,0.4s,baz=103,slow=33,SNR=3.9							
ESLA	**Sonseca Array**	**138.74**	**327**	PFAKE		10 15 20.0	+9.1
ESLA				LR	LR		
comp=Z,1μm,21.0s							
CPUP	**Villa Florida**	**138.84**	**143**	PKP	**PKPdf**	**10 15 08.3**	**-0.9**
comp=Z,2.5nm,0.7s,baz=258,slow=1.9,SNR=2.3							
CPUP	**Villa Florida**	**138.84**	**143**	*e*P	**PKiKP**	**10 15 13.0**	**+1.6**
SDDR	**Presa de Saban**	**139.31**	**68**	PFAKE		10 15 20.0	+7.4
SDDR				LR	LR		
comp=Z,700nm,19.0s							
CNLB	**Canela**	**139.81**	**153**	*e*P	**PKiKP**	**10 15 16.3**	**+2.9**
MTE	**Manteigas**	**140.01**	**331**	PFAKE		10 15 20.0	+6.5
MTE				LR	LR		
comp=Z,2μm,21.0s							
COI	**Coimbra**	**140.57**	**332**	PFAKE		10 15 20.0	+5.5
COI				LR	LR		
comp=Z,2μm,20.0s							
ITAB	**Concordia**	**140.96**	**150**	*e*P	**PKiKP**	**10 15 18.1**	**+2.3**
SDV	**Santo Domingo**	**141.10**	**84**	*e*PKPdf	**PKPdf**	**10 15 11.3**	**-2.6**
SDV	**Santo Domingo**	**141.10**	**84**	*e*P	**PKiKP**	**10 15 16.9**	**+0.3**
SFS	**San Fernando**	**142.27**	**326**	PFAKE		10 15 30.0	+12
SFS				LR	LR		
comp=Z,800nm,20.0s							
PTGB	**Pitanga**	**143.05**	**148**	*e*P	**PKiKP**	**10 15 21.3**	**+1.1**
SIV	**San Ignacio**	**143.14**	**128**	PKP	PKPbc	10 15 14.7	+0.5
comp=Z,7.5nm,0.8s,baz=244,slow=2.4,SNR=18							
SIV				SKPbc	**SKiKP**	**10 18 55.3**	**+1.0**
comp=Z,6.2nm,1.1s,baz=203,slow=2.8,SNR=4.2							
OBIP	**Obispado Ponce**	**143.85**	**68**	*e*PKPpre	PKPpre	10 15 14.4	
AQDB	**Aquidauana**	**144.14**	**139**	*e*P	**PKiKP**	**10 15 22.8**	**+0.4**
SJG	**San Juan**	**144.25**	**68**	*e*PKPdf	**PKPab**	**10 15 16.4**	**-0.5**
SJG				LR	LR		
comp=Z,700nm,18.0s							
SJG	**San Juan**	**144.25**	**68**	*e*PKIKP	**PKPab**	**10 15 16.4**	**-0.5**
SJG				MLR	MLR		
comp=Z,700nm,18.0s							
HUMP	**Col San Antoni**	**144.52**	**68**	*e*PKPdf	**PKPab**	**10 15 17.6**	**-0.4**
MTP	**Monte Pirata**	**144.80**	**68**	*e*PKPdf	**PKPab**	**10 15 18.7**	**-0.3**
SPB	**Sao Paulo**	**146.28**	**153**	*e*PKPdf	**PKPdf**	**10 15 22.7**	**+0.3**
SPB	**Sao Paulo**	**146.28**	**153**	*e*P	**PKiKP**	**10 15 27.3**	**+0.5**
TOB2	**Torodi Ar. Sit**	**146.69**	**284**	PFAKE		10 15 30.0	+2.2
TOB2				LR	LR		
comp=Z,400nm,18.0s							
TOA0	**Torodi Ar. Sit**	**146.71**	**284**	*e*PKPdf	**PKPdf**	**10 15 22.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**146.71**	**284**	PKPbc	**PKPbc**	**10 15 24.4**	**-0.7**
comp=Z,15nm,0.6s,baz=52,slow=2.7,SNR=152							
TORD				SKPbc	**SKiKP**	**10 19 02.2**	**+0.6**
comp=Z,3.2nm,0.9s,baz=40,slow=1.3,SNR=4.4							
TOB5	**Torodi Ar. Sit**	**146.72**	**284**	PFAKE		10 15 30.0	+2.1
TOB5				LR	LR		
comp=Z,400nm,19.0s							
TOC7	**Torodi Ar. Sit**	**146.72**	**284**	PFAKE		10 15 30.0	+2.1
TOC7				LR	LR		
comp=Z,400nm,20.0s							
RCLB	**Rio Claro- Sao**	**147.24**	**152**	*e*P	**PKPab**	**10 15 28.2**	**0.0**
SKI	**Saint Kitts**	**147.59**	**68**	PFAKE		10 15 40.0	+10
SKI				LR	LR		
comp=Z,800nm,20.0s							
BB19B	**Bebedouro**	**147.89**	**149**	*e*P	**PKiKP**	**10 15 29.6**	**-0.6**
ITRB	**Iturama**	**148.00**	**145**	*e*P	**PKPbc**	**10 15 28.8**	**+0.2**
DUB01	**Friburgo-RJ**	**149.66**	**160**	*e*P	**PKPbc**	**10 15 32.6**	**-0.2**
BSCB	**Bom Sucesso**	**149.72**	**155**	*e*P	**PKPbc**	**10 15 32.3**	**-0.7**
SVB	**Belmont**	**149.89**	**75**	PFAKE		10 15 40.0	+0.9
SVB				LR	LR		
comp=Z,500nm,19.0s							
CAM01	**Campos-RJ**	**150.14**	**161**	*e*P	**PKPbc**	**10 15 34.0**	**+0.1**
CLDB	**Colider**	**150.25**	**125**	*e*P	**PKPbc**	**10 15 33.5**	**-0.9**
PTGA	**Pitinga**	**150.65**	**103**	PKP	**PKPdf**	**10 15 30.4**	**+0.5**
comp=Z,21nm,0.9s,baz=240,slow=1.0,SNR=22							
PTGA				PKPbc	**PKiKP**	**10 15 35.7**	**-0.3**
comp=Z,131nm,0.8s,baz=240,slow=3.3,SNR=64							
PTGA	**Pitinga**	**150.65**	**103**	*e*PKPdf	**PKPdf**	**10 15 29.3**	**-0.6**
PTGA	**Pitinga**	**150.65**	**103**	*e*P	**PKPbc**	**10 15 33.8**	**-1.5**
ALF01	**Guarapari-ES**	**151.57**	**161**	*e*P	**PKPbc**	**10 15 35.0**	**-2.2**
BDFB	**Brasilia**	**152.57**	**143**	PKP	**PKPdf**	**10 15 33.6**	**+0.8**
comp=Z,5.8nm,0.9s,baz=214,slow=3.6,SNR=5.0							
BDFB				PKPbc	**PKPbc**	**10 15 39.9**	**+0.1**
comp=Z,14nm,0.7s,baz=192,slow=1.9,SNR=14							
BDFB	**Brasilia**	**152.57**	**143**	*e*PKPdf	**PKPdf**	**10 15 32.7**	**-0.1**
BDFB	**Brasilia**	**152.57**	**143**	*e*PKIKP	**PKPdf**	**10 15 32.7**	**-0.1**
RIB01	**Linhares ES**	**152.89**	**161**	*e*P	**PKPbc**	**10 15 37.4**	**-2.9**
KIC	**Kosan Boka**	**153.47**	**271**	*e*PKIKP	**PKiKP**	**10 15 43.1**	**+1.3**
comp=Z,143nm,1.1s							
DBIC	**Dimbokro**	**153.59**	**272**	PKP	**PKPdf**	**10 15 34.6**	**+0.4**
comp=Z,14nm,1.0s,baz=100,slow=6.1,SNR=5.2							
DBIC				PKPbc	**pPKPdf**	**10 15 42.6**	**-1.2**
comp=Z,30nm,0.8s,baz=65,slow=2.6,SNR=20							
DBIC				PKPab	**PKPab**	**10 15 55.0**	**+0.4**
comp=Z,27nm,0.9s,baz=71,slow=3.5,SNR=5.7							
DBIC	**Dimbokro**	**153.59**	**272**	*e*PKPdf	**PKPdf**	**10 15 34.5**	**+0.3**
DBIC				*e*PKPbc	**PKPbc**	**10 15 41.8**	**-0.2**
DBIC				*e*PKPab	**PKPab**	**10 15 55.4**	**+0.9**
DBIC	**Dimbokro**	**153.59**	**272**	*e*PKIKP	**PKPdf**	**10 15 34.5**	**+0.3**
DBIC				*e*		10 15 41.8	
LIC	**Lamto**	**153.75**	**271**	*e*PKIKP	**PKiKP**	**10 15 43.4**	**+1.0**
comp=Z,140nm,0.9s							
TIC	**Toumodi**	**153.75**	**272**	*e*PKIKP	**PKiKP**	**10 15 43.6**	**+1.2**
MDP	**Montagnes des**	**158.87**	**93**	PKP	**PKPdf**	**10 15 42.0**	**+0.9**
comp=Z,12nm,0.9s,baz=268,slow=2.1,SNR=3.7							
NBPA	**Parau_RN**	**166.60**	**155**	*e*P	**PKPdf**	**10 15 55.5**	**+6.8**

IDC 24 10:05:31.7±3.3, 7°.19S×150°.42E, h0^{km}, mb3.5/2, mb1 3.9/2, mb1mx3.5/32, mbtmp3.7/2, Error ellipse: s-maj=126.8km s-min=46.0km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.10**	**229**	P	P	10 10 05.5	-1.7
0.9nm,0.3s,baz=54,slow=11,SNR=0.9							
ASAR	**Alice Springs**	**22.80**	**222**	P	P	10 10 36.8	+0.5
1.2nm,0.6s,baz=58,slow=9.2,SNR=10							
TORD	**Torodi Ar. Bea**	**148.67**	**283**	PKPbc	PKPbc	10 25 21.7	-0.3
1.0nm,0.5s,baz=61,slow=3.1,SNR=17							

*GUC **24** 10:07:09.2±0.4, 37°.37S×74°.36W, h10^{km}±8^{km}, ML3.8*
*ISCJB **24** 10:07:11.1±1.6, 37°.38S±0°.07×74°.3W±0°.2, h33^{km}, mb3.3/3, Error ellipse: s-maj=18.8km s-min=9.9km az=14.7*
*IDC **24** 10:07:16.2±1.8, 37°.17S×72°.68W, h0^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.6/24, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=60.7km s-min=19.7km az=74.0*
ISC 24 10:07:13.9±2.2, 37°.33S±0°.08×74°.2W±0°.2, h35^{km}, n10, σ1°76/10, mb3.4/3, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.00**	**61**	IAML		10 07 52.5	
comp=N,4μm,0.4s							
COCH	**Cobquecura**	**1.65**	**44**	*e*P	**Pn**	**10 07 38.6**	**-1.9**
COCH				*e*S	**Sn**	**10 08 01.2**	**+0.8**
COCH				IAML		10 08 11.8	
comp=E,523nm,0.8s							
CCHI	**Chillan**	**1.85**	**67**	*e*P	**Pn**	**10 07 42.1**	**-1.1**
CCHI				*e*S	**Sn**	**10 08 06.9**	**+1.5**
CCHI				IAML		10 08 21.5	
comp=E,5μm,0.8s							
GO05	**Huala**	**2.96**	**39**	*e*P	**Pn**	**10 07 57.8**	**-0.7**
GO05				IAML		10 09 01.5	
comp=E,244nm,0.7s							
GO06	**Curarrehue**	**3.11**	**137**	*e*P	**Pn**	**10 07 59.7**	**-0.9**
GO06				IAML		10 08 53.0	
comp=N,279nm,0.4s							
PLCA	**Paso Flores**	**4.43**	**141**	Pn	**Pn**	**10 08 18.2**	**-0.5**
comp=N,0.7nm,0.3s,baz=329,slow=13,SNR=18							
PLCA				Lg	Lg	10 09 21.0	
comp=N,2.7nm,0.3s,baz=210,slow=22,SNR=3.4							
CFA	**Coronel Fontan**	**7.54**	**43**	Pn	**Pn**	**10 08 59.7**	**-1.8**
comp=N,0.7nm,0.3s,baz=224,slow=11,SNR=3.6							
CFA				Lg	Lg	10 10 47.0	
comp=N,0.2nm,0.3s,baz=72,slow=20,SNR=2.6							
LPAZ	**La Paz**	**21.64**	**16**	P	**P**	**10 12 04.8**	**+2.9**
comp=N,1.3nm,0.9s,baz=203,slow=6.1,SNR=4.0							
SIV	**San Ignacio**	**24.23**	**32**	P	**P**	**10 12 26.8**	**-0.8**
comp=N,0.6nm,0.8s,baz=207,slow=14,SNR=2.9							
TXAR	**Lajitas Array**	**71.84**	**333**	P	P	10 18 43.2	+10
comp=N,0.6nm,0.9s,baz=150,slow=6.2,SNR=4.5							

ROM 24 10:12:54.4±0.1, 44°.158N±0°.007×10°.15E±0°.01, h8^{km}, Md1.5/6, Error ellipse: s-maj=1.0km s-min=0.5km az=224.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.01**	**37**	P	Pg	10 12 56.1	+0.2
EQUI				S	Sg	10 12 56.7	-0.2
EQUI				AML	AML		
comp=E,1255μm,0.1s							
EQUI				AML	AML		
comp=N,2010μm,0.3s							
EQUI				AML	AML		
comp=E,1255μm,0.1s							
EQUI				AML	AML		
comp=N,2010μm,0.3s							
EQUI				AML	AML		
comp=E,1255μm,0.1s							
EQUI				AML	AML		
comp=N,2010μm,0.3s							
EQUI				END			
EQUI				END			
EQUI				END			
EQUI				END			
T0912	**Minucciano (LU**	**0.05**	**78**	P	Pg	10 12 56.6	+0.4
T0912				S	Sg	10 12 57.7	+0.3
T0912				AML	AML		
comp=E,3415μm,0.1s							
T0912				AML	AML		
comp=N,4475μm,0.4s							
T0912				AML	AML		
comp=E,3510μm,0.1s							
T0912				AML	AML		
comp=N,4360μm,0.4s							
T0912				AML	AML		
comp=E,3410μm,0.1s							
T0912				AML	AML		
comp=N,4480μm,0.4s							
T0912				AML	AML		
comp=E,3510μm,0.1s							
T0912				AML	AML		
comp=N,4360μm,0.4s							
T0912				AML	AML		
comp=E,3410μm,0.1s							
T0912				AML	AML		
comp=E,3510μm,0.1s							
T0912				AML	AML		
comp=N,4475μm,0.4s							
T0912				AML	AML		
comp=N,4360μm,0.4s							
T0912				END			
T0912				END			
T0912				END			
T0912				END			
VLC	**Villacollemand**	**0.17**	**90**	P	Pg	10 12 58.8	+0.8
VLC				S	Sg	10 13 01.6	+1.1
VLC				END			
VLC				END			
VLC				END			
VLC				END			
SARO	**Sassorosso**	**0.19**	**82**	P	Pg	10 12 59.0	+0.7
SARO				S	Sg	10 13 01.9	+1.0
SARO				END			
SARO				END			
SARO				END			
SARO				END			
CARD	**Cardoso**	**0.28**	**118**	P	Pb	10 13 00.9	-0.7
CARD				S	Sg	10 13 05.0	+1.4
CARD				END			
CARD				END			
CARD				END			
CARD				END			
ERBM	**Eremo**	**0.32**	**36**	P	Pb	10 13 01.9	-0.6
ERBM				S	Sb	10 13 07.4	-0.5
GRAM	**Graiana**	**0.34**	**350**	P	Pg	10 13 01.8	+0.7
GRAM				S	Sb	10 13 07.1	-1.2
BDI	**Bagni Di Lucca**	**0.34**	**106**	P	Pb	10 13 02.2	-0.5
BDI				S	Sb	10 13 07.0	-1.4
MAIM	**Mastiano**	**0.35**	**134**	P	Pb	10 13 02.5	-0.4
MAIM				S	Sb	10 13 07.5	-1.0
MAIM				END			
MAIM				END			

*NSSP **24** 10:16:23.8, 40°.77N×44°.20E, h10^{km}, Ms3.0*
*TIF **24** 10:16:23.8, 40°.78N×44°.22E, h11^{km}±1^{km}*
*ISK **24** 10:16:23.1, 40°.78N×44°.20E, h1^{km}, ML3.2/9*
*DDA **24** 10:16:24.0, 40°.78N×44°.21E, h15^{km}±1^{km}, ML3.4*
*AZER **24** 10:16:26.5±1.1, 40°.69N×44°.36E, h3^{km}, ml3.3/19, Error ellipse: s-maj=9.4km s-min=2.3km az=124.0*
**ISC 24 10:16:24.0±0.8, 40°.78

TBLG	**Delisi**	**1.02**	**22**	*i* P		**Pn**	**10 16 44.8**	**+0.6**
TBLG				*i* S		**Sb**	**10 16 57.1**	**+0.1**
TBLG				IAML_P				
	comp=Z,11μm,0.2s							
SEAG	**Tbilisi Sea**	**1.07**	**24**	P		**Sn**	**10 17 00.0**	**+0.4**
GDB	**GEDABAY**	**1.16**	**92**	P		**Pb**	**10 16 46.0**	**-0.1**
	SNR=30							
GDB				S		**Sg**	**10 17 01.9**	**+0.3**
HYR	**Heyderabad**	**1.16**	**156**	P		**Pb**	**10 16 45.9**	**-0.2**
	SNR=19							
HYR				S		**Sn**	**10 17 02.4**	**+0.5**
DYDN	**Diyadin**	**1.30**	**199**	*i* P		**Pn**	**10 16 47.4**	**-0.7**
DYDN				*i* S		**Sg**	**10 17 07.3**	**+1.2**
EPOS	**Posof**	**1.34**	**303**	*i* P		**Pg**	**10 16 50.0**	**+0.1**
SENK	**Senkaya-Erzuru**	**1.44**	**262**	PN		**Pb**	**10 16 50.7**	**-0.2**
AGRB	**Hanur-Agry**	**1.53**	**219**	PN		**Pb**	**10 16 52.3**	**-0.1**
DDFL	**Dedoflistskaro**	**1.58**	**64**	P		**Pn**	**10 16 51.1**	**-0.6**
DDFL				S		**Sg**	**10 17 16.1**	**+1.3**
DDFL	**Dedoflistskaro**	**1.58**	**64**	*i* P		**Pn**	**10 16 51.2**	**-0.6**
DDFL				*i* S		**Sn**	**10 17 12.7**	**+0.6**
GANJ	**Ganja**	**1.60**	**94**	P		**Pb**	**10 16 53.5**	**0.0**
	SNR=54							
GANJ				S		**Sb**	**10 17 14.6**	**+1.0**
EATA	**Eleskirt**	**1.61**	**236**	*i* P		**Pg**	**10 16 54.5**	**-0.6**
EATA				IAML_P				
	comp=Z,4μm,0.3s							
GUDG	**Gudauri**	**1.69**	**6**	P		**Pg**	**10 16 56.1**	**-0.4**
GUDG				S		**Sg**	**10 17 18.8**	**+0.2**
SBZ	**Shahbuz**	**1.72**	**143**	P		**Pb**	**10 16 56.0**	**+0.5**
	SNR=5.9							
SBZ				S		**Sg**	**10 17 19.0**	**-0.3**
TUTA	**Tutak**	**1.75**	**219**	*i* P		**Pg**	**10 16 57.7**	**0.0**
DAGI	**Agillar**	**1.78**	**280**	*i* P		**Pg**	**10 16 57.4**	**-0.8**
DAGI				*i* S		**Sg**	**10 17 19.9**	**-1.3**
DAGI				IAML_P				
	comp=Z,3μm,0.3s							
TKB	**Tkibuli**	**1.82**	**330**	P		**Pb**	**10 16 57.9**	**+0.6**
TKB				S		**Sg**	**10 17 21.3**	**-1.3**
LGD	**Lagodekhi**	**1.85**	**55**	P		**Pb**	**10 16 58.1**	**+0.5**
LGD				S		**Sg**	**10 17 22.9**	**-0.6**
NAX	**Nakhchivan**	**1.88**	**148**	P		**Pb**	**10 16 58.6**	**+0.3**
	SNR=7.9							
NAX				S		**Sg**	**10 17 24.7**	**+0.2**
ONI	**Oni**	**1.90**	**342**	PN		**Pb**	**10 16 57.9**	**-0.7**
ONI	**Oni**	**1.90**	**342**	P		**Pg**	**10 16 59.9**	**-0.5**
ONI				S		**Sg**	**10 17 25.3**	**+0.2**
HOMI	**Horasan**	**1.92**	**248**	*i* P		**Pb**	**10 16 58.8**	**-0.2**
HOMI				IAML_P				
	comp=Z,2μm,0.3s							
DBAD	**Bademkaya**	**1.93**	**278**	*i* P		**Pb**	**10 16 59.1**	**-0.1**
DBAD				IAML_P				
	comp=Z,2μm,0.2s							
KOPR	**Koprukoy-ERZUR**	**1.98**	**247**	PN		**Pn**	**10 16 58.6**	**+1.2**
ZKTA	**Zakatala**	**2.00**	**64**	P		**Pb**	**10 17 00.2**	**-0.1**
	SNR=6.8							
ZKTA				S		**Sg**	**10 17 27.3**	**-1.0**
DBOC	**Borcka**	**2.02**	**287**	*i* P		**Pb**	**10 17 00.7**	**+0.1**
DBOC				IAML_P				
	comp=Z,1μm,0.3s							
BCA	**Borcka**	**2.08**	**289**	PN		**Pb**	**10 17 00.1**	**-1.5**
BATM	**Batumi**	**2.08**	**294**	PN		**Pn**	**10 17 00.0**	**+1.4**
MNGR	**Mingechevir, A**	**2.17**	**89**	P		**Pb**	**10 17 02.5**	**-0.7**
	SNR=6.0							
MNGR				S		**Sg**	**10 17 32.7**	**-1.1**
SEKA	**Sheki**	**2.29**	**78**	P		**Pb**	**10 17 04.7**	**-0.5**
	SNR=30							
SEKA				S		**Sg**	**10 17 35.8**	**-1.9**
ORD	**Ordubad**	**2.30**	**143**	P		**Pb**	**10 17 04.9**	**-0.5**
	SNR=9.1							
ORD				S		**Sg**	**10 17 36.0**	**-1.8**
BRDA	**Brd**	**2.31**	**102**	P		**Pb**	**10 17 06.8**	**+1.3**
	SNR=4.0							
BRDA				S		**Sg**	**10 17 40.0**	**+1.7**
ZRD	**Zardab**	**2.68**	**100**	P		**Pb**	**10 17 13.0**	**+1.1**
	SNR=3.9							
ZRD				S		**Sg**	**10 17 51.8**	**+1.6**
QBL	**Gabala**	**2.74**	**85**	P		**Pb**	**10 17 13.0**	**+0.1**
	SNR=9.7							
QBL				S		**Sg**	**10 17 51.4**	**-0.7**
KOPT	**Kop Dagi**	**2.95**	**256**	*i* P		**Pb**	**10 17 17.2**	**+0.6**
XNQ	**Khinaliq**	**2.99**	**81**	P		**Pb**	**10 17 15.9**	**-1.3**
	SNR=8.5							
XNQ				S		**Sg**	**10 17 57.3**	**-2.7**
KDMR	**Kurdemir**	**3.04**	**96**	S		**Sg**	**10 18 01.2**	**-0.5**
QSAR	**Qusar**	**3.13**	**75**	P		**Pb**	**10 17 20.0**	**+0.4**
QSAR				S		**Sb**	**10 18 00.3**	**+2.6**
PQL	**Pirkuli**	**3.31**	**88**	P		**Pb**	**10 17 20.3**	**-2.5**
	SNR=10							
PQL				S		**Sg**	**10 18 09.8**	**-0.7**
GLBA	**Clilabad**	**3.55**	**114**	S		**Sg**	**10 18 14.2**	**-3.8**
LRK	**Lerik**	**3.82**	**123**	P		**Pb**	**10 17 32.3**	**+0.8**
LRK				S		**Sg**	**10 18 23.7**	**-3.1**

*IDC **24** 10:20:05.7±1.5, 6°.34S×148°.70E, h0km, mb3.9/5, mb1 4.2/8, mb1mx3.9/33, mbtmp4.1/8, ML3.9/3, Error ellipse: s-maj=59.5km s-min=17.9km az=104.0*
*ISCJB **24** 10:20:06.3±0.7, 6°.32S±0°.06×148°.5E±0°.1, h10km, mb4.1/8, Error ellipse: s-maj=17.7km s-min=8.1km az=16.7*
*NEIC **24** 10:20:08.3±1.3, 6°.31S×148°.45E, h10km, mb4.2/8, Error ellipse: s-maj=20.5km s-min=11.7km az=124.0*
ISC 24 10:20:08.3±0.7, 6°.29S±0°.08×148°.4E±0°.1, h10km, n22, σ1°25/25, mb4.1/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.33**	**201**	Pn	**Pn**	**10 21 02.2**	**+1.8**
	108nm,0.3s,baz=349,slow=4.5,SNR=151						
PMG				Sn	**Sn**	**10 21 41.3**	**+1.3**
	195nm,0.3s,baz=314,slow=21,SNR=14						
PMG	**Port Moresby**	**3.33**	**201**	*e*Pn	**Pn**	**10 21 02.4**	**+2.0**
PMG				*e*Sn	**Sn**	**10 21 40.8**	**+0.8**
PMG				*e*Sg	**Sn**	**10 21 41.4**	**+1.3**
RABL	**Rabaul**	**4.30**	**61**	*e*Pn	**Pn**	**10 21 16.1**	**+2.2**
CTA	**Charters Tower**	**13.87**	**188**	Pn	**Pn**	**10 23 22.5**	**-2.6**
	0.2nm,0.3s,baz=14,slow=8.3,SNR=2.7						
CTAO	**Charters Tower**	**13.87**	**188**	*e*Pn	**Pn**	**10 23 24.6**	**-0.5**
MTN	**Manton Dam**	**18.21**	**248**	*e*P	**P**	**10 24 22.2**	**+0.6**
	18nm,1.1s						
EIDS	**Eidsvold**	**19.14**	**173**	*e*P	**P**	**10 24 31.0**	**-0.8**
	10nm,0.8s						
WB2	**Warramunga Arr**	**19.24**	**224**	*e*P	**P**	**10 24 33.6**	**+0.7**
	11nm,1.0s						
WR1	**Warramunga Arr**	**19.24**	**224**	*e*P	**P**	**10 24 33.4**	**+0.3**
WRA	**Warramunga Arr**	**19.25**	**224**	P	**P**	**10 24 33.4**	**+0.3**
	2.1nm,0.3s,baz=55,slow=11,SNR=12						
AS31	**Alice Springs**	**22.19**	**217**	*e*P	**P**	**10 25 04.9**	**0.0**
	7.0nm,0.8s						
ASAR	**Alice Springs**	**22.19**	**217**	P	**P**	**10 25 05.2**	**+0.2**
	5.2nm,0.5s,baz=58,slow=9.1,SNR=54						
STKA	**Stephens Creek**	**26.23**	**193**	P	**P**	**10 25 43.3**	**-0.3**
	2.5nm,0.7s,baz=25,slow=12,SNR=7.7						
STKA	**Stephens Creek**	**26.23**	**193**	*e*P	**P**	**10 25 43.3**	**-0.3**
	1.6nm,0.8s						
FORT	**Forrest**	**30.94**	**216**	*e*P	**P**	**10 26 24.4**	**-1.2**
	18nm,1.0s						
JNU	**Nakatsue**	**42.58**	**338**	*e*P	**P**	**10 28 05.5**	**+0.8**
	7.1nm,1.0s						
KSRS	**Korea Array**	**47.53**	**338**	P	**P**	**10 28 45.4**	**+1.5**
	1.1nm,0.7s,baz=152,slow=8.7,SNR=8.2						
MK32	**Makanchi Array**	**78.60**	**320**	*e*P	**P**	**10 32 09.4**	**-1.0**
MKAR	**Makanchi Array**	**78.60**	**320**	P	**P**	**10 32 09.4**	**-1.0**
	1.0nm,1.1s,baz=88,slow=4.8,SNR=2.5						
ILAR	**Eielson Array**	**85.21**	**23**	P	**P**	**10 32 43.1**	**-1.7**
	0.6nm,0.8s,baz=240,slow=5.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**146.50**	**284**	PKPbc	**PKPdf**	**10 39 49.8**	**+0.2**
	7.6nm,0.5s,baz=49,slow=3.3,SNR=56						
TOA1	**Torodi Ar. Sit**	**146.50**	**284**	*e*PKPdf	**PKPdf**	**10 39 49.8**	**+0.2**

*DDA **24** 10:41:22.1, 38°.59N×37°.36E, h7km±4km, ML2.7*
*ISK **24** 10:41:22.7, 38°.58N×37°.34E, h5km, ML2.0/8*
*ISCJB **24** 10:41:23.2±0.5, 38°.59N±0°.02×37°.34E±0°.03, h6km±4km, Error ellipse: s-maj=4.4km s-min=3.7km az=165.2*
ISC 24 10:41:23.2±0.9, 38°.59N±0°.02×37°.33E±0°.03, h7km±7km, n18, σ1°14/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.12**	**100**	PG	**Pg**	**10 41 25.1**	**-0.8**
DARE				SG	**Sg**	**10 41 27.9**	**+0.2**
CUGUR	**Gurin_SVAS**	**0.14**	**340**	*i* P	**Pg**	**10 41 26.9**	**+0.7**
CUGUR				*i* S	**Sg**	**10 41 28.7**	**+0.3**
ELBS	**KAHRAMANMARAS**	**0.31**	**210**	*i* P	**Pg**	**10 41 28.7**	**-0.6**
ELBS				*i* S	**Sg**	**10 41 34.2**	**+0.8**
ELBS				IAML_P			
	comp=Z,1μm,0.1s						
AKCD	**Akcadag**	**0.55**	**122**	*i* P	**Pg**	**10 41 33.7**	**-0.1**
AKCD				*i* S	**Sb**	**10 41 41.7**	**-1.6**
AKCD				IAML_P			
	comp=Z,6μm,0.1s						
HEKM	**Malatya_Hekimh**	**0.57**	**60**	*i* P	**Pg**	**10 41 33.6**	**-0.6**
HEKM				*i* S	**Sg**	**10 41 42.0**	**+0.4**
HEKM				IAML_P			
	comp=Z,2μm,0.1s						
CUKAN	**kangal_SIVAS**	**0.73**	**8**	*i* P	**Pb**	**10 41 37.8**	**-0.5**
CUKAN				*i* S	**Sg**	**10 41 47.5**	**+0.7**
CUALT	**Altinyayla-SIV**	**0.82**	**327**	*i* P	**Pg**	**10 41 38.1**	**-0.8**
CUALT				*i* S	**Sb**	**10 41 51.2**	**+0.2**
KEMA	**Kemaliye**	**1.13**	**53**	*i* P	**Pg**	**10 41 43.1**	**-1.8**
KEMA				*i* S	**Sg**	**10 41 59.2**	**-0.3**
KEMA				IAML_P			
	comp=Z,377nm,0.1s						
KMRS	**Kahramanmaras**	**1.14**	**198**	PN	**Pn**	**10 41 45.0**	**-0.5**
KMRS				SN	**Sn**	**10 42 00.5**	**-0.9**
CUSAR	**Sarkisla-SIVAS**	**1.18**	**315**	*i* P	**Pg**	**10 41 44.0**	**-1.8**
CUSAR				*i* S	**Sg**	**10 42 01.0**	**-0.2**
BNN	**Bunyan**	**1.19**	**283**	PN	**Pn**	**10 41 46.3**	**-0.1**
BNN				SN	**Sn**	**10 42 03.2**	**+0.3**
GZT	**Gaziantep**	**1.25**	**171**	*i* P	**Pn**	**10 41 48.7**	**+1.5**
GZT				*i* S	**Sn**	**10 42 07.7**	**+3.4**
SVSK	**Karacayir**	**1.35**	**349**	PN	**Pb**	**10 41 48.8**	**+0.1**
SVSK				SN	**Sn**	**10 42 08.3**	**+1.8**
SVRC	**Sivrice-ELAZID**	**1.56**	**97**	PN	**Pg**	**10 41 52.3**	**-0.9**
KOZT	**Kozan**	**1.63**	**227**	PN	**Pb**	**10 41 53.1**	**-0.4**
URFA	**Urfa**	**1.64**	**134**	PN	**Pb**	**10 41 52.9**	**-0.9**
TOKT	**Tokat**	**1.83**	**341**	PN	**Pn**	**10 41 55.9**	**+0.8**
YOZ	**Yozgat**	**1.88**	**304**	PN	**Pn**	**10 41 56.8**	**+0.9**

*IDC **24** 10:42:18.3±2.9, 53°.68N×88°.14E, h0km, mb1 3.2/2, mb1mx3.0/34, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=24.2km s-min=16.9km az=59.0*
KRAR 24 10:42:14.3±0.2, 53°.68N×87°.94E, M2.0, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.87**	**280**	*i*		10 54 51.0	
	baz=94,slow=311,SNR=6.5						
ZALV	**Zalesovo Beam**	**1.87**	**280**	Pn	Pg	10 42 52.9	+2.7
	4.0nm,0.3s,baz=99,slow=14,SNR=46						
ZALV				Lg	Lg	10 43 21.0	
	5.5nm,0.3s,baz=100,slow=20,SNR=17						
ZALV				*i*		10 54 46.7	
	1.0nm,0.3s,baz=76,slow=40,SNR=4.5						
KURBB	**Kurchatov Arra**	**6.55**	**246**	Pn	Pn	10 43 57.8	+6.0
	0.2nm,0.3s,baz=62,slow=14,SNR=10						
KURBB				Sn	Sn	10 45 14.5	+7.4
	0.0nm,0.3s,baz=61,slow=28,SNR=2.9						
KURBB				Lg	Lg	10 45 47.5	
	0.0nm,0.3s,baz=60,slow=30,SNR=4.5						
MKAR	**Makanchi Array**	**7.79**	**210**	Pn	Pn	10 44 14.8	+6.0
	0.2nm,0.3s,baz=26,slow=14,SNR=5.6						
MKAR				Sn	Sn	10 45 43.0	+5.4
	0.2nm,0.3s,baz=26,slow=30,SNR=3.6						
MKAR				Lg	Lg	10 46 25.8	
	0.1nm,0.3s,baz=26,slow=30,SNR=5.3						

IDC 24 10:58:23.4±4.7, 7°.08S×149°.80E, h0km, mb2.9/1, mb1 3.5/2, mb1mx3.2/25, mbtmp3.2/2, ML3.0/1, Error ellipse: s-maj=205.6km s-min=49.6km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.71**	**228**	P	P	11 02 54.0	-0.7
	0.0nm,0.3s,baz=58,slow=11,SNR=2.3						
ASAR	**Alice Springs**	**22.48**	**221**	P	P	11 03 25.1	+0.6
	0.3nm,0.7s,baz=50,slow=9.9,SNR=6.3						
TORD	**Torodi Ar. Bea**	**148.05**	**283**	PKPbc	PKPbc	11 18 11.3	-0.8
	0.2nm,0.3s,baz=54,slow=4.9,SNR=3.2						

IDC 24 11:00:05.7±2.0, 0°.64N×126°.28E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/29, mbtmp3.7/3, Error ellipse: s-maj=167.1km s-min=26.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.93**	**159**	P	P	11 05 00.2	-0.8
	1.7nm,0.5s,baz=338,slow=12,SNR=21						
ASAR	**Alice Springs**	**25.27**	**163**	P	P	11 05 34.4	+0.4
	0.6nm,0.4s,baz=347,slow=12,SNR=23						
MKAR	**Makanchi Array**	**59.84**	**327**	P	P	11 10 13.1	-0.1
	0.3nm,0.3s,baz=114,slow=8.7,SNR=4.6						

MEX 24 11:25:55.4±0.6, 15°.20N×92°.80W, h118km±7km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.60**	**119**	*e*P	Pn	11 26 12.8	-1.0
THIG				*e*S	Sn	11 26 26.1	-1.6
PCIG		**0.64**	**321**	*e*P	Pn	11 26 12.9	-1.3
PCIG				*i* S	Sn	11 26 26.6	-1.7
CCIG	**Comitan**	**1.25**	**31**	*i* P	Pn	11 26 19.2	-0.9
CCIG				*i* S	Sn	11 26 37.2	-1.7
TGIG		**1.60**	**349**	*i* P	Pn	11 26 21.9	-2.0
TGIG				*i* S	Sn	11 26 41.9	-3.8

IGQ 24 11:52:04.5±0.4, 4°.S±2°.8°.8W±°, h1km, MLv3.9, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCRA	**Macar, Loja**	**0.78**	**178**	P	Pg	11 52 18.3	-1.1
MCRA				S	Sg	11 52 30.0	+0.4
GONZ	**Gonzanam**	**0.87**	**138**	P	Pb	11 52 22.4	-0.4
GONZ				S	Sb	11 52 35.0	-0.1
MORR	**Playas El Morr**	**1.01**	**339**	P	Pb	11 52 24.8	0.0
MORR				S	Sb	11 52 38.8	+0.2
COHC	**Cochancay**	**1.33**	**33**	P	Pg	11 52 28.1	-2.0
COHC				S	Sg	11 52 44.8	-2.6
MILO	**Milagro-Astudi**	**1.37**	**18**	P	Pg	11 52 29.8	-1.0
MILO				S	Sg	11 52 48.1	-0.4
ZUMB	**Zumba**	**1.52**	**147**	P	Pn	11 52 31.9	-1.1
ZUMB				S	Sg	11 52 50.9	-2.5
SALI	**Salinas**	**1.72**	**324**	P	Pn	11 52 34.0	-1.7
BMAS	**Trigal station**	**2.56**	**36**	P	Pn	11 52 46.0	-1.5
BMAS				S	Sn	11 53 11.3	-8.2
ARRY	**Arrayan**	**2.57**	**36**	P	Pn	11 52 46.0	-1.7
PAT1	**Patacocha**	**2.58**	**37**	P	Pn	11 52 46.5	-1.5
BPAT	**Tungurahua Vol**	**2.58**	**37**	P	Pn	11 52 46.4	-1.7
BBIL	**Ulba Tungurahu**	**2.60**	**35**	P	Pn	11 52 46.9	-1.2
RETU	**Refugio**	**2.62**	**36**	P	Pn	11 52 47.3	-1.2
POND	**Pondoa**	**2.64**	**35**	P	Pn	11 52 47.1	-1.5
BULB	**Ulba Tungurahu**	**2.65**	**36**	P	Pn	11 52 47.6	-1.2
BRUN	**Tungurahua Vol**	**2.66**	**36**	P	Pn	11 52 47.6	-1.3
PISA	**Pisayambo**	**2.98**	**32**	P	Pn	11 52 52.2	-1.2
BTAM	**Cotopaxi Volca**	**3.30**	**29**	P	Pn	11 52 57.4	-0.5
BVC2	**Cotopaxi Volca**	**3.31**	**28**	P	Pn	11 52 57.9	-0.1

*SOME **24** 12:01:16.7, 41°.48N×81°.00E, h15km*
*NNC **24** 12:01:18.7±4.2, 45°.33N×79°.52E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=43.0km s-min=28.6km az=87.0*
ISC 24 12:01:14.3±5.3, 41°.4N±0°.2×81°.1E±0°.2, h10km, n7, σ0°59/11, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.12**	**345**	Pg	**Pb**	**12 01 53.1**	**+0.2**
	4.8nm,0.2s						
KTMS				Lg	Lg	12 02 19.2	
	4.1nm,0.3s						
KTMS	**Ketmen**	**2.12**	**345**	*e*P	**Pb**	**12 01 52.9**	**0.0**
	4.7nm,0.3s						
KTMS				*e*S	**Sb**	**12 02 19.2**	**-0.2**
	3.7nm,0.3s						
PDGK	**Podgornoye**	**2.27**	**329**	Pg	**Pb**	**12 01 55.1**	**-0.4**
	5.2nm,0.3s						
PDGK				Lg	Lg	12 02 22.9	
	4.4nm,0.3s						
PDGK	**Podgornoye**	**2.27**	**329**	Pn	**Pb**	**12 01 54.5**	**-1.0**
	3.2nm,0.3s						
PDGK				Sn	**Sn**	**12 02 21.2**	**+1.0**
	9.2nm,0.7s						
UZB	**Uzynbulak**	**2.34**	**319**	*e*P	**Pb**	**12 01 56.5**	**-0.1**
	4.8nm,0.2s						
UZB				*e*S	**Sb**	**12 02 25.0**	**-0.6**
	22nm,0.4s						
SATY	**Saty**	**2.61**	**310**	Pg	**Pb**	**12 02 01.0**	**-0.2**
	7.8nm,0.5s						
SATY				Lg	Lg	12 02 33.1	
	6.0nm,0.3s						
SATY	**Saty**	**2.61**	**310**	*e*P	**Pb**	**12 02 01.4**	**+0.2**
	6.8nm,0.2s						
SATY				*e*S	**Sb**	**12 02 33.4**	**+0.1**
	347nm,0.2s						

*IDC **24** 12:09:44.0±1.2, 5°.38S×152°.22E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.9/35, mbtmp3.9/9, ML1.8/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/25, Error ellipse: s-maj=51.7km s-min=19.0km az=128.0*
*ISCJB **24** 12:09:49.4±0.4, 5°.38S±0°.06×152°.09E±0°.08, h45km, mb4.2/18, MS3.3/1, Error ellipse: s-maj=12.9km s-min=6.3km az=37.7*
*NEIC **24** 12:09:51.8±1.3, 5°.35S×152°.08E, h51km±8km, mb4.5/13, Error ellipse: s-maj=22.1km s-min=6.7km az=100.0*
ISC 24 12:09:51.0±0.6, 5°.34S±0°.08×152°.08E±0°.10, h45km, n35, σ0°82/35, mb4.3/18, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.15**	**4**	*e*Pn	**Pn**	**12 10 11.5**	**+0.8**
PMG	**Port Moresby**	**6.33**	**230**	Pn	**Pn**	**12 11 21.4**	**-0.5**
	1.4nm,0.3s,baz=9.5,slow=6.1,SNR=4.0						
PMG				Sn	**Sn**	**12 12 34.0**	**+1.1**
	6.2nm,0.3s,baz=252,slow=12,SNR=9.4						
PMG	**Port Moresby**	**6.33**	**230**	*e*Pn	**Pn**	**12 11 22.9**	**+1.1**
PMG				*e*Sn	**Sn**	**12 12 33.8**	**+0.8**
HNR	**Honiara**	**8.79**	**118**	LR	LR	12 15 26.7	
	comp=Z,59nm,18.4s,baz=234,slow=40						
HNR	**Honiara**	**8.79**	**118**	*e*Pn	**Pn**	**12 11 56.9**	**+1.3**
PATS	**Pohnpei**	**13.60**	**27**	*e*Pn	**Pn**	**12 13 00.4**	**-1.0**
EIDS	**Eidsvold**	**19.94**	**183**	*e*P	**Pn**	**12 14 19.8**	**-1.4**
	9.9nm,1.1s						
DZM	**Mont Dzumac**	**21.67**	**141**	LR	LR	12 22 12.3	
	comp=Z,112nm,18.4s,baz=308,slow=35						
WB2	**Warramunga Arr**	**22.54**	**228**	*e*P	**P**	**12 14 46.5**	**-0.9**
	13nm,1.5s						
WR1	**Warramunga Arr**	**22.55**	**228**	*e*P	**P**	**12 14 46.7**	**-0.8**
WRA	**Warramunga Arr**	**22.55**	**228**	P	**P**	**12 14 46.7**	**-0.8**
	1.1nm,0.6s,baz=56,slow=10,SNR=8.2						
AS31	**Alice Springs**	**25.27**	**222**	*e*P	**P**	**12 15 13.8**	**+0.5**
	1.6nm,0.8s						
ASAR	**Alice Springs**	**25.27**	**222**	P	**P**	**12 15 12.5**	**-0.8**
	1.9nm,0.6s,baz=57,slow=9.0,SNR=31						
SONA0	**Songino Array**	**66.40**	**328**	*e*P	**P**	**12 20 36.6**	**+1.0**
SONM	**Songino Array**	**66.40**	**328**	P	**P**	**12 20 36.6**	**+1.0**
	0.5nm,0.5s,baz=143,slow=6.7,SNR=3.4						
CNPM	**China Poot**	**78.51**	**26**	*e*P	**P**	**12 21 47.4**	**+0.1**
	14nm,0.9s						
TTA	**Tatalina**	**78.53**	**22**	*e*P	**P**	**12 21 47.8**	**+0.3**
	6.6nm,1.3s						
MK32	**Makanchi Array**	**80.26**	**319**	*e*P	**P**	**12 21 57.7**	**+0.5**
MKAR	**Makanchi Array**	**80.26**	**319**	P	**P**	**12 21 57.7**	**+0.5**
	0.2nm,0.3s,baz=55,slow=8.0,SNR=3.6						
ZALV	**Zalesovo Beam**	**81.21**	**327**	P	**P**	**12 22 01.6**	**-0.3**
	0.6nm,0.4s,baz=133,slow=6.3,SNR=2.1						
ZAA1	**Zalesovo Array**	**81.21**	**327**	*e*P	**P**	**12 22 01.6**	**-0.3**
RND	**Reindeer**	**81.50**	**23**	*e*P	**P**	**12 22 02.7**	**-0.7**
	4.7nm,0.8s						
MLY	**Manley**	**81.64**	**21**	*e*P	**P**	**12 22 04.2**	**+0.1**
	5.2nm,0.7s						
WRH	**Wood River Hil**	**82.33**	**22**	*e*P	**P**	**12 22 07.0**	**-0.6**
	6.2nm,1.1s						
ILAR	**Eielson Array**	**82.93**	**22**	P	**P**	**12 22 09.8**	**-1.1**
	3.2nm,0.7s,baz=250,slow=5.4,SNR=32						
ILB	**Eielson Array**	**82.93**	**22**	*e*P	**P**	**12 22 09.6**	**-1.2**
	4.0nm,0.8s						
DOT	**Dot Lake**	**83.51**	**24**	*e*P	**P**	**12 22 14.0**	**+0.1**
	4.3nm,0.8s						
EGAK	**Eagle**	**85.14**	**23**	*e*P	**P**	**12 22 22.5**	**+0.5**
	3.7nm,0.9s						
EPYK	**Eagle Plains**	**87.44**	**22**	*e*P	**P**	**12 22 33.8**	**+0.4**
	6.6nm,0.9s						
NV01	**Mina Array Sit**	**92.98**	**52**	*e*P	**P**	**12 23 00.7**	**+0.5**
NVAR	**Mina Array Bea**	**92.98**	**52**	P	**P**	**12 23 00.7**	**+0.5**
	0.4nm,0.7s,baz=246,slow=6.6,SNR=3.5						
YKA	**Yellowknife Ar**	**96.24**	**28**	P	**P**	**12 23 13.2**	**-1.0**
	0.2nm,0.8s,baz=269,slow=4.9,SNR=3.1						
YKB5	**Yellowknife Ar**	**96.24**	**28**	*e*P	**P**	**12 23 13.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**149.79**	**287**	PKPbc	**PKPbc**	**12 29 36.5**	**-0.7**
	1.1nm,0.8s,baz=58,slow=4.3,SNR=4.7						
TOA1	**Torodi Ar. Sit**	**149.79**	**287**	*e*PKPbc	**PKPbc**	**12 29 36.5**	**-0.7**

**IDC

CBX			*e*Sg	**Sb**	**12 18 27.9**	**-0.1**
CBX	**Cerro Bola**	**1.21 278**	*e*P	**Pn**	**12 18 12.0**	**-0.3**
CBX			*e*S	**Sb**	**12 18 27.9**	**-0.1**
CBX	**Cerro Bola**	**1.21 278**	*e*P	**Pb**	**12 18 12.5**	**+0.2**
CBX			⇑*e*		12 18 31.4	
CBX			IAML		12 18 31.4	
	comp=E,719nm,0.4s					
MONP2	**Monument Peak**	**1.24 307**	*e*P	**Pn**	**12 18 13.0**	**+0.2**
TJIG	**Tijuana**	**1.24 284**	*e*P	**Pn**	**12 18 12.4**	**-0.2**
TJIG			*i* S	**Sb**	**12 18 28.2**	**-0.5**
ECNX	**Esteban Cantu**	**1.25 247**	*e*P	**Pn**	**12 18 12.5**	**-0.2**
BAR	**Barrett**	**1.32 294**	*e*Pn	**Pn**	**12 18 13.2**	**-0.4**
BAR			*e*Sg	**Sg**	**12 18 31.7**	**-0.2**
PBX	**Punta Banda**	**1.32 253**	*e*P	**Pn**	**12 18 13.5**	**-0.2**
113A	**Mohawk Valley,**	**1.40 63**	*e*Pn	**Pn**	**12 18 13.3**	**-1.4**
Y12C	**Blythe**	**1.71 21**	*e*Pn	**Pb**	**12 18 20.4**	**-0.4**
CPE	**Camp Elliot**	**1.74 296**	*e*Pn	**Pb**	**12 18 21.5**	**+0.3**
CPE			*e*Sn	**Sb**	**12 18 44.1**	**+1.2**
PFO	**Pinyon Flats O**	**1.78 325**	*e*Pn	**Pn**	**12 18 18.8**	**-1.3**
Y14A	**Wickenburg**	**2.60 46**	*e*Pn	**Pn**	**12 18 31.5**	**+0.3**
W13A	**Hualapai Mount**	**3.16 21**	*e*Pn	**Pn**	**12 18 39.7**	**+0.6**
U15A	**North Rim**	**4.92 29**	*e*Pn	**Pn**	**12 19 04.8**	**+1.3**
X18A	**Snowflake**	**5.03 60**	*e*Pn	**Pn**	**12 19 05.6**	**+0.8**
LCMT	**Little Creek M**	**5.13 18**	*e*Pn	**Pn**	**12 19 07.3**	**+1.1**
W18A	**Petrified Fore**	**5.47 56**	*e*Pn	**Pn**	**12 19 12.1**	**+1.2**

IDC 24 12:20:17.2±3.1, 7°.21S×150°.43E, h0km, mb3.7/2, mb1 4.1/3, mb1mx3.6/26, mbtmp4.0/3, ML2.3/1, Error ellipse: s-maj=114.4km s-min=41.8km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.91**	**236**	Pn	Pn	12 21 19.2	+0.7
	15nm,0.3s,baz=23,slow=7.1,SNR=44						
PMG				Sn	Sn	12 21 59.4	-5.7
	14nm,0.3s,baz=344,slow=23,SNR=12						
WRA	**Warramunga Arr**	**20.10**	**229**	P	P	12 24 50.7	-2.0
	1.0nm,0.3s,baz=55,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**22.80**	**222**	P	P	12 25 22.6	+0.9
	2.4nm,0.6s,baz=49,slow=11,SNR=44						
TORD	**Torodi Ar. Bea**	**148.69**	**283**	PKPbc	PKPbc	12 40 06.9	-0.6
	1.0nm,0.5s,baz=66,slow=2.3,SNR=13						

*ATH **24** 12:43:05.0, 38°.93N×23°.39E, h16km±3km, ML2.4/13, Error ellipse: s-maj=3.2km s-min=0.8km az=336.0*
*ISCJB **24** 12:43:05.1±0.4, 38°.95N±0°.02×23°.40E±0°.03, h7km±3km, Error ellipse: s-maj=3.4km s-min=3.1km az=157.4*
*THE **24** 12:43:05.5, 38°.93N×23°.40E, h7km, ML2.5/13, Error ellipse: s-maj=0.8km s-min=0.3km az=118.0*
ISC 24 12:43:05.2±0.8, 38°.93N±0°.02×23°.40E±0°.02, h13km±6km, n40, σ0°38/69, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIA	**Simia**	**0.15**	**251**	P	**Pg**	**12 43 09.1**	**0.0**
SMIA				S	**Sg**	**12 43 11.5**	**-0.2**
SMIA	**Simia**	**0.15**	**251**	P	**Pg**	**12 43 09.0**	**0.0**
SMIA				S	**Sg**	**12 43 11.5**	**-0.2**
SMIA				AML	AML	12 43 12.3	
	comp=E,12668μm,0.3s						
SMIA				AML	AML	12 43 12.4	
	comp=N,17056μm,0.4s						
MRKA	**Markates**	**0.27**	**146**	P	**Pg**	**12 43 10.7**	**-0.3**
MRKA				S	**Sg**	**12 43 15.0**	**+0.3**
MRKA	**Markates**	**0.27**	**146**	P	**Pg**	**12 43 10.6**	**-0.3**
MRKA				S	**Sg**	**12 43 14.8**	**0.0**
MRKA				AML	AML	12 43 17.5	
	comp=E,1511μm,0.2s						
MRKA				AML	AML	12 43 18.2	
	comp=N,1577μm,0.2s						
ATAL	**Atalanti**	**0.38**	**231**	P	**Pg**	**12 43 12.8**	**-0.1**
ATAL				S	**Sg**	**12 43 18.2**	**+0.3**
ATAL	**Atalanti**	**0.38**	**231**	P	**Pg**	**12 43 12.7**	**-0.1**
ATAL				S	**Sg**	**12 43 18.0**	**0.0**
ATAL				AML	AML	12 43 18.6	
	comp=E,1415μm,0.3s						
ATAL				AML	AML	12 43 19.4	
	comp=N,1172μm,0.1s						
NEO	**Neokhori**	**0.40**	**340**	P	**Pg**	**12 43 13.3**	**0.0**
NEO				S	**Sg**	**12 43 18.8**	**+0.1**
NEO	**Neokhori**	**0.40**	**340**	P	**Pg**	**12 43 13.1**	**-0.2**
NEO				S	**Sg**	**12 43 18.7**	**+0.1**
NEO				AML	AML	12 43 20.3	
	comp=E,3790μm,0.2s						
NEO				AML	AML	12 43 20.4	
	comp=N,3462μm,0.2s						
LKR	**Lokris**	**0.42**	**228**	P	**Pg**	**12 43 13.5**	**0.0**
LKR				S	**Sg**	**12 43 19.4**	**+0.2**
LKR	**Lokris**	**0.42**	**228**	P	**Pg**	**12 43 13.6**	**0.0**
LKR				S	**Sg**	**12 43 18.8**	**-0.4**
LKR				AML	AML	12 43 20.1	
	comp=N,2274μm,0.2s						
LKR				AML	AML	12 43 21.4	
	comp=E,2589μm,0.2s						
ALNA	**Alonissos**	**0.43**	**59**	P	**Pg**	**12 43 13.3**	**-0.4**
ALNA				S	**Sg**	**12 43 19.8**	**+0.3**
XOR	**Xorichti**	**0.46**	**340**	P	**Pg**	**12 43 14.3**	**-0.2**
XOR				S	**Sg**	**12 43 20.7**	**0.0**
XOR	**Xorichti**	**0.46**	**340**	P	**Pg**	**12 43 14.1**	**-0.3**
XOR				S	**Sg**	**12 43 21.0**	**+0.3**
XOR				AML	AML	12 43 22.0	
	comp=E,1016μm,0.3s						
XOR				AML	AML	12 43 22.4	
	comp=N,1598μm,0.3s						
FYTO	**Fytoko, Volos**	**0.59**	**324**	P	**Pg**	**12 43 16.8**	**-0.1**
FYTO	**Fytoko, Volos**	**0.59**	**324**	P	**Pg**	**12 43 16.7**	**-0.1**
FYTO				S	**Sg**	**12 43 24.4**	**-0.4**
FYTO				AML	AML	12 43 27.0	
	comp=N,611μm,0.2s						
FYTO				AML	AML	12 43 27.5	
	comp=E,465μm,0.2s						
EREA	**Eretria**	**0.66**	**140**	P	**Pg**	**12 43 17.9**	**-0.2**
EREA				S	**Sb**	**12 43 27.6**	**-0.1**
EREA	**Eretria**	**0.66**	**140**	P	**Pg**	**12 43 18.0**	**-0.2**
EREA				S	**Sb**	**12 43 27.8**	**+0.1**
EREA				AML	AML	12 43 29.1	
	comp=E,1218μm,0.3s						
EREA				AML	AML	12 43 31.8	
	comp=N,944μm,0.3s						
VIL2	**Platees**	**0.72**	**188**	P	**Pg**	**12 43 19.5**	**+0.1**
VIL2				S	**Sn**	**12 43 31.2**	**-0.9**
VIL2				AML	AML	12 43 34.4	
	comp=N,684μm,0.3s						
VIL2				AML	AML	12 43 35.8	
	comp=E,1114μm,0.4s						
VILL	**Villia**	**0.77**	**185**	P	**Pg**	**12 43 19.5**	**-0.6**
VILL				S	**Sb**	**12 43 30.9**	**+0.1**
DSF	**Desfina**	**0.85**	**233**	P	**Pg**	**12 43 21.1**	**-0.7**
DSF				S	**Sb**	**12 43 33.3**	**0.0**
DSF	**Desfina**	**0.85**	**233**	P	**Pg**	**12 43 21.0**	**-0.8**
DSF				S	**Sg**	**12 43 33.1**	**+0.1**
DSF				AML	AML	12 43 37.7	
	comp=E,556μm,0.2s						
DSF				AML	AML	12 43 38.8	
	comp=N,520μm,0.3s						
SKY	**Skiros Island**	**0.90**	**93**	P	**Pg**	**12 43 22.6**	**-0.1**
SKY				S	**Sb**	**12 43 34.8**	**+0.2**
PTL	**Penteli**	**0.95**	**157**	P	**Pg**	**12 43 23.2**	**-0.5**
PTL				S	**Sn**	**12 43 37.8**	**0.0**
PTL	**Penteli**	**0.95**	**157**	P	**Pg**	**12 43 23.2**	**-0.5**
ATH	**Athens Observa**	**0.99**	**165**	P	**Pg**	**12 43 24.2**	**-0.1**
LOUT	**Loutraki**	**1.00**	**200**	P	**Pb**	**12 43 24.6**	**+0.2**
LOUT				S	**Sn**	**12 43 39.1**	**+0.3**
LOUT	**Loutraki**	**1.00**	**200**	P	**Pg**	**12 43 24.0**	**-0.5**
LOUT				S	**Sb**	**12 43 37.7**	**+0.3**
LOUT				AML	AML	12 43 44.5	
	comp=E,95μm,0.3s						
LOUT				AML	AML	12 43 45.9	
	comp=N,83μm,0.2s						
ATHU	**Athens Univers**	**1.01**	**162**	P	**Pg**	**12 43 24.2**	**-0.5**
ATHU	**Athens Univers**	**1.01**	**162**	P	**Pg**	**12 43 24.1**	**-0.6**
ATHU				AML	AML	12 43 26.1	
	comp=E,120μm,0.3s						
ATHU				AML	AML	12 43 26.1	
	comp=N,199μm,0.4s						
VLY	**Voula,Athens**	**1.12**	**164**	P	**Pb**	**12 43 26.3**	**-0.2**
VLY				S	**Sn**	**12 43 42.1**	**+0.2**
KALE	**Kalithea**	**1.12**	**242**	P	**Pb**	**12 43 26.0**	**-0.5**
KALE	**Kalithea**	**1.12**	**242**	P	**Pb**	**12 43 25.9**	**-0.6**
KALE				S	**Sn**	**12 43 42.0**	**0.0**
KALE				AML	AML	12 43 46.0	
	comp=N,287μm,0.3s						
KALE				AML	AML	12 43 46.9	
	comp=E,192μm,0.5s						
ANX	**Ano Chora**	**1.20**	**254**	P	**Pb**	**12 43 27.9**	**0.0**
ANX				S	**Sn**	**12 43 45.5**	**+1.5**
THL	**Klokotos Trika**	**1.25**	**301**	P	**Pn**	**12 43 28.1**	**-0.2**
GUR	**Goura**	**1.29**	**220**	P	**Pn**	**12 43 29.4**	**+0.3**
GUR				S	**Sg**	**12 43 47.1**	**+0.2**
LAKA	**Lakka**	**1.31**	**239**	P	**Pn**	**12 43 29.1**	**-0.1**
EPID	**Epidavros**	**1.33**	**190**	P	**Pb**	**12 43 30.4**	**+0.3**
LIT	**Litokhoron**	**1.36**	**329**	P	**Pn**	**12 43 30.0**	**0.0**
DID	**Didima**	**1.43**	**185**	P	**Pn**	**12 43 31.1**	**+0.3**
DID				S	**Sb**	**12 43 50.6**	**+0.8**
PLG	**Polygyros**	**1.44**	**2**	P	**Pn**	**12 43 30.9**	**-0.2**

*CNRM **24** 12:55:46.7, 36°.62N×9°.03W, h29km, ml3.4*
*MDD **24** 12:55:48.8±1.1, 36°.74N×8°.83W, h25km±2km, mbLg2.7/14, Error ellipse: s-maj=7.4km s-min=3.9km az=44.0, PRXIMO*
*INMG **24** 12:55:49.5±1.6, 36°.74N×8°.80W, h7km±3km, MD2.4, ML2.7, Error ellipse: s-maj=5.0km s-min=2.4km az=76.0*
*IGIL **24** 12:55:49.3, 36°.73N×8°.81W, h8km, ML2.9*
ISC 24 12:55:47.6±1.2, 36°.70N±0°.03×8°.82W±0°.04, h18km±4km, n71, σ1°24/138, 4D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.43**	**359**	⇓*i*Pg	**Pg**	**12 55 56.8**	**+0.3**
PFVI				*e*Sg	**Sg**	**12 56 01.9**	**-0.6**
PFVI				A	A	12 56 05.7	
	207nm,0.1s						
PFVI	**Vila Bisbo**	**0.43**	**359**	⇓P	**Pg**	**12 55 56.8**	**+0.3**
	94nm,0.3s,SNR=18						
PFVI				S	**Sg**	**12 56 02.8**	**+0.3**
	344nm,0.1s,SNR=16						
PFVI	**Vila Bisbo**	**0.43**	**359**	P	**Pg**	**12 55 56.8**	**+0.3**
PFVI				S	**Sb**	**12 56 05.0**	**+2.0**
MORF	**Marmelete**	**0.62**	**12**	*e*P	**Pb**	**12 55 60.0**	**+0.1**
MORF				*e*S	**Sb**	**12 56 07.8**	**-0.5**
MORF				AML	AML	12 56 13.0	
	comp=N,588nm,0.2s						
MORF	**Marmelete**	**0.62**	**12**	⇓*e*Pg	**Pb**	**12 56 00.0**	**+0.1**
MORF				*e*Sg	**Sb**	**12 56 08.8**	**+0.5**
MORF				A	A	12 56 12.0	
	comp=N,391nm,0.6s						
MORF	**Marmelete**	**0.62**	**12**	P	**Pb**	**12 55 60.0**	**+0.1**
MORF				S	**Sb**	**12 56 07.8**	**-0.5**
	comp=N,588nm,0.2s						
PTEO	**Sao Teotonio**	**0.85**	**5**	*e*P	**Pb**	**12 56 04.3**	**+0.5**
PTEO				*e*S	**Sb**	**12 56 15.1**	**+0.3**
PTEO				A	A	12 56 18.6	
	comp=N,341nm,0.5s						
PTEO	**Sao Teotonio**	**0.85**	**5**	P	**Pb**	**12 56 04.3**	**+0.5**
PTEO				S	**Sb**	**12 56 15.1**	**+0.3**
	comp=N,170nm,0.5s						
PBDV	**Barranco-do-Ve**	**0.89**	**52**	*e*P	**Pb**	**12 56 05.2**	**+0.6**
PBDV				*e*S	**Sg**	**12 56 17.4**	**+0.5**
PBDV				A	A	12 56 22.6	
	comp=N,78nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.89**	**52**	P	**Pb**	**12 56 05.2**	**+0.6**
PBDV				S	**Sg**	**12 56 17.4**	**+0.5**
	comp=N,78nm,0.3s						
PCVE	**Castro Verde**	**1.12**	**34**	*e*P	**Pn**	**12 56 08.8**	**+0.4**
PCVE				*e*S	**Sn**	**12 56 23.8**	**+0.5**
PCVE				A	A	12 56 26.6	
	comp=N,84nm,0.4s						
PCVE	**Castro Verde**	**1.12**	**34**	P	**Pn**	**12 56 08.8**	**+0.4**
PCVE				S	**Sn**	**12 56 23.8**	**+0.5**
	comp=N,84nm,0.4s						
PVAQ	**Vaqueiros**	**1.13**	**51**	*e*P	**Pn**	**12 56 09.0**	**+0.5**
PVAQ				*e*S	**Sb**	**12 56 23.2**	**+0.3**
PVAQ				A	A	12 56 25.9	
	comp=N,94nm,0.2s						
PVAQ	**Vaqueiros**	**1.13**	**51**	P	**Pn**	**12 56 09.0**	**+0.5**
PVAQ				S	**Sb**	**12 56 23.2**	**+0.3**
	comp=N,94nm,0.2s						
PVAQ	**Vaqueiros**	**1.13**	**51**	P	**Pg**	**12 56 09.7**	**+0.2**
PVAQ				S	**Sg**	**12 56 25.6**	**+1.4**
MESJ	**Messejana**	**1.23**	**23**	*e*P	**Pn**	**12 56 10.5**	**+0.5**
MESJ				*e*S	**Sb**	**12 56 25.9**	**0.0**
MESJ				AML	AML	12 56 29.0	
	comp=N,133nm,0.2s						
MESJ	**Messejana**	**1.23**	**23**	P	**Pn**	**12 56 10.5**	**+0.5**
MESJ				S	**Sb**	**12 56 25.9**	**0.0**
	comp=N,133nm,0.2s						
PNCL	**Nicolau / Gran**	**1.43**	**9**	*e*P	**Pn**	**12 56 13.2**	**+0.6**
PNCL				*e*S	**Sn**	**12 56 30.8**	**-0.1**
PNCL				A	A	12 56 35.6	
	comp=N,106nm,0.2s						
PNCL	**Nicolau / Gran**	**1.43**	**9**	P	**Pn**	**12 56 13.2**	**+0.6**
PNCL				S	**Sn**	**12 56 30.8**	**-0.1**
	comp=N,106nm,0.2s						
PBEJ	**Beja**	**1.52**	**30**	*e*Pn	**Pb**	**12 56 15.2**	**-0.2**
PBEJ				*e*Sg	**Sg**	**12 56 36.6**	**-0.3**
PBEJ				A	A	12 56 39.1	
	comp=N,46nm,0.2s						
PBEJ	**Beja**	**1.52**	**30**	P	**Pb**	**12 56 15.2**	**-0.2**
PBEJ				S	**Sg**	**12 56 36.6**	**-0.3**
	comp=N,23nm,0.2s						
EMIN	**Mina Concepcio**	**2.02**	**57**	P	**Pn**	**12 56 21.5**	**+0.7**
	comp=N,1.3nm,0.3s,SNR=17						
EMIN				S	**Sn**	**12 56 46.9**	**+1.5**
	comp=N,9.6nm,0.1s,SNR=6.6						
PBAR	**Barrancos**	**2.04**	**43**	*e*Pn	**Pn**	**12 56 22.6**	**+1.5**
PBAR				*e*Sn	**Sn**	**12 56 46.0**	**-0.1**
PBAR	**Barrancos**	**2.04**	**43**	P	**Pn**	**12 56 22.6**	**+1.5**
PBAR				S	**Sn**	**12 56 46.0**	**-0.1**
PMAFR	**Mafra**	**2.28**	**351**	*e*Pn	**Pn**	**12 56 25.5**	**+1.1**
PMAFR				*e*Sn	**Sn**	**12 56 53.4**	**+1.4**
PMAFR				A	A	12 57 11.6	
	comp=N,48nm,0.8s						
PMAFR	**Mafra**	**2.28**	**351**	P	**Pn**	**12 56 25.5**	**+1.1**
	comp=N,13nm,0.4s,SNR=8.4						
PMAFR				S	**Sn**	**12 56 53.2**	**+1.2**
	comp=N,92nm,0.3s,SNR=6.2						
ESPR	**Espera**	**2.38**	**85**	⇓P	**Pn**	**12 56 26.6**	**+0.8**
	comp=N,5.7nm,0.2s,SNR=18						
ESPR				S	**Sn**	**12 56 54.5**	**0.0**
	comp=N,34nm,0.2s,SNR=6.3						
PMTG	**Montargil**	**2.41**	**11**	*e*Pn	**Pn**	**12 56 26.4**	**+0.3**
PMTG				*e*Sn	**Sn**	**12 56 54.8**	**-0.4**
PMTG				*e*Sg	**Sg**	**12 57 04.8**	**-0.4**
PMTG				A	A	12 57 07.0	
	comp=N,45nm,0.5s						
PMTG	**Montargil**	**2.41**	**11**	P	**Pn**	**12 56 26.4**	**+0.3**
PMTG				S	**Sn**	**12 56 54.8**	**-0.4**
PTOM	**Tomar**	**2.93**	**6**	*e*Pn	**Pn**	**12 56 33.9**	**+0.6**
PTOM				*e*Sn	**Sn**	**12 57 07.3**	**-0.7**
PTOM				A	A	12 57 21.0	
	comp=N,39nm,0.3s						
PTOM	**Tomar**	**2.93**	**6**	P	**Pn**	**12 56 33.9**	**+0.6**
PTOM				S	**Sn**	**12 57 07.3**	**-0.7**
	comp=N,19nm,0.3s						
PMRV	**Marv??o**	**2.95**	**22**	*e*Pn	**Pn**	**12 56 33.5**	**0.0**
PMRV				*e*Sn	**Sn**	**12 57 07.8**	**-0.6**
PMRV				A	A	12 57 21.8	
	comp=N,30nm,0.7s						
PMRV	**Marv??o**	**2.95**	**22**	P	**Pn**	**12 56 33.5**	**0.0**
PMRV				S	**Sn**	**12 57 07.8**	**-0.6**
	comp=N,30nm,0.7s						
SMIR	**Smir Dam**	**2.96**	**109**	P	**Pn**	**12 56 34.7**	**+1.0**
SMIR				S	**Sn**	**12 57 11.0**	**+2.3**
HORN	**Hornachuelos**	**3.06**	**67**	P	**Pn**	**12 56 36.0**	**+0.9**
HORN				S	**Sn**	**12 57 13.7**	**+2.4**
EMIJ	**Mijas**	**3.26**	**91**	P	**Pn**	**12 56 39.7**	**+1.9**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**12 57 16.9**	**+0.8**
	comp=N,2.6nm,0.3s,SNR=7.9						
PCBR	**Castelo Branco**	**3.31**	**18**	*e*Pn	**Pn**	**12 56 39.4**	**+0.9**
PCBR				*e*Sn	**Sn**	**12 57 16.5**	**-0.8**
PCBR				A	A	12 57 31.6	
	comp=N,18nm,0.3s						
PCBR	**Castelo Branco**	**3.31**	**18**	P	**Pn**	**12 56 39.4**	**+0.9**
PCBR				S	**Sn**	**12 57 16.5**	**-0.8**
	comp=N,9.0nm,0.3s						
PCAS	**Casmilo, Conde**	**3.36**	**4**	*e*Pn	**Pn**	**12 56 40.5**	**+1.3**
PCAS				*e*Sn	**Sn**	**12 57 18.9**	**+0.4**
PCAS				A	A	12 57 42.1	
	comp=N,14nm,0.7s						
PCAS	**Casmilo, Conde**	**3.36**	**4**	P	**Pn**	**12 56 40.5**	**+1.3**
PCAS				S	**Sn**	**12 57 18.9**	**+0.4**
	comp=N,14nm,0.7s						
EADA	**Adamuz**	**3.68**	**65**	P	**Pn**	**12 56 44.3**	**+0.7**
	comp=N,3.0nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**12 57 25.5**	**-1.0**
	comp=N,2.8nm,0.1s,SNR=7.9						
ZHG	**ZHG**	**3.71**	**151**	P	**Pn**	**12 56 44.0**	**0.0**
ZHG				S	**Sn**	**12 57 27.8**	**+0.6**
EGOR	**Sierra Gorda,**	**3.79**	**82**	P	**Pn**	**12 56 47.7**	**+2.4**
	comp=N,0.0nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**12 57 29.8**	**+0.3**
	comp=N,4.0nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**3.83**	**15**	*e*Pn	**Pn**	**12 56 47.1**	**+1.4**
MTE				*e*Sn	**Sn**	**12 57 28.7**	**-1.5**
MTE				*e*Sg	**Sg**	**12 57 47.5**	**-3.0**
MTE				A	A	12 57 53.1	
	comp=N,22nm,0.6s						
MTE	**Manteigas**	**3.83**	**15**	P	**Pn**	**12 56 47.1**	**+1.4**
MTE				S	**Sn**	**12 57 28.7**	**-1.5**
EPLA	**Plasencia**	**3.99**	**32**	P	**Pn**	**12 56 49.7**	**+1.8**
	comp=N,0.0nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**12 57 33.2**	**-1.0**
	comp=N,2.3nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**4.07**	**10**	*e*Sn	**Sn**	**12 57 35.2**	**-1.1**
PVIS				A	A	12 57 58.3	
	comp=N,5.5nm,0.2s						
PVIS	**Viseu**	**4.07**	**10**	S	**Sn**	**12 57 35.2**	**-1.1**
	comp=N,2.8nm,0.2s						
SRHM	**Skhour des Reh**	**4.29**	**170**	P	**Pn**	**12 56 52.2**	**+0.1**
SRHM				S	**Sn**	**12 57 41.9**	**+0.3**
PAB	**San Pablo**	**4.53**	**50**	P	**Pn**	**12 56 56.0**	**+0.7**
	comp=N,0.5nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**12 57 45.7**	**-1.8**
	comp=N,0.8nm,0.1s,SNR=7.9						
AKLM	**AKL**	**4.59**	**117**	P	**Pn**	**12 56 52.8**	**-3.4**
AKLM				S	**Sn**	**12 57 49.3**	**+0.2**
MVO	**Moncorvo**	**4.67**	**17**	*e*Pn	**Pn**	**12 56 58.0**	**+0.7**
MVO				*e*Sn	**Sn**	**12 57 49.9**	**-1.1**
MVO				A	A	12 58 22.9	
	comp=N,9.7nm,0.5s						
MVO	**Moncorvo**	**4.67**	**17**	P	**Pn**	**12 56 58.9**	**+1.7**
	comp=N,0.8nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**12 57 49.2**	**-1.8**
	comp=N,2.4nm,0.3s,SNR=7.9						
EQES	**Quesada**	**4.71**	**75**	P	**Pn**	**12 56 58.4**	**+0.4**
	comp=N,1.2nm,0.2s,SNR=8.1						
EQES				S	**Sn**	**12 57 51.5**	**-0.6**
	comp=N,4.2nm,0.3s						
POLO	**Lamas de Olo**	**4.73**	**9**	*e*Pn	**Pn**	**12 56 58.6**	**+0.4**
POLO				*e*Sn	**Sn**	**12 57 50.3**	**-2.3**
POLO				A	A	12 58 29.4	
	comp=N,2.9nm,0.4s						
POLO	**Lamas de Olo**	**4.73**	**9**	P	**Pn**	**12 56 58.6**	**+0.4**
POLO				S	**Sn**	**12 57 50.3**	**-2.3**
	comp=N,2.9nm,0.4s						
CZD	**Col de Zad**	**4.80**	**139**	P	**Pn**	**12 56 59.6**	**+0.3**
CZD				S	**Sn**	**12 57 52.0**	**-2.5**
ESDC	**Sonseca Array**	**4.84**	**51**	P	**Pn**	**12 57 00.5**	**+0.9**
	comp=N,0.5nm,0.2s,baz=236,slow=13,SNR=10						
PCAB	**Cabril**	**5.04**	**7**	A	A	12 58 37.0	
	comp=N,8.5nm,0.3s						
MD31	**MD31**	**5.08**	**138**	P	**Pn**	**12 57 02.7**	**-0.2**
MD31				S	**Sn**	**12 57 59.4**	**-1.7**
SESP	**Santiago Espad**	**5.19**	**72**	P	**Pn**	**12 57 04.9**	**+0.4**
	comp=N,3.9nm,0.4s,SNR=7.9						
SESP				S	**Sn**	**12 58 02.1**	**-1.9**
	comp=N,2.9nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.19**	**6**	P	**Pn**	**12 57 07.0**	**+2.5**
	comp=N,1.4nm,0.3s,SNR=7.6						
ELOB				S	**Sn**	**12 58 00.0**	**-3.9**
	comp=N,7.0nm,0.3s						
MDT	**Midelt**	**5.20**	**137**	P	**Pn**	**12 57 04.1**	**-0.5**
MDT				S	**Sn**	**12 58 04.8**	**+0.6**
PGAV	**Gavieira, Arco**	**5.28**	**4**	*e*Pn	**Pn**	**12 57 06.2**	**+0.6**
PGAV				*e*Sn	**Sn**	**12 58 03.1**	**-2.9**
PGAV				A	A	12 58 26.3	
	comp=N,3.8nm,0.4s						
PGAV	**Gavieira, Arco**	**5.28**	**4**	P	**Pn**	**12 57 06.2**	**+0.6**
PGAV				S	**Sn**	**12 58 03.1**	**-2.9**
	comp=N,3.8nm,0.4s						
GUD	**Guadarrama**	**5.37**	**41**	P	**Pn**	**12 57 07.8**	**+0.8**
	comp=N,1.7nm,0.3s,SNR=7.9						
GUD				S	**Sn**	**12 58 05.7**	**-2.6**
	comp=N,2.8nm,0.4s,SNR=7.9						
EZAM	**Zamans**	**5.44**	**1**	S	**Sn**	**12 58 08.1**	**-1.8**
	comp=N,2.1nm,0.3s,SNR=7.9						
OUK	**Oukaimeden**	**5.54**	**172**	P	**Pn**	**12 57 07.6**	**-1.8**
OUK				S	**Sn**	**12 58 11.5**	**-1.3**
JBK	**JBK**	**5.62**	**113**	P	**Pn**	**12 57 09.6**	**-0.8**
JBK				S	**Sn**	**12 58 12.5**	**-2.1**
OUZM	**OUZ**	**6.03**	**163**	P	**Pn**	**12 57 16.0**	**+0.1**
OUZM				S	**Sn**	**12 58 22.9**	**-1.6**
ETOB	**Tobarra**	**6.08**	**69**	P	**Pn**	**12 57 16.7**	**0.0**
	comp=N,3.4nm,0.6s,SNR=8.4						
ETOB				S	**Sn**	**12 58 23.0**	**-2.9**
	comp=N,0.7nm,0.2s						

*SOME **24** 13:24:51.0, 43°.63N×82°.25E, h5km*
*NNC **24** 13:24:53.0±1.1, 43°.60N×82°.13E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=10.1km s-min=4.0km az=139.0*
ISC 24 13:24:52.0±1.6, 43°.53N±0°.07×82°.16E±0°.06, h10km, n32, σ1°87/52, 2C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.32**	**267**	S	**Sg**	**13 25 36.1

MK31	**Makanchi Array**	**3.27**	**2**	Pn	**Pn**	**13 25 44.5**	**+1.2**
	0.1nm,0.2s,baz=186,slow=16,SNR=4.7						
MK31				⇓Pg	**Pg**	**13 25 52.3**	**-2.2**
	0.9nm,0.3s,baz=182,slow=13,SNR=13						
MK31				⇓Sn	**Sn**	**13 26 23.6**	**+1.4**
	0.4nm,0.2s,baz=186,slow=17						
MK31				⇑Lg	Lg	13 26 36.2	
	4.0nm,0.4s,baz=186,slow=27						
KOTS	**Kotyrbulak**	**3.69**	**267**	Pg	**Pb**	**13 25 59.3**	**+1.9**
	3.2nm,0.4s						
KOTS				Lg	Lg	13 26 48.6	
	8.0nm,0.4s						
KOTS	**Kotyrbulak**	**3.69**	**267**	*e*P	**Pb**	**13 25 59.3**	**+1.9**
	3.2nm,0.4s						
KOTS				*e*S	**Sg**	**13 26 48.6**	**-2.0**
	8.0nm,0.4s						
MDOK	**Medeo**	**3.75**	**266**	Pg	**Pb**	**13 26 00.8**	**+2.5**
	1.8nm,0.4s						
MDOK				Lg	Lg	13 26 50.7	
	6.0nm,0.5s						
MDOK	**Medeo**	**3.75**	**266**	*e*P	**Pb**	**13 26 00.8**	**+2.5**
	1.8nm,0.4s						
MDOK				*e*S	**Sg**	**13 26 50.7**	**-1.7**
	6.0nm,0.5s						
CHKK	**Chushkaly**	**3.77**	**277**	*e*P	**Pb**	**13 26 00.3**	**+1.7**
	1.5nm,0.3s						
CHKK				*e*S	**Sg**	**13 26 49.6**	**-3.3**
	14nm,0.3s						
TNSS	**Tian-Shan**	**3.84**	**264**	Pg	**Pb**	**13 26 02.6**	**+2.6**
TNSS				Lg	Lg	13 26 54.0	
TNSS	**Tian-Shan**	**3.84**	**264**	*e*P	**Pb**	**13 26 02.6**	**+2.6**
	2.6nm,0.4s						
TNSS				*e*S	**Sg**	**13 26 54.0**	**-1.3**
	6.1nm,0.3s						
KTBS	**Karatobe**	**3.98**	**275**	Pg	**Pb**	**13 26 05.0**	**+2.7**
	0.9nm,0.4s						
KTBS				Lg	Lg	13 26 58.0	
	21nm,0.5s						
KTBS	**Karatobe**	**3.98**	**275**	*e*P	**Pb**	**13 26 05.0**	**+2.7**
	0.9nm,0.4s						
KTBS				*e*S	**Sg**	**13 26 58.0**	**-1.9**
	21nm,0.5s						
ZSN	**Zaisan**	**4.36**	**25**	*e*P	**Pb**	**13 26 07.8**	**-0.8**
	1.1nm,0.2s						
ZSN				*e*S	**Sb**	**13 27 03.5**	**+2.3**
	2.1nm,0.4s						
KST	**Kastek**	**4.55**	**266**	Pg	**Pg**	**13 26 16.1**	**-3.0**
	2.2nm,0.2s						
KST				Lg	Lg	13 27 17.0	
	6.4nm,0.7s						
KST	**Kastek**	**4.55**	**266**	*e*P	**Pg**	**13 26 16.1**	**-3.0**
	2.2nm,0.2s						
KST				*e*S	**Sg**	**13 27 17.0**	**-1.2**
	6.4nm,0.7s						
DGS	**Degeres**	**4.67**	**269**	Pg	**Pb**	**13 26 17.1**	**+3.1**
	1.8nm,0.5s						
DGS				Lg	Lg	13 27 19.5	
	7.7nm,0.6s						
DGS	**Degeres**	**4.67**	**269**	*e*P	**Pb**	**13 26 17.1**	**+3.1**
	1.8nm,0.5s						
DGS				*e*S	**Sg**	**13 27 19.5**	**-2.3**
	7.7nm,0.6s						

*BEO **24** 13:29:24.9±0.5, 40.°96N×20.°12E, h5km, ML3.1/10*
*TIR **24** 13:29:25.5, 41.°16N×20.°18E, h12km, Md3.4/5*
*PDG **24** 13:29:25.3±0.2, 41.°10N×20.°13E, h10km, ML3.4/13, Error ellipse: s-maj=0.3km s-min=0.3km az=90.0*
*THE **24** 13:29:26.4, 41.°20N×20.°19E, h0km±3km, ML2.9/5, Error ellipse: s-maj=3.1km s-min=0.9km az=11.0*
*SKO **24** 13:29:26.4, 41.°16N×20.°15E, h2km, M2.3, ML2.9*

ISC 24 13:29:26.0±1.1, 41.°16N±0.°02×20.°16E±0.°02, h1km±10km, n90, σ1°34/129, 8C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**310**	*e*Pg	**Pg**	**13 29 31.5**	**0.0**
TIR				*e*Sg	**Sb**	**13 29 38.6**	**-0.8**
TIR	**Tirane**	**0.29**	**310**	P	**Pg**	**13 29 31.6**	**0.0**
TIR				S	**Sg**	**13 29 36.9**	**+1.5**
TIR	**Tirane**	**0.29**	**310**	⇑*i*P	**Pg**	**13 29 31.7**	**+0.1**
TIR				S	**Sb**	**13 29 38.7**	**-0.7**
TIR	**Tirane**	**0.29**	**310**	*i* Pg	**Pg**	**13 29 31.5**	**0.0**
TIR	**Tirane**	**0.29**	**310**	*i* PG	**Pg**	**13 29 32.1**	**+0.6**
TIR				*i* SG	**Sg**	**13 29 37.1**	**+1.7**
OHR	**Ohrid**	**0.48**	**96**	*i* Pg	**Pg**	**13 29 34.6**	**-0.6**
OHR				*i* Sg	**Sg**	**13 29 42.5**	**+1.0**
OHR				*e*Lg	Lg	13 29 42.8	
	comp=N,665nm,0.6s						
OHR				*e*Lg	Lg	13 29 42.9	
	comp=E,742nm,0.6s						
PHP	**Peshkopia**	**0.56**	**22**	P	**Pg**	**13 29 35.9**	**-0.9**
PHP				S	**Sg**	**13 29 45.0**	**+0.9**
PHP	**Peshkopia**	**0.56**	**22**	*i* PG	**Pg**	**13 29 36.3**	**-0.5**
PHP				*i* SG	**Sg**	**13 29 45.3**	**+1.2**
TPE	**Tepelena**	**0.87**	**188**	*i* PG	**Pg**	**13 29 42.3**	**-0.4**
TPE				*i* SG	**Sb**	**13 29 55.9**	**-0.2**
ULC	**Ulcinj**	**1.06**	**320**	⇓*i*Pg	**Pg**	**13 29 45.0**	**-1.2**
ULC				*e*Sg	**Sn**	**13 30 02.6**	**-0.8**
ULC	**Ulcinj**	**1.06**	**320**	*i* Pg	**Pg**	**13 29 44.8**	**-1.5**
BCI	**Bajram Curri**	**1.21**	**357**	*i* PN	**Pb**	**13 29 49.0**	**-0.7**
BCI				*i* SN	**Sn**	**13 30 06.4**	**-0.7**
PENT	**Pentalofos**	**1.22**	**142**	P	**Pb**	**13 29 49.3**	**-0.6**
SKO	**Skopje**	**1.25**	**49**	*e*Pg	**Pn**	**13 29 49.5**	**-1.2**
SKO				*e*Sg	**Sn**	**13 30 07.9**	**-0.4**
SKO	**Skopje**	**1.25**	**49**	P	**Pn**	**13 29 49.6**	**-1.2**
SKO	**Skopje**	**1.25**	**49**	*i* Pg	**Pn**	**13 29 49.5**	**-1.2**
SKO				*i* Sg	**Sb**	**13 30 06.8**	**-0.4**
SKO				*e*Lg	Lg	13 30 07.4	
	comp=N,45nm,0.4s						
SKO				*e*Lg	Lg	13 30 07.7	
	comp=E,38nm,0.4s						
DRME	**Dracevica, Mon**	**1.26**	**325**	⇑*i*Pg	**Pn**	**13 29 48.7**	**-2.1**
DRME				*e*Sg	**Sn**	**13 30 09.8**	**+1.4**
DRME	**Dracevica, Mon**	**1.26**	**325**	*e*Pn	**Pn**	**13 29 48.7**	**-2.1**
SRN	**Sarande**	**1.29**	**186**	P	**Pn**	**13 29 50.2**	**-0.9**
SRN				S	**Sn**	**13 30 10.9**	**+1.9**
SRN	**Sarande**	**1.29**	**186**	*i* PN	**Pn**	**13 29 50.4**	**-0.7**
SRN				*i* SN	**Sn**	**13 30 08.7**	**-0.2**
PDG	**Podgorica**	**1.44**	**332**	*e*Pn	**Pn**	**13 29 53.1**	**-0.1**
PDG				*e*Sn	**Sg**	**13 30 16.3**	**+4.1**
PDG	**Podgorica**	**1.44**	**332**	⇓*i*P	**Pn**	**13 29 53.2**	**-0.1**
PDG	**Podgorica**	**1.44**	**332**	S	**Sg**	**13 30 15.0**	**+2.8**
PDG	**Podgorica**	**1.44**	**332**	*i* Pn	**Pn**	**13 29 53.1**	**-0.1**
PDG	**Podgorica**	**1.44**	**332**	*e*Pn	**Pn**	**13 29 52.8**	**-0.4**
TTG	**Podgorica**	**1.44**	**332**	⇓*i*Pg	**Pn**	**13 29 52.7**	**-0.4**
TTG				*e*Sg	**Sg**	**13 30 14.7**	**+2.5**
PVY	**Plav**	**1.44**	**354**	⇓*i*Pg	**Pn**	**13 29 52.0**	**-1.4**
PVY				*e*Sg	**Sg**	**13 30 15.3**	**+3.0**
KEK	**Kerkira**	**1.47**	**191**	P	**Pb**	**13 29 54.0**	**-0.2**
KEK				S	**Sg**	**13 30 16.3**	**+3.0**
BUM	**Brajici-Budva**	**1.48**	**321**	⇓*i*Pg	**Pn**	**13 29 53.8**	**-0.1**
BUM				*e*Sg	**Sg**	**13 30 16.1**	**+2.5**
KZN	**Kozani**	**1.49**	**124**	P	**Pb**	**13 29 54.2**	**-0.3**
KZN				S	**Sg**	**13 30 14.4**	**+0.5**
KPRO	**Kipourio**	**1.51**	**142**	P	**Pb**	**13 29 55.0**	**+0.1**
IGT	**Igoumenitsa**	**1.63**	**175**	P	**Pb**	**13 29 56.6**	**-0.3**
IGT				S	**Sg**	**13 30 19.7**	**+1.3**
IGT	**Igoumenitsa**	**1.63**	**175**	*i* Pn	**Pb**	**13 29 56.6**	**-0.3**
GRG	**Griva**	**1.71**	**96**	*i* Pn	**Pn**	**13 29 56.6**	**-0.3**
IVA	**Berane**	**1.72**	**353**	⇑*i*Pn	**Pn**	**13 29 57.2**	**0.0**
IVA				*e*Sn	**Sg**	**13 30 22.1**	**+0.8**
KOME	**Kolasin**	**1.75**	**344**	⇓*i*Pn	**Pn**	**13 29 57.7**	**0.0**
KOME				*e*Sn	**Sg**	**13 30 22.9**	**+0.5**
HCY	**Herceg Novi**	**1.79**	**316**	⇓*i*Pn	**Pn**	**13 29 57.6**	**-0.5**
HCY				*e*Sn	**Sg**	**13 30 23.3**	**-0.2**
HCY	**Herceg Novi**	**1.79**	**316**	*e*Pn	**Pn**	**13 29 56.7**	**-1.4**
VAY	**Valandovo**	**1.82**	**84**	*e*Pn	**Pn**	**13 29 58.1**	**-0.4**
VAY				*e*Sn	**Sn**	**13 30 22.2**	**0.0**
VAY	**Valandovo**	**1.82**	**84**	*i* Pn	**Pb**	**13 29 59.4**	**-0.7**
VAY				*i* Sg	**Sg**	**13 30 24.5**	**0.0**
VAY				*e*Lg	Lg	13 30 24.6	
	comp=N,96nm,0.8s						
VAY				*e*Lg	Lg	13 30 25.1	
	comp=E,54nm,0.6s						
NKME	**Niksic**	**1.84**	**331**	⇓*i*Pn	**Pn**	**13 29 58.8**	**0.0**
NKME				*e*Sn	**Sg**	**13 30 24.8**	**-0.3**
NKY	**Niksic**	**1.87**	**333**	⇑*i*Pn	**Pn**	**13 29 58.8**	**-0.4**
NKY				*e*Sn	**Sb**	**13 30 25.2**	**+0.3**
TREB	**Trebinje**	**2.06**	**320**	*e*Pn	**Pn**	**13 30 01.4**	**-0.4**
TREB				*e*Sn	**Sb**	**13 30 29.5**	**-0.8**
TREB	**Trebinje**	**2.06**	**320**	*e*Pn	**Pn**	**13 30 01.0**	**-0.8**
BARS	**Barje**	**2.06**	**36**	*e*Pn	**Pb**	**13 30 03.5**	**-0.7**
BARS	**Barje**	**2.06**	**36**	*e*Pn	Pg	13 30 18.3	+13
SJES	**Sjenica**	**2.10**	**356**	*e*Pn	**Pb**	**13 30 03.9**	**-1.1**
SJES				*e*Sn	**Sb**	**13 30 32.5**	**+0.8**
BRY	**Bratogost**	**2.12**	**326**	⇓*i*Pn	**Pn**	**13 30 02.3**	**-0.4**
BRY				*e*Sn	**Sb**	**13 30 31.5**	**-0.6**
BRY	**Bratogost**	**2.12**	**326**	*e*Pn	**Pb**	**13 30 03.9**	**-1.4**
THL	**Klokotos Trika**	**2.13**	**138**	P	**Pn**	**13 30 02.6**	**-0.1**
THL				S	**Sb**	**13 30 30.7**	**-1.7**
SELS	**Selova**	**2.18**	**19**	*e*Pn	**Pn**	**13 30 04.1**	**+0.7**
SELS				*e*Sn	**Sg**	**13 30 35.1**	**-0.8**
PLE	**Pljevlja**	**2.24**	**345**	⇑*i*Pn	**Pn**	**13 30 04.7**	**+0.3**
PLE				*e*Sn	**Sb**	**13 30 34.6**	**-1.1**
UPM	**Unac-Piva**	**2.24**	**336**	⇓*i*Pn	**Pn**	**13 30 04.4**	**-0.1**
UPM				*e*Sn	**Sb**	**13 30 34.4**	**-1.4**
UPM	**Unac-Piva**	**2.24**	**336**	*e*Pn	**Pb**	**13 30 06.2**	**-1.2**
KKB	**Krupnik**	**2.30**	**71**	*i* Pn	**Pn**	**13 30 06.0**	**+0.9**
LKD2	**Lefkada island**	**2.40**	**171**	P	**Pn**	**13 30 06.7**	**+0.2**
IVAS	**Ivanjica**	**2.41**	**360**	*e*Pn	**Pn**	**13 30 07.9**	**+1.2**
IVAS				*e*Sn	**Sb**	**13 30 41.1**	**+0.5**
SOH	**Sokhos**	**2.44**	**97**	*i* Pn	**Pn**	**13 30 06.8**	**-0.3**
STON	**Ston**	**2.51**	**314**	*e*Pn	**Pn**	**13 30 07.1**	**-0.8**
STON	**Ston**	**2.51**	**314**	*e*Pn	**Pn**	**13 30 06.5**	**-1.3**
STON				Sn	**Sb**	**13 30 42.1**	**-1.0**
STON	**Ston**	**2.51**	**314**	*e*Pn	**Pn**	**13 30 06.9**	**-1.0**
MATE	**Matera**	**2.67**	**260**	⇑*i*P	**Pb**	**13 30 12.9**	**-1.7**
VTS	**Vitosha**	**2.72**	**57**	*e*Pn	**Pn**	**13 30 11.3**	**+0.4**
VTS	**Vitosha**	**2.72**	**57**	⇑*i*P	**Pn**	**13 30 11.6**	**+0.7**
VTS	**Vitosha**	**2.72**	**57**	S	**Sn**	**13 30 45.1**	**+0.6**
VTS	**Vitosha**	**2.72**	**57**	*i* Pn	**Pn**	**13 30 10.5**	**-0.4**
BOVS	**Bovan**	**2.72**	**24**	*e*Pn	**Pn**	**13 30 12.3**	**+1.4**
GRUS	**Gruza**	**2.76**	**8**	*e*Pn	**Pn**	**13 30 12.5**	**+1.2**
GRUS				*e*Sn	**Sb**	**13 30 48.4**	**-1.9**
BBLS	**Lazići**	**2.76**	**349**	*e*Pn	**Pn**	**13 30 13.4**	**+1.9**
BBLS	**Lazići**	**2.76**	**349**	*e*Pn	**Pn**	**13 30 13.4**	**+1.9**
ZAPS	**Zavoj**	**2.80**	**40**	*e*Pn	**Pn**	**13 30 13.5**	**+1.6**
DIVS	**Divibare**	**2.94**	**358**	*e*Pn	**Pn**	**13 30 15.3**	**+1.4**
DIVS	**Divibare**	**2.94**	**358**	*e*Pn	**Pn**	**13 30 15.3**	**+1.4**
HAPS	**Han Pijesak,BI**	**3.06**	**343**	*e*Pn	**Pn**	**13 30 16.2**	**+0.6**
HAPS				*e*Sn	**Sb**	**13 30 55.5**	**-3.6**
HAPS	**Han Pijesak,BI**	**3.06**	**343**	*e*Pn	**Pn**	**13 30 13.7**	**-1.9**
ZAGS	**Zajecar**	**3.06**	**29**	*e*Pn	**Pn**	**13 30 17.3**	**+1.8**
TRUS	**Trudelj**	**3.06**	**3**	*e*Pn	**Pn**	**13 30 16.9**	**+1.3**
KUBS	**Kucevo**	**3.43**	**18**	*e*Pn	**Pn**	**13 30 20.7**	**0.0**
MDVR	**Moldovita**	**3.79**	**17**	⇑*i*P	**Pn**	**13 30 25.4**	**-0.2**
HERR	**Herculane**	**4.07**	**23**	⇓*i*P	**Pn**	**13 30 29.7**	**+0.3**
BLY	**Banja Luka**	**4.20**	**330**	*e*Pn	**Pb**	**13 30 40.0**	**-0.6**
BZS	**Buzias**	**4.58**	**13**	*e*Pn	**Pn**	**13 30 36.5**	**+0.1**
BZS	**Buzias**	**4.58**	**13**	⇓*i*P	**Pn**	**13 30 37.4**	**+1.0**
GZR	**Gura Zlata**	**4.64**	**23**	⇓*i*P	**Pn**	**13 30 37.5**	**+0.2**
UDBI	**Udbina**	**4.67**	**318**	*e*Pn	**Pn**	**13 30 38.3**	**+0.7**
NVLJ	**Novalja**	**5.17**	**313**	*e*Pn	**Pn**	**13 30 43.3**	**-1.1**
MORH	**Mrgy. Hungar**	**5.17**	**348**	*e*Pn	**Pn**	**13 30 45.0**	**+0.5**
CRES	**Cresnjev**	**5.78**	**325**	*e*Pn	**Pn**	**13 30 52.5**	**-0.4**
CEY	**Cerknica**	**6.19**	**320**	*e*Pn	**Pn**	**13 30 57.1**	**-1.5**
VYHS	**Vyhne**	**7.39**	**353**	*e*SN	**Sn**	**13 32 46.4**	**+6.9**

MEX 24 13:44:07.9±0.6, 16.°12N×97.°63W, h20km±78km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.28**	**42**	*i* P	Pn	13 44 28.1	-2.8
VHO				*i* S	Sn	13 44 42.8	-4.7
TLIG	**Tlapa**	**1.70**	**328**	*e*P	Pn	13 44 33.1	-3.5

*TEH **24** 14:37:28.5, 32.°84N×46.°12E, h10km, ML3.3*
*ISN **24** 14:37:29.9±0.3, 32.°97N×46.°34E, h0km, ML3.2*
*ISCJB **24** 14:37:33.6±1.1, 33.°1N±0.°1×46.°45E±0.°05, h13km, Error ellipse: s-maj=15.1km s-min=6.0km az=177.2*

ISC 24 14:37:34.9±1.2, 33.°17N±0.°08×46.°49E±0.°05, h13km, n12, σ0°65/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**1.16**	**3**	*e*Pn	**Pb**	**14 37 56.6**	**-0.3**
IGHG				IAMB	IAmb	14 37 58.0	
	comp=Z,5μm,0.2s						
IKFM	**Kafar-mosalman**	**1.19**	**72**	*e*Pn	**Pg**	**14 37 57.7**	**0.0**
IKFM				IAMB	IAmb	14 37 58.7	
	comp=Z,0.0nm,0.1s						
KCHF	**Cheshme Sefid,**	**1.19**	**22**	*e*Pn	**Pn**	**14 37 57.2**	**-0.2**
IKOM	**Komasi**	**1.31**	**40**	*e*Pn	**Pn**	**14 37 59.4**	**+0.3**
IKOM				IAMB	IAmb	14 38 02.9	
	comp=Z,0.0nm,0.2s						
IVIS	**Veis**	**1.38**	**12**	*e*Pn	**Pn**	**14 37 59.9**	**-0.1**
IVIS				IAMB	IAmb	14 38 24.6	
	comp=Z,3μm,0.3s						
IDHR	**Dehrash**	**1.52**	**357**	*e*Pn	**Pn**	**14 38 00.8**	**-1.3**
IDHR				IAMB	IAmb	14 38 27.4	
	comp=Z,0.0nm,0.3s						
IDOB	**Doab**	**1.53**	**66**	*e*Pn	**Pn**	**14 38 02.6**	**+0.4**
IDOB				IAMB	IAmb	14 38 34.5	
	comp=Z,0.0nm,0.4s						
IKMR	**Kamar-syah**	**1.62**	**77**	*e*Pn	**Pn**	**14 38 03.2**	**+0.1**
IBZA	**Bozab**	**1.72**	**41**	*e*Pn	**Pn**	**14 38 05.1**	**+0.3**
BHD	**Baghdad**	**1.77**	**274**	*e*Pg	**Pb**	**14 38 07.0**	**-0.3**
	baz=100						
BHD				*e*Sg	**Sg**	**14 38 33.0**	**+1.0**
ILIN	**Lien**	**1.78**	**12**	IAMB	IAmb	14 38 36.6	
	comp=Z,818nm,0.4s						
ILIN				*e*Pn	**Pn**	**14 38 06.4**	**+0.7**
IPIR	**Pirpir**	**3.73**	**96**	*e*Pn	**Pn**	**14 38 31.8**	**-0.7**

MEX 24 14:45:12.2±0.5, 15.°23N×94.°30W, h42km±46km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.15**	**65**	*e*P	Pn	14 45 29.9	-1.9
PCIG				*e*S	Sn	14 45 44.2	-2.1
TGIG		**1.92**	**36**	*e*P	Pn	14 45 40.9	-1.6
TGIG				*i* S	Sn	14 46 03.2	-2.1
CCIG	**Comitan**	**2.33**	**63**	*i* P	Pn	14 45 44.2	-4.1
CCIG				*i* S	Sn	14 46 17.5	+1.7

*ISCJB **24** 15:09:23.1±0.8, 20.°49S±0.°10×178.°1W±0.°2, h650km, mb3.5/8, Error ellipse: s-maj=23.0km s-min=12.1km az=11.6*
*IDC **24** 15:09:26.1±4.5, 20.°41S×178.°10W, h672km±61km, mb3.0/8, mb1 3.3/10, mb1mx3.1/25, mbtmp4.1/10, Error ellipse: s-maj=35.1km s-min=27.0km az=6.0*

ISC 24 15:09:24.9±0.9, 20.°4S±0.°1×178.°1W±0.°2, h650km, n13, σ1°66/14, mb3.6/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.52**	**261**	P	**P**	**15 12 27.6**	**+0.7**
	1.0nm,0.3s,baz=105,slow=23,SNR=9.0						
URZ	**Urewera**	**18.25**	**192**	P	**P**	**15 13 01.3**	**+0.8**
	2.2nm,0.3s,baz=297,slow=2.5,SNR=17						
URZ				S	**S**	**15 15 52.9**	**-2.1**
	0.2nm,0.3s,baz=201,slow=14,SNR=2.1						
ASAR	**Alice Springs**	**44.46**	**257**	P	**P**	**15 16 41.8**	**+0.5**
	1.0nm,0.4s,baz=87,slow=8.6,SNR=43						
WRA	**Warramunga Arr**	**44.53**	**262**	P	**P**	**15 16 41.4**	**-0.4**
	1.2nm,0.2s,baz=92,slow=7.5,SNR=40						
MJAR	**Matsushiro Arr**	**70.11**	**324**	P	**P**	**15 19 32.6**	**-1.5**
	1.3nm,0.5s,baz=166,slow=6.2,SNR=5.9						
PETK	**Petropavlovsk-**	**76.19**	**345**	P	**P**	**15 20 07.2**	**-0.9**
	2.6nm,0.7s,baz=122,slow=8.9,SNR=4.3						
KSRS	**Korea Array**	**76.78**	**319**	P	**P**	**15 20 11.7**	**0.0**
	0.6nm,0.7s,baz=133,slow=5.6,SNR=4.0						
USRK	**Ussuriysk Ar.**	**78.86**	**326**	P	**P**	**15 20 23.7**	**+1.0**
	1.3nm,0.8s,baz=107,slow=7.0,SNR=5.3						
NVAR	**Mina Array Bea**	**81.03**	**43**	P	**P**	**15 20 35.3**	**+0.9**
	0.2nm,0.6s,baz=242,slow=4.7,SNR=2.9						
ILAR	**Eielson Array**	**88.26**	**13**	P	**P**	**15 21 07.5**	**-1.0**
	0.8nm,0.6s,baz=223,slow=5.4,SNR=9.9						
AKASG	**Malin Array Be**	**142.92**	**331**	PKP	**PKPdf**	**15 27 43.6**	**-2.5**
	0.2nm,0.2s,baz=39,slow=4.3,SNR=5.8						
BRTR	**Keskin Array B**	**146.74**	**312**	PKPbc	**PKPbc**	**15 27 56.3**	**+0.1**
	0.3nm,0.3s,baz=104,slow=4.9,SNR=3.1						
GERES	**GERESS Array B**	**150.11**	**344**	PKPbc	**PKPdf**	**15 28 01.8**	**+3.5**
	0.5nm,0.5s,baz=22,slow=1.4,SNR=4.4						

*ISCJB **24** 15:26:47.2±0.5, 4.°20S±0.°05×77.°42W±0.°09, h100km, mb3.8/8, Error ellipse: s-maj=12.4km s-min=6.4km az=5.8*

*IDC **24** 15:26:49.2±2.7, 4.°28S×77.°48W, h112km±29km, mb3.5/8, mb1 3.8/11, mb1mx3.6/31, mbtmp3.9/11, MS3.1/2, Ms1 3.1/2, ms1mx2.6/21, Error ellipse: s-maj=26.7km s-min=16.2km az=39.0*

ISC 24 15:26:48.2±0.6, 4.°31S±0.°06×77.°4W±0.°1, h100km, n23, σ1°88/24, mb3.8/8, 1C, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.98**	**200**	P	**Pn**	**15 27 36.5**	**+2.4**
	11nm,0.3s,baz=23,slow=7.8,SNR=45						
ATAH				S	**Sn**	**15 28 10.9**	**+1.5**
	57nm,0.3s,baz=281,slow=17,SNR=29						
ATAH				LR	LR	15 28 27.3	
	comp=Z,114nm,20.8s,baz=101,slow=33						
OTAV	**Otavalo**	**4.64**	**347**	*e*P	**Pn**	**15 27 55.0**	**-1.4**
PTLC	**Puerto Leguiza**	**5.14**	**30**	*e*P	**Pn**	**15 28 00.3**	**-2.6**
FLOC	**Florencia**	**6.10**	**17**	⇑*i*P	**Pn**	**15 28 16.9**	**+1.0**
BBAC	**Balboa, Cauca**	**6.29**	**1**	*e*P	**Pn**	**15 28 21.5**	**+2.8**
POPC	**Popayan, Colom**	**6.84**	**6**	*e*P	**Pn**	**15 28 29.3**	**+3.2**
NNA	**Nana**	**7.65**	**176**	P	**Pn**	**15 28 38.6**	**+1.6**
	4.9nm,0.3s,baz=346,slow=11,SNR=5.8						
NNA				S	**Sn**	**15 29 58.3**	**-3.8**
	15nm,0.3s,baz=300,slow=18,SNR=6.6						
PRAC	**Prado**	**8.35**	**17**	*e*P	**Pn**	**15 28 48.7**	**+2.2**
LPAZ	**La Paz**	**14.98**	**143**	P	**P**	**15 30 18.1**	**-0.3**
	0.2nm,0.3s,baz=321,slow=10,SNR=4.9						
PTGA	**Pitinga**	**17.76**	**79**	P	**P**	**15 30 49.1**	**+0.5**
	1.9nm,0.3s,baz=274,slow=13,SNR=16						
SIV	**San Ignacio**	**19.80**	**127**	P	**P**	**15 31 12.6**	**+1.8**
	0.5nm,0.3s,baz=313,slow=8.7,SNR=8.2						
PLCA	**Paso Flores**	**36.78**	**171**	P	**P**	**15 33 47.0**	**+0.7**
	1.1nm,0.5s,baz=31,slow=4.9,SNR=5.5						
TXAR	**Lajitas Array**	**41.89**	**325**	P	**P**	**15 34 28.6**	**-0.4**
	0.2nm,0.4s,baz=140,slow=5.9,SNR=3.9						
PDAR	**Pinedale Array**	**55.17**	**331**	P	**P**	**15 36 09.7**	**-1.1**
	0.5nm,0.6s,baz=133,slow=10.0,SNR=6.0						
NVAR	**Mina Array Bea**	**56.93**	**322**	P	**P**	**15 36 23.6**	**+0.3**
	0.6nm,0.7s,baz=122,slow=7.2,SNR=5.4						
YBH	**Yreka Blue Hor**	**61.62**	**323**	LR	LR	16 02 33.0	
	comp=Z,344nm,18.0s,baz=148,slow=35						
YKA	**Yellowknife Ar**	**72.38**	**343**	P	**P**	**15 38 02.1**	**-0.9**
	1.1nm,0.4s,baz=140,slow=6.1,SNR=27						
DBIC	**Dimbokro**	**73.22**	**82**	P	**P**	**15 38 09.8**	**+0.8**
	4.2nm,1.0s,baz=258,slow=4.1,SNR=4.2						
TORD	**Torodi Ar. Bea**	**80.38**	**76**	P	**P**	**15 38 48.6**	**-0.7**
	0.5nm,0.3s,baz=265,slow=5.9,SNR=11						
ILAR	**Eielson Array**	**85.28**	**336**	P	**P**	**15 39 12.8**	**-0.8**
	0.6nm,0.9s,baz=133,slow=5.0,SNR=4.9						
MKAR	**Makanchi Array**	**134.16**	**19**	PKP	**PKPdf**	**15 45 53.2**	**-1.1**
	0.3nm,0.5s,baz=354,slow=2.9,SNR=4.0						
ASAR	**Alice Springs**	**138.73**	**226**	PKP	**PKPdf**	**15 46 01.1**	**-2.4**
	0.4nm,0.8s,baz=120,slow=2.1,SNR=5.5						
WRA	**Warramunga Arr**	**140.59**	**231**	PKhKP	PKPpre	15 46 01.2	
	1.0nm,0.8s,baz=135,slow=1.6,SNR=2.9						
WRA				PKP	**PKPdf**	**15 46 05.8**	**-1.1**
	0.9nm,0.8s,baz=135,slow=1.6,SNR=4.0						

*IDC **24** 15:34:39.7±14.0, 27.°65N×86.°21E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.4/29, mbtmp3.7/5, ML4.0/1, Error ellipse: s-maj=261.1km s-min=40.2km az=34.0*
*NDI **24** 15:34:51.3±2.1, 28.°71N×86.°53E, h30km, ML3.5*
*ISCJB **24** 15:34:52.1±1.0, 28.°64N±0.°08×86.°91E±0.°09, h33km, mb3.5/4, Error ellipse: s-maj=14.7km s-min=6.3km az=136.3*

**ISC 24

242nm,0.3s,baz=147,slow=22,SNR=357
JTS S **Sn** **15 43 39.0 +0.6**
524nm,0.3s,baz=73,slow=19,SNR=35
JTS Las Juntas de 0.76 278 *eP* **Pn** **15 43 25.5 +0.8**
JTS *eS* **Sn** **15 43 39.2 +0.9**
ACAL Aguas Claras 0.94 298 *iP* **Pn** **15 43 27.3 +0.7**
PTEN Parque Tenorio 0.95 304 *iP* **Pn** **15 43 27.3 +0.8**
EDDO Dominical 0.98 161 *eP* **Pn** **15 43 27.7 +0.8**
CUI Cuipilapa 1.07 296 *iP* **Pn** **15 43 28.9 +1.1**
EDLM Las Mercedes 1.08 147 *eP* **Pn** **15 43 28.6 +0.6**
HORNC Hornillas 1.11 298 *iP* **Pn** **15 43 29.0 +0.7**
MESS Mesas 1.13 299 *eP* **Pn** **15 43 29.5 +1.0**
GPS1 Guardaparques 1.28 297 *iP* **Pn** **15 43 31.4 +1.1**
DRK0 Durika 1.31 135 *eP* **Pn** **15 43 31.1 +0.5**
DRK0 *eS* **Sn** **15 43 49.0 0.0**
BUEV Buena Vista 1.34 297 *eP* **Pn** **15 43 32.2 +1.2**
GB1A Borinquen Arri 1.35 298 *eP* **Pn** **15 43 32.2 +1.2**
LAPC Finca la Perla 1.35 295 *iP* **Pn** **15 43 31.9 +0.9**
EDBA Buenos Aires 1.36 138 *eP* **Pn** **15 43 31.4 +0.3**
NY14 Universidad de 1.40 289 *iP* **Pn** **15 43 32.9 +1.3**
EDPN Palmar Norte 1.41 149 *eP* **Pn** **15 43 32.2 +0.5**
PTJ1 Puerto Jimnez 1.86 152 *eP* **Pn** **15 43 38.2 +0.9**
PTJ1 *eS* **Sn** **15 44 04.2 +3.4**
CONN Concepcion 1.97 314 *eP* **Pn** **15 43 39.4 +0.7**
ESPN Las Esperanzas 2.00 357 *eP* **Pn** **15 43 39.8 +0.7**
ESPN *eS* **Sn** **15 44 04.8 +0.8**
ESPN IAML 15 44 05.6
comp=N,177nm,0.9s
ACON Acoyapa 2.02 331 *iP* **Pn** **15 43 40.1 +0.8**
BRU2 Volcan 2.02 133 *eP* **Pn** **15 43 40.4 +0.9**
BRU2 *eS* **Sn** **15 44 05.5 +0.7**
TBS2 2.05 132 *eP* **Pn** **15 43 40.8 +0.9**
TBS2 *eS* **Sn** **15 44 05.7 +0.2**
DVD David 2.44 135 *eP* **Pn** **15 43 48.0 +3.2**
DVD *eS* **Sn** **15 44 14.9 +0.5**
MATN Matagalpa 3.21 328 *eP* **Pn** **15 43 56.2 +1.1**
YKA Yellowknife Ar 56.65 344 P **P** **15 52 39.2 +0.6**
comp=N,1.0nm,0.7s,baz=136,slow=7.2,SNR=18
ILAR Eielson Array 69.37 336 P **P** **15 54 03.0 +0.3**
comp=N,0.3nm,0.6s,baz=125,slow=4.0,SNR=5.6
ESDC Sonseca Array 76.07 52 P **P** **15 54 43.8 +0.8**
comp=N,0.4nm,0.5s,baz=290,slow=7.3,SNR=3.1
TORD Torodi Ar. Bea 83.77 78 P **P** **15 55 24.7 -0.1**
comp=N,0.2nm,0.5s,baz=281,slow=4.8,SNR=3.2
ASAR Alice Springs 141.31 245 PKP **PKPdf** **16 02 21.2 -4.8**
comp=N,0.2nm,0.5s,baz=103,slow=4.1,SNR=8.0
WRA Warramunga Arr 141.64 251 PKP **PKPdf** **16 02 22.5 -4.1**
comp=N,0.9nm,0.7s,baz=127,slow=2.1,SNR=3.4

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*DJA **24** 15:53:24.0±2.0, 3°N±9°×9°2E±1°7, h10km, M4.8/10, mB5.2/4, mb4.8/10, MLv4.9/8, Mw(mB)4.6/4*
*IDC **24** 15:53:32.9±1.1, 2°74N×92°66E, h0km, mb3.9/9, mb1 4.1/12, mb1mx3.8/38, mbtmp4.0/12, ML4.1/3, MS3.3/8, Ms1 3.3/8, ms1mx3.1/29, Error ellipse: s-maj=33.4km s-min=16.9km az=47.0*
*NEIC **24** 15:53:34.2±0.4, 2°74N×92°67E, h10km, mb4.3/13, Error ellipse: s-maj=8.3km s-min=4.6km az=216.0*
*ISCJB **24** 15:53:35.9±0.6, 2°69N±0°06×92°79E±0°05, h33km, mb4.2/18, MS3.4/5, Error ellipse: s-maj=10.0km s-min=5.2km az=38.3*
ISC 24 15:53:37.6±0.7, 2°66N±0°09×92°69E±0°07, h35km, n56, σ1§11/53, mb4.2/18, MS3.4/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**4.04**	**67**	P		**Pn**	**15 54 35.6**	**-1.3**
TPTI		**4.52**	**82**	P		**Pn**	**15 54 43.2**	**-0.4**
33nm,0.9s,1μm0.2nm								
GSI	**Gunungsitoli**	**5.06**	**105**	*e*Pn		**Pn**	**15 54 50.1**	**-0.9**
GSI	**Gunungsitoli**	**5.06**	**105**	P		**Pn**	**15 54 50.0**	**-1.0**
KCSI	**Kotacane, Aceh**	**5.15**	**80**	P		**Pn**	**15 54 52.6**	**+0.4**
188nm,0.8s,2μm0.9nm								
TSI	**Tuntungan**	**5.92**	**82**	P		**Pn**	**15 55 03.3**	**+0.4**
PSI	**Prapat**	**6.23**	**89**	Pn		**Pn**	**15 55 06.8**	**-0.4**
2.1nm,0.3s,baz=304,slow=3.8,SNR=15								
PSI				Sn		**Sn**	**15 56 14.9**	**-2.4**
3.6nm,0.3s,baz=241,slow=19,SNR=2.9								
PSI				LR		LR	15 57 23.1	
comp=Z,304nm,20.9s,baz=288,slow=37								
MNSI	**Mandailing Nat**	**7.13**	**105**	P		**Pn**	**15 55 18.9**	**-0.5**
95nm,0.8s,2μm0.5nm								
SISI	**Saibi**	**7.52**	**122**	P		**Pn**	**15 55 22.6**	**-2.2**
KULM	**Kulim**	**8.36**	**72**	*e*Pn		**Pn**	**15 55 35.4**	**-0.9**
IPM	**Ipoh**	**8.51**	**77**	*e*Pn		**Pn**	**15 55 38.0**	**-0.5**
SDSI	**Sungai Dareh**	**9.44**	**112**	P		**Pn**	**15 55 49.7**	**-1.4**
MYKOM	**Kota Tinggi**	**11.18**	**94**	*e*Pn		**Pn**	**15 56 14.6**	**-0.5**
MNAI	**Manna**	**12.40**	**124**	*e*Pn		**Pn**	**15 56 31.9**	**+0.2**
PALK	**Pallekele**	**12.79**	**291**	Pn		**Pn**	**15 56 35.4**	**-1.7**
1.7nm,0.3s,baz=116,slow=12,SNR=5.3								
PALK				LR		LR	16 00 38.2	
comp=Z,169nm,21.1s,baz=116,slow=33								
CM31	**Chiang Mai Arr**	**16.86**	**21**	*e*Pn		**Pn**	**15 57 29.5**	**-1.4**
9.3nm,0.8s								
CMAR	**Chiang Mai Arr**	**16.86**	**21**	Pn		**Pn**	**15 57 27.9**	**-3.1**
0.4nm,0.3s,baz=216,slow=12,SNR=27								
CMAR				LR		LR	16 03 53.1	
comp=Z,73nm,18.0s,baz=215,slow=37								
UTTA	**Uttaradit**	**16.86**	**27**	P		**Pn**	**15 57 30.1**	**-0.9**
17μm,1.0s								
CHTO	**Chiang Mai**	**17.18**	**20**	*e*Pn		**Pn**	**15 57 33.6**	**-1.5**
10nm,0.9s								
CMMT	**Chiang Mai**	**17.18**	**20**	P		**Pn**	**15 57 35.8**	**+0.7**
6.5nm,0.9s								
LEM	**Lembang**	**17.63**	**122**	LR		LR	16 04 07.7	
comp=Z,139nm,18.4s,baz=244,slow=36								
KSM	**Kuching**	**17.64**	**93**	*e*Pn		**P**	**15 57 42.3**	**+0.8**
5.7nm,0.8s								
NONG	**Nongkai**	**18.43**	**33**	P		**P**	**15 57 49.9**	**-0.2**
0.3nm,1.4s								
SBUM	**Sibu**	**19.51**	**90**	*e*P		**P**	**15 58 01.4**	**-0.7**
2.3nm,0.8s								
SLVN	**Son La**	**21.54**	**30**	*e*P		**P**	**15 58 23.5**	**-0.4**
30nm,1.7s								
SGKI	**Sangatta, Kali**	**25.11**	**97**	P		P	15 58 49.6	-10
LSA	**Lhasa**	**26.93**	**357**	P		**P**	**15 59 17.5**	**+1.2**
LSA				pmax		pmax		
comp=Z,42nm,0.7s								
LSA	**Lhasa**	**26.93**	**357**	*e*P		**P**	**15 59 17.2**	**+0.9**
comp=Z,8.0nm,0.6s								
LZH	**Lanzhou**	**34.83**	**16**	*e*P		**P**	**16 00 27.3**	**+1.9**
LZH				pP		pP	16 00 36.1	+1.8
LZH				sP		pwP	16 00 40.5	+0.6
LZH				*e*PP		**PP**	**16 01 45.3**	**+0.5**
LZH				pmax		pmax		
comp=Z,18nm,1.1s								
LZH				pmax		pmax		
comp=Z,46nm,5.2s								
AAI	**Ambon**	**36.04**	**100**	P		P	16 00 28.4	-7.6
WMQ	**Urumqi**	**41.23**	**355**	*e*P		**P**	**16 01 20.5**	**+1.3**
WMQ				LR		LR		
comp=N,97nm,29.3s								
WMQ				LR		LR		
comp=E,330nm,28.8s								
WMQ				LR		LR		
comp=Z,34nm,25.5s								
HHC	**Hu-ho-hao-te**	**41.66**	**22**	*e*P		**P**	**16 01 24.1**	**+1.3**
HHC				pmax		pmax		
comp=Z,13nm,1.0s								
HHC				pmax		pmax		
comp=Z,24nm,6.0s								
BTK	**Batken**	**42.18**	**335**	*e*P		**P**	**16 01 27.7**	**+0.7**
comp=Z,14nm,1.4s								
MK31	**Makanchi Array**	**44.88**	**350**	*e*P		**P**	**16 01 48.0**	**-0.7**
comp=Z,4.1nm,1.1s								
MK32	**Makanchi Array**	**44.88**	**350**	*e*P		**P**	**16 01 48.5**	**-0.2**
MKAR	**Makanchi Array**	**44.88**	**350**	P		**P**	**16 01 48.5**	**-0.2**
comp=Z,2.5nm,0.7s,baz=170,slow=8.3,SNR=20								
SONA0	**Songino Array**	**46.53**	**13**	*e*P		**P**	**16 02 01.5**	**-0.3**
SONM	**Songino Array**	**46.53**	**13**	P		**P**	**16 02 01.5**	**-0.3**
comp=Z,1.4nm,0.7s,baz=191,slow=6.8,SNR=4.2								
WR1	**Warramunga Arr**	**46.64**	**121**	*e*P		**P**	**16 02 03.4**	**+0.5**
WRA	**Warramunga Arr**	**46.64**	**121**	P		**P**	**16 02 03.4**	**+0.5**
comp=Z,1.4nm,0.8s,baz=292,slow=9.5,SNR=7.8								
GEYT	**Alibeck**	**47.26**	**322**	P		**P**	**16 02 07.8**	**+0.2**
comp=Z,1.4nm,0.7s,baz=139,slow=9.0,SNR=3.1								
KS15	**Wonju Array Si**	**47.34**	**39**	*e*P		**P**	**16 02 08.8**	**+0.7**
comp=Z,13nm,1.6s								
KSAR	**Wonju Array Be**	**47.34**	**39**	P		**P**	**16 02 08.8**	**+0.7**
KSRS	**Korea Array**	**47.37**	**39**	P		**P**	**16 02 08.8**	**+0.5**
comp=Z,0.9nm,0.8s,baz=222,slow=8.2,SNR=7.7								
KSRS				LR		LR	16 24 04.7	
comp=Z,39nm,18.6s,baz=230,slow=39								
ASAR	**Alice Springs**	**47.88**	**125**	P		**P**	**16 02 13.1**	**+0.4**
comp=Z,0.4nm,0.8s,baz=296,slow=7.9,SNR=6.6								
AS31	**Alice Springs**	**47.89**	**125**	*e*P		**P**	**16 02 13.1**	**+0.4**
comp=Z,5.0nm,1.8s								
ZALV	**Zalesovo Beam**	**51.53**	**354**	P		**P**	**16 02 39.8**	**0.0**
comp=Z,3.3nm,0.5s,baz=176,slow=7.4,SNR=13								
ZALV				LR		LR	16 27 44.8	
comp=Z,24nm,19.4s,baz=45,slow=40								
ZAA1	**Zalesovo Array**	**51.54**	**354**	*e*P		**P**	**16 02 39.8**	**-0.1**
MJAR	**Matsushiro Arr**	**53.77**	**45**	LR		LR	16 27 45.8	
comp=Z,28nm,18.5s,baz=285,slow=38								
ABKAR	**Akbulak array**	**54.18**	**334**	*e*P		**P**	**16 02 58.3**	**-1.1**
comp=Z,2.8nm,0.9s								
STKA	**Stephens Creek**	**57.70**	**131**	P		**P**	**16 03 27.2**	**+2.3**
comp=Z,1.7nm,0.9s,baz=299,slow=10,SNR=3.7								
STKA	**Stephens Creek**	**57.70**	**131**	*e*P		**P**	**16 03 27.2**	**+2.3**
comp=Z,3.0nm,1.5s								
BRTR	**Keskin Array B**	**64.82**	**313**	LR		LR	16 33 56.5	
comp=Z,17nm,18.3s,baz=109,slow=37								
GEC2	**GERESS Array S**	**80.76**	**319**	*e*P		**P**	**16 05 47.7**	**+0.1**
comp=Z,15nm,1.9s								
GERES	**GERESS Array B**	**80.76**	**319**	P		**P**	**16 05 47.7**	**+0.1**
comp=Z,0.6nm,0.8s,baz=182,slow=12,SNR=4.9								
TXAR	**Lajitas Array**	**144.54**	**25**	PKP		**PKPdf**	**16 13 10.6**	**-0.6**
comp=Z,0.2nm,0.5s,baz=349,slow=0.9,SNR=3.7								

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*ISCJB **24** 16:43:48.6±0.7, 79°32N±0°05×20°6E±0°2, h10km, Error ellipse: s-maj=8.5km s-min=4.8km az=151.6*
*BER **24** 16:43:51.4±3.2, 79°39N×20°85E, h15km±24km, ML2.7, Confirmed Earthquake*
*NAO **24** 16:43:53.3±1.9, 79°23N×20°12E, h15km±9km, ML3.1*
*IEPN **24** 16:43:53.0, 79°09N×20°92E, h10km*
ISC 24 16:43:50.8±1.0, 79°32N±0°06×20°37E±0°04, h10km, n16, σ1§39/27, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**1.39**	**216**	Pn		**Pn**	**16 44 16.2**	**0.0**
baz=39,slow=12								
SPA0				Pg		**Pg**	**16 44 17.8**	**+0.3**
baz=39,slow=18								
SPA0				Lg		Lg	16 44 34.0	
baz=46,slow=28								
SPA0	**Spitsbergen Ar**	**1.39**	**216**	*e*P		**Pn**	**16 44 16.2**	**0.0**
SPA0				*e*S		**Sb**	**16 44 34.2**	**-0.4**
SPA0				IAML			16 44 38.8	
comp=Z,164nm,0.2s								
KBS	**Kingsbay**	**1.65**	**260**	Pn		**Pn**	**16 44 19.1**	**-0.7**
KBS				Pg		**Pb**	**16 44 21.7**	**+0.5**
KBS				Lg		Lg	16 44 42.3	
KBS	**Kingsbay**	**1.65**	**260**	*e*P		**Pn**	**16 44 19.3**	**-0.5**
KBS				*e*Sg		**Sb**	**16 44 42.5**	**+0.5**
KBS				IAML			16 44 45.1	
comp=Z,191nm,0.5s								
BRBA	**Barentsburg A**	**1.75**	**227**	Pn		**Pn**	**16 44 21.2**	**0.0**
BRBA				Pg		**Pb**	**16 44 23.8**	**+0.8**
BRBA				Lg		Lg	16 44 42.5	
BRBA	**Barentsburg A**	**1.75**	**227**	Pn		**Pn**	**16 44 21.2**	**0.0**
BRBA				Pg		**Pb**	**16 44 23.8**	**+0.8**
BRBA				Sg		**Sn**	**16 44 42.5**	**-1.0**
HSP	**Hornsund**	**2.53**	**206**	Pn		**Pn**	**16 44 33.8**	**+2.0**
HSP				Pg		**Pb**	**16 44 38.2**	**+2.0**
HSP				Lg		Lg	16 45 11.6	
HSPB	**Hornsund (broa**	**2.53**	**206**	*e*P		**Pn**	**16 44 33.6**	**+1.7**
HSPB				*e*Sg		**Sg**	**16 45 11.4**	**-0.7**
HSPB				IAML			16 45 13.6	
comp=Z,84nm,0.7s								
HOPEN	**Hopen**	**2.99**	**159**	Pn		**Pn**	**16 44 37.9**	**-0.2**
HOPEN				Pg		**Pb**	**16 44 46.2**	**+2.2**
HOPEN				Lg		Lg	16 45 26.4	
HOPEN	**Hopen**	**2.99**	**159**	*e*P		**Pn**	**16 44 37.9**	**-0.2**
HOPEN				IAML			16 45 35.6	
comp=Z,64nm,0.6s								
BJO	**Bjornoya**	**4.85**	**184**	*e*S		**Sn**	**16 45 55.1**	**-4.6**
BJO				IAML			16 46 35.0	
comp=Z,20nm,0.4s								
BJO1	**Bjornoya**	**4.85**	**184**	Pn		**Pn**	**16 45 03.2**	**-0.6**
BJO1				Lg		Lg	16 46 23.4	
ZFI2	**Zemlya Franca-**	**4.92**	**59**	*e*P		**Pn**	**16 45 04.4**	**-0.2**
ZFI2				*e*S		**Sn**	**16 45 59.4**	**-2.0**
comp=Z,5.4nm,1.0s								
ARA0	**ARCESS Array S**	**9.93**	**169**	Pn		**Pn**	**16 46 12.9**	**-0.4**
baz=351,slow=12								
ARA0				Sn		Sn	16 47 55.0	-9.5
baz=4.7,slow=22								
ARA0	**ARCESS Array S**	**9.93**	**169**	Pn		**Pn**	**16 46 12.9**	**-0.4**
baz=351,slow=12								
ARA0				Sn		Sn	16 47 55.0	-9.5
baz=4.7,slow=22								
AMDE	**Amderma**	**14.12**	**110**	*e*P		**Pn**	**16 47 10.9**	**+0.5**
AMDE				*e*S		Sn	16 49 36.5	-10

IDC 24 16:45:13.6±4.2, 3°05S×130°91E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.5/28, mbtmp3.7/3, ML2.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/24, Error ellipse: s-maj=302.6km s-min=29.7km az=72.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.12**	**169**	P		Pn	16 49 12.7	-1.8
0.1nm,0.3s,baz=349,slow=12,SNR=5.2								
ASAR	**Alice Springs**	**20.70**	**172**	P		P	16 49 56.2	+0.7
3.0nm,0.5s,baz=352,slow=11,SNR=85								
KLR	**Kul'dur**	**52.07**	**1**	LR		LR	17 19 27.5	
comp=Z,36nm,18.2s,baz=204,slow=39								
MKAR	**Makanchi Array**	**65.47**	**325**	P		P	16 55 58.6	0.0
0.4nm,0.7s,baz=116,slow=6.6,SNR=3.7								

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*ISCJB **24** 16:59:43.6±1.3, 31°7N±0°3×40°8W±0°1, h14km, mb3.6/12, MS3.4/7, Error ellipse: s-maj=37.4km s-min=15.5km az=7.6*
*IDC **24** 16:59:43.4±1.6, 31°66N×40°82W, h0km, mb3.6/12, mb1 3.9/12, mb1mx3.8/40, mbtmp3.6/12, MS3.4/7, Ms1 3.4/7, ms1mx3.0/32, Error ellipse: s-maj=47.5km s-min=19.0km az=8.0*
ISC 24 16:59:45.5±1.6, 31°7N±0°3×40°8W±0°1, h14km, n22, σ0§77/12, mb3.7/12, MS3.5/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**29.62**	**329**	LR		LR	17 17 10.2	
comp=Z,102nm,18.7s,baz=114,slow=35								
ESDC	**Sonseca Array**	**30.81**	**65**	P		**P**	**17 05 59.7**	**-1.2**
0.1nm,0.3s,baz=262,slow=9.8,SNR=2.7								
DBIC	**Dimbokro**	**41.74**	**119**	LR		LR	17 23 52.5	
comp=Z,53nm,18.0s,baz=232,slow=35								
TORD	**Torodi Ar. Bea**	**43.06**	**105**	P		**P**	**17 07 45.4**	**+0.2**
1.2nm,0.8s,baz=303,slow=6.8,SNR=6.9								
GERES	**GERESS Array B**	**44.01**	**51**	P		**P**	**17 07 52.4**	**-0.2**
0.5nm,0.8s,baz=265,slow=8.7,SNR=4.0								
ULM	**Lac du Bonnet**	**44.45**	**311**	LR		LR	17 26 34.6	
comp=Z,41nm,18.7s,baz=34,slow=36								
NOA	**NORSAR Array B**	**44.63**	**33**	P		**P**	**17 07 57.6**	**+0.4**
0.5nm,0.7s,baz=253,slow=8.0,SNR=2.8								
H10N2	**ASCENSION HYDR**	**46.62**	**143**	T		T	17 57 39.2	
baz=329,slow=75,SNR=9.0								
H10N3	**ASCENSION HYDR**	**46.63**	**143**	T		T	17 57 58.1	
baz=329,slow=75,SNR=7.1								
H10N1	**ASCENSION HYDR**	**46.64**	**143**	T		T	17 57 56.2	
baz=329,slow=75,SNR=20								
H10S1	**ASCENSION HYDR**	**47.49**	**144**	T		T	17 59 07.8	
baz=329,slow=75,SNR=12								
H10S3	**ASCENSION HYDR**	**47.49**	**144**	T		T	17 58 56.6	
baz=329,slow=75,SNR=14								
H10S2	**ASCENSION HYDR**	**47.51**	**144**	T		T	17 59 09.0	
baz=329,slow=75,SNR=13								
FINES	**FINESS Array B**	**51.76**	**34**	P		**P**	**17 08 52.4**	**+0.1**
1.3nm,0.8s,baz=289,slow=5.8,SNR=6.1								
TXAR	**Lajitas Array**	**53.55**	**285**	LR		LR	17 32 09.4	
comp=Z,21nm,18.1s,baz=0.0,slow=36								
AKASG	**Malin Array Be**	**53.96**	**48**	P		**P**	**17 09 08.5**	**-0.2**
2.1nm,0.6s,baz=276,slow=6.3,SNR=12								
PDAR	**Pinedale Array**	**54.49**	**303**	P		**P**	**17 09 13.2**	**+0.2**
0.8nm,0.7s,baz=82,slow=11,SNR=9.3								
PDAR				LR		LR	17 30 32.7	
comp=Z,69nm,20.4s,baz=92,slow=34								
YKA	**Yellowknife Ar**	**55.05**	**327**	P		**P**	**17 09 16.1**	**-0.3**
0.2nm,0.5s,baz=84,slow=7.7,SNR=4.1								
YKA				LR		LR	17 32 03.6	
comp=Z,8.2nm,18.2s,baz=73,slow=35								
BRTR	**Keskin Array B**	**59.41**	**60**	P		**P**	**17 09 48.0**	**+0.2**
0.8nm,0.7s,baz=245,slow=6.7,SNR=6.8								
NVAR	**Mina Array Bea**	**62.09**	**300**	P		**P**	**17 10 05.5**	**-0.7**
0.2nm,0.4s,baz=72,slow=5.8,SNR=4.0								
NVAR				LR		LR	17 35 32.4	
comp=Z,75nm,19.8s,baz=137,slow=35								
KBZ	**Khabaz**	**64.68**	**53**	P		**P**	**17 10 24.6**	**+1.7**
1.2nm,0.8s,baz=256,slow=7.1,SNR=3.4								
ILAR	**Eielson Array**	**68.25**	**334**	P		**P**	**17 10 45.7**	**+0.2**
0.4nm,0.8s,baz=56,slow=4.6,SNR=5.9								

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*ISCJB **24** 17:05:11.6±0.7, 37°6S±0°2×51°3E±0°2, h10km, mb4.1/8, MS3.6/6, Error ellipse: s-maj=33.3km s-min=14.6km az=20.8*
*IDC **24** 17:05:12.0±1.0, 37°24S×51°43E, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/30, mbtmp4.2/3, MS3.6/7, Ms1 3.6/7, ms1mx3.3/26, Error ellipse: s-maj=97.1km s-min=25.1km az=14.0*
*NEIC **24** 17:05:13.1±1.1, 37°50S×51°25E, h10km, mb4.2/5, Error ellipse: s-maj=30.8km s-min=26.4km az=222.0*
ISC 24 17:05:13.0±0.7, 37°5S±0°2×51°3E±0°2, h10km, n33, σ0§66/20, mb4.2/8, MS3.6/6, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**19.21**	**348**	LR		LR	17 15 11.4	
comp=Z,134nm,21.0s,baz=6.5,slow=32								
BOSA	**Boshof**	**23.49**	**285**	P		**P**	**17 10 23.6**	**+0.5**
11nm,1.3s,baz=114,slow=12,SNR=3.1								
LBTB	**Lobatse**	**25.15**	**292**	*e*P		**P**	**17 10 38.1**	**-0.5**
3.7nm,0.9s								
SUR	**Sutherland**	**25.43**	**272**	LR		LR	17 18 05.2	
comp=Z,77nm,18.9s,baz=146,slow=30								
MATP	**Matopo**	**26.10**	**304**	LR		LR	17 19 06.1	
comp=Z,141nm,20.1s,baz=140,slow=32								
MAW	**Mawson**	**30.84**	**171**	LR		LR	17 20 38.7	
comp=Z,220nm,21.0s,baz=18,slow=30								
H08S1	**Diego Carcia H**	**35.41**	**38**	T		T	17 49 25.6	
baz=209,slow=76								
H08S2	**Diego Garcia H**	**35.42**	**38**	T		T	17 49 27.3	
baz=209								
H08S3	**Diego Garcia H**	**35.43**	**38**	T		T	17 49 28.5	
baz=209,slow=76								
CASY	**Casey**	**44.03**	**150**	*e*P		**P**	**17 13 21.5**	**+1.0**
3.3nm,1.0s								
H01W2	**Cape Leeuwin H**	**49.94**	**107**	T		T	18 07 26.4	
baz=247,slow=75,SNR=59								
H01W3	**Cape Leeuwin H**	**49.95**	**107**	T		T	18 07 33.3	
baz=247,slow=75,SNR=46								
H01W1	**Cape Leeuwin H**	**49.96**	**107**	T		T	18 07 28.2	
baz=247,slow=75,SNR=48								
QSPA	**South Pole Qui**	**52.68**	**180**	*e*P		**P**	**17 14 26.0**	**-1.3**
8.5nm,1.3s								
VNDA	**Vanda**	**57.92**	**166**	LR		LR	17 37 10.0	
comp=Z,82nm,19.1s,baz=273,slow=33								
ASAR	**Alice Springs**	**70.39**	**105**	P		**P**	**17 16 27.8**	**+0.2**
1.5nm,0.8s,baz=228,slow=5.7,SNR=20								
AS31	**Alice Springs**	**70.39**	**105**	*e*P		**P**	**17 16 27.1**	**-0.5**
0.5nm,0.6s								
CMAR	**Chiang Mai Arr**	**71.49**	**48**	LR		LR	17 44 59.4	
comp=Z,61nm,18.5s,baz=192,slow=34								
WR1	**Warramunga Arr**	**72.78**	**102**	*e*P		**P**	**17 16 42.2**	**+0.2**
WRA	**Warramunga Arr**	**72.78**	**102**	P		**P**	**17 16 42.2**	**+0.2**
1.8nm,0.8s,baz=230,slow=6.4,SNR=6.7								
WB2	**Warramunga Arr**	**72.79**	**102**	*e*P		**P**	**17 16 42.4**	**+0.3**
15nm,1.5s								
BRTR	**Keskin Array B**	**78.56**	**346**	LR		LR	17 47 48.4	
comp=Z,11nm,21.2s,baz=126,slow=33								
X48A	**Hartselle**	**146.33**	**278**	*e*PKPdf		**PKPdf**	**17 24 52.7**	**0.0**
COWI	**Conover**	**149.53**	**299**	*e*PKPbc		**PKiKP**	**17 25 03.0**	**-0.3**
CCM	**Cathedral Cave**	**150.50**	**283**	*e*PKPbc		**PKPbc**	**17 25 05.1**	**+0.3**
W41B	**Gary Mavity, V**	**150.64**	**277**	*e*PKPbc		**PKiKP**	**17 25 06.4**	**+0.5**
WRH	**Wood River Hil**	**150.64**	**17**	*e*PKPbc		**PKiKP**	**17 25 04.3**	**-0.6**
ILAR	**Eielson Array**	**150.65**	**16**	PKPbc		**PKPbc**	**17 25 04.2**	**-0.1**
1.2nm,0.8s,baz=310,slow=2.5,SNR=10.0								
ILB	**Eielson Array**	**150.65**	**16**	*e*PKPbc		**PKPbc**	**17 25 04.3**	**0.0**
WHAR	**Wooly Hollow**	**150.70**	**277**	*e*PKPbc		**PKPbc**	**17 25 04.6**	**-0.7**
YKA	**Yellowknife Ar**	**153.52**	**345**	PKPbc		**PKiKP**	**17 25 10.8**	**-0.2**
0.4nm,0.6s,baz=39,slow=1.1,SNR=5.3								
YKB5	**Yellowknife Ar**	**153.52**	**345**	*e*PKPbc		**PKiKP**	**17 25 10.8**	**-0.2**
TXAR	**Lajitas Array**	**157.60**	**256**	PKPab		**PKPab**	**17 25 43.4**	**+1.5**
0.3nm,0.6s,baz=117,slow=7.6,SNR=3.9								

JMA 24 17:13:33.6±0.2, 31°88N×141°08E, h5km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.26**	**298**	P	

GNL	**Ganaly**	**3.44 348**	*e*P	Pn	17 32 41.7	+3.3
GNL			*e*S	Sn	17 33 21.2	+3.1
MKZ	**Mys Kozlova**	**4.51 19**	*e*P	Pn	17 32 54.4	+1.8
KZV	**Kizimen**	**4.83 8**	*e*P	Pn	17 33 00.8	+3.5
KZV			*e*S	Sn	17 33 54.4	+2.5
TUMD	**Tumrok D**	**4.93 8**	*e*P	Pn	17 33 01.9	+3.4
TUMD			*e*S	Sn	17 33 56.5	+2.4
TUMR	**Tumrok**	**4.99 7**	*e*P	Pn	17 33 03.6	+4.2
KBTR	**Krutoberegovo**	**6.28 19**	*e*P	Pn	17 33 19.5	+2.7

*NNC **24** 17:53:21.8±3.4, 45°.14N×79°.92E, h0km, mb2.4, mpv2.4, Error ellipse: s-maj=31.4km s-min=21.9km az=97.0*
SOME 24 17:53:20.3, 41°.87N×81°.10E, h0km, 2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.67 341**		P	Pb	17 53 52.1	0.0
	0.8nm,0.2s						
KTMS				S	Sg	17 54 15.1	+1.1
	1.4nm,0.1s						
KTMS	**Ketmen**	**1.67 341**		*e*P	Pb	17 53 52.1	0.0
	0.8nm,0.2s						
KTMS				*e*S	Sg	17 54 15.1	+1.1
	1.4nm,0.1s						
PDGK	**Podgornoye**	**1.88 321**		P	Pb	17 53 55.5	-0.2
	0.3nm,0.5s						
PDGK				S	Sg	17 54 20.9	+0.1
	1.2nm,0.3s						
PDGK	**Podgornoye**	**1.88 321**		⇓P	Pn	17 53 54.5	+0.6
	8.9nm,2.7s						
PDGK				⇓S	Sn	17 54 19.0	+0.6
	1.1nm,0.4s						
SATY	**Saty**	**2.32 302**		Pg	Pb	17 54 03.5	+0.4
	1.5nm,0.1s						
SATY				Lg	Lg	17 54 35.0	
	4.3nm,0.3s						
SATY	**Saty**	**2.32 302**		*e*P	Pb	17 54 03.7	+0.6
	0.8nm,0.1s						
SATY				*e*S	Sg	17 54 35.0	+0.1
	3.4nm,0.2s						
KPKS	**Kokpek**	**2.39 313**		*e*P	Pb	17 54 03.9	-0.4
	3.1nm,0.2s						
KPKS				*e*S	Sb	17 54 35.3	+0.9
	5.5nm,0.4s						

*ISCJB **24** 17:57:56.3±1.3, 13°.63S±0°.08×166°.5E±0°.1, h39km, mb3.9/5, Error ellipse: s-maj=21.8km s-min=8.2km az=154.1*
*IDC **24** 17:57:58.7±3.2, 13°.58S×166°.60E, h48km±27km, mb3.7/5, mb1 4.0/7, mb1mx3.6/27, mbtmp4.0/7, ML4.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/19, Error ellipse: s-maj=33.3km s-min=18.2km az=67.0*
ISC 24 17:57:57.8±1.4, 13°.6S±0°.1×166°.7E±0°.2, h39km, n7, σ1s26/9, mb3.8/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.77 301**		P	**Pn**	**17 59 50.2**	**+1.8**
	7.5nm,0.3s,baz=182,slow=5.0,SNR=5.9						
HNR				S	**Sn**	**18 01 14.2**	**-0.9**
	10nm,0.3s,baz=333,slow=22,SNR=11						
HNR				LR	LR	18 02 36.0	
	comp=Z,103nm,18.2s,baz=287,slow=36						
DZM	**Mont Dzumac**	**8.46 181**		P	**Pn**	**17 59 58.4**	**+0.4**
	0.5nm,0.3s,baz=295,slow=17,SNR=11						
DZM				S	**Sn**	**18 01 32.7**	**+0.3**
	0.4nm,0.3s,baz=114,slow=17,SNR=2.2						
STKA	**Stephens Creek**	**29.33 227**		P	**P**	**18 03 57.2**	**+0.1**
	2.2nm,0.8s,baz=75,slow=8.3,SNR=4.9						
WRA	**Warramunga Arr**	**31.57 254**		P	**P**	**18 04 15.4**	**-1.5**
	0.8nm,0.5s,baz=76,slow=8.4,SNR=9.7						
ASAR	**Alice Springs**	**32.57 247**		P	**P**	**18 04 24.4**	**-1.4**
	0.7nm,0.6s,baz=74,slow=9.5,SNR=25						
CMAR	**Chiang Mai Arr**	**73.95 294**		P	**P**	**18 09 30.4**	**+0.7**
	0.7nm,0.3s,baz=111,slow=5.1,SNR=5.6						
ILAR	**Eielson Array**	**85.60 18**		P	**P**	**18 10 31.1**	**-0.7**
	0.5nm,0.7s,baz=238,slow=5.2,SNR=4.9						

*NEIC **24** 18:12:40.2±1.5, 18°.97S×169°.42E, h135km±6km, mb4.5/10, Error ellipse: s-maj=26.5km s-min=19.6km az=103.0*
*ISCJB **24** 18:12:41.0±0.9, 19°.06S±0°.09×169°.3E±0°.1, h150km, mb4.4/15, Error ellipse: s-maj=14.4km s-min=12.1km az=1.1*
*IDC **24** 18:12:42.1±3.4, 19°.07S×169°.34E, h145km±23km, mb4.2/9, mb1 4.2/10, mb1mx3.9/27, mbtmp4.6/10, MS3.1/2, Ms1 3.1/2, ms1mx2.8/17, Error ellipse: s-maj=29.5km s-min=17.8km az=54.0*
ISC 24 18:12:42.7±0.7, 19°.1S±0°.1×169°.3E±0°.1, h150km, n41, σ0s74/44, mb4.4/15, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.67 207**		*e*Pn	**Pn**	**18 13 25.0**	**-0.9**
DZM	**Mont Dzumac**	**4.01 222**		P	**Pn**	**18 13 43.0**	**-0.2**
	46nm,0.3s,baz=67,slow=10,SNR=321						
DZM				S	**Sn**	**18 14 29.7**	**-0.6**
	16nm,0.3s,baz=72,slow=20,SNR=1.5						
DZM				LR	LR	18 15 01.1	
	comp=Z,146nm,19.4s,baz=84,slow=34						
DZM	**Mont Dzumac**	**4.01 222**		*e*Pn	**Pn**	**18 13 42.6**	**-0.5**
ONTNC	**Ouen Toro**	**4.18 219**		*e*Pn	**Pn**	**18 13 44.6**	**-0.7**
EIDS	**Eidsvold**	**18.00 246**		*e*P	**Pn**	**18 16 44.0**	**+0.4**
	14nm,0.6s						
CTA	**Charters Tower**	**21.76 264**		P	**P**	**18 17 24.0**	**+1.5**
	7.8nm,0.5s,baz=91,slow=12,SNR=20						
PMG	**Port Moresby**	**23.51 291**		P	**P**	**18 17 39.3**	**0.0**
	9.6nm,0.9s,baz=158,slow=18,SNR=4.9						
RPZ	**Rata Peaks**	**24.60 177**		P	**P**	**18 17 49.6**	**+0.8**
	6.0nm,0.4s,baz=323,slow=20,SNR=4.6						
STKA	**Stephens Creek**	**28.00 237**		P	**P**	**18 18 19.8**	**+0.3**
	11nm,0.7s,baz=68,slow=9.7,SNR=46						
STKA	**Stephens Creek**	**28.00 237**		*e*P	**P**	**18 18 19.7**	**+0.1**
	2.0nm,0.6s						
WB2	**Warramunga Arr**	**32.94 263**		*e*P	**P**	**18 19 02.4**	**-0.8**
	10.0nm,1.0s						
WRAB	**Tennant Creek**	**32.94 263**		*e*P	**P**	**18 19 01.9**	**-1.3**
	5.5nm,0.5s						
WR1	**Warramunga Arr**	**32.95 263**		*e*P	**P**	**18 19 02.4**	**-0.9**
WR1				*e*PcP	**PcP**	**18 21 44.3**	**+0.2**
WRA	**Warramunga Arr**	**32.95 263**		P	**P**	**18 19 02.4**	**-0.9**
	3.8nm,0.3s,baz=88,slow=9.3,SNR=122						
WRA				PcP	**PcP**	**18 21 44.3**	**+0.2**
	0.9nm,0.5s,baz=96,slow=3.4,SNR=4.1						
AS31	**Alice Springs**	**33.24 256**		*e*P	**P**	**18 19 05.4**	**-0.4**
	15nm,0.5s						
AS31				*e*ScP	**ScP**	**18 25 15.1**	**-0.2**
ASAR	**Alice Springs**	**33.24 256**		P	**P**	**18 19 05.5**	**-0.3**
	30nm,0.6s,baz=83,slow=8.7,SNR=923						
ASAR				PcP	**PcP**	**18 21 44.6**	**-0.3**
	0.6nm,0.6s,baz=84,slow=2.8,SNR=4.4						
ASAR				ScP	**ScP**	**18 25 15.1**	**-0.2**
	0.5nm,0.8s,baz=79,slow=4.8,SNR=4.8						
VNDA	**Vanda**	**58.59 182**		P	**P**	**18 22 23.3**	**+0.1**
	0.7nm,0.5s,baz=360,slow=7.7,SNR=12						
VNDA	**Vanda**	**58.59 182**		*e*P	**P**	**18 22 23.4**	**+0.2**
	15nm,2.0s						
SBA	**Scott Base**	**58.82 181**		*e*P	**P**	**18 22 26.3**	**+1.5**
	7.9nm,0.8s						
CASY	**Casey**	**60.30 203**		*e*P	**P**	**18 22 34.7**	**-0.3**
	3.6nm,0.9s						
KS15	**Wonju Array Si**	**68.44 325**		*e*pP	pP	18 23 59.3	-5.1
QSPA	**South Pole Qui**	**70.97 180**		*e*P	**P**	**18 23 43.5**	**-0.2**
	12nm,1.1s						
CMAR	**Chiang Mai Arr**	**78.52 294**		P	**P**	**18 24 28.8**	**+1.0**
	1.2nm,0.8s,baz=135,slow=5.2,SNR=7.3						
MAW	**Mawson**	**78.61 202**		P	**P**	**18 24 27.6**	**+0.2**
	3.7nm,0.7s,baz=128,slow=7.4,SNR=9.1						
MAW	**Mawson**	**78.61 202**		*e*P	**P**	**18 24 28.2**	**+0.9**
	2.6nm,0.5s						
PDAR	**Pinedale Array**	**96.45 47**		LR	LR	19 04 24.4	
	comp=Z,13nm,18.3s,baz=320,slow=32						
MK32	**Makanchi Array**	**101.69 316**		*e*Pdif	**Pdif**	**18 26 18.1**	**-0.1**
MKAR	**Makanchi Array**	**101.69 316**		P	**Pdif**	**18 26 18.1**	**-0.1**
	0.2nm,0.5s,baz=104,slow=6.1,SNR=2.7						
ARA0	**ARCESS Array S**	**124.94 345**		*e*PKPdf	**PKPdf**	**18 31 23.1**	**-1.1**
ARCES	**ARCESS Array B**	**124.94 345**		PKP	**PKPdf**	**18 31 23.1**	**-1.1**
	1.9nm,0.9s,baz=114,slow=3.0,SNR=6.0						
EKA	**Eskdalemuir Ar**	**143.37 353**		PKP	PKPbc	18 31 56.3	-0.2
	1.1nm,0.8s,baz=0.0,slow=2.1,SNR=3.6						
CONA	**Conrad Observa**	**144.05 329**		*e*PKiKP	**PKPdf**	**18 32 01.4**	**+0.9**
	1.6nm,0.6s						
GEC2	**GERESS Array S**	**144.39 332**		*e*PKPdf	**PKPdf**	**18 32 00.6**	**-0.5**
GERES	**GERESS Array B**	**144.39 332**		PKP	**PKPdf**	**18 32 00.1**	**-1.0**
	1.6nm,0.6s,baz=40,slow=3.4,SNR=16						
IDI	**Anoyia**	**144.71 305**		PKP	**PKPdf**	**18 32 01.4**	**-0.6**
	3.0nm,0.3s,baz=143,slow=5.1,SNR=15						
MOA	**Molln**	**144.87 330**		*e*PKiKP	**PKPdf**	**18 32 02.6**	**+0.8**
	4.7nm,0.5s						
SOKA	**Soboth**	**145.33 328**		*e*PKiKP	**PKPab**	**18 32 04.4**	**+1.2**
	1.9nm,0.4s						
ABTA	**Abfaltersbach**	**146.49 331**		*e*PKPab	**PKPab**	**18 32 06.6**	**-1.0**
	3.4nm,0.7s						
MOTA	**Moosalm**	**146.67 333**		*e*PKiKP	**PKPab**	**18 32 08.1**	**-0.2**
	4.0nm,0.9s						
SQTA	**Sankt Quirin**	**146.72 332**		*e*PKPab	**PKPbc**	**18 32 06.8**	**-0.3**
	4.9nm,0.5s						
FETA	**Feichten**	**147.08 333**		*e*PKiKP	**PKPab**	**18 32 09.3**	**-0.7**
	5.4nm,0.8s						

*ISCJB **24** 18:27:15.3±0.3, 24°.28N±0°.01×122°.00E±0°.01, h2km±2km, Error ellipse: s-maj=2.6km s-min=1.7km az=139.8*
*JMA **24** 18:27:15.5±0.1, 24°.22N×121°.92E, h16km±4km, M2.5*
*TAP **24** 18:27:15.6, 24°.29N×121°.93E, h14km, ML3.1, C*
ISC 24 18:27:15.1±1.1, 24°.26N±0°.02×122°.00E±0°.02, h4km±9km, n93, σ0s71/150, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.28 305**		*i* P	**Pg**	**18 27 20.6**	**0.0**
	baz=310						
NANB				S	**Sg**	**18 27 23.9**	**-0.4**
	baz=310						
ENA	**Nanau**	**0.29 304**		*i* P	**Pg**	**18 27 20.6**	**-0.1**
	baz=310						
ENA				*e*S	**Sg**	**18 27 24.1**	**-0.4**
	baz=310						
EOS1	**EOS1**	**0.31 22**		*i* P	**Pb**	**18 27 23.1**	**-0.1**
	baz=22						
EOS1				*i* S	**Sb**	**18 27 28.4**	**-0.1**
	baz=22						
TWC	**Suao**	**0.37 338**		*i* P	**Pg**	**18 27 22.6**	**+0.3**
	baz=356						
TWC				S	**Sg**	**18 27 27.3**	**+0.2**
	baz=356						
NACB	**Ninganchiao**	**0.38 257**		*i* P	**Pg**	**18 27 22.0**	**-0.5**
	baz=251						
NACB				S	**Sg**	**18 27 27.2**	**-0.3**
	baz=251						
TWD	**Chiawan**	**0.41 244**		P	**Pg**	**18 27 23.1**	**0.0**
	baz=244						
TWD				*e*S	**Sb**	**18 27 30.7**	**-1.0**
	baz=244						
HWA	**Hwalien**	**0.46 232**		*e*P	**Pb**	**18 27 26.0**	**+0.2**
	baz=233						
ETLH	**Xiulin Townshi**	**0.48 263**		*i* P	**Pg**	**18 27 23.8**	**-0.6**
	baz=267						
ETLH				*e*S	**Sg**	**18 27 30.1**	**-0.5**
	baz=267						
ENLB	**Shoufeng**	**0.51 226**		*e*S	**Sb**	**18 27 35.0**	**+0.5**
	baz=220						
ENTT	**Nioudou**	**0.55 313**		*i* P	**Pg**	**18 27 25.7**	**+0.1**
	baz=317						
ENTT				*e*S	**Sg**	**18 27 32.4**	**-0.4**
	baz=317						
TWE	**Neicheng**	**0.55 326**		*i* P	**Pg**	**18 27 25.7**	**+0.1**
	baz=332						
TWE				*e*S	**Sg**	**18 27 32.6**	**-0.2**
	baz=332						
ILA	**Ilan**	**0.55 335**		*e*S	**Sg**	**18 27 33.8**	**+1.0**
	baz=341						
EGS		**0.58 354**		*e*S	**Sg**	**18 27 34.6**	**+0.8**
	baz=354						
NNSB	**Datong**	**0.59 286**		P	**Pg**	**18 27 26.1**	**-0.4**
	baz=286						
NNS	**Nan Shan**	**0.60 287**		P	**Pg**	**18 27 26.3**	**-0.4**
	baz=287						
NTC	**Toucheng**	**0.61 345**		P	**Pb**	**18 27 27.4**	**-0.9**
	baz=350						
NTC				*e*S	**Sg**	**18 27 34.9**	**+0.1**
	baz=350						
WHF	**Hehuan Shan**	**0.69 260**		*e*P	**Pg**	**18 27 27.8**	**-0.5**
	baz=265						
WHF				*e*S	**Sg**	**18 27 38.1**	**+0.9**
	baz=265						
ESL	**Shilin**	**0.69 229**		*e*P	**Pg**	**18 27 28.6**	**+0.3**
	baz=232						
ESL				*e*S	**Sb**	**18 27 40.0**	**+0.4**
	baz=232						
YHNB	**Yeheng**	**0.70 305**		P	**Pg**	**18 27 28.6**	**+0.1**
	baz=312						
YHNB				*e*S	**Sg**	**18 27 36.8**	**-0.9**
	baz=312						
NSK	**Sanguang**	**0.72 305**		P	**Pg**	**18 27 28.9**	**+0.1**
	baz=312						
NSK				*e*S	**Sg**	**18 27 38.9**	**+0.7**
	baz=312						
TIPB	**Shuangxi**	**0.72 347**		*e*P	**Pb**	**18 27 29.7**	**-0.6**
	baz=351						
TIPB				*e*S	**Sg**	**18 27 38.7**	**+0.3**
	baz=351						
TWT	**Tachien**	**0.76 269**		*e*P	**Pb**	**18 27 30.3**	**-0.7**
	baz=268						
TWT				*e*S	**Sb**	**18 27 40.7**	**-1.0**
	baz=268						
TDCB	**Techi**	**0.77 269**		*e*P	**Pg**	**18 27 29.7**	**-0.2**
	baz=269						
TDCB				*e*S	**Sg**	**18 27 40.2**	**+0.3**
	baz=269						
CHGB	**Renai**	**0.78 255**		*e*P	**Pg**	**18 27 30.0**	**-0.2**
	baz=247						
CHGB				*e*S	**Sg**	**18 27 41.3**	**+0.9**
	baz=247						
EGFH	**Guangfu**	**0.79 222**		*e*P	**Pg**	**18 27 30.8**	**+0.5**
	baz=234						
EGFH				*e*S	**Sb**	**18 27 43.5**	**+0.9**
	baz=234						
TWA	**Mucha**	**0.81 332**		*e*P	**Pb**	**18 27 32.5**	**+0.8**
	baz=323						
OWD	**Renai**	**0.82 248**		*e*P	**Pg**	**18 27 30.9**	**+0.1**
	baz=252						
OWD				*e*S	**Sb**	**18 27 42.6**	**-0.8**
	baz=252						
NHDH	**Xindian Distri**	**0.82 328**		*e*P	**Pb**	**18 27 32.2**	**+0.2**
	baz=325						
NWF	**Wu-fen Shan**	**0.83 346**		*e*P	**Pb**	**18 27 32.0**	**-0.1**
	baz=340						
NWF				*e*S	**Sg**	**18 27 42.3**	**+0.5**
	baz=340						
WFSB	**Wu-fen Shan**	**0.83 346**		*e*P	**Pb**	**18 27 32.0**	**-0.1**
	baz=340						
WFSB				*e*S	**Sg**	**18 27 42.3**	**+0.5**
	baz=340						
JYNG	**Yonagunijimaku**	**0.88 78**		P	**Pn**	**18 27 33.7**	**-0.6**
JYNG				S	**Sn**	**18 27 46.5**	**-1.0**
WLTB	**Daxi**	**0.90 311**		*e*P	**Pn**	**18 27 34.1**	**-0.5**
	baz=313						
HGSD	**Ruisui**	**0.93 215**		*e*P	**Pb**	**18 27 33.7**	**-0.1**
	baz=212						
HGSD				*e*S	**Sn**	**18 27 49.5**	**+0.6**
	baz=212						
VWDT	**VWDT**	**0.94 237**		*e*P	**Pg**	**18 27 32.9**	**-0.2**
	baz=236						
VWDT				*e*S	**Sn**	**18 27 48.2**	**-0.7**
	baz=236						
YOJ	**Yonaguni jima**	**0.94 78**		*e*P	**Pn**	**18 27 34.6**	**-0.5**
	baz=66						
YOJ				*e*S	**Sb**	**18 27 47.5**	**+0.7**
	baz=66						
YOJ	**Yonaguni jima**	**0.94 78**		P	**Pn**	**18 27 34.6**	**-0.5**
YOJ				*e*S	**Sb**	**18 27 47.8**	**+1.0**
YM01	**YM01**	**0.96 336**		*e*P	**Pb**	**18 27 34.7**	**+0.3**
	baz=339						
WHP	**Taichung City**	**0.97 271**		*e*P	**Pg**	**18 27 33.7**	**+0.1**
	baz=279						
WHP				*e*S	**Sg**	**18 27 46.7**	**+0.5**
	baz=279						
YM10	**YM10**	**0.97 336**		*e*P	**Pb**	**18 27 34.8**	**+0.2**
	baz=330						
YM10				*e*S	**Sb**	**18 27 48.1**	**+0.2**
	baz=330						
LIOB	**Emei**	**0.98 293**		*e*P	**Pb**	**18 27 34.4**	**-0.3**
	baz=294						
LIOB				*e*S	**Sb**	**18 27 47.6**	**-0.4**
	baz=294						
EHY	**Hungye**	**0.98 220**		*e*P	**Pg**	**18 27 33.6**	**-0.3**
	baz=217						
EHY				*e*S	**Sn**	**18 27 50.1**	**+0.1**
	baz=217						
YM05	**YM05**	**0.98 336**		*e*P	**Pb**	**18 27 35.0**	**+0.3**
	baz=340						
YM04	**YM04**	**0.98 334**		*e*P	**Pb**	**18 27 34.8**	**0.0**
	baz=338						
NSTT	**Nanjuang**	**0.98 292**		*e*P	**Pg**	**18 27 34.3**	**+0.3**
	baz=293						
NSTT				*e*S	**Sg**	**18 27 47.4**	**+0.6**
	baz=293						
TWS1	**Kuangyinshan**	**0.99 328**		*e*P	**Pb**	**18 27 35.2**	**+0.4**
	baz=320						
YM08	**YM08**	**0.99 338**		*e*P	**Pb**	**18 27 34.6**	**-0.3**
	baz=341						
YM03	**YM03**	**1.00 335**		*e*P	**Pn**	**18 27 35.7**	**-0.4**
	baz=339						
DPDB	**Guoxing**	**1.01 257**		*e*P	**Pg**	**18 27 34.2**	**-0.2**
	baz=263						
DPDB				*e*S	**Sb**	**18 27 48.5**	**-0.5**
	baz=263						
ANP	**Anpu**	**1.02 335**		*e*P	**Pb**	**18 27 35.5**	**+0.1**
	baz=338						
NTST	**Danshui**	**1.03 331**		*e*P	**Pn**	**18 27 36.5**	**+0.2**
	baz=334						
SBCB	**Hsinchu**	**1.07 300**		*e*P	**Pn**	**18 27 36.9**	**+0.1**
	baz=301						
SSLB	**Suanglung**	**1.07 244**		*e*P	**Pg**	**18 27 35.1**	**-0.5**
	baz=252						
SSLB				*e*S	**Sg**	**18 27 50.1**	**+0.6**
	baz=252						
TWY	**Chenhua**	**1.07 340**		*e*P	**Pn**	**18 27 36.7**	**-0.2**
	baz=333						
SMLT	**Sun Moon Lake**	**1.08 250**		*e*P	**Pg**	**18 27 35.8**	**+0.1**
	baz=249						
SMLT				*e*S	**Sb**	**18 27 50.5**	**-0.3**
	baz=249						
YULB	**Yu-li**	**1.08 217**		*e*P	**Pg**	**18 27 34.6**	**-1.2**
	baz=215						
YULB				*e*S	**Sb**	**18 27 51.4**	**+0.5**
	baz=215						
TYC	**Yuchr**	**1.11 251**		*e*P	**Pg**	**18 27 36.1**	**-0.3**
	baz=250						
TWF1	**Yuli**	**1.11 216**		*e*P	**Pg**	**18 27 35.0**	**-1.4**
	baz=230						
TWF1				*e*S	**Sb**	**18 27 52.3**	**+0.4**
	baz=230						
TWQ1	**Liyutan**	**1.13 275**		*e*P	**Pn**	**18 27 38.0**	**+0.3**
	baz=274						
NMLH	**Miaoli**	**1.14 284**		*e*P	**Pn**	**18 27 38.1**	**+0.2**
	baz=284						
NSY	**Sanyi**	**1.14 278**		*e*S	**Sb**	**18 27 53.1**	**+0.4**
	baz=285						
WHYT	**Xinyi Township**	**1.19 242**		*e*P	**Pg**	**18 27 37.7**	**-0.3**
	baz=247						
WHYT				*e*S	**Sn**	**18 27 55.4**	**0.0**
	baz=247						
TCU	**Taichung**	**1.22 265**		*e*P	**Pn**	**18 27 39.7**	**+0.8**
	baz=265						
YUS	**Yu-Shan**	**1.23 232**		*e*P	**Pg**	**18 27 38.4**	**-0.4**
	baz=231						
YUS				*e*S	**Sb**	**18 27 56.4**	**+0.6**
	baz=231						
WJS	**Zhushan**	**1.25 250**		*e*P	**Pg**	**18 27 39.0**	**0.0**
	baz=242						
WNT	**Mingjian**	**1.27 253**		*e*P	**Pn**	**18 27 40.1**	**+0.5**
	baz=252						
ELDTW	**Lidau**	**1.40 220**		*e*P	**Pn**	**18 27 39.7**	**-1.9**
	baz=219						
ELDTW				*e*S	**Sg**	**18 28 00.0**	**-0.1**
	baz=219						
WGK	**Gukeng**	**1.44 247**		*e*P	**Pb**	**18 27 42.5**	**0.0**
	baz=247						
WGK				*e*S	**Sn**	**18 28 04.1**	**+2.7**
	baz=247						
WDLH	**Douliu**	**1.46 247**		*e*P	**Pn**	**18 27 42.6**	**+0.4**
	baz=247						
RLNB	**Erlin**	**1.55 256**		*e*S	**Sg**	**18 28 05.7**	**+0.9**
	baz=257						
IRIF	**Iriomote-Funau**	**1.58 87**		P	**Pn**	**18 27 43.9**	**0.0**
IRIF				S	**Sn**	**18 28 04.6**	**-0.1**
CHN4	**Tsaushan**	**1.58 235**		*e*P	**Pn**	**18 27 44.4**	**+0.4**
	baz=236						
CHN4				*e*S	**Sg**	**18 28 08.0**	**+2.1**
	baz=236						
TPUB	**Ta-pu**	**1.58 233**		*e*P	**Pn**	**18 27 44.3**	**+0.3**
	baz=221						
TPUB				*e*S	**Sg**	**18 28 07.1**	**+1.1**
	baz=221						
STYT	**Tauyuan**	**1.58 226**		*e*P	**Pn**	**18 27 43.5**	**-0.5**
	baz=215						
STYT				*e*S	**Sg**	**18 28 06.3**	**+0.3**
	baz=215						
WTP	**Ta-pu**	**1.63 232**		*e*P	**Pn**	**18 27 44.6**	**-0.1**
	baz=219						
WTP				*e*S	**Sg**	**18 28 08.2**	**+0.8**
	baz=219						
HATJ	**Hateruma jima**	**1.66 97**		*e*S	**Sn**	**18 28 07.0**	**+0.2**
TWGBT	**Beinan**	**1.67 211**		*e*P	**Pn**	**18 27 43.3**	**-1.9**
	baz=196						
TWGBT				*e*S	**Sn**	**18 28 06.4**	**-0.7**
	baz=196						
TWG	**Pinlang**	**1.67 211**		*e*P	**Pn**	**18 27 43.1**	**-2.1**
	baz=193						
TWK	**Hsinying**	**1.71 235**		*e*P	**Pn**	**18 27 46.0**	**+0.3**
	baz=235						
TWK				*e*S	**Sg**	**18 28 10.2**	**+0.2**
	baz=235						
CHN1	**Nanshi**	**1.73 232**		*e*P	**Pb**	**18 27 47.0**	**-0.5**
	baz=233						
CHN1				*e*S	**Sg**	**18 28 11.5**	**+0.9**
	baz=233						
SNST	**Tainan City**	**1.73 233**		*e*P	**Pn**	**18 27 46.6**	**+0.6**
	baz=234						
SNST				*e*S	**Sg**	**18 28 12.0**	**+1.4**
	baz=234						
WLGB	**Puzi**	**1.75 244**		*e*P	**Pn**	**18 27 46.9**	**+0.7**
	baz=245						
WLGB				*e*S	**Sg**	**18 28 12.4**	**+1.2**
	baz=245						
SGST	**Jiashian**	**1.75 228**		*e*P	**Pn**	**18 27 47.2**	**+0.8**
	baz=216						
SGST				*e*S	**Sg**	**18 28 13.1**	**+1.6**
	baz=216						
SLGT	**Liugui**	**1.77 225**		*e*P	**Pn**	**18 27 47.0**	**+0.3**
	baz=226						
SLGT				*e*S	**Sg**	**18 28 12.4**	**+0.3**
	baz=226						
JKRS	**Kuro-shima**	**1.83 90**		P	**Pb**	**18 27 48.3**	**-0.9**
JKRS				S	**Sn**	**18 28 11.4**	**+0.4**
JIJ	**Ishigaki jima**	**1.95 87**		P	**Pn**	**18 27 49.4**	**+0.3**
JIJ				S	**Sn**	**18 28 13.3**	**-0.8**
SSD	**Sandimen**	**1.97 220**		*e*P	**Pn**	**18 27 50.2**	**+1.0**
	baz=218						
TWM1	**Shoushan**	**2.04 226**		*e*P	**Pb**	**18 27 51.9**	**-0.9**
	baz=223						
MASBT	**Mashibuluo**	**2.07 218**		*e*P	**Pn**	**18 27 51.6**	**+0.9**
	baz=218						
MASBT				*e*S	**Sb**	**18 28 19.4**	**0.0**
	baz=218						
JISG	**Ishigakijimahi**	**2.13 81**		P	**Pn**	**18 27 51.6**	**+0.1

AZAP IAML 19 05 21.5
comp=Z,68nm,0.3s
AZAP eS Sn 19 05 49.6 -0.4
HJA Humahuaca 1.99 57 eP Pn 19 05 22.1 +0.8
HJA IAML 19 05 23.8
comp=Z,43nm,0.4s
HJA eS Sn 19 05 50.6 0.0
FSA Cafayete 2.12 148 eP Pn 19 05 23.1 +0.7
FSA IAML 19 05 23.2
comp=Z,57nm,0.3s
LVC Limon Verde 2.29 317 P Pn 19 05 25.8 +1.4
comp=Z,33nm,0.3s,baz=152,slow=6.1,SNR=335
LVC S Sn 19 05 56.3 -0.1
comp=Z,82nm,0.3s,baz=18,slow=20,SNR=75
LVC Limon Verde 2.29 317 eP Pn 19 05 26.0 +1.5
LVC eS Sn 19 05 57.0 +0.6
LVC IAML 19 06 00.0
comp=Z,160nm,0.2s
LVC Limon Verde 2.29 317⇓ iP Pn 19 05 25.8 +1.4
LVC i S Sn 19 05 56.4 0.0
GO02 Mina Guanaco 2.31 248⇑ iP Pn 19 05 26.0 +1.4
GO02 i S Sn 19 05 57.7 +1.0
PB15 IPOC Station P 2.33 298 eP Pn 19 05 26.4 +1.7
PB15 IPOC Station P 2.33 298⇑ iP Pn 19 05 26.2 +1.5
PB15 eS Sn 19 05 56.8 -0.1
YJA Yavi 2.64 37 eP Pn 19 05 29.1 +0.6
YJA IAML 19 05 30.3
comp=Z,14nm,0.5s
PB06 IPOC Station P 2.68 306 eP Pn 19 05 30.1 +1.4
PB06 IPOC Station P 2.68 306⇑ iP Pn 19 05 30.0 +1.4
PB06 eS Sn 19 06 03.2 -0.7
PB06 IAML 19 06 04.9
comp=N,1μm,0.1s
PB14 IPOC Station P 2.91 263 eP Pn 19 05 32.6 +1.0
PB14 IPOC Station P 2.91 263 eP Pn 19 05 32.5 +1.0
PB14 i S Sn 19 06 08.5 -0.6
PB14 IAML 19 06 10.9
comp=E,301nm,0.7s
AHML Horco Molle 3.00 146 eP Pn 19 05 32.9 +0.5
AHML IAML 19 05 33.4
comp=Z,26nm,0.4s
AHML eS Sn 19 06 09.9 -0.9
PB05 IPOC Station P 3.09 297 eP Pn 19 05 34.6 +1.1
PB05 IPOC Station P 3.09 297 eP Pn 19 05 34.2 +0.7
PB05 i S Sn 19 06 10.7 -1.9
PB05 IAML 19 06 13.1
comp=E,405nm,0.2s
PB09 IPOC Station P 3.11 323 eP Pn 19 05 35.8 +1.9
PB09 IPOC Station P 3.11 323⇑ eP Pn 19 05 35.6 +1.8
PB09 eS Sn 19 06 13.2 -0.1
PB10 IPOC Station P 3.14 284 eP Pn 19 05 35.5 +1.5
PB10 IPOC Station P 3.14 284 eP Pn 19 05 34.6 +0.5
PB10 eS Sn 19 06 11.3 -2.4
PB10 IAML 19 06 17.0
comp=N,244nm,0.3s
PB03 IPOC Station P 3.23 314 eP Pn 19 05 36.3 +1.0
PB03 IPOC Station P 3.23 314⇑ eP Pn 19 05 36.1 +0.8
PB03 eS Sn 19 06 14.3 -1.6
PB03 IAML 19 06 16.2
comp=E,871nm,0.3s
PB04 IPOC Station P 3.33 306 eP Pn 19 05 38.1 +1.6
PB04 IPOC Station P 3.33 306⇑ eP Pn 19 05 37.1 +0.7
PB04 eS Sn 19 06 16.1 -1.8
PB04 IAML 19 06 19.8
comp=E,654nm,0.1s
PB07 IPOC Station P 3.55 316 eP Pn 19 05 40.0 +0.8
PB07 IPOC Station P 3.55 316 eP Pn 19 05 39.8 +0.6
PB07 eS Sn 19 06 20.8 -2.1
PB01 IPOC Station P 3.86 327 eP Pn 19 05 43.4 +0.4
PB01 i S Sn 19 06 28.0 -1.8
PB02 IPOC Station P 3.86 320⇑ eP Pn 19 05 43.3 +0.3
PB02 eS Sn 19 06 27.3 -2.4
CYA Choya 4.31 163 eP Pn 19 05 49.5 +0.9
VCA Vinchina 4.50 191 eP Pn 19 05 53.9 +2.8
PB08 IPOC Station P 4.51 336 eP Pn 19 05 52.5 +1.0
PB08 eS Sn 19 06 43.6 -1.4
CFA Coronel Fontan 7.33 187 P Pn 19 06 27.6 -0.1
comp=E,2.4nm,0.3s,baz=315,slow=8.1,SNR=30
CFA S Sn 19 07 46.2 -4.3
comp=E,0.9nm,0.3s,baz=79,slow=2.6,SNR=2.8
LPAZ La Paz 8.02 354 P Pn 19 06 38.4 +0.9
comp=E,7.2nm,0.3s,baz=150,slow=5.5,SNR=66
CPUP Villa Florida 9.18 105 P Pn 19 06 50.2 -1.8
comp=E,0.1nm,0.3s,baz=285,slow=7.1,SNR=2.8
SIV San Ignacio 10.09 36 P Pn 19 07 02.3 -1.7
comp=E,0.9nm,0.3s,baz=248,slow=9.8,SNR=15
BDFB Brasília 19.99 68 P P 19 09 02.0 +0.3
comp=E,1.2nm,0.3s,baz=226,slow=9.9,SNR=8.1
TORD Torodi Ar. Bea 76.87 69 P P 19 16 15.8 +0.7
comp=E,0.3nm,0.3s,baz=247,slow=5.3,SNR=9.9
MKAR Makanchi Array 146.89 40 PKPbc PKiKP 19 24 06.2 +0.4
comp=E,0.1nm,0.4s,baz=307,slow=3.1,SNR=3.3

*ISCJB **24** 19:26:07.4±1.3, 17°.5S±0°.4×179°.1W±0°.3, h539km, mb3.6/8, Error ellipse: s-maj=58.8km s-min=16.8km az=148.1*
*IDC **24** 19:26:13.5±17.0, 17°.59S×179°.10W, h606km±239km, mb3.1/8, mb1 3.4/8, mb1mx3.1/30, mbtmp4.1/8, Error ellipse: s-maj=72.7km s-min=53.9km az=37.0*
ISC 24 19:26:08.2±1.4, 17°.5S±0°.4×179°.0W±0°.3, h539km, n8, σ0°60/8, mb3.7/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.98**	**260**	P	**P**	**19 31 59.0**	**+0.2**
	2.2nm,0.6s,baz=72,slow=6.4,SNR=2.9						
STKA	**Stephens Creek**	**38.34**	**241**	P	**P**	**19 32 43.3**	**+0.1**
	3.0nm,0.5s,baz=88,slow=9.6,SNR=10						
WRA	**Warramunga Arr**	**44.17**	**259**	P	**P**	**19 33 28.9**	**-0.6**
	0.9nm,0.4s,baz=90,slow=8.3,SNR=14						
ASAR	**Alice Springs**	**44.38**	**254**	P	**P**	**19 33 31.1**	**0.0**
	7.0nm,0.5s,baz=89,slow=8.1,SNR=177						
PETK	**Petropavlovsk-**	**73.17**	**346**	P	**P**	**19 36 44.6**	**+0.7**
	2.4nm,0.9s,baz=136,slow=5.9,SNR=4.0						
NVAR	**Mina Array Bea**	**79.52**	**44**	P	**P**	**19 37 19.5**	**0.0**
	0.3nm,0.5s,baz=228,slow=8.9,SNR=4.6						
ILAR	**Eielson Array**	**85.63**	**13**	P	**P**	**19 37 48.5**	**-0.9**
	0.4nm,0.4s,baz=211,slow=5.1,SNR=7.8						
TXAR	**Lajitas Array**	**86.25**	**58**	P	**P**	**19 37 53.5**	**+0.3**
	0.6nm,0.8s,baz=207,slow=5.8,SNR=5.6						

*ISCJB **24** 19:27:33.4±0.9, 14°.35S±0°.07×167°.2E±0°.2, h200km, mb3.7/10, Error ellipse: s-maj=24.4km s-min=9.9km az=177.4*
*IDC **24** 19:27:35.1±3.5, 14°.41S×167°.22E, h201km±31km, mb3.5/10, mb1 3.7/11, mb1mx3.5/31, mbtmp4.0/11, Error ellipse: s-maj=23.4km s-min=21.8km az=87.0*
ISC 24 19:27:34.8±0.9, 14°.39S±0°.09×167°.3E±0°.2, h200km, n14, σ0°77/16, mb3.8/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.68**	**186**	P	**Pn**	**19 29 24.8**	**+0.9**
	0.9nm,0.3s,baz=72,slow=20,SNR=9.7						
DZM				S	**Sn**	**19 30 49.8**	**-0.9**
	0.1nm,0.3s,baz=61,slow=6.4,SNR=2.0						
STKA	**Stephens Creek**	**29.20**	**229**	P	**P**	**19 33 18.2**	**+0.5**
	3.7nm,0.5s,baz=51,slow=8.8,SNR=11						
WRA	**Warramunga Arr**	**31.89**	**255**	P	**P**	**19 33 41.3**	**-0.3**
	0.5nm,0.4s,baz=84,slow=8.9,SNR=7.3						
ASAR	**Alice Springs**	**32.78**	**249**	P	**P**	**19 33 48.9**	**-0.4**
	0.8nm,0.3s,baz=74,slow=9.5,SNR=19						
ASAR				PcP	**PcP**	**19 36 28.5**	**-1.3**
	0.5nm,0.8s,baz=72,slow=3.0,SNR=3.2						
SIJI	**Sorong**	**38.03**	**287**	P	**P**	**19 34 33.5**	**-0.6**
	2.3nm,0.4s,baz=106,slow=11,SNR=5.9						
VNDA	**Vanda**	**63.20**	**181**	P	**P**	**19 37 41.2**	**+0.1**
	0.4nm,0.7s,baz=5.7,slow=6.0,SNR=2.9						
PETK	**Petropavlovsk-**	**67.72**	**354**	P	**P**	**19 38 11.4**	**+1.0**
	1.4nm,0.7s,baz=141,slow=7.1,SNR=3.4						
CMAR	**Chiang Mai Arr**	**74.80**	**294**	P	**P**	**19 38 54.2**	**+0.7**
	0.4nm,0.5s,baz=121,slow=4.5,SNR=3.9						
MAW	**Mawson**	**82.19**	**202**	P	**P**	**19 39 33.1**	**+0.1**
	1.3nm,0.7s,baz=21,slow=8.6,SNR=4.4						
ILAR	**Eielson Array**	**86.21**	**18**	P	**P**	**19 39 51.8**	**-1.4**
	0.7nm,0.7s,baz=228,slow=5.3,SNR=6.3						
MKAR	**Makanchi Array**	**96.95**	**316**	P	**P**	**19 40 43.8**	**+0.3**
	0.5nm,0.6s,baz=79,slow=7.5,SNR=5.4						
ARCES	**ARCESS Array B 119.92**	**345**	PKP		**PKPdf**	**19 46 00.8**	**+0.1**
	0.7nm,0.4s,baz=70,slow=1.8,SNR=6.1						
FINES	**FINESS Array B 125.40**	**338**	PKP		**PKiKP**	**19 46 12.0**	**+0.2**
	0.2nm,0.5s,baz=316,slow=3.8,SNR=3.4						
KEST	**Kesra 150.94**	**321**	PKPbc		**PKiKP**	**19 47 05.1**	**+0.3**
	3.6nm,0.6s,baz=72,slow=3.2,SNR=3.8						

MAN 24 19:30:43.9, 8°.97N×125°.60E, h30km, mb3.8, ML2.6, MS2.1, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.02**	**90**	eP	Pb	19 30 49.1	+0.2
BUTP				eS	Sb	19 30 53.7	+1.3
SCPH	**Surigao**	**0.82**	**352**⇑	eP	Pb	19 31 07.5	+7.9
CGP	**Cagayan de Oro**	**1.03**	**240**⇑	eP	Pn	19 31 02.4	0.0
CGP				eS	Sn	19 31 16.1	+0.2
BUKP	**Musuan**	**1.21**	**206**	eP	Pb	19 31 07.3	+1.1
BUKP				eS	Sb	19 31 25.4	+3.9
MSLP	**Maasin**	**1.37**	**328**	eP	Pn	19 31 06.4	-0.6
MSLP				eS	Sn	19 31 24.1	-0.1
MATI	**Mati**	**2.11**	**162**	eP	Pn	19 30 55.0	-22

TAP 24 19:45:20.3, 24°.86N×122°.02E, h12km, ML1.9, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.08**	**259**	eP	Pg	19 45 23.5	+0.6
	baz=255						
EGS				eS	Sg	19 45 25.5	+0.7
	baz=255						
TWB1	**Santiao Chiao**	**0.15**	**350**	P	Pg	19 45 24.3	+0.4
	baz=353						
TWB1				eS	Sg	19 45 27.1	+0.7
	baz=353						
NTC	**Toucheng**	**0.17**	**268**	P	Pb	19 45 25.0	-0.4
	baz=268						
NTC				S	Sg	19 45 28.2	+1.3
	baz=268						
TIPB	**Shuangxi**	**0.21**	**303**	eP	Pb	19 45 25.8	-0.3
	baz=302						
TIPB				S	Sg	19 45 29.3	+1.3
	baz=302						
ILA	**Ilan**	**0.26**	**249**	eP	Pb	19 45 26.4	-0.5
	baz=247						
ILA				eS	Sb	19 45 31.1	-0.3
	baz=247						
TWC	**Suao**	**0.29**	**211**	eP	Pg	19 45 26.4	+0.1
	baz=209						
TWC				eS	Sb	19 45 31.4	-0.9
	baz=209						
NWF	**Wu-fen Shan**	**0.30**	**315**	eP	Pb	19 45 27.5	-0.2
	baz=314						
NWF				eS	Sb	19 45 32.3	-0.3
	baz=314						
WFSB	**Wu-fen Shan**	**0.30**	**315**	eP	Pb	19 45 27.5	-0.1
	baz=314						
WFSB				eS	Sb	19 45 32.6	+0.1
	baz=314						
EOS1	**EOS1**	**0.33**	**162**	P	Pb	19 45 27.7	-0.4
	baz=161						
EOS1				eS	Sb	19 45 33.1	-0.2
	baz=161						
TWE	**Neicheng**	**0.35**	**247**	P	Pb	19 45 28.1	-0.4
	baz=244						
TWE				eS	Sb	19 45 33.1	-0.7
	baz=244						
ENTT	**Nioudou**	**0.46**	**242**	eP	Pb	19 45 30.1	-0.4
	baz=241						
ENTT				eS	Sb	19 45 37.1	-0.2
	baz=241						
TATO	**Taipei**	**0.49**	**284**	eP	Pg	19 45 30.4	+0.4
	baz=283						
TATO				eS	Sb	19 45 37.8	-0.3
	baz=283						
NANB	**Nanao**	**0.49**	**209**	eP	Pb	19 45 31.0	0.0
	baz=209						
NANB				eS	Sb	19 45 38.5	+0.4
	baz=209						
YM01	**YM01**	**0.49**	**305**	P	Pb	19 45 31.5	+0.5
	baz=305						
YM01				eS	Sb	19 45 38.2	-0.1
	baz=305						
ENA	**Nanau**	**0.50**	**210**	eP	Pb	19 45 30.8	-0.2
	baz=209						
ENA				eS	Sb	19 45 38.3	+0.1
	baz=209						
YM08	**YM08**	**0.51**	**310**	eP	Pb	19 45 31.1	-0.1
	baz=310						
YM10	**YM10**	**0.51**	**306**	eP	Pb	19 45 31.7	+0.5
	baz=305						
YM10				eS	Sb	19 45 38.6	0.0
	baz=305						
YM05	**YM05**	**0.51**	**307**	eP	Pb	19 45 31.3	+0.1
	baz=306						
YM04	**YM04**	**0.52**	**304**	eP	Pg	19 45 31.0	+0.4
	baz=303						
YM03	**YM03**	**0.54**	**306**	eP	Pg	19 45 31.2	+0.4
	baz=306						
YM03				eS	Sb	19 45 39.3	-0.1
	baz=306						
YHNB	**Yeheng**	**0.61**	**252**	eP	Pb	19 45 32.9	-0.2
	baz=251						
NCU	**National Centr**	**0.76**	**278**	eP	Pg	19 45 35.2	+0.2
	baz=278						
NCU				eS	Sb	19 45 46.3	+0.5
	baz=278						
NACB	**Ninganchiao**	**0.78**	**209**	eP	Pb	19 45 35.9	0.0
	baz=209						
NACB				eS	Sb	19 45 46.9	+0.4
	baz=209						

JMA 24 19:45:29.1±0.1, 24°.11N×123°.55E, h17km±2km, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.24**	**103**	P	Pg	19 45 34.4	-0.1
HATJ				S	Sg	19 45 38.5	+0.3
IRIF	**Iriomote-Funau**	**0.28**	**36**	P	Pg	19 45 35.2	0.0
IRIF				S	Sg	19 45 39.4	+0.1
JKRS	**Kuro-shima**	**0.44**	**73**	P	Pg	19 45 38.0	0.0
JKRS				S	Sb	19 45 44.9	+0.2
JIJ	**Ishigaki jima**	**0.60**	**65**	P	Pg	19 45 40.4	-0.5
JIJ				S	Sg	19 45 48.8	-0.1
YOJ	**Yonaguni jima**	**0.60**	**306**	S	Sg	19 45 49.2	+0.1
JISG	**Ishigakijimahi**	**0.84**	**55**	P	Pb	19 45 44.8	-0.5
JISG				S	Sb	19 45 56.2	-0.1
JTJ	**Tarama**	**1.18**	**63**	P	Pn	19 45 50.7	-0.1
JTJ				eS	Sn	19 46 06.2	-0.2

*ISCJB **24** 20:03:16.9±0.4, 43°.72N±0°.03×105°.29W±0°.05, h0km, mb4.3/1, Error ellipse: s-maj=5.0km s-min=3.9km az=174.5*
*ANF **24** 20:03:17.2±0.8, 43°.70N×105°.33W, ML3.3/8, Error ellipse: s-maj=9.0km s-min=5.9km az=110.0*
*NEIC **24** 20:03:18.0±0.5, 43°.70N×105°.28W, h0km, ML3.1, Error ellipse: s-maj=6.7km s-min=6.2km az=88.0, Suspected Mining explosion.*
NEIC 69 km [43 miles] SSE of Gillette.
*IDC **24** 20:03:18.5±2.0, 43°.96N×105°.72W, h0km, mb4.1/1, mb1 4.1/3, mb1mx3.4/46, mbtmp3.9/3, ML3.6/2, Error ellipse: s-maj=68.4km s-min=9.4km az=147.0*
ISC 24 20:03:18.0±0.8, 43°.70N±0°.03×105°.33W±0°.04, h0km, n48, σ1°28/52, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.03**	**65**	ePg	**Pg**	**20 03 37.1**	**-0.6**
RSSD	**Black Hills**	**1.03**	**65**	P	**Pg**	**20 03 36.9**	**-0.8**
	baz=245						
K22A	**Casper**	**1.36**	**220**	ePn	**Pg**	**20 03 42.5**	**-1.5**
K22A	**Casper**	**1.36**	**220**	P	**Pg**	**20 03 43.0**	**-1.1**
	baz=41						
K22A				S	**Sg**	**20 04 02.6**	**+0.9**
	baz=41						
PHWY	**Pilot Hill**	**2.40**	**182**	ePn	**Pn**	**20 03 58.6**	**-0.1**
RWWY	**Rawlins**	**2.44**	**215**	ePn	**Pn**	**20 03 59.6**	**+0.4**
N23A	**Red Feather La**	**2.84**	**189**	ePn	**Pn**	**20 04 05.1**	**+0.3**
N23A	**Red Feather La**	**2.84**	**189**	P	**Pn**	**20 04 04.4**	**-0.4**
	baz=9.8						
N23A				Sb	**Sb**	**20 04 45.9**	**+0.9**
	baz=9.8						
LAO	**LASA Array**	**3.06**	**348**	ePn	**Pn**	**20 04 09.5**	**+1.9**
LAO	**LASA Array**	**3.06**	**348**	P	**Pn**	**20 04 08.1**	**+0.5**
	baz=167						
LAO				Sb	**Sb**	**20 04 52.3**	**+1.1**
	baz=167						
RLMT	**Red Lodge**	**3.16**	**298**	ePn	**Pn**	**20 04 09.1**	**0.0**
RLMT	**Red Lodge**	**3.16**	**298**	P	**Pn**	**20 04 09.5**	**+0.3**
	baz=115						
RLMT				Sb	**Sb**	**20 04 55.1**	**+0.9**
	baz=115						
BW06	**Boulder Array**	**3.22**	**255**	ePn	**Pn**	**20 04 10.4**	**+0.3**
BW06	**Boulder Array**	**3.22**	**255**	P	**Pn**	**20 04 10.1**	**0.0**
	baz=72						
PD31	**Pinedale Array**	**3.22**	**255**	ePn	**Pn**	**20 04 10.7**	**+0.7**
PDAR	**Pinedale Array**	**3.22**	**255**	Pn	**Pn**	**20 04 11.1**	**+1.0**
	6.5nm,0.3s,baz=70,slow=16,SNR=41						
PDAR				Lg	Lg	20 04 54.1	
	3.1nm,0.3s,baz=68,slow=28,SNR=3.1						
OGNE	**Ogallala**	**3.68**	**137**	ePn	**Pn**	**20 04 17.1**	**+0.9**
GCMT	**Greycliff**	**3.73**	**306**	ePn	**Pn**	**20 04 16.5**	**-0.5**
LOHW	**Long Hollow**	**3.83**	**271**	ePn	Pn	20 04 12.1	-6.3
H17A	**Grant Village**	**3.84**	**282**	ePn	**Pn**	**20 04 20.9**	**+2.2**
FLWY	**Flagg Ranch**	**3.90**	**278**	ePn	**Pn**	**20 04 20.2**	**+0.9**
ISCO	**Idaho Springs**	**3.90**	**183**	ePn	**Pn**	**20 04 19.1**	**-0.3**
ISCO	**Idaho Springs**	**3.90**	**183**	P	**Pn**	**20 04 20.3**	**+0.9**
	baz=3.6						
ISCO				Sb	**Sb**	**20 05 18.1**	**+2.5**
	baz=3.6						
MOOW	**Moose Ponds**	**3.92**	**273**	ePn	**Pn**	**20 04 21.4**	**+1.7**
SNOW	**Snow King Moun**	**3.95**	**268**	ePn	**Pn**	**20 04 18.0**	**-2.1**
YPP	**Pitchstone Pla**	**3.99**	**280**	ePn	**Pn**	**20 04 20.8**	**+0.1**
REDW	**Red Top Meadow**	**4.03**	**267**	ePn	**Pn**	**20 04 22.0**	**+0.9**
IMW	**Indian Meadow**	**4.06**	**275**	ePn	**Pn**	**20 04 22.7**	**+1.0**
TPAW	**Teton Pass**	**4.09**	**269**	ePn	**Pn**	**20 04 23.4**	**+1.4**
YHH	**Holmes Hill**	**4.11**	**287**	ePn	**Pn**	**20 04 20.7**	**-1.6**
FXWY	**Fox Creek**	**4.13**	**271**	ePn	**Pn**	**20 04 22.9**	**+0.3**
O20A	**White River Ci**	**4.17**	**212**	ePn	**Pn**	**20 04 24.8**	**+1.8**
SMCO	**Snowmass**	**4.68**	**196**	ePn	**Pn**	**20 04 33.0**	**+2.8**
Q24A	**Divide**	**4.73**	**178**	Pb	**Pb**	**20 04 41.5**	**-0.4**
	baz=359						
BOZ	**Bozeman (W)**	**4.88**	**295**	ePn	**Pn**	**20 04 32.6**	**-0.2**
PV22	**Blue Mesa, Par**	**5.78**	**208**	ePn	**Pn**	**20 04 45.2**	**0.0**
HVU	**Hansel Valley**	**5.80**	**253**	ePn	**Pn**	**20 04 46.5**	**+1.1**
PV07	**Paradox Valley**	**5.82**	**207**	ePn	**Pn**	**20 04 47.0**	**+1.3**
P17A	**Butcher Ranch,**	**5.85**	**226**	ePn	**Pn**	**20 04 48.5**	**+2.4**
PV23	**Carpenter Ridg**	**5.93**	**209**	ePn	**Pn**	**20 04 47.5**	**+0.2**
PV20	**West Nyswonger**	**6.01**	**208**	ePn	**Pn**	**20 04 47.6**	**-0.8**
SRU	**San Rafael Swe**	**6.02**	**222**	ePn	**Pn**	**20 04 46.9**	**-1.5**
TMUT	**Trail Mountain**	**6.23**	**227**	ePn	**Pn**	**20 04 49.8**	**-1.6**
Q16A	**Castle Valley**	**6.49**	**225**	ePn	**Pn**	**20 04 54.9**	**0.0**
T25A	**Trinidad**	**6.59**	**174**	ePn	**Pn**	**20 04 53.2**	**-3.1**
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn	**Pn**	**20 05 30.1**	**-1.8**
	1.5nm,0.3s,baz=230,slow=10,SNR=6.2						
ULM				Lg	Lg	20 08 03.6	
	0.6nm,0.3s,baz=346,slow=19,SNR=2.6						
ARA0	**ARCESS Array S**	**61.47**	**18**	eP	**P**	**20 13 35.5**	**-0.3**
ARCES	**ARCESS Array B**	**61.47**	**18**	P	**P**	**20 13 35.5**	**-0.3**
	2.0nm,0.9s,baz=323,slow=6.8,SNR=4.6						

*ISCJB **24** 20:13:33.3±0.6, 29°.42N±0°.05×139°.4E±0°.1, h450km, mb3.1/8, Error ellipse: s-maj=12.8km s-min=5.9km az=170.3*
*IDC **24** 20:13:34.1±1.2, 29°.43N×139°.30E, h444km±12km, mb2.9/9, mb1 3.1/12, mb1mx2.9/52, mbtmp3.8/12, Error ellipse: s-maj=22.9km s-min=14.6km az=90.0*
*JMA **24** 20:13:35.1±0.3, 29°.54N×139°.71E, h451km±5km, M3.6*
ISC 24 20:13:34.6±0.9, 29°.48N±0°.08×139°.5E±0°.1, h450km, n25, σ1°65/31, mb3.0/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.38**	**134**	S	**S**	**20 15 39.3**	**-2.2**
JHJ	**Hachijo jima 2**	**3.64**	**4**	P	**P**	**20 14 46.5**	**0.0**
	15nm,0.3s,baz=229,slow=20,SNR=9.3						
JHJ				S	**S**	**20 15 44.8**	**-0.3**
	8.4nm,0.3s,baz=90,slow=20,SNR=2.4						
JHH2	**Haha-jima-NKT2**	**3.72**	**139**	S	**S**	**20 15 44.7**	**-1.9**
BSO1	**Boso 1**	**5.32**	**14**	P	**P**	**20 15 02.9**	**+1.6**
BSO1				S	**S**	**20 16 12.6**	**+0.3**
BSO3	**Boso 3**	**5.38**	**9**	eS	**S**	**20 16 13.8**	**-0.1**
JIE	**Ise**	**5.42**	**335**	P	**P**	**20 15 05.3**	**+2.3**
JKN2	**Miekihoku**	**5.46**	**331**	P	**P**	**20 15 05.5**	**+2.1**
BSO4	**Boso 4**	**5.54**	**8**	eS	**S**	**20 16 17.1**	**-0.1**
JHU	**Hanno**	**6.35**	**359**	eS	**S**	**20 16 30.0**	**-2.5**
JRY	**Ryogami san**	**6.53**	**356**	P	**P**	**20 15 15.3**	**+1.0**
JAG	**Ashikaga**	**6.92**	**360**	P	**P**	**20 15 18.7**	**+0.3**
JAG				S	**S**	**20 16 39.2**	**-4.2**
MJAR	**Matsushiro Arr**	**7.12**	**352**	P	**P**	**20 15 20.4**	**-0.1**
	0.2nm,0.3s,baz=135,slow=23,SNR=11						
MJAR				S	**S**	**20 16 45.0**	**-2.2**
	0.1nm,0.3s,baz=182,slow=18,SNR=4.1						
JHO	**Hitachi**	**7.17**	**7**	P	**P**	**20 15 22.7**	**+1.7**
JHO				eS	**S**	**20 16 46.9**	**-1.3**
JFK	**Kawauchi**	**7.95**	**8**	P	**P**	**20 15 30.9**	**+1.5**
JFK				S	**S**	**20 17 02.4**	**-1.2**
JMK	**Ichinoseki**	**9.56**	**8**	P	**P**	**20 15 49.0**	**+2.2**
USRK	**Ussuriysk Ar.**	**15.85**	**340**	P	**P**	**20 16 55.7**	**+1.2**
	1.0nm,0.3s,baz=152,slow=8.9,SNR=14						
KLR	**Kul'dur**	**20.58**	**346**	P	**P**	**20 17 42.5**	**+1.5**
	1.7nm,0.6s,baz=238,slow=3.8,SNR=5.0						
MKAR	**Makanchi Array**	**47.11**	**308**	P	**P**	**20 21 23.5**	**-0.9**
	0.1nm,0.4s,baz=104,slow=9.4,SNR=2.4						
WRA	**Warramunga Arr**	**49.38**	**186**	P	**P**	**20 21 41.1**	**-0.7**
	1.2nm,0.3s,baz=359,slow=6.9,SNR=75						
KURBB	**Kurchatov Arra**	**49.66**	**313**	P	**P**	**20 21 42.1**	**-1.4**
	0.5nm,0.5s,baz=92,slow=7.4,SNR=7.0						
BVAR	**Borovoye Array**	**54.66**	**316**	P	**P**	**20 22 19.1**	**-0.6**
	0.3nm,0.4s,baz=88,slow=7.1,SNR=5.2						
ILAR	**Eielson Array**	**56.80**	**29**	P	**P**	**20 22 34.5**	**+0.2**
	0.3nm,0.7s,baz=286,slow=6.5,SNR=3.1						
INK	**Inuvik**	**61.88**	**25**	P	**P**	**20 23 10.3**	**+1.9**
	1.0nm,0.3s,baz=279,slow=4.9,SNR=5.4						
DLBC	**Dease Lake**	**65.65**	**35**	P	**P**	**20 23 32.6**	**-0.3**
	0.7nm,0.5s,baz=287,slow=20,SNR=2.7						
YKA	**Yellowknife Ar**	**71.19**	**28**	P	**P**	**20 24 06.2**	**-0.3**
	0.1nm,0.5s,baz=296,slow=9.7,SNR=3.9						

*ISCJB **24** 20:36:37.3±0.8, 19°.0S±0°.1×169°.4E±0°.2, h246km, mb3.7/10, Error ellipse: s-maj=26.8km s-min=10.5km az=33.8*
*IDC **24** 20:36:39.7±2.8, 18°.98S×169°.44E, h257km±25km, mb3.5/10, mb1 3.7/11, mb1mx3.5/25, mbtmp4.1/11, Error ellipse: s-maj=27.3km s-min=18.9km az=134.0*
ISC 24 20:36:38.5±0.8, 19°.0S±0°.1×169°.4E±0°.2, h246km, n23, σ1°08/25, mb3.6/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.15**	**222**	P	**Pn**	**20 37 45.6**	**+1.6**
	2.4nm,0.3s,baz=73,slow=20,SNR=20						
DZM				S	**S**	**20 38 33.1**	**-3.0**
	2.8nm,0.3s,baz=127,slow=20,SNR=2.4						
STKA	**Stephens Creek**	**28.13**	**237**	P	**P**	**20 42 08.8**	**+0.8**
	3.0nm,0.6s,baz=68

MYKA	Terra Mystica	146.01 330	*e*PKPbc	PKPdf	20 55 48.6	+0.4
	1.7nm,0.3s					
WATA	Walderalm	146.43 332	*e*PKPbc	PKPbc	20 55 50.0	-0.8
	0.9nm,0.3s					
ABTA	Abfaltersbach	146.45 331	*e*PKPbc	PKPdf	20 55 49.9	+0.9
	1.3nm,0.4s					
WTTA	Wattenberg	146.46 332	*i* PKPab	PKPbc	20 55 50.8	-0.1
	1.1nm,0.3s					
MOTA	Moosalm	146.63 333	*i* PKPbc	PKPbc	20 55 50.9	-0.5
	1.0nm,0.4s					
SQTA	Sankt Quirin	146.68 333	*i* PKPbc	PKPbc	20 55 51.2	-0.3
	2.7nm,0.5s					
FETA	Feichten	147.04 333	*i* PKPbc	PKPdf	20 55 51.3	+1.2
	1.5nm,0.4s					

*IDC **24** 21:06:26.8±18.0, 35°.33N×70°.16E, h276km±136km, mb2.9/1, mb1 2.6/4, mb1mx2.4/42, mbtmp3.4/4, Error ellipse: s-maj=280.5km s-min=66.5km az=157.0*
*ISCJB **24** 21:06:31.6±0.9, 36°.50N±0°.09×69°.9E±0°.1, h200km, Error ellipse: s-maj=16.9km s-min=9.6km az=140.2*

ISC 24 21:06:32.3±1.2, 36°.4N±0°.1×69°.9E±0°.1, h200km, n13, σ1§31/13, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	Alibeck	9.50	283	P	Pn	21 08 45.4	+0.3
	0.4nm,0.3s,baz=115,slow=10.0,SNR=5.8						
PYUN	Piuthan	13.85	123	*e*P	Pn	21 09 39.2	-1.5
	7.0nm,0.3s						
MKAR	Makanchi Array	13.88	38	P	Pn	21 09 41.5	+0.9
	0.1nm,0.3s,baz=207,slow=9.9,SNR=7.2						
DANN	Dangsing	14.22	121	*e*P	Pn	21 09 44.3	-1.0
	18nm,0.6s						
KOLN	Koldanda	14.48	123	*e*P	Pn	21 09 47.9	-0.5
	40nm,0.7s						
GKN	Gorkha	15.05	120	*e*P	Pn	21 09 55.0	-0.3
	9.8nm,0.3s						
KURBB	Kurchatov Arra	15.48	21	P	Pn	21 09 59.4	-0.8
	0.0nm,0.3s,baz=213,slow=10,SNR=2.7						
DMN	Daman	15.62	120	*e*P	Pn	21 10 03.1	+0.8
	18nm,0.9s						
KKN	Kakani	15.63	119	*e*P	Pn	21 10 03.3	+0.9
	2.0nm,0.2s						
PKIN	Phulchoki	15.84	120	*e*P	Pn	21 10 06.1	+1.1
	5.6nm,0.4s						
PKI	Pulchoki	15.85	120	*e*P	Pn	21 10 06.3	+1.1
	4.1nm,0.2s						
JIRN	Jiri	16.35	118	*e*P	Pn	21 10 13.9	+2.7
	16nm,0.3s						
ZALV	Zalesovo Beam	20.35	26	P	P	21 10 52.0	-1.1
	1.0nm,0.5s,baz=222,slow=10.0,SNR=4.3						

*IDC **24** 21:14:16.3±2.2, 5°.54N×124°.28E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/28, mbtmp3.6/3, Error ellipse: s-maj=219.2km s-min=25.6km az=64.0*
*ISCJB **24** 21:14:28.6±0.8, 6°.0N±0°.1×125°.6E±0°.1, h140km±8km, mb3.3/3, Error ellipse: s-maj=22.4km s-min=14.4km az=147.3*
*MAN **24** 21:14:28.7, 6°.03N×125°.71E, h135km, mb4.7, ML3.6, MS3.5*

ISC 24 21:14:29.9±1.1, 6°.02N±0°.10×125°.7E±0°.1, h135km±9km, n8, σ1§31/11, mb3.4/3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.10	37	*e*P	Pn	21 14 47.5	-0.7
DDMP				*e*S	Sn	21 15 01.7	-0.3
MATI	Mati	1.10	33	*e*P	Pn	21 14 52.8	-1.4
MATI				*e*S	Sn	21 15 15.6	+2.9
SKMP	Bagumbayan, Su	1.21	294	*e*P	Pn	21 14 55.2	0.0
CTBH	Cotabato--PC H	1.83	311	↑*i*P	Pn	21 15 02.1	-0.1
BUKP	Musuan	1.94	343	*e*P	Pn	21 15 03.3	-0.2
BUKP				*e*S	Sn	21 15 28.7	-0.4
WRA	Warramunga Arr	27.18	162	P	P	21 20 01.2	+0.1
	0.2nm,0.4s,baz=336,slow=12,SNR=5.8						
ASAR	Alice Springs	30.59	165	P	P	21 20 32.0	+0.8
	0.4nm,0.5s,baz=345,slow=7.6,SNR=11						
MKAR	Makanchi Array	55.07	325	P	P	21 23 47.2	-0.7
	0.2nm,0.3s,baz=134,slow=8.3,SNR=7.8						

IDC 24 21:16:11.3±3.2, 2°.14N×95°.36E, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.5/29, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=122.1km s-min=31.3km az=58.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.60	12	Pn	Pn	21 20 04.8	-0.9
	0.1nm,0.3s,baz=205,slow=12,SNR=14						
H08S2	Diego Garcia H	24.80	247	T	T	21 47 51.2	
	baz=66,slow=76,SNR=159						
H08S3	Diego Garcia H	24.80	247	T	T	21 47 51.3	
	baz=66,slow=76,SNR=130						
H08S1	Diego Garcia H	24.81	247	T	T	21 47 52.5	
	baz=66,slow=76,SNR=104						
WRA	Warramunga Arr	44.09	122	P	P	21 24 21.5	-0.2
	1.8nm,1.1s,baz=296,slow=9.7,SNR=2.4						
MKAR	Makanchi Array	45.92	348	P	P	21 24 35.7	-0.1
	1.6nm,0.5s,baz=161,slow=7.7,SNR=15						
ZALV	Zalesovo Beam	52.37	352	P	P	21 25 25.2	+0.1
	1.6nm,0.5s,baz=176,slow=6.0,SNR=8.4						

*IDC **24** 22:04:11.4±0.3, 10°.79N×42°.56W, h0km, mb5.6/38, mb1 5.7/39, mb1mx5.7/39, mbtmp5.6/39, ML6.2/2, MS6.1/35, Ms1 6.1/35, ms1mx6.0/37, Error ellipse: s-maj=9.9km s-min=7.4km az=120.0*
*MOS **24** 22:04:11.7±1.1, 10°.83N×42°.60W, h10km, mb6.4/61, MS6.1/55, Error ellipse: s-maj=7.1km s-min=4.2km az=54.7*
*ISCJB **24** 22:04:12.5±0.1, 10°.76N±0°.02×42°.597W±0°.009, h15km, mb6.1/214, MS6.3/754, Error ellipse: s-maj=2.2km s-min=1.3km az=173.5*
*BJI **24** 22:04:12.5±0.0, 10°.70N×42°.60W, h10km, mB6.5/58, Ms6.6/75, Ms7 6.4/68*
*NEIC **24** 22:04:13.5±1.6, 10°.70N×42°.59W, h10km, mb6.1/635, ME6.5, MS6.3/741, MW6.4, MW6.5, MW6.6, Error ellipse: s-maj=14.3km s-min=12.6km az=300.0, Moment Tensor Solution. s88 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.08; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$0.50; $M_{r\theta}$0.72; $M_{\theta\phi}$-4.57; $M_{\phi r}$0.89; Best double couple: $M_0$4.70000×10^{18} NP1:ϕ_s274.00000°, δ79.00000°, λ-172.00000°. NP2:ϕ_s182.00000°, δ82.00000°, λ-11.00000°. Principal axes: T 4.6300, Plg2.0000°, Azm228.0000°; N 0.1900, Plg76.0000°, Azm327.0000°; P -4.8200, Plg13.0000°, Azm138.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s281.00000°, δ70.00000°, λ-178.00000°. NP2: ϕ_s190.00000°, δ88.00000°, λ-20.00000°. Principal axes: T Plg13.0000°, Azm237.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm144.0000°; Apparent Stress 0.77 MPa Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
*NEIC **24** 22:04:13.0±0.0, 10°.73N×42°.62W, h21km, Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.39; $M_{\theta\theta}$-1.00; $M_{\phi\phi}$1.39; $M_{r\theta}$4.65; $M_{\theta\phi}$-7.03; $M_{\phi r}$-1.09; Best double couple: $M_0$8.60000×10^{18} NP1:ϕ_s95.00000°, δ90.00000°, λ146.00000°. NP2:ϕ_s186.00000°, δ56.00000°, λ0.00000°. Principal axes: T 8.9800, Plg23.0000°, Azm45.0000°; N -0.8500, Plg56.0000°, Azm274.0000°; P -8.1300, Plg22.0000°, Azm145.0000°;*
*GCMT **24** 22:04:17.5±0.0, 10°.91N×42°.46W, h18km, MW6.5/141, Moment Tensor Solution. s141,c306; s140,c624; Duration: 4s2 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.33±.02; $M_{\theta\theta}$-0.83±.02; $M_{\phi\phi}$1.16±.02; $M_{r\theta}$0.67±.06; $M_{\theta\phi}$-5.83±.02; $M_{\phi r}$1.64±.06; Best double couple: $M_0$6.18100×10^{18} NP1:ϕ_s184.00000°, δ85.00000°, λ-16.00000°. NP2:ϕ_s276.00000°, δ74.00000°, λ-174.00000°. Principal axes: T 6.1860, Plg7.0000°, Azm231.0000°; N -0.0090, Plg73.0000°, Azm346.0000°; P -6.1760, Plg15.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **24** 22:04:21.7±0.0, 10°.99N×42°.42W, h26km, Moment Tensor Solution. s80 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.33; $M_{\theta\theta}$-0.57; $M_{\phi\phi}$0.90; $M_{r\theta}$-0.88; $M_{\theta\phi}$-6.61; $M_{\phi r}$2.45; Best double couple: $M_0$7.10000×10^{18} NP1:ϕ_s40.00000°, δ85.00000°, λ19.00000°. NP2:ϕ_s272.00000°, δ71.00000°, λ174.00000°. Principal axes: T 7.5600, Plg17.0000°, Azm229.0000°; N -0.9100, Plg70.0000°, Azm19.0000°; P -6.6400, Plg9.0000°, Azm136.0000°;*

ISC 24 22:04:14.2±0.4, 10°.69N±0°.03×42°.67W±0°.03, h17km±1km, h18km:pP-P, n2573, σ1§67/2221, mb6.3/260, MS6.3/797, 91C-81D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	Montagnes des	11.33	241	Pn	Pn	22 06 54.9	-0.4
	2μm,0.3s,baz=56,slow=14,SNR=1221						
MDP				Sn	Sn	22 08 53.5	-8.2
	70nm,0.3s,baz=343,slow=8.2,SNR=4.3						
MDP				LR	LR	22 10 43.7	
	comp=Z,210μm,21.2s,baz=69,slow=34						
NBMO	Morrinhos-CE	14.15	169	*e*P	Pn	22 07 32.8	-1.2
BBSP	Saint Philip	16.60	280	*e*P	P	22 08 09.0	+0.4
BBGH	Gun Hill	16.71	280	*e*Pn	P	22 08 10.1	+0.3
	5μm,1.7s						
BBGH	Gun Hill	16.71	280	*e*P	Pn	22 08 08.1	+0.5
BCHC	Barbados, Cave	16.77	280	*e*P	P	22 08 11.2	+0.6
NBPA	Parau_RN	17.24	161	*e*P	P	22 08 16.2	+0.4
TOSP	Speyside	17.55	274	*e*P	Pn	22 08 17.4	-0.8
RCBR	Riachuelo	17.74	157	P	P	22 08 22.3	+1.0
	9.2nm,0.3s,baz=261,slow=0.3,SNR=116						
RCBR				S	Sn	22 11 39.4	+1.4
	2.9nm,0.3s,baz=270,slow=20,SNR=3.8						
RCBR				LR	LR	22 13 45.4	
	comp=Z,141μm,18.8s,baz=223,slow=32						
RCBR	Riachuelo	17.74	157	*e*Pn	P	22 08 22.0	+0.7
	10μm,1.9s						
RCBR	Riachuelo	17.74	157	*e*P	P	22 08 22.0	+0.7
RCBR				pmax	pmax		
	comp=Z,10μm,1.9s						
RCBR	Riachuelo	17.74	157	*e*P	P	22 08 21.8	+0.5
TBH	Brigand Hill	18.09	271	*e*P	P	22 08 28.6	+3.5
SLPA	Patience	18.11	282	*e*P	P	22 08 28.7	+3.4
MCLT	Moule a Chique	18.11	281	*e*P	Pn	22 08 24.8	-0.3
H05S1	Guadeloupe/Mar	18.12	284	T	T	22 27 15.2	
	SNR=1929						
MPOM	Morne Pois Mar	18.14	284	*e*P	Pn	22 08 25.3	-0.1
SLW	Petit Monier	18.15	282	*e*P	P	22 08 27.8	+2.0
SLBI	Saint Lucia, B	18.18	282	*e*P	Pn	22 08 24.8	-1.1
MVM	Montagne Vaucl	18.20	284	*e*P	Pn	22 08 26.1	0.0
ILAM	Ilet Lapin Mar	18.21	285	*e*P	Pn	22 08 26.3	0.0
SLB	Belfond	18.22	282	*e*P	Pn	22 08 26.1	-0.4
SLDE	Delcer	18.23	282	*e*P	P	22 08 28.0	+1.2
SVCV	St. Vincent, C	18.25	280	*e*P	P	22 08 29.2	+2.2
LPMF	Morne Lapointe	18.27	284	*e*P	Pn	22 08 27.0	0.0
SFAN	Fancy Village	18.29	280	*e*P	Pn	22 08 26.6	-0.7
SSV	Crater Summit	18.31	280	*e*P	P	22 08 28.7	+1.0
ZAM	Aeronautique	18.32	284	*e*P	P	22 08 28.1	+0.4
SVV	Soufriere Volc	18.33	280	*e*P	P	22 08 28.2	+0.4
FCV	Fort Charlotte	18.34	280	*e*P	Pn	22 08 27.3	-0.6
TRMF	Trois Ilets	18.34	284	*e*P	P	22 08 29.1	+1.2
BIM	Bigot	18.36	284	*e*P	Pn	22 08 28.2	0.0
SVB	Belmont	18.36	280	*e*P	Pn	22 08 29.4	+1.3
	comp=Z,2μm,1.6s						
SVB	Belmont	18.36	280	*e*P	P	22 08 26.8	-1.3
FDF	Fort de France	18.47	284	*e*P	Pn	22 08 30.2	+0.7
	comp=Z,3μm,1.5s						
FDF	Fort de France	18.47	284	*e*P	Pn	22 08 29.5	0.0
FDF	Fort de France	18.47	284	*e*P	Pn	22 08 30.2	+0.7
FDF				pmax	pmax		
	comp=Z,3μm,1.5s						
TPP	Pointe-a-Pierr	18.47	271	*e*P	Pn	22 08 33.1	+3.6
BAMF	Morne Balai	18.48	285	*e*P	Pn	22 08 30.8	+1.1
GBMF	Grand Be	18.49	285	*e*P	Pn	22 08 31.3	+1.4
CXM	Morne La Croix	18.50	285	*e*P	Pn	22 08 30.2	+0.2
PML	Morne Lenard	18.51	285	*e*P	Pn	22 08 31.4	+1.4
PCM	Pelee Case Pet	18.54	285	*e*P	Pn	22 08 31.0	+0.7
GRSS	Sisters	18.63	277	*e*P	Pn	22 08 33.5	+2.0
GRHS	Sauteurs	18.66	277	*e*P	Pn	22 08 33.0	+1.2
GRHS	Sauteurs	18.66	277	*e*P	Pn	22 08 33.4	+1.6
GRGR	Grenville	18.67	276	*e*P	Pn	22 08 33.3	+1.4
	comp=Z,3μm,1.5s						
GRGR	Grenville	18.67	276	*e*P	P	22 08 31.1	-0.4
GRGR	Grenville	18.67	276	*e*P	Pn	22 08 32.1	+0.2
DLPL	La Plaine	18.68	286	*e*P	Pn	22 08 33.5	+1.5
H05N1	Guadeloupe/Mar	18.73	289	T	T	22 27 51.9	
	SNR=1669						
DBCT	Belle View Cho	18.76	286	*e*P	Pn	22 08 34.7	+1.7
DPMT	Pointe Michel	18.79	286	*e*P	Pn	22 08 39.4	+6.1
DWS	Wesley	18.79	287	*e*P	Pn	22 08 33.7	+0.4
MDN	Morne-Daniel	18.81	286	*e*P	Pn	22 08 35.4	+1.7
NBLI	Livramento-PB	18.82	162	*e*P	Pn	22 08 33.9	+0.1
MAGL	Barre de l'ile	18.85	288	*e*P	Pn	22 08 34.3	+0.2
MDPO	Dominica; Chan	18.92	287	*e*P	P	22 08 34.0	-0.2
SACV	Santiago Islan	19.06	75	*e*P	P	22 08 30.2	-5.6
	comp=Z,1μm,1.0s						
SACV				*e*Sn	Sn	22 11 48.9	-21
TDBA	Terre de Bas,	19.16	288	*e*P	Pn	22 08 38.1	+0.4
ABD	La Joyeuse, An	19.17	290	*e*P	Pn	22 08 38.2	+0.3
CBE	Ff, Capester	19.18	288	*e*P	Pn	22 08 38.1	0.0
ANWB	Willy Bob	19.78	293	*e*P	Pn	22 08 44.6	-0.7
	comp=Z,1μm,1.1s						
ANWB	Willy Bob	19.78	293	*e*P	P	22 08 42.8	-0.9
MLYT	Lee's Yard	19.88	290	*e*P	P	22 08 45.7	+0.8
SMTB	Santa Maria do	20.03	194	*e*P	Pn	22 08 48.8	+0.5
NVBH	Bath Hotel, Ne	20.38	290	*e*P	Pn	22 08 52.7	+0.3
NVRH	Round Hill, Ne	20.38	291	*e*P	Pn	22 08 53.0	+0.7
SKI	Saint Kitts	20.55	291	*e*P	Pn	22 08 53.4	-1.0
	comp=Z,1μm,1.0s						
SKI				LR	LR		
	comp=Z,73μm,22.0s						
SKI	Saint Kitts	20.55	291	*e*P	P	22 08 52.3	+0.1
SKI	Saint Kitts	20.55	291	*e*P	Pn	22 08 53.4	-1.0
SKI				pmax	pmax		
	comp=Z,1μm,1.0s						
SKI				MLR	MLR		
	comp=Z,73μm,22.0s						
PTGA	Pitinga	20.61	238	P	Pn	22 08 54.4	-0.7
	comp=Z,883nm,0.9s,baz=57,slow=12,SNR=367						
PTGA				S	S	22 12 36.5	-6.2
	comp=Z,219nm,0.8s,baz=135,slow=18,SNR=3.1						
PTGA				LR	LR	22 16 19.4	
	comp=Z,129μm,21.1s,baz=46,slow=35						
PTGA	Pitinga	20.61	238	*e*P	Pn	22 08 54.0	-1.0
	comp=Z,5μm,1.4s						
PTGA				LR	LR		
	comp=Z,134μm,21.0s						
PTGA	Pitinga	20.61	238	*e*P	Pn	22 08 54.9	-0.1
SKDB	Saint Kitts 2	20.63	291	*e*P	Pn	22 08 56.3	+1.0
BSK	Brimstone Hill	20.65	291	*e*P	Pn	22 08 56.5	+1.1
SEUS	St. Eustatius	20.82	291	*e*P	P	22 08 56.2	+1.2
	comp=Z,2μm,1.2s						
SEUS				LR	LR		
	comp=Z,57μm,19.0s						
SEUS	St. Eustatius	20.82	291	*e*P	P	22 08 55.6	+0.7
SMRT	St. Maarten	21.07	293	*e*P	P	22 08 58.0	+0.3
	comp=Z,681nm,1.1s						
SMRT	St. Maarten	21.07	293	*e*P	P	22 08 57.4	-0.3
STVI	Saint Thomas	22.86	292	*e*P	P	22 09 16.7	-0.2
	comp=Z,754nm,1.1s						
STVI				LR	LR		
	comp=Z,40μm,19.0s						
CUPR	Culebra, Puert	23.15	292	*e*P	P	22 09 20.1	+0.3
	comp=Z,404nm,1.1s						
CUPR				LR	LR		
	comp=Z,54μm,21.0s						
PEXB	Peixe	23.33	194	*e*P	P	22 09 23.7	+2.0
PEXB				*e*S	Sn	22 13 46.7	-5.8
PEXB	Peixe	23.33	194	*e*P	P	22 09 24.0	+2.4
MTP	Monte Pirata	23.34	291	*e*P	P	22 09 22.1	+0.3
	comp=Z,1μm,1.5s						
MTP				LR	LR		
	comp=Z,48μm,19.0s						
HUMP	Col San Antoni	23.62	291	*e*P	P	22 09 24.7	+0.2
	comp=Z,2μm,1.8s						
HUMP				LR	LR		
	comp=Z,41μm,20.0s						
CBYP	Canovanas	23.66	291	*e*P	P	22 09 24.8	-0.2
	comp=Z,2μm,2.0s						
CBYP				LR	LR		
	comp=Z,47μm,19.0s						
SJG	San Juan	23.89	291	P	P	22 09 27.6	+0.4
	comp=Z,150nm,0.9s,baz=94,slow=6.5,SNR=42						
SJG				S	S	22 13 42.8	0.0
	comp=Z,7.5nm,0.2s,baz=343,slow=19,SNR=4.4						
SJG				LR	LR	22 18 25.4	
	comp=Z,40μm,18.3s,baz=97,slow=36						
SJG	San Juan	23.89	291	*e*P	P	22 09 28.0	+0.8
	comp=Z,491nm,1.1s						
SJG				LR	LR		
	comp=Z,46μm,18.0s						
SJG	San Juan	23.89	291	*e*P	P	22 09 28.0	+0.8
SJG				pmax	pmax		
	comp=Z,491nm,1.1s						
SJG				MLR	MLR		
	comp=Z,46μm,18.0s						
OBIP	Obispado Ponce	24.30	290	*e*P	P	22 09 30.9	0.0
	comp=Z,1μm,1.4s						
OBIP				LR	LR		
	comp=Z,42μm,19.0s						
EMPR	Esperanza - Ma	24.33	291	PFAKE		22 09 40.0	+8.7
EMPR				LR	LR		
	comp=Z,36μm,20.0s						
AOPR	Arecibo Observ	24.51	291	*e*P	P	22 09 33.1	+0.2
	comp=Z,1μm,1.7s						
AOPR				LR	LR		
	comp=Z,43μm,21.0s						
MPR	Mayaguez	24.83	290	PFAKE		22 09 50.0	+14
MPR				LR	LR		
	comp=Z,74μm,22.0s						
AGP	Aguadilla	24.88	291	PFAKE		22 09 50.0	+14
AGP				LR	LR		
	comp=Z,33μm,21.0s						
CLDB	Colider	25.09	212	*e*P	P	22 09 39.6	+1.6
BDFB	Brasilia	26.69	192	P	P	22 09 54.4	+1.7
	comp=Z,78nm,0.8s,baz=15,slow=11,SNR=68						
BDFB				S	S	22 14 28.2	+0.6
	comp=Z,36nm,0.8s,baz=121,slow=19,SNR=1.6						
BDFB				LR	LR	22 19 48.2	
	comp=Z,164μm,19.9s,baz=6.8,slow=35						
BDFB	Brasilia	26.69	192	*e*P	P	22 09 54.4	+1.7
	comp=Z,285nm,1.1s						
BDFB				LR	LR		
	comp=Z,164μm,20.0s						
SDD	Santo Domingo	27.45	289	PFAKE		22 10 10.0	+11
SDD				LR	LR		
	comp=Z,40μm,20.0s						
SDV	Santo Domingo	27.61	269	P	P	22 10 01.9	+0.8
	comp=Z,189nm,0.9s,baz=88,slow=6.3,SNR=132						
SDV				S	S	22 14 41.7	-0.8
	comp=Z,11nm,0.7s,baz=3.6,slow=16,SNR=1.9						
SDV				LR	LR	22 22 04.1	
	comp=Z,32μm,18.5s,baz=78,slow=39						
SDV	Santo Domingo	27.61	269	*e*P	P	22 10 02.0	+0.8
SDV				LR	LR		
	comp=Z,31μm,19.0s						
SDV	Santo Domingo	27.61	269	*e*P	P	22 10 02.0	+0.8
URIC	Uribia, Colomb	28.78	275	*e*P	P	22 10 11.7	+0.4
SDDR	Presa de Saban	28.83	290	PFAKE		22 10 20.0	+8.1
SDDR				LR	LR		
	comp=Z,42μm,22.0s						
TAMC	Tame, Arauca	29.10	264	*e*P	P	22 10 17.4	+3.2
SJMB	Sao Joao De Ma	29.24	177	*e*P	P	22 10 15.3	-0.1
SJMB				*e*S	S	22 15 18.2	+11
SJMB	Sao Joao De Ma	29.24	177	*e*P	P	22 10 16.2	+0.9
PMNB	Patos De Minas	29.28	187	*e*P	P	22 10 17.0	+1.2
PMNB				*e*S	S	22 15 19.4	+11
PMNB	Patos De Minas	29.28	187	*e*P	P	22 10 17.2	+1.4
GRTK	Grand Turk	29.33	295	PFAKE		22 10 30.0	+14
GRTK				LR	LR		
	comp=Z,23μm,20.0s						
CAPV	Capacho	29.39	267	*e*P	P	22 10 17.9	+0.9
BSFB	Barra de Sao F	29.39	176	*e*P	P	22 10 16.9	+0.2
BSFB				*e*S	S	22 15 23.5	+14
BSFB	Barra de Sao F	29.39	176	*e*P	P	22 10 16.8	+0.2
BBSR	BB Station	29.63	320	*e*P	P	22 10 19.2	+0.5
	comp=Z,154nm,1.0s						
BBSR				LR	LR		
	comp=Z,42μm,20.0s						
PAMC	Pamplona, Colo	29.84	266	*e*P	P	22 10 23.7	+2.4
RIB01	Linhares ES	29.90	176	*e*P	P	22 10 22.8	+1.6
YOPC	Yopal, Colombi	29.92	262	*e*P	P	22 10 24.5	+2.8
MACI	Morro de la Ar	30.11	51	*e*P	P	22 10 23.8	+0.5
	comp=Z,1μm,1.7s						
OCAC	Ocana	30.32	268	*e*P	P	22 10 25.3	0.0
BARC	Barichara	30.43	265	*e*P	P	22 10 29.6	+3.3
PCAN	Candelaria	30.43	22	*e*P	P	22 10 27.9	+2.1
	comp=Z,956nm,1.7s						
HOR	Horta	30.43	22	*e*P	P	22 10 27.9	+2.2
	comp=Z,995nm,2.1s						
RUSC	La Rusia	30.46	263	*e*P	P	22 10 29.7	+2.9
PICO	Pico	30.49	22	*e*P	P	22 10 27.9	+1.6
	comp=Z,1μm,2.0s						
PCED	Cedros	30.50	22	*e*P	P	22 10 29.0	+2.7
	comp=Z,877nm,2.0s						
PPNO	Prainha do Nor	30.52	23	*e*P	P	22 10 26.8	+0.2
	comp=Z,1μm,1.7s						
PSMA	Santa Maria	30.60	28	*e*P	P	22 10 28.6	+1.4
	comp=Z,2μm,1.8s						
PSMN	Pico do Norte,	30.64	28	*e*P	P	22 10 28.8	+1.2
	comp=Z,1μm,1.8s						
PMAN	Manadas	30.73	23	*e*P	P	22 10 31.2	+2.8
	comp=Z,1μm,1.6s						
ROSA	Rosais	30.75	22	*e*P	P	22 10 27.9	-0.7
	comp=Z,1μm,1.8s						
ROSA	Rosais	30.75	22	PFAKE		22 10 40.0	+11
ROSA				LR	LR		
	comp=Z,43μm,20.0s						
BRRC	Barranca, Sant	30.87	266	*e*P	P	22 10 29.4	-0.5
C2SB	Chapadao do Su	30.94	199	*e*P	P	22 10 33.0	+2.6
C2SB	Chapadao do Su	30.94	199	*e*P	P	22 10 33.4	+3.0
PDA	Ponta Delgada	30.97	27	*e*P	P	22 10 30.1	-0.4
	comp=Z,2μm,1.7s						
SMRC	Santa Marta, M	30.98	274	*e*P	P	22 10 31.4	+0.5
PSET	Sete Cidades	31.01	27	*e*P	P	22 10 33.8	+2.9
	comp=Z,3μm,1.5s						
CMLA	Cha da Macela	31.05	27	*e*P	P	22 10 32.3	+1.1
	comp=Z,2μm,1.8s						
CMLA	Cha da Macela	31.05	27	*e*P	P	22 10 31.8	+0.6
	comp=Z,3μm,1.6s						
CMLA				LR	LR		
	comp=Z,28μm,20.0s						
CMLA	Cha da Macela	31.05	27	*i* P	P	22 10 31.9	+0.6
ADH	Angra Heroismo	31.08	24	*e*P	P	22 10 33.8	+2.3
	comp=Z,1μm,1.7s						
PGRA	Graciosa	31.12	22	*e*P	P	22 10 33.4	+1.6
	comp=Z,1μm,1.6s						
ITRB	Iturama	31.14	194	*e*P	P	22

GTBY LR LR
comp=Z,17µm,19.0s
GTBY Guantanamo Bay 32.56 290 *eP* **P 22 10 45.8 +1.1**
DUB01 Friburgo-RJ 32.57 179 *eP* **P 22 10 46.3 +1.6**
PRAC Prado 32.68 260 *eP* **P 22 10 47.5 +1.5**
VAS01 Vassouras-RJ 32.77 181 *eP* **P 22 10 48.4 +1.9**
HELC Santa Helena 32.80 265 *eP* **P 22 10 46.8 -0.5**
GUY2C Guyana, Caldas 32.82 263 *eP* **P 22 10 48.4 +0.8**
RREF El Recreo 32.87 262 *eP* **P 22 10 48.8 +0.6**
PMPS Porto Santo 32.88 43 *eP* **P 22 10 49.8 +2.4**
comp=Z,970nm,1.9s
PMPS Porto Santo 32.88 43 *e*PP PP 22 12 00.9 -0.9
PMPST Porto Santo, M 32.89 43 *eP* **P 22 10 50.1 +2.6**
comp=Z,952nm,1.7s
ORTC Ortega, Tolima 32.98 261 *eP* **P 22 10 49.7 +1.1**
RCLB Rio Claro- Sao 33.25 188 *eP* **P 22 10 53.0 +2.4**
DBBC Dabeiba 33.33 267 *eP* **P 22 10 51.7 0.0**
CMJ Castle Mountai 33.43 287 ‖ *iP* **P 22 10 55.0 +2.7**
BETC Betania 33.48 259 *eP* **P 22 10 54.9 +2.0**
YHJ Yallahs 33.51 286 ‖ *iP* **P 22 10 55.7 +2.6**
AQDB Aquidauana 33.52 203 *eP* **P 22 10 55.8 +2.7**
H10N3 ASCENSION HYDR 33.54 122 T T 22 46 14.1
baz=303,slow=75,SNR=251
H10N2 ASCENSION HYDR 33.55 122 T T 22 46 14.3
baz=303,slow=75,SNR=1021
ESAR Angra dos Reis 33.55 183 *eP* **P 22 10 55.9 +2.7**
H10N1 ASCENSION HYDR 33.56 122 T T 22 46 15.6
baz=303,slow=75,SNR=1762
PTLC Puerto Leguiza 33.60 254 *eP* **P 22 10 56.3 +2.4**
ASCN Ascension 33.71 122 *eP* **P 22 10 55.6 +0.8**
comp=Z,1µm,1.6s
ASCN LR LR
comp=Z,89µm,21.0s
GWJ Greenwich 33.76 287 *i P* **P 22 10 57.8 +2.5**
HOJ Hope 33.77 286 ‖ *iP* **P 22 10 58.0 +2.7**
PLMC San Jos del P 33.78 263 *eP* **P 22 10 55.9 +0.4**
STH Stony Hill 33.83 286 ‖ *iP* **P 22 10 58.5 +2.6**
MARP Paez Belalcaza 33.93 259 *eP* **P 22 10 57.4 +0.2**
FLOC Florencia 33.98 257 *eP* **P 22 10 58.0 +0.8**
H10S3 ASCENSION HYDR 34.02 124 T T 22 46 49.0
baz=304,slow=75,SNR=267
H10S1 ASCENSION HYDR 34.02 124 T T 22 46 49.5
baz=304,slow=75,SNR=135
YOTC Yotoco, Valle 34.03 261 *eP* **P 22 10 56.3 -1.5**
H10S2 ASCENSION HYDR 34.04 124 T T 22 46 40.2
baz=304,slow=75,SNR=110
PCJ Portland Cotta 34.12 286 ‖ *iP* **P 22 11 00.3 +2.0**
BBJ Bamboo Saint A 34.30 287 ‖ *iP* **P 22 11 02.0 +1.9**
SPB Sao Paulo 34.39 188 PFAKE 22 11 10.0 +9.5
SPB LR LR
comp=Z,40µm,18.0s
SPB Sao Paulo 34.39 188 *eP* **P 22 11 02.9 +2.4**
FRTB Fartura 34.49 191 *eP* **P 22 11 03.1 +1.6**
PCON Cinco Dias 34.49 258 *eP* **P 22 11 03.3 +1.0**
CVJ Coleyville 34.54 287 ‖ *iP* **P 22 11 04.1 +2.0**
MTDJ Mount Denham 34.54 287 PFAKE 22 11 20.0 +18
MTDJ LR LR
comp=Z,26µm,21.0s
MTDJ Mount Denham 34.54 287 *eP* **P 22 11 02.9 +0.8**
MCJ Malvern 34.64 286 ‖ *iP* **P 22 11 05.0 +2.0**
MCJ *i P* P 22 11 09.5 +6.5
POPC Popayan, Colom 34.70 259 *eP* **P 22 11 03.7 0.0**
UPD2 Meteti 34.90 270 *eP* **P 22 11 07.2 +2.0**
MALC Bahia Malaga 34.99 262 *eP* **P 22 11 08.0 +2.0**
MALC Bahia Malaga 34.99 262 *eP* **P 22 11 07.2 +1.2**
NEJ Negril 35.29 286 ‖ *iP* **P 22 11 10.4 +1.9**
BBAC Balboa, Cauca 35.39 258 *eP* **P 22 11 09.5 -0.1**
CPAS1 Pasto 35.69 257 *eP* **P 22 11 14.3 +1.8**
CCUFI Cufio, Nario 35.71 257 *eP* **P 22 11 14.7 +2.0**
GCUF Volcan Galeras 35.71 257 *eP* **P 22 11 14.7 +2.0**
GRGC Isla de Gorgon 36.03 260 *eP* **P 22 11 14.8 -0.2**
PTGB Pitanga 36.37 195 *eP* **P 22 11 20.0 +2.4**
BCIP Isla Barro Col 36.63 271 PFAKE 22 11 30.0 +10
BCIP LR LR
comp=Z,19µm,20.0s
BCIP Isla Barro Col 36.63 271 *eP* **P 22 11 21.2 +1.2**
LPAZ La Paz 36.79 224 P **P 22 11 24.1 +2.1**
comp=Z,701nm,0.9s,baz=39,slow=7.9,SNR=1004
LPAZ S **S 22 17 06.7 +0.7**
comp=Z,12nm,0.8s,baz=108,slow=20,SNR=1.8
LPAZ LR LR 22 27 34.8
comp=Z,43µm,18.6s,baz=43,slow=38
LPAZ La Paz 36.79 224 *eP* **P 22 11 23.7 +1.8**
LPAZ *e*S **S 22 17 10.9 +4.9**
LPAZ La Paz 36.79 224 *eP* **P 22 11 24.9 +2.9**
CTUM2 Tumaco 36.87 259 *eP* **P 22 11 23.5 +1.4**
TUMC Tumaco 36.87 259 *eP* **P 22 11 23.1 +1.0**
OTAV Otavalo 37.05 256 *eP* **P 22 11 25.9 +1.8**
comp=Z,832nm,1.4s
OTAV LR LR
comp=Z,26µm,21.0s
OTAV Otavalo 37.05 256 *eP* **P 22 11 25.9 +1.8**
OTAV pmax pmax
comp=Z,832nm,1.4s
OTAV MLR MLR
comp=Z,26µm,21.0s
OTAV Otavalo 37.05 256 *eP* **P 22 11 25.9 +1.8**
OTAV Otavalo 37.05 256 *eP* **P 22 11 26.0 +1.8**
TIC Toumodi 37.42 93 *eP* **P 22 11 24.6 -2.2**
LIC Lamto 37.48 94 *eP* **P 22 11 23.6 -3.6**
comp=Z,4µm,1.4s
DBIC Dimbokro 37.57 93 P **P 22 11 26.4 -1.6**
comp=Z,806nm,1.1s,baz=264,slow=10,SNR=194
DBIC LR LR 22 23 06.9
comp=Z,26µm,21.3s,baz=256,slow=30
DBIC Dimbokro 37.57 93 *eP* **P 22 11 26.2 -1.9**
comp=Z,2µm,1.3s
DBIC Dimbokro 37.57 93 *eP* **P 22 11 26.2 -1.9**
DBIC pmax pmax
comp=Z,2µm,1.3s
KIC Kosan Boka 37.73 93 *eP* **P 22 11 25.8 -3.6**
comp=Z,3µm,1.4s
PRVC Isla de Provid 37.91 278 *eP* **P 22 11 32.0 +1.1**
GBN Guysborough 38.18 338 *eP* **P 22 11 33.4 +0.7**
comp=Z,78nm,1.0s
GBN LR LR
comp=Z,19µm,21.0s
ITAB Concordia 38.80 194 *eP* **P 22 11 40.5 +2.3**
062Z Marathon 38.99 296 P **P 22 11 40.9 +1.1**
baz=104
060Z West Palm Beac 38.99 299 P **P 22 11 41.0 +1.1**
baz=106
060A Indiantown 39.01 300 PFAKE 22 11 50.0 +10
060A LR LR
comp=Z,19µm,21.0s
060A Indiantown 39.01 300 P **P 22 11 41.2 +1.3**
baz=107
V62A Hyde County Ai 39.05 315 PFAKE 22 11 50.0 +10
V62A LR LR
comp=Z,48µm,20.0s
V62A Hyde County Ai 39.05 315 P **P 22 11 41.2 +1.0**
baz=121
061Z Ochoppi 39.15 298 PFAKE 22 11 50.0 +8.8
061Z LR LR
comp=Z,22µm,19.0s
061Z Ochoppi 39.15 298 P **P 22 11 42.5 +1.3**
baz=106
PB16 IPOC Station P 39.16 223 *eP* **P 22 11 41.6 -0.3**
PB16 IPOC Station P 39.16 223 ⇑ *iP* **P 22 11 41.7 -0.3**
M65A Busby, Falmout 39.36 326 P **P 22 11 43.3 +0.6**
baz=133
M65A S **S 22 17 47.0 +3.8**
baz=133
CPUP Villa Florida 39.46 201 P **P 22 11 45.2 +1.5**
comp=Z,91nm,0.8s,baz=29,slow=7.6,SNR=110
CPUP S **S 22 17 47.9 +2.8**
comp=Z,5.8nm,0.8s,baz=326,slow=15,SNR=2.1
CPUP LR LR 22 28 28.2
comp=Z,43µm,18.5s,baz=26,slow=37
CPUP Villa Florida 39.46 201 *eP* **P 22 11 45.5 +1.8**
W61A Ground Anchor 39.59 314 P **P 22 11 45.0 +0.4**
baz=120
959A Okeechobee 39.59 300 P **P 22 11 45.2 +0.3**
baz=108
V61A Roper 39.60 315 PFAKE 22 12 00.0 +15
V61A LR LR
comp=Z,44µm,20.0s
V61A Roper 39.60 315 P **P 22 11 45.4 +0.6**
baz=121,SNR=9.3
YJA Yavi 39.61 214 *eP* **P 22 11 47.6 +2.1**
059A Moore Haven 39.66 300 P **P 22 11 46.4 +1.0**
baz=107,SNR=7.8
059Z Ave Maria 39.74 298 P **P 22 11 46.6 +0.5**
baz=106

859A Kempfer Cattle 39.77 301 P **P 22 11 47.0 +0.6**
baz=108,SNR=8.8
MNMCX Minye Minye 39.78 222 *eP* **P 22 11 44.9 -1.9**
MNMC Minye Minye 39.78 222 *eP* **P 22 11 45.9 -0.9**
comp=Z,217nm,1.1s
MNMC LR LR
comp=Z,39µm,20.0s
MNMC Minye Minye 39.78 222 ⇑ *iP* **P 22 11 45.7 -1.1**
U61A Possum Corner 39.79 315 PFAKE 22 12 00.0 +14
U61A LR LR
comp=Z,46µm,21.0s
U61A Possum Corner 39.79 315 P **P 22 11 47.2 +0.8**
baz=121,SNR=8.2
PB12 IPOC Station P 39.91 223 *eP* **P 22 11 45.3 -2.3**
PB12 IPOC Station P 39.91 223 ⇑ *iP* **P 22 11 45.9 -1.7**
GO01 Chusmiza 39.91 221 PFAKE 22 12 00.0 +12
GO01 LR LR
comp=Z,56µm,22.0s
Y60A Bolivia 39.92 311 PFAKE 22 12 00.0 +13
Y60A LR LR
comp=Z,39µm,20.0s
Y60A Bolivia 39.92 311 P **P 22 11 48.4 +0.9**
baz=117
S61A Accomac 39.99 318 PFAKE 22 12 00.0 +12
S61A LR LR
comp=Z,41µm,21.0s
S61A Accomac 39.99 318 P **P 22 11 48.7 +0.7**
baz=124
X60A Albert Glenn T 40.01 312 P **P 22 11 48.8 +0.6**
baz=118,SNR=20
W60A Pink Hill 40.04 313 P **P 22 11 49.1 +0.7**
baz=119,SNR=18
EMMW East Machias 40.05 332 PFAKE 22 12 00.0 +12
EMMW LR LR
comp=Z,25µm,21.0s
V60A Jim Taylor Roa 40.07 314 PFAKE 22 12 00.0 +11
V60A LR LR
comp=Z,51µm,22.0s
V60A Jim Taylor Roa 40.07 314 P **P 22 11 49.5 +0.8**
baz=120,SNR=37
BRYW Bryant College 40.09 326 PFAKE 22 12 00.0 +11
BRYW LR LR
comp=Z,40µm,19.0s
RTC Rabat Centre 40.11 49 *eP* **P 22 11 51.3 +2.2**
comp=Z,7µm,1.6s
RTC LR LR
comp=Z,154µm,22.0s
R61A Willards 40.13 319 P **P 22 11 50.4 +1.2**
baz=125,SNR=12
BCX Boston College 40.17 327 PFAKE 22 12 00.0 +11
BCX LR LR
comp=Z,38µm,22.0s
858A St. Cloud 40.21 301 P **P 22 11 50.7 +0.7**
baz=108,SNR=6.4
PB08 IPOC Station P 40.23 220 *eP* **P 22 11 48.2 -2.4**
DWPF Disney Wildern 40.24 301 *eP* **P 22 11 51.7 +1.5**
comp=Z,222nm,0.9s
DWPF LR LR
comp=Z,25µm,21.0s
DWPF Disney Wildern 40.24 301 P **P 22 11 50.9 +0.7**
baz=108
058A Arcadia 40.25 299 P **P 22 11 51.1 +0.8**
baz=106,SNR=13
PFVI Vila Bisbo 40.25 44 *eP* **P 22 11 53.0 +2.8**
comp=Z,854nm,2.2s
PFVI Vila Bisbo 40.25 44 *e*PP PP 22 13 33.2 +10
PFVI *e*S **S 22 17 59.1 +2.3**
PFVI Vila Bisbo 40.25 44 PFAKE 22 12 00.0 +10
PFVI LR LR
comp=Z,45µm,22.0s
CNNC Cliffs of the 40.26 313 PFAKE 22 12 00.0 +10
CNNC LR LR
comp=Z,52µm,21.0s
CNNC Cliffs of the 40.26 313 P **P 22 11 50.9 +0.6**
baz=119,SNR=6.1
PB11 IPOC Station P 40.27 221 PFAKE 22 12 00.0 +9.3
PB11 LR LR
comp=Z,46µm,22.0s
PB11 IPOC Station P 40.27 221 *eP* **P 22 11 48.9 -1.8**
PB11 IPOC Station P 40.27 221 ⇑ *iP* **P 22 11 49.5 -1.2**
WES Weston 40.29 327 PFAKE 22 12 00.0 +10
WES LR LR
comp=Z,39µm,20.0s
758A Lake Helen 40.31 302 P **P 22 11 51.6 +0.8**
baz=109,SNR=17
U60A Pendleton 40.35 315 P **P 22 11 51.9 +0.8**
baz=121,SNR=21
958A Wauchula 40.35 300 P **P 22 11 51.3 +0.1**
baz=107
HJA Humahuaca 40.38 213 *eP* **P 22 11 53.2 +1.4**
Z59A Georgetown, SC 40.38 310 P **P 22 11 52.3 +1.0**
baz=115
T60A Surry 40.41 316 PFAKE 22 12 00.0 +8.5
T60A LR LR
comp=Z,40µm,21.0s
T60A Surry 40.41 316 P **P 22 11 52.1 +0.6**
baz=122,SNR=10
Q61A Milford 40.44 320 P **P 22 11 52.3 +0.6**
baz=125
PSGC Pisagua 40.46 222 ⇑ *iP* **P 22 11 50.0 -2.2**
PSGCX Pisagua 40.46 222 *eP* **P 22 11 50.4 -1.9**
MORF Marmelete 40.46 43 *eP* **P 22 11 51.5 -0.6**
MORF *e*S **S 22 18 00.7 +0.6**
MORF AMS AMS 22 24 33.6
comp=Z,39µm,23.5s
MORF Marmelete 40.46 43 *eP* **P 22 11 52.8 +0.8**
comp=Z,687nm,1.6s
MORF Marmelete 40.46 43 *e*PP PP 22 13 34.9 +10
MORF *e*S **S 22 18 02.7 +2.6**
MORF Marmelete 40.46 43 *eP* **P 22 11 51.4 -0.6**
MORF *e*S **S 22 18 00.7 +0.6**
X59A McDuffie Farm, 40.46 312 P **P 22 11 52.5 +0.6**
baz=117,SNR=7.8
YLE Yale 40.48 324 PFAKE 22 12 00.0 +8.0
YLE LR LR
comp=Z,48µm,22.0s
HRV Adam Dziewonsk 40.50 327 *eP* **P 22 11 53.0 +0.8**
comp=Z,195nm,1.1s
HRV LR LR
comp=Z,43µm,20.0s
HRV Adam Dziewonsk 40.50 327 *eP* **P 22 11 53.0 +0.8**
HRV pmax pmax
comp=Z,195nm,1.1s
HRV MLR MLR
comp=Z,43µm,20.0s
HRV Adam Dziewonsk 40.50 327 P **P 22 11 52.9 +0.7**
baz=133
658A Bunnell 40.51 303 PFAKE 22 12 00.0 +7.6
658A LR LR
comp=Z,26µm,20.0s
658A Bunnell 40.51 303 P **P 22 11 52.9 +0.4**
baz=109,SNR=7.2
PTEO Sao Teotonio 40.54 43 *eP* **P 22 11 53.0 +0.4**
comp=Z,1µm,1.9s
CNLB Canela 40.55 191 *eP* **P 22 11 55.9 +3.1**
P61A Hammonton 40.57 321 P **P 22 11 53.9 +1.2**
baz=126
W59A Clinton 40.62 313 P **P 22 11 54.1 +0.8**
baz=118,SNR=11
S60A Water View 40.66 317 P **P 22 11 54.2 +0.7**
baz=122,SNR=6.8
O61A Allentown 40.67 322 P **P 22 11 54.2 +0.6**
baz=127
U59A Littleton 40.73 315 PFAKE 22 12 10.0 +16
U59A LR LR
comp=Z,55µm,22.0s
U59A Littleton 40.73 315 P **P 22 11 54.8 +0.6**
baz=120,SNR=64
CPNY Central Park 40.74 323 PFAKE 22 12 10.0 +16
CPNY LR LR
comp=Z,35µm,20.0s
NNA Nana 40.74 237 PFAKE 22 12 10.0 +15
NNA LR LR
comp=Z,54µm,21.0s
NNA Nana 40.74 237 *i* P **P 22 11 55.5 +0.9**
V59A Middlesex 40.76 314 P **P 22 11 55.0 +0.6**
baz=119,SNR=50
QUA2 Belchertown 40.78 326 PFAKE 22 12 10.0 +16
QUA2 LR LR
comp=Z,38µm,19.0s
957A Wimauma 40.79 300 PFAKE 22 12 10.0 +15
957A LR LR
comp=Z,28µm,21.0s
957A Wimauma 40.79 300 P **P 22 11 55.0 +0.2**
baz=107
Z58A St. Stephen 40.83 309 P **P 22 11 55.6 +0.6**

baz=115,SNR=30
Q60A Greensboro 40.84 319 P **P 22 11 55.9 +0.9**
baz=125
PAL Palisades 40.85 323 PFAKE 22 12 10.0 +15
PAL LR LR
comp=Z,30µm,20.0s
PAL Palisades 40.85 323 P **P 22 11 55.6 +0.5**
baz=129,SNR=32
158A Hollywood 40.87 308 P **P 22 11 55.5 +0.1**
baz=114
T59A Double "B" Far 40.88 316 PFAKE 22 12 10.0 +15
T59A LR LR
comp=Z,40µm,20.0s
T59A Double "B" Far 40.88 316 P **P 22 11 56.0 +0.6**
baz=121,SNR=43
LIS Lisbon 40.90 41 *eP* **P 22 11 55.1 -0.5**
LIS *e*S **S 22 18 07.1 +0.7**
LIS AMS AMS 22 24 33.8
comp=Z,27µm,22.3s
LIS Lisbon 40.90 41 *eP* **P 22 11 56.9 +1.4**
comp=Z,2µm,2.0s
LIS Lisbon 40.90 41 *eP* **P 22 11 55.0 -0.5**
LIS *e*S **S 22 18 07.1 +0.7**
R60A Leonardtown, M 40.91 318 P **P 22 11 56.1 +0.5**
baz=123
PBDV Barranco-do-Ve 40.92 44 *eP* **P 22 11 56.1 +0.3**
comp=Z,670nm,2.3s
PBDV Barranco-do-Ve 40.92 44 *e*PP PP 22 13 31.8 +1.6
PBDV *e*S **S 22 18 08.7 +1.9**
PMAFR Mafra 40.95 41 *eP* **P 22 11 55.9 -0.1**
comp=Z,2µm,1.8s
PMAFR Mafra 40.95 41 *e*PP PP 22 13 29.4 -1.1
PMAFR *e*S **S 22 18 08.5 +1.3**
M61A Granite Spring 40.95 324 P **P 22 11 56.6 +0.6**
baz=129,SNR=27
857A Zephyrhills 40.96 301 P **P 22 11 57.2 +1.1**
baz=107,SNR=15
Y58A Scranton 40.96 310 PFAKE 22 12 10.0 +14
Y58A LR LR
comp=Z,46µm,22.0s
Y58A Scranton 40.96 310 P **P 22 11 57.0 +0.9**
baz=116,SNR=9.3
PNCL Nicolau / Gran 40.98 42 *eP* **P 22 11 56.3 +0.1**
comp=Z,920nm,1.8s
PNCL Nicolau / Gran 40.98 42 *e*PP PP 22 13 29.5 -1.3
PNCL *e*S **S 22 18 10.3 +2.7**
WVL Waterville 40.98 330 PFAKE 22 12 10.0 +14
WVL LR LR
comp=Z,36µm,20.0s
X58A Rowland 41.00 311 PFAKE 22 12 10.0 +14
X58A LR LR
comp=Z,39µm,20.0s
X58A Rowland 41.00 311 P **P 22 11 57.0 +0.6**
baz=116,SNR=7.5
NHSC New Hope 41.01 309 PFAKE 22 12 10.0 +13
NHSC LR LR
comp=Z,29µm,21.0s
NHSC New Hope 41.01 309 P **P 22 11 57.4 +0.8**
baz=114,SNR=20
AZAP Zapla 41.02 212 *eP* **P 22 11 58.2 +1.3**
757A Oxford 41.02 302 P **P 22 11 57.3 +0.6**
baz=108,SNR=12
MESJ Messejana 41.04 43 *eP* **P 22 11 56.1 -0.6**
MESJ *e*S **S 22 18 09.2 +0.7**
MESJ AMS AMS 22 24 38.5
comp=Z,31µm,22.6s
MESJ Messejana 41.04 43 *eP* **P 22 11 56.1 -0.6**
MESJ *e*S **S 22 18 09.2 +0.7**
BRNJ Basking Ridge 41.04 322 PFAKE 22 12 10.0 +13
BRNJ LR LR
comp=Z,38µm,21.0s
PCVE Castro Verde 41.05 43 *eP* **P 22 11 56.5 -0.3**
comp=Z,593nm,2.4s
PCVE *e*S **S 22 18 10.6 +1.9**
KSCT Kent School, K 41.06 324 PFAKE 22 12 10.0 +13
KSCT LR LR
comp=Z,36µm,21.0s
657A Interlachen 41.06 303 P **P 22 11 57.6 +0.6**
baz=109,SNR=24
557A Orange Park 41.09 304 P **P 22 11 57.7 +0.4**
baz=110,SNR=12
PB01 IPOC Station P 41.10 220 PFAKE 22 12 10.0 +13
PB01 LR LR
comp=Z,40µm,21.0s
S59A Mechanicsville 41.12 317 P **P 22 11 57.3 0.0**
baz=122,SNR=14
W58A Raeford 41.13 312 P **P 22 11 58.3 +0.8**
baz=117,SNR=45
PVAQ Vaqueiros 41.15 44 *eP* **P 22 11 57.5 -0.1**
comp=Z,569nm,2.0s
PVAQ Vaqueiros 41.15 44 *e*PP PP 22 13 31.5 -1.2
PVAQ *e*S **S 22 18 12.9 +2.7**
PVAQ *e*LQ LQ 22 21 18.4
PVAQ *e*LR LR 22 22 51.4
comp=Z,47µm,22.0s
PVAQ Vaqueiros 41.15 44 PFAKE 22 12 10.0 +12
PVAQ LR LR
comp=Z,57µm,22.0s
457A Yulee 41.16 305 P **P 22 11 58.4 +0.6**
baz=110
P60A Greenville 41.17 320 P **P 22 11 58.2 +0.4**
baz=126,SNR=18
IFR Ifrane 41.20 51 *eP* **P 22 11 58.0 -0.3**
IFR *i* S **S 22 18 08.2 -3.3**
FFD Franklin Falls 41.21 328 PFAKE 22 12 10.0 +12
FFD LR LR
comp=Z,38µm,22.0s
257A Skidaway Islan 41.22 307 PFAKE 22 12 10.0 +12
257A LR LR
comp=Z,31µm,20.0s
257A Skidaway Islan 41.22 307 P **P 22 11 59.1 +0.8**
baz=112,SNR=6.2
R59A King George, V 41.23 317 P **P 22 11 59.1 +0.8**
baz=122,SNR=18
U58A Oxford 41.29 314 P **P 22 11 59.1 +0.4**
baz=119,SNR=58
Q59A Harwood 41.29 319 P **P 22 11 59.6 +0.9**
baz=124
ODNJ Ogdensburg 41.31 323 PFAKE 22 12 10.0 +11
ODNJ LR LR
comp=Z,36µm,19.0s
PKME Peaks-Kenny Pk 41.32 331 PFAKE 22 12 10.0 +11
PKME LR LR
comp=Z,24µm,21.0s
PKME Peaks-Kenny Pk 41.32 331 P **P 22 11 59.4 +0.5**
baz=138,SNR=36
O60A Telford 41.33 321 P **P 22 11 60.0 +1.0**
baz=126,SNR=96
PBEJ Beja 41.37 43 *eP* **P 22 12 00.4 +0.9**
comp=Z,1µm,1.8s
PBEJ Beja 41.37 43 *e*PP PP 22 13 36.8 +1.7
357A Townsend 41.38 306 P **P 22 12 00.0 +0.4**
baz=111
CBN Corbin Frederi 41.40 317 PFAKE 22 12 10.0 +10
CBN LR LR
comp=Z,31µm,20.0s
CBN Corbin Frederi 41.40 317 P **P 22 11 60.0 +0.3**
baz=122,SNR=12
V58A Windy Hill, Pi 41.40 313 P **P 22 12 00.3 +0.6**
baz=118,SNR=49
157A Early Branch 41.47 308 P **P 22 12 01.2 +0.8**
baz=113,SNR=34
LUPA Lehigh Univers 41.48 322 PFAKE 22 12 10.0 +10
LUPA LR LR
comp=Z,4µm,22.0s
BATG Bathurst New B 41.48 336 PFAKE 22 12 10.0 +10
BATG LR LR
comp=Z,34µm,21.0s
Z57A Bowman 41.49 309 P **P 22 12 01.1 +0.6**
baz=114,SNR=36
PB09 IPOC Station P 41.50 219 *eP* **P 22 12 01.3 +0.4**
PB09 IPOC Station P 41.50 219 ⇑ *iP* **P 22 12 01.1 +0.2**
X57A Johnson Farm, 41.52 311 P **P 22 12 01.3 +0.6**
baz=116,SNR=8.2
EVO Evora 41.55 42 *eP* **P 22 12 00.6 -0.3**
comp=Z,2µm,1.8s
EVO Evora 41.55 42 *e*PP PP 22 13 32.5 -4.5
EVO Evora 41.55 42 ⇑ *eP* **P 22 12 00.8 0.0**
EVO *i* S **S 22 18 16.2 +0.1**
656A Willston 41.55 302 PFAKE 22 12 10.0 +9.0
656A LR LR
comp=Z,27µm,22.0s
656A Willston 41.55 302 P **P 22 12 01.7 +0.7**
baz=108,SNR=19
T58A Grand View Acr 41.55 315 P **P 22 12 01.2 +0.3**
baz=120,SNR=74

S58A	**Poland Farm, P**	**41.55 316**	PFAKE			22 12 10.0 +9.1
S58A			LR	LR		
	comp=Z,41µm,20.0s					
S58A	**Poland Farm, P**	**41.55 316**	P	**P**		**22 12 01.4 +0.5**
	baz=121,SNR=37					
Y57A	**Sumter**	**41.55 310**	PFAKE			22 12 10.0 +9.1
Y57A			LR	LR		
	comp=Z,40µm,21.0s					
Y57A	**Sumter**	**41.55 310**	P	**P**		**22 12 01.7 +0.7**
	baz=115,SNR=8.6					
JTS	**Las Juntas de**	**41.55 273**	*e*P	**P**		**22 12 02.1 +0.8**
	comp=Z,89nm,1.1s					
JTS	**Las Juntas de**	**41.55 273**	*c i*P	**P**		**22 12 00.7 -0.6**
JTS			pmax	pmax		
	comp=Z,84nm,1.2s					
PB02	**IPOC Station P**	**41.56 220**	*e*P	**P**		**22 12 00.6 -0.7**
PB02	**IPOC Station P**	**41.56 220** ⇑	*i*P	**P**		**22 12 01.3 +0.1**
P59A	**Jarrettsville**	**41.56 320**	P	**P**		**22 12 01.8 +0.8**
	baz=125,SNR=60					
456A	**Hilliard**	**41.57 305**	PFAKE			22 12 10.0 +8.9
456A			LR	LR		
	comp=Z,29µm,20.0s					
456A	**Hilliard**	**41.57 305**	P	**P**		**22 12 02.2 +1.1**
	baz=110,SNR=16					
R58B	**Mineral**	**41.61 317**	PFAKE			22 12 10.0 +8.6
R58B			LR	LR		
	comp=Z,37µm,20.0s					
R58B	**Mineral**	**41.61 317**	P	**P**		**22 12 02.1 +0.6**
	baz=121,SNR=121					
556A	**Lake Butler**	**41.64 303**	P	**P**		**22 12 02.5 +0.8**
	baz=109,SNR=44					
SLA	**San Lorenzo**	**41.66 212**	*e*P	**P**		**22 12 03.5 +1.4**
SLA	**San Lorenzo**	**41.66 212** ⇑	*i*P	**P**		**22 12 02.9 +0.8**
PMTG	**Montargil**	**41.70 41**	*e*P	**P**		**22 12 01.7 -0.4**
	comp=Z,1µm,1.7s					
PMTG	**Montargil**	**41.70 41**	*e*PP	PP		22 13 42.9 +4.3
PMTG			*e*S	**S**		**22 18 19.5 +1.2**
HNH	**Hanover**	**41.71 327**	PFAKE			22 12 10.0 +7.9
HNH			LR	LR		
	comp=Z,31µm,20.0s					
SDMD	**Soldier's Deli**	**41.71 319**	PFAKE			22 12 10.0 +7.8
SDMD			LR	LR		
	comp=Z,25µm,22.0s					
MVL	**Millersville**	**41.73 320**	PFAKE			22 12 10.0 +7.7
MVL			LR	LR		
	comp=Z,37µm,20.0s					
SFS	**San Fernando**	**41.73 46**	PFAKE			22 12 10.0 +7.6
SFS			LR	LR		
	comp=Z,8µm,20.0s					
SFS	**San Fernando**	**41.73 46** ⇑	*e*P	**P**		**22 12 01.4 -0.9**
SFS			*i* S	**S**		**22 18 25.0 +6.2**
W57A	**Gilead**	**41.75 312**	PFAKE			22 12 10.0 +7.5
W57A			LR	LR		
	comp=Z,42µm,20.0s					
W57A	**Gilead**	**41.75 312**	P	**P**		**22 12 03.1 +0.5**
	baz=116,SNR=42					
CNIL	**Conil**	**41.79 46**	*e*P	**P**		**22 12 04.3 +1.4**
TRY	**Troy**	**41.81 325**	PFAKE			22 12 20.0 +17
TRY			LR	LR		
	comp=Z,39µm,20.0s					
PQI	**Presque Isle**	**41.81 334**	PFAKE			22 12 20.0 +17
PQI			LR	LR		
	comp=Z,36µm,20.0s					
156A	**Sylvania**	**41.85 308**	P	**P**		**22 12 04.1 +0.7**
	baz=112,SNR=26					
PB07	**IPOC Station P**	**41.85 220**	*e*P	**P**		**22 12 03.1 -0.6**
PB07	**IPOC Station P**	**41.85 220** ⇑	*i*P	**P**		**22 12 02.7 -1.1**
356A	**Blackshear**	**41.86 305**	P	**P**		**22 12 04.2 +0.7**
	baz=111,SNR=9.2					
U57A	**Blanch**	**41.86 314**	P	**P**		**22 12 04.0 +0.6**
	baz=118,SNR=114					
BIRD	**Birdtown, Kers**	**41.87 311**	PFAKE			22 12 20.0 +16
BIRD			LR	LR		
	comp=Z,45µm,22.0s					
R58A	**Rapidan**	**41.87 317**	P	**P**		**22 12 04.0 +0.4**
	baz=122,SNR=85					
PTOM	**Tomar**	**41.88 41**	*e*P	**P**		**22 12 03.3 -0.3**
	comp=Z,2µm,1.8s					
PTOM	**Tomar**	**41.88 41**	*e*PP	PP		22 13 40.4 -0.2
LBNH	**Lisbon**	**41.89 328**	PFAKE			22 12 20.0 +16
LBNH			LR	LR		
	comp=Z,41µm,22.0s					
LBNH	**Lisbon**	**41.89 328**	P	**P**		**22 12 04.7 +1.1**
	baz=134,SNR=37					
256A	**Glennville**	**41.91 306**	P	**P**		**22 12 04.7 +0.8**
	baz=112,SNR=14					
N59A	**State Game Lan**	**41.91 322**	PFAKE			22 12 20.0 +16
N59A			LR	LR		
	comp=Z,50µm,22.0s					
N59A	**State Game Lan**	**41.91 322**	P	**P**		**22 12 04.8 +0.9**
	baz=126,SNR=94					
LVC	**Limon Verde**	**41.91 218**	*e*P	**P**		**22 12 04.4 0.0**
	comp=Z,295nm,1.1s					
LVC			LR	LR		
	comp=Z,46µm,21.0s					
LVC	**Limon Verde**	**41.91 218**	*e*P	**P**		**22 12 03.9 -0.6**
LVC	**Limon Verde**	**41.91 218**	*e*P	**P**		**22 12 04.4 0.0**
LVC			pmax	pmax		
	comp=Z,295nm,1.1s					
LVC			MLR	MLR		
	comp=Z,46µm,21.0s					
LVC	**Limon Verde**	**41.91 218**	*e*P	**P**		**22 12 04.5 0.0**
LVC			*e*S	**S**		**22 18 30.8 +8.3**
LVC	**Limon Verde**	**41.91 218**	*e*P	**P**		**22 12 04.9 +0.5**
V57A	**Coltrane Farms**	**41.92 313**	P	**P**		**22 12 04.4 +0.4**
	baz=118,SNR=50					
PB03	**IPOC Station P**	**42.01 219**	*e*P	**P**		**22 12 05.0 0.0**
PB03	**IPOC Station P**	**42.01 219** ⇑	*i*P	**P**		**22 12 04.3 -0.7**
Z56A	**Williston**	**42.01 309**	PFAKE			22 12 20.0 +15
Z56A			LR	LR		
	comp=Z,28µm,19.0s					
Z56A	**Williston**	**42.01 309**	P	**P**		**22 12 05.8 +1.0**
	baz=113					
CEU	**Ceuta**	**42.06 47** ⇑	*e*P	**P**		**22 12 06.0 +0.9**
CEU			*i* S	**S**		**22 18 28.2 +4.5**
PCAS	**Casmilo, Conde**	**42.07 40**	*e*P	**P**		**22 12 04.7 -0.4**
	comp=Z,821nm,1.6s					
PCAS	**Casmilo, Conde**	**42.07 40**	*e*PP	PP		22 13 41.3 -1.3
PCAS			*e*S	**S**		**22 18 27.2 +3.4**
T57A	**Hurt**	**42.07 315**	PFAKE			22 12 20.0 +15
T57A			LR	LR		
	comp=Z,48µm,22.0s					
T57A	**Hurt**	**42.07 315**	P	**P**		**22 12 05.5 +0.3**
	baz=119,SNR=38					
GIBL	**Gibalbin**	**42.08 46**	*e*P	**P**		**22 12 07.5 +2.2**
555A	**McAlpin**	**42.14 303**	PFAKE			22 12 20.0 +14
555A			LR	LR		
	comp=Z,27µm,18.0s					
555A	**McAlpin**	**42.14 303**	P	**P**		**22 12 06.8 +1.0**
	baz=109,SNR=26					
Y56A	**Pelion**	**42.15 309**	P	**P**		**22 12 06.5 +0.7**
	baz=114					
W56A	**Indian Trail**	**42.17 311**	P	**P**		**22 12 06.5 +0.5**
	baz=116,SNR=29					
655A	**Horseshoe Beac**	**42.19 302**	P	**P**		**22 12 07.3 +1.1**
	baz=108,SNR=20					
COI	**Coimbra**	**42.21 40**	*e*P	**P**		**22 12 06.5 +0.2**
	comp=Z,865nm,1.9s					
COI	**Coimbra**	**42.21 40**	*e*PP	PP		22 13 42.8 -1.3
COI			*e*S	**S**		**22 18 29.0 +3.2**
COI	**Coimbra**	**42.21 40**	PFAKE			22 12 20.0 +14
COI			LR	LR		
	comp=Z,36µm,20.0s					
R57A	**Stanardsville**	**42.22 317**	P	**P**		**22 12 07.1 +0.7**
	baz=121,SNR=97					
X56A	**White Oak**	**42.23 310**	P	**P**		**22 12 07.3 +0.8**
	baz=115,SNR=51					
ACCN	**Adirondack Com**	**42.24 326**	PFAKE			22 12 20.0 +14
ACCN			LR	LR		
	comp=Z,42µm,20.0s					
S57A	**Dark Hollow, R**	**42.24 316**	PFAKE			22 12 20.0 +13
S57A			LR	LR		
	comp=Z,43µm,20.0s					
S57A	**Dark Hollow, R**	**42.24 316**	P	**P**		**22 12 07.5 +1.0**
	baz=120,SNR=192					
KSPA	**Keystone Colle**	**42.29 322**	PFAKE			22 12 20.0 +13
KSPA			LR	LR		
	comp=Z,32µm,20.0s					
JSC	**Jenkinsville**	**42.32 310**	PFAKE			22 12 20.0 +13
JSC			LR	LR		
	comp=Z,33µm,20.0s					
255A	**Hazlehurst**	**42.35 306**	PFAKE			22 12 20.0 +12
255A			LR	LR		
	comp=Z,31µm,20.0s					
255A	**Hazlehurst**	**42.35 306**	P	**P**		**22 12 08.5 +1.0**
	baz=111,SNR=12					
VT1	**Waterbury**	**42.38 328**	PFAKE			22 12 20.0 +12
VT1			LR	LR		
	comp=Z,34µm,19.0s					
PB06	**IPOC Station P**	**42.38 218**	*e*P	**P**		**22 12 07.5 -0.6**
PB06	**IPOC Station P**	**42.38 218** ⇑	*i*P	**P**		**22 12 08.2 +0.2**
455A	**Stateville**	**42.39 304**	P	**P**		**22 12 08.6 +0.8**
	baz=109,SNR=30					
V56A	**Mocksville**	**42.41 312**	PFAKE			22 12 20.0 +12
V56A			LR	LR		
	comp=Z,42µm,20.0s					
V56A	**Mocksville**	**42.41 312**	P	**P**		**22 12 08.4 +0.5**
	baz=117,SNR=71					
PMRV	**Marv??o**	**42.44 42**	*e*P	**P**		**22 12 07.6 -0.5**
	comp=Z,2µm,1.8s					
PMRV	**Marv??o**	**42.44 42**	*e*PP	PP		22 13 44.9 -1.7
PMRV			*e*S	**S**		**22 18 29.6 +0.4**
PMRV			*e*LQ	LQ		22 21 54.9
PMRV			*e*LR	LR		22 23 21.9
	comp=Z,24µm,22.0s					
355A	**Pearson**	**42.45 305**	P	**P**		**22 12 09.6 +1.3**
	baz=110,SNR=33					
REAL	**Reales**	**42.45 47**	*e*P	**P**		**22 12 09.3 +0.8**
PB04	**IPOC Station P**	**42.46 219**	PFAKE			22 12 20.0 +11
PB04			LR	LR		
	comp=Z,28µm,20.0s					
PB04	**IPOC Station P**	**42.46 219**	*e*P	**P**		**22 12 08.6 -0.1**
LIJA	**Lijar**	**42.51 46**	*e*P	**P**		**22 12 09.0 +0.1**
P57A	**Homestead Farm**	**42.51 319**	P	**P**		**22 12 09.5 +0.8**
	baz=123,SNR=67					
PVLZ	**Peæn de**	**42.52 49** ⇑	*e*P	**P**		**22 12 08.1 -0.7**
PVLZ			*i* S	**S**		**22 18 31.1 +0.6**
Q57A	**Strasburg**	**42.53 318**	P	**P**		**22 12 09.8 +0.8**
	baz=122,SNR=37					
Z55A	**Blythe**	**42.56 308**	P	**P**		**22 12 10.0 +0.7**
	baz=112,SNR=12					
U56A	**King**	**42.57 313**	P	**P**		**22 12 10.2 +0.9**
	baz=117,SNR=27					
155A	**Kite**	**42.60 307**	P	**P**		**22 12 10.6 +1.1**
	baz=112,SNR=122					
PCBR	**Castelo Branco**	**42.60 41**	*e*P	**P**		**22 12 09.2 -0.3**
	comp=Z,1µm,2.0s					
PCBR	**Castelo Branco**	**42.60 41**	*e*PP	PP		22 13 47.9 -0.5
S56A	**Natural Bridge**	**42.62 315**	P	**P**		**22 12 10.7 +1.0**
	baz=119					
PTO	**Porto**	**42.63 39**	*e*P	**P**		**22 12 09.5 -0.1**
	comp=Z,700nm,1.9s					
Y55A	**Saluda**	**42.63 309**	P	**P**		**22 12 10.5 +0.8**
	baz=114,SNR=79					
T56A	**Rocky Mt**	**42.63 314**	P	**P**		**22 12 10.7 +0.9**
	baz=118,SNR=39					
O57A	**Amberson**	**42.66 320**	P	**P**		**22 12 10.7 +0.7**
	baz=124,SNR=112					
X55A	**Gracelyn & Ava**	**42.67 310**	P	**P**		**22 12 11.0 +0.9**
	baz=114,SNR=33					
PB15	**IPOC Station P**	**42.70 218**	*e*P	**P**		**22 12 10.1 -0.6**
554A	**Perry**	**42.72 303**	P	**P**		**22 12 11.7 +1.2**
	baz=108,SNR=15					
KMSC	**Kings Mountain**	**42.73 311**	PFAKE			22 12 20.0 +9.4
KMSC			LR	LR		
	comp=Z,45µm,21.0s					
KMSC	**Kings Mountain**	**42.73 311**	P	**P**		**22 12 11.4 +0.8**
	baz=115,SNR=55					
BINY	**Binghamton**	**42.81 323**	PFAKE			22 12 20.0 +8.9
BINY			LR	LR		
	comp=Z,37µm,22.0s					
BINY	**Binghamton**	**42.81 323**	P	**P**		**22 12 11.9 +0.8**
	baz=127,SNR=84					
PVIS	**Viseu**	**42.83 40**	*e*P	**P**		**22 12 11.0 -0.3**
	comp=Z,1µm,1.9s					
PVIS	**Viseu**	**42.83 40**	*e*PP	PP		22 13 54.9 +4.1
MTE	**Manteigas**	**42.87 40**	*e*P	**P**		**22 12 11.8 +0.1**
	comp=Z,1µm,1.8s					
MTE	**Manteigas**	**42.87 40**	*e*PP	PP		22 13 49.7 -1.6
MTE			*e*S	**S**		**22 18 35.9 +0.2**
MTE			*e*LQ	LQ		22 21 59.5
MTE			*e*LR	LR		22 23 31.1
	comp=Z,36µm,20.0s					
MTE	**Manteigas**	**42.87 40**	PFAKE			22 12 20.0 +8.3
MTE			LR	LR		
	comp=Z,39µm,22.0s					
454A	**Quitman**	**42.87 304**	P	**P**		**22 12 13.0 +1.2**
	baz=109,SNR=37					
PB05	**IPOC Station P**	**42.88 219**	*e*P	**P**		**22 12 13.0 +0.9**
PB05	**IPOC Station P**	**42.88 219** ⇓	*i*P	**P**		**22 12 10.9 -1.2**
N57A	**Milroy**	**42.92 320**	P	**P**		**22 12 12.5 +0.5**
	baz=124,SNR=76					
NCB	**Newcomb**	**42.93 326**	PFAKE			22 12 20.0 +7.9
NCB			LR	LR		
	comp=Z,30µm,22.0s					
PAULI	**Pauline**	**42.95 310**	PFAKE			22 12 20.0 +7.6
PAULI			LR	LR		
	comp=Z,35µm,20.0s					
254A	**Abbeville**	**43.01 306**	P	**P**		**22 12 13.9 +1.1**
	baz=110,SNR=28					
FSA	**Cafayete**	**43.04 211**	*e*P	**P**		**22 12 12.7 -0.6**
Q56A	**Snyder Ridge,**	**43.05 317**	P	**P**		**22 12 14.3 +1.2**
	baz=121,SNR=76					
HODGE	**Hodges**	**43.05 309**	PFAKE			22 12 30.0 +17
HODGE			LR	LR		
	comp=Z,33µm,21.0s					
P56A	**Dayton Farm, R**	**43.06 318**	P	**P**		**22 12 14.0 +0.8**
	baz=122,SNR=59					
SSPA	**Standing Stone**	**43.06 320**	*e*P	**P**		**22 12 13.8 +0.6**
	comp=Z,1µm,1.9s					
SSPA			LR	LR		
	comp=Z,43µm,22.0s					
SSPA	**Standing Stone**	**43.06 320**	P	**P**		**22 12 13.8 +0.6**
	baz=124					
TIGA	**Tifton**	**43.08 305**	PFAKE			22 12 30.0 +17
TIGA			LR	LR		
	comp=Z,38µm,22.0s					
TIGA	**Tifton**	**43.08 305**	P	**P**		**22 12 14.6 +1.2**
	baz=110,SNR=19					
154A	**Montrose**	**43.10 307**	PFAKE			22 12 30.0 +16
154A			LR	LR		
	comp=Z,33µm,20.0s					
154A	**Montrose**	**43.10 307**	P	**P**		**22 12 14.7 +1.2**
	baz=111,SNR=58					
U55A	**TA2, Sparta**	**43.12 313**	P	**P**		**22 12 14.7 +0.9**
	baz=117,SNR=67					
Z54A	**Sparta**	**43.12 308**	P	**P**		**22 12 14.8 +1.1**
	baz=112					
EMAL	**Malaga-Limoner**	**43.13 47** ⇑	*e*P	**P**		**22 12 14.1 +0.3**
EMAL			*i* S	**S**		**22 18 39.5 0.0**
FRNY	**Flat Rock**	**43.16 328**	PFAKE			22 12 30.0 +16
FRNY			LR	LR		
	comp=Z,32µm,20.0s					
T55A	**Pulaski**	**43.21 314**	P	**P**		**22 12 15.5 +1.0**
	baz=118,SNR=32					
Y54A	**Tignall**	**43.23 309**	P	**P**		**22 12 15.5 +0.9**
	baz=113,SNR=95					
POLO	**Lamas de Olo**	**43.26 39**	*e*P	**P**		**22 12 14.6 -0.3**
	comp=Z,542nm,2.0s					
POLO	**Lamas de Olo**	**43.26 39**	*e*PP	PP		22 13 53.5 -2.1
POLO			*e*S	**S**		**22 18 43.8 +2.3**
X54A	**Belton**	**43.27 310**	P	**P**		**22 12 15.9 +1.0**
	baz=114,SNR=75					
AHML	**Horco Molle**	**43.27 210**	*e*P	**P**		**22 12 15.2 +0.1**
O56A	**Blue Knob Stat**	**43.29 319**	PFAKE			22 12 30.0 +15
O56A			LR	LR		
	comp=Z,54µm,22.0s					
O56A	**Blue Knob Stat**	**43.29 319**	P	**P**		**22 12 15.8 +0.7**
	baz=123,SNR=130					
PCAB	**Cabril**	**43.31 38**	*e*P	**P**		**22 12 15.1 -0.1**
	comp=Z,910nm,2.0s					
PCAB	**Cabril**	**43.31 38**	*e*PP	PP		22 13 53.6 -2.4
PGAV	**Gavieira, Arco**	**43.31 38**	*e*P	**P**		**22 12 15.1 -0.2**
	comp=Z,1µm,1.8s					
PGAV	**Gavieira, Arco**	**43.31 38**	*e*PP	PP		22 13 52.9 -3.2
PGAV			*e*S	**S**		**22 18 42.0 -0.2**
PGAV			*e*LQ	LQ		22 22 04.2
PGAV			*e*LR	LR		22 23 18.0
	comp=Z,28µm,22.0s					
S55A	**Lewisburg**	**43.32 315**	P	**P**		**22 12 16.3 +1.0**
	baz=118,SNR=69					
W54A	**Cherokee Point**	**43.34 311**	P	**P**		**22 12 16.6 +1.1**
	baz=114,SNR=63					
553A	**Crawfordville**	**43.37 303**	P	**P**		**22 12 17.3 +1.5**
	baz=108,SNR=10					
TOC5	**Torodi Ar. Sit**	**43.42 82**	PFAKE			22 12 30.0 +14
TOC5			LR	LR		
	comp=Z,46µm,21.0s					
TOC7	**Torodi Ar. Sit**	**43.42 82**	PFAKE			22 12 30.0 +14
TOC7			LR	LR		
	comp=Z,43µm,21.0s					
TOB5	**Torodi Ar. Sit**	**43.42 82**	PFAKE			22 12 30.0 +14
TOB5			LR	LR		
	comp=Z,44µm,21.0s					
TOB4	**Torodi Ar. Sit**	**43.42 82**	PFAKE			22 12 30.0 +14
TOB4			LR	LR		
	comp=Z,40µm,21.0s					
TOA1	**Torodi Ar. Sit**	**43.43 82**	PFAKE			22 12 30.0 +13
TOA1			LR	LR		
	comp=Z,41µm,21.0s					
TOB1	**Torodi Ar. Sit**	**43.43 82**	PFAKE			22 12 30.0 +13
TOB1			LR	LR		
	comp=Z,300nm,21.0s					
TOA0	**Torodi Ar. Sit**	**43.44 82**	*e*P	**P**		**22 12 15.1 -1.5**
	comp=Z,899nm,1.0s					
TOA0			LR	LR		
	comp=Z,41µm,21.0s					
TORD	**Torodi Ar. Bea**	**43.44 82**	P	**P**		**22 12 13.9 -2.7**
	comp=Z,575nm,1.1s,baz=226,slow=8.0,SNR=550					
TORD			S	**S**		**22 18 40.3 -4.2**
	comp=Z,17nm,1.2s,baz=253,slow=25,SNR=2.3					
TORD			LR	LR		22 27 55.5
	comp=Z,43µm,21.2s,baz=305,slow=33					
TOA2	**Torodi Ar. Sit**	**43.44 82**	PFAKE			22 12 30.0 +13
TOA2			LR	LR		
	comp=Z,41µm,21.0s					
TOC4	**Torodi Ar. Sit**	**43.44 82**	PFAKE			22 12 30.0 +13
TOC4			LR	LR		
	comp=Z,40µm,21.0s					
TOC1	**Torodi Ar. Sit**	**43.44 82**	PFAKE			22 12 30.0 +13
TOC1			LR	LR		
	comp=Z,50µm,21.0s					
TOB3	**Torodi Ar. Sit**	**43.45 82**	PFAKE			22 12 30.0 +13
TOB3			LR	LR		
	comp=Z,40µm,21.0s					
TOB2	**Torodi Ar. Sit**	**43.45 82**	PFAKE			22 12 30.0 +13
TOB2			LR	LR		
	comp=Z,61µm,21.0s					
V54A	**Nebo**	**43.45 312**	P	**P**		**22 12 17.5 +1.0**
	baz=115,SNR=55					
TOC2	**Torodi Ar. Sit**	**43.46 82**	PFAKE			22 12 30.0 +13
TOC2			LR	LR		
	comp=Z,42µm,21.0s					
TOC3	**Torodi Ar. Sit**	**43.46 82**	PFAKE			22 12 30.0 +13
TOC3			LR	LR		
	comp=Z,40µm,20.0s					
N56A	**West Decatur**	**43.47 320**	P	**P**		**22 12 17.5 +0.9**
	baz=124,SNR=145					
453A	**Whigham**	**43.48 304**	*e*P	**P**		**22 12 17.4 +0.8**
	comp=Z,583nm,1.3s					
453A			LR	LR		
	comp=Z,29µm,20.0s					
453A	**Whigham**	**43.48 304**	P	**P**		**22 12 18.1 +1.4**
	baz=108,SNR=33					
LONY	**Lake Ozonia**	**43.55 327**	PFAKE			22 12 30.0 +13
LONY			LR	LR		
	comp=Z,31µm,22.0s					
LONY	**Lake Ozonia**	**43.55 327**	P	**P**		**22 12 17.6 +0.5**
	baz=131,SNR=28					
353A	**Camilla**	**43.55 305**	P	**P**		**22 12 18.5 +1.3**
	baz=109,SNR=66					
PB10	**IPOC Station P**	**43.59 219**	*e*P	**P**		**22 12 17.9 +0.3**
	comp=Z,273nm,1.1s					
PB10			LR	LR		
	comp=Z,33µm,21.0s					
PB10	**IPOC Station P**	**43.59 219**	*e*P	**P**		**22 12 17.3 -0.3**
MELI	**Melilla**	**43.59 49** ⇑	*e*P	**P**		**22 12 17.9 +0.5**
MELI			*i* S	**S**		**22 18 46.0 -0.2**
MVO	**Moncorvo**	**43.62 40**	*e*P	**P**		**22 12 17.8 0.0**
	comp=Z,960nm,2.0s					
MVO	**Moncorvo**	**43.62 40**	*e*PP	PP		22 13 57.4 -2.0
MVO			*e*S	**S**		**22 18 46.2 -0.5**
MVO			*e*LQ	LQ		22 22 05.3
MVO			*e*LR	LR		22 23 49.3
	comp=Z,33µm,20.0s					
Q55A	**Buckhannon**	**43.63 317**	P	**P**		**22 12 19.0 +1.1**
	baz=120,SNR=66					
TGUH	**Tegucigalpa,Un**	**43.65 279**	*e*P	**P**		**22 12 20.6 +2.2**
	comp=Z,526nm,1.0s					
TGUH			LR	LR		
	comp=Z,25µm,21.0s					
TGUH	**Tegucigalpa,Un**	**43.65 279**	*e*P	**P**		**22 12 19.9 +1.5**
GOGA	**Godfrey**	**43.67 308**	PFAKE			22 12 30.0 +12
GOGA			LR	LR		
	comp=Z,30µm,19.0s					
GOGA	**Godfrey**	**43.67 308**	P	**P**		**22 12 19.1 +0.9**
	baz=112,SNR=110					
153A	**Fort Valley**	**43.68 306**	P	**P**		**22 12 19.5 +1.2**
	baz=110,SNR=20					
U54A	**Nelsons Funny**	**43.68 313**	PFAKE			22 12 30.0 +12
U54A			LR	LR		
	comp=Z,41µm,21.0s					
U54A	**Nelsons Funny**	**43.68 313**	P	**P**		**22 12 19.3 +0.9**
	baz=116,SNR=39					
Z53A	**Monticello**	**43.70 307**	P	**P**		**22 12 19.4 +1.0**
	baz=111,SNR=62					
P55A	**Reedsville**	**43.72 317**	P	**P**		**22 12 19.5 +0.9**
	baz=121,SNR=78					
253A	**Americus**	**43.72 306**	*e*P	**P**		**22 12 19.9 +1.3**
	comp=Z,616nm,1.3s					
253A			LR	LR		
	comp=Z,31µm,20.0s					
253A	**Americus**	**43.72 306**	P	**P**		**22 12 19.7 +1.1**
	baz=110,SNR=7.8					
M56A	**Emporium**	**43.72 321**	P	**P**		**22 12 19.1 +0.6**
	baz=124,SNR=64					
O55A	**Ligonier**	**43.74 319**	P	**P**		**22 12 19.5 +0.9**
	baz=122,SNR=54					
T54A	**Tazewell**	**43.75 313**	P	**P**		**22 12 19.7 +0.8**
	baz=117,SNR=68					
MCWV	**Mont Chateau**	**43.80 318**	*e*P	**P**		**22 12 20.1 +0.9**
	comp=Z,91nm,0.9s					
MCWV			LR	LR		
	comp=Z,18µm,21.0s					
MCWV	**Mont Chateau**	**43.80 318**	P	**P**		**22 12 20.2 +0.9**
	baz=121,SNR=21					
N55A	**Marion Center**	**43.84 320**	PFAKE			22 12 30.0 +11
N55A			LR	LR		
	comp=Z,45µm,21.0s					
N55A	**Marion Center**	**43.84 320**	P	**P**		**22 12 20.2 +0.8**
	baz=123,SNR=88					
R54A	**Victor**	**43.85 315**	P	**P**		**22 12 20.8 +1.2**
	baz=118,SNR=69					
S54A	**Dingess, Beckl**	**43.90 314**	P	**P**		**22 12 20.9 +0.9**
	baz=118,SNR=53					
Y53A	**Monroe**	**43.92 308**	P	**P**		**22 12 21.4 +1.1**
	baz=112,SNR=121					
X53A	**Estanollee**	**43.95 309**	P	**P**		**22 12 21.8 +1.4**
	baz=113,SNR=97					
V53A	**Saluda**	**44.05 311**	PFAKE			22 12 30.0 +8.7
V53A			LR	LR		
	comp=Z,43µm,22.0s					
V53A	**Saluda**	**44.05 311**	P	**P**		**22 12 22.0 +0.7**
	baz=114,SNR=58					
552A	**Lynn Haven**	**44.06 302**	P	**P**		**22 12 22.6 +1.2**
	baz=107					
M55A	**Ridgway**	**44.08 320**	P	**P**		**22 12 21.8 +0.4**
	baz=124,SNR=48					
W53A	**Cullowhee**	**44.11 310**	P	**P**		**22 12 23.1 +1.2**
	baz=114,SNR=107					
Q54A	**Coxs Mills**	**44.13 316**	PFAKE			22 12 30.0 +8.2
Q54A			LR	LR		
	comp=Z,36µm,20.0s					
Q54A	**Coxs Mills**	**44.13 316**	P	**P**		**22 12 22.8 +0.9**
	baz=119,SNR=28					
PBRG	**Braganca**	**44.16 39**	*e*P	**P**		**22 12 21.8 -0.3**
	comp=Z,1µm,1.8s					
PBRG	**Braganca**	**44.16 39**	*e*PP	PP		22 14 04.2 -0.9
PBRG			*e*S	**S**		**22 18 57.1 +2.6**
U53A	**Fall Branch**	**44.16 312**	P	**P**		**22 12 23.0 +0.8**
	baz=115,

L55A	Hinsdale	44.27 322	P	P	22 12 23.7 +0.7
	baz=125,SNR=65				
Y52A	Lilburn	44.30 308	PFAKE		22 12 40.0 +17
Y52A			LR	LR	
	comp=Z,27μm,19.0s				
Y52A	Lilburn	44.30 308	P	P	22 12 24.5 +1.2
	baz=112,SNR=50				
PB14	IPOC Station P	44.33 217	eP	P	22 12 23.9 0.0
Z52A	Williamson	44.33 307	P	P	22 12 24.8 +1.3
	baz=110,SNR=66				
K55A	Perry	44.36 322	P	P	22 12 24.1 +0.4
	baz=126,SNR=56				
152A	Waverly Hall	44.39 306	PFAKE		22 12 40.0 +16
152A			LR	LR	
	comp=Z,27μm,19.0s				
152A	Waverly Hall	44.39 306	P	P	22 12 25.2 +1.2
	baz=110,SNR=90				
T53A	Wise	44.40 313	P	P	22 12 25.0 +0.9
	baz=116,SNR=67				
S53A	Williamson	44.42 314	P	P	22 12 24.9 +0.7
	baz=117,SNR=21				
O54A	Avella	44.42 318	P	P	22 12 24.9 +0.7
	baz=121,SNR=32				
X52A	Dahlonega	44.44 309	P	P	22 12 25.6 +1.1
	baz=112,SNR=70				
H56A	Elgin	44.45 326	P	P	22 12 24.9 +0.7
	baz=129,SNR=98				
PECO	Prince Edward	44.45 324	P	P	22 12 25.1 +0.8
	baz=128,SNR=99				
PAB	San Pablo	44.51 43	eP	P	22 12 24.5 -0.5
	comp=Z,212nm,1.1s				
PAB			LR	LR	
	comp=Z,35μm,21.0s				
PAB	San Pablo	44.51 43	eP	P	22 12 24.5 -0.5
PAB			pmax	pmax	
	comp=Z,212nm,1.1s				
PAB			MLR	MLR	
	comp=Z,35μm,21.0s				
LATQ	La Tuque	44.52 331	P	P	22 12 25.3 +0.5
	baz=135,SNR=57				
J55A	Hilton	44.53 323	PFAKE		22 12 40.0 +15
J55A			LR	LR	
	comp=Z,38μm,22.0s				
J55A	Hilton	44.53 323	P	P	22 12 25.4 +0.5
	baz=126,SNR=26				
Q53A	Leroy	44.54 316	P	P	22 12 25.9 +0.8
	baz=118,SNR=36				
451A	Vernon	44.58 303	PFAKE		22 12 40.0 +14
451A			LR	LR	
	comp=Z,22μm,19.0s				
451A	Vernon	44.58 303	P	P	22 12 26.9 +1.4
	baz=107,SNR=15				
N54A	Moraine State	44.58 319	PFAKE		22 12 40.0 +15
N54A			LR	LR	
	comp=Z,45μm,21.0s				
N54A	Moraine State	44.58 319	P	P	22 12 26.2 +0.8
	baz=122,SNR=106				
ORIO	Orleans, Innes	44.59 327	P	P	22 12 26.0 +0.6
	baz=131,SNR=23				
R53A	Hurricane	44.59 315	PFAKE		22 12 40.0 +14
R53A			LR	LR	
	comp=Z,46μm,21.0s				
R53A	Hurricane	44.59 315	P	P	22 12 26.2 +0.7
	baz=118,SNR=24				
ORHO	Orleans, Herit	44.60 327	P	P	22 12 25.3 -0.2
	baz=131				
W52A	Murphy	44.65 310	PFAKE		22 12 40.0 +14
W52A			LR	LR	
	comp=Z,31μm,21.0s				
W52A	Murphy	44.65 310	P	P	22 12 26.9 +0.8
	baz=113,SNR=21				
M54A	Oil Creek Stat	44.66 320	PFAKE		22 12 40.0 +14
M54A			LR	LR	
	comp=Z,47μm,21.0s				
M54A	Oil Creek Stat	44.66 320	P	P	22 12 26.7 +0.6
	baz=123,SNR=79				
K54A	Basiliko Farm,	44.67 322	P	P	22 12 26.7 +0.6
	baz=125,SNR=36				
V52A	Sevierville	44.70 311	PFAKE		22 12 40.0 +14
V52A			LR	LR	
	comp=Z,34μm,20.0s				
V52A	Sevierville	44.70 311	P	P	22 12 27.0 +0.6
	baz=114,SNR=46				
P53A	Whipple	44.75 317	PFAKE		22 12 40.0 +13
P53A			LR	LR	
	comp=Z,34μm,20.0s				
P53A	Whipple	44.75 317	P	P	22 12 27.6 +0.8
	baz=119,SNR=76				
251A	Midway	44.75 305	P	P	22 12 27.8 +0.9
	baz=109,SNR=50				
U52A	Thorn Hill	44.76 312	P	P	22 12 27.8 +0.9
	baz=114,SNR=65				
T52A	Hallie	44.78 313	PFAKE		22 12 40.0 +13
T52A			LR	LR	
	comp=Z,46μm,21.0s				
T52A	Hallie	44.78 313	P	P	22 12 27.9 +0.8
	baz=116,SNR=63				
151A	Opelika	44.83 306	P	P	22 12 28.5 +1.0
	baz=109,SNR=61				
ESDC	Sonseca Array	44.83 43	P	P	22 12 26.7 -0.8
	comp=Z,47nm,0.8s,baz=241,slow=8.2,SNR=153				
ESDC			S	S	22 18 54.1 -10
	comp=Z,0.1nm,0.3s,baz=295,slow=6.9,SNR=2.8				
ESDC			LR	LR	22 26 41.4
	comp=Z,30μm,21.9s,baz=235,slow=30				
ESLA	Sonseca Array	44.83 43	PFAKE		22 12 40.0 +12
ESLA			LR	LR	
	comp=Z,39μm,22.0s				
L54A	Sinclairville	44.84 321	P	P	22 12 28.1 +0.6
	baz=124,SNR=37				
TEIG	Tepich	44.84 288	eP	P	22 12 28.9 +1.1
	comp=Z,363nm,1.1s				
TEIG			LR	LR	
	comp=Z,21μm,20.0s				
MEDO	Medina	44.85 323	eP	P	22 12 28.4 +0.9
	comp=Z,141nm,0.7s				
MEDO			LR	LR	
	comp=Z,36μm,22.0s				
MEDO	Medina	44.85 323	P	P	22 12 27.9 +0.4
	baz=125,SNR=24				
CYA	Choya	44.88 209	eP	P	22 12 27.3 -0.6
H55A	Tweed	44.94 325	P	P	22 12 28.8 +0.6
	baz=128,SNR=66				
TZTN	Tazewell	44.95 312	PFAKE		22 12 40.0 +12
TZTN			LR	LR	
	comp=Z,44μm,22.0s				
TZTN	Tazewell	44.95 312	P	P	22 12 29.5 +1.0
	baz=114,SNR=89				
Z51A	Franklin	44.97 307	P	P	22 12 29.8 +1.1
	baz=110,SNR=24				
O53A	New Philadelph	45.01 318	P	P	22 12 29.5 +0.7
	baz=120,SNR=62				
I55A	Frankford	45.02 324	P	P	22 12 29.5 +0.7
	baz=127,SNR=60				
J54A	Appleton	45.02 323	PFAKE		22 12 40.0 +11
J54A			LR	LR	
	comp=Z,37μm,22.0s				
J54A	Appleton	45.02 323	P	P	22 12 29.1 +0.3
	baz=125,SNR=22				
ALLY	Alegheny Colle	45.04 320	PFAKE		22 12 40.0 +11
ALLY			LR	LR	
	comp=Z,53μm,21.0s				
N53A	Lisbon	45.05 318	PFAKE		22 12 40.0 +11
N53A			LR	LR	
	comp=Z,39μm,20.0s				
N53A	Lisbon	45.05 318	P	P	22 12 30.0 +0.9
	baz=121,SNR=50				
R52A	Catlettsburg	45.08 314	P	P	22 12 30.0 +0.6
	baz=117,SNR=38				
Y51A	Rockmart	45.09 308	P	P	22 12 30.4 +0.9
	baz=111,SNR=94				
S52A	Salyersville	45.09 313	P	P	22 12 30.2 +0.6
	baz=116,SNR=8.1				
Q52A	Bidwell	45.10 315	P	P	22 12 30.2 +0.6
	baz=118,SNR=65				
G55A	Calabogie	45.12 326	P	P	22 12 29.9 +0.3
	baz=129,SNR=63				
SHEL	Horse Pasture	45.13 125	eP	P	22 12 30.6 +0.5
	comp=Z,1μm,1.4s				
SHEL			LR	LR	
	comp=Z,24μm,19.0s				
SHEL	Horse Pasture	45.13 125	iP	P	22 12 31.0 +0.9
DELO	Deloro Mine	45.16 325	P	P	22 12 30.6 +0.6
	baz=127,SNR=84				
X51A	Calhoun	45.16 309	PFAKE		22 12 40.0 +10
X51A			LR	LR	
	comp=Z,33μm,22.0s				
X51A	Calhoun	45.16 309	P	P	22 12 31.3 +1.1
	baz=112,SNR=26				
PLVO	Plevna	45.18 326	PFAKE		22 12 40.0 +10
PLVO			LR	LR	
	comp=Z,43μm,22.0s				
PLVO	Plevna	45.18 326	P	P	22 12 30.3 +0.2
	baz=128,SNR=39				
OTSS	Djebel Tessala	45.19 50	P	P	22 12 39.0 +8.5
U51A	La Follette	45.23 311	P	P	22 12 31.4 +0.7
	baz=114,SNR=61				
CPCT	Cooper Cave	45.24 310	PFAKE		22 12 40.0 +9.3
CPCT			LR	LR	
	comp=Z,26μm,20.0s				
V51A	Loudon	45.25 310	PFAKE		22 12 40.0 +9.2
V51A			LR	LR	
	comp=Z,34μm,19.0s				
V51A	Loudon	45.25 310	P	P	22 12 31.6 +0.8
	baz=113,SNR=30				
WLVO	Wesleyville	45.26 324	P	P	22 12 31.2 +0.6
	baz=126,SNR=73				
M53A	WI Miller and	45.27 319	P	P	22 12 31.3 +0.4
	baz=122,SNR=43				
L53A	Girard	45.28 320	P	P	22 12 31.7 +0.7
	baz=122,SNR=66				
F55A	Otter Lake	45.28 327	P	P	22 12 31.6 +0.7
	baz=130,SNR=65				
350A	Dozier	45.30 304	P	P	22 12 32.6 +1.4
	baz=107,SNR=21				
STCO	Saint Catharin	45.30 322	P	P	22 12 31.6 +0.5
	baz=125,SNR=13				
W51A	Cleveland	45.31 309	P	P	22 12 32.3 +0.9
	baz=112,SNR=44				
450A	Crestview	45.32 303	P	P	22 12 32.9 +1.4
	baz=106,SNR=8.8				
P52A	Corning	45.33 316	P	P	22 12 31.9 +0.6
	baz=118,SNR=49				
O52A	Adamsville	45.36 317	PFAKE		22 12 40.0 +8.4
O52A			LR	LR	
	comp=Z,31μm,20.0s				
O52A	Adamsville	45.36 317	P	P	22 12 32.4 +0.8
	baz=119,SNR=109				
DRCO	St. Marys Ceme	45.41 323	P	P	22 12 32.5 +0.6
	baz=126,SNR=52				
150A	Eclectic	45.41 306	P	P	22 12 33.3 +1.2
	baz=109,SNR=93				
250A	Grady	45.41 305	PFAKE		22 12 40.0 +7.9
250A			LR	LR	
	comp=Z,34μm,22.0s				
250A	Grady	45.41 305	P	P	22 12 33.1 +1.0
	baz=108,SNR=25				
T51A	Gray	45.41 312	P	P	22 12 32.8 +0.7
	baz=114,SNR=49				
DRWO	Darlington Wes	45.42 323	P	P	22 12 32.2 +0.2
	baz=126,SNR=43				
S51A	Beattyville	45.44 313	PFAKE		22 12 40.0 +7.7
S51A			LR	LR	
	comp=Z,43μm,20.0s				
S51A	Beattyville	45.44 313	P	P	22 12 33.3 +0.9
	baz=115,SNR=71				
Z50A	Ashland	45.54 306	PFAKE		22 12 50.0 +17
Z50A			LR	LR	
	comp=Z,24μm,21.0s				
Z50A	Ashland	45.54 306	P	P	22 12 34.1 +0.9
	baz=109,SNR=71				
USTO	Oran	45.55 50	P	P	22 12 41.0 +7.9
N52A	McGinn's Farm,	45.60 318	P	P	22 12 34.4 +0.8
	baz=120,SNR=40				
Y50A	Piedmont	45.61 307	P	P	22 12 34.6 +1.0
	baz=110,SNR=29				
UCM	Universidad Co	45.62 43⇑	eP	P	22 12 34.0 +0.3
UCM			iS	S	22 19 16.5 +0.7
TORO	Toronto--Lesli	45.63 323	P	P	22 12 34.2 +0.5
	baz=125				
BANO	Bancroft	45.64 325	P	P	22 12 34.3 +0.5
	baz=128,SNR=66				
TYNO	Tyneside	45.66 322	P	P	22 12 34.4 +0.5
	baz=124,SNR=66				
PEMO	Pembroke	45.67 326	P	P	22 12 34.4 +0.4
	baz=129,SNR=53				
PKRO	Pickering	45.67 323	P	P	22 12 34.6 +0.5
	baz=125,SNR=16				
R51A	Hillsboro	45.72 314	P	P	22 12 35.4 +0.9
	baz=116,SNR=101				
X50B	Fort Payne	45.74 308	P	P	22 12 35.7 +1.0
	baz=111,SNR=84				
W50A	Signal Mountai	45.74 309	PFAKE		22 12 50.0 +15
W50A			LR	LR	
	comp=Z,31μm,21.0s				
W50A	Signal Mountai	45.74 309	P	P	22 12 35.9 +1.1
	baz=112,SNR=182				
M52A	Chesterland	45.76 319	PFAKE		22 12 50.0 +15
M52A			LR	LR	
	comp=Z,46μm,22.0s				
M52A	Chesterland	45.76 319	P	P	22 12 35.1 +0.3
	baz=121,SNR=33				
V50A	Pikevile	45.76 310	P	P	22 12 35.7 +0.9
	baz=112,SNR=70				
BRAL	Brewton	45.81 303	PFAKE		22 12 50.0 +15
BRAL			LR	LR	
	comp=Z,30μm,19.0s				
BRAL	Brewton	45.81 303	P	P	22 12 36.4 +1.1
	baz=106				
449A	Pace	45.83 303	P	P	22 12 36.9 +1.4
	baz=106,SNR=8.0				
U50A	Jamestown	45.85 311	P	P	22 12 36.3 +0.7
	baz=113,SNR=88				
Q51A	Peebles	45.88 315	PFAKE		22 12 50.0 +14
Q51A			LR	LR	
	comp=Z,48μm,22.0s				
Q51A	Peebles	45.88 315	P	P	22 12 36.5 +0.7
	baz=117,SNR=94				
P51A	Williamsport	45.89 316	PFAKE		22 12 50.0 +14
P51A			LR	LR	
	comp=Z,35μm,20.0s				
P51A	Williamsport	45.89 316	P	P	22 12 36.4 +0.6
	baz=118,SNR=50				
O51A	Pataskala	45.89 317	P	P	22 12 36.3 +0.5
	baz=118,SNR=39				
I53A	Kortright Cn E	45.90 323	P	P	22 12 36.0 +0.2
	baz=125,SNR=14				
349A	Repton	45.98 303	P	P	22 12 38.2 +1.6
	baz=107,SNR=30				
Z49A	Columbiana	46.00 306	P	P	22 12 38.0 +1.2
	baz=109,SNR=134				
K52A	Tillsonburg	46.01 321	P	P	22 12 37.2 +0.5
	baz=123,SNR=23				
149A	Jones	46.02 305	P	P	22 12 38.1 +1.2
	baz=108,SNR=75				
S50A	Richmond	46.04 313	P	P	22 12 38.2 +1.1
	baz=115,SNR=77				
ACTO	Acton	46.06 322	P	P	22 12 37.6 +0.5
	baz=124,SNR=51				
T50A	Nancy	46.09 312	P	P	22 12 38.4 +0.9
	baz=114,SNR=90				
G53A	Haliburton	46.10 325	P	P	22 12 37.7 +0.3
	baz=127,SNR=89				
249A	Camden	46.10 304	P	P	22 12 38.8 +1.2
	baz=107,SNR=53				
J52A	Paris	46.11 322	P	P	22 12 37.7 +0.2
	baz=123,SNR=55				
N51A	Ashland	46.11 318	PFAKE		22 12 50.0 +12
N51A			LR	LR	
	comp=Z,43μm,22.0s				
N51A	Ashland	46.11 318	P	P	22 12 38.2 +0.6
	baz=119,SNR=31				
E54A	Lac Daplat, Po	46.12 327	P	P	22 12 37.8 +0.3
	baz=129,SNR=115				
Y49A	Blount Mountai	46.12 307	PFAKE		22 12 50.0 +12
Y49A			LR	LR	
	comp=Z,28μm,19.0s				
Y49A	Blount Mountai	46.12 307	P	P	22 12 38.6 +0.8
	baz=110,SNR=51				
ACSO	Alum Creek Sta	46.19 317	PFAKE		22 12 50.0 +12
ACSO			LR	LR	
	comp=Z,29μm,20.0s				
ACSO	Alum Creek Sta	46.19 317	P	P	22 12 38.6 +0.5
	baz=118,SNR=61				
M51A	Elyria	46.19 318	P	P	22 12 38.7 +0.6
	baz=120,SNR=34				
SWET	Sewanee	46.22 309	PFAKE		22 12 50.0 +11
SWET			LR	LR	
	comp=Z,29μm,22.0s				
Q50A	Georgetown	46.24 314	P	P	22 12 39.4 +0.8
	baz=116,SNR=62				
R50A	Paris	46.24 314	P	P	22 12 39.7 +1.1
	baz=115,SNR=72				
MYIG	Mrida	46.27 289	PFAKE		22 12 50.0 +11
MYIG			LR	LR	
	comp=Z,20μm,20.0s				
X49A	Woodville	46.28 308	P	P	22 12 40.0 +1.1
	baz=110,SNR=94				
ALGO	Algonquin Park	46.28 326	P	P	22 12 38.8 0.0
	baz=128,SNR=35				
D54A	Lac Fusel, La	46.30 328	P	P	22 12 38.8 -0.1
	baz=130,SNR=80				
VCA	Vinchina	46.32 212⇑	iP	P	22 12 40.0 +0.5
LRAL	Lakeview Retre	46.32 306	PFAKE		22 12 50.0 +11
LRAL			LR	LR	
	comp=Z,25μm,20.0s				
LRAL	Lakeview Retre	46.32 306	P	P	22 12 40.3 +1.0
	baz=108,SNR=78				
E53A	Dumoine, Ponti	46.34 327	P	P	22 12 39.4 +0.2
	baz=129,SNR=80				
I52A	Shelburne	46.39 323	P	P	22 12 40.1 +0.3
	baz=124,SNR=23				
V49A	McMinnville	46.40 310	P	P	22 12 40.5 +0.6
	baz=112,SNR=126				
W49A	Belvidere	46.44 309	P	P	22 12 41.2 +0.9
	baz=111,SNR=108				
OJGS	Djebel Guires	46.45 51	P	P	22 12 40.0 -0.4
P50A	Jamestown	46.45 315	P	P	22 12 41.0 +0.7
	baz=117,SNR=66				
K51A	Iona Station	46.47 320	P	P	22 12 40.7 +0.3
	baz=122,SNR=16				
GO03	Copiap	46.50 214	PFAKE		22 12 50.0 +9.2
GO03			LR	LR	
	comp=Z,25μm,18.0s				
H52A	Wyevale	46.55 323	P	P	22 12 41.1 +0.3
	baz=125,SNR=54				
N50A	Nevada	46.55 317	P	P	22 12 41.6 +0.6
	baz=118,SNR=66				
O50A	Cable	46.58 316	P	P	22 12 41.9 +0.6
	baz=118,SNR=61				
U49A	Red Boiling Sp	46.59 311	P	P	22 12 42.2 +0.8
	baz=112,SNR=103				
T49A	Edmonton	46.63 312	PFAKE		22 12 50.0 +8.3
T49A			LR	LR	
	comp=Z,34μm,20.0s				
T49A	Edmonton	46.63 312	P	P	22 12 42.6 +0.9
	baz=113,SNR=108				
148A	Greensboro	46.66 305	P	P	22 12 42.8 +0.8
	baz=108,SNR=14				
PLIO	Pelee Island,	46.69 319	P	P	22 12 42.3 +0.2
	baz=120,SNR=20				
S49A	Springfield	46.73 313	P	P	22 12 43.2 +0.7
	baz=114,SNR=71				
BUKO	Buck Lake	46.73 325	P	P	22 12 42.6 +0.3
	baz=126,SNR=67				
Y48A	Jasper	46.74 307	P	P	22 12 43.5 +0.9
	baz=109,SNR=44				
I51A	Listowel	46.75 322	P	P	22 12 42.7 +0.2
	baz=123,SNR=62				
M50A	Fremont	46.79 318	PFAKE		22 13 00.0 +17
M50A			LR	LR	
	comp=Z,36μm,20.0s				
M50A	Fremont	46.79 318	P	P	22 12 43.3 +0.4
	baz=119,SNR=24				
D53A	Lac Vacive, Po	46.80 327	PFAKE		22 13 00.0 +17
D53A			LR	LR	
	comp=Z,37μm,21.0s				
D53A	Lac Vacive, Po	46.80 327	P	P	22 12 43.0 +0.2
	baz=129,SNR=112				
X48A	Hartselle	46.82 308	PFAKE		22 13 00.0 +17
X48A			LR	LR	
	comp=Z,26μm,19.0s				
X48A	Hartselle	46.82 308	P	P	22 12 44.0 +0.8
	baz=110,SNR=72				
E52A	Mattawa	46.82 326	P	P	22 12 42.9 -0.1
	baz=128,SNR=43				
ETRT	Tiaret	46.82 51	P	P	22 12 46.0 +2.6
CLTN	Cedars of Leba	46.84 310	PFAKE		22 13 00.0 +17
CLTN			LR	LR	
	comp=Z,18μm,22.0s				
R49A	Shelbyville	46.85 313	P	P	22 12 44.3 +0.9
	baz=114,SNR=106				
EANR	'Ain N'Sour	46.87 50	P	P	22 12 45.1 +1.4
F52A	Sundridge	46.89 325	P	P	22 12 43.8 +0.2
	baz=126,SNR=48				
L50A	Kingsville	46.95 319	P	P	22 12 44.4 +0.3
	baz=120,SNR=46				
Q49A	Aurora	46.95 314	P	P	22 12 44.9 +0.8
	baz=115,SNR=103				
W48A	Pulaski	46.96 308	P	P	22 12 45.3 +1.0
	baz=110,SNR=110				
BWLO	Walkerton	46.99 322	P	P	22 12 44.6 +0.2
	baz=123,SNR=24				
P49A	Miami Univ. Ec	47.06 315	P	P	22 12 45.4 +0.4
	baz=116,SNR=90				
CHGQ	Chibougamau	47.06 332	P	P	22 12 45.3 +0.5
	baz=135,SNR=155				
O49A	Covington	47.08 316	PFAKE		22 13 00.0 +15
O49A			LR	LR	
	comp=Z,37μm,22.0s				
O49A	Covington	47.08 316	P	P	22 12 45.6 +0.4
	baz=117,SNR=34				
V48A	Smith Brothers	47.09 309	PFAKE		22 13 00.0 +15
V48A			LR	LR	
	comp=Z,27μm,19.0s				
V48A	Smith Brothers	47.09 309	P	P	22 12 46.1 +0.8
	baz=111,SNR=184				
D52A	ZEK Kipawa Sen	47.11 327	P	P	22 12 45.5 +0.2
	baz=128,SNR=76				
KLBO	Killbear Provi	47.14 324	P	P	22 12 46.0 +0.5
	baz=125,SNR=59				
ECHA	Ech Chlef	47.15 50	P	P	22 12 47.6 +1.9
U48A	Cassie Pea, Po	47.16 310	P	P	22 12 46.7 +0.9
	baz=112,SNR=37				
K50A	Casco	47.20 320	PFAKE		22 13 00.0 +14
K50A			LR	LR	
	comp=Z,54μm,22.0s				
K50A	Casco	47.20 320	P	P	22 12 46.4 +0.4
	baz=121,SNR=12				
S48A	Wiedeman Farm,	47.23 312	P	P	22 12 46.7 +0.3
	baz=113,SNR=51				
147A	Livingston	47.23 305	PFAKE		22 13 00.0 +14
147A			LR	LR	
	comp=Z,26μm,20.0s				
147A	Livingston	47.23 305	P	P	22 12 47.4 +0.9
	baz=107,SNR=22				
BRCO	Bruce Peninsul	47.24 322	P	P	22 12 46.3 0.0
	baz=123				
BASO	Ashfield	47.25 322	P	P	22 12 46.8 +0.3
	baz=123,SNR=18				
T48A	Bowling Green	47.27 311	P	P	22 12 47.7 +1.0
	baz=112,SNR=97				
BMRO	Meriville Lake	47.30 323	P	P	22 12 47.1 +0.3
	baz=124,SNR=35				
F51A	Arnstein	47.31 325	P	P	22 12 46.8 0.0
	baz=126,SNR=49				
N49A	Columbus Grove	47.32 317	PFAKE		22 13 00.0 +13
N49A			LR	LR	
	comp=Z,37μm,21.0s				
N49A	Columbus Grove	47.32 317	P	P	22 12 47.4 +0.4
	baz=118,SNR=48				
EBNR	Beni Rached	47.32 50	P	P	22 12 50.4 +3.2
R48A	Northridge Ran	47.40 313	P	P	22 12 48.6 +1.0
	baz=114,SNR=27				
E51A	G1948 Merrick	47.43 326	P	P	22 12 48.1 +0.3
	baz=127,SNR=112				
M49A	Liberty Center	47.44 318	P	P	22 12 48.4 +0.5
	baz=118,SNR=39				
X47A	Russelville	47.47 307	P	P	22 12 48.8 +0.5
	baz=109,SNR=100				
TAM	Tamanrasset	47.49 69	PFAKE		22 13 00.0 +11
TAM			LR	LR	
	comp=Z,59μm,20.0s				
W47A	Westpoint	47.51 308	P	P	22 12 49.1 +0.5
	baz=110,SNR=93				
Q48A	North Vernon	47.51 314	P	P	22 12 49.2 +0.6
	baz=114,SNR=114				
P48A	Milroy	47.52 315	P	P	22 12 48.7 +0.1
	baz=115,SNR=60				
LPA	La Plata	47.60 197	ceP	P	22 12 48.0 -1.1
LPA			esP	pP	22 12 54.0 +0.5
LPA			ePCP	PcP	22 14 16.0 -2.8
LPA			ePP	PP	22 14 41.0 +0.1
LPA			ePPP	PPP	22 14 48.0
LPA			ePPP	PPP	22 15 25.0
LPA			ePPP	PPP	22 15 37.0
LPA			eS	S	22 19 44.0 +0.1
LPA			esS	sS	22 19 51.0 -0.1
LPA			ePS		22 19 56.0
LPA			ePSP	PSP	22 20 02.0
LPA			ePKIKP	PKiKP	22 21 10.0 -1.2

LPA			eSCS	ScS	22 22 43.0	+0.7
LPA			eSSS	SSS	22 23 15.0	
LPA			eSS	SS	22 23 20.0	+7.7
LPA			eSS	SnSn	22 23 58.0	+1.7
LPA			ePKIKP		22 24 42.0	
LPA			ePKIKS		22 24 47.0	
LPA			eSSS	SSS	22 25 04.0	
L49A	Milan	47.60 319	P	P	22 12 49.7	+0.5
	baz=119,SNR=31					
AAM	Ann Arbor	47.62 319	PFAKE		22 13 00.0	+11
AAM			LR	LR		
	comp=Z,50μm,21.0s					
AAM	Ann Arbor	47.62 319	P	P	22 12 50.1	+0.7
	baz=119,SNR=27					
WCI	Wyandotte Cave	47.63 313	eP	P	22 12 50.7	+1.2
	comp=Z,208nm,0.8s					
WCI			LR	LR		
	comp=Z,46μm,22.0s					
WCI	Wyandotte Cave	47.63 313	eP	P	22 12 50.7	+1.2
WCI			pmax	pmax		
	comp=Z,208nm,0.8s					
WCI			MLR	MLR		
	comp=Z,46μm,22.0s					
WCI	Wyandotte Cave	47.63 313	P	P	22 12 50.3	+0.8
	baz=113					
V47A	Nunnelly	47.65 309	P	P	22 12 50.0	+0.3
	baz=110,SNR=121					
O48A	Farmland	47.68 316	P	P	22 12 49.8	0.0
	baz=116,SNR=66					
U47A	Clarksville	47.69 310	P	P	22 12 50.7	+0.7
	baz=111,SNR=121					
D51A	Lot 18 Range I	47.70 326	P	P	22 12 49.9	0.0
	baz=127					
LSQQ	Lebel-sur-Quev	47.71 330	P	P	22 12 50.0	+0.1
	baz=132					
K49A	Clarkson	47.73 319	P	P	22 12 50.5	+0.3
	baz=120,SNR=12					
T47A	Sharon Grove	47.75 311	PFAKE		22 13 00.0	+10
T47A			LR	LR		
	comp=Z,31μm,20.0s					
T47A	Sharon Grove	47.75 311	P	P	22 12 51.1	+0.6
	baz=112,SNR=107					
PLAL	Pickwick Lake	47.79 308	PFAKE		22 13 00.0	+9.2
PLAL			LR	LR		
	comp=Z,22μm,20.0s					
S47A	Hartford	47.81 312	P	P	22 12 51.5	+0.7
	baz=112					
J49A	Marlette	47.82 320	P	P	22 12 51.0	+0.2
	baz=121,SNR=31					
R47A	Wooly Knot Far	47.83 313	P	P	22 12 51.5	+0.5
	baz=113,SNR=31					
TOBO	Tobermory, Bru	47.83 323	P	P	22 12 51.0	+0.1
	baz=124,SNR=30					
N48A	Decatur	47.86 316	P	P	22 12 51.3	+0.1
	baz=117,SNR=66					
I49A	Point Hope	47.92 321	PFAKE		22 13 00.0	+8.3
I49A			LR	LR		
	comp=Z,36μm,21.0s					
I49A	Point Hope	47.92 321	P	P	22 12 51.8	+0.1
	baz=121,SNR=21					
M48A	Edgerton	47.93 317	PFAKE		22 13 00.0	+8.2
M48A			LR	LR		
	comp=Z,38μm,21.0s					
M48A	Edgerton	47.93 317	P	P	22 12 52.0	+0.2
	baz=118,SNR=14					
L48A	N Adams	47.96 318	P	P	22 12 52.3	+0.3
	baz=118,SNR=75					
WVT	Waverly	47.99 309	eP	P	22 12 52.5	+0.2
	comp=Z,256nm,0.9s					
WVT			LR	LR		
	comp=Z,31μm,21.0s					
WVT	Waverly	47.99 309	eP	P	22 12 52.5	+0.2
WVT			pmax	pmax		
	comp=Z,256nm,0.9s					
WVT			MLR	MLR		
	comp=Z,31μm,21.0s					
WVT	Waverly	47.99 309	P	P	22 12 52.7	+0.4
	baz=110					
SCHQ	Schefferville	48.00 341	P	P	22 12 52.0	-0.1
	comp=Z,233nm,0.8s,baz=150,slow=5.9,SNR=39					
SCHQ			S	S	22 19 47.2	-2.0
	comp=Z,2.2nm,0.8s,baz=231,slow=14,SNR=2.3					
SCHQ			LR	LR	22 30 20.0	
	comp=Z,11μm,20.7s,baz=160,slow=33					
Q47A	Bedord North L	48.01 313	P	P	22 12 52.9	+0.5
	baz=114,SNR=32					
X46A	Booneville	48.05 307	P	P	22 12 53.1	+0.2
	baz=108,SNR=21					
E50A	Wahnapitae	48.06 325	P	P	22 12 52.6	-0.1
	baz=125,SNR=11					
W46A	Michie	48.08 308	P	P	22 12 52.9	-0.1
	baz=109,SNR=12					
V46A	Holladay	48.10 309	P	P	22 12 53.3	+0.1
	baz=110,SNR=111					
P47A	Martinsville	48.12 314	P	P	22 12 53.6	+0.3
	baz=114,SNR=51					
K48A	Perry	48.17 319	P	P	22 12 53.8	+0.2
	baz=119,SNR=55					
BLO	Bloomington	48.17 314	PFAKE		22 13 10.0	+16
BLO			LR	LR		
	comp=Z,41μm,20.0s					
J48A	Bridge Port	48.20 320	PFAKE		22 13 00.0	+6.2
J48A			LR	LR		
	comp=Z,53μm,22.0s					
J48A	Bridge Port	48.20 320	P	P	22 12 53.9	+0.1
	baz=120,SNR=38					
N47A	Urbana	48.32 316	P	P	22 12 55.0	+0.3
	baz=116,SNR=60					
U46A	Springville	48.33 310	P	P	22 12 55.3	+0.4
	baz=110,SNR=19					
T46A	Princeton	48.36 311	P	P	22 12 55.7	+0.6
	baz=111,SNR=53					
O47A	Sheridan	48.37 315	P	P	22 12 55.3	+0.1
	baz=115,SNR=50					
F49A	Sandfield	48.43 324	P	P	22 12 55.6	+0.1
	baz=124,SNR=42					
S46A	Don Dixon Farm	48.46 311	P	P	22 12 56.3	+0.4
	baz=112,SNR=98					
L47A	Sherwood	48.48 318	P	P	22 12 56.1	+0.1
	baz=118,SNR=45					
M47A	Cromwell	48.48 317	P	P	22 12 56.2	+0.2
	baz=117,SNR=14					
MATQ	Matagami	48.50 330	P	P	22 12 55.9	-0.1
	baz=131,SNR=89					
R46A	Gibon Southern	48.51 312	P	P	22 12 57.0	+0.8
	baz=112,SNR=56					
USIN	University of	48.53 312	PFAKE		22 13 10.0	+14
USIN			LR	LR		
	comp=Z,36μm,20.0s					
I48A	Sherman Twp	48.59 321	P	P	22 12 56.9	+0.1
	baz=121,SNR=23					
H48A	Harrisville	48.63 322	PFAKE		22 13 10.0	+13
H48A			LR	LR		
	comp=Z,31μm,22.0s					
H48A	Harrisville	48.63 322	P	P	22 12 57.4	+0.3
	baz=121					
ABA	Alger-Bouzarea	48.63 50	P	P	22 13 00.0	+2.7
K47A	Vermontville	48.67 319	P	P	22 12 57.7	+0.2
	baz=118,SNR=48					
PAYG	Puerto Ayora	48.67 260	eP	P	22 12 59.5	+1.6
	comp=Z,326nm,1.1s					
OXF	Oxford	48.69 307	PFAKE		22 13 10.0	+12
OXF			LR	LR		
	comp=Z,27μm,20.0s					
Q46A	CEJHS Indians,	48.71 313	P	P	22 12 58.5	+0.7
	baz=113,SNR=11					
F48A	Evansville	48.81 323	P	P	22 12 58.5	+0.1
	baz=123,SNR=31					
GO04	Tololo Observa	48.82 213	PFAKE		22 13 10.0	+11
GO04			LR	LR		
	comp=Z,28μm,20.0s					
J47A	Sunmer	48.83 319	PFAKE		22 13 10.0	+11
J47A			LR	LR		
	comp=Z,50μm,22.0s					
J47A	Sunmer	48.83 319	P	P	22 12 59.0	+0.3
	baz=119,SNR=37					
P46A	Rosedale	48.84 314	P	P	22 12 59.4	+0.6
	baz=114,SNR=40					
D49A	Beulah Townshi	48.90 326	P	P	22 12 59.6	+0.4
	baz=125,SNR=34					
E48A	Lockeyer	48.90 324	P	P	22 12 59.6	+0.4
	baz=124,SNR=78					
T45A	Paducah	48.91 310	PFAKE		22 13 10.0	+11
T45A			LR	LR		
	comp=Z,32μm,18.0s					
T45A	Paducah	48.91 310	P	P	22 12 59.5	+0.1
	baz=110					
VBMS	Vicksburg	48.94 304	eP	P	22 13 01.1	+1.4
	comp=Z,258nm,1.2s					
VBMS			LR	LR		
	comp=Z,27μm,20.0s					
VBMS	Vicksburg	48.94 304	P	P	22 13 00.8	+1.1
	baz=105,SNR=5.4					
M46A	Old House Fiel	49.00 316	PFAKE		22 13 10.0	+10
M46A			LR	LR		
	comp=Z,41μm,22.0s					
M46A	Old House Fiel	49.00 316	P	P	22 13 00.6	+0.6
	baz=116,SNR=21					
I47A	Gladwin	49.01 320	PFAKE		22 13 10.0	+10
I47A			LR	LR		
	comp=Z,42μm,22.0s					
I47A	Gladwin	49.01 320	P	P	22 13 00.5	+0.4
	baz=120,SNR=29					
N46A	Monticello	49.04 316	P	P	22 13 00.8	+0.5
	baz=115,SNR=69					
HALT	Halls	49.07 309	PFAKE		22 13 10.0	+9.4
HALT			LR	LR		
	comp=Z,25μm,18.0s					
SFIN	Lafayette	49.07 315	eP	P	22 13 01.1	+0.5
	comp=Z,523nm,1.5s					
SFIN			LR	LR		
	comp=Z,39μm,20.0s					
SFIN	Lafayette	49.07 315	P	P	22 13 01.0	+0.4
	baz=114,SNR=44					
D48A	Paudash Townsh	49.09 325	P	P	22 13 00.6	0.0
	baz=125,SNR=90					
R45A	Skylar, Fairfi	49.10 312	P	P	22 13 01.5	+0.7
	baz=112,SNR=110					
H47A	Mio	49.12 321	P	P	22 13 00.9	+0.1
	baz=120,SNR=18					
OLIL	Olney	49.13 313	PFAKE		22 13 10.0	+9.0
OLIL			LR	LR		
	comp=Z,42μm,22.0s					
GLAT	Glass	49.15 309	PFAKE		22 13 10.0	+8.8
GLAT			LR	LR		
	comp=Z,23μm,22.0s					
P45A	Graceland, Par	49.18 314	PFAKE		22 13 10.0	+8.6
P45A			LR	LR		
	comp=Z,42μm,20.0s					
P45A	Graceland, Par	49.18 314	P	P	22 13 01.9	+0.5
	baz=113,SNR=34					
K46A	Dorr	49.19 318	P	P	22 13 01.5	0.0
	baz=117,SNR=32					
G47A	Hillman	49.20 322	P	P	22 13 01.6	+0.2
	baz=121,SNR=17					
L46A	Eue Claire	49.23 317	PFAKE		22 13 10.0	+8.3
L46A			LR	LR		
	comp=Z,36μm,22.0s					
L46A	Eue Claire	49.23 317	P	P	22 13 01.9	+0.2
	baz=116,SNR=11					
Q45A	Warren Harvey,	49.23 313	P	P	22 13 02.8	+1.0
	baz=112					
MET	Memphis--Engin	49.28 307	PFAKE		22 13 10.0	+7.7
MET			LR	LR		
	comp=Z,26μm,20.0s					
J46A	Howard City	49.41 319	P	P	22 13 03.2	+0.1
	baz=118					
O45A	Potomac	49.46 315	P	P	22 13 03.8	+0.3
	baz=114,SNR=12					
GLMI	Grayling	49.48 321	PFAKE		22 13 20.0	+16
GLMI			LR	LR		
	comp=Z,39μm,21.0s					
GLMI	Grayling	49.48 321	P	P	22 13 04.1	+0.5
	baz=120,SNR=19					
PVMO	Portageville	49.51 309	PFAKE		22 13 20.0	+16
PVMO			LR	LR		
	comp=Z,20μm,20.0s					
E47A	Iron Bridge	49.53 324	P	P	22 13 04.1	+0.1
	baz=123,SNR=66					
N45A	Kentland	49.55 315	P	P	22 13 04.7	+0.4
	baz=114,SNR=76					
I46A	Reed City	49.57 320	P	P	22 13 04.4	+0.1
	baz=119,SNR=25					
M45A	Boilermakers S	49.60 316	P	P	22 13 05.3	+0.7
	baz=115,SNR=12					
S44A	Carbondale	49.60 311	P	P	22 13 05.2	+0.5
	baz=110,SNR=73					
GNAR	Gosnell	49.61 308	PFAKE		22 13 20.0	+15
GNAR			LR	LR		
	comp=Z,24μm,18.0s					
PARMO	Parma	49.63 309	PFAKE		22 13 20.0	+15
PARMO			LR	LR		
	comp=Z,26μm,22.0s					
H46A	Fife Lake	49.70 321	P	P	22 13 05.4	+0.1
	baz=119,SNR=11					
D47A	Chapleau	49.76 324	P	P	22 13 05.7	0.0
	baz=123,SNR=56					
X43A	Marvell	49.85 306	PFAKE		22 13 20.0	+13
X43A			LR	LR		
	comp=Z,22μm,21.0s					
X43A	Marvell	49.85 306	P	P	22 13 07.0	+0.4
	baz=106,SNR=13					
G46A	Petoskey	49.88 322	P	P	22 13 06.8	+0.2
	baz=120,SNR=15					
J45A	Montague	49.93 319	PFAKE		22 13 20.0	+13
J45A			LR	LR		
	comp=Z,49μm,21.0s					
J45A	Montague	49.93 319	P	P	22 13 07.2	+0.1
	baz=117					
O44A	Mansfield	49.94 314	P	P	22 13 07.4	+0.2
	baz=113,SNR=13					
N44A	Piper City	49.96 315	P	P	22 13 07.5	+0.2
	baz=114,SNR=51					
HBAR	Harrisburg	49.98 308	PFAKE		22 13 20.0	+12
HBAR			LR	LR		
	comp=Z,26μm,21.0s					
CCA1	Carnmenellis	50.00 31	eP	P	22 13 06.7	-0.7
CCA1			IAmb	IAmb	22 13 10.8	
	comp=Z,3μm,1.9s					
CCA1			e		22 20 15.4	
CCA1			IAMs_20	IAMs_20	22 27 27.1	
	comp=Z,42μm,33.2s					
E46A	Sault Ste Mari	50.09 323	PFAKE		22 13 20.0	+12
E46A			LR	LR		
	comp=Z,28μm,21.0s					
E46A	Sault Ste Mari	50.09 323	P	P	22 13 08.3	+0.1
	baz=122,SNR=30					
I45A	Fountain	50.11 320	PFAKE		22 13 20.0	+12
I45A			LR	LR		
	comp=Z,36μm,20.0s					
I45A	Fountain	50.11 320	P	P	22 13 08.4	0.0
	baz=118					
M44A	Midewin, Midew	50.14 316	PFAKE		22 13 20.0	+11
M44A			LR	LR		
	comp=Z,35μm,21.0s					
M44A	Midewin, Midew	50.14 316	P	P	22 13 08.6	-0.1
	baz=114,SNR=27					
PBMO	Poplar Bluff	50.18 309	PFAKE		22 13 20.0	+11
PBMO			LR	LR		
	comp=Z,28μm,21.0s					
D46A	Sault St. Mari	50.21 324	P	P	22 13 09.2	+0.1
	baz=122,SNR=74					
G45A	Suttons Bay	50.23 321	PFAKE		22 13 20.0	+11
G45A			LR	LR		
	comp=Z,39μm,22.0s					
G45A	Suttons Bay	50.23 321	P	P	22 13 09.7	+0.4
	baz=119,SNR=25					
SET	Setif	50.24 52	P	P	22 13 10.0	+0.4
IGLA	Glengowla, Co	50.26 25	eP	P	22 13 09.7	+0.4
IGLA			IAmb	IAmb	22 13 12.9	
	comp=Z,2μm,2.3s					
IGLA			e		22 20 15.9	
IGLA			IAMs_20	IAMs_20	22 27 36.8	
	comp=Z,35μm,22.4s					
CKHR	Kef el Ahmar	50.27 52	P	P	22 13 10.8	+0.9
H45A	Beulah	50.27 320	P	P	22 13 09.6	0.0
	baz=119					
L44A	Lake County Fo	50.38 317	P	P	22 13 10.6	+0.1
	baz=115,SNR=16					
CCAR	Cane Creek	50.40 305	PFAKE		22 13 20.0	+9.3
CCAR			LR	LR		
	comp=Z,26μm,20.0s					
NRS	Narsarsuaq	50.42 358	PFAKE		22 13 20.0	+10
NRS			LR	LR		
	comp=Z,19μm,18.0s					
F45A	CMU Biological	50.46 322	P	P	22 13 11.1	+0.1
	baz=120,SNR=30					
P43A	Skaggs, Pawnee	50.50 313	P	P	22 13 11.3	-0.1
	baz=112,SNR=21					
SLM	Saint Louis	50.66 312	PFAKE		22 13 30.0	+17
SLM			LR	LR		
	comp=Z,26μm,20.0s					
IWEX	Carrickbyrne,	50.67 28	eP	P	22 13 11.0	-1.5
IWEX			IAmb	IAmb	22 13 16.2	
	comp=Z,3μm,2.2s					
IWEX			e		22 20 23.4	
IWEX			IAMs_20	IAMs_20	22 27 47.2	
	comp=Z,40μm,23.9s					
HDIL	Hopedale	50.68 314	PFAKE		22 13 30.0	+17
HDIL			LR	LR		
	comp=Z,46μm,20.0s					
HDIL	Hopedale	50.68 314	P	P	22 13 12.6	-0.2
	baz=113,SNR=24					
DFRA	Djebel Bou Aff	50.71 51	P	P	22 13 12.0	-1.2
N43A	Stutzman Famil	50.74 315	P	P	22 13 13.4	+0.1
	baz=113,SNR=16					
M43A	Waltham Townsh	50.79 315	P	P	22 13 13.8	+0.2
	baz=114,SNR=42					
HTL	Hartland	50.87 30	eP	P	22 13 12.3	-1.8
HTL			IAmb	IAmb	22 13 17.7	
	comp=Z,2μm,2.0s					
HTL			IAMs_20	IAMs_20	22 27 54.3	
	comp=Z,33μm,26.8s					
K43A	Burlington	50.88 317	PFAKE		22 13 30.0	+16
K43A			LR	LR		
	comp=Z,37μm,22.0s					
K43A	Burlington	50.88 317	P	P	22 13 14.3	0.0
	baz=115,SNR=19					
CTEI	Djebel Teioual	50.97 52	P	P	22 13 15.2	0.0
JVM	Valle D.L. Mar	50.99 33	eP	P	22 13 14.8	-0.1
JSA	Saint Aubin	50.99 33	eP	P	22 13 13.9	-1.1
JSA			IAmb	IAmb	22 13 18.4	
	comp=Z,2μm,1.9s					
JSA			e		22 20 22.0	
JSA			IAMs_20	IAMs_20	22 29 29.0	
	comp=Z,26μm,20.8s					
Z41A	Richland Creek	51.06 304	PFAKE		22 13 30.0	+14
Z41A			LR	LR		
	comp=Z,28μm,21.0s					
Z41A	Richland Creek	51.06 304	P	P	22 13 16.2	+0.4
	baz=104					
UALR	University of	51.08 306	PFAKE		22 13 30.0	+14
UALR			LR	LR		
	comp=Z,26μm,20.0s					
CASM	Ain Smara	51.09 52	P	P	22 13 16.1	0.0
W41B	Gary Mavity, V	51.11 307	PFAKE		22 13 30.0	+14
W41B			LR	LR		
	comp=Z,26μm,22.0s					
W41B	Gary Mavity, V	51.11 307	P	P	22 13 16.1	0.0
	baz=106,SNR=165					
PEL	Peldehue	51.12 210	PFAKE		22 13 30.0	+14
PEL			LR	LR		
	comp=Z,40μm,19.0s					
E44A	Grand Marais A	51.17 323	PFAKE		22 13 30.0	+14
E44A			LR	LR		
	comp=Z,28μm,22.0s					
E44A	Grand Marais A	51.17 323	P	P	22 13 16.7	+0.3
	baz=120,SNR=12					
WHAR	Wooly Hollow	51.18 307	PFAKE		22 13 30.0	+13
WHAR			LR	LR		
	comp=Z,24μm,22.0s					
CCM	Cathedral Cave	51.21 311	eP	P	22 13 16.7	-0.1
	comp=Z,114nm,0.8s					
CCM			LR	LR		
	comp=Z,29μm,22.0s					
CCM	Cathedral Cave	51.21 311	eP	P	22 13 16.7	-0.1
CCM			pmax	pmax		
	comp=Z,114nm,0.8s					
CCM			MLR	MLR		
	comp=Z,29μm,22.0s					
CCM	Cathedral Cave	51.21 311	P	P	22 13 16.6	-0.2
	baz=109					
H43A	Windswept, Lux	51.29 319	PFAKE		22 13 30.0	+13
H43A			LR	LR		
	comp=Z,44μm,22.0s					
H43A	Windswept, Lux	51.29 319	P	P	22 13 17.6	+0.3
	baz=117,SNR=34					
CKFL	Kef-Lekhel	51.31 52	P	P	22 13 18.0	+0.2
RSBS	Rosebush, Pemb	51.35 29	eP	P	22 13 17.2	-0.4
RSBS			IAmb	IAmb	22 13 22.0	
	comp=Z,2μm,2.3s					
RSBS			e		22 20 35.4	
RSBS			IAMs_20	IAMs_20	22 27 51.1	
	comp=Z,22μm,37.4s					
X40A	Basin Creek Fa	51.40 306	PFAKE		22 13 30.0	+12
X40A			LR	LR		
	comp=Z,21μm,20.0s					
X40A	Basin Creek Fa	51.40 306	P	P	22 13 18.3	0.0
	baz=105,SNR=67					
WLAR	White Oak Lake	51.42 305	PFAKE		22 13 30.0	+12
WLAR			LR	LR		
	comp=Z,34μm,18.0s					
DSB	Dublin	51.44 27	eP	P	22 13 17.3	-0.9
	comp=Z,2μm,2.0s					
DSB			LR	LR		
	comp=Z,26μm,21.0s					
L42A	Oliver, Polo	51.50 316	PFAKE		22 13 30.0	+11
L42A			LR	LR		
	comp=Z,37μm,21.0s					
L42A	Oliver, Polo	51.50 316	P	P	22 13 18.9	0.0
	baz=113,SNR=43					
CAEH	'Ain El Ouahch	51.53 51	P	P	22 13 20.5	+1.3
E43A	Lone Tree Farm	51.70 322	PFAKE		22 13 30.0	+10
E43A			LR	LR		
	comp=Z,26μm,22.0s					
E43A	Lone Tree Farm	51.70 322	P	P	22 13 20.4	+0.1
	baz=119,SNR=77					
TRQA	Tornquist	51.75 199	eP	P	22 13 20.7	-0.1
	comp=Z,148nm,1.2s					
TRQA			LR	LR		
	comp=Z,62μm,20.0s					
TRQA	Tornquist	51.75 199	eP	P	22 13 20.7	-0.1
TRQA			pmax	pmax		
	comp=Z,148nm,1.2s					
TRQA			MLR	MLR		
	comp=Z,62μm,20.0s					
I42A	Draeger Farm,	51.77 318	PFAKE		22 13 30.0	+9.0
I42A			LR	LR		
	comp=Z,38μm,20.0s					
I42A	Draeger Farm,	51.77 318	P	P	22 13 20.9	0.0
	baz=115,SNR=40					
N41A	Harden Midland	51.84 314	PFAKE		22 13 30.0	+8.5
N41A			LR	LR		
	comp=Z,47μm,20.0s					
N41A	Harden Midland	51.84 314	P	P	22 13 20.9	-0.6
	baz=111,SNR=83					
ABSA	Djebel Ababsia	51.86 52	P	P	22 13 21.9	0.0
M41A	Milan	51.86 315	P	P	22 13 21.1	-0.5
	baz=112,SNR=32					
U40A	Yellville	51.92 308	P	P	22 13 21.6	-0.6
	baz=106,SNR=157					
CMAH	Djebel Manchou	51.92 52	P	P	22 13 22.3	+0.1
MIAR	Mount Ida	52.00 306	PFAKE		22 13 40.0	+17
MIAR			LR	LR		
	comp=Z,22μm,21.0s					
MIAR	Mount Ida	52.00 306	P	P	22 13 22.7	-0.1
	baz=104,SNR=56					
F42A	Maple Grove Fa	52.11 321	P	P	22 13 23.4	0.0
	baz=117					
ETX06	Route 59 and C	52.11 302	PFAKE		22 13 40.0	+16
ETX06			LR	LR		
	comp=Z,17μm,20.0s					
IDGL	Inch Island, C	52.20 25	eP	P	22 13 21.4	-2.4
IDGL			IAmb	IAmb	22 13 27.9	
	comp=Z,1μm,1.6s					
IDGL			e		22 20 38.9	
IDGL			IAMs_20	IAMs_20	22 28 13.0	
	comp=Z,37μm,35.8s					
MONM	Monmouth	52.22 30	eP	P	22 13 23.1	-1.0
MONM			IAmb	IAmb	22 13 27.6	
	comp=Z,4μm,1.9s					
MONM			IAMs_20	IAMs_20	22 28 34.0	
	comp=Z,33μm,27.1s					
MCH1	Michaelchurch	52.22 30	eP	P	22 13 22.9	-1.2
MCH1			IAmb	IAmb	22 13 28.2	
	comp=Z,3μm,2.1s					
MCH1			e		22 20 43.4	
MCH1			IAMs_20	IAMs_20	22 28 32.8	
	comp=Z,38μm,33.7s					
OLDB	Oldbury-Upon-S	52.24 31	eP	P	22 13 21.8	-2.4
OLDB			IAmb	IAmb	22 13 27.5	
	comp=Z,2μm,1.8s					
OLDB			e		22 20 46.5	
OLDB			IAMs_20	IAMs_20	22 28 14.4	
	comp=Z,48μm,40.9s					
JFWS	Jewell Farm	52.26 317	PFAKE		22 13 40.0	+15
JFWS			LR	LR		
	comp=Z,44μm,22.0s					
JFWS	Jewell Farm	52.26 317	P	P	22 13 24.5	-0.1
	baz=113,SNR=42					

YRC Rhoscolyn 52.26 28 *eP* **P 22 13 23.3 -1.1**
NATX Nacogdoches 52.26 302 PFAKE 22 13 40.0 +15
NATX LR LR
comp=Z,26µm,20.0s
NATX Nacogdoches 52.26 302 P **P 22 13 25.0 +0.2**
baz=102,SNR=12
GMM Mts of Mourne 52.29 26 *eP* **P 22 13 23.1 -1.4**
W39A Magazine 52.33 306 PFAKE 22 13 40.0 +15
W39A LR LR
comp=Z,30µm,21.0s
W39A Magazine 52.33 306 P **P 22 13 25.7 +0.4**
baz=105,SNR=120
WLF1 Llynfaes 52.36 28 *eP* **P 22 13 23.6 -1.5**
WLF1 IAmb IAmb 22 13 29.8
comp=Z,7µm,2.1s
WLF1 *e* 22 20 46.5
WLF1 IAMs_20 IAMs_20 22 28 41.0
comp=Z,76µm,26.5s
YLL Llanberis 52.37 28 *eP* **P 22 13 24.6 -0.6**
WPS Cemaes, Angles 52.39 28 *eP* **P 22 13 24.7 -0.6**
WPS IAmb IAmb 22 13 28.9
comp=Z,2µm,1.8s
WPS *e* 22 20 44.8
WPS IAMs_20 IAMs_20 22 29 43.8
comp=Z,34µm,23.1s
N40A Mertquake, Sal 52.42 314 P **P 22 13 25.1 -0.7**
baz=111,SNR=37
LLW Llanuwychllyn 52.43 29 *eP* **P 22 13 23.9 -1.8**
I41A Arkdale 52.47 318 PFAKE 22 13 40.0 +14
I41A LR LR
comp=Z,38µm,20.0s
I41A Arkdale 52.47 318 P **P 22 13 26.1 0.0**
baz=115,SNR=28
WME Myndd Eilian 52.48 28 *eP* **P 22 13 25.9 0.0**
STRD Stroud 52.50 31 *eP* **P 22 13 23.3 -2.9**
STRD IAmb IAmb 22 13 29.2
comp=Z,2µm,2.0s
STRD *e* 22 20 50.2
STRD IAMs_20 IAMs_20 22 28 42.6
comp=Z,29µm,24.4s
SWN1 Swindon 52.53 31 *eP* **P 22 13 25.6 -0.8**
SWN1 IAmb IAmb 22 13 30.7
comp=Z,3µm,2.0s
SWN1 *e* 22 20 50.2
SWN1 IAMs_20 IAMs_20 22 28 39.2
comp=Z,36µm,32.1s
L40A Anamosa 52.59 315 PFAKE 22 13 40.0 +13
L40A LR LR
comp=Z,37µm,20.0s
L40A Anamosa 52.59 315 P **P 22 13 26.8 -0.3**
baz=112,SNR=86
FOEL Foel Wylfa 52.67 29 *eP* **P 22 13 26.8 -0.7**
FOEL IAmb IAmb 22 13 31.8
comp=Z,5µm,2.1s
FOEL *e* 22 20 47.1
FOEL IAMs_20 IAMs_20 22 28 45.2
comp=Z,47µm,37.6s
WOL Wolverton 52.71 31 *eP* **P 22 13 26.9 -0.8**
WOL IAmb IAmb 22 13 32.1
comp=Z,5µm,2.0s
WOL *e* 22 20 50.5
WOL IAMs_20 IAMs_20 22 28 45.1
comp=Z,36µm,32.2s
HHAR Hobbs 52.74 308 PFAKE 22 13 40.0 +12
HHAR LR LR
comp=Z,18µm,20.0s
CLGH Cloghs, Cushen 52.79 25 *eP* **P 22 13 26.6 -1.7**
CLGH IAmb IAmb 22 13 32.9
comp=Z,3µm,2.2s
CLGH *e* 22 20 53.8
CLGH IAMs_20 IAMs_20 22 29 45.7
comp=Z,28µm,17.9s
WIM Isle of Man 52.79 27 *eP* **P 22 13 27.7 -0.6**
CLF Chambon-Foret 52.86 36 PFAKE 22 13 40.0 +11
CLF LR LR
comp=Z,27µm,20.0s
COWI Conover 52.89 321 PFAKE 22 13 40.0 +11
COWI LR LR
comp=Z,28µm,20.0s
IOMK Kirk Michael 52.91 27 *eP* **P 22 13 27.7 -1.5**
IOMK IAmb IAmb 22 13 33.7
comp=Z,4µm,2.1s
IOMK *e* 22 20 55.8
IOMK IAMs_20 IAMs_20 22 28 40.8
comp=Z,79µm,30.0s
HKT Hockley 52.92 299 *eP* **P 22 13 30.0 +0.4**
comp=Z,209nm,1.4s
HKT LR LR
comp=Z,16µm,19.0s
HKT Hockley 52.92 299 *eP* **P 22 13 30.0 +0.4**
HKT pmax pmax
comp=Z,209nm,1.4s
HKT MLR MLR
comp=Z,16µm,19.0s
D41A Chassel 52.98 322 PFAKE 22 13 40.0 +10
D41A LR LR
comp=Z,28µm,22.0s
D41A Chassel 52.98 322 P **P 22 13 30.2 +0.4**
baz=118,SNR=54
SSB Saint Sauveur 52.99 40 PFAKE 22 13 40.0 +10
SSB LR LR
comp=Z,29µm,20.0s
KEST Kesra 53.18 53 P **P 22 13 31.7 +0.1**
comp=Z,88nm,0.9s,baz=204,slow=3.3,SNR=48
KEST S **S 22 21 01.0 -0.9**
comp=Z,9.8nm,1.2s,baz=308,slow=19,SNR=1.8
KEST LR LR 22 33 04.5
comp=Z,21µm,21.4s,baz=217,slow=33
KEST Kesra 53.18 53 PFAKE 22 13 40.0 +8.4
KEST LR LR
comp=Z,28µm,22.0s
G40A Rib Lake 53.19 319 PFAKE 22 13 40.0 +8.5
G40A LR LR
comp=Z,48µm,22.0s
G40A Rib Lake 53.19 319 P **P 22 13 31.7 +0.2**
baz=115,SNR=110
GO05 Huala 53.23 210 PFAKE 22 13 40.0 +8.2
GO05 LR LR
comp=Z,42µm,20.0s
GAL1 Galloway 53.25 26 *eP* **P 22 13 29.6 -2.0**
GAL1 IAmb IAmb 22 13 35.9
comp=Z,1µm,2.3s
GAL1 *e* 22 20 58.7
GAL1 IAMs_20 IAMs_20 22 28 50.1
comp=Z,22µm,34.5s
HMNX Herstmonceux 53.27 33 *eP* **P 22 13 31.6 -0.3**
HMNX IAmb IAmb 22 13 36.4
comp=Z,2µm,2.1s
HMNX *e* 22 20 56.3
HMNX IAMs_20 IAMs_20 22 28 59.5
comp=Z,27µm,27.8s
STNC Stoke 53.27 29 *eP* **P 22 13 31.2 -0.7**
STNC IAmb IAmb 22 13 36.3
comp=Z,4µm,2.1s
STNC *e* 22 20 59.9
STNC IAMs_20 IAMs_20 22 29 03.1
comp=Z,45µm,37.4s
F40A Park Falls 53.42 320 P **P 22 13 33.1 0.0**
baz=116,SNR=140
X37A Clayton 53.45 305 PFAKE 22 13 50.0 +16
X37A LR LR
comp=Z,24µm,22.0s
CWF Charnwood Fore 53.50 30 *eP* **P 22 13 30.4 -3.1**
CWF IAmb IAmb 22 13 37.5
comp=Z,2µm,2.0s
CWF *e* 22 20 52.4
CWF IAMs_20 IAMs_20 22 29 08.5
comp=Z,40µm,34.9s
LBWR Ladybower, Pea 53.69 29 *eP* **P 22 13 34.4 -0.6**
LBWR IAmb IAmb 22 13 39.3
comp=Z,4µm,2.1s
LBWR IAMs_20 IAMs_20 22 29 15.7
comp=Z,48µm,35.5s
C40A Isle Royale Na 53.73 323 PFAKE 22 13 50.0 +15
C40A LR LR
comp=Z,27µm,19.0s
C40A Isle Royale Na 53.73 323 P **P 22 13 35.3 0.0**
baz=118,SNR=48
KESW Keswick, Cumbr 53.78 27 *eP* **P 22 13 34.5 -1.1**
KESW IAmb IAmb 22 13 40.0
comp=Z,3µm,2.3s
KESW *e* 22 21 06.7
KESW IAMs_20 IAMs_20 22 29 05.7
comp=Z,36µm,30.7s
G39A Holcombe 53.82 319 P **P 22 13 36.0 -0.1**
baz=114,SNR=53

ELSH Elham, Standar 53.85 33 *eP* **P 22 13 35.6 -0.6**
ELSH IAmb IAmb 22 13 40.2
comp=Z,3µm,2.2s
ELSH IAMs_20 IAMs_20 22 29 16.3
comp=Z,29µm,29.1s
LAWE Loch Awe, Argy 53.89 25 *eP* **P 22 13 35.5 -0.8**
LAWE IAmb IAmb 22 13 40.4
comp=Z,3µm,2.4s
LAWE *e* 22 21 07.5
LAWE IAMs_20 IAMs_20 22 29 10.1
comp=Z,31µm,30.4s
F39A Loretta 53.92 320 P **P 22 13 36.8 -0.1**
baz=115,SNR=152
SCIA State Center 53.92 315 PFAKE 22 13 50.0 +13
SCIA LR LR
comp=Z,35µm,19.0s
SCIA State Center 53.92 315 P **P 22 13 36.5 -0.4**
baz=110,SNR=14
PGBU Glenifferbraes 53.97 26 *eP* **P 22 13 36.1 -0.9**
PGBU IAmb IAmb 22 13 41.1
comp=Z,3µm,2.1s
PGBU IAMs_20 IAMs_20 22 30 29.5
comp=Z,28µm,17.6s
BHH Howats Hill 54.05 27 *eP* **P 22 13 36.4 -1.1**
HPK Haverah Park 54.07 29 *eP* **P 22 13 37.3 -0.4**
HPK IAmb IAmb 22 13 42.0
comp=Z,5µm,2.4s
HPK *e* 22 21 11.4
HPK IAMs_20 IAMs_20 22 30 13.1
comp=Z,26µm,19.3s
TUL1 Leonard 54.10 307 PFAKE 22 13 50.0 +12
TUL1 LR LR
comp=Z,19µm,22.0s
TUL1 Leonard 54.10 307 P **P 22 13 37.8 -0.5**
baz=104,SNR=58
ESK Eskdalemuir 54.20 27 *eP* **P 22 13 38.0 -0.6**
comp=Z,1µm,2.0s
ESK LR LR
comp=Z,30µm,21.0s
ESK Eskdalemuir 54.20 27 *eP* **P 22 13 36.5 -2.1**
ESK IAmb IAmb 22 13 41.4
comp=Z,1µm,2.0s
ESK *e* 22 21 13.2
ESK IAMs_20 IAMs_20 22 29 14.1
comp=Z,200µm,36.1s
ESK Eskdalemuir 54.20 27 *i* P **P 22 13 38.5 -0.1**
BNI Bardonecchia 54.28 41 PFAKE 22 13 50.0 +10
BNI LR LR
comp=Z,42µm,22.0s
EAB Aberfoyle 54.28 25 *eP* **P 22 13 38.1 -1.1**
KVTX Kingsville 54.37 296 PFAKE 22 13 50.0 +10
KVTX LR LR
comp=Z,17µm,19.0s
LMK Market Rasen 54.40 30 *eP* **P 22 13 39.4 -0.7**
LMK IAmb IAmb 22 13 44.3
comp=Z,3µm,1.9s
LMK *e* 22 21 12.3
LMK IAMs_20 IAMs_20 22 29 35.4
comp=Z,37µm,34.6s
EAU Auchinoon 54.43 26 *eP* **P 22 13 40.0 -0.3**
EDMD Edmundbyers 54.45 28 *eP* **P 22 13 39.4 -1.1**
EDMD IAmb IAmb 22 13 43.3
comp=Z,1µm,2.1s
EDMD *e* 22 21 13.6
EDMD IAMs_20 IAMs_20 22 30 21.5
comp=Z,27µm,20.1s
WACR West Acre 54.45 31 *eP* **P 22 13 38.5 -2.0**
WACR IAmb IAmb 22 13 46.1
comp=Z,429nm,1.0s
WACR *e* 22 21 14.7
WACR IAMs_20 IAMs_20 22 30 18.0
comp=Z,26µm,23.8s
TLIG Tlapa 54.48 284 PFAKE 22 13 50.0 +8.5
TLIG LR LR
comp=Z,12µm,21.0s
KPL Plockton 54.52 24 *eP* **P 22 13 39.9 -1.1**
KPL IAmb IAmb 22 13 44.8
comp=Z,2µm,2.1s
KPL IAMs_20 IAMs_20 22 29 46.4
comp=Z,34µm,25.6s
RRH Rhenigidale 54.53 23 *eP* **P 22 13 39.8 -1.2**
F38A Pierce - Schro 54.55 320 P **P 22 13 41.2 -0.2**
baz=114,SNR=44
INVG Invergeldie, C 54.56 25 *eP* **P 22 13 39.7 -1.5**
INVG IAmb IAmb 22 13 43.8
comp=Z,885nm,2.2s
INVG *e* 22 21 15.8
INVG IAMs_20 IAMs_20 22 29 31.5
comp=Z,28µm,23.1s
EBL Broad Law 54.56 26 *eP* **P 22 13 40.0 -1.3**
EDI Edinburgh 54.60 26 *eP* **P 22 13 39.2 -2.3**
EDI IAmb IAmb 22 13 45.5
comp=Z,2µm,2.1s
EDI *e* 22 21 16.2
EDI IAMs_20 IAMs_20 22 30 59.9
comp=Z,30µm,17.5s
E38A The Farm, Brul 54.61 320 PFAKE 22 13 50.0 +8.2
E38A LR LR
comp=Z,36µm,20.0s
E38A The Farm, Brul 54.61 320 P **P 22 13 41.1 -0.7**
baz=115,SNR=21
WHTX Lake Whitney, 54.64 302 PFAKE 22 14 00.0 +18
WHTX LR LR
comp=Z,23µm,18.0s
WHTX Lake Whitney, 54.64 302 P **P 22 13 42.0 -0.3**
baz=100,SNR=20
GDLE Glaisdale, N Y 54.73 29 *eP* **P 22 13 41.4 -1.1**
GDLE IAmb IAmb 22 13 46.5
comp=Z,4µm,2.5s
KAC Achnashellach 54.77 24 *eP* **P 22 13 42.9 +0.1**
RRR Rubha Reidh 54.82 23 *eP* **P 22 13 43.2 +0.1**
ESY Stoneypath 54.84 26 *eP* **P 22 13 41.7 -1.6**
SPMN Marine on St. 54.86 318 PFAKE 22 14 00.0 +16
SPMN LR LR
comp=Z,32µm,20.0s
SPMN Marine on St. 54.86 318 P **P 22 13 43.4 -0.3**
baz=113,SNR=48
F37A Hinrichs Farm, 54.94 319 P **P 22 13 44.3 +0.2**
baz=113,SNR=20
ANGG Ammassalik, Gr 54.96 3 PFAKE 22 14 00.0 +16
ANGG LR LR
comp=Z,28µm,21.0s
EDU Dundee 55.07 26 *eP* **P 22 13 43.9 -1.0**
MDO Dochfour 55.10 24 *eP* **P 22 13 43.9 -1.2**
EYMN Ely 55.15 322 PFAKE 22 14 00.0 +14
EYMN LR LR
comp=Z,21µm,21.0s
EYMN Ely 55.15 322 P **P 22 13 44.7 -1.0**
baz=116,SNR=22
BSKQ Steenkerk 55.19 34 P **P 22 13 44.8 -1.0**
SENIN Lac Senin/Sane 55.20 40 PFAKE 22 14 00.0 +14
SENIN LR LR
comp=Z,35µm,20.0s
DOU Dourbes 55.21 35 ⇑P **P 22 13 45.0 -1.1**
comp=Z,290nm,2.6s
SNF Seneffe 55.23 35 ⇑P **P 22 13 45.1 -1.1**
H09N1 TRISTAN DA CUN 55.41 151 T T 23 13 49.1
SNR=32
RSC Scourie 55.41 23 *eP* **P 22 13 46.2 -1.1**
TRIS Tristan da Cun 55.41 151 PFAKE 22 14 00.0 +12
TRIS LR LR
comp=Z,31µm,21.0s
BMRD Maredsous 55.41 35 P **P 22 13 46.7 -0.7**
comp=Z,239nm,2.1s
UCC Uccle 55.42 34 PFAKE 22 14 00.0 +12
UCC LR LR
comp=Z,22µm,20.0s
UCC Uccle 55.42 34 ⇑P **P 22 13 46.5 -1.1**
comp=Z,268nm,2.4s
H09W1 TRISTAN DA CUN 55.42 151 T T 23 13 35.2
SNR=287
LNIG Linares 55.53 293 PFAKE 22 14 00.0 +11
LNIG LR LR
comp=Z,8µm,20.0s
KSU1 Kansas State U 55.53 310 PFAKE 22 14 00.0 +11
KSU1 LR LR
comp=Z,18µm,18.0s
KSU1 Kansas State U 55.53 310 P **P 22 13 47.5 -1.1**
baz=106,SNR=48
MME1 Meikle Cairn 55.59 25 *eP* **P 22 13 47.2 -1.5**
BGES Gesves 55.62 35 P **P 22 13 48.1 -1.0**
comp=Z,420nm,2.3s
MCD Coleburn Disti 55.65 24 *eP* **P 22 13 48.0 -1.0**
BCLA Clavier 55.76 35 ⇓P **P 22 13 49.5 -0.5**
comp=Z,420nm,2.3s

833A Chaparral WMA, 55.78 297 PFAKE 22 14 00.0 +9.5
833A LR LR
comp=Z,15µm,20.0s
833A Chaparral WMA, 55.78 297 P **P 22 13 50.5 0.0**
baz=96,SNR=28
ECH Echery 55.87 38 PFAKE 22 14 00.0 +9.1
ECH LR LR
comp=Z,18µm,18.0s
WLF Walferdange 55.90 36 PFAKE 22 14 00.0 +8.9
WLF LR LR
comp=Z,120µm,21.0s
WLF Walferdange 55.90 36 ⇑P **P 22 13 49.7 -1.3**
comp=Z,320nm,2.2s
BIGH Upper Bighouse 55.99 23 *eP* **P 22 13 52.1 +0.6**
BIGH IAmb IAmb 22 13 55.4
comp=Z,4µm,2.4s
BIGH IAMs_20 IAMs_20 22 30 27.3
comp=Z,29µm,24.9s
BSTI Sart Tilman 55.99 35 ⇑P **P 22 13 50.9 -0.8**
comp=Z,140nm,2.0s
BORG Borgarnes 56.00 11 P **P 22 13 51.8 +0.3**
comp=Z,65nm,1.0s,baz=168,slow=6.7,SNR=17
BORG Borgarnes 56.00 11 *eP* **P 22 13 52.7 +1.2**
comp=Z,207nm,1.0s
BORG Borgarnes 56.00 11 *i* P **P 22 13 53.0 +1.5**
MLA1 Latheron 56.08 24 *eP* **P 22 13 50.9 -1.2**
BHOU Houvegnez 56.13 35 ⇑P **P 22 13 52.1 -0.7**
comp=Z,376nm,2.6s
BEBN Eben Emael 56.15 35 ⇑P **P 22 13 51.9 -0.9**
comp=Z,431nm,2.6s
WMOK Wichita Mounta 56.23 305 PFAKE 22 14 10.0 +16
WMOK LR LR
comp=Z,29µm,22.0s
WMOK Wichita Mounta 56.23 305 P **P 22 13 52.7 -1.0**
baz=101,SNR=67
MEM Membach 56.25 35 ⇑P **P 22 13 52.8 -0.7**
comp=Z,341nm,2.1s
HGN Heimansgroeve 56.28 35 *eP* **P 22 13 53.0 -0.7**
HGN *eS* **S 22 21 51.1 +8.2**
JCT Junction City 56.39 299 PFAKE 22 14 10.0 +15
JCT LR LR
comp=Z,13µm,18.0s
JCT Junction City 56.39 299 P **P 22 13 54.4 -0.6**
baz=98,SNR=66
VLC Villacollemand 56.42 44 *eP* **P 22 13 55.8 +0.9**
comp=Z,896nm,1.9s
VLC LR LR
comp=Z,10µm,21.0s
SFJD Kangerlussuaq 56.49 356 *eP* **P 22 13 54.6 -0.3**
comp=Z,320nm,0.9s
SFJD Kangerlussuaq 56.49 356 *i* P **P 22 13 55.1 +0.2**
SFJD Kangerlussuaq 56.49 356 *i* P **P 22 13 55.1 +0.2**
TUE Stuetta 56.55 41 PFAKE 22 14 10.0 +14
TUE LR LR
comp=Z,29µm,20.0s
ABTX Abilene, Hawle 56.57 302 PFAKE 22 14 10.0 +14
ABTX LR LR
comp=Z,25µm,19.0s
ABTX Abilene, Hawle 56.57 302 P **P 22 13 55.4 -0.8**
baz=99,SNR=43
HKB Herkenbosch 56.61 35 P **P 22 13 55.0 -1.1**
BFO Black Forest 56.63 38 *eP* **P 22 13 55.9 -0.4**
comp=Z,656nm,1.4s
BFO LR LR
comp=Z,18µm,19.0s
BFO Black Forest 56.63 38 *i* P **P 22 13 55.7 -0.6**
CLTB Caltabellotta 56.64 52 PFAKE 22 14 10.0 +13
CLTB LR LR
comp=Z,19µm,21.0s
GO06 Curarrehue 56.73 206 PFAKE 22 14 10.0 +13
GO06 LR LR
comp=Z,28µm,18.0s
U32A Winter Ranch, 56.73 307 PFAKE 22 14 10.0 +13
U32A LR LR
comp=Z,20µm,19.0s
ECSD EROS Data Cent 56.89 316 PFAKE 22 14 10.0 +12
ECSD LR LR
comp=Z,29µm,22.0s
ECSD EROS Data Cent 56.89 316 P **P 22 13 57.4 -0.8**
baz=108,SNR=53
DAVOX Davos/Dischmat 57.00 41 S **S 22 21 45.3 -7.7**
comp=Z,0.6nm,0.3s,baz=294,slow=20,SNR=1.8
FUORN Ofenpass-Fuorn 57.19 41 PFAKE 22 14 10.0 +9.4
FUORN LR LR
comp=Z,29µm,20.0s
BGNE Belgrade 57.29 313 PFAKE 22 14 10.0 +8.9
BGNE LR LR
comp=Z,54µm,22.0s
BGNE Belgrade 57.29 313 P **P 22 14 00.6 -0.6**
baz=106,SNR=64
PLCA Paso Flores 57.29 205 P **P 22 14 01.8 +0.7**
comp=Z,102nm,0.8s,baz=52,slow=7.4,SNR=226
PLCA S **S 22 21 50.9 -5.8**
comp=Z,1.7nm,0.8s,baz=59,slow=7.9,SNR=2.5
PLCA LR LR 22 40 29.8
comp=Z,23µm,20.4s,baz=52,slow=38
PLCA Paso Flores 57.29 205 *eP* **P 22 14 02.5 +1.4**
WDD Wied Dalam 57.31 54 PFAKE 22 14 10.0 +8.7
WDD LR LR
comp=Z,23µm,20.0s
WTSB Winterswijk 57.32 34 *eP* **P 22 13 59.8 -1.3**
WTSB *eS* **S 22 21 57.9 +1.4**
STU Stuttgart 57.33 38 PFAKE 22 14 10.0 +8.7
STU LR LR
comp=Z,22µm,19.0s
CBKS Cedar Bluff 57.83 309 PFAKE 22 14 20.0 +15
CBKS LR LR
comp=Z,23µm,18.0s
CBKS Cedar Bluff 57.83 309 P **P 22 14 04.7 -0.3**
baz=103,SNR=20
AGMN Agassiz Nation 57.97 321 PFAKE 22 14 20.0 +14
AGMN LR LR
comp=Z,22µm,19.0s
AGMN Agassiz Nation 57.97 321 P **P 22 14 04.6 -1.1**
baz=112,SNR=37
AQU L'Aquila 57.97 47 PFAKE 22 14 20.0 +14
AQU LR LR
comp=Z,14µm,20.0s
AQU L'Aquila 57.97 47 *eP* **P 22 14 05.5 -0.4**
LRW Lerwick 58.13 23 *eP* **P 22 14 05.0 -1.6**
LRW IAmb IAmb 22 14 10.4
comp=Z,3µm,2.5s
LRW *e* 22 22 02.8
LRW IAMs_20 IAMs_20 22 31 25.8
comp=Z,38µm,34.7s
ZAIG Zacatecas 58.27 290 PFAKE 22 14 20.0 +11
ZAIG LR LR
comp=Z,10µm,22.0s
AMTX Amarillo 58.60 304 PFAKE 22 14 20.0 +9.4
AMTX LR LR
comp=Z,27µm,21.0s
AMTX Amarillo 58.60 304 P **P 22 14 09.8 -0.7**
baz=99
SUSD Miller 58.71 316 P **P 22 14 10.0 -1.0**
baz=107,SNR=17
ILULI Ilulissat 58.72 356 *i* P **P 22 14 11.3 +0.7**
ILULI MLR MLR
comp=Z,11µm,16.0s
ILULI Ilulissat 58.72 356 *i* P **P 22 14 11.3 +0.7**
comp=Z,11µm,16.0s
ULM Lac du Bonnet 58.72 323 P **P 22 14 09.2 -1.7**
comp=Z,104nm,0.7s,baz=106,slow=7.0,SNR=67
ULM S **S 22 22 12.6 -2.5**
comp=Z,3.8nm,0.7s,baz=223,slow=18,SNR=1.9
ULM LR LR 22 35 27.6
comp=Z,29µm,21.8s,baz=111,slow=32
ULM Lac du Bonnet 58.72 323 PFAKE 22 14 20.0 +9.1
ULM LR LR
comp=Z,34µm,22.0s
CEL Celeste 58.85 52 PFAKE 22 14 20.0 +7.8
CEL LR LR
comp=Z,14µm,22.0s
GRFO Grafenberg 58.91 38 *eP* **P 22 14 12.8 +0.6**
comp=Z,737nm,1.7s
GRFO LR LR
comp=Z,14µm,22.0s
GRFO Grafenberg 58.91 38 *eP* **P 22 14 12.9 +0.6**
GRFO pmax pmax
comp=Z,737nm,1.7s
GRFO MLR MLR
comp=Z,14µm,22.0s
GRA1 Grafenberg Arr 58.91 38 PFAKE 22 14 20.0 +7.7
GRA1 LR LR
comp=Z,14µm,20.0s
MSTX Muleshoe 59.36 303 PFAKE 22 14 30.0 +14
MSTX LR LR

comp=Z,21µm,21.0s
MSTX Muleshoe 59.36 303 P **P** **22 14 15.4 -0.5**
baz=98,SNR=96
JAVS Javornik 59.44 43 *i* P **P** **22 14 15.3 -0.9**
JAVS *i* 22 14 18.2
JAVS *i* S **S** **22 22 27.3 +2.6**
RIY Rijeka 59.55 43 *eP* **P** **22 14 16.2 -0.6**
NVLJ Novalja 59.60 44 P **P** **22 14 16.0 -1.2**
TXAR Lajitas Array 59.61 298 P **P** **22 14 17.9 +0.3**
comp=Z,42nm,0.7s,baz=122,slow=7.2,SNR=244
TXAR LR LR 22 41 34.6
comp=Z,5µm,19.1s,baz=0.0,slow=38
TXAR PKPPKP P'P'df 22 43 37.2 -12
comp=Z,1.0nm,1.0s,baz=274,slow=3.5,SNR=4.7
CEY Cerknica 59.64 43 *eP* **P** **22 14 16.5 -0.9**
TIP Timpagrande 59.70 51 PFAKE 22 14 30.0 +12
TIP LR LR
comp=Z,16µm,20.0s
TIP Timpagrande 59.70 51 P **P** **22 14 14.4 -3.6**
TIP Timpagrande 59.70 51 ⇑*iP* **P** **22 14 16.6 -1.4**
LJU Ljubljana 59.79 43 *eP* **P** **22 14 17.8 -0.7**
VISS Visnje 59.93 43 *i* P **P** **22 14 18.8 -0.7**
VISS *i* 22 14 21.3
VISS *i* S **S** **22 22 32.2 +1.3**
MATE Matera 59.96 49 ⇑*iP* **P** **22 14 19.0 -0.7**
OGNE Ogallala 60.02 311 PFAKE 22 14 30.0 +10
OGNE LR LR
comp=Z,26µm,21.0s
OGNE Ogallala 60.02 311 P **P** **22 14 20.0 -0.2**
baz=102,SNR=22
KSCO Kaye Shedlock' 60.07 309 PFAKE 22 14 30.0 +9.3
KSCO LR LR
comp=Z,23µm,19.0s
KSCO Kaye Shedlock' 60.07 309 P **P** **22 14 21.1 +0.4**
baz=101
BOJS Bojanci 60.12 43 *i* P **P** **22 14 20.4 -0.4**
BOJS *i* 22 14 22.9
BOJS *eS* **S** **22 22 34.8 +1.4**
GEC2 GERESS Array S 60.13 39 PFAKE 22 14 30.0 +9.1
GEC2 LR LR
comp=Z,20µm,19.0s
GERES GERESS Array B 60.13 39 P **P** **22 14 19.6 -1.3**
comp=Z,42nm,1.1s,baz=254,slow=5.0,SNR=74
GERES S **S** **22 22 31.5 -2.1**
comp=Z,0.3nm,0.5s,baz=54,slow=23,SNR=2.7
GERES LR LR 22 39 07.7
comp=Z,17µm,18.5s,baz=254,slow=35
GERES PKPPKP 22 43 42.5
comp=Z,0.2nm,0.3s,baz=72,slow=4.3,SNR=4.7
KHC Kasperske Hory 60.15 39 PFAKE 22 14 30.0 +9.1
KHC LR LR
comp=Z,7µm,20.0s
KHC Kasperske Hory 60.15 39 *eP* **P** **22 14 19.4 -1.5**
KHC *e* 22 14 23.5
KHC *e* 22 16 31.0
KHC *eS* **S** **22 22 34.3 +0.6**
KHC MLR MLR
comp=Z,17µm,19.3s
MDND Maddock 60.17 319 PFAKE 22 14 30.0 +9.0
MDND LR LR
comp=Z,32µm,20.0s
MDND Maddock 60.17 319 P **P** **22 14 20.1 -1.0**
baz=108,SNR=24
KMY Karmoy 60.20 26 *eP* **P** **22 14 20.0 -1.0**
KMY IVmBBB 22 14 24.2
comp=Z,4µm,2.6s
UDBI Udbina 60.21 45 P **P** **22 14 20.7 -0.8**
STAV Stavanger 60.25 27 *eP* **P** **22 14 20.1 -1.2**
STAV IVmB_BB 22 14 24.6
comp=Z,8µm,2.7s
STAV *eS* **S** **22 22 38.3 +3.8**
STAV IVMs_BB IVMs_BB 22 32 31.9
comp=Z,7µm,24.8s
CRES Cresnjev 60.35 43 *eP* **P** **22 14 21.5 -0.8**
GO07 Milladeo Hill, 60.56 206 *eP* **P** **22 14 23.8 +0.2**
comp=Z,235nm,1.1s
GO07 LR LR
comp=Z,25µm,19.0s
CLL Collm 60.57 37 PFAKE 22 14 40.0 +16
CLL LR LR
comp=Z,26µm,21.0s
CLL Collm 60.57 37 *eP* **P** **22 14 22.0 -1.7**
CLL *i* Pmax 22 14 24.3
comp=Z,658nm,1.6s
CLL *e*Pmax 22 14 28.0
CLL *e*PP **PP** **22 16 34.0 -3.2**
CLL *eS* **S** **22 22 38.0 -0.8**
comp=N,13µm,26.7s
CLL *eS* **S** **22 22 38.0 -0.8**
comp=E,20µm,27.8s
CLL *eS* **S** **22 22 38.0 -0.8**
comp=Z,8µm,21.5s
CLL *e*SS **SS** **22 26 34.0 -3.1**
CLL *e*SSS SSS 22 29 19.0
CLL Lmax 22 37 00.0
CLL Lm MLR 22 38 00.0
comp=N,11µm,18.5s
CLL Lm MLR 22 38 00.0
comp=E,20µm,18.8s
CLL Lm MLR 22 38 00.0
comp=Z,24µm,18.9s
CLL *e*PKPPKPdf 22 43 44.0
comp=Z,32nm,2.0s
CLL Collm 60.57 37 *eP* **P** **22 14 22.0 -1.7**
CLL *eS* **S** **22 22 38.0 -0.8**
CLL pmax pmax
comp=Z,658nm,1.6s
MUD Monsted U'grnd 60.63 30 *i* P **P** **22 14 23.0 -1.0**
MUD MLR MLR
comp=Z,23µm,19.0s
MUD Monsted U'grnd 60.63 30 *i* P **P** **22 14 23.0 -1.0**
comp=Z,23µm,19.0s
BLS5 Blasjo 60.84 26 *eP* **P** **22 14 24.7 -0.7**
BLS5 IVmB_BB 22 14 29.2
comp=Z,5µm,3.5s
BLS5 *eS* **S** **22 22 41.6 -0.5**
BLS5 IVMs_BB IVMs_BB 22 32 49.8
comp=Z,7µm,27.5s
ASK Askoy 60.88 25 *eP* **P** **22 14 24.7 -0.9**
ASK *eS* **S** **22 22 44.4 +1.9**
BER Bergen 60.88 25 *eP* **P** **22 14 24.9 -0.7**
BER IVmB_BB 22 14 29.2
comp=Z,6µm,2.8s
BER *eS* **S** **22 22 42.5 +0.1**
BER IVMs_BB IVMs_BB 22 38 34.7
comp=Z,6µm,13.8s
BRG Berggiesshubel 60.97 37 *i* P **P** **22 14 25.5 -0.9**
comp=Z,1µm,2.1s
BRG PP **PP** **22 16 36.0 -4.7**
BRG S **S** **22 22 40.0 -4.0**
BRG SS SS 22 26 26.0 -17
BRG *e*PKPPKP 22 43 53.4
comp=Z,42nm,1.7s
comp=N,7µm,15.7s
comp=E,17µm,17.7s
comp=Z,22µm,17.9s
BRG Berggiesshubel 60.97 37 *i* P **P** **22 14 25.5 -0.9**
BRG 22 16 36.0
BRG S **S** **22 22 40.0 -4.0**
BRG pmax pmax
comp=Z,1µm,2.1s
BRG pmax pmax
comp=Z,42nm,1.7s
BRG MLR MLR
comp=N,7µm,15.7s
BRG MLR MLR
comp=E,17µm,17.7s
BRG MLR MLR
comp=Z,22µm,17.9s
SUE Sulen 61.02 24 *eP* **P** **22 14 26.6 0.0**
SUE IVmB_BB 22 14 30.3
comp=Z,6µm,2.8s
SUE *eS* **S** **22 22 47.2 +3.0**
SUE IVMs_BB IVMs_BB 22 32 60.0
comp=Z,6µm,26.0s
PRU Pruhonice 61.03 38 *eP* **P** **22 14 25.9 -0.9**
PRU *e* 22 14 34.3
PRU *eS* **S** **22 22 48.0 +3.2**
PRU MLR MLR
comp=Z,21µm,34.9s
PRU Pruhonice 61.03 38 *eP* **P** **22 14 25.9 -0.9**
PRU *ex* x 22 14 34.3
PRU *eS* **S** **22 22 48.0 +3.2**
PRU AMS AMS 22 32 40.0
comp=Z,21µm,34.9s

T25A Trinidad 61.14 307 PFAKE 22 14 40.0 +12
T25A LR LR
comp=Z,13µm,22.0s
T25A Trinidad 61.14 307 P **P** **22 14 28.5 +0.4**
baz=99,SNR=109
SCO Scoresbysund 61.15 8 PFAKE 22 14 40.0 +13
SCO LR LR
comp=Z,16µm,20.0s
SCO Scoresbysund 61.15 8 *i* P **P** **22 14 27.2 0.0**
SCO Scoresbysund 61.15 8 *i* P **P** **22 14 27.2 0.0**
GOPC GO Pecny, Ondr 61.16 38 *eP* **P** **22 14 26.1 -1.6**
GOPC *e* 22 14 31.2
GOPC *eS* **S** **22 22 45.4 -1.1**
GOPC MLR MLR
comp=Z,13µm,20.9s
GOPC GO Pecny, Ondr 61.16 38 *eP* **P** **22 14 26.1 -1.6**
GOPC *ep*P **pP** **22 14 31.2 -1.1**
GOPC *ex* x 22 14 37.4
GOPC *eS* **S** **22 22 45.4 -1.1**
GOPC AMS AMS 22 35 20.0
comp=Z,13µm,20.9s
STON Ston 61.17 47 *eP* **P** **22 14 26.4 -1.5**
ODD1 Odda 61.17 26 *eP* **P** **22 14 27.6 -0.1**
ODD1 IVmB_BB 22 14 31.7
comp=Z,8µm,2.6s
ODD1 *eS* **S** **22 22 45.6 -0.8**
HOMB Homborsund 61.18 28 *eP* **P** **22 14 27.2 -0.4**
HOMB IVmB_BB 22 14 31.8
comp=Z,8µm,2.4s
HOMB IVMs_BB IVMs_BB 22 33 12.3
comp=Z,8µm,38.4s
PVCC Panska Ves 61.23 38 *eP* **P** **22 14 27.8 -0.4**
PVCC *eS* **S** **22 22 47.4 +0.1**
PVCC MLR MLR
comp=Z,15µm,18.0s
PVCC Panska Ves 61.23 38 *eP* **P** **22 14 27.8 -0.4**
PVCC *ex* x 22 14 38.3
PVCC *eS* **S** **22 22 47.4 +0.1**
PVCC AMS AMS 22 38 30.0
comp=Z,15µm,18.0s
BLY Banja Luka 61.25 45 PFAKE 22 14 40.0 +12
BLY LR LR
comp=Z,8µm,20.0s
BLY Banja Luka 61.25 45 ⇓*iP* **P** **22 14 27.5 -1.0**
BLY Banja Luka 61.25 45 *eP* **P** **22 14 27.4 -1.0**
MNTX Cornudas Mount 61.28 300 PFAKE 22 14 40.0 +11
MNTX LR LR
comp=Z,14µm,18.0s
MNTX Cornudas Mount 61.28 300 P **P** **22 14 28.7 -0.2**
baz=95,SNR=123
TREC Trest 61.39 39 *eP* **P** **22 14 31.2 +1.9**
TREC *eS* **S** **22 22 51.2 +1.7**
TREC MLR MLR
comp=Z,17µm,18.5s
TREC Trest 61.39 39 *eP* **P** **22 14 31.2 +1.9**
TREC *eS* **S** **22 22 51.2 +1.7**
TREC AMS AMS 22 38 30.0
comp=Z,17µm,18.5s
BEHE Becsehely 61.41 43 *eP* **P** **22 14 29.9 +0.4**
BEHE Becsehely 61.41 43 IP **P** **22 14 32.1 +2.6**
BEHE EPP 22 16 43.1
BEHE IS 22 22 52.1
RUE Ruedersdorf 61.44 35 *eP* **P** **22 14 29.0 -0.5**
RUE IAmb IAmb 22 14 34.9
comp=Z,1µm,1.5s
FCC Fort Churchill 61.53 332 PFAKE 22 14 40.0 +10
FCC LR LR
comp=Z,25µm,21.0s
SOP Sopron 61.60 41 ⇑IP **P** **22 14 33.0 +2.3**
SOP EPP 22 16 47.1
SOP IS 22 22 57.0
TREB Trebinje 61.60 47 *eP* **P** **22 14 29.1 -1.8**
HCY Herceg Novi 61.65 47 ⇓*iP* **P** **22 14 33.0 +1.8**
HCY Herceg Novi 61.65 47 *eP* **P** **22 14 27.4 -3.8**
HYA Hoyanger 61.66 25 *eP* **P** **22 14 31.5 +0.7**
HYA IVmB_BB 22 14 34.9
comp=Z,5µm,2.7s
HYA *eS* **S** **22 22 55.8 +3.4**
HYA IVMs_BB IVMs_BB 22 35 18.7
comp=Z,5µm,18.0s
BRY Bratogost 61.78 47 ⇓*iP* **P** **22 14 32.8 +0.6**
BRY Bratogost 61.78 47 *eP* **P** **22 14 31.6 -0.6**
KRUC Moravsky 61.89 40 ⇑*iP* **P** **22 14 31.6 -1.1**
KRUC *ep*P **PP** **22 16 47.2 -1.7**
KRUC *eS* **S** **22 22 57.1 +1.3**
SUMG Summit 61.90 1 PFAKE 22 14 50.0 +17
SUMG LR LR
comp=Z,17µm,21.0s
SUMG Summit 61.90 1 ⇑*iP* **P** **22 14 32.2 -0.6**
SUMG MLR MLR
comp=Z,43µm,21.0s
SUMG Summit 61.90 1 ⇑*iP* **P** **22 14 32.2 -0.6**
comp=Z,43µm,21.0s
BUM Brajici-Budva 61.91 48 ⇓*iP* **P** **22 14 33.9 +0.8**
COP Copenhagen 61.94 32 *i* P **P** **22 14 33.2 +0.4**
COP pmax pmax
comp=Z,780nm,1.7s
COP MLR MLR
comp=Z,6µm,17.0s
COP Copenhagen 61.94 32 *i* P **P** **22 14 33.2 +0.4**
comp=Z,777nm,1.7s
comp=Z,6µm,17.0s
RGN Rugen 61.96 33 PFAKE 22 14 50.0 +17
RGN LR LR
comp=Z,16µm,21.0s
RGN Rugen 61.96 33 *eP* **P** **22 14 32.6 -0.4**
RGN IAmb IAmb 22 14 37.2
comp=Z,1µm,1.6s
Q24A Divide 62.00 308 PFAKE 22 14 50.0 +16
Q24A LR LR
comp=Z,20µm,19.0s
Q24A Divide 62.00 308 P **P** **22 14 34.6 +0.6**
baz=99,SNR=37
VLO Vlora 62.01 50 P **P** **22 14 35.5 +1.9**
VLO Vlora 62.01 50 *i* P **P** **22 14 36.5 +2.9**
NKME Niksic 62.05 47 ⇓*iP* **P** **22 14 34.8 +0.9**
VRAC Vranov 62.09 40 ⇑*iP* **P** **22 14 33.3 -0.7**
VRAC Vranov 62.09 40 ⇑*iP* **P** **22 14 33.0 -1.0**
VRAC *ep*P **PP** **22 16 49.1 -1.5**
VRAC *eS* **S** **22 22 59.2 +0.9**
NKY Niksic 62.09 47 ⇓*iP* **P** **22 14 35.3 +1.0**
SDCO Great Sand Dun 62.09 307 PFAKE 22 14 50.0 +15
SDCO LR LR
comp=Z,13µm,19.0s
SDCO Great Sand Dun 62.09 307 P **P** **22 14 35.2 +0.6**
baz=98,SNR=37
UPC Upice 62.09 38 *eP* **P** **22 14 33.3 -0.7**
UPC *eS* **S** **22 22 56.6 -1.7**
UPC MLR MLR
comp=Z,13µm,18.5s
UPC Upice 62.09 38 *eP* **P** **22 14 33.3 -0.7**
UPC *ex* x 22 14 44.1
UPC *eS* **S** **22 22 56.6 -1.7**
UPC AMS AMS 22 39 00.0
comp=Z,13µm,18.5s
ZST Bratislava 62.09 41 *eP* **P** **22 14 32.6 -1.5**
ZST *e* 22 16 49.3
ZST *eS* **S** **22 22 55.3 -3.0**
ZST *e*SS **SS** **22 27 00.3 -0.8**
ZST Bratislava 62.09 41 *eP* **P** **22 14 32.5 -1.5**
ZST *e*PP **PP** **22 16 49.3 -1.4**
ZST *eS* **S** **22 22 55.3 -3.0**
ZST *e*SS **SS** **22 27 00.3 -0.8**
DRME Dracevica, Mon 62.10 48 ⇓*iP* **P** **22 14 35.6 +1.4**
DRME Dracevica, Mon 62.10 48 *eP* **P** **22 14 34.5 +0.3**
ULC Ulcinj 62.10 48 ⇓*iP* **P** **22 14 34.7 +0.4**
UPM Unac-Piva 62.11 47 ⇓*iP* **P** **22 14 35.0 +0.5**
UPM Unac-Piva 62.11 47 *eP* **P** **22 14 34.4 -0.1**
KEK Kerkira 62.11 51 *eP* **P** **22 14 35.0 +0.6**
KEK *eP* **P** **22 14 35.0 +0.6**
KEK Kerkira 62.11 51 P **P** **22 14 35.0 +0.6**
CHVC Chvalec 62.14 38 *eP* **P** **22 14 33.4 -1.0**
RSSD Black Hills 62.16 314 *eP* **P** **22 14 34.4 -0.4**
RSSD LR LR
comp=Z,30µm,21.0s
RSSD Black Hills 62.16 314 *eP* **P** **22 14 34.4 -0.4**
RSSD pmax pmax
comp=Z,74nm,0.9s
RSSD MLR MLR
comp=Z,30µm,21.0s
RSSD Black Hills 62.16 314 P **P** **22 14 34.3 -0.5**
baz=103

PDG Podgorica 62.20 48 ⇓*iP* **P** **22 14 35.0 +0.1**
PDG Podgorica 62.20 48 *eP* **P** **22 14 34.8 -0.1**
TTG Podgorica 62.20 48 ⇓*iP* **P** **22 14 36.1 +1.2**
TTG Podgorica 62.20 48 PFAKE 22 14 50.0 +15
TTG LR LR
comp=Z,12µm,22.0s
OSTC Ostas 62.23 38 *eP* **P** **22 14 34.6 -0.4**
OSTC *eS* **S** **22 23 00.0 -0.1**
OSTC AMS AMS 22 39 00.0
comp=Z,13µm,18.4s
DPC Dobruska-Polom 62.23 38 *eP* **P** **22 14 34.4 -0.6**
DPC *eS* **S** **22 23 00.2 +0.1**
DPC MLR MLR
comp=Z,10µm,17.5s
DPC Dobruska-Polom 62.23 38 *eP* **P** **22 14 34.4 -0.6**
DPC *ex* x 22 14 45.4
DPC *eS* **S** **22 23 00.2 +0.1**
DPC AMS AMS 22 39 10.0
comp=Z,10µm,17.5s
EPT El Paso 62.24 300 PFAKE 22 14 50.0 +14
EPT LR LR
comp=Z,14µm,19.0s
MODS Modra-Piesok 62.25 41 *eP* **P** **22 14 33.5 -1.7**
MODS pmax pmax
comp=Z,822nm,1.7s
MODS Modra-Piesok 62.25 41 *eP* **P** **22 14 33.5 -1.7**
MODS *e*PP **PP** **22 16 47.5 -4.7**
MODS *eS* **S** **22 22 58.5 -1.9**
MODS *e*SS **SS** **22 26 59.5 -4.2**
MODS *eL* L 22 35 50.1
TIH Tihany 62.26 42 ⇑IP **P** **22 14 38.0 +2.8**
TIH EPP 22 16 52.1
TIH IS 22 22 57.0
SKAR Skarslia 62.29 26 *eP* **P** **22 14 34.7 -0.5**
SKAR IVmB_BB 22 14 39.5
comp=Z,6µm,2.6s
SKAR *eS* **S** **22 23 01.2 +0.7**
SKAR IVMs_BB IVMs_BB 22 33 29.6
comp=Z,6µm,31.8s
SRN Sarande 62.29 51 P **P** **22 14 36.1 +0.6**
SRN Sarande 62.29 51 *i* P **P** **22 14 37.7 +2.1**
HAPS Han Pijesak,Bl 62.33 46 *eP* **P** **22 14 33.1 -2.7**
KONO Kongsberg 62.34 27 *eP* **P** **22 14 35.1 -0.3**
comp=Z,342nm,1.4s
KONO LR LR
comp=Z,17µm,21.0s
KONO Kongsberg 62.34 27 *ceP* **P** **22 14 34.2 -1.3**
KONO pmax pmax
comp=Z,489nm,2.5s
KONO Kongsberg 62.34 27 *eP* **P** **22 14 34.8 -0.6**
KONO IVmB_BB 22 14 39.3
comp=Z,5µm,3.0s
KONO *eS* **S** **22 23 02.3 +1.3**
KONO IVMs_BB IVMs_BB 22 33 30.1
comp=Z,6µm,29.5s
KSP Ksiaz 62.37 38 *eP* **P** **22 14 35.3 -0.5**
KSP *eS* **S** **22 23 06.3 +4.6**
KSP LMZ LR 22 34 42.4
comp=Z,17µm,27.0s
KSP Ksiaz 62.37 38 *eP* **P** **22 14 35.3 -0.5**
KSP *eS* **S** **22 23 06.3 +4.6**
KSP MLR MLR
comp=Z,17µm,27.0s
TPE Tepelena 62.37 50 P **P** **22 14 37.0 +0.9**
TPE Tepelena 62.37 50 *i* P **P** **22 14 38.6 +2.6**
TIR Tirane 62.44 49 *eP* **P** **22 14 36.0 -0.5**
comp=Z,272nm,1.2s
TIR Tirane 62.44 49 P **P** **22 14 36.0 -0.5**
TIR Tirane 62.44 49 ⇓*iP* **P** **22 14 37.0 +0.5**
TIR Tirane 62.44 49 *eP* **P** **22 14 36.0 -0.5**
TIR pmax pmax
comp=Z,273nm,1.2s
TIR Tirane 62.44 49 *i* P **P** **22 14 38.5 +1.9**
KOME Kolasin 62.47 47 ⇓*iP* **P** **22 14 37.5 +0.7**
PLE Pljevlja 62.48 47 ⇓*iP* **P** **22 14 37.1 +0.2**
VLS Valsamata 62.48 53 P **P** **22 14 34.3 -2.6**
IGT Igoumenitsa 62.49 51 *eP* **P** **22 14 37.3 +0.4**
IGT Igoumenitsa 62.49 51 P **P** **22 14 37.3 +0.4**
IGT Igoumenitsa 62.49 51 *eP* **P** **22 14 37.3 +0.4**
ISCO Idaho Springs 62.49 309 PFAKE 22 14 50.0 +13
ISCO LR LR
comp=Z,23µm,21.0s
ISCO Idaho Springs 62.49 309 P **P** **22 14 38.0 +0.8**
baz=99,SNR=244
ANMO Albuquerque 62.50 304 PKPPKP **P'P'df** **22 43 40.6 -4.4**
comp=Z,2.5nm,1.0s,baz=213,slow=1.8,SNR=4.5
ANMO Albuquerque 62.50 304 *eP* **P** **22 14 37.9 +0.6**
comp=Z,95nm,1.4s
ANMO LR LR
comp=Z,25µm,20.0s
ANMO Albuquerque 62.50 304 *ceP* **P** **22 14 37.9 +0.6**
ANMO pmax pmax
comp=Z,131nm,1.9s
ANMO Albuquerque 62.50 304 P **P** **22 14 38.0 +0.6**
baz=96
TASM ASL Pad, Albuq 62.50 304 P **P** **22 14 37.9 +0.5**
baz=96,SNR=48
TASM ASL Pad, Albuq 62.50 304 P **P** **22 14 38.0 +0.6**
baz=96,SNR=34
AKN Aaknes 62.53 24 *eP* **P** **22 14 37.0 +0.3**
AKN IVmB_BB 22 14 40.9
comp=Z,7µm,2.6s
AKN *eS* **S** **22 23 05.5 +2.0**
AKN IVMs_BB IVMs_BB 22 36 03.4
comp=Z,6µm,20.6s
PUK Puka 62.59 48 *i* P **P** **22 14 39.5 +1.8**
MORH Mrgy, Hungar 62.60 43 *eP* **P** **22 14 36.6 -0.8**
MORH Mrgy, Hungar 62.60 43 ⇑IP **P** **22 14 39.0 +1.6**
MORH EPP 22 16 57.0
MORH IS 22 22 57.0
BBLS Lazići 62.60 46 *eP* **P** **22 14 37.4 -0.2**
CSKK Cskako 62.62 42 IP **P** **22 14 37.0 -0.6**
CSKK EPP 22 16 58.0
PHWY Pilot Hill 62.62 311 PFAKE 22 14 50.0 +12
PHWY LR LR
comp=Z,24µm,21.0s
LKD2 Lefkada island 62.63 52 P **P** **22 14 38.0 +0.2**
KFL Anninata 62.63 53 P **P** **22 14 35.9 -1.9**
JAVC Velka Javorina 62.64 40 ⇑*iP* **P** **22 14 37.4 -0.4**
JAVC *e*PP **PP** **22 16 51.5 -4.1**
JAVC *eS* **S** **22 23 03.8 -1.5**
PVY Plav 62.74 48 ⇓*iP* **P** **22 14 39.3 +0.6**
IVA Berane 62.75 47 ⇓*iP* **P** **22 14 38.8 +0.1**
STRU Stroemstad 62.77 28 *eP* **P** **22 14 37.9 -0.5**
SRO Srobarova 62.77 42 *eP* **P** **22 14 38.3 -0.3**
SRO Srobarova 62.77 42 *eP* **P** **22 14 38.3 -0.3**
BCI Bajram Curri 62.78 48 *i* P **P** **22 14 35.1 -3.7**
Y22D IRIS PASSCAL I 62.79 303 PFAKE 22 14 50.0 +11
Y22D LR LR
comp=Z,22µm,20.0s
Y22D IRIS PASSCAL I 62.79 303 P **P** **22 14 40.2 +0.9**
baz=96
SRO2 Moca 62.81 42 *eP* **P** **22 14 37.1 -1.8**
SRO2 Moca 62.81 42 *eP* **P** **22 14 37.1 -1.8**
MORC Moravsky Berou 62.81 39 PFAKE 22 14 50.0 +11
MORC LR LR
comp=Z,16µm,19.0s
MORC Moravsky Berou 62.81 39 ⇑*iP* **P** **22 14 38.9 0.0**
MORC Moravsky Berou 62.81 39 ⇑*iP* **P** **22 14 38.3 -0.6**
MORC *e*PP **PP** **22 16 53.2 -3.9**
MORC *eS* **S** **22 23 04.5 -3.0**
N23A Red Feather La 62.92 310 PFAKE 22 14 50.0 +10
N23A LR LR
comp=Z,15µm,19.0s
N23A Red Feather La 62.92 310 P **P** **22 14 40.4 +0.3**
baz=100,SNR=81
PHP Peshkopia 62.93 49 P **P** **22 14 41.0 +1.1**
PHP Peshkopia 62.93 49 *i* P **P** **22 14 42.0 +2.2**
MOL Molde 62.96 24 *eP* **P** **22 14 39.4 -0.2**
MOL IVmB_BB 22 14 43.7
comp=Z,5µm,2.9s
MOL *eS* **S** **22 23 10.3 +1.6**
MOL IVMs_BB IVMs_BB 22 34 50.9
comp=Z,7µm,21.7s
PDO Prodromos 63.01 52 P **P** **22 14 39.0 -1.3**
DIVS Divibare 63.06 46 *eP* **P** **22 14 40.0 -0.7**
OHR Ohrid 63.10 49 *i* P **P** **22 14 44.7 +3.7**
S22A 4UR Ranch, Cre 63.13 307 PFAKE 22 14 50.0 +8.4
S22A LR LR
comp=Z,14µm,22.0s
S22A 4UR Ranch, Cre 63.13 307 P **P** **22 14 42.3 +0.7**
baz=97,SNR=85
RLS Riolos of Patr 63.15 53 P **P** **22 14 43.4 +2.1**

PENT	**Pentalofos**	**63.21**	**50**	P	**P**	**22 14 44.2**	**+2.4**
OKC	**Ostrava-Krasne**	**63.21**	**39**	*e*P	**P**	**22 14 41.7**	**+0.2**
OKC				*e*		22 14 45.7	
OKC				*e*S	**S**	**22 23 12.5**	**+0.2**
OKC				MLR	MLR		
	comp=Z,12μm,18.9s						
OKC	**Ostrava-Krasne**	**63.21**	**39**	*e*P	**P**	**22 14 41.7**	**+0.2**
OKC				*e*pP	**pP**	**22 14 45.7**	**-0.3**
OKC				*e*S	**S**	**22 23 12.5**	**+0.2**
OKC				AMS	AMS	22 39 40.0	
	comp=Z,12μm,18.9s						
MEV	**Metsovon**	**63.21**	**51**	*e*P	**P**	**22 14 44.7**	**+2.8**
MEV	**Metsovon**	**63.21**	**51**	P	**P**	**22 14 44.7**	**+2.8**
PYL	**PYLOS**	**63.23**	**54**	*e*P	**P**	**22 14 41.6**	**-0.2**
PYL	**PYLOS**	**63.23**	**54**	P	**P**	**22 14 41.6**	**-0.2**
PVO	**Paravola**	**63.27**	**52**	P	**P**	**22 14 43.1**	**+1.0**
AMT	**Artemida-Makis**	**63.28**	**53**	P	**P**	**22 14 42.4**	**+0.2**
VYHS	**Vyhne**	**63.29**	**41**	*e*P	**P**	**22 14 41.1**	**-0.9**
VYHS				pmax	pmax		
	comp=Z,316nm,1.8s						
VYHS	**Vyhne**	**63.29**	**41**	*e*P	**P**	**22 14 41.1**	**-0.9**
VYHS				*e*PP	**PP**	**22 16 58.0**	**-3.2**
VYHS				*e*S	**S**	**22 23 14.5**	**+1.1**
VYHS				*e*L	L	22 36 25.6	
DOMB	**Dombas**	**63.29**	**24**	*e*P	**P**	**22 14 41.7**	**-0.1**
DOMB				IVmB_BB		22 14 46.2	
	comp=Z,6μm,2.6s						
DOMB				*e*PP	**PP**	**22 17 02.8**	**+1.8**
DOMB				*e*S	**S**	**22 23 13.2**	**+0.2**
DOMB				IVMs_BB	IVMs_BB	22 34 19.1	
	comp=Z,7μm,30.6s						
DGMT	**Dagmar**	**63.30**	**319**	PFAKE		22 15 00.0	+18
DGMT				LR	LR		
	comp=Z,33μm,22.0s						
DGMT	**Dagmar**	**63.30**	**319**	P	**P**	**22 14 42.0**	**-0.1**
	baz=105,SNR=12						
RAC	**Raciborz**	**63.30**	**39**	*e*P	**P**	**22 14 42.5**	**+0.4**
RAC				*e*S	**S**	**22 23 11.0**	**-2.5**
RAC				MLR	MLR		
	comp=Z,15μm,21.4s						
DRO	**Drossia**	**63.33**	**53**	P	**P**	**22 14 43.4**	**+0.9**
KPRO	**Kipourio**	**63.34**	**51**	P	**P**	**22 14 43.6**	**+1.0**
121A	**Cookes Peak, D**	**63.38**	**301**	P	**P**	**22 14 44.1**	**+0.9**
	baz=94,SNR=75						
ITM	**Ithomi**	**63.41**	**54**	*e*P	**P**	**22 14 42.4**	**-0.6**
ITM				LR	LR		
	comp=Z,8μm,20.0s						
ITM	**Ithomi**	**63.41**	**54**	P	**P**	**22 14 42.4**	**-0.6**
SMCO	**Snowmass**	**63.44**	**308**	PFAKE		22 15 00.0	+16
SMCO				LR	LR		
	comp=Z,19μm,19.0s						
NAO01	**NORSAR Array S**	**63.47**	**26**	*e*P	**P**	**22 14 42.5**	**-0.5**
FNA	**Florina**	**63.48**	**50**	PFAKE		22 15 00.0	+16
FNA				LR	LR		
	comp=Z,7μm,20.0s						
FNA	**Florina**	**63.48**	**50**	P	P	22 14 35.6	-7.9
EFI	**East Falkland**	**63.52**	**191**	*e*P	**P**	**22 14 44.5**	**+1.2**
	comp=Z,365nm,1.4s						
EFI				LR	LR		
	comp=Z,27μm,21.0s						
EFI	**East Falkland**	**63.52**	**191**	*i* P	**P**	**22 14 43.4**	**+0.1**
EFI				pmax	pmax		
	comp=Z,103nm,1.0s						
EVR	**Evrytania**	**63.53**	**52**	P	**P**	**22 14 45.3**	**+1.3**
EFP	**Efpalio**	**63.54**	**52**	P	**P**	**22 14 44.3**	**+0.4**
ANX	**Ano Chora**	**63.58**	**52**	P	**P**	**22 14 44.7**	**+0.4**
LAKA	**Lakka**	**63.58**	**53**	*e*P	**P**	**22 14 45.8**	**+1.6**
LAKA	**Lakka**	**63.58**	**53**	P	**P**	**22 14 45.8**	**+1.6**
K22A	**Casper**	**63.65**	**312**	PFAKE		22 15 00.0	+15
K22A				LR	LR		
	comp=Z,33μm,22.0s						
K22A	**Casper**	**63.65**	**312**	P	**P**	**22 14 44.0**	**-0.8**
	baz=100,SNR=10						
SERG	**Sergoula**	**63.66**	**52**	P	**P**	**22 14 45.7**	**+1.0**
TRIZ	**Trizonia**	**63.67**	**52**	P	**P**	**22 14 45.2**	**+0.5**
GKP	**Gorka Klasztor**	**63.68**	**35**	*e*P	**P**	**22 14 44.4**	**-0.1**
GKP				*e*S	**S**	**22 23 21.7**	**+3.7**
GKP				LMZ	LR	22 37 40.2	
	comp=Z,26μm,22.1s						
GKP	**Gorka Klasztor**	**63.68**	**35**	*e*P	**P**	**22 14 44.4**	**-0.1**
GKP				*e*S	**S**	**22 23 21.7**	**+3.7**
GKP				MLR	MLR		
	comp=Z,26μm,22.0s						
KZN	**Kozani**	**63.70**	**50**	P	**P**	**22 14 44.3**	**-0.7**
NB2	**NORSAR Subarra**	**63.71**	**26**	P	**P**	**22 14 44.0**	**-0.6**
	comp=Z,2μm,2.5s,baz=245,slow=6.9						
NB2	**NORSAR Subarra**	**63.71**	**26**	P	**P**	**22 14 44.0**	**-0.6**
	baz=245,slow=6.9						
NOA	**NORSAR Array B**	**63.71**	**26**	P	**P**	**22 14 43.8**	**-0.8**
	comp=Z,38nm,0.9s,baz=242,slow=7.0,SNR=54						
NOA				S	**S**	**22 23 20.2**	**+2.0**
	comp=Z,0.6nm,0.9s,baz=187,slow=3.8,SNR=2.2						
NOA				LR	LR	22 37 08.4	
	comp=Z,16μm,21.7s,baz=240,slow=31						
SKO	**Skopje**	**63.71**	**48**	*i* P	**P**	**22 14 42.1**	**-2.9**
TRIP	**Tripoli**	**63.72**	**53**	P	**P**	**22 14 46.1**	**+0.9**
KALE	**Kalithea**	**63.72**	**52**	*e*P	**P**	**22 14 45.3**	**+0.1**
KALE	**Kalithea**	**63.72**	**52**	P	**P**	**22 14 45.3**	**+0.1**
THL	**Klokotos Trika**	**63.78**	**51**	P	**P**	**22 14 45.0**	**-0.4**
VLX	**Vlachokerasia**	**63.79**	**54**	*e*P	**P**	**22 14 46.9**	**+1.2**
VLX	**Vlachokerasia**	**63.79**	**54**	P	**P**	**22 14 46.9**	**+1.2**
FFC	**Flin Flon**	**63.82**	**326**	*e*P	**P**	**22 14 44.7**	**-0.7**
	comp=Z,322nm,1.0s						
FFC				LR	LR		
	comp=Z,23μm,19.0s						
FFC	**Flin Flon**	**63.82**	**326**	*i* P	**P**	**22 14 44.8**	**-0.7**
GUR	**Goura**	**63.82**	**53**	*e*P	**P**	**22 14 46.4**	**+0.5**
GUR	**Goura**	**63.82**	**53**	P	**P**	**22 14 46.4**	**+0.5**
PSZ	**Piszkesteto**	**63.83**	**42**	PFAKE		22 15 00.0	+14
PSZ				LR	LR		
	comp=Z,23μm,20.0s						
PSZ	**Piszkesteto**	**63.83**	**42**	⇓*i*P	**P**	**22 14 45.6**	**-0.1**
PSZ	**Piszkesteto**	**63.83**	**42**	⇑IP	**P**	**22 14 48.1**	**+2.3**
PSZ				EPP		22 17 05.1	
JMIC	**Jan Mayen**	**63.85**	**12**	S	**S**	**22 23 22.7**	**+3.1**
	comp=Z,24nm,0.6s,baz=53,slow=16,SNR=2.1						
JMIC	**Jan Mayen**	**63.85**	**12**	IVmB_BB		22 14 50.5	
	comp=Z,5μm,2.7s						
JMIC				*e*S	**S**	**22 23 26.3**	**+6.7**
JMIC				IVMs_BB	IVMs_BB	22 35 23.3	
	comp=Z,6μm,19.7s						
LANS	**Liptovska Anna**	**63.86**	**40**	*e*P	**P**	**22 14 46.1**	**+0.3**
LANS	**Liptovska Anna**	**63.86**	**40**	*e*P	**P**	**22 14 46.1**	**+0.3**
RWWY	**Rawlins**	**63.99**	**311**	PFAKE		22 15 00.0	+13
RWWY				LR	LR		
	comp=Z,33μm,22.0s						
DSF	**Desfina**	**64.03**	**52**	P	**P**	**22 14 48.7**	**+1.5**
THAL	**Thalero**	**64.09**	**53**	P	**P**	**22 14 46.3**	**-1.2**
BANR	**Banloc**	**64.12**	**45**	⇓*i*P	**P**	**22 14 47.8**	**+0.3**
VLI	**Veliai**	**64.16**	**54**	*e*P	**P**	**22 14 48.1**	**+0.1**
VLI	**Veliai**	**64.16**	**54**	P	**P**	**22 14 48.1**	**+0.1**
KTHR	**Kythira**	**64.17**	**55**	P	**P**	**22 14 47.6**	**-0.5**
LAO	**LASA Array**	**64.21**	**317**	PFAKE		22 15 00.0	+12
LAO				LR	LR		
	comp=Z,24μm,20.0s						
LAO	**LASA Array**	**64.21**	**317**	P	**P**	**22 14 48.2**	**-0.1**
	baz=102,SNR=25						
LIT	**Litokhoron**	**64.22**	**51**	PFAKE		22 15 00.0	+12
LIT				LR	LR		
	comp=Z,9μm,20.0s						
LIT	**Litokhoron**	**64.22**	**51**	P	**P**	**22 14 46.7**	**-1.7**
TIM	**Timisoara**	**64.25**	**44**	⇑*i*P	**P**	**22 14 48.8**	**+0.4**
GRG	**Griva**	**64.27**	**50**	P	**P**	**22 14 48.2**	**-0.5**
PROD	**Prodromos**	**64.30**	**53**	P	**P**	**22 14 49.0**	**+0.1**
OJC	**Ojcow**	**64.33**	**39**	*e*P	**P**	**22 14 49.1**	**+0.2**
OJC				*e*S	**S**	**22 23 32.4**	**+6.1**
OJC				LMZ	LR	22 37 53.8	
	comp=Z,16μm,21.2s						
OJC	**Ojcow**	**64.33**	**39**	*e*P	**P**	**22 14 49.1**	**+0.2**
OJC				*e*S	**S**	**22 23 32.4**	**+6.1**
OJC				MLR	MLR		
	comp=Z,16μm,21.2s						
ANKY	**Antikythira Is**	**64.37**	**55**	*e*P	**P**	**22 14 51.5**	**+2.1**
ANKY	**Antikythira Is**	**64.37**	**55**	P	**P**	**22 14 51.5**	**+2.1**
TBLU	**Trondheim**	**64.38**	**24**	*e*P	**P**	**22 14 49.9**	**+1.0**
TBLU				IVmB_BB		22 14 54.0	
	comp=Z,5μm,2.7s						
TBLU				*e*S	**S**	**22 23 30.6**	**+4.3**
TBLU				IVMs_BB	IVMs_BB	22 34 54.6	
	comp=Z,6μm,26.4s						
MVCO	**Mesa Verde**	**64.39**	**306**	PFAKE		22 15 00.0	+10
MVCO				LR	LR		
	comp=Z,17μm,22.0s						
MVCO	**Mesa Verde**	**64.39**	**306**	P	**P**	**22 14 50.4**	**+0.6**
	baz=96,SNR=42						
KRND	**KRANIDI**	**64.40**	**54**	P	**P**	**22 14 48.4**	**-1.1**
KULLO	**Kullorsuaq**	**64.40**	**356**	*i* P	**P**	**22 14 48.0**	**-0.8**
KULLO	**Kullorsuaq**	**64.40**	**356**	*i* P	**P**	**22 14 48.0**	**-0.8**
MDVR	**Moldovita**	**64.40**	**45**	⇑*i*P	**P**	**22 14 49.7**	**+0.2**
LKR	**Lokris**	**64.42**	**52**	P	**P**	**22 14 49.4**	**-0.3**
ATAL	**Atalanti**	**64.44**	**52**	*e*P	**P**	**22 14 49.7**	**-0.1**
ATAL	**Atalanti**	**64.44**	**52**	P	**P**	**22 14 49.7**	**-0.1**
NIE	**Niedzica**	**64.45**	**40**	*e*P	**P**	**22 14 50.3**	**+0.6**
NIE				*e*S	**S**	**22 23 33.5**	**+5.7**
NIE				LMZ	LR	22 36 57.5	
	comp=Z,19μm,27.4s						
NIE	**Niedzica**	**64.45**	**40**	*e*P	**P**	**22 14 50.3**	**+0.6**
NIE				*e*S	**S**	**22 23 33.5**	**+5.7**
NIE				MLR	MLR		
	comp=Z,19μm,27.4s						
VAY	**Valandovo**	**64.45**	**49**	*e*P	**P**	**22 14 49.9**	**+0.1**
VAY	**Valandovo**	**64.45**	**49**	P	**P**	**22 14 49.9**	**+0.1**
VAY	**Valandovo**	**64.45**	**49**	*i* P	**P**	**22 14 49.8**	**-0.1**
VAY	**Valandovo**	**64.45**	**49**	*e*P	**P**	**22 14 49.9**	**+0.1**
FYTO	**Fytoko, Volos**	**64.47**	**51**	*e*P	**P**	**22 14 49.4**	**-0.6**
FYTO	**Fytoko, Volos**	**64.47**	**51**	P	**P**	**22 14 49.4**	**-0.6**
BZS	**Buzias**	**64.50**	**44**	⇑*i*P	**P**	**22 14 50.0**	**0.0**
O20A	**White River Ci**	**64.54**	**309**	PFAKE		22 15 00.0	+9.3
O20A				LR	LR		
	comp=Z,16μm,21.0s						
O20A	**White River Ci**	**64.54**	**309**	P	**P**	**22 14 50.9**	**+0.3**
	baz=98,SNR=50						
319A	**Douglas**	**64.58**	**300**	PFAKE		22 15 00.0	+9.0
319A				LR	LR		
	comp=Z,14μm,19.0s						
VILL	**Villia**	**64.61**	**53**	P	**P**	**22 14 50.6**	**-0.4**
SMIA	**Simia**	**64.61**	**52**	P	**P**	**22 14 51.1**	**+0.1**
PV07	**Paradox Valley**	**64.64**	**307**	PFAKE		22 15 00.0	+8.6
PV07				LR	LR		
	comp=Z,15μm,21.0s						
THE	**Thessaloniki**	**64.65**	**50**	P	**P**	**22 14 51.1**	**0.0**
SIRR	**Siria**	**64.65**	**44**	⇓*i*P	**P**	**22 14 51.5**	**+0.4**
XOR	**Xorichti**	**64.66**	**52**	P	**P**	**22 14 49.1**	**-2.2**
KNT	**Kendrikon**	**64.67**	**50**	P	**P**	**22 14 51.4**	**+0.1**
NEO	**Neokhori**	**64.67**	**52**	P	**P**	**22 14 49.9**	**-1.5**
PV02	**Paradox Valley**	**64.68**	**307**	PFAKE		22 15 00.0	+8.3
PV02				LR	LR		
	comp=Z,17μm,20.0s						
PV13	**Radium Mtn., P**	**64.74**	**307**	PFAKE		22 15 10.0	+18
PV13				LR	LR		
	comp=Z,19μm,22.0s						
PV12	**Saucer Basin,**	**64.75**	**307**	PFAKE		22 15 10.0	+18
PV12				LR	LR		
	comp=Z,23μm,20.0s						
PV22	**Blue Mesa, Par**	**64.76**	**308**	PFAKE		22 15 10.0	+18
PV22				LR	LR		
	comp=Z,16μm,18.0s						
PV11	**David Mesa, Pa**	**64.80**	**307**	PFAKE		22 15 10.0	+18
PV11				LR	LR		
	comp=Z,22μm,21.0s						
PV18	**Skein Mesa, Pa**	**64.82**	**307**	PFAKE		22 15 10.0	+17
PV18				LR	LR		
	comp=Z,17μm,20.0s						
PV16	**Nyswonger Mesa**	**64.83**	**307**	PFAKE		22 15 10.0	+17
PV16				LR	LR		
	comp=Z,18μm,21.0s						
PV04	**Paradox Valley**	**64.84**	**307**	PFAKE		22 15 10.0	+17
PV04				LR	LR		
	comp=Z,20μm,21.0s						
PV17	**East Wray Mesa**	**64.87**	**307**	PFAKE		22 15 10.0	+17
PV17				LR	LR		
	comp=Z,20μm,20.0s						
IMMV	**Iera Moni Meta**	**64.88**	**56**	P	**P**	**22 14 52.8**	**0.0**
MRKA	**Markates**	**64.89**	**52**	P	**P**	**22 14 53.0**	**+0.3**
PV19	**Morning Glory**	**64.89**	**307**	PFAKE		22 15 10.0	+17
PV19				LR	LR		
	comp=Z,16μm,19.0s						
ATH	**Athens Observa**	**64.91**	**53**	P	**P**	**22 14 52.3**	**-0.5**
PV21	**Cone Mtn., Par**	**64.91**	**308**	PFAKE		22 15 10.0	+17
PV21				LR	LR		
	comp=Z,16μm,21.0s						
KKB	**Krupnik**	**64.91**	**49**	*i* P	**P**	**22 14 55.4**	**+2.6**
HERR	**Herculane**	**64.91**	**45**	⇓*i*P	**P**	**22 14 53.3**	**+0.5**
GVD	**Gavdhos**	**64.92**	**57**	*e*P	**P**	**22 14 54.3**	**+1.3**
GVD	**Gavdhos**	**64.92**	**57**	P	**P**	**22 14 54.3**	**+1.3**
PV23	**Carpenter Ridg**	**64.92**	**307**	PFAKE		22 15 10.0	+17
PV23				LR	LR		
	comp=Z,20μm,21.0s						
PV14	**Lion Creek, Pa**	**64.93**	**307**	PFAKE		22 15 10.0	+17
PV14				LR	LR		
	comp=Z,20μm,18.0s						
CHAN	**Chania**	**64.94**	**56**	P	**P**	**22 14 53.1**	**0.0**
PV10	**Paradox Valley**	**64.94**	**307**	PFAKE		22 15 10.0	+17
PV10				LR	LR		
	comp=Z,20μm,22.0s						
VLY	**Voula,Athens**	**64.96**	**53**	*e*P	**P**	**22 14 53.1**	**-0.1**
VLY	**Voula,Athens**	**64.96**	**53**	P	**P**	**22 14 53.1**	**-0.1**
ATHU	**Athens Univers**	**64.96**	**53**	*e*P	**P**	**22 14 53.1**	**-0.1**
ATHU	**Athens Univers**	**64.96**	**53**	P	**P**	**22 14 53.1**	**-0.1**
SOH	**Sokhos**	**64.97**	**50**	P	**P**	**22 14 53.4**	**+0.1**
PLG	**Polygyros**	**64.98**	**50**	P	**P**	**22 14 52.9**	**-0.4**
PTL	**Penteli**	**65.03**	**53**	*e*P	**P**	**22 14 53.7**	**0.0**
PTL	**Penteli**	**65.03**	**53**	P	**P**	**22 14 53.7**	**0.0**
VAM	**Vamos**	**65.06**	**56**	P	**P**	**22 14 54.5**	**+0.6**
EREA	**Eretria**	**65.12**	**53**	P	**P**	**22 14 54.3**	**0.0**
VTS	**Vitosha**	**65.13**	**48**	*e*P	**P**	**22 14 54.7**	**+0.3**
VTS				LR	LR		
	comp=Z,8μm,22.0s						
VTS	**Vitosha**	**65.13**	**48**	P	**P**	**22 14 54.7**	**+0.3**
VTS	**Vitosha**	**65.13**	**48**	⇓*i*P	**P**	**22 14 55.0**	**+0.6**
VTS	**Vitosha**	**65.13**	**48**	*e*P	**P**	**22 14 54.7**	**+0.3**
VTS				MLR	MLR		
	comp=Z,8μm,22.0s						
VTS	**Vitosha**	**65.13**	**48**	*i* P	**P**	**22 14 56.6**	**+2.2**
PUNG	**Punghina**	**65.17**	**46**	⇑*i*P	**P**	**22 14 54.8**	**+0.3**
SRS	**Serrai**	**65.19**	**50**	P	**P**	**22 14 54.1**	**-0.5**
W18A	**Petrified Fore**	**65.20**	**304**	PFAKE		22 15 10.0	+15
W18A				LR	LR		
	comp=Z,21μm,21.0s						
W18A	**Petrified Fore**	**65.20**	**304**	P	**P**	**22 14 55.2**	**+0.1**
	baz=94,SNR=47						
GZR	**Gura Zlata**	**65.25**	**45**	⇓*i*P	**P**	**22 14 54.8**	**-0.3**
MHLO	**Agia Marina, M**	**65.33**	**55**	P	**P**	**22 14 55.2**	**-0.4**
X18A	**Snowflake**	**65.33**	**303**	PFAKE		22 15 10.0	+14
X18A				LR	LR		
	comp=Z,18μm,20.0s						
MMB	**Musomiste**	**65.35**	**49**	*i* P	**P**	**22 14 58.3**	**+2.6**
BEL	**Belsk**	**65.35**	**38**	*e*P	**P**	**22 14 56.9**	**+1.4**
BEL				*e*S	**S**	**22 23 44.0**	**+5.3**
BEL				LMZ	LR	22 37 49.3	
	comp=Z,17μm,23.0s						
BEL	**Belsk**	**65.35**	**38**	*e*P	**P**	**22 14 56.9**	**+1.4**
BEL				*e*S	**S**	**22 23 44.0**	**+5.3**
BEL				MLR	MLR		
	comp=Z,17μm,23.0s						
OUR	**Ouranopolis**	**65.38**	**51**	*e*P	**P**	**22 14 55.2**	**-0.7**
OUR	**Ouranopolis**	**65.38**	**51**	P	**P**	**22 14 55.2**	**-0.7**
OUR	**Ouranopolis**	**65.38**	**51**	*e*P	**P**	**22 14 55.2**	**-0.7**
LPIG	**La Paz**	**65.38**	**292**	LR	LR	22 44 25.6	
	comp=Z,5μm,19.7s,baz=94,slow=37						
NVR	**Nevrokopi**	**65.42**	**49**	P	**P**	**22 14 56.0**	**-0.2**
DEV	**Deva**	**65.43**	**44**	⇑*i*P	**P**	**22 14 56.8**	**+0.7**
SRE	**Strehaia**	**65.43**	**46**	⇑*i*P	**P**	**22 14 56.4**	**+0.3**
SERI	**Serifos**	**65.44**	**54**	P	**P**	**22 14 54.6**	**-1.8**
DRGR		**65.47**	**43**	⇑*i*P	**P**	**22 14 55.6**	**-0.8**
TMBK	**Timbaki Herakl**	**65.49**	**56**	P	**P**	**22 14 58.2**	**+1.5**
SIVA	**Sivas**	**65.53**	**56**	P	**P**	**22 14 56.5**	**-0.4**
UZH	**Uzhgorod**	**65.55**	**41**	*e*P	**P**	**22 14 55.0**	**-1.8**
UZH				*i*		22 14 58.2	
UZH				*e*		22 17 20.2	
UZH				*e*PPP	PPP	22 18 56.2	
UZH				*e*S	**S**	**22 23 36.8**	**-4.5**
UZH				*i* PS		22 24 16.6	
UZH				*i*		22 24 52.2	
UZH				*i* SS	**SS**	**22 27 54.4**	**-0.7**
KOLS	**Kolonicke sedl**	**65.60**	**41**	*e*P	**P**	**22 14 57.2**	**0.0**
KOLS				pmax	pmax		
	comp=Z,449nm,1.7s						
KOLS	**Kolonicke sedl**	**65.60**	**41**	*e*P	**P**	**22 14 57.2**	**0.0**
KOLS				*e*PP	**PP**	**22 17 19.6**	**-1.9**
KOLS				*e*S	**S**	**22 23 42.2**	**+0.2**
KOLS				*e*SS	SS	22 28 11.4	+16
KOLS				*e*L	L	22 37 25.7	
TRPA	**Tarpa**	**65.61**	**42**	⇑*i*P	**P**	**22 14 56.5**	**-0.7**
TRPA	**Tarpa**	**65.61**	**42**	⇑IP	**P**	**22 15 00.0**	**+2.8**
TRPA				EPP		22 17 20.1	
SKY	**Skiros Island**	**65.65**	**52**	*e*P	**P**	**22 14 57.8**	**+0.1**
SKY	**Skiros Island**	**65.65**	**52**	P	**P**	**22 14 57.8**	**+0.1**
NSS	**Namsos**	**65.66**	**23**	*e*P	**P**	**22 14 57.0**	**-0.2**
NSS				IVmB_BB		22 15 01.3	
	comp=Z,6μm,2.7s						
NSS				*e*S	**S**	**22 23 44.1**	**+2.1**
NSS				IVMs_BB	IVMs_BB	22 35 06.1	
	comp=Z,5μm,29.6s						
KLNR	**Kaliningrad**	**65.76**	**35**	*c i*P	**P**	**22 14 57.1**	**-0.9**
KLNR				pmax	pmax		
	comp=Z,1μm,1.6s						
CRAR	**CRAIOVA**	**65.80**	**46**	⇑*i*P	**P**	**22 14 59.1**	**+0.6**
PGB	**Panagyurishte**	**65.80**	**48**	*i* P	**P**	**22 15 01.0**	**+2.3**
BW06	**Boulder Array**	**65.87**	**312**	PFAKE		22 15 10.0	+11
BW06				LR	LR		
	comp=Z,32μm,22.0s						
BW06	**Boulder Array**	**65.87**	**312**	P	**P**	**22 14 58.4**	**-1.0**
	baz=98,SNR=32						
PDAR	**Pinedale Array**	**65.87**	**312**	P	**P**	**22 14 58.5**	**-0.8**
	comp=Z,35nm,1.1s,baz=106,slow=5.4,SNR=120						
PDAR				S	**S**	**22 23 44.0**	**-1.9**
	comp=Z,0.5nm,0.9s,baz=68,slow=24,SNR=2.0						
PDAR				LR	LR	22 40 30.5	
	comp=Z,24μm,21.7s,baz=128,slow=33						
PDAR				PKPPKP		22 43 36.1	
	comp=Z,3.2nm,1.2s,baz=236,slow=1.1,SNR=9.0						
TUC	**Tucson**	**65.91**	**301**	*e*P	**P**	**22 14 59.9**	**+0.4**
	comp=Z,125nm,0.9s						
TUC				LR	LR		
	comp=Z,16μm,20.0s						
TUC	**Tucson**	**65.91**	**301**	*e*P	**P**	**22 14 59.9**	**+0.4**
TUC				pmax	pmax		
	comp=Z,125nm,0.9s						
TUC				MLR	MLR		
	comp=Z,16μm,20.0s						
TUC	**Tucson**	**65.91**	**301**	P	**P**	**22 15 00.2**	**+0.6**
	baz=92						
HSIG		**65.95**	**297**	PFAKE		22 15 10.0	+10
HSIG				LR	LR		
	comp=Z,14μm,19.0s						
LOT	**Lotru**	**65.95**	**45**	⇓*i*P	**P**	**22 15 00.1**	**+0.4**
THAS	**Thassos island**	**65.97**	**50**	P	**P**	**22 14 58.9**	**-0.8**
RLMT	**Red Lodge**	**66.01**	**315**	PFAKE		22 15 10.0	+10
RLMT				LR	LR		
	comp=Z,17μm,21.0s						
RLMT	**Red Lodge**	**66.01**	**315**	P	**P**	**22 14 60.0**	**-0.2**
	baz=99,SNR=16						
KWP	**Kalwaria Pacla**	**66.03**	**40**	*e*P	**P**	**22 15 00.4**	**+0.5**
KWP				*e*S	**S**	**22 23 54.1**	**+7.0**
KWP				LMZ	LR	22 37 46.1	
	comp=Z,32μm,27.8s						
KWP	**Kalwaria Pacla**	**66.03**	**40**	PFAKE		22 15 10.0	+10
KWP				LR	LR		
	comp=Z,167μm,22.0s						
KWP	**Kalwaria Pacla**	**66.03**	**40**	*e*P	**P**	**22 15 00.4**	**+0.5**
KWP				*e*S	**S**	**22 23 54.1**	**+7.0**
KWP				MLR	MLR		
	comp=Z,32μm,27.8s						
IOSP	**Ios island**	**66.04**	**55**	P	**P**	**22 14 59.1**	**-1.1**
CJR	**Cluj-Napoca**	**66.05**	**44**	⇓*i*P	**P**	**22 15 00.1**	**-0.1**
SAP3	**Santorini-Thir**	**66.06**	**55**	P	**P**	**22 15 00.7**	**+0.3**
THR5	**Thira Island,**	**66.06**	**55**	P	**P**	**22 15 00.0**	**-0.4**
LAST	**Lasithi**	**66.08**	**56**	P	**P**	**22 15 00.1**	**-0.5**
SAP4	**Santorini-Oia**	**66.09**	**55**	P	**P**	**22 15 01.0**	**+0.5**
RZN	**Rozhen**	**66.10**	**49**	*i* P	**P**	**22 15 03.4**	**+2.7**
SAP1	**Santorini-Akro**	**66.10**	**55**	P	**P**	**22 15 00.2**	**-0.4**
THR6	**Thira Island,**	**66.10**	**55**	*e*P	**P**	**22 15 00.2**	**-0.4**
THR6	**Thira Island,**	**66.10**	**55**	P	**P**	**22 15 00.2**	**-0.4**
THR3	**Thira Island,**	**66.11**	**55**	*e*P	**P**	**22 14 59.0**	**-1.6**
THR3	**Thira Island,**	**66.11**	**55**	P	**P**	**22 14 59.0**	**-1.6**
CMBO	**Columbo, Santo**	**66.11**	**55**	P	**P**	**22 15 00.2**	**-0.5**
THT1	**Athinios (Pele**	**66.13**	**55**	P	**P**	**22 15 01.5**	**+0.7**
SAP2K	**Karterados**	**66.14**	**55**	P	**P**	**22 15 02.1**	**+1.2**
SANT	**Santorini**	**66.15**	**55**	*e*P	**P**	**22 15 01.2**	**+0.2**
	comp=Z,1μm,1.5s						
SANT				LR	LR		
	comp=Z,11μm,22.0s						
SANT	**Santorini**	**66.15**	**55**	P	**P**	**22 15 01.2**	**+0.2**
BMR	**Baia Mare**	**66.16**	**43**	⇓*i*P	**P**	**22 15 00.3**	**-0.4**
VLAD	**Vladila**	**66.18**	**47**	⇓*i*P	**P**	**22 15 00.9**	**0.0**
NPS	**Neapolis**	**66.20**	**56**	P	**P**	**22 15 00.5**	**-0.8**
LIA	**Limnos Island**	**66.25**	**51**	P	**P**	**22 15 00.8**	**-0.7**
APE	**Apeiranthos**	**66.26**	**54**	*e*P	**P**	**22 15 01.4**	**-0.3**
APE	**Apeiranthos**	**66.26**	**54**	P	**P**	**22 15 01.4**

KONS IVmB_BB 22 15 10.1
comp=Z,5μm,2.8s
IMW Indian Meadow 67.02 313 PFAKE 22 15 20.0 +13
IMW LR LR
comp=Z,60μm,21.0s
PRK Paraskevi 67.02 52 P **P 22 15 06.9 +0.5**
ENEZ Enez 67.07 50 P **P 22 15 07.3 +0.6**
SRIG Santa Rosalia 67.09 295 PFAKE 22 15 20.0 +13
SRIG LR LR
comp=Z,7μm,19.0s
PBUR Paburg 67.09 33 *eP* **P 22 15 05.8 -0.7**
PBUR IAmb IAmb 22 15 11.9
comp=Z,3μm,1.8s
EZN Ezine 67.11 51 P **P 22 15 07.1 +0.1**
EZN Ezine 67.11 51 *eP* **P 22 15 05.8 -1.2**
EZN Ezine 67.11 51 P **P 22 15 05.8 -1.2**
EZN Ezine 67.11 51 ⇓*iP* **P 22 15 07.4 +0.4**
EZN Ezine 67.11 51 *eP* **P 22 15 05.8 -1.2**
DOPR Dopca 67.16 45 ⇑*iP* **P 22 15 07.5 +0.3**
URLA Izmir 67.20 53 P **P 22 15 08.1 +0.4**
HWUT Hardware Ranch 67.21 311 PFAKE 22 15 20.0 +12
HWUT LR LR
comp=Z,25μm,21.0s
WIN Windhoek 67.23 120 PFAKE 22 15 20.0 +12
WIN LR LR
comp=Z,44μm,20.0s
GELI Tayfur-Gelibol 67.28 51 P **P 22 15 08.6 +0.5**
DAG Danmarks Havn 67.29 6 *iP* **P 22 15 06.4 -1.0**
DAG pmax pmax
comp=Z,66nm,0.8s
DAG MLR MLR
comp=Z,21μm,22.0s
DAG Danmarks Havn 67.29 6 *iP* **P 22 15 06.4 -1.0**
comp=Z,89nm,0.8s
comp=Z,19μm,22.0s
SUW Suwalki 67.29 36 *eP* **P 22 15 07.0 -0.7**
SUW *eS* **S 22 24 04.9 +2.7**
SUW LMZ LR 22 39 41.1
comp=Z,21μm,22.5s
SUW Suwalki 67.29 36 PFAKE 22 15 20.0 +12
SUW LR LR
comp=Z,20μm,20.0s
SUW Suwalki 67.29 36 *eP* **P 22 15 07.1 -0.7**
SUW *eS* **S 22 24 04.9 +2.7**
SUW MLR MLR
comp=Z,21μm,22.5s
BURAR Bucovina Array 67.29 43 ⇑*iP* **P 22 15 08.2 +0.1**
SGRR Singureni 67.33 47 ⇓*iP* **P 22 15 08.5 +0.2**
MOR8 Moi Rana 67.34 22 *eP* **P 22 15 08.5 +0.5**
MOR8 IVmB_BB 22 15 12.8
comp=Z,4μm,2.7s
MOR8 *eS* **S 22 24 05.6 +3.1**
MOR8 IVMs_BB IVMs_BB 22 37 02.5
comp=Z,7μm,24.9s
SMG Samos 67.34 54 P **P 22 15 06.8 -1.8**
U15A North Rim 67.36 305 PFAKE 22 15 20.0 +11
U15A LR LR
comp=Z,21μm,21.0s
OZUR 67.45 44 ⇓*iP* **P 22 15 09.3 +0.2**
MLR Muntele Rosu 67.47 45 S **S 22 24 04.4 -0.6**
comp=Z,1.0nm,1.0s,baz=211,slow=18,SNR=2.2
MLR Muntele Rosu 67.47 45 PFAKE 22 15 20.0 +11
MLR LR LR
comp=Z,17μm,21.0s
MLR Muntele Rosu 67.47 45 ⇓*iP* **P 22 15 08.7 -0.7**
KARP Karpathos 67.48 56 *eP* **P 22 15 09.2 -0.3**
comp=Z,2μm,1.4s
KARP LR LR
comp=Z,10μm,22.0s
KARP Karpathos 67.48 56 P **P 22 15 09.2 -0.3**
LPK Lapseki 67.50 51 P **P 22 15 10.0 +0.6**
DKL Dikili 67.50 52 P **P 22 15 10.1 +0.6**
SECR 67.50 46 ⇓*iP* **P 22 15 09.1 -0.3**
NISR Nisiros 67.51 55 *eP* **P 22 15 09.1 -0.5**
NISR Nisiros 67.51 55 P **P 22 15 09.1 -0.5**
BLCB Balcova 67.55 53 P **P 22 15 10.2 +0.4**
JMB Yambol 67.57 48 *iP* **P 22 15 11.7 +1.9**
SULR 67.58 46 ⇑*iP* **P 22 15 09.7 -0.2**
214A Organ Pipe Nat 67.61 300 P **P 22 15 11.4 +1.0**
baz=91,SNR=48
EDRB Edirne 67.62 49 P **P 22 15 09.8 -0.4**
EDRB Edirne 67.62 49 P **P 22 15 08.4 -1.8**
BODT Bodrum 67.68 54 P **P 22 15 10.1 -0.6**
BODT Bodrum 67.68 54 *eP* **P 22 15 08.7 -2.0**
BODT Bodrum 67.68 54 P **P 22 15 08.7 -2.0**
SLIT Slitere, Latvi 67.72 32 *eP* **P 22 15 08.7 -1.8**
SLIT IAmb IAmb 22 15 15.0
comp=Z,2μm,1.3s
BOZ Bozeman (W) 67.73 315 PFAKE 22 15 20.0 +9.0
BOZ LR LR
comp=Z,12μm,22.0s
BOZ Bozeman (W) 67.73 315 P **P 22 15 10.7 -0.4**
baz=98,SNR=58
BIZ Bicaz 67.78 44 ⇑*iP* **P 22 15 11.1 -0.1**
Y14A Wickenburg 67.83 302 PFAKE 22 15 20.0 +8.2
Y14A LR LR
comp=Z,18μm,19.0s
RKY Sarkoy-Tekirda 67.84 50 P **P 22 15 11.8 +0.1**
ISR Istrita 67.84 46 ⇓*iP* **P 22 15 11.0 -0.6**
DAT Datca 67.88 55 P **P 22 15 11.1 -1.0**
PRAR RASCA 67.93 43 ⇓*iP* **P 22 15 12.0 -0.1**
LOF Lofoten 67.93 20 *eP* **P 22 15 11.8 +0.1**
LOF IVmB_BB 22 15 15.6
comp=Z,6μm,2.7s
LOF *eS* **S 22 24 12.5 +3.1**
LOF IVMs_BB IVMs_BB 22 36 25.4
comp=Z,5μm,33.9s
LEHL Lehliu 67.96 46 ⇑*iP* **P 22 15 12.5 +0.2**
PLOR Plostina 68.01 45 ⇓*iP* **P 22 15 12.7 +0.1**
DUG Dugway, Tooele 68.03 309 PFAKE 22 15 30.0 +17
DUG LR LR
comp=Z,20μm,18.0s
DUG Dugway, Tooele 68.03 309 P **P 22 15 13.3 +0.3**
baz=94,SNR=28
GO10 Punta Arenas 68.06 198 PFAKE 22 15 30.0 +17
GO10 LR LR
comp=Z,79μm,18.0s
VRI Vrincioaia 68.07 45 ⇓*iP* **P 22 15 12.6 -0.4**
PABE Paberze 68.08 34 *eP* **P 22 15 12.2 -0.6**
PABE IAmb IAmb 22 15 17.9
comp=Z,2μm,1.8s
TESR Tescani 68.10 44 ⇑*iP* **P 22 15 12.9 -0.2**
PGOR Pogoanele 68.13 46 ⇓*iP* **P 22 15 12.4 -0.9**
RASA Rasa 68.17 47 ⇑*iP* **P 22 15 12.9 -0.7**
GRER 68.18 45 ⇑*iP* **P 22 15 13.4 -0.2**
PHSR Pinarhisar 68.18 49 ⇓*iP* **P 22 15 13.8 +0.1**
AYDB Zeytinkoy-Aydi 68.19 53 P **P 22 15 14.1 0.0**
ARG Arkhangelos 68.29 55 *eP* **P 22 15 13.6 -0.9**
ARG Arkhangelos 68.29 55 P **P 22 15 13.6 -0.9**
BALB Balikesir 68.29 52 P **P 22 15 14.6 +0.1**
BALB Balikesir 68.29 52 PFAKE 22 15 30.0 +16
BALB LR LR
comp=Z,35μm,21.0s
CRLT Corlu 68.30 50 P **P 22 15 14.7 +0.2**
EDC Edincik 68.33 51 P **P 22 15 14.9 +0.2**
AMRR Amara 68.34 46 ⇑*iP* **P 22 15 14.6 -0.1**
PETR Petresti 68.40 45 ⇑*iP* **P 22 15 14.3 -0.7**
STEI Steigen 68.41 20 *eP* **P 22 15 14.6 -0.1**
STEI IVmB_BB 22 15 18.7
comp=Z,4μm,2.7s
STEI *eS* **S 22 24 17.5 +2.4**
STEI *eSS* **SS 22 28 42.6 +4.1**
STEI IVMs_BB IVMs_BB 22 40 17.9
comp=Z,5μm,17.8s
113A Mohawk Valley, 68.44 301 PFAKE 22 15 30.0 +15
113A LR LR
comp=Z,12μm,20.0s
YER Yerkesik 68.46 54 P **P 22 15 14.8 -0.9**
YER Yerkesik 68.46 54 *eP* **P 22 15 13.4 -2.3**
YER Yerkesik 68.46 54 P **P 22 15 13.4 -2.3**
YER Yerkesik 68.46 54 *eP* **P 22 15 13.4 -2.3**
W13A Hualapai Mount 68.59 304 PFAKE 22 15 30.0 +13
W13A LR LR
comp=Z,21μm,22.0s
ICOR Ion Corvin 68.62 47 ⇑*iP* **P 22 15 15.9 -0.5**
KCTX Karacabey (Bur 68.70 51 P **P 22 15 16.6 -0.5**
BIR Birlad 68.74 44 ⇓*iP* **P 22 15 16.5 -0.6**
DALY Dalyan (Mula) 68.74 55 P **P 22 15 16.7 -0.6**
HARR Harsova 68.77 46 ⇓*iP* **P 22 15 15.6 -1.8**
PDMCI Parker Dam,Lak 68.78 303 P **P 22 15 18.6 +0.9**
baz=91,SNR=54
IAS Iasi 68.81 43 ⇓*iP* **P 22 15 17.6 +0.1**
KULA Kula-Manisa 68.83 53 P **P 22 15 18.1 +0.1**

KULA Kula-Manisa 68.83 53 P **P 22 15 16.6 -1.4**
TLB Topalu 68.84 46 ⇓*iP* **P 22 15 16.7 -1.1**
PSN Preselentsi 68.86 47 *iP* **P 22 15 19.1 +1.2**
CTKS Kestanelik-??a 68.89 50 P **P 22 15 17.9 -0.2**
CFR Carcaliu 68.97 46 ⇑*iP* **P 22 15 17.0 -1.6**
MFTR Murfatlar 69.07 47 ⇓*iP* **P 22 15 19.9 +0.7**
FETY Fethiye 69.08 55 P **P 22 15 18.6 -0.9**
FETY Fethiye 69.08 55 *eP* **P 22 15 21.6 +2.1**
FETY Fethiye 69.08 55 P **P 22 15 21.6 +2.1**
BGKT Bogazkoy 69.08 50 P **P 22 15 19.2 -0.2**
Y12C Blythe 69.09 302 PFAKE 22 15 30.0 +10
Y12C LR LR
comp=Z,14μm,20.0s
Y12C Blythe 69.09 302 P **P 22 15 20.6 +1.1**
baz=91,SNR=30
TIRR Tirgusor 69.09 46 PFAKE 22 15 30.0 +11
TIRR LR LR
comp=Z,22μm,22.0s
TIRR Tirgusor 69.09 46 ⇓*iP* **P 22 15 18.5 -0.8**
ARMT Armutlu 69.11 51 P **P 22 15 19.0 -0.6**
MANR Mangalia 69.16 47 ⇓*iP* **P 22 15 20.0 +0.2**
NEE2 Needles Airpor 69.19 303 P **P 22 15 20.7 +0.5**
baz=91
ISAL Salakas 69.29 34 *eP* **P 22 15 19.9 -0.5**
ISAL IAmb IAmb 22 15 26.0
comp=Z,292nm,1.8s
ISK Istanbul-Kandi 69.29 50 P **P 22 15 20.2 -0.5**
ISK Istanbul-Kandi 69.29 50 P **P 22 15 19.3 -1.4**
KAVV Kandilli-Istan 69.29 50 P **P 22 15 20.3 -0.4**
KLYT Kilyos 69.29 50 ⇓*iP* **P 22 15 20.3 -0.3**
IIGN Ignalina 69.30 35 *eP* **P 22 15 20.1 -0.3**
IIGN IAmb IAmb 22 15 26.1
comp=Z,368nm,1.8s
BUY Buyukada 69.32 50 P **P 22 15 20.3 -0.5**
GLA Glamis 69.33 301 PFAKE 22 15 30.0 +8.9
GLA LR LR
comp=Z,13μm,18.0s
GLA Glamis 69.33 301 P **P 22 15 21.9 +0.8**
baz=90,SNR=12
IZAR Zarasai 69.39 34 *eP* **P 22 15 20.6 -0.4**
IZAR IAmb IAmb 22 15 26.6
comp=Z,265nm,1.7s
KSL Kastellorizon 69.47 55 P **P 22 15 21.9 +0.1**
MSO Missoula 69.47 316 PFAKE 22 15 30.0 +8.2
MSO LR LR
comp=Z,26μm,20.0s
MSO Missoula 69.47 316 P **P 22 15 21.7 -0.1**
baz=96,SNR=33
AKAS Kas 69.49 55 P **P 22 15 21.9 -0.3**
HLID Hailey 69.49 313 PFAKE 22 15 30.0 +7.9
HLID LR LR
comp=Z,40μm,22.0s
HLID Hailey 69.49 313 P **P 22 15 22.3 +0.2**
baz=95,SNR=31
YLV Yalova 69.50 51 P **P 22 15 21.6 -0.5**
YLV Yalova 69.50 51 ⇓*iP* **P 22 15 20.9 -1.1**
TVSB Tavsanli 69.50 52 P **P 22 15 22.3 +0.1**
NACGM Naroch 69.53 35 *eP* **P 22 15 22.0 +0.2**
NACGM *eP* **pP 22 15 24.0 -2.5**
NACGM *e*PcP PcP 22 16 04.0 +19
NACGM *e*PP **PP 22 17 54.0 -1.5**
NACGM *e*PPP PPP 22 19 48.0
NACGM *eS* **S 22 24 28.0 -0.8**
NACGM *e*PS **PnS 22 24 54.0 -1.2**
NACGM *e*SS SS 22 28 44.0 -12
NACGM *e*SSS SSS 22 32 10.0
NACGM *e*LQ LQ 22 36 48.0
NACGM *e*LR LR 22 41 07.0
NACGM LRM MLR 22 43 42.0
comp=Z,21nm,17.0s
IDID Didziasalis 69.58 35 *eP* **P 22 15 21.9 -0.3**
IDID IAmb IAmb 22 15 27.7
comp=Z,220nm,1.4s
LDFC Landfair 69.60 303 PFAKE 22 15 40.0 +17
LDFC LR LR
comp=Z,22μm,20.0s
IRM Iron Mountain 69.61 302 P **P 22 15 23.9 +1.1**
baz=91,SNR=41
MILM Milestii Mici 69.62 44 ⇑*iP* **P 22 15 20.8 -1.8**
KIS Kishinev 69.64 44 *eP* **P 22 15 20.5 -2.2**
comp=Z,3μm,2.3s
KIS Kishinev 69.64 44 *e*PcP PcP 22 15 37.0 -8.6
KIS *eS* **S 22 24 22.5 -7.9**
KIS Kishinev 69.64 44 *eP* **P 22 15 20.5 -2.2**
KIS *eS* **S 22 24 22.5 -7.9**
KIS pmax pmax
comp=Z,3μm,2.3s
KIS pmax pmax
comp=Z,3μm,15.0s
SHPR Sheep Range 69.67 305 PFAKE 22 15 40.0 +17
SHPR LR LR
comp=Z,21μm,22.0s
WALA Waterton Lakes 69.71 318 PFAKE 22 15 40.0 +17
WALA LR LR
comp=Z,36μm,20.0s
HRT Hereke 69.74 50 P **P 22 15 22.9 -0.6**
SILT Sile 69.74 50 P **P 22 15 24.1 +0.7**
SILT Sile 69.74 50 ⇓*iP* **P 22 15 22.8 -0.6**
ELL Elmali 69.75 55 P **P 22 15 24.7 +1.0**
ADVT Abdulvahap 69.77 51 P **P 22 15 23.3 -0.3**
BC3 Big Chuckawall 69.86 302 P **P 22 15 25.3 +0.8**
baz=90,SNR=24
ELK Elko 69.91 309 PFAKE 22 15 40.0 +15
ELK LR LR
comp=Z,19μm,20.0s
GMRC Granite Mounta 70.04 303 P **P 22 15 26.4 +0.8**
baz=91,SNR=81
R11A Troy Canyon, C 70.07 307 PFAKE 22 15 40.0 +14
R11A LR LR
comp=Z,12μm,21.0s
R11A Troy Canyon, C 70.07 307 P **P 22 15 26.4 +0.6**
baz=92,SNR=63
MICGM Minsk 70.09 36 ⇓*iP* **P 22 15 25.0 -0.3**
MICGM ⇓*iP* **P 22 15 25.0 -0.3**
MICGM PM 22 15 26.0
comp=N,0.5nm,1.6s
MICGM PM 22 15 26.0
comp=Z,2.4nm,1.5s
MICGM PM 22 15 26.0
comp=Z,7.2nm,6.0s
MICGM PM 22 15 27.0
comp=E,0.5nm,2.0s
MICGM *e*PcP **PcP 22 15 44.0 -3.3**
MICGM *e*PP **PP 22 18 04.0 +3.7**
MICGM *e*PPP PPP 22 19 32.0
MICGM *e*PsP 22 21 00.0
MICGM *eS* **S 22 24 36.0 +0.6**
MICGM SM 22 24 38.0
comp=E,4.9nm,16.0s
MICGM SM 22 24 39.0
comp=N,5.6nm,18.0s
MICGM *eSS* SS 22 28 46.0 -19
MICGM *e*SSS SSS 22 32 28.0
MICGM *e*LQ LQ 22 36 32.0
MICGM LQM 22 41 24.0
comp=E,15nm,16.0s
MICGM LQM 22 41 28.0
comp=E,11nm,18.0s
MICGM *e*LR LR 22 42 40.0
MICGM LRM MLR 22 45 26.0
comp=Z,25nm,18.0s
MICGM LRM MLR 22 45 28.0
comp=Z,31nm,18.0s
MICGM LRM MLR 22 45 32.0
comp=E,15nm,18.0s
MICGM LRM MLR 22 45 38.0
comp=E,11nm,17.0s
MNK Minsk 70.09 36к *iP* **P 22 15 25.0 -0.3**
MNK *e* 22 15 44.0
MNK *e* 22 18 04.0
MNK *eS* **S 22 24 36.0 +0.6**
MNK pmax pmax
comp=N,490nm,1.6s
MNK pmax pmax
comp=Z,2μm,1.5s
MNK pmax pmax
comp=Z,7μm,6.0s
MNK pmax pmax
comp=E,480nm,2.0s
MNK smax smax
comp=E,5μm,16.0s
MNK smax smax
comp=N,6μm,18.0s
MNK MLR MLR

comp=E,15μm,18.0s
MNK MLR MLR
comp=Z,31μm,18.0s
KORT Korkueli 70.11 55 P **P 22 15 26.8 +0.8**
SWSC Sam W. Stewart 70.15 301 P **P 22 15 27.0 +0.9**
baz=90,SNR=29
VSU Vasula 70.21 32 *ceP* **P 22 15 24.7 -1.3**
VSU pmax pmax
comp=Z,142nm,1.0s
VSU Vasula 70.21 32 *eP* **P 22 15 24.9 -1.1**
VSU IAmb IAmb 22 15 29.6
comp=Z,941nm,1.4s
SAUV Serdivan-Sakar 70.23 51 P **P 22 15 26.1 -0.4**
RES Resolute Bay 70.27 347 PFAKE 22 15 40.0 +14
RES LR LR
comp=Z,10μm,18.0s
ISP Isparta 70.27 54 PFAKE 22 15 40.0 +13
ISP LR LR
comp=Z,8μm,19.0s
TUQ Turquoise Moun 70.27 304 P **P 22 15 27.7 +0.7**
baz=91,SNR=10
SHUT Suhut-Afyon 70.31 53 P **P 22 15 27.4 +0.2**
BELC Belle Mtn. Jos 70.32 302 P **P 22 15 28.4 +1.1**
baz=90,SNR=47
AKASG Malin Array Be 70.34 40 P **P 22 15 25.9 -0.9**
comp=Z,71nm,0.8s,baz=262,slow=5.6,SNR=46
AKASG S **S 22 24 31.6 -6.8**
comp=Z,0.3nm,0.4s,baz=215,slow=35,SNR=3.0
AKASG LR LR 22 43 14.1
comp=Z,13μm,21.6s,baz=265,slow=33
AKASG Malin Array Be 70.34 40 P **P 22 15 26.0 -0.9**
AKBB Malin Array Si 70.34 40 PFAKE 22 15 40.0 +13
AKBB LR LR
comp=Z,17μm,22.0s
TRO Tromso 70.35 19 *eP* **P 22 15 26.6 0.0**
TRO IVmBBB 22 15 30.7
comp=Z,6μm,2.8s
TRO IVmBBB 22 15 33.4
comp=Z,15nm,0.0s
TRO *eS* **S 22 24 40.4 +2.5**
TRO *eSS* **SS 22 29 12.4 +4.1**
TRO IVMs_BB IVMs_BB 22 37 30.7
comp=Z,6μm,27.8s
GULT Gulveren 70.36 51 P **P 22 15 27.4 0.0**
IKP In-Ko-Pah, Jac 70.41 301 P **P 22 15 28.9 +1.1**
baz=90,SNR=28
SRCK Saricakaya, Es 70.43 51 P **P 22 15 27.5 -0.2**
TPNV Topopah Spring 70.56 305 PFAKE 22 15 40.0 +11
TPNV LR LR
comp=Z,18μm,21.0s
TPNV Topopah Spring 70.56 305 P **P 22 15 30.0 +1.2**
baz=91,SNR=36
FINES FINESS Array B 70.56 28 P **P 22 15 27.3 -0.8**
comp=Z,65nm,1.0s,baz=270,slow=3.4,SNR=87
FINES LR LR 22 41 24.0
comp=Z,11μm,21.8s,baz=256,slow=32
FINES PKP2ab 22 43 23.4
comp=Z,1.6nm,0.9s,baz=96,slow=9.8,SNR=5.3
SHOC Shoshone, Teco 70.56 304 P **P 22 15 29.6 +1.0**
baz=91,SNR=9.2
HEC Hector,Ludlow 70.60 303 P **P 22 15 30.0 +1.1**
baz=90,SNR=51
MONP2 Monument Peak 70.67 301 P **P 22 15 30.7 +1.1**
baz=90,SNR=70
PFO Pinyon Flats O 70.70 302 LR LR 22 46 22.8
comp=Z,12μm,18.4s,baz=104,slow=36
PFO Pinyon Flats O 70.70 302 *eP* **P 22 15 30.9 +1.2**
comp=Z,108nm,0.9s
PFO LR LR
comp=Z,13μm,19.0s
PFO Pinyon Flats O 70.70 302 *eP* **P 22 15 30.9 +1.2**
PFO pmax pmax
comp=Z,108nm,0.9s
PFO MLR MLR
comp=Z,13μm,19.0s
PFO Pinyon Flats O 70.70 302 P **P 22 15 30.7 +1.1**
baz=90,SNR=50
KIF Kilpisjarvi 70.72 20 *eP* **P 22 15 28.8 -0.1**
PLID Pearl Lake 70.74 314 PFAKE 22 15 40.0 +10
PLID LR LR
comp=Z,28μm,20.0s
MDUB Mudurnu 70.88 51 P **P 22 15 30.4 -0.2**
MDUB Mudurnu 70.88 51 PFAKE 22 15 40.0 +9.4
MDUB LR LR
comp=Z,27μm,22.0s
BAR Barrett 70.89 301 PFAKE 22 15 40.0 +9.3
BAR LR LR
comp=Z,10μm,19.0s
GSC Goldstone, Bar 70.99 304 PFAKE 22 15 40.0 +8.7
GSC LR LR
comp=Z,16μm,20.0s
GSC Goldstone, Bar 70.99 304 P **P 22 15 32.3 +1.0**
baz=90,SNR=58
FURC Furnace Creek, 71.04 305 P **P 22 15 32.8 +1.4**
baz=90,SNR=18
BBRC Big Bear Solar 71.08 303 P **P 22 15 33.1 +1.0**
baz=90
SVRH Sivrihisar-ESK 71.10 52 P **P 22 15 31.8 -0.1**
RRX Edison Barstow 71.14 303 P **P 22 15 33.5 +1.3**
baz=90,SNR=5.6
109C Camp Elliot, M 71.25 301 P **P 22 15 33.8 +1.0**
baz=89,SNR=8.3
CPE Camp Elliot 71.25 301 PFAKE 22 15 50.0 +17
CPE LR LR
comp=Z,12μm,19.0s
MURC Murrieta 71.31 302 P **P 22 15 34.2 +1.0**
baz=89,SNR=23
KIZT Kizilcal 71.36 53 P **P 22 15 33.7 +0.2**
BMN Battle Mountai 71.40 309 PFAKE 22 15 50.0 +16
BMN LR LR
comp=Z,15μm,19.0s
GRAC Grapevine Rang 71.45 305 P **P 22 15 35.1 +1.1**
baz=90,SNR=9.0
HEF Hetta 71.50 21 *eP* **P 22 15 32.9 -0.8**
MPMC Manual Prospec 71.55 304 P **P 22 15 35.8 +1.0**
baz=90,SNR=38
KTK1 Kautokeino 71.55 20 *eP* **P 22 15 33.5 -0.4**
DAC Darwin (Calif) 71.63 305 PFAKE 22 15 50.0 +15
DAC LR LR
comp=Z,24μm,22.0s
BMO Blue Mountains 71.65 314 PFAKE 22 15 50.0 +15
BMO LR LR
comp=Z,26μm,20.0s
F10A Beach Ranch, E 71.66 315 PFAKE 22 15 50.0 +15
F10A LR LR
comp=Z,14μm,18.0s
BFSC Mount Baldy Ra 71.69 303 P **P 22 15 36.3 +0.6**
baz=89,SNR=58
LRMC Laurel Mtn Rad 71.70 304 P **P 22 15 36.3 +0.6**
baz=90,SNR=15
PPCY Paphos 71.71 57 P **P 22 15 37.8 +2.3**
KONT Konya--Tatoy 71.72 54 P **P 22 15 35.6 0.0**
NEW Newport 71.75 317 PFAKE 22 15 50.0 +14
NEW LR LR
comp=Z,1052μm,21.0s
NEW Newport 71.75 317 P **P 22 15 35.0 -0.7**
baz=94,SNR=73
ALFC Alefka 71.91 56 P **P 22 15 39.1 +2.3**
EDW2 Edwards Air Fo 71.96 303 P **P 22 15 38.0 +0.8**
baz=89,SNR=82
CWC Cottonwood Cre 72.02 305 P **P 22 15 38.3 +0.6**
baz=90
MWC Mount Wilson 72.02 303 PFAKE 22 15 50.0 +12
MWC LR LR
comp=Z,17μm,19.0s
KVN Kaiserville 72.05 308 PFAKE 22 15 50.0 +12
KVN LR LR
comp=Z,13μm,21.0s
LOD Lodumlu 72.06 52 P **P 22 15 37.9 +0.2**
ANTO Ankara 72.09 52 *eP* **P 22 15 40.1 +2.2**
comp=Z,1μm,2.0s
ANTO LR LR
comp=Z,5μm,20.0s
ANTO Ankara 72.09 52 ⇓*iP* **P 22 15 37.0 -0.8**
ANTO Ankara 72.09 52 *eP* **P 22 15 40.1 +2.2**
ANTO pmax pmax
comp=Z,1μm,2.0s
ANTO MLR MLR
comp=Z,5μm,20.0s
NV11 Mina Array Sit 72.09 307 PFAKE 22 15 50.0 +12
NV11 LR LR
comp=Z,1μm,19.0s
PASC Pasadena Art C 72.13 302 PFAKE 22 15 50.0 +12
PASC LR LR
comp=Z,15μm,19.0s
TIN Tinemaha, Big 72.14 306 P **P 22 15 38.8 +0.5**

baz=90
CHBY Cihanbeyli 72.15 53 P **P 22 15 38.2 -0.1**
SZAC Souni 72.15 57 P **P 22 15 40.8 +2.5**
LEF Lefka 72.15 57 P **P 22 15 37.8 -0.4**
LEF Lefka 72.15 57 ⇓*i*P **P 22 15 37.1 -1.1**
NVAR Mina Array Bea 72.21 307 P **P 22 15 38.5 -0.3**
comp=Z,17nm,0.8s,baz=85,slow=6.3,SNR=34
NVAR S **S 22 24 56.9 -4.2**
comp=Z,0.4nm,0.8s,baz=64,slow=2.1,SNR=2.2
NVAR PKP2ab 22 43 16.2
comp=Z,0.3nm,0.5s,baz=222,slow=2.0,SNR=3.6
NVAR LR LR 22 46 17.7
comp=Z,10μm,19.6s,baz=103,slow=35
FMP Fort Macarthur 72.23 302 P **P 22 15 39.3 +0.6**
baz=89
HAMF Hammerfest 72.23 19 *e*P **P 22 15 37.8 -0.2**
HAMF IVmB_BB 22 15 42.2
comp=Z,5μm,2.7s
HAMF *e*S **S 22 25 01.9 +2.3**
HAMF *e*SS **SS 22 29 42.0 +4.8**
HAMF IVMs_BB IVMs_BB 22 38 24.4
comp=Z,5μm,27.0s
KULU Kulu 72.24 52 P **P 22 15 38.8 0.0**
DECC Green Verdugo 72.25 303 P **P 22 15 39.1 +0.2**
baz=89
YKA Yellowknife Ar 72.26 332 P **P 22 15 36.8 -1.5**
comp=Z,57nm,1.0s,baz=102,slow=6.0,SNR=118
YKA PKPPKP 22 43 24.4
comp=Z,0.1nm,0.4s,baz=282,slow=1.7,SNR=5.1
YKA LR LR 22 45 38.0
comp=Z,2μm,19.0s,baz=98,slow=34
PUL Pulkovo 72.28 31 *i*P **P 22 15 37.4 -1.0**
PUL pmax pmax
comp=Z,191nm,1.4s
TEKE Tekeli-Mersin 72.33 55 P **P 22 15 38.9 -0.3**
E09A Wood Farm, Sta 72.33 315 PFAKE 22 15 50.0 +11
E09A LR LR
comp=Z,21μm,21.0s
CIS Catalina Islan 72.34 302 P **P 22 15 40.3 +0.9**
baz=89,SNR=18
ISA Isabella, Lake 72.35 304 PFAKE 22 15 50.0 +11
ISA LR LR
comp=Z,16μm,20.0s
ISA Isabella, Lake 72.35 304 P **P 22 15 40.8 +1.4**
baz=89,SNR=48
RYN Ryan 72.38 307 PFAKE 22 15 50.0 +10
RYN LR LR
comp=Z,14μm,21.0s
BERE Bereket-Mersin 72.41 55 P **P 22 15 40.1 +0.2**
BJO Bjornoya 72.41 14 *e*P **P 22 15 39.6 +0.6**
BJO IVmB_BB 22 15 43.7
comp=Z,4μm,2.5s
BJO *e*S **S 22 25 05.7 +4.0**
BJO IVMsBB 22 38 56.7
comp=Z,4μm,18.8s
J08A Circle Bar Ran 72.43 312 PFAKE 22 15 50.0 +10
J08A LR LR
comp=Z,35μm,22.0s
SCI2 San Clemente I 72.46 301 P **P 22 15 41.5 +1.4**
baz=88,SNR=12
ARE0 ARCESS Array S 72.48 20 PFAKE 22 15 50.0 +10
ARE0 LR LR
comp=Z,600nm,20.0s
ARE0 ARCESS Array S 72.48 20 *e*P **P 22 15 38.6 -0.9**
ARCES ARCESS Array B 72.48 20 P **P 22 15 38.2 -1.3**
comp=Z,32nm,0.8s,baz=248,slow=5.1,SNR=55
ARCES LR LR 22 42 18.1
comp=Z,11μm,19.6s,baz=248,slow=32
C09A Chrisman Ranch 72.49 317 PFAKE 22 15 50.0 +10
C09A LR LR
comp=Z,38μm,20.0s
CSS Mathiatis 72.52 57 *e*P **P 22 15 43.0 +2.6**
comp=Z,440nm,1.4s
CSS LR LR
comp=Z,7μm,22.0s
CSS Mathiatis 72.52 57 P **P 22 15 42.8 +2.4**
CSS Mathiatis 72.52 57 P **P 22 15 43.0 +2.6**
CSS Mathiatis 72.52 57 P **P 22 15 39.9 -0.5**
comp=Z,59nm,1.7s
WVOR Wild Horse Val 72.52 311 PFAKE 22 15 50.0 +10
WVOR LR LR
comp=Z,23μm,19.0s
OSI Osito Audit: C 72.57 303 *e*P **P 22 15 41.4 +0.6**
OSI LR LR
comp=Z,18μm,20.0s
OSI Osito Audit: C 72.57 303 P **P 22 15 41.2 +0.4**
baz=89
TEVE Tevekalti-Mers 72.59 55 P **P 22 15 40.9 0.0**
MLAC Mammoth, Mammo 72.62 306 P **P 22 15 42.3 +1.0**
baz=90,SNR=7.2
SULT Sultanhani-AKS 72.64 53 P **P 22 15 41.3 +0.1**
ARVC Arvin 72.65 304 P **P 22 15 42.3 +1.1**
baz=89,SNR=12
AKKU Akkuyu-Mersin 72.68 55 P **P 22 15 41.2 -0.1**
CANT Cankiri 72.73 51 P **P 22 15 41.8 +0.1**
HSPB Hornsund (broa 72.74 12 *e*P **P 22 15 42.4 +1.5**
HSPB IVmB_BB 22 15 46.7
comp=Z,4μm,2.5s
HSPB *e*S **S 22 25 09.5 +4.1**
HSPB *e*SS **SS 22 29 50.2 +5.5**
HSPB IVMs_BB IVMs_BB 22 38 39.0
comp=Z,6μm,28.6s
BRTR Keskin Array B 72.74 52 P **P 22 15 40.9 -1.0**
comp=Z,26nm,1.0s,baz=258,slow=5.3,SNR=42
BRTR LR LR 22 47 34.0
comp=Z,4μm,20.5s,baz=261,slow=36
OMMB Old Mammoth Mi 72.76 306 PFAKE 22 15 50.0 +7.8
OMMB LR LR
comp=Z,18μm,21.0s
IKL Isikli 72.79 55 P **P 22 15 41.9 -0.1**
KEBE Keben-Mersin 72.81 55 P **P 22 15 42.7 +0.5**
ILGA Ilgaz 72.81 50 PFAKE 22 15 50.0 +7.7
ILGA LR LR
comp=Z,6μm,20.0s
MDPB Devils Postpil 72.82 306 PFAKE 22 16 00.0 +18
MDPB LR LR
comp=Z,16μm,20.0s
VES Vestal, Richgr 72.84 304 P **P 22 15 42.6 +0.3**
baz=89,SNR=12
G08A Pilot Rock 72.84 314 PFAKE 22 15 50.0 +7.7
G08A LR LR
comp=Z,20μm,19.0s
SEVA Sevastopol 72.86 47 ⇓*i*P **P 22 15 41.6 -0.6**
BLG Laguna Peak, P 72.86 302 P **P 22 15 42.6 +0.1**
baz=88
YAYX Yaylak 72.87 53 P **P 22 15 42.4 -0.2**
ITZ Itezhi-Tezhi 72.88 110 ⇓*i*P **P 22 15 41.9 -1.1**
ITZ *i*S **S 22 25 07.1 -2.1**
D08A Wollman Farm, 72.89 316 PFAKE 22 15 50.0 +7.6
D08A LR LR
comp=Z,32μm,22.0s
YERR Yerington 72.94 308 PFAKE 22 16 00.0 +17
YERR LR LR
comp=Z,14μm,20.0s
E08A Dider Farm, El 72.96 315 PFAKE 22 16 00.0 +17
E08A LR LR
comp=Z,22μm,21.0s
BZK Bozkurt 73.04 49 ⇑*i*P **P 22 15 43.1 -0.2**
PAHR Pah Rah Range 73.05 308 PFAKE 22 16 00.0 +16
PAHR LR LR
comp=Z,19μm,20.0s
VOG Valley Oaks Go 73.08 305 P **P 22 15 43.2 -0.5**
baz=89
KBS Kingsbay 73.09 9 *e*P **P 22 15 44.2 +1.2**
comp=Z,332nm,1.1s
KBS Kingsbay 73.09 9*ce*P **P 22 15 43.1 +0.1**
KBS pmax pmax
comp=Z,2μm,2.5s
KBS Kingsbay 73.09 9 *e*P **P 22 15 45.8 +2.8**
KBS IVmB_BB 22 15 48.8
comp=Z,3μm,2.2s
KBS *e*S **S 22 25 11.6 +2.2**
KBS *e*SS **SS 22 29 48.1 -2.0**
KBS IVMs_BB IVMs_BB 22 42 12.4
comp=Z,4μm,16.1s
PHNC Paralimni 73.09 57 P **P 22 15 46.3 +2.5**
WAKR Walker 73.10 307 PFAKE 22 16 00.0 +16
WAKR LR LR
comp=Z,19μm,22.0s
KIZK Mersin 73.15 55 P **P 22 15 44.3 +0.2**
SIM Simferopol' 73.18 46*ce*P **P 22 15 45.0 +0.8**
SIM *e* 22 18 30.0
SIM *e*PPP PPP 22 20 17.0
SIM *e*S **SS 22 29 54.0 +1.1**
SIM pmax pmax
comp=Z,750nm,2.4s
SIM pmax pmax
comp=Z,1μm,9.3s
EREN Erenkoy 73.19 56 P **P 22 15 44.9 +0.5**
I07A Izee 73.20 313 PFAKE 22 16 00.0 +16
I07A LR LR
comp=Z,40μm,20.0s
PNTR Pine Nut 73.22 308 PFAKE 22 16 00.0 +15
PNTR LR LR
comp=Z,18μm,19.0s
VCNR Virginia City 73.26 308 PFAKE 22 16 00.0 +15
VCNR LR LR
comp=Z,18μm,19.0s
SNCC San Nicolas Is 73.27 302 *e*P **P 22 15 45.7 +0.8**
comp=Z,181nm,1.0s
SNCC LR LR
comp=Z,8μm,22.0s
SNCC San Nicolas Is 73.27 302 P **P 22 15 45.9 +1.0**
baz=88,SNR=12
HAWA Hanford 73.28 315 PFAKE 22 16 00.0 +15
HAWA LR LR
comp=Z,20μm,21.0s
SCZ2 Santa Cruz Isl 73.34 302 P **P 22 15 46.0 +0.7**
baz=88,SNR=11
SBC Santa Barbara 73.39 303 P **P 22 15 46.4 +0.8**
baz=88
PKM Mcpherson Peak 73.46 303 P **P 22 15 47.5 +1.2**
baz=88,SNR=70
SPA0 Spitsbergen Ar 73.47 11 *e*P **P 22 15 46.0 +0.8**
SPA0 IVmBBB 22 15 50.4
comp=Z,2μm,2.2s
SPITS Spitsbergen Ar 73.47 11 P **P 22 15 45.2 0.0**
comp=Z,40nm,1.1s,baz=128,slow=9.3,SNR=1.3
F07A Phinny Hill Vi 73.54 315 PFAKE 22 16 00.0 +14
F07A LR LR
comp=Z,15μm,18.0s
KZIT Kziot 73.54 61 P **P 22 15 46.7 +0.1**
comp=Z,526nm,1.1s
SMMC Simmler 73.60 304 P **P 22 15 48.0 +1.1**
baz=88,SNR=10
RUBR Rubicon Trail 73.65 308 PFAKE 22 16 00.0 +13
RUBR LR LR
comp=Z,16μm,19.0s
MOD Modoc Plateau 73.75 311 PFAKE 22 16 00.0 +12
MOD LR LR
comp=Z,19μm,20.0s
PAGB Antelope Grade 73.79 304 PFAKE 22 16 00.0 +12
PAGB LR LR
comp=Z,12μm,21.0s
BEKR Beckworth 73.80 308 PFAKE 22 16 00.0 +12
BEKR LR LR
comp=Z,14μm,20.0s
MBAR Mbarara 73.81 94 *e*P **P 22 15 49.2 +0.5**
comp=Z,588nm,1.6s
MBAR LR LR
comp=Z,15μm,20.0s
MBAR Mbarara 73.81 94*d i*P **P 22 15 48.6 -0.1**
MBAR pmax pmax
comp=Z,212nm,1.3s
CMB Columbia Colle 73.85 307 PFAKE 22 16 00.0 +12
CMB LR LR
comp=Z,20μm,22.0s
KARA Karaisali 73.87 54 P **P 22 15 48.3 -0.1**
AMAZ Amatzia 73.96 60 P **P 22 15 49.1 +0.1**
comp=Z,354nm,1.3s
DIKM Dikmen 73.97 50 P **P 22 15 48.8 -0.1**
DIKM Dikmen 73.97 50 ⇑*i*P **P 22 15 49.0 +0.1**
G06A Carlson Farm, 74.03 314 PFAKE 22 16 00.0 +11
G06A LR LR
comp=Z,19μm,20.0s
EIL Elat 74.09 62 P P 22 16 00.0 +10
LTY Liberty 74.09 316 PFAKE 22 16 00.0 +10
LTY LR LR
comp=Z,22μm,20.0s
HRFI Mount Harif 74.14 62 P **P 22 15 50.0 -0.1**
comp=Z,675nm,1.7s
SUR Sutherland 74.15 128 *e*P **P 22 15 50.4 +0.2**
comp=Z,136nm,1.0s
SUR LR LR
comp=Z,25μm,21.0s
AQBJ Aqaba 74.17 62 P **P 22 15 51.1 +0.8**
comp=Z,228nm,1.2s
K05A Summer Lake 74.19 311 PFAKE 22 16 00.0 +10
K05A LR LR
comp=Z,20μm,21.0s
PINE Pine Mountain 74.23 313 PFAKE 22 16 00.0 +9.4
PINE LR LR
comp=Z,42μm,22.0s
C06D Leavenworth 74.26 317 P **P 22 15 49.2 -1.2**
baz=91
AFDM Forest Hills D 74.29 308 PFAKE 22 16 00.0 +9.2
AFDM LR LR
comp=Z,14μm,21.0s
BEYL Beirut 74.33 58 *e*P **P 22 15 52.0 +0.8**
MMLI Mount Malkishu 74.34 59 P **P 22 15 52.0 +0.7**
comp=Z,348nm,1.7s
DQRL Deir Qamar 74.41 58 *e*P **P 22 15 51.0 -0.7**
CEYT Ceyhan 74.43 54 P **P 22 15 51.4 -0.2**
J05D Fort Rock, OR 74.44 312 P **P 22 15 52.7 +0.9**
baz=90,SNR=31
LISJ El Lisan 74.45 60 P **P 22 15 52.9 +1.1**
comp=Z,279nm,1.5s
BNN Bunyan 74.46 53 P **P 22 15 52.1 +0.2**
BHL Bhannes 74.47 58 *e*P **P 22 15 50.4 -1.7**
KOZT Kozan 74.48 54 P **P 22 15 51.6 -0.3**
G05D Wamic, OR 74.51 314 P **P 22 15 52.5 +0.5**
baz=90,SNR=7.4
QRWL Qaraoun 74.51 58 *e*P **P 22 15 52.0 -0.3**
I05D Terrebonne, OR 74.52 313 P **P 22 15 53.3 +1.2**
baz=90,SNR=24
HOPEN Hopen 74.53 13 IVmB_BB 22 15 56.0
comp=Z,4μm,2.5s
HOPEN *e*S **S 22 25 31.2 +5.6**
SHBL Chebaa 74.57 58 *e*P **P 22 15 52.2 -0.5**
KVT Kavak 74.57 50 P **P 22 15 52.2 -0.2**
KARJ 74.61 61 P **P 22 15 53.5 +0.7**
comp=Z,859nm,0.9s
F05D White Salmon 74.61 315 P **P 22 15 53.2 +0.7**
baz=90,SNR=15
SHMJ Saham 74.62 59 P **P 22 15 53.2 +0.4**
RCY Rachaya 74.64 58 *e*P **P 22 15 53.1 0.0**
JDRJ Daraweish 74.64 61 P **P 22 15 54.2 +1.0**
comp=Z,617nm,1.6s
B06A Marblemount 74.67 317 PFAKE 22 16 10.0 +17
B06A LR LR
comp=Z,31μm,20.0s
ORV Oroville 74.69 308 PFAKE 22 16 10.0 +17
ORV LR LR
comp=Z,14μm,19.0s
WALJ Wala 74.72 60 P **P 22 15 54.7 +1.3**
comp=Z,162nm,1.0s
SAO San Andreas Ge 74.73 305 PFAKE 22 16 10.0 +17
SAO LR LR
comp=Z,18μm,21.0s
RPN Rapa Nui 74.73 238 LR LR 22 46 02.1
comp=Z,5μm,21.1s,baz=66,slow=34
RPN Rapa Nui 74.73 238 *e*P **P 22 15 50.0 -3.5**
comp=Z,632nm,0.9s
RPN Rapa Nui 74.73 238 *e*P **P 22 15 50.0 -3.5**
RPN pmax pmax
comp=Z,631nm,0.9s
LSZ Lusaka 74.76 109 *e*P **P 22 15 54.2 +0.2**
comp=Z,439nm,1.5s
LSZ LR LR
comp=Z,17μm,22.0s
K04D Chiloquin, OR 74.83 311 P **P 22 15 54.4 +0.4**
baz=89
LON Longmire 74.86 316 PFAKE 22 16 10.0 +16
LON LR LR
comp=Z,30μm,22.0s
M04C Macdoel 74.90 310 P **P 22 15 55.2 +0.7**
baz=89,SNR=39
O03E Paynes Creek 74.90 309 P **P 22 15 54.0 -0.5**
baz=89,SNR=26
TOKT Tokat 74.96 51 P **P 22 15 54.5 -0.2**
D05A Enumclaw 74.99 316 PFAKE 22 16 10.0 +15
D05A LR LR
comp=Z,22μm,21.0s
HSUJ Al Zarqa 75.01 60 P **P 22 15 57.0 +1.8**
comp=Z,358nm,2.1s
B05A Bryant 75.07 317 P **P 22 15 53.0 -2.1**
baz=91,SNR=5.8
J04D Umpqua Nationa 75.08 312 P **P 22 15 56.0 +0.4**
baz=89,SNR=14
H04A Detroit Lake 75.12 313 PFAKE 22 16 10.0 +14
H04A LR LR
comp=Z,25μm,21.0s
OBN Obninsk 75.15 36 P **P 22 15 53.9 -1.4**
comp=Z,7.3nm,0.7s,baz=112,slow=3.9
OBN S **S 22 25 33.9 +0.8**
comp=Z,4.1nm,0.5s,baz=90,slow=20,SNR=2.0
OBN Obninsk 75.15 36 *e*P **P 22 15 55.1 -0.3**
comp=Z,1μm,1.8s
OBN LR LR
comp=Z,16μm,18.0s
OBN Obninsk 75.15 36 ⇑*i*P **P 22 15 55.3 -0.1**
OBN Obninsk 75.15 36*ce*P **P 22 15 55.1 -0.3**
OBN *e* 22 16 07.5
OBN *e* 22 18 42.9
OBN *i*S **S 22 25 35.9 +2.8**
OBN *e*SS **SS 22 30 25.3 +3.1**
OBN pmax pmax
comp=Z,774nm,1.8s
L04D Klamath Falls 75.24 311 P **P 22 15 56.5 +0.1**
baz=89,SNR=31
I04A Tendick Farm, 75.30 313 P **P 22 15 56.4 -0.2**
baz=89,SNR=24
KMRS Kahramanmaras 75.33 54 P **P 22 15 57.6 +0.7**
E04D Cinebar 75.38 315 P **P 22 15 56.1 -0.8**
baz=90
LVZ Lovozero 75.39 22 *e*P **P 22 15 56.5 -0.1**
comp=Z,81nm,0.8s
LVZ LR LR
comp=Z,15μm,20.0s
LVZ Lovozero 75.39 22*ce*P **P 22 15 56.5 -0.1**
LVZ pmax pmax
comp=Z,240nm,2.5s
WDC Whiskeytown Da 75.46 309 PFAKE 22 16 10.0 +12
WDC LR LR
comp=Z,10μm,21.0s
A04D Lummi Island 75.48 318 P **P 22 15 56.1 -1.4**
baz=90,SNR=12
H04D Lebanon 75.52 313 P **P 22 15 57.6 -0.2**
baz=89,SNR=8.2
D04E Lakebay 75.52 316 P **P 22 15 57.0 -0.7**
baz=90
ANN Anapa 75.54 46 *e*P **P 22 15 56.0 -1.8**
ANN *e* 22 18 51.8
ANN *e*PPP PPP 22 20 31.8
ANN *e*S **S 22 25 37.3 -0.6**
ANN pmax pmax
comp=E,78nm,1.8s
ANN pmax pmax
comp=Z,481nm,1.7s
ANN pmax pmax
comp=N,164nm,1.8s
ANN pmax pmax
comp=N,650nm,4.0s
ANN pmax pmax
comp=Z,2μm,4.0s
ANN pmax pmax
comp=E,940nm,8.0s
ANN smax smax
comp=Z,2μm,10.8s
ANN smax smax
comp=E,4μm,10.8s
ANN smax smax
comp=N,1μm,10.8s
YBH Yreka Blue Hor 75.56 310 LR LR 22 46 35.6
comp=N,12μm,21.8s,baz=88,slow=34
YBH Yreka Blue Hor 75.56 310 PFAKE 22 16 10.0 +12
YBH LR LR
comp=Z,14μm,19.0s
N02D Trinity Center 75.57 310 P **P 22 15 57.6 -0.7**
baz=88,SNR=12
GAZ Gaziantep 75.59 54 P **P 22 15 59.3 +0.9**
ASF Jabal al Asfar 75.60 59 P **P 22 15 59.4 +0.8**
comp=Z,264nm,2.1s
O02D Mt. Diablo Mer 75.66 309 P **P 22 15 58.1 -0.7**
baz=88,SNR=11
M02C Callahan 75.67 310 P **P 22 15 58.4 -0.5**
baz=88,SNR=24
F04D Rainier, OR 75.69 315 P **P 22 15 58.1 -0.6**
baz=89
CUKAN kangal_SIVAS 75.70 52 *i*P **P 22 15 59.9 +0.8**
HUMO Hull Mountain 75.72 311 PFAKE 22 16 10.0 +11
HUMO LR LR
comp=Z,20μm,22.0s
GDXM Geysers 75.72 307 PFAKE 22 16 10.0 +11
GDXM LR LR
comp=Z,18μm,19.0s
D03D Eldon 75.74 316 P **P 22 15 58.1 -0.9**
baz=90,SNR=11
DARE Darende-Malaty 75.75 53 P **P 22 15 59.7 +0.4**
MOS Moscow 75.78 35 *e*P **P 22 15 58.7 -0.3**
MOS *e* 22 16 10.5
MOS *e* 22 18 46.0
MOS *e*S **S 22 25 38.4 -1.7**
MOS *e* 22 26 07.7
MOS *e*SS **SS 22 30 29.6 -2.1**
MOS pmax pmax
comp=Z,868nm,2.0s
MOS pmax pmax
comp=Z,4μm,2.8s
MOS pmax pmax
comp=E,2μm,3.6s
MOS pmax pmax
comp=N,1μm,3.6s
MCCM Marconi Confer 75.81 307 PFAKE 22 16 10.0 +10
MCCM LR LR
comp=Z,14μm,20.0s
G03D McMinnville, O 75.88 314 P **P 22 16 00.5 +0.7**
baz=89,SNR=14
CUZAR Zara_SIVAS 75.92 51 *i*P **P 22 16 00.1 -0.2**
COR Corvallis 75.92 313 *e*P **P 22 16 01.4 +1.3**
comp=Z,155nm,1.2s
COR LR LR
comp=Z,26μm,22.0s
COR Corvallis 75.92 313 *e*P **P 22 16 01.4 +1.3**
COR pmax pmax
comp=Z,155nm,1.2s
COR MLR MLR
comp=Z,26μm,22.0s
HOPS Hopland Field 75.92 308 PFAKE 22 16 10.0 +10
HOPS LR LR
comp=Z,15μm,20.0s
PGC Sidney 75.97 318 PFAKE 22 16 10.0 +10
PGC LR LR
comp=Z,34μm,20.0s
I03D Drain, OR 75.98 312 P **P 22 16 00.7 +0.3**
baz=88,SNR=14
AKCD Akcadag 76.10 53 *i*P **P 22 16 01.6 +0.2**
AKCD IAML_P
comp=Z,48nm,0.2s
HEKM Malatya_Hekimh 76.11 52 *i*P **P 22 16 03.3 +1.8**
HEKM IAML_P
comp=Z,89nm,0.1s
L02E Cave Junction 76.21 311 P **P 22 16 02.0 +0.2**
baz=88,SNR=17
SUSE Susehri 76.23 51 *i*P **P 22 16 05.9 +3.7**
SUSE IAML_P
comp=Z,6nm,0.7s
K02D Willamette Mer 76.24 311 P **P 22 16 02.4 +0.3**
baz=88,SNR=31
NLWA Neilton Lookou 76.27 316 PFAKE 22 16 10.0 +8.0
NLWA LR LR
comp=Z,28μm,20.0s
KCPM Cahto Peak 76.29 308 PFAKE 22 16 10.0 +7.6
KCPM LR LR
comp=Z,12μm,20.0s
BOSA Boshof 76.29 123 P **P 22 16 01.7 -0.9**
comp=Z,144nm,1.0s,baz=290,slow=6.7,SNR=25
BOSA S **S 22 25 41.5 -5.5**
comp=Z,2.0nm,0.9s,baz=87,slow=18,SNR=1.7
BOSA LR LR 22 42 37.5
comp=Z,26μm,21.8s,baz=288,slow=30
I02D Swisshome 76.33 313 P **P 22 16 02.7 +0.3**
baz=88,SNR=6.2
KHMM Horse Mountain 76.35 310 PFAKE 22 16 20.0 +17
KHMM LR LR
comp=Z,16μm,20.0s
KMRM Mail Ridge 76.36 309 PFAKE 22 16 20.0 +17
KMRM LR LR
comp=Z,19μm,22.0s
J01E Myrtle Point 76.42 312 P **P 22 16 03.5 +0.6**
baz=88,SNR=7.7
LPSR Galich'ya Gora 76.49 38 *e*P **P 22 16 02.3 -0.8**
LPSR *e* 22 16 04.0
LPSR *e*S **S 22 25 47.6 -0.4**
LPSR pmax pmax
comp=Z,300nm,1.0s
LPSR pmax pmax

comp=Z,300nm,1.0s
LPSR smax smax
comp=N,3μm,8.7s
KEMA Kemaliye 76.50 52 *i* P **P 22 16 04.2 +0.6**
KEMA IAML_P
comp=Z,270nm,0.3s
JCC Jacoby Creek, 76.58 310 PFAKE 22 16 20.0 +16
JCC LR LR
comp=Z,10μm,19.0s
VSR Storozhevoye 76.64 40 *e*P **P 22 16 03.0 -1.0**
VSR *e* 22 16 04.4
VSR *e* 22 18 49.9
VSR *e*S **S 22 25 48.5 -1.3**
VSR pmax pmax
comp=Z,470nm,1.7s
VSR pmax pmax
comp=Z,2μm,2.3s
VSR smax smax
comp=N,2μm,4.7s
VORR Voronezh 76.66 39 *e*P **P 22 16 03.0 -1.1**
VORR pmax pmax
comp=Z,1μm,2.0s
REFA Refahiye_ERZN 76.71 52 *i* P **P 22 16 08.6 +3.8**
REFA IAML_P
comp=Z,95nm,0.2s
VORD Divnogorie 76.72 40 *e*P **P 22 16 04.0 -0.4**
VORD *e* 22 16 06.1
VORD *e*S **S 22 25 51.8 +1.1**
VORD pmax pmax
comp=Z,180nm,1.4s
VORD pmax pmax
comp=Z,1μm,2.1s
VORD smax smax
comp=N,320nm,2.2s
KEBM Edson Butte 76.72 312 PFAKE 22 16 20.0 +15
KEBM LR LR
comp=Z,34μm,20.0s
SURC SANLIURFA_SURC 76.73 55 *i* P **P 22 16 05.5 +0.7**
SURC IAML_P
comp=Z,53nm,0.2s
URFA Urfa 76.86 54 P **P 22 16 06.5 +0.8**
KLMR Klimovskoe 76.93 30 *e*P **P 22 16 03.8 -1.6**
KLMR pmax pmax
comp=Z,534nm,1.5s
KLMR Klimovskoe 76.93 30 *e*P **P 22 16 03.9 -1.5**
KLMR AMP 22 16 12.6
comp=Z,534nm,1.5s
PMSA Palmer Station 76.96 189 P **P 22 16 06.7 +1.3**
comp=Z,82nm,1.0s,baz=50,slow=5.8,SNR=2.4
PMSA Palmer Station 76.96 189 *e*P **P 22 16 07.3 +1.9**
comp=Z,98nm,0.9s
PMSA Palmer Station 76.96 189 *e*P **P 22 16 07.2 +1.9**
KELT Kelkit 77.04 51 *i* P **P 22 16 08.3 +1.5**
KELT IAML_P
comp=Z,2.6nm,0.1s
SVRC Sivrice-ELAZID 77.19 53 P **P 22 16 08.6 +1.0**
SOC Sochi 77.22 48 *e*P **P 22 16 08.9 +1.5**
SOC *e**PP **pP 22 16 12.0 0.0**
SOC *e* 22 16 19.9
SOC *e* 22 19 00.1
SOC *e*PPP PPP 22 20 44.2
SOC *e*S **S 22 25 57.7 +1.3**
SOC *e* 22 26 25.6
SOC *e*SS **SS 22 30 49.3 -4.8**
SOC pmax pmax
comp=Z,729nm,2.0s
SOC pmax pmax
comp=Z,2μm,2.2s
SOC MLR MLR
comp=Z,4μm,20.0s
TNCL Tunceli-Merkez 77.32 52 *i* P **P 22 16 08.6 +0.4**
TNCL IAML_P
comp=Z,432nm,0.8s
KTUT Trabzon 77.39 50⇓ *i* P **P 22 16 08.1 -0.3**
MACK Trabzon 77.39 50 *i* P **P 22 16 10.6 +2.1**
MACK IAML_P
comp=Z,450nm,0.2s
EUZM Uzumlu 77.41 52 *i* P **P 22 16 12.5 +3.7**
EUZM IAML_P
comp=Z,188nm,0.1s
DIYA Diyarbakir 77.86 53 *i* P **P 22 16 13.7 +2.5**
DIYA IAML_P
comp=Z,62nm,0.1s
DYBB Diyarbakir 77.87 53 P **P 22 16 12.2 +0.9**
KOPT Kop Dagi 78.00 51 *i* P **P 22 16 13.0 +0.8**
KOPT IAML_P
comp=Z,57nm,0.1s
HANI Diyarbakir_Han 78.04 53 *i* P **P 22 16 12.8 +0.5**
HANI IAML_P
comp=Z,454nm,0.5s
YEDI Yedisu-Bingol 78.08 52 P **P 22 16 13.3 +0.8**
MAZI Mazidag 78.15 54 P **P 22 16 13.4 +0.5**
BGOL Bingol 78.21 52 *i* P **P 22 16 14.3 +1.1**
BGOL IAML_P
comp=Z,24nm,0.2s
VRH Novokhopyorsk 78.25 40 *e*P **P 22 16 12.9 -0.1**
VRH *e* 22 16 14.3
VRH *e*S **S 22 26 05.6 -1.6**
VRH pmax pmax
comp=Z,230nm,1.3s
VRH pmax pmax
comp=Z,230nm,1.3s
VRH smax smax
comp=N,2μm,4.9s
KRIK Erzurum-spir 78.31 51 *i* P **P 22 16 15.1 +1.2**
KRIK IAML_P
comp=Z,18nm,0.1s
MARD Mardin 78.42 54 *i* P **P 22 16 15.1 +0.6**
MARD IAML_P
comp=Z,122nm,0.4s
BNGL BINGOL 78.58 52 *i* P **P 22 16 16.5 +1.1**
AKDA Akdag 78.66 51 *i* P **P 22 16 17.6 +1.8**
BCA Borcka 78.75 50 P **P 22 16 15.4 -0.7**
BCA Borcka 78.75 50⇓ *i* P **P 22 16 14.9 -1.2**
DBOC Borcka 78.79 50 *i* P **P 22 16 18.5 +2.2**
DBOC IAML_P
comp=Z,109nm,0.3s
BATM Batumi 78.80 50⇑ *i* P **P 22 16 15.2 -1.0**
BATM Batumi 78.80 50 *i* P **P 22 16 19.8 +3.5**
VRTB Varto-Mus 78.81 52 P **P 22 16 20.2 +3.6**
VRTB Varto-Mus 78.81 52 *i* P P 22 16 21.7 +5.1
VRTB IAML_P
comp=Z,139nm,0.3s
DBAD Bademkaya 78.84 50 *i* P **P 22 16 17.1 +0.4**
DBAD IAML_P
comp=Z,1.9nm,0.5s
MUSM Mu-Merkez 78.89 52 *i* P **P 22 16 17.2 +0.2**
MUSM IAML_P
comp=Z,297nm,0.8s
DAGI Agillar 79.00 50 *i* P **P 22 16 18.2 +0.6**
KOPR Koprukoy-ERZUR 79.04 51 P **P 22 16 18.9 +1.0**
HOMI Horasan 79.08 51 *i* P **P 22 16 20.6 +2.4**
HOMI IAML_P
comp=Z,583nm,0.1s
SRTM Siirt_Merkez 79.27 53 *i* P **P 22 16 20.2 +1.1**
SRTM IAML_P
comp=Z,920nm,0.8s
KIV Kislovodsk 79.34 47 *e*P **P 22 16 19.1 -0.2**
KIV comp=Z,617nm,1.6s
KIV LR LR
comp=Z,5μm,21.0s
KIV Kislovodsk 79.34 47⇑ *i* P **P 22 16 19.1 -0.2**
KIV Kislovodsk 79.34 47 *i* P **P 22 16 18.8 -0.5**
SNR=72
KIV Kislovodsk 79.34 47 *e*P **P 22 16 19.2 -0.1**
KIV *e* 22 19 18.7
KIV *e*S **S 22 26 20.1 +0.7**
KIV *e*SS **SS 22 31 27.5 +1.2**
KIV pmax pmax
comp=Z,551nm,1.1s
KIV pmax pmax
comp=Z,2μm,5.0s
KIV MLR MLR
comp=Z,12μm,19.0s
KVAR Kislovodsk Arr 79.35 47 P **P 22 16 19.3 -0.1**
comp=Z,6.5nm,0.9s,baz=90,slow=20
KVAR S **S 22 26 16.7 -2.9**
comp=Z,0.8nm,0.4s,baz=159,slow=14,SNR=2.4
SENK Senkaya-Erzuru 79.37 51 P **P 22 16 20.4 +0.7**
BLIS Bitlis-Merkez 79.38 53 *i* P **P 22 16 20.5 +0.7**
BLIS IAML_P
comp=Z,276nm,0.3s
GOF Gofitskoye 79.51 46⇓ *i* P **P 22 16 20.1 0.0**
GOF *e*S **S 22 26 24.9 +4.0**
GOF pmax pmax
comp=Z,755nm,1.5s
GOF smax smax
comp=N,140nm,2.0s
KBZ Khabaz 79.51 47 P **P 22 16 20.3 +0.2**
comp=N,44nm,1.0s,baz=269,slow=4.1,SNR=34
KBZ LR LR 22 51 31.9
comp=N,5μm,20.1s,baz=291,slow=36
EPOS Posof 79.58 50 *i* P **P 22 16 21.1 +0.3**
MLAZ Malazgirt-MUS 79.65 52 P **P 22 16 22.2 +1.0**
ADCV BITLIS_Adilcev 79.82 52 *i* P **P 22 16 25.7 +3.5**
ADCV IAML_P
comp=Z,395nm,0.1s
TUTA Tutak 79.83 52 *i* P **P 22 16 26.6 +4.3**
TUTA IAML_P
comp=Z,67nm,0.1s
PRGR Permogore 79.87 29⇑ *i* P **P 22 16 21.6 0.0**
PRGR pmax pmax
comp=Z,385nm,1.1s
KARS Kars 79.92 50 P **P 22 16 23.6 +1.0**
FURI Furi 79.95 83 PFAKE 22 16 40.0 +17
FURI LR LR
comp=Z,28μm,20.0s
FURI Furi 79.95 83 *e*P **P 22 16 25.9 +2.5**
FURI *e*S **S 22 26 32.8 +5.4**
AGRB Hanur-Agry 79.95 52 P **P 22 16 23.5 +0.6**
AAE Adis Abeba 80.02 83 *i* P **P 22 16 25.5 +1.7**
AAE *i* S **SKSac 22 26 37.5 -3.8**
AAE Adis Abeba 80.02 83 *i* P **P 22 16 25.7 +1.9**
AAE *e*S **SKSac 22 26 34.4 -6.9**
AAE Adis Abeba 80.02 83 *i* P **P 22 16 25.5 +1.7**
AAE *i* S **SKSac 22 26 37.5 -3.8**
NCK Nalchik 80.04 48 *d i* P **P 22 16 22.8 -0.2**
NCK pmax pmax
comp=Z,300nm,1.6s
AKDM Akdamar-Van 80.07 53 P **P 22 16 24.4 +0.9**
GEVA Gevas 80.13 53 *i* P **P 22 16 23.3 -0.5**
GEVA IAML_P
comp=Z,196nm,0.6s
AKH Akhalkalaki 80.16 50 PFAKE 22 16 40.0 +16
AKH LR LR
comp=Z,4μm,22.0s
AKH Akhalkalaki 80.16 50⇑ *i* P **P 22 16 24.6 +0.7**
KMBO Kilima Mbogo 80.31 93 P **P 22 16 26.6 +1.3**
comp=Z,33nm,1.0s,baz=284,slow=5.3,SNR=33
KMBO PP PP 22 19 16.7 -12
comp=Z,13nm,1.1s,baz=268,slow=9.5,SNR=3.6
KMBO LR LR 22 49 54.9
comp=Z,12μm,18.8s,baz=272,slow=34
KMBO Kilima Mbogo 80.31 93 *e*P **P 22 16 27.0 +1.7**
comp=Z,191nm,1.4s
KMBO LR LR
comp=Z,19μm,21.0s
KMBO Kilima Mbogo 80.31 93 *i* P **P 22 16 26.0 +0.7**
SNR=50
KMBO Kilima Mbogo 80.31 93 *e*P **P 22 16 27.0 +1.7**
KMBO pmax pmax
comp=Z,191nm,1.4s
KMBO MLR MLR
comp=Z,19μm,21.0s
KMBO Kilima Mbogo 80.31 93 *i* P **P 22 16 27.1 +1.8**
KMBO *e*S **S 22 26 38.8 +7.8**
EAK Akyaka 80.31 50 *i* P **P 22 16 28.6 +3.9**
EAK IAML_P
comp=Z,19nm,0.7s
ZEI Tsey 80.33 48 *e*P **P 22 16 22.6 -2.2**
ZEI *e*S **S 22 26 32.1 +2.0**
ZEI *i* SS **SS 22 31 43.8 +2.5**
ZEI pmax pmax
comp=Z,275nm,1.6s
ZEI pmax pmax
comp=E,68nm,1.1s
ZEI pmax pmax
comp=N,121nm,1.6s
ZEI pmax pmax
comp=Z,748nm,6.0s
VANB Van 80.36 52 P **P 22 16 25.7 +0.7**
TVAN Van 80.38 53 *i* P **P 22 16 28.9 +3.6**
TVAN IAML_P
comp=Z,451nm,0.5s
VMUR Van-Muradiye 80.46 52 *i* P **P 22 16 29.7 +4.1**
VMUR IAML_P
comp=Z,67nm,0.4s
INK Inuvik 80.47 338 S **S 22 26 27.8 -2.3**
comp=Z,0.9nm,0.5s,baz=263,slow=18,SNR=2.0
INK LR LR 22 48 44.0
comp=Z,5μm,21.9s,baz=76,slow=33
INK Inuvik 80.47 338 PFAKE 22 16 40.0 +15
INK LR LR
comp=Z,31μm,21.0s
DESE Dese 80.53 80 *i* P **P 22 16 27.6 +1.0**
DESE *i* S **S 22 26 34.3 +0.8**
DESE Dese 80.53 80 *i* P **P 22 16 27.6 +1.0**
DESE *i* S **S 22 26 34.3 +0.8**
HAKT HAKKARI 80.72 53 *i* P **P 22 16 27.3 +0.2**
HAKT IAML_P
comp=Z,411nm,0.8s
KZRT Kazreti 80.84 50 *i* P **P 22 16 30.4 +3.0**
TASB TASBURUN-IGDIR 80.87 51 P **P 22 16 28.2 +0.6**
ANKE Ethiopia-Afar 80.87 82 *i* P **P 22 16 30.5 +2.0**
ANKE *i* S **S 22 26 43.5 +6.4**
ANKE Ethiopia-Afar 80.87 82 *i* P **P 22 16 30.5 +2.0**
ANKE *i* S **S 22 26 43.5 +6.4**
WRAK Wrangell Islan 81.01 326 PFAKE 22 16 40.0 +12
WRAK LR LR
comp=Z,16μm,20.0s
TBLG Delisi 81.05 49 *i* P **P 22 16 29.4 +0.8**
TBLG IAML_P
comp=Z,64nm,0.1s
BTNK Botanikuri 81.10 49 *i* P **P 22 16 30.8 +2.0**
BTNK IAML_P
comp=Z,110nm,0.1s
GNI Garni 81.23 51 P **P 22 16 29.6 -0.1**
comp=Z,37nm,1.0s,baz=200,slow=5.5
GNI S **S 22 26 38.0 -1.6**
comp=Z,3.4nm,0.7s,baz=218,slow=19,SNR=1.8
GNI Garni 81.23 51 *e*P **P 22 16 30.4 +0.8**
GNI comp=Z,828nm,1.6s
GNI LR LR
comp=Z,6μm,22.0s
GNI Garni 81.23 51 *i* P **P 22 16 29.5 -0.1**
SNR=42
GNI Garni 81.23 51 *c e*P **P 22 16 28.9 -0.8**
GNI pmax pmax
comp=Z,2μm,1.5s
DIB Dawson Inlet, 81.42 323 PFAKE 22 16 40.0 +10
DIB LR LR
comp=Z,14μm,19.0s
CRAG Craig 81.54 325 PFAKE 22 16 40.0 +9.3
CRAG LR LR
comp=Z,12μm,19.0s
GROC Groznyy 81.66 48 *e*P **P 22 16 30.1 -1.6**
GROC *e* 22 19 36.3
GROC *e*S **S 22 26 40.0 -3.6**
GROC pmax pmax
comp=Z,321nm,1.7s
WHY Whitehorse 81.85 330 PFAKE 22 16 40.0 +7.5
WHY LR LR
comp=Z,20μm,22.0s
JIS Juneau Island 81.90 328 PFAKE 22 16 40.0 +7.5
JIS LR LR
comp=Z,20μm,19.0s
EPYK Eagle Plains 81.91 336 PFAKE 22 16 40.0 +7.4
EPYK LR LR
comp=Z,24μm,19.0s
EPYK Eagle Plains 81.91 336 P **P 22 16 32.3 -0.3**
baz=82,SNR=38
KIRV Kirov 82.05 32 P **P 22 16 32.8 -0.5**
comp=Z,48nm,0.8s,baz=346,slow=1.0,SNR=24
BESE Bessie Mountai 82.11 328 PFAKE 22 16 50.0 +16
BESE LR LR
comp=Z,17μm,19.0s
DDFL Dedoflistskaro 82.12 49 *i* P **P 22 16 31.7 -2.5**
SKAG Skagway 82.23 329 PFAKE 22 16 50.0 +16
SKAG LR LR
comp=Z,14μm,20.0s
MAK Makhachkala 82.94 48 *d i* P **P 22 16 38.8 +0.5**
MAK *e* 22 19 49.6
MAK *e*S **S 22 26 57.4 +0.8**
MAK *e*SS **SS 22 32 12.9 -6.8**
MAK pmax pmax
comp=Z,410nm,1.5s
MAK MLR MLR
comp=Z,5μm,18.0s
AKT Akhty 83.31 49⇓ *i* P **P 22 16 43.0 +2.5**
AKT *e* 22 16 47.9
AKT *e* 22 19 58.1
AKT *e*S **S 22 27 01.8 +1.0**
AKT pmax pmax
comp=Z,189nm,1.5s
DAWY Dawson 83.40 334 PFAKE 22 16 50.0 +10
DAWY LR LR
comp=Z,18μm,20.0s
EGAK Eagle 84.01 335 PFAKE 22 17 00.0 +17
EGAK LR LR
comp=Z,11μm,19.0s
RAYN Ar Rayn 84.15 67 *e*P **P 22 16 45.4 +0.3**
comp=Z,877nm,1.9s
RAYN LR LR
comp=Z,17μm,20.0s
RAYN Ar Rayn 84.15 67 *i* P **P 22 16 44.7 -0.3**
SNR=70
RAYN Ar Rayn 84.15 67 *e*P **P 22 16 45.4 +0.3**
RAYN pmax pmax
comp=Z,877nm,1.9s
RAYN MLR MLR
comp=Z,17μm,20.0s
BCPM Bancas Point 84.30 330 PFAKE 22 17 00.0 +15
BCPM LR LR
comp=Z,15μm,19.0s
YKU2 Yakutat 84.41 329 PFAKE 22 17 00.0 +15
YKU2 LR LR
comp=Z,13μm,19.0s
VNA1 Neumayer--Stat 84.46 169 P **P 22 16 47.0 +1.6**
DAMY Dhamar 84.56 76 PFAKE 22 17 00.0 +12
DAMY LR LR
comp=Z,32μm,18.0s
PCA Pinnacle 84.58 330 PFAKE 22 17 00.0 +14
PCA LR LR
comp=Z,19μm,21.0s
VNA3 Neumayer Olymp 84.71 170 P **P 22 16 48.0 +1.3**
VNA2 Neumayer--Watz 84.85 169 P **P 22 16 48.5 +1.1**
baz=307,slow=5.2
FYU Fort Yukon 85.22 337 PFAKE 22 17 00.0 +11
FYU LR LR
comp=Z,24μm,20.0s
DOT Dot Lake 85.51 334 PFAKE 22 17 00.0 +9.0
DOT LR LR
comp=Z,22μm,20.0s
MENT Mentasta 85.54 333 PFAKE 22 17 00.0 +8.8
MENT LR LR
comp=Z,15μm,21.0s
PRP Porcupine Dome 85.62 336 PFAKE 22 17 00.0 +8.3
PRP LR LR
comp=Z,20μm,20.0s
RIDG Independent Ri 85.82 334 PFAKE 22 17 00.0 +7.4
RIDG LR LR
comp=Z,19μm,20.0s
TOLK Toolik Lake Re 86.17 339 PFAKE 22 17 10.0 +16
TOLK LR LR
comp=Z,14μm,20.0s
TOLK Toolik Lake Re 86.17 339 P **P 22 16 54.6 +0.3**
baz=70
SNAA Sanae 86.33 168 P **P 22 16 55.8 +0.9**
SNAA Sanae 86.33 168 PFAKE 22 17 10.0 +15
SNAA LR LR
comp=Z,13μm,20.0s
SNAA Sanae 86.33 168 *d i* P **P 22 16 54.9 0.0**
ILAR Eielson Array 86.39 335 P **P 22 16 55.2 -0.1**
comp=Z,123nm,1.1s,baz=69,slow=3.7,SNR=290
ILAR S **S 22 27 26.6 -3.5**
comp=Z,0.4nm,0.9s,baz=127,slow=2.4,SNR=2.6
ILAR LR LR 22 52 44.3
comp=Z,7μm,21.0s,baz=92,slow=34
HMT Hamilton 86.47 331 PFAKE 22 17 10.0 +14
HMT LR LR
comp=Z,21μm,20.0s
POKR Poker Plat Res 86.50 336 P **P 22 16 56.1 +0.2**
baz=72
HDA Harding Lake 86.52 335 PFAKE 22 17 10.0 +14
HDA LR LR
comp=Z,13μm,20.0s
COLA College 86.75 336 *e*P **P 22 16 57.4 +0.3**
comp=Z,236nm,1.1s
COLA LR LR
comp=Z,12μm,20.0s
COLA College 86.75 336 *c i* P **P 22 16 56.9 -0.1**
COLA pmax pmax
comp=Z,153nm,1.2s
TCOL CIGO, UAF Yank 86.75 336 P **P 22 16 57.1 0.0**
baz=72
CCB Clear Creek Bu 86.80 335 PFAKE 22 17 10.0 +13
CCB LR LR
comp=Z,11μm,20.0s
MDM Murphy Dome 86.87 336 PFAKE 22 17 10.0 +12
MDM LR LR
comp=Z,12μm,20.0s
COLD Coldfoot 86.88 338 PFAKE 22 17 10.0 +12
COLD LR LR
comp=Z,15μm,20.0s
WRH Wood River Hil 86.97 335 PFAKE 22 17 10.0 +12
WRH LR LR
comp=Z,10μm,19.0s
DHY Denali Highway 87.11 334 PFAKE 22 17 10.0 +11
DHY LR LR
comp=Z,20μm,20.0s
EYAK Cordova Ski Ar 87.12 331 PFAKE 22 17 10.0 +11
EYAK LR LR
comp=Z,26μm,20.0s
ARU Arti 87.31 33 P **P 22 17 00.2 +0.2**
comp=Z,12nm,0.8s,baz=271,slow=3.7,SNR=64
ARU S **SKSac 22 27 26.0 -0.8**
comp=Z,0.3nm,0.3s,baz=229,slow=20,SNR=1.8
ARU Arti 87.31 33 *e*P **P 22 17 00.2 +0.2**
comp=Z,792nm,2.0s
ARU LR LR
comp=Z,18μm,20.0s
ARU Arti 87.31 33 *d i* P **P 22 16 58.8 -1.2**
ARU S **SKSac 22 27 25.7 -1.1**
ARU pmax pmax
comp=Z,88nm,1.2s
ARU pmax pmax
comp=Z,1μm,9.3s
ARU smax smax
comp=N,2μm,7.9s
SCM Sheep Creek Mo 87.47 333 PFAKE 22 17 10.0 +9.3
SCM LR LR
comp=Z,12μm,20.0s
MCK McKinley 87.56 335 PFAKE 22 17 10.0 +8.9
MCK LR LR
comp=Z,15μm,20.0s
RND Reindeer 87.63 334 PFAKE 22 17 10.0 +8.5
RND LR LR
comp=Z,16μm,20.0s
BWN Browne 87.64 335 PFAKE 22 17 10.0 +8.6
BWN LR LR
comp=Z,11μm,20.0s
GLI Glacier Island 87.65 332 PFAKE 22 17 10.0 +8.4
GLI LR LR
comp=Z,19μm,22.0s
MLY Manley 87.85 336 PFAKE 22 17 10.0 +7.5
MLY LR LR
comp=Z,25μm,19.0s
KNK Knik Glacier 88.11 332 PFAKE 22 17 20.0 +16
KNK LR LR
comp=Z,12μm,18.0s
GHO Glory Hole Cre 88.20 333 PFAKE 22 17 20.0 +16
GHO LR LR
comp=Z,13μm,22.0s
TRF Thorofare Moun 88.23 335 PFAKE 22 17 20.0 +16
TRF LR LR
comp=Z,4μm,18.0s
BPAW Bear Paw Mtn. 88.29 335 PFAKE 22 17 20.0 +15
BPAW LR LR
comp=Z,10μm,19.0s
SVE Sverdlovsk 88.30 32 *d i* P **P 22 17 05.2 +0.5**
SVE *e* 22 20 28.4
SVE *e*PPP PPP 22 22 32.2
SVE *e*S **SKSac 22 27 33.1 +0.3**
SVE pmax pmax
comp=Z,375nm,2.5s
SVE pmax pmax
comp=Z,720nm,8.7s
SVE MLR MLR
comp=Z,20μm,18.0s
SVE MLR MLR
comp=E,13μm,18.0s
PMR Palmer 88.36 333 PFAKE 22 17 20.0 +15
PMR LR LR
comp=Z,12μm,20.0s
KTH Kantishna Hill 88.46 335 PFAKE 22 17 20.0 +15
KTH LR LR

comp=Z,13μm,18.0s
AKTO Aktyubinsk 88.56 39 P P 22 17 06.4 +0.3
comp=Z,39nm,0.9s,baz=291,slow=5.3,SNR=61
AKTO S **SKSac 22 27 30.5 -4.1**
comp=Z,0.4nm,0.3s,baz=294,slow=20,SNR=1.7
RC01 Rabbit Creek A 88.80 332 PFAKE 22 17 20.0 +13
RC01 LR LR
comp=Z,15μm,22.0s
CAST Castle Rocks 88.99 335 PFAKE 22 17 20.0 +12
CAST LR LR
comp=Z,11μm,21.0s
SEW Seward 89.01 331 PFAKE 22 17 20.0 +12
SEW LR LR
comp=Z,28μm,20.0s
BRLK Bradley Lake 89.80 331 PFAKE 22 17 20.0 +8.2
BRLK LR LR
comp=Z,27μm,20.0s
CNPM China Poot 90.05 331 PFAKE 22 17 20.0 +7.1
CNPM LR LR
comp=Z,22μm,20.0s
HOM Homer 90.20 331 PFAKE 22 17 30.0 +16
HOM LR LR
comp=Z,23μm,21.0s
TTA Tatalina 90.82 335 PFAKE 22 17 30.0 +14
TTA LR LR
comp=Z,9μm,20.0s
RDOG Red Dog Mine 90.88 341 PFAKE 22 17 30.0 +13
RDOG LR LR
comp=Z,13μm,21.0s
KDAK Kodiak Island 91.36 330 S **SKSac 22 27 50.9 +0.3**
comp=Z,7.8nm,1.1s,baz=354,slow=18,SNR=1.9
KDAK Kodiak Island 91.36 330 *e*P **P 22 17 19.7 +0.7**
comp=Z,41nm,0.9s
KDAK LR LR
comp=Z,25μm,19.0s
KDAK Kodiak Island 91.36 330 *i* P **P 22 17 19.7 +0.7**
SVW2 Sparrevohn 91.42 333 PFAKE 22 17 30.0 +11
SVW2 LR LR
comp=Z,10μm,20.0s
GEYT Alibeck 91.87 51 P **P 22 17 22.1 +0.3**
comp=Z,26nm,1.0s,baz=270,slow=5.9,SNR=30
GEYT S **SKSac 22 27 51.9 -2.5**
comp=Z,2.1nm,0.7s,baz=45,slow=55,SNR=3.3
GYA0B ALIBECK ARRAY 91.87 51 PFAKE 22 17 30.0 +8.1
GYA0B LR LR
comp=Z,8μm,20.0s
OHAK Old Harbor 91.93 329 PFAKE 22 17 30.0 +8.4
OHAK LR LR
comp=Z,18μm,20.0s
AJN Ajban 92.47 65 *i* P **P 22 17 24.8 0.0**
SNR=20
SII Sitkinak Islan 92.64 329 PFAKE 22 17 40.0 +15
SII LR LR
comp=Z,14μm,20.0s
ASUD Al Ashush, Dub 92.76 64 *i* P **P 22 17 25.2 -1.0**
SNR=11
UMQ Umm Al-Quwin 92.85 64 P **P 22 17 26.9 +0.3**
FAQ Al Faqa, Dubai 92.96 64 *i* P **P 22 17 27.1 -0.1**
SNR=22
NAZ Nazwa, Dubai 92.97 64 *i* P **P 22 17 27.1 -0.1**
SNR=29
SHME Shamm 93.15 63 *i* P **P 22 17 27.9 -0.1**
SNR=9.8
ALNE Al Ain 93.26 65 *i* P **P 22 17 27.7 -0.8**
SNR=53
BANOM Banah 93.32 63 *i* P **P 22 17 28.4 -0.4**
SNR=11
MSFE Esma-Masafi 93.32 64 *i* P **P 22 17 28.2 -0.7**
SNR=25
ABPO Ambohimpanom 93.33 109 *e*P **P 22 17 31.1 +2.0**
comp=Z,224nm,1.9s
ABPO LR LR
comp=Z,15μm,20.0s
ABPO Ambohimpanom 93.33 109 *e*P **P 22 17 31.1 +2.0**
ABPO pmax pmax
comp=Z,223nm,1.9s
ABPO MLR MLR
comp=Z,15μm,20.0s
ASHO Ashiyiah 93.39 64 *i* P **P 22 17 29.0 -0.1**
SNR=37
HATD Hatta, Dubai 93.42 64 *i* P **P 22 17 30.0 +0.7**
SNR=47
UOSS Minazif 93.46 64 *e*P **P 22 17 29.5 +0.1**
comp=Z,551nm,1.6s
UOSS LR LR
comp=Z,14μm,20.0s
UOSS Minazif 93.46 64 *i* P **P 22 17 28.6 -0.8**
SNR=30
MDH Madha 93.46 64 *i* P **P 22 17 28.8 -0.6**
SNR=26
ANM Nome 93.62 339 PFAKE 22 17 40.0 +11
ANM LR LR
comp=Z,13μm,20.0s
BRVK Borovoye 94.84 34 *e*P **P 22 17 35.1 0.0**
comp=Z,22nm,0.9s
BRVK LR LR
comp=Z,24μm,22.0s
BRVK Borovoye 94.84 34*c i*P **P 22 17 34.9 -0.2**
BRVK pmax pmax
comp=Z,27nm,1.5s
CHGN Chignik 94.87 330 PFAKE 22 17 50.0 +15
CHGN LR LR
comp=Z,14μm,22.0s
BVAR Borovoye Array 94.91 34 P **P 22 17 35.4 -0.1**
comp=Z,9.3nm,0.8s,baz=298,slow=3.2,SNR=44
BVAR PP **PP 22 21 26.2 +2.1**
comp=Z,3.2nm,0.8s,baz=286,slow=5.4,SNR=3.4
RKT Rikitea 96.22 248 *e*SKSac **SKSac 22 28 19.5 +1.2**
comp=Z,4μm,30.6s
RKT *e*SP SP 22 30 20.3 -0.2
comp=Z,11μm,30.2s
RKT *e*SS **SS 22 35 30.9 -2.9**
comp=Z,10μm,29.5s
RKT Rikitea 96.22 248 *e*LR LR 22 48 45.7
comp=Z,16μm,38.5s
SDPT Sand Point 96.35 329 PFAKE 22 17 50.0 +8.1
SDPT LR LR
comp=Z,11μm,19.0s
SYO Syowa Base 97.14 159|| *e*P **P 22 17 44.2 -0.9**
TIXI Tiksi 97.65 3 P Pdif 22 17 48.9 +1.3
comp=Z,3.2nm,0.3s,baz=349,slow=3.7,SNR=7.3
TIXI PP **PP 22 21 45.3 +0.7**
comp=Z,3.3nm,0.5s,baz=331,slow=5.0,SNR=4.0
TIXI Tiksi 97.65 3 *e*P Pdif 22 17 47.6 +0.1
comp=Z,49nm,1.4s
TIXI LR LR
comp=Z,5μm,21.0s
TIXI Tiksi 97.65 3 *i* P **P 22 17 46.2 -1.3**
TIXI pmax pmax
comp=Z,40nm,1.8s
FALS False Pass 98.06 330 PFAKE 22 18 00.0 +10
FALS LR LR
comp=Z,21μm,20.0s
BILL Bilibino 98.79 349 *e*P Pdif 22 17 54.3 +1.6
comp=Z,33nm,1.4s
BILL LR LR
comp=Z,6μm,20.0s
BILL Bilibino 98.79 349 *i* P Pdif 22 17 53.3 +0.6
BILL *e* 22 21 55.1
BILL *i* S **SKSac 22 28 32.5 +2.6**
BILL *i* PS PS 22 30 49.0 +0.3
BILL *e*SS **SS 22 36 07.2 +0.6**
BILL pmax pmax
comp=Z,17nm,1.2s
MSEY Mahe Island 98.84 93 PFAKE 22 18 10.0 +16
MSEY LR LR
comp=Z,14μm,21.0s
IUG Iuzhnay 99.14 44 *e*P **Pdif 22 17 56.5 +1.5**
IUG *e* 22 21 56.0
IUG Iuzhnay 99.14 44 *e*P **Pdif 22 17 56.6 +1.5**
IUG *e*PP **PP 22 21 56.1 -1.1**
JBG Jabagly 99.38 44 *e*P **Pdif 22 17 56.7 +0.6**
JBG *e* 22 21 55.5
JBG pmax pmax
comp=Z,93nm,2.3s
AKUT Akutan 99.61 330 PFAKE 22 18 10.0 +13
AKUT LR LR
comp=Z,13μm,19.0s
CHGR Chuyangaron 99.87 48 PFAKE 22 18 10.0 +12
CHGR LR LR
comp=Z,20μm,18.0s
SPIA Saint Paul Isl 99.90 334 PFAKE 22 18 10.0 +12
SPIA LR LR
comp=Z,25μm,20.0s
UNV Unalaska Valle 100.13 330 PFAKE 22 18 10.0 +11
UNV LR LR
comp=Z,9μm,19.0s
KURBB Kurchatov Arra 100.50 34 P **Pdif 22 18 00.4 -0.3**
comp=Z,2.3nm,0.8s,baz=295,slow=5.3,SNR=14
KURBB PP **PP 22 22 06.5 -0.4**
comp=Z,21nm,1.2s,baz=301,slow=8.1,SNR=12
KURK Kurchatov 100.50 34 *e*Pdif **Pdif 22 18 01.2 +0.5**
KURK LR LR
comp=Z,29μm,22.0s
KURK Kurchatov 100.50 34 *e*P **Pdif 22 18 01.2 +0.5**
KURK MLR MLR
comp=Z,29μm,22.0s
BTK Batken 100.52 46 PFAKE 22 18 10.0 +8.9
BTK LR LR
comp=Z,8μm,21.0s
NVS Novosibirsk 100.55 28 *e*P **Pdif 22 17 59.8 -1.0**
NVS *e* 22 22 08.6
NVS *e* 22 31 05.5
NVS pmax pmax
comp=Z,35nm,2.5s
BTLS Baital 100.56 40 *e*P **Pdif 22 18 01.2 +0.1**
BTLS *e* 22 22 03.6
BTLS Baital 100.56 40 *e*P **Pdif 22 18 01.3 +0.1**
BTLS *e*PP **PP 22 22 03.6 -4.0**
QSPA South Pole Qui 100.69 180 *e*Pdif **Pdif 22 18 02.1 +0.8**
CRZF Crozet Islands 100.77 135 PFAKE 22 18 10.0 +8.1
CRZF LR LR
comp=Z,6μm,20.0s
KBL Kabul 101.31 51 PFAKE 22 18 20.0 +15
KBL LR LR
comp=Z,6μm,20.0s
RER Riviere de l'E 101.56 110 PFAKE 22 18 20.0 +14
RER LR LR
comp=Z,12μm,22.0s
NIKH Nikolski High 101.78 330 PFAKE 22 18 20.0 +14
NIKH LR LR
comp=Z,12μm,21.0s
ZAA0 Zalesovo Array 101.83 29 PFAKE 22 18 20.0 +13
ZAA0 LR LR
comp=Z,11μm,20.0s
ZALV Zalesovo Beam 101.83 29 P **Pdif 22 18 05.7 -0.8**
comp=Z,3.5nm,0.9s,baz=284,slow=6.0,SNR=11
ZALV PP **PP 22 22 09.3 -7.5**
comp=Z,4.8nm,0.9s,baz=292,slow=9.0,SNR=4.6
ZALV PKKPbc **PKKPbc 22 34 10.6 -3.2**
comp=Z,0.7nm,0.5s,baz=190,slow=0.9,SNR=3.1
ZALV Zalesovo Beam 101.83 29 *i* P **Pdif 22 18 06.4 -0.1**
ZALV pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 101.93 42 P **Pdif 22 18 08.9 +1.4**
comp=Z,1.6nm,0.2s,baz=252,slow=4.5,SNR=13
AAK PP **PP 22 22 19.6 +1.4**
comp=Z,11nm,1.0s,baz=290,slow=6.2,SNR=6.1
AAK Ala-Archa 101.93 42 PFAKE 22 18 20.0 +13
AAK LR LR
comp=Z,7μm,20.0s
AAK Ala-Archa 101.93 42 *i* P **Pdif 22 18 09.1 +1.6**
SNR=6.9
FRU1 Bishkek 101.94 42 PFAKE 22 18 20.0 +13
FRU1 LR LR
comp=Z,7μm,20.0s
TKM2 Tokmak 2 102.52 42 *i* P **Pdif 22 18 10.4 +0.2**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s
KUU Kurty 102.55 40 *e*PP **PP 22 22 19.2 -3.5**
BOOM Boomskoye usch 102.95 42 PFAKE 22 18 20.0 +8.0
BOOM LR LR
comp=Z,10μm,21.0s
AAA Alma-Ata 103.24 41 *e*PP **PP 22 22 26.7 -1.2**
TDK Taldyqorghan 103.30 39 *e*P **Pdif 22 18 13.9 +0.6**
TDK *e* 22 22 25.1
TDK Taldyqorghan 103.30 39 *e*Pdif **Pdif 22 18 13.9 +0.6**
TDK *e*PP **PP 22 22 25.2 -3.0**
MDOK Medeo 103.35 41 *e*P **Pdif 22 18 14.6 +0.8**
MDOK *e* 22 22 27.7
MDOK *i* S **SKSac 22 28 55.6 +2.3**
MDOK Medeo 103.35 41 *e*Pdif **Pdif 22 18 14.6 +0.8**
MDOK *e*PP **PP 22 22 27.7 -1.1**
MDOK *i* S **SKSac 22 28 55.6 +2.3**
MDOK *e*SS SS 22 36 58.3 -14
KPKS Kokpek 104.24 40 *e*P **Pdif 22 18 19.4 +1.8**
KPKS *e* 22 22 34.6
KPKS *e*SS SS 22 37 26.6 +2.7
KPKS Kokpek 104.24 40 *e*Pdif **Pdif 22 18 19.5 +1.8**
KPKS *e*PP **PKiKP 22 22 34.6 +0.2**
KPKS *e*SS SS 22 37 26.6 +2.7
SATY Saty 104.27 40 *e*P **Pdif 22 18 18.5 +0.7**
SATY *e* 22 22 34.3
SATY *e*SS SS 22 37 27.0 +2.6
SATY Saty 104.27 40 *e*Pdif **Pdif 22 18 18.5 +0.7**
SATY *e*PP **PKiKP 22 22 34.4 -0.2**
SATY *e*SS SS 22 37 27.0 +2.6
MAKZ Makanchi 104.47 36 PFAKE 22 18 30.0 +12
MAKZ LR LR
comp=Z,14μm,19.0s
PRZ Przheval'sk 104.55 41 PFAKE 22 18 30.0 +11
PRZ LR LR
comp=Z,12μm,20.0s
UZB Uzynbulak 104.61 40 *e*P **Pdif 22 18 19.4 0.0**
UZB *i* 22 22 38.9
UZB Uzynbulak 104.61 40 *e*Pdif **Pdif 22 18 19.4 0.0**
UZB *i* PP **PP 22 22 38.9 +0.7**
MKAR Makanchi Array 104.66 36 Pdiff **Pdif 22 18 19.7 +0.4**
comp=Z,3.7nm,1.0s,baz=312,slow=6.4,SNR=8.5
MKAR PP **PP 22 22 38.0 -0.3**
comp=Z,2.3nm,0.8s,baz=353,slow=4.9,SNR=3.7
MKAR PKKPbc **PKKPbc 22 34 04.0 -1.3**
comp=Z,3.6nm,1.1s,baz=131,slow=3.4,SNR=6.5
ATKA Atka Island 104.82 332 PFAKE 22 18 30.0 +10
ATKA LR LR
comp=Z,10μm,21.0s
NIL Nilore 104.88 51 PFAKE 22 18 30.0 +9.4
NIL LR LR
comp=Z,3μm,21.0s
SEY Seymchan 105.68 353 PP **PKiKP 22 22 39.6 +3.2**
comp=Z,2.3nm,0.4s,baz=23,slow=7.7,SNR=4.8
BHJ Bhuj 105.72 62 *e*P **Pdif 22 18 21.6 -2.9**
ZSN Zaisan 105.73 34 *i* PP **PP 22 22 43.2 -2.9**
MAW Mawson 105.73 157 PP **PP 22 22 49.7 +3.6**
comp=Z,4.6nm,1.0s,baz=241,slow=2.6,SNR=4.0
MAW PKKPbc **PKKPbc 22 33 56.3 -6.3**
comp=Z,2.9nm,1.0s,baz=342,slow=3.2,SNR=2.8
MAW Mawson 105.73 157 PFAKE 22 22 50.0 +14
MAW LR LR
comp=Z,2μm,22.0s
ADK Adak 106.18 332 PFAKE 22 22 50.0 +12
ADK LR LR
comp=Z,9μm,19.0s
YAK Yakutsk 107.26 4 PFAKE 22 22 50.0 +11
YAK LR LR
comp=Z,4μm,22.0s
POHA Pohakuloa 107.32 295 PFAKE 22 22 50.0 +9.1
POHA LR LR
comp=Z,4μm,19.0s
HPAH Hawaii Prepara 107.38 295 PFAKE 22 22 50.0 +9.2
HPAH LR LR
comp=Z,4μm,20.0s
KHU Kahuku 107.56 294 PFAKE 22 22 50.0 +8.6
KHU LR LR
comp=Z,4μm,19.0s
KHLU Kahalu`u 107.70 295 PFAKE 22 22 50.0 +8.6
KHLU LR LR
comp=Z,5μm,22.0s
DHRM DHARAMSHALA 107.79 51 *e*P **Pdif 22 18 32.8 -1.0**
DHRM IAMs_20 IAMs_20 22 56 28.1
comp=Z,3μm,22.3s
SMLA Simla 108.94 52 *e*P **Pdif 22 18 36.3 -2.4**
SMLA IAMs_20 IAMs_20 22 57 07.2
comp=Z,9μm,43.4s
BOD Bodaibo 109.11 13 *e*P **Pdif 22 18 51.7 +13**
BOD *e* 22 23 07.3
BOD pmax pmax
comp=Z,4.0nm,1.9s
MA2 Magadan 109.14 353 PP **PP 22 23 11.6 +1.2**
comp=Z,3.7nm,0.4s,baz=24,slow=10,SNR=4.4
MA2 Magadan 109.14 353 PFAKE 22 22 50.0 +7.1
MA2 LR LR
comp=Z,4μm,19.0s
PPT2 Papeete2 109.15 255 *e*PP **PP 22 23 06.6 -6.1**
comp=Z,1μm,27.0s
PPT2 *e*SKSac **SKSac 22 29 17.9 -1.7**
comp=Z,2μm,27.2s
PPT2 *e*SP SP 22 32 41.0 +3.5
comp=Z,8μm,27.2s
PPT2 *e*SS **SS 22 38 32.0 -0.9**
comp=Z,6μm,26.5s
PPT2 Papeete2 109.15 255 *e*LQ LQ 22 49 50.3
comp=Z,19μm,32.5s
PPT2 *e*LR LR 22 54 51.7
comp=Z,27μm,34.0s,baz=87
SMY Shemya 109.42 337 PFAKE 22 23 00.0 +16
SMY LR LR
comp=Z,7μm,20.0s
WMQ Urumqi 109.49 36 Pdif **Pdif 22 18 44.0 +3.1**
WMQ PP **PP 22 23 14.0 +0.3**
WMQ S **Sdif 22 30 45.8 -6.3**
WMQ SS **SS 22 38 38.0 +3.2**
WMQ AMB AMB
comp=Z,2μm,10.1s
WMQ LR LR
comp=Z,3μm,21.3s
WMQ LR LR
comp=Z,6μm,28.9s
WMQ LR LR
comp=Z,16μm,19.7s
WMQ Urumqi 109.49 36 PFAKE 22 23 00.0 +16
WMQ LR LR
comp=Z,20μm,19.0s
TBI Tubuai 109.49 249 *e*PP **PP 22 23 13.6 -1.4**
comp=Z,701nm,32.2s
TBI *e*SKSac **SKSac 22 29 18.0 -2.7**
comp=Z,2μm,27.8s
TBI *e*SP SP 22 32 44.2 +3.5
comp=Z,7μm,27.5s
TBI *e*SS **SS 22 38 36.2 -0.8**
comp=Z,8μm,30.8s
TBI Tubuai 109.49 249 *e*LQ LQ 22 50 02.8
comp=Z,12μm,36.8s
TBI *e*LR LR 22 54 56.2
comp=Z,11μm,38.5s,baz=90
DDI Dehra Dun 109.97 52 *e*P **Pdif 22 18 40.4 -3.0**
POO Poona 110.99 65 *e*P **PKiKP 22 22 46.2 -1.4**
SBA Scott Base 111.19 186 PFAKE 22 23 00.0 +14
SBA LR LR
comp=Z,8μm,22.0s
TLY Talaya 111.41 22 PFAKE 22 23 00.0 +13
TLY LR LR
comp=Z,7μm,19.0s
GOA Goa 111.95 68 *e*P **PKiKP 22 22 48.0 -1.4**
VNDA Vanda 111.99 186 PKiKP **PKiKP 22 22 48.6 +0.8**
comp=Z,2.3nm,1.1s,baz=192,slow=2.2,SNR=3.4
VNDA PP **PP 22 23 35.0 +3.8**
comp=Z,4.6nm,1.1s,baz=168,slow=12,SNR=3.7
VNDA PKKP **PKKPab 22 33 51.8 +3.2**
comp=Z,2.1nm,1.1s,baz=297,slow=4.2,SNR=2.7
ZAK Zakamensk 112.32 23 *e*PKiKP **PKiKP 22 22 46.4 -2.9**
ZAK pmax pmax
comp=Z,24nm,2.1s
BHPL Bhopal 112.39 59 *e*P **PKiKP 22 22 49.5 -0.7**
BHPL IAMs_20 IAMs_20 23 00 27.1
comp=Z,13μm,50.7s
MNCI Minicoy 113.32 76 PFAKE 22 23 00.0 +7.9
MNCI LR LR
comp=Z,16μm,20.0s
LATR Latur 113.44 65 *ex* PKiKP 22 22 44.2 -8.0
PET Petropavlovsk 113.97 346 PFAKE 22 23 00.0 +7.8
PET LR LR
comp=Z,6μm,21.0s
PETK Petropavlovsk- 114.11 347 PKKPbc PKKPbc 22 33 36.0 +0.7
comp=Z,3.0nm,0.9s,baz=199,slow=3.1,SNR=3.2
SONM Songino Array 115.58 23 PKP **PKPdf 22 22 56.4 +0.7**
comp=Z,2.5nm,0.8s,baz=329,slow=1.7,SNR=4.0
SONM PP **PP 22 23 58.0 +1.1**
comp=Z,2.6nm,0.8s,baz=299,slow=6.6,SNR=4.2
SONM PKKPbc **PKKPbc 22 33 28.9 -1.3**
comp=Z,2.1nm,0.6s,baz=176,slow=5.9,SNR=3.8
ULN Ulaanbaatar 115.80 22 PFAKE 22 23 10.0 +14
ULN LR LR
comp=Z,10μm,22.0s
ULN Ulaanbaatar 115.80 22 *i* PKIKP **PKiKP 22 22 55.0 -1.2**
DGAR Diego Garcia 115.94 93 PFAKE 22 23 10.0 +13
DGAR LR LR
comp=Z,7μm,20.0s
NKL Nikolayevsk 116.35 358 *e*P **Pdif 22 19 07.4 -3.7**
NKL *i* 22 22 56.0
NKL *e*PPP PPP 22 26 27.1
NKL *e* 22 30 06.4
NKL *e*SSS SSS 22 44 24.5
NKL MLR MLR
comp=Z,4μm,19.0s
NKL MLR MLR
comp=N,2μm,17.0s
NKL MLR MLR
comp=E,2μm,19.0s
HIA Hailar 118.33 13 PFAKE 22 23 10.0 +9.2
HIA LR LR
comp=Z,6μm,21.0s
GRNR Gornyy 118.79 1 *e*PKIKP **PKiKP 22 23 03.2 +1.5**
GRNR *e* 22 24 17.8
BOK Bokaro 119.16 55 *e*P **PKPdf 22 23 02.3 -0.8**
BOK IAMs_20 IAMs_20 23 02 50.1
comp=Z,6μm,35.9s
GTA Gaotai 119.17 33 *e*PKP **PKPdf 22 23 02.4 -0.5**
GTA PP **PP 22 24 25.6 +3.4**
GTA AMB AMB
comp=Z,2μm,7.0s
GTA LR LR
comp=Z,5μm,24.1s
GTA LR LR
comp=Z,8μm,23.5s
GTA LR LR
comp=Z,7μm,24.9s
GTK Tadong 119.52 50 *e*P **PKPdf 22 23 02.9 -1.0**
LSA Lhasa 120.08 47 PKP **PKPdf 22 23 05.3 0.0**
LSA PP **PP 22 24 28.9 -0.6**
LSA LR LR
comp=Z,16μm,29.2s
LSA LR LR
comp=Z,14μm,27.1s
LSA LR LR
comp=Z,27μm,29.9s
LSA Lhasa 120.08 47 PFAKE 22 23 20.0 +15
LSA LR LR
comp=Z,4μm,18.0s
LSA Lhasa 120.08 47 *i* P **PKPdf 22 23 04.5 -0.8**
SNR=13
KLR Kul'dur 120.14 4 PKP **PKPdf 22 23 03.5 -0.7**
comp=Z,4.6nm,0.9s,baz=356,slow=4.8,SNR=5.4
KLR PP **PP 22 24 25.9 -2.1**
comp=Z,1.9nm,0.8s,baz=263,slow=2.6,SNR=2.4
KLR PKKPbc **PKKPbc 22 33 08.8 -4.9**
comp=Z,3.6nm,0.9s,baz=338,slow=6.8,SNR=5.4
KLR Kul'dur 120.14 4 *i* PKIKP **PKPdf 22 23 03.4 -0.8**
BWNR Bhubaneshwar 120.69 59 *ex* PKPdf 22 23 17.9 +12
BWNR IAMs_20 IAMs_20 23 17 21.1
comp=Z,8μm,14.8s
MIDW Midway 121.56 313 PFAKE 22 23 20.0 +12
MIDW LR LR
comp=Z,8μm,20.0s
CASY Casey 121.57 168 *e*PKPdf **PKiKP 22 23 07.2 +0.7**
CASY LR LR
comp=Z,10μm,19.0s
TURI Tura 121.77 51 *e*P **PKPdf 22 23 07.0 -1.1**
TAWA Tawang 121.80 48 *e*P **PKPdf 22 23 08.2 -0.3**
YSS Yuzh-Sakhalins 122.41 356 PFAKE 22 23 20.0 +11
YSS LR LR
comp=Z,3μm,21.0s
YSS Yuzh-Sakhalins 122.41 356 *i* PKIKP **PKiKP 22 23 14.3 +5.5**
YSS *e* 22 24 40.7
YSS *e* 22 30 15.5
YSS *e*PS PKKPdf 22 34 36.4 +55
YSS *e* 22 36 04.6
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,3μm,19.0s
YSS MLR MLR
comp=N,3μm,20.0s
YSS MLR MLR
comp=E,2μm,19.0s
SHL Shillong 122.94 50 *e*P **PKPdf 22 23 09.5 -1.0**
SHL *ex* x 22 31 40.0
TEZP TEZPUR 123.03 48 *e*P **PKPdf 22 23 09.2 -1.2**
BTO Baotou 123.05 25 *e*PKP **PKPdf 22 23 05.5 -4.8**
ZIRO ZIRO 123.27 47 *e*P **PKPdf 22 23 10.6 -0.5**
HHC Hu-ho-hao-te 123.46 23 *e*PKP **PKiKP 22 23 11.8 +0.5**
HHC PP **PP 22 24 55.0 +3.8**
HHC SS SS 22 41 41.8 +5.1
HHC LR LR
comp=E,7μm,18.8s
HHC LR LR

comp=E,5µm,18.2s
KUR Kuril'sk 123.53 351 *i* PKIKP **PKiKP 22 23 11.3 +0.2**
KUR *e* 22 24 52.3
KUR *e*PPP PPP 22 27 30.1
KUR *e*SS SS 22 41 42.0 +5.3
KUR *e*SSS SSS 22 46 18.6
KUR MLR MLR
comp=Z,5µm,22.0s
KUR MLR MLR
comp=N,4µm,20.0s
KUR MLR MLR
comp=E,1µm,18.0s
LZH Lanzhou 123.77 33 *e*PKP **PKPdf 22 23 10.8 -1.1**
LZH sPKP 22 23 15.3
LZH PP **PP 22 24 57.5 +3.9**
LZH SKS **SKSdf 22 30 18.4 -5.1**
LZH SKKS **SKKSac 22 31 45.1 -7.9**
LZH AMB AMB
comp=E,2µm,8.8s
LZH LR LR
comp=E,5µm,18.4s
LZH LR LR
comp=E,9µm,18.5s
LZH LR LR
comp=E,7µm,20.1s
BELO BELONIA 123.84 53 *e*P **PKPdf 22 23 12.0 -0.1**
JORH JORHAT 124.02 47 *e*P **PKPdf 22 23 11.4 -0.9**
MOKO MOKOCHONG 124.46 48 *e*P **PKPdf 22 23 12.5 -0.9**
KOHI KOHIMA 124.51 49 *e*P **PKPdf 22 23 12.8 -0.8**
KOHI IAmb IAmb 22 23 14.9
comp=Z,15nm,0.7s
MDJ Mudanjiang 124.51 7 PFAKE 22 23 20.0 +6.9
MDJ LR LR
comp=Z,6µm,22.0s
TEY Ternei 124.53 1 *e*PKIKP **PKiKP 22 23 18.0 +4.9**
CN2 Changchun 124.70 10 *e*PKP **PKPdf 22 23 12.3 -0.9**
CN2 *e*PP **PP 22 25 02.6 +3.6**
CN2 *e*SKKS 22 31 53.6
CN2 SS **SS 22 41 50.1 -1.4**
CN2 AMB AMB
comp=Z,810nm,13.0s
CN2 LR LR
comp=Z,5µm,20.0s
CN2 LR LR
comp=Z,3µm,20.0s
CN2 LR LR
comp=Z,6µm,20.0s
USA0B Ussuriysk Arra 125.16 5 PFAKE 22 23 30.0 +16
USA0B LR LR
comp=Z,5µm,20.0s
USRK Ussuriysk Ar. 125.16 5 PKP **PKPdf 22 23 13.0 -1.0**
comp=Z,9.5nm,0.9s,baz=239,slow=1.1,SNR=7.1
ASAJ Asahikawa 125.25 355 PKP **PKPdf 22 23 13.7 -0.5**
comp=Z,14nm,0.9s,baz=276,slow=11,SNR=7.9
JMP Maruseppu 125.29 355 P **PKPdf 22 23 14.3 0.0**
BJI Beijing 125.85 20 PKP **PKPdf 22 23 15.1 -0.4**
BJI PP **PP 22 25 08.8 +1.9**
BJI AMB AMB
comp=Z,210nm,4.3s
BJI LR LR
comp=Z,3µm,25.1s
BJI LR LR
comp=Z,2µm,21.8s
BJI LR LR
comp=Z,5µm,26.6s
BJT Baijiatuan 125.86 20 PFAKE 22 23 30.0 +14
BJT LR LR
comp=Z,9µm,22.0s
TIY Taiyuan 126.50 25 *e*PKP **PKPdf 22 23 14.9 -2.0**
TIY PP **PP 22 25 14.6 +3.2**
TIY SKS **SKSdf 22 30 25.8 -2.5**
TIY SS **SS 22 42 18.4 +3.5**
TIY AMB AMB
comp=Z,770nm,9.9s
TIY LR LR
comp=Z,8µm,17.9s
TIY LR LR
comp=Z,3µm,16.7s
TIY LR LR
comp=Z,8µm,21.8s
JSH Shimam 126.87 357 P **PKiKP 22 23 20.8 +3.0**
JEM Erimo 127.28 355 P **PKiKP 22 23 22.0 +3.3**
ERM Erimo 127.28 355 PFAKE 22 23 30.0 +11
ERM LR LR
comp=Z,6µm,21.0s
ERM Erimo 127.28 355 *i* PKIKP **PKPdf 22 23 17.0 -1.1**
CD2 Chengdu 127.56 37 PKP **PKPdf 22 23 17.6 -1.5**
CD2 sPKP 22 23 21.5
CD2 PP **PP 22 25 17.1 -1.8**
CD2 SKS **SKSdf 22 30 29.1 -1.4**
CD2 SKKS **SKKSac 22 32 11.1 -6.0**
CD2 SS **SS 22 42 25.3 -3.6**
CD2 AMB AMB
comp=Z,4µm,10.2s
CD2 LR LR
comp=Z,9µm,23.3s
CD2 LR LR
comp=Z,30µm,18.4s
XAN Xi'an 127.97 30 PKP **PKPdf 22 23 18.8 -1.0**
XAN PP **PP 22 25 19.9 -1.4**
XAN SKS **SKSdf 22 30 25.3 -5.8**
XAN SKKS **SKKSac 22 32 16.3 -3.1**
XAN SS **SS 22 42 35.9 +2.5**
XAN AMB AMB
comp=Z,1µm,4.1s
XAN LR LR
comp=Z,3µm,34.7s
XAN LR LR
comp=Z,8µm,28.9s
XAN LR LR
comp=Z,8µm,22.8s
XAN Xi'an 127.97 30 PFAKE 22 23 30.0 +10
XAN LR LR
comp=Z,9µm,22.0s
JOT Ohata 128.07 356 P **PKiKP 22 23 20.0 -0.3**
DL2 Dalian 128.53 16 SS SS 22 42 28.3 -11
DL2 AMB AMB
comp=Z,750nm,12.0s
DL2 LR LR
comp=N,5µm,18.2s
DL2 LR LR
comp=E,2µm,19.2s
DL2 LR LR
comp=Z,7µm,20.6s
TIA Tai'an 129.61 21 PKP **PKPdf 22 23 20.8 -2.0**
TIA PP **PP 22 25 32.8 +1.1**
TIA SKKS 22 32 30.8
TIA AMB AMB
comp=Z,640nm,3.5s
TIA LR LR
comp=Z,4µm,13.7s
TIA LR LR
comp=Z,9µm,17.3s
DGPR DIGLIPUR 129.96 63 *e*P **PKPdf 22 23 23.6 -0.3**
DGPR IAmb IAmb 22 23 30.1
comp=Z,111nm,1.4s
DGPR IAMs_20 IAMs_20 22 55 38.7
comp=Z,1µm,5.8s
JOM Ohasama 129.96 356 P **PKPdf 22 23 22.4 -0.9**
JYA Atsumi 130.92 358 P **PKPdf 22 23 23.6 -1.6**
KMI Kunming 130.97 43 PKP **PKPdf 22 23 18.6 -7.4**
KMI sPKP 22 23 26.3
KMI SKKS 22 32 31.5
KMI AMB AMB
comp=Z,2µm,10.0s
KMI LR LR
comp=Z,6µm,21.4s
KMI LR LR
comp=Z,3µm,19.8s
KMI LR LR
comp=Z,7µm,21.4s
KMI Kunming 130.97 43 PFAKE 22 23 40.0 +13
KMI LR LR
comp=Z,7µm,21.0s
ENH Enshi 131.25 33 PFAKE 22 23 40.0 +13
ENH LR LR
comp=Z,10µm,21.0s
KSRS Korea Array 131.30 10 PKP **PKPdf 22 23 25.6 -0.4**
comp=Z,1.2nm,0.7s,baz=326,slow=3.0,SNR=6.4
JSD Sado 131.52 359 P **PKPdf 22 23 25.4 -0.9**
JMM Marumori 131.59 356 P **PKPdf 22 23 26.1 -0.4**
CHTO Chiang Mai 132.12 52 *e*PKPdf **PKiKP 22 23 28.7 -0.3**
CHTO LR LR
comp=Z,5µm,20.0s
CHTO Chiang Mai 132.12 52 *e*PKIKP **PKiKP 22 23 28.7 -0.3**
CHTO MLR MLR
comp=Z,5µm,20.0s
CMMT Chiang Mai 132.12 52 PKP **PKiKP 22 23 32.4 +3.3**
TJN Taejon 132.25 11 *i* PKIKP **PKPdf 22 23 26.3 -1.5**
CMAR Chiang Mai Arr 132.32 53 PKP **PKPdf 22 23 27.9 -0.5**
comp=Z,6.3nm,0.8s,baz=291,slow=3.5,SNR=19
CMAR PP **PP 22 25 50.6 +0.1**
comp=Z,4.5nm,0.9s,baz=300,slow=7.2,SNR=4.0
PAYA Payao 132.52 51 PKP **PKiKP 22 23 29.8 -0.1**
GYA Guiyang 132.55 38 ⇓ *i* PKP **PKiKP 22 23 29.4 -0.5**
GYA PP **PP 22 25 53.9 +2.4**
GYA PKS 22 27 00.0
GYA SKKS 22 32 49.8
GYA SS **SS 22 43 27.4 -3.1**
GYA AMB AMB
comp=Z,1µm,9.6s
GYA LR LR
comp=Z,4µm,22.7s
GYA LR LR
comp=Z,3µm,20.8s
GYA LR LR
comp=Z,7µm,22.7s
LAMP Lampang 132.82 52 PKP **PKiKP 22 23 33.4 +3.0**
MAJO Matsushiro 133.01 359 *e*PKPdf **PKPdf 22 23 29.0 -0.2**
MAJO LR LR
comp=Z,5µm,21.0s
MAJO Matsushiro 133.01 359 *i* PKIKP **PKPdf 22 23 27.9 -1.4**
MAT Matsushiro 133.01 359 PKP PKPpre 22 23 22.7
MAT Matsushiro 133.01 359 P PKPpre 22 23 22.9
MJAR Matsushiro Arr 133.01 359 PKP **PKPdf 22 23 28.3 -1.0**
comp=Z,6.5nm,1.1s,baz=337,slow=3.4,SNR=5.9
MJAR PP **PP 22 25 55.9 +2.5**
comp=Z,14nm,1.1s,baz=344,slow=6.2,SNR=7.9
JGN Niukaw 133.34 0 P **PKPdf 22 23 29.7 -0.2**
WHN Wuhan 133.43 28 ⇑ PKP **PKiKP 22 23 30.9 -0.5**
WHN PP **PP 22 25 57.8 +1.2**
WHN SS SS 22 43 43.3 +3.2
WHN AMB AMB
comp=Z,3µm,3.3s
WHN LR LR
comp=Z,3µm,14.5s
WHN LR LR
comp=Z,24µm,24.3s
JRY Ryogami san 133.52 358 P **PKPdf 22 23 29.6 -0.6**
JGF Kuroka 133.96 360 P **PKiKP 22 23 36.1 +3.7**
NJ2 Nanjing 133.97 22 *e*PKP **PKPdf 22 23 30.8 -0.3**
NJ2 sPKP 22 23 34.4
NJ2 PP **PP 22 26 01.5 +1.7**
NJ2 PKS 22 27 06.6
NJ2 SS SS 22 43 52.4 +6.1
NJ2 AMB AMB
comp=Z,1µm,8.5s
NJ2 LR LR
comp=Z,6µm,22.2s
NJ2 LR LR
comp=Z,6µm,20.3s
NJ2 LR LR
comp=Z,7µm,22.7s
UTTA Uttaradit 133.98 52 PKP **PKPdf 22 23 32.1 +0.6**
INU Inuyama 134.21 0 PFAKE 22 23 40.0 +7.2
INU LR LR
comp=Z,3µm,21.0s
JOD2 Odawara 2 134.27 358 P **PKPdf 22 23 31.2 -0.4**
SLVN Son La 134.28 46 PFAKE 22 23 40.0 +6.6
SLVN LR LR
comp=Z,7µm,20.0s
JHS Saijyo 134.39 5 P **PKPdf 22 23 31.0 -0.9**
BFZ Birch Farm 134.53 222 PFAKE 22 23 40.0 +6.7
BFZ LR LR
comp=Z,10µm,20.0s
MXZ Matakaoa Point 134.55 227 PFAKE 22 23 40.0 +6.6
MXZ LR LR
comp=Z,5µm,20.0s
PBKT Sadao Pong 134.97 53 PKP **PKiKP 22 23 34.1 -0.7**
URZ Urewera 135.10 226 PKP **PKiKP 22 23 35.0 +0.6**
comp=Z,15nm,0.9s,baz=74,slow=8.3,SNR=4.2
URZ Urewera 135.10 226 PFAKE 22 23 50.0 +16
URZ LR LR
comp=Z,10µm,22.0s
BKZ Black Stump Fm 135.10 224 PFAKE 22 23 50.0 +15
BKZ LR LR
comp=Z,12µm,20.0s
MQZ McQueen's Vall 135.11 216 PFAKE 22 23 50.0 +16
MQZ LR LR
comp=Z,9µm,19.0s
JIE Ise 135.16 1 P **PKPdf 22 23 28.9 -4.4**
SNZO South Karori 135.20 220 PFAKE 22 23 50.0 +15
SNZO LR LR
comp=Z,12µm,19.0s
CRLZ Canterbury Las 135.21 217 PFAKE 22 23 50.0 +15
CRLZ LR LR
comp=Z,12µm,20.0s
KHZ Kahutara 135.33 218 PFAKE 22 23 50.0 +15
KHZ LR LR
comp=Z,6µm,20.0s
ODZ Otahua Downs 135.42 214 PFAKE 22 23 50.0 +15
ODZ LR LR
comp=Z,8µm,20.0s
SSE Sheshan 135.66 20 PKP **PKPdf 22 23 34.4 +0.1**
SSE PP **PP 22 26 13.3 +2.9**
SSE SS SS 22 44 06.5 0.0
SSE AMB AMB
comp=Z,460nm,11.1s
SSE LR LR
comp=Z,3µm,21.3s
SSE LR LR
comp=Z,2µm,21.1s
SSE Sheshan 135.66 20 PFAKE 22 23 50.0 +14
SSE LR LR
comp=Z,9µm,19.0s
OXZ Oxford 135.70 217 PFAKE 22 23 50.0 +14
OXZ LR LR
comp=Z,10µm,19.0s
NONG Nongkai 135.78 50 PKP **PKiKP 22 23 36.2 -0.2**
LTZ Lake Taylor 135.88 217 PFAKE 22 23 50.0 +14
LTZ LR LR
comp=Z,10µm,19.0s
JNU Nakatsue 136.00 8 P **PKiKP 22 23 37.2 +0.6**
RPZ Rata Peaks 136.03 215 PKP **PKiKP 22 23 36.5 +0.2**
comp=Z,26nm,1.0s,baz=76,slow=3.5,SNR=3.7
RPZ Rata Peaks 136.03 215 PFAKE 22 23 50.0 +14
RPZ LR LR
comp=Z,9µm,20.0s
THZ Tophouse 136.09 219 PFAKE 22 23 50.0 +14
THZ LR LR
comp=Z,12µm,22.0s
LBZ Lake Benmore 136.09 214 PFAKE 22 23 50.0 +14
LBZ LR LR
comp=Z,9µm,20.0s
CHAI Chaiyaphum 136.16 53 PKP **PKiKP 22 23 37.2 -0.1**
WKZ Wanaka 136.44 213 PFAKE 22 23 50.0 +13
WKZ LR LR
comp=Z,10µm,19.0s
HIZ Hauiti 136.54 224 PFAKE 22 23 50.0 +13
HIZ LR LR
comp=Z,7µm,19.0s
MLZ Mavora Lakes 136.55 212 *e*PKPdf **PKiKP 22 23 37.2 -0.1**
KHON Khomkaen 136.56 52 PKP **PKiKP 22 23 41.6 +3.5**
MLSI Meulaboh, Aceh 136.63 72 PKP **PKPdf 22 23 36.7 +0.1**
MLSI PKP **sPKPdf 22 23 44.3 +1.7**
PYZ Puysegur Point 136.71 210 PFAKE 22 23 50.0 +12
PYZ LR LR
comp=Z,9µm,20.0s
LHMI Lhok Sumawe 136.79 70 PFAKE 22 23 50.0 +11
LHMI LR LR
comp=Z,5µm,20.0s
FOZ Fox Glacier 136.84 215 PFAKE 22 23 50.0 +12
FOZ LR LR
comp=Z,14µm,19.0s
DCZ Deep Cove 136.97 211 PFAKE 22 23 50.0 +12
DCZ LR LR
comp=Z,6µm,20.0s
SKNT Sakolnakorn 137.07 51 PKP **PKPdf 22 23 31.6 -5.7**
PANO Nakornpanom 137.44 50 PKP **PKiKP 22 23 39.3 -0.5**
KCSI Kotacane, Aceh 138.17 72 PKP **PKPdf 22 23 32.6 -6.8**
KCSI PKP **PKiKP 22 23 39.5 -1.9**
KCSI PKP **PKiKP 22 23 39.6 -1.9**
WAKE Wake Island 138.50 316 PFAKE 22 23 50.0 +8.1
WAKE LR LR
comp=Z,9µm,20.0s
GSI Gunungsitoli 138.70 76 PFAKE 22 23 50.0 +7.5
GSI LR LR
comp=Z,9µm,19.0s
GSI Gunungsitoli 138.70 76 PKP **PKPdf 22 23 40.7 +0.3**
GSI PKP **pPKPdf 22 23 43.8 -1.1**
OUZ Omahuta 139.00 228 PFAKE 22 23 50.0 +7.5
OUZ LR LR
comp=Z,7µm,20.0s
GZH Guangzhou 139.03 35 PKP **PKiKP 22 23 44.5 +1.6**
GZH PP **PP 22 26 32.3 +0.3**
GZH SKKS 22 33 29.0
GZH SS **SS 22 44 45.0 -2.6**
GZH LR LR
comp=Z,4µm,18.4s
GZH LR LR
comp=Z,6µm,19.0s
SKLT Songkhla 139.38 66 PKP **PKiKP 22 23 43.8 -0.1**
PSI Prapat 139.49 73 PFAKE 22 23 50.0 +5.7
PSI LR LR
comp=Z,11µm,20.0s
QIZ Qiongzhong 139.92 43 PKP PKPdf 22 23 31.3 -11
QIZ PP PP 22 26 30.0 -7.9
QIZ Qiongzhong 139.92 43 SS **SS 22 44 53.3 -5.4**
QIZ AMB AMB
comp=Z,1µm,4.6s
QIZ LR LR
comp=N,4µm,23.7s
QIZ LR LR
comp=E,2µm,21.4s
QIZ LR LR
comp=Z,5µm,30.4s
QIZ Qiongzhong 139.92 43 PFAKE 22 23 50.0 +5.1
QIZ LR LR
comp=Z,5µm,20.0s
HKPS Hong Kong Po S 140.12 35 PFAKE 22 23 50.0 +4.8
HKPS LR LR
comp=Z,6µm,20.0s
QZH Quanzhou 140.14 27 *e*PKP **PKPdf 22 23 39.0 -3.7**
QZH PP **PP 22 26 41.1 +2.5**
QZH PKS **PKSdf 22 27 16.8 -2.1**
QZH SS SS 22 45 03.8 +3.7
QZH AMB AMB
comp=Z,1µm,10.9s
QZH LR LR
comp=Z,7µm,21.3s
QZH LR LR
comp=Z,2µm,18.0s
QZH LR LR
comp=Z,10µm,22.3s
KULM Kulim 140.18 68 PFAKE 22 24 00.0 +14
KULM LR LR
comp=Z,7µm,22.0s
KNMB Chin-men Tao 140.47 28 PFAKE 22 24 00.0 +14
KNMB LR LR
comp=Z,10µm,21.0s
MNSI Mandailing Nat 140.76 75 PKP **PKPdf 22 23 41.3 -2.8**
TATO Taipei 141.33 23 PFAKE 22 24 00.0 +12
TATO LR LR
comp=Z,7µm,21.0s
YHNB Yeheng 141.56 24 PFAKE 22 24 00.0 +12
YHNB LR LR
comp=Z,9µm,21.0s
JOW Kunigami 141.68 13 PFAKE 22 24 00.0 +12
JOW LR LR
comp=Z,5µm,22.0s
NACB Ninganchiao 142.09 24 PFAKE 22 24 00.0 +11
NACB LR LR
comp=Z,8µm,20.0s
PDSI Padang 142.10 78 PKP **PKPdf 22 23 41.4 -5.2**
PDSI PKP **PKiKP 22 23 44.3 -5.2**
SSLB Suanglung 142.18 25 PFAKE 22 24 00.0 +11
SSLB LR LR
comp=Z,5µm,21.0s
BKNI Bangkinang 142.29 75 PFAKE 22 24 00.0 +10
BKNI LR LR
comp=Z,6µm,19.0s
YOJ Yonaguni jima 142.37 22 PFAKE 22 24 00.0 +10
YOJ LR LR
comp=Z,5µm,20.0s
TPUB Ta-pu 142.47 26 *e*PKPdf **PKPdf 22 23 47.9 +0.9**
TPUB LR LR
comp=Z,5µm,20.0s
TARA Tarawa 142.63 287 PFAKE 22 24 00.0 +9.4
TARA LR LR
comp=Z,4µm,20.0s
YULB Yu-li 142.67 25 PFAKE 22 24 00.0 +10
YULB LR LR
comp=Z,5µm,19.0s
SDSI Sungai Dareh 143.04 77 PKP PKPab 22 23 42.6 -0.8
SDSI PKP PKPbc 22 23 43.6 -1.4
TWG Pinlang 143.08 25 PFAKE 22 24 00.0 +8.7
TWG LR LR
comp=Z,25µm,20.0s
KRJI Kerinci 143.38 79 PKP PKPab 22 23 45.4 +0.4
KRJI PKP PKPbc 22 23 45.9 -0.2
KRJI PKP **PKPdf 22 23 48.9 0.0**
DLV T Lat 143.57 53 PFAKE 22 24 00.0 +7.3
DLV LR LR
comp=Z,8µm,22.0s
KWAJ Kwajalein Atol 144.18 302 PFAKE 22 24 00.0 +6.3
KWAJ LR LR
comp=Z,9µm,22.0s
MYKOM Kota Tinggi 144.46 72 PFAKE 22 24 00.0 +5.7
MYKOM LR LR
comp=Z,8µm,20.0s
JMBI JAMBI 145.35 77 PKP **PKPbc 22 23 49.1 -3.0**
JMBI PKP **PKiKP 22 23 54.5 -1.7**
MNAI Manna 145.37 82 PFAKE 22 24 00.0 +3.8
MNAI LR LR
comp=Z,9µm,22.0s
TPRI Tanjung Pinang 145.39 73 PKP **PKPbc 22 23 51.3 -0.9**
TPRI PKP **PKPab 22 23 53.9 +1.5**
LHSI Lahat 145.80 81 PKP **PKPdf 22 23 52.0 -1.0**
LHSI PKP **PKPbc 22 23 53.1 -0.4**
DSRI Dabo 145.90 75 PKP **PKPdf 22 23 52.0 -1.2**
DSRI PKP **PKPbc 22 23 53.0 -0.8**
DSRI PKP **PKPab 22 23 55.6 +1.3**
LWLI Liwa 146.58 83 PKP **PKPbc 22 23 55.3 -0.7**
LWLI PKP **PKPab 22 23 56.9 -0.1**
MDSI Maura Dua 146.59 82 PKP **PKPdf 22 23 53.6 -0.7**
TAU Tasmania Unive 146.74 193 *e*PKPdf **PKPab 22 23 56.3 -0.2**
TAU LR LR
comp=Z,8µm,20.0s
TAU Tasmania Unive 146.74 193 *e*PKP2 **PKPab 22 23 56.3 -0.2**
TAU MLR MLR
comp=Z,8µm,20.0s
KASI Kota Agung 147.11 84 PKP **PKPdf 22 23 54.6 -0.6**
KASI PKP **PKPbc 22 23 56.1 -1.2**
KASI PKP **PKPab 22 23 56.9 -2.0**
KLI Kotabumi 147.33 82 PKP **PKPbc 22 23 57.1 -0.8**
KLI PKP **PKiKP 22 24 00.4 +0.2**
ABRA Dolores 147.40 30 *e*P **PKPbc 22 23 58.7 +0.8**
APYP Conner 147.48 29 *e*P **PKPab 22 23 59.4 -0.8**
BLSI Bandar Lampung 147.81 83 PKP **PKPdf 22 23 57.3 +0.9**
BLSI PKP **pPKPdf 22 24 00.6 -0.3**
PPBI Pangkal Pinang 147.90 77 PKP **PKPdf 22 23 56.7 +0.2**
PPBI PKP **PKPbc 22 23 58.1 -1.4**
BOLP Bolinao 148.06 33 *e*P **PKPbc 22 23 59.3 -0.5**
CGJI Cibinong 148.47 85 PKP **PKPdf 22 23 56.9 -0.5**
CGJI PKP **PKPbc 22 23 58.4 -2.6**
CGJI PKP **pPKPdf 22 23 59.3 -2.7**
SCZP Santa Cruz 148.55 34 *e*P **PKPbc 22 23 59.6 -1.5**
SMPP San Manuel, Pa 148.65 32 *e*P **PKPbc 22 24 00.2 -1.2**
SBJI Serang 148.81 84 PKP **PKPdf 22 23 59.0 +1.0**
SBJI PKP **sPKPdf 22 24 03.9 -0.2**
XMIS Christmas Isla 148.87 93 PFAKE 22 24 10.0 +4.1
XMIS LR LR
comp=Z,6µm,20.0s
BALP Baler 149.45 31 *e*P **PKPbc 22 24 02.6 -0.8**
TPI Tanjungpandan 149.52 77 PKP **PKPdf 22 24 00.0 +0.8**
TPI PKP **PKPbc 22 24 02.9 -0.8**
ONTNC Ouen Toro 149.85 244 PFAKE 22 24 10.0 +0.3
ONTNC LR LR
comp=Z,5µm,19.0s
DZM Mont Dzumac 149.93 244 *e*SS SS 22 46 54.9 -0.2
comp=Z,6µm,29.8s
DZM Mont Dzumac 149.93 244 *e*LR LR 23 13 50.8
comp=Z,16µm,27.9s
DZM Mont Dzumac 149.93 244 PKPbc **PKiKP 22 24 05.8 +0.3**
comp=Z,103nm,0.9s,baz=41,slow=18,SNR=26
DZM Mont Dzumac 149.93 244 PFAKE 22 24 10.0 -0.1
DZM LR LR
comp=Z,5µm,20.0s
LUBP Lubang 150.40 35 *e*P **PKPbc 22 24 03.5 -2.2**
KSM Kuching 150.53 67 PFAKE 22 24 10.0 -2.7
KSM LR LR
comp=Z,8µm,22.0s
CISI Cisompet, Garu 150.70 86 PFAKE 22 24 10.0 +2.7

CISI				LR	LR			
	comp=Z,6μm,22.0s							
CISI	**Cisompet, Garu**	**150.70**	**86**	PKP	**PKPdf**	**22 24 00.8**	**-0.3**	
CISI				PKP	**pPKPdf**	**22 24 02.1**	**-3.5**	
CISI				PKP	**PKPbc**	**22 24 05.9**	**-0.7**	
JCJI	**Jatiwangi**	**150.97**	**84**	PKP	**PKPdf**	**22 24 02.6**	**+1.2**	
JCJI				PKP	**pPKPdf**	**22 24 05.4**	**-0.5**	
JCJI				PKP	**PKiKP**	**22 24 09.2**	**+1.5**	
NWAO	**Narrogin (SRO)**	**151.16**	**143**	*e*PKPbc	**PKPbc**	**22 24 06.8**	**-0.3**	
NWAO				LR	LR			
	comp=Z,6μm,21.0s							
NWAO	**Narrogin (SRO)**	**151.16**	**143**	*e*PKIKP	**PKPbc**	**22 24 06.8**	**-0.3**	
NWAO				MLR	MLR			
	comp=Z,6μm,21.0s							
SARN	**Sarigan**	**151.53**	**343**	PFAKE		22 24 10.0	+1.2	
SARN				LR	LR			
	comp=Z,3μm,21.0s							
BUSP	**Coron**	**151.75**	**38**	*e*P	**PKiKP**	**22 24 09.6**	**+0.3**	
SBUM	**Sibu**	**151.81**	**64**	PFAKE		22 24 10.0	+0.5	
SBUM				LR	LR			
	comp=Z,3μm,22.0s							
ENPP	**El Nido**	**151.89**	**40**	*e*P	**PKPdf**	**22 24 02.9**	**+0.1**	
TOO	**Toolangi**	**152.25**	**194**	PFAKE		22 24 10.0	+0.2	
TOO				LR	LR			
	comp=Z,9μm,20.0s							
PVCP	**Virac**	**152.56**	**29**	*e*P	**PKPbc**	**22 24 08.4**	**-2.3**	
BATP	**Bataraza**	**152.57**	**46**	*e*P	**PKPdf**	**22 24 05.2**	**+1.4**	
PATS	**Pohnpei**	**152.81**	**309**	*e*PKPbc	**PKPbc**	**22 24 10.2**	**-1.2**	
PATS				LR	LR			
	comp=Z,5μm,21.0s							
MORW	**Morawa**	**152.97**	**136**	*e*PKPdf	**PKPdf**	**22 24 06.7**	**+2.6**	
MORW				LR	LR			
	comp=Z,6μm,22.0s							
SMRI	**Semarang**	**153.19**	**84**	*e*PKPab	**PKPab**	**22 24 25.7**	**+1.8**	
SMRI				LR	LR			
	comp=Z,10μm,20.0s							
SMRI	**Semarang**	**153.19**	**84**	PKP	**PKPdf**	**22 24 06.0**	**+1.2**	
SMRI				PKP	**pPKPdf**	**22 24 08.7**	**-0.6**	
SMRI				PKP	**PKiKP**	**22 24 12.7**	**+0.3**	
CAN	**Canberra**	**153.28**	**202**	PFAKE		22 24 20.0	-3.6	
CAN				LR	LR			
	comp=Z,5μm,19.0s							
PBKI	**Pangkalan Bun**	**153.33**	**75**	PKP	**PKPdf**	**22 24 06.1**	**+1.1**	
PBKI				PKP	**pPKPdf**	**22 24 09.5**	**0.0**	
PBKI				PKP	**pPKPbc**	**22 24 15.8**	**-1.2**	
UGM	**Wanagama**	**153.41**	**86**	PFAKE		22 24 20.0	-4.8	
UGM				LR	LR			
	comp=Z,7μm,19.0s							
UGM	**Wanagama**	**153.41**	**86**	PKP	**PKPdf**	**22 24 06.4**	**+1.3**	
UGM				PKP	**pPKPdf**	**22 24 08.8**	**-0.8**	
UGM				PKP	**PKiKP**	**22 24 14.7**	**+1.9**	
WOJI	**Wonogiri, Jawa**	**153.79**	**86**	PKP	**PKPdf**	**22 24 07.0**	**+1.4**	
WOJI				PKP	**pPKPdf**	**22 24 10.9**	**+0.8**	
WOJI				PKP	**pPKPbc**	**22 24 15.9**	**-2.1**	
PWJI	**Pagerwojo**	**154.68**	**86**	PKP	**PKPdf**	**22 24 08.3**	**+1.5**	
PWJI				PKP	**pPKPdf**	**22 24 09.9**	**-1.4**	
GUMO	**Guam**	**154.75**	**343**	PFAKE		22 24 20.0	+4.5	
GUMO				LR	LR			
	comp=Z,4μm,22.0s							
GIRL	**Giralia**	**154.93**	**121**	PFAKE		22 24 20.0	+4.3	
GIRL				LR	LR			
	comp=Z,13μm,22.0s							
MSLP	**Maasin**	**155.88**	**31**	*e*P	**PKPdf**	**22 24 08.0**	**-0.5**	
ARMA	**Armidale**	**156.29**	**212**	*e*PKPab	**PKPab**	**22 24 38.3**	**+1.7**	
ARMA				LR	LR			
	comp=Z,7μm,18.0s							
PAGZ	**Pagadian**	**156.94**	**38**	*e*P	**PKPdf**	**22 24 13.7**	**+3.9**	
JAGI	**Jajag, Banyuwa**	**157.04**	**87**	PFAKE		22 24 20.0	+10	
JAGI				LR	LR			
	comp=Z,6μm,20.0s							
HNR	**Honiara**	**157.70**	**271**	PFAKE		22 24 20.0	+9.2	
HNR				LR	LR			
	comp=Z,5μm,19.0s							
CTBH	**Cotabato--PC H**	**157.95**	**37⇑**	*i*P	**PKPab**	**22 24 44.1**	**+0.1**	
BBOO	**Buckleboo**	**157.95**	**177**	PFAKE		22 24 20.0	+9.4	
BBOO				LR	LR			
	comp=Z,8μm,19.0s							
SRBI	**Singaraja**	**158.03**	**85**	PKP	**PKPdf**	**22 24 12.9**	**+1.7**	
SRBI				PKP	**pPKPdf**	**22 24 15.0**	**-0.7**	
SRBI				PKP	**sPKPdf**	**22 24 18.2**	**+0.9**	
FORT	**Forrest**	**158.23**	**158**	PFAKE		22 24 20.0	+9.0	
FORT				LR	LR			
	comp=Z,7μm,21.0s							
STKA	**Stephens Creek**	**158.55**	**190**	PKP	**PKPdf**	**22 24 12.4**	**+1.0**	
	comp=Z,14nm,1.1s,baz=105,slow=3.9,SNR=9.4							
STKA	**Stephens Creek**	**158.55**	**190**	PFAKE		22 24 20.0	+8.6	
STKA				LR	LR			
	comp=Z,1μm,20.0s							
DAV	**Davao City (W)**	**158.83**	**34**	PFAKE		22 24 20.0	+7.8	
DAV				LR	LR			
	comp=Z,8μm,22.0s							
DDMP	**Don Marcelino,**	**159.70**	**35**	*e*P	**PKPdf**	**22 24 07.9**	**-5.3**	
PSAD3	**Pilbara Seismi**	**159.95**	**125**	PFAKE		22 24 20.0	+6.7	
PSAD3				LR	LR			
	comp=Z,8μm,20.0s							
PSAC3	**Pilbara Seismi**	**160.00**	**125**	PFAKE		22 24 20.0	+6.7	
PSAC3				LR	LR			
	comp=Z,7μm,21.0s							
PSAB1	**Pilbara Seismi**	**160.03**	**125**	PFAKE		22 24 20.0	+6.6	
PSAB1				LR	LR			
	comp=Z,8μm,22.0s							
PSAA1	**Pilbara Seismi**	**160.03**	**125**	PFAKE		22 24 20.0	+6.6	
PSAA1				LR	LR			
	comp=Z,7μm,20.0s							
PSAC1	**Pilbara Seismi**	**160.03**	**125**	PFAKE		22 24 20.0	+6.6	
PSAC1				LR	LR			
	comp=Z,8μm,22.0s							
PSAB3	**Pilbara Seismi**	**160.04**	**125**	PFAKE		22 24 20.0	+6.6	
PSAB3				LR	LR			
	comp=Z,7μm,19.0s							
PSA00	**Pilbara Seismi**	**160.04**	**125**	PFAKE		22 24 20.0	+6.6	
PSA00				LR	LR			
	comp=Z,7μm,20.0s							
PSAA3	**Pilbara Seismi**	**160.05**	**125**	PFAKE		22 24 20.0	+6.6	
PSAA3				LR	LR			
	comp=Z,7μm,20.0s							
PSAA2	**Pilbara Seismi**	**160.05**	**125**	PFAKE		22 24 20.0	+6.6	
PSAA2				LR	LR			
	comp=Z,7μm,19.0s							
KAPI	**Kappang**	**161.70**	**73**	*e*PKPab	**PKPab**	**22 25 01.7**	**+1.1**	
KAPI	**Kappang**	**161.70**	**73**	*e*PKP2	**PKPab**	**22 25 01.7**	**+1.1**	
SANI	**Sanana**	**165.84**	**53**	PKP	**PKPdf**	**22 24 21.4**	**+2.2**	
SANI				PKP	**pPKPdf**	**22 24 24.2**	**+0.4**	
ASAR	**Alice Springs**	**166.69**	**166**	PKP	**PKPdf**	**22 24 18.8**	**-0.9**	
	comp=Z,9.0nm,1.0s,baz=159,slow=0.3,SNR=24							
ASAR				PKPab	**PKPab**	**22 25 21.8**	**-0.2**	
	comp=Z,36nm,1.1s,baz=196,slow=4.3,SNR=19							
ASAR				PP	**PP**	**22 29 13.4**	**+5.1**	
	comp=Z,15nm,1.0s,baz=173,slow=4.5,SNR=6.5							
SOEI	**Soe**	**167.11**	**87**	*e*PKPab	**PKPab**	**22 25 24.3**	**-0.3**	
CTA	**Charters Tower**	**167.31**	**222**	PKP	**PKPdf**	**22 24 20.1**	**0.0**	
	comp=Z,11nm,1.0s,baz=243,slow=4.5,SNR=2.9							
CTA				PKPab	**PKPab**	**22 25 25.4**	**+0.6**	
	comp=Z,14nm,1.0s,baz=118,slow=6.9,SNR=4.8							
SIJI	**Sorong**	**168.53**	**32**	PKP	**PKPdf**	**22 24 20.8**	**-0.4**	
	comp=Z,12nm,0.7s,baz=67,slow=5.4,SNR=8.2							
SIJI				PKPab	**PKPab**	**22 25 29.8**	**-0.6**	
	comp=Z,28nm,0.8s,baz=322,slow=5.8,SNR=6.3							
SIJI				PP	**PP**	**22 29 21.6**	**+3.3**	
	comp=Z,13nm,0.9s,baz=341,slow=5.4,SNR=9.7							
WRA	**Warramunga Arr**	**170.36**	**163**	PKP	**PKPdf**	**22 24 21.8**	**-0.3**	
	comp=Z,16nm,1.1s,baz=288,slow=0.8,SNR=11							
WRA				PKPab	**PKPab**	**22 25 38.0**	**-0.3**	
	comp=Z,10nm,0.8s,baz=193,slow=3.4,SNR=5.5							
WRAB	**Tennant Creek**	**170.37**	**163**	*e*PKPab	**PKPab**	**22 25 38.4**	**+0.1**	
WRAB	**Tennant Creek**	**170.37**	**163**	*e*PKP2	**PKPab**	**22 25 38.4**	**+0.1**	
COEN	**Coen**	**173.43**	**240**	*e*PKPab	**PKPab**	**22 25 54.5**	**+2.2**	

*HEL **24** 22:18:35.0, 67.°17N×20.°63E, h0km, ML1.6, Explosion*

UPP 24 22:18:34.2±0.1, 67.°17N×20.°65E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.06**	**213**	P	Pg	22 18 35.5	+0.2
DUNU				S	Sg	22 18 36.7	+0.7
DUNU	**Dundret**	**0.06**	**213**	*i* P	Pg	22 18 35.5	+0.2
DUNU				*i* S	Sg	22 18 36.7	+0.7
MASU	**Masugnsbyn**	**0.60**	**60**	P	Pg	22 18 45.5	-0.1
MASU	**Masugnsbyn**	**0.60**	**60**	*i* P	Pg	22 18 45.5	-0.1
SALU	**Saltoluokta**	**0.86**	**285**	P	Pg	22 18 50.2	-0.4
SALU	**Saltoluokta**	**0.86**	**285**	*i* P	Pg	22 18 50.2	-0.4
ERTU	**Ertsjaerv**	**0.87**	**135**	P	Pg	22 18 50.3	-0.5
ERTU	**Ertsjaerv**	**0.87**	**135**	*i* P	Pg	22 18 50.3	-0.5
PAJU	**Pajala**	**0.97**	**97**	P	Pg	22 18 52.5	-0.4
PAJU	**Pajala**	**0.97**	**97**	*e*P	Pg	22 18 52.5	-0.4
HARU	**Harads**	**1.02**	**173**	P	Pg	22 18 53.1	-0.5
HARU	**Harads**	**1.02**	**173**	*e*P	Pg	22 18 53.1	-0.5
HEF	**Hetta**	**1.69**	**41**	*e*PG	Pn	22 19 05.2	+0.2
HEF	baz=216			MSG		22 19 25.5	
HEF	comp=Z,3.6nm,0.2s						
HEF				*e*SG	Sn	22 19 27.0	-0.3
SJUU	**Sjulsmark**	**1.71**	**167**	P	Pn	22 19 05.0	-0.2
SJUU	**Sjulsmark**	**1.71**	**167**	*e*P	Pn	22 19 05.0	-0.2
TOF	**Tornio**	**1.83**	**125**	*e*PN	Pn	22 19 07.5	+0.7
TOF				MSG		22 19 29.7	
TOF	comp=Z,3.4nm,0.2s						
TOF				*e*SN	Sb	22 19 31.5	-0.3
KIF	**Kilpisjarvi**	**1.84**	**2**	*e*PG	Pb	22 19 08.6	-0.1
KIF				MSG		22 19 31.0	
KIF	comp=Z,3.0nm,0.2s						
KIF				*e*SG	Sg	22 19 33.6	+0.2
RNF	**Rovaniemi**	**2.19**	**102**	*e*PB	Pb	22 19 13.2	-1.4
RNF	baz=295						
RNF				*e*SG	Sb	22 19 42.2	0.0
SGF	**Sodankyl**	**2.30**	**80**	*e*SG	Sb	22 19 45.2	-0.1
BURU	**Burvik**	**2.61**	**173**	*e*P	Pn	22 19 18.7	+1.2
	baz=3.0						
ARE0	**ARCESS Array S**	**2.98**	**35**	*e*PG	Pg	22 19 30.3	-1.0
	baz=212						
MSF	**Maaselka**	**3.59**	**107**	*e*SG	Sg	22 20 26.9	-2.3

UPP 24 22:19:06.0±0.1, 67.°17N×20.°72E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.07**	**230**	P	Pg	22 19 07.7	+0.3
MASU	**Masugnsbyn**	**0.57**	**59**	P	Pg	22 19 16.9	-0.1
MASU				S	Sg	22 19 24.4	-0.1
ERTU	**Ertsjaerv**	**0.85**	**136**	P	Pg	22 19 21.7	-0.5
SALU	**Saltoluokta**	**0.88**	**285**	P	Pg	22 19 22.3	-0.6
PAJU	**Pajala**	**0.95**	**98**	P	Pg	22 19 23.7	-0.4
LANU	**Lannavaara**	**1.01**	**28**	P	Pg	22 19 24.8	-0.5
HARU	**Harads**	**1.01**	**174**	P	Pg	22 19 24.7	-0.8

*ISCJB **24** 22:32:21.2±0.6, 21.°57N±0.°05×143.°2E±0.°1, h311km, mb3.7/13, Error ellipse: s-maj=18.2km s-min=7.1km az=173.1*

*JMA **24** 22:32:21.8±0.4, 21.°72N×143.°71E, h338km, M4.4*

*IDC **24** 22:32:24.4±2.2, 21.°65N×143.°08E, h325km±23km, mb3.5/13, mb1 3.7/16, mb1mx3.4/51, mbtmp4.3/16, Error ellipse: s-maj=17.3km s-min=12.3km az=88.0*

ISC 24 22:32:23.4±0.6, 21.°73N±0.°07×143.°1E±0.°1, h311km, n29, σ1°91/36, mb3.7/13, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.96**	**350**	P	**Pn**	**22 33 42.5**	**+1.6**
JHH2				*e*S	**S**	**22 34 45.1**	**+1.9**
CBIJ	**Chichi jima**	**5.41**	**351**	P	**Pn**	**22 33 46.8**	**+0.7**
CBIJ				*e*S	**S**	**22 34 54.5**	**+1.8**
GUMO	**Guam**	**8.26**	**168**	P	**Pn**	**22 34 21.9**	**+1.5**
	12nm,0.3s,baz=283,slow=18,SNR=3.3						
JHJ	**Hachijo jima 2**	**11.73**	**346**	P	**P**	**22 35 02.8**	**-0.9**
	14nm,0.3s,baz=197,slow=23,SNR=6.1						
JHJ				S	**S**	**22 37 05.1**	**-8.1**
	4.2nm,0.3s,baz=46,slow=18,SNR=2.1						
BSO1	**Boso 1**	**13.02**	**352**	P	**P**	**22 35 18.2**	**+0.8**
JIE	**Ise**	**13.83**	**337**	P	**Pn**	**22 35 29.3**	**+1.7**
JOD2	**Odawara 2**	**13.94**	**346**	P	**Pn**	**22 35 30.2**	**+1.2**
JOD2				*e*S	**S**	**22 38 00.2**	**-1.5**
JTO	**Tosashimizu**	**14.39**	**323**	P	**Pn**	**22 35 37.3**	**+3.1**
JMN	**Monobe**	**14.48**	**328**	P	**Pn**	**22 35 37.6**	**+2.2**
JRY	**Ryogami san**	**14.71**	**346**	P	**Pn**	**22 35 37.9**	**-0.1**
JRY				*e*S	**S**	**22 38 15.0**	**-2.1**
JAD	**Aida**	**15.34**	**331**	P	**Pn**	**22 35 46.3**	**+1.0**
MJAR	**Matsushiro Arr**	**15.37**	**345**	P	**Pn**	**22 35 44.9**	**-0.9**
	0.2nm,0.3s,baz=164,slow=10,SNR=7.4						
JHS	**Saijyo**	**15.88**	**329**	P	**Pn**	**22 35 52.0**	**+0.3**
JSD	**Sado**	**16.79**	**347**	P	**P**	**22 36 00.1**	**+0.8**
KLR	**Kul'dur**	**28.90**	**344**	P	**P**	**22 37 54.8**	**+0.7**
	1.6nm,0.4s,baz=170,slow=10,SNR=6.4						
CMAR	**Chiang Mai Arr**	**41.53**	**274**	P	**P**	**22 39 40.8**	**-0.6**
	1.6nm,0.3s,baz=82,slow=6.7,SNR=3.6						
WRA	**Warramunga Arr**	**42.30**	**192**	P	**P**	**22 39 45.4**	**-2.1**
	1.3nm,0.4s,baz=7.5,slow=8.3,SNR=31						
ASAR	**Alice Springs**	**46.01**	**192**	P	**P**	**22 40 15.3**	**-1.4**
	0.3nm,0.3s,baz=16,slow=11,SNR=4.1						
ZALV	**Zalesovo Beam**	**54.16**	**322**	P	**P**	**22 41 17.0**	**-0.1**
	1.5nm,0.6s,baz=91,slow=6.5,SNR=5.0						
ZALV				PcP	**PcP**	**22 42 16.0**	**-1.2**
	1.0nm,0.4s,baz=127,slow=5.0,SNR=4.3						
MKAR	**Makanchi Array**	**54.65**	**313**	P	**P**	**22 41 20.8**	**+0.1**
	0.8nm,0.5s,baz=84,slow=8.6,SNR=10						
MKAR				PcP	**PcP**	**22 42 18.7**	**-0.7**
	0.5nm,0.4s,baz=67,slow=4.2,SNR=5.5						
ILAR	**Eielson Array**	**62.03**	**27**	P	**P**	**22 42 10.3**	**-0.8**
	1.3nm,0.6s,baz=261,slow=5.1,SNR=12						
INK	**Inuvik**	**67.56**	**24**	P	**P**	**22 42 46.5**	**0.0**
	1.1nm,0.6s,baz=315,slow=2.9,SNR=3.1						
YKA	**Yellowknife Ar**	**76.45**	**28**	P	**P**	**22 43 39.2**	**+0.3**
	2.0nm,0.5s,baz=292,slow=5.7,SNR=18						
ARCES	**ARCESS Array B**	**78.88**	**341**	P	**P**	**22 43 52.3**	**+0.1**
	3.5nm,0.6s,baz=75,slow=8.9,SNR=19						
KBZ	**Khabaz**	**82.32**	**314**	P	**P**	**22 44 10.8**	**0.0**
	0.3nm,0.3s,baz=74,slow=6.3,SNR=3.9						
FINES	**FINESS Array B**	**83.13**	**334**	P	**P**	**22 44 13.2**	**-1.4**
	2.0nm,0.4s,baz=65,slow=4.7,SNR=35						
NVAR	**Mina Array Bea**	**83.16**	**51**	P	**P**	**22 44 16.3**	**+0.8**
	1.3nm,0.7s,baz=276,slow=5.5,SNR=7.1						
PLCA	**Paso Flores**	**145.81**	**131**	PKPbc	**PKPbc**	**22 51 26.3**	**-0.3**
	1.9nm,0.5s,baz=281,slow=5.2,SNR=4.7						
LPAZ	**La Paz**	**149.98**	**85**	PKPbc	**PKPbc**	**22 51 38.5**	**-0.3**
	1.8nm,0.6s,baz=324,slow=1.6,SNR=5.6						

*IDC **24** 22:39:18.0±4.7, 21.°15S×178.°78W, h596km±53km, mb3.1/10, mb1 3.4/10, mb1mx3.2/34, mbtmp4.1/10, Error ellipse: s-maj=26.0km s-min=24.2km az=59.0*

*ISCJB **24** 22:39:18.7±0.7, 21.°2S±0.°2×178.°9W±0.°2, h619km, mb3.6/10, Error ellipse: s-maj=27.6km s-min=16.4km az=151.4*

ISC 24 22:39:19.9±0.7, 21.°2S±0.°2×178.°8W±0.°2, h619km, n16, σ0°67/16, mb3.8/10, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.65**	**266**	P	**P**	**22 45 03.2**	**-0.1**
	4.7nm,0.9s,baz=97,slow=8.1,SNR=2.7						
STKA	**Stephens Creek**	**36.79**	**245**	P	**P**	**22 45 37.1**	**-0.3**
	1.0nm,0.3s,baz=108,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**43.61**	**258**	P	**P**	**22 46 31.4**	**-0.3**
	4.4nm,0.8s,baz=90,slow=8.4,SNR=27						
ASAR				PcP	**PcP**	**22 48 05.3**	**+0.4**
	0.9nm,0.6s,baz=97,slow=3.7,SNR=6.4						
WRA	**Warramunga Arr**	**43.74**	**263**	P	**P**	**22 46 32.2**	**-0.5**
	3.2nm,0.8s,baz=95,slow=8.5,SNR=9.0						
VNDA	**Vanda**	**57.17**	**185**	P	**P**	**22 48 09.1**	**+0.1**
	0.4nm,0.7s,baz=67,slow=3.0,SNR=3.2						
MAW	**Mawson**	**80.66**	**200**	P	**P**	**22 50 29.1**	**-0.2**
	2.3nm,0.3s,baz=153,slow=11,SNR=3.9						
NVAR	**Mina Array Bea**	**82.05**	**44**	P	**P**	**22 50 37.1**	**-0.1**
	1.0nm,0.6s,baz=225,slow=8.8,SNR=3.8						
TXAR	**Lajitas Array**	**88.08**	**58**	P	**P**	**22 51 07.0**	**+0.6**
	0.6nm,0.8s,baz=209,slow=10.0,SNR=5.5						
ILAR	**Eielson Array**	**89.15**	**13**	P	**P**	**22 51 09.3**	**-1.0**
	0.2nm,0.5s,baz=227,slow=4.8,SNR=5.0						
CMAR	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**22 51 15.3**	**+1.8**
	1.1nm,0.8s,baz=142,slow=2.7,SNR=7.5						
ARCES	**ARCESS Array B**	**129.44**	**349**	PKP	**PKPdf**	**22 57 19.1**	**+0.3**
	3.1nm,0.9s,baz=56,slow=3.1,SNR=5.5						
FINES	**FINESS Array B**	**136.19**	**343**	PKP	**PKiKP**	**22 57 33.0**	**-0.5**
	0.8nm,0.7s,baz=50,slow=3.0,SNR=4.2						
AKASG	**Malin Array Be**	**143.22**	**330**	PKP	PKPab	22 57 42.6	-0.4
	1.8nm,0.5s,baz=42,slow=4.3,SNR=22						
BRTR	**Keskin Array B**	**146.70**	**311**	PKPbc	**PKPbc**	**22 57 53.8**	**-0.2**
	1.2nm,0.6s,baz=128,slow=5.4,SNR=8.7						
BURAR	**Bucovina Array**	**147.25**	**329⇑**	*i* P	**PKiKP**	**22 57 56.7**	**-0.1**
GERES	**GERESS Array B**	**150.63**	**343**	PKPbc	**PKPbc**	**22 58 03.0**	**-0.2**
	0.8nm,0.6s,baz=56,slow=3.4,SNR=8.0						

*ISCJB **24** 22:41:35.8±0.3, 24.°86N±0.°02×122.°10E±0.°02, h3km±2km, mb4.0/3, Error ellipse: s-maj=2.8km s-min=2.4km az=14.6*

*JMA **24** 22:41:36.7±0.1, 24.°86N×122.°00E, h35km, M3.4*

*TAP **24** 22:41:36.0, 24.°85N×122.°04E, h10km, ML3.7, B*

*IDC **24** 22:41:37.2±1.4, 24.°63N×121.°16E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.5/36, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=66.7km s-min=21.5km az=83.0*

ISC 24 22:41:36.3±0.8, 24.°87N±0.°02×122.°06E±0.°02, h10km±6km, n118, σ0°82/154, mb4.1/3, 18C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.12**	**259**	⇑P	**Pg**	**22 41 39.1**	**-0.1**
EGS	baz=267			S	**Sg**	**22 41 41.0**	**-0.2**
TWB1	**Santiao Chiao**	**0.15**	**334⇑**	*i* P	**Pg**	**22 41 40.0**	**+0.2**
TWB1	baz=337			*i* S	**Sg**	**22 41 42.9**	**+0.8**
NTC	**Toucheng**	**0.21**	**266**	⇑P	**Pg**	**22 41 40.8**	**+0.1**
NTC	baz=272			S	**Sg**	**22 41 44.3**	**+0.6**
TIPB	**Shuangxi**	**0.24**	**296⇑**	*i* P	**Pg**	**22 41 41.5**	**+0.3**
TIPB	baz=301			S	**Sg**	**22 41 45.1**	**+0.5**
ILA	**Ilan**	**0.30**	**250**	P	**Pg**	**22 41 42.4**	**0.0**
ILA	baz=253			S	**Sb**	**22 41 47.3**	**-1.6**
EOS1	**EOS1**	**0.32**	**169**	*e*P	**Pg**	**22 41 43.0**	**+0.2**
TWC	**Suao**	**0.32**	**217**	P	**Pg**	**22 41 42.2**	**-0.5**
TWC	baz=226			S	**Sg**	**22 41 46.2**	**-0.9**
NWF	**Wu-fen Shan**	**0.33**	**308⇑**	*i* P	**Pb**	**22 41 43.4**	**-0.9**
NWF	baz=304			S	**Sb**	**22 41 48.3**	**-1.4**
WFSB	**Wu-fen Shan**	**0.33**	**308**	⇑P	**Pb**	**22 41 43.4**	**-0.9**
WFSB	baz=303			S	**Sb**	**22 41 48.4**	**-1.2**
TWE	**Neicheng**	**0.39**	**248⇑**	*i* P	**Pg**	**22 41 43.7**	**-0.3**
TWE	baz=250			S	**Sg**	**22 41 48.9**	**-0.2**
TWA	**Mucha**	**0.45**	**284⇑**	*i* P	**Pb**	**22 41 45.4**	**-0.9**
TWA	baz=278			S	**Sb**	**22 41 51.8**	**-1.4**
NHDH	**Xindian Distri**	**0.50**	**281**	*e*P	**Pb**	**22 41 46.7**	**-0.5**
NHDH	baz=275			*e*S	**Sb**	**22 41 53.1**	**-1.4**
ENTT	**Nioudou**	**0.51**	**243**	P	**Pg**	**22 41 45.9**	**-0.3**
ENTT	baz=246			*e*S	**Sb**	**22 41 53.5**	**-1.3**
NANB	**Nanao**	**0.52**	**213**	*e*P	**Pg**	**22 41 46.2**	**-0.3**
NANB	baz=221			S	**Sg**	**22 41 53.0**	**-0.4**
YM01	**YM01**	**0.53**	**302⇑**	*i* P	**Pb**	**22 41 47.5**	**-0.3**
YM01	baz=303			S	**Sb**	**22 41 54.3**	**-1.1**
ENA	**Nanau**	**0.53**	**214**	*e*P	**Pg**	**22 41 46.2**	**-0.3**
TAP	**Taipei**	**0.53**	**289**	P	**Pb**	**22 41 47.4**	**-0.4**
TAP	baz=290			*e*S	**Sb**	**22 41 53.8**	**-1.7**
TATO	**Taipei**	**0.53**	**282**	⇑P	**Pb**	**22 41 47.1**	**-0.7**
TATO	baz=276			*e*S	**Sg**	**22 41 53.5**	**-0.2**
YM08	**YM08**	**0.53**	**307**	⇑P	**Pb**	**22 41 47.3**	**-0.5**
YM10	**YM10**	**0.54**	**302⇑**	*i* P	**Pb**	**22 41 47.6**	**-0.3**
YM05	**YM05**	**0.54**	**303⇑**	*i* P	**Pb**	**22 41 47.6**	**-0.3**
YM04	**YM04**	**0.56**	**301⇑**	*i* P	**Pb**	**22 41 47.9**	**-0.3**
YM03	**YM03**	**0.57**	**303⇑**	*i* P	**Pb**	**22 41 47.9**	**-0.5**
TWY	**Chenhua**	**0.58**	**314⇑**	*i* P	**Pb**	**22 41 48.6**	**-0.1**
ANP	**Anpu**	**0.58**	**303**	P	**Pb**	**22 41 48.2**	**-0.6**
NTST	**Danshui**	**0.63**	**298**	*e*P	**Pb**	**22 41 49.7**	**+0.2**
TWS1	**Kuangyinshan**	**0.63**	**292**	P	**Pb**	**22 41 49.7**	**+0.3**
TWS1	baz=293			S	**Sb**	**22 41 58.7**	**+0.3**
YHNB	**Yeheng**	**0.65**	**253**	⇑P	**Pg**	**22 41 48.5**	**-0.5**
YHNB	baz=255			S	**Sg**	**22 41 55.9**	**-1.7**
NSK	**Sanguang**	**0.67**	**253**	P	**Pg**	**22 41 48.6**	**-0.7**
WLTB	**Daxi**	**0.73**	**269**	*e*P	**Pb**	**22 41 51.0**	**-0.2**
NNSB	**Datong**	**0.76**	**235**	*e*P	**Pg**	**22 41 50.5**	**-0.5**
NNSB	baz=237			*e*S	**Sb**	**22 42 01.4**	**-0.8**
NNS	**Nan Shan**	**0.76**	**236**	*e*P	**Pg**	**22 41 50.8**	**-0.2**
PCYT	**Pengchaiyu**	**0.76

	baz=211					
NMLH	Miaoli	1.20	254	eP	Pg	22 42 00.3 +0.9
	baz=270					
OWD	Renai	1.22	222	eP	Pb	22 41 58.9 -0.7
	baz=229					
NSY	Sanyi	1.27	249	eP	Pg	22 42 01.5 +0.8
	baz=256					
NSY				eS	Sn	22 42 18.7 +1.4
	baz=256					
TWQ1	Liyutan	1.28	246	eP	Pg	22 42 01.3 +0.4
	baz=248					
TWQ1				eS	Sg	22 42 18.4 +0.8
	baz=248					
PTSB	Yuanli	1.30	252	eP	Pg	22 42 02.0 +0.7
	baz=270					
DPDB	Guoxing	1.33	231	eP	Pb	22 42 01.4 -0.1
	baz=224					
EGFH	Guangfu	1.33	206	eP	Pn	22 42 00.8 -0.1
	baz=215					
VWDT	VWDT	1.39	217	P	Pb	22 42 02.3 -0.2
	baz=229					
VWDT				eS	Sb	22 42 20.1 -0.1
	baz=229					
WDJ	Dajia District	1.39	248	eP	Pg	22 42 03.6 +0.5
	baz=266					
SMLT	Sun Moon Lake	1.44	227	eP	Pn	22 42 02.4 -0.3
	baz=230					
TCU	Taichung	1.45	241	eP	Pg	22 42 05.2 +0.9
	baz=262					
TYC	Yuchr	1.46	229	eP	Pb	22 42 03.8 +0.2
	baz=223					
SSLB	Suanglung	1.48	223	eP	Pn	22 42 03.2 +0.1
	baz=227					
HGSD	Ruisui	1.49	203	eP	Pg	22 42 05.2 +0.3
	baz=223					
EHY	Hungye	1.52	207	eP	Pn	22 42 04.0 +0.4
	baz=220					
WNT	Mingjian	1.60	232	eP	Pg	22 42 06.9 -0.1
	baz=226					
WJS	Zhushan	1.60	230	eP	Pg	22 42 06.9 -0.1
	baz=224					
IRIF	Iriomote-Funau	1.61	109	P	Pn	22 42 03.5 -1.3
YULB	Yu-li	1.63	206	eP	Pn	22 42 05.3 +0.2
	baz=219					
TWF1	Yuli	1.66	205	eP	Pn	22 42 06.4 +0.8
	baz=222					
YUS	Yu-Shan	1.71	217	eP	Pb	22 42 08.2 +0.1
	baz=229					
HATJ	Hateruma jima	1.78	117	P	Pn	22 42 06.6 -0.6
HATJ				S	Sn	22 42 27.9 -2.0
WGK	Gukeng	1.81	230	eP	Pg	22 42 12.3 +1.4
	baz=233					
WDLH	Douliu	1.82	230	eP	Pg	22 42 10.9 -0.4
	baz=234					
RLNB	Erlin	1.83	238	eP	Pb	22 42 09.7 -0.3
	baz=258					
JKRS	Kuro-shima	1.88	109	P	Pn	22 42 08.0 -0.6
JKRS				eS	Sn	22 42 31.6 -0.8
ELDTW	Lidau	1.93	210	eP	Pb	22 42 10.8 -0.8
	baz=201					
JIJ	Ishigaki jima	1.96	104	P	Pn	22 42 09.4 -0.3
JIJ				eS	Sn	22 42 34.1 -0.2
CHN4	Tsaushan	2.02	222	eP	Pb	22 42 13.5 +0.3
	baz=227					
CHY	Chiayi	2.02	228	eP	Pb	22 42 13.8 +0.5
	baz=232					
TPUB	Ta-pu	2.04	220	eP	Pb	22 42 12.6 -0.9
	baz=216					
TPUB				eS	Sg	22 42 41.0 -0.9
	baz=216					
JISG	Ishigakijimahi	2.06	97	P	Pn	22 42 11.0 -0.1
JISG				eS	Sn	22 42 36.4 -0.5
STYT	Tauyuan	2.08	215	eP	Pb	22 42 14.6 +0.4
	baz=209					
WTP	Ta-pu	2.09	220	eP	Pb	22 42 14.6 +0.2
	baz=225					
TWK	Hsinying	2.15	222	eP	Pb	22 42 15.0 -0.4
	baz=232					
TWK				eS	Sg	22 42 44.6 -0.8
	baz=232					
PTTC	Pingtan	2.17	287	eP	Pn	22 42 10.9 -1.6
	baz=285					
SNST	Tainan City	2.18	221	eP	Pb	22 42 15.2 -0.7
	baz=226					
CHN1	Nanshi	2.19	220	eP	Pb	22 42 16.2 +0.2
	baz=225					
TWG	Pinlang	2.23	204	eP	Pb	22 42 15.7 -1.1
	baz=210					
TWGBT	Beinan	2.23	204	eP	Pn	22 42 15.1 +1.7
	baz=210					
SGST	Jiashian	2.23	218	eP	Pb	22 42 16.5 -0.3
	baz=209					
SLGT	Liugui	2.27	215	eP	Pb	22 42 16.6 -0.9
	baz=221					
MATB	Ma-tsu	2.30	304	eP	Pn	22 42 13.7 -0.7
	baz=299					
SSD	Sandimen	2.49	212	eP	Pb	22 42 19.6 -1.6
	baz=218					
MASBT	Mashibuluo	2.60	211	eP	Pb	22 42 21.4 -1.7
	baz=216					
PNG	Penghu	2.63	241	eP	Pn	22 42 19.4 +0.5
	baz=244					
PHUB	P'eng-hu	2.64	240	eP	Pn	22 42 18.8 -0.3
	baz=243					
XPSS	Dashiqiu	2.66	321	eP	Pn	22 42 18.4 -0.9
	baz=316					
LYJJ	Jianjiangzhen	2.67	309	eP	Pn	22 42 18.2 -1.2
	baz=304					
PTMZ	Houxiangcun	2.68	274	eP	Pn	22 42 18.9 -0.7
	baz=273					
EAST	Anshuo	2.71	204	eP	Pn	22 42 21.9 +1.8
	baz=196					
WDGT	Dungji	2.72	234	eP	Pn	22 42 19.7 -0.4
	baz=238					
SCZT	Fangliau	2.81	208	eP	Pb	22 42 26.0 -0.8
	baz=198					
VCHM	Qimei	2.92	236	eP	Pn	22 42 24.3 +1.5
	baz=252					
MHZQ	Yeshan	3.00	295	eP	Pn	22 42 23.0 -1.0
	baz=290					
KNM	Kinmen	3.33	263	eP	Pn	22 42 29.5 +1.0
	baz=264					
KNMB	Chin-men Tao	3.37	264	eP	Pn	22 42 28.0 -1.1
	baz=264					
AXDP	Jialang	3.72	271	eP	Pn	22 42 33.4 -0.4
	baz=258					
ZPLA	Ao Xicun	4.04	258	eP	Pn	22 42 38.4 +0.1
	baz=258					
ZZJH	Jiuhuzhen	4.05	265	eP	Pn	22 42 38.3 -0.2
	baz=266					
KSRS	Korea Array	13.51	20	Pn	P	22 44 56.8 -0.5
	0.3nm,0.3s,baz=186,slow=9.8,SNR=2.6					
USRK	Ussuriysk Ar.	20.92	20	P	Pn	22 46 26.8 +5.2
	3.3nm,0.9s,baz=207,slow=11,SNR=4.5					
SONM	Songino Array	26.06	336	P	P	22 47 11.7 +1.6
	5.3nm,1.1s,baz=147,slow=8.6,SNR=6.8					
WRA	Warramunga Arr	46.12	164	P	P	22 50 04.1 +3.1
	1.6nm,0.6s,baz=343,slow=11,SNR=12					
ASAR	Alice Springs	49.59	166	P	P	22 50 29.2 +1.3
	0.7nm,0.8s,baz=340,slow=8.5,SNR=5.8					

*ATH **24** 22:49:14.1, 37.°85N×26.°73E, h28km±1km, ML2.3/2, Error ellipse: s-maj=2.5km s-min=0.9km az=87.0*
*ISK **24** 22:49:14.7, 37.°88N×26.°70E, h14km, ML2.4/11*
*ISCJB **24** 22:49:15.1±0.4, 37.°87N±0.°02×26.°66E±0.°03, h5km±4km, Error ellipse: s-maj=4.0km s-min=2.8km az=161.4*
*DDA **24** 22:49:15.5, 37.°91N×26.°74E, h7km±3km, ML2.6*
*THE **24** 22:49:15.8, 37.°87N×26.°69E, h10km±1km, ML2.0/3, Error ellipse: s-maj=2.2km s-min=0.4km az=61.0*

ISC 24 22:49:15.0±0.8, 37.°87N±0.°02×26.°67E±0.°02, h17km±6km, n39, σ0.°52/59, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SMG	Samos	0.21	140	P	P	Pg	22 49 20.3	+0.3
SMG				S	S	Sg	22 49 23.6	+0.3
SMG	Samos	0.21	140	P	P	Pg	22 49 20.3	+0.3
SMG				S	S	Sg	22 49 23.4	+0.1
SMG				AML	AML		22 49 23.8	
	comp=N,1532μm,0.3s							
SMG				AML	AML		22 49 23.8	
	comp=E,1675μm,0.2s							
GMLD	Gumuldur	0.28	43	PG	P	Pg	22 49 20.4	-0.8
GMLD				SG	S	Sg	22 49 24.6	-0.8
ZEY	zmir	0.39	341	i P	P	Pb	22 49 23.5	0.0
ZEY				IAML_P				
	comp=Z,6μm,0.1s							
GCAM	G?zelcaml?	0.48	110	PG	P	Pg	22 49 24.2	-0.4
GCAM				SG	S	Sg	22 49 31.4	+0.3
GCAM	G?zelcaml?	0.48	110	i P	P	Pg	22 49 24.4	-0.2
GCAM				i S	S	Sb	22 49 32.3	+0.6
GCAM				IAML_P				
	comp=Z,3μm,0.2s							
URLA	Izmir	0.49	353	PG	P	Pg	22 49 24.9	0.0
URLA				SG	S	Sg	22 49 32.1	+0.5
URLA	Izmir	0.49	353	i P	P	Pb	22 49 25.6	+0.3
URLA				i S	S	Sb	22 49 32.3	0.0
URLA				IAML_P				
	comp=Z,2μm,0.2s							
BLCB	Balcova	0.59	30	PG	P	Pb	22 49 26.3	-0.7
DIDI	Didim-Aydin	0.67	137	PG	P	Pg	22 49 28.3	+0.1
CHOS	Chios island	0.71	317	PG	P	Pg	22 49 29.2	+0.3
CHOS	Chios island	0.71	317	P	P	Pg	22 49 29.5	+0.6
CHOS				S	S	Sn	22 49 40.9	-0.1
CHOS	Chios island	0.71	317	P	P	Pg	22 49 29.5	+0.6
CHOS				S	S	Sn	22 49 39.8	-1.2
CHOS				AML	AML		22 49 42.9	
	comp=N,298μm,0.3s							
CHOS				AML	AML		22 49 43.9	
	comp=E,492μm,0.2s							
KRBN	Karaburun	0.73	353	PG	Pb	22 49 29.3	0.0
FOCM	Foa	0.84	3	PG	Pb	22 49 31.5	+0.2
BODT	Bodrum	0.95	147	PG	Pn	22 49 33.2	-0.5
BODT	Bodrum	0.95	147	P	Pb	22 49 32.8	-0.3
BODT				S	Sn	22 49 47.2	+0.3
AYDB	Zeytinkoy-Aydi	0.97	85	PG	Pb	22 49 33.6	+0.1
AYDN	Tasoluk	0.98	102	i P	Pb	22 49 33.6	-0.1
AYDN				i S	Sb	22 49 46.7	+0.3
AYDN				IAML_P				
	comp=Z,545nm,0.1s							
BDRM	Kayabasi	1.01	142	i P	Pg	22 49 35.3	+0.7
BDRM				i S	Sn	22 49 49.9	+1.6
BDRM				IAML_P				
	comp=Z,1μm,0.2s							
ZEDA	zmir-Bergama	1.14	16	i P	Pb	22 49 36.7	+0.4
ZEDA				i S	Sg	22 49 52.9	+0.8
ZEDA				IAML_P				
	comp=Z,510nm,0.1s							
AMGA	Amorgos Island	1.21	211	P	Pb	22 49 37.3	-0.1
AMGA	Amorgos Island	1.21	211	P	Pb	22 49 37.3	-0.1
AMGA				S	Sg	22 49 53.7	-0.3
APE	Apeiranthos	1.21	229	PN	Pg	22 49 37.9	-0.4
APE	Apeiranthos	1.21	229	P	Pg	22 49 37.8	-0.5
APE				S	Sg	22 49 54.7	+0.6
APE	Apeiranthos	1.21	229	P	Pg	22 49 37.7	-0.7
APE				S	Sg	22 49 54.6	+0.5
DKL	Dikili	1.22	9	PN	Pb	22 49 37.5	-0.1
DAT	Datca	1.35	147	PN	Pb	22 49 39.4	-0.5
DAT	Datca	1.35	147	i P	Pg	22 49 40.7	-0.4
DAT				IAML_P				
	comp=Z,64nm,0.1s							
AKHS	Akhisar	1.35	41	i P	Pg	22 49 41.6	+0.5
AKHS				IAML_P				
	comp=Z,551nm,0.2s							
PRK	Paraskevi	1.41	347	P	Pb	22 49 40.6	-0.3
PRK				S	Sg	22 50 01.1	+0.6
AYVA	Ayvalik	1.44	1	i P	Pb	22 49 42.0	+0.7
AYVA				IAML_P				
	comp=Z,200nm,0.3s							
SIGR	SIGRI	1.48	335	PN	Pn	22 49 40.7	-0.3
SIGR	SIGRI	1.48	335	P	Pb	22 49 41.5	-0.7
SIGR	SIGRI	1.48	335	P	Pn	22 49 40.9	0.0
SIGR				S	Sb	22 50 01.2	+0.5
MANT	Manisa	1.61	67	i P	Pg	22 49 45.9	-0.2
MANT				i S	Sb	22 50 04.7	0.0
MANT				IAML_P				
	comp=Z,267nm,0.1s							
STEP	BALIKESIR_Sava	1.72	28	i P	Pg	22 49 47.5	-0.5
STEP				i S	Sg	22 50 09.4	-0.9
STEP				IAML_P				
	comp=Z,628nm,0.1s							
BAYC	CANAKKALE_Bayr	1.87	357	i P	Pn	22 49 46.1	-0.3
DURS	Dursunbey	2.23	39	i P	Pb	22 49 55.3	+0.3
DURS				IAML_P				
	comp=Z,112nm,0.3s							

IDC 24 23:11:52.8±1.9, 16.°95S×177.°64W, h0km, mb4.1/4, mb1 4.4/4, mb1mx3.8/39, mbtmp4.1/4, Error ellipse: s-maj=191.6km s-min=30.9km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.74	240	P	P	P	23 19 27.5	+0.2
	0.5nm,0.2s,baz=48,slow=14,SNR=3.2							
WRA	Warramunga Arr	45.53	259	P	P	P	23 20 14.9	+0.2
	2.1nm,0.4s,baz=90,slow=7.5,SNR=24							
ASAR	Alice Springs	45.76	253	P	P	P	23 20 15.8	-0.6
	2.5nm,0.5s,baz=87,slow=8.3,SNR=32							
TXAR	Lajitas Array	84.86	57	P	P	P	23 24 30.0	0.0
	0.4nm,0.8s,baz=216,slow=7.7,SNR=5.2							

*MOS **24** 23:12:20.5±1.2, 41.°40N×141.°96E, h33km, mb5.0/35, Error ellipse: s-maj=7.9km s-min=5.5km az=112.9*
*ISCJB **24** 23:12:25.0±0.2, 41.°51N±0.°02×142.°04E±0.°03, h68km±1km, mb4.6/110, Error ellipse: s-maj=4.3km s-min=2.5km az=135.4*
*NEIC **24** 23:12:24.9±2.9, 41.°48N×142.°05E, h55km±5km, mb4.7/67, Error ellipse: s-maj=15.9km s-min=10.8km az=143.0*
NEIC Recorded [2 JMA] in southwestern Hokkaido. Also recorded [2 JMA] in Aomori, Honshu.
*JMA **24** 23:12:25.5±0.1, 41.°49N×142.°01E, h65km±2km, M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s=25.00000°, δ72.00000°, λ94.00000°. NP2:ϕ_s193.00000°, δ18.00000°, λ78.00000°. Principal axes: T Plg63.0000°, Azm301.0000°; N Plg4.0000°, Azm204.0000°; P Plg27.0000°, Azm112.0000°;*
JMA Felt II J1.
*BJI **24** 23:12:26.0±0.0, 41.°49N×141.°77E, h72km, mb4.8/47, mB5.2/7, Ms4.9/8, Ms7 4.9/8*
*IDC **24** 23:12:26.6±1.4, 41.°51N×142.°00E, h67km±11km, mb4.2/25, mb1 4.3/31, mb1mx4.2/54, mbtmp4.5/31, Error ellipse: s-maj=13.7km s-min=9.3km az=121.0*

ISC 24 23:12:25.3±0.6, 41.°51N±0.°03×142.°08E±0.°03, h59km±6km, n266, σ1.°43/297, mb4.7/110, 34C-18D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JAHD	Aomorihigashid	0.61	247	⇓P	P	Pn	23 12 38.7	+0.3
JAHD				S	S	Sn	23 12 48.5	+0.5
JARK	Aomorirokkasho	0.74	228	P	P	Pn	23 12 39.8	-0.1
JARK				S	S	Sn	23 12 50.0	-0.6
JOT	Ohata	0.79	261	⇓P	P	Pn	23 12 40.4	-0.1
JOT				S	S	Sn	23 12 51.6	-0.2
JKB	Kayabe	0.87	296	⇓P	P	Pn	23 12 41.4	-0.2
JKB				eS	S	Sn	23 12 53.3	-0.4
JNBK	Urakawa-nobuka	0.92	33	P	P	Pn	23 12 42.9	+0.7
JNBK				eS	S	Sn	23 12 56.7	+2.0
ERM	Erimo	0.95	57	ePn	P	Pn	23 12 43.9	+1.3
ERM				eSn	S	Sn	23 12 51.7	-3.7
ERM	Erimo	0.95	57	⇑iP	P	Pn	23 12 43.7	+1.1
JEM	Erimo	0.95	57	⇑P	P	Pn	23 12 43.9	+1.3
JEM				eS	S	Sn	23 12 57.5	+2.1
JTM	Tenmabayashi	1.05	227	⇓P	P	Pn	23 12 44.2	+0.2
JTM				S	S	Sn	23 12 57.4	-0.4
JIAM	Iburiatsuma	1.12	354	P	P	Pn	23 12 46.5	+1.6
JIAM				eS	S	Sn	23 13 01.3	+1.9
JANG	Nango	1.21	201	⇓P	P	Pn	23 12 45.9	-0.2
JANG				S	S	Sn	23 13 00.9	-0.7
JNB	Noboribetsu	1.24	321	⇓P	P	Pn	23 12 46.2	-0.2
JNB				S	S	Sn	23 13 01.8	-0.4
JSR	Shiriuchi	1.25	272	⇓P	P	Pn	23 12 46.6	0.0
JSR				eS	S	Sn	23 13 02.4	-0.1
JBT2	Biratori 2	1.29	9	P	P	Pn	23 12 48.3	+1.2
JBT2				eS	S	Sn	23 13 04.9	+1.5
JEW	Eniwo	1.41	341	⇓P	P	Pn	23 12 49.7	+0.9
JEW				S	S	Sn	23 13 07.1	+0.7
JYM2	Yakumo 2	1.42	296	⇓P	P	Pn	23 12 49.4	+0.6
JYM2				eS	S	Sn	23 13 07.0	+0.5
JCH	Churui	1.46	40	⇓P	P	Pn	23 12 51.3	+1.9
JCH				eS	S	Sn	23 13 10.0	+2.5
JFR	Furan	1.70	13	P	P	Pn	23 12 53.8	+1.2
JFR				eS	S	Sn	23 13 15.1	+1.8
JOSM	Okushiri--Mats	2.03	287	⇓P	P	Pn	23 12 56.7	-0.4
JOSM				eS	S	Sn	23 13 19.9	-1.5
ASAJ	Asahikawa	2.63	8	P	P	Pn	23 13 07.3	+2.0
	42nm,0.3s,baz=222,slow=11,SNR=122							
ASAJ				S	S	Sn	23 13 38.0	+1.9
	27nm,0.3s,baz=223,slow=16,SNR=6.8							
GLVR	Golovnino	3.38	48	d iP	P	Pn	23 13 16.2	+0.7
GLVR				i S	S	Sn	23 13 54.1	-0.2
GLVR				pmax	pmax			
	comp=Z,569nm,0.5s							
GLVR				smax	smax			
	comp=E,1μm,0.3s							
GLVR				smax	smax			
	comp=N,515nm,0.2s							
GRPR	Tuman	3.68	46	d iP	P	Pn	23 13 20.4	+0.8
GRPR				i S	S	Sn	23 14 00.1	-1.6
GRPR				pmax	pmax			
	comp=Z,222nm,0.4s							
GRPR				smax	smax			
	comp=N,468nm,0.4s							
GRPR				smax	smax			
	comp=E,1μm,0.3s							
LAGR	Lagunnoye	3.73	46	d iP	P	Pn	23 13 21.3	+1.0
LAGR				i S	S	Sn	23 14 02.7	-0.2
LAGR				pmax	pmax			
	comp=Z,460nm,0.6s							
LAGR				smax	smax			
	comp=N,875nm,0.2s							
LAGR				smax	smax			
	comp=E,2μm,0.4s							
YUK	Yuzh-Kuril'sk	3.76	46	eP	P	Pn	23 13 21.5	+0.8
YUK				i S	S	Sn	23 14 02.3	-1.3
YUK				pmax	pmax			
	comp=N,176nm,0.4s							
YUK				pmax	pmax			
	comp=Z,313nm,0.4s							
YUK				pmax	pmax			
	comp=E,107nm,0.2s							
YUK				smax	smax			
	comp=N,1μm,0.4s							
YUK				smax	smax			
	comp=E,2μm,0.5s							
TEY	Ternei	5.33	313	⇑eP	P	Pn	23 13 42.8	+0.5
TEY				e			23 14 34.9	
TEY				pmax	pmax			
	comp=E,60nm,0.7s							
TEY				pmax	pmax			
	comp=N,70nm,0.6s							
TEY				pmax	pmax			
	comp=Z,80nm,0.5s							
YSS	Yuzh-Sakhalins	5.47	5	ePn	P	Pn	23 13 46.5	+2.4
YSS	Yuzh-Sakhalins	5.47	5	eP	P	Pn	23 13 46.5	+2.4
KUR	Kuril'sk	5.62	47	eP	P	Pn	23 13 46.8	+0.6
KUR				eS	S	Sn	23 14 48.6	-0.8
KUR				pmax	pmax			
	comp=Z,80nm,0.6s							
KUR				smax	smax			
	comp=N,98nm,0.4s							
KUR				smax	smax			
	comp=E,123nm,0.4s							
MJB9	Matsu-Tunnel	5.80	213	ePn	P	Pn	23 13 51.1	+2.3
MAJO	Matsushiro	5.80	213	ePn	P	Pn	23 13 51.4	+2.6
MAJO	Matsushiro	5.80	213	d iP	P	Pn	23 13 51.1	+2.3
MAT	Matsushiro	5.80	213	P	P	Pn	23 13 51.5	+2.7
MAT				S	S	Sn	23 14 56.4	+2.4
MJAR	Matsushiro Arr	5.80	213	P	P	Pn	23 13 51.0	+2.3
	comp=E,0.7nm,0.3s,baz=21,slow=14,SNR=31							
INU	Inuyama	7.32	215	ePn	P	Pn	23 14 11.7	+2.1
VLA	Vladivostok	7.73	285	i P	P	Pn	23 14 18.3	+3.2
VLA				pmax	pmax			
	comp=Z,49nm,1.0s							
USA0B	Ussuriysk Arra	7.89	293	ePn	P	Pn	23 14 17.7	+0.4
USRK	Ussuriysk Ar.	7.89	293	P	P	Pn	23 14 17.2	0.0
	comp=Z,2.1nm,0.3s,baz=103,slow=13,SNR=34							
MSHR	Mys Shultsa	8.20	281	i P	P	Pn	23 14 22.5	+0.9
JHJ	Hachijo jima 2	8.57	193	P	P	Pn	23 14 26.7	0.0
	comp=Z,5.4nm,0.3s,baz=32,slow=19,SNR=3.3							
MDJ	Mudanjiang	9.66	293	ePn	P	Pn	23 14 44.1	+2.6
KLR	Kul'dur	10.60	320	P	P	Pn	23 14 56.4	+2.1
	comp=Z,0.3nm,0.3s,baz=125,slow=14,SNR=20							
KLR	Kul'dur	10.60	320	i P	P	Pn	23 14 56.7	+2.4
KSRS	Korea Array	11.67	254	P	P	Pn	23 15 12.3	+3.4
	comp=Z,1.9nm,0.3s,baz=63,slow=14,SNR=39							
KS15	Wonju Array Si	11.70	254	ePn	P	Pn	23 15 12.3	+3.0
KS15				eSn	S	Sn	23 17 24.7	+6.4
JNU	Nakatsue	12.22	230	P	P	Pn	23 15 17.3	+0.7
	comp=Z,0.6nm,0.3s,baz=63,slow=5.4,SNR=5.5							
TJN	Taejon	12.55	251	cePn	P	Pn	23 15 24.8	+3.9
PEA0B	Petropavlovsk-	15.67	37	ePn	P	P	23 16 04.4	-0.8
	comp=Z,10nm,0.9s							
DL2	Dalian	15.84	267	P	P	P	23 16 05.8	-1.4
DL2				pmax	pmax			
	comp=Z,39nm,1.0s							
HIA	Hailar	17.46	304	i P	P	Pn	23 16 23.4	-1.2
HIA				pmax	pmax			
	comp=Z,44nm,1.0s							
MA2	Magadan	18.88	14	P	P	P	23 16 40.5	-0.1
	comp=Z,1.0nm,0.3s,baz=202,slow=16,SNR=4.0							
MA2	Magadan	18.88	14	cePn	P	P	23 16 40.2	-0.4
MA2				pmax	pmax			
	comp=Z,13nm,1.7s							
BJT	Baijiatuau	19.67	274	eP	P	P	23 16 48.2	-1.1
	comp=Z,19nm,0.8s							
BJT	Baijiatuau	19.67	274	eP	P	P	23 16 48.2	-1.1
BJT				pmax	pmax			
	comp=Z,19nm,0.8s							
NJ2	Nanjing	20.81	251	eP	P	P	23 17 02.8	+1.1
NJ2				pmax	pmax			
	comp=Z,11nm,0.5s							
YAK	Yakutsk	21.86	344	eP	P	P	23 17 07.9	-4.8
YAK				eS	S	S	23 21 03.7	-7.1
SEY	Seymchan	22.31	12	P	P	P	23 17 16.0	-1.6
	comp=Z,4.1nm,0.5s,baz=208,slow=6.8,SNR=12							
SEY	Seymchan	22.31	12	cePn	P	P	23 17 15.7	-1.8
HHC	Hu-ho-hao-te	22.93	279	eP	P	P	23 17 25.1	+0.7
HHC				pmax	pmax			
	comp=Z,13nm,1.0s							
TATO	Taipei	23.75	232	eP	P	P	23 17 32.8	+0.6
	comp=Z,44nm,1.0s							
BOD	Bodaibo	24.17	322	eP	P	P	23 17 33.5	-2.2
BOD				pmax	pmax			
	comp=Z,11nm,1.2s							
ULN	Ulaanbaatar	25.55	296	eP	P	P	23 17 47.2	-1.3
	comp=Z,9.2nm,1.0s							
ULN	Ulaanbaatar	25.55	296	cePn	P	P	23 17 48.0	-0.5
ULN				pmax	pmax			
	comp=Z,8.0nm,0.8s							
SONA0	Songino Array	25.99	296	eP	P	P	23 17 52.4	-0.1
SONM	Songino Array	25.99	296	P	P	P	23 17 52.4	-0.1
	comp=Z,7.0nm,0.6s,baz=86,slow=8.7,SNR=19							
XAN	Xi'an	27.13	265	P	P	P	23 18 01.0	-1.8
XAN				pmax	pmax			
	comp=Z,9.0nm,0.9s							
XAN	Xi'an	27.13	265	eP	P	P	23 18 01.2	-1.5
	comp=Z,6.6nm,0.8s							
XAN	Xi'an	27.13	265	eP	P	P	23 18 01.3	-1.5
XAN				pmax	pmax			
	comp=Z,7.0nm,0.8s							
TLY	Talaya	28.00	304	i P	P	P	23 18 10.6	+0.2
ZAK	Zakamensk	28.13	302	eP	P	P	23 18 10.4	-1.2
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.4s							
ENH	Enshi	28.53	257	eP	P	P	23 18 13.2	-2.1
	comp=Z,7.7nm,0.8s							
BILL	Bilibino	29.61	18	cePn	P	P	23 18 23.7	-0.7
BILL				pmax	pmax			
	comp=Z,4.0nm,1.7s							
MOY	Mondy	29.65	304	eP	P	P	23 18 25.5	+0.4
MOY				pmax	pmax			

baz=321,slow=76,SNR=389
H11N1 WAKE ISLAND Hy 30.27 128 T T 23 51 02.5
baz=321,slow=76,SNR=307
H11N3 WAKE ISLAND Hy 30.27 128 T T 23 51 03.1
baz=321,slow=76,SNR=355
H11S1 WAKE ISLAND Hy 31.10 130 T T 23 52 06.9
baz=323,slow=76,SNR=145
H11S3 WAKE ISLAND Hy 31.11 130 T T 23 52 07.8
baz=323,slow=76,SNR=88
H11S2 WAKE ISLAND Hy 31.12 130 T T 23 52 09.3
baz=323,slow=76,SNR=126
CD2 Chengdu 32.45 263 P **P** **23 18 47.9 -2.0**
CD2 pmax pmax
comp=Z,30nm,0.5s
GYA Guiyang 32.73 254 P **P** **23 18 51.3 -1.1**
GYA pmax pmax
comp=Z,10.0nm,0.7s
SLVN Son La 37.89 250 *e*P **P** **23 19 37.0 +0.2**
comp=Z,7.8nm,0.9s
DGZ Jazzator, Alta 38.35 301 *i* P **P** **23 19 41.3 +0.8**
DGZ pmax pmax
comp=Z,11nm,1.0s
ZAA1 Zalesovo Array 39.41 308 *e*P **P** **23 19 49.3 +0.2**
ZAA1 *e*PcP **PcP** **23 21 56.2 +0.2**
ZAA0 Zalesovo Array 39.41 308 *e*P **P** **23 19 49.0 0.0**
comp=Z,14nm,0.6s
ZALV Zalesovo Beam 39.41 308 P **P** **23 19 49.3 +0.2**
comp=Z,17nm,0.7s,baz=88,slow=7.6,SNR=54
ZALV PcP **PcP** **23 21 56.2 +0.2**
comp=Z,3.6nm,0.6s,baz=102,slow=3.1,SNR=7.0
WMQ Urumqi 39.46 292 *e*P **P** **23 19 50.5 +0.9**
WMQ pP sP 23 20 09.0 -2.2
WMQ PcP **PcP** **23 21 55.0 -1.5**
WMQ pmax pmax
comp=Z,27nm,0.7s
WMQ pmax pmax
comp=Z,720nm,11.8s
WMQ LR LR
comp=Z,640nm,19.9s
WMQ LR LR
comp=Z,1μm,19.9s
WMQ LR LR
comp=Z,1μm,15.3s
WMQ Urumqi 39.46 292 *e*P **P** **23 19 50.6 +0.9**
comp=Z,32nm,0.6s
WMQ Urumqi 39.46 292 *e*P **P** **23 19 50.6 +0.9**
WMQ pmax pmax
comp=Z,32nm,0.6s
NVS Novosibirsk 40.24 310 *e*P **P** **23 19 54.1 -1.9**
NONG Nongkai 40.60 247 P **P** **23 20 00.5 +1.2**
comp=Z,0.3nm,0.7s,comp=Z,326nm
SKNT Sakolnakorn 40.78 245 P **P** **23 20 01.5 +0.7**
comp=Z,15nm,0.9s
KHON Khomkaen 42.02 245 P **P** **23 20 11.6 +0.7**
comp=Z,74μm,0.7s
PAYA Payao 42.03 251 P **P** **23 20 15.5 +4.4**
comp=Z,24μm,0.8s
MK31 Makanchi Array 42.33 298 *e*P **P** **23 20 13.2 0.0**
comp=Z,11nm,0.8s
MKAR Makanchi Array 42.33 298 P **P** **23 20 13.1 -0.1**
comp=Z,9.4nm,0.7s,baz=72,slow=12,SNR=44
MKAR PcP **PcP** **23 22 06.4 +0.6**
comp=Z,1.1nm,0.5s,baz=50,slow=4.7,SNR=3.7
LSA Lhasa 42.50 271 *e*P **P** **23 20 14.7 -0.7**
comp=Z,9.2nm,1.0s
MAKZ Makanchi 42.53 298 *e*P **P** **23 20 12.8 -2.0**
comp=Z,13nm,0.8s
MAKZ Makanchi 42.53 298 *e*P **P** **23 20 12.8 -2.0**
MAKZ pmax pmax
comp=Z,13nm,0.8s
CHAI Chaiyaphum 42.90 246 P **P** **23 20 18.3 +0.2**
comp=Z,33μm,0.6s,comp=Z,360μm
CMMT Chiang Mai 43.05 252 P **P** **23 20 23.2 +3.9**
comp=Z,4.6nm,0.7s
CHTO Chiang Mai 43.05 252 *e*P **P** **23 20 17.3 -2.0**
comp=Z,6.9nm,0.7s
CHTO Chiang Mai 43.05 252 *e*P **P** **23 20 17.3 -2.0**
CHTO pmax pmax
comp=Z,7.0nm,0.7s
CAST Castle Rocks 43.28 37 *e*P **P** **23 20 21.6 +0.9**
comp=Z,7.1nm,0.9s
CM31 Chiang Mai Arr 43.28 251 *e*P **P** **23 20 20.3 -1.0**
comp=Z,5.3nm,0.4s
CMAR Chiang Mai Arr 43.28 251 P **P** **23 20 22.0 +0.8**
comp=Z,1.3nm,0.4s,baz=42,slow=7.9,SNR=7.8
KURK Kurchatov 43.70 305 *e*P **P** **23 20 23.6 -0.6**
comp=Z,18nm,0.6s
KURK Kurchatov 43.70 305 *ce*P **P** **23 20 23.9 -0.3**
KURK pmax pmax
comp=Z,17nm,0.7s
BPAW Bear Paw Mtn. 43.75 36 *e*P **P** **23 20 23.8 -0.6**
comp=Z,4.1nm,0.8s
KURBB Kurchatov Arra 43.78 304 P **P** **23 20 24.7 -0.1**
comp=Z,22nm,0.6s,baz=78,slow=8.8,SNR=104
KTH Kantishna Hill 43.80 37 *e*P **P** **23 20 23.8 -1.1**
comp=Z,13nm,1.0s
MLY Manley 43.83 34 *e*P **P** **23 20 26.8 +1.7**
comp=Z,6.9nm,0.9s
TRF Thorofare Moun 44.09 37 *e*P **P** **23 20 28.2 +0.9**
comp=Z,1.0nm,0.9s
WRH Wood River Hil 44.99 35 *e*P **P** **23 20 35.5 +1.3**
comp=Z,4.7nm,0.9s
COLA College 45.06 35 *i* P **P** **23 20 34.5 -0.3**
COLA pmax pmax
comp=Z,15nm,0.9s
ILAR Eielson Array 45.48 35 P **P** **23 20 39.0 +0.9**
comp=Z,7.8nm,0.9s,baz=264,slow=5.9,SNR=65
JIRN Jiri 47.28 271 *e*P **P** **23 20 55.2 +2.0**
comp=Z,61nm,0.7s
GUN Gumba 47.38 272 *e*P **P** **23 20 55.2 +1.2**
comp=Z,109nm,0.6s
KKN Kakani 47.89 272 *e*P **P** **23 20 58.8 +1.0**
comp=Z,55nm,0.8s
PKI Pulchoki 47.91 272 *e*P **P** **23 20 59.1 +1.0**
comp=Z,17nm,0.6s
PKIN Phulchoki 47.92 272 *e*P **P** **23 20 59.0 +0.9**
comp=Z,16nm,0.5s
BOOM Boomskoye usch 48.01 294 *e*P **P** **23 20 58.3 -0.2**
comp=Z,13nm,0.8s
BOOM Boomskoye usch 48.01 294 *e*P **P** **23 20 58.3 -0.2**
BOOM pmax pmax
comp=Z,13nm,0.8s
BVAR Borovoye Array 48.04 310 P **P** **23 20 58.8 +0.4**
comp=Z,7.4nm,0.4s,baz=77,slow=9.0,SNR=76
TKM2 Tokmak 2 48.08 295 P **P** **23 20 59.5 +0.5**
SNR=15
TKM2 Tokmak 2 48.08 295 *i* P **P** **23 20 58.6 -0.5**
TKM2 pmax pmax
comp=Z,11nm,0.5s
BRVK Borovoye 48.09 310 *e*P **P** **23 20 58.7 +0.1**
comp=Z,8.0nm,0.6s
BRVK Borovoye 48.09 310 *c i*P **P** **23 20 58.8 +0.1**
BRVK pmax pmax
comp=Z,6.0nm,0.6s
DMN Daman 48.12 272 *e*P **P** **23 21 00.5 +0.9**
comp=Z,24nm,0.7s
GKN Gorkha 48.26 273 *e*P **P** **23 21 01.4 +0.8**
comp=Z,30nm,0.5s
KBK Karagaybulak 48.62 295 P **P** **23 21 03.7 +0.5**
SNR=16
KZA Kyzart 48.64 294 P **P** **23 21 04.8 +1.1**
SNR=8.4
USP Ospenovka 48.69 296 P **P** **23 21 03.8 +0.3**
SNR=6.8
DANN Dangsing 48.74 274 *e*P **P** **23 21 04.6 +0.2**
comp=Z,191nm,0.6s
AAK Ala-Archa 48.94 295 *i* P **P** **23 21 04.6 -1.0**
AAK pmax pmax
comp=Z,3.0nm,0.5s
KOLN Koldanda 49.16 273 *e*P **P** **23 21 07.3 -0.3**
comp=Z,29nm,0.6s
KSH Kashi 49.18 291 P **P** **23 21 11.8 +4.4**
KSH S **S** **23 28 13.8 +5.1**
KSH SS **SS** **23 31 43.4 +3.2**
KSH pmax pmax
comp=Z,9.0nm,0.6s
KSH LR LR
comp=Z,3μm,16.5s
KSH LR LR
comp=Z,1μm,10.8s
KSH LR LR
comp=Z,4μm,16.9s
EKS2 Erkin-Say 49.42 296 P **P** **23 21 09.3 +0.1**
SNR=7.6
EPYK Eagle Plains 49.42 32 *e*P **P** **23 21 10.3 +1.5**
comp=Z,21nm,0.8s
PYUN Piuthan 49.45 274 *e*P **P** **23 21 08.5 -1.2**
comp=Z,68nm,0.8s
AML Almayashu 49.68 295 P **P** **23 21 12.3 +0.7**
SNR=7.0
INK Inuvik 50.20 29 P **P** **23 21 15.9 +1.4**
comp=Z,12nm,0.5s,baz=290,slow=5.9,SNR=26
SVE Sverdlovsk 52.20 317 *e*P **P** **23 21 30.3 +0.6**
SVE pmax pmax
comp=Z,10.0nm,0.7s
ARU Arti 53.41 317 *e*P **P** **23 21 37.8 -0.9**
comp=Z,6.3nm,0.9s
ARU Arti 53.41 317 *d i*P **P** **23 21 38.3 -0.4**
ARU PPP PPP 23 24 50.6
ARU S **S** **23 29 05.5 -0.8**
ARU pmax pmax
comp=Z,5.0nm,0.7s
NIL Nilore 53.82 285 *e*P **P** **23 21 41.5 -0.5**
comp=Z,9.9nm,0.6s
NIL Nilore 53.82 285 *e*P **P** **23 21 41.5 -0.5**
NIL pmax pmax
comp=Z,10.0nm,0.6s
AKTO Aktyubinsk 56.14 310 P **P** **23 21 58.7 +0.2**
comp=Z,6.4nm,0.7s,baz=73,slow=13,SNR=20
KBS Kingsbay 56.35 350 *i* P **P** **23 21 58.3 -1.3**
KBS pmax pmax
comp=Z,31nm,1.3s
KBL Kabul 56.39 289 *e*P **P** **23 21 60.0 -0.8**
KBL Kabul 56.39 289 *e*P **P** **23 22 00.0 -0.8**
PRGR Permogore 57.33 326 *e*P **P** **23 22 06.2 -0.5**
PRGR pmax pmax
comp=Z,8.0nm,0.6s
RES Resolute Bay 58.15 15 P **P** **23 22 12.7 +0.4**
comp=Z,13nm,0.7s,baz=303,slow=6.2,SNR=31
YKA Yellowknife Ar 59.70 32 P **P** **23 22 23.8 +0.6**
comp=Z,1.1nm,0.8s,baz=306,slow=6.4,SNR=10
ARA0 ARCESS Array S 60.01 339 *e*P **P** **23 22 24.0 -1.3**
ARCES ARCESS Array B 60.01 339 P **P** **23 22 24.0 -1.3**
comp=Z,2.6nm,0.8s,baz=45,slow=8.7,SNR=7.6
ARCES ARCESS Array B 60.01 339 P **P** **23 22 24.0 -1.3**
KLMR Klimovskoe 60.28 327 *e*P **P** **23 22 25.6 -1.6**
KLMR pmax pmax
comp=Z,8.0nm,1.1s
KLMR Klimovskoe 60.28 327 *e*P **P** **23 22 25.7 -1.5**
KLMR AMP 23 22 27.9
comp=Z,8.0nm,1.1s
DAG Danmarks Havn 61.37 355 *i* P **P** **23 22 34.1 -0.3**
DAG pmax pmax
comp=Z,4.0nm,0.8s
DAG Danmarks Havn 61.37 355 *i* P **P** **23 22 34.1 -0.3**
comp=Z,5.9nm,0.8s
WR1 Warramunga Arr 61.56 188 *e*P **P** **23 22 35.5 -0.8**
WRA Warramunga Arr 61.56 188 P **P** **23 22 35.5 -0.8**
comp=Z,3.5nm,1.1s,baz=0.7,slow=6.8,SNR=6.1
GEYT Alibeck 62.19 297 P **P** **23 22 40.5 -0.1**
comp=Z,7.3nm,0.7s,baz=25,slow=3.9,SNR=14
GYA0B ALIBECK ARRAY 62.19 297 *e*P **P** **23 22 39.4 -1.2**
comp=Z,7.7nm,0.6s
VRH Novokhopyorsk 64.65 317 *e*P **P** **23 22 55.7 -0.8**
VRH pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 64.85 322 *ce*P **P** **23 22 56.8 -0.9**
OBN pmax pmax
comp=Z,6.0nm,0.6s
FIA1 FINESS Array S 65.12 332 *e*P **P** **23 22 59.2 -0.1**
comp=Z,12nm,0.8s
FINES FINESS Array B 65.12 332 P **P** **23 22 59.2 -0.2**
comp=Z,11nm,0.7s,baz=53,slow=7.2,SNR=66
LPSR Galich'ya Gora 65.23 319 *e*P **P** **23 22 59.0 -1.3**
LPSR pmax pmax
comp=Z,6.0nm,0.8s
AS31 Alice Springs 65.28 188 *e*P **P** **23 22 59.5 -1.3**
comp=Z,0.8nm,0.7s
ASAR Alice Springs 65.28 188 P **P** **23 23 00.9 0.0**
comp=Z,1.3nm,0.8s,baz=8.3,slow=4.7,SNR=6.5
VSR Storozhevoye 65.94 318 *e*P **P** **23 23 04.5 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.5s
VORD Divnogorie 66.03 318 *e*P **P** **23 23 04.3 -1.1**
VORD pmax pmax
comp=Z,20nm,1.7s
SUMG Summit 66.22 0 *e*P **P** **23 23 07.6 +0.8**
comp=Z,9.8nm,1.0s
SUMG Summit 66.22 0 *i* P **P** **23 23 07.7 +0.9**
SUMG pmax pmax
comp=Z,22nm,0.9s
SUMG Summit 66.22 0 *i* P **P** **23 23 07.7 +0.9**
comp=Z,22nm,0.9s
AKT Akhty 66.87 305 *e*P **P** **23 23 11.1 0.0**
AKT *e* 23 23 42.3
AKT pmax pmax
comp=Z,14nm,0.8s
VSU Vasula 66.88 329 *ce*P **P** **23 23 09.9 -0.8**
VSU pmax pmax
comp=Z,29nm,1.7s
GOF Gofitskoye 67.54 311 ⇑*i*P **P** **23 23 15.8 +0.7**
GOF pmax pmax
comp=Z,21nm,0.6s
NCK Nalchik 68.15 309 *i* P **P** **23 23 19.0 -0.1**
NCK pmax pmax
comp=Z,3.0nm,0.7s
KIV Kislovodsk 68.40 310 *e*P **P** **23 23 20.9 +0.2**
comp=Z,26nm,1.1s
KIV Kislovodsk 68.40 310 ⇑*i*P **P** **23 23 22.2 +1.5**
KIV Kislovodsk 68.40 310 *e*P **P** **23 23 21.1 +0.4**
KIV pmax pmax
comp=Z,72nm,1.0s
KBZ Khabaz 68.42 310 P **P** **23 23 21.4 +0.8**
comp=Z,5.9nm,0.7s,baz=28,slow=4.4,SNR=16
GNI Garni 69.48 306 *i* P **P** **23 23 28.2 +0.6**
GNI pmax pmax
comp=Z,28nm,1.2s
NB2 NORSAR Subarra 70.27 337 P **P** **23 23 31.5 -0.4**
comp=Z,1.6nm,0.5s,baz=35,slow=6.5
NOA NORSAR Array B 70.27 337 P **P** **23 23 31.8 -0.1**
comp=Z,2.8nm,0.6s,baz=37,slow=6.1,SNR=19
AKASG Malin Array Be 71.10 322 P **P** **23 23 36.8 -0.2**
comp=Z,5.3nm,0.4s,baz=45,slow=6.2,SNR=41
AKASG Malin Array Be 71.10 322 *i* P **P** **23 23 36.7 -0.3**
AKASG pmax pmax
comp=Z,9.0nm,0.5s
SFJD Kangerlussuaq 71.39 5 *i* P **P** **23 23 38.8 +0.3**
SFJD pmax pmax
comp=Z,18nm,1.1s
SFJD Kangerlussuaq 71.39 5 *i* P **P** **23 23 38.8 +0.3**
comp=Z,18nm,1.1s
KVN Kaiserville 71.67 54 *e*P **P** **23 23 41.1 +0.2**
comp=Z,2.8nm,1.0s
KVN Kaiserville 71.67 54 *e*P **P** **23 23 41.2 +0.2**
KVN pmax pmax
comp=Z,3.0nm,1.0s
NV01 Mina Array Sit 71.93 55 *e*P **P** **23 23 44.3 +1.7**
NVAR Mina Array Bea 71.93 55 P **P** **23 23 44.3 +1.7**
comp=Z,0.5nm,0.6s,baz=292,slow=5.7,SNR=5.5
DIKM Dikmen 74.09 312 ⇑*i*P **P** **23 23 56.3 +1.3**
PDAR Pinedale Array 74.19 47 P **P** **23 23 56.5 +0.7**
comp=Z,1.0nm,0.8s,baz=252,slow=1.4,SNR=6.1
KWP Kalwaria Pacla 74.81 324 *e*P **P** **23 23 59.9 +0.9**
KWP Kalwaria Pacla 74.81 324 *e*P **P** **23 23 59.9 +0.9**
BURAR Bucovina Array 75.14 321 ⇓*i*P **P** **23 24 01.4 +0.3**
BIZ Bicaz 75.20 320 ⇑*i*P **P** **23 24 02.1 +0.8**
TESR Tescani 75.25 320 ⇑*i*P **P** **23 24 01.8 +0.2**
CFR Carcaliu 75.46 318 ⇑*i*P **P** **23 24 02.0 -0.8**
KOLS Kolonicke sedl 75.52 324 *e*P **P** **23 24 03.4 +0.3**
KOLS pmax pmax
comp=Z,5.0nm,1.3s
KOLS Kolonicke sedl 75.52 324 *e*P **P** **23 24 03.4 +0.3**
OJC Ojcow 75.62 326 *e*P **P** **23 24 04.2 +0.5**
OJC Ojcow 75.62 326 *e*P **P** **23 24 04.2 +0.5**
comp=Z,13nm,0.9s
OJC Ojcow 75.62 326 *e*P **P** **23 24 04.2 +0.5**
VRI Vrincioaia 75.67 319 ⇑*i*P **P** **23 24 03.9 -0.1**
TRPA Tarpa 75.99 323 ⇑*i*P **P** **23 24 06.5 +0.7**
NIE Niedzica 76.02 325 *e*P **P** **23 24 07.1 +1.1**
NIE Niedzica 76.02 325 *e*P **P** **23 24 07.1 +1.1**
DOPR Dopca 76.25 320 ⇑*i*P **P** **23 24 08.1 +0.8**
BRTR Keskin Array B 76.29 311 P **P** **23 24 08.3 +0.4**
comp=Z,3.3nm,0.7s,baz=70,slow=4.2,SNR=21
ICOR Ion Corvin 76.38 318 ⇑*i*P **P** **23 24 09.0 +1.0**
CJR Cluj-Napoca 76.55 322 ⇑*i*P **P** **23 24 10.0 +0.9**
KSP Ksiaz 76.58 328 *e*P **P** **23 24 09.9 +0.8**
KSP Ksiaz 76.58 328 *e*P **P** **23 24 09.9 +0.8**
MORC Moravsky Berou 76.90 327 ⇑*i*P **P** **23 24 11.6 +0.6**
MORC Moravsky Berou 76.90 327 *e*P **P** **23 24 12.0 +1.0**
DPC Dobruska-Polom 76.95 328 *e*P **P** **23 24 12.1 +0.8**
DPC Dobruska-Polom 76.95 328 *e*P **P** **23 24 12.1 +0.8**
UPC Upice 76.95 328 *e*P **P** **23 24 11.9 +0.7**
UPC Upice 76.95 328 *e*P **P** **23 24 11.9 +0.7**
ARR Arges 77.04 320 ⇓*i*P **P** **23 24 13.3 +1.4**
MDUB Mudurnu 77.14 313 *e*P **P** **23 24 12.3 -0.3**
comp=Z,48nm,0.8s
PSZ Piszkesteto 77.33 324 ⇑*i*P **P** **23 24 14.2 +0.7**
VYHS Vyhne 77.35 325 *e*P **P** **23 24 14.2 +0.7**
VYHS pmax pmax
comp=Z,3.0nm,1.3s
VYHS Vyhne 77.35 325 *e*P **P** **23 24 14.2 +0.7**
CLL Collm 77.48 330 ⇑*i*P **P** **23 24 13.2 -0.9**
comp=Z,5.0nm,0.8s
CLL *e*(pP) **pP** **23 24 28.0 -2.2**
CLL Collm 77.48 330 ⇑*i*P **P** **23 24 13.2 -0.9**
CLL *e* 23 24 28.0
CLL pmax pmax
comp=Z,5.0nm,0.8s
JAVC Velka Javorina 77.56 326 *e*P **P** **23 24 16.4 +1.7**
VRAC Vranov 77.66 327 ⇑*i*P **P** **23 24 16.0 +0.8**
VRAC Vranov 77.66 327 *e*P **P** **23 24 16.0 +0.8**
GZR Gura Zlata 77.91 321 ⇑*i*P **P** **23 24 17.1 +0.4**
KRUC Moravsky 77.93 327 *e*P **P** **23 24 17.4 +0.7**
PRU Pruhonice 77.94 328 *e*P **P** **23 24 17.3 +0.6**
PRU Pruhonice 77.94 328 *e*P **P** **23 24 17.3 +0.6**
BZS Buzias 78.29 322 ⇑*i*P **P** **23 24 18.5 -0.2**
PHSR Pinarhisar 78.29 316 ⇑*i*P **P** **23 24 19.6 +0.8**
MDVR Moldovita 78.87 321 ⇑*i*P **P** **23 24 21.9 -0.1**
KHC Kasperske Hory 79.01 328 *e*P **P** **23 24 23.0 +0.3**
KHC *e* 23 24 28.6
KHC Kasperske Hory 79.01 328 *e*P **P** **23 24 23.0 +0.3**
KHC *e*PCP **PcP** **23 24 28.6 -2.5**
KHC *ex* x 23 24 42.9
CONA Conrad Observa 79.04 326 *e*P **P** **23 24 23.6 +0.7**
comp=Z,5.8nm,1.6s
GERES GERESS Array B 79.19 328 P **P** **23 24 23.7 0.0**
comp=Z,1.5nm,0.7s,baz=46,slow=5.8,SNR=12
ALN Alexandroupoli 79.59 316 *e*P **P** **23 24 24.9 -1.0**
comp=Z,2.7nm,0.9s
ALN Alexandroupoli 79.59 316 *e*P **P** **23 24 24.9 -1.0**
ALN pmax pmax
comp=Z,3.0nm,0.9s
CSS Mathiatis 79.73 308 *e*P **P** **23 24 26.3 -0.5**
comp=Z,12nm,1.0s
VTS Vitosha 79.75 319 ⇑*i*P **P** **23 24 27.5 +0.5**
SOKA Soboth 80.38 326 *e*P **P** **23 24 29.4 -0.8**
comp=Z,5.0nm,0.7s
OBKA Obir 80.71 326 *e*P **P** **23 24 32.7 +0.7**
comp=Z,6.2nm,0.8s
KBA Koelnbreinsper 80.75 327 *e*P **P** **23 24 33.0 +0.7**
comp=Z,9.5nm,1.0s
MYKA Terra Mystica 80.99 327 *e*P **P** **23 24 32.8 -0.6**
comp=Z,11nm,1.2s
WATA Walderalm 81.25 328 *e*P **P** **23 24 35.4 +0.5**
comp=Z,1.3nm,0.4s
WTTA Wattenberg 81.28 328 *e*P **P** **23 24 35.5 +0.3**
comp=Z,4.2nm,0.6s
LAZ Ladron 81.31 51 *e*P **P** **23 24 37.5 +1.9**
ANMO Albuquerque 81.33 51 *ce*P **P** **23 24 34.0 -1.6**
ANMO pmax pmax
comp=Z,3.0nm,2.5s
RETA Reutte 81.44 329 *e*P **P** **23 24 36.2 +0.4**
comp=Z,11nm,1.4s
FETA Feichten 81.84 329 *e*P **P** **23 24 37.7 -0.4**
comp=Z,6.3nm,1.0s
DAVA Damuels 81.95 329 *e*P **P** **23 24 39.1 +0.5**
comp=Z,8.7nm,1.0s
FUORN Ofenpass-Fuorn 82.35 329 *e*P **P** **23 24 40.8 -0.1**
comp=Z,9.3nm,0.8s
VLDQ Val d'Or 84.15 25 *e*P **P** **23 24 48.9 -0.9**
comp=Z,7.0nm,0.8s
TXAR Lajitas Array 86.99 53 P **P** **23 25 05.7 +1.3**
comp=Z,0.5nm,0.8s,baz=264,slow=3.8,SNR=5.0
CLTN Cedars of Leba 90.95 37 *e*P **P** **23 25 22.9 +0.2**
comp=Z,2.3nm,0.4s
ESDC Sonseca Array 93.50 334 P **P** **23 25 34.1 -0.4**
comp=Z,0.8nm,0.6s,baz=26,slow=3.9,SNR=6.7

ROM 24 23:21:48.8±0.1, 42.789N±0.003×12.952E±0.004,
h9km, ML1.8/10, Error ellipse: s-maj=0.3km
s-min=0.2km az=126.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.13**	**70**	P	Pg	23 21 52.2	+0.5
NRCA				S	Sg	23 21 54.5	+0.8
NRCA				AML	AML		
	comp=E,2560μm,0.2s						
NRCA				AML	AML		
	comp=N,1024μm,1.6s						
NRCA				AML	AML		
	comp=E,2560μm,0.2s						
NRCA				AML	AML		
	comp=N,1024μm,1.6s						
NRCA				AML	AML		
	comp=E,2560μm,0.2s						
NRCA				AML	AML		
	comp=N,1024μm,1.6s						
LNSS	**Leonessa**	**0.20**	**161**	P	Pg	23 21 53.6	+0.7
LNSS				S	Sg	23 21 57.0	+1.4
LNSS				AML	AML		
	comp=E,670μm,0.1s						
LNSS				AML	AML		
	comp=N,686μm,0.1s						
LNSS				AML	AML		
	comp=E,670μm,0.1s						
LNSS				AML	AML		
	comp=N,687μm,0.1s						
LNSS				AML	AML		
	comp=N,687μm,0.1s						
LNSS				AML	AML		
	comp=E,670μm,0.1s						
CESI	**CESI - Serrava**	**0.22**	**351**	P	Pg	23 21 54.0	+0.8
CESI				S	Sg	23 21 57.6	+1.4
CESI				AML	AML		
	comp=E,100μm,1.3s						
CESI				AML	AML		
	comp=N,154μm,0.7s						
CESI				AML	AML		
	comp=E,100μm,1.3s						
CESI				AML	AML		
	comp=N,154μm,0.7s						
CESI				AML	AML		
	comp=E,100μm,1.3s						
CESI				AML	AML		
	comp=N,154μm,0.7s						
FDMO	**Fiordimonte**	**0.27**	**22**	P	Pg	23 21 54.7	+0.6
FDMO				S	Sb	23 21 59.1	-1.4
FDMO				AML	AML		
	comp=E,692μm,0.1s						
FDMO				AML	AML		
	comp=N,334μm,0.3s						
FDMO				AML	AML		
	comp=E,692μm,0.1s						
FDMO				AML	AML		
	comp=N,334μm,0.3s						
FDMO				AML	AML		
	comp=N,334μm,0.3s						
FDMO				AML	AML		
	comp=E,692μm,0.1s						
MOMA	**Monte Martano**	**0.28**	**273**	P	Pb	23 21 55.3	-0.8
MOMA				S	Sb	23 22 00.2	-0.8
MOMA				AML	AML		
	comp=E,309μm,0.8s						
MOMA				AML	AML		
	comp=N,261μm,0.2s						
MOMA				AML	AML		
	comp=E,309μm,0.8s						
MOMA				AML	AML		
	comp=N,260μm,0.2s						
MOMA				AML	AML		
	comp=N,260μm,0.2s						
MOMA				AML	AML		
	comp=E,309μm,0.8s						
SMA1	**SAN MARTINO**	**0.32**	**119**	P	Pg	23 21 56.0	+0.8
SMA1				AML	AML		
	comp=E,200μm,0.5s						
SMA1				AML	AML		
	comp=N,216μm,0.7s						
SMA1				AML	AML		
	comp=E,200μm,0.5s						
SMA1				AML	AML		
	comp=N,216μm,0.7s						
CESX	**Cesi**	**0.33**	**237**	P	Pg	23 21 55.9	+0.6
CESX				S	Sb	23 22 01.2	-1.1
CESX				AML	AML		
	comp=E,167μm,0.2s						

CESX			AML	AML		
	comp=N,180μm,0.3s					
CESX			AML	AML		
	comp=E,167μm,0.2s					
CESX			AML	AML		
	comp=N,180μm,0.3s					
CESX			AML	AML		
	comp=E,167μm,0.2s					
CESX			AML	AML		
	comp=N,180μm,0.3s					
CSP1	**Cessapalombo**	**0.35 31**	P	Pg	23 21 56.3	+0.5
CSP1			S	Sb	23 22 02.1	-1.0
CSP1			AML	AML		
	comp=E,224μm,0.7s					
CSP1			AML	AML		
	comp=N,291μm,1.5s					
SNTG	**Esanatoglia**	**0.47 359**	P	Pg	23 21 58.2	+0.4
SNTG			S	Sb	23 22 05.7	-0.6
SNTG			AML	AML		
	comp=E,101μm,0.5s					
SNTG			AML	AML		
	comp=N,124μm,0.1s					
SNTG			AML	AML		
	comp=E,101μm,0.5s					
SNTG			AML	AML		
	comp=N,124μm,0.1s					
SNTG			AML	AML		
	comp=N,124μm,0.1s					
SNTG			AML	AML		
	comp=E,101μm,0.5s					
FOSV	**Fossato di Vic**	**0.52 345**	P	Pg	23 21 59.4	+0.5
FOSV			S	Sb	23 22 07.7	-0.2
CING	**Cingoli**	**0.61 17**	AML	AML		
	comp=N,71μm,1.6s					
CING			AML	AML		
	comp=E,95μm,1.2s					
CING			AML	AML		
	comp=N,71μm,1.6s					
CING			AML	AML		
	comp=E,95μm,1.2s					
GUMA	**Gualdo di Mace**	**0.77 69**	P	Pg	23 21 57.3	-6.3
GUMA			S	Sg	23 22 03.8	-10
GUMA			AML	AML		
	comp=E,306μm,0.9s					
GUMA			AML	AML		
	comp=N,344μm,1.0s					
GUMA			AML	AML		
	comp=N,344μm,1.0s					
GUMA			AML	AML		
	comp=E,306μm,0.9s					

*ISCJB **24** 23:27:39.9±0.5, 24°.85N±0°.04×122°.05E±0°.06, h10km±10km, Error ellipse: s-maj=9.0km s-min=6.5km az=6.8*
*TAP **24** 23:27:39.8, 24°.88N×122°.01E, h7km, ML3.1, D*
*JMA **24** 23:27:40.1±0.1, 24°.84N×122°.03E, h13km, M2.4*

ISC 24 23:27:39.7±0.9, 24°.84N±0°.04×122°.03E±0°.03, h11km±7km, n15, σ0°.64/24, 3C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.09**	**272**	⇓*i*P	**Pg**	**23 27 42.4**	**+0.1**
	baz=243						
TWB1	**Santiao Chiao**	**0.17**	**347**	⇑*i*P	**Pg**	**23 27 43.2**	**-0.3**
	baz=353						
TWB1				*i*S	**Sg**	**23 27 45.9**	**-0.3**
	baz=353						
NTC	**Toucheng**	**0.18**	**274**	P	**Pg**	**23 27 43.1**	**-0.6**
	baz=262						
NTC				S	**Sg**	**23 27 47.3**	**+0.8**
	baz=262						
TIPB	**Shuangxi**	**0.23**	**305**	⇑*i*P	**Pg**	**23 27 44.8**	**+0.4**
	baz=299						
TIPB				*i*S	**Sg**	**23 27 48.3**	**+0.5**
	baz=299						
TWC	**Suao**	**0.28**	**216**	S	**Sb**	**23 27 51.9**	**+0.4**
	baz=207						
NWF	**Wu-fen Shan**	**0.32**	**315**	⇑*i*P	**Pg**	**23 27 46.7**	**+0.5**
	baz=312						
NWF				*i*S	**Sg**	**23 27 51.5**	**+0.9**
	baz=312						
WFSB	**Wu-fen Shan**	**0.32**	**315**	P	**Pb**	**23 27 46.7**	**-0.7**
	baz=312						
WFSB				S	**Sb**	**23 27 51.5**	**-1.1**
	baz=312						
TWE	**Neicheng**	**0.35**	**250**	P	**Pg**	**23 27 47.1**	**+0.4**
	baz=242						
TWE				*e*S	**Sg**	**23 27 49.8**	**-1.6**
	baz=242						
TWA	**Mucha**	**0.43**	**289**	P	**Pb**	**23 27 48.9**	**-0.4**
	baz=284						
TWA				S	**Sb**	**23 27 55.1**	**-0.6**
	baz=284						
YM01	**YM01**	**0.52**	**306**	P	**Pb**	**23 27 50.8**	**0.0**
	baz=303						
YM08	**YM08**	**0.53**	**311**	P	**Pb**	**23 27 50.7**	**-0.2**
	baz=309						
JYNG	**Yonagunijimaku**	**0.92**	**115**	P	**Pg**	**23 27 57.2**	**-0.2**
JYNG				*e*S	**Sg**	**23 28 09.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.97**	**113**	P	**Pg**	**23 27 58.3**	**0.0**
YOJ				*e*S	**Sg**	**23 28 10.8**	**-0.2**
IRIF	**Iriomote-Funau**	**1.63**	**108**	S	**Sn**	**23 28 29.5**	**+0.4**
HATJ	**Hateruma jima**	**1.80**	**115**	P	**Pn**	**23 28 11.1**	**+0.6**

UPP 25 00:11:28.7±0.1, 67°.83N×20°.19E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 11 42.1	-0.2
DUNU	**Dundret**	**0.72**	**168**	P	Pg	00 11 42.3	-0.2
MASU	**Masugnsbyn**	**0.78**	**117**	P	Pg	00 11 43.6	-0.1
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 11 43.5	-0.2
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pg	00 11 51.8	0.0
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pn	00 11 53.2	+0.4
PAJU	**Pajala**	**1.39**	**124**	P	Pg	00 11 54.0	-1.1
PAJU				S	Sg	00 12 12.9	-0.3
HEF	**Hetta**	**1.43**	**64**	*e*P	Pn	00 11 55.0	-0.8
HEF	**Hetta**	**1.43**	**64**	*e*P	Pn	00 11 54.9	-0.9
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	00 11 56.0	-0.7
KTK1	**Kautokeino**	**1.64**	**42**	*e*P	Pn	00 11 58.5	-0.2
HARU	**Harads**	**1.70**	**169**	P	Pn	00 11 59.6	+0.1
STEI	**Steigen**	**1.88**	**275**	*e*P	Pb	00 12 03.4	-0.4
SJUU	**Sjulsmark**	**2.40**	**166**	P	Pn	00 12 10.4	+1.3

*ISCJB **25** 00:11:33.0±0.4, 67°.80N±0°.02×20°.10E±0°.07, h0km, Error ellipse: s-maj=4.2km s-min=3.0km az=37.1*
*HEL **25** 00:11:35.6±0.1, 67°.83N×20°.19E, h0km, ML2.3(UPP), Explosion*
*BER **25** 00:11:35.6±5.6, 67°.83N×20°.24E, h0km, ML2.0, ML2.7(NAO), Suspected explosion*
*NAO **25** 00:11:35.2±0.9, 67°.79N×20°.36E, ML2.7*
*UPP **25** 00:11:35.2±0.1, 67°.82N×20°.20E, h5km±4km, ML2.3, Explosion*
*IDC **25** 00:11:35.9±0.9, 67°.76N×20°.42E, h0km, mb1 3.0/5, mb1mx2.9/38, mbtmp3.0/5, ML2.5/5, Error ellipse: s-maj=14.9km s-min=7.0km az=116.0*

ISC 25 00:11:33.0±0.6, 67°.77N±0°.02×20°.08E±0°.02, h0km, n43, σ2s17/73, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.68**	**164**	P	**Pb**	**00 11 48.5**	**+0.8**
DUNU				S	**Sb**	**00 11 58.1**	**+0.4**
DUNU	**Dundret**	**0.68**	**164**	*i*P	**Pb**	**00 11 48.5**	**+0.8**
DUNU				*i*S	**Sb**	**00 11 58.1**	**+0.4**
SALU	**Saltoluokta**	**0.72**	**238**	P	**Pb**	**00 11 49.8**	**+1.4**
SALU	**Saltoluokta**	**0.72**	**238**	*i*P	**Pb**	**00 11 49.8**	**+1.4**
LANU	**Lannavaara**	**0.77**	**68**	P	**Pg**	**00 11 48.4**	**+0.6**
LANU				S	**Sg**	**00 11 57.8**	**0.0**
LANU	**Lannavaara**	**0.77**	**68**	*i*P	**Pg**	**00 11 48.4**	**+0.6**
LANU				*i*S	**Sg**	**00 11 57.8**	**0.0**
MASU	**Masugnsbyn**	**0.80**	**112**	P	**Pg**	**00 11 49.7**	**+1.4**
MASU	**Masugnsbyn**	**0.80**	**112**	*i*P	**Pg**	**00 11 49.7**	**+1.4**
KIF	**Kilpisjarvi**	**1.27**	**12**	Pg	**Pn**	**00 11 58.2**	**+0.4**
KIF				Lg	Lg	00 12 14.1	
KIF	**Kilpisjarvi**	**1.27**	**12**	Pg	**Pn**	**00 11 58.2**	**+0.4**
KIF				Sg	**Sb**	**00 12 14.1**	**-0.3**
KIF	**Kilpisjarvi**	**1.27**	**12**	*e*P	**Pn**	**00 11 58.6**	**+0.8**
KIF				*e*SB	**Sb**	**00 12 14.3**	**-0.1**
PAJU	**Pajala**	**1.39**	**121**	P	**Pn**	**00 12 00.4**	**+0.7**
PAJU	**Pajala**	**1.39**	**121**	*e*P	**Pn**	**00 12 00.4**	**+0.7**
ERTU	**Ertsjaerv**	**1.48**	**145**	P	**Pg**	**00 12 02.4**	**+1.2**
ERTU	**Ertsjaerv**	**1.48**	**145**	*e*P	**Pg**	**00 12 02.4**	**+1.2**
HEF	**Hetta**	**1.49**	**63**	Pg	**Pn**	**00 12 01.2**	**+0.3**
HEF				Lg	Lg	00 12 19.7	
HEF	**Hetta**	**1.49**	**63**	Pg	**Pn**	**00 12 01.2**	**+0.3**
HEF				Sg	**Sg**	**00 12 19.7**	**-1.0**
HEF	**Hetta**	**1.49**	**63**	*e*P	**Pn**	**00 12 00.8**	**-0.1**
HARU	**Harads**	**1.66**	**167**	P	**Pg**	**00 12 05.8**	**+1.2**
HARU	**Harads**	**1.66**	**167**	*e*P	**Pg**	**00 12 05.8**	**+1.2**
KTK1	**Kautokeino**	**1.71**	**42**	*e*S	**Sn**	**00 12 25.8**	**-0.7**
KTK1				IAML		00 12 31.6	
	comp=Z,24nm,0.3s						
STEI	**Steigen**	**1.84**	**277**	*e*Pg	**Pg**	**00 12 09.4**	**+1.2**
STEI				*e*S	**Sb**	**00 12 31.7**	**+0.8**
STEI				IAML		00 12 40.0	
	comp=Z,31nm,0.3s						
TRO	**Tromso**	**1.92**	**348**	*e*Pg	**Pb**	**00 12 08.9**	**+0.2**
TRO				*e*Sg	**Sg**	**00 12 33.9**	**-0.5**
TRO				IAML		00 12 37.7	
	comp=Z,23nm,0.3s						
ARA0	**ARCESS Array S**	**2.66**	**46**	Pn	**Pb**	**00 12 19.5**	**-1.9**
	baz=226,slow=16						
ARA0				Sn	**Sn**	**00 12 51.9**	**+1.9**
	baz=230,slow=22						
ARA0	**ARCESS Array S**	**2.66**	**46**	Pn	**Pb**	**00 12 19.5**	**-1.9**
	baz=226,slow=16						
ARA0				Sn	**Sn**	**00 12 51.9**	**+1.9**
	baz=230,slow=22						
ARCES	**ARCESS Array B**	**2.66**	**46**	Pn	**Pn**	**00 12 19.1**	**+2.1**
	comp=Z,2.1nm,0.3s,baz=233,slow=12,SNR=37						
ARCES				Sn	**Sn**	**00 12 52.2**	**+2.3**
	comp=Z,4.7nm,0.3s,baz=224,slow=24,SNR=13						
MOR8	**Moi Rana**	**2.74**	**237**	*e*P	**Pn**	**00 12 18.3**	**+0.2**
KONS	**Konsvik**	**3.00**	**248**	*e*P	**Pn**	**00 12 25.1**	**+3.4**
APA0	**Apatity Array**	**4.92**	**86**	Pn	**Pn**	**00 12 48.6**	**+0.6**
	baz=290,slow=14						
APA0				Pg	**Pb**	**00 13 01.4**	**+1.5**
	baz=284,slow=18						
APA0				Sn	**Sn**	**00 13 45.0**	**-0.7**
	baz=275,slow=28						
APA0				Lg	Lg	00 14 03.8	
	baz=304,slow=37						
APA0	**Apatity Array**	**4.92**	**86**	Pn	**Pn**	**00 12 48.6**	**+0.6**
	baz=290,slow=14						
APA0				Pg	**Pb**	**00 13 01.4**	**+1.5**
	baz=284,slow=18						
APA0				Sn	**Sn**	**00 13 45.0**	**-0.7**
	baz=275,slow=28						
APA0				Sg	**Sb**	**00 14 03.8**	**+4.2**
	baz=304,slow=37						
FIA0	**FINESS Array S**	**6.86**	**155**	Pn	**Pn**	**00 13 17.6**	**+3.1**
	baz=346,slow=14						
FIA0				Sn	**Sn**	**00 14 32.4**	**-0.8**
	baz=346,slow=28						
FIA0				Lg	Lg	00 15 08.0	
	baz=342,slow=37						
FIA0	**FINESS Array S**	**6.86**	**155**	Pn	**Pn**	**00 13 17.6**	**+3.1**
	baz=346,slow=14						
FIA0				Sn	**Sn**	**00 14 32.4**	**-0.8**
	baz=346,slow=28						
FIA0				Sg	**Sg**	**00 15 08.0**	**-4.8**
	baz=342,slow=37						
FINES	**FINESS Array B**	**6.86**	**155**	Pn	**Pn**	**00 13 17.6**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=344,slow=12,SNR=9.2						
FINES				Sn	**Sn**	**00 14 32.6**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=346,slow=22,SNR=2.2						
FINES				Lg	Lg	00 15 08.1	
	comp=Z,0.5nm,0.3s,baz=348,slow=26,SNR=11						
NB2	**NORSAR Subarra**	**7.76**	**214**	Pn	**Pn**	**00 13 29.9**	**+2.8**
	baz=21,slow=12						
NB2				Lg	Lg	00 15 39.6	
	baz=25,slow=37						
NB2	**NORSAR Subarra**	**7.76**	**214**	Pn	**Pn**	**00 13 29.9**	**+2.8**
	baz=21,slow=12						
NB2				Sg	**Sg**	**00 15 39.6**	**-2.3**
	baz=25,slow=37						
NOA	**NORSAR Array B**	**7.76**	**214**	Pn	**Pn**	**00 13 28.9**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=24,slow=11,SNR=5.6						
NOA				Sn	**Sn**	**00 14 54.7**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=30,slow=14,SNR=2.6						
NOA				Lg	Lg	00 15 41.0	
	comp=Z,0.1nm,0.3s,baz=35,slow=13,SNR=5.4						
NRA0	**NORESS Array S**	**7.97**	**212**	Pn	**Pn**	**00 13 33.4**	**+3.4**
	baz=38,slow=10						
NRA0				Sn	**Sn**	**00 15 01.9**	**+1.2**
	baz=23,slow=28						
NRA0				Lg	Lg	00 15 44.5	
	baz=34,slow=28						
NRA0	**NORESS Array S**	**7.97**	**212**	Pn	**Pn**	**00 13 33.4**	**+3.4**
	baz=38,slow=10						
NRA0				Sn	**Sn**	**00 15 01.9**	**+1.2**
	baz=23,slow=28						
NRA0				Sg	**Sg**	**00 15 44.5**	**-4.2**
	baz=34,slow=28						
HFS	**Hagfors**	**8.16**	**203**	Pn	**Pn**	**00 13 35.0**	**+2.5**
HFS				Sn	**Sn**	**00 15 03.9**	**-1.4**
	baz=27,slow=22						
HFS				Lg	Lg	00 15 48.6	
	baz=28,slow=37						
HFS	**Hagfors**	**8.16**	**203**	Pn	**Pn**	**00 13 34.7**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=19,slow=14,SNR=5.5						
HFS				Sn	**Sn**	**00 15 04.2**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=20,slow=25,SNR=3.3						
HFS				Lg	Lg	00 15 54.0	
	comp=Z,0.5nm,0.3s,baz=20,slow=26,SNR=5.7						
HFS	**Hagfors**	**8.16**	**203**	Pn	**Pn**	**00 13 35.0**	**+2.5**
HFS				Sn	**Sn**	**00 15 03.9**	**-1.4**
	baz=27,slow=22						
HFS				Sg	**Sg**	**00 15 48.6**	**-6.1**
	baz=28,slow=37						
SPITS	**Spitsbergen Ar**	**10.51**	**356**	Pn	**Pn**	**00 14 05.2**	**+0.6**
	baz=164,slow=16,SNR=1.2						
LSH	**Leshukonskoye**	**10.67**	**94**	*e*P	Pn	00 14 12.1	+5.3
LSH				*e*S	**Sn**	**00 15 58.7**	**-8.1**

*IDC **25** 00:35:03.7±0.7, 20°.91N×122°.05E, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.8/46, mbtmp3.9/16, ML3.6/2, MS3.4/1, Ms1 3.4/1, ms1mx2.9/36, Error ellipse: s-maj=21.4km s-min=15.2km az=81.0*
*JMA **25** 00:35:07.1±0.4, 21°.09N×121°.98E, h94km, M3.8*
*TAP **25** 00:35:08.4, 21°.14N×122°.05E, h59km±1km, ML4.4, D*

ISC 25 00:35:05.5±1.3, 21°.06N±0°.04×122°.03E±0°.03, h10km±9km, n109, σ1s70/171, mb3.9/13, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.62**	**186**	⇓*e*P	**Pg**	**00 35 17.1**	**-0.4**
BBP				*e*S	**Sg**	**00 35 26.0**	**+0.4**
LAY	**Lan-yu**	**1.07**	**336**	*e*P	**Pg**	**00 35 25.6**	**-0.6**
	baz=333						
LAY				*e*S	**Sb**	**00 35 41.2**	**+1.0**
	baz=333						
TSEB	**Hengchuen, Pin**	**1.34**	**309**	*e*P	**Pg**	**00 35 31.8**	**+0.4**
	baz=305						
TSEB				*e*S	**Sb**	**00 35 48.8**	**+0.7**
	baz=305						
TWKBT	**Hengchun**	**1.43**	**308**	*e*P	**Pb**	**00 35 32.6**	**+0.3**
	baz=305						
TWKBT				*e*S	**Sb**	**00 35 50.4**	**-0.2**
	baz=305						
TWK1	**Hengchun**	**1.44**	**308**	*e*P	**Pn**	**00 35 32.5**	**+0.8**
	baz=305						
TWK1				*e*S	**Sb**	**00 35 50.4**	**-0.4**
	baz=305						
HEN	**Hengchun**	**1.53**	**308**	*e*P	**Pn**	**00 35 33.9**	**+1.0**
	baz=306						
HEN				*e*S	**Sn**	**00 35 52.3**	**-0.4**
	baz=306						
TAW	**Tawu**	**1.67**	**321**	*e*P	**Pn**	**00 35 33.3**	**-1.4**
	baz=319						
TAW				*e*S	**Sn**	**00 35 53.3**	**-2.9**
	baz=319						
EAST	**Anshuo**	**1.72**	**320**	*e*P	**Pn**	**00 35 34.0**	**-1.4**
	baz=318						
EAST				*e*S	**Sn**	**00 35 55.0**	**-2.4**
	baz=318						
SCZT	**Fangliau**	**1.85**	**315**	*e*P	**Pn**	**00 35 38.0**	**+0.7**
	baz=320						
SCZT				*e*S	**Sn**	**00 36 00.8**	**+0.1**
	baz=320						
TTN	**Taitung**	**1.88**	**334**	*e*P	**Pb**	**00 35 39.2**	**-0.6**
	baz=339						
TTN				*e*S	**Sn**	**00 36 01.8**	**+0.5**
	baz=339						
TWGBT	**Beinan**	**1.96**	**333**	*e*P	**Pn**	**00 35 39.2**	**+0.4**
	baz=322						
TWGBT				*e*S	**Sn**	**00 36 02.3**	**-1.1**
	baz=322						
SSPT	**Xinbi**	**1.96**	**316**	*e*P	**Pn**	**00 35 40.1**	**+1.2**
	baz=324						
SSPT				*e*S	**Sn**	**00 36 03.8**	**+0.2**
	baz=324						
TWG	**Pinlang**	**1.97**	**333**	*e*P	**Pn**	**00 35 39.1**	**+0.3**
	baz=322						
TWG				*e*S	**Sn**	**00 36 01.9**	**-1.7**
	baz=322						
MASBT	**Mashibuluo**	**2.02**	**320**	*e*P	**Pn**	**00 35 40.2**	**+0.6**
	baz=325						
MASBT				*e*S	**Sn**	**00 36 02.6**	**-2.3**
	baz=325						
CHKT	**Chengkung**	**2.12**	**343**	*e*P	**Pn**	**00 35 38.3**	**-2.7**
	baz=348						
CHKT				*e*S	**Sn**	**00 36 04.6**	**-2.9**
	baz=348						
SSD	**Sandimen**	**2.12**	**323**	*e*P	**Pn**	**00 35 42.1**	**+1.1**
	baz=328						
TWM1	**Shoushan**	**2.31**	**320**	*e*P	**Pb**	**00 35 46.3**	**-0.9**
	baz=318						
SLGT	**Liugui**	**2.31**	**327**	*e*P	**Pb**	**00 35 46.2**	**-1.1**
	baz=327						
SLGT				*e*S	**Sn**	**00 36 13.0**	**+0.8**
	baz=327						
ELDTW	**Lidau**	**2.32**	**336**	*e*P	**Pn**	**00 35 43.9**	**+0.1**
	baz=328						
TWF1	**Yuli**	**2.38**	**344**	*e*P	**Pn**	**00 35 44.0**	**-0.6**
	baz=350						
TWF1				*e*S	**Sn**	**00 36 13.0**	**-0.9**
	baz=350						
STYT	**Tauyuan**	**2.40**	**331**	*e*P	**Pn**	**00 35 46.4**	**+1.5**
	baz=334						
SGST	**Jiashian**	**2.42**	**327**	*e*P	**Pb**	**00 35 47.5**	**-1.6**
	baz=325						
SGST				*e*S	**Sn**	**00 36 16.5**	**+1.7**
	baz=325						
YULB	**Yu-li**	**2.42**	**344**	*e*P	**Pn**	**00 35 44.6**	**-0.5**
	baz=332						
YULB				*e*S	**Sn**	**00 36 12.1**	**-2.7**
	baz=332						
HGSD	**Ruisui**	**2.49**	**347**	*e*P	**Pn**	**00 35 44.7**	**-1.3**
	baz=352						
HGSD				*e*S	**Sn**	**00 36 15.6**	**-0.8**
	baz=352						
EHY	**Hungye**	**2.52**	**345**	*e*P	**Pn**	**00 35 46.0**	**-0.5**
	baz=332						
EHY				*e*S	**Sn**	**00 36 16.3**	**-1.0**
	baz=332						
CHN1	**Nanshi**	**2.53**	**327**	*e*P	**Pb**	**00 35 49.3**	**-1.7**
	baz=326						
CHN1				*e*S	**Sn**	**00 36 20.3**	**+2.7**
	baz=326						
WTP	**Ta-pu**	**2.54**	**329**	*e*P	**Pb**	**00 35 49.4**	**-1.8**
	baz=315						
WTP				*e*S	**Sn**	**00 36 19.2**	**+1.3**
	baz=315						
SNST	**Tainan City**	**2.58**	**327**	*e*P	**Pn**	**00 35 49.9**	**+2.6**
	baz=325						
TPUB	**Ta-pu**	**2.58**	**330**	*e*P	**Pn**	**00 35 49.5**	**+2.1**
	baz=315						
TPUB				*e*S	**Sn**	**00 36 20.3**	**+1.5**
	baz=315						
YUS	**Yu-Shan**	**2.62**	**338**	*e*P	**Pn**	**00 35 49.8**	**+1.6**
	baz=329						
CHN4	**Tsaushan**	**2.64**	**330**	*e*P	**Pb**	**00 35 51.1**	**-1.8**
	baz=316						
CHN4				*e*S	**Sn**	**00 36 21.4**	**+1.1**
	baz=316						
EGFH	**Guangfu**	**2.66**	**348**	*e*P	**Pn**	**00 35 47.8**	**-0.6**
	baz=355						
EGFH				*e*S	**Sn**	**00 36 19.0**	**-1.6**
	baz=355						
ESL	**Shilin**	**2.80**	**349**	*e*P	**Pn**	**00 35 49.7**	**-0.6**
	baz=354						
ESL				*e*S	**Sn**	**00 36 21.6**	**-2.5**
	baz=354						
VWDT	**VWDT**	**2.81**	**343**	*e*P	**Pn**	**00 35 50.8**	**+0.4**
	baz=349						
WHYT	**Xinyi Township**	**2.84**	**338**	*e*P	**Pn**	**00 35 53.4**	**+2.5**
	baz=323						
ENLB	**Shoufeng**	**2.86**	**352**	*e*S	**Sn**	**00 36 21.1**	**-4.5**
	baz=1.0						
SSLB	**Suanglung**	**2.89**	**340**	*e*P	**Pn**	**00 35 53.0**	**+1.4**
	baz=324						
SSLB				*e*S	**Sn**	**00 36 26.0**	**-0.6**
	baz=324						
WDLH	**Douliu**	**2.96**	**332**	*e*P	**Pn**	**00 35 54.9**	**+2.4**
	baz=319						
WDLH				*e*S	**Sn**	**00 36 28.6**	**+0.5**
	baz=319						
OWD	**Renai**	**2.99**	**345**	*e*P	**Pn**	**00 35 53.0**	**-0.1**
	baz=344						
OWD				*e*S	**Sn**	**00 36 27.9**	**-1.1**
	baz=344						
SMLT	**Sun Moon Lake**	**3.00**	**340**	*e*P	**Pn**	**00 35 54.6**	**+1.4**
	baz=325						
SMLT				*e*S	**Sn**	**00 36 29.2**	**0.0**
	baz=325						
TYC	**Yuchr**	**3.03**	**339**	*e*P	**Pn**	**00 35 55.4**	**+1.9**
	baz=325						
TYC				*e*S	**Sn**	**00 36 30.5**	**+0.6**
	baz=325						
TWD	**Chiawan**	**3.03**	**352**	*e*P	**Pn**	**00 35 52.6**	**-0.9**
	baz=359						
TWD				*e*S	**Sn**	**00 36 25.3**	**-4.6**
	baz=359						
WNT	**Mingjian**	**3.07**	**336**	*e*P	**Pn**	**00 35 57.4**	**+3.4**
	baz=323						
WNT				*e*S	**Sn**	**00 36 33.5**	**+2.7**
	baz=323						
CHGB	**Renai**	**3.09**	**345**	*e*P	**Pn**	**00 35 55.2**	**+0.7**
	baz=345						
CHGB				*e*S	**Sn**	**00 36 30.6**	**-1.1**
	baz=345						
WDGT	**Dungji**	**3.10**	**315**	*e*S	**Sn**	**00 36 28.6**	**-3.0**
	baz=314						
NACB	**Ninganchiao**	**3.13**	**353**	*e*P	**Pn**	**00 35 53.7**	**-1.2**
	baz=359						
NACB				*e*S	**Sn**	**00 36 28.0**	**-4.3**
	baz=359						
DPDB	**Guoxing**	**3.13**	**341**	*e*P	**Pn**	**00 35 56.3**	**+1.4**
	baz=326						
DPDB				*e*S	**Sn**	**00 36 32.2**	**-0.3**
	baz=326						
WHF	**Hehuan Shan**	**3.15**	**347**	*e*P	**Pn**	**00 35 55.6**	**0.0**
	baz=354						
ETLH	**Xiulin Townshi**	**3.17**	**351**	*e*P	**Pn**	**00 35 54.9**	**-0.6**
	baz=350						
ETLH				*e*S	**Sn**	**00 36 30.1**	**-3.4**
	baz=350						
VCHM	**Qimei**	**3.22**	**312**	*e*P	**Pn**	**00 35 55.1**	**-1.0**
	baz=320						
VCHM				*e*S	**Sn**	**00 36 30.8**	**-3.8**
	baz=320						
TDCB	**Techi**	**3.28**	**346**	*e*P	**Pn**	**00 35 57.6**	**+0.5**
	baz=345						
TDCB				*e*S	**Sn**	**00 36 34.9**	**-1.3**
	baz=345						
PHUB	**P'eng-hu**	**3.34**	**317**	*e*P	**Pn**	**00 35 57.8**	**+0.1**
	baz=309						
PHUB				*e*S	**Sn**	**00 36 34.5**	**-2.9**
	baz=309						
WHP	**Taichung City**	**3.36**	**343**	*e*P	**Pn**	**00 36 00.7**	**+2.6**
	baz=329						
WHP				*e*S	**Sn**	**00 36 41.3**	**+3.3**
	baz=329						
NANB	**Nanao**	**3.36**	**356**	*e*P	**Pn**	**00 35 58.5**	**+0.4**
	baz=3.0						
NANB				*e*S	**Sn**	**00 36 35.1**	**-3.0**
	baz=3.0						
ENA	**Nanau**	**3.36**	**356**	*e*P	**Pn**	**00 35 59.0**	**+1.0**
	baz=3.0						
ENA				*e*S	**Sn**	**00 36 35.0**	**-3.1**
	baz=3.0						
PNG	**Penghu**	**3.39**	**318**	*e*P	**Pn**	**00 35 58.9**	**+0.4**
	baz=317						
PNG				*e*S	**

	baz=356						
NNS	**Nan Shan**	**3.42**	**350**	*e*S	**Sn**	**00 36 38.3**	**-1.3**
	baz=357						
TWQ1	**Liyutan**	**3.47**	**341**	*e*S	**Sn**	**00 36 43.9**	**+3.1**
	baz=328						
EOS1	**EOS1**	**3.48**	**1**	*e*P	**Pn**	**00 35 59.7**	**+0.1**
	baz=10.0						
EOS1				*e*S	**Sn**	**00 36 39.7**	**-1.0**
	baz=10.0						
JYNG	**Yonaguni jima**	**3.48**	**14**	P	**Pn**	**00 36 01.7**	**+2.0**
JYNG				*e*S	**Sn**	**00 36 41.4**	**+0.5**
YOJ	**Yonaguni jima**	**3.51**	**15**	*e*P	**Pn**	**00 36 00.6**	**+0.6**
	baz=6.0						
YOJ				*e*S	**Sn**	**00 36 39.8**	**-1.8**
	baz=6.0						
YOJ	**Yonaguni jima**	**3.51**	**15**	P	**Pn**	**00 36 00.9**	**+0.9**
YOJ				*e*S	**Sn**	**00 36 41.7**	**+0.1**
TWC	**Suao**	**3.54**	**357**	*e*P	**Pn**	**00 36 01.8**	**+1.3**
	baz=4.0						
TWC				*e*S	**Sn**	**00 36 40.1**	**-2.2**
	baz=4.0						
IRIF	**Iriomote-Funau**	**3.62**	**25**	P	**Pn**	**00 36 02.2**	**+0.6**
IRIF				S	**Sn**	**00 36 43.5**	**-0.9**
YHNB	**Yeheng**	**3.65**	**351**	*e*P	**Pn**	**00 36 02.1**	**+0.1**
	baz=357						
YHNB				*e*S	**Sn**	**00 36 43.4**	**-1.8**
	baz=357						
NSK	**Sanguang**	**3.65**	**350**	*e*P	**Pn**	**00 36 03.4**	**+1.2**
	baz=358						
NSK				*e*S	**Sn**	**00 36 43.6**	**-1.7**
	baz=358						
JKRS	**Kuro-shima**	**3.65**	**30**	P	**Pn**	**00 36 02.3**	**+0.2**
JKRS				*e*S	**Sn**	**00 36 45.1**	**-0.1**
NSTT	**Nanjuang**	**3.68**	**345**	*e*P	**Pn**	**00 36 04.7**	**+2.3**
	baz=331						
NSTT				*e*S	**Sn**	**00 36 45.4**	**-0.5**
	baz=331						
LIOB	**Emei**	**3.69**	**346**	*e*S	**Sn**	**00 36 46.1**	**-0.1**
	baz=331						
NTC	**Toucheng**	**3.78**	**357**	*e*P	**Pn**	**00 36 06.4**	**+2.6**
	baz=5.0						
JIJ	**Ishigaki jima**	**3.82**	**30**	P	**Pn**	**00 36 04.9**	**+0.5**
JIJ				*e*S	**Sn**	**00 36 47.7**	**-1.7**
TIPB	**Shuangxi**	**3.90**	**357**	*e*P	**Pn**	**00 36 06.3**	**+0.8**
	baz=7.0						
TIPB				*e*S	**Sn**	**00 36 49.5**	**-1.9**
	baz=7.0						
YM01	**YM01**	**4.09**	**354**	*e*P	**Pn**	**00 36 10.4**	**+2.3**
	baz=354						
JISG	**Ishigakijimahi**	**4.09**	**30**	P	**Pn**	**00 36 08.3**	**+0.2**
JISG				*e*S	**Sn**	**00 36 53.9**	**-2.2**
JTJ	**Tarama**	**4.33**	**34**	P	**Pn**	**00 36 12.6**	**+1.2**
JTJ				*e*S	**Sn**	**00 37 00.8**	**-1.2**
KNM	**Kinmen**	**4.71**	**316**	*e*P	**Pn**	**00 36 17.9**	**+1.3**
	baz=313						
KNM				*e*S	**Sn**	**00 37 11.4**	**+0.1**
	baz=313						
KNMB	**Chin-men Tao**	**4.77**	**316**	*e*P	**Pn**	**00 36 16.9**	**-0.6**
	baz=315						
KNMB				*e*S	**Sn**	**00 37 09.6**	**-3.3**
	baz=315						
PTMZ	**Houxiangcun**	**4.78**	**326**	*e*P	**Pn**	**00 36 18.5**	**+0.9**
	baz=325						
PTMZ				*e*S	**Sn**	**00 37 08.9**	**-4.2**
	baz=325						
ZPLA	**Ao Xicun**	**4.88**	**307**	*e*P	**Pn**	**00 36 18.3**	**-0.7**
	baz=305						
ZPLA				*e*S	**Sn**	**00 37 11.9**	**-3.7**
	baz=305						
AXDP	**Jialang**	**5.35**	**316**	*e*P	**Pn**	**00 36 24.9**	**-0.4**
	baz=315						
AXDP				*e*S	**Sn**	**00 37 24.0**	**-3.1**
	baz=315						
MATB	**Ma-tsu**	**5.42**	**340**	*e*P	**Pn**	**00 36 26.8**	**+0.5**
	baz=339						
MATB				*e*S	**Sn**	**00 37 25.9**	**-2.8**
	baz=339						
MHZQ	**Yeshan**	**5.72**	**332**	*e*S	**Sn**	**00 37 34.7**	**-1.6**
	baz=331						
LYJJ	**Jianjiangzhen**	**5.85**	**340**	*e*P	**Pn**	**00 36 32.9**	**+0.6**
	baz=339						
JNTH	**Nagotoyohara**	**7.72**	**44**	P	**Pn**	**00 36 58.4**	**+0.4**
JOW	**Kunigami**	**8.10**	**44**	Pn	**Pn**	**00 37 03.5**	**+0.2**
	1.0nm,0.3s,baz=206,slow=16,SNR=9.4						
JOW				Sn	**Sn**	**00 38 35.6**	**+0.7**
	0.2nm,0.3s,baz=148,slow=12,SNR=1.4						
JOW	**Kunigami**	**8.10**	**44**	P	**Pn**	**00 37 03.4**	**+0.2**
KSRS	**Korea Array**	**17.12**	**16**	P	**P**	**00 39 06.2**	**-0.3**
	0.6nm,0.3s,baz=197,slow=11,SNR=25						
KSRS				LR	LR	00 45 45.1	
	comp=Z,130nm,21.4s,baz=200,slow=37						
MJAR	**Matsushiro Arr**	**20.91**	**39**	P	**P**	**00 39 49.6**	**+1.5**
	3.5nm,0.8s,baz=230,slow=10,SNR=5.9						
CMAR	**Chiang Mai Arr**	**21.88**	**267**	P	**P**	**00 39 59.9**	**+1.2**
	0.4nm,0.3s,baz=82,slow=8.9,SNR=2.7						
USRK	**Ussuriysk Ar.**	**24.52**	**17**	P	**P**	**00 40 26.5**	**+1.5**
	5.6nm,0.8s,baz=202,slow=8.0,SNR=11						
KLR	**Kul'dur**	**29.16**	**13**	P	**P**	**00 41 08.6**	**+1.8**
	3.7nm,0.7s,baz=180,slow=9.1,SNR=11						
SONM	**Songino Array**	**29.54**	**338**	P	**P**	**00 41 10.5**	**+0.2**
	0.8nm,0.3s,baz=151,slow=9.2,SNR=2.7						
MKAR	**Makanchi Array**	**41.15**	**318**	P	**P**	**00 42 50.8**	**+0.9**
	1.7nm,0.6s,baz=110,slow=9.9,SNR=13						
H11N1	**WAKE ISLAND Hy**	**41.97**	**84**	T	T	01 27 52.5	
	baz=282,slow=76,SNR=142						
H11N2	**WAKE ISLAND Hy**	**41.97**	**84**	T	T	01 27 58.2	
	baz=282,slow=76,SNR=160						
H11N3	**WAKE ISLAND Hy**	**41.99**	**84**	T	T	01 27 54.3	
	baz=282,slow=76,SNR=127						
H11S3	**WAKE ISLAND Hy**	**42.00**	**85**	T	T	01 27 52.0	
	baz=281,slow=75,SNR=593						
H11S1	**WAKE ISLAND Hy**	**42.01**	**85**	T	T	01 27 53.3	
	baz=281,slow=75,SNR=512						
H11S2	**WAKE ISLAND Hy**	**42.02**	**85**	T	T	01 27 53.4	
	baz=281,slow=75,SNR=572						
WRA	**Warramunga Arr**	**42.49**	**163**	P	**P**	**00 42 58.7**	**-2.4**
	1.6nm,1.0s,baz=340,slow=11,SNR=5.7						
ZALV	**Zalesovo Beam**	**43.30**	**329**	P	**P**	**00 43 07.5**	**+0.2**
	1.7nm,0.6s,baz=115,slow=7.0,SNR=7.6						
KURBB	**Kurchatov Arra**	**45.01**	**322**	P	**P**	**00 43 21.6**	**+0.5**
	2.2nm,0.9s,baz=115,slow=7.7,SNR=14						
ASAR	**Alice Springs**	**45.94**	**165**	P	**P**	**00 43 27.8**	**-0.9**
	0.3nm,0.5s,baz=353,slow=10,SNR=6.8						
STKA	**Stephens Creek**	**55.87**	**160**	P	**P**	**00 44 42.0**	**-1.4**
	1.7nm,0.6s,baz=290,slow=1.9,SNR=3.7						
ILAR	**Eielson Array**	**71.63**	**27**	P	**P**	**00 46 27.5**	**+0.6**
	0.2nm,0.5s,baz=266,slow=5.2,SNR=2.8						
FINES	**FINESS Array B**	**74.53**	**330**	P	**P**	**00 46 44.6**	**+0.4**
	0.4nm,0.8s,baz=93,slow=5.6,SNR=3.4						
YKA	**Yellowknife Ar**	**85.53**	**23**	P	**P**	**00 47 44.3**	**+0.8**
	0.4nm,0.5s,baz=310,slow=4.6,SNR=7.0						

*IDC **25** 00:38:12.9±0.9, 18°.68N×121°.29E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/47, mbtmp3.7/9, ML3.7/1, MS3.5/2, Ms1 3.5/2, ms1mx3.1/35, Error ellipse: s-maj=31.6km s-min=19.0km az=69.0*
*ISCJB **25** 00:38:16.1±1.1, 18°.87N±0°.04×121°.01E±0°.06, h23km±8km, mb3.6/7, Error ellipse: s-maj=9.2km s-min=6.0km az=173.1*
*MAN **25** 00:38:18.0, 18°.71N×121°.05E, h15km, mb4.7, ML3.5, MS3.4*
ISC 25 00:38:15.5±2.0, 18°.82N±0°.05×121°.09E±0°.07, h11km±13km, n26, σ1ş43/29, mb3.6/7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.96**	**171**	*e*P	**Pb**	**00 38 34.4**	**+0.2**
APYP				*e*S	**Sn**	**00 38 47.8**	**-0.8**
SGCP	**Mt. Cagua**	**1.08**	**122**	*e*P	**Pn**	**00 38 37.1**	**+0.6**
SGCP				*e*S	**Sn**	**00 38 53.5**	**+2.1**
ABRA	**Dolores**	**1.22**	**197**	*e*P	**Pb**	**00 38 36.8**	**-1.7**
ABRA				*e*S	**Sb**	**00 38 53.5**	**-0.7**
CVP	**Callao Caves**	**1.31**	**148**	⇑*i*P	**Pg**	**00 38 40.9**	**+0.2**
CVP				*i* S	**Sn**	**00 38 57.7**	**+0.5**
CAUP	**Cauayan**	**1.99**	**159**	*e*P	**Pn**	**00 38 50.1**	**+1.0**
CAUP				*e*S	**Sb**	**00 39 16.1**	**-0.5**
SMPP	**San Manuel, Pa**	**2.68**	**188**	*e*P	**Pn**	**00 38 59.5**	**+0.9**
SMPP				*e*S	**Sn**	**00 39 32.1**	**+1.0**
BALP	**Baler**	**3.10**	**171**	*e*P	**Pn**	**00 39 05.3**	**+1.0**
BALP				*e*S	**Sn**	**00 39 42.7**	**+1.4**
SCZP	**Santa Cruz**	**3.23**	**201**	*e*P	**Pn**	**00 39 07.4**	**+1.3**
SCZP				*e*S	**Sn**	**00 39 46.4**	**+1.9**
POLP	**Polilio Island**	**4.15**	**169**	*e*P	**Pn**	**00 39 21.3**	**+2.5**
POLP				*e*S	**Sn**	**00 40 08.8**	**+1.6**
TGY	**Tagaytay City**	**4.69**	**182**	Pn	**Pn**	**00 39 28.5**	**+2.1**
	baz=0.0,slow=20,SNR=4.2						
TGY				Sn	**Sb**	**00 40 33.3**	**-1.1**
	baz=358,slow=13,SNR=1.2						
TGY				LR	LR	00 41 14.7	
	comp=Z,510nm,22.0s,baz=12,slow=40						
DAV	**Davao City (W)**	**12.47**	**159**	LR	LR	00 46 28.6	
	comp=Z,291nm,18.5s,baz=128,slow=40						
KSRS	**Korea Array**	**19.51**	**16**	P	**P**	**00 42 43.2**	**+0.5**
	0.2nm,0.3s,baz=198,slow=12,SNR=6.1						
CMAR	**Chiang Mai Arr**	**20.99**	**273**	P	**P**	**00 42 59.9**	**+0.9**
	0.9nm,0.3s,baz=76,slow=8.3,SNR=4.9						
WRA	**Warramunga Arr**	**40.65**	**161**	P	**P**	**00 45 53.0**	**-2.9**
	1.2nm,0.7s,baz=344,slow=12,SNR=7.2						
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**00 46 10.0**	**+1.2**
	0.3nm,0.5s,baz=76,slow=5.1,SNR=3.7						
H11S3	**WAKE ISLAND Hy**	**43.11**	**83**	T	T	01 31 42.8	
	baz=276						
H11S1	**WAKE ISLAND Hy**	**43.12**	**83**	T	T	01 31 37.7	
	baz=276						
H11S2	**WAKE ISLAND Hy**	**43.13**	**83**	T	T	01 31 40.3	
	baz=276						
H11N1	**WAKE ISLAND Hy**	**43.15**	**81**	T	T	01 32 07.8	
	baz=277						
H11N2	**WAKE ISLAND Hy**	**43.15**	**81**	T	T	01 32 20.4	
	baz=277						
H11N3	**WAKE ISLAND Hy**	**43.17**	**81**	T	T	01 32 14.4	
	baz=277						
ASAR	**Alice Springs**	**44.04**	**163**	P	**P**	**00 46 21.6**	**-1.8**
	0.4nm,0.4s,baz=338,slow=7.1,SNR=6.2						
ZALV	**Zalesovo Beam**	**44.76**	**330**	P	**P**	**00 46 29.5**	**+0.6**
	0.3nm,0.4s,baz=104,slow=6.1,SNR=2.1						
KURBB	**Kurchatov Arra**	**46.24**	**323**	P	**P**	**00 46 41.6**	**+0.9**
	0.7nm,0.2s,baz=121,slow=8.0,SNR=6.4						
ILAR	**Eielson Array**	**74.02**	**26**	P	**P**	**00 49 50.1**	**-0.9**
	0.3nm,0.5s,baz=271,slow=4.0,SNR=3.2						
YKA	**Yellowknife Ar**	**87.93**	**23**	P	**P**	**00 51 04.5**	**-0.6**
	0.9nm,0.8s,baz=311,slow=4.4,SNR=8.8						

MEX 25 00:39:57.0±0.3, 17°.18N×96°.23W, h79km±5km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.50**	**258**	*i* P	Pn	00 40 09.5	-1.4
VHO				*i* S	Sn	00 40 19.3	-1.8
CMIG	**Matias Romero**	**1.29**	**94**	*e*P	Pn	00 40 18.1	-1.4
CMIG				*i* S	Sn	00 40 35.0	-1.5
HUIG	**Huatulco**	**1.41**	**175**	*e*P	Pn	00 40 20.0	-1.1
HUIG				*i* S	Sn	00 40 37.3	-1.9

*ISCJB **25** 00:43:30.4±0.8, 4°.60S±0°.09×144°.2E±0°.1, h110km, mb3.8/6, Error ellipse: s-maj=17.7km s-min=7.4km az=141.8*
*IDC **25** 00:43:31.6±0.9, 4°.48S×144°.01E, h102km±8km, mb3.6/6, mb1 3.8/9, mb1mx3.6/30, mbtmp4.1/9, MS3.5/1, Ms1 3.5/1, ms1mx2.9/19, Error ellipse: s-maj=28.2km s-min=15.6km az=92.0*
ISC 25 00:43:31.7±0.8, 4°.53S±0°.09×144°.1E±0°.1, h110km, n15, σ1ş69/15, mb3.9/8, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**3.97**	**300**	P	**Pn**	**00 44 28.9**	**-1.9**
	2.4nm,0.3s,baz=175,slow=4.3,SNR=11						
JAY				S	**Sn**	**00 45 19.5**	**+3.0**
	2.7nm,0.3s,baz=259,slow=20,SNR=4.0						
PMG	**Port Moresby**	**5.70**	**148**	P	**Pn**	**00 44 55.9**	**+2.0**
	7.4nm,0.3s,baz=20,slow=6.2,SNR=6.1						
PMG				S	**Sn**	**00 45 56.7**	**-1.5**
	2.8nm,0.3s,baz=302,slow=22,SNR=1.3						
WRA	**Warramunga Arr**	**18.05**	**211**	P	**P**	**00 47 33.8**	**-0.8**
	2.2nm,0.3s,baz=30,slow=12,SNR=57						
ASAR	**Alice Springs**	**21.44**	**206**	P	**P**	**00 48 10.3**	**-0.9**
	1.9nm,0.6s,baz=36,slow=8.3,SNR=20						
ASAR				pP	**pP**	**00 48 31.7**	**-1.1**
	3.2nm,0.6s,baz=30,slow=12,SNR=4.8						
NWAO	**Narrogin (SRO)**	**37.80**	**218**	P	**P**	**00 50 37.5**	**0.0**
	16nm,1.1s,baz=48,slow=15,SNR=2.6						
MJAR	**Matsushiro Arr**	**41.23**	**353**	LR	LR	01 07 31.0	
	comp=Z,59nm,18.1s,baz=45,slow=35						
KSRS	**Korea Array**	**44.42**	**341**	P	**P**	**00 51 33.1**	**+1.5**
	0.7nm,0.4s,baz=170,slow=9.9,SNR=4.3						
PETK	**Petropavlovsk-**	**58.55**	**10**	pP	pP	00 53 41.6	-1.8
	3.5nm,0.8s,baz=182,slow=5.3,SNR=3.1						
VNDA	**Vanda**	**73.55**	**176**	P	**P**	**00 54 54.2**	**+2.0**
	0.5nm,0.9s,baz=346,slow=7.8,SNR=4.6						
MKAR	**Makanchi Array**	**74.57**	**321**	pP	pP	00 55 25.5	-1.0
	1.3nm,0.8s,baz=103,slow=6.7,SNR=7.3						
ZALV	**Zalesovo Beam**	**76.27**	**328**	P	**P**	**00 55 06.9**	**-1.3**
	0.5nm,0.5s,baz=130,slow=7.8,SNR=3.6						
ZALV				pP	**pP**	**00 55 34.8**	**-1.4**
	1.2nm,0.7s,baz=116,slow=6.6,SNR=2.9						
ILAR	**Eielson Array**	**85.27**	**24**	P	**P**	**00 55 55.8**	**-0.1**
	1.2nm,0.8s,baz=254,slow=4.7,SNR=10						
ILAR				pP	**pP**	**00 56 22.8**	**-1.6**
	0.6nm,0.8s,baz=255,slow=5.0,SNR=3.3						
TORD	**Torodi Ar. Bea**	**141.96**	**286**	PKhKP	PKPpre	01 02 46.8	
	0.2nm,0.4s,baz=84,slow=2.7,SNR=5.5						
LPAZ	**La Paz**	**141.97**	**124**	PKhKP	PKPpre	01 02 50.1	
	0.6nm,0.4s,baz=220,slow=1.2,SNR=3.6						
DBIC	**Dimbokro**	**149.08**	**275**	PKPbc	**PKPbc**	**01 03 09.1**	**+0.8**
	2.8nm,0.4s,baz=81,slow=2.0,SNR=13						

DJA 25 00:47:16.0±0.3, 2°.5±3°.×12°.1E±°, h10km, M3.6/7, MLv3.6/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.26**	**230**	P	Pn	00 47 38.1	-1.5
TTSI				S	Sb	00 47 55.9	-0.2
APSI	**Ampana**	**1.57**	**33**	P	Pn	00 47 41.2	-2.8
APSI				S	Sn	00 48 00.2	-4.3
SPSI	**Sidrap Palu**	**1.99**	**211**	P	Pn	00 47 50.1	+0.3
SPSI				S	Sn	00 48 15.4	+0.6
LUWI	**Luwuk**	**2.31**	**59**	P	Pn	00 47 54.6	+0.4
KDI	**Kendari**	**2.50**	**133**	P	Pn	00 47 57.3	+0.5
BKSI	**Bulukumba**	**3.13**	**192**	P	Pn	00 48 05.5	0.0

MAN 25 01:23:51.0, 10°.01N×125°.89E, h99km, mb4.4, ML3.2, MS3.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.07**	**194**	*e*P	Pn	01 24 12.7	+0.5
BUTP				*e*S	Sn	01 24 28.1	+0.1
PLP	**Palo**	**1.45**	**322**	⇓*e*P	Pn	01 24 16.6	-0.1
PLP				*e*S	Sn	01 24 38.0	+1.9
BESP	**Borongan**	**1.64**	**344**	*e*P	Pn	01 24 19.6	+0.6
BESP				*e*S	Sn	01 24 41.3	+1.1
BUKP	**Musuan**	**2.27**	**201**	*e*P	Pn	01 24 27.9	+0.8
BUKP				*e*S	Sn	01 24 55.7	+0.9

*IDC **25** 01:38:20.0±15.0, 36°.99N×71°.97E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/26, mbtmp3.5/4, Error ellipse: s-maj=353.7km s-min=49.8km az=108.0*
*NNC **25** 01:38:45.8±4.3, 37°.80N×70°.46E, h0km, mb3.6, mpv2.9, Error ellipse: s-maj=47.2km s-min=29.1km az=110.0*
ISC 25 01:38:20.5±1.9, 36°.9N±0°.1×72°.2E±0°.2, h10km, n12, σ2ş95/15, mb3.6/4, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.47**	**343**	Pg	**Pb**	**01 39 57.3**	**+1.1**
	2.3nm,0.2s						
IUG				Lg	Lg	01 40 51.4	
	153nm,0.6s						
MRKS	**Merke**	**5.85**	**7**	Pg	**Pb**	**01 40 01.0**	**-1.6**
	2.6nm,0.1s						
MRKS				Lg	Lg	01 40 58.2	
	12nm,0.4s						
AAK	**Ala-Archa**	**5.95**	**16**	⇑Pg	Pb	01 40 01.0	-3.4
	1.2nm,0.6s						
AAK				⇓Lg	Lg	01 40 58.3	
	5.1nm,0.8s						
KK31	**Karatay Array**	**6.29**	**348**	Pn	**Pb**	**01 40 07.0**	**-3.2**
	0.3nm,0.2s,baz=157,slow=12,SNR=5.2						
KK31				⇑Pg	**Pg**	**01 40 21.1**	**+0.1**
	0.7nm,0.3s,baz=157,slow=14,SNR=3.6						
KK31				Sn	**Sn**	**01 41 09.0**	**+3.6**
	4.3nm,0.3s,baz=185,slow=16,SNR=18						
KK31	**Karatay Array**	**6.29**	**348**	Pn	**Pb**	**01 40 07.0**	**-3.2**
	0.3nm,0.2s,baz=157,slow=12,SNR=5.2						
KK31				⇑Pg	**Pg**	**01 40 21.1**	**+0.1**
	0.7nm,0.3s,baz=157,slow=14,SNR=3.6						
KK31				Sn	**Sn**	**01 41 09.0**	**+3.6**
	4.3nm,0.3s,baz=185,slow=16,SNR=18						
BRLS	**Borolday**	**6.35**	**344**	Pg	Pb	01 40 05.0	-6.2
	2.2nm,0.1s						
BRLS				Lg	Lg	01 41 05.1	
	14nm,0.2s						
AB31	**Akbulak array**	**15.21**	**328**	P	**P**	**01 42 01.8**	**+1.5**
	0.5nm,0.4s,baz=135,slow=11,SNR=17						
AB31				⇑S	**Sn**	**01 44 37.8**	**-5.9**
	0.5nm,0.5s,baz=150,slow=23,SNR=4.5						
AKTO	**Aktyubinsk**	**16.92**	**327**	⇑P	**P**	**01 42 23.3**	**+4.0**
	1.5nm,0.5s						
FINES	**FINESS Array B**	**37.68**	**325**	P	**P**	**01 45 35.7**	**+0.1**
	0.8nm,0.8s,baz=119,slow=8.6,SNR=2.0						
ARCES	**ARCESS Array B**	**41.12**	**337**	P	**P**	**01 46 03.8**	**-0.5**
	0.9nm,0.7s,baz=119,slow=9.4,SNR=4.1						
NOA	**NORSAR Array B**	**44.63**	**323**	P	**P**	**01 46 32.2**	**-0.7**
	0.2nm,0.5s,baz=111,slow=6.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**66.72**	**269**	P	**P**	**01 49 12.0**	**-0.1**
	0.2nm,0.5s,baz=46,slow=5.8,SNR=7.2						

*IDC **25** 02:01:47.3±2.4, 6°.57S×148°.76E, h79km±20km, mb3.7/3, mb1 4.0/5, mb1mx3.4/32, mbtmp4.1/5, MS3.5/5, Ms1 3.5/5, ms1mx3.2/24, Error ellipse: s-maj=70.7km s-min=13.3km az=125.0*
ISC 25 02:01:43.1±1.2, 6°.1S±0°.2×148°.3E±0°.3, h35km, n10, σ1ş58/10, mb3.9/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.43**	**199**	P	**Pn**	**02 02 35.5**	**+1.4**
	36nm,0.3s,baz=45,slow=7.1,SNR=34						
PMG				S	**Sn**	**02 03 14.0**	**+0.4**
	50nm,0.3s,baz=154,slow=18,SNR=9.8						
PMG				LR	LR	02 04 10.0	
	comp=Z,901nm,18.2s,baz=330,slow=44						
SIJI	**Sorong**	**17.76**	**286**	LR	LR	02 15 16.6	
	comp=Z,132nm,18.4s,baz=62,slow=44						
WRA	**Warramunga Arr**	**19.27**	**223**	P	**P**	**02 06 05.5**	**+0.5**
	0.7nm,0.3s,baz=53,slow=9.8,SNR=18						
WRA				S	**Sn**	**02 09 41.6**	**+0.2**
	0.1nm,0.3s,baz=48,slow=18,SNR=4.2						
GUMO	**Guam**	**19.89**	**350**	LR	LR	02 14 44.6	
	comp=Z,54nm,18.8s,baz=99,slow=38						
ASAR	**Alice Springs**	**22.24**	**217**	P	**P**	**02 06 37.6**	**+0.5**
	5.8nm,0.6s,baz=49,slow=9.6,SNR=53						
ASAR				S	**S**	**02 10 37.6**	**-2.5**
	3.6nm,1.1s,baz=34,slow=22,SNR=6.9						
STKA	**Stephens Creek**	**26.36**	**193**	P	**P**	**02 07 13.6**	**-2.5**
	2.4nm,0.7s,baz=15,slow=12,SNR=5.0						
STKA				LR	LR	02 18 23.4	
	comp=Z,170nm,18.3s,baz=116,slow=38						
ZALV	**Zalesovo Beam**	**79.80**	**328**	LR	LR	02 49 08.5	
	comp=Z,39nm,20.8s,baz=66,slow=35						
ILAR	**Eielson Array**	**85.11**	**23**	P	**P**	**02 14 14.9**	**-0.3**
	0.3nm,0.6s,baz=247,slow=5.5,SNR=4.4						
GERES	**GERESS Array B**	**122.73**	**326**	PKP	**PKPdf**	**02 20 35.2**	**-0.3**
	0.4nm,0.5s,baz=60,slow=2.4,SNR=4.1						
TORD	**Torodi Ar. Bea**	**146.35**	**284**	PKPbc	**PKPdf**	**02 21 21.6**	**+1.5**
	6.7nm,0.4s,baz=64,slow=3.4,SNR=3.4						

*ISCJB **25** 02:08:19.6±0.2, 18°.67N±0°.03×68°.08W±0°.02, h101km±3km, mb3.7/10, Error ellipse: s-maj=5.6km s-min=3.4km az=5.2*
*NEIC **25** 02:08:21.1±0.0, 18°.76N×68°.07W, h89km, mb3.9/10, MD3.9(RSPR), After RSPR.*
*IDC **25** 02:08:21.8±1.6, 18°.83N×67°.89W, h93km±17km, mb3.3/8, mb1 3.6/8, mb1mx3.4/32, mbtmp3.6/8, Error ellipse: s-maj=22.9km s-min=16.7km az=25.0*
*RSPR **25** 02:08:21.1, 18°.76N×68°.07W, h89km±1km, MD3.9/22*
ISC 25 02:08:20.3±0.7, 18°.73N±0°.06×68°.08W±0°.03, h84km±7km, n109, σ1ş32/138, mb3.7/9, 22C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGP	**Aguadilla**	**0.95**	**110**	*e*Pn	**Pn**	**02 08 39.6**	**+0.7**
AGP				*e*Sn	**Sn**	**02 08 54.4**	**+1.5**
AGPR	**Aguadilla, PR**	**0.95**	**106**	⇑*e*P	**Pn**	**02 08 39.6**	**+0.6**
AGPR	**Aguadilla, PR**	**0.95**	**106**	*e*S	**Sn**	**02 08 54.4**	**+1.4**
MPR	**Mayaguez**	**1.03**	**120**	⇑*e*P	**Pn**	**02 08 40.3**	**+0.4**
MPR				*e*S	**Sn**	**02 08 55.6**	**+1.0**
MPR	**Mayaguez**	**1.03**	**120**	*e*Pn	**Pn**	**02 08 40.3**	**+0.4**
MPR				*e*Sn	**Sn**	**02 08 55.6**	**+1.0**
LSP	**Las Mesas**	**1.09**	**120**	⇓*e*P	**Pn**	**02 08 41.2**	**+0.5**
LSP				*e*S	**Sn**	**02 08 57.2**	**+1.2**
LSP	**Las Mesas**	**1.09**	**120**	*e*Pn	**Pn**	**02 08 41.2**	**+0.5**
LSP				*e*Sn	**Sn**	**02 08 57.2**	**+1.2**
CRPR	**Cabo Rojo, PR**	**1.17**	**128**	⇑*e*P	**Pn**	**02 08 42.1**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.17**	**128**	*e*S	**Sn**	**02 08 58.7**	**+1.2**
CRPR	**Cabo Rojo, PR**

STVI	**Saint Thomas**	**2.99**	**97**	*e*S		**Sn**	**02 09 41.2 +0.8**
STVI	**Saint Thomas**	**2.99**	**97**	*e*Pn		**Pn**	**02 09 07.1 +1.6**
STVI				*e*Sn		**Sn**	**02 09 39.6 -0.8**
SDDR	**Presa de Saban**	**3.05**	**275**	*e*Pn		**Pn**	**02 09 09.2 +2.7**
SDDR				*e*Sn		**Sn**	**02 09 43.4 +1.4**
GRTK	**Grand Turk**	**3.99**	**314**	*e*Pn		**Pn**	**02 09 19.1 +0.1**
GRTK				*e*Sn		**Sn**	**02 10 03.2 -1.4**
LGNH	**Logne**	**4.30**	**268**	*e*Pn		**Pn**	**02 09 20.6 -2.8**
SMRT	**St. Maarten**	**4.80**	**97**	*e*Pn		**Pn**	**02 09 31.1 +0.9**
SMRT				*e*Sn		**Sn**	**02 10 22.9 -1.6**
GTBY	**Guantanamo Bay**	**6.75**	**281**	*e*Pn		**Pn**	**02 09 57.7 +1.0**
GTBY				*e*Sn		**Sn**	**02 11 08.1 -4.0**
URIC	**Uribia, Colomb**	**7.94**	**209**	*e*P		**Pn**	**02 10 10.1 -3.0**
SVB	**Belmont**	**8.52**	**129**	*e*Pn		**Pn**	**02 10 19.5 -1.4**
GRGR	**Grenville**	**9.02**	**136**	*e*Pn		**Pn**	**02 10 26.8 -1.0**
SDV	**Santo Domingo**	**10.09**	**195**	P		**Pn**	**02 10 40.3 -2.3**
	1.9nm,0.3s,baz=12,slow=6.3,SNR=8.2						
SDV				S		Sn	02 12 24.7 -10
	0.9nm,0.3s,baz=305,slow=20,SNR=1.9						
SDV	**Santo Domingo**	**10.09**	**195**	*e*Pn		**Pn**	**02 10 40.9 -1.7**
SDV				*e*Sn		Sn	02 12 24.7 -10
CODC	**Agustn Codazz**	**10.17**	**211⇑**	*e*P		**Pn**	**02 10 39.4 -4.1**
SMLC	**San Martn de**	**11.46**	**211**	*e*P		Pn	02 10 54.5 -6.5
OCAC	**Ocana**	**11.60**	**207**	*e*P		**Pn**	**02 10 59.7 -3.4**
PAMC	**Pamplona, Colo**	**12.18**	**202**	*e*P		**Pn**	**02 11 09.3 -1.9**
BARC	**Barichara**	**13.05**	**203**	*e*P		**Pn**	**02 11 20.8 -1.9**
PTBC	**PUERTO BERRIO,**	**13.62**	**208**	*e*P		**Pn**	**02 11 27.4 -2.6**
RUSC	**La Rusia**	**13.66**	**202**	*e*P		**Pn**	**02 11 29.0 -1.9**
BBSR	**BB Station**	**13.92**	**12**	*e*Pn		**Pn**	**02 11 34.4 +0.6**
BBSR				*e*Sn		Sn	02 13 57.1 -10
HELC	**Santa Helena**	**14.42**	**211**	*e*P		**Pn**	**02 11 38.7 -2.1**
NORC	**Norcasia**	**14.67**	**208**	*e*P		**Pn**	**02 11 41.2 -2.4**
BCIP	**Isla Barro Col**	**14.84**	**232**	*e*Pn		**Pn**	**02 11 45.4 -0.4**
CHIC	**Chingaza**	**15.06**	**202**	*e*P		**Pn**	**02 11 47.0 -2.1**
GUY2C	**Guyana, Caldas**	**15.19**	**209**	*e*P		**Pn**	**02 11 51.4 +0.6**
RREF	**El Recreo**	**15.47**	**208**	*e*P		**Pn**	**02 11 53.7 -0.7**
ORTC	**Ortega, Tolima**	**16.31**	**206**	*e*P		**Pn**	**02 12 03.7 -0.7**
PRAC	**Prado**	**16.34**	**205**	*e*P		**Pn**	**02 12 05.2 +0.4**
POPC	**Popayan, Colom**	**18.16**	**209⇑**	*e*P		**Pn**	**02 12 27.5 +0.2**
453A	**Whigham**	**19.03**	**312**	*e*P		**P**	**02 12 35.3 -0.4**
	29nm,1.2s						
BIRD	**Birdtown, Kers**	**19.30**	**328**	*e*P		**P**	**02 12 38.2 -0.4**
	10.0nm,1.4s						
JSC	**Jenkinsville**	**19.44**	**325**	*e*P		**P**	**02 12 40.7 +0.6**
	2.7nm,0.8s						
W57A	**Gilead**	**19.48**	**330**	*e*P		**P**	**02 12 40.5 0.0**
	13nm,1.3s						
HODGE	**Hodges**	**19.95**	**324**	*e*P		**P**	**02 12 45.2 -0.5**
	8.4nm,1.4s						
T59A	**Double "B" Far**	**19.99**	**337**	*e*P		**P**	**02 12 45.9 -0.2**
	3.4nm,0.9s						
S58A	**Poland Farm, P**	**20.74**	**337**	*e*P		**P**	**02 12 54.5 +0.3**
	5.3nm,0.6s						
S58A				*e*S		**S**	**02 16 39.4 -1.6**
R58B	**Mineral**	**20.99**	**338**	*e*P		**P**	**02 12 54.4 -2.4**
	6.9nm,1.3s						
TXAR	**Lajitas Array**	**34.05**	**295**	P		**P**	**02 14 58.6 +1.8**
	1.0nm,0.7s,baz=116,slow=10,SNR=14						
TXAR				PcP		**PcP**	**02 17 32.6 -0.3**
	0.2nm,0.6s,baz=134,slow=5.4,SNR=3.5						
LPAZ	**La Paz**	**34.80**	**180**	P		**P**	**02 15 06.0 +2.2**
	1.3nm,0.6s,baz=348,slow=9.3,SNR=4.2						
LPAZ	**La Paz**	**34.80**	**180**	*e*P		**P**	**02 15 02.1 -1.7**
H07N1	**FLORES T-PHASE**	**38.06**	**49**	T		T	02 55 52.9
	SNR=6.8						
PDAR	**Pinedale Array**	**42.37**	**314**	P		**P**	**02 16 07.8 +1.2**
	0.2nm,0.6s,baz=117,slow=11,SNR=3.1						
PDAR				PcP		**PcP**	**02 17 58.8 +0.1**
	0.3nm,0.5s,baz=98,slow=6.8,SNR=3.5						
NV01	**Mina Array Sit**	**47.64**	**305**	*e*P		**P**	**02 16 50.0 +1.5**
NVAR	**Mina Array Bea**	**47.64**	**305**	P		**P**	**02 16 50.0 +1.5**
	0.4nm,0.6s,baz=102,slow=5.0,SNR=4.1						
YKA	**Yellowknife Ar**	**54.17**	**335**	P		**P**	**02 17 36.7 0.0**
	0.5nm,0.6s,baz=111,slow=7.5,SNR=7.5						
YKB5	**Yellowknife Ar**	**54.17**	**335**	*e*P		**P**	**02 17 36.7 0.0**
TOA1	**Torodi Ar. Sit**	**66.96**	**83**	*e*P		**P**	**02 19 03.7 -0.9**
TORD	**Torodi Ar. Bea**	**66.96**	**83**	P		**P**	**02 19 03.7 -0.9**
	7.2nm,0.3s,baz=299,slow=7.6,SNR=6.4						
ILAR	**Eielson Array**	**68.46**	**333**	P		**P**	**02 19 13.0 -0.1**
	0.5nm,0.8s,baz=101,slow=4.7,SNR=4.2						
ILB	**Eielson Array**	**68.46**	**333**	*e*P		**P**	**02 19 13.0 -0.1**
	1.1nm,1.0s						
FIA0	**FINESS Array S**	**75.71**	**30**	*e*P		**P**	**02 19 56.7 +0.3**
FINES	**FINESS Array B**	**75.71**	**30**	P		**P**	**02 19 56.7 +0.3**
	0.6nm,0.8s,baz=264,slow=4.1,SNR=4.3						
BR101	**Keskin Array S**	**86.86**	**49**	*e*P		**P**	**02 20 55.6 -0.5**
BRTR	**Keskin Array B**	**86.86**	**49**	P		**P**	**02 20 55.6 -0.5**
	0.6nm,0.9s,baz=279,slow=3.6,SNR=3.4						
WRA	**Warramunga Arr**	**158.81**	**263**	PKPab		**PKPab**	**02 28 46.3 +0.8**
	1.3nm,1.0s,baz=117,slow=4.8,SNR=2.9						
ASAR	**Alice Springs**	**158.93**	**253**	PKPab		**PKPab**	**02 28 45.3 -0.7**
	0.4nm,0.5s,baz=102,slow=4.3,SNR=3.5						

*ISCJB **25** 02:33:52.9±1.1, 6°.9S±0°.2×149°.6E±0°.2, h42km, mb3.9/4, MS3.6/8, Error ellipse: s-maj=39.3km s-min=10.1km az=37.5*
*IDC **25** 02:33:59.0±2.1, 6°.99S×149°.36E, h81km±15km, mb3.7/4, mb1 4.0/6, mb1mx3.6/31, mbtmp4.1/6, MS3.6/8, Ms1 3.6/8, ms1mx3.2/43, Error ellipse: s-maj=46.9km s-min=11.9km az=124.0*
ISC 25 02:33:54.8±1.3, **6°.9S**±0°.2×**149°.5E**±0°.3, **h42**km, **n14**, σ1§**93**/**11**, **mb3.9**/**4**, **MS3.6**/**8**, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.38**	**223**	P	**Pn**	**02 34 47.1**	**+1.9**
	44nm,0.3s,baz=14,slow=7.6,SNR=49						
PMG				S	**Sn**	**02 35 26.0**	**+1.9**
	103nm,0.3s,baz=157,slow=20,SNR=12						
WRA	**Warramunga Arr**	**19.59**	**227**	P	**P**	**02 38 18.5**	**-1.1**
	1.1nm,0.3s,baz=57,slow=11,SNR=37						
WRA				S	**S**	**02 41 55.2**	**-3.6**
	0.1nm,0.3s,baz=44,slow=16,SNR=3.1						
GUMO	**Guam**	**20.88**	**347**	LR	LR	02 46 41.4	
	comp=Z,82nm,18.2s,baz=150,slow=36						
ASAR	**Alice Springs**	**22.40**	**220**	P	**P**	**02 38 49.6**	**-0.3**
	5.9nm,0.7s,baz=54,slow=9.4,SNR=45						
ASAR				S	**S**	**02 42 50.7**	**-2.8**
	2.1nm,0.9s,baz=35,slow=20,SNR=4.8						
ASAR				LR	LR	02 47 39.2	
	comp=Z,190nm,20.1s,baz=52,slow=37						
STKA	**Stephens Creek**	**25.91**	**196**	P	**P**	**02 39 22.6**	**-0.4**
	0.8nm,0.3s,baz=338,slow=12,SNR=3.6						
STKA				LR	LR	02 50 46.3	
	comp=Z,233nm,18.4s,baz=12,slow=39						
RPZ	**Rata Peaks**	**41.24**	**156**	LR	LR	02 58 41.3	
	comp=Z,189nm,18.8s,baz=217,slow=36						
MJAR	**Matsushiro Arr**	**44.51**	**347**	LR	LR	02 59 54.5	
	comp=Z,57nm,18.1s,baz=320,slow=35						
PETK	**Petropavlovsk-**	**60.20**	**6**	LR	LR	03 04 48.0	
	comp=Z,44nm,20.8s,baz=222,slow=31						
BRDH	**Bariadhala**	**63.76**	**299**	LR	LR	03 11 30.0	
	comp=Z,50nm,19.1s,baz=130,slow=35						
MA2	**Magadan**	**66.28**	**1**	LR	LR	03 12 02.6	
	comp=Z,27nm,19.5s,baz=135,slow=34						
SONM	**Songino Array**	**66.42**	**330**	P	**P**	**02 44 39.9**	**+0.1**
	0.7nm,0.6s,baz=145,slow=5.3,SNR=2.3						
ILAR	**Eielson Array**	**85.36**	**23**	P	**P**	**02 46 27.2**	**0.0**
	0.4nm,0.6s,baz=254,slow=5.3,SNR=5.6						
GERES	**GERESS Array B**	**124.05**	**326**	PKP	**PKPdf**	**02 52 48.5**	**-0.4**
	0.5nm,0.8s,baz=23,slow=3.5,SNR=3.5						
TORD	**Torodi Ar. Bea**	**147.72**	**284**	PKPbc	**PKPdf**	**02 53 33.8**	**+0.6**
	8.9nm,0.6s,baz=64,slow=2.9,SNR=4.2						

IDC 25 02:35:23.5±1.8, **6°.51S**×**147°.40E**, **h0**km, **mb3.5**/3, **mb1 3.9**/5, **mb1mx3.7**/31, **mbtmp3.6**/5, **Error ellipse: s-maj=64.7km s-min=27.6km az=106.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.88**	**185**	Pn	Pn	02 36 11.8	+1.1
	baz=5.1,slow=16,SNR=0.7						
PMG				Sn	Sb	02 36 50.8	-0.9
	52nm,0.3s,baz=135,slow=22,SNR=2.9						
WRA	**Warramunga Arr**	**18.42**	**222**	P	Pn	02 39 38.6	-1.8
	baz=49,slow=10,SNR=0.9						
ASAR	**Alice Springs**	**21.43**	**216**	P	P	02 40 13.6	+0.2
	1.2nm,0.5s,baz=42,slow=11,SNR=0.9						
MKAR	**Makanchi Array**	**78.15**	**320**	P	P	02 47 25.3	+0.5
	0.1nm,0.4s,baz=103,slow=6.4,SNR=1.2						
ILAR	**Eielson Array**	**85.79**	**23**	P	P	02 48 04.0	-0.5
	0.4nm,0.8s,baz=243,slow=6.0,SNR=1.7						

*TIR **25** 02:35:43.4, 40°.13N×19°.91E, h1km, Md2.5/5*
*ISCJB **25** 02:35:44.4±0.5, 40°.13N±0°.02×19°.87E±0°.04, h1km±5km, Error ellipse: s-maj=4.9km s-min=3.6km az=155.5*
*THE **25** 02:35:44.5, 40°.13N×19°.89E, h0km±3km, ML2.1/5, Error ellipse: s-maj=3.1km s-min=0.6km az=306.0*
*ATH **25** 02:35:44.2, 40°.10N×19°.80E, h20km±1km, ML2.0/6, Error ellipse: s-maj=2.3km s-min=1.3km az=238.0*
ISC 25 02:35:44.5±1.0, **40°.13N**±0°.02×**19°.89E**±0°.03, **h5**km±10km, **n35**, σ0§**70**/**52**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.19**	**29**	P	**Pg**	**02 35 47.8**	**-0.5**
TPE				S	**Sg**	**02 35 50.7**	**-0.2**
	718nm,0.2s						
TPE	**Tepelena**	**0.19**	**29**	*i* PG	**Pg**	**02 35 47.8**	**-0.5**
TPE				*i* SG	**Sg**	**02 35 50.9**	**0.0**
SRN	**Sarande**	**0.26**	**161**	P	**Pg**	**02 35 49.2**	**-0.4**
SRN				S	**Sg**	**02 35 53.3**	**+0.3**
	2μm,0.3s						
SRN	**Sarande**	**0.26**	**161**	*i* PG	**Pg**	**02 35 49.3**	**-0.2**
SRN				*i* SG	**Sg**	**02 35 53.8**	**+0.8**
KASA	**Kassiopi**	**0.38**	**174**	P	**Pg**	**02 35 51.1**	**-0.7**
KASA				S	**Sg**	**02 35 57.8**	**+0.9**
KEK	**Kerkira**	**0.42**	**189**	P	**Pg**	**02 35 52.0**	**-0.6**
KEK				S	**Sg**	**02 35 59.5**	**+1.5**
	205nm,0.3s						
KEK	**Kerkira**	**0.42**	**189**	P	**Pg**	**02 35 51.7**	**-0.9**
KEK				S	**Sg**	**02 35 59.0**	**+0.9**
KEK				AML	AML	02 35 60.0	
	comp=E,486μm,0.1s						
KEK				AML	AML	02 36 03.8	
	comp=N,320μm,0.4s						
VLO	**Vlora**	**0.45**	**319**	P	**Pg**	**02 35 53.1**	**-0.1**
VLO				S	**Sg**	**02 36 00.2**	**+1.0**
	comp=N,502nm,0.2s						
VLO	**Vlora**	**0.45**	**319**	*i* PG	**Pg**	**02 35 53.7**	**+0.5**
VLO				*i* SG	**Sb**	**02 36 00.6**	**-1.4**
IGT	**Igoumenitsa**	**0.69**	**150**	P	**Pg**	**02 35 57.3**	**-0.3**
IGT				S	**Sb**	**02 36 08.2**	**-0.5**
	comp=N,92nm,0.2s						
IGT	**Igoumenitsa**	**0.69**	**150**	*i* PG	**Pg**	**02 35 57.5**	**-0.1**
IGT				*i* SG	**Sb**	**02 36 08.2**	**-0.5**
IGT	**Igoumenitsa**	**0.69**	**150**	P	**Pg**	**02 35 57.0**	**-0.6**
IGT				S	**Sb**	**02 36 08.5**	**-0.2**
IGT				AML	AML	02 36 14.1	
	comp=E,218μm,0.2s						
IGT				AML	AML	02 36 15.8	
	comp=N,152μm,0.3s						
JAN	**Janina**	**0.88**	**122**	P	**Pb**	**02 36 01.7**	**-0.5**
JAN				S	**Sb**	**02 36 14.2**	**-0.1**
JAN	**Janina**	**0.88**	**122**	P	**Pb**	**02 36 01.9**	**-0.3**
JAN				S	**Sb**	**02 36 14.3**	**-0.1**
JAN				AML	AML	02 36 19.2	
	comp=N,304μm,0.3s						
JAN				AML	AML	02 36 22.5	
	comp=E,407μm,0.4s						
PENT	**Pentalofos**	**0.96**	**86**	P	**Pn**	**02 36 04.9**	**+0.1**
MEV	**Metsovon**	**1.09**	**108**	P	**Pn**	**02 36 06.7**	**+0.1**
SCTE	**Santa Cesarea**	**1.09**	**268**	*i* PG	**Pg**	**02 36 05.2**	**-0.2**
SCTE				*i* SG	**Sn**	**02 36 22.0**	**+0.1**
SCTE	**Santa Cesarea**	**1.09**	**268**	P	**Pg**	**02 36 04.4**	**-0.9**
TIR	**Tirane**	**1.22**	**359**	P	**Pg**	**02 36 07.7**	**-0.2**
TIR	**Tirane**	**1.22**	**359**	P	**Pg**	**02 36 07.7**	**-0.2**
KZN	**Kozani**	**1.45**	**82**	P	**Pb**	**02 36 12.1**	**0.0**
KZN				AML	AML	02 36 39.8	
	comp=E,162μm,0.5s						
KZN				AML	AML	02 36 40.0	
	comp=N,107μm,0.7s						
LKD2	**Lefkada island**	**1.46**	**156**	P	**Pg**	**02 36 12.4**	**-0.2**
LKD2				S	**Sb**	**02 36 31.6**	**+0.4**
THL	**Klokotos Trika**	**1.73**	**108**	P	**Pb**	**02 36 16.7**	**-0.1**
THL				S	**Sg**	**02 36 39.7**	**-0.4**
THL				AML	AML	02 36 44.4	
	comp=E,49μm,0.3s						
THL				AML	AML	02 36 44.8	
	comp=N,51μm,0.6s						
PDO	**Prodromos**	**1.83**	**146**	P	**Pn**	**02 36 16.1**	**-0.5**
EVR	**Evrytania**	**1.92**	**129**	P	**Pb**	**02 36 19.4**	**-0.5**
PVO	**Paravola**	**1.97**	**139**	P	**Pn**	**02 36 18.7**	**+0.2**
LIT	**Litokhoron**	**2.00**	**90**	P	**Pn**	**02 36 19.5**	**+0.6**
LIT				AML	AML	02 36 52.8	
	comp=E,45μm,0.4s						
LIT				AML	AML	02 36 53.2	
	comp=N,43μm,0.4s						
VLS	**Valsamata**	**2.02**	**164**	P	**Pn**	**02 36 18.4**	**-0.9**
GRG	**Griva**	**2.09**	**66**	P	**Pn**	**02 36 21.2**	**+1.0**
ANX	**Ano Chora**	**2.20**	**134**	P	**Pn**	**02 36 23.1**	**+1.4**
EFP	**Efpalio**	**2.31**	**137**	P	**Pn**	**02 36 24.3**	**+1.1**
SERG	**Sergoula**	**2.40**	**135**	P	**Pn**	**02 36 25.1**	**+0.7**
KALE	**Kalithea**	**2.46**	**134**	P	**Pn**	**02 36 26.4**	**+1.0**
LAKA	**Lakka**	**2.49**	**139**	P	**Pn**	**02 36 27.5**	**+1.8**
DRO	**Drossia**	**2.59**	**146**	P	**Pn**	**02 36 27.2**	**+0.1**

IDC 25 02:37:57.1±6.1, **7°.66S**×**126°.75E**, **h322**km±68km, **mb3.1**/2, **mb1 3.4**/5, **mb1mx3.1**/29, **mbtmp4.0**/5, **Error ellipse: s-maj=102.8km s-min=19.6km az=51.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.96**	**230**	P	Pn	02 39 04.5	+0.4
	14nm,0.3s,baz=263,slow=5.3,SNR=12						
BATI				S	S	02 39 58.1	+0.2
	19nm,0.3s,baz=309,slow=19,SNR=6.2						
WRA	**Warramunga Arr**	**14.26**	**150**	P	P	02 41 04.1	-0.9
	0.6nm,0.3s,baz=328,slow=13,SNR=5.1						
ASAR	**Alice Springs**	**17.33**	**157**	P	P	02 41 39.1	+0.7
	0.9nm,0.3s,baz=334,slow=12,SNR=8.2						
STKA	**Stephens Creek**	**27.78**	**152**	P	P	02 43 16.9	-0.4
	1.3nm,0.4s,baz=335,slow=12,SNR=3.0						
MKAR	**Makanchi Array**	**67.05**	**328**	P	P	02 48 16.3	0.0
	0.2nm,0.6s,baz=120,slow=5.2,SNR=2.1						

MEX 25 02:38:25.7±0.3, **17°.29N**×**94°.69W**, **h165**km±3km, **MD4.0**, **Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.27**	**223**	*i* P	Pn	02 38 46.4	-1.5
CMIG				*e*S	Sn	02 39 02.7	-2.3
TGIG		**1.58**	**109**	*i* P	Pn	02 38 56.0	-1.3
TGIG				*e*S	Sn	02 39 19.5	-2.1
VHO	**Vista Hermosa**	**1.97**	**264**	*e*P	Pn	02 39 00.6	-1.0
VHO				*i* S	Sn	02 39 27.4	-1.8
HUIG	**Huatulco**	**2.04**	**222**	*e*P	Pn	02 39 00.9	-1.2
HUIG				*e*S	Sn	02 39 27.5	-2.8
PCIG		**2.12**	**138**	*e*P	Pn	02 39 01.0	-2.1
PCIG				*i* S	Sn	02 39 29.0	-2.9
CCIG	**Comitan**	**2.64**	**112**	*e*P	Pn	02 39 08.5	-1.0
CCIG				*e*S	Sn	02 39 41.5	-1.9

DJA 25 02:46:28.0±0.3, **1°.S**±2°.×**10°.0E**±°, **h10**km, **M3.8**/9, **mb3.9**/1, **MLv3.7**/9, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.10**	**97**	P	Pg	02 46 30.0	-0.7
PDSI				S	Sg	02 46 33.9	+1.3
SDSI	**Sungai Dareh**	**1.07**	**92**	P	Pg	02 46 47.5	-1.1
SDSI				S	Sb	02 47 02.8	+0.2
SISI	**Saibi**	**1.34**	**252**	P	Pn	02 46 46.0	-6.8
SISI				S	Sb	02 47 03.8	-6.6
BKNI	**Bangkinang**	**1.40**	**29**	P	Pn	02 46 52.7	-0.8
BKNI				S	Sn	02 47 11.9	-0.1
KRJI	**Kerinci**	**1.62**	**137**	P	Pn	02 46 57.0	+0.3
KRJI				S	Sg	02 47 20.3	+0.2
PPSI	**Pulau Pagai**	**1.88**	**191**	P	Pn	02 47 00.0	-0.3
PPSI				S	Sn	02 47 24.1	0.0
RGRI	**Rengat**	**2.05**	**75**	P	Pg	02 47 07.8	+0.5
MDSI	**Maura Dua**	**5.22**	**133**	P	Pn	02 47 47.1	+0.9

IDC 25 02:47:02.4±1.5, **3°.62S**×**150°.11E**, **h0**km, **mb4.1**/4, **mb1 4.3**/5, **mb1mx3.8**/41, **mbtmp4.2**/5, **ML2.2**/1, **Error ellipse: s-maj=100.0km s-min=24.7km az=119.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.45**	**207**	Pn	Pn	02 48 40.3	+1.6
	3.0nm,0.3s,baz=270,slow=14,SNR=6.3						
WRA	**Warramunga Arr**	**22.36**	**222**	P	P	02 52 01.5	-0.8
	2.5nm,0.3s,baz=47,slow=9.3,SNR=13						
ASAR	**Alice Springs**	**25.34**	**217**	P	P	02 52 31.9	+0.6
	2.9nm,0.6s,baz=45,slow=7.9,SNR=11						
STKA	**Stephens Creek**	**29.23**	**195**	P	P	02 53 05.2	-0.9
	1.0nm,0.4s,baz=14,slow=10,SNR=3.6						
ILAR	**Eielson Array**	**82.10**	**23**	P	P	02 59 24.8	+0.2
	0.8nm,0.6s,baz=255,slow=4.9,SNR=8.3						

*ISCJB **25** 02:47:44.2±0.3, 4°.61S±0°.04×149°.49E±0°.07, h577km, mb4.2/38, Error ellipse: s-maj=9.1km s-min=5.3km az=4.4*
*NEIC **25** 02:47:46.1±1.6, 4°.62S×149°.45E, h585km±7km, mb4.5/28, Error ellipse: s-maj=15.5km s-min=9.2km az=130.0*
*IDC **25** 02:47:46.1±1.0, 4°.63S×149°.39E, h585km±12km, mb3.4/17, mb1 3.6/22, mb1mx3.4/45, mbtmp4.5/22, Error ellipse: s-maj=15.2km s-min=7.6km az=99.0*
ISC 25 02:47:45.3±0.4, **4°.63S**±0°.06×**149°.46E**±0°.09, **h577**km, **n60**, σ1§**06**/**68**, **mb4.3**/**38**, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.31**	**321**	*e*P	**P**	**02 49 06.0**	**+1.4**
PMG	**Port Moresby**	**5.26**	**206**	P	**P**	**02 49 20.9**	**+2.0**
	12nm,0.3s,baz=56,slow=5.2,SNR=22						
PMG				S	**S**	**02 50 32.3**	**-3.2**
	baz=22,slow=4.5,SNR=2.5						
PMG	**Port Moresby**	**5.26**	**206**	*e*P	**P**	**02 49 20.7**	**+1.7**
PMG				*e*S	**S**	**02 50 35.0**	**-0.4**
JAY	**Jayapura**	**8.99**	**283**	P	**P**	**02 49 53.5**	**-0.2**
	15nm,0.3s,baz=131,slow=4.8,SNR=63						
COEN	**Coen**	**11.15**	**213**	*e*P	**P**	**02 50 16.2**	**+0.9**
CTA	**Charters Tower**	**15.68**	**191**	P	**P**	**02 51 01.6**	**+0.9**
	3.9nm,0.3s,baz=1.8,slow=11,SNR=31						
CTAO	**Charters Tower**	**15.68**	**191**	*e*P	**P**	**02 51 02.1**	**+1.3**
	39nm,1.1s						
FAKI	**Fak Fak**	**17.26**	**275**	*e*P	**P**	**02 51 13.8**	**-1.5**
	123nm,1.5s						
SIJI	**Sorong**	**18.55**	**281**	P	**P**	**02 51 25.9**	**-1.2**
	1.5nm,0.3s,baz=144,slow=22,SNR=2.3						
GUMO	**Guam**	**18.67**	**346**	P	**P**	**02 51 28.2**	**+0.1**
	11nm,0.3s,baz=82,slow=9.4,SNR=4.4						
GUMO	**Guam**	**18.67**	**346**	*e*P	**P**	**02 51 28.4**	**+0.3**
MTN	**Manton Dam**	**19.85**	**245**	*e*P	**P**	**02 51 41.6**	**+2.7**
	19nm,1.1s						
EIDS	**Eidsvold**	**20.68**	**176**	*e*P	**P**	**02 51 46.9**	**+0.7**
	4.7nm,0.9s						
WC3	**Warramunga Arr**	**21.17**	**223**	*e*P	**P**	**02 51 50.8**	**+0.1**
	13nm,1.3s						
WB2	**Warramunga Arr**	**21.17**	**223**	*e*P	**P**	**02 51 51.0**	**+0.2**
	21nm,1.5s						
WRA	**Warramunga Arr**	**21.18**	**223**	P	**P**	**02 51 51.3**	**+0.5**
	2.5nm,0.3s,baz=54,slow=9.3,SNR=55						
WRA				S	**S**	**02 55 06.6**	**-2.3**
	2.6nm,0.6s,baz=49,slow=17,SNR=6.5						
WRA				PcP	**PcP**	**02 55 31.8**	**+0.2**
	0.7nm,0.4s,baz=39,slow=3.2,SNR=3.3						
WRA				ScP	**ScP**	**02 58 13.9**	**-0.6**
	0.9nm,0.8s,baz=53,slow=5.6,SNR=3.1						
DZM	**Mont Dzumac**	**23.90**	**138**	P	**P**	**02 52 15.1**	**0.0**
	9.8nm,0.8s,baz=247,slow=9.6,SNR=6.5						
DZM	**Mont Dzumac**	**23.90**	**138**	*e*P	**P**	**02 52 15.4**	**+0.3**
	52nm,1.5s						
AS31	**Alice Springs**	**24.15**	**217**	*e*P	**P**	**02 52 17.7**	**+0.4**
	2.4nm,0.6s						
ASAR	**Alice Springs**	**24.15**	**217**	P	**P**	**02 52 17.6**	**+0.3**
	4.1nm,0.4s,baz=50,slow=8.1,SNR=59						
ASAR				PcP	**PcP**	**02 55 37.3**	**-0.5**
	0.4nm,0.6s,baz=49,slow=3.1,SNR=3.0						
ASAR				S	**S**	**02 55 55.8**	**+0.1**
	1.1nm,0.8s,baz=46,slow=15,SNR=4.1						
ASAR				ScP	**ScP**	**02 58 22.0**	**-0.5**
	0.6nm,0.8s,baz=29,slow=2.4,SNR=3.5						
ARMA	**Armidale**	**25.73**	**176**	*e*P	**P**	**02 52 33.0**	**+1.8**
	21nm,1.4s						
STKA	**Stephens Creek**	**28.09**	**194**	P	**P**	**02 52 51.4**	**-0.3**
	1.7nm,0.4s,baz=2.9,slow=11,SNR=6.0						
STKA	**Stephens Creek**	**28.09**	**194**	*e*P	**P**	**02 52 50.9**	**-0.8**
	0.9nm,1.1s						
FUNA	**Funafuti**	**29.79**	**99**	*e*P	**P

Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAG	**Danmarks Havn**	**6.06**	**169**	⇓*iP*	**Pn**	**02 55 17.1**	**+0.1**
DAG				*i* S	**Sn**	**02 56 24.6**	**-1.6**
KBS	**Kingsbay**	**6.73**	**105**	*e*Pn	**Pn**	**02 55 23.4**	**-2.7**
KBS				*e*Sn	**Sn**	**02 56 43.6**	**+1.0**
SPA0	**Spitsbergen Ar**	**7.87**	**103**	*e*Pn	**Pn**	**02 55 41.0**	**-0.7**
SPA0				*e*Sn	**Sn**	**02 57 09.9**	**-0.7**
SPITS	**Spitsbergen Ar**	**7.87**	**103**	Pn	**Pn**	**02 55 40.7**	**-1.0**
	baz=330,slow=8.3,SNR=20						
SPITS				Sn	**Sn**	**02 57 09.9**	**-0.7**
	baz=334,slow=19,SNR=2.2						
TULEG	**Thule**	**9.81**	**256**	*e*Pn	**Pn**	**02 56 08.5**	**+0.2**
TULEG				*e*Sn	**Sn**	**02 57 55.5**	**-2.8**
KULLO	**Kullorsuaq**	**10.21**	**236**	*i* P	**Pn**	**02 56 15.1**	**+1.3**
KULLO				*i* S	**Sn**	**02 58 05.7**	**-2.4**
SUMG	**Summit**	**10.61**	**204**	*e*Pn	**Pn**	**02 56 20.1**	**+0.5**
SUMG				*e*Sn	Sn	02 58 10.8	-7.6
SUMG	**Summit**	**10.61**	**204**	*i* P	**Pn**	**02 56 19.4**	**-0.2**
SUMG				*i*		02 58 15.3	
JMIC	**Jan Mayen**	**12.22**	**156**	Pn	**Pn**	**02 56 42.1**	**+0.8**
	3.5nm,0.3s,baz=189,slow=3.0,SNR=3.6						
JMIC				Sn	Sn	02 58 48.8	-8.5
	2.3nm,0.3s,baz=61,slow=22,SNR=3.3						
SCO	**Scoresbysund**	**12.32**	**177**	*e*Pn	**Pn**	**02 56 42.3**	**-0.4**
SCO				*e*Sn	**Sn**	**02 58 55.6**	**-4.2**
SCO	**Scoresbysund**	**12.32**	**177**	*i* P	**Pn**	**02 56 43.0**	**+0.3**
RES	**Resolute Bay**	**14.72**	**278**	Pn	**Pn**	**02 57 15.8**	**+0.6**
	0.6nm,0.3s,baz=39,slow=11,SNR=15						
RES				Sn	Sn	02 59 49.3	-8.8
	0.1nm,0.3s,baz=146,slow=17,SNR=1.5						
ILULI	**Ilulissat**	**14.78**	**220**	*e*Pn	**Pn**	**02 57 16.7**	**+0.6**
ARA0	**ARCESS Array S**	**16.73**	**112**	*e*Pn	**Pn**	**02 57 39.9**	**-1.6**
ARCES	**ARCESS Array B**	**16.73**	**112**	Pn	**Pn**	**02 57 39.9**	**-1.6**
	0.2nm,0.3s,baz=351,slow=11,SNR=6.3						
ARE0	**ARCESS Array S**	**16.73**	**112**	*e*Pn	**Pn**	**02 57 42.5**	**+1.0**
	1.3nm,1.4s						
NC602	**NORSAR Array S**	**23.81**	**135**	*e*P	**P**	**02 59 03.0**	**+3.1**
	15nm,1.3s						
FIA1	**FINESS Array S**	**24.60**	**118**	*e*P	**P**	**02 59 07.7**	**+0.4**
	3.3nm,1.0s						
FIA0	**FINESS Array S**	**24.60**	**118**	*e*P	**P**	**02 59 07.7**	**+0.4**
FINES	**FINESS Array B**	**24.60**	**118**	P	**P**	**02 59 07.7**	**+0.4**
	1.4nm,0.6s,baz=356,slow=12,SNR=7.8						
HFS	**Hagfors**	**24.60**	**133**	P	**P**	**02 59 07.4**	**+0.1**
	2.6nm,1.0s,baz=27,slow=9.7,SNR=4.8						
EPYK	**Eagle Plains**	**27.41**	**306**	*e*P	**P**	**02 59 30.9**	**-1.7**
	8.2nm,1.3s						
FYU	**Fort Yukon**	**28.05**	**313**	*e*P	**P**	**02 59 39.4**	**+1.1**
	3.0nm,0.9s						
ESK	**Eskdalemuir**	**28.12**	**155**	*e*P	**P**	**02 59 39.8**	**+0.7**
	4.3nm,1.3s						
BILL	**Bilibino**	**29.33**	**352**	*e*P	**P**	**02 59 45.6**	**-4.1**
	1.6nm,0.9s						
HOM	**Homer**	**35.42**	**316**	*e*P	**P**	**03 00 42.6**	**-0.4**
	54nm,1.0s						
GEC2	**GERESS Array S**	**35.77**	**136**	*e*P	**P**	**03 00 47.8**	**+1.5**
	3.2nm,1.2s						
GERES	**GERESS Array B**	**35.77**	**136**	P	**P**	**03 00 47.8**	**+1.5**
	0.2nm,0.3s,baz=352,slow=6.0,SNR=3.6						
VLDQ	**Val d'Or**	**38.11**	**241**	*e*P	**P**	**03 01 05.8**	**-0.1**
	8.6nm,1.4s						
PQI	**Presque Isle**	**38.54**	**230**	*e*P	**P**	**03 01 10.8**	**+1.1**
	8.1nm,1.2s						
ZAA1	**Zalesovo Array**	**39.11**	**63**	*e*P	**P**	**03 01 13.9**	**-0.4**
ZALV	**Zalesovo Beam**	**39.11**	**63**	P	**P**	**03 01 13.9**	**-0.4**
	1.5nm,0.6s,baz=343,slow=7.2,SNR=4.7						
AGMN	**Agassiz Nation**	**40.13**	**260**	*e*P	**P**	**03 01 23.0**	**+0.1**
	2.1nm,0.8s						
BBB	**Bella Bella**	**40.34**	**293**	LR	LR	03 20 26.0	
	comp=Z,87nm,18.6s,baz=205,slow=40						
KURBB	**Kurchatov Arra**	**41.65**	**69**	P	**P**	**03 01 35.2**	**-0.2**
	0.3nm,0.7s,baz=350,slow=7.2,SNR=3.3						
KBZ	**Khabaz**	**43.97**	**106**	P	**P**	**03 01 54.9**	**+0.6**
	3.6nm,0.9s,baz=315,slow=3.1,SNR=6.9						
MK32	**Makanchi Array**	**45.87**	**67**	*e*P	**P**	**03 02 08.3**	**-1.1**
MKAR	**Makanchi Array**	**45.87**	**67**	P	**P**	**03 02 08.3**	**-1.1**
	0.2nm,0.3s,baz=354,slow=9.3,SNR=2.9						
MKAR				LR	LR	03 25 13.5	
	comp=Z,30nm,18.1s,baz=70,slow=41						
BR101	**Keskin Array S**	**46.83**	**117**	*e*P	**P**	**03 02 18.2**	**+1.1**
BRTR	**Keskin Array B**	**46.83**	**117**	P	**P**	**03 02 18.2**	**+1.1**
	0.5nm,0.8s,baz=2.9,slow=5.8,SNR=3.4						
BOOM	**Boomskoye usch**	**49.35**	**74**	*e*P	**P**	**03 02 39.0**	**+2.4**
	2.7nm,0.7s						
MDPB	**Devils Postpil**	**53.57**	**281**	*e*P	**P**	**03 03 11.0**	**+2.7**
	6.1nm,1.1s						
ANMO	**Albuquerque**	**54.62**	**268**	LR	LR	03 27 39.3	
	comp=Z,45nm,19.6s,baz=291,slow=37						
LTX	**Lajitas**	**59.79**	**264**	*e*P	**P**	**03 03 54.8**	**+2.3**
TXAR	**Lajitas Array**	**59.79**	**264**	P	**P**	**03 03 54.7**	**+2.3**
	0.2nm,0.6s,baz=30,slow=5.5,SNR=2.6						

*TAP **25** 03:00:06.8,24.°84N×122.°08E,h7km,ML3.6,C*
*ISCJB **25** 03:00:07.2±0.4,24.°86N±0.°02×122.°11E±0.°02,h5km±3km,*
mb3.6/8,MS3.5/2,Error ellipse: s-maj=3.2km s-min=2.8km
az=18.3
*JMA **25** 03:00:07.9,24.°85N×122.°01E,h31km±5km,M3.3*
*IDC **25** 03:00:08.3±1.0,24.°83N×121.°68E,h0km,mb3.7/9,*
mb1 3.9/9,mb1mx3.6/52,mbtmp3.7/9,MS3.3/4,Ms1 3.4/4,
ms1mx2.9/43,Error ellipse: s-maj=38.6km s-min=18.3km
az=72.0

ISC 25 03:00:07.7±0.9,24.°85N±0.°02×122.°07E±0.°02,h7km±6km,
n107,σ0°99/123,mb3.6/8,17C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.12**	**269**	⇑*iP*	**Pg**	**03 00 10.3**	**0.0**
	baz=270						
EGS				*i* S	**Sg**	**03 00 12.5**	**+0.4**
	baz=270						
TWB1	**Santiao Chiao**	**0.18**	**336**	⇑*iP*	**Pg**	**03 00 11.3**	**0.0**
	baz=335						
TWB1				*i* S	**Sg**	**03 00 14.2**	**+0.5**
	baz=335						
NTC	**Toucheng**	**0.21**	**272**	⇑P	**Pg**	**03 00 12.1**	**+0.1**
	baz=272						
NTC				*e*S	**Sg**	**03 00 15.3**	**+0.4**
	baz=272						
TIPB	**Shuangxi**	**0.25**	**300**	⇑*iP*	**Pg**	**03 00 12.8**	**+0.1**
	baz=299						
TIPB				*i* S	**Sg**	**03 00 16.6**	**+0.5**
	baz=299						
ILA	**Ilan**	**0.30**	**255**	P	**Pg**	**03 00 14.0**	**+0.4**
	baz=254						
ILA				*e*S	**Sg**	**03 00 17.7**	**+0.1**
	baz=254						
EOS1	**EOS1**	**0.30**	**169**	P	**Pg**	**03 00 14.1**	**+0.5**
	baz=171						
TWC	**Suao**	**0.31**	**220**	⇑P	**Pg**	**03 00 13.5**	**-0.3**
	baz=221						
NWF	**Wu-fen Shan**	**0.34**	**311**	⇑*iP*	**Pg**	**03 00 14.7**	**+0.3**
	baz=310						
NWF				S	**Sb**	**03 00 20.2**	**-1.8**
	baz=310						
WFSB	**Wu-fen Shan**	**0.34**	**311**	⇑P	**Pg**	**03 00 14.8**	**+0.3**
	baz=299						
WFSB				S	**Sb**	**03 00 20.4**	**-1.5**
	baz=299						
TWE	**Neicheng**	**0.38**	**251**	P	**Pg**	**03 00 15.0**	**-0.2**
	baz=251						
SLBB	**Yuanshan**	**0.40**	**257**	P	**Pg**	**03 00 15.5**	**0.0**
	baz=257						
ENTT	**Nioudou**	**0.50**	**246**	*e*P	**Pg**	**03 00 17.2**	**-0.2**
	baz=245						
NHDH	**Xindian Distri**	**0.51**	**283**	*e*P	**Pb**	**03 00 17.8**	**-1.2**
	baz=283						
NANB	**Nanao**	**0.51**	**215**	P	**Pg**	**03 00 17.1**	**-0.4**
	baz=206						
NANB				*e*S	**Sg**	**03 00 24.1**	**0.0**
	baz=206						
ENA	**Nanau**	**0.51**	**215**	*e*P	**Pg**	**03 00 17.7**	**+0.1**
	baz=206						
ENA				S	**Sg**	**03 00 24.4**	**+0.2**
	baz=206						
TATO	**Taipei**	**0.54**	**284**	⇑*e*P	**Pb**	**03 00 18.2**	**-1.3**
	baz=284						
YM01	**YM01**	**0.54**	**304**	⇑*iP*	**Pb**	**03 00 18.7**	**-0.9**
	baz=302						
TAP	**Taipei**	**0.54**	**291**	*e*P	**Pb**	**03 00 18.6**	**-1.0**
	baz=290						
YM08	**YM08**	**0.55**	**308**	P	**Pb**	**03 00 18.7**	**-1.1**
	baz=307						
YM10	**YM10**	**0.55**	**304**	P	**Pb**	**03 00 19.0**	**-0.8**
	baz=302						
YM05	**YM05**	**0.55**	**305**	⇑*iP*	**Pb**	**03 00 19.0**	**-0.8**
	baz=293						
YM04	**YM04**	**0.57**	**303**	⇑*iP*	**Pb**	**03 00 19.2**	**-0.9**
	baz=302						
YM03	**YM03**	**0.58**	**305**	⇑*iP*	**Pb**	**03 00 19.4**	**-0.9**
	baz=293						
ANP	**Anpu**	**0.60**	**304**	⇑*e*P	**Pb**	**03 00 19.5**	**-1.2**
	baz=293						
TWY	**Chenhua**	**0.60**	**315**	⇑*iP*	**Pb**	**03 00 20.0**	**-0.6**
	baz=314						
TWS1	**Kuangyinshan**	**0.64**	**293**	*e*P	**Pb**	**03 00 21.0**	**-0.3**
	baz=293						
NTST	**Danshui**	**0.64**	**300**	*e*P	**Pb**	**03 00 20.8**	**-0.5**
	baz=299						
YHNB	**Yeheng**	**0.65**	**255**	⇑P	**Pg**	**03 00 19.8**	**-0.5**
	baz=266						
NSK	**Sanguang**	**0.67**	**255**	⇑*iP*	**Pg**	**03 00 19.9**	**-0.6**
	baz=255						
NSK				*e*S	**Sb**	**03 00 29.6**	**-1.6**
	baz=255						
WLTB	**Daxi**	**0.74**	**271**	*e*P	**Pb**	**03 00 23.1**	**+0.1**
	baz=270						
NNSB	**Datong**	**0.75**	**236**	*e*P	**Pg**	**03 00 21.8**	**-0.4**
	baz=236						
NNS	**Nan Shan**	**0.75**	**237**	P	**Pg**	**03 00 21.9**	**-0.3**
	baz=237						
PCYT	**Pengchaiyu**	**0.78**	**0**	⇑P	**Pg**	**03 00 23.3**	**+0.6**
	baz=352						
NCU	**National Centr**	**0.81**	**279**	*e*P	**Pn**	**03 00 24.4**	**-1.2**
	baz=268						
NCU				*e*S	**Sn**	**03 00 35.7**	**-2.2**
	baz=268						
NCUH	**Zhongli**	**0.81**	**279**	*e*P	**Pb**	**03 00 23.5**	**-0.7**
	baz=276						
ETLH	**Xiulin Townshi**	**0.83**	**220**	*e*P	**Pb**	**03 00 23.9**	**-0.7**
	baz=220						
TWD	**Chiawan**	**0.88**	**209**	*e*P	**Pg**	**03 00 24.3**	**-0.2**
	baz=199						
TWD				*e*S	**Sb**	**03 00 36.3**	**-0.9**
	baz=199						
JYNG	**Yonaguni jima**	**0.89**	**116**	P	**Pg**	**03 00 24.9**	**0.0**
JYNG				S	**Sg**	**03 00 37.3**	**+0.9**
YOJ	**Yonaguni jima**	**0.94**	**114**	P	**Pg**	**03 00 25.2**	**-0.6**
	baz=114						
YOJ				*e*S	**Sg**	**03 00 37.3**	**-0.8**
	baz=114						
YOJ	**Yonaguni jima**	**0.94**	**114**	P	**Pg**	**03 00 25.7**	**-0.1**
YOJ				*e*S	**Sg**	**03 00 38.4**	**+0.4**
LIOB	**Emei**	**0.98**	**258**	*e*P	**Pn**	**03 00 27.7**	**-0.2**
	baz=258						
SBCB	**Hsinchu**	**0.98**	**267**	P	**Pn**	**03 00 27.2**	**-0.8**
	baz=258						
SBCB				*e*S	**Sn**	**03 00 40.1**	**-2.1**
	baz=258						
NSTT	**Nanjuang**	**0.99**	**258**	*e*P	**Pb**	**03 00 26.7**	**-0.6**
	baz=257						
TWT	**Tachien**	**1.00**	**234**	*e*P	**Pn**	**03 00 28.9**	**+0.5**
	baz=224						
WHF	**Hehuan Shan**	**1.01**	**226**	*e*P	**Pg**	**03 00 26.7**	**-0.5**
	baz=225						
TDCB	**Techi**	**1.02**	**235**	*e*P	**Pb**	**03 00 27.3**	**-0.5**
	baz=226						
ENLB	**Shoufeng**	**1.03**	**204**	*e*P	**Pg**	**03 00 26.7**	**-0.8**
	baz=212						
CHGB	**Renai**	**1.13**	**226**	*e*P	**Pg**	**03 00 29.0**	**-0.5**
	baz=225						
WHP	**Taichung City**	**1.17**	**241**	*e*P	**Pg**	**03 00 29.5**	**-0.6**
	baz=240						
ESL	**Shilin**	**1.18**	**209**	*e*P	**Pg**	**03 00 29.3**	**-1.0**
	baz=207						
NMLH	**Miaoli**	**1.20**	**255**	*e*P	**Pn**	**03 00 30.5**	**-0.5**
	baz=255						
OWD	**Renai**	**1.20**	**223**	*e*P	**Pg**	**03 00 29.8**	**-1.0**
	baz=228						
NSY	**Sanyi**	**1.26**	**250**	*e*P	**Pn**	**03 00 31.9**	**0.0**
	baz=250						
PTSB	**Yuanli**	**1.30**	**252**	*e*P	**Pg**	**03 00 32.5**	**-0.2**
	baz=270						
EGFH	**Guangfu**	**1.31**	**207**	*e*P	**Pg**	**03 00 33.0**	**+0.1**
	baz=211						
DPDB	**Guoxing**	**1.32**	**232**	*e*P	**Pg**	**03 00 33.0**	**0.0**
	baz=231						
VWDT	**VWDT**	**1.38**	**218**	*e*P	**Pb**	**03 00 33.5**	**-0.3**
	baz=207						
WDJ	**Dajia District**	**1.39**	**249**	*e*P	**Pg**	**03 00 34.8**	**+0.4**
	baz=266						
SMLT	**Sun Moon Lake**	**1.43**	**228**	*e*P	**Pg**	**03 00 34.8**	**-0.4**
	baz=225						
TYC	**Yuchr**	**1.45**	**230**	*e*P	**Pg**	**03 00 35.8**	**+0.3**
	baz=235						
SSLB	**Suanglung**	**1.46**	**224**	*e*P	**Pb**	**03 00 34.6**	**-0.8**
	baz=221						
HGSD	**Ruisui**	**1.47**	**204**	*e*P	**Pg**	**03 00 36.1**	**+0.1**
	baz=208						
EHY	**Hungye**	**1.50**	**207**	*e*P	**Pn**	**03 00 35.2**	**+0.1**
	baz=210						
WNT	**Mingjian**	**1.59**	**233**	*e*P	**Pg**	**03 00 38.8**	**+0.6**
	baz=219						
WHYT	**Xinyi Township**	**1.59**	**224**	*e*P	**Pg**	**03 00 38.1**	**-0.1**
	baz=221						
IRIF	**Iriomote-Funau**	**1.60**	**108**	P	**Pn**	**03 00 34.8**	**-1.7**
IRIF				S	**Sn**	**03 00 55.9**	**-1.5**
YULB	**Yu-li**	**1.61**	**206**	*e*P	**Pn**	**03 00 35.8**	**-0.8**
	baz=214						
TWF1	**Yuli**	**1.65**	**205**	*e*P	**Pn**	**03 00 37.4**	**+0.3**
	baz=215						
YUS	**Yu-Shan**	**1.69**	**217**	*e*P	**Pb**	**03 00 39.2**	**-0.3**
	baz=224						
HATJ	**Hateruma jima**	**1.77**	**116**	P	**Pn**	**03 00 38.2**	**-0.6**
HATJ				*e*S	**Sn**	**03 00 58.8**	**-2.8**
JKRS	**Kuro-shima**	**1.87**	**109**	P	**Pn**	**03 00 39.0**	**-1.2**
JKRS				*e*S	**Sn**	**03 01 01.7**	**-2.4**
ELDTW	**Lidau**	**1.91**	**210**	*e*P	**Pb**	**03 00 42.7**	**-0.3**
	baz=189						
JIJ	**Ishigaki jima**	**1.95**	**104**	P	**Pn**	**03 00 39.9**	**-1.4**
JIJ				*e*S	**Sn**	**03 01 05.4**	**-0.7**
CHN4	**Tsaushan**	**2.01**	**222**	*e*P	**Pg**	**03 00 45.0**	**-1.2**
	baz=215						
TPUB	**Ta-pu**	**2.02**	**221**	*e*P	**Pb**	**03 00 43.6**	**-1.3**
	baz=212						
JISG	**Ishigakijimahi**	**2.06**	**97**	P	**Pn**	**03 00 41.3**	**-1.5**
STYT	**Tauyuan**	**2.06**	**216**	*e*P	**Pg**	**03 00 46.0**	**-1.2**
	baz=208						
WTP	**Ta-pu**	**2.07**	**220**	*e*P	**Pb**	**03 00 45.6**	**-0.2**
	baz=211						
TWK	**Hsinying**	**2.13**	**223**	*e*P	**Pb**	**03 00 46.3**	**-0.5**
	baz=214						
SNST	**Tainan City**	**2.16**	**222**	*e*P	**Pb**	**03 00 47.1**	**-0.1**
	baz=213						
CHN1	**Nanshi**	**2.17**	**221**	*e*P	**Pb**	**03 00 47.1**	**-0.3**
	baz=212						
PTTC	**Pingtan**	**2.18**	**288**	*e*P	**Pn**	**03 00 42.9**	**-1.6**
	baz=285						
TWG	**Pinlang**	**2.21**	**205**	*e*P	**Pb**	**03 00 46.3**	**-1.8**
	baz=184						
TWGBT	**Beinan**	**2.21**	**204**	*e*P	**Pn**	**03 00 45.5**	**+0.6**
	baz=184						
SGST	**Jiashian**	**2.22**	**218**	*e*P	**Pb**	**03 00 47.2**	**-1.1**
	baz=200						
SLGT	**Liugui**	**2.26**	**215**	*e*P	**Pb**	**03 00 48.3**	**-0.6**
	baz=207						
MATB	**Ma-tsu**	**2.32**	**305**	*e*P	**Pn**	**03 00 44.9**	**-1.4**
	baz=301						
MASBT	**Mashibuluo**	**2.58**	**211**	*e*P	**Pb**	**03 00 52.5**	**-2.0**
	baz=187						
XPSS	**Dashiqiu**	**2.68**	**321**	*e*P	**Pn**	**03 00 50.2**	**-1.1**
	baz=316						
PTMZ	**Houxiangcun**	**2.68**	**275**	*e*P	**Pn**	**03 00 50.9**	**-0.4**
	baz=272						
LYJJ	**Jianjiangzhen**	**2.69**	**310**	*e*P	**Pn**	**03 00 50.1**	**-1.3**
	baz=306						
EAST	**Anshuo**	**2.69**	**205**	*e*P	**Pn**	**03 00 52.7**	**+1.1**
	baz=187						
MHZQ	**Yeshan**	**3.02**	**295**	*e*P	**Pn**	**03 00 55.4**	**-0.6**
	baz=292						
KNMB	**Chin-men Tao**	**3.37**	**264**	*e*P	**Pn**	**03 01 00.0**	**-0.8**
	baz=262						
AXDP	**Jialang**	**3.72**	**272**	*e*P	**Pn**	**03 01 05.3**	**-0.4**
	baz=270						
KSRS	**Korea Array**	**13.53**	**20**	LR	LR	03 09 20.1	
	comp=Z,66nm,18.5s,baz=205,slow=40						
DAV	**Davao City (W)**	**17.99**	**169**	LR	LR	03 11 12.8	
	comp=Z,66nm,18.9s,baz=330,slow=37						
USRK	**Ussuriysk Ar.**	**20.94**	**20**	P	Pn	03 04 54.9	+1.3
	2.5nm,0.9s,baz=205,slow=10,SNR=4.4						
KLR	**Kul'dur**	**25.49**	**15**	P	**P**	**03 05 38.9**	**+2.3**
	1.1nm,0.8s,baz=268,slow=5.8,SNR=3.5						
SONM	**Songino Array**	**26.09**	**336**	P	**P**	**03 05 42.9**	**+0.7**
	4.4nm,1.0s,baz=144,slow=10,SNR=6.8						
SONM				LR	LR	03 17 24.3	
	comp=Z,100nm,20.5s,baz=56,slow=40						
MKAR	**Makanchi Array**	**38.43**	**315**	P	**P**	**03 07 31.4**	**+1.2**
	0.2nm,0.3s,baz=95,slow=8.9,SNR=3.8						
ZALV	**Zalesovo Beam**	**40.13**	**326**	P	**P**	**03 07 43.7**	**-0.4**
	0.9nm,0.5s,baz=117,slow=8.3,SNR=2.7						
KURBB	**Kurchatov Arra**	**42.13**	**319**	P	**P**	**03 07 59.1**	**-1.5**
	0.8nm,1.0s,baz=104,slow=7.7,SNR=3.8						
WRA	**Warramunga Arr**	**46.09**	**164**	P	**P**	**03 08 35.1**	**+2.4**
	2.4nm,0.6s,baz=346,slow=12,SNR=13						
ASAR	**Alice Springs**	**49.57**	**166**	P	**P**	**03 09 01.5**	**+1.8**
	0.6nm,0.7s,baz=341,slow=9.0,SNR=5.6						
NOA	**NORSAR Array B**	**78.02**	**332**	LR	LR	03 50 20.1	
	comp=Z,33nm,18.1s,baz=35,slow=39						
YKA	**Yellowknife Ar**	**82.05**	**23**	P	**P**	**03 12 30.8**	**+2.2**
	0.2nm,0.7s,baz=316,slow=4.0,SNR=3.8						

*IDC **25** 03:08:11.1±1.0,6.°28S×148.°83E,h0km,mb4.1/5,*
mb1 4.3/8,mb1mx3.9/41,mbtmp4.2/8,ML3.8/3,MS3.4/8,
Ms1 3.4/8,ms1mx3.2/30,Error ellipse: s-maj=32.7km
s-min=19.0km az=101.0
*ISCJB **25** 03:08:16.1±0.5,6.°40S±0.°06×148.°69E±0.°07,h53km,*
mb4.6/12,MS3.4/6,Error ellipse: s-maj=11.1km
s-min=7.1km az=31.5
*NEIC **25** 03:08:18.4±2.6,6.°44S×148.°77E,h61km±7km,mb4.4/16,*
Error ellipse: s-maj=18.0km s-min=13.6km az=136.0

ISC 25 03:08:17.7±0.6,6.°44S±0.°08×148.°73E±0.°09,h53km,n36,
σ0°85/35,mb4.3/12,MS3.4/6,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.33**	**208**	Pn	**Pn**	**03 09 07.7**	**+0.3**
	80nm,0.3s,baz=7.8,slow=4.4,SNR=67						
PMG				Sn	**Sn**	**03 09 46.4**	**+0.6**
	108nm,0.3s,baz=143,slow=21,SNR=15						
PMG				LR	LR	03 10 09.9	
	comp=Z,291nm,20.8s,baz=339,slow=34						
PMG	**Port Moresby**	**3.33**	**208**	*e*Pn	**Pn**	**03 09 08.2**	**+0.8**
PMG				*e*Sn	**Sn**	**03 09 46.5**	**+0.6**
RABL	**Rabaul**	**4.08**	**57**	*e*Pn	**Pn**	**03 09 18.7**	**+1.0**
COEN	**Coen**	**9.26**	**216**	*e*Pn	**Pn**	**03 10 27.9**	**-0.8**
HNR	**Honiara**	**11.50**	**106**	LR	LR	03 14 46.7	
	comp=Z,108nm,20.7s,baz=324,slow=35						
CTA	**Charters Tower**	**13.78**	**190**	Pn	**Pn**	**03 11 29.7**	**-0.8**
	0.2nm,0.3s,baz=15,slow=12,SNR=3.5						
CTAO	**Charters Tower**	**13.78**	**190**	*e*Pn	**Pn**	**03 11 31.7**	**+1.3**
MTN	**Manton Dam**	**18.47**	**249**	*e*P	**P**	**03 12 28.9**	**-0.6**
	47nm,1.4s						
EIDS	**Eidsvold**	**18.96**	**173**	*e*P	**Pn**	**03 12 36.0**	**+0.2**
	11nm,0.8s						
WRAB	**Tennant Creek**	**19.37**	**225**	*e*P	**P**	**03 12 38.4**	**-0.8**
	16nm,0.8s						
WRAB				*e*S	**S**	**03 16 14.4**	**-1.3**
WC3	**Warramunga Arr**	**19.37**	**225**	*e*P	**P**	**03 12 39.5**	**+0.2**
	16nm,0.8s						
WB2	**Warramunga Arr**	**19.37**	**225**	*e*P	**Pn**	**03 12 40.5**	**-0.4**
	18nm,0.8s						
WR1	**Warramunga Arr**	**19.38**	**225**	*e*P	**Pn**	**03 12 40.6**	**-0.4**
WRA	**Warramunga Arr**	**19.38**	**225**	P	**Pn**	**03 12 40.6**	**-0.4**
	1.3nm,0.3s,baz=55,slow=11,SNR=22						
GUMO	**Guam**	**20.26**	**349**	LR	LR	03 18 57.2	
	comp=Z,100nm,21.7s,baz=160,slow=32						
AS31	**Alice Springs**	**22.29**	**218**	*e*P	**P**	**03 13 11.2**	**+0.4**
	7.7nm,0.7s						
ASAR	**Alice Springs**	**22.29**	**218**	P	**P**	**03 13 10.8**	**+0.1**
	6.1nm,0.6s,baz=50,slow=9.5,SNR=70						
ASAR				LR	LR	03 22 32.3	
	comp=Z,172nm,20.6s,baz=44,slow=38						
DZM	**Mont Dzumac**	**23.11**	**134**	P	**P**	**03 13 19.5**	**+0.1**
	20nm,1.1s,baz=144,slow=19,SNR=3.9						
DZM	**Mont Dzumac**	**23.11**	**134**	*e*P	**P**	**03 13 19.5**	**+0.1**
	82nm,1.5s						
ARMA	**Armidale**	**24.01**	**174**	*e*P	**P**	**03 13 27.6**	**-0.2**
	9.8nm,0.9s						
FITZ	**Fitzroy Crossi**	**25.33**	**241**	*e*P	**P**	**03 13 41.1**	**+1.3**
	31nm,0.8s						
STKA	**Stephens Creek**	**26.17**	**194**	P	**P**	**03 13 49.8**	**+2.5**
	2.9nm,0.5s,baz=16,slow=10,SNR=8.6						
STKA				LR	LR	03 25 08.4	
	comp=Z,174nm,18.4s,baz=19,slow=39						
STKA	**Stephens Creek**	**26.17**	**194**	*e*P	**P**	**03 13 47.7**	**+0.4**
	2.3nm,1.1s						
LUWI	**Luwuk**	**26.44**	**281**	*e*P	**P**	**03 13 49.1**	**-0.9**
	139nm,0.4s						
RPZ	**Rata Peaks**	**41.99**	**156**	LR	LR	03 31 32.5	
	comp=Z,109nm,19.1s,baz=222,slow=33						
NIUE	**Niue**	**42.11**	**111**	*e*P	**P**	**03 16 03.2**	**-1.9**
	204nm,0.9s						
MJAR	**Matsushiro Arr**	**43.88**	**348**	LR	LR	03 33 16.2	
	comp=Z,37nm,18.2s,baz=200,slow=34						
KSRS	**Korea Array**	**47.

Error ellipse: s-maj=62.2km s-min=13.9km az=19.8
ISC 25 03:13:30.7±1.4, 6°2S±0°.2×148°2E±0°.5, h53km, n6, σ0°62/7, mb3.7/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.39**	**198**	Pn	**Pn**	**03 14 20.6**	**-0.5**
	25nm,0.3s,baz=33,slow=4.7,SNR=6.5						
PMG				Sn	**Sn**	**03 15 00.2**	**+0.1**
	40nm,0.3s,baz=145,slow=22,SNR=6.6						
WRA	**Warramunga Arr**	**19.23**	**223**	P	**Pn**	**03 17 51.8**	**-0.3**
	0.2nm,0.3s,baz=53,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**22.20**	**217**	P	**P**	**03 18 23.6**	**+0.8**
	3.0nm,0.6s,baz=49,slow=9.7,SNR=7.1						
STKA	**Stephens Creek**	**26.32**	**193**	P	**P**	**03 19 02.0**	**+0.5**
	1.5nm,0.7s,baz=12,slow=14,SNR=2.6						
ILAR	**Eielson Array**	**85.15**	**23**	P	**P**	**03 26 01.0**	**+0.1**
	0.2nm,0.6s,baz=260,slow=5.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**146.33**	**284**	PKPbc	**PKiKP**	**03 33 09.3**	**-0.5**
	5.8nm,0.3s,baz=95,slow=3.0,SNR=5.3						

*IDC **25** 03:25:21.7±10.0, 21°.71S×173°.57W, h0km, mb4.6/4, mb1 4.7/5, mb1mx4.0/24, mbtmp4.6/5, ML3.8/1, Error ellipse: s-maj=193.0km s-min=130.1km az=44.0*
ISC 25 03:25:31.2±5.5, 21°.8S±0°.3×174°.3W±0°.6, h25km, n14, σ1°86/13, mb4.8/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**17.89**	**265**	P	**P**	**03 29 40.1**	**+1.1**
	0.3nm,0.3s,baz=86,slow=15,SNR=5.1						
DZM	**Mont Dzumac**	**17.89**	**265**	*e*P	**Pn**	**03 29 38.1**	**-0.4**
URZ	**Urewera**	**18.03**	**202**	*e*P	**Pn**	**03 29 41.9**	**+1.9**
BKZ	**Black Stump Fm**	**19.06**	**202**	*e*P	**P**	**03 29 51.2**	**-0.4**
BFZ	**Birch Farm**	**20.50**	**201**	*e*P	Pn	03 30 10.4	+0.8
CTA	**Charters Tower**	**36.83**	**265**	P	**P**	**03 32 38.3**	**+0.7**
	18nm,0.5s,baz=93,slow=10,SNR=50						
CTAO	**Charters Tower**	**36.83**	**265**	*e*P	**P**	**03 32 38.4**	**+0.9**
	20nm,0.5s						
STKA	**Stephens Creek**	**40.41**	**246**	P	**P**	**03 33 05.9**	**-1.5**
	0.9nm,0.4s,baz=100,slow=9.8,SNR=4.2						
COEN	**Coen**	**41.13**	**274**	*e*P	**P**	**03 33 16.1**	**+2.6**
	22nm,1.2s						
AS31	**Alice Springs**	**47.62**	**257**	*e*P	**P**	**03 34 01.2**	**-4.2**
	1.6nm,1.0s						
ASAR	**Alice Springs**	**47.62**	**257**	P	**P**	**03 34 04.8**	**-0.7**
	3.5nm,0.8s,baz=93,slow=8.2,SNR=17						
WB2	**Warramunga Arr**	**47.86**	**262**	*e*P	**P**	**03 34 06.9**	**-0.4**
	9.0nm,0.6s						
WR1	**Warramunga Arr**	**47.87**	**262**	*e*P	**P**	**03 34 06.9**	**-0.5**
WRA	**Warramunga Arr**	**47.87**	**262**	P	**P**	**03 34 06.9**	**-0.5**
	6.4nm,0.5s,baz=98,slow=7.7,SNR=47						

IDC 25 03:25:46.7±6.3, 24°.92S×179°.07E, h0km, mb4.0/1, mb1 4.1/1, mb1mx3.5/19, mbtmp4.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/24, Error ellipse: s-maj=348.4km s-min=51.2km az=154.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.04**	**262**	P	P	03 33 31.6	-0.5
	1.2nm,0.5s,baz=89,slow=7.6,SNR=14						
JAY	**Jayapura**	**43.15**	**295**	LR	LR	03 49 36.7	
	comp=Z,45nm,19.7s,baz=168,slow=33						
ARCES	**ARCESS Array B**	**132.70**	**348**	PKP	PKPdf	03 44 60.0	-2.8
	1.0nm,0.8s,baz=22,slow=1.3,SNR=5.6						
FINES	**FINESS Array B**	**139.12**	**341**	PKP	PKPdf	03 45 14.3	-0.6
	0.5nm,0.4s,baz=54,slow=3.6,SNR=2.8						
AKASG	**Malin Array Be**	**145.35**	**326**	PKPbc	PKPbc	03 45 25.4	-0.7
	2.2nm,0.5s,baz=43,slow=4.6,SNR=9.2						
BRTR	**Keskin Array B**	**147.49**	**305**	PKPbc	PKPab	03 45 34.2	-0.9
	0.8nm,0.6s,baz=111,slow=4.5,SNR=5.5						

WEL 25 03:41:01.3±1.3, 35°S±16°×17°9E±1°6, h182km±23km, M3.6/14, MLv3.6/14, Error ellipse: s-maj=0.0km s-min=0.0km az=168.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.22**	**189**	P	Pn	03 41 40.9	0.0
MXZ				S	Sn	03 42 11.7	-0.2
WMGZ	**Waiomatatini S**	**2.47**	**186**	P	Pn	03 41 44.3	+0.7
WMGZ				S	Sn	03 42 17.3	+0.6
HAZ	**Te Kaha**	**2.51**	**198**	P	Pn	03 41 44.6	+0.4
HAZ				S	Sn	03 42 17.7	0.0
PUZ	**Puketiti**	**2.73**	**188**	P	Pn	03 41 46.9	+0.1
PUZ				S	Sn	03 42 22.1	-0.2
RUGZ	**Raukumara Rang**	**2.74**	**198**	P	Pn	03 41 47.3	+0.3
RUGZ				S	Sn	03 42 22.1	-0.5
KUZ	**Kuaotunu**	**2.82**	**240**	P	Pn	03 41 47.3	-0.6
TWGZ	**Tauwhareparae**	**2.88**	**192**	P	Pn	03 41 49.0	+0.5
TWGZ				S	Sn	03 42 27.1	+1.6
MWZ	**Matawai**	**3.12**	**198**	P	Pn	03 41 51.8	+0.2
MWZ				S	Sn	03 42 31.3	+0.5
CNGZ	**Carnagh Statio**	**3.15**	**188**	P	Pn	03 41 51.9	+0.1
TKGZ	**Te Karaka**	**3.15**	**193**	P	Pn	03 41 51.7	-0.1
TKGZ				S	Sn	03 42 31.9	+0.4
URZ	**Urewera**	**3.18**	**204**	P	Pn	03 41 51.9	-0.3
RAGZ	**Rawiri**	**3.31**	**199**	P	Pn	03 41 53.9	+0.1
RIGZ	**Rimuhau**	**3.43**	**193**	P	Pn	03 41 54.8	-0.5
RTZ	**Ruatahuna**	**3.54**	**203**	P	Pn	03 41 56.0	-0.8
SNGZ	**Shannon Statio**	**3.59**	**198**	P	Pn	03 41 57.1	-0.2
BKZ	**Black Stump Fm**	**4.20**	**205**	P	Pn	03 42 04.7	-0.4
HIZ	**Hauiti**	**4.43**	**224**	P	Pn	03 42 10.3	+2.3
KWHZ	**Kaweka Forest**	**4.46**	**204**	P	Pn	03 42 07.0	-1.3
NGZ	**Ngauruhoe**	**4.56**	**213**	P	Pn	03 42 08.9	-0.8
BHHZ	**Black Hill Sta**	**4.64**	**207**	P	Pn	03 42 10.0	-0.7
FWVZ	**Far West T-bar**	**4.65**	**212**	P	Pn	03 42 11.2	+0.2
KAHZ	**Kahuranaki**	**4.67**	**198**	P	Pn	03 42 09.8	-1.2
TSZ	**Takapari Road**	**5.18**	**205**	P	Pn	03 42 15.1	-2.5

MAN 25 03:44:55.3, 7°82N×122°85E, h34km, mb3.7, ML2.4, MS1.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.28**	**264**	*e*P	Pb	03 45 04.5	+1.5
IPIL				*e*S	Sb	03 45 11.3	+3.2
DCPH	**Dipolog City**	**0.91**	**33**	⇑*e*P	Pb	03 45 12.9	+0.3
DCPH				*e*S	Sn	03 45 23.8	+0.2

WEL 25 03:46:18.1±0.8, 32°S±7°×18°0E±1°5, h345km±12km, M4.1/15, mB4.5/8, ML4.5/1, MLv4.7/15, Mw(mB)3.6/8, Error ellipse: s-maj=0.0km s-min=0.0km az=110.5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.99**	**40**	P	Pn	03 47 15.2	-1.8
GLKZ				S	S	03 48 05.1	+0.8
MXZ	**Matakaoa Point**	**6.12**	**192**	P	Pn	03 47 51.3	+1.4
MXZ				S	S	03 49 04.3	-0.2
KUZ	**Kuaotunu**	**6.20**	**212**	S	S	03 49 06.7	+0.5
WMGZ	**Waiomatatini S**	**6.35**	**190**	P	Pn	03 47 53.5	+0.9
WMGZ				S	S	03 49 11.2	+1.9
OUZ	**Omahuta**	**6.38**	**234**	P	Pn	03 47 54.7	+1.7
HAZ	**Te Kaha**	**6.41**	**195**	P	Pn	03 47 54.9	+1.6
HAZ				S	S	03 49 11.3	+0.8
PUZ	**Puketiti**	**6.62**	**191**	P	Pn	03 47 56.3	+0.5
PUZ				S	S	03 49 15.5	+0.3
RUGZ	**Raukumara Rang**	**6.63**	**195**	P	Pn	03 47 57.1	+1.1
RUGZ				S	S	03 49 15.3	-0.3
TWGZ	**Tauwhareparae**	**6.78**	**193**	P	Pn	03 47 59.2	+1.6
TWGZ				S	S	03 49 20.1	+1.6
MWZ	**Matawai**	**7.02**	**195**	P	Pn	03 48 02.3	+1.8
MWZ				S	S	03 49 23.5	-0.2
CNGZ	**Carnagh Statio**	**7.03**	**191**	P	Pn	03 48 02.6	+2.1
URZ	**Urewera**	**7.05**	**198**	P	Pn	03 48 01.3	+0.6
URZ				S	S	03 49 23.8	-0.5
TKGZ	**Te Karaka**	**7.05**	**193**	P	Pn	03 48 01.7	+0.9
TKGZ				S	S	03 49 23.9	-0.4
RAGZ	**Rawiri**	**7.20**	**196**	P	Pn	03 48 03.0	+0.3
RIGZ	**Rimuhau**	**7.33**	**193**	P	Pn	03 48 03.7	-0.4
RTZ	**Ruatahuna**	**7.42**	**198**	P	Pn	03 48 05.0	-0.2
MTHZ	**Maungataniwha**	**7.68**	**198**	P	Pn	03 48 08.4	+0.1
MRHZ	**Matea Rd**	**7.78**	**200**	P	Pn	03 48 08.8	-0.6
HIZ	**Hauiti**	**8.05**	**209**	P	Pn	03 48 13.4	+0.8
BKZ	**Black Stump Fm**	**8.07**	**199**	P	Pn	03 48 11.9	-0.9
MCHZ	**McNeill Hill**	**8.27**	**197**	P	Pn	03 48 13.8	-1.5
WTVZ	**West Tongariro**	**8.30**	**204**	P	Pn	03 48 14.0	-1.7
TWVZ	**Taurewa**	**8.31**	**205**	P	Pn	03 48 14.7	-1.2
KWHZ	**Kaweka Forest**	**8.33**	**199**	P	Pn	03 48 14.2	-1.7
NGZ	**Ngauruhoe**	**8.35**	**203**	P	Pn	03 48 14.9	-1.4
TUVZ	**Tukino**	**8.42**	**203**	P	Pn	03 48 15.2	-1.9
FWVZ	**Far West T-bar**	**8.44**	**203**	P	Pn	03 48 15.4	-2.1
BHHZ	**Black Hill Sta**	**8.49**	**200**	P	Pn	03 48 15.4	-2.5
MOVZ	**Moawhango**	**8.51**	**202**	P	Pn	03 48 16.0	-2.1
PKVZ	**Pokaka**	**8.54**	**204**	P	Pn	03 48 16.8	-1.7
KAHZ	**Kahuranaki**	**8.56**	**196**	P	Pn	03 48 16.9	-1.8
PXZ	**Pawanui**	**8.79**	**195**	P	Pn	03 48 19.4	-2.0
PNHZ	**Pukenui**	**8.85**	**199**	P	Pn	03 48 18.6	-3.5
TSZ	**Takapari Road**	**9.05**	**199**	P	Pn	03 48 20.3	-4.2
PRHZ	**Porangahau**	**9.07**	**196**	P	Pn	03 48 22.2	-2.5
DVHZ	**Dannevirke**	**9.21**	**198**	P	Pn	03 48 22.7	-3.8
BFZ	**Birch Farm**	**9.55**	**197**	P	Pn	03 48 26.9	-3.7
MRZ	**Mangatainoka R**	**9.71**	**200**	P	Pn	03 48 28.9	-3.5
OGWZ	**Otaki Gorge**	**9.98**	**201**	P	Pn	03 48 32.1	-3.5
TMWZ	**Te Maipa**	**10.04**	**197**	P	Pn	03 48 34.8	-1.6
MTW	**Mount Morrison**	**10.20**	**199**	P	Pn	03 48 35.5	-2.7
MSWZ	**Moikau Station**	**10.51**	**199**	P	Pn	03 48 38.9	-3.0

*DDA **25** 04:00:40.4, 39°.34N×27°.89E, h23km±1km, ML3.7*
*ISK **25** 04:00:40.4, 39°.33N×27°.89E, h13km, ML3.6/40*
*ISCJB **25** 04:00:41.5±0.2, 39°.36N±0°.01×27°.88E±0°.02, h20km±3km, Error ellipse: s-maj=2.5km s-min=2.3km az=173.3*
*SOF **25** 04:00:43.8, 39°.62N×27°.82E, h8km*
ISC 25 04:00:41.1±0.9, 39°.32N±0°.02×27°.85E±0°.02, h18km±5km, n129, σ1°05/150, 16C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEP	**BALIKESIR_Sava**	**0.11**	**298**	*i*P	**Pg**	**04 00 45.1**	**+0.2**
STEP				*i*S	**Sg**	**04 00 48.1**	**+0.5**
STEP				IAML_P			
	comp=Z,441μm,0.2s						
BALB	**Balikesir**	**0.32**	**4**	PG	**Pb**	**04 00 47.8**	**-0.5**
BALB				SG	**Sb**	**04 00 52.7**	**-0.4**
AKHS	**Akhisar**	**0.45**	**183**	*i*P	**Pb**	**04 00 50.5**	**0.0**
AKHS				IAML_P			
	comp=Z,227μm,0.1s						
AKS	**Akhisar**	**0.45**	**184**	PG	**Pb**	**04 00 49.7**	**-0.8**
AKS				SG	**Sb**	**04 00 57.0**	**+0.2**
DURS	**Dursunbey**	**0.56**	**60**	*i*P	**Pg**	**04 00 51.4**	**-0.9**
DURS				*i*S	**Sg**	**04 00 59.6**	**-0.2**
DURS				IAML_P			
	comp=Z,34μm,0.1s						
GOMA	**Golmarmara-Man**	**0.62**	**175**	PG	**Pb**	**04 00 52.8**	**-0.6**
GOMA				SG	**Sb**	**04 01 01.9**	**+0.2**
ZEDA	**zmir-Bergama**	**0.70**	**239**	*i*P	**Pn**	**04 00 55.8**	**-0.3**
ZEDA				*i*S	**Sb**	**04 01 05.0**	**+0.9**
ZEDA				IAML_P			
	comp=Z,40μm,0.2s						
GONE	**Gonen-Balikesi**	**0.73**	**350**	PG	**Pb**	**04 00 55.1**	**-0.3**
DKL	**Dikili**	**0.78**	**251**	PG	**Pn**	**04 00 56.6**	**-0.6**
DKL				SG	**Sn**	**04 01 07.9**	**-0.5**
AYVA	**Ayvalik**	**0.90**	**269**	*i*P	**Pn**	**04 00 60.0**	**+1.1**
AYVA				*i*S	**Sn**	**04 01 13.1**	**+1.7**
MANT	**Manisa**	**1.00**	**146**	*i*P	**Pb**	**04 01 00.7**	**+0.6**
MANT				*i*S	**Sg**	**04 01 12.6**	**-1.2**
KCTX	**Karacabey (Bur**	**1.02**	**22**	PG	**Pg**	**04 00 59.8**	**-1.1**
EDC	**Edincik**	**1.02**	**1**	PG	**Pb**	**04 01 00.1**	**-0.2**
KULA	**Kula-Manisa**	**1.03**	**142**	PG	**Pg**	**04 01 00.4**	**-0.7**
FOCM	**Foa**	**1.06**	**235**	PN	**Pn**	**04 01 01.5**	**+0.4**
ORLT	**Orhaneli**	**1.08**	**48**	PG	**Pg**	**04 01 00.9**	**-1.3**
BAYC	**CANAKKALE_Bayr**	**1.09**	**293**	*i*P	**Pn**	**04 01 02.1**	**+0.6**
BAYC				*i*S	**Sn**	**04 01 17.2**	**+1.0**
BAYC				IAML_P			
	comp=Z,50μm,0.3s						
USAK	**Uak-Merkez**	**1.10**	**123**	*i*P	**Pb**	**04 01 02.0**	**+0.4**
USAK				*i*S	**Sg**	**04 01 15.3**	**-1.5**
USAK				IAML_P			
	comp=Z,40μm,0.2s						
SHAP	**Saphane-Kutahy**	**1.11**	**105**	PN	**Pg**	**04 01 01.9**	**-0.8**
BLCB	**Balcova**	**1.13**	**214**	PN	**Pn**	**04 01 02.8**	**+0.7**
KRBN	**Karaburun**	**1.25**	**235**	PN	**Pn**	**04 01 04.8**	**+1.1**
GEDZ	**Gediz**	**1.25**	**102**	PN	**Pg**	**04 01 03.9**	**-1.3**
TVSB	**Tavsanli**	**1.26**	**84**	PN	**Pg**	**04 01 04.1**	**-1.3**
EZN	**Ezine**	**1.28**	**294**	PN	**Pn**	**04 01 05.3**	**+1.2**
EZN	**Ezine**	**1.28**	**294**	⇑*i*P	**Pn**	**04 01 05.4**	**+1.3**
ULDT	**Uludag**	**1.29**	**50**	*i*P	**Pb**	**04 01 05.8**	**+0.9**
ULDT				*i*S	**Sg**	**04 01 22.1**	**-0.8**
GDZ	**Gediz**	**1.29**	**100**	*i*P	**Pb**	**04 01 05.5**	**+0.5**
GDZ				*i*S	**Sg**	**04 01 21.6**	**-1.4**
GDZ				IAML_P			
	comp=Z,14μm,0.1s						
MDNY	**Mudanya-Bursa**	**1.31**	**37**	PN	**Pn**	**04 01 04.7**	**+0.1**
GPNR	**Gulpinar-Canak**	**1.33**	**276**	PN	**Pg**	**04 01 05.6**	**-1.3**
LPK	**Lapseki**	**1.34**	**322**	PN	**Pg**	**04 01 05.6**	**-1.4**
URLA	**Izmir**	**1.37**	**226**	PN	**Pn**	**04 01 05.6**	**+0.1**
URLA	**Izmir**	**1.37**	**226**	*i*P	**Pg**	**04 01 06.2**	**-1.4**
URLA				*i*S	**Sn**	**04 01 23.8**	**+0.6**
URLA				IAML_P			
	comp=Z,6μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**1.38**	**179**	PN	**Pn**	**04 01 05.6**	**0.0**
GMLD	**Gumuldur**	**1.44**	**211**	PN	**Pb**	**04 01 06.8**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.46**	**339**	PN	**Pb**	**04 01 07.4**	**-0.4**
SART	**Tekirdag**	**1.46**	**340**	*i*P	**Pg**	**04 01 07.8**	**-1.4**
SART				*i*S	**Sb**	**04 01 25.7**	**-0.3**
SART				IAML_P			
	comp=Z,21μm,0.1s						
ARMT	**Armutlu**	**1.46**	**32**	PN	**Pn**	**04 01 06.6**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.51**	**316**	PN	**Pb**	**04 01 08.2**	**-0.4**
ZEY	**zmir**	**1.51**	**225**	*i*P	**Pb**	**04 01 08.2**	**-0.5**
ZEY				*i*S	**Sg**	**04 01 31.4**	**+1.5**
ZEY				IAML_P			
	comp=Z,5μm,0.2s						
GEMT	**Gemlik**	**1.52**	**43**	PN	**Pn**	**04 01 07.5**	**+0.1**
SIGR	**SIGRI**	**1.55**	**266**	PN	**Pb**	**04 01 08.7**	**-0.6**
CESE	**eme**	**1.56**	**231**	PN	**Pb**	**04 01 08.6**	**-1.0**
KHAL	**Karahalli**	**1.60**	**126**	*i*P	**Pn**	**04 01 09.0**	**+0.4**
KHAL				*i*S	**Sn**	**04 01 28.9**	**0.0**
KHAL				IAML_P			
	comp=Z,6μm,0.3s						
IZI	**Iznik**	**1.61**	**51**	PN	**Pn**	**04 01 08.9**	**+0.1**
KHL	**Karahalli**	**1.65**	**127**	PN	**Pn**	**04 01 09.3**	**0.0**
AYDN	**Tasoluk**	**1.66**	**179**	*i*P	**Pn**	**04 01 10.2**	**+0.8**
AYDN				*i*S	**Sg**	**04 01 34.2**	**-0.6**
TKR	**Tekirdag**	**1.68**	**352**	PN	**Pn**	**04 01 09.9**	**+0.2**
CHOS	**Chios island**	**1.68**	**237**	PN	**Pn**	**04 01 10.3**	**+0.5**
GCAM	**G?zelcaml?**	**1.69**	**197**	PN	**Pn**	**04 01 09.5**	**-0.3**
GCAM	**G?zelcaml?**	**1.69**	**197**	*i*P	**Pn**	**04 01 10.1**	**+0.3**
GCAM				*i*S	**Sg**	**04 01 35.0**	**-0.7**
YLV	**Yalova**	**1.71**	**43**	PN	**Pn**	**04 01 09.8**	**-0.3**
YLV	**Yalova**	**1.71**	**43**	⇑*i*P	**Pn**	**04 01 09.8**	**-0.3**
GOKC	**Gokceada-Canak**	**1.73**	**301**	PN	**Pn**	**04 01 11.0**	**+0.7**
KESN	**Edirne-Kesan**	**1.75**	**330**	*i*P	**Pb**	**04 01 12.1**	**-0.8**
KESN				*i*S	**Sn**	**04 01 32.8**	**-0.1**
CRLT	**Corlu**	**1.81**	**357**	PN	**Pn**	**04 01 12.2**	**+0.8**
BUY	**Buyukada**	**1.81**	**32**	PN	**Pn**	**04 01 11.2**	**-0.2**
ADVT	**Abdulvahap**	**1.83**	**52**	PN	**Pn**	**04 01 12.1**	**+0.4**
ELBA	**Catalca**	**1.87**	**14**	*i*P	**Pn**	**04 01 13.2**	**+0.9**
ELBA				IAML_P			
	comp=Z,3μm,0.1s						
ENEZ	**Enez**	**1.92**	**318**	PN	**Pb**	**04 01 14.2**	**-1.4**
KAVV	**Kandilli-Istan**	**1.97**	**28**	PN	**Pn**	**04 01 13.3**	**-0.3**
ISK	**Istanbul-Kandi**	**1.97**	**28**	PN	**Pn**	**04 01 13.3**	**-0.3**
CTKS	**Kestanelik-??a**	**1.98**	**15**	PN	**Pn**	**04 01 13.5**	**-0.2**
AFYO	**Afyonkarahisar**	**1.98**	**105**	*i*P	**Pn**	**04 01 15.2**	**+1.3**
AFYO				IAML_P			
	comp=Z,1μm,0.3s						
BGKT	**Bogazkoy**	**1.98**	**21**	PN	**Pn**	**04 01 13.4**	**-0.4**
DIDI	**Didim-Aydin**	**2.00**	**194**	PN	**Pn**	**04 01 15.0**	**+0.9**
HRT	**Hereke**	**2.05**	**42**	PN	**Pn**	**04 01 14.5**	**-0.2**
AUKIR	**Kırka- Seyitga**	**2.08**	**90**	*i*P	**Pg**	**04 01 20.2**	**-0.9**
BORA	**Eskisehir**	**2.09**	**74**	*i*P	**Pn**	**04 01 16.6**	**+1.2**
BORA				IAML_P			
	comp=Z,2μm,0.1s						
KLYT	**Kilyos**	**2.13**	**25**	PN	**Pn**	**04 01 15.8**	**0.0**
KLYT	**Kilyos**	**2.13**	**25**	⇑*i*P	**Pn**	**04 01 15.9**	**+0.1**
GEYV	**SAKARYA_Geyve**	**2.21**	**58**	*i*P	**Pn**	**04 01 17.6**	**+0.7**
GEYV				*i*S	**Sg**	**04 01 52.7**	**+0.4**
GEYV				IAML_P			
	comp=Z,1μm,0.2s						
SRCK	**Saricakaya, Es**	**2.26**	**71**	PN	**Pn**	**04 01 17.8**	**+0.2**
SRCK	**Saricakaya, Es**	**2.26**	**71**	*i*P	**Pn**	**04 01 18.9**	**+1.2**
SRCK				IAML_P			
	comp=Z,1μm,0.2s						
BDRM	**Kayabasi**	**2.28**	**188**	*i*P	**Pn**	**04 01 18.9**	**+1.0**
SILT	**Sile**	**2.29**	**36**	PN	**Pn**	**04 01 17.9**	**0.0**
SILT	**Sile**	**2.29**	**36**	⇓*i*P	**Pn**	**04 01 18.0**	**0.0**
PHSR	**Pinarhisar**	**2.32**	**354**	PN	**Pn**	**04 01 18.9**	**+0.5**
PHSR	**Pinarhisar**	**2.32**	**354**	⇑*i*P	**Pn**	**04 01 18.9**	**+0.5**
SPNC	**Sapanca-Adapaz**	**2.33**	**53**	PN	**Pn**	**04 01 19.3**	**+0.7**
GULT	**Gulveren**	**2.33**	**61**	PN	**Pn**	**04 01 19.2**	**+0.5**
ESKT	**Eskisehir**	**2.33**	**84**	PN	**Pn**	**04 01 19.0**	**+0.2**
SAUV	**Serdivan-Sakar**	**2.37**	**53**	PN	**Pn**	**04 01 19.4**	**+0.3**
BRDR	**BURDUR-Merkez**	**2.38**	**132**	*i*P	**Pn**	**04 01 20.0**	**+0.7**
BRDR				IAML_P			
	comp=Z,591nm,0.2s						
BOLV	**Bolvadin**	**2.49**	**103**	*i*P	**Pn**	**04 01 22.4**	**+1.5**
BOLV				IAML_P			
	comp=Z,576nm,0.1s						
CIFT	**Cifteler, Eski**	**2.49**	**88**	*i*P	**Pg**	**04 01 28.2**	**-0.7**
KAND	**Kocaeli-Kandir**	**2.52**	**45**	*i*P	**Pn**	**04 01 22.5**	**+1.3**
KAND				IAML_P			
	comp=Z,247nm,0.2s						
TURN	**Turunc**	**2.52**	**166**	*i*P	**Pn**	**04 01 22.6**	**+1.5**
TURN				IAML_P			
	comp=Z,1μm,0.2s						
KIRK	**Kırklareli**	**2.52**	**347**	*i*P	**Pn**	**04 01 21.9**	**+0.7**
KIRK				IAML_P			
	comp=Z,4μm,0.3s						
RDO	**Rodhopi**	**2.54**	**317**	PN	**Pn**	**04 01 22.8**	**+1.4**
DALY	**Dalyan (Mula)**	**2.58**	**166**	*i*P	**Pn**	**04 01 23.2**	**+1.2**
DALY				IAML_P			
	comp=Z,481nm,0.3s						
DAT	**Datca**	**2.60**	**185**	*i*P	**Pn**	**04 01 22.6**	**+0.1**
BAGO	**Egridir - ISPA**	**2.66**	**119**	*i*P	**Pn**	**04 01 22.2**	**-1.0**
BTAS	**Taskesti**	**2.72**	**62**	*i*P	**Pn**	**04 01 24.0**	**-0.1**
SAHE	**Sakarya_HENDEK**	**2.77**	**56**	*i*P	**Pn**	**04 01 25.8**	**+1.2**
SAHE				IAML_P			
	comp=Z,144nm,0.2s						
FETY	**Fethiye**	**2.86**	**160**	*i*P	**Pn**	**04 01 27.8**	**+2.0**
FETY				IAML_P			
	comp=Z,1μm,0.2s						
AUMIH	**MIHALICIK**	**2.86**	**78**	*i*P	**Pn**	**04 01 26.8**	**+0.7**
AUSIV	**SIVRIHISAR**	**2.86**	**87**	*i*P	**Pg**	**04 01 34.8**	**-1.3**
APE	**Apeiranthos**	**2.90**	**220**	⇑*i*P	**Pb**	**04 01 31.0**	**-1.4**
KDZ	**Kurdzhali**	**2.97**	**322**	*i*P	**Pb**	**04 01 32.7**	**-0.9**
KORT	**Korkueli**	**3.04**	**139**	*i*P	**Pn**	**04 01 30.7**	**+2.1**
KORT				IAML_P			
	comp=Z,438nm,0.2s						
DOGA	**KONYA_Doganhis**	**3.23**	**111**	*i*P	**Pn**	**04 01 32.6**	**+1.6**
DOGA				IAML_P			
	comp=Z,384nm,0.2s						
DIM	**Dimitrovgrad**	**3.24**	**328**	*i*P	**Pn**	**04 01 32.1**	**+1.0**
KIBS	**BOLU**	**3.27**	**69**	*i*P	**Pg**	**04 01 42.2**	**-1.6**
JMB	**Yambol**	**3.28**	**343**	*i*P	**Pn**	**04 01 33.5**	**+1.8**
RZN	**Rozhen**	**3.36**	**316**	*i*P	**Pn**	**04 01 34.3**	**+1.4**
AKAS	**Kas**	**3.39**	**155**	*i*P	**Pn**	**04 01 37.2**	**+3.9**
KDHN	**Kadinhani**	**3.42**	**102**	*i*P	**Pg**	**04 01 44.4**	**-2.3**
BCAM	**Yenicaga**	**3.56**	**64**	*i*P	**Pb**	**04 01 45.5**	**+1.8**
KONT	**Konya--Tatoy**	**3.79**	**110**	*i*P	**Pn**	**04 01 40.5**	**+1.8**
KONT				IAML_P			
	comp=Z,390nm,0.2s						
KEPZ	**Antalya-Kepez**	**3.82**	**128**	*i*P	**Pn**	**04 01 40.6**	**+1.4**
KEPZ				IAML_P			
	comp=Z,300nm,0.2s						
MMB	**Musomiste**	**3.87**	**307**	*i*P	**Pn**	**04 01 42.2**	**+2.4**
PSN	**Preselentsi**	**4.36**	**3**	*i*P	**Pn**	**04 01 46.8**	**+0.3**
KKB	**Krupnik**	**4.43**	**307**	*i*P	**Pn**	**04 01 49.5**	**+2.1**
**DELI

GEM				Sg	Sg	05 04 19.3	+0.7
RCY	Rachaya	0.28	80	eP	Pg	05 04 15.0	-0.2
RCY				eS	Sg	05 04 18.6	-0.3
KSDI	Kefar Szold	0.28	154	Pg	Pg	05 04 15.1	-0.2
KSDI				Sg	Sg	05 04 19.7	+0.6
MMA0B	Mount Meron ar	0.44	192	Pg	Pb	05 04 19.2	-0.8
MMA0B				Sg	Sb	05 04 26.9	+0.1
BHL	Bhannes	0.47	15	eP	Pg	05 04 18.6	-0.3
KSHT	Keshet	0.53	151	Pg	Pb	05 04 20.7	-0.7
MMLI	Mount Malkishu	1.01	184	Pg	Pb	05 04 29.2	-0.4
HMDT	Nahal Hemdat	1.19	179	Pg	Pg	05 04 31.9	-0.7
HMDT				Sg	Sn	05 04 49.2	-0.2
DSI	Dead Sea	1.88	183	Pn	Pn	05 04 43.3	+1.0
DSI				Sn	Sb	05 05 08.2	+0.1

WEL 25 05:42:42.2±0.9, 36°S±7°×17°9E±°, h92km±21km, M3.9/39, ML4.2/7, MLv3.9/39, Error ellipse: s-maj=0.0km s-min=0.0km az=43.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.43	196	P	Pn	05 43 05.8	-1.3
MXZ				S	Sn	05 43 25.6	-0.4
WMGZ	Waiomatatini S	1.66	191	P	Pn	05 43 10.9	+0.9
WMGZ				S	Sn	05 43 33.6	+2.5
HAZ	Te Kaha	1.77	207	P	Pn	05 43 10.7	-0.7
PKGZ	Pakihiroa	1.80	199	P	Pn	05 43 11.6	-0.2
PUZ	Puketiti	1.93	193	P	Pn	05 43 13.8	+0.3
PUZ				S	Sn	05 43 37.4	-0.1
RUGZ	Raukumara Rang	1.99	207	P	Pn	05 43 14.3	-0.2
RUGZ				S	Sn	05 43 40.4	+1.4
TWGZ	Tauwhareparae	2.10	198	P	Pn	05 43 16.2	+0.5
TWGZ				S	Sn	05 43 43.3	+2.0
WHRZ	Whale Island	2.22	221	P	Pn	05 43 18.2	+0.8
WHRZ				S	Sn	05 43 45.4	+1.1
CNGZ	Carnagh Statio	2.34	192	P	Pn	05 43 19.4	+0.5
CNGZ				S	Sn	05 43 46.9	-0.2
MWZ	Matawai	2.38	205	P	Pn	05 43 19.8	+0.4
MWZ				S	Sn	05 43 48.6	+0.7
TKGZ	Te Karaka	2.38	199	P	Pn	05 43 19.4	0.0
TKGZ				S	Sn	05 43 47.5	-0.4
OPRZ	Ohinepanea	2.45	227	P	Pn	05 43 20.4	+0.1
URZ	Urewera	2.48	213	P	Pn	05 43 20.4	-0.2
URZ				S	Sn	05 43 49.3	-0.9
MARZ	Manawahe	2.48	223	P	Pn	05 43 20.8	+0.1
KUZ	Kuaotunu	2.55	256	P	Pn	05 43 20.9	-0.8
KUZ				S	Sn	05 43 52.1	0.0
TGRZ	Tauranga	2.56	232	P	Pn	05 43 21.1	-0.6
RAGZ	Rawiri	2.56	205	P	Pn	05 43 22.2	+0.3
RAGZ				S	Sn	05 43 53.1	+0.7
RIGZ	Rimuhau	2.65	198	P	Pn	05 43 22.7	-0.4
RIGZ				S	Sn	05 43 53.7	-0.8
OMRZ	Omania	2.73	225	P	Pn	05 43 24.1	0.0
RRRZ	Republican Roa	2.83	220	P	Pn	05 43 25.8	+0.4
PRGZ	Paritu Road	2.83	195	P	Pn	05 43 24.6	-0.9
RTZ	Ruatahuna	2.83	210	P	Pn	05 43 25.4	-0.1
KMRZ	Kaimai	2.83	233	P	Pn	05 43 26.0	+0.5
HLRZ	Highlands Stat	2.85	223	P	Pn	05 43 26.4	+0.8
HSRZ	Hossack Road	2.95	223	P	Pn	05 43 27.6	+0.6
KNZ	Kokohu	2.97	197	P	Pn	05 43 26.0	-1.3
PRRZ	Plateau Road	3.01	219	P	Pn	05 43 27.8	0.0
WIAZ	Waiheke Island	3.03	257	P	Pn	05 43 27.7	-0.4
MHGZ	Mahia Peninsul	3.05	193	P	Pn	05 43 27.4	-0.9
RAHZ	Arahi	3.05	206	P	Pn	05 43 28.9	+0.5
TOZ	Tahuroa Road	3.07	239	P	Pn	05 43 28.8	+0.2
MKAZ	Moumakai	3.08	252	P	Pn	05 43 28.5	-0.2
ALRZ	Allen Road	3.08	219	P	Pn	05 43 28.9	+0.1
MTHZ	Maungataniwha	3.09	210	P	Pn	05 43 29.4	+0.5
MRHZ	Matea Rd	3.26	215	P	Pn	05 43 30.4	-0.8
NMHZ	Naumai	3.31	208	P	Pn	05 43 32.0	0.0
TLZ	Tolley Road	3.38	230	P	Pn	05 43 33.6	+0.8
ARHZ	Aropaoanui	3.39	205	P	Pn	05 43 32.9	0.0
BKZ	Black Stump Fm	3.50	211	P	Pn	05 43 33.8	-0.6
RATZ	Rangitukua	3.60	221	P	Pn	05 43 36.2	+0.3
WCZ	Waipu Caves	3.63	273	P	Pn	05 43 36.2	0.0
MCHZ	McNeill Hill	3.66	207	P	Pn	05 43 36.6	+0.1
KWHZ	Kaweka Forest	3.75	210	P	Pn	05 43 37.1	-0.7
KAHZ	Kahuranaki	3.91	202	P	Pn	05 43 38.6	-1.4
HIZ	Hauiti	3.92	232	P	Pn	05 43 41.6	+1.6
NGZ	Ngauruhoe	3.92	220	P	Pn	05 43 40.6	+0.3
KRHZ	Kereru	3.96	208	P	Pn	05 43 39.0	-1.6
FWVZ	Far West T-bar	4.01	219	P	Pn	05 43 42.9	+1.4
MOVZ	Moawhango	4.03	216	P	Pn	05 43 40.1	-1.5
PXZ	Pawanui	4.13	201	P	Pn	05 43 41.1	-1.9
PRHZ	Porangahau	4.42	202	P	Pn	05 43 44.6	-2.3
TSZ	Takapari Road	4.47	209	P	Pn	05 43 47.2	-0.4
DVHZ	Dannevirke	4.60	206	P	Pn	05 43 48.9	-0.5
POWZ	Post Office Ro	4.83	209	P	Pn	05 43 53.7	+1.2
TIWZ	Tintock	5.13	206	P	Pn	05 43 54.7	-1.8
PAWZ	Paruwai Farm	5.82	206	P	Pn	05 44 04.2	-1.8
PLWZ	Palliser	6.05	206	P	Pn	05 44 07.8	-1.2
TUWZ	Tuamarina	6.47	215	P	Pn	05 44 14.7	-0.1
THZ	Tophouse	7.22	218	P	Pn	05 44 25.2	+0.2
CTZ	Chatham Island	8.31	156	P	Pn	05 44 39.5	-0.4

ROM 25 06:10:43.7±0.2, 41°357N±0°009×13°729E±0°010, h5km±1km, ML2.1/4, Error ellipse: s-maj=1.0km s-min=0.7km az=40.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERA	Filignano	0.32	42	P	Pb	06 10 51.2	-0.9
CERA				S	Sb	06 10 56.2	-1.4
CERA				AML	AML		
	comp=E,715μm,0.5s						
CERA				AML	AML		
	comp=N,676μm,0.4s						
CERA				AML	AML		
	comp=N,676μm,0.4s						
CERA				AML	AML		
	comp=E,715μm,0.5s						
CERA				END			
CERA				END			
POFI	Posta Fibreno	0.36	358	P	Pg	06 10 51.5	+0.8
POFI				S	Sb	06 10 58.0	-0.7
POFI				END			
POFI				END			
PIGN	Pignataro Magg	0.38	115	P	Pg	06 10 51.8	+0.8
PIGN				AML	AML		
	comp=E,181μm,0.2s						
PIGN				AML	AML		
	comp=N,238μm,1.4s						
PIGN				AML	AML		
	comp=N,238μm,1.4s						
PIGN				AML	AML		
	comp=E,181μm,0.2s						
PIGN				END			
PIGN				END			
VAGA	Valle Agricola	0.39	81	P	Pg	06 10 52.1	+0.9
VAGA				S	Sb	06 10 59.2	-0.1
VAGA				AML	AML		
	comp=E,342μm,0.3s						
VAGA				AML	AML		
	comp=N,752μm,0.4s						
VAGA				AML	AML		
	comp=E,352μm,0.3s						
VAGA				AML	AML		
	comp=N,768μm,0.4s						
VAGA				AML	AML		
	comp=E,352μm,0.3s						
VAGA				AML	AML		
	comp=E,342μm,0.3s						
VAGA				AML	AML		
	comp=N,768μm,0.4s						
VAGA				AML	AML		
	comp=N,752μm,0.4s						
GIUL	Giuliano Di Ro	0.41	300	P	Pb	06 10 53.5	0.0
GIUL				S	Sb	06 10 59.8	-0.2
GIUL				AML	AML		
	comp=E,228μm,0.4s						
GIUL				AML	AML		
	comp=N,258μm,1.4s						
GIUL				AML	AML		
	comp=N,258μm,1.4s						
GIUL				AML	AML		
	comp=E,228μm,0.4s						
RNI2	Rionero Sannit	0.47	43	P	Pb	06 10 53.7	-0.8
RNI2				S	Sb	06 11 01.8	-0.1
MIDA	Miranda	0.49	54	P	Pg	06 10 53.6	+0.5
SGG	Gregorio Mates	0.49	86	P	Pb	06 10 54.6	-0.3
SGG				S	Sb	06 11 01.8	-0.6
VVLD	Villa Vallelon	0.52	351	P	Pg	06 10 53.9	+0.2
VVLD				S	Sb	06 11 02.1	-1.2
INTR	Introdacqua	0.67	11	P	Pg	06 10 57.1	+0.6
INTR				S	Sb	06 11 07.7	+0.2
LPEL	Lama dei Pelig	0.77	26	P	Pb	06 10 59.3	-0.3
CERT	Cerreto	0.81	317	P	Pg	06 10 59.8	+0.4
CERT				S	Sb	06 11 11.9	+0.2

TIR 25 06:11:08.3, 41°63N×20°10E, h12km, Md3.0/5
SKO 25 06:11:09.6, 41°65N×20°09E, h10km, M1.8, ML2.7
BEO 25 06:11:09.0±0.3, 41°68N×20°22E, h0km, ML2.6/14
PDG 25 06:11:09.5±0.2, 41°64N×20°06E, h10km, ML3.0/13, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0
THE 25 06:11:10.2, 41°50N×20°27E, h0km±4km, ML2.8/5, Error ellipse: s-maj=4.8km s-min=1.6km az=318.0

ISC 25 06:11:08.8±0.9, 41°60N±0°02×20°13E±0°02, h15km±7km, n84, σ1°44/126, 13C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.24	71	P	Pg	06 11 14.1	-0.1
PHP				S	Sg	06 11 18.5	+0.6
PHP	Peshkopia	0.24	71	i PG	Pg	06 11 14.1	-0.1
PHP				i SG	Sg	06 11 18.4	+0.5
TIR	Tirane	0.33	218	ePg	Pb	06 11 16.1	-0.3
TIR				eSg	Sb	06 11 21.6	+0.2
TIR	Tirane	0.33	218	P	Pb	06 11 16.0	-0.3
TIR				S	Sb	06 11 23.0	+1.6
TIR	Tirane	0.33	218	⇑iP	Pb	06 11 15.9	-0.5
TIR	Tirane	0.33	218	i Pg	Pb	06 11 15.8	-0.5
TIR	Tirane	0.33	218	i PG	Pg	06 11 15.4	-0.2
TIR				i SG	Sb	06 11 21.0	-0.4
PUK	Puka	0.47	338	i PG	Pg	06 11 17.3	-1.0
PUK				i SG	Sg	06 11 24.3	-0.4
OHR	Ohrid	0.70	134	i Pg	Pb	06 11 22.8	+0.1
OHR				i Sg	Sn	06 11 35.0	+0.2
OHR				eLg	Lg	06 11 36.5	
	comp=N,174nm,0.5s						
OHR				eLg	Lg	06 11 37.0	
	comp=E,373nm,0.8s						
ULC	Ulcinj	0.76	299	⇑iPg	Pg	06 11 21.9	-1.6
ULC				eSg	Sg	06 11 33.0	-0.5
ULC	Ulcinj	0.76	299	⇓iPg	Pg	06 11 22.3	-1.3
BCI	Bajram Curri	0.76	356	i PG	Pg	06 11 23.1	-0.6
BCI				i SG	Sb	06 11 34.2	+0.1
DRME	Dracevica, Mon	0.92	310	⇓iPg	Pg	06 11 25.2	-1.4
DRME				eSg	Sb	06 11 38.8	+0.4
DRME	Dracevica, Mon	0.92	310	ePn	Pg	06 11 24.9	-1.7
PVY	Plav	1.00	353	⇑iPg	Pb	06 11 26.7	-1.2
PVY				eSg	Sg	06 11 41.9	+0.7
SKO	Skopje	1.04	69	ePg	Pb	06 11 26.7	-1.9
SKO				eSg	Sb	06 11 39.7	-2.3
SKO	Skopje	1.04	69	i Pg	Pb	06 11 28.7	+0.1
SKO				i Sg	Sg	06 11 42.8	+0.1
SKO				eLg	Lg	06 11 43.6	
	comp=E,12nm,0.5s						
SKO				eLg	Lg	06 11 44.0	
	comp=N,30nm,0.5s						
PDG	Podgorica	1.05	322	ePg	Pb	06 11 27.1	-1.6
PDG				eSg	Sb	06 11 42.5	+0.2
PDG	Podgorica	1.05	322	⇑iP	Pb	06 11 27.9	-0.8
PDG				S	Sn	06 11 43.4	0.0
PDG	Podgorica	1.05	322	⇓iPg	Pb	06 11 27.6	-1.1
PDG	Podgorica	1.05	322	ePn	Pb	06 11 27.3	-1.4
TTG	Podgorica	1.05	322	⇓iPg	Pb	06 11 27.3	-1.4
TTG				eSg	Sn	06 11 43.6	+0.2
BUM	Brajici-Budva	1.16	307	⇑iPg	Pb	06 11 29.9	-0.7
BUM				eSg	Sn	06 11 47.1	+1.0
FNA	Florina	1.25	131	P	Pn	06 11 29.6	-2.1
FNA				S	Sb	06 11 47.8	-0.1
FNA	Florina	1.25	131	i PN	Pn	06 11 29.5	-2.3
BEY	Berane	1.28	352	⇑iPg	Pn	06 11 31.7	-0.5
IVA	Berane	1.28	352	⇓iPg	Pn	06 11 32.5	+0.3
IVA				eSg	Sg	06 11 51.8	+1.6
KOME	Kolasin	1.33	340	⇑iPg	Pn	06 11 33.2	+0.3
KOME				eSg	Sg	06 11 53.4	+1.7
NKME	Niksic	1.46	323	⇓iPg	Pb	06 11 35.3	-0.3
NKME				eSg	Sg	06 11 57.2	+1.4
NKY	Niksic	1.48	325	⇓iPg	Pb	06 11 35.7	-0.3
NKY				eSg	Sg	06 11 57.6	+1.2
HCY	Herceg Novi	1.48	305	⇑iPg	Pb	06 11 36.0	-0.1
HCY				eSg	Sg	06 11 57.8	+1.1
HCY	Herceg Novi	1.48	305	ePn	Pn	06 11 34.9	-0.1
SJES	Sjenica	1.66	356	ePg	Pb	06 11 38.7	-0.5
SJES				eSg	Sb	06 12 00.2	+0.3
TREB	Trebinje	1.73	311	ePg	Pb	06 11 40.2	-0.1
TREB				eSg	Sg	06 12 04.7	+0.2
TREB	Trebinje	1.73	311	ePn	Pb	06 11 40.0	-0.3
BARS	Barje	1.74	45	ePn	Sn	06 11 55.5	-4.9
BRY	Bratogost	1.76	318	⇑iPn	Pn	06 11 39.6	+0.7
BRY				eSn	Sg	06 12 04.8	-0.6
BRY	Bratogost	1.76	318	ePn	Pn	06 11 39.5	+0.7
SELS	Selova	1.77	24	ePg	Pn	06 11 39.3	+0.4
SELS				eSg	Sn	06 12 02.1	+0.9
KZN	Kozani	1.79	136	P	Pn	06 11 39.7	+0.4
KZN				S	Sn	06 12 02.3	+0.5
PLE	Pljevlja	1.81	343	⇓iPn	Pb	06 11 41.4	-0.3
PLE				eSn	Sg	06 12 06.2	-0.9
GRG	Griva	1.83	110	P	Pn	06 11 40.6	+0.9
GRG				S	Sb	06 12 05.1	+0.5
GRG	Griva	1.83	110	i Pn	Pb	06 11 41.4	-0.5
UPM	Unac-Piva	1.84	331	⇓iPn	Pb	06 11 41.9	-0.3
UPM				eSn	Sg	06 12 06.8	-1.2
UPM	Unac-Piva	1.84	331	ePn	Pb	06 11 42.0	-0.3
VAY	Valandovo	1.85	98	ePg	Pb	06 11 41.7	-0.6
VAY				eSg	Sb	06 12 06.2	+0.9
VAY	Valandovo	1.85	98	i Pn	Pb	06 11 41.6	-0.8
KPRO	Kipourio	1.89	150	P	Pn	06 11 40.0	-0.6
KPRO				S	Sn	06 12 05.4	+1.1
KTI	Kastanea	1.93	128	P	Pn	06 11 39.8	-1.4
IVAS	Ivanjica	1.97	0	ePg	Pn	06 11 42.7	+1.0
IVAS				eSg	Sb	06 12 10.0	+1.2
STON	Ston	2.21	306	ePn	Pb	06 11 46.9	-1.5
STON				eSg	Sb	06 12 14.4	-1.1
STON	Ston	2.21	306	ePn	Pn	06 11 46.2	+1.3
STON				Sn	Sb	06 12 15.1	-0.4
STON	Ston	2.21	306	ePn	Pn	06 11 45.5	+0.7
KKB	Krupnik	2.22	82	i Pn	Pn	06 11 47.1	+2.0
BBLS	Lazići	2.32	347	ePg	Pb	06 11 48.8	-1.6
BBLS				eSg	Sb	06 12 20.5	+1.5
BBLS	Lazići	2.32	347	ePn	Pn	06 11 48.5	+1.9
GRUS	Gruza	2.32	10	ePg	Pn	06 11 48.3	+1.8
GRUS				eSg	Sb	06 12 19.5	+0.6
BOVS	Bovan	2.34	29	ePg	Pb	06 11 49.5	-1.1
BOVS				eSg	Sb	06 12 19.7	+0.4
DIVS	Divibare	2.50	358	ePg	Pb	06 11 52.6	-0.8
DIVS				eSg	Sb	06 12 24.5	+0.6
DIVS	Divibare	2.50	358	ePn	Pn	06 11 49.6	+0.7
VTS	Vitosha	2.52	65	ePn	Pn	06 11 49.9	+0.6
VTS				eSn	Sn	06 12 19.1	-0.7
VTS	Vitosha	2.52	65	⇑iP	Pb	06 11 53.6	-0.2
VTS	Vitosha	2.52	65	S	Sn	06 12 21.5	+1.7
VTS	Vitosha	2.52	65	i Pn	Pn	06 11 50.9	+1.6
HAPS	Han Pijesak,Bl	2.63	341	ePn	Pn	06 11 52.4	+1.6
HAPS	Han Pijesak,Bl	2.63	341	ePn	Pn	06 11 52.3	+1.5
MATE	Matera	2.76	251	⇓iP	Pn	06 11 53.7	+1.2
KUBS	Kucevo	3.02	21	ePn	Pn	06 11 57.2	+1.1
MDVR	Moldovita	3.38	19	⇑iP	Pn	06 12 04.6	+3.6
HERR	Herculane	3.67	26	⇓iP	Pn	06 12 07.9	+2.9
BLY	Banja Luka	3.81	327	ePn	Pn	06 12 08.6	+1.7
BLY	Banja Luka	3.81	327	⇓iP	Pn	06 12 08.3	+1.4
BLY	Banja Luka	3.81	327	ePn	Pn	06 12 11.0	+4.1
BZS	Buzias	4.15	15	ePn	Pn	06 12 12.3	+0.7
BZS	Buzias	4.15	15	⇓iP	Pn	06 12 15.1	+3.5
GZR	Gura Zlata	4.25	26	⇑iP	Pn	06 12 15.1	+2.1
UDBI	Udbina	4.33	314	ePn	Pn	06 12 16.6	+2.4
UDBI				Sn	Sn	06 13 06.4	+2.0
MORH	Mrgy, Hungar	4.73	347	ePn	Pn	06 12 19.9	+0.3
NVLJ	Novalja	4.86	309	ePn	Pn	06 12 22.9	+1.7
CRES	Cresnjev	5.41	323	ePn	Pn	06 12 30.5	+1.6
MLR	Muntele Rosu	5.74	45	⇑iP	Pn	06 12 37.3	+3.8
CEY	Cerknica	5.85	317	ePn	Pn	06 12 36.1	+1.2
PSZ	Piszkesteto	6.32	359	⇓iP	Pn	06 12 38.1	-3.3
VYHS	Vyhne	6.95	353	ePN	Pn	06 12 45.7	-4.3

DDA 25 06:13:42.9, 36°53N×33°45E, h7km±6km, ML2.7

ISK 25 06:13:43.8, 36°44N×33°47E, h7km, ML2.6/22
ISCJB 25 06:13:44.1±0.3, 36°44N±0°03×33°47E±0°02, h6km±3km, Error ellipse: s-maj=4.8km s-min=3.1km az=0.1

ISC 25 06:13:44.0±0.9, 36°47N±0°02×33°46E±0°02, h8km±6km, n34, σ0°63/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEVE	Tevekalti-Mers	0.04	198	PG	Pg	06 13 45.7	0.0
TEVE				SG	Sg	06 13 46.8	-0.1
KEBE	Keben-Mersin	0.21	97	PG	Pg	06 13 48.3	+0.1
KEBE				SG	Sg	06 13 51.6	+0.5
BERE	Bereket-Mersin	0.23	237	PG	Pg	06 13 48.5	-0.1
BERE				SG	Sg	06 13 52.0	+0.3
OREN	Orenkoy-Mersin	0.27	180	PG	Pg	06 13 48.6	-0.6
TEPE	Tepekoy-Mersin	0.27	162	PG	Pg	06 13 49.1	-0.2
IKL	Isikli	0.30	142	PG	Pg	06 13 49.6	-0.2
YESI	Yesilovacik-Me	0.31	152	PG	Pg	06 13 49.3	-0.9
YORU	Yoruktepe-Mers	0.32	188	PG	Pg	06 13 49.9	-0.4
AKKU	Akkuyu-Mersin	0.32	167	PG	Pg	06 13 50.0	-0.3
AKK1	Akkuyu-Mersin	0.34	169	PG	Pg	06 13 50.4	-0.2
KARG	Kargicak-Mersi	0.34	143	PG	Pg	06 13 50.5	-0.1
AKK2	Akkuyu-Mersin	0.34	168	PG	Pg	06 13 50.2	-0.5
TISA	Tisan-Mersin	0.36	150	PG	Pg	06 13 50.8	-0.2
SILI	Silifke-Mersin	0.39	106	PG	Pg	06 13 51.6	0.0
SLFK	Silifke-Mersin	0.40	101	PG	Pg	06 13 51.6	-0.2
TEKE	Tekeli-Mersin	0.43	220	PG	Pg	06 13 52.2	-0.2
ERMK	Ermenek	0.47	291	i P	Pg	06 13 53.1	0.0
ERMK				i S	Sb	06 14 00.7	-1.1
KIZK	Mersin	0.55	89	PG	Pb	06 13 54.9	-1.0
KIZK	Mersin	0.55	89	i P	Pg	06 13 54.1	-0.5
KIZK				i S	Sg	06 14 02.1	+0.2
MERS	Mersin	0.94	65	PG	Pb	06 14 02.4	-0.2
GAZI	Gazipasa	0.95	256	PG	Pb	06 14 02.3	-0.4
GAZI	Gazipasa	0.95	256	i P	Pg	06 14 01.4	-0.9
GAZI				i S	Sg	06 14 14.2	-0.4
GAZI				IAML_P			
	comp=Z,620nm,0.2s						
KERG	Konya-Eregli	1.08	29	i P	Pg	06 14 03.8	-0.9
KERG				i S	Sg	06 14 18.0	-0.8
KERG				IAML_P			
	comp=Z,168nm,0.1s						
EREN	Erenkoy	1.10	148	PG	Pg	06 14 04.8	-0.3
EREN	Erenkoy	1.10	148	i P	Pn	06 14 06.7	+1.1
EREN				i S	Sn	06 14 22.3	+1.3
EREN				IAML_P			
	comp=Z,2μm,0.3s						
DED	Mersin	1.18	65	i P	Pg	06 14 05.5	-1.2
DED				i S	Sb	06 14 21.6	-0.5
DED				IAML_P			
	comp=Z,462nm,0.1s						
KARA	Karaisali	1.50	58	PN	Pg	06 14 12.2	-0.6
CSS	Mathiatis	1.51	184	PN	Pb	06 14 11.5	-0.7
KRTS	Karatas	1.55	86	PN	Pb	06 14 12.6	-0.2
KEPZ	Antalya-Kepez	1.55	287	i P	Pb	06 14 12.4	-0.5
KEPZ				i S	Sg	06 14 33.2	-0.6
KMER	Konya-Meram	1.56	326	i P	Pg	06 14 13.5	-0.4
KMER				i S	Sg	06 14 35.6	+1.4
KONT	Konya--Tatoy	1.71	330	PN	Pb	06 14 15.4	-0.3
KONT	Konya--Tatoy	1.71	330	i P	Pg	06 14 17.4	+0.6
KONT				i S	Sg	06 14 39.3	+0.4
KOZT	Kozan	2.15	61	PN	Pn	06 14 20.9	+0.9

IDC 25 06:14:38.2±1.7, 6°00S×130°61E, h0km, mb4.6/2, mb1 4.5/4, mb1mx3.9/24, mbtmp4.4/4, ML4.2/2, Error ellipse: s-maj=121.4km s-min=23.8km az=67.0
NEIC 25 06:14:56.5±2.8, 6°54S×129°93E, h174km±9km, mb4.2/7, Error ellipse: s-maj=14.5km s-min=7.2km az=105.0
ISCJB 25 06:14:57.1±0.5, 6°77S±0°05×130°07E±0°07, h200km, mb4.3/7, Error ellipse: s-maj=9.4km s-min=6.1km az=162.1

ISC 25 06:14:58.2±0.8, 6°75S±0°07×130°10E±0°08, h200km, n22, σ3°26/29, mb4.4/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.71	136	ePn	Pn	06 15 33.9	0.0
SAUI				eSn	Sn	06 15 58.2	-3.4
FAKI	Fak Fak	4.36	29	ePn	Pn	06 16 01.1	-3.6
FAKI				eSn	Sn	06 16 41.0	-16
MTN	Manton Dam	6.14	171	ePn	Pn	06 16 27.7	+0.4
MTN				eSn	Sn	06 17 35.0	-3.1
SOEI	Soe	6.50	242	ePn	Pn	06 16 30.0	-2.2
SOEI				eSn	Sn	06 17 42.9	-3.7
FITZ	Fitzroy Crossi	12.09	201	ePn	Pn	06 17 44.5	+0.1
WRAB	Tennant Creek	13.74	163	ePn	Pn	06 18 05.0	-0.1
WR1	Warramunga Arr	13.75	163	ePn	Pn	06 18 04.0	-1.2
WR1				eSn	S	06 20 33.1	-5.3
WRA	Warramunga Arr	13.75	163	Pn	Pn	06 18 04.0	-1.2
	1.2nm,0.3s,baz=348,slow=13,SNR=51						
WRA				Sn	S	06 20 33.1	-5.3
	2.7nm,0.3s,baz=337,slow=22,SNR=9.0						
WB2	Warramunga Arr	13.75	163	ePn	Pn	06 18 04.1	-1.1
WC3	Warramunga Arr	13.77	163	ePn	Pn	06 18 04.9	-0.5
COEN	Coen	14.71	120	eP	P	06 18 19.8	+1.7
AS31	Alice Springs	17.21	168	eP	Pn	06 18 48.7	+1.6
	2.3nm,0.8s						
AS31				eS	S	06 22 03.4	+8.8
ASAR	Alice Springs	17.21	168	P	Pn	06 18 49.8	+2.6
	1.0nm,0.3s,baz=344,slow=9.5,SNR=36						
ASAR				S	S	06 21 59.4	+4.8
	0.5nm,0.3s,baz=1.4,slow=28,SNR=6.0						
BBOO	Buckleboo	26.52	169	eP	P	06 20 21.1	+3.7
	7.6nm,1.0s						
STKA	Stephens Creek	27.21	158	P	P	06 20 27.4	+3.8
	1.9nm,0.4s,baz=333,slow=10,SNR=8

BKI S Sn 06 28 44.3 -1.1
KBTR Krutoberegovo 5.00 309 eP Pn 06 28 39.2 +0.5
KBTR Krutoberegovo 5.00 309 PN Pn 06 28 39.2 +0.5
KZV Kizimen 5.88 292 eS Sn 06 29 57.3 -0.1
SPN Mys Shipunski 5.89 272 eP Pn 06 28 52.0 +1.2
SPN eS Sn 06 29 55.3 -2.1
SPN Mys Shipunski 5.89 272 PN Pn 06 28 52.0 +1.2
TUMR Tumrok 6.00 293 eP Pn 06 28 52.5 -0.1
TUMR Tumrok 6.00 293 PN Pn 06 28 52.5 -0.1
UGLR Uglovaya 6.59 274 eP Pn 06 29 02.6 +1.9
UGLR Uglovaya 6.59 274 PN Pn 06 29 02.6 +1.9
SMAR Somma 6.60 274 eP Pn 06 29 03.3 +2.4
SMAR Somma 6.60 274 PN Pn 06 29 03.3 +2.4
KRER Koryakskii 6.63 275 eP Pn 06 29 03.8 +2.5
KRER eS Sn 06 30 15.1 -0.9
KRER Koryakskii 6.63 275 PN Pn 06 29 03.8 +2.5
AVH Avacha 6.64 274 eP Pn 06 29 03.1 +1.8
AVH eS Sn 06 30 14.1 -2.0
AVH Avacha 6.64 274 PN Pn 06 29 03.1 +1.8
DALK Dalny 6.66 272 eP Pn 06 29 02.3 +0.9
DALK Dalny 6.66 272 PN Pn 06 29 02.3 +0.9
KRX Arik 6.69 275 eP Pn 06 29 04.1 +2.1
KRX eS Sn 06 30 15.9 -1.4
KRX Arik 6.69 275 PN Pn 06 29 04.1 +2.1
KOK Koryaka 6.70 275 eP Pn 06 29 04.9 +2.8
KOK Koryaka 6.70 275 PN Pn 06 29 04.9 +2.8
RUS Russkaya 6.89 267 eS Sn 06 30 19.9 -2.2
KRMR Karymshinskiy 7.05 271 eP Pn 06 29 08.4 +1.5
KRMR eS Sn 06 30 24.5 -1.6
KRMR Karymshinskiy 7.05 271 PN Pn 06 29 08.4 +1.5
MTVR Mutnovka 7.08 268 eP Pn 06 29 09.5 +2.1
MTVR eS Sn 06 30 24.3 -2.7
MTVR Mutnovka 7.08 268 PN Pn 06 29 09.5 +2.1
GNL Ganaly 7.09 278 eP Pn 06 29 09.8 +2.3
GNL eS Sn 06 30 26.9 -0.4
GNL Ganaly 7.09 278 PN Pn 06 29 09.8 +2.3
ASAK Asacha 7.27 268 eP Pn 06 29 11.8 +1.9
ASAK Asacha 7.27 268 PN Pn 06 29 11.8 +1.9
PETK Petropavlovsk- 7.28 274 Pn Pn 06 29 13.3 +3.4
0.8nm,0.3s,baz=95,slow=20,SNR=8.4
PETK Sn Sn 06 30 31.2 -0.4
1.6nm,0.3s,baz=317,slow=32,SNR=7.2
KDTR Khodutka, Kamc 7.30 263 eP Pn 06 29 11.9 +1.6
KDTR eS Sn 06 30 28.2 -4.0
KDTR Khodutka, Kamc 7.30 263 PN Pn 06 29 11.9 +1.6
KDAK Kodiak Island 21.56 63 P P 06 32 11.3 -1.2
2.1nm,0.5s,baz=246,slow=7.5,SNR=7.5
ILAR Eielson Array 24.53 45 P P 06 32 40.8 -1.6
1.3nm,0.8s,baz=249,slow=8.6,SNR=11
H11N2 WAKE ISLAND Hy 33.56 185 T T 07 09 50.2
baz=3.5,slow=76,SNR=148
H11N3 WAKE ISLAND Hy 33.57 185 T T 07 09 51.1
baz=3.5,slow=76,SNR=159
H11N1 WAKE ISLAND Hy 33.58 185 T T 07 09 51.6
baz=3.5,slow=76,SNR=162
H11S1 WAKE ISLAND Hy 34.78 185 T T 07 11 20.2
baz=3.4,slow=76,SNR=165
H11S3 WAKE ISLAND Hy 34.80 185 T T 07 11 23.8
baz=3.4,slow=76,SNR=79
H11S2 WAKE ISLAND Hy 34.80 185 T T 07 11 21.3
baz=3.4,slow=76,SNR=137
YKA Yellowknife Ar 38.96 46 P P 06 34 48.0 -0.8
0.4nm,0.6s,baz=292,slow=8.3,SNR=4.9
YKA Yellowknife Ar 38.96 46 P P 06 34 48.0 -0.8
NVAR Mina Array Bea 50.09 77 P P 06 36 18.2 0.0
0.3nm,0.6s,baz=298,slow=8.1,SNR=4.1
PDAR Pinedale Array 52.20 67 P P 06 36 33.0 -1.0
1.0nm,0.9s,baz=328,slow=5.3,SNR=7.0
NOA NORSAR Array B 64.76 349 P P 06 38 00.7 -0.3
0.5nm,0.5s,baz=16,slow=6.6,SNR=3.8
TXAR Lajitas Array 65.07 74 P P 06 38 04.3 +0.8
2.8nm,0.5s,baz=306,slow=5.0,SNR=48
GERES GERESS Array B 76.25 344 P P 06 39 11.7 +0.3
0.3nm,0.3s,baz=1.9,slow=5.9,SNR=3.2
ASAR Alice Springs 82.71 213 P P 06 39 48.2 +1.7
0.4nm,0.7s,baz=20,slow=6.7,SNR=4.2

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*IDC **25** 06:40:20.3±0.6, 3.°76S×142.°17E, h0km, mb4.2/17, mb1 4.4/22, mb1mx4.3/39, mbtmp4.4/22, ML4.2/3, MS3.6/13, Ms1 3.7/13, ms1mx3.5/27, Error ellipse: s-maj=17.8km s-min=12.0km az=67.0*
*ISCJB **25** 06:40:24.1±0.2, 3.°83S±0.°03×142.°05E±0.°03, h35km, mb4.6/49, MS3.8/15, Error ellipse: s-maj=4.8km s-min=3.6km az=143.7*
*BJI **25** 06:40:25.8±0.0, 4.°04S×142.°21E, h59km, mb4.9/34, mB5.1/24, Ms4.9/8, Ms7 4.6/7*
*DJA **25** 06:40:27.7±0.4, 4.°S±3.°×14.°2E±.°, h51km±4km, M5.1/31, mB5.4/10, mb4.9/31, MLv5.5/6, Mw(mB)4.9/10*
*NEIC **25** 06:40:27.6±1.8, 3.°84S×142.°03E, h54km±7km, mb4.8/40, Error ellipse: s-maj=10.5km s-min=4.1km az=214.0*
ISC 25 06:40:26.1±0.4, 3.°81S±0.°04×142.°06E±0.°05, h35km, n107, σ1°46/115, mb4.8/48, MS3.9/17, 1D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.87**	**314**	Pn	**Pn**	**06 40 55.1**	**-0.7**
	95nm,0.3s,baz=145,slow=9.9,SNR=258						
JAY				Sn	**Sn**	**06 41 18.7**	**+0.5**
	120nm,0.3s,baz=270,slow=23,SNR=16						
JAY				LR	LR	06 41 40.9	
	comp=Z,1μm,21.4s,baz=81,slow=42						
JAY	**Jayapura**	**1.87**	**314**	P	**Pn**	**06 40 55.0**	**-0.7**
JAY				S	**Sn**	**06 41 18.7**	**+0.5**
GENI	**Genyem**	**2.25**	**303**	P	**Pn**	**06 41 00.3**	**-0.6**
GENI				S	**Sn**	**06 41 25.3**	**-2.1**
MMPI	**Merauke**	**4.92**	**200**	P	**Pn**	**06 41 39.3**	**+1.7**
MMPI				S	**Sn**	**06 42 36.7**	**+3.5**
MANU	**Manus Island**	**5.58**	**72**	ePn	**Pn**	**06 41 48.9**	**+2.2**
SRPI	**Serui, Papua**	**6.13**	**288**	P	**Pn**	**06 41 53.7**	**-0.6**
SRPI				S	**Sn**	**06 43 01.2**	**-2.0**
PMG	**Port Moresby**	**7.51**	**138**	Pn	**Pn**	**06 42 13.0**	**-0.3**
	2.6nm,0.3s,baz=325,slow=10,SNR=2.8						
PMG				Sn	**Sn**	**06 43 39.3**	**+2.0**
	baz=9.3,slow=19,SNR=1.9						
PMG	**Port Moresby**	**7.51**	**138**	ePn	**Pn**	**06 42 14.8**	**+1.5**
PMG				eSn	**Sn**	**06 43 39.3**	**+2.0**
FAKI	**Fak Fak**	**9.84**	**275**	ePn	**Pn**	**06 42 47.3**	**+2.1**
FAKI	**Fak Fak**	**9.84**	**275**	P	**Pn**	**06 42 45.6**	**+0.4**
	73nm,0.9s						
COEN	**Coen**	**10.14**	**174**	ePn	**Pn**	**06 42 51.4**	**+2.0**
SIJI	**Sorong**	**11.18**	**285**	Pn	**Pn**	**06 43 03.0**	**-0.6**
	1.7nm,0.3s,baz=80,slow=12,SNR=6.5						
SIJI				LR	LR	06 48 44.4	
	comp=Z,242nm,18.8s,baz=84,slow=45						
SWI	**Sorong**	**11.19**	**285**	P	**Pn**	**06 43 04.6**	**+1.0**
	50nm,0.7s						
BNDI	**Bandanaira**	**12.15**	**266**	P	**Pn**	**06 43 17.0**	**+0.2**
MTN	**Manton Dam**	**14.04**	**230**	ePn	**Pn**	**06 43 42.5**	**-0.2**
NLAI	**Namlea**	**14.95**	**272**	P	**Pn**	**06 43 53.5**	**-1.5**
TNTI	**Ternate**	**15.38**	**287**	ePn	**Pn**	**06 44 00.8**	**+0.1**
	49nm,1.0s						
TNTI	**Ternate**	**15.38**	**287**	P	**Pn**	**06 44 00.0**	**-0.7**
	48nm,1.3s						
CTA	**Charters Tower**	**16.68**	**166**	Pn	**Pn**	**06 44 17.1**	**-0.2**
	0.4nm,0.3s,baz=341,slow=14,SNR=9.7						
CTAO	**Charters Tower**	**16.68**	**166**	ePn	**Pn**	**06 44 17.4**	**0.0**
	48nm,1.3s						
WRAB	**Tennant Creek**	**17.70**	**205**	eP	**Pn**	**06 44 27.9**	**-2.2**
	101nm,1.3s						
WB2	**Warramunga Arr**	**17.71**	**205**	eP	**Pn**	**06 44 27.9**	**-2.3**
	76nm,1.1s						
WR1	**Warramunga Arr**	**17.71**	**205**	eP	**Pn**	**06 44 28.4**	**-1.8**
WR1				eSn	**Sn**	**06 47 46.4**	**-0.3**
WRA	**Warramunga Arr**	**17.71**	**205**	P	**Pn**	**06 44 28.4**	**-1.8**
	1.1nm,0.3s,baz=24,slow=11,SNR=35						
WRA				S	**Sn**	**06 47 46.4**	**-0.3**
	0.8nm,0.3s,baz=21,slow=24,SNR=3.4						
HNR	**Honiara**	**18.61**	**108**	P	**P**	**06 44 40.0**	**-0.7**
HNR	**Honiara**	**18.61**	**108**	P	**P**	**06 44 39.8**	**-1.0**
	13nm,0.3s,baz=187,slow=8.1,SNR=3.5						
HNR	**Honiara**	**18.61**	**108**	eP	**P**	**06 44 39.0**	**-1.8**
	60nm,0.7s						
SOEI	**Soe**	**18.62**	**251**	eP	**P**	**06 44 40.6**	**-0.4**
	92nm,0.7s						
SOEI	**Soe**	**18.62**	**251**	P	**P**	**06 44 39.9**	**-1.1**
	137nm,0.8s,2μm						
BATI	**Baumata**	**19.33**	**250**	P	**P**	**06 44 49.0**	**+0.3**
	6.5nm,0.3s,baz=169,slow=1.8,SNR=7.7						
BATI	**Baumata**	**19.33**	**250**	P	**Pn**	**06 44 49.2**	**-0.7**
	49nm,0.9s						
PATS	**Pohnpei**	**19.36**	**57**	eP	**P**	**06 44 49.0**	**+0.1**
	50nm,1.1s						
KDI	**Kendari**	**19.40**	**269**	P	**Pn**	**06 44 51.1**	**+0.4**
LUWI	**Luwuk**	**19.47**	**278**	P	**P**	**06 44 50.4**	**+0.3**
MMRI	**Maumere**	**20.28**	**255**	eP	**P**	**06 44 57.4**	**-1.6**
	68nm,1.1s						
APSI	**Ampana**	**20.60**	**278**	P	**P**	**06 45 03.1**	**+0.7**
	77nm,0.9s,861nm						
EDFI	**Ende, Flores**	**20.83**	**255**	P	**P**	**06 45 03.0**	**-2.1**
	24nm,0.9s,1μm						
AS31	**Alice Springs**	**21.25**	**201**	eP	**P**	**06 45 09.3**	**-0.1**
	16nm,0.6s						
ASAR	**Alice Springs**	**21.25**	**201**	P	**P**	**06 45 08.8**	**-0.7**
	49nm,0.8s,baz=30,slow=9.1,SNR=157						
ASAR				S	**S**	**06 49 05.9**	**+1.9**
	7.0nm,0.9s,baz=17,slow=25,SNR=4.7						
ASAR				LR	LR	06 54 15.3	
	comp=Z,127nm,20.5s,baz=28,slow=39						
FITZ	**Fitzroy Crossi**	**21.45**	**227**	eP	**P**	**06 45 11.2**	**-0.3**
	16nm,0.8s						
BSSI	**Bau Bau, Buton**	**21.61**	**263**	P	**P**	**06 45 14.3**	**+0.9**
BKSI	**Bulukumba**	**21.92**	**265**	P	**P**	**06 45 17.1**	**+0.4**
	35nm,0.7s						
TTSI	**Tana Toraja**	**22.22**	**271**	P	**P**	**06 45 20.4**	**+0.5**
SPSI	**Sidrap Palu**	**22.24**	**269**	P	**P**	**06 45 19.1**	**-1.1**
KAPI	**Kappang**	**22.28**	**266**	P	**P**	**06 45 21.0**	**+0.5**
	4.0nm,0.3s,baz=15,slow=7.5,SNR=8.1						
KAPI	**Kappang**	**22.28**	**266**	eP	**P**	**06 45 19.9**	**-0.6**
	28nm,1.0s						
EIDS	**Eidsvold**	**23.12**	**159**	eP	**P**	**06 45 28.4**	**-0.9**
	36nm,0.9s						
WBSI	**Waikabubak, Su**	**23.24**	**254**	P	**P**	**06 45 30.7**	**+0.1**
PSA00	**Pilbara Seismi**	**27.88**	**229**	eP	**P**	**06 46 10.8**	**-2.0**
	50nm,1.4s						
STKA	**Stephens Creek**	**27.92**	**181**	LR	LR	06 59 25.8	
	comp=Z,279nm,18.6s,baz=1.7,slow=41						
STKA	**Stephens Creek**	**27.92**	**181**	eP	**P**	**06 46 12.6**	**-0.5**
BBOO	**Buckleboo**	**29.39**	**190**	eP	**P**	**06 46 24.3**	**-1.9**
	28nm,1.5s						
DZM	**Mont Dzumac**	**29.81**	**130**	eP	P	06 46 40.2	+10
	16nm,0.6s						
DZM				eLR	LR	06 54 17.2	
	comp=Z,395nm,23.2s						
DZM	**Mont Dzumac**	**29.81**	**130**	P	**P**	**06 46 30.2**	**+0.1**
	4.7nm,0.9s,baz=315,slow=20,SNR=2.5						
DZM				LR	LR	06 58 01.6	
	comp=Z,328nm,20.7s,baz=336,slow=36						
DZM	**Mont Dzumac**	**29.81**	**130**	eP	**P**	**06 46 29.7**	**-0.4**
	37nm,1.3s						
FORT	**Forrest**	**29.90**	**205**	eP	**P**	**06 46 30.2**	**-0.5**
	60nm,1.4s						
CAN	**Canberra**	**32.00**	**169**	eP	**P**	**06 46 50.1**	**+0.8**
	44nm,1.4s						
MORW	**Morawa**	**35.23**	**222**	eP	**P**	**06 47 17.0**	**-0.4**
	78nm,1.4s						
JHJ	**Hachijo jima 2**	**36.80**	**357**	LR	LR	06 59 18.3	
	comp=Z,168nm,21.8s,baz=233,slow=31						
MJAR	**Matsushiro Arr**	**40.31**	**355**	P	**P**	**06 47 58.3**	**-1.9**
	0.9nm,0.3s,baz=169,slow=7.9,SNR=6.1						
MJAR				LR	LR	07 03 51.0	
	comp=Z,45nm,19.0s,baz=230,slow=35						
MAJO	**Matsushiro**	**40.31**	**355**	eP	**P**	**06 47 58.3**	**-1.9**
SDSI	**Sungai Dareh**	**40.70**	**273**	P	**P**	**06 48 01.2**	**-2.5**
	9.0nm,1.0s						
NJ2	**Nanjing**	**41.94**	**330**	eP	**P**	**06 48 15.5**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSRS	**Korea Array**	**43.11**	**343**	P	**P**	**06 48 22.5**	**-0.6**
	1.4nm,0.6s,baz=172,slow=8.4,SNR=11						
KSRS				LR	LR	07 04 43.9	
	comp=Z,35nm,20.8s,baz=155,slow=34						
GYA	**Guiyang**	**45.59**	**313**	eP	P	06 48 38.0	-5.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BKZ	**Black Stump Fm**	**47.05**	**143**	eP	**P**	**06 48 54.7**	**+0.2**
	comp=Z,39nm,1.4s						
KMI	**Kunming**	**47.79**	**309**	P	**P**	**06 49 02.0**	**+1.3**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**47.89**	**299**	P	**P**	**06 49 02.6**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=133,slow=5.3,SNR=2.3						
CMAR				LR	LR	07 09 10.3	
	comp=Z,26nm,20.6s,baz=190,slow=36						
USRK	**Ussuriysk Ar.**	**48.65**	**350**	P	**P**	**06 49 07.2**	**+0.6**
	comp=Z,3.8nm,0.8s,baz=169,slow=8.1,SNR=6.9						
XAN	**Xi'an**	**48.93**	**323**	P	**P**	**06 49 12.8**	**+3.7**
XAN				pP	sP	06 49 24.0	+0.2
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,240nm,6.9s						
XAN				LR	LR		
	comp=Z,120nm,23.8s						
CN2	**Changchun**	**49.70**	**344**	eP	**P**	**06 49 16.8**	**+2.1**
CN2				eSP	sP	06 49 35.0	+5.6
CN2				eS	**S**	**06 56 20.5**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,6.0s						
CD2	**Chengdu**	**50.27**	**316**	P	**P**	**06 49 20.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
HHC	**Hu-ho-hao-te**	**52.47**	**331**	eP	**P**	**06 49 37.5**	**+1.8**
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,20nm,5.6s						
LZH	**Lanzhou**	**53.40**	**321**	eP	**P**	**06 49 44.3**	**+1.6**
LZH				pP	sP	06 49 59.0	+1.5
LZH				sP	pP	06 50 05.0	+12
LZH				ePP	**PP**	**06 51 47.5**	**+4.0**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,89nm,7.6s						
LZH				LR	LR		
	comp=Z,400nm,15.7s						
LZH				LR	LR		
	comp=Z,400nm,16.0s						
LZH				LR	LR		
	comp=Z,510nm,18.0s						
KLR	**Kul'dur**	**53.58**	**352**	P	**P**	**06 49 42.7**	**-1.0**
	comp=Z,1.9nm,1.0s,baz=131,slow=5.8,SNR=3.6						
KLR				LR	LR	07 08 53.2	
	comp=Z,32nm,21.1s,baz=172,slow=32						
GTA	**Gaotai**	**57.97**	**322**	eP	**P**	**06 50 16.8**	**+1.4**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PETK	**Petropavlovsk-**	**58.22**	**11**	LR	LR	07 12 13.4	
	comp=Z,43nm,21.9s,baz=210,slow=33						
SONM	**Songino Array**	**60.18**	**333**	P	**P**	**06 50 30.2**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=142,slow=7.3,SNR=2.9						
CASY	**Casey**	**66.14**	**193**	eP	**P**	**06 51 09.0**	**-0.6**
	comp=Z,8.2nm,1.1s						
SEY	**Seymchan**	**67.03**	**5**	P	**P**	**06 51 13.5**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=127,slow=20,SNR=2.8						
WMQ	**Urumqi**	**67.97**	**321**	P	**P**	**06 51 23.0**	**+1.2**
WMQ				pP	sP	06 51 41.0	+4.3
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,110nm,6.1s						
WMQ				LR	LR		
	comp=Z,410nm,28.9s						
WMQ				LR	LR		
	comp=Z,690nm,29.2s						
WMQ				LR	LR		
	comp=Z,130nm,26.7s						
PPT	**Papeete**	**68.23**	**107**	LR	LR	07 18 12.5	
	comp=Z,61nm,18.5s,baz=34,slow=33						
PPT2	**Papeete2**	**68.23**	**107**	eLR	LR	07 12 03.0	
	comp=Z,41nm,21.2s						
MK31	**Makanchi Array**	**72.72**	**322**	eP	**P**	**06 51 50.1**	**-0.6**
	comp=Z,6.0nm,1.1s						
MKAR	**Makanchi Array**	**72.72**	**322**	P	**P**	**06 51 51.3**	**+0.6**
	comp=Z,3.6nm,0.7s,baz=106,slow=7.1,SNR=28						
MAKZ	**Makanchi**	**72.92**	**321**	eP	**P**	**06 51 52.3**	**+0.4**
	comp=Z,15nm,1.3s						
KSH	**Kashi**	**74.28**	**313**	P	**P**	**06 52 03.8**	**+3.6**
KSH				sP	sP	06 52 21.3	+6.0
KSH				PP	**PP**	**06 54 47.8**	**+1.3**
KSH				S	**S**	**07 01 33.3**	**+1.3**
KSH				SS	**SS**	**07 06 24.0**	**+5.6**
KSH				pmax	pmax		
	comp=Z,25nm,1.2s						
KSH				pmax	pmax		
	comp=Z,380nm,5.5s						
KSH				LR	LR		
	comp=Z,2μm,21.2s						
KSH				LR	LR		
	comp=Z,270nm,11.6s						
VNDA	**Vanda**	**74.41**	**176**	P	**P**	**06 51 59.7**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=324,slow=6.8,SNR=17						
VNDA				LR	LR	07 25 27.6	
	comp=Z,110nm,18.1s,baz=274,slow=36						
VNDA	**Vanda**	**74.41**	**176**	eP	**P**	**06 51 59.2**	**-0.9**
VNDA				ePcP	**P**	**06 51 59.8**	**-0.4**
ZALV	**Zalesovo Beam**	**74.58**	**329**	P	**P**	**06 52 01.1**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=69,slow=4.8,SNR=2.7						
KURK	**Kurchatov**	**76.55**	**324**	eP	**P**	**06 52 11.8**	**-0.9**
	comp=Z,5.0nm,0.8s						
KURBB	**Kurchatov Arra**	**76.57**	**324**	P	**P**	**06 52 11.4**	**-1.5**
	comp=Z,2.6nm,1.0s,baz=115,slow=5.2,SNR=9.8						
CNPM	**China Poot**	**81.70**	**28**	eP	**P**	**06 52 40.8**	**0.0**
	comp=Z,8.1nm,0.7s						
MAW	**Mawson**	**82.37**	**202**	P	**P**	**06 52 43.2**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=54,slow=19,SNR=5.1						
MAW				LR	LR	07 25 19.9	
	comp=Z,82nm,20.3s,baz=22,slow=33						
MAW	**Mawson**	**82.37**	**202**	eP	**P**	**06 52 43.5**	**-0.6**
	comp=Z,1.5nm,1.0s						
MCK	**McKinley**	**84.27**	**25**	eP	**P**	**06 52 53.8**	**-0.2**
	comp=Z,9.2nm,1.0s						
CCB	**Clear Creek Bu**	**85.05**	**24**	eP	**P**	**06 52 56.7**	**-1.2**
	comp=Z,12nm,1.1s						
ILAR	**Eielson Array**	**85.46**	**24**	P	**P**	**06 52 58.2**	**-1.7**
	comp=Z,3.7nm,0.8s,baz=257,slow=5.0,SNR=38						
QSPA	**South Pole Qui**	**86.14**	**180**	eP	**P**	**06 53 02.7**	**-0.8**
	comp=Z,6.9nm,0.8s						
DAWY	**Dawson**	**88.41**	**26**	eP	**P**	**06 53 14.0**	**-0.4**
	comp=Z,6.9nm,1.0s						
HYT	**Haines Junctio**	**88.64**	**29**	eP	**P**	**06 53 14.6**	**-1.1**
	comp=Z,5.2nm,1.1s						
SYO	**Syowa Base**	**90.92**	**201**	‖ ePcP	**PcP**	**06 53 29.0**	**+2.0**
YKA	**Yellowknife Ar**	**99.52**	**27**	P	**Pdif**	**06 54 04.3**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=280,slow=4.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**139.78**	**286**	PKP	**PKPdf**	**06 59 51.3**	**-0.2**
	comp=Z,5.2nm,0.3s,baz=56,slow=2.5,SNR=2.8						
TOA1	**Torodi Ar. Sit**	**139.78**	**286**	ePKPdf	**PKPdf**	**06 59 51.3**	**-0.2**
ROSC	**El Rosal**	**143.71**	**87**	PKP	PKPbc	06 59 56.4	-0.3
	comp=Z,1.1nm,0.4s,baz=285,slow=20,SNR=1.9						
LPAZ	**La Paz**	**144.08**	**125**	PKP	**PKPdf**	**06 59 59.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=293,slow=2.9,SNR=4.0						

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*KRSC **25** 06:58:08.3±1.6, 52.°61N×161.°01E, h65km±21km, ML4.4*
*MOS **25** 06:58:09.6±0.8, 52.°57N×161.°02E, h64km, mb3.9/1, Error ellipse: s-maj=8.3km s-min=4.8km az=100.2*
*ISCJB **25** 06:58:10.4±0.6, 52.°63N±0.°04×160.°96E±0.°07, h63km±5km, mb3.7/13, Error ellipse: s-maj=8.2km s-min=3.6km az=41.1*
*IDC **25** 06:58:13.3±2.3, 52.°73N×160.°83E, h71km±20km, mb3.4/12, mb1 3.7/12, mb1mx3.5/39, mbtmp3.7/12, Error ellipse: s-maj=21.6km s-min=16.9km az=172.0*
ISC 25 06:58:09.9±1.2, 52.°57N±0.°04×161.°04E±0.°04, h48km±11km, n101, σ1°32/131, mb3.7/13, 4C-3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.81**	**311**	eP	**Pn**	**06 58 25.1**	**+0.1**
SPN				eS	**Sn**	**06 58 35.5**	**-0.5**
SPN	**Mys Shipunski**	**0.81**	**311**	PN	**Pn**	**06 58 25.1**	**+0.1**
SPN				S	**Sn**	**06 58 35.5**	**-0.5**
NLC	**Nalytchevo**	**1.19**	**301**	eP	**Pn**	**06 58 30.3**	**+0.2**
NLC				eS	**Sn**	**06 58 44.4**	**-0.7**
NLC	**Nalytchevo**	**1.19**	**301**	PN	**Pn**	**06 58 30.3**	**+0.2**
NLC				S	**Sn**	**06 58 44.4**	**-0.7**
DALK	**Dalny**	**1.46**	**289**	eP	**Pn**	**06 58 34.4**	**+0.6**
DALK				eS	**Sn**	**06 58 51.5**	**-0.3**
DALK	**Dalny**	**1.46**	**289**	PN	**Pn**	**06 58 34.4**	**+0.6**
DALK				S	**Sn**	**06 58 51.5**	**-0.3**
SDLR	**Sedlovina**	**1.48**	**299**	eP	**Pn**	**06 58 34.7**	**+0.5**
SDLR	**Sedlovina**	**1.48**	**299**	PN	**Pn**	**06 58 34.7**	**+0.5**
UGLR	**Uglovaya**	**1.49**	**296**	eP	**Pn**	**06 58 34.7**	**+0.4**
UGLR	**Uglovaya**	**1.49**	**296**	PN	**Pn**	**06 58 34.7**	**+0.4**
PET	**Petropavlovsk**	**1.52**	**288**	‖ iPN	**Pn**	**06 58 35.2**	**+0.6**
PET				eS	**Sn**	**06 58 53.6**	**+0.5**
PET				pmax	pmax		
	comp=Z,1μm,0.4s						
PET				smax	smax		
	comp=E,4μm,0.6s						
PET				smax	smax		
	comp=N,1μm,0.5s						
SMAR	**Somma**	**1.52**	**298**	eP	**Pn**	**06 58 35.2**	**+0.4**
SMAR	**Somma**	**1.52**	**298**	PN	**Pn**	**06 58 35.2**	**+0.4**
RUS	**Russkaya**	**1.55**	**266**	eP	**Pn**	**06 58 35.8**	**+0.8**
RUS				eS	**Sn**	**06 58 54.0**	**0.0**
RUS	**Russkaya**	**1.55**	**266**	PN	**Pn**	**06 58 35.8**	**+0.8**
RUS				S	**Sn**	**06 58 54.0**	**0.0**
AVH	**Avacha**	**1.56**	**297**	eP	**Pn**	**06 58 36.2**	**+1.0**
AVH	**Avacha**	**1.56**	**297**	PN	**Pn**	**06 58 36.2**	**+1.0**
KRER	**Koryakskii**	**1.57**	**299**	eP	**Pn**	**06 58 36.4**	**+0.9**
KRER				eS	**Sn**	**06 58 55.1**	**+0.4**
KRER	**Koryakskii**	**1.57**	**299**	PN	**Pn**	**06 58 36.4**	**+0.9**
KRER				S	**Sn**	**06 58 55.1**	**+0.4**
KOK	**Koryaka**	**1.62**	**297**	eP	**Pn**	**06 58 36.4**	**+0.3**
KOK	**Koryaka**	**1.62**	**297**	PN	**Pn**	**06 58 36.4**	**+0.3**
KRX	**Arik**	**1.65**	**299**	eP	**Pn**	**06 58 37.2**	**+0.7**
KRX	**Arik**	**1.65**	**299**	PN	**Pn**	**06 58 37.2**	**+0.7**
MTVR	**Mutnovka**	**1.75**	**268**	eP	**Pn**	**06 58 38.8**	**+0.9**
MTVR				eS	**Sn**	**06 58 59.2**	**+0.2**
MTVR	**Mutnovka**	**1.75**	**268**	PN	**Pn**	**06 58 38.8**	**+0.9**
MTVR				S	**Sn**	**06 58 59.2**	**+0.2**
KRMR	**Karymshinskiy**	**1.79**	**279**	eP	**Pn**	**06 58 38.9**	**+0.6**
KRMR				eS	**Sn**	**06 58 59.1**	**-0.7**
KRMR	**Karymshinskiy**	**1.79**	**279**	PN	**Pn**

ESO	Esso	3.63	339	eP		Pn	06 59 05.3	+1.8
ESO	Esso	3.63	339	PN		Pn	06 59 05.3	+1.8
KRSR	Krestovskiy	3.66	356	eP		Pn	06 59 04.9	+0.9
KRSR	Krestovskiy	3.66	356	PN		Pn	06 59 04.9	+0.9
KLY	Klyuchi	3.75	357	eS		Sn	06 59 48.5	+0.5
KBTR	Krutoberegovo	3.79	15	eP		Pn	06 59 07.0	+1.4
KBTR				eS		Sn	06 59 48.5	-0.4
KBTR	Krutoberegovo	3.79	15	PN		Pn	06 59 07.0	+1.4
KBTR				S		Sn	06 59 48.5	-0.4
KBG	Krutoberegovo	3.81	14	eP		Pn	06 59 07.9	+1.9
KBG				eS		Sn	06 59 49.6	+0.1
KBG	Krutoberegovo	3.81	14	PN		Pn	06 59 07.9	+1.9
KBG				S		Sn	06 59 49.6	+0.1
ALID	Alaid	3.82	246	eP		Pn	06 59 07.7	+1.5
ALID	Alaid	3.82	246	PN		Pn	06 59 07.7	+1.5
SRDR	Sredinnyy	3.83	349	eP		Pn	06 59 08.0	+1.7
SRDR	Sredinnyy	3.83	349	PN		Pn	06 59 08.0	+1.7
BKI	Bering	3.93	46	eP		Pn	06 59 08.5	+0.9
BKI				eS		Sn	06 59 49.9	-2.5
BKI	Bering	3.93	46	PN		Pn	06 59 08.5	+0.9
BKI				S		Sn	06 59 49.9	-2.5
BDR	Baidarnaya	4.00	1	eP		Pn	06 59 11.5	+2.8
BDR	Baidarnaya	4.00	1	PN		Pn	06 59 11.5	+2.8
SMKR	Semkarok	4.03	3	eP		Pn	06 59 10.8	+1.8
SMKR	Semkarok	4.03	3	PN		Pn	06 59 10.8	+1.8
SRKR	Sorokina	4.09	1	eP		Pn	06 59 12.4	+2.5
SRKR	Sorokina	4.09	1	PN		Pn	06 59 12.4	+2.5
MA2	Magadan	9.06	325	⇓eP		Pn	07 00 15.9	-2.0
SEY	Seymchan	11.36	340	⇓eP		Pn	07 00 47.3	-1.9
BILL	Bilibino	15.72	7	⇑eP		P	07 01 51.4	+0.4
BILL				pmax		pmax		
	comp=Z,5.0nm,1.1s							
ERM	Erimo	16.04	236	⇑eP		Pn	07 01 49.1	-2.8
MJAR	Matsushiro Arr	22.69	234	P		P	07 03 09.3	+2.1
	comp=Z,1.1nm,0.3s,baz=20,slow=12,SNR=3.9							
TIXI	Tiksi	23.80	335	⇓eP		P	07 03 17.2	-0.4
H11N2	WAKE ISLAND Hy	33.09	170	T		T	07 40 30.8	
	baz=352							
H11N3	WAKE ISLAND Hy	33.11	170	T		T	07 40 33.8	
	baz=352							
H11N1	WAKE ISLAND Hy	33.11	170	T		T	07 40 40.1	
	baz=352							
H11S1	WAKE ISLAND Hy	34.28	170	T		T	07 42 25.2	
	baz=352							
H11S3	WAKE ISLAND Hy	34.30	170	T		T	07 42 17.7	
	baz=352							
H11S2	WAKE ISLAND Hy	34.30	170	T		T	07 42 09.2	
	baz=352							
YKA	Yellowknife Ar	43.16	42	P		P	07 06 04.3	-0.9
	comp=Z,0.2nm,0.3s,baz=299,slow=7.5,SNR=4.1							
KURK	Kurchatov	48.50	303	⇑eP		P	07 06 45.6	-1.8
KURK				pmax		pmax		
	comp=Z,2.0nm,1.9s							
MKAR	Makanchi Array	48.90	297	P		P	07 06 49.1	-1.5
	comp=Z,0.3nm,0.6s,baz=63,slow=8.3,SNR=3.9							
MKAR	Makanchi Array	48.90	297	iP		P	07 06 49.4	-1.2
FFC	Flin Flon	52.97	46	iP		P	07 07 16.5	-4.5
NVAR	Mina Array Bea	55.38	70	P		P	07 07 41.5	+2.4
	comp=Z,0.4nm,0.6s,baz=299,slow=7.7,SNR=5.3							
PDAR	Pinedale Array	57.27	61	P		P	07 07 54.2	+1.7
	comp=Z,0.6nm,0.8s,baz=307,slow=4.3,SNR=8.1							
FINES	FINESS Array B	60.83	337	P		P	07 08 17.0	+0.5
	comp=Z,1.8nm,0.5s,baz=36,slow=8.4,SNR=16							
FINES	FINESS Array B	60.83	337	P		P	07 08 17.0	+0.5
NOA	NORSAR Array B	64.20	344	P		P	07 08 38.6	-0.5
	comp=Z,0.5nm,0.6s,baz=20,slow=6.6,SNR=3.2							
AKASG	Malin Array Be	69.35	330	P		P	07 09 10.7	-1.3
	comp=Z,0.3nm,0.4s,baz=28,slow=6.4,SNR=3.5							
TXAR	Lajitas Array	70.31	67	P		P	07 09 19.9	+1.6
	comp=Z,0.8nm,0.6s,baz=295,slow=4.6,SNR=10							
GERES	GERESS Array B	75.21	338	P		P	07 09 47.6	+0.5
	comp=Z,0.5nm,0.5s,baz=31,slow=5.9,SNR=3.9							
BRTR	Keskin Array B	77.39	321	P		P	07 09 59.9	+0.3
	comp=Z,0.7nm,0.7s,baz=39,slow=8.2,SNR=3.5							
ASAR	Alice Springs	79.53	205	P		P	07 10 12.1	+0.9
	comp=Z,0.6nm,0.6s,baz=19,slow=5.8,SNR=8.9							
KMBO	Kilima Mbogo	110.78	297	iPKIKP		PKiKP	07 16 33.5	-4.3
KMBO				pmax		pmax		
	comp=Z,1.0nm,0.3s							

*ISK **25** 07:03:20.9, 36°.45N×33°.46E, h10km, ML2.5/17*
*DDA **25** 07:03:20.1, 36°.48N×33°.48E, h7km±4km, ML2.4*
*ISCJB **25** 07:03:21.1±0.4, 36°.46N±0°.03×33°.47E±0°.03, h12km±3km, Error ellipse: s-maj=5.2km s-min=3.5km az=177.7*
ISC 25 07:03:21.4±1.0, 36°.46N±0°.03×33°.46E±0°.02, h10km±6km, n24, σ0s58/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEVE	Tevekalti-Mers	0.03	208	PG	Pg	07 03 23.2	-0.2
TEVE				SG	Sg	07 03 24.3	-0.6
KEBE	Keben-Mersin	0.20	95	PG	Pg	07 03 25.8	+0.1
KEBE				SG	Sg	07 03 29.4	+0.7
BERE	Bereket-Mersin	0.23	239	PG	Pg	07 03 25.9	-0.3
BERE				SG	Sg	07 03 29.9	+0.5
OREN	Orenkoy-Mersin	0.26	181	PG	Pg	07 03 25.9	-0.7
OREN				SG	Sg	07 03 30.5	+0.4
TEPE	Tepekoy-Mersin	0.26	162	PG	Pg	07 03 26.5	-0.2
TEPE				SG	Sg	07 03 30.5	+0.3
IKL	Isikli	0.29	141	PG	Pg	07 03 26.9	-0.3
IKL				SG	Sg	07 03 31.6	+0.5
YESI	Yesilovacik-Me	0.30	151	PG	Pg	07 03 26.9	-0.6
AKKU	Akkuyu-Mersin	0.31	167	PG	Pg	07 03 27.5	-0.2
YORU	Yoruktepe-Mers	0.31	188	PG	Pg	07 03 27.4	-0.3
AKK1	Akkuyu-Mersin	0.33	169	PG	Pg	07 03 27.8	-0.1
KARG	Kargicak-Mersi	0.33	142	PG	Pg	07 03 27.9	-0.1
TISA	Tisan-Mersin	0.35	150	PG	Pg	07 03 28.1	-0.2
SILI	Silifke-Mersin	0.39	104	PG	Pg	07 03 29.3	+0.3
SLFK	Silifke-Mersin	0.40	100	PG	Pg	07 03 29.6	+0.3
TEKE	Tekeli-Mersin	0.43	221	PG	Pg	07 03 29.3	-0.5
ERMK	Ermenek	0.48	292	iP	Pg	07 03 31.5	+0.7
ERMK				iS	Sg	07 03 38.2	+1.1
ERMK				IAML_P			
	comp=Z,2μm,0.2s						
KIZK	Mersin	0.55	88	PG	Pg	07 03 31.7	-0.4
KIZK	Mersin	0.55	88	iP	Pg	07 03 31.5	-0.6
KIZK				iS	Sg	07 03 39.4	0.0
KIZK				IAML_P			
	comp=Z,964nm,0.2s						
MERS	Mersin	0.94	64	PG	Pg	07 03 39.6	0.0
GAZI	Gazipasa	0.95	256	PG	Pg	07 03 39.3	-0.5
GAZI	Gazipasa	0.95	256	iP	Pg	07 03 38.5	-1.3
GAZI				iS	Sg	07 03 52.7	+0.5
GAZI				IAML_P			
	comp=Z,224nm,0.1s						
KERG	Konya-Eregli	1.09	29	iP	Pg	07 03 41.7	-0.7
KERG				iS	Sg	07 03 55.5	-1.0
KERG				IAML_P			
	comp=Z,63nm,0.1s						
EREN	Erenkoy	1.09	148	PN	Pg	07 03 42.4	-0.1
KEPZ	Antalya-Kepez	1.56	287	iP	Pn	07 03 49.8	+0.6
KEPZ				iS	Sn	07 04 08.5	-0.9

*IDC **25** 07:15:43.5±1.1, 10°.55S×150°.18E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.8/24, mbtmp3.8/9, ML3.6/2, Error ellipse: s-maj=34.6km s-min=22.4km az=97.0*
*ISCJB **25** 07:15:46.8±0.9, 10°.68S±0°.09×150°.02E±0°.10, h33km, mb4.0/5, Error ellipse: s-maj=15.1km s-min=11.3km az=138.7*
ISC 25 07:15:48.7±1.0, 10°.80S±0°.08×150°.0E±0°.1, h35km, n10, σ2s12/12, mb3.9/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.08	296	Pn	Pn	07 16 34.5	-0.4
	7.6nm,0.3s,baz=74,slow=9.0,SNR=8.6						
PMG				Sn	Sn	07 17 10.6	+0.1
	22nm,0.3s,baz=203,slow=6.6,SNR=5.6						
CTA	Charters Tower	9.90	201	Pn	Pn	07 18 10.2	+1.6
	0.4nm,0.3s,baz=29,slow=13,SNR=1.5						
CTA				Sn	Sn	07 19 53.9	-4.8
	0.1nm,0.3s,baz=279,slow=19,SNR=1.0						
WRA	Warramunga Arr	17.57	237	P	P	07 19 52.2	+0.3
	0.2nm,0.3s,baz=59,slow=13,SNR=3.8						
ASAR	Alice Springs	19.94	228	P	Pn	07 20 21.9	+2.2
	0.7nm,1.0s,baz=69,slow=11,SNR=9.3						
KSRS	Korea Array	52.26	338	P	P	07 24 56.6	+0.1
	0.6nm,0.4s,baz=149,slow=7.0,SNR=4.5						
VNDA	Vanda	67.00	177	P	P	07 26 39.5	+1.9
	0.8nm,0.8s,baz=335,slow=7.5,SNR=7.3						
MKAR	Makanchi Array	83.03	320	P	P	07 28 11.3	+0.7
	0.7nm,0.7s,baz=110,slow=6.8,SNR=6.8						
ZALV	Zalesovo Beam	84.60	327	P	P	07 28 16.9	-1.5
	1.8nm,0.5s,baz=108,slow=4.9,SNR=4.6						
ILAR	Eielson Array	88.74	22	P	P	07 28 36.5	-1.8
	0.8nm,0.8s,baz=248,slow=4.6,SNR=8.6						
TORD	Torodi Ar. Bea	148.87	278	PKPbc	PKiKP	07 35 35.0	-0.2
	1.2nm,0.7s,baz=80,slow=3.0,SNR=7.2						

*KRNET **25** 07:20:27.0±0.1, 39°.39N×70°.66E, mb3.1*
*NNC **25** 07:20:33.3±4.0, 39°.75N×71°.25E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=32.9km s-min=19.7km az=20.0*
ISC 25 07:20:28.5±2.3, 39°.46N±0°.10×70°.64E±0°.08, h10km, n17, σ2s98/27, 20C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	0.62	13	⇓eP	Pg	07 20 40.1	-0.4
	baz=10.0						
BTK				⇓iS	Sb	07 20 50.0	-0.2
	baz=10.0						
DRK	Karamyk	0.90	88	⇑eP	Pg	07 20 44.3	-1.6
	baz=83						
DRK				⇑iS	Sb	07 20 56.6	-2.0
	baz=83						
ARK	Arkit	2.55	23	⇑eP	Pb	07 21 12.5	-1.9
	baz=22						
ARK				⇑iS	Sb	07 21 45.5	-0.3
	baz=22						
ARSB	Arslanbob	2.58	43	⇑iP	Pb	07 21 12.8	-2.3
	baz=42						
ARSB				⇑iS	Sb	07 21 46.2	-0.8
	baz=42						
IUG	Iuzhnay	2.73	350	Pg	Pg	07 21 19.0	-1.8
	11nm,0.3s						
IUG				Lg	Lg	07 21 58.2	
	31nm,0.5s						
AML	Almayashu	3.54	40	⇓iP	Pn	07 21 26.7	+2.8
	baz=39						
AML				⇓iS	Sb	07 22 10.5	-4.1
	baz=39						
BRLS	Borolday	3.62	351	Pg	Pb	07 21 30.6	-2.1
BRLS				Lg	Lg	07 22 18.0	
	4.4nm,0.3s						
KK31	Karatay Array	3.65	359	⇓Pn	Pn	07 21 27.8	+2.8
	0.4nm,0.3s,baz=179,slow=13,SNR=36						
KK31				⇓Pg	Pg	07 21 35.5	-2.8
	2.0nm,0.4s,baz=169,slow=11,SNR=20						
KK31				Lg	Lg	07 22 22.0	
	5.0nm,0.5s,baz=176,slow=28,SNR=9.3						
ARLS	Aral	3.69	48	⇑eP	Pn	07 21 28.5	+2.7
	baz=47						
ARLS				⇑eS	Sn	07 22 13.2	+3.8
	baz=47						
MRKS	Merke	3.82	30	Pg	Pn	07 21 30.4	+2.9
	5.3nm,0.4s						
MRKS				Lg	Lg	07 22 17.8	
	6.0nm,0.3s						
EKS2	Erkin-Say	3.98	36	⇑iP	Pn	07 21 32.4	+2.6
	baz=35						
EKS2				⇑iS	Sn	07 22 20.3	+3.7
	baz=35						
UCH	Uchtor	4.04	45	⇑iP	Pn	07 21 34.0	+3.2
	baz=45						
UCH				⇑iS	Sb	07 22 23.2	-5.8
	baz=45						
AAK	Ala-Archa	4.31	41	⇑Pn	Pn	07 21 35.2	+0.9
	2.4nm,0.6s						
AAK				⇑Lg	Lg	07 22 37.3	
	5.6nm,0.5s						
KZA	Kyzart	4.37	52	⇑iP	Pn	07 21 38.8	+3.4
	baz=51						
KZA				⇑iS	Sn	07 22 31.6	+5.0
	baz=51						
USP	Ospenovka	4.79	36	⇑iP	Pn	07 21 43.2	+2.4
	baz=35						
USP				⇑iS	Sn	07 22 39.4	+3.1
	baz=35						
TKM2	Tokmak 2	5.10	46	⇑Pn	Pn	07 21 45.6	+0.5
	3.3nm,0.5s						
TKM2				⇑Lg	Lg	07 23 01.3	
	4.3nm,0.8s						
KST	Kastek	5.38	47	Pg	Pb	07 21 56.8	-5.9
	4.1nm,0.6s						
KST				Lg	Lg	07 23 02.9	
	6.2nm,0.4s						

NNC 25 07:30:12.7±0.7, 49°.97N×78°.24E, h0km, mb3.5, mpv3.2, 13C-7D, Error ellipse: s-maj=6.7km s-min=2.7km az=85.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.64	16	⇓P	Pg	07 30 25.8	+0.7
KUR07				⇓S	Sg	07 30 34.6	+1.2
KUR06	Kurchatov Arra	0.66	16	⇑P	Pg	07 30 26.2	+0.8
KUR06				⇑S	Sg	07 30 35.0	+0.9
KUR16	Kurchatov Arra	0.68	14	⇑P	Pg	07 30 26.2	+0.5
KUR16				⇑S	Sg	07 30 35.6	+0.9
KUR17	Kurchatov Arra	0.68	13	⇑P	Pb	07 30 26.7	-0.8
KUR17				⇑S	Sg	07 30 35.9	+1.3
KURBB	Kurchatov Arra	0.69	16	⇑P	Pg	07 30 26.3	+0.5
KURBB	5.1nm,0.3s						
KURBB				⇑S	Sg	07 30 35.8	+1.2
	17nm,0.5s						
KUR15	Kurchatov Arra	0.69	18	⇓P	Pg	07 30 26.0	+0.2
KUR15				⇑S	Sg	07 30 35.2	+0.5
KUR14	Kurchatov Arra	0.69	19	⇑P	Pg	07 30 26.1	+0.2
KUR14				⇓S	Sg	07 30 34.9	+0.1
KUR05	Kurchatov Arra	0.70	16	⇑P	Pg	07 30 26.6	+0.4
KUR05				⇑S	Sg	07 30 35.9	+0.6
KUR04	Kurchatov Arra	0.72	16	⇓P	Pg	07 30 27.1	+0.5
KUR04				⇓S	Sg	07 30 36.2	+0.3
SEM	Semipalatinsk	1.37	70	P	Pg	07 30 37.2	-1.6
SEM	7.9nm,0.2s						
SEM				S	Sn	07 30 58.1	-0.1
	26nm,0.4s						
MAKZ	Makanchi	4.02	140	⇑Lg	Lg	07 32 19.2	
	5.0nm,0.6s						
MK31	Makanchi Array	4.17	138	Pn	Pn	07 31 17.1	-0.4
	baz=328,slow=11,SNR=11						
MK31				⇓Pg	Pb	07 31 26.8	-0.1
	0.6nm,0.6s						
MK31				Lg	Lg	07 32 21.2	
	6.9nm,0.7s,baz=325,slow=28,SNR=15						
KAPS	Kapalarasan	4.74	170	Pg	Pb	07 31 38.6	+1.9
	0.4nm,0.0s						
KAPS				Lg	Lg	07 32 43.2	
	4.7nm,0.4s						
ZSN	Zaisan	5.06	117	Pg	Pb	07 31 42.1	0.0
	1.8nm,0.3s						
ZSN				Lg	Lg	07 32 49.1	
	1.5nm,0.3s						
CHKK	Chushkaly	6.17	188	Pg	Pb	07 32 05.0	+4.0
	1.1nm,0.3s						
CHKK				Lg	Lg	07 33 28.9	
	4.5nm,0.3s						

*IDC **25** 07:30:59.3±0.6, 12°.10N×143°.57E, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.1/34, mbtmp4.3/13, MS3.3/8, Ms1 3.3/8, ms1mx3.0/33, Error ellipse: s-maj=26.7km s-min=14.6km az=91.0*
*ISCJB **25** 07:31:01.7±0.3, 12°.03N±0°.04×143°.70E±0°.07, h25km, mb4.4/42, MS3.2/6, Error ellipse: s-maj=9.6km s-min=5.7km az=16.9*
*NEIC **25** 07:31:01.9±1.2, 12°.05N×143°.73E, h14km±5km, mb4.5/33, Error ellipse: s-maj=17.7km s-min=13.0km az=101.0*
ISC 25 07:31:03.4±0.5, 12°.05N±0°.06×143°.78E±0°.08, h25km, n68, σ0s92/57, mb4.4/39, MS3.1/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.86	35	Pn	Pn	07 31 33.9	+0.2
	102nm,0.3s,baz=13,slow=6.8,SNR=39						
GUMO				Sn	Sn	07 31 55.8	-0.6
	85nm,0.3s,baz=18,slow=22,SNR=6.4						
GUMO	Guam	1.86	35	ePn	Pn	07 31 33.8	+0.1
GUMO				eSn	Sn	07 31 55.4	-1.0
SARN	Sarigan	5.01	23	ePn	Pn	07 32 18.9	+1.8
PATS	Pohnpei	15.24	109	ePn	Pn	07 34 34.8	-2.3
	37nm,1.4s						
SIJI	Sorong	17.87	225	LR	LR	07 42 12.8	
	comp=Z,98nm,18.9s,baz=138,slow=38						
RABL	Rabaul	18.16	152	ePn	Pn	07 35 13.8	-0.3
	50nm,0.4s						
DAV	Davao City (W)	18.61	256	LR	LR	07 44 37.5	
	comp=Z,41nm,18.7s,baz=140,slow=44						
JHJ	Hachijo jima 2	21.29	351	LR	LR	07 42 25.1	
	comp=Z,73nm,21.1s,baz=116,slow=32						
H11N1	WAKE ISLAND Hy	23.48	68	T	T	08 00 44.5	
	baz=255,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	23.49	68	T	T	08 00 41.9	
	baz=255,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	23.50	68	T	T	08 00 45.9	
	baz=255,slow=75,SNR=16						
JNU	Nakatsue	24.07	333	P	P	07 36 16.3	-0.7
	7.8nm,0.9s,baz=194,slow=1.9,SNR=4.3						
JNU				LR	LR	07 44 50.6	
	comp=Z,27nm,19.7s,baz=182,slow=35						
JNU	Nakatsue	24.07	333	eP	P	07 36 17.1	+0.2
	8.1nm,0.8s						
MJAR	Matsushiro Arr	24.89	349	LR	LR	07 45 05.0	
	comp=Z,42nm,18.0s,baz=185,slow=34						
KSRS	Korea Array	29.01	333	P	P	07 36 59.0	-2.4
	0.6nm,0.4s,baz=161,slow=12,SNR=3.5						
KAPI	Kappang	29.30	236	LR	LR	07 48 27.4	
	comp=Z,70nm,21.9s,baz=110,slow=36						
BATI	Baumata	29.81	223	LR	LR	07 49 47.2	
	comp=Z,171nm,18.6s,baz=214,slow=38						
WB2	Warramunga Arr	33.12	196	eP	P	07 37 37.9	+0.2
	16nm,1.4s						
WR1	Warramunga Arr	33.12	196	eP	P	07 37 37.7	-0.1
WRA	Warramunga Arr	33.13	196	P	P	07 37 37.7	-0.1
	2.3nm,0.6s,baz=6.7,slow=9.2,SNR=25						
JAGI	Jajag, Banyuwa	35.82	237	eP	P	07 38 00.2	-1.0
	53nm,0.6s						
AS31	Alice Springs	36.79	195	eP	P	07 38 08.6	-0.9
	2.4nm,1.5s						
ASAR	Alice Springs	36.79	195	P	P	07 38 08.3	-1.1
	0.7nm,0.6s,baz=16,slow=11,SNR=13						
DZM	Mont Dzumac	40.55	147	P	P	07 38 42.3	+1.2
	22nm,0.9s,baz=356,slow=8.6,SNR=8.4						
DZM	Mont Dzumac	40.55	147	eP	P	07 38 41.4	+0.4
	21nm,0.8s						
CMAR	Chiang Mai Arr	43.64	284	P	P	07 39 07.0	+0.7
	1.7nm,0.3s,baz=87,slow=6.5,SNR=6.2						
STKA	Stephens Creek	43.73	183	P	P	07 39 06.3	-0.4
	1.1nm,0.5s,baz=336,slow=7.8,SNR=5.5						
STKA	Stephens Creek	43.73	183	eP	P	07 39 06.1	-0.7
	1.8nm,1.4s						
FORT	Forrest	45.19	199	eP	P	07 39 18.9	+0.4
	22nm,1.1s						
BBOO	Buckleboo	45.22	189	eP	P	07 39 18.2	-0.5
	12nm,1.2s						
ULN	Ulaanbaatar	47.05	327	eP	P	07 39 32.9	-0.3
	3.0nm,1.1s						
TOO	Toolangi	49.39	178	eP	P	07 39 52.0	+0.9
	21nm,1.3s						
TLY	Talaya	51.10	329	eP	P	07 40 04.2	+0.3
	1.8nm,0.7s						
UNV	Unalaska Valle	57.19	33	eP	P	07 40 47.7	-0.5
	39nm,1.4s						
BKZ	Black Stump Fm	59.38	151	eP	P	07 41 04.1	+0.3
	18nm,1.4s						
ZALV	Zalesovo Beam	62.26	325	P	P	07 41 22.7	-0.5
	1.2nm,0.4s,baz=101,slow=7.5,SNR=3.0						
ZAA1	Zalesovo Array	62.26	325	eP	P	07 41 22.7	-0.5
KURK	Kurchatov	65.08	320	eP	P	07 41 41.6	-0.2
	6.1nm,0.9s						
SVW2	Sparrevohn	65.52	28	eP	P	07 41 44.9	+0.3
	3.2nm,1.2s						
CNPM	China Poot	67.09	30	eP	P	07 41 54.5	-0.2
	5.2nm,0.7s						
NIL	Nilore	67.27	301	eP	P	07 41 56.1	-0.1
	7.1nm,0.8s						
SKT	Skwentna	67.64	27	eP	P	07 41 58.1	+0.1
	2.7nm,0.7s						
SML	Sawmill	69.06	28	eP	P	07 42 07.4	+0.4
	4.7nm,0.9s						
KKAR	Karatay Array	69.66	312	eP	P	07 42 11.4	+0.3
	2.9nm,1.0s						
HDA	Harding Lake	70.29	26	eP	P	07 42 14.5	0.0
	2.5nm,0.8s						
ILAR	Eielson Array	70.40	25	P	P	07 42 13.4	-1.7
	1.0nm,0.5s,baz=247,slow=5.8,SNR=22						
ILB	Eielson Array	70.40	25	eP	P	07 42 14.2	-0.9
	2.7nm,1.1s						
BRVK	Borovoye	70.54	322	eP	P	07 42 16.2	0.0
	3.6nm,1.0s						
DOT	Dot Lake	71.37	27	eP	P	07 42 21.4	+0.3
	3.7nm,1.1s						
EGAK	Eagle	72.81	26	eP	P	07 42 31.1	+1.4
	3.2nm,1.0s						
EPYK	Eagle Plains	74.83	24	eP	P	07 42 42.6	+1.1
	4.6nm,1.3s						
ABKAR	Akbulak array	76.96	318	eP	P	07 42 53.9	-0.1
	1.6nm,0.8s						
YKW3	Yellowknife Ar	84.68	27	eP	P	07 43 36.0	+1.1
	1.9nm,0.9s						
YKA	Yellowknife Ar	84.70	27	P	P	07 43 35.7	+0.7
	0.5nm,0.3s,baz=286,slow=5.0,SNR=11						
YKB5	Yellowknife Ar	84.70	27	eP	P	07 43 35.7	+0.7
BMO	Blue Mountains	87.82	45	eP	P	07 43 51.9	+0.9
	2.4nm,0.8s						
ARA0	ARCESS Array S	88.21	342	eP	P	07 43 52.0	-0.1
ARCES	ARCESS Array B	88.21	342	P	P	07 43 52.0	-0.1
	1.1nm,0.5s,baz=80,slow=6.7,SNR=8.7						
NV01	Mina Array Sit	88.70	51	eP	P	07 43 57.3	+1.9
NVAR	Mina Array Bea	88.70	51	P	P	07 43 57.3	+1.9
	1.9nm,0.7s,baz=263,slow=5.5,SNR=15						
KVN	Kaiserville	88.70	50	eP	P	07 43 56.5	+1.2
	2.1nm,1.0s						
FIA0	FINESS Array S	92.09	335	eP	P	07 44 09.3	-1.1
FINES	FINESS Array B	92.09	335	P	P	07 44 09.3	-1.1
	1.9nm,0.4s,baz=66,slow=5.6,SNR=17						
PDAR	Pinedale Array	93.79	45	LR	LR	08 25 32.4	
	comp=Z,17nm,18.9s,baz=265,slow=35						
NB200	NORSAR Array S	98.09	339	eP	Pdif	07 44 36.7	-1.2
NOA	NORSAR Array B	98.09

TDK	**Taldyqorghan**	**2.69 278**	*e*P		**Pg**	**07 40 10.2**	**-2.0**
	55nm,0.2s						
TDK			*e*S		**Sg**	**07 40 45.5**	**-1.5**
	97nm,0.5s						
UZB	**Uzynbulak**	**2.75 237**	Pg		**Pg**	**07 40 13.5**	**0.0**
	1.8nm,0.3s						
UZB			Lg		Lg	07 40 47.8	
	11nm,0.3s						
UZB	**Uzynbulak**	**2.75 237**	*e*P		**Pb**	**07 40 09.3**	**-0.8**
	3.2nm,0.3s						
UZB			*e*S		**Sb**	**07 40 43.9**	**0.0**
	11nm,0.3s						
MNBS	**Baschi**	**2.77 258**	Pg		**Pg**	**07 40 12.8**	**-1.0**
	4.1nm,0.3s						
MNBS			Lg		Lg	07 40 46.5	
	37nm,0.5s						
MNBS	**Baschi**	**2.77 258**	*e*P		**Pb**	**07 40 11.1**	**+0.8**
	4.1nm,0.3s						
MNBS			*e*S		**Sb**	**07 40 46.5**	**+2.1**
	37nm,0.5s						
KPKS	**Kokpek**	**2.80 245**	*e*P		**Pb**	**07 40 10.7**	**-0.1**
	7.2nm,0.2s						
KPKS			*e*S		**Sb**	**07 40 46.4**	**+1.3**
	66nm,0.5s						
KURS	**Kuram**	**3.12 248**	Pg		**Pg**	**07 40 19.2**	**-1.4**
	3.5nm,0.5s						
KURS			Lg		Lg	07 40 57.7	
	13nm,0.9s						
KURS	**Kuram**	**3.12 248**	*e*P		**Pb**	**07 40 16.9**	**+0.5**
	2.2nm,0.5s						
KURS			*e*S		**Sb**	**07 40 56.7**	**+2.2**
	4.3nm,0.4s						
ARXS	**Arharly**	**3.14 262**	Pg		**Pg**	**07 40 18.7**	**-2.2**
	3.9nm,0.3s						
ARXS			Lg		Lg	07 40 56.9	
	28nm,0.3s						
ARXS	**Arharly**	**3.14 262**	*e*P		**Pb**	**07 40 17.6**	**+0.9**
	2.6nm,0.3s						
ARXS			*e*S		**Sg**	**07 40 58.1**	**-3.6**
	28nm,0.3s						
SATY	**Saty**	**3.18 240**	Pg		**Pg**	**07 40 20.2**	**-1.3**
	8.1nm,0.1s						
SATY			Lg		Lg	07 40 59.4	
	37nm,0.4s						
SATY	**Saty**	**3.18 240**	*e*P		**Pb**	**07 40 18.3**	**+1.0**
	8.1nm,0.1s						
SATY			*e*S		**Sg**	**07 40 59.4**	**-3.3**
	37nm,0.4s						
ZSN	**Zaisan**	**3.33 33**	Pg		**Pg**	**07 40 24.6**	**+0.2**
	1.5nm,0.2s						
ZSN			Lg		Lg	07 41 07.0	
	3.5nm,0.3s						
ZSN	**Zaisan**	**3.33 33**	*e*P		**Pb**	**07 40 19.6**	**-0.2**
	1.3nm,0.1s						
ZSN			*e*S		**Sb**	**07 41 00.9**	**+0.6**
	3.5nm,0.3s						
CHKK	**Chushkaly**	**3.81 259**	Pg		**Pg**	**07 40 31.2**	**-2.5**
	1.8nm,0.3s						
CHKK			Lg		Lg	07 41 18.3	
	14nm,0.4s						
CHKK	**Chushkaly**	**3.81 259**	*e*P		**Pb**	**07 40 29.5**	**+1.5**
	1.1nm,0.3s						
CHKK			*e*S		**Sb**	**07 41 18.3**	**+4.0**
	14nm,0.4s						
KOTS	**Kotyrbulak**	**3.93 250**	Pg		**Pg**	**07 40 33.6**	**-2.5**
	3.1nm,0.2s						
KOTS			Lg		Lg	07 41 22.3	
	27nm,0.3s						
KOTS	**Kotyrbulak**	**3.93 250**	*e*P		**Pb**	**07 40 31.1**	**+0.9**
	3.1nm,0.2s						
KOTS			*e*S		**Sb**	**07 41 21.2**	**+3.4**
	27nm,0.3s						
MDOK	**Medeo**	**4.00 249**	Pg		**Pg**	**07 40 35.0**	**-2.3**
	3.3nm,0.4s						
MDOK			Lg		Lg	07 41 24.8	
	7.4nm,0.5s						
MDOK	**Medeo**	**4.00 249**	*e*P		**Pb**	**07 40 33.4**	**+2.0**
	3.3nm,0.4s						
MDOK			*e*S		**Sg**	**07 41 24.8**	**-4.4**
	7.4nm,0.5s						
KTBS	**Karatobe**	**4.06 258**	Pg		**Pg**	**07 40 35.3**	**-3.2**
	2.1nm,0.5s						
KTBS			Lg		Lg	07 41 25.5	
	24nm,0.5s						
KTBS	**Karatobe**	**4.06 258**	*e*P		**Pb**	**07 40 34.0**	**+1.6**
	2.1nm,0.5s						
KTBS			*e*S		**Sb**	**07 41 25.5**	**+4.0**
	24nm,0.5s						
TNSS	**Tian-Shan**	**4.12 248**	Pg		**Pg**	**07 40 38.9**	**-0.8**
	2.8nm,0.4s						
TNSS			Lg		Lg	07 41 31.7	
	9.5nm,0.4s						
TNSS	**Tian-Shan**	**4.12 248**	⇑*i*P		**Pg**	**07 40 38.9**	**-0.8**
	1.5nm,0.2s						
TNSS			*e*S		**Sg**	**07 41 34.7**	**+1.5**
	9.8nm,0.5s						
MTBS	**Maitube**	**4.43 251**	Pg		**Pg**	**07 40 44.2**	**-1.4**
	2.9nm,0.1s						
MTBS			Lg		Lg	07 41 40.8	
	12nm,0.2s						
MTBS	**Maitube**	**4.43 251**	*e*P		**Pg**	**07 40 42.5**	**-3.1**
	2.6nm,0.1s						
MTBS			*e*S		**Sg**	**07 41 40.8**	**-2.2**
	12nm,0.2s						
KST	**Kastek**	**4.78 252**	Pg		**Pg**	**07 40 50.0**	**-2.2**
	2.1nm,0.5s						
KST			Lg		Lg	07 41 50.7	
	5.8nm,0.6s						
KST	**Kastek**	**4.78 252**	*e*P		**Pb**	**07 40 46.3**	**+1.6**
	1.0nm,0.3s						
KST			*e*S		**Sb**	**07 41 47.5**	**+5.2**
	5.8nm,0.6s						
DGS	**Degeres**	**4.84 255**	Pg		**Pg**	**07 40 51.4**	**-2.0**
	65nm,0.3s						
DGS			Lg		Lg	07 41 53.0	
	11nm,0.6s						
DGS	**Degeres**	**4.84 255**	*e*P		**Pb**	**07 40 46.5**	**+0.9**
	65nm,0.3s						
DGS			*e*S		**Sb**	**07 41 47.6**	**+3.7**
	11nm,0.6s						
KURBB	**Kurchatov Arra**	**6.41 339**	⇑Lg		Lg	07 42 42.8	
	8.8nm,0.6s						

NIED ***25*** *07:47:00, 39.°60N×143.°60E, h26km, Mw3.4 Best double couple: M₀1.47000×10¹⁴ NP1:φ₀=231.00000°, δ23.00000°, λ105.00000°. NP2:φ₀=35.00000°, δ67.00000°, λ84.00000°.*

JMA 25 07:47:07.3±0.1, 39.°63N×143.°59E, h27km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.36 284**		P	Pn	07 47 30.9	+0.3
JTH				*e*S	Sn	07 47 47.9	+0.1
MIYJ	**Miyakonagasawa**	**1.37 268**		P	Pn	07 47 31.2	+0.6
JKEN	**Kujiedanarisaw**	**1.56 292**		P	Pn	07 47 33.7	+0.5
JKEN				*e*S	Sn	07 47 53.4	+0.9
OFUJ	**Ofunato**	**1.59 250**		P	Pn	07 47 34.3	+0.7
JANG	**Nango**	**1.76 296**		P	Pn	07 47 36.4	+0.4
JOM	**Ohasama**	**1.78 266**		P	Pn	07 47 37.6	+1.3
JOM				*e*S	Sn	07 47 59.4	+1.3
JMK	**Ichinoseki**	**1.96 251**		P	Pn	07 47 39.9	+1.2
JMK				*e*S	Sn	07 48 03.2	+0.8
JIO	**Ouri**	**2.10 237**		P	Pn	07 47 41.3	+0.6
JIO				*e*S	Sn	07 48 04.8	-1.2
JTM	**Tenmabayashi**	**2.25 302**		P	Pn	07 47 44.3	+1.6
JTM				*e*S	Sb	07 48 12.2	-2.4
JYK	**Kaneyama**	**2.61 255**		P	Pn	07 47 49.5	+1.9
JYK				*e*S	Sn	07 48 21.0	+2.6
JOT	**Ohata**	**2.61 313**		P	Pn	07 47 49.0	+1.3
JNBK	**Urakawa-nobuka**	**2.72 347**		P	Pn	07 47 52.0	+2.8
JNBK				*e*S	Sn	07 48 24.5	+3.3
JCH	**Churui**	**2.99 357**		P	Pn	07 47 55.0	+2.1
JCH				*e*S	Sn	07 48 29.9	+2.1

NEIC ***25*** *08:09:49.2±0.0, 23.°71N×99.°97W, h5km, MD4.0(MEX), After MEX.*

MEX 25 08:09:49.4±0.6, 23.°72N×99.°98W, h5km, MD4.0, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	**Linares**	**1.26**	**22**	*e*Pg	Pg	08 10 09.7	-4.0
LNIG				*e*Pg	Pb	08 10 09.7	-4.0
LNIG				*e*Sg	Sg	08 10 26.6	-3.3
LNIG				*e*Sn	Sb	08 10 26.7	-3.6
LNIG	**Linares**	**1.26**	**22**	*e*P	Pg	08 10 09.7	-4.0
LNIG				*i* S	Sg	08 10 26.7	-3.3
ZAIG	**Zacatecas**	**2.56**	**249**	*e*Pn	Pn	08 10 29.1	-2.7
ZAIG				*e*Sn	Sn	08 11 02.5	-1.0
ZAIG	**Zacatecas**	**2.56**	**249**	*e*P	Pn	08 10 29.3	-2.6
ZAIG				*e*S	Sn	08 10 59.5	-4.0
833A	**Chaparral WMA,**	**4.61**	**6**	*e*Pn	Pn	08 10 59.3	-0.5
HPIG		**6.05**	**303**	*e*Pn	Pn	08 11 17.0	-2.8
TX31	**Lajitas Ar. Si**	**6.49**	**330**	*e*Pn	Pn	08 11 22.7	-3.0
JCT	**Junction City**	**6.73**	**1**	*e*Pn	Pn	08 11 26.0	-3.0
JCT				*e*Sn	Sn	08 12 43.8	-2.3
ABTX	**Abilene, Hawle**	**8.87**	**2**	*e*Pn	Pn	08 11 55.8	-2.5
WMOK	**Wichita Mounta**	**11.03**	**5**	*e*Pn	Pn	08 12 24.1	-3.7
TEIG	**Tepich**	**11.41**	**106**	*e*Pn	Pn	08 12 33.9	+0.8

BJI ***25*** *08:34:36.4±0.0, 55.°40N×113.°42E, h10km, mb4.4/31, mB4.7/25, Ms4.5/21, Ms7 4.3/21*
IDC ***25*** *08:34:38.5±0.5, 55.°16N×113.°05E, h0km, mb4.2/25, mb1 4.4/27, mb1mx4.3/41, mbtmp4.2/27, ML4.1/2, MS3.7/20, Ms1 3.8/20, ms1mx3.6/42, Error ellipse: s-maj=12.5km s-min=10.5km az=8.0*
MOS ***25*** *08:34:38.4±1.0, 55.°10N×113.°09E, h11km, mb4.8/40, Error ellipse: s-maj=6.8km s-min=5.2km az=84.2*
BYKL ***25*** *08:34:40.4±0.2, 55.°14N×113.°07E*
NEIC ***25*** *08:34:40.0±1.1, 55.°12N×113.°04E, h10km, mb4.6/86, Error ellipse: s-maj=15.7km s-min=14.5km az=163.0*
ISCJB ***25*** *08:34:41.8±0.1, 55.°10N±0.°02×113.°08E±0.°03, h33km, mb4.5/124, MS3.8/27, Error ellipse: s-maj=2.8km s-min=2.2km az=151.0*

ISC 25 08:34:40.2±0.6, 55.°11N±0.°02×113.°04E±0.°02, h11km±3km, n317, σ1§85/364, mb4.6/133, MS3.8/27, 32C-15D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**1.05**	**16**	⇑*i*Pg	Pb	**08 35 00.2**	**-0.1**
SVKR				*e*Pb	Pn	**08 35 02.1**	**+1.3**
SVKR				max		08 35 02.5	
	10μm,0.3s						
SVKR				*e*Sg	Sg	**08 35 15.0**	**+1.0**
SVKR				*e*Sb	Sn	**08 35 18.9**	**+3.4**
SVKR				max		08 35 19.7	
	152μm,0.5s						
SVKR	**Severomuysk**	**1.05**	**16**	⇑*i*PG	Pb	**08 35 00.2**	**-0.1**
SVKR				*e*S	Sb	**08 35 14.4**	**+0.3**
YLYR	**Ulyunkhan**	**1.10**	**258**	⇑*i*Pg	Pb	**08 35 01.0**	**-0.3**
YLYR				Pmax		08 35 03.0	
	891nm,0.7s						
YLYR				*e*Sg	Sn	**08 35 16.6**	**-0.2**
YLYR				*e*Sb	Sg	**08 35 20.0**	**+4.2**
YLYR				max		08 35 20.6	
	16μm,0.3s						
YLYR	**Ulyunkhan**	**1.10**	**258**	⇑*i*PG	Pb	**08 35 01.0**	**-0.3**
YLYR				*e*		08 35 16.6	
YLYR				pmax	pmax		
	comp=Z,1μm,0.4s						
YLYR				smax	smax		
	comp=N,13μm,0.4s						
YOA	**Uoyan**	**1.26**	**324**	⇑*i*Pg	Pn	**08 35 03.6**	**-0.1**
YOA				Pmax		08 35 04.0	
	comp=N,16μm,0.3s						
YOA				*e*Sg	Sg	**08 35 21.5**	**+0.6**
YOA				Smax		08 35 22.2	
	comp=N,71μm,0.4s						
YOA	**Uoyan**	**1.26**	**324**	⇑*i*PG	Pn	**08 35 03.7**	**0.0**
YOA				*i*		08 35 21.5	
YOA				pmax	pmax		
	comp=Z,17μm,0.3s						
YOA				smax	smax		
	comp=N,6μm,0.4s						
KMO	**Kumora**	**1.30**	**307**	⇑*i*Pg	Pn	**08 35 04.0**	**-0.2**
KMO				Pmax		08 35 04.5	
	comp=N,10μm,0.4s						
KMO				*i* Sg	Sb	**08 35 21.4**	**+0.1**
KMO				Smax		08 35 22.3	
	comp=N,31μm,1.0s						
KMO				*e*Sb	Sg	**08 35 24.3**	**+2.3**
KMO	**Kumora**	**1.30**	**307**	⇑*i*PG	Pn	**08 35 04.0**	**-0.2**
KMO				*e*		08 35 21.2	
KMO				pmax	pmax		
	comp=Z,8μm,0.4s						
KMO				smax	smax		
	comp=N,420nm,0.8s						
NLYR	**Nelyaty**	**2.04**	**46**	⇓*i*Pn	Pn	**08 35 14.5**	**+0.1**
NLYR				⇓*i*Pg	Pb	**08 35 16.9**	**-0.4**
NLYR				*e*		08 35 19.7	
NLYR				max		08 35 22.0	
	comp=N,3μm,0.8s						
NLYR				*e*Sg	Sb	**08 35 43.6**	**+1.0**
NLYR				Smax		08 35 50.0	
	comp=N,15μm,1.1s						
NLYR	**Nelyaty**	**2.04**	**46**	*e*PN	Pn	**08 35 14.5**	**+0.1**
NLYR				*e*		08 35 16.6	
NLYR				*e*		08 35 43.2	
NLYR				pmax	pmax		
	comp=Z,3μm,0.8s						
NLYR				smax	smax		
	comp=N,15μm,1.3s						
NIZ	**Nizh Angarsk**	**2.10**	**290**	⇓*i*Pg	Pn	**08 35 16.6**	**+1.4**
NIZ				*e*		08 35 22.6	
NIZ				max		08 35 23.8	
	comp=N,2μm,1.1s						
NIZ				*e*Sg	Sb	**08 35 44.7**	**+0.5**
NIZ				*e*SgSg	Sg	**08 35 47.0**	**-0.5**
NIZ				max		08 35 48.1	
	comp=N,17μm,0.8s						
NIZ	**Nizh Angarsk**	**2.10**	**290**	*e*PN	Pb	**08 35 18.8**	**+0.6**
NIZ				*e*		08 35 46.0	
NIZ				pmax	pmax		
	comp=Z,2μm,0.9s						
NIZ				smax	smax		
	comp=N,9μm,1.0s						
SYVR	**Suvo**	**2.30**	**232**	*e*	Pb	**08 35 20.9**	**-0.7**
SYVR				*e*Pg	Pg	**08 35 21.8**	**-2.4**
SYVR				*e*		08 35 26.7	
SYVR				max		08 35 27.7	
	comp=N,1μm,1.1s						
SYVR				*e*Sn	Sb	**08 35 49.4**	**-0.5**
SYVR				*e*Sg	Sg	**08 35 53.0**	**-0.9**
SYVR				Smax		08 36 00.7	
	comp=N,6μm,0.8s						
SYVR	**Suvo**	**2.30**	**232**	*e*PN	Pn	**08 35 19.0**	**+1.1**
SYVR				*e*		08 35 21.5	
SYVR				*e*		08 35 52.9	
SYVR				pmax	pmax		
	comp=Z,1μm,1.0s						
SYVR				smax	smax		
	comp=E,6μm,0.8s						
BOD	**Bodaibo**	**2.77**	**11**	⇓*i*Pn	Pn	**08 35 23.9**	**-0.4**
BOD				⇓*i*Pg	Pb	**08 35 28.6**	**-0.9**
BOD				Pmax		08 35 36.9	
	comp=E,1μm,0.7s						
BOD				*e*Sn	Sn	**08 35 57.7**	**+0.1**
BOD				*e*Sg	Sb	**08 36 04.6**	**+1.2**
BOD				Smax		08 36 06.3	
	comp=E,12μm,0.8s						
BOD	**Bodaibo**	**2.77**	**11**	*e*PN	Pn	**08 35 24.1**	**-0.2**
BOD				*e*		08 35 28.6	
BOD				*e*		08 36 04.9	
BOD				pmax	pmax		
	comp=Z,1μm,0.8s						
BOD				smax	smax		
	comp=E,9μm,1.0s						
CIT	**Chita**	**3.11**	**174**	*e*Pn	Pn	**08 35 28.9**	**-0.2**
CIT				*e*Pg	Pb	**08 35 35.7**	**+0.2**
CIT				Pmax		08 35 40.3	
	comp=E,1μm,0.5s						
CIT				*e*Sg	Sg	**08 36 16.9**	**-3.2**
CIT				Smax		08 36 20.6	
	comp=E,8μm,0.8s						
CIT	**Chita**	**3.11**	**174**	*e*PN	Pn	**08 35 29.0**	**-0.2**
CIT				*e*		08 35 35.4	
CIT				*e*S	Sn	**08 36 07.8**	**+1.5**
CIT				*e*		08 36 16.7	
CIT				pmax	pmax		
	comp=Z,1μm,0.5s						
CIT				smax	smax		
	comp=E,6μm,0.4s						
MXMB	**Maximikha**	**3.13**	**235**	*e*Pn	Pn	**08 35 30.0**	**+0.7**
MXMB				*e*Pg	Pb	**08 35 36.8**	**+1.1**
MXMB				*e*		08 36 01.0	
MXMB				*e*Sg	Sg	**08 36 18.2**	**-2.4**
CRS	**Chara**	**3.44**	**56**	⇓*i*Pn	Pn	**08 35 34.0**	**+0.3**
CRS				*e*Pg	Pb	**08 35 39.9**	**-1.2**
CRS				*e*		08 35 44.4	
CRS				max		08 35 49.4	
	comp=E,1μm,1.0s						
CRS				*e*Sg	Sb	**08 36 26.1**	**+3.3**
CRS				Smax		08 36 37.9	
	comp=E,5μm,1.3s						
OGRR	**Ongureny**	**3.51**	**247**	⇓*i*Pn	Pn	**08 35 36.5**	**+2.0**
OGRR				*e*Pg	Pb	**08 35 43.9**	**+1.7**
OGRR				*e*		08 35 51.8	
OGRR				max		08 35 51.8	
	comp=E,404nm,0.9s						
OGRR				*e*		08 36 19.6	
OGRR				*e*Sg	Sg	**08 36 31.0**	**-1.7**
OGRR				Smax		08 36 39.3	
	comp=E,1μm,1.5s						
OGRR	**Ongureny**	**3.51**	**247**	*e*PN	Pn	**08 35 36.3**	**+1.8**
OGRR				*e*		08 35 43.9	
OGRR				*e*		08 36 27.7	
OGRR				pmax	pmax		
	comp=Z,408nm,1.0s						
OGRR				smax	smax		
	comp=E,781nm,0.5s						
KELR	**Kotokel**	**3.76**	**233**	*e*Pn	Pn	**08 35 36.8**	**-1.2**
KELR				*e*Pg	Pb	**08 35 48.4**	**+1.9**
KELR				*e*Sg	Sg	**08 36 39.4**	**-1.4**
TUP	**Tupik**	**4.07**	**97**	⇑*i*Pn	Pn	**08 35 42.1**	**-0.1**
TUP				*e*Pg	Pb	**08 35 52.6**	**+0.9**
TUP				Pmax		08 35 53.5	
	comp=E,502nm,1.2s						
TUP				*e*Sn	Sn	**08 36 25.7**	**-4.1**
TUP				*e*Sg	Sb	**08 36 45.1**	**+4.3**
TUP				Smax		08 36 51.5	
	comp=E,7μm,0.8s						
TUP	**Tupik**	**4.07**	**97**	*e*PN	Pn	**08 35 42.3**	**+0.1**
TUP				*e*		08 35 52.8	
TUP				*e*S	Sn	**08 36 29.6**	**-0.2**
TUP				*e*		08 36 45.6	
TUP				pmax	pmax		
	comp=Z,466nm,0.5s						
TUP				smax	smax		
	comp=N,8μm,1.3s						
KHNR	**Khani**	**4.30**	**62**	*e*Sg	Sb	**08 36 52.8**	**+5.3**
VTMR	**Vitim**	**4.35**	**357**	*e*Pn	Pn	**08 35 44.8**	**-1.2**
VTMR				*e*Pg	Pb	**08 35 57.6**	**+1.2**
VTMR				*e*Sn	Sn	**08 36 35.1**	**-1.5**
VTMR				*e*Sg	Sb	**08 36 52.4**	**+3.6**
UUDB	**Ulan-Yde**	**4.57**	**227**	⇓*i*Pn	Pn	**08 35 50.1**	**+1.0**
UUDB				*e*		08 35 53.3	
UUDB				*e*Pg	Pb	**08 36 03.1**	**+2.9**
UUDB				*e*		08 36 07.7	
UUDB				Pmax		08 36 09.1	
	comp=N,668nm,0.5s						
UUDB				*e*		08 36 38.0	
UUDB				*e*Sg	Sg	**08 37 03.3**	**-3.4**
UUDB				Smax		08 37 16.7	
	comp=N,3μm,1.3s						
TRG	**Tyrgan**	**4.60**	**242**	⇑*i*Pn	Pn	**08 35 50.5**	**+1.0**
TRG				*e*Pg	Pb	**08 36 02.8**	**+2.0**
TRG				Pmax		08 36 09.7	
	comp=N,104nm,1.0s						
TRG				*e*		08 36 46.8	
TRG				*e*Sg	Sg	**08 37 03.6**	**-4.2**
TRG				Smax		08 37 17.5	
	comp=N,766nm,1.0s						
TRG	**Tyrgan**	**4.60**	**242**	*e*PN	Pn	**08 35 50.6**	**+1.0**
TRG				*e*		08 36 03.6	
TRG				*e*S	Sn	**08 36 44.7**	**+1.7**
TRG				*e*		08 37 04.2	
TRG				pmax	pmax		
	comp=Z,95nm,0.7s						
TRG				smax	smax		
	comp=N,657nm,0.6s						
KAB	**Kabansk**	**4.88**	**234**	*e*	Pb	**08 36 04.5**	**-1.1**
KAB				*e*Pg	Pg	08 36 08.1	-5.6
KAB				Pmax		08 36 23.2	
	comp=N,463nm,1.1s						
KAB				*e*Sg	Sg	**08 37 12.8**	**-4.1**
KAB				Smax		08 37 27.6	
	comp=N,7μm,1.2s						
STDB	**Stepnoy Dvoret**	**4.94**	**236**	*e*	Pb	**08 36 06.3**	**-0.3**
STDB				*e*		08 36 11.4	
STDB				*e*Sg	Sg	**08 37 14.3**	**-4.4**
YKLR	**Yuktali**	**5.08**	**70**	⇓*i*Pn	Pn	**08 35 56.0**	**-0.1**
YKLR				*e*Pg	Pb	**08 36 09.7**	**+0.8**
YKLR				*e*		08 36 14.7	
YKLR				*e*Sg	Sb	**08 37 16.3**	**+6.5**
BGT	**Bolshoye Golou**	**5.49**	**239**	*e*Sg	Sg	**08 37 32.5**	**-3.6**
LSTR	**Listvyanka**	**5.88**	**240**	*e*Pn	Pn	**08 36 07.2**	**+0.1**
LSTR				*e*Pg	Pb	**08 36 25.8**	**+3.3**
LSTR				Pmax		08 36 39.6	
	comp=N,40nm,0.8s						
LSTR				*e*Sn	Sn	**08 37 12.7**	**-1.6**
LSTR				*e*Sg	Sg	**08 37 43.5**	**-5.1**
LSTR				Smax		08 38 16.8	
	comp=N,491nm,1.7s						
IRK	**Irkutsk**	**5.95**	**245**	*e*Sg	Sg	**08 37 44.6**	**-6.3**
IRK				Smax		08 37 57.6	
	comp=N,1μm,0.6s						
IRK	**Irkutsk**	**5.95**	**245**	*e*PN	Pb	**08 36 26.2**	**+2.5**
IRK				*e*		08 37 42.9	
IRK				pmax	pmax		
	comp=Z,250nm,0.2s						
IRK				smax	smax		
	comp=E,1μm,0.5s						
IVK	**Ivanovka**	**6.12**	**241**	*e*Pn	Pn	**08 36 09.9**	**-0.6**
IVK				*e*Pg	Pb	**08 36 29.1**	**+2.3**
TLY	**Talaya**	**6.58**	**242**	*e*Pn	Pn	**08 36 15.6**	**-1.2**
TLY	**Talaya**	**6.58**	**242**	*e*PN	Pn	**08 36 18.2**	**+1.4**
TLY				*e*		08 36 39.7	
TLY				*e*		08 38 06.1	
TLY				pmax	pmax		
	comp=Z,63nm,0.5s						
TNDR	**Tynda**	**6.70**	**85**	*e*Pn	Pn	**08 36 18.7**	**+0.3**
TNDR				*e*		08 36 36.7	
TNDR				*i* Sg	Sg	**08 38 07.9**	**-7.2**
CLNS	**Chul'man**	**6.88**	**71**	*e*Pn	Pn	**08 36 18.2**	**-2.6**
CLNS				*e*Pg	Pb	**08 36 43.8**	**+4.3**
CLNS				*e*Sg	Sg	**08 38 12.4**	**-8.2**
ARS	**Arshan**	**7.09**	**248**	*e*Pn	Pn	**08 36 24.3**	**+0.5**
ARS				*e*Pg	Pb	**08 36 47.4**	**+4.2**
ARS				Pmax		08 36 58.4	
	comp=Z,108nm,0.7s						
ARS				*e*Sg	Sg	**08 38 21.7**	**-5.8**
ARS				Smax		08 38 33.7	
	comp=Z,1μm,0.9s						
ARS	**Arshan**	**7.09**	**248**	*e*PG	Pb	08 36 48.9	+5.7
ARS				*e*		08 38 17.5	
ARS				pmax	pmax		
	comp=Z,109nm,0.7s						
ARS				smax	smax		
	comp=E,1μm,0.9s						
HIA	**Hailar**	**7.16**	**142**	*e*Pn	Pn	**08 36 23.0**	**-1.7**
HIA	**Hailar**	**7.16**	**142**	*e*Pn	Pn	**08 36 24.4**	**-0.3**
HIA				*e*Pg	Pb	08 36 50.3	+5.9
HIA				*e*Sg	Sg	**08 38 23.8**	**-5.9**
HIA	**Hailar**	**7.16**	**142**	*e*PN	Pn	**08 36 23.0**	**-1.7**
ZAK	**Zakamensk**	**7.58**	**235**	*e*Pn	Pn	**08 36 33.7**	**+3.2**
ZAK				*e*Pg	Pb	08 36 57.8	+6.2
ZAK				Pmax		08 37 18.3	
	comp=E,32nm,1.0s						
ZAK				*e*Sg	Sg	**08 38 37.0**	**-6.2**
ZAK				Smax		08 39 08.4	
	comp=E,392nm,1.5s						
ZAK	**Zakamensk**	**7.58**	**235**	*e*PG	Pg	08 36 58.6	-6.6
ZAK				*e*		08 38 35.1	
ZAK				pmax	pmax		
	comp=Z,31nm,0.9s						
ZAK				smax	smax		
	comp=E,392nm,1.6s						
MOY	**Mondy**	**7.98**	**249**	*e*PN	Pn	**08 36 37.6**	**+1.5**
MOY				*i*		08 37 03.4	
ULN	**Ulaanbaatar**	**8.16**	**210**	*e*Pn	Pn	**08 36 38.7**	**+0.2**
ULN	**Ulaanbaatar**	**8.16**	**210**	*e*	Pn	08 36 44.9	+6.4
ULN				*e*		08 37 09.6	
ULN				*e*		08 38 15.9	
ULN				*i

ORL Orlik 8.24 257⇑ *i*Pn Pn 08 36 40.2 +0.6
ORL max 08 36 59.3
comp=Z,87nm,1.1s
ORL *e* 08 38 14.2
ORL *e*Sg Sg 08 38 54.0 -10
ORL Smax 08 39 07.4
comp=Z,294nm,1.8s
ORL Orlik 8.24 257 *e*PN Pn 08 36 40.8 +1.2
SONA0 Songino Array 8.38 212 *e*Pn Pn 08 36 42.7 +1.2
SONA0 *e*Sn **Sn 08 38 18.6 +2.4**
SONM Songino Array 8.38 212 Pn Pn 08 36 42.7 +1.2
comp=Z,1.2nm,0.3s,baz=25,slow=13,SNR=11
SONM Pg Pb 08 37 10.6 +5.4
comp=Z,3.5nm,0.3s,baz=19,slow=14,SNR=6.3
SONM Sn **Sn 08 38 18.6 +2.4**
comp=Z,4.7nm,0.3s,baz=30,slow=23,SNR=3.7
SONM Lg Lg 08 39 03.5
comp=Z,19nm,0.3s,baz=21,slow=27,SNR=12
SONM LR LR 08 40 14.1
comp=Z,524nm,19.9s,baz=50,slow=40
ZEA Zeya 8.40 94 *e*PN Pn 08 36 42.6 +0.9
ZEA pmax pmax
comp=Z,39nm,0.6s
ZEA MLR MLR
comp=Z,2μm,8.0s
YAK Yakutsk 11.09 45 *e*Pn Pn 08 37 17.9 -0.5
YAK Yakutsk 11.09 45 *e*P Pn 08 37 17.9 -0.5
KLR Kul'dur 12.89 109 Pn Pn 08 37 42.5 -0.5
comp=Z,1.6nm,0.3s,baz=307,slow=12,SNR=14
KLR Sn **Sn 08 40 07.5 +1.1**
comp=Z,1.1nm,0.3s,baz=320,slow=12,SNR=2.7
KLR Lg Lg 08 41 21.8
comp=Z,3.7nm,0.3s,baz=224,slow=9.9,SNR=12
KLR LR LR 08 43 08.0
comp=Z,401nm,19.6s,baz=302,slow=40
CN2 Changchun 13.88 140 *e*P Pn 08 37 58.5 +1.9
CN2 *e*S **Sn 08 40 34.5 +4.0**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,1μm,12.0s
CN2 LR LR
comp=Z,500nm,12.0s
CN2 LR LR
comp=Z,1μm,10.0s
HHC Hu-ho-hao-te 14.31 185 *e*P Pn 08 38 04.0 +1.4
HHC pmax pmax
comp=Z,14nm,1.1s
HHC pmax pmax
comp=Z,19nm,5.4s
HHC LR LR
comp=Z,1μm,7.3s
HHC LR LR
comp=Z,410nm,7.1s
USA0B Ussuriysk Arra 16.37 124 *e*Pn P 08 38 31.0 -1.5
comp=Z,16nm,1.4s
USRK Ussuriysk Ar. 16.37 124 Pn P 08 38 37.7 +5.2
comp=Z,0.1nm,0.3s,baz=310,slow=14,SNR=4.5
USRK Lg Lg 08 43 14.2
comp=Z,0.4nm,0.3s,baz=326,slow=18,SNR=5.0
ZALV Zalesovo Beam 16.38 278 Lg Lg 08 43 10.2
comp=Z,0.5nm,0.3s,baz=76,slow=24,SNR=4.8
ZALV LR LR 08 45 06.3
comp=Z,258nm,18.6s,baz=70,slow=38
DGZ Jazzator, Alta 16.48 261 *i* P P 08 38 33.6 -0.4
OKH Okha 17.45 83 *de*P Pn 08 38 38.6 -4.5
OKH MLR MLR
comp=Z,500nm,9.0s
TIXI Tiksi 17.93 16 P Pn 08 38 44.0 -5.0
comp=Z,1.0nm,0.3s,baz=194,slow=7.7,SNR=7.4
TIXI S **Sn 08 41 59.5 -9.1**
comp=Z,1.2nm,0.3s,baz=277,slow=17,SNR=3.4
TIXI Lg Lg 08 43 59.5
comp=Z,0.7nm,0.3s,baz=348,slow=17,SNR=3.5
TIXI LR LR 08 45 58.9
comp=Z,464nm,19.1s,baz=188,slow=38
TIXI Tiksi 17.93 16 *e*Pn Pn 08 38 48.7 -0.3
comp=Z,23nm,0.6s
TIXI Tiksi 17.93 16 *ce*P Pn 08 38 43.3 -5.7
TIXI pmax pmax
comp=Z,11nm,1.0s
GTA Gaotai 18.04 215 *e*P P 08 38 55.5 +4.3
GTA pP sP 08 39 00.0 +3.6
GTA sP pP 08 39 03.0 +8.2
GTA pmax pmax
comp=Z,42nm,5.4s
GTA LR LR
comp=Z,360nm,11.4s
GTA LR LR
comp=Z,560nm,12.4s
GTA LR LR
comp=Z,750nm,12.1s
UGL Uglegorsk 18.74 97 P P 08 38 50.9 -7.7
WMQ Urumqi 19.85 246 *e*P Pn 08 39 13.3 +0.8
WMQ pP sP 08 39 17.0 +0.9
WMQ sP pP 08 39 21.0 +6.5
WMQ pmax pmax
comp=Z,11nm,0.7s
LZH Lanzhou 20.05 202 *e*P Pn 08 39 14.8 -0.2
LZH *e*S **S 08 42 53.8 -4.6**
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,190nm,5.4s
LZH LR LR
comp=Z,780nm,12.5s
LZH LR LR
comp=Z,1μm,10.3s
LZH LR LR
comp=Z,750nm,13.0s
YSS Yuzh-Sakhalins 20.27 101 *e*P P 08 39 14.7 -0.7
comp=Z,12nm,0.9s
YSS Yuzh-Sakhalins 20.27 101 *e*P Pn 08 39 16.6 -0.7
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS MLR MLR
comp=Z,400nm,11.0s
YSS MLR MLR
comp=N,800nm,12.0s
KS15 Wonju Array Si 20.36 144 *e*P P 08 39 16.2 -0.2
comp=N,9.7nm,0.9s
KSRS Korea Array 20.36 144 P P 08 39 17.1 +0.7
comp=N,2.7nm,1.0s,baz=353,slow=9.1,SNR=4.4
KSRS Lg Lg 08 45 19.8
comp=N,0.9nm,0.3s,baz=329,slow=28,SNR=5.7
KSRS LR LR 08 48 14.3
comp=N,147nm,20.9s,baz=335,slow=40
MA2 Magadan 20.64 62 P P 08 39 19.3 0.0
comp=N,2.9nm,0.4s,baz=315,slow=5.7,SNR=3.0
MA2 Lg Lg 08 45 14.6
comp=N,4.6nm,0.7s,baz=195,slow=16,SNR=2.5
MK31 Makanchi Array 20.94 259 *e*P P 08 39 21.6 -1.0
comp=N,13nm,1.3s
MK31 Makanchi Array 20.94 259 Pn P 08 39 23.4 +0.8
comp=N,16nm,1.2s,baz=47,slow=14,SNR=6.6
MK31 ⇓Lg Lg 08 41 01.7
comp=N,8.1nm,1.0s,baz=53,slow=11,SNR=4.1
MK31 Makanchi Array 20.94 259 *i* P P 08 39 23.4 +0.7
MK31 pmax pmax
comp=Z,16nm,1.3s
MK32 Makanchi Array 20.94 259 *e*P P 08 39 23.5 +0.9
MKAR Makanchi Array 20.94 259 P P 08 39 23.5 +0.9
comp=Z,1.8nm,0.4s,baz=52,slow=8.1,SNR=6.9
MKAR Lg Lg 08 45 45.4
comp=Z,0.6nm,0.7s,baz=59,slow=25,SNR=3.8
MKAR LR LR 08 47 45.0
comp=Z,177nm,21.6s,baz=45,slow=38
MKAR Makanchi Array 20.94 259 *ce*P Pn 08 39 24.1 -1.1
MKAR pmax pmax
comp=Z,2.0nm,0.4s
KURK Kurchatov 21.07 272 *e*P P 08 39 23.3 -0.7
comp=Z,19nm,0.9s
KURK Kurchatov 21.07 272 *ce*P P 08 39 24.5 +0.5
KURK pmax pmax
comp=Z,32nm,1.3s
MAKZ Makanchi 21.11 260 *e*P P 08 39 23.7 -0.8
comp=Z,23nm,0.9s
MAKZ Makanchi 21.11 260 ⇓Pn P 08 39 25.3 +0.8
comp=Z,19nm,0.9s
MAKZ Makanchi 21.11 260 *e*P P 08 39 23.7 -0.8
MAKZ pmax pmax
comp=Z,23nm,0.9s
KURBB Kurchatov Arra 21.17 272 P P 08 39 24.6 -0.4
comp=Z,15nm,0.9s,baz=67,slow=11,SNR=5.6
KURBB Lg Lg 08 45 42.3
comp=Z,2.7nm,1.0s,baz=68,slow=32,SNR=3.6
KURBB Kurchatov Arra 21.17 272 ⇑Pn P 08 39 24.7 -0.4
comp=Z,33nm,1.1s,baz=68,slow=12
KURBB ⇑Lg Lg 08 40 54.5
comp=Z,64nm,0.8s
XAN Xi'an 21.27 189 P P 08 39 17.5 -8.8
XAN S Sn 08 43 30.3 +0.8
XAN smax smax
comp=N,49nm,1.7s
XAN smax smax
comp=E,45nm,2.4s
XAN LR LR
comp=N,880nm,10.0s
XAN LR LR
comp=E,420nm,8.0s
XAN LR LR
comp=Z,990nm,11.2s
SEY Seymchan 21.40 53 P P 08 39 28.1 +0.6
comp=Z,9.3nm,0.9s,baz=293,slow=11,SNR=14
SEY Lg Lg 08 45 52.2
comp=Z,14nm,0.9s,baz=326,slow=5.3,SNR=7.9
SEY Seymchan 21.40 53 *ce*P P 08 39 28.5 +1.1
NJ2 Nanjing 23.42 167 *e*P P 08 39 48.3 -0.7
NJ2 pmax pmax
comp=Z,12nm,0.5s
PDGK Podgornoye 24.62 255 P P 08 40 00.9 +0.5
PDGK pmax pmax
comp=Z,8.0nm,1.1s
BVAR Borovoye Array 24.83 283 P P 08 40 02.4 +0.3
comp=Z,7.0nm,0.7s,baz=75,slow=7.8,SNR=27
BRVK Borovoye 24.88 283 *e*P P 08 40 01.5 -1.0
comp=Z,26nm,1.1s
BRVK Borovoye 24.88 283 *i* P P 08 40 03.1 +0.6
BRVK pmax pmax
comp=Z,26nm,1.1s
JNU Nakatsue 25.30 143 LR LR 08 49 54.0
comp=Z,117nm,20.2s,baz=356,slow=36
MAJO Matsushiro 25.31 127 *e*P P 08 40 08.1 +1.5
MAJO Matsushiro 25.31 127 *e*P P 08 40 08.1 +1.5
MJAR Matsushiro Arr 25.32 127 P P 08 40 08.1 +1.5
comp=Z,1.1nm,0.7s,baz=337,slow=9.1,SNR=4.0
MJAR LR LR 08 50 28.2
comp=Z,214nm,18.2s,baz=315,slow=37
PRZ Przheval'sk 25.78 255 *e*P P 08 40 11.0 0.0
comp=Z,17nm,0.3s
PRZ Przheval'sk 25.78 255 *e*P P 08 40 11.0 0.0
PRZ pmax pmax
comp=Z,17nm,0.3s
OTUK Ortayu 25.85 272 P P 08 40 12.5 +1.1
OTUK pmax pmax
comp=Z,25nm,1.1s
PEA0B Petropavlovsk- 25.93 76 *e*P P 08 40 11.6 -0.4
comp=Z,31nm,1.2s
PETK Petropavlovsk- 25.93 76 P P 08 40 12.4 +0.4
comp=Z,7.5nm,0.8s,baz=314,slow=5.7,SNR=10
PETK LR LR 08 51 07.8
comp=Z,136nm,19.3s,baz=288,slow=38
TKM2 Tokmak 2 27.07 259 *i* P P 08 40 24.4 +1.8
TKM2 pmax pmax
comp=Z,9.0nm,1.0s
BOOM Boomskoye usch 27.15 258 *e*P P 08 40 22.9 -0.4
comp=Z,8.2nm,1.1s
BOOM Boomskoye usch 27.15 258 *e*P P 08 40 23.0 -0.4
BOOM pmax pmax
comp=Z,8.0nm,1.1s
BILL Bilibino 27.41 41 *e*P P 08 40 25.4 +0.2
comp=Z,10nm,1.5s
BILL Bilibino 27.41 41⇓ *e*P P 08 40 26.1 +0.9
BILL *e**PP **sP 08 40 32.4 +1.7**
BILL *e* 08 46 27.0
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,118nm,16.0s
AAK Ala-Archa 27.87 260 P P 08 40 30.4 +0.6
comp=Z,1.5nm,0.3s,baz=91,slow=5.5,SNR=5.5
AAK Ala-Archa 27.87 260 *e*P P 08 40 29.4 -0.4
comp=Z,4.5nm,0.8s
AAK Ala-Archa 27.87 260 *ce*P P 08 40 29.7 -0.1
AAK pmax pmax
comp=Z,5.0nm,0.8s
JHJ Hachijo jima 2 28.88 129 P P 08 40 40.2 +1.6
comp=Z,36nm,0.6s,baz=234,slow=19,SNR=2.4
JHJ LR LR 08 52 32.6
comp=Z,83nm,21.0s,baz=360,slow=37
KSH Kashi 29.15 253 *e*P P 08 40 50.5 +9.4
KK31 Karatay Array 29.84 264 *e*P P 08 40 46.0 -1.1
comp=Z,3.1nm,1.1s
KK31 Karatay Array 29.84 264 *e*P P 08 40 46.0 -1.1
KK31 pmax pmax
comp=Z,3.0nm,1.1s
ARU Arti 30.00 295 LR LR 08 54 36.8
comp=Z,269nm,19.8s,baz=68,slow=40
ARU Arti 30.00 295 *e*P P 08 40 48.1 -0.2
comp=Z,11nm,1.4s
ARU Arti 30.00 295 *i* P P 08 40 48.8 +0.5
ARU pmax pmax
comp=Z,7.0nm,1.4s
KMI Kunming 30.91 198 P P 08 40 58.5 +1.7
KMI pmax pmax
comp=Z,18nm,0.6s
KMI LR LR
comp=Z,500nm,11.6s
KMI LR LR
comp=Z,560nm,10.6s
KMI LR LR
comp=Z,480nm,11.6s
BTK Batken 31.65 259 *e*P P 08 41 03.4 +0.2
comp=Z,12nm,0.8s
BTK Batken 31.65 259 *e*P P 08 41 03.4 +0.2
BTK pmax pmax
comp=Z,12nm,0.8s
AB31 Akbulak array 32.39 282 *i* P P 08 41 10.1 +0.6
AB31 pmax pmax
comp=Z,11nm,0.9s
ABKAR Akbulak array 32.39 282 *e*P P 08 41 09.7 +0.2
comp=Z,9.4nm,0.8s
GAR Garm 32.66 258 *e*P P 08 41 12.3 +0.2
comp=Z,20nm,1.0s
GAR Garm 32.66 258 *e*P P 08 41 12.3 +0.2
GAR pmax pmax
comp=Z,20nm,1.0s
AKTO Aktyubinsk 32.87 285 P P 08 41 14.2 +0.5
comp=Z,3.1nm,0.7s,baz=59,slow=9.9,SNR=7.5
AKTO Aktyubinsk 32.87 285 P P 08 41 14.0 +0.3
AKTO pmax pmax
comp=Z,5.0nm,0.9s
KIRV Kirov 33.80 302 P P 08 41 22.1 +0.5
comp=Z,11nm,0.4s,baz=44,slow=9.0,SNR=3.6
PRGR Permogore 34.46 309 *e*P P 08 41 27.0 -0.3
PRGR pmax pmax
comp=Z,14nm,0.9s
SMY Shemya 35.04 68 *e*P P 08 41 32.5 +0.1
comp=Z,24nm,1.0s
SMY Shemya 35.04 68 *e*P P 08 41 32.5 +0.1
SMY pmax pmax
comp=Z,24nm,1.0s
QIZ Qiongzhong 36.10 185 P P 08 41 41.5 -0.4
QIZ S **S 08 47 22.5 +1.5**
QIZ LR LR
comp=Z,250nm,14.3s
APA Apatity 37.30 321⇑ *i*P P 08 41 46.2 -5.4
APA pmax pmax
comp=Z,4.0nm,0.7s
APA MLR MLR
comp=Z,100nm,12.0s
KLMR Klimovskoe 37.49 310 *e*P P 08 41 51.5 -1.7
KLMR pmax pmax
comp=Z,15nm,0.9s
KLMR Klimovskoe 37.49 310 *e*P P 08 41 51.5 -1.7
KLMR AMP 08 41 54.4
comp=Z,15nm,0.9s
NONG Nongkai 37.75 195 P P 08 42 02.3 +6.4
comp=Z,0.2nm,1.4s
SPA0 Spitsbergen Ar 38.08 341 *e*P P 08 41 58.1 0.0
comp=Z,38nm,1.4s
CMAR Chiang Mai Arr 38.14 202 P P 08 41 59.3 +0.1
comp=Z,0.6nm,0.3s,baz=0.0,slow=8.6,SNR=3.4
CMAR LR LR 08 59 28.9
comp=Z,121nm,18.7s,baz=85,slow=39
CMAR Chiang Mai Arr 38.14 202 *i* P P 08 42 05.4 +6.2
CMAR pmax pmax
comp=Z,1.0nm,0.3s
SKNT Sakolnakorn 38.70 194 P P 08 42 10.6 +6.7
comp=Z,12nm,0.8s
ARA0 ARCESS Array S 39.20 326 *e*P P 08 42 07.5 -0.2
ARCES ARCESS Array B 39.20 326 P P 08 42 07.5 -0.2
comp=Z,2.4nm,0.7s,baz=75,slow=9.9,SNR=9.9
ARCES LR LR 09 03 19.6
comp=Z,114nm,20.5s,baz=86,slow=44
OBN Obninsk 41.66 303⇑ *i*P P 08 42 28.2 +0.2
OBN *e**PP **sP 08 42 35.7 +2.1**
OBN *e*S **S 08 48 47.9 +3.9**
OBN SS **SS 08 51 48.0 -0.8**
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,211nm,16.0s
TOLK Toolik Lake Re 42.73 32 *e*P P 08 42 37.0 +0.3
comp=Z,6.3nm,0.9s
FIA1 FINESS Array S 42.91 315 *e*P P 08 42 38.2 +0.1
comp=Z,13nm,0.8s
FINES FINESS Array B 42.91 315 P P 08 42 38.2 +0.1
comp=Z,8.4nm,0.6s,baz=64,slow=8.7,SNR=32
FINES LR LR 09 01 56.7
comp=Z,160nm,19.4s,baz=48,slow=38
CHBT CHBT 43.09 195 P P 08 42 48.5 +8.5
comp=Z,103nm,0.5s,comp=Z,21μm
TTA Tatalina 43.66 41 *e*P P 08 42 44.2 -0.1
comp=Z,2.2nm,0.9s
TTA Tatalina 43.66 41 *e*P P 08 42 44.2 -0.1
TTA pmax pmax
comp=Z,2.0nm,0.9s
CAST Castle Rocks 44.85 39 *e*P P 08 42 53.4 -0.3
comp=Z,4.1nm,0.8s
DAG Danmarks Havn 44.89 346 *e*P P 08 42 53.4 -0.5
DAG pmax pmax
comp=Z,19nm,1.3s
DAG Danmarks Havn 44.89 346 *i* P P 08 42 53.4 -0.5
comp=Z,10.0nm,1.3s
KIV Kislovodsk 45.12 286 *e*P P 08 42 54.6 -1.6
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,127nm,16.0s
TRF Thorofare Moun 45.48 39 *e*P P 08 42 58.9 -0.1
comp=Z,2.3nm,1.0s
CCB Clear Creek Bu 45.62 36 *e*P P 08 42 59.6 -0.3
comp=Z,8.8nm,1.3s
WRH Wood River Hil 45.63 37 *e*P P 08 43 00.5 +0.5
comp=Z,5.2nm,0.8s
ILAR Eielson Array 45.86 36 P P 08 43 02.2 +0.5
comp=Z,5.4nm,0.9s,baz=299,slow=6.9,SNR=51
ILAR LR LR 09 04 35.8
comp=Z,82nm,19.8s,baz=338,slow=39
ILB Eielson Array 45.86 36 *e*P P 08 43 02.2 +0.5
comp=Z,8.1nm,1.0s
HDA Harding Lake 46.06 36 *e*P P 08 43 03.6 +0.2
comp=Z,5.7nm,0.8s
RSO Redoubt South 46.37 43 *e*P P 08 43 06.4 +0.4
DHY Denali Highway 46.75 38 *e*P P 08 43 08.9 -0.1
comp=Z,5.4nm,0.6s
GHO Glory Hole Cre 47.01 40 *e*P P 08 43 11.3 +0.3
comp=Z,6.5nm,0.7s
PMR Palmer 47.05 40 *e*P P 08 43 11.1 0.0
comp=Z,4.3nm,0.7s
PMR Palmer 47.05 40 *e*P P 08 43 11.1 0.0
PMR pmax pmax
comp=Z,4.0nm,0.7s
SML Sawmill 47.21 40 *e*P P 08 43 12.4 0.0
comp=Z,8.6nm,0.8s
SML Sawmill 47.21 40 *e*P P 08 43 12.4 0.0
SML pmax pmax
comp=Z,9.0nm,0.8s
ANN Anapa 47.43 291 *e*P P 08 43 10.9 -3.4
ANN pmax pmax
comp=Z,25nm,1.0s
DOT Dot Lake 47.53 36 *e*P P 08 43 14.3 -0.5
comp=Z,10nm,0.8s
INK Inuvik 47.56 28 P P 08 43 14.8 -0.2
comp=Z,3.9nm,0.8s,baz=343,slow=7.0,SNR=4.7
INK Inuvik 47.56 28 *e*P P 08 43 14.9 0.0
comp=Z,3.3nm,0.7s
INK Inuvik 47.56 28 *e*P P 08 43 14.9 0.0
INK pmax pmax
comp=Z,3.0nm,0.7s
EGAK Eagle 47.74 34 *e*P P 08 43 16.8 +0.4
comp=Z,6.3nm,1.0s
AKASG Malin Array Be 47.85 301 P P 08 43 17.5 0.0
comp=Z,2.4nm,0.4s,baz=46,slow=8.8,SNR=18
AKASG LR LR 09 05 19.7
comp=Z,143nm,18.2s,baz=30,slow=38
AKBB Malin Array Si 47.85 301 *e*P P 08 43 17.4 0.0
comp=Z,9.9nm,1.1s
AKBB Malin Array Si 47.85 301 *e*P P 08 43 17.4 0.0
AKBB pmax pmax
comp=Z,10.0nm,1.1s
EPYK Eagle Plains 48.02 31 *e*P P 08 43 18.7 +0.1
comp=Z,3.9nm,0.8s
MENT Mentasta 48.12 37 *e*P P 08 43 19.7 +0.3
comp=Z,3.3nm,0.8s
KDAK Kodiak Island 48.12 46 *i* P P 08 43 19.8 +0.4
OHAK Old Harbor 48.18 47 *e*P P 08 43 19.9 0.0
comp=Z,15nm,0.8s
GUMO Guam 48.26 137 LR LR 09 02 17.8
comp=Z,52nm,21.2s,baz=3.5,slow=34
DAWY Dawson 48.79 34 *e*P P 08 43 24.6 0.0
comp=Z,2.1nm,0.6s
NB2 NORSAR Subarra 48.87 321 P P 08 43 24.6 -0.7
comp=Z,6.2nm,1.0s,baz=49,slow=7.9
NB200 NORSAR Array S 48.87 321 *e*P P 08 43 23.8 -1.5
NOA NORSAR Array B 48.87 321 P P 08 43 23.8 -1.5
comp=Z,3.7nm,0.9s,baz=48,slow=7.3,SNR=11
NOA LR LR 09 05 40.3
comp=Z,132nm,18.1s,baz=45,slow=38
RES Resolute Bay 49.15 9 LR LR 09 05 40.8
comp=Z,90nm,18.9s,baz=294,slow=38
SUMG Summit 51.07 349 *e*P P 08 43 41.9 -0.4
comp=Z,12nm,1.1s
SUMG Summit 51.07 349 *e*P P 08 43 42.4 +0.2
SUMG pmax pmax
comp=Z,29nm,1.1s
SUMG Summit 51.07 349 *i* P P 08 43 42.4 +0.2
comp=Z,29nm,1.1s
KWP Kalwaria Pacla 51.71 304 *e*P P 08 43 47.4 +0.5
comp=Z,86nm,1.0s
KWP Kalwaria Pacla 51.71 304 *e*P P 08 43 47.4 +0.5
BUR08 Bucovina Ar. S 51.85 301 *e*P P 08 43 48.3 +0.2
comp=Z,6.9nm,0.8s
BURAR Bucovina Array 51.87 301⇑ *i*P P 08 43 48.5 +0.3
BURAR Bucovina Array 51.87 301 P P 08 43 49.8 +1.6
TESR Tescani 51.91 299⇑ *i*P P 08 43 49.2 +0.8
VRI Vrincioaia 52.31 298⇓ *i*P P 08 43 52.6 +1.2
OJC Ojcow 52.67 306 *e*P P 08 43 54.4 +0.4
comp=Z,6.8nm,1.1s
OJC Ojcow 52.67 306 *e*P P 08 43 54.4 +0.4
OJC pmax pmax
comp=Z,7.0nm,1.1s
TRPA Tarpa 52.82 303⇑ *i*P P 08 43 56.3 +1.2
DOPR Dopca 52.92 299⇓ *i*P P 08 43 57.9 +2.0
BR131 Keskin Array S 52.95 288 *e*P P 08 43 57.0 +0.7
comp=Z,2.6nm,0.9s
MLR Muntele Rosu 52.97 298 *e*P P 08 43 57.2 +0.8
comp=Z,5.1nm,1.1s
MLR Muntele Rosu 52.97 298⇑ *i*P P 08 43 58.0 +1.6
MLR Muntele Rosu 52.97 298 *e*P P 08 43 57.2 +0.8
MLR pmax pmax
comp=Z,5.0nm,1.1s
KDZE Karadeniz Ereo 53.02 291⇑ *i*P P 08 43 59.7 +3.0
PSI Prapat 53.40 198 *e*P P 08 44 00.6 +0.8
comp=Z,13nm,1.0s
PSI Prapat 53.40 198 *e*P P 08 44 00.6 +0.8
PSI pmax pmax
comp=Z,13nm,1.0s
VOIR 53.46 299⇑ *i*P P 08 44 01.4 +1.5
DRGR 53.67 301⇑ *i*P P 08 44 02.4 +0.9
OKC Ostrava-Krasne 53.70 307 AMS AMS 09 08 40.0
comp=Z,200nm,18.3s
MDUB Mudurnu 53.74 291 *e*P P 08 44 02.8 +0.6
comp=Z,35nm,0.7s
DPC Dobruska-Polom 54.17 308 *e*P P 08 44 06.5 +1.5
DPC *e* 08 44 14.6
DPC Dobruska-Polom 54.17 308 *e*P P 08 44 06.5 +1.5
DPC *ex* x 08 44 14.6
UPC Upice 54.19 309 *e*P P 08 44 06.6 +1.4
UPC Upice 54.19 309 *e*P P 08 44 06.6 +1.4
VYHS Vyhne 54.33 305 *e*P P 08 44 07.4 +1.2
VYHS pmax pmax
comp=Z,4.0nm,1.2s
VYHS Vyhne 54.33 305 *e*P P 08 44 07.4 +1.2
PVCC Panska Ves 54.82 309 AMS AMS 09 10 00.0
comp=Z,200nm,8.4s
BRG Berggiesshubel 54.85 310 *e*P P 08 44 10.1 +0.2

	comp=Z,10nm,1.3s						
BRG				*e*			08 44 18.7
	comp=Z,4.3nm,0.9s						
BRG	**Berggiesshubel**	**54.85**	**310**	*e*P	**P**	**08 44 10.1**	**+0.2**
BRG				*e*			08 44 18.7
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CLL	**Collm**	**54.95**	**311**	*i* P	**P**	**08 44 10.3**	**-0.3**
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**54.95**	**311**	*i* P	**P**	**08 44 10.3**	**-0.3**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BZS	**Buzias**	**55.04**	**301** ⇑	*i*P	**P**	**08 44 12.5**	**+1.2**
MDVR	**Moldovita**	**55.59**	**300** ⇑	*i*P	**P**	**08 44 16.1**	**+0.7**
CONA	**Conrad Observa**	**56.12**	**307**	*i* pP	**P**	**08 44 20.8**	**+1.6**
	comp=Z,4.0nm,0.7s						
KHC	**Kasperske Hory**	**56.28**	**309**	*e*P	**P**	**08 44 20.2**	**-0.1**
	comp=Z,2.6nm,0.8s						
KHC	**Kasperske Hory**	**56.28**	**309**	*e*P	**P**	**08 44 20.9**	**+0.6**
KHC				*e*		08 44 29.8	
KHC	**Kasperske Hory**	**56.28**	**309**	*e*P	**P**	**08 44 20.9**	**+0.6**
KHC				*ex*	x	08 44 29.8	
VTS	**Vitosha**	**56.38**	**298**	*e*P	**P**	**08 44 21.3**	**+0.1**
	comp=Z,4.1nm,0.7s						
VTS	**Vitosha**	**56.38**	**298**	*e*P	**P**	**08 44 21.3**	**+0.1**
VTS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GEC2	**GERESS Array S**	**56.43**	**309**	*e*P	**P**	**08 44 22.0**	**+0.6**
GEC2	**GERESS Array S**	**56.43**	**309**	*e*P	**P**	**08 44 22.0**	**+0.6**
GERES	**GERESS Array B**	**56.43**	**309**	P	**P**	**08 44 22.3**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=54,slow=6.8,SNR=12						
MANT	**Manisa**	**56.59**	**291**	*e*P	**P**	**08 44 23.1**	**+0.3**
	comp=Z,25nm,0.9s						
ARSA	**Arzberg**	**56.77**	**306**	*i* P	**P**	**08 44 20.1**	**-3.7**
	comp=Z,3.0nm,0.8s						
EZN	**Ezine**	**56.80**	**293** ⇑	*i*P	**P**	**08 44 25.4**	**+1.4**
EZN	**Ezine**	**56.80**	**293**	P	**P**	**08 44 26.8**	**+2.8**
MOA	**Molln**	**56.91**	**307**	*i* pP	**P**	**08 44 25.8**	**+1.0**
	comp=Z,6.3nm,1.1s						
YKA	**Yellowknife Ar**	**56.96**	**24**	P	**P**	**08 44 23.1**	**-1.8**
	comp=Z,1.5nm,0.7s,baz=330,slow=7.3,SNR=15						
YKA				LR	LR	09 10 34.3	
	comp=Z,5.1nm,20.1s,baz=344,slow=38						
YKB5	**Yellowknife Ar**	**56.96**	**24**	*e*P	**P**	**08 44 23.1**	**-1.8**
SOKA	**Soboth**	**57.42**	**306**	*i* pP	**P**	**08 44 29.3**	**+0.9**
	comp=Z,8.1nm,1.5s						
OBKA	**Obir**	**57.77**	**306**	*i* pP	**P**	**08 44 32.0**	**+1.1**
	comp=Z,12nm,0.8s						
KBA	**Koelnbreinsper**	**57.90**	**307**	*i* pP	**P**	**08 44 32.5**	**+0.6**
	comp=Z,9.2nm,0.9s						
MYKA	**Terra Mystica**	**58.10**	**307**	*i* pP	**P**	**08 44 34.4**	**+1.1**
	comp=Z,7.5nm,0.9s						
ABTA	**Abfaltersbach**	**58.53**	**308**	*i* P	P	08 44 31.5	-4.8
	comp=Z,4.1nm,0.4s						
WTTA	**Wattenberg**	**58.54**	**308**	*i* P	**P**	**08 44 32.6**	**-3.8**
	comp=Z,12nm,1.1s						
MOTA	**Moosalm**	**58.71**	**309**	*i* pP	**P**	**08 44 38.5**	**+0.9**
	comp=Z,7.5nm,1.0s						
RETA	**Reutte**	**58.76**	**309**	*i* P	**P**	**08 44 35.7**	**-2.1**
	comp=Z,5.2nm,1.1s						
SQTA	**Sankt Quirin**	**58.76**	**309**	*i* pP	**P**	**08 44 39.2**	**+1.3**
	comp=Z,6.9nm,0.8s						
FETA	**Feichten**	**59.13**	**309**	*i* pP	**P**	**08 44 41.8**	**+1.3**
	comp=Z,6.3nm,1.1s						
BFO	**Black Forest**	**59.19**	**311**	*i* P	**P**	**08 44 41.5**	**+0.8**
FUORN	**Ofenpass-Fuorn**	**59.64**	**309**	*e*P	**P**	**08 44 44.7**	**+0.6**
	comp=Z,7.9nm,0.8s						
MSO	**Missoula**	**70.98**	**32**	*e*P	**P**	**08 45 57.9**	**+0.4**
	comp=Z,4.8nm,0.9s						
ESDC	**Sonseca Array**	**71.39**	**313**	P	**P**	**08 46 00.3**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=26,slow=6.8,SNR=15						
BMO	**Blue Mountains**	**71.67**	**35**	*e*P	**P**	**08 46 01.8**	**+0.1**
	comp=Z,5.6nm,0.8s						
BMO	**Blue Mountains**	**71.67**	**35**	*e*P	**P**	**08 46 01.8**	**+0.1**
BMO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HRY	**Holter Researc**	**71.72**	**31**	*e*P	**P**	**08 46 02.0**	**+0.1**
DLMT	**Dillon**	**72.71**	**32**	*e*P	**P**	**08 46 08.0**	**+0.1**
	comp=Z,6.3nm,1.0s						
MCMT	**McKenzie Canyo**	**73.11**	**32**	*e*P	**P**	**08 46 11.0**	**+0.5**
MOD	**Modoc Plateau**	**73.23**	**39**	*e*P	**P**	**08 46 11.9**	**+0.9**
	comp=Z,5.1nm,0.9s						
HLID	**Hailey**	**73.76**	**34**	*e*P	**P**	**08 46 14.8**	**+0.6**
	comp=Z,1.9nm,0.8s						
MOOW	**Moose Ponds**	**74.73**	**31**	*e*P	**P**	**08 46 20.6**	**+0.7**
	comp=Z,3.0nm,1.0s						
FXWY	**Fox Creek**	**74.75**	**32**	*e*P	**P**	**08 46 20.4**	**+0.4**
	comp=Z,5.9nm,0.9s						
TPAW	**Teton Pass**	**74.90**	**32**	*e*P	**P**	**08 46 21.5**	**+0.5**
	comp=Z,5.7nm,0.8s						
BEKR	**Beckworth**	**75.00**	**40**	*e*P	**P**	**08 46 21.7**	**+0.2**
	comp=Z,4.3nm,1.1s						
PAHR	**Pah Rah Range**	**75.49**	**39**	*e*P	**P**	**08 46 24.7**	**+0.5**
PNTR	**Pine Nut**	**75.96**	**40**	*e*P	**P**	**08 46 27.7**	**+0.7**
PD31	**Pinedale Array**	**75.98**	**31**	*e*P	**P**	**08 46 26.7**	**-0.4**
	comp=Z,1.2nm,0.8s						
PDAR	**Pinedale Array**	**75.98**	**31**	P	**P**	**08 46 26.2**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=26,slow=2.3,SNR=14						
PDAR				LR	LR	09 26 01.0	
	comp=Z,55nm,19.9s,baz=50,slow=41						
ELK	**Elko**	**76.02**	**36**	*e*P	**P**	**08 46 27.6**	**+0.2**
	comp=Z,3.5nm,0.8s						
ELK	**Elko**	**76.02**	**36**	*e*P	**P**	**08 46 27.6**	**+0.2**
ELK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RSSD	**Black Hills**	**76.25**	**27**	*e*P	**P**	**08 46 28.0**	**-0.6**
	comp=Z,3.8nm,0.8s						
RSSD	**Black Hills**	**76.25**	**27**	*e*P	**P**	**08 46 28.0**	**-0.6**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HWUT	**Hardware Ranch**	**76.43**	**33**	*e*P	**P**	**08 46 30.1**	**+0.5**
	comp=Z,5.3nm,0.7s						
KVN	**Kaiserville**	**76.54**	**39**	*e*P	**P**	**08 46 30.8**	**+0.6**
KVN	**Kaiserville**	**76.54**	**39**	*e*P	**P**	**08 46 30.8**	**+0.6**
WR1	**Warramunga Arr**	**76.94**	**159**	*e*P	**P**	**08 46 31.8**	**-0.5**
WRA	**Warramunga Arr**	**76.94**	**159**	P	**P**	**08 46 31.8**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=337,slow=5.6,SNR=14						
WB2	**Warramunga Arr**	**76.94**	**159**	*e*P	**P**	**08 46 32.0**	**-0.3**
	comp=Z,5.1nm,0.9s						
WC3	**Warramunga Arr**	**76.96**	**159**	*e*P	**P**	**08 46 32.5**	**+0.1**
	comp=Z,9.3nm,1.2s						
NV01	**Mina Array Sit**	**77.01**	**39**	*e*P	**P**	**08 46 33.4**	**+0.4**
NVAR	**Mina Array Bea**	**77.01**	**39**	P	**P**	**08 46 33.4**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=315,slow=4.3,SNR=25						
NV11	**Mina Array Sit**	**77.06**	**39**	*e*P	**P**	**08 46 33.5**	**+0.3**
	comp=Z,0.2nm,0.8s						
ECSD	**EROS Data Cent**	**78.35**	**21**	*e*P	**P**	**08 46 39.5**	**-0.6**
	comp=Z,5.0nm,1.1s						
PQI	**Presque Isle**	**78.58**	**1**	*e*P	**P**	**08 46 41.3**	**0.0**
	comp=Z,11nm,1.1s						
PV09	**Paradox Valley**	**80.02**	**32**	*e*P	**P**	**08 46 50.0**	**+0.3**
SMCO	**Snowmass**	**80.04**	**30**	*e*P	**P**	**08 46 50.2**	**+0.3**
	comp=Z,5.8nm,0.9s						
AS31	**Alice Springs**	**80.47**	**161**	*e*P	**P**	**08 46 51.3**	**-0.4**
	comp=Z,1.2nm,1.0s						
ASAR	**Alice Springs**	**80.47**	**161**	P	**P**	**08 46 51.5**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=351,slow=5.7,SNR=12						
SCIA	**State Center**	**80.79**	**20**	*e*P	**P**	**08 46 53.6**	**+0.2**
	comp=Z,12nm,1.1s						
MVCO	**Mesa Verde**	**81.40**	**32**	*e*P	**P**	**08 46 56.6**	**-0.4**
	comp=Z,5.0nm,0.9s						
S22A	**4UR Ranch, Cre**	**81.41**	**31**	*e*P	**P**	**08 46 57.4**	**+0.2**
	comp=Z,3.9nm,1.0s						
SDCO	**Great Sand Dun**	**81.80**	**30**	*e*P	**P**	**08 46 59.1**	**0.0**
	comp=Z,6.2nm,1.0s						
Y12C	**Blythe**	**82.56**	**38**	*e*P	**P**	**08 47 03.4**	**+0.6**
	comp=Z,4.4nm,0.8s						
ANMO	**Albuquerque**	**84.12**	**32**	*e*P	**P**	**08 47 11.4**	**+0.3**
	comp=Z,3.5nm,0.9s						
ANMO	**Albuquerque**	**84.12**	**32**	*ce*P	**P**	**08 47 11.9**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
P53A	**Whipple**	**84.96**	**11**	*e*P	**P**	**08 47 14.7**	**-0.4**
	comp=Z,8.5nm,0.9s						
TUC	**Tucson**	**85.16**	**36**	*e*P	**P**	**08 47 16.5**	**+0.2**
	comp=Z,2.2nm,0.6s						
TUC	**Tucson**	**85.16**	**36**	*e*P	**P**	**08 47 16.5**	**+0.2**
TUC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WMOK	**Wichita Mounta**	**86.43**	**26**	*e*P	**P**	**08 47 22.6**	**+0.1**
	comp=Z,11nm,1.1s						
WMOK	**Wichita Mounta**	**86.43**	**26**	*e*P	**P**	**08 47 22.6**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,11nm,1.1s						
WVT	**Waverly**	**87.37**	**17**	*e*P	**P**	**08 47 26.6**	**-0.4**
	comp=Z,6.7nm,1.0s						
WVT	**Waverly**	**87.37**	**17**	*e*P	**P**	**08 47 26.6**	**-0.4**
WVT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNTX	**Cornudas Mount**	**87.46**	**32**	*e*P	**P**	**08 47 27.5**	**-0.1**
	comp=Z,2.5nm,0.9s						
TX31	**Lajitas Ar. Si**	**90.19**	**31**	*e*P	**P**	**08 47 40.9**	**+0.3**
	comp=Z,1.4nm,1.0s						
TXAR	**Lajitas Array**	**90.19**	**31**	P	**P**	**08 47 40.4**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=345,slow=2.4,SNR=12						
TOA1	**Torodi Ar. Sit**	**91.07**	**295**	*e*P	**P**	**08 47 44.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**91.07**	**295**	P	**P**	**08 47 44.1**	**-0.6**
	comp=Z,6.5nm,0.4s,baz=51,slow=4.2,SNR=6.9						
VNDA	**Vanda**	**135.77**	**166**	PKP	**PKPdf**	**08 53 58.5**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=332,slow=6.7,SNR=3.8						
VNDA	**Vanda**	**135.77**	**166**	*e*PKPdf	**PKPdf**	**08 53 58.6**	**-0.2**
CPUP	**Villa Florida**	**150.39**	**342**	PKPbc	**PKPbc**	**08 54 30.2**	**-1.0**
	comp=Z,2.7nm,0.6s,baz=69,slow=2.1,SNR=5.7						

*IDC **25** 08:36:22.5±4.6, 53°.79N×90°.92E, h0km, mb1 3.4/3, mb1mx3.2/44, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=48.8km s-min=27.6km az=38.0*

ASRS 25 08:36:17.2, 53°.86N×91°.12E, M2.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.73**	**274**	*i*		08 58 05.0	
	baz=91,slow=307,SNR=3.2						
ZALV	**Zalesovo Beam**	**3.73**	**274**	Pn	Pn	08 37 18.8	+2.8
	0.0nm,0.3s,baz=93,slow=14,SNR=1.8						
ZALV				Pg	Pb	08 37 25.4	+1.5
	2.2nm,0.3s,baz=103,slow=15,SNR=15						
ZALV				Lg	Lg	08 38 16.9	
	3.1nm,0.3s,baz=85,slow=22,SNR=10						
KURBB	**Kurchatov Arra**	**8.38**	**252**	Pn	Pn	08 38 23.4	+3.5
	0.2nm,0.3s,baz=64,slow=14,SNR=7.2						
KURBB				Lg	Lg	08 40 44.9	
	0.1nm,0.3s,baz=70,slow=35,SNR=5.5						
MKAR	**Makanchi Array**	**9.04**	**222**	Pn	Pn	08 38 33.0	+4.0
	0.4nm,0.3s,baz=40,slow=14,SNR=8.6						
MKAR				Lg	Lg	08 40 54.9	
	0.2nm,0.3s,baz=35,slow=18,SNR=1.4						

IDC 25 08:46:20.9±3.5, 54°.23N×87°.42E, h0km, mb1 2.9/2, mb1mx2.9/41, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=28.4km s-min=18.7km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.56**	**261**	*i*		08 55 39.8	
	baz=81,slow=303,SNR=12						
ZALV	**Zalesovo Beam**	**1.56**	**261**	Pg	Pn	08 46 49.4	-0.5
	1.8nm,0.3s,baz=76,slow=15,SNR=11						
ZALV				Lg	Lg	08 47 10.6	
	2.4nm,0.3s,baz=81,slow=25,SNR=7.0						
KURBB	**Kurchatov Arra**	**6.53**	**240**	Pn	Pn	08 47 57.1	-1.0
	0.1nm,0.3s,baz=56,slow=13,SNR=2.1						
KURBB				Sn	Sn	08 49 09.1	-4.1
	0.0nm,0.3s,baz=46,slow=31,SNR=2.6						
KURBB				Lg	Lg	08 49 50.1	
	0.0nm,0.3s,baz=50,slow=29,SNR=2.4						
MKAR	**Makanchi Array**	**8.13**	**206**	Pn	Pn	08 48 22.3	+2.1
	0.1nm,0.3s,baz=40,slow=23,SNR=1.9						
MKAR				Sn	Sn	08 49 52.4	-0.3
	0.1nm,0.3s,baz=32,slow=28,SNR=2.0						
MKAR				Lg	Lg	08 50 36.0	
	0.1nm,0.3s,baz=27,slow=29,SNR=2.7						

*ISCJB **25** 08:48:54.8±0.6, 44°.48S±0°.02×167°.72E±0°.04, h3km±4km, mb4.7/5, Error ellipse: s-maj=4.6km s-min=3.0km az=23.4*
*WEL **25** 08:48:56.5±1.0, 45°.S±4°.×16°.8E±°, h5km, M4.4/7, ML4.6/7, MLv4.4/7, Error ellipse: s-maj=0.0km s-min=0.0km az=130.9*
*NEIC **25** 08:48:58.4±0.0, 44°.69S×167°.86E, h9km, mb4.2/5, ML4.4(WEL), After WEL.*

ISC 25 08:48:57.7±1.0, 44°.60S±0°.03×167°.79E±0°.03, h12km±6km, n87, σ1°.02/100, mb4.4/5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.12**	**129**	P	**Pg**	**08 49 01.5**	**+0.7**
MSZ				S	**Sg**	**08 49 04.2**	**+1.1**
MLZ	**Mavora Lakes**	**0.81**	**163**	*e*Pg	**Pb**	**08 49 13.3**	**-0.4**
MLZ	**Mavora Lakes**	**0.81**	**163**	P	**Pb**	**08 49 13.4**	**-0.4**
MLZ				S	**Sb**	**08 49 24.8**	**+0.3**
JCZ	**Jackson Bay**	**0.88**	**54**	P	**Pg**	**08 49 13.5**	**-1.3**
JCZ				S	**Sg**	**08 49 25.1**	**-1.1**
WKZ	**Wanaka**	**0.91**	**105**	*e*Pg	**Pg**	**08 49 14.9**	**-0.2**
WKZ				*e*Sg	**Sg**	**08 49 24.7**	**-2.2**
WKZ	**Wanaka**	**0.91**	**105**	P	**Pb**	**08 49 15.1**	**-0.3**
WKZ				S	**Sb**	**08 49 28.1**	**+0.7**
DCZ	**Deep Cove**	**0.98**	**207**	*e*Pg	**Pg**	**08 49 15.8**	**-0.8**
DCZ				*e*Sg	**Sg**	**08 49 28.9**	**-0.5**
DCZ	**Deep Cove**	**0.98**	**207**	P	**Pg**	**08 49 16.0**	**-0.6**
DCZ				S	**Sb**	**08 49 29.3**	**-0.2**
EAZ	**Earnscleugh**	**1.25**	**121**	P	**Pb**	**08 49 21.1**	**-0.2**
EAZ				S	**Sb**	**08 49 37.5**	**+0.2**
WHZ	**Wether Hill Ro**	**1.30**	**175**	*e*Pg	**Pn**	**08 49 21.2**	**-0.5**
WHZ	**Wether Hill Ro**	**1.30**	**175**	P	**Pn**	**08 49 21.7**	**0.0**
WHZ				S	**Sn**	**08 49 39.5**	**+0.4**
LBZ	**Lake Benmore**	**1.73**	**84**	*e*Pn	**Pn**	**08 49 28.2**	**+0.6**
LBZ	**Lake Benmore**	**1.73**	**84**	P	**Pn**	**08 49 28.3**	**+0.7**
PYZ	**Puysegur Point**	**1.76**	**206**	*e*Pn	**Pn**	**08 49 28.1**	**+0.1**
PYZ	**Puysegur Point**	**1.76**	**206**	P	**Pb**	**08 49 29.2**	**-0.7**
FOZ	**Fox Glacier**	**1.81**	**55**	*e*Pn	**Pn**	**08 49 29.7**	**+1.1**
FOZ				*e*Sn	**Sn**	**08 49 52.9**	**+1.5**
FOZ	**Fox Glacier**	**1.81**	**55**	P	**Pb**	**08 49 30.1**	**-0.5**
FOZ				S	**Sb**	**08 49 53.1**	**-0.1**
TUZ	**Tuapeka**	**1.88**	**137**	P	**Pb**	**08 49 31.2**	**-0.8**
TUZ				S	**Sg**	**08 49 57.0**	**-1.1**
ODZ	**Otahua Downs**	**2.08**	**103**	*e*Pn	**Pn**	**08 49 32.7**	**+0.3**
ODZ				*e*Sn	**Sn**	**08 49 57.5**	**-0.8**
ODZ	**Otahua Downs**	**2.08**	**103**	P	**Pn**	**08 49 33.1**	**+0.7**
SYZ	**Scrubby Hill**	**2.16**	**154**	P	**Pb**	**08 49 35.0**	**-1.7**
APZ	**The Paps**	**2.24**	**177**	P	**Pb**	**08 49 36.6**	**-1.6**
HHSZ	**Highcliff Hill**	**2.37**	**124**	P	**Pn**	**08 49 38.2**	**+1.8**
RPZ	**Rata Peaks**	**2.51**	**71**	*e*Pn	**Pn**	**08 49 39.0**	**+0.7**
RPZ	**Rata Peaks**	**2.51**	**71**	P	**Pn**	**08 49 38.3**	**0.0**
INZ	**Inchbonnie**	**3.24**	**56**	P	**Pn**	**08 49 46.9**	**-1.5**
OXZ	**Oxford**	**3.32**	**69**	*e*Pn	**Pn**	**08 49 49.0**	**-0.4**
OXZ	**Oxford**	**3.32**	**69**	P	**Pn**	**08 49 47.9**	**-1.6**
MQZ	**McQueen's Vall**	**3.61**	**77**	*e*Pn	**Pn**	**08 49 53.9**	**+0.5**
MQZ	**McQueen's Vall**	**3.61**	**77**	P	**Pn**	**08 49 52.4**	**-1.1**
CRLZ	**Canterbury Las**	**3.63**	**75**	*e*Pn	**Pn**	**08 49 52.5**	**-1.2**
CRLZ	**Canterbury Las**	**3.63**	**75**	P	**Pn**	**08 49 52.3**	**-1.3**
LTZ	**Lake Taylor**	**3.72**	**62**	*e*Pn	**Pn**	**08 49 55.1**	**0.0**
LTZ	**Lake Taylor**	**3.72**	**62**	P	**Pn**	**08 49 53.6**	**-1.4**
AKCZ	**Akaroa Harbour**	**3.75**	**81**	P	**Pn**	**08 49 54.8**	**-0.5**
AMCZ	**Amberley**	**3.79**	**70**	P	**Pn**	**08 49 55.1**	**-0.8**
OKCZ	**Okains Bay**	**3.89**	**79**	P	**Pn**	**08 49 57.9**	**+0.6**
DSZ	**Denniston Nort**	**4.09**	**47**	P	**Pn**	**08 49 58.3**	**-1.8**
GVZ	**Greta Valley S**	**4.13**	**69**	P	**Pn**	**08 49 59.2**	**-1.4**
THZ	**Tophouse**	**4.69**	**55**	*e*Pn	**Pn**	**08 50 08.8**	**+0.4**
THZ	**Tophouse**	**4.69**	**55**	P	**Pn**	**08 50 07.2**	**-1.2**
KHZ	**Kahutara**	**4.71**	**64**	*e*Pn	**Pn**	**08 50 08.1**	**-0.5**
KHZ	**Kahutara**	**4.71**	**64**	P	**Pn**	**08 50 08.7**	**+0.1**
QRZ	**Quartz Range**	**5.13**	**44**	P	**Pn**	**08 50 12.5**	**-1.9**
NNZ	**Nelson**	**5.31**	**52**	P	**Pn**	**08 50 15.7**	**-1.1**
TUWZ	**Tuamarina**	**5.51**	**57**	P	**Pn**	**08 50 20.3**	**+0.8**
DUWZ	**D'Urville Isla**	**5.90**	**52**	P	**Pn**	**08 50 24.0**	**-0.9**
CAW	**Cannon Point**	**6.38**	**59**	P	**Pn**	**08 50 30.9**	**-0.7**
MTW	**Mount Morrison**	**6.62**	**61**	P	**Pn**	**08 50 34.0**	**-0.8**
NMEZ	**Namu Road**	**6.88**	**43**	P	**Pn**	**08 50 39.7**	**+1.4**
MRZ	**Mangatainoka R**	**6.96**	**58**	P	**Pn**	**08 50 40.4**	**+0.9**
NBEZ	**Newall Road No**	**6.99**	**42**	P	**Pn**	**08 50 38.1**	**-1.7**
KHEZ	**Kahui Hut**	**7.04**	**43**	P	**Pn**	**08 50 39.1**	**-1.5**
PREZ	**Palmer Road**	**7.07**	**44**	P	**Pn**	**08 50 40.9**	**-0.2**
PKE	**Pukeiti**	**7.10**	**43**	P	**Pn**	**08 50 40.1**	**-1.4**
LREZ	**Lake Rotokare**	**7.11**	**46**	P	**Pn**	**08 50 42.2**	**+0.7**
WAZ	**Wanganui**	**7.21**	**50**	P	**Pn**	**08 50 44.5**	**+1.7**
DREZ	**Durham Road**	**7.21**	**44**	P	**Pn**	**08 50 44.3**	**+1.3**
BFZ	**Birch Farm**	**7.36**	**61**	*e*Pn	**Pn**	**08 50 45.0**	**+0.1**
VRZ	**Vera Road**	**7.54**	**46**	P	**Pn**	**08 50 47.3**	**-0.1**
PKVZ	**Pokaka**	**7.73**	**49**	P	**Pn**	**08 50 51.3**	**+1.1**
TWVZ	**Taurewa**	**7.94**	**49**	P	**Pn**	**08 50 54.4**	**+1.4**
HIZ	**Hauiti**	**8.06**	**43**	*e*Pn	**Pn**	**08 50 54.5**	**0.0**
HIZ	**Hauiti**	**8.06**	**43**	P	**Pn**	**08 50 53.3**	**-1.2**
TLZ	**Tolley Road**	**8.54**	**46**	P	**Pn**	**08 51 00.4**	**-0.8**
TOZ	**Tahuroa Road**	**8.99**	**43**	P	**Pn**	**08 51 06.8**	**-0.4**
AWAZ	**Awhitu Peninsu**	**9.14**	**37**	P	**Pn**	**08 51 08.9**	**-0.4**
WTAZ	**Waiatarua**	**9.22**	**36**	P	**Pn**	**08 51 09.9**	**-0.6**
MKAZ	**Moumakai**	**9.33**	**39**	P	**Pn**	**08 51 12.8**	**+0.8**
MBAZ	**Motutapu North**	**9.50**	**37**	P	**Pn**	**08 51 15.3**	**+1.0**
WIAZ	**Waiheke Island**	**9.58**	**38**	P	**Pn**	**08 51 16.4**	**+1.0**
MWZ	**Matawai**	**9.62**	**53**	P	**Pn**	**08 51 16.5**	**+0.6**
KUZ	**Kuaotunu**	**9.88**	**40**	P	**Pn**	**08 51 20.4**	**+0.9**
RUGZ	**Raukumara Rang**	**9.96**	**52**	P	**Pn**	**08 51 22.0**	**+1.3**
TWGZ	**Tauwhareparae**	**9.98**	**54**	P	**Pn**	**08 51 20.8**	**-0.1**
WCZ	**Waipu Caves**	**9.99**	**32**	P	**Pn**	**08 51 19.8**	**-1.2**
OUZ	**Omahuta**	**10.37**	**27**	*e*Pn	**Pn**	**08 51 25.2**	**-1.0**
OUZ	**Omahuta**	**10.37**	**27**	P	**Pn**	**08 51 24.8**	**-1.4**
TAU	**Tasmania Unive**	**14.89**	**269**	*e*Pn	**Pn**	**08 52 27.5**	**-0.5**
CAN	**Canberra**	**17.09**	**296**	*e*Pn	**Pn**	**08 52 56.5**	**0.0**
	91nm,1.5s						
TOO	**Toolangi**	**18.18**	**285**	*e*Pn	**P**	**08 53 11.1**	**+0.8**
	17nm,1.3s						
SBA	**Scott Base**	**33.37**	**180**	*e*P	**P**	**08 55 34.7**	**-0.6**
	5.1nm,1.0s						
WB2	**Warramunga Arr**	**37.05**	**301**	*e*P	**P**	**08 56 07.3**	**-0.3**
	6.0nm,1.1s						
CASY	**Casey**	**37.23**	**214**	*e*P	**P**	**08 56 09.5**	**+0.9**
	1.4nm,0.9s						
HHC	**Hu-ho-hao-te**	**98.89**	**320**	*e*P	Pdif	09 02 38.5	+1.0
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,21nm,5.1s						
LZH	**Lanzhou**	**98.98**	**313**	*e*P	**Pdif**	**09 02 37.5**	**-0.6**
LZH				pP	pP	09 02 40.8	-1.2
LZH				sP	sP	09 02 42.3	-1.4
LZH				*e*PP	**PP**	**09 06 43.3**	**+2.6**
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,45nm,9.2s						
KSH	**Kashi**	**117.45**	**299**	*e*PKP	**PKiKP**	**09 07 44.3**	**+1.3**

*ISCJB **25** 08:56:10.4±0.3, 60°.14N±0°.02×153°.39W±0°.06, h158km±3km, mb3.3/3, Error ellipse: s-maj=5.2km s-min=3.2km az=31.3*
*IDC **25** 08:56:11.8±3.1, 60°.15N×152°.91W, h116km±15km, mb3.2/3, mb1 3.7/7, mb1mx3.2/44, mbtmp3.7/7, Error ellipse: s-maj=65.3km s-min=10.1km az=100.0*
*NEIC **25** 08:56:12.4±0.0, 60°.13N×153°.38W, h155km, ML3.6(AEIC), After AEIC.*

ISC 25 08:56:11.9±0.9, 60°.15N±0°.04×153°.40W±0°.05, h154km±6km, n99, σ1°.17/113, mb3.4/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIM	**Iliamna**	**0.23**	**106**	*e*Pn	**Pn**	**08 56 32.6**	**-0.3**
ILIM				*e*Sn	**Sn**	**08 56 49.1**	**+0.3**
IVE	**Iliamna Volcan**	**0.23**	**123**	*e*Pn	**Pn**	**08 56 32.5**	**-0.4**
ILS	**Iliamna Low So**	**0.25**	**138**	*e*Pn	**Pn**	**08 56 32.4**	**-0.5**
RSO	**Redoubt South**	**0.45**	**45**	*e*Pn	**Pn**	**08 56 33.7

HYT	Haines Junctio	7.88	78	ePn	Pn	08 58 04.5	+0.9
BM3	Burnt Mountain	8.27	24	ePn	Pn	08 58 07.2	-1.5
TOLK	Toolik Lake Re	8.69	9	ePn	Pn	08 58 14.6	+0.4
UNV	Unalaska Valle	9.52	234	ePn	Pn	08 58 24.0	-1.3
EPYK	Eagle Plains	9.75	43	ePn	Pn	08 58 28.6	+0.4
SIT	Sitka	9.92	100	ePn	Pn	08 58 31.0	+0.5
INK	Inuvik	11.85	38	P	Pn	08 58 55.0	-0.7
0.9nm,0.3s,baz=213,slow=12,SNR=19							
INK	Inuvik	11.85	38	ePn	Pn	08 58 55.9	+0.2
YKA	Yellowknife Ar	18.58	66	P	P	09 00 16.2	-0.5
0.1nm,0.3s,baz=280,slow=11,SNR=5.1							
YKB5	Yellowknife Ar	18.58	66	eP	P	09 00 16.2	-0.5
NV01	Mina Array Sit	30.97	119	eP	P	09 02 17.1	+2.6
NVAR	Mina Array Bea	30.97	119	P	P	09 02 17.1	+2.6
0.5nm,0.6s,baz=311,slow=8.8,SNR=6.8							
NV11	Mina Array Sit	31.03	118	eP	P	09 02 16.0	+1.0
PDAR	Pinedale Array	31.62	103	P	P	09 02 20.4	+0.2
0.3nm,0.4s,baz=320,slow=4.0,SNR=4.8							
TXAR	Lajitas Array	45.22	110	P	P	09 04 15.4	+1.9
0.3nm,0.5s,baz=332,slow=7.2,SNR=7.4							

SOME ***25*** *09:15:59.3, 40°.67N×75°.80E, h10km*
NNC ***25*** *09:16:00.7±1.1, 40°.72N×75°.86E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=7.5km s-min=4.9km az=172.0*
KRNET ***25*** *09:16:03.1±0.1, 40°.85N×75°.77E, h19km, mb2.8*

ISC 25 09:16:01.6±2.1, 40°.80N±0°.08×75°.78E±0°.03, h8km±17km, n52, σ0°.94/76, 25C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	Kyzart	1.34	343	P	Pg	09 16 27.6	+0.3
SNR=26							
KZA	Kyzart	1.34	343	⇑iP	Pg	09 16 27.6	+0.3
baz=43							
KZA				⇑iS	Sg	09 16 45.5	+0.8
baz=43							
ULHL	Ulahol	1.49	13	P	Pb	09 16 30.0	+0.3
SNR=13							
ULHL	Ulahol	1.49	13	⇑iP	Pb	09 16 30.0	+0.3
baz=14							
ULHL				⇑iS	Sg	09 16 49.6	+0.1
baz=14							
ARLS	Aral	1.53	315	⇓eP	Pb	09 16 30.7	+0.4
baz=14							
ARLS				⇓iS	Sg	09 16 50.6	-0.1
baz=14							
BOOM	Boomskoye usch	1.70	4	⇓iP	Pg	09 16 33.9	-0.2
baz=5.0							
BOOM				⇓iS	Sg	09 16 56.1	0.0
baz=5.0							
UCH	Uchtor	1.72	327	P	Pg	09 16 34.8	+0.3
SNR=10							
UCH	Uchtor	1.72	327	⇑iP	Pb	09 16 34.1	+0.4
baz=26							
UCH				⇑iS	Sg	09 16 56.8	0.0
baz=26							
KBK	Karagaybulak	1.96	342	P	Pg	09 16 39.6	+0.5
SNR=10							
KBK	Karagaybulak	1.96	342	⇓iP	Pb	09 16 38.4	+0.7
baz=41							
KBK				⇓iS	Sg	09 17 04.1	-0.5
baz=41							
AML	Almayashu	2.06	311	P	Pb	09 16 40.6	+1.1
SNR=6.4							
AML	Almayashu	2.06	311	⇑iP	Pb	09 16 40.1	+0.7
baz=10.0							
AML				⇑iS	Sg	09 17 07.1	-0.6
baz=10.0							
AAK	Ala-Archa	2.08	333	P	Pg	09 16 41.6	+0.3
SNR=11							
AAK	Ala-Archa	2.08	333	⇑Pg	Pg	09 16 41.3	-0.1
10.0nm,0.4s							
AAK				⇑Lg	Lg	09 17 09.3	
21nm,0.4s							
AAK	Ala-Archa	2.08	333	⇑iP	Pb	09 16 40.2	+0.6
baz=32							
AAK				⇑iS	Sg	09 17 07.2	-1.1
baz=32							
TKM2	Tokmak 2	2.13	356	P	Pg	09 16 42.0	-0.4
SNR=6.3							
TKM2	Tokmak 2	2.13	356	⇑Pg	Pg	09 16 42.1	-0.3
3.0nm,0.4s							
TKM2				⇑Lg	Lg	09 17 10.5	
9.9nm,0.3s							
TKM2	Tokmak 2	2.13	356	⇑iP	Pb	09 16 40.8	+0.3
baz=57							
TKM2				⇑iS	Sg	09 17 08.3	-1.6
baz=57							
ARSB	Arslanbob	2.18	285	⇑iP	Pb	09 16 41.8	+0.4
baz=83							
ARSB				⇑eS	Sg	09 17 11.1	-0.4
baz=83							
KST	Kastek	2.25	3	Pg	Pb	09 16 43.0	+0.5
9.4nm,0.7s							
KST				Lg	Lg	09 17 14.9	
17nm,0.5s							
KST	Kastek	2.25	3	⇑iP	Pb	09 16 43.0	+0.5
4.5nm,0.4s							
KST				eS	Sg	09 17 14.9	+1.0
17nm,0.4s							
CHMS	Chumysh	2.33	341	⇑iP	Pb	09 16 43.6	-0.3
baz=41							
CHMS				⇑iS	Sb	09 17 13.0	+0.1
baz=41							
MTBS	Maitube	2.38	12	Pg	Pb	09 16 45.9	+1.1
3.6nm,0.2s							
MTBS				Lg	Lg	09 17 19.6	
18nm,0.2s							
MTBS	Maitube	2.38	12	eP	Pb	09 16 45.9	+1.1
2.8nm,0.1s							
MTBS				eS	Sg	09 17 19.6	+1.5
18nm,0.2s							
EKS2	Erkin-Say	2.39	322	⇑iP	Pb	09 16 44.3	-0.7
baz=21							
EKS2				⇑iS	Sb	09 17 14.5	-0.2
baz=21							
TNSS	Tian-Shan	2.40	21	Pg	Pb	09 16 46.3	+0.9
3.2nm,0.3s							
TNSS				Lg	Lg	09 17 20.4	
9.6nm,0.3s							
TNSS	Tian-Shan	2.40	21	⇑iP	Pb	09 16 46.3	+0.9
1.7nm,0.1s							
TNSS				⇓iS	Sg	09 17 20.4	+1.5
11nm,0.2s							
DGS	Degeres	2.44	360	Pg	Pb	09 16 46.9	+1.0
7.8nm,0.4s							
DGS				Lg	Lg	09 17 21.2	
28nm,0.7s							
DGS	Degeres	2.44	360	eP	Pb	09 16 46.9	+1.0
4.5nm,0.5s							
DGS				eS	Sg	09 17 21.2	+1.1
28nm,0.7s							
MDOK	Medeo	2.55	21	Pg	Pb	09 16 47.7	+0.1
1.9nm,0.2s							
MDOK				Lg	Lg	09 17 22.7	
5.8nm,0.4s							
MDOK	Medeo	2.55	21	eP	Pb	09 16 47.7	+0.1
1.9nm,0.2s							
MDOK				eS	Sg	09 17 22.7	-0.7
5.9nm,0.4s							
KOTS	Kotyrbulak	2.63	22	Pg	Pb	09 16 48.9	-0.2
7.6nm,0.2s							
KOTS				Lg	Lg	09 17 24.9	
19nm,0.2s							
KOTS	Kotyrbulak	2.63	22	eP	Pb	09 16 49.0	-0.2
7.6nm,0.2s							
KOTS				eS	Sg	09 17 24.9	-1.2
19nm,0.2s							
USP	Ospenovka	2.65	339	P	Sg	09 17 26.4	-0.2
SNR=10.0							
USP	Ospenovka	2.65	339	⇓iP	Pb	09 16 47.9	-1.4
baz=39							
USP				⇓iS	Sb	09 17 20.7	-1.3
baz=39							
MRKS	Merke	2.73	316	Pg	Pb	09 16 51.0	+0.3
4.2nm,0.5s							
MRKS				Lg	Lg	09 17 28.4	
7.6nm,0.2s							
MRKS	Merke	2.73	316	eP	Pb	09 16 51.0	+0.3
1.5nm,0.2s							
MRKS				eS	Sg	09 17 28.4	-0.8
7.6nm,0.2s							
KTBS	Karatobe	2.99	13	Pg	Pb	09 16 56.5	+1.4
4.1nm,0.3s							
KTBS				Lg	Lg	09 17 37.9	
21nm,0.8s							
KTBS	Karatobe	2.99	13	eP	Pb	09 16 56.5	+1.4
4.1nm,0.3s							
KTBS				eS	Sg	09 17 37.9	+0.2
21nm,0.8s							
SATY	Saty	2.99	40	Pg	Pb	09 16 56.0	+0.7
2.9nm,0.3s							
SATY				Lg	Lg	09 17 36.9	
6.5nm,0.5s							
SATY	Saty	2.99	40	eP	Pb	09 16 56.0	+0.7
2.9nm,0.3s							
SATY				eS	Sg	09 17 36.9	-0.8
8.1nm,0.3s							
CHKK	Chushkaly	3.19	16	Pg	Pb	09 16 58.7	+0.2
2.6nm,0.4s							
CHKK				Lg	Lg	09 17 41.5	
11nm,0.2s							
CHKK	Chushkaly	3.19	16	eP	Pb	09 16 58.7	+0.2
2.6nm,0.4s							
CHKK				⇑iS	Sg	09 17 41.5	-2.4
11nm,0.2s							
KURS	Kuram	3.23	33	Pg	Pb	09 16 59.5	+0.4
2.6nm,0.4s							
KURS				Lg	Lg	09 17 42.9	
3.4nm,0.7s							
KPKS	Kokpek	3.43	38	eP	Pb	09 17 03.2	+0.5
2.2nm,0.3s							
KPKS				eS	Sg	09 17 49.4	-2.4
14nm,0.4s							
ARXS	Arharly	3.74	23	Pg	Pb	09 17 09.6	+1.7
1.3nm,0.5s							
ARXS				Lg	Lg	09 18 00.4	
3.6nm,0.4s							
ARXS	Arharly	3.74	23	eP	Pb	09 17 09.6	+1.7
1.3nm,0.5s							
ARXS				eS	Sg	09 18 00.4	-1.2
3.6nm,0.4s							
PDGK	Podgornoye	3.75	46	Pg	Pb	09 17 08.4	+0.3
0.4nm,0.2s							
PDGK				Lg	Lg	09 17 58.4	
2.3nm,0.7s							
PDGK	Podgornoye	3.75	46	⇓Lg	Lg	09 17 59.0	
4.9nm,0.8s							
MNBS	Baschi	3.81	30	Pg	Pb	09 17 11.1	+1.9
1.2nm,0.3s							
MNBS				Lg	Lg	09 18 02.8	
3.3nm,0.3s							
MNBS	Baschi	3.81	30	eP	Pb	09 17 11.1	+1.9
1.2nm,0.3s							
MNBS				eS	Sg	09 18 02.8	-1.2
3.3nm,0.3s							
KK31	Karatay Array	4.55	302	⇓Lg	Lg	09 18 27.9	
0.9nm,0.6s,baz=121,slow=29							

ISK ***25*** *09:16:38.9, 38°.86N×37°.85E, h5km, ML2.3/4*
DDA ***25*** *09:16:40.0, 38°.88N×37°.77E, h7km±3km, ML2.5*
ISCJB ***25*** *09:16:41.2±0.6, 38°.86N±0°.05×37°.80E±0°.05, h17km±7km, Error ellipse: s-maj=8.1km s-min=6.6km az=157.0*

ISC 25 09:16:40.9±1.0, 38°.85N±0°.05×37°.80E±0°.04, h13km±8km, n11, σ1°.23/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.13	78	iP	Pb	09 16 44.9	-0.6
HEKM				iS	Sg	09 16 48.6	+1.6
HEKM				IAML_P			
comp=Z,30μm,0.2s							
DARE	Darende-Malaty	0.37	221	PG	Pg	09 16 47.7	-0.8
DARE				SG	Sb	09 16 55.6	+0.3
CUGUR	Gurin_SVAS	0.43	253	iP	Pg	09 16 49.1	-0.4
CUKAN	kangal_SIVAS	0.53	331	iP	Pg	09 16 49.6	-1.7
CUKAN				iS	Sg	09 16 58.1	-0.4
KEMA	Kemaliye	0.68	52	iP	Pg	09 16 53.8	-0.4
KEMA				IAML_P			
comp=Z,550nm,0.1s							
SVSK	Karacayir	1.23	330	PN	Pn	09 17 03.8	0.0
SVRC	Sivrice-ELAZID	1.27	111	PN	Pg	09 17 03.7	-1.7
CUSAR	Sarkisla-SIVAS	1.33	296	iP	Pn	09 17 03.9	-1.6
CUSAR				iS	Sn	09 17 24.5	+1.4
SUSE	Susehri	1.39	13	iP	Pn	09 17 06.2	0.0
SUSE				IAML_P			
comp=Z,421nm,0.2s							
KELT	Kelkit	1.72	41	iP	Pb	09 17 12.9	+0.4
KELT				iS	Sg	09 17 37.6	+1.4
KELT				IAML_P			
comp=Z,293nm,0.2s							
YOZ	Yozgat	2.08	293	PN	Pn	09 17 17.0	+1.3

UCR 25 09:36:58.1±2.4, 7°.48N×81°.98W, h7km±8km, MD4.1, 2C, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	David	1.06	334	⇑eP	Pg	09 37 17.1	-1.4
DVD				eS	Sb	09 37 33.3	+0.4
TBS2		1.47	333	eP	Pn	09 37 23.9	-1.4
TBS2				eS	Sb	09 37 44.9	0.0
BRU2	Volcan	1.49	332	⇑iP	Pn	09 37 24.3	-1.2
BRU2				eS	Sb	09 37 45.6	+0.3
EDSV	San Vito	1.66	324	eP	Pn	09 37 25.6	-2.2
PTJ1	Puerto Jimnez	1.68	309	eP	Pn	09 37 28.1	+0.1
PTJ1				eS	Sb	09 37 51.0	+0.2
PNME	Penonome	1.92	58	eP	Pn	09 37 30.6	-0.6
EDPN	Palmar Norte	2.08	315	eP	Pn	09 37 31.8	-1.7
EDBA	Buenos Aires	2.11	323	eP	Pb	09 37 35.5	-1.3
DRK0	Durika	2.17	325	eP	Pn	09 37 34.1	-0.8
DRK0				eS	Sn	09 38 02.4	+0.1
EDLM	Las Mercedes	2.40	318	eP	Pn	09 37 37.4	-0.5
ZANG	Zanguenga, Cho	2.55	55	eP	Pn	09 37 40.6	+0.7
BCIP	Isla Barro Col	2.70	51	eP	Pn	09 37 42.7	+0.7
BCIP				eS	Sn	09 38 14.9	0.0
UPA	Univ. de Panam	2.84	58	eP	Pn	09 37 44.6	+0.7
UPA				eS	Sn	09 38 20.0	+1.6
LCR2	La Lucha 2	3.01	318	eP	Pn	09 37 44.8	-1.7

IDC 25 09:47:38.8±9.0, 3°.71S×101°.78W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.8/24, mbtmp3.6/5, MS3.6/11, Ms1 3.6/11, ms1mx3.5/17, Error ellipse: s-maj=263.6km s-min=124.5km az=120.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	El Rosal	28.71	73	LR	LR	10 03 24.4	
comp=Z,100nm,20.7s,baz=214,slow=33							
TXAR	Lajitas Array	32.90	357	P	P	09 54 16.0	+1.1
0.3nm,0.9s,baz=178,slow=7.1,SNR=3.0							
TXAR				LR	LR	10 05 27.7	
comp=Z,210nm,21.7s,baz=0.0,slow=32							
PFO	Pinyon Flats O	39.62	341	LR	LR	10 07 06.5	
comp=Z,91nm,20.4s,baz=169,slow=30							
NVAR	Mina Array Bea	44.63	341	LR	LR	10 10 08.8	
comp=Z,75nm,18.4s,baz=204,slow=30							
PLCA	Paso Flores	46.35	147	LR	LR	10 11 31.3	
comp=Z,71nm,18.9s,baz=254,slow=31							
PDAR	Pinedale Array	46.79	352	P	P	09 56 09.0	-1.4
0.3nm,0.7s,baz=166,slow=8.1,SNR=4.0							
PDAR				LR	LR	10 12 58.6	
comp=Z,31nm,18.1s,baz=188,slow=32							
PPT	Papeete	48.80	250	LR	LR	10 11 04.4	
comp=Z,101nm,20.4s,baz=120,slow=29							
PPT2	Papeete2	48.80	250	eLR	LR	10 10 13.6	
comp=Z,169nm,24.5s							
TBI	Tubuai	50.00	243	eLR	LR	10 10 59.1	
comp=Z,93nm,27.0s							
ULM	Lac du Bonnet	53.98	5	P	P	09 57 04.6	+0.2
3.1nm,0.6s,baz=203,slow=3.2,SNR=3.6							
ULM				LR	LR	10 18 36.3	
comp=Z,84nm,18.5s,baz=222,slow=34							
BDFB	Brasilia	54.16	107	LR	LR	10 17 42.0	
comp=Z,70nm,18.8s,baz=107,slow=33							
YKA	Yellowknife Ar	66.74	354	P	P	09 58 31.5	0.0
0.3nm,0.8s,baz=157,slow=7.0,SNR=2.5							
YKA				LR	LR	10 24 52.9	
comp=Z,8.7nm,18.8s,baz=148,slow=33							
ILAR	Eielson Array	75.89	342	P	P	09 59 26.9	0.0
0.7nm,0.8s,baz=143,slow=5.6,SNR=7.3							
H11N3	WAKE ISLAND Hy	92.47	289	T	T	11 42 00.7	
baz=93,slow=75,SNR=6.1							
H11N2	WAKE ISLAND Hy	92.48	290	T	T	11 42 09.6	
baz=93,slow=75,SNR=7.7							
H11N1	WAKE ISLAND Hy	92.49	289	T	T	11 42 03.6	
baz=93,slow=75,SNR=5.8							
H11S2	WAKE ISLAND Hy	92.60	288	T	T	11 42 11.4	
baz=94,slow=74,SNR=5.8							
H11S1	WAKE ISLAND Hy	92.60	288	T	T	11 42 11.6	
baz=94,slow=74,SNR=4.2							
H11S3	WAKE ISLAND Hy	92.62	288	T	T	11 42 16.6	
baz=94,slow=74,SNR=3.8							
ESDC	Sonseca Array	98.37	51	LR	LR	10 39 07.9	
comp=Z,19nm,20.7s,baz=200,slow=31							

MOS ***25*** *09:52:51.9±1.5, 19°.70S×179°.65E, h445km, mb4.6/31, Error ellipse: s-maj=13.3km s-min=9.2km az=75.8*
BJI ***25*** *09:52:53.0±0.0, 20°.00S×179°.60E, h476km, mb4.6/20, mB4.9/13*
IDC ***25*** *09:52:54.9±1.7, 19°.88S×179°.49E, h482km±18km, mb4.0/25, mb1 4.1/25, mb1mx4.0/31, mbtmp4.7/25, Error ellipse: s-maj=12.8km s-min=9.6km az=130.0*
ISCJB ***25*** *09:52:55.1±0.1, 19°.99S±0°.03×179°.41E±0°.04, h500km, mb4.5/219, Error ellipse: s-maj=4.9km s-min=2.7km az=30.1*
NEIC ***25*** *09:52:55.8±2.1, 19°.85S×179°.58E, h494km±5km, mb4.6/208, Error ellipse: s-maj=15.1km s-min=12.3km az=117.0*

ISC 25 09:52:55.8±0.3, 19°.93S±0°.05×179°.59E±0°.06, h500km, n629, σ1°.20/660, mb4.6/219, 70C-12D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	9.55	167	eP	P	09 55 07.0	-1.3
RAO	Raoul Island	9.55	167	eP	P	09 55 07.0	-1.3
GLKZ	Green Lake	9.56	167	P	P	09 55 05.5	-2.9
MARNC	Mare, Loyalty	10.93	260	eP	P	09 55 22.3	-0.8
FUNA	Funafuti	11.35	358	eP	P	09 55 24.8	-2.7
DZM	Mont Dzumac	12.46	258	P	P	09 55 40.6	+1.2
1.2nm,0.3s,baz=166,slow=7.0,SNR=9.4							
DZM				S	S	09 57 55.5	+1.2
0.1nm,0.3s,baz=195,slow=20,SNR=2.1							
DZM	Mont Dzumac	12.46	258	eP	P	09 55 37.6	-1.8
DZM				eS	S	09 57 55.6	+1.4
ONTNC	Ouen Toro	12.49	257	eP	P	09 55 37.4	-2.1
OUZ	Omahuta	16.12	198	eP	P	09 56 18.4	+0.9
37nm,0.8s							
OUZ	Omahuta	16.12	198	P	P	09 56 18.6	+1.1
WCZ	Waipu Caves	16.60	195	P	P	09 56 23.6	+1.1
GRZ	Great Barrier	16.66	192	P	P	09 56 22.7	-0.4
KUZ	Kuaotunu	17.09	191	P	P	09 56 26.7	-0.7
ABAZ	Army Bay	17.12	193	P	P	09 56 28.5	+0.8
WIAZ	Waiheke Island	17.25	192	P	P	09 56 29.1	+0.1
MBAZ	Motutapu North	17.27	193	P	P	09 56 30.4	+1.2
MXZ	Matakaoa Point	17.60	183	eP	P	09 56 29.5	-2.8
45nm,1.0s							
MXZ	Matakaoa Point	17.60	183	P	P	09 56 28.7	-3.7
HAZ	Te Kaha	17.83	185	P	P	09 56 31.9	-2.5
WMGZ	Waiomatatini S	17.85	183	P	P	09 56 31.2	-3.4
TGRZ	Tauranga	17.97	189	P	P	09 56 36.8	+1.1
RUGZ	Raukumara Rang	18.05	185	P	P	09 56 34.9	-1.7
TOZ	Tahuroa Road	18.09	190	P	P	09 56 38.2	+1.5
PUZ	Puketiti	18.11	183	P	P	09 56 34.6	-2.4
KMRZ	Kaimai	18.13	189	P	P	09 56 38.9	+1.7
TWGZ	Tauwhareparae	18.23	184	P	P	09 56 36.4	-1.8
OMRZ	Omania	18.32	188	P	P	09 56 37.6	-1.4
URZ	Urewera	18.39	186	P	P	09 56 35.0	-4.6
2.8nm,0.3s,baz=19,slow=6.3,SNR=18							
URZ				S	S	09 59 36.3	-5.7
1.0nm,0.3s,baz=201,slow=23,SNR=22							
URZ	Urewera	18.39	186	eP	P	09 56 36.3	-3.2
52nm,0.9s							
TKGZ	Te Karaka	18.50	184	P	P	09 56 38.5	-2.1
CNGZ	Carnagh Statio	18.53	183	P	P	09 56 39.3	-1.5
RAGZ	Rawiri	18.59	185	P	P	09 56 39.8	-1.8
HRRZ	Handcock Road	18.62	188	P	P	09 56 40.2	-1.5
TLZ	Tolley Road	18.67	190	P	P	09 56 42.6	+0.5
HIZ	Hauiti	18.97	192	eP	P	09 56 45.5	+0.7
63nm,0.8s							
MRHZ	Matea Rd	19.04	188	P	P	09 56 42.6	-2.9
RAHZ	Arahi	19.04	186	P	P	09 56 42.7	-2.9
KNTN	Kanton	19.05	28	eP	P	09 56 43.5	-2.4
59nm,0.8s							
BKZ	Black Stump Fm	19.35	187	eP	P	09 56 45.7	-2.8
17nm,0.9s							
BFZ	Birch Farm	20.88	187	eP	P	09 57 00.6	-1.6
36nm,0.8s							
HNR	Honiara	21.66	296	P	P	09 57 10.0	+0.4
HNR	Honiara	21.66	296	P	P	09 57 10.4	+0.8
85nm,0.6s,baz=215,slow=3.4,SNR=8.8							
HNR	Honiara	21.66	296	eP	P	09 57 10.4	+0.8
132nm,0.9s							
HNR	Honiara	21.66	296	eP	P	09 57 10.4	+0.8
HNR				pmax	pmax		
comp=Z,132nm,0.9s							
SNZO	South Karori	21.71	190	eP	P	09 57 08.2	-1.5
comp=Z,45nm,0.8s							
THZ	Tophouse	22.49	193	eP	P	09 57 15.7	-1.1
comp=Z,32nm,0.5s							
KHZ	Kahutara	22.99	192	eP	P	09 57 19.2	-2.0
comp=Z,28nm,0.7s							
LTZ	Lake Taylor	23.60	194	eP	P	09 57 24.4	-2.3
comp=Z,52nm,0.7s							
OXZ	Oxford	24.17	194	eP	P	09 57 29.9	-1.9
comp=Z,93nm,0.7s							
CRLZ	Canterbury Las	24.29	192	eP	P	09 57 31.0	-1.7
comp=Z,108nm,1.5s							
MQZ	McQueen's Vall	24.41	192	eP	P	09 57 31.3	-2.5
comp=Z,74nm,1.3s							
RPZ	Rata Peaks	24.77	195	P	P	09 57 36.2	-0.9
comp=Z,20nm,0.6s,baz=12,slow=2.2,SNR=14							
RPZ	Rata Peaks	24.77	195	eP	P	09 57 36.5	-0.6
comp=Z,22nm,0.6s							
FOZ	Fox Glacier	24.92	197	eP	P	09 57 37.7	-0.7
comp=Z,42nm,0.7s							
LBZ	Lake Benmore	25.61	196	eP	P	09 57 44.3	-0.2
comp=Z,42nm,1.3s							
WKZ	Wanaka	26.33	197	eP	P	09 57 49.9	-1.0
MLZ	Mavora Lakes	27.08	198	eP	P	09 57 57.5	0.0
DCZ	Deep Cove	27.46	199	eP	P	09 58 00.0	-0.7
WHZ	Wether Hill Ro	27.61	198	eP	P	09 58 00.8	-1.3
CTAO	Charters Tower	31.30	264	eP	P	09 58 35.0	+0.5
comp=Z,10nm,0.6s							
CTAO	Charters Tower	31.30	264	eP	P	09 58 35.0	+0.5
CTAO				pmax	pmax		
comp=Z,11nm,0.6s							
XMAS	Kiritimati	31.38	48	eP	P	09 58 35.2	0.0
comp=Z,54nm,0.9s							
TOO	Toolangi	34.44	232	eP	P	09 59 01.7	+0.8
comp=Z,25nm,1.3s							
TOO	Toolangi	34.44	232	eP	P	09 59 01.7	+0.8
TOO				pmax	pmax		
comp=Z,25nm,1.3s							
COEN	Coen	35.29	274	eP	P	09 59 08.4	0.0
comp=Z,22nm,1.4s							
STKA	Stephens Creek	36.02	243	P	P	09 59 14.1	-0.1
comp=Z,7.0nm,0.9s,baz=101,slow=6.3,SNR=11							
STKA	Stephens Creek	36.02	243	eP	P	09 59 14.8	+0.6
comp=Z,1.6nm,0.9s							
STKA	Stephens Creek	36.02	243	eP	P	09 59 14.8	+0.6
STKA				pmax	pmax		
comp=Z,2.0nm,0.9s							
JOHN	Johnston Islan	37.97	17	eP	P	09 59 28.5	-1.8
comp=Z,198nm,1.0s							
BBOO	Buckleboo	40.79	243	eP	P	09 59 52.9	-0.1
comp=Z,12nm,1.2s							
WAKE	Wake Island	40.99	341	eP	P	09 59 53.6	-1.1
comp=Z,84nm,1.0s							
WC3	Warramun

ASAR	Alice Springs	42.45	256	P	P	10 00 06.0	-0.5
	comp=Z,8.5nm,0.6s,baz=96,slow=8.4,SNR=29						
ASAR				ScP	ScP	10 04 57.3	+6.2
	comp=Z,1.3nm,0.9s,baz=111,slow=5.1,SNR=4.4						
ASAR				S	S	10 05 51.1	-0.6
	comp=Z,5.2nm,0.9s,baz=92,slow=16,SNR=23						
MLH	Mauna Loa	46.22	34	eP	P	10 00 35.5	-0.3
MLH	Mauna Loa	46.22	34	eP	P	10 00 35.5	-0.3
HMH	Humu'ula Sheep	46.26	33	eP	P	10 00 35.6	-0.6
KHLH	Kahului Airpor	46.88	31	eP	P	10 00 39.4	-1.1
	comp=Z,86nm,1.4s						
PSAD2	Pilbara Seismi	55.48	257	eP	P	10 01 42.1	-1.1
	comp=Z,52nm,1.4s						
PSAC2	Pilbara Seismi	55.54	257	eP	P	10 01 41.9	-1.7
	comp=Z,35nm,1.4s						
PSAB2	Pilbara Seismi	55.58	257	eP	P	10 01 43.6	-0.3
	comp=Z,33nm,1.4s						
PSA00	Pilbara Seismi	55.59	257	eP	P	10 01 43.5	-0.4
	comp=Z,30nm,1.4s						
PSAA1	Pilbara Seismi	55.60	257	eP	P	10 01 43.6	-0.4
	comp=Z,49nm,1.4s						
PSAD1	Pilbara Seismi	55.63	257	eP	P	10 01 43.0	-1.2
	comp=Z,32nm,1.4s						
PSAD3	Pilbara Seismi	55.64	257	eP	P	10 01 43.6	-0.6
	comp=Z,34nm,1.4s						
VNDA	Vanda	58.28	184	P	P	10 02 03.0	+1.6
	comp=Z,4.1nm,0.7s,baz=356,slow=7.4,SNR=42						
VNDA	Vanda	58.28	184	eP	P	10 02 03.1	+1.6
	comp=Z,6.3nm,0.9s						
VNDA	Vanda	58.28	184	eP	P	10 02 03.1	+1.6
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SBA	Scott Base	58.30	183	eP	P	10 02 03.8	+2.3
	comp=Z,16nm,1.0s						
SBA	Scott Base	58.30	183	eP	P	10 02 03.8	+2.3
SBA				pmax	pmax		
	comp=Z,16nm,1.0s						
GIRL	Giralia	60.52	255	eP	P	10 02 17.8	+0.4
	comp=Z,272nm,1.4s						
CASY	Casey	63.51	205	eP	P	10 02 36.5	+0.4
	comp=Z,7.7nm,1.0s						
MJAR	Matsushiro Arr	68.43	325	P	P	10 03 07.0	-0.3
	comp=Z,2.6nm,0.7s,baz=161,slow=6.3,SNR=8.6						
MAJO	Matsushiro	68.44	325	eP	P	10 03 06.7	-0.6
MAJO				ePcP	P	10 03 07.0	-0.3
MAJO	Matsushiro	68.44	325⇓	eP	P	10 03 07.4	+0.1
MAJO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
QSPA	South Pole Qui	70.13	180	eP	P	10 03 17.9	+0.7
	comp=Z,14nm,0.9s						
ADK	Adak	71.58	2	eP	P	10 03 25.3	-0.3
	comp=Z,16nm,0.8s						
ADK	Adak	71.58	2	eP	P	10 03 25.3	-0.3
ADK				pmax	pmax		
	comp=Z,16nm,0.8s						
ATKA	Atka Island	72.03	4	eP	P	10 03 27.4	-0.8
	comp=Z,30nm,0.9s						
SMY	Shemya	72.51	356	eP	P	10 03 30.6	-0.4
	comp=Z,21nm,0.9s						
SMY	Shemya	72.51	356	eP	P	10 03 30.6	-0.4
SMY				pmax	pmax		
	comp=Z,21nm,0.9s						
YSS	Yuzh-Sakhalins	74.40	335	eP	P	10 03 42.7	+0.7
	comp=Z,19nm,1.1s						
YSS	Yuzh-Sakhalins	74.40	335⇑	eP	P	10 03 42.9	+1.0
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
UNV	Unalaska Valle	74.44	8	eP	P	10 03 41.4	-0.6
	comp=Z,22nm,0.8s						
AKUT	Akutan	74.83	9	eP	P	10 03 43.4	-0.8
	comp=Z,90nm,1.4s						
KSRS	Korea Array	74.98	320	P	P	10 03 45.2	-0.3
	comp=Z,1.3nm,0.7s,baz=143,slow=5.7,SNR=8.4						
KS15	Wonju Array Si	75.00	320	eP	P	10 03 45.2	-0.3
	comp=Z,3.5nm,0.9s						
PETK	Petropavlovsk-	75.17	347	P	P	10 03 46.4	+0.2
	comp=Z,12nm,0.9s,baz=118,slow=7.1,SNR=11						
PEA1	Petropavlovsk-	75.18	347	eP	P	10 03 46.4	+0.2
SDPT	Sand Point	76.88	12	eP	P	10 03 55.4	-0.1
	comp=Z,45nm,0.7s						
USRK	Ussuriysk Ar.	77.24	327	P	P	10 03 59.2	+1.4
	comp=Z,6.7nm,0.9s,baz=147,slow=3.9,SNR=10						
TYV	Tymovskoe	77.62	337	eP	P	10 04 00.5	+0.8
TYV				pmax	pmax		
	comp=Z,16nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,5.6s						
NJ2	Nanjing	77.79	311	eP	P	10 04 03.0	+1.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CHGN	Chignik	78.18	12	eP	P	10 04 02.9	+0.4
	comp=Z,32nm,0.7s						
CHIA	Chirikof Islan	78.35	14	eP	P	10 04 03.6	+0.1
	comp=Z,28nm,0.7s						
SCZ2	Santa Cruz Isl	78.87	48	P	P	10 04 08.1	+1.2
	baz=237						
SCI2	San Clemente I	79.08	49	P	P	10 04 08.8	+0.8
	baz=238						
SAO	San Andreas Ge	79.19	44	eP	P	10 04 08.9	+0.4
	comp=Z,17nm,0.9s						
SAO	San Andreas Ge	79.19	44	eP	P	10 04 08.9	+0.4
SAO				pmax	pmax		
	comp=Z,17nm,0.9s						
PKM	Mcpherson Peak	79.23	47	P	P	10 04 10.6	+1.5
	baz=236,SNR=6.4						
BLG	Laguna Peak, P	79.33	48	P	P	10 04 10.3	+1.0
	baz=237						
SII	Sitkinak Islan	79.33	14	eP	P	10 04 09.3	+0.5
	comp=Z,68nm,1.2s						
SMMC	Simmler	79.34	46	P	P	10 04 10.8	+1.4
	baz=236						
PAGB	Antelope Grade	79.40	46	eP	P	10 04 10.0	+0.3
	comp=Z,12nm,1.1s						
HOPS	Hopland Field	79.44	42	eP	P	10 04 09.2	-0.5
	comp=Z,48nm,1.4s						
KMRM	Mail Ridge	79.77	41	eP	P	10 04 13.0	+1.4
	comp=Z,45nm,0.9s						
ARVC	Arvin	80.04	47	P	P	10 04 14.1	+1.1
	baz=237						
OHAK	Old Harbor	80.15	15	eP	P	10 04 13.2	+0.2
	comp=Z,11nm,0.7s						
VES	Vestal, Richgr	80.25	46	P	P	10 04 15.1	+1.0
	baz=237						
O02D	Mt. Diablo Mer	80.31	41	P	P	10 04 16.3	+1.9
	baz=234,SNR=6.1						
MURC	Murrieta	80.37	49	P	P	10 04 15.9	+1.1
	baz=238						
BFSC	Mount Baldy Ra	80.38	48	P	P	10 04 15.8	+0.8
	baz=238						
EDW2	Edwards Air Fo	80.49	48	P	P	10 04 16.6	+1.1
	baz=238,SNR=8.3						
CN2	Changchun	80.49	323	eP	P	10 04 17.5	+2.4
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
MONP2	Monument Peak	80.56	50	P	P	10 04 17.3	+1.3
	baz=239,SNR=11						
ISA	Isabella, Lake	80.58	47	P	P	10 04 17.4	+1.5
	baz=237,SNR=6.9						
CMB	Columbia Colle	80.60	44	eP	P	10 04 16.9	+0.9
	comp=Z,13nm,0.8s						
IKP	In-Ko-Pah, Jac	80.66	50	P	P	10 04 17.9	+1.5
	baz=239,SNR=5.4						
WDC	Whiskeytown Da	80.70	41	eP	P	10 04 15.8	-0.5
	comp=Z,20nm,1.0s						
WDC	Whiskeytown Da	80.70	41	eP	P	10 04 15.8	-0.5
WDC				pmax	pmax		
	comp=Z,20nm,1.0s						
AFDM	Forest Hills D	80.74	43	eP	P	10 04 16.5	-0.1
	comp=Z,13nm,0.9s						
ORV	Oroville	80.75	42	eP	P	10 04 17.4	+0.7
	comp=Z,9.3nm,0.8s						
IPM	Ipoh	80.81	278	eP	P	10 04 18.0	+0.4
	comp=Z,12nm,0.6s						
KDAK	Kodiak Island	80.82	15	P	P	10 04 16.7	+0.3
	comp=Z,9.1nm,0.7s,baz=205,slow=3.7,SNR=21						
KDAK	Kodiak Island	80.82	15	eP	P	10 04 16.7	+0.3
	comp=Z,13nm,0.8s						
KDAK	Kodiak Island	80.82	15	i P	P	10 04 16.6	+0.1
N02D	Trinity Center	80.83	40	P	P	10 04 18.9	+1.8
	baz=234,SNR=5.3						
PFO	Pinyon Flats O	80.90	49	eP	P	10 04 18.5	+0.8
	comp=Z,9.6nm,1.4s						
PFO	Pinyon Flats O	80.90	49	eP	P	10 04 18.5	+0.8
PFO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PFO	Pinyon Flats O	80.90	49	P	P	10 04 18.8	+1.1
	baz=239						
KLR	Kul'dur	80.91	331	deP	P	10 04 18.5	+1.3
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BBRC	Big Bear Solar	80.91	49	P	P	10 04 18.6	+0.7
	baz=238						
M02C	Callahan	80.99	40	P	P	10 04 19.9	+2.0
	baz=234,SNR=7.3						
O03E	Paynes Creek	80.99	41	P	P	10 04 19.0	+1.0
	baz=234,SNR=7.0						
L02E	Cave Junction	81.00	39	P	P	10 04 19.2	+1.4
	baz=233						
LRMC	Laurel Mtn Rad	81.02	47	P	P	10 04 19.3	+1.0
	baz=238						
SWSC	Sam W. Stewart	81.04	50	P	P	10 04 19.9	+1.7
	baz=239						
RRX	Edison Barstow	81.18	48	P	P	10 04 20.2	+1.2
	baz=238						
MDPB	Devils Postpil	81.24	45	eP	P	10 04 20.8	+1.3
	comp=Z,17nm,0.9s						
CWC	Cottonwood Cre	81.26	46	P	P	10 04 20.8	+1.3
	baz=237						
OMMB	Old Mammoth Mi	81.28	45	eP	P	10 04 21.2	+1.4
	comp=Z,12nm,1.1s						
YBH	Yreka Blue Hor	81.28	40	P	P	10 04 21.3	+1.9
	comp=Z,13nm,0.7s,baz=193,slow=2.1,SNR=41						
YBH	Yreka Blue Hor	81.28	40	eP	P	10 04 21.1	+1.7
	comp=Z,15nm,0.8s						
K02D	Willamette Mer	81.29	39	P	P	10 04 20.8	+1.3
	baz=233						
MAW	Mawson	81.32	200	P	P	10 04 20.2	+1.1
	comp=Z,3.0nm,0.7s,baz=137,slow=7.4,SNR=11						
MAW	Mawson	81.32	200	eP	P	10 04 20.3	+1.2
	comp=Z,1.7nm,1.3s						
MAW	Mawson	81.32	200	eP	P	10 04 20.3	+1.2
MAW				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MLAC	Mammoth, Mammo	81.40	45	P	P	10 04 21.2	+0.9
	baz=237						
J01E	Myrtle Point	81.42	38	P	P	10 04 21.9	+1.9
	baz=232						
BELC	Belle Mtn. Jos	81.43	49	P	P	10 04 21.8	+1.3
	baz=239,SNR=5.7						
KULM	Kulim	81.45	279	eP	P	10 04 21.0	+0.2
	comp=Z,6.5nm,0.8s						
MPMC	Manual Prospec	81.46	47	P	P	10 04 21.9	+1.3
	baz=238,SNR=16						
WAKR	Walker	81.48	44	eP	P	10 04 22.3	+1.6
	comp=Z,23nm,0.9s						
TIN	Tinemaha, Big	81.49	46	P	P	10 04 21.8	+1.1
	baz=237						
DAC	Darwin (Calif)	81.51	47	eP	P	10 04 23.5	+2.6
	comp=Z,4.7nm,0.8s						
DAC	Darwin (Calif)	81.51	47	eP	P	10 04 23.5	+2.6
DAC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GSC	Goldstone, Bar	81.54	48	P	P	10 04 21.9	+1.0
	baz=238						
HEC	Hector,Ludlow	81.62	48	P	P	10 04 22.5	+1.2
	baz=239						
BC3	Big Chuckawall	81.65	50	P	P	10 04 23.0	+1.5
	baz=239						
BEKR	Beckworth	81.65	42	eP	P	10 04 22.7	+1.2
	comp=Z,12nm,0.7s						
HUMO	Hull Mountain	81.66	39	eP	P	10 04 22.9	+1.7
	comp=Z,22nm,1.1s						
PNTR	Pine Nut	81.70	43	eP	P	10 04 22.1	+0.2
	comp=Z,33nm,0.8s						
VCNR	Virginia City	81.78	43	eP	P	10 04 23.4	+1.2
	comp=Z,10nm,0.9s						
GLA	Glamis	81.80	51	P	P	10 04 24.0	+1.8
	baz=240						
L04D	Klamath Falls	81.81	40	P	P	10 04 23.5	+1.3
	baz=234,SNR=5.4						
M04C	Macdoel	81.84	40	P	P	10 04 23.7	+1.4
	baz=234,SNR=6.9						
YERR	Yerington	81.88	44	eP	P	10 04 23.9	+1.2
	comp=Z,20nm,0.8s						
GRAC	Grapevine Rang	82.04	46	P	P	10 04 24.8	+1.4
	baz=238,SNR=12						
GMRC	Granite Mounta	82.07	49	P	P	10 04 24.7	+1.0
	baz=239,SNR=8.0						
I03D	Drain, OR	82.08	38	P	P	10 04 25.0	+1.6
	baz=233						
FURC	Furnace Creek,	82.11	47	P	P	10 04 24.8	+1.2
	baz=238						
IRM	Iron Mountain	82.12	49	P	P	10 04 25.3	+1.5
	baz=240,SNR=7.6						
RYN	Ryan	82.15	44	eP	P	10 04 25.2	+1.1
	comp=Z,20nm,1.3s						
PAHR	Pah Rah Range	82.19	43	eP	P	10 04 24.9	+0.7
	comp=Z,16nm,0.9s						
NV01	Mina Array Sit	82.19	44	eP	P	10 04 25.5	+1.2
NVAR	Mina Array Bea	82.19	44	P	P	10 04 25.5	+1.2
	comp=Z,8.5nm,0.8s,baz=225,slow=8.0,SNR=71						
SHOC	Shoshone, Teco	82.22	48	P	P	10 04 25.3	+1.1
	baz=239						
TUQ	Turquoise Moun	82.22	48	P	P	10 04 25.3	+0.9
	baz=239						
NV11	Mina Array Sit	82.28	45	eP	P	10 04 25.9	+1.1
	comp=Z,1.8nm,1.2s						
Y12C	Blythe	82.36	50	eP	P	10 04 26.5	+1.5
	comp=Z,14nm,1.1s						
Y12C	Blythe	82.36	50	P	P	10 04 26.3	+1.2
	baz=240						
K04D	Chiloquin, OR	82.38	39	P	P	10 04 26.0	+0.9
	baz=234						
113A	Mohawk Valley,	82.43	51	eP	P	10 04 27.0	+1.6
	comp=Z,8.6nm,1.1s						
J04D	Umpqua Nationa	82.53	39	P	P	10 04 27.0	+1.1
	baz=234						
KVN	Kaiserville	82.66	44	eP	P	10 04 27.9	+1.2
	comp=Z,16nm,0.9s						
KVN	Kaiserville	82.66	44	eP	P	10 04 27.9	+1.2
KVN				pmax	pmax		
	comp=Z,16nm,0.9s						
MA2	Magadan	82.66	346	P	P	10 04 25.1	-0.8
	comp=Z,9.6nm,0.8s,baz=147,slow=8.0,SNR=6.8						
MA2	Magadan	82.66	346	eP	P	10 04 25.3	-0.7
	comp=Z,11nm,0.8s						
MA2	Magadan	82.66	346	ceP	P	10 04 25.2	-0.7
MA2				pmax	pmax		
	comp=Z,12nm,0.8s						
I04A	Tendick Farm,	82.68	38	P	P	10 04 27.5	+1.0
	baz=234						
CNPM	China Poot	82.70	15	eP	P	10 04 25.8	-0.4
	comp=Z,20nm,0.8s						
HOM	Homer	82.72	14	eP	P	10 04 26.4	+0.2
	comp=Z,82nm,0.8s						
214A	Organ Pipe Nat	82.74	52	P	P	10 04 28.7	+1.7
	baz=241						
TPNV	Topopah Spring	82.78	47	eP	P	10 04 28.4	+1.1
	comp=Z,16nm,0.9s						
TPNV	Topopah Spring	82.78	47	eP	P	10 04 28.4	+1.1
TPNV				pmax	pmax		
	comp=Z,16nm,0.9s						
TPNV	Topopah Spring	82.78	47	P	P	10 04 28.6	+1.3
	baz=239,SNR=20						
NEE2	Needles Airpor	82.80	49	P	P	10 04 28.6	+1.4
	baz=240						
MOD	Modoc Plateau	82.84	41	eP	P	10 04 28.8	+1.3
	comp=Z,18nm,0.7s						
PDMCI	Parker Dam,Lak	82.91	50	P	P	10 04 29.2	+1.4
	baz=240						
H04D	Lebanon	82.93	38	P	P	10 04 28.8	+1.2
	baz=233						
K05A	Summer Lake	82.96	40	eP	P	10 04 29.9	+1.9
	comp=Z,40nm,1.0s						
BRLK	Bradley Lake	82.99	15	eP	P	10 04 27.4	-0.2
	comp=Z,27nm,0.8s						
G03D	McMinnville, O	83.04	37	P	P	10 04 29.6	+1.4
	baz=233						
J05D	Fort Rock, OR	83.08	39	P	P	10 04 30.2	+1.6
	baz=234,SNR=20						
SVW2	Sparrevohn	83.19	12	eP	P	10 04 28.4	-0.1
	comp=Z,6.9nm,0.6s						
RSO	Redoubt South	83.19	13	eP	P	10 04 28.2	-0.6
SHPR	Sheep Range	83.30	47	eP	P	10 04 31.0	+1.1
	comp=Z,7.7nm,1.0s						
PINE	Pine Mountain	83.54	39	eP	P	10 04 32.5	+1.5
	comp=Z,31nm,0.8s						
I05D	Terrebonne, OR	83.63	38	P	P	10 04 32.5	+1.3
	baz=234						
SEW	Seward	83.64	15	eP	P	10 04 30.6	-0.1
	comp=Z,16nm,0.9s						
F04D	Rainier, OR	83.71	36	P	P	10 04 33.0	+1.5
	baz=233						
R11A	Troy Canyon, C	83.95	46	eP	P	10 04 33.9	+0.8
	comp=Z,4.3nm,1.0s						
R11A	Troy Canyon, C	83.95	46	P	P	10 04 34.0	+0.8
	baz=239,SNR=8.2						
BMN	Battle Mountai	83.97	43	eP	P	10 04 34.5	+1.3
	comp=Z,14nm,0.8s						
BMN	Battle Mountai	83.97	43	eP	P	10 04 34.5	+1.3
BMN				pmax	pmax		
	comp=Z,14nm,0.8s						
SPU	Mount Spurr	83.99	13	eP	P	10 04 31.4	-1.2
WVOR	Wild Horse Val	84.17	41	eP	P	10 04 35.3	+1.3
	comp=Z,16nm,1.0s						
WVOR	Wild Horse Val	84.17	41	eP	P	10 04 35.3	+1.3
WVOR				pmax	pmax		
	comp=Z,16nm,1.0s						
G05D	Wamic, OR	84.17	38	P	P	10 04 35.0	+1.1
	baz=234						
E04D	Cinebar	84.24	36	P	P	10 04 35.6	+1.5
	baz=233						
TUC	Tucson	84.42	53	eP	P	10 04 37.2	+1.8
	comp=Z,8.9nm,1.3s						
TUC	Tucson	84.42	53	P	P	10 04 37.3	+1.8
	baz=242						
RC01	Rabbit Creek A	84.43	14	eP	P	10 04 34.4	-0.3
	comp=Z,18nm,0.9s						
F05D	White Salmon	84.46	37	P	P	10 04 36.2	+1.0
	baz=234						
D04E	Lakebay	84.50	35	P	P	10 04 37.2	+1.8
	baz=233						
SUA	Susitna One	84.53	14	eP	P	10 04 34.9	-0.4
	comp=Z,16nm,0.7s						
D03D	Eldon	84.55	35	P	P	10 04 36.7	+1.2
	baz=233						
G06A	Carlson Farm,	84.56	38	eP	P	10 04 37.0	+1.2
	comp=Z,7.5nm,0.8s						
I07A	Izee	84.56	39	eP	P	10 04 37.3	+1.4
	comp=Z,12nm,0.8s						
J08A	Circle Bar Ran	84.78	40	eP	P	10 04 37.9	+0.9
	comp=Z,16nm,1.1s						
TTA	Tatalina	84.80	11	eP	P	10 04 36.8	+0.2
	comp=Z,8.6nm,1.1s						
TTA	Tatalina	84.80	11	eP	P	10 04 36.8	+0.2
TTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LCMT	Little Creek M	84.89	48	eP	P	10 04 38.7	+1.0
	comp=Z,5.5nm,0.9s						
GLI	Glacier Island	84.89	16	eP	P	10 04 36.7	-0.2
	comp=Z,40nm,0.7s						
D05A	Enumclaw	84.94	36	eP	P	10 04 38.7	+1.2
	comp=Z,29nm,1.0s						
EYAK	Cordova Ski Ar	84.96	16	eP	P	10 04 37.5	+0.2
PMR	Palmer	85.02	14	eP	P	10 04 37.2	-0.3
	comp=Z,8.9nm,0.6s						
PMR	Palmer	85.02	14	eP	P	10 04 37.2	-0.3
PMR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KNK	Knik Glacier	85.02	15	eP	P	10 04 37.6	0.0
	comp=Z,16nm,0.8s						
PGC	Sidney	85.03	34	eP	P	10 04 38.1	+0.2
	comp=Z,6.4nm,0.7s						
CCUT	Cedar City	85.07	47	eP	P	10 04 40.0	+1.3
	comp=Z,4.4nm,0.9s						
KNB	Kanab	85.18	48	eP	P	10 04 40.7	+1.5
	comp=Z,6.2nm,0.9s						
KNB	Kanab	85.18	48	eP	P	10 04 40.7	+1.5
KNB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PSUT	Pine Spring	85.22	46	eP	P	10 04 40.6	+1.2
	comp=Z,4.8nm,0.8s						
GHO	Glory Hole Cre	85.22	14	eP	P	10 04 38.5	-0.1
	comp=Z,32nm,0.7s						
U15A	North Rim	85.27	49	eP	P	10 04 41.0	+1.2
	comp=Z,12nm,0.9s						
SEY	Seymchan	85.33	348	P	P	10 04 39.2	+0.2
	comp=Z,22nm,0.8s,baz=154,slow=4.9,SNR=41						
ELK	Elko	85.42	44	eP	P	10 04 41.5	+1.1
	comp=Z,8.6nm,1.2s						
A04D	Lummi Island	85.47	34	P	P	10 04 41.1	+1.1
	baz=233,SNR=7.8						
WUAZ	Wupatki	85.49	50	eP	P	10 04 42.0	+1.3
	comp=Z,5.9nm,0.9s						
WUAZ	Wupatki	85.49	50	P	P	10 04 42.0	+1.3
	baz=242						
B05A	Bryant	85.52	35	P	P	10 04 41.4	+1.1
	baz=233,SNR=7.7						
G08A	Pilot Rock	85.56	38	eP	P	10 04 41.9	+1.1
	comp=Z,16nm,1.0s						
SCM	Sheep Creek Mo	85.66	15	eP	P	10 04 40.8	+0.1
	comp=Z,28nm,0.7s						
SCM	Sheep Creek Mo	85.66	15	eP	P	10 04 40.8	+0.1
SCM				pmax	pmax		
	comp=Z,28nm,0.7s						
LTY	Liberty	85.71	36	eP	P	10 04 41.9	+0.6
	comp=Z,10nm,0.8s						
PKCU	Pink Cliffs	85.75	48	eP	P	10 04 44.2	+2.1
	comp=Z,17nm,1.0s						
HAWA	Hanford	85.85	37	eP	P	10 04 43.4	+1.5
	comp=Z,24nm,0.9s						
CAST	Castle Rocks	85.99	12	eP	P	10 04 41.1	-1.2
	comp=Z,12nm,0.7s						
XAN	Xi'an	86.00	308	P	P	10 04 44.5	+1.5
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MTPU	Mount Pierson	86.12	47	eP	P	10 04 46.0	+2.1
	comp=Z,6.4nm,0.9s						
PCA	Pinnacle	86.16	19	eP	P	10 04 43.0	-0.2
	comp=Z,22nm,0.7s						
E08A	Dider Farm, El	86.18	37	eP	P	10 04 43.8	+0.3
	comp=Z,13nm,0.8s						
BMO	Blue Mountains	86.30	39	eP	P	10 04 45.4	+1.1
	comp=Z,3.6nm,0.8s						
BALM	Baldy	86.30	18	eP	P	10 04 44.0	+0.1
	comp=Z,20nm,1.2s						
BALM	Baldy	86.30	18	eP	P	10 04 44.0	+0.1
BALM				pmax	pmax		
	comp=Z,20nm,1.2s						
W18A	Petrified Fore	86.49	51	P	P	10 04 45.5	-0.1
	baz=243						
D08A	Wollman Farm,	86.57	37	eP	P	10 04 46.7	+1.3
	comp=Z,19nm,0.8s						
RND	Reindeer	86.66	14	eP	P	10 04 45.1	-0.4
	comp=Z,36nm,1.2s						
RND	Reindeer	86.66	14	eP	P	10 04 45.1	-0.4
RND				pmax	pmax		
	comp=Z,36nm,1.2s						
DHY	Denali Highway	86.71	14	eP	P	10 04 45.8	-0.1
	comp=Z,12nm,1.2s						
E09A	Wood Farm, Sta	86.71	38	eP	P	10 04 46.3	+0.3
	comp=Z,17nm,1.3s						
DUG	Dugway, Tooele	86.74	45	P	P	10 04 47.1	+0.5
	baz=241						
SYO	Syowa Base	86.77	193⇑	eP	P	10 04 44.0	-2.0
SYO	Syowa Base	86.77	193⇓	ePcP	PcP	10 04 47.0	-0.6
121A	Cookes Peak, D	86.79	54	P	P	10 04 47.8	+0.8
	baz=244						
BPAW	Bear Paw Mtn.	86.82	12	eP	P	10 04 46.1	-0.1
	comp=Z,1.6nm,1.0s						
MCK	McKinley	86.93	13	eP	P	10 04 46.4	-0.3
	comp=Z,7.4nm,0.8s						
MCK	McKinley	86.93	13	eP	P	10 04 46.4	-0.3
MCK				pmax	pmax		
	comp=Z,7.0nm,

HVU	Hansel Valley	87.55	44	eP	P	10 04 51.7	+1.4
HVU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HYT	Haines Junctio	87.58	20	eP	P	10 04 50.6	+0.7
	comp=Z,8.6nm,0.9s						
CTU	Camp Tracy	87.69	45	eP	P	10 04 51.9	+0.9
	comp=Z,6.8nm,0.9s						
MLY	Manley	87.70	12	eP	P	10 04 49.5	-0.8
	comp=Z,9.9nm,0.8s						
WRH	Wood River Hil	87.76	13	eP	P	10 04 49.9	-0.6
	comp=Z,20nm,0.9s						
SRU	San Rafael Swe	87.78	47	eP	P	10 04 52.1	+0.7
	comp=Z,9.1nm,1.0s						
P17A	Butcher Ranch,	87.80	47	eP	P	10 04 52.8	+1.2
	comp=Z,8.0nm,1.2s						
CMAR	Chiang Mai Arr	87.80	290	P	P	10 04 53.3	+1.5
	comp=Z,5.3nm,0.9s,baz=124,slow=3.1,SNR=21						
CMAR	Chiang Mai Arr	87.80	290	ceP	P	10 04 54.0	+2.2
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JLU	Jordanelle	87.85	45	eP	P	10 04 53.0	+1.2
	comp=Z,7.1nm,1.1s						
HDA	Harding Lake	87.96	14	eP	P	10 04 51.0	-0.5
	comp=Z,17nm,0.6s						
HDA	Harding Lake	87.96	14	P	P	10 04 50.7	-0.8
	baz=211						
CCB	Clear Creek Bu	87.97	13	eP	P	10 04 50.8	-0.7
	comp=Z,20nm,0.7s						
DOT	Dot Lake	88.00	15	eP	P	10 04 51.2	-0.5
	comp=Z,12nm,0.7s						
TCUT	Toone Canyon	88.12	45	eP	P	10 04 54.6	+1.5
	comp=Z,32nm,0.9s						
MDM	Murphy Dome	88.15	13	eP	P	10 04 52.1	-0.3
	comp=Z,18nm,0.9s						
TCOL	CIGO, UAF Yank	88.16	13	P	P	10 04 51.6	-0.8
	baz=210						
COLA	College	88.16	13	eP	P	10 04 52.0	-0.4
	comp=Z,26nm,0.8s						
COLA	College	88.16	13	c iP	P	10 04 51.5	-0.8
COLA				pmax	pmax		
	comp=Z,24nm,0.8s						
HWUT	Hardware Ranch	88.25	44	eP	P	10 04 54.2	+0.6
	comp=Z,5.0nm,0.8s						
NEW	Newport	88.25	37	P	P	10 04 53.9	+0.6
	baz=237,SNR=7.7						
BILL	Bilibino	88.26	355	eP	P	10 04 53.0	+0.2
	comp=Z,6.7nm,0.7s						
BILL	Bilibino	88.26	355	deP	P	10 04 53.7	+0.9
BILL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNTX	Cornudas Mount	88.28	55	eP	P	10 04 55.0	+1.2
	comp=Z,7.4nm,1.1s						
MNTX	Cornudas Mount	88.28	55	P	P	10 04 55.0	+1.2
	baz=245,SNR=9.2						
ILAR	Eielson Array	88.28	14	P	P	10 04 52.1	-0.8
	comp=Z,12nm,0.9s,baz=230,slow=5.6,SNR=81						
ILB	Eielson Array	88.28	14	eP	P	10 04 51.7	-1.3
	comp=Z,16nm,0.9s						
PV05	Paradox Valley	88.29	48	eP	P	10 04 56.0	+2.0
	comp=Z,9.5nm,1.0s						
WHY	Whitehorse	88.30	21	eP	P	10 04 54.0	+0.7
	comp=Z,11nm,0.7s						
BNM	Barren Site	88.36	53	eP	P	10 04 54.9	+0.5
DLBC	Dease Lake	88.43	24	P	P	10 04 55.0	+1.1
	comp=Z,5.5nm,0.8s,baz=232,slow=6.0,SNR=12						
DLBC	Dease Lake	88.43	24	eP	P	10 04 54.6	+0.7
	comp=Z,7.1nm,0.8s						
PV09	Paradox Valley	88.46	48	eP	P	10 04 56.4	+1.6
POKR	Poker Plat Res	88.46	13	P	P	10 04 52.8	-1.0
	baz=211						
PV20	West Nyswonger	88.50	48	eP	P	10 04 54.5	-0.4
	comp=Z,12nm,1.4s						
PV23	Carpenter Ridg	88.52	48	eP	P	10 04 56.7	+1.6
	comp=Z,7.0nm,0.8s						
PV13	Radium Mtn., P	88.52	48	eP	P	10 04 56.1	+1.0
	comp=Z,6.7nm,1.2s						
PV16	Nyswonger Mesa	88.53	48	eP	P	10 04 55.7	+0.6
	comp=Z,11nm,1.4s						
PV03	Paradox Valley	88.55	48	eP	P	10 04 53.0	-2.1
	comp=Z,6.3nm,1.2s						
PV11	David Mesa, Pa	88.55	48	eP	P	10 04 57.0	+1.9
	comp=Z,9.5nm,1.2s						
PV04	Paradox Valley	88.57	48	eP	P	10 04 56.4	+1.2
	comp=Z,8.2nm,1.1s						
PV21	Cone Mtn., Par	88.60	48	eP	P	10 04 56.3	+0.9
	comp=Z,9.8nm,1.1s						
PV12	Saucer Basin,	88.61	48	eP	P	10 04 56.6	+1.2
	comp=Z,16nm,1.3s						
TX31	Lajitas Ar. Si	88.67	58	eP	P	10 04 57.1	+1.3
	comp=Z,13nm,1.3s						
TXAR	Lajitas Array	88.67	58	P	P	10 04 57.6	+1.8
	comp=Z,3.9nm,0.7s,baz=216,slow=6.0,SNR=53						
PV22	Blue Mesa, Par	88.72	48	eP	P	10 04 57.4	+1.5
	comp=Z,12nm,1.2s						
TASM	ASL Pad, Albuq	88.83	52	P	P	10 04 57.5	+1.0
	baz=245,SNR=7.6						
TASM	ASL Pad, Albuq	88.83	52	P	P	10 04 57.4	+0.9
	baz=245,SNR=6.9						
ANMO	Albuquerque	88.83	52	eP	P	10 04 57.5	+1.0
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	88.83	52	eP	P	10 04 57.5	+1.0
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	88.83	52	P	P	10 04 57.5	+1.0
	baz=245						
MCMT	McKenzie Canyo	89.00	41	eP	P	10 04 58.0	+0.9
MSO	Missoula	89.34	39	eP	P	10 04 58.0	-0.4
	comp=Z,10nm,1.4s						
MSO	Missoula	89.34	39	P	P	10 04 59.3	+0.8
	baz=240						
DLMT	Dillon	89.42	41	eP	P	10 05 00.3	+1.4
	comp=Z,11nm,1.1s						
TPAW	Teton Pass	89.55	43	eP	P	10 05 01.1	+1.3
	comp=Z,10nm,1.1s						
DAWY	Dawson	89.56	17	eP	P	10 04 59.1	+0.1
	comp=Z,12nm,0.8s						
FXWY	Fox Creek	89.57	43	eP	P	10 05 01.0	+1.2
	comp=Z,3.3nm,0.8s						
EGAK	Eagle	89.66	16	eP	P	10 04 59.5	+0.1
	comp=Z,14nm,0.8s						
LRM	Limekiln Ridge	89.73	40	eP	P	10 05 01.7	+1.2
IMW	Indian Meadow	89.75	43	eP	P	10 05 01.7	+1.0
	comp=Z,13nm,1.0s						
COLD	Coldfoot	89.75	11	eP	P	10 05 00.3	+0.6
	comp=Z,12nm,1.2s						
S22A	4UR Ranch, Cre	89.76	49	P	P	10 05 02.0	+1.1
	baz=244,SNR=6.4						
O20A	White River Ci	89.81	47	eP	P	10 05 02.0	+1.1
	comp=Z,18nm,1.0s						
O20A	White River Ci	89.81	47	P	P	10 05 01.9	+1.0
	baz=244,SNR=13						
LOHW	Long Hollow	89.83	43	eP	P	10 05 01.7	+0.7
	comp=Z,5.0nm,0.9s						
QLMT	Earthquake Lak	89.88	42	eP	P	10 05 02.9	+1.7
YHB	Horse Butte	89.99	42	eP	P	10 05 03.1	+1.4
	comp=Z,9.6nm,0.9s						
YFT	Old Faithful	90.08	42	eP	P	10 05 01.8	-0.4
	comp=Z,9.0nm,1.0s						
YMR	Madison River	90.10	42	eP	P	10 05 03.1	+0.9
	comp=Z,9.3nm,0.8s						
BW06	Boulder Array	90.11	44	eP	P	10 05 02.3	0.0
	comp=Z,7.9nm,0.9s						
BW06	Boulder Array	90.11	44	P	P	10 05 03.0	+0.7
	baz=243,SNR=13						
PD31	Pinedale Array	90.11	44	eP	P	10 05 02.9	+0.6
	comp=Z,6.8nm,0.9s						
PDAR	Pinedale Array	90.11	44	P	P	10 05 03.2	+0.9
	comp=Z,5.6nm,0.9s,baz=210,slow=3.0,SNR=43						
BOZ	Bozeman (W)	90.13	41	eP	P	10 05 03.0	+0.8
	comp=Z,6.5nm,1.0s						
BOZ	Bozeman (W)	90.13	41	eP	P	10 05 03.0	+0.8
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOZ	Bozeman (W)	90.13	41	P	P	10 05 03.3	+1.1
	baz=241,SNR=9.0						
H17A	Grant Village	90.21	42	eP	P	10 05 02.1	-0.7
	comp=Z,7.6nm,0.9s						
H17A	Grant Village	90.21	42	P	P	10 05 04.8	+2.0
	baz=242						
YHH	Holmes Hill	90.23	42	eP	P	10 05 03.0	+0.1
	comp=Z,3.9nm,0.7s						
SMCO	Snowmass	90.27	48	eP	P	10 05 04.5	+1.1
	comp=Z,7.9nm,1.0s						
HRY	Holter Researc	90.54	40	eP	P	10 05 04.0	0.0
LZH	Lanzhou	90.64	308	⇓P	P	10 05 06.0	+1.2
LZH				pP	pP	10 06 54.0	-1.7
LZH				sP	sP	10 07 42.0	-4.1
LZH				PP	PP	10 08 52.3	+3.2
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,65nm,9.5s						
SDCO	Great Sand Dun	90.71	50	P	P	10 05 05.9	+0.6
	baz=245						
TOLK	Toolik Lake Re	91.11	11	eP	P	10 05 06.1	0.0
	comp=Z,3.6nm,0.8s						
TOLK	Toolik Lake Re	91.11	11	P	P	10 05 06.2	0.0
	baz=209						
RWWY	Rawlins	91.19	46	eP	P	10 05 07.2	-0.2
	comp=Z,56nm,0.3s						
T25A	Trinidad	91.25	51	P	P	10 05 08.5	+0.8
	baz=246						
PLCA	Paso Flores	91.29	134	P	P	10 05 08.4	+0.6
	comp=Z,1.1nm,0.8s,baz=344,slow=7.5,SNR=3.7						
PLCA	Paso Flores	91.29	134	eP	P	10 05 09.5	+1.7
PLCA	Paso Flores	91.29	134	eP	P	10 05 09.5	+1.7
RLMT	Red Lodge	91.38	42	eP	P	10 05 07.8	-0.3
	comp=Z,5.7nm,0.9s						
RLMT	Red Lodge	91.38	42	P	P	10 05 09.3	+1.3
	baz=243,SNR=5.7						
ISCO	Idaho Springs	91.49	48	P	P	10 05 10.1	+1.3
	baz=245						
N23A	Red Feather La	91.72	47	P	P	10 05 10.9	+1.1
	baz=245,SNR=6.8						
EPYK	Eagle Plains	92.06	16	eP	P	10 05 10.6	+0.1
	comp=Z,15nm,1.3s						
EPYK	Eagle Plains	92.06	16	P	P	10 05 10.3	-0.2
	baz=221						
EGMT	Eagleton	92.40	39	eP	P	10 05 12.8	+0.3
	comp=Z,8.0nm,1.1s						
EGMT	Eagleton	92.40	39	P	P	10 05 12.8	+0.3
	baz=243						
ULN	Ulaanbaatar	93.47	320	⇓eP	P	10 05 17.7	+0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONA0	Songino Array	93.85	320	eP	P	10 05 18.7	-0.6
SONM	Songino Array	93.85	320	P	P	10 05 18.7	-0.6
	comp=Z,0.5nm,0.4s,baz=105,slow=3.4,SNR=3.2						
RSSD	Black Hills	94.33	45	eP	P	10 05 21.4	-0.2
	comp=Z,5.5nm,1.0s						
RSSD	Black Hills	94.33	45	eP	P	10 05 21.4	-0.2
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RSSD	Black Hills	94.33	45	P	P	10 05 21.9	+0.3
	baz=246						
INK	Inuvik	94.33	16	P	P	10 05 20.0	-0.7
	comp=Z,5.3nm,1.1s,baz=235,slow=3.6,SNR=4.7						
INK	Inuvik	94.33	16	eP	P	10 05 19.6	-1.1
	comp=Z,5.9nm,1.0s						
INK	Inuvik	94.33	16	eP	P	10 05 19.7	-1.1
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DGMT	Dagmar	95.95	41	P	P	10 05 29.9	+1.2
	baz=247						
YKA	Yellowknife Ar	96.96	25	P	P	10 05 32.7	0.0
	comp=Z,1.0nm,0.8s,baz=240,slow=4.5,SNR=8.0						
YKB5	Yellowknife Ar	96.96	25	eP	P	10 05 32.7	0.0
TIXI	Tiksi	97.63	346	⇑eP	P	10 05 35.7	+0.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
060Z	West Palm Beac	107.11	68	P	PKiKP	10 10 25.1	0.0
	baz=256						
V53A	Saluda	107.34	58	P	PKiKP	10 10 26.0	+0.6
	baz=258						
T52A	Hallie	107.50	56	P	PKiKP	10 10 26.5	+0.9
	baz=258						
ZALV	Zalesovo Beam	108.64	322	PKiKP	PKiKP	10 10 26.8	-0.3
	comp=Z,1.0nm,0.5s,baz=24,slow=1.4,SNR=4.6						
ZAA1	Zalesovo Array	108.64	322	ePKiKP	PKiKP	10 10 26.8	-0.3
M51A	Elyria	108.92	52	P	PKiKP	10 10 28.4	+0.3
	baz=260						
NHSC	New Hope	108.93	61	P	PKiKP	10 10 28.5	+0.2
	baz=258						
MK32	Makanchi Array	109.17	314	ePKiKP	PKiKP	10 10 28.9	+0.4
MK32				ePKiKPbc	PKKPbc	10 21 35.5	-1.8
MKAR	Makanchi Array	109.17	314	PKiKP	PKiKP	10 10 28.9	+0.4
	comp=Z,0.9nm,0.6s,baz=48,slow=1.8,SNR=8.6						
MKAR				PKKPbc	PKKPbc	10 21 35.5	-1.8
	comp=Z,0.1nm,0.4s,baz=242,slow=3.1,SNR=3.6						
KSH	Kashi	112.72	305	ePKP	PKiKP	10 10 39.3	+3.8
CHGR	Chuyangaron	117.91	304	ePKPdf	PKiKP	10 10 47.7	+2.2
SPA0	Spitsbergen Ar	121.16	356	ePKPdf	PKiKP	10 10 51.0	+0.4
SPITS	Spitsbergen Ar	121.16	356	PKP	PKiKP	10 10 50.8	+0.1
	comp=Z,5.5nm,0.7s,baz=121,slow=9.1,SNR=5.9						
ARU	Arti	123.45	325	⇓iPKIKP	PKPdf	10 10 55.4	0.0
ARU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ABKAR	Akbulak array	124.12	317	ePKPdf	PKPdf	10 10 55.3	-1.7
PRGR	Permogore	127.56	334	ePKIKP	PKPdf	10 11 02.6	-0.5
PRGR				pmax	pmax		
	comp=Z,18nm,0.6s						
ARA0	ARCESS Array S	127.94	349	ePKPdf	PKiKP	10 11 04.1	-0.3
ARCES	ARCESS Array B	127.94	349	PKP	PKiKP	10 11 04.1	-0.3
	comp=Z,3.3nm,0.8s,baz=309,slow=0.8,SNR=8.7						
FIA0	FINESS Array S	134.57	342	ePKPdf	PKPdf	10 11 14.4	-2.0
FIA0				eSKPbc	SKPab	10 14 02.1	-1.4
FIA0	FINESS Array S	134.57	342	ePKIKP	PKPdf	10 11 14.4	-2.0
FIA0				e		10 14 02.1	
FINES	FINESS Array B	134.57	342	PKP	PKPdf	10 11 14.4	-2.0
	comp=Z,3.4nm,0.6s,baz=99,slow=3.4,SNR=13						
FINES				SKPbc	SKPab	10 14 02.1	-1.4
	comp=Z,5.9nm,1.0s,baz=75,slow=2.2,SNR=10						
OBN	Obninsk	135.17	331	⇑iPKIKP	PKiKP	10 11 19.7	+0.4
OBN				e		10 14 05.1	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
NB2	NORSAR Subarra	138.12	352	PKP	PKPpre	10 11 15.3	
	comp=Z,1.7nm,0.8s,baz=17,slow=2.6						
NB200	NORSAR Array S	138.12	352	ePKPpre	PKPpre	10 11 13.3	
NB200				ePKPdf	PKiKP	10 11 24.3	-0.9
NOA	NORSAR Array B	138.12	352	PKhKP	PKPpre	10 11 13.3	
	comp=Z,1.6nm,0.8s,baz=22,slow=3.9,SNR=5.0						
NOA				PKP	PKiKP	10 11 24.3	-0.9
	comp=Z,0.9nm,0.7s,baz=15,slow=4.1,SNR=4.9						
AKASG	Malin Array Be	141.41	330	PKhKP	PKPpre	10 11 23.8	
	comp=Z,4.5nm,0.6s,baz=38,slow=4.4,SNR=23						
AKASG				SKPbc	SKiKP	10 14 21.4	+0.8
	comp=Z,0.2nm,0.3s,baz=31,slow=2.2,SNR=5.6						
AKBB	Malin Array Si	141.41	330	ePKPpre	PKPpre	10 11 23.6	
AKBB	Malin Array Si	141.41	330	ePKHKP	PKPpre	10 11 23.6	
BZK	Bozkurt	143.58	315	⇑iP	PKPdf	10 11 32.9	-0.4
GKP	Gorka Klasztor	144.04	342	ePKP	PKPdf	10 11 33.6	-0.2
GKP	Gorka Klasztor	144.04	342	ePKIKP	PKPdf	10 11 33.6	-0.2
BEL	Belsk	144.10	338	ePKP	PKPdf	10 11 34.4	+0.5
BEL	Belsk	144.10	338	ePKIKP	PKPdf	10 11 34.4	+0.5
ILGA	Ilgaz	144.17	314	ePKPbc	PKPab	10 11 34.5	+0.1
LVV	L'vov	144.39	333	ePKIKP	PKPbc	10 11 34.3	0.0
ESK	Eskdalemuir	144.61	3	ePKPbc	PKPbc	10 11 34.9	+0.1
ESK	Eskdalemuir	144.61	3	i PKIKP	PKPab	10 11 35.2	-0.1
BR101	Keskin Array S	144.78	312	ePKPdf	PKPbc	10 11 36.2	+0.2
BR131	Keskin Array S	144.78	312	ePKPdf	PKPbc	10 11 36.2	+0.2
BRTR	Keskin Array B	144.78	312	PKP	PKPbc	10 11 36.2	+0.2
	comp=Z,9.8nm,0.6s,baz=128,slow=4.1,SNR=53						
KWP	Kalwaria Pacla	145.10	334	ePKP	PKPab	10 11 37.0	-0.4
KWP	Kalwaria Pacla	145.10	334	ePKPdf	PKPdf	10 11 36.0	+0.2
KWP	Kalwaria Pacla	145.10	334	ePKIKP	PKPab	10 11 37.0	-0.4
PRAR	RASCA	145.11	328	⇑iP	PKPab	10 11 37.5	0.0
TLCR		145.11	323	⇓iP	PKPab	10 11 37.4	-0.1
TLCR		145.11	323	⇓PKIKP	PKPab	10 11 37.4	-0.1
ANTO	Ankara	145.31	312	ePKPbc	PKPab	10 11 38.3	-0.3
ANTO	Ankara	145.31	312	⇑iP	PKPab	10 11 38.3	-0.3
ANTO	Ankara	145.31	312	⇑PKIKP	PKPab	10 11 38.3	-0.3
BUR08	Bucovina Ar. S	145.42	329	ePKPbc	PKPbc	10 11 38.1	+0.5
BURAR	Bucovina Array	145.44	329	⇑iP	PKPab	10 11 39.1	+0.2
BURAR	Bucovina Array	145.44	329	⇑PKIKP	PKPab	10 11 39.1	+0.2
BIZ	Bicaz	145.46	327	⇑iP	PKPab	10 11 38.8	0.0
TESR	Tescani	145.46	326	⇑iP	PKPbc	10 11 37.8	+0.1
CFR	Carcaliu	145.50	323	⇑iP	PKPbc	10 11 38.1	+0.3
CFR	Carcaliu	145.50	323	⇑PKIKP	PKPbc	10 11 38.1	+0.3
TIRR	Tirgusor	145.78	322	ePKPbc	PKPbc	10 11 38.3	-0.2
TIRR	Tirgusor	145.78	322	⇑iP	PKPbc	10 11 38.4	-0.2
TIRR	Tirgusor	145.78	322	⇑PKIKP	PKPbc	10 11 38.4	-0.2
OJC	Ojcow	145.78	337	ePKP	PKPbc	10 11 38.9	+0.4
OJC	Ojcow	145.78	337	ePKPdf	PKPdf	10 11 37.2	+0.3
OJC	Ojcow	145.78	337	ePKIKP	PKPbc	10 11 38.9	+0.4
KOLS	Kolonicke sedl	145.81	333	ePKIKP	PKPab	10 11 39.6	-0.6
KOLS	Kolonicke sedl	145.81	333	ePKP	PKPab	10 11 39.6	-0.6
VRI	Vrincioaia	145.84	325	⇑iP	PKPbc	10 11 38.2	-0.6
VRI	Vrincioaia	145.84	325	⇑PKIKP	PKPbc	10 11 38.2	-0.6
PLOR	Plostina	145.89	325	⇑iP	PKPbc	10 11 39.4	+0.4
PLOR	Plostina	145.89	325	⇑PKIKP	PKPbc	10 11 39.4	+0.4
HARR	Harsova	145.91	323	⇑iP	PKPab	10 11 40.3	-0.4
HARR	Harsova	145.91	323	⇑PKIKP	PKPab	10 11 40.3	-0.4
TLB	Topalu	145.91	323	⇑iP	PKPbc	10 11 38.2	-0.8
TLB	Topalu	145.91	323	⇑PKIKP	PKPbc	10 11 38.2	-0.8
UZH	Uzhgorod	146.04	333	⇓iPKIKP	PKPbc	10 11 40.0	+0.8
UZH				i		10 11 43.5	
MANR	Mangalia	146.05	321	⇑iP	PKPab	10 11 40.8	-0.4
MDUB	Mudurnu	146.14	314	ePKPbc	PKPbc	10 11 40.2	+0.3
ARCR	ARCALIA	146.23	329	⇑iP	PKPab	10 11 41.5	-0.4
NIE	Niedzica	146.24	335	ePKPbc	PKPbc	10 11 40.8	+1.0
NIE	Niedzica	146.24	335	ePKIKP	PKPbc	10 11 40.8	+1.0
TRPA	Tarpa	146.31	332	⇑iP	PKPab	10 11 40.4	+0.4
DSB	Dublin	146.43	6	ePKPbc	PKPbc	10 11 40.4	+0.2
KSP	Ksiaz	146.45	341	ePKP	PKPbc	10 11 41.2	+0.9
KSP	Ksiaz	146.45	341	ePKIKP	PKPbc	10 11 41.2	+0.9
DOPR	Dopca	146.48	327	⇑iP	PKPbc	10 11 41.7	+1.1
MLR	Muntele Rosu	146.50	326	ePKPbc	PKPbc	10 11 40.7	-0.1
MLR	Muntele Rosu	146.50	326	⇑iP	PKPbc	10 11 41.7	+0.9
MLR	Muntele Rosu	146.50	326	⇑PKIKP	PKPbc	10 11 41.7	+0.9
OKC	Ostrava-Krasne	146.70	338	ePKIKP	PKPbc	10 11 41.9	+0.9
OKC	Ostrava-Krasne	146.70	338	⇑ePKP	PKPbc	10 11 41.9	+0.9
CSS	Mathiatis	146.71	304	ePKPbc	PKPbc	10 11 41.8	+0.2
OSTC	Ostas	146.72	341	⇑ePKP	PKPbc	10 11 42.1	+1.0
SECR		146.73	325	⇑iP	PKiKP	10 11 42.6	-0.8
CHVC	Chvalec	146.75	341	⇑ePKP	PKPbc	10 11 42.0	+0.8
LANS	Liptovska Anna	146.78	336	ePKP2	PKiKP	10 11 42.8	-0.6
LANS	Liptovska Anna	146.78	336	ePKP	PKiKP	10 11 42.8	-0.6
UPC	Upice	146.83	341	ePKIKP	PKPbc	10 11 42.2	+0.8
UPC	Upice	146.83	341	ePKP	PKPbc	10 11 42.2	+0.8
DPC	Dobruska-Polom	146.87	340	ePKIKP	PKPbc	10 11 42.4	+0.9
DPC				e		10 11 45.8	
DPC	Dobruska-Polom	146.87	340	⇑ePKP	PKPbc	10 11 42.4	+0.9
DPC				ePKPAB	PKPab	10 11 45.8	+1.4
KECS	Kecovo	146.91	334	ePKP2	PKiKP	10 11 43.0	-0.6
KECS	Kecovo	146.91	334	ePKP	PKiKP	10 11 43.0	-0.6
CLL	Collm	146.96	345	ePKPbc	PKPbc	10 11 41.2	-0.4
CLL	Collm	146.96	345	⇑iPKPbc	PKPbc	10 11 41.3	-0.4
	comp=Z,54nm,0.9s						
CLL				⇓iPKPab	PKiKP	10 11 44.0	+0.4
	comp=Z,16nm,0.8s						
CLL	Collm	146.96	345	⇑iPKIKP	PKPbc	10 11 41.3	-0.4
CLL				i		10 11 44.0	
CLL				pmax	pmax		
	comp=Z,54nm,0.9s						
CLL				pmax	pmax		
	comp=Z,16nm,0.8s						
MORC	Moravsky Berou	146.96	339	ePKPbc	PKPbc	10 11 41.6	-0.1
MORC	Moravsky Berou	146.96	339	⇑iP	PKiKP	10 11 43.0	-0.7
MORC	Moravsky Berou	146.96	339	⇑PKP2	PKiKP	10 11 43.0	-0.7
MORC	Moravsky Berou	146.96	339	ePKP	PKPbc	10 11 41.5	-0.3
VOIR		147.01	326	⇑iP	PKPbc	10 11 42.4	+0.3
VOIR		147.01	326	⇑PKIKP	PKPbc	10 11 42.4	+0.3
BRG	Berggiesshubel	147.11	343	i PKP	PKPbc	10 11 42.7	+0.6
	comp=Z,20nm,0.8s						
BRG	Berggiesshubel	147.11	343	i PKIKP	PKPbc	10 11 42.7	+0.6
BRG				pmax	pmax		
	comp=Z,20nm,0.8s						
DRGR		147.22	330	⇑iP	PKPbc	10 11 43.1	+0.5
DRGR		147.22	330	⇑PKIKP	PKPbc	10 11 43.1	+0.5
PVCC	Panska Ves	147.24	342	ePKIKP	PKiKP	10 11 43.5	-0.7
PVCC				e		10 11 47.1	
PVCC	Panska Ves	147.24	342	⇑ePKP	PKiKP	10 11 43.5	-0.7
PVCC				ePKPAB	PKPab	10 11 47.1	+1.3
ARR	Arges	147.27	327	⇑iP	PKiKP	10 11 44.2	-0.4
YLV	Yalova	147.31	316	⇑iP	PKPbc	10 11 43.3	+0.2
YLV	Yalova	147.31	316	⇑PKIKP	PKPbc	10 11 43.3	+0.2
VYHS	Vyhne	147.56	336	ePKIKP	PKPbc	10 11 44.1	+0.7
VYHS	Vyhne	147.56	336	ePKP	PKPbc	10 11 44.1	+0.7
PSZ	Piszkesteto	147.60	334	ePKPbc	PKPbc	10 11 43.9	+0.4
PSZ	Piszkesteto	147.60	334	ePKIKP	PKPbc	10 11 43.9	+0.4
LOT	Lotru	147.66	327	⇑iP	PKPbc	10 11 44.4	+0.5
VRAC	Vranov

BLY	Banja Luka	151.26	333	*e*PKPbc	PKPbc	10 11 52.3	0.0
BLY				*e*PKPab	PKPab	10 12 02.0	-0.6
BLY	Banja Luka	151.26	333	⇑*i*P	PKPbc	10 11 52.2	-0.2
BOJS	Bojanci	151.40	337	*i* PKPbc	PKiKP	10 11 53.3	+0.3
DAVA	Damuels	151.46	345	*i* PKiKP	PKiKP	10 11 53.4	+0.2
	comp=Z,6.6nm,0.6s						
FETA	Feichten	151.49	344	*i* PKiKP	PKiKP	10 11 53.5	+0.2
	comp=Z,22nm,1.1s,SNR=8.5						
JAVS	Javornik	151.50	339	*i* PKPbc	PKPbc	10 11 52.8	-0.2
CEY	Cerknica	151.50	338	⇑*i*P	PKPbc	10 11 52.9	0.0
UPM	Unac-Piva	151.69	329	*e*P	PKPbc	10 11 53.0	-0.6
RIY	Rijeka	151.84	337	*e*P	PKPbc	10 11 53.6	0.0
CLF	Chambon-Foret	151.89	356	*e*PKPbc	PKiKP	10 11 54.9	+1.0
CLF				*e*PKPab	PKPab	10 12 05.8	+0.7
FUORN	Ofenpass-Fuorn	151.98	344	*e*PKPbc	PKiKP	10 11 55.0	+0.5
FUORN				*e*PKPab	PKPab	10 12 07.0	+1.1
PDG	Podgorica	152.10	328	⇑*i*P	PKiKP	10 11 54.9	+0.4
DRME	Dracevica, Mon	152.31	328	*e*P	PKPbc	10 11 51.5	-3.3
TUE	Stuetta	152.35	345	*e*PKPdf	PKPdf	10 11 46.7	-1.0
TUE				*e*PKPbc	PKiKP	10 11 55.8	+0.7
TUE				*e*PKPab	PKPab	10 12 07.8	+0.5
SENIN	Lac Senin/Sane	152.89	348	*e*PKPbc	PKiKP	10 11 57.4	+1.1
SENIN				*e*PKPab	PKPab	10 12 09.4	-0.3
ESDC	Sonseca Array	160.09	8	PKPab	PKPab	10 12 40.1	-0.6
	comp=Z,2.8nm,0.6s,baz=342,slow=4.1,SNR=14						
TORD	Torodi Ar. Bea	172.96	197	PKPab	PKPab	10 13 38.4	+0.3
	comp=Z,0.9nm,0.9s,baz=145,slow=5.4,SNR=3.6						
TOA1	Torodi Ar. Sit	172.97	197	*e*PKPab	PKPab	10 13 38.4	+0.3

*IDC **25** 09:57:06.3±5.4, 26°.89N×129°.43E, h0km, mb3.9/3, mb1 3.8/6, mb1mx3.6/42, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=97.9km s-min=41.0km az=144.0*
*NEIC **25** 09:57:20.3±2.5, 27°.66N×129°.83E, h98km±8km, mb4.3/4, Error ellipse: s-maj=17.3km s-min=11.1km az=144.0*
*ISCJB **25** 09:57:22.8±0.3, 28°.22N±0°.03×129°.13E±0°.05, h66km±4km, mb3.6/3, Error ellipse: s-maj=8.9km s-min=3.3km az=31.2*
*JMA **25** 09:57:24.1±0.2, 28°.29N×129°.01E, h54km±2km, M3.7*
JMA Felt I J1.

ISC 25 09:57:24.0±0.8, 28°.23N±0°.04×129°.07E±0°.05, h61km±7km, n39, σ1§57/52, mb3.7/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMN	Amaminishikomi	0.09	82	P	Pn	09 57 32.8	-0.4
JAMN				S	Sn	09 57 38.8	-1.0
JTK	Tokunoshima	0.46	194	P	Pn	09 57 35.6	0.0
JTK				S	Sn	09 57 44.0	-0.1
JAM	Amami Oshima	0.50	69	P	Pn	09 57 35.8	-0.3
JAM				S	Sn	09 57 44.5	-0.4
JZK	Kikaishima	0.80	84	P	Pn	09 57 41.3	+1.8
JZK				*e*S	Sn	09 57 55.8	+4.9
JTAJ	Takarajima	0.93	7	P	Pn	09 57 40.1	-1.1
JTAJ				S	Sn	09 57 52.0	-1.8
JOKE	Okinoerabujima	0.97	207	P	Pn	09 57 41.9	+0.1
JOKE				S	Sn	09 57 54.5	-0.4
JYRO	Yoronjima	1.32	205	P	Pn	09 57 46.6	+0.3
JYRO				*e*S	Sn	09 58 03.1	+0.1
JIH	Iheya	1.54	220	P	Pn	09 57 49.3	0.0
JIH				*e*S	Sn	09 58 07.7	-0.6
JOW	Kunigami	1.56	207	*e*Pn	Pn	09 57 48.9	-0.6
JOW				*e*Sn	Sn	09 58 08.8	0.0
JOW	Kunigami	1.56	207	P	Pn	09 57 49.7	+0.1
JOW				S	Sn	09 58 09.6	+0.7
JNN	Nakanoshima	1.75	23	P	Pn	09 57 51.4	-0.7
JNN				*e*S	Sn	09 58 12.2	-1.2
JNTH	Nagotoyohara	1.94	209	P	Pn	09 57 55.4	+0.7
JNTH				*e*S	Sn	09 58 18.3	+0.2
JAGN	Aguni-jima	2.31	225	P	Pn	09 58 00.2	+0.6
JAGN				*e*S	Sn	09 58 27.4	+0.5
JYAK	Yakushimahirau	2.36	32	P	Pn	09 57 59.8	-0.6
JYAK				*e*S	Sn	09 58 26.9	-1.4
JKC	Kuchinoerabu	2.43	24	P	Pn	09 58 01.2	-0.1
JKC				*e*S	Sn	09 58 29.0	-0.9
JKE	Kume jima 2	2.78	228	P	Pn	09 58 06.7	+0.6
JKE				*e*S	Sn	09 58 39.0	+0.5
JTN	Tanegashima 3	2.93	34	P	Pn	09 58 09.2	+1.0
JMZ	Minamidaito 2	3.07	141	P	Pn	09 58 09.8	-0.3
JMZ				*e*S	Sn	09 58 42.9	-2.8
JNU	Nakatsue	5.12	17	Pn	Pn	09 58 41.0	+2.9
	3.1nm,0.3s,baz=271,slow=6.0,SNR=28						
JNU	Nakatsue	5.12	17	*e*Pn	Pn	09 58 41.3	+3.2
YOJ	Yonaguni jima	6.61	237	*e*Pn	Pn	09 58 58.6	+0.1
YHNB	Yeheng	7.76	245	*e*Pn	Pn	09 59 16.1	+1.8
NACB	Ninganchiao	7.84	241	*e*Pn	Pn	09 59 14.4	-1.0
YULB	Yu-li	8.50	237	*e*Pn	Pn	09 59 21.2	-3.3
TPUB	Ta-pu	9.05	239	*e*Pn	Pn	09 59 32.1	+0.1
KSRS	Korea Array	9.25	354	Pn	Pn	09 59 37.8	+3.2
	0.2nm,0.3s,baz=168,slow=13,SNR=6.0						
MAJO	Matsushiro	11.32	41	*e*Pn	Pn	10 00 02.8	-0.1
MJAR	Matsushiro Arr	11.32	41	Pn	Pn	10 00 02.8	-0.1
	0.0nm,0.3s,baz=212,slow=16,SNR=2.7						
XAN	Xi'an	18.19	294	*e*P	Pn	10 01 33.4	+1.2
	7.7nm,0.6s						
SONA0	Songino Array	26.33	324	*e*P	P	10 02 56.4	+2.3
SONM	Songino Array	26.33	324	P	P	10 02 56.4	+2.3
	1.3nm,0.4s,baz=138,slow=10,SNR=3.9						
H11N2	WAKE ISLAND Hy	35.46	95	T	T	10 42 06.3	
	baz=290,slow=74,SNR=7.1						
H11N1	WAKE ISLAND Hy	35.47	95	T	T	10 42 00.9	
	baz=290,slow=74,SNR=6.6						
H11N3	WAKE ISLAND Hy	35.48	95	T	T	10 42 02.4	
	baz=290,slow=74,SNR=12						
MK32	Makanchi Array	40.80	310	*e*P	P	10 04 58.9	-0.4
MKAR	Makanchi Array	40.80	310	P	P	10 04 58.9	-0.4
	0.4nm,0.4s,baz=94,slow=10,SNR=5.5						
SEW	Seward	61.79	34	*e*P	P	10 07 28.4	-7.6
FIA0	FINESS Array S	71.50	330	*e*P	P	10 08 35.4	-2.5
FINES	FINESS Array B	71.50	330	P	P	10 08 35.4	-2.5
	0.5nm,0.5s,baz=76,slow=5.9,SNR=3.6						

*SOME **25** 09:58:13.8, 43°.63N×69°.43E*

NNC 25 09:58:17.3±2.2, 43°.66N×69°.78E, h0km, mb3.9, mpv3.1, 3C, Error ellipse: s-maj=12.2km s-min=7.3km az=140.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	Boroldoy	0.63	176	P	Pn	09 58 32.5	-1.0
	1.8nm,0.1s						
BRLS				S	Sn	09 58 46.6	+2.3
	10nm,0.3s						
KK31	Karatay Array	0.77	136	⇑P	Pg	09 58 31.4	-0.7
	1.0nm,0.3s,baz=319,slow=17,SNR=31						
KK31				S	Sg	09 58 43.1	+1.0
	20nm,0.7s,baz=316,slow=32,SNR=73						
IUG	luzhnay	1.52	173	P	Pn	09 58 46.0	+0.1
IUG				S	Sn	09 59 09.6	+3.2
MRKS	Merke	2.68	109	Pg	Pb	09 59 06.9	+0.6
	4.5nm,0.4s						
MRKS				Lg	Lg	09 59 45.6	
	5.8nm,0.4s						
BTLS	Baital	3.36	64	Pg	Pg	09 59 21.8	+0.2
	6.2nm,0.5s						
BTLS				Lg	Lg	10 00 10.6	
	2.4nm,0.6s						
AAK	Ala-Archa	3.60	105	⇑Lg	Lg	10 00 12.9	
	5.4nm,0.9s						
TKM2	Tokmak 2	4.31	98	⇑Lg	Lg	10 00 35.0	
	2.3nm,0.5s						
DGS	Degeres	4.38	93	Pg	Pb	09 59 38.1	+2.9
	25nm,0.5s						
DGS				Lg	Lg	10 00 39.0	
	9.4nm,0.7s						
KST	Kastek	4.55	96	Pg	Pb	09 59 41.3	+3.1
	2.2nm,0.3s						
KST				Lg	Lg	10 00 44.3	
	4.5nm,0.8s						

STR 25 10:03:59.9±0.6, 48°.N±3°×±°, h0km, MLv1.6/6, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECH	Echery	0.27	135	Pg	Pg	10 04 04.8	-0.3
ECH				Sg	Sg	10 04 08.5	-0.2
WLS	Welschbruch	0.32	89	Pg	Pg	10 04 05.7	-0.4
WLS				Sg	Sg	10 04 10.6	+0.3
MOF	Molkenrain	0.58	162	Pg	Pg	10 04 11.9	+0.8
KIZ	Kirchzarten	0.84	122	Pg	Pb	10 04 16.7	-0.6
KIZ				Sg	Sb	10 04 28.1	-1.0
OPP	Oppenau	0.88	84	Pg	Pg	10 04 16.6	-0.2
OPP				Sg	Sg	10 04 28.9	+0.6
BOURR	Bourrignon	1.04	166	Pg	Pg	10 04 20.1	+0.2
BOURR				Sg	Sg	10 04 34.1	+0.7
LOMF	Lomont	1.06	181	Pg	Pg	10 04 20.1	-0.1
LOMF				Sg	Sb	10 04 34.8	-0.7
CHMF	Charmoille	1.17	187	Pg	Pg	10 04 21.9	-0.4
CHMF				Sg	Sg	10 04 37.3	-0.1

*NIED **25** 10:13:00, 36°.70N×140°.70E, h5km, Mw3.5 Best double couple: M0:1.74000×10^14 NP1:ϕs14.00000°, δ41.00000°, λ-26.00000°. NP2:ϕs124.00000°, δ73.00000°, λ-129.00000°.*

JMA 25 10:13:56.7, 36°.72N×140°.66E, h10km±1km, M3.5, 3C-3D Broadband fault plane solution: P waves. NP1: ϕs132.00000°, δ82.00000°, λ-109.00000°. **NP2:** ϕs19.00000°, δ21.00000°, λ-25.00000°. **Principal axes:** T Plg34.0000°, Azm238.0000°; N Plg19.0000°, Azm135.0000°; P Plg50.0000°, Azm21.0000°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.13	214	⇓P	Pg	10 13 59.9	+0.1
JHO				S	Sg	10 14 02.0	+0.1
JFFD	Fukushimafurud	0.38	348	⇓P	Pg	10 14 04.2	0.0
JFFD				S	Sg	10 14 09.1	-0.1
JHYU	Hitachinakayam	0.38	189	P	Pg	10 14 04.4	+0.1
JHYU				S	Sg	10 14 09.7	+0.4
ONAJ	Iwakimizuishiy	0.40	16	⇑P	Pg	10 14 04.4	-0.2
ONAJ				S	Sg	10 14 09.8	0.0
JYT	Yasato	0.62	218	⇑P	Pg	10 14 08.5	-0.2
JYT				S	Sg	10 14 17.3	+0.5
JSB	Shiboa	0.64	293	⇑P	Pb	10 14 09.7	-0.4
JSB				S	Sb	10 14 18.6	-0.5
JFK	Kawauchi	0.67	15	P	Pg	10 14 09.0	-0.6
JFK				S	Sg	10 14 18.4	0.0
JFT	Otama	0.84	342	⇓P	Pg	10 14 12.6	-0.3
JFT				S	Sg	10 14 23.6	-0.2
JAG	Ashikaga	1.01	253	P	Pg	10 14 15.0	-1.2
JFY	Yanaizu	1.03	312	P	Pg	10 14 16.0	-0.5
JFY				S	Sg	10 14 29.3	-0.5
MAT	Matsushiro	1.98	266	P	Pn	10 14 30.9	+0.6
MAT				S	Sb	10 14 56.9	-0.7

*IDC **25** 10:33:56.4±5.7, 8°.35S×107°.80E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.6/33, mbtmp4.1/3 Error ellipse: s-maj=175.6km s-min=19.6km az=68.0*
*ISCJB **25** 10:34:02.4±0.6, 8°.08S±0°.07×107°.99E±0°.07, h70km, mb4.1/7, Error ellipse: s-maj=10.4km s-min=9.0km az=153.7*
*NEIC **25** 10:34:03.7±0.8, 8°.08S×108°.00E, h62km±14km, mb4.3/4, Error ellipse: s-maj=15.3km s-min=8.3km az=185.0*

ISC 25 10:34:04.4±0.9, 8°.09S±0°.06×108°.0E±0°.1, h70km, n13, σ1§19/14, mb4.0/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	1.31	344	Pn	Pn	10 34 25.1	-1.9
	15nm,0.3s,baz=317,slow=5.7,SNR=5.1						
LEM				Sn	Sn	10 34 46.5	+2.6
	5.1nm,0.3s,baz=307,slow=20,SNR=2.7						
XMIS	Christmas Isla	3.30	224	*e*Pn	Pn	10 34 53.7	-0.1
XMIS				*e*Sn	Sn	10 35 31.6	-0.3
MNAI	Manna	6.22	306	*e*Pn	Pn	10 35 32.9	-0.7
WRA	Warramunga Arr	28.10	118	P	P	10 39 49.9	0.0
	0.8nm,0.6s,baz=288,slow=12,SNR=1.9						
WR1	Warramunga Arr	28.11	118	*e*P	P	10 39 49.9	0.0
WRAB	Tennant Creek	28.11	118	*e*P	P	10 39 48.1	-1.8
	22nm,1.5s						
WB2	Warramunga Arr	28.11	118	*e*P	P	10 39 50.2	+0.2
	4.7nm,1.2s						
AS31	Alice Springs	29.27	125	*e*P	P	10 39 59.9	-0.3
	1.0nm,0.4s						
ASAR	Alice Springs	29.27	125	P	P	10 40 01.1	+0.9
	1.1nm,0.3s,baz=295,slow=7.5,SNR=52						
STKA	Stephens Creek	39.19	132	P	P	10 41 26.0	+0.2
	2.4nm,0.4s,baz=312,slow=7.6,SNR=13						
STKA	Stephens Creek	39.19	132	*e*P	P	10 41 26.2	+0.4
JOW	Kunigami	39.91	29	*e*P	P	10 41 31.9	+0.2
	35nm,1.0s						
TPNV	Topopah Spring	130.70	47	*e*PKPpre	PKPpre	10 52 53.6	

WEL 25 10:40:27.9±1.1, 34°S±6°×17°8E±1°4, h33km, M3.5/7, ML3.9/12, MLv3.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=88.2, North of New Zealand

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.20	173	P	Pn	10 41 16.7	+0.9
MXZ				S	Sn	10 41 54.4	+1.5
HAZ	Te Kaha	3.37	180	P	Pn	10 41 20.0	+1.8
HAZ				S	Sn	10 41 59.9	+3.0
WMGZ	Waiomatatini S	3.47	172	P	Pn	10 41 19.8	+0.3
WMGZ				S	Sn	10 42 00.4	+1.0
PKGZ	Pakihiroa	3.51	176	P	Pn	10 41 21.3	+1.1
PKGZ				S	Sn	10 42 00.3	-0.3
RUGZ	Raukumara Rang	3.58	181	P	Pn	10 41 22.1	+1.0
RUGZ				S	Sn	10 42 02.5	+0.1
PUZ	Puketiti	3.70	174	P	Pn	10 41 22.0	-0.7
PUZ				S	Sn	10 42 04.2	-1.0
URZ	Urewera	3.91	188	P	Pn	10 41 26.7	+1.1
URZ				S	Sn	10 42 13.1	+2.8
MWZ	Matawai	3.95	183	P	Pn	10 41 26.7	+0.5
MWZ				S	Sn	10 42 12.9	+1.5
CNGZ	Carnagh Statio	4.11	175	P	Pn	10 41 27.0	-1.3
RAGZ	Rawiri	4.12	184	P	Pn	10 41 27.9	-0.6
RAGZ				S	Sn	10 42 16.1	+0.5
RTZ	Ruatahuna	4.28	189	P	Pn	10 41 30.4	-0.2
RTZ				S	Sn	10 42 21.0	+1.5
RIGZ	Rimuhau	4.32	180	P	Pn	10 41 29.1	-2.1
RIGZ				S	Sn	10 42 19.9	-0.5
MRHZ	Matea Rd	4.58	194	P	Pn	10 41 34.3	-0.5
NMHZ	Naumai	4.77	189	P	Pn	10 41 36.3	-1.2
NMHZ				S	Sn	10 42 32.1	+0.4
BKZ	Black Stump Fm	4.89	192	P	Pn	10 41 37.7	-1.4
BKZ				S	Sn	10 42 32.8	-1.7
BHHZ	Black Hill Sta	5.28	195	P	Pn	10 41 42.6	-1.9
BHHZ				S	Sn	10 42 41.0	-3.3
VRZ	Vera Road	5.32	206	P	Pn	10 41 46.6	+1.6
KRHZ	Kereru	5.37	192	P	Pn	10 41 42.8	-2.9
KRHZ				S	Sn	10 42 42.5	-3.9
KAHZ	Kahuranaki	5.45	187	P	Pn	10 41 43.3	-3.5
KAHZ				S	Sn	10 42 45.6	-2.8
PNHZ	Pukenui	5.67	192	P	Pn	10 41 46.3	-3.4
PNHZ				S	Sn	10 42 48.6	-5.1
PXZ	Pawanui	5.69	187	P	Pn	10 41 45.5	-4.5
PXZ				S	Sn	10 42 47.2	-6.9
TSZ	Takapari Road	5.85	194	P	Pn	10 41 48.2	-4.1
TSZ				S	Sn	10 42 53.6	-4.7
DVHZ	Dannevirke	6.05	192	P	Pn	10 41 50.6	-4.4
DVHZ				S	Sn	10 42 55.9	-7.1
BFZ	Birch Farm	6.41	191	P	Pn	10 41 55.3	-4.6
BFZ				S	Sn	10 43 02.7	-9.2
MRZ	Mangatainoka R	6.51	195	P	Pn	10 41 55.7	-5.6
MRZ				S	Sn	10 43 05.9	-8.5
TIWZ	Tintock	6.56	193	P	Pn	10 41 56.2	-5.8
TIWZ				S	Sn	10 43 08.3	-7.3
HOWZ	Holdsworth Sta	6.75	195	P	Pn	10 41 58.6	-6.0
HOWZ				S	Sn	10 43 11.9	-8.4
OGWZ	Otaki Gorge	6.75	197	P	Pn	10 41 59.3	-5.3
OGWZ				S	Sn	10 43 11.9	-8.4
CAW	Cannon Point	7.05	197	P	Pn	10 42 03.0	-5.8
TUWZ	Tuamarina	7.66	202	P	Pn	10 42 10.4	-6.7
TUWZ				S	Sn	10 43 34.0	-8.7

*PRE **25** 10:54:47.1±1.9, 27°.00S×26°.78E, h2km, ML2.8*
*EAF **25** 10:54:47.5±1.2, 26°.92S×26°.94E, h0km±18km, MD3.9*
*BUL **25** 10:54:48.9±1.6, 26°.96S×27°.02E, h0km±19km, MD4.4*

ISC 25 10:54:47.3±1.1, 26°.95S±0°.04×26°.74E±0°.03, h12km±10km, n15, σ1§94/28, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	Parys	0.56	88	*e*P	Pg	10 54 57.4	-0.9
PRYS				*e*S	Sg	10 55 04.9	-0.8
PRYS				AML	AML	10 55 09.9	
	comp=Z,415nm,0.6s						
WDLM	Western Deep L	0.80	50	*e*P	Pb	10 55 03.6	+0.2
WDLM				*e*S	Sg	10 55 12.8	-0.7
WDLM				AML	AML	10 55 15.0	
	comp=Z,626nm,0.1s						
KLOF	Kloof	0.98	53	*e*P	Pb	10 55 06.6	+0.3
KLOF				*e*S	Sg	10 55 18.8	-0.3
KLOF				AML	AML	10 55 24.1	
	comp=Z,1μm,0.2s						
KSR	Koster	1.10	8	*e*P	Pb	10 55 09.6	+1.2
KSR				*e*S	Sg	10 55 23.9	+1.0
KSR				AML	AML	10 55 28.5	
	comp=Z,137nm,0.2s						
SWZ	Schweizer	1.27	259	*e*P	Pg	10 55 12.1	+0.2
SWZ				*e*S	Sb	10 55 29.6	+1.9
SWZ				AML	AML	10 55 33.2	
	comp=Z,350nm,0.5s						
ERPM	east rand prop	1.48	66	*e*P	Pb	10 55 16.2	+1.4
ERPM				*e*S	Sn	10 55 35.7	+2.5
ERPM				AML	AML	10 55 36.9	
	comp=Z,63nm,0.2s						
BOSA	Boshof	2.12	218	*i* P	Pb	10 55 24.8	-0.9
BOSA				*i* S	Sg	10 55 54.1	-1.3
BOSA	Boshof	2.12	218	*i* P	Pb	10 55 24.8	-0.9
BOSA				*i* S	Sg	10 55 54.1	-1.3
BOSA	Boshof	2.12	218	*e*P	Pn	10 55 24.0	+1.3
BOSA				*e*S	Sn	10 55 50.3	+1.3
BOSA				AML	AML	10 55 55.0	
	comp=Z,45nm,0.4s						
LBTB	Lobatse	2.18	332	*e*P	Pb	10 55 27.0	+0.3
LBTB				*e*S	Sb	10 55 55.5	+1.7
LBTB				AML	AML	10 55 58.0	
	comp=Z,92nm,0.3s						
UPI	Upington	5.06	253	*e*P	Pn	10 56 05.8	+2.6
UPI				*e*S	Sn	10 57 01.3	-0.3
UPI				AML	AML	10 57 28.2	
	comp=Z,20nm,0.4s						
MATP	Matopo	6.69	14	*i* P	Pn	10 56 25.6	0.0
MATP				*i* S	Sn	10 57 36.5	-5.2
MATP	Matopo	6.69	14	*i* P	Pn	10 56 25.6	0.0
MATP				*i* S	Sn	10 57 36.5	-5.2
TSUM	Tsumeb	11.41	311	*i* P	Pn	10 57 29.9	-0.5
TSUM	Tsumeb	11.41	311	*i* P	Pn	10 57 29.9	-0.5

*JMA **25** 11:27:55.7±0.2, 31°.44N×142°.01E, h38km, M3.7*
*ISCJB **25** 11:27:56.3±0.8, 31°.60N±0°.04×142°.3E±0°.1, h35km, mb3.6/3, Error ellipse: s-maj=13.7km s-min=6.0km az=170.9*
*IDC **25** 11:27:57.9±3.8, 31°.09N×140°.80E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/30, mbtmp3.4/4, ML2.5/1, Error ellipse: s-maj=153.4km s-min=25.0km az=72.0*

ISC 25 11:27:58.5±1.3, 31°.51N±0°.08×142°.1E±0°.1, h35km, n20, σ1§14/29, mb3.5/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.18	296	P	Pn	11 28 30.6	-1.6
BSO1	Boso 1	3.27	344	P	Pn	11 28 47.0	+0.3
BSO1				S	Sn	11 29 25.5	+1.5
BSO3	Boso 3	3.53	339	P	Pn	11 28 50.9	+0.3
BSO3				S	Sn	11 29 32.0	+1.0
BSO4	Boso 4	3.76	338	S	Sn	11 29 38.6	+1.7
JIM2	Oshima 3	3.89	326	S	Sn	11 29 40.9	+0.6
JKUC	kamogawauchiur	3.96	337	P	Pn	11 28 57.0	+0.3
JHU	Hanno	4.92	333	P	Pn	11 29 10.0	+0.2
JHU				S	Sn	11 30 05.8	+0.3
JAG	Ashikaga	5.36	337	P	Pn	11 29 16.5	+0.5
JFK	Kawauchi	5.92	351	S	Sn	11 30 27.1	-3.3
MJAR	Matsushiro Arr	5.96	328	Pn	Pn	11 29 24.7	+0.5
	0.1nm,0.3s,baz=155,slow=11,SNR=8.1						
MJAR				Sn	Sn	11 30 30.8	-0.3
	0.1nm,0.3s,baz=142,slow=22,SNR=2.5						
JFT	Otama	6.16	347	P	Pn	11 29 26.4	-0.6
JFT				S	Sn	11 30 35.2	-1.0
JMM	Marumori	6.43	351	P	Pn	11 29 30.4	-0.2
JYS	Shiratake	6.89	347	P	Pn	11 29 37.0	0.0
JYS				S	Sn	11 30 53.8	-0.4
JIO	Ouri	6.95	355	S	Sn	11 30 53.4	-2.2
JMK	Ichinoseki	7.46	355	P	Pn	11 29 45.6	+0.9
JMK				S	Sn	11 31 06.2	-1.8
OFUJ	Ofunato	7.56	358	P	Pn	11 29 46.0	-0.1
OFUJ				S	Sn	11 31 09.9	-0.7
JRG	Rokugo	7.96	352	P	Pn	11 29 52.5	+0.9
JRG				S	Sn	11 31 20.3	0.0
MKAR	Makanchi Array	47.68	307	P	P	11 36 31.6	+0.1
	0.2nm,0.4s,baz=93,slow=8.9,SNR=2.9						
WRA	Warramunga Arr	51.69	189	P	P	11 37 02.1	-0.1
	0.8nm,0.7s,baz=0.0,slow=8.4,SNR=5.0						
ASAR	Alice Springs	55.42	189	P	P	11 37 30.1	+0.7
	0.3nm,0.7s,baz=2.9,slow=6.3,SNR=7.5						

IDC 25 11:38:26.3±7.8, 7°.97S×129°.33E, h226km±39km, mb3.4/1, mb1 3.7/3, mb1mx3.0/39, mbtmp4.2/3, Error ellipse: s-maj=85.6km s-min=65.3km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.85	158	P	Pn	11 41 19.2	-2.0
	0.5nm,0.3s,baz=337,slow=13,SNR=22						
WRA				S	S	11 43 43.4	-0.1
	1.2nm,0.3s,baz=334,slow=22,SNR=9.9						
ASAR	Alice Springs	16.21	165	P	Pn	11 42 02.1	+0.1
	1.2nm,0.3s,baz=344,slow=11,SNR=224						
ASAR				S	S	11 45 01.7	+2.2
	0.2nm,0.3s,baz=348,slow=25,SNR=4.8						
ASAR				ScP	ScP	11 49 53.6	-1.3
	0.0nm,0.3s,baz=342,slow=1.8,SNR=4.4						
STKA	Stephens Creek	26.39	156	P	P	11 43 42.3	+0.3
	0.8nm,0.4s,baz=349,slow=10,SNR=3.7						

NNC 25 11:38:40.9±2.5, 39°.46N×71°.65E, h13km±9km, mb3.6, mpv3.2, 8C-1D, Error ellipse: s-maj=18.5km s-min=10.7km az=0.0, Tajikistan

| Code | Station Name | Δ° | AZ° | Phase

s-min=16.2km az=50.0
NEIC ***25*** *11:41:41.1±2.5, 34°.26N×88°.22E, h10km±1km, mb4.1/23, Error ellipse: s-maj=13.8km s-min=9.1km az=51.0*
BJI ***25*** *11:41:49.5±0.0, 35°.24N×88°.96E, h8km, mb4.5/8, mB4.5/5, Ms4.2/7, Ms7 3.9/4*
ISC 25 11:41:42.3±0.5, 34°.46N±0°.06×88°.26E±0°.05, h10km, n82, σ1§95/72, mb4.0/19, MS3.5/14, 1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.34**	**152**	Pn	**Pn**	**11 43 05.0**	**+2.4**
LSA				Sn	Sn	11 43 21.8	-43
LSA				smax	smax		
	comp=N,230nm,0.8s						
LSA				smax	smax		
	comp=E,140nm,0.8s						
LSA	**Lhasa**	**5.34**	**152**	*e*Pn	Pn	11 42 56.7	-5.8
GUN	**Gumba**	**6.84**	**198**	*e*P	**Pn**	**11 43 26.6**	**+3.6**
	comp=E,34nm,0.5s						
JIRN	**Jiri**	**7.01**	**195**	*e*P	**Pn**	**11 43 28.7**	**+3.3**
	comp=E,27nm,0.4s						
KKN	**Kakani**	**7.12**	**202**	*e*P	**Pn**	**11 43 30.9**	**+4.1**
	comp=E,20nm,0.5s						
PKIN	**Phulchoki**	**7.29**	**200**	*e*P	**Pn**	**11 43 32.4**	**+3.3**
	comp=E,17nm,0.5s						
PKI	**Pulchoki**	**7.29**	**200**	*e*P	**Pn**	**11 43 32.5**	**+3.3**
	comp=E,30nm,0.6s						
DMN	**Daman**	**7.34**	**202**	*e*P	**Pn**	**11 43 33.8**	**+3.9**
	comp=E,31nm,0.5s						
PYUN	**Piuthan**	**7.78**	**217**	*e*P	**Pn**	**11 43 37.8**	**+2.0**
	comp=E,93nm,0.9s						
WMQ	**Urumqi**	**9.36**	**357**	*e*P	**Pn**	**11 43 56.0**	**-1.3**
WMQ				S	Sn	11 45 28.0	-15
WMQ	**Urumqi**	**9.36**	**357**	*e*Pn	**Pn**	**11 43 58.9**	**+1.5**
SHL	**Shillong**	**9.40**	**160**	*e*Pn	Pn	11 43 53.3	-4.7
PRZ	**Przheval'sk**	**11.12**	**319**	*e*Pn	**Pn**	**11 44 21.7**	**0.0**
BRDH	**Bariadhala**	**12.11**	**165**	LR	LR	11 50 51.4	
	comp=E,258nm,19.9s,baz=240,slow=46						
NIL	**Nilore**	**12.48**	**271**	*e*Pn	**Pn**	**11 44 36.7**	**-3.3**
BOOM	**Boomskoye usch**	**12.54**	**313**	*e*Pn	**Pn**	**11 44 41.0**	**0.0**
LZH	**Lanzhou**	**12.84**	**78**	*e*P	**Pn**	**11 44 45.0**	**-0.1**
LZH				pP		11 44 47.3	
LZH				sP		11 44 49.0	
LZH				*e*PP		11 44 55.0	
LZH				pmax	pmax		
	comp=E,20nm,1.0s						
LZH				pmax	pmax		
	comp=E,65nm,4.6s						
LZH				LR	LR		
	comp=E,1μm,11.0s						
MK31	**Makanchi Array**	**13.12**	**342**	*e*Pn	**Pn**	**11 44 49.9**	**+1.1**
MK32	**Makanchi Array**	**13.12**	**342**	*e*Pn	**Pn**	**11 44 47.7**	**-1.1**
MKAR	**Makanchi Array**	**13.12**	**342**	Pn	**Pn**	**11 44 47.7**	**-1.1**
	comp=E,0.2nm,0.3s,baz=155,slow=14,SNR=5.5						
MKAR				LR	LR	11 50 39.9	
	comp=E,162nm,18.7s,baz=156,slow=41						
MAKZ	**Makanchi**	**13.22**	**341**	*e*Pn	**Pn**	**11 44 50.5**	**+0.5**
AAK	**Ala-Archa**	**13.51**	**311**	LR	LR	11 51 05.1	
	comp=E,148nm,21.7s,baz=114,slow=42						
AAK	**Ala-Archa**	**13.51**	**311**	*e*Pn	**Pn**	**11 44 54.9**	**+0.8**
BTK	**Batken**	**14.96**	**297**	*e*Pn	**Pn**	**11 45 12.9**	**-1.1**
	comp=E,6.8nm,0.8s						
GAR	**Garm**	**15.08**	**293**	*e*Pn	**Pn**	**11 45 14.5**	**-1.1**
KMI	**Kunming**	**15.62**	**123**	*e*Pn	**Pn**	**11 45 21.2**	**-1.7**
	comp=E,15nm,0.5s						
KBL	**Kabul**	**15.85**	**276**	*e*Pn	**Pn**	**11 45 24.9**	**-0.9**
	comp=E,5.8nm,0.8s						
CHGR	**Chuyangaron**	**15.91**	**291**	*e*Pn	**Pn**	**11 45 26.2**	**-0.2**
KK31	**Karatay Array**	**16.29**	**307**	*e*Pn	**Pn**	**11 45 32.0**	**+0.9**
	comp=E,3.4nm,1.0s						
XAN	**Xi'an**	**17.09**	**86**	P	**P**	**11 45 42.8**	**-0.3**
XAN				S	**Sn**	**11 48 53.0**	**+1.5**
XAN				pmax	pmax		
	comp=E,9.0nm,1.1s						
XAN				LR	LR		
	comp=E,350nm,8.8s						
XAN				LR	LR		
	comp=E,170nm,7.4s						
XAN				LR	LR		
	comp=E,310nm,12.8s						
XAN	**Xi'an**	**17.09**	**86**	*e*P	**Pn**	**11 45 41.5**	**+0.1**
	comp=E,36nm,1.8s						
KURBB	**Kurchatov Arra**	**17.65**	**339**	P	**Pn**	**11 45 48.0**	**-0.1**
	comp=E,0.1nm,0.3s,baz=147,slow=12,SNR=8.2						
KURK	**Kurchatov**	**17.70**	**340**	*e*Pn	**Pn**	**11 45 47.6**	**-1.2**
	comp=E,3.9nm,0.9s						
KURK				*e*Sn	**Sn**	**11 49 08.2**	**+2.1**
GYA	**Guiyang**	**17.74**	**112**	‖ *i*P	**Pn**	**11 45 48.3**	**-1.3**
GYA				S	Sn	11 48 54.5	-13
GYA				SS	**SnSn**	**11 49 21.0**	**+0.1**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,60nm,3.8s						
GYA				LR	LR		
	comp=N,410nm,13.4s						
GYA				LR	LR		
	comp=E,160nm,13.1s						
GYA				LR	LR		
	comp=Z,170nm,9.6s						
PAYA	**Payao**	**18.23**	**143**	P	**P**	**11 46 02.9**	**+7.1**
	comp=Z,14μm,1.2s						
CHTO	**Chiang Mai**	**18.25**	**146**	*e*P	**Pn**	**11 45 51.7**	**-4.1**
	comp=Z,9.2nm,1.1s						
CMMT	**Chiang Mai**	**18.26**	**146**	P	**P**	**11 45 57.4**	**+1.3**
	comp=Z,4.0nm,1.1s						
ENH	**Enshi**	**18.40**	**97**	*e*P	**P**	**11 45 56.5**	**-1.2**
ENH				*e*Pn	**Pn**	**11 45 56.6**	**-1.1**
CM31	**Chiang Mai Arr**	**18.56**	**146**	*e*P	**P**	**11 45 56.9**	**-2.6**
	comp=Z,14nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.56**	**146**	P	**P**	**11 45 58.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=329,slow=11,SNR=24						
CMAR				LR	LR	11 53 44.9	
	comp=Z,107nm,18.1s,baz=325,slow=39						
SONA0	**Songino Array**	**19.04**	**40**	*e*P	**Pn**	**11 46 06.6**	**+1.2**
SONM	**Songino Array**	**19.04**	**40**	P	**Pn**	**11 46 06.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=232,slow=13,SNR=10						
SONM				LR	LR	11 53 51.3	
	comp=Z,216nm,18.2s,baz=256,slow=38						
ULN	**Ulaanbaatar**	**19.41**	**41**	*e*P	**Pn**	**11 46 09.9**	**0.0**
	comp=Z,7.2nm,1.2s						
ZAA0	**Zalesovo Array**	**19.64**	**354**	*e*P	**P**	**11 46 08.9**	**-2.0**
	comp=Z,3.9nm,1.0s						
ZALV	**Zalesovo Beam**	**19.64**	**354**	P	**Pn**	**11 46 13.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=176,slow=11,SNR=3.6						
ZALV				LR	LR	11 54 56.8	
	comp=Z,148nm,18.3s,baz=248,slow=40						
ZAA1	**Zalesovo Array**	**19.64**	**354**	*e*P	**Pn**	**11 46 13.1**	**+0.7**
NONG	**Nongkai**	**21.05**	**137**	P	**P**	**11 46 28.2**	**+1.7**
BVAR	**Borovoye Array**	**22.50**	**331**	P	**P**	**11 46 43.8**	**+1.9**
	comp=Z,0.9nm,0.5s,baz=133,slow=11,SNR=4.8						
BRVK	**Borovoye**	**22.56**	**331**	*e*P	**P**	**11 46 40.7**	**-1.8**
	comp=Z,3.0nm,0.8s						
GEYT	**Alibeck**	**24.52**	**287**	P	**P**	**11 47 00.7**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=68,slow=9.4,SNR=2.5						
GEYT				LR	LR	11 58 50.1	
	comp=Z,125nm,18.5s,baz=95,slow=42						
GYA0B	**ALIBECK ARRAY**	**24.52**	**287**	*e*P	**P**	**11 47 01.1**	**-0.9**
	comp=Z,6.8nm,1.0s						
ABKAR	**Akbulak array**	**25.57**	**314**	*e*P	**P**	**11 47 12.0**	**+0.7**
	comp=Z,5.2nm,0.8s						
AKTO	**Aktyubinsk**	**27.19**	**315**	LR	LR	11 59 15.1	
	comp=Z,82nm,20.4s,baz=120,slow=39						
PALK	**Pallekele**	**27.94**	**196**	LR	LR	11 58 43.6	
	comp=Z,123nm,18.9s,baz=113,slow=37						
WSAR	**Wadi Sarin**	**28.16**	**254**	LR	LR	12 00 32.8	
	comp=Z,44nm,18.9s,baz=90,slow=40						
ARU	**Arti**	**29.88**	**326**	LR	LR	12 00 54.7	
	comp=Z,137nm,20.1s,baz=128,slow=38						
KS15	**Wonju Array Si**	**32.05**	**73**	*e*P	**P**	**11 48 07.4**	**-1.9**
	comp=Z,23nm,1.1s						
KSRS	**Korea Array**	**32.08**	**73**	LR	LR	12 02 02.9	
	comp=Z,88nm,18.3s,baz=272,slow=38						
KBZ	**Khabaz**	**36.02**	**299**	LR	LR	12 05 28.0	
	comp=Z,55nm,19.8s,baz=94,slow=40						
MAJO	**Matsushiro**	**40.35**	**72**	*e*P	**P**	**11 49 18.7**	**-1.5**
	comp=Z,4.1nm,0.6s						
TIXI	**Tiksi**	**42.87**	**18**	P	**P**	**11 49 40.9**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=252,slow=1.8,SNR=8.1						
TIXI	**Tiksi**	**42.87**	**18**	*e*P	**P**	**11 49 41.8**	**+1.5**
	comp=Z,2.2nm,0.8s						
BR101	**Keskin Array S**	**43.32**	**294**	*e*P	**P**	**11 49 45.2**	**+0.6**
BR131	**Keskin Array S**	**43.32**	**294**	*e*P	**P**	**11 49 42.4**	**-2.3**
	comp=Z,2.1nm,1.0s						
BRTR	**Keskin Array B**	**43.32**	**294**	P	**P**	**11 49 45.2**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=94,slow=7.4,SNR=5.2						
BRTR				LR	LR	12 10 03.6	
	comp=Z,27nm,18.7s,baz=94,slow=39						
FINES	**FINESS Array B**	**47.22**	**325**	LR	LR	12 11 42.0	
	comp=Z,96nm,18.3s,baz=89,slow=38						
MLR	**Muntele Rosu**	**47.91**	**303**	P	**P**	**11 50 21.8**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=98,slow=14,SNR=2.8						
PETK	**Petropavlovsk-**	**51.37**	**46**	LR	LR	12 13 42.7	
	comp=Z,47nm,19.4s,baz=278,slow=37						
NOA	**NORSAR Array B**	**54.40**	**324**	LR	LR	12 16 04.3	
	comp=Z,106nm,19.7s,baz=75,slow=38						
GEC2	**GERESS Array S**	**55.38**	**309**	*e*P	**P**	**11 51 18.1**	**+1.5**
	comp=Z,4.2nm,0.5s						
GERES	**GERESS Array B**	**55.38**	**309**	LR	LR	12 16 45.7	
	comp=Z,81nm,18.4s,baz=82,slow=38						
WRA	**Warramunga Arr**	**69.62**	**134**	P	**P**	**11 52 50.7**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=323,slow=6.6,SNR=13						
WR1	**Warramunga Arr**	**69.62**	**134**	*e*P	**P**	**11 52 50.7**	**-1.3**
WB2	**Warramunga Arr**	**69.63**	**134**	*e*P	**P**	**11 52 51.0**	**-1.0**
	comp=Z,40nm,1.9s						
WC3	**Warramunga Arr**	**69.65**	**134**	*e*P	**P**	**11 52 51.0**	**-1.2**
	comp=Z,19nm,1.5s						
ILAR	**Eielson Array**	**72.15**	**22**	P	**P**	**11 53 07.5**	**+0.6**
	comp=Z,0.6nm,1.0s,baz=292,slow=4.8,SNR=4.8						
ILAR				LR	LR	12 27 26.4	
	comp=Z,68nm,19.4s,baz=332,slow=38						
AS31	**Alice Springs**	**72.25**	**136**	*e*P	**P**	**11 53 06.4**	**-1.6**
	comp=Z,1.4nm,1.1s						
ASAR	**Alice Springs**	**72.25**	**137**	P	**P**	**11 53 06.8**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=333,slow=6.0,SNR=7.3						
TOA1	**Torodi Ar. Sit**	**79.89**	**279**	*e*P	**P**	**11 53 50.2**	**-1.5**
TORD	**Torodi Ar. Bea**	**79.89**	**279**	P	**P**	**11 53 50.2**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=50,slow=5.4,SNR=5.3						
TORD				LR	LR	12 34 07.1	
	comp=Z,53nm,20.1s,baz=5.0,slow=39						
YKA	**Yellowknife Ar**	**81.64**	**11**	P	**P**	**11 54 02.0**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=330,slow=5.7,SNR=3.8						
YKB5	**Yellowknife Ar**	**81.64**	**11**	*e*P	**P**	**11 54 02.0**	**+1.7**

NEIC ***25*** *11:54:36.3±0.0, 16°.07N×97°.13W, h41km, MD4.0(MEX), After MEX.*
MEX 25 11:54:36.3±0.5, 16°.07N×97°.13W, h41km±6km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.03**	**106**	*e*Pn	Pn	11 54 52.8	-1.5
HUIG				*e*Sn	Sn	11 55 05.2	-2.3
HUIG	**Huatulco**	**1.03**	**106**	*e*P	Pn	11 54 52.8	-1.5
HUIG				*i* S	Sn	11 55 05.2	-2.3
VHO	**Vista Hermosa**	**1.07**	**21**	*e*Pn	Pn	11 54 53.0	-2.0
VHO				*e*Sn	Sn	11 55 06.0	-2.8
VHO	**Vista Hermosa**	**1.07**	**21**	*e*P	Pn	11 54 53.0	-2.0
VHO				*i* S	Sn	11 55 06.0	-2.8
TLIG	**Tlapa**	**2.02**	**318**	*e*Pn	Pn	11 55 09.0	+0.9
TLIG				*e*Sn	Sn	11 55 31.7	-0.5
CMIG	**Matias Romero**	**2.39**	**64**	*e*Pn	Pn	11 55 11.8	-1.1
CMIG				*e*Sn	Sn	11 55 38.9	-2.1
CMIG	**Matias Romero**	**2.39**	**64**	*e*P	Pn	11 55 11.8	-1.1
CMIG				*i* S	Sn	11 55 38.9	-2.1

NEIC ***25*** *12:06:33.0±0.0, 14°.36N×95°.31W, h10km, MD4.1(MEX), After MEX.*
MEX 25 12:06:33.4±0.5, 14°.39N×95°.28W, h10km, MD4.1, Off coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.58**	**330**	*e*Pn	Pn	12 06 57.8	-3.7
HUIG				*e*Sn	Sn	12 07 16.6	-5.4
HUIG	**Huatulco**	**1.58**	**330**	*i* P	Pn	12 06 57.8	-3.7
HUIG				*e*S	Sn	12 07 16.6	-5.4
PCIG		**2.38**	**57**	*e*Pn	Pn	12 07 09.6	-2.9
PCIG				*e*Sn	Sn	12 07 37.6	-4.2
PCIG		**2.38**	**57**	*e*P	Pn	12 07 09.6	-2.9
PCIG				*i* S	Sn	12 07 37.6	-4.2
TGIG		**3.15**	**41**	*e*Pn	Pn	12 07 21.1	-2.1
TGIG				*e*Sn	Sn	12 07 59.9	-1.1
TGIG		**3.15**	**41**	*i* P	Pn	12 07 21.1	-2.1
TGIG				*e*S	Sn	12 07 59.9	-1.1
CCIG	**Comitan**	**3.57**	**58**	*e*Pn	Pn	12 07 28.1	-0.9
CCIG				*e*Pn	Pb	12 07 28.3	-8.5
CCIG				*e*Sn	Sn	12 08 10.7	-0.7
CCIG				*e*Sn	Sb	12 08 10.9	-9.3
CCIG	**Comitan**	**3.57**	**58**	*e*P	Pn	12 07 28.3	-0.7
CCIG				*e*S	Sn	12 08 10.7	-0.7
TLIG	**Tlapa**	**4.46**	**315**	*e*Pn	Pn	12 07 39.7	-1.6
TLIG				*e*Sn	Sn	12 08 28.4	-4.9
TEIG	**Tepich**	**8.85**	**48**	*e*Pn	Pn	12 08 37.4	-4.1
TEIG				*e*Sn	Sn	12 10 17.8	-3.6

IDC ***25*** *12:09:42.2±5.6, 30°.10S×178°.76W, h140km±46km, mb3.8/6, mb1 3.9/7, mb1mx3.6/30, mbtmp4.1/7, Error ellipse: s-maj=38.1km s-min=21.9km az=37.0*
ISCJB ***25*** *12:09:46.8±0.3, 30°.48S±0°.03×178°.92W±0°.08, h200km, mb4.1/13, Error ellipse: s-maj=9.7km s-min=3.6km az=18.1*
NEIC ***25*** *12:09:46.7±2.9, 30°.45S×178°.92W, h184km±5km, mb4.7/17, Error ellipse: s-maj=18.6km s-min=10.7km az=118.0*
ISC 25 12:09:47.6±0.6, 30°.55S±0°.06×178°.9W±0°.1, h200km, n105, σ1§75/118, mb4.3/13, 1C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.52**	**32**	P	**Pn**	**12 10 22.2**	**+0.8**
GLKZ				S	**Sn**	**12 10 47.1**	**-0.6**
RAO	**Raoul Island**	**1.53**	**32**	*e*Pn	**Pn**	**12 10 21.9**	**+0.3**
RAO				*e*Sn	Sn	12 10 37.3	-11
RIZ	**Raoul Island**	**1.53**	**32**	P	**Pn**	**12 10 22.1**	**+0.6**
MXZ	**Matakaoa Point**	**7.38**	**198**	*e*Pn	**Pn**	**12 11 32.9**	**+0.3**
MXZ				*e*Sn	**Sn**	**12 12 54.6**	**-1.6**
MXZ	**Matakaoa Point**	**7.38**	**198**	P	**Pn**	**12 11 33.6**	**+0.9**
MXZ				S	**Sn**	**12 12 56.5**	**+0.4**
WMGZ	**Waiomatatini S**	**7.59**	**197**	P	**Pn**	**12 11 37.0**	**+1.6**
WMGZ				S	**Sn**	**12 13 04.0**	**+2.7**
HAZ	**Te Kaha**	**7.71**	**200**	P	**Pn**	**12 11 38.4**	**+1.5**
HAZ				S	**Sn**	**12 13 06.8**	**+2.9**
PUZ	**Puketiti**	**7.87**	**197**	P	**Pn**	**12 11 38.3**	**-0.8**
PUZ				S	**Sn**	**12 13 09.6**	**+1.7**
OUZ	**Omahuta**	**7.88**	**232**	*e*Pn	**Pn**	**12 11 37.6**	**-1.5**
RUGZ	**Raukumara Rang**	**7.93**	**200**	P	**Pn**	**12 11 41.5**	**+1.6**
RUGZ				S	**Sn**	**12 13 10.5**	**+1.1**
TWGZ	**Tauwhareparae**	**8.04**	**198**	P	**Pn**	**12 11 41.1**	**-0.3**
TWGZ				S	**Sn**	**12 13 15.0**	**+3.0**
CNGZ	**Carnagh Statio**	**8.28**	**196**	P	**Pn**	**12 11 44.0**	**-0.3**
MWZ	**Matawai**	**8.32**	**200**	P	**Pn**	**12 11 44.0**	**-0.9**
MWZ				S	**Sn**	**12 13 19.5**	**+1.0**
URZ	**Urewera**	**8.38**	**202**	P	**Pn**	**12 11 45.2**	**-0.5**
	1.0nm,0.3s,baz=276,slow=5.1,SNR=12						
URZ				S	**Sn**	**12 13 18.0**	**-1.8**
	7.2nm,0.3s,baz=3.2,slow=18,SNR=6.1						
URZ	**Urewera**	**8.38**	**202**	*e*Pn	**Pn**	**12 11 48.2**	**+2.5**
URZ				*e*Sn	**Sn**	**12 13 21.2**	**+1.3**
URZ	**Urewera**	**8.38**	**202**	P	**Pn**	**12 11 45.8**	**+0.2**
RIGZ	**Rimuhau**	**8.60**	**198**	P	**Pn**	**12 11 48.1**	**-0.4**
RTZ	**Ruatahuna**	**8.75**	**202**	P	**Pn**	**12 11 48.6**	**-1.9**
RAHZ	**Arahi**	**8.99**	**201**	P	**Pn**	**12 11 52.9**	**-0.7**
TLZ	**Tolley Road**	**9.04**	**209**	P	Pn	12 11 59.5	+5.3
MRHZ	**Matea Rd**	**9.13**	**204**	P	**Pn**	**12 11 56.2**	**+0.7**
NMHZ	**Naumai**	**9.24**	**202**	P	**Pn**	**12 11 57.0**	**+0.1**
BKZ	**Black Stump Fm**	**9.40**	**203**	*e*Pn	**Pn**	**12 12 00.1**	**+1.0**
BKZ				*e*Sn	**Sn**	**12 13 47.0**	**+2.7**
BKZ	**Black Stump Fm**	**9.40**	**203**	P	**Pn**	**12 11 58.5**	**-0.5**
HIZ	**Hauiti**	**9.48**	**211**	*e*Pn	**Pn**	**12 12 01.1**	**+1.1**
HIZ				*e*Sn	**Sn**	**12 13 44.8**	**-1.4**
HIZ	**Hauiti**	**9.48**	**211**	P	Pn	12 12 05.5	+5.5
MCHZ	**McNeill Hill**	**9.59**	**201**	P	**Pn**	**12 12 02.5**	**+1.0**
KWHZ	**Kaweka Forest**	**9.66**	**202**	P	**Pn**	**12 12 01.6**	**-0.7**
TUVZ	**Tukino**	**9.79**	**206**	P	**Pn**	**12 12 07.1**	**+2.9**
FWVZ	**Far West T-bar**	**9.82**	**206**	P	**Pn**	**12 12 07.4**	**+2.8**
WHVZ	**Whangaehu Hut**	**9.83**	**206**	P	**Pn**	**12 12 08.2**	**+3.5**
BHHZ	**Black Hill Sta**	**9.84**	**204**	P	**Pn**	**12 12 04.6**	**-0.1**
KAHZ	**Kahuranaki**	**9.86**	**200**	P	**Pn**	**12 12 03.8**	**-1.1**
KRHZ	**Kereru**	**9.88**	**202**	P	**Pn**	**12 12 04.1**	**-1.0**
MOVZ	**Moawhango**	**9.88**	**205**	P	**Pn**	**12 12 06.1**	**+0.9**
PKVZ	**Pokaka**	**9.93**	**207**	P	**Pn**	**12 12 07.8**	**+1.9**
PXZ	**Pawanui**	**10.08**	**199**	P	**Pn**	**12 12 09.3**	**+1.5**
PNHZ	**Pukenui**	**10.18**	**202**	P	**Pn**	**12 12 11.9**	**+2.9**
PRHZ	**Porangahau**	**10.37**	**200**	P	**Pn**	**12 12 11.5**	**+0.1**
TSZ	**Takapari Road**	**10.39**	**203**	P	**Pn**	**12 12 12.1**	**+0.4**
WAZ	**Wanganui**	**10.47**	**207**	P	**P**	**12 12 17.0**	**-3.1**
DVHZ	**Dannevirke**	**10.54**	**201**	P	**Pn**	**12 12 16.7**	**+3.1**
POWZ	**Post Office Ro**	**10.75**	**203**	P	**P**	**12 12 22.1**	**-1.1**
PRWZ	**Pori Road**	**10.83**	**201**	P	**Pn**	**12 12 18.0**	**+0.6**
PRWZ	**Pori Road**	**10.83**	**201**	P	**P**	**12 12 23.1**	**-1.0**
BFZ	**Birch Farm**	**10.86**	**200**	*e*Pn	**Pn**	**12 12 16.1**	**-1.7**
BFZ				*e*Sn	**Sn**	**12 14 17.1**	**-1.8**
BFZ	**Birch Farm**	**10.86**	**200**	P	**Pn**	**12 12 19.0**	**+1.2**
MRZ	**Mangatainoka R**	**11.05**	**203**	P	**Pn**	**12 12 18.2**	**-2.0**
TIWZ	**Tintock**	**11.06**	**201**	P	**Pn**	**12 12 20.9**	**+0.5**
HOWZ	**Holdsworth Sta**	**11.29**	**202**	P	**Pn**	**12 12 24.7**	**+1.4**
OGWZ	**Otaki Gorge**	**11.33**	**204**	P	**Pn**	**12 12 22.7**	**-1.1**
TMWZ	**Te Maipa**	**11.36**	**201**	P	**Pn**	**12 12 26.0**	**+1.8**
MTW	**Mount Morrison**	**11.53**	**202**	P	**Pn**	**12 12 28.3**	**+1.9**
CAW	**Cannon Point**	**11.63**	**203**	P	**Pn**	**12 12 27.5**	**-0.1**
DUWZ	**D'Urville Isla**	**11.79**	**208**	P	**Pn**	**12 12 31.2**	**+1.5**
WEL	**Wellington**	**11.89**	**204**	P	**Pn**	**12 12 32.4**	**+1.5**
SNZO	**South Karori**	**11.93**	**204**	*e*Pn	**Pn**	**12 12 31.7**	**+0.3**
PLWZ	**Palliser**	**11.98**	**202**	P	**Pn**	**12 12 34.2**	**+2.1**
TCW	**Tory Channel**	**12.00**	**206**	P	**Pn**	**12 12 32.9**	**+0.6**
TUWZ	**Tuamarina**	**12.32**	**206**	P	**Pn**	**12 12 36.4**	**+0.1**
NNZ	**Nelson**	**12.36**	**208**	P	**Pn**	**12 12 37.9**	**+1.1**
QRZ	**Quartz Range**	**12.41**	**212**	P	**Pn**	**12 12 38.8**	**+1.3**
BSWZ	**Blackbirch Sta**	**12.59**	**206**	P	**P**	**12 12 42.9**	**-0.7**
THZ	**Tophouse**	**13.01**	**208**	*e*Pn	**Pn**	**12 12 45.1**	**0.0**
THZ				*e*Sn	**S**	**12 15 06.9**	**-3.3**
THZ	**Tophouse**	**13.01**	**208**	P	**Pn**	**12 12 45.5**	**+0.4**
KHZ	**Kahutara**	**13.32**	**205**	*e*Pn	**Pn**	**12 12 48.8**	**-0.1**
KHZ	**Kahutara**	**13.32**	**205**	P	**Pn**	**12 12 49.5**	**+0.6**
GVZ	**Greta Valley S**	**13.98**	**205**	P	**P**	**12 12 58.7**	**-0.4**
NIUE	**Niue**	**14.00**	**37**	*e*Pn	**Pn**	**12 12 55.4**	**-2.1**
LTZ	**Lake Taylor**	**14.12**	**208**	*e*Pn	**Pn**	**12 12 58.5**	**-0.4**
CRLZ	**Canterbury Las**	**14.66**	**205**	*e*Pn	**Pn**	**12 13 04.1**	**-1.4**
OXZ	**Oxford**	**14.67**	**207**	*e*Pn	**Pn**	**12 13 04.9**	**-0.7**
MQZ	**McQueen's Vall**	**14.76**	**205**	*e*Pn	**Pn**	**12 13 05.8**	**-0.9**
RPZ	**Rata Peaks**	**15.39**	**209**	P	**Pn**	**12 13 13.9**	**-0.5**
	0.6nm,0.3s,baz=16,slow=7.4,SNR=4.1						
RPZ				S	**S**	**12 15 55.1**	**-10**
	0.9nm,0.3s,baz=326,slow=21,SNR=11						
RPZ	**Rata Peaks**	**15.39**	**209**	*e*P	**Pn**	**12 13 14.2**	**-0.3**
	84nm,1.5s						
FOZ	**Fox Glacier**	**15.78**	**212**	*e*P	**P**	**12 13 18.0**	**-0.9**
	129nm,1.6s						
LBZ	**Lake Benmore**	**16.30**	**209**	*e*P	**Pn**	**12 13 26.2**	**+0.8**
	62nm,1.4s						
ODZ	**Otahua Downs**	**16.66**	**207**	*e*P	**Pn**	**12 13 29.9**	**+0.3**
	80nm,1.4s						
WKZ	**Wanaka**	**17.15**	**210**	*e*P	**P**	**12 13 34.3**	**+0.3**
	169nm,1.6s						
AFI	**Afiamalu**	**17.80**	**23**	*e*P	**P**	**12 13 39.5**	**-1.9**
	105nm,1.3s						
ARMA	**Armidale**	**25.41**	**263**	*e*P	**P**	**12 14 57.4**	**+0.5**
	23nm,1.4s						
EIDS	**Eidsvold**	**27.01**	**274**	*e*P	**P**	**12 15 11.2**	**0.0**
	34nm,1.8s						
CTA	**Charters Tower**	**33.10**	**280**	P	**P**	**12 16 06.7**	**+1.9**
	4.2nm,0.8s,baz=111,slow=12,SNR=7.6						
CTAO	**Charters Tower**	**33.10**	**280**	*e*P	**P**	**12 16 07.1**	**+2.3**
	21nm,1.5s						
STKA	**Stephens Creek**	**33.73**	**257**	P	**P**	**12 16 12.7**	**+2.5**
	2.5nm,0.4s,baz=104,slow=13,SNR=9.4						
STKA	**Stephens Creek**	**33.73**	**257**	*e*P	**P**	**12 16 13.1**	**+3.0**
	8.0nm,2.0s						
**

H11N3	**WAKE ISLAND Hy 28.61 124**		T		T		12 47 10.0
	baz=316,slow=76,SNR=654						
H11S1	**WAKE ISLAND Hy 29.36 126**		T		T		12 48 05.5
	baz=318,slow=76,SNR=265						
H11S3	**WAKE ISLAND Hy 29.36 126**		T		T		12 48 05.6
	baz=318,slow=76,SNR=282						
H11S2	**WAKE ISLAND Hy 29.38 126**		T		T		12 48 11.2
	baz=318,slow=76,SNR=279						
ZALV	**Zalesovo Beam**	**41.22 311**	P		**P**	**12 18 38.0**	**-1.4**
	1.1nm,0.5s,baz=87,slow=10,SNR=4.7						
MKAR	**Makanchi Array**	**43.70 301**	P		**P**	**12 18 59.6**	**-0.2**
	0.3nm,0.3s,baz=88,slow=8.6,SNR=4.7						
FINES	**FINESS Array B**	**67.64 332**	P		**P**	**12 21 50.6**	**-0.4**
	0.2nm,0.3s,baz=62,slow=11,SNR=3.3						

*IDC **25** 12:26:56.8±1.0,26°.62N×99°.75E,h0km,mb3.6/8, mb1 3.8/8,mb1mx3.5/35,mbtmp3.6/8,Error ellipse: s-maj=67.1km s-min=17.4km az=60.0*
*ISCJB **25** 12:26:59.0±0.8,26°.77N±0°.09×100°.06E±0°.10,h28km, mb3.5/8,Error ellipse: s-maj=14.4km s-min=11.8km az=144.3*
*BJI **25** 12:26:59.3±0.0,26°.97N×100°.27E,h9km,ML3.6/4*

ISC 25 12:27:00.9±1.0,26°.71N±0°.10×100°.01E±0°.10,h28km,n11, σ0s85/13,mb3.7/8,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.92**	**122**	Pg	**Pb**	**12 27 51.3**	**-1.1**
KMI				Sg	**Sb**	**12 28 28.5**	**+0.7**
KMI				smax	smax		
	comp=N,290nm,0.8s						
KMI				smax	smax		
	comp=E,250nm,0.8s						
XAN	**Xi'an**	**10.61**	**44**	P	**Pn**	**12 29 30.5**	**-0.6**
XAN				S	**Sn**	**12 31 29.5**	**+0.5**
WMQ	**Urumqi**	**19.78**	**333**	*e*P	**P**	**12 31 28.5**	**-0.3**
WMQ				sP	pP	12 31 36.0	-1.2
SONM	**Songino Array**	**21.68**	**12**	P	**P**	**12 31 50.9**	**+1.5**
	1.4nm,0.8s,baz=186,slow=13,SNR=4.6						
MKAR	**Makanchi Array**	**24.46**	**330**	P	**P**	**12 32 17.9**	**+0.5**
	0.3nm,0.6s,baz=134,slow=11,SNR=3.5						
KURBB	**Kurchatov Arra**	**28.98**	**331**	P	**P**	**12 32 57.9**	**0.0**
	0.1nm,0.3s,baz=136,slow=10,SNR=2.8						
ZALV	**Zalesovo Beam**	**29.44**	**342**	P	**P**	**12 33 01.2**	**-0.8**
	0.4nm,0.3s,baz=160,slow=9.3,SNR=4.0						
WRA	**Warramunga Arr**	**57.09**	**141**	P	**P**	**12 36 45.5**	**+0.6**
	1.7nm,0.5s,baz=327,slow=7.3,SNR=18						
FINES	**FINESS Array B**	**59.27**	**328**	P	**P**	**12 36 59.8**	**+0.2**
	0.6nm,0.8s,baz=126,slow=7.1,SNR=3.4						
ASAR	**Alice Springs**	**59.84**	**144**	P	**P**	**12 37 05.0**	**+1.0**
	0.4nm,0.6s,baz=329,slow=7.1,SNR=14						
NOA	**NORSAR Array B**	**66.44**	**328**	P	**P**	**12 37 46.8**	**-0.6**
	0.4nm,0.6s,baz=77,slow=6.5,SNR=2.4						

*SKO **25** 12:34:26.5,39°.83N×19°.54E,h0km*
*ISCJB **25** 12:34:28.6±0.7,39°.96N±0°.03×19°.80E±0°.06,h7km±5km, Error ellipse: s-maj=7.2km s-min=4.7km az=179.6*
*ATH **25** 12:34:28.5,39°.97N×19°.85E,h12km±2km,ML2.6/2,Error ellipse: s-maj=5.0km s-min=2.1km az=107.0*
*THE **25** 12:34:29.7,39°.94N×19°.90E,h5km±2km,ML2.4/6,Error ellipse: s-maj=2.8km s-min=0.5km az=177.0*

ISC 25 12:34:29.1±1.1,39°.94N±0°.03×19°.87E±0°.04,h8km±8km, n21,σ1s22/31,1D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.12**	**121**	P	**Pg**	**12 34 31.7**	**-0.1**
SRN				S	**Sg**	**12 34 33.3**	**-0.3**
KEK	**Kerkira**	**0.23**	**193**	P	**Pg**	**12 34 34.0**	**+0.2**
KEK				S	**Sg**	**12 34 38.4**	**+1.4**
TPE	**Tepelena**	**0.37**	**17**	P	**Pg**	**12 34 36.4**	**+0.1**
TPE				S	**Sg**	**12 34 42.2**	**+1.0**
IGT	**Igoumenitsa**	**0.55**	**139**	P	**Pg**	**12 34 39.2**	**-0.4**
IGT				S	**Sg**	**12 34 47.5**	**+0.7**
IGT	**Igoumenitsa**	**0.55**	**139**	⇓*i*Pg	**Pg**	**12 34 39.4**	**-0.2**
IGT				*i* Sg	**Sb**	**12 34 47.9**	**-0.9**
IGT	**Igoumenitsa**	**0.55**	**139**	P	**Pg**	**12 34 39.4**	**-0.2**
IGT				S	**Sg**	**12 34 47.5**	**+0.7**
IGT				AML	AML	12 34 48.1	
	comp=N,1471μm,0.3s						
IGT				AML	AML	12 34 48.9	
	comp=E,1141μm,0.2s						
PENT	**Pentalofos**	**1.01**	**75**	P	**Pb**	**12 34 48.4**	**-0.5**
PENT				S	**Sb**	**12 35 02.4**	**+0.1**
MEV	**Metsovon**	**1.06**	**98**	P	**Pg**	**12 34 49.0**	**-0.5**
KPRO	**Kipourio**	**1.15**	**89**	P	**Pg**	**12 34 50.5**	**-0.7**
KPRO				S	**Sn**	**12 35 07.2**	**-0.3**
KPRO	**Kipourio**	**1.15**	**89**	P	**Pg**	**12 34 50.4**	**-0.7**
KPRO				AML	AML	12 35 13.2	
	comp=E,582μm,0.6s						
KPRO				AML	AML	12 35 15.4	
	comp=N,460μm,0.9s						
TSLK	**Tsoukalades, L**	**1.27**	**151**	P	**Pb**	**12 34 53.1**	**-0.2**
LKD2	**Lefkada island**	**1.30**	**152**	P	**Pg**	**12 34 53.6**	**-0.6**
OHR	**Ohrid**	**1.37**	**31**	*i* Pg	**Pg**	**12 34 54.8**	**-0.5**
OHR				*i* Sg	**Sn**	**12 35 17.6**	**+4.8**
EVGI	**Lefkada island**	**1.46**	**155**	P	**Pb**	**12 34 56.2**	**-0.2**
PDO	**Prodromos**	**1.69**	**142**	P	**Pn**	**12 34 59.3**	**+0.5**
LIT	**Litokhoron**	**2.02**	**85**	*i* Pn	**Pb**	**12 35 05.1**	**-1.0**
LIT	**Litokhoron**	**2.02**	**85**	P	**Pn**	**12 35 04.5**	**+1.0**
ANX	**Ano Chora**	**2.09**	**130**	P	**Pb**	**12 35 06.1**	**-1.1**
AGG	**Agios Georgios**	**2.12**	**115**	P	**Pb**	**12 35 06.4**	**-1.3**
GRG	**Griva**	**2.18**	**62**	*i* Pn	**Pb**	**12 35 08.0**	**-0.8**
STON	**Ston**	**3.35**	**332**	*e*Pn	**Pn**	**12 35 21.1**	**-0.5**
STON				Sn	**Sn**	**12 35 59.7**	**-1.9**

MAN 25 12:51:05.4,9°.35N×126°.25E,h132km,mb4.3,ML3.1, MS2.8,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.72**	**238**	*e*P	Pn	12 51 27.5	+1.4
BUTP				*e*S	Sn	12 51 44.1	+2.2
MSLP	**Maasin**	**1.57**	**300**	*e*P	Pn	12 51 35.7	+1.2
MSLP				*e*S	Sn	12 51 57.5	+0.9
BUKP	**Musuan**	**1.87**	**219**	*e*P	Pn	12 51 41.2	+3.1
BUKP				*e*S	Sn	12 52 02.3	-0.6
BESP	**Borongan**	**2.37**	**341**	*e*P	Pn	12 51 44.9	+0.8
BESP				*e*S	Sn	12 52 14.6	+0.8
DDMP	**Don Marcelino,**	**3.27**	**189**	*e*P	Pn	12 51 56.1	+0.5
DDMP				*e*S	Sn	12 52 33.5	-1.0
CNP	**Cataman**	**3.50**	**334**	*e*P	Pn	12 52 00.3	+1.6
CNP				*e*S	Sn	12 52 40.7	+0.9

IDC 25 12:51:24.6±3.8,6°.94S×149°.99E,h0km,mb2.9/1, mb1 3.4/2,mb1mx3.2/18,mbtmp3.2/2,ML3.1/1,Error ellipse: s-maj=149.1km s-min=47.9km az=118.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.94**	**228**	P	P	12 55 57.7	-0.7
	0.1nm,0.3s,baz=54,slow=11,SNR=2.7						
ASAR	**Alice Springs**	**22.70**	**221**	P	P	12 56 28.1	0.0
	0.3nm,0.5s,baz=54,slow=9.0,SNR=7.3						
TORD	**Torodi Ar. Bea**	**148.20**	**284**	PKPbc	PKPbc	13 11 13.4	-0.3
	7.2nm,0.3s,baz=68,slow=3.7,SNR=4.4						

*SOME **25** 12:56:04.2,42°.18N×81°.77E,h15km*
*NNC **25** 12:56:06.8±1.9,42°.12N×81°.47E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=13.3km s-min=8.6km az=164.0*

ISC 25 12:55:59.5±3.7,42°.1N±0°.1×82°.3E±0°.1,h13km,n20, σ1s77/31,4C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.94**	**314**	P	**Pb**	**12 56 35.1**	**+0.2**
	17nm,0.3s						
KTMS				S	**Sn**	**12 56 57.1**	**+0.4**
	13nm,0.4s						
KTMS	**Ketmen**	**1.94**	**314**	*e*P	**Pb**	**12 56 35.1**	**+0.2**
	17nm,0.3s						
KTMS				*e*S	**Sn**	**12 56 57.1**	**+0.4**
	13nm,0.4s						
PDGK	**Podgornoye**	**2.38**	**302**	Pg	**Pb**	**12 56 41.4**	**-1.0**
	6.6nm,0.4s						
PDGK				Lg	Lg	12 57 08.0	
	14nm,0.6s						
PDGK	**Podgornoye**	**2.38**	**302**	⇓Pg	**Pb**	**12 56 41.6**	**-0.8**
	7.4nm,0.5s						
PDGK				⇓Lg	Lg	12 57 09.4	
	38nm,0.5s						
UZB	**Uzynbulak**	**2.61**	**294**	Pg	**Pb**	**12 56 44.8**	**-1.4**
	6.5nm,0.3s						
UZB				Lg	Lg	12 57 14.2	
	12nm,0.4s						
UZB	**Uzynbulak**	**2.61**	**294**	*e*P	**Pb**	**12 56 44.8**	**-1.4**
	6.5nm,0.3s						
UZB				*e*S	**Sn**	**12 57 14.2**	**+1.1**
	12nm,0.4s						
DJR	**Jarkent**	**2.86**	**322**	Pg	**Pb**	**12 56 51.5**	**+1.0**
	15nm,0.4s						
DJR				Lg	Lg	12 57 25.5	
	8.2nm,0.5s						
DJR	**Jarkent**	**2.86**	**322**	*e*P	**Pb**	**12 56 51.5**	**+1.0**
	15nm,0.4s						
DJR				⇓*i*S	**Sb**	**12 57 25.5**	**0.0**
	8.2nm,0.5s						
KPKS	**Kokpek**	**2.96**	**298**	*e*P	**Pb**	**12 56 51.1**	**-1.2**
	9.6nm,0.2s						
KPKS				*e*S	**Sn**	**12 57 25.0**	**+3.1**
	48nm,0.3s						
SATY	**Saty**	**3.01**	**290**	Pg	**Pb**	**12 56 51.5**	**-1.5**
	9.6nm,0.3s						
SATY				Lg	Lg	12 57 25.9	
	22nm,0.5s						
SATY	**Saty**	**3.01**	**290**	*e*P	**Pb**	**12 56 51.5**	**-1.5**
	9.6nm,0.3s						
SATY				*e*S	**Sn**	**12 57 25.9**	**+3.0**
	22nm,0.5s						
KURS	**Kuram**	**3.31**	**296**	Pg	**Pb**	**12 56 57.4**	**-0.8**
	2.4nm,0.6s						
KURS				Lg	Lg	12 57 35.7	
	8.0nm,0.5s						
KURS	**Kuram**	**3.31**	**296**	*e*P	**Pb**	**12 56 57.4**	**-0.8**
	2.4nm,0.6s						
KURS				*e*S	**Sb**	**12 57 35.7**	**-2.8**
	8.0nm,0.5s						
MNBS	**Baschi**	**3.45**	**306**	Pg	**Pb**	**12 56 59.9**	**-0.6**
	2.5nm,0.3s						
MNBS				Lg	Lg	12 57 40.0	
	14nm,0.3s						
MNBS	**Baschi**	**3.45**	**306**	*e*P	**Pb**	**12 56 59.9**	**-0.6**
	2.5nm,0.3s						
MNBS				*e*S	**Sb**	**12 57 40.0**	**-2.4**
	14nm,0.3s						
KAPS	**Kapalarasan**	**3.81**	**327**	Pg	**Pb**	**12 57 06.3**	**-0.4**
	2.1nm,0.3s						
KAPS				Lg	Lg	12 57 51.0	
	8.7nm,0.4s						
KAPS	**Kapalarasan**	**3.81**	**327**	*e*P	**Pb**	**12 57 06.3**	**-0.4**
	2.1nm,0.3s						
KAPS				*e*S	**Sb**	**12 57 51.0**	**-1.7**
	8.7nm,0.4s						
MK31	**Makanchi Array**	**4.68**	**0**	Pn	**Pb**	**12 57 21.3**	**-0.2**
	0.1nm,0.2s,baz=186,slow=12,SNR=4.8						
MK31				⇓Sn	**Sb**	**12 58 15.6**	**-2.1**
	0.7nm,0.6s,baz=191,slow=22,SNR=5.6						
MK31				Lg	Lg	12 58 34.5	
	2.3nm,0.6s,baz=189,slow=30,SNR=6.8						
MAKZ	**Makanchi**	**4.70**	**358**	⇑Pn	**Pb**	**12 57 20.9**	**-0.8**
	0.6nm,0.3s						
MAKZ				⇑Sn	**Sb**	**12 58 17.4**	**-0.8**
	1.2nm,0.5s						
MAKZ				⇑Lg	Lg	12 58 35.1	
	2.3nm,0.7s						
KK31	**Karatay Array**	**8.73**	**280**	⇑Pn	Pg	12 58 38.5	-8.0
	0.6nm,0.3s,baz=183,slow=11,SNR=12						
KK31				Sn	**Sn**	**12 59 49.2**	**+5.5**
	1.4nm,0.4s,baz=190,slow=22,SNR=5.0						

*EAF **25** 12:55:56.2±1.4,26°.94S×28°.98E,h23km±32km,MD3.5*
*BUL **25** 12:55:57.3±1.7,26°.98S×29°.03E,h22km±36km,MD3.8*
*ISCJB **25** 12:56:00.9±0.8,26°.24S±0°.06×27°.69E±0°.07,h6km±6km, Error ellipse: s-maj=13.1km s-min=5.5km az=42.2*
*PRE **25** 12:56:02.5±1.8,26°.44S×27°.67E,h2km,ML2.7*

ISC 25 12:56:01.7±1.1,26°.39S±0°.04×27°.69E±0°.04,h10km±6km, n16,σ1s41/28,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.08**	**301**	*e*P	**Pg**	**12 56 04.3**	**+1.1**
KLOF				*e*S	**Sg**	**12 56 05.4**	**-0.6**
KLOF				AML	AML	12 56 05.8	
	comp=Z,8μm,0.1s						
WDLM	**Western Deep L**	**0.24**	**262**	*e*P	**Pg**	**12 56 06.7**	**+0.1**
WDLM				*e*S	**Sg**	**12 56 09.6**	**-0.5**
WDLM				AML	AML	12 56 10.7	
	comp=Z,1μm,0.3s						
ERPM	**east rand prop**	**0.50**	**85**	*e*P	**Pg**	**12 56 11.8**	**+0.3**
ERPM				*e*S	**Sb**	**12 56 21.8**	**+1.7**
ERPM				AML	AML	12 56 23.8	
	comp=Z,176nm,0.3s						
KSR	**Koster**	**0.89**	**307**	*e*P	**Pg**	**12 56 19.1**	**+0.3**
KSR				*e*S	**Sb**	**12 56 33.5**	**+2.2**
KSR				AML	AML	12 56 39.1	
	comp=Z,55nm,0.1s						
SWZ	**Schweizer**	**2.25**	**249**	*e*P	**Pn**	**12 56 40.8**	**+1.7**
SWZ				*e*S	**Sb**	**12 57 10.0**	**-0.4**
SWZ				AML	AML	12 57 11.9	
	comp=Z,137nm,0.6s						
LBTB	**Lobatse**	**2.33**	**306**	*e*P	**Pn**	**12 56 42.8**	**+2.6**
LBTB				*e*S	**Sb**	**12 57 13.0**	**+0.2**
LBTB				AML	AML	12 57 15.5	
	comp=Z,118nm,0.3s						
BOSA	**Boshof**	**3.09**	**224**	*i* P	**Pn**	**12 56 51.0**	**+0.3**
BOSA				*i* S	**Sb**	**12 57 33.2**	**-1.5**
BOSA	**Boshof**	**3.09**	**224**	*i* P	**Pn**	**12 56 51.0**	**+0.3**
BOSA				*i* S	**Sb**	**12 57 33.2**	**-1.5**
BOSA	**Boshof**	**3.09**	**224**	*e*P	**Pn**	**12 56 51.3**	**+0.6**
BOSA				*e*S	**Sn**	**12 57 29.9**	**+2.1**
BOSA				AML	AML	12 57 37.4	
	comp=Z,29nm,0.5s						
MSNA	**Messina**	**4.56**	**28**	*i* P	Pn	12 57 06.1	-4.7
MSNA				*i* S	Sn	12 57 55.0	-8.8
MSNA	**Messina**	**4.56**	**28**	*i* P	Pn	12 57 06.1	-4.7
MSNA				*i* S	Sn	12 57 55.0	-8.8
MATP	**Matopo**	**5.99**	**7**	*i* P	**Pn**	**12 57 30.5**	**+0.1**
MATP				*i* S	**Sn**	**12 58 38.8**	**-0.4**
MATP	**Matopo**	**5.99**	**7**	*i* P	**Pn**	**12 57 30.5**	**+0.1**
MATP				*i* S	**Sn**	**12 58 38.8**	**-0.4**
UPI	**Upington**	**6.05**	**250**	*e*P	**Pn**	**12 57 33.3**	**+2.0**
UPI				*e*S	**Sn**	**12 58 39.3**	**-1.4**
UPI				AML	AML	12 59 22.6	
	comp=Z,19nm,0.6s						
BLWY	**Bulawayo**	**6.28**	**8**	*i* P	**Pn**	**12 57 33.1**	**-1.5**
BLWY				*i* S	**Sn**	**12 58 44.3**	**-2.2**
BLWY	**Bulawayo**	**6.28**	**8**	*i* P	**Pn**	**12 57 33.1**	**-1.5**
BLWY				*i* S	**Sn**	**12 58 44.3**	**-2.2**

KRSC 25 13:05:48.8±0.9,59°.94N×163°.75E,h3km±4km,ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSR	**Ossora**	**0.78**	**207**	*e*P	Pb	13 06 04.6	-0.3
OSSR				*e*S	Sb	13 06 16.3	+0.4
TILK	**Tilichiki**	**1.30**	**66**	*e*P	Pg	13 06 13.2	-0.5
TILK				*e*S	Sn	13 06 32.0	+0.3
PALN	**Palana**	**2.11**	**248**	*e*P	Pb	13 06 26.9	-0.7
PALN				*e*S	Sb	13 06 53.3	-0.9
KMSK	**Kamenskaya**	**2.80**	**24**	*e*P	Pb	13 06 37.4	-2.0
KMSK				*e*S	Sb	13 07 11.7	-2.4

*IDC **25** 13:07:48.4±1.0,16°.54S×173°.15W,h0km,mb3.9/6, mb1 4.2/6,mb1mx3.8/26,mbtmp3.9/6,MS3.0/2,Ms1 3.0/2, ms1mx2.8/19,Error ellipse: s-maj=51.2km s-min=21.3km az=136.0*
*ISCJB **25** 13:07:52.2±0.6,16°.49S±0°.10×173°.27W±0°.10,h35km, mb4.1/8,MS2.8/1,Error ellipse: s-maj=15.2km s-min=11.7km az=139.0*
*NEIC **25** 13:07:54.0±0.3,16°.54S×173°.22W,h35km,mb4.4/4,Error ellipse: s-maj=11.8km s-min=8.8km az=150.0*

ISC 25 13:07:53.8±0.7,16°.6S±0°.1×173°.2W±0°.1,h35km,n30, σ0s71/23,mb4.0/8,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.01**	**129**	*e*Pn	**Pn**	**13 08 53.3**	**+0.5**
RAR	**Rarotonga**	**13.55**	**112**	LR	LR	13 14 32.3	
	comp=Z,83nm,21.5s,baz=264,slow=30						
DZM	**Mont Dzumac**	**19.92**	**251**	*e*P	**P**	**13 12 22.8**	**0.0**
	47nm,1.4s						
PPT	**Papeete**	**22.64**	**96**	LR	LR	13 18 51.0	
	comp=Z,38nm,21.0s,baz=96,slow=29						
URZ	**Urewera**	**23.20**	**200**	P	**P**	**13 12 57.5**	**0.0**
	8.3nm,1.0s,baz=100,slow=18,SNR=2.2						
URZ				S	**S**	**13 17 05.2**	**-1.7**
	3.9nm,0.8s,baz=341,slow=18,SNR=3.3						
H11S2	**WAKE ISLAND Hy 40.05 330**		T		T	13 57 27.5	
	baz=149,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy 40.07 330**		T		T	13 57 27.2	
	baz=149,slow=75,SNR=6.7						
H11S1	**WAKE ISLAND Hy 40.07 330**		T		T	13 57 28.9	
	baz=149,slow=75,SNR=6.1						
H11N3	**WAKE ISLAND Hy 41.01 331**		T		T	13 58 35.6	
	baz=150,slow=76,SNR=7.4						
H11N1	**WAKE ISLAND Hy 41.02 331**		T		T	13 58 29.5	
	baz=150,slow=76,SNR=4.6						
H11N2	**WAKE ISLAND Hy 41.03 331**		T		T	13 58 39.4	
	baz=150,slow=76,SNR=5.6						
WR1	**Warramunga Arr**	**49.73**	**258**	*e*P	**P**	**13 16 44.1**	**+1.1**
WRA	**Warramunga Arr**	**49.73**	**258**	P	**P**	**13 16 44.1**	**+1.0**
	1.1nm,0.9s,baz=90,slow=7.8,SNR=3.1						
ASAR	**Alice Springs**	**49.90**	**253**	P	**P**	**13 16 44.1**	**-0.2**
	1.3nm,0.7s,baz=86,slow=8.0,SNR=13						
NVAR	**Mina Array Bea**	**75.10**	**42**	P	**P**	**13 19 32.4**	**-0.2**
	1.1nm,0.9s,baz=226,slow=9.6,SNR=7.3						
NV01	**Mina Array Sit**	**75.11**	**42**	*e*P	**P**	**13 19 32.4**	**-0.2**
PD31	**Pinedale Array**	**83.04**	**42**	*e*P	**P**	**13 20 15.9**	**-0.1**
	1.4nm,0.9s						
PDAR	**Pinedale Array**	**83.04**	**42**	P	**P**	**13 20 15.7**	**-0.3**
	1.1nm,0.8s,baz=204,slow=3.3,SNR=7.6						
CCB	**Clear Creek Bu**	**83.29**	**11**	*e*P	**P**	**13 20 15.6**	**-0.8**
	2.1nm,0.8s						
ILAR	**Eielson Array**	**83.57**	**11**	P	**P**	**13 20 16.6**	**-1.3**
	0.5nm,0.7s,baz=226,slow=6.8,SNR=5.3						
RWWY	**Rawlins**	**84.04**	**43**	*e*P	**P**	**13 20 21.7**	**+0.5**
	14nm,0.9s						
VRAC	**Vranov**	**146.39**	**348**	PKPbc	**PKPdf**	**13 27 30.1**	**+0.3**
	5.3nm,1.0s,baz=292,slow=11,SNR=4.8						
GRA1	**Grafenberg Arr**	**146.78**	**355**	*e*PKPdf	**PKPdf**	**13 27 30.8**	**+0.4**
GRFO	**Grafenberg**	**146.78**	**355**	*e*PKPdf	**PKPdf**	**13 27 30.9**	**+0.6**
BR101	**Keskin Array S**	**147.16**	**320**	*e*PKPbc	**PKPbc**	**13 27 34.2**	**+0.5**
BRTR	**Keskin Array B**	**147.16**	**320**	PKPbc	**PKPbc**	**13 27 34.2**	**+0.5**
	2.1nm,0.8s,baz=94,slow=1.2,SNR=8.9						
GEC2	**GERESS Array S**	**147.33**	**351**	*e*PKPdf	**PKPbc**	**13 27 33.3**	**-0.5**
GERES	**GERESS Array B**	**147.33**	**351**	PKPbc	**PKPbc**	**13 27 33.6**	**-0.2**
	0.8nm,0.6s,baz=29,slow=3.0,SNR=6.6						
DAVOX	**Davos/Dischmat**	**149.78**	**356**	PKPbc	**PKPbc**	**13 27 40.9**	**+0.5**
	1.8nm,0.5s,baz=15,slow=16,SNR=3.1						
FUORN	**Ofenpass-Fuorn**	**149.91**	**355**	*e*PKPbc	**PKPbc**	**13 27 41.2**	**+0.4**

*SFS **25** 13:09:55.0,32°.53N×5°.78W,ML4.4,SW. KHENFRA (MARRUECOS)*
*INMG **25** 13:09:55.8±1.1,32°.56N×5°.48W,h0km,ML2.6,Error ellipse: s-maj=9.0km s-min=6.0km az=88.0*
*CNRM **25** 13:09:56.0,32°.39N×5°.35W,h5km,ml3.4*
*IGIL **25** 13:09:57.2,32°.56N×5°.44W,h1km*
*MDD **25** 13:10:01.7±2.4,32°.78N×5°.64W,h96km±57km,mb3.5/9, Error ellipse: s-maj=20.7km s-min=16.3km az=48.0, PRXIMO*

ISC 25 13:09:55.1±1.1,32°.52N±0°.03×5°.43W±0°.02,h10km±9km, n68,σ1s99/115,Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZD	**Col de Zad**	**0.60**	**32**	P	**Pg**	**13 10 08.1**	**+1.2**
CZD				S	**Sb**	**13 10 18.3**	**+1.6**
MD31	**MD31**	**0.66**	**58**	P	**Pg**	**13 10 08.1**	**+0.2**
MD31				S	**Sg**	**13 10 17.7**	**+1.1**
MDT	**Midelt**	**0.75**	**67**	P	**Pg**	**13 10 09.4**	**-0.2**
MDT				S	**Sg**	**13 10 21.0**	**+1.5**
GOLM	**Goulmima**	**0.91**	**154**	P	**Pg**	**13 10 10.1**	**-2.5**
GOLM				S	**Sg**	**13 10 21.3**	**-3.2**
IFR	**Ifrane**	**1.03**	**14**	*e*P	**Pg**	**13 10 15.5**	**+0.6**
IFR				*e*S	**Sn**	**13 10 31.4**	**+1.1**
LCRM	**LCR**	**1.26**	**22**	P	**Pb**	**13 10 20.0**	**+0.9**
LCRM				S	**Sn**	**13 10 38.1**	**+2.1**
ZHG	**ZHG**	**1.38**	**312**	P	**Pb**	**13 10 22.9**	**+1.9**
ZHG				S	**Sn**	**13 10 42.7**	**+3.8**
ARF	**Arif**	**1.49**	**136**	P	**Pn**	**13 10 20.6**	**-1.5**
ARF				S	**Sn**	**13 10 39.7**	**-2.0**
OUZM	**OUZ**	**1.97**	**216**	P	**Pn**	**13 10 31.2**	**+2.5**
OUZM				S	**Sg**	**13 10 58.8**	**+0.5**
SRHM	**Skhour des Reh**	**2.09**	**269**	P	**Pg**	**13 10 34.5**	**-0.7**
SRHM				S	**Sg**	**13 11 02.1**	**-0.1**
AKLM	**AKL**	**2.38**	**33**	P	**Pb**	**13 10 39.4**	**+1.3**
AKLM				S	**Sg**	**13 11 11.1**	**-0.3**
RSA	**Sarsar**	**2.38**	**352**	P	**Pb**	**13 10 38.7**	**+0.6**
RSA				S	**Sg**	**13 11 11.0**	**-0.6**
OUK	**Oukaimeden**	**2.45**	**238**	P	**Pn**	**13 10 38.1**	**+2.5**
OUK				S	**Sn**	**13 11 07.5**	**+1.8**
CHEFC	**Chefchaouen**	**2.58**	**2**	P	**Pb**	**13 10 40.4**	**-1.2**
CHEFC				S	**Sg**	**13 11 16.3**	**-1.8**
TDRA	**Tendrara**	**2.91**	**79**	P	**Pn**	**13 10 45.1**	**+3.4**
TDRA				S	**Sn**	**13 11 19.9**	**+3.1**
PALE	**Palemas**	**2.96**	**24**	P	**Pn**	**13 10 45.7**	**+3.4**
PALE				S	**Sb**	**13 11 22.5**	**-1.7**
JBK	**JBK**	**3.00**	**52**	P	**Pn**	**13 10 43.0**	**+0.1**
JBK				S	**Sn**	**13 11 18.6**	**-0.5**
TTIG	**Tnine Tigouga,**	**3.24**	**233**	P	**Pn**	**13 10 47.6**	**+1.5**
TTIG				S	**Sn**	**13 11 28.8**	**+3.9**
GOG	**Mont Gurugu**	**3.37**	**36**	P	**Pb**	**13 10 52.9**	**-2.1**
GOG				S	**Sb**	**13 11 34.4**	**-1.7**
TAF	**Taforalt**	**3.40**	**47**	P	**Pn**	**13 10 50.9**	**+2.6**
TAF				S	**Sn**	**13 11 32.4**	**+3.7**
FIGM	**Figuig**	**3.55**	**95**	P	**

1.6nm,0.2s,SNR=7.9
PTEO Sao Teotonio 5.70 333 *e*Pn **Pn 13 11 20.4 +0.6**
PTEO A A 13 12 25.9
6.0nm,0.8s
PTEO Sao Teotonio 5.70 333 P **Pn 13 11 20.4 +0.6**
MESJ Messejana 5.78 337 *e*P **Pn 13 11 21.2 +0.3**
MESJ Messejana 5.78 337 *e*Pn **Pn 13 11 21.4 +0.5**
MESJ *e*Sn **Sn 13 12 25.5 -1.8**
MESJ A A 13 12 33.2
6.3nm,0.5s
MESJ Messejana 5.78 337 P **Pn 13 11 21.2 +0.3**
MESJ S **Sn 13 12 25.5 -1.8**
6.3nm,0.5s
PBAR Barrancos 5.79 347 *e*Pn **Pn 13 11 21.7 +0.6**
PBAR Barrancos 5.79 347 P **Pn 13 11 21.7 +0.6**
PNCL Nicolau / Gran 6.13 336 *e*Pn **Pn 13 11 25.8 +0.1**
PNCL *e*Sn **Sn 13 12 34.0 -1.9**
PNCL A A 13 12 38.5
4.1nm,0.9s
PNCL Nicolau / Gran 6.13 336 P **Pn 13 11 25.8 +0.1**
PNCL S **Sn 13 12 34.0 -1.9**
4.1nm,0.9s
PMTG Montargil 6.92 342 *e*Pn **Pn 13 11 36.7 +0.1**
PMTG *e*Sn **Sn 13 12 53.1 -2.2**
PMTG A A 13 13 12.2
3.3nm,0.7s
PMTG Montargil 6.92 342 P **Pn 13 11 36.7 +0.1**
PMTG S **Sn 13 12 53.1 -2.2**
3.3nm,0.7s
PAB San Pablo 7.07 7 P **Pn 13 11 38.5 -0.1**
1.0nm,0.2s,SNR=7.9
PAB S **Sn 13 12 54.6 -4.5**
0.4nm,0.2s,SNR=7.9
PMRV Marv??o 7.08 348 *e*Pn **Pn 13 11 39.2 +0.5**
PMRV *e*Sn **Sn 13 12 56.3 -2.9**
PMRV A A 13 13 16.1
2.9nm,0.7s
PMRV Marv??o 7.08 348 P **Pn 13 11 39.2 +0.5**
PMRV S **Sn 13 12 56.3 -2.9**
2.9nm,0.7s
PCBR Castelo Branco 7.49 348 *e*Pn **Pn 13 11 45.2 +0.8**
PCBR *e*Sn **Sn 13 13 06.4 -3.0**
PCBR Castelo Branco 7.49 348 P **Pn 13 11 45.2 +0.8**
PCBR S **Sn 13 13 06.4 -3.0**
EPLA Plasencia 7.55 356 P **Pn 13 11 45.4 +0.1**
5.0nm,0.2s,SNR=7.9
EPLA S **Sn 13 13 07.0 -3.9**
1.4nm,0.4s,SNR=7.9
MTE Manteigas 8.05 348 *e*Pn **Pn 13 11 52.7 +0.6**
MTE Manteigas 8.05 348 P **Pn 13 11 52.7 +0.6**
MVO Moncorvo 8.72 352 *e*Pn **Pn 13 12 02.1 +0.7**
MVO Moncorvo 8.72 352 P **Pn 13 12 01.6 +0.2**
6.2nm,0.1s,SNR=7.9
POLO Lamas de Olo 9.04 349 *e*Pn **Pn 13 12 06.3 +0.6**
POLO Lamas de Olo 9.04 349 P **Pn 13 12 06.3 +0.6**
PBRG Braganca 9.33 354 *e*Pn **Pn 13 12 10.2 +0.5**
PBRG Braganca 9.33 354 P **Pn 13 12 10.2 +0.5**
ECAL Calabor 9.46 354 P **Pn 13 12 11.9 +0.3**
1.2nm,0.1s,SNR=7.9
ECAL S **Sn 13 13 53.9 -4.1**
1.8nm,0.2s,SNR=7.9
ELOB Lobios 9.56 348 P **Pn 13 12 12.6 -0.3**
1.9nm,0.3s,SNR=7.9
PGAV Gavieira, Arco 9.70 347 *e*Pn **Pn 13 12 16.0 +1.2**
PGAV Gavieira, Arco 9.70 347 P **Pn 13 12 16.0 +1.2**

DDA ***25*** *13:22:20.9, 38°.70N×44°.79E, h5km±1km, ML3.6*
NSSP ***25*** *13:22:21.4, 38°.62N×44°.73E, h8km, Ms4.2*
AZER ***25*** *13:22:22.2±0.2, 38°.67N×44°.77E, h2km, ml4.4/25, Error ellipse: s-maj=4.2km s-min=3.3km az=299.0*
TEH ***25*** *13:22:23.1, 38°.67N×44°.65E, h7km, ML4.1*
IDC ***25*** *13:22:24.9±0.7, 38°.76N×44°.68E, h0km, mb4.0/14, mb1 4.0/24, mb1mx3.9/47, mbtmp4.0/24, ML3.5/8, MS3.3/19, Ms1 3.3/19, ms1mx3.2/41, Error ellipse: s-maj=10.5km s-min=10.1km az=14.0*
ISK ***25*** *13:22:25.1, 38°.68N×44°.45E, h5km, ML4.1/16*
MOS ***25*** *13:22:28.6±1.6, 38°.79N×44°.80E, h33km, mb4.3/9, Error ellipse: s-maj=8.4km s-min=4.5km az=101.4*
NEIC ***25*** *13:22:31.0±1.7, 38°.83N×44°.69E, h45km±10km, mb4.0/13, MD4.1(ISK), ML3.9(THR), MN4.1(TEH), Error ellipse: s-maj=15.8km s-min=10.3km az=159.0*
ISC 25 13:22:26.6±0.6, 38°.66N±0°.02×44°.68E±0°.02, h12km±4km, n256, σ2°13/293, mb4.2/28, MS3.2/13, 10C-19D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
MAKU	**Maku**	**0.69**	**0**	*e*Pg	**Pg**	**13 22 36.3**	**-3.8**
CLDR	**Caldiran**	**0.76**	**309**	PG	**Pg**	**13 22 37.4**	**-4.1**
CLDR				SG	**Sg**	**13 22 48.2**	**-3.3**
CLDR	**Caldiran**	**0.76**	**309**	*i* P	**Pg**	**13 22 37.8**	**-3.6**
CLDR				*i* S	**Sg**	**13 22 50.1**	**-1.4**
CLDR				IAML_P			
comp=Z,74μm,0.4s							
CLDR	**Caldiran**	**0.76**	**309**	*e*Pg	**Pg**	**13 22 37.4**	**-4.1**
IMRD	**Marand**	**0.80**	**86**	*e*Pg	**Pg**	**13 22 38.9**	**-3.3**
IMRD				IAMB	IAmb	13 22 57.7	
comp=Z,61μm,0.5s							
NAX	**Nakhchivan**	**0.82**	**51**	*e*Pg	**Pg**	**13 22 39.1**	**-3.3**
NAX	**Nakhchivan**	**0.82**	**51**	P	**Pg**	**13 22 39.7**	**-2.7**
SNR=132							
NAX				S	**Sg**	**13 22 52.2**	**-0.9**
ISHB	**Shabestar**	**0.83**	**117**	*e*Pg	**Pg**	**13 22 39.1**	**-3.6**
ISHB				IAMB	IAmb	13 22 55.3	
comp=Z,80μm,0.4s							
VMUR	**Van-Muradiye**	**0.92**	**291**	*i* P	**Pg**	**13 22 40.9**	**-3.6**
VMUR				*i* S	**Sg**	**13 22 56.4**	**-0.2**
VMUR	**Van-Muradiye**	**0.92**	**291**	*e*Pg	**Pg**	**13 22 39.9**	**-4.6**
SBZ	**Shahbuz**	**1.00**	**43**	*e*Pg	**Pg**	**13 22 42.9**	**-3.0**
SBZ	**Shahbuz**	**1.00**	**43**	P	**Pg**	**13 22 42.8**	**-3.2**
SNR=185							
SBZ				S	**Sg**	**13 22 58.1**	**-1.0**
VANB	**Van**	**1.01**	**267**	PG	**Pg**	**13 22 42.1**	**-4.0**
VANB				SG	**Sg**	**13 22 54.9**	**-4.4**
VANB	**Van**	**1.01**	**267**	*e*Pg	**Pg**	**13 22 42.1**	**-4.0**
ORD	**Ordubad**	**1.06**	**75**	*e*Pg	**Pg**	**13 22 42.6**	**-4.5**
ORD	**Ordubad**	**1.06**	**75**	P	**Pg**	**13 22 43.9**	**-3.2**
SNR=215							
ORD				S	**Sg**	**13 22 59.0**	**-2.0**
HYR	**Heyderabad**	**1.06**	**7**	*e*Pg	**Pg**	**13 22 45.4**	**-1.7**
HYR	**Heyderabad**	**1.06**	**7**	P	**Pg**	**13 22 43.5**	**-3.7**
SNR=186							
HYR				S	**Sn**	**13 23 01.4**	**-0.8**
DYDN	**Diyadin**	**1.17**	**319**	*i* P	**Pg**	**13 22 45.5**	**-3.7**
DYDN				*i* S	**Sn**	**13 23 07.9**	**+2.9**
DYDN				IAML_P			
comp=Z,16μm,0.6s							
DYDN	**Diyadin**	**1.17**	**319**	*e*Pg	**Pg**	**13 22 44.7**	**-4.4**
ITBZ	**Tabriz**	**1.23**	**110**	*e*Pg	**Pb**	**13 22 46.1**	**-3.8**
ITBZ				IAMB	IAmb	13 23 11.1	
comp=Z,32μm,0.4s							
GEVA	**Gevas**	**1.32**	**255**	*i* P	**Pn**	**13 22 48.0**	**-3.0**
GEVA				*i* S	**Sg**	**13 23 08.8**	**-0.3**
GEVA				IAML_P			
comp=Z,9μm,0.5s							
GEVA	**Gevas**	**1.32**	**255**	*e*Pg	**Pn**	**13 22 46.9**	**-4.1**
HAKT	**HAKKARI**	**1.34**	**215**	*i* P	**Pn**	**13 22 49.2**	**-2.2**
HAKT				*i* S	**Sn**	**13 23 09.6**	**+0.3**
HAKT				IAML_P			
comp=Z,7μm,0.4s							
HAKT	**HAKKARI**	**1.34**	**215**	*e*Pg	**Pn**	**13 22 48.5**	**-2.9**
TASB	**TASBURUN-IGDIR**	**1.36**	**346**	PN	**Pn**	**13 22 50.8**	**-0.7**
TASB	**TASBURUN-IGDIR**	**1.36**	**346**	*e*Pg	**Pn**	**13 22 51.2**	**-0.3**
AKDM	**Akdamar-Van**	**1.37**	**257**	PN	**Pn**	**13 22 49.2**	**-2.6**
AKDM				SN	**Sb**	**13 23 06.9**	**-3.0**
AKDM	**Akdamar-Van**	**1.37**	**257**	*e*Pg	**Pn**	**13 22 49.1**	**-2.7**
IAZR	**Azarshahr**	**1.42**	**133**	*e*Pg	**Pn**	**13 22 49.9**	**-2.6**
IAZR				IAMB	IAmb	13 23 19.4	
comp=Z,10μm,0.5s							
GNI	**Garni**	**1.49**	**2**	PN	**Pn**	**13 22 52.2**	**-1.1**
GNI	**Garni**	**1.49**	**2**	Pg	**Pn**	**13 22 51.0**	**-2.3**
comp=Z,157nm,0.3s,baz=200,slow=3.2,SNR=254							
GNI				Lg	Lg	13 23 09.5	
comp=Z,155nm,0.3s,baz=191,slow=16,SNR=10							
GNI	**Garni**	**1.49**	**2**	*e*Pn	**Pn**	**13 22 51.4**	**-2.0**
GNI	**Garni**	**1.49**	**2**	⇓*i*P	**Pn**	**13 22 51.0**	**-2.3**
GNI				⇓*i*S	**Sb**	**13 23 12.7**	**-0.5**
GNI	**Garni**	**1.49**	**2**	*e*Pg	**Pn**	**13 22 51.0**	**-2.3**
ADCV	**BITLIS_Adilcev**	**1.54**	**276**	*i* P	**Pn**	**13 22 52.7**	**-1.3**
ADCV				*i* S	**Sg**	**13 23 16.7**	**+0.6**
ADCV				IAML_P			
comp=Z,7μm,0.4s							
AGRB	**Hanur-Agry**	**1.60**	**305**	PN	**Pn**	**13 22 53.6**	**-1.3**
AGRB	**Hanur-Agry**	**1.60**	**305**	*e*Pn	**Pn**	**13 22 53.6**	**-1.3**
TUTA	**Tutak**	**1.63**	**298**	*i* P	**Pn**	**13 22 53.2**	**-2.1**
TUTA				*i* S	**Sg**	**13 23 19.9**	**+0.8**
TUTA				IAML_P			
comp=Z,5μm,0.4s							
TUTA	**Tutak**	**1.63**	**298**	*e*Pn	**Pn**	**13 22 53.1**	**-2.2**
CUKT	**Cukurca**	**1.65**	**211**	PN	**Pn**	**13 22 55.1**	**-0.4**
CUKT	**Cukurca**	**1.65**	**211**	*i* P	**Pn**	**13 22 55.0**	**-0.4**
CUKT				*i* S	**Sg**	**13 23 19.5**	**-0.1**
CUKT				IAML_P			
comp=Z,8μm,0.5s							
CUKT	**Cukurca**	**1.65**	**211**	*e*Pn	**Pn**	**13 22 55.0**	**-0.4**
ARUZ	**Aruch**	**1.68**	**345**	⇓*i*P	**Pn**	**13 22 54.9**	**-1.1**
ARUZ				⇓*i*S	**Sg**	**13 23 21.1**	**+0.4**
MLAZ	**Malazgirt-MUS**	**1.73**	**287**	PN	**Pn**	**13 22 55.1**	**-1.5**
DIGO	**Kars**	**2.02**	**330**	*i* P	**Pb**	**13 23 03.2**	**-0.2**
DIGO				IAML_P			
comp=Z,30μm,0.7s							
DIGO	**Kars**	**2.02**	**330**	*e*Pn	**Pb**	**13 23 03.0**	**-0.4**
MAHB	**Mahabad**	**2.06**	**156**	*e*Pn	**Pn**	**13 23 00.4**	**-0.8**
EATA	**Eleskirt**	**2.08**	**306**	*i* P	**Pn**	**13 23 01.7**	**+0.1**
EATA				IAML_P			
comp=Z,5μm,0.4s							
EATA	**Eleskirt**	**2.08**	**306**	*e*Pn	**Pn**	**13 23 01.3**	**-0.3**
EAK	**Akyaka**	**2.19**	**338**	*i* P	**Pb**	**13 23 04.6**	**-1.5**
EAK				IAML_P			
comp=Z,6μm,0.6s							
EAK	**Akyaka**	**2.19**	**338**	*e*Pn	**Pb**	**13 23 04.3**	**-1.9**
GDB	**GEDABAY**	**2.22**	**22**	*e*Pn	**Pn**	**13 23 01.2**	**-2.2**
GDB	**GEDABAY**	**2.22**	**22**	P	**Pn**	**13 23 03.2**	**-0.2**
SNR=719							
GDB				S	**Sb**	**13 23 33.5**	**-0.7**
SRTM	**Siirt_Merkez**	**2.27**	**254**	*i* P	**Pb**	**13 23 05.7**	**-1.9**
SRTM				*i* S	**Sg**	**13 23 39.0**	**-0.5**
SRTM				IAML_P			
comp=Z,7μm,0.4s							
SRTM	**Siirt_Merkez**	**2.27**	**254**	*e*Pn	**Pn**	**13 23 04.8**	**+0.8**
KARS	**Kars**	**2.32**	**328**	*e*Pn	**Pn**	**13 23 05.6**	**+0.9**
KARS	**Kars**	**2.32**	**328**	*e*PN	**Pn**	**13 23 05.6**	**+0.9**
KARS	**Kars**	**2.32**	**328**	*e*Pn	**Pn**	**13 23 06.2**	**+1.5**
GANJ	**Ganja**	**2.35**	**32**	*e*Pn	**Pn**	**13 23 03.1**	**-2.0**
GANJ	**Ganja**	**2.35**	**32**	P	**Pn**	**13 23 04.7**	**-0.4**
SNR=186							
GANJ				S	**Sb**	**13 23 38.0**	**0.0**
QZX	**Qazax, Azerbai**	**2.45**	**12**	*e*Pn	**Pn**	**13 23 04.9**	**-1.6**
QZX	**Qazax, Azerbai**	**2.45**	**12**	P	**Pn**	**13 23 05.6**	**-0.8**
SNR=97							
QZX				S	**Sb**	**13 23 39.3**	**-1.5**
MUSM	**Mu-Merkez**	**2.48**	**272**	*i* P	**Pb**	**13 23 09.2**	**-2.0**
MUSM				IAML_P			
comp=Z,777nm,0.4s							
MUSM	**Mu-Merkez**	**2.48**	**272**	*e*Pn	**Pn**	**13 23 08.5**	**+1.6**
ISRB	**Sarab**	**2.50**	**109**	IAMB	IAmb	13 23 12.8	
comp=Z,12μm,0.4s							
ISRB				*e*Pn	**Pn**	**13 23 06.8**	**-0.4**
BRDA	**Brd**	**2.51**	**50**	*e*Pn	**Pn**	**13 23 03.6**	**-3.6**
BRDA	**Brd**	**2.51**	**50**	P	**Pn**	**13 23 05.9**	**-1.4**
SNR=4.3							
BRDA				S	**Sb**	**13 23 40.4**	**-2.1**
GRMI	**Germi**	**2.52**	**86**	*e*Pn	**Pn**	**13 23 06.9**	**-0.6**
KOPR	**Koprukoy-ERZUR**	**2.56**	**302**	PN	**Pn**	**13 23 07.4**	**-0.7**
SENK	**Senkaya-Erzuru**	**2.61**	**317**	PN	**Pn**	**13 23 08.3**	**-0.5**
SENK	**Senkaya-Erzuru**	**2.61**	**317**	*e*Pn	**Pn**	**13 23 08.7**	**-0.1**
BGD	**Bogdanovka**	**2.73**	**343**	P	**Pb**	**13 23 13.7**	**-1.8**
BGD				S	**Sg**	**13 23 57.0**	**+2.7**
KZRT	**Kazreti**	**2.73**	**356**	P	**Pb**	**13 23 13.8**	**-1.6**
KZRT				S	**Sg**	**13 23 51.7**	**-2.6**
SVAN	**Silvan-Diyarba**	**2.78**	**261**	PN	**Pn**	**13 23 09.8**	**-1.2**
SVAN	**Silvan-Diyarba**	**2.78**	**261**	*i* P	**Pb**	**13 23 13.8**	**-2.4**
SVAN				*i* S	**Sg**	**13 23 53.6**	**-2.4**
SVAN	**Silvan-Diyarba**	**2.78**	**261**	*e*Pn	**Pn**	**13 23 09.7**	**-1.2**
BTMN	**Batman**	**2.79**	**255**	*i* P	**Pb**	**13 23 14.1**	**-2.4**
BTMN				*i* S	**Sg**	**13 23 55.1**	**-1.2**
BTMN				IAML_P			
comp=Z,888nm,0.6s							
MNGR	**Mingechevir, A**	**2.81**	**41**	P	**Pn**	**13 23 10.7**	**-0.6**
SNR=23							
MNGR				S	**Sb**	**13 23 48.5**	**-2.5**
ZRD	**Zardab**	**2.83**	**54**	P	**Pn**	**13 23 11.2**	**-0.5**
SNR=18							
ZRD				S	**Sb**	**13 23 48.6**	**-3.1**
LRK	**Lerik**	**2.87**	**89**	P	**Pn**	**13 23 11.8**	**-0.5**
SNR=126							
LRK				S	**Sn**	**13 23 49.0**	**+2.2**
AKH	**Akhalkalaki**	**2.89**	**342**	PN	**Pn**	**13 23 13.4**	**+0.8**
AKH	**Akhalkalaki**	**2.89**	**342**	P	**Pb**	**13 23 16.4**	**-1.9**
AKH	**Akhalkalaki**	**2.89**	**342**	*e*PN	**Pb**	**13 23 16.3**	**-1.9**
GLBA	**Cilalabad**	**2.95**	**78**	*e*Pn	Pn	13 23 07.4	-5.9
GLBA	**Cilalabad**	**2.95**	**78**	P	**Pn**	**13 23 12.7**	**-0.6**
SNR=19							
GLBA				S	**Sb**	**13 23 52.3**	**-2.9**
DDFL	**Dedoflistskaro**	**2.99**	**21**	P	**Pn**	**13 23 15.9**	**+1.9**
DDFL				S	**Sg**	**13 24 01.0**	**-1.8**
BTNK	**Botanikuri**	**3.02**	**2**	P	**Sg**	**13 24 03.1**	**-0.5**
TBLG	**Delisi**	**3.07**	**1**	PN	**Pn**	**13 23 16.8**	**+1.9**
TBLG	**Delisi**	**3.07**	**1**	P	**Pb**	**13 23 18.6**	**-2.5**
TBLG				S	**Sg**	**13 24 03.1**	**-2.0**
TBLG	**Delisi**	**3.07**	**1**	*e*Pn	**Pn**	**13 23 14.9**	**0.0**
TBLG	**Delisi**	**3.07**	**1**	*e*PN	**Pn**	**13 23 14.9**	**0.0**
TBLG	**Delisi**	**3.07**	**1**	*e*Pn	**Pn**	**13 23 15.5**	**+0.6**
BNGB	**Bingl**	**3.14**	**277**	PN	**Pn**	**13 23 15.4**	**-0.6**
SEKA	**Sheki**	**3.20**	**36**	P	**Pn**	**13 23 16.7**	**0.0**
SNR=29							
SEKA				S	**Sb**	**13 23 58.7**	**-3.6**
LKRN	**Lenkeran, Azer**	**3.21**	**88**	P	**Pn**	**13 23 16.1**	**-0.7**
SNR=9.9							
LKRN				S	**Sn**	**13 23 58.3**	**+3.3**
ASTR	**Astara**	**3.22**	**91**	P	**Pn**	**13 23 16.3**	**-0.7**
SNR=22							
ASTR				S	**Sn**	**13 23 58.4**	**+3.1**
BINT	**Bingol**	**3.28**	**275**	*e*Pn	**Pn**	**13 23 15.3**	**-2.7**
YEDI	**Yedisu-Bingol**	**3.31**	**285**	PN	**Pn**	**13 23 18.2**	**-0.2**
YEDI	**Yedisu-Bingol**	**3.31**	**285**	*e*Pn	**Pn**	**13 23 17.0**	**-1.4**
ZKTA	**Zakatala**	**3.33**	**26**	P	**Pn**	**13 23 17.9**	**-0.5**
SNR=62							
ZKTA				S	**Sn**	**13 24 01.0**	**+3.1**
QBL	**Gabala**	**3.33**	**46**	*e*Pn	**Pn**	**13 23 15.2**	**-3.4**
QBL	**Gabala**	**3.33**	**46**	P	**Pn**	**13 23 18.1**	**-0.6**
SNR=59							
QBL				S	**Sn**	**13 24 01.5**	**+3.4**
MARD	**Mardin**	**3.36**	**248**	*i* P	**Pn**	**13 23 20.6**	**+1.5**
MARD				IAML_P			
comp=Z,3μm,0.6s							
HANI	**Diyarbakir_Han**	**3.36**	**267**	*i* P	**Pb**	**13 23 26.6**	**+0.4**
HANI				IAML_P			
comp=Z,255nm,0.3s							
MAZI	**Mazidag**	**3.55**	**252**	PN	**Pn**	**13 23 20.9**	**-0.7**
MAZI	**Mazidag**	**3.55**	**252**	*e*Pn	**Pn**	**13 23 20.6**	**-1.0**
ALIB	**Äli-Bayra**	**3.60**	**68**	*e*Pn	Pn	13 23 17.3	-4.8
ALIB	**Äli-Bayra**	**3.60**	**68**	P	**Pn**	**13 23 21.9**	**-0.3**
SNR=11							
ALIB				S	**Sn**	**13 24 07.9**	**+3.3**
XNQ	**Khinaliq**	**3.66**	**46**	*e*Pn	**Pn**	**13 23 19.7**	**-3.5**
XNQ	**Khinaliq**	**3.66**	**46**	P	**Pn**	**13 23 22.7**	**-0.5**
SNR=19							
XNQ				S	**Sn**	**13 24 08.5**	**+2.1**
AKT	**Akhty**	**3.66**	**39**	*e*PN	**Pb**	**13 23 29.8**	**-1.5**
AKT				*e*		13 23 36.9	
AKT				*e*		13 23 39.2	
AKT				*e*S	**Sg**	**13 24 19.4**	**-4.8**
AKT				*e*		13 24 29.6	
AKT				pmax	pmax		
comp=Z,100nm,0.7s							
AKT				smax	smax		
comp=E,223nm,0.7s							
AKT				smax	smax		
comp=E,214nm,0.6s							
AKT				smax	smax		
comp=N,203nm,0.7s							
PQL	**Pirkuli**	**3.69**	**54**	*e*Pn	**Pn**	**13 23 19.4**	**-4.2**
PQL	**Pirkuli**	**3.69**	**54**	P	**Pn**	**13 23 23.0**	**-0.6**
SNR=12							
PQL				S	**Sn**	**13 24 09.2**	**+2.1**
BATM	**Batumi**	**3.72**	**323**	P	**Pb**	**13 23 33.3**	**+1.0**
ZNJK	**Zanjan**	**3.75**	**121**	*e*Pn	**Pn**	**13 23 24.3**	**-0.2**
GBS	**Qobustan**	**3.79**	**59**	*e*Pn	**Pn**	**13 23 20.6**	**-4.2**
GBS	**Qobustan**	**3.79**	**59**	P	**Pn**	**13 23 24.4**	**-0.5**
SNR=13							
GBS				S	**Sn**	**13 24 12.7**	**+3.4**
QUB	**Quba**	**3.92**	**45**	*e*Pn	**Pn**	**13 23 23.9**	**-2.8**
ATGJ	**Altiaghaj**	**3.95**	**55**	*e*Pn	**Pn**	**13 23 22.9**	**-4.2**
ATGJ	**Altiaghaj**	**3.95**	**55**	P	**Pn**	**13 23 26.8**	**-0.3**
SNR=23							
ATGJ				S	**Sn**	**13 24 15.8**	**+2.4**
QSAR	**Qusar**	**3.96**	**43**	*e*Pn	**Pn**	**13 23 23.6**	**-3.6**
QSAR	**Qusar**	**3.96**	**43**	P	**Pn**	**13 23 26.8**	**-0.4**
SNR=8.0							
QSAR				S	**Sn**	**13 24 17.3**	**+3.7**
QUBA	**Quba, Azerbaij**	**3.98**	**46**	P	**Pn**	**13 23 27.3**	**-0.2**
SNR=25							
QUBA				S	**Sn**	**13 24 17.2**	**+3.3**
ONI	**Oni**	**4.03**	**347**	PN	**Pn**	**13 23 29.2**	**+1.0**
ONI	**Oni**	**4.03**	**347**	P	**Sg**	**13 24 38.0**	**+1.9**
SIZA	**Siyzn**	**4.04**	**52**	*e*Pn	**Pn**	**13 23 24.1**	**-4.3**
SIZA	**Siyzn**	**4.04**	**52**	P	**Pn**	**13 23 28.2**	**-0.2**
SNR=7.5							
SIZA				S	**Sn**	**13 24 15.6**	**-0.1**
ZEI	**Tsey**	**4.16**	**352**	*e*PN	**Pn**	**13 23 33.7**	**+3.5**
ZEI				pmax	pmax		
comp=Z,38nm,0.6s							
IDHR	**Dehrash**	**4.19**	**160**	*e*Pn	**Pn**	**13 23 31.8**	**+1.3**
IGHG	**Ghaleghazi**	**4.58**	**160**	*e*Pn	**Pn**	**13 23 40.3**	**+4.3**
IGHG				IAMB	IAmb	13 25 23.1	
comp=E,5μm,0.8s							
GROC	**Groznyy**	**4.62**	**10**	*e*PN	**Pn**	**13 23 32.3**	**-3.8**
GROC				*e*		13 24 27.5	
GROC				*e*		13 24 41.7	
GROC				pmax	pmax		
comp=Z,64nm,1.2s							
GROC				smax	smax		
comp=N,519nm,1.3s							
GROC				smax	smax		
comp=N,175nm,1.2s							
MAK	**Makhachkala**	**4.80**	**26**	*e*PN	**Pn**	**13 23 37.3**	**-1.4**
MAK				*e*S	**Sn**	**13 24 31.3**	**-2.9**
MAK				pmax	pmax		
comp=Z,19nm,0.3s							
MAK				MLR	MLR		
comp=Z,223nm,13.0s							
QABG	**Abgarm-Qazvin**	**4.90**	**125**	*e*Pn	**Pn**	**13 23 40.7**	**+0.4**
IBZA	**Bozab**	**4.91**	**148**	*e*Pn	**Pn**	**13 23 42.4**	**+2.0**
IGZV	**Ghazvin**	**4.96**	**116**	*e*Pn	**Pn**	**13 23 40.6**	**-0.5**
IGZV				IAMB	IAmb	13 25 34.1	
comp=Z,968nm,0.7s							
IKOM	**Komasi**	**5.03**	**152**	*e*Pn	**Pn**	**13 23 44.5**	**+2.5**
KBZ	**Khabaz**	**5.24**	**346**	Pn	**Pn**	**13 23 45.5**	**+0.8**
comp=Z,0.2nm,0.3s,baz=180,slow=13,SNR=8.3							
HSAM	**Samen**	**5.45**	**143**	*e*Pn	**Pn**	**13 23 50.7**	**+2.8**
KVAR	**Kislovodsk Arr**	**5.50**	**345**	Pn	**Pn**	**13 23 50.9**	**+2.5**
baz=207,slow=18,SNR=2.0							
KIV	**Kislovodsk**	**5.50**	**345**	*e*Pn	**Pn**	**13 23 46.9**	**-1.5**
KIV	**Kislovodsk**	**5.50**	**345**	*e*P	**Pn**	**13 23 46.3**	**-2.1**
KIV				pmax	pmax		
comp=Z,17nm,1.0s							
KIV				MLR	MLR		
comp=Z,104nm,8.0s							
IKFM	**Kafar-mosalman**	**5.73**	**152**	*e*Pn	**Pn**	**13 23 53.5**	**+2.0**
IKMR	**Kamar-syah**	**5.94**	**149**	*e*Pn	**Pn**	**13 23 56.6**	**+2.2**
IANJ	**Anjilo**	**8.04**	**111**	*e*Pn	**Pn**	**13 24 27.8**	**+4.4**
ANN	**Anapa**	**8.18**	**321**	*e*P	Pn	13 24 30.2	+5.1
ANN				pmax	pmax		
comp=Z,32nm,1.0s							
ANN				MLR	MLR		
comp=Z,314nm,14.0s							
BR101	**Keskin Array S**	**8.64**	**281**	*e*Pn	**Pn**	**13 24 35.3**	**+3.8**
BR131	**Keskin Array S**	**8.64**	**281**	*e*Pn	**Pn**	**13 24 33.4**	**+1.9**
BRTR	**Keskin Array B**	**8.64**	**281**	Pn	**Pn**	**13 24 35.3**	**+3.8**
comp=Z,0.1nm,0.3s,baz=96,slow=11,SNR=15							
BRTR				LR	LR	13 28 18.2	
comp=Z,317nm,19.5s,baz=99,slow=41							
BZK	**Bozkurt**	**8.79**	**295**	⇑*i*P	**Sn**	**13 26 17.0**	**+4.5**
ASF	**Jabal al Asfar**	**9.07**	**227**	Lg	Lg	13 27 13.0	
comp=Z,0.3nm,0.3s,baz=107,slow=20,SNR=2.9							
BR231	**Keskin MP Arra**	**9.31**	**281**	*e*Pn	**Pn**	**13 24 42.1**	**+1.4**
MMAI	**Mount Meron Ar**	**9.40**	**236**	LR	LR	13 28 24.3	
comp=Z,136nm,19.2s,baz=200,slow=38							
MDUB	**Mudurnu**	**10.56**	**284**	*e*Pn	**Pn**	**13 24 58.5**	**+0.7**
GEYT	**Alibeck**	**10.59**	**90**	Pn	**Pn**	**13 24 57.8**	**-0.4**
comp=Z,0.7nm,0.3s,baz=287,slow=15,SNR=3.2							
GEYT				LR	LR	13 29 50.9	
comp=Z,108nm,20.2s,baz=260,slow=42							
EIL	**Elat**	**12.05**	**225**	LR	LR	13 30 20.1	
comp=Z,132nm,19.5s,baz=54,slow=39							
VORD	**Divnogorie**	**12.88**	**345**	*e*P	**Pn**	**13 25 31.3**	**+2.0**
VORD				pmax	pmax		
comp=Z,20nm,1.7s							
VSR	**Storozhevoye**	**13.14**	**345**	*e*P	**Pn**	**13 25 34.0**	**+1.1**
VSR				pmax	pmax		
comp=Z,10.0nm,1.3s							
TIRR	**Tirgusor**	**13.48**	**301**	⇑*i*P	P	13 25 56.8	+10
LPSR	**Galich'ya Gora**	**14.50**	**346**	*e*P	**P**	**13 25 55.8**	**-2.4**
LPSR				pmax	pmax		
comp=Z,30nm,0.7s							
VRI	**

ARU	**Arti**	**20.02**	**23**	P	**P**	**13 26 58.2**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=172,slow=21,SNR=8.9						
ARU				LR	LR	13 37 18.0	
	comp=Z,114nm,18.2s,baz=192,slow=45						
ARU	**Arti**	**20.02**	**23**	*eP*	**P**	**13 26 58.7**	**-0.4**
	comp=Z,9.7nm,0.7s						
ARU	**Arti**	**20.02**	**23**	*c iP*	**P**	**13 26 58.4**	**-0.7**
ARU				S	**S**	**13 30 43.2**	**-0.6**
ARU				pmax	pmax		
	comp=Z,14nm,1.0s						
KIRV	**Kirov**	**20.17**	**7**	P	**P**	**13 26 59.8**	**-0.9**
	comp=Z,7.3nm,0.4s,baz=165,slow=7.5,SNR=4.4						
KIRV				LR	LR	13 35 07.9	
	comp=Z,50nm,20.2s,baz=171,slow=38						
IDID	**Didziasalis**	**20.57**	**330**	*eP*	Pn	13 27 06.3	-0.9
IIGN	**Ignalina**	**20.80**	**329**	*eP*	Pn	13 27 09.2	-0.7
SVE	**Sverdlovsk**	**21.01**	**25** ‖	*eP*	**P**	**13 27 11.3**	**+1.5**
SVE				pmax	pmax		
	comp=Z,24nm,1.1s						
VYHS	**Vyhne**	**21.05**	**306**	*eP*	**P**	**13 27 12.8**	**+2.4**
VYHS	**Vyhne**	**21.05**	**306**	*e*PN	**P**	**13 27 12.8**	**+2.4**
VYHS				*e*pP	**sP**	**13 27 19.8**	**+3.5**
IZAR	**Zarasai**	**21.08**	**330**	*eP*	**P**	**13 27 12.7**	**+2.2**
PABE	**Paberze**	**21.83**	**327**	*eP*	**P**	**13 27 14.2**	**-4.4**
KLMR	**Klimovskoe**	**22.45**	**353**	*eP*	**P**	**13 27 27.5**	**+2.3**
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s						
KLMR	**Klimovskoe**	**22.45**	**353**	*eP*	**P**	**13 27 27.5**	**+2.3**
KLMR				AMP		13 27 29.6	
	comp=Z,17nm,1.2s						
VRAC	**Vranov**	**22.71**	**307**	LR	LR	13 38 39.9	
	comp=Z,68nm,19.0s,baz=99,slow=43						
BRVK	**Borovoye**	**22.75**	**42** ‖	*eP*	**P**	**13 27 31.3**	**+2.8**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	**Borovoye Array**	**22.79**	**43**	P	**P**	**13 27 27.8**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=258,slow=10,SNR=7.6						
AAK	**Ala-Archa**	**22.91**	**70**	P	**P**	**13 27 31.7**	**+1.3**
	comp=Z,1.6nm,0.4s,baz=241,slow=8.0,SNR=3.1						
AAK	**Ala-Archa**	**22.91**	**70** ‖	*eP*	**P**	**13 27 32.3**	**+1.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VSU	**Vasula**	**22.96**	**335**	*de*P	**P**	**13 27 30.9**	**+0.3**
VSU				pmax	pmax		
	comp=Z,66nm,1.0s						
VSU	**Vasula**	**22.96**	**335**	*eP*	**P**	**13 27 29.1**	**-1.5**
PRGR	**Permogore**	**23.01**	**1**	*eP*	**P**	**13 27 28.6**	**-2.4**
PRGR				pmax	pmax		
	comp=Z,15nm,0.4s						
GERES	**GERESS Array B**	**24.43**	**305**	P	**P**	**13 27 45.2**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=103,slow=8.3,SNR=8.5						
GERES				LR	LR	13 40 23.8	
	comp=Z,49nm,20.5s,baz=106,slow=44						
KHC	**Kasperske Hory**	**24.57**	**305**	*eP*	**P**	**13 27 47.0**	**+0.7**
KHC	**Kasperske Hory**	**24.57**	**305**	*e*PKP	**P**	**13 27 47.0**	**+0.7**
FIA0	**FINESS Array S**	**25.56**	**339**	*eP*	**P**	**13 27 53.9**	**-1.1**
FIA0	**FINESS Array S**	**25.56**	**339**	*eP*	**P**	**13 27 53.9**	**-1.1**
FINES	**FINESS Array B**	**25.56**	**339**	P	**P**	**13 27 53.9**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=141,slow=12,SNR=7.4						
DAVOX	**Davos/Dischmat**	**26.65**	**299**	LR	LR	13 41 36.7	
	comp=Z,24nm,19.6s,baz=264,slow=43						
KURBB	**Kurchatov Arra**	**26.65**	**52**	P	**P**	**13 28 05.1**	**0.0**
	comp=Z,2.2nm,0.7s,baz=262,slow=9.0,SNR=14						
KURK	**Kurchatov**	**26.73**	**52**	*eP*	**P**	**13 28 04.7**	**-1.0**
	comp=Z,3.3nm,0.8s						
KURK	**Kurchatov**	**26.73**	**52** ‖	*eP*	**P**	**13 28 06.8**	**+1.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK31	**Makanchi Array**	**28.58**	**61**	*eP*	**P**	**13 28 22.6**	**+0.2**
	comp=Z,1.7nm,0.9s						
MK31	**Makanchi Array**	**28.58**	**61**	*eP*	**P**	**13 28 22.6**	**+0.2**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK32	**Makanchi Array**	**28.58**	**61**	*eP*	**P**	**13 28 22.8**	**+0.4**
MKAR	**Makanchi Array**	**28.58**	**61**	P	**P**	**13 28 22.8**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=265,slow=7.2,SNR=10						
MKAR	**Makanchi Array**	**28.58**	**61**	*i P*	**P**	**13 28 23.5**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**29.01**	**328**	P	**P**	**13 28 25.5**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=123,slow=7.6,SNR=6.8						
HFS				LR	LR	13 41 28.7	
	comp=Z,52nm,18.8s,baz=131,slow=40						
NB200	**NORSAR Array S**	**30.53**	**328**	*eP*	**P**	**13 28 38.1**	**-1.5**
NOA	**NORSAR Array B**	**30.53**	**328**	P	**P**	**13 28 38.1**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=131,slow=7.6,SNR=3.2						
NOA				LR	LR	13 42 25.2	
	comp=Z,42nm,19.8s,baz=130,slow=39						
ZALV	**Zalesovo Beam**	**31.17**	**47**	LR	LR	13 42 06.7	
	comp=Z,35nm,18.7s,baz=252,slow=38						
WMQ	**Urumqi**	**32.48**	**67**	*eP*	**P**	**13 28 58.5**	**+1.6**
WMQ				pP	sP	13 29 09.8	+6.8
WMQ				LR	LR		
	comp=N,48nm,28.9s						
WMQ				LR	LR		
	comp=E,250nm,29.3s						
WMQ				LR	LR		
	comp=Z,84nm,24.1s						
ESDC	**Sonseca Array**	**37.36**	**287**	P	**P**	**13 29 37.4**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=69,slow=10,SNR=3.4						
KMBO	**Kilima Mbogo**	**40.18**	**192**	LR	LR	13 49 13.4	
	comp=Z,44nm,18.2s,baz=92,slow=40						
ULN	**Ulaanbaatar**	**45.22**	**57**	*c iP*	**P**	**13 30 44.3**	**+0.7**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TOA1	**Torodi Ar. Sit**	**45.69**	**248**	*eP*	**P**	**13 30 47.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**45.69**	**248**	P	**P**	**13 30 47.1**	**-0.5**
	comp=Z,10nm,0.4s,baz=38,slow=7.3,SNR=7.9						
TORD				LR	LR	13 55 56.6	
	comp=Z,60nm,18.3s,baz=0.0,slow=44						
LZH	**Lanzhou**	**46.38**	**74**	*eP*	**P**	**13 30 53.8**	**+0.8**
LZH				pP	sP	13 31 05.0	+6.0
LZH				sP	pP	13 31 09.5	+12
LZH				*e*PP	**PP**	**13 32 42.0**	**+0.2**
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,42nm,5.4s						
BOD	**Bodaibo**	**47.66**	**43**	*eP*	**P**	**13 30 59.6**	**-2.9**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**50.32**	**65**	*eP*	**P**	**13 31 24.0**	**+0.8**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,26nm,5.6s						
KMI	**Kunming**	**50.35**	**88**	P	**P**	**13 31 25.8**	**+2.0**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**50.97**	**97**	P	**P**	**13 31 28.5**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=298,slow=7.7,SNR=4.4						
CMAR				LR	LR	13 59 06.8	
	comp=Z,52nm,19.3s,baz=220,slow=43						
XAN	**Xi'an**	**51.01**	**74**	P	**P**	**13 31 29.8**	**+1.3**
XAN				pP	sP	13 31 35.8	+1.2
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KS15	**Wonju Array Si**	**63.23**	**62**	*eP*	**P**	**13 32 53.6**	**-1.2**
	comp=Z,20nm,1.4s						
KSRS	**Korea Array**	**63.25**	**62**	P	**P**	**13 32 54.6**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=293,slow=7.1,SNR=8.5						
BILL	**Bilibino**	**65.03**	**21** ‖	*eP*	**P**	**13 33 06.8**	**+0.7**
BILL				*SP	**sP**	**13 33 15.0**	**+2.6**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BOSA	**Boshof**	**69.34**	**198**	P	**P**	**13 33 33.8**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=5.4,slow=8.1,SNR=3.5						
FFC	**Flin Flon**	**82.68**	**341**	*i P*	**P**	**13 34 50.3**	**+0.5**
PDAR	**Pinedale Array**	**95.64**	**341**	LR	LR	14 20 54.3	
	comp=Z,63nm,18.2s,baz=302,slow=37						

DDA ***25*** *13:26:03.2,38.°69N×44.°74E, h1km±2km, ML3.4*
AZER ***25*** *13:26:03.7±0.2,38.°73N×44.°73E, h2km, ml3.5/12, Error ellipse: s-maj=3.6km s-min=3.5km az=246.0*
NSSP ***25*** *13:26:03.4,38.°60N×44.°75E, h8km, Ms3.4*
TEH ***25*** *13:26:04.7,38.°64N×44.°67E, h6km, ML3.3*
ISK ***25*** *13:26:05.8,38.°69N×44.°49E, h5km, ML3.4/9*
ISC 25 13:26:04.1±1.2,38.°67N±0.°02×44.°73E±0.°02, h3km±10km, n63, σ1°49/89, 1C-1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMRD	**Marand**	**0.76**	**86**	*e*Pg	**Pb**	**13 26 20.2**	**+0.1**
IMRD				*e*Sg	**Sb**	**13 26 31.2**	**+0.3**
IMRD				IAMB	IAmb	13 26 37.4	
	comp=Z,32μm,0.3s						
NAX	**Nakhchivan**	**0.78**	**49**	P	**Pn**	**13 26 20.9**	**-1.2**
	SNR=20						
NAX				S	**Sn**	**13 26 33.5**	**-0.9**
ISHB	**Shabestar**	**0.79**	**119**	*e*Pg	**Pb**	**13 26 20.7**	**+0.1**
ISHB				IAMB	IAmb	13 26 35.0	
	comp=Z,20μm,0.3s						
CLDR	**Caldiran**	**0.80**	**307**	PG	**Pg**	**13 26 18.6**	**-0.8**
CLDR				SG	**Sg**	**13 26 29.1**	**-0.6**
CLDR	**Caldiran**	**0.80**	**307**	*i* P	**Pg**	**13 26 18.8**	**-0.7**
CLDR				*i* S	**Sb**	**13 26 30.8**	**-1.2**
CLDR				IAML_P			
	comp=Z,21μm,0.3s						
CLDR	**Caldiran**	**0.80**	**307**	*e*Pg	**Pg**	**13 26 18.6**	**-0.8**
VMUR	**Van-Muradiye**	**0.96**	**290**	*i* P	**Pg**	**13 26 21.7**	**-0.9**
VMUR				*i* S	**Sn**	**13 26 37.8**	**-1.2**
VMUR	**Van-Muradiye**	**0.96**	**290**	*e*Pg	**Pg**	**13 26 21.3**	**-1.3**
SBZ	**Shahbuz**	**0.97**	**41**	P	**Pn**	**13 26 24.2**	**-0.6**
	SNR=28						
SBZ				S	**Sn**	**13 26 38.9**	**-0.2**
ORD	**Ordubad**	**1.02**	**75**	P	**Pn**	**13 26 25.2**	**-0.2**
ORD				S	**Sn**	**13 26 40.5**	**+0.3**
VANB	**Van**	**1.06**	**267**	PG	**Pg**	**13 26 23.6**	**-0.8**
VANB	**Van**	**1.06**	**267**	*e*Pg	**Pg**	**13 26 23.5**	**-0.8**
HYR	**Heyderabad**	**1.06**	**5**	P	**Pn**	**13 26 24.7**	**-1.2**
	SNR=11						
HYR				S	**Sn**	**13 26 41.7**	**+0.5**
ITBZ	**Tabriz**	**1.19**	**111**	*e*Pg	**Pn**	**13 26 27.7**	**-0.1**
ITBZ				IAMB	IAmb	13 26 52.6	
	comp=Z,6μm,0.4s						
DYDN	**Diyadin**	**1.20**	**318**	*i* P	**Pn**	**13 26 27.6**	**-0.4**
DYDN				*i* S	**Sn**	**13 26 47.0**	**+2.1**
DYDN				IAML_P			
	comp=Z,4μm,0.3s						
DYDN	**Diyadin**	**1.20**	**318**	*e*Pg	**Pn**	**13 26 27.3**	**-0.7**
GEVA	**Gevas**	**1.36**	**256**	*i* P	**Pn**	**13 26 29.0**	**-1.2**
GEVA				*i* S	**Sn**	**13 26 49.1**	**+0.3**
GEVA				IAML_P			
	comp=Z,3μm,0.3s						
GEVA	**Gevas**	**1.36**	**256**	*e*Pg	**Pn**	**13 26 28.4**	**-1.8**
HAKT	**HAKKARI**	**1.37**	**217**	*i* P	**Pg**	**13 26 30.9**	**+0.5**
HAKT				*i* S	**Sn**	**13 26 51.6**	**+2.5**
HAKT	**HAKKARI**	**1.37**	**217**	*e*Pg	**Pg**	**13 26 30.4**	**0.0**
TASB	**TASBURUN-IGDIR**	**1.37**	**344**	PN	**Pg**	**13 26 31.8**	**+1.4**
TASB				SN	**Sn**	**13 26 51.7**	**+2.7**
TASB	**TASBURUN-IGDIR**	**1.37**	**344**	*e*Pg	**Pg**	**13 26 31.8**	**+1.4**
IAZR	**Azarshahr**	**1.39**	**135**	*e*Pg	**Pg**	**13 26 31.1**	**+0.3**
IAZR				IAMB	IAmb	13 26 39.0	
	comp=Z,13μm,0.3s						
AKDM	**Akdamar-Van**	**1.42**	**257**	PN	**Pn**	**13 26 30.3**	**-0.7**
AKDM				SN	**Sb**	**13 26 48.7**	**-1.1**
AKDM	**Akdamar-Van**	**1.42**	**257**	*e*Pg	**Pn**	**13 26 30.2**	**-0.7**
GNI	**Garni**	**1.48**	**0**	PN	**Pg**	**13 26 33.8**	**+1.3**
GNI				SN	**Sg**	**13 26 55.2**	**+3.5**
GNI	**Garni**	**1.48**	**0** ‖	*i* P	**Pg**	**13 26 33.3**	**+0.7**
GNI				‖ *i* S	**Sg**	**13 26 55.3**	**+3.5**
ADCV	**BITLIS_Adilcev**	**1.58**	**276**	*i* P	**Pg**	**13 26 34.7**	**+0.4**
ADCV				*i* S	**Sg**	**13 26 56.8**	**+2.0**
ADCV				IAML_P			
	comp=Z,3μm,0.4s						
ADCV	**BITLIS_Adilcev**	**1.58**	**276**	*e*Pg	**Pg**	**13 26 33.8**	**-0.6**
AGRB	**Hanur-Agry**	**1.63**	**304**	PN	**Pg**	**13 26 35.2**	**-0.2**
AGRB	**Hanur-Agry**	**1.63**	**304**	*e*Pn	**Pg**	**13 26 35.2**	**-0.2**
TUTA	**Tutak**	**1.67**	**297**	*i* P	**Pg**	**13 26 35.3**	**-0.7**
TUTA				IAML_P			
	comp=Z,6μm,0.3s						
TUTA	**Tutak**	**1.67**	**297**	*e*Pn	**Pb**	**13 26 35.1**	**-0.5**
CUKT	**Cukurca**	**1.67**	**213**	PN	**Pg**	**13 26 37.0**	**+0.8**
CUKT	**Cukurca**	**1.67**	**213**	*e*Pn	**Pg**	**13 26 37.0**	**+0.8**
ARUZ	**Aruch**	**1.69**	**343**	*i* P	**Pg**	**13 26 37.2**	**+0.7**
ARUZ				*i* S	**Sg**	**13 27 03.6**	**+5.1**
MLAZ	**Malazgirt-MUS**	**1.77**	**286**	PN	**Pb**	**13 26 36.5**	**-0.8**
MLAZ	**Malazgirt-MUS**	**1.77**	**286**	*e*Pn	**Pb**	**13 26 36.4**	**-0.8**
DIGO	**Kars**	**2.04**	**329**	*i* P	**Pg**	**13 26 44.1**	**+0.9**
DIGO				IAML_P			
	comp=Z,5μm,0.7s						
DIGO	**Kars**	**2.04**	**329**	*e*Pn	**Pg**	**13 26 43.5**	**+0.3**
EATA	**Eleskirt**	**2.11**	**305**	*i* P	**Pb**	**13 26 42.5**	**-0.7**
EATA				IAML_P			
	comp=Z,1μm,0.4s						
EATA	**Eleskirt**	**2.11**	**305**	*e*Pn	**Pb**	**13 26 42.2**	**-1.0**
GDB	**GEDABAY**	**2.20**	**21**	P	**Pb**	**13 26 44.4**	**-0.2**
	SNR=19						
GDB				S	**Sg**	**13 27 16.8**	**+2.0**
SRTM	**Siirt_Merkez**	**2.31**	**254**	*i* P	**Pb**	**13 26 46.9**	**+0.4**
SRTM				IAML_P			
	comp=Z,2μm,0.3s						
SRTM	**Siirt_Merkez**	**2.31**	**254**	*e*Pn	**Pb**	**13 26 45.9**	**-0.6**
GANJ	**Ganja**	**2.33**	**31**	P	**Pb**	**13 26 46.7**	**0.0**
	SNR=14						
GANJ				S	**Sg**	**13 27 18.9**	**0.0**
QZX	**Qazax, Azerbai**	**2.44**	**11**	P	**Pb**	**13 26 47.2**	**-1.5**
	SNR=8.6						
QZX				S	**Sg**	**13 27 20.1**	**-2.4**
ISRB	**Sarab**	**2.46**	**109**	*e*Pn	**Pb**	**13 26 48.9**	**-0.1**
ISRB				IAMB	IAmb	13 26 54.1	
	comp=Z,1μm,0.4s						
MUSM	**Mu-Merkez**	**2.52**	**272**	*i* P	**Pb**	**13 26 48.7**	**-1.4**
MUSM	**Mu-Merkez**	**2.52**	**272**	*e*Pn	**Pb**	**13 26 48.3**	**-1.8**
KOPR	**Koprukoy-ERZUR**	**2.60**	**302**	PN	**Pb**	**13 26 48.9**	**-2.5**
BGD	**Bogdanovka**	**2.74**	**342**	P	**Pg**	**13 26 56.6**	**0.0**
MNGR	**Mingechevir, A**	**2.78**	**40**	P	**Pb**	**13 26 53.2**	**-1.2**
MNGR				S	**Sg**	**13 27 30.3**	**-3.1**
LRK	**Lerik**	**2.82**	**89**	P	**Pb**	**13 26 53.9**	**-1.3**
LRK				S	**Sg**	**13 27 32.6**	**-2.2**
AKH	**Akhalkalaki**	**2.90**	**341**	P	**Pg**	**13 27 00.7**	**+0.9**
GLBA	**Clilabad**	**2.91**	**77**	P	**Pb**	**13 26 55.0**	**-1.6**
GLBA				S	**Sb**	**13 27 34.2**	**+1.6**
DDFL	**Dedoflistskaro**	**2.97**	**20**	P	**Pb**	**13 26 57.5**	**-0.3**
LKRN	**Lenkeran, Azer**	**3.17**	**88**	P	**Pb**	**13 26 57.8**	**-3.2**
LKRN				S	**Sb**	**13 27 40.4**	**+0.5**
ASTR	**Astara**	**3.18**	**91**	P	**Pb**	**13 26 58.7**	**-2.5**
ASTR				S	**Sb**	**13 27 41.5**	**+1.1**
LGD	**Lagodekhi**	**3.37**	**20**	P	**Pg**	**13 27 07.7**	**-1.0**
MAZI	**Mazidag**	**3.59**	**252**	*e*Pn	**Pn**	**13 27 03.2**	**+2.4**
XNQ	**Khinaliq**	**3.62**	**45**	P	**Pn**	**13 27 03.5**	**+2.2**
XNQ				S	**Sb**	**13 27 51.1**	**-2.3**
ONI	**Oni**	**4.04**	**346**	P	**Pg**	**13 27 20.9**	**-0.6**
ONI				S	Sn	13 27 22.4	-32

ISCJB ***25*** *13:32:28.2±0.6,39.°42N±0.°05×28.°82E±0.°06, h33km±6km, Error ellipse: s-maj=9.0km s-min=6.8km az=140.5*
DDA ***25*** *13:32:29.3,39.°65N×28.°88E, h7km±1km, ML2.5*
ISK ***25*** *13:32:29.1,39.°57N×28.°89E, h23km, ML1.8/5*
ISC 25 13:32:28.6±1.0,39.°49N±0.°03×28.°81E±0.°04, h27km±10km, n12, σ2°25/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.28**	**294**	*i* P	**Pb**	**13 32 36.9**	**+1.2**
DURS				*i* S	**Sb**	**13 32 41.5**	**+1.0**
DURS				IAML_P			
	comp=Z,1μm,0.1s						
TVSB	**Tavsanli**	**0.51**	**94**	PG	**Pb**	**13 32 39.2**	**+0.1**
TVSB				SG	**Sb**	**13 32 46.4**	**+0.1**
GDZ	**Gediz**	**0.66**	**127**	*i* P	**Pn**	**13 32 43.8**	**+1.5**
GDZ				*i* S	**Sn**	**13 32 54.4**	**+2.7**
GDZ				IAML_P			
	comp=Z,1μm,0.1s						
GDZ	**Gediz**	**0.66**	**127**	*i* P	**Pn**	**13 32 44.7**	**+2.4**
GDZ				*i* S	**Sn**	**13 32 54.8**	**+3.1**
GDZ				IAML_P			
	comp=Z,1μm,0.1s						
ULDT	**Uludag**	**0.70**	**21**	*i* P	**Pb**	**13 32 40.9**	**-1.5**
ULDT				*i* S	**Sb**	**13 32 48.2**	**-3.7**
ULDT				IAML_P			
	comp=Z,1μm,0.1s						
USAK	**Uak-Merkez**	**0.79**	**168**	*i* P	**Pb**	**13 32 42.4**	**-1.3**
USAK				*i* S	**Sb**	**13 32 49.1**	**-4.9**
USAK				IAML_P			
	comp=Z,126nm,0.2s						
KCTX	**Karacabey (Bur**	**0.85**	**336**	PG	**Pn**	**13 32 45.7**	**+0.8**
MANT	**Manisa**	**1.01**	**191**	*i* P	**Pn**	**13 32 46.1**	**-1.1**
MANT				*i* S	Sb	13 32 52.0	-8.6
ARMT	**Armutlu**	**1.08**	**2**	PG	**Pn**	**13 32 47.9**	**-0.1**
ARMT				SG	**Sn**	**13 33 02.0**	**-0.1**
EDC	**Edincik**	**1.13**	**320**	PN	**Pb**	**13 32 49.6**	**+0.1**
KHAL	**Karahalli**	**1.23**	**154**	*i* P	Pn	13 32 43.1	-7.1
KHAL				*i* S	Sn	13 32 48.4	-18
KHAL				IAML_P			
	comp=Z,468nm,0.1s						
SRCK	**Saricakaya, Es**	**1.51**	**68**	PN	**Pn**	**13 32 54.2**	**+0.3**

ISCJB ***25*** *13:34:33.5±0.3,24.°59N±0.°02×122.°35E±0.°02, h79km±3km, Error ellipse: s-maj=3.0km s-min=2.3km az=165.0*
JMA ***25*** *13:34:33.1±0.1,24.°54N×122.°32E, h85km±2km, M3.1*
TAP ***25*** *13:34:33.1,24.°61N×122.°33E, h88km, ML3.7, B*
ISC 25 13:34:33.9±1.3,24.°58N±0.°03×122.°35E±0.°02, h79km±6km, n107, σ0°94/211, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.20**	**262**	*i* P	**Pn**	**13 34 46.0**	**+0.4**
	baz=253						
EOS1				*i* S	**Sn**	**13 34 55.2**	**+1.1**
	baz=253						
EGS		**0.46**	**305**	P	**Pn**	**13 34 47.3**	**0.0**
	baz=296						
EGS				S	**Sn**	**13 34 57.8**	**+0.7**
	baz=296						
TWB1	**Santiao Chiao**	**0.54**	**323**	*i* P	**Pn**	**13 34 47.5**	**-0.4**
	baz=318						
TWB1				S	**Sn**	**13 34 57.9**	**-0.3**
	baz=318						
NTC	**Toucheng**	**0.54**	**300**	P	**Pn**	**13 34 47.9**	**-0.1**
	baz=299						
NTC				S	**Sn**	**13 34 57.9**	**-0.5**
	baz=299						
JYNG	**Yonagunijimaku**	**0.56**	**103**	P	**Pn**	**13 34 48.1**	**0.0**
JYNG				*e*S	**Sn**	**13 34 59.2**	**+0.6**
NANB	**Nanao**	**0.56**	**255**	*i* P	**Pn**	**13 34 48.2**	**+0.1**
	baz=251						
NANB				S	**Sn**	**13 34 59.3**	**+0.6**
	baz=251						
ENA	**Nanau**	**0.57**	**255**	*i* P	**Pn**	**13 34 48.3**	**+0.1**
	baz=251						
ENA				*i* S	**Sn**	**13 34 59.5**	**+0.7**
	baz=251						
ILA	**Ilan**	**0.57**	**289**	P	**Pn**	**13 34 48.3**	**0.0**
	baz=287						
ILA				S	**Sn**	**13 34 58.9**	**0.0**
	baz=287						
TIPB	**Shuangxi**	**0.61**	**310**	*i* P	**Pn**	**13 34 48.4**	**-0.3**
	baz=309						
TIPB				S	**Sn**	**13 34 59.3**	**-0.3**
	baz=309						
YOJ	**Yonaguni jima**	**0.62**	**101**	*i* P	**Pn**	**13 34 48.8**	**+0.1**
	baz=109						
YOJ				S	**Sn**	**13 34 60.0**	**+0.4**
	baz=109						
YOJ	**Yonaguni jima**	**0.62**	**101**	P	**Pn**	**13 34 48.6**	**0.0**
YOJ				*e*S	**Sn**	**13 35 00.0**	**+0.4**
TWE	**Neicheng**	**0.63**	**283**	*i* P	**Pn**	**13 34 48.9**	**+0.1**
	baz=281						
TWE				S	**Sn**	**13 34 59.5**	**-0.3**
	baz=281						
SLBB	**Yuanshan**	**0.67**	**285**	*i* P	**Pn**	**13 34 49.4**	**+0.2**
	baz=289						
SLBB				S	**Sn**	**13 35 01.1**	**+0.4**
	baz=289						
NWF	**Wu-fen Shan**	**0.71**	**314**	*i* P	**Pn**	**13 34 49.6**	**-0.1**
	baz=306						
NWF				*i* S	**Sn**	**13 35 01.3**	**-0.2**
	baz=306						
WFSB	**Wu-fen Shan**	**0.71**	**314**	*i* P	**Pn**	**13 34 49.6**	**0.0**
	baz=307						
WFSB				S	**Sn**	**13 35 01.1**	**-0.2**
	baz=307						
ENTT	**Nioudou**	**0.71**	**275**	*i* P	**Pn**	**13 34 50.1**	**+0.4**
	baz=273						
ENTT				S	**Sn**	**13 35 02.2**	**+0.9**
	baz=273						
NWLT	**Wulai**	**0.79**	**285**	*i* P	**Pn**	**13 34 50.5**	**0.0**
	baz=291						
NWLT				S	**Sn**	**13 35 02.9**	**0.0**
	baz=291						
NACB	**Ninganchiao**	**0.80**	**240**	*i* P	**Pn**	**13 34 49.8**	**-0.7**
	baz=237						
NACB				S	**Sn**	**13 35 03.1**	**+0.2**
	baz=237						
TWA	**Mucha**	**0.80**	**300**	*i* P	**Pn**	**13 34 50.4**	**-0.3**
	baz=292						
TWA				S	**Sn**	**13 35 02.6**	**-0.4**
	baz=292						
NHDH	**Xindian Distri**	**0.84**	**297**	*i* P	**Pn**	**13 34 50.9**	**-0.2**
	baz=296						
NHDH				*i* S	**Sn**	**13 35 03.0**	**-0.8**
	baz=296						
TWD	**Chiawan**	**0.84**	**234**	*i* P	**Pn**	**13 34 50.6**	**-0.5**
	baz=231						
TWD				S	**Sn**	**13 35 03.7**	**-0.2**
	baz=231						
ETLH	**Xiulin Townshi**	**0.87**	**245**	*i* P	**Pn**	**13 34 51.2**	**-0.3**
	baz=237						
ETLH				S	**Sn**	**13 35 04.5**	**-0.1**
	baz=237						
TATO	**Taipei**	**0.88**	**297**	P	**Pn**	**13 34 51.1**	**-0.3**
	baz=296						
TATO				S	**Sn**	**13 35 03.4**	**-1.1**
	baz=296						
YHNB	**Yeheng**	**0.89**	**276**	*i* P	**Pn**	**13 34 51.9**	**+0.2**
	baz=274					

	baz=281					
NCUH	**Zhongli**	**1.12 290**	P	**Pn**	**13 34 54.6**	**+0.2**
	baz=281					
NCUH			S	**Sn**	**13 35 10.2**	**+0.4**
	baz=281					
ESL	**Shilin**	**1.13 228**	P	**Pn**	**13 34 54.0**	**-0.5**
	baz=234					
ESL			S	**Sn**	**13 35 08.6**	**-1.4**
	baz=234					
TDCB	**Techi**	**1.13 254**	*i* P	**Pn**	**13 34 55.0**	**+0.4**
	baz=244					
TDCB			S	**Sn**	**13 35 10.0**	**-0.2**
	baz=244					
CHGB	**Renai**	**1.19 244**	*i* P	**Pn**	**13 34 55.6**	**+0.2**
	baz=236					
CHGB			S	**Sn**	**13 35 11.7**	**+0.2**
	baz=236					
LIOB	**Emei**	**1.21 273**	*i* P	**Pn**	**13 34 55.7**	**+0.1**
	baz=272					
LIOB			S	**Sn**	**13 35 12.1**	**+0.3**
	baz=272					
NSTT	**Nanjuang**	**1.23 273**	*i* P	**Pn**	**13 34 55.7**	**+0.1**
	baz=271					
NSTT			S	**Sn**	**13 35 11.9**	**-0.1**
	baz=271					
EGFH	**Guangfu**	**1.23 223**	P	**Pn**	**13 34 55.1**	**-0.7**
	baz=231					
EGFH			S	**Sn**	**13 35 11.4**	**-0.8**
	baz=231					
OWD	**Renai**	**1.23 240**	*i* P	**Pn**	**13 34 55.7**	**-0.2**
	baz=233					
OWD			S	**Sn**	**13 35 11.2**	**-1.3**
	baz=233					
SBCB	**Hsinchu**	**1.26 280**	P	**Pn**	**13 34 55.3**	**-0.8**
	baz=279					
SBCB			S	**Sn**	**13 35 12.4**	**-0.3**
	baz=279					
HSN	**Hsinchu**	**1.27 280**	*e*P	**Pn**	**13 34 55.3**	**-1.0**
	baz=281					
HSN			S	**Sn**	**13 35 12.8**	**-0.2**
	baz=281					
IRIF	**Iriomote-Funau**	**1.28 101**	P	**Pn**	**13 34 56.2**	**-0.2**
IRIF			S	**Sn**	**13 35 13.7**	**+0.4**
WHP	**Taichung City**	**1.31 257**	*i* P	**Pn**	**13 34 57.9**	**+1.0**
	baz=255					
WHP			S	**Sn**	**13 35 14.8**	**+0.7**
	baz=255					
HGSD	**Ruisui**	**1.37 218**	*i* P	**Pn**	**13 34 57.0**	**-0.5**
	baz=210					
HGSD			S	**Sn**	**13 35 15.6**	**+0.2**
	baz=210					
VWDT	**VWDT**	**1.37 234**	*i* P	**Pn**	**13 34 57.6**	**+0.1**
	baz=226					
VWDT			S	**Sn**	**13 35 15.3**	**-0.1**
	baz=226					
DPDB	**Guoxing**	**1.40 248**	P	**Pn**	**13 34 58.8**	**+0.7**
	baz=245					
DPDB			*e*S	**Sn**	**13 35 17.7**	**+1.5**
	baz=245					
NMLH	**Miaoli**	**1.42 269**	*i* P	**Pn**	**13 34 58.5**	**+0.4**
	baz=267					
NMLH			S	**Sn**	**13 35 16.5**	**+0.1**
	baz=267					
EHY	**Hungye**	**1.42 221**	*i* P	**Pn**	**13 34 57.0**	**-1.2**
	baz=211					
EHY			*e*S	**Sn**	**13 35 14.6**	**-1.9**
	baz=211					
HATJ	**Hateruma jima**	**1.43 111**	P	**Pn**	**13 34 58.7**	**+0.4**
HATJ			*e*S	**Sn**	**13 35 16.6**	**0.0**
NSY	**Sanyi**	**1.45 264**	P	**Pn**	**13 34 59.1**	**+0.5**
	baz=262					
NSY			S	**Sn**	**13 35 18.0**	**+0.8**
	baz=262					
SMLT	**Sun Moon Lake**	**1.49 243**	P	**Pn**	**13 35 00.1**	**+1.0**
	baz=234					
SMLT			S	**Sn**	**13 35 19.8**	**+1.6**
	baz=234					
SSLB	**Suanglung**	**1.50 239**	P	**Pn**	**13 34 59.2**	**+0.1**
	baz=233					
SSLB			*e*S	**Sn**	**13 35 18.2**	**0.0**
	baz=233					
PTSB	**Yuanli**	**1.50 265**	P	**Pn**	**13 34 59.8**	**+0.6**
	baz=264					
PTSB			*e*S	**Sn**	**13 35 19.3**	**+0.9**
	baz=264					
TYC	**Yuchr**	**1.52 244**	P	**Pn**	**13 35 00.4**	**+1.0**
	baz=247					
TYC			S	**Sn**	**13 35 19.8**	**+1.1**
	baz=247					
YULB	**Yu-li**	**1.52 219**	*i* P	**Pn**	**13 34 58.4**	**-1.2**
	baz=217					
YULB			S	**Sn**	**13 35 17.0**	**-1.8**
	baz=217					
TWF1	**Yuli**	**1.55 218**	*i* P	**Pn**	**13 34 58.9**	**-1.0**
	baz=224					
TWF1			*e*S	**Sn**	**13 35 18.6**	**-0.9**
	baz=224					
JKRS	**Kuro-shima**	**1.55 102**	P	**Pn**	**13 35 00.2**	**+0.3**
JKRS			S	**Sn**	**13 35 20.3**	**+0.8**
WDJ	**Dajia District**	**1.57 262**	P	**Pn**	**13 35 00.0**	**-0.1**
	baz=260					
WDJ			S	**Sn**	**13 35 20.1**	**+0.2**
	baz=260					
TCU	**Taichung**	**1.58 255**	P	**Pn**	**13 35 00.5**	**+0.2**
	baz=253					
TCU			*e*S	**Sn**	**13 35 20.6**	**+0.3**
	baz=253					
WHYT	**Xinyi Township**	**1.62 238**	*i* P	**Pn**	**13 35 02.0**	**+1.2**
	baz=230					
WHYT			S	**Sn**	**13 35 22.3**	**+1.1**
	baz=230					
JIJ	**Ishigaki jima**	**1.65 97**	P	**Pn**	**13 35 00.9**	**-0.3**
JIJ			S	**Sn**	**13 35 21.2**	**-0.6**
WJS	**Zhushan**	**1.66 243**	*i* P	**Pn**	**13 35 02.3**	**+1.0**
	baz=252					
WJS			S	**Sn**	**13 35 23.6**	**+1.5**
	baz=252					
WNT	**Mingjian**	**1.67 246**	P	**Pn**	**13 35 02.5**	**+1.1**
	baz=243					
WNT			S	**Sn**	**13 35 24.3**	**+2.0**
	baz=243					
YUS	**Yu-Shan**	**1.67 230**	P	**Pn**	**13 35 01.9**	**-0.1**
	baz=221					
YUS			S	**Sn**	**13 35 22.9**	**-0.2**
	baz=221					
WCHH	**Zhanghua**	**1.71 253**	*e*P	**Pn**	**13 35 02.2**	**+0.4**
	baz=251					
WCHH			*e*S	**Sn**	**13 35 23.9**	**+0.9**
	baz=251					
CHKT	**Chengkung**	**1.72 212**	P	**Pn**	**13 35 00.9**	**-1.2**
	baz=202					
CHKT			S	**Sn**	**13 35 21.2**	**-2.4**
	baz=202					
JISG	**Ishigakijimahi**	**1.79 89**	P	**Pn**	**13 35 02.8**	**-0.2**
JISG			*e*S	**Sn**	**13 35 25.0**	**0.0**
ELDTW	**Lidau**	**1.84 222**	*i* P	**Pn**	**13 35 02.9**	**-0.9**
	baz=215					
ELDTW			S	**Sn**	**13 35 25.3**	**-1.2**
	baz=215					
WGK	**Gukeng**	**1.86 242**	*e*P	**Pn**	**13 35 04.9**	**+1.1**
	baz=251					
WGK			S	**Sn**	**13 35 28.8**	**+2.2**
	baz=251					
WDLH	**Douliu**	**1.87 242**	P	**Pn**	**13 35 04.8**	**+0.7**
	baz=251					
WDLH			S	**Sn**	**13 35 29.0**	**+1.9**
	baz=251					
RLNB	**Erlin**	**1.94 250**	*i* P	**Pn**	**13 35 05.2**	**+0.3**
	baz=257					
RLNB			S	**Sn**	**13 35 28.9**	**+0.3**
	baz=257					
CHN2	**Minshiung**	**2.00 239**	*e*P	**Pn**	**13 35 07.1**	**+1.3**
	baz=248					
CHN2			S	**Sn**	**13 35 32.0**	**+1.8**
	baz=248					
WTCT	**Ta-ch'eng**	**2.02 250**	*e*P	**Pn**	**13 35 05.7**	**-0.2**
	baz=256					
WTCT			*e*S	**Sn**	**13 35 30.3**	**-0.1**
	baz=256					
CHN4	**Tsaushan**	**2.02 233**	P	**Pn**	**13 35 07.2**	**+1.2**
	baz=231					
CHN4			S	**Sn**	**13 35 32.4**	**+1.9**
	baz=231					
TPUB	**Ta-pu**	**2.02 231**	P	**Pn**	**13 35 07.0**	**+0.8**
	baz=229					
TPUB			S	**Sn**	**13 35 32.2**	**+1.5**
	baz=229					
STYT	**Tauyuan**	**2.02 226**	P	**Pn**	**13 35 07.1**	**+0.9**
	baz=216					
STYT			S	**Sn**	**13 35 32.1**	**+1.3**
	baz=216					
CHY	**Chiayi**	**2.06 239**	P	**Pn**	**13 35 07.4**	**+0.8**
	baz=247					
CHY			S	**Sn**	**13 35 32.7**	**+1.2**
	baz=247					
WTP	**Ta-pu**	**2.07 230**	P	**Pn**	**13 35 07.6**	**+0.8**
	baz=229					
WTP			S	**Sn**	**13 35 33.3**	**+1.5**
	baz=229					
TWGBT	**Beinan**	**2.10 214**	*i* P	**Pn**	**13 35 06.1**	**-1.1**
	baz=211					
TWGBT			S	**Sn**	**13 35 30.0**	**-2.5**
	baz=211					
TWG	**Pinlang**	**2.10 214**	*i* P	**Pn**	**13 35 06.1**	**-1.1**
	baz=211					
TWG			S	**Sn**	**13 35 29.9**	**-2.7**
	baz=211					
TWK	**Hsinying**	**2.14 233**	P	**Pn**	**13 35 08.3**	**+0.5**
	baz=230					
TWK			S	**Sn**	**13 35 34.3**	**+0.7**
	baz=230					
JTJ	**Tarama**	**2.15 88**	P	**Pn**	**13 35 08.3**	**+0.6**
JTJ			*e*S	**Sn**	**13 35 34.9**	**+1.4**
WSF	**Szhu**	**2.15 245**	P	**Pn**	**13 35 08.1**	**+0.2**
	baz=242					
WSF			S	**Sn**	**13 35 34.5**	**+0.7**
	baz=242					
CHN1	**Nanshi**	**2.17 231**	P	**Pn**	**13 35 09.2**	**+1.1**
	baz=228					
CHN1			S	**Sn**	**13 35 35.2**	**+1.1**
	baz=228					
SNST	**Tainan City**	**2.17 232**	P	**Pn**	**13 35 09.1**	**+1.1**
	baz=229					
SNST			S	**Sn**	**13 35 35.0**	**+1.0**
	baz=229					
WLGB	**Puzi**	**2.17 240**	*e*P	**Pn**	**13 35 09.0**	**+1.0**
	baz=238					
WLGB			*e*S	**Sn**	**13 35 35.3**	**+1.2**
	baz=238					
SGST	**Jiashian**	**2.20 228**	*e*P	**Pn**	**13 35 10.1**	**+1.7**
	baz=225					
SGST			*e*S	**Sn**	**13 35 36.8**	**+2.0**
	baz=225					
SLGT	**Liugui**	**2.22 225**	P	**Pn**	**13 35 09.9**	**+1.2**
	baz=232					
SLGT			S	**Sn**	**13 35 37.3**	**+2.0**
	baz=232					
CHN8	**Yiju**	**2.31 238**	*e*S	**Sn**	**13 35 37.7**	**+0.3**
	baz=236					
ECL	**Taimali**	**2.35 213**	P	**Pn**	**13 35 09.3**	**-1.1**
	baz=204					
ECL			S	**Sn**	**13 35 36.7**	**-1.8**
	baz=204					
SSD	**Sandimen**	**2.41 221**	P	**Pn**	**13 35 12.3**	**+1.1**
	baz=218					
SSD			S	**Sn**	**13 35 41.7**	**+1.9**
	baz=218					
MASBT	**Mashibuluo**	**2.51 219**	P	**Pn**	**13 35 13.4**	**+0.8**
	baz=216					
MASBT			S	**Sn**	**13 35 43.3**	**+1.0**
	baz=216					
PTTC	**Pingtan**	**2.51 292**	P	**Pn**	**13 35 11.8**	**-0.8**
	baz=292					
PTTC			S	**Sn**	**13 35 40.0**	**-2.3**
	baz=292					
TAW	**Tawu**	**2.58 211**	*e*P	**Pn**	**13 35 12.8**	**-0.8**
	baz=204					
TAW			*e*S	**Sn**	**13 35 41.9**	**-2.1**
	baz=204					
EAST	**Anshuo**	**2.58 212**	P	**Pn**	**13 35 12.9**	**-0.8**
	baz=205					
EAST			*e*S	**Sn**	**13 35 42.0**	**-2.1**
	baz=205					
SSPT	**Xinbi**	**2.65 218**	*e*P	**Pn**	**13 35 16.0**	**+1.5**
	baz=215					
SSPT			*e*S	**Sn**	**13 35 45.3**	**-0.3**
	baz=215					
MATB	**Ma-tsu**	**2.68 306**	P	**Pn**	**13 35 14.2**	**-0.6**
	baz=306					
MATB			S	**Sn**	**13 35 44.9**	**-1.4**
	baz=306					

*ISCJB **25** 13:41:25.1±1.4,24°.20S±0°.10×179°.4E±0°.2,h531km, mb3.8/6, Error ellipse: s-maj=27.9km s-min=12.4km az=170.1*

*IDC **25** 13:41:26.9±4.2,24°.09S×179°.34E,h533km±41km,mb3.3/6, mb1 3.5/8,mb1mx3.1/30,mbtmp4.3/8, Error ellipse: s-maj=37.9km s-min=30.2km az=117.0*

ISC 25 13:41:26.7±1.1,24°.35±0°.1×179°.3E±0°.2,h531km,n11, σ1°55/14,mb3.9/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.05**	**278**	P	**P**	**13 44 07.0**	**+1.1**
	0.8nm,0.3s,baz=205,slow=21,SNR=8.5						
URZ	**Urewera**	**14.02**	**187**	P	**P**	**13 44 27.7**	**+1.7**
	0.3nm,0.3s,baz=355,slow=19,SNR=4.2						
URZ				S	**S**	**13 46 51.1**	**-2.8**
	0.2nm,0.3s,baz=315,slow=20,SNR=2.4						
CTA	**Charters Tower**	**30.86**	**271**	P	**P**	**13 46 60.0**	**+0.2**
	5.1nm,0.3s,baz=95,slow=10,SNR=19						
STKA	**Stephens Creek**	**33.99**	**249**	P	**P**	**13 47 27.6**	**+1.4**
	1.8nm,0.5s,baz=99,slow=12,SNR=10						
ASAR	**Alice Springs**	**41.35**	**261**	P	**P**	**13 48 26.5**	**0.0**
	2.6nm,0.8s,baz=100,slow=8.7,SNR=22						
ASAR				PcP	**PcP**	**13 50 12.6**	**+0.3**
	0.3nm,0.6s,baz=104,slow=3.9,SNR=3.8						
ASAR				S	**S**	**13 54 00.8**	**-2.1**
	0.4nm,0.8s,baz=97,slow=15,SNR=3.9						
WRA	**Warramunga Arr**	**41.76**	**267**	P	**P**	**13 48 29.2**	**-0.5**
	2.6nm,0.5s,baz=95,slow=9.3,SNR=28						
MJAR	**Matsushiro Arr**	**71.90**	**326**	P	**P**	**13 51 54.5**	**-1.5**
	1.0nm,0.7s,baz=162,slow=5.1,SNR=3.5						
PETK	**Petropavlovsk-**	**79.37**	**347**	P	**P**	**13 52 36.3**	**-0.8**
	1.4nm,0.6s,baz=126,slow=6.8,SNR=4.5						
FINES	**FINESS Array B**	**138.64**	**341**	PKP	**PKPdf**	**13 59 51.3**	**-0.3**
	0.3nm,0.3s,baz=90,slow=8.3,SNR=3.6						
AKASG	**Malin Array Be**	**144.98**	**326**	PKP	**PKPdf**	**14 00 02.3**	**-0.8**
	0.6nm,0.4s,baz=49,slow=3.9,SNR=3.6						
BRTR	**Keskin Array B**	**147.33**	**306**	PKPbc	**PKPdf**	**14 00 09.7**	**+2.1**
	0.6nm,0.5s,baz=120,slow=2.0,SNR=3.3						

IDC 25 14:03:28.6±16.0,17°.02S×179°.73W,h626km±161km, mb3.5/3,mb1 3.7/3,mb1mx2.9/19,mbtmp4.6/3,Error ellipse: s-maj=137.8km s-min=82.5km az=107.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.97**	**240**	P	P	14 09 55.1	-0.1
	4.5nm,0.8s,baz=94,slow=10.0,SNR=7.5						
WRA	**Warramunga Arr**	**43.56**	**259**	P	P	14 10 39.6	0.0
	2.3nm,0.5s,baz=90,slow=8.6,SNR=27						
ASAR	**Alice Springs**	**43.82**	**253**	P	P	14 10 41.6	+0.1
	21nm,0.7s,baz=88,slow=8.1,SNR=228						
ASAR				PcP	PcP	14 12 13.4	-0.3
	0.8nm,0.8s,baz=90,slow=5.6,SNR=4.1						
GERES	**GERESS Array B**	**146.42**	**344**	PKPbc	PKPbc	14 22 00.4	-0.6
	0.5nm,0.5s,baz=0.0,slow=3.2,SNR=5.4						

*IDC **25** 14:06:32.2±9.5,35°.10S×179°.58E,h0km,mb4.1/2, mb1 4.4/2,mb1mx3.8/16,mbtmp4.1/2, Error ellipse: s-maj=347.9km s-min=47.6km az=34.0*

*WEL **25** 14:07:02.6±1.0,35°.5±6°.×17°.9E±1°.2,h33km,M4.4/38, ML4.5/30,MLv4.4/38, Error ellipse: s-maj=0.0km s-min=0.0km az=100.6*

ISC 25 14:06:57.4±2.0,35°.2S±0°.1×179°.2E±0°.1,h200km,n106, σ2°41/113,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHRZ	**Whale Island**	**3.20**	**213**	P	**Pn**	**14 07 53.9**	**+4.6**
WHRZ				S	**Sn**	**14 08 30.8**	**+0.8**
GRZ	**Great Barrier**	**3.21**	**250**	P	**Pn**	**14 07 51.3**	**+1.8**
OPRZ	**Ohinepanea**	**3.39**	**218**	P	**Pn**	**14 07 54.8**	**+3.2**
MWZ	**Matawai**	**3.40**	**203**	P	**Pn**	**14 07 55.6**	**+3.8**
MWZ				S	**Sn**	**14 08 37.0**	**+2.4**
MARZ	**Manawahe**	**3.44**	**215**	P	**Pn**	**14 07 55.5**	**+3.2**
TGRZ	**Tauranga**	**3.46**	**222**	P	**Pn**	**14 07 55.6**	**+3.2**
URZ	**Urewera**	**3.48**	**208**	P	**Pn**	**14 07 55.4**	**+2.7**
URZ				S	**Sn**	**14 08 36.1**	**-0.1**
EDRZ	**Edgecumbe**	**3.51**	**213**	P	**Pn**	**14 07 56.4**	**+3.3**
RAGZ	**Rawiri**	**3.59**	**203**	P	**Pn**	**14 07 57.6**	**+3.5**
RAGZ				S	**Sn**	**14 08 41.0**	**+2.3**
KARZ	**Kaharoa**	**3.68**	**219**	P	**Pn**	**14 07 58.2**	**+3.0**
OMRZ	**Omania**	**3.68**	**217**	P	**Pn**	**14 07 57.9**	**+2.7**
KMRZ	**Kaimai**	**3.72**	**224**	P	**Pn**	**14 07 58.8**	**+3.2**
TARZ	**Mount Tarawera**	**3.72**	**215**	P	**Pn**	**14 08 00.2**	**+4.5**
MKAZ	**Moumakai**	**3.77**	**239**	P	**Pn**	**14 07 59.1**	**+2.8**
RRRZ	**Republican Roa**	**3.80**	**214**	P	**Pn**	**14 08 00.7**	**+4.1**
RRRZ				S	**Sn**	**14 08 44.0**	**+0.8**
MUGZ	**Murupara**	**3.80**	**210**	P	**Pn**	**14 07 59.6**	**+2.9**
MUGZ				S	**Sn**	**14 08 43.2**	**-0.2**
HLRZ	**Highlands Stat**	**3.81**	**216**	P	**Pn**	**14 08 00.2**	**+3.5**
UTU	**Utuhina**	**3.82**	**218**	P	Pn	14 08 02.2	+5.3
RTZ	**Ruatahuna**	**3.84**	**207**	P	**Pn**	**14 07 59.4**	**+2.1**
RTZ				S	**Sn**	**14 08 42.7**	**-1.6**
PRGZ	**Paritu Road**	**3.86**	**195**	P	**Pn**	**14 08 00.6**	**+3.2**
PRGZ				S	**Sn**	**14 08 47.1**	**+2.4**
SNGZ	**Shannon Statio**	**3.87**	**202**	P	**Pn**	**14 08 00.6**	**+3.1**
SNGZ				S	**Sn**	**14 08 46.7**	**+1.8**
TOZ	**Tahuroa Road**	**3.90**	**228**	P	**Pn**	**14 08 01.3**	**+3.5**
HSRZ	**Hossack Road**	**3.90**	**216**	P	**Pn**	**14 08 02.0**	**+4.0**
HRRZ	**Handcock Road**	**3.95**	**215**	P	**Pn**	**14 08 02.3**	**+3.8**
PRRZ	**Plateau Road**	**3.98**	**213**	P	**Pn**	**14 08 01.8**	**+2.9**
GRRZ	**Galatos Road**	**4.00**	**217**	P	**Pn**	**14 08 02.3**	**+3.2**
KNZ	**Kokohu**	**4.00**	**197**	P	**Pn**	**14 08 01.8**	**+2.6**
ALRZ	**Allen Road**	**4.06**	**213**	P	**Pn**	**14 08 02.5**	**+2.7**
RAHZ	**Arahi**	**4.08**	**204**	P	**Pn**	**14 08 02.9**	**+2.9**
MTHZ	**Maungataniwha**	**4.10**	**206**	P	**Pn**	**14 08 02.9**	**+2.5**
WPRZ	**Whakapapatarin**	**4.11**	**215**	P	**Pn**	**14 08 03.9**	**+3.5**
WHHZ	**Waihua**	**4.17**	**201**	P	**Pn**	**14 08 04.1**	**+2.8**
KUTZ	**Kaahu Road**	**4.25**	**218**	P	**Pn**	**14 08 05.7**	**+3.4**
MRHZ	**Matea Rd**	**4.25**	**211**	P	**Pn**	**14 08 04.7**	**+2.4**
TLZ	**Tolley Road**	**4.28**	**222**	P	**Pn**	**14 08 05.8**	**+3.1**
WHTZ	**Whakaora**	**4.32**	**216**	P	**Pn**	**14 08 06.1**	**+2.9**
NMHZ	**Naumai**	**4.33**	**205**	P	**Pn**	**14 08 06.0**	**+2.6**
ARHZ	**Aropaoanui**	**4.42**	**203**	P	**Pn**	**14 08 07.3**	**+2.9**
HATZ	**Hinemaiaia**	**4.44**	**213**	P	**Pn**	**14 08 06.3**	**+1.7**
WATZ	**Wairara**	**4.46**	**217**	P	**Pn**	**14 08 07.1**	**+2.2**
BKZ	**Black Stump Fm**	**4.51**	**208**	P	**Pn**	**14 08 07.3**	**+1.8**
RATZ	**Rangitukua**	**4.57**	**216**	P	**Pn**	**14 08 08.6**	**+2.3**
OUZ	**Omahuta**	**4.58**	**268**	P	**Pn**	**14 08 07.0**	**+0.7**
RITZ	**Rihia Road**	**4.62**	**214**	P	**Pn**	**14 08 08.9**	**+2.1**
MCHZ	**McNeill Hill**	**4.68**	**204**	P	**Pn**	**14 08 09.6**	**+1.9**
KATZ	**Kakaramea**	**4.69**	**215**	P	**Pn**	**14 08 10.1**	**+2.2**
CKHZ	**Cape Kidnapper**	**4.76**	**200**	P	**Pn**	**14 08 10.4**	**+1.8**
KWHZ	**Kaweka Forest**	**4.76**	**207**	P	**Pn**	**14 08 10.3**	**+1.6**
HIZ	**Hauiti**	**4.80**	**225**	P	**Pn**	**14 08 12.3**	**+3.2**
KRVZ	**Karewarewa**	**4.81**	**215**	P	**Pn**	**14 08 10.8**	**+1.4**
WTVZ	**West Tongariro**	**4.85**	**215**	P	**Pn**	**14 08 11.3**	**+1.4**
TWVZ	**Taurewa**	**4.89**	**217**	P	**Pn**	**14 08 11.7**	**+1.3**
NGZ	**Ngauruhoe**	**4.89**	**215**	P	**Pn**	**14 08 12.0**	**+1.5**
KAHZ	**Kahuranaki**	**4.94**	**201**	P	**Pn**	**14 08 12.9**	**+1.9**
TUVZ	**Tukino**	**4.94**	**214**	P	**Pn**	**14 08 12.4**	**+1.3**
BHHZ	**Black Hill Sta**	**4.96**	**209**	P	**Pn**	**14 08 12.0**	**+0.8**
KRHZ	**Kereru**	**4.97**	**206**	P	**Pn**	**14 08 12.2**	**+0.8**
FWVZ	**Far West T-bar**	**4.98**	**214**	P	**Pn**	**14 08 12.9**	**+1.2**
WHVZ	**Whangaehu Hut**	**4.99**	**214**	P	**Pn**	**14 08 12.7**	**+0.9**
MOVZ	**Moawhango**	**5.01**	**212**	P	**Pn**	**14 08 12.1**	**+0.2**
PKVZ	**Pokaka**	**5.11**	**216**	P	**Pn**	**14 08 14.6**	**+1.5**
MTVZ	**Mangateitei**	**5.12**	**214**	P	**Pn**	**14 08 14.6**	**+1.3**
PXZ	**Pawanui**	**5.17**	**200**	P	**Pn**	**14 08 14.7**	**+0.9**
PNHZ	**Pukenui**	**5.27**	**206**	P	**Pn**	**14 08 15.5**	**+0.3**
VRZ	**Vera Road**	**5.28**	**221**	P	**Pn**	**14 08 17.8**	**+2.5**
WPHZ	**Waipukurau**	**5.33**	**203**	P	**Pn**	**14 08 16.5**	**+0.7**
PRHZ	**Porangahau**	**5.45**	**201**	P	**Pn**	**14 08 18.2**	**+0.7**
TSZ	**Takapari Road**	**5.49**	**207**	P	**Pn**	**14 08 17.8**	**-0.1**
DVHZ	**Dannevirke**	**5.63**	**204**	P	**Pn**	**14 08 19.8**	**-0.2**
DREZ	**Durham Road**	**5.63**	**223**	P	**Pn**	**14 08 22.6**	**+2.8**
WAZ	**Wanganui**	**5.64**	**215**	P	**Pn**	**14 08 20.5**	**+0.5**
ANWZ	**Angora Road**	**5.67**	**201**	P	**Pn**	**14 08 21.6**	**+1.3**
LREZ	**Lake Rotokare**	**5.71**	**220**	P	**Pn**	**14 08 22.8**	**+2.0**
PKE	**Pukeiti**	**5.76**	**225**	P	**Pn**	**14 08 24.2**	**+2.7**
KHEZ	**Kahui Hut**	**5.81**	**224**	P	**Pn**	**14 08 24.4**	**+2.3**
POWZ	**Post Office Ro**	**5.85**	**207**	P	**Pn**	**14 08 22.8**	**+0.2**
OHWZ	**Ohakea**	**5.87**	**210**	P	**Pn**	**14 08 23.8**	**+1.0**
NBEZ	**Newall Road No**	**5.87**	**225**	P	Pn	14 08 29.6	+6.7
PRWZ	**Pori Road**	**5.92**	**204**	P	**Pn**	**14 08 23.8**	**+0.3**
BFZ	**Birch Farm**	**5.95**	**202**	P	**Pn**	**14 08 23.7**	**-0.2**
TIWZ	**Tintock**	**6.15**	**204**	P	**Pn**	**14 08 26.1**	**-0.4**
MRZ	**Mangatainoka R**	**6.15**	**207**	P	**Pn**	**14 08 25.6**	**-0.9**
CPWZ	**Castlepoint**	**6.17**	**202**	P	**Pn**	**14 08 29.0**	**+2.2**
HOWZ	**Holdsworth Sta**	**6.38**	**206**	P	**Pn**	**14 08 28.3**	**-1.2**
OGWZ	**Otaki Gorge**	**6.44**	**208**	P	**Pn**	**14 08 29.0**	**-1.3**
NNZ	**Nelson**	**7.55**	**216**	P	**Pn**	**14 08 41.5**	**-3.1**
QRZ	**Quartz Range**	**7.69**	**222**	P	**Pn**	**14 08 44.2**	**-2.3**
THZ	**Tophouse**	**8.20**	**215**	P	**Pn**	**14 08 50.3**	**-2.9**
KHZ	**Kahutara**	**8.45**	**210**	P	**Pn**	**14 08 54.0**	**-2.3**
DSZ	**Denniston Nort**	**8.73**	**219**	P	**Pn**	**14 08 59.2**	**-0.8**
GVZ	**Greta Valley S**	**9.11**	**210**	P	**Pn**	**14 09 01.9**	**-3.0**
LTZ	**Lake Taylor**	**9.29**	**213**	P	**Pn**	**14 09 04.4**	**-2.9**
AMCZ	**Amberley**	**9.44**	**210**	P	**Pn**	**14 09 07.9**	**-1.3**
INZ	**Inchbonnie**	**9.63**	**216**	P	**Pn**	**14 09 08.8**	**-2.9**
OKCZ	**Okains Bay**	**9.74**	**207**	P	**Pn**	**14 09 10.8**	**-2.3**
CRLZ	**Canterbury Las**	**9.78**	**209**	P	**Pn**	**14 09 11.7**	**-1.9**
OXZ	**Oxford**	**9.82**	**212**	P	**Pn**	**14 09 10.6**	**-3.6**
MQZ	**McQueen's Vall**	**9.88**	**209**	P	**Pn**	**14 09 11.3**	**-3.6**
WVZ	**Waitaha Valley**	**10.24**	**217**	P	**Pn**	**14 09 20.0**	**+0.4**
RPZ	**Rata Peaks**	**10.57**	**214**	P	**Pn**	**14 09 20.9**	**-3.0**
FOZ	**Fox Glacier**	**11.03**	**218**	P	**Pn**	**14 09 27.3**	**-2.5**
ODZ	**Otahua Downs**	**11.80**	**211**	P	**Pn**	**14 09 37.3**	**-2.3**
JCZ	**Jackson Bay**	**11.94**	**219**	P	**Pn**	**14 09 38.2**	**-3.3**
ASAR	**Alice Springs**	**40.76**	**274**	P	**P**	**14 14 17.8**	**-1.3**
	2.3nm,0.5s,baz=115,slow=7.7,SNR=19						
WRA	**Warramunga Arr**	**42.20**	**279**	P	**P**	**14 14 29.3**	**-1.5**
	1.4nm,0.6s,baz=121,slow=8.2,SNR=11						
TORD	**Torodi Ar. Bea**	**157.93**	**187**	PKPab	**PKPab**	**14 27 04.5**	**-0.1**
	0.5nm,0.6s,baz=174,sl

TNTI	**Ternate**	5.01 342	*e*Pn	Pn	14 45 31.6	+0.2
TNTI	**Ternate**	5.01 342	P	Pn	14 45 33.0	+1.6
LUWI	**Luwuk**	6.81 296	*e*Pn	Pn	14 45 57.2	+1.2
BATI	**Baumata**	8.04 220	P	Pn	14 46 15.2	+2.2
	1.2nm,0.3s,baz=39,slow=4.0,SNR=4.0					
BATI			LR	LR	14 49 00.2	
	comp=Z,569nm,20.7s,baz=36,slow=35					
MTN	**Manton Dam**	9.03 166	*e*Pn	Pn	14 46 27.3	+0.9
KAPI	**Kappang**	9.17 264	P	Pn	14 46 30.6	+2.1
	1.7nm,0.3s,baz=106,slow=6.8,SNR=9.7					
KAPI	**Kappang**	9.17 264	*e*Pn	Pn	14 46 30.3	+1.8
KAPI	**Kappang**	9.17 264	*e*P	Pn	14 46 30.3	+1.8
DAV	**Davao City (W)**	11.52 343	LR	LR	14 51 49.4	
	comp=Z,128nm,20.9s,baz=135,slow=39					
FITZ	**Fitzroy Crossi**	14.34 193	*e*Pn	Pn	14 47 38.5	-0.6
JAGI	**Jajag, Banyuwa**	15.31 253	*e*Pn	Pn	14 47 52.6	+0.4
WRAB	**Tennant Creek**	16.67 162	*e*Pn	Pn	14 48 06.8	-2.9
	48nm,1.0s					
WRAB	**Tennant Creek**	16.67 162	*ce*P	Pn	14 48 06.4	-3.3
WRAB			pmax	pmax		
	comp=Z,24nm,1.3s					
WR1	**Warramunga Arr**	16.68 162	*e*Pn	Pn	14 48 06.1	-3.6
WRA	**Warramunga Arr**	16.68 162	P	Pn	14 48 06.1	-3.6
	comp=Z,0.5nm,0.3s,baz=344,slow=13,SNR=28					
WB2	**Warramunga Arr**	16.68 162	*e*Pn	Pn	14 48 06.9	-2.9
	comp=Z,52nm,1.0s					
COEN	**Coen**	17.19 126	*e*Pn	Pn	14 48 15.3	-0.9
	comp=Z,38nm,1.0s					
SBUM	**Sibu**	17.87 291	*e*P	P	14 48 25.1	0.0
	comp=Z,4.4nm,1.0s					
KSM	**Kuching**	19.37 286	*e*P	P	14 48 41.6	0.0
	comp=Z,11nm,0.9s					
PSA00	**Pilbara Seismi**	19.53 206	*e*P	P	14 48 43.4	+0.2
	comp=Z,165nm,1.8s					
AS31	**Alice Springs**	20.11 167	*e*P	P	14 48 50.0	+0.5
	comp=Z,23nm,0.8s					
AS31			*e*PcP	PcP	14 53 03.7	-0.6
ASAR	**Alice Springs**	20.11 167	P	Pn	14 48 51.0	-0.6
	comp=Z,66nm,0.8s,baz=347,slow=10,SNR=357					
ASAR			PcP	PcP	14 53 03.7	-0.6
	comp=Z,1.8nm,0.6s,baz=353,slow=1.5,SNR=8.9					
ASAR			LR	LR	14 56 59.1	
	comp=Z,198nm,18.6s,baz=324,slow=38					
CTA	**Charters Tower**	23.25 135	P	P	14 49 23.5	+0.3
	comp=Z,9.9nm,1.0s,baz=323,slow=11,SNR=6.3					
FORT	**Forrest**	26.61 182	*e*P	P	14 49 53.6	-0.3
	comp=Z,44nm,0.8s					
STKA	**Stephens Creek**	30.15 158	P	P	14 50 25.8	+0.3
	comp=Z,2.2nm,0.8s,baz=337,slow=14,SNR=3.5					
STKA			LR	LR	15 02 56.7	
	comp=Z,152nm,18.4s,baz=20,slow=37					
STKA	**Stephens Creek**	30.15 158	*e*P	P	14 50 25.8	+0.3
	comp=Z,9.9nm,1.8s					
STKA	**Stephens Creek**	30.15 158	*e*P	P	14 50 25.8	+0.3
STKA			pmax	pmax		
	comp=Z,10.0nm,1.8s					
KHON	**Khomkaen**	32.78 309	P	P	14 50 56.2	+7.4
	comp=Z,52μm,0.9s					
CHAI	**Chaiyaphum**	33.19 307	P	P	14 51 00.3	+7.9
	comp=Z,12μm,0.9s					
NONG	**Nongkai**	33.57 312	P	P	14 51 02.7	+7.0
	comp=Z,0.2nm,1.0s					
UTTA	**Uttaradit**	35.36 309	P	P	14 51 19.1	+7.9
	comp=Z,11μm,1.0s					
CM31	**Chiang Mai Arr**	37.03 308	*e*P	P	14 51 26.0	+0.5
	comp=Z,7.4nm,1.0s					
CM31			*e*PcP	PcP	14 53 46.3	+0.2
CMAR	**Chiang Mai Arr**	37.03 308	P	P	14 51 26.0	+0.5
	comp=Z,2.2nm,1.0s,baz=136,slow=7.5,SNR=10					
CMAR			PcP	PcP	14 53 46.3	+0.2
	comp=Z,1.2nm,0.8s,baz=149,slow=2.3,SNR=5.6					
NJ2	**Nanjing**	37.14 346	*e*P	P	14 51 28.0	+1.8
NJ2			pmax	pmax		
	comp=Z,6.0nm,0.5s					
CMMT	**Chiang Mai**	37.22 309	P	P	14 51 29.0	+1.9
	comp=Z,6.6nm,1.1s					
CHTO	**Chiang Mai**	37.23 309	*e*P	P	14 51 27.9	+0.7
	comp=Z,9.9nm,0.9s					
CHTO	**Chiang Mai**	37.23 309	*e*P	P	14 51 27.9	+0.7
CHTO			pmax	pmax		
	comp=Z,10.0nm,0.9s					
JHJ	**Hachijo jima 2**	38.36 15	LR	LR	15 06 12.5	
	comp=Z,271nm,19.9s,baz=146,slow=34					
KMI	**Kunming**	38.55 320	P	P	14 51 40.8	+2.3
KMI			pmax	pmax		
	comp=Z,12nm,0.7s					
KS15	**Wonju Array Si**	41.27 359	*e*P	P	14 52 02.4	+1.7
	comp=Z,8.2nm,0.8s					
KSAR	**Wonju Array Be**	41.27 359	P	P	14 52 02.4	+1.7
KSRS	**Korea Array**	41.29 359	P	P	14 52 02.4	+1.7
	comp=Z,1.3nm,0.7s,baz=167,slow=7.8,SNR=7.1					
MJAR	**Matsushiro Arr**	41.29 11	P	P	14 52 01.6	+0.7
	comp=Z,6.0nm,0.9s,baz=193,slow=10,SNR=8.8					
MAJO	**Matsushiro**	41.29 11	*e*P	P	14 52 01.6	+0.7
MAJO	**Matsushiro**	41.29 11	*e*P	P	14 52 01.6	+0.7
MAT	**Matsushiro**	41.29 11	P	P	14 52 01.5	+0.6
MAT			S	S	14 58 07.2	-5.9
XAN	**Xi'an**	42.31 335	P	P	14 52 15.3	+6.1
XAN			pmax	pmax		
	comp=Z,6.0nm,0.9s					
LZH	**Lanzhou**	46.29 332	*e*P	P	14 52 40.5	-0.8
LZH			pP	pwP	14 52 52.0	-0.6
LZH			sP	sP	14 52 56.8	+3.2
LZH			*e*PP	PP	14 54 29.5	-0.9
LZH			pmax	pmax		
	comp=Z,23nm,1.3s					
LZH			pmax	pmax		
	comp=Z,79nm,5.2s					
LZH			LR	LR		
	comp=Z,360nm,13.1s					
LZH			LR	LR		
	comp=Z,380nm,13.5s					
LZH			LR	LR		
	comp=Z,470nm,16.7s					
HHC	**Hu-ho-hao-te**	47.40 342	*e*P	P	14 52 52.5	+2.7
HHC			pmax	pmax		
	comp=Z,18nm,1.1s					
HHC			pmax	pmax		
	comp=Z,30nm,5.1s					
USRK	**Ussuriysk Ar.**	48.09 3	P	P	14 52 55.5	+0.5
	comp=Z,1.4nm,0.7s,baz=182,slow=6.9,SNR=3.8					
GTA	**Gaotai**	50.87 331	*e*P	P	14 53 17.0	+0.6
GTA			pmax	pmax		
	comp=Z,2.0nm,0.8s					
KLR	**Kul'dur**	53.10 2	LR	LR	15 16 02.4	
	comp=Z,51nm,20.9s,baz=133,slow=36					
KLR	**Kul'dur**	53.10 2	*i* P	P	14 53 33.5	+0.8
KLR			pmax	pmax		
	comp=Z,6.0nm,1.3s					
ULN	**Ulaanbaatar**	55.12 342	*e*P	P	14 53 47.2	-0.5
	comp=Z,4.7nm,0.7s					
ULN	**Ulaanbaatar**	55.12 342	*ce*P	P	14 53 49.3	+1.6
ULN			pmax	pmax		
	comp=Z,7.0nm,1.0s					
SONA0	**Songino Array**	55.30 342	*e*P	P	14 53 49.2	+0.3
SONM	**Songino Array**	55.30 342	P	P	14 53 49.2	+0.3
	comp=Z,0.5nm,0.3s,baz=144,slow=5.5,SNR=4.4					
ZEA	**Zeya**	57.58 359	*e*P	P	14 54 06.5	+1.7
TLY	**Talaya**	59.53 342	*i* P	P	14 54 18.7	+0.2
TLY			pmax	pmax		
	comp=Z,7.0nm,1.0s					
WMQ	**Urumqi**	60.33 327	P	P	14 54 26.8	+2.6
WMQ			pP	sP	14 54 37.5	+0.7
WMQ			sP	pwP	14 54 40.8	+4.3
WMQ			pmax	pmax		
	comp=Z,11nm,1.1s					
WMQ			pmax	pmax		
	comp=Z,84nm,4.1s					
PETK	**Petropavlovsk-**	61.88 19	P	P	14 54 36.2	+1.7
	comp=Z,2.8nm,0.9s,baz=168,slow=5.0,SNR=5.2					
PEA1	**Petropavlovsk-**	61.89 19	*e*P	P	14 54 36.2	+1.7
BOD	**Bodaibo**	62.81 351	*e*P	P	14 54 39.2	-1.4
BOD			pmax	pmax		
	comp=Z,13nm,0.9s					
DGZ	**Jazzator, Alta**	64.39 332	*i* P	P	14 54 51.6	+0.2
DGZ			pmax	pmax		
	comp=Z,2.0nm,1.1s					
KSH	**Kashi**	65.11 317	P	P	14 55 02.5	+6.2
KSH			PP	PP	14 57 27.0	+7.1
KSH			S	S	15 03 47.5	+10
KSH			pmax	pmax		
	comp=Z,14nm,0.8s					
KSH			pmax	pmax		
	comp=Z,270nm,5.0s					
KSH			LR	LR		
	comp=Z,250nm,13.8s					
KSH			LR	LR		
	comp=Z,240nm,7.9s					
KSH			LR	LR		
	comp=Z,160nm,10.5s					
MK31	**Makanchi Array**	65.16 327	*e*P	P	14 54 55.6	-0.8
	comp=Z,5.2nm,0.8s					
MK31	**Makanchi Array**	65.16 327	*e*P	P	14 54 55.6	-0.8
MK31			pmax	pmax		
	comp=Z,5.0nm,0.8s					
MK32	**Makanchi Array**	65.16 327	*e*P	P	14 54 55.9	-0.5
MKAR	**Makanchi Array**	65.16 327	P	P	14 54 55.9	-0.5
	comp=Z,2.0nm,0.5s,baz=123,slow=8.1,SNR=22					
MKAR	**Makanchi Array**	65.16 327	*ce*P	P	14 54 56.4	+0.1
MKAR			pmax	pmax		
	comp=Z,2.0nm,0.5s					
MAKZ	**Makanchi**	65.34 326	*e*P	P	14 54 56.3	-1.2
	comp=Z,6.4nm,0.9s					
MAKZ	**Makanchi**	65.34 326	*e*P	P	14 54 56.3	-1.2
MAKZ			pmax	pmax		
	comp=Z,6.0nm,0.9s					
YAK	**Yakutsk**	65.88 0	*e*P	P	14 55 00.8	+0.3
	comp=Z,44nm,0.7s					
YAK	**Yakutsk**	65.88 0	*e*P	P	14 55 00.9	+0.3
YAK			*e**PP	sP	14 55 13.6	+0.5
YAK			*e*		14 55 28.3	
YAK			*e*		14 57 24.3	
YAK			*e*PPP	PPP	14 59 08.0	
YAK			*e*S	S	15 03 46.6	+1.3
YAK			*e**SS	sS	15 04 21.1	+21
AAK	**Ala-Archa**	67.59 320	*ce*P	P	14 55 12.9	+0.8
AAK			pmax	pmax		
	comp=Z,4.0nm,1.3s					
ZAA0	**Zalesovo Array**	68.46 334	*e*P	P	14 55 15.8	-1.3
	comp=Z,7.7nm,0.8s					
ZALV	**Zalesovo Beam**	68.46 334	P	P	14 55 15.9	-1.2
	comp=Z,2.7nm,0.7s,baz=103,slow=4.7,SNR=9.6					
ZALV	**Zalesovo Beam**	68.46 334	*i* P	P	14 55 16.5	-0.6
ZALV			pmax	pmax		
	comp=Z,3.0nm,0.7s					
ZAA1	**Zalesovo Array**	68.46 334	*e*P	P	14 55 15.9	-1.2
GAR	**Garm**	68.82 315	*e*P	P	14 55 19.7	-0.2
	comp=Z,21nm,1.1s					
GAR	**Garm**	68.82 315	*e*P	P	14 55 19.7	-0.2
GAR			pmax	pmax		
	comp=Z,21nm,1.1s					
KURK	**Kurchatov**	69.43 329	*e*P	P	14 55 22.9	-0.4
	comp=Z,18nm,0.9s					
KURK	**Kurchatov**	69.43 329	*ce*P	P	14 55 23.0	-0.2
KURK			pmax	pmax		
	comp=Z,12nm,1.3s					
KK31	**Karatay Array**	70.41 319	*e*P	P	14 55 29.2	-0.3
	comp=Z,4.1nm,1.1s					
KK31	**Karatay Array**	70.41 319	*e*P	P	14 55 29.2	-0.3
KK31			pmax	pmax		
	comp=Z,4.0nm,1.1s					
KKAR	**Karatay Array**	70.41 319	*e*P	P	14 55 29.3	-0.1
	comp=Z,4.1nm,1.1s					
KKAR	**Karatay Array**	70.41 319	*e*P	P	14 55 29.3	-0.1
KKAR			pmax	pmax		
	comp=Z,4.0nm,1.1s					
BRVK	**Borovoye**	75.06 328	*e*P	P	14 55 56.8	0.0
	comp=Z,7.0nm,0.8s					
BRVK	**Borovoye**	75.06 328	*e*P	P	14 55 56.8	0.0
BRVK			pmax	pmax		
	comp=Z,7.0nm,0.8s					
VNDA	**Vanda**	75.50 173	P	P	14 55 58.4	-0.6
	comp=Z,1.2nm,0.8s,baz=308,slow=5.8,SNR=8.7					
VNDA			LR	LR	15 28 00.5	
	comp=Z,41nm,18.5s,baz=262,slow=35					
VNDA	**Vanda**	75.50 173	*e*P	P	14 55 58.1	-0.9
VNDA	**Vanda**	75.50 173	*e*P	P	14 55 58.1	-0.9
TIXI	**Tiksi**	75.54 360	*e*P	P	14 55 59.4	+0.2
	comp=Z,7.0nm,1.0s					
TIXI	**Tiksi**	75.54 360	*ce*P	P	14 55 59.6	+0.4
TIXI			pmax	pmax		
	comp=Z,6.0nm,1.7s					
GEYT	**Alibeck**	77.48 310	P	P	14 56 10.9	-0.1
	comp=Z,0.7nm,0.4s,baz=104,slow=10,SNR=3.3					
ABKAR	**Akbulak array**	79.52 322	*e*P	P	14 56 21.4	-0.5
SVE	**Sverdlovsk**	81.68 329	*e*P	P	14 56 32.4	-0.9
SVE			pmax	pmax		
	comp=Z,13nm,0.9s					
ARU	**Arti**	82.63 328	*e*P	P	14 56 37.4	-0.9
	comp=Z,12nm,0.9s					
ARU	**Arti**	82.63 328	*c i* P	P	14 56 38.0	-0.3
ARU					14 59 44.0	
ARU			S	S	15 06 55.8	+2.4
ARU			SS	SS	15 12 15.1	-0.6
ARU			pmax	pmax		
	comp=Z,5.0nm,0.8s					
RAYN	**Ar Rayn**	85.55 294	*e*P	P	14 56 53.3	-0.7
	comp=Z,14nm,1.2s					
RAYN	**Ar Rayn**	85.55 294	*e*P	P	14 56 53.3	-0.7
RAYN			pmax	pmax		
	comp=Z,14nm,1.2s					
RSO	**Redoubt South**	87.76 29	*e*P	P	14 57 00.9	-3.2
ZEI	**Tsey**	89.04 313	*e*P	P	14 57 10.1	-0.6
KBZ	**Khabaz**	89.87 314	P	P	14 57 13.7	-0.5
	comp=Z,1.7nm,0.9s,baz=125,slow=4.6,SNR=3.4					
CCB	**Clear Creek Bu**	90.74 25	*e*P	P	14 57 17.3	-0.5
ILAR	**Eielson Array**	91.15 25	P	P	14 57 18.6	-1.1
	comp=Z,0.5nm,0.7s,baz=265,slow=4.4,SNR=6.9					
ILB	**Eielson Array**	91.15 25	*e*P	P	14 57 18.6	-1.1
	comp=Z,6.5nm,1.6s					
KLMR	**Klimovskoe**	93.19 331	*e*P	P	14 57 26.8	-2.4
KLMR			pmax	pmax		
	comp=Z,10.0nm,1.5s					
KLMR	**Klimovskoe**	93.19 331	*e*P	P	14 57 26.9	-2.3
KLMR			AMP		14 57 34.9	
	comp=Z,10.0nm,1.5s					
DAWY	**Dawson**	94.35 26	*e*P	P	14 57 34.9	+0.3
	comp=Z,4.0nm,0.9s					
ARA0	**ARCESS Array S**	98.44 340	*e*P	Pdif	14 57 53.8	+0.8
ARCES	**ARCESS Array B**	98.44 340	P	Pdif	14 57 53.8	+0.8
	comp=Z,2.5nm,1.1s,baz=89,slow=7.3,SNR=4.7					
TORD	**Torodi Ar. Bea**	127.11 283	PKP	PKPdf	15 03 19.5	-0.9
	comp=Z,1.8nm,1.1s,baz=114,slow=2.1,SNR=5.3					
TOA1	**Torodi Ar. Sit**	127.12 283	*e*PKPdf	PKPdf	15 03 19.5	-0.9
CPUP	**Villa Florida**	149.22 169	PKPbc	PKPbc	15 04 03.6	-0.8
	comp=Z,6.1nm,0.9s,baz=180,slow=5.1,SNR=5.7					

IDC 25 15:01:06.2±2.3, 4°.45S×151°.55E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.4/35, mbtmp3.5/3, Error ellipse: s-maj=158.1km s-min=29.1km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.76	226	P	P	15 06 10.1	-0.4
	1.7nm,0.9s,baz=55,slow=9.8,SNR=7.1						
ASAR	**Alice Springs**	25.59	220	P	P	15 06 38.7	+1.3
	0.4nm,0.6s,baz=54,slow=8.6,SNR=7.4						
ILAR	**Eielson Array**	82.31	22	P	P	15 13 31.2	+1.7
	0.6nm,0.7s,baz=243,slow=5.4,SNR=4.3						
TORD	**Torodi Ar. Bea**	149.01	288	PKPbc	PKPdf	15 20 54.5	+1.1
	0.8nm,1.0s,baz=100,slow=2.3,SNR=2.9						

NIED ***25*** *15:02:00, 31°.80N×141°.80E, h8km, Mw4.1 Best double couple: M0 1.64000×10^15 NP1:φ=202.00000°, δ=67.00000°, λ=8.00000°. NP2:φ=109.00000°, δ=83.00000°, λ=157.00000°.*
IDC ***25*** *15:02:33.9±0.6, 31°.52N×141°.78E, h0km, mb4.3/18, mb1 4.5/22, mb1mx4.3/41, mbtmp4.3/22, ML3.4/4, MS3.4/14, Ms1 3.4/14, ms1mx3.2/38, Error ellipse: s-maj=16.7km s-min=14.7km az=56.0*
NEIC ***25*** *15:02:34.5±2.7, 31°.52N×141°.80E, h6km±16km, mb4.7/33, Error ellipse: s-maj=6.2km s-min=5.7km az=116.0*
BJI ***25*** *15:02:35.0±0.0, 31°.47N×141°.82E, h29km, mb4.6/45, mB4.9/33, Ms4.3/19, Ms7 4.0/18*
MOS ***25*** *15:02:36.7±1.0, 31°.50N×141°.73E, h33km, mb5.0/28, Error ellipse: s-maj=14.2km s-min=6.0km az=120.4*
ISCJB ***25*** *15:02:36.2±0.3, 31°.59N±0°.03×141°.80E±0°.05, h29km, mb4.6/66, MS3.6/20, Error ellipse: s-maj=6.7km s-min=4.2km az=151.2*
JMA ***25*** *15:02:39.4±0.6, 31°.83N×141°.78E, h51km, M3.8*
ISC 25 15:02:38.0±0.5, 31°.63N±0°.06×141°.94E±0°.06, h29km, n163, σ1§67/159, **mb4.7**/66, **MS3.6**/20, **8C-4D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	2.02	295	P	Pn	15 03 08.9	-1.3
JHCJ	**Hachijojimakas**	2.31	309	P	Pn	15 03 12.6	-1.5
JHJ2	**Mitsune**	2.32	310	*e*Pn	Pn	15 03 12.9	-1.3
JHJ2	**Mitsune**	2.32	310	P	Pn	15 03 13.0	-1.3
JHJ	**Hachijo jima 2**	2.35	310	Pn	Pn	15 03 13.0	-1.7
	50nm,0.3s,baz=261,slow=23,SNR=39						
JHJ				Sn	Sn	15 03 42.3	-0.2
	34nm,0.3s,baz=56,slow=23,SNR=6.0						
JMKN	**Mikurajimanish**	3.00	319	P	Pn	15 03 22.1	-1.5
BSO1	**Boso 1**	3.12	345	P	Pn	15 03 24.4	-0.3
BSO3	**Boso 3**	3.38	340	P	Pn	15 03 28.2	-0.4
JHU	**Hanno**	4.75	333	P	Pn	15 03 46.6	-1.1
JYT	**Yasato**	4.81	343	P	Pn	15 03 48.3	-0.1
JRY	**Ryogami san**	5.05	331	P	Pn	15 03 51.9	+0.1
JHO	**Hitachi**	5.09	347	P	Pn	15 03 51.0	-1.4
JAG	**Ashikaga**	5.21	337	P	Pn	15 03 53.7	-0.2
JAG				*e*S	Sn	15 04 52.6	-0.4
INU	**Inuyama**	5.54	313	*e*Pn	Pn	15 03 58.6	+0.2
MJAR	**Matsushiro Arr**	5.79	329	Pn	Pn	15 04 02.6	+0.6
	1.6nm,0.3s,baz=149,slow=11,SNR=85						
MJAR				Sn	Sn	15 05 07.7	+0.2
	baz=172,slow=30,SNR=2.7						
MJAR				LR	LR	15 06 02.5	
	comp=Z,248nm,18.8s,baz=145,slow=36						
MAJO	**Matsushiro**	5.79	329	*e*Pn	Pn	15 04 02.7	+0.7
MAJO				*e*Sn	Sn	15 05 07.7	+0.2
MAJO	**Matsushiro**	5.79	329	*e*P	Pn	15 04 02.7	+0.7
MAJO				*e*		15 05 07.7	
MAT	**Matsushiro**	5.79	329	P	Pn	15 04 02.9	+0.9
MAT				S	Sn	15 05 06.5	-1.0
MJB9	**Matsu-Tunnel**	5.80	329	*e*Pn	Pn	15 04 02.5	+0.4
JMK	**Ichinoseki**	7.33	356	P	Pn	15 04 21.6	-1.4
JMK				*e*S	Sn	15 05 41.0	-4.2
JNU	**Nakatsue**	9.47	282	Pn	Pn	15 04 56.5	+4.0
	0.2nm,0.3s,baz=80,slow=8.1,SNR=7.5						
ERM	**Erimo**	10.41	5	*e*Pn	Pn	15 05 02.4	-2.8
ERM	**Erimo**	10.41	5	*ce*P	Pn	15 05 02.7	-2.5
ERM				pmax	pmax		
	comp=Z,15nm,1.0s						
ASAJ	**Asahikawa**	12.47	2	Pn	Pn	15 05 31.0	-2.5
	comp=Z,0.7nm,0.3s,baz=223,slow=12,SNR=9.9						
ASAJ				Sn	Sn	15 07 44.5	-6.9
	comp=Z,0.2nm,0.3s,baz=66,slow=18,SNR=4.7						
KSRS	**Korea Array**	12.93	301	Pn	Pn	15 05 43.5	+3.8
	comp=Z,0.3nm,0.3s,baz=110,slow=13,SNR=14						
KSRS				LR	LR	15 10 42.8	
	comp=Z,81nm,19.4s,baz=135,slow=38						
KSAR	**Wonju Array Be**	12.95	300	Pn	Pn	15 05 43.5	+3.5
KSAR	**Wonju Array Be**	12.95	300	P	Pn	15 05 43.5	+3.5
USRK	**Ussuriysk Ar.**	14.79	331	Pn	Pn	15 06 04.7	-0.3
	comp=Z,0.2nm,0.3s,baz=139,slow=13,SNR=7.3						
YSS	**Yuzh-Sakhalins**	15.31	2	*e*Pn	Pn	15 06 09.8	-2.2
	comp=Z,15nm,1.0s						
YSS	**Yuzh-Sakhalins**	15.31	2	*e*P	Pn	15 06 09.4	-2.6
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,12.5s						
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS				MLR	MLR		
	comp=E,200nm,14.0s						
CN2	**Changchun**	17.79	318	*e*P	P	15 06 45.0	+1.1
CN2				pmax	pmax		
	comp=E,10.0nm,0.7s						
KLR	**Kul'dur**	19.18	339	P	P	15 06 58.9	-0.3
	comp=E,0.4nm,0.3s,baz=142,slow=12,SNR=14						
KLR	**Kul'dur**	19.18	339	‖ *i* P	P	15 06 57.5	-1.7
KLR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TYV	**Tymovskoe**	19.22	1	*e*P	Pn	15 07 01.6	+0.9
TYV				*e*S	S	15 10 42.4	+6.9
TYV				pmax	pmax		
	comp=Z,100nm,3.2s						
TYV				pmax	pmax		
	comp=Z,16nm,1.0s						
TYV				smax	smax		
	comp=N,9.0nm,1.1s						
TYV				smax	smax		
	comp=N,400nm,10.2s						
GRNR	**Gornyy**	19.55	349	*e*P	Pn	15 07 08.0	+3.3
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
NJ2	**Nanjing**	19.61	277	*e*P	P	15 07 02.0	-2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SKR	**Severo-Kuril's**	21.75	25	*e*P	P	15 07 23.0	-4.0
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
BJT	**Baijiatuau**	22.45	299	*e*P	P	15 07 32.0	-2.7
	comp=Z,9.0nm,0.6s						
BJT	**Baijiatuau**	22.45	299	*e*P	P	15 07 32.0	-2.7
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HIA	**Hailar**	24.26	323	*e*P	P	15 07 51.1	-1.4
	comp=Z,54nm,1.6s						
HIA	**Hailar**	24.26	323	*e*P	P	15 07 51.1	-1.4
HIA				pmax	pmax		
	comp=Z,53nm,1.6s						
ZEA	**Zeya**	24.49	339	*e*P	P	15 07 56.0	+1.5
ZEA				pmax	pmax		
	comp=Z,200nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.0s						
H11N2	**WAKE ISLAND Hy**	25.36	112	T	T	15 34 24.8	
	baz=304,slow=75,SNR=8.8						
H11N1	**WAKE ISLAND Hy**	25.36	112	T	T	15 34 30.5	
	baz=304,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	25.38	112	T	T	15 34 28.9	
	baz=304,slow=75,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	25.88	114	T	T	15 35 01.6	
	baz=304,slow=73,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	25.88	114	T	T	15 35 02.7	
	baz=304,slow=73,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	25.90	114	T	T	15 35 04.3	
	baz=304,slow=73,SNR=4.2						
TGY	**Tagaytay City**	25.97	233	LR	LR	15 18 59.6	
	comp=Z,64nm,18.1s,baz=56,slow=38						
HHC	**Hu-ho-hao-te**	26.06	299	*e*P	P	15 08 09.5	+0.5
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,20nm,5.3s						
XAN	**Xi'an**	27.78	284	P	P	15 08 22.3	-2.2
XAN				pP	sP	15 08 33.0	-0.8
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN				LR	LR		
	comp=Z,140nm,11.9s						
XAN				LR	LR		
	comp=Z,180nm,15.2s

ZAK pmax pmax
comp=Z,3.0nm,1.3s
TLY Talaya 34.39 317 *e*P **P 15 09 22.9 +0.5**
comp=Z,6.9nm,1.0s
TLY Talaya 34.39 317 *e*P **P 15 09 23.5 +1.0**
TLY pmax pmax
comp=Z,20nm,1.1s
TLY MLR MLR
comp=Z,326nm,16.0s
GTA Gaotai 34.90 295 *e*P **P 15 09 25.0 -2.2**
GTA pP pP 15 09 32.0 -1.7
GTA sP sP 15 09 35.5 -1.0
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,140nm,6.3s
GTA LR LR
comp=Z,130nm,11.4s
GTA LR LR
comp=Z,150nm,13.7s
GTA LR LR
comp=Z,150nm,10.8s
RABL Rabaul 36.93 163 *e*P **P 15 09 44.5 -0.1**
BILL Bilibino 39.11 14⇓*e*P **P 15 10 03.0 +0.6**
BILL *e* 15 10 16.2
BILL 15 12 16.0
BILL pmax pmax
comp=Z,2.0nm,1.1s
CM31 Chiang Mai Arr 40.85 262 *e*P **P 15 10 15.2 -2.2**
comp=Z,20nm,1.8s
CMAR Chiang Mai Arr 40.85 262 P **P 15 10 15.2 -2.2**
comp=Z,1.3nm,0.7s,baz=55,slow=7.0,SNR=13
CMAR LR LR 15 28 37.9
comp=Z,35nm,18.9s,baz=140,slow=38
WMQ Urumqi 43.87 302 P **P 15 10 43.0 +1.1**
WMQ pP sP 15 10 49.3 -2.0
WMQ sP pwP 15 10 53.8 -3.3
WMQ pmax pmax
comp=Z,14nm,0.9s
WMQ pmax pmax
comp=Z,130nm,6.3s
WMQ LR LR
comp=Z,40nm,29.0s
WMQ LR LR
comp=Z,180nm,28.8s
ZAA0 Zalesovo Array 46.00 316 *e*P **P 15 10 57.8 -0.7**
comp=Z,7.6nm,0.9s
ZALV Zalesovo Beam 46.00 316 P **P 15 10 58.8 +0.3**
comp=Z,5.6nm,0.7s,baz=104,slow=7.5,SNR=20
ZALV PcP **PcP 15 12 35.2 +0.5**
comp=Z,0.9nm,0.4s,baz=104,slow=4.6,SNR=3.0
ZALV LR LR 15 31 42.3
comp=Z,35nm,19.4s,baz=70,slow=38
ZAA1 Zalesovo Array 46.00 316 *e*P **P 15 10 58.8 +0.3**
ZAA1 *e*PcP **PcP 15 12 35.2 +0.4**
NVS Novosibirsk 47.00 317 *e*P **P 15 11 06.3 0.0**
MK31 Makanchi Array 47.52 306 *e*P **P 15 11 10.1 -0.5**
comp=Z,8.4nm,0.9s
MK31 Makanchi Array 47.52 306 *i*P **P 15 11 10.0 -0.5**
MK31 pmax pmax
comp=Z,15nm,1.0s
MK32 Makanchi Array 47.52 306 *e*P **P 15 11 10.4 -0.1**
MKAR Makanchi Array 47.52 306 P **P 15 11 10.4 -0.1**
comp=Z,6.7nm,0.7s,baz=90,slow=9.7,SNR=64
MKAR Makanchi Array 47.52 306 *ce*P **P 15 11 10.3 -0.3**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
MAKZ Makanchi 47.73 307 *e*P **P 15 11 11.9 -0.3**
comp=Z,7.2nm,0.7s
MAKZ Makanchi 47.73 307 *e*P **P 15 11 11.9 -0.3**
MAKZ pmax pmax
comp=Z,7.0nm,0.7s
KURK Kurchatov 49.73 312 *e*P **P 15 11 26.8 -0.7**
comp=Z,52nm,1.3s
KURK Kurchatov 49.73 312 *i*P **P 15 11 27.3 -0.2**
KURK pmax pmax
comp=Z,38nm,1.2s
PDGK Podgornoye 49.85 302 P **P 15 11 27.8 -0.9**
PDGK pmax pmax
comp=Z,13nm,0.8s
WRAB Tennant Creek 51.78 189 *e*P **P 15 11 41.8 -1.4**
comp=Z,6.0nm,0.8s
WRAB Tennant Creek 51.78 189 *i*P **P 15 11 41.1 -2.1**
WB2 Warramunga Arr 51.79 189 *e*P **P 15 11 41.9 -1.4**
comp=Z,35nm,1.7s
WR1 Warramunga Arr 51.80 189 *e*P **P 15 11 42.3 -1.0**
WRA Warramunga Arr 51.80 189 P **P 15 11 42.3 -1.0**
comp=Z,12nm,1.2s,baz=358,slow=8.3,SNR=29
TOLK Toolik Lake Re 53.12 25 *e*P **P 15 11 53.5 +0.9**
comp=Z,5.0nm,0.8s
KSH Kashi 53.17 298 P P 15 11 57.8 +4.3
KSH pP pwP 15 12 07.5 -1.4
KSH PP PP 15 14 00.5 +7.0
KSH S **S 15 19 26.0 +3.5**
KSH ScS **ScS 15 21 42.8 +1.5**
KSH SS **SS 15 23 04.5 +2.5**
KSH pmax pmax
comp=Z,22nm,1.0s
KSH pmax pmax
comp=Z,280nm,4.6s
KSH LR LR
comp=Z,280nm,7.7s
KSH LR LR
comp=Z,170nm,8.4s
KSH LR LR
comp=Z,340nm,8.6s
AAK Ala-Archa 53.58 302 LR LR 15 35 13.9
comp=Z,44nm,18.4s,baz=69,slow=37
AAK Ala-Archa 53.58 302 *e*P **P 15 11 55.7 -0.9**
comp=Z,4.1nm,0.8s
AAK Ala-Archa 53.58 302 *ce*P **P 15 11 55.5 -1.1**
AAK pmax pmax
comp=Z,4.0nm,1.0s
HDA Harding Lake 53.84 31 *e*P **P 15 11 58.4 +0.5**
comp=Z,5.7nm,1.2s
ILAR Eielson Array 53.88 30 P **P 15 11 58.9 +0.7**
comp=Z,3.6nm,1.0s,baz=266,slow=6.4,SNR=28
ILB Eielson Array 53.88 30 *e*P **P 15 11 58.2 0.0**
comp=Z,5.2nm,1.0s
BRVK Borovoye 54.68 315 *e*P **P 15 12 03.8 -0.4**
comp=Z,7.1nm,1.0s
BRVK Borovoye 54.68 315 *i*P **P 15 12 04.1 -0.1**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
DOT Dot Lake 55.11 32 *e*P **P 15 12 08.2 +1.0**
comp=Z,8.7nm,1.7s
AS31 Alice Springs 55.52 189 *e*P **P 15 12 09.7 -0.8**
comp=Z,1.5nm,0.6s
ASAR Alice Springs 55.52 189 P **P 15 12 09.6 -1.0**
comp=Z,3.6nm,0.8s,baz=0.0,slow=5.5,SNR=44
EGAK Eagle 56.33 30 *e*P **P 15 12 16.4 +0.6**
comp=Z,14nm,1.8s
KK31 Karatay Array 56.34 303 *e*P **P 15 12 15.9 -0.4**
comp=Z,19nm,0.8s
KK31 Karatay Array 56.34 303 *i*P **P 15 12 16.2 -0.1**
KK31 pmax pmax
comp=Z,13nm,0.7s
KKAR Karatay Array 56.34 303 *e*P **P 15 12 15.9 -0.4**
comp=Z,19nm,0.8s
KKAR Karatay Array 56.34 303 *e*P **P 15 12 15.9 -0.4**
KKAR pmax pmax
comp=Z,19nm,0.8s
DAWY Dawson 57.15 31 *e*P **P 15 12 23.5 +1.7**
comp=Z,15nm,2.0s
GAR Garm 57.54 299 *e*P **P 15 12 24.5 -0.6**
comp=Z,19nm,0.9s
GAR Garm 57.54 299 *e*P **P 15 12 24.5 -0.6**
GAR pmax pmax
comp=Z,19nm,0.9s
EPYK Eagle Plains 58.03 28 *e*P **P 15 12 29.4 +1.5**
comp=Z,10nm,0.9s
INK Inuvik 59.02 26 P **P 15 12 36.4 +1.7**
comp=Z,2.0nm,0.5s,baz=281,slow=3.1,SNR=3.4
INK Inuvik 59.02 26 *e*P **P 15 12 35.8 +1.1**
comp=Z,5.8nm,1.1s
INK Inuvik 59.02 26 *e*P **P 15 12 35.8 +1.1**
INK pmax pmax
comp=Z,6.0nm,1.1s
SVE Sverdlovsk 59.54 321 *e*P **P 15 12 39.4 +0.9**
SVE pmax pmax
comp=Z,20nm,1.4s
ARU Arti 60.75 321 LR LR 15 40 04.6
comp=Z,23nm,20.4s,baz=69,slow=37
ARU Arti 60.75 321 *e*P **P 15 12 46.6 -0.2**
comp=Z,22nm,1.2s
ARU Arti 60.75 321 *c i*P **P 15 12 47.0 +0.2**
ARU 15 13 26.5
ARU 15 14 56.2
ARU S **S 15 21 07.9 +6.1**
ARU SS **SS 15 24 54.1 -6.1**
ARU pmax pmax
comp=Z,20nm,1.2s
AB31 Akbulak array 61.83 313 *i*P **P 15 12 54.1 -0.1**
AB31 pmax pmax
comp=Z,4.0nm,0.5s
ABKAR Akbulak array 61.83 313 *e*P **P 15 12 53.8 -0.4**
comp=Z,8.2nm,0.8s
AKTO Aktyubinsk 62.68 314 LR LR 15 43 48.5
comp=Z,17nm,18.0s,baz=85,slow=40
AKTO Aktyubinsk 62.68 314 P **P 15 12 59.4 -0.5**
AKTO pmax pmax
comp=Z,9.0nm,0.9s
KIRV Kirov 64.86 325 LR LR 15 44 18.8
comp=Z,42nm,19.2s,baz=126,slow=39
PRGR Permogore 65.56 329 *e*P **P 15 13 17.8 -0.8**
PRGR pmax pmax
comp=Z,4.0nm,0.5s
GEYT Alibeck 66.92 301 P **P 15 13 28.2 +0.4**
comp=Z,9.6nm,0.9s,baz=29,slow=3.4,SNR=15
GEYT LR LR 15 46 19.5
comp=Z,34nm,19.2s,baz=75,slow=39
GYA0B ALIBECK ARRAY 66.92 301 *e*P **P 15 13 27.1 -0.7**
comp=Z,13nm,0.9s
YKA Yellowknife Ar 68.28 29 P **P 15 13 36.4 +0.5**
comp=Z,0.9nm,0.8s,baz=296,slow=6.0,SNR=4.2
YKB5 Yellowknife Ar 68.28 29 *e*P **P 15 13 36.4 +0.5**
KLMR Klimovskoe 68.58 329 *e*P **P 15 13 36.7 -1.0**
KLMR pmax pmax
comp=Z,8.0nm,1.5s
KLMR Klimovskoe 68.58 329 *e*P **P 15 13 36.7 -1.0**
KLMR AMP 15 13 39.3
comp=Z,8.0nm,1.5s
VRH Novokhopyorsk 71.91 319 *e*P **P 15 13 56.4 -1.9**
VRH pmax pmax
comp=Z,9.0nm,0.5s
AKT Akhty 72.70 308 *e*P **P 15 14 03.8 +0.4**
AKT *e* 15 14 21.2
AKT pmax pmax
comp=Z,7.0nm,0.6s
OBN Obninsk 72.71 325⇓*e*P **P 15 14 03.4 +0.4**
OBN *e* 15 14 17.9
OBN pmax pmax
comp=Z,8.0nm,0.5s
OBN MLR MLR
comp=Z,62nm,18.0s
VSR Storozhevoye 73.31 320 *e*P **P 15 14 05.8 -0.9**
VSR pmax pmax
comp=Z,5.0nm,0.6s
FIA0 FINESS Array S 73.80 333 *e*P **P 15 14 09.6 +0.2**
FIA0 FINESS Array S 73.80 333 *e*P **P 15 14 09.6 +0.2**
FINES FINESS Array B 73.80 333 P **P 15 14 09.6 +0.2**
comp=Z,1.5nm,0.5s,baz=50,slow=6.0,SNR=10
KBZ Khabaz 74.79 312 P **P 15 14 16.5 +1.0**
comp=Z,3.9nm,0.8s,baz=127,slow=5.5,SNR=8.0
KIV Kislovodsk 74.81 312 *e*P **P 15 14 17.1 +1.4**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,97nm,18.0s
NV01 Mina Array Sit 77.91 52 *e*P **P 15 14 35.0 +1.5**
NVAR Mina Array Bea 77.91 52 P **P 15 14 35.0 +1.5**
comp=Z,0.5nm,0.6s,baz=304,slow=5.8,SNR=4.5
AKASG Malin Array Be 78.85 323 LR LR 15 52 39.6
comp=Z,37nm,20.8s,baz=0.0,slow=38
NB2 NORSAR Subarra 79.33 338 P **P 15 14 41.0 +0.2**
comp=Z,1.2nm,0.7s,baz=41,slow=5.3
NB200 NORSAR Array S 79.33 338 *e*P **P 15 14 41.0 +0.2**
NOA NORSAR Array B 79.33 338 P **P 15 14 41.0 +0.2**
comp=Z,1.8nm,0.8s,baz=41,slow=5.4,SNR=8.7
NOA LR LR 15 52 39.7
comp=Z,31nm,20.8s,baz=0.0,slow=38
NOA NORSAR Array B 79.33 338 P **P 15 14 41.0 +0.2**
PD31 Pinedale Array 81.16 45 *e*P **P 15 14 52.5 +1.3**
comp=Z,3.8nm,1.5s
PDAR Pinedale Array 81.16 45 P **P 15 14 52.5 +1.3**
comp=Z,0.6nm,0.8s,baz=213,slow=3.1,SNR=4.9
BR101 Keskin Array S 82.78 312 *e*P **P 15 15 00.5 +0.9**
BRTR Keskin Array B 82.78 312 P **P 15 15 00.5 +0.9**
comp=Z,2.3nm,0.9s,baz=128,slow=3.4,SNR=8.1
BURAR Bucovina Array 82.83 322⇓*i*P **P 15 15 00.6 +0.9**
BURAR Bucovina Array 82.83 322⇓P **P 15 15 00.6 +0.9**
RAYN Ar Rayn 83.14 293 *e*P **P 15 15 02.0 +0.3**
comp=Z,11nm,0.8s
RAYN Ar Rayn 83.14 293 *e*P **P 15 15 02.0 +0.3**
RAYN pmax pmax
comp=Z,11nm,0.8s
MORC Moravsky Berou 85.12 328⇑*i*P **P 15 15 12.1 +0.8**
MORC Moravsky Berou 85.12 328⇑P **P 15 15 12.1 +0.8**
VYHS Vyhne 85.42 326 *e*P P 15 15 17.6 +4.8
VYHS Vyhne 85.42 326 *e*P P 15 15 17.6 +4.8
TX31 Lajitas Ar. Si 93.05 53 *e*P **P 15 15 51.1 +1.7**
comp=Z,5.7nm,1.2s
TXAR Lajitas Array 93.05 53 P **P 15 15 50.9 +1.5**
comp=Z,1.6nm,0.7s,baz=310,slow=2.4,SNR=14
SNAA Sanae 135.69 195 *e*PKPdf **PKPdf 15 21 54.3 -0.4**
SNAA Sanae 135.69 195 *e*PKIKP **PKPdf 15 21 54.3 -0.4**
LPAZ La Paz 148.69 68 PKPbc **PKiKP 15 22 26.4 +1.1**
comp=Z,2.1nm,0.7s,baz=293,slow=5.2,SNR=7.1
SIV San Ignacio 153.90 59 PKPbc **PKiKP 15 22 36.3 +1.1**
comp=Z,0.7nm,0.8s,baz=203,slow=6.3,SNR=4.4

NEIC ***25*** *15:09:38.7±1.2, 24°.36S×177°.34W, h128km±11km, mb4.7/15, Error ellipse: s-maj=11.8km s-min=6.1km az=124.0*
IDC ***25*** *15:09:39.8±6.8, 24°.36S×177°.37W, h135km±60km, mb3.8/13, mb1 4.0/14, mb1mx3.9/31, mbtmp4.3/14, Error ellipse: s-maj=22.3km s-min=19.9km az=79.0*
ISCJB ***25*** *15:09:40.0±0.4, 24°.615±0°.04×177°.4W±0°.1, h153km, mb4.2/19, Error ellipse: s-maj=13.3km s-min=5.4km az=15.6*
ISC 25 15:09:41.0±0.5, 24°.52S±0°.06×177°.3W±0°.1, h153km, n93, σ2.930/77, mb4.1/19, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.76**	**186**	P	**Pn**	**15 10 52.7**	**+1.5**
GLKZ				S	**Sn**	**15 11 49.8**	**+3.8**
NIUE	**Niue**	**8.75**	**53**	*e*Pn	**Pn**	**15 11 40.4**	**-4.1**
OUZ	**Omahuta**	**13.25**	**214**	*e*P	**P**	**15 12 48.8**	**+1.4**
OUZ	**Omahuta**	**13.25**	**214**	P	**P**	**15 12 48.5**	**+1.1**
WCZ	**Waipu Caves**	**13.46**	**210**	P	**P**	**15 12 50.8**	**+1.0**
MXZ	**Matakaoa Point**	**13.53**	**195**	S	Sn	15 15 04.0	-13
WMGZ	**Waiomatatini S**	**13.75**	**194**	S	Sn	15 15 09.7	-12
HAZ	**Te Kaha**	**13.84**	**196**	P	**Pn**	**15 12 50.0**	**-0.7**
HAZ				S	Sn	15 15 13.0	-11
PKGZ	**Pakihiroa**	**13.89**	**195**	P	Pn	15 12 44.3	-7.2
PKGZ				S	Sn	15 15 13.9	-11
PUZ	**Puketiti**	**14.03**	**195**	P	**Pn**	**15 12 51.6**	**-1.5**
RUGZ	**Raukumara Rang**	**14.07**	**196**	P	**Pn**	**15 12 51.4**	**-2.3**
RUGZ				S	Sn	15 15 17.1	-13
TWGZ	**Tauwhareparae**	**14.19**	**195**	P	**P**	**15 12 58.0**	**0.0**
TWGZ				S	Sn	15 15 20.7	-12
MWZ	**Matawai**	**14.45**	**196**	P	**Pn**	**15 12 56.8**	**-1.7**
MWZ				S	Sn	15 15 25.8	-13
URZ	**Urewera**	**14.49**	**198**	P	**Pn**	**15 13 01.0**	**+2.1**
	4.3nm,0.3s,baz=258,slow=3.1,SNR=21						
URZ				S	Sn	15 15 25.6	-14
	1.3nm,0.3s,baz=163,slow=20,SNR=6.0						
URZ	**Urewera**	**14.49**	**198**	*e*Pn	**Pn**	**15 12 59.6**	**+0.7**
URZ				S	Sn	15 15 25.6	-14
URZ	**Urewera**	**14.49**	**198**	P	**Pn**	**15 12 58.1**	**-0.8**
URZ				S	Sn	15 15 24.6	-15
TOZ	**Tahuroa Road**	**14.52**	**203**	P	**P**	**15 13 02.8**	**+1.2**
RAGZ	**Rawiri**	**14.63**	**197**	P	**Pn**	**15 12 58.9**	**-1.8**
RAGZ				S	Sn	15 15 31.1	-12
RIGZ	**Rimuhau**	**14.75**	**195**	P	**Pn**	**15 13 02.9**	**+0.8**
RIGZ				S	Sn	15 15 33.7	-12
RTZ	**Ruatahuna**	**14.86**	**198**	P	**Pn**	**15 13 02.3**	**-1.3**
RTZ				S	Sn	15 15 33.0	-16
TLZ	**Tolley Road**	**15.05**	**202**	P	**P**	**15 13 08.3**	**+0.8**
RAHZ	**Arahi**	**15.12**	**197**	P	**Pn**	**15 13 05.9**	**-0.8**
RAHZ				S	Sn	15 15 42.9	-12
MRHZ	**Matea Rd**	**15.23**	**199**	P	**Pn**	**15 13 07.2**	**-0.9**
MRHZ				S	Sn	15 15 45.9	-12
HIZ	**Hauiti**	**15.45**	**204**	*e*P	**P**	**15 13 13.5**	**+1.6**
	77nm,1.2s						
HIZ	**Hauiti**	**15.45**	**204**	P	**P**	**15 13 13.5**	**+1.6**
BKZ	**Black Stump Fm**	**15.51**	**198**	*e*Pn	**Pn**	**15 13 10.3**	**-1.2**
	73nm,1.7s						
BKZ	**Black Stump Fm**	**15.51**	**198**	P	**Pn**	**15 13 09.7**	**-1.9**
BKZ				S	Sn	15 15 51.3	-13
MCHZ	**McNeill Hill**	**15.71**	**197**	P	**Pn**	**15 13 12.1**	**-2.0**
MCHZ				S	Sn	15 15 53.9	-15
TUVZ	**Tukino**	**15.86**	**200**	P	**Pn**	**15 13 13.8**	**-2.2**
FWVZ	**Far West T-bar**	**15.88**	**201**	P	**Pn**	**15 13 14.9**	**-1.4**
DRZ	**Dome Shelter**	**15.89**	**201**	P	**P**	**15 13 21.2**	**+4.1**
BHHZ	**Black Hill Sta**	**15.94**	**199**	P	**Pn**	**15 13 14.5**	**-2.3**
BHHZ				S	S	15 15 59.4	-15
PKVZ	**Pokaka**	**15.98**	**201**	P	**Pn**	**15 13 16.0**	**-1.3**
KRHZ	**Kereru**	**15.99**	**198**	P	**Pn**	**15 13 15.0**	**-2.4**
KAHZ	**Kahuranaki**	**16.00**	**196**	P	**Pn**	**15 13 16.2**	**-1.3**
VRZ	**Vera Road**	**16.03**	**203**	P	**P**	**15 13 19.2**	**+0.9**
PXZ	**Pawanui**	**16.22**	**196**	P	**Pn**	**15 13 15.3**	**-4.9**
PNHZ	**Pukenui**	**16.29**	**198**	P	**Pn**	**15 13 18.8**	**-2.3**
TSZ	**Takapari Road**	**16.49**	**198**	P	**P**	**15 13 18.9**	**-4.6**
DVHZ	**Dannevirke**	**16.66**	**198**	P	**S**	**15 16 26.0**	**-4.5**
ANWZ	**Angora Road**	**16.73**	**197**	P	**S**	**15 16 25.5**	**-6.4**
POWZ	**Post Office Ro**	**16.86**	**198**	P	S	15 16 23.4	-12
PRWZ	**Pori Road**	**16.95**	**198**	P	S	15 16 22.8	-14
BFZ	**Birch Farm**	**16.99**	**197**	*e*P	**P**	**15 13 28.2**	**-0.8**
	140nm,1.5s						
BFZ	**Birch Farm**	**16.99**	**197**	P	**P**	**15 13 26.8**	**-2.1**
BFZ	**Birch Farm**	**16.99**	**197**	P	S	15 16 25.6	-13
MRZ	**Mangatainoka R**	**17.16**	**199**	P	S	15 16 26.6	-15
TIWZ	**Tintock**	**17.18**	**198**	P	S	15 16 28.9	-13
HOWZ	**Holdsworth Sta**	**17.40**	**198**	P	S	15 16 30.3	-16
OGWZ	**Otaki Gorge**	**17.42**	**199**	P	S	15 16 37.3	-10
MTW	**Mount Morrison**	**17.64**	**198**	P	S	15 16 38.7	-13
CAW	**Cannon Point**	**17.72**	**199**	P	S	15 16 41.3	-12
DUWZ	**D'Urville Isla**	**17.81**	**202**	P	**S**	**15 16 45.9**	**-9.0**
PAWZ	**Paruwai Farm**	**17.87**	**198**	P	S	15 16 44.2	-12
TCW	**Tory Channel**	**18.06**	**201**	P	S	15 16 47.2	-12
PLWZ	**Palliser**	**18.09**	**198**	P	S	15 16 49.3	-11
QRZ	**Quartz Range**	**18.34**	**205**	P	**S**	**15 16 59.2**	**-6.0**
TUWZ	**Tuamarina**	**18.37**	**201**	P	S	15 16 53.6	-12
NNZ	**Nelson**	**18.37**	**203**	P	S	15 16 55.3	-10
THZ	**Tophouse**	**19.02**	**203**	*e*P	**P**	**15 13 52.6**	**+1.5**
	46nm,1.3s						
THZ	**Tophouse**	**19.02**	**203**	P	S	15 17 09.3	-10
KHZ	**Kahutara**	**19.39**	**201**	*e*P	**P**	**15 13 54.5**	**-0.5**
	131nm,1.8s						
RPZ	**Rata Peaks**	**21.39**	**204**	P	**P**	**15 14 17.2**	**+0.7**
	16nm,0.7s,baz=324,slow=3.4,SNR=7.0						
STKA	**Stephens Creek**	**36.77**	**249**	P	**P**	**15 16 34.7**	**+0.7**
	2.6nm,0.7s,baz=96,slow=12,SNR=10						
STKA	**Stephens Creek**	**36.77**	**249**	*e*P	**P**	**15 16 34.5**	**+0.6**
	3.7nm,1.6s						
AS31	**Alice Springs**	**44.34**	**261**	*e*P	**P**	**15 17 36.4**	**+0.2**
	1.3nm,0.5s						
ASAR	**Alice Springs**	**44.34**	**261**	P	**P**	**15 17 36.4**	**+0.1**
	1.8nm,0.3s,baz=93,slow=7.4,SNR=111						
ASAR				S	**S**	**15 23 56.3**	**-2.8**
	0.3nm,1.0s,baz=110,slow=15,SNR=4.1						
WR1	**Warramunga Arr**	**44.79**	**266**	*e*P	**P**	**15 17 39.6**	**-0.2**
WRA	**Warramunga Arr**	**44.79**	**266**	P	**P**	**15 17 39.6**	**-0.2**
	3.6nm,0.5s,baz=94,slow=9.3,SNR=54						
VNDA	**Vanda**	**53.99**	**185**	P	**P**	**15 18 51.2**	**+2.5**
	1.0nm,0.6s,baz=12,slow=4.7,SNR=6.0						
VNDA	**Vanda**	**53.99**	**185**	*e*P	**P**	**15 18 50.9**	**+2.3**
CASY	**Casey**	**60.63**	**206**	*e*P	**P**	**15 19 36.3**	**+1.0**
	15nm,0.6s						
QSPA	**South Pole Qui**	**65.57**	**180**	*e*P	**P**	**15 20 09.9**	**+1.7**
	5.7nm,0.8s						
KIWB	**Kanaga Island**	**76.04**	**0**	*e*P	**P**	**15 21 10.2**	**-0.9**
MAW	**Mawson**	**78.01**	**200**	P	**P**	**15 21 24.2**	**+2.1**
	5.8nm,0.6s,baz=136,slow=7.1,SNR=26						
MAW	**Mawson**	**78.01**	**200**	*e*P	**P**	**15 21 23.9**	**+1.8**
	1.4nm,0.6s						
PETK	**Petropavlovsk-**	**80.29**	**345**	P	**P**	**15 21 34.9**	**+0.4**
	2.5nm,0.7s,baz=140,slow=7.0,SNR=3.3						
PEA1	**Petropavlovsk-**	**80.30**	**345**	*e*P	**P**	**15 21 34.9**	**+0.4**
NV01	**Mina Array Sit**	**83.53**	**43**	*e*P	**P**	**15 21 52.9**	**+0.8**
NVAR	**Mina Array Bea**	**83.53**	**43**	P	**P**	**15 21 52.9**	**+0.8**
	0.6nm,0.6s,baz=213,slow=8.3,SNR=7.2						
PLCA	**Paso Flores**	**86.08**	**133**	P	**P**	**15 22 04.5**	**-0.4**
	1.8nm,0.7s,baz=296,slow=6.6,SNR=3.6						
TXAR	**Lajitas Array**	**88.71**	**57**	P	**P**	**15 22 18.5**	**+1.0**
	0.2nm,0.5s,baz=230,slow=5.6,SNR=2.9						
TRF	**Thorofare Moun**	**90.23**	**12**	*e*P	**P**	**15 22 23.7**	**-0.1**
	1.2nm,0.8s						
SEY	**Seymchan**	**90.41**	**347**	P	**P**	**15 22 24.7**	**+0.3**
	3.8nm,0.8s,baz=143,slow=7.5						
RND	**Reindeer**	**90.47**	**12**	*e*P	**P**	**15 22 25.6**	**+0.7**
	7.7nm,1.1s						
PD31	**Pinedale Array**	**91.46**	**43**	*e*P	**P**	**15 22 30.2**	**0.0**
	6.4nm,1.9s						
PDAR	**Pinedale Array**	**91.46**	**43**	P	**P**	**15 22 30.2**	**0.0**
	0.3nm,0.7s,baz=212,slow=3.2,SNR=2.9						
ILAR	**Eielson Array**	**92.08**	**13**	P	**P**	**15 22 31.3**	**-0.9**
	0.5nm,0.7s,baz=233,slow=5.1,SNR=5.7						
ILB	**Eielson Array**	**92.08**	**13**	*e*P	**P**	**15 22 31.3**	**-0.9**
	12nm,1.9s						
PHWY	**Pilot Hill**	**93.31**	**46**	*e*P	**P**	**15 22 39.6**	**+0.8**
	29nm,0.9s						
AKTO	**Aktyubinsk**	**130.43**	**316**	PKP	**PKPdf**	**15 28 32.6**	**-0.5**
	0.6nm,0.5s,baz=40,slow=14,SNR=3.1						
TORD	**Torodi Ar. Bea**	**168.65**	**175**	PKPab	**PKPab**	**15 30 41.5**	**+0.7**
	1.2nm,0.7s,baz=187,slow=4.4,SNR=6.8						
TOA1	**Torodi Ar. Sit**	**168.66**	**175**	*e*PKPab	**PKPab**	**15 30 41.5**	**+0.6**

DJA 25 15:20:34.7±0.4, 4°S±3°×12°9E±°, h10km, M3.8/7, MLv3.8/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.71**	**302**	P	Pg	15 20 48.7	+0.3
AAI				S	Sb	15 20 58.6	-0.4
MSAI	**Masohi**	**0.72**	**10**	P	Pg	15 20 48.6	-0.1
MSAI				S	Sb	15 20 58.8	-0.5
BNDI	**Bandanaira**	**1.19**	**113**	P	Pb	15 20 56.0	-1.4
BNDI				S	Sb	15 21 12.1	-0.8
NLAI	**Namlea**	**1.88**	**296**	P	Pg	15 21 10.6	-0.2
SANI	**Sanana**	**3.45**	**305**	P	Pn	15 21 29.2	+0.7
FAKI	**Fak Fak**	**3.62**	**72**	P	Pn	15 21 32.3	+1.4
SWI	**Sorong**	**4.01**	**38**	P	Pn	15 21 36.8	+0.5

IDC ***25*** *15:28:30.2±2.7, 43°.24N×81°.85E, h0km, mb1 3.4/4, mb1mx3.2/39, mbtmp3.4/4, ML3.2/4, Error ellipse: s-maj=27.5km s-min=19.7km az=124.0*
SOME ***25*** *15:28:31.1, 43°.13N×81°.60E, h0km*
NNC ***25*** *15:28:32.0±1.0, 43°.21N×81°.70E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=8.2km s-min=3.9km az=149.0*
ISC 25 15:28:30.1±1.6, 43°.20N±0°.06×81°.79E±0°.04, h1km±11km, n53, σ1.978/80, 11C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.08**	**284**	P	**Pg**	**15 28 51.5**	**+0.6**
	64nm,0.1s						
KTMS				S	**Sb**	**15 29 06.6**	**+0.2**
	230nm,0.2s						
KTMS	**Ketmen**	**1.08**	**284**	*e*P	**Pg**	**15 28 51.5**	**+0.6**
	64nm,0.1s						
KTMS				*e*S	**Sb**	**15 29 06.6**	**+0.2**
	230nm,0.2s						
PDGK	**Podgornoye**	**1.69**	**275**	P	**Pn**	**15 29 01.5**	**+0.6**
	14nm,0.2s						
PDGK				S	**Sb**	**15 29 24.1**	**+0.2**
	142nm,0.3s						
PDGK	**Podgornoye**	**1.69**	**275**	⇑P	**Pn**	**15 29 01.2**	**+0.3**
	11nm,0.3s						
PDGK				⇑S	**Sb**	**15 29 23.6**	**-0.3**
	199nm,0.5s						
DJR	**Jarkent**	**1.84**	**309**	P	**Pb**	**15 29 05.7**	**+1.0**
	27nm,0.4s						
DJR				S	**Sg**	**15 29 30.6**	**+1.3**
	124nm,0.4s						
DJR	**Jarkent**	**1.84**	**309**	*e*P	**Pb**	**15 29 05.8**	**+1.0**
	27nm,0.4s						
DJR				*e*S	**Sg**	**15 29 30.5**	**+1.1**
	124nm,0.4s						
UZB	**Uzynbulak**	**2.03**	**270**	Pg	**Pn**	**15 29 07.3**	**+1.7**
	31nm,0.2s						
UZB				Lg	Lg	15 29 33.7	
	233nm,0.2s						
UZB	**Uzynbulak**	**2.03**	**270**	*e*P	**Pn**	**15 29 07.3**	**+1.7**
	31nm,0.2s						
UZB				*e*S	**Sb**	**15 29 33.7**	**+0.1**
	233nm,0.2s						
KPKS	**Kokpek**	**2.29**	**278**	*e*P	**Pb**	**15 29 12.4**	**+0.1**
	42nm,0.2s						

KPKS				*e*S		**Sb**	**15 29 42.0 +1.0**
	410nm,0.3s						
ZHN	**Zhinishke**	**2.46 271**	Pg			**Pb**	**15 29 15.6 +0.4**
	23nm,0.3s						
ZHN				Lg		Lg	15 29 47.8
	99nm,0.3s						
ZHN	**Zhinishke**	**2.46 271**	*e*P			**Pb**	**15 29 15.6 +0.4**
	23nm,0.3s						
ZHN				*e*S		**Sg**	**15 29 47.8 -1.2**
	99nm,0.3s						
SATY	**Saty**	**2.48 268**	Pg			**Pb**	**15 29 15.8 +0.2**
	57nm,0.4s						
SATY				Lg		Lg	15 29 48.5
	195nm,0.2s						
SATY	**Saty**	**2.48 268**	*e*P			**Pb**	**15 29 15.8 +0.2**
	57nm,0.4s						
SATY				*e*S		**Sb**	**15 29 48.5 +1.7**
	195nm,0.2s						
MNBS	**Baschi**	**2.62 291**	Pg			**Pb**	**15 29 17.8 -0.1**
	16nm,0.2s						
MNBS				Lg		Lg	15 29 51.6
	87nm,0.2s						
MNBS	**Baschi**	**2.62 291**	*e*P			**Pb**	**15 29 17.8 -0.1**
	16nm,0.2s						
MNBS				*e*S		**Sb**	**15 29 51.5 +1.0**
	87nm,0.2s						
KURS	**Kuram**	**2.66 278**	Pg			**Pb**	**15 29 18.4 -0.2**
	11nm,0.5s						
KURS				Lg		Lg	15 29 53.4
	24nm,0.6s						
KURS	**Kuram**	**2.66 278**	*e*P			**Pb**	**15 29 18.9 +0.3**
	11nm,0.5s						
KURS				*e*S		**Sb**	**15 29 53.4 +1.7**
	24nm,0.6s						
KAPS	**Kapalarasan**	**2.73 321**	Pg			**Pb**	**15 29 21.3 +1.5**
	12nm,0.2s						
KAPS				Lg		Lg	15 29 57.2
	90nm,0.5s						
KAPS	**Kapalarasan**	**2.73 321**	*e*P			**Pb**	**15 29 21.3 +1.5**
	12nm,0.2s						
KAPS				*e*S		**Sg**	**15 29 57.2 -0.5**
	90nm,0.5s						
TDK	**Taldyqorghan**	**3.04 308**	Pg			**Pb**	**15 29 25.8 +0.8**
	23nm,0.2s						
TDK				Lg		Lg	15 30 05.8
	76nm,0.3s						
TDK	**Taldyqorghan**	**3.04 308**	*e*P			**Pb**	**15 29 25.8 +0.8**
	23nm,0.2s						
TDK				*e*S		**Sg**	**15 30 05.8 -1.9**
	76nm,0.3s						
ARXS	**Arharly**	**3.05 291**	Pg			**Pb**	**15 29 26.1 +0.9**
	12nm,0.3s						
ARXS				Lg		Lg	15 30 05.5
	58nm,0.4s						
ARXS	**Arharly**	**3.05 291**	*e*P			**Pb**	**15 29 26.1 +0.9**
	12nm,0.3s						
ARXS				*e*S		**Sb**	**15 30 05.5 +2.5**
	58nm,0.4s						
KOTS	**Kotyrbulak**	**3.42 272**	Pg			**Pb**	**15 29 32.8 +1.2**
	6.0nm,0.3s						
KOTS				Lg		Lg	15 30 17.4
	65nm,0.5s						
KOTS	**Kotyrbulak**	**3.42 272**	*e*P			**Pb**	**15 29 32.9 +1.2**
	6.0nm,0.3s						
KOTS				*e*S		**Sg**	**15 30 17.4 -2.7**
	65nm,0.5s						
MDOK	**Medeo**	**3.47 271**	Pg			**Pb**	**15 29 34.0 +1.6**
	7.3nm,0.3s						
MDOK				Lg		Lg	15 30 19.4
	26nm,0.4s						
MDOK	**Medeo**	**3.47 271**	*e*P			**Pb**	**15 29 34.0 +1.6**
	7.3nm,0.3s						
MDOK				*e*S		**Sg**	**15 30 19.4 -2.2**
	26nm,0.4s						
KNDC	**Almaty**	**3.53 272**	⇑Lg			Lg	15 30 22.2
TNSS	**Tian-Shan**	**3.55 269**	Pg			**Pb**	**15 29 35.8 +1.8**
	8.1nm,0.6s						
TNSS				Lg		Lg	15 30 22.2
	33nm,0.3s						
TNSS	**Tian-Shan**	**3.55 269**	*e*P			**Pb**	**15 29 35.8 +1.8**
	8.1nm,0.6s						
TNSS				*e*S		**Sg**	**15 30 22.2 -2.1**
	33nm,0.3s						
CHKK	**Chushkaly**	**3.56 282**	Pg			**Pb**	**15 29 34.8 +0.9**
	3.0nm,0.2s						
CHKK				Lg		Lg	15 30 20.5
	44nm,0.2s						
CHKK	**Chushkaly**	**3.56 282**	*e*P			**Pb**	**15 29 34.8 +0.9**
	3.0nm,0.2s						
CHKK				*e*S		**Sb**	**15 30 20.4 +2.9**
	44nm,0.2s						
MAKZ	**Makanchi**	**3.62 2**	⇑Pn			**Pn**	**15 29 29.4 +2.2**
	6.0nm,0.2s						
MAKZ			⇑Sn			**Sn**	**15 30 11.5 +0.9**
	6.3nm,0.3s						
MK31	**Makanchi Array**	**3.62 5**	Pn			**Pn**	**15 29 29.2 +1.9**
	0.8nm,0.1s,baz=57,slow=12,SNR=100						
MK31			⇑Pg			**Pb**	**15 29 37.6 +2.8**
	2.3nm,0.3s,baz=192,slow=13,SNR=12						
MK31			⇓Lg			Lg	15 30 24.4
	43nm,0.5s						
MKAR	**Makanchi Array**	**3.62 5**	Pn			**Pn**	**15 29 29.2 +1.9**
	5.8nm,0.3s,baz=183,slow=11,SNR=138						
MKAR				Lg		Lg	15 30 25.5
	8.6nm,0.3s,baz=188,slow=28,SNR=9.4						
MTBS	**Maitube**	**3.93 271**	Pg			**Pb**	**15 29 40.6 +0.5**
	4.2nm,0.2s						
MTBS				Lg		Lg	15 30 30.3
	37nm,0.5s						
MTBS	**Maitube**	**3.93 271**	*e*P			**Pb**	**15 29 40.6 +0.5**
	4.2nm,0.2s						
MTBS			⇓*i*S			**Sb**	**15 30 30.3 +2.1**
	37nm,0.5s						
KUU	**Kurty**	**4.03 282**	Pg			**Pb**	**15 29 42.4 +0.6**
	1.5nm,0.1s						
KUU				Lg		Lg	15 30 34.0
	24nm,0.4s						
KUU	**Kurty**	**4.03 282**	*e*P			**Pb**	**15 29 42.4 +0.6**
	1.5nm,0.1s						
KUU			⇑*i*S			**Sb**	**15 30 34.0 +3.0**
	24nm,0.4s						
KST	**Kastek**	**4.27 270**	Pg			**Pb**	**15 29 48.6 +2.5**
	7.8nm,0.4s						
KST				Lg		Lg	15 30 44.2
	22nm,0.3s						
KST	**Kastek**	**4.27 270**	⇓*i*P			**Pb**	**15 29 48.6 +2.5**
	7.8nm,0.4s						
KST			⇓*i*S			**Sg**	**15 30 44.2 -3.2**
	22nm,0.3s						
TKM2	**Tokmak 2**	**4.55 269**	⇓Pn			**Pn**	**15 29 43.3 +3.0**
	1.6nm,0.7s						
TKM2			⇑Pg			**Pg**	**15 29 56.1 -1.3**
	7.1nm,1.1s						
TKM2			⇑Lg			Lg	15 30 54.5
	14nm,0.6s						
ZSN	**Zaisan**	**4.77 26**	Pg			**Pg**	**15 29 59.8 -1.8**
	3.8nm,0.5s						
ZSN				Lg		Lg	15 31 03.5
	28nm,0.7s						
ZSN	**Zaisan**	**4.77 26**	*e*P			**Pg**	**15 29 59.8 -1.8**
	3.8nm,0.5s						
ZSN				*e*S		**Sg**	**15 31 03.5 +0.1**
	28nm,0.7s						
AAK	**Ala-Archa**	**5.39 267**	Pg			**Pb**	**15 30 09.5 +4.4**
	0.8nm,0.3s,baz=107,slow=11,SNR=2.6						
AAK				Lg		Lg	15 31 18.5
	1.1nm,0.3s,baz=31,slow=12,SNR=4.5						
AAK	**Ala-Archa**	**5.39 267**	⇑Pg			**Pg**	**15 30 11.2 -2.3**
	1.5nm,0.4s						
AAK			⇓Lg			Lg	15 31 21.2
	4.8nm,0.4s						
MRKS	**Merke**	**6.30 269**	Pg			**Pb**	**15 30 24.7 +4.1**
	3.7nm,0.3s						
MRKS				Lg		Lg	15 31 46.6
	5.2nm,0.4s						
KURBB	**Kurchatov Arra**	**7.76 344**	Pn			**Pn**	**15 30 24.6 +0.5**
	0.1nm,0.3s,baz=170,slow=12,SNR=8.0						
KURBB				Sn		**Sn**	**15 31 50.3 -2.3**
	0.3nm,0.3s,baz=160,slow=23,SNR=9.9						
KURBB				Lg		Lg	15 32 36.8
	0.1nm,0.3s,baz=164,slow=24,SNR=3.6						
KURBB	**Kurchatov Arra**	**7.76 344**	⇑Pn			**Pn**	**15 30 24.2 +0.1**
	1.2nm,0.4s						
KURBB			⇓Sn			**Sn**	**15 31 52.4 -0.1**
	5.7nm,0.5s						
KURBB			⇓Lg			Lg	15 32 33.5
	15nm,0.7s						
KK31	**Karatay Array**	**8.25 273**	⇓Lg			Lg	15 32 51.7
	1.1nm,0.5s,baz=87,slow=27,SNR=3.7						
OTUK	**Ortayu**	**8.32 311**	⇓Sn			**Sn**	**15 32 04.2 -2.3**
	1.1nm,0.4s						
OTUK			⇓Lg			Lg	15 32 51.5
	3.7nm,0.6s						
ZALV	**Zalesovo Beam**	**10.95 9**	Pn			**Pn**	**15 31 07.5 -0.2**
	0.3nm,0.3s,baz=186,slow=12,SNR=3.7						
ZALV			Sn			**Sn**	**15 33 04.9 -5.9**
	0.2nm,0.3s,baz=183,slow=22,SNR=2.6						
ZALV			Lg			Lg	15 34 17.7
	0.1nm,0.3s,baz=200,slow=24,SNR=2.1						
SONM	**Songino Array**	**17.82 66**	Pn			**Pn**	**15 32 38.6 -0.9**
	0.3nm,0.3s,baz=279,slow=12,SNR=3.6						

MAN ***25*** *15:57:43.2, 12°.22N×125°.96E, h23km, mb4.9, ML3.8, MS3.8*
IDC ***25*** *15:57:44.2±0.9, 12°.05N×125°.49E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.6/42, mbtmp3.9/7, ML4.5/1, Error ellipse: s-maj=35.9km s-min=18.4km az=64.0*
ISCJB ***25*** *15:57:46.7±0.6, 12°.15N±0°.04×125°.85E±0°.06, h36km, mb4.0/10, Error ellipse: s-maj=8.8km s-min=5.9km az=13.0*
NEIC ***25*** *15:57:53.6±4.0, 11°.96N×125°.54E, h79km±39km, mb4.1/4, Error ellipse: s-maj=16.0km s-min=10.7km az=68.0*

ISC 25 15:57:49.2±0.8, 12°.13N±0°.06×125°.69E±0°.09, h36km, n21, σ1§65/26, mb4.0/10, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.58**	**205**	*e*P	**Pn**	**15 57 58.1**	**-3.0**
BESP				*e*S	**Sn**	**15 58 10.6**	**+1.3**
CNP	**Catarman**	**1.08**	**291**	*e*P	**Pn**	**15 58 05.8**	**-1.9**
CNP				*e*S	**Sn**	**15 58 23.9**	**+2.5**
PLP	**Palo**	**1.19**	**216**	⇑*e*P	**Pn**	**15 58 06.9**	**-2.4**
OCLP	**Ormoc**	**1.51**	**225**	*e*P	**Pn**	**15 58 12.7**	**-1.0**
OCLP				*e*S	**Sn**	**15 58 34.8**	**+2.7**
LLP	**Lapu-Lapu**	**2.47**	**223**	*e*P	**Pn**	**15 58 25.7**	**-1.2**
LLP				*e*S	**Sn**	**15 58 59.1**	**+3.2**
CGP	**Cagayan de Oro**	**3.78**	**195**	⇓*e*P	**Pn**	**15 58 45.5**	**+0.5**
CGP				*e*S	**Sn**	**15 59 29.4**	**+1.2**
GUMO	**Guam**	**18.75**	**83**	P	**Pn**	**16 02 08.1**	**+2.2**
	1.3nm,0.3s,baz=122,slow=5.4,SNR=3.6						
BATI	**Baumata**	**22.28**	**185**	P	**P**	**16 02 42.7**	**-0.7**
	22nm,0.9s,baz=62,slow=2.1,SNR=4.5						
CMAR	**Chiang Mai Arr**	**26.54**	**287**	P	**P**	**16 03 22.8**	**-1.0**
	0.6nm,0.7s,baz=102,slow=8.4,SNR=4.9						
AS31	**Alice Springs**	**36.47**	**167**	*e*P	**P**	**16 04 50.2**	**-0.8**
	3.9nm,1.8s						
ASAR	**Alice Springs**	**36.47**	**167**	P	**P**	**16 04 49.8**	**-1.2**
	0.3nm,0.4s,baz=350,slow=7.3,SNR=16						
STKA	**Stephens Creek**	**46.33**	**161**	P	**P**	**16 06 12.6**	**+0.9**
	2.2nm,1.0s,baz=336,slow=18,SNR=2.7						
STKA	**Stephens Creek**	**46.33**	**161**	*e*P	**P**	**16 06 11.2**	**-0.6**
	3.8nm,1.6s						
MK31	**Makanchi Array**	**50.22**	**322**	*e*P	**P**	**16 06 41.5**	**-0.2**
	1.6nm,0.8s						
MK32	**Makanchi Array**	**50.22**	**322**	*e*P	**P**	**16 06 42.7**	**+1.0**
MKAR	**Makanchi Array**	**50.22**	**322**	P	**P**	**16 06 42.7**	**+1.0**
	0.7nm,0.8s,baz=116,slow=8.2,SNR=7.5						
KURK	**Kurchatov**	**54.23**	**325**	*e*P	**P**	**16 07 11.4**	**+0.1**
	4.4nm,0.6s						
ARA0	**ARCESS Array S**	**82.27**	**340**	*e*P	**P**	**16 10 07.3**	**+0.7**
ARCES	**ARCESS Array B**	**82.27**	**340**	P	**P**	**16 10 07.3**	**+0.7**
	1.0nm,0.7s,baz=59,slow=5.6,SNR=3.4						
FIA0	**FINESS Array S**	**84.00**	**332**	*e*P	**P**	**16 10 14.5**	**-1.2**
FINES	**FINESS Array B**	**84.00**	**332**	P	**P**	**16 10 14.5**	**-1.2**
	0.5nm,0.6s,baz=101,slow=7.2,SNR=3.3						

WEL 25 15:59:17.0, 40°.S±1°×17°.6E±°, h37km±3km, M3.5/14, ML3.8/12, MLv3.5/14, Error ellipse: s-maj=0.0km s-min=0.0km az=86.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRWZ	**Pori Road**	**0.10**	**213**	P	Pn	15 59 23.8	-6.5
PRWZ				S	Sn	15 59 28.9	-14
DVHZ	**Dannevirke**	**0.19**	**29**	P	Pn	15 59 23.9	-2.5
DVHZ				S	Sn	15 59 29.0	-6.5
POWZ	**Post Office Ro**	**0.23**	**290**	P	Pn	15 59 24.8	-0.9
BFZ	**Birch Farm**	**0.26**	**144**	P	Pn	15 59 24.6	-0.7
BFZ				S	Sn	15 59 30.6	-2.3
ANWZ	**Angora Road**	**0.33**	**88**	P	Pn	15 59 25.5	+0.3
ANWZ				S	Sn	15 59 32.2	0.0
TIWZ	**Tintock**	**0.33**	**201**	P	Pn	15 59 25.8	+0.5
TIWZ				S	Sn	15 59 32.5	+0.2
MRZ	**Mangatainoka R**	**0.40**	**242**	P	Pn	15 59 26.6	+0.6
MRZ				S	Sn	15 59 33.7	+0.8
TSZ	**Takapari Road**	**0.41**	**351**	P	Pn	15 59 26.6	+0.4
TSZ				S	Sn	15 59 33.7	+0.5
CPWZ	**Castlepoint**	**0.46**	**165**	P	Pn	15 59 27.7	+0.8
PRHZ	**Porangahau**	**0.49**	**66**	P	Pn	15 59 27.6	+0.1
PRHZ				S	Sn	15 59 36.1	+1.2
WPHZ	**Waipukurau**	**0.51**	**37**	P	Pn	15 59 28.2	+0.5
WPHZ				S	Sn	15 59 36.9	+1.8
PNHZ	**Pukenui**	**0.57**	**12**	P	Pn	15 59 28.8	+0.1
PNHZ				S	Sn	15 59 37.9	+1.1
HOWZ	**Holdsworth Sta**	**0.59**	**223**	P	Pn	15 59 29.0	0.0
HOWZ				S	Sn	15 59 37.8	+0.4
OHWZ	**Ohakea**	**0.62**	**295**	P	Pn	15 59 30.7	+1.4
TMWZ	**Te Maipa**	**0.65**	**190**	P	Pn	15 59 29.6	-0.2
OGWZ	**Otaki Gorge**	**0.75**	**242**	P	Pn	15 59 31.3	+0.3
OGWZ				S	Sn	15 59 41.8	+0.7
PXZ	**Pawanui**	**0.76**	**55**	P	Pn	15 59 31.2	0.0
MTW	**Mount Morrison**	**0.80**	**211**	P	Pn	15 59 31.6	-0.2
MTW				S	Sn	15 59 42.5	0.0
KRHZ	**Kereru**	**0.86**	**17**	P	Pn	15 59 32.9	+0.3
KAHZ	**Kahuranaki**	**0.93**	**44**	P	Pn	15 59 33.8	+0.3
TRWZ	**Traveller**	**0.97**	**196**	P	Pn	15 59 33.8	-0.2
CAW	**Cannon Point**	**0.98**	**229**	P	Pn	15 59 34.1	0.0
BHHZ	**Black Hill Sta**	**0.98**	**1**	P	Pn	15 59 34.9	+0.7
PAWZ	**Paruwai Farm**	**1.02**	**207**	P	Pn	15 59 34.5	-0.4
WAZ	**Wanganui**	**1.08**	**311**	P	Pn	15 59 37.4	+1.8
KWHZ	**Kaweka Forest**	**1.08**	**16**	P	Pn	15 59 36.1	+0.4
MOVZ	**Moawhango**	**1.08**	**348**	P	Pn	15 59 36.7	+1.0
MSWZ	**Moikau Station**	**1.12**	**212**	P	Pn	15 59 35.5	-0.6
CKHZ	**Cape Kidnapper**	**1.13**	**45**	P	Pn	15 59 36.7	+0.4
MCHZ	**McNeill Hill**	**1.14**	**26**	P	Pn	15 59 36.8	+0.4
MTVZ	**Mangateitei**	**1.17**	**338**	P	Pn	15 59 38.4	+1.6
WHVZ	**Whangaehu Hut**	**1.24**	**343**	P	Pn	15 59 39.4	+1.5
TUVZ	**Tukino**	**1.24**	**346**	P	Pn	15 59 39.3	+1.5
DRZ	**Dome Shelter**	**1.25**	**343**	P	Pn	15 59 39.9	+1.7
PLWZ	**Palliser**	**1.25**	**208**	P	Pn	15 59 37.2	-0.7
FWVZ	**Far West T-bar**	**1.27**	**343**	P	Pn	15 59 39.7	+1.3
BHW	**Baring Head**	**1.29**	**223**	P	Pn	15 59 38.0	-0.5
PKVZ	**Pokaka**	**1.29**	**335**	P	Pn	15 59 40.2	+1.7
NGZ	**Ngauruhoe**	**1.34**	**345**	P	Pn	15 59 40.7	+1.5
BKZ	**Black Stump Fm**	**1.35**	**15**	P	Pn	15 59 39.4	+0.2
WTVZ	**West Tongariro**	**1.40**	**345**	P	Pn	15 59 41.5	+1.5
KRVZ	**Karewarewa**	**1.41**	**347**	P	Pn	15 59 41.9	+1.8
ARHZ	**Aropaoanui**	**1.41**	**32**	P	Pn	15 59 40.6	+0.5
TWVZ	**Taurewa**	**1.47**	**341**	P	Pn	15 59 42.3	+1.3
NMHZ	**Naumai**	**1.49**	**23**	P	Pn	15 59 41.7	+0.5
RITZ	**Rihia Road**	**1.50**	**354**	P	Pn	15 59 42.7	+1.4
KATZ	**Kakaramea**	**1.52**	**350**	P	Pn	15 59 43.4	+1.7
TCW	**Tory Channel**	**1.53**	**241**	P	Pn	15 59 41.4	-0.3
RATZ	**Rangitukua**	**1.61**	**352**	P	Pn	15 59 44.3	+1.3
LREZ	**Lake Rotokare**	**1.61**	**308**	P	Pn	15 59 44.9	+2.0
DUWZ	**D'Urville Isla**	**1.65**	**258**	P	Pn	15 59 43.8	+0.4
MRHZ	**Matea Rd**	**1.66**	**11**	P	Pn	15 59 43.9	+0.3
WHHZ	**Waihua**	**1.67**	**34**	P	Pn	15 59 44.5	+0.9
VRZ	**Vera Road**	**1.67**	**323**	P	Pn	15 59 45.2	+1.6
MTHZ	**Maungataniwha**	**1.73**	**21**	P	Pn	15 59 44.4	-0.1
RAHZ	**Arahi**	**1.75**	**28**	P	Pn	15 59 44.6	-0.1
WATZ	**Wairara**	**1.77**	**352**	P	Pn	15 59 46.0	+0.9
WHTZ	**Whakaora**	**1.80**	**358**	P	Pn	15 59 46.8	+1.2
PREZ	**Palmer Road**	**1.84**	**307**	P	Pn	15 59 48.3	+2.3
TUWZ	**Tuamarina**	**1.86**	**238**	P	Pn	15 59 45.3	-0.9
CMWZ	**Cape Campbell**	**1.88**	**227**	P	Pn	15 59 46.4	-0.1
DREZ	**Durham Road**	**1.91**	**311**	P	Pn	15 59 48.9	+2.0
ALRZ	**Allen Road**	**1.92**	**7**	P	Pn	15 59 47.5	+0.4
MHGZ	**Mahia Peninsul**	**1.95**	**48**	P	Pn	15 59 47.6	+0.1
WPRZ	**Whakapapatarin**	**1.95**	**3**	P	Pn	15 59 48.2	+0.7
KHEZ	**Kahui Hut**	**1.95**	**306**	P	Pn	15 59 50.0	+2.4
SNGZ	**Shannon Statio**	**1.96**	**31**	P	Pn	15 59 47.2	-0.5
NMEZ	**Namu Road**	**1.97**	**302**	P	Pn	15 59 50.2	+2.4
KUTZ	**Kaahu Road**	**1.98**	**355**	P	Pn	15 59 48.7	+0.7
PRRZ	**Plateau Road**	**1.99**	**8**	P	Pn	15 59 48.6	+0.6
RTZ	**Ruatahuna**	**1.99**	**22**	P	Pn	15 59 47.8	-0.3
PKE	**Pukeiti**	**2.03**	**308**	P	Pn	15 59 51.2	+2.5
BSWZ	**Blackbirch Sta**	**2.06**	**232**	P	Pn	15 59 48.1	-0.9
NBEZ	**Newall Road No**	**2.06**	**305**	P	Pn	15 59 51.5	+2.5
MUGZ	**Murupara**	**2.07**	**16**	P	Pn	15 59 51.0	+1.9
HRRZ	**Handcock Road**	**2.08**	**5**	P	Pn	15 59 49.9	+0.5
PRGZ	**Paritu Road**	**2.10**	**43**	P	Pn	15 59 49.2	-0.4
GRRZ	**Galatos Road**	**2.12**	**1**	P	Pn	15 59 51.1	+1.2
NNZ	**Nelson**	**2.15**	**249**	P	Pn	15 59 50.2	-0.1
RRRZ	**Republican Roa**	**2.16**	**10**	P	Pn	15 59 50.6	+0.2
HIZ	**Hauiti**	**2.16**	**334**	P	Pn	15 59 52.2	+1.9
HSRZ	**Hossack Road**	**2.16**	**4**	P	Pn	15 59 50.7	+0.3
TLZ	**Tolley Road**	**2.17**	**349**	P	Pn	15 59 51.1	+0.5
RIGZ	**Rimuhau**	**2.21**	**38**	P	Pn	15 59 50.1	-0.9
RAGZ	**Rawiri**	**2.24**	**29**	P	Pn	15 59 50.7	-0.9
TARZ	**Mount Tarawera**	**2.26**	**9**	P	Pn	15 59 52.0	+0.2
URZ	**Urewera**	**2.36**	**21**	P	Pn	15 59 51.9	-1.2
MWZ	**Matawai**	**2.42**	**29**	P	Pn	15 59 52.7	-1.3
TKGZ	**Te Karaka**	**2.46**	**35**	P	Pn	15 59 53.5	-1.0
CNGZ	**Carnagh Statio**	**2.59**	**41**	P	Pn	15 59 56.0	-0.3
QRZ	**Quartz Range**	**2.70**	**261**	P	Pn	15 59 58.0	+0.2
THZ	**Tophouse**	**2.70**	**240**	P	Pn	15 59 55.4	-2.5
KHZ	**Kahutara**	**2.71**	**223**	P	Pn	15 59 56.0	-1.9
TWGZ	**Tauwhareparae**	**2.74**	**34**	P	Pn	15 59 58.2	-0.2
TOZ	**Tahuroa Road**	**2.77**	**351**	P	Pn	15 59 59.7	+1.0
RUGZ	**Raukumara Rang**	**2.80**	**27**	P	Pn	15 59 58.1	-1.3
PUZ	**Puketiti**	**2.95**	**36**	P	Pn	15 59 59.8	-1.4
PKGZ	**Pakihiroa**	**3.02**	**32**	P	Pn	16 00 01.2	-1.1
HAZ	**Te Kaha**	**3.03**	**27**	P	Pn	16 00 01.5	-0.8
WMGZ	**Waiomatatini S**	**3.23**	**36**	P	Pn	16 00 03.9	-1.1
GVZ	**Greta Valley S**	**3.36**	**221**	P	Pn	16 00 05.9	-1.0
MXZ	**Matakaoa Point**	**3.40**	**32**	P	Pn	16 00 06.8	-0.5
MKAZ	**Moumakai**	**3.43**	**348**	P	Pn	16 00 09.4	+1.5
ETAZ	**East Tamaki Re**	**3.62**	**346**	P	Pn	16 00 12.0	+1.6
LTZ	**Lake Taylor**	**3.65**	**230**	P	Pn	16 00 09.0	-1.9
WTAZ	**Waiatarua**	**3.71**	**341**	P	Pn	16 00 14.1	+2.3
KUZ	**Kuaotunu**	**3.73**	**356**	P	Pn	16 00 12.6	+0.7
WIAZ	**Waiheke Island**	**3.74**	**349**	P	Pn	16 00 13.9	+1.8
MBAZ	**Motutapu North**	**3.80**	**346**	P	Pn	16 00 14.2	+1.3
OKCZ	**Okains Bay**	**3.94**	**213**	P	Pn	16 00 13.6	-1.2
MQZ	**McQueen's Vall**	**4.10**	**217**	P	Pn	16 00 15.4	-1.7
INZ	**Inchbonnie**	**4.12**	**235**	P	Pn	16 00 15.4	-1.9
OXZ	**Oxford**	**4.13**	**225**	P	Pn	16 00 15.4	-2.1
WCZ	**Waipu Caves**	**4.72**	**343**	P	Pn	16 00 27.6	+2.0
ODZ	**Otahua Downs**	**6.06**	**219**	P	Pn	16 00 42.0	-1.9
CTZ	**Chatham Island**	**6.36**	**123**	P	Pn	16 00 48.1	0.0

IDC 25 16:00:54.7±1.6, 1°.26N×129°.40E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/39, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=84.5km s-min=20.7km az=60.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.82**	**139**	Pn	Pn	16 01 41.5	+0.5
	1.8nm,0.3s,baz=191,slow=22,SNR=12						
SIJI				Sn	Sn	16 02 17.6	+1.8
	3.9nm,0.3s,baz=202,slow=23,SNR=17						
WRA	**Warramunga Arr**	**21.62**	**167**	P	P	16 05 46.9	+0.3
	2.2nm,0.7s,baz=348,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**25.16**	**170**	P	P	16 06 21.9	+0.1
	0.3nm,0.7s,baz=360,slow=9.1,SNR=5.7						
STKA	**Stephens Creek**	**34.92**	**162**	P	P	16 07 47.6	-0.7
	0.7nm,0.4s,baz=333,slow=9.3,SNR=7.4						
MKAR	**Makanchi Array**	**61.10**	**325**	P	P	16 11 10.8	+0.1
	0.2nm,0.5s,baz=122,slow=8.2,SNR=3.2						

IDC ***25*** *16:02:26.9±12.0, 20°.25S×178°.11W, h572km±103km, mb3.2/5, mb1 3.3/6, mb1mx2.9/36, mbtmp4.2/6, Error ellipse: s-maj=121.0km s-min=72.0km az=116.0*

ISC 25 16:02:22.8±2.5, 20°.5S±0°.6×177°.8W±0°.4, h534km, n7, σ1§22/8, mb3.9/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.82**	**261**	P	**P**	**16 05 32.5**	**+1.6**
	0.5nm,0.3s,baz=111,slow=18,SNR=5.8						
CTA	**Charters Tower**	**33.72**	**264**	P	**P**	**16 08 18.9**	**-1.2**
	1.0nm,0.3s,baz=76,slow=8.2,SNR=4.5						
STKA	**Stephens Creek**	**38.00**	**244**	P	**P**	**16 08 55.7**	**+0.3**
	0.7nm,0.5s,baz=86,slow=13,SNR=3.3						
ASAR	**Alice Springs**	**44.75**	**257**	P	**P**	**16 09 48.4**	**-0.6**

MTN Manton Dam 13.69 221 *e*Pn **Pn 16 13 13.7 -1.7**
SANI Sanana 14.29 272 P **Pn 16 13 23.0 -0.7**
GUMO Guam 16.63 16 Pn **P 16 13 55.2 -1.3**
1.9nm,0.3s,baz=207,slow=4.5,SNR=3.1
GUMO LR LR 16 20 52.7
comp=Z,198nm,18.2s,baz=208,slow=39
GUMO Guam 16.63 16 *e*P **P 16 13 55.6 -0.9**
303nm,1.4s
GUMO Guam 16.63 16 *e*P **P 16 13 55.6 -0.9**
GUMO pmax pmax
comp=Z,303nm,1.4s
SOEI Soe 17.46 245 *e*P **Pn 16 14 04.2 -0.7**
comp=Z,298nm,1.0s
SOEI Soe 17.46 245 P **Pn 16 14 05.2 +0.3**
DAV Davao City (W) 17.49 303 LR LR 16 20 36.1
comp=Z,184nm,18.6s,baz=110,slow=36
LUWI Luwuk 17.56 274 *e*P **Pn 16 14 04.8 -1.2**
comp=Z,109nm,0.7s
LUWI Luwuk 17.56 274 P **Pn 16 14 04.7 -1.2**
KDI Kendari 17.69 265 P **P 16 14 07.9 -0.4**
BATI Baumata 18.19 244 P **P 16 14 14.1 +0.3**
comp=Z,9.7nm,0.3s,baz=148,slow=1.9,SNR=22
BATI Baumata 18.19 244 P **P 16 14 14.3 +0.5**
WRAB Tennant Creek 18.26 198 *e*P **Pn 16 14 12.4 -2.1**
comp=Z,64nm,0.6s
WRAB Tennant Creek 18.26 198 *ce*P **Pn 16 14 14.3 -0.3**
WRAB pmax pmax
comp=Z,68nm,0.8s
WB2 Warramunga Arr 18.27 198 *e*P **Pn 16 14 13.6 -1.1**
comp=Z,70nm,0.6s
WR1 Warramunga Arr 18.27 198 *e*P **Pn 16 14 13.7 -1.0**
WRA Warramunga Arr 18.27 198 P **Pn 16 14 13.7 -1.0**
comp=Z,11nm,0.3s,baz=21,slow=12,SNR=160
WRA S Sn 16 17 25.1 -13
comp=Z,0.7nm,0.3s,baz=22,slow=23,SNR=5.1
CTA Charters Tower 18.42 162 P **Pn 16 14 17.2 +0.7**
comp=Z,1.0nm,0.3s,baz=334,slow=11,SNR=17
CTAO Charters Tower 18.42 162 *e*P **Pn 16 14 16.6 +0.2**
comp=Z,17nm,0.8s
CTAO Charters Tower 18.42 162 *e*P **Pn 16 14 16.7 +0.2**
CTAO pmax pmax
comp=Z,17nm,0.8s
APSI Ampana 18.69 275 P **Pn 16 14 21.7 +1.9**
CTBH Cotabato--PC H 18.69 301‖ *i*P **Pn 16 14 19.6 -0.3**
MMRI Maumere 18.95 251 *e*P **P 16 14 20.3 -1.9**
comp=Z,48nm,0.5s
MMRI Maumere 18.95 251 P **Pn 16 14 24.2 +1.2**
EDFI Ende, Flores 19.50 251 P **P 16 14 26.9 -1.4**
PATS Pohnpei 20.25 63 *e*P Pn 16 14 38.6 +0.1
comp=Z,107nm,1.2s
BKSI Bulukumba 20.30 261 P **P 16 14 37.4 +0.5**
TTSI Tana Toraja 20.44 268 P Pn 16 14 43.9 +3.2
SPSI Sidrap Palu 20.53 265 P **P 16 14 40.0 +0.6**
KAPI Kappang 20.63 262 P **P 16 14 41.3 +0.8**
comp=Z,8.9nm,0.5s,baz=173,slow=8.1,SNR=5.1
KAPI Kappang 20.63 262 *e*P **P 16 14 39.4 -1.1**
comp=Z,34nm,1.1s
KAPI Kappang 20.63 262 *e*P **P 16 14 39.4 -1.1**
KAPI pmax pmax
comp=Z,34nm,1.1s
HNR Honiara 20.72 110 P **P 16 14 41.0 -0.5**
HNR Honiara 20.72 110 P **P 16 14 41.1 -0.4**
comp=Z,52nm,0.6s,baz=286,slow=3.4,SNR=7.5
HNR Honiara 20.72 110 *e*P **P 16 14 42.4 +0.9**
comp=Z,142nm,1.0s
HNR Honiara 20.72 110 *e*P **P 16 14 42.4 +0.9**
HNR pmax pmax
comp=Z,142nm,1.0s
FITZ Fitzroy Crossi 21.12 222 *e*P **P 16 14 45.1 -0.7**
comp=Z,74nm,1.0s
AS31 Alice Springs 21.92 196 *e*P **P 16 14 54.0 -0.3**
comp=Z,22nm,0.7s
ASAR Alice Springs 21.92 196 P **P 16 14 54.3 0.0**
comp=Z,41nm,0.6s,baz=27,slow=10,SNR=330
ASAR S **S 16 18 52.0 -2.9**
comp=Z,29nm,0.8s,baz=16,slow=28,SNR=13
ASAR LR LR 16 23 42.9
comp=Z,301nm,20.9s,baz=24,slow=37
WBSI Waikabubak, Su 21.93 250 P **P 16 14 52.6 -2.0**
SMKI Samarinda 23.15 275 P P 16 15 22.2 +15
PLAI Plampang 23.24 253 P **P 16 15 09.5 +1.2**
EIDS Eidsvold 25.00 156 *e*P **P 16 15 25.8 +1.2**
comp=Z,126nm,1.5s
TGY Tagaytay City 25.30 311 P **P 16 15 27.9 +0.4**
comp=Z,136nm,0.3s,baz=324,slow=11,SNR=5.4
TGY LR LR 16 23 29.0
comp=Z,105nm,21.9s,baz=240,slow=32
KKM Kota Kinabalu 25.49 290 P **P 16 15 34.0 +4.7**
KMMI Kalianget 26.60 259 P P 16 15 48.7 +9.5
SBUM Sibu 28.48 280 *e*P **P 16 15 55.0 -1.0**
comp=Z,4.9nm,1.1s
SBUM Sibu 28.48 280 P **P 16 15 56.0 -0.1**
STKA Stephens Creek 29.24 178 P **P 16 16 02.7 +0.1**
comp=Z,7.7nm,0.6s,baz=1.3,slow=7.4,SNR=33
STKA LR LR 16 29 28.6
comp=Z,602nm,20.6s,baz=355,slow=40
STKA Stephens Creek 29.24 178 *e*P **P 16 16 02.3 -0.3**
comp=Z,12nm,1.8s
STKA Stephens Creek 29.24 178 *e*P **P 16 16 02.3 -0.3**
STKA pmax pmax
comp=Z,12nm,1.8s
KSM Kuching 30.22 277 *e*P **P 16 16 10.8 -0.8**
comp=Z,12nm,0.9s
KSM Kuching 30.22 277 P **P 16 16 11.0 -0.6**
FORT Forrest 30.40 201 *e*P **P 16 16 13.7 +0.8**
comp=Z,49nm,0.7s
BBOO Buckleboo 30.40 187 *e*P **P 16 16 12.8 -0.1**
comp=Z,23nm,0.8s
DZM Mont Dzumac 32.01 129 *e*LR LR 16 24 42.7
comp=Z,537nm,23.7s
MORW Morawa 35.06 219 *e*P **P 16 16 53.1 -0.6**
comp=Z,33nm,0.9s
MJAR Matsushiro Arr 38.90 357 P **P 16 17 24.8 -1.4**
comp=Z,3.7nm,0.8s,baz=182,slow=9.7,SNR=12
MAJO Matsushiro 38.90 357 *e*P **P 16 17 24.6 -1.6**
comp=Z,6.3nm,0.8s
MAJO Matsushiro 38.90 357⇑ *i*P **P 16 17 25.4 -0.8**
MAJO pmax pmax
comp=Z,8.0nm,1.1s
MAT Matsushiro 38.90 357 P **P 16 17 24.3 -1.9**
MJB9 Matsu-Tunnel 38.90 357 *e*P **P 16 17 24.8 -1.5**
comp=Z,20nm,1.4s
IPM Ipoh 39.83 280 P **P 16 17 34.0 -0.4**
NJ2 Nanjing 39.94 331 *e*P **P 16 17 36.0 +1.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
PANO Nakornpanom 40.25 300 P **P 16 17 38.2 +0.5**
comp=Z,0.4nm,1.0s
KULM Kulim 40.34 281 P **P 16 17 38.0 -0.5**
CHBT CHBT 40.62 293 P **P 16 17 43.8 +3.0**
comp=Z,19nm,0.5s
SKNT Sakolnakorn 40.72 300 P **P 16 17 41.9 +0.3**
comp=Z,17nm,0.7s,comp=Z,2μm
SKLT Songkhla 40.73 284 P **P 16 17 41.5 -0.3**
comp=Z,11nm,0.9s
WHN Wuhan 41.14 325 ⇑P **P 16 17 46.5 +1.7**
KS15 Wonju Array Si 41.38 345 *e*P **P 16 17 47.2 +0.5**
comp=Z,76nm,2.0s
KS15 *e*PcP **PcP 16 19 45.9 +1.2**
KSRS Korea Array 41.38 345 P **P 16 17 47.2 +0.5**
comp=Z,3.0nm,0.7s,baz=157,slow=9.3,SNR=14
KSRS PcP **PcP 16 19 45.9 +1.2**
comp=Z,2.6nm,0.9s,baz=169,slow=3.9,SNR=6.9
KSRS LR LR 16 33 21.6
comp=Z,84nm,21.1s,baz=159,slow=34
KHON Khomkaen 41.47 298 P **P 16 17 50.3 +2.5**
comp=Z,38μm,0.4s
TRTT Trang 41.77 285 P P 16 18 02.6 +12
NONG Nongkai 41.90 301 P **P 16 17 51.4 +0.1**
comp=Z,0.4nm,1.1s
CHAI Chaiyaphum 42.04 297 P **P 16 17 52.1 -0.4**
comp=Z,29μm,0.8s,comp=Z,337μm
GSI Gunungsitoli 42.86 275 *e*P **P 16 17 56.7 -2.6**
UTTA Uttaradit 44.02 299 P **P 16 18 09.1 +0.6**
comp=Z,22μm,0.9s,comp=Z,180μm
LAMP Lampang 45.13 299 P **P 16 18 20.8 +3.4**
comp=Z,26μm,0.8s
PAYA Payao 45.26 300 P **P 16 18 18.5 +0.1**
comp=Z,44μm,0.8s
KMI Kunming 45.59 309 P **P 16 18 23.5 +2.3**
KMI pP sP 16 18 31.0 -3.4
KMI pmax pmax
comp=Z,11nm,0.7s
CM31 Chiang Mai Arr 45.71 299 *e*P **P 16 18 21.1 -0.9**
comp=Z,21nm,1.1s
CMAR Chiang Mai Arr 45.71 299 P **P 16 18 22.4 +0.4**
comp=Z,10.0nm,0.9s,baz=118,slow=6.1,SNR=44
CMAR LR LR 16 39 47.5
comp=Z,28nm,18.1s,baz=122,slow=39
CMAR Chiang Mai Arr 45.71 299 *ce*P **P 16 18 22.3 +0.3**
CMAR pmax pmax
comp=Z,10.0nm,0.9s
CMMT Chiang Mai 45.84 299 P **P 16 18 23.2 +0.2**
comp=Z,5.4nm,1.1s
XAN Xi'an 46.83 324 P **P 16 18 30.5 -0.1**
XAN pP sP 16 18 46.8 +3.1
XAN pmax pmax
comp=Z,12nm,1.0s
XAN pmax pmax
comp=Z,200nm,6.4s
XAN LR LR
comp=Z,130nm,12.3s
XAN LR LR
comp=Z,130nm,17.4s
XAN Xi'an 46.83 324 *e*P **P 16 18 28.4 -2.2**
comp=Z,12nm,1.0s
XAN Xi'an 46.83 324 *e*P **P 16 18 28.4 -2.2**
XAN pmax pmax
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 47.09 352 P **P 16 18 32.4 0.0**
comp=Z,4.1nm,0.9s,baz=165,slow=9.8,SNR=5.9
MDJ Mudanjiang 47.88 350 P **P 16 18 39.3 +0.8**
MDJ pP sP 16 18 51.5 +0.1
MDJ sP pP 16 18 57.0 +9.2
MDJ PcS **PcS 16 24 02.8 +0.5**
MDJ S **S 16 25 36.3 +2.6**
MDJ sS sS 16 25 56.5 +8.0
MDJ pmax pmax
comp=Z,7.0nm,0.7s
MDJ pmax pmax
comp=Z,63nm,4.5s
MDJ LR LR
comp=Z,140nm,17.1s
MDJ LR LR
comp=Z,130nm,17.1s
CN2 Changchun 47.99 346 *e*P **P 16 18 41.5 +2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
KUR Kuril'sk 48.01 7⇑ *i*P **P 16 18 39.8 +0.3**
CD2 Chengdu 48.10 317 P **P 16 18 41.3 +0.8**
RPZ Rata Peaks 49.28 151 P **P 16 18 50.0 +0.7**
comp=Z,33nm,1.0s,baz=298,slow=3.7,SNR=6.1
YSS Yuzh-Sakhalins 49.30 2 *e*P **P 16 18 49.1 -0.3**
comp=Z,22nm,0.6s
YSS Yuzh-Sakhalins 49.30 2 *e*P **P 16 18 49.2 -0.2**
YSS *e* 16 19 04.6
YSS pmax pmax
comp=Z,20nm,1.0s
HHC Hu-ho-hao-te 50.48 332 *e*P **P 16 19 00.5 +1.9**
HHC pmax pmax
comp=Z,15nm,1.1s
HHC pmax pmax
comp=Z,24nm,5.6s
LZH Lanzhou 51.28 322 *e*P **P 16 19 03.5 -1.3**
LZH pP sP 16 19 15.0 -3.0
LZH sP pP 16 19 19.8 +5.6
LZH *e*PP **PP 16 21 01.5 -0.5**
LZH pmax pmax
comp=Z,27nm,1.1s
LZH pmax pmax
comp=Z,85nm,7.8s
LZH LR LR
comp=Z,290nm,16.3s
LZH LR LR
comp=Z,300nm,16.0s
LZH LR LR
comp=Z,470nm,18.2s
KLR Kul'dur 52.06 353 *c i*P **P 16 19 10.2 0.0**
KLR *i* *PP **sP 16 19 24.0 +0.8**
KLR pmax pmax
comp=Z,8.0nm,1.1s
GTA Gaotai 55.85 323 *e*P **P 16 19 39.0 +0.8**
GTA pmax pmax
comp=Z,14nm,0.9s
ZEA Zeya 57.10 351 *e*P **P 16 19 47.0 +0.4**
PETK Petropavlovsk- 57.32 12 P **P 16 19 49.0 +0.7**
comp=Z,4.5nm,0.7s,baz=166,slow=5.8,SNR=11
PETK PcP **PcP 16 20 42.0 -0.1**
comp=Z,2.2nm,0.6s,baz=133,slow=1.4,SNR=6.1
PETK LR LR 16 46 57.0
comp=Z,30nm,18.4s,baz=194,slow=39
PEA1 Petropavlovsk- 57.32 12 *e*P **P 16 19 49.0 +0.7**
PEA1 *e*PcP **PcP 16 20 42.0 -0.1**
ULN Ulaanbaatar 57.96 334 *e*P **P 16 19 53.5 +0.5**
comp=Z,5.5nm,0.9s
ULN Ulaanbaatar 57.96 334 *c i*P **P 16 19 53.7 +0.7**
ULN pmax pmax
comp=Z,8.0nm,1.3s
SONA0 Songino Array 58.22 334 *e*P **P 16 19 55.4 +0.5**
SONM Songino Array 58.22 334 P **P 16 19 55.4 +0.5**
comp=Z,1.5nm,0.7s,baz=156,slow=9.4,SNR=7.5
GUN Gumba 60.37 304 *e*P **P 16 20 11.0 +0.6**
comp=Z,28nm,0.8s
PKI Pulchoki 60.64 304 *e*P **P 16 20 12.1 -0.1**
comp=Z,9.0nm,0.7s
PKIN Phulchoki 60.65 304 *e*P **P 16 20 12.2 0.0**
comp=Z,8.5nm,0.7s
KKN Kakani 60.82 304 *e*P **P 16 20 13.6 +0.3**
comp=Z,13nm,0.7s
DMN Daman 60.91 304 *e*P **P 16 20 14.3 +0.4**
comp=Z,23nm,0.8s
ZAK Zakamensk 61.48 334 *e*P **P 16 20 17.6 +0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.2s
DANN Dangsing 62.28 304 *e*P **P 16 20 23.7 +0.5**
comp=Z,19nm,0.5s
TLY Talaya 62.28 335 *c i*P **P 16 20 23.2 +0.7**
PYUN Piuthan 62.83 303 *e*P **P 16 20 27.4 +0.6**
comp=Z,54nm,0.7s
MOY Mondy 63.41 334 *e*P **P 16 20 31.1 +1.0**
MOY pmax pmax
comp=Z,22nm,1.7s
BOD Bodaibo 63.73 345 *e*P **P 16 20 31.9 0.0**
BOD pmax pmax
comp=Z,9.0nm,1.0s
YAK Yakutsk 64.87 355 *e*P **P 16 20 39.0 -0.3**
comp=Z,37nm,1.2s
YAK Yakutsk 64.87 355 *e*P **P 16 20 37.8 -1.5**
YAK *e**PP **pP 16 20 46.9 -1.9**
YAK *e* 16 21 15.1
YAK *e* 16 23 04.9
YAK *e*S **S 16 29 17.3 -1.0**
YAK *e**SS sS 16 29 58.8 +25
KIWB Kanaga Island 65.03 28 *e*P **P 16 20 40.9 +0.4**
WMQ Urumqi 65.83 321 P **P 16 20 47.0 +1.0**
WMQ pP sP 16 20 58.3 -1.1
WMQ sP PcP 16 21 05.8 -11
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ pmax pmax
comp=Z,47nm,3.7s
WMQ LR LR
comp=Z,100nm,28.9s
WMQ LR LR
comp=Z,380nm,29.0s
DGZ Jazzator, Alta 68.98 326 *c i*P **P 16 21 06.4 +0.5**
DGZ pmax pmax
comp=Z,7.0nm,0.9s
PPT Papeete 70.32 108 LR LR 16 48 20.7
comp=Z,90nm,20.7s,baz=299,slow=33
PPT2 Papeete2 70.32 108 *e*LR LR 16 42 36.7
comp=Z,138nm,22.5s
MK31 Makanchi Array 70.59 322 *e*P **P 16 21 15.8 0.0**
comp=Z,11nm,1.0s
MK31 Makanchi Array 70.59 322 *i* P **P 16 21 15.6 -0.2**
MK31 pmax pmax
comp=Z,16nm,1.1s
MK32 Makanchi Array 70.59 322 *e*P **P 16 21 16.4 +0.7**
MKAR Makanchi Array 70.59 322 P **P 16 21 16.4 +0.7**
comp=Z,7.6nm,0.7s,baz=102,slow=8.1,SNR=90
MAKZ Makanchi 70.79 322 *e*P **P 16 21 17.2 +0.3**
comp=Z,15nm,0.9s
MAKZ Makanchi 70.79 322 *e*P **P 16 21 17.2 +0.3**
MAKZ pmax pmax
comp=Z,15nm,0.9s
TBI Tubuai 70.90 114 *e*S **S 16 30 32.6 +0.8**
comp=Z,50nm,30.0s
TBI Tubuai 70.90 114 *e*LR LR 16 42 50.3
comp=Z,88nm,23.0s
PDGK Podgornoye 70.97 318 P **P 16 21 17.9 -0.4**
PDGK pmax pmax
comp=Z,6.0nm,0.8s
KSH Kashi 72.09 313 P **P 16 21 27.5 +2.4**
KSH pP PcP 16 21 40.5 -2.9
KSH PP **PP 16 24 11.8 +6.2**
KSH S **S 16 30 44.0 -1.4**
KSH SS **SS 16 35 25.0 +1.9**
KSH pmax pmax
comp=Z,33nm,1.1s
KSH pmax pmax
comp=Z,210nm,6.2s
KSH LR LR
comp=Z,210nm,9.6s
KSH LR LR
comp=Z,230nm,10.3s
KSH LR LR
comp=Z,290nm,10.8s
NIL Nilore 72.47 306 *e*P **P 16 21 27.7 +0.4**
comp=Z,50nm,1.4s
NIL Nilore 72.47 306 *e*P **P 16 21 27.7 +0.4**
NIL pmax pmax
comp=Z,50nm,1.4s
ZAA0 Zalesovo Array 72.56 329 *e*P **P 16 21 25.8 -1.6**
comp=Z,8.4nm,0.8s
ZALV Zalesovo Beam 72.56 329 P **P 16 21 27.1 -0.2**
comp=Z,8.7nm,0.8s,baz=109,slow=5.9,SNR=27
ZAA1 Zalesovo Array 72.56 329 *e*P **P 16 21 27.1 -0.2**
BILL Biiibino 72.69 10‖ *e*P **P 16 21 28.3 +0.4**
BILL *e**PP **sP 16 21 41.6 +0.2**
BILL *e* 16 31 31.0
BILL pmax pmax
comp=Z,2.0nm,1.0s
BOOM Boomskoye usch 73.10 316 *e*P **P 16 21 30.6 -0.5**
comp=Z,8.6nm,0.9s
BOOM Boomskoye usch 73.10 316 *e*P **P 16 21 30.6 -0.5**
BOOM pmax pmax
comp=Z,9.0nm,0.9s
KZA Kyzart 73.44 315 P **P 16 21 34.8 +1.4**
SNR=19
TKM2 Tokmak 2 73.48 316 P **P 16 21 34.1 +0.8**
SNR=5.9
UCH Uchtor 74.01 315 P **P 16 21 38.4 +1.6**
SNR=5.8
AAK Ala-Archa 74.16 316⇑ *i*P **P 16 21 38.7 +1.4**
AAK pmax pmax
comp=Z,4.0nm,1.0s
USP Ospenovka 74.36 316 P **P 16 21 39.0 +0.7**
SNR=7.2
TIXI Tiksi 74.40 356 *e*P **P 16 21 36.6 -1.2**
comp=Z,4.1nm,0.8s
TIXI Tiksi 74.40 356 *e*P **P 16 21 36.7 -1.2**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
KURK Kurchatov 74.46 324 *e*P **P 16 21 38.4 -0.2**
comp=Z,13nm,1.1s
KURK Kurchatov 74.46 324 *c i*P **P 16 21 38.5 -0.2**
KURK pmax pmax
comp=Z,11nm,1.2s
AML Almayashu 74.56 315 P **P 16 21 41.1 +1.2**
SNR=9.6
EKS2 Erkin-Say 74.67 315 P **P 16 21 41.5 +1.3**
SNR=6.9
ARSB Arslanbob 74.82 314 *e*P **P 16 21 40.8 -0.3**
comp=Z,8.2nm,0.8s
VNDA Vanda 75.84 175 P **P 16 21 46.5 +0.3**
comp=Z,3.4nm,0.5s,baz=324,slow=6.7,SNR=56
VNDA LR LR 16 55 14.3
comp=Z,161nm,19.1s,baz=344,slow=36
VNDA Vanda 75.84 175 *e*P **P 16 21 46.1 -0.1**
comp=Z,4.1nm,0.6s
VNDA Vanda 75.84 175 *e*P **P 16 21 46.1 -0.1**
VNDA pmax pmax
comp=Z,4.0nm,0.6s
GAR Garm 76.14 311 *e*P **P 16 21 48.2 -0.5**
comp=Z,22nm,1.1s
GAR Garm 76.14 311 *e*P **P 16 21 48.3 -0.5**
GAR pmax pmax
comp=Z,22nm,1.1s
SBA Scott Base 76.59 174 *e*P **P 16 21 51.5 +1.1**
comp=Z,33nm,1.9s
SBA Scott Base 76.59 174 *e*P **P 16 21 51.5 +1.1**
SBA pmax pmax
comp=Z,33nm,1.9s
KK31 Karatay Array 77.09 315 *e*P **P 16 21 53.1 -0.8**
comp=Z,4.3nm,0.9s
KK31 Karatay Array 77.09 315 *i* P **P 16 21 54.1 +0.2**
KK31 pmax pmax
comp=Z,1.0nm,0.5s
KKAR Karatay Array 77.09 315 *e*P **P 16 21 53.1 -0.8**
comp=Z,4.3nm,0.9s
KKAR Karatay Array 77.09 315 *e*P **P 16 21 53.1 -0.8**
KKAR pmax pmax
comp=Z,4.0nm,0.9s
OHAK Old Harbor 79.58 30 *e*P **P 16 22 07.7 +0.4**
comp=Z,19nm,0.8s
SVW2 Sparrevohn 80.00 26 *e*P **P 16 22 10.5 +1.0**
comp=Z,7.0nm,0.9s
BRVK Borovoye 80.12 325 *e*P **P 16 22 09.7 -0.6**
comp=Z,8.0nm,0.7s
BRVK Borovoye 80.12 325 *c i*P **P 16 22 10.4 +0.1**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
KDAK Kodiak Island 80.14 30 *e*P **P 16 22 11.2 +0.9**
comp=Z,14nm,0.8s
KDAK Kodiak Island 80.14 30 *i* P **P 16 22 11.4 +1.1**
TTA Tatalina 80.57 25 *e*P **P 16 22 13.5 +0.8**
comp=Z,9.8nm,1.0s
TTA Tatalina 80.57 25 *e*P **P 16 22 13.5 +0.8**
TTA pmax pmax
comp=Z,10.0nm,1.0s
CNPM China Poot 81.41 29 *e*P **P 16 22 17.3 +0.2**
comp=Z,12nm,0.8s
PPLA Purkeypile 82.17 25 *e*P **P 16 22 21.2 0.0**
comp=Z,19nm,1.5s
RC01 Rabbit Creek A 82.64 27 *e*P **P 16 22 23.6 +0.1**
comp=Z,16nm,0.7s
MAW Mawson 82.90 202 P **P 16 22 25.2 +0.5**
comp=Z,3.9nm,1.0s,baz=43,slow=6.1,SNR=4.4
MAW LR LR 16 56 18.5
comp=Z,85nm,18.8s,baz=46,slow=34
MAW Mawson 82.90 202 *e*P **P 16 22 25.2 +0.5**
comp=Z,2.3nm,1.3s
KTH Kantishna Hill 82.94 25 *e*P **P 16 22 24.4 -0.7**
comp=Z,12nm,1.0s
PMR Palmer 83.08 27 *e*P **P 16 22 25.1 -0.6**
comp=Z,12nm,0.8s
PMR Palmer 83.08 27 *e*P **P 16 22 25.1 -0.6**
PMR pmax pmax
comp=Z,12nm,0.8s
TRF Thorofare Moun 83.17 25 *e*P **P 16 22 25.7 -0.7**
comp=Z,6.0nm,0.9s
GHO Glory Hole Cre 83.22 27 *e*P **P 16 22 26.0 -0.6**
comp=Z,8.8nm,0.8s
KNK Knik Glacier 83.33 27 *e*P **P 16 22 26.8 -0.3**
comp=Z,18nm,0.9s
SML Sawmill 83.50 27 *e*P **P 16 22 28.1 +0.1**
comp=Z,24nm,0.9s
SML Sawmill 83.50 27 *e*P **P 16 22 28.1 +0.1**
SML pmax pmax
comp=Z,24nm,0.9s
BWN Browne 83.76 25 *e*P **P 16 22 29.3 +0.1**
comp=Z,19nm,0.9s
RND Reindeer 83.77 25 *e*P **P 16 22 29.0 -0.4**
comp=Z,14nm,0.9s
GLI Glacier Island 83.80 28 *e*P **P 16 22 29.5 0.0**
comp=Z,14nm,0.9s
MCK McKinley 83.84 25 *e*P **P 16 22 29.0 -0.7**
comp=Z,9.3nm,0.8s
MCK McKinley 83.84 25 *e*P **P 16 22 29.0 -0.7**
MCK pmax pmax
comp=Z,9.0nm,0.8s
SCM Sheep Creek Mo 83.97 27 *e*P **P 16 22 30.8 +0.3**
comp=Z,17nm,0.8s
SCM Sheep Creek Mo 83.97 27 *e*P **P 16 22 30.8 +0.3**
SCM pmax pmax
comp=Z,17nm,0.8s
DHY Denali Highway 84.31 26 *e*P **P 16 22 32.5 +0.3**
comp=Z,14nm,0.9s
DIV Divide 84.49 28 *e*P **P 16 22 33.6 +0.5**
comp=Z,17nm,0.7s
CCB Clear Creek Bu 84.59 24 *e*P **P 16 22 32.6 -0.8**
comp=Z,7.7nm,0.8s
COLA College 84.64 24⇑ *i*P **P 16 22 33.7 +0.1**
COLA pmax pmax
comp=Z,6.0nm,1.1s
HDA Harding Lake 84.88 25 *e*P **P 16 22 33.9 -1.0**
comp=Z,6.5nm,1.0s
ILAR Eielson Array 85.00 24 P **P 16 22 34.8 -0.8**
comp=Z,7.2nm,0.9s,baz=260,slow=4.7,SNR=38

ILAR LR LR 17 00 20.4
comp=Z,23nm,20.2s,baz=276,slow=36
ILB Eielson Array 85.00 24 *eP* **P 16 22 34.2 -1.3**
comp=Z,7.8nm,0.8s
TOLK Toolik Lake Re 85.19 20 *eP* **P 16 22 36.2 -0.3**
comp=Z,5.4nm,0.8s
GEYT Alibeck 85.35 308 P **P 16 22 39.0 +1.1**
comp=Z,4.5nm,0.8s,baz=119,slow=1.9,SNR=8.0
AB31 Akbulak array 85.58 320 *iP* **P 16 22 38.6 -0.1**
AB31 pmax pmax
comp=Z,5.0nm,0.8s
ABKAR Akbulak array 85.58 320 *eP* **P 16 22 37.4 -1.3**
comp=Z,5.7nm,0.8s
RIDG Independent Ri 85.59 26 *eP* **P 16 22 38.0 -0.5**
comp=Z,17nm,1.1s
MENT Mentasta 85.88 26 *eP* **P 16 22 40.2 +0.2**
comp=Z,6.6nm,0.8s
DOT Dot Lake 85.90 26 *eP* **P 16 22 40.3 +0.2**
comp=Z,7.8nm,0.9s
BALM Baldy 86.08 28 *eP* **P 16 22 42.1 +1.0**
comp=Z,9.2nm,0.8s
BALM Baldy 86.08 28 *eP* **P 16 22 42.1 +1.0**
BALM pmax pmax
comp=Z,9.0nm,0.8s
EGAK Eagle 87.39 25 *eP* **P 16 22 47.9 +0.6**
comp=Z,7.2nm,1.0s
QSPA South Pole Qui 87.44 180 *eP* **P 16 22 47.3 -0.3**
comp=Z,9.2nm,0.6s
ARU Arti 87.49 327 *c iP* **P 16 22 46.4 -1.5**
ARU *PP **sP** 16 22 59.7 -1.9
ARU S **SKSac** 16 33 09.1 -4.3
ARU pmax pmax
comp=Z,9.0nm,1.2s
DAWY Dawson 88.01 26 *eP* **P 16 22 51.1 +0.8**
comp=Z,18nm,1.1s
HYT Haines Junctio 88.37 29 *eP* **P 16 22 53.0 +0.8**
comp=Z,9.9nm,0.9s
EPYK Eagle Plains 89.47 24 *eP* **P 16 22 57.7 +0.6**
comp=Z,8.1nm,1.0s
INK Inuvik 90.90 22 *eP* **P 16 23 04.1 +0.4**
comp=Z,5.5nm,1.1s
INK Inuvik 90.90 22 *eP* **P 16 23 04.1 +0.4**
INK pmax pmax
comp=Z,6.0nm,1.1s
PRGR Permogore 94.41 331 *eP* **P 16 23 18.0 -2.0**
PRGR pmax pmax
comp=Z,5.0nm,0.6s
YKA Yellowknife Ar 99.18 27 LR LR 17 04 32.2
comp=Z,9.1nm,22.0s,baz=294,slow=33
ARA0 ARCESS Array S 100.83 341 *ePdif* **Pdif 16 23 48.5 -0.4**
ARCES ARCESS Array B 100.83 341 P **Pdif 16 23 48.5 -0.4**
comp=Z,1.6nm,0.8s,baz=83,slow=7.4,SNR=5.4
ALLY Alegheny Colle 126.78 37 *ePKPdf* **PKPdf 16 29 01.8 -2.5**
PLCA Paso Flores 128.58 150 PKP **PKiKP 16 29 09.1 +0.5**
comp=Z,1.4nm,0.7s,baz=9.6,slow=19,SNR=2.4
TORD Torodi Ar. Bea 137.70 287 PKP **PKPdf 16 29 25.4 -0.2**
comp=Z,2.0nm,0.8s,baz=20,slow=3.7,SNR=10
TOA1 Torodi Ar. Sit 137.71 287 *ePKPdf* **PKPdf 16 29 25.4 -0.2**
PB11 IPOC Station P 143.21 128 *ePKPpre* PKPpre 16 29 33.0
MNMC Minye Minye 143.60 127 *ePKPdf* PKPbc 16 29 34.9 +1.0
GO01 Chusmiza 143.62 129 *ePKPdf* PKPbc 16 29 35.1 +0.9
KIC Kosan Boka 144.92 277 *ePKP1* **PKPab 16 29 37.7 -0.1**
comp=Z,45nm,0.8s
DBIC Dimbokro 145.01 278 PKPbc **PKPbc 16 29 38.1 0.0**
comp=Z,22nm,0.7s,baz=68,slow=3.7,SNR=30
DBIC Dimbokro 145.01 278 *ePKPbc* **PKPbc 16 29 37.8 -0.3**
DBIC Dimbokro 145.01 278 *ePKIKP* **PKPbc 16 29 37.8 -0.3**
TIC Toumodi 145.18 278 *ePKP1* **PKPbc 16 29 38.5 -0.2**
LIC Lamto 145.22 277 *ePKP1* **PKPbc 16 29 38.6 -0.2**
comp=Z,38nm,0.8s
LPAZ La Paz 146.28 125 PKPbc **PKPab 16 29 43.9 +0.4**
comp=Z,7.4nm,0.7s,baz=215,slow=1.8,SNR=24
LPAZ La Paz 146.28 125 *ePKPdf* **PKPdf 16 29 39.6 -2.0**
CPUP Villa Florida 146.66 150 PKPbc **PKPbc 16 29 43.1 +0.3**
comp=Z,6.6nm,0.9s,baz=230,slow=5.6,SNR=5.9

*DDA **25** 16:16:33.8, 40°.91N×35°.80E, h7km±2km, ML2.5*
*ISK **25** 16:16:33.9, 40°.92N×35°.81E, h8km, ML2.1/5*
*ISCJB **25** 16:16:34.6±0.6, 40°.92N±0°.04×35°.82E±0°.07, h9km±8km, Error ellipse: s-maj=8.8km s-min=6.3km az=153.8*
ISC 25 16:16:34.2±1.1, **40°.91N**±0°.03×**35°.80E**±0°.04, **h10**km±12km, **n13**, σ0^{s}**.22**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAVZ	**Havza**	**0.17**	**340**	*i* P	**Pg**	**16 16 37.9**	**0.0**
KVT	**Kavak**	**0.25**	**48**	PG	**Pg**	**16 16 39.0**	**-0.4**
KVT				SG	**Sg**	**16 16 43.2**	**+0.3**
AMSY	**Amasya-Merkez**	**0.28**	**174**	*i* P	**Pb**	**16 16 41.0**	**-0.2**
SAMS	**Samsun-Alacam**	**0.54**	**33**	*i* P	**Pb**	**16 16 45.7**	**0.0**
ERBA	**Erbaa**	**0.76**	**107**	*i* P	**Pg**	**16 16 48.8**	**-0.1**
ERBA				IAML_P			
comp=Z,2μm,0.1s							
TOKT	**Tokat**	**0.82**	**136**	PG	**Pb**	**16 16 50.5**	**-0.1**
TOKT				SG	**Sb**	**16 17 01.9**	**+0.2**
DIKM	**Dikmen**	**0.84**	**331**	PG	**Pb**	**16 16 50.8**	**-0.1**
COAL	**Corum-Alaca**	**0.90**	**223**	*i* P	**Pb**	**16 16 52.1**	**+0.1**
CORM	**Corum**	**1.15**	**231**	PN	**Pn**	**16 16 56.5**	**0.0**
SINO	**SINOP_Merkez**	**1.19**	**338**	*i* P	**Pn**	**16 16 57.0**	**0.0**
YOZ	**Yozgat**	**1.32**	**196**	PN	**Pg**	**16 16 59.6**	**+0.1**
SVSK	**Karacayir**	**1.35**	**137**	PN	**Pb**	**16 16 59.5**	**-0.1**
DELI	**KIRIKKALE**	**1.70**	**238**	*i* P	**Pg**	**16 17 06.3**	**-0.4**
DELI				IAML_P			
comp=Z,232nm,0.2s							

IDC 25 16:17:11.4±2.4, **7°.62N**×**125°.53E**, **h0**km, **mb4.2**/4, **mb1 4.3**/4, **mb1mx3.7**/26, **mbtmp4.2**/4, **Error ellipse: s-maj=236.0km s-min=24.2km az=64.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.73**	**163**	P	P	16 23 11.5	+0.8
3.9nm,0.8s,baz=341,slow=12,SNR=12							
ASAR	**Alice Springs**	**32.15**	**165**	P	P	16 23 40.9	-0.1
1.1nm,0.4s,baz=339,slow=6.8,SNR=6.2							
STKA	**Stephens Creek**	**42.16**	**159**	P	P	16 25 05.0	-0.9
5.7nm,1.1s,baz=0.0,slow=10,SNR=3.1							
MKAR	**Makanchi Array**	**53.71**	**324**	P	P	16 26 35.2	-0.1
0.6nm,0.4s,baz=112,slow=8.4,SNR=8.4							

MAN 25 16:23:38.6, 18°.26N×**121°.28E, h31**km, **mb3.8, ML2.5, MS2.1, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.39**	**185**	*eP*	Pn	16 23 48.4	+0.2
APYP				*eS*	Sn	16 23 57.0	+2.4
SGCP	**Mt. Cagua**	**0.73**	**91**	*eP*	Pb	16 23 54.0	+1.1
SGCP				*eS*	Sn	16 24 03.8	+0.9
ABRA	**Dolores**	**0.81**	**222**	*eP*	Pb	16 23 54.2	0.0
ABRA				*eS*	Sn	16 24 05.1	+0.3
CAUP	**Cauayan**	**1.40**	**158**	*eP*	Pb	16 24 03.5	-0.7
CAUP				*eS*	Sb	16 24 22.0	+0.3
BALP	**Baler**	**2.52**	**173**	*eP*	Pn	16 24 17.5	+0.1
BALP				*eS*	Sn	16 24 47.7	+0.7

*IDC **25** 16:27:01.4±2.2, 4°.82S×128°.99E, h0km, mb3.8/1, mb1 3.9/3, mb1mx3.4/29, mbtmp3.7/3, ML3.4/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/28, Error ellipse: s-maj=149.2km s-min=29.5km az=68.0*
*ISCJB **25** 16:27:11.1±1.0, 5°.1S±0°.1×128°.8E±0°.2, h100km, mb3.6/1, Error ellipse: s-maj=28.4km s-min=9.2km az=144.0*
*NEIC **25** 16:27:13.5±1.1, 5°.17S×128°.75E, h107km±15km, mb4.1/3, Error ellipse: s-maj=62.6km s-min=18.9km az=60.0*
ISC 25 16:27:13.0±1.4, **5°.2S**±0°.2×**128°.8E**±0°.2, **h100**km, **n13**, σ1^{s}**.19**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**7.26**	**304**	*ePn*	**Pn**	**16 28 57.2**	**+0.7**
LUWI	**Luwuk**	**7.26**	**304**	P	**Pn**	**16 28 57.0**	**+0.4**
MTN	**Manton Dam**	**7.97**	**163**	*ePn*	**Pn**	**16 29 07.0**	**+0.9**
JAGI	**Jajag, Banyuwa**	**14.88**	**256**	*ePn*	**Pn**	**16 30 37.7**	**-0.7**
WRAB	**Tennant Creek**	**15.64**	**160**	*eP*	**P**	**16 30 50.0**	**-0.1**
8.4nm,0.5s							
WRA	**Warramunga Arr**	**15.65**	**160**	Pn	**Pn**	**16 30 45.7**	**-2.3**
0.1nm,0.3s,baz=340,slow=11,SNR=5.3							
WR1	**Warramunga Arr**	**15.65**	**160**	*ePn*	**Pn**	**16 30 45.7**	**-2.3**
WB2	**Warramunga Arr**	**15.65**	**160**	*ePn*	**Pn**	**16 30 48.0**	**-0.1**
25nm,1.7s							
AS31	**Alice Springs**	**19.04**	**165**	*eP*	**Pn**	**16 31 29.0**	**-0.2**
1.3nm,0.4s							
ASAR	**Alice Springs**	**19.04**	**165**	P	**Pn**	**16 31 28.9**	**-0.3**
0.4nm,0.3s,baz=351,slow=10,SNR=74							
JNU	**Nakatsue**	**38.14**	**3**	LR	LR	16 48 59.5	
comp=Z,24nm,19.0s,baz=321,slow=35							
MK32	**Makanchi Array**	**66.04**	**327**	*eP*	**P**	**16 37 48.9**	**-0.2**
MKAR	**Makanchi Array**	**66.04**	**327**	P	**P**	**16 37 48.9**	**-0.2**
0.5nm,0.5s,baz=126,slow=8.1,SNR=5.8							

*IDC **25** 16:28:07.4±1.9, 2°.94S×127°.92E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.6/31, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=259.4km s-min=24.9km az=66.0*
*ISCJB **25** 16:28:10.9±0.6, 2°.76S±0°.06×127°.90E±0°.04, h38km, mb3.9/3, Error ellipse: s-maj=8.8km s-min=5.5km az=18.7*
*DJA **25** 16:28:11.2±0.9, 3°S±4°×12°8E±°, h28km±10km, M3.8/7, MLv3.8/7*
ISC 25 16:28:12.0±0.9, **2°.81S**±0°.07×**127°.85E**±0°.05, **h38**km, **n11**, σ1^{s}**59**/16, **mb4.0**/3, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.86**	**240**	P	**Pn**	**16 28 28.4**	**+0.8**
NLAI				S	**Sn**	**16 28 40.7**	**+1.7**
AAI	**Ambon**	**0.94**	**158**	P	**Pn**	**16 28 28.0**	**-0.6**
AAI				S	**Sn**	**16 28 41.4**	**+0.6**
MSAI	**Masohi**	**1.20**	**116**	P	**Pn**	**16 28 33.2**	**+1.0**
MSAI				S	**Sn**	**16 28 47.5**	**+0.2**
SANI	**Sanana**	**2.01**	**292**	P	**Pn**	**16 28 43.1**	**-0.2**
SANI				S	**Sn**	**16 29 07.8**	**+0.6**
SWI	**Sorong**	**3.92**	**60**	P	**Pn**	**16 29 09.4**	**-0.2**
FAKI	**Fak Fak**	**4.39**	**92**	P	**Pn**	**16 29 15.8**	**-0.4**
LUWI	**Luwuk**	**5.37**	**289**	*e*	**Pn**	**16 29 25.3**	**-4.3**
WRA	**Warramunga Arr**	**18.17**	**160**	P	**Pn**	**16 32 20.0**	**-1.4**
0.5nm,0.3s,baz=334,slow=12,SNR=22							
ASAR	**Alice Springs**	**21.54**	**165**	P	**P**	**16 32 57.3**	**-0.9**
4.9nm,0.8s,baz=346,slow=12,SNR=28							
ASAR				PcP	**PcP**	**16 37 00.4**	**+0.6**
0.4nm,0.5s,baz=358,slow=1.6,SNR=8.1							
STKA	**Stephens Creek**	**31.68**	**157**	P	**P**	**16 34 31.0**	**-0.9**
2.8nm,1.0s,baz=341,slow=11,SNR=3.5							
MKAR	**Makanchi Array**	**63.57**	**327**	P	**P**	**16 38 41.0**	**+2.2**
0.6nm,0.8s,baz=120,slow=8.5,SNR=5.3							

IDC 25 16:29:50.6±1.8, **17°.23S**×**178°.25W**, **h0**km, **mb4.0**/4, **mb1 4.3**/4, **mb1mx3.7**/38, **mbtmp4.0**/4, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx3.0**/26, **Error ellipse: s-maj=161.7km s-min=31.7km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**34.50**	**279**	LR	LR	16 49 18.6	
comp=Z,220nm,20.7s,baz=300,slow=34							
STKA	**Stephens Creek**	**39.09**	**240**	P	P	16 37 19.1	-0.6
1.1nm,0.4s,baz=88,slow=10,SNR=5.8							
WRA	**Warramunga Arr**	**44.90**	**259**	P	P	16 38 07.2	-0.2
0.7nm,0.4s,baz=91,slow=7.4,SNR=9.8							
ASAR	**Alice Springs**	**45.12**	**254**	P	P	16 38 09.5	+0.3
3.5nm,0.4s,baz=89,slow=8.6,SNR=106							
TXAR	**Lajitas Array**	**85.51**	**58**	P	P	16 42 31.0	0.0
0.4nm,0.7s,baz=210,slow=7.0,SNR=4.3							

*NEIC **25** 16:36:00.7±0.0, 15°.26N×91°.81W, h212km±4km, MD4.2(MEX), After MEX.*
MEX 25 16:36:00.7±0.5, **15°.26N**×**91°.81W**, **h212**km±4km, **MD4.2, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.07**	**343**	*ePn*	Pn	16 36 31.1	-1.3
CCIG				*eS*	S	16 36 54.5	-2.6
CCIG	**Comitan**	**1.07**	**343**	*eP*	Pn	16 36 31.2	-1.2
CCIG				*i* S	S	16 36 54.5	-2.6
PCIG		**1.43**	**288**	*ePn*	Pn	16 36 33.8	-1.1
PCIG				*eS*	S	16 36 59.6	-1.6
PCIG		**1.43**	**288**	*eP*	Pn	16 36 33.8	-1.1
PCIG				*i* S	S	16 36 59.6	-1.6
TGIG		**1.97**	**320**	*ePn*	Pn	16 36 38.9	-1.1
TGIG				*eS*	S	16 37 08.0	-2.3
TGIG		**1.97**	**320**	*i* P	Pn	16 36 38.9	-1.1
TGIG				*i* S	S	16 37 08.0	-2.3
CMIG	**Matias Romero**	**3.47**	**302**	*ePn*	Pn	16 36 55.1	-1.5
CMIG				*eS*	S	16 37 37.4	-2.7
CMIG	**Matias Romero**	**3.47**	**302**	*eP*	Pn	16 36 55.1	-1.5
CMIG				*i* S	S	16 37 37.4	-2.7
SCIG	**Sabancuy**	**3.74**	**9**	*ePn*	Pn	16 36 57.8	-1.9
SCIG				*eS*	S	16 37 41.6	-4.2
SCIG	**Sabancuy**	**3.74**	**9**	*i* P	Pn	16 36 57.8	-1.9
SCIG				*i* S	S	16 37 41.6	-4.2
HUIG	**Huatulco**	**4.17**	**278**	*i* S	S	16 37 52.6	-2.9
VHO	**Vista Hermosa**	**5.06**	**292**	*eP*	Pn	16 37 17.0	+0.5
VHO				*i* S	S	16 38 13.8	-2.2
TEIG	**Tepich**	**5.98**	**34**	*ePn*	Pn	16 37 25.0	-2.9
LVIG	**Laguna Verde**	**6.25**	**316**	*ePn*	Pn	16 37 30.6	-0.8
JTS	**Las Juntas de**	**8.31**	**126**	*ePn*	Pn	16 37 57.1	-1.0

*ISCJB **25** 16:39:59.1±0.3, 2°.89S±0°.04×138°.27E±0°.04, h10km, mb4.5/29, Error ellipse: s-maj=5.6km s-min=5.0km az=146.2*
*NEIC **25** 16:39:59.7±3.5, 2°.79S×138°.31E, h4km±22km, mb4.5/15, Error ellipse: s-maj=8.7km s-min=7.7km az=63.0*
*IDC **25** 16:39:59.0±0.6, 2°.78S×138°.31E, h0km, mb3.9/11, mb1 4.2/17, mb1mx4.1/26, mbtmp4.1/17, ML4.1/5, MS3.4/7, Ms1 3.4/7, ms1mx3.1/27, Error ellipse: s-maj=19.0km s-min=13.8km az=69.0*
*DJA **25** 16:40:01.4±0.3, 3°S±5°×13°8E±°, h10km, M4.8/2, mb5.1/2, MLv4.6/1*
*BJI **25** 16:40:06.7±0.0, 3°.34S×138°.11E, h5km, mb4.6/18, mB5.0/10, Ms4.6/3, Ms7 4.4/2*
ISC 25 16:40:00.5±0.5, **2°.86S**±0°.05×**138°.32E**±0°.06, **h10**km, **n74**, σ1^{s}**89**/63, **mb4.4**/29, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.86**	**82**	P	**Pn**	**16 40 32.4**	**-0.1**
SRPI	**Serui, Papua**	**2.30**	**295**	P	**Pn**	**16 40 38.0**	**-0.5**
JAY	**Jayapura**	**2.41**	**82**	**Pn**	**Pn**	**16 40 40.5**	**+0.4**
9.6nm,0.3s,baz=233,slow=12,SNR=27							
JAY				Sn	**Sb**	**16 41 12.1**	**-1.7**
25nm,0.3s,baz=77,slow=8.0,SNR=4.8							
JAY	**Jayapura**	**2.41**	**82**	P	**Pn**	**16 40 40.2**	**+0.2**
BAKI	**Biak**	**2.76**	**307**	P	**Pn**	**16 40 43.9**	**-1.0**
RKPI	**Ransiki, Papua**	**4.35**	**288**	P	**Pn**	**16 41 08.4**	**+1.6**
MMPI	**Merauke**	**5.94**	**160**	P	**Pn**	**16 41 33.1**	**+4.5**
FAKI	**Fak Fak**	**6.07**	**269**	*ePn*	**Pn**	**16 41 31.9**	**+1.5**
FAKI	**Fak Fak**	**6.07**	**269**	P	**Pn**	**16 41 32.2**	**+1.8**
SIJI	**Sorong**	**7.32**	**286**	Pn	**Pn**	**16 41 47.2**	**-0.4**
10nm,0.3s,baz=40,slow=15,SNR=44							
SWI	**Sorong**	**7.33**	**286**	P	**Pn**	**16 41 48.6**	**+0.9**
PMG	**Port Moresby**	**10.93**	**127**	**Pn**	**Pn**	**16 42 37.9**	**+0.8**
0.3nm,0.3s,baz=273,slow=18,SNR=2.1							
COEN	**Coen**	**12.03**	**157**	*ePn*	**Pn**	**16 42 53.1**	**+0.9**
MTN	**Manton Dam**	**12.21**	**215**	*ePn*	**Pn**	**16 42 56.0**	**+1.3**
SOEI	**Soe**	**15.55**	**243**	*ePn*	**P**	**16 43 44.9**	**+0.3**
96nm,1.1s							
SOEI	**Soe**	**15.55**	**243**	P	**P**	**16 43 45.7**	**+1.1**
DAV	**Davao City (W)**	**16.09**	**308**	LR	LR	16 50 03.3	
comp=Z,78nm,19.0s,baz=124,slow=38							
BATI	**Baumata**	**16.28**	**243**	Pn	**Pn**	**16 43 48.1**	**-1.5**
1.0nm,0.3s,baz=299,slow=19,SNR=2.0							
BATI	**Baumata**	**16.28**	**243**	P	**P**	**16 43 52.6**	**0.0**
WRAB	**Tennant Creek**	**17.41**	**193**	*ePn*	**Pn**	**16 44 03.6**	**-0.2**
25nm,0.7s							
WB2	**Warramunga Arr**	**17.42**	**193**	*ePn*	**Pn**	**16 44 03.8**	**-0.1**
24nm,0.6s							
WR1	**Warramunga Arr**	**17.42**	**193**	*ePn*	**Pn**	**16 44 02.6**	**-1.3**
WR1				*eSn*	**Sn**	**16 47 12.7**	**-5.3**
WRA	**Warramunga Arr**	**17.42**	**193**	P	**Pn**	**16 44 02.6**	**-1.3**
0.6nm,0.3s,baz=13,slow=11,SNR=42							
WRA				S	**Sn**	**16 47 12.7**	**-5.3**
0.7nm,0.3s,baz=8.7,slow=23,SNR=4.4							
GUMO	**Guam**	**17.58**	**22**	LR	LR	16 51 05.5	
comp=Z,82nm,19.7s,baz=121,slow=38							
KAPI	**Kappang**	**18.65**	**263**	LR	LR	16 52 28.8	
comp=Z,64nm,21.8s,baz=302,slow=40							
CTA	**Charters Tower**	**18.80**	**156**	P	**Pn**	**16 44 21.9**	**+1.1**
0.5nm,0.3s,baz=316,slow=15,SNR=3.9							
CTAO	**Charters Tower**	**18.80**	**156**	*eP*	**Pn**	**16 44 22.0**	**+1.1**
14nm,1.0s							
FITZ	**Fitzroy Crossi**	**19.60**	**219**	*eP*	**Pn**	**16 44 30.6**	**+0.2**
20nm,1.1s							
AS31	**Alice Springs**	**21.12**	**191**	*eP*	**P**	**16 44 45.9**	**+0.2**
11nm,0.5s							
AS31				*eS*	**S**	**16 48 40.0**	**-0.9**
ASAR	**Alice Springs**	**21.12**	**191**	P	**P**	**16 44 46.4**	**+0.7**
11nm,0.7s,baz=14,slow=11,SNR=168							
ASAR				S	**S**	**16 48 40.1**	**-0.8**
10nm,1.0s,baz=14,slow=26,SNR=8.2							
TGY	**Tagaytay City**	**24.10**	**315**	LR	LR	16 56 00.4	
comp=Z,102nm,19.3s,baz=149,slow=40							
EIDS	**Eidsvold**	**25.53**	**152**	*eP*	**P**	**16 45 32.0**	**+2.5**
57nm,1.8s							
STKA	**Stephens Creek**	**29.03**	**174**	P	**P**	**16 46 02.1**	**+1.1**
1.3nm,0.6s,baz=338,slow=8.2,SNR=3.0							
STKA	**Stephens Creek**	**29.03**	**174**	*eP*	**P**	**16 46 02.1**	**+1.1**
4.8nm,1.6s							
PANO	**Nakornpanom**	**38.75**	**302**	P	P	16 47 35.8	+10
0.3nm,1.3s							
SKLT	**Songkhla**	**38.92**	**285**	P	P	16 47 38.0	+11
5.4nm,0.9s							
MJAR	**Matsushiro Arr**	**39.20**	**360**	LR	LR	17 01 52.3	
comp=Z,34nm,19.6s,baz=190,slow=34							
SKNT	**Sakolnakorn**	**39.21**	**301**	P	P	16 47 38.9	+10
17nm,1.1s							
NJ2	**Nanjing**	**39.33**	**333**	*eP*	P	16 47 42.3	+12
NJ2				pmax	pmax		
comp=Z,15nm,0.5s							
KS15	**Wonju Array Si**	**41.25**	**347**	*eP*	**P**	**16 47 46.9**	**+1.0**
13nm,0.9s							
KSAR	**Wonju Array Be**	**41.25**	**347**	P	**P**	**16 47 46.9**	**+1.0**
KSRS	**Korea Array**	**41.25**	**347**	P	**P**	**16 47 46.9**	**+1.0**
0.9nm,0.8s,baz=168,slow=12,SNR=6.3							
NANT	**Nan**	**42.81**	**302**	P	P	16 48 13.4	+14
10μm,1.2s							
PAYA	**Payao**	**43.77**	**302**	P	P	16 48 16.6	+10
17μm,0.8s							
CM31	**Chiang Mai Arr**	**44.17**	**300**	*eP*	**P**	**16 48 10.4**	**+0.4**
20nm,1.5s							
CMAR	**Chiang Mai Arr**	**44.17**	**300**	P	**P**	**16 48 10.4**	**+0.4**
1.7nm,1.0s,baz=113,slow=6.5,SNR=7.4							
CMMT	**Chiang Mai**	**44.32**	**301**	P	P	16 48 25.0	+14
3.1nm,1.9s							
KMI	**Kunming**	**44.32**	**311**	P	P	16 48 24.5	+13
KMI				pmax	pmax		
comp=Z,10.0nm,0.6s							
HHC	**Hu-ho-hao-te**	**49.89**	**333**	*eP*	P	16 49 06.5	+12
HHC				pmax	pmax		
comp=Z,12nm,1.2s							
HHC				pmax	pmax		
comp=Z,13nm,5.4s							
LZH	**Lanzhou**	**50.37**	**323**	*eP*	P	16 49 08.0	+10
LZH				pP	sP	16 49 11.3	+8.6
LZH				sP	pP	16 49 12.8	+11
LZH				*ePP*	PP	16 51 05.3	+11
LZH				pmax	pmax		
comp=Z,18nm,1.3s							
LZH				pmax	pmax		
comp=Z,59nm,5.7s							
LZH				LR	LR		
comp=N,220nm,15.9s							
LZH				LR	LR		
comp=E,220nm,16.1s							
LZH				LR	LR		
comp=Z,330nm,18.0s							
SONA0	**Songino Array**	**57.69**	**335**	*eP*	**P**	**16 49 50.8**	**-0.7**
SONM	**Songino Array**	**57.69**	**335**	P	**P**	**16 49 50.8**	**-0.7**
0.4nm,0.6s,baz=160,slow=4.6,SNR=3.4							
PETK	**Petropavlovsk-**	**58.09**	**14**	P	**P**	**16 49 51.8**	**-2.2**
2.4nm,0.8s,baz=167,slow=7.2,SNR=4.1							
PETK				LR	LR	17 11 33.2	
comp=Z,22nm,21.5s,baz=221,slow=33							
PEA1	**Petropavlovsk-**	**58.10**	**14**	*eP*	**P**	**16 49 51.9**	**-2.2**
WMQ	**Urumqi**	**64.88**	**322**	*eP*	P	16 50 51.3	+11
WMQ				pP	sP	16 50 56.8	+12
WMQ				sP	PcP	16 50 58.3	-15
WMQ				pmax	pmax		
comp=Z,8.0nm,0.7s							
WMQ				LR	LR		
comp=N,51nm,29.3s							
WMQ				LR	LR		
comp=E,300nm,29.1s							
MK31	**Makanchi Array**	**69.67**	**323**	*eP*	**P**	**16 51 11.3**	**+0.9**
3.5nm,1.1s							
MK32	**Makanchi Array**	**69.67**	**323**	*eP*	**P**	**16 51 10.2**	**-0.3**
MKAR	**Makanchi Array**	**69.67**	**323**	P	**P**	**16 51 10.2**	**-0.3**
0.7nm,0.6s,baz=137,slow=6.2,SNR=7.6							
MAKZ	**Makanchi**	**69.86**	**322**	*eP*	**P**	**16 51 11.3**	**-0.4**
5.2nm,1.0s							
ZALV	**Zalesovo Beam**	**71.87**	**330**	P	**P**	**16 51 23.1**	**-0.5**
0.5nm,0.5s,baz=113,slow=11,SNR=2.4							
ZAA1	**Zalesovo Array**	**71.87**	**330**	*eP*	**P**	**16 51 23.1**	**-0.5**
VNDA	**Vanda**	**75.67**	**175**	P	**P**	**16 51 45.7**	**+0.1**
1.0nm,0.6s,baz=328,slow=7.1,SNR=13							
VNDA				LR	LR	17 24 43.6	
comp=Z,117nm,19.1s,baz=310,slow=35							
MAW	**Mawson**	**81.84**	**202**	P	**P**	**16 52 20.8**	**+1.1**
2.0nm,0.9s,baz=331,slow=13,SNR=3.1							
MAW	**Mawson**	**81.84**	**202**	*eP*	**P**	**16 52 20.8**	**+1.1**
1.1nm,1.0s							
ILAR	**Eielson Array**	**86.12**	**24**	P	**P**	**16 52 40.2**	**-1.4**
0.5nm,0.7s,baz=255,slow=3.5,SNR=2.9							
ILB	**Eielson Array**	**86.12**	**24**	*eP*	**P**	**16 52 40.2**	**-1.4**
4.6nm,1.0s							
DOT	**Dot Lake**	**87.06**	**26**	*eP*	**P**	**16 52 45.6**	**-0.6**
4.9nm,1.1s							
VYHS	**Vyhne**	**111.34**	**322**	*ePDIF*	**Pdif**	**16 54 45.2**	**+8.6**
TORD	**Torodi Ar. Bea**	**135.92**	**286**	PKP	**PKiKP**	**16 59 23.3**	**-1.2**
0.7nm,0.8s,baz=43,slow=2.8,SNR=2.3							
TOA1	**Torodi Ar. Sit**	**135.93**	**286**	*ePKPdf*	**PKiKP**	**16 59 23.2**	**-1.3**

baz=47
UCH ⇓iS **Sn** **16 50 19.2 +2.3**
baz=47
AAK Ala-Archa 4.72 44 ⇑Pn Pb 16 49 32.9 -6.6
5.6nm,0.5s
AAK ⇑Sn **Sn** **16 50 28.3 +5.5**
8.5nm,0.6s
AAK ⇑Lg Lg 16 50 50.6
17nm,0.6s
AAK Ala-Archa 4.72 44⇑iP **Pn** **16 49 30.8 +2.8**
baz=44
AAK ⇑iS **Sn** **16 50 25.3 +2.5**
baz=44
KZA Kyzart 4.82 54⇑iP **Pn** **16 49 32.1 +2.5**
baz=53
KZA ⇑iS **Sn** **16 50 27.6 +1.9**
baz=53
FRU1 Bishkek 4.91 44⇓iP **Pn** **16 49 33.3 +2.8**
baz=43
FRU1 ⇓iS **Sn** **16 50 29.7 +2.3**
baz=43
KBK Karagaybulak 4.98 47⇓iP **Pn** **16 49 34.5 +2.9**
baz=46
KBK ⇓iS **Sn** **16 50 31.4 +2.0**
baz=46
USP Ospenovka 5.17 39⇑iP **Pn** **16 49 36.9 +2.8**
baz=38
USP ⇑iS **Sn** **16 50 35.8 +2.0**
baz=38
TKM2 Tokmak 2 5.52 48 ⇓Pn **Pn** **16 49 41.5 +2.5**
4.9nm,0.6s
TKM2 ⇑Sn **Sn** **16 50 44.1 +1.4**
13nm,1.0s
TKM2 ⇓Lg Lg 16 51 17.6
11nm,0.7s
TKM2 Tokmak 2 5.52 48⇓iP **Pn** **16 49 41.7 +2.6**
baz=47
TKM2 ⇓iS **Sn** **16 50 44.1 +1.4**
baz=47
ULHL Ulahol 5.54 57⇑iP **Pn** **16 49 41.7 +2.4**
baz=56
ULHL ⇑iS **Sn** **16 50 44.6 +1.5**
baz=56
OTUK Ortayu 9.05 10 ⇓Pn **Pn** **16 50 28.4 +1.1**
0.7nm,0.4s
OTUK ⇑Sn **Sn** **16 52 10.5 +1.3**
2.6nm,0.6s
OTUK ⇑Lg Lg 16 53 05.4
11nm,0.8s
GEYT Alibeck 9.42 265 Pn **Pn** **16 50 32.2 -0.2**
0.3nm,0.3s,baz=84,slow=13,SNR=4.3
GEYT Sn **Sn** **16 52 17.7 -0.7**
1.2nm,0.3s,baz=76,slow=12,SNR=7.5
AB31 Akbulak array 12.24 327 Pn **Pn** **16 51 09.9 -1.1**
1.4nm,0.5s,baz=171,slow=9.4,SNR=86
AB31 ⇑Sn **Sn** **16 53 23.8 -3.6**
2.1nm,0.6s
ZALV Zalesovo Beam 17.73 30 P **P** **16 52 24.8 +0.5**
0.2nm,0.3s,baz=213,slow=12,SNR=4.8
BRTR Keskin Array B 27.94 283 P **P** **16 54 07.6 +0.3**
0.3nm,0.5s,baz=93,slow=7.5,SNR=3.8
FINES FINESS Array B 34.71 324 P P 16 55 11.4 +5.1
0.3nm,0.4s,baz=122,slow=7.2,SNR=5.0
ARCES ARCESS Array B 38.22 337 P P 16 55 41.5 +5.2
1.2nm,0.9s,baz=108,slow=8.6,SNR=4.6

*IDC **25** 16:53:25.3±1.1,56°.36S×25°.23W,h0km,mb4.3/3,*
mb1 4.4/3,mb1mx3.9/23,mbtmp4.3/3,Error ellipse:
s-maj=43.2km s-min=31.8km az=77.0
*ISCJB **25** 16:53:27.3±0.9,56°.4S±0°.1×25°.2W±0°.5,h29km,Error*
ellipse: s-maj=39.5km s-min=20.2km az=1.3
*NEIC **25** 16:53:30.3±0.6,56°.42S×25°.39W,h35km,mb4.6/2,Error*
ellipse: s-maj=28.5km s-min=16.2km az=91.0
ISC 25 16:53:29.2±0.9,56°.4S±0°.2×25°.3W±0°.3,h29km,n10,
σ0°41/10,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**33.85**	**180**	*eP*	**P**	**17 00 08.8**	**0.0**
20nm,1.8s							
VNDA	**Vanda**	**46.27**	**182**	P	**P**	**17 01 51.6**	**+0.3**
0.4nm,0.6s,baz=214,slow=7.0,SNR=7.2							
VNDA	**Vanda**	**46.27**	**182**	*eP*	**P**	**17 01 51.0**	**-0.3**
LPAZ	**La Paz**	**51.46**	**303**	P	**P**	**17 02 32.7**	**+0.2**
2.2nm,0.4s,baz=72,slow=6.0,SNR=15							
LPAZ	**La Paz**	**51.46**	**303**	*eP*	**P**	**17 02 32.0**	**-0.5**
2.9nm,0.6s							
TORD	**Torodi Ar. Bea**	**72.85**	**28**	P	**P**	**17 04 55.1**	**0.0**
1.2nm,0.7s,baz=199,slow=6.8,SNR=5.4							
TOA1	**Torodi Ar. Sit**	**72.86**	**28**	*eP*	**P**	**17 04 55.1**	**0.0**
SONA0	**Songino Array**	**149.68**	**86**	*e*PKPbc	**PKiKP**	**17 13 15.9**	**-0.3**
SONM	**Songino Array**	**149.68**	**86**	PKPbc	**PKiKP**	**17 13 15.9**	**-0.3**
0.3nm,0.4s,baz=222,slow=1.9,SNR=2.8							
ILAR	**Eielson Array**	**151.15**	**311**	PKPbc	**PKiKP**	**17 13 19.2**	**+0.7**
0.5nm,1.0s,baz=120,slow=2.4,SNR=4.8							

DJA 25 16:58:52.0±1.3,5°N±5°×9°6E±1°1,h10km,M3.7/6,
MLv3.7/6,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.74**	**144**	P	Pg	16 59 06.0	-0.3
MLSI				S	Sg	16 59 15.8	-0.2
LHMI	**Lhok Sumawe**	**1.04**	**70**	P	Pg	16 59 11.4	-0.6
TPTI		**2.00**	**143**	P	Pn	16 59 25.8	-0.1
TPTI				S	Sb	16 59 53.4	-0.2
KCSI	**Kotacane, Aceh**	**2.24**	**127**	P	Pn	16 59 29.8	+0.6
KCSI				S	Sn	16 59 58.1	+1.1

*KRNET **25** 16:59:08.8±0.1,39°.32N×71°.88E,mb4.8*
*NNC **25** 16:59:09.0±1.7,39°.49N×72°.07E,h0km,mb4.8,mpv4.4,*
Error ellipse: s-maj=15.5km s-min=9.0km az=170.0
*BJI **25** 16:59:08.4±0.0,39°.45N×71°.72E,h12km,mb4.6/31,*
mB4.6/22,ML4.6/3,Ms4.2/14,Ms7.3/13
*IDC **25** 16:59:09.4±0.5,39°.37N×72°.14E,h0km,mb4.3/22,*
mb1 4.4/31,mb1mx4.3/43,mbtmp4.3/31,ML3.7/9,MS3.6/21,
Ms1 3.6/21,ms1mx3.4/46,Error ellipse: s-maj=10.3km
s-min=8.6km az=135.0
*ISCJB **25** 16:59:10.9±0.8,39°.31N±0°.02×72°.04E±0°.02,h19km±6km,*
mb4.5/76,MS3.7/19,Error ellipse: s-maj=3.1km
s-min=2.7km az=136.4
*NEIC **25** 16:59:11.6±0.9,39°.43N×71°.97E,h12km±5km,mb4.6/35,*
Error ellipse: s-maj=5.9km s-min=5.1km az=155.0
*MOS **25** 16:59:11.7±1.4,39°.41N×72°.01E,h21km,mb4.7/30,Error*
ellipse: s-maj=5.7km s-min=4.6km az=85.7
*SOME **25** 16:59:14.2,39°.92N×72°.75E,h20km*
ISC 25 16:59:11.0±0.6,39°.43N±0°.03×71°.99E±0°.02,h7km±3km,
n308,σ2°08/339,mb4.6/76,MS3.6/19,56C-34D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.15**	**288**	⇑*iP*	**Pg**	**16 59 12.5**	**-1.9**
baz=40							
DRK				⇑*iS*	**Sg**	**16 59 15.8**	**-0.9**
baz=40							
BTK	**Batken**	**1.10**	**305**	*e*Pg	**Pg**	**16 59 29.3**	**-2.8**
BTK	**Batken**	**1.10**	**305**	*e*PG	**Pg**	**16 59 29.3**	**-2.8**
BTK	**Batken**	**1.10**	**305**	⇑*iP*	**Pg**	**16 59 29.3**	**-2.8**
baz=12							
BTK				⇑*iS*	**Sg**	**16 59 44.7**	**-1.7**
baz=12							
GAR	**Garm**	**1.37**	**252**	*e*Pn	**Pn**	**16 59 35.2**	**-1.4**
GAR	**Garm**	**1.37**	**252**	*e*PG	**Pn**	**16 59 35.3**	**-1.4**
ARSB	**Arslanbob**	**2.04**	**22**	*e*Pn	**Pn**	**16 59 46.9**	**+1.1**
ARSB	**Arslanbob**	**2.04**	**22**	⇑*iP*	**Pn**	**16 59 47.0**	**+1.1**
baz=22							
ARSB				⇑*e*S	**Sb**	**17 00 14.8**	**+0.8**
baz=22							
ARK	**Arkit**	**2.36**	**360**	⇑*iP*	**Pn**	**16 59 51.2**	**+0.9**
baz=2.0							
ARK				⇑*iS*	**Sb**	**17 00 22.0**	**-1.4**
baz=2.0							
TAS	**Tashkent**	**2.80**	**313**	⇑*eP*	**Pn**	**16 59 56.3**	**+0.1**
baz=16							
TAS				⇑*iS*	**Sn**	**17 00 30.0**	**-0.3**
baz=16							
AML	**Almayashu**	**2.99**	**25**	P	**Pn**	**17 00 01.0**	**+1.9**
SNR=40							
AML	**Almayashu**	**2.99**	**25**	⇑*iP*	**Pn**	**17 00 00.7**	**+1.5**
baz=26							
AML				⇑*iS*	**Sn**	**17 00 38.0**	**+2.5**
baz=26							
KSH	**Kashi**	**3.08**	**87**	Pn	**Pn**	**16 59 59.0**	**-1.2**
KSH				Sn	**Sn**	**17 00 34.3**	**-3.1**
KSH				smax	smax		
comp=N,3μm,0.9s							
KSH				smax	smax		
comp=E,2μm,1.0s							
IUG	**Iuzhnay**	**3.09**	**332**	Pg	**Pn**	**17 00 02.1**	**+1.8**
170nm,0.4s							
IUG				Lg	Lg	17 00 47.9	
1μm,0.5s							
IUG	**Iuzhnay**	**3.09**	**332**	*e*P	**Pg**	**17 00 08.6**	**-1.7**
163nm,0.7s							
IUG				*e*S	**Sb**	**17 00 46.5**	**+2.2**
3μm,0.6s							
UCH	**Uchtor**	**3.38**	**34**	P	**Pn**	**17 00 06.8**	**+2.2**
SNR=36							
UCH	**Uchtor**	**3.38**	**34**	⇑*iP*	**Pn**	**17 00 06.1**	**+1.4**
baz=34							
UCH				⇑*iS*	**Sn**	**17 00 47.9**	**+2.6**
baz=34							
MRKS	**Merke**	**3.44**	**15**	Pg	**Pn**	**17 00 07.1**	**+2.1**
127nm,0.4s							
MRKS				Lg	Lg	17 00 57.0	
501nm,0.6s							
MRKS	**Merke**	**3.44**	**15**	*e*P	**Pn**	**17 00 06.7**	**+1.6**
127nm,0.4s							
MRKS				*e*S	**Sn**	**17 00 43.5**	**-2.6**
500nm,0.5s							
EKS2	**Erkin-Say**	**3.50**	**22**	P	**Pn**	**17 00 07.8**	**+1.9**
SNR=184							
EKS2	**Erkin-Say**	**3.50**	**22**	⇓*iP*	**Pn**	**17 00 07.3**	**+1.4**
baz=23							
EKS2				⇓*iS*	**Sn**	**17 00 49.9**	**+2.3**
baz=23							
KZA	**Kyzart**	**3.62**	**42**	P	**Pn**	**17 00 10.2**	**+2.4**
SNR=188							
KZA	**Kyzart**	**3.62**	**42**	⇓*iP*	**Pn**	**17 00 09.1**	**+1.2**
baz=42							
KZA				⇓*iS*	**Sn**	**17 00 53.4**	**+2.4**
baz=42							
AAK	**Ala-Archa**	**3.72**	**30**	Pn	**Pn**	**17 00 11.1**	**+2.1**
17nm,0.3s,baz=194,slow=5.6,SNR=58							
AAK				Sn	**Sn**	**17 00 57.5**	**+4.3**
16nm,0.3s,baz=0.0,slow=20,SNR=6.0							
AAK				LR	LR	17 01 46.7	
comp=Z,568nm,18.7s,baz=210,slow=42							
AAK	**Ala-Archa**	**3.72**	**30**	P	**Pn**	**17 00 11.8**	**+2.8**
SNR=39							
AAK	**Ala-Archa**	**3.72**	**30**	Pn	**Pn**	**17 00 08.6**	**-0.4**
182nm,0.9s							
AAK				Lg	Lg	17 01 06.3	
884nm,1.1s							
AAK	**Ala-Archa**	**3.72**	**30**	*i* P	**Pn**	**17 00 11.8**	**+2.8**
SNR=65							
AAK	**Ala-Archa**	**3.72**	**30**	PN	**Pn**	**17 00 11.4**	**+2.4**
AAK						17 00 57.1	
AAK				pmax	pmax		
comp=Z,182nm,0.9s							
AAK				smax	smax		
comp=Z,884nm,1.1s							
AAK	**Ala-Archa**	**3.72**	**30**	⇓*iP*	**Pn**	**17 00 10.4**	**+1.4**
baz=30							
AAK				⇓*iS*	**Sn**	**17 00 55.6**	**+2.5**
baz=30							
KK31	**Karatay Array**	**3.83**	**344**	*e*Pn	**Pn**	**17 00 12.1**	**+1.7**
KK31	**Karatay Array**	**3.83**	**344**	Pn	**Pn**	**17 00 11.2**	**+0.8**
comp=Z,15nm,0.3s,baz=172,slow=13,SNR=1579							
KK31				⇑Pg	**Pb**	**17 00 19.0**	**+0.1**
comp=Z,153nm,0.5s,baz=166,slow=18,SNR=59							
KK31				⇓Lg	Lg	17 01 08.8	
comp=Z,651nm,0.5s							
KK31	**Karatay Array**	**3.83**	**344**	*e*PN	**Pb**	**17 00 20.9**	**+2.0**
KK31						17 01 08.7	
KK31				pmax	pmax		
comp=Z,153nm,0.5s							
KK31				smax	smax		
comp=Z,651nm,0.5s							
KKAR	**Karatay Array**	**3.83**	**344**	*e*Pn	**Pn**	**17 00 12.2**	**+1.8**
KKAR	**Karatay Array**	**3.83**	**344**	*e*PN	**Pn**	**17 00 12.2**	**+1.8**
FRU1	**Bishkek**	**3.92**	**30**	*e*Pn	**Pn**	**17 00 13.9**	**+2.3**
FRU1	**Bishkek**	**3.92**	**30**	*e*PN	**Pn**	**17 00 13.9**	**+2.3**
FRU1	**Bishkek**	**3.92**	**30**	⇑*eP*	**Pn**	**17 00 13.0**	**+1.4**
baz=30							
FRU1				⇑*iS*	**Sn**	**17 01 00.1**	**+2.2**
baz=30							
KBK	**Karagaybulak**	**3.92**	**34**	P	**Pn**	**17 00 14.6**	**+2.8**
SNR=81							
KBK	**Karagaybulak**	**3.92**	**34**	⇑*iP*	**Pn**	**17 00 13.0**	**+1.2**
baz=34							
KBK				⇑*iS*	**Sn**	**17 01 00.2**	**+2.1**
baz=34							
BRLS	**Boroldoy**	**3.94**	**336**	Pg	**Pb**	**17 00 17.0**	**-3.9**
comp=Z,1.0nm,0.3s							
BRLS				Lg	Lg	17 01 13.1	
comp=Z,583nm,0.8s							
CHMS	**Chumysh**	**4.13**	**29**	P	**Pn**	**17 00 17.3**	**+2.8**
SNR=180							
CHMS	**Chumysh**	**4.13**	**29**	⇑*iP*	**Pn**	**17 00 15.8**	**+1.3**
baz=30							
CHMS				⇑*iS*	**Sn**	**17 01 05.1**	**+2.1**
baz=30							
USP	**Ospenovka**	**4.27**	**25**	P	**Pn**	**17 00 18.7**	**+2.2**
SNR=23							
USP	**Ospenovka**	**4.27**	**25**	⇑*iP*	**Pn**	**17 00 17.8**	**+1.3**
baz=26							
USP				⇑*iS*	**Sn**	**17 01 08.3**	**+1.8**
baz=26							
BOOM	**Boomskoye usch**	**4.27**	**43**	*e*Pn	**Pn**	**17 00 18.9**	**+2.4**
BOOM	**Boomskoye usch**	**4.27**	**43**	*e*PN	**Pn**	**17 00 19.0**	**+2.4**
BOOM	**Boomskoye usch**	**4.27**	**43**	⇑*iP*	**Pn**	**17 00 18.1**	**+1.5**
baz=43							
BOOM				⇑*iS*	**Sn**	**17 01 08.7**	**+1.9**
baz=43							
ULHL	**Ulahol**	**4.28**	**48**	P	**Pn**	**17 00 18.7**	**+2.0**
SNR=131							
ULHL	**Ulahol**	**4.28**	**48**	⇑*iP*	**Pn**	**17 00 18.2**	**+1.5**
baz=47							
ULHL				⇑*iS*	**Sn**	**17 01 09.1**	**+2.2**
baz=47							
TKM2	**Tokmak 2**	**4.42**	**37**	P	**Pn**	**17 00 20.8**	**+2.1**
SNR=104							
TKM2	**Tokmak 2**	**4.42**	**37**	⇓Pn	**Pn**	**17 00 20.7**	**+2.0**
comp=Z,37nm,0.5s							
TKM2				⇑Lg	Lg	17 01 29.9	
comp=Z,393nm,0.9s							
TKM2	**Tokmak 2**	**4.42**	**37**	*i* PN	**Pn**	**17 00 20.7**	**+2.0**
TKM2				pmax	pmax		
comp=Z,37nm,0.5s							
TKM2	**Tokmak 2**	**4.42**	**37**	⇑*iP*	**Pn**	**17 00 20.3**	**+1.6**
baz=37							
TKM2				⇑*iS*	**Sn**	**17 01 12.5**	**+2.0**
baz=37							
KST	**Kastek**	**4.69**	**38**	Pg	**Pb**	**17 00 29.8**	**-3.8**
comp=Z,80nm,0.6s							
KST				Lg	Lg	17 01 35.5	
comp=Z,208nm,1.2s							
KST	**Kastek**	**4.69**	**38**	*e*P	**Pn**	**17 00 24.9**	**+2.6**
comp=Z,65nm,0.6s							
KST				*e*S	**Sn**	**17 01 15.1**	**-1.9**
comp=Z,147nm,0.7s							
DGS	**Degeres**	**4.75**	**36**	Pg	**Pb**	**17 00 32.7**	**-1.9**
comp=Z,99nm,0.7s							
DGS				Lg	Lg	17 01 40.8	
comp=Z,344nm,0.7s							
AAA	**Alma-Ata**	**5.29**	**43**	Pg	**Pb**	**17 00 41.6**	**-2.2**
comp=Z,14nm,0.1s							
AAA				Lg	Lg	17 01 55.8	
comp=Z,175nm,0.4s							
AAA	**Alma-Ata**	**5.29**	**43**	*e*PN	**Pb**	**17 00 47.4**	**+3.6**
AAA				*e*S	**Sg**	**17 01 55.6**	**-5.2**
AAA				pmax	pmax		
comp=Z,34nm,0.3s							
AAA				smax	smax		
comp=N,176nm,0.4s							
KNDC	**Almaty**	**5.32**	**43**	⇑Pn	**Pn**	**17 00 30.3**	**-0.6**
KNDC				⇑Lg	Lg	17 01 57.0	
MDOK	**Medeo**	**5.33**	**44**	Pg	**Pb**	**17 00 41.4**	**-3.1**
comp=N,30nm,0.7s							
MDOK				Lg	Lg	17 01 56.0	
comp=N,129nm,1.0s							
KOTS	**Kotyrbulak**	**5.41**	**44**	Pg	**Pb**	**17 00 42.4**	**-3.5**
comp=N,37nm,0.7s							
KOTS				Lg	Lg	17 01 57.6	
comp=N,466nm,1.0s							
KBL	**Kabul**	**5.42**	**207**	*e*Pn	**Pn**	**17 00 36.0**	**+3.6**
KBL	**Kabul**	**5.42**	**207**	*e*PN	**Pn**	**17 00 36.0**	**+3.6**
KUU	**Kurty**	**5.52**	**35**	Pg	**Pb**	**17 00 44.4**	**-3.2**
comp=N,6.4nm,0.2s							
KUU				Lg	Lg	17 02 00.9	
comp=N,331nm,0.6s							
KTBS	**Karatobe**	**5.54**	**38**	Pg	**Pb**	**17 00 45.3**	**-2.7**
comp=N,25nm,0.5s							
KTBS				Lg	Lg	17 02 02.1	
comp=N,206nm,0.7s							
CEP	**Cherat**	**5.60**	**181**	P	Pn	17 00 40.3	+5.5
PRZ	**Przheval'sk**	**5.73**	**56**	*e*Pn	**Pn**	**17 00 39.6**	**+3.0**
PRZ	**Przheval'sk**	**5.73**	**56**	*e*PN	**Pn**	**17 00 39.7**	**+3.0**
CHKK	**Chushkaly**	**5.79**	**39**	Pg	**Pb**	**17 00 50.4**	**-1.9**
comp=N,13nm,0.5s							
CHKK				Lg	Lg	17 02 11.3	
comp=N,158nm,0.7s							
BTLS	**Baital**	**5.81**	**15**	Pg	**Pb**	**17 00 50.9**	**-1.6**
comp=N,40nm,0.5s							
BTLS				Lg	Lg	17 02 11.4	
comp=N,58nm,0.8s							
CHCP	**Chirah Chowk**	**5.85**	**170**	P	Pn	17 00 42.9	+4.7
NIL	**Nilore**	**5.86**	**170**	*e*Pn	**Pn**	**17 00 40.5**	**+2.2**
NIL	**Nilore**	**5.86**	**170**	*e*PN	**Pn**	**17 00 40.5**	**+2.2**
KURS	**Kuram**	**6.16**	**47**	Pg	**Pb**	**17 00 56.7**	**-1.9**
comp=N,40nm,1.2s							
KURS				Lg	Lg	17 02 22.3	
comp=N,156nm,1.4s							
ARXS	**Arharly**	**6.47**	**41**	Pg	**Pb**	**17 01 03.9**	**+0.1**
comp=N,24nm,0.7s							
ARXS				Lg	Lg	17 02 34.3	
comp=N,135nm,0.8s							
THW	**Thamme Wali**	**6.63**	**182**	P	**Pn**	**17 00 52.9**	**+4.1**
MNBS	**Baschi**	**6.67**	**44**	Pg	**Pb**	**17 01 06.7**	**-0.7**
comp=N,13nm,1.0s							
MNBS				Lg	Lg	17 02 39.2	
comp=N,66nm,0.6s							
PDGK	**Podgornoye**	**6.85**	**53**	⇑Pn	**Pn**	**17 00 51.7**	**-0.3**
comp=N,31nm,0.9s							
PDGK				⇓Lg	Lg	17 02 46.7	
comp=N,219nm,0.9s							
PDGK	**Podgornoye**	**6.85**	**53**	PN	**Pn**	**17 00 54.3**	**+2.3**
PDGK				pmax	pmax		
comp=Z,31nm,0.9s							
DJR	**Jarkent**	**7.60**	**47**	Pg	**Pb**	**17 01 21.7**	**-1.5**
comp=Z,12nm,0.6s							
DJR				Lg	Lg	17 03 05.5	
comp=Z,74nm,1.2s							
DHRM	**DHARAMSHALA**	**7.97**	**153**	*e*P	**Pn**	**17 01 08.4**	**+0.9**
DHRM				*e*S	**Sn**	**17 02 37.0**	**-1.0**
DHRM				IAML		17 02 47.5	
comp=N,120nm,0.2s							
DHRM				IAML		17 02 49.0	
comp=E,151nm,0.3s							
KAPS	**Kapalarasan**	**7.99**	**41**	Pg	**Pb**	**17 01 30.2**	**+0.4**
comp=E,7.6nm,0.6s							
KAPS				Lg	Lg	17 03 19.9	
comp=E,55nm,0.9s							
OTUK	**Ortayu**	**8.81**	**2**	⇑Pn	**Pn**	**17 01 17.0**	**-1.7**
comp=E,15nm,0.8s							
OTUK				⇓Pg	Pg	17 01 49.7	-10
comp=E,26nm,0.9s							
OTUK				⇓Lg	Lg	17 03 45.1	
comp=E,198nm,0.9s							
OTUK	**Ortayu**	**8.81**	**2**	P	**Pn**	**17 01 18.8**	**0.0**
OTUK				pmax	pmax		
comp=Z,8.0nm,0.7s							
SMLA	**Simla**	**9.30**	**151**	*e*P	**Pn**	**17 01 26.9**	**+1.5**
SMLA				*e*S	**Sn**	**17 03 07.1**	**-3.2**
SMLA				IAML		17 03 16.1	
comp=N,97nm,0.7s							
SMLA				IAML		17 03 17.1	
comp=E,143nm,0.4s							
MAKZ	**Makanchi**	**10.37**	**41**	*e*Pn	**Pn**	**17 01 42.3**	**+2.3**
MAKZ	**Makanchi**	**10.37**	**41**	⇓Pn	**Pn**	**17 01 37.4**	**-2.7**
comp=E,12nm,1.0s							
MAKZ				⇑Lg	Lg	17 04 36.7	
comp=E,21nm,0.9s							
MAKZ	**Makanchi**	**10.37**	**41**	P	**Pn**	**17 01 43.6**	**+3.5**
MAKZ				pmax	pmax		
comp=Z,12nm,1.0s							
MK31	**Makanchi Array**	**10.52**	**42**	*e*Pn	**Pn**	**17 01 44.6**	**+2.4**
MK31	**Makanchi Array**	**10.52**	**42**	⇓Pn	**Pn**	**17 01 43.6**	**+1.5**
comp=Z,10nm,0.9s,baz=221,slow=13,SNR=47							
MK31				⇓Lg	Lg	17 04 41.4	
comp=Z,22nm,0.8s							
MK31	**Makanchi Array**	**10.52**	**42**	*i* P	**Pn**	**17 01 44.4**	**+2.2**
MK31				pmax	pmax		
comp=Z,10.0nm,1.0s							
MK32	**Makanchi Array**	**10.52**	**42**	*e*Pn	**Pn**	**17 01 43.8**	**+1.6**
MK32				*e*Lg	Lg	17 04 47.1	
MKAR	**Makanchi Array**	**10.52**	**42**	Pn	**Pn**	**17 01 43.8**	**+1.6**
comp=Z,0.3nm,0.3s,baz=225,slow=14,SNR=25							
MKAR				Lg	Lg	17 04 47.2	
comp=Z,0.6nm,0.3s,baz=256,slow=22,SNR=4.3							
MKAR				LR	LR	17 05 58.8	
comp=Z,226nm,20.3s,baz=227,slow=39							
JOSI	**Joshimath**	**10.81**	**143**	*e*P	**Pn**	**17 01 47.2**	**+0.9**
JOSI				*e*S	**Sn**	**17 03 44.0**	**-3.7**
JOSI				IAML		17 04 02.6	
comp=E,255nm,0.1s							
JOSI				IAML		17 04 02.8	
comp=N,892nm,1.0s							
GEYT	**Alibeck**	**10.95**	**266**	Pn	**Pn**	**17 01 47.0**	**-1.1**
comp=N,1.7nm,0.3s,baz=88,slow=15,SNR=24							
GEYT				Sn	**Sn**	**17 03 47.8**	**-3.0**
comp=N,2.4nm,0.3s,baz=116,slow=11,SNR=5.1							
GEYT				LR	LR	17 06 48.6	
comp=N,263nm,21.9s,baz=30,slow=42							
GYA0B	**ALIBECK ARRAY**	**10.95**	**266**	*e*Pn	**Pn**	**17 01 47.5**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**10.95**	**266**	⇑Pn	**Pn**	**17 01 47.0**	**-1.1**
GYA0B				⇑Sn	**Sn**	**17 03 51.6**	**+0.8**
KURBB	**Kurchatov Arra**	**12.10**	**20**	Pn	**Pn**	**17 02 01.9**	**-1.8**
comp=N,0.4nm,0.3s,baz=214,slow=12,SNR=36							
KURBB				Lg	Lg	17 05 31.7	
comp=N,0.2nm,0.3s,baz=213,slow=29,SNR=8.1							
KURBB	**Kurchatov Arra**	**12.10**	**20**	⇓Pn	**Pn**	**17 02 01.8**	**-1.9**
comp=N,12nm,0.8s							
KURBB				⇓Lg	Lg	17 05 31.8	
comp=N,100nm,0.9s							
KURK	**Kurchatov**	**12.21**	**20**	*e*Pn	**Pn**	**17 02 02.8**	**-2.4**
KURK	**Kurchatov**	**12.21**	**20**	*e*P	**Pn**	**17 02 03.3**	**-1.9**
KURK				pmax	pmax		
comp=Z,14nm,1.3s							
WMQ	**Urumqi**	**12.54**	**64**	*e*P	**Pn**	**17 02 11.8**	**+2.0**
WMQ				sP		17 02 20.5	
WMQ				pmax	pmax		
comp=Z,27nm,0.9s							
AB31	**Akbulak array**	**13.05**	**323**	⇑Pn	**Pn**	**17 02 13.7**	**-3.0**
comp=Z,7.3nm,0.4s,baz=128,slow=14,SNR=414							
AB31	**Akbulak array**	**13.05**	**323**	*e*P	**Pn**	**17 02 13.7**	**-3.0**
AB31				pmax	pmax		
comp=Z,7.0nm,0.4s							
ABKAR	**Akbulak array**	**13.05**	**323**	*e*Pn	**Pn**	**17 02 13.6**	**-3.1**
BVAR	**Borovoye Array**	**13.64**	**356**	Pn	**Pn**	**17 02 22.1**	**-2.6**
comp=Z,1.0nm,0.3s,baz=165,slow=12,SNR=34							
BVAR				Sn	**Sn**	**17 04 50.1**	**-6.4**
comp=Z,0.2nm,0.3s,baz=164,slow=22,SNR=3.3							
BVAR				Lg	Lg	17 06 19.7	
comp=Z,0.4nm,0.3s,baz=202,slow=19,SNR=4.5							
BVAR				LR	LR	17 07 19.8	
comp=Z,80nm,20.3s,baz=232,slow=36							
BRVK	**Borovoye**	**13.68**	**356**	*e*Pn	**Pn**	**17 02 22.5**	**-2.8**
BRVK	**Borovoye**	**13.68**	**

DMN	**Daman**	**16.06**	**133**	*e*P	**Pn**	**17 02 54.0**	**-3.6**
	comp=Z,74nm,0.9s						
PKIN	**Phulchoki**	**16.25**	**133**	*e*P	**Pn**	**17 02 56.3**	**-3.7**
	comp=Z,77nm,0.8s						
PKI	**Pulchoki**	**16.26**	**133**	*e*P	**Pn**	**17 02 56.2**	**-4.0**
	comp=Z,66nm,0.7s						
GUN	**Gumba**	**16.28**	**131**	*e*P	**Pn**	**17 02 56.5**	**-3.9**
	comp=Z,25nm,0.5s						
JIRN	**Jiri**	**16.65**	**131**	*e*P	**Pn**	**17 03 00.7**	**-4.5**
	comp=Z,53nm,0.5s						
BHPL	**Bhopal**	**16.79**	**162**	*ex*	**Pn**	**17 03 02.4**	**-4.2**
BHPL				*ex*	x	17 06 00.7	
ZAA0	**Zalesovo Array**	**16.94**	**27**	*e*Pn	**Pn**	**17 03 07.4**	**-0.8**
	comp=Z,32nm,1.4s						
ZAA0	**Zalesovo Array**	**16.94**	**27**	⇓Pn	**P**	**17 03 10.1**	**-0.1**
	comp=Z,1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**16.94**	**27**	Pn	**Pn**	**17 03 07.5**	**-0.8**
	comp=Z,2.9nm,0.3s,baz=217,slow=11,SNR=30						
ZALV				LR	LR	17 10 00.6	
	comp=Z,240nm,20.0s,baz=250,slow=38						
ZAA1	**Zalesovo Array**	**16.94**	**27**	*e*Pn	**Pn**	**17 03 07.5**	**-0.8**
NVS	**Novosibirsk**	**17.17**	**22**	⇓*i*P	**P**	**17 03 13.0**	**+0.2**
NVS				*e*		17 06 17.3	
LSA	**Lhasa**	**18.50**	**116**	P	**P**	**17 03 27.3**	**-0.9**
LSA	**Lhasa**	**18.50**	**116**	*e*P	**Pn**	**17 03 28.7**	**+0.5**
	comp=Z,5.9nm,0.8s						
LSA	**Lhasa**	**18.50**	**116**	*e*P	**Pn**	**17 03 28.7**	**+0.5**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKT	**Akhty**	**18.56**	**284**	*e*P	**Pn**	**17 03 28.8**	**+0.2**
AKT				*e*S	**Sn**	**17 06 57.3**	**+1.0**
AKT				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AKT				smax	smax		
	comp=N,12nm,0.5s						
MAK	**Makhachkala**	**18.74**	**289**	*e*P	**P**	**17 03 28.8**	**-1.4**
MAK				*e*S	**Sn**	**17 06 58.9**	**-1.4**
MAK				pmax	pmax		
	comp=Z,24nm,0.3s						
MAK				MLR	MLR		
	comp=Z,165nm,15.0s						
SHME	**Shamm**	**18.82**	**230**	P	**Pn**	**17 03 33.9**	**+2.1**
SVE	**Sverdlovsk**	**18.94**	**341**	*e*P	**P**	**17 03 29.5**	**-2.8**
SVE				*e*S	**Sn**	**17 07 01.8**	**-3.1**
SVE				pmax	pmax		
	comp=Z,14nm,1.1s						
SVE				MLR	MLR		
	comp=Z,698nm,12.0s						
ARU	**Arti**	**19.18**	**337**	P	**Pn**	**17 03 35.5**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=146,slow=11,SNR=18						
ARU				LR	LR	17 11 29.3	
	comp=Z,408nm,20.4s,baz=137,slow=38						
ARU	**Arti**	**19.18**	**337**	*e*P	**P**	**17 03 34.5**	**-0.5**
	comp=Z,30nm,1.1s						
ARU	**Arti**	**19.18**	**337**	*d i*P	**P**	**17 03 35.2**	**+0.3**
ARU				S	**S**	**17 07 12.8**	**+0.5**
ARU				pmax	pmax		
	comp=Z,17nm,0.9s						
ARU				MLR	MLR		
	comp=Z,446nm,18.0s						
MDH	**Madha**	**19.30**	**228**	P	**Pn**	**17 03 38.3**	**+0.8**
MSFE	**Esma-Masafi**	**19.34**	**228**	P	**Pn**	**17 03 38.8**	**+0.8**
UOSS	**Minazif**	**19.63**	**227**	*e*P	**Pn**	**17 03 41.5**	**0.0**
	comp=Z,27nm,1.3s						
WSAR	**Wadi Sarin**	**19.73**	**219**	P	**P**	**17 03 40.7**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=225,slow=5.7,SNR=3.1						
HATD	**Hatta, Dubai**	**19.77**	**227**	P	**Pn**	**17 03 45.0**	**+1.9**
GROC	**Groznyy**	**20.00**	**289**	*e*P	**P**	**17 03 42.6**	**-1.4**
GROC				*e*		17 03 58.0	
GROC				*e*S	**Sn**	**17 07 30.6**	**-0.2**
GROC				pmax	pmax		
	comp=Z,63nm,1.2s						
FAQ	**Al Faqa, Dubai**	**20.14**	**228**	P	Pn	17 03 47.8	+0.4
ASUD	**Al Ashush, Dub**	**20.38**	**229**	P	Pn	17 03 50.6	+0.3
GNI	**Garni**	**20.93**	**281**	P	Pn	17 03 56.6	-0.2
	comp=Z,8.9nm,0.5s,baz=100,slow=5.7,SNR=4.1						
GNI	**Garni**	**20.93**	**281**	*e*P	**P**	**17 03 54.2**	**-0.1**
	comp=Z,60nm,1.2s						
GNI	**Garni**	**20.93**	**281**	*i* P	Pn	17 03 57.0	+0.2
	SNR=5.8						
GNI	**Garni**	**20.93**	**281**	*i* P	Pn	17 03 57.0	+0.2
GNI				pmax	pmax		
	comp=Z,69nm,1.3s						
ZEI	**Tsey**	**21.39**	**288**	*e*P	**P**	**17 03 59.7**	**+0.4**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.3s						
GTA	**Gaotai**	**21.47**	**81**	*e*P	**P**	**17 04 00.8**	**+0.7**
GTA				pP	sP	17 04 05.0	+0.7
GTA				sP	pP	17 04 08.3	+5.3
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,92nm,7.0s						
GTA				LR	LR		
	comp=Z,100nm,9.5s						
GTA				LR	LR		
	comp=Z,130nm,8.6s						
GTA				LR	LR		
	comp=Z,220nm,8.3s						
NCK	**Nalchik**	**21.61**	**290**⇑	*e*P	**P**	**17 04 02.1**	**+0.6**
NCK				pmax	pmax		
	comp=Z,35nm,0.9s						
SHL	**Shillong**	**21.68**	**124**	*e*P	**P**	**17 04 02.6**	**+0.1**
	comp=Z,17nm,0.8s						
SHL	**Shillong**	**21.68**	**124**	*e*P	**P**	**17 04 02.6**	**+0.1**
SHL				pmax	pmax		
	comp=Z,17nm,0.8s						
SHL	**Shillong**	**21.68**	**124**	*e*P	**P**	**17 04 04.0**	**+1.5**
GOF	**Gofitskoye**	**22.09**	**294**⇑	*e*P	**P**	**17 04 06.8**	**+0.2**
KBZ	**Khabaz**	**22.12**	**291**	P	**P**	**17 04 07.5**	**+0.6**
	comp=Z,4.6nm,0.6s,baz=122,slow=7.0,SNR=14						
KBZ				LR	LR	17 14 36.6	
	comp=Z,117nm,19.4s,baz=84,slow=42						
NEY	**Neytrino**	**22.25**	**289**	*i* P	**P**	**17 04 09.4**	**+0.9**
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KVAR	**Kislovodsk Arr**	**22.28**	**291**	P	**P**	**17 04 10.1**	**+1.3**
	comp=Z,2.6nm,0.5s,baz=270,slow=20,SNR=4.6						
KVAR				LR	LR	17 14 25.4	
	comp=Z,112nm,21.6s,baz=252,slow=41						
KIV	**Kislovodsk**	**22.28**	**291**	*e*P	**P**	**17 04 08.5**	**-0.3**
	comp=Z,20nm,0.8s						
KIV	**Kislovodsk**	**22.28**	**291**	*e*P	**P**	**17 04 09.2**	**+0.4**
KIV				*e*S	**S**	**17 08 14.5**	**+0.4**
KIV				pmax	pmax		
	comp=Z,42nm,1.0s						
KIV				MLR	MLR		
	comp=Z,150nm,14.0s						
MOY	**Mondy**	**23.54**	**49**	*e*P	**P**	**17 04 24.0**	**+2.2**
BRDH	**Bariadhala**	**23.63**	**129**	LR	LR	17 15 36.5	
	comp=Z,234nm,20.1s,baz=310,slow=42						
KIRV	**Kirov**	**24.01**	**330**	P	**P**	**17 04 27.5**	**+1.4**
	comp=Z,14nm,0.7s,baz=123,slow=8.6,SNR=14						
KIRV				LR	LR	17 14 54.1	
	comp=Z,199nm,21.2s,baz=215,slow=39						
VRH	**Novokhopyorsk**	**24.14**	**309**	*e*P	**P**	**17 04 28.3**	**+0.9**
VRH				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ZAK	**Zakamensk**	**24.54**	**53**	*e*P	**P**	**17 04 31.0**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	**Talaya**	**25.11**	**50**	*e*P	P	17 04 27.3	-8.9
TLY				pmax	pmax		
	comp=Z,13nm,0.6s						
LZH	**Lanzhou**	**25.34**	**87**	*e*P	**P**	**17 04 36.8**	**-1.8**
LZH				*e*PP	**PnPn**	**17 05 15.3**	**+2.3**
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,68nm,4.8s						
LZH				LR	LR		
	comp=Z,370nm,12.5s						
LZH				LR	LR		
	comp=Z,380nm,12.8s						
LZH				LR	LR		
	comp=Z,470nm,15.2s						
VSR	**Storozhevoye**	**25.69**	**308**	*e*P	**P**	**17 04 41.8**	**+0.4**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ANN	**Anapa**	**26.06**	**293**	*e*P	**P**	**17 04 45.6**	**+0.8**
ANN				*e**PP	**sP**	**17 04 49.0**	**-0.2**
ANN				*e*S	**S**	**17 09 18.4**	**+2.3**
ANN				pmax	pmax		
	comp=Z,38nm,1.1s						
SONA0	**Songino Array**	**26.10**	**60**	*e*P	**P**	**17 04 45.5**	**0.0**
SONM	**Songino Array**	**26.10**	**60**	P	**P**	**17 04 45.5**	**0.0**
	comp=Z,1.9nm,0.6s,baz=263,slow=9.6,SNR=13						
SONM				LR	LR	17 15 41.2	
	comp=Z,161nm,19.6s,baz=250,slow=38						
LPSR	**Galich'ya Gora**	**26.21**	**311**	*e*P	**P**	**17 04 46.7**	**+0.6**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ULN	**Ulaanbaatar**	**26.55**	**60**	*e*P	**P**	**17 04 49.2**	**-0.2**
	comp=Z,6.0nm,1.0s						
ULN	**Ulaanbaatar**	**26.55**	**60**	*ce*P	**P**	**17 04 49.7**	**+0.2**
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
RAYN	**Ar Rayn**	**27.46**	**243**	*e*P	**P**	**17 04 58.0**	**+0.2**
	comp=Z,6.4nm,0.9s						
RAYN	**Ar Rayn**	**27.46**	**243**	*i* P	**P**	**17 04 58.8**	**+1.0**
	SNR=5.9						
RAYN	**Ar Rayn**	**27.46**	**243**	*e*P	**P**	**17 04 58.0**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PRGR	**Permogore**	**27.48**	**333**	*e*P	**P**	**17 04 56.1**	**-1.3**
PRGR				pmax	pmax		
	comp=Z,11nm,0.8s						
OBN	**Obninsk**	**28.31**	**315**	LR	LR	17 17 42.1	
	comp=Z,24nm,20.3s,baz=84,slow=39						
OBN	**Obninsk**	**28.31**	**315**	⇓*e*P	**P**	**17 05 05.8**	**+0.9**
OBN				*e*		17 05 10.1	
OBN				*e*		17 05 55.9	
OBN				*e*		17 06 06.9	
OBN				*e*S	**S**	**17 09 54.0**	**+2.7**
OBN				*e*SSS	SSS	17 11 30.4	
OBN				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN				MLR	MLR		
	comp=Z,149nm,15.0s						
SIM	**Simferopol'**	**28.41**	**294**	*e*P	**P**	**17 05 05.4**	**-0.6**
SIM				pmax	pmax		
	comp=Z,15nm,1.1s						
KLMR	**Klimovskoe**	**29.37**	**328**	*e*P	**P**	**17 05 14.5**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KLMR	**Klimovskoe**	**29.37**	**328**	*e*P	**P**	**17 05 14.5**	**+0.2**
KLMR				AMP		17 05 28.6	
	comp=Z,8.0nm,1.4s						
BR101	**Keskin Array S**	**29.41**	**283**	*e*P	**P**	**17 05 16.5**	**+1.3**
BRTR	**Keskin Array B**	**29.41**	**283**	P	**P**	**17 05 16.5**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=88,slow=8.0,SNR=12						
BRTR				LR	LR	17 19 10.7	
	comp=Z,43nm,18.8s,baz=89,slow=41						
BRTR	**Keskin Array B**	**29.41**	**283**	*ce*P	**P**	**17 05 16.8**	**+1.7**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**30.11**	**74**	*e*P	**P**	**17 05 22.3**	**+1.0**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,23nm,5.4s						
CM31	**Chiang Mai Arr**	**31.31**	**124**	*e*P	**P**	**17 05 30.1**	**-1.9**
	comp=Z,6.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**31.31**	**124**	P	**P**	**17 05 30.1**	**-1.9**
	comp=Z,1.3nm,0.9s,baz=305,slow=9.1,SNR=7.6						
CMAR				LR	LR	17 20 30.4	
	comp=Z,116nm,18.0s,baz=337,slow=41						
LAMP	**Lampang**	**31.71**	**123**	P	P	17 05 41.0	+5.6
	comp=Z,19μm,0.7s						
AKASG	**Malin Array Be**	**31.81**	**305**	P	**P**	**17 05 36.7**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=78,slow=7.7,SNR=2.9						
AKASG				LR	LR	17 21 30.2	
	comp=Z,108nm,18.1s,baz=80,slow=42						
AKBB	**Malin Array Si**	**31.81**	**305**	*e*P	**P**	**17 05 34.6**	**-1.4**
	comp=Z,5.7nm,1.1s						
AKBB	**Malin Array Si**	**31.81**	**305**	*e*P	**P**	**17 05 34.6**	**-1.4**
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NANT	**Nan**	**32.21**	**121**	P	**P**	**17 05 38.1**	**-1.7**
	comp=Z,11μm,0.8s						
BOD	**Bodaibo**	**32.61**	**42**	*e*P	**P**	**17 05 42.5**	**-0.4**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CFR	**Carcaliu**	**32.62**	**295**⇑	*i*P	**P**	**17 05 45.5**	**+2.3**
CFR	**Carcaliu**	**32.62**	**295**	⇑P	**P**	**17 05 45.5**	**+2.3**
PALK	**Pallekele**	**32.97**	**164**	P	P	17 05 52.8	+6.3
TESR	**Tescani**	**33.54**	**297**⇑	*i*P	**P**	**17 05 53.3**	**+2.1**
VRI	**Vrincioaia**	**33.54**	**296**⇑	*i*P	**P**	**17 05 54.9**	**+3.6**
VRI	**Vrincioaia**	**33.54**	**296**	⇑P	**P**	**17 05 54.9**	**+3.6**
PLOR	**Plostina**	**33.60**	**296**	⇓*i*P	**P**	**17 05 54.7**	**+2.9**
PLOR	**Plostina**	**33.60**	**296**	⇓P	**P**	**17 05 54.7**	**+2.9**
BIZ	**Bicaz**	**33.88**	**298**	⇓*i*P	**P**	**17 05 56.5**	**+2.3**
MLR	**Muntele Rosu**	**34.13**	**296**	*e*P	**P**	**17 05 55.6**	**-0.9**
	comp=Z,34nm,1.5s						
MLR	**Muntele Rosu**	**34.13**	**296**	⇓*i*P	**P**	**17 06 00.4**	**+3.9**
MLR	**Muntele Rosu**	**34.13**	**296**	⇓P	**P**	**17 06 00.4**	**+3.9**
BURAR	**Bucovina Array**	**34.44**	**299**	⇓*i*P	**P**	**17 06 01.3**	**+2.2**
BURAR	**Bucovina Array**	**34.44**	**299**	⇓P	**P**	**17 06 01.3**	**+2.2**
DOPR	**Dopca**	**34.46**	**296**	⇓*i*P	**P**	**17 06 02.5**	**+3.2**
VOIR		**34.76**	**296**	⇓*i*P	**P**	**17 06 04.3**	**+2.4**
VOIR		**34.76**	**296**	⇓P	**P**	**17 06 04.3**	**+2.4**
FIA0	**FINESS Array S**	**35.54**	**324**	*e*P	**P**	**17 06 08.9**	**+0.7**
FIA0	**FINESS Array S**	**35.54**	**324**	*e*P	**P**	**17 06 09.0**	**+0.7**
FINES	**FINESS Array B**	**35.54**	**324**	P	**P**	**17 06 08.9**	**+0.7**
	comp=Z,2.8nm,0.4s,baz=111,slow=8.8,SNR=27						
FINES				LR	LR	17 21 33.3	
	comp=Z,274nm,18.9s,baz=96,slow=38						
FINES	**FINESS Array B**	**35.54**	**324**	P	**P**	**17 06 09.0**	**+0.7**
LOT	**Lotru**	**35.65**	**296**	⇓*i*P	**P**	**17 06 12.8**	**+3.2**
SKNT	**Sakolnakorn**	**35.70**	**120**	P	**P**	**17 06 11.5**	**+1.4**
	comp=Z,17nm,1.8s						
TRPA	**Tarpa**	**36.20**	**300**	⇓*i*P	**P**	**17 06 17.2**	**+3.1**
BZS	**Buzias**	**37.13**	**296**⇑	*i*P	**P**	**17 06 24.9**	**+2.8**
BZS	**Buzias**	**37.13**	**296**	⇑P	**P**	**17 06 24.9**	**+2.8**
MDVR	**Moldovita**	**37.19**	**295**	⇓*i*P	**P**	**17 06 25.3**	**+2.6**
NJ2	**Nanjing**	**38.39**	**86**	*e*P	**P**	**17 06 34.5**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARA0	**ARCESS Array S**	**38.76**	**336**	*e*P	**P**	**17 06 36.2**	**+0.6**
ARCES	**ARCESS Array B**	**38.76**	**336**	P	**P**	**17 06 36.2**	**+0.6**
	comp=Z,6.1nm,0.7s,baz=112,slow=8.4,SNR=37						
ARCES				LR	LR	17 23 30.0	
	comp=Z,261nm,21.0s,baz=86,slow=38						
ARE0	**ARCESS Array S**	**38.76**	**336**	*e*P	**P**	**17 06 36.1**	**+0.6**
	comp=Z,0.6nm,1.0s						
ARE0	**ARCESS Array S**	**38.76**	**336**	*e*P	**P**	**17 06 36.7**	**+1.1**
HEF	**Hetta**	**38.90**	**334**	*e*P	**P**	**17 06 36.9**	**+0.2**
KTK1	**Kautokeino**	**39.28**	**335**	*e*P	**P**	**17 06 39.6**	**-0.3**
HAMF	**Hammerfest**	**39.81**	**337**	*e*P	**P**	**17 06 45.5**	**+1.2**
KIF	**Kilpisjarvi**	**40.09**	**334**	*e*P	**P**	**17 06 46.4**	**-0.2**
GOPC	**GO Pecny, Ondr**	**41.08**	**304**	AMS	AMS	17 27 00.0	
	comp=Z,100nm,16.3s						
YAK	**Yakutsk**	**41.14**	**37**	*e*P	**P**	**17 06 54.6**	**-0.8**
	comp=Z,20nm,0.7s						
YAK	**Yakutsk**	**41.14**	**37**	*e*P	**P**	**17 06 53.8**	**-1.6**
YAK				*e**PP	**sP**	**17 07 05.4**	**+5.6**
YAK				*e*		17 08 49.2	
YAK				*e*S	**S**	**17 13 05.0**	**-3.5**
YAK				*e*SS	**ScS**	**17 16 59.3**	**-0.5**
SKLT	**Songkhla**	**41.15**	**134**	P	**P**	**17 06 58.2**	**+2.2**
	comp=Z,7.1nm,1.1s						
PRU	**Pruhonice**	**41.22**	**304**	AMS	AMS	17 27 00.0	
	comp=Z,100nm,12.7s						
BRG	**Berggiesshubel**	**41.48**	**306**	*e*(P)	**P**	**17 06 60.0**	**+1.6**
	comp=Z,2.6nm,0.6s						
BRG	**Berggiesshubel**	**41.48**	**306**	*e*P	**P**	**17 07 00.0**	**+1.6**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GEC2	**GERESS Array S**	**41.94**	**303**	*e*P	**P**	**17 07 04.7**	**+2.4**
	comp=Z,4.4nm,1.1s						
GEC2	**GERESS Array S**	**41.94**	**303**	*e*P	**P**	**17 07 04.7**	**+2.4**
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GERES	**GERESS Array B**	**41.94**	**303**	P	**P**	**17 07 04.7**	**+2.4**
	comp=Z,0.9nm,0.5s,baz=64,slow=9.6,SNR=10						
GERES				LR	LR	17 25 38.6	
	comp=Z,56nm,21.7s,baz=96,slow=38						
KHC	**Kasperske Hory**	**41.97**	**303**	*e*P	**P**	**17 07 04.5**	**+2.0**
KHC	**Kasperske Hory**	**41.97**	**303**	*e*P	**P**	**17 07 04.5**	**+2.0**
CLL	**Collm**	**42.02**	**307**	*e*S	**S**	**17 13 26.0**	**+4.2**
CLL				LmV		17 26 00.0	
	comp=Z,100nm,19.7s						
CLL	**Collm**	**42.02**	**307**	*e*P	P	17 07 12.0	+9.3
CLL				*e*S	**S**	**17 13 26.0**	**+4.2**
NC602	**NORSAR Array S**	**42.38**	**321**	*e*P	**P**	**17 07 06.0**	**+0.5**
NC303	**NORSAR Array S**	**42.48**	**321**	*e*P	**P**	**17 07 06.8**	**+0.4**
	comp=Z,77nm,1.8s						
NC303	**NORSAR Array S**	**42.48**	**321**	*e*P	**P**	**17 07 06.9**	**+0.5**
NB2	**NORSAR Subarra**	**42.55**	**321**	P	**P**	**17 07 06.7**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=93,slow=8.6						
NB2	**NORSAR Subarra**	**42.55**	**321**	P	**P**	**17 07 06.7**	**-0.3**
	baz=93,slow=8.6						
NB200	**NORSAR Array S**	**42.55**	**321**	*e*P	**P**	**17 07 07.4**	**+0.3**
NOA	**NORSAR Array B**	**42.55**	**321**	P	**P**	**17 07 07.4**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=92,slow=8.0,SNR=9.3						
NOA				LR	LR	17 25 51.1	
	comp=Z,148nm,20.9s,baz=95,slow=38						
NAO01	**NORSAR Array S**	**42.70**	**321**	*e*P	**P**	**17 07 09.0**	**+0.7**
NBO00	**NORSAR Array S**	**42.76**	**321**	*e*P	**P**	**17 07 10.1**	**+1.4**
TIXI	**Tiksi**	**42.77**	**23**	*e*P	**P**	**17 07 08.0**	**-0.6**
	comp=Z,5.7nm,0.8s						
TIXI	**Tiksi**	**42.77**	**23**	*ce*P	**P**	**17 07 08.2**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NC204	**NORSAR Array S**	**42.78**	**321**	*e*P	**P**	**17 07 09.0**	**+0.1**
KLR	**Kul'dur**	**42.83**	**56**	*i* P	**P**	**17 07 08.8**	**-0.6**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
IPM	**Ipoh**	**43.60**	**135**	*e*P	**P**	**17 07 14.8**	**-1.2**
	comp=Z,11nm,0.8s						
GSI	**Gunungsitoli**	**44.55**	**142**	*e*P	**P**	**17 07 23.6**	**+0.1**
	comp=Z,30nm,0.7s						
MAJO	**Matsushiro**	**51.20**	**71**	*e*P	**P**	**17 08 14.1**	**-0.9**
MAJO	**Matsushiro**	**51.20**	**71**	*e*P	**P**	**17 08 14.1**	**-0.9**
MJAR	**Matsushiro Arr**	**51.20**	**71**	P	**P**	**17 08 14.1**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=290,slow=9.6,SNR=7.6						
KMBO	**Kilima Mbogo**	**51.40**	**227**	P	**P**	**17 08 17.9**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=33,slow=10.0,SNR=5.6						
KMBO	**Kilima Mbogo**	**51.40**	**227**	*e*P	**P**	**17 08 17.9**	**+1.0**
	comp=Z,3.7nm,0.9s						
KMBO	**Kilima Mbogo**	**51.40**	**227**	P	**P**	**17 08 18.6**	**+1.8**
KMBO	**Kilima Mbogo**	**51.40**	**227**	*ce*P	**P**	**17 08 18.1**	**+1.2**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BILL	**Bilibino**	**55.64**	**27**	*i* P	**P**	**17 08 48.4**	**+1.3**
BILL				*e*		17 08 52.5	
BILL				S	**S**	**17 16 32.0**	**-1.0**
BILL				SS	**SS**	**17 20 24.0**	**+6.6**
BILL				SSS	SSS	17 22 25.0	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.9s						
BILL				MLR	MLR		
	comp=Z,111nm,17.0s						
ESDC	**Sonseca Array**	**56.81**	**297**	P	**P**	**17 08 58.3**	**+2.3**
	comp=Z,0.7nm,0.5s,baz=51,slow=7.2,SNR=4.8						
PEA1	**Petropavlovsk-**	**57.34**	**46**	*e*P	**P**	**17 08 58.8**	**-0.7**
PETK	**Petropavlovsk-**	**57.34**	**46**	P	**P**	**17 08 58.8**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=330,slow=5.0,SNR=2.7						
SUMG	**Summit**	**58.55**	**341**	*e*P	**P**	**17 09 08.9**	**+0.8**
	comp=Z,4.7nm,0.7s						
SUMG	**Summit**	**58.55**	**341**	*e*P	**P**	**17 09 08.9**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TOA1	**Torodi Ar. Sit**	**66.59**	**268**	*e*P	**P**	**17 10 01.3**	**-0.9**
TOA0	**Torodi Ar. Sit**	**66.59**	**268**	*e*P	**P**	**17 10 00.9**	**-1.2**
	comp=Z,3.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**66.59**	**268**	P	**P**	**17 10 01.3**	**-0.9**
	comp=Z,7.8nm,0.3s,baz=30,slow=6.8,SNR=18						
COLD	**Coldfoot**	**68.94**	**16**	*e*P	**P**	**17 10 16.1**	**-0.1**
	comp=Z,5.6nm,1.3s						
INK	**Inuvik**	**70.89**	**10**	*e*P	**P**	**17 10 28.1**	**0.0**
	comp=Z,14nm,1.5s						
INK	**Inuvik**	**70.89**	**10**	*e*P	**P**	**17 10 28.1**	**0.0**
INK				pmax	pmax		
	comp=Z,14nm,1.5s						
BPAW	**Bear Paw Mtn.**	**71.37**	**18**	*e*P	**P**	**17 10 30.1**	**-1.1**
	comp=Z,3.6nm,1.0s						
COLA	**College**	**71.45**	**17**	*i* P	**P**	**17 10 31.9**	**+0.3**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ILAR	**Eielson Array**	**71.75**	**16**	P	**P**	**17 10 32.5**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=322,slow=5.2,SNR=18						
ILB	**Eielson Array**	**71.75**	**16**	*e*P	**P**	**17 10 32.1**	**-1.3**
	comp=Z,4.1nm,1.2s						
KTH	**Kantishna Hill**	**71.84**	**19**	*e*P	**P**	**17 10 32.8**	**-1.3**
	comp=Z,3.9nm,0.8s						
DHY	**Denali Highway**	**73.10**	**18**	*e*P	**P**	**17 10 40.6**	**-1.1**
	comp=Z,4.1nm,0.7s						
DAWY	**Dawson**	**73.89**	**14**	*e*P	**P**	**17 10 45.3**	**-1.0**
	comp=Z,2.5nm,0.8s						
SML	**Sawmill**	**73.96**	**19**	*e*P	**P**	**17 10 46.1**	**-0.6**
	comp=Z,11nm,0.8s						
SML	**Sawmill**	**73.96**	**19**	*e*P	**P**	**17 10 46.1**	**-0.6**
SML				pmax	pmax		
	comp=Z,11nm,0.8s						
SCM	**Sheep Creek Mo**	**74.18**	**18**	*e*P	**P**	**17 10 47.3**	**-0.7**
	comp=Z,19nm,0.9s						
SCM	**Sheep Creek Mo**	**74.18**	**18**	*e*P	**P**	**17 10 47.3**	**-0.7**
SCM				pmax	pmax		
	comp=Z,19nm,0.9s				

JKHN	**Kushirohamanak**	**1.38**	**258**	P	**Pn**	**17 03 25.4**	**+0.7**
JKHN				*e*S	**Sn**	**17 03 41.5**	**-0.3**
JRA	**Rausu**	**1.47**	**293**	P	**Pn**	**17 03 26.3**	**+0.4**
JRA				*e*S	**Sn**	**17 03 44.6**	**+0.5**
JNK	**Nakash**	**1.67**	**278**	P	**Pn**	**17 03 28.6**	**-0.1**
JNK				*e*S	**Sn**	**17 03 47.7**	**-1.3**
JAK	**Akkeshi**	**1.73**	**258**	P	**Pn**	**17 03 29.4**	**-0.1**
JAK				*e*S	**Sn**	**17 03 49.4**	**-1.0**
KUR	**Kuril'sk**	**1.95**	**18**	*e*P	**Pn**	**17 03 33.0**	**+0.5**
KUR				AMB	AMB	17 03 33.0	
3.0nm,0.1s							
KUR				*i* S	**Sn**	**17 03 55.0**	**-0.7**
KUR				A	A	17 03 57.0	
84nm,0.2s							
KUR				A	A	17 03 57.0	
50nm,0.2s							
JTKR	**Abashiri--Toko**	**2.32**	**286**	P	**Pn**	**17 03 38.0**	**+0.5**
JTKR				*e*S	**Sn**	**17 04 05.6**	**+0.8**
JAR	**Ashorobuto**	**2.36**	**269**	P	**Pn**	**17 03 38.7**	**+0.6**
JAR				*e*S	**Sn**	**17 04 05.6**	**-0.2**
JMP	**Maruseppu**	**2.71**	**284**	P	**Pn**	**17 03 43.7**	**+0.7**
JCH	**Churui**	**2.78**	**255**	P	**Pn**	**17 03 43.9**	**+0.1**
JCH				*e*S	**Sn**	**17 04 15.4**	**-0.7**
JNBK	**Urakawa-nobuka**	**3.31**	**252**	P	**Pn**	**17 03 51.0**	**-0.2**

ISCJB ***25*** *17:03:47.4±0.3, 44°.13N±0°.03×10°.10E±0°.04, h7km±4km, Error ellipse: s-maj=6.3km s-min=3.6km az=32.4*
ROM ***25*** *17:03:47.6±0.1, 44°.158N±0°.007×10°.180E±0°.007, h8km, ML2.2/11, Error ellipse: s-maj=0.9km s-min=0.5km az=210.0*
GEN ***25*** *17:03:48.1, 44°.17N×10°.18E, h3km±1km, Ml2.0*
LDG ***25*** *17:03:48.7±0.1, 44°.16N×10°.18E, h2km, Md2.3/2, Ml2.3/9, Error ellipse: s-maj=1.4km s-min=1.0km az=19.0*
ISC 25 17:03:47.8±0.9, 44°.15N±0°.03×10°.14E±0°.03, h6km±5km, n30, σ1°23/48, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.02**	**26**	P	**Pg**	**17 03 49.0**	**0.0**
EQUI				S	**Sg**	**17 03 49.4**	**-0.5**
EQUI	**Equi**	**0.02**	**26**	P	**Pg**	**17 03 49.0**	**0.0**
EQUI				END			
EQUI				END			
T0912	**Minucciano (LU**	**0.05**	**68**	P	**Pg**	**17 03 49.3**	**0.0**
T0912				S	**Sg**	**17 03 50.1**	**-0.4**
T0912				END			
T0912				END			
T0911	**Castelpoggio (**	**0.06**	**233**	P	**Pg**	**17 03 50.5**	**+1.0**
T0911				AML	AML		
comp=E,1785μm,0.4s							
T0911				AML	AML		
comp=N,2005μm,0.3s							
T0911				AML	AML		
comp=E,1765μm,0.4s							
T0911				AML	AML		
comp=N,2005μm,0.2s							
T0911				AML	AML		
comp=E,1785μm,0.4s							
T0911				AML	AML		
comp=N,2005μm,0.3s							
T0911				AML	AML		
comp=E,1765μm,0.4s							
T0911				AML	AML		
comp=N,2010μm,0.3s							
T0911				AML	AML		
comp=E,1785μm,0.4s							
T0911				AML	AML		
comp=E,1765μm,0.4s							
T0911				AML	AML		
comp=N,2005μm,0.3s							
T0911				AML	AML		
comp=N,2010μm,0.3s							
T0911				END			
T0911				END			
VLC	**Villacollemand**	**0.18**	**86**	*i* P	**Pg**	**17 03 51.7**	**+0.3**
VLC				S	**Sg**	**17 03 54.3**	**+0.5**
VLC				AML	AML		
comp=E,2160μm,0.1s							
VLC				AML	AML		
comp=N,2335μm,0.1s							
VLC				AML	AML		
comp=E,2315μm,0.1s							
VLC				AML	AML		
comp=N,2415μm,0.1s							
VLC				AML	AML		
comp=E,2165μm,0.1s							
VLC				AML	AML		
comp=N,2335μm,0.1s							
VLC				AML	AML		
comp=E,2315μm,0.1s							
VLC				AML	AML		
comp=N,2415μm,0.1s							
VLC				AML	AML		
comp=N,2415μm,0.1s							
VLC				AML	AML		
comp=N,2335μm,0.1s							
VLC				AML	AML		
comp=E,2315μm,0.1s							
VLC				AML	AML		
comp=E,2165μm,0.1s							
VLC				END			
VLC				END			
CARD	**Cardoso**	**0.28**	**116**	P	**Pg**	**17 03 53.7**	**+0.5**
CARD				S	**Sg**	**17 03 57.3**	**+0.5**
CARD	**Cardoso**	**0.28**	**116**	P	**Pg**	**17 03 53.7**	**+0.5**
CARD				AML	AML		
comp=E,904μm,1.4s							
CARD				AML	AML		
comp=N,1170μm,0.4s							
CARD				AML	AML		
comp=E,904μm,1.4s							
CARD				AML	AML		
comp=N,1170μm,0.4s							
CARD				AML	AML		
comp=N,1170μm,0.4s							
CARD				AML	AML		
comp=E,904μm,1.4s							
CARD				END			
CARD				END			
ERBM	**Eremo**	**0.33**	**36**	P	**Pg**	**17 03 54.9**	**+0.5**
ERBM				AML	AML		
comp=E,890μm,1.2s							
ERBM				AML	AML		
comp=N,824μm,0.7s							
ERBM				AML	AML		
comp=E,890μm,1.2s							
ERBM				AML	AML		
comp=N,824μm,0.7s							
ERBM				AML	AML		
comp=E,890μm,1.2s							
ERBM				AML	AML		
comp=N,824μm,0.7s							
BDI	**Bagni Di Lucca**	**0.34**	**105**	P	**Pg**	**17 03 54.6**	**+0.1**
BDI				S	**Sg**	**17 03 59.6**	**+0.7**
BDI				AML	AML		
comp=E,454μm,0.3s							
BDI				AML	AML		
comp=N,280μm,1.3s							
BDI				AML	AML		
comp=E,455μm,0.3s							
BDI				AML	AML		
comp=N,332μm,0.8s							
BDI				AML	AML		
comp=E,454μm,0.3s							
BDI				AML	AML		
comp=E,455μm,0.3s							
BDI				AML	AML		
comp=N,332μm,0.8s							
BDI				AML	AML		
comp=N,280μm,1.3s							
MAIM	**Mastiano**	**0.34**	**133**	P	**Pg**	**17 03 55.1**	**+0.6**
MAIM				S	**Sg**	**17 03 59.9**	**+0.8**
MAIM	**Mastiano**	**0.34**	**133**	P	**Pg**	**17 03 55.2**	**+0.6**
MAIM				S	**Sg**	**17 04 00.1**	**+1.0**
MAIM				AML	AML		
comp=E,954μm,0.4s							
MAIM				AML	AML		
comp=N,402μm,0.4s							
MAIM				AML	AML		
comp=E,954μm,0.4s							
MAIM				AML	AML		
comp=N,402μm,0.4s							
MAIM				AML	AML		
comp=N,402μm,0.4s							
MAIM				AML	AML		
comp=E,954μm,0.4s							
GRAM	**Graiana**	**0.35**	**351**	P	**Pg**	**17 03 55.2**	**+0.6**
GRAM				S	**Sg**	**17 04 00.2**	**+1.0**
GRAM	**Graiana**	**0.35**	**351**	P	**Pg**	**17 03 55.2**	**+0.6**
GRAM				S	**Sg**	**17 04 00.4**	**+1.2**
GRAM				AML	AML		
comp=E,2510μm,0.2s							
GRAM				AML	AML		
comp=N,3040μm,1.1s							
GRAM				AML	AML		
comp=E,2510μm,0.2s							
GRAM				AML	AML		
comp=N,3040μm,1.1s							
GRAM				AML	AML		
comp=E,2510μm,0.2s							
GRAM				AML	AML		
comp=N,3040μm,1.1s							
POPM	**Popiglio**	**0.46**	**103**	P	**Pg**	**17 03 56.7**	**0.0**
POPM				S	**Sg**	**17 04 03.1**	**+0.6**
POPM	**Popiglio**	**0.46**	**103**	P	**Pg**	**17 03 56.7**	**0.0**
POPM				S	**Sg**	**17 04 03.5**	**+0.9**
POPM				AML	AML		
comp=E,679μm,0.1s							
POPM				AML	AML		
comp=N,736μm,0.4s							
POPM				AML	AML		
comp=N,736μm,0.4s							
POPM				AML	AML		
comp=E,679μm,0.1s							
MSSA	**Maissana**	**0.48**	**291**	P	**Pg**	**17 03 57.9**	**+0.8**
MSSA				AML	AML		
comp=E,140μm,1.3s							
MSSA				AML	AML		
comp=N,130μm,1.5s							
MSSA				AML	AML		
comp=E,140μm,1.3s							
MSSA				AML	AML		
comp=N,130μm,1.5s							
MTCR	**Monte La Croce**	**0.63**	**101**	P	**Pg**	**17 03 60.0**	**0.0**
ZCCA	**Zocca**	**0.63**	**71**	AML	AML		
ZCCA				AML	AML		
comp=E,113μm,0.4s							
ZCCA				AML	AML		
comp=E,113μm,0.4s							
ZCCA				AML	AML		
comp=N,150μm,0.8s							
ZCCA				AML	AML		
comp=N,150μm,0.8s							
CRMI	**Carmignano**	**0.70**	**121**	AML	AML		
comp=E,43μm,0.8s							
CRMI				AML	AML		
comp=E,43μm,0.8s							
CRMI				AML	AML		
comp=N,63μm,0.9s							
CRMI				AML	AML		
comp=N,63μm,0.9s							
GORR	**Gorreto**	**0.76**	**307**	P	**Pg**	**17 04 03.3**	**+0.8**
BOB	**Bobbio (Coli)**	**0.79**	**321**	P	**Pg**	**17 04 03.5**	**+0.5**
PGF	**Pioggiola**	**1.80**	**208**	*e*Pn	**Pn**	**17 04 19.5**	**0.0**
PGF				*e*Sn	**Sn**	**17 04 41.7**	**-1.1**
comp=N,6.1nm,0.4s							
SBF	**Sospel**	**1.97**	**263**	*e*Pn	**Pn**	**17 04 22.2**	**+0.4**
SBF				*e*Sn	**Sn**	**17 04 46.0**	**-0.9**
comp=N,6.2nm,0.3s							
MBDF	**Montbardon**	**2.48**	**285**	*e*Pn	**Pn**	**17 04 29.4**	**+0.5**
MBDF	**Montbardon**	**2.48**	**285**	*e*Pg	**Pg**	**17 04 35.2**	**-0.2**
MBDF				*e*Sn	**Sn**	**17 04 58.4**	**-1.2**
MBDF				*e*Sg	**Sg**	**17 05 07.7**	**+0.1**
comp=N,1.6nm,0.3s							
FRF	**La Foret Royal**	**2.59**	**258**	*e*Pn	**Pn**	**17 04 30.6**	**+0.3**
FRF				*e*Sn	**Sn**	**17 05 00.8**	**-1.4**
comp=N,2.2nm,0.3s							
LMR	**La Mourre**	**2.75**	**254**	*e*Pn	**Pn**	**17 04 32.6**	**+0.1**
LMR				*e*Sn	**Sn**	**17 05 04.6**	**-1.5**
comp=N,1.3nm,0.3s							
ORIF	**Oris-en-Rattie**	**3.14**	**286**	*e*Pn	**Pn**	**17 04 38.1**	**+0.1**
ORIF				*e*Sn	**Sn**	**17 05 13.9**	**-1.9**
comp=N,2.2nm,0.4s							
CABF	**La Chapelle**	**3.77**	**312**	*e*P	**Pn**	**17 04 48.8**	**+2.2**
CABF				*e*Sn	**Sn**	**17 05 28.6**	**-2.7**
comp=N,1.3nm,0.3s							
HINF	**Hinteralfeld**	**4.33**	**329**	*e*P	**Pn**	**17 04 57.0**	**+2.8**
HINF				*e*Sn	**Sn**	**17 05 40.1**	**-4.8**
comp=N,2.1nm,0.4s							

ISCJB ***25*** *17:14:44.3±0.7, 4°.1S±0°.1×103°.3W±0°.1, h10km, mb4.3/71, MS3.8/25, Error ellipse: s-maj=20.7km s-min=9.8km az=143.5*
IDC ***25*** *17:14:44.9±1.2, 4°.01S×103°.45W, h0km, mb3.9/10, mb1 4.2/10, mb1mx3.9/36, mbtmp3.9/10, MS3.8/23, Ms1 3.8/23, ms1mx3.7/32, Error ellipse: s-maj=50.2km s-min=17.2km az=60.0*
NEIC ***25*** *17:14:45.1±1.2, 4°.17S×103°.33W, h10km±8km, mb4.4/67, Error ellipse: s-maj=38.6km s-min=19.9km az=51.0*
GCMT ***25*** *17:14:53.1±0.5, 3°.64S±0°.03×103°.47W±0°.03, h22km±1km, MW4.9/80, Moment Tensor Solution. s28,c37; s80,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.46±.18; $M_{\theta\theta}$1.62±.14; $M_{\phi\phi}$-0.16±.13; $M_{r\theta}$0.50±.21; $M_{\theta\phi}$2.02±.10; $M_{\phi r}$-0.24±.22; Best double couple: M≥2.45300×10^{16} NP1:ϕ_s271.00000°, δ63.00000°, λ-38.00000°. NP2: ϕ_s21.00000°, δ57.00000°, λ-147.00000°. Principal axes: T 2.9560, Plg4.0000°, Azm327.0000°; N -1.0060, Plg45.0000°, Azm61.0000°; P -1.9510, Plg45.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 17:14:46.1±1.1, 4°.0S±0°.2×103°.3W±0°.2, h10km, n106, σ0°81/80, mb4.4/71, MS3.8/25, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.57**	**21**	LR	LR	17 26 25.6	
comp=Z,114nm,18.5s,baz=208,slow=31							
APG	**El Apazote**	**22.78**	**34**	LR	LR	17 26 49.8	
comp=Z,198nm,18.1s,baz=303,slow=32							
JTS	**Las Juntas de**	**23.14**	**52**	LR	LR	17 26 30.9	
comp=Z,349nm,20.9s,baz=300,slow=30							
RPN	**Rapa Nui**	**23.68**	**194**	LR	LR	17 26 50.6	
comp=Z,306nm,18.2s,baz=354,slow=31							
ATAH	**Atahualpa**	**24.95**	**98**	LR	LR	17 26 16.2	
comp=Z,43nm,20.7s,baz=265,slow=28							
OTAV	**Otavalo**	**25.17**	**81**	*e*P	**P**	**17 20 10.1**	**-2.4**
22nm,1.3s							
NNA	**Nana**	**27.32**	**108**	LR	LR	17 28 34.8	
comp=Z,299nm,20.6s,baz=282,slow=30							
LPIG	**La Paz**	**28.79**	**347**	LR	LR	17 29 10.2	
comp=Z,327nm,20.8s,baz=182,slow=30							
ROSC	**El Rosal**	**30.24**	**73**	LR	LR	17 30 47.6	
comp=Z,109nm,20.6s,baz=230,slow=32							
LTX	**Lajitas**	**33.18**	**359**	*e*P	**P**	**17 21 23.4**	**+0.2**
TX31	**Lajitas Ar. Si**	**33.18**	**359**	*e*P	**P**	**17 21 23.0**	**-0.2**
14nm,1.8s							
TXAR	**Lajitas Array**	**33.18**	**359**	P	**P**	**17 21 23.4**	**+0.2**
0.1nm,0.3s,baz=159,slow=10,SNR=2.3							
JCT	**Junction City**	**34.48**	**5**	*e*P	**P**	**17 21 34.8**	**+0.4**
4.1nm,0.8s							
HKT	**Hockley**	**34.54**	**11**	*e*P	**P**	**17 21 36.0**	**+1.2**
7.4nm,1.0s							
MNTX	**Cornudas Mount**	**35.59**	**357**	*e*P	**P**	**17 21 43.7**	**-0.3**
6.0nm,1.5s							
LPAZ	**La Paz**	**36.60**	**112**	LR	LR	17 34 17.4	
comp=Z,128nm,21.4s,baz=289,slow=32							
TUC	**Tucson**	**36.84**	**349**	*e*P	**P**	**17 21 54.0**	**-0.7**
7.1nm,1.5s							
MSTX	**Muleshoe**	**37.80**	**1**	*e*P	**P**	**17 22 01.6**	**-1.3**
23nm,1.7s							
LENM	**Lemitar**	**38.15**	**355**	*e*P	**P**	**17 22 05.1**	**-0.9**
X18A	**Snowflake**	**38.87**	**351**	*e*P	**P**	**17 22 13.1**	**+1.1**
3.1nm,0.6s							
Y14A	**Wickenburg**	**38.87**	**347**	*e*P	**P**	**17 22 11.8**	**-0.1**
10nm,0.3s							
ANMO	**Albuquerque**	**38.89**	**356**	LR	LR	17 35 41.2	
comp=Z,48nm,19.0s,baz=176,slow=32							
ANMO	**Albuquerque**	**38.89**	**356**	*e*P	**P**	**17 22 11.1**	**-1.0**
5.7nm,1.6s							
X37A	**Clayton**	**39.13**	**10**	*e*P	**P**	**17 22 14.2**	**+0.2**
10nm,1.2s							
MIAR	**Mount Ida**	**39.45**	**13**	*e*P	**P**	**17 22 17.3**	**+0.7**
6.7nm,0.8s							
PFO	**Pinyon Flats O**	**39.46**	**343**	LR	LR	17 34 34.4	
comp=Z,233nm,21.5s,baz=164,slow=30							
WUAZ	**Wupatki**	**40.07**	**350**	*e*P	**P**	**17 22 22.6**	**+0.7**
3.4nm,1.0s							
W13A	**Hualapai Mount**	**40.18**	**346**	*e*P	**P**	**17 22 24.1**	**+1.2**
3.3nm,1.0s							
T25A	**Trinidad**	**40.97**	**359**	*e*P	**P**	**17 22 30.0**	**+0.5**
3.5nm,0.9s							
U15A	**North Rim**	**41.12**	**349**	*e*P	**P**	**17 22 30.8**	**0.0**
1.9nm,0.8s							
GSC	**Goldstone, Bar**	**41.14**	**343**	*e*P	**P**	**17 22 30.1**	**-0.6**
4.6nm,0.9s							
MVCO	**Mesa Verde**	**41.32**	**354**	*e*P	**P**	**17 22 32.5**	**+0.2**
4.7nm,0.8s							
PLAL	**Pickwick Lake**	**41.36**	**19**	*e*P	**P**	**17 22 32.8**	**+0.4**
14nm,1.1s							
GOGA	**Godfrey**	**41.70**	**25**	*e*P	**P**	**17 22 35.6**	**+0.4**
9.5nm,1.4s							
S22A	**4UR Ranch, Cre**	**41.70**	**356**	*e*P	**P**	**17 22 35.8**	**+0.3**
3.6nm,1.1s							
KNB	**Kanab**	**41.80**	**349**	*e*P	**P**	**17 22 36.6**	**+0.4**
5.5nm,1.1s							
SHPR	**Sheep Range**	**41.83**	**346**	*e*P	**P**	**17 22 35.2**	**-1.3**
5.0nm,1.2s							
LCMT	**Little Creek M**	**41.88**	**348**	*e*P	**P**	**17 22 36.2**	**-0.7**
9.6nm,1.8s							
PEL	**Peldehue**	**42.00**	**138**	*e*P	**P**	**17 22 36.3**	**-1.5**
65nm,2.0s							
PV13	**Radium Mtn., P**	**42.29**	**354**	*e*P	**P**	**17 22 39.8**	**-0.5**
4.5nm,1.0s							
PV02	**Paradox Valley**	**42.33**	**354**	*e*P	**P**	**17 22 40.3**	**-0.3**
3.9nm,0.7s							
PBMO	**Poplar Bluff**	**42.34**	**15**	*e*P	**P**	**17 22 40.9**	**+0.5**
14nm,1.1s							
PV03	**Paradox Valley**	**42.39**	**353**	*e*P	**P**	**17 22 41.1**	**0.0**
14nm,1.8s							
PV12	**Saucer Basin,**	**42.45**	**354**	*e*P	**P**	**17 22 41.4**	**-0.1**
4.3nm,0.9s							
WVT	**Waverly**	**42.49**	**19**	*e*P	**P**	**17 22 41.4**	**-0.3**
7.8nm,0.6s							
CFA	**Coronel Fontan**	**42.84**	**134**	P	**P**	**17 22 47.5**	**+2.8**
2.5nm,0.8s,baz=201,slow=17,SNR=2.2							
CCM	**Cathedral Cave**	**43.34**	**14**	*e*P	**P**	**17 22 48.6**	**0.0**
7.1nm,0.8s							
PTGA	**Pitinga**	**43.39**	**87**	P	**P**	**17 22 51.0**	**+1.6**
1.5nm,0.7s,baz=315,slow=19,SNR=2.4							
PTGA	**Pitinga**	**43.39**	**87**	*e*P	**P**	**17 22 50.3**	**+0.9**
9.1nm,1.3s							
SRU	**San Rafael Swe**	**43.45**	**352**	*e*P	**P**	**17 22 49.8**	**+0.2**
4.3nm,1.0s							
PSUT	**Pine Spring**	**43.47**	**348**	*e*P	**P**	**17 22 50.2**	**+0.4**
2.2nm,0.8s							
ISCO	**Idaho Springs**	**43.67**	**357**	*e*P	**P**	**17 22 50.6**	**-0.9**
3.2nm,1.0s							
R11A	**Troy Canyon, C**	**43.69**	**346**	*e*P	**P**	**17 22 51.9**	**+0.4**
1.7nm,0.9s							
V53A	**Saluda**	**43.91**	**24**	*e*P	**P**	**17 22 53.8**	**+0.6**
11nm,1.2s							
O20A	**White River Ci**	**44.19**	**355**	*e*P	**P**	**17 22 55.5**	**-0.1**
13nm,1.3s							
NV01	**Mina Array Sit**	**44.48**	**343**	*e*P	**P**	**17 22 58.4**	**+0.4**
NVAR	**Mina Array Bea**	**44.48**	**343**	P	**P**	**17 22 58.4**	**+0.4**
0.2nm,0.3s,baz=150,slow=7.3,SNR=3.4							
NVAR				LR	LR	17 37 34.0	
comp=Z,159nm,19.1s,baz=151,slow=31							
MPU	**Maple Canyon**	**44.50**	**351**	*e*P	**P**	**17 22 59.3**	**+1.2**
5.5nm,0.7s							
KVN	**Kaiserville**	**45.00**	**344**	*e*P	**P**	**17 23 03.0**	**+1.0**
6.1nm,1.4s							
TCUT	**Toone Canyon**	**45.55**	**351**	*e*P	**P**	**17 23 06.9**	**+0.5**
11nm,0.9s							
BGU	**Big Grassy Mou**	**45.62**	**350**	*e*P	**P**	**17 23 08.8**	**+1.9**
12nm,1.8s							
SPUT	**South Promonto**	**45.90**	**350**	*e*P	**P**	**17 23 09.7**	**+0.6**
6.1nm,1.1s							
PAHR	**Pah Rah Range**	**45.98**	**343**	*e*P	**P**	**17 23 10.8**	**+1.1**
7.2nm,1.3s							
HWUT	**Hardware Ranch**	**46.05**	**351**	*e*P	**P**	**17 23 10.5**	**+0.2**
18nm,2.0s							
HVU	**Hansel Valley**	**46.41**	**350**	*e*P	**P**	**17 23 13.5**	**+0.3**
3.1nm,0.8s							
ORV	**Oroville**	**46.51**	**341**	*e*P	**P**	**17 23 13.7**	**0.0**
6.6nm,0.9s							
PLCA	**Paso Flores**	**46.91**	**146**	P	**P**	**17 23 16.7**	**-0.3**
5.2nm,1.2s,baz=270,slow=15,SNR=2.4							
PLCA				LR	LR	17 38 22.9	
comp=Z,230nm,19.2s,baz=323,slow=30							
BW06	**Boulder Array**	**46.93**	**354**	*e*P	**P**	**17 23 16.9**	**-0.4**
9.2nm,1.4s							
PD31	**Pinedale Array**	**46.93**	**354**	*e*P	**P**	**17 23 16.4**	**-0.9**
9.2nm,1.5s							
PDAR	**Pinedale Array**	**46.93**	**354**	P	**P**	**17 23 16.8**	**-0.5**
1.1nm,0.7s,baz=171,slow=6.4,SNR=11							
PDAR				LR	LR	17 39 45.5	
comp=Z,77nm,19.4s,baz=138,slow=32							
PPT	**Papeete**	**47.28**	**250**	LR	LR	17 37 20.7	
comp=Z,87nm,21.1s,baz=39,slow=29							
PPT2	**Papeete2**	**47.28**	**250**	*e*LR	LR	17 36 50.1	
comp=Z,160nm,26.0s							
LOHW	**Long Hollow**	**47.89**	**353**	*e*P	**P**	**17 23 23.6**	**-1.1**
2.2nm,0.8s							
RSSD	**Black Hills**	**47.94**	**359**	*e*P	**P**	**17 23 25.2**	**+0.1**
4.6nm,1.0s							
FXWY	**Fox Creek**	**47.97**	**352**	*e*P	**P**	**17 23 24.5**	**-0.8**
3.6nm,1.0s							
MOOW	**Moose Ponds**	**48.04**	**353**	*e*P	**P**	**17 23 26.1**	**+0.2**
13nm,1.9s							
IMW	**Indian Meadow**	**48.21**	**353**	*e*P	**P**	**17 23 26.3**	**-1.0**
5.0nm,0.8s							
FLWY	**Flagg Ranch**	**48.36**	**353**	*e*P	**P**	**17 23 28.0**	**-0.4**
8.6nm,1.0s							
HLID	**Hailey**	**48.43**	**349**	*e*P	**P**	**17 23 28.5**	**-0.4**
3.4nm,0.8s							
TBI	**Tubuai**	**48.52**	**242**	*e*LR	LR	17 37 25.6	
comp=Z,154nm,28.8s							
YBH	**Yreka Blue Hor**	**48.87**	**341**	P	**P**	**17 23 32.3**	**+0.2**
0.8nm,0.5s,baz=207,slow=6.8,SNR=2.1							
YHH	**Holmes Hill**	**49.07**	**353**	*e*P	**P**	**17 23 34.1**	**+0.2**
3.3nm,1.1s							
CPUP	**Villa Florida**	**49.21**	**122**	LR	LR	17 41 30.9	
comp=Z,113nm,19.1s,baz=268,slow=32							
RLMT	**Red Lodge**	**49.23**	**354**	*e*P	**P**	**17 23 34.5**	**-0.5**
9.2nm,0.8s							
MCMT	**McKenzie Canyo**	**49.39**	**351**	*e*P	**P**	**17 23 36.6**	**+0.3**
I07A	**Izee**	**50.07**	**345**	*e*P	**P**	**17 23 41.3**	**0.0**
6.5nm,0.8s							
EYMN	**Ely**	**52.79**	**10**	*e*P	**P**	**17 24 00.2**	**-1.3**
8.5nm,1.3s							
ULM	**Lac du Bonnet**	**54.44**	**6**	P	**P**	**17 24 12.9**	**-0.7**
5.1nm,0.8s,baz=181,slow=4.9,SNR=4.3							
ULM				LR	LR	17 46 17.1	
comp=Z,189nm,18.9s,baz=228,slow=35							
BDFB	**Brasilia**	**55.51**	**106**	LR	LR	17 46 42.6	
comp=Z,77nm,18.3s,baz=172,slow=34							
YKA	**Yellowknife Ar**	**66.91**	**354**	P	**P**	**17 25 38.6**	**+0.3**
0.9nm,0.8s,baz=163,slow=7.0,SNR=5.2							
YKA				LR	LR	17 54 03.5	
comp=Z,7.6nm,18.2s,baz=169,slow=35							
YKB5	**Yellowknife Ar**	**66.91**	**354**	*e*P	**P**	**17 25 38.6**	**+0.3**
RND	**Reindeer**	**75.41**	**341**	*e*P	**P**	**17 26 29.7**	**-0.2**
4.4nm,0.9s							
ILAR	**Eielson Array**	**75.73**	**342**	P	**P**	**17 26 31.3**	**-0.4**
0.9nm,0.8s,baz=162,slow=4.4,SNR=7.1							
ILB	**Eielson Array**	**75.73**	**342**	*e*P	**P**	**17 26 30.8**	**-0.9**
2.6nm,0.9s							
WRH	**Wood River Hil**	**75.90**	**342**	*e*P	**P**	**17 26 32.0**	**-0.7**
4.6nm,1.0s							
URZ	**Urewera**	**79.36**	**232**	LR	LR	17 53 48.6	
comp=Z,65nm,19.6s,baz=111,slow=30							
RPZ	**Rata Peaks**	**84.10**	**227**	LR	LR	17 57 45.9	
comp=Z,118nm,18.1s,baz=120,slow=31							
VNDA	**Vanda**	**87.15**	**193**	LR	LR	18 01 25.4	
comp=Z,38nm,18.1s,baz=235,slow=32							
H11N3	**WAKE ISLAND Hy**	**91.17**	**290**	T	T	19 08 24.6	
baz=96,slow=75,SNR=17							
H11N2	**WAKE ISLAND Hy**	**91.18**	**290**	T	T	19 08 24.1	
baz=96,slow=75,SNR=18							
H11N1	**WAKE ISLAND Hy**	**91.18**	**290**	T	T	19 08 19.5	
baz=96,slow=75,SNR=13							
H11S2	**WAKE ISLAND Hy**	**91.28**	**288**	T	T	19 08 26.

mb4.2/2, MLv3.6/7, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.63**	**235**	P	Pn	17 15 21.9	+0.7
LUWI				S	Sn	17 15 42.5	+1.3
APSI	**Ampana**	**2.58**	**252**	P	Pn	17 15 34.8	+0.6
SANI	**Sanana**	**2.71**	**136**	P	Pn	17 15 35.9	-0.1
SANI				S	Sn	17 16 06.7	-0.9
NLAI	**Namlea**	**4.33**	**136**	P	Pn	17 15 57.6	-0.6
TTSI	**Tana Toraja**	**5.19**	**236**	P	Pn	17 16 10.5	+0.6
SPSI	**Sidrap Palu**	**5.79**	**228**	P	Pn	17 16 19.0	+0.8

*ISK **25** 17:18:59.9, 38.°70N×44.°80E, h5km, ML2.5/6*
*ISCJB **25** 17:19:01.6±1.2, 38.°70N±0.°06×44.°8E±0.°1, h7km, Error ellipse: s-maj=13.0km s-min=8.3km az=167.4*
*DDA **25** 17:19:06.7, 38.°66N×44.°23E, h6km±1km, ML2.4*

ISC 25 17:19:02.8±1.6, 38.°70N±0.°04×44.°61E±0.°10, h7km, n13, σ0.°994/14, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.70**	**310**	PG	**Pg**	**17 19 16.5**	**+0.3**
CLDR				SG	**Sn**	**17 19 29.2**	**-1.3**
CLDR	**Caldiran**	**0.70**	**310**	*i* P	**Pb**	**17 19 17.7**	**+0.3**
CLDR				IAML_P			
	comp=Z,4μm,0.4s						
VMUR	**Van-Muradiye**	**0.86**	**290**	*i* P	**Pn**	**17 19 21.9**	**+0.5**
VMUR				IAML_P			
	comp=Z,444nm,0.2s						
VANB	**Van**	**0.96**	**264**	PN	**Pn**	**17 19 22.4**	**-0.4**
GEVA	**Gevas**	**1.28**	**253**	*i* P	**Pb**	**17 19 26.6**	**-0.7**
GEVA				IAML_P			
	comp=Z,424nm,0.2s						
TASB	**TASBURUN-IGDIR**	**1.31**	**348**	PN	**Pn**	**17 19 26.4**	**-1.2**
AKDM	**Akdamar-Van**	**1.33**	**254**	PN	**Pn**	**17 19 28.1**	**+0.2**
HAKT	**HAKKARI**	**1.34**	**212**	*i* P	**Pg**	**17 19 29.2**	**+0.6**
HAKT				IAML_P			
	comp=Z,316nm,0.2s						
GNI	**Garni**	**1.45**	**4**	PN	**Pn**	**17 19 28.8**	**-0.8**
AGRB	**Hanur-Agry**	**1.53**	**305**	PN	**Pb**	**17 19 31.6**	**0.0**
CUKT	**Cukurca**	**1.65**	**209**	PN	**Pn**	**17 19 32.4**	**+0.1**
EATA	**Eleskirt**	**2.01**	**306**	*i* P	**Pg**	**17 19 41.8**	**+0.4**
EATA				IAML_P			
	comp=Z,208nm,0.3s						
EAK	**Akyaka**	**2.13**	**339**	*i* P	**Pg**	**17 19 45.6**	**+2.1**

*ISCJB **25** 17:46:24.3±1.1, 55.°4N±0.°3×152.°7E±0.°3, h550km, mb3.4/6, Error ellipse: s-maj=36.1km s-min=17.9km az=14.9*
*IDC **25** 17:46:25.2±1.6, 55.°13N×152.°79E, h564km±94km, mb2.7/6, mb1 2.8/7, mb1mx2.5/44, mbtmp3.7/7, Error ellipse: s-maj=161.8km s-min=23.5km az=164.0*

ISC 25 17:46:25.2±1.3, 55.°3N±0.°3×152.°7E±0.°2, h550km, n7, σ0.°47/7, mb3.5/6, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**3.69**	**125**	P	**P**	**17 47 44.8**	**+0.1**
	0.4nm,0.3s,baz=350,slow=4.7,SNR=5.2						
ILAR	**Eielson Array**	**30.41**	**47**	P	**P**	**17 51 52.5**	**-0.2**
	0.4nm,0.6s,baz=285,slow=8.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**37.89**	**297**	P	**P**	**17 52 54.6**	**-0.7**
	0.4nm,0.3s,baz=52,slow=7.9,SNR=2.3						
KURBB	**Kurchatov Arra**	**42.95**	**296**	P	**P**	**17 53 35.9**	**+0.3**
	0.5nm,0.2s,baz=60,slow=7.6,SNR=6.8						
MKAR	**Makanchi Array**	**43.28**	**289**	P	**P**	**17 53 38.0**	**-0.3**
	0.9nm,0.5s,baz=57,slow=7.5,SNR=18						
BVAR	**Borovoye Array**	**45.55**	**303**	P	**P**	**17 53 55.9**	**+0.3**
	0.6nm,0.4s,baz=68,slow=5.7,SNR=6.9						
FINES	**FINESS Array B**	**56.22**	**332**	P	**P**	**17 55 13.1**	**+0.3**
	0.4nm,0.4s,baz=34,slow=10,SNR=5.5						

*IDC **25** 17:46:49.9±5.5, 22.°67S×179.°91W, h561km±51km, mb3.5/8, mb1 3.5/10, mb1mx3.2/37, mbtmp4.5/10, Error ellipse: s-maj=55.1km s-min=17.0km az=54.0*

ISC 25 17:46:47.6±2.3, 22.°6S±0.°2×179.°6W±0.°3, h550km, n11, σ1.°28/12, mb4.3/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.89**	**270**	P	**P**	**17 49 37.0**	**+1.5**
	0.3nm,0.3s,baz=218,slow=17,SNR=3.7						
URZ	**Urewera**	**15.87**	**189**	P	**P**	**17 50 03.9**	**-1.8**
	1.3nm,0.3s,baz=282,slow=3.2,SNR=11						
RPZ	**Rata Peaks**	**22.44**	**198**	P	**P**	**17 51 05.6**	**+0.2**
	7.5nm,0.8s,baz=350,slow=19,SNR=1.9						
CTA	**Charters Tower**	**31.83**	**268**	P	**P**	**17 52 27.9**	**0.0**
	6.6nm,0.6s,baz=96,slow=11,SNR=15						
PMG	**Port Moresby**	**34.41**	**287**	P	**P**	**17 52 48.8**	**-0.8**
	13nm,0.8s,baz=299,slow=19,SNR=3.0						
STKA	**Stephens Creek**	**35.53**	**246**	P	**P**	**17 52 59.0**	**+0.1**
	2.5nm,0.5s,baz=102,slow=9.9,SNR=8.1						
ASAR	**Alice Springs**	**42.59**	**259**	P	**P**	**17 53 55.4**	**-0.6**
	4.4nm,0.7s,baz=100,slow=7.4,SNR=70						
ASAR				PcP	**pP**	**17 55 33.9**	**+1.2**
	0.3nm,0.6s,baz=101,slow=4.8,SNR=3.8						
WRA	**Warramunga Arr**	**42.84**	**265**	P	**P**	**17 53 56.7**	**-1.2**
	2.0nm,0.2s,baz=99,slow=7.8,SNR=71						
SIJI	**Sorong**	**52.35**	**287**	P	**P**	**17 55 07.9**	**-1.2**
	12nm,0.7s,baz=79,slow=6.6,SNR=10						
VNDA	**Vanda**	**55.71**	**185**	P	**P**	**17 55 32.4**	**+0.7**
	0.7nm,0.7s,baz=352,slow=7.3,SNR=7.1						
BRTR	**Keskin Array B**	**147.03**	**309**	PKPbc	**PKPbc**	**18 05 31.0**	**+1.8**
	0.4nm,0.5s,baz=136,slow=5.4,SNR=3.2						

*ISCJB **25** 17:47:47.7±0.5, 37.°48N±0.°02×27.°80E±0.°04, h7km±8km, Error ellipse: s-maj=5.8km s-min=4.2km az=7.4*
*ISK **25** 17:47:47.2, 37.°49N×27.°79E, h11km, ML1.9/8*
*DDA **25** 17:47:47.4, 37.°47N×27.°79E, h7km±2km, ML2.5*

ISC 25 17:47:47.2±1.0, 37.°45N±0.°03×27.°82E±0.°04, h11km±11km, n14, σ1.°15/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.22**	**12**	*i* P	**Pb**	**17 47 52.3**	**-0.9**
AYDN				*i* S	**Sg**	**17 47 55.2**	**+0.3**
AYDN				IAML_P			
	comp=Z,3μm,0.1s						
YER	**Yerkesik**	**0.48**	**130**	PG	**Pg**	**17 47 57.2**	**+0.6**
YER				SG	**Sb**	**17 48 06.2**	**+1.4**
BDRM	**Kayabasi**	**0.49**	**218**	*i* P	**Pg**	**17 47 57.7**	**+1.1**
BDRM				IAML_P			
	comp=Z,1μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**0.50**	**6**	PG	**Pg**	**17 47 56.9**	**-0.1**
AYDB				SG	**Sg**	**17 48 03.7**	**0.0**
GCAM	**G?zelcaml?**	**0.53**	**298**	PG	**Pg**	**17 47 57.5**	**0.0**
GCAM				SG	**Sg**	**17 48 04.3**	**-0.3**
GCAM	**G?zelcaml?**	**0.53**	**298**	*i* P	**Pb**	**17 47 58.2**	**-0.3**
BODT	**Bodrum**	**0.56**	**227**	PG	**Pg**	**17 47 58.8**	**+0.7**
BODT				SG	**Sb**	**17 48 07.5**	**+0.4**
DAT	**Datca**	**0.74**	**195**	PG	**Pg**	**17 48 02.1**	**+0.6**
DAT				SG	**Sb**	**17 48 14.1**	**+1.7**
DAT	**Datca**	**0.74**	**195**	*i* P	**Pg**	**17 47 58.2**	**-3.3**
TURN	**Turunc**	**0.85**	**132**	PG	**Pg**	**17 48 02.9**	**-0.6**
DGB	**zmir**	**0.96**	**309**	*i* P	**Pn**	**17 48 06.3**	**-0.3**
DGB				IAML_P			
	comp=Z,522nm,0.1s						
BLCB	**Balcova**	**1.12**	**327**	PG	**Pb**	**17 48 08.1**	**-0.5**
MANT	**Manisa**	**1.19**	**29**	*i* P	**Pg**	**17 48 11.0**	**+0.9**
MANT				IAML_P			
	comp=Z,537nm,0.2s						
KULA	**Kula-Manisa**	**1.25**	**32**	PN	**Pg**	**17 48 10.9**	**-0.4**

*NEIC **25** 17:48:18.8±0.0, 14.°41N×94.°59W, h17km, MD4.1(MEX), After MEX.*

MEX 25 17:48:18.6±0.7, 14.°40N×94.°60W, h17km±15km, MD4.1, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.86**	**46**	*e*P	Pn	17 48 46.6	-3.1
PCIG				*e*Sn	Sn	17 49 07.8	-5.0
PCIG		**1.86**	**46**	*i* P	Pn	17 48 46.6	-3.1
PCIG				*i* S	Sn	17 49 07.8	-5.0
HUIG	**Huatulco**	**1.99**	**313**	*e*Pn	Pn	17 48 49.2	-2.3
HUIG				*e*Sn	Sn	17 49 10.6	-5.4
HUIG	**Huatulco**	**1.99**	**313**	*e*P	Pn	17 48 48.3	-3.2
HUIG				*i* S	Sn	17 49 10.6	-5.4
CMIG	**Matias Romero**	**2.69**	**354**	*e*Pn	Pn	17 48 59.3	-1.8
CMIG				*e*Sn	Sn	17 49 29.5	-3.8
CMIG	**Matias Romero**	**2.69**	**354**	*i* P	Pn	17 48 59.3	-1.8
CMIG				*e*S	Sn	17 49 29.5	-3.8
TGIG		**2.76**	**31**	*e*Pn	Pn	17 49 00.3	-1.9
TGIG				*e*Sn	Sn	17 49 31.5	-3.7
TGIG		**2.76**	**31**	*e*P	Pn	17 49 00.3	-1.9
TGIG				*e*S	Sn	17 49 31.5	-3.7
CCIG	**Comitan**	**3.03**	**52**	*e*Pn	Pn	17 49 05.5	-0.5
CCIG				*e*Pn	Pb	17 49 05.5	-6.7
CCIG				*e*Sn	Sn	17 49 38.2	-3.7
CCIG				*e*Sn	Sb	17 49 40.4	-8.5
CCIG	**Comitan**	**3.03**	**52**	*e*P	Pn	17 49 05.5	-0.5
CCIG				*e*S	Sn	17 49 40.4	-1.5
TEIG	**Tepich**	**8.37**	**45**	*e*Pn	Pn	17 50 16.0	-3.2
TEIG				*e*Sn	Sn	17 51 40.8	-13
WLAR	**White Oak Lake**	**19.25**	**4**	*e*P	P	17 52 35.2	-7.0

MEX 25 18:01:35.3±0.7, 15.°10N×93.°19W, h70km±9km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.60**	**357**	*e*P	Pn	18 01 47.6	-1.6
PCIG				*e*S	Sn	18 01 57.9	-1.4
THIG		**0.91**	**102**	*i* P	Pn	18 01 52.1	-0.5
THIG				*i* S	Sn	18 02 04.2	-1.4
CCIG	**Comitan**	**1.55**	**41**	*i* P	Pn	18 02 00.5	-0.6
CCIG				*i* S	Sn	18 02 18.7	-1.8
TGIG		**1.67**	**2**	*i* P	Pn	18 02 00.6	-2.0
TGIG				*i* S	Sn	18 02 20.7	-2.5
CMIG	**Matias Romero**	**2.56**	**321**	*e*P	Pn	18 02 13.5	-1.1
CMIG				*i* S	Sn	18 02 43.6	-1.1

*NIED **25** 18:23:00, 38.°90N×142.°00E, h53km, Mw3.9 Best double couple: M0 7.00000×10^14 NP1:φs206.00000°, δ20.00000°, λ94.00000°. NP2:φs22.00000°, δ70.00000°, λ88.00000°.*
*ISCJB **25** 18:23:09.6±1.0, 38.°87N±0.°04×142.°0E±0.°1, h54km±6km, mb3.7/6, MS3.0/2, Error ellipse: s-maj=16.1km s-min=6.9km az=7.6*
*JMA **25** 18:23:10.9, 38.°89N×141.°98E, h50km±1km, M3.7*
JMA Felt II J1.
*IDC **25** 18:23:12.2±1.6, 38.°91N×142.°22E, h72km±8km, mb3.4/6, mb1 3.5/11, mb1mx3.2/44, mbtmp3.7/11, MS2.8/7, Ms1 2.9/7, ms1mx2.6/24, Error ellipse: s-maj=35.4km s-min=16.2km az=79.0*

ISC 25 18:23:10.8±1.1, 38.°84N±0.°05×142.°03E±0.°09, h43km±7km, n33, σ1.°78/33, mb3.9/7, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.37**	**311**	⇓P	**Pn**	**18 23 20.1**	**0.0**
OFUJ				S	**Sn**	**18 23 26.5**	**-0.1**
JKMT	**Kesennumamotoy**	**0.44**	**266**	P	**Pn**	**18 23 20.9**	**+0.1**
JKMT				S	**Sn**	**18 23 27.8**	**-0.1**
JMK	**Ichinoseki**	**0.64**	**280**	⇓P	**Pn**	**18 23 23.3**	**-0.2**
JMK				S	**Sn**	**18 23 32.0**	**-0.6**
JIO	**Ouri**	**0.66**	**234**	⇓P	**Pn**	**18 23 23.9**	**+0.2**
JIO				*i* S	**Sn**	**18 23 32.7**	**-0.3**
JOM	**Ohasama**	**0.85**	**318**	⇓P	**Pn**	**18 23 25.9**	**-0.5**
JOM				S	**Sn**	**18 23 36.8**	**-0.9**
JOU	**Okura**	**1.17**	**247**	⇓P	**Pn**	**18 23 30.6**	**-0.1**
JRG	**Rokugo**	**1.22**	**298**	⇓P	**Pn**	**18 23 30.8**	**-0.6**
JYK	**Kaneyama**	**1.31**	**274**	⇓P	**Pn**	**18 23 32.3**	**-0.2**
JMM	**Marumori**	**1.38**	**225**	P	**Pn**	**18 23 33.4**	**-0.1**
JMM				*e*S	**Sn**	**18 23 50.5**	**0.0**
JANG	**Nango**	**1.58**	**346**	P	**Pn**	**18 23 35.7**	**-0.6**
MJAR	**Matsushiro Arr**	**3.80**	**234**	P	**Pn**	**18 24 09.2**	**+2.4**
	0.3nm,0.3s,baz=39,slow=11,SNR=27						
MAT	**Matsushiro**	**3.80**	**234**	P	**Pn**	**18 24 09.5**	**+2.7**
MAT				S	**Sn**	**18 24 55.5**	**+5.2**
ASAJ	**Asahikawa**	**5.29**	**4**	P	**Pn**	**18 24 27.3**	**+0.1**
	0.6nm,0.3s,baz=211,slow=16,SNR=12						
ASAJ				S	**Sn**	**18 25 31.8**	**+4.9**
	0.4nm,0.3s,baz=126,slow=19,SNR=2.5						
ASAJ				LR	LR	18 26 56.3	
	comp=Z,58nm,18.0s,baz=179,slow=43						
JHJ	**Hachijo jima 2**	**5.99**	**198**	P	**Pn**	**18 24 38.5**	**+1.6**
	2.1nm,0.3s,baz=253,slow=19,SNR=4.5						
JHJ				S	**Sn**	**18 25 42.3**	**-1.9**
	5.5nm,0.3s,baz=50,slow=17,SNR=2.6						
JHJ				LR	LR	18 26 58.4	
	comp=Z,54nm,18.1s,baz=106,slow=37						
USRK	**Ussuriysk Ar.**	**9.24**	**309**	P	**Pn**	**18 25 24.7**	**+3.3**
	0.2nm,0.3s,baz=95,slow=10,SNR=7.3						
JNU	**Nakatsue**	**10.68**	**241**	LR	LR	18 29 55.9	
	comp=Z,62nm,20.3s,baz=347,slow=37						
KSRS	**Korea Array**	**11.20**	**267**	P	Pn	18 25 53.8	+5.7
	0.2nm,0.3s,baz=82,slow=14,SNR=12						
KSRS				LR	LR	18 29 07.2	
	comp=Z,49nm,18.3s,baz=72,slow=31						
KLR	**Kul'dur**	**12.74**	**328**	LR	LR	18 30 49.3	
	comp=Z,40nm,19.4s,baz=61,slow=36						
H11N2	**WAKE ISLAND Hy**	**28.71**	**124**	T	T	18 59 28.9	
	baz=317,slow=76,SNR=502						
H11N1	**WAKE ISLAND Hy**	**28.72**	**124**	T	T	18 59 29.6	
	baz=317,slow=76,SNR=506						
H11N3	**WAKE ISLAND Hy**	**28.73**	**124**	T	T	18 59 30.3	
	baz=317,slow=76,SNR=563						
H11S1	**WAKE ISLAND Hy**	**29.48**	**126**	T	T	19 00 22.3	
	baz=318,slow=76,SNR=137						
H11S3	**WAKE ISLAND Hy**	**29.48**	**126**	T	T	19 00 22.4	
	baz=318,slow=76,SNR=225						
H11S2	**WAKE ISLAND Hy**	**29.50**	**126**	T	T	19 00 25.9	
	baz=318,slow=76,SNR=154						
ZALV	**Zalesovo Beam**	**41.08**	**311**	P	**P**	**18 30 48.1**	**-1.8**
	0.5nm,0.4s,baz=88,slow=16,SNR=5.3						
ZALV				pP	**sP**	**18 31 06.9**	**0.0**
	2.0nm,0.6s,baz=98,slow=7.0,SNR=6.5						
CMAR	**Chiang Mai Arr**	**42.45**	**254**	LR	LR	18 52 06.8	
	comp=Z,18nm,18.1s,baz=210,slow=41						
MKAR	**Makanchi Array**	**43.60**	**301**	P	**P**	**18 31 09.8**	**-0.8**
	1.4nm,0.8s,baz=83,slow=9.6,SNR=15						
MKAR				pP	**sP**	**18 31 27.9**	**+0.3**
	1.5nm,0.9s,baz=87,slow=8.6,SNR=7.0						
KURBB	**Kurchatov Arra**	**45.30**	**307**	P	**P**	**18 31 22.7**	**-1.3**
	0.9nm,0.4s,baz=82,slow=8.1,SNR=21						
KURBB				pP	**sP**	**18 31 40.7**	**-0.4**
	2.7nm,0.8s,baz=82,slow=8.1,SNR=9.7						
BVAR	**Borovoye Array**	**49.73**	**311**	P	**P**	**18 31 57.4**	**-1.1**
	0.2nm,0.3s,baz=58,slow=8.9,SNR=3.4						
WRA	**Warramunga Arr**	**58.91**	**188**	P	**P**	**18 33 04.5**	**-1.0**
	1.0nm,0.9s,baz=349,slow=6.8,SNR=2.6						
ASAR	**Alice Springs**	**62.64**	**188**	P	**P**	**18 33 30.4**	**-0.3**
	0.3nm,0.8s,baz=11,slow=5.6,SNR=4.7						
FINES	**FINESS Array B**	**67.45**	**332**	pP	pP	18 34 18.5	+4.4
	0.8nm,0.6s,baz=44,slow=8.2,SNR=3.3						
NOA	**NORSAR Array B**	**72.71**	**337**	LR	LR	19 11 35.4	
	comp=Z,6.5nm,18.3s,baz=125,slow=40						

*NNC **25** 18:30:16.6±0.4, 42.°90N×78.°49E, h0km, mb3.4, mpv3.4, Error ellipse: s-maj=3.4km s-min=1.5km az=172.0*
*KRNET **25** 18:30:17.2±0.1, 42.°93N×78.°48E, h20km, mb3.1*
*SOME **25** 18:30:17.5, 42.°92N×78.°45E, h15km*

ISC 25 18:30:15.8±0.9, 42.°91N±0.°02×78.°49E±0.°02, h16km±7km, n69, σ0.°82/123, 30C-12D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.16**	**339**	P	**Pb**	**18 30 20.5**	**-0.1**
	283nm,0.1s						
SATY				S	**Sg**	**18 30 22.7**	**-0.5**
SATY	**Saty**	**0.16**	**339**	⇓*e*P	**Pb**	**18 30 20.5**	**-0.1**
	283nm,0.1s						
SATY				*e*S	**Sg**	**18 30 22.7**	**-0.5**
	3μm,0.1s						
ZHN	**Zhinishke**	**0.26**	**352**	P	**Pb**	**18 30 22.3**	**0.0**
	113nm,0.1s						
ZHN				S	**Sb**	**18 30 26.0**	**-0.6**
	822nm,0.2s						
ZHN	**Zhinishke**	**0.26**	**352**	⇑*e*P	**Pb**	**18 30 22.3**	**0.0**
	baz=52						
ZHN				⇑*e*S	**Sb**	**18 30 26.0**	**-0.6**
	baz=52						
ZHN	**Zhinishke**	**0.26**	**352**	⇑*e*P	**Pb**	**18 30 22.3**	**0.0**
	113nm,0.1s						
ZHN				*e*S	**Sb**	**18 30 26.0**	**-0.6**
	822nm,0.2s						
PRZ	**Przheval'sk**	**0.43**	**189**	⇑*i*P	**Pb**	**18 30 26.3**	**+1.2**
	baz=86						
PRZ				⇑*i*S	**Sb**	**18 30 32.8**	**+1.4**
	baz=86						
UZB	**Uzynbulak**	**0.46**	**58**	P	**Pb**	**18 30 26.0**	**+0.4**
	38nm,0.1s						
UZB				S	**Sb**	**18 30 32.4**	**+0.1**
	173nm,0.2s						
UZB	**Uzynbulak**	**0.46**	**58**	⇑*e*P	**Pb**	**18 30 26.0**	**+0.4**
	baz=61						
UZB				⇑*e*S	**Sb**	**18 30 32.4**	**+0.1**
	baz=61						
UZB	**Uzynbulak**	**0.46**	**58**	⇑*e*P	**Pb**	**18 30 26.0**	**+0.4**
	38nm,0.1s						
UZB				*e*S	**Sb**	**18 30 32.4**	**+0.1**
	173nm,0.2s						
KPKS	**Kokpek**	**0.58**	**14**	⇑*e*P	**Pb**	**18 30 28.2**	**+0.6**
	baz=15						
KPKS				⇑*e*S	**Sb**	**18 30 35.7**	**+0.1**
	baz=15						
KPKS	**Kokpek**	**0.58**	**14**	⇑*e*P	**Pb**	**18 30 28.2**	**+0.6**
	126nm,0.1s						
KPKS				*e*S	**Sb**	**18 30 35.7**	**+0.1**
	172nm,0.3s						
KURS	**Kuram**	**0.62**	**338**	P	**Pb**	**18 30 29.0**	**+0.6**
	2.3nm,0.1s						
KURS				S	**Sb**	**18 30 37.4**	**+0.4**
	36nm,0.3s						
KURS	**Kuram**	**0.62**	**338**	⇑*e*P	**Pb**	**18 30 29.0**	**+0.6**
	baz=38						
KURS				⇑*e*S	**Sb**	**18 30 37.4**	**+0.4**
	baz=38						
KURS	**Kuram**	**0.62**	**338**	⇑*e*P	**Pb**	**18 30 29.0**	**+0.6**
	2.3nm,0.1s						
KURS				*e*S	**Sb**	**18 30 37.4**	**+0.4**
	36nm,0.3s						
PDGK	**Podgornoye**	**0.85**	**60**	P	**Pn**	**18 30 33.0**	**-0.2**
	10nm,0.3s						
PDGK				S	**Sn**	**18 30 44.4**	**-0.9**
	16nm,0.4s						
PDGK	**Podgornoye**	**0.85**	**60**	⇑P	**Pn**	**18 30 32.9**	**-0.3**
	7.3nm,0.4s						
PDGK				⇑S	**Sn**	**18 30 44.6**	**-0.7**
	17nm,0.5s						
PDGK	**Podgornoye**	**0.85**	**60**	⇓*i*P	**Pn**	**18 30 32.9**	**-0.3**
	baz=61						
PDGK				⇓*i*S	**Sn**	**18 30 44.5**	**-0.9**
	baz=61						
KOTS	**Kotyrbulak**	**1.06**	**288**	P	**Pn**	**18 30 36.8**	**+0.7**
	2.8nm,0.1s						
KOTS				S	**Sn**	**18 30 50.9**	**+0.2**
	58nm,0.1s						
KOTS	**Kotyrbulak**	**1.06**	**288**	*e*P	**Pn**	**18 30 36.8**	**+0.7**
	baz=87						
KOTS				*e*S	**Sn**	**18 30 50.8**	**+0.2**
	baz=87						
KOTS	**Kotyrbulak**	**1.06**	**288**	*e*P	**Pn**	**18 30 36.8**	**+0.7**
	2.8nm,0.1s						
KOTS				*e*S	**Sn**	**18 30 50.9**	**+0.2**
	58nm,0.1s						
MDOK	**Medeo**	**1.09**	**284**	Pg	**Pg**	**18 30 37.2**	**+0.3**
	2.2nm,0.2s						
MDOK				Lg	Lg	18 30 51.4	
	25nm,0.3s						
MDOK	**Medeo**	**1.09**	**284**	*e*P	**Pg**	**18 30 37.2**	**+0.3**
	baz=83						
MDOK				*e*S	**Sg**	**18 30 51.4**	**+0.3**
	baz=83						
MDOK	**Medeo**	**1.09**	**284**	*e*P	**Pg**	**18 30 37.2**	**+0.3**
	2.2nm,0.2s						
MDOK				*e*S	**Sg**	**18 30 51.4**	**+0.3**
	25nm,0.3s						
TNSS	**Tian-Shan**	**1.14**	**277**	P	**Pg**	**18 30 38.4**	**+0.5**
	2.4nm,0.1s						
TNSS				S	**Sn**	**18 30 53.3**	**+0.4**
	15nm,0.1s						
TNSS	**Tian-Shan**	**1.14**	**277**	*e*P	**Pg**	**18 30 38.4**	**+0.5**
	baz=76						
TNSS				*e*S	**Sn**	**18 30 53.3**	**+0.4**
	baz=76						
TNSS	**Tian-Shan**	**1.14**	**277**	*e*P	**Pg**	**18 30 38.4**	**+0.5**
	2.4nm,0.1s						
TNSS				*e*S	**Sn**	**18 30 53.3**	**+0.4**
	15nm,0.1s						
MNBS	**Baschi**	**1.17**	**357**	P	**Pg**	**18 30 39.5**	**+0.9**
	18nm,0.1s						
MNBS				S	**Sn**	**18 30 55.3**	**+1.9**
	49nm,0.1s						
MNBS	**Baschi**	**1.17**	**357**	*e*P	**Pg**	**18 30 39.5**	**+0.9**
	18nm,0.1s						
MNBS				*e*S	**Sn**	**18 30 55.3**	**+1.9**
	49nm,0.1s						
ARXS	**Arharly**	**1.39**	**340**	P	**Pg**	**18 30 43.1**	**+0.4**
	11nm,0.2s						
ARXS				S	**Sg**	**18 31 01.3**	**+0.5**
	38nm,0.1s						
ARXS	**Arharly**	**1.39**	**340**	*e*P	**Pg**	**18 30 43.1**	**+0.4**
	11nm,0.2s						
ARXS				*e*S	**Sg**	**18 31 01.3**	**+0.5**
	38nm,0.1s						
CHKK	**Chushkaly**	**1.45**	**311**	P	**Pg**	**18 30 43.8**	**+0.2**
	2.4nm,0.1s						
CHKK				S	**Sg**	**18 31 02.8**	**+0.3**
	71nm,0.2s						
CHKK	**Chushkaly**	**1.45**	**311**	*e*P	**Pg**	**18 30 43.8**	**+0.2**
	baz=11						
CHKK				*e*S	**Sg**	**18 31 02.8**	**+0.3**
	baz=11						
CHKK	**Chushkaly**	**1.45**	**311**	*e*P	**Pg**	**18 30 43.8**	**+0.2**
	2.4nm,0.1s						
CHKK				*e*S	**Sg**	**18 31 02.8**	**+0.3**
	71nm,0.2s						
KTMS	**Ketmen**	**1.47**	**68**	P	**Pg**	**18 30 44.0**	**-0.1**
	16nm,0.3s						
KTMS				S	**Sg**	**18 31 03.2**	**0.0**
	29nm,0.3s						
KTMS	**Ketmen**	**1.47**	**68**	*e*P	**Pg**	**18 30 44.0**	**-0.1**
	baz=68						
KTMS				*e*S	**Sg**	**18 31 03.2**	**0.0**
	baz=68						
KTMS	**Ketmen**	**1.47**	**68**	*e*P	**Pg**	**18 30 44.0**	**-0

KST				S	Sg	18 31 15.5	-0.1
	14nm,0.4s						
KST	**Kastek**	**1.86**	**275**	*e*P	**Pg**	**18 30 51.3**	**-0.2**
	baz=74						
KST				⇓*i*S	**Sg**	**18 31 15.5**	**-0.1**
	baz=74						
KST	**Kastek**	**1.86**	**275**	*e*P	**Pg**	**18 30 51.3**	**-0.2**
	3.9nm,0.2s						
KST				⇓*i*S	**Sg**	**18 31 15.5**	**-0.1**
	14nm,0.4s						
BOOM	**Boomskoye usch**	**1.92**	**258**	⇑*i*P	**Pb**	**18 30 51.6**	**+1.0**
	baz=58						
BOOM				⇑*i*S	**Sb**	**18 31 16.5**	**+2.1**
	baz=58						
TDK	**Taldyqorghan**	**2.10**	**358**	Pg	**Pg**	**18 30 55.7**	**-0.3**
	44nm,0.2s						
TDK				Lg	Lg	18 31 23.1	
	131nm,0.4s						
TDK	**Taldyqorghan**	**2.10**	**358**	*e*P	**Pg**	**18 30 55.7**	**-0.3**
	44nm,0.2s						
TDK				*e*S	**Sg**	**18 31 23.1**	**-0.1**
	131nm,0.4s						
TKM2	**Tokmak 2**	**2.12**	**271**	⇓Pg	**Pg**	**18 30 56.0**	**-0.6**
	3.8nm,0.3s						
TKM2				⇑Lg	Lg	18 31 24.5	
	8.2nm,0.3s						
TKM2	**Tokmak 2**	**2.12**	**271**	⇓*i*P	**Pb**	**18 30 55.3**	**+1.3**
	baz=71						
TKM2				⇓*i*S	**Sg**	**18 31 22.9**	**-1.3**
	baz=71						
KAPS	**Kapalarasan**	**2.46**	**14**	Pg	**Pg**	**18 31 01.9**	**-1.0**
	6.3nm,0.1s						
KAPS				Lg	Lg	18 31 33.9	
	16nm,0.2s						
KAPS	**Kapalarasan**	**2.46**	**14**	*e*P	**Pg**	**18 31 01.9**	**-1.0**
	6.3nm,0.1s						
KAPS				*e*S	**Sg**	**18 31 33.9**	**-1.0**
	16nm,0.2s						
KZA	**Kyzart**	**2.53**	**252**	⇑*i*P	**Pb**	**18 31 00.3**	**-0.8**
	baz=51						
KZA				⇑*i*S	**Sb**	**18 31 31.3**	**-0.9**
	baz=51						
KBK	**Karagaybulak**	**2.62**	**266**	⇑*i*P	**Pb**	**18 31 02.2**	**-0.2**
	baz=65						
KBK				⇑*i*S	**Sb**	**18 31 34.3**	**-0.1**
	baz=65						
CHMS	**Chumysh**	**2.74**	**273**	⇑*i*P	**Pb**	**18 31 03.9**	**-0.6**
	baz=73						
CHMS				⇑*i*S	**Sb**	**18 31 37.7**	**-0.2**
	baz=73						
AAK	**Ala-Archa**	**2.95**	**266**	⇓Pg	**Pg**	**18 31 10.9**	**-1.5**
	3.0nm,0.7s						
AAK				⇑Lg	Lg	18 31 52.1	
	12nm,0.8s						
MRKS	**Merke**	**3.87**	**269**	Pg	**Pg**	**18 31 28.4**	**-1.6**
	1.8nm,0.2s						
MRKS				Lg	Lg	18 32 18.6	
	5.6nm,0.2s						
MRKS	**Merke**	**3.87**	**269**	*e*P	**Pg**	**18 31 28.4**	**-1.6**
	baz=69						
MRKS				*e*S	**Sg**	**18 32 18.6**	**-1.6**
	baz=69						
MRKS	**Merke**	**3.87**	**269**	*e*P	**Pg**	**18 31 28.4**	**-1.6**
	1.8nm,0.2s						
MRKS				*e*S	**Sg**	**18 32 18.6**	**-1.6**
	5.6nm,0.2s						
MAKZ	**Makanchi**	**4.62**	**31**	⇓Lg	Lg	18 32 42.6	
	2.3nm,0.8s						
MK31	**Makanchi Array**	**4.73**	**34**	⇑Pn	Pn	18 31 31.7	+5.2
	1.2nm,0.4s,baz=216,slow=12,SNR=13						
MK31				⇓Lg	Lg	18 32 44.7	
	1.1nm,0.5s,baz=216,slow=27,SNR=5.7						
KK31	**Karatay Array**	**5.85**	**275**	Pg	**Pg**	**18 32 03.4**	**-4.4**
	0.8nm,0.7s,baz=81,slow=15,SNR=4.7						
KK31				Lg	Lg	18 33 23.4	
	0.6nm,0.4s,baz=91,slow=28,SNR=7.0						
OTUK	**Ortayu**	**6.86**	**323**	⇑Lg	Lg	18 33 53.5	
	1.7nm,0.5s						
KURBB	**Kurchatov Arra**	**7.72**	**0**	⇓Lg	Lg	18 34 18.8	
	8.4nm,0.9s						

MEX 25 18:34:57.2±0.4, 15°.62N×95°.80W, h7km±5km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.33**	**296**	*e*P	Pg	18 35 03.5	-0.3
HUIG				*e*S	Sg	18 35 08.3	+0.1
PANG	**Puerto Angel**	**0.65**	**274**	*i* P	Pg	18 35 08.9	-0.9
PANG				*i* S	Sg	18 35 18.2	-0.1
VHO	**Vista Hermosa**	**1.70**	**328**	*e*S	Sn	18 35 45.4	-4.2
CMIG	**Matias Romero**	**1.70**	**31**	*e*P	Pn	18 35 24.1	-3.3
CMIG				*e*S	Sn	18 35 45.3	-4.1
PCIG		**2.48**	**88**	*e*P	Pb	18 35 42.9	+0.7

*ISCJB **25** 18:57:15.7±0.7, 36°.13N±0°.03×31°.19E±0°.02, h14km±5km, Error ellipse: s-maj=4.8km s-min=3.0km az=14.6*
*ISK **25** 18:57:15.0, 36°.13N×31°.18E, h15km, ML3.4/26*
*DDA **25** 18:57:15.9, 36°.16N×31°.18E, h34km±1km, ML3.3*
*NIC **25** 18:57:18.1±0.4, 36°.35N×31°.58E, h17km, ML3.5*
ISC 25 18:57:16.0±1.7, 36°.16N±0°.03×31°.25E±0°.02, h14km±13km, n66, σ0°.93/78, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNVG	**Manavgat-Antal**	**0.65**	**12**	PG	**Pb**	**18 57 29.4**	**+0.4**
MNVG				SG	**Sn**	**18 57 39.3**	**-1.4**
ALAN	**Alanya-ANTALYA**	**0.75**	**58**	PG	**Pb**	**18 57 31.3**	**+0.6**
ALAN				SG	**Sn**	**18 57 42.6**	**-0.6**
AKUM	**Antalya-Kumluc**	**0.75**	**283**	*i* P	**Pn**	**18 57 32.6**	**+0.5**
AKUM				*i* S	**Sn**	**18 57 46.9**	**+3.6**
KEPZ	**Antalya-Kepez**	**0.79**	**21**	*i* P	**Pn**	**18 57 32.3**	**-0.5**
KEPZ				IAML_P			
	comp=Z,10μm,0.2s						
GAZI	**Gazipasa**	**0.87**	**85**	PG	**Pn**	**18 57 33.4**	**-0.4**
GAZI				SG	**Sn**	**18 57 45.8**	**-0.4**
GAZI	**Gazipasa**	**0.87**	**85**	*i* P	**Pn**	**18 57 34.5**	**+0.7**
GAZI				*i* S	**Sn**	**18 57 45.4**	**-0.9**
KORT	**Korkueli**	**1.11**	**319**	PN	**Pb**	**18 57 36.1**	**-0.9**
KORT	**Korkueli**	**1.11**	**319**	*i* P	**Pb**	**18 57 36.7**	**-0.3**
KORT				*i* S	**Sn**	**18 57 56.6**	**+4.3**
KORT				IAML_P			
	comp=Z,290nm,0.1s						
ELL	**Elmali**	**1.23**	**299**	PN	**Pn**	**18 57 38.4**	**-0.5**
AKAS	**Kas**	**1.33**	**274**	PN	**Pn**	**18 57 39.7**	**-0.6**
AKAS	**Kas**	**1.33**	**274**	*i* P	**Pb**	**18 57 40.7**	**-0.1**
AKAS				IAML_P			
	comp=Z,7μm,0.3s						
KSL	**Kastellorizon**	**1.35**	**270**	P	**Pn**	**18 57 40.0**	**-0.4**
KSL				S	**Sn**	**18 57 57.1**	**-1.0**
BCK	**Bucak**	**1.40**	**338**	PN	**Pn**	**18 57 40.5**	**-0.7**
ERMK	**Ermenek**	**1.43**	**70**	*i* P	**Pg**	**18 57 43.7**	**+0.3**
ERMK				IAML_P			
	comp=Z,2μm,0.2s						
ALFC	**Alefka**	**1.49**	**132**	P	**Pn**	**18 57 42.1**	**-0.2**
	baz=325						
ALFC				S	**Sn**	**18 58 01.6**	**0.0**
TEKE	**Tekeli-Mersin**	**1.51**	**90**	PN	**Pb**	**18 57 43.4**	**-0.4**
PPCY	**Paphos**	**1.56**	**145**	P	**Pb**	**18 57 45.0**	**+0.5**
	baz=337						
BERE	**Bereket-Mersin**	**1.61**	**83**	PN	**Pn**	**18 57 44.5**	**+0.4**
AKDN	**Akdeniz- Kıbrı**	**1.64**	**121**	PN	**Pn**	**18 57 45.1**	**+0.7**
LEF	**Lefka**	**1.69**	**127**	PN	**Pn**	**18 57 44.4**	**-0.7**
LEF	**Lefka**	**1.69**	**127**	*i* P	**Pn**	**18 57 44.6**	**-0.5**
YORU	**Yoruktepe-Mers**	**1.75**	**90**	PN	**Pn**	**18 57 46.4**	**+0.5**
ISP	**Isparta**	**1.76**	**341**	PN	**Pn**	**18 57 45.9**	**-0.2**
ISP	**Isparta**	**1.76**	**341**	P	**Pn**	**18 57 46.5**	**+0.4**
ISP				S	**Sn**	**18 58 07.8**	**-0.6**
TEVE	**Tevekalti-Mers**	**1.79**	**81**	PN	**Pn**	**18 57 47.3**	**+0.7**
FETY	**Fethiye**	**1.81**	**286**	PN	**Pn**	**18 57 46.1**	**-0.7**
FETY	**Fethiye**	**1.81**	**286**	P	**Pn**	**18 57 47.0**	**+0.2**
FETY				S	**Sn**	**18 58 08.3**	**-1.2**
FETY	**Fethiye**	**1.81**	**286**	*i* P	**Pn**	**18 57 47.6**	**+0.8**
FETY				IAML_P			
	comp=Z,5μm,0.3s						
KMER	**Konya-Meram**	**1.84**	**29**	*i* P	**Pb**	**18 57 48.9**	**-0.5**
KMER				*i* S	**Sb**	**18 58 12.5**	**+0.2**
KMER				IAML_P			
	comp=Z,730nm,0.3s						
AKKU	**Akkuyu-Mersin**	**1.86**	**89**	PN	**Pn**	**18 57 48.4**	**+1.0**
BAGO	**Egridir - ISPA**	**1.86**	**349**	*i* P	**Pb**	**18 57 48.9**	**-0.9**
BAGO				IAML_P			
	comp=Z,867nm,0.2s						
TISA	**Tisan-Mersin**	**1.97**	**89**	PN	**Pn**	**18 57 49.6**	**+0.7**
DOGA	**KONYA_Doganhis**	**1.97**	**10**	*i* P	**Pb**	**18 57 50.6**	**-1.1**
DOGA				IAML_P			
	comp=Z,4μm,0.3s						
IKL	**Isikli**	**1.97**	**87**	PN	**Pn**	**18 57 50.2**	**+1.2**
KONT	**Konya--Tatoy**	**1.99**	**26**	PN	**Pn**	**18 57 49.9**	**+0.6**
KONT	**Konya--Tatoy**	**1.99**	**26**	*i* P	**Pb**	**18 57 50.6**	**-1.4**
KONT				IAML_P			
	comp=Z,3μm,0.2s						
KEBE	**Keben-Mersin**	**2.01**	**81**	PN	**Pn**	**18 57 50.5**	**+0.9**
CSS	**Mathiatis**	**2.08**	**125**	PN	**Pn**	**18 57 49.7**	**-0.7**
CSS	**Mathiatis**	**2.08**	**125**	P	**Pn**	**18 57 50.5**	**+0.1**
	baz=314						
CSS				S	**Sn**	**18 58 15.3**	**-0.8**
CSS	**Mathiatis**	**2.08**	**125**	P	**Pn**	**18 57 49.6**	**-0.8**
SILI	**Silifke-Mersin**	**2.17**	**84**	PN	**Pn**	**18 57 52.2**	**+0.5**
DALY	**Dalyan (Mula)**	**2.19**	**288**	PN	**Pn**	**18 57 51.7**	**-0.3**
DALY	**Dalyan (Mula)**	**2.19**	**288**	*i* P	**Pn**	**18 57 52.8**	**+0.8**
DALY				IAML_P			
	comp=Z,2μm,0.1s						
LADK	**Ladik-KONYA**	**2.22**	**23**	PN	**Pn**	**18 57 53.0**	**+0.5**
TURN	**Turunc**	**2.25**	**289**	PN	**Pb**	**18 57 55.9**	**-0.4**
KIZK	**Mersin**	**2.36**	**81**	PN	**Pn**	**18 57 55.1**	**+0.8**
KIZK	**Mersin**	**2.36**	**81**	*i* P	**Pb**	**18 57 57.4**	**-0.8**
KIZK				IAML_P			
	comp=Z,1μm,0.2s						
SHUT	**Suhut-Afyon**	**2.45**	**347**	PN	**Pn**	**18 57 55.9**	**+0.2**
EREN	**Erenkoy**	**2.46**	**104**	PN	**Pn**	**18 57 56.7**	**+1.1**
KDHN	**Kadinhani**	**2.46**	**16**	*i* P	**Pn**	**18 57 56.1**	**+0.3**
KDHN				IAML_P			
	comp=Z,94nm,0.1s						
ARG	**Arkhangelos**	**2.53**	**272**	PN	**Pn**	**18 57 55.6**	**-1.0**
YER	**Yerkesik**	**2.58**	**293**	PN	**Pn**	**18 57 56.9**	**-0.4**
YER	**Yerkesik**	**2.58**	**293**	P	**Pn**	**18 57 57.4**	**+0.1**
CHBY	**Cihanbeyli**	**2.75**	**28**	PN	**Pn**	**18 58 00.1**	**+0.4**
KIZT	**Kizilcal**	**2.76**	**10**	PN	**Pn**	**18 58 00.3**	**+0.4**
DAT	**Datca**	**3.01**	**282**	PN	**Pn**	**18 58 02.8**	**-0.6**
KULA	**Kula-Manisa**	**3.13**	**319**	PN	**Pn**	**18 58 04.7**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**3.22**	**305**	PN	**Pn**	**18 58 05.7**	**-0.6**
KUL	**Konya-Kulu**	**3.28**	**23**	*i* P	**Pn**	**18 58 08.3**	**+1.2**
SVRH	**Sivrihisar-ESK**	**3.29**	**4**	PN	**Pn**	**18 58 07.4**	**+0.3**
BODT	**Bodrum**	**3.29**	**287**	PN	**Pn**	**18 58 06.9**	**-0.3**
KARP	**Karpathos**	**3.38**	**261**	PN	**Pn**	**18 58 07.9**	**-0.4**
GCAM	**G?zelcaml?**	**3.56**	**297**	PN	**Pn**	**18 58 10.3**	**-0.5**
TVSB	**Tavsanli**	**3.58**	**337**	PN	**Pn**	**18 58 11.3**	**+0.2**
ZKR	**Zakros**	**4.23**	**257**	PN	**Pn**	**18 58 20.4**	**+0.4**
IDI	**Anoyia**	**5.25**	**262**	PN	**Pn**	**18 58 34.5**	**+0.5**

MEX 25 19:14:47.9±0.3, 14°.87N×93°.28W, h18km±60km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.84**	**4**	*e*P	Pb	19 15 01.1	-2.9
PCIG				*i* S	Sb	19 15 11.4	-3.5
THIG		**0.98**	**87**	*i* P	Pb	19 15 04.0	-2.4
THIG				*i* S	Sb	19 15 15.7	-3.3

*THE **25** 19:25:13.5, 34°.30N×25°.13E, h0km±3km, ML2.2/5, Error ellipse: s-maj=4.9km s-min=0.9km az=174.0*
ATH 25 19:25:13.7, 34°.32N×25°.20E, h26km±3km, ML2.5/3, Error ellipse: s-maj=5.7km s-min=1.6km az=352.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.77**	**336**	P	Pb	19 25 28.4	0.0
SIVA				S	Sn	19 25 40.0	+0.5
SIVA	**Sivas**	**0.77**	**336**	P	Pb	19 25 28.4	0.0
SIVA				S	Sn	19 25 40.1	+0.7
SIVA				AML	AML	19 25 40.9	
	comp=N,1401μm,0.2s						
SIVA				AML	AML	19 25 41.0	
	comp=E,2064μm,0.3s						
SIVA	**Sivas**	**0.77**	**336**	P	Pb	19 25 28.4	-0.1
SIVA				S	Sb	19 25 38.2	-0.3
SIVA				AML	AML	19 25 47.0	
	comp=E,1544μm,0.3s						
SIVA				AML	AML	19 25 51.1	
	comp=N,1422μm,0.6s						
TMBK	**Timbaki Herakl**	**0.83**	**335**	P	Pn	19 25 29.8	+0.1
TMBK				S	Sn	19 25 42.6	+1.5
LAST	**Lasithi**	**0.87**	**15**	P	Pn	19 25 30.9	+0.6
LAST				S	Sn	19 25 44.9	+2.7
LAST	**Lasithi**	**0.87**	**15**	P	Pn	19 25 31.0	+0.7
LAST	**Lasithi**	**0.87**	**15**	P	Pn	19 25 30.9	+0.6
LAST				S	Sn	19 25 43.3	+1.1
LAST				AML	AML	19 25 52.3	
	comp=N,196μm,0.5s						
LAST				AML	AML	19 25 56.5	
	comp=E,236μm,0.8s						
KSTL	**Kastelli Herak**	**0.99**	**354**	P	Pn	19 25 31.5	-0.3
KSTL				S	Sn	19 25 46.0	+1.1
IDI	**Anoyia**	**1.00**	**345**	P	Pb	19 25 32.4	0.0
IDI				S	Sn	19 25 46.7	+1.3
IDI				AML	AML	19 25 51.5	
	comp=E,232μm,0.3s						
IDI				AML	AML	19 25 53.4	
	comp=N,170μm,0.6s						
IDI	**Anoyia**	**1.00**	**345**	P	Pb	19 25 32.4	0.0
IDI				S	Sb	19 25 45.2	0.0
IDI				AML	AML	19 25 48.9	
	comp=N,188μm,0.5s						
IDI				AML	AML	19 25 51.5	
	comp=E,232μm,0.3s						
NPS	**Neapolis**	**1.00**	**20**	P	Pb	19 25 33.2	+0.8
NPS	**Neapolis**	**1.00**	**20**	P	Pb	19 25 33.3	+0.9
NPS	**Neapolis**	**1.00**	**20**	P	Pb	19 25 33.3	+0.9
GVD	**Gavdhos**	**1.05**	**300**	P	Pb	19 25 33.4	+0.1
GVD	**Gavdhos**	**1.05**	**300**	P	Pb	19 25 33.4	+0.1
GVD				S	Sb	19 25 48.9	+2.3
GVD				AML	AML	19 25 57.3	
	comp=E,491μm,0.4s						
GVD				AML	AML	19 25 59.5	
	comp=N,427μm,0.3s						
GVD	**Gavdhos**	**1.05**	**300**	P	Pb	19 25 33.2	0.0
ZKR	**Zakros**	**1.16**	**46**	P	Pb	19 25 35.8	+0.8
VAM	**Vamos**	**1.36**	**323**	P	Pb	19 25 38.1	-0.4
VAM	**Vamos**	**1.36**	**323**	P	Pb	19 25 38.6	+0.1
VAM	**Vamos**	**1.36**	**323**	P	Pb	19 25 38.3	-0.2
IMMV	**Iera Moni Meta**	**1.52**	**319**	P	Pb	19 25 41.5	+0.3
IMMV	**Iera Moni Meta**	**1.52**	**319**	P	Pb	19 25 41.4	+0.3
IOSP	**Ios island**	**2.40**	**2**	P	Pn	19 25 53.1	+1.8
VLI	**Veliai**	**3.02**	**323**	P	Pn	19 26 01.2	+1.4

*NEIC **25** 19:55:14.3±0.0, 15°.93N×95°.43W, h48km, MD4.0(MEX), After MEX.*
MEX 25 19:55:14.3±0.6, 15°.93N×95°.43W, h48km±14km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.68**	**256**	*e*Pn	Pn	19 55 25.8	-1.9
HUIG				*e*Sn	Sn	19 55 35.8	-1.6
HUIG	**Huatulco**	**0.68**	**256**	*i* P	Pn	19 55 25.8	-1.9
HUIG				*i* S	Sn	19 55 35.8	-1.6
CMIG	**Matias Romero**	**1.26**	**24**	*e*Pn	Pn	19 55 33.9	-1.7
CMIG				*e*Sn	Sn	19 55 49.3	-2.1
CMIG	**Matias Romero**	**1.26**	**24**	*e*P	Pn	19 55 33.9	-1.7
CMIG				*e*S	Sn	19 55 49.3	-2.1
VHO	**Vista Hermosa**	**1.69**	**312**	*e*Pn	Pn	19 55 40.2	-1.4
VHO				*e*Sn	Sn	19 56 00.0	-2.1
VHO	**Vista Hermosa**	**1.69**	**312**	*e*P	Pn	19 55 40.2	-1.4
VHO				*i* S	Sn	19 56 00.0	-2.1
PCIG		**2.14**	**96**	*e*Pn	Pn	19 55 46.8	-0.7
PCIG				*e*Sn	Sn	19 56 10.8	-2.1
PCIG		**2.14**	**96**	*e*P	Pn	19 55 46.8	-0.7
PCIG				*e*S	Sn	19 56 10.8	-2.1
TGIG		**2.37**	**69**	*e*Pn	Pn	19 55 48.5	-2.2
TGIG				*e*Sn	Sn	19 56 16.4	-2.2
TGIG		**2.37**	**69**	*e*P	Pn	19 55 48.5	-2.2
TGIG				*i* S	Sn	19 56 16.4	-2.2
CCIG	**Comitan**	**3.18**	**83**	*e*Pn	Pn	19 56 01.4	-0.6
CCIG				*e*Pn	Pn	19 56 01.7	-0.3
CCIG				*e*Sn	Sn	19 56 44.2	+5.4
CCIG	**Comitan**	**3.18**	**83**	*e*P	Pn	19 56 01.7	-0.3
CCIG				*i* S	Sn	19 56 44.2	+5.4
TLIG	**Tlapa**	**3.42**	**299**	*e*Pn	Pn	19 56 06.0	+0.8
V48A	**Smith Brothers**	**21.17**	**20**	*e*S	Sn	20 03 56.5	-0.8
S58A	**Poland Farm, P**	**26.50**	**32**	*e*P	P	20 00 52.1	+4.9
PHWY	**Pilot Hill**	**26.73**	**343**	*e*P	P	20 00 54.3	+4.7

*NIED **25** 19:56:00, 24°.90N×122°.00E, h5km, Mw4.4 Best double couple: M∘5.07000×10^15 NP1:φ∘75.00000°, δ45.00000°, λ-63.00000°. NP2:φ∘220.00000°, δ51.00000°, λ-114.00000°.*
*IDC **25** 19:56:08.0±0.9, 24°.88N×122°.16E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/34, mbtmp3.9/10, ML2.2/1, MS3.7/16, Ms1 3.7/16, ms1mx3.5/30, Error ellipse: s-maj=29.3km s-min=18.4km az=66.0*
*ISCJB **25** 19:56:08.3±0.3, 24°.90N±0°.02×122°.11E±0°.02, h9km±2km, mb4.1/22, MS3.9/12, Error ellipse: s-maj=2.9km s-min=2.6km az=26.2*
*TAP **25** 19:56:08.2, 24°.86N×122°.04E, h13km, ML3.9, B*
*JMA **25** 19:56:08.9±0.1, 24°.87N×122°.01E, h36km, M3.6*
*NEIC **25** 19:56:09.1±1.6, 24°.85N×122°.06E, h10km±5km, mb4.4/13, Error ellipse: s-maj=8.4km s-min=4.5km az=200.0*
ISC 25 19:56:08.9±0.9, 24°.85N±0°.02×122°.07E±0°.02, h9km±6km, n161, σ0°.88/173, mb4.2/22, MS3.9/12, 20C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.13**	**268**	P	**Pg**	**19 56 11.5**	**-0.2**
	baz=262						
EGS				S	**Sg**	**19 56 14.1**	**+0.4**
	baz=262						
TWB1	**Santiao Chiao**	**0.17**	**335**	⇑*i*P	**Pg**	**19 56 12.3**	**-0.3**
	baz=335						
TWB1				*i* S	**Sg**	**19 56 15.3**	**+0.2**
	baz=335						
NTC	**Toucheng**	**0.22**	**271**	⇑P	**Pg**	**19 56 12.9**	**-0.4**
	baz=275						
NTC				S	**Sg**	**19 56 16.8**	**+0.4**
	baz=275						
TIPB	**Shuangxi**	**0.25**	**299**	⇑*i*P	**Pg**	**19 56 13.9**	**-0.1**
	baz=301						
TIPB				*i* S	**Sg**	**19 56 17.4**	**0.0**
	baz=301						
EOS1	**EOS1**	**0.30**	**170**	P	**Pg**	**19 56 15.5**	**+0.6**
	baz=166						
ILA	**Ilan**	**0.30**	**254**	P	**Pg**	**19 56 14.8**	**-0.2**
	baz=252						
ILA				*e*S	**Sg**	**19 56 19.4**	**+0.4**
	baz=252						
NWF	**Wu-fen Shan**	**0.34**	**310**	⇑*i*P	**Pg**	**19 56 15.8**	**0.0**
	baz=307						
NWF				*i* S	**Sg**	**19 56 20.9**	**+0.6**
	baz=307						
WFSB	**Wu-fen Shan**	**0.34**	**310**	⇑P	**Pg**	**19 56 15.7**	**+0.1**
	baz=307						
WFSB				S	**Sg**	**19 56 20.8**	**+0.5**
	baz=307						
TWE	**Neicheng**	**0.39**	**251**	⇑*i*P	**Pg**	**19 56 16.0**	**-0.5**
	baz=241						
ENTT	**Nioudou**	**0.50**	**246**	*e*P	**Pg**	**19 56 18.3**	**-0.4**
	baz=244						
NHDH	**Xindian Distri**	**0.51**	**283**	*e*P	**Pb**	**19 56 19.2**	**-0.8**
	baz=274						
NHDH				S	**Sb**	**19 56 26.0**	**-1.5**
	baz=274						
NANB	**Nanao**	**0.51**	**215**	*e*P	**Pg**	**19 56 18.4**	**-0.4**
	baz=221						
ENA	**Nanau**	**0.52**	**216**	*e*P	**Pg**	**19 56 18.6**	**-0.4**
	baz=220						
NWLT	**Wulai**	**0.52**	**262**	*e*P	**Pg**	**19 56 18.7**	**-0.3**
	baz=261						
YM01	**YM01**	**0.54**	**303**	⇑*i*P	**Pb**	**19 56 19.8**	**-0.9**
	baz=304						
YM01				S	**Sg**	**19 56 26.5**	**0.0**
	baz=304						
TATO	**Taipei**	**0.54**	**283**	*e*Pg	**Pg**	**19 56 19.3**	**-0.1**
TATO	**Taipei**	**0.54**	**283**	⇑*e*P	**Pg**	**19 56 19.4**	**0.0**
	baz=275						
YM08	**YM08**	**0.55**	**308**	⇑*i*P	**Pg**	**19 56 19.7**	**+0.1**
	baz=308						
YM08				*e*S	**Sg**	**19 56 26.3**	**-0.5**
	baz=308						
YM10	**YM10**	**0.55**	**304**	⇑*i*P	**Pb**	**19 56 19.9**	**-0.9**
	baz=304						
YM05	**YM05**	**0.56**	**304**	⇑*i*P	**Pb**	**19 56 19.9**	**-1.0**
	baz=305						
YM05				*e*S	**Sb**	**19 56 28.2**	**-0.8**
	baz=305						
YM04	**YM04**	**0.57**	**302**	⇑P	**Pb**	**19 56 20.2**	**-1.0**
	baz=302						
YM03	**YM03**	**0.58**	**304**	⇑P	**Pg**	**19 56 20.2**	**0.0**
	baz=304						
ANP	**Anpu**	**0.60**	**304**	*e*P	**Pg**	**19 56 20.5**	**-0.1**
	baz=304						
TWY	**Chenhua**	**0.60**	**315**	⇑*i*P	**Pb**	**19 56 21.0**	**-0.7**
	baz=316						
TWS1	**Kuangyinshan**	**0.64**	**293**	⇑P	**Pb**	**19 56 21.8**	**-0.6**
	baz=293						
NTST	**Danshui**	**0.65**	**299**	*e*P	**Pb**	**19 56 22.0**	**-0.3**
	baz=300						
YHNB	**Yeheng**	**0.66**	**254**	*e*Pg	**Pg**	**19 56 20.6**	**-0.9**
YHNB	**Yeheng**	**0.66**	**254**	⇑P	**Pg**	**19 56 20.7**	**-0.9**
	baz=262						
NSK	**Sanguang**	**0.67**	**255**	⇑*i*P	**Pg**	**19 56 20.9**	**-1.0**
	baz=255						
NSK				S	**Sg**	**19 56 29.4**	**-1.2**
	baz=255						
WLTB	**Daxi**	**0.74**	**270**	*e*P	**Pb**	**19 56 23.9**	**-0.2**
	baz=270						
NNSB	**Datong**	**0.75**	**236**	*e*P	**Pg**	**19 56 23.2**	**-0.3**
	baz=240						
NNS	**Nan Shan**	**0.75**	**237**	*e*P	**Pg**	**19 56 22.7**	**-0.8**
	baz=241						
PCYT	**Pengchaiyu**	**0.78**	**0**	⇑*i*P	**Pb**	**19 56 24.2**	**-0.4**
	baz=6.0						
NACB	**Ninganchiao**	**0.80**	**213**	*e*Pg	**Pg**	**19 56 23.9**	**-0.4**
NACB	**Ninganchiao**	**0.80**	**213**	*e*P	**Pg**	**19 56 23.6**	**-0.7**
	baz=224						
NACB				*e*S	**Sg**	**19 56 34.5**	**-0.2**
	baz=224						
NCU	**National Centr**	**0.81**	**279**

	baz=273					
OWD	Renai	1.21 223	eP	Pn	19 56 31.4	-0.7
	baz=224					
NSY	Sanyi	1.27 250	‖eP	Pg	19 56 33.6	+0.4
	baz=267					
TWQ1	Liyutan	1.28 247	eP	Pg	19 56 34.3	+0.8
	baz=265					
PTSB	Yuanli	1.30 252	eP	Pg	19 56 34.4	+0.4
	baz=270					
EGFH	Guangfu	1.31 207	eP	Pb	19 56 33.9	+0.2
	baz=223					
DPDB	Guoxing	1.32 232	eP	Pg	19 56 34.3	0.0
	baz=225					
VWDT	VWDT	1.38 218	eP	Pb	19 56 34.4	-0.5
	baz=220					
WDJ	Dajia District	1.39 249	eP	Pg	19 56 35.7	0.0
	baz=269					
SMLT	Sun Moon Lake	1.44 228	eP	Pg	19 56 36.3	-0.2
	baz=230					
TCU	Taichung	1.45 241	eP	Pg	19 56 37.2	+0.5
	baz=262					
TYC	Yuchr	1.45 230	eP	Pb	19 56 36.2	+0.1
	baz=224					
SSLB	Suanglung	1.47 224	ePn	Pb	19 56 36.3	-0.1
SSLB	Suanglung	1.47 224	eP	Pb	19 56 36.6	+0.1
	baz=226					
HGSD	Ruisui	1.47 204	eP	Pb	19 56 36.7	+0.2
	baz=222					
EHY	Hungye	1.50 207	eP	Pb	19 56 36.3	-0.7
	baz=210					
WNT	Mingjian	1.59 233	eP	Pg	19 56 39.7	+0.2
	baz=234					
IRIF	Iriomote-Funau	1.59 108	P	Pn	19 56 35.9	-1.4
IRIF			eS	Sn	19 56 56.8	-1.3
WJS	Zhushan	1.59 230	eP	Pg	19 56 39.7	+0.2
	baz=225					
WHYT	Xinyi Township	1.60 224	eP	Pg	19 56 39.1	-0.4
	baz=226					
YULB	Yu-li	1.61 206	ePn	Pb	19 56 38.4	-0.5
YULB	Yu-li	1.61 206	eP	Pb	19 56 38.4	-0.5
	baz=209					
TWF1	Yuli	1.65 206	eP	Pn	19 56 38.3	+0.2
	baz=219					
YUS	Yu-Shan	1.70 217	eP	Pg	19 56 41.2	-0.3
	baz=227					
HATJ	Hateruma jima	1.77 116	P	Pn	19 56 39.1	-0.6
WGK	Gukeng	1.80 230	eP	Pg	19 56 42.9	-0.5
	baz=232					
WDLH	Douliu	1.81 231	eP	Pg	19 56 43.3	-0.4
	baz=233					
RLNB	Erlin	1.83 239	eP	Pb	19 56 41.5	-1.1
	baz=257					
CHKT	Chengkung	1.86 200	eP	Pn	19 56 40.5	-0.4
	baz=180					
JKRS	Kuro-shima	1.87 109	P	Pn	19 56 40.3	-0.8
JKRS			eS	Sn	19 57 04.1	-0.7
ELDTW	Lidau	1.91 210	eP	Pb	19 56 42.9	-1.2
	baz=198					
JIJ	Ishigaki jima	1.95 104	P	Pn	19 56 41.2	-1.0
JIJ			eS	Sn	19 57 05.3	-1.5
CHN4	Tsaushan	2.01 222	eP	Pb	19 56 46.2	+0.5
	baz=225					
TPUB	Ta-pu	2.03 221	ePn	Pb	19 56 45.6	-0.4
TPUB	Ta-pu	2.03 221	eP	Pb	19 56 46.5	+0.5
	baz=224					
JISG	Ishigakijimahi	2.05 97	P	Pn	19 56 42.4	-1.3
WSF	Szhu	2.07 235	eP	Pn	19 56 44.5	+0.6
	baz=237					
WTP	Ta-pu	2.08 220	eP	Pb	19 56 47.1	+0.3
	baz=223					
WLGB	Puzi	2.12 230	eP	Pb	19 56 47.4	0.0
	baz=233					
SNST	Tainan City	2.17 222	eP	Pb	19 56 48.5	+0.2
	baz=225					
PTTC	Pingtan	2.18 288	eP	Pn	19 56 43.7	-1.7
	baz=288					
TWGBT	Beinan	2.22 204	eP	Pn	19 56 45.9	0.0
	baz=190					
TWG	Pinlang	2.22 205	ePn	Pn	19 56 47.2	+1.3
TWG	Pinlang	2.22 205	eP	Pb	19 56 47.7	-1.5
	baz=190					
SGST	Jiashian	2.22 218	eP	Pb	19 56 49.2	-0.2
	baz=221					
SLGT	Liugui	2.26 215	eP	Pb	19 56 49.2	-0.7
	baz=219					
CHN8	Yiju	2.26 229	eP	Pb	19 56 48.4	-1.5
	baz=231					
MATB	Ma-tsu	2.32 304	eP	Pn	19 56 46.3	-0.9
	baz=303					
ECL	Taimali	2.46 205	eP	Pb	19 56 51.6	-1.8
	baz=192					
SSD	Sandimen	2.47 212	eP	Pb	19 56 52.8	-0.8
	baz=216					
TWM1	Shoushan	2.52 217	eP	Pb	19 56 54.1	-0.3
	baz=220					
MASBT	Mashibuluo	2.59 211	eP	Pb	19 56 54.4	-1.1
	baz=214					
PNG	Penghu	2.63 241	eP	Pn	19 56 53.0	+1.5
	baz=243					
PHUB	P'eng-hu	2.64 240	eP	Pn	19 56 53.2	+1.5
	baz=241					
XPSS	Dashiqiu	2.68 321	eP	Pn	19 56 50.4	-1.8
	baz=319					
PTMZ	Houxiangcun	2.69 275	eP	Pn	19 56 52.1	-0.2
	baz=275					
LYJJ	Jianjiangzhen	2.69 310	eP	Pn	19 56 50.7	-1.6
	baz=307					
EAST	Anshuo	2.70 205	eP	Pb	19 56 55.0	-2.4
	baz=194					
SCZT	Fangliau	2.80 209	eP	Pb	19 56 57.2	-1.9
	baz=195					
VCHM	Qimei	2.92 236	eP	Pb	19 56 58.2	-2.9
	baz=251					
MHZQ	Yeshan	3.02 295	eP	Pn	19 56 55.6	-1.3
	baz=293					
KNM	Kinmen	3.34 263	eP	Pn	19 57 02.7	+1.4
	baz=265					
KNMB	Chin-men Tao	3.37 264	ePn	Pn	19 57 01.2	-0.6
KNMB	Chin-men Tao	3.37 264	eP	Pn	19 57 01.0	-0.8
	baz=266					
AXDP	Jialang	3.73 272	eP	Pn	19 57 06.3	-0.4
	baz=274					
TGY	Tagaytay City	10.74 186	LR	LR	20 03 34.4	
	comp=Z,151nm,19.4s,baz=285,slow=41					
JNU	Nakatsue	11.28 41	LR	LR	20 03 47.5	
	comp=Z,74nm,20.6s,baz=184,slow=41					
KSRS	Korea Array	13.52 20	Pn	Pn	19 59 24.5	+3.6
	0.3nm,0.3s,baz=207,slow=18,SNR=2.9					
KSRS			LR	LR	20 05 30.7	
	comp=Z,246nm,20.1s,baz=204,slow=42					
MAJO	Matsushiro	18.09 46	ePn	P	20 00 20.9	-0.1
MJAR	Matsushiro Arr	18.09 46	P	P	20 00 20.9	-0.1
	0.0nm,0.3s,baz=252,slow=12,SNR=3.4					
MJAR			LR	LR	20 07 49.0	
	comp=Z,133nm,20.2s,baz=240,slow=39					
CMAR	Chiang Mai Arr	22.40 258	P	P	20 01 10.0	+2.1
	0.6nm,0.8s,baz=71,slow=8.7,SNR=2.9					
CMAR			LR	LR	20 10 33.2	
	comp=Z,184nm,18.5s,baz=70,slow=38					
SBUM	Sibu	24.21 205	eP	P	20 01 26.3	+0.2
	4.4nm,1.0s					
ULN	Ulaanbaatar	25.87 336	eP	P	20 01 40.0	-1.1
	11nm,1.3s					
SONA0	Songino Array	26.09 336	eP	P	20 01 44.0	+1.0
SONM	Songino Array	26.09 336	P	P	20 01 44.0	+1.0
	8.3nm,1.1s,baz=153,slow=9.1,SNR=30					
SONM			LR	LR	20 13 26.8	
	comp=Z,375nm,20.9s,baz=144,slow=40					
TLY	Talaya	30.27 337	eP	P	20 02 20.1	-0.2
	13nm,1.4s					
MK31	Makanchi Array	38.43 315	eP	P	20 03 30.4	-0.5
	4.1nm,1.1s					
MK32	Makanchi Array	38.43 315	eP	P	20 03 31.7	+0.8
MKAR	Makanchi Array	38.43 315	P	P	20 03 31.7	+0.8
	2.2nm,1.0s,baz=111,slow=9.2,SNR=9.3					
MAKZ	Makanchi	38.64 315	eP	P	20 03 32.8	+0.2
	5.5nm,1.1s					
PETK	Petropavlovsk-	38.87 34	LR	LR	20 20 00.9	
	comp=Z,49nm,18.4s,baz=239,slow=37					
ZAA0	Zalesovo Array	40.13 326	eP	P	20 03 44.3	-0.7
	6.6nm,1.1s					
ZALV	Zalesovo Beam	40.13 326	P	P	20 03 44.9	-0.1
	3.7nm,0.9s,baz=108,slow=8.0,SNR=6.4					
ZAA1	Zalesovo Array	40.14 326	eP	P	20 03 44.9	-0.1
KURK	Kurchatov	42.11 319	eP	P	20 04 00.2	-1.1
	8.3nm,1.4s					
KURBB	Kurchatov Arra	42.13 319	P	P	20 04 01.8	+0.3
	1.8nm,1.1s,baz=105,slow=6.5,SNR=8.1					
WRAB	Tennant Creek	46.09 164	eP	P	20 04 33.5	0.0
	25nm,1.6s					
WR1	Warramunga Arr	46.10 164	eP	P	20 04 33.3	-0.2
WRA	Warramunga Arr	46.10 164	P	P	20 04 33.3	-0.2
	7.2nm,1.0s,baz=340,slow=8.9,SNR=9.1					
WB2	Warramunga Arr	46.10 164	eP	P	20 04 33.4	-0.2
	12nm,1.1s					
TIXI	Tiksi	46.99 3	eP	P	20 04 39.3	-0.7
	6.3nm,1.1s					
BRVK	Borovoye	47.75 320	eP	P	20 04 46.9	+0.7
	4.9nm,1.3s					
AS31	Alice Springs	49.57 166	eP	P	20 05 00.8	+0.2
	0.7nm,0.9s					
ASAR	Alice Springs	49.57 166	P	P	20 05 01.4	+0.8
	1.3nm,0.9s,baz=345,slow=7.3,SNR=6.2					
GEYT	Alibeck	55.16 300	LR	LR	20 33 25.2	
	comp=Z,110nm,18.4s,baz=105,slow=40					
STKA	Stephens Creek	59.41 161	LR	LR	20 34 58.5	
	comp=Z,77nm,19.2s,baz=207,slow=39					
KBZ	Khabaz	65.70 309	LR	LR	20 38 57.6	
	comp=Z,82nm,18.4s,baz=66,slow=39					
KIV	Kislovodsk	65.80 309	eP	P	20 06 55.5	+0.8
	8.3nm,1.3s					
ARCES	ARCESS Array B	69.23 338	LR	LR	20 40 58.5	
	comp=Z,53nm,19.5s,baz=110,slow=39					
FINES	FINESS Array B	71.28 330	LR	LR	20 41 59.3	
	comp=Z,186nm,18.2s,baz=72,slow=39					
AKASG	Malin Array Be	72.91 318	LR	LR	20 40 54.8	
	comp=Z,34nm,19.0s,baz=20,slow=37					
BR101	Keskin Array S	73.43 306	eP	P	20 07 42.0	+0.1
BRTR	Keskin Array B	73.43 306	P	P	20 07 42.0	+0.1
	0.4nm,0.6s,baz=101,slow=7.5,SNR=4.6					
BRTR			LR	LR	20 43 35.8	
	comp=Z,29nm,18.2s,baz=94,slow=39					
NOA	NORSAR Array B	78.02 332	LR	LR	20 46 04.5	
	comp=Z,113nm,18.2s,baz=75,slow=38					
YKA	Yellowknife Ar	82.05 23	P	P	20 08 29.6	+0.3
	0.6nm,0.8s,baz=315,slow=4.3,SNR=4.0					
YKB5	Yellowknife Ar	82.05 23	eP	P	20 08 29.6	+0.3
GERES	GERESS Array B	82.84 321	LR	LR	20 49 30.1	
	comp=Z,49nm,19.1s,baz=63,slow=39					

TAP 25 20:08:14.1,24°.83N×122°.01E,h12km,ML3.0,C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.07	283	P	Pg	20 08 16.9	+0.2
	baz=283						
EGS				eS	Sg	20 08 18.8	+0.4
	baz=283						
NTC	Toucheng	0.17	279	i P	Pb	20 08 18.5	-0.6
	baz=279						
NTC				i S	Sg	20 08 21.6	+1.0
	baz=279						
TWB1	Santiao Chiao	0.18	353	eP	Pg	20 08 17.9	-0.2
	baz=355						
TWB1				eS	Sg	20 08 21.5	+0.5
	baz=355						
TIPB	Shuangxi	0.22	310	i P	Pg	20 08 19.3	+0.5
	baz=310						
TIPB				i S	Sg	20 08 22.8	+0.7
	baz=310						
ILA	Ilan	0.25	255	eP	Pg	20 08 19.1	-0.2
	baz=254						
ILA				eS	Sg	20 08 24.1	+1.4
	baz=254						
EOS1	EOS1	0.30	159	eP	Pb	20 08 20.8	-0.5
	baz=158						
EOS1				eS	Sb	20 08 25.9	-0.2
	baz=158						
NWF	Wu-fen Shan	0.32	319	P	Pb	20 08 21.3	-0.5
	baz=319						
NWF				S	Sb	20 08 26.6	-0.4
	baz=319						
WFSB	Wu-fen Shan	0.32	319	P	Pb	20 08 21.2	-0.5
	baz=319						
WFSB				eS	Sb	20 08 26.5	-0.3
	baz=319						
TWE	Neicheng	0.33	251	i P	Pb	20 08 21.5	-0.4
	baz=249						
TWE				eS	Sb	20 08 26.7	-0.4
	baz=249						
ENTT	Nioudou	0.45	245	i P	Pb	20 08 23.9	0.0
	baz=244						
ENTT				eS	Sb	20 08 30.6	0.0
	baz=244						
NHDH	Xindian Distri	0.46	287	eS	Sb	20 08 31.3	+0.4
	baz=286						
NANB	Nanao	0.46	211	eP	Pb	20 08 23.9	-0.3
	baz=210						
NANB				eS	Sb	20 08 31.5	+0.5
	baz=210						
NWLT	Wulai	0.47	264	eP	Pb	20 08 23.9	-0.3
	baz=263						
ENA	Nanau	0.47	212	eP	Pb	20 08 23.9	-0.3
	baz=210						
ENA				eS	Sb	20 08 31.9	+0.8
	baz=210						
TATO	Taipei	0.50	287	eP	Pb	20 08 25.3	+0.5
	baz=287						
YM01	YM01	0.51	308	i P	Pb	20 08 25.2	+0.2
	baz=308						
YM10	YM10	0.52	309	P	Pb	20 08 25.5	+0.2
	baz=308						
YM08	YM08	0.52	313	P	Pb	20 08 25.2	0.0
	baz=313						
YM05	YM05	0.53	310	i P	Pb	20 08 25.4	+0.2
	baz=309						
YM04	YM04	0.54	307	P	Pb	20 08 25.7	+0.2
	baz=306						
YM03	YM03	0.55	309	eP	Pb	20 08 25.8	+0.1
	baz=309						
TWY	Chenhua	0.58	320	P	Pb	20 08 26.4	+0.3
	baz=320						
YHNB	Yeheng	0.60	255	P	Pb	20 08 26.2	-0.3
	baz=254						
TWS1	Kuangyinshan	0.60	297	eP	Pb	20 08 27.1	+0.6
	baz=297						
NTST	Danshui	0.61	303	eP	Pb	20 08 26.9	+0.2
	baz=303						
NNS	Nan Shan	0.70	236	eP	Pb	20 08 28.4	+0.2
	baz=235						
NNS				eS	Sb	20 08 38.4	+0.5
	baz=235						
NNSB	Datong	0.70	235	eP	Pb	20 08 28.4	+0.2
	baz=235						
NACB	Ninganchiao	0.75	210	eP	Pb	20 08 29.5	+0.4
	baz=210						
NACB				eS	Sb	20 08 40.0	+0.6
	baz=210						
NCUH	Zhongli	0.76	281	eP	Pb	20 08 29.3	0.0
	baz=280						
NCUH				eS	Sb	20 08 40.0	+0.4
	baz=280						
ETLH	Xiulin Townshi	0.78	218	eP	Pb	20 08 29.9	+0.2
	baz=217						
ETLH				eS	Sb	20 08 40.7	+0.4
	baz=217						
LIOB	Emei	0.92	259	eP	Pn	20 08 32.9	0.0
	baz=258						
LIOB				eS	Sb	20 08 45.2	+0.9
	baz=258						
NSTT	Nanjuang	0.94	258	eP	Pg	20 08 32.2	0.0
	baz=257						
NSTT				eS	Sb	20 08 45.0	+0.3
	baz=257						
TDCB	Techi	0.96	234	eS	Sb	20 08 46.2	+0.6
	baz=233						
CHGB	Renai	1.08	225	eP	Pn	20 08 35.2	0.0
	baz=224						
CHGB				eS	Sg	20 08 49.3	+0.3
	baz=224						
ESL	Shilin	1.14	208	eP	Pg	20 08 36.0	0.0
	baz=207						
ESL				eS	Sg	20 08 50.8	0.0
	baz=207						
DPDB	Guoxing	1.27	232	eP	Pn	20 08 37.7	+0.1
	baz=231						
DPDB				eS	Sn	20 08 54.7	+0.1
	baz=231						
EGFH	Guangfu	1.27	205	eP	Pb	20 08 38.1	+0.1
	baz=204						
VWDT	VWDT	1.33	217	eP	Pb	20 08 39.1	+0.1
	baz=216						
VWDT				eS	Sb	20 08 56.0	0.0
	baz=216						
SSLB	Suanglung	1.42	223	eP	Pb	20 08 40.7	+0.2
	baz=222						
SSLB				eS	Sb	20 08 58.7	+0.2
	baz=222						

*TAP **25** 20:08:22.5,24°.81N×122°.04E,h7km,ML3.1,B*
*ISCJB **25** 20:08:23.6±0.3,24°.83N±0°.01×122°.08E±0°.02,h16km±3km,*
Error ellipse: s-maj=2.5km s-min=2.3km az=3.7
*JMA **25** 20:08:23.5,24°.85N×121°.98E,h40km,M2.6*
ISC 25 20:08:22.9±0.8,24°.83N±0°.02×122°.02E±0°.02,h16km±5km,
n70,σ0s67/133,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.08	278	P	Pg	20 08 25.8	-0.3
	baz=290						
EGS				eS	Sg	20 08 27.9	-0.3
	baz=290						
TWB1	Santiao Chiao	0.18	349	eP	Pg	20 08 27.4	+0.1
	baz=348						
TWB1				eS	Sb	20 08 30.9	-0.2
	baz=348						
NTC	Toucheng	0.18	277	P	Pg	20 08 27.3	0.0
	baz=283						
NTC				eS	Sb	20 08 30.8	-0.4
	baz=283						
TIPB	Shuangxi	0.23	307	eP	Pg	20 08 28.2	+0.2
	baz=309						
TIPB				eS	Sb	20 08 32.5	-0.1
	baz=309						
ILA	Ilan	0.26	255	eS	Sb	20 08 33.8	+0.3
	baz=260						
EOS1	EOS1	0.30	161	eP	Pg	20 08 29.5	+0.3
	baz=163						
EOS1				eS	Sb	20 08 34.2	-0.4
	baz=163						
NWF	Wu-fen Shan	0.32	317	eP	Pg	20 08 29.9	+0.2
	baz=317						
NWF				eS	Sb	20 08 35.8	+0.3
	baz=317						
WFSB	Wu-fen Shan	0.32	317	eP	Pb	20 08 30.6	+0.3
	baz=317						
WFSB				eS	Sb	20 08 35.8	+0.4
	baz=317						
TWE	Neicheng	0.34	251	i P	Pb	20 08 30.3	-0.3
	baz=254						
TWE				eS	Sb	20 08 35.6	-0.3
	baz=254						
ENTT	Nioudou	0.46	245	P	Pb	20 08 32.6	-0.1
	baz=248						
ENTT				S	Sb	20 08 40.0	+0.7
	baz=248						
NHDH	Xindian Distri	0.47	286	P	Pb	20 08 33.3	+0.5
	baz=288						
NHDH				eS	Sb	20 08 40.6	+1.0
	baz=288						
NANB	Nanao	0.47	212	eP	Pb	20 08 32.6	-0.3
	baz=215						
NANB				eS	Sb	20 08 39.9	+0.2
	baz=215						
NWLT	Wulai	0.48	263	eP	Pb	20 08 33.0	0.0
	baz=266						
NWLT				eS	Sb	20 08 40.6	+0.8
	baz=266						
ENA	Nanau	0.48	213	eP	Pb	20 08 33.3	+0.3
	baz=215						
ENA				eS	Sb	20 08 40.2	+0.4
	baz=215						
TATO	Taipei	0.51	286	eP	Pb	20 08 34.0	+0.6
	baz=288						
TATO				eS	Sn	20 08 42.3	-1.6
	baz=288						
YM01	YM01	0.52	307	P	Pb	20 08 34.0	+0.3
	baz=308						
YM01				S	Sn	20 08 43.5	-0.7
	baz=308						
YM10	YM10	0.53	307	i P	Pb	20 08 34.2	+0.4
	baz=308						
YM10				i S	Sn	20 08 43.8	-0.8
	baz=308						
YM08	YM08	0.53	312	P	Pb	20 08 34.0	+0.1
	baz=312						
YM08				S	Sn	20 08 43.6	-1.0
	baz=312						
YM05	YM05	0.53	308	i P	Pb	20 08 34.3	+0.4
	baz=309						
YM05				i S	Sn	20 08 43.8	-0.8
	baz=309						
YM04	YM04	0.55	306	i P	Pb	20 08 34.5	+0.4
	baz=306						
YM04				i S	Sn	20 08 43.7	-1.2
	baz=306						
YM03	YM03	0.56	308	P	Pb	20 08 34.8	+0.4
	baz=308						
YM03				eS	Sn	20 08 45.0	-0.3
	baz=308						
ANP	Anpu	0.58	308	P	Pb	20 08 34.6	-0.1
	baz=308						
ANP				eS	Sn	20 08 45.1	-0.7
	baz=308						
TWY	Chenhua	0.58	319	P	Pb	20 08 35.2	+0.4
	baz=319						
TWY				eS	Sn	20 08 44.7	-1.1
	baz=319						
TWS1	Kuangyinshan	0.61	296	eP	Pn	20 08 36.3	-0.6
	baz=297						
TWS1				eS	Sn	20 08 45.8	-0.8
	baz=297						
YHNB	Yeheng	0.61	255	P	Pb	20 08 35.1	-0.2
	baz=257						
YHNB				eS	Sb	20 08 44.4	+0.7
	baz=257						
NTST	Danshui	0.62	302	i P	Pn	20 08 36.3	-0.8
	baz=303						
NTST				S	Sn	20 08 46.3	-0.3
	baz=303						
WLTB	Daxi	0.70	272	eS	Sn	20 08 48.5	-0.3
	baz=273						
NNSB	Datong	0.71	235	P	Pb	20 08 37.3	+0.3
	baz=237						
NNSB				eS	Sb	20 08 47.3	+0.7
	baz=237						
NNS	Nan Shan	0.71	237	eP	Pb	20 08 37.4	+0.4
	baz=238						
NNS				eS	Sn	20 08 48.2	-1.0
	baz=238						
NACB	Ninganchiao	0.76	211	eP	Pn	20 08 38.5	-0.6
	baz=212						
NACB				S	Sb	20 08 49.0	+1.0
	baz=212						
NCU	National Centr	0.77	280	eP	Pn	20 08 39.2	0.0
	baz=281						
NCU				eS	Sn	20 08 50.0	-0.5
	baz=281						
PCYT	Pengchaiyu	0.79	3	P	Pb	20 08 38.8	+0.5
	baz=2.0						
PCYT				S	Sn	20 08 50.5	-0.6
	baz=2.0						
ETLH	Xiulin Townshi	0.80	218	eP	Pn	20 08 39.0	-0.5
	baz=220						
ETLH				eS	Sn	20 08 50.1	-1.1
	baz=220						
TWD	Chiawan	0.84	208	eP	Pg	20 08 39.6	+0.3
	baz=208						
TWD				S	Sg	20 08 51.2	+0.7
	baz=208						
JYNG	Yonagunijimaku	0.92	114	P	Pg	20 08 41.0	+0.2
JYNG				eS	Sg	20 08 53.0	+0.1
LIOB	Emei	0.94	259	eP	Pn	20 08 42.1	+0.7
	baz=260						
LIOB				eS	Sn	20 08 55.1	+0.5
	baz=260						
SBCB	Hsinchu	0.94	268	eS	Sn	20 08 55.7	+0.9
	baz=269						
NSTT	Nanjuang	0.95	258	eP	Pn	20 08 41.5	-0.2
	baz=259						
NSTT				S	Sn	20 08 54.8	-0.1
	baz=259						
YOJ	Yonaguni jima	0.97	112	eP	Pb	20 08 41.3	0.0
	baz=111						
YOJ				eS	Sg	20 08 54.6	+0.2
	baz=111						
YOJ	Yonaguni jima	0.97	112	P	Pb	20 08 41.4	0.0
YOJ				eS	Sb	20 08 53.8	-0.2
WHF	Hehuan Shan	0.97	225	eP	Pn	20 08 42.2	-0.1
	baz=226						
WHF				eS	Sn	20 08 55.7	-0.3

	baz=226					
TDCB	**Techi**	**0.98 234**	*e*P	**Pn**	**20 08 42.5**	**+0.3**
	baz=235					
TDCB			*e*S	**Sn**	**20 08 55.3**	**-0.5**
	baz=235					
CHGB	**Renai**	**1.09 225**	*e*P	**Pg**	**20 08 43.9**	**-0.1**
	baz=226					
CHGB			*e*S	**Sn**	**20 08 59.0**	**+0.3**
	baz=226					
ESL	**Shilin**	**1.15 208**	*e*P	**Pb**	**20 08 44.6**	**+0.1**
	baz=208					
ESL			*e*S	**Sg**	**20 09 00.7**	**+0.6**
	baz=208					
OWD	**Renai**	**1.17 222**	*e*P	**Pg**	**20 08 45.8**	**+0.3**
	baz=222					
OWD			*e*S	**Sg**	**20 09 01.5**	**+0.8**
	baz=222					
NSY	**Sanyi**	**1.22 250**	*e*S	**Sg**	**20 09 03.6**	**+1.1**
	baz=251					
DPDB	**Guoxing**	**1.28 232**	*e*P	**Pg**	**20 08 47.2**	**-0.3**
	baz=232					
DPDB			*e*S	**Sg**	**20 09 04.7**	**+0.4**
	baz=232					
EGFH	**Guangfu**	**1.28 205**	*e*S	**Sg**	**20 09 04.3**	**0.0**
	baz=206					
VWDT	**VWDT**	**1.34 217**	*e*P	**Pb**	**20 08 48.0**	**+0.3**
	baz=218					
VWDT			*e*S	**Sg**	**20 09 05.5**	**-0.8**
	baz=218					
SMLT	**Sun Moon Lake**	**1.40 228**	*e*P	**Pb**	**20 08 48.8**	**+0.1**
	baz=228					
SMLT			*e*S	**Sb**	**20 09 06.9**	**+0.6**
	baz=228					
TYC	**Yuchr**	**1.41 229**	*e*P	**Pg**	**20 08 49.5**	**-0.6**
	baz=229					
TYC			*e*S	**Sg**	**20 09 08.0**	**-0.5**
	baz=229					
SSLB	**Suanglung**	**1.43 223**	*e*P	**Pb**	**20 08 49.2**	**0.0**
	baz=224					
SSLB			*e*S	**Sg**	**20 09 08.2**	**-0.8**
	baz=224					
HGSD	**Ruisui**	**1.44 202**	*e*P	**Pb**	**20 08 49.5**	**0.0**
	baz=203					
HGSD			*e*S	**Sg**	**20 09 08.8**	**-0.7**
	baz=203					
WHYT	**Xinyi Township**	**1.56 224**	*e*P	**Pb**	**20 08 51.2**	**-0.2**
	baz=224					
WHYT			*e*S	**Sb**	**20 09 11.1**	**+0.2**
	baz=224					
YULB	**Yu-li**	**1.58 205**	*e*P	**Pb**	**20 08 51.6**	**-0.2**
	baz=205					
YULB			*e*S	**Sb**	**20 09 12.1**	**+0.6**
	baz=205					
TWF1	**Yuli**	**1.62 204**	*e*P	**Pb**	**20 08 51.6**	**-0.8**
	baz=204					
TWF1			*e*S	**Sb**	**20 09 12.2**	**-0.5**
	baz=204					
IRIF	**Iriomote-Funau**	**1.63 107**	P	**Pn**	**20 08 51.3**	**+0.3**
IRIF			*e*S	**Sn**	**20 09 11.6**	**-0.1**
YUS	**Yu-Shan**	**1.66 216**	*e*P	**Pb**	**20 08 52.9**	**-0.5**
	baz=217					
YUS			*e*S	**Sn**	**20 09 13.5**	**+0.4**
	baz=217					
HATJ	**Hateruma jima**	**1.80 115**	*e*S	**Sn**	**20 09 15.4**	**-0.4**
ELDTW	**Lidau**	**1.88 210**	*e*P	**Pn**	**20 08 55.5**	**+1.0**
	baz=209					
ELDTW			*e*S	**Sb**	**20 09 19.2**	**-1.0**
	baz=209					
JKRS	**Kuro-shima**	**1.90 108**	P	**Pn**	**20 08 54.6**	**-0.1**
JKRS			*e*S	**Sn**	**20 09 18.0**	**-0.4**
CHN4	**Tsaushan**	**1.97 222**	*e*P	**Pb**	**20 08 57.4**	**-1.1**
	baz=222					
CHN4			*e*S	**Sb**	**20 09 21.7**	**-1.1**
	baz=222					
JIJ	**Ishigaki jima**	**1.98 103**	P	**Pn**	**20 08 56.5**	**+0.6**
JIJ			*e*S	**Sn**	**20 09 19.6**	**-0.8**
TPUB	**Ta-pu**	**1.99 220**	*e*P	**Pn**	**20 08 57.3**	**+1.3**
	baz=220					
TPUB			*e*S	**Sb**	**20 09 22.6**	**-0.7**
	baz=220					
STYT	**Tauyuan**	**2.03 215**	*e*P	**Pn**	**20 08 57.7**	**+1.2**
	baz=215					
STYT			*e*S	**Sb**	**20 09 23.3**	**-1.2**
	baz=215					
WTP	**Ta-pu**	**2.04 219**	*e*P	**Pn**	**20 08 58.1**	**+1.4**
	baz=219					
WTP			*e*S	**Sn**	**20 09 22.6**	**+0.7**
	baz=219					
TWK	**Hsinying**	**2.10 222**	*e*P	**Pn**	**20 08 58.7**	**+1.2**
	baz=222					
TWK			*e*S	**Sb**	**20 09 25.0**	**-1.5**
	baz=222					
CHN1	**Nanshi**	**2.14 220**	*e*P	**Pn**	**20 08 59.3**	**+1.4**
	baz=220					
CHN1			*e*S	**Sb**	**20 09 26.2**	**-1.4**
	baz=220					
TWG	**Pinlang**	**2.19 204**	*e*P	**Pn**	**20 08 59.8**	**+1.2**
	baz=203					
SGST	**Jiashian**	**2.19 217**	*e*P	**Pn**	**20 09 00.0**	**+1.3**
	baz=217					
SGST			*e*S	**Sb**	**20 09 27.7**	**-1.3**
	baz=217					

*IDC **25** 20:10:49.0±5.5, 52°.82N×174°.56W, h170km±51km, mb3.3/11, mb1 3.6/13, mb1mx3.4/36, mbtmp3.9/13, Error ellipse: s-maj=28.7km s-min=13.2km az=8.0*
*ISCJB **25** 20:10:50.6±0.2, 52°.60N±0°.07×174°.33W±0°.06, h196km±3km, mb3.6/20, Error ellipse: s-maj=12.4km s-min=3.9km az=158.9*
*NEIC **25** 20:10:51.9±0.0, 52°.14N×174°.16W, h200km, mb4.3/27, After AEIC.*

ISC 25 20:10:51.1±0.6, 52°.7N±0°.1×174°.33W±0°.05, h191km±6km, n80, σ1§26/91, mb3.7/20, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOWE	**Korovin West**	**0.32**	**171**	*e*Pn	**Pn**	**20 11 17.5**	**+0.8**
KOKL	**Mount Kliuchef**	**0.37**	**167**	*e*Pn	**Pn**	**20 11 17.6**	**+0.7**
KOSE	**Korovin Southe**	**0.38**	**153**	*e*Pn	**Pn**	**20 11 17.5**	**+0.6**
KOFP	**Korovin Flat P**	**0.43**	**160**	*e*Pn	**Pn**	**20 11 17.4**	**+0.3**
ATKA	**Atka Island**	**0.49**	**170**	*e*Pn	**Pn**	**20 11 17.1**	**0.0**
ATKA				*e*Sn	**Sn**	**20 11 37.3**	**+0.2**
GSTR	**Great Sitkin T**	**1.21**	**242**	*e*Pn	**Pn**	**20 11 21.9**	**+0.4**
GSTR				*e*Sn	**Sn**	**20 11 44.7**	**-0.4**
GSMY	**Great Sitkin M**	**1.23**	**239**	*e*Pn	**Pn**	**20 11 21.9**	**+0.1**
GSMY				*e*Sn	**Sn**	**20 11 45.4**	**0.0**
GSTD	**Great Sitkin T**	**1.28**	**241**	*e*Pn	**Pn**	**20 11 22.3**	**+0.1**
GSTD				*e*Sn	**Sn**	**20 11 46.3**	**+0.1**
ETKA	**Kagalaska Isla**	**1.52**	**238**	*e*Pn	**Pn**	**20 11 24.1**	**0.0**
ETKA				*e*Sn	**Sn**	**20 11 48.7**	**-1.0**
ADAG	**Mount Adagdak**	**1.56**	**244**	*e*Pn	**Pn**	**20 11 24.9**	**+0.3**
ADK	**Adak**	**1.65**	**242**	*e*Pn	**Pn**	**20 11 25.2**	**-0.2**
ADK				*e*		20 11 25.3	
ADK				*e*Sn	**Sn**	**20 11 50.7**	**-1.3**
KIRH	**Kanaga Island**	**1.87**	**246**	*e*Pn	**Pn**	**20 11 27.9**	**+0.3**
KINC	**Kanaga Island**	**1.87**	**247**	*e*Pn	**Pn**	**20 11 28.0**	**+0.4**
KINC				*e*Sn	**Sn**	**20 11 56.4**	**+0.4**
KIKV	**Kanaga Island**	**1.92**	**246**	*e*Pn	**Pn**	**20 11 28.5**	**+0.4**
KIWB	**Kanaga Island**	**1.92**	**245**	*e*Pn	**Pn**	**20 11 28.2**	**+0.1**
KIMD	**Kanaga Island**	**2.01**	**244**	*e*Pn	**Pn**	**20 11 29.1**	**+0.1**
TAPA	**Tanaga Point A**	**2.31**	**249**	*e*Pn	**Pn**	**20 11 32.8**	**+0.5**
TAFP	**Tanaga Falls P**	**2.37**	**252**	*e*Pn	**Pn**	**20 11 33.6**	**+0.6**
TAFP				*e*Sn	**Sn**	**20 12 05.2**	**-0.4**
TASE	**Tanaga Southea**	**2.43**	**251**	*e*Pn	**Pn**	**20 11 34.5**	**+0.8**
TANO	**Tanaga North**	**2.45**	**253**	*e*Pn	**Pn**	**20 11 34.8**	**+0.9**
GAEA	**Gareloi East**	**2.86**	**253**	*e*Pn	**Pn**	**20 11 39.6**	**+1.0**
GALAA	**Gareloi Lava P**	**2.88**	**253**	*e*Pn	**Pn**	**20 11 39.5**	**+0.7**
NIKH	**Nikolski High**	**3.34**	**83**	*e*Pn	**Pn**	**20 11 40.8**	**-3.5**
MREP	**Makushin Rep't**	**4.70**	**73**	*e*Pn	**Pn**	**20 12 03.1**	**+1.8**
MSW	**Makushin Switc**	**4.70**	**72**	*e*Pn	**Pn**	**20 12 03.0**	**+1.7**
MSW				*e*Sn	**Sn**	**20 12 57.4**	**+0.9**
UNV	**Unalaska Valle**	**4.84**	**73**	*e*Pn	**Pn**	**20 12 04.2**	**+1.0**
UNV				*e*Sn	**Sn**	**20 12 58.5**	**-1.4**
SPIA	**Saint Paul Isl**	**5.08**	**26**	*e*Pn	**Pn**	**20 12 09.3**	**+3.1**
AKUT	**Akutan**	**5.33**	**71**	*e*Pn	**Pn**	**20 12 09.3**	**0.0**
SDPT	**Sand Point**	**8.59**	**66**	*e*Pn	**Pn**	**20 12 51.2**	**-0.6**
CHGN	**Chignik**	**9.94**	**62**	*e*Pn	**Pn**	**20 13 08.6**	**-0.9**
CHIA	**Chirikof Islan**	**11.41**	**66**	*e*Pn	**Pn**	**20 13 27.1**	**-1.3**
SII	**Sitkinak Islan**	**12.29**	**64**	*e*Pn	**Pn**	**20 13 39.2**	**-0.5**
ANM	**Nome**	**12.78**	**18**	*e*Pn	**P**	**20 13 49.3**	**-0.3**
OHAK	**Old Harbor**	**12.90**	**61**	*e*Pn	**Pn**	**20 13 45.9**	**-1.4**
SVW2	**Sparrevohn**	**13.23**	**43**	*e*Pn	**P**	**20 13 53.4**	**-1.1**
KDAK	**Kodiak Island**	**13.39**	**59**	P	**Pn**	**20 13 51.3**	**-2.2**
	4.2nm,0.3s,baz=284,slow=6.1,SNR=38					
KDAK				S	**Sn**	**20 16 20.2**	**-2.3**
	0.3nm,0.3s,baz=240,slow=20,SNR=6.2					
KDAK	**Kodiak Island**	**13.39**	**59**	*e*Pn	**Pn**	**20 13 51.1**	**-2.4**
TTA	**Tatalina**	**14.11**	**36**	*e*Pn	**P**	**20 14 04.5**	**+0.1**
RSO	**Redoubt South**	**14.16**	**48**	*e*Pn	**P**	**20 14 04.3**	**-0.8**
CNPM	**China Poot**	**14.54**	**53**	*e*Pn	**P**	**20 14 08.5**	**-0.7**
BRLK	**Bradley Lake**	**14.79**	**52**	*e*Pn	**Pn**	**20 14 10.7**	**-0.1**
	13nm,0.6s						
SEW	**Seward**	**15.58**	**52**	*e*P	**Pn**	**20 14 20.1**	**-0.3**
	25nm,0.4s						
CAST	**Castle Rocks**	**15.85**	**39**	*e*P	**P**	**20 14 26.5**	**+3.0**
	7.9nm,0.8s						
KTH	**Kantishna Hill**	**16.36**	**39**	*e*P	**Pn**	**20 14 31.6**	**+1.7**
	12nm,0.6s						
GHO	**Glory Hole Cre**	**16.39**	**46**	*e*P	**Pn**	**20 14 32.1**	**+1.9**
	14nm,0.4s						
TRF	**Thorofare Moun**	**16.55**	**40**	*e*P	**Pn**	**20 14 33.3**	**+1.0**
	9.8nm,0.9s						
BPAW	**Bear Paw Mtn.**	**16.62**	**37**	*e*P	**Pn**	**20 14 35.2**	**+2.2**
	11nm,0.7s						
SML	**Sawmill**	**16.66**	**47**	*e*P	**Pn**	**20 14 34.0**	**+0.6**
	9.2nm,0.6s						
PEA0B	**Petropavlovsk-**	**16.84**	**283**	*e*P	**Pn**	**20 14 36.2**	**+0.6**
	29nm,1.4s						
PETK	**Petropavlovsk-**	**16.84**	**283**	P	**Pn**	**20 14 36.5**	**+0.8**
	0.5nm,0.3s,baz=82,slow=14,SNR=12						
RND	**Reindeer**	**17.10**	**41**	*e*P	**Pn**	**20 14 39.0**	**+0.3**
	27nm,0.6s						
SCM	**Sheep Creek Mo**	**17.12**	**47**	*e*P	**Pn**	**20 14 40.3**	**+1.4**
	12nm,0.7s						
MCK	**McKinley**	**17.22**	**40**	*e*P	**Pn**	**20 14 40.7**	**+0.6**
	16nm,0.8s						
MLY	**Manley**	**17.23**	**35**	*e*P	**Pn**	**20 14 41.6**	**+1.4**
	7.4nm,0.7s						
EYAK	**Cordova Ski Ar**	**17.47**	**52**	*e*P	**Pn**	**20 14 43.2**	**+0.2**
	4.4nm,0.8s						
ILAR	**Eielson Array**	**18.50**	**39**	P	**P**	**20 14 51.7**	**-0.8**
	0.5nm,0.3s,baz=252,slow=9.6,SNR=9.6						
SEY	**Seymchan**	**20.24**	**313**	P	**P**	**20 15 08.4**	**-2.8**
	1.7nm,0.6s,baz=37,slow=20,SNR=2.3						
EGAK	**Eagle**	**20.75**	**41**	*e*P	**P**	**20 15 17.8**	**+1.2**
	19nm,1.5s						
DAWY	**Dawson**	**21.26**	**44**	*e*P	**P**	**20 15 23.3**	**+1.3**
	4.1nm,0.6s						
EPYK	**Eagle Plains**	**23.01**	**39**	*e*P	**P**	**20 15 38.9**	**0.0**
	4.6nm,0.8s						
INK	**Inuvik**	**24.80**	**35**	*e*P	**P**	**20 15 56.1**	**+1.2**
	7.4nm,1.5s						
ERM	**Erimo**	**30.29**	**267**	*e*P	**P**	**20 16 44.9**	**+0.7**
	11nm,1.5s						
YKA	**Yellowknife Ar**	**32.31**	**49**	P	**P**	**20 17 01.7**	**+0.1**
	0.2nm,0.3s,baz=286,slow=7.5,SNR=3.4						
I07A	**Izee**	**36.61**	**81**	*e*P	**P**	**20 17 41.2**	**+2.4**
	1.4nm,0.8s						
MCMT	**McKenzie Canyo**	**40.16**	**76**	*e*P	**P**	**20 18 09.9**	**+1.3**
NVAR	**Mina Array Bea**	**40.69**	**87**	P	**P**	**20 18 15.6**	**+2.7**
	1.0nm,0.7s,baz=302,slow=7.3,SNR=5.5						
R11A	**Troy Canyon, C**	**42.39**	**86**	*e*P	**P**	**20 18 28.7**	**+2.0**
	1.0nm,0.6s						
BW06	**Boulder Array**	**43.30**	**76**	*e*P	**P**	**20 18 33.3**	**-0.7**
	2.4nm,0.6s						
PD31	**Pinedale Array**	**43.30**	**76**	*e*P	**P**	**20 18 35.1**	**+1.1**
	1.9nm,0.8s						
PDAR	**Pinedale Array**	**43.30**	**76**	P	**P**	**20 18 34.7**	**+0.7**
	1.5nm,0.5s,baz=312,slow=3.1,SNR=21						
U15A	**North Rim**	**45.63**	**85**	*e*P	**P**	**20 18 54.2**	**+1.6**
	2.3nm,0.5s						
PV13	**Radium Mtn., P**	**46.60**	**81**	*e*P	**P**	**20 19 01.4**	**+1.3**
	9.7nm,1.5s						
SONM	**Songino Array**	**48.50**	**298**	P	**P**	**20 19 14.8**	**+0.4**
	0.3nm,0.5s,baz=81,slow=8.9,SNR=3.0						
TXAR	**Lajitas Array**	**55.76**	**85**	P	**P**	**20 20 08.8**	**+0.7**
	0.5nm,0.7s,baz=281,slow=3.7,SNR=6.8						
MKAR	**Makanchi Array**	**61.34**	**310**	P	**P**	**20 20 45.4**	**-0.8**
	0.3nm,0.4s,baz=40,slow=6.1,SNR=6.4						
FINES	**FINESS Array B**	**65.07**	**349**	P	**P**	**20 21 08.2**	**-2.2**
	0.6nm,0.7s,baz=7.0,slow=13,SNR=3.1						
ABKAR	**Akbulak array**	**68.50**	**325**	*e*P	**P**	**20 21 32.6**	**+0.3**
	1.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.58**	**279**	P	**P**	**20 22 02.5**	**-0.8**
	0.7nm,0.6s,baz=22,slow=7.4,SNR=6.5						
WRA	**Warramunga Arr**	**84.90**	**228**	P	**P**	**20 23 03.1**	**-1.2**
	1.3nm,0.9s,baz=32,slow=6.9,SNR=4.8						
ASAR	**Alice Springs**	**88.35**	**226**	P	**P**	**20 23 21.2**	**+0.3**
	1.2nm,0.7s,baz=25,slow=4.6,SNR=16						

*JMA **25** 20:38:30.0±0.2, 23°.25N×121°.64E, h13km±4km, M3.6*
*ISCJB **25** 20:38:31.3±0.3, 23°.27N±0°.01×121°.55E±0°.02, h23km±2km, Error ellipse: s-maj=2.8km s-min=2.2km az=44.5*
*TAP **25** 20:38:32.1, 23°.31N×121°.45E, h26km, ML3.6, B*

ISC 25 20:38:31.8±0.9, 23°.28N±0°.02×121°.52E±0°.02, h27km±5km, n118, σ0§96/169, 4C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.22**	**290**	⇓*i*P	**Pb**	**20 38 37.7**	**-0.3**
	baz=286						
TWF1				S	**Sb**	**20 38 42.1**	**-0.1**
	baz=286						
CHKT	**Chengkung**	**0.23**	**220**	⇑*i*P	**Pb**	**20 38 38.5**	**+0.5**
	baz=192						
CHKT				S	**Sb**	**20 38 43.1**	**+0.9**
	baz=192						
HGSD	**Ruisui**	**0.23**	**337**	⇑P	**Pb**	**20 38 37.8**	**-0.3**
	baz=353						
HGSD				*e*S	**Sb**	**20 38 44.5**	**+2.0**
	baz=353						
YULB	**Yu-li**	**0.24**	**299**	⇓P	**Pb**	**20 38 37.7**	**-0.5**
	baz=300						
YULB				S	**Sb**	**20 38 41.8**	**-0.8**
	baz=300						
EHY	**Hungye**	**0.29**	**321**	⇓*i*P	**Pb**	**20 38 38.4**	**-0.6**
	baz=317						
EHY				*i*S	**Sb**	**20 38 43.0**	**-0.8**
	baz=317						
EGFH	**Guangfu**	**0.40**	**347**	P	**Pb**	**20 38 40.3**	**-0.3**
	baz=344						
EGFH				S	**Sb**	**20 38 45.9**	**-0.6**
	baz=344						
ELDTW	**Lidau**	**0.47**	**260**	⇓*i*P	**Pb**	**20 38 40.7**	**-1.0**
	baz=245						
ELDTW				S	**Sb**	**20 38 46.4**	**-2.1**
	baz=245						
ESL	**Shilin**	**0.54**	**351**	*e*P	**Pb**	**20 38 41.9**	**-1.0**
	baz=348						
ESL				*e*S	**Sb**	**20 38 49.0**	**-1.4**
	baz=348						
YUS	**Yu-Shan**	**0.57**	**292**	⇓*i*P	**Pb**	**20 38 42.8**	**-0.8**
	baz=290						
YUS				S	**Sb**	**20 38 49.8**	**-1.7**
	baz=290						
VWDT	**VWDT**	**0.59**	**324**	⇓P	**Pb**	**20 38 43.2**	**-0.5**
	baz=327						
VWDT				S	**Sb**	**20 38 50.5**	**-1.2**
	baz=327						
TWGBT	**Beinan**	**0.61**	**222**	⇑P	**Pb**	**20 38 43.0**	**-0.9**
	baz=223						
TWGBT				S	**Sb**	**20 38 51.1**	**-1.2**
	baz=223						
TWG	**Pinlang**	**0.61**	**223**	⇑P	**Pb**	**20 38 43.0**	**-1.0**
	baz=223						
TWG				S	**Sb**	**20 38 51.0**	**-1.3**
	baz=223						
TTN	**Taitung**	**0.62**	**214**	*e*P	**Pb**	**20 38 44.1**	**-0.1**
	baz=206						
HWA	**Hwalien**	**0.70**	**6**	*e*P	**Pb**	**20 38 45.5**	**0.0**
	baz=1.0						
SSLB	**Suanglung**	**0.73**	**314**	⇓P	**Pb**	**20 38 44.8**	**-1.2**
	baz=322						
SSLB				S	**Sb**	**20 38 53.2**	**-2.5**
	baz=322						
WHYT	**Xinyi Township**	**0.74**	**304**	P	**Pb**	**20 38 45.6**	**-0.6**
	baz=311						
WHYT				S	**Sb**	**20 38 55.2**	**-0.9**
	baz=311						
OWD	**Renai**	**0.75**	**335**	*e*P	**Pb**	**20 38 45.3**	**-1.0**
	baz=349						
TWD	**Chiawan**	**0.80**	**5**	*e*P	**Pb**	**20 38 46.4**	**-0.8**
	baz=358						
TPUB	**Ta-pu**	**0.82**	**272**	⇓P	**Pb**	**20 38 47.2**	**-0.3**
	baz=268						
TPUB				S	**Sb**	**20 38 57.6**	**-0.6**
	baz=268						
SMLT	**Sun Moon Lake**	**0.83**	**317**	⇓*i*P	**Pb**	**20 38 47.0**	**-0.8**
	baz=322						
SMLT				*e*S	**Sb**	**20 38 57.5**	**-1.2**
	baz=322						
WTP	**Ta-pu**	**0.84**	**268**	⇓*i*P	**Pb**	**20 38 47.5**	**-0.3**
	baz=264						
WTP				S	**Sb**	**20 38 58.6**	**-0.1**
	baz=264						
CHN5	**Tsauling**	**0.84**	**293**	⇓*i*P	**Pb**	**20 38 47.7**	**-0.1**
	baz=291						
CHN5				S	**Sb**	**20 38 59.0**	**+0.2**
	baz=291						
CHGB	**Renai**	**0.84**	**338**	P	**Pb**	**20 38 47.3**	**-0.7**
	baz=350						
CHGB				*e*S	**Sb**	**20 38 56.6**	**-2.6**
	baz=350						
SLGT	**Liugui**	**0.85**	**251**	*e*P	**Pb**	**20 38 48.1**	**0.0**
	baz=244						
SLGT				*e*S	**Sb**	**20 38 58.2**	**-1.0**
	baz=244						
ECL	**Taimali**	**0.85**	**218**	*e*P	**Pb**	**20 38 46.0**	**-2.0**
	baz=212						
CHN4	**Tsaushan**	**0.86**	**275**	*e*P	**Pb**	**20 38 48.0**	**-0.2**
	baz=272						
CHN4				S	**Sn**	**20 38 60.0**	**+0.2**
	baz=272						
TYC	**Yuchr**	**0.88**	**316**	⇓*i*P	**Pb**	**20 38 47.7**	**-0.7**
	baz=321						
SGST	**Jiashian**	**0.89**	**258**	*e*P	**Pb**	**20 38 48.3**	**-0.3**
	baz=246						
SGST				*e*S	**Sn**	**20 39 00.6**	**0.0**
	baz=246						
NACB	**Ninganchiao**	**0.90**	**4**	*e*P	**Pb**	**20 38 48.2**	**-0.6**
	baz=358						
WHF	**Hehuan Shan**	**0.90**	**345**	*e*P	**Pb**	**20 38 47.3**	**-1.8**
	baz=358						
WJS	**Zhushan**	**0.91**	**307**	*e*P	**Pn**	**20 38 49.2**	**+0.3**
	baz=306						
WJS				S	**Sb**	**20 39 00.9**	**+0.1**
	baz=306						
CHN1	**Nanshi**	**0.92**	**265**	⇓P	**Pn**	**20 38 49.2**	**+0.2**
	baz=261						
CHN1				S	**Sn**	**20 39 01.7**	**+0.3**
	baz=261						
ETLH	**Xiulin Townshi**	**0.93**	**358**	*e*P	**Pb**	**20 38 47.6**	**-1.8**
	baz=2.0						
DPDB	**Guoxing**	**0.93**	**324**	*e*P	**Pb**	**20 38 48.7**	**-0.8**
	baz=330						
DPDB				*e*S	**Sb**	**20 39 01.1**	**-0.4**
	baz=330						
SNST	**Tainan City**	**0.94**	**267**	P	**Pn**	**20 38 49.5**	**+0.2**
	baz=263						
SNST				*e*S	**Sb**	**20 39 01.8**	**+0.1**
	baz=263						
TWK	**Hsinying**	**0.95**	**270**	*e*P	**Pb**	**20 38 49.4**	**-0.4**
	baz=266						
TWK				S	**Sb**	**20 39 01.9**	**-0.1**
	baz=266						
WGK	**Gukeng**	**0.97**	**295**	*e*P	**Pb**	**20 38 49.9**	**-0.2**
	baz=293						
WGK				*e*S	**Sn**	**20 39 03.0**	**+0.3**
	baz=293						
SSD	**Sandimen**	**0.97**	**238**	*e*P	**Pb**	**20 38 48.7**	**-1.4**
	baz=227						
WNT	**Mingjian**	**0.98**	**308**	*e*P	**Pb**	**20 38 49.7**	**-0.5**
	baz=308						
WDLH	**Douliu**	**0.99**	**295**	*e*P	**Pn**	**20 38 50.4**	**+0.4**
	baz=293						
WDLH				*e*S	**Sn**	**20 39 03.9**	**+0.8**
	baz=293						
TDCB	**Techi**	**1.03**	**341**	*e*P	**Pb**	**20 38 50.1**	**-1.0**
	baz=333						
CHY	**Chiayi**	**1.03**	**283**	*e*P	**Pn**	**20 38 50.8**	**+0.3**
	baz=280						
MASBT	**Mashibuluo**	**1.05**	**231**	*e*P	**Pn**	**20 38 50.1**	**-0.7**
	baz=218						
TAW	**Tawu**	**1.08**	**213**	*e*P	**Pn**	**20 38 49.9**	**-1.3**
	baz=206						
TAW				*e*S	**Sb**	**20 39 02.7**	**-2.9**
	baz=206						
EAST	**Anshuo**	**1.08**	**215**	*e*P	**Pn**	**20 38 49.7**	**-1.6**
	baz=202						
SGLT	**Jiouru**	**1.10**	**240**	*e*P	**Pb**	**20 38 52.9**	**+0.8**
	baz=242						
SGLT				*e*S	**Sn**	**20 39 08.7**	**+3.0**
	baz=242						
TWM1	**Shoushan**	**1.11**	**246**	*e*P	**Pb**	**20 38 53.4**	**+1.0**
	baz=241						
WHP	**Taichung City**	**1.13**	**332**	*e*P	**Pb**	**20 38 54.0**	**+1.2**
	baz=342						
WLGB	**Puzi**	**1.14**	**280**	*e*P	**Pb**	**20 38 52.9**	**0.0**
	baz=278						
WLGB				*e*S	**Sn**	**20 39 08.1**	**+1.3**
	baz=278						
NNSB	**Datong**	**1.16**	**354**	*e*P	**Pn**	**20 38 51.6**	**-0.8**
	baz=11						
ENA	**Nanau**	**1.17**	**10**	*e*P	**Pn**	**20 38 52.2**	**-0.2**
	baz=1.0						
TCU	**Taichung**	**1.17**	**318**	*e*P	**Pb**	**20 38 53.6**	**+0.3**
	baz=319						
NANB	**Nanao**	**1.17**	**10**	*e*P	**Pn**	**20 38 51.2**	**-1.1**
	baz=2.0						
NNS	**Nan Shan**	**1.17**	**353**	*e*P	**Pn**	**20 38 51.9**	**-0.7**
	baz=10.0						
SSPT	**Xinbi**	**1.18**	**228**	*e*P	**Pb**	**20 38 53.2**	**-0.4**
	baz=218						
WCHH	**Zhanghua**	**1.19**	**312**	*e*P	**Pb**	**20 38 53.4**	**-0.4**
	baz=311						
WCHH				*e*S	**Sn**	**20 39 09.4**	**+1.3**
	baz=311						
CHN8	**Yiju**	**1.21**	**274**	*e*P	**Pn**	**20 38 53.4**	**+0.5**
	baz=271						
CHN8				*e*S	**Sb**	**20 39 09.5**	**+0.2**
	baz=271						
SNJT	**Kaohsiung City**	**1.21**	**245**	*e*P	**Pb**	**20 38 55.3**	**+1.2**
	baz=240						
SNJT				*e*S	**Sb**	**20 39 12.4**	**+3.1**
	baz=240						
SCZT	**Fangliau**	**1.23**	**223**	*e*P	**Pn**	**20 38 53.2**	**0.0**
	baz=208						
LAY	**Lan-yu**	**1.23**	**179**	*e*P	**Pn**	**20 38 52.3**	**-1.0**
	baz=167						
RLNB	**Erlin**	**1.23**	**

WLTB	Daxi	1.59	351	eP	Pb	20 39 00.9	+0.3
	baz=5.0						
EGS		1.61	13	eP	Pb	20 39 00.9	+0.1
	baz=4.0						
NHDH	Xindian Distri	1.68	0	eP	Pn	20 38 58.9	-0.6
	baz=14						
TATO	Taipei	1.69	359	eP	Pn	20 39 00.4	+0.7
	baz=13						
TIPB	Shuangxi	1.71	9	eP	Pn	20 39 01.1	+1.1
	baz=10.0						
WDGT	Dungji	1.71	270	eP	Pn	20 39 00.2	+0.3
	baz=267						
JYNG	Yonagunijimaku	1.75	48	P	Pn	20 38 58.4	-2.0
JYNG				eS	Sn	20 39 20.4	-1.4
YOJ	Yonaguni jima	1.80	49	P	Pn	20 39 02.1	+1.0
	baz=52						
YOJ				eS	Sn	20 39 23.4	+0.3
	baz=52						
NWF	Wu-fen Shan	1.80	7	eP	Pb	20 39 03.6	-0.6
	baz=8.0						
WFSB	Wu-fen Shan	1.80	7	eP	Pn	20 39 02.2	+1.1
	baz=8.0						
PHUB	P'eng-hu	1.81	278	eP	Pn	20 39 00.7	-0.5
	baz=276						
PHUB				eS	Sn	20 39 22.2	-1.0
	baz=276						
TWS1	Kuangyinshan	1.82	357	eP	Pn	20 39 02.0	+0.6
	baz=14						
PNG	Penghu	1.83	280	eP	Pn	20 39 01.5	0.0
	baz=277						
PNG				eS	Sn	20 39 23.0	-0.8
	baz=277						
YM01	YM01	1.86	1	eP	Pn	20 39 03.5	+1.5
	baz=3.0						
YM04	YM04	1.87	0	eP	Pn	20 39 03.0	+0.9
	baz=16						
YM05	YM05	1.88	1	eP	Pn	20 39 02.7	+0.4
	baz=3.0						
YM03	YM03	1.90	0	eP	Pn	20 39 03.3	+0.8
	baz=16						
VCHM	Qimei	1.93	268	eP	Pn	20 39 03.0	+0.2
	baz=266						
HATJ	Hateruma jima	2.23	69	S	Sn	20 39 34.5	+0.8
IRIF	Iriomote-Funau	2.28	62	P	Sn	20 39 09.1	+1.4
IRIF				eS	Sn	20 39 35.3	+0.4
JKRS	Kuro-shima	2.47	67	P	Sn	20 39 11.8	+1.5
JKRS				eS	Sn	20 39 40.5	+0.9
JJI	Ishigaki jima	2.63	65	P	Sn	20 39 13.1	+0.6
JJI				S	Sn	20 39 43.3	-0.3
PTTC	Pingtan	2.73	325	eP	Pn	20 39 13.8	-0.1
	baz=326						
PTMZ	Houxiangcun	2.81	309	eP	Pn	20 39 14.6	-0.4
	baz=296						
JISG	Ishigakijimahi	2.87	62	P	Pn	20 39 16.2	+0.5
JISG				eS	Sn	20 39 49.1	-0.2
KNM	Kinmen	3.05	293	eP	Pn	20 39 19.4	+1.2
	baz=290						
KNMB	Chin-men Tao	3.10	293	eP	Pn	20 39 18.4	-0.6
	baz=292						
MATB	Ma-tsu	3.20	334	eP	Pn	20 39 20.1	-0.3
	baz=335						
JTJ	Tarama	3.21	64	P	Pn	20 39 21.8	+1.3
JTJ				S	Sn	20 39 58.3	+0.5
ZPLA	Ao Xicun	3.52	281	eP	Pn	20 39 25.8	+1.1
	baz=279						
MHZQ	Yeshan	3.61	322	eP	Pn	20 39 26.5	+0.5
	baz=324						
AXDP	Jialang	3.63	297	eP	Pn	20 39 25.8	-0.4
	baz=297						
LYJJ	Jianjiangzhen	3.63	334	eP	Pn	20 39 26.4	+0.1
	baz=335						
JIRB	Irabujima	3.68	64	P	Pn	20 39 27.9	+1.0
JIRB				eS	Sn	20 40 09.5	+0.1
JMJ	Miyako jima 2	3.77	65	eP	Pn	20 39 29.4	+1.2
	baz=70						
JMJ2	Miyako jima3	3.77	66	P	Pn	20 39 29.7	+1.5
JMJ2				eS	Sn	20 40 12.3	+0.6
JIKM	Ikemajima	3.78	64	eS	Sn	20 40 12.0	+0.1
XPSS	Dashiqiu	3.83	342	eP	Pn	20 39 29.2	+0.1
	baz=343						

ISCJB ***25*** *20:39:18.0±0.2, 60°.04N±0°.02×153°.17W±0°.04, h121km±2km, mb4.2/37, Error ellipse: s-maj=3.6km s-min=2.7km az=139.8*
IDC ***25*** *20:39:18.0±1.8, 60°.16N×153°.28W, h102km±18km, mb3.7/13, mb1 3.9/18, mb1mx3.7/47, mbtmp4.1/18, MS2.7/1, Ms1 2.7/1, ms1mx2.2/32, Error ellipse: s-maj=18.1km s-min=11.2km az=16.0*
NEIC ***25*** *20:39:20.0±0.0, 60°.00N×153°.14W, h115km, mb4.2/28, ML3.9(AEIC), After AEIC.*
ISC 25 20:39:19.4±0.6, 60°.02N±0°.04×153°.10W±0°.04, h120km±5km, n164, σ1°33/182, mb4.2/37, 1D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVE	Iliamna Volcan	0.04	89	ePn	Pn	20 39 35.2	-0.7
ILS	Iliamna Low So	0.06	165	ePn	Pn	20 39 35.0	-0.8
RDSO	Redoubt South	0.47	22	ePn	Pn	20 39 36.9	-0.4
RSO	Redoubt South	0.48	21	ePn	Pn	20 39 37.0	-0.4
RDWB	Redoubt West	0.49	15	ePn	Pn	20 39 36.8	-0.6
RDWB				eSn	Sn	20 39 50.4	-0.6
RDJH	Redoubt Jeurge	0.60	14	ePn	Pn	20 39 37.6	-0.4
RDJH				eSn	Sn	20 39 52.0	-0.1
AUL	Augustine Lava	0.66	195	ePn	Pn	20 39 37.9	-0.4
AUL				eSn	Sn	20 39 52.5	-0.1
AUE	Augustine Isla	0.67	192	ePn	Pn	20 39 37.9	-0.5
AUW	Augustine West	0.68	196	ePn	Pn	20 39 38.3	-0.2
AUI	Augustine Isla	0.70	194	ePn	Pn	20 39 38.2	-0.4
AUI				eSn	Sn	20 39 52.3	-0.9
HOM	Homer	0.82	115	ePn	Pn	20 39 39.7	+0.1
HOM				eSn	Sn	20 39 55.3	+0.4
CNPM	China Poot	1.06	117	ePn	Pn	20 39 41.7	-0.3
CNPM				eSn	Sn	20 39 58.8	-0.4
BRLK	Bradley Lake	1.14	102	ePn	Pn	20 39 42.5	-0.3
BRLK				eSn	Sn	20 40 00.1	-0.5
FONW	Fourpeaked Sta	1.26	200	ePn	Pn	20 39 43.4	-0.6
SPWE	Spurr West	1.29	12	ePn	Pn	20 39 44.7	+0.3
SPCP	Crater Peak Br	1.34	20	ePn	Pn	20 39 45.2	+0.2
SLKM	Skilak Lake	1.52	70	ePn	Pn	20 39 46.5	-0.4
SVW2	Sparrevohn	1.64	313	ePn	Pn	20 39 47.2	-1.1
KAHC	Katmai Hardscr	1.68	216	ePn	Pn	20 39 48.2	-0.8
KAHG	Katmai Hook Gl	1.70	207	ePn	Pn	20 39 48.9	-0.2
KARR	Katmai Rainbow	1.73	209	ePn	Pn	20 39 49.1	-0.4
SEW	Seward	1.83	86	ePn	Pn	20 39 49.9	-0.7
SEW				eSn	Sn	20 40 13.4	-1.1
FIB	Fire Island	1.85	50	ePn	Pn	20 39 51.9	+1.1
SUA	Susitna One	1.86	38	ePn	Pn	20 39 51.3	+0.3
SUA				eSn	Sn	20 40 16.4	+1.0
RC01	Rabbit Creek A	1.98	56	ePn	Pn	20 39 52.3	-0.1
RC01				eSn	Sn	20 40 16.9	-1.0
KABU	Katmai Buttres	2.08	214	ePn	Pn	20 39 53.4	-0.5
KABU				eSn	Sn	20 40 19.4	-0.9
KELA	Mount Kelaz	2.08	222	ePn	Pn	20 39 53.0	-0.9
KDAK	Kodiak Island	2.26	173	P	Pn	20 39 54.2	-1.7
	28nm,0.3s,baz=28,slow=10,SNR=314						
KDAK				S	Sn	20 40 22.2	-1.8
	83nm,0.3s,baz=136,slow=23,SNR=41						
KDAK	Kodiak Island	2.26	173	ePn	Pn	20 39 54.4	-1.6
KDAK				eSn	Sn	20 40 22.4	-1.6
PMR	Palmer	2.51	49	ePn	Pn	20 39 58.4	-0.7
KNK	Knik Glacier	2.68	56	ePn	Pn	20 40 00.5	-0.9
GHO	Glory Hole Cre	2.70	47	ePn	Pn	20 40 00.8	-0.8
OHAK	Old Harbor	2.80	182	ePn	Pn	20 40 00.9	-2.0
PPLA	Purkeypile	2.92	8	ePn	Pn	20 40 05.4	+0.7
SML	Sawmill	2.94	50	ePn	Pn	20 40 03.7	-1.1
GLI	Glacier Island	3.10	71	ePn	Pn	20 40 05.1	-1.7
TT01	Tatalina	3.22	335	ePn	Pn	20 40 07.5	-0.9
TT01				ePn	Pn	20 40 07.5	-0.9
TTA	Tatalina	3.24	336	ePn	Pn	20 40 07.7	-1.1
SCM	Sheep Creek Mo	3.36	55	ePn	Pn	20 40 09.2	-1.1
CAST	Castle Rocks	3.45	8	ePn	Pn	20 40 11.5	+0.1
SII	Sitkinak Islan	3.51	190	ePn	Pn	20 40 10.0	-2.4
KTH	Kantishna Hill	3.70	15	ePn	Pn	20 40 14.3	-0.5
TRF	Thorofare Moun	3.70	20	ePn	Pn	20 40 14.5	-0.4
EYAK	Cordova Ski Ar	3.70	79	ePn	Pn	20 40 13.5	-1.3
DIV	Divide	3.79	70	ePn	Pn	20 40 15.1	-0.7
RND	Reindeer	3.96	29	ePn	Pn	20 40 17.9	-0.3
SGAM	Sherman Glacie	3.96	80	ePn	Pn	20 40 18.1	-0.2
DHY	Denali Highway	4.12	39	ePn	Pn	20 40 19.8	-0.7
BPAW	Bear Paw Mtn.	4.22	13	ePn	Pn	20 40 21.2	-0.5
MCK	McKinley	4.22	26	ePn	Pn	20 40 21.6	-0.1
CHIA	Chirikof Islan	4.39	199	ePn	Pn	20 40 21.9	-2.2
CHIR	Chirikof Islan	4.42	199	ePn	Pn	20 40 21.9	-2.5
HMT	Hamilton	4.43	82	ePn	Pn	20 40 23.8	-0.7
BWN	Browne	4.51	21	ePn	Pn	20 40 25.4	-0.1
BWN				ePn	Pn	20 40 25.6	+0.1
NICHA	Nichawak Mount	4.57	83	ePn	Pn	20 40 26.3	-0.2
CHGN	Chignik	4.67	219	ePn	Pn	20 40 26.6	-1.2
PAX	Paxson	4.71	48	ePn	Pn	20 40 27.6	-0.7
VNHG	Veniaminof 1	4.98	223	ePn	Pn	20 40 31.8	-0.2
WRH	Wood River Hil	5.05	25	ePn	Pn	20 40 32.0	-0.7
SNH	Sunshine Point	5.14	84	ePn	Pn	20 40 33.6	-0.5
MLY	Manley	5.15	11	ePn	Pn	20 40 34.6	+0.4
CCB	Clear Creek Bu	5.26	26	ePn	Pn	20 40 34.9	-0.8
HDA	Harding Lake	5.26	30	ePn	Pn	20 40 35.0	-0.7
MENT	Mentasta	5.37	53	ePn	Pn	20 40 37.2	+0.1
RIDG	Independent Ri	5.40	43	ePn	Pn	20 40 37.4	-0.2
PS08	TAPS Pump Stn8	5.41	30	ePn	Pn	20 40 36.9	-0.7
BALM	Baldy	5.41	74	ePn	Pn	20 40 37.7	-0.1
COLA	College	5.45	24	ePn	Pn	20 40 37.7	-0.5
MDM	Murphy Dome	5.45	22	ePn	Pn	20 40 37.7	-0.5
ILAR	Eielson Array	5.58	29	P	Pn	20 40 39.0	-1.0
	4.7nm,0.3s,baz=218,slow=14,SNR=158						
ILAR				S	Sn	20 41 36.7	-6.0
	7.7nm,0.3s,baz=216,slow=21,SNR=12						
ILB	Eielson Array	5.58	29	ePn	Pn	20 40 38.9	-1.0
DOT	Dot Lake	5.62	46	ePn	Pn	20 40 39.8	-0.7
IM3	Indian Mountai	6.00	357	ePn	Pn	20 40 45.8	+0.2
CHX	Chain Hills	6.01	84	ePn	Pn	20 40 46.4	+0.6
PS06	TAPS Pump Stn6	6.06	13	ePn	Pn	20 40 46.5	+0.1
SDPT	Sand Point	6.12	223	ePn	Pn	20 40 45.3	-2.0
BCA3	Beaver Creek A	6.21	56	ePn	Pn	20 40 48.0	-0.6
PCA	Pinnacle	6.43	84	ePn	Pn	20 40 51.4	-0.1
PRP	Porcupine Dome	6.52	29	ePn	Pn	20 40 51.9	-0.8
BCPM	Bancas Point	6.76	85	ePn	Pn	20 40 55.2	-0.6
YKU2	Yakutat	6.80	88	ePn	Pn	20 40 56.0	-0.4
PS05	TAPS Pump Stn5	6.91	8	ePn	Pn	20 40 58.4	+0.5
PNL	Peninsula	6.92	87	ePn	Pn	20 40 57.7	-0.3
YUK4	Talbot Arm	7.22	73	ePn	Pn	20 41 02.7	+0.4
ANM	Nome	7.31	314	ePn	Pn	20 41 03.0	-0.3
EGAK	Eagle	7.31	44	ePn	Pn	20 41 02.1	-1.2
COLD	Coldfoot	7.35	9	ePn	Pn	20 41 03.8	-0.1
FYU	Fort Yukon	7.46	25	ePn	Pn	20 41 04.4	-0.9
DAWY	Dawson	7.61	52	ePn	Pn	20 41 07.6	+0.2
HYT	Haines Junctio	7.76	77	ePn	Pn	20 41 08.6	-0.9
BM3	Burnt Mountain	8.32	23	ePn	Pn	20 41 15.4	-1.6
SKAG	Skagway	8.99	86	ePn	Pn	20 41 27.5	+1.5
AKUT	Akutan	9.06	235	ePn	Pn	20 41 26.8	-0.2
BESE	Bessie Mountai	9.44	91	ePn	Pn	20 41 31.8	-0.4
UNV	Unalaska Valle	9.57	236	ePn	Pn	20 41 30.5	-3.4
EPYK	Eagle Plains	9.74	42	ePn	Pn	20 41 36.3	+0.2
SIT	Sitka	9.75	100	eSn	Sn	20 43 17.4	-6.3
JIS	Juneau Island	9.77	92	ePn	Pn	20 41 36.9	+0.4
JIS				eSn	Sn	20 43 20.5	-3.6
WRAK	Wrangell Islan	11.51	99	ePn	Pn	20 42 00.1	+0.3
CRAG	Craig	11.59	104	ePn	Pn	20 42 01.8	+1.0
INK	Inuvik	11.86	37	P	Pn	20 42 03.1	-1.2
	0.3nm,0.3s,baz=234,slow=9.8,SNR=3.2						
INK	Inuvik	11.86	37	ePn	Pn	20 42 03.3	-1.0
DLBC	Dease Lake	11.91	88	P	Pn	20 42 05.7	+0.5
	0.7nm,0.3s,baz=296,slow=16,SNR=5.9						
DLBC				S	Sn	20 44 15.4	-0.7
	1.6nm,0.3s,baz=203,slow=10,SNR=4.4						
DLBC				LR	LR	20 46 55.9	
	comp=Z,41nm,20.6s,baz=8.5,slow=38						
DLBC	Dease Lake	11.91	88	ePn	Pn	20 42 06.5	+1.4
DIB	Dawson Inlet,	13.21	112	ePn	Pn	20 42 22.7	+0.7
MOBC	Moresby Island	13.48	111	ePn	Pn	20 42 26.7	+1.0
ATKA	Atka Island	14.08	246	ePn	Pn	20 42 33.0	-0.3
GSTR	Great Sitkin T	15.01	248	ePn	P	20 42 47.0	-0.6
GSMY	Great Sitkin M	15.05	248	ePn	Pn	20 42 45.6	+0.1
ADAG	Mount Adagdak	15.34	249	ePn	Pn	20 42 49.9	+0.7
ADK	Adak	15.44	249	ePn	Pn	20 42 50.6	+0.2
	8.1nm,0.4s						
KIWB	Kanaga Island	15.68	249	ePn	P	20 42 55.9	+1.0
KIMD	Kanaga Island	15.78	249	ePn	Pn	20 42 54.4	-0.3
BBB	Bella Bella	15.91	108	ePn	P	20 42 57.7	+0.2
	8.1nm,0.9s						
YKW3	Yellowknife Ar	18.47	65	eP	P	20 43 26.0	+0.4
	13nm,0.6s						
YKA	Yellowknife Ar	18.49	66	P	P	20 43 26.2	+0.5
	1.9nm,0.3s,baz=277,slow=10,SNR=84						
YKB5	Yellowknife Ar	18.49	66	eP	P	20 43 26.2	+0.5
NEW	Newport	23.80	103	P	P	20 44 22.5	+1.6
	3.3nm,0.6s,baz=309,slow=12,SNR=7.4						
NEW	Newport	23.80	103	eP	P	20 44 22.5	+1.6
	4.1nm,0.6s						
WALA	Waterton Lakes	24.86	99	eP	P	20 44 32.2	+1.7
	5.2nm,1.0s						
RES	Resolute Bay	25.32	32	eP	P	20 44 36.9	+2.6
	6.0nm,1.0s						
SEY	Seymchan	25.54	300	P	P	20 44 36.7	+0.3
	1.3nm,0.5s,baz=136,slow=18,SNR=4.1						
BMO	Blue Mountains	26.16	109	eP	P	20 44 43.9	+1.6
	3.2nm,1.2s						
PEA1	Petropavlovsk-	27.41	278	eP	P	20 44 52.9	-0.4
PEA0B	Petropavlovsk-	27.41	278	eP	P	20 44 53.2	-0.1
	18nm,1.1s						
PETK	Petropavlovsk-	27.41	278	P	P	20 44 52.9	-0.4
	1.9nm,0.3s,baz=68,slow=14,SNR=13						
HRY	Holter Researc	27.48	100	eP	P	20 44 55.7	+1.6
EGMT	Eagleton	27.61	96	eP	P	20 44 54.8	-0.4
	23nm,1.1s						
YHH	Holmes Hill	29.32	102	eP	P	20 45 12.8	+2.1
	3.4nm,0.6s						
RLMT	Red Lodge	29.86	100	eP	P	20 45 18.1	+2.7
	5.4nm,0.6s						
FLWY	Flagg Ranch	29.91	103	eP	P	20 45 18.7	+2.9
	5.6nm,0.7s						
IMW	Indian Meadow	29.93	103	eP	P	20 45 17.8	+1.7
	6.5nm,0.8s						
FXWY	Fox Creek	30.08	104	eP	P	20 45 19.6	+2.2
	2.7nm,0.8s						
TPAW	Teton Pass	30.23	104	eP	P	20 45 21.1	+2.4
	4.7nm,0.6s						
NVAR	Mina Array Bea	30.77	119	P	P	20 45 25.8	+2.3
	1.1nm,0.6s,baz=312,slow=9.8,SNR=7.5						
NV11	Mina Array Sit	30.84	119	eP	P	20 45 26.5	+2.6
	0.1nm,0.6s						
PD31	Pinedale Array	31.45	103	eP	P	20 45 30.9	+1.6
	1.2nm,0.7s						
PDAR	Pinedale Array	31.45	103	P	P	20 45 31.1	+1.8
	1.1nm,0.8s,baz=312,slow=7.1,SNR=9.3						
NLU	North Lily Min	32.39	110	eP	P	20 45 41.0	+3.4
	10nm,1.3s						
RSSD	Black Hills	33.18	96	eP	P	20 45 45.4	+0.9
	6.6nm,0.9s						
PV13	Radium Mtn., P	35.36	108	eP	P	20 46 04.4	+1.1
	5.8nm,1.1s						
EYMN	Ely	36.80	81	eP	P	20 46 16.0	+0.8
	4.9nm,0.8s						
G40A	Rib Lake	39.30	83	eP	P	20 46 36.7	+0.5
	4.9nm,0.5s						
TXAR	Lajitas Array	45.03	110	P	P	20 47 24.9	+1.9
	0.7nm,0.5s,baz=303,slow=6.7,SNR=12						
PLAL	Pickwick Lake	48.11	91	eP	P	20 47 46.7	-0.1
	4.9nm,0.8s						
MAJO	Matsushiro	48.73	273	eP	P	20 47 50.6	-0.8
MAT	Matsushiro	48.73	273	P	P	20 47 50.8	-0.7
MJAR	Matsushiro Arr	48.73	273	P	P	20 47 50.6	-0.8
	1.0nm,0.6s,baz=36,slow=6.3,SNR=5.1						
KSRS	Korea Array	53.13	282	P	P	20 48 24.6	+0.4
	2.4nm,0.7s,baz=38,slow=6.6,SNR=12						
SONA0	Songino Array	54.74	306	eP	P	20 48 36.6	+0.5
SONM	Songino Array	54.74	306	P	P	20 48 36.6	+0.5
	4.1nm,0.7s,baz=42,slow=7.0,SNR=27						
ZAA1	Zalesovo Array	57.33	323	eP	P	20 48 53.5	-0.7
ZAA0	Zalesovo Array	57.33	323	eP	P	20 48 53.6	-0.7
	3.3nm,0.5s						
ZALV	Zalesovo Beam	57.33	323	P	P	20 48 53.5	-0.7
	3.2nm,0.4s,baz=30,slow=6.7,SNR=15						
HHC	Hu-ho-hao-te	58.13	297	eP	P	20 49 00.0	-0.2
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,32nm,5.5s						
FIA0	FINESS Array S	58.87	0	eP	P	20 49 03.4	-1.4
FINES	FINESS Array B	58.87	0	P	P	20 49 03.4	-1.4
	comp=Z,0.6nm,0.7s,baz=20,slow=6.1,SNR=3.6						
MKAR	Makanchi Array	64.39	321	P	P	20 49 39.7	-2.4
	comp=Z,0.4nm,0.4s,baz=37,slow=7.4,SNR=9.1						
WMQ	Urumqi	65.21	316	P	P	20 49 50.3	+2.7
WMQ				pP	pP	20 50 17.5	+0.5
WMQ				sP	sP	20 50 31.0	+0.9
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,47nm,5.1s						
WMQ				LR	LR		
	comp=N,86nm,28.9s						
WMQ				LR	LR		
	comp=E,290nm,28.8s						
WMQ				LR	LR		
	comp=Z,34nm,29.2s						
LZH	Lanzhou	65.47	300	⇓P	P	20 49 49.0	-0.4
LZH				pP	pP	20 50 17.5	-1.3
LZH				sP	sP	20 50 30.3	-1.5
LZH				PP	PP	20 52 16.5	+2.1
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				pmax	pmax		
	comp=Z,43nm,7.9s						
KK31	Karatay Array	71.19	328	eP	P	20 50 23.1	-1.6
	comp=Z,3.5nm,1.5s						
KKAR	Karatay Array	71.19	328	eP	P	20 50 23.4	-1.4
	comp=Z,1.4nm,1.1s						
VYHS	Vyhne	71.65	6	eP	P	20 50 27.1	-0.3
ESDC	Sonseca Array	77.46	24	P	P	20 51 00.5	-0.7
	comp=Z,0.4nm,0.6s,baz=342,slow=5.1,SNR=3.1						

ISCJB ***25*** *20:48:17.6±0.3, 24°.87N±0°.02×122°.11E±0°.02, h6km±2km, mb3.9/13, MS3.3/10, Error ellipse: s-maj=2.5km s-min=2.5km az=153.0*
TAP ***25*** *20:48:17.6, 24°.84N×122°.05E, h10km, ML3.8, B*
IDC ***25*** *20:48:17.5±1.6, 24°.86N×122°.10E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/36, mbtmp3.9/7, MS3.3/12, Ms1 3.4/12, ms1mx3.1/35, Error ellipse: s-maj=146.3km s-min=16.7km az=64.0*
NEIC ***25*** *20:48:18.5±1.9, 24°.82N×122°.06E, h6km±4km, mb4.0/6, Error ellipse: s-maj=7.9km s-min=4.6km az=199.0*
JMA ***25*** *20:48:18.5, 24°.85N×122°.01E, h36km, M3.3*
ISC 25 20:48:18.4±0.9, 24°.84N±0°.02×122°.07E±0°.02, h7km±6km, n153, σ0°86/179, mb4.0/13, MS3.2/10, 26C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.13	271	⇑iP	Pg	20 48 20.7	-0.4
	baz=272						
EGS				S	Sg	20 48 22.8	-0.2
	baz=272						
TWB1	Santiao Chiao	0.18	335	⇑iP	Pg	20 48 21.8	-0.3
	baz=336						
TWB1				iS	Sg	20 48 24.7	+0.1
	baz=336						
NTC	Toucheng	0.22	273	⇑P	Pg	20 48 22.6	-0.1
	baz=274						
NTC				S	Sg	20 48 26.2	+0.5
	baz=274						
TIPB	Shuangxi	0.26	300	⇑P	Pg	20 48 23.4	-0.1
	baz=301						
TIPB				iS	Sg	20 48 27.1	+0.2
	baz=301						
EOS1	EOS1	0.30	170	P	Pg	20 48 24.7	+0.5
	baz=164						
ILA	Ilan	0.30	255	⇑iP	Pg	20 48 24.1	-0.2
	baz=255						
ILA				iS	Sg	20 48 28.7	+0.3
	baz=255						
NWF	Wu-fen Shan	0.35	311	⇑iP	Pg	20 48 25.2	0.0
	baz=304						
NWF				iS	Sg	20 48 30.5	+0.7
	baz=304						
WFSB	Wu-fen Shan	0.35	311	⇑P	Pg	20 48 25.3	+0.1
	baz=304						
WFSB				S	Sg	20 48 30.6	+0.8
	baz=304						
ENTT	Nioudou	0.50	246	P	Pg	20 48 27.5	-0.6
	baz=246						
NANB	Nanao	0.51	215	eP	Pg	20 48 28.0	-0.2
	baz=222						
NANB				eS	Sg	20 48 35.0	+0.2
	baz=222						
NHDH	Xindian Distri	0.51	284	eP	Pg	20 48 27.9	-0.4
	baz=276						
ENA	Nanau	0.51	216	eP	Pg	20 48 28.1	-0.2
	baz=222						
ENA				eS	Sg	20 48 34.8	-0.2
	baz=222						
NWLT	Wulai	0.52	263	⇑eP	Pg	20 48 27.9	-0.5
	baz=263						
NWLT				eS	Sg	20 48 34.2	-1.1
	baz=263						
TATO	Taipei	0.55	284	ePg	Pg	20 48 28.7	-0.2
TATO	Taipei	0.55	284	⇑P	Pg	20 48 28.9	-0.1
	baz=276						
TATO				S	Sg	20 48 36.0	-0.1
	baz=276						
YM01	YM01	0.55	304	⇑iP	Pg	20 48 29.3	+0.3
	baz=303						
YM01				S	Sg	20 48 36.1	-0.1
	baz=303						
TAP	Taipei	0.55	291	⇑iP	Pg	20 48 29.3	+0.3
	baz=291						
TAP				S	Sg	20 48 36.7	+0.5
	baz=291						
YM08	YM08	0.56	308	⇑iP	Pg	20 48 29.2	+0.1
	baz=300						
YM05	YM05	0.56	305	⇑iP	Pg	20 48 29.5	+0.2
	baz=297						
YM04	YM04	0.58	303	⇑iP	Pg	20 48 29.8	+0.3
	baz=302						
YM03	YM03	0.59	305	⇑iP	Pg	20 48 29.8	+0.1
	baz=297						
ANP	Anpu	0.61	305	⇑P	Pg	20 48

YOJ	Yonaguni jima	0.94 114	P	Pg	20 48 36.1	-0.3
YOJ			S	Sg	20 48 48.9	+0.4
HWA	Hwalien	0.96 206	eP	Pg	20 48 37.1	+0.2
	baz=214					
LIOB	Emei	0.98 259	eP	Pb	20 48 37.5	-0.2
	baz=251					
SBCB	Hsinchu	0.99 267	⇑P	Pb	20 48 37.8	0.0
	baz=283					
SBCB			eS	Sb	20 48 50.7	-0.3
	baz=283					
NSTT	Nanjuang	1.00 258	P	Pg	20 48 37.2	-0.3
	baz=271					
HSN	Hsinchu	1.00 268	eP	Pg	20 48 36.1	-1.6
	baz=286					
WHF	Hehuan Shan	1.01 227	eP	Pg	20 48 37.2	-0.6
	baz=228					
WHF			eS	Sg	20 48 51.0	0.0
	baz=228					
TDCB	Techi	1.02 235	eP	Pg	20 48 37.7	-0.3
	baz=230					
ENLB	Shoufeng	1.03 205	P	Pg	20 48 37.2	-1.0
	baz=216					
ENLB			eS	Sb	20 48 52.5	+0.3
	baz=216					
CHGB	Renai	1.13 227	eP	Pg	20 48 39.6	-0.5
	baz=229					
CHGB			eS	Sn	20 48 55.8	-0.9
	baz=229					
WHP	Taichung City	1.17 241	eP	Pb	20 48 40.6	-0.4
	baz=249					
ESL	Shilin	1.18 210	eP	Pb	20 48 40.4	-0.6
	baz=220					
ESL			eS	Sb	20 48 56.3	-0.3
	baz=220					
OWD	Renai	1.20 223	eP	Pb	20 48 40.8	-0.8
	baz=225					
NMLH	Miaoli	1.20 256	eP	Pg	20 48 41.9	+0.4
	baz=273					
NSY	Sanyi	1.27 251	eP	Pg	20 48 42.9	+0.2
	baz=268					
PTSB	Yuanli	1.30 253	eP	Pg	20 48 44.5	+1.1
	baz=270					
EGFH	Guangfu	1.31 207	eP	Pb	20 48 43.1	-0.1
	baz=225					
DPDB	Guoxing	1.32 233	eP	Pg	20 48 43.5	-0.2
	baz=224					
VWDT	VWDT	1.38 218	⇓eP	Pn	20 48 43.6	-0.4
	baz=230					
VWDT			eS	Sg	20 49 02.8	+0.1
	baz=230					
WDJ	Dajia District	1.39 250	eP	Pg	20 48 45.9	+0.8
	baz=266					
SMLT	Sun Moon Lake	1.43 228	eP	Pb	20 48 45.0	-0.4
	baz=230					
TCU	Taichung	1.45 242	eP	Pg	20 48 46.9	+0.8
	baz=262					
TYC	Yuchr	1.45 230	eP	Pb	20 48 45.2	-0.5
	baz=223					
SSLB	Suanglung	1.46 224	ePn	Pb	20 48 45.4	-0.6
SSLB	Suanglung	1.46 224	⇓eP	Pn	20 48 45.1	-0.1
	baz=227					
HGSD	Ruisui	1.47 204	eP	Pb	20 48 45.8	-0.3
	baz=224					
EHY	Hungye	1.50 207	eP	Pn	20 48 45.3	-0.3
	baz=211					
WNT	Mingjian	1.59 233	eP	Pg	20 48 49.0	+0.1
	baz=226					
WJS	Zhushan	1.59 231	eP	Pg	20 48 48.7	-0.3
	baz=224					
IRIF	Iriomote-Funau	1.59 108	P	Pn	20 48 45.2	-1.8
IRIF			eS	Sn	20 49 05.9	-1.9
WHYT	Xinyi Township	1.59 224	eP	Pg	20 48 48.8	-0.1
	baz=227					
YULB	Yu-li	1.61 206	ePn	Pn	20 48 46.6	-0.6
YULB	Yu-li	1.61 206	eP	Pn	20 48 46.9	-0.3
	baz=211					
TWF1	Yuli	1.64 206	eP	Pn	20 48 47.7	0.0
	baz=222					
YUS	Yu-Shan	1.69 217	eP	Pb	20 48 49.7	-0.5
	baz=229					
ALS	Alishan	1.76 221	eP	Pb	20 48 50.8	-0.4
	baz=211					
HATJ	Hateruma jima	1.76 116	P	Pn	20 48 48.4	-0.9
HATJ			eS	Sn	20 49 10.5	-1.5
CHN5	Tsauling	1.78 226	eP	Pg	20 48 52.0	-0.5
	baz=230					
WDLH	Douliu	1.81 231	eP	Pb	20 48 50.9	-1.0
	baz=234					
RLNB	Erlin	1.83 239	eP	Pn	20 48 49.8	-0.3
	baz=258					
JKRS	Kuro-shima	1.86 108	P	Pn	20 48 49.8	-0.9
JKRS			S	Sn	20 49 13.1	-1.4
ELDTW	Lidau	1.91 211	eP	Pn	20 48 51.7	+0.3
	baz=190					
JIJ	Ishigaki jima	1.94 104	P	Pn	20 48 50.8	-1.0
JIJ			eS	Sn	20 49 15.9	-0.6
CHN2	Minshiung	1.96 228	eP	Pg	20 48 55.2	-0.7
	baz=232					
CHN4	Tsaushan	2.01 223	eP	Pb	20 48 55.3	+0.1
	baz=227					
CHY	Chiayi	2.01 229	eP	Pb	20 48 55.6	+0.3
	baz=232					
TPUB	Ta-pu	2.02 221	ePn	Pb	20 48 54.7	-0.9
TPUB	Ta-pu	2.02 221	eP	Pb	20 48 55.3	-0.2
	baz=225					
JISG	Ishigakijimahi	2.05 97	P	Pn	20 48 52.6	-0.7
WSF	Szhu	2.07 235	eP	Pb	20 48 55.0	-1.2
	baz=238					
WTP	Ta-pu	2.07 220	eP	Pb	20 48 56.1	-0.3
	baz=224					
TWK	Hsinying	2.13 223	eP	Pb	20 48 56.4	-1.0
	baz=227					
SNST	Tainan City	2.16 222	eP	Pb	20 48 57.0	-0.9
	baz=226					
CHN1	Nanshi	2.17 221	⇑P	Pb	20 48 56.7	-1.3
	baz=225					
PTTC	Pingtan	2.19 288	⇑eP	Pn	20 48 53.2	-2.0
	baz=285					
TWG	Pinlang	2.21 205	ePn	Pn	20 48 56.6	+1.1
TWG	Pinlang	2.21 205	eP	Pn	20 48 55.7	+0.2
	baz=184					
TWGBT	Beinan	2.21 204	eP	Pn	20 48 55.7	+0.2
	baz=184					
SGST	Jiashian	2.22 218	eP	Pb	20 48 57.8	-1.1
	baz=223					
SLGT	Liugui	2.26 216	eP	Pb	20 48 58.7	-0.8
	baz=220					
CHN8	Yiju	2.26 229	eP	Pb	20 48 59.1	-0.4
	baz=233					
MATB	Ma-tsu	2.32 305	eP	Pn	20 48 55.5	-1.5
	baz=298					
ECL	Taimali	2.46 205	eP	Pn	20 48 59.0	+0.1
	baz=186					
SSD	Sandimen	2.47 213	eP	Pb	20 49 01.3	-1.8
	baz=217					
TWM1	Shoushan	2.51 217	eP	Pb	20 49 02.7	-1.2
	baz=222					
MASBT	Mashibuluo	2.58 211	eP	Pn	20 49 02.5	+1.9
	baz=216					
PNG	Penghu	2.62 242	eP	Pn	20 49 02.1	+0.9
	baz=243					
PHUB	P'eng-hu	2.64 240	eP	Pn	20 49 01.3	0.0
	baz=243					
XPSS	Dashiqiu	2.68 321	eP	Pn	20 49 00.3	-1.6
	baz=314					
PTMZ	Houxiangcun	2.69 275	eP	Pn	20 49 01.2	-0.8
	baz=273					
LYJJ	Jianjiangzhen	2.69 310	eP	Pn	20 49 00.4	-1.7
	baz=303					
EAST	Anshuo	2.69 205	eP	Pn	20 49 03.5	+1.3
	baz=187					
WDGT	Dungji	2.71 235	eP	Pb	20 49 04.8	-2.4
	baz=238					
SSPT	Xinbi	2.72 211	eP	Pn	20 49 04.0	+1.5
	baz=187					
SCZT	Fangliau	2.80 209	eP	Pn	20 49 05.8	+2.3
	baz=187					
VCHM	Qimei	2.91 237	eP	Pn	20 49 06.1	+1.0
	baz=252					
MHZQ	Yeshan	3.02 295	eP	Pn	20 49 07.4	+0.8
	baz=291					
HEN	Hengchun	3.08 204	eP	Pn	20 49 09.7	+2.3
	baz=188					
TWK1	Hengchun	3.11 202	eP	Pn	20 49 10.4	+2.5
	baz=183					
TSEB	Hengchuen, Pin	3.12 200	eP	Pn	20 49 08.6	+0.6
	baz=182					
QZH	Quanzhou	3.16 273	ePn	Pn	20 49 08.0	-0.6
QZH			Sn	Sb	20 49 55.5	+1.9
QZH			smax	smax		
	comp=N,87nm,1.5s					
QZH			smax	smax		
	comp=E,47nm,0.7s					
QZH			LR	LR		
	comp=N,830nm,7.1s					
QZH			LR	LR		
	comp=E,570nm,5.9s					
QZH			LR	LR		
	comp=Z,810nm,8.8s					
KNMB	Chin-men Tao	3.37 264	ePn	Pn	20 49 12.3	+0.8
KNMB	Chin-men Tao	3.37 264	eP	Pn	20 49 10.6	-0.9
	baz=264					
AXDP	Jialang	3.73 272	eP	Pn	20 49 15.7	-0.6
	baz=270					
JOW	Kunigami	5.93 69	ePn	Pn	20 49 48.6	+2.0
NJ2	Nanjing	7.72 339	eP	Pb	20 50 22.5	-10
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.5s					
NJ2			LR	LR		
	comp=N,590nm,7.6s					
NJ2			LR	LR		
	comp=E,400nm,10.4s					
NJ2			LR	LR		
	comp=Z,610nm,9.5s					
KS15	Wonju Array Si	13.51 20	ePn	Pn	20 51 32.9	+2.5
KSRS	Korea Array	13.53 20	LR	LR	20 57 39.0	
	comp=Z,77nm,19.4s,baz=204,slow=42					
MJAR	Matsushiro Arr	18.10 46	LR	LR	20 59 57.8	
	comp=Z,51nm,18.8s,baz=235,slow=39					
CMAR	Chiang Mai Arr	22.40 258	LR	LR	21 03 02.8	
	comp=Z,69nm,19.8s,baz=73,slow=40					
ASAJ	Asahikawa	25.49 36	LR	LR	21 04 10.3	
	comp=Z,41nm,18.8s,baz=156,slow=37					
KLR	Kul'dur	25.50 15	LR	LR	21 03 35.1	
	comp=Z,48nm,18.3s,baz=206,slow=36					
ULN	Ulaanbaatar	25.87 336	eP	P	20 53 51.5	+0.7
	comp=Z,4.7nm,1.4s					
SONA0	Songino Array	26.09 336	eP	P	20 53 53.3	+0.5
SONM	Songino Array	26.09 336	P	P	20 53 53.3	+0.5
	comp=Z,5.3nm,1.0s,baz=157,slow=8.6,SNR=19					
SONM			LR	LR	21 05 17.6	
	comp=Z,116nm,19.2s,baz=150,slow=39					
KAPI	Kappang	29.76 185	LR	LR	21 05 50.4	
	comp=Z,45nm,21.8s,baz=298,slow=35					
MK31	Makanchi Array	38.44 315	eP	P	20 55 41.1	+0.4
	comp=Z,1.5nm,1.0s					
MK32	Makanchi Array	38.44 315	eP	P	20 55 41.2	+0.5
MKAR	Makanchi Array	38.44 315	P	P	20 55 41.2	+0.5
	comp=Z,1.1nm,0.8s,baz=111,slow=9.4,SNR=7.8					
MKAR			LR	LR	21 11 48.5	
	comp=Z,24nm,19.0s,baz=42,slow=37					
MAKZ	Makanchi	38.64 315	eP	P	20 55 43.4	+0.9
	comp=Z,2.6nm,1.1s					
ZAA0	Zalesovo Array	40.14 326	eP	P	20 55 54.4	-0.4
	comp=Z,3.1nm,0.9s					
ZALV	Zalesovo Beam	40.14 326	P	P	20 55 53.9	-0.9
	comp=Z,2.5nm,0.8s,baz=110,slow=8.5,SNR=7.5					
ZALV			LR	LR	21 13 36.9	
	comp=Z,57nm,19.8s,baz=69,slow=38					
ZAA1	Zalesovo Array	40.14 326	eP	P	20 55 53.9	-0.9
KURBB	Kurchatov Arra	42.13 319	P	P	20 56 11.4	+0.2
	comp=Z,0.6nm,0.8s,baz=113,slow=8.4,SNR=5.7					
WR1	Warramunga Arr	46.09 164	eP	P	20 56 42.8	-0.4
WRA	Warramunga Arr	46.09 164	P	P	20 56 42.8	-0.4
	comp=Z,3.3nm,0.9s,baz=341,slow=9.2,SNR=13					
WB2	Warramunga Arr	46.09 164	eP	P	20 56 42.6	-0.7
	comp=Z,8.4nm,1.2s					
TIXI	Tiksi	47.00 3	eP	P	20 56 49.5	-0.3
	comp=Z,2.5nm,0.8s					
ASAR	Alice Springs	49.57 166	P	P	20 57 10.7	+0.5
	comp=Z,0.6nm,0.8s,baz=343,slow=8.1,SNR=5.0					
ASAR			LR	LR	21 18 47.2	
	comp=Z,72nm,18.4s,baz=230,slow=37					
STKA	Stephens Creek	59.41 161	P	P	20 58 22.3	+0.7
	comp=Z,2.0nm,0.9s,baz=325,slow=9.2,SNR=3.2					
FINES	FINESS Array B	71.29 330	LR	LR	21 33 24.3	
	comp=Z,41nm,18.9s,baz=70,slow=38					
NOA	NORSAR Array B	78.02 332	LR	LR	21 38 13.0	
	comp=Z,39nm,18.0s,baz=90,slow=38					

NEIC ***25*** *21:01:13.1±0.0, 14°.53N×92°.97W, h20km, mb3.9/1, MD4.1(MEX), After MEX.*
MEX ***25*** *21:01:13.1±0.7, 14°.53N×92°.97W, h20km±53km, MD4.1*
SNET ***25*** *21:01:16.6±0.8, 14°.31N×92°.54W, h15km, ML3.8*
UCR ***25*** *21:01:16.7±1.1, 14°.23N×92°.58W, h19km±999km, ML3.5, mb3.9(NEIC)*

ISC 25 21:01:09.0±1.8,**14°.52N**±0°.07×**93°.01W**±0°.05,**h11**km±10km, **n26**,σ1°.41/43,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
THIG		**0.81**	**62**	ePg	**Pg**	**21 01 25.5**	**+0.7**
THIG				eSg	**Sg**	**21 01 35.8**	**+0.3**
THIG		**0.81**	**62**	eP	**Pg**	**21 01 25.5**	**+0.7**
THIG				eS	**Sg**	**21 01 35.8**	**+0.3**
PCIG		**1.20**	**350**	ePn	**Pg**	**21 01 31.4**	**-0.6**
PCIG				eSn	**Sg**	**21 01 45.8**	**-1.8**
PCIG		**1.20**	**350**	eP	**Pg**	**21 01 31.4**	**-0.6**
PCIG				eS	**Sg**	**21 01 45.6**	**-2.0**
PCIG				*i* S	**Sg**	**21 01 45.8**	**-1.8**
CCIG	**Comitan**	**1.94**	**25**	ePn	**Pn**	**21 01 43.2**	**+1.1**
CCIG				ePn	**Pn**	**21 01 43.6**	**+1.4**
CCIG				eSn	**Sn**	**21 02 05.1**	**-1.6**
CCIG				eSn	**Sn**	**21 02 06.9**	**+0.2**
CCIG	**Comitan**	**1.94**	**25**	eP	**Pn**	**21 01 43.6**	**+1.4**
CCIG				eS	**Sn**	**21 02 06.9**	**+0.2**
TGIG		**2.25**	**357**	ePn	**Pn**	**21 01 46.7**	**+0.4**
TGIG				eSn	**Sn**	**21 02 13.2**	**-0.9**
TGIG		**2.25**	**357**	eP	**Pn**	**21 01 46.7**	**+0.4**
TGIG				eS	**Sn**	**21 02 13.2**	**-0.9**
CMIG	**Matias Romero**	**3.13**	**325**	ePn	**Pn**	**21 01 59.7**	**+1.4**
CMIG				eSn	**Sn**	**21 02 34.7**	**-1.1**
CMIG	**Matias Romero**	**3.13**	**325**	*i* P	**Pn**	**21 01 59.7**	**+1.4**
CMIG				*i* S	**Sn**	**21 02 34.7**	**-1.1**
SBLS	**San Blas**	**3.35**	**101**	eP	**Pn**	**21 02 02.2**	**+0.6**
SBLS				eS	**Sn**	**21 02 38.6**	**-2.9**
SBLS	**San Blas**	**3.35**	**101**	eP	**Pn**	**21 02 02.2**	**+0.6**
SBLS				eS	**Sn**	**21 02 38.6**	**-2.9**
CEVE	**Cerro Verde**	**3.35**	**101**	eP	**Pn**	**21 02 02.5**	**+0.9**
CEVE				eS	**Sn**	**21 02 38.6**	**-3.0**
CEVE				IAML		21 02 56.1	
	comp=Z,289nm,0.3s						
CEVE	**Cerro Verde**	**3.35**	**101**	eP	**Pn**	**21 02 02.5**	**+0.9**
CEVE				eS	**Sn**	**21 02 38.6**	**-3.0**
CEVE				IAML		21 02 56.1	
	comp=Z,289nm,0.3s						
SNJE	**San Jose**	**3.36**	**101**	eP	**Pn**	**21 02 02.2**	**+0.5**
SNJE	**San Jose**	**3.36**	**101**	eP	**Pn**	**21 02 02.2**	**+0.5**
BOQS	**Boqueron**	**3.70**	**102**	eP	**Pn**	**21 02 07.1**	**+0.7**
LFU	**La Fuente**	**3.85**	**101**	eP	**Pn**	**21 02 08.7**	**+0.3**
LFU	**La Fuente**	**3.85**	**101**	eP	**Pn**	**21 02 08.7**	**+0.3**
LFRS	**El Faro**	**3.93**	**103**	eP	**Pn**	**21 02 10.7**	**+1.2**
CNCH	**Conchagua**	**5.17**	**103**	eP	**Pn**	**21 02 27.2**	**+0.6**
CNCH	**Conchagua**	**5.17**	**103**	eP	**Pn**	**21 02 27.2**	**+0.6**
CSGN	**Cosiguina Volc**	**5.51**	**106**	ePn	**Pn**	**21 02 32.2**	**+1.1**
TEIG	**Tepich**	**7.25**	**38**	ePn	**Pn**	**21 02 53.8**	**-1.3**
KVTX	**Kingsville**	**13.74**	**341**	ePn	**Pn**	**21 04 24.4**	**+0.6**
CLTN	**Cedars of Leba**	**22.30**	**14**	eP	**P**	**21 06 08.8**	**+2.3**
	comp=Z,6.0nm,1.2s						

JMA ***25*** *21:13:42.0±0.1, 24°.09N×122°.36E, h54km±2km, M2.0*
TAP ***25*** *21:13:42.6, 24°.16N×122°.38E, h50km, ML2.8, D*

ISC 25 21:13:39.9±1.1,**24°.09N**±0°.03×**122°.37E**±0°.02,**h12**km±9km, **n61**,σ0°.58/116,**2D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
EOS1	**EOS1**	**0.51**	**334**	eP	**Pn**	**21 13 53.3**	**+0.3**
	baz=321						
EOS1				eS	**Sn**	**21 14 02.0**	**+0.4**
	baz=321						
JYNG	**Yonagunijimaku**	**0.63**	**56**	P	**Pn**	**21 13 55.3**	**+0.6**
JYNG				eS	**Sn**	**21 14 05.1**	**+0.3**
NANB	**Nanao**	**0.66**	**301**	P	**Pn**	**21 13 55.5**	**+0.4**
	baz=302						
NANB				eS	**Sn**	**21 14 05.4**	**0.0**
	baz=302						
ENA	**Nanau**	**0.67**	**300**	eP	**Pn**	**21 13 55.5**	**+0.4**
	baz=300						
ENA				eS	**Sn**	**21 14 05.4**	**-0.1**
	baz=300						
YOJ	**Yonaguni jima**	**0.69**	**58**	eP	**Pn**	**21 13 55.9**	**+0.4**
	baz=52						
YOJ				eS	**Sn**	**21 14 06.2**	**+0.1**
	baz=52						
YOJ	**Yonaguni jima**	**0.69**	**58**	P	**Pn**	**21 13 56.0**	**+0.5**
YOJ				eS	**Sn**	**21 14 05.8**	**-0.4**
TWD	**Chiawan**	**0.71**	**269**	P	**Pn**	**21 13 56.1**	**+0.3**
	baz=254						
TWD				eS	**Sn**	**21 14 06.5**	**-0.1**
	baz=254						
NACB	**Ninganchiao**	**0.71**	**277**	⇓P	**Pn**	**21 13 56.0**	**+0.2**
	baz=262						
NACB				eS	**Sn**	**21 14 06.3**	**-0.5**
	baz=262						
ETLH	**Xiulin Townshi**	**0.82**	**278**	⇓eP	**Pn**	**21 13 57.7**	**+0.3**
	baz=273						
ETLH				S	**Sb**	**21 14 07.8**	**+0.6**
	baz=273						
EGS		**0.85**	**332**	eS	**Sn**	**21 14 10.6**	**+0.5**
	baz=322						
ESL	**Shilin**	**0.90**	**252**	eP	**Pn**	**21 13 58.7**	**+0.2**
	baz=240						
ESL				eS	**Sn**	**21 14 10.5**	**-0.9**
	baz=240						
ENTT	**Nioudou**	**0.91**	**307**	P	**Pn**	**21 13 59.0**	**+0.3**
	baz=303						
ENTT				eS	**Sn**	**21 14 11.6**	**-0.2**
	baz=303						
EGFH	**Guangfu**	**0.96**	**244**	eP	**Pn**	**21 13 59.7**	**+0.4**
	baz=240						
EGFH				S	**Sn**	**21 14 13.0**	**+0.1**
	baz=240						
NNSB	**Datong**	**0.96**	**291**	eP	**Pn**	**21 13 59.9**	**+0.5**
	baz=286						
NNSB				eS	**Sn**	**21 14 12.4**	**-0.7**
	baz=286						
NNS	**Nan Shan**	**0.97**	**291**	eP	**Pn**	**21 14 00.4**	**+0.9**
	baz=287						
NNS				eS	**Sn**	**21 14 13.0**	**-0.3**
	baz=287						
TIPB	**Shuangxi**	**1.01**	**331**	eP	**Pn**	**21 14 00.9**	**+1.0**
	baz=328						
TIPB				eS	**Sg**	**21 14 11.9**	**-0.6**
	baz=328						
WHF	**Hehuan Shan**	**1.01**	**273**	eP	**Pn**	**21 14 00.5**	**+0.2**
	baz=258						
WHF				eS	**Sn**	**21 14 14.1**	**-0.7**
	baz=258						
NWLT	**Wulai**	**1.04**	**311**	eP	**Pn**	**21 14 01.2**	**+0.7**
	baz=298						
NWLT				eS	**Sn**	**21 14 15.0**	**0.0**
	baz=298						
HGSD	**Ruisui**	**1.05**	**236**	P	**Pn**	**21 14 01.0**	**+0.5**
	baz=226						
HGSD				eS	**Sn**	**21 14 15.4**	**+0.2**
	baz=226						
YHNB	**Yeheng**	**1.07**	**303**	*i* P	**Pn**	**21 14 01.5**	**+0.6**
	baz=299						
YHNB				eS	**Sg**	**21 14 14.8**	**+0.1**
	baz=299						
NSK	**Sanguang**	**1.09**	**302**	P	**Pn**	**21 14 01.5**	**+0.4**
	baz=299						
NSK				eS	**Sn**	**21 14 15.9**	**-0.2**
	baz=299						
CHGB	**Renai**	**1.09**	**269**	P	**Pn**	**21 14 02.0**	**+0.7**
	baz=255						
CHGB				eS	**Sn**	**21 14 16.4**	**0.0**
	baz=255						
OWD	**Renai**	**1.10**	**263**	P	**Pn**	**21 14 01.8**	**+0.5**
	baz=259						
OWD				S	**Sg**	**21 14 15.4**	**-0.2**
	baz=259						
TDCB	**Techi**	**1.12**	**278**	P	**Pn**	**21 14 02.3**	**+0.7**
	baz=265						
TDCB				eS	**Sn**	**21 14 17.1**	**+0.1**
	baz=265						
EHY	**Hungye**	**1.12**	**239**	eP	**Pn**	**21 14 02.3**	**+0.8**
	baz=246						
EHY				eS	**Sn**	**21 14 17.3**	**+0.4**
	baz=246						
TWA	**Mucha**	**1.14**	**321**	eS	**Sn**	**21 14 17.7**	**+0.5**
	baz=331						
VWDT	**VWDT**	**1.18**	**254**	P	**Pg**	**21 14 03.3**	**+0.7**
	baz=250						
VWDT				eS	**Sn**	**21 14 18.3**	**+0.2**
	baz=250						
YULB	**Yu-li**	**1.21**	**235**	P	**Pg**	**21 14 03.2**	**0.0**
	baz=243						
YULB				eS	**Sn**	**21 14 19.2**	**+0.2**
	baz=243						
TWF1	**Yuli**	**1.23**	**233**	P	**Pg**	**21 14 03.6**	**0.0**
	baz=242						
TWF1				eS	**Sn**	**21 14 19.6**	**+0.1**
	baz=242						
IRIF	**Iriomote-Funau**	**1.26**	**79**	P	**Pb**	**21 14 04.0**	**+0.3**
IRIF				eS	**Sb**	**21 14 19.8**	**-0.1**
WLTB	**Daxi**	**1.27**	**307**	eS	**Sg**	**21 14 21.3**	**+0.4**
	baz=294						
YM01	**YM01**	**1.28**	**325**	eP	**Pn**	**21 14 03.8**	**+0.2**
	baz=334						
YM01				eS	**Sb**	**21 14 18.8**	**-1.6**
	baz=334						
YM05	**YM05**	**1.29**	**326**	eS	**Sb**	**21 14 19.6**	**-1.3**
	baz=334						
YM04	**YM04**	**1.30**	**324**	eS	**Sb**	**21 14 19.2**	**-1.9**
	baz=333						
WHP	**Taichung City**	**1.31**	**278**	eP	**Pg**	**21 14 06.8**	**+1.6**
	baz=267						
WHP				eS	**Sg**	**21 14 21.9**	**-0.4**
	baz=267						
DPDB	**Guoxing**	**1.32**	**268**	eP	**Pg**	**21 14 05.5**	**+0.1**
	baz=265						
SSLB	**Suanglung**	**1.33**	**257**	P	**Pg**	**21 14 05.4**	**-0.2**
	baz=254						
SSLB				eS	**Sn**	**21 14 22.1**	**+0.1**
	baz=254						
LIOB	**Emei**	**1.35**	**294**	P	**Pg**	**21 14 06.2**	**+0.3**
	baz=291						
LIOB				S	**Sg**	**21 14 23.4**	**-0.2**
	baz=291						
NSTT	**Nanjuang**	**1.36**	**294**	eP	**Pg**	**21 14 05.8**	**-0.3**
	baz=290						
NSTT				eS	**Sn**	**21 14 23.0**	**+0.3**
	baz=290						
SMLT	**Sun Moon Lake**	**1.36**	**261**	eP	**Pg**	**21 14 06.0**	**-0.2**
	baz=258						
SMLT				eS	**Sb**	**21 14 22.8**	**-0.1**
	baz=258						
TYC	**Yuchr**	**1.40**	**263**	P	**Pg**	**21 14 06.5**	**-0.3**
	baz=259						
TYC				eS	**Sn**	**21 14 23.6**	**0.0**
	baz=259						
WHYT	**Xinyi Township**	**1.44**	**254**	eP	**Pg**	**21 14 07.5**	**-0.2**
	baz=244						
WHYT				eS	**Sb**	**21 14 25.2**	**0.0**
	baz=244						
TWQ1	**Liyutan**	**1.48**	**280**	eP	**Pg**	**21 14 08.7**	**+0.3**
	baz=277						
TWQ1				eS	**Sn**	**21 14 25.6**	**-0.1**
	baz=277						
JKRS	**Kuro-shima**	**1.50**	**84**	P	**Pb**	**21 14 08.1**	**+0.3**
JKRS				eS	**Sn**	**21 14 26.6**	**+0.4**
ELDTW	**Lidau**	**1.53**	**234**	P	**Pb**	**21 14 07.8**	**-0.6**
	baz=223						
ELDTW				eS	**Sn**	**21 14 26.2**	**-0.9**
	baz=223						
JIJ	**Ishigaki jima**	**1.64**	**80**	P	**Pn**	**21 14 08.9**	**+0.3**
JIJ				S	**Sn**	**21 14 28.7**	**-0.9**
WDLH	**Douliu**	**1.73**	**257**	eP	**Pb**	**21 14 12.2**	**+0.6**
	baz=254						
WDLH				eS	**Sg**	**21 14 34.5**	**-1.0**
	baz=254						
TWGBT	**Beinan**	**1.74**	**223**	P	**Pb**	**21 14 11.0**	**-0.8**
	baz=230						
TWGBT				S	**Sn**	**21 14 31.4**	**-0.6**
	baz=230						
TWG	**Pinlang**	**1.74**	**224**	eP	**Pn**	**21 14 10.1**	**+0.1**
	baz=230						
TWG				eS	**Sn**	**21 14 31.1**	**-1.0**
	baz=230						
STYT	**Tauyuan**	**1.75**	**238**	P	**Pb**	**21 14 11.9**	**0.0**
	baz=235						
STYT				eS	**Sn**	**21 14 32.4**	**+0.1**
	baz=235						
TPUB	**Ta-pu**	**1.78**	**244**

	baz=241						
CHN4	**Tsaushan**	**1.79**	**246**	*e*P	**Pb**	**21 14 13.2**	**+0.5**
	baz=243						
CHN4				*e*S	**Sn**	**21 14 33.6**	**+0.3**
	baz=243						
WTP	**Ta-pu**	**1.82**	**243**	*e*P	**Pb**	**21 14 13.4**	**+0.2**
	baz=240						
WTP				*e*S	**Sb**	**21 14 36.1**	**+0.2**
	baz=240						
JISG	**Ishigakijimahi**	**1.84**	**74**	P	**Pn**	**21 14 11.4**	**+0.1**
JISG				*e*S	**Sn**	**21 14 34.1**	**-0.4**
TWK	**Hsinying**	**1.91**	**245**	*e*P	**Pb**	**21 14 14.2**	**-0.6**
	baz=242						
TWK				*e*S	**Sb**	**21 14 38.9**	**+0.2**
	baz=242						
CHN1	**Nanshi**	**1.92**	**242**	*e*P	**Pb**	**21 14 15.0**	**+0.1**
	baz=239						
CHN1				*e*S	**Sb**	**21 14 38.7**	**-0.1**
	baz=239						
SGST	**Jiashian**	**1.92**	**239**	*e*P	**Pb**	**21 14 15.2**	**+0.2**
	baz=236						
SGST				*e*S	**Sb**	**21 14 39.8**	**+0.9**
	baz=236						
SLGT	**Liugui**	**1.92**	**236**	*e*P	**Pb**	**21 14 15.0**	**0.0**
	baz=226						
SLGT				*e*S	**Sb**	**21 14 38.2**	**-0.8**
	baz=226						
SNST	**Tainan City**	**1.93**	**244**	*e*P	**Pn**	**21 14 13.5**	**+1.0**
	baz=241						
SNST				*e*S	**Sb**	**21 14 39.6**	**+0.6**
	baz=241						
SSD	**Sandimen**	**2.08**	**230**	*e*P	**Pb**	**21 14 16.5**	**-1.2**
	baz=225						
SSD				*e*S	**Sb**	**21 14 42.6**	**-1.0**
	baz=225						
MASBT	**Mashibuluo**	**2.17**	**228**	*e*P	**Pn**	**21 14 17.3**	**+1.4**
	baz=224						
MASBT				*e*S	**Sn**	**21 14 42.9**	**+0.1**
	baz=224						

RSNC ***25*** *21:15:42.3±0.7, 1°.61N×79°.69W, h32km±22km, ML2.9*
ISCJB ***25*** *21:15:43.8±1.5, 1°.53N±0°.06×79°.50W±0°.06, h12km±14km, Error ellipse: s-maj=13.3km s-min=5.0km az=39.6*
IGQ ***25*** *21:15:43.9±0.7, 1°.N±5°×7°.9W±°, h10km, MLv3.9*
ISC 25 21:15:42.0±1.6, 1°.57N±0°.06×79°.53W±0°.06, h11km±13km, n43, σ1§40/50, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTUM2	**Tumaco**	**0.85**	**72**	*e*P	**Pg**	**21 15 59.3**	**+1.0**
CTUM2				*e*S	**Sb**	**21 16 12.0**	**+1.8**
TUMC	**Tumaco**	**0.85**	**72**	*e*P	**Pg**	**21 15 59.4**	**+1.1**
TUMC				*e*S	**Sb**	**21 16 12.0**	**+1.9**
TUMC				*i*		21 16 26.7	
	comp=Z,483nm,0.5s						
PTGL	**Punta Galera**	**0.92**	**213**	P	**Pg**	**21 16 00.1**	**+0.2**
PTGL				S	**Sb**	**21 16 13.5**	**+1.1**
LITE1	**Lita**	**1.40**	**123**	P	**Pn**	**21 16 06.1**	**-1.6**
PAC1	**Pacto, Paraso**	**1.49**	**150**	P	**Pn**	**21 16 07.7**	**-1.1**
PAC1				S	**Sb**	**21 16 27.1**	**-1.7**
MAG1	**Magdalena**	**1.64**	**188**	P	**Pn**	**21 16 11.7**	**+0.8**
CUSE	**Cuicocha Este**	**1.69**	**138**	P	**Pn**	**21 16 11.4**	**-0.5**
CUSE				S	**Sn**	**21 16 33.0**	**-0.8**
URCU	**Urcuqui**	**1.70**	**131**	P	**Pn**	**21 16 11.6**	**-0.4**
OTAV	**Otavalo**	**1.71**	**141**	*e*P	**Pn**	**21 16 11.4**	**-0.7**
OTAV				*e*S	**Sb**	**21 16 34.0**	**-1.4**
COTA	**Cotacachi**	**1.71**	**136**	P	**Pn**	**21 16 12.2**	**-0.1**
CUIC	**Cuicocha-Domo**	**1.72**	**137**	P	**Pn**	**21 16 11.5**	**-0.8**
CUSW	**Cuicocha Oeste**	**1.74**	**137**	P	**Pn**	**21 16 12.1**	**-0.4**
PULU	**Pululahua**	**1.85**	**146**	P	**Pn**	**21 16 14.3**	**+0.3**
IMBA	**Imbabura, San**	**1.85**	**134**	P	**Pn**	**21 16 14.8**	**+0.7**
YAHU	**Yahuarcocha**	**1.88**	**129**	P	**Pn**	**21 16 15.3**	**+0.8**
YANA	**Yana**	**1.93**	**150**	P	**Pn**	**21 16 15.3**	**+0.1**
TULM	**Tulcn-Chalpat**	**1.94**	**116**	P	**Pn**	**21 16 16.3**	**+1.0**
TERV	**Terraza Guagua**	**1.96**	**152**	P	**Pn**	**21 16 16.4**	**+0.6**
GRGC	**Isla de Gorgon**	**1.98**	**44**	*e*P	**Pn**	**21 16 13.2**	**-2.2**
GRGC				*i*		21 16 34.3	
	comp=Z,24nm,0.4s						
CAYA	**Cayambe**	**2.14**	**134**	P	**Pn**	**21 16 19.5**	**+1.3**
NINA	**Atacazo Ninahu**	**2.15**	**155**	P	**Pn**	**21 16 19.4**	**+1.2**
BBAC	**Balboa, Cauca**	**2.33**	**79**	*e*P	**Pn**	**21 16 20.1**	**-0.5**
BBAC				*e*S	**Sn**	**21 16 49.3**	**0.0**
BBAC				*i*		21 16 55.6	
	comp=Z,91nm,0.3s						
PITA	**Cotopaxi Volc**	**2.38**	**152**	P	**Pb**	**21 16 23.7**	**-1.5**
ILLI	**Illinizas Sur**	**2.40**	**160**	P	**Pn**	**21 16 23.0**	**+1.3**
ANTG	**Antisana-Guama**	**2.42**	**148**	P	**Pn**	**21 16 23.2**	**+1.2**
ANTI	**Antisana**	**2.43**	**146**	P	**Pn**	**21 16 23.3**	**+1.2**
BNAS	**Cotopaxi Volca**	**2.46**	**155**	P	**Pn**	**21 16 24.1**	**+1.6**
ANTS	**Antisana-Sarah**	**2.46**	**146**	P	**Pn**	**21 16 23.9**	**+1.3**
ANTM	**Antisana-La Mi**	**2.46**	**148**	P	**Pb**	**21 16 24.9**	**-1.7**
VC1	**Cotopaxi 1**	**2.47**	**153**	P	**Pb**	**21 16 25.3**	**-1.4**
BREF	**Cotopaxi Volca**	**2.48**	**154**	P	**Pb**	**21 16 26.1**	**-0.8**
BVC2	**Cotopaxi Volca**	**2.48**	**153**	P	**Pn**	**21 16 24.3**	**+1.5**
CONE	**Cono NE Rev Vo**	**2.49**	**131**	P	**Pb**	**21 16 25.4**	**-1.6**
BTAM	**Cotopaxi Volca**	**2.50**	**153**	P	**Pn**	**21 16 25.1**	**+1.9**
COV1	**Cotopaxi Volc**	**2.51**	**152**	P	**Pn**	**21 16 25.2**	**+1.8**
LAV4	**Lava4-Reventad**	**2.52**	**131**	P	**Pn**	**21 16 25.4**	**+2.3**
BMOR	**Cotopaxi Volca**	**2.52**	**155**	P	**Pn**	**21 16 25.0**	**+1.5**
CASC	**Dorado de Casc**	**2.61**	**123**	P	**Pb**	**21 16 27.2**	**-1.7**
PIS1	**Pisayambo**	**2.85**	**156**	P	**Pb**	**21 16 31.1**	**-2.1**
PISA	**Pisayambo**	**2.85**	**156**	P	**Pn**	**21 16 30.7**	**+2.8**
SOTA	**Rioblanco**	**2.98**	**79**	*e*S	**Sn**	**21 17 07.9**	**+2.2**
POPC	**Popayan, Colom**	**3.02**	**71**	*e*P	**Pn**	**21 16 29.8**	**-0.2**
ARDO	**Archidona, Ten**	**3.08**	**146**	P	**Pb**	**21 16 35.3**	**-1.5**

ISCJB ***25*** *21:22:33.1±0.3, 46°.81N±0°.01×7°.18E±0°.03, h9km±2km, Error ellipse: s-maj=3.3km s-min=2.2km az=3.1*
ZUR ***25*** *21:22:33.9, 46°.78N×7°.23E, h5km±1km, MLh2.0/10, Error ellipse: s-maj=2.1km s-min=0.8km az=259.0*
LDG ***25*** *21:22:34.0±0.1, 46°.80N×7°.24E, h2km, Md2.0/1, Ml2.4/21, Error ellipse: s-maj=2.2km s-min=2.0km az=73.0*
STR ***25*** *21:22:35.1±0.6, 47°.N±2°×°±°, h12km±3km, MLv1.9/6*
ISC 25 21:22:33.6±0.8, 46°.79N±0°.02×7°.22E±0°.02, h10km±5km, n55, σ1§79/87, 4C-4D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STAF	**Tafers**	**0.01**	**350**	⇓P*g*	**Pg**	**21 22 35.1**	**-0.4**
STAF				Sg	**Sg**	**21 22 36.1**	**-0.6**
TORNY	**Torny/Romont**	**0.18**	**264**	⇓P*g*	**Pg**	**21 22 37.9**	**+0.5**
TORNY				Sg	**Sg**	**21 22 41.0**	**+0.9**
WIMIS	**Wimmis**	**0.31**	**114**	P*g*	**Pg**	**21 22 39.8**	**0.0**
NOV3	**NOV3**	**0.41**	**208**	P*g*	**Pg**	**21 22 41.7**	**+0.1**
AIGLE	**Aigle**	**0.49**	**202**	⇑P*g*	**Pg**	**21 22 42.9**	**-0.2**
LKBD	**Leukerbad**	**0.49**	**145**	P*g*	**Pg**	**21 22 43.7**	**+0.5**
LKBD2	**Leukerbad 2**	**0.51**	**145**	⇑P*g*	**Pg**	**21 22 44.1**	**+0.5**
BRANT	**Les Verrieres**	**0.53**	**286**	⇓P*g*	**Pg**	**21 22 44.5**	**+0.6**
BRANT				Sg	**Sb**	**21 22 52.6**	**-0.4**
CHMF	**Charmoille**	**0.60**	**320**	P*g*	**Pg**	**21 22 45.9**	**+0.6**
CHMF	**Charmoille**	**0.60**	**320**	⇓P*g*	**Pg**	**21 22 45.8**	**+0.6**
CHMF				Sg	**Sg**	**21 22 54.3**	**+1.2**
LOMF	**Lomont**	**0.62**	**335**	P*g*	**Pb**	**21 22 46.7**	**0.0**
LOMF				Sg	**Sb**	**21 22 55.7**	**+0.2**
BALST	**Balsthal**	**0.63**	**31**	⇑P*g*	**Pg**	**21 22 46.5**	**+0.6**
HASLI	**Hasliberg/Brie**	**0.64**	**93**	Sg	**Sb**	**21 22 55.6**	**-0.5**
SALAN	**Lac Salanfe**	**0.67**	**195**	⇑P*n*	**Pg**	**21 22 46.2**	**-0.4**
CABF	**La Chapelle**	**0.80**	**257**	*e*P*g*	**Pg**	**21 22 49.4**	**+0.4**
	SNR=1.0						
CABF				*e*S*g*	**Sb**	**21 23 00.4**	**-0.2**
	13nm,0.2s,SNR=1.0						
OG02	**Monnetier-Morn**	**0.94**	**228**	P*n*	**Pb**	**21 22 52.6**	**+0.5**
OG02				Sg	**Sn**	**21 23 06.4**	**-0.1**
HINF	**Hinteralfeld**	**1.05**	**346**	*e*P*g*	**Pg**	**21 22 53.8**	**-0.1**
	SNR=1.0						
HINF				*e*S*g*	**Sg**	**21 23 07.3**	**-0.3**
	10nm,0.2s,SNR=1.0						
MOF	**Molkenrain**	**1.06**	**357**	P*n*	**Pg**	**21 22 54.4**	**+0.4**
MOF				Sg	**Sn**	**21 23 09.6**	**-0.1**
RSL	**Roselend**	**1.18**	**201**	P*n*	**Pb**	**21 22 56.0**	**-0.2**
RSL				Sn	**Sn**	**21 23 13.9**	**+1.3**
KIZ	**Kirchzarten**	**1.26**	**22**	P*g*	**Pg**	**21 22 58.3**	**+0.5**
KIZ				Sg	**Sn**	**21 23 14.9**	**+0.5**
LPL	**La Plagne**	**1.32**	**195**	*e*P*n*	**Pn**	**21 22 58.5**	**+0.1**
	SNR=1.0						
LPL	**La Plagne**	**1.32**	**195**	*e*P*g*	**Pg**	**21 23 00.1**	**+1.1**
	SNR=1.0						
LPL				*e*S*g*	**Sn**	**21 23 17.1**	**+0.9**
	2.3nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**1.33**	**194**	*e*P*n*	**Pn**	**21 22 59.0**	**+0.4**
	SNR=1.0						
LPG	**La Plagne**	**1.33**	**194**	*e*P*g*	**Pg**	**21 23 00.5**	**+1.2**
LPG				*e*S*g*	**Sg**	**21 23 17.2**	**+0.6**
	10nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**1.35**	**334**	*e*P*g*	**Pb**	**21 22 59.4**	**+0.3**
	SNR=1.0						
HAU				*e*S*g*	**Sn**	**21 23 16.9**	**+0.2**
	17nm,0.2s,SNR=1.0						
OG35	**Corcelles**	**1.36**	**237**	P*n*	**Pb**	**21 22 59.6**	**+0.3**
OG35				Sn	**Sg**	**21 23 17.9**	**+0.4**
ECH	**Echery**	**1.43**	**358**	P*n*	**Pn**	**21 22 59.5**	**-0.2**
ECH				Sn	**Sb**	**21 23 18.9**	**+0.3**
OGSM	**Saint Maurice**	**1.59**	**222**	P*n*	**Pn**	**21 23 02.4**	**+0.5**
OGSM				Sn	**Sb**	**21 23 24.0**	**+0.8**
CDF	**Champ du Feu**	**1.62**	**1**	*e*P*n*	**Pn**	**21 23 01.6**	**-0.8**
CDF	**Champ du Feu**	**1.62**	**1**	*e*P*g*	**Pb**	**21 23 04.3**	**+0.6**
	SNR=1.0						
CDF				*e*S*n*	**Sn**	**21 23 21.3**	**-2.1**
CDF				*e*S*g*	**Sb**	**21 23 24.3**	**0.0**
	2.8nm,0.2s,SNR=1.0						
WLS	**Welschbruch**	**1.62**	**3**	P*n*	**Pn**	**21 23 02.3**	**-0.1**
WLS				Sg	**Sg**	**21 23 26.1**	**+0.2**
PAGF	**Fort de Pagny**	**2.03**	**331**	*e*P*n*	**Pn**	**21 23 08.3**	**+0.3**
	baz=152						
PAGF	**Fort de Pagny**	**2.03**	**331**	*e*P*g*	**Pg**	**21 23 12.4**	**-0.2**
	baz=146						
PAGF				*e*S*g*	**Sb**	**21 23 37.7**	**+1.7**
	5.3nm,0.3s,baz=146						
SFTF	**Sexfontaines**	**2.05**	**315**	*e*P*n*	**Pn**	**21 23 08.4**	**+0.3**
	baz=135						
SFTF	**Sexfontaines**	**2.05**	**315**	*e*P*g*	**Pg**	**21 23 12.9**	**+0.1**
	baz=138						
SFTF				*e*S*g*	**Sg**	**21 23 39.0**	**-0.3**
	6.0nm,0.2s						
MBDF	**Montbardon**	**2.09**	**189**	*e*P*n*	**Pn**	**21 23 08.8**	**-0.1**
MBDF	**Montbardon**	**2.09**	**189**	*e*P*g*	**Pg**	**21 23 13.3**	**-0.4**
ORIF	**Oris-en-Rattie**	**2.10**	**207**	*e*P*n*	**Pn**	**21 23 08.2**	**-0.7**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**2.10**	**207**	*e*P*g*	**Pg**	**21 23 13.2**	**-0.6**
MEZF	**Maizieres J'vi**	**2.25**	**320**	*e*P*n*	**Pn**	**21 23 10.7**	**-0.3**
	baz=135						
MEZF	**Maizieres J'vi**	**2.25**	**320**	*e*P*g*	**Pg**	**21 23 16.2**	**-0.6**
	baz=148						
MEZF				*e*S*n*	**Sn**	**21 23 37.2**	**-1.6**
MEZF				*e*S*g*	**Sg**	**21 23 44.6**	**-1.4**
	5.5nm,0.3s,baz=135						
SMF	**Signal de Mont**	**2.33**	**268**	*e*P*n*	**Pn**	**21 23 12.1**	**+0.1**
	SNR=1.0						
SMF	**Signal de Mont**	**2.33**	**268**	*e*P*g*	**Pg**	**21 23 17.5**	**-0.7**
SMF				*e*S*n*	**Sn**	**21 23 39.4**	**-1.3**
	SNR=1.0						
SMF				*e*S*g*	**Sb**	**21 23 46.2**	**+1.7**
	3.8nm,0.2s,SNR=1.0						
LOR	**Lormes**	**2.35**	**283**	*e*P*n*	**Pn**	**21 23 12.4**	**+0.1**
	baz=107						
LOR	**Lormes**	**2.35**	**283**	*e*P*g*	**Pb**	**21 23 17.3**	**+1.3**
	baz=98						
LOR				*e*S*n*	**Sn**	**21 23 41.2**	**0.0**
	5.5nm,0.2s,baz=127,SNR=1.0						
SSF	**Saint Saulge**	**2.56**	**277**	*e*P*n*	**Pn**	**21 23 15.6**	**+0.4**
	SNR=1.0						
SSF	**Saint Saulge**	**2.56**	**277**	*e*P*g*	**Pg**	**21 23 22.5**	**-0.1**
VIVF	**Saint-Julien-I**	**2.63**	**224**	*e*P*n*	**Pn**	**21 23 16.5**	**+0.3**
	SNR=1.0						
VIVF				*e*S*g*	**Sg**	**21 23 58.2**	**+0.1**
	1.4nm,0.2s						
AVF	**Avril sur Loir**	**2.66**	**271**	*e*P*n*	**Pn**	**21 23 16.5**	**0.0**
BGF	**Bois d'Agland**	**3.02**	**267**	*e*P*n*	**Pn**	**21 23 21.6**	**+0.1**
BGF				*e*S*g*	**Sg**	**21 24 10.0**	**-0.6**
	4.8nm,0.3s						
SMRF	**Simiane la Rot**	**3.04**	**203**	*e*P*n*	**Pn**	**21 23 22.0**	**+0.1**
SMRF				*e*S*n*	**Sn**	**21 23 57.4**	**-1.1**
	0.9nm,0.3s						
FRF	**La Foret Royal**	**3.26**	**187**	*e*P*n*	**Pn**	**21 23 25.1**	**+0.3**
FRF	**La Foret Royal**	**3.26**	**187**	*e*P*g*	**Pg**	**21 23 34.8**	**-1.2**
FRF				*e*S*n*	**Sn**	**21 24 01.2**	**-2.4**
	0.5nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.49**	**264**	*e*P*n*	**Pn**	**21 23 28.3**	**+0.2**
TCF	**Toulx Ste Croi**	**3.49**	**264**	*e*P*g*	**Pg**	**21 23 39.2**	**-1.3**
TCF				*e*S*g*	**Sg**	**21 24 23.5**	**-2.3**
	1.0nm,0.2s						

LDG ***25*** *21:23:06.1±0.1, 46°.80N×7°.21E, h2km, Md2.1/1, Ml2.3/22, Error ellipse: s-maj=1.9km s-min=1.1km az=79.0*
STR ***25*** *21:23:06.1±0.6, 47°.N±2°×°±°, h13km±3km, MLv1.8/6*
ZUR 25 21:23:04.5, 46°.77N×7°.24E, h4km±1km, MLh2.0/8, 2C-2D, Error ellipse: s-maj=2.9km s-min=0.9km az=245.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STAF	**Tafers**	**0.04**	**338**	⇓P*g*	**Pg**	**21 23 05.8**	**+0.1**
STAF				Sg	**Sg**	**21 23 06.8**	**+0.4**
TORNY	**Torny/Romont**	**0.19**	**271**	⇑P*g*	**Pg**	**21 23 08.5**	**+0.3**
TORNY				Sg	**Sg**	**21 23 11.8**	**+1.0**
WIMIS	**Wimmis**	**0.29**	**111**	P*g*	**Pg**	**21 23 10.5**	**+0.4**
NOV3	**NOV3**	**0.39**	**211**	P*g*	**Pg**	**21 23 12.4**	**+0.2**
BRANT	**Les Verrieres**	**0.55**	**288**	⇑P*g*	**Pg**	**21 23 15.4**	**+0.3**
BRANT				Sg	**Sg**	**21 23 23.3**	**+1.0**
CHMF	**Charmoille**	**0.62**	**320**	P*g*	**Pg**	**21 23 16.5**	**0.0**
CHMF	**Charmoille**	**0.62**	**320**	⇓P*g*	**Pg**	**21 23 16.6**	**0.0**
CHMF				Sg	**Sg**	**21 23 25.1**	**+0.4**
HASLI	**Hasliberg/Brie**	**0.63**	**91**	Sg	**Sb**	**21 23 26.2**	**-1.1**
LOMF	**Lomont**	**0.65**	**334**	P*g*	**Pg**	**21 23 17.2**	**+0.2**
LOMF				Sg	**Sg**	**21 23 26.3**	**+1.0**
SALAN	**Lac Salanfe**	**0.65**	**196**	P*g*	**Pg**	**21 23 17.0**	**0.0**
CABF	**La Chapelle**	**0.81**	**259**	*e*P*g*	**Pb**	**21 23 21.5**	**+0.4**
CABF				*e*S*g*	**Sg**	**21 23 31.2**	**+0.7**
	14nm,0.2s						
OG02	**Monnetier-Morn**	**0.93**	**229**	P*g*	**Pb**	**21 23 23.1**	**-0.1**
OG02				Sn	**Sb**	**21 23 37.0**	**+1.0**
HINF	**Hinteralfeld**	**1.08**	**346**	*e*P*g*	**Pb**	**21 23 25.5**	**-0.3**
HINF				*e*S*g*	**Sg**	**21 23 39.6**	**+0.4**
	6.8nm,0.2s						
MOF	**Molkenrain**	**1.08**	**356**	P*n*	**Pg**	**21 23 25.4**	**0.0**
MOF				Sg	**Sb**	**21 23 40.5**	**+0.1**
RSL	**Roselend**	**1.16**	**202**	P*n*	**Pg**	**21 23 26.8**	**0.0**
RSL				Sg	**Sn**	**21 23 44.8**	**+0.7**
KIZ	**Kirchzarten**	**1.27**	**21**	P*n*	**Pg**	**21 23 29.0**	**+0.1**
KIZ				Sn	**Sb**	**21 23 45.7**	**-0.1**
LPL	**La Plagne**	**1.30**	**196**	*e*P*n*	**Pb**	**21 23 30.6**	**+0.9**
LPL				*e*S*g*	**Sn**	**21 23 48.2**	**+0.6**
	3.0nm,0.3s						
LPG	**La Plagne**	**1.32**	**195**	*e*P*n*	**Pb**	**21 23 30.7**	**+0.7**
LPG	**La Plagne**	**1.32**	**195**	*e*P*g*	**Pb**	**21 23 31.5**	**+1.5**
LPG				*e*S*g*	**Sn**	**21 23 49.1**	**+1.1**
	7.9nm,0.3s						
OG35	**Corcelles**	**1.36**	**238**	P*n*	**Pn**	**21 23 30.0**	**-0.4**
OG35				Sn	**Sb**	**21 23 48.6**	**+0.2**
HAU	**Haudompre**	**1.38**	**334**	*e*P*n*	**Pn**	**21 23 30.1**	**-0.4**
HAU	**Haudompre**	**1.38**	**334**	*e*P*g*	**Pg**	**21 23 31.2**	**+0.3**
HAU				*e*S*g*	**Sg**	**21 23 48.7**	**0.0**
	13nm,0.2s						
OGSM	**Saint Maurice**	**1.58**	**223**	P*n*	**Pn**	**21 23 33.1**	**-0.2**
OGSM				Sg	**Sg**	**21 23 56.1**	**+0.9**
CDF	**Champ du Feu**	**1.64**	**1**	*e*P*n*	**Pn**	**21 23 34.6**	**+0.4**
CDF	**Champ du Feu**	**1.64**	**1**	*e*P*g*	**Pg**	**21 23 36.3**	**+0.3**
CDF				*e*S*g*	**Sb**	**21 23 56.8**	**+0.3**
	2.0nm,0.2s						
PAGF	**Fort de Pagny**	**2.06**	**331**	*e*P*n*	**Pn**	**21 23 39.5**	**-0.4**
PAGF	**Fort de Pagny**	**2.06**	**331**	*e*P*g*	**Pg**	**21 23 43.7**	**-0.2**
	baz=156						
PAGF				*e*S*n*	**Sn**	**21 24 04.4**	**-1.5**
PAGF				*e*S*g*	**Sg**	**21 24 10.2**	**-0.4**
	4.0nm,0.3s,baz=132						
SFTF	**Sexfontaines**	**2.07**	**315**	*e*P*n*	**Pn**	**21 23 40.5**	**+0.5**
	baz=127						
SFTF	**Sexfontaines**	**2.07**	**315**	*e*P*g*	**Pg**	**21 23 43.8**	**-0.4**
SFTF				*e*S*g*	**Sg**	**21 24 10.0**	**-1.0**
	4.2nm,0.2s						
MBDF	**Montbardon**	**2.07**	**189**	*e*P*n*	**Pn**	**21 23 40.7**	**+0.6**
MBDF				*e*S*g*	**Sg**	**21 24 12.9**	**+1.9**
	1.7nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.08**	**208**	*e*P*n*	**Pn**	**21 23 40.6**	**+0.3**
ORIF				*e*S*n*	**Sn**	**21 24 06.2**	**-0.4**
	3.3nm,0.3s						
MEZF	**Maizieres J'vi**	**2.28**	**320**	*e*P*n*	**Pn**	**21 23 42.3**	**-0.6**
	baz=136						
MEZF	**Maizieres J'vi**	**2.28**	**320**	*e*P*g*	**Pg**	**21 23 47.7**	**-0.4**
MEZF				*e*S*n*	**Sn**	**21 24 09.9**	**-1.4**
MEZF				*e*S*g*	**Sg**	**21 24 17.2**	**-0.4**
	2.8nm,0.3s						
SMF	**Signal de Mont**	**2.34**	**268**	*e*P*n*	**Pn**	**21 23 43.3**	**-0.4**
SMF				*e*S*g*	**Sg**	**21 24 18.7**	**-1.0**
	3.8nm,0.2s						
LOR	**Lormes**	**2.36**	**283**	*e*P*n*	**Pn**	**21 23 44.4**	**+0.3**
LOR				*e*S*n*	**Sn**	**21 24 12.0**	**-1.5**
	4.1nm,0.2s						
SSF	**Saint Saulge**	**2.57**	**278**	*e*P*n*	**Pn**	**21 23 46.6**	**-0.3**
SSF	**Saint Saulge**	**2.57**	**278**	*e*P*g*	**Pg**	**21 23 53.3**	**-0.5**
SSF				*e*S*n*	**Sn**	**21 24 16.9**	**-1.8**
SSF				*e*S*g*	**Sg**	**21 24 26.0**	**-1.2**
	2.3nm,0.2s						
VIVF	**Saint-Julien-I**	**2.62**	**224**	*e*P*n*	**Pn**	**21 23 47.7**	**+0.1**
VIVF	**Saint-Julien-I**	**2.62**	**224**	*e*P*g*	**Pg**	**21 23 55.0**	**+0.2**
VIVF				*e*S*n*	**Sn**	**21 24 18.6**	**-1.3**
VIVF				*e*S*g*	**Sg**	**21 24 28.8**	**+0.1**
	1.4nm,0.2s						
AVF	**Avril sur Loir**	**2.67**	**272**	*e*P*n*	**Pn**	**21 23 48.0**	**-0.2**
AVF	**Avril sur Loir**	**2.67**	**272**	*e*P*g*	**Pg**	**21 23 55.5**	**-0.2**
AVF				*e*S*n*	**Sn**	**21 24 19.1**	**-1.9**
AVF				*e*S*g*	**Sg**	**21 24 28.7**	**-1.5**
	0.9nm,0.2s						
SBF	**Sospel**	**2.91**	**177**	*e*P*n*	**Pn**	**21 23 51.8**	**+0.2**
SBF	**Sospel**	**2.91**	**177**	*e*P*g*	**Pg**	**21 24 00.8**	**+0.5**
SBF				*e*S*n*	**Sn**	**21 24 25.8**	**-1.3**
	1.2nm,0.3s						
SMRF	**Simiane la Rot**	**3.03**	**203**	*e*P*n*	**Pn**	**21 23 53.4**	**+0.2**
SMRF				*e*S*n*	**Sn**	**21 24 29.4**	**-0.6**
	0.6nm,0.2s						
BGF	**Bois d'Agland**	**3.03**	**268**	*e*P*n*	**Pn**	**21 23 53.2**	**0.0**
BGF				*e*S*g*	**Sg**	**21 24 40.6**	**-1.2**
	6.1nm,0.3s						
FRF	**La Foret Royal**	**3.24**	**188**	*e*P*n*	**Pn**	**21 23 56.5**	**+0.5**
FRF	**La Foret Royal**	**3.24**	**188**	*e*P*g*	**Pg**	**21 24 06.4**	**-0.1**
FRF				*e*S*n*	**Sn**	**21 24 33.8**	**-1.2**
	0.4nm,0.2s						
LMR	**La Mourre**	**3.48**	**189**	*e*P*n*	**Pn**	**21 23 59.5**	**+0.2**
LMR				*e*S*n*	**Sn**	**21 24 38.7**	**-2.2**
	0.3nm,0.2s						
TCF	**Toulx Ste Croi**	**3.50**	**264**	*e*P*n*	**Pn**	**21 23 59.2**	**-0.5**
TCF	**Toulx Ste Croi**	**3.50**	**264**	*e*P*g*	**Pg**	**21 24 11.3**	**-0.3**
TCF				*e*S*g*	**Sg**	**21 24 55.5**	**-1.5**
	1.0nm,0.2s						

VIE 25 21:23:19.3±1.9, 47°.07N×9°.30E, h9km±9km, ml1.1/2, Error ellipse: s-maj=12.9km s-min=5.8km az=73.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.45**	**61**	*e*P*g*	Pg	**21 23 28.6**	**+0.4**
	0.4nm,0.1s						
DAVA				Sg	Sb	**21 23 35.7**	**-0.7**
	4.8nm,0.3s						
FETA	**Feichten**	**0.98**	**92**	Sg	Sn	**21 23 52.7**	**-0.7**
	2.0nm,0.6s						

VIE 25 21:23:49.0±2.0, 47°.01N×9°.28E, h8km, ml1.0/1, Error ellipse: s-maj=13.7km s-min=7.2km az=69.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.49**	**55**	Pg	Pb	**21 23 59.7**	**-0.3**
	0.2nm,0.1s						
DAVA				Sg	Sg	**21 24 06.1**	**+1.0**
	2.4nm,0.2s						

ISCJB ***25*** *21:24:42.0±0.7, 2°.43N±0°.09×122°.8E±0°.2, h450km, mb3.4/7, Error ellipse: s-maj=22.6km s-min=11.4km az=165.0*
IDC ***25*** *21:24:45.2±2.2, 2°.31N×122°.81E, h479km±33km,

	baz=256							
ILA				*e*S	**Sg**	**22 13 56.7**	**+0.5**
	baz=256							
EOS1	**EOS1**	**0.29 161**	*e*P		**Pb**	**22 13 52.6**	**-0.3**
	baz=163							
NWF	**Wu-fen Shan**	**0.33 318**	*e*P		**Pg**	**22 13 53.3**	**-0.1**
	baz=306							
NWF				*e*S	**Sb**	**22 13 58.6**	**0.0**
	baz=306							
WFSB	**Wu-fen Shan**	**0.33 318**	*i* P		**Pb**	**22 13 53.4**	**-0.3**
	baz=306							
WFSB				*e*S	**Sb**	**22 13 58.8**	**+0.2**
	baz=306							
TWE	**Neicheng**	**0.34 252**	*e*P		**Pg**	**22 13 53.2**	**-0.4**
	baz=251							
TWE				*e*S	**Sg**	**22 13 58.4**	**-0.1**
	baz=251							
TWA	**Mucha**	**0.43 291**	P		**Pb**	**22 13 55.2**	**-0.1**
	baz=280							
TWA				*e*S	**Sb**	**22 14 01.6**	**0.0**
	baz=280							
ENTT	**Nioudou**	**0.46 246**	*i* P		**Pb**	**22 13 55.5**	**-0.3**
	baz=247							
ENTT				*e*S	**Sb**	**22 14 02.3**	**0.0**
	baz=247							
NANB	**Nanao**	**0.47 213**	*e*P		**Pg**	**22 13 55.6**	**-0.3**
	baz=221							
NANB				*e*S	**Sg**	**22 14 01.9**	**-0.4**
	baz=221							
ENA	**Nanau**	**0.47 213**	P		**Pb**	**22 13 55.8**	**-0.2**
	baz=221							
ENA				*e*S	**Sb**	**22 14 03.1**	**+0.4**
	baz=221							
NHDH	**Xindian Distri**	**0.48 287**	*e*P		**Pn**	**22 13 56.9**	**-1.2**
	baz=277							
NHDH				*e*S	**Sb**	**22 14 02.9**	**+0.1**
	baz=277							
NWLT	**Wulai**	**0.48 264**	*i* P		**Pg**	**22 13 55.5**	**-0.5**
	baz=264							
NWLT				*e*S	**Sg**	**22 14 02.1**	**-0.4**
	baz=264							
TATO	**Taipei**	**0.51 287**	P		**Pb**	**22 13 56.7**	**0.0**
	baz=277							
TATO			S		**Sb**	**22 14 03.9**	**+0.1**
	baz=277							
TAP	**Taipei**	**0.52 294**	*e*S		**Sb**	**22 14 04.5**	**+0.6**
	baz=284							
YM01	**YM01**	**0.52 308**	*i* P		**Pb**	**22 13 57.4**	**+0.5**
	baz=305							
YM08	**YM08**	**0.54 312**	*i* P		**Pb**	**22 13 57.3**	**+0.2**
	baz=302							
YM10	**YM10**	**0.54 308**	*i* P		**Pb**	**22 13 57.6**	**+0.5**
	baz=305							
YM05	**YM05**	**0.54 309**	P		**Pb**	**22 13 57.6**	**+0.5**
	baz=298							
YM05				*e*S	**Sb**	**22 14 05.7**	**+1.2**
	baz=298							
YM04	**YM04**	**0.55 306**	*i* P		**Pg**	**22 13 57.8**	**+0.4**
	baz=303							
YM04				*e*S	**Sb**	**22 14 05.7**	**+0.9**
	baz=303							
YM03	**YM03**	**0.56 309**	*i* P		**Pg**	**22 13 57.9**	**+0.3**
	baz=306							
ANP	**Anpu**	**0.58 308**	*e*P		**Pg**	**22 13 58.1**	**+0.1**
	baz=306							
TWY	**Chenhua**	**0.59 319**	P		**Pg**	**22 13 58.6**	**+0.5**
	baz=316							
TWY				*e*S	**Sn**	**22 14 07.4**	**-1.5**
	baz=316							
YHNB	**Yeheng**	**0.61 255**	P		**Pg**	**22 13 58.2**	**-0.3**
	baz=248							
YHNB				*e*S	**Sg**	**22 14 06.5**	**-0.2**
	baz=248							
TWS1	**Kuangyinshan**	**0.62 296**	*e*P		**Pn**	**22 13 59.5**	**-0.5**
	baz=295							
TWS1				*e*S	**Sn**	**22 14 08.2**	**-1.3**
	baz=295							
NTST	**Danshui**	**0.62 303**	*e*P		**Pg**	**22 13 59.0**	**+0.3**
	baz=301							
NSK	**Sanguang**	**0.63 256**	P		**Pb**	**22 13 58.3**	**-0.3**
	baz=256							
NSK				*e*S	**Sg**	**22 14 07.9**	**+0.8**
	baz=256							
NNSB	**Datong**	**0.71 236**	P		**Pg**	**22 14 00.2**	**0.0**
	baz=243							
NNSB				*e*S	**Sg**	**22 14 09.8**	**+0.1**
	baz=243							
NNS	**Nan Shan**	**0.71 237**	*e*P		**Pg**	**22 14 00.3**	**+0.1**
	baz=238							
NNS				*e*S	**Sg**	**22 14 10.6**	**+0.8**
	baz=238							
NACB	**Ninganchiao**	**0.76 211**	P		**Pg**	**22 14 01.1**	**0.0**
	baz=206							
NACB				*e*S	**Sg**	**22 14 10.8**	**-0.4**
	baz=206							
NCUH	**Zhongli**	**0.78 281**	*e*P		**Pn**	**22 14 03.5**	**+1.2**
	baz=279							
NCUH				*e*S	**Sn**	**22 14 14.0**	**+0.6**
	baz=279							
ETLH	**Xiulin Townshi**	**0.79 219**	P		**Pg**	**22 14 01.8**	**0.0**
	baz=230							
ETLH				*e*S	**Sn**	**22 14 13.3**	**-0.6**
	baz=230							
PCYT	**Pengchaiyu**	**0.80 3**	*e*P		**Pn**	**22 14 02.3**	**-0.3**
	baz=354							
PCYT				*e*S	**Sn**	**22 14 15.1**	**+1.0**
	baz=354							
TWD	**Chiawan**	**0.84 208**	P		**Pn**	**22 14 02.8**	**-0.3**
	baz=203							
TWD				*e*S	**Sn**	**22 14 14.6**	**-0.3**
	baz=203							
JYNG	**Yonagunijimaku**	**0.92 114**	P		**Pb**	**22 14 03.4**	**-0.1**
JYNG			S		**Sg**	**22 14 15.9**	**-0.3**
LIOB	**Emei**	**0.94 259**	*e*P		**Pg**	**22 14 04.7**	**+0.2**
	baz=259							
LIOB				*e*S	**Sn**	**22 14 17.8**	**+0.4**
	baz=259							
NSTT	**Nanjuang**	**0.95 258**	*e*P		**Pg**	**22 14 04.5**	**-0.3**
	baz=258							
NSTT				*e*S	**Sn**	**22 14 18.0**	**+0.2**
	baz=258							
TWT	**Tachien**	**0.96 234**	*e*P		**Pg**	**22 14 05.4**	**+0.4**
	baz=231							
TWT				*e*S	**Sn**	**22 14 19.0**	**+0.7**
	baz=231							
YOJ	**Yonaguni jima**	**0.97 112**	*e*P		**Pb**	**22 14 04.4**	**0.0**
	baz=113							
YOJ			S		**Sg**	**22 14 17.5**	**-0.3**
	baz=113							
YOJ	**Yonaguni jima**	**0.97 112**	P		**Pn**	**22 14 04.5**	**-0.3**
YOJ				*e*S	**Sg**	**22 14 17.2**	**-0.6**
WHF	**Hehuan Shan**	**0.97 226**	*e*P		**Pg**	**22 14 05.0**	**-0.3**
	baz=228							
WHF				*e*S	**Sn**	**22 14 18.8**	**0.0**
	baz=228							
TDCB	**Techi**	**0.97 234**	*e*P		**Pn**	**22 14 04.8**	**-0.3**
	baz=228							
CHGB	**Renai**	**1.09 226**	*e*P		**Pg**	**22 14 07.1**	**-0.3**
	baz=228							
OWD	**Renai**	**1.16 222**	*e*P		**Pg**	**22 14 08.3**	**-0.6**
	baz=230							
OWD				*e*S	**Sg**	**22 14 24.6**	**+0.4**
	baz=230							
TWQ1	**Liyutan**	**1.24 248**	*e*P		**Pg**	**22 14 10.6**	**+0.4**
	baz=264							
VWDT	**VWDT**	**1.34 217**	*e*P		**Pb**	**22 14 11.2**	**+0.4**
	baz=220							
SMLT	**Sun Moon Lake**	**1.39 228**	*e*P		**Pg**	**22 14 12.8**	**-0.3**
	baz=230							
SSLB	**Suanglung**	**1.42 224**	*e*P		**Pb**	**22 14 12.3**	**+0.1**
	baz=226							
HGSD	**Ruisui**	**1.44 203**	*e*P		**Pg**	**22 14 13.6**	**-0.4**
	baz=225							
HGSD				*e*S	**Sg**	**22 14 33.7**	**+1.0**
	baz=225							
EHY	**Hungye**	**1.46 206**	*e*P		**Pb**	**22 14 12.4**	**-0.6**
	baz=220							
YULB	**Yu-li**	**1.57 205**	*e*P		**Pb**	**22 14 14.9**	**+0.1**
	baz=220							
IRIF	**Iriomote-Funau**	**1.63 107**	P		**Pn**	**22 14 13.2**	**-0.7**
JKRS	**Kuro-shima**	**1.90 108**	P		**Pn**	**22 14 17.8**	**+0.1**
JKRS				*e*S	**Sn**	**22 14 41.5**	**+0.4**
JIJ	**Ishigaki jima**	**1.98 103**	P		**Pn**	**22 14 19.0**	**+0.2**
JIJ			S		**Sn**	**22 14 44.2**	**+1.1**
STYT	**Tauyuan**	**2.02 215**	*e*P		**Pb**	**22 14 23.2**	**+0.7**
	baz=212							
STYT				*e*S	**Sg**	**22 14 50.1**	**-1.3**
	baz=212							
WTP	**Ta-pu**	**2.04 220**	*e*P		**Pb**	**22 14 23.5**	**+0.8**
	baz=214							
WTP				*e*S	**Sg**	**22 14 50.9**	**-1.0**
	baz=214							
JISG	**Ishigakijimahi**	**2.09 96**	P		**Pn**	**22 14 21.4**	**+1.1**
TWK	**Hsinying**	**2.10 223**	*e*P		**Pb**	**22 14 24.7**	**+1.0**
	baz=230							
TWK				*e*S	**Sg**	**22 14 53.3**	**-0.4**
	baz=230							

MAN 25 22:29:52.4, 8°.40N×126°.10E, h1km, mb3.6, ML2.3, MS1.7, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.33 130**	⇓	*i* P	Pg	22 29 58.8	0.0
BIPH				*i* S	Sb	22 30 07.0	0.0
BUTP	**Butuan**	**0.74 320**		*e*P	Pg	22 30 07.0	+0.3
BUTP				*e*S	Sn	22 30 21.5	-0.5
BUKP	**Musuan**	**1.15 243**		*e*P	Pg	22 30 14.4	-0.2
BUKP				*e*S	Sn	22 30 32.9	+0.6
CGP	**Cagayan de Oro**	**1.40 272**	⇑	*e*P	Pn	22 30 15.7	-3.3
CGP				*e*S	Sg	22 30 36.6	-0.7

*DSN **25** 22:35:43.4±1.5, 26°.76N×57°.99E, h10km, ML3.7/10, Error ellipse: s-maj=22.0km s-min=10.3km az=165.0*
*ISCJB **25** 22:35:45.7±0.5, 26°.69N±0°.03×57°.88E±0°.06, h10km, mb3.6/6, Error ellipse: s-maj=7.6km s-min=4.2km az=10.4*
*IDC **25** 22:35:46.0±1.4, 26°.59N×57°.49E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/48, mbtmp3.7/7, ML3.5/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/44, Error ellipse: s-maj=28.7km s-min=26.1km az=105.0*
*TEH **25** 22:35:47.6, 26°.64N×57°.75E, h10km, ML3.9*
ISC 25 22:35:46.4±0.8, 26°.59N±0°.04×57°.79E±0°.05, h10km, n53, σ1§59/55, mb3.6/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.94 181**		*e*Pg	**Pn**	**22 36 07.8**	**+2.1**
JSK1				IAMB	IAmb	22 37 07.9	
	comp=Z,0.0nm,1.2s						
NIAN	**Nian**	**1.29 319**		*e*Pg	**Pn**	**22 36 10.4**	**-0.1**
NIAN				IAMB	IAmb	22 36 41.6	
	comp=Z,0.0nm,0.4s						
BANOM	**Banah**	**1.49 244**		*e*P	**Pn**	**22 36 13.4**	**+0.1**
	SNR=251						
BANOM				*e*S	**Sg**	**22 36 37.7**	**+3.3**
	SNR=7.9						
SHME	**Shamm**	**1.57 250**		*e*P	**Pn**	**22 36 15.2**	**+0.8**
	SNR=71						
SHME				S	**Sg**	**22 36 38.2**	**+1.2**
SHME	**Shamm**	**1.57 250**		*e*Pn	**Pn**	**22 36 15.7**	**+1.3**
GENO	**Geno**	**1.65 300**		*e*Pn	**Pn**	**22 36 16.8**	**+1.1**
GENO				IAMB	IAmb	22 36 47.8	
	comp=Z,0.0nm,0.4s						
MDH	**Madha**	**1.85 227**		*e*P	**Pn**	**22 36 17.1**	**-1.2**
	SNR=27						
MDH	**Madha**	**1.85 227**		*e*Pn	**Pn**	**22 36 17.6**	**-0.7**
MSFE	**Esma-Masafi**	**1.91 231**		*e*P	**Pn**	**22 36 18.4**	**-0.7**
	SNR=10						
MSFE				S	**Sg**	**22 36 47.4**	**-0.4**
MSFE	**Esma-Masafi**	**1.91 231**		*e*Pn	**Pn**	**22 36 18.2**	**-0.9**
UOSS	**Minazif**	**2.17 222**		*e*P	**Pn**	**22 36 21.9**	**-0.8**
	SNR=10						
UOSS	**Minazif**	**2.17 222**		*e*Pn	**Pn**	**22 36 21.3**	**-1.3**
UMQ	**Umm Al-Quwin**	**2.18 242**		*e*Pn	**Pb**	**22 36 26.5**	**+0.5**
HATD	**Hatta, Dubai**	**2.30 221**		*e*P	**Pn**	**22 36 24.4**	**-0.1**
	SNR=8.9						
HATD	**Hatta, Dubai**	**2.30 221**		*e*Pn	**Pn**	**22 36 23.8**	**-0.7**
ASHO	**Ashiyiah**	**2.45 220**		*e*P	**Pn**	**22 36 27.6**	**+1.1**
	SNR=26						
ASHO	**Ashiyiah**	**2.45 220**		*e*Pn	**Pb**	**22 36 29.8**	**-0.9**
NAZ	**Nazwa, Dubai**	**2.49 231**		*e*P	**Pn**	**22 36 27.5**	**+0.5**
	SNR=31						
NAZ	**Nazwa, Dubai**	**2.49 231**		*e*Pn	**Pb**	**22 36 30.5**	**-0.8**
FAQ	**Al Faqa, Dubai**	**2.70 228**		*e*P	**Pn**	**22 36 31.9**	**+2.0**
	SNR=20						
FAQ	**Al Faqa, Dubai**	**2.70 228**		*e*Pn	**Pn**	**22 36 32.4**	**+2.5**
ASUD	**Al Ashush, Dub**	**2.96 229**		*i* P	**Pn**	**22 36 35.1**	**+1.6**
	SNR=10						
ASUD	**Al Ashush, Dub**	**2.96 229**		*e*Pn	**Pb**	**22 36 37.1**	**-2.1**
HOQ	**Hoqain**	**3.02 188**		*e*Pn	**Pn**	**22 36 37.0**	**+2.6**
BIDO	**Bidbid**	**3.07 174**		*e*Pn	**Pn**	**22 36 37.6**	**+2.6**
ALNE	**Al Ain**	**3.12 217**		*i* P	**Pn**	**22 36 37.4**	**+1.6**
	SNR=7.3						
ALNE	**Al Ain**	**3.12 217**		*e*Pn	**Pn**	**22 36 38.5**	**+2.8**
NGRK	**Negar Kerman**	**3.19 343**		*e*Pn	**Pn**	**22 36 38.5**	**+1.5**
NGRK				IAMB	IAmb	22 37 38.9	
	comp=Z,0.0nm,0.6s						
AJN	**Ajban**	**3.23 232**		*e*Pn	**Pb**	**22 36 44.3**	**+0.4**
CHMN	**Cheshme madani**	**3.27 356**		*e*Pn	**Pn**	**22 36 40.7**	**+2.6**
CHMN				IAMB	IAmb	22 37 47.7	
	comp=Z,0.0nm,1.1s						
WSAR	**Wadi Sarin**	**3.42 167**		Pn	**Pn**	**22 36 40.3**	**+0.5**
	comp=Z,4.0nm,0.3s,baz=303,slow=2.8,SNR=45						
WSAR				Sn	**Sn**	**22 37 19.3**	**-1.2**
	comp=Z,8.7nm,0.3s,baz=249,slow=20,SNR=8.6						
TVBK	**TV Kerman**	**3.51 345**		*e*Pn	**Pn**	**22 36 44.0**	**+2.7**
TVBK				IAMB	IAmb	22 37 48.2	
	comp=Z,0.0nm,0.4s						
KHGB	**Koh Gabri**	**3.95 343**		*e*Pn	**Pn**	**22 36 49.4**	**+2.1**
KHGB				IAMB	IAmb	22 38 03.2	
	comp=Z,0.0nm,0.6s						
SZD1	**Zahaedan-tmp**	**3.97 43**		*e*Pn	**Pb**	**22 36 53.9**	**-2.7**
ISRV	**Sarvestan**	**4.99 305**		*e*Pn	**Pn**	**22 37 02.3**	**+0.7**
IPAR	**Pars**	**5.29 309**		*e*Pn	**Pn**	**22 37 07.6**	**+1.7**
IBAF	**Bafgh**	**5.35 339**		*e*Pn	**Pn**	**22 37 06.8**	**+0.3**
IMEH	**Mehriz**	**5.54 331**		*e*Pn	**Pn**	**22 37 09.7**	**+0.6**
IKOO	**Kooshah**	**5.91 10**		*e*Pn	**Pn**	**22 37 15.0**	**+0.7**
IKAZ	**Kazeroun**	**6.14 303**		*e*Pn	**Pn**	**22 37 17.2**	**-0.3**
ITEG	**Tejag**	**6.34 7**		*e*Pn	**Pn**	**22 37 20.8**	**+0.6**
KLNJ	**Kolanjah**	**7.00 310**		*e*Pn	**Pn**	**22 37 29.3**	**0.0**
IRAM	**Ramesheh**	**7.03 319**		*e*Pn	**Pn**	**22 37 30.0**	**+0.4**
ZNGN	**Zangian**	**8.18 314**		*e*Pn	**Pn**	**22 37 45.4**	**-0.2**
GEYT	**Alibeck**	**11.31 1**		LR	LR	22 43 18.9	
	comp=Z,55nm,18.9s,baz=260,slow=40						
GNI	**Garni**	**17.34 325**		LR	LR	22 47 53.8	
	comp=Z,22nm,18.1s,baz=109,slow=42						
EIL	**Elat**	**20.37 284**		P	**P**	**22 40 20.9**	**-2.3**
	comp=Z,2.3nm,0.7s,baz=45,slow=11,SNR=2.3						
AKTO	**Aktyubinsk**	**23.82 0**		P	**P**	**22 40 59.0**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=163,slow=12,SNR=2.5						
BRTR	**Keskin Array B**	**24.00 309**		P	**P**	**22 41 01.8**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=130,slow=9.6,SNR=8.7						
MKAR	**Makanchi Array**	**27.96 37**		P	**P**	**22 41 41.4**	**+4.3**
	comp=Z,0.3nm,0.7s,baz=228,slow=7.6,SNR=3.5						
GERES	**GERESS Array B**	**40.62 315**		P	**P**	**22 43 25.5**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=126,slow=8.6,SNR=4.2						
FINES	**FINESS Array B**	**40.85 337**		P	**P**	**22 43 27.2**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=148,slow=16,SNR=3.1						
TORD	**Torodi Ar. Bea**	**54.04 267**		P	**P**	**22 45 11.2**	**-0.2**
	comp=Z,7.9nm,0.3s,baz=70,slow=7.5,SNR=8.9						

UCR 25 22:45:13.7±2.2, 9°.10N×84°.03W, h13km±14km, MD4.1, 1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDC	**Heredia**	**0.90 355**		*i* P	Pg	22 45 30.0	-1.1
HDC				*i* S	Sg	22 45 42.7	-0.2
PTJ1	**Puerto Jimnez**	**0.91 128**		*e*P	Pg	22 45 30.3	-1.0
BRU2	**Volcan**	**1.35 103**		*i* P	Pn	22 45 37.1	-1.4
	baz=283,slow=3.2						
BRU2				*e*S	Sn	22 45 56.6	+0.2
TBS2		**1.39 103**		*e*P	Pn	22 45 38.7	-0.2
TBS2				*i* S	Sg	22 45 58.0	-0.6
JTS	**Las Juntas de**	**1.49 322**	⇑	*i* P	Pn	22 45 38.5	-1.8
DVD	**David**	**1.69 113**		*i* P	Pn	22 45 43.4	+0.4
DVD				*i* S	Sb	22 46 05.5	-0.5
BCIP	**Isla Barro Col**	**4.14 89**		*e*P	Pn	22 46 16.8	+0.1
FRIJ	**El Hiral**	**4.25 88**		*e*P	Pn	22 46 18.6	+0.4

*IDC **25** 23:03:21.7±1.0, 13°.70S×169°.18E, h0km, mb4.1/11, mb1 4.4/12, mb1mx4.1/44, mbtmp4.2/12, ML5.0/1, MS3.7/22, Ms1 3.7/22, ms1mx3.6/32, Error ellipse: s-maj=33.2km s-min=19.6km az=136.0*
*NEIC **25** 23:03:22.8±2.2, 13°.77S×169°.28E, h10km±2km, mb4.3/11, Error ellipse: s-maj=20.1km s-min=11.1km az=180.0*
*ISCJB **25** 23:03:24.8±0.5, 13°.94S±0°.06×169°.2E±0°.1, h33km, mb4.3/19, MS3.7/22, Error ellipse: s-maj=15.3km s-min=7.3km az=20.1*
ISC 25 23:03:27.0±0.8, 13°.85S±0°.09×169°.2E±0°.2, h35km, n43, σ1§04/29, mb4.3/19, MS3.7/22, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.58 197**		*e*P	**Pn**	**23 05 27.8**	**-1.1**
	158nm,0.8s						
DZM				*e*LR	LR	23 07 19.8	
	comp=Z,1μm,24.8s						
DZM	**Mont Dzumac**	**8.58 197**		Pn	**Pn**	**23 05 28.0**	**-0.9**
	18nm,0.3s,baz=48,slow=16,SNR=125						
DZM				Sn	**Sn**	**23 07 03.9**	**-0.7**
	0.3nm,0.3s,baz=308,slow=19,SNR=2.0						
DZM				LR	LR	23 08 35.2	
	comp=Z,1μm,18.8s,baz=20,slow=36						
ONTNC	**Ouen Toro**	**8.80 197**		*e*Pn	**Pn**	**23 05 30.9**	**-1.0**
HNR	**Honiara**	**10.06 295**		LR	LR	23 09 35.9	
	comp=Z,329nm,20.5s,baz=131,slow=38						
EIDS	**Eidsvold**	**20.52 233**		*e*P	**P**	**23 08 03.4**	**+1.0**
	29nm,1.1s						
PMG	**Port Moresby**	**22.02 279**		P	**P**	**23 08 17.9**	**-0.6**
	8.9nm,0.5s,baz=301,slow=5.9,SNR=2.1						
PMG				LR	LR	23 15 53.9	
	comp=Z,370nm,18.4s,baz=54,slow=34						
CTA	**Charters Tower**	**22.78 251**		P	**P**	**23 08 28.2**	**+1.5**
	4.5nm,1.0s,baz=66,slow=17,SNR=2.9						
URZ	**Urewera**	**25.31 165**		LR	LR	23 16 51.7	
	comp=Z,128nm,19.7s,baz=1.0,slow=32						
JAY	**Jayapura**	**30.31 289**		LR	LR	23 22 26.0	
	comp=Z,174nm,19.5s,baz=177,slow=38						
STKA	**Stephens Creek**	**30.98 230**		P	**P**	**23 09 41.9**	**+0.7**
	12nm,1.0s,baz=73,slow=8.9,SNR=11						
STKA				LR	LR	23 21 09.9	
	comp=Z,215nm,19.0s,baz=54,slow=34						
WR1	**Warramunga Arr**	**33.84 255**		*e*P	**P**	**23 10 05.8**	**-0.6**
WRA	**Warramunga Arr**	**33.84 255**		P	**P**	**23 10 05.9**	**-0.6**
	1.9nm,0.9s,baz=81,slow=10,SNR=4.9						
AS31	**Alice Springs**	**34.72 248**		*e*P	**P**	**23 10 14.5**	**+0.5**
	4.2nm,1.1s						
ASAR	**Alice Springs**	**34.72 248**		P	**P**	**23 10 13.0**	**-1.0**
	2.7nm,0.7s,baz=83,slow=8.5,SNR=20						
ASAR				LR	LR	23 23 20.9	
	comp=Z,231nm,19.7s,baz=82,slow=34						
PPT2	**Papeete2**	**39.82 101**		*e*LQ	LQ	23 20 02.5	
	736nm,33.2s						
PPT2				*e*LR	LR	23 21 30.8	
	comp=Z,293nm,29.0s						
TBI	**Tubuai**	**40.20 110**		*e*LQ	LQ	23 19 58.8	
	439nm,36.0s						
TBI				*e*LR	LR	23 21 40.3	
	comp=Z,186nm,31.2s						
MJAR	**Matsushiro Arr**	**58.02 331**		LR	LR	23 35 16.5	
	comp=Z,22nm,20.9s,baz=310,slow=33						
VNDA	**Vanda**	**63.79 182**		LR	LR	23 39 13.7	
	comp=Z,46nm,18.0s,baz=340,slow=34						
SBA	**Scott Base**	**64.02 181**		*e*P	**P**	**23 13 56.9**	**+0.3**
	13nm,1.4s						
KSRS	**Korea Array**	**64.09 324**		LR	LR	23 42 03.2	
	comp=Z,19nm,18.1s,baz=133,slow=36						
USRK	**Ussuriysk Ar.**	**66.97 332**		LR	LR	23 39 44.6	
	comp=Z,24nm,20.8s,baz=152,slow=33						
PETK	**Petropavlovsk-**	**67.41 353**		LR	LR	23 38 01.9	
	comp=Z,84nm,21.0s,baz=134,slow=31						
CM31	**Chiang Mai Arr**	**76.30 293**		*e*P	**P**	**23 15 13.2**	**+0.4**
	7.2nm,1.2s						
CMAR	**Chiang Mai Arr**	**76.30 293**		P	**P**	**23 15 13.2**	**+0.4**
	0.4nm,0.4s,baz=121,slow=3.2,SNR=5.1						
CMAR				LR	LR	23 44 53.3	
	comp=Z,15nm,21.9s,baz=125,slow=33						
KDAK	**Kodiak Island**	**78.00 20**		LR	LR	23 42 38.4	
	comp=Z,66nm,21.9s,baz=134,slow=30						
EYAK	**Cordova Ski Ar**	**82.40 21**		*e*P	**P**	**23 15 46.0**	**+0.8**
	19nm,1.6s						
ULN	**Ulaanbaatar**	**82.54 323**		*e*P	**P**	**23 15 46.6**	**+0.1**
	2.1nm,0.9s						
SONA0	**Songino Array**	**82.91 323**		*e*P	**P**	**23 15 47.8**	**-0.5**
SONM	**Songino Array**	**82.91 323**		P	**P**	**23 15 47.8**	**-0.5**
	0.8nm,0.8s,baz=119,slow=5.8,SNR=4.9						
SONM				LR	LR	23 50 52.2	
	comp=Z,31nm,21.1s,baz=90,slow=34						
MAW	**Mawson**	**83.39 202**		P	**P**	**23 15 51.6**	**+1.2**
	2.1nm,0.8s,baz=115,slow=11,SNR=3.4						
MAW	**Mawson**	**83.39 202**		*e*P	**P**	**23 15 51.6**	**+1.2**
	4.2nm,1.8s						
RND	**Reindeer**	**83.53 18**		*e*P	**P**	**23 15 49.0**	**-2.1**
	12nm,1.2s						
MCK	**McKinley**	**83.75 17**		*e*P	**P**	**23 15 50.7**	**-1.5**
	6.9nm,1.0s						
HDA	**Harding Lake**	**84.84 18**		*e*P	**P**	**23 15 56.1**	**-1.6**
	9.5nm,1.2s						
ILAR	**Eielson Array**	**85.13 17**		P	**P**	**23 15 57.4**	**-1.7**
	1.6nm,0.8s,baz=236,slow=5.5,SNR=13						
ILAR				LR	LR	23 46 55.2	
	comp=Z,63nm,21.1s,baz=242,slow=31						
NV01	**Mina Array Sit**	**85.30 49**		*e*P	**P**	**23 16 01.7**	**+0.9**
NVAR	**Mina Array Bea**	**85.30 49**		P	**P**	**23 16 01.7**	**+0.9**
	0.2nm,0.3s,baz=224,slow=6.3,SNR=2.5						
NVAR				LR	LR	23 48 20.1	
	comp=Z,68nm,18.5s,baz=258,slow=32						
LPIG	**La Paz**	**87.14 64**		LR	LR	23 46 21.7	
	comp=Z,29nm,19.2s,baz=230,slow=30						
ELK	**Elko**	**88.33 47**		LR	LR	23 48 05.0	
	comp=Z,68nm,19.3s,baz=284,slow=30						
ANMO	**Albuquerque**	**93.28 55**		LR	LR	23 49 56.9	
	comp=Z,42nm,20.2s,baz=270,slow=30						
ZALV	**Zalesovo Beam**	**97.79 324**		LR	LR	00 00 33.7	
	comp=Z,15nm,19.3s,baz=70,slow=35						
MK32	**Makanchi Array**	**97.86 316**		*e*P	**P**	**23 16 58.5**	**-0.5**
MKAR	**Makanchi Array**	**97.86 316**	

*IDC **25** 23:09:44.3±1.2, 30°.58S×177°.44W, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.8/40, mbtmp4.2/4, ML3.8/1, MS3.1/3, Ms1 3.1/3, ms1mx2.8/30, Error ellipse: s-maj=43.7km s-min=31.1km az=146.0*
*NEIC **25** 23:09:50.3±0.3, 30°.39S×177°.48W, h40km±12km, mb4.0/2, Error ellipse: s-maj=38.6km s-min=6.6km az=69.0*
ISC 25 23:09:48.7±1.1, **30°.6S**±0°.1×**177°.5W**±0°.2, **h33**km, **n22**, σ1§**03**/20, **mb4.1**/4, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.41**	**344**	*e*Pn	**Pn**	**23 10 10.4**	**-1.6**
URZ	**Urewera**	**8.84**	**209**	Pn	**Pn**	**23 11 52.2**	**-1.8**
	1.1nm,0.3s,baz=247,slow=13,SNR=7.1						
URZ				Sn	**Sn**	**23 13 31.7**	**-0.8**
	1.9nm,0.3s,baz=100,slow=22,SNR=7.2						
DZM	**Mont Dzumac**	**16.71**	**297**	LR	LR	23 17 59.5	
	comp=Z,104nm,19.4s,baz=235,slow=30						
PPT	**Papeete**	**28.50**	**69**	LR	LR	23 27 46.5	
	comp=Z,23nm,18.3s,baz=262,slow=38						
STKA	**Stephens Creek**	**34.86**	**257**	P	**P**	**23 16 38.3**	**+1.4**
	2.3nm,0.4s,baz=98,slow=12,SNR=7.3						
STKA	**Stephens Creek**	**34.86**	**257**	*e*P	**P**	**23 16 38.3**	**+1.4**
	1.4nm,0.8s						
AS31	**Alice Springs**	**43.54**	**267**	*e*P	**P**	**23 17 50.0**	**+0.5**
	6.1nm,2.0s						
ASAR	**Alice Springs**	**43.54**	**267**	P	**P**	**23 17 50.0**	**+0.5**
	0.8nm,0.5s,baz=102,slow=7.0,SNR=9.3						
WR1	**Warramunga Arr**	**44.55**	**272**	*e*P	**P**	**23 17 58.5**	**+0.9**
WRA	**Warramunga Arr**	**44.55**	**272**	P	**P**	**23 17 58.5**	**+0.9**
	3.1nm,0.6s,baz=103,slow=8.8,SNR=16						
ATAH	**Atahualpa**	**94.17**	**101**	LR	LR	23 53 09.7	
	comp=Z,9.9nm,21.7s,baz=228,slow=28						
FIA0	**FINESS Array S**	**145.49**	**340**	*e*PKPbc	**PKPab**	**23 29 22.9**	**-0.1**
FINES	**FINESS Array B**	**145.49**	**340**	PKPbc	**PKPab**	**23 29 22.9**	**-0.1**
	5.6nm,0.6s,baz=56,slow=3.5,SNR=48						
NB2	**NORSAR Subarra**	**149.02**	**352**	PKP	**PKPbc**	**23 29 32.9**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=11,slow=2.9						
NB200	**NORSAR Array S**	**149.02**	**352**	*e*PKPbc	**PKiKP**	**23 29 33.3**	**-0.7**
NOA	**NORSAR Array B**	**149.02**	**352**	PKPbc	**PKiKP**	**23 29 33.3**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=14,slow=4.3,SNR=6.4						
AKASG	**Malin Array Be**	**151.74**	**323**	PKPbc	**PKiKP**	**23 29 39.6**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=49,slow=2.8,SNR=3.0						
AKBB	**Malin Array Si**	**151.74**	**323**	*e*PKPbc	**PKiKP**	**23 29 39.6**	**-0.2**
BR101	**Keskin Array S**	**153.09**	**298**	*e*PKPbc	**PKiKP**	**23 29 43.6**	**+0.5**
BRTR	**Keskin Array B**	**153.09**	**298**	PKPbc	**PKiKP**	**23 29 43.6**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=153,slow=5.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**162.60**	**177**	PKPab	**PKPab**	**23 30 37.4**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=174,slow=5.0,SNR=6.5						
TOA1	**Torodi Ar. Sit**	**162.61**	**177**	*e*PKPab	**PKPab**	**23 30 37.4**	**+1.5**

*ISCJB **25** 23:19:11.9±0.8, 51°.47N±0°.04×16°.05E±0°.04, h0km, Error ellipse: s-maj=5.1km s-min=3.8km az=10.2*
*PRU **25** 23:19:13.7±0.0, 51°.46N×16°.11E, h0km*
*VIE **25** 23:19:14.3±1.0, 51°.38N×16°.01E, h0km, mb2.3/4, ml2.5/6, Error ellipse: s-maj=8.8km s-min=6.5km az=30.0, Suspected Mining induced.*
ISC 25 23:19:13.1±1.3, **51°.48N**±0°.06×**16°.14E**±0°.04, **h0**km, **n19**, σ0§**93**/40, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**171**	*i* Pg	**Pg**	**23 19 25.8**	**+0.4**
KSP				*e*Sg	**Sg**	**23 19 34.2**	**+0.4**
CHVC	**Chvalec**	**0.90**	**183**	*e*PG	**Pg**	**23 19 30.6**	**+0.4**
CHVC				*e*SG	**Sg**	**23 19 42.4**	**+0.5**
	comp=Z,17nm,0.3s						
OSTC	**Ostas**	**0.93**	**177**	*e*PG	**Pg**	**23 19 31.1**	**+0.3**
OSTC				*e*SG	**Sg**	**23 19 43.6**	**+0.7**
	comp=Z,25nm,0.6s						
UPC	**Upice**	**0.98**	**185**	*e*PG	**Pg**	**23 19 31.8**	**0.0**
UPC				*e*SG	**Sg**	**23 19 45.2**	**+0.7**
PVCC	**Panska Ves**	**1.38**	**227**	*e*PG	**Pn**	**23 19 39.0**	**-0.5**
PVCC				*e*SG	**Sg**	**23 19 57.1**	**-0.2**
	comp=Z,96nm,0.2s						
BRG	**Berggiesshubel**	**1.51**	**247**	PG	**Pn**	**23 19 41.1**	**-0.3**
BRG				SG	**Sn**	**23 20 01.6**	**-0.2**
	34nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.79**	**209**	*e*PG	**Pn**	**23 19 45.4**	**+0.2**
GOPC				*e*SG	**Sb**	**23 20 10.0**	**+0.3**
	comp=Z,13nm,0.6s						
PRU	**Pruhonice**	**1.81**	**215**	*e*PN	**Pn**	**23 19 45.1**	**-0.3**
PRU				*e*PG	**Pb**	**23 19 46.5**	**-0.5**
PRU				*e*SG	**Sg**	**23 20 11.7**	**+0.6**
	comp=Z,12nm,0.2s						
MORC	**Moravsky Berou**	**1.93**	**152**	*e*PN	**Pn**	**23 19 46.5**	**-0.6**
MORC				*e*SG	**Sn**	**23 20 11.7**	**-0.4**
CLL	**Collm**	**1.97**	**266**	*e*Pg	**Pn**	**23 19 48.0**	**+0.3**
CLL				*i*		23 19 52.4	
CLL				*e*Sg	**Sb**	**23 20 15.0**	**+0.1**
	comp=Z,13nm,0.4s						
VRAC	**Vranov**	**2.20**	**172**	*e*PN	**Pn**	**23 19 50.6**	**-0.2**
VRAC				*e*SG	**Sb**	**23 20 21.1**	**-0.3**
KRUC	**Moravsky**	**2.43**	**176**	*e*PN	**Pn**	**23 19 54.1**	**+0.1**
KRUC				*e*SG	**Sb**	**23 20 28.4**	**+0.3**
OJC	**Ojcow**	**2.64**	**117**	*e*Pg	**Pg**	**23 20 04.6**	**+0.9**
OJC				*e*Sg	**Sg**	**23 20 39.2**	**+1.4**
JAVC	**Velka Javorina**	**2.81**	**159**	*e*PN	**Pb**	**23 20 01.3**	**-2.7**
KHC	**Kasperske Hory**	**2.87**	**216**	*e*PN	**Pn**	**23 20 00.1**	**0.0**
KHC				*e*PG	**Pb**	**23 20 05.9**	**+0.7**
KHC				*e*SN	**Sn**	**23 20 35.0**	**-0.4**
KHC				*e*SG	**Sg**	**23 20 44.2**	**-1.0**
	comp=Z,9.7nm,0.3s						
CONA	**Conrad Observa**	**3.56**	**183**	*e*Pn	**Pn**	**23 20 10.3**	**+0.6**
	comp=Z,1.1nm,0.4s						
CONA				Pg	**Pg**	**23 20 20.4**	**-0.9**
	comp=Z,1.7nm,0.2s						
CONA				Sg	**Sg**	**23 21 09.0**	**+1.5**
	comp=Z,2.9nm,0.2s						
MOA	**Molln**	**3.84**	**199**	*e*Pn	**Pn**	**23 20 13.6**	**+0.3**
	comp=Z,0.8nm,0.2s						
MOA				Sg	**Sg**	**23 21 16.4**	**+0.2**
	comp=Z,3.7nm,0.4s						
ARSA	**Arzberg**	**4.26**	**186**	Sg	**Sg**	**23 21 31.7**	**+2.0**
	comp=Z,1.4nm,0.3s						
KBA	**Koelnbreinsper**	**4.77**	**204**	Pn	**Pn**	**23 20 26.4**	**0.0**
	comp=Z,0.8nm,0.3s						
KBA				Sg	**Sg**	**23 21 49.2**	**+2.9**
	comp=Z,2.1nm,0.4s						

*ISCJB **25** 23:21:32.7±0.3, 24°.84N±0°.01×122°.08E±0°.01, h1km±2km, Error ellipse: s-maj=2.2km s-min=1.9km az=141.4*
*TAP **25** 23:21:32.8, 24°.84N×122°.03E, h8km, ML3.2, C*
*JMA **25** 23:21:33.3, 24°.82N×122°.01E, h23km, M2.7*
ISC 25 23:21:32.7±0.9, **24°.87N**±0°.02×**122°.07E**±0°.02, **h9**km±6km, **n99**, σ0§**72**/192, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.12**	**261**	P	**Pg**	**23 21 35.3**	**-0.3**
	baz=271						
EGS				S	**Sg**	**23 21 37.0**	**-0.5**
	baz=271						
TWB1	**Santiao Chiao**	**0.16**	**333**	P	**Pg**	**23 21 36.7**	**+0.5**
	baz=350						
TWB1				S	**Sg**	**23 21 39.5**	**+1.0**
	baz=350						
NTC	**Toucheng**	**0.22**	**267**	P	**Pg**	**23 21 37.1**	**0.0**
	baz=275						
NTC				*e*S	**Sg**	**23 21 40.0**	**-0.1**
	baz=275						
TIPB	**Shuangxi**	**0.24**	**296**	P	**Pg**	**23 21 38.1**	**+0.4**
	baz=305						
TIPB				S	**Sg**	**23 21 41.5**	**+0.4**
	baz=305						
ILA	**Ilan**	**0.31**	**251**	*e*P	**Pg**	**23 21 38.9**	**0.0**
	baz=254						
ILA				*e*S	**Sg**	**23 21 43.2**	**+0.2**
	baz=254						
EOS1	**EOS1**	**0.32**	**170**	*e*P	**Pg**	**23 21 39.4**	**+0.4**
	baz=163						
EOS1				*e*S	**Sg**	**23 21 43.8**	**+0.5**
	baz=163						
NWF	**Wu-fen Shan**	**0.33**	**308**	P	**Pb**	**23 21 40.0**	**-0.9**
	baz=315						
NWF				*e*S	**Sb**	**23 21 45.2**	**-1.2**
	baz=315						
WFSB	**Wu-fen Shan**	**0.33**	**308**	P	**Pg**	**23 21 39.9**	**+0.6**
	baz=314						
WFSB				*e*S	**Sb**	**23 21 45.5**	**-0.8**
	baz=314						
TWE	**Neicheng**	**0.39**	**249**	P	**Pg**	**23 21 40.0**	**-0.4**
	baz=250						
TWE				*e*S	**Sg**	**23 21 45.3**	**-0.3**
	baz=250						
TWA	**Mucha**	**0.46**	**285**	P	**Pg**	**23 21 41.9**	**+0.3**
	baz=279						
TWA				*e*S	**Sg**	**23 21 48.4**	**+0.7**
	baz=279						
NHDH	**Xindian Distri**	**0.50**	**281**	P	**Pb**	**23 21 43.2**	**-0.6**
	baz=276						
NHDH				S	**Sg**	**23 21 49.2**	**+0.1**
	baz=276						
ENTT	**Nioudou**	**0.51**	**244**	P	**Pg**	**23 21 42.1**	**-0.5**
	baz=245						
ENTT				*e*S	**Sg**	**23 21 49.1**	**-0.2**
	baz=245						
NWLT	**Wulai**	**0.52**	**260**	P	**Pg**	**23 21 42.4**	**-0.4**
	baz=263						
NWLT				*e*S	**Sg**	**23 21 48.8**	**-1.0**
	baz=263						
NANB	**Nanao**	**0.52**	**214**	P	**Pg**	**23 21 42.6**	**-0.3**
	baz=219						
NANB				*e*S	**Sg**	**23 21 49.0**	**-0.8**
	baz=219						
ENA	**Nanau**	**0.53**	**214**	*e*P	**Pg**	**23 21 42.7**	**-0.3**
	baz=219						
ENA				*e*S	**Sg**	**23 21 49.0**	**-0.8**
	baz=219						
YM01	**YM01**	**0.53**	**302**	P	**Pb**	**23 21 44.0**	**-0.2**
	baz=305						
YM01				*e*S	**Sb**	**23 21 51.1**	**-1.0**
	baz=305						
TATO	**Taipei**	**0.54**	**282**	P	**Pg**	**23 21 43.6**	**+0.4**
	baz=277						
TATO				S	**Sg**	**23 21 50.1**	**-0.2**
	baz=277						
TAP	**Taipei**	**0.54**	**289**	*e*P	**Pb**	**23 21 44.3**	**-0.1**
	baz=284						
TAP				*e*S	**Sb**	**23 21 51.4**	**-0.8**
	baz=284						
YM08	**YM08**	**0.54**	**307**	P	**Pb**	**23 21 44.0**	**-0.4**
	baz=299						
YM08				*e*S	**Sb**	**23 21 51.4**	**-0.9**
	baz=299						
YM10	**YM10**	**0.54**	**302**	*e*P	**Pb**	**23 21 44.1**	**-0.4**
	baz=305						
YM10				*e*S	**Sb**	**23 21 51.1**	**-1.3**
	baz=305						
YM05	**YM05**	**0.55**	**303**	P	**Pb**	**23 21 44.2**	**-0.3**
	baz=296						
YM05				*e*S	**Sb**	**23 21 51.6**	**-0.9**
	baz=296						
YM04	**YM04**	**0.56**	**301**	P	**Pb**	**23 21 44.5**	**-0.3**
	baz=303						
YM04				*e*S	**Sg**	**23 21 51.2**	**+0.2**
	baz=303						
YM03	**YM03**	**0.57**	**303**	P	**Pb**	**23 21 44.6**	**-0.4**
	baz=296						
YM03				*e*S	**Sb**	**23 21 52.2**	**-1.0**
	baz=296						
TWY	**Chenhua**	**0.59**	**314**	P	**Pb**	**23 21 45.3**	**0.0**
	baz=307						
TWY				*e*S	**Sb**	**23 21 54.1**	**+0.4**
	baz=307						
ANP	**Anpu**	**0.59**	**303**	*e*P	**Pb**	**23 21 44.9**	**-0.4**
	baz=305						
ANP				*e*S	**Sg**	**23 21 52.4**	**+0.3**
	baz=305						
TWS1	**Kuangyinshan**	**0.64**	**292**	*e*P	**Pb**	**23 21 46.3**	**+0.3**
	baz=295						
TWS1				*e*S	**Sb**	**23 21 54.8**	**-0.2**
	baz=295						
NTST	**Danshui**	**0.64**	**298**	P	**Pb**	**23 21 46.2**	**+0.2**
	baz=301						
NTST				*e*S	**Sb**	**23 21 54.5**	**-0.6**
	baz=301						
YHNB	**Yeheng**	**0.66**	**253**	P	**Pg**	**23 21 44.8**	**-0.7**
	baz=254						
YHNB				*e*S	**Sg**	**23 21 52.6**	**-1.5**
	baz=254						
NSK	**Sanguang**	**0.67**	**254**	P	**Pg**	**23 21 45.0**	**-0.8**
	baz=255						
NSK				*e*S	**Sg**	**23 21 53.6**	**-0.9**
	baz=255						
WLTB	**Daxi**	**0.74**	**269**	*e*P	**Pb**	**23 21 47.8**	**-0.1**
	baz=271						
WLTB				*e*S	**Sg**	**23 21 56.7**	**0.0**
	baz=271						
NNSB	**Datong**	**0.76**	**235**	P	**Pg**	**23 21 47.2**	**-0.3**
	baz=236						
NNSB				*e*S	**Sg**	**23 21 57.2**	**-0.1**
	baz=236						
NNS	**Nan Shan**	**0.76**	**236**	*e*P	**Pg**	**23 21 47.3**	**-0.2**
	baz=237						
NNS				*e*S	**Sg**	**23 21 56.0**	**-1.4**
	baz=237						
PCYT	**Pengchaiyu**	**0.76**	**0**	*e*P	**Pn**	**23 21 49.2**	**-0.5**
	baz=355						
PCYT				*e*S	**Sn**	**23 22 00.7**	**-0.6**
	baz=355						
NCU	**National Centr**	**0.81**	**278**	*e*P	**Pn**	**23 21 49.4**	**-0.9**
	baz=279						
NCU				*e*S	**Sb**	**23 22 00.6**	**+0.7**
	baz=279						
NCUH	**Zhongli**	**0.81**	**277**	*e*P	**Pn**	**23 21 49.9**	**-0.5**
	baz=279						
NCUH				*e*S	**Sn**	**23 22 01.7**	**-0.8**
	baz=279						
NACB	**Ninganchiao**	**0.81**	**212**	P	**Pg**	**23 21 48.0**	**-0.4**
	baz=203						
NACB				*e*S	**Sg**	**23 21 57.5**	**-1.4**
	baz=203						
ETLH	**Xiulin Townshi**	**0.84**	**219**	*e*P	**Pg**	**23 21 48.6**	**-0.4**
	baz=231						
ETLH				*e*S	**Sg**	**23 21 59.2**	**-0.8**
	baz=231						
TWD	**Chiawan**	**0.89**	**209**	P	**Pg**	**23 21 49.6**	**-0.3**
	baz=201						
TWD				*e*S	**Sg**	**23 22 00.7**	**-0.8**
	baz=201						
JYNG	**Yonagunijimaku**	**0.90**	**117**	P	**Pg**	**23 21 50.3**	**+0.3**
JYNG				S	**Sb**	**23 22 02.8**	**+0.2**
YOJ	**Yonaguni jima**	**0.95**	**115**	*e*P	**Pg**	**23 21 51.2**	**+0.2**
	baz=114						
YOJ				*e*S	**Sb**	**23 22 04.5**	**+0.5**
	baz=114						
YOJ	**Yonaguni jima**	**0.95**	**115**	P	**Pg**	**23 21 50.9**	**-0.1**
YOJ				*e*S	**Sg**	**23 22 03.8**	**+0.5**
LIOB	**Emei**	**0.98**	**257**	*e*P	**Pn**	**23 21 52.6**	**-0.1**
	baz=259						
LIOB				*e*S	**Sb**	**23 22 05.0**	**-0.1**
	baz=259						
SBCB	**Hsinchu**	**0.99**	**266**	*e*P	**Pn**	**23 21 52.5**	**-0.3**
	baz=285						
SBCB				*e*S	**Sn**	**23 22 06.1**	**-0.7**
	baz=285						
NSTT	**Nanjuang**	**1.00**	**257**	*e*P	**Pg**	**23 21 52.0**	**+0.1**
	baz=258						
NSTT				*e*S	**Sb**	**23 22 05.2**	**-0.2**
	baz=258						
TWT	**Tachien**	**1.01**	**233**	*e*P	**Pb**	**23 21 52.9**	**+0.3**
	baz=230						
TWT				*e*S	**Sg**	**23 22 05.8**	**+0.3**
	baz=230						
WHF	**Hehuan Shan**	**1.02**	**226**	*e*P	**Pg**	**23 21 52.7**	**+0.3**
	baz=227						
WHF				*e*S	**Sg**	**23 22 05.7**	**-0.1**
	baz=227						
TDCB	**Techi**	**1.03**	**234**	*e*P	**Pb**	**23 21 52.3**	**-0.5**
	baz=230						
TDCB				*e*S	**Sg**	**23 22 05.7**	**-0.3**
	baz=230						
ENLB	**Shoufeng**	**1.05**	**204**	*e*P	**Pg**	**23 21 53.3**	**+0.4**
	baz=216						
ENLB				*e*S	**Sg**	**23 22 07.2**	**+0.8**
	baz=216						
CHGB	**Renai**	**1.14**	**226**	*e*P	**Pb**	**23 21 54.3**	**-0.5**
	baz=227						
CHGB				*e*S	**Sb**	**23 22 09.2**	**-0.6**
	baz=227						
WHP	**Taichung City**	**1.18**	**240**	*e*P	**Pb**	**23 21 55.2**	**-0.1**
	baz=242						
WHP				*e*S	**Sb**	**23 22 09.6**	**-1.1**
	baz=242						
ESL	**Shilin**	**1.20**	**209**	*e*P	**Pn**	**23 21 55.4**	**-0.3**
	baz=210						
ESL				*e*S	**Sb**	**23 22 10.3**	**-0.8**
	baz=210						
NMLH	**Miaoli**	**1.21**	**255**	*e*P	**Pg**	**23 21 56.5**	**+0.6**
	baz=256						
NMLH				*e*S	**Sn**	**23 22 12.4**	**+0.1**
	baz=256						
OWD	**Renai**	**1.22**	**222**	*e*P	**Pn**	**23 21 55.5**	**-0.6**
	baz=228						
OWD				*e*S	**Sb**	**23 22 11.6**	**-0.4**
	baz=228						
NSY	**Sanyi**	**1.27**	**250**	*e*P	**Pb**	**23 21 57.0**	**+0.1**
	baz=251						
NSY				*e*S	**Sn**	**23 22 13.5**	**-0.4**
	baz=251						
TWQ1	**Liyutan**	**1.29**	**247**	*e*P	**Pg**	**23 21 57.7**	**+0.3**
	baz=248						
TWQ1				*e*S	**Sg**	**23 22 14.2**	**+0.1**
	baz=248						
PTSB	**Yuanli**	**1.31**	**252**	*e*P	**Pb**	**23 21 57.3**	**-0.2**
	baz=273						
PTSB				*e*S	**Sg**	**23 22 15.5**	**+0.6**
	baz=273						
EGFH	**Guangfu**	**1.33**	**206**	*e*P	**Pn**	**23 21 57.6**	**+0.1**
	baz=215						
EGFH				*e*S	**Sb**	**23 22 13.7**	**-1.3**
	baz=215						
DPDB	**Guoxing**	**1.33**	**232**	*e*P	**Pb**	**23 21 57.8**	**-0.1**
	baz=242						
DPDB				*e*S	**Sb**	**23 22 14.4**	**-0.6**
	baz=242						
VWDT	**VWDT**	**1.39**	**218**	*e*P	**Pn**	**23 21 58.4**	**0.0**
	baz=228						
VWDT				*e*S	**Sn**	**23 22 16.0**	**-0.9**
	baz=228						
WDJ	**Dajia District**	**1.40**	**249**	*e*P	**Pb**	**23 21 59.2**	**+0.2**
	baz=250						
WDJ				*e*S	**Sg**	**23 22 18.6**	**+0.9**
	baz=250						
SMLT	**Sun Moon Lake**	**1.45**	**228**	*e*P	**Pb**	**23 21 59.7**	**-0.2**
	baz=229						
SMLT				*e*S	**Sb**	**23 22 18.5**	**+0.1**
	baz=229						
TCU	**Taichung**	**1.46**	**241**	*e*P	**Pg**	**23 22 00.6**	**-0.1**
	baz=242						
TCU				*e*S	**Sg**	**23 22 20.4**	**+0.8**
	baz=242						
TYC	**Yuchr**	**1.46**	**229**	*e*P	**Pb**	**23 22 00.5**	**+0.4**
	baz=223						
TYC				*e*S	**Sb**	**23 22 18.7**	**-0.1**
	baz=223						
SSLB	**Suanglung**	**1.48**	**224**	*e*P	**Pb**	**23 22 00.1**	**-0.3**
	baz=226						
SSLB				*e*S	**Sn**	**23 22 18.7**	**-0.3**
	baz=226						
HGSD	**Ruisui**	**1.49**	**203**	*e*P	**Pb**	**23 22 00.7**	**+0.2**
	baz=224						
HGSD				*e*S	**Sg**	**23 22 21.2**	**+0.6**
	baz=224						
EHY	**Hungye**	**1.52**	**207**	*e*P	**Pn**	**23 22 00.4**	**+0.4**
	baz=220						
EHY				*e*S	**Sb**	**23 22 20.4**	**+0.1**
	baz=220						
WNT	**Mingjian**	**1.60**	**232**	*e*P	**Pg**	**23 22 03.5**	**0.0**
	baz=223						
WNT				*e*S	**Sg**	**23 22 25.7**	**+1.5**
	baz=223						
IRIF	**Iriomote-Funau**	**1.60**	**109**	P	**Pn**	**23 21 59.5**	**-1.7**
IRIF				*e*S	**Sn**	**23 22 21.3**	**-0.7**
WJS	**Zhushan**	**1.60**	**230**	*e*P	**Pg**	**23 22 04.3**	**+0.8**
	baz=223						
WJS				*e*S	**Sg**	**23 22 26.1**	**+1.8**
	baz=223						
WHYT	**Xinyi Township**	**1.61**	**224**	*e*P	**Pn**	**23 22 01.7**	**+0.4**
	baz=226						
WHYT				*e*S	**Sb**	**23 22 23.0**	**0.0**
	baz=226						
YULB	**Yu-li**	**1.63**	**206**	*e*P	**Pn**	**23 22 02.1**	**+0.5**
	baz=218						
YULB				*e*S	**Sb**	**23 22 23.1**	**-0.5**
	baz=218						
TWF1	**Yuli**	**1.66**	**205**	*e*P	**Pn**	**23 22 02.8**	**+0.7**
	baz=217						
TWF1				*e*S	**Sn**	**23 22 23.5**	**-0.1**
	baz=217						
YUS	**Yu-Shan**	**1.71**	**217**	*e*P	**Pb**	**23 22 04.4**	**-0.2**
	baz=228						
YUS				*e*S	**Sb**	**23 22 26.3**	**-0.1**
	baz=228						
HATJ	**Hateruma jima**	**1.78**	**117**	*e*S	**Sn**	**23 22 25.8**	**-0.5**
CHN5	**Tsauling**	**1.79**	**225**	*e*P	**Pg**	**23 22 06.9**	**-0.2**
	baz=229						
CHN5				*e*S	**Sg**	**23 22 30.1**	**-0.2**
	baz=229						
WDLH	**Douliu**	**1.82**	**230**	*e*S	**Sg**	**23 22 31.0**	**-0.3**
	baz=234						
JKRS	**Kuro-shima**	**1.88**	**109**	P	**Pn**	**23 22 04.7**	**-0.3**
JKRS				*e*S	**Sn**	**23 22 28.7**	**-0.1**
ELDTW	**Lidau**	**1.93**	**210**	*e*P	**Pn**	**23 22 07.0**	**+1.2**
	baz=215						
ELDTW				*e*S	**Sn**	**23 22 31.0**	**+0.8**
	baz=215						
JIJ	**Ishigaki jima**	**1.95**	**104**	*e*S	**Sn**	**23 22 30.3**	**-0.4**
CHN4	**Tsaushan**	**2.02**	**222**	*e*P	**Pb**	**23 22 10.3**	**+0.6**
	baz=227						
CHN4				*e*S	**Sg**	**23 22 37.3**	**-0.4**
	baz=227						
TPUB	**Ta-pu**	**2.04**	**220**	*e*P	**Pb**	**23 22 10.2**	**+0.3**
	baz=210						
TPUB				*e*S	**Sb**	**23 22 37.0**	**+1.5**
	baz=210						
STYT	**Tauyuan**	**2.08**	**216**	*e*P	**Pb**	**23 22 10.5**	**-0.1**
	baz=210						
STYT				*e*S	**Sb**	**23 22 36.6**	**+0.1**
	baz=210						
WTP	**Ta-pu**	**2.09**	**220**	*e*P	**Pb**	**23 22 11.4**	**+0.6**
	baz=212						
WTP				*e*S	**Sg**	**23 22 38.9**	**-1.0**
	baz=212						
TWK	**Hsinying**	**2.15**	**223**	*e*P	**Pb**	**23 22 11.4**	**-0.4**
	baz=227						
TWK				*e*S	**Sb**	**23 22 40.2**	**+1.6**
	baz=227						
PTTC	**Pingtan**	**2.18**	**287**	*e*P	**Pn**	**23 22 09.1**	**0.0**
	baz=285						
PTTC				*e*S	**Sn**	**23 22 36.0**	**-0.2**
	baz=285						
SNST	**Tainan City**	**2.18**	**222**	*e*P	**Pb**	**23 22 11.8**	**-0.6**
	baz=229						
SNST				*e*S	**Sb**	**23 22 40.4**	**+1.0**
	baz=229						
CHN1	**Nanshi**	**2.19**	**220**	*e*P	**Pb**	**23 22 11.9**	**-0.6**
	baz=213						
CHN1				*e*S	**Sb**	**23 22 41.0**	**+1.2**
	baz=213						
SGST	**Jiashian**	**2.23**	**218**	*e*P	**Pb**	**23 22 13.4**	**+0.1**
	baz=211						
SGST				*e*S	**Sb**	**23 22 42.7**	**+1.6**
	baz=211						
SLGT	**Liugui**	**2.27**	**215**	*e*P	**Pb**	**23 22 13.6**	**-0.4**
	baz=222						
SLGT				*e*S	**Sb**	**23 22 43.4**	**+1.2**
	baz=222						
MATB	**Ma-tsu**	**2.31**	**304**	*e*P	**Pn**	**23 22 11.3**	**+0.4**
	baz=300						
MATB				*e*S	**Sb**	**23 22 40.7**	**-2.4**
	baz=300						
ECL	**Taimali**	**2.48**	**205**	*e*P	**Pn**	**23 22 14.3**	**+1.1**
	baz=197						
SSD	**Sandimen**	**2.49**	**212**	*e*P	**Pb**	**23 22 16.8**	**-0.8**
	baz=216						
MASBT	**Mashibuluo

MHZQ	Yeshan	3.01	295	eP		Pn	23 22 22.2 +1.7
	baz=291						
MHZQ				eS		Sn	23 22 57.7 +1.0
	baz=291						
AXDP	Jialang	3.72	271	eP		Pn	23 22 31.0 +0.6
	baz=269						

ISCJB ***25*** *23:32:39.2±0.8, 43°.30N±0°.04×126°.98W±0°.06, h10km, mb3.2/2, MS3.3/3, Error ellipse: s-maj=7.6km s-min=4.8km az=145.7*
ANF ***25*** *23:32:40.0±0.9, 43°.23N×126°.86W, ML3.3/10, Error ellipse: s-maj=9.3km s-min=5.6km az=60.0*
NEIC ***25*** *23:32:40.8±0.9, 43°.24N×126°.97W, h10km±3km, mb3.8/2, Error ellipse: s-maj=11.5km s-min=4.9km az=149.0*
IDC ***25*** *23:32:41.3±2.2, 43°.41N×126°.71W, h0km, mb3.3/3, mb1 3.8/6, mb1mx3.5/37, mbtmp3.4/6, ML3.7/3, MS3.3/6, Ms1 3.3/6, ms1mx3.0/19, Error ellipse: s-maj=35.0km s-min=17.9km az=54.0*

ISC 25 23:32:41.3±1.3, 43°.26N±0°.06×126°.92W±0°.09, h10km, n63, σ0 95/64, MS3.3/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	1.94	101	ePn	Pn	23 33 12.6	-1.8
J01E	Myrtle Point	2.19	92	P	Pn	23 33 16.3	-1.5
	baz=273,SNR=54						
J01E				S	Sn	23 33 44.6	-0.3
	baz=273						
I02D	Swisshome	2.39	68	P	Pn	23 33 19.3	-1.1
	baz=250,SNR=164						
K02D	Willamette Mer	2.46	102	P	Pn	23 33 20.3	-1.2
	baz=284,SNR=66						
K02D				S	Sn	23 33 51.4	-0.3
	baz=284						
I03D	Drain, OR	2.64	79	P	Pn	23 33 22.9	-1.0
	baz=261,SNR=73						
I03D				S	Sn	23 33 56.1	+0.2
	baz=261						
L02E	Cave Junction	2.68	113	P	Pn	23 33 23.8	-0.8
	baz=295,SNR=20						
L02E				S	Sn	23 33 57.3	+0.1
	baz=295						
COR	Corvallis	2.93	62	ePn	Pn	23 33 27.8	-0.1
HUMO	Hull Mountain	2.98	101	ePn	Pn	23 33 28.4	-0.4
G03D	McMinnville, O	3.27	52	P	Pn	23 33 32.0	-0.7
	baz=235,SNR=45						
G03D				S	Sn	23 34 11.6	0.0
	baz=235						
H04D	Lebanon	3.28	66	P	Pn	23 33 32.9	+0.2
	baz=249,SNR=14						
H04D				S	Sn	23 34 12.2	+0.4
	baz=249						
I04A	Tendick Farm,	3.32	79	P	Pn	23 33 33.5	+0.1
	baz=262,SNR=14						
I04A				S	Sn	23 34 13.8	+0.8
	baz=262						
YBH	Yreka Blue Hor	3.47	115	Pn	Pn	23 33 36.2	+0.7
	1.9nm,0.3s,baz=316,slow=10,SNR=30						
YBH				Sn	Sb	23 34 22.1	-3.0
	0.7nm,0.3s,baz=90,slow=12,SNR=3.3						
YBH	Yreka Blue Hor	3.47	115	ePn	Pn	23 33 36.0	+0.5
L04D	Klamath Falls	3.56	105	S	Sn	23 34 19.5	+0.6
	baz=288						
F03A	Seaside	3.59	41	ePn	Pn	23 33 36.9	-0.1
H04A	Detroit Lake	3.70	66	ePn	Pn	23 33 38.9	+0.2
F04D	Rainier, OR	3.97	43	P	Pn	23 33 41.3	-0.9
	baz=226						
PINE	Pine Mountain	4.38	81	ePn	Pn	23 33 47.4	-0.7
K05A	Summer Lake	4.46	95	ePn	Pn	23 33 49.3	+0.2
G05D	Wamic, OR	4.49	62	P	Pn	23 33 49.7	+0.3
	baz=246,SNR=27						
E04D	Cinebar	4.52	42	P	Pn	23 33 49.5	-0.3
	baz=225,SNR=11						
NLWA	Neilton Lookou	4.66	26	ePn	Pn	23 33 51.3	-0.4
F05D	White Salmon	4.70	54	P	Pn	23 33 53.1	+0.8
	baz=238,SNR=16						
F05D				S	Sn	23 34 48.7	+1.8
	baz=238						
G06A	Carlson Farm,	4.93	64	ePn	Pn	23 33 55.1	-0.4
LON	Longmire	5.03	44	ePn	Pn	23 33 57.4	+0.5
D03D	Eldon	5.05	31	P	Pn	23 33 56.2	-0.9
	baz=214,SNR=16						
D03D				S	Sn	23 34 53.9	-1.6
	baz=214						
D05A	Enumclaw	5.25	40	ePn	Pn	23 33 59.9	0.0
F07A	Phinny Hill Vi	5.65	60	ePn	Pn	23 34 05.4	+0.1
PGC	Sidney	5.91	23	ePn	Pn	23 34 07.8	-1.1
LTY	Liberty	5.95	46	ePn	Pn	23 34 09.6	0.0
B05A	Bryant	6.04	32	P	Pn	23 34 10.1	-0.5
	baz=216,SNR=6.8						
B05A				S	Sn	23 35 20.0	+0.3
	baz=216						
G08A	Pilot Rock	6.07	68	ePn	Pn	23 34 11.0	-0.1
HAWA	Hanford	6.12	57	ePn	Pn	23 34 12.3	+0.6
B06A	Marblemount	6.48	34	ePn	Pn	23 34 16.3	-0.5
D08A	Wollman Farm,	6.81	53	ePn	Pn	23 34 21.8	+0.5
E09A	Wood Farm, Sta	7.03	59	ePn	Pn	23 34 24.2	-0.1
BMO	Blue Mountains	7.11	74	ePn	Pn	23 34 25.1	-0.3
CMB	Columbia Colle	7.21	134	ePn	Pn	23 34 26.4	-0.4
F10A	Beach Ranch, E	7.43	65	ePn	Pn	23 34 30.2	+0.4
C09A	Chrisman Ranch	7.58	50	ePn	Pn	23 34 31.9	0.0
NVAR	Mina Array Bea	8.12	124	LR	LR	23 37 57.0	
	comp=Z,55nm,19.1s,baz=206,slow=39						
NEW	Newport	8.48	50	Pn	Pn	23 34 44.8	+0.6
	0.7nm,0.3s,baz=266,slow=11,SNR=6.0						
NEW				LR	LR	23 38 04.4	
	comp=Z,217nm,21.3s,baz=235,slow=39						
NEW	Newport	8.48	50	ePn	Pn	23 34 44.6	+0.3
NEW	Newport	8.48	50	P	Pn	23 34 44.1	-0.1
	baz=237						
MSO	Missoula	9.86	64	P	Pn	23 35 03.1	0.0
	baz=253						
PD31	Pinedale Array	12.72	86	ePn	Pn	23 35 45.1	+2.6
PDAR	Pinedale Array	12.72	86	Pn	Pn	23 35 45.1	+2.6
	0.1nm,0.3s,baz=273,slow=12,SNR=6.0						
PDAR				LR	LR	23 40 52.5	
	comp=Z,153nm,20.9s,baz=286,slow=39						
DLBC	Dease Lake	15.32	354	Pn	P	23 36 21.4	-0.9
	0.1nm,0.3s,baz=141,slow=2.2,SNR=4.5						
DLBC	Dease Lake	15.32	354	ePn	Pn	23 36 17.2	-0.3
	9.8nm,1.4s						
YKA	Yellowknife Ar	20.58	16	P	P	23 37 20.4	+0.3
	1.4nm,0.8s,baz=204,slow=11,SNR=4.1						
YKB5	Yellowknife Ar	20.58	16	eP	P	23 37 20.4	+0.3
ULM	Lac du Bonnet	22.27	61	LR	LR	23 46 52.8	
	comp=Z,112nm,19.3s,baz=288,slow=39						
TXAR	Lajitas Array	23.23	119	P	P	23 37 51.3	+2.5
	0.4nm,0.8s,baz=339,slow=5.5,SNR=3.9						
ILAR	Eielson Array	24.32	339	P	P	23 37 58.6	-0.2
	1.1nm,0.8s,baz=151,slow=8.5,SNR=11						
ILB	Eielson Array	24.32	339	eP	P	23 37 58.6	-0.2
	1.9nm,0.9s						
INK	Inuvik	25.35	354	LR	LR	23 47 43.5	
	comp=Z,127nm,19.7s,baz=259,slow=36						
H11N3	WAKE ISLAND Hy	59.53	269	T	T	00 46 52.4	
	baz=51,slow=75,SNR=35						
H11N2	WAKE ISLAND Hy	59.53	269	T	T	00 46 51.4	
	baz=51,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	59.55	269	T	T	00 46 53.6	
	baz=51,slow=75,SNR=31						
H11S1	WAKE ISLAND Hy	60.45	268	T	T	00 47 58.6	
	baz=50,slow=75,SNR=203						
H11S2	WAKE ISLAND Hy	60.45	268	T	T	00 48 01.3	
	baz=50,slow=75,SNR=239						
H11S3	WAKE ISLAND Hy	60.46	268	T	T	00 47 57.4	
	baz=50,slow=75,SNR=134						
NOA	NORSAR Array B	70.62	20	LR	LR	00 15 30.4	
	comp=Z,14nm,18.2s,baz=245,slow=36						

MEX 25 23:56:07.6±0.8, 16°.85N×100°.04W, h11km±6km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	Acapulco	0.15	82	eP	Pg	23 56 10.7	-0.3
ACP2				eS	Sg	23 56 13.9	+0.4
CAIG	El Cayaco	0.29	312	iP	Pg	23 56 13.0	-0.5
CAIG				iS	Sg	23 56 17.5	+0.1
MEIG	Mezcala	1.14	21	iP	Pb	23 56 25.8	-3.7
MEIG				eS	Sb	23 56 39.5	-4.8
ARIG	Puente Sto Nin	1.45	348	eP	Pn	23 56 30.9	-2.9
ARIG				iS	Sn	23 56 48.7	-4.2
PLIG	Platanillo	1.61	19	iP	Pn	23 56 33.0	-3.2
PLIG				eS	Sn	23 56 52.6	-4.5

IDC ***25*** *23:59:35.2±0.8, 0°.63N×124°.65E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.8/34, mbtmp4.0/9, ML4.0/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/31, Error ellipse: s-maj=39.1km s-min=16.7km az=68.0*
NEIC ***25*** *23:59:43.6±1.6, 0°.79N×125°.24E, h66km±8km, mb4.2/7, Error ellipse: s-maj=20.5km s-min=16.0km az=164.0*
ISCJB ***25*** *23:59:45.1±0.4, 0°.74N±0°.05×125°.32E±0°.06, h100km, mb4.1/15, Error ellipse: s-maj=8.9km s-min=6.5km az=146.9*
DJA ***25*** *23:59:45.4±1.5, 1°.N±6°.×12°.5E±°, h20km±17km, M4.6/12, mb4.8/5, mB5.3/3, MLv4.5/12, Mw(mB)4.7/3*

ISC 25 23:59:46.9±0.6, 0°.67N±0°.08×125°.33E±0°.08, h100km, n37, σ1 9 37/37, mb4.1/15, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.04	87	ePn	Pn	00 00 18.4	-1.7
TNTI	Ternate	2.04	87	P	Pn	00 00 18.7	-1.3
SANI	Sanana	2.79	166	P	Pn	00 00 26.8	-3.0
LUWI	Luwuk	3.07	236	ePn	Pn	00 00 32.6	-1.1
LUWI	Luwuk	3.07	236	P	Pn	00 00 34.0	+0.4
APSI	Ampana	4.00	247	P	Pn	00 00 48.1	+2.0
NLAI	Namlea	4.27	156	P	Pn	00 00 48.1	-1.7
AAI	Ambon	5.19	147	P	Pn	00 01 02.0	-0.3
MSAI	Maisohi	5.38	138	P	Pn	00 01 05.1	+0.3
SIJI	Sorong	6.13	104	Pn	Pn	00 01 17.2	+2.1
	2.9nm,0.3s,baz=267,slow=5.5,SNR=7.1						
TTSI	Tana Toraja	6.63	236	P	Pn	00 01 22.9	+1.1
FAKI	Fak Fak	7.79	117	ePn	Pn	00 01 35.8	-1.7
KAPI	Kappang	7.93	225	LR	LR	00 04 13.3	
	comp=Z,64nm,18.6s,baz=34,slow=37						
WR1	Warramunga Arr	22.31	157	eP	P	00 04 36.4	-0.1
WRA	Warramunga Arr	22.31	157	P	P	00 04 36.4	-0.1
	3.1nm,0.5s,baz=339,slow=12,SNR=24						
AS31	Alice Springs	25.59	162	eP	P	00 05 08.3	+1.4
	1.0nm,0.8s						
AS31				ePcP	PcP	00 08 37.6	+1.9
ASAR	Alice Springs	25.59	162	P	P	00 05 08.3	+1.4
	2.7nm,0.8s,baz=343,slow=11,SNR=18						
ASAR				PcP	PcP	00 08 37.6	+1.9
	0.6nm,0.5s,baz=356,slow=1.8,SNR=5.3						
CTA	Charters Tower	29.09	136	LR	LR	00 17 50.7	
	comp=Z,280nm,21.5s,baz=105,slow=37						
KS15	Wonju Array Si	36.66	3	eP	P	00 06 44.3	+0.4
	59nm,1.7s						
KSRS	Korea Array	36.68	3	P	P	00 06 44.3	+0.3
	1.7nm,0.8s,baz=183,slow=11,SNR=7.7						
SONA0	Songino Array	49.77	343	eP	P	00 08 28.5	-0.9
SONM	Songino Array	49.77	343	P	P	00 08 28.5	-0.9
	0.4nm,0.7s,baz=140,slow=9.2,SNR=3.1						
PETK	Petropavlovsk-	58.77	22	P	P	00 09 36.7	+2.3
	1.4nm,0.6s,baz=194,slow=4.0,SNR=2.6						
PEA1	Petropavlovsk-	58.77	22	eP	P	00 09 36.7	+2.3
MK31	Makanchi Array	59.29	327	eP	P	00 09 37.1	-1.1
	1.3nm,0.8s						
MK32	Makanchi Array	59.29	327	eP	P	00 09 37.3	-0.9
MKAR	Makanchi Array	59.29	327	P	P	00 09 37.3	-0.9
	1.1nm,0.3s,baz=124,slow=7.7,SNR=20						
ZALV	Zalesovo Beam	62.69	334	P	P	00 09 59.8	-1.2
	0.7nm,0.6s,baz=142,slow=7.3,SNR=3.2						
ZAA1	Zalesovo Array	62.69	334	eP	P	00 09 59.8	-1.2
KURK	Kurchatov	63.58	329	eP	P	00 10 05.9	-1.0
	3.3nm,0.6s						
KKAR	Karatay Array	64.54	318	eP	P	00 10 12.8	-0.6
	7.2nm,1.9s						
ABKAR	Akbulak array	73.64	322	eP	P	00 11 08.5	-1.0
	4.7nm,1.6s						
KNK	Knik Glacier	87.59	29	eP	P	00 12 24.2	+0.4
	22nm,0.6s						
FIA0	FINESS Array S	93.84	332	eP	P	00 12 52.1	-0.7
FINES	FINESS Array B	93.84	332	P	P	00 12 52.1	-0.7
	0.6nm,0.6s,baz=90,slow=5.6,SNR=4.5						
TORD	Torodi Ar. Bea	122.47	286	PKP	PKiKP	00 18 32.4	+0.5
	0.5nm,0.6s,baz=89,slow=2.1,SNR=6.4						
TOA1	Torodi Ar. Sit	122.47	286	ePKPdf	PKiKP	00 18 32.4	+0.5

KRSC 26 00:05:28.3±1.5, 51°.36N×157°.77E, h131km±12km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.49	23	eP	Pn	00 05 49.6	+2.3
KDTR				eS	Sn	00 06 03.5	+1.7
PAU	Pauzhetka	0.61	281	eP	Pn	00 05 49.6	+1.6
PAU				eS	Sn	00 06 04.1	+1.1
MTVR	Mutnovka	1.16	13	eP	Pn	00 05 54.4	+1.5
MTVR				eS	Sn	00 06 12.0	+0.4
RUS	Russkaya	1.17	23	eP	Pn	00 05 54.8	+2.0
RUS				eS	Sn	00 06 12.8	+1.2
SKR	Severo-Kuril's	1.24	238	eP	Pn	00 05 55.7	+2.1
SKR				eS	Sn	00 06 14.6	+1.8
ALID	Alaid	1.48	252	eP	Pn	00 05 57.4	+1.1
ALID				eS	Sn	00 06 17.3	-0.4
KRMR	Karymshinskiy	1.49	8	eP	Pn	00 05 58.4	+2.2
KRMR				eS	Sn	00 06 19.4	+1.7
DALK	Dalny	1.78	20	eP	Pn	00 06 01.9	+2.3
DALK				eS	Sn	00 06 24.8	+1.2
UGLR	Uglovaya	1.96	19	eP	Pn	00 06 04.3	+2.4
AVH	Avacha	2.00	17	eP	Pn	00 06 05.3	+3.0
SDLR	Sedlovina	2.04	19	eP	Pn	00 06 04.6	+1.8
NLC	Nalytchevo	2.06	27	eS	Sn	00 06 29.6	+0.1
SPN	Mys Shipunski	2.23	38	eP	Pn	00 06 07.3	+2.3
SPN				eS	Sn	00 06 34.1	+0.9
GNL	Ganaly	2.34	3	eP	Pn	00 06 08.6	+2.0
KBTR	Krutoberegovo	5.71	30	eP	Pn	00 06 52.4	+1.7
BKI	Bering	6.25	49	eS	Sn	00 08 05.4	-2.6

WEL 26 00:07:59.5, 45°.S±3°.×16°.7E±°, h50km±6km, M3.3/10, ML3.6/8, MLv3.3/10, Error ellipse: s-maj=0.0km s-min=0.0km az=76.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.05	52	P	Pn	00 08 07.7	+0.6
DCZ				S	Sn	00 08 13.8	+1.3
WHZ	Wether Hill Ro	0.72	124	P	Pn	00 08 14.5	+1.0
WHZ				S	Sn	00 08 26.1	+2.5
PYZ	Puysegur Point	0.73	203	P	Pn	00 08 14.1	+0.5
PYZ				S	Sn	00 08 25.1	+1.2
MLZ	Mavora Lakes	0.73	80	P	Pn	00 08 14.2	+0.5
MLZ				S	Sn	00 08 25.7	+1.7
MSZ	Milford Sound	1.01	36	P	Pn	00 08 17.3	-0.1
MSZ				S	Sn	00 08 30.8	+0.3
APZ	The Paps	1.47	155	P	Pn	00 08 24.9	+1.2
APZ				S	Sn	00 08 43.0	+1.2
WKZ	Wanaka	1.52	64	P	Pn	00 08 24.8	+0.6
WKZ				S	Sn	00 08 43.1	+0.2
EAZ	Earnscleugh	1.58	81	P	Pn	00 08 26.0	+0.8
EAZ				S	Sn	00 08 44.7	+0.2
SYZ	Scrubby Hill	1.76	127	P	Pn	00 08 28.6	+1.0
SYZ				S	Sn	00 08 50.3	+1.5
TUZ	Tuapeka	1.83	105	S	Sn	00 08 51.0	+0.5
JCZ	Jackson Bay	1.86	41	P	Pn	00 08 28.9	-0.1
LBZ	Lake Benmore	2.46	64	P	Pn	00 08 36.0	-1.1
HHSZ	Highcliff Hill	2.48	100	P	Pn	00 08 37.8	+0.4
ODZ	Otahua Downs	2.55	81	P	Pn	00 08 37.6	-0.7
FOZ	Fox Glacier	2.76	46	P	Pn	00 08 39.7	-1.5
RPZ	Rata Peaks	3.34	59	P	Pn	00 08 47.1	-2.1
WVZ	Waitaha Valley	3.56	48	P	Pn	00 08 49.8	-2.5
MQZ	McQueen's Vall	4.35	68	P	Pn	00 09 00.6	-2.5
LTZ	Lake Taylor	4.61	56	P	Pn	00 09 03.3	-3.3
OKCZ	Okains Bay	4.61	70	P	Pn	00 09 05.1	-1.6
THZ	Tophouse	5.63	51	P	Pn	00 09 16.8	-3.8
QRZ	Quartz Range	6.13	42	P	Pn	00 09 24.8	-2.6

TIF ***26*** *00:10:40.2, 42°.41N×40°.93E, h31km±3km*
DDA ***26*** *00:10:55.8, 41°.60N×41°.81E, h16km±3km, ML2.1*

ISK 26 00:10:40.9, 42°.31N×40°.88E, h7km, ML2.3/3, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	Batumi	0.93	139	PG	Pb	00 10 59.3	0.0
BATM				SG	Sb	00 11 12.8	+0.9
BATM	Batumi	0.93	139	P	Pb	00 10 59.4	+0.1
BATM				S	Sn	00 11 13.3	-0.7
BATM	Batumi	0.93	139	iP	Pb	00 10 59.6	+0.3
BATM				iS	Sn	00 11 13.9	0.0
BCA	Borcka	1.03	147	PG	Pg	00 11 00.6	0.0
BCA				SG	Sb	00 11 15.5	+0.8
DBOC	Borcka	1.13	148	iP	Pg	00 11 02.3	-0.3
DBOC				iS	Sb	00 11 18.2	+0.6
DBOC				IAML_P			
	comp=Z,1μm,0.1s						
ARXR	Arkhyz	1.28	13	iPg	Pn	00 11 02.5	-2.9
ARXR				iSg	Sg	00 11 17.3	-5.0
DBAD	Bademkaya	1.43	154	iP	Pn	00 11 07.5	+0.2
DBAD				IAML_P			
	comp=Z,481nm,0.1s						
DAGI	Agillar	1.46	147	iP	Pn	00 11 07.3	-0.4
DAGI				IAML_P			
	comp=Z,161nm,0.1s						
EPOS	Posof	1.60	120	iP	Pn	00 11 09.7	0.0
NEY	Neytrino	1.65	55	iPg	Pn	00 11 08.6	-1.9
NEY				eSg	Sn	00 11 27.9	-4.0
ONI	Oni	1.93	81	PN	Pn	00 11 14.9	+0.8
ONI	Oni	1.93	81	P	Pn	00 11 12.8	-1.3
ONI				S	Sn	00 11 36.6	-2.0
SHA1	Shidzhatmaz	1.93	42	iPg	Pn	00 11 13.5	-0.9
SHA1				iSg	Sn	00 11 36.8	-2.2
LZRR	Lazarevskoye	1.96	326	iPg	Pb	00 11 17.1	+0.3
LZRR				eSg	Sb	00 11 40.5	-1.0
BAYT	Aydıntepe-Bayb	1.99	196	PN	Pn	00 11 16.1	+1.0
SENK	Senkaya-Erzuru	2.07	147	PN	Pn	00 11 16.9	+0.7

TIR 26 00:13:45.4, 41°.39N×20°.68E, h7km, Md2.3/3, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.34	329	iPG	Pn	00 13 56.3	-0.7
PHP				iSG	Sb	00 14 00.7	+1.0
TIR	Tirane	0.61	266	iPG	Pg	00 13 56.6	-0.7
TIR				iSG	Sb	00 14 07.0	-0.4
FNA	Florina	0.80	139	iPG	Pg	00 13 58.0	-2.9
FNA				iSG	Sb	00 14 14.0	+1.2
STON	Ston	2.67	305	ePn	Pn	00 14 30.3	+1.5
STON				Sn	Sn	00 15 00.1	-1.2

ATH 26 00:15:27.8, 38°.32N×22°.16E, h8km±2km, ML0.9/4, Error ellipse: s-maj=2.1km s-min=0.6km az=264.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALE	Kalithea	0.07	349	P	Pg	00 15 29.9	+0.1
KALE				S	Sg	00 15 31.4	+0.2
KALE				AML	AML	00 15 31.6	
	comp=E,334μm,0.1s						
KALE				AML	AML	00 15 31.8	
	comp=N,387μm,0.2s						
AIG3	Aigion	0.08	212	P	Pg	00 15 30.0	+0.2
AIG3				S	Sg	00 15 31.4	+0.1
TRIZ	Trizonia	0.08	303	P	Pg	00 15 29.6	-0.2
TRIZ				S	Sg	00 15 31.1	-0.2
AIG4	Aigion	0.09	224	P	Pg	00 15 30.4	+0.3
AIG4				S	Sg	00 15 32.0	+0.4
AIG2	Aigio	0.10	220	P	Pg	00 15 30.2	0.0
AIG2				S	Sg	00 15 32.0	+0.1
AIG1	Aigion	0.11	186	P	Pg	00 15 30.7	+0.4
AIG1				S	Sg	00 15 32.4	+0.3
SERG	Sergoula	0.12	319	P	Pg	00 15 30.5	0.0
SERG				S	Sg	00 15 32.0	-0.4
SERG				AML	AML	00 15 33.0	
	comp=E,117μm,0.1s						
SERG				AML	AML	00 15 33.5	
	comp=N,135μm,0.1s						
LAKA	Lakka	0.16	240	P	Pg	00 15 32.0	+0.8
LAKA				S	Sg	00 15 33.8	+0.3
EFP	Efpalio	0.22	298	P	Pg	00 15 32.2	-0.1
EFP				S	Sg	00 15 35.8	+0.4
EFP				AML	AML	00 15 36.2	
	comp=N,90μm,0.2s						
EFP				AML	AML	00 15 37.7	
	comp=E,50μm,0.1s						
KLV	Kalavryta, Ach	0.28	181	P	Pg	00 15 33.1	-0.2
KLV				S	Sg	00 15 37.1	0.0
DSF	Desfina	0.30	73	P	Pg	00 15 34.0	+0.2
DSF				S	Sg	00 15 38.5	+0.7
ANX	Ano Chora	0.33	326	P	Pg	00 15 34.2	-0.1
ANX				S	Sg	00 15 39.2	+0.5
ANX				AML	AML	00 15 40.0	
	comp=N,53μm,0.2s						
ANX				AML	AML	00 15 40.4	
	comp=E,71μm,0.1s						
GUR	Goura	0.41	159	P	Pg	00 15 35.6	-0.3
GUR				S	Sg	00 15 41.9	+0.6
DRO	Drossia	0.51	224	P	Pg	00 15 37.5	-0.1
DRO				S	Sg	00 15 45.1	+0.8
EVR	Evrytania	0.65	335	P	Pg	00 15 40.2	-0.2
EVR				S	Sg	00 15 49.7	+0.7
AGG	Agios Georgios	0.71	11	P	Pg	00 15 41.0	-0.5

HEL ***26*** *00:17:30.7, 67°.80N×20°.41E, h0km, ML1.7, Explosion*

UPP 26 00:17:30.7±0.1, 67°.83N×20°.19E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.23	268	P	Pg	00 17 35.3	+0.2
RATU				S	Sg	00 17 38.5	+0.5
RATU	Laukkuluspa	0.23	268	iP	Pg	00 17 35.3	+0.2
RATU				iS	Sg	00 17 38.5	+0.5
NIKU	Nikkaluokta	0.44	275	P	Pg	00 17 39.2	0.0
NIKU				S	Sg	00 17 45.0	+0.2
NIKU	Nikkaluokta	0.44	275	iP	Pg	00 17 39.2	0.0
NIKU				iS	Sg	00 17 45.0	+0.2
LANU	Lannavaara	0.71	71	P	Pg	00 17 44.1	-0.2
LANU				S	Sg	00 17 53.7	+0.2
LANU	Lannavaara	0.71	71	iP	Pg	00 17 44.1	-0.2
LANU				iS	Sg	00 17 53.7	+0.2
MASU	Masugnsbyn	0.79	118	P	Pg	00 17 45.5	-0.2
MASU	Masugnsbyn	0.79	118	iP	Pg	00 17 45.5	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	00 17 45.5	-0.3
SALU	Saltoluokta	0.79	236	iP	Pg	00 17 45.5	-0.3
KIF	Kilpisjarvi	1.20	11	eP	Pg	00 17 53.1	-0.6
KIF	Kilpisjarvi	1.20	11	eP	Pg	00 17 53.6	-0.1
	baz=178						
KIF				MSG		00 18 08.8	
	comp=Z,11nm,0.2s						
KIF				eS	Sg	00 18 09.4	+

*ISCJB **26** 00:24:14.5±0.3, 42.°99N±0.°04×29.°22W±0.°07, h10km, mb4.1/25, MS3.1/15, Error ellipse: s-maj=8.3km s-min=4.9km az=153.8*
*IDC **26** 00:24:15.7±0.9, 43.°16N×29.°25W, h0km, mb3.7/12, mb1 3.9/13, mb1mx3.7/46, mbtmp3.7/13, ML5.0/1, MS3.2/15, Ms1 3.2/15, ms1mx3.0/38, Error ellipse: s-maj=26.1km s-min=16.4km az=18.0*
*NEIC **26** 00:24:16.7±0.7, 43.°06N×29.°21W, h10km±2km, mb4.4/17, Error ellipse: s-maj=20.4km s-min=9.9km az=55.0*

ISC 26 00:24:16.1±0.5, 42.°92N±0.°07×29.°31W±0.°09, h10km, n64, σ1°18/55, mb4.2/25, MS3.1/15, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**3.82**	**203**	*eP*	**Pn**	**00 25 16.6**	**+1.6**
ROSA	**Rosais**	**4.28**	**169**	*eP*	**Pn**	**00 25 21.5**	**+0.3**
ROSA				*eS*	**Sn**	**00 26 07.1**	**-4.1**
ROSA				A	A	00 26 08.0	
	4.7nm,0.2s						
ROSA	**Rosais**	**4.28**	**169**	*e*Pn	**Pn**	**00 25 20.8**	**-0.4**
PCED	**Cedros**	**4.32**	**174**	*eP*	**Pn**	**00 25 23.3**	**+1.6**
CALA	**Caldeira**	**4.36**	**174**	*eP*	**Pn**	**00 25 24.1**	**+1.6**
PMAN	**Manadas**	**4.38**	**167**	*eP*	**Pn**	**00 25 23.2**	**+0.5**
PCAN	**Candelaria**	**4.50**	**172**	*eP*	**Pn**	**00 25 25.2**	**+0.9**
PSET	**Sete Cidades**	**5.78**	**151**	*eP*	**Pn**	**00 25 42.4**	**+0.5**
PDA	**Ponta Delgada**	**5.87**	**150**	*eP*	**Pn**	**00 25 43.4**	**+0.3**
CMLA	**Cha da Macela**	**5.91**	**149**	*eP*	**Pn**	**00 25 43.7**	**+0.1**
CMLA	**Cha da Macela**	**5.91**	**149**	*e*Pn	**Pn**	**00 25 43.4**	**-0.2**
PSMA	**Santa Maria**	**6.73**	**150**	*eP*	**Pn**	**00 25 55.7**	**+0.7**
PSMN	**Pico do Norte,**	**6.75**	**150**	*eP*	**Pn**	**00 25 55.5**	**+0.3**
PMOZ	**Porto Moniz, M**	**13.88**	**133**	*e*Pn	**Pn**	**00 27 33.5**	**+0.5**
ESDC	**Sonseca Array**	**19.29**	**91**	P	**P**	**00 28 41.0**	**0.0**
	1.0nm,0.3s,baz=287,slow=13,SNR=16						
EKA	**Eskdalemuir Ar**	**20.99**	**45**	P	**P**	**00 28 58.3**	**-1.0**
	1.2nm,0.6s,baz=240,slow=9.2,SNR=5.6						
MDT	**Midelt**	**21.89**	**109**	P	**P**	**00 29 11.2**	**+2.0**
	2.3nm,1.0s,baz=325,slow=11,SNR=2.8						
MDT				LR	LR	00 36 10.2	
	comp=Z,56nm,18.8s,baz=314,slow=33						
SFJD	**Kangerlussuaq**	**26.76**	**342**	LR	LR	00 37 55.8	
	comp=Z,53nm,21.7s,baz=161,slow=31						
SCHQ	**Schefferville**	**27.06**	**309**	LR	LR	00 38 51.8	
	comp=Z,75nm,18.6s,baz=136,slow=32						
DAVOX	**Davos/Dischmat**	**27.85**	**68**	LR	LR	00 39 26.9	
	comp=Z,41nm,21.1s,baz=258,slow=33						
JMIC	**Jan Mayen**	**29.99**	**13**	LR	LR	00 39 29.0	
	comp=Z,21nm,21.2s,baz=64,slow=31						
NOA	**NORSAR Array B**	**30.17**	**39**	LR	LR	00 40 22.4	
	comp=Z,10nm,19.6s,baz=280,slow=32						
GERES	**GERESS Array B**	**30.20**	**64**	LR	LR	00 41 07.8	
	comp=Z,43nm,19.5s,baz=302,slow=34						
FIA0	**FINESS Array S**	**37.29**	**41**	*eP*	**P**	**00 31 28.1**	**+0.2**
FINES	**FINESS Array B**	**37.29**	**41**	P	**P**	**00 31 28.1**	**+0.2**
	1.9nm,1.0s,baz=260,slow=6.9,SNR=4.4						
FINES				LR	LR	00 45 19.6	
	comp=Z,17nm,18.1s,baz=285,slow=34						
AKASG	**Malin Array Be**	**39.87**	**58**	LR	LR	00 48 07.7	
	comp=Z,25nm,19.2s,baz=310,slow=36						
TOA1	**Torodi Ar. Sit**	**39.94**	**129**	*eP*	**P**	**00 31 51.9**	**+1.3**
TORD	**Torodi Ar. Bea**	**39.94**	**129**	P	**P**	**00 31 51.9**	**+1.3**
	1.1nm,0.8s,baz=329,slow=13,SNR=6.0						
TORD				LR	LR	00 47 39.8	
	comp=Z,50nm,18.7s,baz=325,slow=35						
COWI	**Conover**	**41.91**	**296**	*eP*	**P**	**00 32 02.7**	**-3.9**
	6.9nm,1.4s						
ULM	**Lac du Bonnet**	**44.94**	**304**	LR	LR	00 49 57.4	
	comp=Z,68nm,18.6s,baz=48,slow=34						
BRTR	**Keskin Array B**	**46.40**	**72**	LR	LR	00 51 09.7	
	comp=Z,16nm,21.6s,baz=262,slow=35						
YKA	**Yellowknife Ar**	**51.03**	**323**	P	**P**	**00 33 17.3**	**-0.6**
	0.8nm,0.8s,baz=64,slow=7.1,SNR=4.5						
YKB5	**Yellowknife Ar**	**51.03**	**323**	*eP*	**P**	**00 33 17.3**	**-0.6**
ROSC	**El Rosal**	**54.95**	**239**	LR	LR	00 56 30.1	
	comp=Z,22nm,18.2s,baz=234,slow=35						
N23A	**Red Feather La**	**55.16**	**296**	*eP*	**P**	**00 33 50.0**	**+1.0**
	4.9nm,0.9s						
INK	**Inuvik**	**55.74**	**334**	P	**P**	**00 33 52.1**	**-0.3**
	1.4nm,0.8s,baz=69,slow=6.3,SNR=2.5						
INK	**Inuvik**	**55.74**	**334**	*eP*	**P**	**00 33 52.3**	**-0.1**
	14nm,1.8s						
WALA	**Waterton Lakes**	**56.18**	**308**	*eP*	**P**	**00 33 55.7**	**-0.3**
	14nm,1.3s						
PD31	**Pinedale Array**	**56.59**	**300**	*eP*	**P**	**00 33 59.0**	**-0.1**
	2.1nm,1.1s						
PDAR	**Pinedale Array**	**56.59**	**300**	P	**P**	**00 33 59.0**	**-0.1**
	1.1nm,0.8s,baz=68,slow=8.6,SNR=9.0						
PDAR				LR	LR	00 56 04.9	
	comp=Z,25nm,20.4s,baz=62,slow=34						
IMW	**Indian Meadow**	**56.90**	**301**	*eP*	**P**	**00 34 02.1**	**+0.7**
	3.7nm,0.8s						
AKTO	**Aktyubinsk**	**57.07**	**50**	P	**P**	**00 34 01.7**	**-0.4**
	0.7nm,0.4s,baz=287,slow=8.9,SNR=3.2						
REDW	**Red Top Meadow**	**57.11**	**301**	*eP*	**P**	**00 34 03.5**	**+0.6**
	2.6nm,0.8s						
NEW	**Newport**	**58.43**	**308**	*eP*	**P**	**00 34 12.5**	**+0.7**
PV09	**Paradox Valley**	**58.50**	**295**	*eP*	**P**	**00 34 13.7**	**+0.9**
HLID	**Hailey**	**59.23**	**303**	*eP*	**P**	**00 34 18.4**	**+0.7**
	1.3nm,0.9s						
TMUT	**Trail Mountain**	**59.45**	**297**	*eP*	**P**	**00 34 20.1**	**+0.8**
	5.0nm,0.8s						
TXAR	**Lajitas Array**	**59.76**	**283**	P	**P**	**00 34 22.8**	**+1.5**
	0.4nm,0.7s,baz=56,slow=7.7,SNR=7.1						
TXAR				LR	LR	01 00 00.5	
	comp=Z,34nm,18.3s,baz=0.0,slow=36						
DUG	**Dugway, Tooele**	**60.01**	**299**	*eP*	**P**	**00 34 23.6**	**+0.6**
	3.7nm,0.8s						
ELK	**Elko**	**61.26**	**300**	*eP*	**P**	**00 34 32.6**	**+1.0**
	2.7nm,0.8s						
J08A	**Circle Bar Ran**	**61.84**	**304**	*eP*	**P**	**00 34 36.4**	**+1.1**
	6.6nm,0.8s						
ILAR	**Eielson Array**	**62.14**	**335**	P	**P**	**00 34 36.9**	**0.0**
	0.2nm,0.6s,baz=42,slow=6.1,SNR=2.6						
ILB	**Eielson Array**	**62.14**	**335**	*eP*	**P**	**00 34 36.9**	**0.0**
	7.6nm,1.8s						
KVN	**Kaiserville**	**64.03**	**300**	*eP*	**P**	**00 34 50.8**	**+0.7**
	4.2nm,1.0s						
KURK	**Kurchatov**	**67.66**	**41**	*eP*	**P**	**00 35 11.9**	**-1.1**
	4.5nm,1.2s						
ZAA1	**Zalesovo Array**	**68.29**	**35**	*eP*	**P**	**00 35 17.0**	**+0.1**
ZALV	**Zalesovo Beam**	**68.29**	**35**	P	**P**	**00 35 17.0**	**+0.1**
	0.8nm,0.6s,baz=293,slow=7.6,SNR=3.9						
MK31	**Makanchi Array**	**72.11**	**42**	*eP*	**P**	**00 35 40.2**	**-0.3**
	1.7nm,0.7s						
MK32	**Makanchi Array**	**72.11**	**42**	*eP*	**P**	**00 35 40.2**	**-0.2**
MKAR	**Makanchi Array**	**72.11**	**42**	P	**P**	**00 35 40.2**	**-0.2**
	1.0nm,0.6s,baz=331,slow=7.9,SNR=7.3						
SONA0	**Songino Array**	**81.53**	**28**	*eP*	**P**	**00 36 33.6**	**-0.2**
SONM	**Songino Array**	**81.53**	**28**	P	**P**	**00 36 33.6**	**-0.2**
	0.2nm,0.3s,baz=303,slow=8.0,SNR=2.2						
VNDA	**Vanda**	**144.99**	**184**	PKPbc	**PKPdf**	**00 43 53.7**	**+1.7**
	1.6nm,1.1s,baz=155,slow=2.6,SNR=4.7						
VNDA	**Vanda**	**144.99**	**184**	*e*PKPbc	**PKPdf**	**00 43 54.5**	**+2.5**

*ISCJB **26** 00:33:29.8±1.2, 34.°86N±0.°07×33.°04E±0.°06, h35km±10km, Error ellipse: s-maj=11.8km s-min=8.0km az=173.8*
*DDA **26** 00:33:29.9, 35.°22N×33.°28E, h7km, ML2.0*
*NIC **26** 00:33:29.0±0.2, 34.°84N×33.°02E, h41km, ML2.8*
*ISK **26** 00:33:32.0, 35.°15N×33.°17E, h13km, ML1.8/8*

ISC 26 00:33:30.4±1.1, 34.°88N±0.°06×33.°03E±0.°04, h32km±7km, n19, σ0°91/24, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.18**	**224**	P	**Pb**	**00 33 35.9**	**-0.8**
	baz=52						
SZAC				S	**Sn**	**00 33 41.7**	**+0.9**
CSS	**Mathiatis**	**0.26**	**72**	PG	**Pb**	**00 33 37.0**	**-0.6**
CSS				SG	**Sb**	**00 33 41.7**	**-0.8**
CSS	**Mathiatis**	**0.26**	**72**	P	**Pb**	**00 33 37.4**	**-0.2**
	baz=245						
CSS				S	**Sb**	**00 33 43.5**	**+1.0**
LEF	**Lefka**	**0.26**	**334**	PG	**Pb**	**00 33 37.3**	**-0.3**
LEF				SG	**Sb**	**00 33 42.9**	**+0.4**
LEF	**Lefka**	**0.26**	**334**	*i* P	**Pb**	**00 33 37.3**	**-0.3**
AKIN	**Akıncılar- Kıb**	**0.38**	**70**	PG	**Pb**	**00 33 38.4**	**-0.8**
ALFC	**Alefka**	**0.45**	**308**	P	**Pb**	**00 33 39.5**	**-0.6**
	baz=132						
ALFC				S	**Sb**	**00 33 47.5**	**+0.6**
PPCY	**Paphos**	**0.56**	**270**	P	**Pb**	**00 33 40.4**	**-1.5**
	baz=94						
EREN	**Erenkoy**	**1.14**	**55**	*i* P	Pn	00 33 46.1	-3.8
EREN				IAML_P			
	comp=Z,634nm,0.5s						
TEKE	**Tekeli-Mersin**	**1.26**	**3**	PG	**Pn**	**00 33 51.2**	**-0.5**
TEKE				SG	**Sn**	**00 34 06.4**	**-1.1**
AKKU	**Akkuyu-Mersin**	**1.34**	**18**	PG	**Pn**	**00 33 52.3**	**-0.5**
IKL	**Isikli**	**1.45**	**21**	PN	**Pn**	**00 33 54.3**	**-0.1**
GAZI	**Gazipasa**	**1.47**	**337**	PN	**Pn**	**00 33 56.3**	**+1.7**
GAZI	**Gazipasa**	**1.47**	**337**	*i* P	**Pn**	**00 33 54.4**	**-0.2**
GAZI				IAML_P			
	comp=Z,47nm,0.2s						
BERE	**Bereket-Mersin**	**1.47**	**6**	PN	**Pn**	**00 33 54.7**	**0.0**
TEVE	**Tevekalti-Mers**	**1.58**	**12**	PN	**Pn**	**00 33 56.6**	**+0.3**
ERMK	**Ermenek**	**1.76**	**357**	*i* P	**Pn**	**00 34 00.4**	**+1.7**
ERMK				IAML_P			
	comp=Z,201nm,0.3s						
KIZK	**Mersin**	**1.83**	**29**	*i* P	**Pn**	**00 34 00.2**	**+0.7**
KIZK				IAML_P			
	comp=Z,143nm,0.2s						
MERS	**Mersin**	**2.32**	**31**	PN	**Pn**	**00 34 07.4**	**+1.0**

*ISCJB **26** 00:43:50.2±0.6, 32.°65N±0.°02×117.°42W±0.°03, h9km±4km, Error ellipse: s-maj=4.5km s-min=3.2km az=39.7*
*ANF **26** 00:43:51.1±0.4, 32.°70N×117.°36W, h25km±3km, ML2.9/21, Error ellipse: s-maj=3.5km s-min=2.1km az=13.0*
*ECX **26** 00:43:52.8±0.5, 32.°68N×117.°34W, h11km±6km, MD2.8, ML3.0*
*SCEDC **26** 00:43:52.4, 32.°68N×117.°34W, h16km*
*PAS **26** 00:43:52.3, 32.°68N×117.°34W, h16km, ML3.0*
*NEIC **26** 00:43:52.3±0.0, 32.°68N×117.°34W, h16km, ML3.0(PAS), After PAS.*
NEIC Felt at San Diego, San Marcos and Spring Valley.

ISC 26 00:43:50.3±1.2, 32.°72N±0.°03×117.°40W±0.°03, h9km±10km, n47, σ0°87/66, 5C-9D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.29**	**56**	P	**Pb**	**00 43 58.2**	**+0.5**
	baz=224,SNR=118						
109C				S	**Sb**	**00 44 02.3**	**-0.5**
	baz=224						
CPE	**Camp Elliot**	**0.29**	**56**	*e*Pg	**Pb**	**00 43 57.8**	**0.0**
CPE	**Camp Elliot**	**0.29**	**56**	⇓*i*P	**Pb**	**00 43 58.2**	**+0.5**
CPE				*i* S	**Sb**	**00 44 02.5**	**-0.3**
SDRC	**San Diego Road**	**0.38**	**88**	⇓*e*P	**Pb**	**00 43 59.1**	**-0.1**
SDRC				*e*S	**Sg**	**00 44 03.9**	**+1.1**
SDRC				⇓*e*		00 44 04.5	
SDRC				IAML		00 44 04.5	
	comp=E,2μm,0.1s						
EML	**El Monte Cty P**	**0.49**	**70**	⇓*i*P	**Pb**	**00 44 01.2**	**+0.1**
EML				*e*S	**Sb**	**00 44 07.5**	**-0.9**
BAR	**Barrett**	**0.61**	**94**	*e*Pg	**Pb**	**00 44 03.0**	**-0.2**
BAR				*e*Sg	**Sg**	**00 44 10.3**	**+0.2**
BAR	**Barrett**	**0.61**	**94**	⇑*e*P	**Pb**	**00 44 02.9**	**-0.2**
BAR				*e*S	**Sg**	**00 44 10.5**	**+0.4**
TJIG	**Tijuana**	**0.67**	**115**	⇑*e*P	**Pg**	**00 44 03.6**	**+0.3**
TJIG				*e*S	**Sg**	**00 44 11.8**	**-0.2**
CBX	**Cerro Bola**	**0.74**	**123**	⇑*e*P	**Pg**	**00 44 05.0**	**+0.5**
CBX				*e*S	**Sg**	**00 44 14.5**	**+0.3**
CBX				IAML		00 44 17.9	
	comp=E,915nm,0.4s						
MONP2	**Monument Peak**	**0.84**	**78**	P	**Pb**	**00 44 07.0**	**-0.2**
	baz=255,SNR=16						
MONP2				S	**Sg**	**00 44 17.6**	**+0.3**
	baz=255						
MONP2	**Monument Peak**	**0.84**	**78**	⇓*e*P	**Pb**	**00 44 07.0**	**-0.2**
MURC	**Murrieta**	**0.89**	**11**	P	**Pn**	**00 44 08.7**	**-0.4**
	baz=188,SNR=26						
MURC				S	**Sn**	**00 44 20.8**	**-1.4**
	baz=188						
SCI2	**San Clemente I**	**1.00**	**285**	S	**Sn**	**00 44 24.7**	**-0.2**
	baz=106						
IKP	**In-Ko-Pah, Jac**	**1.09**	**94**	Pb	**Pg**	**00 44 11.2**	**+0.1**
	baz=272,SNR=22						
IKP				S	**Sg**	**00 44 24.8**	**-0.4**
	baz=272						
IKP	**In-Ko-Pah, Jac**	**1.09**	**94**	⇑*e*P	**Pg**	**00 44 11.2**	**+0.1**
IKP				IAML		00 44 25.2	
	comp=N,555nm,0.5s						
IKP				⇑*e*		00 44 25.2	
CIS	**Catalina Islan**	**1.09**	**309**	P	**Pb**	**00 44 11.6**	**+0.2**
	baz=128,SNR=7.9						
CIS				S	**Sb**	**00 44 26.3**	**+0.5**
	baz=128						
RMX	**La Rumorosa**	**1.12**	**96**	*e*P	**Pn**	**00 44 12.4**	**+0.1**
RMX				*e*S	**Sb**	**00 44 27.2**	**+0.5**
PBX	**Punta Banda**	**1.13**	**150**	⇓*e*P	**Pg**	**00 44 11.1**	**-0.9**
PFO	**Pinyon Flats O**	**1.18**	**41**	*e*Pn	**Pn**	**00 44 13.7**	**+0.5**
PFO	**Pinyon Flats O**	**1.18**	**41**	Pb	**Pn**	**00 44 13.9**	**+0.7**
	baz=219,SNR=35						
PFO				S	**Sb**	**00 44 28.3**	**-0.3**
	baz=219						
ECNX	**Esteban Cantu**	**1.26**	**147**	⇓*e*P	**Pb**	**00 44 13.3**	**-0.9**
ECNX				*e*P	Pn	00 44 09.5	-4.7
SWSC	**Sam W. Stewart**	**1.36**	**80**	Pb	**Pg**	**00 44 16.2**	**-0.2**
	baz=259,SNR=18						
SWSC				Sb	**Sn**	**00 44 33.7**	**0.0**
	baz=259						
BFSC	**Mount Baldy Ra**	**1.53**	**352**	Pb	**Pg**	**00 44 19.4**	**-0.2**
	baz=170						
BFSC				Sb	**Sg**	**00 44 39.5**	**+0.1**
	baz=170						
ZAX	**El Zacaton**	**1.54**	**141**	⇓*e*P	**Pn**	**00 44 17.7**	**-0.3**
BBRC	**Big Bear Solar**	**1.58**	**14**	Sb	**Sg**	**00 44 41.9**	**+0.6**
	baz=193						
PASC	**Pasadena Art C**	**1.59**	**336**	*e*Pn	**Pn**	**00 44 18.8**	**+0.1**
MWC	**Mount Wilson**	**1.59**	**340**	*e*Pn	**Pn**	**00 44 19.4**	**+0.5**
BELC	**Belle Mtn. Jos**	**1.73**	**42**	Pb	**Pb**	**00 44 22.2**	**-0.1**
	baz=221,SNR=40						
BC3	**Big Chuckawall**	**1.87**	**60**	Pb	**Pb**	**00 44 23.8**	**-1.0**
	baz=239,SNR=14						
BC3				Sb	**Sb**	**00 44 48.8**	**+0.4**
	baz=239						
BLG	**Laguna Peak, P**	**1.96**	**315**	S	**Sn**	**00 44 48.4**	**-0.2**
	baz=134						
RRX	**Edison Barstow**	**2.17**	**9**	Sb	**Sg**	**00 44 59.4**	**-0.7**
	baz=188						
GLA	**Glamis**	**2.19**	**81**	*e*Pn	**Pn**	**00 44 28.0**	**+1.1**
GLA	**Glamis**	**2.19**	**81**	Pb	**Pb**	**00 44 28.6**	**-1.5**
	baz=261						
EDW2	**Edwards Air Fo**	**2.21**	**347**	Pb	**Pb**	**00 44 29.5**	**-1.0**
	baz=166,SNR=6.3						
EDW2				S	**Sn**	**00 44 55.0**	**+0.2**
	baz=166						
HEC	**Hector,Ludlow**	**2.28**	**23**	Pb	**Pg**	**00 44 33.3**	**-0.7**
	baz=202,SNR=12						
HEC				Sb	**Sg**	**00 45 03.2**	**-0.3**
	baz=202						
ECBX	**El Chinero**	**2.35**	**121**	⇓*e*P	**Pb**	**00 44 32.9**	**+0.1**
IRM	**Iron Mountain**	**2.36**	**52**	Sb	**Sg**	**00 45 05.2**	**-1.0**
	baz=232						
GMRC	**Granite Mounta**	**2.51**	**35**	Sb	**Sg**	**00 45 09.6**	**-1.5**
	baz=214						
Y12C	**Blythe**	**2.62**	**66**	*e*Pn	**Pn**	**00 44 33.8**	**+1.0**
GSC	**Goldstone, Bar**	**2.62**	**11**	*e*Pn	**Pn**	**00 44 34.5**	**+1.6**
GSC	**Goldstone, Bar**	**2.62**	**11**	Sb	**Sg**	**00 45 13.1**	**-1.3**
	baz=190						
TUQ	**Turquoise Moun**	**2.97**	**24**	Sb	**Sg**	**00 45 24.0**	**-1.6**
	baz=204						
LDFC	**Landfair**	**3.02**	**38**	*e*Pn	**Pn**	**00 44 40.5**	**+2.0**
ISA	**Isabella, Lake**	**3.06**	**343**	*e*Pn	**Pn**	**00 44 40.7**	**+1.7**
SHPR	**Sheep Range**	**4.20**	**25**	*e*Pn	**Pn**	**00 44 57.1**	**+2.4**
TPNV	**Topopah Spring**	**4.32**	**12**	*e*Pn	**Pn**	**00 44 57.8**	**+1.5**
MDPB	**Devils Postpil**	**5.09**	**345**	*e*Pn	**Pn**	**00 45 09.2**	**+2.2**

IDC 26 00:51:05.6±11.0, 5.°87S×154.°63E, h127km±70km, mb3.8/3, mb1 3.9/4, mb1mx3.4/32, mbtmp4.2/4, Error ellipse: s-maj=116.6km s-min=76.7km az=2.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.19**	**244**	P	Pn	00 53 01.9	+0.1
	3.6nm,0.3s,baz=51,slow=6.5,SNR=3.4						
PMG				S	Sn	00 54 33.4	+0.6
	2.1nm,0.3s,baz=334,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**24.18**	**233**	P	P	00 56 10.6	+0.2
	3.3nm,0.7s,baz=59,slow=9.8,SNR=17						
ASAR	**Alice Springs**	**26.66**	**226**	P	P	00 56 32.6	-0.2
	1.5nm,0.4s,baz=58,slow=9.1,SNR=15						
H11S3	**WAKE ISLAND Hy**	**26.97**	**26**	T	T	01 24 30.6	
	baz=207,slow=72,SNR=12						
H11S2	**WAKE ISLAND Hy**	**26.98**	**26**	T	T	01 24 30.5	
	baz=207,slow=72,SNR=26						
H11S1	**WAKE ISLAND Hy**	**26.99**	**26**	T	T	01 24 30.8	
	baz=207,slow=72,SNR=17						
STKA	**Stephens Creek**	**28.61**	**204**	P	P	00 56 49.9	-0.1
	1.1nm,0.5s,baz=15,slow=12,SNR=3.0						

*IDC **26** 00:57:02.6±4.2, 0.°43N×99.°50E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/31, mbtmp3.8/4, Error ellipse: s-maj=175.9km s-min=27.0km az=55.0*
*ISCJB **26** 00:57:19.9±0.7, 0.°73N±0.°10×99.°9E±0.°1, h150km, mb3.6/4, Error ellipse: s-maj=18.4km s-min=11.6km az=148.0*
*DJA **26** 00:57:22.8±1.0, 1.°N±8.°×10.°0E±.°, h128km±9km, M3.4/7, MLv3.4/7*

ISC 26 00:57:20.9±1.0, 0.°6N±0.°1×99.°8E±0.°1, h150km, n9, σ0°83/10, mb3.7/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.31**	**307**	P	**Pn**	**00 57 41.3**	**-0.1**
MNSI				S	**Sn**	**00 57 56.5**	**-0.6**
PDSI	**Padang**	**1.64**	**157**	P	**Pn**	**00 57 52.9**	**+0.9**
SISI	**Saibi**	**2.06**	**201**	P	**Pn**	**00 57 56.7**	**0.0**
SDSI	**Sungai Dareh**	**2.22**	**134**	P	**Pn**	**00 57 59.5**	**+0.9**
GSI	**Gunungsitoli**	**2.35**	**287**	P	**Pn**	**00 58 01.4**	**+1.2**
WRA	**Warramunga Arr**	**39.51**	**123**	P	**P**	**01 04 36.7**	**-0.5**
	0.5nm,0.5s,baz=302,slow=8.6,SNR=3.0						
SONM	**Songino Array**	**47.38**	**6**	P	**P**	**01 05 40.6**	**+0.6**
	0.4nm,0.7s,baz=181,slow=7.2,SNR=2.7						
MKAR	**Makanchi Array**	**48.49**	**344**	P	**P**	**01 05 48.2**	**-0.2**
	0.9nm,0.4s,baz=158,slow=8.6,SNR=20						
ZALV	**Zalesovo Beam**	**54.59**	**349**	P	**P**	**01 06 32.6**	**-0.9**
	1.5nm,0.5s,baz=173,slow=6.5,SNR=7.6						

IDC 26 01:33:53.9±1.5, 25.°62N×109.°73W, h0km, mb1 3.5/3, mb1mx3.4/31, mbtmp3.0/3, ML3.6/3, Error ellipse: s-maj=27.7km s-min=11.4km az=117.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.59**	**199**	Pg	Pn	01 34 22.4	-1.0
	baz=30,slow=1.9,SNR=7.6						
LPIG				Lg	Lg	01 34 45.1	
	16nm,0.3s,baz=17,slow=20,SNR=7.6						
TXAR	**Lajitas Array**	**6.54**	**54**	Pn	Pn	01 35 30.9	-0.6
	0.1nm,0.3s,baz=228,slow=13,SNR=4.4						
TXAR				Pg	Pb	01 35 46.5	-2.1
	0.3nm,0.3s,baz=230,slow=14,SNR=9.1						
TXAR				Lg	Lg	01 37 21.4	
	0.6nm,0.3s,baz=231,slow=17,SNR=5.5						
ANMO	**Albuquerque**	**9.72**	**16**	Lg	Lg	01 38 54.5	
	0.2nm,0.3s,baz=306,slow=21,SNR=4.2						
NVAR	**Mina Array Bea**	**14.69**	**333**	Pn	Pn	01 37 25.9	+2.8
	0.3nm,0.3s,baz=152,slow=20,SNR=3.4						
PDAR	**Pinedale Array**	**17.11**	**0**	P	Pn	01 37 55.4	+0.8
	0.1nm,0.3s,baz=181,slow=12,SNR=5.1						

*PAS **26** 01:36:49.4±0.0, 32.°26N×115.°29W, h10km*
*NEIC **26** 01:36:50.6±0.0, 32.°28N×115.°33W, h6km, ML2.6(PAS), ML2.4(PAS), ML2.8(ECX), After ECX.*

ECX 26 01:36:50.5±0.5, 32.°28N×115.°33W, h6km, MD2.6, ML2.8, 3C-6D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.14**	**10**	⇑*e*P	Pg	01 36 53.2	-0.2
CPBX				*e*S	Sg	01 36 55.8	+0.4
CPBX				IAML		01 36 58.1	
	comp=N,9μm,0.2s						
CPBX				⇑*e*		01 36 58.1	
CPBX				⇑*e*		01 36 58.5	
CPBX				IAML		01 36 58.5	
	comp=E,8μm,0.5s						
MBIG	**Mexicali**	**0.17**	**42**	*e*P	Pg	01 36 53.7	-0.3
DREC	**Desert Rsrch C**	**0.54**	**350**	*e*P	Pg	01 37 00.7	-0.1
WESC	**Westside Schoo**	**0.59**	**325**	*e*P	Pg	01 37 01.0	-0.8
YUH	**Yuha Desert**	**0.62**	**307**	⇓*i*P	Pg	01 37 01.1	-1.3
RMX	**La Rumorosa**	**0.71**	**297**	*e*P	Pg	01 37 02.0	-2.1
RMX				*e*S	Sg	01 37 10.7	-2.7
IKP	**In-Ko-Pah, Jac**	**0.75**	**300**	*e*P	Pg	01 37 03.6	-1.4
SWSC	**Sam W. Stewart**	**0.77**	**329**	*e*P	Pg	01 37 04.0	-1.3
CRR	**Carrizo Plain**	**0.81**	**319**	⇓*i*P	Pg	01 37 04.8	-1.3
ECBX	**El Chinero**	**0.84**	**163**	⇓*e*P	Pg	01 37 05.1	-1.5
ECBX				*e*S	Sg	01 37 16.9	-0.6
GLA	**Glamis**	**0.88**	**29**	*e*Pg	Pg	01 37 05.3	-2.1
GLA				*e*Sg	Sg	01 37 17.8	-1.1
MONP2	**Monument Peak**	**1.10**

GLA	Glamis	0.86	30⇑	eP		Pb	01 48 29.8	-0.6
ECBX	El Chinero	0.86	164⇓	eP		Pb	01 48 29.9	-0.6
MONP2	Monument Peak	1.09	303	P		Pb	01 48 34.7	+0.2
	baz=124,SNR=47							
MONP2				S		Sb	01 48 48.9	+0.5
	baz=124							
MONP2	Monument Peak	1.09	303	i P		Pb	01 48 34.9	+0.4
CBX	Cerro Bola	1.13	271	ePg		Pb	01 48 35.0	0.0
CBX				eSn		Sn	01 48 50.0	0.0
CBX	Cerro Bola	1.13	271	eP		Pb	01 48 35.0	0.0
CBX				eS		Sn	01 48 50.0	0.0
CBX	Cerro Bola	1.13	271⇑	eP		Pb	01 48 35.0	0.0
TJIG	Tijuana	1.14	277	eP		Pb	01 48 35.1	-0.1
TJIG				i S		Sb	01 48 50.0	+0.3
TJIG	Tijuana	1.14	277⇑	eP		Pb	01 48 35.2	-0.1
BAR	Barrett	1.19	289	ePg		Pb	01 48 35.9	-0.2
BAR				eSn		Sb	01 48 51.4	+0.3
BAR	Barrett	1.19	289⇑	eP		Pb	01 48 36.4	+0.3
SPIG	San Pedro Mart	1.26	185	ePg		Pn	01 48 36.5	-0.5
SPIG				eSn		Sn	01 48 52.7	-0.9
SPIG	San Pedro Mart	1.26	185	eP		Pn	01 48 36.5	-0.5
SPIG				eS		Sn	01 48 52.7	-0.9
SPIG	San Pedro Mart	1.26	185⇓	eP		Pn	01 48 36.6	-0.5
SPX	San Pedro Mart	1.26	185	eP		Pn	01 48 36.5	-0.6
SPX				eS		Sn	01 48 52.9	-0.8
SPX	San Pedro Mart	1.26	185⇓	eP		Pn	01 48 36.6	-0.4
SPX				IAML			01 48 55.4	
	comp=E,271nm,0.8s							
SPX			⇑	e			01 48 55.4	
BC3	Big Chuckawall	1.35	356	P		Pn	01 48 37.2	-0.8
	baz=175,SNR=34							
BC3				S		Sn	01 48 54.5	-1.0
	baz=175							
113A	Mohawk Valley,	1.40	70	ePn		Pn	01 48 38.1	-0.5
113A				eSn		Sn	01 48 55.7	-1.0
EML	El Monte Cty P	1.40	295	eP		Pb	01 48 39.7	0.0
SDRC	San Diego Road	1.43	288	eP		Pb	01 48 40.2	+0.1
Y12C	Blythe	1.59	25	ePn		Pg	01 48 44.3	-0.6
Y12C				eSn		Sb	01 49 02.0	-0.7
Y12C	Blythe	1.59	25	Pg		Pb	01 48 43.6	+0.7
	baz=204							
109C	Camp Elliot, M	1.60	292	Pb		Pb	01 48 43.2	+0.1
	baz=112							
109C				S		Sb	01 49 04.0	+1.0
	baz=112							
CPE	Camp Elliot	1.60	292	ePn		Pb	01 48 43.3	+0.2
CPE				eSn		Sb	01 49 03.2	+0.3
PFO	Pinyon Flats O	1.61	324	ePn		Pn	01 48 41.1	-0.5
PFO				eSn		Sb	01 49 03.7	+0.4
PFO	Pinyon Flats O	1.61	324	P		Pn	01 48 41.0	-0.7
	baz=144,SNR=15							
PFO				Sb		Sb	01 49 04.8	+1.4
	baz=144							
IRM	Iron Mountain	1.85	5	Pb		Pb	01 48 46.4	-1.0
	baz=184,SNR=13							
MURC	Murrieta	2.03	310	Sb		Sg	01 49 18.0	-1.5
	baz=130							
214A	Organ Pipe Nat	2.17	99	P		Pn	01 48 48.3	-1.0
	baz=278,SNR=14							
Y14A	Wickenburg	2.54	50	ePn		Pn	01 48 55.1	+0.6
MWC	Mount Wilson	2.98	311	ePn		Pn	01 49 00.5	0.0
MWC				eSn		Sn	01 49 36.8	+1.0
W13A	Hualapai Mount	3.04	23	ePn		Pn	01 48 59.9	-1.5
W13A				eSn		Sn	01 49 36.2	-1.1
TUC	Tucson	3.85	89	ePg		Pg	01 49 30.1	+2.2
X16A	Lo Mia Camp, P	3.88	56	ePn		Pn	01 49 13.8	+0.8
X16A				eSn		Sn	01 49 58.5	+0.5
WUAZ	Wupatki	4.59	45	ePn		Pn	01 49 23.6	+0.9
U15A	North Rim	4.82	31	ePn		Pn	01 49 25.9	0.0
X18A	Snowflake	5.02	62	ePn		Pn	01 49 30.3	+1.7
KNB	Kanab	5.14	23	ePn		Pn	01 49 31.1	+0.9

JMA 26 02:02:10.1±0.1, 38°.74N×142°.36E, h32km±2km, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.64	302	P	Pb	02 02 22.6	-0.3
OFUJ				S	Sb	02 02 31.2	-0.4
JKMT	Kesennumamotoy	0.70	276	P	Pn	02 02 23.5	-0.2
JKMT				S	Sb	02 02 32.4	-0.8
JIKH	Ishinomakikobu	0.82	239	P	Pn	02 02 25.0	-0.4
JIKH				S	Sn	02 02 35.4	-1.1
JIO	Ouri	0.84	251	P	Pn	02 02 25.4	-0.3
JIO				S	Sn	02 02 36.0	-1.0
JMK	Ichinoseki	0.92	284	P	Pn	02 02 26.8	+0.1
JMK				S	Sn	02 02 38.8	0.0
JOM	Ohasama	1.11	312	P	Pn	02 02 29.7	+0.3
JOM				S	Sn	02 02 44.0	+0.4
JOU	Okura	1.38	255	P	Pn	02 02 33.7	+0.5
JOU				S	Sb	02 02 51.8	-0.8
JRG	Rokugo	1.50	297	S	Sb	02 02 55.0	-0.9
MAT	Matsushiro	3.96	238	P	Pn	02 03 11.2	+2.6
MAT				eS	Sn	02 03 54.2	+0.2

IDC 26 02:13:33.2±7.4, 7°.96S×128°.40E, h233km±81km, mb2.7/1, mb1 3.1/5, mb1mx2.9/29, mbtmp3.6/5, Error ellipse: s-maj=88.8km s-min=23.1km az=43.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.19	244	P	Pn	02 14 50.8	0.0
	5.2nm,0.3s,baz=279,slow=0.7,SNR=6.1						
BATI				S	S	02 15 53.3	+0.8
	4.5nm,0.3s,baz=32,slow=19,SNR=3.3						
FITZ	Fitzroy Crossi	10.44	195	P	Pn	02 15 57.1	-0.5
WRA	Warramunga Arr	13.23	155	P	Pn	02 16 31.7	-0.9
	0.2nm,0.3s,baz=327,slow=14,SNR=8.9						
WRA				S	S	02 18 52.9	-6.4
	0.3nm,0.3s,baz=323,slow=25,SNR=7.8						
ASAR	Alice Springs	16.49	162	P	Pn	02 17 11.7	-0.3
	0.1nm,0.3s,baz=339,slow=10,SNR=3.2						
MKAR	Makanchi Array	68.17	328	P	P	02 24 08.4	0.0
	0.2nm,0.6s,baz=117,slow=8.4,SNR=2.5						

ISCJB ***26*** *02:29:36.1±1.3, 12°.26N±0°.10×87°.57W±0°.05, h70km±14km, Error ellipse: s-maj=17.0km s-min=6.3km az=21.5*
SNET ***26*** *02:29:37.8±0.9, 12°.41N×87°.59W, h73km±30km, ML3.9*
UCR ***26*** *02:29:37.0±1.5, 12°.31N×87°.54W, h64km±11km, ML4.0*
ISC 26 02:29:36.4±2.2, 12°.3N±0°.1×87°.57W±0°.07, h72km±17km, n17, σ0s58/29, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.66	50	eP	Pn	02 29 51.0	-0.2
CRIN				eS	Sn	02 30 02.0	0.0
CSGN	Cosiguina Volc	0.70	1	eP	Pn	02 29 51.8	+0.2
CSGN				eS	Sn	02 30 02.2	-0.5
CSGN	Cosiguina Volc	0.70	1	eP	Pn	02 29 51.8	+0.2
CSGN				eS	Sn	02 30 02.3	-0.4
CNGN	Cerro Negro	0.88	75	eP	Pn	02 29 54.9	+1.3
CNGN				eS	Sn	02 30 05.8	-0.6
CNGN				IAML		02 30 12.4	
	comp=N,506nm,0.2s						
CNGN	Cerro Negro	0.88	75	eP	Pn	02 29 54.9	+1.3
CNCH	Conchagua	1.03	346	eP	Pn	02 29 55.0	-0.5
CNCH				eS	Sn	02 30 09.9	+0.2
CNCH				IAML		02 30 10.9	
	comp=Z,3μm,0.3s						
CNCH	Conchagua	1.03	346	eP	Pn	02 29 55.0	-0.5
CNCH				eS	Sn	02 30 09.9	+0.2
CNCH				IAML		02 30 10.9	
	comp=Z,3μm,0.3s						
MGAN	Managua	1.30	95	eP	Pn	02 29 58.1	-0.7
MGAN				eS	Sn	02 30 15.4	-0.3
VSM	San Miguel	1.34	329	eP	Pn	02 30 00.5	+0.9
VSM	San Miguel	1.34	329	eP	Pn	02 30 00.5	+0.9
LCY	Lacayo	1.34	328	eP	Pn	02 29 59.8	+0.3
LCY	Lacayo	1.34	328	eP	Pn	02 29 59.8	+0.3
PACA	Pacayal	1.40	328	eP	Pn	02 30 00.3	+0.1
PACA				eS	Sn	02 30 17.7	-0.4
PACA				IAML		02 30 24.6	
	comp=Z,2μm,0.2s						
PACA	Pacayal	1.40	328	eP	Pn	02 30 00.3	+0.1
PACA				eS	Sn	02 30 17.7	-0.4
PACA				IAML		02 30 24.6	
	comp=Z,2μm,0.2s						
ESTN	Estel	1.43	55	eP	Pn	02 30 00.3	-0.3
ESTN				eS	Sn	02 30 18.7	-0.2
MATN	Matagalpa	1.73	68	eP	Pn	02 30 04.5	-0.2
MATN				eS	Sn	02 30 26.0	-0.1
RCON	San Juan de Ri	1.83	49	eP	Pn	02 30 06.2	+0.2
RCON				eS	Sn	02 30 29.1	+0.6

IDC 26 02:59:58.6±4.7, 9°.85S×166°.79E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=249.8km s-min=30.8km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.87	248	P	P	03 06 35.1	+0.6
	0.5nm,0.6s,baz=77,slow=9.5,SNR=5.5						
ASAR	Alice Springs	34.25	242	P	P	03 06 46.0	-0.6
	1.0nm,0.7s,baz=73,slow=9.2,SNR=10						
ILAR	Eielson Array	82.06	18	P	P	03 12 20.5	0.0
	0.3nm,0.8s,baz=220,slow=5.4,SNR=2.8						

ISCJB ***26*** *03:29:59.9±0.5, 34°.58N±0°.02×24°.00E±0°.03, h26km±3km, mb3.7/7, MS2.4/1, Error ellipse: s-maj=4.7km s-min=3.3km az=41.6*
HLW ***26*** *03:29:59.0, 34°.68N×24°.38E, h4km±12km, Md3.9, Ml4.0*
ATH ***26*** *03:30:02.8, 34°.85N×24°.07E, h27km±1km, ML3.3/10, Error ellipse: s-maj=2.3km s-min=1.1km az=205.0*
THE ***26*** *03:30:03.7, 34°.74N×24°.08E, h16km, ML3.3/11, Error ellipse: s-maj=1.9km s-min=1.0km az=22.0*
IDC ***26*** *03:30:04.0±3.5, 34°.75N×24°.39E, h35km±18km, mb3.6/7, mb1 3.6/11, mb1mx3.4/62, mbtmp3.7/11, ML3.6/4, MS2.7/5, Ms1 2.7/5, ms1mx2.4/35, Error ellipse: s-maj=38.8km s-min=21.0km az=18.0*
DDA ***26*** *03:30:57.8, 34°.57N×24°.15E, h18km, ML3.7*
ISC 26 03:30:01.2±0.9, 34°.67N±0°.04×24°.01E±0°.03, h26km±5km, n142, σ1s52/160, mb3.8/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.18	21	P	Pb	03 30 06.6	-0.2
GVD				S	Sb	03 30 10.8	+0.1
GVD	Gavdhos	0.18	21	P	Pb	03 30 06.6	-0.2
GVD				S	Sb	03 30 11.0	+0.4
GVD				AML	AML	03 30 12.1	
GVD				AML	AML	03 30 13.0	
GVDS	Gavdos	0.19	21	P	Pb	03 30 06.5	-0.4
GVDS				S	Sb	03 30 10.7	0.0
TMBK	Timbaki Herakl	0.74	57	P	Pn	03 30 16.1	+0.2
TMBK				S	Sn	03 30 27.0	+0.6
SIVA	Sivas	0.75	62	P	Pn	03 30 16.1	+0.1
SIVA				S	Sb	03 30 24.5	-0.9
SIVA	Sivas	0.75	62	P	Pn	03 30 16.2	+0.1
SIVA				AML	AML	03 30 36.7	
	comp=N,13540μm,0.6s						
SIVA				AML	AML	03 30 39.2	
	comp=E,21143μm,0.4s						
VAM	Vamos	0.76	12	P	Pb	03 30 14.8	-0.9
VAM				S	Sn	03 30 27.4	+0.7
VAM	Vamos	0.76	12	P	Pb	03 30 15.0	-0.7
VAM				S	Sb	03 30 22.3	-3.3
VAM				AML	AML	03 30 30.7	
	comp=E,6291μm,0.6s						
VAM				AML	AML	03 30 35.0	
	comp=N,6986μm,0.7s						
IMMV	Iera Moni Meta	0.79	358	P	Pb	03 30 15.5	-0.9
IMMV				S	Sn	03 30 28.6	+1.0
IMMV	Iera Moni Meta	0.79	358	P	Pb	03 30 15.6	-0.7
IMMV				S	Sb	03 30 24.0	-2.8
IMMV				AML	AML	03 30 33.3	
	comp=N,7630μm,0.4s						
IMMV				AML	AML	03 30 33.9	
	comp=E,8032μm,0.5s						
PRNS	Prines Rethymn	0.81	30	P	Pb	03 30 15.5	-1.1
PRNS				S	Sb	03 30 26.2	-0.9
CHAN	Chania	0.85	2	P	Pb	03 30 16.7	-0.6
CHAN				S	Sn	03 30 30.2	+1.1
IDI	Anoyia	0.95	49	Pg	Pb	03 30 18.5	-0.6
	comp=E,44nm,0.3s,baz=222,slow=15,SNR=84						
IDI				Lg	Lg	03 30 37.0	
	comp=E,119nm,0.3s,baz=287,slow=22,SNR=29						
IDI	Anoyia	0.95	49	P	Pb	03 30 18.3	-0.8
IDI				S	Sb	03 30 30.8	-0.6
IDI				AML	AML	03 30 37.7	
	comp=E,3953μm,0.7s						
IDI				AML	AML	03 30 37.9	
	comp=N,3352μm,0.7s						
KSTL	Kastelli Herak	1.08	54	P	Pb	03 30 24.4	+3.2
LAST	Lasithi	1.30	67	P	Pb	03 30 25.6	+0.5
LAST				S	Sb	03 30 41.2	-0.3
LAST	Lasithi	1.30	67	P	Pb	03 30 25.7	+0.5
LAST				AML	AML	03 30 56.2	
	comp=N,1862μm,0.9s						
LAST				AML	AML	03 31 00.5	
	comp=E,1635μm,0.7s						
ANKY	Antikythira Is	1.33	334	P	Pb	03 30 26.4	+0.9
ANKY	Antikythira Is	1.33	334	P	Pb	03 30 26.9	+1.4
ANKY				AML	AML	03 30 55.5	
	comp=E,1719μm,0.8s						
ANKY				AML	AML	03 30 57.6	
	comp=N,1184μm,0.8s						
NPS	Neapolis	1.45	65	P	Pb	03 30 28.5	+1.0
NPS	Neapolis	1.45	65	P	Pb	03 30 28.4	+1.0
NPS				AML	AML	03 31 06.1	
	comp=N,2147μm,0.7s						
NPS				AML	AML	03 31 07.0	
	comp=E,2100μm,1.1s						
KYTH	Kithira	1.78	334	P	Pb	03 30 32.3	-0.8
KYTH	Kithira	1.78	334	P	Pb	03 30 32.3	-0.8
KYTH				AML	AML	03 31 08.1	
	comp=N,831μm,1.0s						
KYTH				AML	AML	03 31 16.4	
	comp=E,1637μm,0.8s						
KTHR	Kythira	1.79	333	P	Pb	03 30 32.4	-0.9
STIA	Sitia Lasithi	1.79	72	P	Pb	03 30 32.8	-0.5
STIA				S	Sn	03 30 53.9	+1.6
ZKR	Zakros	1.87	76	P	Pb	03 30 33.7	-0.9
ZKR	Zakros	1.87	76	P	Pb	03 30 34.2	-0.5
ZKR				AML	AML	03 31 18.8	
	comp=N,451μm,1.2s						
ZKR				AML	AML	03 31 21.1	
	comp=E,1226μm,1.2s						
SAP1	Santorini-Akro	2.03	33	P	Pn	03 30 35.3	+1.7
SAP1	Santorini-Akro	2.03	33	P	Pn	03 30 35.4	+1.7
THR6	Thira Island,	2.03	34	P	Pn	03 30 35.0	+1.3
THR6	Thira Island,	2.03	34	P	Pn	03 30 35.1	+1.4
MHLO	Agia Marina, M	2.04	9	P	Pn	03 30 35.5	+1.6
MHLO	Agia Marina, M	2.04	9	P	Pn	03 30 35.6	+1.8
THR5	Thira Island,	2.06	32	P	Pb	03 30 36.2	-1.7
THR5	Thira Island,	2.06	32	P	Pb	03 30 36.1	-1.7
SANT	Santorini	2.07	34	P	Pn	03 30 35.6	+1.3
SANT	Santorini	2.07	34	P	Pn	03 30 35.5	+1.3
SAP3	Santorini-Thir	2.08	31	P	Pn	03 30 34.6	+0.3
SAP3	Santorini-Thir	2.08	31	P	Pn	03 30 34.5	+0.3
THR3	Thira Island,	2.08	33	P	Pn	03 30 35.9	+1.6
THR3	Thira Island,	2.08	33	P	Pn	03 30 35.6	+1.3
MHLA	Plaka, Milos I	2.10	9	P	Pn	03 30 36.6	+1.9
THR8	Santorini-Mono	2.11	34	P	Pn	03 30 35.2	+0.5
THR8	Santorini-Mono	2.11	34	P	Pn	03 30 35.2	+0.5
THR2	Thira island,	2.12	33	P	Pn	03 30 36.2	+1.3
CMBO	Columbo, Santo	2.13	32	P	Pn	03 30 36.9	+1.9
CMBO				S	Sn	03 31 02.3	+1.7
CMBO	Columbo, Santo	2.13	32	P	Pn	03 30 36.4	+1.3
ANAF	Anafi Island	2.22	40	P	Pn	03 30 37.3	+1.0
ANAF	Anafi Island	2.22	40	P	Pn	03 30 37.6	+1.4
VLI	Veliai	2.23	337	P	Pb	03 30 39.4	-1.3
VLI	Veliai	2.23	337	P	Pb	03 30 39.3	-1.3
IOSP	Ios island	2.30	27	P	Pn	03 30 38.0	+0.6
IOSP				S	Sn	03 31 06.0	+1.1
IOSP	Ios island	2.30	27	P	Pn	03 30 38.0	+0.6
DYR	Agios Nikonas	2.50	327	P	Pb	03 30 43.3	-2.0
SERI	Serifos	2.52	9	P	Pn	03 30 41.1	+0.7
SERI	Serifos	2.52	9	P	Pn	03 30 41.2	+0.8
AMGA	Amorgos Island	2.65	35	P	Pn	03 30 43.1	+0.9
AMGA				S	Sn	03 31 14.7	+1.2
AMGA	Amorgos Island	2.65	35	P	Pn	03 30 43.0	+0.9
APE	Apeiranthos	2.70	27	P	Pn	03 30 43.2	+0.3
APE				S	Sn	03 31 16.1	+1.4
APE	Apeiranthos	2.70	27	P	Pn	03 30 43.3	+0.5
KARP	Karpathos	2.73	70	P	Pn	03 30 45.5	+2.2
KARP				S	Sn	03 31 17.9	+2.4
KARP	Karpathos	2.73	70	P	Pn	03 30 45.5	+2.2
PYL	PYLOS	2.89	321	P	Pn	03 30 46.9	+1.4
DID	Didima	2.90	348	P	Pn	03 30 46.0	+0.3
DID	Didima	2.90	348	P	Pn	03 30 47.0	+1.3
VLX	Vlachokerasia	3.00	334	P	Pb	03 30 50.6	-3.4
VLX	Vlachokerasia	3.00	334	P	Pn	03 30 49.7	+2.5
EPID	Epidavros	3.03	347	P	Pn	03 30 49.1	+1.7
TRIP	Tripoli	3.18	334	P	Pn	03 30 52.5	+2.9
VLY	Voula,Athens	3.18	357	P	Pn	03 30 50.3	+0.8
VLY	Voula,Athens	3.18	357	P	Pn	03 30 50.4	+0.8
ATHU	Athens Univers	3.30	357	P	Pn	03 30 51.2	+0.1
SLUM	Salum	3.32	162	P	Pn	03 30 51.7	+0.3
	baz=167						
SLUM				AMP		03 31 00.0	
	baz=167						
SLUM				S	Sn	03 31 29.5	-0.6
	baz=167						
ACOR	Acrocorinthos	3.35	344	P	Pn	03 30 52.7	+0.9
PTL	Penteli	3.38	358	P	Pn	03 30 52.8	+0.5
PTL	Penteli	3.38	358	P	Pn	03 30 52.7	+0.5
LOUT	Loutraki	3.42	346	P	Pn	03 30 54.6	+1.9
GUR	Goura	3.53	338	P	Pn	03 30 56.3	+1.9
GUR	Goura	3.53	338	P	Pn	03 30 56.3	+1.9
THAL	Thalero	3.54	343	P	Pn	03 30 55.0	+0.7
VILL	Villia	3.54	351	P	Pn	03 30 55.1	+0.7
DAT	Datca	3.56	54	i P	Pn	03 30 56.2	+1.4
DAT				IAML_P			
	comp=Z,144nm,0.2s						
BDRM	Kayabasi	3.68	48	i P	Pn	03 30 58.4	+2.1
KLV	Kalavryta, Ach	3.69	337	P	Pn	03 30 58.7	+2.2
KLV	Kalavryta, Ach	3.69	337	P	Pn	03 30 58.1	+1.5
ARG	Arkhangelos	3.70	64	P	Pn	03 30 58.0	+1.4
ARG	Arkhangelos	3.70	64	P	Pn	03 30 58.3	+1.7
DSF	Desfina	3.92	343	P	Pn	03 31 01.0	+1.3
DSF	Desfina	3.92	343	P	Pn	03 31 01.2	+1.4
KALE	Kalithea	4.01	339	P	Pn	03 31 02.3	+1.3
KALE	Kalithea	4.01	339	P	Pn	03 31 02.3	+1.3
MRKA	Markates	4.05	355	P	Pn	03 31 01.9	+0.5
MRKA	Markates	4.05	355	P	Pn	03 31 02.0	+0.6
SERG	Sergoula	4.06	338	P	Pn	03 31 02.9	+1.4
SERG	Sergoula	4.06	338	P	Pn	03 31 02.7	+1.1
LKR	Lokris	4.06	349	P	Pn	03 31 02.1	+0.6
CHOS	Chios island	4.06	23	P	Pn	03 31 02.6	+0.9
ATAL	Atalanti	4.10	349	P	Pn	03 31 02.6	+0.5
ATAL	Atalanti	4.10	349	P	Pn	03 31 02.5	+0.5
EFP	Efpalio	4.12	336	P	Pn	03 31 04.9	+2.6
EFP				S	Sn	03 31 51.4	+1.8
EFP	Efpalio	4.12	336	P	Pn	03 31 05.0	+2.6
YER	Yerkesik	4.25	53	P	Pn	03 31 06.8	+2.5
ANX	Ano Chora	4.26	337	P	Pn	03 31 05.8	+1.3
ANX				S	Sn	03 31 55.4	+2.0
ANX	Ano Chora	4.26	337	P	Pn	03 31 05.8	+1.3
AYDN	Tasoluk	4.33	45	i P	Pn	03 31 06.4	+1.1
AYDN				IAML_P			
	comp=Z,282nm,0.2s						
TURN	Turunc	4.34	58	i P	Pn	03 31 03.3	-2.0
TURN				IAML_P			
	comp=Z,1μm,0.4s						
DALY	Dalyan (Mula)	4.34	59	i P	Pn	03 31 07.8	+2.3
PVO	Paravola	4.42	334	P	Pn	03 31 10.0	+3.5
PVO				S	Sn	03 31 59.4	+2.3
PDO	Prodromos	4.53	331	P	Pn	03 31 10.7	+2.6
PDO				S	Sn	03 32 02.6	+2.7
AGG	Agios Georgios	4.55	343	P	Pn	03 31 09.7	+1.3
FETY	Fethiye	4.58	63	P	Pn	03 31 09.3	+0.6
FETY	Fethiye	4.58	63	i P	Pn	03 31 09.5	+0.8
FETY				IAML_P			
	comp=Z,423nm,0.2s						
AKAS	Kas	4.83	70	i P	Pn	03 31 13.3	+1.1
AKAS				IAML_P			
	comp=Z,814nm,0.4s						
AKUM	Antalya-Kumluc	5.43	70	i P	Pn	03 31 20.6	+0.3
AKUM				IAML_P			
	comp=Z,761nm,0.5s						
SWA2		5.54	167	P	Pn	03 31 21.8	-0.2
	baz=170						
KORT	Korkueli	5.65	64	i P	Pn	03 31 25.4	+1.8
KORT				IAML_P			
	comp=Z,455nm,0.5s						
KEPZ	Antalya-Kepez	6.56	68	i P	Pn	03 31 38.5	+2.5
KEPZ				IAML_P			
	comp=Z,376nm,0.3s						
HNAT	Natroun	7.52	130	P	Pn	03 31 48.2	-1.0
	baz=131						
HFRF	Wahat Farafira	8.35	153	P	Pn	03 32 00.0	-0.6
	baz=154						
HFRF				AMP		03 33 00.0	
	baz=154						
HFRF				S	Sn	03 33 28.8	-5.3
	baz=154						
NBNS	Bani Suef	8.65	132	P	Pn	03 32 04.0	-0.6
	baz=133						
SUZ	Suez	8.88	120	P	Pn	03 32 05.8	-2.1
	baz=121						
RSH		8.97	112	P	Pn	03 32 07.1	-1.9
	baz=112						
BRTR	Keskin Array B	9.19	54	Pn	Pn	03 32 09.8	-2.3
	comp=Z,0.1nm,0.3s,baz=226,slow=14,SNR=5.2						
STON	Ston	9.56	331	i Pn	Pn	03 32 12.6	-4.3
STON				Sn	Sn	03 33 54.4	-9.0
MMAI	Mount Meron Ar	9.62	97	Pn	Pn	03 32 16.8	-1.2
	comp=Z,1.9nm,0.3s,baz=297,slow=11,SNR=3.5						
HKAT	Jabal Katrina	10.48	123	P	Pn	03 32 28.8	-1.1
	baz=124						
EIL	Elat	10.52	115	Pn	Pn	03 32 29.8	-0.5
	comp=Z,0.5nm,0.3s,baz=304,slow=5.2,SNR=7.0						
EIL				Sn	Sn	03 34 20.6	-6.8
	comp=Z,1.1nm,0.3s,baz=100,slow=4.8,SNR=4.6						
MLR	Muntele Rosu	10.91	7	LR	LR	03 36 55.2	
	comp=Z,28nm,18.3s,baz=110,slow=38						
UDBI	Udbina	11.71	330	ePn	Pn	03 32 44.8	-1.8
VYHS	Vyhne	14.34	346	ePN	Pn	03 33 19.5	-2.9
GERES	GERESS Array B	16.10	335	Pn	P	03 33 50.4	+1.6
	comp=Z,0.2nm,0.3s,baz=151,slow=12,SNR=4.6						
GERES				LR	LR	03 41 32.8	
	comp=Z,18nm,20.4s,baz=296,slow=43						
DAVOX	Davos/Dischmat	16.13	323	LR	LR	03 40 52.4	
	comp=Z,22nm,20.8s,baz=140,slow=40						
KHC

AIES IAML 03 37 29.2
comp=Z,16μm,0.2s
AIES Las Flores 0.73 0 *eP* **Pn 03 37 19.6 0.0**
AIES *eS* **Sn 03 37 28.7 -1.4**
AIES IAML 03 37 29.2
comp=Z,16μm,0.2s
LFRS El Faro 0.90 360⇑ *iP* **Pn 03 37 21.6 -0.2**
SNVI San Vicente 0.91 13 *eP* **Pn 03 37 21.8 -0.3**
SNVI San Vicente 0.91 13 *eP* **Pn 03 37 21.8 -0.3**
TECA Tecapa 0.94 35 *iP* **Pn 03 37 22.6 +0.2**
TECA Tecapa 0.94 35 *iP* **Pn 03 37 22.6 +0.2**
SNET Serv Nac Est T 0.97 350⇑ *iP* **Pn 03 37 22.9 0.0**
SNET *eS* **Sn 03 37 34.8 -1.0**
SNET IAML 03 37 37.9
comp=Z,8μm,0.2s
SNET Serv Nac Est T 0.97 350⇑ *iP* **Pn 03 37 22.9 0.0**
SNET *eS* **Sn 03 37 34.8 -1.0**
SNET IAML 03 37 37.9
comp=Z,8μm,0.2s
UTEC San Salvador 0.98 352 *eP* **Pn 03 37 23.1 +0.1**
UTEC *eS* **Sn 03 37 35.2 -0.8**
UTEC San Salvador 0.98 352 *eP* **Pn 03 37 23.1 +0.1**
UTEC *eS* **Sn 03 37 35.2 -0.8**
UESS San Salvador 0.99 352 *eP* **Pn 03 37 23.4 +0.4**
UESS *eS* **Sn 03 37 37.0 +0.9**
UESS IAML 03 37 40.2
comp=Z,7μm,0.2s
UESS San Salvador 0.99 352 *eP* **Pn 03 37 23.4 +0.4**
UESS *eS* **Sn 03 37 37.0 +0.9**
UESS IAML 03 37 40.2
comp=Z,7μm,0.2s
PAVA Las Pavas 0.99 7 *eP* **Pn 03 37 23.1 0.0**
PAVA *eS* **Sn 03 37 35.9 -0.4**
PAVA IAML 03 37 36.6
comp=Z,7μm,0.3s
PAVA Las Pavas 0.99 7 *eP* **Pn 03 37 23.1 0.0**
PAVA *eS* **Sn 03 37 35.9 -0.4**
PAVA IAML 03 37 36.6
comp=Z,7μm,0.3s
OPAM San Salvador 1.00 352 *eP* **Pn 03 37 23.2 +0.1**
OPAM *eS* **Sn 03 37 35.7 -0.6**
OPAM IAML 03 37 41.5
comp=Z,7μm,0.2s
OPAM San Salvador 1.00 352 *eP* **Pn 03 37 23.2 +0.1**
OPAM *eS* **Sn 03 37 35.7 -0.6**
OPAM IAML 03 37 41.5
comp=Z,7μm,0.2s
UDBS Soyapango 1.00 354 *eP* **Pn 03 37 23.2 +0.1**
UDBS *eS* **Sn 03 37 35.7 -0.7**
UDBS IAML 03 37 39.5
comp=Z,11μm,0.2s
UDBS Soyapango 1.00 354 *eP* **Pn 03 37 23.2 +0.1**
UDBS *eS* **Sn 03 37 35.7 -0.7**
UDBS IAML 03 37 39.5
comp=Z,11μm,0.2s
LBRS Las Brisas 1.01 1⇑ *iP* **Pn 03 37 23.5 +0.2**
UEES San Salvador 1.02 350 *eP* **Pn 03 37 23.3 -0.1**
UEES *eS* **Sn 03 37 36.2 -0.6**
UEES IAML 03 37 39.8
comp=Z,6μm,0.2s
UEES San Salvador 1.02 350 *eP* **Pn 03 37 23.3 -0.1**
UEES *eS* **Sn 03 37 36.2 -0.6**
UEES IAML 03 37 39.8
comp=Z,6μm,0.2s
LCY Lacayo 1.02 47 *eP* **Pn 03 37 23.7 +0.3**
LCY Lacayo 1.02 47 *eP* **Pn 03 37 23.7 +0.3**
LFU La Fuente 1.02 357⇑ *iP* **Pn 03 37 23.7 +0.2**
LFU La Fuente 1.02 357⇑ *iP* **Pn 03 37 23.7 +0.2**
BOQS Boqueron 1.03 348 *eP* **Pn 03 37 24.0 +0.3**
PACA Pacayal 1.03 44 *eP* **Pn 03 37 23.9 +0.3**
PACA *eS* **Sn 03 37 37.5 +0.3**
PACA Pacayal 1.03 44 *eP* **Pn 03 37 23.9 +0.3**
PACA *eS* **Sn 03 37 37.5 +0.3**
VSM San Miguel 1.04 47 *iP* **Pn 03 37 24.2 +0.4**
VSM San Miguel 1.04 47 *iP* **Pn 03 37 24.2 +0.4**
CEVE Cerro Verde 1.23 333 *eP* **Pn 03 37 27.1 +0.7**
CEVE *eS* **Sn 03 37 43.0 +0.8**
CEVE IAML 03 37 45.6
comp=Z,15μm,0.3s
CEVE Cerro Verde 1.23 333 *eP* **Pn 03 37 27.1 +0.7**
CEVE *eS* **Sn 03 37 43.0 +0.8**
CEVE IAML 03 37 45.6
comp=Z,15μm,0.3s
SBLS San Blas 1.24 334 *eP* **Pn 03 37 27.2 +0.7**
SBLS San Blas 1.24 334 *iP* **Pn 03 37 27.2 +0.7**
SNJE San Jose 1.26 335 *eP* **Pn 03 37 27.4 +0.7**
SNJE San Jose 1.26 335 *eP* **Pn 03 37 27.4 +0.7**
LCND La Caada 1.28 63 *iP* **Pn 03 37 27.4 +0.6**
LCND *eS* **Sn 03 37 43.2 +0.3**
LCND IAML 03 37 45.2
comp=Z,15μm,0.3s
LCND La Caada 1.28 63 *iP* **Pn 03 37 27.4 +0.6**
LCND *eS* **Sn 03 37 43.2 +0.3**
LCND IAML 03 37 45.2
comp=Z,15μm,0.3s
VICT Victoria 1.30 18⇑ *iP* **Pn 03 37 27.5 +0.4**
VICT *eS* **Sn 03 37 44.4 +0.8**
VICT IAML 03 37 45.2
comp=Z,2μm,0.3s
VICT Victoria 1.30 18⇑ *iP* **Pn 03 37 27.5 +0.4**
VICT *eS* **Sn 03 37 44.4 +0.8**
VICT IAML 03 37 45.2
comp=Z,2μm,0.3s
RTR El Retiro 1.30 334 *iP* **Pn 03 37 28.2 +1.0**
RTR El Retiro 1.30 334 *iP* **Pn 03 37 28.2 +1.0**
CNCH Conchagua 1.31 65 *eP* **Pn 03 37 28.0 +0.6**
CNCH *eS* **Sn 03 37 45.1 +1.1**
CNCH IAML 03 37 47.5
comp=Z,20μm,0.2s
CNCH Conchagua 1.31 65 *eP* **Pn 03 37 28.0 +0.6**
CNCH *eS* **Sn 03 37 45.1 +1.1**
CNCH IAML 03 37 47.5
comp=Z,20μm,0.2s
CAHU Cacacuatique 1.33 38 *eP* **Pn 03 37 28.2 +0.6**
CAHU Cacacuatique 1.33 38 *eP* **Pn 03 37 28.2 +0.6**
UNIC Santa Ana 1.35 339 *eP* **Pn 03 37 28.5 +0.6**
UNIC *eS* **Sn 03 37 44.9 +0.1**
UNIC Santa Ana 1.35 339 *eP* **Pn 03 37 28.5 +0.6**
UNIC *eS* **Sn 03 37 44.9 +0.1**
LLGN La Laguna 1.45 4 *eP* **Pn 03 37 29.4 +0.3**
LLGN La Laguna 1.45 4 *eP* **Pn 03 37 29.4 +0.3**
CSGN Cosiguina Volc 1.48 80 *ePn* **Pn 03 37 30.9 +1.3**
CSGN *eSn* **Sn 03 37 47.2 -0.8**
CSGN Cosiguina Volc 1.48 80 *eP* **Pn 03 37 31.3 +1.7**
MTO3 Montecristo 1.69 350 *iP* **Pn 03 37 33.2 +0.5**
MTO3 IAML 03 37 47.3
comp=Z,338nm,0.6s
MTO3 *eS* **Sn 03 37 54.0 +0.7**
MTO3 Montecristo 1.69 350 *iP* **Pn 03 37 33.2 +0.5**
MTO3 IAML 03 37 47.3
comp=Z,338nm,0.6s
MTO3 *eS* **Sn 03 37 54.0 +0.7**
CRIN San Cristobal 1.96 90 *eP* **Pn 03 37 37.4 +1.4**
CRIN IAML 03 38 15.5
comp=N,3μm,0.4s
TGUH Tegucigalpa,Un 2.19 52 *ePn* **Pn 03 37 39.9 +0.8**
TGUH *eSn* **Sn 03 38 03.2 -1.8**
CNGN Cerro Negro 2.31 95 *eP* **Pn 03 37 42.3 +1.5**
CNGN *eS* **Sn 03 38 09.7 +1.5**
CNGN Cerro Negro 2.31 95 *eP* **Pn 03 37 42.3 +1.5**
COPN Copaltepe 2.47 102 *eP* **Pn 03 37 44.1 +1.2**
COPN *eS* **Sn 03 38 12.6 +0.7**
MOMN Momotombo 2.48 97 *eP* **Pn 03 37 44.3 +1.2**
ESTN Estel 2.65 81 *eSn* **Sn 03 38 17.2 +0.7**
ESTN Estel 2.65 81 *eP* **Pn 03 37 46.7 +1.2**
ESTN *eS* **Sn 03 38 17.8 +1.3**
APG El Apazote 2.65 329 P **Pn 03 37 47.2 +1.6**
comp=N,5.3nm,0.3s,baz=154,slow=8.2,SNR=85
APG S Sn 03 38 05.8 -11
comp=N,32nm,0.3s,baz=357,slow=2.0,SNR=22
APG LR LR 03 38 23.4
comp=N,53nm,19.5s,baz=139,slow=30
APYN Apoyeque 2.69 100 *eP* **Pn 03 37 47.8 +1.8**
MGAN Managua 2.80 101 IAML 03 38 21.4
comp=E,124nm,0.4s
RCON San Juan de Ri 2.93 75⇑ *iP* **Pn 03 37 50.4 +1.0**
MATN Matagalpa 3.06 86⇑ *iP* **Pn 03 37 52.2 +1.0**
ACON Acoyapa 3.87 101 *ePn* **Pn 03 38 03.7 +1.6**
ACON *eSn* **Sn 03 38 44.9 -1.5**
ACON Acoyapa 3.87 101 *eP* **Pn 03 38 02.4 +0.3**
CCIG Comitan 4.63 320 *ePn* **Pn 03 38 17.0 +4.2**
CCIG *eSn* **Sn 03 39 06.1 +0.8**
ESPN Las Esperanzas 4.68 96 *ePn* **Pn 03 38 14.7 +1.5**
ESPN *eSn* **Sn 03 38 58.6 -7.6**
JTS Las Juntas de 4.69 121 P Pn 03 38 17.2 +3.7
comp=E,2.5nm,0.3s,baz=352,slow=17,SNR=22
JTS S **Sn 03 39 05.9 -0.8**
comp=E,4.2nm,0.3s,baz=269,slow=8.5,SNR=1.2
JTS Las Juntas de 4.69 121 *ePn* Pn 03 38 17.4 +3.9
JTS *eSn* **Sn 03 39 07.0 +0.4**
JTS Las Juntas de 4.69 121 *eP* **Pn 03 38 16.9 +3.4**
ARE1 Arenal 1 4.81 117 *eP* **Pn 03 38 17.6 +2.5**
CMIG Matias Romero 7.11 308 P **Pn 03 38 49.6 +2.9**
comp=E,0.5nm,0.3s,baz=143,slow=11,SNR=11
CMIG S **Sn 03 40 08.1 +1.9**
comp=E,0.7nm,0.3s,baz=248,slow=20,SNR=2.6
CMIG LR LR 03 41 11.2
comp=E,40nm,21.0s,baz=108,slow=34
ICCO Coco Island 7.40 164⇓ *iP* Pn 03 38 57.0 +6.4
TEIG Tepich 7.50 6 *ePn* **Pn 03 38 54.2 +2.2**
MTDJ Mount Denham 12.38 62 *ePn* **Pn 03 40 01.4 +2.6**
LNIG Linares 15.60 322 *ePn* **P 03 40 42.8 -2.1**
comp=E,4.1nm,0.8s
352A Blakely 19.05 11 *eP* **P 03 41 21.8 -1.1**
comp=E,8.2nm,0.8s
255A Hazlehurst 20.05 17 *eP* **P 03 41 29.6 -4.1**
comp=E,26nm,1.4s
JCT Junction City 20.28 332 *eP* Pn 03 41 38.0 -0.7
comp=E,4.7nm,0.8s
Y49A Blount Mountai 21.18 6 *eP* **P 03 41 43.5 -2.5**
comp=E,7.7nm,1.4s
GOGA Godfrey 21.22 13 *eP* **P 03 41 45.9 -0.4**
comp=E,7.9nm,1.0s
TXAR Lajitas Array 21.39 323 P **P 03 41 50.8 +2.4**
comp=E,0.9nm,0.4s,baz=145,slow=11,SNR=24
TX31 Lajitas Ar. Si 21.39 323 *eP* **P 03 41 51.1 +2.7**
comp=E,2.9nm,1.0s
MIAR Mount Ida 22.11 350 *eP* **P 03 41 56.8 +0.8**
comp=E,4.6nm,0.8s
HODGE Hodges 22.29 15 *eP* **P 03 41 57.9 0.0**
comp=E,7.6nm,1.4s
W50A Signal Mountai 22.64 8 *eP* **P 03 41 59.9 -1.7**
comp=E,4.3nm,1.4s
Y58A Scranton 22.76 21 *eP* **P 03 41 59.8 -3.0**
comp=E,18nm,0.6s
W39A Magazine 22.78 350 *eP* **P 03 42 04.9 +1.8**
comp=E,3.8nm,1.0s
BIRD Birdtown, Kers 23.18 18 *eP* **P 03 42 06.2 -0.8**
comp=E,3.1nm,0.8s
FCAR Ozark Folk Cen 23.23 354 *eP* **P 03 42 08.5 +0.9**
comp=E,3.9nm,0.8s
KMSC Kings Mountain 23.39 16 *eP* **P 03 42 09.4 +0.3**
comp=E,6.8nm,1.1s
V53A Saluda 23.54 13 *eP* **P 03 42 10.5 0.0**
comp=E,7.2nm,1.4s
WMOK Wichita Mounta 23.63 340 *eP* **P 03 42 11.9 +0.5**
comp=E,3.2nm,1.0s
W57A Gilead 23.79 19 *eP* **P 03 42 12.2 -0.6**
comp=E,9.4nm,1.3s
HHAR Hobbs 23.87 350 *eP* **P 03 42 11.9 -1.6**
comp=E,2.8nm,0.7s
AMTX Amarillo 24.86 335 *eP* **P 03 42 25.1 +2.5**
comp=E,11nm,1.3s
CCM Cathedral Cave 25.31 356 *eP* **P 03 42 26.6 +0.1**
comp=E,5.5nm,0.8s
NNA Nana 27.38 153 LR LR 03 51 55.2
comp=E,41nm,20.9s,baz=307,slow=32
SPMN Marine on St. 32.55 355 *eP* **P 03 43 30.4 -0.5**
comp=E,7.2nm,0.5s
PDAR Pinedale Array 34.81 333 P **P 03 43 50.0 -0.8**
comp=E,0.3nm,0.6s,baz=130,slow=9.5,SNR=3.1
PDAR PcP **PcP 03 46 24.1 +0.9**
comp=E,0.3nm,0.5s,baz=122,slow=6.9,SNR=4.9
PDAR pPcP 03 46 40.1
comp=E,0.4nm,0.5s,baz=159,slow=4.7,SNR=3.6
NVAR Mina Array Bea 36.48 320 P **P 03 44 07.6 +2.4**
comp=E,0.3nm,0.5s,baz=119,slow=8.4,SNR=4.0
NVAR PcP **PcP 03 46 30.4 +2.1**
comp=E,0.5nm,0.7s,baz=122,slow=4.6,SNR=3.5
NVAR ScP **ScP 03 50 13.5 +3.3**
comp=E,0.5nm,0.6s,baz=131,slow=3.8,SNR=3.7
EGMT Eagleton 39.20 338 *eP* **P 03 44 29.3 +1.4**
comp=E,6.0nm,0.4s
SIV San Ignacio 39.75 135 P P 03 44 35.8 +3.0
comp=E,1.8nm,0.8s,baz=321,slow=7.7,SNR=9.2
SIV pP pwP 03 44 50.6 +3.6
comp=E,1.7nm,0.9s,baz=340,slow=9.0,SNR=2.9
GO04 Tololo Observa 46.13 158 *eP* **P 03 45 22.4 -2.0**
comp=E,18nm,0.8s
GO04 *ep*P **sP 03 45 44.0 -1.0**
YKA Yellowknife Ar 52.95 345 P **P 03 46 15.0 -0.6**
comp=E,0.8nm,0.4s,baz=146,slow=6.8,SNR=8.0
YKA pP **pP 03 46 29.9 -0.6**
comp=E,1.6nm,0.7s,baz=143,slow=7.3,SNR=3.8
RES Resolute Bay 62.04 358 P **P 03 47 17.8 -1.6**
comp=E,3.4nm,1.0s,baz=182,slow=6.1,SNR=6.3
INK Inuvik 62.48 343 P **P 03 47 21.6 -0.9**
comp=E,1.1nm,0.6s,baz=144,slow=4.4,SNR=3.7
ILAR Eielson Array 65.14 336 P **P 03 47 40.1 +0.1**
comp=E,0.5nm,0.9s,baz=170,slow=5.3,SNR=4.6
ILAR pP **pP 03 47 55.4 +0.1**
comp=E,0.4nm,0.8s,baz=98,slow=6.5,SNR=2.9
WRA Warramunga Arr 137.83 254 PKP **PKiKP 03 56 25.7 -0.6**
comp=E,1.3nm,0.9s,baz=90,slow=1.7,SNR=3.2
WRA pPKP **sPKPdf 03 56 45.6 -1.2**
comp=E,0.3nm,0.4s,baz=77,slow=1.9,SNR=1.2

*ISCJB **26** 03:40:13.4±0.3, 18°.61N±0°.04×71°.64W±0°.02, h10km, mb4.0/16, MS3.3/6, Error ellipse: s-maj=6.0km s-min=2.9km az=178.9*
*NEIC **26** 03:40:13.8±2.2, 18°.64N×71°.63W, h3km±6km, mb4.4/5, Error ellipse: s-maj=7.4km s-min=2.2km az=158.0*
*IDC **26** 03:40:20.0±2.6, 18°.39N×71°.65W, h53km±26km, mb3.5/11, mb1 3.8/13, mb1mx3.6/48, mbtmp3.8/13, ML3.5/2, MS3.1/11, Ms1 3.2/11, ms1mx2.9/40, Error ellipse: s-maj=17.9km s-min=14.9km az=29.0*

ISC 26 03:40:14.2±0.5, 18°.60N±0°.04×71°.66W±0°.03, h10km, n43, σ1§80/52, mb4.0/16, MS3.3/6, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**0.52**	**42**	*ePg*	**Pg**	**03 40 23.1**	**-1.3**
SDDR				*eSg*	**Sg**	**03 40 28.8**	**-2.5**
JAKH	**Jacmel**	**0.89**	**247**	*ePn*	**Pn**	**03 40 33.3**	**+0.5**
JAKH				*eSg*	**Sg**	**03 40 44.2**	**+1.1**
LGNH	**Logne**	**0.91**	**265**	*eSg*	**Sg**	**03 40 44.0**	**+0.5**
BANI	**BANI**	**1.25**	**99**	*eSg*	**Sg**	**03 40 53.6**	**-0.8**
SDD	**Santo Domingo**	**1.66**	**94**	*ePn*	**Pn**	**03 40 41.5**	**-1.9**
SDD				*eSn*	**Sn**	**03 41 03.9**	**-0.9**
GRTK	**Grand Turk**	**2.94**	**10**	*ePn*	**Pn**	**03 41 00.7**	**-0.3**
GRTK				*eSn*	**Sn**	**03 41 33.0**	**-3.4**
PCDR	**Punta Cana, DR**	**3.11**	**91**	*ePn*	**Pn**	**03 41 03.8**	**+0.5**
PCDR				*eSn*	**Sn**	**03 41 39.6**	**-0.9**
GTBY	**Guantanamo Bay**	**3.52**	**293**	*ePn*	**Pn**	**03 41 07.9**	**-1.1**
AGP	**Aguadilla**	**4.29**	**92**	*ePn*	**Pn**	**03 41 17.5**	**-2.1**
AGP				*eSn*	**Sn**	**03 42 12.3**	**+2.6**
MPR	**Mayaguez**	**4.30**	**94**	*ePn*	**Pn**	**03 41 19.1**	**-0.7**
MPR				*eSn*	**Sn**	**03 42 10.8**	**+0.7**
AOPR	**Arecibo Observ**	**4.66**	**92**	*ePn*	**Pn**	**03 41 25.7**	**+1.0**
AOPR				*eSn*	**Sn**	**03 42 22.3**	**+3.4**
OBIP	**Obispado Ponce**	**4.83**	**96**	*ePn*	**Pn**	**03 41 26.7**	**-0.3**
OBIP				*eSn*	**Sn**	**03 42 25.2**	**+2.2**
SJG	**San Juan**	**5.25**	**94**	P	**Pn**	**03 41 35.6**	**+2.7**
	6.7nm,0.3s,baz=236,slow=18,SNR=15						
SJG				S	**Sn**	**03 42 35.1**	**+1.6**
	baz=87,slow=23,SNR=2.0						
SJG				LR	LR	03 43 45.7	
	comp=Z,67nm,21.8s,baz=22,slow=39						
SJG	**San Juan**	**5.25**	**94**	*ePn*	**Pn**	**03 41 32.9**	**+0.1**
SJG				*eSn*	**Sn**	**03 42 34.4**	**+0.9**
CBYP	**Canovanas**	**5.51**	**92**	*ePn*	**Pn**	**03 41 39.7**	**+3.2**
HUMP	**Col San Antoni**	**5.53**	**94**	*ePn*	**Pn**	**03 41 40.0**	**+3.3**
SDV	**Santo Domingo**	**9.70**	**174**	P	**Pn**	**03 42 35.2**	**+1.0**
	0.9nm,0.3s,baz=347,slow=5.9,SNR=8.2						
SDV				S	**Sn**	**03 44 19.9**	**-3.4**
	0.7nm,0.3s,baz=247,slow=20,SNR=3.9						
SDV				LR	LR	03 46 58.0	
	comp=Z,159nm,18.5s,baz=66,slow=42						
BCIP	**Isla Barro Col**	**12.28**	**221**	*ePn*	**Pn**	**03 43 06.1**	**-3.2**
ROSC	**El Rosal**	**13.92**	**191**	P	**P**	**03 43 36.8**	**-3.5**
	0.6nm,0.3s,baz=252,slow=20,SNR=2.5						
ROSC				LR	LR	03 48 40.2	
	comp=Z,63nm,21.9s,baz=352,slow=36						
JTS	**Las Juntas de**	**15.29**	**239**	LR	LR	03 49 05.2	
	comp=Z,41nm,19.2s,baz=113,slow=35						
APG	**El Apazote**	**18.36**	**262**	LR	LR	03 52 20.9	
	comp=Z,48nm,21.8s,baz=288,slow=39						
PTGA	**Pitinga**	**22.38**	**148**	P	**P**	**03 45 12.9**	**0.0**
	4.4nm,0.8s,baz=338,slow=12,SNR=7.0						
PTGA				LR	LR	03 53 19.9	
	comp=Z,48nm,21.8s,baz=339,slow=35						
PTGA	**Pitinga**	**22.38**	**148**	*eP*	**P**	**03 45 14.2**	**+1.4**
	7.4nm,1.1s						
ATAH	**Atahualpa**	**26.42**	**195**	LR	LR	03 57 35.6	
	comp=Z,59nm,18.8s,baz=13,slow=40						
TXAR	**Lajitas Array**	**31.05**	**296**	P	**P**	**03 46 33.5**	**+0.8**
	0.9nm,1.0s,baz=125,slow=6.6,SNR=5.0						
TXAR				PcP	**PcP**	**03 49 27.3**	**-1.1**
	0.4nm,0.8s,baz=105,slow=6.6,SNR=4.3						
MNTX	**Cornudas Mount**	**33.06**	**300**	*eP*	**P**	**03 46 51.6**	**+1.4**
	3.6nm,1.1s						
LPAZ	**La Paz**	**34.84**	**174**	P	**P**	**03 47 05.3**	**-1.0**
	1.2nm,0.9s,baz=339,slow=8.6,SNR=3.1						
LPAZ				LR	LR	04 02 26.1	
	comp=Z,64nm,18.3s,baz=31,slow=38						
ANMO	**Albuquerque**	**34.86**	**305**	P	**P**	**03 47 07.3**	**+1.3**
	0.6nm,0.6s,baz=113,slow=7.7,SNR=3.2						
SIV	**San Ignacio**	**35.91**	**162**	P	**P**	**03 47 13.5**	**-1.5**
	1.8nm,0.8s,baz=351,slow=2.8,SNR=5.1						
W18A	**Petrified Fore**	**37.48**	**304**	*eS*	**S**	**03 53 19.2**	**+1.8**
PDAR	**Pinedale Array**	**40.05**	**315**	P	**P**	**03 47 51.2**	**+1.3**
	0.2nm,0.6s,baz=111,slow=9.9,SNR=3.4						
PDAR				PcP	**PcP**	**03 49 54.4**	**-0.4**
	0.4nm,0.7s,baz=127,slow=3.9,SNR=4.0						
PDAR				LR	LR	04 05 59.1	
	comp=Z,22nm,18.3s,baz=114,slow=38						
SPUT	**South Promonto**	**41.46**	**312**	*eP*	**P**	**03 48 03.1**	**+1.5**
	2.7nm,1.0s						
NVAR	**Mina Array Bea**	**44.96**	**306**	P	**P**	**03 48 31.9**	**+2.0**
	0.5nm,0.8s,baz=77,slow=8.4,SNR=3.1						
NEW	**Newport**	**47.13**	**319**	P	**P**	**03 48 48.0**	**+1.3**
	1.5nm,0.8s,baz=90,slow=6.1,SNR=3.6						
SUMG	**Summit**	**57.23**	**11**	*eP*	**P**	**03 50 02.1**	**+0.3**
	11nm,1.1s						
SUMG	**Summit**	**57.23**	**11**	*iP*	**P**	**03 50 02.4**	**+0.6**
	23nm,1.0s						
ESDC	**Sonseca Array**	**61.35**	**54**	P	**P**	**03 50 32.5**	**+2.0**
	1.3nm,0.8s,baz=272,slow=7.6,SNR=5.5						
ILAR	**Eielson Array**	**67.05**	**333**	P	**P**	**03 51 08.9**	**+1.5**
	0.1nm,0.5s,baz=92,slow=3.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**70.35**	**82**	P	**P**	**03 51 28.0**	**-0.8**
	8.2nm,0.4s,baz=308,slow=7.0,SNR=1.8						
SPITS	**Spitsbergen Ar**	**71.53**	**13**	LR	LR	04 21 01.2	
	comp=Z,26nm,21.2s,baz=5.0,slow=34						
VRAC	**Vranov**	**75.01**	**43**	LR	LR	04 19 55.7	
	comp=Z,32nm,20.5s,baz=240,slow=32						
MLR	**Muntele Rosu**	**82.12**	**45**	*eP*	**P**	**03 52 37.0**	**+1.5**
	5.5nm,1.0s						
BRTR	**Keskin Array B**	**89.50**	**48**	P	**P**	**03 53 12.8**	**+0.7**
	0.7nm,0.8s,baz=270,slow=4.2,SNR=5.7						

MEX 26 03:44:13.6±0.7, 15°.41N×95°.72W, h16km±7km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.52**	**314**	*eP*	Pg	03 44 21.8	-2.2
HUIG				*eS*	Sg	03 44 28.6	-2.3
VHO	**Vista Hermosa**	**1.92**	**330**	*eP*	Pn	03 44 43.3	-2.6
VHO				*i* S	Sn	03 45 05.6	-4.2
PCIG		**2.43**	**83**	*eP*	Pn	03 44 48.7	-3.9
PCIG				*eS*	Sn	03 45 16.9	-5.2
TGIG		**2.84**	**61**	*eP*	Pn	03 44 55.5	-3.0
TGIG				*eS*	Sn	03 45 28.7	-3.7
CCIG	**Comitan**	**3.56**	**75**	*eP*	Pn	03 45 01.5	-6.8
CCIG				*eS*	Sn	03 45 38.8	-11

*MOS **26** 04:04:24.8±1.6, 36°.12N×71°.25E, h33km, mb4.8/21, Error ellipse: s-maj=8.2km s-min=4.6km az=96.8*
*IDC **26** 04:04:28.6±3.4, 36°.26N×71°.41E, h52km±30km, mb4.0/22, mb1 4.1/26, mb1mx3.9/54, mbtmp4.2/26, ML4.0/4, MS2.7/3, Ms1 2.8/3, ms1mx2.4/36, Error ellipse: s-maj=19.1km s-min=14.7km az=173.0*
*BJI **26** 04:04:34.1±0.0, 36°.55N×71°.28E, h101km, mb4.6/21, mB4.5/11*
*ISCJB **26** 04:04:34.1±0.2, 36°.50N±0°.02×71°.43E±0°.03, h114km, mb4.3/51, Error ellipse: s-maj=3.8km s-min=2.9km az=155.0*
*NEIC **26** 04:04:35.5±2.3, 36°.53N×71°.30E, h106km±7km, mb4.5/18, Error ellipse: s-maj=11.3km s-min=8.6km az=104.0*
*NNC **26** 04:04:37.1±3.7, 36°.73N×71°.14E, h127km±47km, mb4.0, mpv4.8, Error ellipse: s-maj=32.4km s-min=23.0km az=36.0*

ISC 26 04:04:35.6±0.4, 36°.50N±0°.04×71°.39E±0°.04, h114km, n183, σ2§10/200, mb4.4/51, 12C-10D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.63**	**342**	*ePn*	**Pn**	**04 05 16.0**	**-1.0**
GAR				*eSn*	**Sn**	**04 05 45.3**	**-3.6**
GAR	**Garm**	**2.63**	**342**	*ePN*	**Pn**	**04 05 16.0**	**-1.0**
CEP	**Cherat**	**2.71**	**171**	P	**Pn**	**04 05 18.8**	**+0.8**
CEP				S	**Sn**	**04 05 51.0**	**+0.4**
KBL	**Kabul**	**2.73**	**225**	*ePn*	**Pn**	**04 05 17.8**	**-0.7**
KBL				*eSn*	**Sn**	**04 05 48.5**	**-2.9**
KBL	**Kabul**	**2.73**	**225**	*ePN*	**Pn**	**04 05 17.8**	**-0.7**
KBL				*e*		04 05 48.5	
CHCP	**Chirah Chowk**	**3.23**	**151**	P	**Pn**	**04 05 26.0**	**+1.2**
NIL	**Nilore**	**3.23**	**151**	*ePn*	**Pn**	**04 05 26.5**	**+1.7**
NIL	**Nilore**	**3.23**	**151**	*ePN*	**Pn**	**04 05 26.5**	**+1.7**
BTK	**Batken**	**3.58**	**353**	*ePn*	**Pn**	**04 05 29.5**	**0.0**
BTK				*eSn*	**Sn**	**04 06 08.6**	**-2.5**
BTK	**Batken**	**3.58**	**353**	*ePN*	**Pn**	**04 05 29.5**	**0.0**
THW	**Thamme Wali**	**3.71**	**175**	P	**Pn**	**04 05 31.4**	**+0.2**
KSH	**Kashi**	**4.71**	**49**	P	**Pn**	**04 05 41.5**	**-3.1**
KSH				S	**Sn**	**04 06 29.8**	**-8.5**
KSH				smax	smax		
	comp=N,1μm,0.5s						
KSH				smax	smax		
	comp=E,590nm,0.5s						
DHRM	**DHARAMSHALA**	**5.87**	**135**	*eP*	**Pn**	**04 06 00.8**	**+0.4**
DHRM				*eS*	**Sn**	**04 07 03.8**	**-2.8**
DHRM				IAML		04 07 08.8	
	comp=E,868nm,0.8s						
AML	**Almayashu**	**5.90**	**17**	P	**Pn**	**04 06 01.1**	**+0.1**
	SNR=50						
UCH	**Uchtor**	**6.21**	**22**	P	**Pn**	**04 06 05.4**	**+0.2**
	SNR=45						
KZA	**Kyzart**	**6.32**	**27**	P	**Pn**	**04 06 07.1**	**+0.5**
	SNR=24						
EKS2	**Erkin-Say**	**6.42**	**16**	P	**Pn**	**04 06 07.5**	**-0.3**
	SNR=54						
AAK	**Ala-Archa**	**6.58**	**20**	P	**Pn**	**04 06 10.2**	**+0.3**
	comp=E,14nm,0.3s,baz=187,slow=7.5,SNR=56						
AAK				S	**Sn**	**04 07 23.9**	**+0.3**
	comp=E,1.8nm,0.3s,baz=136,slow=22,SNR=8.6						
AAK	**Ala-Archa**	**6.58**	**20**	P	**Pn**	**04 06 10.5**	**+0.5**
	SNR=30						
AAK	**Ala-Archa**	**6.58**	**20**	*ePn*	**Pn**	**04 06 10.4**	**+0.5**
AAK				*eSn*	**Sn**	**04 07 21.6**	**-1.9**
AAK	**Ala-Archa**	**6.58**	**20**	⇑P	**Pn**	**04 06 10.0**	**+0.1**
	comp=E,31nm,0.5s						
AAK				⇑S	**Sn**	**04 07 22.6**	**-1.0**
	comp=E,31nm,0.7s						
KK31	**Karatay Array**	**6.63**	**354**	*ePn*	**Pn**	**04 06 09.2**	**-1.3**
KK31				*eSn*	**Sn**	**04 07 19.1**	**-5.4**
KK31	**Karatay Array**	**6.63**	**354**	⇓P	**Pn**	**04 06 09.5**	**-1.0**
	comp=E,58nm,0.3s,baz=180,slow=12,SNR=545						
KK31				S	**Sn**	**04 07 20.5**	**-4.0**
	comp=E,50nm,0.5s,baz=181,slow=20,SNR=12						
KK31	**Karatay Array**	**6.63**	**354**	*ePN*	**Pn**	**04 06 09.4**	**-1.0**
KK31				pmax	pmax		
	comp=Z,58nm,0.4s		

TKM2	Tokmak 2	7.18	26	⇓P		Pn	04 06 18.3	+0.2
	comp=Z,20nm,0.5s							
TKM2	Tokmak 2	7.18	26	*i* P		Pn	04 06 18.3	+0.2
TKM2				pmax	pmax			
	comp=Z,20nm,0.5s							
SMLA	Simla	7.20	136	*e*P		Pn	04 06 17.8	-0.4
SMLA				*e*S		Sn	04 07 33.2	-5.2
SMLA				IAML			04 07 39.2	
	comp=E,244nm,0.3s							
SMLA				IAML			04 07 40.5	
	comp=N,266nm,0.0s							
KKR	Kurukshetra	7.95	144	*e*P		Pn	04 06 26.9	-1.5
KKR				*e*x		x	04 07 36.3	
JOSI	Joshimath	9.03	129	*e*P		Pn	04 06 45.9	+2.6
JOSI				*e*S		Sn	04 08 16.4	-7.0
JOSI				IAML			04 08 28.9	
	comp=E,622nm,0.9s							
JOSI				IAML			04 08 29.2	
	comp=N,325nm,0.3s							
NDI	New Delhi	9.21	146	*e*S		Sn	04 08 20.0	-7.4
PDGK	Podgornoye	9.23	40	⇑P		Pn	04 06 45.3	-0.5
	comp=N,6.4nm,0.8s							
PDGK	Podgornoye	9.23	40	P		Pn	04 06 45.2	-0.5
PDGK				pmax	pmax			
	comp=Z,6.0nm,0.8s							
KUDL	Kundal	9.38	151	*e*P		Pn	04 06 34.1	-14
KUDL				*e*S		Sn	04 08 12.2	-19
GEYT	Alibeck	10.68	282	P		Pn	04 06 59.5	-5.9
	comp=Z,2.0nm,0.3s,baz=110,slow=12,SNR=9.9							
GEYT				S		Sn	04 08 50.4	-12
	comp=Z,7.0nm,0.3s,baz=116,slow=16,SNR=11							
GEYT				LR		LR	04 12 50.9	
	comp=Z,31nm,19.2s,baz=60,slow=47							
GYA0B	ALIBECK ARRAY	10.68	282	*e*Pn		Pn	04 07 04.9	-0.5
OTUK	Ortayu	11.76	3	⇓P		Pn	04 07 16.8	-2.8
	comp=Z,12nm,0.7s							
OTUK	Ortayu	11.76	3	P		Pn	04 07 16.8	-2.8
OTUK				pmax	pmax			
	comp=Z,12nm,0.7s							
PYUN	Piuthan	12.89	127	*e*P		Pn	04 07 29.8	-5.1
	comp=Z,28nm,0.5s							
MAKZ	Makanchi	12.98	34	*e*Pn		Pn	04 07 32.2	-3.3
MAKZ	Makanchi	12.98	34	*e*P		Pn	04 07 32.3	-3.3
MK31	Makanchi Array	13.11	35	*e*Pn		Pn	04 07 37.0	-0.4
MK31	Makanchi Array	13.11	35	P		Pn	04 07 36.2	-1.1
	comp=Z,3.4nm,0.6s,baz=218,slow=8.9,SNR=13							
MK31	Makanchi Array	13.11	35	*i* P		Pn	04 07 36.2	-1.1
MK31				pmax	pmax			
	comp=Z,3.0nm,0.6s							
MK32	Makanchi Array	13.11	35	*e*Pn		Pn	04 07 35.4	-2.0
MKAR	Makanchi Array	13.11	35	P		Pn	04 07 35.4	-2.0
	comp=Z,0.1nm,0.3s,baz=221,slow=13,SNR=11							
DANN	Dangsing	13.23	124	*e*P		Pn	04 07 36.3	-3.0
	comp=Z,30nm,0.5s							
KOLN	Koldanda	13.51	127	*e*P		Pn	04 07 38.7	-4.2
	comp=Z,13nm,0.4s							
BHPL	Bhopal	14.21	157	*e*P		Pn	04 07 50.4	-1.4
BHPL				IAmb		IAmb	04 07 57.1	
	comp=Z,806nm,4.7s							
BHPL				*e*x		x	04 10 18.4	
WMQ	Urumqi	14.44	55	*e*P		P	04 07 57.0	-1.1
WMQ				pP		Pn	04 08 08.5	+14
WMQ				LR		LR		
	comp=Z,46nm,29.0s							
WMQ				LR		LR		
	comp=Z,160nm,29.0s							
WMQ				LR		LR		
	comp=Z,50nm,27.7s							
DMN	Daman	14.61	123	*e*P		Pn	04 07 54.5	-2.6
	comp=Z,24nm,0.6s							
KKN	Kakani	14.61	123	*e*P		Pn	04 07 54.8	-2.2
	comp=Z,33nm,0.5s							
PKIN	Phulchoki	14.83	123	*e*P		Pn	04 07 57.6	-2.2
	comp=Z,24nm,0.4s							
PKI	Pulchoki	14.84	123	*e*P		Pn	04 07 57.5	-2.5
	comp=Z,35nm,0.6s							
GUN	Gumba	14.95	121	*e*P		Pn	04 07 59.5	-1.9
	comp=Z,29nm,0.4s							
KURBB	Kurchatov Arra	15.02	18	P		Pn	04 07 57.9	-3.9
	comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=7.9							
KURBB	Kurchatov Arra	15.02	18	⇑P		P	04 08 04.2	-0.2
	comp=Z,7.7nm,0.6s							
KURK	Kurchatov	15.13	18	*e*Pn		Pn	04 08 00.3	-2.8
	comp=Z,5.0nm,0.8s							
KURK	Kurchatov	15.13	18	⇑*e*P		Pn	04 08 03.0	-0.1
AB31	Akbulak array	15.24	330	⇓P		Pn	04 08 00.9	-3.6
	comp=Z,5.8nm,0.5s							
AB31	Akbulak array	15.24	330	P		Pn	04 08 00.8	-3.6
AB31				pmax	pmax			
	comp=Z,6.0nm,0.5s							
ABKAR	Akbulak array	15.24	330	*e*Pn		Pn	04 08 00.8	-3.7
	comp=Z,11nm,0.4s							
JIRN	Jiri	15.32	121	*e*P		Pn	04 08 04.1	-2.0
BVAR	Borovoye Array	16.54	358	P		Pn	04 08 18.9	-1.7
	comp=Z,0.8nm,0.3s,baz=173,slow=13,SNR=27							
BRVK	Borovoye	16.57	358	*e*P		Pn	04 08 20.2	-0.8
	comp=Z,13nm,1.3s							
BRVK	Borovoye	16.57	358	⇑P		Pn	04 08 19.0	-2.0
	comp=Z,7.6nm,1.0s							
BRVK	Borovoye	16.57	358	*be*P		Pn	04 08 19.2	-1.8
AKTO	Aktyubinsk	16.94	329	P		Pn	04 08 23.6	-1.9
	comp=Z,1.3nm,0.3s,baz=128,slow=13,SNR=20							
AKTO				LR		LR	04 15 19.4	
	comp=Z,22nm,18.9s,baz=140,slow=38							
DGZ	Jazzator, Alta	17.59	36	*ce*P		Pn	04 08 34.6	+1.0
AKT	Akhty	19.03	292	*e*P		Pn	04 08 53.0	+2.3
AKT				*e*S		Sn	04 12 22.1	-2.2
AKT				pmax	pmax			
	comp=Z,9.0nm,0.3s							
ZAA0	Zalesovo Array	19.79	24	*e*P		P	04 08 56.4	-0.3
	comp=Z,7.7nm,0.8s							
ZALV	Zalesovo Beam	19.79	24	P		P	04 08 56.8	+0.1
	comp=Z,6.1nm,0.4s,baz=225,slow=11,SNR=25							
ZAA1	Zalesovo Array	19.79	24	*e*P		P	04 08 56.8	+0.1
NVS	Novosibirsk	20.07	20	*e*P		P	04 09 00.1	+0.4
GROC	Groznyy	20.71	297	*e*P		P	04 09 06.9	+0.2
GROC				*e**PP		pP	04 09 25.5	-2.8
GROC				*e*S		S	04 12 49.1	-2.5
GROC				*e**SS		sS	04 13 25.4	-3.0
GROC				pmax	pmax			
	comp=Z,52nm,1.2s							
GNI	Garni	21.19	288	P		P	04 09 11.7	-0.4
	comp=Z,16nm,0.6s,baz=231,slow=19,SNR=7.4							
GNI	Garni	21.19	288	*e*P		P	04 09 11.7	-0.4
	comp=Z,32nm,1.0s							
GNI	Garni	21.19	288	*d i* P		P	04 09 13.8	+1.7
GNI				pmax	pmax			
	comp=Z,36nm,0.5s							
TBLG	Delisi	21.29	292	*e*P		P	04 09 11.6	-1.4
	comp=Z,11nm,0.6s							
TBLG	Delisi	21.29	292	*e*P		P	04 09 11.6	-1.4
TBLG				pmax	pmax			
	comp=Z,11nm,0.6s							
SVE	Sverdlovsk	21.58	344	*e*P		P	04 09 15.9	0.0
SVE				pmax	pmax			
	comp=Z,10.0nm,0.6s							
ARU	Arti	21.73	341	P		P	04 09 18.0	+0.5
	comp=Z,4.5nm,0.2s,baz=158,slow=9.8,SNR=7.9							
ARU	Arti	21.73	341	*e*P		P	04 09 17.7	+0.2
	comp=Z,31nm,1.4s							
ARU	Arti	21.73	341	*d i* P		P	04 09 17.8	+0.3
ARU							04 09 43.8	
ARU				S		S	04 13 13.1	+2.2
ARU				SS		SnSn	04 13 49.0	+2.2
ARU				pmax	pmax			
	comp=Z,21nm,1.3s							
ZEI	Tsey	22.02	295	*e*P		P	04 09 23.8	+2.9
ZEI				pmax	pmax			
	comp=Z,6.0nm,0.6s							
NCK	Nalchik	22.34	297	⇓*e*P		P	04 09 24.4	+0.4
NCK				pmax	pmax			
	comp=Z,6.0nm,0.6s							
GTA	Gaotai	22.56	74	P		P	04 09 30.0	+3.6
GTA				pP		pP	04 09 54.0	+4.5
GTA				sP		sP	04 10 07.0	+2.7
GTA				pmax	pmax			
	comp=Z,6.0nm,0.8s							
KBZ	Khabaz	22.88	297	P		P	04 09 28.7	-0.6
	comp=Z,2.1nm,0.6s,baz=129,slow=9.3,SNR=4.9							
NEY	Neytrino	22.94	296	⇑*e*P		P	04 09 29.5	-0.6
NEY				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KIV	Kislovodsk	23.06	298	*e*P		P	04 09 32.0	+0.8
KIV				pmax	pmax			
	comp=Z,16nm,0.9s							
KIV				MLR		MLR		
	comp=Z,48nm,14.0s							
VRH	Novokhopyorsk	25.73	314	*e*P		P	04 09 55.2	0.0
VRH				pmax	pmax			
	comp=Z,5.0nm,0.5s							
LZH	Lanzhou	26.10	81	⇓P		P	04 10 02.0	+3.1
LZH				pP		pP	04 10 25.0	+0.1
LZH				sP		sP	04 10 37.8	-0.9
LZH				pmax	pmax			
	comp=Z,20nm,1.0s							
LZH				pmax	pmax			
	comp=Z,63nm,4.7s							
ANN	Anapa	26.91	299	*e*P		P	04 10 12.6	+6.8
ANN				*e*S		S	04 14 47.3	+13
ANN				pmax	pmax			
	comp=Z,27nm,1.0s							
VORD	Divnogorie	27.07	312	*e*P		P	04 10 09.2	+2.0
VORD				pmax	pmax			
	comp=Z,10.0nm,0.3s							
VSR	Storozhevoye	27.23	313	*e*P		P	04 10 07.9	-0.8
VSR				pmax	pmax			
	comp=Z,6.0nm,0.5s							
TLY	Talaya	27.41	46	⇑*e*P		P	04 10 13.0	+2.7
LPSR	Galich'ya Gora	27.87	316	*e*P		P	04 10 14.9	+0.6
LPSR				pmax	pmax			
	comp=Z,10.0nm,0.7s							
SONA0	Songino Array	28.08	55	*e*P		P	04 10 16.0	-0.5
SONM	Songino Array	28.08	55	P		P	04 10 16.0	-0.5
	comp=Z,0.5nm,0.5s,baz=262,slow=9.6,SNR=3.5							
SONM	Songino Array	28.08	55	P		P	04 10 16.0	-0.5
KMI	Kunming	29.09	104	P		P	04 10 28.5	+2.7
KMI				pmax	pmax			
	comp=Z,12nm,0.5s							
BR101	Keskin Array S	29.73	288	*e*P		P	04 10 30.5	-0.7
BRTR	Keskin Array B	29.73	288	P		P	04 10 30.5	-0.7
	comp=Z,0.5nm,0.6s,baz=105,slow=9.3,SNR=3.5							
PRGR	Permogore	29.90	335	*e*P		P	04 10 31.0	-1.2
PRGR				pmax	pmax			
	comp=Z,10.0nm,0.6s							
OBN	Obninsk	30.14	319	*e*P		P	04 10 34.7	+0.3
OBN				pmax	pmax			
	comp=Z,8.0nm,0.9s							
HHC	Hu-ho-hao-te	31.47	70	*e*P		P	04 10 48.5	+2.1
HHC				pmax	pmax			
	comp=Z,12nm,1.1s							
HHC				pmax	pmax			
	comp=Z,22nm,5.3s							
KLMR	Klimovskoe	31.63	330	*e*P		P	04 10 46.9	-0.5
KLMR				pmax	pmax			
	comp=Z,8.0nm,0.9s							
KLMR	Klimovskoe	31.63	330	*e*P		P	04 10 47.0	-0.5
KLMR				AMP			04 10 48.8	
	comp=Z,8.0nm,0.9s							
AKASG	Malin Array Be	33.19	309	P		P	04 11 01.9	+0.7
	comp=Z,4.4nm,0.4s,baz=82,slow=7.0,SNR=8.3							
AKASG	Malin Array Be	33.19	309	*ce*P		P	04 11 03.0	+1.8
AKASG				pmax	pmax			
	comp=Z,4.0nm,0.4s							
AKBB	Malin Array Si	33.19	309	*e*P		P	04 11 01.9	+0.7
	comp=Z,6.8nm,0.6s							
AKBB	Malin Array Si	33.19	309	*e*P		P	04 11 01.9	+0.7
AKBB				pmax	pmax			
	comp=Z,7.0nm,0.6s							
MLR	Muntele Rosu	35.05	299	P		P	04 11 18.0	+0.5
	comp=Z,4.1nm,0.8s,baz=156,slow=3.9,SNR=7.4							
MLR	Muntele Rosu	35.05	299	P		P	04 11 18.0	+0.5
BUR08	Bucovina Ar. S	35.56	303	*e*P		P	04 11 23.4	+1.6
	comp=Z,2.0nm,1.0s							
VSU	Vasula	36.38	321	⇓*e*P		P	04 11 28.5	0.0
VSU				pmax	pmax			
	comp=Z,37nm,1.0s							
UZH	Uzhgorod	37.52	305	*e*P		P	04 11 36.0	-2.3
FIA0	FINESS Array S	37.66	326	*e*P		P	04 11 40.3	+1.0
FIA0	FINESS Array S	37.66	326	*e*P		P	04 11 40.3	+1.0
FINES	FINESS Array B	37.66	326	P		P	04 11 40.3	+1.0
	comp=Z,4.8nm,0.7s,baz=118,slow=9.1,SNR=26							
OJC	Ojcow	39.15	307	*e*P		P	04 11 51.3	-0.7
	comp=Z,7.5nm,1.1s							
OJC	Ojcow	39.15	307	*e*P		P	04 11 51.3	-0.7
OJC				pmax	pmax			
	comp=Z,8.0nm,1.1s							
NJ2	Nanjing	39.16	82	*e*P		P	04 11 53.5	+1.2
NJ2				pmax	pmax			
	comp=Z,11nm,0.5s							
ARA0	ARCESS Array S	41.26	337	*e*P		P	04 12 10.7	+1.5
ARCES	ARCESS Array B	41.26	337	P		P	04 12 10.7	+1.5
	comp=Z,5.7nm,0.7s,baz=112,slow=7.7,SNR=24							
ARE0	ARCESS Array S	41.26	337	*e*P		P	04 12 10.0	+0.9
HEF	Hetta	41.34	336	*e*P		P	04 12 10.8	+1.0
KTK1	Kautokeino	41.74	336	*e*P		P	04 12 14.5	+1.5
HAMF	Hammerfest	42.34	339	*e*P		P	04 12 18.9	+1.1
KIF	Kilpisjarvi	42.54	336	*e*P		P	04 12 20.4	+0.9
HFS	Hagfors	43.26	322	P		P	04 12 26.1	+0.8
	comp=Z,6.9nm,0.7s,baz=108,slow=9.7,SNR=21							
TRO	Tromso	43.39	336	*e*P		P	04 12 28.2	+1.9
MOR8	Moi Rana	43.97	331	*e*P		P	04 12 31.6	+0.6
STEI	Steigen	44.11	333	*e*P		P	04 12 33.4	+1.4
NC405	NORSAR Array S	44.33	323	*e*P		P	04 12 35.0	+1.0
	comp=Z,38nm,1.2s							
NC602	NORSAR Array S	44.38	323	*e*P		P	04 12 34.5	+0.1
NC303	NORSAR Array S	44.51	323	*e*P		P	04 12 36.4	+1.0
	comp=Z,18nm,0.9s							
NC303	NORSAR Array S	44.51	323	*e*P		P	04 12 36.8	+1.5
NB201	NORSAR Array S	44.53	323	*e*P		P	04 12 36.4	+0.8
KONS	Konsvik	44.56	331	*e*P		P	04 12 37.4	+1.7
NB2	NORSAR Subarra	44.57	323	P		P	04 12 36.2	+0.3
	comp=Z,1.7nm,0.5s,baz=96,slow=7.9							
NB2	NORSAR Subarra	44.57	323	P		P	04 12 36.2	+0.3
	baz=96,slow=7.9							
NB200	NORSAR Array S	44.57	323	*e*P		P	04 12 36.2	+0.3
NOA	NORSAR Array B	44.57	323	P		P	04 12 36.2	+0.3
	comp=Z,3.7nm,0.6s,baz=96,slow=7.7,SNR=23							
NOA				LR		LR	04 34 21.6	
	comp=Z,13nm,18.1s,baz=115,slow=40							
GRA1	Grafenberg Arr	44.71	307	*e*P		P	04 12 35.2	-2.0
	comp=Z,19nm,0.8s							
GRF	Grafenberg Arr	44.71	307	*e*P		P	04 12 35.2	-2.0
GRF				pmax	pmax			
	comp=Z,19nm,0.8s							
GRFO	Grafenberg	44.71	307	*e*P		P	04 12 35.5	-1.6
	comp=Z,20nm,0.7s							
GRFO	Grafenberg	44.71	307	*e*P		P	04 12 35.6	-1.6
GRFO				pmax	pmax			
	comp=Z,20nm,0.7s							
NBO00	NORSAR Array S	44.78	323	*e*P		P	04 12 37.7	+0.2
LOF	Lofoten	44.78	333	*e*P		P	04 12 39.2	+1.8
NC204	NORSAR Array S	44.81	323	*e*P		P	04 12 38.3	+0.5
KLR	Kul'dur	44.89	54	⇑*e*P		P	04 12 40.9	+2.3
KLR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
KONO	Kongsberg	45.28	321	*e*P		P	04 12 41.6	+0.1
DAVOX	Davos/Dischmat	46.02	303	P		P	04 12 48.0	+0.3
	comp=Z,2.8nm,0.6s,baz=133,slow=7.4,SNR=4.1							
SPA0	Spitsbergen Ar	47.56	347	*e*P		P	04 13 00.5	+1.4
	comp=Z,20nm,1.2s							
SPA0				*e*S		S	04 19 48.7	+3.5
SPA0	Spitsbergen Ar	47.56	347	*e*P		P	04 13 02.0	+2.9
SPITS	Spitsbergen Ar	47.56	347	P		P	04 13 00.5	+1.4
	comp=Z,1.8nm,0.5s,baz=110,slow=12,SNR=8.2							
EKA	Eskdalemuir Ar	52.50	316	P		P	04 13 37.0	+0.3
	comp=Z,0.9nm,0.5s,baz=93,slow=7.4,SNR=3.8							
BILL	Bilibino	58.47	26	*e*P		P	04 14 21.6	+2.4
BILL				pmax	pmax			
	comp=Z,1.0nm,0.9s							
SUMG	Summit	61.16	341	*e*P		P	04 14 39.7	+1.7
	comp=Z,5.2nm,0.7s							
SUMG	Summit	61.16	341	*e*P		P	04 14 39.7	+1.7
SUMG				pmax	pmax			
	comp=Z,5.0nm,0.7s							
TOA1	Torodi Ar. Sit	66.03	269	*e*P		P	04 15 09.3	-1.0
TORD	Torodi Ar. Bea	66.03	269	P		P	04 15 09.3	-1.1
	comp=Z,7.0nm,0.3s,baz=72,slow=4.0,SNR=5.3							
KIWB	Kanaga Island	73.64	37	*ep*P		pP	04 16 25.2	-1.2
INK	Inuvik	73.85	9	P		P	04 15 58.4	+1.1
	comp=Z,1.2nm,0.5s,baz=3.8,slow=5.2,SNR=5.0							
INK	Inuvik	73.85	9	*e*P		P	04 15 58.4	+1.1
	comp=Z,1.8nm,0.6s							
ILAR	Eielson Array	74.69	16	P		P	04 16 03.1	+0.8
	comp=Z,0.6nm,0.8s,baz=308,slow=4.4,SNR=5.8							
ILB	Eielson Array	74.69	16	*e*P		P	04 16 03.1	+0.8
	comp=Z,2.1nm,1.1s							
BOSA	Boshof	77.95	220	P		P	04 16 20.4	-0.9
	comp=Z,3.8nm,1.1s,baz=23,slow=7.7,SNR=2.5							
YKA	Yellowknife Ar	81.23	3	P		P	04 16 39.9	+1.5
	comp=Z,0.6nm,0.4s,baz=350,slow=5.5,SNR=4.0							
YKB5	Yellowknife Ar	81.23	3	*e*P		P	04 16 39.9	+1.5
WRA	Warramunga Arr	81.73	122	P		P	04 16 41.9	+0.2
	comp=Z,0.8nm,0.5s,baz=306,slow=5.7,SNR=7.7							
WR1	Warramunga Arr	81.73	122	*e*P		P	04 16 41.9	+0.2
ASAR	Alice Springs	84.00	125	P		P	04 16 52.2	-1.1
	comp=Z,0.3nm,0.4s,baz=312,slow=4.7,SNR=4.6							
NNA	Nana	142.42	302	*i* PKIKP		PKiKP	04 24 02.7	+4.2
CFA	Coronel Fontan	146.37	266	PKPbc		PKPbc	04 24 03.2	-0.1
	comp=Z,1.1nm,0.6s,baz=312,slow=3.5,SNR=3.9							

ISCJB ***26*** *04:11:22.0±0.3, 51°.51N±0°.02×16°.10E±0°.02, h0km, Error ellipse: s-maj=2.5km s-min=2.1km az=30.2*
IDC ***26*** *04:11:24.9±0.6, 51°.48N×16°.04E, h0km, mb1 3.4/8, mb1mx3.2/45, mbtmp3.3/8, ML2.9/7, Error ellipse: s-maj=11.3km s-min=5.9km az=104.0*
IPEC ***26*** *04:11:24.4±0.3, 51°.50N×16°.21E, h0km, ML2.6/3, Error ellipse: s-maj=3.2km s-min=1.7km az=65.0*
PRU ***26*** *04:11:25.3±0.0, 51°.46N×16°.06E, h0km*
BGR ***26*** *04:11:26.1±0.5, 51°.41N×16°.09E, h1km, ML3.0/10, Error ellipse: s-maj=6.7km s-min=2.2km az=11.0*
VIE ***26*** *04:11:26.0±0.9, 51°.37N×15°.96E, h0km, mb2.6/7, ml2.8/7, Error ellipse: s-maj=8.2km s-min=4.8km az=17.0, Suspected Mining induced.*
UPP ***26*** *04:11:29.6±3.3, 51°.84N×15°.69E, h0km, ML2.1, Suspected explosion*

ISC 26 04:11:22.6±0.6, 51°.57N±0°.03×16°.11E±0°.02, h0km, n60, σ1§30/1.15, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.74	171	*i* Pg	Pg	04 11 37.4	+0.6
KSP				*e*Sg	Sg	04 11 45.5	-0.8
KSP	Ksiaz	0.74	171	*e*Pg	Pg	04 11 37.4	+0.6
CHVC	Chvalec	0.98	182	*e*PG	Pb	04 11 42.1	-0.5
CHVC				*e*SG	Sg	04 11 53.9	-0.3
	comp=Z,77nm,0.3s						
OSTC	Ostas	1.02	176	*e*PG	Pb	04 11 42.7	-0.4
OSTC				*e*SG	Sg	04 11 53.7	-1.6
	comp=Z,58nm,0.4s						
UPC	Upice	1.06	183	*e*PG	Pg	04 11 43.4	+0.4
UPC				*e*SG	Sg	04 11 55.9	-0.9
	comp=Z,170nm,0.4s						
DPC	Dobruska-Polom	1.23	173	*e*Pg	Pg	04 11 46.2	0.0
DPC	Dobruska-Polom	1.23	173	*e*PG	Pg	04 11 46.1	0.0
DPC				*e*SG	Sg	04 12 01.3	-0.8
	comp=Z,51nm,0.5s						
PVCC	Panska Ves	1.42	223	*e*PG	Pb	04 11 50.5	+0.5
PVCC				*e*SG	Sn	04 12 09.3	+0.1
	comp=Z,174nm,0.3s						
BRG	Berggiesshubel	1.53	244	PN	Pb	04 11 51.7	-0.1
BRG				PG	Pg	04 11 53.1	+1.2
BRG				SG	Sn	04 12 13.0	+1.3
	114nm,0.5s						
FBE	Freiberg	1.85	250	*e*Pg	Pg	04 11 59.2	+1.2
FBE				*e*Sg	Sg	04 12 22.8	+0.9
GOPC	GO Pecny, Ondr	1.86	207	*e*PN	Pn	04 11 55.8	+0.1
GOPC				*e*PG	Pb	04 11 57.3	-0.2
GOPC				*e*SG	Sb	04 12 21.3	+0.1
PRU	Pruhonice	1.87	213	*e*PN	Pn	04 11 56.0	+0.1
PRU				*e*PG	Pb	04 11 57.8	+0.2
PRU				*e*SG	Sb	04 12 21.2	-0.3
	comp=Z,29nm,0.4s						
CLL	Collm	1.96	264	*e*Pn	Pn	04 11 57.0	-0.1
CLL				*e*Pg	Pb	04 11 59.0	-0.2
CLL				*i*		04 12 02.4	
CLL				*i*		04 12 04.4	
CLL				*e*		04 12 15.0	
CLL				*e*Sn	Sn	04 12 23.0	+0.6
CLL				*e*Sg	Sg	04 12 26.0	+0.5
	comp=Z,36nm,0.4s						
RAC	Raciborz	1.99	138	*e*Pg	Pb	04 11 59.6	-0.1
RAC				*e*Sg	Sb	04 12 25.3	+0.2
MORC	Moravsky Berou	2.02	152	*e*PN	Pn	04 11 58.2	+0.3
MORC				*e*SG	Sn	04 12 24.5	+0.7
MORC	Moravsky Berou	2.02	152	*e*Pn	Pn	04 11 58.2	+0.3
	baz=334						
MORC				*e*Sg	Sn	04 12 24.5	+0.7
	comp=Z,39nm,0.4s,baz=334						
MORC	Moravsky Berou	2.02	152	*e*Pn	Pn	04 11 58.3	+0.3
MORC				*e*Sg	Sb	04 12 25.6	-0.2
OKC	Ostrava-Krasne	2.17	142	*e*P	Pb	04 12 03.1	+0.4
OKC	Ostrava-Krasne	2.17	142	*e*Sg	Sb	04 12 30.4	+0.3
OKC	Ostrava-Krasne	2.17	142	*e*PG	Pb	04 12 03.1	+0.4
OKC				*e*SG	Sb	04 12 30.0	-0.1
	comp=Z,47nm,0.6s						
CHZP	Chorzow	2.23	124	*e*Pg	Pg	04 12 06.5	+1.1
CHZP				*e*Sg	Sg	04 12 36.0	+1.7
VRAC	Vranov	2.29	172	Pn	Pn	04 12 02.7	+1.1
	comp=Z,3.2nm,0.3s,baz=350,slow=17,SNR=13						
VRAC				Lg	Lg	04 12 33.5	
	comp=Z,6.3nm,0.3s,baz=257,slow=22,SNR=7.5						
VRAC	Vranov	2.29	172	P	Pn	04 12 02.7	+1.1
VRAC	Vranov	2.29	172	*e*PN	Pn	04 12 02.3	+0.6
VRAC				*e*SG	Sb	04 12 33.5	0.0
VRAC	Vranov	2.29	172	*e*Pn	Pn	04 12 02.2	+0.6
	ba

comp=Z,24nm,1.0s
BLEU Blekinge 4.75 358 P **Pn 04 12 37.6 +2.3**
BLEU S **Sn 04 13 30.0 -1.0**
KBA Koelnbreinsper 4.84 203 *e*Pn **Pn 04 12 38.5 +1.6**
comp=Z,2.5nm,0.3s
BJUU Bjuv 4.87 339 P **Pn 04 12 38.2 +1.2**
DEL Delary 5.08 346 P **Pn 04 12 41.5 +1.5**
WTTA Wattenberg 5.20 216 *e*Pn **Pn 04 12 44.2 +2.4**
comp=Z,1.5nm,0.3s
VXJU Vaexsjoe 5.41 353 P **Pn 04 12 46.5 +2.1**
FABU Falkenberg 5.79 341 P **Pn 04 12 51.2 +1.4**
GNOU Gnosjoe 5.89 347 P **Pn 04 12 53.1 +1.9**
DAVOX Davos/Dischmat 6.29 223 Pn **Pn 04 12 57.4 +0.5**
comp=Z,0.4nm,0.3s,baz=42,slow=16,SNR=3.0
DAVOX Lg Lg 04 14 40.2
comp=Z,0.2nm,0.3s,baz=11,slow=23,SNR=1.5
FKPU Falk 6.75 349 P **Pn 04 13 04.9 +2.1**
AKASG Malin Array Be 8.30 91 Pn **Pn 04 13 23.1 -1.1**
baz=280,slow=12,SNR=1.8
AKASG Lg Lg 04 15 49.1
comp=Z,0.6nm,0.3s,baz=270,slow=25,SNR=2.1
HFS Hagfors 8.69 352 Pn **Pn 04 13 30.2 +0.7**
comp=Z,0.3nm,0.3s,baz=164,slow=16,SNR=4.0
HFS Sn **Sn 04 15 06.6 -1.5**
comp=Z,0.2nm,0.3s,baz=176,slow=25,SNR=3.0
NOA NORSAR Array B 9.87 346 Pn **Pn 04 13 45.7 0.0**
comp=Z,0.0nm,0.3s,baz=167,slow=12,SNR=2.9
FINES FINESS Array B 11.31 25 Pn **Pn 04 14 05.0 -0.4**
comp=Z,0.2nm,0.3s,baz=212,slow=12,SNR=6.8
FINES Sn **Sn 04 16 07.0 -5.3**
comp=Z,0.2nm,0.3s,baz=213,slow=20,SNR=4.2
EKA Eskdalemuir Ar 12.08 296 Pn **Pn 04 14 14.4 -1.4**
baz=104,slow=13,SNR=3.8
ARCES ARCESS Array B 18.56 10 Pn **P 04 15 38.5 -2.2**
comp=Z,0.2nm,0.3s,baz=194,slow=11,SNR=5.0

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*ISCJB **26** 04:46:52.1±0.4, 24°.85N×0°.02×122°.09E±0°.02, h7km±3km, Error ellipse: s-maj=3.6km s-min=3.2km az=153.5*
*JMA **26** 04:46:52.7±0.1, 24°.86N×122°.01E, h34km, M2.6*
*TAP **26** 04:46:52.4, 24°.84N×122°.03E, h8km, ML2.8, C*
ISC 26 04:46:52.2±0.9, 24°.85N±0°.02×122°.07E±0°.02, h10km±7km, n52, σ0°56/77, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.13**	**269**	P	**Pg**	**04 46 54.9**	**-0.3**
	baz=269						
EGS				S	**Sg**	**04 46 56.9**	**-0.5**
	baz=269						
TWB1	**Santiao Chiao**	**0.18**	**335**	P	**Pg**	**04 46 56.2**	**+0.1**
	baz=349						
TWB1				S	**Sg**	**04 46 59.1**	**+0.4**
	baz=349						
NTC	**Toucheng**	**0.22**	**272**	P	**Pg**	**04 46 56.8**	**0.0**
	baz=273						
NTC				S	**Sg**	**04 46 59.9**	**0.0**
	baz=273						
TIPB	**Shuangxi**	**0.26**	**299**	P	**Pg**	**04 46 57.6**	**+0.2**
	baz=303						
TIPB				S	**Sg**	**04 47 01.2**	**+0.2**
	baz=303						
EOS1	**EOS1**	**0.30**	**170**	P	**Pg**	**04 46 59.0**	**+0.7**
	baz=164						
EOS1				*e*S	**Sb**	**04 47 05.2**	**+0.5**
	baz=164						
TWC	**Suao**	**0.31**	**221**	P	**Pg**	**04 46 58.2**	**-0.3**
	baz=214						
TWC				*e*S	**Sg**	**04 47 03.5**	**+0.8**
	baz=214						
NWF	**Wu-fen Shan**	**0.34**	**310**	P	**Pg**	**04 46 59.5**	**+0.3**
	baz=314						
NWF				*e*S	**Sg**	**04 47 04.6**	**+0.8**
	baz=314						
WFSB	**Wu-fen Shan**	**0.34**	**310**	*i* P	**Pg**	**04 46 59.6**	**+0.5**
	baz=314						
WFSB				*e*S	**Sg**	**04 47 04.5**	**+0.7**
	baz=314						
TWE	**Neicheng**	**0.39**	**251**	P	**Pg**	**04 46 59.7**	**-0.2**
	baz=249						
TWE				*e*S	**Sg**	**04 47 04.7**	**-0.4**
	baz=249						
TWA	**Mucha**	**0.46**	**287**	P	**Pg**	**04 47 01.6**	**+0.3**
	baz=288						
TWA				S	**Sg**	**04 47 07.6**	**+0.2**
	baz=288						
ENTT	**Nioudou**	**0.51**	**246**	*i* P	**Pg**	**04 47 02.2**	**+0.1**
	baz=245						
NANB	**Nanao**	**0.51**	**215**	*e*P	**Pg**	**04 47 02.4**	**+0.2**
	baz=219						
NANB				*e*S	**Sg**	**04 47 09.5**	**+0.5**
	baz=219						
ENA	**Nanau**	**0.52**	**216**	P	**Pg**	**04 47 02.6**	**+0.3**
	baz=219						
ENA				*e*S	**Sg**	**04 47 09.5**	**+0.4**
	baz=219						
NWLT	**Wulai**	**0.52**	**262**	P	**Pg**	**04 47 02.1**	**-0.4**
	baz=263						
YM01	**YM01**	**0.54**	**303**	P	**Pb**	**04 47 03.5**	**-0.4**
	baz=305						
TATO	**Taipei**	**0.55**	**284**	P	**Pg**	**04 47 02.9**	**0.0**
	baz=276						
TATO				*e*S	**Sg**	**04 47 09.9**	**-0.2**
	baz=276						
YM08	**YM08**	**0.55**	**308**	*i* P	**Pg**	**04 47 03.5**	**+0.4**
	baz=309						
YM10	**YM10**	**0.56**	**304**	P	**Pb**	**04 47 03.7**	**-0.4**
	baz=305						
YM05	**YM05**	**0.56**	**305**	P	**Pb**	**04 47 03.7**	**-0.5**
	baz=306						
YM04	**YM04**	**0.57**	**302**	*i* P	**Pb**	**04 47 04.0**	**-0.4**
	baz=304						
YM03	**YM03**	**0.58**	**304**	P	**Pb**	**04 47 04.2**	**-0.4**
	baz=306						
ANP	**Anpu**	**0.60**	**304**	P	**Pg**	**04 47 04.1**	**+0.1**
	baz=306						
TWS1	**Kuangyinshan**	**0.65**	**293**	P	**Pb**	**04 47 05.4**	**-0.2**
	baz=294						
TWS1				*e*S	**Sb**	**04 47 14.4**	**-0.2**
	baz=294						
NTST	**Danshui**	**0.65**	**299**	P	**Pb**	**04 47 05.8**	**+0.2**
	baz=308						
YHNB	**Yeheng**	**0.66**	**255**	P	**Pg**	**04 47 04.5**	**-0.5**
	baz=264						
NSK	**Sanguang**	**0.67**	**255**	P	**Pg**	**04 47 04.6**	**-0.6**
	baz=264						
NNSB	**Datong**	**0.75**	**237**	P	**Pg**	**04 47 06.7**	**-0.2**
	baz=236						
NNSB				*e*S	**Sg**	**04 47 16.9**	**+0.2**
	baz=236						
NNS	**Nan Shan**	**0.76**	**238**	*e*P	**Pg**	**04 47 06.8**	**0.0**
	baz=243						
PCYT	**Pengchaiyu**	**0.78**	**360**	P	**Pb**	**04 47 08.3**	**+0.4**
	baz=355						
NACB	**Ninganchiao**	**0.80**	**213**	*e*P	**Pg**	**04 47 07.7**	**0.0**
	baz=203						
NACB				*e*S	**Sg**	**04 47 18.3**	**+0.2**
	baz=203						
ETLH	**Xiulin Townshi**	**0.83**	**220**	P	**Pg**	**04 47 08.3**	**-0.1**
	baz=231						
ETLH				*e*S	**Sb**	**04 47 20.3**	**+0.1**
	baz=231						
TWD	**Chiawan**	**0.88**	**210**	P	**Pg**	**04 47 09.2**	**0.0**
	baz=203						
JYNG	**Yonaguni jima**	**0.89**	**116**	P	**Pg**	**04 47 09.7**	**+0.4**
JYNG				S	**Sb**	**04 47 22.4**	**+0.8**
YOJ	**Yonaguni jima**	**0.94**	**114**	P	**Pg**	**04 47 10.6**	**+0.3**
	baz=114						
YOJ				*e*S	**Sb**	**04 47 23.5**	**+0.4**
	baz=114						
YOJ	**Yonaguni jima**	**0.94**	**114**	P	**Pg**	**04 47 10.3**	**0.0**
YOJ				S	**Sb**	**04 47 23.4**	**+0.4**
LIOB	**Emei**	**0.98**	**258**	P	**Pn**	**04 47 12.8**	**+0.8**
	baz=251						
NSTT	**Nanjuang**	**1.00**	**258**	*e*P	**Pn**	**04 47 13.0**	**+0.7**
	baz=250						
WHF	**Hehuan Shan**	**1.01**	**227**	P	**Pb**	**04 47 12.3**	**+0.1**
	baz=227						
WHF				*e*S	**Sb**	**04 47 25.6**	**-0.1**
	baz=227						
TDCB	**Techi**	**1.02**	**235**	*e*P	**Pg**	**04 47 11.9**	**0.0**
	baz=227						
CHGB	**Renai**	**1.13**	**226**	P	**Pb**	**04 47 13.9**	**-0.1**
	baz=227						
WHP	**Taichung City**	**1.17**	**241**	*e*P	**Pg**	**04 47 16.8**	**+2.0**
	baz=242						
OWD	**Renai**	**1.21**	**223**	*e*P	**Pb**	**04 47 14.6**	**-0.7**
	baz=230						
VWDT	**VWDT**	**1.38**	**218**	*e*P	**Pn**	**04 47 17.8**	**+0.3**
	baz=219						
TYC	**Yuchr**	**1.45**	**230**	*e*P	**Pg**	**04 47 21.4**	**+1.2**
	baz=236						
SSLB	**Suanglung**	**1.47**	**224**	*e*P	**Pn**	**04 47 19.0**	**+0.3**
	baz=226						
HGSD	**Ruisui**	**1.47**	**204**	*e*P	**Pg**	**04 47 21.9**	**+1.4**
	baz=222						
IRIF	**Iriomote-Funau**	**1.59**	**108**	P	**Pn**	**04 47 19.6**	**-0.9**
IRIF				S	**Sn**	**04 47 40.2**	**-0.9**
YULB	**Yu-li**	**1.61**	**206**	*e*P	**Pg**	**04 47 22.9**	**-0.3**
	baz=209						
HATJ	**Hateruma jima**	**1.77**	**116**	P	**Pn**	**04 47 22.4**	**-0.4**
HATJ				S	**Sn**	**04 47 44.6**	**-0.7**
JKRS	**Kuro-shima**	**1.87**	**109**	P	**Pn**	**04 47 24.1**	**-0.1**
JKRS				*e*S	**Sn**	**04 47 46.5**	**-1.3**
JIJ	**Ishigaki jima**	**1.94**	**104**	P	**Pn**	**04 47 25.4**	**+0.1**
JIJ				*e*S	**Sn**	**04 47 48.4**	**-1.4**
JISG	**Ishigakijimahi**	**2.05**	**97**	P	**Pn**	**04 47 27.1**	**+0.3**

MEX 26 04:56:55.3±0.7, 18°.99N×98°.60W, h2km±5km, MD3.6, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPM	**Popocatepetl**	**0.08**	**340**	*i* P	Pg	04 56 59.2	+2.1
	baz=160,slow=10						
PPM				*i* S	Sg	04 57 00.9	+2.5
AMVM	**AMECAMECA**	**0.23**	**308**	*e*P	Pg	04 57 01.7	+2.0
YAIG	**Yautepec**	**0.46**	**254**	*e*P	Pb	04 57 05.5	-0.8
YAIG				*i* S	Sb	04 57 12.8	-0.8
PBVM	**Pinon**	**0.64**	**314**	*e*P	Pb	04 57 08.9	-0.3
PBVM				*e*S	Sb	04 57 18.4	-0.3
MAVM	**Malinalco, Edo**	**0.85**	**268**	*e*P	Pb	04 57 13.3	+0.4
MAVM				*e*S	Sb	04 57 25.7	+0.8
PLIG	**Platanillo**	**1.04**	**235**	*i* P	Pg	04 57 14.8	-0.5
PLIG				*e*S	Sg	04 57 28.9	0.0
DEIG	**Demacu**	**1.37**	**342**	*i* P	Pb	04 57 24.2	+2.5
DEIG				*e*S	Sg	04 57 38.2	-1.1
ARIG	**Puente Sto Nin**	**1.80**	**247**	*e*P	Pg	04 57 29.8	-0.1
ARIG				*e*S	Sg	04 57 53.5	+0.2

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*ISCJB **26** 05:05:58.5±0.3, 16°.37N±0°.06×92°.92W±0°.04, h223km±3km, mb3.6/10, Error ellipse: s-maj=10.7km s-min=4.9km az=27.2*
*IDC **26** 05:05:58.4±0.6, 16°.21N×93°.04W, h213km±6km, mb3.2/7, mb1 3.4/10, mb1mx3.2/33, mbtmp3.8/10, Error ellipse: s-maj=30.2km s-min=6.6km az=33.0*
*NEIC **26** 05:05:59.9±1.9, 16°.49N×92°.95W, h213km±11km, mb4.0/10, MD4.1(MEX), Error ellipse: s-maj=12.6km s-min=5.2km az=148.0*
*MEX **26** 05:05:59.9±0.5, 16°.38N×93°.05W, h229km±5km, MD4.1*
ISC 26 05:05:59.2±0.7, 16°.33N±0°.07×92°.96W±0°.04, h222km±6km, n37, σ1°25/55, mb3.6/10, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.48**	**340**	*e*Pn	**Pn**	**05 06 29.0**	**+0.1**
TGIG				*e*S	**S**	**05 06 51.3**	**-0.9**
TGIG		**0.48**	**340**	*i* P	**Pn**	**05 06 29.0**	**+0.1**
TGIG				*e*S	**S**	**05 06 50.9**	**-1.3**
PCIG		**0.67**	**202**	*e*Pn	**Pn**	**05 06 29.5**	**-0.1**
PCIG				*e*S	**S**	**05 06 53.1**	**-0.2**
PCIG		**0.67**	**202**	*e*P	**Pn**	**05 06 29.5**	**-0.1**
PCIG				*e*S	**S**	**05 06 53.1**	**-0.2**
CCIG	**Comitan**	**0.79**	**93**	*e*Pn	**Pn**	**05 06 30.8**	**+0.4**
CCIG				*e*Pn	**Pn**	**05 06 30.8**	**+0.4**
CCIG				*e*S	**S**	**05 06 53.6**	**-0.9**
CCIG				*e*S	S	05 06 54.0	-0.4
CCIG	**Comitan**	**0.79**	**93**	*i* P	**Pn**	**05 06 30.8**	**+0.4**
CCIG				*i* S	**S**	**05 06 54.0**	**-0.4**
THIG		**1.56**	**155**	*e*Pn	**Pn**	**05 06 36.4**	**+0.9**
THIG				*e*S	**S**	**05 07 04.4**	**+0.8**
THIG		**1.56**	**155**	*e*P	**Pn**	**05 06 36.4**	**+0.9**
THIG				*e*S	**S**	**05 07 04.4**	**+0.8**
CMIG	**Matias Romero**	**2.00**	**293**	P	**Pn**	**05 06 38.5**	**-0.9**
	19nm,0.3s,baz=112,slow=6.2,SNR=554						
CMIG				S	**S**	**05 07 08.2**	**-2.5**
	14nm,0.3s,baz=342,slow=20,SNR=15						
CMIG	**Matias Romero**	**2.00**	**293**	*e*P	**Pn**	**05 06 38.7**	**-0.7**
CMIG				*e*S	**S**	**05 07 08.2**	**-2.5**
APG	**El Apazote**	**2.74**	**118**	P	**Pn**	**05 06 47.4**	**0.0**
	5.8nm,0.3s,baz=60,slow=24,SNR=46						
APG				S	**S**	**05 07 23.9**	**-0.9**
	5.6nm,0.3s,baz=186,slow=22,SNR=11						
HUIG	**Huatulco**	**3.08**	**260**	*e*Pn	**Pn**	**05 06 49.5**	**-1.5**
HUIG				*e*S	**S**	**05 07 29.4**	**-2.1**
HUIG	**Huatulco**	**3.08**	**260**	*e*P	**Pn**	**05 06 49.5**	**-1.5**
HUIG				*e*S	**S**	**05 07 29.4**	**-2.1**
VHO	**Vista Hermosa**	**3.70**	**282**	*e*Pn	**Pn**	**05 06 58.9**	**+0.5**
VHO				*e*S	**S**	**05 07 45.3**	**+0.6**
VHO	**Vista Hermosa**	**3.70**	**282**	*i* P	**Pn**	**05 06 58.9**	**+0.5**
VHO				*i* S	**S**	**05 07 45.3**	**+0.6**
TLIG	**Tlapa**	**5.51**	**284**	*e*Pn	**Pn**	**05 07 21.6**	**+0.8**
TLIG				*e*S	**S**	**05 08 25.9**	**+0.7**
MYIG	**Mrida**	**5.53**	**33**	*e*Pn	**Pn**	**05 07 19.5**	**-1.2**
TEIG	**Tepich**	**5.90**	**48**	*e*Pn	**Pn**	**05 07 23.7**	**-1.8**
TGUH	**Tegucigalpa,Un**	**5.93**	**112**	*e*Pn	**Pn**	**05 07 27.6**	**+1.6**
JTS	**Las Juntas de**	**9.83**	**127**	P	**Pn**	**05 08 16.7**	**+0.6**
	0.7nm,0.3s,baz=288,slow=20,SNR=4.5						
JTS				S	**S**	**05 10 02.7**	**-3.8**
	0.5nm,0.3s,baz=357,slow=19,SNR=1.4						
JTS	**Las Juntas de**	**9.83**	**127**	*e*Pn	**Pn**	**05 08 17.2**	**+1.2**
TX31	**Lajitas Ar. Si**	**16.27**	**325**	*e*Pn	**Pn**	**05 09 37.8**	**+2.0**
	5.8nm,1.5s						
TXAR	**Lajitas Array**	**16.27**	**325**	P	**Pn**	**05 09 36.2**	**+0.4**
	0.1nm,0.3s,baz=146,slow=13,SNR=19						
MIAR	**Mount Ida**	**18.15**	**358**	*e*P	**P**	**05 09 53.2**	**-2.0**
	5.7nm,0.8s						
MNTX	**Cornudas Mount**	**19.03**	**326**	*e*P	**P**	**05 10 05.1**	**+0.4**
	2.6nm,0.9s						
WMOK	**Wichita Mounta**	**19.07**	**345**	*e*P	**P**	**05 10 03.8**	**-1.3**
	2.2nm,0.8s						
AMTX	**Amarillo**	**20.07**	**339**	*e*P	**P**	**05 10 15.9**	**0.0**
	10nm,0.4s						
ANMO	**Albuquerque**	**22.14**	**329**	P	**P**	**05 10 38.1**	**+1.1**
	0.5nm,0.3s,baz=117,slow=11,SNR=5.2						
SDV	**Santo Domingo**	**22.99**	**106**	P	**P**	**05 10 44.7**	**-0.2**
	1.1nm,0.3s,baz=288,slow=9.6,SNR=3.0						
T25A	**Trinidad**	**23.08**	**336**	*e*P	**P**	**05 10 45.9**	**+0.4**
	5.1nm,0.8s						
SNOW	**Snow King Moun**	**31.00**	**334**	*e*P	**P**	**05 11 56.8**	**+0.5**
	4.0nm,0.7s						
NVAR	**Mina Array Bea**	**31.30**	**320**	P	**P**	**05 12 00.5**	**+1.6**
	1.3nm,0.7s,baz=133,slow=10,SNR=10						
J08A	**Circle Bar Ran**	**34.60**	**326**	*e*P	**P**	**05 12 29.0**	**+1.7**
	3.4nm,0.6s						
LPAZ	**La Paz**	**40.62**	**142**	P	**P**	**05 13 18.4**	**-0.1**
	0.6nm,0.7s,baz=319,slow=20,SNR=3.4						
SIV	**San Ignacio**	**44.95**	**134**	P	**P**	**05 13 51.5**	**-1.1**
	0.7nm,0.5s,baz=307,slow=10,SNR=7.4						
YKA	**Yellowknife Ar**	**48.56**	**347**	P	**P**	**05 14 19.4**	**-0.4**
	1.0nm,0.5s,baz=148,slow=7.7,SNR=5.9						
ILAR	**Eielson Array**	**60.35**	**337**	P	**P**	**05 15 44.8**	**+0.3**
	0.4nm,0.7s,baz=134,slow=7.9,SNR=4.9						

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*ISCJB **26** 05:22:48.9±0.9, 58°.4N±0°.2×32°.0W±0°.3, h13km, mb3.5/8, MS3.0/2, Error ellipse: s-maj=26.5km s-min=17.1km az=26.2*
*IDC **26** 05:22:48.7±1.3, 58°.31N×32°.00W, h0km, mb3.4/7, mb1 3.6/7, mb1mx3.4/38, mbtmp3.4/7, MS3.1/2, Ms1 3.0/2, ms1mx2.5/43, Error ellipse: s-maj=35.9km s-min=23.4km az=26.0*
ISC 26 05:22:50.6±1.1, 58°.3N±0°.2×32°.0W±0°.2, h13km, n13, σ0°81/8, mb3.6/8, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOA	**NORSAR Array B**	**21.68**	**64**	P	**P**	**05 27 40.6**	**-0.1**
	0.8nm,0.9s,baz=282,slow=9.2,SNR=2.2						
ESDC	**Sonseca Array**	**25.88**	**124**	P	**P**	**05 28 23.0**	**+1.1**
	0.1nm,0.4s,baz=325,slow=11,SNR=2.4						
ARCES	**ARCESS Array B**	**26.51**	**42**	LR	LR	05 36 52.3	
	comp=Z,20nm,18.6s,baz=272,slow=32						
INK	**Inuvik**	**41.48**	**327**	LR	LR	05 46 49.3	
	comp=Z,38nm,19.6s,baz=74,slow=35						
BRTR	**Keskin Array B**	**44.87**	**85**	P	**P**	**05 31 03.8**	**-0.7**
	0.2nm,0.3s,baz=302,slow=8.3,SNR=2.3						
ILAR	**Eielson Array**	**47.77**	**328**	P	**P**	**05 31 26.5**	**-0.4**
	0.7nm,0.8s,baz=39,slow=7.4,SNR=4.2						
PDAR	**Pinedale Array**	**48.84**	**287**	P	**P**	**05 31 35.8**	**+0.2**
	0.4nm,0.6s,baz=55,slow=8.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**51.69**	**137**	P	**P**	**05 31 56.7**	**-0.6**
	0.7nm,0.7s,baz=339,slow=7.7,SNR=3.4						
KURBB	**Kurchatov Arra**	**57.52**	**45**	P	**P**	**05 32 39.2**	**+0.1**
	0.7nm,0.8s,baz=324,slow=6.8,SNR=5.2						
MKAR	**Makanchi Array**	**62.09**	**45**	P	**P**	**05 33 11.7**	**+1.0**
	0.3nm,0.6s,baz=328,slow=11,SNR=3.7						
H10S1	**ASCENSION HYDR**	**68.49**	**162**	T	T	06 47 53.8	
	baz=350						
H10S3	**ASCENSION HYDR**	**68.50**	**162**	T	T	06 47 54.4	
	baz=350						
H10S2	**ASCENSION HYDR**	**68.51**	**162**	T	T	06 47 54.9	
	baz=350						

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*ISCJB **26** 05:30:42.6±0.6, 58°.32N±0°.08×31°.8W±0°.1, h14km, mb3.7/11, MS3.4/18, Error ellipse: s-maj=11.8km s-min=9.7km az=137.9*
*IDC **26** 05:30:42.3±0.8, 58°.25N×31°.85W, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.7/41, mbtmp3.7/11, ML2.9/2, MS3.5/21, Ms1 3.5/21, ms1mx3.3/40, Error ellipse: s-maj=23.1km s-min=15.7km az=20.0*
ISC 26 05:30:44.4±0.8, 58°.3N±0°.1×31°.83W±0°.09, h14km, n30, σ0°60/14, mb3.8/11, MS3.4/18, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**8.21**	**33**	Pn	**Pn**	**05 32 43.6**	**+0.6**
	0.3nm,0.3s,baz=38,slow=8.1,SNR=1.3						
BORG				Sn	**Sn**	**05 34 15.2**	**-0.3**
	0.3nm,0.3s,baz=104,slow=8.4,SNR=1.9						
BORG				LR	LR	05 34 36.2	
	comp=Z,26nm,19.3s,baz=203,slow=28						
SFJD	**Kangerlussuaq**	**12.25**	**323**	LR	LR	05 37 36.4	
	comp=Z,395nm,18.5s,baz=136,slow=34						
EKA	**Eskdalemuir Ar**	**15.92**	**88**	Pn	**Pn**	**05 34 26.9**	**-0.8**
	baz=289,slow=18,SNR=3.1						
FRB	**Frobisher Bay**	**18.43**	**303**	LR	LR	05 41 08.5	
	comp=Z,334nm,18.5s,baz=70,slow=34						
SCHQ	**Schefferville**	**19.46**	**275**	LR	LR	05 41 29.2	
	comp=Z,201nm,18.9s,baz=12,slow=33						
NOA	**NORSAR Array B**	**21.64**	**64**	P	**P**	**05 35 33.7**	**-0.3**
	0.5nm,0.6s,baz=284,slow=9.6,SNR=2.3						
NOA				LR	LR	05 42 41.5	
	comp=Z,58nm,20.1s,baz=285,slow=33						
HFS	**Hagfors**	**23.04**	**66**	LR	LR	05 43 43.7	
	comp=Z,55nm,18.7s,baz=305,slow=34						
ESDC	**Sonseca Array**	**25.78**	**124**	P	**P**	**05 36 14.1**	**-0.6**
	0.4nm,0.5s,baz=317,slow=8.0,SNR=2.4						
DAVOX	**Davos/Dischmat**	**27.40**	**96**	LR	LR	05 46 51.1	
	comp=Z,99nm,21.0s,baz=286,slow=35						
RES	**Resolute Bay**	**28.12**	**330**	LR	LR	05 47 01.1	
	comp=Z,62nm,19.1s,baz=206,slow=35						
GERES	**GERESS Array B**	**28.13**	**89**	LR	LR	05 47 57.3	
	comp=Z,102nm,18.7s,baz=310,slow=37						
FINES	**FINESS Array B**	**28.43**	**59**	P	**P**	**05 36 38.1**	**-0.1**
	1.2nm,0.8s,baz=278,slow=9.7,SNR=3.3						
FINES				LR	LR	05 47 28.1	
	comp=Z,59nm,18.8s,baz=283,slow=35						
VRAC	**Vranov**	**29.38**	**86**	LR	LR	05 49 00.4	
	comp=Z,118nm,19.2s,baz=296,slow=37						
MDT	**Midelt**	**31.38**	**132**	LR	LR	05 48 46.5	
	comp=Z,57nm,18.9s,baz=348,slow=34						
AKASG	**Malin Array Be**	**35.13**	**75**	P	**P**	**05 37 37.8**	**+0.7**
	0.4nm,0.2s,baz=310,slow=7.8,SNR=1.7						
KEST	**Kesra**	**35.19**	**112**	LR	LR	05 51 06.2	
	comp=Z,89nm,19.1s,baz=325,slow=35						
MLR	**Muntele Rosu**	**36.71**	**84**	LR	LR	05 52 40.2	
	comp=Z,79nm,21.0s,baz=300,slow=36						
ULM	**Lac du Bonnet**	**36.93**	**286**	LR	LR	05 51 48.1	
	comp=Z,114nm,18.9s,baz=65,slow=34						
YKA	**Yellowknife Ar**	**38.50**	**312**	P	**P**	**05 38 04.5**	**-1.1**
	1.2nm,0.9s,baz=56,slow=9.0,SNR=3.5						
YKA				LR	LR	05 52 49.1	
	comp=Z,13nm,19.6s,baz=22,slow=34						
BRTR	**Keskin Array B**	**44.80**	**85**	LR	LR	05 59 00.0	
	comp=Z,38nm,18.5s,baz=278,slow=38						
ILAR	**Eielson Array**	**47.86**	**328**	P	**P**	**05 39 21.5**	**+0.3**
	1.0nm,0.9s,baz=26,slow=7.0,SNR=9.8						
ILAR				LR	LR	05 58 34.6	
	comp=Z,55nm,19.6s,baz=62,slow=35						
PDAR	**Pinedale Array**	**48.93**	**287**	P	**P**	**05 39 29.8**	**-0.2**
	0.8nm,0.8s,baz=62,slow=6.9,SNR=6.2						
PDAR				LR	LR	05 58 55.6	
	comp=Z,88nm,19.7s,baz=55,slow=35						
TORD	**Torodi Ar. Bea**	**51.60**	**137**	P	**P**	**05 39 50.0**	**-0.1**
	1.5nm,1.0s,baz=335,slow=5.2,SNR=5.1						
TORD				LR	LR	05 59 18.1	
	comp=Z,35nm,20.3s,baz=330,slow=33						
DBIC	**Dimbokro**	**55.53**	**147**	P	**P**	**05 40 19.4**	**+0.5**
	4.5nm,1.1s,baz=333,slow=16,SNR=2.3						
DBIC				LR	LR	06 01 12.8	
	comp=Z,71nm,20.4s,baz=330,slow=33						
TXAR	**Lajitas Array**	**56.11**	**272**	P	**P**	**05 40 23.8**	**+0.6**
	0.3nm,0.8s,baz=7.6,slow=3.8,SNR=3.7						
NVAR	**Mina Array Bea**	**56.57**	**290**	LR	LR	06 03 43.3	
	comp=Z,58nm,18.6s,baz=23,slow=35						
MKAR	**Makanchi Array**	**62.08**	**45**	P	**P**	**05 41 04.5**	**+0.2**
	0.4nm,0.4s,baz=339,slow=6.5,SNR=5.3						
H10S1	**ASCENSION HYDR**	**68.41**	**162**	T	T	06 55 51.6	
	baz=350,slow=75,SNR=5.4						
H10S3	**ASCENSION HYDR**	**68.42**	**162**	T	T	06 55 55.8	
	baz=350,slow=75,SNR=6.8						
H10S2	**ASCENSION HYDR**	**68.43**	**162**	T	T	06 55 50.2	
	baz=350,slow=75,SNR=5.0						

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*ISCJB **26** 05:32:47.2±1.1, 58°.3N±0°.2×32°.3W±0°.2, h10km, mb3.6/6, Error ellipse: s-maj=32.7km s-min=15.7km az=17.3*
*IDC **26** 05:32:47.6±1.5, 58°.36N×32°.21W, h0km, mb3.3/5, mb1 3.6/6, mb1mx3.4/42, mbtmp3.3/6, ML3.6/1, Error ellipse: s-maj=42.6km s-min=24.4km az=20.0*
**ISC 26 05:32:49.1±1.2, 58°.4N±0°.2×32°.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**0.29**	**135**	P	Pg	05 35 46.2	-0.3
JNG				S	Sg	05 35 50.2	-0.5
MAT	**Matsushiro**	**0.29**	**103**	P	Pg	05 35 46.1	-0.5
MAT				S	Sg	05 35 50.1	-0.8
MAT	**Matsushiro**	**0.29**	**103**	P	Pg	05 35 46.1	-0.5
MAT				*e*S	Sg	05 35 50.2	-0.7

IDC 26 05:48:45.6±38.0, 20.83S×178.33W, h640km±355km, mb2.7/3, mb1 3.1/3, mb1mx2.7/18, mbtmp3.8/3, Error ellipse: s-maj=515.4km s-min=80.4km az=134.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.14**	**257**	P	P	05 56 00.6	+0.4
	0.8nm,0.4s,baz=97,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**44.25**	**262**	P	P	05 56 00.3	-0.7
	0.4nm,0.3s,baz=94,slow=8.6,SNR=1.8						
ILAR	**Eielson Array**	**88.70**	**13**	P	P	06 00 32.3	+0.2
	0.2nm,0.5s,baz=197,slow=4.7,SNR=2.1						
AKASG	**Malin Array Be**	**143.15**	**331**	PKP	PKPbc	06 07 07.4	+0.6
	1.5nm,0.4s,baz=46,slow=4.1,SNR=2.3						

ISCJB ***26*** *05:48:41.6±0.9, 9.35N±0.02×91.21E±0.02, h7km±5km, mb5.1/147, MS4.0/34, Error ellipse: s-maj=4.1km s-min=2.8km az=139.6*
IDC ***26*** *05:48:42.3±0.4, 9.35N×91.20E, h0km, mb4.9/26, mb1 5.0/29, mb1mx5.0/31, mbtmp4.9/29, ML4.4/3, MS3.8/16, Ms1 3.8/16, ms1mx3.7/32, Error ellipse: s-maj=14.2km s-min=11.5km az=41.0*
DJA ***26*** *05:48:44.2±0.2, 9°N±4°×9°1E±°, h10km, M5.3/17, mB5.7/16, mb4.8/17, MLv5.8/2, Mw(mB)5.2/16, Mwp6.2/1*
BJI ***26*** *05:48:44.7±0.0, 9.18N×91.23E, h36km, mb5.1/62, mB5.0/46, Ms4.4/49, Ms7 4.1/39*
KLM ***26*** *05:48:45.0, 9.33N×91.13E, h10km, mb5.2*
MOS ***26*** *05:48:45.8±1.0, 9.41N×91.19E, h33km, mb5.4/59, MS4.0/6, Error ellipse: s-maj=7.7km s-min=4.6km az=109.0*
NEIC ***26*** *05:48:47.2±1.8, 9.38N×91.25E, h30km±3km, mb5.3/109, Error ellipse: s-maj=9.5km s-min=7.7km az=84.0*
GCMT ***26*** *05:48:47.2±0.3, 9.44N±0.03×91.26E±0.02, h25km±1km, MW4.9/71, Moment Tensor Solution. s22,c26; s71,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.76±.20; $M_{\theta\theta}$0.10±.11; $M_{\phi\phi}$2.66±.12; $M_{r\theta}$0.54±.28; $M_{\theta\phi}$0.30±.09; $M_{\phi r}$-0.72±.21; Best double couple: $M_0$2.86800×10^{16} NP1:ϕ_s355.00000°, δ53.00000°, λ-104.00000°. NP2: ϕ_s198.00000°, δ39.00000°, λ-72.00000°. Principal axes: T 2.7730, Plg7.0000°, Azm95.0000°; N 0.1890, Plg11.0000°, Azm4.0000°; P -2.9630, Plg77.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NDI ***26*** *05:48:49.4±3.1, 9.61N×91.21E, h35km±16km, mb5.2, ML5.2, mb5.3(NEIC)*

ISC 26 05:48:46.1±0.4, 9.36N±0.03×91.24E±0.04, h24km±2km, h24km:pP-P, n903, σ1§18/947, mb5.2/160, MS4.1/35, 40C-38D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.72**	**33**	*e*Pn	Pn	05 49 28.6	+0.2
PBA				*e*Sn	Sn	05 50 00.8	+0.4
PBA	**Port Blair**	**2.72**	**33**	*e*P	Pn	05 49 28.0	-0.3
PBA				*e*S	Sn	05 49 58.3	-2.1
DGPR	**DIGLIPUR**	**4.14**	**23**	*e*P	**Pn**	**05 49 47.4**	**-0.4**
DGPR				*e*S	**Sn**	**05 50 31.3**	**-4.3**
LHMI	**Lhok Sumawe**	**6.99**	**126**	*e*Pn	**Pn**	**05 50 27.4**	**+0.4**
LHMI	**Lhok Sumawe**	**6.99**	**126**	P	**Pn**	**05 50 27.4**	**+0.4**
PKDT	**Phuket**	**7.17**	**101**	P	**Pn**	**05 50 32.0**	**+2.6**
	108nm,0.5s,27μm1.6nm						
MLSI	**Meulaboh, Aceh**	**7.20**	**134**	P	**Pn**	**05 50 28.6**	**-1.3**
TPTI		**8.46**	**135**	P	**Pn**	**05 50 44.5**	**-2.7**
TRTT	**Trang**	**8.49**	**100**	P	**Pn**	**05 50 49.7**	**+2.0**
	64nm,0.6s,1μm0.3nm						
KCSI	**Kotacane, Aceh**	**8.70**	**131**	P	**Pn**	**05 50 50.1**	**-0.5**
PSI	**Prapat**	**10.04**	**130**	Pn	**Pn**	**05 51 08.0**	**-1.0**
	2.1nm,0.3s,baz=286,slow=15,SNR=9.2						
PSI				Sn	**Sn**	**05 52 56.4**	**-4.6**
	4.7nm,0.3s,baz=224,slow=13,SNR=2.3						
PSI	**Prapat**	**10.04**	**130**	*e*P	**Pn**	**05 51 07.9**	**-1.1**
UMPA	**Umpang Tak**	**10.07**	**47**	P	Pn	05 51 18.0	+8.6
KULM	**Kulim**	**10.17**	**113**	*e*Pn	**Pn**	**05 51 11.3**	**+0.6**
KULM	**Kulim**	**10.17**	**113**	P	**Pn**	**05 51 12.0**	**+1.3**
PALK	**Pallekele**	**10.63**	**260**	Pn	**Pn**	**05 51 15.8**	**-1.2**
	3.3nm,0.3s,baz=116,slow=11,SNR=18						
PALK				Sn	Sn	05 53 02.9	-13
	43nm,0.3s,baz=116,slow=22,SNR=13						
PALK				LR	LR	05 54 59.8	
	comp=Z,656nm,19.2s,baz=116,slow=36						
PALK	**Pallekele**	**10.63**	**260**	*e*Pn	**Pn**	**05 51 16.5**	**-0.6**
PALK				*e*		05 53 02.9	
PALK	**Pallekele**	**10.63**	**260**	*e*P	**Pn**	**05 51 16.5**	**-0.6**
IPM	**Ipoh**	**10.85**	**116**	*e*Pn	**Pn**	**05 51 20.0**	**-0.1**
IPM				*e*Sn	**Sn**	**05 53 20.7**	**-0.2**
VIS	**Vishakhapatnam**	**11.32**	**318**	*i* P	**Pn**	**05 51 26.2**	**-0.2**
VIS				*i* S	Sn	05 53 18.3	-14
VIS				*ex*	x	05 53 20.5	
	comp=E,2μm,0.6s						
VIS				*ex*	x	05 53 25.2	
	comp=N,2μm,0.8s						
CHBT	**CHBT**	**11.39**	**72**	P	Pn	05 51 36.7	+9.2
MDRS	**Chennai**	**11.40**	**290**	*e*P	**Pn**	**05 51 28.0**	**+0.5**
MDRS				*e*S	Sn	05 53 21.5	-13
MDRS				IAML		05 53 23.8	
	comp=N,419nm,0.3s						
MDRS				IAML		05 53 24.0	
	comp=E,148nm,0.1s						
CM31	**Chiang Mai Arr**	**11.73**	**39**	*e*Pn	**Pn**	**05 51 32.0**	**-0.1**
CM31				*e*Sn	**Sn**	**05 53 35.3**	**-7.0**
CMAR	**Chiang Mai Arr**	**11.73**	**39**	Pn	**Pn**	**05 51 33.3**	**+1.2**
	comp=E,0.8nm,0.3s,baz=227,slow=13,SNR=46						
CMAR				Sn	**Sn**	**05 53 35.3**	**-7.0**
	comp=E,0.5nm,0.3s,baz=236,slow=27,SNR=4.1						
PBKT	**Sadao Pong**	**11.88**	**52**	P	**Pn**	**05 51 38.4**	**+4.3**
	comp=E,16nm,0.9s						
MNSI	**Mandailing Nat**	**11.88**	**135**	P	**Pn**	**05 51 33.3**	**-0.9**
CHTO	**Chiang Mai**	**12.00**	**38**	*e*Pn	**Pn**	**05 51 36.0**	**+0.2**
CHTO	**Chiang Mai**	**12.00**	**38**	*e*P	**Pn**	**05 51 36.0**	**+0.2**
CMMT	**Chiang Mai**	**12.01**	**38**	P	**Pn**	**05 51 37.9**	**+2.1**
	comp=E,14nm,0.8s						
CHAI	**Chaiyaphum**	**12.34**	**57**	P	**P**	**05 51 50.9**	**-1.4**
	comp=E,32μm,0.6s,comp=E,495μm						
PAYA	**Payao**	**12.98**	**39**	P	**Pn**	**05 51 51.3**	**+2.1**
	comp=E,82μm,0.8s,comp=E,764μm						
SAIH	**SAIHA**	**13.16**	**7**	*e*P	**Pn**	**05 51 50.1**	**-1.6**
BRDH	**Bariadhala**	**13.25**	**2**	Pn	**Pn**	**05 51 55.8**	**+3.0**
	comp=E,14nm,0.3s,baz=216,slow=8.7,SNR=3.4						
BRDH				Sn	Sn	05 54 07.8	-12
	comp=E,5.9nm,0.3s,baz=62,slow=12,SNR=1.6						
PDSI	**Padang**	**13.73**	**138**	P	**Pn**	**05 51 58.4**	**-1.0**
BELO	**BELONIA**	**13.81**	**1**	*e*P	**Pn**	**05 52 01.4**	**+0.9**
SDSI	**Sungai Dareh**	**14.40**	**135**	P	**Pn**	**05 52 07.7**	**-0.9**
NONG	**Nongkai**	**14.44**	**52**	P	**P**	**05 52 12.5**	**-3.2**
	comp=E,2.8nm,0.9s,comp=E,120nm						
AGT	**Agartala**	**14.45**	**0**	*e*P	**Pn**	**05 52 09.4**	**+0.3**
SKNT	**Sakolnakorn**	**14.53**	**57**	P	**P**	**05 52 19.8**	**+3.1**
HYB	**Hyderabad**	**14.71**	**304**	*i* P	**Pn**	**05 52 11.0**	**-1.8**
HYB				*e*S	**Sn**	**05 54 56.0**	**+0.9**
PANO	**Nakornpanom**	**15.14**	**58**	P	**P**	**05 52 25.0**	**+1.5**
	comp=E,1.1nm,0.9s,comp=E,125nm						
BOK	**Bokaro**	**15.24**	**341**	*e*P	**Pn**	**05 52 18.1**	**-1.8**
BOK				IAmb	IAmb	05 52 26.6	
	comp=Z,78nm,0.8s						
KRJI	**Kerinci**	**15.27**	**138**	P	**Pn**	**05 52 19.4**	**-0.9**
TURI	**Tura**	**16.13**	**357**	*e*P	**Pn**	**05 52 27.9**	**-3.4**
SHL	**Shillong**	**16.13**	**2**	*e*Pn	**Pn**	**05 52 31.2**	**-0.4**
	comp=Z,167nm,0.7s						
SHL	**Shillong**	**16.13**	**2**	*e*P	**Pn**	**05 52 31.2**	**-0.4**
SHL				pmax	pmax		
	comp=Z,167nm,0.7s						
SHL	**Shillong**	**16.13**	**2**	*e*P	**Pn**	**05 52 31.4**	**-0.2**
SHL				*e*P	**P**	**05 52 32.0**	**-2.7**
SHL				IAmb	IAmb	05 52 35.4	
	comp=Z,97nm,0.5s						
SHL				*ex*	x	05 55 19.5	
KOHI	**KOHIMA**	**16.50**	**9**	*e*P	**Pn**	**05 52 34.6**	**-1.6**
NGP	**Nagpur**	**16.59**	**316**	*e*P	**Pn**	**05 52 36.8**	**-0.5**
DHUB	**DHUBRI**	**16.61**	**356**	*e*P	**Pn**	**05 52 35.6**	**-1.9**
DHUB				IAmb	IAmb	05 52 41.3	
	comp=Z,88nm,0.6s						
GUWA	**GUWAHATI**	**16.75**	**1**	*e*P	**Pn**	**05 52 37.6**	**-1.6**
GUWA				IAmb	IAmb	05 52 42.4	
	comp=Z,189nm,0.3s						
SLVN	**Son La**	**17.04**	**44**	*e*Pn	**Pn**	**05 52 42.7**	**-0.3**
	comp=Z,103nm,1.1s						
MOKO	**MOKOCHONG**	**17.16**	**10**	*e*P	**Pn**	**05 52 42.5**	**-2.0**
MOKO				IAmb	IAmb	05 52 46.9	
	comp=Z,72nm,0.5s						
TEZP	**TEZPUR**	**17.23**	**5**	*e*P	**Pn**	**05 52 43.0**	**-2.3**
JBP	**Jabalpur**	**17.46**	**323**	*e*P	**Pn**	**05 52 48.3**	**+0.2**
JBP				AMB	AMB	05 53 01.4	
	comp=Z,96nm,0.7s						
JBP				*ex*	x	05 55 47.4	
LHSI	**Lahat**	**17.93**	**136**	P	**Pn**	**05 52 53.3**	**-0.7**
MNAI	**Manna**	**17.95**	**139**	*e*P	**P**	**05 52 56.1**	**+1.4**
	comp=Z,251nm,0.6s						
MNAI				*e*Sn	**S**	**05 56 17.6**	**-2.1**
MNAI	**Manna**	**17.95**	**139**	P	**Pn**	**05 52 53.4**	**-0.8**
GTK	**Tadong**	**18.04**	**352**	*e*P	**Pn**	**05 52 54.5**	**-0.9**
TAWA	**Tawang**	**18.15**	**2**	*e*P	**Pn**	**05 52 56.5**	**-0.5**
ZIRO	**ZIRO**	**18.24**	**7**	*e*P	**Pn**	**05 52 55.9**	**-2.0**
LKP	**Lekhapani**	**18.40**	**13**	*e*P	**P**	**05 52 57.4**	**-2.2**
JIRN	**Jiri**	**18.82**	**346**	*e*P	**Pn**	**05 53 05.4**	**+0.3**
	comp=Z,213nm,0.7s						
MDSI	**Maura Dua**	**18.85**	**136**	P	**P**	**05 53 04.1**	**-0.5**
PKI	**Pulchoki**	**18.93**	**344**	*e*P	**Pn**	**05 53 06.5**	**0.0**
	comp=Z,169nm,0.9s						
PKIN	**Phulchoki**	**18.94**	**344**	*e*P	**Pn**	**05 53 06.5**	**0.0**
	comp=Z,158nm,1.1s						
DMN	**Daman**	**19.05**	**343**	*e*P	**Pn**	**05 53 08.0**	**+0.1**
	comp=Z,91nm,0.7s						
BHPL	**Bhopal**	**19.12**	**318**	*e*P	**Pn**	**05 53 08.6**	**+0.1**
KMI	**Kunming**	**19.12**	**33**	P	**Pn**	**05 53 10.5**	**+1.8**
KMI				pP	pwP	05 53 16.8	-1.2
KMI				sP	sP	05 53 19.8	+3.8
KMI				PP	**PnPn**	**05 53 28.8**	**+7.2**
KMI				S	**Sn**	**05 56 37.8**	**-4.6**
KMI				sS	sS	05 56 52.0	-0.6
KMI				pmax	pmax		
	comp=Z,58nm,1.0s						
KMI				pmax	pmax		
	comp=Z,220nm,6.6s						
KMI				LR	LR		
	comp=Z,450nm,14.8s						
KMI				LR	LR		
	comp=Z,300nm,13.2s						
KMI				LR	LR		
	comp=Z,320nm,13.0s						
GUN	**Gumba**	**19.14**	**345**	*e*P	**Pn**	**05 53 08.7**	**-0.2**
	comp=Z,144nm,0.7s						
LWLI	**Liwa**	**19.16**	**138**	P	**P**	**05 53 07.5**	**-0.6**
POO	**Poona**	**19.17**	**300**	*e*P	**P**	**05 53 08.2**	**+0.1**
KKN	**Kakani**	**19.18**	**344**	*e*P	**Pn**	**05 53 09.2**	**-0.1**
	comp=Z,126nm,1.0s						
KOLN	**Koldanda**	**19.68**	**340**	*e*P	**P**	**05 53 14.3**	**+0.5**
	comp=Z,151nm,0.8s						
KASI	**Kota Agung**	**19.83**	**138**	P	**P**	**05 53 14.8**	**-0.5**
DANN	**Dangsing**	**20.16**	**341**	*e*P	**P**	**05 53 19.2**	**0.0**
	comp=Z,163nm,0.5s						
PYUN	**Piuthan**	**20.20**	**338**	*e*P	**P**	**05 53 19.8**	**+0.3**
	comp=Z,216nm,0.9s						
BLSI	**Bandar Lampung**	**20.22**	**136**	P	Pn	05 53 32.4	+11
LSA	**Lhasa**	**20.24**	**360**	*e*P	**P**	**05 53 20.9**	**+0.8**
LSA				*e*Pn	Pn	05 53 21.6	-0.5
LSA	**Lhasa**	**20.24**	**360**	*e*P	**P**	**05 53 20.9**	**+0.8**
TPI	**Tanjungpandan**	**20.31**	**126**	P	**P**	**05 53 20.3**	**-0.2**
QIZ	**Qiongzhong**	**20.42**	**60**	P	**P**	**05 53 20.8**	**-0.9**
QIZ				S	**S**	**05 57 09.0**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,14nm,0.9s						
QIZ				LR	LR		
	comp=Z,660nm,11.9s						
QIZ				LR	LR		
	comp=Z,340nm,13.0s						
KSM	**Kuching**	**20.52**	**111**	*e*P	**P**	**05 53 23.5**	**+0.7**
	comp=Z,115nm,0.9s						
KSM	**Kuching**	**20.52**	**111**	P	**P**	**05 53 24.0**	**+1.1**
CGJI	**Cibinong**	**21.43**	**137**	P	**P**	**05 53 32.1**	**-0.5**
SBUM	**Sibu**	**21.96**	**107**	*e*P	**P**	**05 53 39.1**	**+0.8**
	comp=Z,57nm,1.0s						
SBUM	**Sibu**	**21.96**	**107**	P	**P**	**05 53 40.0**	**+1.7**
GYA	**Guiyang**	**22.42**	**39⇓**	*i*P	**P**	**05 53 43.5**	**+0.1**
GYA				pP	pP	05 53 49.3	+0.2
GYA				PP	**PnPn**	**05 54 11.5**	**+4.8**
GYA				S	**S**	**05 57 48.0**	**-0.6**
GYA				sS	Sn	05 58 01.3	-0.4
GYA				pmax	pmax		
	comp=Z,60nm,0.7s						
GYA				pmax	pmax		
	comp=Z,130nm,5.6s						
GYA				LR	LR		
	comp=Z,310nm,12.2s						
GYA				LR	LR		
	comp=Z,320nm,12.7s						
GYA				LR	LR		
	comp=Z,510nm,13.2s						
NDI	**New Delhi**	**23.31**	**327**	*e*P	**P**	**05 53 52.0**	**-0.4**
CISI	**Cisompet, Garu**	**23.56**	**135**	*e*P	**P**	**05 53 55.8**	**+0.8**
	comp=Z,104nm,0.4s						
CISI	**Cisompet, Garu**	**23.56**	**135**	P	**P**	**05 53 54.9**	**-0.1**
DDI	**Dehra Dun**	**24.22**	**331**	*e*P	**P**	**05 54 01.4**	**+0.3**
DDI				IAmb	IAmb	05 54 05.3	
	comp=Z,93nm,0.8s						
XMIS	**Christmas Isla**	**24.37**	**144**	*e*P	**P**	**05 54 04.2**	**+1.6**
	comp=Z,89nm,0.7s						
CD2	**Chengdu**	**24.41**	**27⇓**	*i*P	**P**	**05 54 03.0**	**+0.1**
CD2				sP	pwP	05 54 15.8	+2.1
CD2				PP	**PnPn**	**05 54 43.3**	**+9.5**
CD2				PcP	**PcP**	**05 57 41.3**	**-0.5**
CD2				S	**S**	**05 58 19.5**	**-1.9**
CD2				sS	sS	05 58 30.0	-1.3
CD2				SS	**SnSn**	**05 59 17.5**	**+11**
CD2				pmax	pmax		
	comp=Z,380nm,0.8s						
CD2				pmax	pmax		
	comp=Z,490nm,4.4s						
CD2				LR	LR		
	comp=Z,810nm,18.5s						
CD2				LR	LR		
	comp=Z,680nm,17.8s						
CD2				LR	LR		
	comp=Z,760nm,7.1s						
KKM	**Kota Kinabalu**	**24.96**	**96**	*e*P	**P**	**05 54 08.9**	**+0.8**
	comp=Z,46nm,1.0s						
KKM	**Kota Kinabalu**	**24.96**	**96**	P	**P**	**05 54 10.0**	**+1.9**
SMRI	**Semarang**	**25.13**	**130**	P	**P**	**05 54 09.4**	**-0.1**
H08S3	**Diego Garcia H**	**25.18**	**229**	T	T	06 20 58.2	
	baz=49,slow=75,SNR=912						
H08S2	**Diego Garcia H**	**25.18**	**228**	T	T	06 20 54.7	
	baz=49,slow=75,SNR=508						
H08S1	**Diego Garcia H**	**25.20**	**229**	T	T	06 21 06.9	
	baz=49,slow=75,SNR=853						
SMLA	**Simla**	**25.31**	**331**	*e*P	**P**	**05 54 11.7**	**+0.7**
SMLA				IAmb	IAmb	05 54 13.0	
	comp=Z,76nm,0.9s						
H08N1	**Diego Carcia H**	**25.49**	**233**	T	T	06 22 16.9	
	baz=46						
H08N2	**Diego Garcia H**	**25.49**	**233**	T	T	06 22 08.9	
	baz=46						
H08N3	**Diego Garcia H**	**25.50**	**233**	T	T	06 22 08.1	
	baz=46						
NGJI	**Ngawi**	**26.11**	**129**	P	P	05 54 31.2	+13
DHRM	**DHARAMSHALA**	**26.65**	**331**	*ex*	**P**	**05 54 17.7**	**-5.7**
DHRM				IAmb	IAmb	05 54 24.9	
	comp=Z,34nm,1.2s						
ENH	**Enshi**	**26.89**	**37**	*e*P	**P**	**05 54 25.0**	**-0.4**
ENH				*e*pP	**P**	**05 54 25.3**	**0.0**
LZH	**Lanzhou**	**28.97**	**21**	⇓P	**P**	**05 54 44.8**	**+0.7**
LZH				pP	pwP	05 54 54.3	-0.6
LZH				sP	sP	05 54 58.5	+5.8
LZH				S	**S**	**05 59 32.3**	**-1.5**
LZH				pmax	pmax		
	comp=Z,60nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,4.6s						
LZH				LR	LR		
	comp=Z,340nm,15.2s						
LZH				LR	LR		
	comp=Z,350nm,15.7s						
LZH				LR	LR		
	comp=Z,460nm,16.8s						
NIL	**Nilore**	**29.30**	**328**	*e*P	**P**	**05 54 46.7**	**-0.1**
	comp=Z,97nm,0.6s						
NIL	**Nilore**	**29.30**	**328**	*e*P	**P**	**05 54 46.7**	**-0.1**
NIL				pmax	pmax		
	comp=Z,97nm,0.6s						
XAN	**Xi'an**	**29.45**	**31**	P	**P**	**05 54 47.0**	**-1.1**
XAN				pP	pwP	05 54 57.3	-1.7
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN				LR	LR		
	comp=Z,320nm,15.2s						
XAN				LR	LR		
	comp=Z,310nm,17.3s						
XAN				LR	LR		
	comp=Z,250nm,17.3s						
XAN	**Xi'an**	**29.45**	**31**	*e*P	**P**	**05 54 47.1**	**-1.1**
	comp=Z,18nm,0.8s						
XAN	**Xi'an**	**29.45**	**31**	*e*P	**P**	**05 54 47.1**	**-1.1**
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
WHN	**Wuhan**	**30.14**	**42**	⇑P	P	05 54 59.5	+5.2
GTA	**Gaotai**	**30.89**	**13**	*e*P	**P**	**05 55 01.8**	**+0.8**
GTA				pP	pwP	05 55 12.0	+0.2
GTA				sP	sP	05 55 16.0	+6.4
GTA				PcP	**PcP**	**05 57 58.5**	**+1.1**
GTA				S	**S**	**06 00 06.5**	**+2.7**
GTA				pmax	pmax		
	comp=Z,39nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,7.6s						
GTA				LR	LR		
	comp=Z,280nm,16.8s						
GTA				LR	LR		
	comp=Z,320nm,17.8s						
GTA				LR	LR		
	comp=Z,210nm,16.8s						
SPSI	**Sidrap Palu**	**31.36**	**114**	P	**P**	**05 55 05.4**	**+0.2**
KSH	**Kashi**	**32.98**	**338**	P	**P**	**05 55 18.5**	**-0.8**
KSH				PP	**PnPn**	**05 56 29.3**	**+0.4**
KSH				S	**S**	**06 00 33.3**	**-3.2**
KSH				SS	**SnSn**	**06 02 34.3**	**-0.8**
KSH				pmax	pmax		
	comp=Z,89nm,0.9s						
KSH				pmax	pmax		
	comp=Z,330nm,4.6s						
KSH				LR	LR		
	comp=Z,680nm,11.1s						
KSH				LR	LR		
	comp=Z,760nm,12.8s						
KSH				LR	LR		
	comp=Z,550nm,15.9s						
NJ2	**Nanjing**	**34.12**	**45**	*e*P	**P**	**05 55 29.5**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
WMQ	**Urumqi**	**34.47**	**355**	P	**P**	**05 55 33.8**	**+1.7**
WMQ				pP	pwP	05 55 44.0	+1.1
WMQ				sP	sP	05 55 47.5	+6.7
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.6s						
WMQ				LR	LR		
	comp=Z,160nm,29.1s						
WMQ				LR	LR		
	comp=Z,180nm,26.7s						
ULHL	**Ulahol**	**35.31**	**341**	P	**P**	**05 55 40.6**	**+1.0**
	SNR=10						
PDGK	**Podgornoye**	**35.36**	**345**	P	**P**	**05 55 41.2**	**+1.3**
PDGK				pmax	pmax		
	comp=Z,53nm,1.2s						
KZA	**Kyzart**	**35.50**	**339**	P	**P**	**05 55 42.8**	**+1.3**
	SNR=18						
UCH	**Uchtor**	**35.89**	**339**	P	**P**	**05 55 46.2**	**+1.3**
	SNR=27						
AML	**Almayashu**	**36.11**	**338**	P	**P**	**05 55 48.3**	**+1.6**
	SNR=34						
KBK	**Karagaybulak**	**36.12**	**339**	P	**P**	**05 55 47.9**	**+1.5**
	SNR=28						
TKM2	**Tokmak 2**	**36.13**	**340**	P	**P**	**05 55 47.5**	**+0.9**
	SNR=16						
TKM2	**Tokmak 2**	**36.13**	**340**	*i* P	**P**	**05 55 47.2**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC	**Hu-ho-hao-te**	**36.17**	**27**	P	**P**	**05 55 48.5**	**+1.7**
HHC				pmax	pmax		
	comp=Z,27nm,1.1s						
HHC				pmax	pmax		
	comp=Z,22nm,5.2s						
HHC				LR	LR		
	comp=Z,210nm,15.9s						
HHC				LR	LR		
	comp=Z,200nm,15.3s						
AAK	**Ala-Archa**	**36.26**	**339**	P	**P**	**05 55 49.3**	**+1.7**
	SNR=20						
AAK	**Ala-Archa**	**36.26**	**339**	*e*P	**P**	**05 55 49.3**	**+1.7**
	comp=Z,54nm,1.0s						
AAK	**Ala-Archa**	**36.26**	**339**	*d i*P	**P**	**05 55 49.1**	**+1.4**
AAK				pmax	pmax		
	comp=Z,56nm,1.0s						
CHMS	**Chumysh**	**36.48**	**340**	P	**P**	**05 55 50.2**	**+0.8**
	SNR=8.1						
EKS2	**Erkin-Say**	**36.54**	**338**	P	**P**	**05 55 51.8**	**+1.8**
	SNR=43						
USP	**Ospenovka**	**36.81**	**339**	P	**P**	**05 55 53.2**	**+1.0**
	SNR=53						
NLAI	**Namlea**	**37.86**	**108**	P	**P**	**05 56 01.7**	**+0.2**
MK31	**Makanchi Array**	**38.08**	**350**	*i* P	**P**	**05 56 03.3**	**+0.4**
MK31				pmax	pmax		
	comp=Z,28nm,0.8s						
MK32	**Makanchi Array**	**38.08**	**350**	*e*PcP	**PcP**	**05 58 17.9**	**+0.1**
MKAR	**Makanchi Array**	**38.08**	**350**	P	**P**	**05 56 03.3**	**+0.4**
	comp=Z,32nm,0.9s,baz=168,slow=8.4,SNR=116						
MKAR				PcP	**PcP**	**05 58 17.9**	**+0.1**
	comp=Z,6.2nm,0.6s,baz=208,slow=4.3,SNR=8.0						
MKAR				LR	LR	06 14 43.9	
	comp=Z,126nm,18.2s,baz=158,slow=41						
MAKZ	**Makanchi**	**38.15**	**350**	*e*P	**P**	**05 56 03.9**	**+0.5**
	comp=Z,18nm,0.8s						
MAKZ	**Makanchi**	**38.15**	**350**	*e*P	**P**	**05 56 03.9**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,18nm,0.8s						
KK31	**Karatay Array**	**38.19**	**335**	*i* P	**P**	**05 56 04.6**	**+0.7**
KK31				pmax	pmax		
	comp=Z,31nm,0.7s						
GIRL	**Giralia**	**38.97**	**145**	*e*P	**P**	**05 56 12.0**	**+1.3**
	comp=Z,262nm,1.3s						
DGZ	**Jazzator, Alta**	**40.34**	**356**	*d i*P	**P**	**05 56 22.7**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,15nm,1

comp=Z,25nm,0.6s
PALU Palau 42.80 89 P **P 05 56 42.9 +0.5**
baz=43,SNR=3.6
MOY Mondy 42.94 9 *eP* **P 05 56 44.1 +1.0**
MOY pmax pmax
comp=Z,24nm,1.5s
KSRS Korea Array 43.31 44 P **P 05 56 45.8 -0.4**
comp=Z,2.2nm,0.7s,baz=244,slow=8.4,SNR=8.8
KSRS PcP **PcP 05 58 35.2 +0.3**
comp=Z,1.2nm,0.5s,baz=240,slow=3.7,SNR=3.2
TLY Talaya 43.41 11*deP* **P 05 56 48.1 +1.3**
MEEK Meekatharra 44.57 144 P **P 05 56 57.6 +1.1**
baz=45,SNR=7.6
KNRA Kununurra 44.72 124 P **P 05 56 57.8 +0.1**
baz=45,SNR=5.6
ZALV Zalesovo Beam 44.77 355 P **P 05 56 58.1 +0.5**
comp=Z,26nm,0.6s,baz=174,slow=10,SNR=99
ZALV LR LR 06 18 04.0
comp=Z,197nm,20.4s,baz=254,slow=39
MTN Manton Dam 45.35 118 *eP* **P 05 57 02.3 -0.5**
comp=Z,22nm,0.5s
MTN Manton Dam 45.35 118 P **P 05 57 02.2 -0.5**
baz=46,SNR=5.0
CN2 Changchun 45.38 35 *eP* **P 05 57 03.0 +0.3**
CN2 *ep*P pwP 05 57 13.0 -0.6
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,200nm,16.0s
CN2 LR LR
comp=Z,300nm,16.0s
CN2 LR LR
comp=Z,300nm,18.0s
NVS Novosibirsk 45.81 354 *i* P **P 05 57 06.4 +0.6**
RAYN Ar Rayn 45.87 294 *eP* **P 05 57 07.3 +0.4**
comp=Z,29nm,0.8s
RAYN Ar Rayn 45.87 294 *eP* **P 05 57 07.3 +0.4**
RAYN pmax pmax
comp=Z,29nm,0.8s
KDU Kakadu 46.45 117 P **P 05 57 10.9 -0.6**
baz=47,SNR=5.1
BLDU Ballidu 46.67 149 P **P 05 57 13.9 +1.0**
baz=47,SNR=6.4
BRVK Borovoye 46.76 343 *eP* **P 05 57 13.5 +0.2**
comp=Z,23nm,0.9s
BRVK Borovoye 46.76 343*d iP* **P 05 57 13.3 -0.1**
BRVK pmax pmax
comp=Z,31nm,1.1s
MUN Mundaring 47.53 151 P **P 05 57 20.6 +1.0**
baz=48,SNR=10.0
AB31 Akbulak array 47.58 333 P **P 05 57 19.7 -0.1**
AB31 pmax pmax
comp=Z,23nm,0.7s
KLBR Kellerberrin 47.98 149 P **P 05 57 24.2 +1.0**
baz=48,SNR=21
MSHR Mys Shultsa 48.09 40⇓*eP* **P 05 57 22.9 -1.0**
NWAO Narrogin (SRO) 48.80 151 *eP* **P 05 57 30.3 +0.8**
comp=Z,34nm,0.8s
NWAO Narrogin (SRO) 48.80 151 *eP* **P 05 57 30.3 +0.8**
NWAO pmax pmax
comp=Z,34nm,0.8s
H01W3 Cape Leeuwin H 49.05 155 T T 06 50 43.2
baz=328
H01W2 Cape Leeuwin H 49.06 155 T T 06 50 44.6
baz=328
H01W1 Cape Leeuwin H 49.06 155 T T 06 50 32.1
baz=328
USRK Ussuriysk Ar. 49.46 38 P **P 05 57 34.5 +0.1**
comp=Z,4.3nm,0.9s,baz=254,slow=4.5,SNR=5.1
WRKA Warakurna 49.73 134 P **P 05 57 37.6 +0.8**
baz=50,SNR=9.1
AKT Akhty 49.88 317 *eP* **P 05 57 38.5 +0.7**
AKT *e* 05 58 57.2
AKT *e* 05 59 35.4
AKT pmax pmax
comp=Z,38nm,1.0s
KMBL Kambalda 50.01 145 P **P 05 57 39.6 +0.9**
baz=50,SNR=17
MAJO Matsushiro 50.35 50 *eP* **P 05 57 42.4 +1.1**
MAJO *e*PcP **PcP 05 58 60.0 +0.2**
MAJO Matsushiro 50.35 50⇑*eP* **P 05 57 41.7 +0.4**
MJAR Matsushiro Arr 50.35 50 P **P 05 57 42.4 +1.1**
comp=Z,2.8nm,0.7s,baz=236,slow=7.4,SNR=6.0
MJAR PcP **PcP 05 58 60.0 +0.2**
comp=Z,12nm,0.8s,baz=239,slow=3.9,SNR=15
GNI Garni 51.36 315*d iP* **P 05 57 49.9 +0.8**
GNI pmax pmax
comp=Z,158nm,1.0s
BOD Bodaibo 51.43 15 *eP* **P 05 57 49.0 -0.1**
BOD pmax pmax
comp=Z,26nm,1.0s
WR1 Warramunga Arr 51.45 125 *e*PcP **PcP 05 59 03.5 -0.6**
WRA Warramunga Arr 51.45 125 P **P 05 57 49.6 -0.2**
comp=Z,14nm,0.7s,baz=290,slow=9.5,SNR=63
WRA PcP **PcP 05 59 03.5 -0.6**
comp=Z,12nm,0.8s,baz=297,slow=3.7,SNR=5.0
WRAB Tennant Creek 51.46 125 *eP* **P 05 57 49.7 -0.1**
comp=Z,33nm,0.8s
WRAB Tennant Creek 51.46 125*ce*P **P 05 57 50.2 +0.3**
WRAB pmax pmax
comp=Z,18nm,0.8s
WB2 Warramunga Arr 51.47 125 *eP* **P 05 57 49.9 0.0**
comp=Z,35nm,0.8s
ABPO Ambohimpanom 51.75 237 *eP* **P 05 57 52.2 +0.1**
comp=Z,31nm,1.0s
ABPO Ambohimpanom 51.75 237 *eP* **P 05 57 52.3 +0.1**
ABPO pmax pmax
comp=Z,31nm,1.0s
GROC Groznyy 51.94 319 *eP* **P 05 57 51.7 -1.4**
GROC *e* 05 59 03.5
GROC *e*S **S 06 05 13.6 -1.3**
GROC pmax pmax
comp=Z,111nm,1.2s
KLR Kul'dur 52.13 33⇑*eP* **P 05 57 55.1 +0.6**
KLR pmax pmax
comp=Z,17nm,2.3s
AKH Akhalkalaki 52.73 316⇑*iP* **P 05 57 59.9 +0.6**
ZEA Zeya 52.83 26 *eP* **P 05 57 59.1 -0.4**
ZEA pmax pmax
comp=Z,23nm,1.0s
SVE Sverdlovsk 52.99 339*c iP* **P 05 58 01.5 +0.8**
SVE pmax pmax
comp=Z,172nm,1.0s
ZEI Tsey 53.01 317 *eP* **P 05 58 01.3 -0.1**
ZEI pmax pmax
comp=Z,15nm,0.6s
ASAR Alice Springs 53.07 129 P **P 05 58 01.6 -0.2**
comp=Z,6.5nm,0.7s,baz=307,slow=7.3,SNR=61
ASAR PcP **PcP 05 59 10.6 +0.4**
comp=Z,12nm,0.8s,baz=309,slow=4.1,SNR=14
ASAR LR LR 06 23 12.3
comp=Z,113nm,18.2s,baz=286,slow=39
ASAR PKPPKP 06 28 28.1
comp=Z,0.5nm,0.8s,baz=150,slow=3.7,SNR=4.1
AS31 Alice Springs 53.07 129 *e*PcP **PcP 05 59 10.6 +0.4**
FORT Forrest 53.30 140 *eP* **P 05 58 04.2 +0.9**
comp=Z,66nm,1.0s
FORT Forrest 53.30 140 P **P 05 58 04.1 +0.9**
baz=54,SNR=18
ARU Arti 53.43 338 LR LR 06 22 10.8
comp=Z,166nm,18.5s,baz=152,slow=38
ARU Arti 53.43 338 *eP* **P 05 58 03.8 -0.2**
comp=Z,41nm,0.8s
ARU Arti 53.43 338*d iP* **P 05 58 04.0 +0.1**
ARU *PP **pwP 05 58 13.7 -1.2**
ARU 06 00 00.4
ARU S **S 06 05 36.0 +1.2**
ARU SS **SS 06 09 10.6 -4.4**
ARU pmax pmax
comp=Z,52nm,0.9s
ARU MLR MLR
comp=Z,188nm,22.0s
NCK Nalchik 53.51 318⇓*eP* **P 05 58 04.0 -0.8**
NCK pmax pmax
comp=Z,12nm,0.2s
NEY Neytrino 53.99 317⇓*eP* **P 05 58 09.6 +1.1**
NEY pmax pmax
comp=Z,4.0nm,0.7s
BATM Batumi 54.05 315⇓*iP* **P 05 58 09.0 +0.2**
KBZ Khabaz 54.07 318 P **P 05 58 08.9 +0.1**
comp=Z,23nm,0.9s,baz=108,slow=6.3,SNR=29
KBZ LR LR 06 24 14.6
comp=Z,44nm,19.7s,baz=141,slow=40
KIV Kislovodsk 54.30 318 *eP* **P 05 58 11.2 +0.5**
comp=Z,49nm,0.8s
KIV Kislovodsk 54.30 318⇑*iP* **P 05 58 11.2 +0.5**
KIV Kislovodsk 54.30 318 *eP* **P 05 58 11.0 +0.3**
KIV pmax pmax
comp=Z,204nm,1.0s
KIV MLR MLR
comp=Z,101nm,17.0s
GOF Gofitskoye 54.54 320⇑*iP* **P 05 58 12.7 +0.5**
GOF pmax pmax
comp=Z,52nm,0.9s
KMBO Kilima Mbogo 54.76 262 P **P 05 58 14.7 +0.1**
comp=Z,0.8nm,0.3s,baz=77,slow=10,SNR=3.8
KMBO PcP **PcP 05 59 17.4 +0.2**
comp=Z,0.8nm,0.3s,baz=82,slow=6.8,SNR=3.7
GRNR Gornyy 55.49 33 *eP* **P 05 58 18.8 -0.3**
GRNR pmax pmax
comp=Z,21nm,1.0s
QIS Mount Isa 56.08 122 P **P 05 58 24.2 +0.5**
baz=56,SNR=7.9
COEN Coen 56.49 114 P **P 05 58 27.1 +0.3**
baz=57,SNR=4.5
YSS Yuzh-Sakhalins 57.43 40 *eP* **P 05 58 33.4 +0.6**
YSS *e* 05 58 43.6
YSS pmax pmax
comp=Z,30nm,0.7s
YSS MLR MLR
comp=Z,100nm,14.0s
VRH Novokhopyorsk 58.09 326 *eP* **P 05 58 36.2 -1.2**
VRH *PP **sP 05 58 46.7 +0.4**
VRH pmax pmax
comp=Z,60nm,0.8s
KIRV Kirov 58.48 336 LR LR 06 25 34.0
comp=Z,98nm,18.3s,baz=169,slow=38
PMG Port Moresby 58.70 107⇑*eP* **P 05 58 41.1 -1.2**
PMG pmax pmax
comp=Z,89nm,1.3s
NKL Nikolayevsk 58.97 32 *eP* **P 05 58 44.1 +0.6**
NKL *e* 05 59 30.5
NKL *e* 06 00 51.2
NKL *e*S **S 06 06 46.3 -2.1**
NKL *e* 06 08 29.0
NKL *e*SS **SS 06 10 45.4 +3.1**
NKL pmax pmax
comp=Z,21nm,0.8s
NKL pmax pmax
comp=E,8.0nm,0.7s
NKL pmax pmax
comp=N,6.0nm,0.8s
NKL pmax pmax
comp=Z,31nm,4.4s
BR101 Keskin Array S 59.29 311 *e*PcP **PcP 05 59 34.0 -0.2**
BRTR Keskin Array B 59.29 311 P **P 05 58 45.1 -1.2**
comp=Z,8.5nm,0.7s,baz=125,slow=7.4,SNR=48
BRTR PcP **PcP 05 59 34.0 -0.2**
comp=Z,3.5nm,0.8s,baz=134,slow=7.1,SNR=4.0
VORD Divnogorie 59.35 325 *eP* **P 05 58 44.9 -1.3**
VORD *e**PP **sP 05 58 55.1 +0.1**
VORD pmax pmax
comp=Z,20nm,0.6s
VSR Storozhevoye 59.53 325 *eP* **P 05 58 45.7 -1.7**
VSR *e*PP **sP 05 58 56.3 0.0**
VSR pmax pmax
comp=Z,10.0nm,0.6s
YAK Yakutsk 59.54 20 *eP* **P 05 58 45.1 -2.2**
YAK *e**PP **pwP 05 58 56.8 -1.7**
YAK *e* 05 59 32.7
YAK *e* 06 00 54.6
YAK *e*S **S 06 06 52.2 -3.3**
YAK *e**SS **sS 06 07 10.9 +4.8**
YAK *e* 06 08 33.5
YAK *e*SS **SS 06 10 51.1 +0.1**
BZK Bozkurt 59.61 313⇑*iP* **P 05 58 47.5 -0.7**
BBOO Buckleboo 59.84 137 P **P 05 58 50.3 +0.4**
baz=60,SNR=7.1
LPSR Galich'ya Gora 60.26 326 *eP* **P 05 58 51.5 -1.0**
LPSR *e**PP **pwP 05 59 01.9 -1.6**
LPSR pmax pmax
comp=Z,40nm,0.8s
CTAO Charters Tower 61.53 119 *eP* **P 05 59 02.0 +0.3**
comp=Z,16nm,0.9s
CTAO Charters Tower 61.53 119 *eP* **P 05 59 02.0 +0.3**
CTAO pmax pmax
comp=Z,16nm,0.9s
PRGR Permogore 61.86 337⇓*iP* **P 05 59 03.0 -0.1**
PRGR *i* *PP **pwP 05 59 13.2 -1.0**
PRGR pmax pmax
comp=Z,92nm,0.8s
HTT Hallett 62.16 136 P **P 05 59 06.5 +0.8**
baz=62,SNR=4.6
MOS Moscow 62.34 329 *eP* **P 05 59 04.5 -1.9**
MOS *e* 05 59 15.0
MOS *e* 05 59 47.0
MOS pmax pmax
comp=Z,54nm,0.9s
MOS pmax pmax
comp=Z,100nm,1.4s
MOS pmax pmax
comp=Z,36nm,0.8s
OBN Obninsk 62.61 328 LR LR 06 29 49.1
comp=Z,19nm,18.2s,baz=149,slow=39
OBN Obninsk 62.61 328 *eP* **P 05 59 08.0 -0.2**
OBN *e* 05 59 46.4
OBN *e* 06 01 28.0
OBN *e*PPP PPP 06 02 55.9
OBN pmax pmax
comp=Z,26nm,0.4s
OBN MLR MLR
comp=Z,119nm,17.0s
STKA Stephens Creek 63.21 133 P **P 05 59 13.3 +0.6**
comp=Z,14nm,0.6s,baz=316,slow=6.4,SNR=29
STKA LR LR 06 29 26.1
comp=Z,53nm,19.8s,baz=259,slow=39
STKA Stephens Creek 63.21 133 *eP* **P 05 59 13.1 +0.4**
comp=Z,1.4nm,1.4s
STKA Stephens Creek 63.21 133 P **P 05 59 13.3 +0.6**
baz=63,SNR=9.5
STKA Stephens Creek 63.21 133 *eP* **P 05 59 13.1 +0.4**
STKA pmax pmax
comp=Z,1.0nm,1.4s
KARP Karpathos 63.56 305 *eP* **P 05 59 15.2 +0.1**
comp=Z,164nm,1.0s
KLMR Klimovskoe 63.89 335 *eP* **P 05 59 14.8 -1.8**
KLMR pmax pmax
comp=Z,39nm,1.2s
KLMR Klimovskoe 63.89 335 *eP* **P 05 59 14.8 -1.8**
KLMR AMP 05 59 17.7
comp=Z,39nm,1.2s
TLCR 64.07 316⇑*iP* **P 05 59 17.6 -0.5**
TIRR Tirgusor 64.18 315⇑*iP* **P 05 59 18.2 -0.7**
PHSR Pinarhisar 64.25 312⇑*iP* **P 05 59 18.3 -1.1**
MILM Milestii Mici 64.49 318⇑*iP* **P 05 59 19.4 -1.4**
KIS Kishinev 64.50 318 *eP* **P 05 59 19.0 -1.9**
comp=Z,180nm,1.2s
KIS *e*S **S 06 08 02.0 +3.3**
KIS Kishinev 64.50 318 *eP* **P 05 59 19.0 -1.9**
KIS *e* 05 59 30.0
KIS *e*S **S 06 08 02.0 +3.3**
KIS pmax pmax
comp=Z,180nm,1.2s
CFR Carcaliu 64.54 316⇑*iP* **P 05 59 20.5 -0.7**
AKASG Malin Array Be 65.22 322 P **P 05 59 24.1 -1.4**
comp=Z,11nm,0.7s,baz=86,slow=4.9,SNR=13
AKASG LR LR 06 30 35.5
comp=Z,36nm,21.7s,baz=80,slow=38
AKBB Malin Array Si 65.22 322 *ep*P pP 05 59 34.6 +2.6
comp=Z,7.5nm,1.6s
VRI Vrincioaia 65.65 316⇑*iP* **P 05 59 28.7 +0.2**
PLOR Plostina 65.70 316⇑*iP* **P 05 59 29.1 +0.3**
TESR Tescani 65.84 317⇑*iP* **P 05 59 29.4 -0.3**
SECR 65.94 315⇓*iP* **P 05 59 29.3 -1.0**
CMSA Cobar Meteorol 66.06 131 P **P 05 59 32.4 +1.1**
baz=66,SNR=59
MLR Muntele Rosu 66.11 316 *eP* **P 05 59 32.1 +0.5**
comp=Z,85nm,0.9s
MLR Muntele Rosu 66.11 316⇓*iP* **P 05 59 31.9 +0.3**
RMQ Roma 66.21 124 P **P 05 59 34.4 +2.0**
baz=66,SNR=9.6
BIZ Bicaz 66.30 317⇑*iP* **P 05 59 32.4 -0.2**
OZUR 66.34 316⇑*iP* **P 05 59 36.0 +3.1**
TIXI Tiksi 66.37 12 *eP* **P 05 59 31.8 -0.7**
comp=Z,46nm,1.3s
TIXI Tiksi 66.37 12*d iP* **P 05 59 32.1 -0.5**
TIXI pmax pmax
comp=Z,50nm,1.7s
DOPR Dopca 66.59 316⇑*iP* **P 05 59 33.8 -0.7**
HUMR Humele 66.61 314⇑*iP* **P 05 59 33.8 -0.8**
VOIR 66.72 315⇑*iP* **P 05 59 34.4 -1.0**
MA2 Magadan 66.81 29 *eP* **P 05 59 35.5 -0.2**
comp=Z,33nm,0.9s
MA2 Magadan 66.81 29*d iP* **P 05 59 35.6 0.0**
MA2 pmax pmax
comp=Z,28nm,0.7s
ARR Arges 67.00 315⇓*iP* **P 05 59 36.7 -0.5**
BURAR Bucovina Array 67.03 318⇓*iP* **P 05 59 37.1 -0.3**
LSZ Lusaka 67.09 249 *eP* **P 05 59 38.1 -0.2**
comp=Z,8.8nm,0.9s
LSZ Lusaka 67.09 249 *eP* **P 05 59 38.1 -0.2**
LSZ pmax pmax
comp=Z,9.0nm,0.9s
VTS Vitosha 67.56 312 *eP* **P 05 59 40.4 -0.5**
comp=Z,20nm,1.0s
VTS *ep*P **sP 05 59 50.0 +0.2**
VTS Vitosha 67.56 312⇓*iP* **P 05 59 40.4 -0.5**
VTS Vitosha 67.56 312 *eP* **P 05 59 40.4 -0.5**
VTS *e**PP **sP 05 59 50.0 +0.2**
VTS pmax pmax
comp=Z,20nm,1.0s
LOT Lotru 67.61 315⇑*iP* **P 05 59 39.8 -1.3**
EIDS Eidsvold 67.69 122 P **P 05 59 41.9 +0.2**
baz=68,SNR=3.6
VAY Valandovo 67.88 311 *i* P **P 05 59 41.9 -0.8**
CJR Cluj-Napoca 67.94 317⇑*iP* **P 05 59 42.6 -0.5**
GZR Gura Zlata 68.29 315⇓*iP* **P 05 59 44.9 -0.5**
HERR Herculane 68.47 315⇑*iP* **P 05 59 46.1 -0.3**
PETK Petropavlovsk- 68.50 36 P **P 05 59 46.5 +0.1**
comp=Z,1.9nm,0.8s,baz=214,slow=6.6,SNR=3.0
PETK LR LR 06 34 24.9
comp=Z,52nm,19.1s,baz=242,slow=40
DRGR 68.56 317⇑*iP* **P 05 59 47.0 0.0**
SEY Seymchan 68.81 25⇓*iP* **P 05 59 47.7 -0.4**
VSU Vasula 68.86 329*deP* **P 05 59 47.6 -0.9**
VSU pmax pmax
comp=Z,129nm,1.7s
TRPA Tarpa 68.89 318⇓*iP* **P 05 59 48.8 -0.1**
TRPA Tarpa 68.89 318⇓*EP* **P 05 59 48.1 -0.9**
TOO Toolangi 68.90 136 *eP* **P 05 59 50.6 +1.4**
comp=Z,21nm,0.8s
TOO Toolangi 68.90 136 P **P 05 59 51.1 +1.9**
baz=69,SNR=5.3
MDVR Moldovita 68.95 314⇑*iP* **P 05 59 48.8 -0.6**
BZS Buzias 69.13 315⇑*iP* **P 05 59 50.3 -0.2**
UZH Uzhgorod 69.14 319 *eP* **P 05 59 50.0 -0.5**
UZH *e* 05 59 59.8
UZH *e* 06 00 07.8
SIRR Siria 69.19 316⇑*iP* **P 05 59 50.5 -0.4**
LVZ Lovozero 69.20 340 *eP* **P 05 59 49.7 -0.8**
comp=Z,27nm,0.8s
LVZ Lovozero 69.20 340*deP* **P 05 59 49.9 -0.6**
LVZ pmax pmax
comp=Z,16nm,0.7s
KOLS Kolonicke sedl 69.21 319 *eP* **P 05 59 50.7 -0.2**
KOLS pmax pmax
comp=Z,14nm,1.2s
KOLS Kolonicke sedl 69.21 319 *eP* **P 05 59 50.7 -0.2**
APA Apatity 69.46 340⇑*iP* **P 05 59 51.5 -0.6**
APA pmax pmax
comp=Z,21nm,0.7s
APA MLR MLR
comp=Z,700nm,20.0s
FINES FINESS Array B 70.07 332 P **P 05 59 55.3 -0.6**
comp=Z,18nm,0.7s,baz=104,slow=8.0,SNR=64
FINES LR LR 06 33 49.0
comp=Z,61nm,18.4s,baz=112,slow=39
ARMA Armidale 70.13 127 *eP* **P 05 59 59.3 +2.2**
comp=Z,30nm,0.8s
ARMA Armidale 70.13 127 P **P 05 59 57.7 +0.7**
baz=70,SNR=9.8
KECS Kecovo 70.31 318 *eP* **P 05 59 57.3 -0.4**
KECS pmax pmax
comp=Z,44nm,0.8s
KECS Kecovo 70.31 318 *eP* **P 05 59 57.3 -0.4**
KECS *ep*P **pwP 06 00 08.4 -0.6**
PDG Podgorica 70.45 312⇑*iP* **P 05 59 57.3 -1.4**
NIE Niedzica 70.56 319 *eP* **P 05 59 59.1 -0.2**
NIE Niedzica 70.56 319 *eP* **P 05 59 59.1 -0.2**
PSZ Piszkesteto 70.62 317⇑*iP* **P 05 59 58.9 -0.8**
PSZ Piszkesteto 70.62 317⇓*EP* **P 05 59 58.1 -1.6**
OJC Ojcow 71.00 320 *eP* **P 06 00 01.4 -0.5**
OJC Ojcow 71.00 320 *ep*P pP 06 00 11.3 +2.9
OJC Ojcow 71.00 320 *eP* **P 06 00 01.4 -0.5**
LANS Liptovska Anna 71.06 319 *eP* **P 06 00 02.5 +0.2**
LANS Liptovska Anna 71.06 319 *eP* **P 06 00 02.5 +0.2**
MORH Mrgy, Hungar 71.26 316⇓*EP* **P 06 00 02.1 -1.5**
VYHS Vyhne 71.39 318 *eP* **P 06 00 04.0 -0.3**
VYHS pmax pmax
comp=Z,6.0nm,0.9s
VYHS Vyhne 71.39 318 *eP* **P 06 00 04.0 -0.3**
VYHS *ep*P **pwP 06 00 13.9 -1.8**
KLNR Kaliningrad 71.46 325*ce*P **P 06 00 03.9 -0.6**
KLNR pmax pmax
comp=Z,237nm,1.6s
CSKK Cskako 71.65 317 EP P 05 59 58.1 -7.8
OKC Ostrava-Krasne 72.00 319 *eP* **P 06 00 08.0 +0.1**
OKC Ostrava-Krasne 72.00 319 *eP* **P 06 00 08.0 +0.1**
JAVC Velka Javorina 72.20 318 *eP* **P 06 00 09.9 +0.7**
JAVC *e* 06 00 19.8
MATE Matera 72.24 310⇑*iP* **P 06 00 08.4 -1.1**
MORC Moravsky Berou 72.39 319⇓*iP* **P 06 00 09.9 -0.4**
MORC Moravsky Berou 72.39 319 *eP* **P 06 00 10.2 -0.1**
MORC *e* 06 00 20.6
MODS Modra-Piesok 72.41 318 *eP* **P 06 00 09.5 -0.9**
MODS pmax pmax
comp=Z,14nm,0.8s
MODS Modra-Piesok 72.41 318 *eP* **P 06 00 09.5 -0.9**
MODS *ep*P **sP 06 00 19.5 +0.1**
LBTB Lobatse 72.46 240 *eP* **P 06 00 11.6 +0.4**
comp=Z,24nm,0.7s
LBTB Lobatse 72.46 240 *eP* **P 06 00 11.6 +0.4**
LBTB pmax pmax
comp=Z,24nm,0.7s
ZST Bratislava 72.51 318 *eP* **P 06 00 09.9 -1.1**
ZST *e* 06 00 20.3
ZST Bratislava 72.51 318 *eP* **P 06 00 09.9 -1.1**
ZST *ep*P **sP 06 00 20.3 +0.3**
BEHE Becsehely 72.58 316⇓*EP* **P 06 00 11.0 -0.4**
ARCES ARCESS Array B 72.91 340 P **P 06 00 13.2 +0.2**
comp=Z,21nm,0.8s,baz=92,slow=6.2,SNR=42
ARCES LR LR 06 34 01.9
comp=Z,114nm,20.4s,baz=255,slow=37
ARE0 ARCESS Array S 72.91 340 *eP* **P 06 00 13.4 +0.4**
comp=Z,2.3nm,1.0s
ARE0 ARCESS Array S 72.91 340 *eP* **P 06 00 13.4 +0.4**
VRAC Vranov 72.95 319 *eP* **P 06 00 13.4 -0.2**
KRUC Moravsky 73.06 318 *eP* **P 06 00 13.9 -0.3**
KRUC *e* 06 00 23.8
HEF Hetta 73.18 339 *eP* **P 06 00 13.0 -1.6**
DPC Dobruska-Polom 73.23 320 *eP* **P 06 00 15.6 +0.3**
DPC *e* 06 00 25.7
DPC *e* 06 00 25.7
DPC Dobruska-Polom 73.23 320 *eP* **P 06 00 15.6 +0.3**
DPC *ep*P **pwP 06 00 25.7 -1.0**
KSP Ksiaz 73.30 320 *eP* **P 06 00 15.8 +0.2**
KSP Ksiaz 73.30 320 *eP* **P 06 00 15.8 +0.2**
CONA Conrad Observa 73.32 317 *eP* **P 06 00 15.5 -0.4**
comp=Z,5.4nm,0.7s,SNR=5.6
OSTC Ostas 73.32 320 *eP* **P 06 00 15.5 -0.3**
CHVC Chvalec 73.42 320 *eP* **P 06 00 16.7 +0.3**
CHVC *ex* x 06 00 27.0
UPC Upice 73.44 320 *eP* **P 06 00 16.6 +0.1**
UPC Upice 73.44 320 *eP* **P 06 00 16.6 +0.1**
ARSA Arzberg 73.49 316 *eP* **P 06 00 16.9 0.0**
comp=Z,15nm,1.0s,SNR=8.0
KTK1 Kautokeino 73.51 340 *eP* **P 06 00 16.4 -0.1**
BOJS Bojanci 73.57 315 *i* P **P 06 00 16.6 -0.7**
BOJS *i* 06 00 27.0
TREC Trest 73.67 319 AMS AMS 06 28 50.0
comp=Z,200nm,18.8s
SOKA Soboth 73.79 316 *eP* **P 06 00 18.5 -0.2**
comp=Z,20nm,0.9s,SNR=9.4
HAMF Hammerfest 73.86 341 *eP* **P 06 00 18.2 -0.4**
VISS Visnje 73.87 315 *i* P **P 06 00 18.6 -0.5**
VISS *i* 06 00 29.1
BOSA Boshof 73.97 237 P **P 06 00 20.9 +0.8**
comp=Z,27nm,0.8s,baz=77,slow=5.8,SNR=31
BOSA Boshof 73.97 237 *eP* **P 06 00 21.1 +1.0**
comp=Z,37nm,0.9s
BOSA Boshof 73.97 237 *eP* **P 06 00 21.1 +1.0**
BOSA pmax pmax

comp=Z,37nm,0.9s
OBKA Obir 74.11 316 *e*P **P 06 00 20.4 -0.2**
comp=Z,16nm,0.8s
GOPC GO Pecny, Ondr 74.18 319 *e*P **P 06 00 20.3 -0.5**
GOPC *e* 06 00 31.2
GOPC MLR MLR
comp=Z,100nm,17.7s
GOPC GO Pecny, Ondr 74.18 319 *e*P **P 06 00 20.3 -0.5**
GOPC *e*pP **pwP 06 00 31.2 -1.0**
GOPC AMS AMS 06 28 20.0
comp=Z,100nm,17.7s
PRU Pruhonice 74.34 319 *e*P **P 06 00 21.2 -0.5**
PRU *e* 06 00 31.9
PRU MLR MLR
comp=Z,100nm,19.2s
PRU Pruhonice 74.34 319 *e*P **P 06 00 21.2 -0.5**
PRU *e*pP **pwP 06 00 31.9 -1.2**
PRU AMS AMS 06 28 30.0
comp=Z,100nm,19.2s
KIF Kilpisjarvi 74.35 339 *e*P **P 06 00 21.3 0.0**
PVCC Panska Ves 74.36 320 *e*P **P 06 00 22.1 +0.2**
PVCC *e* 06 00 32.5
PVCC MLR MLR
comp=Z,100nm,17.9s
PVCC Panska Ves 74.36 320 *e*P **P 06 00 22.1 +0.2**
PVCC *e*pP **pwP 06 00 32.5 -0.7**
PVCC AMS AMS 06 28 30.0
comp=Z,100nm,17.9s
MOA Molln 74.38 317 *e*P **P 06 00 21.8 -0.3**
comp=Z,13nm,1.0s
JAVS Javornik 74.42 315 *i* P **P 06 00 21.5 -0.9**
JAVS *i* 06 00 33.1
MYKA Terra Mystica 74.75 316 *e*P **P 06 00 23.5 -0.7**
comp=Z,11nm,0.8s
BRG Berggiesshubel 74.78 320 *i* P **P 06 00 24.3 0.0**
comp=Z,43nm,1.5s
BRG *i* 06 00 34.5
comp=Z,18nm,0.8s
BRG Berggiesshubel 74.78 320 *i* P **P 06 00 24.3 0.0**
BRG *i* 06 00 34.5
BRG pmax pmax
comp=Z,43nm,1.5s
BRG pmax pmax
comp=Z,18nm,0.8s
GERES GERESS Array B 74.81 318 P **P 06 00 24.5 -0.2**
comp=Z,13nm,0.8s,baz=89,slow=5.6,SNR=71
KHC Kasperske Hory 74.91 318 *e*P **P 06 00 24.6 -0.5**
KHC *e* 06 00 30.4
KHC *e* 06 00 35.4
KHC MLR MLR
comp=Z,100nm,18.9s
KHC Kasperske Hory 74.91 318 *e*P **P 06 00 24.6 -0.5**
KHC *e*x x 06 00 30.4
KHC *e*pP **pwP 06 00 35.4 -1.1**
KHC AMS AMS 06 28 10.0
comp=Z,100nm,18.9s
KBA Koelnbreinsper 74.97 316 *e*P **P 06 00 25.1 -0.6**
comp=Z,7.8nm,0.7s
TRO Tromso 75.15 340 *e*P **P 06 00 25.6 -0.4**
CLL Collm 75.40 321⇓*i*P **P 06 00 26.5 -1.3**
comp=Z,20nm,1.2s
CLL *i* pP **sP 06 00 36.5 -0.3**
CLL *e*sP **PcP 06 00 41.0 0.0**
CLL Lm MLR 06 59 00.0
comp=Z,400nm,21.3s
CLL Collm 75.40 321⇓*i*P **P 06 00 26.5 -1.3**
CLL *i* *PP **sP 06 00 36.5 -0.3**
CLL pmax pmax
comp=Z,20nm,1.2s
ABTA Abfaltersbach 75.53 316 *e*P **P 06 00 28.2 -0.6**
comp=Z,8.2nm,0.7s
BILL Bilibino 75.78 22 *e*P **P 06 00 29.9 +0.2**
BILL *e* 06 00 40.2
BILL *e* 06 03 24.2
BILL *e*PPP PPP 06 05 10.3
BILL pmax pmax
comp=Z,13nm,2.5s
BILL MLR MLR
comp=Z,112nm,18.0s
STEI Steigen 76.12 338 *e*P **P 06 00 31.7 +0.1**
WTTA Wattenberg 76.14 316 *e*P **P 06 00 31.4 -1.0**
comp=Z,14nm,0.6s,SNR=8.0
MOR8 Moi Rana 76.16 336 *e*P **P 06 00 30.9 -1.0**
WATA Walderalm 76.18 316 *e*P **P 06 00 31.6 -1.0**
comp=Z,13nm,0.7s
SQTA Sankt Quirin 76.43 316 *e*P **P 06 00 32.9 -1.1**
comp=Z,22nm,0.7s,SNR=7.2
MOTA Moosalm 76.50 316 *e*P **P 06 00 33.6 -0.8**
comp=Z,10nm,0.6s,SNR=8.6
RETA Reutte 76.74 317 *e*P **P 06 00 34.9 -0.8**
comp=Z,12nm,0.7s,SNR=13
FETA Feichten 76.75 316 *e*P **P 06 00 35.2 -0.7**
comp=Z,18nm,1.0s,SNR=9.8
CASY Casey 76.76 172 *e*P **P 06 00 36.0 +0.9**
comp=Z,24nm,0.9s
LOF Lofoten 76.79 338 *e*P **P 06 00 34.6 -0.8**
NSS Namsos 76.99 334 *e*P **P 06 00 35.8 -0.8**
VLC Villacollemand 76.99 313 *e*P **P 06 00 36.5 -0.6**
comp=Z,12nm,0.7s
NB201 NORSAR Array S 77.00 331 *e*P **P 06 00 33.7 -3.1**
NB2 NORSAR Subarra 77.04 331 P **P 06 00 35.6 -1.4**
comp=Z,15nm,0.8s,baz=98,slow=5.3
NB2 NORSAR Subarra 77.04 331 P **P 06 00 35.6 -1.4**
baz=98,slow=5.3
NOA NORSAR Array B 77.04 331 P **P 06 00 35.9 -1.1**
comp=Z,10.0nm,0.8s,baz=94,slow=5.6,SNR=29
NAO01 NORSAR Array S 77.18 330 *e*P **P 06 00 36.9 -0.9**
comp=Z,35nm,0.9s
NAO01 *e*pP **PcP 06 00 47.5 -1.0**
NAO01 NORSAR Array S 77.18 330 *e*P **P 06 00 37.1 -0.6**
OSL Oslo 77.21 329 *e*P **P 06 00 37.2 -0.7**
NBO00 NORSAR Array S 77.25 331 *e*P **P 06 00 36.8 -1.4**
NC204 NORSAR Array S 77.27 331 *e*P **P 06 00 37.2 -1.1**
comp=Z,24nm,0.9s
NC204 *e*PcP **PcP 06 00 48.5 -0.4**
DAVA Damuels 77.33 316 *e*P **P 06 00 38.7 -0.4**
comp=Z,17nm,0.6s,SNR=13
TUE Stuetta 77.71 316 *e*P **P 06 00 40.4 -0.8**
comp=Z,10nm,0.8s
HSPB Hornsund (broa 77.73 347 *e*P **P 06 00 41.5 +0.9**
KONO Kongsberg 77.76 329⇑*e*P **P 06 00 40.7 -0.3**
KONO pmax pmax
comp=Z,45nm,2.5s
KONO Kongsberg 77.76 329 *e*P **P 06 00 40.6 -0.3**
SPA0 Spitsbergen Ar 77.81 348 *e*P **P 06 00 41.1 +0.1**
TSUM Tsumeb 77.90 248 *e*P **P 06 00 44.2 +1.5**
comp=Z,6.0nm,0.8s
KEST Kesra 78.05 305 P **P 06 00 43.5 +0.3**
comp=Z,24nm,0.6s,baz=32,slow=0.5,SNR=25
DOMB Dombas 78.12 332 *e*P **P 06 00 41.5 -1.6**
BFO Black Forest 78.37 317 *e*P **P 06 00 43.9 -0.8**
comp=Z,13nm,0.9s
BFO *e*PcP **PcP 06 00 54.2 +0.3**
BFO Black Forest 78.37 317 *e*P **P 06 00 43.9 -0.8**
BFO *e* 06 00 54.2
BFO pmax pmax
comp=Z,13nm,0.9s
SKAR Skarslia 78.44 330 *e*P **P 06 00 44.9 0.0**
MOL Molde 78.85 332 *e*P **P 06 00 47.1 +0.2**
AKN Aaknes 79.10 332 *e*P **P 06 00 48.6 +0.2**
BLS5 Blasjo 79.36 329 *e*P **P 06 00 49.7 -0.2**
WLF Walferdange 79.76 319 P **P 06 00 52.8 +0.6**
MEM Membach 79.82 320 P **P 06 00 52.4 -0.2**
BHOU Houvegnez 79.83 320 P **P 06 00 52.8 +0.2**
BCLA Clavier 80.28 320 P **P 06 00 55.0 0.0**
BGES Gesves 80.42 320 P **P 06 00 55.6 -0.1**
BMRD Maredsous 80.63 320 P **P 06 00 56.2 -0.7**
DOU Dourbes 80.75 319 P **P 06 00 57.3 -0.2**
SNF Seneffe 80.92 320 P **P 06 00 58.2 -0.3**
BSKQ Steenkerk 81.04 320 P **P 06 00 58.4 -0.6**
LRW Lerwick 83.17 330 *e*P **P 06 01 10.0 0.0**
LRW Lerwick 83.17 330 *e*P **P 06 01 10.0 0.0**
EDMD Edmundbyers 84.27 325 *e*P **P 06 01 15.6 -0.3**
EDMD IAmb IAmb 06 01 16.5
comp=Z,36nm,0.9s
LBWR Ladybower, Pea 84.33 323 *e*P **P 06 01 16.2 +0.1**
LBWR IAmb IAmb 06 01 16.8
comp=Z,39nm,0.8s
EBL Broad Law 84.74 326 *e*P **P 06 01 17.7 -0.5**
BIGH Upper Bighouse 84.78 328 *e*P **P 06 01 18.7 +0.4**
BIGH IAmb IAmb 06 01 19.5
comp=Z,65nm,1.1s
ESK Eskdalemuir 84.90 325 *e*P **P 06 01 19.2 +0.2**
comp=Z,22nm,0.8s
ESK Eskdalemuir 84.90 325 *e*P **P 06 01 18.7 -0.3**
ESK IAmb IAmb 06 01 19.2
comp=Z,20nm,0.7s
ESK Eskdalemuir 84.90 325 *i* P **P 06 01 19.1 +0.1**
KESW Keswick, Cumbr 84.96 324 *e*P **P 06 01 19.3 0.0**
KESW IAmb IAmb 06 01 21.9
comp=Z,74nm,1.6s
FOEL Foel Wylfa 85.28 323 *e*P **P 06 01 20.7 -0.3**
FOEL IAmb IAmb 06 01 21.5
comp=Z,20nm,0.7s
MCH1 Michaelchurch 85.30 322 *e*P **P 06 01 20.5 -0.6**
MCH1 IAmb IAmb 06 01 21.9
comp=Z,14nm,0.8s
EAB Aberfoyle 85.39 326 *e*P **P 06 01 21.5 +0.1**
DAG Danmarks Havn 85.42 347⇓*i*P **P 06 01 20.6 -0.6**
DAG *i* 06 01 30.7
DAG Danmarks Havn 85.42 347⇓*i*P **P 06 01 20.6 -0.6**
DAG *i* 06 01 30.7
LLW Llanuwychllyn 85.57 323 *e*P **P 06 01 22.0 -0.4**
KAC Achnashellach 85.68 327 *e*P **P 06 01 22.7 -0.2**
WME Myndd Eilian 85.86 323 *e*P **P 06 01 24.2 +0.5**
RRR Rubha Reidh 85.88 328 *e*P **P 06 01 23.5 -0.3**
KPL Plockton 85.90 327 *e*P **P 06 01 24.0 +0.1**
KPL IAmb IAmb 06 01 24.8
comp=Z,18nm,0.8s
KPL Plockton 85.90 327 *e*P **P 06 01 24.5 +0.6**
WLF1 Llynfaes 85.93 323 *e*P **P 06 01 24.7 +0.5**
WIM Isle of Man 85.94 324 *e*P **P 06 01 23.9 -0.3**
LAWE Loch Awe, Argy 85.96 326 *e*P **P 06 01 24.5 +0.2**
SYO Syowa Base 85.99 196⇑*e*P **P 06 01 23.8 -0.2**
SYO Syowa Base 85.99 196⇑*e*PcP **PcP 06 01 26.8 +0.2**
SYO Syowa Base 85.99 196⇑*e*pP pP 06 01 34.3 +3.7
RRH Rhenigidale 86.33 328 *e*P **P 06 01 26.2 +0.2**
RSBS Rosebush, Pemb 86.38 322 *e*P **P 06 01 26.1 -0.3**
RSBS IAmb IAmb 06 01 27.2
comp=Z,15nm,0.8s
HTL Hartland 86.39 321 *e*P **P 06 01 26.8 +0.3**
HTL IAmb IAmb 06 01 26.9
comp=Z,40nm,1.1s
CLGH Cloghs, Cushen 86.58 325 *e*P **P 06 01 27.5 +0.1**
TORD Torodi Ar. Bea 87.47 283 P **P 06 01 31.6 -0.9**
comp=Z,6.7nm,0.4s,baz=78,slow=4.6,SNR=57
ESDC Sonseca Array 88.07 310 P **P 06 01 35.0 0.0**
comp=Z,3.7nm,0.7s,baz=62,slow=4.3,SNR=16
MVO Moncorvo 90.07 312 *e*P **P 06 01 45.9 +1.5**
comp=Z,27nm,1.2s
MVO Moncorvo 90.07 312 *e*LR LR 06 55 13.9
comp=Z,569nm,20.0s
MTE Manteigas 90.62 311 *e*P **P 06 01 48.0 +1.1**
MTE *i* LQ LQ 06 01 58.4
MTE Manteigas 90.62 311 *e*LR LR 06 55 17.5
comp=Z,675nm,20.0s
PCBR Castelo Branco 90.69 310 *e*P **P 06 01 48.2 +1.0**
PCBR *i* LQ LQ 06 01 58.3
PMRV Marv??o 90.72 310 *e*P **P 06 01 47.9 +0.6**
PMRV *i* LQ LQ 06 01 58.5
PMRV Marv??o 90.72 310 *e*LR LR 06 55 50.3
comp=Z,559nm,20.0s
PGAV Gavieira, Arco 90.80 313 *e*LR LR 06 54 22.5
comp=Z,731nm,20.0s
EVO Evora 91.39 309 *e*P **P 06 01 51.4 +1.0**
EVO *i* LQ LQ 06 02 01.9
PBEJ Beja 91.39 309 *i* LQ LQ 06 02 02.9
PCAS Casmilo, Conde 91.41 311 *e*P **P 06 01 51.5 +1.0**
PVAQ Vaqueiros 91.41 308 *e*P **P 06 01 52.1 +1.5**
PVAQ Vaqueiros 91.41 308 *e*LR LR 06 56 29.0
comp=Z,704nm,20.0s
PMTG Montargil 91.43 310 *e*P **P 06 01 49.6 -1.0**
comp=Z,40nm,1.7s
PMTG *i* LQ LQ 06 02 01.7
PTOM Tomar 91.44 310 *e*P **P 06 01 52.6 +1.9**
PTOM *i* LQ LQ 06 02 02.9
TOLK Toolik Lake Re 91.49 19 P **P 06 01 50.7 +0.4**
baz=300
MESJ Messejana 91.70 309 *e*P **P 06 01 52.3 +0.3**
MESJ AMb AMB 06 02 01.7
comp=Z,36nm,1.9s
MESJ Messejana 91.70 309 *e*P **P 06 01 53.0 +1.1**
MESJ Messejana 91.70 309 *e*P **P 06 01 52.2 +0.3**
PNCL Nicolau / Gran 91.88 309 *e*P **P 06 01 53.9 +1.2**
PNCL *i* LQ LQ 06 02 04.4
SUMG Summit 92.06 347 *i* P **P 06 01 53.8 +0.5**
SUMG *i* 06 02 04.4
SUMG pmax pmax
comp=Z,110nm,1.1s
SUMG Summit 92.06 347 *i* P **P 06 01 53.8 +0.5**
comp=Z,108nm,1.1s
SUMG *i* 06 02 04.4
PTEO Sao Teotonio 92.16 308 *e*P **P 06 01 55.0 +1.0**
URZ Urewera 92.50 128 LR LR 06 45 37.7
comp=Z,41nm,18.9s,baz=278,slow=37
KULLO Kullorsuaq 93.98 352 *i* P **P 06 02 01.8 +0.2**
KULLO pmax pmax
comp=Z,35nm,0.9s
KULLO Kullorsuaq 93.98 352 *i* P **P 06 02 01.8 +0.2**
comp=Z,35nm,0.9s
TCOL CIGO, UAF Yank 94.03 22 P **P 06 02 01.3 -0.8**
baz=302
COLA College 94.03 22⇓*e*P **P 06 02 01.6 -0.4**
COLA pmax pmax
comp=Z,5.0nm,0.9s
RND Reindeer 94.43 23 *e*P **P 06 02 04.5 +0.5**
comp=Z,5.7nm,1.0s
RND Reindeer 94.43 23 *e*P **P 06 02 04.5 +0.5**
RND pmax pmax
comp=Z,6.0nm,1.0s
ILAR Eielson Array 94.44 21 P **P 06 02 03.1 -0.8**
comp=Z,3.8nm,0.7s,baz=298,slow=4.4,SNR=38
ILAR PP **PP 06 05 50.2 -0.8**
comp=Z,1.2nm,0.9s,baz=299,slow=6.3,SNR=4.5
ILB Eielson Array 94.44 21 *e*P **P 06 02 03.4 -0.6**
comp=Z,4.6nm,0.7s
ILB *e*pP **pwP 06 02 13.9 -1.7**
HDA Harding Lake 94.61 22 *e*P **P 06 02 03.9 -0.9**
comp=Z,6.9nm,0.6s
HDA Harding Lake 94.61 22 P **P 06 02 03.7 -1.1**
baz=303
KIC Kosan Boka 94.84 277 *e*PKP2 **P 06 02 08.0 +1.1**
comp=Z,71nm,1.1s
DBIC Dimbokro 94.90 278 P **P 06 02 08.0 +0.9**
comp=Z,15nm,0.8s,baz=67,slow=4.0,SNR=10
DBIC Dimbokro 94.90 278 *e*P **P 06 02 08.1 +0.9**
comp=Z,20nm,0.9s
VNDA Vanda 94.96 168 P **P 06 02 05.4 -0.5**
comp=Z,1.0nm,0.7s,baz=275,slow=7.6,SNR=7.4
TIC Toumodi 95.07 278 *e*PKP2 **P 06 02 09.0 +1.1**
LIC Lamto 95.15 277 *e*PKP2 **P 06 02 09.3 +1.1**
comp=Z,130nm,2.0s
KDAK Kodiak Island 95.56 29 *e*P **P 06 02 10.0 +0.9**
comp=Z,13nm,1.3s
KDAK Kodiak Island 95.56 29 *e*P **P 06 02 10.0 +0.9**
KDAK pmax pmax
comp=Z,13nm,1.3s
SBA Scott Base 96.06 168 *e*P **P 06 02 12.6 +1.6**
comp=Z,3.1nm,0.8s
SBA Scott Base 96.06 168 *e*P **P 06 02 12.6 +1.6**
SBA pmax pmax
comp=Z,3.0nm,0.8s
EPYK Eagle Plains 96.81 18 P **P 06 02 14.4 -0.4**
baz=312
PMOZ Porto Moniz, M 100.12 306 *e*LR LR 06 57 08.1
comp=Z,351nm,18.0s
YKA Yellowknife Ar 105.62 12 PP **PKiKP 06 07 13.6 +6.5**
comp=Z,0.6nm,0.7s,baz=341,slow=7.7,SNR=3.8
D04E Lakebay 116.10 25 P **PKiKP 06 07 27.4 0.0**
baz=322
E04D Cinebar 116.68 25 P **PKPdf 06 07 27.7 -0.9**
baz=322
NEW Newport 117.39 21 P **PKPdf 06 07 29.5 -0.5**
baz=328
H04D Lebanon 118.20 27 P **PKiKP 06 07 31.7 +0.2**
baz=321
CHGQ Chibougamau 119.66 349 P **PKPdf 06 07 33.2 -0.9**
baz=16
MSO Missoula 119.72 20 P **PKPdf 06 07 33.9 -0.7**
baz=331
J05D Fort Rock, OR 119.84 27 P **PKiKP 06 07 35.6 +0.6**
baz=322
EGMT Eagleton 119.92 16 P **PKPdf 06 07 34.7 -0.1**
baz=336,SNR=8.9
L04D Klamath Falls 120.19 28 P **PKPdf 06 07 35.1 -0.5**
baz=321
ULM Lac du Bonnet 120.32 5 PKP **PKPdf 06 07 34.5 -0.9**
comp=Z,6.3nm,0.7s,baz=23,slow=3.2,SNR=4.5
MATQ Matagami 120.33 352 P **PKPdf 06 07 34.5 -0.9**
baz=13
M02C Callahan 120.56 29 P **PKiKP 06 07 36.6 +0.2**
baz=320
M04C Macdoel 120.74 28 P **PKPdf 06 07 36.7 0.0**
baz=321
LSQQ Lebel-sur-Quev 120.92 351 P **PKPdf 06 07 36.0 -0.6**
baz=14
N02D Trinity Center 120.95 30 P **PKiKP 06 07 37.2 0.0**
baz=320
BOZ Bozeman (W) 121.56 19 P **PKPdf 06 07 37.9 -0.3**
baz=333
LATQ La Tuque 121.75 347 P **PKPdf 06 07 37.4 -0.9**
baz=19
O03E Paynes Creek 121.92 29 P **PKPdf 06 07 38.5 -0.4**
baz=321
PMSA Palmer Station 122.02 192 *e*P **PKPdf 06 07 38.0 -0.1**
LAO LASA Array 122.06 14 P **PKiKP 06 07 39.7 +0.5**
baz=340,SNR=9.6
HLID Hailey 122.39 22 *e*PKPdf **PKPdf 06 07 38.1 -1.8**
HLID Hailey 122.39 22 P **PKiKP 06 07 40.0 0.0**
baz=330
YMR Madison River 122.60 19 *e*PKPdf **PKPdf 06 07 39.6 -0.7**
RLMT Red Lodge 122.70 17 P **PKPdf 06 07 40.2 -0.3**
baz=336
D54A Lac Fusel, La 122.72 350 P **PKPdf 06 07 38.9 -1.3**
baz=14
YFT Old Faithful 122.83 19 *e*PKPdf **PKiKP 06 07 42.2 +1.3**
PKME Peaks-Kenny Pk 122.87 344 P **PKPdf 06 07 40.0 -0.5**
baz=23
EYMN Ely 122.90 2 *e*PKPdf **PKPdf 06 07 39.4 -1.1**
EYMN Ely 122.90 2 P **PKPdf 06 07 40.1 -0.4**
baz=357
BEKR Beckworth 122.94 29 *e*PKPdf **PKiKP 06 07 41.5 +0.3**
D53A Lac Vacive, Po 122.96 351 *e*PKPdf **PKPdf 06 07 38.9 -1.7**
D53A Lac Vacive, Po 122.96 351 P **PKPdf 06 07 39.7 -0.9**
baz=13
C40A Isle Royale Na 122.98 0 P **PKPdf 06 07 39.9 -0.7**
baz=360
D52A ZEK Kipawa Sen 123.16 352 P **PKPdf 06 07 39.9 -1.1**
baz=12,SNR=5.7
D51A Lot 18 Range I 123.19 352 P **PKPdf 06 07 39.7 -1.3**
baz=11
D48A Paudash Townsh 123.38 354 P **PKPdf 06 07 40.0 -1.4**
baz=8.2
FXWY Fox Creek 123.50 19 *e*PKPdf **PKiKP 06 07 42.6 +0.3**
E54A Lac Daplat, Po 123.50 350 P **PKPdf 06 07 40.3 -1.3**
baz=14
D47A Chapleau 123.61 355 P **PKPdf 06 07 40.9 -1.0**
baz=6.7
E53A Dumoine, Ponti 123.63 351 P **PKPdf 06 07 40.7 -1.3**
baz=13
E51A G1948 Merrick 123.75 352 P **PKPdf 06 07 41.1 -1.0**
baz=11
D41A Chassel 123.83 360 P **PKPdf 06 07 41.5 -0.8**
baz=0.2,SNR=5.2
D46A Sault St. Mari 123.85 356 P **PKPdf 06 07 41.4 -0.9**
baz=5.6,SNR=6.1
E52A Mattawa 123.88 352 P **PKPdf 06 07 41.3 -1.1**
baz=12
PNTR Pine Nut 123.92 29 *e*PKPdf **PKiKP 06 07 43.5 +0.3**
E50A Wahnapitae 124.01 353 P **PKPdf 06 07 41.9 -0.7**
baz=9.5,SNR=5.0
E48A Lockeyer 124.10 355 P **PKPdf 06 07 41.8 -1.0**
baz=7.8
ALGO Algonquin Park 124.11 351 P **PKPdf 06 07 41.7 -1.1**
baz=13
E44A Grand Marais A 124.22 358 P **PKPdf 06 07 43.0 0.0**
baz=3.4,SNR=5.5
E47A Iron Bridge 124.22 355 P **PKPdf 06 07 42.2 -0.8**
baz=6.5
E38A The Farm, Brul 124.23 2 P **PKPdf 06 07 42.3 -0.8**
baz=357,SNR=5.9
PEMO Pembroke 124.25 350 P **PKPdf 06 07 41.9 -1.2**
baz=14
E46A Sault Ste Mari 124.39 356 P **PKPdf 06 07 42.6 -0.8**
baz=5.3,SNR=9.5
F51A Arnstein 124.40 353 P **PKPdf 06 07 42.7 -0.7**
baz=11
F52A Sundridge 124.45 352 P **PKPdf 06 07 42.6 -0.9**
baz=11
E43A Lone Tree Farm 124.50 359 P **PKPdf 06 07 42.8 -0.7**
baz=2.1,SNR=9.0
LBNH Lisbon 124.51 345 P **PKPdf 06 07 42.8 -0.9**
baz=20
G55A Calabogie 124.57 350 P **PKPdf 06 07 42.7 -1.0**
baz=14
BW06 Boulder Array 124.75 19 P **PKPdf 06 07 43.8 -0.8**
baz=335
PDAR Pinedale Array 124.75 19 PKP **PKPdf 06 07 44.4 -0.1**
comp=Z,3.9nm,0.7s,baz=68,slow=1.3,SNR=38
PDAR PKKPbc **PKKPab 06 17 25.3 -1.4**
comp=Z,0.2nm,0.4s,baz=120,slow=5.7,SNR=3.6
LONY Lake Ozonia 124.77 348 P **PKPdf 06 07 43.5 -0.7**
baz=17
F48A Evansville 124.79 355 P **PKPdf 06 07 43.2 -0.9**
baz=7.3
F49A Sandfield 124.80 354 P **PKPdf 06 07 43.4 -0.8**
baz=8.1
BUKO Buck Lake 124.81 352 P **PKPdf 06 07 43.1 -1.1**
baz=11
PLVO Plevna 124.84 350 P **PKPdf 06 07 43.4 -0.9**
baz=14
F38A Pierce - Schro 124.87 3 P **PKPdf 06 07 43.9 -0.4**
baz=356
F39A Loretta 124.95 2 P **PKPdf 06 07 43.8 -0.7**
baz=357,SNR=5.8
F40A Park Falls 124.96 1 P **PKPdf 06 07 43.7 -0.8**
baz=358,SNR=11
BANO Bancroft 125.00 351 P **PKPdf 06 07 44.1 -0.5**
baz=13
RSSD Black Hills 125.00 13 *e*PKPdf **PKPdf 06 07 44.9 0.0**
RSSD Black Hills 125.00 13 *e*PKIKP **PKPdf 06 07 44.9 0.0**
RSSD Black Hills 125.00 13 P **PKPdf 06 07 44.4 -0.5**
baz=342
G53A Haliburton 125.01 351 P **PKPdf 06 07 43.8 -0.8**
baz=12
NVAR Mina Array Bea 125.05 28 PKP **PKiKP 06 07 45.9 +0.4**
comp=Z,7.5nm,0.8s,baz=299,slow=1.7,SNR=58
NVAR PKKPab **PKKPab 06 17 24.1 -1.3**
comp=Z,0.3nm,0.7s,baz=126,slow=7.5,SNR=3.6
F37A Hinrichs Farm, 125.06 3 P **PKPdf 06 07 44.4 -0.3**
baz=355,SNR=6.1
H56A Elgin 125.12 349 P **PKPdf 06 07 44.2 -0.6**
baz=15
F45A CMU Biological 125.14 357 P **PKPdf 06 07 44.4 -0.4**
baz=3.9,SNR=9.7
H55A Tweed 125.33 350 P **PKPdf 06 07 44.5 -0.7**
baz=14
DELO Deloro Mine 125.44 350 P **PKPdf 06 07 44.5 -0.9**
baz=14
G46A Petoskey 125.47 357 P **PKPdf 06 07 44.8 -0.6**
baz=4.7
G47A Hillman 125.54 356 P **PKPdf 06 07 44.7 -0.9**
baz=5.9
SPMN Marine on St. 125.55 4 P **PKPdf 06 07 45.1 -0.5**
baz=355
G39A Holcombe 125.57 2 P **PKPdf 06 07 44.9 -0.7**
baz=357,SNR=6.0
G40A Rib Lake 125.61 1 P **PKPdf 06 07 45.5 -0.3**
baz=358
H52A Wyevale 125.66 352 P **PKPdf 06 07 44.9 -0.9**
baz=11
SUSD Miller 125.66 9 P **PKPdf 06 07 45.2 -0.7**
baz=348
K22A Casper 125.75 16 P **PKPdf 06 07 45.8 -0.5**
baz=338
DUG Dugway, Tooele 125.90 23 *e*PKPdf **PKPdf 06 07 46.0 -0.6**
DUG Dugway, Tooele 125.90 23 *e*PKIKP **PKPdf 06 07 46.0 -0.6**
DUG Dugway, Tooele 125.90 23 P **PKiKP 06 07 47.3 +0.2**
baz=330
GLMI Grayling 125.94 356 P **PKPdf 06 07 46.0 -0.4**
baz=5.0
HRV Adam Dziewonsk 126.04 344 P **PKPdf 06 07 46.0 -0.6**
baz=21
H47A Mio 126.14 356 P **PKPdf 06 07 46.2 -0.6**
baz=5.5
WLVO Wesleyville 126.14 351 P **PKPdf 06 07 45.8 -0.9**
baz=13
DRWO Darlington Wes 126.25 351 P **PKPdf 06 07 46.3 -0.7**
baz=12
H46A Fife Lake 126.26 357 P **PKPdf 06 07 46.4 -0.6**
baz=4.3
BWLO Walkerton 126.33 353 P **PKPdf 06 07 46.5 -0.7**
baz=9.3
R11A Troy Canyon, C 126.34 26 P **PKiKP 06 07 47.9 -0.1**
baz=327
H43A Windswept, Lux 126.42 359 P **PKPdf 06 07 46.4 -0.9**
baz=1.2

BASO	Ashfield	126.49	354	P	PKPdf	06 07 47.0	-0.5
	baz=8.7						
I48A	Sherman Twp	126.51	355	P	PKPdf	06 07 47.1	-0.3
	baz=6.2						
I51A	Listowel	126.63	353	P	PKPdf	06 07 47.0	-0.8
	baz=9.5						
ECSD	EROS Data Cent	126.68	7	P	PKPdf	06 07 47.6	-0.3
	baz=350						
I49A	Point Hope	126.68	355	P	PKPdf	06 07 47.2	-0.6
	baz=7.3						
J55A	Hilton	126.69	350	P	PKPdf	06 07 47.2	-0.6
	baz=13						
ACTO	Acton	126.70	352	P	PKPdf	06 07 47.0	-0.8
	baz=11						
I47A	Gladwin	126.74	356	P	PKPdf	06 07 47.5	-0.4
	baz=5.2						
CWC	Cottonwood Cre	126.75	30	P	PKPdf	06 07 48.5	+0.1
	baz=323						
I45A	Fountain	126.81	358	P	PKPdf	06 07 47.7	-0.4
	baz=3.1						
J54A	Appleton	126.82	351	P	PKPdf	06 07 47.5	-0.6
	baz=12						
I41A	Arkdale	126.83	1	P	PKPdf	06 07 47.2	-0.9
	baz=359						
MEDO	Medina	126.89	351	P	PKPdf	06 07 47.2	-1.0
	baz=13						
STCO	Saint Catharin	126.96	351	P	PKPdf	06 07 47.9	-0.5
	baz=12						
I42A	Draeger Farm,	127.00	0	P	PKPdf	06 07 47.6	-0.9
	baz=360						
J52A	Paris	127.11	352	P	PKPdf	06 07 48.1	-0.6
	baz=10						
ISA	Isabella, Lake	127.17	30	P	PKPdf	06 07 48.2	-0.9
	baz=322						
TYNO	Tyneside	127.17	352	P	PKPdf	06 07 48.3	-0.5
	baz=11						
TPNV	Topopah Spring	127.20	28	P	PKPdf	06 07 49.2	0.0
	baz=325						
K55A	Perry	127.25	350	P	PKPdf	06 07 48.3	-0.7
	baz=13						
J49A	Marlette	127.29	355	P	PKPdf	06 07 48.1	-0.9
	baz=6.9						
MPMC	Manual Prospec	127.34	29	P	PKiKP	06 07 49.9	-0.2
	baz=324						
BINY	Binghamton	127.38	348	P	PKPdf	06 07 48.2	-1.1
	baz=16						
J48A	Bridge Port	127.40	355	P	PKPdf	06 07 48.6	-0.7
	baz=6.2						
K54A	Basiliko Farm,	127.47	351	P	PKPdf	06 07 48.6	-0.8
	baz=12						
J47A	Sunmer	127.53	356	P	PKPdf	06 07 48.5	-1.0
	baz=4.9						
N23A	Red Feather La	127.55	16	P	PKPdf	06 07 49.6	-0.3
	baz=338						
O20A	White River Ci	127.56	19	P	PKPdf	06 07 49.8	-0.1
	baz=336						
M61A	Granite Spring	127.73	346	P	PKPdf	06 07 49.3	-0.6
	baz=19						
K50A	Casco	127.82	354	P	PKPdf	06 07 49.7	-0.3
	baz=7.6						
L55A	Hinsdale	127.84	350	P	PKPdf	06 07 49.7	-0.5
	baz=13						
K48A	Perry	127.92	356	P	PKPdf	06 07 49.7	-0.6
	baz=5.8						
L54A	Sinclairville	127.94	351	P	PKPdf	06 07 49.3	-1.0
	baz=12						
JFWS	Jewell Farm	127.96	1	P	PKPdf	06 07 49.3	-1.0
	baz=358						
EDW2	Edwards Air Fo	128.03	31	P	PKiKP	06 07 51.5	+0.1
	baz=322						
K47A	Vermontville	128.11	356	P	PKPdf	06 07 49.6	-1.0
	baz=4.7						
K46A	Dorr	128.14	357	P	PKPdf	06 07 49.6	-1.0
	baz=3.7						
K43A	Burlington	128.19	360	P	PKPdf	06 07 50.0	-0.7
	baz=0.5						
GSC	Goldstone, Bar	128.28	29	P	PKiKP	06 07 51.7	-0.2
	baz=324						
L53A	Girard	128.35	352	P	PKPdf	06 07 50.3	-0.8
	baz=11						
M56A	Emporium	128.48	350	P	PKPdf	06 07 50.9	-0.5
	baz=13						
SNCC	San Nicolas Is	128.50	33	P	PKPdf	06 07 50.6	-1.0
	baz=320						
N59A	State Game Lan	128.56	347	P	PKPdf	06 07 51.2	-0.3
	baz=16						
L49A	Milan	128.58	355	P	PKPdf	06 07 51.0	-0.5
	baz=6.3						
M55A	Ridgway	128.60	350	P	PKPdf	06 07 51.1	-0.5
	baz=13						
M54A	Oil Creek Stat	128.70	351	ePKPdf	PKPdf	06 07 51.7	-0.1
M54A	Oil Creek Stat	128.70	351	P	PKPdf	06 07 51.2	-0.6
	baz=12						
NBPA	Parau_RN	128.71	270	eP	PKiKP	06 07 53.2	+0.1
NBLI	Livramento-PB	128.74	268	eP	PKiKP	06 07 53.3	+0.1
BGNE	Belgrade	128.75	9	P	PKPdf	06 07 51.4	-0.5
	baz=348						
L40A	Anamosa	128.78	2	P	PKPdf	06 07 51.3	-0.6
	baz=357						
L48A	N Adams	128.80	356	P	PKPdf	06 07 51.0	-0.9
	baz=5.5						
L47A	Sherwood	128.81	357	P	PKPdf	06 07 51.0	-1.0
	baz=4.5						
L42A	Oliver, Polo	128.88	1	P	PKPdf	06 07 51.4	-0.7
	baz=359						
N56A	West Decatur	129.05	350	P	PKPdf	06 07 52.3	-0.2
	baz=13						
O60A	Telford	129.05	347	P	PKPdf	06 07 52.2	-0.3
	baz=17						
N57A	Milroy	129.07	349	P	PKPdf	06 07 52.0	-0.5
	baz=14						
O59A	Robesonia	129.23	348	P	PKPdf	06 07 52.5	-0.3
	baz=16						
GMRC	Granite Mounta	129.25	29	P	PKiKP	06 07 53.9	0.0
	baz=325						
SSPA	Standing Stone	129.25	349	P	PKPdf	06 07 52.1	-0.7
	baz=14						
N54A	Moraine State	129.28	351	P	PKPdf	06 07 52.1	-0.8
	baz=11						
N55A	Marion Center	129.30	350	P	PKPdf	06 07 52.3	-0.6
	baz=12						
MURC	Murrieta	129.44	31	P	PKiKP	06 07 53.9	-0.3
	baz=323						
M47A	Cromwell	129.45	357	P	PKPdf	06 07 52.4	-0.8
	baz=4.0						
M43A	Waltham Townsh	129.46	0	P	PKPdf	06 07 52.6	-0.6
	baz=360						
M41A	Milan	129.49	2	P	PKPdf	06 07 52.3	-0.9
	baz=358						
M44A	Midewin, Midew	129.50	359	P	PKPdf	06 07 52.9	-0.4
	baz=0.9						
N53A	Lisbon	129.55	352	P	PKPdf	06 07 53.0	-0.4
	baz=10						
MVL	Millersville	129.56	348	ePKPdf	PKiKP	06 07 54.0	-0.2
P60A	Greenville	129.59	347	P	PKPdf	06 07 53.0	-0.5
	baz=17						
O57A	Amberson	129.62	349	P	PKPdf	06 07 52.8	-0.8
	baz=14						
N51A	Ashland	129.63	354	P	PKPdf	06 07 52.5	-1.0
	baz=8.2						
BELC	Belle Mtn. Jos	129.72	30	P	PKPdf	06 07 53.5	-0.6
	baz=324						
O56A	Blue Knob Stat	129.73	350	ePKPdf	PKPdf	06 07 54.0	+0.2
O56A	Blue Knob Stat	129.73	350	P	PKPdf	06 07 53.6	-0.3
	baz=13						
N49A	Columbus Grove	129.79	355	P	PKPdf	06 07 53.2	-0.6
	baz=5.8						
PFO	Pinyon Flats O	129.80	30	P	PKPdf	06 07 54.6	+0.3
	baz=324						
N48A	Decatur	129.92	356	P	PKPdf	06 07 53.2	-0.9
	baz=4.8						
N47A	Urbana	129.93	357	P	PKPdf	06 07 53.1	-1.0
	baz=3.9						
P59A	Jarrettsville	129.96	348	P	PKPdf	06 07 53.9	-0.3
	baz=16						
N46A	Monticello	129.96	358	P	PKPdf	06 07 53.9	-0.3
	baz=2.6						
IRM	Iron Mountain	130.00	29	P	PKPdf	06 07 54.9	+0.4
	baz=325						
MVCO	Mesa Verde	130.11	21	P	PKPdf	06 07 54.6	-0.3
	baz=334						
N41A	Harden Midland	130.15	2	P	PKPdf	06 07 53.7	-0.8
	baz=357						
S22A	4UR Ranch, Cre	130.18	19	P	PKPdf	06 07 55.1	0.0
	baz=336						
PDMCI	Parker Dam,Lak	130.35	28	P	PKiKP	06 07 55.9	-0.1
	baz=326						
O52A	Adamsville	130.36	353	P	PKPdf	06 07 54.2	-0.8
	baz=8.9						
ACSO	Alum Creek Sta	130.37	354	P	PKPdf	06 07 54.3	-0.7
	baz=7.5						
P57A	Homestead Farm	130.39	349	P	PKPdf	06 07 54.8	-0.2
	baz=14						
Q60A	Greensboro	130.41	347	P	PKPdf	06 07 54.5	-0.5
	baz=17						
O51A	Pataskala	130.42	354	P	PKPdf	06 07 54.4	-0.7
	baz=8.0						
P56A	Dayton Farm, R	130.52	350	P	PKPdf	06 07 54.9	-0.4
	baz=13						
O48A	Farmland	130.52	356	P	PKPdf	06 07 54.4	-0.8
	baz=4.7						
O49A	Covington	130.53	356	P	PKPdf	06 07 54.6	-0.7
	baz=5.7						
SDCO	Great Sand Dun	130.59	18	P	PKPdf	06 07 55.6	-0.3
	baz=338						
O47A	Sheridan	130.60	357	P	PKPdf	06 07 54.2	-1.2
	baz=3.3						
O45A	Potomac	130.63	359	P	PKPdf	06 07 54.9	-0.6
	baz=1.3						
P55A	Reedsville	130.68	351	P	PKPdf	06 07 54.6	-1.1
	baz=12						
P54A	Burton	130.69	352	P	PKPdf	06 07 55.1	-0.5
	baz=11						
P52A	Corning	130.87	353	P	PKPdf	06 07 55.0	-0.9
	baz=8.6						
Q57A	Strasburg	130.90	349	P	PKPdf	06 07 55.6	-0.4
	baz=14						
P53A	Whipple	130.93	352	P	PKPdf	06 07 55.7	-0.3
	baz=9.6						
CBKS	Cedar Bluff	131.00	11	P	PKPdf	06 07 56.2	-0.1
	baz=346						
Q56A	Snyder Ridge,	131.03	350	P	PKPdf	06 07 55.8	-0.5
	baz=12						
P51A	Williamsport	131.12	354	P	PKPdf	06 07 55.6	-0.8
	baz=7.4						
Q55A	Buckhannon	131.22	351	P	PKPdf	06 07 56.3	-0.3
	baz=11						
KSU1	Kansas State U	131.24	8	P	PKPdf	06 07 55.9	-0.8
	baz=350						
NBMO	Morrinhos-CE	131.25	274	eP	PKiKP	06 07 58.3	+0.1
P43A	Skaggs, Pawnee	131.25	1	P	PKPdf	06 07 56.2	-0.4
	baz=359						
P46A	Rosedale	131.25	358	P	PKPdf	06 07 56.7	+0.1
	baz=2.0						
P48A	Milroy	131.33	357	P	PKPdf	06 07 56.3	-0.5
	baz=4.4						
Q54A	Coxs Mills	131.34	352	P	PKPdf	06 07 56.5	-0.4
	baz=10						
T25A	Trinidad	131.47	17	P	PKPdf	06 07 57.5	0.0
	baz=339						
W18A	Petrified Fore	131.52	23	P	PKPdf	06 07 57.8	+0.3
	baz=332						
R58A	Rapidan	131.54	349	P	PKPdf	06 07 56.9	-0.4
	baz=14						
Q52A	Bidwell	131.55	353	P	PKPdf	06 07 56.4	-0.8
	baz=8.5						
Q53A	Leroy	131.56	352	P	PKPdf	06 07 57.1	-0.1
	baz=9.5						
R57A	Stanardsville	131.64	349	P	PKPdf	06 07 57.3	-0.1
	baz=14						
R58B	Mineral	131.84	348	P	PKPdf	06 07 57.3	-0.5
	baz=14						
Q45A	Warren Harvey,	131.99	359	P	PKPdf	06 07 57.3	-0.8
	baz=0.8						
R53A	Hurricane	132.14	353	P	PKPdf	06 07 57.6	-0.8
	baz=9.0						
R54A	Victor	132.16	352	P	PKPdf	06 07 57.3	-1.2
	baz=10						
S58A	Poland Farm, P	132.21	349	P	PKPdf	06 07 58.2	-0.3
	baz=14						
S57A	Dark Hollow, R	132.24	349	P	PKPdf	06 07 58.3	-0.3
	baz=13						
T60A	Surry	132.39	347	P	PKPdf	06 07 58.0	-0.8
	baz=16						
ALF01	Guarapari-ES	132.43	251	eP	PKiKP	06 07 60.0	-0.4
R49A	Shelbyville	132.48	356	P	PKPdf	06 07 58.1	-0.9
	baz=4.8						
S55A	Lewisburg	132.48	351	P	PKPdf	06 07 58.3	-0.8
	baz=11						
R47A	Wooly Knot Far	132.55	358	P	PKPdf	06 07 58.3	-0.8
	baz=3.0						
R45A	Skylar, Fairfi	132.60	359	P	PKPdf	06 07 58.9	-0.3
	baz=0.6						
WCI	Wyandotte Cave	132.60	357	P	PKPdf	06 07 58.5	-0.8
	baz=3.3						
CCM	Cathedral Cave	132.78	3	P	PKPdf	06 07 59.1	-0.5
	baz=357						
TASM	ASL Pad, Albuq	132.86	20	P	PKPdf	06 07 59.6	-0.5
	baz=336						
TASM	ASL Pad, Albuq	132.86	20	P	PKPdf	06 07 59.6	-0.5
	baz=336						
ANMO	Albuquerque	132.86	20	ePKPdf	PKPdf	06 08 00.1	0.0
ANMO	Albuquerque	132.86	20	ePKIKP	PKPdf	06 08 00.1	0.0
ANMO	Albuquerque	132.86	20	P	PKPdf	06 07 59.7	-0.4
	baz=336						
T58A	Grand View Acr	132.95	349	P	PKPdf	06 08 00.0	+0.1
	baz=14						
S51A	Beattyville	133.00	354	P	PKPdf	06 07 59.4	-0.6
	baz=6.9						
S50A	Richmond	133.03	355	P	PKPdf	06 07 59.7	-0.3
	baz=5.9						
T57A	Hurt	133.03	350	P	PKPdf	06 07 59.8	-0.3
	baz=13						
SJMB	Sao Joao De Ma	133.04	253	eP	PKPdf	06 08 00.8	+0.2
U60A	Pendleton	133.13	347	P	PKPdf	06 07 59.7	-0.5
	baz=16						
T56A	Rocky Mt	133.14	350	P	PKPdf	06 07 59.8	-0.5
	baz=12						
CAM01	Campos-RJ	133.15	249	eP	PKiKP	06 08 01.7	-0.1
S48A	Wiedeman Farm,	133.16	357	P	PKPdf	06 07 59.3	-1.1
	baz=3.6						
T55A	Pulaski	133.17	351	P	PKPdf	06 08 00.1	-0.3
	baz=11						
S46A	Don Dixon Farm	133.19	359	P	PKPdf	06 07 59.2	-1.1
	baz=1.4						
S47A	Hartford	133.26	358	P	PKPdf	06 07 59.4	-1.1
	baz=2.5						
T54A	Tazewell	133.34	352	P	PKPdf	06 07 59.5	-1.3
	baz=9.7						
T52A	Hallie	133.46	354	P	PKPdf	06 08 00.0	-0.9
	baz=7.8						
U58A	Oxford	133.49	349	P	PKPdf	06 08 00.1	-0.9
	baz=14						
TUC	Tucson	133.53	26	ePKPdf	PKPdf	06 08 00.6	-0.6
TUC	Tucson	133.53	26	ePKIKP	PKPdf	06 08 00.6	-0.6
TUC	Tucson	133.53	26	P	PKPdf	06 08 00.7	-0.6
	baz=329						
T53A	Wise	133.54	353	P	PKPdf	06 08 00.5	-0.6
	baz=8.4						
T49A	Edmonton	133.68	356	P	PKPdf	06 08 00.6	-0.8
	baz=4.4						
T51A	Gray	133.70	355	P	PKPdf	06 08 00.6	-0.8
	baz=6.5						
T50A	Nancy	133.72	356	P	PKPdf	06 08 00.3	-1.1
	baz=5.3						
T48A	Bowling Green	133.73	357	P	PKPdf	06 08 00.4	-1.0
	baz=3.2						
DUB01	Friburgo-RJ	133.77	248	eP	PKPdf	06 08 02.5	+0.6
U55A	TA2, Sparta	133.81	351	P	PKPdf	06 08 01.1	-0.6
	baz=10						
T46A	Princeton	133.84	359	P	PKPdf	06 08 01.1	-0.5
	baz=1.2						
T47A	Sharon Grove	133.87	358	P	PKPdf	06 08 01.3	-0.4
	baz=2.2						
TZTN	Tazewell	134.08	354	P	PKPdf	06 08 01.6	-0.5
	baz=7.1						
U53A	Fall Branch	134.15	353	P	PKPdf	06 08 02.0	-0.3
	baz=8.5						
V58A	Windy Hill, Pi	134.18	349	P	PKPdf	06 08 01.3	-0.9
	baz=13						
V57A	Coltrane Farms	134.21	350	P	PKPdf	06 08 01.3	-1.1
	baz=12						
U49A	Red Boiling Sp	134.29	357	P	PKPdf	06 08 01.6	-0.8
	baz=4.1						
U50A	Jamestown	134.32	356	P	PKPdf	06 08 01.7	-0.9
	baz=5.4						
U48A	Cassie Pea, Po	134.33	358	P	PKPdf	06 08 02.0	-0.6
	baz=3.0						
U40A	Yellville	134.37	5	P	PKPdf	06 08 01.9	-0.7
	baz=354						
V56A	Mocksville	134.41	351	P	PKPdf	06 08 02.0	-0.7
	baz=11						
U47A	Clarksville	134.43	358	P	PKPdf	06 08 02.2	-0.5
	baz=2.0						
V55A	Taylorsville	134.47	351	P	PKPdf	06 08 02.2	-0.7
	baz=10						
TUL1	Leonard	134.49	8	P	PKPdf	06 08 02.2	-0.7
	baz=350						
U46A	Springville	134.53	359	P	PKPdf	06 08 02.3	-0.6
	baz=0.8						
121A	Cookes Peak, D	134.56	23	P	PKPdf	06 08 02.4	-1.0
	baz=333						
V54A	Nebo	134.65	352	P	PKPdf	06 08 02.5	-0.7
	baz=9.4						
WVT	Waverly	134.75	359	ePKPdf	PKPdf	06 08 02.9	-0.4
WVT	Waverly	134.75	359	ePKIKP	PKPdf	06 08 02.9	-0.4
WVT	Waverly	134.75	359	P	PKPdf	06 08 02.6	-0.7
	baz=1.3						
V52A	Sevierville	134.78	354	ePKPdf	PKPdf	06 08 03.2	-0.2
V52A	Sevierville	134.78	354	P	PKPdf	06 08 02.8	-0.7
	baz=7.2						
V53A	Saluda	134.87	353	ePKPdf	PKPdf	06 08 03.1	-0.6
V53A	Saluda	134.87	353	P	PKPdf	06 08 02.8	-0.9
	baz=8.2						
V51A	Loudon	134.89	355	P	PKPdf	06 08 02.9	-0.7
	baz=6.1						
MSTX	Muleshoe	134.90	17	P	PKPdf	06 08 02.8	-1.0
	baz=340						
W57A	Gilead	134.96	350	P	PKPdf	06 08 02.9	-0.8
	baz=12						
V49A	McMinnville	135.04	357	P	PKPdf	06 08 03.0	-0.9
	baz=4.0						
W56A	Indian Trail	135.08	350	P	PKPdf	06 08 03.4	-0.5
	baz=11						
V46A	Holladay	135.08	359	P	PKPdf	06 08 03.1	-0.8
	baz=0.9						
V50A	Pikevile	135.08	356	P	PKPdf	06 08 03.6	-0.4
	baz=5.1						
V48A	Smith Brothers	135.11	358	P	PKPdf	06 08 03.4	-0.6
	baz=2.7						
WMOK	Wichita Mounta	135.13	12	P	PKPdf	06 08 03.4	-0.7
	baz=346						
KMSC	Kings Mountain	135.19	351	P	PKPdf	06 08 03.5	-0.7
	baz=10						
W54A	Cherokee Point	135.36	352	P	PKPdf	06 08 03.8	-0.8
	baz=9.2						
W53A	Cullowhee	135.40	353	P	PKPdf	06 08 03.9	-0.8
	baz=7.8						
W39A	Magazine	135.43	6	P	PKPdf	06 08 04.2	-0.5
	baz=353						
ESAR	Angra dos Reis	135.50	247	eP	PKPdf	06 08 04.2	-0.9
W52A	Murphy	135.56	354	P	PKPdf	06 08 04.2	-0.7
	baz=6.8						
W51A	Cleveland	135.56	355	P	PKPdf	06 08 04.4	-0.5
	baz=5.6						
W50A	Signal Mountai	135.56	356	P	PKPdf	06 08 04.1	-0.8
	baz=4.8						
W41B	Gary Mavity, V	135.59	4	P	PKPdf	06 08 04.5	-0.5
	baz=355						
W47A	Westpoint	135.62	359	P	PKPdf	06 08 04.2	-0.8
	baz=1.6						
W48A	Pulaski	135.71	358	P	PKPdf	06 08 04.3	-0.9
	baz=2.6						
X55A	Gracelyn & Ava	135.89	352	P	PKPdf	06 08 04.7	-0.8
	baz=10						
X54A	Belton	135.92	352	P	PKPdf	06 08 05.1	-0.5
	baz=9.0						
JSC	Jenkinsville	136.02	351	ePKPdf	PKPdf	06 08 03.6	-2.1
JSC	Jenkinsville	136.02	351	ePKIKP	PKPdf	06 08 03.6	-2.1
X52A	Dahlonega	136.04	354	P	PKPdf	06 08 05.4	-0.5
	baz=6.9						
X53A	Estanollee	136.07	353	P	PKPdf	06 08 05.5	-0.3
	baz=7.7						
MIAR	Mount Ida	136.10	6	P	PKPdf	06 08 05.7	-0.2
	baz=353						
Y57A	Sumter	136.14	350	P	PKPdf	06 08 05.8	-0.2
	baz=12						
BSCB	Bom Sucesso	136.14	249	eP	PKPdf	06 08 06.8	+0.4
X51A	Calhoun	136.16	355	P	PKPdf	06 08 05.3	-0.7
	baz=5.5						
MNTX	Cornudas Mount	136.19	21	P	PKPdf	06 08 05.6	-0.6
	baz=336						
JANB	Januaria	136.25	258	eP	PKPdf	06 08 07.3	+0.6
X49A	Woodville	136.31	357	P	PKPdf	06 08 05.5	-0.8
	baz=3.5						
X46A	Booneville	136.33	360	P	PKPdf	06 08 05.4	-0.9
	baz=0.2						
X47A	Russelville	136.36	359	P	PKPdf	06 08 05.3	-1.1
	baz=1.3						
OXF	Oxford	136.37	1	P	PKPdf	06 08 05.4	-1.0
	baz=359						
X48A	Hartselle	136.40	358	P	PKPdf	06 08 05.5	-1.0
	baz=2.4						
Y54A	Tignall	136.63	353	P	PKPdf	06 08 06.1	-0.8
	baz=8.7						
Y53A	Monroe	136.75	354	P	PKPdf	06 08 06.5	-0.6
	baz=7.4						
Y52A	Lilburn	136.79	354	ePKPdf	PKiKP	06 08 09.1	+0.1
Y52A	Lilburn	136.79	354	P	PKPdf	06 08 06.5	-0.8
	baz=6.7						
Y51A	Rockmart	136.84	356	P	PKPdf	06 08 06.8	-0.6
	baz=5.3						
Y50A	Piedmont	136.89	356	P	PKPdf	06 08 06.9	-0.6
	baz=4.3						
Z57A	Bowman	136.90	350	P	PKPdf	06 08 06.9	-0.5
	baz=12						
Y48A	Jasper	136.94	358	P	PKPdf	06 08 06.1	-1.4
	baz=2.3						
Y49A	Blount Mountai	136.97	357	P	PKPdf	06 08 06.9	-0.6
	baz=3.4						
ABTX	Abilene, Hawle	136.98	14	P	PKPdf	06 08 07.0	-0.7
	baz=344						
GOGA	Godfrey	137.17	353	P	PKPdf	06 08 07.7	-0.3
	baz=7.7						
Z55A	Blythe	137.19	352	P	PKPdf	06 08 07.4	-0.5
	baz=9.6						
Z54A	Sparta	137.27	353	P	PKPdf	06 08 07.4	-0.7
	baz=8.6						
Z52A	Williamson	137.49	355	P	PKPdf	06 08 08.2	-0.4
	baz=6.3						
Z50A	Ashland	137.54	356	P	PKPdf	06 08 08.5	-0.1
	baz=4.1						
Z49A	Columbiana	137.63	357	P	PKPdf	06 08 08.3	-0.5
	baz=3.2						
LRAL	Lakeview Retre	137.81	358	P	PKPdf	06 08 08.5	-0.6
	baz=2.6						
155A	Kite	137.83	352	P	PKPdf	06 08 08.7	-0.4
	baz=9.2						
PMNB	Patos De Minas	138.01	253	eP	PKPdf	06 08 10.1	+0.2
152A	Waverly Hall	138.03	355	P	PKPdf	06 08 09.3	-0.2
	baz=5.9						
SPB	Sao Paulo	138.09	245	eP	PKPdf	06 08 10.5	+0.7
150A	Eclectic	138.19	357	P	PKPdf	06 08 09.0	-0.8
	baz=4.0						
151A	Opelika	138.22	356	P	PKPdf	06 08 09.4	-0.5
	baz=5.0						
149A	Jones	138.24	358	P	PKPdf	06 08 09.3	-0.6
	baz=2.9						
RCLB	Rio Claro- Sao	138.42	247	eP	PKPdf	06 08 10.7	+0.1
253A	Americus	138.58	354	P	PKPdf	06 08 09.8	-0.7
	baz=6.9						
251A	Midway	138.66	356	P	PKPdf	06 08 10.5	-0.2
	baz=5.0						
252A	Lumpkin	138.70	355	P	PKPdf	06 08 10.3	-0.4
	baz=6.0						
249A	Camden	138.87	358	P	PKPdf	06 08 10.2	-0.8
	baz=2.4						
TXAR	Lajitas Array	138.94	20	PKhKP	PKPpre	06 08 05.2	
	comp=Z,0.2nm,0.5s,baz=52,slow=0.7,SNR=5.4						
TXAR				PKP	PKPdf	06 08 11.6	+0.2
	comp=Z,1.5nm,0.6s,baz=252,slow=1.2,SNR=23						
TXAR				PP	PP	06 10 58.1	-3.8
	comp=Z,0.9nm,1.0s,baz=344,slow=2.7,SNR=4.1						
JCT	Junction City	139.00	15	P	PKPdf	06 08 10.6	-0.8
	baz=343						
353A	Camilla	139.29	354	P	PKPdf	06 08 11.0	-0.9
	baz=6.8						
CNLB

SJG	San Juan	144.74	321	ePKPdf	PKPbc	06 08 20.7	-0.1
SJG	San Juan	144.74	321	ePKIKP	PKPbc	06 08 20.7	-0.1
PLCA	Paso Flores	144.82	204	PKP	PKPbc	06 08 20.9	+0.4
comp=Z,21nm,0.8s,baz=174,slow=2.6,SNR=46							
PLCA	Paso Flores	144.82	204	ePKPdf	PKPdf	06 08 21.1	-0.4
PLCA	Paso Flores	144.82	204	ePKIKP	PKPdf	06 08 21.1	-0.4
PLCA	Paso Flores	144.82	204	eP	PKPab	06 08 20.4	0.0
ZAIG	Zacatecas	145.32	23	ePKPbc	PKPdf	06 08 23.8	+0.6
CPUP	Villa Florida	145.79	236	PKPbc	PKPdf	06 08 23.5	+0.1
comp=Z,26nm,0.7s,baz=98,slow=2.8,SNR=36							
CPUP	Villa Florida	145.79	236	eP	PKPdf	06 08 23.1	-0.3
GO06	Curarrehue	146.17	204	ePKPbc	PKPab	06 08 25.6	0.0
AQDB	Aquidauana	146.27	247	eP	PKPdf	06 08 24.3	-0.2
SDDR	Presa de Saban	146.99	329	ePKPbc	PKPbc	06 08 27.7	0.0
CLDB	Colider	147.52	264	eP	PKPdf	06 08 27.0	+0.3
PTGA	Pitinga	150.09	285	ePKPbc	PKPbc	06 08 36.1	+0.2
PTGA	Pitinga	150.09	285	eP	PKPdf	06 08 31.3	+0.4
GO05	Huala	150.19	209	ePKPbc	PKiKP	06 08 36.3	-0.2
TEIG	Tepich	150.60	359	ePKPdf	PKPdf	06 08 33.4	+1.8
TEIG				ePKPbc	pPKPdf	06 08 37.9	-0.6
TEIG				ePKPab	PKPab	06 08 44.3	+0.8
TLIG	Tlapa	151.55	20	ePKPbc	PKPbc	06 08 39.6	+0.2
GO04	Tololo Observa	153.35	217	ePKPbc	PKPbc	06 08 43.1	-0.2
LVC	Limon Verde	156.85	233	eP	PKPdf	06 08 41.4	+0.6
LPAZ	La Paz	158.75	249	PKP	PKPdf	06 08 43.8	+0.2
comp=Z,3.2nm,0.9s,baz=82,slow=1.2,SNR=10							
LPAZ				PKPab	PKPab	06 09 19.1	-0.1
comp=Z,7.6nm,0.9s,baz=130,slow=2.8,SNR=9.6							
LPAZ	La Paz	158.75	249	ePKPdf	PKPdf	06 08 42.3	-1.3
LPAZ	La Paz	158.75	249	ePKIKP	PKPdf	06 08 42.3	-1.3
LPAZ	La Paz	158.75	249	eP	PKPdf	06 08 43.9	+0.2
ROSC	El Rosal	159.85	314	PKP	PKPdf	06 08 44.9	+0.2
comp=Z,3.1nm,0.7s,baz=47,slow=22,SNR=5.0							
ROSC				PKPab	PKPab	06 09 23.9	+0.1
comp=Z,4.5nm,0.8s,baz=345,slow=22,SNR=4.5							
OTAV	Otavalo	165.99	312	eP	PKPdf	06 08 51.9	+1.1

*ISCJB **26** 05:53:37.5±0.3, 24°.85N±0°.01×122°.08E±0°.02, h11km±2km,*
Error ellipse: s-maj=2.5km s-min=2.3km az=18.9
*TAP **26** 05:53:37.4, 24°.84N×122°.02E, h10km, ML3.2, B*
*JMA **26** 05:53:38.0, 24°.86N×122°.01E, h36km, M2.6*

ISC 26 05:53:37.6±0.8, 24°.85N±0°.02×122°.06E±0°.02, h12km±5km, n78, σ0.945/139, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.12	266	*i* P	Pg	05 53 40.3	-0.4
baz=275							
EGS				*i* S	Sg	05 53 42.4	-0.6
baz=275							
TWB1	Santiao Chiao	0.17	336	*i* P	Pg	05 53 41.5	0.0
baz=352							
TWB1				*i* S	Sg	05 53 44.6	+0.4
baz=352							
NTC	Toucheng	0.21	270	P	Pg	05 53 42.1	-0.1
baz=275							
NTC				*i* S	Sg	05 53 45.3	0.0
baz=275							
TIPB	Shuangxi	0.25	299	*i* P	Pg	05 53 43.0	+0.2
baz=307							
TIPB				*i* S	Sg	05 53 46.7	+0.4
baz=307							
ILA	Ilan	0.30	253	*e*P	Pg	05 53 43.3	-0.5
baz=253							
ILA				*e*S	Sg	05 53 48.4	+0.5
baz=253							
EOS1	EOS1	0.31	169	*e*P	Pg	05 53 44.4	+0.5
baz=161							
EOS1				*e*S	Sb	05 53 50.2	+0.3
baz=161							
TWC	Suao	0.31	219	*e*P	Pg	05 53 43.8	-0.2
baz=213							
TWC				*e*S	Sg	05 53 48.3	+0.1
baz=213							
NWF	Wu-fen Shan	0.34	310	*i* P	Pg	05 53 44.9	+0.4
baz=317							
NWF				*i* S	Sb	05 53 50.4	-0.6
baz=317							
WFSB	Wu-fen Shan	0.34	310	P	Pg	05 53 45.0	+0.6
baz=317							
WFSB				*i* S	Sb	05 53 50.2	-0.7
baz=317							
TWE	Neicheng	0.38	250	P	Pg	05 53 45.0	-0.2
baz=249							
TWE				S	Sg	05 53 50.0	-0.4
baz=249							
ENTT	Nioudou	0.50	245	*e*P	Pg	05 53 47.4	-0.1
baz=244							
ENTT				*e*S	Sg	05 53 54.5	+0.5
baz=244							
NHDH	Xindian Distri	0.50	283	*e*P	Pb	05 53 48.0	-0.3
baz=285							
NHDH				*e*S	Sg	05 53 54.5	+0.4
baz=285							
NANB	Nanao	0.51	214	P	Pg	05 53 47.2	-0.5
baz=211							
NANB				S	Sg	05 53 54.3	-0.1
baz=211							
ENA	Nanau	0.51	215	P	Pg	05 53 47.8	+0.1
baz=211							
ENA				S	Sg	05 53 54.6	+0.1
baz=211							
NWLT	Wulai	0.52	262	*e*P	Pg	05 53 47.5	-0.2
baz=262							
NWLT				*e*S	Sg	05 53 54.4	-0.2
baz=262							
YM01	YM01	0.53	303	P	Pb	05 53 49.0	0.0
baz=307							
YM01				S	Sb	05 53 56.1	-0.5
baz=307							
TATO	Taipei	0.54	283	*e*P	Pg	05 53 48.0	-0.1
baz=286							
TATO				*e*S	Sg	05 53 55.4	+0.2
baz=286							
TAP	Taipei	0.54	290	*e*S	Sb	05 53 56.7	+0.1
baz=293							
YM08	YM08	0.54	308	P	Pb	05 53 48.9	-0.2
baz=311							
YM10	YM10	0.55	304	*e*P	Pb	05 53 49.2	0.0
baz=307							
YM05	YM05	0.55	305	P	Pb	05 53 49.1	0.0
baz=308							
YM04	YM04	0.56	302	*e*P	Pg	05 53 49.1	+0.5
baz=305							
YM04				*e*S	Sg	05 53 56.5	+0.3
baz=305							
YM03	YM03	0.57	305	*e*P	Pb	05 53 49.6	0.0
baz=308							
ANP	Anpu	0.59	304	*e*P	Pb	05 53 50.0	0.0
baz=307							
ANP				*e*S	Sg	05 53 57.2	+0.1
baz=307							
TWY	Chenhua	0.59	315	*e*P	Pb	05 53 50.2	+0.2
baz=319							
TWY				*e*S	Sg	05 53 57.4	+0.3
baz=319							
TWS1	Kuangyinshan	0.64	293	*e*P	Pb	05 53 50.5	-0.1
baz=295							
TWS1				*e*S	Sb	05 53 59.7	+0.2
baz=295							
NTST	Danshui	0.64	299	*e*P	Pb	05 53 50.8	+0.1
baz=302							
NTST				*e*S	Sb	05 53 59.1	-0.4
baz=302							
YHNB	Yeheng	0.65	254	P	Pg	05 53 49.7	-0.6
baz=254							
YHNB				*e*S	Sg	05 53 58.7	-0.2
baz=254							
NSK	Sanguang	0.66	255	*e*P	Pg	05 53 50.0	-0.6
baz=254							
NSK				*e*S	Sb	05 53 59.8	-0.5
baz=254							
NNSB	Datong	0.75	236	*e*P	Pg	05 53 51.8	-0.4
baz=235							
NNSB				*e*S	Sg	05 54 01.5	-0.5
baz=235							
NNS	Nan Shan	0.75	237	*e*P	Pg	05 53 52.1	-0.1
baz=235							
NNS				*e*S	Sg	05 54 01.8	-0.2
baz=235							
PCYT	Pengchaiyu	0.77	1	*e*P	Pg	05 53 52.6	0.0
baz=3.0							
NACB	Ninganchiao	0.80	212	P	Pg	05 53 53.0	-0.1
baz=210							
NACB				S	Sg	05 54 03.2	-0.3
baz=210							
NCU	National Centr	0.80	279	*e*S	Sb	05 54 04.4	+0.1
baz=279							
NCUH	Zhongli	0.81	278	*e*S	Sb	05 54 04.0	-0.4
baz=279							
ETLH	Xiulin Townshi	0.83	220	*e*P	Pg	05 53 53.5	-0.2
baz=218							
ETLH				*e*S	Sg	05 54 04.8	+0.1
baz=218							
TWD	Chiawan	0.88	209	P	Pg	05 53 54.4	-0.2
baz=206							
TWD				S	Sg	05 54 05.7	-0.4
baz=206							
JYNG	Yonagunijimaku	0.90	116	P	Pg	05 53 55.1	+0.2
JYNG				*e*S	Sb	05 54 07.7	+0.7
YOJ	Yonaguni jima	0.95	114	*e*P	Pg	05 53 55.8	-0.1
baz=112							
YOJ				*e*S	Sb	05 54 09.9	+1.5
baz=112							
YOJ	Yonaguni jima	0.95	114	P	Pg	05 53 55.5	-0.4
YOJ				S	Sg	05 54 08.9	+0.7
LIOB	Emei	0.97	258	*e*S	Sg	05 54 08.7	-0.4
baz=258							
SBCB	Hsinchu	0.98	267	*e*S	Sb	05 54 10.1	+0.7
baz=267							
NSTT	Nanjuang	0.99	257	*e*P	Pg	05 53 55.5	-1.3
baz=257							
NSTT				*e*S	Sb	05 54 09.6	-0.1
baz=257							
TWT	Tachien	1.00	234	*e*P	Pg	05 53 57.0	0.0
baz=233							
TWT				*e*S	Sb	05 54 10.8	+0.5
baz=233							
WHF	Hehuan Shan	1.01	226	*e*P	Pb	05 53 57.4	+0.1
baz=224							
WHF				*e*S	Sg	05 54 10.2	-0.3
baz=224							
TDCB	Techi	1.02	234	*e*P	Pg	05 53 56.7	-0.6
baz=233							
TDCB				*e*S	Sb	05 54 10.6	0.0
baz=233							
ENLB	Shoufeng	1.03	204	*e*S	Sb	05 54 11.7	+0.7
baz=202							
CHGB	Renai	1.13	226	*e*P	Pg	05 53 58.9	-0.6
baz=224							
CHGB				*e*S	Sb	05 54 14.6	+0.7
baz=224							
WHP	Taichung City	1.17	241	*e*P	Pn	05 54 00.1	+0.3
baz=240							
WHP				*e*S	Sg	05 54 15.1	-0.2
baz=240							
ESL	Shilin	1.18	209	*e*P	Pb	05 53 59.5	-0.5
baz=207							
ESL				*e*S	Sg	05 54 15.7	-0.1
baz=207							
NMLH	Miaoli	1.20	255	*e*P	Pn	05 54 00.5	+0.4
baz=255							
NMLH				*e*S	Sg	05 54 15.9	-0.4
baz=255							
OWD	Renai	1.21	222	*e*P	Pb	05 54 00.4	0.0
baz=221							
OWD				*e*S	Sg	05 54 16.7	+0.1
baz=221							
TWQ1	Liyutan	1.28	247	*e*P	Pb	05 54 01.7	+0.1
baz=246							
TWQ1				*e*S	Sb	05 54 18.1	+0.1
baz=246							
EGFH	Guangfu	1.31	206	*e*P	Pn	05 54 01.8	0.0
baz=205							
EGFH				*e*S	Sn	05 54 19.4	+0.3
baz=205							
DPDB	Guoxing	1.32	232	*e*S	Sb	05 54 19.1	-0.1
baz=231							
VWDT	VWDT	1.38	218	*e*P	Pn	05 54 03.0	+0.4
baz=216							
VWDT				*e*S	Sn	05 54 21.4	+0.6
baz=216							
SMLT	Sun Moon Lake	1.43	228	*e*P	Pn	05 54 03.7	+0.2
baz=226							
SMLT				*e*S	Sn	05 54 22.2	-0.1
baz=226							
TYC	Yuchr	1.45	230	*e*P	Pn	05 54 03.7	+0.1
baz=228							
TYC				*e*S	Sn	05 54 22.6	+0.1
baz=228							
SSLB	Suanglung	1.47	224	*e*P	Pn	05 54 03.9	0.0
baz=223							
SSLB				*e*S	Sn	05 54 23.3	+0.3
baz=223							
HGSD	Ruisui	1.48	203	*e*P	Pn	05 54 04.3	+0.3
baz=202							
HGSD				*e*S	Sn	05 54 23.4	+0.3
baz=202							
EHY	Hungye	1.50	207	*e*P	Pn	05 54 04.8	+0.5
baz=205							
WJS	Zhushan	1.59	230	*e*S	Sn	05 54 26.6	+0.5
baz=229							
IRIF	Iriomote-Funau	1.60	108	P	Pn	05 54 04.9	-0.8
IRIF				*e*S	Sn	05 54 25.4	-0.9
YULB	Yu-li	1.61	206	*e*P	Pn	05 54 06.0	+0.1
baz=204							
YULB				*e*S	Sn	05 54 26.7	+0.1
baz=204							
TWF1	Yuli	1.65	205	*e*P	Pn	05 54 07.0	+0.6
baz=203							
TWF1				*e*S	Sn	05 54 27.7	+0.2
baz=203							
YUS	Yu-Shan	1.69	217	*e*P	Pn	05 54 07.2	-0.2
baz=216							
YUS				*e*S	Sn	05 54 29.3	0.0
baz=216							
ALS	Alishan	1.76	221	*e*P	Pn	05 54 08.5	+0.3
baz=219							
ALS				*e*S	Sn	05 54 30.4	-0.3
baz=219							
CHN5	Tsauling	1.78	226	*e*P	Pn	05 54 08.5	+0.3
baz=224							
CHN5				*e*S	Sn	05 54 30.8	0.0
baz=224							
JKRS	Kuro-shima	1.88	109	P	Pn	05 54 09.2	-0.3
JKRS				S	Sn	05 54 32.1	-0.9
JIJ	Ishigaki jima	1.96	104	P	Pn	05 54 10.8	+0.2
JIJ				S	Sn	05 54 34.5	-0.5
CHN4	Tsaushan	2.01	222	*e*P	Pn	05 54 11.6	+0.3
baz=221							
CHN4				*e*S	Sn	05 54 37.2	+0.8
baz=221							
TPUB	Ta-pu	2.03	221	*e*P	Pn	05 54 12.3	+0.7
baz=219							
TPUB				*e*S	Sn	05 54 37.5	+0.7
baz=219							
JISG	Ishigakijimahi	2.06	97	P	Pn	05 54 10.2	-1.8
WTP	Ta-pu	2.08	220	*e*P	Pn	05 54 13.0	+0.7
baz=218							
WTP				*e*S	Sn	05 54 38.0	-0.1
baz=218							
TWK	Hsinying	2.14	223	*e*P	Pn	05 54 13.4	+0.3
baz=221							
TWK				*e*S	Sn	05 54 39.4	-0.2
baz=221							
CHN1	Nanshi	2.17	221	*e*P	Pn	05 54 14.3	+0.7
baz=219							
CHN1				*e*S	Sn	05 54 40.8	+0.4
baz=219							
SGST	Jiashian	2.22	218	*e*P	Pn	05 54 15.1	+0.8
baz=216							
LYJJ	Jianjiangzhen	2.68	310	*e*S	Sn	05 54 53.4	+0.6
baz=309							

*ISCJB **26** 05:57:27.2±0.3, 24°.85N±0°.01×122°.08E±0°.01, h10km±1km,*
Error ellipse: s-maj=2.3km s-min=2.1km az=12.8
*JMA **26** 05:57:27.8±0.1, 24°.84N×122°.02E, h28km, M3.0*
*TAP **26** 05:57:27.1, 24°.84N×122°.02E, h8km, ML3.5, B*

ISC 26 05:57:26.6±0.9, 24°.86N±0°.02×122°.12E±0°.02, h11km±6km, n92, σ0.955/170, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.17	265	P	Pg	05 57 30.0	-0.3
baz=274							
EGS				S	Sg	05 57 32.3	-0.6
baz=274							
TWB1	Santiao Chiao	0.19	322	*i* P	Pg	05 57 31.2	+0.6
baz=352							
TWB1				*i* S	Sg	05 57 34.2	+0.8
baz=352							
NTC	Toucheng	0.26	269	P	Pg	05 57 31.8	-0.1
baz=275							
NTC				*e*S	Sg	05 57 35.1	-0.4
baz=275							
TIPB	Shuangxi	0.29	293	⇑ *i* P	Pg	05 57 32.6	+0.2
baz=307							
TIPB				*i* S	Sg	05 57 36.2	-0.1
baz=307							
EOS1	EOS1	0.31	178	*e*P	Pb	05 57 34.0	-0.1
baz=161							
EOS1				*e*S	Sb	05 57 39.5	+0.4
baz=161							
ILA	Ilan	0.35	254	*e*P	Pg	05 57 33.6	+0.1
baz=253							
ILA				*e*S	Sg	05 57 38.3	+0.2
baz=253							
TWC	Suao	0.35	224	*e*P	Pg	05 57 33.1	-0.4
baz=212							
TWC				*e*S	Sg	05 57 38.0	-0.1
baz=212							
NWF	Wu-fen Shan	0.37	305	P	Pb	05 57 34.6	-0.6
baz=317							
NWF				S	Sb	05 57 39.8	-1.2
baz=317							
WFSB	Wu-fen Shan	0.37	305	*i* P	Pb	05 57 34.6	-0.5
baz=317							
WFSB				S	Sb	05 57 39.8	-1.1
baz=317							
NANB	Nanao	0.54	218	*e*P	Pg	05 57 37.2	0.0
baz=211							
NANB				*e*S	Sg	05 57 44.5	+0.2
baz=211							
ENTT	Nioudou	0.55	246	*e*P	Pg	05 57 36.9	-0.3
baz=244							
ENTT				*e*S	Sg	05 57 43.7	-0.7
baz=244							
NHDH	Xindian Distri	0.55	281	*e*P	Pg	05 57 36.9	-0.3
baz=285							
NHDH				*e*S	Sg	05 57 44.0	-0.4
baz=285							
ENA	Nanau	0.55	218	*e*P	Pg	05 57 37.4	+0.1
baz=211							
ENA				*e*S	Sg	05 57 44.9	+0.4
baz=211							
NWLT	Wulai	0.56	262	*e*P	Pg	05 57 37.1	-0.4
baz=262							
NWLT				*e*S	Sg	05 57 44.1	-0.9
baz=262							
YM01	YM01	0.57	300	P	Pb	05 57 38.6	0.0
baz=307							
YM08	YM08	0.58	305	P	Pb	05 57 38.4	-0.3
baz=311							
TAP	Taipei	0.58	288	*e*P	Pb	05 57 38.5	-0.3
baz=293							
TAP				*e*S	Sg	05 57 46.4	+0.8
baz=293							
TATO	Taipei	0.58	282	*e*P	Pg	05 57 37.6	-0.2
baz=285							
TATO				*e*S	Sg	05 57 45.6	0.0
baz=285							
YM10	YM10	0.58	300	P	Pb	05 57 38.9	0.0
baz=307							
YM05	YM05	0.58	301	P	Pb	05 57 38.8	0.0
baz=308							
YM05				*e*S	Sb	05 57 46.9	-0.3
baz=308							
YM04	YM04	0.60	299	P	Pb	05 57 39.0	-0.1
baz=305							
YM04				*e*S	Sg	05 57 46.2	0.0
baz=305							
YM03	YM03	0.61	301	*e*P	Pb	05 57 38.7	-0.6
baz=307							
YM03				*e*S	Sb	05 57 47.4	-0.6
baz=307							
ANP	Anpu	0.63	301	*e*P	Pb	05 57 39.6	-0.1
baz=307							
ANP				*e*S	Sb	05 57 47.8	-0.8
baz=307							
NTST	Danshui	0.68	297	*e*P	Pb	05 57 40.5	+0.1
baz=302							
TWS1	Kuangyinshan	0.68	291	*e*P	Pb	05 57 40.1	-0.3
baz=295							
TWS1				*e*S	Sg	05 57 48.8	+0.2
baz=295							
YHNB	Yeheng	0.70	254	*i* P	Pg	05 57 39.5	-0.6
baz=254							
YHNB				S	Sg	05 57 48.8	-0.4
baz=254							
NSK	Sanguang	0.71	255	P	Pg	05 57 39.5	-0.9
baz=254							
NSK				S	Sg	05 57 49.1	-0.6
baz=254							
PCYT	Pengchaiyu	0.77	357	*e*P	Pn	05 57 43.3	-0.1
baz=3.0							
PCYT				*e*S	Sn	05 57 55.3	+0.4
baz=3.0							
WLTB	Daxi	0.78	270	*e*P	Pg	05 57 41.5	-0.2
baz=271							
WLTB				*e*S	Sg	05 57 51.9	-0.1
baz=271							
NNSB	Datong	0.79	237	*e*P	Pg	05 57 41.5	-0.4
baz=234							
NNSB				*e*S	Sg	05 57 52.9	+0.6
baz=234							
NNS	Nan Shan	0.79	238	*e*P	Pg	05 57 41.5	-0.4
baz=235							
NNS				*e*S	Sg	05 57 52.6	+0.2
baz=235							
NACB	Ninganchiao	0.83	215	P	Pg	05 57 42.5	-0.1
baz=210							
NACB				S	Sg	05 57 53.5	0.0
baz=210							
NCU	National Centr	0.85	278	*e*P	Pg	05 57 42.7	-0.2
baz=279							
NCU				*e*S	Sg	05 57 54.4	+0.3
baz=279							
NCUH	Zhongli	0.85	277	*e*P	Pg	05 57 43.0	0.0
baz=279							
NCUH				*e*S	Sg	05 57 54.4	+0.3
baz=279							
JYNG	Yonagunijimaku	0.86	118	P	Pn	05 57 44.7	+0.1
JYNG				S	Sn	05 57 57.4	+0.3
ETLH	Xiulin Townshi	0.87	222	*e*P	Pg	05 57 43.1	-0.2
baz=218							
ETLH				*e*S	Sg	05 57 54.2	-0.5
baz=218							
YOJ	Yonaguni jima	0.91	116	P	Pn	05 57 46.3	+1.1
baz=112							
YOJ				*e*S	Sn	05 57 59.9	+1.6
baz=112							
YOJ	Yonaguni jima	0.91	116	P	Pn	05 57 45.2	0.0
YOJ				*e*S	Sn	05 57 58.3	0.0
TWD	Chiawan	0.91	211	*e*P	Pg	05 57 44.2	+0.2
baz=206							
TWD				*e*S	Sg	05 57 56.0	+0.1
baz=206							
HWA	Hwalien	0.99	208	*e*S	Sg	05 57 59.0	+0.4
baz=203							
LIOB	Emei	1.02	258	*e*P	Pg	05 57 46.3	+0.1
baz=258							
LIOB				*e*S	Sg	05 57 59.5	-0.1
baz=258							
SBCB	Hsinchu	1.03	266	*e*P	Pg	05 57 46.4	0.0
baz=267							
SBCB				*e*S	Sg	05 58 00.1	+0.3
baz=267							
NSTT	Nanjuang	1.04	258	*e*P	Pg	05 57 46.5	0.0
baz=257							
NSTT				*e*S	Sg	05 57 59.7	-0.4
baz=257							
HSN	Hsinchu	1.04	267	*e*S	Sg	05 57 58.9	-1.3
baz=269							
TWT	Tachien	1.05	235	*e*P	Pg	05 57 46.4	-0.3
baz=233							
TWT				*e*S	Sg	05 58 00.6	+0.2
baz=233							
WHF	Hehuan Shan	1.05	228	*e*P	Pg	05 57 46.8	-0.1
baz=224							
WHF				*e*S	Sg	05 58 00.5	-0.1
baz=224							
TDCB	Techi	1.06	235	*e*P	Pg	05 57 46.5	-0.5
baz=233							
TDCB				*e*S	Sg	05 58 00.8	0.0
baz=233							
ENLB	Shoufeng	1.06	206	*e*P	Pg	05 57 46.5	-0.4
baz=202							
ENLB				*e*S	Sb	05 58 01.8	+1.0
baz=202							
CHGB	Renai	1.17	227	*e*P	Pb	05 57 48.7	-0.2

CHGB	baz=224		eS	Sb	05 58 04.0	-0.2
WHP	**Taichung City** baz=240	**1.21 242**	eP	Pn	05 57 49.7	+0.1
WHP	baz=240		eS	Sb	05 58 05.0	-0.3
ESL	**Shilin** baz=207	**1.21 211**	eP	Pn	05 57 49.1	-0.4
ESL	baz=207		eS	Sg	05 58 06.3	+0.6
OWD	**Renai** baz=221	**1.24 224**	eP	Pn	05 57 49.8	-0.3
OWD	baz=221		eS	Sb	05 58 05.6	-0.6
NMLH	**Miaoli** baz=255	**1.25 255**	eP	Pn	05 57 49.8	-0.1
NMLH	baz=255		eS	Sb	05 58 06.6	+0.4
NSY	**Sanyi** baz=249	**1.31 251**	eP	Pn	05 57 50.8	0.0
NSY	baz=249		eS	Sb	05 58 07.9	-0.1
TWQ1	**Liyutan** baz=246	**1.32 248**	eP	Pb	05 57 51.6	+0.2
TWQ1	baz=246		eS	Sb	05 58 08.7	+0.3
EGFH	**Guangfu** baz=204	**1.34 208**	eP	Pn	05 57 51.6	+0.4
EGFH	baz=204		eS	Sb	05 58 09.3	+0.4
PTSB	**Yuanli** baz=252	**1.35 253**	eP	Pn	05 57 51.5	+0.1
PTSB	baz=252		eS	Sb	05 58 09.1	0.0
DPDB	**Guoxing** baz=231	**1.36 233**	eP	Pn	05 57 52.1	+0.5
DPDB	baz=231		eS	Sb	05 58 09.8	+0.3
VWDT	**VWDT** baz=216	**1.42 219**	eP	Pb	05 57 53.1	+0.1
VWDT	baz=216		eS	Sn	05 58 11.6	+0.7
WDJ	**Dajia District** baz=248	**1.44 250**	eP	Pn	05 57 52.6	0.0
WDJ	baz=248		eS	Sn	05 58 11.0	-0.5
SMLT	**Sun Moon Lake** baz=226	**1.48 229**	eP	Pn	05 57 53.4	+0.2
SMLT	baz=226		eS	Sn	05 58 12.0	-0.5
TYC	**Yuchr** baz=228	**1.49 231**	eP	Pn	05 57 53.5	+0.3
TYC	baz=228		eS	Sn	05 58 12.4	-0.3
HGSD	**Ruisui** baz=202	**1.50 205**	eP	Pn	05 57 54.2	+0.8
HGSD	baz=202		eS	Sn	05 58 14.0	+1.0
SSLB	**Suanglung** baz=222	**1.50 225**	eP	Pn	05 57 53.9	+0.3
SSLB	baz=222		eS	Sn	05 58 12.9	-0.3
EHY	**Hungye** baz=205	**1.53 208**	eP	Pn	05 57 54.2	+0.4
IRIF	**Iriomote-Funau**	**1.56 109**	P	Pb	05 57 54.6	-0.8
IRIF			eS	Sb	05 58 15.1	-0.1
WHYT	**Xinyi Township** baz=223	**1.63 225**	eP	Pn	05 57 55.3	0.0
WHYT	baz=223		eS	Sn	05 58 16.4	+0.1
WJS	**Zhushan** baz=229	**1.63 231**	eP	Pn	05 57 56.0	+0.7
WJS	baz=229		eS	Sn	05 58 16.0	-0.4
YULB	**Yu-li** baz=204	**1.64 207**	eP	Pn	05 57 56.3	+0.9
YULB	baz=204		eS	Sn	05 58 17.4	+0.9
TWF1	**Yuli** baz=203	**1.68 207**	eP	Pn	05 57 56.3	+0.4
TWF1	baz=203		eS	Sn	05 58 18.2	+0.8
YUS	**Yu-Shan** baz=215	**1.73 218**	eP	Pn	05 57 57.6	+0.6
YUS	baz=215		eS	Sn	05 58 19.0	-0.3
HATJ	**Hateruma jima**	**1.73 117**	P	Pb	05 57 57.6	-0.8
HATJ			eS	Sb	05 58 19.2	-1.0
ALS	**Alishan** baz=219	**1.80 222**	eP	Pn	05 57 58.5	+0.7
ALS	baz=219		eS	Sn	05 58 20.4	-0.4
CHN5	**Tsauling** baz=224	**1.82 227**	eP	Pn	05 57 58.7	+0.8
CHN5	baz=224		eS	Sn	05 58 21.1	+0.2
JKRS	**Kuro-shima**	**1.83 109**	P	Pb	05 57 59.1	-1.0
JKRS			eS	Sb	05 58 22.0	-1.1
WDLH	**Douliu** baz=229	**1.85 231**	eS	Sn	05 58 21.1	-0.6
JIJ	**Ishigaki jima**	**1.91 105**	P	Pb	05 58 00.4	-1.0
JIJ			eS	Sb	05 58 25.2	-0.1
JISG	**Ishigakijimahi**	**2.02 97**	P	Pb	05 58 03.0	-0.2
CHN4	**Tsaushan** baz=221	**2.05 223**	eP	Pn	05 58 02.1	+1.1
CHN4	baz=221		eS	Sn	05 58 27.1	+0.6
CHY	**Chiayi** baz=227	**2.06 229**	eS	Sn	05 58 25.6	-1.1
TPUB	**Ta-pu** baz=219	**2.06 221**	eP	Pn	05 58 02.1	+0.9
TPUB	baz=219		eS	Sn	05 58 27.1	+0.2
STYT	**Tauyuan** baz=214	**2.10 217**	eS	Sn	05 58 28.4	+0.5
WSF	**Szhu** baz=233	**2.11 235**	eP	Pn	05 58 02.4	+0.6
WTP	**Ta-pu** baz=218	**2.11 221**	eP	Pn	05 58 03.2	+1.3
WTP	baz=218		eS	Sn	05 58 28.4	+0.2
TWK	**Hsinying** baz=221	**2.17 223**	eP	Pn	05 58 03.4	+0.6
TWK	baz=221		eS	Sn	05 58 30.3	+0.6
SNST	**Tainan City** baz=220	**2.20 223**	eS	Sn	05 58 30.0	-0.4
CHN1	**Nanshi** baz=219	**2.21 221**	eP	Pn	05 58 03.4	+0.1
CHN1	baz=219		eS	Sn	05 58 30.3	-0.3
SGST	**Jiashian** baz=216	**2.26 219**	eS	Sn	05 58 31.0	-0.8
SLGT	**Liugui** baz=214	**2.29 216**	eP	Pn	05 58 05.5	+1.1
SLGT	baz=214		eS	Sn	05 58 32.4	-0.2
MASBT	**Mashibuluo** baz=209	**2.62 212**	eP	Pn	05 58 09.0	+0.2
MASBT	baz=209		eS	Sn	05 58 40.8	+0.2
XPSS	**Dashiqiu** baz=321	**2.69 320**	eP	Pn	05 58 11.1	+1.3
XPSS	baz=321		eS	Sn	05 58 43.5	+1.1
LYJJ	**Jianjiangzhen** baz=309	**2.71 309**	eP	Pn	05 58 10.8	+0.7
LYJJ	baz=309		eS	Sn	05 58 43.9	+1.0

TAP ***26*** *05:59:17.9, 24°.84N×122°.02E, h10km, ML3.0, B*
ISCJB ***26*** *05:59:18.2±0.3, 24°.84N±0°.02×122°.06E±0°.02, h11km±2km,*
Error ellipse: s-maj=2.7km s-min=2.4km az=141.5
JMA ***26*** *05:59:18.8, 24°.84N×122°.01E, h31km, M2.4*

ISC 26 05:59:17.9±0.9, 24°.84N±0°.02×122°.07E±0°.03, h13km±6km, n60, σ0s.41/108, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS	baz=275	**0.12 272**		*i* P	**Pg**	05 59 20.8	-0.4
EGS	baz=275			S	**Sg**	05 59 22.6	-0.8
TWB1	**Santiao Chiao** baz=351	**0.18 336**		*i* P	**Pg**	05 59 22.1	+0.1
TWB1	baz=351			*i* S	**Sg**	05 59 25.1	+0.2
NTC	**Toucheng** baz=276	**0.22 273**		*i* P	**Pg**	05 59 22.6	0.0
NTC	baz=276			S	**Sg**	05 59 26.4	+0.6
TIPB	**Shuangxi** baz=306	**0.26 300**		*i* P	**Pg**	05 59 23.5	+0.1
TIPB	baz=306			*i* S	**Sg**	05 59 27.1	+0.1
EOS1	**EOS1** baz=161	**0.30 169**		P	**Pb**	05 59 24.9	-0.1
EOS1	baz=161			eS	**Sb**	05 59 30.1	+0.3
ILA	**Ilan** baz=253	**0.30 255**		eP	**Pb**	05 59 24.8	-0.3
ILA	baz=253			eS	**Sg**	05 59 28.9	+0.7
TWC	**Suao** baz=213	**0.31 221**		eP	**Pg**	05 59 24.0	-0.2
TWC	baz=213			eS	**Sg**	05 59 28.7	+0.3
NWF	**Wu-fen Shan** baz=316	**0.35 311**		P	**Pb**	05 59 25.5	-0.5
NWF	baz=316			*i* S	**Sb**	05 59 30.8	-0.6
WFSB	**Wu-fen Shan** baz=316	**0.35 311**		P	**Pb**	05 59 25.5	-0.4
WFSB	baz=316			*i* S	**Sb**	05 59 30.8	-0.6
ENTT	**Nioudou** baz=244	**0.50 246**		P	**Pb**	05 59 28.0	-0.6
ENTT	baz=244			eS	**Sb**	05 59 35.1	-0.6
NANB	**Nanao** baz=211	**0.50 215**		eP	**Pb**	05 59 27.9	-0.7
NANB	baz=211			eS	**Sb**	05 59 35.0	-0.8
ENA	**Nanau** baz=211	**0.51 216**		eP	**Pb**	05 59 28.2	-0.4
ENA	baz=211			eS	**Sg**	05 59 35.1	+0.5
NHDH	**Xindian Distri** baz=285	**0.51 284**		eP	**Pg**	05 59 28.0	+0.1
NHDH	baz=285			S	**Sg**	05 59 35.2	+0.5
NWLT	**Wulai** baz=262	**0.52 263**		P	**Pg**	05 59 28.0	-0.1
NWLT	baz=262			eS	**Sg**	05 59 34.9	-0.1
TATO	**Taipei** baz=286	**0.54 284**		eP	**Pg**	05 59 28.4	-0.1
TATO	baz=286			eS	**Sg**	05 59 36.1	+0.3
YM01	**YM01** baz=306	**0.55 304**		P	**Pb**	05 59 29.5	+0.2
YM01	baz=306			eS	**Sb**	05 59 36.7	-0.4
TAP	**Taipei** baz=293	**0.55 291**		eP	**Pb**	05 59 28.9	-0.4
TAP	baz=293			eS	**Sb**	05 59 36.7	-0.4
YM08	**YM08** baz=311	**0.55 309**		eP	**Pb**	05 59 29.3	-0.2
YM10	**YM10** baz=307	**0.56 304**		eP	**Pb**	05 59 29.3	-0.2
YM10	baz=307			eS	**Sb**	05 59 37.3	-0.2
YM05	**YM05** baz=308	**0.56 305**		P	**Pb**	05 59 29.7	+0.1
YM05	baz=308			eS	**Sb**	05 59 37.3	-0.2
YM04	**YM04** baz=305	**0.57 303**		eP	**Pb**	05 59 29.8	0.0
YM04	baz=305			eS	**Sb**	05 59 37.8	-0.2
YM03	**YM03** baz=307	**0.59 305**		eP	**Pb**	05 59 29.9	-0.2
YM03	baz=307			eS	**Sb**	05 59 38.3	0.0
ANP	**Anpu** baz=307	**0.60 305**		eP	**Pg**	05 59 29.4	-0.4
ANP	baz=307			eS	**Sg**	05 59 37.7	-0.1
TWS1	**Kuangyinshan** baz=295	**0.64 294**		eP	**Pb**	05 59 31.1	+0.1
TWS1	baz=295			eS	**Sb**	05 59 39.7	-0.2
YHNB	**Yeheng** baz=254	**0.65 255**		*i* P	**Pg**	05 59 30.4	-0.3
YHNB	baz=254			S	**Sg**	05 59 39.2	-0.1
NSK	**Sanguang** baz=254	**0.67 256**		eP	**Pg**	05 59 30.0	-0.9
NSK	baz=254			eS	**Sg**	05 59 39.0	-0.7
NNSB	**Datong** baz=235	**0.75 237**		P	**Pb**	05 59 32.4	-0.4
NNSB	baz=235			eS	**Sb**	05 59 42.9	-0.1
NNS	**Nan Shan** baz=235	**0.75 238**		eP	**Pg**	05 59 31.9	-0.6
NNS	baz=235			eS	**Sg**	05 59 42.4	+0.1
PCYT	**Pengchaiyu** baz=3.0	**0.78 0**		eP	**Pb**	05 59 33.7	+0.3
NACB	**Ninganchiao** baz=210	**0.79 213**		P	**Pb**	05 59 33.3	-0.3
NACB	baz=210			eS	**Sg**	05 59 43.5	-0.1
ETLH	**Xiulin Townshi** baz=218	**0.83 220**		eP	**Pg**	05 59 33.7	-0.2
ETLH	baz=218			eS	**Sb**	05 59 45.5	+0.2
TWD	**Chiawan** baz=206	**0.87 210**		P	**Pb**	05 59 34.8	-0.1
TWD	baz=206			S	**Sg**	05 59 46.0	-0.1
JYNG	**Yonagunijimaku**	**0.89 116**		P	**Pn**	05 59 35.7	-0.4
JYNG				S	**Sn**	05 59 48.2	-0.6
YOJ	**Yonaguni jima** baz=112	**0.94 114**		P	**Pn**	05 59 36.8	+0.1
YOJ	baz=112			S	**Sn**	05 59 50.2	+0.2
YOJ	**Yonaguni jima**	**0.94 114**		P	**Pn**	05 59 36.4	-0.3
YOJ				S	**Sn**	05 59 49.4	-0.6
LIOB	**Emei** baz=258	**0.98 259**		eS	**Sb**	05 59 50.1	+0.6
NSTT	**Nanjuang** baz=257	**0.99 258**		eP	**Pg**	05 59 36.5	-0.5
NSTT	baz=257			eS	**Sg**	05 59 49.9	-0.2
WHF	**Hehuan Shan** baz=224	**1.01 227**		eP	**Pb**	05 59 37.6	+0.1
WHF	baz=224			eS	**Sb**	05 59 50.7	-0.1
TDCB	**Techi** baz=233	**1.01 235**		eP	**Pb**	05 59 37.9	+0.5
TDCB	baz=233			eS	**Sb**	05 59 51.1	+0.4
CHGB	**Renai** baz=225	**1.13 227**		eP	**Pg**	05 59 39.0	-0.6
CHGB	baz=225			eS	**Sb**	05 59 54.5	+0.4
WHP	**Taichung City** baz=240	**1.17 241**		eP	**Pg**	05 59 39.8	-0.6
ESL	**Shilin** baz=207	**1.18 210**		eP	**Pn**	05 59 40.3	+0.2
ESL	baz=207			eS	**Sn**	05 59 56.8	+0.8
OWD	**Renai** baz=221	**1.20 223**		P	**Pn**	05 59 40.9	+0.4
OWD	baz=221			S	**Sb**	05 59 56.4	+0.3
TWQ1	**Liyutan** baz=246	**1.28 248**		eP	**Pb**	05 59 41.9	+0.1
TWQ1	baz=246			eS	**Sb**	05 59 58.5	+0.3
VWDT	**VWDT** baz=216	**1.37 218**		eP	**Pb**	05 59 43.3	-0.1
VWDT	baz=216			eS	**Sb**	06 00 01.2	+0.3
SMLT	**Sun Moon Lake** baz=226	**1.43 228**		eP	**Pn**	05 59 43.8	+0.1
SMLT	baz=226			eS	**Sb**	06 00 02.3	-0.4
TYC	**Yuchr** baz=228	**1.45 230**		eP	**Pn**	05 59 43.8	0.0
TYC	baz=228			eS	**Sn**	06 00 02.5	-0.1
SSLB	**Suanglung** baz=223	**1.46 224**		eP	**Pn**	05 59 44.4	+0.4
SSLB	baz=223			eS	**Sn**	06 00 03.1	+0.1
HGSD	**Ruisui** baz=202	**1.47 204**		eP	**Pb**	05 59 44.7	-0.3
HGSD	baz=202			eS	**Sb**	06 00 04.1	+0.5
EHY	**Hungye** baz=205	**1.49 207**		eP	**Pn**	05 59 44.7	+0.3
IRIF	**Iriomote-Funau**	**1.59 108**		P	**Pn**	05 59 46.3	+0.5
IRIF				eS	**Sn**	06 00 06.5	+0.2
YULB	**Yu-li** baz=204	**1.61 206**		eP	**Pn**	05 59 46.7	+0.7
YULB	baz=204			eS	**Sn**	06 00 07.0	+0.4
ALS	**Alishan** baz=219	**1.76 221**		eS	**Sn**	06 00 10.7	0.0
HATJ	**Hateruma jima**	**1.77 116**		eS	**Sn**	06 00 10.9	+0.4
CHN5	**Tsauling** baz=224	**1.77 226**		eP	**Pn**	05 59 48.8	+0.4
CHN5	baz=224			eS	**Sn**	06 00 11.0	+0.1
JKRS	**Kuro-shima**	**1.87 108**		S	**Sn**	06 00 13.7	+0.7
CHN4	**Tsaushan** baz=221	**2.00 223**		eP	**Pn**	05 59 51.9	+0.5
TPUB	**Ta-pu** baz=219	**2.02 221**		eP	**Pn**	05 59 52.5	+0.8
WTP	**Ta-pu** baz=218	**2.07 220**		eP	**Pn**	05 59 52.8	+0.4
TWK	**Hsinying** baz=221	**2.13 223**		eP	**Pn**	05 59 54.0	+0.7

TAP ***26*** *06:00:00.9, 24°.83N×122°.02E, h10km, ML3.3, B*
ISCJB ***26*** *06:00:01.3±0.3, 24°.83N±0°.02×122°.06E±0°.02, h11km±2km,*
Error ellipse: s-maj=2.5km s-min=2.3km az=3.9
JMA ***26*** *06:00:01.3, 24°.89N×121°.98E, h35km, M2.9*

ISC 26 06:00:01.0±0.8, 24°.85N±0°.02×122°.03E±0°.02, h15km±5km, n62, σ0s.53/107, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS	baz=283	**0.09 268**		*i* P	**Pg**	06 00 03.8	-0.4
EGS	baz=283			S	**Sg**	06 00 06.0	-0.2
TWB1	**Santiao Chiao** baz=352	**0.16 348**		P	**Pg**	06 00 05.2	+0.1
TWB1	baz=352			*i* S	**Sb**	06 00 08.4	-0.6
NTC	**Toucheng** baz=279	**0.18 272**		*i* P	**Pg**	06 00 05.6	+0.3
NTC	baz=279			S	**Sb**	06 00 08.9	-0.5
TIPB	**Shuangxi** baz=309	**0.22 304**		*i* P	**Pb**	06 00 06.6	-0.2
TIPB	baz=309			*i* S	**Sb**	06 00 10.2	-0.4
ILA	**Ilan** baz=255	**0.27 252**		P	**Pg**	06 00 06.9	+0.2
ILA	baz=255			S	**Sb**	06 00 11.4	-0.5
TWC	**Suao** baz=214	**0.29 214**		*i* P	**Pg**	06 00 06.9	-0.2
TWC	baz=214			eS	**Sg**	06 00 11.8	+0.5
EOS1	**EOS1** baz=160	**0.31 163**		eP	**Pg**	06 00 07.8	+0.3
EOS1	baz=160			eS	**Sb**	06 00 13.1	0.0
NWF	**Wu-fen Shan** baz=318	**0.32 315**		P	**Pb**	06 00 08.6	+0.2
NWF	baz=318			*i* S	**Sb**	06 00 14.0	+0.6
WFSB	**Wu-fen Shan** baz=318	**0.32 315**		P	**Pb**	06 00 08.6	+0.2
WFSB	baz=318			*i* S	**Sb**	06 00 13.8	+0.4
ENTT	**Nioudou** baz=245	**0.47 244**		P	**Pb**	06 00 10.8	-0.2
ENTT	baz=245			eS	**Sb**	06 00 17.4	-0.3
NHDH	**Xindian Distri** baz=286	**0.47 284**		eP	**Pb**	06 00 11.0	0.0
NHDH	baz=286			eS	**Sb**	06 00 18.3	+0.5
NWLT	**Wulai** baz=264	**0.48 262**		P	**Pb**	06 00 11.0	-0.2
NWLT	baz=264			eS	**Sb**	06 00 17.8	-0.3
NANB	**Nanao** baz=211	**0.49 211**		P	**Pg**	06 00 11.1	+0.4
NANB	baz=211			eS	**Sb**	06 00 18.0	-0.3
ENA	**Nanau** baz=211	**0.49 212**		eP	**Pb**	06 00 11.4	0.0
ENA	baz=211			eS	**Sb**	06 00 18.2	-0.2
TATO	**Taipei** baz=287	**0.51 285**		eP	**Pb**	06 00 11.5	-0.1
TATO	baz=287			S	**Sb**	06 00 19.1	+0.3
TAP	**Taipei** baz=294	**0.51 292**		S	**Sb**	06 00 19.9	+0.9
YM01	**YM01** baz=307	**0.51 306**		P	**Pb**	06 00 12.5	+0.8
YM01	baz=307			eS	**Sb**	06 00 20.0	+1.0
YM08	**YM08** baz=312	**0.52 311**		eP	**Pb**	06 00 12.4	+0.5
YM10	**YM10** baz=308	**0.52 306**		eP	**Pb**	06 00 12.6	+0.6
YM10	baz=308			eS	**Sn**	06 00 20.8	-1.9
YM05	**YM05** baz=309	**0.52 307**		P	**Pb**	06 00 12.6	+0.6
YM04	**YM04** baz=306	**0.54 305**		eP	**Pb**	06 00 12.8	+0.6
YM03	**YM03** baz=308	**0.55 307**		eP	**Pb**	06 00 12.8	+0.4
ANP	**Anpu** baz=308	**0.57 306**		eS	**Sb**	06 00 21.5	+0.7
TWS1	**Kuangyinshan** baz=296	**0.61 295**		eP	**Pb**	06 00 13.5	+0.2
TWS1	baz=296			eS	**Sb**	06 00 22.7	+1.0
NTST	**Danshui** baz=302	**0.61 301**		eP	**Pn**	06 00 14.2	-1.0
YHNB	**Yeheng** baz=255	**0.62 253**		eP	**Pg**	06 00 13.3	+0.1
YHNB	baz=255			eS	**Sb**	06 00 21.9	-0.2
NSK	**Sanguang** baz=255	**0.63 254**		eP	**Pg**	06 00 13.4	0.0
NSK	baz=255			eS	**Sb**	06 00 22.4	-0.1
WLTB	**Daxi** baz=272	**0.70 271**		eS	**Sn**	06 00 25.5	-1.5
NNSB	**Datong** baz=235	**0.72 235**		P	**Pb**	06 00 15.5	+0.1
NNSB	baz=235			eS	**Sb**	06 00 25.3	+0.2
NNS	**Nan Shan** baz=236	**0.72 236**		eP	**Pb**	06 00 15.5	+0.2
NNS	baz=236			eS	**Sb**	06 00 26.0	+0.9
NCU	**National Centr** baz=280	**0.77 279**		eS	**Sn**	06 00 27.9	-0.9
NCUH	**Zhongli** baz=280	**0.77 279**		eS	**Sn**	06 00 27.8	-1.0
NACB	**Ninganchiao** baz=210	**0.78 210**		eP	**Pb**	06 00 15.9	-0.4
NACB	baz=210			S	**Sg**	06 00 27.0	+0.6
PCYT	**Pengchaiyu** baz=3.0	**0.78 3**		eP	**Pg**	06 00 16.7	+0.5
PCYT	baz=3.0			eS	**Sn**	06 00 29.1	+0.1
ETLH	**Xiulin Townshi** baz=218	**0.81 218**		P	**Pg**	06 00 17.1	+0.3
ETLH	baz=218			eS	**Sb**	06 00 27.5	-0.1
TWD	**Chiawan** baz=207	**0.86 207**		P	**Pb**	06 00 17.6	-0.1
TWD				S	**Sb**	06 00 28.9	-0.1

	baz=207						
JYNG	**Yonagunijimaku**	**0.92**	**115**	P	**Pb**	**06 00 18.9**	**+0.1**
JYNG				S	**Sb**	**06 00 31.0**	**+0.1**
NSTT	**Nanjuang**	**0.96**	**257**	*e*P	**Pn**	**06 00 19.9**	**0.0**
	baz=258						
NSTT				*e*S	**Sn**	**06 00 33.0**	**-0.3**
	baz=258						
HSN	**Hsinchu**	**0.96**	**268**	*e*S	**Sg**	**06 00 32.2**	**0.0**
	baz=270						
YOJ	**Yonaguni jima**	**0.97**	**113**	P	**Pb**	**06 00 19.6**	**-0.1**
	baz=111						
YOJ				S	**Sg**	**06 00 32.9**	**+0.3**
	baz=111						
YOJ	**Yonaguni jima**	**0.97**	**113**	P	**Pb**	**06 00 19.8**	**+0.2**
YOJ				*e*S	**Sb**	**06 00 32.2**	**-0.1**
WHF	**Hehuan Shan**	**0.98**	**225**	*e*P	**Pg**	**06 00 20.4**	**+0.2**
	baz=225						
WHF				*e*S	**Sg**	**06 00 33.6**	**+0.5**
	baz=225						
TDCB	**Techi**	**0.99**	**233**	*e*P	**Pb**	**06 00 20.1**	**+0.1**
	baz=234						
TDCB				*e*S	**Sn**	**06 00 34.2**	**-0.1**
	baz=234						
CHGB	**Renai**	**1.10**	**225**	*e*P	**Pb**	**06 00 21.7**	**-0.2**
	baz=225						
CHGB				*e*S	**Sg**	**06 00 37.3**	**+0.5**
	baz=225						
WHP	**Taichung City**	**1.14**	**240**	*e*P	**Pg**	**06 00 22.8**	**-0.2**
	baz=240						
ESL	**Shilin**	**1.16**	**208**	*e*P	**Pb**	**06 00 23.2**	**+0.4**
	baz=207						
ESL				*e*S	**Sn**	**06 00 38.3**	**-0.2**
	baz=207						
OWD	**Renai**	**1.18**	**221**	*e*P	**Pb**	**06 00 23.3**	**+0.1**
	baz=221						
OWD				*e*S	**Sg**	**06 00 39.6**	**+0.3**
	baz=221						
TWQ1	**Liyutan**	**1.25**	**247**	*e*P	**Pb**	**06 00 24.5**	**+0.3**
	baz=247						
TWQ1				*e*S	**Sg**	**06 00 41.4**	**+0.1**
	baz=247						
VWDT	**VWDT**	**1.36**	**217**	*e*P	**Pb**	**06 00 26.3**	**+0.1**
	baz=216						
VWDT				*e*S	**Sg**	**06 00 44.2**	**-0.6**
	baz=216						
SMLT	**Sun Moon Lake**	**1.41**	**227**	*e*P	**Pb**	**06 00 26.9**	**-0.1**
	baz=227						
SMLT				*e*S	**Sb**	**06 00 45.5**	**+0.6**
	baz=227						
TYC	**Yuchr**	**1.42**	**229**	*e*P	**Pb**	**06 00 27.6**	**+0.4**
	baz=228						
TYC				*e*S	**Sb**	**06 00 45.7**	**+0.5**
	baz=228						
SSLB	**Suanglung**	**1.44**	**223**	*e*P	**Pb**	**06 00 27.2**	**-0.4**
	baz=223						
SSLB				*e*S	**Sb**	**06 00 46.6**	**+0.8**
	baz=223						
HGSD	**Ruisui**	**1.46**	**202**	*e*P	**Pb**	**06 00 27.6**	**-0.3**
	baz=202						
HGSD				*e*S	**Sb**	**06 00 47.3**	**+1.0**
	baz=202						
EHY	**Hungye**	**1.48**	**206**	*e*P	**Pn**	**06 00 27.6**	**+0.5**
	baz=205						
WHYT	**Xinyi Township**	**1.57**	**223**	*e*P	**Pn**	**06 00 29.0**	**+0.6**
	baz=223						
WHYT				*e*S	**Sb**	**06 00 49.2**	**-0.2**
	baz=223						
YULB	**Yu-li**	**1.59**	**205**	*e*S	**Sb**	**06 00 50.9**	**+0.7**
	baz=204						
TWF1	**Yuli**	**1.63**	**204**	*e*S	**Sn**	**06 00 50.0**	**0.0**
	baz=204						
IRIF	**Iriomote-Funau**	**1.63**	**108**	P	**Pn**	**06 00 28.7**	**-0.5**
IRIF				*e*S	**Sn**	**06 00 49.5**	**-0.5**
HATJ	**Hateruma jima**	**1.80**	**116**	*e*S	**Sn**	**06 00 54.3**	**+0.1**
JKRS	**Kuro-shima**	**1.91**	**108**	P	**Pn**	**06 00 33.1**	**+0.1**
JKRS				S	**Sn**	**06 00 55.5**	**-1.2**
JIJ	**Ishigaki jima**	**1.99**	**104**	P	**Pb**	**06 00 35.6**	**-1.3**
JIJ				*e*S	**Sn**	**06 00 59.2**	**+0.5**
JISG	**Ishigakijimahi**	**2.09**	**97**	S	**Sn**	**06 01 01.7**	**+0.3**

IDC 26 06:11:24.3±1.7, 58°.30N×32°.41W, h0km, mb3.4/2, mb1 3.9/2, mb1mx3.3/40, mbtmp3.4/2, Error ellipse: s-maj=104.2km s-min=33.1km az=42.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**47.66**	**328**	P	P	06 20 01.7	-0.1
	0.2nm,0.6s,baz=32,slow=7.5,SNR=2.0						
PDAR	**Pinedale Array**	**48.62**	**287**	P	P	06 20 09.6	-0.2
	0.1nm,0.3s,baz=64,slow=6.1,SNR=2.3						
TORD	**Torodi Ar. Bea**	**51.84**	**136**	P	P	06 20 34.0	-0.1
	8.1nm,0.3s,baz=340,slow=9.1,SNR=3.0						

IDC 26 06:11:44.7±1.5, 58°.63N×31°.43W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.5/41, mbtmp4.0/3, Error ellipse: s-maj=97.1km s-min=28.7km az=43.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**47.65**	**328**	P	P	06 20 22.1	0.0
	0.6nm,0.9s,baz=28,slow=8.0,SNR=4.0						
PDAR	**Pinedale Array**	**49.02**	**287**	P	P	06 20 33.0	-0.2
	0.7nm,0.7s,baz=64,slow=6.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**51.73**	**137**	P	P	06 20 53.5	-0.1
	6.4nm,0.3s,baz=325,slow=5.8,SNR=2.6						

*ISCJB **26** 06:25:30.6±0.3, 24°.82N±0°.02×122°.07E±0°.02, h4km±3km, Error ellipse: s-maj=2.8km s-min=2.6km az=35.5*
*TAP **26** 06:25:30.9, 24°.83N×122°.01E, h10km, ML3.1, B*
*JMA **26** 06:25:31.3, 24°.83N×122°.00E, h34km, M2.7*
ISC 26 06:25:30.9±0.8, 24°.82N±0°.02×122°.04E±0°.02, h12km±4km, n77, σ0s66/117, 5C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.10**	**282**	P	**Pg**	**06 25 33.5**	**-0.3**
	baz=282						
EGS				S	**Sg**	**06 25 35.1**	**-0.8**
	baz=282						
TWB1	**Santiao Chiao**	**0.19**	**345**	⇑*i*P	**Pb**	**06 25 34.9**	**-1.4**
	baz=355						
TWB1				*i* S	**Sb**	**06 25 38.0**	**-0.1**
	baz=355						
NTC	**Toucheng**	**0.19**	**279**	P	**Pb**	**06 25 35.3**	**-1.1**
	baz=278						
NTC				S	**Sb**	**06 25 38.2**	**+0.1**
	baz=278						
TIPB	**Shuangxi**	**0.24**	**307**	⇑*i*P	**Pg**	**06 25 36.2**	**+0.1**
	baz=309						
TIPB				S	**Sb**	**06 25 39.7**	**+0.1**
	baz=309						
ILA	**Ilan**	**0.27**	**258**	*e*P	**Pg**	**06 25 36.8**	**+0.3**
	baz=255						
ILA				*e*S	**Sg**	**06 25 40.4**	**+0.1**
	baz=255						
TWC	**Suao**	**0.28**	**219**	⇑P	**Pg**	**06 25 36.4**	**-0.2**
	baz=214						
TWC				S	**Sg**	**06 25 39.8**	**-0.6**
	baz=214						
EOS1	**EOS1**	**0.28**	**164**	⇑P	**Pg**	**06 25 37.3**	**+0.6**
	baz=152						
EOS1				*e*S	**Sg**	**06 25 42.8**	**+2.2**
	baz=152						
NWF	**Wu-fen Shan**	**0.34**	**316**	P	**Pg**	**06 25 38.3**	**+0.4**
	baz=309						
NWF				*e*S	**Sg**	**06 25 42.8**	**+0.3**
	baz=309						
WFSB	**Wu-fen Shan**	**0.34**	**316**	P	**Pg**	**06 25 38.2**	**+0.4**
	baz=309						
WFSB				S	**Sg**	**06 25 42.6**	**+0.2**
	baz=309						
TWE	**Neicheng**	**0.35**	**253**	P	**Pg**	**06 25 38.0**	**0.0**
	baz=250						
TWE				S	**Sg**	**06 25 42.5**	**-0.3**
	baz=250						
ENTT	**Nioudou**	**0.47**	**247**	P	**Pg**	**06 25 40.3**	**+0.2**
	baz=246						
ENTT				S	**Sg**	**06 25 46.4**	**0.0**
	baz=246						
NANB	**Nanao**	**0.47**	**214**	P	**Pg**	**06 25 40.0**	**-0.2**
	baz=219						
NANB				S	**Sg**	**06 25 46.7**	**+0.1**
	baz=219						
ENA	**Nanau**	**0.48**	**215**	*e*P	**Pg**	**06 25 40.6**	**+0.2**
	baz=219						
ENA				S	**Sg**	**06 25 46.7**	**0.0**
	baz=219						
NHDH	**Xindian Distri**	**0.49**	**287**	*e*P	**Pg**	**06 25 40.9**	**+0.3**
	baz=277						
NHDH				*e*S	**Sg**	**06 25 47.4**	**+0.3**
	baz=277						
NWLT	**Wulai**	**0.49**	**265**	P	**Pg**	**06 25 40.5**	**0.0**
	baz=264						
NWLT				S	**Sg**	**06 25 46.6**	**-0.6**
	baz=264						
TATO	**Taipei**	**0.52**	**287**	P	**Pg**	**06 25 41.4**	**+0.3**
	baz=278						
TATO				S	**Sg**	**06 25 47.9**	**-0.3**
	baz=278						
TAP	**Taipei**	**0.53**	**294**	*e*P	**Pg**	**06 25 41.7**	**+0.3**
	baz=285						
TAP				*e*S	**Sg**	**06 25 49.0**	**+0.7**
	baz=285						
YM01	**YM01**	**0.54**	**307**	P	**Pg**	**06 25 42.1**	**+0.7**
	baz=298						
YM01				S	**Sg**	**06 25 49.1**	**+0.6**
	baz=298						
YM08	**YM08**	**0.55**	**312**	P	**Pg**	**06 25 42.0**	**+0.4**
	baz=301						
YM08				*e*S	**Sg**	**06 25 49.5**	**+0.6**
	baz=301						
YM10	**YM10**	**0.55**	**307**	P	**Pg**	**06 25 42.4**	**+0.7**
	baz=307						
ANP	**Anpu**	**0.59**	**308**	*e*P	**Pg**	**06 25 42.9**	**+0.4**
	baz=307						
TWY	**Chenhua**	**0.60**	**318**	⇑*i*P	**Pg**	**06 25 43.4**	**+0.7**
	baz=309						
YHNB	**Yeheng**	**0.62**	**256**	P	**Pb**	**06 25 42.8**	**-1.0**
	baz=255						
YHNB				S	**Sg**	**06 25 50.7**	**-0.7**
	baz=255						
TWS1	**Kuangyinshan**	**0.63**	**296**	P	**Pg**	**06 25 44.2**	**+1.1**
	baz=296						
TWS1				*e*S	**Sg**	**06 25 52.5**	**+1.0**
	baz=296						
NTST	**Danshui**	**0.64**	**302**	*e*P	**Pg**	**06 25 44.2**	**+0.9**
	baz=302						
NSK	**Sanguang**	**0.64**	**257**	P	**Pb**	**06 25 43.0**	**-1.1**
	baz=265						
NNSB	**Datong**	**0.72**	**237**	P	**Pb**	**06 25 44.6**	**-0.8**
	baz=236						
NNSB				*e*S	**Sb**	**06 25 54.4**	**-0.8**
	baz=236						
NNS	**Nan Shan**	**0.72**	**238**	*e*P	**Pb**	**06 25 45.0**	**-0.4**
	baz=237						
NACB	**Ninganchiao**	**0.76**	**212**	P	**Pb**	**06 25 45.7**	**-0.4**
	baz=213						
NACB				*e*S	**Sb**	**06 25 55.3**	**-1.2**
	baz=213						
ETLH	**Xiulin Townshi**	**0.80**	**220**	*e*P	**Pb**	**06 25 46.4**	**-0.3**
	baz=229						
ETLH				*e*S	**Sb**	**06 25 56.7**	**-0.8**
	baz=229						
PCYT	**Pengchaiyu**	**0.80**	**2**	*e*P	**Pg**	**06 25 47.1**	**+0.7**
	baz=1.0						
TWD	**Chiawan**	**0.84**	**209**	P	**Pb**	**06 25 47.1**	**-0.4**
	baz=209						
TWD				S	**Sb**	**06 25 57.8**	**-0.9**
	baz=209						
JYNG	**Yonagunijimaku**	**0.90**	**114**	P	**Pb**	**06 25 48.4**	**-0.1**
JYNG				*e*S	**Sb**	**06 26 00.6**	**+0.1**
LIOB	**Emei**	**0.95**	**259**	*e*P	**Pn**	**06 25 49.9**	**-0.1**
	baz=259						
YOJ	**Yonaguni jima**	**0.95**	**112**	P	**Pb**	**06 25 48.9**	**-0.5**
	baz=114						
YOJ				*e*S	**Sb**	**06 26 02.2**	**+0.3**
	baz=114						
YOJ	**Yonaguni jima**	**0.95**	**112**	P	**Pb**	**06 25 49.0**	**-0.3**
YOJ				*e*S	**Sb**	**06 26 01.8**	**-0.1**
SBCB	**Hsinchu**	**0.96**	**268**	*e*P	**Pb**	**06 25 49.7**	**+0.2**
	baz=285						
SBCB				*e*S	**Sg**	**06 26 03.0**	**+1.0**
	baz=285						
NSTT	**Nanjuang**	**0.96**	**259**	*e*P	**Pn**	**06 25 50.1**	**-0.2**
	baz=258						
TWT	**Tachien**	**0.97**	**234**	*e*P	**Pg**	**06 25 50.9**	**+1.3**
	baz=227						
WHF	**Hehuan Shan**	**0.98**	**226**	*e*P	**Pb**	**06 25 50.3**	**+0.3**
	baz=227						
WHF				*e*S	**Sb**	**06 26 02.6**	**-0.5**
	baz=227						
TDCB	**Techi**	**0.98**	**235**	*e*P	**Pb**	**06 25 50.1**	**+0.1**
	baz=229						
TDCB				*e*S	**Sb**	**06 26 02.5**	**-0.5**
	baz=229						
ENLB	**Shoufeng**	**1.00**	**204**	*e*P	**Pb**	**06 25 49.2**	**-0.9**
	baz=212						
CHGB	**Renai**	**1.10**	**226**	P	**Pb**	**06 25 51.5**	**-0.4**
	baz=227						
CHGB				S	**Sb**	**06 26 06.3**	**0.0**
	baz=227						
WHP	**Taichung City**	**1.14**	**242**	*e*P	**Pg**	**06 25 53.3**	**+0.5**
	baz=242						
ESL	**Shilin**	**1.15**	**209**	*e*P	**Pn**	**06 25 52.8**	**0.0**
	baz=210						
OWD	**Renai**	**1.17**	**223**	*e*P	**Pn**	**06 25 52.8**	**-0.4**
	baz=224						
OWD				*e*S	**Sb**	**06 26 07.7**	**-0.7**
	baz=224						
NMLH	**Miaoli**	**1.17**	**256**	*e*P	**Pn**	**06 25 53.2**	**+0.1**
	baz=256						
NSY	**Sanyi**	**1.23**	**251**	*e*P	**Pg**	**06 25 56.4**	**+1.8**
	baz=269						
EGFH	**Guangfu**	**1.28**	**206**	*e*P	**Pb**	**06 25 55.6**	**+0.6**
	baz=223						
DPDB	**Guoxing**	**1.28**	**232**	*e*P	**Pg**	**06 25 56.3**	**+0.7**
	baz=223						
VWDT	**VWDT**	**1.34**	**218**	*e*P	**Pb**	**06 25 56.5**	**+0.4**
	baz=228						
VWDT				*e*S	**Sg**	**06 26 14.6**	**+0.4**
	baz=228						
SMLT	**Sun Moon Lake**	**1.40**	**228**	P	**Pb**	**06 25 57.9**	**+0.8**
	baz=229						
TYC	**Yuchr**	**1.42**	**230**	*e*P	**Pb**	**06 25 58.3**	**+1.1**
	baz=221						
SSLB	**Suanglung**	**1.43**	**224**	*e*P	**Pb**	**06 25 57.6**	**+0.1**
	baz=226						
SSLB				*e*S	**Sb**	**06 26 16.2**	**+0.4**
	baz=226						
HGSD	**Ruisui**	**1.44**	**203**	*e*P	**Pb**	**06 25 58.3**	**+0.7**
	baz=220						
EHY	**Hungye**	**1.47**	**207**	*e*P	**Pn**	**06 25 57.7**	**+0.5**
	baz=227						
EHY				*e*S	**Sb**	**06 26 17.5**	**+0.8**
	baz=227						
YULB	**Yu-li**	**1.58**	**206**	*e*P	**Pb**	**06 25 59.9**	**-0.1**
	baz=219						
YULB				*e*S	**Sb**	**06 26 20.4**	**+0.4**
	baz=219						
IRIF	**Iriomote-Funau**	**1.61**	**107**	P	**Pn**	**06 25 58.2**	**-1.0**
IRIF				S	**Sn**	**06 26 18.7**	**-1.2**
TWF1	**Yuli**	**1.61**	**205**	*e*P	**Pb**	**06 26 01.1**	**+0.5**
	baz=221						
YUS	**Yu-Shan**	**1.66**	**217**	*e*P	**Pb**	**06 26 01.6**	**-0.1**
	baz=228						
ALS	**Alishan**	**1.73**	**221**	*e*P	**Pg**	**06 26 04.6**	**+0.5**
	baz=210						
CHN5	**Tsauling**	**1.74**	**226**	*e*P	**Pb**	**06 26 03.3**	**+0.4**
	baz=229						
HATJ	**Hateruma jima**	**1.78**	**115**	*e*S	**Sn**	**06 26 23.2**	**-0.8**
JKRS	**Kuro-shima**	**1.89**	**108**	P	**Pn**	**06 26 02.7**	**-0.2**
JKRS				S	**Sn**	**06 26 25.8**	**-0.8**
JIJ	**Ishigaki jima**	**1.97**	**103**	P	**Pn**	**06 26 03.8**	**-0.2**
JIJ				*e*S	**Sn**	**06 26 28.2**	**-0.4**
CHN4	**Tsaushan**	**1.98**	**222**	*e*P	**Pb**	**06 26 06.7**	**-0.1**
	baz=226						
TPUB	**Ta-pu**	**1.99**	**221**	*e*P	**Pb**	**06 26 07.7**	**+0.6**
	baz=224						
WTP	**Ta-pu**	**2.04**	**220**	*e*P	**Pb**	**06 26 08.8**	**+0.9**
	baz=223						
JISG	**Ishigakijimahi**	**2.08**	**96**	P	**Pn**	**06 26 06.2**	**+0.6**
TWK	**Hsinying**	**2.10**	**223**	*e*P	**Pb**	**06 26 08.9**	**-0.1**
	baz=226						
CHN1	**Nanshi**	**2.14**	**221**	*e*P	**Pb**	**06 26 10.3**	**+0.7**
	baz=224						
SGST	**Jiashian**	**2.19**	**218**	*e*P	**Pb**	**06 26 10.2**	**-0.2**
	baz=208						
MATB	**Ma-tsu**	**2.31**	**305**	*e*P	**Pn**	**06 26 09.4**	**+0.7**
	baz=301						
MASBT	**Mashibuluo**	**2.55**	**211**	*e*P	**Pb**	**06 26 14.9**	**-1.7**
	baz=214						
PTMZ	**Houxiangcun**	**2.66**	**275**	*e*P	**Pn**	**06 26 14.5**	**+0.9**
	baz=273						
LYJJ	**Jianjiangzhen**	**2.68**	**310**	*e*P	**Pn**	**06 26 14.4**	**+0.6**
	baz=305						
AXDP	**Jialang**	**3.70**	**272**	*e*P	**Pn**	**06 26 28.1**	**+0.2**
	baz=268						

*ISK **26** 06:33:00.7, 39°.14N×29°.14E, h5km, ML2.5/11*
*DDA **26** 06:33:01.6, 39°.10N×29°.13E, h7km±5km, ML3.0*
*ISCJB **26** 06:33:02.2±0.8, 39°.13N±0°.03×29°.12E±0°.04, h2km±9km, Error ellipse: s-maj=6.5km s-min=4.8km az=138.1*
ISC 26 06:33:01.3±1.0, 39°.09N±0°.04×29°.10E±0°.03, h7km±8km, n18, σ0s82/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.11**	**124**	PG	**Pg**	**06 33 03.0**	**-0.9**
SHAP				SG	**Sg**	**06 33 06.6**	**+0.9**
GEDZ	**Gediz**	**0.24**	**100**	PG	**Pg**	**06 33 06.5**	**+0.3**
GEDZ				SG	**Sg**	**06 33 10.7**	**+1.2**
GDZ	**Gediz**	**0.29**	**89**	*i* P	**Pb**	**06 33 08.0**	**-1.0**
GDZ				*i* S	**Sb**	**06 33 12.7**	**-1.5**
GDZ				IAML_P			
	comp=Z,19μm,0.2s						
USAK	**Uak-Merkez**	**0.38**	**190**	*i* P	**Pn**	**06 33 12.5**	**-0.7**
USAK				*i* S	**Sb**	**06 33 16.7**	**+0.2**
TVSB	**Tavsanli**	**0.46**	**37**	PG	**Pg**	**06 33 09.9**	**-0.4**
TVSB				SG	**Sg**	**06 33 16.0**	**-0.3**
KHAL	**Karahalli**	**0.78**	**157**	*i* P	**Pn**	**06 33 19.2**	**+0.4**
KHAL				*i* S	**Sb**	**06 33 28.2**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.11**	**286**	*i* P	**Pn**	**06 33 24.7**	**+1.3**
STEP				*i* S	**Sn**	**06 33 38.9**	**-0.1**
SHUT	**Suhut-Afyon**	**1.25**	**115**	PN	**Pn**	**06 33 25.8**	**+0.5**
KCTX	**Karacabey (Bur**	**1.31**	**334**	PN	**Pg**	**06 33 26.2**	**-0.3**
BORA	**Eskisehir**	**1.31**	**52**	*i* P	**Pb**	**06 33 27.4**	**+1.1**
BORA				*i* S	**Sn**	**06 33 44.3**	**+0.4**
BORA				IAML_P			
	comp=Z,2μm,0.1s						
ADVT	**Abdulvahap**	**1.43**	**20**	PN	**Pg**	**06 33 28.2**	**-0.6**
GONE	**Gonen-Balikesi**	**1.46**	**312**	PN	**Pg**	**06 33 28.8**	**-0.5**
ARMT	**Armutlu**	**1.49**	**353**	PN	**Pg**	**06 33 29.4**	**-0.5**
YLV	**Yalova**	**1.49**	**8**	PN	**Pg**	**06 33 29.7**	**-0.3**
SRCK	**Saricakaya, Es**	**1.52**	**51**	PN	**Pg**	**06 33 29.6**	**-0.8**
SRCK	**Saricakaya, Es**	**1.52**	**51**	*i* P	**Pg**	**06 33 31.4**	**+1.0**
SRCK				IAML_P			
	comp=Z,818nm,0.1s						
EDC	**Edincik**	**1.58**	**323**	PN	**Pb**	**06 33 30.6**	**-0.3**
GULT	**Gulveren**	**1.73**	**39**	PN	**Pb**	**06 33 32.4**	**-1.1**

*DDA **26** 06:37:22.0, 38°.69N×34°.77E, h7km±5km, ML2.5*
*ISK **26** 06:37:23.9, 38°.84N×34°.68E, h5km, ML2.1/4*
ISC 26 06:37:21.3±1.5, 38°.65N±0°.05×34°.64E±0°.05, h7km±13km, n10, σ0s68/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVNS	**Nevsehir-Avano**	**0.22**	**46**	*i* P	**Pg**	**06 37 25.8**	**+0.1**
AVNS				*i* S	**Sg**	**06 37 28.2**	**-0.5**
AVNS				IAML_P			
	comp=Z,78μm,0.2s						
YAYX	**Yaylak**	**0.71**	**294**	PG	**Pn**	**06 37 38.2**	**+0.3**
YAYX				SG	**Sn**	**06 37 48.7**	**-0.5**
KIRS	**Kırehir-Merke**	**0.74**	**310**	*i* P	**Pb**	**06 37 36.0**	**-0.6**
KIRS				*i* S	**Sn**	**06 37 50.0**	**0.0**
KIRS				IAML_P			
	comp=Z,183nm,0.1s						
SIRC	**Yozgat**	**0.79**	**30**	*i* P	**Pg**	**06 37 35.6**	**-0.8**
SIRC				*i* S	**Sg**	**06 37 47.1**	**+0.5**
SIRC				IAML_P			
	comp=Z,626nm,0.2s						
YAHY	**KAYSERI_Yahyal**	**0.79**	**134**	*i* P	**Pg**	**06 37 36.5**	**0.0**
YAHY				*i* S	**Sb**	**06 37 48.9**	**+0.4**
YAHY				IAML_P			
	comp=Z,306nm,0.2s						
YOZ	**Yozgat**	**1.12**	**28**	PG	**Pb**	**06 37 42.5**	**-0.5**
YOZ				SG	**Sg**	**06 37 57.2**	**0.0**
DELI	**KIRIKKALE**	**1.46**	**338**	*i* P	**Pg**	**06 37 48.6**	**-0.5**
DELI				*i* S	**Sg**	**06 38 09.4**	**+1.3**
CORM	**Corum**	**1.52**	**360**	PN	**Pg**	**06 37 50.5**	**0.0**
CORM				SN	**Sg**	**06 38 09.9**	**-0.3**
COAL	**Corum-Alaca**	**1.62**	**9**	*i* P	**Pg**	**06 37 52.9**	**+0.6**
COAL				*i* S	**Sg**	**06 38 14.8**	**+1.5**
SVSK	**Karacayir**	**2.22**	**55**	PN	**Pb**	**06 38 01.5**	**-0.2**

*DDA **26** 06:38:40.6, 38°.70N×34°.75E, h16km±2km, ML2.7*
*ISCJB **26** 06:38:41.2±0.7, 38°.68N±0°.03×34°.73E±0°.05, h5km±7km, Error ellipse: s-maj=6.8km s-min=4.9km az=165.4*
*ISK **26** 06:38:41.1, 38°.69N×34°.76E, h9km, ML2.2/7*
ISC 26 06:38:41.4±1.0, 38°.69N±0°.03×34°.74E±0°.04, h12km±7km, n15, σ0s73/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVNS	**Nevsehir-Avano**	**0.14**	**38**	*i* P	**Pg**	**06 38 44.4**	**-0.6**
AVNS				*i* S	**Sg**	**06 38 48.6**	**+1.1**
SIRC	**Yozgat**	**0.72**	**26**	*i* P	**Pg**	**06 38 54.7**	**-0.6**
SIRC				*i* S	**Sb**	**06 39 05.5**	**-0.2**
SIRC				IAML_P			
	comp=Z,2μm,0.1s						
YAYX	**Yaylak**	**0.76**	**289**	PG	**Pb**	**06 38 56.2**	**-0.4**
KIRS	**Kırehir-Merke**	**0.78**	**305**	*i* P	**Pg**	**06 38 55.8**	**-0.7**
KIRS				IAML_P			
	comp=Z,522nm,0.2s						
YAHY	**KAYSERI_Yahyal**	**0.78**	**140**	*i* P	**Pb**	**06 38 56.0**	**-0.8**
YAHY				*i* S	**Sb**	**06 39 07.3**	**0.0**
YAHY				IAML_P			
	comp=Z,977nm,0.1s						
SERE	**Sereflikochisa**	**0.95**	**286**	PG	**Pn**	**06 39 00.3**	**-0.3**
CDAG	**Cicekdag**	**0.97**	**343**	*i* P	**Pg**	**06 38 59.1**	**-1.0**
CDAG				IAML_P			
	comp=Z,564nm,0.1s						
YOZ	**Yozgat**	**1.05**	**25**	PG	**Pb**	**06 39 00.7**	**-0.8**
YOZ				SG	**Sn**	**06 39 16.8**	**+0.2**
SULT	**Sultanhani-AKS**	**1.08**	**243**	PN	**Pn**	**06 39 02.6**	**+0.2**
SULT				SN	**Sn**	**06 39 18.3**	**+1.0**
AKO	**Adana**	**1.35**	**155**	*i* P	**Pg**	**06 39 06.9**	**-0.5**
AKO				IAML_P			
	comp=Z,360nm,0.2s						
GULE	**Gulek**	**1.41**	**179**	*i* P	**Pg**	**06 39 08.2**	**-0.3**
GULE				IAML_P			
	comp=Z,268nm,0.2s						
DELI	**KIRIKKALE**	**1.45**	**334**	*i* P	**Pg**	**06 39 08.8**	**-0.4**
DELI				*i* S	**Sg**	**06 39 29.2**	**+1.2**
DELI				IAML_P			
	comp=Z,572nm,0.2s						
CORM	**Corum**	**1.48**	**357**	PN	**Pb**	**06 39 08.9**	**-0.1**
KOZT	**Kozan**	**1.49**	**144**	PN	**Pb**	**06 39 08.4**	**-0.5**
SVSK	**Karacayir**	**2.14**	**54**	PN	**Pn**	**06 39 17.6**	**+0.8**

*IDC **26** 06:44:36.9±0.6, 58°.28N×31°.96W, h0km, mb4.1/19, mb1 4.3/21, mb1mx4.2/42, mbtmp4.2/21, ML3.8/2, MS3.9/30, Ms1 3.9/30, ms1mx3.9/36, Error ellipse: s-maj=17.7km s-min=11.8km az=5.0*
*BJI **26** 06:44:37.0±0.0, 58°.40N×31°.90W, h10km, mb4.8/18, mB5.0/11, Ms4.7/3, Ms7 4.4/2*
*MOS **26** 06:44:37.9±0.9,

BORG Borgarnes 8.15 34 *e*Pn **Pn 06 46 38.8 +1.4**
BORG *e*Sn **Sn 06 48 07.9 -1.4**
BORG Borgarnes 8.15 34 *e*P **Pn 06 46 38.8 +1.4**
BORG *e* 06 48 07.9
SFJD Kangerlussuaq 12.12 323 LR LR 06 51 30.1
comp=Z,2µm,18.4s,baz=127,slow=34
SUMG Summit 14.50 352 *e*Pn **Pn 06 48 04.3 -0.3**
SUMG Summit 14.50 352 *e*P **Pn 06 48 04.3 -0.3**
DSB Dublin 15.21 99 *e*Pn **Pn 06 48 14.4 +0.5**
43nm,1.4s
ESK Eskdalemuir 15.96 89 *e*Pn **Pn 06 48 23.6 -0.1**
52nm,1.4s
JMIC Jan Mayen 15.97 28 LR LR 06 52 09.5
comp=Z,53nm,19.1s,baz=278,slow=28
EKA Eskdalemuir Ar 15.98 89 Pn **Pn 06 48 23.2 -0.7**
baz=297,slow=11,SNR=11
H07N1 FLORES T-PHASE 18.71 178 T T 07 07 50.8
SNR=22
SCHQ Schefferville 19.39 275 LR LR 06 55 23.2
comp=Z,1µm,18.4s,baz=100,slow=33
NB2 NORSAR Subarra 21.64 65 P **P 06 49 28.3 -1.1**
comp=Z,35nm,1.7s,baz=282,slow=11
NB200 NORSAR Array S 21.64 65 *e*P **P 06 49 28.0 -1.4**
NOA NORSAR Array B 21.64 65 P **P 06 49 28.0 -1.4**
comp=Z,4.6nm,0.9s,baz=282,slow=9.1,SNR=5.8
NOA LR LR 06 56 35.7
comp=Z,275nm,20.9s,baz=280,slow=33
NC405 NORSAR Array S 21.86 64 *e*P **P 06 49 32.5 +0.7**
comp=Z,39nm,1.3s
BSKQ Steenkerk 22.07 95 P **P 06 49 32.7 -1.3**
BSKQ Steenkerk 22.07 95 sP sP 06 49 38.8 +0.2
BMRD Maredsous 22.63 95 P **P 06 49 39.4 -0.6**
BMRD sP **sP 06 49 44.5 -0.2**
DOU Dourbes 22.66 95 P **P 06 49 39.0 -1.3**
DOU sP **pwP 06 49 47.2 +1.4**
CLF Chambon-Foret 22.71 102 *e*P **P 06 49 39.2 -1.7**
comp=Z,42nm,1.0s
BGES Gesves 22.75 94 P **P 06 49 40.7 -0.6**
HFS Hagfors 23.05 66 P **P 06 49 43.6 -0.7**
comp=Z,3.4nm,0.8s,baz=297,slow=6.3,SNR=5.4
BATG Bathurst New B 23.15 256 *e*P **P 06 49 46.2 +0.8**
comp=Z,46nm,1.2s
BHOU Houvegnez 23.25 94 P **P 06 49 46.1 -0.3**
BHOU pP **pP 06 49 50.3 +0.5**
LMN Caledonia Moun 23.48 252 *e*P **P 06 49 48.7 0.0**
comp=Z,31nm,1.3s
WLF Walferdange 23.73 95 P **P 06 49 51.2 0.0**
WLF sP **sP 06 49 55.7 -0.2**
BFO Black Forest 25.68 95 *i* P **P 06 50 09.6 +0.5**
PAB San Pablo 25.84 125 *e*P **P 06 50 11.5 +0.8**
comp=Z,16nm,1.2s
PAB San Pablo 25.84 125 *e*P **P 06 50 11.5 +0.8**
PAB pmax pmax
comp=Z,16nm,1.2s
CHGQ Chibougamau 25.86 270 P **P 06 50 10.3 -0.4**
baz=54
ESDC Sonseca Array 25.90 124 P **P 06 50 10.8 -0.4**
comp=Z,3.0nm,0.7s,baz=317,slow=8.7,SNR=12
ESDC LR LR 06 58 39.4
comp=Z,253nm,20.4s,baz=325,slow=33
ARCES ARCESS Array B 26.45 42 P **P 06 50 16.4 +0.6**
comp=Z,4.5nm,1.0s,baz=284,slow=7.3,SNR=3.8
BRG Berggiesshubel 27.14 86 *e*P **P 06 50 26.4 +4.3**
comp=Z,10nm,1.5s
comp=N,572nm,13.9s
comp=E,436nm,13.1s
comp=Z,756nm,14.6s
BRG Berggiesshubel 27.14 86 *e*P **P 06 50 26.5 +4.3**
BRG pmax pmax
comp=Z,10.0nm,1.5s
BRG MLR MLR
comp=N,572nm,13.9s
BRG MLR MLR
comp=E,436nm,13.1s
BRG MLR MLR
comp=Z,756nm,14.6s
MATQ Matagami 27.67 272 P **P 06 50 26.2 -0.7**
baz=54
LSQQ Lebel-sur-Quev 27.74 270 P **P 06 50 27.2 -0.4**
baz=53
GERES GERESS Array B 28.19 90 LR LR 07 01 33.7
comp=Z,543nm,19.0s,baz=308,slow=36
LBNH Lisbon 28.22 258 *e*P **P 06 50 33.0 +1.0**
comp=Z,20nm,1.4s
LBNH Lisbon 28.22 258 *e*P **P 06 50 33.0 +1.0**
LBNH pmax pmax
comp=Z,20nm,1.4s
LBNH Lisbon 28.22 258 P **P 06 50 31.4 -0.5**
baz=46
FIA1 FINESS Array S 28.42 59 *e*P **P 06 50 33.0 -0.5**
comp=Z,18nm,1.3s
FINES FINESS Array B 28.42 59 P **P 06 50 32.8 -0.8**
comp=Z,3.7nm,0.8s,baz=284,slow=8.3,SNR=8.2
FINES LR LR 07 01 21.3
comp=Z,223nm,18.3s,baz=288,slow=35
D54A Lac Fusel, La 28.75 267 P **P 06 50 36.3 -0.3**
baz=50
ORIO Orleans, Innes 29.25 263 P **P 06 50 41.2 +0.1**
baz=48
HRV Adam Dziewonsk 29.27 255 P **P 06 50 41.7 +0.4**
baz=43
D53A Lac Vacive, Po 29.34 268 P **P 06 50 41.7 -0.2**
baz=50
E54A Lac Daplat, Po 29.49 266 P **P 06 50 42.8 -0.3**
baz=49
APA Apatity 29.64 45⇑ *i*P P 06 50 37.9 -6.4
APA pmax pmax
comp=Z,1.0nm,1.0s
E53A Dumoine, Ponti 29.77 266 P **P 06 50 45.5 -0.2**
baz=49
D52A ZEK Kipawa Sen 29.78 268 P **P 06 50 45.7 -0.1**
baz=50
VSU Vasula 29.89 64⇑ *e*P **P 06 50 50.1 +3.6**
VSU pmax pmax
comp=Z,58nm,2.0s
PEMO Pembroke 30.02 265 P **P 06 50 47.8 0.0**
baz=48
G55A Calabogie 30.02 264 P **P 06 50 47.7 -0.2**
baz=48
D51A Lot 18 Range I 30.21 269 P **P 06 50 49.4 -0.2**
baz=50
ALGO Algonquin Park 30.25 266 P **P 06 50 49.7 -0.2**
baz=49
PLVO Plevna 30.35 264 P **P 06 50 51.0 +0.2**
baz=48
E52A Mattawa 30.36 267 P **P 06 50 50.9 0.0**
baz=49
E51A G1948 Merrick 30.64 268 P **P 06 50 53.2 -0.1**
baz=50
H55A Tweed 30.74 263 P **P 06 50 54.2 0.0**
baz=47
BANO Bancroft 30.81 265 P **P 06 50 55.3 +0.4**
baz=48
DELO Deloro Mine 30.99 264 P **P 06 50 56.8 +0.3**
baz=47
F52A Sundridge 31.03 267 P **P 06 50 56.7 -0.1**
baz=49
PECO Prince Edward 31.06 262 P **P 06 50 57.3 +0.2**
baz=46
VYHS Vyhne 31.11 86 *e*P **P 06 51 01.4 +3.9**
VYHS Vyhne 31.11 86 *e*P **P 06 51 01.4 +3.9**
G53A Haliburton 31.11 265 P **P 06 50 57.7 +0.2**
baz=48
F51A Arnstein 31.25 268 P **P 06 50 59.0 +0.2**
baz=49
D48A Paudash Townsh 31.44 271 P **P 06 51 00.0 -0.4**
baz=50
KLBO Killbear Provi 31.79 267 P **P 06 51 03.7 +0.2**
baz=48
D47A Chapleau 32.20 272 P **P 06 51 07.1 0.0**
baz=50
MMNY Mt. Morris Dam 32.38 262 *e*P **P 06 51 09.7 +1.1**
comp=Z,16nm,0.9s
K55A Perry 32.47 262 P **P 06 51 09.7 +0.2**
baz=45
F49A Sandfield 32.48 269 P **P 06 51 09.6 +0.1**
baz=49
KOLS Kolonicke sedl 32.64 83 *e*P **P 06 51 11.5 +0.5**
KOLS Kolonicke sedl 32.64 83 *e*P **P 06 51 11.4 +0.5**
E47A Iron Bridge 32.68 271 P **P 06 51 11.4 +0.2**
baz=50
F48A Evansville 32.74 270 P **P 06 51 11.8 0.0**
baz=49
D46A Sault St. Mari 32.80 273 P **P 06 51 12.4 +0.1**
baz=50
O60A Telford 32.84 256 P **P 06 51 13.4 +0.7**
baz=42

L55A Hinsdale 33.05 261 P **P 06 51 15.2 +0.7**
baz=44
O59A Robesonia 33.24 257 P **P 06 51 16.5 +0.3**
baz=42
I51A Listowel 33.26 266 P **P 06 51 16.5 +0.1**
baz=46
E46A Sault Ste Mari 33.28 272 P **P 06 51 16.5 0.0**
baz=49
P60A Greenville 33.33 256 P **P 06 51 17.2 +0.2**
baz=41
J52A Paris 33.37 265 P **P 06 51 17.5 +0.2**
baz=46
BASO Ashfield 33.46 267 P **P 06 51 18.3 +0.2**
baz=47
L54A Sinclairville 33.47 262 P **P 06 51 18.5 +0.3**
baz=44
N57A Milroy 33.62 259 P **P 06 51 19.8 +0.3**
baz=43
M55A Ridgway 33.73 261 P **P 06 51 20.8 +0.3**
baz=44
G47A Hillman 33.83 270 P **P 06 51 21.1 -0.1**
baz=48
Q61A Milford 33.88 254 P **P 06 51 22.2 +0.4**
baz=40
N56A West Decatur 33.88 260 P **P 06 51 22.6 +0.7**
baz=43
P59A Jarrettsville 33.89 256 P **P 06 51 22.3 +0.4**
baz=41
E44A Grand Marais A 33.97 274 P **P 06 51 22.5 0.0**
baz=50
O57A Amberson 34.06 258 P **P 06 51 23.7 +0.3**
baz=42
I49A Point Hope 34.12 268 P **P 06 51 23.9 +0.1**
baz=47
L53A Girard 34.16 263 P **P 06 51 24.6 +0.4**
baz=44
M54A Oil Creek Stat 34.17 262 P **P 06 51 24.6 +0.2**
baz=44
N55A Marion Center 34.34 260 P **P 06 51 26.4 +0.5**
baz=43
F45A CMU Biological 34.36 272 P **P 06 51 26.0 +0.1**
baz=49
H47A Mio 34.40 270 P **P 06 51 26.6 +0.4**
baz=47
I48A Sherman Twp 34.41 269 P **P 06 51 26.8 +0.4**
baz=47
O56A Blue Knob Stat 34.50 259 P **P 06 51 27.6 +0.4**
baz=42
KLMR Klimovskoe 34.60 55 *e*P **P 06 51 26.6 -1.2**
KLMR pmax pmax
comp=Z,50nm,1.4s
KLMR Klimovskoe 34.60 55 *e*P **P 06 51 26.6 -1.2**
KLMR AMP 06 51 35.4
comp=Z,50nm,1.4s
J49A Marlette 34.68 267 P **P 06 51 29.2 +0.4**
baz=46
E43A Lone Tree Farm 34.69 274 P **P 06 51 28.7 -0.1**
baz=49
N54A Moraine State 34.73 261 P **P 06 51 29.9 +0.7**
baz=43
M53A WI Miller and 34.74 263 P **P 06 51 29.7 +0.4**
baz=44
P57A Homestead Farm 34.80 258 P **P 06 51 30.4 +0.7**
baz=42
C40A Isle Royale Na 34.83 278 P **P 06 51 30.3 +0.4**
baz=51
O55A Ligonier 34.93 260 P **P 06 51 31.5 +0.6**
baz=42
I47A Gladwin 34.95 269 P **P 06 51 31.4 +0.3**
baz=47
H46A Fife Lake 34.96 270 P **P 06 51 31.3 +0.2**
baz=47
BUR08 Bucovina Ar. S 34.97 82 *e*P **P 06 51 32.2 +0.9**
comp=Z,4.7nm,1.1s
D41A Chassel 35.07 276 P **P 06 51 32.3 +0.3**
baz=50
AKASG Malin Array Be 35.16 75 P **P 06 51 31.7 -1.1**
comp=Z,1.6nm,0.4s,baz=303,slow=8.2,SNR=4.3
AKASG LR LR 07 05 22.7
comp=Z,164nm,19.7s,baz=310,slow=35
P56A Dayton Farm, R 35.21 258 P **P 06 51 33.8 +0.5**
baz=42
K49A Clarkson 35.25 267 P **P 06 51 34.3 +0.7**
baz=46
N53A Lisbon 35.29 262 P **P 06 51 34.5 +0.5**
baz=43
KEST Kesra 35.29 112 LR LR 07 05 18.3
comp=Z,414nm,18.1s,baz=211,slow=35
Q57A Strasburg 35.34 257 P **P 06 51 35.0 +0.6**
baz=41
O54A Avella 35.50 261 P **P 06 51 36.3 +0.4**
baz=43
K48A Perry 35.59 267 P **P 06 51 36.5 0.0**
baz=46
M51A Elyria 35.61 264 P **P 06 51 36.9 +0.2**
baz=44
J47A Sunmer 35.65 269 P **P 06 51 37.6 +0.5**
baz=46
O53A New Philadelph 35.89 262 P **P 06 51 39.7 +0.6**
baz=43
R57A Stanardsville 35.95 257 P **P 06 51 40.3 +0.6**
baz=40
N51A Ashland 36.01 264 P **P 06 51 40.5 +0.3**
baz=44
M50A Fremont 36.01 265 P **P 06 51 40.6 +0.5**
baz=44
EYMN Ely 36.03 280 P **P 06 51 40.2 0.0**
baz=50,SNR=12
Q55A Buckhannon 36.23 259 P **P 06 51 42.8 +0.7**
baz=42
S58A Poland Farm, P 36.23 256 P **P 06 51 42.6 +0.5**
baz=40
OBN Obninsk 36.24 65 *e*P **P 06 51 40.5 -1.5**
OBN *e* 06 53 03.0
OBN pmax pmax
comp=Z,14nm,0.4s
O52A Adamsville 36.31 262 *e*P **P 06 51 44.0 +1.2**
comp=Z,22nm,1.2s
O52A Adamsville 36.31 262 P **P 06 51 43.2 +0.5**
baz=43
T59A Double "B" Far 36.47 254 P **P 06 51 44.6 +0.6**
baz=39
N50A Nevada 36.52 264 P **P 06 51 44.8 +0.3**
baz=44
P53A Whipple 36.54 261 P **P 06 51 45.9 +1.2**
baz=42,SNR=5.8
K46A Dorr 36.54 269 P **P 06 51 44.9 +0.2**
baz=46
S57A Dark Hollow, R 36.58 257 P **P 06 51 45.5 +0.5**
baz=40
Q54A Coxs Mills 36.63 260 P **P 06 51 45.8 +0.4**
baz=42
F40A Park Falls 36.63 276 P **P 06 51 46.0 +0.6**
baz=48
P52A Corning 36.82 262 P **P 06 51 47.5 +0.4**
baz=42
ULM Lac du Bonnet 36.84 286 LR LR 07 05 32.4
comp=Z,509nm,18.8s,baz=62,slow=34
E38A The Farm, Brul 36.92 278 P **P 06 51 47.5 -0.4**
baz=49
N49A Columbus Grove 36.95 265 P **P 06 51 48.7 +0.5**
baz=44
T58A Grand View Acr 36.99 255 P **P 06 51 49.0 +0.5**
baz=39
F39A Loretta 37.05 277 P **P 06 51 48.7 -0.2**
baz=48,SNR=6.4
U59A Littleton 37.07 254 P **P 06 51 49.8 +0.6**
baz=39
Q53A Leroy 37.08 260 P **P 06 51 49.7 +0.4**
baz=42
G40A Rib Lake 37.10 275 P **P 06 51 49.5 0.0**
baz=48
FFC Flin Flon 37.18 296 *e*P **P 06 51 50.1 +0.1**
comp=Z,4.4nm,0.8s
FFC Flin Flon 37.18 296 *i* P **P 06 51 50.8 +0.8**
O50A Cable 37.22 264 P **P 06 51 51.1 +0.6**
baz=43
VTS Vitosha 37.30 90 *e*P **P 06 51 50.3 -1.0**
comp=Z,10nm,1.4s
VTS Vitosha 37.30 90 *e*P **P 06 51 50.3 -1.0**
VTS pmax pmax
comp=Z,10.0nm,1.4s
R54A Victor 37.31 259 P **P 06 51 51.7 +0.4**
baz=41
T57A Hurt 37.31 256 P **P 06 51 51.9 +0.6**
baz=40
U58A Oxford 37.42 255 P **P 06 51 52.8 +0.5**
baz=39

N48A Decatur 37.44 266 P **P 06 51 52.6 +0.2**
baz=44
F38A Pierce - Schro 37.52 278 P **P 06 51 52.9 -0.1**
baz=48,SNR=15
O49A Covington 37.57 264 P **P 06 51 53.7 +0.3**
baz=43
G39A Holcombe 37.60 276 P **P 06 51 53.5 -0.1**
baz=48
T56A Rocky Mt 37.69 257 P **P 06 51 55.8 +1.2**
baz=40
R53A Hurricane 37.69 260 P **P 06 51 55.1 +0.6**
baz=41
P50A Jamestown 37.71 263 P **P 06 51 55.1 +0.4**
baz=42
K43A Burlington 37.87 271 P **P 06 51 56.1 +0.1**
baz=46
Q51A Peebles 37.90 262 P **P 06 51 56.5 +0.3**
baz=42
O48A Farmland 37.95 265 P **P 06 51 56.4 -0.2**
baz=43
T55A Pulaski 38.01 258 P **P 06 51 57.4 +0.1**
baz=40
R52A Catlettsburg 38.05 261 P **P 06 51 58.3 +0.8**
baz=41
F37A Hinrichs Farm, 38.07 278 P **P 06 51 57.7 +0.1**
baz=48
V58A Windy Hill, Pi 38.17 255 P **P 06 51 59.4 +0.9**
baz=38
P49A Miami Univ. Ec 38.24 264 P **P 06 51 58.9 -0.3**
baz=42
N46A Monticello 38.32 267 P **P 06 51 59.9 +0.2**
baz=44
YKA Yellowknife Ar 38.37 312 P **P 06 51 59.6 -0.3**
comp=Z,3.1nm,0.8s,baz=59,slow=9.1,SNR=9.8
YKA LR LR 07 07 03.8
comp=Z,67nm,19.2s,baz=60,slow=35
YKB5 Yellowknife Ar 38.37 312 *e*P **P 06 51 59.6 -0.3**
U56A King 38.39 257 P **P 06 52 00.5 +0.1**
baz=39
T54A Tazewell 38.46 258 P **P 06 52 01.3 +0.2**
baz=40
SPMN Marine on St. 38.49 277 P **P 06 52 01.2 0.0**
baz=48
U55A TA2, Sparta 38.62 257 P **P 06 52 03.1 +0.7**
baz=40,SNR=5.8
M44A Midewin, Midew 38.65 269 *e*P **P 06 52 02.5 0.0**
comp=Z,17nm,1.2s
M44A Midewin, Midew 38.65 269 P **P 06 52 02.6 +0.1**
baz=44
P48A Milroy 38.67 265 P **P 06 52 02.4 -0.3**
baz=42
Q49A Aurora 38.73 264 P **P 06 52 03.1 -0.1**
baz=42
N45A Kentland 38.76 268 P **P 06 52 03.6 +0.2**
baz=44
W58A Raeford 38.84 254 P **P 06 52 05.1 +0.9**
baz=38
R50A Paris 38.97 262 P **P 06 52 05.6 +0.4**
baz=41
U54A Nelsons Funny 39.00 258 P **P 06 52 06.1 +0.5**
baz=40
T53A Wise 39.02 259 P **P 06 52 05.9 +0.1**
baz=40
S51A Beattyville 39.07 261 P **P 06 52 06.5 +0.4**
baz=41
L42A Oliver, Polo 39.07 271 P **P 06 52 06.1 0.0**
baz=45
M43A Waltham Townsh 39.10 270 P **P 06 52 06.3 0.0**
baz=44
V55A Taylorsville 39.20 257 P **P 06 52 07.8 +0.6**
baz=39
S50A Richmond 39.46 262 P **P 06 52 10.0 +0.6**
baz=41
U53A Fall Branch 39.51 259 P **P 06 52 10.2 +0.3**
baz=40
Q47A Bedord North L 39.58 265 P **P 06 52 10.6 +0.2**
baz=42
V54A Nebo 39.64 258 P **P 06 52 11.4 +0.5**
baz=39
S49A Springfield 39.84 263 P **P 06 52 12.8 +0.3**
baz=41
TZTN Tazewell 39.88 260 P **P 06 52 13.8 +0.9**
baz=40
U52A Thorn Hill 39.90 260 P **P 06 52 13.6 +0.5**
baz=40
WCI Wyandotte Cave 40.04 264 P **P 06 52 14.2 0.0**
baz=42
R47A Wooly Knot Far 40.11 264 P **P 06 52 15.0 +0.3**
baz=42
V53A Saluda 40.17 258 P **P 06 52 15.7 +0.4**
baz=39
T50A Nancy 40.18 262 P **P 06 52 15.8 +0.5**
baz=40
W54A Cherokee Point 40.30 257 P **P 06 52 17.0 +0.7**
baz=39
V52A Sevierville 40.44 259 P **P 06 52 17.8 +0.3**
baz=39
T49A Edmonton 40.48 262 P **P 06 52 17.8 -0.1**
baz=41
X55A Gracelyn & Ava 40.49 256 P **P 06 52 18.5 +0.5**
baz=38
Q45A Warren Harvey, 40.52 267 P **P 06 52 18.2 +0.1**
baz=42
W53A Cullowhee 40.73 258 P **P 06 52 21.0 +0.9**
baz=39
X54A Belton 40.81 257 P **P 06 52 21.4 +0.8**
baz=38
S47A Hartford 40.82 264 P **P 06 52 20.9 +0.3**
baz=41
NHSC New Hope 40.83 253 P **P 06 52 21.4 +0.7**
baz=37
V51A Loudon 40.86 260 P **P 06 52 21.8 +0.8**
baz=40
T48A Bowling Green 40.93 263 P **P 06 52 21.6 +0.1**
baz=41
Z57A Bowman 40.95 254 P **P 06 52 22.1 +0.4**
baz=37
Y55A Saluda 41.03 256 P **P 06 52 22.7 +0.4**
baz=38
U49A Red Boiling Sp 41.06 262 P **P 06 52 22.9 +0.3**
baz=40
CPCT Cooper Cave 41.22 260 *e*P **P 06 52 24.9 +0.9**
comp=Z,6.8nm,1.0s
X53A Estanollee 41.32 258 P **P 06 52 25.5 +0.7**
baz=38
V50A Pikevile 41.35 260 P **P 06 52 25.7 +0.7**
baz=40
T47A Sharon Grove 41.39 264 P **P 06 52 26.0 +0.6**
baz=41
INK Inuvik 41.44 327 P **P 06 52 24.8 -0.5**
comp=Z,3.2nm,0.8s,baz=20,slow=8.8,SNR=10
INK Inuvik 41.44 327 *e*P **P 06 52 24.8 -0.5**
comp=Z,5.2nm,0.9s
INK Inuvik 41.44 327 *e*P **P 06 52 24.8 -0.5**
INK pmax pmax
comp=Z,5.0nm,0.9s
ECSD EROS Data Cent 41.50 279 P **P 06 52 26.4 +0.2**
baz=46
Y54A Tignall 41.51 256 P **P 06 52 26.8 +0.5**
baz=38
X52A Dahlonega 41.55 258 P **P 06 52 27.2 +0.5**
baz=39
W51A Cleveland 41.57 260 P **P 06 52 27.2 +0.4**
baz=39
V49A McMinnville 41.69 261 P **P 06 52 27.8 0.0**
baz=40
T46A Princeton 41.77 264 P **P 06 52 28.7 +0.3**
baz=41
W50A Signal Mountai 41.82 260 P **P 06 52 29.4 +0.5**
baz=39
U47A Clarksville 41.90 263 P **P 06 52 30.0 +0.4**
baz=40
Y53A Monroe 41.98 257 P **P 06 52 30.9 +0.8**
baz=38
S44A Carbondale 41.99 266 P **P 06 52 30.2 0.0**
baz=41
X51A Calhoun 42.08 259 P **P 06 52 31.7 +0.7**
baz=39
Z54A Sparta 42.08 256 P **P 06 52 31.4 +0.4**
baz=38
DGMT Dagmar 42.16 289 *e*P **P 06 52 32.5 +1.0**
comp=Z,17nm,1.1s
DGMT Dagmar 42.16 289 P **P 06 52 32.0 +0.5**
baz=48
V48A Smith Brothers 42.19 262 P **P 06 52 32.2 +0.3**
baz=40
GOGA Godfrey 42.26 257 *e*P **P 06 52 33.3 +0.8**
comp=Z,7.7nm,0.9s

GOGA **Godfrey** 42.26 257 *eP* **P** 06 52 33.3 +0.8
GOGA pmax pmax
comp=Z,8.0nm,0.9s
GOGA **Godfrey** 42.26 257 P **P** 06 52 33.3 +0.8
baz=38
155A **Kite** 42.38 255 P **P** 06 52 33.6 +0.2
baz=37
Z53A **Monticello** 42.42 257 P **P** 06 52 34.2 +0.5
baz=38
WVT **Waverly** 42.42 263 P **P** 06 52 33.8 0.0
baz=40
V47A **Nunnelly** 42.49 263 P **P** 06 52 34.3 0.0
baz=40
W48A **Pulaski** 42.71 262 P **P** 06 52 36.5 +0.3
baz=39
CCM **Cathedral Cave** 42.77 268 *eP* **P** 06 52 36.4 -0.1
comp=Z,15nm,1.5s
CCM **Cathedral Cave** 42.77 268 *eP* **P** 06 52 36.4 -0.1
CCM pmax pmax
comp=Z,15nm,1.5s
CCM **Cathedral Cave** 42.77 268 P **P** 06 52 36.5 -0.1
baz=42
V46A **Holladay** 42.82 263 P **P** 06 52 36.7 -0.4
baz=40
X49A **Woodville** 42.88 261 P **P** 06 52 37.5 0.0
baz=39
Z52A **Williamson** 42.93 258 P **P** 06 52 38.7 +0.8
baz=38
255A **Hazlehurst** 42.94 254 P **P** 06 52 38.5 +0.6
baz=36
W47A **Westpoint** 42.97 262 P **P** 06 52 37.9 -0.3
baz=40
Y50A **Piedmont** 43.06 259 P **P** 06 52 39.3 +0.4
baz=38
PBMO **Poplar Bluff** 43.30 266 *eP* **P** 06 52 40.3 -0.6
comp=Z,20nm,1.4s
X48A **Hartselle** 43.30 261 P **P** 06 52 40.8 -0.1
baz=39
254A **Abbeville** 43.34 255 P **P** 06 52 41.6 +0.4
baz=37
Y49A **Blount Mountai** 43.43 260 *eP* **P** 06 52 42.5 +0.4
comp=Z,4.7nm,0.9s
Y49A **Blount Mountai** 43.43 260 P **P** 06 52 42.4 +0.4
baz=38
EPYK **Eagle Plains** 43.64 326 P **P** 06 52 42.2 -1.1
baz=48,SNR=5.4
253A **Americus** 43.67 256 P **P** 06 52 44.3 +0.4
baz=37
X47A **Russelville** 43.67 262 P **P** 06 52 43.8 -0.1
baz=39
Y48A **Jasper** 43.78 261 P **P** 06 52 44.8 0.0
baz=39
151A **Opelika** 43.92 258 P **P** 06 52 46.0 +0.2
baz=37
Z49A **Columbiana** 44.02 260 P **P** 06 52 47.0 +0.3
baz=38
252A **Lumpkin** 44.03 257 P **P** 06 52 47.0 +0.2
baz=37
150A **Eclectic** 44.21 259 P **P** 06 52 49.1 +0.8
baz=38
353A **Camilla** 44.29 256 P **P** 06 52 49.4 +0.6
baz=36
251A **Midway** 44.30 258 P **P** 06 52 49.2 +0.2
baz=37
LAO **LASA Array** 44.38 289 *eP* **P** 06 52 50.4 +0.9
comp=Z,9.9nm,0.8s
LAO **LASA Array** 44.38 289 P **P** 06 52 50.4 +0.9
baz=46
LRAL **Lakeview Retre** 44.38 260 P **P** 06 52 49.8 +0.2
baz=38
TAM **Tamanrasset** 44.50 127 *eP* **P** 06 52 50.8 0.0
comp=Z,14nm,1.5s
TAM **Tamanrasset** 44.50 127 *eP* **P** 06 52 50.8 0.0
TAM pmax pmax
comp=Z,14nm,1.5s
149A **Jones** 44.62 259 P **P** 06 52 51.7 +0.3
baz=38
BR101 **Keskin Array S** 44.85 85 *eP* **P** 06 52 53.3 -0.1
BRTR **Keskin Array B** 44.85 85 P **P** 06 52 53.3 -0.1
comp=Z,2.0nm,0.9s,baz=326,slow=6.4,SNR=7.7
BRTR LR LR 07 12 15.3
comp=Z,191nm,21.1s,baz=290,slow=37
BRTR **Keskin Array B** 44.85 85 *i P* **P** 06 52 54.2 +0.8
BRTR pmax pmax
comp=Z,2.0nm,0.8s
U40A **Yellville** 44.89 268 P **P** 06 52 53.6 0.0
baz=41
EGMT **Eagleton** 45.20 292 P **P** 06 52 56.1 +0.1
baz=46
249A **Camden** 45.28 259 P **P** 06 52 57.0 +0.2
baz=37
TOLK **Toolik Lake Re** 45.47 333 *eP* **P** 06 52 58.4 +0.5
comp=Z,8.8nm,0.9s
TOLK **Toolik Lake Re** 45.47 333 P **P** 06 52 57.7 -0.2
baz=41,SNR=8.2
W41B **Gary Mavity, V** 45.47 267 *eP* **P** 06 52 57.7 -0.6
comp=Z,6.3nm,1.2s
W41B **Gary Mavity, V** 45.47 267 P **P** 06 52 57.8 -0.4
baz=40
FYU **Fort Yukon** 45.92 329 *eP* **P** 06 53 02.5 +1.1
comp=Z,26nm,1.4s
DAWY **Dawson** 46.06 324 *eP* **P** 06 53 03.7 +1.0
comp=Z,12nm,1.0s
EGAK **Eagle** 46.08 326 *eP* **P** 06 53 02.1 -0.6
comp=Z,6.6nm,0.9s
CCAR **Cane Creek** 46.19 265 *eP* **P** 06 53 04.8 +0.9
comp=Z,44nm,1.4s
W39A **Magazine** 46.26 268 P **P** 06 53 04.3 -0.2
baz=40
X40A **Basin Creek Fa** 46.31 266 P **P** 06 53 04.3 -0.5
baz=39
KIV **Kislovodsk** 46.47 74 *eP* **P** 06 53 07.6 +1.4
KIV pmax pmax
comp=Z,20nm,1.1s
KIV MLR MLR
comp=Z,246nm,16.0s
WALA **Waterton Lakes** 46.48 296 *eP* **P** 06 53 05.8 -0.5
comp=Z,8.8nm,0.9s
MIAR **Mount Ida** 46.65 267 P **P** 06 53 07.4 -0.1
baz=40
KBZ **Khabaz** 46.74 74 P **P** 06 53 08.0 -0.1
comp=Z,1.5nm,0.7s,baz=333,slow=8.1,SNR=4.0
KBZ LR LR 07 13 39.9
comp=Z,148nm,18.2s,baz=324,slow=37
KBZ **Khabaz** 46.74 74 *eP* **P** 06 53 08.0 -0.1
TUL1 **Leonard** 46.78 270 P **P** 06 53 07.8 -0.7
baz=40
RLMT **Red Lodge** 46.99 289 *eP* **P** 06 53 11.8 +1.4
comp=Z,6.0nm,1.0s
K22A **Casper** 47.38 285 P **P** 06 53 12.8 -0.6
baz=44
POKR **Poker Plat Res** 47.61 329 P **P** 06 53 14.3 -0.4
baz=40
ILAR **Eielson Array** 47.72 328 P **P** 06 53 16.0 +0.4
comp=Z,4.1nm,0.8s,baz=34,slow=6.6,SNR=42
ILAR PcP **PcP** 06 54 43.9 -0.6
comp=Z,0.9nm,0.6s,baz=355,slow=2.9,SNR=7.5
ILAR LR LR 07 14 43.2
comp=Z,126nm,18.1s,baz=50,slow=38
BOZ **Bozeman (W)** 47.82 291 P **P** 06 53 16.8 +0.1
baz=44
COLA **College** 47.91 329⇑ *iP* **P** 06 53 17.8 +0.9
COLA pmax pmax
comp=Z,8.0nm,1.0s
HDA **Harding Lake** 48.02 328 P **P** 06 53 17.8 -0.1
baz=40
KSCO **Kaye Shedlock'** 48.04 279 P **P** 06 53 18.0 -0.4
baz=42
H17A **Grant Village** 48.16 289 *eP* **P** 06 53 20.3 +0.8
comp=Z,4.4nm,1.1s
N23A **Red Feather La** 48.36 283 *eP* **P** 06 53 20.6 -0.5
comp=Z,19nm,1.4s
N23A **Red Feather La** 48.36 283 P **P** 06 53 20.7 -0.4
baz=42,SNR=5.4
YPP **Pitchstone Pla** 48.36 289 *eP* **P** 06 53 23.4 +2.3
comp=Z,7.3nm,1.3s
NEW **Newport** 48.55 297 P **P** 06 53 21.7 -0.6
baz=44
BW06 **Boulder Array** 48.83 287 P **P** 06 53 23.4 -1.3
baz=43,SNR=7.3
PDAR **Pinedale Array** 48.83 287 P **P** 06 53 23.3 -1.4
comp=Z,2.1nm,0.7s,baz=63,slow=7.5,SNR=23
PDAR LR LR 07 12 58.8
comp=Z,406nm,18.5s,baz=44,slow=35
FXWY **Fox Creek** 48.93 289 *eP* **P** 06 53 24.3 -1.1
comp=Z,3.2nm,1.1s
ISCO **Idaho Springs** 49.00 282 *eP* **P** 06 53 27.0 +0.9
comp=Z,9.9nm,1.4s

ISCO **Idaho Springs** 49.00 282 *eP* **P** 06 53 27.0 +0.9
ISCO pmax pmax
comp=Z,10.0nm,1.4s
ISCO **Idaho Springs** 49.00 282 P **P** 06 53 26.6 +0.5
baz=42,SNR=5.9
WMOK **Wichita Mounta** 49.24 272 P **P** 06 53 27.7 +0.1
baz=40
TRF **Thorofare Moun** 49.69 329 *eP* **P** 06 53 31.9 +1.0
comp=Z,8.8nm,1.1s
KTH **Kantishna Hill** 49.78 329 *eP* **P** 06 53 32.2 +0.7
comp=Z,4.9nm,1.0s
O20A **White River Ci** 50.10 284 P **P** 06 53 34.6 +0.2
baz=42
GNI **Garni** 50.29 76⇑ *eP* **P** 06 53 37.2 +1.4
GNI pmax pmax
comp=Z,39nm,1.1s
T25A **Trinidad** 50.37 278 P **P** 06 53 36.8 +0.3
baz=41
SDCO **Great Sand Dun** 50.48 280 P **P** 06 53 37.2 -0.1
baz=41
HLID **Hailey** 50.66 291 P **P** 06 53 38.6 +0.1
baz=42
ABKAR **Akbulak array** 50.90 58 *eP* **P** 06 53 40.5 +0.5
comp=Z,6.9nm,1.0s
S22A **4UR Ranch, Cre** 51.17 281 P **P** 06 53 42.9 +0.4
baz=41,SNR=5.7
SPUT **South Promonto** 51.36 288 *eP* **P** 06 53 42.4 -1.4
comp=Z,12nm,1.5s
SUA **Susitna One** 51.42 327 *eP* **P** 06 53 44.5 +0.6
comp=Z,9.9nm,0.8s
TOA1 **Torodi Ar. Sit** 51.72 137 *eP* **P** 06 53 44.8 -1.7
TOA0 **Torodi Ar. Sit** 51.73 137 *eP* **P** 06 53 44.9 -1.6
comp=Z,9.9nm,1.3s
TORD **Torodi Ar. Bea** 51.73 137 P **P** 06 53 44.8 -1.8
comp=Z,7.5nm,0.4s,baz=344,slow=9.6,SNR=15
TORD LR LR 07 13 12.2
comp=Z,88nm,21.7s,baz=335,slow=33
PV16 **Nyswonger Mesa** 51.82 283 *eP* **P** 06 53 45.2 -2.1
comp=Z,3.4nm,0.8s
PV03 **Paradox Valley** 51.82 283 *eP* **P** 06 53 43.8 -3.6
comp=Z,14nm,1.5s
PV13 **Radium Mtn., P** 51.88 283 *eP* **P** 06 53 47.7 -0.1
comp=Z,7.5nm,0.9s
BRVK **Borovoye** 52.39 48⇓ *eP* **P** 06 53 53.0 +1.9
BRVK pmax pmax
comp=Z,6.0nm,1.5s
MVCO **Mesa Verde** 52.44 282 P **P** 06 53 52.4 +0.5
baz=40,SNR=5.7
JCT **Junction City** 53.10 269 P **P** 06 53 57.2 +0.5
baz=38
ANMO **Albuquerque** 53.11 276⇑ *eP* **P** 06 53 57.8 +0.9
ANMO pmax pmax
comp=Z,6.0nm,1.9s
ANMO **Albuquerque** 53.11 278 P **P** 06 53 57.5 +0.5
baz=39
TASM **ASL Pad, Albuq** 53.11 278 P **P** 06 53 57.7 +0.7
baz=39
TASM **ASL Pad, Albuq** 53.11 278 P **P** 06 53 57.7 +0.7
baz=39
CNPM **China Poot** 53.14 326 *eP* **P** 06 53 57.4 +0.8
comp=Z,9.3nm,0.8s
BILL **Biiibino** 53.18 352 *eP* **P** 06 53 57.9 +1.2
BILL *e* 06 55 04.9
BILL pmax pmax
comp=Z,1.0nm,1.1s
J05D **Fort Rock, OR** 54.17 296 P **P** 06 54 04.2 -0.3
baz=40
MNTX **Cornudas Mount** 55.08 275 P **P** 06 54 10.8 -0.3
baz=38
R11A **Troy Canyon, C** 55.17 288 P **P** 06 54 11.5 -0.4
baz=40
WUAZ **Wupatki** 55.22 282 P **P** 06 54 12.2 0.0
baz=39
DBIC **Dimbokro** 55.67 147 P **P** 06 54 13.5 -1.9
comp=Z,3.2nm,0.8s,baz=312,slow=9.7,SNR=3.2
DBIC LR LR 07 15 07.0
comp=Z,250nm,20.6s,baz=326,slow=33
NVS **Novosibirsk** 55.69 39 *eP* **P** 06 54 16.4 +1.3
KVN **Kaiserville** 55.89 290 *eP* **P** 06 54 16.0 -1.0
comp=Z,6.6nm,1.0s
KVN **Kaiserville** 55.89 290 *eP* **P** 06 54 16.0 -1.0
KVN pmax pmax
comp=Z,7.0nm,1.0s
PAHR **Pah Rah Range** 56.01 292 *eP* **P** 06 54 17.7 -0.2
comp=Z,7.5nm,1.2s
TXAR **Lajitas Array** 56.04 272 P **P** 06 54 17.6 -0.6
comp=Z,0.6nm,0.7s,baz=51,slow=5.8,SNR=8.3
TXAR PcP **PcP** 06 55 15.1 -1.1
comp=Z,0.2nm,0.7s,baz=46,slow=2.6,SNR=1.9
TXAR LR LR 07 17 35.1
comp=Z,178nm,19.1s,baz=0.0,slow=35
NVAR **Mina Array Bea** 56.47 290 P **P** 06 54 20.8 -0.4
comp=Z,1.1nm,0.8s,baz=64,slow=6.2,SNR=7.8
NVAR LR LR 07 17 54.7
comp=Z,232nm,18.2s,baz=14,slow=35
TPNV **Topopah Spring** 56.59 287 P **P** 06 54 22.4 +0.3
baz=39
O03E **Paynes Creek** 56.73 294 P **P** 06 54 22.4 -0.5
baz=39
GRAC **Grapevine Rang** 57.12 288 P **P** 06 54 25.7 0.0
baz=39
KURK **Kurchatov** 57.42 45 *eP* **P** 06 54 28.3 +0.8
comp=Z,6.0nm,1.1s
KURK **Kurchatov** 57.42 45⇓ *iP* **P** 06 54 28.8 +1.3
KURK pmax pmax
comp=Z,13nm,2.5s
CWC **Cottonwood Cre** 57.91 288 P **P** 06 54 30.6 -0.8
baz=38
MPMC **Manual Prospec** 57.91 288 P **P** 06 54 31.3 -0.1
baz=38
GEYT **Alibeck** 58.68 68 LR LR 07 20 54.3
comp=Z,69nm,19.0s,baz=275,slow=37
ISA **Isabella, Lake** 58.71 288 P **P** 06 54 36.9 0.0
baz=38
214A **Organ Pipe Nat** 58.75 281 P **P** 06 54 37.3 +0.2
baz=37
BC3 **Big Chuckawall** 58.77 284 P **P** 06 54 37.6 +0.3
baz=38
BELC **Belle Mtn. Jos** 58.77 285 P **P** 06 54 37.5 +0.2
baz=38
SMLC **San Martn de** 58.97 231 *eP* **P** 06 54 36.4 -2.4
ZARC **Zaragoza, Cauc** 60.48 231 *eP* **P** 06 54 49.5 +0.4
PTBC **PUERTO BERRIO,** 61.18 230 *eP* **P** 06 54 52.9 -1.0
RUSC **La Rusia** 61.22 228 *eP* **P** 06 54 53.5 -1.2
DGZ **Jazzator, Alta** 61.41 40⇑ *iP* **P** 06 54 57.7 +2.4
DGZ pmax pmax
comp=Z,1.0nm,0.5s
DBBC **Dabeiba** 61.47 232 *eP* **P** 06 54 55.8 -0.2
HELC **Santa Helena** 61.93 231 *eP* **P** 06 54 59.6 +0.2
MK31 **Makanchi Array** 62.03 45 *eP* **P** 06 54 59.6 +0.2
comp=Z,1.6nm,0.7s
MK31 **Makanchi Array** 62.03 45 *eP* **P** 06 54 59.6 +0.2
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MK32 **Makanchi Array** 62.03 45 *eP* **P** 06 54 58.9 -0.5
MKAR **Makanchi Array** 62.03 45 P **P** 06 54 58.9 -0.5
comp=Z,2.2nm,0.7s,baz=327,slow=5.7,SNR=17
MKAR LR LR 07 22 34.5
comp=Z,39nm,18.1s,baz=306,slow=37
NORC **Norcasia** 62.23 230 *eP* **P** 06 55 01.5 +0.4
CTAB **Cerro Tablazo,** 62.47 229 *eP* **P** 06 55 04.7 +1.5
ROSC **El Rosal** 62.67 229 P **P** 06 55 03.5 -0.9
comp=Z,4.0nm,0.5s,baz=29,slow=7.1,SNR=9.0
ROSC LR LR 07 23 24.8
comp=Z,32nm,18.0s,baz=206,slow=37
ROSC **El Rosal** 62.67 229 *eP* **P** 06 55 05.8 +1.5
comp=Z,20nm,1.3s
ROSC **El Rosal** 62.67 229 *eP* **P** 06 55 05.1 +0.8
GUY2C **Guyana, Caldas** 62.74 230 *eP* **P** 06 55 05.0 0.0
RREF **El Recreo** 63.03 230 *eP* **P** 06 55 08.5 +1.4
GAR **Garm** 63.55 58 *eP* **P** 06 55 09.3 -0.4
comp=Z,21nm,1.0s
GAR **Garm** 63.55 58 *eP* **P** 06 55 09.3 -0.4
GAR pmax pmax
comp=Z,21nm,1.0s
PRAC **Prado** 63.92 229 *eP* **P** 06 55 11.6 -0.6
YOTC **Yotoco, Valle** 64.26 231 *eP* **P** 06 55 14.9 +0.3
KSH **Kashi** 65.59 54 P **P** 06 55 25.0 +2.0
KSH pP sP 06 55 28.5 +0.4
KSH PP **PP** 06 57 46.3 -0.5
KSH S **S** 07 04 07.3 -0.6
KSH SS **SS** 07 08 22.0 +1.1
KSH pmax pmax
comp=Z,46nm,1.5s
KSH LR LR
comp=Z,260nm,12.0s
WMQ **Urumqi** 66.56 43 *eP* **P** 06 55 32.3 +3.2

WMQ sP pwP 06 55 39.3 +4.2
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,72nm,5.1s
WMQ LR LR
comp=Z,330nm,29.1s
WMQ LR LR
comp=Z,210nm,29.0s
H10S1 **ASCENSION HYDR** 68.54 162 T T 08 09 52.3
baz=350,slow=75,SNR=17
H10S3 **ASCENSION HYDR** 68.55 162 T T 08 09 53.6
baz=350,slow=75,SNR=20
H10S2 **ASCENSION HYDR** 68.56 162 T T 08 09 54.5
baz=350,slow=75,SNR=20
PETK **Petropavlovsk-** 68.60 354 LR LR 07 28 12.2
comp=Z,58nm,18.4s,baz=28,slow=38
SONA0 **Songino Array** 68.72 29 *eP* **P** 06 55 43.0 +0.2
SONM **Songino Array** 68.72 29 P **P** 06 55 43.0 +0.2
comp=Z,0.6nm,0.6s,baz=336,slow=6.8,SNR=4.4
ULN **Ulaanbaatar** 68.86 28⇓ *iP* **P** 06 55 44.8 +1.1
ULN pmax pmax
comp=Z,14nm,2.5s
HIA **Hailar** 70.22 19⇓ *eP* **P** 06 55 53.9 +2.0
HIA pmax pmax
comp=Z,32nm,0.8s
BDFB **Brasilia** 74.93 196 LR LR 07 23 23.7
comp=Z,94nm,20.9s,baz=7.8,slow=31
CN2 **Changchun** 76.47 17 *eP* **P** 06 56 28.8 +0.1
HHC **Hu-ho-hao-te** 76.56 28 *eP* **P** 06 56 29.5 0.0
HHC pmax pmax
comp=Z,13nm,1.1s
HHC pmax pmax
comp=Z,30nm,5.4s
KMBO **Kilima Mbogo** 80.19 108 LR LR 07 34 54.2
comp=Z,83nm,18.3s,baz=289,slow=38
KSRS **Korea Array** 83.05 16 LR LR 07 35 27.0
comp=Z,24nm,18.4s,baz=348,slow=37
NJ2 **Nanjing** 86.66 25 *eP* **P** 06 57 22.3 -0.5
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
CPUP **Villa Florida** 87.00 203 LR LR 07 32 47.3
comp=Z,23nm,20.9s,baz=28,slow=33
KMI **Kunming** 88.68 40 P **P** 06 57 33.3 +0.4
KMI pmax pmax
comp=Z,9.0nm,0.5s
CMAR **Chiang Mai Arr** 93.44 46 LR LR 07 42 03.9
comp=Z,44nm,18.5s,baz=145,slow=37
BOSA **Boshof** 98.86 132 LR LR 07 41 29.3
comp=Z,102nm,18.3s,baz=1.0,slow=34
TAOE **Nuku Hiva Isla** 107.01 281 *e*LR LR 07 34 17.2
comp=Z,196nm,23.9s
PPT2 **Papeete2** 119.23 284 *e*LR LR 07 39 51.8
comp=Z,103nm,24.5s
TBI **Tubuai** 123.96 281 *e*LR LR 07 42 05.9
comp=Z,233nm,37.8s
WR1 **Warramunga Arr** 140.33 20 *e*PKPdf **PKPdf** 07 04 06.4 -1.7
WRA **Warramunga Arr** 140.33 20 PKP **PKPdf** 07 04 06.4 -1.7
comp=Z,1.1nm,1.0s,baz=19,slow=3.5,SNR=3.1
DZM **Mont Dzuac** 141.38 332 *e*LR LR 07 50 17.5
comp=Z,114nm,29.1s
ASAR **Alice Springs** 143.87 22 PKP PKPab 07 04 11.3 -0.2
comp=Z,0.4nm,0.7s,baz=354,slow=2.7,SNR=6.0

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*IDC **26** 06:47:35.8±0.8, 2°.40S×139°.90E, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.9/27, mbtmp4.0/7, ML4.4/1, MS3.3/6, Ms1 3.3/6, ms1mx3.0/23, Error ellipse: s-maj=20.2km s-min=9.6km az=7.0*
*ISCJB **26** 06:47:37.6±0.7, 2°.48S±0°.08×139°.92E±0°.10, h25km, mb3.8/5, MS3.4/4, Error ellipse: s-maj=15.6km s-min=9.8km az=30.1*
ISC 26 06:47:39.0±0.9, 2°.6S±0°.1×140°.0E±0°.1, h25km, n21, σ2.50/13, mb4.0/5, MS3.4/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	0.76	87	Pg	**Pb**	06 47 52.3	-1.2
	256nm,0.3s,baz=248,slow=10.0,SNR=334						
JAY				Lg	Lg	06 48 02.4	
	522nm,0.3s,baz=116,slow=22,SNR=19						
JAY				LR	LR	06 48 29.9	
	comp=Z,642nm,18.5s,baz=250,slow=66						
SIJI	**Sorong**	8.84	281	LR	LR	06 53 52.7	
	comp=Z,92nm,21.1s,baz=100,slow=43						
GUMO	**Guam**	16.77	17	LR	LR	06 58 15.2	
	comp=Z,59nm,18.4s,baz=176,slow=38						
WRA	**Warramunga Arr**	18.13	197	P	**P**	06 51 50.6	+1.3
	1.3nm,0.3s,baz=21,slow=12,SNR=28						
WRA				S	**Sn**	06 55 09.5	-1.5
	0.3nm,0.3s,baz=21,slow=30,SNR=5.3						
FITZ	**Fitzroy Crossi**	20.87	221	P	**P**	06 52 20.8	+1.4
	5.2nm,0.7s,baz=41,slow=10,SNR=11						
FITZ				S	**S**	06 56 04.5	-6.4
	4.8nm,0.9s,baz=119,slow=1.5,SNR=4.8						
FITZ				LR	LR	07 01 36.0	
	comp=Z,122nm,21.2s,baz=33,slow=40						
ASAR	**Alice Springs**	21.79	195	P	**P**	06 52 30.1	+0.9
	1.8nm,0.4s,baz=23,slow=11,SNR=34						
ASAR				S	**S**	06 56 31.6	+2.5
	0.8nm,0.6s,baz=16,slow=26,SNR=5.0						
STKA	**Stephens Creek**	29.20	177	LR	LR	07 08 20.6	
	comp=Z,108nm,18.2s,baz=270,slow=42						
H11S3	**WAKE ISLAND Hy**	33.62	50	T	T	07 29 33.7	
	baz=232,slow=75,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	33.63	50	T	T	07 29 29.5	
	baz=232,slow=75,SNR=6.5						
H11S1	**WAKE ISLAND Hy**	33.64	50	T	T	07 29 31.0	
	baz=232,slow=75,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	34.50	49	T	T	07 30 37.4	
	baz=233,slow=75,SNR=7.6						
H11N2	**WAKE ISLAND Hy**	34.51	49	T	T	07 30 38.4	
	baz=233,slow=75,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	34.51	49	T	T	07 30 40.4	
	baz=233,slow=75,SNR=4.5						
KSRS	**Korea Array**	41.35	345	LR	LR	07 08 59.6	
	comp=Z,69nm,21.4s,baz=160,slow=31						
USRK	**Ussuriysk Ar.**	47.09	352	LR	LR	07 11 25.7	
	comp=Z,38nm,20.5s,baz=163,slow=30						
MKAR	**Makanchi Array**	70.43	322	P	**P**	06 58 52.1	+0.8
	0.5nm,0.4s,baz=96,slow=9.4,SNR=7.1						
ZALV	**Zalesovo Beam**	72.43	329	P	**P**	06 59 03.0	-0.1
	0.6nm,0.4s,baz=137,slow=6.6,SNR=2.6						
VNDA	**Vanda**	75.82	175	P	**P**	06 59 24.6	+2.1
	0.4nm,0.9s,baz=332,slow=6.4,SNR=2.5						
ILAR	**Eielson Array**	85.18	24	P	**P**	07 00 11.8	-1.2
	0.9nm,0.7s,baz=261,slow=4.5,SNR=9.5						
DBIC	**Dimbokro**	144.69	278	PKP	**PKPab**	07 07 13.6	+0.1
	3.7nm,0.4s,baz=85,slow=3.2,SNR=12						
LPAZ	**La Paz**	146.53	125	PKPbc	**PKPab**	07 07 21.2	+0.3
	1.2nm,0.6s,baz=281,slow=3.3,SNR=5.8						

IDC 26 07:06:56.8±9.6, 20°.50S×179°.04W, h552km±110km, mb2.8/5, mb1 3.3/5, mb1mx3.0/26, mbtmp3.7/5, Error ellipse: s-maj=134.0km s-min=35.1km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	43.57	257	P	P	07 14 12.4	-0.2
	0.4nm,0.6s,baz=93,slow=8.4,SNR=7.2						
NVAR	**Mina Array Bea**	81.70	44	P	P	07 18 18.4	+0.2
	0.3nm,0.6s,baz=225,slow=8.9,SNR=5.0						
TXAR	**Lajitas Array**	87.88	58	P	P	07 18 48.9	+0.6
	0.3nm,0.7s,baz=234,slow=3.1,SNR=3.9						
ILAR	**Eielson Array**	88.53	13	P	P	07 18 50.5	+0.2
	0.4nm,0.5s,baz=222,slow=5.7,SNR=5.6						
PDAR	**Pinedale Array**	89.63	44	P	P	07 18 54.9	-1.5
	0.4nm,0.6s,baz=236,slow=4.5,SNR=4.8						
ARCES	**ARCESS Array B**	128.74	349	PKP	PKiKP	07 25 01.8	+0.1
	1.3nm,0.7s,baz=72,slow=2.9,SNR=4.0						
AKASG	**Malin Array Be**	142.54	330	PKP	PKPdf	07 25 25.0	-2.0
	0.6nm,0.3s,baz=46,slow=3.8,SNR=2.1						

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*ISCJB **26** 07:18:45.4±0.4, 24°.83N±0°.02×122°.10E±0°.02, h0km±4km, Error ellipse: s-maj=3.1km s-min=2.7km az=33.1*
*TAP **26** 07:18:45.4, 24°.84N×122°.06E, h8km, ML3.1, C*
*JMA **26** 07:18:46.3±0.1, 24°.84N×122°.02E, h27km, M2.7*
ISC 26 07:18:45.6±0.8, 24°.85N±0°.02×122°.05E±0°.02, h14km±5km, n64, σ0.53/88, Taiwan region

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

EGS		**0.11 270**	*i* P		**Pg**	**07 18 48.5**	**-0.3**
	baz=271						
EGS			*i* S		**Sg**	**07 18 50.5**	**-0.5**
	baz=271						
TWB1	**Santiao Chiao**	**0.17 341**	*i* P		**Pg**	**07 18 49.7**	**0.0**
	baz=342						
TWB1			*i* S		**Sg**	**07 18 52.5**	**+0.1**
	baz=342						
NTC	**Toucheng**	**0.20 272**	*e*P		**Pg**	**07 18 50.3**	**+0.2**
	baz=273						
NTC			*e*S		**Sg**	**07 18 53.4**	**+0.2**
	baz=273						
TIPB	**Shuangxi**	**0.24 302**	*i* P		**Pg**	**07 18 51.2**	**+0.4**
	baz=301						
TIPB			S		**Sg**	**07 18 54.7**	**+0.3**
	baz=301						
TWC	**Suao**	**0.30 218**	P		**Pg**	**07 18 51.7**	**-0.1**
	baz=218						
EOS1	**EOS1**	**0.30 167**	*e*P		**Pg**	**07 18 52.5**	**+0.6**
	baz=166						
EOS1			*e*S		**Sg**	**07 18 56.8**	**+0.7**
	baz=166						
NWF	**Wu-fen Shan**	**0.33 313**	*e*P		**Pb**	**07 18 53.1**	**-0.2**
	baz=300						
NWF			*e*S		**Sb**	**07 18 58.2**	**-0.3**
	baz=300						
WFSB	**Wu-fen Shan**	**0.33 313**	*e*P		**Pb**	**07 18 53.1**	**-0.2**
	baz=312						
WFSB			*e*S		**Sb**	**07 18 58.1**	**-0.3**
	baz=312						
TWE	**Neicheng**	**0.37 250**	P		**Pg**	**07 18 53.2**	**+0.2**
	baz=250						
TWE			*e*S		**Sg**	**07 18 57.6**	**-0.6**
	baz=250						
ENTT	**Nioudou**	**0.49 245**	P		**Pb**	**07 18 55.6**	**-0.3**
	baz=245						
ENTT			*e*S		**Sg**	**07 19 01.8**	**+0.1**
	baz=245						
NHDH	**Xindian Distri**	**0.49 284**	*e*P		**Pb**	**07 18 56.4**	**+0.4**
	baz=275						
NHDH			*e*S		**Sg**	**07 19 02.4**	**+0.5**
	baz=275						
NANB	**Nanao**	**0.50 213**	P		**Pg**	**07 18 55.4**	**-0.1**
	baz=219						
NANB			*e*S		**Sg**	**07 19 02.1**	**0.0**
	baz=219						
ENA	**Nanau**	**0.50 214**	*e*P		**Pg**	**07 18 55.7**	**+0.2**
	baz=219						
ENA			*e*S		**Sg**	**07 19 01.9**	**-0.4**
	baz=219						
TATO	**Taipei**	**0.53 284**	*e*P		**Pb**	**07 18 56.6**	**+0.1**
	baz=276						
TATO			*e*S		**Sg**	**07 19 03.2**	**+0.2**
	baz=276						
YM01	**YM01**	**0.53 305**	P		**Pb**	**07 18 57.1**	**+0.5**
	baz=303						
YM01			*e*S		**Sg**	**07 19 03.2**	**+0.1**
	baz=303						
YM08	**YM08**	**0.54 309**	*e*P		**Pb**	**07 18 57.0**	**+0.1**
	baz=308						
YM10	**YM10**	**0.54 305**	*e*P		**Pb**	**07 18 57.3**	**+0.5**
	baz=304						
YM05	**YM05**	**0.54 306**	P		**Pb**	**07 18 57.3**	**+0.4**
	baz=305						
YM04	**YM04**	**0.56 303**	P		**Pb**	**07 18 57.5**	**+0.4**
	baz=303						
YM03	**YM03**	**0.57 306**	*e*P		**Pb**	**07 18 57.7**	**+0.3**
	baz=305						
TWY	**Chenhua**	**0.59 316**	P		**Pb**	**07 18 58.4**	**+0.7**
	baz=316						
TWS1	**Kuangyinshan**	**0.63 294**	*e*P		**Pn**	**07 18 59.3**	**-0.7**
	baz=294						
NTST	**Danshui**	**0.63 300**	*e*P		**Pn**	**07 18 59.2**	**-0.9**
	baz=307						
YHNB	**Yeheng**	**0.64 254**	*e*P		**Pg**	**07 18 58.0**	**-0.1**
	baz=264						
NSK	**Sanguang**	**0.65 255**	*e*P		**Pg**	**07 18 58.1**	**-0.2**
	baz=264						
NNS	**Nan Shan**	**0.74 237**	*e*P		**Pn**	**07 19 01.0**	**-0.7**
	baz=237						
NNSB	**Datong**	**0.74 236**	*e*P		**Pg**	**07 19 00.2**	**+0.2**
	baz=236						
PCYT	**Pengchaiyu**	**0.78 1**	*e*P		**Pn**	**07 19 02.0**	**-0.2**
	baz=353						
NACB	**Ninganchiao**	**0.79 212**	P		**Pb**	**07 19 00.9**	**-0.2**
	baz=200						
NACB			S		**Sb**	**07 19 10.6**	**-0.9**
	baz=200						
ETLH	**Xiulin Townshi**	**0.82 219**	*e*P		**Pg**	**07 19 01.8**	**+0.3**
	baz=230						
ETLH			*e*S		**Sg**	**07 19 12.6**	**+0.3**
	baz=230						
TWD	**Chiawan**	**0.87 209**	P		**Pg**	**07 19 02.7**	**+0.3**
	baz=197						
TWD			*e*S		**Sb**	**07 19 13.1**	**-0.7**
	baz=197						
JYNG	**Yonaguni jima**	**0.90 116**	P		**Pb**	**07 19 03.2**	**+0.2**
JYNG			S		**Sg**	**07 19 15.6**	**+0.7**
YOJ	**Yonaguni jima**	**0.95 113**	*e*P		**Pb**	**07 19 03.8**	**-0.1**
	baz=114						
YOJ			*e*S		**Sb**	**07 19 16.0**	**-0.3**
	baz=114						
YOJ	**Yonaguni jima**	**0.95 113**	P		**Pb**	**07 19 03.7**	**-0.1**
YOJ			*e*S		**Sg**	**07 19 16.9**	**+0.4**
LIOB	**Emei**	**0.96 258**	*e*P		**Pn**	**07 19 05.6**	**+1.0**
	baz=251						
NSTT	**Nanjuang**	**0.98 258**	*e*P		**Pg**	**07 19 05.7**	**+1.2**
	baz=258						
TWT	**Tachien**	**0.99 234**	*e*P		**Pn**	**07 19 06.1**	**+0.9**
	baz=226						
WHF	**Hehuan Shan**	**1.00 226**	*e*P		**Pn**	**07 19 05.7**	**+0.1**
	baz=225						
TDCB	**Techi**	**1.00 234**	*e*P		**Pg**	**07 19 05.7**	**+0.7**
	baz=226						
ENLB	**Shoufeng**	**1.02 204**	*e*S		**Sn**	**07 19 19.9**	**+0.3**
	baz=210						
CHGB	**Renai**	**1.12 226**	*e*P		**Pg**	**07 19 07.4**	**+0.2**
	baz=225						
WHP	**Taichung City**	**1.15 241**	*e*P		**Pg**	**07 19 08.6**	**+0.7**
	baz=241						
ESL	**Shilin**	**1.17 209**	*e*P		**Pb**	**07 19 07.9**	**+0.3**
	baz=205						
OWD	**Renai**	**1.19 222**	*e*P		**Pg**	**07 19 08.7**	**+0.1**
	baz=221						
DPDB	**Guoxing**	**1.31 232**	*e*P		**Pg**	**07 19 12.3**	**+1.6**
	baz=220						
VWDT	**VWDT**	**1.37 218**	*e*P		**Pg**	**07 19 11.8**	**-0.1**
	baz=206						
SMLT	**Sun Moon Lake**	**1.42 228**	*e*P		**Pg**	**07 19 13.8**	**+0.9**
	baz=228						
TYC	**Yuchr**	**1.44 230**	*e*P		**Pg**	**07 19 13.1**	**-0.2**
	baz=218						
SSLB	**Suanglung**	**1.45 224**	*e*P		**Pg**	**07 19 13.2**	**-0.3**
	baz=223						
HGSD	**Ruisui**	**1.46 203**	*e*P		**Pg**	**07 19 13.4**	**-0.4**
	baz=217						
EHY	**Hungye**	**1.49 207**	*e*P		**Pg**	**07 19 13.8**	**-0.4**
	baz=201						
YULB	**Yu-li**	**1.60 206**	*e*P		**Pb**	**07 19 15.3**	**+0.4**
	baz=200						
IRIF	**Iriomote-Funau**	**1.61 108**	P		**Pn**	**07 19 13.0**	**-0.5**
IRIF			S		**Sn**	**07 19 33.2**	**-0.9**
TWF1	**Yuli**	**1.64 205**	*e*P		**Pb**	**07 19 15.9**	**+0.4**
	baz=217						
YUS	**Yu-Shan**	**1.68 217**	*e*P		**Pb**	**07 19 17.2**	**+0.6**
	baz=227						
CHN5	**Tsauling**	**1.77 226**	*e*P		**Pg**	**07 19 19.8**	**+0.3**
	baz=226						
HATJ	**Hateruma jima**	**1.78 116**	P		**Pn**	**07 19 16.1**	**+0.2**
HATJ			S		**Sn**	**07 19 37.6**	**-0.7**
JKRS	**Kuro-shima**	**1.88 108**	P		**Pn**	**07 19 17.5**	**+0.2**
JKRS			S		**Sn**	**07 19 40.6**	**-0.2**
JIJ	**Ishigaki jima**	**1.96 104**	P		**Pn**	**07 19 19.0**	**+0.6**
JIJ			S		**Sn**	**07 19 43.4**	**+0.6**
CHN4	**Tsaushan**	**2.00 222**	*e*P		**Pg**	**07 19 23.4**	**-0.5**
	baz=222						
TPUB	**Ta-pu**	**2.01 220**	*e*P		**Pg**	**07 19 23.2**	**-1.0**
	baz=221						
WTP	**Ta-pu**	**2.06 220**	*e*P		**Pg**	**07 19 24.2**	**-1.0**
	baz=220						
TWK	**Hsinying**	**2.12 223**	*e*P		**Pb**	**07 19 24.8**	**+0.9**
	baz=222						
SLGT	**Liugui**	**2.25 215**	*e*P		**Pb**	**07 19 26.2**	**+0.3**
	baz=211						

*ISCJB **26** 07:20:09.8±1.2,31°.78S±0°.05×70°.16W±0°.06,*
h118km±11km,Error ellipse: s-maj=8.7km s-min=6.4km
az=41.2
*GUC **26** 07:20:09.8±0.8,31°.85S×70°.47W,h124km±10km,ML2.9*
*SJA **26** 07:20:09.8±0.5,31°.81S×70°.12W,h115km±5km,ML3.4,*
MW3.5

ISC 26 07:20:10.6±2.2,31°.80S±0°.05×70°.17W±0°.05,
h114km±19km,n11,σ0°61/19,2C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**0.79**	**123**	*e*P	**Pn**	**07 20 30.2**	**-0.1**
AUSP				*e*S	**Sn**	**07 20 45.9**	**+0.6**
CO02	**Combarbal**	**0.93**	**309⇑**	*i*P	**Pn**	**07 20 31.5**	**+0.1**
CO02				*e*S	**Sn**	**07 20 47.3**	**+0.1**
ROCH	**El Roble**	**1.37**	**211⇑**	*i*P	**Pn**	**07 20 35.7**	**-0.7**
ROCH				*e*S	**Sn**	**07 20 54.6**	**-1.3**
ROCH				IAML		07 20 56.6	
	comp=N,360nm,0.7s						
RTLL	**Cerro Villicun**	**1.52**	**73**	*e*P	**Pn**	**07 20 37.5**	**-0.3**
RTLL				*e*S	**Sn**	**07 20 58.2**	**-0.3**
RTLL				IAML		07 20 59.7	
	comp=E,348nm,0.4s						
FCH	**Farellones**	**1.53**	**184**	*e*P	**Pn**	**07 20 38.5**	**+0.2**
FCH				*e*S	**Sn**	**07 21 00.4**	**+1.0**
FCH				IAML		07 21 02.6	
	comp=E,150nm,0.2s						
CFA	**Coronel Fontan**	**1.65**	**84**	*e*P	**Pn**	**07 20 39.4**	**-0.1**
CFA				*e*S	**Sn**	**07 21 01.1**	**-0.3**
AMOG	**MOGNA**	**1.67**	**60**	*e*P	**Pn**	**07 20 39.9**	**+0.2**
AMOG				*e*S	**Sn**	**07 21 01.6**	**-0.2**
STL	**Santa Lucia**	**1.69**	**194**	*e*P	**Pn**	**07 20 39.4**	**-0.5**
STL				IAML		07 21 04.2	
	comp=N,146nm,0.3s						
GO04	**Tololo Observa**	**1.71**	**341**	*e*P	**Pn**	**07 20 40.6**	**+0.3**
LMEL	**Las Melosas**	**2.05**	**181**	*e*P	**Pn**	**07 20 44.6**	**+0.1**
LMEL				*i* S	**Sn**	**07 21 11.5**	**+1.1**
LMEL				IAML		07 21 15.6	
ACAN	**Cantantal**	**2.57**	**101**	*e*P	**Pn**	**07 20 50.9**	**-0.2**

*TAP **26** 07:24:30.6,24°.84N×122°.05E,h9km,ML2.9,B*
*ISCJB **26** 07:24:31.0±0.3,24°.84N±0°.02×122°.05E±0°.02,h10km±3km,*
Error ellipse: s-maj=3.2km s-min=3.1km az=8.0
*JMA **26** 07:24:31.8±0.1,24°.84N×121°.99E,h32km,M2.3*

ISC 26 07:24:31.1±0.9,24°.83N±0°.02×122°.05E±0°.02,h9km±7km,
n50,σ0°64/75,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.11**	**277**	*i* P	**Pg**	**07 24 33.6**	**-0.2**
	baz=268						
EGS				*e*S	**Sg**	**07 24 35.4**	**-0.2**
	baz=268						
TWB1	**Santiao Chiao**	**0.19**	**342**	*i* P	**Pg**	**07 24 34.7**	**-0.3**
	baz=343						
TWB1				S	**Sg**	**07 24 37.4**	**-0.3**
	baz=343						
NTC	**Toucheng**	**0.20**	**277**	P	**Pg**	**07 24 35.4**	**+0.1**
	baz=273						
NTC				*e*S	**Sg**	**07 24 38.5**	**+0.3**
	baz=273						
TIPB	**Shuangxi**	**0.25**	**304**	P	**Pg**	**07 24 36.2**	**0.0**
	baz=301						
TIPB				S	**Sg**	**07 24 39.7**	**+0.1**
	baz=301						
TWC	**Suao**	**0.29**	**220**	P	**Pg**	**07 24 36.9**	**0.0**
	baz=226						
TWC				S	**Sg**	**07 24 40.6**	**-0.2**
	baz=226						
EOS1	**EOS1**	**0.29**	**166**	*e*P	**Pg**	**07 24 37.8**	**+0.9**
	baz=164						
EOS1				*e*S	**Sg**	**07 24 42.7**	**+1.9**
	baz=164						
NWF	**Wu-fen Shan**	**0.34**	**314**	*e*P	**Pg**	**07 24 38.2**	**+0.2**
	baz=304						
NWF				*e*S	**Sg**	**07 24 43.1**	**+0.6**
	baz=304						
WFSB	**Wu-fen Shan**	**0.34**	**314**	*e*P	**Pg**	**07 24 38.1**	**+0.2**
	baz=303						
WFSB				*e*S	**Sg**	**07 24 43.0**	**+0.5**
	baz=303						
TWE	**Neicheng**	**0.37**	**253**	P	**Pg**	**07 24 38.3**	**0.0**
	baz=250						
ENTT	**Nioudou**	**0.48**	**247**	*e*P	**Pg**	**07 24 40.7**	**+0.2**
	baz=246						
NANB	**Nanao**	**0.49**	**214**	*e*P	**Pg**	**07 24 40.6**	**0.0**
	baz=221						
NANB				*e*S	**Sg**	**07 24 47.2**	**+0.2**
	baz=221						
ENA	**Nanau**	**0.49**	**215**	*e*P	**Pg**	**07 24 41.0**	**+0.4**
	baz=221						
ENA				*e*S	**Sg**	**07 24 47.6**	**+0.5**
	baz=221						
NHDH	**Xindian Distri**	**0.50**	**285**	*e*S	**Sg**	**07 24 47.9**	**+0.6**
	baz=275						
NWLT	**Wulai**	**0.50**	**264**	*e*P	**Pg**	**07 24 40.7**	**-0.2**
	baz=263						
TATO	**Taipei**	**0.53**	**286**	*e*S	**Sg**	**07 24 48.3**	**-0.2**
	baz=276						
YM01	**YM01**	**0.54**	**306**	*e*P	**Pg**	**07 24 42.2**	**+0.6**
	baz=303						
YM01				*e*S	**Sg**	**07 24 49.2**	**+0.5**
	baz=303						
YM08	**YM08**	**0.55**	**310**	*e*P	**Pg**	**07 24 42.0**	**+0.2**
	baz=300						
YM10	**YM10**	**0.55**	**306**	*e*P	**Pg**	**07 24 42.4**	**+0.5**
	baz=304						
YM05	**YM05**	**0.55**	**307**	*e*P	**Pg**	**07 24 42.4**	**+0.5**
	baz=305						
YM04	**YM04**	**0.57**	**305**	*e*P	**Pg**	**07 24 42.6**	**+0.4**
	baz=302						
YM03	**YM03**	**0.58**	**307**	*e*P	**Pg**	**07 24 42.7**	**+0.3**
	baz=305						
ANP	**Anpu**	**0.60**	**306**	*e*P	**Pg**	**07 24 42.9**	**+0.1**
	baz=305						
TWY	**Chenhua**	**0.60**	**317**	*e*P	**Pg**	**07 24 43.3**	**+0.5**
	baz=315						
TWY				*e*S	**Sg**	**07 24 50.9**	**+0.1**
	baz=315						
TWS1	**Kuangyinshan**	**0.64**	**295**	*e*P	**Pg**	**07 24 44.1**	**+0.7**
	baz=294						
YHNB	**Yeheng**	**0.64**	**255**	*e*P	**Pg**	**07 24 43.0**	**-0.5**
	baz=255						
YHNB				*e*S	**Sg**	**07 24 52.8**	**+1.0**
	baz=255						
NTST	**Danshui**	**0.64**	**301**	*e*P	**Pg**	**07 24 44.1**	**+0.6**
	baz=300						
NSK	**Sanguang**	**0.65**	**256**	*e*P	**Pg**	**07 24 43.1**	**-0.6**
	baz=264						
NNSB	**Datong**	**0.73**	**237**	*e*P	**Pg**	**07 24 45.2**	**-0.1**
	baz=243						
NACB	**Ninganchiao**	**0.78**	**213**	*e*P	**Pg**	**07 24 46.3**	**+0.2**
	baz=206						
NACB				*e*S	**Sg**	**07 24 56.2**	**0.0**
	baz=206						
PCYT	**Pengchaiyu**	**0.80**	**1**	*e*P	**Pg**	**07 24 47.1**	**+0.7**
	baz=342						
ETLH	**Xiulin Townshi**	**0.81**	**220**	*e*P	**Pb**	**07 24 46.8**	**-0.6**
	baz=232						
ETLH				*e*S	**Sg**	**07 24 57.0**	**-0.4**
	baz=232						
TWD	**Chiawan**	**0.86**	**209**	*e*P	**Pb**	**07 24 47.3**	**-0.8**
	baz=203						
TWD				*e*S	**Sb**	**07 24 58.5**	**-1.2**
	baz=203						
JYNG	**Yonagunijimaku**	**0.90**	**115**	P	**Pb**	**07 24 48.8**	**0.0**
JYNG				S	**Sb**	**07 25 00.9**	**0.0**
YOJ	**Yonaguni jima**	**0.95**	**113**	*e*P	**Pb**	**07 24 48.9**	**-0.8**
	baz=114						
YOJ				*e*S	**Sb**	**07 25 01.6**	**-0.7**
	baz=114						
YOJ	**Yonaguni jima**	**0.95**	**113**	P	**Pb**	**07 24 49.8**	**+0.1**
YOJ				S	**Sb**	**07 25 02.5**	**+0.2**
LIOB	**Emei**	**0.96**	**259**	*e*P	**Pb**	**07 24 49.9**	**0.0**
	baz=259						
NSTT	**Nanjuang**	**0.98**	**258**	*e*P	**Pb**	**07 24 50.6**	**+0.4**
	baz=258						
WHF	**Hehuan Shan**	**0.99**	**227**	*e*P	**Pb**	**07 24 50.0**	**-0.7**
	baz=228						
WHF				*e*S	**Sb**	**07 25 03.5**	**-0.5**
	baz=228						
CHGB	**Renai**	**1.11**	**226**	*e*P	**Pb**	**07 24 52.1**	**-0.5**
	baz=228						
OWD	**Renai**	**1.18**	**223**	*e*P	**Pn**	**07 24 53.2**	**-0.8**
	baz=224						
VWDT	**VWDT**	**1.36**	**218**	*e*P	**Pn**	**07 24 56.8**	**+0.6**
	baz=229						
VWDT				*e*S	**Sn**	**07 25 14.6**	**+0.3**
	baz=229						
TYC	**Yuchr**	**1.43**	**230**	*e*P	**Pn**	**07 24 56.6**	**-0.6**
	baz=222						
SSLB	**Suanglung**	**1.44**	**224**	*e*P	**Pn**	**07 24 57.9**	**+0.4**
	baz=226						
YULB	**Yu-li**	**1.59**	**206**	*e*P	**Pn**	**07 24 59.6**	**+0.2**
	baz=211						
IRIF	**Iriomote-Funau**	**1.60**	**108**	P	**Pn**	**07 24 58.8**	**-0.8**
HATJ	**Hateruma jima**	**1.77**	**115**	P	**Pn**	**07 25 01.7**	**-0.2**
HATJ				S	**Sn**	**07 25 23.2**	**-1.4**
JKRS	**Kuro-shima**	**1.88**	**108**	P	**Pn**	**07 25 02.6**	**-0.8**
JKRS				S	**Sn**	**07 25 26.5**	**-0.7**
JIJ	**Ishigaki jima**	**1.96**	**103**	P	**Pn**	**07 25 05.5**	**+1.0**
JIJ				*e*S	**Sn**	**07 25 29.3**	**+0.1**
CHN4	**Tsaushan**	**1.99**	**222**	*e*P	**Pb**	**07 25 08.9**	**+1.4**
	baz=230						
CHN4				*e*S	**Sb**	**07 25 34.4**	**+2.1**
	baz=230						
TPUB	**Ta-pu**	**2.00**	**221**	*e*S	**Sg**	**07 25 35.4**	**-0.1**
	baz=214						

*IDC **26** 08:18:09.9±0.8,27°.58N×52°.38E,h0km,mb4.1/15,*
mb1 4.1/19,mb1mx4.0/39,mbtmp4.0/19,ML3.7/4,MS2.4/1,
Ms1 2.4/1,ms1mx2.1/31,Error ellipse: s-maj=19.5km
s-min=16.8km az=9.0
*ISCJB **26** 08:18:11.2±0.3,27°.67N±0°.03×52°.27E±0°.03,h14km,*
mb4.2/31,MS4.0/1,Error ellipse: s-maj=4.9km
s-min=2.9km az=136.1
*TEH **26** 08:18:12.8,27°.67N×52°.29E,h20km,ML3.8*
*NEIC **26** 08:18:12.3±0.0,27°.66N×52°.25E,h16km,mb4.2/16,*
MN3.9(TEH),After TEH.
*DSN **26** 08:18:17.4±0.7,27°.55N×52°.69E,h10km,ML4.1/8,Error*
ellipse: s-maj=18.1km s-min=5.6km az=35.0

ISC 26 08:18:12.2±0.5,27°.64N±0°.05×52°.34E±0°.04,h14km,n119,
σ1°47/125,mb4.1/32,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.79**	**112**	*e*Pg	**Pn**	**08 18 29.5**	**+0.6**
LMD1				*e*Sg	**Sn**	**08 18 41.1**	**+0.6**
GHIR	**Ghir-Karzin**	**0.86**	**41**	*e*Pg	**Pg**	**08 18 28.5**	**-0.4**
JHRM	**Jahrom**	**1.39**	**51**	*e*Pg	**Pg**	**08 18 40.4**	**+1.4**
SHI	**Shiraz**	**2.00**	**4**	*e*Pn	**Pb**	**08 18 47.4**	**-1.1**
SHI				IAMB	IAmb	08 19 26.3	
	comp=N,6μm,0.8s						
IKAZ	**Kazeroun**	**2.18**	**348**	*e*Pn	**Pb**	**08 18 49.7**	**-1.9**
IKAZ				IAMB	IAmb	08 19 31.2	
	comp=Z,11μm,0.4s						
IPAR	**Pars**	**2.28**	**16**	*e*Pn	**Pb**	**08 18 52.1**	**-1.2**
KLNJ	**Kolanjah**	**3.42**	**349**	*e*Pn	**Pn**	**08 19 06.2**	**+0.8**
AJN	**Ajban**	**3.88**	**142**	*e*Pn	**Pn**	**08 19 14.8**	**+3.4**
BANOM	**Banah**	**3.93**	**115**	*i* P	**Pn**	**08 19 13.9**	**+1.8**
	SNR=20						
NAZ	**Nazwa, Dubai**	**3.98**	**131**	*i* P	**Pn**	**08 19 15.6**	**+2.9**
	SNR=27						
NAZ	**Nazwa, Dubai**	**3.98**	**131**	*e*Pn	**Pn**	**08 19 15.7**	**+2.9**
ASUD	**Al Ashush, Dub**	**4.03**	**137**	*i* P	**Pn**	**08 19 15.9**	**+2.5**
	SNR=46						
ASUD	**Al Ashush, Dub**	**4.03**	**137**	*e*Pn	**Pn**	**08 19 16.7**	**+3.3**
FAQ	**Al Faqa, Dubai**	**4.10**	**134**	*i* P	**Pn**	**08 19 16.1**	**+1.7**
	SNR=18						
FAQ	**Al Faqa, Dubai**	**4.10**	**134**	*e*Pn	**Pn**	**08 19 17.6**	**+3.1**
MSFE	**Esma-Masafi**	**4.11**	**123**	*i* P	**Pn**	**08 19 16.1**	**+1.6**
	SNR=23						
MSFE				S	**Sn**	**08 20 02.1**	**-0.4**
MSFE	**Esma-Masafi**	**4.11**	**123**	*e*Pn	**Pn**	**08 19 16.6**	**+2.0**
IRAM	**Ramesheh**	**4.16**	**0**	*e*Pn	**Pn**	**08 19 16.1**	**+0.7**
IRAM				IAMB	IAmb	08 20 33.1	
	comp=Z,642nm,0.6s						
IMEH	**Mehriz**	**4.23**	**27**	*e*Pn	**Pn**	**08 19 19.2**	**+2.7**
IMEH				IAMB	IAmb	08 19 21.9	
	comp=Z,2μm,0.2s						
MDH	**Madha**	**4.24**	**122**	P	**Pn**	**08 19 17.7**	**+1.3**
MDH	**Madha**	**4.24**	**122**	*e*Pn	**Pn**	**08 19 18.2**	**+1.8**
NGRK	**Negar Kerman**	**4.34**	**62**	*e*Pn	**Pn**	**08 19 19.5**	**+1.3**
UOSS	**Minazif**	**4.38**	**127**	*e*Pn	**Pn**	**08 19 19.7**	**+1.3**
UOSS				*e*Sn	**Sn**	**08 20 07.8**	**-1.5**
UOSS	**Minazif**	**4.38**	**127**	*i* P	**Pn**	**08 19 19.6**	**+1.3**
	SNR=30						
UOSS	**Minazif**	**4.38**	**127**	*e*Pn	**Pn**	**08 19 20.2**	**+1.9**
HATD	**Hatta, Dubai**	**4.41**	**129**	*i* P	**Pn**	**08 19 20.4**	**+1.7**
	SNR=8.7						
HATD				S	**Sn**	**08 20 09.7**	**-0.2**
HATD	**Hatta, Dubai**	**4.41**	**129**	*e*Pn	**Pn**	**08 19 21.2**	**+2.5**
ISAD	**Sadrabad**	**4.42**	**15**	*e*Pn	**Pn**	**08 19 21.0**	**+1.9**
ISAD				IAMB	IAmb	08 19 23.0	
	comp=Z,836nm,0.2s						
ASHO	**Ashiyiah**	**4.45**	**131**	*i* P	**Pn**	**08 19 21.0**	**+1.7**
	SNR=28						
ASHO	**Ashiyiah**	**4.45**	**131**	*e*Pn	**Pn**	**08 19 21.6**	**+2.3**
TVBK	**TV Kerman**	**4.53**	**58**	*e*Pn	**Pn**	**08 19 22.9**	**+2.2**
KHGB	**Koh Gabri**	**4.54**	**52**	*e*Pn	**Pn**	**08 19 22.4**	**+1.8**
ALNE	**Al Ain**	**4.71**	**138**	*e*Pn	**Pn**	**08 19 25.7**	**+2.9**
MZR	**Muzera**	**4.73**	**167**	*e*Pn	**Pn**	**08 19 26.3**	**+3.2**
IGAR	**Gharneh**	**4.76**	**357**	*e*Pn	**Pn**	**08 19 25.1**	**+1.4**
ROKH	**ROKH**	**4.83**	**347**	*e*Pn	**Pn**	**08 19 25.3**	**+0.7**
CHMN	**Cheshme madani**	**5.07**	**63**	*e*Pn	**Pn**	**08 19 30.5**	**+2.4**
YZKH	**Yazd**	**5.12**	**22**	*e*Pn	**Pn**	**08 19 29.9**	**+1.3**
NASN	**Na'in**	**5.16**	**4**	*e*Pn	**Pn**	**08 19 29.6**	**+0.3**
IPIR	**Pirpir**	**5.18**	**346**	IAMB	IAmb	08 20 31.0	
	comp=Z,412nm,0.4s						
IZEF	**Zefreh**	**5.24**	**360**	*e*Pn	**Pn**	**08 19 30.4**	**0.0**
IKLH	**Kolahrood**	**5.70**	**354**	*e*Pn	**Pn**	**08 19 37.1**	**+0.4**
IKLH				IAMB	IAmb	08 19 44.9	
	comp=Z,335nm,0.2s						
HOQ	**Hoqain**	**6.04**	**131**	*e*Pn	**Pn**	**08 19 43.5**	**+2.4**
KRSH	**Karshahi**	**6.31**	**358**	*e*Pn	**Pn**	**08 19 45.7**	**+0.7**
KHMZ	**Khomeyn**	**6.42**	**342**	*e*Pn	**Pn**	**08 19 46.0**	**-0.5**
ASAO	**Ashtian**	**7.17**	**345**	*e*Pn	**Pn**	**08 19 56.7**	**-0.1**
WSAR	**Wadi Sarin**	**7.18**	**126**	Pn	**Pn**	**08 19 57.3**	**+0.6**
	comp=Z,3.1nm,0.3s,baz=308,slow=9.5,SNR=13						
WSAR				Sn	**Sn**	**08 21 14.5**	**-3.6**
	comp=Z,4.6nm,0.3s,baz=118,slow=15,SNR=7.5						
IVRN	**Varamin**	**7.35**	**356**	*e*Pn	**Pn**	**08 19 59.4**	**+0.2**
RAYN	**Ar Rayn**	**7.41**	**238**	*e*Pn	**Pn**	**08 20 01.8**	**+1.8**
RAYN				*

MK31	**Makanchi Array**	**30.30**	**43**	*e*P	**P**	**08 24 23.3**	**+0.3**
MK32	**Makanchi Array**	**30.30**	**43**	*e*P	**P**	**08 24 23.7**	**+0.7**
MK32				*e*PcP	**PcP**	**08 27 23.2**	**0.0**
MKAR	**Makanchi Array**	**30.30**	**43**	P	**P**	**08 24 23.7**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=250,slow=7.8,SNR=11						
MKAR				PcP	**PcP**	**08 27 23.2**	**0.0**
	comp=Z,0.3nm,0.5s,baz=257,slow=2.3,SNR=3.0						
WMQ	**Urumqi**	**32.63**	**51**	*e*P	**P**	**08 24 45.0**	**+1.4**
WMQ				sP	sP	08 24 53.8	+3.8
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				LR	LR		
	comp=N,140nm,29.2s						
WMQ				LR	LR		
	comp=E,420nm,29.1s						
WMQ				LR	LR		
	comp=Z,50nm,16.9s						
LANS	**Liptovska Anna**	**33.15**	**319**	*e*P	**P**	**08 24 50.0**	**+2.0**
VYHS	**Vyhne**	**33.22**	**318**	*e*P	**P**	**08 24 52.6**	**+4.0**
ZAA0	**Zalesovo Array**	**35.45**	**33**	*e*P	**P**	**08 25 07.3**	**-0.5**
ZALV	**Zalesovo Beam**	**35.45**	**33**	P	**P**	**08 25 08.1**	**+0.2**
	comp=Z,3.3nm,0.3s,baz=236,slow=8.8,SNR=12						
CLL	**Collm**	**37.82**	**320**	*e*pP	pP	08 25 31.0	-1.6
	comp=Z,5.0nm,0.6s						
FIA1	**FINESS Array S**	**38.10**	**340**	*e*P	**P**	**08 25 30.0**	**-0.3**
	comp=Z,1.9nm,0.6s						
FINES	**FINESS Array B**	**38.10**	**340**	P	**P**	**08 25 30.2**	**0.0**
	comp=Z,1.4nm,0.4s,baz=144,slow=9.2,SNR=17						
GTA	**Gaotai**	**40.86**	**61**	*e*P	**P**	**08 25 54.5**	**+0.7**
GTA				pP	pP	08 25 59.0	+0.9
GTA				sP	sP	08 26 01.8	+1.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STRU	**Stroemstad**	**42.24**	**330**	*e*P	**P**	**08 26 04.6**	**0.0**
OSL	**Oslo**	**42.90**	**331**	*e*P	**P**	**08 26 08.7**	**-1.3**
NC602	**NORSAR Array S**	**42.96**	**332**	*e*P	**P**	**08 26 10.2**	**-0.2**
NC405	**NORSAR Array S**	**43.09**	**332**	*e*P	**P**	**08 26 11.7**	**+0.2**
	comp=Z,11nm,0.6s						
KONO	**Kongsberg**	**43.25**	**330**	*e*P	**P**	**08 26 12.7**	**-0.1**
NB2	**NORSAR Subarra**	**43.25**	**332**	P	**P**	**08 26 12.6**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=121,slow=8.6						
NB2	**NORSAR Subarra**	**43.25**	**332**	P	**P**	**08 26 12.6**	**-0.3**
	baz=121,slow=8.6						
NOA	**NORSAR Array B**	**43.25**	**332**	P	**P**	**08 26 12.5**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=121,slow=8.2,SNR=11						
NAO01	**NORSAR Array S**	**43.29**	**332**	*e*P	**P**	**08 26 13.0**	**-0.2**
NAO01	**NORSAR Array S**	**43.29**	**332**	*e*P	**P**	**08 26 13.2**	**0.0**
NBO00	**NORSAR Array S**	**43.43**	**332**	*e*P	**P**	**08 26 14.3**	**0.0**
NBO00	**NORSAR Array S**	**43.43**	**332**	*e*P	**P**	**08 26 14.3**	**0.0**
NC204	**NORSAR Array S**	**43.56**	**332**	*e*P	**P**	**08 26 15.2**	**-0.2**
	comp=Z,8.1nm,1.0s						
NC204	**NORSAR Array S**	**43.56**	**332**	*e*P	**P**	**08 26 15.5**	**+0.1**
LZH	**Lanzhou**	**44.12**	**66**	*e*P	**P**	**08 26 18.8**	**-1.6**
LZH				pP	pP	08 26 22.0	-2.8
LZH				sP	sP	08 26 23.0	-3.5
ARCES	**ARCESS Array B**	**44.73**	**347**	P	**P**	**08 26 24.8**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=126,slow=28,SNR=6.8						
ARE0	**ARCESS Array S**	**44.73**	**347**	*e*P	**P**	**08 26 25.0**	**+0.3**
	comp=Z,0.2nm,0.8s						
KMI	**Kunming**	**44.97**	**81**	P	**P**	**08 26 29.0**	**+1.6**
KMI				pmax	pmax		
	comp=Z,25nm,0.5s						
SONA0	**Songino Array**	**46.22**	**49**	*e*P	**P**	**08 26 36.6**	**-0.4**
SONM	**Songino Array**	**46.22**	**49**	P	**P**	**08 26 36.6**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=245,slow=8.5,SNR=3.7						
ESK	**Eskdalemuir**	**48.28**	**321**	*e*P	**P**	**08 26 53.2**	**+0.5**
	comp=Z,9.9nm,1.1s						
TOA0	**Torodi Ar. Sit**	**49.28**	**264**	*e*P	**P**	**08 27 00.9**	**0.0**
	comp=Z,2.2nm,1.0s						
TOA1	**Torodi Ar. Sit**	**49.28**	**264**	*e*P	**P**	**08 27 01.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**49.28**	**264**	P	**P**	**08 27 01.4**	**+0.5**
	comp=Z,7.6nm,0.3s,baz=50,slow=11,SNR=7.9						
HHC	**Hu-ho-hao-te**	**49.83**	**59**	*e*P	**P**	**08 27 04.5**	**-0.4**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,23nm,5.2s						
DBIC	**Dimbokro**	**57.95**	**260**	P	**P**	**08 28 04.6**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=34,slow=7.3,SNR=4.2						
DBIC	**Dimbokro**	**57.95**	**260**	*e*P	**P**	**08 28 04.9**	**+0.4**
	comp=Z,5.8nm,1.1s						
KSRS	**Korea Array**	**62.92**	**60**	P	**P**	**08 28 36.2**	**-2.0**
	comp=Z,0.9nm,0.5s,baz=283,slow=5.4,SNR=4.2						
ILAR	**Eielson Array**	**86.68**	**8**	P	**P**	**08 30 54.6**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=317,slow=4.9,SNR=3.1						
YKA	**Yellowknife Ar**	**89.58**	**354**	P	**P**	**08 31 09.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=358,slow=3.5,SNR=3.5						
YKB5	**Yellowknife Ar**	**89.58**	**354**	*e*P	**P**	**08 31 09.1**	**+0.1**
WR1	**Warramunga Arr**	**92.31**	**111**	*e*P	**P**	**08 31 22.5**	**+0.1**
WRA	**Warramunga Arr**	**92.31**	**111**	P	**P**	**08 31 22.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=305,slow=2.9,SNR=3.1						
ASAR	**Alice Springs**	**93.72**	**115**	P	**P**	**08 31 28.4**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=298,slow=4.6,SNR=8.1						

*ISCJB **26** 08:18:29.4±0.4, 23°.63N±0°.02×122°.04E±0°.02, h19km±5km, Error ellipse: s-maj=3.5km s-min=2.1km az=44.7*
*JMA **26** 08:18:30.1±0.1, 23°.65N×121°.99E, h30km±4km, M2.5*
*TAP **26** 08:18:31.0, 23°.65N×121°.97E, h38km, ML3.1, C*
ISC 26 08:18:30.0±1.1, 23°.65N±0°.02×121°.98E±0°.02, h25km±11km, n59, σ0s63/115, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.43**	**305**	*e*P	**Pb**	**08 18 37.5**	**-1.5**
	baz=312						
ENLB				*e*S	**Sb**	08 18 44.2	-1.0
	baz=312						
HWA	**Hwalien**	**0.47**	**313**	*e*S	**Sn**	08 18 48.2	-0.4
	baz=314						
EGFH	**Guangfu**	**0.51**	**272**	*e*P	**Pb**	08 18 40.9	+0.5
	baz=272						
EGFH				*e*S	**Sb**	08 18 48.6	+1.2
	baz=272						
ESL	**Shilin**	**0.53**	**288**	*e*P	**Pb**	08 18 40.6	-0.1
	baz=282						
ESL				*e*S	**Sb**	08 18 48.8	+0.8
	baz=282						
HGSD	**Ruisui**	**0.54**	**253**	*i* P	**Pb**	08 18 41.1	+0.2
	baz=252						
HGSD				*e*S	**Sb**	08 18 48.6	+0.4
	baz=252						
TWD	**Chiawan**	**0.55**	**320**	*e*P	**Pn**	08 18 41.9	-0.3
	baz=322						
TWD				*e*S	**Sb**	08 18 49.3	+0.6
	baz=322						
EHY	**Hungye**	**0.62**	**256**	P	**Pb**	08 18 42.8	+0.5
	baz=256						
EHY				*e*S	**Sb**	08 18 51.6	+0.9
	baz=256						
NACB	**Ninganchiao**	**0.63**	**326**	*i* P	**Pb**	08 18 42.4	0.0
	baz=326						
NACB				*e*S	**Sb**	08 18 50.8	0.0
	baz=326						
YULB	**Yu-li**	**0.68**	**248**	*i* P	**Pb**	08 18 43.6	+0.4
	baz=261						
YULB				*e*S	**Sn**	08 18 53.2	-0.7
	baz=261						
TWF1	**Yuli**	**0.70**	**245**	P	**Pn**	08 18 44.0	-0.3
	baz=238						
TWF1				S	**Sn**	08 18 54.0	-0.3
	baz=238						
ETLH	**Xiulin Townshi**	**0.72**	**320**	*i* P	**Pb**	08 18 43.9	0.0
	baz=321						
ETLH				*e*S	**Sb**	08 18 53.7	+0.3
	baz=321						
VWDT	**VWDT**	**0.78**	**277**	*i* P	**Pn**	08 18 45.0	-0.3
	baz=278						
VWDT				*e*S	**Sn**	08 18 55.9	-0.4
	baz=278						
CHKT	**Chengkung**	**0.79**	**226**	*e*P	**Pn**	08 18 44.9	-0.6
	baz=218						
CHKT				*e*S	**Sb**	08 18 54.2	-1.3
	baz=218						
OWD	**Renai**	**0.80**	**292**	P	**Pn**	08 18 45.3	-0.5
	baz=292						
OWD				*e*S	**Sb**	08 18 56.1	+0.3
	baz=292						
NANB	**Nanao**	**0.80**	**345**	*e*P	**Pb**	08 18 45.6	+0.3
	baz=338						
NANB				*e*S	**Sn**	08 18 56.8	0.0
	baz=338						
ENA	**Nanau**	**0.80**	**344**	P	**Pn**	08 18 45.5	-0.2
	baz=339						
ENA				*e*S	**Sn**	08 18 56.5	-0.3
	baz=339						
WHF	**Hehuan Shan**	**0.82**	**307**	P	**Pn**	**08 18 45.8**	**-0.5**
	baz=307						
WHF				*e*S	**Sb**	08 18 56.7	0.0
	baz=307						
CHGB	**Renai**	**0.84**	**299**	*i* P	**Pn**	08 18 46.4	-0.1
	baz=299						
CHGB				*e*S	**Sb**	08 18 57.3	+0.1
	baz=299						
EOS1	**EOS1**	**0.90**	**8**	*e*P	**Pb**	08 18 47.3	+0.3
	baz=18						
EOS1				*e*S	**Sb**	08 18 59.2	+0.7
	baz=18						
NNSB	**Datong**	**0.95**	**325**	*e*P	**Pb**	08 18 48.1	+0.2
	baz=316						
NNSB				*e*S	**Sn**	08 19 00.2	-0.3
	baz=316						
TWT	**Tachien**	**0.95**	**309**	P	**Pb**	08 18 48.4	+0.5
	baz=309						
TWT				S	**Sb**	08 19 01.4	+1.2
	baz=309						
SSLB	**Suanglung**	**0.95**	**278**	*e*P	**Pn**	08 18 47.6	-0.2
	baz=278						
SSLB				*e*S	**Sn**	08 19 00.2	-0.4
	baz=278						
TWC	**Suao**	**0.96**	**353**	*e*P	**Pb**	08 18 48.6	+0.6
	baz=353						
TWC				S	**Sb**	08 19 01.6	+1.4
	baz=353						
NNS	**Nan Shan**	**0.96**	**325**	*e*P	**Pb**	08 18 48.2	+0.1
	baz=325						
NNS				*e*S	**Sn**	08 19 00.5	-0.4
	baz=325						
YUS	**Yu-Shan**	**0.96**	**260**	P	**Pn**	08 18 48.3	0.0
	baz=260						
YUS				*e*S	**Sn**	08 19 01.0	-0.4
	baz=260						
TDCB	**Techi**	**0.96**	**308**	*e*S	**Sn**	08 18 59.7	-1.3
	baz=309						
ELDTW	**Lidau**	**1.00**	**243**	*e*P	**Pn**	08 18 47.7	-0.8
	baz=242						
ELDTW				*e*S	**Sn**	08 19 00.2	-1.7
	baz=242						
SMLT	**Sun Moon Lake**	**1.02**	**283**	P	**Pb**	08 18 49.1	+0.1
	baz=290						
SMLT				*e*S	**Sb**	08 19 02.8	+0.7
	baz=290						
WHYT	**Xinyi Township**	**1.04**	**273**	*e*P	**Pb**	08 18 49.9	+0.6
	baz=268						
DPDB	**Guoxing**	**1.04**	**292**	*e*P	**Pb**	08 18 49.5	+0.2
	baz=292						
DPDB				*e*S	**Sb**	08 19 02.8	+0.2
	baz=292						
ENTT	**Nioudou**	**1.05**	**339**	*e*P	**Pb**	08 18 49.9	+0.4
	baz=339						
ENTT				*e*S	**Sb**	08 19 03.2	+0.3
	baz=339						
TYC	**Yuchr**	**1.06**	**284**	*e*P	**Pb**	08 18 49.7	0.0
	baz=291						
TYC				*e*S	**Sn**	08 19 03.2	0.0
	baz=291						
WHP	**Taichung City**	**1.13**	**303**	*e*P	**Pb**	08 18 51.4	+0.4
	baz=311						
WHP				*e*S	**Sb**	08 19 05.4	0.0
	baz=311						
YHNB	**Yeheng**	**1.15**	**331**	*e*P	**Pb**	08 18 51.7	+0.4
	baz=331						
YHNB				*e*S	**Sn**	08 19 05.4	-0.2
	baz=331						
NSK	**Sanguang**	**1.17**	**331**	*e*P	**Pb**	08 18 51.9	+0.3
	baz=331						
NSK				*e*S	**Sb**	08 19 06.2	-0.1
	baz=331						
TWGBT	**Beinan**	**1.18**	**225**	*e*P	**Pn**	08 18 50.2	-0.7
	baz=237						
TWGBT				*e*S	**Sn**	08 19 05.0	-1.1
	baz=237						
TWG	**Pinlang**	**1.18**	**225**	*e*P	**Pn**	08 18 50.2	-0.7
	baz=237						
TWG				*e*S	**Sn**	08 19 05.3	-0.9
	baz=237						
JYNG	**Yonagunijimaku**	**1.18**	**48**	P	**Pn**	08 18 51.0	+0.1
JYNG				S	**Sn**	08 19 05.7	-0.5
EGS		**1.19**	**358**	*e*P	**Pb**	08 18 51.9	0.0
	baz=9.0						
EGS				*e*S	**Sb**	08 19 07.2	+0.5
	baz=9.0						
CHN5	**Tsauling**	**1.20**	**268**	P	**Pb**	08 18 52.7	+0.6
	baz=267						
CHN5				*e*S	**Sb**	08 19 07.5	+0.3
	baz=267						
NWLT	**Wulai**	**1.20**	**339**	*e*P	**Pb**	08 18 52.6	+0.5
	baz=328						
NWLT				*e*S	**Sb**	08 19 07.3	+0.1
	baz=328						
YOJ	**Yonaguni jima**	**1.24**	**49**	*e*P	**Pb**	08 18 52.6	0.0
	baz=49						
YOJ				*e*S	**Sn**	08 19 07.5	-0.1
	baz=49						
YOJ	**Yonaguni jima**	**1.24**	**49**	P	**Pb**	08 18 52.3	-0.4
YOJ				*e*S	**Sn**	08 19 07.4	-0.1
TPUB	**Ta-pu**	**1.29**	**254**	P	**Pb**	08 18 54.0	+0.4
	baz=246						
TPUB				*e*S	**Sb**	08 19 09.8	0.0
	baz=246						
CHN4	**Tsaushan**	**1.31**	**257**	P	**Pb**	08 18 54.5	+0.6
	baz=250						
CHN4				*e*S	**Sb**	08 19 11.8	+1.4
	baz=250						
TIPB	**Shuangxi**	**1.32**	**354**	*e*P	**Pb**	08 18 53.8	-0.3
	baz=5.0						
TIPB				*e*S	**Sb**	08 19 10.6	-0.1
	baz=5.0						
WTP	**Ta-pu**	**1.32**	**252**	P	**Pb**	08 18 54.3	+0.1
	baz=252						
WTP				*e*S	**Sb**	08 19 12.0	+1.3
	baz=252						
NSTT	**Nanjuang**	**1.32**	**317**	*e*P	**Pb**	08 18 54.7	+0.5
	baz=318						
NSTT				*e*S	**Sb**	08 19 11.1	+0.4
	baz=318						
LIOB	**Emei**	**1.32**	**318**	*e*P	**Pb**	08 18 54.8	+0.6
	baz=318						
LIOB				*e*S	**Sb**	08 19 11.1	+0.3
	baz=318						
CHN1	**Nanshi**	**1.42**	**251**	P	**Pb**	08 18 56.3	+0.6
	baz=251						
CHN1				*e*S	**Sb**	08 19 14.6	+1.1
	baz=251						
TWK	**Hsinying**	**1.43**	**255**	P	**Pb**	08 18 56.4	+0.4
	baz=254						
TWK				*e*S	**Sb**	08 19 14.5	+0.8
	baz=254						
NCU	**National Centr**	**1.50**	**331**	P	**Pb**	08 18 56.8	-0.3
	baz=331						
NCU				*e*S	**Sb**	08 19 16.0	+0.2
	baz=331						
MASBT	**Mashibuluo**	**1.62**	**230**	*e*P	**Pn**	08 18 57.4	+0.5
	baz=229						
MASBT				*e*S	**Sn**	08 19 17.5	+0.5
	baz=229						
HATJ	**Hateruma jima**	**1.71**	**76**	P	**Pn**	08 18 58.2	0.0
HATJ				*e*S	**Sn**	08 19 19.0	-0.3
IRIF	**Iriomote-Funau**	**1.73**	**67**	P	**Pn**	08 18 59.0	+0.5
IRIF				S	**Sn**	08 19 19.9	+0.1
JKRS	**Kuro-shima**	**1.94**	**72**	P	**Pn**	08 19 02.1	+0.7
JKRS				*e*S	**Sn**	08 19 25.0	+0.1
JIJ	**Ishigaki jima**	**2.10**	**70**	P	**Pn**	08 19 03.6	+0.1
JIJ				*e*S	**Sn**	08 19 27.2	-1.6
JISG	**Ishigakijimahi**	**2.32**	**66**	P	**Pn**	08 19 06.3	-0.3
JISG				S	**Sn**	08 19 32.5	-1.8
JTJ	**Tarama**	**2.67**	**68**	P	**Pn**	08 19 12.2	+0.8
JTJ				S	**Sn**	08 19 41.9	-1.0

*IDC **26** 08:32:18.6±3.4, 53°.52N×87°.74E, h0km, mb1 3.4/3, mb1mx3.2/40, mbtmp3.4/3, ML3.2/3, Error ellipse: s-maj=38.0km s-min=15.6km az=80.0*
KRAR 26 08:32:14.3±0.2, 53°.54N×87°.55E, M2.9, 3C-3D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.67**	**285**	*i*		08 43 37.4	
	baz=100,slow=307,SNR=5.0						
ZALV	**Zalesovo Beam**	**1.67**	**285**	Pn	Pg	08 32 49.6	+3.3
	13nm,0.3s,baz=102,slow=13,SNR=94						
ZALV				Sn	Sg	08 33 14.1	+6.1
	6.0nm,0.3s,baz=107,slow=27,SNR=12						
KURK	**Kurchatov**	**6.18**	**246**	⇑Pn	Pn	08 33 52.9	+6.2
	1.0nm,0.7s						
KURK				⇑Sn	Sn	08 34 46.1	-12
	5.2nm,0.7s						
KURK				⇓Lg	Lg	08 35 10.5	
	17nm,0.8s						
KURBB	**Kurchatov Arra**	**6.28**	**246**	Pn	Pn	08 33 53.6	+5.6
	0.3nm,0.3s,baz=64,slow=14,SNR=19						
KURBB	**Kurchatov Arra**	**6.28**	**246**	⇑Pn	Pn	08 33 54.1	+6.0
	1.5nm,0.3s,baz=61,slow=14						
KURBB				⇓Sn	Sn	08 34 48.8	-12
	9.4nm,0.7s						
KURBB				⇓Lg	Lg	08 35 13.9	
	38nm,0.8s,baz=67,slow=23						
MKAR	**Makanchi Array**	**7.55**	**209**	Pn	Pn	08 34 11.8	+6.2
	0.6nm,0.3s,baz=27,slow=13,SNR=20						
MKAR				Sn	Sn	08 35 36.5	+4.7
	0.1nm,0.3s,baz=37,slow=22,SNR=4.1						
MKAR				Lg	Lg	08 36 20.7	
	0.1nm,0.3s,baz=33,slow=32,SNR=4.3						
BVAR	**Borovoye Array**	**10.29**	**274**	Pn	Pn	08 34 48.6	+5.5
	0.3nm,0.3s,baz=87,slow=13,SNR=5.1						

IDC 26 08:37:18.0±29.0, 29°.55S×175°.94W, h0km, mb4.0/3, mb1 4.2/5, mb1mx3.9/26, mbtmp4.1/5, ML3.8/2, MS3.6/1, Ms1 3.6/1, ms1mx2.6/23, Error ellipse: s-maj=538.5km s-min=48.7km az=85.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.43**	**212**	Pn	Pn	08 39 47.0	-1.8
	0.3nm,0.3s,baz=260,slow=6.8,SNR=6.4						
URZ				Sn	Sn	08 41 21.3	-25
	4.8nm,0.3s,baz=134,slow=21,SNR=22						
RPZ	**Rata Peaks**	**17.54**	**213**	P	Pn	08 41 22.3	-1.7
	0.8nm,0.3s,baz=9.2,slow=19,SNR=3.6						
STKA	**Stephens Creek**	**36.41**	**255**	P	P	08 44 24.2	-0.1
	2.2nm,0.6s,baz=83,slow=8.1,SNR=6.0						
ASAR	**Alice Springs**	**44.95**	**265**	P	P	08 45 35.2	+0.2
	0.4nm,0.3s,baz=104,slow=7.8,SNR=10.0						
WRA	**Warramunga Arr**	**45.87**	**270**	P	P	08 45 42.8	+0.4
	1.1nm,0.3s,baz=103,slow=8.0,SNR=23						
RPN	**Rapa Nui**	**57.94**	**105**	LR	LR	09 05 25.9	
	comp=Z,57nm,20.1s,baz=296,slow=29						

*GUC **26** 08:39:55.6±0.7, 32°.05S×71°.77W, h31km±5km, ML3.5*
ISC 26 08:39:50.4±3.3, 32°.9S±0°.1×72°.7W±0°.2, h1km±19km, n10, σ2s02/20, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**1.38**	**94**	*e*P	**Pn**	**08 40 15.8**	**-1.3**
ROCH				*e*S	**Sb**	**08 40 31.3**	**-4.1**
ROCH				IAML		08 40 32.8	
	comp=E,2μm,0.4s						
ANTU	**Antumapu**	**1.82**	**113**	*e*P	**Pg**	**08 40 26.1**	**+0.7**
ANTU				*e*S	**Sb**	**08 40 49.3**	**+1.3**
ANTU				IAML		08 40 55.1	
	comp=E,661nm,0.3s						
CLCH	**Cerro Calan**	**1.85**	**107**	*e*P	**Pb**	**08 40 24.9**	**-0.1**
CLCH				*e*S	**Sn**	**08 40 46.8**	**-0.5**
CLCH				IAML		08 40 49.4	
	comp=N,1μm,0.5s						
FCH	**Farellones**	**2.03**	**103**	⇑*i*P	**Pn**	**08 40 26.8**	**+0.8**
FCH				*e*S	**Sn**	**08 40 50.2**	**-2.0**
FCH				IAML		08 40 52.6	
	comp=N,592nm,0.2s						
LMEL	**Las Melosas**	**2.26**	**116**	⇑*i*P	**Pb**	**08 40 32.4**	**+0.2**
LMEL				*e*S	**Sb**	**08 41 00.6**	**-0.1**
LMEL				IAML		08 41 06.9	
	comp=N,513nm,0.4s						
AUSP	**Uspallata**	**2.83**	**78**	*e*P	**Pn**	**08 40 36.6**	**-0.4**
AUSP				*e*S	**Sn**	**08 41 11.1**	**-0.8**
RTLL	**Cerro Villicun**	**3.86**	**68**	*e*P	**Pn**	**08 40 49.6**	**-1.4**
RTLL				*e*S	**Sn**	**08 41 40.2**	**+3.1**
RTLL				IAML		08 41 44.7	
	comp=E,252nm,0.4s						
CFA	**Coronel Fontan**	**3.95**	**72**	*e*P	**Pn**	**08 40 50.8**	**-1.3**
CFA				*e*S	**Sn**	**08 41 42.1**	**+3.0**
AMOG	**MOGNA**	**4.03**	**62**	*e*P	**Pn**	**08 40 51.6**	**-1.7**
AMOG				*e*S	**Sn**	**08 41 43.0**	**+1.8**
ACAN	**Cantantal**	**4.65**	**84**	*i* P	**Pn**	**08 41 01.2**	**-0.6**
ACAN				*e*S	**Sn**	**08 41 59.6**	**+3.2**

IDC 26 08:50:54.3±10.0, 1°.34N×85°.47W, h0km, mb3.4/3, mb1 3.9/3, mb1mx3.5/39, mbtmp3.4/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/15, Error ellipse: s-maj=640.2km s-min=149.4km az=50.0, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**14.45**	**340**	LR	LR	08 58 50.5	
	comp=Z,36nm,18.9s,baz=218,slow=33						
TXAR	**Lajitas Array**	**32.80**	**330**	P	P	08 57 29.9	+0.2
	0.5nm,0.9s,baz=150,slow=9.3,SNR=5.0						
TXAR				LR	LR	09 08 37.1	
	comp=Z,41nm,21.1s,baz=0.0,slow=32						
PDAR	**Pinedale Array**	**46.55**	**336**	P	P	08 59 23.8	-0.4
	0.2nm,0.4s,baz=146,slow=7.1,SNR=3.0						
ILAR	**Eielson Array**	**76.94**	**337**	P	P	09 02 48.5	+0.1
	0.5nm,0.9s,baz=147,slow=5.1,SNR=4.8						

MEX 26 08:59:09.3±0.3, 15°.65N×96°.03W, h12km±2km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.14**	**327**	*e*P	Pg	08 59 12.2	-0.6
HUIG				*i* S	Sg	08 59 14.4	-0.7
PANG	**Puerto Angel**	**0.43**	**272**	*i* P	Pg	08 59 17.2	-0.5
PANG				*i* S	Sg	08 59 22.9	-0.6
VHO	**Vista Hermosa**	**1.56**	**335**	*i* P	Pn	08 59 33.5	-3.6
VHO				*e*S	Sn	08 59 52.4	-4.9

*ISCJB **26** 09:04:17.5±0.4, 24°.83N±0°.02×122°.07E±0°.02, h9km±3km, Error ellipse: s-maj=3.6km s-min=3.4km az=22.6*
*JMA **26** 09:04:17.9, 24°.85N×122°.04E, h19km, M2.0*
*TAP **26** 09:04:17.4, 24°.84N×122°.04E, h9km, ML2.7, B*
ISC 26 09:04:17.3±0.8, 24°.85N±0°.02×122°.05E±0°.02, h14km±6km, n46, σ0s50/69, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.11**	**267**	*i* P	**Pg**	**09 04 20.3**	**-0.3**
	baz=273						
EGS				*i* S	**Sg**	**09 04 22.2**	**-0.6**
	baz=273						
TWB1	**Santiao Chiao**	**0.17**	**340**	*i* P	**Pg**	**09

	baz=251						
TWE				S	Sg	09 04 30.0	0.0
	baz=251						
TWA	**Mucha**	**0.45 287**	*e*P		**Pb**	09 04 26.9	0.0
	baz=279						
TWA				*e*S	**Sb**	09 04 33.2	-0.2
	baz=279						
ENTT	**Nioudou**	**0.49 245**	*e*P		**Pb**	09 04 27.5	-0.1
	baz=246						
ENTT				*e*S	**Sg**	09 04 33.6	+0.1
	baz=246						
NANB	**Nanao**	**0.50 213**	P		**Pg**	09 04 27.4	+0.1
	baz=221						
NANB				*e*S	**Sg**	09 04 34.2	+0.3
	baz=221						
NWLT	**Wulai**	**0.51 262**	*e*P		**Pg**	09 04 27.1	-0.2
	baz=263						
ENA	**Nanau**	**0.51 214**	P		**Pb**	09 04 28.2	+0.3
	baz=221						
ENA				*e*S	**Sg**	09 04 34.4	+0.3
	baz=221						
TATO	**Taipei**	**0.53 284**	*e*P		**Pb**	09 04 29.2	+0.9
	baz=277						
YM01	**YM01**	**0.53 304**	*e*P		**Pb**	09 04 29.1	+0.7
	baz=304						
YM01				*e*S	**Sb**	09 04 35.8	-0.1
	baz=304						
YM08	**YM08**	**0.54 309**	*e*P		**Pb**	09 04 28.8	+0.3
	baz=301						
YM10	**YM10**	**0.54 304**	*e*P		**Pb**	09 04 28.9	+0.3
	baz=304						
YM05	**YM05**	**0.54 305**	*e*P		**Pb**	09 04 29.1	+0.6
	baz=305						
YM04	**YM04**	**0.56 303**	*e*P		**Pb**	09 04 29.5	+0.7
	baz=303						
YM03	**YM03**	**0.57 305**	*e*P		**Pn**	09 04 30.4	-0.7
	baz=306						
TWY	**Chenhua**	**0.59 316**	*e*P		**Pb**	09 04 30.0	+0.6
	baz=309						
TWS1	**Kuangyinshan**	**0.63 294**	*e*P		**Pb**	09 04 30.9	+0.9
	baz=294						
YHNB	**Yeheng**	**0.64 254**	*e*P		**Pg**	09 04 30.0	+0.2
	baz=264						
NSK	**Sanguang**	**0.66 255**	*e*P		**Pg**	09 04 29.9	-0.3
	baz=265						
NNSB	**Datong**	**0.74 236**	*e*P		**Pg**	09 04 31.8	+0.1
	baz=243						
NNS	**Nan Shan**	**0.74 237**	*e*P		**Pg**	09 04 31.6	-0.1
	baz=237						
NACB	**Ninganchiao**	**0.79 212**	*e*P		**Pg**	09 04 32.5	-0.2
	baz=206						
NACB				*e*S	**Sb**	09 04 43.8	+0.4
	baz=206						
ETLH	**Xiulin Townshi**	**0.82 219**	*e*P		**Pb**	09 04 33.9	+0.5
	baz=230						
ETLH				*e*S	**Sb**	09 04 44.9	+0.5
	baz=230						
TWD	**Chiawan**	**0.87 209**	*e*P		**Pn**	09 04 34.8	-0.3
	baz=203						
TWD				*e*S	**Sg**	09 04 45.5	-0.1
	baz=203						
JYNG	**Yonagunijimaku**	**0.90 116**	P		**Pb**	09 04 34.4	-0.3
JYNG				*e*S	**Sb**	09 04 47.3	+0.7
YOJ	**Yonaguni jima**	**0.95 114**	*e*P		**Pg**	09 04 36.0	+0.3
	baz=113						
YOJ				*e*S	**Sg**	09 04 48.3	+0.1
	baz=113						
YOJ	**Yonaguni jima**	**0.95 114**	P		**Pg**	09 04 35.8	+0.1
YOJ				*e*S	**Sg**	09 04 48.6	+0.4
LIOB	**Emei**	**0.96 258**	*e*P		**Pn**	09 04 36.4	0.0
	baz=251						
CHGB	**Renai**	**1.12 226**	*e*P		**Pg**	09 04 39.8	+0.8
	baz=227						
WHP	**Taichung City**	**1.16 241**	*e*P		**Pg**	09 04 40.1	+0.4
	baz=242						
ESL	**Shilin**	**1.18 209**	*e*P		**Pg**	09 04 40.0	0.0
	baz=211						
OWD	**Renai**	**1.20 222**	*e*P		**Pg**	09 04 40.7	+0.3
	baz=229						
VWDT	**VWDT**	**1.37 218**	*e*P		**Pb**	09 04 43.2	+0.5
	baz=220						
TYC	**Yuchr**	**1.44 229**	*e*P		**Pb**	09 04 44.4	+0.5
	baz=222						
SSLB	**Suanglung**	**1.46 224**	*e*P		**Pb**	09 04 44.4	+0.2
	baz=227						
SSLB				*e*S	**Sb**	09 05 03.0	+0.4
	baz=227						
EHY	**Hungye**	**1.50 207**	*e*P		**Pb**	09 04 44.7	-0.1
	baz=220						
HATJ	**Hateruma jima**	**1.78 116**	P		**Pn**	09 04 48.4	+0.8
HATJ				S	**Sn**	09 05 08.7	-1.3
JKRS	**Kuro-shima**	**1.88 108**	P		**Pn**	09 04 47.1	-1.9
JKRS				*e*S	**Sn**	09 05 12.2	-0.3
JIJ	**Ishigaki jima**	**1.96 104**	P		**Pn**	09 04 50.7	+0.6

*ISCJB **26** 09:51:05.9±0.5, 37°.23N±0°.04×28°.18E±0°.04, h8km±7km, Error ellipse: s-maj=6.8km s-min=4.5km az=41.1*
*ISK **26** 09:51:05.3, 37°.21N×28°.15E, h5km, ML2.4/7*
*DDA **26** 09:51:05.3, 37°.21N×28°.21E, h7km±2km, ML2.5*
ISC 26 09:51:05.2±1.0, 37°.22N±0°.03×28°.19E±0°.03, h11km±7km, n14, σ0°64/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**139**	PG	**Pg**	**09 51 08.4**	**+0.1**
YER				SG	**Sg**	**09 51 10.8**	**+0.4**
TURN	**Turunc**	**0.48**	**136**	PG	**Pg**	**09 51 14.6**	**-0.1**
TURN				SG	**Sb**	**09 51 22.2**	**-0.6**
TURN	**Turunc**	**0.48**	**136**	*i* P	**Pg**	**09 51 14.2**	**-0.5**
TURN				*i* S	**Sg**	**09 51 19.7**	**-1.4**
TURN				IAML_P			
	comp=Z,2μm,0.2s						
AYDN	**Tasoluk**	**0.50**	**331**	*i* P	**Pb**	**09 51 16.3**	**+0.2**
AYDN				*i* S	**Sb**	**09 51 23.4**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.51**	**179**	PG	**Pb**	**09 51 16.1**	**0.0**
DALY	**Dalyan (Mula)**	**0.55**	**137**	PG	**Pb**	**09 51 17.3**	**+0.4**
DALY				SG	**Sb**	**09 51 26.4**	**+1.6**
DALY	**Dalyan (Mula)**	**0.55**	**137**	*i* P	**Pb**	**09 51 16.7**	**-0.2**
DALY				*i* S	**Sn**	**09 51 27.6**	**-0.5**
DALY				IAML_P			
	comp=Z,1μm,0.2s						
BDRM	**Kayabasi**	**0.61**	**255**	*i* P	**Pg**	**09 51 16.7**	**-0.5**
BDRM				*i* S	**Sb**	**09 51 27.4**	**+0.8**
BDRM				IAML_P			
	comp=Z,810nm,0.1s						
DAT	**Datca**	**0.69**	**225**	*i* P	**Pb**	**09 51 19.6**	**+0.2**
DAT				*i* S	**Sn**	**09 51 32.7**	**+0.9**
DAT				IAML_P			
	comp=Z,165nm,0.1s						
BODT	**Bodrum**	**0.72**	**257**	PG	**Pb**	**09 51 19.9**	**+0.1**
GCAM	**G?zelcaml?**	**0.90**	**302**	PG	**Pn**	**09 51 23.4**	**-0.3**
GCAM	**G?zelcaml?**	**0.90**	**302**	*i* P	**Pg**	**09 51 22.3**	**-0.2**
GCAM				IAML_P			
	comp=Z,686nm,0.2s						
MANT	**Manisa**	**1.30**	**13**	*i* P	**Pg**	**09 51 30.5**	**+0.3**
MANT				*i* S	**Sb**	**09 51 46.6**	**0.0**
MANT				IAML_P			
	comp=Z,454nm,0.2s						
AKAS	**Kas**	**1.51**	**130**	PN	**Pg**	**09 51 34.7**	**+0.5**

*IDC **26** 09:54:31.8±4.1, 36°.59N×72°.48E, h84km±35km, mb3.6/8, mb1 3.7/14, mb1mx3.5/39, mbtmp3.9/14, Error ellipse: s-maj=29.4km s-min=20.8km az=160.0*
*ISCJB **26** 09:54:42.9±0.3, 37°.29N±0°.02×72°.05E±0°.04, h130km, mb4.0/17, Error ellipse: s-maj=4.9km s-min=3.2km az=161.4*
*NEIC **26** 09:54:44.4±2.4, 37°.37N×71°.92E, h157km±16km, mb4.2/2, Error ellipse: s-maj=12.7km s-min=2.4km az=92.0*
*MOS **26** 09:54:44.8±1.6, 37°.42N×72°.01E, h144km, mb4.4/7, Error ellipse: s-maj=9.3km s-min=5.3km az=90.2*
*NNC **26** 09:54:49.2±4.1, 37°.72N×71°.93E, h168km±52km, mb3.5, mpv4.3, Error ellipse: s-maj=42.2km s-min=21.9km az=23.0*
ISC 26 09:54:42.7±0.5, 37°.27N±0°.04×71°.97E±0°.05, h130km, n104, σ2°35/119, mb3.9/17, 4C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.17**	**323**	*e*Pn	**Pn**	**09 55 20.5**	**+1.7**
GAR				*e*Sn	**Sn**	**09 55 46.6**	**+0.1**
GAR	**Garm**	**2.17**	**323**	*e*PN	**Pn**	**09 55 20.5**	**+1.7**
GAR				*e*	**Sn**	**09 55 46.6**	**+0.1**
CHGR	**Chuyangaron**	**2.62**	**303**	*e*P	Pn	09 55 42.9	+18
CHGR				*e*		09 56 25.4	
BTK	**Batken**	**2.93**	**342**	*e*Pn	**Pn**	**09 55 31.5**	**+3.1**
BTK				*e*Sn	**Sn**	**09 56 05.3**	**+1.6**
BTK	**Batken**	**2.93**	**342**	*e*PN	**Pn**	**09 55 31.5**	**+3.1**
BTK				*e*		09 56 05.3	
CEP	**Cherat**	**3.44**	**181**	P	**Pn**	**09 55 39.0**	**+3.8**
CEP				S	**Sn**	**09 56 21.0**	**+5.3**
KBL	**Kabul**	**3.61**	**222**	*e*Pn	**Pn**	**09 55 41.1**	**+3.6**
KBL				*e*Sn	**Sn**	**09 56 23.2**	**+3.3**
KBL	**Kabul**	**3.61**	**222**	*e*PN	**Pn**	**09 55 41.1**	**+3.6**
CHCP	**Chirah Chowk**	**3.75**	**163**	P	**Pn**	**09 55 43.6**	**+4.4**
NIL	**Nilore**	**3.76**	**163**	*e*Pn	**Pn**	**09 55 43.7**	**+4.4**
NIL				*e*Sn	**Sn**	**09 56 26.8**	**+3.7**
NIL	**Nilore**	**3.76**	**163**	*e*PN	**Pn**	**09 55 43.7**	**+4.4**
ARSB	**Arslanbob**	**4.12**	**11**	*e*Pn	**Pn**	**09 55 45.5**	**+1.3**
THW	**Thamme Wali**	**4.47**	**182**	P	**Pn**	**09 55 51.5**	**+2.8**
AML	**Almayashu**	**5.03**	**15**	P	**Pn**	**09 55 58.3**	**+1.8**
	SNR=28						
UCH	**Uchtor**	**5.33**	**21**	P	**Pn**	**09 56 02.4**	**+1.9**
	SNR=103						
SARP	**Sargodha**	**5.37**	**174**	P	**Pn**	**09 56 02.8**	**+2.1**
KZA	**Kyzart**	**5.43**	**27**	P	**Pn**	**09 56 03.4**	**+1.6**
	SNR=9.7						
EKS2	**Erkin-Say**	**5.56**	**14**	P	**Pn**	**09 56 05.7**	**+2.3**
	SNR=19						
AAK	**Ala-Archa**	**5.70**	**19**	P	**Pn**	**09 56 07.7**	**+2.5**
	SNR=10						
AAK	**Ala-Archa**	**5.70**	**19**	*e*Pn	**Pn**	**09 56 07.3**	**+2.1**
AAK				*e*Sn	**Sn**	**09 57 09.5**	**-0.2**
AAK	**Ala-Archa**	**5.70**	**19**	⇓P	**Pn**	**09 56 07.5**	**+2.3**
	22nm,0.4s						
AAK				⇓S	**Sn**	**09 57 08.0**	**-1.6**
	131nm,0.8s						
AAK	**Ala-Archa**	**5.70**	**19**	*e*PN	**Pn**	**09 56 07.3**	**+2.1**
AAK				*e*		09 57 09.5	
KK31	**Karatay Array**	**5.93**	**350**	*e*Pn	**Pn**	**09 56 09.7**	**+1.5**
KK31				*e*Sn	**Sn**	**09 57 11.7**	**-3.3**
KK31	**Karatay Array**	**5.93**	**350**	P	**Pn**	**09 56 09.4**	**+1.2**
	26nm,0.4s,baz=161,slow=9.2,SNR=315						
KK31				S	**Sn**	**09 57 12.2**	**-2.8**
	130nm,0.5s,baz=172,slow=21,SNR=18						
KK31	**Karatay Array**	**5.93**	**350**	*e*PN	**Pn**	**09 56 09.7**	**+1.5**
KKAR	**Karatay Array**	**5.93**	**350**	*e*Pn	**Pn**	**09 56 09.6**	**+1.4**
KKAR				*e*Sn	**Sn**	**09 57 12.1**	**-2.9**
KKAR	**Karatay Array**	**5.93**	**350**	*e*PN	**Pn**	**09 56 09.6**	**+1.4**
ULHL	**Ulahol**	**5.96**	**32**	P	**Pn**	**09 56 10.8**	**+2.0**
	SNR=14						
BOOM	**Boomskoye usch**	**6.04**	**29**	*e*Pn	**Pn**	**09 56 11.4**	**+1.6**
BOOM	**Boomskoye usch**	**6.04**	**29**	*e*PN	**Pn**	**09 56 11.4**	**+1.6**
CHMS	**Chumysh**	**6.11**	**20**	P	**Pn**	**09 56 12.6**	**+2.1**
	SNR=16						
TKM2	**Tokmak 2**	**6.29**	**25**	P	**Pn**	**09 56 15.3**	**+2.1**
	SNR=22						
TKM2	**Tokmak 2**	**6.29**	**25**	⇓P	**Pn**	**09 56 15.0**	**+1.7**
	17nm,0.7s						
TKM2	**Tokmak 2**	**6.29**	**25**	*i* PN	**Pn**	**09 56 14.9**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,17nm,0.7s						
USP	**Ospenovka**	**6.29**	**17**	P	**Pn**	**09 56 14.8**	**+1.7**
	SNR=7.8						
PRZ	**Przheval'sk**	**7.18**	**42**	*e*Pn	**Pn**	**09 56 27.1**	**+2.0**
PRZ	**Przheval'sk**	**7.18**	**42**	*e*PN	**Pn**	**09 56 27.1**	**+2.0**
KKR	**Kurukshetra**	**8.33**	**150**	*e*P	**Pn**	**09 56 44.2**	**+3.6**
KKR				*e*S	**Sn**	**09 58 10.1**	**-3.1**
PDGK	**Podgornoye**	**8.34**	**41**	⇓P	**Pn**	**09 56 41.3**	**+0.6**
	comp=Z,7.2nm,0.7s						
PDGK	**Podgornoye**	**8.34**	**41**	PN	**Pn**	**09 56 41.3**	**+0.6**
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
JOSI	**Joshimath**	**9.19**	**135**	*e*P	**Pn**	**09 56 53.6**	**+1.2**
JOSI				*e*S	**Sn**	**09 58 31.1**	**-3.1**
JOSI				IAML		09 58 35.2	
	comp=E,401nm,0.7s						
JOSI				IAML		09 58 36.1	
	comp=N,643nm,0.8s						
KALG	**Kalgarh**	**9.59**	**142**	*e*P	Pn	09 56 43.1	-14
KALG				*e*S	Sn	09 58 23.0	-21
KHET	**Khetri**	**9.72**	**160**	*e*P	**Pn**	**09 56 59.6**	**+0.3**
KHET				*e*S	**Sn**	**09 58 41.3**	**-5.4**
KHET				IAML		09 58 46.3	
	comp=N,86nm,0.0s						
KHET				IAML		09 58 46.9	
	comp=E,39nm,0.2s						
KUDL	**Kundal**	**9.86**	**156**	*e*P	Pn	09 56 50.1	-11
KUDL				*e*S	Sn	09 58 32.0	-18
KUDL				IAML		09 58 36.2	
	comp=N,39nm,0.5s						
KUDL				IAML		09 58 37.3	
	comp=E,63nm,0.7s						
JASL	**Jaisalmer**	**10.35**	**185**	*e*S	**Sn**	**09 58 57.2**	**-4.9**
OTUK	**Ortayu**	**10.97**	**1**	⇑P	**Pn**	**09 57 14.2**	**-1.8**
	comp=E,4.4nm,1.1s						
OTUK	**Ortayu**	**10.97**	**1**	P	**Pn**	**09 57 14.1**	**-1.8**
OTUK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GEYT	**Alibeck**	**11.02**	**278**	P	**Pn**	**09 57 14.1**	**-2.4**
	comp=Z,2.2nm,0.3s,baz=120,slow=10,SNR=12						
GEYT				S	**Sn**	**09 59 12.9**	**-5.0**
	comp=Z,6.1nm,0.3s,baz=95,slow=16,SNR=11						
GYA0B	**ALIBECK ARRAY**	**11.02**	**278**	*e*Pn	**Pn**	**09 57 12.7**	**-3.8**
MK31	**Makanchi Array**	**12.21**	**36**	*e*Pn	**Pn**	**09 57 32.4**	**+0.2**
MK31	**Makanchi Array**	**12.21**	**36**	*e*P	**Pn**	**09 57 32.4**	**+0.2**
MKAR	**Makanchi Array**	**12.21**	**36**	P	**Pn**	**09 57 28.8**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=219,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**12.21**	**36**	*i* P	**Pn**	**09 57 33.5**	**+1.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PYUN	**Piuthan**	**13.02**	**131**	*e*P	**Pn**	**09 57 41.9**	**-1.1**
	comp=Z,158nm,0.9s						
DANN	**Dangsing**	**13.31**	**129**	*e*P	**Pn**	**09 57 47.4**	**+0.6**
	comp=Z,40nm,0.3s						
KOLN	**Koldanda**	**13.62**	**131**	*e*P	**Pn**	**09 57 49.7**	**-1.1**
	comp=Z,30nm,0.4s						
GKN	**Gorkha**	**14.10**	**127**	*e*P	**Pn**	**09 57 57.0**	**+0.2**
	comp=Z,43nm,0.3s						
KURBB	**Kurchatov Arra**	**14.15**	**17**	P	**Pn**	**09 57 54.7**	**-2.4**
	comp=Z,0.0nm,0.3s,baz=211,slow=12,SNR=4.5						
KURBB				S	**Sn**	**10 00 36.7**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=212,slow=10.0,SNR=3.1						
KURBB	**Kurchatov Arra**	**14.15**	**17**	⇑P	**P**	**09 58 00.0**	**-0.6**
	comp=Z,4.5nm,0.6s						
KURK	**Kurchatov**	**14.26**	**17**	*e*Pn	**Pn**	**09 57 57.5**	**-0.9**
KURK	**Kurchatov**	**14.26**	**17**	*d i* P	**P**	**09 58 02.0**	**+0.2**
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
KKN	**Kakani**	**14.66**	**126**	*e*P	**Pn**	**09 58 03.9**	**-0.1**
	comp=Z,37nm,0.5s						
DMN	**Daman**	**14.67**	**127**	*e*P	**Pn**	**09 58 03.4**	**-0.8**
	comp=Z,16nm,0.3s						
AB31	**Akbulak array**	**14.82**	**328**	P	**Pn**	**09 58 05.3**	**-0.2**
	comp=Z,2.1nm,0.3s,baz=138,slow=12,SNR=153						
AB31	**Akbulak array**	**14.82**	**328**	*i* P	**Pn**	**09 58 05.3**	**-0.2**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ABKAR	**Akbulak array**	**14.82**	**328**	*e*Pn	**Pn**	**09 58 03.8**	**-1.7**
PKIN	**Phulchoki**	**14.88**	**127**	*e*P	**Pn**	**09 58 06.1**	**-0.7**
	comp=Z,30nm,0.5s						
PKI	**Pulchoki**	**14.89**	**127**	*e*P	**Pn**	**09 58 06.6**	**-0.4**
	comp=Z,63nm,0.9s						
GUN	**Gumba**	**14.97**	**125**	*e*P	**Pn**	**09 58 08.0**	**+0.1**
	comp=Z,147nm,1.0s						
JIRN	**Jiri**	**15.34**	**125**	*e*P	**Pn**	**09 58 12.5**	**-0.1**
	comp=Z,85nm,0.4s						
BVAR	**Borovoye Array**	**15.79**	**356**	P	**Pn**	**09 58 16.8**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=155,slow=11,SNR=9.5						
BRVK	**Borovoye**	**15.83**	**356**	*e*P	**Pn**	**09 58 16.9**	**-1.2**
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**15.83**	**356**	⇑P	**Pn**	**09 58 16.4**	**-1.8**
	comp=Z,8.7nm,1.0s						
BRVK	**Borovoye**	**15.83**	**356**	P	**Pn**	**09 58 16.3**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRVK				pmax	pmax		
	comp=Z,31nm,0.7s						
AKTO	**Aktyubinsk**	**16.53**	**327**	P	**Pn**	**09 58 26.4**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=161,slow=7.0,SNR=22						
DGZ	**Jazzator, Alta**	**16.70**	**37**	⇓*e*P	**Pn**	**09 58 28.5**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**18.89**	**24**	P	**P**	**09 58 50.9**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=224,slow=8.3,SNR=4.6						
AKT	**Akhty**	**19.19**	**290**	*e*P	**Pn**	**09 59 01.6**	**+3.0**
AKT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GROC	**Groznyy**	**20.80**	**295**	*e*P	**P**	**09 59 15.4**	**+1.9**
GROC				*e**PP	**pP**	**09 59 43.6**	**+5.6**
GROC				*e**SP	sP	10 00 04.6	+10
GROC				*e*S	**S**	**10 02 58.4**	**+0.1**
GROC				pmax	pmax		
	comp=Z,20nm,0.7s						
SVE	**Sverdlovsk**	**20.98**	**342**	*e*P	**P**	**09 59 16.2**	**+0.9**
ARU	**Arti**	**21.18**	**339**	P	**P**	**09 59 17.3**	**-0.1**
	comp=Z,2.2nm,0.2s,baz=152,slow=9.8,SNR=6.5						
ARU	**Arti**	**21.18**	**339**	*d i* P	**P**	**09 59 18.2**	**+0.8**
ARU						09 59 47.1	
ARU				S	**S**	**10 03 03.1**	**-2.1**
ARU				pmax	pmax		
	comp=Z,18nm,1.8s						
GNI	**Garni**	**21.41**	**286**	*de*P	**P**	**09 59 24.5**	**+4.2**
GNI				pmax	pmax		
	comp=Z,63nm,0.9s						
ZEI	**Tsey**	**22.14**	**293**	*e*P	**P**	**09 59 31.3**	**+3.4**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKH	**Akhalkalaki**	**22.36**	**289**	*e*P	**P**	**09 59 30.6**	**+0.4**
	comp=Z,14nm,1.0s						
AKH	**Akhalkalaki**	**22.36**	**289**	*e*P	**P**	**09 59 30.6**	**+0.4**
AKH				pmax	pmax		
	comp=Z,15nm,1.0s						
KBZ	**Khabaz**	**22.96**	**295**	P	**P**	**09 59 34.7**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=72,slow=9.6,SNR=4.1						
NEY	**Neytrino**	**23.04**	**294**	⇓*e*P	**P**	**09 59 40.2**	**+3.6**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV	**Kislovodsk**	**23.14**	**296**	*e*P	**P**	**09 59 40.7**	**+3.3**
KIV				*e*S	**S**	**10 03 40.3**	**+1.4**
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV				MLR	MLR		
	comp=Z,40nm,14.0s						
ANN	**Anapa**	**26.96**	**297**	*e*P	P	10 00 24.2	+12
ANN				pmax	pmax		
	comp=Z,28nm,0.9s						
SONM	**Songino Array**	**27.26**	**56**	*e*P	**P**	**10 00 16.6**	**+1.9**
ULN	**Ulaanbaatar**	**27.70**	**56**	⇑*e*P	**P**	**10 00 23.1**	**+4.4**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	**Obninsk**	**29.88**	**318**	*e*P	**P**	**10 00 39.2**	**+1.6**
OBN				pmax	pmax		
	comp=Z,11nm,1.1s						
BRTR	**Keskin Array B**	**29.95**	**287**	P	**P**	**10 00 37.0**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=99,slow=8.9,SNR=3.1						
BRTR	**Keskin Array B**	**29.95**	**287**	P	**P**	**10 00 37.0**	**-1.7**
AKASG	**Malin Array Be**	**33.08**	**308**	P	**P**	**10 01 06.3**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=107,slow=8.5,SNR=2.3						
FINES	**FINESS Array B**	**37.29**	**325**	P	**P**	**10 01 41.9**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=122,slow=9.8,SNR=5.4						
FINES	**FINESS Array B**	**37.29**	**325**	*i* P	**P**	**10 01 42.5**	**+0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**40.74**	**337**	P	**P**	**10 02 09.9**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=112,slow=9.3,SNR=4.6						
ARCES	**ARCESS Array B**	**40.74**	**337**	*e*P	**P**	**10 02 12.7**	**+2.4**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL	**Bilibino**	**57.57**	**26**	*e*P	**P**	**10 04 17.9**	**-0.4**
BILL				*e*		10 06 31.2	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**66.51**	**269**	P	**P**	**10 05 16.4**	**-2.4**
	comp=Z,10.0nm,0.4s,baz=57,slow=2.9,SNR=3.7						
INK	**Inuvik**	**73.02**	**10**	P	**P**	**10 05 56.5**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=314,slow=2.8,SNR=3.7						
ASAR	**Alice Springs**	**84.06**	**126**	P	P	10 06 48.6	-10
	comp=Z,0.6nm,1.1s,baz=134,slow=4.1,SNR=4.4						

*NIED **26** 10:19:00, 24°.70N×121°.80E, h8km, Mw4.3 Best double couple: M0=2.91000×10^15 NP1:φs=20.00000°, δ=41.00000°, λ=-121.00000°. NP2:φs=239.00000°, δ=56.00000°, λ=-66.00000°.*
*ASIES **26** 10:19:16.4, 24°.79N×121°.87E, h17km, MW3.9*
*BJI **26** 10:19:16.8±0.0, 24°.85N×121°.86E, h6km, mb4.4/22, mB4.4/19, ML4.3/4, Ms4.2/23, Ms7 4.0/20*
*JMA **26** 10:19:17.4, 24°.74N×121°.83E, h20km±4km, M4.4*
*TAP **26** 10:19:17.3, 24°.79N×121°.87E, h10km, ML4.5, B*
*ISCJB **26** 10:19:17.2±0.2, 24°.80N±0°.01×121°.93E±0°.01, h8km±1km, mb3.8/13, MS3.4/12, Error ellipse: s-maj=2.1km s-min=2.0km az=140.3*
*IDC **26** 10:19:27.7±6.5, 24°.72N×121°.90E, h99km±63km, mb3.6/12, mb1 3.7/12, mb1mx3.5/41, mbtmp3.9/12, MS3.2/15, Ms1 3.3/15, ms1mx3.1/33, Error ellipse: s-maj=24.5km s-min=13.8km az=70.0*
ISC 26 10:19:17.6±0.7, 24°.78N±0°.01×121°.90E±0°.02, h11km±4km, n167, σ1°03/212, mb4.0/13, MS3.5/12, 28C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.07**	**25**	⇓*i* P	**Pg**	**10 19 20.2**	**+0.2**
	baz=52						
EGS				*i* S	**Sg**	**10 19 21.9**	**+0.1**
	baz=52						
NTC	**Toucheng**	**0.10**	**321**	⇓*i* P	**Pg**	**10 19 19.9**	**-0.4**
	baz=339						
NTC				S	**Sg**	**10 19 21.9**	**-0.4**
	baz=339						
ILA	**Ilan**	**0.14**	**265**	⇓*i* P	**Pg**	**10 19 20.7**	**-0.2**
	baz=255						
ILA				*i* S	**Sg**	**10 19 23.2**	**0.0**
	baz=255						
TWC	**Suao**	**0.17**	**195**	⇑*i* P	**Pg**	**10 19 21.7**	**+0.2**
	baz=177						
TWC				*i* S	**Sg**	**10 19 24.1**

YHNB	Yeheng	0.49 257	⇑P		Pg	10 19 26.5	-0.7
	baz=264						
YM05	YM05	0.49 322	⇑iP		Pg	10 19 27.3	+0.1
	baz=323						
YM08	YM08	0.49 326	⇑iP		Pg	10 19 27.1	-0.2
	baz=327						
YM04	YM04	0.50 319	⇑iP		Pg	10 19 27.4	+0.1
	baz=319						
NSK	Sanguang	0.50 258	⇑iP		Pg	10 19 26.7	-0.7
	baz=267						
NSK			eS		Sg	10 19 32.3	-1.8
	baz=267						
YM03	YM03	0.52 321	⇑iP		Pg	10 19 27.6	-0.1
	baz=321						
ANP	Anpu	0.53 320	⇑iP		Pg	10 19 27.9	-0.1
	baz=321						
TWS1	Kuangyinshan	0.54 307	⇑iP		Pb	10 19 28.7	-0.4
	baz=307						
NTST	Danshui	0.56 314	⇑iP		Pb	10 19 29.1	-0.3
	baz=324						
NTST			eS		Sb	10 19 36.9	-0.5
	baz=324						
TWY	Chenhua	0.56 331	⇑iP		Pg	10 19 28.8	+0.2
	baz=323						
TWY			S		Sg	10 19 35.6	-0.5
	baz=323						
NNSB	Datong	0.58 234	⇑P		Pg	10 19 28.3	-0.7
	baz=231						
NNS	Nan Shan	0.58 235	eP		Pg	10 19 28.8	-0.2
	baz=232						
WLTB	Daxi	0.59 277	⇑iP		Pb	10 19 29.6	-0.3
	baz=276						
WLTB			i S		Sb	10 19 37.2	-1.1
	baz=276						
NACB	Ninganchiao	0.66 205	eP		Pg	10 19 29.2	-1.2
	baz=211						
NACB			eS		Sg	10 19 39.4	+0.3
	baz=211						
NCU	National Centr	0.67 287	⇑iP		Pb	10 19 31.4	0.0
	baz=286						
NCU			S		Sb	10 19 41.4	+0.7
	baz=286						
NCUH	Zhongli	0.67 286	P		Pb	10 19 31.4	0.0
	baz=286						
NCUH			eS		Sb	10 19 41.5	+0.8
	baz=286						
ETLH	Xiulin Townshi	0.68 214	eP		Pg	10 19 30.6	-0.3
	baz=211						
TWD	Chiawan	0.75 202	⇓iP		Pg	10 19 31.8	-0.2
	baz=199						
TWD			S		Sg	10 19 41.2	-0.7
	baz=199						
LIOB	Emei	0.81 261	P		Pb	10 19 33.2	-0.6
	baz=251						
LIOB			eS		Sn	10 19 45.8	-1.2
	baz=251						
NSTT	Nanjuang	0.83 260	P		Pb	10 19 33.6	-0.4
	baz=258						
NSTT			eS		Sn	10 19 46.1	-1.2
	baz=258						
SBCB	Hsinchu	0.83 271	⇑P		Pn	10 19 34.4	-0.8
	baz=290						
SBCB			S		Sn	10 19 46.9	-0.5
	baz=290						
TWT	Tachien	0.84 232	P		Pg	10 19 33.5	-0.4
	baz=221						
HWA	Hwalien	0.84 199	eP		Pb	10 19 34.2	0.0
	baz=195						
HSN	Hsinchu	0.84 272	⇑P		Pb	10 19 33.9	-0.3
	baz=291						
HSN			S		Sb	10 19 45.9	+0.3
	baz=291						
TDCB	Techi	0.85 232	eP		Pg	10 19 33.0	-1.1
	baz=223						
WHF	Hehuan Shan	0.85 223	eP		Pg	10 19 33.3	-0.9
	baz=211						
PCYT	Pengchaiyu	0.86 10	P		Pg	10 19 33.8	-0.5
	baz=13						
PCYT			eS		Sb	10 19 46.7	+0.5
	baz=13						
ENLB	Shoufeng	0.91 197	eP		Pg	10 19 34.0	-1.2
	baz=195						
ENLB			eS		Sn	10 19 48.6	-0.8
	baz=195						
CHGB	Renai	0.97 223	eP		Pg	10 19 35.3	-1.0
	baz=215						
WHP	Taichung City	1.00 240	eP		Pg	10 19 36.4	-0.5
	baz=239						
JYNG	Yonagunijimaku	1.01 109	P		Pg	10 19 36.6	-0.4
JYNG			S		Sb	10 19 50.7	+0.4
NMLH	Miaoli	1.03 257	eP		Pn	10 19 38.2	+0.1
	baz=255						
NMLH			eS		Sn	10 19 53.4	+0.9
	baz=255						
ESL	Shilin	1.05 204	eP		Pb	10 19 36.9	-0.8
	baz=201						
ESL			S		Sb	10 19 51.5	0.0
	baz=201						
OWD	Renai	1.05 219	eP		Pg	10 19 37.2	-0.6
	baz=217						
YOJ	Yonaguni jima	1.06 107	P		Pb	10 19 37.5	-0.5
	baz=107						
YOJ			eS		Sb	10 19 51.9	+0.1
	baz=107						
YOJ	Yonaguni jima	1.06 107	P		Pb	10 19 37.4	-0.5
YOJ			S		Sb	10 19 51.9	+0.1
NSY	Sanyi	1.09 251	P		Pn	10 19 39.5	+0.6
	baz=249						
NSY			S		Sn	10 19 54.7	+0.7
	baz=249						
TWQ1	Liyutan	1.11 248	P		Pn	10 19 39.5	+0.4
	baz=246						
PTSB	Yuanli	1.13 253	P		Pb	10 19 39.0	-0.2
	baz=252						
PTSB			S		Sn	10 19 55.4	+0.4
	baz=252						
DPDB	Guoxing	1.15 230	eP		Pn	10 19 39.8	+0.1
	baz=237						
EGFH	Guangfu	1.18 201	eP		Pb	10 19 39.3	-0.7
	baz=205						
WDJ	Dajia District	1.22 250	eP		Pg	10 19 40.6	-0.5
	baz=267						
VWDT	VWDT	1.23 214	⇓P		Pn	10 19 40.3	-0.4
	baz=213						
SMLT	Sun Moon Lake	1.27 226	eP		Pb	10 19 41.5	-0.1
	baz=214						
TCU	Taichung	1.28 241	eP		Pg	10 19 42.2	0.0
	baz=239						
TCU			eS		Sg	10 20 00.7	+1.9
	baz=239						
TYC	Yuchr	1.29 228	eP		Pb	10 19 41.5	-0.3
	baz=233						
TYC			eS		Sg	10 19 59.0	-0.1
	baz=233						
SSLB	Suanglung	1.31 221	⇓P		Pn	10 19 41.5	-0.3
	baz=209						
HGSD	Ruisui	1.35 199	eP		Pg	10 19 44.0	+0.4
	baz=213						
EHY	Hungye	1.37 203	eP		Pn	10 19 42.3	-0.4
	baz=202						
WCHH	Zhanghua	1.41 241	eP		Pg	10 19 44.7	+0.1
	baz=259						
WNT	Mingjian	1.42 231	eP		Pg	10 19 44.7	-0.3
	baz=225						
WJS	Zhushan	1.43 229	eP		Pg	10 19 45.3	+0.3
	baz=223						
WHYT	Xinyi Township	1.44 222	eP		Pg	10 19 45.9	+0.6
	baz=211						
YULB	Yu-li	1.48 202	eP		Pn	10 19 44.5	+0.3
	baz=200						
TWF1	Yuli	1.52 201	eP		Pb	10 19 45.4	-0.4
	baz=198						
YUS	Yu-Shan	1.55 214	eP		Pb	10 19 46.6	+0.1
	baz=213						
ALS	Alishan	1.61 219	eP		Pg	10 19 48.2	-0.3
	baz=210						
WGK	Gukeng	1.63 229	eP		Pb	10 19 48.0	+0.3
	baz=249						
WDLH	Douliu	1.65 229	eP		Pg	10 19 48.7	-0.5
	baz=228						
RLNB	Erlin	1.66 238	eP		Pb	10 19 47.9	-0.2
	baz=256						
IRIF	Iriomote-Funau	1.73 104	P		Pn	10 19 46.5	-1.0
IRIF			S		Sn	10 20 08.6	-0.9
CHKT	Chengkung	1.74 196	eP		Pb	10 19 48.7	-0.8
	baz=210						
ELDTW	Lidau	1.77 207	eP		Pb	10 19 49.5	-0.7
	baz=190						
CHN2	Minshiung	1.80 227	eP		Pb	10 19 50.1	-0.4
	baz=248						
CHN4	Tsaushan	1.85 220	eP		Pb	10 19 51.5	0.0
	baz=205						
CHY	Chiayi	1.85 227	eP		Pb	10 19 50.7	-0.8
	baz=247						
TPUB	Ta-pu	1.87 219	⇓P		Pb	10 19 51.5	-0.3
	baz=203						
TPUB			eS		Sg	10 20 18.8	+0.9
	baz=203						
HATJ	Hateruma jima	1.88 112	P		Pn	10 19 49.3	-0.3
HATJ			eS		Sn	10 20 11.5	-1.9
WSF	Szhu	1.91 234	eP		Pn	10 19 48.9	-1.0
	baz=248						
WTP	Ta-pu	1.92 218	eP		Pb	10 19 52.8	+0.1
	baz=196						
TWK	Hsinying	1.98 221	eP		Pb	10 19 53.2	-0.4
	baz=219						
TWK			eS		Sg	10 20 20.7	-0.6
	baz=219						
JKRS	Kuro-shima	2.00 105	P		Pn	10 19 50.9	-0.3
JKRS			S		Sn	10 20 15.5	-0.7
SNST	Tainan City	2.01 220	eP		Pb	10 19 54.0	-0.2
	baz=219						
CHN1	Nanshi	2.02 219	eP		Pb	10 19 54.3	-0.1
	baz=218						
PTTC	Pingtan	2.06 291	eP		Pn	10 19 50.3	-1.7
	baz=292						
PTTC			eS		Sn	10 20 17.6	-0.1
	baz=292						
SGST	Jiashian	2.07 216	eP		Pb	10 19 54.9	-0.3
	baz=199						
SGST			eS		Sg	10 20 22.6	-1.7
	baz=199						
JIJ	Ishigaki jima	2.09 101	P		Pn	10 19 51.6	-0.9
JIJ			eS		Sn	10 20 16.7	-1.7
TWG	Pinlang	2.09 201	eP		Pn	10 19 52.7	+0.2
	baz=181						
TWGBT	Beinan	2.09 201	eP		Pn	10 19 53.2	+0.6
	baz=181						
CHN8	Yiju	2.10 228	eP		Pn	10 19 53.5	+0.9
	baz=245						
SLGT	Liugui	2.11 213	eP		Pb	10 19 55.5	-0.4
	baz=195						
CHN3	Shinhua	2.20 220	eP		Pb	10 19 58.0	+0.7
	baz=219						
JISG	Ishigakijimahi	2.20 94	P		Pn	10 19 54.0	-0.1
SCLT	Jiali	2.23 225	eP		Pn	10 19 55.6	+1.2
	baz=242						
MATB	Ma-tsu	2.23 308	eP		Pn	10 19 53.0	-1.5
	baz=305						
SSD	Sandimen	2.33 210	eP		Pb	10 19 59.0	-0.7
	baz=209						
SSD			eS		Sb	10 20 28.9	+0.4
	baz=209						
ECL	Taimali	2.34 202	eP		Pb	10 19 57.9	-1.9
	baz=184						
TWM1	Shoushan	2.37 215	eP		Pb	10 19 59.2	-1.0
	baz=215						
SGLT	Jiouru	2.42 213	eP		Pb	10 20 00.9	-0.1
	baz=212						
MASBT	Mashibuluo	2.45 209	eP		Pb	10 20 01.6	-0.1
	baz=208						
PNG	Penghu	2.46 241	eP		Pn	10 19 58.0	+0.4
	baz=241						
PHUB	P'eng-hu	2.47 240	eP		Pn	10 19 57.0	-0.7
	baz=240						
PTMZ	Houxiangcun	2.54 276	eP		Pn	10 19 57.5	-1.2
	baz=277						
WDGT	Dungji	2.54 234	eP		Pn	10 19 59.4	+0.7
	baz=234						
JTJ	Tarama	2.55 92	P		Pn	10 19 59.0	+0.1
JTJ			eS		Sn	10 20 28.4	-1.6
EAST	Anshuo	2.57 202	eP		Pn	10 20 00.9	+1.7
	baz=189						
TAW	Tawu	2.58 201	eP		Pb	10 20 01.4	-2.4
	baz=185						
SSPT	Xinbi	2.59 208	eP		Pb	10 20 03.6	-0.4
	baz=209						
WSSB	Gushan	2.60 216	eP		Pn	10 20 01.3	+1.7
	baz=216						
LYJJ	Jianjiangzhen	2.61 313	eP		Pn	10 19 58.4	-1.3
	baz=310						
XPSS	Dashiqiu	2.64 325	eP		Pn	10 19 58.5	-1.5
	baz=321						
SCZT	Fangliau	2.67 206	eP		Pb	10 20 03.8	-1.5
	baz=206						
VCHM	Qimei	2.75 236	eP		Pn	10 20 01.9	+0.3
	baz=251						
TWP	Hsiaoliuchiu	2.80 211	eP		Pb	10 20 07.7	+0.1
	baz=211						
MHZQ	Yeshan	2.91 298	eP		Pn	10 20 03.5	-0.3
	baz=295						
JIRB	Irabujima	2.98 88	P		Pn	10 20 06.0	+1.3
TWK1	Hengchun	3.00 200	eP		Pn	10 20 07.5	+2.6
	baz=188						
TWKBT	Hengchun	3.00 200	eP		Pb	10 20 07.9	-3.0
	baz=188						
QZH	Quanzhou	3.01 274	Pn		Pn	10 20 04.0	-1.1
QZH			Sn		Sn	10 20 37.5	-3.7
QZH			smax		smax		
	comp=N,630nm,1.0s						
QZH			smax		smax		
	comp=E,360nm,1.3s						
TSEB	Hengchuen, Pin	3.01 198	eP		Pn	10 20 07.9	+2.8
	baz=183						
JIKM	Ikemajima	3.05 87	P		Pn	10 20 07.4	+1.7
JMJ	Miyako jima 2	3.09 89	eP		Pn	10 20 08.0	+1.8
	baz=105						
JMJ2	Miyako jima3	3.12 90	P		Pn	10 20 08.2	+1.5
KNM	Kinmen	3.17 264	eP		Pn	10 20 08.4	+0.9
	baz=266						
JOGS	Gusukube	3.19 90	P		Pn	10 20 08.1	+0.4
KNMB	Chin-men Tao	3.21 265	eP		Pn	10 20 06.8	-1.1
	baz=267						
AXDP	Jialang	3.57 273	eP		Pn	10 20 12.1	-0.8
	baz=275						
ZPLA	Ao Xicun	3.88 258	eP		Pn	10 20 16.8	-0.3
	baz=261						
ZZJH	Jiuhuzhen	3.90 266	eP		Pn	10 20 16.5	-0.9
	baz=269						
NJ2	Nanjing	7.73 340	eP		Pn	10 21 14.3	+4.3
NJ2			S		Sn	10 22 46.3	+8.8
NJ2			pmax		pmax		
	comp=Z,11nm,0.7s						
NJ2			smax		smax		
	comp=N,190nm,0.9s						
NJ2			smax		smax		
	comp=E,150nm,0.9s						
NJ2			LR		LR		
	comp=N,690nm,8.9s						
NJ2			LR		LR		
	comp=E,650nm,8.7s						
NJ2			LR		LR		
	comp=Z,1μm,7.1s						
TGY	Tagaytay City	10.66 185	LR		LR	10 26 38.7	
	comp=Z,114nm,20.1s,baz=7.5,slow=41						
JNU	Nakatsue	11.44 41	LR		LR	10 26 52.7	
	comp=Z,62nm,20.9s,baz=350,slow=39						
KSRS	Korea Array	13.64 21	P		P	10 22 43.2	+3.3
	comp=Z,0.6nm,0.3s,baz=199,slow=12,SNR=16						
KSRS			LR		LR	10 27 58.7	
	comp=Z,40nm,21.5s,baz=213,slow=37						
GYA	Guiyang	13.85 280	eP		Pn	10 22 32.0	-1.9
GYA			PP		P	10 22 43.8	+1.4
GYA			S		Sn	10 25 05.3	-2.5
GYA			SS		SnSn	10 25 22.5	+2.3
GYA			pmax		pmax		
	comp=Z,10.0nm,0.6s						
GYA			pmax		pmax		
	comp=Z,50nm,4.2s						
GYA			LR		LR		
	comp=Z,580nm,12.4s						
GYA			LR		LR		
	comp=Z,470nm,10.9s						
GYA			LR		LR		
	comp=Z,630nm,9.0s						
XAN	Xi'an	14.58 312	P		Pn	10 22 42.0	-2.0
XAN			pP		P	10 22 52.0	+1.6
XAN			pmax		pmax		
	comp=Z,6.0nm,0.7s						
XAN			LR		LR		
	comp=Z,270nm,7.5s						
XAN			LR		LR		
	comp=Z,310nm,9.8s						
XAN			LR		LR		
	comp=Z,480nm,10.8s						
MJAR	Matsushiro Arr	18.26 46	LR		LR	10 30 50.5	
	comp=Z,54nm,20.9s,baz=245,slow=37						
LZH	Lanzhou	19.18 310	eP		P	10 23 39.5	-2.0
LZH			pP		Pn	10 23 42.3	-0.1
LZH			PP		sP	10 23 57.5	+11
LZH			pmax		pmax		
	comp=Z,19nm,1.0s						
LZH			pmax		pmax		
	comp=Z,87nm,5.2s						
LZH			LR		LR		
	comp=Z,280nm,14.1s						
LZH			LR		LR		
	comp=Z,280nm,12.5s						
LZH			LR		LR		
	comp=Z,380nm,15.2s						
CN2	Changchun	19.20 8	eP		Pn	10 23 49.8	+7.5
CN2			pmax		pmax		
	comp=Z,10.0nm,0.5s						
CN2			LR		LR		
	comp=N,400nm,12.0s						
CN2			LR		LR		
	comp=E,400nm,12.0s						
CN2			LR		LR		
	comp=Z,400nm,12.0s						
USRK	Ussuriysk Ar.	21.05 21	P		P	10 24 04.9	+3.4
	comp=Z,3.9nm,0.8s,baz=207,slow=11,SNR=4.5						
CMAR	Chiang Mai Arr	22.23 258	P		P	10 24 17.0	+2.6
	comp=Z,0.4nm,0.3s,baz=61,slow=7.5,SNR=3.6						
CMAR			LR		LR	10 33 30.2	
	comp=Z,55nm,19.2s,baz=67,slow=38						
GTA	Gaotai	23.64 313	eP		P	10 24 29.0	0.0
GTA			pP		sP	10 24 33.8	+0.1
GTA			sP		pP	10 24 36.5	+4.2
GTA			S		S	10 28 42.8	-0.8
GTA			pmax		pmax		
	comp=Z,4.0nm,0.8s						
GTA			pmax		pmax		
	comp=Z,56nm,6.7s						
GTA			LR		LR		
	comp=Z,130nm,14.0s						
GTA			LR		LR		
	comp=Z,160nm,15.2s						
GTA			LR		LR		
	comp=Z,190nm,15.5s						
KLR	Kul'dur	25.60 15	P		P	10 24 48.4	+1.7
	comp=Z,2.3nm,0.6s,baz=196,slow=6.6,SNR=8.3						
KLR			LR		LR	10 34 37.1	
	comp=Z,49nm,18.7s,baz=205,slow=35						
SONM	Songino Array	26.09 336	P		P	10 24 52.0	+0.7
	comp=Z,6.7nm,0.9s,baz=149,slow=8.8,SNR=24						
SONM			LR		LR	10 36 28.8	
	comp=Z,126nm,21.3s,baz=123,slow=39						
WMQ	Urumqi	33.72 313	eP		P	10 25 59.5	+0.5
WMQ			pP		sP	10 26 04.5	+0.7
MKAR	Makanchi Array	38.37 315	P		P	10 26 38.9	+0.2
	comp=Z,0.7nm,0.6s,baz=103,slow=9.1,SNR=5.7						
MKAR			LR		LR	10 44 53.9	
	comp=Z,19nm,21.3s,baz=96,slow=40						
PETK	Petropavlovsk-	39.01 34	LR		LR	10 43 58.7	
	comp=Z,24nm,18.7s,baz=196,slow=38						
ZALV	Zalesovo Beam	40.11 326	LR		LR	10 44 53.6	
	comp=Z,74nm,18.3s,baz=82,slow=38						
KURBB	Kurchatov Arra	42.08 319	P		P	10 27 09.8	+0.5
	comp=Z,0.3nm,0.3s,baz=96,slow=7.8,SNR=4.5						
WRA	Warramunga Arr	46.07 164	P		P	10 27 41.0	-0.7
	comp=Z,3.3nm,0.6s,baz=346,slow=11,SNR=32						
BVAR	Borovoye Array	47.63 320	P		P	10 27 53.7	+0.1
	comp=Z,1.0nm,0.7s,baz=118,slow=8.6,SNR=5.1						
ASAR	Alice Springs	49.54 165	P		P	10 28 08.2	-0.4
	comp=Z,0.8nm,0.6s,baz=336,slow=6.7,SNR=20						
ASAR			PcP		PcP	10 29 28.8	-1.6
	comp=Z,0.8nm,0.8s,baz=340,slow=3.7,SNR=5.2						
GEYT	Alibeck	55.06 300	LR		LR	10 55 36.9	
	comp=Z,35nm,18.0s,baz=110,slow=39						
STKA	Stephens Creek	59.40 161	P		P	10 29 19.2	-0.9
	comp=Z,1.6nm,0.7s,baz=320,slow=5.3,SNR=5.8						
KBZ	Khabaz	65.62 309	LR		LR	11 02 06.3	
	comp=Z,24nm,18.1s,baz=32,slow=39						
FINES	FINESS Array B	71.26 330	P		P	10 30 36.8	+0.1
	comp=Z,0.6nm,0.5s,baz=81,slow=8.6,SNR=3.7						
FINES			LR		LR	11 04 26.3	
	comp=Z,33nm,18.1s,baz=46,slow=38						
BRTR	Keskin Array B	73.34 306	P		P	10 30 50.0	+0.3
	comp=Z,0.4nm,0.4s,baz=134,slow=7.1,SNR=3.9						
NOA	NORSAR Array B	78.00 332	LR		LR	11 08 39.7	
	comp=Z,22nm,18.7s,baz=260,slow=38						
GERES	GERESS Array B	82.80 321	LR		LR	11 11 49.2	
	comp=Z,20nm,19.3s,baz=328,slow=38						

GUC 26 10:41:52.6±0.6, 22°.27S×67°.72W, h198km±6km, ML3.7, 11C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.16 253		⇓iP	Pn	10 42 22.9	-0.7
LVC				i S	Sn	10 42 46.3	-1.4
PB06	IPOC Station P	1.77 256		eP	Pn	10 42 28.5	-0.3
PB06				eS	Sn	10 42 56.0	-0.9
PB06				IAML		10 42 57.5	
	comp=N,262nm,0.1s						
PB15	IPOC Station P	1.87 240		⇑iP	Pn	10 42 29.6	-0.2
PB15				i S	Sn	10 42 58.1	-0.7
PB03	IPOC Station P	1.90 276		⇑iP	Pn	10 42 30.1	-0.1
PB03				eS	Sn	10 42 58.2	-1.0
PB03				IAML		10 42 59.6	
	comp=N,546nm,0.2s						
PB01	IPOC Station P	2.05 306		⇑iP	Pn	10 42 31.4	-0.2
PB01				eS	Sn	10 43 01.0	-0.9
PB01				IAML		10 43 02.7	
	comp=E,358nm,0.3s						
PB07	IPOC Station P	2.09 285		⇑iP	Pn	10 42 32.2	+0.1
PB07				eS	Sn	10 43 01.7	-1.0
PB07				IAML		10 43 02.2	
	comp=N,538nm,0.4s						
PB02	IPOC Station P	2.24 295		⇑iP	Pn	10 42 33.5	-0.1
PB02				eS	Sn	10 43 04.4	-1.1
PB02				IAML		10 43 07.2	
	comp=E,414nm,0.3s						
PB04	IPOC Station P	2.25 268		⇑eP	Pn	10 42 33.9	+0.1
PB04				eS	Sn	10 43 05.0	-0.9
PB04				IAML		10 43 07.3	
	comp=N,478nm,0.3s						
PB05	IPOC Station P	2.37 255		⇑iP	Pn	10 42 35.1	0.0
PB05				i S	Sn	10 43 06.6	-1.5
PB05				IAML		10 43 07.8	
	comp=N,110nm,0.3s						
PB08	IPOC Station P	2.51 327		⇑iP	Pn	10 42 37.5	+0.5
PB08				eS	Sn	10 43 11.2	-0.2
PB08				IAML		10 43 14.1	
	comp=E,74nm,0.2s						
PB10	IPOC Station P	2.90 244		eP	Pn	10 42 40.9	0.0
GO01	Chusmiza	2.94 332		⇑iP	Pn	10 42 42.1	+0.1
GO01				i S	Sn	10 43 20.2	-0.2
PB11	IPOC Station P	3.09 324		⇑iP	Pn	10 42 42.8	-0.6
PB11				eS	Sn	10 43 21.6	-1.5
GO02	Mina Guanaco	3.35 210		⇓iP	Pn	10 42 46.2	-0.4
GO02				i S	Sn	10 43 27.1	-1.9
MNMC	Minye Minye	3.59 330		⇑iP	Pn	10 42 49.6	0.0
MNMC				i S	Sn	10 43 33.3	-0.8

IDC 26 10:44:34.7±1.9, 18°.28S×178°.18W, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.8/31, mbtmp4.0/4, Error ellipse: s-maj=52.7km s-min=34.7km az=122.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	20.32 191		P	P	10 49 12.4	0.0
	2.2nm,0.3s,baz=307,slow=15,SNR=8.3						
WRA	Warramunga Arr	44.78 260		P	P	10 52 50.6	+0.1
	0.9nm,0.3s,baz=95,slow=7.0,SNR=24						
ASAR	Alice Springs	44.90 255		P	P	10 52 51.1	-0.4
	1.2nm,0.4s,baz=87,slow=8.2,SNR=30						
ILAR	Eielson Array	86.20 13		P	P	10 57 17.6	+0.1
	0.3nm,0.5s,baz=221,slow=6.4,SNR=5.3						

RSNC 26 10:50:23.3±0.5, 6°.83N×73°.19W, h146km±5km, ML1.3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.24 179		eP	Pn	10 50 43.1	-0.4
BARC				eS	Sn	10 50 58.6	-0.3

BARC			*i*			10 50 59.5	
	comp=Z,5.8nm,0.2s						
RUSC	**La Rusia**	**0.94 174**	*e*P	Pn		10 50 47.4	-0.4
RUSC			*e*S	Sn		10 51 05.9	-0.5
RUSC			*i*			10 51 07.6	
	comp=Z,2.5nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.29 257**	*e*P	Pn		10 50 49.6	-0.9
PTBC			*e*S	Sn		10 51 10.8	-0.4
PTBC			*i*			10 51 16.8	
	comp=Z,3.2nm,0.2s						
NORC	**Norcasia**	**2.10 233**	*e*S	Sn		10 51 26.8	-0.3
PRAC	**Prado**	**3.53 209**	*e*P	Pn		10 51 17.6	+0.2
PRAC			*e*S	Sn		10 51 58.3	-1.0

*ISCJB **26** 10:51:27.5±0.3,2°.80S±0°.03×80°.79W±0°.03,h35km, mb4.5/52,MS3.5/12,Error ellipse: s-maj=3.8km s-min=3.6km az=20.9*
*IGQ **26** 10:51:28.3±0.5,3°.S±2°.×8°.1W±°, h6km,mb5.2,MLv5.1*
*NEIC **26** 10:51:29.4±2.3,2°.58S×80°.42W,h35km±3km,mb4.5/55, Error ellipse: s-maj=16.6km s-min=9.2km az=76.0*
*IDC **26** 10:51:31.7±2.6,2°.72S×80°.43W,h49km±29km,mb3.9/11, mb1 4.1/13,mb1mx3.9/31,mbtmp4.2/13,ML4.3/3,MS3.5/14, Ms1 3.5/14,ms1mx3.3/29,Error ellipse: s-maj=28.1km s-min=15.0km az=51.0*

ISC 26 10:51:29.0±0.5,2°.77S±0°.05×80°.64W±0°.06,h35km,n148, σ1§64/140,mb4.5/52,MS3.4/12,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APLA	**Playas - Guaya**	**0.28**	**63**	P	**Pn**	**10 51 35.6**	**-1.0**
APLA				S	**Sn**	**10 51 41.4**	**-0.6**
MORR	**Playas El Morr**	**0.33**	**68**	P	**Pn**	**10 51 37.3**	**0.0**
MORR				S	**Sn**	**10 51 43.7**	**+0.7**
SALI	**Salinas**	**0.67**	**329**	P	**Pn**	**10 51 42.1**	**0.0**
MILO	**Milagro-Astudi**	**1.19**	**66**	P	**Pn**	**10 51 49.5**	**+0.4**
MILO				S	**Sn**	**10 52 07.8**	**+3.7**
COHC	**Cochancay**	**1.42**	**78**	P	**Pn**	**10 51 52.0**	**-0.3**
MCRA	**Macar, Loja**	**1.73**	**157**	P	**Pn**	**10 51 53.6**	**-3.1**
BMAS	**Trigal station**	**2.50**	**60**	P	**Pn**	**10 52 08.4**	**+0.9**
ARRY	**Arrayan**	**2.52**	**60**	P	**Pn**	**10 52 08.7**	**+0.9**
BBIL	**Ulba Tungurahu**	**2.52**	**59**	P	**Pn**	**10 52 09.7**	**+1.9**
PAT1	**Patacocha**	**2.54**	**60**	P	**Pn**	**10 52 09.4**	**+1.3**
BPAT	**Tungurahua Vol**	**2.54**	**60**	P	**Pn**	**10 52 09.4**	**+1.3**
RETU	**Refugio**	**2.56**	**59**	P	**Pn**	**10 52 10.2**	**+1.8**
ZUMB	**Zumba**	**2.56**	**144**	P	**Pn**	**10 52 10.7**	**+2.5**
ZUMB				S	**Sn**	**10 52 39.2**	**+0.9**
POND	**Pondoa**	**2.57**	**59**	P	**Pn**	**10 52 09.5**	**+1.1**
RUN5	**Runtun**	**2.59**	**59**	P	**Pn**	**10 52 10.6**	**+1.8**
BULB	**Ulba Tungurahu**	**2.59**	**59**	P	**Pn**	**10 52 10.3**	**+1.5**
ILLI	**Illinizas Sur**	**2.80**	**43**	P	**Pn**	**10 52 12.9**	**+1.2**
PIS1	**Pisayambo**	**2.82**	**53**	P	**Pn**	**10 52 14.1**	**+2.0**
PISA	**Pisayambo**	**2.82**	**53**	P	**Pn**	**10 52 14.3**	**+2.2**
BMOR	**Cotopaxi Volca**	**2.98**	**47**	P	**Pn**	**10 52 16.5**	**+2.2**
BNAS	**Cotopaxi Volca**	**3.00**	**46**	P	**Pn**	**10 52 17.3**	**+2.8**
BREF	**Cotopaxi Volca**	**3.03**	**47**	P	**Pn**	**10 52 17.9**	**+2.8**
BTAM	**Cotopaxi Volca**	**3.06**	**47**	P	**Pn**	**10 52 17.9**	**+2.5**
BVC2	**Cotopaxi Volca**	**3.06**	**47**	P	**Pn**	**10 52 17.9**	**+2.5**
VC1	**Cotopaxi 1**	**3.08**	**47**	P	**Pn**	**10 52 18.5**	**+2.9**
COV1	**Cotopaxi Volc**	**3.11**	**48**	P	**Pn**	**10 52 17.9**	**+1.7**
NINA	**Atacazo Ninahu**	**3.11**	**41**	P	**Pn**	**10 52 17.9**	**+1.9**
PITA	**Cotopaxi Volc**	**3.11**	**45**	P	**Pn**	**10 52 18.7**	**+2.7**
ANTG	**Antisana-Guama**	**3.28**	**47**	P	**Pn**	**10 52 20.7**	**+2.2**
ANTM	**Antisana-La Mi**	**3.28**	**48**	P	**Pn**	**10 52 20.4**	**+2.0**
TERV	**Terraza Guagua**	**3.29**	**38**	P	**Pn**	**10 52 20.5**	**+2.0**
GGP	**Refugio Guagua**	**3.29**	**39**	P	**Pn**	**10 52 21.6**	**+3.0**
GOLV	**Golondrinas**	**3.32**	**27**	P	Pn	10 52 23.4	+5.0
ARDO	**Archidona, Ten**	**3.34**	**58**	P	**Pn**	**10 52 21.1**	**+2.2**
ANTS	**Antisana-Sarah**	**3.35**	**48**	P	**Pn**	**10 52 21.5**	**+2.2**
YANA	**Yana**	**3.35**	**38**	P	**Pn**	**10 52 20.6**	**+1.3**
ANTI	**Antisana**	**3.38**	**47**	P	**Pn**	**10 52 22.8**	**+2.9**
PULU	**Pululahua**	**3.50**	**38**	P	**Pn**	**10 52 22.9**	**+1.5**
PAC1	**Pacto, Paraso**	**3.54**	**32**	P	**Pn**	**10 52 21.1**	**-0.5**
OTAV	**Otavalo**	**3.70**	**36**	*e*Pn	**Pn**	**10 52 25.6**	**+1.5**
OTAV	**Otavalo**	**3.70**	**36**	*e*P	**Pn**	**10 52 25.5**	**+1.3**
CUIC	**Cuicocha-Domo**	**3.81**	**37**	P	**Pn**	**10 52 27.0**	**+1.5**
CAYA	**Cayambe**	**3.87**	**43**	P	Pn	10 52 31.9	+5.4
IMBA	**Imbabura, San**	**3.89**	**39**	P	**Pn**	**10 52 29.7**	**+3.0**
URCU	**Urcuqui**	**3.98**	**37**	P	**Pn**	**10 52 30.0**	**+2.1**
YAHU	**Yahuarcocha**	**4.04**	**40**	P	**Pn**	**10 52 31.2**	**+2.5**
LITE1	**Lita**	**4.21**	**33**	P	**Pn**	**10 52 31.3**	**+0.4**
CASC	**Dorado de Casc**	**4.39**	**49**	P	**Pn**	**10 52 35.0**	**+1.8**
ATAH	**Atahualpa**	**4.88**	**153**	P	Pn	10 52 43.3	+3.0
	8.3nm,0.3s,baz=347,slow=6.0,SNR=42						
ATAH				S	**Sn**	**10 53 38.0**	**+2.1**
	20nm,0.3s,baz=349,slow=16,SNR=3.5						
GCUF	**Volcan Galeras**	**5.16**	**40**	*e*P	**Pn**	**10 52 45.8**	**+1.6**
BBAC	**Balboa, Cauca**	**5.84**	**36**	*e*P	**Pn**	**10 52 54.0**	**+0.6**
GRGC	**Isla de Gorgon**	**6.24**	**23**	*e*P	**Pn**	**10 52 58.3**	**-0.4**
SOTA	**Rioblanco**	**6.32**	**40**	*e*P	**Pn**	**10 53 01.3**	**+1.1**
PTLC	**Puerto Leguiza**	**6.53**	**64**	*e*P	**Pn**	**10 53 02.3**	**-0.4**
POPC	**Popayan, Colom**	**6.60**	**37**	*e*P	**Pn**	**10 53 02.6**	**-1.2**
FLOC	**Florencia**	**6.60**	**49**	*e*P	**Pn**	**10 53 03.2**	**-0.4**
PCON	**Cinco Dias**	**6.61**	**40**	*e*P	**Pn**	**10 53 05.4**	**+1.2**
MARP	**Paez Belalcaza**	**7.28**	**40**	*e*P	**Pn**	**10 53 13.1**	**-0.1**
MALC	**Bahia Malaga**	**7.50**	**26**	*e*P	**Pn**	**10 53 18.1**	**+2.1**
YOTC	**Yotoco, Valle**	**7.96**	**33**	*e*P	Pn	10 53 17.6	-4.8
MACC	**Macarena, Meta**	**8.37**	**54**	*e*P	**Pn**	**10 53 29.4**	**+1.5**
ORTC	**Ortega, Tolima**	**8.55**	**39**	*e*P	**Pn**	**10 53 29.0**	**-1.4**
PRAC	**Prado**	**8.63**	**42**	*e*P	**Pn**	**10 53 30.0**	**-1.5**
GUY2C	**Guyana, Caldas**	**9.53**	**34**	*e*P	**Pn**	**10 53 41.4**	**-2.8**
ROSC	**El Rosal**	**9.85**	**40**	LR	LR	10 58 33.0	
	comp=Z,194nm,18.8s,baz=228,slow=44						
ROSC	**El Rosal**	**9.85**	**40**	*e*Pn	Pn	10 53 44.2	-4.3
PAYG	**Puerto Ayora**	**9.86**	**282**	P	Pn	10 53 53.3	+5.0
NNA	**Nana**	**9.90**	**158**	P	**Pn**	**10 53 50.1**	**+1.1**
	21nm,0.3s,baz=338,slow=10,SNR=31						
NNA				S	**Sn**	**10 55 36.0**	**-3.1**
	7.5nm,0.3s,baz=240,slow=22,SNR=7.7						
NNA	**Nana**	**9.90**	**158**	*e*Pn	**Pn**	**10 53 50.6**	**+1.6**
NNA	**Nana**	**9.90**	**158**	P	Pn	**10 53 49.7**	**+0.7**
CHIC	**Chingaza**	**10.08**	**43**	*e*P	**Pn**	**10 53 50.3**	**-1.5**
NORC	**Norcasia**	**10.09**	**35**	*e*P	Pn	10 53 58.3	+6.8
JTS	**Las Juntas de**	**13.66**	**342**	LR	LR	10 59 14.8	
	comp=Z,106nm,18.1s,baz=225,slow=34						
LPAZ	**La Paz**	**18.22**	**138**	P	**P**	**10 55 40.0**	**+0.1**
	0.2nm,0.3s,baz=331,slow=16,SNR=11						
LPAZ				LR	LR	11 04 20.2	
	comp=Z,160nm,18.8s,baz=306,slow=42						
LPAZ	**La Paz**	**18.22**	**138**	*e*P	**P**	**10 55 39.5**	**-0.4**
	5.8nm,0.8s						
MNMC	**Minye Minye**	**19.53**	**147**	*e*P	**Pn**	**10 55 55.6**	**+0.3**
	11nm,0.8s						
PB11	**IPOC Station P**	**20.01**	**148**	*e*P	**Pn**	**10 56 00.2**	**-0.7**
	12nm,0.7s						
APG	**El Apazote**	**20.16**	**331**	P	Pn	10 56 03.3	+0.6
	3.5nm,0.8s,baz=262,slow=4.6,SNR=3.8						
APG				LR	LR	11 02 43.9	
	comp=Z,104nm,18.6s,baz=60,slow=33						
GO01	**Chusmiza**	**20.18**	**147**	*e*P	Pn	10 56 03.9	+0.7
	16nm,0.8s						
GO01				*e*Sn	Sn	10 59 56.3	+6.5
PTGA	**Pitinga**	**20.77**	**85**	P	**P**	**10 56 06.0**	**-1.1**
	10nm,0.6s,baz=266,slow=11,SNR=25						
PTGA				LR	LR	11 04 52.8	
	comp=Z,183nm,18.8s,baz=270,slow=39						
PTGA	**Pitinga**	**20.77**	**85**	*e*P	**P**	**10 56 05.2**	**-1.9**
	12nm,0.8s						
LVC	**Limon Verde**	**22.77**	**151**	P	**P**	**10 56 29.8**	**+0.9**
	4.8nm,0.6s,baz=325,slow=6.7,SNR=7.6						
LVC				LR	LR	11 05 53.8	
	comp=Z,109nm,19.1s,baz=314,slow=38						
SIV	**San Ignacio**	**23.32**	**126**	P	**P**	**10 56 34.0**	**-0.2**
	6.4nm,0.8s,baz=309,slow=9.6,SNR=26						
SJG	**San Juan**	**25.19**	**34**	LR	LR	11 08 12.0	
	comp=Z,104nm,20.2s,baz=228,slow=40						
MDP	**Montagnes des**	**29.05**	**74**	P	**P**	**10 57 26.4**	**+0.2**
	14nm,1.0s,baz=261,slow=8.0,SNR=4.5						
MDP				LR	LR	11 09 24.0	
	comp=Z,175nm,18.7s,baz=275,slow=37						
CPUP	**Villa Florida**	**32.40**	**138**	LR	LR	11 14 23.9	
	comp=Z,76nm,19.4s,baz=315,slow=42						
453A	**Whigham**	**33.62**	**354**	*e*P	**P**	**10 58 03.8**	**-2.4**
	37nm,0.5s						
BDFB	**Brasilia**	**34.58**	**114**	P	**P**	**10 58 15.0**	**0.0**
	2.1nm,0.4s,baz=282,slow=7.6,SNR=4.1						
BDFB				LR	LR	11 13 58.0	
	comp=Z,184nm,19.6s,baz=229,slow=39						
253A	**Americus**	**34.80**	**355**	*e*P	P	10 58 10.2	-6.1
	28nm,0.6s						
154A	**Montrose**	**35.27**	**356**	*e*P	**P**	**10 58 15.9**	**-4.5**
	27nm,0.9s						
152A	**Waverly Hall**	**35.45**	**354**	*e*P	**P**	**10 58 20.4**	**-1.7**
	9.7nm,1.0s						
147A	**Livingston**	**35.98**	**349**	*e*P	**P**	**10 58 24.9**	**-1.7**
	655nm,1.0s						
Z50A	**Ashland**	**36.17**	**352**	*e*P	**P**	**10 58 28.1**	**-0.1**
	6.9nm,1.0s						
HODGE	**Hodges**	**36.83**	**358**	*e*P	**P**	**10 58 31.9**	**-2.0**
	7.7nm,0.6s						
JSC	**Jenkinsville**	**36.86**	**359**	*e*P	**P**	**10 58 30.6**	**-3.4**
	8.1nm,0.7s						
W52A	**Murphy**	**37.79**	**356**	*e*P	**P**	**10 58 38.8**	**-3.2**
	9.3nm,0.6s						
W50A	**Signal Mountai**	**38.02**	**354**	*e*P	**P**	**10 58 42.1**	**-1.8**
	8.6nm,0.6s						
SWET	**Sewanee**	**38.11**	**353**	*e*P	**P**	**10 58 43.7**	**-1.0**
	9.5nm,0.6s						
V60A	**Jim Taylor Roa**	**38.46**	**4**	*e*P	**P**	**10 58 43.3**	**-4.2**
	35nm,0.6s						
TXAR	**Lajitas Array**	**38.80**	**327**	P	**P**	**10 58 52.8**	**+2.1**
	0.3nm,0.7s,baz=148,slow=9.7,SNR=4.3						
TXAR				PcP	**PcP**	**11 01 03.1**	**+1.4**
	0.2nm,0.6s,baz=143,slow=3.2,SNR=2.8						
TXAR				LR	LR	11 13 01.2	
	comp=Z,32nm,19.0s,baz=0.0,slow=33						
PLCA	**Paso Flores**	**38.88**	**168**	P	**P**	**10 58 52.2**	**+1.0**
	2.2nm,0.9s,baz=5.5,slow=9.9,SNR=3.7						
PLCA	**Paso Flores**	**38.88**	**168**	*e*P	**P**	**10 58 52.2**	**+1.0**
	15nm,1.5s						
CLTN	**Cedars of Leba**	**39.02**	**353**	*e*P	**P**	**10 58 51.7**	**-0.6**
	2.9nm,0.6s						
W39A	**Magazine**	**39.73**	**343**	*e*P	**P**	**10 58 58.9**	**+0.7**
	9.8nm,1.3s						
MNTX	**Cornudas Mount**	**41.56**	**327**	*e*P	**P**	**10 59 13.6**	**+0.1**
	2.1nm,0.8s						
P45A	**Graceland, Par**	**42.59**	**352**	*e*P	**P**	**10 59 20.6**	**-1.0**
	11nm,0.6s						
ANMO	**Albuquerque**	**44.66**	**329**	*e*P	**P**	**10 59 39.1**	**+0.4**
	10.0nm,1.4s						
SDCO	**Great Sand Dun**	**46.43**	**333**	*e*P	**P**	**10 59 52.8**	**0.0**
	9.5nm,1.6s						
X16A	**Lo Mia Camp, P**	**46.97**	**325**	*e*P	**P**	**10 59 57.2**	**+0.2**
	2.3nm,0.9s						
H43A	**Windswept, Lux**	**47.46**	**353**	*e*P	**P**	**10 59 59.5**	**-0.8**
	16nm,1.0s						
WUAZ	**Wupatki**	**47.73**	**326**	*e*P	**P**	**11 00 02.8**	**+0.1**
	4.3nm,0.9s						
PV02	**Paradox Valley**	**48.34**	**330**	*e*P	**P**	**11 00 07.5**	**0.0**
	9.2nm,1.3s						
PV13	**Radium Mtn., P**	**48.35**	**330**	*e*P	**P**	**11 00 08.0**	**+0.4**
	10nm,1.2s						
PV03	**Paradox Valley**	**48.44**	**330**	*e*P	**P**	**11 00 09.6**	**+1.3**
	5.5nm,1.1s						
PV12	**Saucer Basin,**	**48.46**	**330**	*e*P	**P**	**11 00 07.9**	**-0.6**
	8.2nm,1.1s						
ECSD	**EROS Data Cent**	**48.47**	**345**	*e*P	**P**	**11 00 07.8**	**-0.3**
	4.7nm,0.7s						
E43A	**Lone Tree Farm**	**49.25**	**354**	*e*P	**P**	**11 00 13.4**	**-0.7**
	4.1nm,0.6s						
LCMT	**Little Creek M**	**49.85**	**326**	*e*P	**P**	**11 00 19.4**	**+0.4**
	3.7nm,1.3s						
D41A	**Chassel**	**50.11**	**353**	*e*P	**P**	**11 00 20.0**	**-0.6**
	18nm,1.1s						
CCUT	**Cedar City**	**50.30**	**326**	*e*P	**P**	**11 00 22.7**	**+0.2**
	4.9nm,1.3s						
BW06	**Boulder Array**	**52.31**	**333**	*e*P	**P**	**11 00 37.3**	**-0.2**
	2.6nm,1.0s						
PD31	**Pinedale Array**	**52.31**	**333**	*e*P	**P**	**11 00 38.6**	**+1.1**
	2.4nm,1.0s						
PDAR	**Pinedale Array**	**52.31**	**333**	P	**P**	**11 00 38.6**	**+1.1**
	1.5nm,0.9s,baz=140,slow=7.8,SNR=9.6						
PDAR				LR	LR	11 23 19.3	
	comp=Z,40nm,19.9s,baz=134,slow=36						
AGMN	**Agassiz Nation**	**52.56**	**347**	*e*P	**P**	**11 00 38.9**	**-0.1**
	13nm,1.0s						
SNOW	**Snow King Moun**	**53.40**	**333**	*e*P	**P**	**11 00 45.2**	**-0.4**
	4.5nm,1.1s						
LOHW	**Long Hollow**	**53.45**	**333**	*e*P	**P**	**11 00 46.7**	**+0.8**
	3.1nm,1.1s						
NV11	**Mina Array Sit**	**53.66**	**324**	*e*P	**P**	**11 00 48.0**	**+0.5**
	0.2nm,1.0s						
NV01	**Mina Array Sit**	**53.75**	**323**	*e*P	**P**	**11 00 50.3**	**+2.1**
NVAR	**Mina Array Bea**	**53.75**	**323**	P	**P**	**11 00 50.3**	**+2.1**
	1.2nm,0.8s,baz=143,slow=7.0,SNR=13						
ULM	**Lac du Bonnet**	**54.41**	**348**	P	**P**	**11 00 52.8**	**+0.3**
	9.3nm,0.8s,baz=158,slow=4.0,SNR=5.3						
ULM	**Lac du Bonnet**	**54.41**	**348**	*e*P	**P**	**11 00 50.4**	**-2.1**
	8.2nm,0.8s						
HLID	**Hailey**	**55.20**	**331**	*e*P	**P**	**11 01 00.1**	**+1.5**
	2.6nm,1.0s						
BOZ	**Bozeman (W)**	**55.45**	**334**	*e*P	**P**	**11 01 00.1**	**-0.3**
	3.0nm,0.9s						
WVOR	**Wild Horse Val**	**56.60**	**327**	*e*P	**P**	**11 01 09.7**	**+1.1**
	6.3nm,1.3s						
MSO	**Missoula**	**57.43**	**333**	*e*P	**P**	**11 01 15.3**	**+1.0**
	4.4nm,1.1s						
F10A	**Beach Ranch, E**	**58.33**	**331**	*e*P	**P**	**11 01 19.2**	**-1.5**
	6.3nm,1.3s						
G08A	**Pilot Rock**	**58.72**	**329**	*e*P	**P**	**11 01 23.0**	**-0.4**
	5.3nm,1.0s						
E09A	**Wood Farm, Sta**	**59.16**	**331**	*e*P	**P**	**11 01 26.6**	**+0.2**
	10nm,1.4s						
INK	**Inuvik**	**79.65**	**342**	*e*P	**P**	**11 03 33.3**	**+0.9**
	7.7nm,1.4s						
HFS	**Hagfors**	**94.55**	**30**	LR	LR	11 46 12.0	
	comp=Z,13nm,18.7s,baz=301,slow=35						
VRAC	**Vranov**	**96.81**	**41**	LR	LR	11 44 38.9	
	comp=Z,10nm,20.8s,baz=240,slow=33						
AS31	**Alice Springs**	**137.32**	**230**	*e*PKPdf	**PKiKP**	**11 10 50.5**	**-1.1**
ASAR	**Alice Springs**	**137.32**	**230**	PKP	**PKiKP**	**11 10 50.5**	**-1.1**
	0.4nm,0.9s,baz=126,slow=2.5,SNR=3.2						
KSH	**Kashi**	**137.70**	**27**	*e*PKP	**PKiKP**	**11 10 52.8**	**+0.7**
WMQ	**Urumqi**	**137.83**	**13**	*e*PKP	**PKPdf**	**11 10 50.5**	**+0.3**
HHC	**Hu-ho-hao-te**	**140.52**	**345**	*e*PKP	**PKPdf**	**11 10 55.5**	**+0.3**
NJ2	**Nanjing**	**145.58**	**330**	*e*PKPbc	**PKPab**	**11 11 05.5**	**+0.9**
LZH	**Lanzhou**	**146.59**	**353**	*e*PKPbc	**PKPdf**	**11 11 04.5**	**-1.6**
LZH				PKPab	**PKPab**	**11 11 08.5**	**-0.1**
LZH				pPKP	pPKPdf	11 11 16.3	-1.2
LZH				sPKP		11 11 20.3	
LZH				LR	LR		
	comp=N,52nm,18.1s						
LZH				LR	LR		
	comp=E,49nm,18.3s						
LZH				LR	LR		
	comp=Z,70nm,20.0s						

MEX 26 10:52:48.3±0.3,15°.89N×96°.77W,h43km±5km,MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PANG	**Puerto Angel**	**0.36**	**127**	*e*P	Pn	10 52 56.0	-1.6
PANG				*e*S	Sn	10 53 02.1	-1.9
HUIG	**Huatulco**	**0.65**	**101**	*e*P	Pn	10 52 59.8	-1.4
HUIG				*e*S	Sn	10 53 08.5	-1.9
VHO	**Vista Hermosa**	**1.18**	**2**	*e*P	Pn	10 53 06.9	-1.7
VHO				*i* S	Sn	10 53 21.2	-2.3

*ISCJB **26** 10:55:09.4±0.7,20°.04S±0°.09×177°.5W±0°.1,h550km,Error ellipse: s-maj=16.8km s-min=11.6km az=19.8*
*IDC **26** 10:55:11.9±2.3,19°.99S×177°.47W,h566km±28km, mb3.4/10,mb1 3.6/12,mb1mx3.4/27,mbtmp4.4/12,Error ellipse: s-maj=22.1km s-min=13.9km az=153.0*

ISC 26 10:55:10.4±0.8,20°.1S±0°.1×177°.4W±0°.1,h550km,n15, σ1§06/18,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.18**	**260**	P	**P**	**10 58 22.2**	**+0.3**
	2.5nm,0.3s,baz=63,slow=9.0,SNR=27						
URZ	**Urewera**	**18.75**	**193**	P	**P**	**10 58 54.9**	**0.0**
	2.3nm,0.3s,baz=38,slow=13,SNR=15						
URZ				S	**S**	**11 01 55.1**	**-2.4**
	0.3nm,0.3s,baz=137,slow=19,SNR=3.3						
RPZ	**Rata Peaks**	**25.49**	**200**	P	**P**	**10 59 56.0**	**+0.8**
	9.8nm,0.7s,baz=320,slow=7.9,SNR=2.7						
STKA	**Stephens Creek**	**38.46**	**244**	P	**P**	**11 01 47.0**	**+1.3**
	3.8nm,0.6s,baz=84,slow=9.9,SNR=11						
JAY	**Jayapura**	**44.40**	**288**	P	**P**	**11 02 32.7**	**-0.1**
	12nm,0.4s,baz=156,slow=4.5,SNR=10						
ASAR	**Alice Springs**	**45.13**	**256**	P	**P**	**11 02 38.8**	**+0.4**
	11nm,0.5s,baz=88,slow=8.1,SNR=148						
ASAR				PcP	**PcP**	**11 04 07.0**	**-0.2**
	1.1nm,0.5s,baz=109,slow=3.8,SNR=6.4						
ASAR				S	**S**	**11 08 37.2**	**-1.0**
	1.6nm,0.8s,baz=93,slow=16,SNR=12						
WRA	**Warramunga Arr**	**45.18**	**261**	P	**P**	**11 02 38.5**	**-0.3**
	7.5nm,0.5s,baz=94,slow=7.4,SNR=89						
MJAR	**Matsushiro Arr**	**70.16**	**323**	P	**P**	**11 05 27.0**	**-1.0**
	1.9nm,0.7s,baz=161,slow=7.7,SNR=5.0						
NVAR	**Mina Array Bea**	**80.34**	**43**	P	**P**	**11 06 24.9**	**0.0**
	0.1nm,0.4s,baz=216,slow=5.4,SNR=3.6						
TXAR	**Lajitas Array**	**86.37**	**57**	P	**P**	**11 06 55.9**	**+0.9**
	0.3nm,0.7s,baz=224,slow=7.5,SNR=4.3						
ILAR	**Eielson Array**	**87.76**	**13**	P	**P**	**11 06 59.1**	**-1.4**
	0.3nm,0.6s,baz=226,slow=5.5,SNR=4.7						
CMAR	**Chiang Mai Arr**	**90.46**	**289**	P	**P**	**11 07 14.9**	**+0.7**
	0.7nm,0.4s,baz=109,slow=2.5,SNR=5.4						
ARCES	**ARCESS Array B**	**128.57**	**350**	PKP	**PKPdf**	**11 13 14.0**	**-0.4**
	1.3nm,0.6s,baz=31,slow=3.3,SNR=5.5						
BRTR	**Keskin Array B**	**146.92**	**313**	PKPbc	**PKPdf**	**11 13 50.5**	**+1.7**
	1.4nm,0.5s,baz=137,slow=4.0,SNR=6.4						
GERES	**GERESS Array B**	**149.90**	**345**	PKPbc	**PKPbc**	**11 13 58.4**	**-0.4**
	1.1nm,0.5s,baz=79,slow=2.9,SNR=5.6						

*DDA **26** 11:38:07.8,41°.23N×43°.80E,h7km±3km,ML2.6*
*ISCJB **26** 11:38:08.7±0.6,41°.22N±0°.03×43°.79E±0°.03,h5km±5km, Error ellipse: s-maj=5.6km s-min=3.6km az=170.2*
*TIF **26** 11:38:08.4,41°.27N×43°.79E,h14km*

ISC 26 11:38:08.2±0.9,41°.23N±0°.04×43°.79E±0°.03,h14km±8km, n15,σ0§59/30,Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.15**	**285**	P	**Pb**	**11 38 12.5**	**-0.4**
BGD				S	**Sg**	**11 38 15.2**	**+0.2**
AKH	**Akhalkalaki**	**0.29**	**309**	P	**Pg**	**11 38 14.5**	**+0.1**
AKH				S	**Sg**	**11 38 18.7**	**0.0**
KZRT	**Kazreti**	**0.48**	**70**	P	**Pb**	**11 38 18.3**	**-0.2**
KZRT				S	**Sg**	**11 38 24.7**	**+0.4**
KZRT	**Kazreti**	**0.48**	**70**	*i* P	**Pb**	**11 38 18.3**	**-0.2**
KZRT				*i* S	**Sb**	**11 38 25.0**	**-0.5**
EAK	**Akyaka**	**0.56**	**195**	*i* P	**Pg**	**11 38 19.0**	**-0.2**
EAK				*i* S	**Sg**	**11 38 27.2**	**+0.6**
EAK				IAML_P			
	comp=Z,2μm,0.2s						
TBLG	**Delisi**	**0.87**	**54**	P	**Pn**	**11 38 25.9**	**-0.1**
TBLG				S	**Sb**	**11 38 37.4**	**+0.8**
TBLG	**Delisi**	**0.87**	**54**	*i* P	**Pb**	**11 38 25.1**	**+0.1**
TBLG				*i* S	**Sn**	**11 38 37.9**	**-0.6**
TBLG				IAML_P			
	comp=Z,2μm,0.1s						
BTNK	**Botanikuri**	**0.88**	**59**	P	**Pb**	**11 38 25.1**	**-0.1**
BTNK				S	**Sb**	**11 38 37.6**	**+0.7**
BTNK	**Botanikuri**	**0.88**	**59**	*i* P	**Pb**	**11 38 25.9**	**+0.6**
BTNK				*i* S	**Sb**	**11 38 37.9**	**+1.0**
BTNK				IAML_P			
	comp=Z,2μm,0.1s						
TKB	**Tkibuli**	**1.27**	**332**	P	**Pg**	**11 38 32.3**	**-0.4**
TKB				S	**Sn**	**11 38 49.6**	**+1.2**
ONI	**Oni**	**1.39**	**350**	P	**Pg**	**11 38 34.4**	**-0.5**
ONI				S	**Sg**	**11 38 52.7**	**-0.2**
DAGI	**Agillar**	**1.43**	**265**	*i* P	**Pg**	**11 38 35.2**	**-0.5**
DAGI				*i* S	**Sb**	**11 38 53.2**	**+0.5**
DAGI				IAML_P			
	comp=Z,140nm,0.2s						
DBAD	**Bademkaya**	**1.60**	**263**	*i* P	**Pg**	**11 38 38.5**	**-0.4**
DBAD				*i* S	**Sg**	**11 38 58.8**	**-0.9**
DBAD				IAML_P			
	comp=Z,327nm,0.2s						
BATM	**Batumi**	**1.62**	**284**

WRA	**Warramunga Arr**	**39.96 321**	P	P	11 57 14.0	0.0
	2.3nm,1.0s,baz=158,slow=6.9,SNR=8.7					
H08S2	**Diego Garcia H**	**82.34 268**	T	T	13 33 05.8	
	baz=144					
H08S1	**Diego Carcia H**	**82.35 268**	T	T	13 33 07.9	
	baz=144					
H08S3	**Diego Garcia H**	**82.36 268**	T	T	13 33 13.3	
	baz=144					
CPUP	**Villa Florida**	**92.97 147**	LR	LR	12 37 11.4	
	comp=Z,34nm,19.4s,baz=144,slow=31					

*ISCJB **26** 12:03:46.9±0.8, 39.°79N±0.°04×30.°53E±0.°06, h1km±9km, Error ellipse: s-maj=8.3km s-min=5.7km az=35.5*
*ISK **26** 12:03:46.7, 39.°83N×30.°48E, h5km, ML2.2/5*
*DDA **26** 12:03:47.6, 39.°85N×30.°51E, h6km±1km, ML2.5*

ISC 26 12:03:47.6±1.0, 39.°83N±0.°04×30.°48E±0.°04, h10km±8km, n12, σ1°01/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.05**	**336**	*i* P	**Pg**	**12 03 49.4**	**-0.4**
SRCK	**Saricakaya, Es**	**0.24**	**28**	PG	**Pg**	**12 03 52.1**	**-0.4**
SRCK				SG	**Sg**	**12 03 56.0**	**+0.2**
SRCK	**Saricakaya, Es**	**0.24**	**28**	*i* P	**Pg**	**12 03 52.2**	**-0.2**
SRCK				*i* S	**Sg**	**12 03 56.8**	**+1.0**
GULT	**Gulveren**	**0.60**	**3**	PG	**Pg**	**12 03 59.2**	**-0.1**
GEYV	**SAKARYA_Geyve**	**0.67**	**348**	*i* P	**Pg**	**12 03 58.5**	**-2.0**
GEYV				*i* S	**Sb**	**12 04 11.3**	**+0.7**
MDUB	**Mudurnu**	**0.84**	**41**	PG	**Pb**	**12 04 03.6**	**-0.8**
TVSB	**Tavsanli**	**0.88**	**244**	PG	**Pg**	**12 04 03.8**	**-0.7**
TVSB				SG	**Sb**	**12 04 16.6**	**-0.1**
SVRH	**Sivrihisar-ESK**	**0.89**	**115**	PG	**Pg**	**12 04 04.5**	**-0.3**
SAHE	**Sakarya_HENDEK**	**1.06**	**16**	*i* P	**Pg**	**12 04 07.2**	**-0.8**
GDZ	**Gediz**	**1.07**	**226**	*i* P	**Pn**	**12 04 09.7**	**+0.9**
GDZ				*i* S	**Sg**	**12 04 21.1**	**-1.1**
ULDT	**Uludag**	**1.08**	**287**	*i* P	**Pn**	**12 04 09.4**	**+0.5**
ULDT				*i* S	**Sb**	**12 04 23.5**	**+0.9**
ULDT				IAML_P			
	comp=Z,337nm,0.1s						
DURS	**Dursunbey**	**1.56**	**262**	*i* P	**Pn**	**12 04 15.6**	**0.0**
DURS				*i* S	**Sg**	**12 04 40.1**	**+2.1**
DURS				IAML_P			
	comp=Z,187nm,0.1s						

TEH 26 12:16:00.8, 35.°82N×60.°16E, h10km, ML3.5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRKH	**Jarkhoshk**	**0.17**	**60**	*e*Pg	Pg	12 16 04.6	0.0
JRKH				*e*Sg	Sg	12 16 07.7	+0.4
IMYA	**Miami**	**0.52**	**355**	*e*Pg	Pb	12 16 11.8	-0.4
IMYA				*e*Sg	Sb	12 16 19.7	-0.2
IMYA				IAMB	IAmb	12 16 20.9	
	comp=Z,32μm,0.2s						
IMOG	**Moghan**	**0.73**	**293**	*e*Pg	Pg	12 16 15.0	+0.1
IMOG				*e*Sg	Sg	12 16 25.0	+0.5
IMOG				IAMB	IAmb	12 16 27.3	
	comp=Z,44μm,0.1s						
IPAY	**Payeh**	**1.13**	**304**	*e*Pg	Pg	12 16 22.1	-0.5
IPAY				IAMB	IAmb	12 16 42.1	
	comp=Z,27μm,0.2s						
IAKL	**Akhelmad**	**1.38**	**305**	*e*Pg	Pn	12 16 26.0	-0.4
IAKL				IAMB	IAmb	12 16 50.3	
	comp=Z,18μm,0.1s						
IKRD	**Kardeh**	**1.64**	**306**	*e*Pg	Pn	12 16 21.8	-8.1
IKRD				IAMB	IAmb	12 16 42.1	
	comp=Z,16μm,0.2s						
IEMG	**Emamgholi**	**2.00**	**323**	*e*Pn	Pb	12 16 38.3	+0.8
IEMG				IAMB	IAmb	12 17 08.9	
	comp=Z,5μm,0.5s						
ISFR	**Sfrayin**	**2.13**	**306**	*e*Pn	Pb	12 16 39.6	-0.1
ISFR				IAMB	IAmb	12 17 15.4	
	comp=Z,7μm,0.5s						
SBZV	**Sabzevar**	**2.14**	**286**	*e*Pn	Pb	12 16 39.7	-0.1
SHRT	**Shahrakht**	**2.17**	**177**	*e*Pg	Pb	12 16 38.9	-1.4
BJRD	**Bojnurd**	**2.90**	**311**	*e*Pn	Pg	12 16 57.5	+1.1
IDAH	**Dahanechah**	**3.08**	**185**	*e*Pn	Pn	12 16 51.6	+1.8
IDAH				IAMB	IAmb	12 17 41.5	
	comp=Z,864nm,0.5s						
ITEG	**Tejag**	**3.14**	**202**	*e*Pn	Pn	12 16 52.7	+2.1
ITEG				IAMB	IAmb	12 17 03.2	
	comp=Z,1μm,0.3s						
TABS	**Tabas**	**3.31**	**230**	*e*Pn	Pn	12 16 54.8	+2.0
TKDS	**Koohdasht(Taba**	**3.33**	**230**	*e*Pn	Pn	12 16 55.1	+2.0
TNSJ	**Nastanj**	**3.46**	**239**	*e*Pn	Pn	12 16 57.5	+2.7
IKOO	**Kooshah**	**3.52**	**196**	*e*Pn	Pn	12 16 57.4	+1.6
IKOO				IAMB	IAmb	12 17 09.6	
	comp=Z,219nm,0.2s						
MRVT	**Maraveh tapeh**	**3.75**	**300**	*e*Pn	Pb	12 17 07.7	+0.5
BSRN	**Basiran**	**3.94**	**193**	*e*Pn	Pn	12 17 02.9	+1.4
IBAF	**Bafgh**	**5.70**	**224**	*e*Pn	Pn	12 17 28.5	+2.8
IBAF				IAMB	IAmb	12 19 16.1	
	comp=Z,99nm,0.6s						

MAN 26 12:36:14.2, 13.°58N×120.°70E, h8km, mb3.9, ML2.6, MS2.2, Mindoro

JMA 26 12:41:08.6±0.2, 24.°86N×123.°16E, h23km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.42**	**199**	P	Pb	12 41 17.1	-0.3
YOJ				S	Sb	12 41 23.3	0.0
JYNG	**Yonagunijimaku**	**0.45**	**206**	P	Pb	12 41 17.9	0.0
JYNG				S	Sb	12 41 24.3	+0.1
IRIF	**Iriomote-Funau**	**0.74**	**135**	P	Pb	12 41 22.6	-0.2
IRIF				S	Sb	12 41 33.0	+0.6
JKRS	**Kuro-shima**	**0.99**	**129**	P	Pb	12 41 27.0	-0.1
JKRS				*e*S	Sb	12 41 39.4	-0.3
HATJ	**Hateruma jima**	**0.99**	**144**	S	Sb	12 41 39.3	-0.5
JIJ	**Ishigaki jima**	**1.02**	**119**	S	Sb	12 41 39.1	-1.5
JISG	**Ishigakijimahi**	**1.08**	**104**	S	Sb	12 41 40.6	-1.7

TAP 26 12:41:10.2, 23.°75N×121.°99E, h11km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.48**	**313**	*e*P	Pg	12 41 20.2	+0.5
	baz=313						
ESL	**Shilin**	**0.51**	**277**	*e*S	Sb	12 41 29.7	+1.0
	baz=276						
EGFH	**Guangfu**	**0.52**	**261**	*e*S	Sb	12 41 29.6	+0.7
	baz=260						
NACB	**Ninganchiao**	**0.55**	**320**	P	Pg	12 41 21.2	+0.2
	baz=319						
NACB				*e*S	Sg	12 41 28.5	+0.1
	baz=319						
HGSD	**Ruisui**	**0.58**	**244**	*e*P	Pg	12 41 20.8	-0.7
	baz=243						
HGSD				*e*S	Sg	12 41 29.4	+0.2
	baz=243						
ETLH	**Xiulin Townshi**	**0.65**	**315**	*e*S	Sg	12 41 31.2	-0.2
	baz=314						
EHY	**Hungye**	**0.66**	**248**	*e*P	Pg	12 41 22.7	-0.3
	baz=247						
EHY				*e*S	Sg	12 41 31.9	+0.2
	baz=247						
NANB	**Nanao**	**0.71**	**342**	*e*P	Pb	12 41 24.5	0.0
	baz=342						
ENA	**Nanau**	**0.71**	**342**	*e*P	Pg	12 41 23.6	-0.4
	baz=342						
YULB	**Yu-li**	**0.73**	**241**	*e*P	Pg	12 41 23.6	-0.7
	baz=240						
TWF1	**Yuli**	**0.75**	**238**	P	Pg	12 41 24.1	-0.6
	baz=237						
TWF1				S	Sg	12 41 34.8	+0.3
	baz=237						
WHF	**Hehuan Shan**	**0.77**	**301**	*e*P	Pg	12 41 25.4	+0.2
	baz=300						
OWD	**Renai**	**0.77**	**285**	P	Pg	12 41 24.6	-0.6
	baz=285						
VWDT	**VWDT**	**0.78**	**270**	*e*P	Pg	12 41 24.9	-0.3
	baz=270						
VWDT				*e*S	Sg	12 41 35.4	0.0
	baz=270						
CHGB	**Renai**	**0.81**	**293**	*e*S	Sg	12 41 36.7	+0.2
	baz=292						
EOS1	**EOS1**	**0.81**	**9**	*e*P	Pg	12 41 25.4	-0.5
	baz=9.0						
NNSB	**Datong**	**0.87**	**321**	*e*P	Pb	12 41 27.4	-0.1
	baz=320						
NNSB				*e*S	Sg	12 41 38.0	-0.5
	baz=320						
SSLB	**Suanglung**	**0.95**	**272**	*e*P	Pg	12 41 27.8	-0.7
	baz=272						
ENTT	**Nioudou**	**0.96**	**337**	*e*S	Sg	12 41 40.6	-0.9
	baz=336						
ELDTW	**Lidau**	**1.05**	**238**	*e*P	Pb	12 41 28.0	-2.5
	baz=237						
YHNB	**Yeheng**	**1.07**	**329**	*e*S	Sb	12 41 42.9	-2.0
	baz=328						

NNC 26 12:47:59.1±10.0, 37.°84N×71.°51E, h0km, mb4.0, mpv3.5, 1C-1D, Error ellipse: s-maj=73.8km s-min=52.8km az=4.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.45**	**346**	Pg	Pg	12 49 24.0	-0.3
	2.3nm,0.2s						
IUG				Lg	Lg	12 50 25.3	
	35nm,0.3s						
MRKS	**Merke**	**5.07**	**14**	Pg	Pg	12 49 34.2	-2.1
	6.6nm,0.4s						
MRKS				Lg	Lg	12 50 43.7	
	15nm,0.6s						
KK31	**Karatay Array**	**5.31**	**352**	⇓Pg	Pb	12 49 35.0	+2.2
	1.6nm,0.6s,baz=179,slow=12,SNR=29						
KK31				⇑Lg	Lg	12 50 44.5	
	4.5nm,0.5s,baz=180,slow=19,SNR=6.5						
BRLS	**Borolday**	**5.34**	**347**	Pg	Pb	12 49 32.0	-1.3
	0.7nm,0.2s						
BRLS				Lg	Lg	12 50 39.3	
	4.7nm,0.3s						
SGDS	**Sogindy**	**6.08**	**22**	Pg	Pb	12 49 47.9	+1.9
	1.7nm,0.3s						
SGDS				Lg	Lg	12 51 06.4	
	2.2nm,0.5s						
KST	**Kastek**	**6.21**	**32**	Pg	Pb	12 49 49.1	+1.0
	3.8nm,0.4s						
KST				Lg	Lg	12 51 08.2	
	1.6nm,0.4s						

*MDD **26** 12:53:13.2±2.5, 35.°57N×1.°39W, h0km, mbLg2.1/6, Error ellipse: s-maj=15.0km s-min=10.8km az=146.0, PRXIMO*
*CNRM **26** 12:53:21.6, 35.°58N×3.°18W, h15km, ml2.6*

ISC 26 12:53:15.9±1.8, 35.°72N±0.°04×1.°42W±0.°06, h11km±12km, n11, σ1°31/22, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAF	**Taforalt**	**1.22**	**222**	P	**Pn**	**12 53 38.9**	**-0.1**
TAF				S	**Sb**	**12 53 55.2**	**+0.5**
ENIJ	**Nijar**	**1.40**	**333**	P	**Pg**	**12 53 43.1**	**+0.3**
	1.3nm,0.1s,SNR=7.9						
ENIJ				S	**Sg**	**12 54 01.8**	**+0.8**
	9.9nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.67**	**315**	P	**Pb**	**12 53 47.2**	**+0.4**
	5.2nm,0.7s,SNR=6.7						
EBER				S	**Sg**	**12 54 09.2**	**-0.5**
	2.3nm,0.2s,SNR=4.7						
JBK	**JBK**	**1.67**	**215**	P	**Pb**	**12 53 47.9**	**+1.1**
JBK				S	**Sn**	**12 54 04.3**	**-2.5**
EMUR	**La Murta**	**2.12**	**4**	P	**Pb**	**12 53 53.5**	**-0.9**
	0.3nm,0.1s,SNR=7.9						
EMUR				S	**Sn**	**12 54 18.1**	**+0.4**
	1.7nm,0.2s,SNR=5.9						
EQES	**Quesada**	**2.46**	**328**	P	**Pb**	**12 54 00.4**	**+0.1**
	0.3nm,0.1s,SNR=20						
EQES				S	**Sb**	**12 54 31.4**	**+0.7**
	3.1nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**2.56**	**340**	P	**Pb**	**12 54 02.0**	**0.0**
	3.1nm,0.2s,SNR=7.9						
SESP				S	**Sb**	**12 54 33.0**	**-0.4**
	3.1nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**2.56**	**340**	P	**Pb**	**12 54 02.0**	**0.0**
SESP				S	**Sg**	**12 54 36.3**	**-1.9**
EMIJ	**Mijas**	**2.84**	**288**	P	**Pn**	**12 54 01.5**	**+0.3**
	0.4nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**12 54 34.2**	**-1.2**
	0.5nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**2.92**	**358**	P	**Pb**	**12 54 05.8**	**-2.3**
	1.5nm,0.1s,SNR=8.7						
ETOB				S	**Sn**	**12 54 40.1**	**+2.6**
	2.1nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**3.97**	**33**	P	**Pn**	**12 54 18.0**	**+1.3**
	0.6nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**12 55 02.2**	**-1.0**
	0.7nm,0.1s,SNR=7.9						

*CNRM **26** 13:21:45.8, 36.°17N×7.°93W, h48km, ml2.7*
*MDD **26** 13:21:46.5±1.3, 36.°38N×7.°90W, h60km±13km, mb3.3/3, Error ellipse: s-maj=9.8km s-min=5.5km az=176.0, PRXIMO*
*IGIL **26** 13:21:47.8, 36.°40N×8.°00W, h12km, ML2.2*
*INMG **26** 13:21:47.4±1.7, 36.°27N×7.°95W, h31km±18km, ML2.2, Error ellipse: s-maj=8.5km s-min=5.7km az=20.0*

ISC 26 13:21:45.6±1.4, 36.°31N±0.°03×7.°88W±0.°04, h33km±4km, n49, σ1°15/90, 2D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.94**	**358**	*e*P	**Pb**	**13 22 03.3**	**-0.1**
PBDV				*e*S	**Sn**	**13 22 15.1**	**+0.4**
PBDV				A	A	13 22 24.8	
	12nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.94**	**358**	P	**Pb**	**13 22 03.3**	**-0.1**
PBDV				S	**Sn**	**13 22 15.1**	**+0.4**
	12nm,0.2s						
PVAQ	**Vaqueiros**	**1.10**	**7**	*e*P	**Pb**	**13 22 05.8**	**-0.4**
PVAQ				*e*S	**Sb**	**13 22 19.3**	**-1.0**
PVAQ				A	A	13 22 28.2	
	22nm,0.3s						
PVAQ	**Vaqueiros**	**1.10**	**7**	P	**Pb**	**13 22 05.8**	**-0.4**
PVAQ				S	**Sb**	**13 22 19.3**	**-1.0**
	22nm,0.3s						
PVAQ	**Vaqueiros**	**1.10**	**7**	P	**Pb**	**13 22 05.8**	**-0.4**
PVAQ				S	**Sb**	**13 22 23.2**	**+2.9**
PFVI	**Vila Bisbo**	**1.12**	**318**	*e*P	**Pn**	**13 22 05.1**	**+0.1**
PFVI				*e*S	**Sn**	**13 22 18.6**	**-0.6**
PFVI				A	A	13 22 23.0	
	21nm,0.2s						
PFVI	**Vila Bisbo**	**1.12**	**318**	P	**Pn**	**13 22 05.2**	**+0.2**
	37nm,1.1s,SNR=11						
PFVI				S	**Sn**	**13 22 18.7**	**-0.6**
	8.8nm,0.3s,SNR=9.6						
MORF	**Marmelete**	**1.17**	**328**	*e*P	**Pn**	**13 22 06.0**	**+0.2**
MORF				*e*S	**Sn**	**13 22 19.4**	**-1.2**
MORF				AML	AML	13 22 21.6	
	comp=N,34nm,0.3s						
MORF	**Marmelete**	**1.17**	**328**	⇓*e*P	**Pn**	**13 22 06.0**	**+0.2**
MORF				*e*S	**Sn**	**13 22 20.7**	**+0.1**
MORF				A	A	13 22 21.1	
	comp=N,29nm,0.1s						
MORF	**Marmelete**	**1.17**	**328**	P	**Pn**	**13 22 06.0**	**+0.2**
MORF				S	**Sn**	**13 22 19.4**	**-1.2**
	comp=N,34nm,0.3s						
PCVE	**Castro Verde**	**1.33**	**355**	⇓*e*P	**Pb**	**13 22 09.0**	**-1.0**
PCVE				*e*S	**Sn**	**13 22 24.6**	**+0.2**
PCVE				A	A	13 22 25.2	
	comp=N,29nm,0.1s						
PCVE	**Castro Verde**	**1.33**	**355**	P	**Pb**	**13 22 09.0**	**-1.0**
PCVE				S	**Sn**	**13 22 24.6**	**+0.2**
	comp=N,29nm,0.1s						
PTEO	**Sao Teotonio**	**1.41**	**332**	*e*P	**Pn**	**13 22 09.7**	**+0.8**
PTEO				*e*S	**Sn**	**13 22 26.1**	**-0.2**
PTEO				A	A	13 22 31.0	
	comp=N,13nm,0.3s						
PTEO	**Sao Teotonio**	**1.41**	**332**	P	**Pn**	**13 22 09.7**	**+0.8**
PTEO				S	**Sn**	**13 22 26.1**	**-0.2**
	comp=N,6.5nm,0.3s						
MESJ	**Messejana**	**1.55**	**350**	*e*P	**Pn**	**13 22 12.0**	**+1.1**
MESJ				*e*S	**Sn**	**13 22 29.8**	**-0.1**
MESJ				AML	AML	13 22 30.8	
	comp=N,32nm,0.3s						
MESJ	**Messejana**	**1.55**	**350**	*e*P	**Pn**	**13 22 12.1**	**+1.1**
MESJ				*e*S	**Sn**	**13 22 30.1**	**+0.2**
MESJ				A	A	13 22 31.8	
	comp=N,15nm,0.1s						
MESJ	**Messejana**	**1.55**	**350**	P	**Pn**	**13 22 12.0**	**+1.1**
MESJ				S	**Sn**	**13 22 29.8**	**-0.1**
	comp=N,32nm,0.3s						
PBEJ	**Beja**	**1.72**	**0**	*e*S	**Sn**	**13 22 34.8**	**+0.8**
PBEJ	**Beja**	**1.72**	**0**	S	**Sn**	**13 22 34.8**	**+0.8**
EMIN	**Mina Concepcio**	**1.75**	**33**	P	**Pn**	**13 22 13.7**	**0.0**
	comp=N,1.5nm,0.2s,SNR=6.5						
EMIN				S	**Sn**	**13 22 34.1**	**-0.7**
	comp=N,3.5nm,0.4s,SNR=5.8						
PNCL	**Nicolau / Gran**	**1.87**	**344**	*e*Pn	**Pn**	**13 22 16.0**	**+0.7**
PNCL				*e*Sn	**Sn**	**13 22 36.7**	**-1.1**
PNCL				A	A	13 22 43.5	
	comp=N,8.9nm,0.5s						
PNCL	**Nicolau / Gran**	**1.87**	**344**	P	**Pn**	**13 22 16.0**	**+0.7**
PNCL				S	**Sn**	**13 22 36.7**	**-1.1**
	comp=N,8.9nm,0.5s						
PBAR	**Barrancos**	**1.98**	**20**	*e*Sn	**Sn**	**13 22 40.9**	**+0.4**
PBAR	**Barrancos**	**1.98**	**20**	S	**Sn**	**13 22 40.9**	**+0.4**
PMTG	**Montargil**	**2.77**	**354**	*e*Pn	**Pn**	**13 22 28.5**	**+0.8**
PMTG				*e*Sn	**Sn**	**13 22 59.7**	**-0.3**
PMTG				A	A	13 23 00.6	
	comp=N,18nm,0.2s						
PMTG	**Montargil**	**2.77**	**354**	P	**Pn**	**13 22 28.5**	**+0.8**
PMTG				S	**Sn**	**13 22 59.7**	**-0.3**
	comp=N,18nm,0.2s						
PMAFR	**Mafra**	**2.87**	**338**	*e*Pn	**Pn**	**13 22 30.3**	**+1.3**
PMAFR				*e*Sn	**Sn**	**13 23 01.4**	**-1.0**
PMAFR				A	A	13 23 03.9	
	comp=N,13nm,0.1s						
PMAFR	**Mafra**	**2.87**	**338**	P	**Pn**	**13 22 30.3**	**+1.3**
	comp=N,18nm,0.7s,SNR=5.9						
PMAFR				S	**Sn**	**13 23 02.3**	**-0.1**
	comp=N,12nm,0.3s,SNR=7.2						
ALMR	**Almeirim**	**2.90**	**349**	*e*P	**Pn**	**13 22 30.4**	**+1.0**
ALMR	**Almeirim**	**2.90**	**349**	P	**Pn**	**13 22 30.4**	**+1.0**
ZHG	**ZHG**	**3.03**	**160**	P	**Pn**	**13 22 31.0**	**-0.3**
ZHG				S	**Sn**	**13 23 07.8**	**+1.3**
PMRV	**Marv??o**	**3.14**	**7**	*e*Pn	**Pn**	**13 22 33.8**	**+1.0**
PMRV				*e*Sn	**Sn**	**13 23 08.9**	**-0.2**
PMRV				A	A	13 23 10.9	
	comp=N,2.4nm,0.1s						
PMRV	**Marv??o**	**3.14**	**7**	P	**Pn**	**13 22 33.8**	**+1.0**
PMRV				S	**Sn**	**13 23 08.9**	**-0.2**
	comp=N,2.4nm,0.1s						
EADA	**Adamuz**	**3.23**	**54**	P	**Pn**	**13 22 35.7**	**+1.7**
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**13 23 10.6**	**-0.6**
	comp=N,3.4nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**3.54**	**5**	*e*Pn	**Pn**	**13 22 39.4**	**+1.1**
PCBR	**Castelo Branco**	**3.54**	**5**	P	**Pn**	**13 22 39.4**	**+1.1**
PCAS	**Casmilo, Conde**	**3.77**	**353**	*e*Pn	**Pn**	**13 22 43.1**	**+1.7**
PCAS				*e*Sn	**Sn**	**13 23 24.8**	**+0.1**
PCAS				A	A	13 23 27.7	
	comp=N,4.2nm,0.4s						
PCAS	**Casmilo, Conde**	**3.77**	**353**	P	**Pn**	**13 22 43.1**	**+1.7**
PCAS				Sn	**Sn**	**13 23 24.8**	**+0.1**
	comp=N,4.2nm,0.4s						
SRHM	**Skhour des Reh**	**3.83**	**180**	P	**Pn**	**13 22 42.5**	**+0.3**
SRHM				S	**Sn**	**13 23 28.2**	**+2.0**
EPLA	**Plasencia**	**4.01**	**20**	P	**Pn**	**13 22 44.9**	**+0.1**
	comp=N,0.5nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**13 23 28.9**	**-1.7**
	comp=N,1.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.13**	**67**	P	**Pn**	**13 22 48.9**	**+2.5**
	comp=N,0.3nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**13 23 33.5**	**-0.1**
	comp=N,0.6nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**4.27**	**40**	P	**Pn**	**13 22 49.9**	**+1.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**13 23 34.0**	**-3.1**
	comp=N,0.9nm,0.2s,SNR=7.9						
MD31	**MD31**	**4.29**	**142**	P	**Pn**	**13 22 49.0**	**+0.3**
MD31				S	**Sn**	**13 23 35.4**	**-2.2**
MDT	**Midelt**	**4.41**	**141**	P	**Pn**	**13 22 50.6**	**+0.3**
MDT				S	**Sn**	**13 23 37.9**	**-2.7**
OUK	**Oukaimeden**	**5.09**	**180**	P	**Pn**	**13 22 59.5**	**-0.4**
OUK				S	**Sn**	**13 23 56.9**	**-0.7**
OUZM	**OUZ**	**5.46**	**170**	P	**Pn**	**13 23 04.3**	**-0.6**
OUZM				S	**Sn**	**13 24 05.8**	**-0.9**
ETOB	**Tobarra**	**5.55**	**63**	P	**Pn**	**13 23 07.3**	**+1.4**
	comp=N,0.3nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**13 24 06.9**	**-1.7**
	comp=N,0.7nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.55**	**359**	P	**Pn**	**13 23 06.6**	**+0.6**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**13 24 05.6**	**-3.1**
	comp=N,1.2nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.70**	**9**	P	**Pn**	**13 23 08.8**	**+0.9**
	comp=N,0.8nm,0.2s,SNR=4.0						
ECAL				S	**Sn**	**13 24 09.6**	**-2.6**
	comp=N,1.2nm,0.2s,SNR=7.9						

IDC 26 13:31:37.4±15.0, 0.°33S×89.°84E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.4/27, mbtmp3.7/3, Error ellipse: s-maj=308.1km s-min=102.6km az=162.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.71**	**25**	P	P	13 36 19.6	+0.2
	0.5nm,0.3s,baz=223,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**47.40**	**353**	P	P	13 40 13.7	+0.2
	0.4nm,0.4s,baz=170,slow=8.8,SNR=5.0						
SONM	**Songino Array**	**50.09**	**14**	P	P	13 40 33.9	-0.5
	1.5nm,0.5s,baz=199,slow=9.2,SNR=9.3						

*ISK **26** 13:33:29.5, 39.°66N×28.°89E, h3km, ML2.5/10, Suspected Mining explosion.*
*DDA **26** 13:33:29.8, 39.°65N×28.°87E, h7km±2km, ML2.7*
*ISCJB **26** 13:33:30.1±0.4, 39.°65N±0.°03×28.°87E±0.°04, h0km, Error ellipse: s-maj=4.1km s-min=3.6km az=29.0*

ISC 26 13:33:29.8±0.9, 39.°69N±0.°04×28.°88E±0.°03, h0km, n18, σ0°64/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.33**	**254**	*i* P	**Pg**	**13 33 36.4**	**+0.4**
DURS				*i* S	**Sg**	**13 33 41.4**	**+1.2**
DURS				IAML_P			
	comp=Z,3μm,0.1s						
ORLT	**Orhaneli**	**0.35**	**2**	PG	**Pb**	**13 33 37.8**	**-1.2**
ULDT	**Uludag**	**0.49**	**24**	*i* P	**Pb**	**13 33 41.9**	**+0.5**
ULDT				*i* S	**Sb**	**13 33 48.6**	**-0.6**
TVSB	**Tavsanli**	**0.51**	**118**	PG	**Pg**	**13 33 39.7**	**+0.1**
TVSB				SG	**Sg**	**13 33 47.4**	**+1.2**
KCTX	**Karacabey (Bur**	**0.70**	**325**	PG	**Pb**	**13 33 44.6**	**-0.3**
GDZ	**

	baz=272						
TIPB	**Shuangxi**	**0.24**	**301⇑**	*eP*	**Pg**	**13 42 05.9**	**+0.2**
	baz=303						
TIPB				*eS*	**Sg**	**13 42 09.5**	**+0.4**
	baz=303						
TWC	**Suao**	**0.30**	**217**	P	**Pg**	**13 42 06.6**	**-0.2**
	baz=223						
TWC				*eS*	**Sg**	**13 42 10.4**	**-0.6**
	baz=223						
EOS1	**EOS1**	**0.31**	**167**	P	**Pg**	**13 42 07.5**	**+0.6**
	baz=164						
NWF	**Wu-fen Shan**	**0.33**	**312**	*eP*	**Pg**	**13 42 07.8**	**+0.5**
	baz=305						
NWF				*eS*	**Sb**	**13 42 13.0**	**-0.7**
	baz=305						
WFSB	**Wu-fen Shan**	**0.33**	**312**	*eP*	**Pb**	**13 42 07.8**	**-0.5**
	baz=305						
WFSB				*eS*	**Sb**	**13 42 13.0**	**-0.6**
	baz=305						
TWE	**Neicheng**	**0.37**	**250**	P	**Pg**	**13 42 08.0**	**0.0**
	baz=248						
TWE				*eS*	**Sg**	**13 42 12.9**	**-0.1**
	baz=248						
SLBB	**Yuanshan**	**0.39**	**256**	*eP*	**Pg**	**13 42 08.6**	**+0.2**
	baz=256						
TWA	**Mucha**	**0.44**	**287**	*eP*	**Pg**	**13 42 09.5**	**+0.1**
	baz=278						
TWA				*eS*	**Sg**	**13 42 16.1**	**+0.9**
	baz=278						
ENTT	**Nioudou**	**0.49**	**245**	*eP*	**Pg**	**13 42 10.2**	**-0.1**
	baz=244						
ENTT				*eS*	**Sg**	**13 42 16.2**	**-0.5**
	baz=244						
NHDH	**Xindian Distri**	**0.49**	**283**	*eP*	**Pb**	**13 42 11.4**	**+0.3**
	baz=275						
NANB	**Nanao**	**0.50**	**213**	*eP*	**Pg**	**13 42 10.4**	**-0.1**
	baz=219						
NANB				*eS*	**Sg**	**13 42 17.3**	**+0.1**
	baz=219						
ENA	**Nanau**	**0.51**	**214**	*eP*	**Pg**	**13 42 10.5**	**0.0**
	baz=219						
ENA				*eS*	**Sg**	**13 42 17.8**	**+0.5**
	baz=219						
TATO	**Taipei**	**0.52**	**284**	*eP*	**Pb**	**13 42 11.7**	**-0.1**
	baz=276						
TATO				*eS*	**Sg**	**13 42 18.3**	**+0.4**
	baz=276						
YM01	**YM01**	**0.53**	**304**	*eP*	**Pb**	**13 42 11.9**	**+0.1**
	baz=304						
YM01				*eS*	**Sb**	**13 42 19.0**	**-0.4**
	baz=304						
YM08	**YM08**	**0.54**	**309**	*eP*	**Pb**	**13 42 11.8**	**-0.1**
	baz=298						
YM08				*eS*	**Sg**	**13 42 18.4**	**+0.1**
	baz=298						
YM10	**YM10**	**0.54**	**304**	*eP*	**Pb**	**13 42 12.1**	**+0.2**
	baz=305						
YM05	**YM05**	**0.54**	**305⇑**	*eP*	**Pb**	**13 42 12.1**	**0.0**
	baz=295						
YM05				*eS*	**Sg**	**13 42 18.9**	**+0.5**
	baz=295						
YM04	**YM04**	**0.55**	**303**	*eP*	**Pb**	**13 42 12.3**	**+0.1**
	baz=303						
YM03	**YM03**	**0.57**	**305**	*eP*	**Pb**	**13 42 12.3**	**-0.2**
	baz=306						
ANP	**Anpu**	**0.58**	**305**	*eP*	**Pb**	**13 42 12.6**	**-0.2**
	baz=306						
TWY	**Chenhua**	**0.59**	**316**	P	**Pb**	**13 42 13.1**	**+0.3**
	baz=316						
TWY				*eS*	**Sb**	**13 42 20.9**	**-0.1**
	baz=316						
TWS1	**Kuangyinshan**	**0.62**	**294**	*eP*	**Pb**	**13 42 14.1**	**+0.7**
	baz=294						
TWS1				*eS*	**Sb**	**13 42 22.3**	**+0.1**
	baz=294						
NTST	**Danshui**	**0.63**	**300**	*eP*	**Pb**	**13 42 14.1**	**+0.6**
	baz=308						
YHNB	**Yeheng**	**0.64**	**254**	*eP*	**Pg**	**13 42 12.8**	**-0.3**
	baz=254						
YHNB				*eS*	**Sb**	**13 42 23.8**	**+1.2**
	baz=254						
NSK	**Sanguang**	**0.65**	**255**	P	**Pg**	**13 42 12.9**	**-0.4**
	baz=254						
NSK				*eS*	**Sg**	**13 42 21.3**	**-0.7**
	baz=254						
NNSB	**Datong**	**0.74**	**235**	*eP*	**Pg**	**13 42 14.7**	**-0.3**
	baz=236						
NNS	**Nan Shan**	**0.74**	**237**	*eP*	**Pg**	**13 42 14.3**	**-0.7**
	baz=236						
PCYT	**Pengchaiyu**	**0.78**	**1**	*eP*	**Pn**	**13 42 16.8**	**-0.5**
	baz=360						
NACB	**Ninganchiao**	**0.79**	**212**	*eP*	**Pg**	**13 42 15.8**	**-0.1**
	baz=224						
NACB				*eS*	**Sg**	**13 42 26.1**	**-0.2**
	baz=224						
ETLH	**Xiulin Townshi**	**0.82**	**219**	*eP*	**Pg**	**13 42 16.6**	**0.0**
	baz=229						
ETLH				*eS*	**Sg**	**13 42 27.3**	**-0.1**
	baz=229						
JYNG	**Yonagunijimaku**	**0.91**	**116**	P	**Pb**	**13 42 18.5**	**+0.3**
JYNG				S	**Sb**	**13 42 30.7**	**+0.4**
YOJ	**Yonaguni jima**	**0.96**	**114**	*eP*	**Pg**	**13 42 19.0**	**-0.1**
	baz=114						
YOJ	**Yonaguni jima**	**0.96**	**114**	P	**Pg**	**13 42 19.3**	**+0.2**
YOJ				S	**Sb**	**13 42 31.9**	**+0.2**
LIOB	**Emei**	**0.96**	**258**	*eP*	**Pn**	**13 42 20.8**	**+0.9**
	baz=259						
LIOB				*eS*	**Sn**	**13 42 33.1**	**-0.4**
	baz=259						
NSTT	**Nanjuang**	**0.98**	**257**	*eP*	**Pn**	**13 42 20.0**	**-0.1**
	baz=258						
NSTT				*eS*	**Sn**	**13 42 35.1**	**+1.2**
	baz=258						
WHF	**Hehuan Shan**	**1.00**	**226**	*eP*	**Pg**	**13 42 19.5**	**-0.5**
	baz=226						
TDCB	**Techi**	**1.01**	**234**	*eP*	**Pb**	**13 42 19.8**	**-0.2**
	baz=227						
CHGB	**Renai**	**1.12**	**226**	*eP*	**Pb**	**13 42 21.5**	**-0.5**
	baz=227						
WHP	**Taichung City**	**1.16**	**241**	*eP*	**Pg**	**13 42 23.1**	**+0.2**
	baz=242						
ESL	**Shilin**	**1.18**	**209**	*eP*	**Pn**	**13 42 22.5**	**-0.3**
	baz=210						
OWD	**Renai**	**1.20**	**222**	*eP*	**Pn**	**13 42 23.1**	**-0.2**
	baz=224						
VWDT	**VWDT**	**1.37**	**217**	*eP*	**Pb**	**13 42 26.5**	**+0.4**
	baz=219						
SMLT	**Sun Moon Lake**	**1.42**	**228**	*eP*	**Pb**	**13 42 27.6**	**+0.5**
	baz=220						
SSLB	**Suanglung**	**1.46**	**224**	*eP*	**Pb**	**13 42 27.7**	**+0.1**
	baz=226						
YULB	**Yu-li**	**1.61**	**205**	*eP*	**Pn**	**13 42 29.5**	**+0.7**
	baz=210						
IRIF	**Iriomote-Funau**	**1.61**	**108**	P	**Pn**	**13 42 28.9**	**+0.1**
IRIF				S	**Sn**	**13 42 48.7**	**-0.9**
HATJ	**Hateruma jima**	**1.79**	**116**	P	**Pn**	**13 42 31.4**	**+0.2**
HATJ				S	**Sn**	**13 42 53.0**	**-0.8**
JKRS	**Kuro-shima**	**1.89**	**108**	P	**Pn**	**13 42 33.2**	**+0.6**
JKRS				S	**Sn**	**13 42 55.7**	**-0.6**
JIJ	**Ishigaki jima**	**1.97**	**104**	P	**Pn**	**13 42 33.5**	**-0.2**
JIJ				S	**Sn**	**13 42 57.0**	**-1.3**
JISG	**Ishigakijimahi**	**2.07**	**97**	P	**Pn**	**13 42 36.3**	**+1.1**

TRN 26 13:53:35.2, 17.°18N×61.°27W, h32km, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.69**	**315**	*eP*	Pb	13 53 49.7	+0.8
ANWB				*eS*	Sn	13 54 00.9	+2.5
DEG	**La Desirade**	**0.88**	**167**	*eP*	Pb	13 53 52.6	+0.5
DEG				*eS*	Sb	13 54 06.3	+2.8
MLYT	**Lee's Yard**	**0.99**	**243**	*eP*	Pb	13 53 54.0	+0.2
MLYT				*eS*	Sb	13 54 08.4	+1.8
NVRH	**Round Hill, Ne**	**1.27**	**271**	*eS*	Sb	13 54 15.2	+0.6
SKTB	**Turtle Beach**	**1.29**	**272**	*eS*	Sb	13 54 15.4	+0.4
NVBH	**Bath Hotel, Ne**	**1.29**	**268**	*eS*	Sb	13 54 16.1	+1.0
SKI	**Saint Kitts**	**1.41**	**277**	*eP*	Pb	13 54 00.7	-0.3
SKI				*eS*	Sb	13 54 18.7	0.0
SKDB	**Saint Kitts 2**	**1.48**	**279**	*eS*	Sb	13 54 20.7	0.0
BSK	**Brimstone Hill**	**1.51**	**277**	*eP*	Pb	13 54 01.6	-1.0
BSK				*eS*	Sb	13 54 21.7	+0.3
DWS	**Wesley**	**1.60**	**181**	*eP*	Pb	13 54 03.1	-1.0
DWS				*eS*	Sb	13 54 22.6	-1.3
MDPO	**Dominica; Chan**	**1.60**	**186**	*eP*	Pb	13 54 03.3	-0.8
MDPO				*eS*	Sb	13 54 23.1	-0.8
MDN	**Morne-Daniel**	**1.85**	**184**	*eS*	Sb	13 54 29.4	-1.7
FDF	**Fort de France**	**2.43**	**177**	*eP*	Pn	13 54 14.3	+1.6
FDF				*eS*	Sn	13 54 42.9	+1.5
SLBI	**Saint Lucia, B**	**3.15**	**175**	*eP*	Pn	13 54 24.3	+1.8
SLBI				*eS*	Sn	13 55 00.1	+1.1

MEX 26 14:16:02.5±0.3, 14.°81N×93.°67W, h20km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.99**	**26**	*eP*	Pb	14 16 17.8	-3.1
PCIG				*eS*	Sb	14 16 29.9	-3.6
TGIG		**2.03**	**15**	*eP*	Pn	14 16 33.3	-2.3
TGIG				*eS*	Sn	14 16 56.5	-3.8
CCIG	**Comitan**	**2.08**	**45**	*eP*	Pn	14 16 34.5	-1.9
CCIG				*eS*	Sn	14 16 58.1	-3.7

*ISCJB **26** 14:18:31.8±0.4, 24.°83N±0.°02×122.°07E±0.°02, h7km±3km, Error ellipse: s-maj=3.4km s-min=2.9km az=137.3*
*TAP **26** 14:18:31.9, 24.°85N×122.°03E, h9km, ML2.7, B*
*JMA **26** 14:18:32.5±0.1, 24.°85N×121.°96E, h42km±5km, M2.0*

ISC 26 14:18:31.7±0.8, 24.°86N±0.°02×122.°03E±0.°02, h15km±5km, n57, o0±51/91, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.09**	**263**	P	**Pg**	**14 18 34.6**	**-0.2**
	baz=261						
EGS				*eS*	**Sg**	**14 18 36.7**	**-0.1**
	baz=261						
TWB1	**Santiao Chiao**	**0.16**	**346**	P	**Pg**	**14 18 35.6**	**-0.1**
	baz=348						
TWB1				*eS*	**Sg**	**14 18 38.1**	**-0.2**
	baz=348						
NTC	**Toucheng**	**0.18**	**270**	*eP*	**Pb**	**14 18 36.4**	**-0.4**
	baz=270						
NTC				*eS*	**Sb**	**14 18 39.9**	**-0.3**
	baz=270						
TIPB	**Shuangxi**	**0.22**	**302**	*eP*	**Pb**	**14 18 37.1**	**-0.3**
	baz=302						
TIPB				*eS*	**Sb**	**14 18 40.7**	**-0.6**
	baz=302						
TWC	**Suao**	**0.29**	**214**	P	**Pg**	**14 18 38.0**	**+0.1**
	baz=223						
TWC				*eS*	**Sg**	**14 18 41.8**	**-0.3**
	baz=223						
NWF	**Wu-fen Shan**	**0.31**	**314**	*eP*	**Pb**	**14 18 39.1**	**0.0**
	baz=304						
NWF				*eS*	**Sb**	**14 18 44.0**	**-0.1**
	baz=304						
WFSB	**Wu-fen Shan**	**0.31**	**314**	*eP*	**Pb**	**14 18 39.0**	**0.0**
	baz=304						
WFSB				*eS*	**Sb**	**14 18 43.8**	**-0.2**
	baz=304						
EOS1	**EOS1**	**0.32**	**164**	P	**Pg**	**14 18 38.8**	**+0.6**
	baz=165						
TWE	**Neicheng**	**0.36**	**248**	P	**Pg**	**14 18 39.3**	**+0.4**
	baz=248						
TWE				*eS*	**Sg**	**14 18 44.2**	**+0.3**
	baz=248						
SLBB	**Yuanshan**	**0.37**	**254**	*eP*	**Pb**	**14 18 40.0**	**-0.1**
	baz=255						
SLBB				*eS*	**Sb**	**14 18 45.4**	**-0.3**
	baz=255						
TWA	**Mucha**	**0.42**	**287**	P	**Pb**	**14 18 41.1**	**+0.2**
	baz=277						
TWA				*eS*	**Sb**	**14 18 47.4**	**+0.2**
	baz=277						
NHDH	**Xindian Distri**	**0.47**	**283**	*eP*	**Pb**	**14 18 42.7**	**+0.9**
	baz=275						
ENTT	**Nioudou**	**0.47**	**243**	P	**Pb**	**14 18 41.5**	**-0.2**
	baz=244						
ENTT				*eS*	**Sg**	**14 18 47.7**	**+0.2**
	baz=244						
NANB	**Nanao**	**0.50**	**211**	*eP*	**Pg**	**14 18 41.4**	**-0.2**
	baz=219						
NANB				*eS*	**Sg**	**14 18 48.5**	**+0.3**
	baz=219						
ENA	**Nanau**	**0.50**	**212**	*eP*	**Pb**	**14 18 42.2**	**-0.1**
	baz=219						
ENA				*eS*	**Sg**	**14 18 48.7**	**+0.4**
	baz=219						
TATO	**Taipei**	**0.51**	**284**	*eP*	**Pb**	**14 18 42.4**	**0.0**
	baz=275						
TATO				*eS*	**Sb**	**14 18 49.8**	**+0.2**
	baz=275						
YM01	**YM01**	**0.51**	**305**	*eP*	**Pb**	**14 18 43.1**	**+0.7**
	baz=304						
YM01				*eS*	**Sb**	**14 18 50.0**	**+0.3**
	baz=304						
TAP	**Taipei**	**0.51**	**291**	*eS*	**Sb**	**14 18 50.5**	**+0.9**
	baz=282						
YM08	**YM08**	**0.52**	**310**	*eP*	**Pb**	**14 18 43.1**	**+0.5**
	baz=301						
YM10	**YM10**	**0.52**	**305**	*eP*	**Pb**	**14 18 43.4**	**+0.8**
	baz=304						
YM10				*eS*	**Sb**	**14 18 50.2**	**+0.2**
	baz=304						
YM05	**YM05**	**0.52**	**306**	*eP*	**Pb**	**14 18 43.3**	**+0.6**
	baz=305						
YM04	**YM04**	**0.54**	**304**	*eP*	**Pb**	**14 18 43.6**	**+0.7**
	baz=303						
YM04				*eS*	**Sb**	**14 18 50.7**	**+0.2**
	baz=303						
YM03	**YM03**	**0.55**	**306**	*eP*	**Pb**	**14 18 43.7**	**+0.5**
	baz=305						
ANP	**Anpu**	**0.57**	**306**	*eP*	**Pb**	**14 18 43.9**	**+0.5**
	baz=305						
TWY	**Chenhua**	**0.57**	**317**	P	**Pb**	**14 18 44.4**	**+0.9**
	baz=316						
TWY				*eS*	**Sb**	**14 18 51.9**	**+0.5**
	baz=316						
TWS1	**Kuangyinshan**	**0.61**	**294**	P	**Pn**	**14 18 45.4**	**-0.4**
	baz=293						
TWS1				*eS*	**Sb**	**14 18 53.3**	**+0.8**
	baz=293						
YHNB	**Yeheng**	**0.62**	**253**	*eP*	**Pg**	**14 18 44.1**	**+0.1**
	baz=263						
NSK	**Sanguang**	**0.64**	**254**	*eP*	**Pg**	**14 18 44.2**	**0.0**
	baz=254						
NSK				*eS*	**Sg**	**14 18 52.0**	**-0.6**
	baz=254						
NNSB	**Datong**	**0.73**	**234**	*eP*	**Pg**	**14 18 45.9**	**0.0**
	baz=236						
NNSB				*eS*	**Sg**	**14 18 55.4**	**-0.1**
	baz=236						
NNS	**Nan Shan**	**0.73**	**235**	*eP*	**Pg**	**14 18 45.5**	**-0.4**
	baz=236						
PCYT	**Pengchaiyu**	**0.77**	**3**	*eP*	**Pn**	**14 18 48.1**	**0.0**
	baz=1.0						
NACB	**Ninganchiao**	**0.79**	**210**	*eP*	**Pb**	**14 18 47.3**	**+0.2**
	baz=224						
NACB				*eS*	**Sg**	**14 18 57.1**	**-0.2**
	baz=224						
ETLH	**Xiulin Townshi**	**0.82**	**218**	*eP*	**Pg**	**14 18 47.7**	**+0.1**
	baz=229						
ETLH				*eS*	**Sg**	**14 18 58.5**	**+0.2**
	baz=229						
TWD	**Chiawan**	**0.87**	**207**	*eP*	**Pb**	**14 18 48.9**	**+0.4**
	baz=203						
JYNG	**Yonagunijimaku**	**0.93**	**116**	P	**Pg**	**14 18 49.9**	**+0.3**
JYNG				S	**Sb**	**14 19 02.4**	**+0.8**
LIOB	**Emei**	**0.95**	**257**	*eP*	**Pn**	**14 18 51.9**	**+1.4**
	baz=258						
NSTT	**Nanjuang**	**0.96**	**257**	*eP*	**Pn**	**14 18 51.0**	**+0.3**
	baz=250						
YOJ	**Yonaguni jima**	**0.97**	**114**	*eP*	**Pb**	**14 18 50.0**	**-0.3**
	baz=115						
YOJ				*eS*	**Sb**	**14 19 02.8**	**-0.2**
	baz=115						
YOJ	**Yonaguni jima**	**0.97**	**114**	P	**Pg**	**14 18 50.9**	**+0.3**
YOJ				S	**Sg**	**14 19 04.1**	**+0.8**
TWT	**Tachien**	**0.98**	**233**	*eP*	**Pn**	**14 18 51.6**	**+0.5**
	baz=227						
WHF	**Hehuan Shan**	**0.99**	**225**	*eP*	**Pg**	**14 18 50.9**	**-0.1**
	baz=227						
WHF				*eS*	**Sb**	**14 19 04.2**	**+0.2**
	baz=227						
TDCB	**Techi**	**0.99**	**233**	*eP*	**Pn**	**14 18 51.3**	**0.0**
	baz=230						
TDCB				*eS*	**Sb**	**14 19 04.0**	**+0.2**
	baz=230						
CHGB	**Renai**	**1.11**	**225**	*eP*	**Pb**	**14 18 53.1**	**+0.3**
	baz=227						
CHGB				*eS*	**Sg**	**14 19 07.8**	**+0.1**
	baz=227						
ESL	**Shilin**	**1.17**	**208**	*eP*	**Pn**	**14 18 53.8**	**+0.2**
	baz=210						
OWD	**Renai**	**1.19**	**221**	*eP*	**Pb**	**14 18 54.4**	**+0.4**
	baz=224						
NSY	**Sanyi**	**1.23**	**250**	*eP*	**Pg**	**14 18 55.9**	**+0.4**
	baz=269						
VWDT	**VWDT**	**1.36**	**217**	*eP*	**Pg**	**14 18 57.8**	**-0.1**
	baz=228						
VWDT				*eS*	**Sg**	**14 19 15.4**	**-0.3**
	baz=228						
SMLT	**Sun Moon Lake**	**1.41**	**227**	*eP*	**Pg**	**14 18 59.1**	**+0.2**
	baz=220						
TYC	**Yuchr**	**1.43**	**229**	*eP*	**Pg**	**14 18 59.4**	**+0.2**
	baz=222						
HGSD	**Ruisui**	**1.47**	**202**	*eP*	**Pg**	**14 19 00.6**	**+0.7**
	baz=193						
IRIF	**Iriomote-Funau**	**1.63**	**108**	P	**Pn**	**14 18 59.4**	**-0.5**
IRIF				S	**Sn**	**14 19 18.6**	**-2.1**
TWF1	**Yuli**	**1.64**	**204**	*eP*	**Pb**	**14 19 02.2**	**+0.5**
	baz=221						
CHN5	**Tsauling**	**1.76**	**225**	*eP*	**Pg**	**14 19 05.5**	**0.0**
	baz=230						
HATJ	**Hateruma jima**	**1.80**	**116**	P	**Pn**	**14 19 02.4**	**+0.1**
HATJ				S	**Sn**	**14 19 23.6**	**-1.3**
JKRS	**Kuro-shima**	**1.90**	**108**	P	**Pn**	**14 19 03.8**	**+0.1**
JKRS				*eS*	**Sn**	**14 19 26.8**	**-0.6**
JIJ	**Ishigaki jima**	**1.98**	**104**	P	**Pn**	**14 19 05.3**	**+0.5**
JIJ				S	**Sn**	**14 19 29.3**	**-0.1**
CHN4	**Tsaushan**	**1.99**	**222**	*eP*	**Pg**	**14 19 09.1**	**-0.8**
	baz=227						

JMA 26 14:52:42.9±0.2, 24.°06N×123.°55E, h18km±2km, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.23**	**91**	P	Pg	14 52 48.2	-0.1
HATJ				S	Sb	14 52 52.1	0.0
IRIF	**Iriomote-Funau**	**0.32**	**31**	P	Pg	14 52 49.8	0.0
IRIF				S	Sg	14 52 54.1	-0.4
JKRS	**Kuro-shima**	**0.46**	**67**	P	Pg	14 52 52.1	-0.1
JKRS				S	Sb	14 52 58.8	-0.1
JIJ	**Ishigaki jima**	**0.62**	**61**	P	Pb	14 52 54.9	-0.3
JIJ				S	Sg	14 53 02.5	-1.0
JYNG	**Yonagunijimaku**	**0.68**	**305**	S	Sb	14 53 04.5	-0.7
JISG	**Ishigakijimahi**	**0.87**	**53**	P	Pb	14 52 58.9	-0.6
JISG				S	Sb	14 53 09.7	-1.1
JTJ	**Tarama**	**1.20**	**61**	S	Sb	14 53 20.4	+0.1

TAP 26 14:52:45.4, 24.°41N×121.°42E, h6km, ML1.2, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.04**	**300**	*i* P	Pg	14 52 46.8	-0.2
	baz=301						
NNSB				S	Sg	14 52 47.7	-0.4
	baz=301						
NNS	**Nan Shan**	**0.05**	**306**	P	Pg	14 52 46.8	-0.3
	baz=310						
NNS				S	Sg	14 52 48.0	-0.3
	baz=310						
ETLH	**Xiulin Townshi**	**0.21**	**164**	*eP*	Pg	14 52 50.1	+0.5
	baz=164						
ETLH				*eS*	Sg	14 52 52.9	+0.5
	baz=164						
YHNB	**Yeheng**	**0.26**	**351**	P	Pg	14 52 50.9	+0.3
	baz=351						
YHNB				*eS*	Sg	14 52 53.9	-0.2
	baz=351						
ENTT	**Nioudou**	**0.27**	**30**	P	Pg	14 52 50.8	+0.1
	baz=31						
ENTT				*eS*	Sg	14 52 54.4	+0.2
	baz=31						
NSK	**Sanguang**	**0.27**	**348**	*eP*	Pg	14 52 51.6	+0.8
	baz=349						
NSK				*eS*	Sg	14 52 54.2	-0.2
	baz=349						
NACB	**Ninganchiao**	**0.28**	**146**	*eP*	Pg	14 52 51.2	+0.2
	baz=145						
NACB				*eS*	Sg	14 52 55.4	+0.6
	baz=145						
TDCB	**Techi**	**0.28**	**237**	P	Pg	14 52 50.7	-0.4
	baz=236						
TDCB				*eS*	Sg	14 52 54.2	-0.6
	baz=236						
ENA	**Nanau**	**0.29**	**86**	*eP*	Pg	14 52 51.1	-0.1
	baz=86						
ENA				*eS*	Sg	14 52 55.4	+0.3
	baz=86						
WHF	**Hehuan Shan**	**0.30**	**208**	*eP*	Pg	14 52 51.1	-0.3
	baz=206						
WHF				*eS*	Sg	14 52 55.3	-0.1
	baz=206						
NANB	**Nanao**	**0.30**	**86**	P	Pg	14 52 51.3	-0.1
	baz=86						
NANB				S	Sg	14 52 55.2	-0.2
	baz=86						
SLBB	**Yuanshan**	**0.40**	**30**	P	Pg	14 52 53.5	+0.3
	baz=29						
SLBB				*eS*	Sg	14 52 58.7	+0.4
	baz=29						
CHGB	**Renai**	**0.41**	**213**	*eP*	Pg	14 52 52.9	-0.7
	baz=212						
CHGB				*eS*	Sg	14 52 58.3	-0.7
	baz=212						
OWD	**Renai**	**0.50**	**206**	*eP*	Pg	14 52 54.3	-0.9
	baz=206						
OWD				*eS*	Sg	14 53 01.7	-0.1
	baz=206						

TAP 26 14:56:53.1, 24.°67N×121.°58E, h8km, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENTT	**Nioudou**	**0.03**	**210**	P	Pg	14 56 55.0	+0.4
	baz=196						
ENTT				S	Sg	14 56 56.3	+0.6
	baz=196						
TWE	**Neicheng**	**0.09**	**55**	P	Pg	14 56 56.2	+0.8
	baz=61						
TWE				*eS*	Sg	14 56 58.3	+1.4
	baz=61						
SLBB	**Yuanshan**	**0.10**	**29**	*eP*	Pg	14 56 56.2	+0.7
	baz=29						
SLBB				*eS*	Sg	14 56 58.9	+1.7
	baz=29						
YHNB	**Yeheng**	**0.19**	**271**	*eP*	Pg	14 56 58.2	+1.1
	baz=270						
YHNB				S	Sg	14 57 01.4	+1.7
	baz=270						
NSK	**Sanguang**	**0.21**	**272**	*eP*	Pg	14 56 59.0	+1.7
	baz=271						
NANB	**Nanao**	**0.28**	**148**	*eP*	Pb	14 57 00.1	-0.4
	baz=147						
NTC	**Toucheng**	**0.29**	**50**	*eP*	Pb	14 57 00.1	-0.5
	baz=50						
EGS		**0.36**	**61**	*eP*	Pb	14 57 01.1	-0.8
	baz=62						
TIPB	**Shuangxi**	**0.37**	**36**	*eP*	Pb	14 57 01.5	-0.6
	baz=36						
TIPB				*eS*	Sg	14 57 06.6	+1.1
	baz=36						

JMA 26 14:57:12.0, 24.°34N×123.°39E, h16km±2km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.31**	**91**	P	Pg	14 57 18.2	-0.4
IRIF				*eS*	Sg	14 57 23.5	+0.5
YOJ	**Yonaguni jima**	**0.37**	**289**	P	Pg	14 57 19.4	-0.1
YOJ				S	Sg	14 57 24.5	-0.2
JYNG	**Yonagunijimaku**	**0.42**	**285**	P	Pg	14 57 20.5	0.0
JYNG				S	Sg	14 57 26.4	+0.1
HATJ	**Hateruma jima**	**0.47**	**127**	P	Pg	14 57 21.2	-0.3
HATJ				*eS*	Sg	14 57 27.6	-0.3
JKRS	**Kuro-shima**	**0.57**	**100**	P	Pg	14 57 22.9	-0.5
JKRS				S	Sb	14 57 31.6	0.0
JIJ	**Ishigaki jima**	**0.69**	**88**	P	Pg	14 57 24.8	-0.7
J

JTJ	Tarama	1.23 76	P	Pg	14 57 36.3	+0.5
JTJ			S	Sg	14 57 51.4	-0.5

UCR 26 15:04:02.1±2.5, 11°.02N×86°.27W, h3km±15km, MD3.9, ML2.7, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.81	117	i P		Pg	15 04 18.1	+0.5
CONN	Concepcion	0.83	49	eP		Pb	15 04 19.0	-0.2
LAPC	Finca la Perla	0.85	107	i P		Pg	15 04 18.6	0.0
LAPC				i S		Sb	15 04 31.0	-0.5
GB1A	Borinquen Arri	0.88	103	i P		Pg	15 04 19.4	+0.5
GB1A				i S		Sb	15 04 31.9	-0.3
GPS3	Bodega del ICE	0.92	107	i P		Pg	15 04 20.1	+0.3
BUAI	Buenos Aires	0.93	99	i P		Pg	15 04 20.2	+0.3
GPS2	Hotel Rincn d	0.94	106	i P		Pg	15 04 20.2	+0.1
MASN	Masaya	0.97	7	eP		Pg	15 04 20.9	+0.2
COLC	Colonia	1.10	109	i P		Pg	15 04 22.4	-0.8
HORNC	Hornillas	1.11	106	i P		Pg	15 04 22.8	-0.7
MGAN	Managua	1.12	1	eP		Pg	15 04 23.3	-0.3
CUI	Cuipilapa	1.14	108	i P		Pn	15 04 26.2	+1.1
COPN	Copaltepe	1.20	345	eP		Pg	15 04 23.9	-1.2
APYN	Apoyeque	1.21	356	eP		Pg	15 04 24.8	-0.5
MOMN	Momotombo	1.41	349	eP		Pn	15 04 26.9	-1.9
ACON	Acoyapa	1.43	49	eP		Pn	15 04 27.3	-1.6
JTS	Las Juntas de	1.48	119	eP		Pn	15 04 28.2	-1.5
ARE1	Arenal 1	1.62	110	eP		Pn	15 04 31.2	-0.4
ARE1				eS		Sg	15 04 54.6	+0.5
TEL3	Telica 3	1.64	340	eP		Pn	15 04 31.2	-0.8
MATN	Matagalpa	1.93	10⇑	eP		Pn	15 04 34.6	-1.4
ESPN	Las Esperanzas	2.25	59	eP		Pn	15 04 39.5	-0.9
ESPN				eS		Sn	15 05 06.6	-2.0
ESPN				IAML			15 05 16.5	
	comp=N,20nm,0.4s							
CSGN	Cosiguina Volc	2.32	327	eP		Pn	15 04 42.1	+0.8
LCR2	La Lucha 2	2.56	120	eP		Pn	15 04 46.3	+1.5

*TIF **26** 15:05:19.7, 41°.24N×43°.80E, h16km±1km*
*DDA **26** 15:05:20.0, 41°.22N×43°.76E, h7km±2km, ML2.9*
*NORS **26** 15:05:22.4±0.0, 41°.48N×43°.79E, h2km, MPVA3.6*

ISC 26 15:05:20.2±1.0, 41°.23N±0°.03×43°.83E±0°.02, h10km±10km, n27, σ0°55/47, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.18	282	P		Pg	15 05 24.3	+0.1
BGD				S		Sg	15 05 27.0	0.0
AKH	Akhalkalaki	0.32	306	P		Pg	15 05 26.4	-0.2
AKH				S		Sg	15 05 30.4	-0.4
KZRT	Kazreti	0.46	69	P		Pb	15 05 30.2	-0.1
KZRT				S		Sb	15 05 36.6	-0.6
KZRT	Kazreti	0.46	69	i P		Pb	15 05 30.3	0.0
KZRT				i S		Sb	15 05 36.5	-0.7
EAK	Akyaka	0.57	198	i P		Pg	15 05 31.4	+0.2
EAK				i S		Sg	15 05 39.1	+0.4
EAK				IAML_P				
	comp=Z,12μm,0.3s							
TBLG	Delisi	0.85	53	P		Pb	15 05 37.0	0.0
TBLG				S		Sb	15 05 48.9	+0.5
TBLG	Delisi	0.85	53	i P		Pn	15 05 37.9	-0.3
TBLG				i S		Sb	15 05 49.5	+1.1
BTNK	Botanikuri	0.86	57	P		Pb	15 05 36.9	-0.3
BTNK				S		Sb	15 05 49.4	+0.7
EPOS	Posof	0.88	289	i P		Pg	15 05 37.0	-0.1
DIGO	Kars	0.88	203	i P		Pb	15 05 37.8	+0.1
DIGO				IAML_P				
	comp=Z,5μm,0.3s							
TKB	Tkibuli	1.29	331	P		Pn	15 05 44.0	-0.2
TKB				S		Sb	15 06 01.3	+0.2
ONI	Oni	1.39	348	P		Pg	15 05 47.2	+0.3
ONI				S		Sg	15 06 05.9	+0.9
DAGI	Agillar	1.46	265	i P		Pb	15 05 47.2	-0.2
DAGI				i S		Sb	15 06 05.7	-0.4
DAGI				IAML_P				
	comp=Z,512nm,0.2s							
ZEI	Tsey	1.56	2	ePg		Pg	15 05 50.0	-0.1
ZEI				eSg		Sg	15 06 11.1	+0.7
DBAD	Bademkaya	1.63	263	i P		Pb	15 05 50.0	-0.4
DBAD				IAML_P				
	comp=Z,1μm,0.2s							
LACR	Lac	1.64	12	ePg		Pb	15 05 50.4	-0.1
LACR				eSg		Sg	15 06 12.7	-0.1
DBOC	Borcka	1.64	275	i P		Pb	15 05 50.7	+0.2
BATM	Batumi	1.65	284	P		Pb	15 05 50.1	-0.6
BATM	Batumi	1.65	284	i P		Pb	15 05 50.5	-0.2
DIGR	Digorskoe uzhe	1.68	354	ePg		Pg	15 05 52.7	+0.2
DIGR				eSg		Sg	15 06 13.7	-0.6
EATA	Eleskirt	1.70	217	i P		Pb	15 05 52.0	+0.2
EATA				IAML_P				
	comp=Z,408nm,0.3s							
KORR	Kora	1.87	5	ePg		Pg	15 05 56.0	0.0
KORR				eSg		Sg	15 06 21.2	+1.1
LGD	Lagodekhi	1.91	71	P		Pb	15 05 55.4	+0.3
LGD				S		Sg	15 06 21.1	-0.4
KMGR	Komgaron	1.98	22	ePg		Pg	15 05 58.0	-0.2
KMGR				eSg		Sg	15 06 24.9	+1.0
LSNR	Lesken	2.05	360	ePg		Pg	15 05 59.3	-0.2
LSNR				eSg		Sg	15 06 25.3	-0.7
NEY	Neytrino	2.18	338	ePg		Pb	15 06 00.3	+0.4
NEY				eSg		Sb	15 06 28.3	+1.3
BTKR	Batakoyurt	2.21	14	ePg		Pg	15 06 01.6	-0.9
BTKR				eSg		Sg	15 06 29.9	-1.2

*ISK **26** 15:13:34.7, 37°.08N×28°.54E, h7km, ML2.5/13*
*DDA **26** 15:13:34.7, 37°.08N×28°.54E, h7km±1km, ML2.6*

ISC 26 15:13:36.1±1.2, 37°.05N±0°.04×28°.49E±0°.03, h21km±1km, n20, σ1°36/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.19	297	PG		Pb	15 13 39.6	-2.5
YER				SG		Sb	15 13 43.3	-3.0
TURN	Turunc	0.20	153	PG		Pb	15 13 42.5	+0.5
TURN				SG		Sb	15 13 48.8	+2.8
TURN	Turunc	0.20	153	i P		Pb	15 13 43.0	+1.0
TURN				i S		Sb	15 13 48.9	+2.8
DALY	Dalyan (Mula)	0.27	151	PG		Pb	15 13 40.9	-1.5
DALY	Dalyan (Mula)	0.27	151	i P		Pb	15 13 41.9	-0.5
DALY				i S		Sb	15 13 47.2	+0.5
DALY				IAML_P				
	comp=Z,8μm,0.1s							
MRSB	Marmaris-Mugla	0.41	215	PG		Pb	15 13 43.7	-0.8
MRSB				SG		Sb	15 13 50.9	+0.7
BBRN	Bozburun-Marma	0.51	223	PG		Pb	15 13 45.4	-0.9
BBRN				SG		Sb	15 13 54.2	+1.0
FETY	Fethiye	0.63	131	PG		Pb	15 13 46.9	-1.6
FETY	Fethiye	0.63	131	i P		Pb	15 13 47.4	-1.1
FETY				i S		Sb	15 13 56.9	-0.1
FETY				IAML_P				
	comp=Z,2μm,0.2s							
DATC	Datca-Mugla	0.72	247	PG		Pb	15 13 50.0	0.0
AYDN	Tasoluk	0.78	322	i P		Pb	15 13 50.8	-0.2
AYDN				i S		Sb	15 13 59.7	-1.4
DAT	Datca	0.80	247	PG		Pb	15 13 51.1	-0.2
DAT	Datca	0.80	247	i P		Pb	15 13 51.1	-0.2
DAT				i S		Sn	15 14 03.6	0.0
DAT				IAML_P				
	comp=Z,311nm,0.2s							
BDRM	Kayabasi	0.84	271	i P		Pn	15 13 52.5	-0.1
BDRM				IAML_P				
	comp=Z,781nm,0.2s							
ARG	Arkhangelos	0.88	199	PG		Pb	15 13 52.3	-0.4
BODT	Bodrum	0.94	271	PG		Pn	15 13 54.2	+0.1
AKAS	Kas	1.21	132	PN		Pb	15 13 58.9	+0.5
AKAS	Kas	1.21	132	i P		Pb	15 13 59.9	+1.5
AKAS				IAML_P				
	comp=Z,3μm,0.2s							
KULA	Kula-Manisa	1.47	5	PN		Pn	15 14 01.8	+0.4
KORT	Korkueli	1.49	91	PN		Pb	15 14 03.3	+0.2

*SJA **26** 15:34:16.0±0.4, 24°.17S×67°.00W, h207km±3km, ML2.7, MW3.2*
*ISCJB **26** 15:34:18.1±1.1, 24°.13S±0°.07×67°.10W±0°.04, h183km±12km, Error ellipse: s-maj=11.6km s-min=5.5km az=18.4*
*GUC **26** 15:34:18.9±0.4, 24°.01S×67°.37W, h234km±6km, ML3.6*

ISC 26 15:34:16.0±2.6, 24°.17S±0°.08×67°.05W±0°.05, h205km±22km, n27, σ1°27/42, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.51	112	eP		Pn	15 34 50.8	+0.4
SLA				IAML			15 34 51.7	
	comp=Z,45nm,0.6s							
SLA				eS		Sn	15 35 16.3	-1.0
AZAP	Zapla	1.81	92	eP		Pn	15 34 53.6	+0.2
AZAP				IAML			15 34 54.0	
	comp=Z,77nm,0.4s							
AZAP				eS		Sn	15 35 21.7	-0.6
LVC	Limon Verde	2.31	312	eP		Pn	15 34 59.7	+1.1
LVC				IAML			15 35 00.2	
	comp=Z,31nm,0.6s							
LVC				eS		Sn	15 35 31.8	+0.1
LVC	Limon Verde	2.31	312	⇓iP		Pn	15 34 59.9	+1.3
LVC				eS		Sn	15 35 31.3	-0.3
PB15	IPOC Station P	2.42	293	eP		Pn	15 35 00.6	+1.1
PB15	IPOC Station P	2.42	293	eP		Pn	15 35 01.0	+1.5
PB15				i S		Sn	15 35 33.3	-0.1
YJA	Yavi	2.43	36	eP		Pn	15 35 00.9	+0.9
YJA				IAML			15 35 01.6	
	comp=Z,5.2nm,0.4s							
YJA				eS		Sn	15 35 34.2	-0.1
PB06	IPOC Station P	2.73	302	eP		Pn	15 35 04.3	+1.3
PB06				eS		Sn	15 35 39.7	-0.1
PB06	IPOC Station P	2.73	302	eP		Pn	15 35 04.4	+1.4
PB06				i S		Sn	15 35 38.7	-1.0
PB06				IAML			15 35 41.5	
	comp=N,176nm,0.1s							
PB14	IPOC Station P	3.09	261	eP		Pn	15 35 08.7	+1.4
PB09	IPOC Station P	3.10	319	eP		Pn	15 35 08.6	+1.3
PB09	IPOC Station P	3.10	319	eP		Pn	15 35 08.9	+1.6
PB09				eS		Sn	15 35 46.6	-1.0
PB09				IAML			15 35 48.9	
	comp=N,58nm,0.7s							
PB05	IPOC Station P	3.17	294	eP		Pn	15 35 09.3	+1.2
PB05	IPOC Station P	3.17	294	eP		Pn	15 35 09.3	+1.2
PB05				i S		Sn	15 35 46.8	-2.1
PB05				IAML			15 35 51.7	
	comp=N,70nm,0.6s							
PB03	IPOC Station P	3.26	310	eP		Pn	15 35 10.3	+1.1
PB03	IPOC Station P	3.26	310	eP		Pn	15 35 10.1	+0.9
PB03				i S		Sn	15 35 49.5	-1.4
PB10	IPOC Station P	3.27	281	eP		Pn	15 35 10.3	+1.2
PB10	IPOC Station P	3.27	281	eP		Pn	15 35 10.4	+1.2
PB10				i S		Sn	15 35 48.8	-2.0
PB10				IAML			15 35 54.1	
	comp=N,63nm,0.1s							
PB04	IPOC Station P	3.38	302	eP		Pn	15 35 11.6	+0.9
PB04	IPOC Station P	3.38	302	eP		Pn	15 35 11.7	+1.0
PB04				i S		Sn	15 35 51.2	-2.2
PB04				IAML			15 36 00.9	
	comp=N,113nm,0.3s							
PB07	IPOC Station P	3.57	312	eP		Pn	15 35 13.9	+1.0
PB07	IPOC Station P	3.57	312	eP		Pn	15 35 13.7	+0.8
PB07				i S		Sn	15 35 55.3	-2.2
PB02	IPOC Station P	3.86	317	eP		Pn	15 35 17.7	+1.3
PB02	IPOC Station P	3.86	317⇑	iP		Pn	15 35 16.9	+0.4
PB02				i S		Sn	15 36 01.5	-2.4
PB08	IPOC Station P	4.45	334	eP		Pn	15 35 25.0	+1.0
PB08	IPOC Station P	4.45	334	eP		Pn	15 35 25.3	+1.2
PB11	IPOC Station P	5.01	331	eP		Pn	15 35 31.5	+0.7

NEIC 26 15:39:36.9±0.0, 55°.37N×153°.74W, h5km, ML2.7 (AEIC), After AEIC., South of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CHIA	Chirikof Islan	1.14	295	ePn		Pg	15 39 54.2	-4.6
CHIR	Chirikof Islan	1.16	294	ePg		Pg	15 39 54.4	-4.7
SII	Sitkinak Islan	1.22	348	ePn		Pg	15 39 55.3	-4.9
OHAK	Old Harbor	1.88	8	ePn		Pn	15 40 05.3	-4.2
KDAK	Kodiak Island	2.50	14	ePn		Pn	15 40 14.6	-3.7
KDAK				eSn		Sn	15 40 41.8	-7.3
AZAC	Aniakchak	2.94	303	ePn		Pn	15 40 19.9	-4.4
CNPM	China Poot	4.38	17	ePn		Pn	15 40 40.0	-4.1

*ISCJB **26** 15:41:08.8±0.1, 17°.61S±0°.03×178°.54W±0°.03, h547km, mb4.4/127, Error ellipse: s-maj=4.3km s-min=3.2km az=39.3*
*MOS **26** 15:41:09.0±1.0, 17°.48S×178°.58W, h543km, mb4.2/19, Error ellipse: s-maj=12.3km s-min=10.3km az=164.2*
*IDC **26** 15:41:10.1±1.8, 17°.59S×178°.50W, h554km±20km, mb3.9/17, mb1 4.1/19, mb1mx3.9/32, mbtmp4.8/19, Error ellipse: s-maj=12.8km s-min=11.4km az=138.0*
*NEIC **26** 15:41:10.0±0.5, 17°.60S×178°.53W, h555km±5km, mb4.3/85, Error ellipse: s-maj=6.0km s-min=3.7km az=151.0*

ISC 26 15:41:09.2±0.3, 17°.65S±0°.06×178°.47W±0°.06, h547km, n391, σ1°07/379, mb4.3/127, 37C-16D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NIUE	Niue	8.24	101	eP		P	15 43 08.3	-0.9
FUNA	Funafuti	9.35	346	eP		P	15 43 20.6	+0.1
GLKZ	Green Lake	11.57	178	P		P	15 43 41.6	-1.6
GLKZ				S		S	15 45 49.2	-0.7
MARNC	Mare, Loyalty	13.28	251	eP		P	15 44 01.8	+0.8
PINNC	Pines Island,	14.12	247	eP		P	15 44 11.3	+1.7
DZM	Mont Dzumac	14.86	250	P		P	15 44 18.5	+1.2
	2.7nm,0.3s,baz=216,slow=18,SNR=21							
DZM	Mont Dzumac	14.86	250	eP		P	15 44 18.6	+1.2
	8.2nm,0.3s							
DZM	Mont Dzumac	14.86	250	eP		P	15 44 16.3	-1.1
ONTNC	Ouen Toro	14.91	249	eP		P	15 44 17.6	-0.2
KNTN	Kanton	16.20	25	eP		P	15 44 30.3	-0.6
	126nm,1.2s							
NFK	Norfolk Island	16.85	225	P		P	15 44 39.2	+2.6
	baz=17,SNR=3.3							
RAR	Rarotonga	17.99	104	P		P	15 44 47.2	0.0
	1.7nm,0.3s,baz=249,slow=6.7,SNR=5.3							
RAR	Rarotonga	17.99	104	eP		P	15 44 47.7	+0.6
	46nm,1.0s							
RAR	Rarotonga	17.99	104	eP		P	15 44 47.7	+0.6
RAR				pmax	pmax			
	comp=Z,46nm,1.0s							
OUZ	Omahuta	18.87	200	eP		P	15 44 57.9	+2.9
	comp=Z,79nm,0.7s							
OUZ	Omahuta	18.87	200	P		P	15 44 58.8	+3.7
GRZ	Great Barrier	19.29	195	P		P	15 45 01.3	+2.5
WCZ	Waipu Caves	19.30	198	P		P	15 45 02.9	+4.0
KUZ	Kuaotunu	19.70	194	P		P	15 45 05.4	+2.9
WIAZ	Waiheke Island	19.89	195	P		P	15 45 07.2	+3.0
MXZ	Matakaoa Point	20.04	187	P		P	15 45 05.3	-0.3
WSRZ	White Island S	20.16	190	P		P	15 45 08.5	+1.7
WIZ	White Island	20.17	190	P		P	15 45 08.5	+1.7
WMGZ	Waiomatatini S	20.28	187	P		P	15 45 08.1	+0.2
HAZ	Te Kaha	20.30	189	P		P	15 45 08.3	+0.4
PKGZ	Pakihiroa	20.39	188	P		P	15 45 09.3	+0.4
RUGZ	Raukumara Rang	20.52	189	P		P	15 45 09.9	-0.2
TGRZ	Tauranga	20.53	192	P		P	15 45 11.5	+1.4
PUZ	Puketiti	20.55	187	P		P	15 45 11.0	+0.8
TWGZ	Tauwhareparae	20.69	188	P		P	15 45 12.1	+0.5
TOZ	Tahuroa Road	20.70	194	P		P	15 45 14.3	+2.7
URZ	Urewera	20.90	190	P		P	15 45 12.4	-0.9
	comp=Z,36nm,0.8s,baz=359,slow=4.9,SNR=13							
URZ	Urewera	20.90	190	eP		P	15 45 12.1	-1.3
	comp=Z,36nm,0.7s							
URZ	Urewera	20.90	190	P		P	15 45 11.6	-1.7
MWZ	Matawai	20.91	189	P		P	15 45 12.7	-0.8
CNGZ	Carnagh Statio	20.96	187	P		P	15 45 15.5	+1.6
RIGZ	Rimuhau	21.24	188	P		P	15 45 15.7	-0.8
MTHZ	Maungataniwha	21.52	190	P		P	15 45 18.4	-0.6
RAHZ	Arahi	21.54	189	P		P	15 45 19.8	+0.6
HIZ	Hauiti	21.59	194	P		P	15 45 22.9	+3.3
BKZ	Black Stump Fm	21.89	191	P		P	15 45 21.5	-0.8
MCHZ	McNeill Hill	22.12	190	P		P	15 45 24.6	+0.2
KWHZ	Kaweka Forest	22.15	191	P		P	15 45 24.6	-0.1
BHHZ	Black Hill Sta	22.28	191	P		P	15 45 23.3	-2.5
PXZ	Pawanui	22.67	189	P		P	15 45 26.0	-3.2
LTZ	Lake Taylor	26.26	196	eP		P	15 46 01.1	0.0
	comp=Z,34nm,0.7s							
OXZ	Oxford	26.83	195	eP		P	15 46 05.5	-0.5
	comp=Z,84nm,0.8s							
RPZ	Rata Peaks	27.45	197	P		P	15 46 12.2	+0.7
	comp=Z,14nm,0.7s,baz=283,slow=2.9,SNR=6.7							
PAE	Paea	27.52	94	eP		P	15 46 15.4	+3.0
	comp=Z,5.9nm,0.7s							
PPT2	Papeete2	27.53	94	eP		P	15 46 15.2	+2.6
	comp=Z,33nm,0.7s							
PPT	Papeete	27.53	94	P		P	15 46 14.4	+1.9
	comp=Z,30nm,0.7s,baz=65,slow=18,SNR=4.2							
FOZ	Fox Glacier	27.64	199	eP		P	15 46 13.5	+0.4
	comp=Z,74nm,0.7s							
TBI	Tubual	27.73	107	eP		P	15 46 16.2	+2.0
	comp=Z,56nm,0.7s							
TIAR	Tiarei	27.75	94	eP		P	15 46 16.0	+1.5
	comp=Z,33nm,1.1s							
EIDS	Eidsvold	29.30	250	eP		P	15 46 28.2	+0.3
	comp=Z,18nm,0.8s							
EIDS	Eidsvold	29.30	250	P		P	15 46 28.3	+0.5
	baz=30,SNR=9.6							
MLZ	Mavora Lakes	29.82	199	eP		P	15 46 33.3	+1.1
	comp=Z,90nm,0.7s							
ARMA	Armidale	30.02	239	eP		P	15 46 35.6	+1.4
	comp=Z,27nm,0.7s							
ARMA	Armidale	30.02	239	P		P	15 46 35.9	+1.7
	baz=31,SNR=22							
WHZ	Wether Hill Ro	30.35	199	eP		P	15 46 37.5	+0.9
	comp=Z,49nm,0.7s							
MGCD	Mangrove Creek	31.39	235	P		P	15 46 47.7	+1.9
	baz=32,SNR=12							
RMQ	Roma	31.55	248	P		P	15 46 48.5	+1.3
	baz=32,SNR=30							
CTAO	Charters Tower	33.43	260	eP		P	15 47 03.4	+0.1
	comp=Z,22nm,0.8s							
CTAO	Charters Tower	33.43	260	eP		P	15 47 03.4	+0.1
CTAO				pmax	pmax			
	comp=Z,22nm,0.8s							
CNB	Canberra Magne	33.54	232	P		P	15 47 05.7	+1.7
	baz=34,SNR=56							
PMG	Port Moresby	34.36	279	eP		P	15 47 12.0	+1.0
	comp=Z,81nm,0.8s							
PMG	Port Moresby	34.36	279	d iP		P	15 47 12.6	+1.5
PMG				pmax	pmax			
	comp=Z,318nm,0.8s							
MILA	Mila	34.41	229	P		P	15 47 12.6	+1.3
	baz=35,SNR=5.6							
CMSA	Cobar Meteorol	35.23	240	P		P	15 47 19.2	+1.1
	baz=36,SNR=78							
MANU	Manus Island	36.95	291	eP		P	15 47 33.7	+1.1
	comp=Z,55nm,1.1s							
COEN	Coen	37.05	270	eP		P	15 47 34.4	+1.1
	comp=Z,47nm,0.9s							
COEN	Coen	37.05	270	P		P	15 47 34.4	+1.1
	baz=38,SNR=20							
TOO	Toolangi	37.29	230	eP		P	15 47 36.5	+1.4
	comp=Z,65nm,0.9s							
TOO	Toolangi	37.29	230	P		P	15 47 36.6	+1.4
	baz=38,SNR=23							
TOO	Toolangi	37.29	230	eP		P	15 47 36.5	+1.4
TOO				pmax	pmax			
	comp=Z,65nm,0.9s							
MOO	Moorlands	38.24	222	P		P	15 47 43.8	+1.1
	baz=39,SNR=4.1							
STKA	Stephens Creek	38.70	241	P		P	15 47 48.0	+1.5
	comp=Z,38nm,0.6s,baz=89,slow=10.0,SNR=156							
STKA	Stephens Creek	38.70	241	eP		P	15 47 47.9	+1.3
	comp=Z,12nm,0.9s							
STKA	Stephens Creek	38.70	241	P		P	15 47 48.1	+1.5
	baz=39,SNR=130							
STKA	Stephens Creek	38.70	241	eP		P	15 47 47.9	+1.3
STKA				pmax	pmax			
	comp=Z,12nm,0.9s							
QIS	Mount Isa	39.65	259	P		P	15 47 53.7	-0.7
	baz=40,SNR=5.4							
ARPS	Mount Arapiles	39.76	233	P		P	15 47 56.0	+0.9
	baz=40,SNR=16							
MMPI	Merauke	41.03	277	P		P	15 48 04.9	-0.6
	comp=Z,224nm,1.0s							
HTT	Hallett	41.23	239	P		P	15 48 08.1	+1.2
	baz=42,SNR=26							
JAY	Jayapura	42.78	286	P		P	15 48 19.5	+0.2
	comp=Z,251nm,1.0s							
GENI	Genyem	43.24	286	P		P	15 48 24.5	+1.6
	comp=Z,97nm,1.0s							
BBOO	Buckleboo	43.48	241	eP		P	15 48 25.2	+0.7
	comp=Z,78nm,0.9s							
BBOO	Buckleboo	43.48	241	P		P	15 48 25.3	+0.7
	baz=44,SNR=81							
WB2	Warramunga Arr	44.61	259	eP		P	15 48 33.1	-0.3
	comp=Z,40nm,0.6s							
WRAB	Tennant Creek	44.61	259	eP		P	15 48 32.9	-0.5
	comp=Z,34nm,0.6s							
WRAB	Tennant Creek	44.61	259	eP		P	15 48 32.9	-0.5
WRAB				pmax	pmax			
	comp=Z,34nm,0.6s							
WR1	Warramunga Arr	44.62	259	eP		P	15 48 33.1	-0.4
WRA	Warramunga Arr	44.62	259	P		P	15 48 33.1	-0.4
	comp=Z,29nm,0.5s,baz=86,slow=8.3,SNR=296							
WRA				S		S	15 54 26.3	-4.0
	comp=Z,1.2nm,0.7s,baz=111,slow=11,SNR=3.3							
AS31	Alice Springs	44.80	254	ePcP		PcP	15 50 03.5	-1.7
AS31				eScP		ScP	15 53 05.8	+0.2
ASAR	Alice Springs	44.80	254	P		P	15 48 35.4	+0.4
	comp=Z,231nm,0.6s,baz=90,slow=7.8,SNR=6387							
ASAR				PcP		PcP	15 50 03.5	-1.7
	comp=Z,5.5nm,0.4s,baz=102,slow=3.2,SNR=5.3							
ASAR				ScP		ScP	15 53 05.8	+0.2
	comp=Z,1.8nm,0.8s,baz=109,slow=4.1,SNR=5.0							
ASAR				S		S	15 54 29.5	-3.3
	comp=Z,3.4nm,0.9s,baz=87,slow=16,SNR=13							
KDU	Kakadu	47.50	269	P		P	15 48 55.3	-0.1
	baz=48,SNR=42							
BAKI	Biak	47.52	285	P		P	15 48 56.6	+1.0
	comp=Z,62nm,0.9s							
MTN	Manton Dam	48.75	268	eP		P	15 49 04.2	-0.4
	comp=Z,35nm,0.8s							
MTN	Manton Dam	48.75	268	P		P	15 49 04.3	-0.4
	baz=49,SNR=22							
WRKA	Warakurna	49.87	252	P		P	15 49 13.3	+0.4
	baz=50,SNR=171							
FORT	Forrest	50.07

MAJO Matsushiro 67.67 323 eP P 15 51 11.4 -0.7
MAJO Matsushiro 67.67 323⇓eP P 15 51 11.5 -0.7
MAJO pmax pmax
comp=Z,35nm,3.4s
MAT Matsushiro 67.67 323 P P 15 51 11.4 -0.7
KKM Kota Kinabalu 68.62 284 P P 15 51 19.0 +0.5
SBUM Sibu 71.11 279 eP P 15 51 33.3 +0.1
comp=Z,7.6nm,0.7s
SBUM Sibu 71.11 279 P P 15 51 34.0 +0.8
TPUB Ta-pu 72.07 302 eP P 15 51 37.1 -1.6
comp=Z,23nm,0.9s
CISI Cisompet, Garu 72.27 268 eP P 15 51 38.8 -1.3
comp=Z,54nm,0.9s
QSPA South Pole Qui 72.41 180 eP P 15 51 40.7 +0.8
comp=Z,35nm,0.9s
KSM Kuching 72.59 277 eP P 15 51 41.5 -0.3
comp=Z,38nm,0.8s
KSM Kuching 72.59 277 P P 15 51 43.0 +1.2
PETK Petropavlovsk- 73.41 345 P P 15 51 45.3 -0.4
comp=Z,5.9nm,0.8s,baz=117,slow=8.2,SNR=12
PEA1 Petropavlovsk- 73.42 345 eP P 15 51 45.3 -0.4
KSRS Korea Array 74.47 318 P P 15 51 52.4 +0.5
comp=Z,2.2nm,0.7s,baz=131,slow=6.0,SNR=14
KS15 Wonju Array Si 74.49 318 eP P 15 51 52.4 +0.3
KS15 ePcP PcP 15 52 03.4 0.0
KSAR Wonju Array Be 74.49 318 P P 15 51 52.4 +0.3
KSAR Wonju Array Be 74.49 318 P P 15 51 52.4 +0.3
SAO San Andreas Ge 76.28 44 eP P 15 52 02.9 +0.8
comp=Z,7.2nm,0.8s
SAO San Andreas Ge 76.28 44 eP P 15 52 02.9 +0.8
SAO pmax pmax
comp=Z,7.0nm,0.8s
USRK Ussuriysk Ar. 76.37 326 P P 15 52 03.3 +0.9
comp=Z,2.0nm,0.6s,baz=96,slow=7.8,SNR=6.5
ISA Isabella, Lake 77.68 46 eP P 15 52 10.5 +0.7
comp=Z,8.9nm,1.0s
ISA Isabella, Lake 77.68 46 eP P 15 52 10.5 +0.7
ISA pmax pmax
comp=Z,9.0nm,1.0s
AFDM Forest Hills D 77.83 42 eP P 15 52 11.2 +0.7
comp=Z,4.7nm,0.9s
MDJ Mudanjiang 77.94 325 eP P 15 52 11.6 +0.6
MDPB Devils Postpil 78.33 44 eP P 15 52 14.3 +0.8
comp=Z,11nm,1.1s
OMMB Old Mammoth Mi 78.37 44 eP P 15 52 14.4 +0.6
comp=Z,5.1nm,1.0s
WAKR Walker 78.57 43 eP P 15 52 15.6 +0.8
comp=Z,6.5nm,0.9s
HUMO Hull Mountain 78.73 38 eP P 15 52 16.4 +1.1
comp=Z,35nm,2.0s
PNTR Pine Nut 78.79 43 eP P 15 52 16.3 +0.4
comp=Z,10nm,0.8s
MYKOM Kota Tinggi 78.81 275 P P 15 52 17.0 +0.7
YERR Yerington 78.97 43 eP P 15 52 17.3 +0.5
comp=Z,5.8nm,0.7s
RYN Ryan 79.24 44 eP P 15 52 18.1 -0.1
comp=Z,5.4nm,1.0s
PAHR Pah Rah Range 79.27 42 eP P 15 52 18.7 +0.4
comp=Z,4.2nm,0.9s
NV01 Mina Array Sit 79.28 44 eP P 15 52 19.2 +0.8
NVAR Mina Array Bea 79.28 44 P P 15 52 19.2 +0.8
comp=Z,4.0nm,0.8s,baz=226,slow=8.8,SNR=26
NV11 Mina Array Sit 79.38 44 eP P 15 52 19.3 +0.4
comp=Z,0.3nm,0.9s
KVN Kaiserville 79.75 43 eP P 15 52 21.4 +0.5
comp=Z,3.7nm,0.7s
KVN Kaiserville 79.75 43 eP P 15 52 21.4 +0.5
KVN pmax pmax
comp=Z,4.0nm,0.7s
CN2 Changchun 79.78 322 eP P 15 52 21.0 +0.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
KLR Kul'dur 79.86 329⇑eP P 15 52 24.0 +3.0
KLR pmax pmax
comp=Z,2.0nm,0.8s
TPNV Topopah Spring 79.88 46 eP P 15 52 22.0 +0.3
comp=Z,4.3nm,1.0s
TPNV Topopah Spring 79.88 46 eP P 15 52 22.0 +0.3
TPNV pmax pmax
comp=Z,4.0nm,1.0s
MOD Modoc Plateau 79.92 40 eP P 15 52 21.9 +0.2
comp=Z,3.9nm,0.7s
K05A Summer Lake 80.04 39 eP P 15 52 22.3 0.0
comp=Z,12nm,1.1s
SHPR Sheep Range 80.41 47 eP P 15 52 24.2 -0.2
comp=Z,3.2nm,0.9s
PINE Pine Mountain 80.62 38 eP P 15 52 24.9 -0.5
comp=Z,8.7nm,0.9s
R11A Troy Canyon, C 81.05 45 eP P 15 52 28.0 +0.3
comp=Z,7.8nm,1.6s
BMN Battle Mountai 81.06 43 eP P 15 52 28.1 +0.4
comp=Z,8.9nm,1.2s
BMN Battle Mountai 81.06 43 eP P 15 52 28.1 +0.4
BMN pmax pmax
comp=Z,9.0nm,1.2s
WVOR Wild Horse Val 81.25 40 eP P 15 52 29.1 +0.5
comp=Z,7.1nm,0.8s
WVOR Wild Horse Val 81.25 40 eP P 15 52 29.1 +0.5
WVOR pmax pmax
comp=Z,7.0nm,0.8s
TUC Tucson 81.59 52 eP P 15 52 30.7 +0.2
comp=Z,5.2nm,0.9s
TUC Tucson 81.59 52 eP P 15 52 30.7 +0.2
TUC pmax pmax
comp=Z,5.0nm,0.9s
I07A Izee 81.64 39 eP P 15 52 31.1 +0.6
comp=Z,5.2nm,0.8s
J08A Circle Bar Ran 81.86 40 eP P 15 52 32.2 +0.6
comp=Z,6.0nm,0.8s
LCMT Little Creek M 82.00 47 eP P 15 52 33.4 +0.8
comp=Z,4.3nm,0.9s
X16A Lo Mia Camp, P 82.06 50 eP P 15 52 33.7 +0.7
comp=Z,9.0nm,0.9s
CCUT Cedar City 82.18 47 eP P 15 52 34.4 +0.9
comp=Z,4.7nm,1.0s
KNB Kanab 82.30 47 eP P 15 52 34.5 +0.4
comp=Z,6.1nm,1.0s
KNB Kanab 82.30 47 eP P 15 52 34.5 +0.4
KNB pmax pmax
comp=Z,6.0nm,1.0s
PSUT Pine Spring 82.32 46 eP P 15 52 34.5 +0.3
comp=Z,3.2nm,0.7s
IPM Ipoh 82.33 277 eP P 15 52 34.6 0.0
comp=Z,21nm,0.8s
IPM Ipoh 82.33 277 P P 15 52 35.0 +0.4
SZCU Shurtz Canyon 82.39 47 eP P 15 52 34.9 +0.3
comp=Z,3.7nm,0.9s
U15A North Rim 82.39 48 eP P 15 52 35.5 +0.8
comp=Z,9.9nm,0.9s
ELK Elko 82.51 43 eP P 15 52 35.8 +0.6
comp=Z,4.7nm,0.9s
ELK Elko 82.51 43 eP P 15 52 35.8 +0.6
ELK pmax pmax
comp=Z,5.0nm,0.9s
WUAZ Wupatki 82.62 49 eP P 15 52 37.1 +1.4
comp=Z,7.7nm,0.9s
G08A Pilot Rock 82.64 38 eP P 15 52 35.7 +0.2
comp=Z,4.7nm,1.1s
KULM Kulim 82.94 278 P P 15 52 38.0 +0.4
MTPU Mount Pierson 83.23 47 eP P 15 52 39.9 +0.9
comp=Z,6.0nm,1.1s
MSU Marysvale 83.46 46 eP P 15 52 40.7 +0.7
MSU Marysvale 83.46 46 eP P 15 52 40.7 +0.7
SEY Seymchan 83.51 347 d iP P 15 52 38.4 -0.9
TRF Thorofare Moun 83.77 12 eP P 15 52 39.1 -1.7
comp=Z,1.2nm,0.6s
PSI Prapat 83.80 275 eP P 15 52 41.0 -1.1
comp=Z,21nm,0.8s
RND Reindeer 84.03 13 eP P 15 52 41.0 -1.0
comp=Z,4.3nm,1.0s
RND Reindeer 84.03 13 eP P 15 52 41.0 -1.0
RND pmax pmax
comp=Z,4.0nm,1.0s
F10A Beach Ranch, E 84.03 38 eP P 15 52 42.6 +0.2
comp=Z,5.8nm,0.9s
ENH Enshi 84.08 304 eP P 15 52 42.9 -0.1
comp=Z,24nm,1.0s
MAW Mawson 84.08 200 P P 15 52 42.7 +0.5
comp=Z,11nm,0.7s
MAW Mawson 84.08 200 eP P 15 52 42.7 +0.5
comp=Z,2.7nm,0.8s
MAW Mawson 84.08 200 eP P 15 52 42.7 +0.5
MAW pmax pmax
comp=Z,3.0nm,0.8s
HLID Hailey 84.47 41 eP P 15 52 45.1 +0.3
comp=Z,2.6nm,0.8s
ZEA Zeya 84.93 331 eP P 15 52 46.8 +0.3
ZEA pmax pmax
comp=Z,20nm,1.0s
MNTX Cornudas Mount 85.48 55 eP P 15 52 50.3 +0.6
comp=Z,6.3nm,1.3s
ILAR Eielson Array 85.65 13 P P 15 52 48.5 -1.3
comp=Z,0.8nm,0.4s,baz=223,slow=5.3,SNR=14
ILAR pP pwP 15 54 53.2 +3.1
comp=Z,2.9nm,1.2s,baz=224,slow=5.7,SNR=9.0
ILB Eielson Array 85.65 13 eP P 15 52 48.5 -1.3
PV22 Blue Mesa, Par 85.83 48 eP P 15 52 52.1 +0.6
comp=Z,3.4nm,1.0s
TX31 Lajitas Ar. Si 85.91 58 eP P 15 52 53.0 +1.1
comp=Z,8.5nm,1.0s
TXAR Lajitas Array 85.91 58 P P 15 52 53.9 +2.0
comp=Z,5.1nm,0.8s,baz=224,slow=5.2,SNR=41
ANMO Albuquerque 85.98 52 eP P 15 52 51.8 -0.5
comp=Z,4.0nm,1.1s
ANMO Albuquerque 85.98 52⇑iP P 15 52 53.3 +1.0
ANMO pmax pmax
comp=Z,3.0nm,1.0s
XAN Xi'an 86.06 307 P P 15 52 53.5 +1.0
XAN pP PcP 15 52 59.8 +5.6
XAN pmax pmax
comp=Z,16nm,1.2s
MCMT McKenzie Canyo 86.08 41 eP P 15 52 53.0 +0.4
BILL Bilibino 86.17 354 eP P 15 52 51.7 -0.3
comp=Z,3.3nm,1.0s
BILL Bilibino 86.17 354 eP P 15 52 51.8 -0.3
BILL pmax pmax
comp=Z,4.0nm,1.0s
DLMT Dillon 86.50 40 eP P 15 52 54.7 +0.3
comp=Z,13nm,1.8s
REDW Red Top Meadow 86.64 42 eP P 15 52 55.6 +0.3
comp=Z,4.8nm,0.9s
LRM Limekiln Ridge 86.81 40 eP P 15 52 56.5 +0.5
IMW Indian Meadow 86.83 42 eP P 15 52 56.8 +0.6
comp=Z,7.1nm,1.0s
S22A 4UR Ranch, Cre 86.88 49 eP P 15 52 57.4 +0.8
comp=Z,2.2nm,0.9s
MOOW Moose Ponds 86.89 42 eP P 15 52 56.4 0.0
comp=Z,4.1nm,1.3s
LOHW Long Hollow 86.91 42 eP P 15 52 56.8 +0.3
comp=Z,2.1nm,0.9s
HHC Hu-ho-hao-te 87.05 314 eP P 15 52 59.3 +2.2
HHC pmax pmax
comp=Z,18nm,1.1s
HHC pmax pmax
comp=Z,20nm,5.5s
YPP Pitchstone Pla 87.09 42 eP P 15 52 57.4 0.0
comp=Z,7.2nm,0.7s
PD31 Pinedale Array 87.20 43 eP P 15 52 57.5 -0.4
PDAR Pinedale Array 87.20 43 P P 15 52 58.2 +0.3
comp=Z,1.4nm,0.5s,baz=207,slow=2.8,SNR=15
KMI Kunming 87.66 297 P P 15 53 02.0 +1.6
KMI pmax pmax
comp=Z,17nm,1.1s
LNIG Linares 87.77 63 eP P 15 52 59.3 -1.3
comp=Z,9.1nm,1.1s
CM31 Chiang Mai Arr 88.74 290 eP P 15 53 06.2 +0.9
CMAR Chiang Mai Arr 88.74 290 P P 15 53 06.2 +0.9
comp=Z,5.0nm,0.9s,baz=110,slow=2.7,SNR=28
CMAR Chiang Mai Arr 88.74 290 ceP P 15 53 06.3 +0.9
CMAR pmax pmax
comp=Z,6.0nm,0.9s
CHTO Chiang Mai 88.86 290 eP P 15 53 05.1 -0.8
comp=Z,4.4nm,0.7s
CHTO Chiang Mai 88.86 290 eP P 15 53 05.1 -0.8
CHTO pmax pmax
comp=Z,4.0nm,0.7s
SYO Syowa Base 89.39 193⇑eP P 15 53 05.0 -2.3
SYO Syowa Base 89.39 193⇑ePcP PcP 15 53 08.0 -0.3
LZH Lanzhou 90.69 308 ⇑P P 15 53 15.0 +0.8
LZH pP pP 15 55 17.5 +3.1
LZH sP sP 15 56 12.3 +3.0
LZH PP PP 15 57 03.3 +3.6
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,79nm,5.3s
ULN Ulaanbaatar 92.92 319⇓eP P 15 53 23.6 -0.6
ULN pmax pmax
comp=Z,4.0nm,1.1s
SONA0 Songino Array 93.32 319 eP P 15 53 25.6 -0.3
SONM Songino Array 93.32 319 P P 15 53 25.6 -0.3
comp=Z,0.5nm,0.4s,baz=123,slow=2.8,SNR=4.7
GTA Gaotai 94.82 310 eP P 15 53 33.5 +0.5
GTA pP pP 15 55 30.0 -3.5
GTA sP sP 15 56 24.0 -4.4
GTA pmax pmax
comp=Z,2.0nm,1.0s
ZAA1 Zalesovo Array 107.99 322 ePKiKP PKiKP 15 58 32.8 -1.9
ZALV Zalesovo Beam 107.99 322 PKiKP PKiKP 15 58 32.8 -1.9
comp=Z,0.8nm,0.5s,baz=160,slow=1.9,SNR=2.9
MK32 Makanchi Array 108.91 314 ePKiKP PKiKP 15 58 35.2 -1.5
MKAR Makanchi Array 108.91 314 PKiKP PKiKP 15 58 35.2 -1.5
comp=Z,0.9nm,0.5s,baz=185,slow=0.4,SNR=15
KURK Kurchatov 111.59 318⇓iPKIKP PKiKP 15 58 40.6 -0.9
KURK pmax pmax
comp=Z,3.0nm,1.7s
AAK Ala-Archa 114.17 309⇓iPKIKP PKPdf 15 58 45.7 -1.3
BRVK Borovoye 116.67 321⇑iPKIKP PKPdf 15 58 50.2 -1.0
ARU Arti 122.60 326 PKP PKPdf 15 59 01.8 -0.8
comp=Z,1.6nm,0.5s,baz=330,slow=5.4,SNR=7.2
ARU Arti 122.60 326 iPKIKP PKPdf 15 59 01.1 -1.4
ARU 16 00 47.5
ARU 16 05 16.0
AKTO Aktyubinsk 124.63 320 PKP PKPdf 15 59 05.8 -0.8
comp=Z,0.9nm,0.4s,baz=344,slow=1.8,SNR=7.2
ARA0 ARCESS Array S 126.05 350 ePKPdf PKPdf 15 59 07.2 -1.6
ARCES ARCESS Array B 126.05 350 PKP PKPdf 15 59 07.2 -1.6
comp=Z,2.1nm,0.8s,baz=329,slow=1.4,SNR=6.3
GEYT Alibeck 126.84 304 PKP PKPdf 15 59 10.4 -0.9
comp=Z,3.2nm,0.9s,baz=264,slow=4.3,SNR=5.6
FIA0 FINESS Array S 132.92 344 ePP PP 16 01 56.4 +1.1
FINES FINESS Array B 132.92 344 PKP PKPdf 15 59 19.9 -2.1
comp=Z,1.2nm,0.6s,baz=70,slow=4.6,SNR=7.0
FINES PP PP 16 01 56.4 +1.1
comp=Z,1.9nm,0.7s,baz=29,slow=4.4,SNR=7.4
FINES FINESS Array B 132.92 344 c iPKIKP PKPdf 15 59 20.2 -1.8
FINES pmax pmax
comp=Z,1.0nm,0.6s
OBN Obninsk 134.04 333⇓iPKIKP PKPdf 15 59 24.0 -0.3
OBN pmax pmax
comp=Z,5.0nm,0.8s
HFS Hagfors 136.67 351 PKhKP PKPpre 15 59 21.2
comp=Z,2.2nm,0.7s,baz=48,slow=2.1,SNR=6.6
SOC Sochi 138.73 317 iPKIKP PKPdf 15 59 31.0 -2.3
SOC eSS SS 16 19 59.1 -4.9
AKASG Malin Array Be 140.30 332 PKhKP PKPpre 15 59 28.4
comp=Z,1.6nm,0.4s,baz=44,slow=4.3,SNR=2.4
AKBB Malin Array Si 140.30 332 ePKPpre PKPpre 15 59 28.4
AKBB Malin Array Si 140.30 332 ePKHKP PKPpre 15 59 28.4
EKA Eskdalemuir Ar 142.21 4 PKhKP PKPpre 15 59 35.1
comp=Z,0.3nm,0.4s,baz=347,slow=2.9,SNR=4.0
KWP Kalwaria Pacla 143.81 337 ePKPbc PKPbc 15 59 40.3 -1.0
KWP Kalwaria Pacla 143.81 337 ePKIKP PKPbc 15 59 40.3 -1.1
TLCR 144.32 326⇑iPKIKP PKPbc 15 59 43.0 -0.1
TLCR 144.32 326 ⇑PKIKP PKPbc 15 59 43.0 -0.1
OJC Ojcow 144.35 340 ePKP PKPbc 15 59 42.5 -0.5
OJC Ojcow 144.35 340 ePKPbc PKPbc 15 59 42.5 -0.5
OJC Ojcow 144.35 340 ePKIKP PKPbc 15 59 42.5 -0.5
BURAR Bucovina Array 144.36 332⇑iPKIKP PKPdf 15 59 43.5 +0.1
BURAR Bucovina Array 144.36 332 ⇑PKIKP PKPdf 15 59 43.5 +0.1
BIZ Bicaz 144.45 331⇑iPKIKP PKPbc 15 59 43.7 +0.2
TESR Tescani 144.51 330⇑iPKIKP PKPdf 15 59 43.2 -0.3
KOLS Kolonicke sedl 144.54 336 ePKIKP PKPbc 15 59 43.9 +0.2
KOLS Kolonicke sedl 144.54 336 ePKP PKPbc 15 59 43.9 +0.2
BR101 Keskin Array S 144.56 315 ePKPdf PKPdf 15 59 43.7 -0.3
BRTR Keskin Array B 144.56 315 PKP PKPdf 15 59 43.7 -0.3
comp=Z,9.7nm,0.9s,baz=116,slow=2.9,SNR=39
UZH Uzhgorod 144.78 336 ePKIKP PKPdf 15 59 43.8 -0.1
UZH e 16 01 48.8
KSP Ksiaz 144.84 344 ePKP PKPbc 15 59 44.7 +0.2
KSP Ksiaz 144.84 344 ePKIKP PKPbc 15 59 44.7 +0.2
NIE Niedzica 144.86 339 ePKP PKPbc 15 59 44.7 0.0
NIE Niedzica 144.86 339 ePKIKP PKPbc 15 59 44.7 0.0
VRI Vrincioaia 144.93 329⇑iPKIKP PKPbc 15 59 44.9 -0.1
VRI Vrincioaia 144.93 329 ⇑PKIKP PKPbc 15 59 44.9 -0.1
PLOR Plostina 144.98 329⇑iPKIKP PKPbc 15 59 45.0 -0.1
PLOR Plostina 144.98 329 ⇑PKIKP PKPbc 15 59 45.0 -0.1
ASF Jabal al Asfar 144.99 301 PKP PKPdf 15 59 44.8 -0.1
comp=Z,5.5nm,0.7s,baz=54,slow=4.3,SNR=8.8
TIRR Tirgusor 145.02 326 ePKPdf PKPdf 15 59 44.8 +0.4
TIRR Tirgusor 145.02 326⇑iPKIKP PKPbc 15 59 45.3 +0.1
TIRR Tirgusor 145.02 326 ⇑PKIKP PKPbc 15 59 45.3 +0.1
ANTO Ankara 145.05 316 ePKPdf PKPdf 15 59 44.3 -0.5
ANTO Ankara 145.05 316⇑iP PKPbc 15 59 46.0 +0.4
ANTO Ankara 145.05 316 ⇑PKIKP PKPbc 15 59 46.0 +0.4
TRPA Tarpa 145.09 335⇑iP PKPdf 15 59 42.9 -1.5
HARR Harsova 145.12 326⇓iP PKPbc 15 59 45.2 -0.3
HARR Harsova 145.12 326 ⇓PKIKP PKPbc 15 59 45.2 -0.3
OSTC Ostas 145.13 344 ePKP PKPbc 15 59 45.2 -0.2
TLB Topalu 145.13 326⇑iP PKPdf 15 59 45.1 +0.5
TLB Topalu 145.13 326 ⇑PKIKP PKPdf 15 59 45.1 +0.5
CHVC Chvalec 145.14 344 ePKP PKPbc 15 59 45.5 +0.1
CLL Collm 145.20 347 ePKPdf PKPdf 15 59 44.1 -0.5
CLL Collm 145.20 347⇓iPKPbc PKPdf 15 59 44.3 -0.2
comp=Z,15nm,0.6s
CLL Collm 145.20 347⇓iPKIKP PKPdf 15 59 44.3 -0.2
CLL pmax pmax
comp=Z,15nm,0.6s
OKC Ostrava-Krasne 145.21 341 ePKIKP PKPbc 15 59 45.3 -0.3
OKC Ostrava-Krasne 145.21 341 ePKP PKPbc 15 59 45.3 -0.3
OZUR 145.22 330⇑iP PKPdf 15 59 44.5 -0.3
UPC Upice 145.22 344 ePKP2 PKPbc 15 59 45.8 +0.1
UPC Upice 145.22 344 ePKP PKPbc 15 59 45.8 +0.1
DPC Dobruska-Polom 145.28 343 ePKP2 PKPbc 15 59 46.1 +0.2
DPC Dobruska-Polom 145.28 343 ePKP PKPbc 15 59 46.1 +0.2
LANS Liptovska Anna 145.38 339 ePKP2 PKPab 15 59 47.0 -0.5
LANS Liptovska Anna 145.38 339 ePKP PKPab 15 59 47.0 -0.5
LANS e 15 59 49.8
MORC Moravsky Berou 145.45 342 ePKPdf PKPdf 15 59 45.7 +0.7
MORC Moravsky Berou 145.45 342⇑iP PKPdf 15 59 45.8 +0.7
MORC Moravsky Berou 145.45 342 ⇑PKIKP PKPdf 15 59 45.8 +0.7
MORC Moravsky Berou 145.45 342 ePKP PKPbc 15 59 46.3 -0.1
DOPR Dopca 145.50 330⇑iP PKPab 15 59 47.4 -0.6
PVCC Panska Ves 145.57 345 ePKP2 PKPbc 15 59 46.8 +0.1
PVCC Panska Ves 145.57 345 ePKP PKPbc 15 59 46.8 +0.1
MLR Muntele Rosu 145.58 329 PKPbc PKPdf 15 59 45.6 +0.1
comp=Z,3.7nm,0.5s,baz=353,slow=10,SNR=6.9
MLR Muntele Rosu 145.58 329 ePKPdf PKPdf 15 59 46.3 +0.7
MLR Muntele Rosu 145.58 329⇓iP PKPdf 15 59 45.6 0.0
KECS Kecovo 145.58 338 ePKP2 PKPbc 15 59 46.8 0.0
KECS Kecovo 145.58 338 ePKP PKPbc 15 59 46.8 0.0
MDUB Mudurnu 145.78 318 ePKPdf PKPbc 15 59 47.2 -0.5
MMAI Mount Meron Ar 145.95 303 PKPbc PKPbc 15 59 48.5 +0.1
comp=Z,14nm,0.5s,baz=72,slow=5.4,SNR=37
MBAR Mbarara 146.01 241 ePKPdf PKPdf 15 59 48.1 +0.8
MBAR Mbarara 146.01 241 ePKIKP PKPdf 15 59 48.1 +0.8
PRU Pruhonice 146.08 345 ePKIKP PKPbc 15 59 47.9 -0.2
PRU Pruhonice 146.08 345 ePKP PKPbc 15 59 47.9 -0.2
DRGR 146.08 334⇑iP PKPbc 15 59 48.3 0.0
DRGR 146.08 334 ⇑PKP2 PKPbc 15 59 48.3 0.0
VRAC Vranov 146.15 342⇑iP PKPbc 15 59 48.0 -0.3
VRAC Vranov 146.15 342 ⇑PKIKP PKPbc 15 59 48.0 -0.3
VRAC Vranov 146.15 342 ePKP PKPbc 15 59 48.1 -0.3
VYHS Vyhne 146.16 339 ePKP2 PKPbc 15 59 48.5 +0.1
VYHS Vyhne 146.16 339 ePKP PKPbc 15 59 48.5 +0.1
JAVC Velka Javorina 146.22 341 ePKP PKPbc 15 59 49.7 +1.1
ARR Arges 146.30 330⇑iP PKPbc 15 59 49.9 +0.9
KRUC Moravsky 146.42 342 ePKP PKPbc 15 59 49.0 -0.1
MODS Modra-Piesok 146.77 341 ePKP2 PKPbc 15 59 49.8 -0.3
MODS Modra-Piesok 146.77 341 ePKP PKPbc 15 59 49.8 -0.3
CSS Mathiatis 146.88 308 ePKPbc PKPbc 15 59 50.3 -0.5
MEM Membach 146.92 355 PKPbc PKPbc 15 59 50.2 -0.1
SIRR Siria 146.94 334⇓iP PKPbc 15 59 50.6 0.0
KHC Kasperske Hory 147.11 345 ePKPbc PKPbc 15 59 50.8 -0.2
KHC Kasperske Hory 147.11 345 ePKP2 PKPbc 15 59 50.8 -0.2
KHC Kasperske Hory 147.11 345 ePKP PKPbc 15 59 50.9 -0.2
GZR Gura Zlata 147.14 332⇓iP PKPbc 15 59 50.6 -0.6
GZR Gura Zlata 147.14 332 ⇓PKHKP PKPbc 15 59 50.6 -0.6
EIL Elat 147.25 298 PKPbc PKPbc 15 59 51.8 -0.1
comp=Z,6.1nm,0.8s,baz=258,slow=2.6,SNR=6.1
GERES GERESS Array B 147.35 345 PKPbc PKPbc 15 59 51.4 -0.3
comp=Z,5.7nm,0.6s,baz=23,slow=3.0,SNR=38
DOU Dourbes 147.54 356 PKPbc PKPbc 15 59 51.8 -0.2
CONA Conrad Observa 147.60 342 iPKIKP PKPbc 15 59 52.4 +0.1
comp=Z,7.8nm,0.6s,SNR=5.4
HERR Herculane 147.70 332⇑iP PKPbc 15 59 51.4 -1.2
WLF Walferdange 147.84 354 ePKPbc PKPbc 15 59 53.1 +0.3
WLF Walferdange 147.84 354 ePKP2 PKPbc 15 59 53.1 +0.3
WLF Walferdange 147.84 354 PKPbc PKPbc 15 59 53.1 +0.3
MDVR Moldovita 148.09 332⇓iP PKPbc 15 59 52.6 -1.1
MOA Molln 148.12 344 iPKPbc PKPbc 15 59 53.3 -0.3
comp=Z,2.0nm,0.6s
BFO Black Forest 148.90 351 ePKPbc PKPbc 15 59 55.0 -0.6
BFO Black Forest 148.90 351 iPKHKP PKPbc 15 59 55.3 -0.2
SOKA Soboth 148.97 342 iPKPbc PKPbc 15 59 55.0 -0.8
comp=Z,3.3nm,0.6s
VTS Vitosha 149.01 328 ePKPbc PKPbc 15 59 55.9 -0.2
VTS Vitosha 149.01 328 ePKHKP PKPbc 15 59 55.9 -0.2
KBA Koelnbreinsper 149.07 344 iPKPbc PKPbc 15 59 55.2 -1.0
comp=Z,6.5nm,0.4s,SNR=5.9
WATA Walderalm 149.26 347 iPKPbc PKPbc 15 59 56.0 -0.6
comp=Z,6.0nm,0.5s
RETA Reutte 149.29 348 iPKPbc PKPbc 15 59 56.1 -0.5
comp=Z,3.2nm,0.5s
WTTA Wattenberg 149.31 346 iPKPbc PKPbc 15 59 56.4 -0.4
comp=Z,9.3nm,0.4s,SNR=5.7
MOTA Moosalm 149.35 347 iPKPbc PKPbc 15 59 56.3 -0.5
comp=Z,4.3nm,0.4s
MYKA Terra Mystica 149.41 343 iPKPbc PKPbc 15 59 55.6 -1.2
comp=Z,6.7nm,0.4s
SQTA Sankt Quirin 149.45 347 iPKPbc PKPbc 15 59 56.6 -0.4
comp=Z,9.4nm,0.5s
ABTA Abfaltersbach 149.59 345 iPKPbc PKPbc 15 59 56.5 -0.9
comp=Z,10.0nm,0.5s,SNR=6.3
DAVA Damuels 149.65 349 iPKPbc PKPbc 15 59 57.2 -0.4
comp=Z,5.9nm,0.8s
FETA Feichten 149.74 347 iPKiKP PKPbc 15 59 57.5 -0.3
comp=Z,10nm,1.1s
BLY Banja Luka 149.96 337⇑iP PKPbc 15 59 58.3 +0.2
DAVOX Davos/Dischmat 150.14 348 PKPbc PKPbc 15 59 58.6 -0.2
baz=217,slow=5.1
FUORN Ofenpass-Fuorn 150.22 348 ePKPbc PKPbc 15 59 58.7 -0.3
PDG Podgorica 151.04 332⇑iP PKPbc 15 59 59.2 -1.5
IDI Anoyia 152.80 315 PKPbc PKiKP 16 00 05.1 +0.1
comp=Z,2.7nm,0.4s,baz=225,slow=1.4,SNR=4.7
TORD Torodi Ar. Bea 175.52 182 PKP PKPdf 16 00 16.2 -1.3
comp=Z,1.8nm,1.1s,baz=282,slow=1.3,SNR=4.8
TORD PKPab PKPab 16 01 59.1 +0.7
comp=Z,0.5nm,0.7s,baz=166,slow=3.6,SNR=4.0
TORD PP PP 16 05 49.1 -0.9
comp=Z,0.9nm,1.1s,baz=152,slow=6.5,SNR=2.4
TOA1 Torodi Ar. Sit 175.53 182 ePKPdf PKPdf 16 00 16.2 -1.3
TOA1 ePKPab PKPab 16 01 59.1 +0.7

GUC 26 15:42:15.3±0.7, 32°.19S×71°.99W, h38km±3km, ML3.6,
Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	1.14	134	eP	Pn	15 42 35.7	+0.8
ROCH				iS	Sn	15 42 51.6	+2.3
ROCH				IAML		15 42 52.6	
comp=N,2μm,0.2s							
PEL	Peldehue	1.45	131	eP	Pn	15 42 40.9	+1.8
PEL				iS	Sn	15 43 00.2	+3.3
PEL				IAML		15 43 02.6	
comp=N,2μm,0.3s							
STL	Santa Lucia	1.68	138	iS	Sn	15 43 06.3	+3.7
CLCH	Cerro Calan	1.72	135	eP	Pn	15 42 44.9	+2.2
CLCH				iS	Sn	15 43 06.8	+3.4
CLCH				IAML		15 43 12.7	
comp=N,1μm,0.4s							
FCH	Farellones	1.83	129	eP	Pn	15 42 46.7	+2.2
FCH				iS	Sn	15 43 10.7	+4.2
FCH				IAML		15 43 13.0	
comp=E,905nm,0.3s							
LMEL	Las Melosas	2.23	138	iS	Sn	15 43 20.2	+3.9

KRSC 26 15:43:00.4±1.4, 50°.31N×157°.09E, h30km±23km, ML3.7,
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.73	301	iP	Pb	15 43 14.1	-0.4
SKR				eS	Sb	15 43 23.0	-1.1
PAU	Pauzhetka	1.17	351	eP	Pb	15 43 22.1	+0.1
PAU				eS	Sb	15 43 37.0	+0.2
KDTR	Khodutka, Kamc	1.62	22	eP	Pb	15 43 29.1	-0.6
KDTR				eS	Sb	15 43 49.4	-0.4
ASAK	Asacha	2.14	13	eP	Pn	15 43 36.1	+2.0
MTVR	Mutnovka	2.28	17	eP	Pb	15 43 38.7	-2.2
MTVR				eS	Sb	15 44 06.2	-2.5
RUS	Russkaya	2.31	22	eP	Pn	15 43 38.4	+2.1

RUS				eS	Sn	15 44 05.6	+2.0
KRMR	**Karymshinskiy**	**2.61**	**14**	eS	Sb	15 44 15.2	-2.7
DALK	**Dalny**	**2.92**	**20**	eP	Pn	15 43 47.6	+2.9
DALK				eS	Sb	15 44 23.1	-3.7
UGLR	**Uglovaya**	**3.10**	**20**	eP	Pn	15 43 50.7	+3.4
AVH	**Avacha**	**3.13**	**18**	eP	Pn	15 43 50.8	+3.0
AVH				eS	Sn	15 44 28.4	+4.3
SMAR	**Somma**	**3.14**	**19**	eP	Pb	15 43 52.2	-3.4
KRER	**Koryakskii**	**3.17**	**18**	eP	Pn	15 43 52.2	+3.8
SDLR	**Sedlovina**	**3.17**	**20**	eP	Pn	15 43 51.6	+3.2
NLC	**Nalytchevo**	**3.19**	**25**	eS	Sn	15 44 28.1	+2.7
KRX	**Arik**	**3.20**	**17**	eP	Pb	15 43 54.0	-2.6
SPN	**Mys Shipunski**	**3.33**	**32**	eP	Pn	15 43 53.5	+3.0
SPN				eS	Sn	15 44 33.0	+4.0

*GUC **26** 15:47:05.5±0.6, 27°.75S×70°.85W, h60km, ML4.0*
*NEIC **26** 15:47:06.3±1.6, 27°.61S×71°.07W, h29km±3km, ML4.1(GUC), Error ellipse: s-maj=17.0km s-min=11.1km az=96.0*
NEIC Felt [III] at Copiapo and Tierra Amarilla.
*IDC **26** 15:47:10.9±3.8, 27°.58S×70°.55W, h52km±24km, mb4.5/2, mb1 4.2/5, mb1mx3.6/33, mbtmp4.3/5, ML3.9/3, MS3.0/2, Ms1 3.1/2, ms1mx2.7/20, Error ellipse: s-maj=74.6km s-min=27.6km az=83.0*

ISC 26 15:47:05.8±1.0, 27°.68S±0°.04×71°.3W±0°.1, h32km, n32, σ1°.77/31, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.90**	**85**	ePn	**Pn**	**15 47 21.0**	**-1.3**
CRCH	**Chaqaral**	**1.44**	**23**	eP	**Pn**	**15 47 30.6**	**+1.0**
CRCH				i S	**Sn**	**15 47 48.9**	**+1.6**
LSCH	**La Serena**	**2.22**	**180**	eP	**Pn**	**15 47 40.8**	**+0.4**
LSCH				eS	**Sn**	**15 48 07.5**	**+0.7**
LSCH				IAML		15 48 13.6	
	comp=E,633nm,0.4s						
GO02	**Mina Guanaco**	**2.91**	**31**	ePn	**Pn**	**15 47 52.0**	**+1.9**
PB14	**IPOC Station P**	**3.13**	**14**	IAML		15 48 49.3	
	comp=E,784nm,0.8s						
CO02	**Combarbal**	**3.52**	**177**	i S	**Sn**	**15 48 38.9**	**-0.1**
PB10	**IPOC Station P**	**4.19**	**9**	ePn	**Pn**	**15 48 07.1**	**-0.4**
CFA	**Coronel Fontan**	**4.71**	**147**	P	**Pn**	**15 48 16.4**	**+1.8**
	comp=E,13nm,0.3s,baz=331,slow=12,SNR=43						
CFA				S	**Sn**	**15 49 11.9**	**+3.7**
	comp=E,15nm,0.3s,baz=248,slow=23,SNR=8.6						
PB15	**IPOC Station P**	**4.73**	**20**	eP	**Pn**	**15 48 16.2**	**+1.2**
ROC1	**El Roble**	**5.29**	**178**	ePn	**Pn**	**15 48 27.0**	**+4.3**
PB04	**IPOC Station P**	**5.41**	**11**	ePn	**Pn**	**15 48 23.8**	**-0.6**
LVC	**Limon Verde**	**5.47**	**23**	P	**Pn**	**15 48 26.9**	**+1.5**
	comp=E,2.2nm,0.3s,baz=154,slow=6.9,SNR=14						
LVC				S	**Sn**	**15 49 29.9**	**+2.5**
	comp=E,2.7nm,0.3s,baz=205,slow=19,SNR=2.5						
LVC				LR	LR	15 50 56.8	
	comp=E,142nm,19.5s,baz=210,slow=44						
LVC	**Limon Verde**	**5.47**	**23**	ePn	**Pn**	**15 48 26.8**	**+1.3**
PEL	**Peldehue**	**5.47**	**175**	ePn	**Pn**	**15 48 26.3**	**+1.2**
PB01	**IPOC Station P**	**6.80**	**14**	ePn	**Pn**	**15 48 42.8**	**-0.6**
PB11	**IPOC Station P**	**8.01**	**11**	ePn	**Pn**	**15 48 59.1**	**-1.0**
MNMC	**Minye Minye**	**8.64**	**10**	ePn	**Pn**	**15 49 07.9**	**-0.9**
LPAZ	**La Paz**	**11.70**	**15**	P	**Pn**	**15 49 51.3**	**+0.3**
	comp=E,0.3nm,0.3s,baz=299,slow=7.4,SNR=4.7						
LPAZ	**La Paz**	**11.70**	**15**	ePn	**Pn**	**15 49 51.1**	**0.0**
CPUP	**Villa Florida**	**12.48**	**87**	LR	LR	15 55 20.9	
	comp=E,91nm,18.6s,baz=230,slow=41						
SIV	**San Ignacio**	**14.97**	**41**	P	**Pn**	**15 50 30.1**	**-5.1**
	comp=E,0.2nm,0.3s,baz=247,slow=15,SNR=2.8						
DBIC	**Dimbokro**	**72.57**	**73**	P	**P**	**15 58 29.6**	**-0.6**
	comp=E,1.6nm,0.5s,baz=216,slow=7.1,SNR=4.7						
TORD	**Torodi Ar. Bea**	**81.43**	**70**	P	**P**	**15 59 19.2**	**-0.8**
	comp=E,6.2nm,0.2s,baz=280,slow=4.9,SNR=7.3						
TOA1	**Torodi Ar. Sit**	**81.43**	**70**	eP	**P**	**15 59 19.2**	**-0.8**
H11S2	**WAKE ISLAND Hyl**	**26.32**	**273**	T	T	18 25 14.5	
	baz=112,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hyl**	**26.33**	**273**	T	T	18 25 15.3	
	baz=112,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hyl**	**26.33**	**273**	T	T	18 25 15.9	
	baz=112,slow=75,SNR=12						
KURBB	**Kurchatov Arra**	**147.60**	**37**	PKPbc	**PKiKP**	**16 06 48.0**	**-0.6**
	comp=E,0.8nm,0.5s,baz=302,slow=3.4,SNR=7.8						
ZAA1	**Zalesovo Array**	**148.41**	**27**	ePKPbc	**PKiKP**	**16 06 49.8**	**-0.4**
ZALV	**Zalesovo Beam**	**148.41**	**27**	PKPbc	**PKiKP**	**16 06 49.8**	**-0.4**
	comp=E,2.4nm,0.7s,baz=324,slow=7.3,SNR=6.5						
MK32	**Makanchi Array**	**151.79**	**40**	ePKPbc	**PKiKP**	**16 06 57.7**	**+0.3**
MKAR	**Makanchi Array**	**151.79**	**40**	PKPbc	**PKiKP**	**16 06 57.7**	**+0.3**
	comp=E,0.6nm,0.4s,baz=306,slow=2.3,SNR=10						

*DDA **26** 15:57:06.0, 36°.95N×27°.99E, h7km±3km, ML2.1*

ISK 26 15:57:06.3, 36°.93N±28°.03E, h5km, ML1.8/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBRN	**Bozburun-Marma**	**0.25**	**174**	PG	Pb	15 57 12.5	-0.8
BBRN				SG	Sb	15 57 17.0	-1.0
MRSB	**Marmaris-Mugla**	**0.25**	**147**	PG	Pb	15 57 12.6	-0.8
MRSB				SG	Sb	15 57 17.2	-0.9
YER	**Yerkesik**	**0.29**	**45**	PG	Pb	15 57 13.4	-0.6
DAT	**Datca**	**0.41**	**241**	PG	Pb	15 57 15.6	-0.6
DAT	**Datca**	**0.41**	**241**	i P	Pb	15 57 15.7	-0.5
DAT				i S	Sg	15 57 20.2	+0.5
TURN	**Turunc**	**0.47**	**97**	PG	Pg	15 57 11.9	-3.4
TURN				SG	Sg	15 57 16.2	-5.1
TURN	**Turunc**	**0.47**	**97**	i P	Pg	15 57 12.7	-2.5
TURN				i S	Sg	15 57 15.9	-5.5
TURN				IAML_P			
	comp=Z,666nm,0.1s						
BDRM	**Kayabasi**	**0.48**	**286**	i P	Pg	15 57 14.0	-1.7
BDRM				i S	Sg	15 57 22.1	+0.1
BODT	**Bodrum**	**0.59**	**283**	PG	Pb	15 57 18.8	-0.3
AYDN	**Tasoluk**	**0.74**	**351**	i P	Pg	15 57 20.3	-0.2
AYDN				IAML_P			
	comp=Z,297nm,0.1s						

NNC 26 16:08:49.5±1.9, 54°.25N×86°.11E, h0km, mb4.0, mpv3.4, 11C-3D, Error ellipse: s-maj=18.3km s-min=10.3km az=176.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.82**	**249**	⇑P	Pg	16 09 04.9	-0.3
	1.3nm,0.4s						
ZAA0				⇑S	Sb	16 09 17.1	-1.0
	12nm,0.3s						
KURK	**Kurchatov**	**5.78**	**235**	⇑Pn	Pn	16 10 19.0	+2.5
	2.3nm,0.5s						
KURK				⇑Sn	Sn	16 11 24.6	+1.2
	1.4nm,0.5s						
KURK				⇑Lg	Lg	16 11 51.5	
	11nm,0.6s						
KURBB	**Kurchatov Arra**	**5.89**	**235**	⇓Pn	Pn	16 10 20.3	+2.3
	4.5nm,0.3s						
KURBB				⇑Sn	Sn	16 11 26.7	+0.7
	7.7nm,0.4s						
KURBB				⇑Lg	Lg	16 11 59.0	
	31nm,0.7s						
MK31	**Makanchi Array**	**7.85**	**200**	⇑Pn	Pn	16 10 46.7	+1.8
	1.1nm,0.3s,baz=26,slow=13,SNR=142						
MK31				⇓Sn	Sn	16 12 14.0	-0.4
	1.0nm,0.5s,baz=22,slow=26,SNR=3.3						
MK31				⇑Lg	Lg	16 12 56.6	
	5.2nm,0.7s,baz=15,slow=31,SNR=9.4						
MAKZ	**Makanchi**	**7.90**	**201**	⇑Pn	Pn	16 10 47.2	+1.6
	2.5nm,0.6s						
MAKZ				⇓Sn	Sn	16 12 16.2	+0.6
	3.1nm,0.8s						
MAKZ				⇑Lg	Lg	16 12 57.7	
	5.4nm,0.8s						

*TIR **26** 16:09:41.6, 42°.91N×21°.89E, h8km, Md3.2/3*
*SIK **26** 16:09:57.2, 42°.97N×20°.65E, h0km, M3.0*
*SKO **26** 16:09:58.0, 43°.03N×20°.69E, h0km, M2.8, ML2.9*
*BEO **26** 16:09:58.5±0.3, 42°.95N×20°.66E, h0km, ML3.0/13*
*SAR **26** 16:09:58.1±0.6, 42°.95N×20°.62E, h4km±2km, ML3.0/1*
*PDG **26** 16:09:58.0±0.3, 42°.95N×20°.64E, h13km, MD3.0/3, ML3.0/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*SOF **26** 16:10:04.1, 43°.14N×21°.28E, h10km*

ISC 26 16:09:57.9±1.1, 42°.98N±0°.02×20°.65E±0°.01, h4km±9km, n91, σ0°.91/141, 15C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SELS	**Selova**	**0.42**	**55**	ePg	**Pg**	**16 10 05.9**	**0.0**
BEY	**Berane**	**0.57**	**259**	⇓iPg	**Pg**	**16 10 08.8**	**0.0**
IVA	**Berane**	**0.57**	**259**	⇓iPg	**Pg**	**16 10 08.8**	**0.0**
IVA				i Sg	**Sg**	**16 10 16.8**	**+0.7**
SJES	**Sjenica**	**0.57**	**299**	ePg	**Pg**	**16 10 09.0**	**+0.2**
SJES				eSg	**Sg**	**16 10 16.7**	**+0.5**
PVY	**Plav**	**0.64**	**233**	⇓iPg	**Pg**	**16 10 09.6**	**-0.6**
PVY				eSg	**Sg**	**16 10 18.8**	**+0.3**
IVAS	**Ivanjica**	**0.69**	**329**	ePg	**Pg**	**16 10 10.9**	**-0.3**
BCI	**Bajram Curri**	**0.75**	**215**	i PN	**Pg**	**16 10 11.6**	**-0.7**
BCI				i SN	**Sg**	**16 10 21.7**	**-0.4**
KOME	**Kolasin**	**0.84**	**261**	ePg	**Pg**	**16 10 13.7**	**-0.4**
KOME				eSg	**Sb**	**16 10 26.3**	**-0.6**
BARS	**Barje**	**0.87**	**101**	ePg	**Pg**	**16 10 14.8**	**+0.2**
BARS				eSg	**Sg**	**16 10 26.5**	**+0.6**
BARS				eSg	Sn	16 10 45.7	+16
GRUS	**Gruza**	**0.91**	**3**	ePg	**Pg**	**16 10 15.4**	**+0.1**
GRUS				eSg	**Sb**	**16 10 29.1**	**+0.5**
PLE	**Pljevlja**	**0.98**	**291**	⇓iPg	**Pg**	**16 10 16.6**	**-0.2**
PLE				eSg	**Sb**	**16 10 32.1**	**+1.1**
BOVS	**Bovan**	**1.01**	**49**	ePg	**Pb**	**16 10 18.1**	**+0.2**
BOVS				eSg	**Sg**	**16 10 30.9**	**+0.6**
RUDO	**Rudo**	**1.13**	**305**	⇑iPg	**Pg**	**16 10 17.9**	**-1.6**
RUDO				eSg	**Sg**	**16 10 33.7**	**-0.5**
PDG	**Podgorica**	**1.17**	**242**	⇓iP	**Pg**	**16 10 19.7**	**-0.5**
PDG	**Podgorica**	**1.17**	**242**	i Pg	**Pg**	**16 10 19.2**	**-1.0**
PDG	**Podgorica**	**1.17**	**242**	ePg	**Pg**	**16 10 18.8**	**-1.4**
PDG				eSg	**Sg**	**16 10 33.4**	**-2.0**
TTG	**Podgorica**	**1.17**	**242**	⇓iPg	**Pg**	**16 10 19.2**	**-1.0**
TTG				eSg	**Sn**	**16 10 37.4**	**+0.1**
SKO	**Skopje**	**1.17**	**150**	i Pg	**Pg**	**16 10 18.4**	**-1.9**
SKO				i Sg	**Sb**	**16 10 35.9**	**-0.2**
SKO				eLg	Lg	16 10 36.5	
	comp=E,12nm,0.3s						
DIVS	**Divibare**	**1.21**	**337**	ePg	**Pg**	**16 10 20.9**	**-0.2**
DIVS				eSg	**Sn**	**16 10 39.4**	**+0.8**
DIVS	**Divibare**	**1.21**	**337**	⇑iPg	**Pg**	**16 10 20.6**	**-0.5**
DIVS				eSg	**Sg**	**16 10 37.3**	**+0.4**
NKY	**Niksic**	**1.23**	**263**	⇑iPg	**Pg**	**16 10 20.4**	**-1.0**
NKY				eSg	**Sn**	**16 10 39.6**	**+0.6**
TRUS	**Trudelj**	**1.25**	**352**	ePg	**Pg**	**16 10 21.9**	**0.0**
BBLS	**Lazići**	**1.27**	**315**	ePg	**Pg**	**16 10 21.3**	**-0.9**
BBLS				eSg	**Sn**	**16 10 40.4**	**+0.5**
BBLS	**Lazići**	**1.27**	**315**	⇑iPg	**Pg**	**16 10 21.2**	**-0.9**
BBLS				eSg	**Sb**	**16 10 39.0**	**0.0**
NKME	**Niksic**	**1.27**	**261**	⇓iPg	**Pg**	**16 10 20.9**	**-1.2**
NKME				eSg	**Sn**	**16 10 41.1**	**+1.2**
UPM	**Unac-Piva**	**1.30**	**280**	⇑iPg	**Pg**	**16 10 22.1**	**-0.6**
UPM				eSg	**Sn**	**16 10 41.9**	**+1.1**
UPM	**Unac-Piva**	**1.30**	**280**	ePg	**Pg**	**16 10 21.9**	**-0.8**
UPM				eSg	**Sg**	**16 10 38.4**	**-1.2**
PHP	**Peshkopia**	**1.31**	**187**	i PN	**Pb**	**16 10 23.2**	**+0.2**
PHP				i SN	**Sn**	**16 10 41.4**	**+0.5**
DRME	**Dracevica, Mon**	**1.34**	**234**	ePg	**Pn**	**16 10 22.5**	**-0.9**
DRME				eSg	**Sn**	**16 10 43.2**	**+1.5**
DRME	**Dracevica, Mon**	**1.34**	**234**	ePn	**Pn**	**16 10 22.3**	**-1.1**
DRME				eSn	**Sg**	**16 10 40.9**	**-0.1**
SVIS	**Svilajnac**	**1.34**	**18**	ePg	**Pn**	**16 10 23.4**	**0.0**
SVIS				eSg	**Sn**	**16 10 42.1**	**+0.4**
CEME	**Cevo**	**1.35**	**252**	⇓iPg	**Pn**	**16 10 22.5**	**-1.0**
CEME				eSg	**Sn**	**16 10 43.1**	**+1.2**
ZAGS	**Zajecar**	**1.42**	**54**	ePg	**Pb**	**16 10 25.0**	**+0.1**
ZAGS				eSg	**Sn**	**16 10 44.3**	**+0.7**
ULC	**Ulcinj**	**1.46**	**226**	⇑iPg	**Pn**	**16 10 24.9**	**-0.1**
ULC				eSg	**Sg**	**16 10 46.1**	**+1.5**
ULC	**Ulcinj**	**1.46**	**226**	i Pg	**Pg**	**16 10 25.7**	**-0.1**
BUM	**Brajici-Budva**	**1.47**	**243**	⇓iPg	**Pn**	**16 10 24.5**	**-0.6**
BUM				i Sg	**Sg**	**16 10 45.9**	**+1.0**
ZAPS	**Zavoj**	**1.48**	**78**	ePg	**Pn**	**16 10 25.0**	**-0.3**
ZAPS				eSg	**Sg**	**16 10 45.6**	**+0.1**
BRY	**Bratogost**	**1.55**	**268**	⇑iPg	**Pn**	**16 10 26.0**	**-0.4**
BRY				eSg	**Sg**	**16 10 48.6**	**+0.9**
BRY	**Bratogost**	**1.55**	**268**	ePn	**Pn**	**16 10 25.8**	**-0.6**
BRY				eSn	**Sn**	**16 10 46.5**	**-0.6**
KUBS	**Kucevo**	**1.61**	**27**	ePg	**Pn**	**16 10 26.2**	**-0.9**
HAPS	**Han Pijesak,BI**	**1.66**	**312**	ePg	**Pb**	**16 10 28.9**	**-0.1**
HAPS				eSg	**Sg**	**16 10 52.0**	**+0.9**
HAPS	**Han Pijesak,BI**	**1.66**	**312**	ePn	**Pn**	**16 10 27.3**	**-0.5**
HAPS				eSn	**Sn**	**16 10 49.4**	**-0.2**
HCY	**Herceg Novi**	**1.68**	**252**	⇓iPn	**Pn**	**16 10 28.2**	**+0.2**
HCY				i Sn	**Sb**	**16 10 51.1**	**+0.3**
HCY	**Herceg Novi**	**1.68**	**252**	ePn	**Pn**	**16 10 27.5**	**-0.5**
HCY				eSn	**Sn**	**16 10 49.0**	**-0.9**
TREB	**Trebinje**	**1.71**	**262**	ePg	**Pb**	**16 10 29.7**	**-0.2**
TREB				eSg	**Sg**	**16 10 53.7**	**+0.8**
TREB	**Trebinje**	**1.71**	**262**	ePn	**Pn**	**16 10 28.8**	**+0.3**
TREB				eSn	**Sn**	**16 10 50.9**	**+0.1**
TIR	**Tirane**	**1.74**	**200**	⇑iP	**Pg**	**16 10 32.4**	**+1.3**
TIR	**Tirane**	**1.74**	**200**	S	**Sg**	**16 10 56.2**	**+2.6**
TEKS	**Tekeris**	**1.76**	**333**	ePg	**Pb**	**16 10 31.2**	**+0.4**
TEKS				eSg	**Sg**	**16 10 55.1**	**+0.6**
TEKS	**Tekeris**	**1.76**	**333**	ePn	**Pn**	**16 10 29.7**	**+0.5**
TEKS				eSn	**Sb**	**16 10 53.0**	**-0.3**
BEO	**Beograd**	**1.83**	**356**	eSg	**Sg**	**16 10 56.6**	**-0.1**
OHR	**Ohrid**	**1.87**	**177**	i Pg	**Pg**	**16 10 33.8**	**0.0**
OHR				i Sg	**Sg**	**16 10 58.4**	**+0.3**
OHR				eLg	Lg	16 11 04.3	
	comp=E,235nm,0.7s						
OHR				eLg	Lg	16 11 06.7	
	comp=N,153nm,0.7s						
VTS	**Vitosha**	**1.94**	**100**	ePg	**Pn**	**16 10 31.7**	**0.0**
VTS	**Vitosha**	**1.94**	**100**	⇑iP	**Pn**	**16 10 32.3**	**+0.6**
VTS	**Vitosha**	**1.94**	**100**	i Pg	**Pn**	**16 10 31.8**	**0.0**
VTS	**Vitosha**	**1.94**	**100**	i P	**Pn**	**16 10 31.7**	**0.0**
MDVR	**Moldovita**	**1.96**	**23**	⇑iP	**Pn**	**16 10 31.4**	**-0.5**
MDVR	**Moldovita**	**1.96**	**23**	S	**Sn**	**16 10 55.6**	**-1.3**
KKB	**Krupnik**	**2.12**	**121**	i Pn	**Pn**	**16 10 34.6**	**+0.5**
KKB	**Krupnik**	**2.12**	**121**	i P	**Pb**	**16 10 36.7**	**-0.2**
DJES	**Djerdap**	**2.16**	**38**	eSg	**Sg**	**16 11 06.4**	**-0.8**
STON	**Ston**	**2.17**	**268**	ePg	**Pb**	**16 10 36.5**	**-1.2**
STON				eSg	**Sg**	**16 11 06.7**	**-0.9**
STON	**Ston**	**2.17**	**268**	ePn	**Pb**	**16 10 37.3**	**-0.4**
STON				eSn	**Sb**	**16 11 06.1**	**+1.2**
STON	**Ston**	**2.17**	**268**	ePn	**Pn**	**16 10 34.9**	**+0.2**
STON				eSn	**Sn**	**16 11 01.9**	**-0.1**
VAY	**Valandovo**	**2.19**	**139**	i Pn	**Pn**	**16 10 35.0**	**-0.1**
VAY				i Sn	**Sb**	**16 11 04.5**	**-1.0**
VAY				eLg	Lg	16 11 18.3	
	comp=E,43nm,0.7s						
HERR	**Herculane**	**2.29**	**33**	⇑iP	**Pn**	**16 10 36.3**	**-0.1**
MPEP	**Malo Peshtene**	**2.29**	**80**	P	**Pg**	**16 10 41.2**	**-0.6**
GRG	**Griva**	**2.41**	**147**	i Pn	**Pn**	**16 10 38.5**	**+0.4**
KNT	**Kendrikon**	**2.47**	**137**	i Pn	**Pn**	**16 10 39.3**	**+0.3**
SRE	**Strehaia**	**2.50**	**47**	⇑iP	**Pn**	**16 10 40.0**	**+0.7**
DOB	**Doboj**	**2.54**	**314**	ePn	**Pn**	**16 10 40.3**	**+0.4**
MMB	**Musomiste**	**2.67**	**120**	i Pn	**Pn**	**16 10 43.2**	**+1.4**
MMB	**Musomiste**	**2.67**	**120**	i P	**Pb**	**16 10 45.3**	**-1.0**
BZS	**Buzias**	**2.72**	**14**	⇑iP	**Pn**	**16 10 43.2**	**+0.8**
SRS	**Serrai**	**2.88**	**129**	i Pn	**Pn**	**16 10 45.2**	**+0.7**
BLY	**Banja Luka**	**3.06**	**306**	ePn	**Pn**	**16 10 46.9**	**-0.2**
BLY				eSn	**Sn**	**16 11 24.6**	**+0.4**
SIRR	**Siria**	**3.36**	**12**	⇓iP	**Pn**	**16 10 51.2**	**0.0**
MORH	**Mrgy, Hungar**	**3.53**	**337**	ePn	**Pn**	**16 10 53.5**	**0.0**
MORH				eSn	**Sn**	**16 11 36.0**	**+0.3**
MORH	**Mrgy, Hungar**	**3.53**	**337**	Sn	**Sn**	**16 11 35.0**	**-0.7**
MORH				ESg		16 11 53.0	
MORH	**Mrgy, Hungar**	**3.53**	**337**	⇑EPn	**Pn**	**16 10 53.0**	**-0.5**
NVLJ	**Novalja**	**4.47**	**293**	ePn	**Pn**	**16 11 08.7**	**+2.3**
DOPR	**Dopca**	**4.52**	**47**	⇑iP	**Pn**	**16 11 08.0**	**+1.0**
CRES	**Cresnjev**	**4.68**	**309**	ePn	**Pn**	**16 11 09.4**	**+0.1**
PSZ	**Piszkesteto**	**4.96**	**354**	EPn	**Pn**	**16 11 13.0**	**-0.2**
PSZ				Sn	**Sn**	**16 12 09.1**	**-2.0**
SOKA	**Soboth**	**5.44**	**315**	i Pn	**Pn**	**16 11 20.4**	**+0.6**
	comp=E,1.2nm,0.2s						
SOKA				eSn	**Sn**	**16 12 20.7**	**-2.1**
	comp=E,1.6nm,0.4s						
OBKA	**Obir**	**5.59**	**311**	ePn	**Pn**	**16 11 23.1**	**+1.2**
	comp=E,4.1nm,0.3s						
ARSA	**Arzberg**	**5.60**	**321**	ePn	**Pn**	**16 11 22.6**	**+0.6**
	comp=E,7.6nm,0.3s						
ARSA				i Sn	**Sn**	**16 12 23.8**	**-2.9**
	comp=E,3.7nm,0.3s						
VYHS	**Vyhne**	**5.66**	**348**	ePN	**Pn**	**16 11 23.5**	**+0.8**
MODS	**Modra-Piesok**	**5.88**	**338**	ePN	**Pn**	**16 11 25.9**	**+0.1**
MYKA	**Terra Mystica**	**6.17**	**309**	ePn	**Pn**	**16 11 31.9**	**+2.1**
	comp=E,4.5nm,0.4s						
WTTA	**Wattenberg**	**7.68**	**307**	Pn	**Pn**	**16 11 54.1**	**+3.6**
	comp=E,4.1nm,0.4s						

*SKO **26** 16:15:11.3, 42°.99N×20°.72E, h0km, ML2.5*
*SIK **26** 16:15:11.1, 42°.96N×20°.67E, h2km, M2.6*
*SAR **26** 16:15:11.6±0.7, 42°.94N×20°.61E, h4km±2km, ML2.7/8*
*BEO **26** 16:15:11.5±0.3, 42°.95N×20°.65E, h5km, ML2.7/12*
*PDG **26** 16:15:12.9±0.3, 42°.98N×20°.52E, h4km, MD2.8/1, ML2.7/13, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*SOF **26** 16:15:18.7, 42°.69N×21°.26E, h13km*

ISC 26 16:15:11.0±1.0, 42°.97N±0°.02×20°.65E±0°.01, h7km±9km, n80, σ0°.87/125, 15C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SELS	**Selova**	**0.43**	**54**	ePg	**Pg**	**16 15 19.0**	**-0.3**
SELS				eSg	**Sg**	**16 15 25.1**	**+0.2**
BEY	**Berane**	**0.56**	**260**	⇓iPg	**Pg**	**16 15 21.9**	**+0.1**
IVA	**Berane**	**0.56**	**260**	⇓iPg	**Pg**	**16 15 21.9**	**+0.1**
IVA				eSg	**Sg**	**16 15 29.4**	**+0.3**
SJES	**Sjenica**	**0.57**	**301**	ePg	**Pg**	**16 15 22.3**	**+0.3**
SJES				eSg	**Sg**	**16 15 29.7**	**+0.2**
PVY	**Plav**	**0.63**	**234**	⇓iPg	**Pg**	**16 15 22.8**	**-0.3**
PVY				eSg	**Sg**	**16 15 31.8**	**+0.5**
IVAS	**Ivanjica**	**0.71**	**329**	ePg	**Pg**	**16 15 23.9**	**-0.7**
IVAS				eSg	**Sg**	**16 15 34.2**	**+0.5**
KOME	**Kolasin**	**0.84**	**262**	⇑iPg	**Pg**	**16 15 26.6**	**-0.5**
KOME				eSg	**Sg**	**16 15 38.0**	**0.0**
BARS	**Barje**	**0.87**	**100**	ePg	**Pg**	**16 15 27.7**	**0.0**
BARS	**Barje**	**0.87**	**100**	ePg	Pn	16 15 37.4	+7.7
BARS				eSg	**Sg**	**16 15 38.9**	**-0.2**
BARS				eSg	Sn	16 15 58.9	+16
GRUS	**Gruza**	**0.92**	**3**	ePg	**Pg**	**16 15 28.4**	**-0.2**
GRUS				eSg	**Sb**	**16 15 41.6**	**-0.2**
PLE	**Pljevlja**	**0.99**	**292**	⇓iPg	**Pg**	**16 15 29.9**	**0.0**
PLE				eSg	**Sb**	**16 15 43.7**	**-0.1**
BOVS	**Bovan**	**1.02**	**49**	ePg	**Pn**	**16 15 31.2**	**-0.6**
BOVS				eSg	**Sb**	**16 15 44.7**	**+0.1**
RUDO	**Rudo**	**1.14**	**305**	ePg	**Pb**	**16 15 31.0**	**-2.0**
RUDO				eSg	**Sg**	**16 15 47.5**	**0.0**
SKO	**Skopje**	**1.16**	**149**	i Pg	**Pb**	**16 15 32.5**	**-0.9**
SKO				i Sg	**Sb**	**16 15 47.0**	**-1.5**
SKO				eLg	Lg	16 15 47.7	
	comp=N,6.1nm,0.3s						
PDG	**Podgorica**	**1.16**	**243**	⇑iP	**Pb**	**16 15 32.5**	**-0.9**
PDG	**Podgorica**	**1.16**	**243**	S	**Sb**	**16 15 47.1**	**-1.4**
PDG	**Podgorica**	**1.16**	**243**	i Pg	**Pb**	**16 15 32.3**	**-0.9**
PDG				i Sg	**Sn**	**16 15 50.2**	**+0.5**
PDG	**Podgorica**	**1.16**	**243**	ePg	**Pb**	**16 15 31.8**	**-1.5**
PDG				eSg	**Sb**	**16 15 46.9**	**-1.6**
TTG	**Podgorica**	**1.16**	**243**	⇑iPg	**Pb**	**16 15 32.4**	**-0.9**
TTG				eSg	**Sn**	**16 15 49.7**	**0.0**
NKY	**Niksic**	**1.22**	**263**	⇓iPg	**Pn**	**16 15 33.6**	**-1.0**
NKY				eSg	**Sn**	**16 15 51.8**	**+0.3**
DIVS	**Divibare**	**1.23**	**337**	ePg	**Pn**	**16 15 34.0**	**-0.7**
DIVS				eSg	**Sn**	**16 15 52.1**	**+0.6**
DIVS	**Divibare**	**1.23**	**337**	⇑iPg	**Pn**	**16 15 33.9**	**-0.7**
DIVS				eSg	**Sn**	**16 15 50.7**	**-0.8**
NKME	**Niksic**	**1.26**	**261**	⇑iPg	**Pn**	**16 15 34.5**	**-0.6**
NKME				eSg	**Sn**	**16 15 52.8**	**+0.5**
TRUS	**Trudelj**	**1.27**	**352**	ePg	**Pb**	**16

MXZ	**Matakaoa Point**	**3.54**	**205**	P	Pn	16 21 26.3	-4.8
MXZ				S	S	16 22 23.3	+0.3
WMGZ	**Waiomatatini S**	**3.74**	**202**	P	Pn	16 21 29.9	-3.2
WMGZ				S	S	16 22 30.1	+3.5
HAZ	**Te Kaha**	**3.91**	**210**	P	Pn	16 21 31.7	-3.1
HAZ				S	S	16 22 32.5	+2.8
PKGZ	**Pakihiroa**	**3.92**	**206**	P	Pn	16 21 32.0	-2.9
PKGZ				S	S	16 22 32.7	+2.8
PUZ	**Puketiti**	**4.02**	**203**	P	Pn	16 21 32.8	-3.2
PUZ				S	S	16 22 35.4	+3.6
RUGZ	**Raukumara Rang**	**4.13**	**209**	P	Pn	16 21 34.1	-3.1
RUGZ				S	S	16 22 35.9	+1.8
TWGZ	**Tauwhareparae**	**4.21**	**205**	P	Pn	16 21 39.0	+1.1
TWGZ				S	S	16 22 40.7	+5.3
CNGZ	**Carnagh Statio**	**4.42**	**201**	P	Pn	16 21 37.8	-2.2
MWZ	**Matawai**	**4.51**	**208**	P	Pn	16 21 33.2	-7.9
MWZ				S	S	16 22 47.1	+5.9
URZ	**Urewera**	**4.62**	**212**	P	Pn	16 21 39.0	-3.1
URZ				S	S	16 22 48.7	+5.5
MUGZ	**Murupara**	**4.95**	**213**	P	Pn	16 21 43.1	-2.7
SNGZ	**Shannon Statio**	**4.97**	**207**	P	Pn	16 21 45.7	-0.4
BKZ	**Black Stump Fm**	**5.64**	**211**	P	Pn	16 21 53.4	-0.1
KWHZ	**Kaweka Forest**	**5.89**	**210**	P	Pn	16 21 57.1	+0.8
HIZ	**Hauiti**	**5.98**	**225**	P	Pn	16 21 58.6	+1.3
KRHZ	**Kereru**	**6.10**	**209**	P	Pn	16 21 58.4	-0.2
PNHZ	**Pukenui**	**6.40**	**209**	P	Pn	16 22 01.8	-0.3
TSZ	**Takapari Road**	**6.62**	**210**	P	Pn	16 22 04.4	-0.2
TIWZ	**Tintock**	**7.26**	**207**	P	Pn	16 22 12.4	+0.3
TIWZ				S	S	16 23 39.2	+1.4
MRZ	**Mangatainoka R**	**7.28**	**209**	P	Pn	16 22 11.7	-0.6
MRZ				S	S	16 23 39.2	+0.9
HOWZ	**Holdsworth Sta**	**7.51**	**208**	P	Pn	16 22 15.1	+0.1
HOWZ				S	S	16 23 42.9	-0.2
TMWZ	**Te Maipa**	**7.55**	**206**	P	P	16 22 16.5	-0.2
OGWZ	**Otaki Gorge**	**7.58**	**210**	P	Pn	16 22 15.0	-0.8
MTW	**Mount Morrison**	**7.74**	**207**	P	Pn	16 22 18.0	+0.3
CAW	**Cannon Point**	**7.87**	**210**	P	Pn	16 22 18.4	-0.7
PAWZ	**Paruwai Farm**	**7.96**	**207**	P	P	16 22 21.6	+0.1
WEL	**Wellington**	**8.14**	**210**	P	Pn	16 22 22.7	+0.4
PLWZ	**Palliser**	**8.19**	**207**	P	Pn	16 22 23.9	+1.0
TCW	**Tory Channel**	**8.29**	**213**	P	Pn	16 22 23.4	-0.8
TUWZ	**Tuamarina**	**8.62**	**213**	P	Pn	16 22 26.9	-1.1
QRZ	**Quartz Range**	**8.87**	**221**	P	Pn	16 22 31.3	+0.2
THZ	**Tophouse**	**9.36**	**216**	P	Pn	16 22 36.7	-0.3
KHZ	**Kahutara**	**9.59**	**211**	P	P	16 22 40.8	-0.6
GVZ	**Greta Valley S**	**10.25**	**211**	P	P	16 22 49.0	+0.2
LTZ	**Lake Taylor**	**10.45**	**214**	P	P	16 22 51.2	+0.3
INZ	**Inchbonnie**	**10.80**	**217**	P	P	16 22 55.0	+0.2
OKCZ	**Okains Bay**	**10.87**	**209**	P	P	16 22 58.0	+2.3
MQZ	**McQueen's Vall**	**11.02**	**210**	P	P	16 22 57.9	+0.7

*ISCJB **26** 16:20:40.1±0.9, 14°.9S±0°.2×179°.3W±0°.2, h400km, mb3.7/11, Error ellipse: s-maj=34.7km s-min=14.0km az=145.2*

*IDC **26** 16:20:42.8±6.1, 14°.95S×179°.28W, h419km±66km, mb3.3/11, mb1 3.6/12, mb1mx3.3/28, mbtmp4.1/12, Error ellipse: s-maj=37.4km s-min=24.4km az=142.0*

ISC 26 16:20:41.1±1.1, 14°.9S±0°.2×179°.2W±0°.2, h400km, n14, σ0$80/12, mb3.7/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.33**	**240**	P	**P**	**16 23 58.7**	**+1.3**
0.3nm,0.3s,baz=128,slow=20,SNR=7.6							
STKA	**Stephens Creek**	**39.47**	**238**	P	**P**	**16 27 34.4**	**-0.5**
3.1nm,0.6s,baz=75,slow=11,SNR=10							
JAY	**Jayapura**	**41.37**	**283**	P	**P**	**16 27 51.0**	**+0.4**
11nm,0.8s,baz=112,slow=5.4,SNR=2.7							
WRA	**Warramunga Arr**	**44.47**	**257**	P	**P**	**16 28 13.8**	**-1.2**
1.0nm,0.3s,baz=86,slow=7.2,SNR=4.2							
ASAR	**Alice Springs**	**44.91**	**251**	P	**P**	**16 28 17.9**	**-0.6**
9.3nm,0.3s,baz=85,slow=8.8,SNR=270							
MJAR	**Matsushiro Arr**	**65.03**	**323**	P	**P**	**16 30 39.7**	**-0.5**
2.2nm,0.7s,baz=164,slow=6.8,SNR=3.8							
PETK	**Petropavlovsk-**	**70.58**	**345**	P	**P**	**16 31 13.9**	**-0.1**
1.5nm,0.7s,baz=119,slow=7.5,SNR=4.3							
NVAR	**Mina Array Bea**	**77.83**	**45**	P	**P**	**16 31 56.6**	**+0.5**
0.3nm,0.6s,baz=224,slow=7.5,SNR=2.0							
ILAR	**Eielson Array**	**83.15**	**13**	P	**P**	**16 32 22.9**	**-0.2**
0.5nm,0.7s,baz=243,slow=6.7,SNR=4.7							
TXAR	**Lajitas Array**	**85.08**	**58**	P	**P**	**16 32 33.8**	**+0.2**
0.3nm,0.5s,baz=224,slow=6.3,SNR=1.6							
PDAR	**Pinedale Array**	**85.73**	**44**	P	**P**	**16 32 36.2**	**-0.5**
0.3nm,0.5s,baz=180,slow=3.9,SNR=3.5							
SONM	**Songino Array**	**90.75**	**320**	P	**P**	**16 33 01.1**	**+1.0**
0.4nm,0.5s,baz=102,slow=3.5,SNR=2.6							
MMAI	**Mount Meron Ar**	**143.78**	**306**	PKP	PKPab	16 39 29.5	+1.1
2.2nm,0.5s,baz=65,slow=4.0,SNR=4.0							
GERES	**GERESS Array B**	**144.51**	**345**	PKP	PKPbc	16 39 30.4	-0.1
0.7nm,0.4s,baz=25,slow=4.4,SNR=4.9							

*DDA **26** 16:33:54.8, 35°.69N×27°.09E, h5km±1km, ML3.7*

*ISK **26** 16:33:56.8, 35°.78N×27°.25E, h5km, ML4.0/17*

*IDC **26** 16:33:57.3±0.7, 35°.86N×27°.23E, h0km, mb4.0/16, mb1 4.0/21, mb1mx3.9/40, mbtmp3.9/21, ML3.6/5, MS3.1/9, Ms1 3.0/9, ms1mx2.7/40, Error ellipse: s-maj=17.0km s-min=11.4km az=157.0*

*ATH **26** 16:33:58.5, 35°.81N×27°.26E, h27km±1km, ML4.0/11, Error ellipse: s-maj=2.0km s-min=0.7km az=126.0*

*NEIC **26** 16:33:59.6±1.9, 35°.80N×27°.26E, h16km±13km, ML4.0(THE), Error ellipse: s-maj=6.3km s-min=4.6km az=177.0*

*THE **26** 16:33:59.8, 35°.82N×27°.25E, h5km±1km, ML4.0/9, Error ellipse: s-maj=1.8km s-min=0.5km az=124.0*

*ISCJB **26** 16:33:59.5±0.4, 35°.72N±0°.02×27°.31E±0°.02, h28km±3km, mb3.9/19, MS3.1/4, Error ellipse: s-maj=2.6km s-min=2.1km az=3.0*

*MOS **26** 16:34:00.7±1.7, 35°.75N×27°.30E, h35km, mb4.2/7, Error ellipse: s-maj=8.9km s-min=6.3km az=83.6*

*HLW **26** 16:34:03.2, 35°.71N×27°.52E, h33km±32km, Ml4.0*

*GII **26** 16:34:04.4±0.0, 35°.56N×27°.72E, h10km, mb4.3/2, MD4.2/2*

*NIC **26** 16:34:05.5±0.2, 36°.40N×27°.72E, h36km, mb4.4, ML4.0*

ISC 26 16:34:00.3±0.4, 35°.76N±0°.03×27°.28E±0°.02, h20km±1km, n217, σ1$46/264, mb4.0/19, MS3.0/4, 2C-4D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.23**	**205**	P	**Pb**	**16 34 05.0**	**-0.8**
KARP				S	**Sg**	**16 34 10.0**	**+0.2**
KARP	**Karpathos**	**0.23**	**205**	P	**Pb**	**16 34 05.0**	**-0.8**
KARP				S	**Sg**	**16 34 10.1**	**+0.3**
KARP				AML	AML	16 34 10.3	
KARP				AML	AML	16 34 11.4	
comp=N,80886μm,0.2s							
ARG	**Arkhangelos**	**0.82**	**56**	PG	**Pb**	**16 34 14.0**	**-1.9**
ARG				SG	**Sb**	**16 34 26.6**	**0.0**
ARG	**Arkhangelos**	**0.82**	**56**	P	**Pb**	**16 34 14.5**	**-1.4**
ARG				S	**Sg**	**16 34 27.8**	**+0.4**
ARG	**Arkhangelos**	**0.82**	**56**	P	**Pb**	**16 34 14.5**	**-1.4**
ARG				S	**Sg**	**16 34 27.8**	**+0.4**
ARG	**Arkhangelos**	**0.82**	**56**	P	**Pb**	**16 34 14.5**	**-1.4**
ARG				S	**Sg**	**16 34 27.8**	**+0.4**
ARG	**Arkhangelos**	**0.82**	**56**	P	**Pb**	**16 34 14.2**	**-1.7**
ARG				S	**Sb**	**16 34 26.3**	**-0.3**
ARG				AML	AML	16 34 29.4	
comp=N,13188μm,0.5s							
ARG				AML	AML	16 34 29.5	
comp=E,21297μm,0.4s							
NISR	**Nisiros**	**0.86**	**352**	*e*Pn	**Pb**	**16 34 15.7**	**-0.9**
NISR				*e*Sn	**Sb**	**16 34 27.3**	**-0.4**
NISR	**Nisiros**	**0.86**	**352**	P	**Pb**	**16 34 15.7**	**-0.9**
NISR				S	**Sb**	**16 34 27.3**	**-0.4**
NISR	**Nisiros**	**0.86**	**352**	P	**Pb**	**16 34 14.6**	**-2.0**
NISR				S	**Sb**	**16 34 26.5**	**-1.2**
NISR				AML	AML	16 34 33.6	
comp=N,13057μm,0.7s							
NISR				AML	AML	16 34 37.2	
comp=E,14433μm,0.8s							
DAT	**Datca**	**1.00**	**14**	PG	**Pb**	**16 34 16.5**	**-2.5**
DAT				SG	**Sb**	**16 34 31.9**	**+0.1**
DAT	**Datca**	**1.00**	**14**	*i* P	**Pb**	**16 34 16.7**	**-2.2**
DAT				*i* S	**Sb**	**16 34 30.2**	**-1.5**
DAT				IAML_P			
comp=Z,6μm,0.1s							
DATC	**Datca-Mugla**	**1.04**	**17**	PG	**Pb**	**16 34 17.9**	**-1.8**
DATC				SG	**Sb**	**16 34 33.2**	**+0.2**
ZKR	**Zakros**	**1.08**	**234**	*e*Pn	**Pb**	**16 34 19.9**	**-0.4**
ZKR				*e*Sn	**Sg**	**16 34 35.7**	**+0.2**
ZKR	**Zakros**	**1.08**	**234**	P	**Pb**	**16 34 19.9**	**-0.4**
ZKR				S	**Sg**	**16 34 35.7**	**+0.2**
ZKR	**Zakros**	**1.08**	**234**	P	**Pb**	**16 34 19.9**	**-0.4**
ZKR				S	**Sg**	**16 34 35.5**	**0.0**
ZKR				AML	AML	16 34 38.1	
comp=N,7991μm,0.4s							
ZKR				AML	AML	16 34 40.2	
comp=E,19344μm,0.5s							
BBRN	**Bozburun-Marma**	**1.11**	**34**	PN	**Pn**	**16 34 19.5**	**-1.3**
BBRN				SN	**Sn**	**16 34 35.6**	**0.0**
STIA	**Sitia Lasithi**	**1.12**	**241**	P	**Pb**	**16 34 20.9**	**-0.1**
STIA				S	**Sg**	**16 34 36.5**	**-0.2**
MRSB	**Marmaris-Mugla**	**1.21**	**38**	PN	**Pn**	**16 34 21.1**	**-1.0**
BODT	**Bodrum**	**1.30**	**1**	PN	**Pn**	**16 34 22.3**	**-1.1**
BODT	**Bodrum**	**1.30**	**1**	P	**Pn**	**16 34 22.1**	**-1.3**
BDRM	**Kayabasi**	**1.31**	**6**	*i* P	**Pn**	**16 34 23.6**	**+0.1**
BDRM				IAML_P			
comp=Z,8μm,0.3s							
ANAF	**Anafi Island**	**1.36**	**296**	P	**Pn**	**16 34 23.1**	**-1.1**
ANAF				S	**Sn**	**16 34 40.8**	**-0.9**
NPS	**Neapolis**	**1.45**	**250**	P	**Pn**	**16 34 25.0**	**-0.4**
NPS				S	**Sb**	**16 34 44.5**	**-0.1**
NPS	**Neapolis**	**1.45**	**250**	P	**Pn**	**16 34 25.0**	**-0.4**
NPS				S	**Sb**	**16 34 44.5**	**-0.1**
NPS	**Neapolis**	**1.45**	**250**	P	**Pn**	**16 34 25.0**	**-0.4**
NPS				S	**Sb**	**16 34 44.5**	**-0.1**
NPS	**Neapolis**	**1.45**	**250**	P	**Pn**	**16 34 25.4**	**0.0**
NPS				S	**Sn**	**16 34 43.6**	**-0.2**
NPS				AML	AML	16 34 45.8	
comp=N,18308μm,0.4s							
NPS				AML	AML	16 34 45.8	
comp=E,17447μm,0.3s							
DALY	**Dalyan (Mula)**	**1.53**	**46**	PN	**Pn**	**16 34 26.4**	**-0.1**
DALY	**Dalyan (Mula)**	**1.53**	**46**	*i* P	**Pb**	**16 34 27.4**	**-0.6**
TURN	**Turunc**	**1.54**	**43**	PN	Pn	16 34 21.8	-4.8
TURN	**Turunc**	**1.54**	**43**	*i* P	**Pn**	**16 34 22.4**	**-4.2**
AMGA	**Amorgos Island**	**1.55**	**314**	P	**Pn**	**16 34 25.0**	**-1.8**
AMGA				S	**Sn**	**16 34 46.2**	**-0.1**
AMGA	**Amorgos Island**	**1.55**	**314**	P	**Pn**	**16 34 25.1**	**-1.7**
AMGA				S	**Sn**	**16 34 45.8**	**-0.5**
AMGA				AML	AML	16 34 52.5	
comp=E,6353μm,0.7s							
AMGA				AML	AML	16 34 53.5	
comp=N,7993μm,0.5s							
LAST	**Lasithi**	**1.59**	**248**	P	**Pn**	**16 34 27.3**	**-0.1**
LAST				S	**Sn**	**16 34 47.9**	**+0.5**
LAST	**Lasithi**	**1.59**	**248**	P	**Pn**	**16 34 27.3**	**-0.1**
LAST				S	**Sn**	**16 34 47.9**	**+0.5**
LAST	**Lasithi**	**1.59**	**248**	P	**Pn**	**16 34 27.4**	**+0.1**
LAST				S	**Sn**	**16 34 47.1**	**-0.3**
LAST				AML	AML	16 35 01.7	
comp=N,4489μm,0.8s							
LAST				AML	AML	16 35 05.2	
comp=E,5275μm,1.0s							
YER	**Yerkesik**	**1.59**	**30**	PN	**Pn**	**16 34 26.9**	**-0.5**
YER	**Yerkesik**	**1.59**	**30**	P	**Pn**	**16 34 27.1**	**-0.3**
YER				S	**Sn**	**16 34 46.6**	**-0.9**
SANT	**Santorini**	**1.60**	**293**	P	**Pn**	**16 34 26.5**	**-1.0**
SANT	**Santorini**	**1.60**	**293**	P	**Pn**	**16 34 26.5**	**-1.0**
THT1	**Athinios (Pele**	**1.62**	**293**	P	**Pn**	**16 34 26.9**	**-0.9**
THR6	**Thira Island,**	**1.64**	**292**	P	**Pn**	**16 34 27.3**	**-0.7**
THR7	**Fira-Santorini**	**1.64**	**294**	P	**Pn**	**16 34 27.0**	**-1.0**
SAP1	**Santorini-Akro**	**1.64**	**292**	P	**Pn**	**16 34 27.6**	**-0.5**
SAP1	**Santorini-Akro**	**1.64**	**292**	P	**Pn**	**16 34 27.5**	**-0.5**
THR2	**Thira island,**	**1.65**	**295**	P	**Pn**	**16 34 27.2**	**-0.9**
THT2	**Imerovigli**	**1.65**	**295**	P	**Pn**	**16 34 26.8**	**-1.4**
THT2				AML	AML	16 34 56.6	
comp=E,12748μm,0.4s							
THT2				AML	AML	16 34 57.2	
comp=N,16091μm,0.6s							
THR3	**Thira Island,**	**1.66**	**294**	*e*Pn	**Pn**	**16 34 27.2**	**-1.0**
THR3	**Thira Island,**	**1.66**	**294**	P	**Pn**	**16 34 27.2**	**-1.0**
THR3	**Thira Island,**	**1.66**	**294**	P	**Pn**	**16 34 27.4**	**-0.8**
CMBO	**Columbo, Santo**	**1.68**	**296**	P	**Pn**	**16 34 27.7**	**-0.8**
CMBO				S	**Sn**	**16 34 48.9**	**-0.5**
CMBO	**Columbo, Santo**	**1.68**	**296**	P	**Pn**	**16 34 27.6**	**-0.9**
CMBO				AML	AML	16 34 56.5	
comp=N,8191μm,0.4s							
CMBO				AML	AML	16 34 58.3	
comp=E,10237μm,0.5s							
THR5	**Thira Island,**	**1.70**	**293**	P	**Pn**	**16 34 28.0**	**-0.8**
FETY	**Fethiye**	**1.70**	**59**	PN	**Pn**	**16 34 29.1**	**+0.2**
FETY	**Fethiye**	**1.70**	**59**	P	**Pn**	**16 34 29.1**	**+0.2**
FETY	**Fethiye**	**1.70**	**59**	*i* P	**Pb**	**16 34 30.8**	**-0.1**
FETY				IAML_P			
comp=Z,29μm,0.4s							
SAP3	**Santorini-Thir**	**1.71**	**294**	P	**Pn**	**16 34 27.4**	**-1.5**
IACM	**Heraklion**	**1.86**	**257**	P	**Pn**	**16 34 31.4**	**+0.4**
IACM				S	**Sn**	**16 34 54.7**	**+0.8**
KSTL	**Kastelli Herak**	**1.86**	**257**	P	**Pn**	**16 34 28.6**	**-2.4**
KSTL				S	**Sn**	**16 34 51.0**	**-2.9**
IOSP	**Ios island**	**1.88**	**301**	P	**Pn**	**16 34 30.0**	**-1.3**
IOSP	**Ios island**	**1.88**	**301**	P	**Pn**	**16 34 29.9**	**-1.3**
KSL	**Kastellorizon**	**1.91**	**78**	P	**Pn**	**16 34 32.6**	**+0.9**
KSL	**Kastellorizon**	**1.91**	**78**	P	**Pn**	**16 34 32.6**	**+0.9**
KSL	**Kastellorizon**	**1.91**	**78**	P	**Pn**	**16 34 32.0**	**+0.3**
KSL				AML	AML	16 35 15.6	
comp=E,4022μm,1.5s							
KSL				AML	AML	16 35 19.8	
comp=N,1862μm,1.1s							
APE	**Apeiranthos**	**1.92**	**313**	P	**Pn**	**16 34 30.5**	**-1.5**
APE	**Apeiranthos**	**1.92**	**313**	P	**Pn**	**16 34 30.5**	**-1.5**
APE	**Apeiranthos**	**1.92**	**313**	*ce*P	**Pn**	**16 34 30.3**	**-1.7**
APE	**Apeiranthos**	**1.92**	**313**	P	**Pn**	**16 34 30.6**	**-1.5**
GCAM	**G?zelcaml?**	**1.94**	**359**	PN	**Pn**	**16 34 32.1**	**0.0**
GCAM	**G?zelcaml?**	**1.94**	**359**	*i* P	**Pn**	**16 34 32.2**	**0.0**
AKAS	**Kas**	**1.94**	**75**	PN	**Pn**	**16 34 33.3**	**+1.0**
AKAS	**Kas**	**1.94**	**75**	*i* P	**Pb**	**16 34 34.3**	**-0.9**
AKAS				IAML_P			
comp=Z,7μm,0.2s							
AYDN	**Tasoluk**	**1.96**	**14**	*i* P	**Pn**	**16 34 33.3**	**+0.8**
AYDN				IAML_P			
comp=Z,6μm,0.3s							
SMG	**Samos**	**1.98**	**350**	P	**Pn**	**16 34 30.8**	**-1.9**
SMG	**Samos**	**1.98**	**350**	P	**Pn**	**16 34 30.8**	**-1.9**
SMG	**Samos**	**1.98**	**350**	P	**Pn**	**16 34 31.1**	**-1.6**
IDI	**Anoyia**	**2.01**	**257**	Pn	**Pn**	**16 34 32.8**	**-0.3**
comp=Z,34nm,0.3s,baz=59,slow=17,SNR=114							
IDI				Sn	**Sn**	**16 34 57.4**	**-0.2**
comp=Z,112nm,0.3s,baz=301,slow=18,SNR=12							
IDI				LR	LR	16 35 09.3	
comp=Z,99nm,21.7s,baz=42,slow=36							
IDI	**Anoyia**	**2.01**	**257**	P	**Pn**	**16 34 32.4**	**-0.7**
SIVA	**Sivas**	**2.15**	**251**	P	**Pn**	**16 34 35.4**	**+0.4**
SIVA	**Sivas**	**2.15**	**251**	P	**Pn**	**16 34 35.4**	**+0.4**
SIVA	**Sivas**	**2.15**	**251**	P	**Pn**	**16 34 35.9**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.24**	**12**	PN	**Pn**	**16 34 36.4**	**0.0**
DGB	**zmir**	**2.31**	**352**	*i* P	**Pn**	**16 34 36.5**	**-0.7**
DGB				IAML_P			
comp=Z,760nm,0.2s							
ELL	**Elmali**	**2.34**	**64**	PN	**Pn**	**16 34 38.8**	**+1.0**
MHLO	**Agia Marina, M**	**2.51**	**293**	P	**Pn**	**16 34 40.0**	**+0.1**
MHLA	**Plaka, Milos I**	**2.51**	**294**	P	**Pn**	**16 34 40.2**	**+0.2**
VAM	**Vamos**	**2.54**	**263**	P	**Pn**	**16 34 39.7**	**-0.6**
VAM	**Vamos**	**2.54**	**263**	P	**Pn**	**16 34 39.7**	**-0.6**
VAM	**Vamos**	**2.54**	**263**	P	**Pn**	**16 34 39.7**	**-0.6**
VAM	**Vamos**	**2.54**	**263**	P	**Pn**	**16 34 39.7**	**-0.6**
AKUM	**Antalya-Kumluc**	**2.54**	**76**	*i* P	**Pb**	**16 34 43.0**	**-2.3**
SERI	**Serifos**	**2.65**	**303**	P	**Pn**	**16 34 41.3**	**-0.6**
URLA	**Izmir**	**2.65**	**348**	*e*P	**Pn**	**16 34 40.3**	**-1.7**
IMMV	**Iera Moni Meta**	**2.71**	**265**	P	**Pn**	**16 34 42.6**	**-0.1**
IMMV				AML	AML	16 35 35.8	
comp=N,2191μm,0.8s							
IMMV				AML	AML	16 35 45.4	
comp=E,1681μm,0.6s							
KORT	**Korkueli**	**2.77**	**63**	PN	**Pn**	**16 34 44.7**	**+1.0**
KORT	**Korkueli**	**2.77**	**63**	*i* P	**Pn**	**16 34 46.2**	**+2.5**
MANT	**Manisa**	**2.91**	**20**	*i* P	**Pn**	**16 34 47.7**	**+2.0**
MANT				IAML_P			
comp=Z,488nm,0.2s							
KULA	**Kula-Manisa**	**2.96**	**21**	PN	**Pn**	**16 34 46.9**	**+0.6**
AKHS	**Akhisar**	**3.14**	**8**	*i* P	**Pn**	**16 34 50.0**	**+1.3**
KHAL	**Karahalli**	**3.15**	**33**	*i* P	**Pn**	**16 34 50.3**	**+1.4**
ANKY	**Antikythira Is**	**3.24**	**273**	P	**Pn**	**16 34 49.3**	**-0.7**
USAK	**Uak-Merkez**	**3.26**	**25**	*e*P	**Pn**	**16 34 50.0**	**-0.3**
ISP	**Isparta**	**3.32**	**51**	PN	**Pn**	**16 34 52.2**	**+1.0**
KYTH	**Kithira**	**3.47**	**280**	P	**Pn**	**16 34 53.2**	**0.0**
STEP	**BALIKESIR_Sava**	**3.63**	**5**	*e*P	**Pn**	**16 34 57.5**	**+2.1**
VLI	**Veliai**	**3.64**	**287**	P	**Pn**	**16 34 55.5**	**0.0**
KEPZ	**Antalya-Kepez**	**3.67**	**71**	*i* P	**Pn**	**16 34 59.1**	**+3.1**
DID	**Didima**	**3.69**	**299**	P	**Pn**	**16 34 56.2**	**-0.1**
EPID	**Epidavros**	**3.82**	**300**	P	**Pn**	**16 34 57.6**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**4.02**	**352**	*i* P	**Pn**	**16 35 00.1**	**-0.6**
VIL2	**Platees**	**4.04**	**308**	P	**Pn**	**16 34 58.9**	**-2.1**
TVSB	**Tavsanli**	**4.07**	**25**	PN	**Pn**	**16 35 01.6**	**+0.1**
GAZI	**Gazipasa**	**4.11**	**82**	PN	**Pn**	**16 35 03.1**	**+1.1**
GAZI	**Gazipasa**	**4.11**	**82**	*i* P	**Pn**	**16 35 03.6**	**+1.6**
DYR	**Agios Nikonas**	**4.12**	**286**	P	**Pn**	**16 35 01.7**	**-0.5**
ACOR	**Acrocorinthos**	**4.13**	**302**	P	**Pn**	**16 35 03.3**	**+1.1**
MRKA	**Markates**	**4.16**	**316**	P	**Pn**	**16 35 02.4**	**-0.3**
PPCY	**Paphos**	**4.23**	**100**	P	**Pn**	**16 35 04.9**	**+1.3**
baz=293							
ALFC	**Alefka**	**4.38**	**96**	P	**Pn**	**16 35 06.3**	**+0.5**
baz=288							
ALFC				S	**Sn**	**16 35 53.9**	**-2.4**
SLUM	**Salum**	**4.59**	**203**	P	**Pn**	**16 35 10.1**	**+1.5**
baz=206							
SLUM				S	**Sn**	**16 36 00.8**	**-0.6**
baz=206							
KONT	**Konya--Tatoy**	**4.62**	**60**	PN	**Pn**	**16 35 10.8**	**+1.8**
KONT	**Konya--Tatoy**	**4.62**	**60**	*e*P	**Pn**	**16 35 11.5**	**+2.4**
ERMK	**Ermenek**	**4.64**	**77**	*e*P	**Pn**	**16 35 13.0**	**+3.5**
SZAC	**Souni**	**4.69**	**101**	P	**Pn**	**16 35 11.4**	**+1.4**
baz=292							
SZAC				S	**Sn**	**16 36 03.3**	**-0.6**
LADK	**Ladik-KONYA**	**4.74**	**58**	PN	**Pn**	**16 35 12.3**	**+1.5**
KDHN	**Kadinhani**	**4.75**	**53**	*i* P	**Pn**	**16 35 12.2**	**+1.4**
TEKE	**Tekeli-Mersin**	**4.75**	**84**	PN	**Pn**	**16 35 11.9**	**+1.2**
KIZT	**Kizilcal**	**4.81**	**48**	PN	**Pn**	**16 35 13.2**	**+1.5**
BERE	**Bereket-Mersin**	**4.85**	**81**	PN	**Pn**	**16 35 13.7**	**+1.4**
CSS	**Mathiatis**	**5.01**	**97**	P	**Pn**	**16 35 15.2**	**+0.9**
baz=289							
CSS				S	**Sn**	**16 36 10.3**	**-1.3**
CSS	**Mathiatis**	**5.01**	**97**	Pn	**Pn**	**16 35 15.1**	**+0.8**
CSS	**Mathiatis**	**5.01**	**97**	P	**Pn**	**16 35 15.2**	**+0.9**
comp=Z,13nm,1.0s,comp=Z,0.1nm							
GULN	**MERSIN_Gulnar**	**5.10**	**83**	*e*P	**Pn**	**16 35 17.1**	**+1.6**
BRTR	**Keskin Array B**	**6.41**	**50**	Pn	**Pn**	**16 35 35.2**	**+1.5**
comp=Z,0.4nm,0.3s,baz=243,slow=14,SNR=11							
BRTR				Sn	**Sn**	**16 36 45.7**	**-0.6**
baz=219,slow=18,SNR=2.1							
BRTR				LR	LR	16 38 49.8	
comp=Z,108nm,20.1s,baz=234,slow=46							
SWA2	**6.68**	**194**	P	**Pn**	**16 35 39.2**	**+1.9**	
baz=196							
KOT	**Kottamia**	**6.96**	**145**	P	**Pn**	**16 35 41.1**	**-0.1**
baz=146							
HHAG	**Hagoal**	**7.07**	**144**	P	**Pn**	**16 35 42.7**	**+0.1**
baz=144							
HHAG				S	**Sn**	**16 36 54.9**	**-7.5**
baz=144							
GLL	**Jalalah**	**7.21**	**148**	P	**Pn**	**16 35 45.0**	**+0.4**
baz=148							
RSH	**7.21**	**130**	P	**Pn**	**16 35 44.9**	**+0.4**	
baz=130							
MMA0	**Mount Meron ar**	**7.25**	**110**	Pn	**Pn**	**16 35 45.1**	**-0.1**
MMAI	**Mount Meron Ar**	**7.25**	**110**	Pn	**Pn**	**16 35 44.6**	**-0.5**
comp=Z,2.7nm,0.3s,baz=306,slow=12,SNR=13							
MMAI				Sn	**Sn**	**16 37 06.2**	**-0.8**
comp=Z,5.6nm,0.3s,baz=307,slow=25,SNR=9.5							
GEM	**Giv'at Ha'Em**	**7.37**	**108**	Pn	**Pn**	**16 35 46.8**	**0.0**
KSDI	**Kefar Szold**	**7.38**	**108**	Pn	**Pn**	**16 35 46.9**	**0.0**
NATI	**Neve Ativ**	**7.41**	**107**	Pn	**Pn**	**16 35 47.4**	**+0.1**
NATI				Sn	**Sn**	**16 37 07.5**	**-3.3**
SUZ	**Suez**	**7.53**	**

comp=Z,50nm,0.6s
GEYT Alibeck 24.72 76 P **P 16 39 20.9 +0.6**
comp=Z,0.9nm,0.5s,baz=284,slow=7.3,SNR=2.7
ESDC Sonseca Array 24.96 288 P **P 16 39 21.2 -1.2**
comp=Z,2.0nm,0.6s,baz=80,slow=10.0,SNR=11
FINES FINESS Array B 25.72 359 P **P 16 39 26.9 -2.1**
comp=Z,3.8nm,0.9s,baz=242,slow=4.1,SNR=6.9
FINES PcP **PcP 16 42 58.1 -0.4**
comp=Z,1.0nm,0.7s,baz=111,slow=2.7,SNR=4.1
HFS Hagfors 25.93 344 P **P 16 39 31.1 +0.2**
comp=Z,1.8nm,0.8s,baz=137,slow=7.2,SNR=3.6
HFS LR LR 16 50 50.0
comp=Z,28nm,18.3s,baz=124,slow=39
MDT Midelt 26.45 273 P **P 16 39 36.9 +0.8**
comp=Z,2.2nm,1.1s,baz=84,slow=10,SNR=2.6
MDT LR LR 16 52 07.2
comp=Z,37nm,19.2s,baz=144,slow=41
AKTO Aktyubinsk 26.58 47 P **P 16 39 36.9 0.0**
comp=Z,1.5nm,0.5s,baz=251,slow=9.2,SNR=5.6
TORD Torodi Ar. Bea 32.21 232 P **P 16 40 27.5 +0.3**
comp=Z,4.9nm,0.3s,baz=36,slow=9.3,SNR=16
TORD LR LR 16 56 18.0
comp=Z,69nm,18.4s,baz=350,slow=42
ARCES ARCESS Array B 33.85 359 P **P 16 40 39.2 -1.8**
comp=Z,3.8nm,0.9s,baz=183,slow=8.7,SNR=5.9
ARCES PcP **PcP 16 43 18.4 -0.9**
comp=Z,2.4nm,0.9s,baz=163,slow=4.5,SNR=3.7
KSH Kashi 38.37 69 *e*P **P 16 41 20.8 +0.6**
KURK Kurchatov 39.46 51↓*e*P **P 16 41 31.7 +2.7**
KURK pmax pmax
comp=Z,3.0nm,0.7s
DBIC Dimbokro 41.30 233 P **P 16 41 44.5 -0.1**
comp=Z,1.5nm,0.5s,baz=21,slow=8.6,SNR=2.7
MKAR Makanchi Array 42.00 57 P **P 16 41 50.4 +0.3**
comp=Z,0.7nm,0.5s,baz=269,slow=8.5,SNR=11
MKAR Makanchi Array 42.00 57 *e*P **P 16 41 53.2 +3.1**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
SPITS Spitsbergen Ar 42.78 357 P **P 16 41 55.6 -0.4**
comp=Z,0.9nm,0.5s,baz=150,slow=15,SNR=3.6
ZALV Zalesovo Beam 43.34 47 P **P 16 42 00.6 -0.2**
comp=Z,1.1nm,0.5s,baz=271,slow=5.1,SNR=4.0
ZALV LR LR 17 02 37.8
comp=Z,21nm,18.2s,baz=72,slow=40
ZALV Zalesovo Beam 43.34 47 *e*P **P 16 42 02.1 +1.3**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
SONM Songino Array 57.76 51 P **P 16 43 50.3 +0.3**
comp=Z,0.2nm,0.3s,baz=299,slow=7.9,SNR=3.0
ULN Ulaanbaatar 58.17 51↓*e*P **P 16 43 52.8 -0.1**
ULN pmax pmax
comp=Z,5.0nm,2.6s
TIXI Tiksi 59.99 21↓*e*P **P 16 44 08.1 +3.2**
TIXI pmax pmax
comp=Z,7.0nm,3.0s
KSAR Wonju Array Be 76.52 54 P **P 16 45 49.0 0.0**
KSAR Wonju Array Be 76.52 54 P **P 16 45 49.1 0.0**
KSRS Korea Array 76.54 54 P **P 16 45 49.0 -0.1**
comp=Z,1.0nm,0.7s,baz=307,slow=5.5,SNR=6.0
KSRS Korea Array 76.54 54 *e*P **P 16 45 49.4 +0.3**
KSRS pmax pmax
comp=Z,1.0nm,0.7s
ILAR Eielson Array 79.70 357 P **P 16 46 05.0 -1.2**
comp=Z,0.3nm,0.6s,baz=336,slow=3.3,SNR=3.4
ILAR Eielson Array 79.70 357 P **Pdif 16 46 05.0 -1.2**
NVAR Mina Array Bea 99.61 333 P **Pdif 16 47 42.5 -0.2**
comp=Z,0.1nm,0.3s,baz=32,slow=5.3,SNR=2.8

NIED ***26*** *17:12:00, 39.°80N×143.°80E, h11km, Mw4.8 Best double couple: M0 1.74000×10^16 NP1:ϕs 166.00000°, δ39.00000°, λ45.00000°. NP2:ϕs 38.00000°, δ64.00000°, λ120.00000°.*
ISCJB ***26*** *17:12:05.5±0.8, 39.°77N±0.°02×143.°64E±0.°03, h2km±4km, mb4.9/151, MS4.5/49, Error ellipse: s-maj=4.5km s-min=2.9km az=138.9*
IDC ***26*** *17:12:06.4±0.5, 39.°74N×143.°65E, h0km, mb4.5/24, mb1 4.6/31, mb1mx4.5/38, mbtmp4.5/31, ML3.8/6, MS4.0/18, Ms1 4.1/18, ms1mx3.8/32, Error ellipse: s-maj=14.9km s-min=11.5km az=117.0*
BJI ***26*** *17:12:06.5±0.0, 39.°69N×143.°49E, h9km, mb5.0/62, mB5.0/47, Ms4.7/58, Ms7 4.5/55*
JMA ***26*** *17:12:07.9±0.2, 39.°81N×143.°72E, h27km, M4.8*
JMA Felt I J1.
NEIC ***26*** *17:12:09.6±1.2, 39.°74N×143.°56E, h18km±2km, mb4.9/91, Error ellipse: s-maj=17.3km s-min=11.3km az=119.0*
NEIC Recorded [1 JMA] in Iwate.
MOS ***26*** *17:12:10.7±0.9, 39.°88N×143.°54E, h33km, mb5.1/58, MS4.7/13, Error ellipse: s-maj=6.4km s-min=4.1km az=105.0*
GCMT ***26*** *17:12:11.6±0.4, 39.°82N±0.°04×143.°92E±0.°04, h18km±1km, MW4.9/64, Moment Tensor Solution. s14,c14; s64,c86; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 1.47±.15; Mθθ -0.05±.08; Mφφ -1.41±.10; Mrθ 0.47±.21; Mθφ -0.39±.05; Mφr 1.85±.26; Best double couple: M0 2.42300×10^16 NP1:ϕs 14.00000°, δ71.00000°, λ90.00000°. NP2: ϕs 196.00000°, δ19.00000°, λ91.00000°. Principal axes: T 2.4000, Plg64.0000°, Azm284.0000°; N 0.0510, Plg0.0000°, Azm15.0000°; P -2.4450, Plg26.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 17:12:10.0±0.7, 39.°76N±0.°04×143.°70E±0.°04, h25km±4km**, n386,** σ1s**59**/421**, mb4.9**/159**, MS4.6**/50**, 34C-15D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.43**	**278**	P	**Pn**	**17 12 32.6**	**-1.7**
MIYJ	**Miyakonagasawa**	**1.46**	**264**	P	**Pn**	**17 12 33.6**	**-1.2**
MIYJ				*e*S	**Sn**	**17 12 51.5**	**-1.7**
JKEN	**Kujiedanarisaw**	**1.59**	**287**	P	**Pn**	**17 12 34.7**	**-1.9**
JANG	**Nango**	**1.79**	**291**	P	**Pn**	**17 12 37.7**	**-1.6**
JOM	**Ohasama**	**1.88**	**262**	P	**Pn**	**17 12 40.0**	**-0.6**
JOM				*e*S	**Sn**	**17 13 03.7**	**+0.2**
JMK	**Ichinoseki**	**2.08**	**248**	P	**Pn**	**17 12 42.3**	**-1.1**
ERM	**Erimo**	**2.29**	**350**	*e*Pn	**Pn**	**17 12 45.1**	**-1.2**
ERM	**Erimo**	**2.29**	**350**↓*e*P		**Pn**	**17 12 44.6**	**-1.7**
ERM				pmax	pmax		
comp=Z,329nm,1.3s							
JOT	**Ohata**	**2.59**	**310**	P	**Pn**	**17 12 49.2**	**-1.2**
JNBK	**Urakawa-nobuka**	**2.62**	**344**	P	**Pn**	**17 12 49.9**	**-0.9**
JYK	**Kaneyama**	**2.72**	**253**	P	**Pn**	**17 12 51.8**	**-0.4**
JCH	**Churui**	**2.87**	**355**	P	**Pn**	**17 12 53.1**	**-1.0**
JKB	**Kayabe**	**2.94**	**317**	P	**Pn**	**17 12 54.7**	**-0.4**
JKB				*e*S	**Sn**	**17 13 29.3**	**-0.3**
JAK	**Akkeshi**	**3.32**	**13**	P	**Pn**	**17 12 58.9**	**-1.5**
JAK				*e*S	**Sn**	**17 13 35.8**	**-3.2**
JFT	**Otama**	**3.45**	**231**	P	**Pn**	**17 13 01.3**	**-0.9**
JFT				*e*S	**Sn**	**17 13 41.7**	**-0.7**
JFR	**Furan**	**3.50**	**347**	P	**Pn**	**17 13 03.2**	**+0.3**
JEW	**Eniwo**	**3.52**	**332**	P	**Pn**	**17 13 03.1**	**0.0**
JEW				*e*S	**Sn**	**17 13 43.7**	**-0.2**
JAR	**Ashorobuto**	**3.54**	**1**	P	**Pn**	**17 13 01.6**	**-1.8**
JAR				*e*S	**Sn**	**17 13 41.7**	**-2.7**
JAW	**Awa shima**	**3.70**	**251**	P	**Pn**	**17 13 05.6**	**0.0**
GLVR	**Golovnino**	**4.21**	**18**	*e*P	**Pn**	**17 13 11.7**	**-0.8**
GLVR				*e*S	**Sn**	**17 13 57.3**	**-3.5**
GLVR				pmax	pmax		
comp=N,141nm,0.5s							
GLVR				pmax	pmax		
comp=E,122nm,0.5s							
GLVR				pmax	pmax		
comp=Z,474nm,0.5s							
GLVR				smax	smax		
comp=N,1μm,0.2s							
GLVR				smax	smax		
comp=E,2μm,0.4s							
GLVR				MLR	MLR		
comp=Z,4μm,10.0s							
ASAJ	**Asahikawa**	**4.43**	**350**	Pn	**Pn**	**17 13 15.4**	**-0.3**
comp=Z,4.7nm,0.3s,baz=203,slow=16,SNR=41							
ASAJ				Sn	**Sn**	**17 14 05.9**	**-0.6**
comp=Z,10nm,0.3s,baz=168,slow=32,SNR=6.4							
GRPR	**Tuman**	**4.51**	**19**	*e*P	**Pn**	**17 13 15.3**	**-1.4**
GRPR				*e*S	**Sn**	**17 14 04.3**	**-3.9**
GRPR				pmax	pmax		
comp=Z,188nm,0.4s							
GRPR				pmax	pmax		
comp=N,37nm,0.2s							
GRPR				pmax	pmax		
comp=E,58nm,0.3s							
GRPR				smax	smax		
comp=N,2μm,0.4s							
GRPR				smax	smax		
comp=E,2μm,0.4s							
GRPR				MLR	MLR		
comp=N,263nm,5.0s							
GRPR				MLR	MLR		
comp=Z,371nm,5.0s							
LAGR Lagunnoye 4.57 19 *e*P **Pn 17 13 16.5 -1.0**							
LAGR				*e*S	**Sn**	**17 14 06.0**	**-3.8**
LAGR				pmax	pmax		
comp=N,115nm,0.5s							
LAGR				pmax	pmax		
comp=Z,355nm,0.5s							
LAGR				pmax	pmax		
comp=E,127nm,0.1s							
LAGR				smax	smax		
comp=E,2μm,0.6s							
YUK Yuzh-Kuril'sk 4.57 20*de*P **Pn 17 13 15.7 -1.8**							
MAJO Matsushiro 5.39 235 *e*Pn **Pn 17 13 28.7 -0.1**							
MAJO				*e*Sn	**Sn**	**17 14 35.3**	**+5.2**
MAJO Matsushiro 5.39 235*c i*P **Pn 17 13 28.9 +0.1**							
MAT Matsushiro 5.39 235 P **Pn 17 13 28.9 +0.1**							
MAT				S	**Sn**	**17 14 30.8**	**+0.7**
MJAR Matsushiro Arr 5.39 235 Pn **Pn 17 13 28.9 +0.1**							
comp=E,1.2nm,0.3s,baz=42,slow=12,SNR=223							
MJAR				Sn	**Sn**	**17 14 35.3**	**+5.2**
baz=112,slow=28,SNR=2.0							
MJAR				LR	LR	17 15 53.6	
comp=E,1μm,18.5s,baz=55,slow=43							
MJB9 Matsu-Tunnel 5.39 235 *e*Pn **Pn 17 13 29.3 +0.4**							
KUR Kuril'sk 6.28 28 *e*P **Pn 17 13 40.4 -0.6**							
KUR				*e*S	**Sn**	**17 14 48.9**	**-3.0**
KUR				pmax	pmax		
comp=Z,129nm,0.6s							
KUR				pmax	pmax		
comp=N,34nm,0.5s							
KUR				pmax	pmax		
comp=E,38nm,0.6s							
KUR				pmax	pmax		
comp=Z,63nm,5.1s							
KUR				smax	smax		
comp=N,571nm,0.6s							
KUR				smax	smax		
comp=E,449nm,0.6s							
KUR				MLR	MLR		
comp=Z,296nm,9.0s							
KUR				MLR	MLR		
comp=E,2μm,12.0s							
KUR				MLR	MLR		
comp=N,331nm,8.0s							
INU Inuyama 6.89 232 *e*Pn **Pn 17 13 48.9 -0.6**							
YSS Yuzh-Sakhalins 7.23 355 *e*Pn **Pn 17 13 53.7 -0.3**							
YSS Yuzh-Sakhalins 7.23 355↓*i*P **Pn 17 13 54.6 +0.6**							
YSS				*e*S	**Sn**	**17 15 13.2**	**-2.0**
YSS				pmax	pmax		
comp=Z,30nm,1.2s							
YSS				smax	smax		
comp=E,30nm,0.7s							
YSS				MLR	MLR		
comp=Z,1μm,13.0s							
YSS				MLR	MLR		
comp=N,2μm,14.0s							
YSS				MLR	MLR		
comp=E,2μm,17.2s							
JHJ Hachijo jima 2 7.34 207 Pn **Pn 17 13 54.0 -1.6**							
comp=E,20nm,0.3s,baz=304,slow=20,SNR=10							
JHJ				Sn	**Sn**	**17 15 11.2**	**-6.9**
comp=E,34nm,0.3s,baz=70,slow=23,SNR=8.5							
TEY Ternei 7.44 317↑*e*P **Pn 17 13 58.1 +1.1**							
TEY				*e*S	**Sn**	**17 15 19.2**	**-1.3**
TEY				pmax	pmax		
comp=N,10.0nm,0.7s							
TEY				pmax	pmax		
comp=E,30nm,0.7s							
TEY				pmax	pmax		
comp=Z,30nm,0.7s							
TEY				smax	smax		
comp=N,20nm,0.9s							
TEY				smax	smax		
comp=E,20nm,1.2s							
TEY				MLR	MLR		
comp=E,1μm,13.0s							
TEY				MLR	MLR		
comp=N,2μm,14.0s							
TEY				MLR	MLR		
comp=Z,2μm,11.0s							
VLA Vladivostok 9.49 295↓*e*P **Pn 17 14 27.4 +2.4**							
VLA				pmax	pmax		
comp=Z,38nm,1.1s							
USA0B Ussuriysk Arra 9.78 301 *e*Pn **Pn 17 14 30.4 +1.3**							
USRK Ussuriysk Ar. 9.78 301 Pn **Pn 17 14 30.4 +1.3**							
comp=Z,1.7nm,0.3s,baz=107,slow=10,SNR=63							
TYV Tymovskoe 11.13 357 *e*P Pn 17 14 56.5 +9.0							
TYV				pmax	pmax		
comp=Z,11nm,0.9s							
TYV				MLR	MLR		
comp=Z,2μm,17.0s							
MDJ Mudanjiang 11.54 299 P **Pn 17 14 55.3 +2.3**							
MDJ				pP		17 15 00.3	
MDJ				sP		17 15 03.0	
MDJ				S	**Sn**	**17 17 08.8**	**+7.8**
MDJ				ScS	**ScS**	**17 27 54.3**	**+4.2**
MDJ				pmax	pmax		
comp=Z,27nm,1.0s							
MDJ				pmax	pmax		
comp=Z,420nm,5.8s							
MDJ				LR	LR		
comp=Z,1μm,12.5s							
MDJ				LR	LR		
comp=Z,2μm,12.5s							
MDJ				LR	LR		
comp=Z,2μm,11.9s							
MDJ Mudanjiang 11.54 299 *e*Pn **Pn 17 14 51.2 -1.8**							
GRNR Gornyy 12.14 338 *e*P **Pn 17 15 01.0 -0.3**							
GRNR				pmax	pmax		
comp=Z,42nm,1.0s							
JNU Nakatsue 12.26 241 Pn **Pn 17 15 01.4 -1.6**							
comp=Z,0.6nm,0.3s,baz=58,slow=11,SNR=5.4							
JNU Nakatsue 12.26 241 *e*Pn **Pn 17 15 01.9 -1.1**							
KSRS Korea Array 12.56 264 Pn **Pn 17 15 07.3 +0.2**							
comp=Z,0.4nm,0.3s,baz=88,slow=13,SNR=36							
KSRS				LR	LR	17 19 28.9	
comp=Z,820nm,18.6s,baz=66,slow=35							
KS15 Wonju Array Si 12.59 264 *e*Pn **Pn 17 15 05.1 -2.4**							
KLR Kul'dur 12.73 322 Pn **Pn 17 15 09.3 0.0**							
comp=Z,0.3nm,0.3s,baz=131,slow=12,SNR=28							
KLR				LR	LR	17 20 03.8	
comp=Z,237nm,20.7s,baz=135,slow=38							
TJN Taejon 13.31 260↓*e*P **Pn 17 15 17.7 +0.4**							
NKL Nikolayevsk 13.56 352 *e*P **Pn 17 15 17.9 -2.7**							
NKL				*e*S	**Sn**	**17 17 45.6**	**-4.7**
NKL				pmax	pmax		
comp=Z,1.0nm,0.9s							
NKL				pmax	pmax		
comp=N,4.0nm,1.0s							
NKL				pmax	pmax		
comp=E,8.0nm,1.0s							
NKL				MLR	MLR		
comp=E,694nm,15.0s							
NKL				MLR	MLR		
comp=N,882nm,15.0s							
NKL				MLR	MLR		
comp=Z,1μm,15.0s							
OKH Okha 13.81 358*de*P Pn 17 15 11.8 -12							
OKH				pmax	pmax		
comp=Z,100nm,18.2s							
OKH				MLR	MLR		
comp=Z,1μm,19.0s							
CN2 Changchun 14.20 292 *e*P **Pn 17 15 27.8 -1.7**							
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s							
CN2				pmax	pmax		
comp=Z,300nm,9.0s							
CN2				LR	LR		
comp=Z,1μm,12.0s							
CN2				LR	LR		
comp=Z,900nm,12.0s							
CN2				LR	LR		
comp=Z,1μm,13.0s							
PETK Petropavlovsk- 16.43 31 Pn **Pn 17 15 57.9 -0.9**							
comp=Z,0.1nm,0.3s,baz=195,slow=10,SNR=3.7							
PEA1 Petropavlovsk- 16.44 31 *e*Pn **Pn 17 15 57.9 -0.9**							
PET Petropavlovsk 16.76 33 *e*P **P 17 16 06.1 +1.2**							
PET				*e*S	**Sn**	**17 19 09.2**	**+1.1**
PET				pmax	pmax		
comp=Z,30nm,1.1s							
PET				MLR	MLR		
comp=Z,600nm,17.0s							
PET				MLR	MLR		
comp=Z,500nm,20.0s							
DL2 Dalian 17.10 274 P **P 17 16 08.3 -0.5**							
DL2				S	**Sn**	**17 19 18.5**	**+2.0**
DL2				pmax	pmax		
comp=Z,75nm,1.1s							
DL2				pmax	pmax		
comp=Z,190nm,6.3s							
DL2				LR	LR		
comp=Z,810nm,13.1s							
DL2				LR	LR		
comp=Z,450nm,13.1s							
DL2				LR	LR		
comp=Z,740nm,17.7s							
ZEA Zeya 17.90 327 *e*P **Pn 17 16 13.7 -3.4**							
ZEA				pmax	pmax		
comp=N,47nm,1.0s							
ZEA				pmax	pmax		
comp=E,41nm,1.0s							
ZEA				pmax	pmax		
comp=Z,58nm,1.0s							
ZEA				MLR	MLR		
comp=Z,2μm,15.0s							
ZEA				MLR	MLR		
comp=E,2μm,16.0s							
ZEA				MLR	MLR		
comp=N,600nm,11.0s							
HIA Hailar 19.48 307 *e*P **P 17 16 32.5 -2.5**							
comp=N,26nm,0.8s							
HIA Hailar 19.48 307 *e*P **P 17 16 32.5 -2.5**							
HIA				pmax	pmax		
comp=Z,26nm,0.8s							
MA2 Magadan 20.34 10 P **P 17 16 43.7 -0.5**							
comp=Z,42nm,0.8s,baz=191,slow=8.7,SNR=29							
MA2 Magadan 20.34 10 *e*P **P 17 16 44.9 +0.8**							
comp=Z,45nm,0.9s							
MA2 Magadan 20.34 10*c i*P **P 17 16 45.0 +0.8**							
MA2				pmax	pmax		
comp=Z,36nm,0.7s							
BJT Baijiatuau 21.10 280 *e*P **P 17 16 50.2 -2.3**							
comp=Z,22nm,1.0s							
BJT Baijiatuau 21.10 280 *e*P **P 17 16 50.3 -2.3**							
BJT				pmax	pmax		
comp=Z,22nm,1.0s							
NJ2 Nanjing 21.50 257 *e*P **P 17 16 54.8 -2.1**							
NJ2				S	**S**	**17 20 50.5**	**-3.6**
NJ2				pmax	pmax		
comp=Z,24nm,0.7s							
NJ2				LR	LR		
comp=Z,1μm,10.4s							
NJ2				LR	LR		
comp=Z,820nm,11.4s							
NJ2				LR	LR		
comp=Z,850nm,8.5s							
SEY Seymchan 23.79 10 P **P 17 17 20.4 0.0**							
comp=Z,43nm,0.9s,baz=192,slow=6.6,SNR=53							
SEY Seymchan 23.79 10↑↑*e*P **P 17 17 19.9 -0.5**							
YAK Yakutsk 23.89 344 *e*P **P 17 17 19.3 -2.1**							
comp=Z,62nm,0.9s							
YAK Yakutsk 23.89 344 *e*P **P 17 17 19.6 -1.7**							
YAK				*e**PP	**pP**	**17 17 27.9**	**0.0**
YAK				*e*PPP	PPP	17 17 56.9	
YAK				*e*		17 21 02.2	
YAK				*e*S	**S**	**17 21 33.8**	**-2.0**
YAK				*e**SS	**sS**	**17 21 49.9**	**+2.9**
YAK				*e*SS	**SnSn**	**17 22 14.5**	**-1.4**
YAK				*e*SSS	SSS	17 22 31.3	
CIT Chita 24.11 311 *e*P **P 17 17 22.2 -1.5**							
CIT				*e*		17 17 30.9	
CIT				*e*		17 17 39.0	
CIT				pmax	pmax		
comp=Z,141nm,1.0s							
TIY Taiyuan 24.41 275 *e*P **P 17 17 28.8 +2.2**							
TIY				S	**S**	**17 21 37.8**	**-7.2**
TIY				pmax	pmax		
comp=Z,200nm,6.8s							
TIY				LR	LR		
comp=Z,620nm,14.0s							
TIY				LR	LR		
comp=Z,210nm,8.7s							
TIY				LR	LR		
comp=Z,630nm,17.2s							
SSLB Suanglung 24.95 237 *e*P **P 17 17 29.4 -2.1**							
comp=Z,30nm,1.0s							
YULB Yu-li 25.00 236 *e*P **P 17 17 28.8 -3.1**							
comp=Z,31nm,1.2s							
TPUB Ta-pu 25.50 237 *e*P **P 17 17 35.0 -1.5**							
comp=Z,57nm,1.2s							
TWG Pinlang 25.56 235 *e*P **P 17 17 36.5 -0.4**							
comp=Z,119nm,0.9s							
WHN Wuhan 25.61 258 ↑↑P **P 17 17 37.0 -0.3**							
WHN				S	**S**	**17 21 57.8**	**-6.1**
WHN				pmax	pmax		
comp=Z,190nm,0.9s							
WHN				pmax	pmax		
comp=Z,520nm,2.6s							
WHN				LR	LR		
comp=Z,6μm,19.3s							
WHN				LR	LR		
comp=Z,2μm,13.4s							
WHN				LR	LR		
comp=Z,2μm,16.4s							
BTO Baotou 25.66 283 *e*P **P 17 17 37.0 -0.9**							
BOD Bodaibo 26.30 323 *e*P **P 17 17 43.0 -0.4**							
BOD				pmax	pmax		
comp=Z,36nm,1.0s							
ULN Ulaanbaatar 27.45 299 *e*P **P 17 17 53.1 -1.0**							
comp=Z,48nm,1.3s							
ULN Ulaanbaatar 27.45 299*c i*P **P 17 17 54.6 +0.6**							
ULN				pmax	pmax		
comp=Z,43nm,1.3s							
SONA0 Songino Array 27.89 299 *e*P **P 17 17 58.7 +0.7**							
SONM Songino Array 27.89 299 P **P 17 17 58.7 +0.7**							
comp=Z,12nm,1.0s,baz=98,slow=8.4,SNR=45							
SONM				LR	LR	17 29 00.9	
comp=Z,142nm,19.4s,baz=86,slow=36							
H11N2 WAKE ISLAND Hy 28.21 128 T T 17 47 32.4							
baz=322							
H11N1 WAKE ISLAND Hy 28.22 128 T T 17 47 28.7							
baz=322							
H11N3 WAKE ISLAND Hy 28.23 128 T T 17 47 29.3							
baz=322							
XAN Xi'an 28.27 269 P **P 17 18 00.5 -0.9**							
XAN				pP	sP	17 18 10.0	-0.9
XAN				pmax	pmax		
comp=Z,25nm,0.9s							
XAN				pmax	pmax		
comp=Z,120nm,3.6s							
XAN				LR	LR		
comp=Z,600nm,15.2s							
XAN				LR	LR		
comp=Z,810nm,14.2s							
XAN				LR	LR		
comp=Z,720nm,14.7s							
XAN Xi'an 28.27 269 *e*P **P 17 18 00.3 -1.0**							
comp=Z,20nm,0.8s							
XAN Xi'an 28.27 269 *e*P **P 17 18 00.4 -0.9**							
XAN				pmax	pmax		
comp=Z,20nm,0.8s							
H11S1 WAKE ISLAND Hy 29.03 130 T T 17 48 33.4							
baz=317							
H11S3 WAKE ISLAND Hy 29.04 130 T T 17 48 31.4							
baz=317							
H11S2 WAKE ISLAND Hy 29.05 130 T T 17 48 28.9							
baz=317							
ENH Enshi 29.43 262 *e*P **P 17 18 11.4 -0.2**							
comp=Z,58nm,0.9s							
TLY Talaya 30.02 307 *e*P **P 17 18 17.2 +0.6**							
comp=Z,9.3nm,0.9s							
TLY Talaya 30.02 307 *e*P **P 17 18 17.3 +0.6**							
TLY				*e*		17 19 27.1	
TLY				*e*SS	SS	17 25 01.7	-19
TLY				pmax	pmax		
comp=Z,35nm,1.2s							
TLY				MLR	MLR		
comp=Z,2μm,14.0s							
ZAK Zakamensk 30.11 304 *e*P **P 17 18 17.0 -0.6**							
ZAK				pmax	pmax		
comp=Z,14nm,1.3s							
BILL Bilibino 30.91 16 *e*P **P 17 18 24.3 0.0**							
comp=Z,7.1nm,0.9s							
BILL Bilibino 30.91 16 *e*P **P 17 18 23.7 -0.6**							
BILL				*e*PPP	PPP	17 19 29.9	

BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,308nm,16.0s
LZH Lanzhou 31.48 276 *e*P **P 17 18 28.8 -1.0**
LZH pP pP 17 18 34.5 -2.1
LZH PP **PnPn 17 19 31.0 -2.0**
LZH *e*S **S 17 23 38.5 +2.0**
LZH sS sS 17 23 50.0 +2.3
LZH pmax pmax
comp=Z,47nm,1.2s
LZH pmax pmax
comp=Z,190nm,4.8s
LZH LR LR
comp=Z,610nm,13.0s
LZH LR LR
comp=Z,1μm,13.2s
LZH LR LR
comp=Z,1μm,16.3s
MOY Mondy 31.66 306 *e*P **P 17 18 31.8 +0.5**
MOY pmax pmax
comp=Z,21nm,2.0s
TIXI Tiksi 32.84 351 P **P 17 18 40.5 -0.6**
comp=Z,1.3nm,0.6s,baz=130,slow=11,SNR=3.9
TIXI Tiksi 32.84 351 *e*P **P 17 18 40.5 -0.6**
comp=Z,3.0nm,0.8s
TIXI Tiksi 32.84 351⇓*e*P **P 17 18 41.1 -0.1**
TIXI pmax pmax
comp=Z,5.0nm,1.7s
GYA Guiyang 33.50 258⇑*i*P **P 17 18 47.0 -0.6**
GYA pP pP 17 18 55.0 +0.7
GYA PP **PnPn 17 19 58.3 -0.7**
GYA S **S 17 24 07.3 -0.8**
GYA sS sS 17 24 22.5 +3.3
GYA SS **SnSn 17 26 05.0 -6.0**
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,120nm,5.3s
GYA LR LR
comp=Z,590nm,16.2s
GYA LR LR
comp=Z,300nm,14.6s
GYA LR LR
comp=Z,780nm,15.8s
CD2 Chengdu 33.53 267 P **P 17 18 47.3 -0.5**
CD2 S **S 17 24 09.3 +0.9**
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 pmax pmax
comp=Z,130nm,5.1s
CD2 LR LR
comp=Z,1μm,12.7s
CD2 LR LR
comp=Z,980nm,12.2s
CD2 LR LR
comp=Z,1μm,13.1s
GTA Gaotai 33.57 284 ⇑P **P 17 18 48.8 +0.7**
GTA pP pP 17 18 53.5 -1.4
GTA sP sP 17 18 55.8 -1.9
GTA PcP **PcP 17 21 29.8 +1.6**
GTA S **S 17 24 07.5 -1.5**
GTA pmax pmax
comp=Z,27nm,1.2s
GTA pmax pmax
comp=Z,130nm,8.1s
GTA LR LR
comp=Z,350nm,14.3s
GTA LR LR
comp=Z,690nm,15.2s
GTA LR LR
comp=Z,900nm,15.9s
KMI Kunming 37.19 259 P **P 17 19 19.8 +0.3**
KMI PP **PnPn 17 20 45.0 +0.1**
KMI S **S 17 24 58.8 -6.2**
KMI pmax pmax
comp=Z,23nm,1.1s
KMI pmax pmax
comp=Z,110nm,6.4s
KMI LR LR
comp=Z,540nm,13.7s
KMI LR LR
comp=Z,440nm,13.8s
KMI LR LR
comp=Z,580nm,15.5s
KMI Kunming 37.19 259 *e*P **P 17 19 18.7 -0.8**
comp=Z,40nm,1.3s
KMI Kunming 37.19 259 *e*P **P 17 19 18.7 -0.8**
KMI pmax pmax
comp=Z,40nm,1.3s
SLVN Son La 38.50 253 *e*P **P 17 19 30.5 +0.1**
comp=Z,14nm,1.1s
DGZ Jazzator, Alta 40.33 303*c i*P **P 17 19 46.7 +1.3**
DGZ pmax pmax
comp=Z,14nm,1.0s
NONG Nongkai 41.10 250 P **P 17 19 52.8 +0.8**
comp=Z,0.5nm,0.9s
SKNT Sakolnakorn 41.21 248 P **P 17 19 53.6 +0.7**
comp=Z,20nm,1.2s
WMQ Urumqi 41.28 295 P **P 17 19 54.3 +1.0**
WMQ pP pP 17 19 58.0 -2.2
WMQ sP sP 17 20 01.5 -1.4
WMQ pmax pmax
comp=Z,23nm,1.3s
WMQ pmax pmax
comp=Z,36nm,3.8s
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,2μm,29.2s
WMQ LR LR
comp=Z,200nm,14.9s
WMQ Urumqi 41.28 295 *e*P **P 17 19 52.6 -0.7**
comp=Z,52nm,1.2s
WMQ Urumqi 41.28 295 *e*P **P 17 19 52.6 -0.7**
WMQ pmax pmax
comp=Z,52nm,1.2s
ZAA0 Zalesovo Array 41.47 310 *e*P **P 17 19 53.4 -1.2**
comp=Z,9.3nm,0.8s
ZAA1 Zalesovo Array 41.47 310 *e*P **P 17 19 52.8 -1.9**
ZAA1 *e*PcP **PcP 17 21 52.5 +0.6**
ZALV Zalesovo Beam 41.47 310 P **P 17 19 52.8 -1.9**
comp=Z,7.3nm,0.5s,baz=99,slow=7.9,SNR=25
ZALV PcP **PcP 17 21 52.5 +0.6**
comp=Z,5.1nm,0.8s,baz=63,slow=3.7,SNR=3.7
ZALV LR LR 17 37 57.0
comp=Z,236nm,19.6s,baz=70,slow=37
NVS Novosibirsk 42.32 312 *i*P **P 17 20 01.9 +0.4**
KHON Khomkaen 42.46 249 P **P 17 20 03.8 +0.7**
comp=Z,60μm,0.8s
PAYA Payao 42.70 255 P P 17 20 12.8 +7.8
UTTA Uttaradit 43.20 252 P **P 17 20 09.5 +0.4**
comp=Z,26μm,0.9s,comp=Z,202μm
CHAI Chaiyaphum 43.35 249 P **P 17 20 10.4 +0.1**
comp=Z,46μm,0.9s,comp=Z,427μm
PBKT Sadao Pong 43.65 251 P **P 17 20 13.3 +0.6**
comp=Z,8.2nm,1.1s
CMMT Chiang Mai 43.72 255 P **P 17 20 13.7 +0.4**
comp=Z,9.2nm,1.4s
CHTO Chiang Mai 43.72 255 *e*P **P 17 20 13.0 -0.3**
comp=Z,12nm,0.9s
CHTO Chiang Mai 43.72 255 *e*P **P 17 20 13.0 -0.3**
CHTO pmax pmax
comp=Z,12nm,0.9s
LSA Lhasa 43.79 274 *e*P **P 17 20 15.1 +0.8**
comp=Z,54nm,1.9s
LSA Lhasa 43.79 274 *e*P **P 17 20 15.1 +0.8**
LSA pmax pmax
comp=Z,54nm,1.9s
KDAK Kodiak Island 43.88 44 P **P 17 20 14.7 +0.6**
comp=Z,2.5nm,0.8s,baz=0.0,slow=7.1,SNR=2.8
CM31 Chiang Mai Arr 43.94 254 *e*P **P 17 20 15.1 0.0**
comp=Z,5.5nm,0.8s
CMAR Chiang Mai Arr 43.94 254 P **P 17 20 15.4 +0.4**
comp=Z,3.9nm,0.9s,baz=47,slow=6.6,SNR=30
CMAR LR LR 17 38 06.3
comp=Z,149nm,18.6s,baz=59,slow=36
MK31 Makanchi Array 44.25 300 *e*P **P 17 20 17.1 -0.2**
comp=Z,16nm,0.9s
MK31 Makanchi Array 44.25 300 *i*P **P 17 20 17.0 -0.2**
MK31 pmax pmax
comp=Z,19nm,0.9s
MK32 Makanchi Array 44.25 300 *e*P **P 17 20 17.4 +0.1**
MKAR Makanchi Array 44.25 300 P **P 17 20 17.4 +0.1**
comp=Z,13nm,0.9s,baz=82,slow=9.9,SNR=90
MKAR LR LR 17 38 06.1
comp=Z,134nm,20.9s,baz=77,slow=35
MAKZ Makanchi 44.46 300 *e*P **P 17 20 19.0 +0.1**
comp=Z,23nm,1.1s
MAKZ Makanchi 44.46 300 *e*P **P 17 20 19.0 +0.1**
MAKZ pmax pmax
comp=Z,23nm,1.1s
MLY Manley 44.59 33 *e*P **P 17 20 20.1 +0.3**
comp=Z,3.6nm,1.0s
CHBT CHBT 45.24 245 P P 17 20 37.5 +12
KURK Kurchatov 45.72 306 *e*P **P 17 20 28.9 +0.1**
comp=Z,35nm,0.8s
KURK Kurchatov 45.72 306*c i*P **P 17 20 28.9 +0.1**
KURK pmax pmax
comp=Z,55nm,1.3s
HDA Harding Lake 46.22 34 *e*P **P 17 20 34.1 +1.4**
comp=Z,28nm,2.0s
ILAR Eielson Array 46.24 34 P **P 17 20 34.0 +1.3**
comp=Z,1.3nm,0.7s,baz=263,slow=6.4,SNR=14
ILB Eielson Array 46.24 34 *e*P **P 17 20 33.5 +0.8**
comp=Z,7.8nm,0.9s
PHET Kaeng Krachan 47.04 248 P **P 17 20 41.3 +1.7**
comp=Z,40μm,0.9s
PDGK Podgornoye 47.14 296 P **P 17 20 39.6 -0.7**
PDGK pmax pmax
comp=Z,16nm,0.8s
JIRN Jiri 48.59 274 *e*P **P 17 20 52.7 +0.7**
comp=Z,164nm,1.3s
GUN Gumba 48.71 274 *e*P **P 17 20 53.1 +0.2**
comp=Z,116nm,0.7s
KSM Kuching 48.72 227 *e*P **P 17 20 52.3 -0.3**
comp=Z,16nm,1.0s
KKN Kakani 49.23 275 *e*P **P 17 20 57.1 +0.4**
comp=Z,97nm,0.7s
PKI Pulchoki 49.24 274 *e*P **P 17 20 56.8 -0.1**
comp=Z,20nm,0.6s
PKIN Phulchoki 49.24 274 *e*P **P 17 20 56.9 0.0**
comp=Z,19nm,0.7s
DMN Daman 49.45 275 *e*P **P 17 20 58.8 +0.3**
comp=Z,26nm,0.7s
BOOM Boomskoye usch 49.87 296 *e*P **P 17 21 02.0 +0.6**
comp=Z,27nm,0.8s
BOOM Boomskoye usch 49.87 296 *e*P **P 17 21 02.0 +0.6**
BOOM pmax pmax
comp=Z,27nm,0.8s
TKM2 Tokmak 2 49.95 297 P **P 17 21 03.0 +0.9**
SNR=32
TKM2 Tokmak 2 49.95 297 P **P 17 21 02.2 +0.1**
TKM2 pmax pmax
comp=Z,37nm,0.9s
DANN Dangsing 50.12 276 *e*P **P 17 21 04.1 +0.5**
comp=Z,128nm,0.8s
BRVK Borovoye 50.16 311 *e*P **P 17 21 03.7 +0.5**
comp=Z,14nm,0.9s
BRVK Borovoye 50.16 311*c i*P **P 17 21 03.6 +0.4**
BRVK pmax pmax
comp=Z,13nm,0.8s
EPYK Eagle Plains 50.27 31 *e*P **P 17 21 05.3 +1.4**
comp=Z,25nm,0.3s
OTUK Ortayu 50.33 305 P **P 17 21 04.4 -0.2**
OTUK pmax pmax
comp=Z,14nm,1.0s
KBK Karagaybulak 50.50 297 P **P 17 21 06.7 +0.6**
SNR=27
KZA Kyzart 50.50 296 P **P 17 21 07.9 +1.4**
SNR=7.2
USP Ospenovka 50.58 298 P **P 17 21 06.9 +0.3**
SNR=9.1
AAK Ala-Archa 50.81 297 *e*P **P 17 21 08.5 +0.1**
comp=Z,13nm,1.2s
AAK Ala-Archa 50.81 297*c i*P **P 17 21 08.6 +0.1**
AAK pmax pmax
comp=Z,12nm,1.2s
PYUN Piuthan 50.83 276 *e*P **P 17 21 09.2 +0.3**
comp=Z,88nm,1.0s
KSH Kashi 50.97 293 P **P 17 21 13.5 +3.8**
KSH pP pwP 17 21 24.3 +4.2
KSH PP **PP 17 23 11.3 +5.3**
KSH S **S 17 28 27.5 +2.3**
KSH ScS **ScS 17 30 56.8 -2.0**
KSH SS **SS 17 31 59.5 -0.4**
KSH pmax pmax
comp=Z,38nm,1.1s
KSH pmax pmax
comp=Z,220nm,5.0s
KSH LR LR
comp=Z,1μm,15.3s
KSH LR LR
comp=Z,810nm,14.0s
KSH LR LR
comp=Z,960nm,14.6s
HYT Haines Junctio 51.05 38 *e*P **P 17 21 11.5 +1.6**
comp=Z,13nm,0.9s
INK Inuvik 51.15 28 P **P 17 21 11.1 +0.8**
comp=Z,1.9nm,0.4s,baz=301,slow=6.0,SNR=10
INK Inuvik 51.15 28 *e*P **P 17 21 11.4 +1.1**
comp=Z,5.0nm,0.8s
INK Inuvik 51.15 28 *e*P **P 17 21 11.4 +1.1**
INK pmax pmax
comp=Z,5.0nm,0.8s
EKS2 Erkin-Say 51.30 297 P **P 17 21 12.5 +0.4**
SNR=10.0
AML Almayashu 51.55 297 P **P 17 21 15.3 +0.9**
SNR=13
ARSB Arslanbob 52.36 296 *e*P **P 17 21 20.4 +0.3**
comp=Z,35nm,1.0s
KK31 Karatay Array 53.35 299 *e*P **P 17 21 27.0 -0.2**
comp=Z,12nm,1.0s
KK31 Karatay Array 53.35 299 *i*P **P 17 21 26.9 -0.2**
KK31 pmax pmax
comp=Z,9.0nm,0.9s
KKAR Karatay Array 53.35 299 *e*P **P 17 21 27.0 -0.1**
comp=Z,12nm,1.0s
KKAR Karatay Array 53.35 299 *e*P **P 17 21 27.0 -0.1**
KKAR pmax pmax
comp=Z,13nm,1.0s
SVE Sverdlovsk 54.32 318⇓*e*P **P 17 21 34.9 +0.9**
SVE pmax pmax
comp=Z,29nm,1.0s
SVE MLR MLR
comp=Z,1μm,15.0s
GAR Garm 55.18 295 *e*P **P 17 21 40.6 -0.1**
comp=Z,36nm,1.4s
GAR Garm 55.18 295 *e*P **P 17 21 40.6 -0.1**
GAR pmax pmax
comp=Z,36nm,1.4s
NIL Nilore 55.49 287 *e*P **P 17 21 43.2 +0.3**
comp=Z,43nm,0.9s
NIL Nilore 55.49 287 *e*P **P 17 21 43.2 +0.3**
NIL pmax pmax
comp=Z,43nm,0.9s
ARU Arti 55.53 318 *e*P **P 17 21 43.2 +0.4**
comp=Z,34nm,1.0s
ARU Arti 55.53 318*c i*P **P 17 21 43.2 +0.4**
ARU 17 22 38.5
ARU 17 23 44.3
ARU S **S 17 29 28.8 +2.4**
ARU SS **SS 17 33 05.1 -5.8**
ARU pmax pmax
comp=Z,41nm,1.1s
ARU MLR MLR
comp=Z,951nm,15.0s
AB31 Akbulak array 57.58 310 *i*P **P 17 21 57.7 +0.2**
AB31 pmax pmax
comp=Z,7.0nm,0.6s
ABKAR Akbulak array 57.58 310 *e*P **P 17 21 57.7 +0.3**
comp=Z,12nm,0.8s
KBL Kabul 58.14 290 *e*P **P 17 22 01.5 -0.4**
comp=Z,13nm,0.9s
KBL Kabul 58.14 290 *e*P **P 17 22 01.5 -0.4**
KBL pmax pmax
comp=Z,13nm,0.9s
AKTO Aktyubinsk 58.21 311 P **P 17 22 01.6 -0.3**
AKTO pmax pmax
comp=Z,12nm,0.9s
WRAB Tennant Creek 60.02 190⇑*i*P **P 17 22 14.0 -0.6**
WRAB pmax pmax
comp=Z,32nm,3.0s
WB2 Warramunga Arr 60.03 190 *e*P **P 17 22 14.3 -0.4**
comp=Z,36nm,1.8s
WR1 Warramunga Arr 60.03 190 *e*P **P 17 22 14.1 -0.6**
WRA Warramunga Arr 60.03 190 P **P 17 22 14.1 -0.6**
comp=Z,3.7nm,0.6s,baz=356,slow=7.5,SNR=30
ARA0 ARCESS Array S 62.08 339 *e*P **P 17 22 28.8 +0.6**
ARCES ARCESS Array B 62.08 339 P **P 17 22 28.8 +0.7**
comp=Z,2.9nm,0.8s,baz=22,slow=6.9,SNR=5.0
ARCES LR LR 17 52 27.7
comp=Z,222nm,21.0s,baz=14,slow=39
KLMR Klimovskoe 62.42 328 *e*P **P 17 22 29.4 -1.1**
KLMR pmax pmax
comp=Z,22nm,1.3s
KLMR Klimovskoe 62.42 328 *e*P **P 17 22 29.4 -1.1**
KLMR AMP 17 22 31.7
comp=Z,22nm,1.2s
AS31 Alice Springs 63.75 190 *e*P **P 17 22 39.8 +0.1**
comp=Z,1.2nm,0.9s
ASAR Alice Springs 63.75 190 P **P 17 22 39.9 +0.1**
comp=Z,1.6nm,0.6s,baz=5.9,slow=5.7,SNR=33
GEYT Alibeck 64.10 299 P **P 17 22 42.1 +0.1**
comp=Z,6.4nm,0.9s,baz=5.2,slow=1.6,SNR=14
GEYT LR LR 17 52 58.8
comp=Z,116nm,18.8s,baz=50,slow=38
GYA0B ALIBECK ARRAY 64.10 299 *e*P **P 17 22 41.9 -0.1**
comp=Z,8.8nm,0.9s
DZM Mont Dzumac 65.07 157 LR LR 17 53 06.3
comp=Z,56nm,18.1s,baz=25,slow=38
MOS Moscow 66.13 324 *e*P **P 17 22 54.4 -0.5**
VRH Novokhopyorsk 66.77 318 *e*P **P 17 22 58.4 -0.6**
VRH pmax pmax
comp=Z,20nm,1.0s
VRH MLR MLR
comp=Z,790nm,14.0s
OBN Obninsk 66.99 323 *e*P **P 17 23 01.0 +0.7**
OBN *e* 17 23 32.4
OBN *e* 17 25 29.3
OBN *e*PPP PPP 17 27 02.0
OBN pmax pmax
comp=Z,9.0nm,0.4s
OBN MLR MLR
comp=Z,69nm,17.0s
FIA1 FINESS Array S 67.24 333 *e*P **P 17 23 01.7 -0.1**
comp=Z,20nm,0.9s
FIA0 FINESS Array S 67.24 333 *e*P **P 17 23 02.0 +0.2**
FIA0 FINESS Array S 67.24 333 *e*P **P 17 23 02.0 +0.2**
FINES FINESS Array B 67.24 333 P **P 17 23 02.0 +0.2**
comp=Z,9.7nm,0.7s,baz=47,slow=8.4,SNR=33
FINES LR LR 17 55 36.0
comp=Z,494nm,18.1s,baz=34,slow=39
FINES FINESS Array B 67.24 333 *i*P **P 17 23 02.4 +0.6**
FINES pmax pmax
comp=Z,10.0nm,0.7s
LPSR Galich'ya Gora 67.36 320 *e*P **P 17 23 02.0 -0.8**
LPSR pmax pmax
comp=Z,20nm,0.9s
LPSR MLR MLR
comp=Z,570nm,14.0s
K05A Summer Lake 67.85 52 *e*P **P 17 23 08.0 +1.7**
comp=Z,17nm,1.2s
SUMG Summit 67.96 1 *e*P **P 17 23 08.1 +1.4**
comp=Z,8.4nm,0.9s
SUMG Summit 67.96 1 *e*P **P 17 23 08.1 +1.4**
SUMG pmax pmax
comp=Z,8.0nm,0.9s
VSR Storozhevoye 68.06 319 *e*P **P 17 23 06.8 -0.4**
VSR pmax pmax
comp=Z,9.0nm,0.6s
VSR MLR MLR
comp=Z,390nm,13.0s
BMO Blue Mountains 68.78 49 *e*P **P 17 23 13.1 +1.2**
comp=Z,5.3nm,1.5s
BMO Blue Mountains 68.78 49 *e*P **P 17 23 13.1 +1.2**
BMO pmax pmax
comp=Z,5.0nm,1.5s
AKT Akhty 68.90 307 *e*P **P 17 23 13.0 +0.2**
AKT *e* 17 23 37.4
AKT pmax pmax
comp=Z,20nm,0.9s
VSU Vasula 69.01 330*ce*P **P 17 23 13.4 +0.5**
VSU pmax pmax
comp=Z,65nm,0.9s
VSU Vasula 69.01 330 *e*P **P 17 23 13.5 +0.5**
VSU IAmb IAmb 17 23 14.1
comp=Z,46nm,0.8s
GOF Gofitskoye 69.62 312⇑*e*P **P 17 23 17.6 +0.6**
NCK Nalchik 70.22 310 *i*P **P 17 23 20.4 -0.4**
NCK pmax pmax
comp=Z,4.0nm,0.2s
FFC Flin Flon 70.45 34 *e*P **P 17 23 22.4 +0.5**
comp=Z,4.9nm,0.8s
FFC Flin Flon 70.45 34 *e*P **P 17 23 22.4 +0.5**
FFC pmax pmax
comp=Z,5.0nm,0.8s
ZEI Tsey 70.45 310 *e*P **P 17 23 21.9 -0.6**
ZEI pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 70.47 311 *e*P **P 17 23 23.0 +0.5**
comp=Z,50nm,1.0s
KIV Kislovodsk 70.47 311⇑*i*P **P 17 23 23.7 +1.3**
KIV Kislovodsk 70.47 311 *e*P **P 17 23 23.6 +1.2**
KIV *e*S **S 17 32 37.2 +3.2**
KIV pmax pmax
comp=Z,166nm,1.1s
KIV pmax pmax
comp=Z,128nm,4.1s
KIV MLR MLR
comp=Z,840nm,18.0s
KBZ Khabaz 70.49 311 P **P 17 23 22.8 +0.5**
comp=Z,20nm,0.9s,baz=64,slow=3.7,SNR=40
TBLG Delisi 70.58 308 *e*P **P 17 23 23.6 +0.5**
comp=Z,17nm,0.9s
HRY Holter Researc 70.75 45 *e*P **P 17 23 25.2 +1.1**
NEY Neytrino 70.88 311⇓*e*P **P 17 23 26.3 +1.3**
NEY pmax pmax
comp=Z,3.0nm,0.9s
YERR Yerington 71.02 55 *e*P **P 17 23 26.6 +0.7**
comp=Z,4.9nm,0.9s
DLMT Dillon 71.16 46 *e*P **P 17 23 28.4 +1.8**
comp=Z,5.4nm,0.9s
IDID Didziasalis 71.17 327 *e*P **P 17 23 27.3 +1.0**
IDID IAmb IAmb 17 23 28.3
comp=Z,7.9nm,0.8s
HLID Hailey 71.22 49 *e*P **P 17 23 27.6 +0.5**
comp=Z,7.6nm,0.5s
ISAL Salakas 71.24 328 *e*P **P 17 23 27.8 +1.1**
ISAL IAmb IAmb 17 23 28.9
comp=Z,15nm,0.9s
STKA Stephens Creek 71.30 182 P **P 17 23 27.1 -0.1**
comp=Z,1.6nm,0.6s,baz=338,slow=5.9,SNR=9.0
GNI Garni 71.51 307⇑*e*P **P 17 23 30.5 +1.6**
GNI pmax pmax
comp=Z,44nm,1.4s
AKH Akhalkalaki 71.52 309 *e*P **P 17 23 28.9 +0.1**
comp=Z,12nm,1.1s
AKH Akhalkalaki 71.52 309⇓*i*P **P 17 23 30.2 +1.3**
AKH Akhalkalaki 71.52 309 *e*P **P 17 23 29.0 +0.1**
AKH pmax pmax
comp=Z,12nm,1.1s
BOZ Bozeman (W) 71.55 46 *e*P **P 17 23 30.5 +1.5**
comp=Z,5.3nm,1.0s
BOZ Bozeman (W) 71.55 46 *e*P **P 17 23 30.5 +1.5**
BOZ pmax pmax
comp=Z,5.0nm,1.0s
KVN Kaiserville 71.69 54 *e*P **P 17 23 31.6 +1.6**
comp=Z,5.3nm,1.0s
KVN Kaiserville 71.69 54 *e*P **P 17 23 31.6 +1.6**
KVN pmax pmax
comp=Z,5.0nm,1.0s
NV01 Mina Array Sit 71.94 55 *e*P **P 17 23 32.5 +1.0**
NVAR Mina Array Bea 71.94 55 P **P 17 23 32.5 +1.0**
comp=Z,2.7nm,0.9s,baz=288,slow=6.3,SNR=9.4
PABE Paberze 72.16 329 *e*P **P 17 23 32.6 +0.4**
PABE IAmb IAmb 17 23 34.1
comp=Z,32nm,0.9s
NC204 NORSAR Array S 72.30 338 *e*P **P 17 23 33.7 +0.6**
comp=Z,32nm,0.9s
NB2 NORSAR Subarra 72.36 338 P **P 17 23 33.3 -0.1**
comp=Z,3.3nm,0.8s,baz=37,slow=6.2
NB200 NORSAR Array S 72.36 338 *e*P **P 17 23 33.6 +0.2**
NOA NORSAR Array B 72.36 338 P **P 17 23 33.6 +0.2**
comp=Z,6.3nm,0.8s,baz=37,slow=6.0,SNR=15
NOA LR LR 17 59 34.3
comp=Z,201nm,18.1s,baz=25,slow=39
NBO00 NORSAR Array S 72.49 338 *e*P **P 17 23 34.4 +0.2**
comp=Z,39nm,1.0s
BCA Borcka 72.62 310⇑*i*P **P 17 23 35.8 +0.5**
IMW Indian Meadow 72.99 47 *e*P **P 17 23 40.0 +2.1**
comp=Z,6.0nm,1.1s
FXWY Fox Creek 73.11 47 *e*P **P 17 23 40.5 +2.1**
comp=Z,5.0nm,1.3s
AKASG Malin Array Be 73.23 323 P **P 17 23 38.6 -0.1**
comp=Z,3.9nm,0.5s,baz=44,slow=7.0,SNR=10.0
AKASG LR LR 17 57 52.2
comp=Z,147nm,18.5s,baz=35,slow=38
AKBB Malin Array Si 73.23 323 *e*P **P 17 23 38.7 0.0**

comp=Z,11nm,0.8s
AKBB Malin Array Si 73.23 323 *e*P **P 17 23 38.7 0.0**
AKBB pmax pmax
comp=Z,11nm,0.8s
HVU Hansel Valley 73.26 49 *e*P **P 17 23 40.9 +1.6**
comp=Z,4.4nm,1.0s
HVU Hansel Valley 73.26 49 *e*P **P 17 23 40.9 +1.6**
HVU pmax pmax
comp=Z,4.0nm,1.0s
R11A Troy Canyon, C 73.69 54 *e*P **P 17 23 41.9 0.0**
comp=Z,14nm,1.8s
TPNV Topopah Spring 74.13 55 *e*P **P 17 23 45.5 +1.0**
comp=Z,6.8nm,0.8s
TPNV Topopah Spring 74.13 55 *e*P **P 17 23 45.5 +1.0**
TPNV pmax pmax
comp=Z,7.0nm,0.8s
KLNR Kaliningrad 74.30 330 *de*P **P 17 23 45.7 +0.8**
KLNR pmax pmax
comp=Z,97nm,0.8s
PD31 Pinedale Array 74.49 47 *e*P **P 17 23 47.5 +1.0**
comp=Z,2.7nm,1.0s
PDAR Pinedale Array 74.49 47 P **P 17 23 46.6 0.0**
comp=Z,1.0nm,0.6s,baz=291,slow=1.3,SNR=12
SIM Simferopol' 74.63 316 *e*P **P 17 23 47.7 +0.7**
SIM pmax pmax
comp=Z,14nm,0.9s
SIM MLR MLR
comp=N,100nm,14.0s
LVV L'vov 76.22 325 *e*P **P 17 23 56.7 +0.6**
SRU San Rafael Swe 76.28 50 *e*P **P 17 23 56.5 -0.4**
comp=N,4.7nm,0.9s
SRU San Rafael Swe 76.28 50 *e*P **P 17 23 56.5 -0.4**
SRU pmax pmax
comp=Z,5.0nm,0.9s
KWP Kalwaria Pacla 76.95 325 *e*P **P 17 24 01.3 +1.1**
KWP Kalwaria Pacla 76.95 325 *e*P **P 17 24 01.3 +1.1**
comp=Z,299nm,0.5s
KWP Kalwaria Pacla 76.95 325 *e*P **P 17 24 01.3 +1.1**
BUR08 Bucovina Ar. S 77.26 322 *e*P **P 17 24 02.4 +0.3**
comp=Z,6.9nm,0.8s
BURAR Bucovina Array 77.27 322 ⇑*i*P **P 17 24 02.8 +0.6**
BIZ Bicaz 77.33 322 ⇑*i*P **P 17 24 03.7 +1.3**
TESR Tescani 77.38 321 ⇑*i*P **P 17 24 02.9 +0.2**
PV21 Cone Mtn., Par 77.56 50 *e*P **P 17 24 05.6 +1.5**
comp=Z,5.0nm,1.0s
CFR Carcaliu 77.58 319 ⇓*i*P **P 17 24 04.5 +0.7**
KOLS Kolonicke sedl 77.66 325 *e*P **P 17 24 05.0 +0.8**
KOLS pmax pmax
comp=Z,6.0nm,0.9s
KOLS Kolonicke sedl 77.66 325 *e*P **P 17 24 05.0 +0.8**
PV22 Blue Mesa, Par 77.69 50 *e*P **P 17 24 08.4 +3.6**
comp=Z,5.7nm,1.1s
OJC Ojcow 77.76 327 *e*P **P 17 24 05.7 +0.9**
OJC Ojcow 77.76 327 *e*P **P 17 24 04.9 +0.2**
comp=Z,22nm,1.1s
OJC Ojcow 77.76 327 *e*P **P 17 24 04.9 +0.2**
OJC pmax pmax
comp=Z,22nm,1.1s
VRI Vrincioaia 77.80 320 ⇑*i*P **P 17 24 06.7 +1.7**
UZH Uzhgorod 77.87 325 *e*P **P 17 24 05.0 -0.3**
UZH *e* 17 24 14.6
UZH *e* 17 24 23.8
PV13 Radium Mtn., P 77.91 50 *e*P **P 17 24 07.4 +1.3**
comp=Z,6.3nm,1.0s
WUAZ Wupatki 78.09 54 *e*P **P 17 24 08.4 +1.4**
comp=Z,4.7nm,0.9s
OZUR 78.09 321 ⇑*i*P **P 17 24 08.2 +1.5**
TRPA Tarpa 78.13 324 ⇓*i*P **P 17 24 08.1 +1.3**
NIE Niedzica 78.16 326 *e*P **P 17 24 08.0 +1.0**
NIE Niedzica 78.16 326 *e*P **P 17 24 08.0 +1.0**
BR101 Keskin Array S 78.37 312 *e*P **P 17 24 08.4 -0.1**
BR101 *e*PP **PP 17 27 05.1 -0.1**
BRTR Keskin Array B 78.37 312 P **P 17 24 08.4 -0.1**
comp=Z,5.1nm,1.2s,baz=90,slow=4.9,SNR=12
BRTR PP **PP 17 27 05.1 -0.1**
comp=Z,0.7nm,0.7s,baz=73,slow=9.7,SNR=3.6
BRTR LR LR 18 02 14.6
comp=Z,57nm,19.2s,baz=24,slow=38
BRTR Keskin Array B 78.37 312 *i* P **P 17 24 09.3 +0.8**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
DOPR Dopca 78.38 321 ⇑*i*P **P 17 24 10.8 +2.5**
MLR Muntele Rosu 78.45 321 ⇑*i*P **P 17 24 10.3 +1.5**
KSP Ksiaz 78.71 329 *e*P **P 17 24 11.0 +1.0**
KSP Ksiaz 78.71 329 *e*P **P 17 24 11.0 +1.0**
LANS Liptovska Anna 78.71 326 *e*P **P 17 24 12.1 +2.0**
LANS Liptovska Anna 78.71 326 *e*P **P 17 24 12.1 +2.0**
OKC Ostrava-Krasne 78.74 328 *e*P **P 17 24 11.5 +1.4**
OKC MLR MLR
comp=Z,300nm,22.3s
OKC Ostrava-Krasne 78.74 328 *e*P **P 17 24 11.5 +1.4**
OKC AMS AMS 18 02 10.0
comp=Z,300nm,22.3s
OSTC Ostas 78.97 329 *e*P **P 17 24 12.6 +1.2**
OSTC AMS AMS 18 04 10.0
comp=Z,400nm,16.1s
CHVC Chvalec 79.01 329 *e*P **P 17 24 12.9 +1.3**
CHVC *e*x x 17 24 21.4
CHVC AMS AMS 18 04 10.0
comp=Z,400nm,13.6s
MORC Moravsky Berou 79.04 328 *e*P **P 17 24 12.8 +1.0**
comp=Z,10nm,1.0s
MORC Moravsky Berou 79.04 328 ⇑*i*P **P 17 24 12.8 +1.0**
MORC Moravsky Berou 79.04 328 *e*P **P 17 24 12.8 +1.0**
MORC pmax pmax
comp=Z,10.0nm,1.0s
MORC Moravsky Berou 79.04 328 *e*P **P 17 24 12.6 +0.7**
DPC Dobruska-Polom 79.09 329 *e*P **P 17 24 13.4 +1.3**
DPC *e* 17 24 21.8
DPC *e* 17 24 31.3
DPC MLR MLR
comp=Z,200nm,16.4s
DPC Dobruska-Polom 79.09 329 *e*P **P 17 24 13.4 +1.3**
DPC *e*x x 17 24 21.8
DPC *e*x x 17 24 31.3
DPC AMS AMS 18 04 30.0
comp=Z,200nm,16.4s
UPC Upice 79.09 329 *e*P **P 17 24 13.2 +1.1**
UPC MLR MLR
comp=Z,400nm,15.4s
UPC Upice 79.09 329 *e*P **P 17 24 13.2 +1.1**
UPC AMS AMS 18 04 30.0
comp=Z,400nm,15.4s
S22A 4UR Ranch, Cre 79.36 50 *e*P **P 17 24 15.8 +1.6**
comp=Z,9.8nm,1.6s
PSZ Piszkesteto 79.47 325 *e*P **P 17 24 15.4 +1.1**
comp=Z,11nm,1.0s
PSZ Piszkesteto 79.47 325 ⇓*i*P **P 17 24 15.4 +1.1**
VYHS Vyhne 79.48 326 *e*P **P 17 24 15.4 +1.1**
VYHS pmax pmax
comp=Z,4.0nm,1.1s
VYHS Vyhne 79.48 326 *e*P **P 17 24 15.4 +1.1**
BRG Berggiesshubel 79.60 330 *e*P **P 17 24 15.2 +0.3**
comp=Z,6.1nm,1.0s
BRG PP PP 17 27 26.2 +11
comp=Z,6.7nm,1.4s
comp=N,187nm,15.8s
comp=E,210nm,13.7s
comp=Z,327nm,15.7s
BRG Berggiesshubel 79.60 330 *e*P **P 17 24 15.1 +0.3**
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG pmax pmax
comp=Z,7.0nm,1.4s
BRG MLR MLR
comp=N,187nm,15.8s
BRG MLR MLR
comp=E,210nm,13.7s
BRG MLR MLR
comp=Z,327nm,15.7s
CLL Collm 79.61 331 *e*P **P 17 24 14.2 -0.6**
comp=Z,8.9nm,0.8s
CLL Collm 79.61 331 ⇑*i*P **P 17 24 14.1 -0.8**
comp=Z,12nm,0.9s
CLL *e*pP **pP 17 24 22.0 -0.1**
CLL *e*S **S 17 34 20.0 +4.9**
CLL LmH 17 58 00.0
comp=N,400nm,19.0s
CLL LmH 17 58 00.0
comp=E,400nm,19.4s
CLL LmV 18 03 00.0
comp=Z,200nm,21.0s
CLL Collm 79.61 331 ⇑*i*P **P 17 24 14.1 -0.8**
CLL *e* 17 24 22.0
CLL *e*S **S 17 34 20.0 +4.9**
CLL pmax pmax
comp=Z,12nm,0.9s
PVCC Panska Ves 79.64 330 *e*P **P 17 24 16.4 +1.4**
PVCC MLR MLR
comp=Z,400nm,17.6s
PVCC Panska Ves 79.64 330 *e*P **P 17 24 16.4 +1.4**
PVCC AMS AMS 18 02 50.0
comp=Z,400nm,17.6s
JAVC Velka Javorina 79.70 327 *e*P **P 17 24 17.2 +1.7**
VRAC Vranov 79.79 328 ⇑*i*P **P 17 24 17.0 +1.1**
VRAC Vranov 79.79 328 *e*P **P 17 24 16.7 +0.8**
VRAC *e* 17 24 25.7
GOPC GO Pecny, Ondr 80.04 329 *e*P **P 17 24 18.3 +1.0**
GOPC MLR MLR
comp=Z,300nm,18.8s
GOPC GO Pecny, Ondr 80.04 329 *e*P **P 17 24 18.3 +1.0**
GOPC AMS AMS 18 03 10.0
comp=Z,300nm,18.8s
GZR Gura Zlata 80.05 322 ⇑*i*P **P 17 24 18.1 +0.7**
KRUC Moravsky 80.07 328 *e*P **P 17 24 18.2 +0.8**
KRUC *e* 17 24 26.7
PRU Pruhonice 80.08 329 *e*P **P 17 24 18.7 +1.3**
PRU *e* 17 24 27.4
PRU MLR MLR
comp=Z,300nm,15.4s
PRU Pruhonice 80.08 329 *e*P **P 17 24 18.7 +1.3**
PRU *e*x x 17 24 27.4
PRU AMS AMS 18 03 10.0
comp=Z,300nm,15.4s
MODS Modra-Piesok 80.24 327 *e*P **P 17 24 18.7 +0.3**
MODS pmax pmax
comp=Z,10.0nm,1.1s
MODS Modra-Piesok 80.24 327 *e*P **P 17 24 18.7 +0.3**
TREC Trest 80.25 329 *e*P **P 17 24 19.6 +1.2**
TREC MLR MLR
comp=Z,400nm,15.9s
TREC Trest 80.25 329 *e*P **P 17 24 19.6 +1.2**
TREC AMS AMS 18 05 10.0
comp=Z,400nm,15.9s
PHSR Pinarhisar 80.41 317 ⇑*i*P **P 17 24 20.9 +1.5**
BZS Buzias 80.42 323 ⇓*i*P **P 17 24 20.1 +0.7**
HERR Herculane 80.60 322 ⇑*i*P **P 17 24 21.3 +1.0**
ECSD EROS Data Cent 80.67 40 *e*P **P 17 24 21.4 +0.6**
comp=Z,74nm,0.9s
NKC Novy Kostel 80.69 331 AMS AMS 18 06 20.0
comp=Z,300nm,14.3s
KHC Kasperske Hory 81.14 329 *e*P **P 17 24 23.4 +0.2**
comp=Z,3.7nm,1.0s
KHC Kasperske Hory 81.14 329 *e*P **P 17 24 24.1 +0.9**
KHC *e* 17 24 32.8
KHC MLR MLR
comp=Z,300nm,17.0s
KHC Kasperske Hory 81.14 329 *e*P **P 17 24 24.1 +0.9**
KHC *e*x x 17 24 32.8
KHC AMS AMS 18 03 50.0
comp=Z,300nm,17.0s
CONA Conrad Observa 81.18 327 *i* P **P 17 24 24.8 +1.3**
comp=Z,7.7nm,1.1s
RAYN Ar Rayn 81.26 293 *e*P **P 17 24 24.2 -0.1**
comp=Z,8.2nm,1.0s
RAYN Ar Rayn 81.26 293 *e*P **P 17 24 24.2 -0.1**
RAYN pmax pmax
comp=Z,8.0nm,1.0s
GEC2 GERESS Array S 81.32 329 *e*P **P 17 24 24.7 +0.5**
comp=Z,2.7nm,0.8s
GEC2 GERESS Array S 81.32 329 *e*P **P 17 24 24.7 +0.5**
GEC2 pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B 81.32 329 P **P 17 24 25.1 +0.9**
comp=Z,1.7nm,0.6s,baz=35,slow=5.4,SNR=14
GERES LR LR 18 04 21.5
comp=Z,245nm,18.5s,baz=12,slow=39
ANMO Albuquerque 81.47 51 ⇑*e*P **P 17 24 27.4 +2.0**
ANMO pmax pmax
comp=Z,3.0nm,1.1s
ARSA Arzberg 81.85 327 *i* P **P 17 24 26.1 -0.9**
comp=Z,6.0nm,1.0s
VTS Vitosha 81.88 320 *e*P **P 17 24 28.3 +0.9**
comp=Z,10.0nm,0.9s
VTS Vitosha 81.88 320 *e*P **P 17 24 28.3 +0.9**
VTS pmax pmax
comp=Z,10.0nm,0.9s
SCHQ Schefferville 82.22 17 LR LR 18 06 46.7
comp=Z,75nm,18.0s,baz=56,slow=40
SOKA Soboth 82.51 327 *i* P **P 17 24 31.1 +0.6**
comp=Z,10nm,0.9s
KBA Koelnbreinsper 82.89 328 *i* PcP **P 17 24 34.3 +1.7**
comp=Z,7.4nm,0.9s
MOTA Moosalm 83.56 330 *i* PcP **P 17 24 37.2 +1.2**
comp=Z,9.8nm,0.9s
RETA Reutte 83.57 330 *i* PcP **P 17 24 37.2 +1.2**
comp=Z,9.5nm,1.1s
SQTA Sankt Quirin 83.62 330 *i* P **P 17 24 37.1 +0.8**
comp=Z,7.2nm,1.2s
PMOR Pomariorio Ree 83.67 115 *e*T T 18 56 49.4
comp=Z,2.3nm,0.2s
BFO Black Forest 83.78 332 *i* P **P 17 24 38.2 +1.2**
FETA Feichten 83.97 330 *i* P **P 17 24 38.8 +0.7**
comp=Z,5.5nm,0.8s
DAVA Damuels 84.08 330 *i* PcP **P 17 24 39.4 +0.7**
comp=Z,7.8nm,1.0s
PPT Papeete 84.29 118 LR LR 17 58 43.3
comp=Z,79nm,19.5s,baz=306,slow=33
PPT2 Papeete2 84.30 118 *e*LR LR 17 51 01.0
comp=Z,149nm,22.5s,baz=317
FUORN Ofenpass-Fuorn 84.48 330 *e*P **P 17 24 41.8 +0.9**
comp=Z,15nm,0.8s
D53A Lac Vacive, Po 86.00 27 *e*P **P 17 24 50.9 +2.8**
comp=Z,34nm,1.9s
WMOK Wichita Mounta 86.10 47 *e*P **P 17 24 50.2 +1.4**
comp=Z,4.1nm,0.8s
WMOK Wichita Mounta 86.10 47 *e*P **P 17 24 50.3 +1.4**
WMOK pmax pmax
comp=Z,4.0nm,0.8s
LTX Lajitas 87.05 54 *e*P **P 17 24 55.2 +1.5**
LTX Lajitas 87.05 54 *e*P **P 17 24 55.2 +1.5**
TXAR Lajitas Array 87.05 54 P **P 17 24 55.2 +1.5**
comp=Z,0.5nm,0.7s,baz=319,slow=3.6,SNR=6.7
SADO Sadowa 87.45 29 LR LR 18 07 57.9
comp=Z,65nm,18.1s,baz=359,slow=38
CCM Cathedral Cave 87.62 40 *e*P **P 17 24 57.2 +1.0**
comp=Z,13nm,0.8s
CCM Cathedral Cave 87.62 40 *e*P **P 17 24 57.2 +1.0**
CCM pmax pmax
comp=Z,13nm,0.8s
TBI Tubuai 88.42 122 *e*LR LR 17 52 25.3
comp=Z,106nm,34.5s
TORD Torodi Ar. Bea 116.60 318 PP PP 17 31 55.7 -3.2
comp=Z,2.3nm,1.1s,baz=32,slow=8.7,SNR=5.8

TRN 26 17:14:38.9, 10.80N×62.15W, h15km, MD3.6, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**0.84**	**125**	*e*S	Sn	17 15 07.5	-0.8
TBH	**Brigand Hill**	**1.11**	**107**	*e*S	Sn	17 15 15.5	+0.4
GRGR	**Grenville**	**1.41**	**20**	*e*P	Pn	17 15 03.8	-0.3
GRGR				*e*S	Sn	17 15 22.3	0.0
GRHS	**Sauteurs**	**1.50**	**19**	*e*P	Pn	17 15 05.2	0.0
GRHS				*e*S	Sn	17 15 24.4	-0.1
GRSS	**Sisters**	**1.58**	**20**	*e*P	Pb	17 15 07.4	-0.4
GRSS	**Sisters**	**1.58**	**20**	*e*	Pg	17 15 12.2	+3.0
GRSS				*e*S	Sb	17 15 27.1	-0.4
TOSP	**Speyside**	**1.66**	**73**	*e*P	Pb	17 15 08.5	-0.7
TOSP				*e*S	Sb	17 15 29.4	-0.6
FCV	**Fort Charlotte**	**2.50**	**21**	*e*P	Pn	17 15 19.1	0.0
FCV				*e*S	Sn	17 15 49.9	+0.5
SVB	**Belmont**	**2.61**	**20**	*e*P	Pn	17 15 21.5	+1.0
SVB				*e*S	Sn	17 15 51.5	-0.5
SVCV	**St. Vincent, C**	**2.64**	**22**	*e*P	Pn	17 15 22.4	+1.3
SVCV				*e*S	Sn	17 15 52.2	-0.7
SVV	**Soufriere Volc**	**2.66**	**20**	*e*P	Pn	17 15 21.8	+0.5
SVV				*e*S	Sn	17 15 53.1	-0.2
SSV	**Crater Summit**	**2.68**	**20**	*e*P	Pn	17 15 22.4	+0.8
SSV				*e*S	Sn	17 15 53.7	-0.1
SFAN	**Fancy Village**	**2.74**	**20**	*e*S	Sn	17 15 54.8	-0.4
MCLT	**Moule a Chique**	**3.12**	**22**	*e*P	Pn	17 15 28.1	+0.5
MCLT				*e*S	Sn	17 16 04.8	+0.1
SLDE	**Delcer**	**3.17**	**20**	*e*P	Pn	17 15 28.8	+0.5
SLDE				*e*S	Sn	17 16 05.0	-0.8
SLB	**Belfond**	**3.19**	**20**	*e*P	Pn	17 15 30.0	+1.3
SLB				*e*S	Sn	17 16 06.3	-0.2
SLPA	**Patience**	**3.26**	**22**	*e*P	Pn	17 15 30.0	+0.5
SLPA				*e*S	Sn	17 16 08.6	+0.4
SLBI	**Saint Lucia, B**	**3.40**	**20**	*e*P	Pn	17 15 31.4	-0.1
SLBI				*e*S	Sn	17 16 11.1	-0.5
SLW	**Petit Monier**	**3.41**	**20**	*e*P	Pn	17 15 32.2	+0.6
FDF	**Fort de France**	**4.03**	**14**	*e*P	Pn	17 15 40.5	+0.4
FDF	**Fort de France**	**4.03**	**14**	*e*S	Sn	17 16 26.6	-0.4

WEL 26 17:16:47.1±1.1, 32.5°S±9.5°×18.0°W±2.2°2, h315km±16km, M4.2/12, mB4.6/7, MLv4.6/12, Mw(mB)3.8/7, Error ellipse: s-maj=0.0km s-min=0.0km az=109.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.28**	**33**	S	S	17 18 34.3	0.0
GRZ	**Great Barrier**	**5.67**	**221**	P	Pn	17 18 14.2	+1.5
MXZ	**Matakaoa Point**	**5.69**	**194**	P	Pn	17 18 13.3	+0.3
MXZ				S	S	17 19 24.1	+1.8
WMGZ	**Waiomatatini S**	**5.92**	**193**	P	Pn	17 18 16.9	+1.2
WMGZ				S	S	17 19 29.1	+1.8
HAZ	**Te Kaha**	**6.00**	**198**	P	Pn	17 18 17.2	+0.6
HAZ				S	S	17 19 31.5	+2.5
PKGZ	**Pakihiroa**	**6.05**	**195**	P	Pn	17 18 17.2	-0.2
PKGZ				S	S	17 19 30.6	+0.3
PUZ	**Puketiti**	**6.19**	**193**	P	Pn	17 18 19.2	+0.3
PUZ				S	S	17 19 33.8	+0.6
RUGZ	**Raukumara Rang**	**6.22**	**198**	P	Pn	17 18 19.3	-0.1
RUGZ				S	S	17 19 32.6	-1.4
WIAZ	**Waiheke Island**	**6.24**	**219**	P	Pn	17 18 20.1	+0.5
CNGZ	**Carnagh Statio**	**6.60**	**193**	P	Pn	17 18 24.1	+0.3
TKGZ	**Te Karaka**	**6.63**	**195**	P	Pn	17 18 23.9	-0.2
TKGZ				S	S	17 19 42.7	0.0
URZ	**Urewera**	**6.65**	**200**	P	Pn	17 18 22.6	-1.8
URZ				S	S	17 19 41.4	-1.8
KARZ	**Kaharoa**	**6.73**	**207**	P	Pn	17 18 26.0	+0.6
RAGZ	**Rawiri**	**6.79**	**198**	P	Pn	17 18 26.2	+0.1
RAGZ				S	S	17 19 46.5	+0.2
MUGZ	**Murupara**	**6.96**	**202**	P	Pn	17 18 27.1	-1.0
MUGZ				S	S	17 19 49.3	-0.6

*IDC **26** 17:56:26.9±1.3, 44.40N×105.26W, h0km, mb1 3.6/5, mb1mx3.4/36, mbtmp3.3/5, ML3.0/4, Error ellipse: s-maj=31.4km s-min=12.2km az=149.0*
*ISCJB **26** 17:56:30.5±0.3, 43.75N±0.02×105.29W±0.03, h0km, Error ellipse: s-maj=3.4km s-min=3.0km az=39.6*
*NEIC **26** 17:56:31.6±0.2, 43.80N×105.25W, h0km, ML3.4, Error ellipse: s-maj=3.0km s-min=2.8km az=53.0, Suspected Mining explosion.*
NEIC 58 km [36 miles] SSE of Gillette.
*ANF **26** 17:56:31.3±0.6, 43.78N×105.32W, ML3.6/11, Error ellipse: s-maj=9.7km s-min=5.7km az=136.0*
ISC 26 17:56:31.4±0.7, 43.77N±0.03×105.33W±0.04, h0km, n100, σ18.37/106, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**69**	*e*Pg	**Pg**	**17 56 49.8**	**-0.9**
RSSD	**Black Hills**	**1.00**	**69**	P	**Pg**	**17 56 50.1**	**-0.6**
	baz=250						
RSSD				S	**Sb**	**17 57 04.8**	**-0.8**
	baz=250						
K22A	**Casper**	**1.42**	**218**	*e*Pn	**Pn**	**17 56 57.6**	**-1.0**
K22A	**Casper**	**1.42**	**218**	P	**Pn**	**17 56 58.0**	**-0.6**
	baz=39						
K22A				S	**Sg**	**17 57 18.0**	**+1.1**
	baz=39						
PHWY	**Pilot Hill**	**2.47**	**182**	*e*Pn	**Pn**	**17 57 13.5**	**+0.4**
RWWY	**Rawlins**	**2.50**	**214**	*e*Pn	**Pn**	**17 57 14.3**	**+0.8**
N23A	**Red Feather La**	**2.91**	**189**	*e*Pn	**Pn**	**17 57 20.2**	**+1.0**
N23A	**Red Feather La**	**2.91**	**189**	P	**Pn**	**17 57 20.0**	**+0.8**
	baz=9.8						
N23A				Sb	**Sb**	**17 58 03.5**	**+3.0**
	baz=9.8						
LAO	**LASA Array**	**2.99**	**348**	*e*Pn	**Pn**	**17 57 20.2**	**+0.1**
LAO	**LASA Array**	**2.99**	**348**	P	**Pn**	**17 57 20.2**	**+0.1**
	baz=166						
LAO				Sb	**Sb**	**17 58 03.5**	**+0.9**
	baz=166						
RLMT	**Red Lodge**	**3.13**	**297**	*e*Pn	**Pn**	**17 57 22.7**	**+0.5**
RLMT	**Red Lodge**	**3.13**	**297**	P	**Pn**	**17 57 22.8**	**+0.6**
	baz=113						
PD31	**Pinedale Array**	**3.24**	**253**	*e*Pn	**Pn**	**17 57 24.9**	**+1.1**
PD31				*e*Sn	**Sb**	**17 58 08.7**	**-1.5**
PDAR	**Pinedale Array**	**3.24**	**253**	Pn	**Pn**	**17 57 24.9**	**+1.1**
	4.2nm,0.3s,baz=67,slow=16,SNR=79						
PDAR				Sn	**Sb**	**17 58 08.7**	**-1.5**
	18nm,0.3s,baz=80,slow=27,SNR=12						
BW06	**Boulder Array**	**3.25**	**253**	*e*Pn	**Pn**	**17 57 24.7**	**+0.9**
BW06	**Boulder Array**	**3.25**	**253**	P	**Pn**	**17 57 24.9**	**+1.1**
	baz=70						
GCMT	**Greycliff**	**3.69**	**305**	*e*Pn	**Pn**	**17 57 30.6**	**+0.7**
OGNE	**Ogallala**	**3.73**	**138**	*e*Pn	**Pn**	**17 57 30.5**	**+0.1**
OGNE	**Ogallala**	**3.73**	**138**	P	**Pn**	**17 57 31.2**	**+0.8**
	baz=321						
LOHW	**Long Hollow**	**3.83**	**269**	*e*Pn	**Pn**	**17 57 33.5**	**+1.7**
H17A	**Grant Village**	**3.83**	**281**	*e*Pn	**Pn**	**17 57 34.2**	**+2.3**
H17A	**Grant Village**	**3.83**	**281**	P	**Pn**	**17 57 32.5**	**+0.6**
	baz=97						
FLWY	**Flagg Ranch**	**3.89**	**276**	*e*Pn	**Pn**	**17 57 34.0**	**+1.3**
MOOW	**Moose Ponds**	**3.92**	**272**	*e*Pn	**Pn**	**17 57 34.9**	**+1.8**
SNOW	**Snow King Moun**	**3.95**	**267**	*e*Pn	**Pn**	**17 57 35.2**	**+1.7**
ISCO	**Idaho Springs**	**3.97**	**183**	*e*Pn	**Pn**	**17 57 34.5**	**+0.7**
ISCO	**Idaho Springs**	**3.97**	**183**	P	**Pn**	**17 57 34.9**	**+1.1**
	baz=3.8						
ISCO				Sb	**Sb**	**17 58 34.5**	**+3.4**
	baz=3.8						
YPP	**Pitchstone Pla**	**3.98**	**279**	*e*Pn	**Pn**	**17 57 35.1**	**+1.2**
REDW	**Red Top Meadow**	**4.03**	**266**	*e*Pn	**Pn**	**17 57 35.8**	**+1.2**
IMW	**Indian Meadow**	**4.06**	**274**	*e*Pn	**Pn**	**17 57 37.0**	**+1.9**
TPAW	**Teton Pass**	**4.09**	**268**	*e*Pn	**Pn**	**17 57 37.1**	**+1.6**
YHH	**Holmes Hill**	**4.09**	**286**	*e*Pn	**Pn**	**17 57 36.6**	**+1.1**
FXWY	**Fox Creek**	**4.13**	**270**	*e*Pn	**Pn**	**17 57 37.5**	**+1.5**
O20A	**White River Ci**	**4.23**	**212**	*e*Pn	**Pn**	**17 57 38.9**	**+1.5**
O20A	**White River Ci**	**4.23**	**212**	P	**Pn**	**17 57 38.3**	**+1.0**
	baz=30						
AHID	**Auburn Hatcher**	**4.33**	**259**	*e*Pn	**Pn**	**17 57 39.2**	**+0.5**
QLMT	**Earthquake Lak**	**4.50**	**286**	*e*Pn	**Pn**	**17 57 40.5**	**-0.6**
SMCO	**Snowmass**	**4.75**	**196**	*e*Pn	**Pn**	**17 57 44.8**	**+0.1**
DGMT	**Dagmar**	**4.77**	**9**	*e*Pn	**Pn**	**17 57 45.6**	**+1.0**
DGMT	**Dagmar**	**4.77**	**9**	P	**Pn**	**17 57 45.6**	**+1.0**
	baz=189						
DGMT				Sb	**Sb**	**17 58 56.5**	**+2.7**
	baz=189						
Q24A	**Divide**	**4.80**	**178**	*e*Pn	**Pn**	**17 57 46.2**	**+0.9**
BOZ	**Bozeman (W)**	**4.85**	**294**	*e*Pn	**Pn**	**17 57 46.6**	**+0.8**
HWUT	**Hardware Ranch**	**5.08**	**247**	*e*Pn	**Pn**	**17 57 49.0**	**0.0**
TCUT	**Toone Canyon**	**5.22**	**242**	*e*Pn	**Pn**	**17 57 51.7**	**+0.8**
EGMT	**Eagleton**	**5.26**	**326**	*e*Pn	**Pn**	**17 57 50.2**	**-1.1**
DLMT	**Dillon**	**5.43**	**290**	*e*Pn	**Pn**	**17 57 52.4**	**-1.4**
HRY	**Holter Researc**	**5.45**	**305**	*e*Pn	**Pn**	**17 57 53.9**	**-0.1**
LRM	**Limekiln Ridge**	**5.47**	**295**	*e*Pn	**Pn**	**17 57 56.1**	**+1.8**
MCMT	**McKenzie Canyo**	**5.50**	**284**	*e*Pn	**Pn**	**17 57 55.0**	**+0.2**
MDND	**Maddock**	**5.72**	**42**	*e*Pn	**Pn**	**17 57 55.1**	**-2.5**
BGNE	**Belgrade**	**5.80**	**112**	*e*Pn	**Pn**	**17 57 57.7**	**-1.1**
SPUT	**South Promonto**	**5.80**	**247**	*e*Pn	**Pn**	**17 57 59.7**	**+0.8**
HVU	**Hansel Valley**	**5.83**	**253**	*e*Pn	**Pn**	**17 58 00.7**	**+1.5**
PV22	**Blue Mesa, Par**	**5.84**	**208**	*e*Pn	**Pn**	**17 58 00.5**	**+1.0**
PV21	**Cone Mtn., Par**	**5.88**	**209**	*e*Pn	**Pn**	**17 58 01.5**	**+1.4**
PV07	**Paradox Valley**	**5.88**	**206**	*e*Pn	**Pn**	**17 58 01.4**	**+1.3**
P17A	**Butcher Ranch,**	**5.90**	**225**	*e*Pn	**Pn**	**17 58 01.3**	**+1.1**
PV23	**Carpenter Ridg**	**5.99**	**209**	*e*Pn	**Pn**	**17 58 02.5**	**+0.8**
PV09	**Paradox Valley**	**5.99**	**210**	*e*Pn	**Pn**	**17 58 02.4**	**+0.8**
PV04	**Paradox Valley**	**6.01**	**208**	*e*Pn	**Pn**	**17 58 03.3**	**+1.5**
SDCO	**Great Sand Dun**	**6.02**	**181**	*e*Pn	**Pn**	**17 58 02.9**	**+0.9**
PV12	**Saucer Basin,**	**6.04**	**207**	*e*Pn	**Pn**	**17 58 01.8**	**-0.4**
PV14	**Lion Creek, Pa**	**6.07**	**209**	*e*Pn	**Pn**	**17 58 02.9**	**+0.2**
PV10	**Paradox Valley**	**6.07**	**209**	*e*Pn	**Pn**	**17 58 03.3**	**+0.7**
SRU	**San Rafael Swe**	**6.07**	**222**	*e*Pn	**Pn**	**17 58 04.3**	**+1.7**
PV20	**West Nyswonger**	**6.08**	**208**	*e*Pn	**Pn**	**17 58 01.9**	**-0.8**
PV11	**David Mesa, Pa**	**6.08**	**207**	*e*Pn	**Pn**	**17 58 04.1**	**+1.3**
PV16	**Nyswonger Mesa**	**6.09**	**208**	*e*Pn	**Pn**	**17 58 04.4**	**+1.6**
PV19	**Morning Glory**	**6.11**	**208**	*e*Pn	**Pn**	**17 58 03.9**	**+0.7**
PV03	**Paradox Valley**	**6.12**	**207**	*e*Pn	**Pn**	**17 58 04.0**	**+0.8**
S22A	**4UR Ranch, Cre**	**6.12**	**191**	*e*Pn	**Pn**	**17 58 04.5**	**+1.1**
PV02	**Paradox Valley**	**6.12**	**206**	*e*Pn	**Pn**	**17 58 04.8**	**+1.5**
PV17	**East Wray Mesa**	**6.13**	**208**	*e*Pn	**Pn**	**17 58 04.6**	**+1.1**
PV18	**Skein Mesa, Pa**	**6.14**	**207**	*e*Pn	**Pn**	**17 58 04.8**	**+1.2**
PV13	**Radium

NLU	North Lily Min	6.31	235	ePn	Pn	17 58 06.3	+0.4
ECSD	EROS Data Cent	6.32	87	ePn	Pn	17 58 05.6	-0.2
PV05	Paradox Valley	6.36	208	ePn	Pn	17 58 05.7	-0.9
BGU	Big Grassy Mou	6.37	246	ePn	Pn	17 58 06.8	0.0
Q16A	Castle Valley	6.54	224	ePn	Pn	17 58 09.7	+0.6
HLID	Hailey	6.59	271	ePn	Pn	17 58 10.4	+0.7
DUG	Dugway, Tooele	6.62	240	ePn	Pn	17 58 09.5	-0.6
T25A	Trinidad	6.66	174	ePn	Pn	17 58 10.7	0.0
MSU	Marysvale	7.36	227	ePn	Pn	17 58 21.6	+1.2
TCRU	Three Creeks R	7.44	229	ePn	Pn	17 58 18.3	-3.1
MTPU	Mount Pierson	7.72	225	ePn	Pn	17 58 25.9	+0.5
ELK	Elko	7.94	251	Pn	Pn	17 58 31.9	+3.5
	0.5nm,0.3s,baz=63,slow=8.7,SNR=8.4						
ELK				Lg	Lg	18 00 44.6	
	0.1nm,0.3s,baz=171,slow=3.7,SNR=3.1						
AGMN	Agassiz Nation	8.00	52	ePn	Pn	17 58 31.3	+2.5
PSUT	Pine Spring	8.29	234	ePn	Pn	17 58 34.7	+1.7
ULM	Lac du Bonnet	9.15	42	Pn	Pn	17 58 30.8	-14
	0.5nm,0.3s,baz=356,slow=13,SNR=1.5						
ULM				Lg	Lg	18 01 04.6	
	baz=313,slow=19,SNR=2.0						
NEW	Newport	9.35	303	Lg	Lg	18 01 08.2	
	baz=270,slow=20,SNR=1.1						
NV01	Mina Array Sit	11.14	246	ePn	Pn	17 59 14.6	+2.4
NVAR	Mina Array Bea	11.14	246	Pn	Pn	17 59 14.6	+2.4
	0.1nm,0.3s,baz=58,slow=12,SNR=3.6						
FFC	Flin Flon	11.18	10	ePn	Pn	17 59 10.7	-1.7
LTX	Lajitas	14.47	174	ePn	P	18 00 02.0	-2.5
TXAR	Lajitas Array	14.47	174	Pn	P	18 00 02.0	-2.5
	0.1nm,0.3s,baz=355,slow=9.1,SNR=2.0						
TXAR				Lg	Lg	18 04 08.0	
	0.1nm,0.3s,baz=18,slow=18,SNR=2.7						
Y49A	Blount Mountai	17.72	118	ePn	Pn	18 00 39.5	-0.1
CPCT	Cooper Cave	18.02	110	ePn	Pn	18 00 43.4	+0.1
Z50A	Ashland	18.42	118	ePn	Pn	18 00 47.9	-0.3

JMA 26 18:34:45.9±0.3, 27°.15N×125°.43E, h203km, M3.5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	1.46	124	P	Pn	18 35 20.3	+0.7
JKE				S	S	18 35 45.4	+0.1
JAGN	Aguni-jima	1.71	109	P	Pn	18 35 22.3	+0.5
JAGN				S	S	18 35 48.9	-0.3
JIKM	Ikemajima	2.22	184	eS	S	18 35 59.0	+0.5
JIH	Iheya	2.27	92	P	Pn	18 35 27.8	+0.4
JIH				eS	S	18 35 57.8	-1.3
JIRB	Irabujima	2.32	186	P	Pn	18 35 28.4	+0.3
JIRB				eS	S	18 36 00.8	+0.4
JJT3	Tamagusuku3	2.33	115	P	Pn	18 35 29.2	+1.0
JJT3				eS	S	18 36 00.3	-0.1
JOGS	Gusukube	2.38	181	P	Pn	18 35 29.3	+0.6
JNTH	Nagotoyohara	2.40	105	P	Pn	18 35 29.1	+0.2
JMJ2	Miyako jima3	2.40	182	P	Pn	18 35 29.5	+0.6
JMJ2				eS	S	18 36 02.5	+0.6
JOW	Kunigami	2.56	96	P	Pn	18 35 30.6	0.0
JOW				S	S	18 36 02.6	-2.3
JTJ	Tarama	2.58	195	P	Pn	18 35 31.1	+0.2
JTJ				eS	S	18 36 04.8	-0.7
JYRO	Yoronjima	2.70	92	P	Pn	18 35 31.9	-0.3
JYRO				S	S	18 36 04.8	-2.8
JISG	Ishigakijimahi	2.74	202	P	Pn	18 35 32.9	+0.1
JISG				eS	S	18 36 07.6	-1.1
JOKE	Okinoerabujima	2.80	85	P	Pn	18 35 33.1	-0.3
JOKE				S	S	18 36 07.8	-2.1
JIJ	Ishigaki jima	3.01	203	P	Pn	18 35 35.3	-0.5
JIJ				S	S	18 36 11.7	-2.5
JKRS	Kuro-shima	3.17	204	P	Pn	18 35 37.3	-0.4
JKRS				S	S	18 36 17.1	-0.6
JTK	Tokunoshima	3.19	78	P	Pn	18 35 37.2	-0.7
HATJ	Hateruma jima	3.41	206	P	Pn	18 35 40.0	-0.6
HATJ				eS	S	18 36 21.4	-1.5
YOJ	Yonaguni jima	3.45	220	P	Pn	18 35 41.6	+0.5
YOJ				eS	S	18 36 25.2	+1.5
JAMN	Amaminishikomi	3.49	71	P	Pn	18 35 40.6	-0.9
JYNG	Yonagunijimaku	3.50	220	P	Pn	18 35 42.1	+0.4

*KRNET **26** 18:47:10.3±0.1, 39°.80N×71°.23E, mb3.2*
*ISCJB **26** 18:47:11.5±0.9, 39°.69N±0°.05×71°.15E±0°.05, h10km, Error ellipse: s-maj=7.7km s-min=4.9km az=24.9*
*NNC **26** 18:47:17.4±4.0, 39°.98N×71°.29E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=30.4km s-min=14.6km az=6.0*
ISC 26 18:47:11.4±1.2, 39°.76N±0°.06×71°.21E±0°.04, h10km, n26, σ2°64/38, 17C-8D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	0.43	315	⇑iP	Pg	18 47 18.6	-1.3
	baz=9.0						
BTK				⇑iS	Sg	18 47 23.6	-1.9
	baz=9.0						
DRK	Karamyk	0.53	121	⇑iP	Pg	18 47 20.9	-1.0
	baz=26						
DRK				⇑iS	Sg	18 47 28.4	-0.5
	baz=26						
ARSB	Arslanbob	2.07	40	⇓iP	Pb	18 47 48.0	-1.2
	baz=41						
ARSB				⇓iS	Sb	18 48 14.5	-0.5
	baz=41						
ARK	Arkit	2.12	15	⇑iP	Pb	18 47 47.9	-2.1
	baz=16						
ARK				⇑iS	Sb	18 48 14.9	-1.5
	baz=16						
TAS	Tashkent	2.15	318	⇓eP	Pb	18 47 48.1	-2.4
	baz=17						
TAS				⇓iS	Sb	18 48 15.9	-1.3
	baz=17						
IUG	Iuzhnay	2.55	340	Pg	Pg	18 47 59.5	-0.8
	7.9nm,0.4s						
IUG				Lg	Lg	18 48 32.7	
	136nm,0.3s						
AML	Almayashu	3.03	38	P	Pb	18 48 03.8	-1.9
	SNR=7.5						
AML	Almayashu	3.03	38	⇓eP	Pb	18 48 03.0	-2.7
	baz=38						
AML				⇓iS	Sb	18 48 40.0	-2.8
	baz=38						
ARLS	Aral	3.16	47	⇑iP	Pn	18 48 03.1	+1.7
	baz=48						
ARLS				⇑iS	Sn	18 48 40.7	+1.4
	baz=48						
MRKS	Merke	3.35	26	Pg	Pg	18 48 15.1	-0.5
	18nm,0.4s						
MRKS				Lg	Lg	18 48 59.7	
	46nm,0.4s						
KK31	Karatay Array	3.39	351	⇑Pn	Pn	18 48 06.9	+2.6
	1.6nm,0.5s,baz=162,slow=12,SNR=56						
KK31				Lg	Lg	18 48 59.0	
	12nm,0.3s,baz=162,slow=30,SNR=13						
BRLS	Borolday	3.43	343	Pg	Pb	18 48 12.4	+0.1
	1.0nm,0.2s						
BRLS				Lg	Lg	18 48 54.2	
	15nm,0.2s						
EKS2	Erkin-Say	3.49	33	⇑eP	Pn	18 48 09.0	+3.1
	baz=33						
EKS2				⇑iS	Sn	18 48 50.1	+2.8
	baz=33						
UCH	Uchtor	3.51	44	P	Pb	18 48 11.1	-2.9
	SNR=6.6						
UCH	Uchtor	3.51	44	⇓eP	Pb	18 48 10.1	-3.9
	baz=45						
UCH				⇓iS	Sn	18 48 52.1	+3.7
	baz=45						
AAK	Ala-Archa	3.80	40	⇑iP	Pn	18 48 13.7	+3.5
	baz=40						
AAK				⇑iS	Sn	18 48 58.1	+3.1
	baz=40						
KZA	Kyzart	3.84	52	P	Pn	18 48 14.7	+3.8
	SNR=8.9						
KZA	Kyzart	3.84	52	⇑iP	Pb	18 48 14.9	-4.6
	baz=52						
KZA				⇑iS	Sn	18 49 00.2	+3.8
	baz=52						
CHMS	Chumysh	4.19	38	⇑eP	Pn	18 48 18.9	+3.4
	baz=39						
CHMS				⇑iS	Sn	18 49 07.3	+2.7
	baz=39						
USP	Ospenovka	4.29	34	P	Pn	18 48 20.1	+3.3
	SNR=14						
TKM2	Tokmak 2	4.57	45	P	Pn	18 48 24.9	+4.1
	SNR=7.0						
KST	Kastek	4.85	46	Pg	Pg	18 48 43.1	-1.3
	4.1nm,0.4s						
KST				Lg	Lg	18 49 47.2	
	7.0nm,0.4s						
DGS	Degeres	4.88	43	Pg	Pg	18 48 43.2	-1.8
	5.8nm,0.6s						
DGS				Lg	Lg	18 49 46.7	
	11nm,0.7s						
KOTS	Kotyrbulak	5.63	50	Pg	Pg	18 48 58.9	-0.4
	3.3nm,0.5s						
KOTS				Lg	Lg	18 50 13.8	
	13nm,0.7s						
KTBS	Karatobe	5.69	44	Pg	Pg	18 48 58.3	-2.1
	1.9nm,0.6s						
KTBS				Lg	Lg	18 50 12.7	
	10.0nm,0.5s						
ARXS	Arharly	6.64	46	Pg	Pg	18 49 16.0	-2.6
	1.6nm,0.5s						
ARXS				Lg	Lg	18 50 44.0	
	2.7nm,0.5s						

*IDC **26** 18:48:06.2±2.5, 4°.04S×102°.79E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/26, mbtmp3.7/5, Error ellipse: s-maj=114.7km s-min=20.9km az=56.0*
*ISCJB **26** 18:48:18.9±0.6, 4°.24S±0°.08×102°.80E±0°.07, h100km, mb3.7/5, Error ellipse: s-maj=13.6km s-min=5.1km az=37.8*
*DJA **26** 18:48:20.0±0.3, 4°.S±3°×10°.3E±°, h102km±4km, M3.7/5, MLv3.7/5*
ISC 26 18:48:19.2±0.9, 4°.13S±0°.09×102°.90E±0°.08, h100km, n22, σ1°62/24, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.24	167	P	Pn	18 48 35.5	+1.9
MNAI				S	Sn	18 48 47.4	+3.1
LHSI	Lahat	0.69	64	P	Pn	18 48 38.7	+2.2
LHSI				S	Sn	18 48 52.1	+2.6
MDSI	Maura Dua	1.32	106	P	Pn	18 48 44.8	+1.5
MDSI				S	Sn	18 49 02.8	+1.2
LWLI	Liwa	1.45	128	P	Pn	18 48 46.8	+1.7
KASI	Kota Agung	2.11	131	P	Pn	18 48 54.4	+1.2
KASI				S	Sn	18 49 19.9	+0.7
KRJI	Kerinci	2.48	324	P	Pn	18 49 00.7	+2.5
PPSI	Pulau Pagai	3.19	295	P	Pn	18 49 09.0	+1.4
SDSI	Sungai Dareh	3.50	335	P	Pn	18 49 12.8	+1.1
CGJI	Cibinong	3.72	132	P	Pn	18 49 14.4	-0.2
PDSI	Padang	4.02	323	P	Pn	18 49 19.5	+0.8
SISI	Saibi	4.72	306	P	Pn	18 49 29.0	+0.8
BKNI	Bangkinang	4.80	337	P	Pn	18 49 30.9	+1.6
CISI	Cisompet, Garu	5.96	125	P	Pn	18 49 44.4	-0.6
GSI	Gunungsitoli	7.58	315	P	Pn	18 50 06.1	-1.0
H08S2	Diego Garcia H	30.45	262	T	T	19 24 35.6	
	baz=84						
H08S3	Diego Garcia H	30.45	262	T	T	19 24 59.8	
	baz=84						
H08S1	Diego Carcia H	30.46	262	T	T	19 24 40.7	
	baz=84						
WRA	Warramunga Arr	34.42	120	P	P	18 54 57.0	-0.4
	0.4nm,0.2s,baz=296,slow=10,SNR=19						
ASAR	Alice Springs	35.66	126	P	P	18 55 07.8	-0.2
	0.3nm,0.5s,baz=297,slow=7.2,SNR=12						
ASAR				PcP	PcP	18 57 34.3	-0.3
	0.2nm,0.4s,baz=308,slow=2.2,SNR=3.7						
SONM	Songino Array	51.83	3	P	P	18 57 16.1	-1.1
	0.4nm,0.6s,baz=198,slow=9.1,SNR=3.4						
MKAR	Makanchi Array	53.88	343	P	P	18 57 30.5	-1.7
	0.2nm,0.4s,baz=142,slow=8.6,SNR=4.4						
ZALV	Zalesovo Beam	59.81	348	P	P	18 58 12.2	-1.7
	0.7nm,0.3s,baz=154,slow=6.1,SNR=3.7						

JMA 26 19:05:25.8±0.3, 24°.57N×123°.24E, h33km±4km, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.23	243	P	Pn	19 05 32.5	-0.2
JYNG	Yonagunijimaku	0.29	246	P	Pb	19 05 33.2	-0.3
JYNG				eS	Sn	19 05 38.5	-0.1
IRIF	Iriomote-Funau	0.50	118	eS	Sb	19 05 43.5	-0.3
HATJ	Hateruma jima	0.73	135	P	Pn	19 05 39.5	-0.2
HATJ				eS	Sn	19 05 48.7	-1.0
JKRS	Kuro-shima	0.78	115	P	Pb	19 05 41.1	+0.2
JKRS				eS	Sn	19 05 50.8	-0.1
JIJ	Ishigaki jima	0.85	104	P	Pn	19 05 41.2	-0.2

TAP 26 19:05:59.6, 23°.74N×121°.45E, h21km±1km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu	0.07	198	P	Pb	19 06 04.4	+0.9
	baz=198						
EGFH				S	Sb	19 06 06.8	+0.7
	baz=198						
ESL	Shilin	0.08	346	*i* P	Pb	19 06 04.2	+0.7
	baz=351						
ESL				*i* S	Sb	19 06 06.7	+0.5
	baz=351						
HGSD	Ruisui	0.25	186	eP	Pb	19 06 05.8	+0.1
	baz=186						
HGSD				eS	Sb	19 06 10.3	+0.4
	baz=186						
EHY	Hungye	0.26	207	P	Pb	19 06 06.5	+0.6
	baz=205						
EHY				S	Sb	19 06 10.6	+0.4
	baz=205						
VWDT	VWDT	0.29	273	eP	Pn	19 06 07.8	-0.8
	baz=272						
VWDT				eS	Sn	19 06 12.7	-1.5
	baz=272						
OWD	Renai	0.33	310	eP	Pb	19 06 07.9	+1.1
	baz=310						
OWD				eS	Sb	19 06 12.7	+0.9
	baz=310						
YULB	Yu-li	0.37	202	eP	Pb	19 06 07.8	+0.3
	baz=202						
YULB				eS	Sb	19 06 13.7	+1.0
	baz=202						
CHGB	Renai	0.41	321	eP	Pb	19 06 09.3	+1.2
	baz=321						
CHGB				eS	Sb	19 06 15.1	+1.1
	baz=321						
TWF1	Yuli	0.41	200	P	Pb	19 06 08.4	+0.3
	baz=199						
TWF1				S	Sn	19 06 16.1	-1.3
	baz=199						
WHF	Hehuan Shan	0.44	337	eP	Pb	19 06 09.0	+0.2
	baz=337						
WHF				S	Sb	19 06 15.5	+0.5
	baz=337						
ETLH	Xiulin Townshi	0.47	3	eP	Pb	19 06 09.4	+0.3
	baz=3.0						
ETLH				eS	Sb	19 06 15.4	-0.2
	baz=3.0						
YUS	Yu-Shan	0.52	242	P	Pb	19 06 10.8	+0.4
	baz=241						
YUS				S	Sb	19 06 18.6	+0.9
	baz=241						
WHYT	Xinyi Township	0.55	266	eP	Pb	19 06 11.2	+0.5
	baz=265						
WHYT				eS	Sn	19 06 19.9	-1.0
	baz=265						
TDCB	Techi	0.58	332	eP	Pb	19 06 11.8	+0.6
	baz=332						
TDCB				eS	Sb	19 06 19.1	0.0
	baz=332						

DJA 26 19:07:28.3±0.8, 1°.N±4°×12°.0E±°, h71km±13km, M3.8/5, MLv3.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	Ampana	2.00	136	P	Pn	19 07 59.4	-0.6
APSI				S	Sn	19 08 23.7	-0.4
LUWI	Luwuk	2.96	122	P	Pn	19 08 12.2	-0.8
LUWI				S	Sn	19 08 49.2	+1.7
TTSI	Tana Toraja	3.59	187	P	Pn	19 08 23.1	+1.5
TTSI				S	Sn	19 09 05.3	+2.5

*SOME **26** 19:12:54.3, 41°.03N×78°.72E, h20km*

*KRNET **26** 19:12:54.4±0.1, 41°.04N×78°.71E, mb2.9*
*NNC **26** 19:12:55.2±1.7, 41°.14N×78°.71E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=11.8km s-min=8.6km az=165.0*
ISC 26 19:12:56.2±2.3, 41°.0N±0°.1×78°.67E±0°.06, h10km, n40, σ1°48/67, 17C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.47	352	⇑iP	Pn	19 13 21.4	-1.5
	baz=51						
PRZ				⇑iS	Sn	19 13 41.1	-1.1
	baz=51						
KDJ	Kajisay	1.57	315	⇓iP	Pn	19 13 23.5	-0.8
	baz=14						
KDJ				⇓iS	Sb	19 13 44.7	-0.7
	baz=14						
SATY	Saty	2.04	355	Pg	Pb	19 13 31.6	-1.8
	50nm,0.5s						
SATY				Lg	Lg	19 13 58.8	
	95nm,0.7s						
SATY	Saty	2.04	355	eP	Pb	19 13 31.6	-1.8
	46nm,0.6s						
SATY				eS	Sb	19 13 58.5	-0.3
	110nm,0.4s						
UZB	Uzynbulak	2.13	7	Pg	Pn	19 13 32.1	+0.2
	16nm,0.3s						
UZB				Lg	Lg	19 13 59.6	
	46nm,0.5s						
UZB	Uzynbulak	2.13	7	eP	Pn	19 13 32.1	+0.2
	16nm,0.3s						
UZB				eS	Sb	19 13 59.6	-1.9
	46nm,0.5s						
ZHN	Zhinishke	2.14	355	eP	Pb	19 13 33.1	-2.1
	37nm,0.4s						
ZHN				eS	Sb	19 14 00.7	-1.1
	47nm,0.2s						
ULHL	Ulahol	2.19	305	⇓eP	Pb	19 13 33.6	-2.4
	baz=4.0						
ULHL				⇓iS	Sb	19 14 01.3	-2.0
	baz=4.0						
PDGK	Podgornoye	2.38	15	Pg	Pn	19 13 34.9	-0.4
	7.5nm,0.2s						
PDGK				Lg	Lg	19 14 04.3	
	35nm,0.5s						
PDGK	Podgornoye	2.38	15	⇓Pn	Pn	19 13 34.4	-0.9
	5.1nm,0.3s						
PDGK				⇑Lg	Lg	19 14 05.0	
	38nm,0.4s						
PDGK	Podgornoye	2.38	15	⇓iP	Pn	19 13 35.0	-0.4
	baz=14						
PDGK				⇓iS	Sn	19 14 05.6	+1.0
	baz=14						
TNSS	Tian-Shan	2.38	328	eP	Pb	19 13 38.3	-1.1
	6.1nm,0.3s						
TNSS				eS	Sb	19 14 09.8	+0.8
	22nm,0.5s						
KPKS	Kokpek	2.44	0	eP	Pn	19 13 36.9	+0.8
	30nm,0.3s						
KPKS				eS	Sn	19 14 07.3	+1.4
	158nm,0.5s						
MDOK	Medeo	2.45	331	eP	Pb	19 13 37.6	-2.7
	8.0nm,0.4s						
MDOK				eS	Sb	19 14 08.6	-2.1
	34nm,0.6s						
KOTS	Kotyrbulak	2.49	333	Pg	Pb	19 13 38.3	-2.8
	5.4nm,0.2s						
KOTS				Lg	Lg	19 14 10.0	
	32nm,0.4s						
KOTS	Kotyrbulak	2.49	333	eP	Pb	19 13 38.3	-2.8
	3.1nm,0.2s						
KOTS				eS	Sb	19 14 10.0	-1.9
	27nm,0.5s						
BOOM	Boomskoye usch	2.51	306	⇑iP	Pn	19 13 38.0	+0.8
	baz=6.0						
BOOM				⇑iS	Sn	19 14 09.6	+1.6
	baz=6.0						
MTBS	Maitube	2.68	322	eP	Pb	19 13 43.6	-0.7
	2.9nm,0.1s						
MTBS				eS	Sb	19 14 18.8	+1.5
	12nm,0.4s						
KZA	Kyzart	2.77	293	⇑iP	Pn	19 13 41.3	+0.3
	baz=93						
KZA				⇑iS	Sn	19 14 16.0	+1.2
	baz=93						
KST	Kastek	2.85	316	Pg	Pb	19 13 46.8	-0.3
	5.9nm,0.3s						
KST				Lg	Lg	19 14 24.7	
	14nm,0.5s						
KST	Kastek	2.85	316	eP	Pb	19 13 46.8	-0.3
	5.4nm,0.3s						
KST				eS	Sb	19 14 24.7	+2.5
	14nm,0.5s						
TKM2	Tokmak 2	2.97	311	⇑Pg	Pb	19 13 46.8	-2.5
	1.2nm,0.4s						
TKM2				⇑Lg	Lg	19 14 26.9	
	12nm,0.6s						
TKM2	Tokmak 2	2.97	311	⇑eP	Pn	19 13 43.9	+0.3
	baz=10.0						
TKM2				⇑iS	Sn	19 14 20.3	+0.9
	baz=10.0						
MNBS	Baschi	3.05	356	Pg	Pb	19 13 49.6	-1.1
MNBS				Lg	Lg	19 14 29.8	
MNBS	Baschi	3.05	356	eP	Pb	19 13 49.6	-1.1
	2.0nm,0.2s						
MNBS				eS	Sb	19 14 29.8	+1.7
	19nm,0.3s						
KTBS	Karatobe	3.06	332	Pg	Pb	19 13 49.7	-1.0
	3.2nm,0.3s						
KTBS				Lg	Lg	19 14 29.5	
	35nm,0.3s						
KTBS	Karatobe	3.06	332	eP	Pb	19 13 49.7	-1.0
	3.2nm,0.3s						
KTBS				eS	Sb	19 14 29.5	+1.4
	35nm,0.3s						
CHKK	Chushkaly	3.08	337	eP	Pb	19 13 50.1	-1.0
	2.8nm,0.3s						
CHKK				eS	Sb	19 14 29.9	+1.1
	22nm,0.4s						
DGS	Degeres	3.09	317	Pg	Pb	19 13 49.9	-1.4
	6.1nm,0.4s						
DGS				Lg	Lg	19 14 29.7	
	15nm,0.5s						
DGS	Degeres	3.09	317	eP	Pb	19 13 49.9	-1.4
	6.1nm,0.4s						
DGS				eS	Sb	19 14 29.7	+0.7
	15nm,0.5s						
KBK	Karagaybulak	3.22	302	⇑iP	Pn	19 13 47.6	+0.6
	baz=1.0						
KBK				⇑iS	Sn	19 14 26.6	+1.1
	baz=1.0						
ARXS	Arharly	3.24	349	Pg	Pb	19 13 53.0	-0.9
	4.3nm,0.5s						
ARXS				Lg	Lg	19 14 35.1	
	13nm,0.5s						
ARXS	Arharly	3.24	349	eP	Pb	19 13 53.0	-0.9
	4.3nm,0.5s						
ARXS				eS	Sb	19 14 35.0	+1.6
	13nm,0.5s						
UCH	Uchtor	3.34	292	⇑iP	Pn	19 13 49.6	+0.8
	baz=92						
UCH				⇑iS	Sn	19 14 29.7	+0.9
	baz=92						
ARLS	Aral	3.37	286	⇑iP	Pn	19 13 49.8	+0.8
	baz=86						
ARLS				⇑iS	Sn	19 14 30.1	+0.9
	baz=86						
DJR	Jarkent	3.40	14	Pg	Pb	19 13 55.0	-1.6
	5.8nm,0.3s						
DJR				Lg	Lg	19 14 38.5	
	13nm,0.3s						
DJR	Jarkent	3.40	14	eP	Pb	19 13 55.0	-1.6
	5.8nm,0.3s						
DJR				eS	Sb	19 14 38.5	+0.5
	13nm,0.3s						
FRU1	Bishkek	3.50	302	⇓iP	Pn	19 13 51.3	+0.6
	baz=2.0						
FRU1				⇓iS	Sn	19 14 33.0	+0.8
	baz=2.0						
KAPS	Kapalarasan	4.28	6	Pg	Pb	19 14 12.2	+0.6
	1.3nm,0.4s						
KAPS				Lg	Lg	19 15 07.9	
	9.3nm,0.5s						
KAPS	Kapalarasan	4.28	6	eP	Pb	19 14 12.2	+0.6
	1.3nm,0.4s						
KAPS				eS	Sb	19 15 07.9	+4.5
	9.3nm,0.5s						

IDC 26 19:18:04.0±8.0, 21°.53S×11°.74W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.5/24, mbtmp3.6/2, MS3.3/1, Ms1 3.4/1, ms1mx2.6/25, Error ellipse: s-maj=171.5km s-min=141.4km az=48.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**36.90**	**22**	P	P	19 25 14.4	-0.1
	1.1nm,0.6s,baz=204,slow=9.3,SNR=8.5						
LPAZ	**La Paz**	**53.37**	**265**	LR	LR	19 47 51.3	
	comp=Z,31nm,21.4s,baz=118,slow=34						
ESDC	**Sonseca Array**	**61.31**	**7**	P	P	19 28 21.3	0.0
	0.3nm,0.5s,baz=196,slow=7.2,SNR=3.6						
BRTR	**Keskin Array B**	**74.20**	**35**	P	P	19 29 42.8	0.0
	0.6nm,0.8s,baz=213,slow=6.9,SNR=4.1						

*ISCJB **26** 19:23:11.9±0.6, 0°.04N±0°.06×123°.82E±0°.03, h110km, mb3.4/6, Error ellipse: s-maj=8.3km s-min=4.3km az=162.5*
*IDC **26** 19:23:13.2±2.2, 0°.14N×123°.81E, h132km±22km, mb3.2/6, mb1 3.4/9, mb1mx3.2/32, mbtmp3.7/9, MS2.5/1, Ms1 2.5/1, ms1mx2.3/13, Error ellipse: s-maj=20.1km s-min=14.2km az=63.0*
*DJA **26** 19:23:14.9±0.3, 0°S±2°×12°4E±°, h69km±13km, M4.1/13, mb4.0/7, mB4.5/1, MLv4.2/13, Mw(mB)3.7/1*
ISC 26 19:23:11.5±0.7, 0°.11N±0°.06×123°.81E±0°.05, h110km, n22, σ1§97/32, mb3.3/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.54**	**222**	P	**Pn**	**19 23 39.7**	**+0.9**
LUWI				S	**Sn**	**19 23 58.5**	**-1.1**
APSI	**Ampana**	**2.38**	**245**	P	**Pn**	**19 23 51.4**	**+2.0**
SANI	**Sanana**	**3.06**	**135**	P	**Pn**	**19 23 57.5**	**-0.9**
SANI				S	**Sn**	**19 24 30.9**	**-3.6**
TNTI	**Ternate**	**3.62**	**80**	P	**Pn**	**19 24 07.3**	**+1.5**
TNTI				S	**Sn**	**19 24 51.0**	**+3.1**
SGSI	**Sangihe**	**3.95**	**26**	P	**Pn**	**19 24 14.4**	**+4.2**
NLAI	**Namlea**	**4.68**	**135**	P	**Pn**	**19 24 21.4**	**+1.3**
NLAI				S	**Sn**	**19 25 11.9**	**-1.5**
TTSI	**Tana Toraja**	**5.07**	**232**	P	**Pn**	**19 24 27.6**	**+2.3**
SPSI	**Sidrap Palu**	**5.71**	**225**	P	**Pn**	**19 24 36.6**	**+2.6**
SPSI				S	**Sn**	**19 25 39.7**	**+1.3**
MSAI	**Masohi**	**6.17**	**124**	P	**Pn**	**19 24 43.0**	**+2.8**
	14nm,0.8s						
MSAI				S	**Sn**	**19 25 50.8**	**+1.4**
	14nm,0.8s						
KAPI	**Kappang**	**6.50**	**218**	P	**Pn**	**19 24 46.9**	**+2.2**
	2.1nm,0.3s,baz=17,slow=14,SNR=3.1						
KAPI				S	**Sn**	**19 25 57.9**	**+0.4**
	1.3nm,0.3s,baz=90,slow=19,SNR=2.6						
BKSI	**Bulukumba**	**6.53**	**214**	P	**Pn**	**19 24 47.4**	**+2.3**
	5.4nm,0.7s						
DAV	**Davao City (W)**	**7.14**	**14**	LR	LR	19 28 30.0	
	comp=Z,37nm,19.1s,baz=213,slow=45						
SIJI	**Sorong**	**7.52**	**97**	P	**Pn**	**19 25 00.5**	**+1.9**
	3.4nm,0.3s,baz=210,slow=18,SNR=16						
SIJI				S	**Sn**	**19 26 24.3**	**+1.9**
	0.2nm,0.3s,baz=287,slow=19,SNR=2.5						
EDFI	**Ende, Flores**	**9.05**	**193**	P	**Pn**	**19 25 22.0**	**+2.6**
FITZ	**Fitzroy Crossi**	**18.18**	**174**	P	**P**	**19 27 16.4**	**+0.6**
	0.2nm,0.3s,baz=14,slow=9.1,SNR=4.7						
WRA	**Warramunga Arr**	**22.44**	**153**	P	**P**	**19 28 01.2**	**-0.4**
	0.8nm,0.5s,baz=337,slow=12,SNR=13						
WRA				PcP	**PcP**	**19 31 51.4**	**-0.9**
	0.8nm,0.9s,baz=328,slow=2.7,SNR=3.7						
ASAR	**Alice Springs**	**25.59**	**158**	P	**P**	**19 28 30.4**	**-0.3**
	0.2nm,0.5s,baz=344,slow=8.6,SNR=9.1						
ASAR				PcP	**PcP**	**19 31 58.5**	**-0.6**
	0.4nm,0.4s,baz=347,slow=2.4,SNR=11						
CMAR	**Chiang Mai Arr**	**30.48**	**308**	P	**P**	**19 29 14.1**	**-0.1**
	0.2nm,0.6s,baz=122,slow=6.5,SNR=3.5						
USRK	**Ussuriysk Ar.**	**44.50**	**8**	P	**P**	**19 31 11.6**	**-0.4**
	1.4nm,0.7s,baz=196,slow=7.9,SNR=2.9						
SONM	**Songino Array**	**49.89**	**345**	P	**P**	**19 31 52.6**	**-1.3**
	0.2nm,0.5s,baz=139,slow=7.7,SNR=2.1						
MKAR	**Makanchi Array**	**58.95**	**328**	P	**P**	**19 32 58.4**	**-1.0**
	1.6nm,0.5s,baz=123,slow=8.6,SNR=29						
MKAR				PcP	**PcP**	**19 33 45.4**	**-2.0**
	0.5nm,0.5s,baz=132,slow=3.2,SNR=6.3						
TORD	**Torodi Ar. Bea**	**121.16**	**285**	PKP	**PKPdf**	**19 41 50.8**	**-1.7**
	12nm,0.4s,baz=65,slow=1.9,SNR=4.4						

MAN 26 19:48:04.4, 7°.74N×124°.69E, h7km, mb4.0, ML2.8, MS2.5, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.68**	**220⇑**	*i* P	Pg	19 48 17.9	+0.4
CTBH				*i* S	Sb	19 48 28.1	-0.1
CGP	**Cagayan de Oro**	**0.71**	**1⇑**	*e*P	Pg	19 48 17.9	-0.2
CGP				*e*S	Sn	19 48 32.1	+0.1
SKMP	**Bagumbayan, Su**	**1.22**	**187**	*e*P	Pb	19 48 27.2	-0.7
SKMP				*e*S	Sn	19 48 44.4	-0.3
IPIL	**Ipil**	**2.10**	**271**	*e*P	Pb	19 48 41.6	-1.2
IPIL				*e*S	Sn	19 49 07.0	+0.7

*ISCJB **26** 19:59:02.6±0.5, 40°.53N±0°.03×43°.01E±0°.04, h7km±6km, Error ellipse: s-maj=5.5km s-min=4.4km az=28.8*
*DDA **26** 19:59:02.2, 40°.52N×43°.03E, h7km±2km, ML2.7*
*ISK **26** 19:59:02.1, 40°.55N×43°.03E, h7km, ML2.0/7*
ISC 26 19:59:02.1±1.1, 40°.54N±0°.03×43°.02E±0°.03, h9km±9km, n17, σ0§66/23, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARS	**Kars**	**0.10**	**25**	PG	**Pg**	**19 59 04.8**	**+0.1**
DIGO	**Kars**	**0.29**	**115**	*i* P	**Pg**	**19 59 08.7**	**+0.6**
DIGO				*i* S	**Sb**	**19 59 13.4**	**-1.4**
DIGO				IAML_P			
	comp=Z,18μm,0.2s						
EAK	**Akyaka**	**0.47**	**71**	*i* P	**Pb**	**19 59 12.4**	**-0.2**
EAK				*i* S	**Sb**	**19 59 19.6**	**-0.1**
SENK	**Senkaya-Erzuru**	**0.51**	**273**	PG	**Pg**	**19 59 12.8**	**+0.7**
EATA	**Eleskirt**	**0.79**	**211**	*i* P	**Pb**	**19 59 17.9**	**-0.3**
EATA				*i* S	**Sg**	**19 59 27.0**	**-0.6**
EATA				IAML_P			
	comp=Z,2μm,0.3s						
AKH	**Akhalkalaki**	**0.94**	**22**	PG	**Pg**	**19 59 20.3**	**+0.1**
AKH				SG	**Sb**	**19 59 33.4**	**+0.1**
AGRB	**Hanur-Agry**	**0.96**	**181**	PG	**Pb**	**19 59 21.3**	**+0.3**
AGRB				SG	**Sn**	**19 59 35.3**	**-0.5**
EPOS	**Posof**	**0.99**	**347**	*i* P	**Pn**	**19 59 22.9**	**+0.6**
DAGI	**Agillar**	**1.00**	**303**	*i* P	**Pn**	**19 59 22.7**	**+0.3**
DAGI				IAML_P			
	comp=Z,652nm,0.2s						
KOPR	**Koprukoy-ERZUR**	**1.05**	**239**	PG	**Pg**	**19 59 21.7**	**-0.6**
KOPR				SG	**Sn**	**19 59 38.0**	**+0.1**
DBAD	**Bademkaya**	**1.12**	**296**	*i* P	**Pg**	**19 59 23.8**	**+0.2**
DBAD				IAML_P			
	comp=Z,576nm,0.2s						
TUTA	**Tutak**	**1.15**	**188**	*i* P	**Pb**	**19 59 24.2**	**+0.1**
GNI	**Garni**	**1.37**	**106**	PN	**Pn**	**19 59 26.9**	**-0.6**
BCA	**Borcka**	**1.40**	**311**	PN	**Pb**	**19 59 28.4**	**+0.1**
BATM	**Batumi**	**1.46**	**317**	PN	**Pb**	**19 59 29.8**	**+0.3**
CLDR	**Caldiran**	**1.55**	**153**	PN	**Pb**	**19 59 31.3**	**+0.2**
CLDR	**Caldiran**	**1.55**	**153**	*i* P	**Pg**	**19 59 33.8**	**+1.9**

*KRSC **26** 20:25:57.2±1.9, 48°.06N×156°.21E, h18km±38km, ML4.1*
*IDC **26** 20:26:01.1±4.8, 48°.34N×154°.30E, h72km±40km, mb3.1/4, mb1 3.4/5, mb1mx3.1/37, mbtmp3.5/5, ML2.7/1, MS1.9/1, Ms1 1.9/1, ms1mx1.8/13, Error ellipse: s-maj=60.8km s-min=23.5km az=150.0*
ISC 26 20:25:56.2±1.4, 48°.0N±0°.1×154°.9E±0°.2, h33km, n27, σ1§97/31, mb3.3/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.80**	**16**	*e*P	**Pn**	**20 26 39.0**	**+0.4**
SKR				*e*S	**Sn**	**20 27 10.1**	**-1.0**
PAU	**Pauzhetka**	**3.68**	**19**	*e*P	**Pn**	**20 26 53.4**	**+2.7**
PAU				*e*S	**Sn**	**20 27 32.9**	**0.0**
KDTR	**Khodutka, Kamc**	**4.33**	**27**	*e*P	**Pn**	**20 27 00.2**	**+0.6**
KDTR				*e*S	**Sn**	**20 27 48.0**	**-0.9**
MTVR	**Mutnovka**	**4.95**	**24**	*e*P	**Pn**	**20 27 09.0**	**+0.6**
MTVR				*e*S	**Sn**	**20 28 04.7**	**+0.2**
RUS	**Russkaya**	**5.00**	**26**	*e*P	**Pn**	**20 27 09.4**	**+0.5**
RUS				*e*S	**Sn**	**20 28 04.0**	**-1.5**
KRMR	**Karymshinskiy**	**5.25**	**22**	*e*P	**Pn**	**20 27 15.2**	**+2.9**
PETK	**Petropavlovsk-**	**5.41**	**18**	P	**Pn**	**20 27 17.0**	**+2.5**
	1.3nm,0.3s,baz=175,slow=11,SNR=43						
PETK				LR	LR	20 29 52.4	
	comp=Z,14nm,21.6s,baz=176,slow=44						
DALK	**Dalny**	**5.60**	**25**	*e*P	**Pn**	**20 27 18.5**	**+1.4**
DALK				*e*S	**Sn**	**20 28 18.9**	**-1.3**
UGLR	**Uglovaya**	**5.78**	**24**	*e*P	**Pn**	**20 27 22.0**	**+2.4**
AVH	**Avacha**	**5.80**	**23**	*e*P	**Pn**	**20 27 23.1**	**+3.1**
AVH				*e*S	**Sn**	**20 28 26.0**	**+0.6**
KRER	**Koryakskii**	**5.84**	**23**	*e*P	**Pn**	**20 27 22.7**	**+2.1**
SDLR	**Sedlovina**	**5.86**	**24**	*e*P	**Pn**	**20 27 22.8**	**+2.1**
SDLR				S	**Sn**	**20 28 26.4**	**-0.3**
KRX	**Arik**	**5.87**	**23**	*e*P	**Pn**	**20 27 23.4**	**+2.5**
GNL	**Ganaly**	**6.01**	**18**	*e*P	**Pn**	**20 27 25.5**	**+2.6**
SPN	**Mys Shipunski**	**6.05**	**31**	*e*P	**Pn**	**20 27 25.0**	**+1.7**
SPN				*e*S	**Sn**	**20 28 29.9**	**-1.5**
MKZ	**Mys Kozlova**	**7.83**	**31**	*e*P	**Pn**	**20 27 47.7**	**0.0**
MKZ				*e*S	**Sn**	**20 29 10.2**	**-4.9**
KBTR	**Krutoberegovo**	**9.55**	**28**	*e*P	**Pn**	**20 28 12.3**	**+1.1**
KSRS	**Korea Array**	**22.33**	**252**	P	**P**	**20 30 50.0**	**-0.9**
	0.5nm,0.5s,baz=52,slow=10,SNR=6.6						
H11N2	**WAKE ISLAND Hy**	**29.84**	**157**	T	T	21 03 43.2	
	baz=344,slow=76,SNR=97						
H11N1	**WAKE ISLAND Hy**	**29.86**	**157**	T	T	21 03 43.8	
	baz=344,slow=76,SNR=149						
H11N3	**WAKE ISLAND Hy**	**29.86**	**157**	T	T	21 03 43.9	
	baz=344,slow=76,SNR=97						
H11S1	**WAKE ISLAND Hy**	**30.96**	**158**	T	T	21 05 05.8	
	baz=344,slow=76,SNR=367						
H11S3	**WAKE ISLAND Hy**	**30.97**	**158**	T	T	21 05 05.6	
	baz=344,slow=76,SNR=527						
H11S2	**WAKE ISLAND Hy**	**30.98**	**158**	T	T	21 05 06.5	
	baz=344,slow=76,SNR=349						
ILAR	**Eielson Array**	**34.81**	**40**	P	**P**	**20 32 44.0**	**+0.6**
	0.2nm,0.6s,baz=264,slow=6.3,SNR=3.8						
FINES	**FINESS Array B**	**63.41**	**335**	P	**P**	**20 36 19.4**	**-2.5**
	0.5nm,0.5s,baz=38,slow=7.0,SNR=3.5						
TXAR	**Lajitas Array**	**75.83**	**62**	P	**P**	**20 37 40.9**	**+1.7**
	0.1nm,0.4s,baz=308,slow=4.4,SNR=2.4						

TRN 26 20:29:50.3, 14°.23N×59°.59W, h5km, MD3.8, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**1.08**	**178**	*e*P	Pn	20 30 13.9	+1.8
BBGH				*e*S	Sn	20 30 30.5	+3.0
BBSP	**Saint Philip**	**1.13**	**173**	*e*P	Pn	20 30 14.9	+2.2
BBSP				*e*S	Sn	20 30 32.0	+3.3
MPOM	**Morne Pois Mar**	**1.24**	**280**	*e*P	Pn	20 30 15.8	+1.4
MVM	**Montagne Vaucl**	**1.30**	**284**	*e*P	Pg	20 30 16.3	+1.0
SLBI	**Saint Lucia, B**	**1.35**	**261**	*e*P	Pg	20 30 17.6	+1.3
SLBI				*e*S	Sn	20 30 37.8	+3.6
LPMF	**Morne Lapointe**	**1.37**	**285**	*e*P	Pg	20 30 17.1	+0.5
MCLT	**Moule a Chique**	**1.41**	**249**	*e*P	Pb	20 30 17.2	+0.1
ZAM	**Aeronautique**	**1.43**	**284**	*e*P	Pg	20 30 18.0	+0.2
TRMF	**Trois Ilets**	**1.44**	**282**	*e*P	Pg	20 30 18.7	+0.7
BIM	**Bigot**	**1.46**	**281**	*e*P	Pg	20 30 18.7	+0.4
FDF	**Fort de France**	**1.59**	**288**	*e*P	Pb	20 30 20.3	+0.1
FDF				*e*S	Sg	20 30 42.9	+1.5
BAMF	**Morne Balai**	**1.61**	**291**	*e*P	Pg	20 30 21.2	-0.1
GBMF	**Grand Be**	**1.62**	**290**	*e*P	Pg	20 30 21.6	+0.1
CXM	**Morne La Croix**	**1.63**	**291**	*e*P	Pg	20 30 22.0	+0.4
PML	**Morne Lenard**	**1.63**	**290**	*e*P	Pg	20 30 21.7	0.0
PCM	**Pelee Case Pet**	**1.67**	**291**	*e*P	Pg	20 30 22.3	0.0
SVCV	**St. Vincent, C**	**1.78**	**238**	*e*P	Pb	20 30 23.6	+0.1
SVCV				*e*S	Sg	20 30 48.2	+0.5
SVV	**Soufriere Volc**	**1.82**	**240**	*e*P	Pb	20 30 24.2	+0.1
SVV				*e*S	Sg	20 30 48.6	-0.2
SVB	**Belmont**	**1.87**	**240**	*e*P	Pb	20 30 24.7	-0.3
SVB				*e*S	Sg	20 30 49.7	-0.9
TDBA	**Terre de Bas,**	**2.54**	**309**	*e*P	Pn	20 30 34.3	+2.1
CBE	**Ff, Capester**	**2.67**	**313**	*e*P	Pn	20 30 35.5	+1.6

*IDC **26** 20:33:18.1±1.5, 34°.33N×25°.21E, h0km, mb3.5/2, mb1 3.5/3, mb1mx3.2/39, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=51.0km s-min=26.0km az=141.0*
*ISCJB **26** 20:33:20.1±1.4, 34°.20N±0°.06×25°.15E±0°.05, h19km±7km, mb3.5/3, Error ellipse: s-maj=10.8km s-min=6.2km az=171.7*
*ATH **26** 20:33:22.4, 34°.42N×25°.08E, h28km±1km, ML2.7/7, Error ellipse: s-maj=5.0km s-min=1.6km az=353.0*
*THE **26** 20:33:22.5, 34°.39N×25°.10E, h0km, ML2.7/6, Error ellipse: s-maj=1.7km s-min=0.6km az=171.0*
ISC 26 20:33:20.1±2.0, 34°.30N±0°.07×25°.12E±0°.04, h8km±11km, n28, σ0§79/40, mb3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.76**	**340**	P	**Pg**	**20 33 35.2**	**+0.4**
SIVA				S	**Sb**	**20 33 45.9**	**-0.3**
SIVA	**Sivas**	**0.76**	**340**	P	**Pb**	**20 33 35.4**	**-0.3**
SIVA				S	**Sg**	**20 33 44.9**	**+0.2**
SIVA				AML	AML	20 33 47.7	
	comp=E,4583μm,0.6s						
SIVA				AML	AML	20 33 54.6	
	comp=N,3141μm,0.6s						
TMBK	**Timbaki Herakl**	**0.83**	**339**	P	**Pb**	**20 33 36.9**	**+0.2**
TMBK				S	**Sb**	**20 33 48.9**	**+0.9**
LAST	**Lasithi**	**0.91**	**19**	P	**Pb**	**20 33 38.3**	**+0.1**
LAST				S	**Sn**	**20 33 51.6**	**-1.1**
LAST	**Lasithi**	**0.91**	**19**	P	**Pb**	**20 33 38.2**	**+0.1**
LAST				AML	AML	20 33 59.4	
	comp=E,473μm,0.7s						
LAST				AML	AML	20 34 03.6	
	comp=N,439μm,0.7s						
KSTL	**Kastelli Herak**	**1.00**	**358**	P	**Pb**	**20 33 38.6**	**-0.8**
KSTL				S	**Sg**	**20 33 52.0**	**-0.4**
IDI	**Anoyia**	**1.00**	**349**	P	**Pg**	**20 33 39.5**	**0.0**
IDI				AML	AML	20 33 55.3	
	comp=N,434μm,0.6s						
IDI				AML	AML	20 34 01.0	
	comp=E,506μm,0.6s						
GVD	**Gavdhos**	**1.01**	**303**	P	**Pn**	**20 33 40.9**	**+0.3**
GVD				S	**Sn**	**20 33 55.4**	**+0.3**
GVD	**Gavdhos**	**1.01**	**303**	P	**Pb**	**20 33 40.2**	**+0.3**
GVD				AML	AML	20 33 59.5	
	comp=E,1834μm,0.5s						
GVD				AML	AML	20 33 59.7	
	comp=N,1948μm,0.5s						
GVDS	**Gavdos**	**1.01**	**303**	P	**Pn**	**20 33 41.2**	**+0.6**
GVDS				S	**Sn**	**20 33 55.8**	**+0.7**
STIA	**Sitia Lasithi**	**1.20**	**41**	P	**Pn**	**20 33 44.2**	**+0.9**
STIA				S	**Sn**	**20 34 00.9**	**+1.1**
ZKR	**Zakros**	**1.21**	**48**	P	**Pn**	**20 33 44.6**	**+1.2**
ZKR				S	**Sn**	**20 34 01.5**	**+1.4**
ZKR	**Zakros**	**1.21**	**48**	P	**Pn**	**20 33 44.7**	**+1.2**
ZKR				S	**Sn**	**20 34 00.8**	**+0.8**
ZKR				AML	AML	20 34 08.4	
	comp=E,489μm,0.7s						
ZKR				AML	AML	20 34 14.3	
	comp=N,224μm,0.5s						
VAM	**Vamos**	**1.34**	**326**	P	**Pn**	**20 33 45.3**	**+0.1**
VAM				S	**Sn**	**20 34 04.3**	**+1.1**
VAM	**Vamos**	**1.34**	**326**	P	**Pn**	**20 33 45.2**	**0.0**
VAM				AML	AML	20 34 09.2	
	comp=E,685μm,0.5s						
VAM				AML	AML	20 34 12.1	
	comp=N,655μm,0.5s						
IMMV	**Iera Moni Meta**	**1.49**	**321**	P	**Pb**	**20 33 48.4**	**+0.3**
IMMV				S	**Sg**	**20 34 08.0**	**-0.1**
IMMV	**Iera Moni Meta**	**1.49**	**321**	P	**Pb**	**20 33 48.2**	**+0.1**
IMMV				AML	AML	20 34 17.4	
	comp=E,575μm,0.5s						
IMMV				AML	AML	20 34 25.3	
	comp=N,558μm,0.5s						
KARP	**Karpathos**	**2.09**	**53**	P	**Pb**	**20 33 58.2**	**-0.1**
THR3	**Thira Island,**	**2.12**	**6**	P	**Pn**	**20 33 57.0**	**+1.1**
IOSP	**Ios island**	**2.42**	**3**	P	**Pn**	**20 34 00.1**	**+0.1**
MHLO	**Agia Marina, M**	**2.46**	**346**	P	**Pn**	**20 34 00.2**	**-0.3**
KYTH	**Kithira**	**2.59**	**320**	P	**Pn**	**20 34 04.1**	**+1.7**
VLI	**Veliai**	**3.00**	**324**	P	**Pn**	**20 34 08.7**	**+0.7**
DID	**Didima**	**3.55**	**335**	P	**Pn**	**20 34 15.6**	**0.0**
GERES	**GERESS Array B**	**16.83**	**333**	Pn	**Pn**	**20 37 16.5**	**+0.4**
	comp=N,0.1nm,0.3s,baz=142,slow=16,SNR=2.6						
TORD	**Torodi Ar. Bea**	**29.92**	**231**	P	**P**	**20 39 28.5**	**-0.2**
	comp=N,0.3nm,0.4s,baz=32,slow=8.5,SNR=6.8						
MKAR	**Makanchi Array**	**44.28**	**56**	P	**P**	**20 41 29.1**	**-1.1**
	comp=N,0.2nm,0.5s,baz=273,slow=6.1,SNR=3.4						
ZALV	**Zalesovo Beam**	**45.62**	**46**	P	**P**	**20 41 39.0**	**-1.8**
	comp=N,0.5nm,0.3s,baz=278,slow=8.0,SNR=2.5						

TAP 26 20:33:42.9, 24°.82N×121°.87E, h10km±1km, ML0.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.05**	**316**	P	Pg	20 33 45.6	+0.7
	baz=315						
NTC				S	Sg	20 33 47.0	+0.8
	baz=315						
EGS		**0.06**	**62**	P	Pg	20 33 45.3	+0.3
	baz=68						
EGS				S	Sg	20 33 47.7	+1.2
	baz=68						
TIPB	**Shuangxi**	**0.16**	**345**	*i* P	Pg	20 33 47.5	+1.0
	baz=345						
TIPB				*i* S	Sg	20 33 50.2	+1.4
	baz=345						
TWC	**Suao**	**0.21**	**186**	*e*P	Pg	20 33 48.0	+0.9
	baz=182						
TWE	**Neicheng**	**0.21**	**243**	P	Pg	20 33 47.9	+0.7
	baz=240						

JMA 26 20:34:12.7±0.1, 24°.73N×123°.43E, h15km±3km, M3.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**235**	P	Pg	20 34 21.8	-0.2
YOJ				S	Sg	20 34 28.0	-0.3
IRIF	**Iriomote-Funau**	**0.48**	**145**	P	Pg	20 34 22.1	-0.1
IRIF				S	Sg	20 34 28.3	-0.4
JYNG	**Yonagunijimaku**	**0.52**	**238**	P	Pg	20 34 22.9	-0.1
JYNG				S	Sg	20 34 29.9	-0.1
JKRS	**Kuro-shima**	**0.72**	**133**	P	Pg	20 34 26.6	-0.2
JKRS				S	Sg	20 34 36.1	-0.2
JIJ	**Ishigaki jima**	**0.74**	**119**	P	Pg	20 34 26.6	-0.6
JIJ				S	Sg	20 34 36.2	-0.8
HATJ	**Hateruma jima**	**0.75**	**153**	P	Pg	20 34 27.0	-0.4
HATJ				S	Sg	20 34 36.4	-0.9
JISG	**Ishigakijimahi**	**0.81**	**100**	P	Pg	20 34 27.8	-0.7
JISG				*e*S	Sg	20 34 38.8	-0.4
JTJ	**Tarama**	**1.16**	**94**	P	Pn	20 34 34.1	-0.3
JTJ				S	Sb	20 34 49.0	-0.3

IDC 26 20:36:39.1±3.4, 19°.90N×147°.44E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/38, mbtmp3.6/8, ML2.6/1, Error ellipse: s-maj=132.3km s-min=20.1km az=81.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N1	**WAKE ISLAND Hy**	**18.30**	**87**	T	T	21 00 11.4	
	baz=274						
H11N2	**WAKE ISLAND Hy**	**18.31**	**87**	T	T	21 00 13.9	
	baz=274						
H11N3	**WAKE ISLAND Hy**	**18.32**	**87**	T	T	21 00 22.8	
	baz=274						
MJAR	**Matsushiro Arr**	**18.45**	**336**	P	Pn	20 40 54.8	-1.4
	0.0nm,0.3s,baz=154,slow=12,SNR=2.9						
KSRS	**Korea Array**	**24.39**	**320**	P	P	20 41 58.7	-0.4
	0.9nm,0.6s,baz=149,slow=8.9,SNR=5.5						
WRA	**Warramunga Arr**	**41.63**	**199**	P	P	20 44 29.2	0.0
	0.8nm,0.7s,baz=15,slow=7.1,SNR=6.4						
SONM	**Songino Array**	**43.26**	**320**	P	P	20 44 42.9	+0.4
	0.3nm,0.4s,baz=129,slow=8.4,SNR=3.6						
ASAR	**Alice Springs**	**45.27**	**198**	P	P	20 44 58.2	-0.4
	0.3nm,0.6s,baz=18,slow=9.7,SNR=7.2						
ZALV	**Zalesovo Beam**	**58.08**	**322**	P	P	20 46 34.0	0.0
	0.7nm,0.5s,baz=112,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**58.83**	**313**	P	P	20 46 39.6	+0.1
	0.1nm,0.3s,baz=101,slow=7.2,SNR=3.1						
FINES	**FINESS Array B**	**86.48**	**336**	P	P	20 49 23.6	+0.1
	1.4nm,0.7s,baz=69,slow=4.6,SNR=4.1						

*ISCJB **26** 20:44:42.9±0.8, 17°.9N±0°.1×96°.39E±0°.08, h11km, mb3.8/6, MS3.2/9, Error ellipse: s-maj=19.5km s-min=7.5km az=24.3*
*IDC **26** 20:44:42.6±1.3, 17°.97N×96°.49E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/31, mbtmp3.7/6, ML3.3/1, MS3.2/10, Ms1 3.2/10, ms1mx2.9/40, Error ellipse: s-maj=31.4km s-min=15.0km az=9.0*
ISC 26 20:44:44.3±0.9, 18°.0N±0°.1×96°.52E±0°.07, h11km, n29, σ1§56/21, mb3.8/6, MS3.3/9, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**2.35**	**79**	Pn	**Pn**	**20 45 22.9**	**+0.1**
	2.1nm,0.3s,baz=257,slow=14,SNR=66						
CMAR				Pg	**Pb**	**20 45 26.4**	**-0.2**
	12nm,0.3s,baz=255,slow=17,SNR=95						
CMAR				Lg	Lg	20 45 58.2	
	64nm,0.3s,baz=255,slow=35,SNR=13						
CMAR				LR	LR	20 46 09.4	
	comp=Z,304nm,19.3s,baz=243,slow=36						
CMMT	**Chiang Mai**	**2.44**	**71**	P	**Pb**	**20 45 27.6**	**-0.7**
	57nm,0.7s,6μm						
UMPA	**Umpang Tak**	**2.87**	**128**	P	**Pn**	**20 45 31.0**	**+0.9**
	300μm,0

SVSA 26 20:55:17.8±1.0, 38°.70N×29°.01W, h4km±4km, MD3.5, ML3.2, 4D, Error ellipse: s-maj=8.4km s-min=5.2km az=43.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.25**	**107**	⇓*i*P	Pg	20 55 22.5	-0.2
PCED				*e*S	Sg	20 55 26.0	0.0
PCED				A	A	20 55 26.7	
	2μm,0.2s						
CALA	**Caldeira**	**0.27**	**116**	*e*P	Pg	20 55 23.1	+0.1
CALA				*e*S	Sg	20 55 26.5	-0.1
HOR	**Horta**	**0.34**	**120**	⇓*i*P	Pg	20 55 23.9	-0.5
HOR				*e*S	Sg	20 55 28.5	-0.4
HOR				A	A	20 55 30.3	
	2μm,0.3s						
PCAN	**Candelaria**	**0.47**	**120**	⇓*i*P	Pg	20 55 25.7	-1.2
PCAN				*e*S	Sg	20 55 32.0	-1.1
PCAN				A	A	20 55 34.0	
	782nm,0.4s						
PICO	**Pico**	**0.50**	**113**	⇓*i*P	Pg	20 55 26.5	-0.9
PICO				*e*S	Sg	20 55 33.5	-0.4
PICO				A	A	20 55 34.1	
	2μm,0.3s						
ROSA	**Rosais**	**0.60**	**88**	*e*P	Pg	20 55 28.0	-1.3
ROSA				*e*S	Sg	20 55 35.4	-1.7
ROSA				A	A	20 55 43.1	
	467nm,0.7s						
PPNO	**Prainha do Nor**	**0.63**	**111**	*e*P	Pg	20 55 28.8	-1.0
PPNO				*e*S	Sg	20 55 37.0	-1.0
PPNO				A	A	20 55 41.7	
	354nm,0.2s						
PMAN	**Manadas**	**0.72**	**95**	*e*P	Pg	20 55 29.9	-1.8
PMAN				*e*S	Sg	20 55 38.8	-2.3
PMAN				A	A	20 55 44.6	
	223nm,0.5s						

*GEN **26** 21:02:09.6, 43°.75N×7°.33E, h11km±2km, Ml0.6*
LDG 26 21:02:09.7±0.1, 43°.70N×7°.35E, h2km, Md1.9/3, Ml1.8/9, Error ellipse: s-maj=2.1km s-min=1.4km az=159.0, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBF	**Sospel**	**0.18**	**21**	*e*Pg	Pg	21 02 13.0	-0.1
SBF				*e*Sg	Sg	21 02 15.9	+0.5
	61nm,0.3s						
NEGI	**Seborga**	**0.30**	**60**	P	Pg	21 02 15.7	+0.3
NEGI				S	Sg	21 02 20.0	+0.7
IMI	**Imperia**	**0.45**	**62**	P	Pg	21 02 18.3	0.0
IMI				S	Sg	21 02 25.2	+1.0
MGRO	**Montegrosso**	**0.48**	**44**	P	Pg	21 02 18.5	-0.3
MGRO				S	Sg	21 02 26.1	+1.0
FRF	**La Foret Royal**	**0.53**	**255**	*e*Pg	Pg	21 02 18.9	-0.9
FRF				*e*Sg	Sg	21 02 26.0	-0.7
	3.8nm,0.2s						
RORO	**Rocca Rossa**	**0.66**	**51**	P	Pg	21 02 22.0	-0.4
RORO				S	Sg	21 02 31.0	0.0
LMR	**La Mourre**	**0.71**	**239**	*e*Pg	Pg	21 02 22.6	-0.7
LMR				*e*Sg	Sg	21 02 32.6	+0.1
	5.2nm,0.2s						
PZZ	**Stroppo**	**0.82**	**348**	P	Pg	21 02 24.6	-0.9
PZZ				S	Sg	21 02 34.9	-1.3
MBDF	**Montbardon**	**1.11**	**338**	*e*Pg	Pg	21 02 31.1	+0.2
MBDF				*e*Sg	Sg	21 02 45.2	-0.1
	1.5nm,0.2s						
SMRF	**Simiane la Rot**	**1.31**	**283**	*e*Pg	Pg	21 02 33.9	-1.0
SMRF				*e*Sg	Sb	21 02 52.2	-0.2
	7.4nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.61**	**320**	*e*Pn	Pn	21 02 37.9	-1.4
ORIF	**Oris-en-Rattie**	**1.61**	**320**	*e*Pg	Pb	21 02 40.2	0.0
ORIF				*e*Sg	Sb	21 03 00.9	-0.2
	6.3nm,0.4s						
PGF	**Pioggiola**	**1.67**	**133**	*e*Pn	Pn	21 02 38.8	-1.2
PGF				*e*Sn	Sn	21 02 59.8	-2.3
	0.4nm,0.2s						
LPG	**La Plagne**	**1.85**	**347**	*e*Pn	Pn	21 02 41.6	-1.1
LPG	**La Plagne**	**1.85**	**347**	*e*Pg	Pb	21 02 44.6	+0.2
LPG				*e*Sg	Sg	21 03 08.9	-0.2
	0.4nm,0.2s						
LPL	**La Plagne**	**1.87**	**347**	*e*Pn	Pn	21 02 41.6	-1.3
LPL	**La Plagne**	**1.87**	**347**	*e*Pg	Pb	21 02 44.9	+0.2
LPL				*e*Sn	Sn	21 03 04.0	-3.2
LPL				*e*Sg	Sg	21 03 09.6	-0.2
	0.7nm,0.2s						
VIVF	**Saint-Julien-l**	**2.24**	**302**	*e*Pn	Pn	21 02 46.1	-1.8
VIVF				*e*Sn	Sn	21 03 12.7	-3.5
	0.8nm,0.2s						
LASF	**Ste Croix**	**2.55**	**280**	*e*Pn	Pn	21 02 50.5	-1.6
LASF				*e*Sn	Sn	21 03 19.4	-4.4
	0.4nm,0.2s						
MTLF	**Montolieu**	**3.75**	**266**	*e*Pn	Pn	21 03 06.8	-1.8
MTLF	**Montolieu**	**3.75**	**266**	*e*Pg	Pb	21 03 18.9	+2.3
MTLF				*e*Sg	Sg	21 04 06.9	-3.2
	0.4nm,0.3s						

*VIE **26** 21:03:28.6±0.2, 46°.56N×10°.62E, h10km±2km, mb1.2/2, ml1.6/8, Error ellipse: s-maj=1.3km s-min=0.8km az=169.0*
*ZUR **26** 21:03:28.8, 46°.55N×10°.62E, h10km±2km, MLh1.4/5, Error ellipse: s-maj=5.1km s-min=1.4km az=288.0*
ROM 26 21:03:28.3±0.1, 46°.548N±0°.007×10°.617E±0°.008, h12km±1km, ML1.2/7, 4C, Error ellipse: s-maj=0.7km s-min=0.4km az=185.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOSI	**Grossmontoni**	**0.08**	**326**	⇑Pg	Pg	21 03 31.5	+0.3
MOSI				Sg	Sg	21 03 33.3	0.0
MOSI	**Grossmontoni**	**0.08**	**326**	P	Pg	21 03 31.6	+0.3
MOSI				S	Sg	21 03 33.3	-0.1
MOSI				AML	AML		
	comp=E,264μm,0.3s						
MOSI				AML	AML		
	comp=N,252μm,0.8s						
MOSI				AML	AML		
	comp=E,264μm,0.3s						
MOSI				AML	AML		
	comp=N,252μm,0.8s						
MOSI				AML	AML		
	comp=N,252μm,0.8s						
MOSI				AML	AML		
	comp=E,264μm,0.3s						
BRMO	**Bormio**	**0.18**	**247**	⇑Pg	Pg	21 03 33.0	+0.5
BRMO	**Bormio**	**0.18**	**247**	P	Pg	21 03 33.0	+0.5
BRMO				S	Sg	21 03 35.5	+0.1
BRMO				AML	AML		
	comp=E,111μm,0.5s						
BRMO				AML	AML		
	comp=N,152μm,0.1s						
BRMO				AML	AML		
	comp=E,111μm,0.5s						
BRMO				AML	AML		
	comp=N,152μm,0.1s						
BRMO				AML	AML		
	comp=N,152μm,0.1s						
BRMO				AML	AML		
	comp=E,111μm,0.5s						
FUORN	**Ofenpass-Fuorn**	**0.26**	**287**	⇑Pg	Pg	21 03 34.3	+0.5
FUORN				Sg	Sg	21 03 38.1	+0.6
FUORN	**Ofenpass-Fuorn**	**0.26**	**287**	P	Pg	21 03 34.3	+0.5
FUORN				S	Sg	21 03 38.1	+0.7
FUORN				AML	AML		
	comp=E,35μm,0.4s						
FUORN				AML	AML		
	comp=N,60μm,0.7s						
FUORN				AML	AML		
	comp=E,35μm,0.4s						
FUORN				AML	AML		
	comp=N,59μm,0.7s						
FUORN				AML	AML		
	comp=E,35μm,0.4s						
FUORN				AML	AML		
	comp=N,59μm,0.7s						
APPI	**Appiano**	**0.43**	**99**	P	Pg	21 03 37.3	+0.5
APPI				S	Sg	21 03 42.7	+0.2
APPI				AML	AML		
	comp=E,41μm,1.5s						
APPI				AML	AML		
	comp=N,55μm,1.5s						
APPI				AML	AML		
	comp=E,41μm,1.5s						
APPI				AML	AML		
	comp=N,54μm,1.5s						
APPI				AML	AML		
	comp=E,41μm,1.5s						
APPI				AML	AML		
	comp=N,54μm,1.5s						
BERNI	**Berninapass**	**0.43**	**252**	P	Pg	21 03 37.4	+0.5
BERNI				S	Sb	21 03 43.7	-0.9
BERNI				AML	AML		
	comp=E,29μm,0.3s						
BERNI				AML	AML		
	comp=N,20μm,1.5s						
BERNI				AML	AML		
	comp=E,29μm,0.3s						
BERNI				AML	AML		
	comp=N,20μm,1.5s						
BERNI				AML	AML		
	comp=E,29μm,0.3s						
BERNI				AML	AML		
	comp=N,20μm,1.5s						
FETA	**Feichten**	**0.48**	**9**	*e*Pg	Pb	21 03 38.5	-0.4
	comp=N,0.3nm,0.0s						
FETA				*e*Sg	Sg	21 03 44.7	+0.5
	comp=N,2.3nm,0.1s						
MABI	**Malga Bissina**	**0.50**	**188**	Pg	Pg	21 03 38.5	+0.3
MABI	**Malga Bissina**	**0.50**	**188**	P	Pg	21 03 38.5	+0.4
MABI				S	Sg	21 03 44.7	-0.1
MABI				AML	AML		
	comp=E,36μm,0.2s						
MABI				AML	AML		
	comp=N,28μm,0.4s						
MABI				AML	AML		
	comp=N,28μm,0.4s						
MABI				AML	AML		
	comp=E,36μm,0.2s						
ABSI	**Aberstueckl**	**0.52**	**69**	⇑Pg	Pg	21 03 38.7	+0.2
ABSI	**Aberstueckl**	**0.52**	**69**	P	Pg	21 03 38.7	+0.2
ABSI				S	Sg	21 03 45.9	+0.5
ABSI				AML	AML		
	comp=E,37μm,0.6s						
ABSI				AML	AML		
	comp=N,36μm,0.7s						
ABSI				AML	AML		
	comp=E,37μm,0.6s						
ABSI				AML	AML		
	comp=N,35μm,0.7s						
ABSI				AML	AML		
	comp=N,35μm,0.7s						
ABSI				AML	AML		
	comp=E,37μm,0.6s						
KOSI	**Kohlern**	**0.53**	**99**	P	Pb	21 03 39.3	-0.4
KOSI				S	Sg	21 03 46.0	+0.2
DAVOX	**Davos/Dischmat**	**0.56**	**295**	*e*P	Pg	21 03 39.6	+0.3
DAVOX				S	Sg	21 03 47.3	+0.6
ROSI	**Rosskopf**	**0.67**	**55**	P	Pb	21 03 41.8	-0.3
ROSI				S	Sg	21 03 49.8	-0.3
SQTA	**Sankt Quirin**	**0.79**	**31**	*e*Pg	Pb	21 03 44.0	0.0
	comp=E,0.6nm,0.1s						
SQTA				Sg	Sg	21 03 53.5	-0.4
	comp=E,2.5nm,0.1s						
MOTA	**Moosalm**	**0.86**	**23**	Pg	Pb	21 03 45.6	+0.3
	comp=E,0.3nm,0.1s						
MOTA				*i* Sg	Sb	21 03 57.1	+0.1
	comp=E,1.1nm,0.1s						

*IDC **26** 21:03:45.9±3.0, 0°.61N×97°.08E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/47, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=114.9km s-min=26.3km az=62.0*
*ISCJB **26** 21:03:47.6±0.8, 0°.71N±0°.06×97°.13E±0°.07, h23km, mb3.7/4, Error ellipse: s-maj=11.9km s-min=5.5km az=142.2*
*DJA **26** 21:03:49.6±0.8, 1°.N±4°.×9°.7E±°, h35km±13km, M3.8/9, mb4.1/2, MLv3.6/9*
ISC 26 21:03:49.3±1.1, 0°.72N±0°.07×97°.13E±0°.08, h23km, n19, σ0°.89/17, mb3.7/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.73**	**37**	P	**Pn**	**21 04 04.1**	**-0.2**
SNSI	**Sinabang, Aceh**	**1.86**	**334**	P	**Pn**	**21 04 18.4**	**-1.5**
SNSI				S	**Sn**	**21 04 42.4**	**-0.3**
MNSI	**Mandailing Nat**	**2.45**	**88**	P	**Pn**	**21 04 27.5**	**-0.4**
MNSI				S	**Sn**	**21 04 56.4**	**-0.8**
SISI	**Saibi**	**2.82**	**136**	P	**Pn**	**21 04 31.9**	**-1.1**
KCSI	**Kotacane, Aceh**	**2.86**	**13**	P	**Pn**	**21 04 33.3**	**-0.3**
KCSI				S	**Sn**	**21 05 06.8**	**-0.5**
MLSI	**Meulaboh, Aceh**	**3.60**	**348**	P	**Pn**	**21 04 43.4**	**-0.4**
MLSI				S	**Sn**	**21 05 24.4**	**-1.2**
BKNI	**Bangkinang**	**3.93**	**96**	P	**Pn**	**21 04 46.7**	**-1.6**
KRJI	**Kerinci**	**5.15**	**123**	P	**Pn**	**21 05 05.6**	**+0.4**
CMAR	**Chiang Mai Arr**	**17.72**	**6**	P	**P**	**21 07 55.6**	**+0.2**
	0.1nm,0.3s,baz=196,slow=11,SNR=3.4						
H08S2	**Diego Garcia H**	**25.94**	**251**	T	T	21 36 10.2	
	baz=72,slow=75,SNR=272						
H08S3	**Diego Garcia H**	**25.94**	**251**	T	T	21 36 10.5	
	baz=72,slow=75,SNR=275						
H08S1	**Diego Carcia H**	**25.95**	**251**	T	T	21 36 11.6	
	baz=72,slow=75,SNR=270						
H01W3	**Cape Leeuwin H**	**38.83**	**157**	T	T	21 52 15.6	
	baz=333,slow=76,SNR=48						
H01W2	**Cape Leeuwin H**	**38.84**	**157**	T	T	21 52 16.6	
	baz=333,slow=76,SNR=49						
H01W1	**Cape Leeuwin H**	**38.84**	**157**	T	T	21 52 18.3	
	baz=333,slow=76,SNR=53						
ASAR	**Alice Springs**	**43.16**	**127**	P	**P**	**21 11 48.5**	**-0.1**
	0.4nm,0.8s,baz=297,slow=8.4,SNR=3.2						
SONM	**Songino Array**	**47.62**	**8**	P	**P**	**21 12 24.5**	**+0.8**
	0.4nm,0.8s,baz=190,slow=8.9,SNR=2.6						
MKAR	**Makanchi Array**	**47.69**	**346**	P	**P**	**21 12 25.2**	**+1.1**
	0.7nm,0.6s,baz=160,slow=7.7,SNR=10						
ZALV	**Zalesovo Beam**	**54.02**	**351**	P	**P**	**21 13 12.2**	**+0.6**
	1.6nm,0.7s,baz=178,slow=7.3,SNR=4.1						

*ISCJB **26** 21:07:13.6±1.1, 34°.09N±0°.04×25°.09E±0°.03, h8km±8km, Error ellipse: s-maj=6.1km s-min=4.4km az=23.7*
*IDC **26** 21:07:13.0±1.1, 34°.18N×25°.06E, h0km, mb3.6/3, mb1 3.8/9, mb1mx3.5/42, mbtmp3.6/9, ML3.5/6, MS3.7/1, Ms1 3.7/1, ms1mx2.3/38, Error ellipse: s-maj=22.5km s-min=17.5km az=170.0*
*ISK **26** 21:07:15.7, 34°.28N×25°.06E, h12km, ML3.4/13*
*ATH **26** 21:07:17.7, 34°.35N×25°.08E, h30km±2km, ML3.2/3, Error ellipse: s-maj=6.6km s-min=2.0km az=3.0*
*THE **26** 21:07:18.2, 34°.35N×25°.09E, h0km, ML3.1/8, Error ellipse: s-maj=1.8km s-min=0.6km az=172.0*
ISC 26 21:07:15.1±1.5, 34°.18N±0°.05×25°.10E±0°.03, h14km±9km, n54, σ1°.27/72, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.87**	**344**	P	**Pb**	**21 07 31.8**	**-0.2**
SIVA				S	**Sb**	**21 07 43.1**	**-0.4**
SIVA	**Sivas**	**0.87**	**344**	P	**Pb**	**21 07 31.8**	**-0.2**
SIVA				S	**Sb**	**21 07 42.9**	**-0.6**
SIVA				AML	AML	21 07 49.8	
	comp=N,7213μm,0.4s						
SIVA				AML	AML	21 07 51.7	
	comp=E,10173μm,0.7s						
TMBK	**Timbaki Herakl**	**0.94**	**343**	P	**Pb**	**21 07 33.2**	**+0.2**
TMBK				S	**Sb**	**21 07 45.0**	**-0.3**
LAST	**Lasithi**	**1.03**	**17**	P	**Pb**	**21 07 34.8**	**+0.1**
LAST				S	**Sn**	**21 07 49.0**	**-0.4**
LAST	**Lasithi**	**1.03**	**17**	P	**Pb**	**21 07 34.8**	**+0.1**
LAST				AML	AML	21 08 01.5	
	comp=E,1511μm,0.7s						
LAST				AML	AML	21 08 01.7	
	comp=N,1200μm,0.6s						
GVD	**Gavdhos**	**1.07**	**309**	P	**Pn**	**21 07 37.0**	**+1.4**
GVD				S	**Sn**	**21 07 51.9**	**+1.7**
GVD	**Gavdhos**	**1.07**	**309**	P	**Pg**	**21 07 35.6**	**-0.1**
GVD				AML	AML	21 07 59.3	
	comp=E,3535μm,0.4s						
GVD				AML	AML	21 08 00.8	
	comp=N,3225μm,0.6s						
GVDS	**Gavdos**	**1.07**	**309**	P	**Pn**	**21 07 36.8**	**+1.2**
GVDS				S	**Sn**	**21 07 51.7**	**+1.5**
IDI	**Anoyia**	**1.12**	**351**	PG	**Pb**	**21 07 35.8**	**-0.5**
IDI				SG	**Sg**	**21 07 50.2**	**-1.2**
IDI	**Anoyia**	**1.12**	**351**	Pn	**Pb**	**21 07 35.8**	**-0.5**
	comp=N,20nm,0.3s,baz=162,slow=13,SNR=90						
IDI				LR	LR	21 07 46.3	
	comp=N,18nm,20.9s,baz=170,slow=30						
IDI				Sn	**Sg**	**21 07 49.9**	**-1.5**
	comp=N,73nm,0.3s,baz=164,slow=18,SNR=18						
IDI	**Anoyia**	**1.12**	**351**	P	**Pb**	**21 07 35.9**	**-0.5**
KSTL	**Kastelli Herak**	**1.12**	**359**	P	**Pb**	**21 07 35.4**	**-0.9**
KSTL				S	**Sb**	**21 07 48.4**	**-2.3**
NPS	**Neapolis**	**1.16**	**21**	P	**Pg**	**21 07 37.2**	**-0.3**
NPS				S	**Sn**	**21 07 52.9**	**+0.4**
NPS	**Neapolis**	**1.16**	**21**	P	**Pg**	**21 07 37.1**	**-0.4**
PRNS	**Prines Rethymn**	**1.28**	**337**	P	**Pg**	**21 07 39.9**	**+0.1**
PRNS				S	**Sg**	**21 07 56.4**	**-0.2**
STIA	**Sitia Lasithi**	**1.31**	**38**	P	**Pg**	**21 07 40.7**	**+0.4**
STIA				S	**Sg**	**21 07 58.3**	**+1.0**
ZKR	**Zakros**	**1.31**	**44**	PN	**Pg**	**21 07 40.1**	**-0.2**
ZKR				SN	**Sg**	**21 07 57.4**	**0.0**
ZKR	**Zakros**	**1.31**	**44**	P	**Pg**	**21 07 40.5**	**+0.2**
ZKR				S	**Sg**	**21 07 58.8**	**+1.4**
ZKR	**Zakros**	**1.31**	**44**	P	**Pg**	**21 07 40.6**	**+0.3**
VAM	**Vamos**	**1.44**	**329**	P	**Pb**	**21 07 41.8**	**+0.2**
VAM				S	**Sg**	**21 08 00.6**	**-0.8**
VAM	**Vamos**	**1.44**	**329**	P	**Pb**	**21 07 41.8**	**+0.2**
IMMV	**Iera Moni Meta**	**1.58**	**325**	P	**Pb**	**21 07 44.0**	**0.0**
IMMV				S	**Sg**	**21 08 04.7**	**-1.3**
IMMV	**Iera Moni Meta**	**1.58**	**325**	P	**Pb**	**21 07 44.2**	**+0.2**
KARP	**Karpathos**	**2.18**	**50**	PN	**Pb**	**21 07 53.0**	**-1.2**
KARP	**Karpathos**	**2.18**	**50**	P	**Pb**	**21 07 54.2**	**0.0**
SANT	**Santorini**	**2.21**	**7**	PN	**Pn**	**21 07 51.8**	**+0.5**
ANAF	**Anafi Island**	**2.24**	**14**	P	**Pn**	**21 07 53.1**	**+1.3**
ANAF				S	**Sn**	**21 08 20.2**	**+1.0**
ANAF	**Anafi Island**	**2.24**	**14**	P	**Pn**	**21 07 52.8**	**+1.1**
IOSP	**Ios island**	**2.54**	**3**	P	**Pn**	**21 07 56.6**	**+0.7**
MHLO	**Agia Marina, M**	**2.57**	**347**	P	**Pn**	**21 07 56.8**	**+0.5**
APE	**Apeiranthos**	**2.91**	**7**	PN	**Pn**	**21 08 01.6**	**+0.7**
APE	**Apeiranthos**	**2.91**	**7**	P	**Pn**	**21 08 01.3**	**+0.4**
VLI	**Veliai**	**3.09**	**326**	P	**Pn**	**21 08 04.3**	**+0.9**
ARG	**Arkhangelos**	**3.20**	**50**	PN	**Pn**	**21 08 07.2**	**+2.2**
DAT	**Datca**	**3.25**	**38**	PN	**Pn**	**21 08 07.4**	**+1.7**
DALY	**Dalyan (Mula)**	**3.92**	**47**	PN	**Pn**	**21 08 17.0**	**+2.3**
TURN	**Turunc**	**3.92**	**46**	PN	**Pn**	**21 08 12.8**	**-2.0**
YER	**Yerkesik**	**3.93**	**40**	PN	**Pn**	**21 08 17.1**	**+2.2**
FETY	**Fethiye**	**4.07**	**52**	PN	**Pn**	**21 08 18.5**	**+1.6**
KSL	**Kastellorizon**	**4.17**	**61**	P	**Pn**	**21 08 19.9**	**+1.7**
AKAS	**Kas**	**4.22**	**60**	PN	**Pn**	**21 08 20.7**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**4.39**	**30**	PN	**Pn**	**21 08 23.4**	**+2.1**
ELL	**Elmali**	**4.69**	**55**	PN	**Pn**	**21 08 27.9**	**+2.5**
MMAI	**Mount Meron Ar**	**8.67**	**95**	Pn	**Pn**	**21 09 20.3**	**+0.1**
	comp=N,1.6nm,0.3s,baz=274,slow=12,SNR=9.7						
MMAI				Sn	**Sn**	**21 10 55.9**	**-1.8**
	comp=N,1.9nm,0.3s,baz=282,slow=20,SNR=6.4						
BRTR	**Keskin Array B**	**8.79**	**48**	Pn	**Pn**	**21 09 23.3**	**+1.5**
	comp=N,0.1nm,0.3s,baz=231,slow=12,SNR=2.6						
VAE	**Valguarnera**	**9.29**	**294**	Pn	**Pn**	**21 09 28.6**	**+0.1**
	comp=N,0.4nm,0.3s,baz=102,slow=20,SNR=2.6						
EIL	**Elat**	**9.50**	**116**	Pn	**Pn**	**21 09 32.6**	**+1.2**
	comp=N,1.0nm,0.3s,baz=239,slow=2.2,SNR=10						
EIL				Sn	**Sn**	**21 11 13.2**	**-4.7**
	comp=N,0.6nm,0.3s,baz=313,slow=19,SNR=2.7						
KBZ	**Khabaz**	**16.78**	**50**	Pn	**P**	**21 11 13.8**	**+2.2**
	comp=N,0.3nm,0.3s,baz=227,slow=6.4,SNR=4.1						
GERES	**GERESS Array B**	**16.93**	**333**	Pn	**P**	**21 11 13.5**	**0.0**
	comp=N,0.2nm,0.3s,baz=144,slow=12,SNR=7.0						
ESDC	**Sonseca Array**	**23.82**	**292**	P	**P**	**21 12 27.8**	**+0.3**
	comp=N,0.5nm,0.7s,baz=86,slow=9.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**29.83**	**231**	P	**P**	**21 13 21.4**	**-0.4**
	comp=N,7.7nm,0.3s,baz=37,slow=6.6,SNR=20						
MKAR	**Makanchi Array**	**44.36**	**56**	P	**P**	**21 15 25.3**	**+0.5**
	comp=N,0.3nm,0.5s,baz=278,slow=6.5,SNR=5.1						
ZALV	**Zalesovo Beam**	**45.72**	**45**	P	**P**	**21 15 35.1**	**-0.3**
	comp=N,1.2nm,0.4s,baz=273,slow=9.6,SNR=4.2						
DAV	**Davao City (W)**	**94.66**	**78**	LR	LR	22 11 12.0	
	comp=N,31nm,18.2s,baz=210,slow=40						

IDC 26 21:07:45.8±8.1, 20°.70S×178°.49W, h404km±84km, mb3.0/4, mb1 3.3/5, mb1mx3.0/22, mbtmp3.9/5, Error ellipse: s-maj=44.1km s-min=26.9km az=42.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.91**	**191**	P	P	21 11 29.0	0.0
	1.0nm,0.3s,baz=18,slow=9.6,SNR=3.8						
ASAR	**Alice Springs**	**44.03**	**257**	P	P	21 15 15.9	0.0
	0.6nm,0.6s,baz=85,slow=8.5,SNR=7.2						
WRA	**Warramunga Arr**	**44.12**	**262**	P	P	21 15 16.4	-0.2
	0.5nm,0.3s,baz=96,slow=7.7,SNR=14						
VNDA	**Vanda**	**57.67**	**185**	P	P	21 16 55.0	-0.2
	0.5nm,0.5s,baz=29,slow=6.0,SNR=9.2						
ILAR	**Eielson Array**	**88.61**	**13**	P	P	21 19 53.8	+0.1
	0.4nm,0.4s,baz=218,slow=5.1,SNR=5.3						

IDC 26 21:25:15.6±4.1, 1°.49N×96°.42E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/27, mbtmp3.8/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/30, Error ellipse: s-maj=156.1km s-min=27.7km az=57.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**25.53**	**249**	T	T	21 57 44.3	
	baz=71,slow=75,SNR=9.2						
H08S3	**Diego Garcia H**	**25.53**	**249**	T	T	21 57 55.8	
	baz=71,slow=75,SNR=8.3						
H08S1	**Diego Carcia H**	**25.55**	**249**	T	T	21 57 53.1	
	baz=71,slow=75,SNR=11						
H01W3	**Cape Leeuwin H**	**39.81**	**157**	T	T	22 14 29.0	
	baz=331						
H01W2	**Cape Leeuwin H**	**39.82**	**157**	T	T	22 14 27.9	
	baz=331						
H01W1	**Cape Leeuwin H**	**39.82**	**157**	T	T	22 14 30.8	
	baz=331						
WRA	**Warramunga Arr**	**42.85**	**122**	P	P	21 33 15.8	-0.1
	1.0nm,0.9s,baz=294,slow=10.0,SNR=5.1						
MKAR	**Makanchi Array**	**46.78**	**347**	P	P	21 33 47.1	+0.2
	0.8nm,0.8s,baz=161,slow=8.0,SNR=7.4						
SONM	**Songino Array**	**46.97**	**9**	P	P	21 33 48.4	-0.1
	0.3nm,0.5s,baz=180,slow=6.5,SNR=2.4						
ZALV	**Zalesovo Beam**	**53.16**	**351**	P	P	21 34 34.8	-0.4
	2.3nm,0.4s,baz=180,slow=6.4,SNR=7.8						
KMBO	**Kilima Mbogo**	**59.22**	**268**	LR	LR	21 58 52.7	
	comp=Z,26nm,18.5s,baz=93,slow=34						

*ISCJB **26** 21:57:25.3±0.6, 28°.46S±0°.05×176°.1W±0°.1, h29km, mb4.4/17, MS4.0/11, Error ellipse: s-maj=14.2km s-min=6.7km az=14.9*
*IDC **26** 21:57:25.9±0.8, 27°.84S×176°.59W, h0km, mb4.4/14, mb1 4.5/14, mb1mx4.3/35, mbtmp4.3/14, MS4.0/11, Ms1 4.0/11, ms1mx3.8/20, Error ellipse: s-maj=29.8km s-min=20.7km az=155.0*
*NEIC **26** 21:57:26.4±2.6, 28°.22S×176°.24W, h14km±5km, mb4.4/12, Error ellipse: s-maj=33.6km s-min=16.9km az=137.0*
ISC 26 21:57:28.1±0.6, 28°.48S±0°.08×176°.17W±0°.09, h29km, n70, σ2°.30/64, mb4.4/17, MS4.0/11, Kermadec Islands region

| Code | Station Name |

comp=Z,1μm,18.7s,baz=120,slow=34
DZM Mont Dzumac 16.96 288 *e*P **P 22 01 23.8 -1.4**
77nm,1.2s
DZM *e*LR LR 22 05 18.8
comp=Z,2μm,23.8s
DZM Mont Dzumac 16.96 288 *e*Pn **P 22 01 24.9 -0.3**
16nm,1.1s
LTZ Lake Taylor 17.07 210 *e*Pn **Pn 22 01 24.9 +0.4**
OXZ Oxford 17.60 210 *e*Pn **Pn 22 01 31.0 -0.2**
41nm,1.0s
MQZ McQueen's Vall 17.65 208 *e*Pn **P 22 01 33.5 +1.0**
16nm,0.9s
RPZ Rata Peaks 18.35 211 *e*P **Pn 22 01 42.3 +2.0**
24nm,1.1s
LBZ Lake Benmore 19.26 211 *e*P **Pn 22 01 52.6 +1.2**
15nm,1.1s
ODZ Otahua Downs 19.58 209 *e*P **Pn 22 01 55.3 +0.1**
21nm,1.0s
DCZ Deep Cove 21.49 213 *e*P **P 22 02 18.8 +4.4**
27nm,1.2s
PYZ Puysegur Point 22.23 213 *e*P **P 22 02 27.7 +5.4**
103nm,1.1s
PAE Paea 26.66 72 *e*T T 22 30 31.8
8.6nm,0.4s
PPT2 Papeete2 26.70 72 *e*S **S 22 07 32.5 -6.4**
52nm,24.2s
PPT2 *e*LQ LQ 22 08 20.4
374nm,25.2s
PPT2 *e*LR LR 22 09 46.8
comp=Z,604nm,26.5s
PPT2 Papeete2 26.70 72 *e*T T 22 30 35.2
8.1nm,0.4s
PPT Papeete 26.71 72 LR LR 22 10 51.5
comp=Z,172nm,20.5s,baz=248,slow=30
TVO Taravao 26.88 73 *e*T T 22 30 49.8
3.0nm,0.4s
EIDS Eidsvold 29.32 268 *e*P **P 22 03 26.9 -1.4**
4.5nm,0.8s
VAH Vaihoa 29.49 70 *e*T T 22 34 03.0
13nm,0.2s
CTA Charters Tower 35.15 275 P **P 22 04 17.8 -1.6**
2.0nm,0.4s,baz=100,slow=9.0,SNR=4.1
STKA Stephens Creek 36.51 254 P **P 22 04 31.8 +0.8**
0.9nm,0.3s,baz=96,slow=13,SNR=6.2
STKA LR LR 22 17 49.3
comp=Z,399nm,19.4s,baz=58,slow=34
TAOE Nuku Hiva Isla 39.08 67 *e*LR LR 22 15 26.0
comp=Z,243nm,25.2s
ASAR Alice Springs 44.85 264 P **P 22 05 39.4 -0.7**
4.2nm,0.8s,baz=108,slow=7.4,SNR=29
ASAR PcP **PcP 22 07 22.6 +1.0**
0.5nm,0.4s,baz=109,slow=3.6,SNR=2.9
ASAR LR LR 22 22 56.6
comp=Z,335nm,20.5s,baz=118,slow=34
WR1 Warramunga Arr 45.67 269 *e*P **P 22 05 44.9 -1.7**
WRA Warramunga Arr 45.67 269 P **P 22 05 44.9 -1.7**
2.3nm,0.3s,baz=100,slow=7.6,SNR=12
FITZ Fitzroy Crossi 54.00 268 P **P 22 06 50.5 +0.6**
4.3nm,0.9s,baz=132,slow=8.2,SNR=4.5
SIJI Sorong 57.17 289 P **P 22 07 10.8 -1.9**
3.9nm,0.4s,baz=148,slow=13,SNR=4.0
MAW Mawson 74.66 200 P P 22 09 10.9 +6.6
1.9nm,0.7s,baz=193,slow=6.0,SNR=3.7
MAW LR LR 22 42 28.8
comp=Z,130nm,18.9s,baz=96,slow=36
MJAR Matsushiro Arr 77.61 324 P **P 22 09 19.8 -1.8**
4.9nm,0.8s,baz=163,slow=6.1,SNR=9.5
MAJO Matsushiro 77.61 324 *e*P **P 22 09 19.8 -1.8**
PLCA Paso Flores 82.63 132 LR LR 22 38 24.3
comp=Z,58nm,21.4s,baz=266,slow=30
KSRS Korea Array 83.95 318 P **P 22 09 53.9 -1.5**
2.5nm,1.0s,baz=123,slow=6.0,SNR=9.5
PETK Petropavlovsk- 84.37 345 P **P 22 09 56.9 -0.3**
2.5nm,0.9s,baz=123,slow=5.3,SNR=4.2
PEA1 Petropavlovsk- 84.38 345 *e*P **P 22 09 56.9 -0.3**
NV01 Mina Array Sit 85.75 42 *e*P **P 22 10 06.6 +1.9**
NVAR Mina Array Bea 85.75 42 P **P 22 10 06.6 +1.9**
1.0nm,0.8s,baz=224,slow=7.6,SNR=6.7
NVAR LR LR 22 45 22.3
comp=Z,102nm,18.2s,baz=238,slow=34
USRK Ussuriysk Ar. 86.47 325 P **P 22 10 08.0 +0.2**
5.3nm,1.0s,baz=140,slow=9.2,SNR=5.1
TXAR Lajitas Array 90.00 56 LR LR 22 45 46.6
comp=Z,33nm,18.1s,baz=0,0,slow=32
PDAR Pinedale Array 93.64 43 P **P 22 10 43.6 +1.7**
0.3nm,0.6s,baz=255,slow=5.5,SNR=2.0
PDAR LR LR 22 51 53.4
comp=Z,58nm,18.5s,baz=252,slow=35
CMAR Chiang Mai Arr 94.29 289 P **P 22 10 44.9 -0.3**
1.2nm,0.8s,baz=139,slow=4.5,SNR=6.5
LPAZ La Paz 97.44 113 LR LR 22 47 06.3
comp=Z,28nm,19.4s,baz=302,slow=30
MK32 Makanchi Array 117.75 310 *e*PKPdf **PKPdf 22 16 11.1 -0.3**
MKAR Makanchi Array 117.75 310 PKP **PKPdf 22 16 11.1 -0.3**
0.9nm,0.8s,baz=79,slow=1.2,SNR=6.7
KK31 Karatay Array 125.33 304 *e*PKPdf **PKPdf 22 16 24.7 -1.4**
ARA0 ARCESS Array S 137.03 349 *e*PKPdf **PKiKP 22 16 49.5 +0.3**
ARCES ARCESS Array B 137.03 349 PKP **PKiKP 22 16 49.5 +0.3**
1.0nm,0.6s,baz=58,slow=2.2,SNR=4.2
FIA0 FINESS Array S 143.85 342 *e*PKPpre PKPpre 22 16 56.0
FINES FINESS Array B 143.85 342 PKhKP PKPpre 22 16 56.0
2.0nm,0.9s,baz=50,slow=2.8,SNR=5.5
KBZ Khabaz 145.31 307 PKP **PKPbc 22 17 02.9 +0.1**
2.1nm,0.8s,baz=128,slow=5.9,SNR=5.9
KIV Kislovodsk 145.41 307 *e*PKPbc **PKPbc 22 17 02.9 -0.4**
NB2 NORSAR Subarra147.06 353 PKP **PKPdf 22 17 06.2 +0.7**
comp=Z,1.6nm,0.7s,baz=9.1,slow=2.9
NB200 NORSAR Array S 147.06 353 *e*PKPdf **PKPdf 22 17 07.2 +1.7**
NOA NORSAR Array B 147.06 353 PKPbc **PKPdf 22 17 07.2 +1.7**
comp=Z,4.2nm,0.9s,baz=15,slow=4.5,SNR=9.1
AKASG Malin Array Be 150.67 326 PKPbc **PKPbc 22 17 16.7 -0.3**
comp=Z,0.8nm,0.3s,baz=47,slow=2.1,SNR=6.7
AKBB Malin Array Si 150.67 326 *e*PKPbc **PKPbc 22 17 17.4 +0.4**
BR101 Keskin Array S 153.01 302 *e*PKPbc **PKPbc 22 17 23.1 +0.2**
BRTR Keskin Array B 153.01 302 PKPbc **PKPbc 22 17 23.1 +0.2**
comp=Z,1.6nm,0.9s,baz=113,slow=2.8,SNR=7.8
TORD Torodi Ar. Bea 164.62 172 PKP **PKPdf 22 17 30.8 +0.9**
comp=Z,7.6nm,0.3s,baz=285,slow=2.8,SNR=3.5
TORD PKPab **PKPab 22 18 29.5 +4.7**
comp=Z,1.2nm,0.8s,baz=172,slow=2.2,SNR=5.9
TOA1 Torodi Ar. Sit 164.62 172 *e*PKPdf **PKPdf 22 17 30.8 +0.9**
TOA1 *e*PKPab **PKPab 22 18 29.5 +4.7**

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*ISCJB **26** 22:00:19.4±1.7, 5°.1S±0°.2×151°.5E±0°.4, h129km, mb3.5/5, Error ellipse: s-maj=59.9km s-min=11.4km az=33.7*
*IDC **26** 22:00:20.4±2.5, 5°.18S×151°.60E, h129km±16km, mb3.4/5, mb1 3.7/6, mb1mx3.3/32, mbtmp3.9/6, Error ellipse: s-maj=54.7km s-min=13.6km az=122.0*
ISC 26 22:00:20.2±1.7, 5°.2S±0°.3×151°.7E±0°.4, h129km, n7, σ0=97/10, mb3.7/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.12**	**227**	P	**Pn**	**22 01 49.2**	**+0.9**
	8.9nm,0.3s,baz=34,slow=5.7,SNR=16						
PMG				S	**Sn**	**22 02 56.2**	**-0.9**
	16nm,0.3s,baz=336,slow=19,SNR=12						
WRA	**Warramunga Arr**	**22.34**	**227**	P	**P**	**22 05 06.3**	**-1.3**
	1.4nm,0.5s,baz=54,slow=12,SNR=11						
WRA				S	**S**	**22 09 04.8**	**+0.7**
	0.9nm,0.8s,baz=55,slow=20,SNR=1.9						
ASAR	**Alice Springs**	**25.10**	**221**	P	**P**	**22 05 33.9**	**+0.8**
	1.1nm,0.4s,baz=53,slow=9.0,SNR=21						
ASAR				ScP	**ScP**	**22 12 30.8**	**-0.9**
	0.2nm,0.3s,baz=60,slow=4.6,SNR=4.0						
SONM	**Songino Array**	**66.06**	**328**	P	**P**	**22 10 54.2**	**+0.8**
	0.6nm,0.5s,baz=148,slow=4.1,SNR=6.2						
MKAR	**Makanchi Array**	**79.88**	**319**	P	**P**	**22 12 13.9**	**-0.8**
	0.1nm,0.4s,baz=94,slow=7.9,SNR=2.8						
ILAR	**Eielson Array**	**82.95**	**22**	P	**P**	**22 12 30.3**	**-0.1**
	1.0nm,0.6s,baz=247,slow=5.1,SNR=8.3						
TORD	**Torodi Ar. Bea**	**149.34**	**287**	PKPbc	**PKPbc**	**22 19 54.9**	**0.0**
	0.5nm,0.7s,baz=68,slow=3.1,SNR=6.0						

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*ISCJB **26** 22:12:25.8±1.3, 54°.8N±0°.2×153°.1E±0°.3, h600km, mb3.2/6, Error ellipse: s-maj=33.0km s-min=20.4km az=12.7*
*IDC **26** 22:12:26.8±1.5, 54°.60N×153°.20E, h610km±28km, mb2.7/6, mb1 2.9/7, mb1mx2.5/33, mbtmp3.7/7, Error ellipse: s-maj=51.4km s-min=19.2km az=173.0*
ISC 26 22:12:26.7±1.4, 54°.7N±0°.3×153°.2E±0°.2, h600km, n7, σ0=56/7, mb3.4/6, Sea of Okhotsk

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

PETK	**Petropavlovsk-**	**3.13**	**119**	P	**P**	**22 13 46.8**	**+0.3**
	0.6nm,0.3s,baz=33,slow=3.0,SNR=17						
ILAR	**Eielson Array**	**30.64**	**47**	P	**P**	**22 17 53.6**	**+0.2**
	0.3nm,0.6s,baz=267,slow=5.5,SNR=4.7						
INK	**Inuvik**	**35.12**	**38**	P	**P**	**22 18 31.4**	**+0.6**
	0.5nm,0.4s,baz=251,slow=6.6,SNR=3.5						
MKAR	**Makanchi Array**	**43.74**	**290**	P	**P**	**22 19 40.2**	**+0.1**
	0.7nm,0.5s,baz=56,slow=6.9,SNR=18						
ARCES	**ARCESS Array B**	**50.37**	**339**	P	**P**	**22 20 29.0**	**-0.3**
	1.6nm,0.7s,baz=46,slow=9.1,SNR=3.1						
FINES	**FINESS Array B**	**56.90**	**333**	P	**P**	**22 21 15.3**	**+0.1**
	1.2nm,0.8s,baz=35,slow=4.7,SNR=5.0						
TXAR	**Lajitas Array**	**73.65**	**62**	P	**P**	**22 22 59.6**	**-0.8**
	0.1nm,0.5s,baz=306,slow=3.0,SNR=3.5						

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*GUC **26** 22:18:35.8±0.5, 18°.19S×71°.32W, h47km±4km, ML3.6*
ISC 26 22:18:35.3±2.9, 18°.34S±0°.07×71°.3W±0°.1, h5km±13km, n20, σ0=82/30, 1C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**1.00**	**106**	*e*P	**Pg**	**22 18 54.1**	**-0.3**
PB12				*i*S	**Sg**	**22 19 08.1**	**+0.8**
PB12				IAML		22 19 10.5	
	comp=N,2μm,0.2s						
PSGC	**Pisagua**	**1.70**	**138**	*e*P	**Pn**	**22 19 05.3**	**-0.4**
PSGC				*i*S	**Sn**	**22 19 27.5**	**-0.4**
PB16	**IPOC Station P**	**1.74**	**90**	*e*P	**Pn**	**22 19 05.5**	**-1.3**
PB16				*e*S	**Sn**	**22 19 29.5**	**-0.1**
PB16	**IPOC Station P**	**1.74**	**90**	*e*P	**Pn**	**22 19 05.4**	**-1.3**
PB16				*i*S	**Sn**	**22 19 28.4**	**-1.2**
PB16				IAML		22 19 29.9	
	comp=N,2μm,0.5s						
MNMC	**Minye Minye**	**1.83**	**116**	*e*P	**Pn**	**22 19 07.2**	**-0.4**
MNMC				*i*S	**Sn**	**22 19 31.2**	**-0.2**
PB11	**IPOC Station P**	**2.13**	**132**	*e*P	**Pn**	**22 19 11.5**	**-0.2**
PB11				*e*S	**Sb**	**22 19 41.7**	**+0.4**
PB11	**IPOC Station P**	**2.13**	**132**	*e*P	**Pn**	**22 19 11.4**	**-0.2**
PB11				*i*S	**Sn**	**22 19 38.9**	**+0.3**
PB11				IAML		22 19 42.9	
	comp=E,569nm,0.1s						
GO01	**Chusmiza**	**2.42**	**123**	*e*P	**Pn**	**22 19 16.3**	**+0.3**
GO01				*i*S	**Sn**	**22 19 47.0**	**+0.8**
PB08	**IPOC Station P**	**2.73**	**131**	*e*P	**Pn**	**22 19 20.6**	**+0.4**
PB08	**IPOC Station P**	**2.73**	**131**	*e*P	**Pn**	**22 19 20.2**	**+0.1**
PB08				*i*S	**Sn**	**22 19 54.5**	**+0.6**
PB01	**IPOC Station P**	**3.20**	**147**	*e*P	**Pn**	**22 19 26.3**	**-0.1**
PB02	**IPOC Station P**	**3.26**	**156**	*e*P	**Pn**	**22 19 27.4**	**+0.1**
PB02				*e*S	**Sn**	**22 20 07.8**	**+1.3**
PB02	**IPOC Station P**	**3.26**	**156**	⇓*i*P	**Pn**	**22 19 27.3**	**+0.1**
PB07	**IPOC Station P**	**3.63**	**158**	*e*P	**Pn**	**22 19 32.7**	**+0.3**
LPAZ	**La Paz**	**3.68**	**57**	*e*P	**Pn**	**22 19 34.7**	**+1.2**
LPAZ				⇓*e*S	Sn	22 20 01.6	-16
PB03	**IPOC Station P**	**3.98**	**158**	*e*P	**Pn**	**22 19 36.7**	**-0.4**
PB04	**IPOC Station P**	**4.13**	**165**	*e*P	**Pn**	**22 19 38.7**	**-0.5**
PB05	**IPOC Station P**	**4.61**	**167**	*e*P	**Pn**	**22 19 45.3**	**-0.5**
PB06	**IPOC Station P**	**4.65**	**159**	*e*P	**Pn**	**22 19 45.1**	**-1.2**
LVC	**Limon Verde**	**4.82**	**152**	*e*P	**Pn**	**22 19 46.7**	**-2.2**
LVC				IAML		22 19 56.8	
	comp=Z,9.2nm,0.2s						

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*DMN **26** 22:22:13.4±0.3, 26°.86N×85°.96E, h50km, Ml4.5/6, Error ellipse: s-maj=6.0km s-min=3.8km az=153.0*
ISC 26 22:22:11.4±2.9, 26°.7N±0°.2×86°.0E±0°.1, h60km±55km, n10, σ0=78/17, 1C, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	**0.98**	**12**	*e*Pg	**Pn**	**22 22 29.7**	**+0.2**
JIRN				*e*Sg	**Sn**	**22 22 42.2**	**-0.7**
PKI	**Pulchoki**	**1.00**	**330**	*e*Pg	**Pn**	**22 22 30.4**	**+0.6**
PKI				*e*Sg	**Sn**	**22 22 42.4**	**-1.0**
	693nm,0.3s						
PKI				*e*Sg	**Sn**	**22 22 43.3**	**-0.1**
	3μm,0.4s						
PKIN	**Phulchoki**	**1.01**	**330**	*e*Pg	**Pn**	**22 22 30.5**	**+0.6**
DMN	**Daman**	**1.19**	**320**	*e*Pg	**Pn**	**22 22 33.4**	**+1.2**
DMN				*e*Sg	**Sn**	**22 22 47.0**	**-0.6**
	828nm,0.4s						
DMN				*e*Sg	**Sn**	**22 22 47.8**	**+0.2**
	3μm,0.4s						
GUN	**Gumba**	**1.21**	**356**	*e*Pg	**Pn**	**22 22 33.3**	**+0.8**
GUN				*e*Sg	**Sn**	**22 22 47.2**	**-1.1**
	12μm,0.6s						
KKN	**Kakani**	**1.25**	**331**	*e*Pg	**Pn**	**22 22 33.7**	**+0.8**
KKN				*e*Sg	**Sn**	**22 22 48.2**	**-0.8**
	544nm,0.2s						
KOLN	**Koldanda**	**2.37**	**297**	*e*Pn	**Pn**	**22 22 48.6**	**+0.6**
DANN	**Dangsing**	**2.56**	**310**	*e*Pn	**Pn**	**22 22 51.1**	**+0.3**
PYUN	**Piuthan**	**3.00**	**298**	*e*Pn	**Pn**	**22 22 56.9**	**+0.3**
NGP	**Nagpur**	**8.40**	**230**	⇓*e*P	**Pn**	**22 24 09.9**	**-0.6**
NGP				*e*S	Sn	22 25 35.6	-8.2

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*NIED **26** 22:53:00, 39°.70N×143°.60E, h17km, Mw3.6 Best double couple: M0=2.67000×10^14 NP1:φs=172.00000°, δ=34.00000°, λ=49.00000°. NP2:φs=38.00000°, δ=65.00000°, λ=113.00000°.*
JMA 26 22:53:52.0±0.2, 39°.68N×143°.64E, h25km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.39**	**281**	P	Pn	22 54 16.0	+0.2
MIYJ	**Miyakonagasawa**	**1.41**	**266**	P	Pn	22 54 16.6	+0.5
MIYJ				*e*S	Sb	22 54 34.7	-0.5
JKEN	**Kujiedanarisaw**	**1.57**	**290**	P	Pn	22 54 18.7	+0.4
JKEN				*e*S	Sn	22 54 38.1	+0.2
JANG	**Nango**	**1.77**	**294**	P	Pn	22 54 21.6	+0.5
JOM	**Ohasama**	**1.83**	**264**	P	Pn	22 54 23.1	+1.3
JOM				*e*S	Sb	22 54 45.7	-1.4
JMK	**Ichinoseki**	**2.01**	**250**	P	Pn	22 54 25.4	+1.0
JIO	**Ouri**	**2.16**	**236**	P	Pn	22 54 27.0	+0.6
JYK	**Kaneyama**	**2.66**	**254**	P	Pn	22 54 34.9	+1.7
JYK				*e*S	Sn	22 55 06.3	+1.7
JNBK	**Urakawa-nobuka**	**2.68**	**346**	P	Pn	22 54 36.0	+2.4
JNBK				*e*S	Sn	22 55 07.1	+1.9
JCH	**Churui**	**2.94**	**356**	P	Pn	22 54 38.3	+1.2
JCH				*e*S	Sn	22 55 11.9	+0.3
JKB	**Kayabe**	**2.96**	**319**	*e*S	Sn	22 55 13.9	+1.8
JFT	**Otama**	**3.37**	**231**	P	Pn	22 54 44.3	+1.3

WEL 26 22:54:02.5±0.7, 37°S±6°×17°8E±°, h29km±4km, M3.5/40, ML3.8/31, MLv3.5/40, Error ellipse: s-maj=0.0km s-min=0.0km az=12.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.43**	**175**	P	Pn	22 54 12.5	-0.2
HAZ				S	Sn	22 54 21.0	+1.4
WIZ	**White Island**	**0.48**	**246**	P	Pn	22 54 14.3	+0.8
WIZ				S	Sn	22 54 22.7	+1.7
MXZ	**Matakaoa Point**	**0.51**	**117**	P	Pb	22 54 12.9	-0.2
MXZ				Sn	Sn	22 54 21.6	-0.1
PKGZ	**Pakihiroa**	**0.62**	**154**	P	Pb	22 54 14.9	0.0
RUGZ	**Raukumara Rang**	**0.64**	**184**	P	Pb	22 54 14.9	-0.4
WMGZ	**Waiomatatini S**	**0.73**	**132**	P	Pn	22 54 17.3	+0.4
WMGZ				S	Sn	22 54 29.6	+2.5
WHRZ	**Whale Island**	**0.80**	**229**	P	Pn	22 54 18.2	+0.2
WHRZ				S	Sn	22 54 30.0	+1.1
PUZ	**Puketiti**	**0.85**	**151**	P	Pn	22 54 18.5	0.0
PUZ				S	Sn	22 54 31.9	+1.8
MWZ	**Matawai**	**1.02**	**189**	P	Pn	22 54 20.1	-0.8
MWZ				S	Sn	22 54 33.2	-1.0
URZ	**Urewera**	**1.05**	**208**	P	Pn	22 54 20.8	-0.6
URZ				S	Sn	22 54 34.8	-0.3
MARZ	**Manawahe**	**1.07**	**232**	P	Pn	22 54 21.3	-0.3
MARZ				S	Sn	22 54 35.7	+0.2
OPRZ	**Ohinepanea**	**1.07**	**241**	P	Pn	22 54 21.3	-0.4
OPRZ				S	Sn	22 54 34.9	-0.6
EDRZ	**Edgecumbe**	**1.11**	**225**	P	Pn	22 54 21.9	-0.3
TKGZ	**Te Karaka**	**1.11**	**176**	P	Pn	22 54 22.6	+0.4
RAGZ	**Rawiri**	**1.19**	**192**	P	Pn	22 54 23.4	0.0
CNGZ	**Carnagh Statio**	**1.21**	**162**	P	Pn	22 54 23.4	-0.1
TGRZ	**Tauranga**	**1.24**	**251**	P	Pn	22 54 23.8	-0.1
TARZ	**Mount Tarawera**	**1.33**	**227**	P	Pn	22 54 25.8	+0.5
OMRZ	**Omania**	**1.33**	**234**	P	Pn	22 54 25.3	+0.1
KARZ	**Kaharoa**	**1.37**	**239**	P	Pn	22 54 25.8	0.0
RIGZ	**Rimuhau**	**1.37**	**179**	P	Pn	22 54 25.7	-0.1
MUGZ	**Murupara**	**1.38**	**213**	P	Pn	22 54 25.4	-0.4

RRRZ	**Republican Roa**	**1.40**	**223**	P	Pn	22 54 26.1	-0.1
RTZ	**Ruatahuna**	**1.42**	**205**	P	Pn	22 54 25.8	-0.7
HLRZ	**Highlands Stat**	**1.43**	**230**	P	Pn	22 54 26.7	0.0
SNGZ	**Shannon Statio**	**1.48**	**192**	P	Pb	22 54 28.5	-1.0
HRRZ	**Handcock Road**	**1.56**	**227**	P	Pb	22 54 29.8	-1.1
PRRZ	**Plateau Road**	**1.58**	**222**	P	Pn	22 54 29.1	+0.5
PRGZ	**Paritu Road**	**1.59**	**176**	P	Pn	22 54 28.7	-0.1
GRRZ	**Galatos Road**	**1.64**	**231**	P	Pn	22 54 29.8	+0.3
ALRZ	**Allen Road**	**1.65**	**221**	P	Pn	22 54 30.1	+0.4
RAHZ	**Arahi**	**1.67**	**198**	P	Pn	22 54 30.7	+0.9
MTHZ	**Maungataniwha**	**1.68**	**205**	P	Pn	22 54 30.1	+0.1
KNZ	**Kokohu**	**1.69**	**182**	P	Pn	22 54 29.1	-1.0
KUZ	**Kuaotunu**	**1.72**	**289**	P	Pn	22 54 29.9	-0.6
WHHZ	**Waihua**	**1.79**	**193**	P	Pn	22 54 32.0	+0.5
TOZ	**Tahuroa Road**	**1.82**	**257**	P	Pn	22 54 31.7	-0.2
MHGZ	**Mahia Peninsul**	**1.82**	**176**	P	Pn	22 54 31.1	-0.9
MRHZ	**Matea Rd**	**1.83**	**214**	P	Pn	22 54 31.8	-0.3
KUTZ	**Kaahu Road**	**1.91**	**232**	P	Pn	22 54 33.4	+0.2
NMHZ	**Naumai**	**1.91**	**202**	P	Pn	22 54 34.2	+1.0
TLZ	**Tolley Road**	**2.01**	**240**	P	Pn	22 54 34.5	-0.1
ARHZ	**Aropaoanui**	**2.02**	**197**	P	Pn	22 54 34.6	-0.1
MKAZ	**Moumakai**	**2.07**	**275**	P	Pn	22 54 35.3	0.0
BKZ	**Black Stump Fm**	**2.08**	**208**	P	Pn	22 54 35.6	+0.1
GRZ	**Great Barrier**	**2.12**	**300**	P	Pn	22 54 35.7	-0.4
WIAZ	**Waiheke Island**	**2.15**	**284**	P	Pn	22 54 36.5	0.0
RATZ	**Rangitukua**	**2.18**	**225**	P	Pn	22 54 38.2	+1.3
RITZ	**Rihia Road**	**2.21**	**221**	P	Pn	22 54 38.8	+1.5
MCHZ	**McNeill Hill**	**2.26**	**201**	P	Pn	22 54 37.7	-0.4
ETAZ	**East Tamaki Re**	**2.28**	**279**	P	Pn	22 54 38.6	+0.4
KATZ	**Kakaramea**	**2.30**	**224**	P	Pn	22 54 39.9	+1.2
MBAZ	**Motutapu North**	**2.34**	**283**	P	Pn	22 54 39.3	+0.3
CKHZ	**Cape Kidnapper**	**2.38**	**192**	P	Pn	22 54 38.4	-1.3
KRVZ	**Karewarewa**	**2.42**	**223**	P	Pn	22 54 41.3	+1.1
EPAZ	**Eden Park BICE**	**2.44**	**280**	P	Pn	22 54 40.8	+0.4
ABAZ	**Army Bay**	**2.44**	**286**	P	Pn	22 54 40.7	+0.3
HBAZ	**Herne Bay Bore**	**2.45**	**280**	P	Pn	22 54 41.2	+0.6
WTVZ	**West Tongariro**	**2.46**	**223**	P	Pn	22 54 42.2	+1.4
AWAZ	**Awhitu Peninsu**	**2.49**	**275**	P	Pn	22 54 41.5	+0.5
NGZ	**Ngauruhoe**	**2.50**	**222**	P	Pn	22 54 42.3	+0.9
TWVZ	**Taurewa**	**2.51**	**225**	P	Pn	22 54 43.2	+1.7
BHHZ	**Black Hill Sta**	**2.53**	**211**	P	Pn	22 54 41.8	+0.1
TUVZ	**Tukino**	**2.54**	**220**	P	Pn	22 54 42.6	+0.6
KRHZ	**Kereru**	**2.55**	**205**	P	Pn	22 54 40.8	-1.1
KAHZ	**Kahuranaki**	**2.55**	**195**	P	Pn	22 54 41.0	-1.0
HIZ	**Hauiti**	**2.57**	**242**	P	Pn	22 54 42.8	+0.6
FWVZ	**Far West T-bar**	**2.58**	**221**	P	Pn	22 54 43.3	+0.7
WHVZ	**Whangaehu Hut**	**2.58**	**220**	P	Pn	22 54 43.1	+0.5
RVAZ	**Riverhead Bore**	**2.59**	**282**	P	Pn	22 54 42.8	+0.4
MOVZ	**Moawhango**	**2.59**	**216**	P	Pn	22 54 42.5	-0.1
PKVZ	**Pokaka**	**2.71**	**223**	P	Pn	22 54 45.1	+0.8
PXZ	**Pawanui**	**2.78**	**194**	P	Pn	22 54 42.9	-2.3
PNHZ	**Pukenui**	**2.85**	**205**	P	Pn	22 54 44.2	-1.9
WPHZ	**Waipukurau**	**2.91**	**200**	P	Pn	22 54 44.8	-2.2
VRZ	**Vera Road**	**2.95**	**232**	P	Pn	22 54 48.9	+1.4
PRHZ	**Porangahau**	**3.06**	**196**	P	Pn	22 54 46.4	-2.5
TSZ	**Takapari Road**	**3.06**	**206**	P	Pn	22 54 46.9	-2.1
WCZ	**Waipu Caves**	**3.06**	**296**	P	Pn	22 54 48.8	-0.2
WAZ	**Wanganui**	**3.24**	**221**	P	Pn	22 54 51.8	+0.3
ANWZ	**Angora Road**	**3.28**	**197**	P	Pn	22 54 49.1	-2.8
LREZ	**Lake Rotokare**	**3.38**	**230**	P	Pn	22 54 54.7	+1.5
POWZ	**Post Office Ro**	**3.42**	**206**	P	Pn	22 54 51.9	-2.0
PKE	**Pukeiti**	**3.49**	**237**	P	Pn	22 54 56.3	+1.3
PRWZ	**Pori Road**	**3.50**	**203**	P	Pn	22 54 52.5	-2.5
KHEZ	**Kahui Hut**	**3.52**	**235**	P	Pn	22 54 57.7	+2.3
OUZ	**Omahuta**	**3.95**	**301**	P	Pn	22 55 01.3	+0.1
CTZ	**Chatham Island**	**7.71**	**148**	P	Pn	22 55 48.9	-3.9
WVZ	**Waitaha Valley**	**7.85**	**221**	P	Pn	22 55 49.7	-5.0

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*NIED **26** 22:54:00, 44°.70N×145°.70E, h8km, Mw4.4 Best double couple: M0=4.77000×10^15 NP1:φs=72.00000°, δ=51.00000°, λ=129.00000°. NP2:φs=200.00000°, δ=53.00000°, λ=52.00000°.*
*BJI **26** 22:54:45.6±0.0, 45°.02N×146°.23E, h8km, mb4.6/30, mB4.8/23, Ms4.3/16, Ms7 4.0/14*
*IDC **26** 22:54:48.4±0.8, 44°.85N×145°.65E, h0km, mb4.4/18, mb1 4.6/23, mb1mx4.5/45, mbtmp4.4/23, ML3.5/5, MS3.3/5, Ms1 3.3/5, ms1mx3.1/43, Error ellipse: s-maj=24.5km s-min=11.7km az=164.0*
*ISCJB **26** 22:54:48.5±1.0, 44°.74N±0°.02×145°.70E±0°.03, h10km±6km, mb4.5/82, Error ellipse: s-maj=3.3km s-min=2.7km az=34.0*
*JMA **26** 22:54:50.2±0.2, 44°.72N×145°.72E, h31km±2km, M4.3*
JMA Felt II J1.
*NEIC **26** 22:54:51.5±2.1, 44°.78N×145°.63E, h21km±5km, mb4.9/196, Error ellipse: s-maj=15.2km s-min=5.1km az=179.0*
NEIC Recorded [2 JMA] in northeastern Hokkaido.
*SKHL **26** 22:54:51.2±0.3, 44°.66N×145°.76E, h38km±8km, mb5.0/18, Ms4.2/6*
SKHL Felt (II) at Yuzhno-kuril'sk (73 km), Goryachei Plyazh(76 km).
*MOS **26** 22:54:51.3±1.1, 44°.66N×145°.76E, h34km, mb4.9/29, Error

JRA *e*S **Sb** **22 55 18.3 0.0**
GLVR Golovnino 0.93 192 *i* PN **Pn** **22 55 08.3 -0.7**
GLVR *i* S **Sb** **22 55 21.5 +1.0**
GLVR pmax pmax
comp=N,237nm,0.6s
GLVR pmax pmax
comp=Z,2μm,0.6s
GLVR pmax pmax
comp=E,303nm,0.2s
GLVR smax smax
comp=N,14nm,0.4s
GLVR smax smax
comp=E,13nm,0.4s
GLVR Golovnino 0.93 192 *e*P **Pn** **22 55 07.3 -1.7**
GLVR AMB AMB 22 55 08.6
comp=E,237nm,0.6s
GLVR AMB AMB 22 55 08.6
comp=E,303nm,0.6s
GLVR AMB AMB 22 55 08.6
comp=E,2μm,0.6s
GLVR *i* S **Sb** **22 55 19.5 -1.0**
GLVR A A 22 55 22.5
comp=E,13μm,0.4s
GLVR A A 22 55 22.5
comp=E,14μm,0.4s
NEM2 Nemuro 2 1.29 181 ⇓P **Pn** **22 55 12.9 -1.0**
NEM2 *e*S **Sn** **22 55 29.2 -1.3**
JNK Nakash 1.31 216 ⇓P **Pn** **22 55 13.3 -1.0**
JNK *e*S **Sn** **22 55 30.2 -0.9**
JTKR Abashiri--Toko 1.51 244 P **Pn** **22 55 15.4 -1.5**
JTKR *e*S **Sn** **22 55 33.6 -2.3**
KUR Kuril'sk 1.59 68*c i*PN **Pn** **22 55 17.7 -0.4**
KUR *e*S **Sn** **22 55 36.5 -1.5**
KUR pmax pmax
comp=Z,2μm,0.5s
KUR pmax pmax
comp=N,268nm,0.2s
KUR pmax pmax
comp=E,626nm,0.2s
KUR smax smax
comp=N,2μm,0.2s
KUR smax smax
comp=E,3μm,0.2s
KUR Kuril'sk 1.59 68 *e*P **Pn** **22 55 18.5 +0.4**
KUR AMB AMB 22 55 19.4
comp=E,2μm,0.4s
KUR *e*S **Sn** **22 55 37.4 -0.6**
KUR A A 22 55 41.9
comp=E,3μm,0.3s
KUR A A 22 55 41.9
comp=E,3μm,0.3s
KUR AMS AMS 22 56 06.3
comp=E,6μm,10.0s
KUR AMS AMS 22 56 06.3
comp=E,10μm,10.0s
KUR AMS AMS 22 56 06.3
comp=E,4μm,10.0s
JKHN Kushirohamanak 1.63 196 P **Pn** **22 55 18.1 -0.5**
JKHN *e*S **Sn** **22 55 38.9 -0.1**
JMP Maruseppu 1.85 250 ⇓P **Pn** **22 55 20.5 -1.2**
JMP *e*S **Sn** **22 55 42.7 -1.8**
JSE Soyaes 2.29 279 P **Pn** **22 55 26.1 -1.7**
JKK2 Kamakawa 2 2.31 251 ⇓P **Pn** **22 55 27.0 -1.1**
ASAJ Asahikawa 2.34 258 Pn **Pn** **22 55 27.9 -0.6**
comp=E,39nm,0.3s,baz=65,slow=11,SNR=107
ASAJ LR LR 22 55 54.2
comp=E,165nm,19.1s,baz=348,slow=28
ASAJ Sn **Sn** **22 55 55.8 -0.8**
comp=E,101nm,0.3s,baz=343,slow=29,SNR=7.4
ASAJ Asahikawa 2.34 258 ⇓P **Pn** **22 55 27.8 -0.6**
YSS Yuzh-Sakhalins 3.13 318 *e*Pn **Pn** **22 55 37.6 -1.6**
YSS *e*Sn Sn 22 56 05.9 -10
YSS Yuzh-Sakhalins 3.13 318 *e*PN **Pn** **22 55 37.8 -1.4**
YSS pmax pmax
comp=Z,220nm,0.6s
YSS MLR MLR
comp=Z,1μm,15.0s
YSS MLR MLR
comp=N,1μm,10.0s
YSS Yuzh-Sakhalins 3.13 318 *e*P **Pn** **22 55 37.0 -2.2**
YSS AMB AMB 22 55 39.5
comp=N,190nm,0.5s
YSS *e*S **Sn** **22 56 12.0 -3.9**
YSS A A 22 56 14.0
comp=N,730nm,0.5s
YSS A A 22 56 14.0
comp=N,680nm,0.5s
YSS AMS AMS 22 57 10.0
comp=N,1μm,10.0s
YSS AMS AMS 22 57 10.0
comp=N,775nm,10.0s
YSS AMS AMS 22 57 10.0
comp=N,1μm,10.0s
ERM Erimo 3.26 217 *e*Pn **Pn** **22 55 41.1 +0.1**
ERM Erimo 3.26 217*de*PN **Pn** **22 55 44.9 +3.9**
UGL Uglegorsk 5.11 331 *e*PN **Pn** **22 56 10.4 +4.0**
UGL pmax pmax
comp=Z,72nm,0.6s
UGL MLR MLR
comp=Z,1μm,12.0s
UGL MLR MLR
comp=N,800nm,10.0s
TYV Tymovskoe 6.56 342 *e*PN **Pn** **22 56 27.4 +1.0**
TYV pmax pmax
comp=Z,11nm,0.8s
TYV Tymovskoe 6.56 342 *e*P **Pn** **22 56 27.4 +1.0**
TYV AMB AMB 22 56 34.6
comp=Z,67nm,0.4s
TYV *e*S **Sn** **22 57 38.8 -1.7**
TYV A A 22 57 40.0
comp=Z,65nm,0.6s
TYV A A 22 57 40.0
comp=Z,102nm,0.6s
TYV AMS AMS 22 59 45.7
comp=Z,770nm,16.0s
TYV AMS AMS 22 59 45.7
comp=Z,760nm,16.0s
TYV AMS AMS 22 59 45.7
comp=Z,710nm,16.0s
GRNR Gornyy 8.79 317 *e*PN **Pn** **22 56 56.0 -0.9**
GRNR pmax pmax
comp=Z,23nm,0.2s
GRNR Gornyy 8.79 317 *e*P **Pn** **22 56 56.0 -0.9**
GRNR AMB AMB 22 56 57.1
comp=Z,23nm,0.2s
OKH Okha 9.10 349 *e*P **Pn** **22 57 02.2 +1.1**
OKH AMS AMS 23 01 24.0
comp=Z,500nm,16.0s
NKL Nikolayevsk 9.14 340 *e*PN **Pn** **22 57 00.8 -0.9**
NKL pmax pmax
comp=N,16nm,1.1s
NKL pmax pmax
comp=E,7.0nm,1.1s
NKL pmax pmax
comp=Z,17nm,1.1s
NKL MLR MLR
comp=E,429nm,17.0s
NKL MLR MLR
comp=Z,370nm,19.0s
NKL Nikolayevsk 9.14 340 *e*P **Pn** **22 57 03.5 +1.8**
NKL AMB AMB 22 57 10.2
comp=Z,24nm,0.9s
NKL AMS AMS 23 00 46.0
comp=Z,900nm,16.0s
NKL AMS AMS 23 00 46.0
comp=Z,500nm,16.0s
SKR Severo-Kuril's 9.22 45⇓*e*PN **Pn** **22 57 02.6 -0.2**
USA0B Ussuriysk Arra 9.88 272 *e*Pn Pn 22 57 06.5 -5.3
USRK Ussuriysk Ar. 9.88 272 Pn **Pn** **22 57 11.2 -0.7**
comp=Z,0.1nm,0.3s,baz=85,slow=16,SNR=2.1
USRK LR LR 23 00 37.9
comp=Z,155nm,20.1s,baz=79,slow=36
MJB9 Matsu-Tunnel 9.93 218 *e*Pn **Pn** **22 57 13.6 +0.9**
MAJO Matsushiro 9.93 218 *e*Pn **Pn** **22 57 13.6 +0.9**
MAJO Matsushiro 9.93 218⇓*e*PN **Pn** **22 57 14.6 +1.9**
MAJO pmax pmax
comp=Z,16nm,0.9s
MJAR Matsushiro Arr 9.93 218 Pn **Pn** **22 57 13.8 +1.1**
comp=Z,0.1nm,0.3s,baz=25,slow=12,SNR=9.8
MJAR LR LR 23 01 51.4
comp=Z,326nm,18.4s,baz=35,slow=42
KLR Kul'dur 10.63 300 Pn **Pn** **22 57 19.9 -2.2**
comp=Z,0.2nm,0.3s,baz=108,slow=18,SNR=3.2
KLR LR LR 23 01 15.1
comp=Z,255nm,20.7s,baz=112,slow=37
KLR Kul'dur 10.63 300⇓*e*PN **Pn** **22 57 23.8 +1.7**
KLR pmax pmax
comp=Z,6.0nm,0.9s
KLR Kul'dur 10.63 300 *e*P **Pn** **22 57 23.8 +1.7**
MSHR Mys Shultsa 10.80 264⇑*e*PN **Pn** **22 57 25.9 +1.4**
PEA0B Petropavlovsk- 11.53 39 *e*Pn **Pn** **22 57 36.6 +2.2**
PEA0B *e*Sn Sn 22 59 26.0 -16
PETK Petropavlovsk- 11.53 39 Pn **Pn** **22 57 33.0 -1.4**
comp=Z,0.6nm,0.3s,baz=189,slow=10,SNR=5.2
PETK LR LR 23 01 44.1
comp=Z,267nm,19.1s,baz=226,slow=36
PEA1 Petropavlovsk- 11.53 39 *e*Pn **Pn** **22 57 33.0 -1.4**
PET Petropavlovsk 11.91 41 *e*P **Pn** **22 57 38.8 -0.7**
PET AMB AMB 22 57 39.0
comp=Z,26nm,0.7s
PET AMS AMS 23 03 06.1
comp=Z,360nm,16.0s
EKMR Ekimchan 11.91 320 *e*P **Pn** **22 57 40.9 +1.2**
EKMR AMB AMB 22 57 50.9
comp=Z,5.0nm,0.6s
CN2 Changchun 14.60 274 *e*P **Pn** **22 58 15.3 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,500nm,11.0s
CN2 LR LR
comp=Z,400nm,11.0s
CN2 LR LR
comp=Z,400nm,12.0s
BMKR Bomnak 14.84 319 *e*P **P** **22 58 25.0 -0.3**
BMKR AMB AMB 22 58 30.4
comp=Z,10.0nm,1.0s
ZEA Zeya 15.11 314 *e*P **Pn** **22 58 24.0 +0.9**
ZEA pmax pmax
comp=Z,26nm,0.8s
ZEA MLR MLR
comp=E,400nm,12.0s
ZEA MLR MLR
comp=Z,500nm,12.0s
ZEA MLR MLR
comp=N,200nm,13.0s
ZEA Zeya 15.11 314 *e*P **Pn** **22 58 21.0 -2.1**
ZEA AMB AMB 22 58 31.0
comp=N,26nm,0.8s
ZEA AMS AMS 23 05 03.0
comp=N,200nm,13.0s
ZEA AMS AMS 23 05 03.0
comp=N,400nm,13.0s
ZEA AMS AMS 23 05 03.0
comp=N,500nm,13.0s
MA2 Magadan 15.25 10 Pn **Pn** **22 58 24.1 -1.0**
comp=N,26nm,0.3s,baz=168,slow=16,SNR=4.7
MA2 Magadan 15.25 10⇑*e*P **Pn** **22 58 25.7 +0.7**
MA2 pmax pmax
comp=Z,6.0nm,0.6s
MA2 Magadan 15.25 10 *e*P **Pn** **22 58 25.7 +0.7**
KSRS Korea Array 15.25 248 Pn **Pn** **22 58 25.7 +0.5**
comp=Z,0.1nm,0.3s,baz=60,slow=12,SNR=8.9
KS15 Wonju Array Si 15.29 248 *e*Pn **Pn** **22 58 25.7 +0.1**
comp=Z,7.7nm,1.1s
KROS Kirovskiy 15.60 316 *e*P **Pn** **22 58 26.0 -3.6**
KROS AMB AMB 22 58 31.7
comp=Z,3.0nm,0.5s
YAK Yakutsk 19.78 337 *e*P **P** **22 59 19.8 +0.1**
comp=Z,34nm,0.8s
YAK Yakutsk 19.78 337 *e*P **Pn** **22 59 27.1 +5.8**
YAK *e*S **Sn** **23 03 06.1 +3.3**
SMY Shemya 20.26 56 *e*P **P** **22 59 23.4 -1.6**
comp=Z,32nm,0.8s
SMY Shemya 20.26 56 *e*P **P** **22 59 23.4 -1.6**
SMY pmax pmax
comp=Z,32nm,0.8s
BOD Bodaibo 23.60 315 *e*P **P** **22 59 58.3 -2.0**
BOD pmax pmax
comp=Z,12nm,1.5s
NJ2 Nanjing 24.45 248 *e*P **P** **23 00 09.8 +1.3**
NJ2 pmax pmax
comp=Z,15nm,0.5s
HHC Hu-ho-hao-te 25.30 273 P **P** **23 00 16.8 +0.6**
HHC S **S** **23 04 51.5 +10**
HHC pmax pmax
comp=Z,14nm,1.1s
HHC pmax pmax
comp=Z,21nm,5.3s
HHC LR LR
comp=Z,230nm,9.4s
HHC LR LR
comp=Z,340nm,12.6s
BILL Biiibino 25.78 18 *e*P **P** **23 00 19.6 -0.6**
comp=Z,9.5nm,0.6s
BILL Biiibino 25.78 18 *e*P **P** **23 00 19.1 -1.1**
BILL pmax pmax
comp=Z,18nm,1.3s
BILL Biiibino 25.78 18 *e*P **P** **23 00 19.1 -1.1**
ULN Ulaanbaatar 26.78 291 *e*P **P** **23 00 28.4 -1.2**
comp=Z,6.6nm,1.0s
ULN Ulaanbaatar 26.78 291⇑*e*P **P** **23 00 30.1 +0.5**
ULN pmax pmax
comp=Z,2.0nm,0.6s
ULN Ulaanbaatar 26.78 291 *e*P **P** **23 00 30.1 +0.5**
SONA0 Songino Array 27.22 291 *e*P **P** **23 00 32.6 -1.0**
SONA0 *e*PcP **PcP** **23 03 53.3 +0.1**
SONM Songino Array 27.22 291 P **P** **23 00 32.6 -1.0**
comp=Z,1.5nm,0.7s,baz=74,slow=8.9,SNR=10
SONM PcP **PcP** **23 03 53.3 +0.1**
comp=Z,1.4nm,0.8s,baz=116,slow=1.9,SNR=6.2
TIK Tiksi 28.27 349 *e*P **P** **23 00 43.1 +0.6**
TIXI Tiksi 28.28 349⇑*e*P **P** **23 00 43.1 +0.5**
TIXI pmax pmax
comp=Z,5.0nm,1.2s
ZAK Zakamensk 28.96 297 *e*P **P** **23 00 50.6 +1.5**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
H11N2 WAKE ISLAND Hy 30.43 138 T T 23 32 02.1
baz=330,slow=75,SNR=95
H11N1 WAKE ISLAND Hy 30.44 138 T T 23 31 59.2
baz=330,slow=75,SNR=79
H11N3 WAKE ISLAND Hy 30.45 138 T T 23 32 03.6
baz=330,slow=75,SNR=82
LZH Lanzhou 32.77 270 *e*P **P** **23 01 24.5 +1.6**
LZH pP pP 23 01 29.0 +0.6
LZH sP sP 23 01 31.8 +1.0
LZH *e*PP **PnPn** **23 02 32.5 +1.2**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,86nm,5.2s
GTA Gaotai 34.19 278 *e*P P 23 01 40.5 +5.4
GTA pP pwP 23 01 44.8 +1.1
GTA sP sP 23 01 47.3 +4.4
GTA pmax pmax
comp=Z,4.0nm,0.6s
CD2 Chengdu 35.54 262 *e*P **P** **23 01 47.0 +0.2**
CNP Catarman 36.78 216 *e*P **P** **23 02 00.8 +3.4**
TTA Tatalina 37.36 40 *e*P **P** **23 02 02.5 +0.6**
comp=Z,7.1nm,0.9s
TTA Tatalina 37.36 40 *e*P **P** **23 02 02.6 +0.6**
TTA pmax pmax
comp=Z,7.0nm,0.9s
OTRP Odiongan 38.07 220 *e*P **P** **23 02 04.8 -3.6**
SJMP San Jose 38.40 221 *e*P **P** **23 02 08.2 -2.9**
OHAK Old Harbor 39.07 49 *e*P **P** **23 02 15.2 -1.2**
comp=Z,25nm,0.8s
PPLA Purkeypile 39.11 40 *e*P **P** **23 02 15.4 -1.3**
comp=Z,8.7nm,1.0s
DGZ Jazzator, Alta 39.12 299⇓*e*P **P** **23 02 19.3 +2.3**
DGZ pmax pmax
comp=Z,1.0nm,0.8s
KDAK Kodiak Island 39.37 48 P **P** **23 02 18.6 -0.2**
comp=Z,18nm,0.8s,baz=296,slow=8.6,SNR=11
KDAK PcP **PcP** **23 04 27.3 +0.5**
comp=Z,5.0nm,0.7s,baz=135,slow=2.9,SNR=4.5
KDAK Kodiak Island 39.37 48 *e*P **P** **23 02 18.8 0.0**
comp=Z,19nm,0.8s
KDAK *e*PcP **PcP** **23 04 27.9 +1.1**
BPAW Bear Paw Mtn. 39.61 38 *e*P **P** **23 02 21.5 +0.7**
comp=Z,5.1nm,0.9s
KTH Kantishna Hill 39.66 39 *e*P **P** **23 02 20.1 -1.2**
comp=Z,16nm,0.9s
ZALV Zalesovo Beam 39.67 306 PcP **PcP** **23 04 27.7 -0.1**
comp=Z,3.6nm,0.7s,baz=72,slow=2.1,SNR=11
KMI Kunming 39.77 255 P **P** **23 02 26.3 +3.5**
KMI pmax pmax
comp=Z,8.0nm,0.7s
COLD Coldfoot 39.93 33 *e*P **P** **23 02 22.3 -1.1**
comp=Z,2.1nm,0.9s
TRF Thorofare Moun 39.95 39 *e*P **P** **23 02 24.4 +0.6**
comp=Z,1.6nm,0.9s
BWN Browne 40.27 38 *e*P **P** **23 02 26.9 +0.6**
comp=Z,52nm,1.2s
WMQ Urumqi 40.85 290 *e*P **P** **23 02 32.5 +1.1**
WMQ pP pP 23 02 37.5 +0.5
WMQ pmax pmax
comp=Z,10.0nm,1.1s
WMQ pmax pmax
comp=Z,99nm,4.9s
WMQ LR LR
comp=Z,150nm,18.7s
WMQ LR LR
comp=Z,230nm,23.9s
TCOL CIGO, UAF Yank 40.93 37 P **P** **23 02 31.6 0.0**
baz=274
COLA College 40.93 37*c i*P **P** **23 02 31.8 +0.1**
COLA pmax pmax
comp=Z,19nm,0.9s
SML Sawmill 40.99 41 *e*P **P** **23 02 32.9 +0.6**
comp=Z,17nm,0.7s
SML Sawmill 40.99 41 *e*P **P** **23 02 32.9 +0.6**
SML pmax pmax
comp=Z,17nm,0.7s
POKR Poker Plat Res 41.09 36 P **P** **23 02 33.3 +0.2**
baz=274
ILAR Eielson Array 41.35 37 P **P** **23 02 34.8 -0.3**
comp=Z,9.7nm,0.9s,baz=272,slow=7.4,SNR=27
ILAR PcP **PcP** **23 04 32.2 -0.9**
comp=Z,0.7nm,0.8s,baz=249,slow=3.0,SNR=4.6
DIV Divide 42.30 42 *e*P **P** **23 02 44.0 +1.0**
comp=Z,13nm,1.1s
MKAR Makanchi Array 43.30 296 P **P** **23 02 50.7 -0.6**
comp=Z,1.3nm,0.7s,baz=80,slow=8.5,SNR=12
MKAR PcP **PcP** **23 04 39.7 -0.2**
comp=Z,1.8nm,0.7s,baz=61,slow=3.4,SNR=7.9
MKAR Makanchi Array 43.30 296 *e*P **P** **23 02 51.2 -0.1**
MAKZ Makanchi 43.49 296 *e*P **P** **23 02 50.8 -2.0**
comp=Z,1.9nm,0.8s
MAKZ Makanchi 43.49 296 *e*P **P** **23 02 50.8 -2.0**
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 44.21 303 *e*P **P** **23 02 56.5 -2.0**
comp=Z,2.9nm,1.0s
KURK Kurchatov 44.21 303⇑*e*P **P** **23 02 59.4 +0.9**
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURK Kurchatov 44.21 303 *e*P **P** **23 02 59.4 +0.9**
EPYK Eagle Plains 45.31 34 P **P** **23 03 07.1 -0.1**
baz=282
INK Inuvik 46.12 31 P **P** **23 03 12.6 -0.9**
comp=Z,2.9nm,0.5s,baz=294,slow=6.3,SNR=19
HYT Haines Junctio 46.30 41 *e*P **P** **23 03 16.2 +1.1**
comp=Z,23nm,0.9s
BRVK Borovoye 48.22 308⇑*e*P **P** **23 03 32.5 +2.5**
BRVK pmax pmax
comp=Z,3.0nm,1.0s
AAK Ala-Archa 50.08 294*de*P **P** **23 03 45.0 +0.4**
AAK pmax pmax
comp=Z,8.0nm,1.7s
AAK Ala-Archa 50.08 294 *e*P **P** **23 03 45.0 +0.4**
KSH Kashi 50.62 290 *e*P P 23 03 55.8 +7.1
ARU Arti 53.01 316*c i*P **P** **23 04 04.3 -1.8**
ARU 23 05 12.2
ARU S **S** **23 11 33.1 -1.4**
ARU SS **SS** **23 15 07.3 -5.8**
ARU pmax pmax
comp=Z,7.0nm,1.5s
YKA Yellowknife Ar 55.60 34 P **P** **23 04 24.2 -0.6**
comp=Z,1.4nm,0.6s,baz=300,slow=7.1,SNR=4.7
ABKAR Akbulak array 55.73 308 *e*P **P** **23 04 25.2 -0.8**
comp=Z,2.3nm,0.6s
D03D Eldon 59.63 52 P **P** **23 04 55.0 +1.5**
baz=304
B05A Bryant 59.77 51 P **P** **23 04 55.4 +1.0**
baz=305
E04D Cinebar 60.48 52 P **P** **23 05 00.6 +1.3**
baz=305
H04D Lebanon 61.56 54 P **P** **23 05 07.4 +0.8**
baz=306
J01E Myrtle Point 61.66 56 P **P** **23 05 09.2 +1.9**
baz=306
I03D Drain, OR 61.69 55 P **P** **23 05 09.4 +1.9**
baz=306
G05D Wamic, OR 61.96 53 P **P** **23 05 10.7 +1.3**
baz=306
K02D Willamette Mer 62.09 57 P **P** **23 05 11.9 +1.5**
baz=306
I04A Tendick Farm, 62.18 55 P **P** **23 05 12.1 +1.2**
baz=306,SNR=5.6
L02E Cave Junction 62.44 57 P **P** **23 05 14.1 +1.4**
baz=307
NEW Newport 62.47 48 P **P** **23 05 13.6 +0.8**
baz=307,SNR=9.8
I05D Terrebonne, OR 62.48 54 P **P** **23 05 14.0 +1.1**
baz=307
J04D Umpqua Nationa 62.68 55 P **P** **23 05 16.0 +1.5**
baz=307
GEYT Alibeck 63.14 298 P **P** **23 05 17.5 +0.1**
comp=Z,1.4nm,0.6s,baz=66,slow=11,SNR=5.2
J05D Fort Rock, OR 63.17 55 P **P** **23 05 19.2 +1.6**
baz=307
L04D Klamath Falls 63.18 56 P **P** **23 05 19.2 +1.5**
baz=307,SNR=6.4
M02C Callahan 63.35 57 P **P** **23 05 20.4 +1.6**
baz=307
FINES FINESS Array B 63.62 332 P **P** **23 05 18.6 -1.4**
comp=Z,4.8nm,0.6s,baz=41,slow=7.7,SNR=38
N02D Trinity Center 63.69 58 P **P** **23 05 22.6 +1.6**
baz=308,SNR=6.3
M04C Macdoel 63.72 56 P **P** **23 05 22.5 +1.2**
baz=308
OBN Obninsk 64.00 323 *e*P **P** **23 05 24.0 +1.3**
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 64.00 323 *e*P **P** **23 05 24.0 +1.3**
O02D Mt. Diablo Mer 64.12 58 P **P** **23 05 25.5 +1.6**
baz=308,SNR=5.3
O03E Paynes Creek 64.65 58 P **P** **23 05 28.2 +0.9**
baz=308,SNR=9.1
MSO Missoula 65.06 48 P **P** **23 05 30.5 +0.6**
baz=310,SNR=9.0
FFC Flin Flon 65.56 36 *e*P **P** **23 05 31.9 -1.0**
comp=Z,12nm,0.9s
FFC Flin Flon 65.56 36 *e*P **P** **23 05 31.9 -1.0**
FFC pmax pmax
comp=Z,12nm,0.9s
EGMT Eagleton 66.46 45 P **P** **23 05 39.5 +0.6**
baz=311,SNR=6.0
HLID Hailey 66.88 51 P **P** **23 05 42.8 +1.0**
baz=310,SNR=11
BOZ Bozeman (W) 67.08 48 P **P** **23 05 44.0 +1.0**
baz=311,SNR=21
AKT Akhty 67.23 306 *e*P **P** **23 05 43.8 -0.1**
AKT *e* 23 06 12.0
AKT pmax pmax
comp=Z,7.0nm,0.7s
NVAR Mina Array Bea 67.93 57 P **P** **23 05 50.0 +1.4**
comp=Z,7.6nm,0.7s,baz=295,slow=6.5,SNR=65
NCK Nalchik 68.24 310⇓*i*P **P** **23 05 50.5 +0.3**
NCK pmax pmax
comp=Z,11nm,1.0s
NB2 NORSAR Subarra 68.40 338 P **P** **23 05 49.3 -1.6**
comp=Z,2.0nm,0.8s,baz=32,slow=6.2
NOA NORSAR Array B 68.40 338 P **P** **23 05 49.5 -1.4**
comp=Z,2.5nm,0.7s,baz=33,slow=6.2,SNR=9.5
KIV Kislovodsk 68.43 311 *e*P **P** **23 05 51.8 +0.4**
comp=Z,8.3nm,0.7s
KIV Kislovodsk 68.43 311⇓*i*P **P** **23 05 51.9 +0.5**
KIV Kislovodsk 68.43 311 ⇓P **P** **23 05 51.9 +0.5**
KIV Kislovodsk 68.43 311 *e*P **P** **23 05 52.0 +0.5**
H17A Grant Village 68.43 49 P **P** **23 05 54.4 +2.7**
baz=312
KBZ Khabaz 68.46 311 P **P** **23 05 51.8 +0.3**
comp=Z,5.0nm,0.8s,baz=39,slow=4.1,SNR=11
ZEI Tsey 68.54 309 *e*P **P** **23 05 50.3 -2.0**
ZEI pmax pmax
comp=Z,3.0nm,0.5s
RLMT Red Lodge 68.64 47 P **P** **23 05 54.1 +1.2**
baz=312
TBLG Delisi 68.77 308 *e*P **P** **23 05 52.1 -1.4**
comp=Z,11nm,0.9s
TBLG Delisi 68.77 308 *e*P **P** **23 05 52.1 -1.4**
TBLG pmax pmax
comp=Z,11nm,0.9s
NEY Neytrino 68.88 310⇑*e*P **P** **23 05 55.8 +1.4**
NEY pmax pmax
comp=Z,1.0nm,0.8s

DGMT	Dagmar	68.89	42	P		P	23 05 54.5 +0.4
	baz=314						
PKM	Mcpherson Peak	69.28	61	P		P	23 05 58.4 +1.4
	baz=311						
CWC	Cottonwood Cre	69.35	59	P		P	23 05 58.4 +1.0
	baz=311						
GRAC	Grapevine Rang	69.42	58	P		P	23 05 59.1 +1.4
	baz=311						
R11A	Troy Canyon, C	69.60	56	P		P	23 05 59.8 +0.9
	baz=311,SNR=14						
ISA	Isabella, Lake	69.61	60	P		P	23 05 59.6 +0.7
	baz=311						
ARVC	Arvin	69.74	60	P		P	23 06 01.0 +1.4
	baz=311						
GNI	Garni	69.81	307	*d*	*i* P	P	23 06 01.7 +1.5
GNI					pmax	pmax	
	comp=Z,46nm,1.3s						
MPMC	Manual Prospec	69.96	59	P		P	23 06 02.0 +0.8
	baz=311,SNR=14						
DUG	Dugway, Tooele	69.99	53	P		P	23 06 02.7 +1.4
	baz=312,SNR=13						
BW06	Boulder Array	70.07	49	P		P	23 06 02.3 +0.4
	baz=313,SNR=7.3						
PDAR	Pinedale Array	70.07	49	P		P	23 06 02.6 +0.8
	comp=Z,6.1nm,0.8s,baz=270,slow=0.7,SNR=44						
FURC	Furnace Creek,	70.07	58	P		P	23 06 03.1 +1.5
	baz=311,SNR=16						
TPNV	Topopah Spring	70.13	58	P		P	23 06 03.3 +1.1
	baz=312,SNR=6.2						
LRMC	Laurel Mtn Rad	70.22	60	P		P	23 06 03.7 +0.9
	baz=311						
BLG	Laguna Peak, P	70.26	61	P		P	23 06 04.2 +1.3
	baz=311						
AKASG	Malin Array Be	70.27	323	P		P	23 06 01.5 -1.0
	comp=Z,4.9nm,0.6s,baz=39,slow=6.7,SNR=8.4						
AKASG	Malin Array Be	70.27	323	*i* P		P	23 06 01.7 -0.8
AKASG					pmax	pmax	
	comp=Z,6.0nm,0.6s						
AKBB	Malin Array Si	70.27	323	*e*P		P	23 06 01.8 -0.7
	comp=Z,12nm,1.0s						
AKBB	Malin Array Si	70.27	323	*e*P		P	23 06 01.8 -0.7
AKBB					pmax	pmax	
	comp=Z,12nm,1.0s						
EDW2	Edwards Air Fo	70.42	60	P		P	23 06 05.0 +1.1
	baz=311,SNR=6.0						
GSC	Goldstone, Bar	70.88	59	P		P	23 06 07.5 +0.8
	baz=312,SNR=7.2						
BFSC	Mount Baldy Ra	71.05	60	P		P	23 06 08.5 +0.7
	baz=312,SNR=5.4						
TUQ	Turquoise Moun	71.33	59	P		P	23 06 10.5 +1.1
	baz=312						
ULM	Lac du Bonnet	71.37	37	P		P	23 06 08.1 -1.2
	comp=Z,4.5nm,0.5s,baz=327,slow=8.2,SNR=4.8						
HEC	Hector,Ludlow	71.48	59	P		P	23 06 11.4 +1.1
	baz=312,SNR=5.6						
MURC	Murrieta	71.76	61	P		P	23 06 12.7 +0.7
	baz=312						
GMRC	Granite Mounta	71.92	59	P		P	23 06 14.1 +1.1
	baz=312,SNR=8.2						
RSSD	Black Hills	72.03	45	*e*P		P	23 06 13.9 +0.3
	comp=Z,4.3nm,0.8s						
RSSD	Black Hills	72.03	45	*e*P		P	23 06 13.9 +0.3
RSSD					pmax	pmax	
	comp=Z,4.0nm,0.8s						
RSSD	Black Hills	72.03	45	P		P	23 06 14.0 +0.3
	baz=316						
PFO	Pinyon Flats O	72.21	60	P		P	23 06 15.6 +0.8
	baz=312						
BELC	Belle Mtn. Jos	72.24	60	P		P	23 06 15.6 +0.6
	baz=312						
109C	Camp Elliot, M	72.29	61	P		P	23 06 16.1 +1.0
	baz=312						
O20A	White River Ci	72.60	51	P		P	23 06 17.5 +0.3
	baz=314						
IRM	Iron Mountain	72.66	59	P		P	23 06 18.3 +1.0
	baz=313,SNR=7.9						
MONP2	Monument Peak	72.72	61	P		P	23 06 18.7 +0.7
	baz=312						
BC3	Big Chuckawall	72.81	60	P		P	23 06 18.8 +0.4
	baz=313						
SWSC	Sam W. Stewart	73.07	60	P		P	23 06 20.4 +0.6
	baz=313						
IKP	In-Ko-Pah, Jac	73.08	61	P		P	23 06 20.5 +0.6
	baz=313						
PDMCI	Parker Dam,Lak	73.17	58	P		P	23 06 21.2 +0.9
	baz=313,SNR=7.1						
Y12C	Blythe	73.31	59	P		P	23 06 22.2 +1.1
	baz=313						
N23A	Red Feather La	73.32	49	P		P	23 06 22.3 +0.8
	baz=315						
GLA	Glamis	73.60	60	P		P	23 06 24.0 +1.0
	baz=313						
KWP	Kalwaria Pacla	73.81	325	*e*P		P	23 06 23.8 0.0
KWP	Kalwaria Pacla	73.81	325	*e*P		P	23 06 23.8 0.0
WUAZ	Wupatki	74.00	56	P		P	23 06 26.8 +1.4
	baz=314,SNR=5.1						
ISCO	Idaho Springs	74.27	49	P		P	23 06 28.2 +1.1
	baz=316						
BURAR	Bucovina Array	74.32	323	⇑ *i* P		P	23 06 26.7 -0.3
BURAR	Bucovina Array	74.32	323	⇑P		P	23 06 26.7 -0.3
BIZ	Bicaz	74.45	322	⇑ *i* P		P	23 06 27.9 +0.3
OJC	Ojcow	74.49	327	*e*P		P	23 06 27.4 -0.4
OJC	Ojcow	74.49	327	*e*P		P	23 06 27.4 -0.4
MVCO	Mesa Verde	74.49	53	P		P	23 06 29.4 +1.1
	baz=315,SNR=7.6						
KOLS	Kolonicke sedl	74.53	325	*e*P		P	23 06 28.0 -0.1
KOLS					pmax	pmax	
	comp=Z,7.0nm,1.0s						
KOLS	Kolonicke sedl	74.53	325	*e*P		P	23 06 28.0 -0.1
TESR	Tescani	74.54	321	⇑ *i* P		P	23 06 27.9 -0.2
NIE	Niedzica	74.94	327	*e*P		P	23 06 30.8 +0.4
NIE	Niedzica	74.94	327	*e*P		P	23 06 30.8 +0.4
EYMN	Ely	74.98	36	P		P	23 06 30.2 -0.5
	baz=322						
TRPA	Tarpa	75.06	325	⇓ *i* P		P	23 06 31.1 0.0
TRPA	Tarpa	75.06	325	EP		P	23 06 31.1 0.0
S22A	4UR Ranch, Cre	75.06	52	P		P	23 06 33.1 +1.4
	baz=316,SNR=6.8						
ARCR	ARCALIA	75.11	323	⇑ *i* P		P	23 06 32.5 +1.1
Q24A	Divide	75.12	50	P		P	23 06 32.6 +0.6
	baz=316						
OZUR		75.24	321	⇑ *i* P		P	23 06 33.0 +0.7
OGNE	Ogallala	75.34	46	P		P	23 06 33.5 +0.5
	baz=317						
OKC	Ostrava-Krasne	75.43	328	*e*P		P	23 06 33.2 0.0
OKC	Ostrava-Krasne	75.43	328	*e*P		P	23 06 33.2 0.0
LANS	Liptovska Anna	75.48	327	*e*P		P	23 06 34.5 +0.9
LANS	Liptovska Anna	75.48	327	*e*P		P	23 06 34.5 +0.9
OSTC	Ostas	75.56	329	*e*P		P	23 06 34.1 +0.1
214A	Organ Pipe Nat	75.59	59	P		P	23 06 35.4 +0.9
	baz=314						
CHVC	Chvalec	75.59	330	*e*P		P	23 06 34.4 +0.3
KECS	Kecovo	75.61	326	*e*P		P	23 06 34.7 +0.4
KECS	Kecovo	75.61	326	*e*P		P	23 06 34.7 +0.4
MLR	Muntele Rosu	75.64	321	⇓ *i* P		P	23 06 36.2 +1.5
MLR	Muntele Rosu	75.64	321	⇓P		P	23 06 36.2 +1.5
UPC	Upice	75.67	330	*e*P		P	23 06 34.9 +0.3
UPC	Upice	75.67	330	*e*P		P	23 06 34.9 +0.3
DPC	Dobruska-Polom	75.69	329	*e*P		P	23 06 35.3 +0.6
DPC	Dobruska-Polom	75.69	329	*e*P		P	23 06 35.3 +0.6
MORC	Moravsky Berou	75.71	328	⇑ *i* P		P	23 06 34.7 -0.2
MORC	Moravsky Berou	75.71	328	⇑P		P	23 06 34.7 -0.2
MORC	Moravsky Berou	75.71	328	*e*P		P	23 06 34.9 0.0
SDCO	Great Sand Dun	75.80	51	P		P	23 06 35.9 0.0
	baz=316						
ECSD	EROS Data Cent	75.95	41	P		P	23 06 36.2 -0.1
	baz=320,SNR=6.8						
E38A	The Farm, Brul	76.01	37	P		P	23 06 36.1 -0.5
	baz=322						
CLL	Collm	76.06	332	⇑ *i* P		P	23 06 34.8 -1.9
	comp=Z,9.0nm,0.7s						
CLL				*i* (PcP)		pwP	23 06 47.9 +1.8
CLL	Collm	76.06	332	⇑ *i* P		P	23 06 34.8 -1.9
CLL				*i*			23 06 47.9
CLL					pmax	pmax	
	comp=Z,9.0nm,0.7s						
BRG	Berggiesshubel	76.10	331	*e*P		P	23 06 37.0 0.0
	comp=Z,6.1nm,1.1s						
BRG	Berggiesshubel	76.10	331	*e*P		P	23 06 37.0 0.0
BRG					pmax	pmax	
	comp=Z,6.0nm,1.1s						
BR101	Keskin Array S	76.21	313	*e*P		P	23 06 38.1 +0.1
BRTR	Keskin Array B	76.21	313	P		P	23 06 38.1 +0.1
	comp=Z,0.4nm,0.4s,baz=108,slow=29,SNR=7.6						
VYHS	Vyhne	76.25	327	*e*P		P	23 06 38.1 +0.1
VYHS					pmax	pmax	
	comp=Z,6.0nm,1.1s						
VYHS	Vyhne	76.25	327	*e*P		P	23 06 38.1 +0.1
PSZ	Piszkesteto	76.30	326	⇑ *i* P		P	23 06 37.7 -0.6
PSZ	Piszkesteto	76.30	326	⇑P		P	23 06 37.7 -0.6
PSZ	Piszkesteto	76.30	326	EP		P	23 06 38.1 -0.2
ARR	Arges	76.32	322	⇓ *i* P		P	23 06 39.9 +1.4
F38A	Pierce - Schro	76.38	37	P		P	23 06 38.5 -0.3
	baz=322,SNR=5.1						
JAVC	Velka Javorina	76.41	328	*e*P		P	23 06 39.8 +0.9
VRAC	Vranov	76.44	329	⇑ *i* P		P	23 06 38.2 -0.8
VRAC	Vranov	76.44	329	⇑P		P	23 06 38.2 -0.8
VRAC	Vranov	76.44	329	*e*P		P	23 06 39.1 +0.1
SPMN	Marine on St.	76.55	38	P		P	23 06 39.7 0.0
	baz=322						
TUC	Tucson	76.58	58	*e*P		P	23 06 40.4 +0.2
	comp=Z,6.5nm,0.9s						
TUC	Tucson	76.58	58	*e*P		P	23 06 40.4 +0.2
TUC					pmax	pmax	
	comp=Z,7.0nm,0.9s						
TUC	Tucson	76.58	58	P		P	23 06 41.3 +1.2
	baz=315						
GOPC	GO Pecny, Ondr	76.60	330	*e*P		P	23 06 39.7 -0.2
GOPC				*e*			23 06 44.8
GOPC	GO Pecny, Ondr	76.60	330	*e*P		P	23 06 39.7 -0.2
GOPC				*ep*P		pP	23 06 44.8 -1.0
PRU	Pruhonice	76.63	330	*e*P		P	23 06 39.5 -0.5
PRU	Pruhonice	76.63	330	*e*P		P	23 06 39.5 -0.5
KRUC	Moravsky	76.72	329	*e*P		P	23 06 40.6 0.0
F39A	Loretta	76.83	37	P		P	23 06 41.2 0.0
	baz=322						
T25A	Trinidad	76.83	51	P		P	23 06 42.3 +0.6
	baz=317,SNR=5.5						
TREC	Trest	76.86	329	*e*P		P	23 06 41.7 +0.3
TREC	Trest	76.86	329	*e*P		P	23 06 41.7 +0.3
MODS	Modra-Piesok	76.95	328	*e*P		P	23 06 41.7 -0.2
MODS					pmax	pmax	
	comp=Z,9.0nm,1.0s						
MODS	Modra-Piesok	76.95	328	*e*P		P	23 06 41.7 -0.2
F40A	Park Falls	77.16	36	P		P	23 06 43.4 +0.2
	baz=323						
TASM	ASL Pad, Albuq	77.26	53	P		P	23 06 45.4 +1.2
	baz=316,SNR=10						
TASM	ASL Pad, Albuq	77.26	53	P		P	23 06 45.3 +1.2
	baz=316,SNR=11						
ANMO	Albuquerque	77.26	53	*e*P		P	23 06 43.5 -0.6
	comp=Z,6.0nm,0.8s						
ANMO	Albuquerque	77.26	53	*ce*P		P	23 06 45.4 +1.3
ANMO					pmax	pmax	
	comp=Z,9.0nm,1.3s						
ANMO	Albuquerque	77.26	53	P		P	23 06 45.2 +1.1
	baz=316						
BZS	Buzias	77.43	323	⇑ *i* P		P	23 06 44.3 -0.3
BZS	Buzias	77.43	323	⇑P		P	23 06 44.4 -0.2
MGCD	Mangrove Creek	77.64	175	P		P	23 06 43.5 -2.2
	baz=41,SNR=4.3						
KHC	Kasperske Hory	77.69	330	*e*P		P	23 06 46.1 0.0
KHC				*e*			23 06 51.5
KHC	Kasperske Hory	77.69	330	*e*P		P	23 06 46.1 0.0
KHC				*ep*P		pP	23 06 51.5 -0.4
CONA	Conrad Observa	77.86	328	*i* P		P	23 06 47.7 +0.6
	comp=Z,4.8nm,0.8s						
GERES	GERESS Array B	77.89	330	P		P	23 06 46.8 -0.5
	comp=Z,1.9nm,0.8s,baz=28,slow=6.0,SNR=18						
MORH	Mrgy, Hungar	78.18	326	EP		P	23 06 48.1 -0.7
121A	Cookes Peak, D	78.21	56	P		P	23 06 50.2 +0.8
	baz=316,SNR=5.4						
D47A	Chapleau	79.04	32	P		P	23 06 52.5 -1.0
	baz=327						
VTS	Vitosha	79.10	321	*e*P		P	23 06 54.7 +0.6
	comp=Z,3.3nm,1.0s						
VTS	Vitosha	79.10	321	*e*P		P	23 06 54.7 +0.6
VTS					pmax	pmax	
	comp=Z,3.0nm,1.0s						
E46A	Sault Ste Mari	79.15	33	P		P	23 06 53.4 -0.7
	baz=326						
SOKA	Soboth	79.21	328	*i* P		P	23 06 55.3 +0.7
	comp=Z,7.2nm,1.1s						
I42A	Draeger Farm,	79.30	37	P		P	23 06 54.2 -0.7
	baz=324						
H43A	Windswept, Lux	79.32	36	P		P	23 06 54.5 -0.6
	baz=324						
D48A	Paudash Townsh	79.42	31	P		P	23 06 55.0 -0.5
	baz=328						
LSQQ	Lebel-sur-Quev	79.47	27	P		P	23 06 55.2 -0.6
	baz=331						
E47A	Iron Bridge	79.47	32	P		P	23 06 54.9 -1.0
	baz=327						
D49A	Beulah Townshi	79.50	31	P		P	23 06 55.4 -0.7
	baz=328						
KBA	Koelnbreinsper	79.50	329	*i* P		P	23 06 57.3 +1.0
	comp=Z,12nm,1.3s						
CHGQ	Chibougamau	79.53	25	P		P	23 06 55.3 -0.9
	baz=332						
H45A	Beulah	79.90	35	P		P	23 06 58.7 +0.4
	baz=326						
WATA	Walderalm	79.92	330	*i* P		P	23 06 59.0 +0.5
	comp=Z,6.3nm,1.0s						
WTTA	Wattenberg	79.96	330	*i* P		P	23 06 59.7 +0.9
	comp=Z,7.7nm,0.8s						
AMTX	Amarillo	79.99	50	P		P	23 06 59.7 +0.7
	baz=318						
RETA	Reutte	80.08	331	*i* P		P	23 07 00.0 +0.8
	comp=Z,8.0nm,1.3s						
MOTA	Moosalm	80.08	331	*i* P		P	23 06 59.9 +0.6
	comp=Z,8.8nm,0.9s						
SQTA	Sankt Quirin	80.15	330	*i* P		P	23 06 59.8 +0.1
	comp=Z,8.3nm,1.3s						
BFO	Black Forest	80.17	333	*i* P		P	23 06 59.9 +0.2
MNTX	Cornudas Mount	80.22	55	P		P	23 07 01.2 +0.9
	baz=317,SNR=7.7						
F48A	Evansville	80.25	32	P		P	23 06 59.5 -0.6
	baz=327						
FETA	Feichten	80.49	331	*i* P		P	23 07 00.1 -1.5
	comp=Z,4.8nm,1.0s						
F49A	Sandfield	80.52	32	P		P	23 07 00.6 -0.9
	baz=328						
DAVA	Damuels	80.56	331	*i* P		P	23 07 01.6 -0.3
	comp=Z,7.0nm,1.0s						
ECH	Echery	80.65	333	*e*P		P	23 07 00.5 -1.7
	comp=Z,6.9nm,1.0s						
ECH	Echery	80.65	333	*e*P		P	23 07 00.5 -1.7
ECH					pmax	pmax	
	comp=Z,7.0nm,1.0s						
E51A	G1948 Merrick	80.80	30	P		P	23 07 02.1 -1.0
	baz=329						
H48A	Harrisville	80.92	33	P		P	23 07 03.1 -0.6
	baz=327						
D53A	Lac Vacive, Po	80.95	28	P		P	23 07 03.2 -0.6
	baz=330						
N41A	Harden Midland	80.99	40	P		P	23 07 03.7 -0.5
	baz=323						
D54A	Lac Fusel, La	81.23	28	P		P	23 07 04.3 -1.1
	baz=331						
M43A	Waltham Townsh	81.26	38	P		P	23 07 05.4 -0.2
	baz=324						
E52A	Mattawa	81.30	29	P		P	23 07 05.6 -0.2
	baz=330						
F52A	Sundridge	81.49	30	P		P	23 07 06.7 -0.1
	baz=330						
KLBO	Killbear Provi	81.54	31	P		P	23 07 06.3 -0.7
	baz=329						
J47A	Sunmer	81.55	35	P		P	23 07 07.0 0.0
	baz=326						
N43A	Stutzman Famil	81.56	39	P		P	23 07 06.9 -0.3
	baz=324						
E53A	Dumoine, Ponti	81.57	29	P		P	23 07 06.1 -1.1
	baz=330						
K46A	Dorr	81.61	36	P		P	23 07 07.0 -0.4
	baz=326						
WMOK	Wichita Mounta	81.67	49	P		P	23 07 08.2 +0.3
	baz=320						
E54A	Lac Daplat, Po	81.68	28	P		P	23 07 07.0 -0.7
	baz=331						
M44A	Midewin, Midew	81.70	38	P		P	23 07 07.4 -0.6
	baz=325						
I49A	Point Hope	81.76	33	P		P	23 07 08.0 -0.1
	baz=328						
BUKO	Buck Lake	81.77	30	P		P	23 07 07.6 -0.6
	baz=330						
BMRO	Meriville Lake	81.82	32	P		P	23 07 08.2 -0.3
	baz=328						
HDIL	Hopedale	81.82	39	P		P	23 07 08.3 -0.3
	baz=324						
J48A	Bridge Port	81.92	34	P		P	23 07 09.9 +0.9
	baz=327						
BASO	Ashfield	82.14	32	P		P	23 07 10.2 0.0
	baz=328						
K48A	Perry	82.19	35	P		P	23 07 10.3 -0.1
	baz=327						
BWLO	Walkerton	82.26	32	P		P	23 07 10.5 -0.3
	baz=328						
G53A	Haliburton	82.32	30	P		P	23 07 10.1 -1.0
	baz=330						
PEMO	Pembroke	82.32	29	P		P	23 07 10.5 -0.6
	baz=331						
TUL1	Leonard	82.35	46	P		P	23 07 11.7 +0.3
	baz=321						
N45A	Kentland	82.38	38	P		P	23 07 10.8 -0.6
	baz=325						
P43A	Skaggs, Pawnee	82.45	40	P		P	23 07 11.8 -0.1
	baz=324						
I51A	Listowel	82.57	32	P		P	23 07 12.1 -0.3
	baz=329						
BANO	Bancroft	82.66	30	P		P	23 07 12.4 -0.4
	baz=330						
N46A	Monticello	82.67	37	P		P	23 07 13.2 +0.2
	baz=325						
O45A	Potomac	82.77	38	P		P	23 07 13.4 -0.2
	baz=325						
L48A	N Adams	82.78	35	P		P	23 07 13.4 -0.2
	baz=327						
ABTX	Abilene, Hawle	82.80	51	P		P	23 07 14.3 +0.4
	baz=319						
CCM	Cathedral Cave	82.92	42	*e*P		P	23 07 14.0 -0.3
	comp=Z,12nm,1.1s						
CCM	Cathedral Cave	82.92	42	*e*P		P	23 07 14.0 -0.3
CCM					pmax	pmax	
	comp=Z,12nm,1.1s						
CCM	Cathedral Cave	82.92	42	P		P	23 07 14.1 -0.3
	baz=323						
PLVO	Plevna	82.94	29	P		P	23 07 14.2 -0.1
	baz=331						
TXAR	Lajitas Array	82.96	55	P		P	23 07 16.0 +1.2
	comp=Z,3.2nm,0.7s,baz=292,slow=3.8,SNR=24						
ORIO	Orleans, Innes	83.11	28	P		P	23 07 14.5 -0.7
	baz=332						
N47A	Urbana	83.13	37	P		P	23 07 14.8 -0.7
	baz=326						
DELO	Deloro Mine	83.20	30	P		P	23 07 15.0 -0.7
	baz=331						
J52A	Paris	83.25	32	P		P	23 07 15.6 -0.4
	baz=329						
H55A	Tweed	83.33	29	P		P	23 07 15.6 -0.7
	baz=331						
P45A	Graceland, Par	83.35	39	P		P	23 07 16.6 0.0
	baz=325						
L50A	Kingsville	83.36	34	P		P	23 07 16.5 -0.1
	baz=328						
M49A	Liberty Center	83.36	35	P		P	23 07 16.6 +0.1
	baz=327						
N48A	Decatur	83.44	36	P		P	23 07 16.7 -0.2
	baz=326						
WLVO	Wesleyville	83.44	30	P		P	23 07 16.3 -0.6
	baz=330						
I55A	Frankford	83.44	30	P		P	23 07 16.1 -0.8
	baz=331						
U40A	Yellville	83.48	44	P		P	23 07 17.2 -0.1
	baz=322,SNR=10						
P46A	Rosedale	83.51	38	P		P	23 07 17.3 -0.1
	baz=325						
H56A	Elgin	83.61	29	P		P	23 07 17.1 -0.6
	baz=332						
Q45A	Warren Harvey,	83.68	39	P		P	23 07 18.3 +0.1
	baz=325						
N49A	Columbus Grove	83.74	36	P		P	23 07 18.1 -0.4
	baz=327						
M50A	Fremont	83.80	35	P		P	23 07 18.5 -0.3
	baz=328						
O48A	Farmland	83.88	37	P		P	23 07 18.9 -0.3
	baz=326						
W39A	Magazine	83.93	45	P		P	23 07 19.6 +0.1
	baz=322						
P47A	Martinsville	84.03	38	P		P	23 07 19.9 -0.2
	baz=326						
MEDO	Medina	84.07	31	P		P	23 07 19.7 -0.4
	baz=330						
S44A	Carbondale	84.15	41	P		P	23 07 20.7 0.0
	baz=324						
LONY	Lake Ozonia	84.15	28	P		P	23 07 20.1 -0.5
	baz=332						
M51A	Elyria	84.21	34	P		P	23 07 20.5 -0.4
	baz=328						
J55A	Hilton	84.22	30	P		P	23 07 20.4 -0.5
	baz=331						
O49A	Covington	84.28	36	P		P	23 07 21.0 -0.3
	baz=327						
N50A	Nevada	84.29	35	P		P	23 07 21.1 -0.2
	baz=328						
JCT	Junction City	84.33	52	P		P	23 07 22.1 +0.3
	baz=320						
M52A	Chesterland	84.36	34	P		P	23 07 21.7 0.0
	baz=328						
Q47A	Bedord North L	84.42	38	P		P	23 07 21.8 -0.2
	baz=326						
P48A	Milroy	84.42	37	P		P	23 07 21.8 -0.3
	baz=326						
L53A	Girard	84.44	33	P		P	23 07 21.8 -0.2
	baz=329						
K54A	Basiliko Farm,	84.47	31	P		P	23 07 21.8 -0.4
	baz=330						
N51A	Ashland	84.48	35	P		P	23 07 21.8 -0.5
	baz=328						
WHTX	Lake Whitney,	84.48	50	P		P	23 07 23.1 +0.7
	baz=320						
R46A	Gibon Southern	84.53	39	P		P	23 07 22.7 +0.1
	baz=325						
MIAR	Mount Ida	84.55	46	P		P	23 07 23.2 +0.5
	baz=322,SNR=7.5						
L54A	Sinclairville	84.56	32	P		P	23 07 22.2 -0.5
	baz=330						
K55A	Perry	84.59	31	P		P	23 07 22.2 -0.7
	baz=330						
O50A	Cable	84.62	36	P		P	23 07 23.0 -0.1
	baz=327						
P49A	Miami Univ. Ec	84.67	37	P		P	23 07 23.1 -0.1
	baz=327						
M53A	WI Miller and	84.72	33	P		P	23 07 23.3 -0.2
	baz=329						
W41B	Gary Mavity, V	84.72	44	P		P	23 07 23.5 -0.1
	baz=323,SNR=5.2						
Q48A	North Vernon	84.73	38	P		P	23 07 23.5 -0.1
	baz=326						
ACSO	Alum Creek Sta	84.81	35	P		P	23 07 23.6 -0.4
	baz=328						
S46A	Don Dixon Farm	84.86	40	P		P	23 07 24.2 0.0
	baz=325						
R47A	Wooly Knot Far	84.90	39	P		P	23 07 24.5 0.0
	baz=326						
L55A	Hinsdale	84.93	31	P		P	23 07 24.2 -0.4
	baz=330						
X40A	Basin Creek Fa	84.97	45	P		P	23 07 25.4 +0.5
	baz=323						
P50A	Jamestown	85.00	36	P		P	23 07 24.9 0.0
	baz=327						
Q49A	Aurora	85.03	37	P		P	23 07 25.2 +0.1
	baz=327						
O51A	Pataskala	85.04	35	P		P	23 07 24.9 -0.2
	baz=328						
M54A	Oil Creek Stat	85.05	32	P		P	23 07 24.9 -0.3
	baz=330						
WCI	Wyandotte Cave	85.06	39	*e*P		P	23 07 25.4 +0.1
	comp=Z,15nm,1.1s						
WCI	Wyandotte Cave	85.06	39	*e*P		P	23 07 25.4 +0.1
WCI					pmax	pmax	
	comp=Z,15nm,1.1s						
WCI	Wyandotte Cave	85.06	39	P		P	23 07 25.4 +0.1

O53A	New Philadelph	85.52	34	P		P	23 07 27.0	-0.6
	baz=329							
Q50A	Georgetown	85.56	37	P		P	23 07 27.7	0.0
	baz=327							
M56A	Emporium	85.63	32	P		P	23 07 27.6	-0.5
	baz=330							
S48A	Wiedeman Farm,	85.64	39	P		P	23 07 28.4	+0.2
	baz=326							
P52A	Corning	85.67	35	P		P	23 07 27.8	-0.5
	baz=328							
Q51A	Peebles	85.67	36	P		P	23 07 28.4	+0.1
	baz=328							
T47A	Sharon Grove	85.71	40	P		P	23 07 28.8	+0.3
	baz=326,SNR=6.1							
BINY	Binghamton	85.81	30	P		P	23 07 29.2	+0.3
	baz=332							
S49A	Springfield	85.87	38	P		P	23 07 29.6	+0.3
	baz=326							
R50A	Paris	85.88	37	P		P	23 07 29.5	+0.1
	baz=327							
O54A	Avella	85.91	34	P		P	23 07 29.6	+0.1
	baz=329							
N55A	Marion Center	85.93	32	P		P	23 07 29.5	-0.1
	baz=330							
T48A	Bowling Green	85.94	39	P		P	23 07 29.8	+0.1
	baz=326							
U47A	Clarksville	86.08	40	P		P	23 07 30.8	+0.5
	baz=325							
N56A	West Decatur	86.08	32	P		P	23 07 30.2	-0.1
	baz=330							
WVT	Waverly	86.08	41	*e*P		P	23 07 30.5	+0.1
	comp=Z,7.0nm,0.8s							
WVT	Waverly	86.08	41	*e*P		P	23 07 30.5	+0.1
WVT				pmax		pmax		
	comp=Z,7.0nm,0.8s							
WVT	Waverly	86.08	41	P		P	23 07 30.9	+0.5
	baz=325							
P53A	Whipple	86.09	35	P		P	23 07 30.3	-0.1
	baz=329							
Q52A	Bidwell	86.18	36	P		P	23 07 30.8	0.0
	baz=328							
R51A	Hillsboro	86.18	37	P		P	23 07 31.1	+0.2
	baz=327							
V46A	Holladay	86.21	41	P		P	23 07 31.0	0.0
	baz=325							
O55A	Ligonier	86.31	33	P		P	23 07 31.5	+0.1
	baz=330							
T49A	Edmonton	86.33	39	P		P	23 07 31.7	+0.1
	baz=326,SNR=5.1							
S50A	Richmond	86.35	38	P		P	23 07 31.9	+0.2
	baz=327							
U48A	Cassie Pea, Po	86.36	40	P		P	23 07 31.8	0.0
	baz=326							
V47A	Nunnelly	86.47	41	P		P	23 07 32.5	+0.2
	baz=325,SNR=6.6							
SSPA	Standing Stone	86.48	32	P		P	23 07 32.1	-0.2
	baz=331							
N57A	Milroy	86.50	31	P		P	23 07 32.2	-0.2
	baz=331							
O56A	Blue Knob Stat	86.54	32	P		P	23 07 32.7	0.0
	baz=330							
R52A	Catlettsburg	86.55	36	P		P	23 07 32.4	-0.3
	baz=328							
Q53A	Leroy	86.57	35	P		P	23 07 33.0	+0.2
	baz=329,SNR=5.5							
OXF	Oxford	86.64	43	P		P	23 07 33.1	-0.1
	baz=324							
P55A	Reedsville	86.70	34	P		P	23 07 33.7	+0.3
	baz=330							
T50A	Nancy	86.71	38	P		P	23 07 33.5	+0.1
	baz=327,SNR=6.8							
U49A	Red Boiling Sp	86.71	39	P		P	23 07 33.7	+0.2
	baz=326,SNR=7.1							
S51A	Beattyville	86.73	37	P		P	23 07 33.4	-0.2
	baz=327							
CLTN	Cedars of Leba	86.80	40	*e*P		P	23 07 32.8	-1.2
	comp=Z,5.8nm,1.0s							
R53A	Hurricane	86.84	36	P		P	23 07 34.2	+0.1
	baz=328							
V48A	Smith Brothers	86.87	40	P		P	23 07 34.2	0.0
	baz=326							
W47A	Westpoint	86.91	41	P		P	23 07 34.6	+0.1
	baz=325							
O57A	Amberson	86.94	32	P		P	23 07 34.6	0.0
	baz=331							
N59A	State Game Lan	87.01	30	P		P	23 07 35.1	+0.2
	baz=332							
Q55A	Buckhannon	87.04	34	P		P	23 07 35.3	+0.2
	baz=329							
P56A	Dayton Farm, R	87.09	33	P		P	23 07 35.6	+0.3
	baz=330							
T51A	Gray	87.14	38	P		P	23 07 35.6	0.0
	baz=327							
U50A	Jamestown	87.21	39	P		P	23 07 36.1	+0.2
	baz=327							
V49A	McMinnville	87.27	40	P		P	23 07 36.1	-0.1
	baz=326							
W48A	Pulaski	87.31	41	P		P	23 07 36.6	+0.2
	baz=326,SNR=7.5							
Q56A	Snyder Ridge,	87.36	33	P		P	23 07 36.6	0.0
	baz=330							
M61A	Granite Spring	87.36	29	P		P	23 07 36.3	-0.3
	baz=333							
R54A	Victor	87.37	35	P		P	23 07 36.9	+0.2
	baz=329							
X47A	Russelville	87.38	42	P		P	23 07 36.5	-0.3
	baz=325							
T52A	Hallie	87.44	37	P		P	23 07 37.3	+0.3
	baz=328							
PAL	Palisades	87.59	29	P		P	23 07 37.4	-0.2
	baz=333							
U51A	La Follette	87.60	38	P		P	23 07 37.7	-0.1
	baz=327							
W49A	Belvidere	87.64	40	P		P	23 07 38.0	0.0
	baz=326,SNR=6.6							
Q57A	Strasburg	87.67	33	P		P	23 07 38.1	0.0
	baz=330							
TZTN	Tazewell	87.67	38	P		P	23 07 38.3	+0.2
	baz=328							
V50A	Pikevile	87.71	39	P		P	23 07 38.3	0.0
	baz=327							
T53A	Wise	87.74	37	P		P	23 07 38.6	0.0
	baz=328							
X48A	Hartselle	87.82	41	P		P	23 07 38.9	0.0
	baz=326							
U52A	Thorn Hill	87.88	38	P		P	23 07 39.5	+0.3
	baz=328,SNR=6.8							
P59A	Jarrettsville	87.91	31	P		P	23 07 38.9	-0.3
	baz=332							
S55A	Lewisburg	87.92	35	P		P	23 07 39.3	-0.1
	baz=329							
V51A	Loudon	87.94	39	P		P	23 07 39.4	0.0
	baz=327							
W50A	Signal Mountai	88.01	40	P		P	23 07 39.8	0.0
	baz=326,SNR=5.6							
P60A	Greenville	88.03	31	P		P	23 07 39.5	-0.3
	baz=332							
T54A	Tazewell	88.08	36	P		P	23 07 40.4	+0.3
	baz=329							
X49A	Woodville	88.11	41	P		P	23 07 40.4	+0.2
	baz=326,SNR=8.1							
CPCT	Cooper Cave	88.16	39	*e*P		P	23 07 36.9	-3.5
	comp=Z,9.7nm,0.9s							
Y48A	Jasper	88.20	42	P		P	23 07 40.3	-0.4
	baz=326							
V52A	Sevierville	88.24	38	P		P	23 07 41.1	+0.2
	baz=328,SNR=5.2							
U53A	Fall Branch	88.24	37	P		P	23 07 40.8	-0.1
	baz=328,SNR=5.6							
R57A	Stanardsville	88.26	33	P		P	23 07 41.2	+0.3
	baz=330							
W51A	Cleveland	88.29	39	P		P	23 07 41.3	+0.2
	baz=327							
T55A	Pulaski	88.36	35	P		P	23 07 41.8	+0.3
	baz=329							
BLA	Blacksburg	88.43	35	P		P	23 07 42.0	+0.2
	baz=329							
R58A	Rapidan	88.46	33	P		P	23 07 41.7	-0.2
	baz=331							
X50B	Fort Payne	88.46	40	P		P	23 07 42.0	0.0
	baz=326							
S57A	Dark Hollow, R	88.55	34	P		P	23 07 42.6	+0.3
	baz=330							
Y49A	Blount Mountai	88.61	41	P		P	23 07 42.6	-0.1
	baz=326							
W52A	Murphy	88.72	39	P		P	23 07 43.2	+0.1
	baz=327							
V53A	Saluda	88.73	38	P		P	23 07 43.2	0.0
	baz=328							
X51A	Calhoun	88.74	40	P		P	23 07 43.1	-0.1
	baz=327							
T56A	Rocky Mt	88.75	35	P		P	23 07 43.2	-0.1
	baz=330							
U55A	TA2, Sparta	88.78	36	P		P	23 07 43.7	+0.2
	baz=329							
W53A	Cullowhee	88.99	38	P		P	23 07 44.7	+0.1
	baz=328							
LRAL	Lakeview Retre	89.01	42	P		P	23 07 44.6	+0.1
	baz=326							
V54A	Nebo	89.01	37	P		P	23 07 44.5	0.0
	baz=328							
T57A	Hurt	89.09	35	P		P	23 07 45.0	+0.2
	baz=330							
Z49A	Columbiana	89.10	42	P		P	23 07 45.0	+0.1
	baz=326							
X52A	Dahlonega	89.14	39	P		P	23 07 45.4	+0.3
	baz=327							
U56A	King	89.19	36	P		P	23 07 45.4	+0.1
	baz=329							
Y51A	Rockmart	89.20	40	P		P	23 07 45.4	0.0
	baz=327,SNR=5.8							
V55A	Taylorsville	89.26	36	P		P	23 07 45.6	-0.1
	baz=329							
Z50A	Ashland	89.33	41	P		P	23 07 46.3	+0.2
	baz=326,SNR=19							
T58A	Grand View Acr	89.42	34	P		P	23 07 46.5	+0.1
	baz=330							
149A	Jones	89.46	42	P		P	23 07 47.0	+0.3
	baz=326,SNR=5.4							
W54A	Cherokee Point	89.49	38	P		P	23 07 46.8	0.0
	baz=328							
X53A	Estanollee	89.49	39	P		P	23 07 47.2	+0.5
	baz=328,SNR=5.4							
U57A	Blanch	89.55	35	P		P	23 07 47.1	+0.1
	baz=330							
V56A	Mocksville	89.60	36	P		P	23 07 47.3	+0.1
	baz=329							
Z51A	Franklin	89.63	41	P		P	23 07 47.5	+0.1
	baz=327							
Y52A	Lilburn	89.69	39	P		P	23 07 48.1	+0.4
	baz=327							
249A	Camden	89.81	43	P		P	23 07 49.1	+0.8
	baz=326							
150A	Eclectic	89.82	42	P		P	23 07 48.6	+0.3
	baz=326,SNR=6.3							
V57A	Coltrane Farms	89.83	35	P		P	23 07 48.3	-0.1
	baz=330							
X54A	Belton	89.87	38	P		P	23 07 48.9	+0.4
	baz=328							
U58A	Oxford	89.90	34	P		P	23 07 48.8	+0.2
	baz=330							
Y53A	Monroe	89.91	39	P		P	23 07 49.4	+0.7
	baz=328							
Z52A	Williamson	90.09	40	P		P	23 07 49.8	+0.2
	baz=327							
W56A	Indian Trail	90.14	36	P		P	23 07 49.8	+0.1
	baz=329							
V58A	Windy Hill, Pi	90.19	35	P		P	23 07 50.4	+0.4
	baz=330							
250A	Grady	90.22	42	P		P	23 07 50.9	+0.6
	baz=326							
X55A	Gracelyn & Ava	90.25	37	P		P	23 07 50.9	+0.5
	baz=329							
Y54A	Tignall	90.31	39	P		P	23 07 51.1	+0.6
	baz=328,SNR=11							
GOGA	Godfrey	90.34	39	P		P	23 07 51.3	+0.6
	baz=328							
W57A	Gilead	90.37	36	P		P	23 07 51.2	+0.3
	baz=330							
Z53A	Monticello	90.40	39	P		P	23 07 51.4	+0.3
	baz=328							
251A	Midway	90.54	41	P		P	23 07 52.4	+0.7
	baz=326							
V59A	Middlesex	90.57	34	P		P	23 07 51.9	+0.1
	baz=330							
Y55A	Saluda	90.61	38	P		P	23 07 52.3	+0.3
	baz=328							
Z54A	Sparta	90.76	39	P		P	23 07 53.2	+0.5
	baz=328							
W58A	Raeford	90.80	35	P		P	23 07 53.0	+0.1
	baz=330							
353A	Camilla	91.72	41	P		P	23 07 57.7	+0.6
	baz=327							
ESDC	Sonseca Array	91.75	337	P		P	23 07 56.9	-0.4
	comp=Z,0.5nm,0.6s,baz=12,slow=5.1,SNR=3.7							
Z59A	Georgetown, SC	92.31	36	P		P	23 08 00.3	+0.4
	baz=330							
DBIC	Dimbokro	122.48	325	PKP		PKPdf	23 13 44.0	-1.4
	comp=Z,2.6nm,0.7s,baz=18,slow=5.4,SNR=3.7							
DBIC	Dimbokro	122.48	325	PKIKP		PKPdf	23 13 44.0	-1.4
SIV	San Ignacio	143.53	47	PKhKP		PKPpre	23 14 21.3	
	comp=Z,1.8nm,0.7s,baz=337,slow=3.0,SNR=6.7							
GO04	Tololo Observa	147.84	76	*e*PKPbc		PKPbc	23 14 35.1	+0.3
BDFB	Brasilia	148.81	26	PKPbc		PKPbc	23 14 37.8	+0.3
	comp=Z,4.9nm,0.8s,baz=206,slow=7.9,SNR=5.4							
VNA2	Neumayer--Watz	150.56	198	PKPdf		PKPbc	23 14 38.0	-2.1
	baz=140,slow=1.7							
VNA3	Neumayer Olymp	150.78	196	PKPdf		PKPbc	23 14 38.8	-1.8
VNA1	Neumayer--Stat	150.96	197	PKPdf		PKPbc	23 14 39.0	-1.9
PLCA	Paso Flores	153.16	94	PKPbc		PKPbc	23 14 47.0	0.0
	comp=Z,2.1nm,0.9s,baz=196,slow=22,SNR=3.7							

BJI ***26*** *22:58:57.4±0.0,0°.71S×125°.24E,h62km,mb5.7/84, mB5.5/51,Ms4.9/85,Ms7 4.8/81*

MOS ***26*** *22:58:59.3±0.9,0°.17S×124°.90E,h33km,mb6.2/71, MS4.7/27,Error ellipse: s-maj=8.1km s-min=4.1km az=114.3*

IDC ***26*** *22:59:00.4±1.6,0°.18S×124°.90E,h26km±10km,mb5.5/28, mb1 5.5/30,mb1mx5.5/31,mbtmp5.6/30,ML4.8/2,MS4.7/27, Ms1 4.7/27,ms1mx4.5/38,Error ellipse: s-maj=13.2km s-min=7.6km az=73.0*

NEIC ***26*** *22:59:01.0±2.9,0°.14S×125°.05E,h33km±3km,mb5.9/205, MS4.9/160,MW5.4,MW5.5,Error ellipse: s-maj=7.0km s-min=4.8km az=208.0,Moment Tensor Solution. s36 Moment tensor: Scale 1017Nm; Mrr1.06; Mθθ-0.07; Mφφ-0.99; Mrθ0.46; Mθφ-0.40; Mφr0.67; Best double couple: M01.40000×1017 NP1:φs191.00000°,δ28.00000°, λ74.00000°. NP2:φs29.00000°,δ63.00000°,λ98.00000°. Principal axes: T 1.3400, Plg70.0000°, Azm317.0000°; N 0.0500, Plg7.0000°, Azm206.0000°; P -1.3900, Plg18.0000°, Azm113.0000°;*

NEIC Felt at Gorontalo, Indonesia.

ISCJB ***26*** *22:59:01.9±0.3,0°.22S±0°.01×125°.05E±0°.02,h57km±2km, mb5.9/195,MS4.9/215 Error ellipse: s-maj=2.7km s-min=2.4km az=6.9*

NEIC ***26*** *22:59:01.0±0.0,0°.26S×125°.15E,h35km,Moment Tensor Solution. s27 Moment tensor: Scale 1017Nm; Mrr1.45; Mθθ-1.25; Mφφ-0.19; Mrθ0.72; Mθφ-0.92; Mφr1.42; Best double couple: M02.30000×1017 NP1:φs37.00000°, δ68.00000°,λ69.00000°. NP2:φs263.00000°,δ29.00000°, λ132.00000°. Principal axes: T 2.2700, Plg60.0000°, Azm276.0000°; N 0.0300, Plg19.0000°, Azm45.0000°; P -2.3000, Plg20.0000°, Azm142.0000°;*

GCMT ***26*** *22:59:02.0±0.1,0°.33S±0°.01×125°.04E±0°.01,h35km, MW5.5/112,Moment Tensor Solution. s112,c205; s102,c224; Duration: 1s4 Moment tensor: Scale 1017 Nm; Mrr1.86±.04; Mθθ-1.26±.03; Mφφ-0.60±.03; Mrθ0.17±.04; Mθφ-1.43±.02; Mφr1.28±.04; Best double couple: M02.53000×1017 NP1:φs29.00000°,δ61.00000°, λ63.00000°. NP2:φs255.00000°,δ38.00000°,λ130.00000°. Principal axes: T 2.4560, Plg63.0000°, Azm254.0000°; N 0.1470, Plg23.0000°, Azm42.0000°; P -2.6040, Plg12.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

DJA ***26*** *22:59:03.8±0.1,0°S±1°×12°5E±°,h56km±2km,M5.8/93, mb6.0/93,mB6.1/73,MLv5.9/23,Mw(mB)5.8/73,Mwp5.6/3*

KLM ***26*** *22:59:05.0,0°.06S×125°.22E,h80km,mb5.8*

ISC 26 22:59:03.3±0.3,0°.20S±0°.03×125°.04E±0°.03,h55km±2km, h55km:pP-P,n1612,σ1°48/1668,mb5.9/209,MS4.9/217, 104C-42D,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	Sanana	2.07	153	P	Pn	22 59 32.6	-3.1
SANI				S	Sn	22 59 55.8	-4.5
LUWI	Luwuk	2.42	250	*e*Pn	Pn	22 59 41.6	+1.2
LUWI					*e*Sn		Sn	23 00 04.4	-4.4
LUWI	Luwuk	2.42	250	P	Pn	22 59 41.7	+1.3
LUWI				S	Sn	23 00 18.3	+9.5
TNTI	Ternate	2.52	67	*e*Pn	Pn	22 59 40.8	-1.0
TNTI	Ternate	2.52	67	P	Pn	22 59 41.4	-0.5
TNTI				S	Sn	23 00 11.4	0.0
APSI	Ampana	3.46	258	P	Pn	22 59 56.4	+1.7
APSI				S	Sn	23 00 40.6	+6.1
NLAI	Namlea	3.66	146	P	Pn	22 59 54.3	-3.1
NLAI				S	Sn	23 00 35.3	-4.0
SGSI	Sangihe	3.89	7	P	Pn	23 00 01.0	+0.3
SGSI				S	Sn	23 00 47.7	+2.6
KDI	Kendari	4.45	213	P	Pn	23 00 07.1	-1.2
AAI	Ambon	4.68	138	P	Pn	23 00 10.4	-1.1
AAI				S	Sn	23 01 03.5	-1.1
MSAI	Masohi	4.99	129	P	Pn	23 00 14.7	-1.0
MSAI				S	Sn	23 01 09.1	-3.0
BBSI	Bau Bau	5.80	205	P	Pn	23 00 27.9	+1.0
TTSI	Tana Toraja	5.93	242	P	Pn	23 00 29.6	+1.0
	5μm,0.7s,52μm27nm						
TTSI				S	Sn	23 01 37.6	+2.3
	5μm,0.7s,52μm27nm						
SIJI	Sorong	6.26	96	Pn	Pn	23 00 31.9	-1.3
	16nm,0.3s,baz=292,slow=9.8,SNR=21						
SIJI				Sn	Sn	23 01 45.6	+2.1
	baz=279,slow=17,SNR=2.1						
DDMP	Don Marcelino,	6.30	6	*e*P	Pn	23 00 34.5	+0.8
SPSI	Sidrap Palu	6.46	235	P	Pn	23 00 37.3	+1.5
	2μm,0.6s,20μm9.7nm						
SPSI				S	Sn	23 01 48.7	+0.5
	2μm,0.6s,20μm9.7nm						
BNDI	Bandanaira	6.49	132	P	Pn	23 00 34.2	-2.0
	1μm,1.2s,16μm22μm6.5nm						
BNDI				S	Sn	23 01 45.2	-3.7
	1μm,1.2s,16μm22μm6.5nm						
SKMP	Bagumbayan, Su	6.69	356	*e*P	Pn	23 00 40.1	+1.0
BKSI	Bulukumba	7.07	224	P	Pn	23 00 45.1	+0.9
	557nm,0.7s,6μm5μm3.6nm						
BKSI				S	Sn	23 02 03.3	0.0
	557nm,0.7s,6μm5μm3.6nm						
KAPI	Kappang	7.12	228	Pn	Pn	23 00 45.9	+1.0
	120nm,0.3s,baz=47,slow=5.9,SNR=213						
KAPI				Sn	Sn	23 02 00.9	-3.7
	45nm,0.3s,baz=274,slow=20,SNR=1.3						
KAPI				LR	LR	23 04 19.1	
	comp=Z,21μm,20.0s,baz=114,slow=45						
KAPI	Kappang	7.12	228	P	Pn	23 00 46.6	+1.6
	SNR=166						
MATI	Mati	7.20	10	*e*P	Pn	23 00 48.4	+2.3
DAV	Davao City (W)	7.24	4	Pn	Pn	23 00 50.1	+3.5
	31nm,0.3s,baz=135,slow=2.3,SNR=22						
DAV				LR	LR	23 03 48.5	
	comp=Z,18μm,19.6s,baz=202,slow=40						
DAV	Davao City (W)	7.24	4	*e*Pn	Pn	23 00 45.7	-1.0
DAV	Davao City (W)	7.24	4	P	Pn	23 00 46.5	-0.1
DAV	Davao City (W)	7.24	4	P	Pn	23 00 50.2	+3.6
	SNR=72						
CTBH	Cotabato--PC H	7.42	354⇑	*i*P	Pn	23 00 51.0	+2.0
SGKI	Sangatta, Kali	7.44	267	P	Pn	23 00 51.0	+1.6
	800nm,0.6s,9μm4.5nm						
SGKI				S	Sn	23 02 20.0	+7.6
	800nm,0.6s,9μm4.5nm						
BSSI	Bau Bau, Buton	7.45	217	P	Pn	23 00 49.2	-0.2
ZCP	Zamboanga City	7.68	337⇑	*e*P	Pn	23 00 53.6	+1.0
FAKI	Fak Fak	7.70	111	*e*Pn	Pn	23 00 49.8	-3.1
FAKI				*e*Sn	Sn	23 02 10.3	-8.4
FAKI	Fak Fak	7.70	111	P	Pn	23 00 49.6	-3.3
	226nm,0.7s,3μm0.8nm						
FAKI				S	Sn	23 02 12.7	-6.0
	226nm,0.7s,3μm0.8nm						
SMKI	Samarinda	7.83	268	P	Pn	23 00 56.7	+2.0
	2μm,0.9s,16μm6.5nm						
SMKI				S	Sn	23 02 27.0	+4.9
	2μm,0.9s,16μm6.5nm						
BUKP	Musuan	8.03	0	*e*P	Pn	23 00 59.6	+2.1
BKB	Balikpapan	8.21	263	P	Pn	23 01 01.6	+1.7
	2μm,0.9s,27μm						
BKB				S	Sn	23 02 34.7	+3.4
	2μm,0.9s,27μm						
IPIL	Ipil	8.31	343	*e*P	Pn	23 01 02.1	+0.8
CGP	Cagayan de Oro	8.61	358⇓	*e*P	Pn	23 01 09.5	+4.2
MMRI	Maumere	8.83	198	*e*Pn	Pn	23 01 08.7	+0.3
MMRI	Maumere	8.83	198	P	Pn	23 01 09.7	+1.3
	421nm,1.1s,5μm						
MMRI				S	Sn	23 02 45.8	-0.8
	421nm,1.1s,5μm						
EDFI	Ende, Flores	9.12	201	P	Pn	23 01 12.5	0.0
	187nm,1.0s,4μm						
BUTP	Butuan	9.13	4	*e*P	Pn	23 01 15.2	+2.7
SOEI	Soe	9.52	185	*e*Pn	Pn	23 01 18.7	+0.7
SOEI	Soe	9.52	185	P	Pn	23 01 20.5	+2.5
SAUI	Saumlaki	9.94	141	*e*Pn	Pn	23 01 21.2	-2.3
BATI	Baumata	10.03	188	Pn	Pn	23 01 28.6	+3.7
	12nm,0.3s,baz=214,slow=0.4,SNR=42						
BATI				LR	LR	23 07 08.6	
	comp=Z,5μm,18.4s,baz=359,slow=49						
BATI	Baumata	10.03	188	P	Pn	23 01 26.8	+1.9
MTKI	Muara Teweh, K	10.17	266	P	Pn	23 01 29.5	+2.8
	822nm,0.9s,10μm						
MSLP	Maasin	10.27	359	*e*P	Pn	23 01 29.2	+1.1
LLP	Lapu-Lapu	10.50	354	*e*P	Pn	23 01 33.8	+2.5
KKM	Kota Kinabalu	10.77	305	*e*Pn	Pn	23 01 37.5	+2.5
KKM				*e*Sn	Sn	23 03 24.7	-10
KKM	Kota Kinabalu	10.77	305	P	Pn	23 01 38.0	+2.9
WBSI	Waikabubak, Su	10.93	211	P	Pn	23 01 39.3	+2.1
BAKI	Biak	11.11	95	P	Pn	23 01 40.7	+1.1
OCLP	Ormoc	11.19	358	*e*P	Pn	23 01 42.5	+1.9
PLAI	Plampang	11.21	220	P	Pn	23 01 41.4	+0.4
JAP	San Jose, Anti	11.30	344⇑	*e*P	Pn	23 01 48.1	+5.9
BATP	Bataraza	11.48	321	*e*P	Pn	23 01 44.5	-0.2
CUYO	Cuyo Island	11.68	340	*e*P	Pn	23 01 49.1	+1.7
SRBI	Singaraja	12.54	231	P	Pn	23 02 00.2	+1.1
ENPP	El Nido	12.63	334	*e*P	Pn	23 02 01.3	+1.0
DNP	Denpasar	12.91	229	P	P	23 02 16.5	+3.3
KMMI	Kalianget	12.97	238	P	Pn	23 02 08.2	+3.2
	411nm,0.7s,3μm						
BUSP	Coron	13.04	339	*e*P	Pn	23 02 08.1	+2.1
IGBI	Denpasar	13.05	229	P	P	23 02 17.7	+2.9
SBUM	Sibu	13.08	282	*e*Pn	Pn	23 02 08.0	+1.5
SBUM	Sibu	13.08	282	P	Pn	23 02 08.0	+1.5
PBKI	Pangkalan Bun	13.59	259	P	Pn	23 02 14.1	+0.6
JAGI	Jajag, Banyuwa	13.61	233	*e*Pn	Pn	23 02 15.5	+1.8
JAGI	Jajag, Banyuwa	13.61	233	P	Pn	23 02 16.2	+2.5
PVCP	Virac	13.74	356	*e*P	Pn	23 02 16.8	+1.4
MTN	Manton Dam	13.94	155	*e*Pn	Pn	23 02 16.2	-1.9
MTN	Manton Dam	13.94	155	P	Pn	23 02 16.3	-1.9
	baz=14,SNR=54						
GRJI	Gresik	14.19	242	P	Pn	23 02 23.5	+1.9
PGP	Puerto Galera	14.20	344⇓	*e*P	P	23 02 25.6	-2.0
KDU	Kakadu	14.43	150	P	Pn	23 02 21.8	-2.9
	baz=14,SNR=70						
TGY	Tagaytay City	14.78	344	Pn	P	23 02 32.1	-2.0
	24nm,0.3s,baz=196,slow=4.9,SNR=14						
TGY	Tagaytay City	14.78	344⇓	*e*P	P	23 02 37.1	+3.0
KSM	Kuching	14.82	276	*e*P	Pn	23 02 32.1	+2.3
KSM	Kuching	14.82	276	P	P	23 02 37.0	+2.5
POLP	Polilio Island	15.15	348	*e*P	Pn	23 02 34.9	+0.9
NGJI	Ngawi	15.30	242	P	P	23 02 39

CVP Callao Caves 18.07 350‖ *e*P Pn 23 03 11.7 +1.1
ABRA Dolores 18.24 347 *e*P P 23 03 12.0 -0.3
APYP Conner 18.33 348 *e*P Pn 23 03 13.6 -0.2
SGCP Mt. Cagua 18.56 351 *e*P Pn 23 03 17.0 +0.5
LEM Lembang 18.58 249 P **Pn 23 03 18.1 +1.0**
95nm,0.3s,baz=53,slow=7.4,SNR=49
LEM LR LR 23 10 59.5
comp=Z,10μm,21.4s,baz=57,slow=39
LEM Lembang 18.58 249 P **P 23 03 16.4 +0.1**
CISI Cisompet, Garu 18.66 247 *e*P **Pn 23 03 18.0 +0.1**
3μm,0.8s
CISI Cisompet, Garu 18.66 247 P **P 23 03 16.4 -0.7**
PPBI Pangkal Pinang 19.00 264 P **P 23 03 20.6 -0.1**
CBJI Citeko 19.17 251 P **Pn 23 03 23.4 -0.5**
TNG Tangerang 19.29 252 P **Pn 23 03 25.6 +0.2**
3μm,0.9s,28μm
SBJI Serang 19.77 252 P **P 23 03 28.6 -0.5**
CGJI Cibinong 20.32 251 P **P 23 03 33.5 -1.6**
DLV T Lat 20.39 307 *e*Pn Pn 23 03 37.8 -0.7
332nm,0.9s
DLV LR LR
comp=Z,5μm,21.0s
BLSI Bandar Lampung 20.42 255 P **P 23 03 36.3 +0.1**
PMBI Palembang 20.44 262 P **P 23 03 37.0 +0.6**
TPRI Tanjung Pinang 20.54 273 P **P 23 03 38.5 +1.0**
comp=Z,2μm,0.8s,comp=Z,41μm
KLI Kotabumi 20.68 257 P **P 23 03 40.1 +1.1**
KASI Kota Agung 21.18 255 P **P 23 03 43.9 -0.5**
MDSI Maura Dua 21.27 258 P **P 23 03 45.7 +0.4**
MYKOM Kota Tinggi 21.28 275 *e*P **P 23 03 44.2 -1.2**
comp=Z,424nm,0.9s
MYKOM LR LR
comp=Z,2μm,19.0s
MYKOM Kota Tinggi 21.28 275 P **P 23 03 47.0 +1.6**
JMBI JAMBI 21.44 266 P **P 23 03 48.8 +1.6**
MBWA Marble Bar 21.47 194 P **P 23 03 48.2 +0.8**
SNR=8.4
LWLI Liwa 21.49 257 P **P 23 03 48.9 +1.1**
comp=Z,385nm,0.8s,comp=Z,13μm
WRAB Tennant Creek 21.63 156 *e*P **P 23 03 47.2 -2.0**
comp=Z,165nm,0.8s
WRAB Tennant Creek 21.63 156 *d i*P **P 23 03 47.1 -2.0**
WRAB pmax pmax
comp=Z,197nm,1.5s
WRA Warramunga Arr 21.63 156 P **P 23 03 47.8 -1.4**
comp=Z,68nm,0.7s,baz=335,slow=12,SNR=89
WRA S **S 23 07 37.6 -8.3**
comp=Z,18nm,0.9s,baz=341,slow=15,SNR=2.8
WRA ScP **ScP 23 11 24.1 +2.0**
comp=Z,12nm,0.8s,baz=0.0,slow=2.7,SNR=5.1
WRA ScS **ScS 23 15 06.0 -0.5**
comp=Z,2.9nm,1.0s,baz=274,slow=4.9,SNR=3.3
WRA P3KPbc 23 37 35.7
comp=Z,2.2nm,0.8s,baz=162,slow=3.5,SNR=2.6
LHSI Lahat 21.80 260 P **P 23 03 49.9 -1.1**
XMIS Christmas Isla 21.81 241 PFAKE 23 04 00.0 +8.8
XMIS LR LR
comp=Z,6μm,19.0s
MANU Manus Island 22.40 95 *e*P **P 23 03 58.6 +1.1**
comp=Z,376nm,1.6s
MNAI Manna 22.44 259 *e*P **P 23 03 57.0 -1.0**
comp=Z,732nm,0.7s
MNAI LR LR
comp=Z,4μm,20.0s
MNAI Manna 22.44 259 P **P 23 03 58.8 +0.8**
comp=Z,883nm,0.6s,comp=Z,10μm
COEN Coen 22.57 128 P **P 23 03 56.7 -2.5**
baz=22,SNR=56
TWG Pinlang 23.21 351 *e*P **P 23 04 02.1 -3.5**
comp=Z,441nm,0.5s
KRJI Kerinci 23.64 265 P **P 23 04 10.5 +0.4**
comp=Z,4μm,0.9s,comp=Z,30μm
YULB Yu-li 23.73 351 *e*P **P 23 04 07.1 -3.5**
comp=Z,94nm,0.6s
YULB *e*PcP **PcP 23 07 53.0 -0.6**
PMG Port Moresby 23.84 113 P **P 23 04 11.2 -0.5**
comp=Z,62nm,0.9s,baz=334,slow=10,SNR=10
PMG S **S 23 08 21.9 -2.1**
comp=Z,5.8nm,0.3s,baz=212,slow=13,SNR=1.6
PMG LR LR 23 16 22.8
comp=Z,1μm,21.1s,baz=316,slow=44
PMG Port Moresby 23.84 113 *e*P **P 23 04 11.8 +0.1**
comp=Z,699nm,1.8s
PMG Port Moresby 23.84 113 *e*P **P 23 04 11.8 +0.1**
PMG pmax pmax
comp=Z,699nm,1.8s
GUMO Guam 23.95 54 P **P 23 04 12.2 -0.5**
comp=Z,59nm,0.5s,baz=179,slow=17,SNR=5.7
GUMO Guam 23.95 54 *e*P **P 23 04 12.7 0.0**
comp=Z,816nm,1.6s
GUMO Guam 23.95 54 *e*P **P 23 04 12.7 0.0**
GUMO pmax pmax
comp=Z,816nm,1.6s
BKNI Bangkinang 24.00 271 PFAKE 23 04 20.0 +6.8
BKNI LR LR
comp=Z,3μm,22.0s
BKNI Bangkinang 24.00 271 P **P 23 04 13.5 +0.3**
comp=Z,671nm,1.0s,comp=Z,6μm
QIZ Qiongzhong 24.24 323 P **P 23 04 15.0 -0.3**
QIZ S **S 23 08 20.0 -10**
QIZ pmax pmax
comp=Z,40nm,0.7s
QIZ LR LR
comp=Z,1μm,14.9s
QIZ LR LR
comp=Z,830nm,17.5s
QIZ LR LR
comp=Z,2μm,17.9s
IPM Ipoh 24.43 281 *e*P **P 23 04 17.1 -0.2**
comp=Z,207nm,0.9s
IPM *e*PcP **PcP 23 07 54.1 -1.2**
IPM LR LR
comp=Z,2μm,22.0s
IPM Ipoh 24.43 281 P **P 23 04 17.0 -0.2**
PDSI Padang 24.59 268 P **P 23 04 17.6 -1.0**
comp=Z,939nm,1.1s,comp=Z,8μm
YOJ Yonaguni jima 24.59 356 *e*P **P 23 04 17.1 -1.4**
comp=Z,175nm,0.6s
YOJ Yonaguni jima 24.59 356 *e*P **P 23 04 17.1 -1.4**
YOJ pmax pmax
comp=Z,175nm,0.6s
GIRL Giralia 24.66 205 *e*P **P 23 04 20.1 +1.0**
comp=Z,473nm,1.0s
GIRL Giralia 24.66 205 P **P 23 04 20.0 +0.9**
baz=25,SNR=13
QIS Mount Isa 24.75 146 P **P 23 04 20.2 +0.3**
baz=25,SNR=199
AS31 Alice Springs 24.86 160 *e*P **P 23 04 21.1 +0.1**
comp=Z,30nm,0.6s
AS31 *e*PcP **PcP 23 07 57.1 +1.1**
AS31 *e*ScP **ScP 23 11 32.8 +2.2**
AS31 *e*ScS **ScS 23 15 17.4 -1.5**
ASAR Alice Springs 24.86 160 P **P 23 04 20.6 -0.4**
comp=Z,127nm,1.0s,baz=342,slow=10,SNR=256
ASAR PcP **PcP 23 07 57.1 +1.1**
comp=Z,37nm,0.7s,baz=345,slow=2.0,SNR=16
ASAR S **S 23 08 44.5 +4.2**
comp=Z,38nm,1.2s,baz=347,slow=24,SNR=6.1
ASAR ScP **ScP 23 11 32.8 +2.2**
comp=Z,8.6nm,0.9s,baz=334,slow=2.6,SNR=8.5
ASAR ScS **ScS 23 15 17.4 -1.5**
comp=Z,2.1nm,0.8s,baz=333,slow=4.4,SNR=4.8
ASAR LR LR 23 15 52.4
comp=Z,1μm,21.7s,baz=318,slow=41
ASAR P3KPbc 23 37 23.7
comp=Z,1.2nm,0.8s,baz=146,slow=4.2,SNR=7.8
WRKA Warakurna 24.89 173 P **P 23 04 21.4 +0.2**
baz=25,SNR=381
KULM Kulim 24.96 283 *e*P **P 23 04 21.3 -0.6**
comp=Z,192nm,1.0s
KULM LR LR
comp=Z,4μm,21.0s
KULM Kulim 24.96 283 P **P 23 04 22.0 +0.1**
YHNB Yeheng 24.98 352 PFAKE 23 04 30.0 +8.0
YHNB LR LR
comp=Z,4μm,21.0s
PPSI Pulau Pagai 25.15 264 P **P 23 04 27.5 +3.8**
comp=Z,2μm,1.0s,comp=Z,16μm
TATO Taipei 25.26 352 *e*P **P 23 04 24.5 -0.1**
comp=Z,243nm,1.1s
TATO LR LR
comp=Z,4μm,22.0s
SKLT Songkhla 25.43 287 P **P 23 04 26.7 +0.5**
comp=Z,146nm,1.2s,comp=Z,2μm
MNSI Mandailing Nat 25.48 272 P **P 23 04 26.7 +0.1**
comp=Z,317nm,0.7s,comp=Z,3μm

QZH Quanzhou 25.76 346⇑ *i*P P 23 04 29.0 -0.1
QZH S **S 23 08 50.0 -4.4**
QZH pmax pmax
comp=Z,85nm,0.6s
QZH pmax pmax
comp=Z,660nm,4.4s
QZH LR LR
comp=Z,940nm,21.3s
QZH LR LR
comp=Z,1μm,19.4s
QZH LR LR
comp=Z,2μm,27.0s
CHBT CHBT 25.94 301 P **P 23 04 32.7 +1.9**
comp=Z,340nm,0.5s,comp=Z,4μm
SISI Saibi 25.97 267 P **P 23 04 32.9 +1.8**
comp=Z,337nm,0.9s,comp=Z,3μm
ANA2 Anatahan 26.19 50 *e*P **P 23 04 33.5 +0.4**
comp=Z,368nm,0.9s
PSI Prapat 26.27 277 P **P 23 04 31.2 -2.8**
comp=Z,127nm,1.1s,baz=103,slow=5.2,SNR=53
PSI S **S 23 09 00.8 -2.3**
comp=Z,6.1nm,0.4s,baz=264,slow=9.5,SNR=1.8
PSI LR LR 23 16 41.1
comp=Z,2μm,19.0s,baz=104,slow=41
PSI Prapat 26.27 277 *e*P **P 23 04 32.4 -1.6**
comp=Z,190nm,1.1s
PSI *e*PcP **PcP 23 08 00.4 +0.8**
PSI LR LR
comp=Z,2μm,21.0s
PSI Prapat 26.27 277 *e*P **P 23 04 32.4 -1.6**
PSI *e* 23 08 00.4
PSI pmax pmax
comp=Z,190nm,1.1s
PSI MLR MLR
comp=Z,2μm,21.0s
SARN Sarigan 26.46 50 *e*P **P 23 04 35.5 -0.1**
comp=Z,299nm,1.4s
PANO Nakornpanom 26.50 312 P **P 23 04 36.0 +0.2**
comp=Z,4.0nm,0.9s,comp=Z,134nm
TRTT Trang 26.50 288 P **P 23 04 35.9 0.0**
comp=Z,187nm,1.0s,comp=Z,2μm
TSI Tuntungan 26.71 278 P **P 23 04 39.2 +1.4**
comp=Z,192nm,0.8s
SKNT Sakolnakorn 26.87 310 P **P 23 04 39.2 0.0**
comp=Z,115nm,0.6s,comp=Z,2μm
MEEK Meekatharra 27.00 193 P **P 23 04 39.5 -0.8**
baz=27,SNR=49
JOW Kunigami 27.06 6 P **P 23 04 41.0 +0.2**
comp=Z,47nm,0.8s,baz=180,slow=13,SNR=33
RABL Rabaul 27.39 99 *e*P **P 23 04 44.7 +0.7**
comp=Z,436nm,1.1s
RABL LR LR
comp=Z,1μm,21.0s
KHON Khomkaen 27.39 308 P **P 23 04 44.3 +0.4**
comp=Z,599μm,0.8s
KCSI Kotacane, Aceh 27.50 278 P **P 23 04 43.6 -1.3**
comp=Z,155nm,1.1s,comp=Z,2μm
GSI Gunungsitoli 27.50 273 PFAKE 23 05 00.0 +15
GSI LR LR
comp=Z,4μm,20.0s
GSI Gunungsitoli 27.50 273 P **P 23 04 44.5 -0.4**
comp=Z,273nm,1.2s
PKDT Phuket 27.81 287 P **P 23 04 47.6 0.0**
comp=Z,112nm,0.9s,comp=Z,4μm
CHAI Chaiyaphum 27.82 306 P **P 23 04 47.6 -0.1**
comp=Z,227μm,0.7s
NONG Nongkai 28.16 311 P **P 23 04 50.3 -0.4**
comp=Z,2.3nm,0.8s
PHET Kaeng Krachan 28.36 298 P **P 23 04 53.4 +0.8**
comp=Z,103μm,0.9s,comp=Z,922μm
CTA Charters Tower 28.67 135 P **P 23 04 54.5 -0.7**
comp=Z,15nm,0.9s,baz=306,slow=12,SNR=16
CTA ScP **ScP 23 11 45.1 +3.2**
comp=Z,28nm,1.1s,baz=304,slow=3.6,SNR=6.3
CTA LR LR 23 18 48.4
comp=Z,941nm,21.9s,baz=258,slow=41
CTAO Charters Tower 28.67 135 *e*P **P 23 04 56.4 +1.1**
comp=Z,295nm,1.8s
CTAO *e*PcP **PcP 23 08 02.9 -2.2**
CTAO Charters Tower 28.67 135 *e*P **P 23 04 56.4 +1.1**
CTAO *e* 23 08 02.9
CTAO pmax pmax
comp=Z,295nm,1.8s
MLSI Meulaboh, Aceh 28.95 279 P **P 23 04 57.6 -0.2**
comp=Z,412nm,1.1s,comp=Z,4μm
PBKT Sadao Pong 29.00 306 P **P 23 04 58.1 -0.1**
comp=Z,41nm,0.8s,comp=Z,707nm
SRDT SRDT 29.44 300 P **P 23 05 03.3 +1.2**
comp=Z,64nm,0.8s,comp=Z,2μm
SLVN Son La 29.73 317 PFAKE 23 05 20.0 +15
SLVN LR LR
comp=Z,2μm,21.0s
MORW Morawa 29.96 196 *e*P **P 23 05 06.1 -0.5**
comp=Z,57nm,0.8s
MORW LR LR
comp=Z,2μm,21.0s
MORW Morawa 29.96 196 P **P 23 05 06.2 -0.5**
baz=30,SNR=14
UTTA Uttaradit 29.97 308 P **P 23 05 07.1 +0.3**
comp=Z,137μm,0.8s
UMPA Umpang Tak 30.54 303 P **P 23 05 12.3 +0.4**
comp=Z,119μm,0.8s
FORT Forrest 30.55 175 *e*P **P 23 05 11.7 0.0**
comp=Z,205nm,0.8s
FORT Forrest 30.55 175 P **P 23 05 11.8 +0.1**
baz=31,SNR=89
LAMP Lampang 31.13 308 P **P 23 05 17.9 +0.8**
comp=Z,179μm,0.9s
BLDU Ballidu 31.27 194 P **P 23 05 17.5 -0.6**
baz=31,SNR=45
SSE Sheshan 31.34 354 PFAKE 23 05 30.0 +11
SSE LR LR
comp=Z,2μm,22.0s
CM31 Chiang Mai Arr 31.64 307 *e*P **P 23 05 21.9 +0.4**
comp=Z,181nm,1.3s
CM31 *e*PcP **PcP 23 08 14.8 +1.9**
CM31 *e*ScP **ScP 23 11 53.5 +1.8**
CM31 *e*ScS **ScS 23 15 52.2 +2.2**
CMAR Chiang Mai Arr 31.64 307 P **P 23 05 21.1 -0.5**
comp=Z,51nm,1.1s,baz=139,slow=7.3,SNR=131
CMAR PcP **PcP 23 08 14.8 +1.9**
comp=Z,37nm,0.8s,baz=175,slow=1.9,SNR=19
CMAR ScP **ScP 23 11 53.5 +1.8**
comp=Z,3.5nm,0.8s,baz=144,slow=2.4,SNR=6.3
CMAR PKiKP **PKiKP 23 15 42.6 +0.6**
comp=Z,2.2nm,0.8s,baz=277,slow=0.7,SNR=6.8
CMAR ScS **ScS 23 15 52.2 +2.2**
comp=Z,1.0nm,0.7s,baz=160,slow=2.9,SNR=4.7
CMAR LR LR 23 17 58.5
comp=Z,2μm,21.8s,baz=154,slow=36
CMMT Chiang Mai 31.83 308 P **P 23 05 23.3 +0.1**
comp=Z,107nm,1.1s,comp=Z,1μm
CHTO Chiang Mai 31.84 308 *e*P **P 23 05 23.6 +0.3**
comp=Z,138nm,0.8s
CHTO *e*PcP **PcP 23 08 14.7 +1.3**
CHTO LR LR
comp=Z,2μm,22.0s
CHTO Chiang Mai 31.84 308 *e*P **P 23 05 23.6 +0.3**
CHTO *e* 23 08 14.7
CHTO pmax pmax
comp=Z,138nm,0.8s
CHTO MLR MLR
comp=Z,2μm,22.0s
CHTO Chiang Mai 31.84 308 P **P 23 05 24.0 +0.8**
SNR=45
GYA Guiyang 31.88 328⇑ *i*P P 23 05 23.5 -0.1
GYA pP pP 23 05 37.3 +0.8
GYA sP sP 23 05 46.5 +4.0
GYA PP **PnPn 23 06 31.0 +0.9**
GYA PcP **PcP 23 08 14.5 +1.1**
GYA S **S 23 10 27.8 -3.0**
GYA sS sS 23 10 54.0 +1.1
GYA pmax pmax
comp=Z,90nm,0.6s
GYA pmax pmax
comp=Z,190nm,8.7s
GYA LR LR
comp=Z,910nm,16.5s
GYA LR LR
comp=Z,870nm,16.4s
GYA LR LR
comp=Z,1μm,17.4s
KLBR Kellerberrin 31.97 192 P **P 23 05 23.9 -0.4**
baz=32,SNR=8.1
WHN Wuhan 32.22 343 ⇑P **P 23 05 28.0 +1.6**
WHN S **S 23 10 31.8 -4.0**
WHN pmax pmax
comp=Z,140nm,0.8s
WHN pmax pmax
comp=Z,460nm,4.4s
WHN LR LR
comp=Z,1μm,11.7s
WHN LR LR
comp=Z,3μm,21.4s
WHN LR LR
comp=Z,5μm,26.5s
NJ2 Nanjing 32.61 350 *e*P **P 23 05 30.3 +0.5**
NJ2 pP **pP 23 05 44.0 +1.3**
NJ2 S **S 23 10 43.0 +1.2**
NJ2 pmax pmax
comp=Z,110nm,0.9s
NJ2 LR LR
comp=Z,2μm,14.2s
NJ2 LR LR
comp=Z,970nm,12.8s
NJ2 LR LR
comp=Z,3μm,21.3s
MUN Mundaring 32.69 194 P **P 23 05 30.2 -0.3**
baz=33,SNR=8.7
KMI Kunming 33.15 321 PFAKE 23 05 50.0 +15
KMI LR LR
comp=Z,2μm,19.0s
NWAO Narrogin (SRO) 33.37 192 *e*P **P 23 05 35.9 -0.6**
comp=Z,171nm,1.6s
NWAO Narrogin (SRO) 33.37 192 *e*P **P 23 05 35.9 -0.6**
NWAO pmax pmax
comp=Z,171nm,1.6s
JNU Nakatsue 33.60 9 P **P 23 05 38.0 -0.5**
comp=Z,117nm,0.8s,baz=188,slow=3.9,SNR=55
JNU LR LR 23 19 16.4
comp=Z,648nm,21.5s,baz=168,slow=36
ENH Enshi 33.73 335 PFAKE 23 05 50.0 +10
ENH LR LR
comp=Z,3μm,20.0s
BBOO Buckleboo 34.06 163 P **P 23 05 42.5 0.0**
baz=34,SNR=10
PBA Port Blair 34.17 291 *e*P P 23 05 42.4 -1.2
comp=Z,211nm,1.2s
PBA LR LR
comp=Z,3μm,20.0s
DGPR DIGLIPUR 34.49 294 *e*P **P 23 05 45.6 -0.8**
RMQ Roma 34.71 141 P **P 23 05 48.2 0.0**
baz=35,SNR=7.1
STKA Stephens Creek 35.18 155 P **P 23 05 52.6 +0.3**
comp=Z,91nm,0.8s,baz=319,slow=9.3,SNR=116
STKA S **S 23 11 19.9 -1.8**
comp=Z,12nm,1.1s,baz=50,slow=20,SNR=2.7
STKA ScP **ScP 23 12 05.6 +1.8**
comp=Z,15nm,0.9s,baz=349,slow=6.0,SNR=3.9
STKA Stephens Creek 35.18 155 *e*P **P 23 05 52.5 +0.3**
comp=Z,19nm,0.8s
STKA *e*ScP **ScP 23 12 05.6 +1.8**
STKA Stephens Creek 35.18 155 P **P 23 05 52.6 +0.3**
baz=35,SNR=99
HTT Hallett 35.54 160 P **P 23 05 56.4 +1.1**
baz=36,SNR=18
TJN Taejon 36.46 3 *d i*P **P 23 06 04.6 +1.6**
CMSA Cobar Meteorol 36.80 150 P **P 23 06 07.0 +1.0**
baz=37,SNR=50
CD2 Chengdu 36.95 329 P **P 23 06 07.0 -0.4**
CD2 sP sP 23 06 26.5 +0.1
CD2 PP **PnPn 23 07 33.0 -0.2**
CD2 S **S 23 11 48.3 -0.7**
CD2 sS sS 23 12 14.5 +3.2
CD2 pmax pmax
comp=Z,210nm,0.7s
CD2 pmax pmax
comp=Z,260nm,4.0s
CD2 LR LR
comp=Z,2μm,21.1s
CD2 LR LR
comp=Z,2μm,23.5s
CD2 LR LR
comp=Z,2μm,21.1s
INU Inuyama 37.09 16 *e*P **P 23 06 09.1 +0.6**
comp=Z,128nm,1.0s
XAN Xi'an 37.27 338 PFAKE 23 06 20.0 +10
XAN LR LR
comp=Z,2μm,19.0s
KSRS Korea Array 37.56 4 P **P 23 06 13.5 +1.1**
comp=Z,61nm,0.7s,baz=180,slow=10,SNR=280
KSRS PcP **PcP 23 08 31.2 +1.7**
comp=Z,19nm,0.7s,baz=178,slow=2.5,SNR=10
KSRS S **S 23 11 59.9 +2.1**
comp=Z,0.6nm,0.3s,baz=264,slow=30,SNR=2.5
KSRS ScP **ScP 23 12 14.5 +2.1**
comp=Z,3.3nm,0.7s,baz=186,slow=3.2,SNR=5.2
KSRS LR LR 23 21 30.5
comp=Z,987nm,21.2s,baz=194,slow=36
MAJO Matsushiro 38.55 17 *e*P **P 23 06 20.4 -0.4**
comp=Z,114nm,0.8s
MAJO *e*PcP **PcP 23 08 34.1 +1.5**
MAJO Matsushiro 38.55 17 *c i*P **P 23 06 20.1 -0.7**
MAJO pmax pmax
comp=Z,102nm,0.7s
MAJO MLR MLR
comp=Z,611nm,19.0s
MAT Matsushiro 38.55 17 P **P 23 06 20.2 -0.6**
MAT S **S 23 12 11.0 -1.9**
MJAR Matsushiro Arr 38.55 17 P **P 23 06 20.2 -0.6**
comp=Z,62nm,0.7s,baz=198,slow=9.0,SNR=153
MJAR PcP **PcP 23 08 34.1 +1.5**
comp=Z,31nm,0.8s,baz=196,slow=3.9,SNR=6.9
MJAR S **S 23 12 11.1 -1.8**
comp=Z,4.7nm,0.8s,baz=184,slow=13,SNR=4.9
MJAR P3KPbc 23 36 28.2
comp=Z,0.6nm,0.3s,baz=28,slow=5.5,SNR=4.0
MJB9 Matsu-Tunnel 38.55 17 *e*P **P 23 06 20.4 -0.4**
comp=Z,114nm,0.7s
MJB9 *e*PcP **PcP 23 08 34.3 +1.7**
DL2 Dalian 39.04 356 P **P 23 06 25.0 +0.2**
DL2 PcP **PcP 23 08 35.3 +1.3**
DL2 S **S 23 12 19.5 -0.7**
DL2 pmax pmax
comp=Z,83nm,0.8s
DL2 pmax pmax
comp=Z,230nm,4.6s
DL2 LR LR
comp=Z,1μm,25.3s
DL2 LR LR
comp=Z,610nm,24.1s
DL2 LR LR
comp=Z,2μm,25.5s
ARMA Armidale 39.27 142 P **P 23 06 28.5 +1.5**
baz=39,SNR=6.3
KOHI KOHIMA 39.44 313 *e*P **P 23 06 27.3 -1.3**
KOHI IAmb IAmb 23 06 29.9
comp=Z,110nm,0.6s
TIY Taiyuan 39.48 344 *e*P **P 23 06 29.5 +0.9**
TIY S **S 23 12 27.0 0.0**
TIY sS **sS 23 12 53.0 +3.6**
TIY pmax pmax
comp=Z,180nm,0.7s
TIY LR LR
comp=Z,140nm,4.9s
TIY LR LR
comp=Z,450nm,14.1s
TIY LR LR
comp=Z,1μm,29.5s
MOKO MOKOCHONG 39.50 314 *e*P **P 23 06 28.4 -0.7**
MOKO IAmb IAmb 23 06 31.4
comp=Z,187nm,0.4s
ARPS Mount Arapiles 39.58 159 P **P 23 06 30.5 +1.2**
baz=40,SNR=9.7
BELO BELONIA 40.11 308 *e*P **P 23 06 34.4 +0.5**
YNG Young 40.36 150 P **P 23 06 36.3 +0.4**
baz=40,SNR=14
ZIRO ZIRO 40.70 315 *e*P **P 23 06 38.3 -0.8**
BJT Baijiatuau 40.84 350 PFAKE 23 06 50.0 +10
BJT LR LR
comp=Z,700nm,22.0s
BJI Beijing 40.86 350 P **P 23 06 39.3 -0.6**
BJI pmax pmax
comp=Z,45nm,1.1s
BJI LR LR
comp=Z,310nm,27.5s
BJI LR LR
comp=Z,250nm,25.9s
BJI LR LR
comp=Z,760nm,27.5s
TEZP TEZPUR 40.92 313 *e*P **P 23 06 39.4 -1.2**
SHL Shillong 41.00 311 *e*P **P 23 06 41.1 -0.4**
comp=Z,166nm,0.7s
SHL *e*PcP **PcP 23 08 41.1 +0.2**

SHL	**Shillong**	**41.00 311**	*e*P	**P**	**23 06 41.1 -0.4**
SHL			*e*		23 08 41.2
SHL			pmax	pmax	
comp=Z,166nm,0.7s					
SHL	**Shillong**	**41.00 311** ⇑	*i*P	**P**	**23 06 43.0 +1.5**
SHL			*e*x	x	23 12 32.5
LZH	**Lanzhou**	**41.13 334** ⇑	P	**P**	**23 06 42.5 +0.1**
LZH			pP	pP	23 06 55.3 -0.2
LZH			sP	sP	23 07 04.5 +3.0
LZH			PP	**PnPn**	**23 08 21.3 -1.8**
LZH			PcP	**PcP**	**23 08 42.5 +1.4**
LZH			S	**S**	**23 12 51.5 -0.4**
LZH			sS	sS	23 13 17.0 +2.6
LZH			SS	**SS**	**23 15 51.5 -5.0**
LZH			pmax	pmax	
comp=Z,260nm,1.3s					
LZH			pmax	pmax	
comp=Z,560nm,5.0s					
LZH			LR	LR	
comp=Z,1μm,13.6s					
LZH			LR	LR	
comp=Z,2μm,14.2s					
LZH			LR	LR	
comp=Z,3μm,16.3s					
CAN	**Canberra**	**41.47 150**	*e*P	**P**	**23 06 47.2 +2.1**
comp=Z,111nm,0.9s					
CAN	**Canberra**	**41.47 150**	*e*P	**P**	**23 06 47.2 +2.1**
CAN			pmax	pmax	
comp=Z,111nm,0.9s					
CNB	**Canberra Magne**	**41.65 150**	P	**P**	**23 06 49.1 +2.6**
baz=42,SNR=8.0					
TOO	**Toolangi**	**41.70 155**	*e*P	**P**	**23 06 49.3 +2.4**
comp=Z,100nm,1.0s					
TOO	**Toolangi**	**41.70 155**	P	**P**	**23 06 49.1 +2.1**
baz=42,SNR=24					
TOO	**Toolangi**	**41.70 155**	*e*P	**P**	**23 06 49.3 +2.4**
TOO			pmax	pmax	
comp=Z,100nm,1.0s					
SNY	**Shenyang**	**41.86 358** ⇑	P	**P**	**23 06 47.8 -0.2**
SNY			S	**S**	**23 13 00.3 -1.7**
SNY			pmax	pmax	
comp=Z,78nm,0.9s					
SNY			LR	LR	
comp=Z,960nm,24.9s					
SNY			LR	LR	
comp=Z,1μm,23.8s					
SNY			LR	LR	
comp=Z,2μm,23.3s					
TAWA	**Tawang**	**42.16 314**	*e*P	**P**	**23 06 51.0 -0.2**
HHC	**Hu-ho-hao-te**	**42.66 345**	P	**P**	**23 06 56.3 +1.6**
HHC			S	**S**	**23 13 15.8 +1.7**
HHC			pmax	pmax	
comp=Z,36nm,1.1s					
HHC			pmax	pmax	
comp=Z,40nm,5.4s					
HHC			LR	LR	
comp=Z,710nm,18.2s					
HHC			LR	LR	
comp=Z,810nm,20.6s					
BTO	**Baotou**	**42.85 343**	*e*P	**P**	**23 06 56.0 -0.3**
MSHR	**Mys Shultsa**	**42.94 7** ⇑	*e*P	**P**	**23 06 57.8 +1.0**
VLA	**Vladivostok**	**43.56 7***c*	*i*P	**P**	**23 07 03.0 +1.2**
VLA			pmax	pmax	
comp=Z,221nm,0.8s					
CN2	**Changchun**	**43.81 0** ⇑	*i*P	**P**	**23 07 03.5 -0.3**
CN2			*e*pP	pP	23 07 19.0 +1.8
CN2			*e*sP	sP	23 07 26.3 +3.1
CN2			PcP	**PcP**	**23 08 50.8 +1.2**
CN2			*e*S	**S**	**23 13 31.0 +0.3**
CN2			pmax	pmax	
comp=Z,50nm,0.6s					
CN2			pmax	pmax	
comp=Z,300nm,4.0s					
CN2			LR	LR	
comp=Z,600nm,19.0s					
CN2			LR	LR	
comp=Z,600nm,19.0s					
CN2			LR	LR	
comp=Z,700nm,20.0s					
LSA	**Lhasa**	**43.90 316**	PFAKE		23 07 20.0 +15
LSA			LR	LR	
comp=Z,400nm,19.0s					
LSA	**Lhasa**	**43.90 316**	*i* P	**P**	**23 07 05.6 +0.3**
SNR=82					
GTK	**Tadong**	**44.42 311**	*e*P	**P**	**23 07 08.8 -0.4**
GTK			IAmb	IAmb	23 07 12.1
comp=Z,53nm,0.8s					
USA0B	**Ussuriysk Arra**	**44.64 7**	PFAKE		23 07 20.0 +10
USA0B			LR	LR	
comp=Z,700nm,22.0s					
USRK	**Ussuriysk Ar.**	**44.64 7**	P	**P**	**23 07 11.1 +0.7**
comp=Z,104nm,0.5s,baz=186,slow=6.6,SNR=103					
USRK			LR	LR	23 26 02.6
comp=Z,520nm,21.3s,baz=167,slow=36					
MDJ	**Mudanjiang**	**44.81 5**	P	**P**	**23 07 12.5 +0.7**
MDJ			pP	pP	23 07 21.8 -3.4
MDJ			PP	**PP**	**23 09 00.3 +2.9**
MDJ			S	**S**	**23 13 49.0 +3.8**
MDJ			pmax	pmax	
comp=Z,190nm,1.0s					
MDJ			pmax	pmax	
comp=Z,660nm,3.1s					
MDJ			LR	LR	
comp=Z,640nm,19.9s					
MDJ			LR	LR	
comp=Z,720nm,20.4s					
MDJ			LR	LR	
comp=Z,790nm,22.3s					
MDJ	**Mudanjiang**	**44.81 5**	PFAKE		23 07 20.0 +8.2
MDJ			LR	LR	
comp=Z,600nm,19.0s					
PALK	**Pallekele**	**44.84 280**	LR	LR	23 28 44.3
comp=Z,1μm,19.0s,baz=118,slow=40					
PALK	**Pallekele**	**44.84 280**	*e*P	**P**	**23 07 12.1 -0.5**
comp=Z,45nm,0.9s					
PALK			LR	LR	
comp=Z,2μm,20.0s					
PALK	**Pallekele**	**44.84 280**	P	**P**	**23 07 11.8 -0.8**
PALK	**Pallekele**	**44.84 280**	*e*P	**P**	**23 07 12.1 -0.5**
PALK			pmax	pmax	
comp=Z,45nm,0.9s					
PALK			MLR	MLR	
comp=Z,2μm,20.0s					
BOK	**Bokaro**	**44.85 305**	*e*P	**P**	**23 07 12.2 -0.3**
BOK			IAmb	IAmb	23 07 15.8
comp=Z,37nm,1.1s					
ERM	**Erimo**	**45.10 19**	*e*P	**P**	**23 07 15.1 +1.0**
comp=Z,84nm,0.8s					
ERM	**Erimo**	**45.10 19***de*P		**P**	**23 07 14.9 +0.8**
ERM			pmax	pmax	
comp=Z,109nm,0.9s					
WAKE	**Wake Island**	**45.17 62**	PFAKE		23 07 30.0 +15
WAKE			LR	LR	
comp=Z,1μm,18.0s					
GTA	**Gaotai**	**45.68 333** ⇑	P	**P**	**23 07 18.8 -0.2**
GTA			pP	pP	23 07 32.5 +0.2
GTA			sP	pwP	23 07 36.8 -0.3
GTA			PcP	**PcP**	**23 08 57.8 +1.5**
GTA			PcS	**PcS**	**23 12 50.5 -0.1**
GTA			S	**S**	**23 13 58.8 +0.5**
GTA			sS	sS	23 14 25.5 +4.4
GTA			pmax	pmax	
comp=Z,16nm,1.2s					
GTA			pmax	pmax	
comp=Z,380nm,6.5s					
GTA			LR	LR	
comp=Z,870nm,20.0s					
GTA			LR	LR	
comp=Z,830nm,18.4s					
GTA			LR	LR	
comp=Z,2μm,20.0s					
TEY	**Ternei**	**46.20 11** ⇓	*e*P	**P**	**23 07 23.0 +0.3**
TEY			*e*		23 07 38.8
TEY			pmax	pmax	
comp=N,100nm,0.7s					
TEY			pmax	pmax	
comp=E,30nm,0.7s					
TEY			pmax	pmax	
comp=Z,150nm,0.7s					
MDRS	**Chennai**	**46.31 288**	*e*P	**P**	**23 07 23.1 -1.0**
JIRN	**Jiri**	**46.43 310**	*e*P	**P**	**23 07 24.8 -0.6**
comp=Z,512nm,0.5s					
GUN	**Gumba**	**46.80 310**	*e*P	**P**	**23 07 27.4 -0.8**
comp=Z,808nm,0.7s					
PKI	**Pulchoki**	**46.99 309**	*e*P	**P**	**23 07 28.7 -1.0**
comp=Z,159nm,0.5s					
PKIN	**Phulchoki**	**47.01 309**	*e*P	**P**	**23 07 28.6 -1.1**
comp=Z,176nm,0.6s					
KKN	**Kakani**	**47.20 309**	*e*P	**P**	**23 07 30.3 -0.9**
comp=Z,182nm,0.5s					
DMN	**Daman**	**47.24 309**	*e*P	**P**	**23 07 30.9 -0.7**
comp=Z,234nm,0.7s					
GKN	**Gorkha**	**47.80 309**	*e*P	**P**	**23 07 34.9 -0.9**
comp=Z,355nm,0.6s					
YUK	**Yuzh-Kuril'sk**	**47.80 20** ⇓	*e*P	**P**	**23 07 36.4 +1.1**
KOLN	**Koldanda**	**48.49 308**	*e*P	**P**	**23 07 40.6 -0.6**
comp=Z,682nm,0.7s					
DANN	**Dangsing**	**48.64 309**	*e*P	**P**	**23 07 41.5 -1.0**
comp=Z,888nm,0.6s					
TRD	**Trivandrum**	**48.67 281**	*e*P	**P**	**23 07 41.6 -1.0**
TRD			IAmb	IAmb	23 07 43.5
comp=Z,153nm,1.2s					
HYB	**Hyderabad**	**48.98 293**	*i* P	**P**	**23 07 42.0 -2.9**
comp=Z,160nm,1.0s					
PYUN	**Piuthan**	**49.13 309**	*e*P	**P**	**23 07 45.6 -0.5**
comp=Z,820nm,0.5s					
YSS	**Yuzh-Sakhalins**	**49.46 16**	*e*P	**P**	**23 07 48.2 +0.3**
comp=Z,72nm,0.8s					
YSS	**Yuzh-Sakhalins**	**49.46 16** ⇑	*e*P	**P**	**23 07 48.2 +0.3**
YSS			*e**PP	**pwP**	**23 08 04.0 -0.9**
YSS			*e*		23 09 03.3
YSS			*e*		23 09 41.9
YSS			*e*S	**S**	**23 14 55.0 +3.7**
YSS			*e*PS	PKiKP	23 15 05.0 -52
YSS			pmax	pmax	
comp=Z,60nm,1.3s					
YSS			MLR	MLR	
comp=N,200nm,20.0s					
YSS			MLR	MLR	
comp=Z,200nm,20.0s					
YSS			MLR	MLR	
comp=E,300nm,18.0s					
HIA	**Hailar**	**49.49 355**	PFAKE		23 08 00.0 +12
HIA			LR	LR	
comp=Z,1μm,20.0s					
KUR	**Kuril'sk**	**49.55 21** ⇓	*e*P	**P**	**23 07 50.3 +1.6**
KLR	**Kul'dur**	**49.58 6***c*	*i*P	**P**	**23 07 48.9 0.0**
KLR			pmax	pmax	
comp=Z,103nm,0.6s					
KLR			MLR	MLR	
comp=Z,562nm,20.0s					
NGP	**Nagpur**	**49.66 298** ⇓	*i*P	**P**	**23 07 48.7 -1.3**
NGP			*e*x	x	23 08 07.4
ULN	**Ulaanbaatar**	**50.37 344**	*e*P	**P**	**23 07 54.6 -0.5**
comp=Z,135nm,0.8s					
ULN			LR	LR	
comp=Z,800nm,22.0s					
ULN	**Ulaanbaatar**	**50.37 344***c*	*i*P	**P**	**23 07 54.5 -0.5**
ULN			pmax	pmax	
comp=Z,184nm,1.0s					
ULN	**Ulaanbaatar**	**50.37 344**	P	**P**	**23 07 54.9 -0.2**
SNR=72					
SONM	**Songino Array**	**50.52 344**	P	**P**	**23 07 55.6 -0.6**
comp=Z,75nm,0.6s,baz=156,slow=8.0,SNR=117					
SONM			LR	LR	23 30 32.9
comp=Z,889nm,20.2s,baz=152,slow=38					
GRNR	**Gornyy**	**51.70 9** ⇑	*i*P	**P**	**23 08 05.8 +1.0**
GRNR			pmax	pmax	
comp=N,42nm,0.9s					
GRNR			pmax	pmax	
comp=Z,100nm,0.9s					
BHPL	**Bhopal**	**51.78 300**	*e*P	**P**	**23 08 04.6 -1.4**
BHPL			IAmb	IAmb	23 08 07.3
comp=Z,100nm,0.6s					
GOA	**Goa**	**52.91 290**	*e*P	**P**	**23 08 11.9 -2.5**
DGAR	**Diego Garcia**	**52.91 261**	*e*P	**P**	**23 08 13.6 -0.9**
comp=Z,354nm,1.0s					
DGAR	**Diego Garcia**	**52.91 261**	*e*P	**P**	**23 08 13.6 -0.9**
DGAR			pmax	pmax	
comp=Z,354nm,1.0s					
CIT	**Chita**	**52.93 351**	*e*P	**P**	**23 08 12.5 -1.5**
CIT			*e*		23 08 22.9
CIT			*e*		23 09 22.0
CIT			pmax	pmax	
comp=Z,170nm,1.3s					
TYV	**Tymovskoe**	**53.04 14**	*e*P	**P**	**23 08 16.2 +1.5**
TYV			*e*		23 15 44.6
TYV			pmax	pmax	
comp=Z,33nm,0.7s					
TYV			pmax	pmax	
comp=Z,400nm,4.2s					
TYV			MLR	MLR	
comp=E,900nm,18.0s					
TYV			MLR	MLR	
comp=Z,300nm,20.0s					
ZAK	**Zakamensk**	**53.71 343**	*e*P	**P**	**23 08 19.0 -0.8**
ZAK			pmax	pmax	
comp=Z,43nm,1.0s					
ZAK			pmax	pmax	
comp=Z,8.0nm,1.5s					
ZEA	**Zeya**	**53.78 2**	*e*P	**P**	**23 08 20.1 -0.1**
ZEA			*e*		23 09 22.0
ZEA			*e*S	**S**	**23 15 49.5 -1.1**
ZEA			*e*PS	**PKiKP**	**23 16 00.5 -0.8**
ZEA			*e*		23 18 06.0
ZEA			*e*SS	**SS**	**23 19 34.0 +1.7**
ZEA			pmax	pmax	
comp=N,99nm,0.8s					
ZEA			pmax	pmax	
comp=E,62nm,0.8s					
ZEA			pmax	pmax	
comp=Z,210nm,0.8s					
ZEA			smax	smax	
comp=N,300nm,6.0s					
ZEA			MLR	MLR	
comp=Z,600nm,18.0s					
ZEA			MLR	MLR	
comp=E,400nm,16.0s					
ZEA			MLR	MLR	
comp=N,400nm,18.0s					
NDI	**New Delhi**	**53.96 306**	*e*P	**P**	**23 08 21.0 -1.0**
DDI	**Dehra Dun**	**53.97 309**	*e*P	**P**	**23 08 20.3 -1.7**
DDI			IAmb	IAmb	23 08 22.9
comp=Z,143nm,1.0s					
NKL	**Nikolayevsk**	**54.74 11**	*e*P	**P**	**23 08 27.5 +0.4**
NKL			*e*		23 09 26.8
NKL			*e*		23 10 29.2
NKL			*e*S	**S**	**23 16 04.8 +1.3**
NKL			pmax	pmax	
comp=Z,169nm,0.8s					
NKL			pmax	pmax	
comp=E,269nm,16.9s					
NKL			pmax	pmax	
comp=N,429nm,24.8s					
NKL			pmax	pmax	
comp=Z,246nm,1.2s					
NKL			MLR	MLR	
comp=Z,294nm,18.0s					
TLY	**Talaya**	**54.76 344**	*e*P	**P**	**23 08 27.4 +0.1**
comp=Z,95nm,0.7s					
TLY			LR	LR	
comp=Z,800nm,21.0s					
TLY	**Talaya**	**54.76 344***c*	*i*P	**P**	**23 08 27.3 0.0**
TLY			*e*		23 09 25.0
TLY			*e*		23 10 31.1
TLY			*e*S	S	23 16 25.2 +21
TLY			*e*SS	**SS**	**23 19 52.2 +4.3**
TLY			pmax	pmax	
comp=Z,207nm,0.6s					
TLY			MLR	MLR	
comp=Z,2μm,20.0s					
TLY	**Talaya**	**54.76 344**	P	**P**	**23 08 27.7 +0.4**
SNR=51					
SMLA	**Simla**	**55.01 309**	*e*P	**P**	**23 08 28.8 -0.7**
SMLA			IAmb	IAmb	23 08 31.2
WMQ	**Urumqi**	**55.04 328**	P	**P**	**23 08 31.0 +1.5**
WMQ			pP	pwP	23 08 46.3 -1.7
WMQ			PcP	**PcP**	**23 09 31.8 +1.2**
WMQ			S	**S**	**23 16 08.8 +0.8**
WMQ			ScS	**ScS**	**23 18 12.0 -2.1**
WMQ			pmax	pmax	
comp=Z,80nm,0.9s					
WMQ			pmax	pmax	
comp=Z,270nm,3.7s					
WMQ			LR	LR	
comp=Z,340nm,23.1s					
WMQ			LR	LR	
comp=Z,460nm,21.3s					
WMQ			LR	LR	
comp=Z,1μm,25.1s					
WMQ	**Urumqi**	**55.04 328**	PFAKE		23 08 40.0 +10
WMQ			LR	LR	
comp=Z,900nm,21.0s					
IRK	**Irkutsk**	**55.10 345**	*e*P	**P**	**23 08 30.2 +0.5**
IRK			pmax	pmax	
comp=Z,97nm,1.2s					
MOY	**Mondy**	**55.53 342**	*e*P	**P**	**23 08 33.1 +0.1**
MOY			pmax	pmax	
comp=Z,109nm,1.4s					
DHRM	**DHARAMSHALA**	**56.15 310**	*e*P	**P**	**23 08 36.8 -1.2**
DHRM			IAmb	IAmb	23 08 39.1
comp=Z,532nm,0.9s					
SKR	**Severo-Kuril's**	**57.17 23**	*e*P	**P**	**23 08 45.5 +1.0**
SKR			*e*S	**S**	**23 16 30.9 -5.0**
SKR			pmax	pmax	
comp=Z,85nm,0.9s					
SKR			pmax	pmax	
comp=Z,100nm,4.1s					
SKR			MLR	MLR	
comp=Z,400nm,19.0s					
SKR			MLR	MLR	
comp=Z,300nm,16.0s					
BOD	**Bodaibo**	**58.51 353** ⇓	*i*P	**P**	**23 08 54.2 +0.4**
BOD			pmax	pmax	
comp=Z,252nm,1.1s					
BHJ	**Bhuj**	**58.59 298**	*e*P	**P**	**23 08 54.9 -0.1**
BHJ			IAmb	IAmb	23 09 50.0
comp=Z,242nm,1.6s					
ZSN	**Zaisan**	**58.93 329**	*e*P	**P**	**23 08 55.7 -1.3**
ZSN			*e*S	**S**	**23 16 56.9 -2.2**
ZSN	**Zaisan**	**58.93 329**	*e*P	**P**	**23 08 55.7 -1.3**
ZSN			*e*S	**S**	**23 16 56.9 -2.2**
NIL	**Nilore**	**59.06 310**	*e*P	**P**	**23 08 57.0 -1.2**
comp=Z,110nm,0.6s					
NIL			*e*PcP	**PcP**	**23 09 47.1 +0.5**
NIL			LR	LR	
comp=Z,500nm,22.0s					
NIL	**Nilore**	**59.06 310**	*e*P	**P**	**23 08 57.0 -1.2**
NIL			*e*		23 09 47.1
NIL			pmax	pmax	
comp=Z,110nm,0.6s					
NIL			MLR	MLR	
comp=Z,500nm,22.0s					
DGZ	**Jazzator, Alta**	**59.22 333***c*	*i*P	**P**	**23 08 58.7 -0.4**
DGZ			pmax	pmax	
comp=Z,85nm,1.0s					
UZB	**Uzynbulak**	**59.61 322**	*e*P	**P**	**23 09 01.2 -0.7**
UZB			*e*S	**S**	**23 17 06.2 -2.1**
UZB			pmax	pmax	
comp=Z,42nm,0.6s					
UZB	**Uzynbulak**	**59.61 322**	*e*P	**P**	**23 09 01.2 -0.7**
comp=Z,42nm,0.6s					
UZB			*e*S	**S**	**23 17 06.2 -2.1**
PETK	**Petropavlovsk-**	**59.68 22**	P	**P**	**23 09 03.3 +1.3**
comp=Z,98nm,0.8s,baz=192,slow=4.8,SNR=144					
KSH	**Kashi**	**59.69 317**	P	**P**	**23 09 02.0 -0.5**
KSH			sP	sP	23 09 25.5 +3.4
KSH			PP	**PP**	**23 11 17.0 +2.1**
KSH			S	**S**	**23 17 02.8 -6.7**
KSH			ScS	**ScS**	**23 18 38.3 -10**
KSH			pmax	pmax	
comp=Z,370nm,0.7s					
KSH			pmax	pmax	
comp=Z,370nm,6.2s					
KSH			LR	LR	
comp=Z,1μm,16.8s					
KSH			LR	LR	
comp=Z,380nm,12.4s					
KSH			LR	LR	
comp=Z,2μm,23.4s					
LTZ	**Lake Taylor**	**59.85 141**	*e*P	**P**	**23 09 05.4 +1.9**
comp=Z,204nm,1.7s					
MK31	**Makanchi Array**	**59.87 327**	*e*P	**P**	**23 09 02.7 -0.7**
comp=Z,161nm,0.5s					
MK31			*e*PcP	**PcP**	**23 09 50.4 +0.9**
MK31	**Makanchi Array**	**59.87 327**	*e*P	**P**	**23 09 02.7 -0.7**
MK31			*e*		23 09 50.4
MK31			pmax	pmax	
comp=Z,161nm,0.5s					
MKAR	**Makanchi Array**	**59.87 327**	P	**P**	**23 09 03.1 -0.4**
comp=Z,214nm,0.4s,baz=121,slow=7.8,SNR=346					
MKAR			PcP	**PcP**	**23 09 50.5 +1.1**
comp=Z,67nm,0.6s,baz=115,slow=5.2,SNR=8.7					
MKAR			ScP	**ScP**	**23 13 48.4 +2.4**
comp=Z,4.8nm,0.7s,baz=100,slow=5.0,SNR=4.4					
MKAR			S	**S**	**23 17 08.5 -2.7**
comp=Z,1.0nm,0.7s,baz=146,slow=8.8,SNR=1.6					
MKAR			ScS	**ScS**	**23 18 47.0 -2.2**
comp=Z,2.9nm,1.1s,baz=114,slow=5.2,SNR=3.8					
MKAR			LR	LR	23 36 33.9
comp=Z,1μm,19.2s,baz=120,slow=38					
MKAR			PKPPKP	**P'P'df**	**23 38 30.2 +0.3**
comp=Z,1.0nm,0.8s,baz=338,slow=1.4,SNR=5.4					
MKAR			PKP2bc		23 38 39.8
comp=Z,2.8nm,0.9s,baz=286,slow=2.1,SNR=8.9					
SATY	**Saty**	**59.94 322***ce*P		**P**	**23 09 03.8 -0.3**
SATY			*e*S	**S**	**23 17 13.2 +0.7**
SATY			pmax	pmax	
comp=Z,206nm,0.7s					
SATY			smax	smax	
comp=N,61nm,2.9s					
SATY	**Saty**	**59.94 322** ⇑	*e*P	**P**	**23 09 03.8 -0.3**
comp=N,206nm,0.7s					
SATY			*e*S	**S**	**23 17 13.2 +0.7**
comp=N,61nm,2.9s					
PET	**Petropavlovsk**	**59.98 23**	*e*P	**P**	**23 09 05.6 +1.5**
comp=N,199nm,1.3s					
PET	**Petropavlovsk**	**59.98 23**	*e*P	**P**	**23 09 05.5 +1.5**
PET			*e**PP	**pwP**	**23 09 21.8 +0.3**
PET			*e*S	**S**	**23 17 13.2 +0.9**
PET			pmax	pmax	
comp=Z,89nm,0.8s					
PET			pmax	pmax	
comp=Z,200nm,7.3s					
PET			MLR	MLR	
comp=Z,300nm,21.0s					
PET			MLR	MLR	
comp=Z,300nm,14.0s					
KPKS	**Kokpek**	**59.99 323***ce*P		**P**	**23 09 03.7 -0.7**
KPKS			pmax	pmax	
comp=Z,153nm,0.7s					
KPKS	**Kokpek**	**59.99 323** ⇑	*e*P	**P**	**23 09 03.8 -0.7**
comp=Z,153nm,0.7s					
OXZ	**Oxford**	**60.00 142**	PFAKE		23 09 20.0 +16
OXZ			LR	LR	
comp=Z,2μm,22.0s					
MAKZ	**Makanchi**	**60.04 327**	*e*P	**P**	**23 09 03.8 -0.8**
comp=Z,249nm,0.4s					
MAKZ			LR	LR	
comp=Z,1μm,20.0s					
MAKZ	**Makanchi**	**60.04 327**	*e*P	**P**	**23 09 03.8 -0.8**
MAKZ			pmax	pmax	
comp=Z,249nm,0.4s					
MAKZ			MLR	MLR	
comp=Z,1μm,20.0s					
KDJ	**Kajisay**	**60.21 321**	PFAKE		23 09 20.0 +14
KDJ			LR	LR	
comp=Z,600nm,21.0s					
TNSS	**Tian-Shan**	**60.83 321**	*e*P	**P**	**23 09 10.4 -0.2**
TNSS	**Tian-Shan**	**60.83 321**	*e*P	**P**	**23 09 10.4 -0.2**
MDOK	**Medeo**	**60.84 321**	*e*P	**P**	**23 09 09.8 -0.5**
MDOK			*e*S	**S**	**23 17 25.7 +1.7**
MDOK			pmax	pmax	
comp=Z,2μm,0.8s					
MDOK			smax	smax	
comp=E,276nm,1.8s					
MDOK	**Medeo**	**60.84 321**	*e*P	**P**	**23 09 09.9 -0.5**
comp=E,2μm,0.8s					
MDOK			*e*S	**S**	**23 17 25.7 +1.7**
comp=E,276nm,1.8s					
ULHL	**Ulahol**	**60.87 320**	P	**P**	**23 09 10.3 -0.3**
SNR=101					
BKZ	**Black Stump Fm**	**60.88 136**	*e*P	**P**	**23 09 10.0 -0.6**
comp=E,51nm,0.9s					
BKZ			LR	LR	
comp=Z,2μm,19.0s					
AAA	**Alma-Ata**	**60.94 321**	*e*P	**P**	**23 09 11.0 +0.1**
AAA			*e*S	**S**	**23 17 19.9 -5.3**
AAA			pmax	pmax	
comp=Z,200nm,1.2s					
AAA			smax	smax	
comp=N,100nm,5.2s					
AAA			MLR	MLR	
comp=Z,400nm,15.0s					
AAA	**Alma-Ata**	**60.94 321**	*e*P	**P**	**23 09 11.6 +0.6**
TDK	**Taldyqorghan**	**61.01 324**	*e*P	**P**	**23 09 10.6 -0.6**
TDK			pmax	pmax	
comp=Z,139nm,0.4s					

TDK	**Taldyqorghan**	61.01	324	*e*P		**P**	23 09 10.6 -0.6
	comp=Z,139nm,0.4s						
MTBS	**Maitube**	61.20	321	*e*P		**P**	23 09 11.9 -0.8
MTBS	**Maitube**	61.20	321	*e*P		**P**	23 09 11.9 -0.8
CHKK	**Chushkaly**	61.24	322	*i* P		**P**	23 09 11.6 -1.2
CHKK	**Chushkaly**	61.24	322	*i* P		**P**	23 09 11.7 -1.2
KZA	**Kyzart**	61.42	320	P		**P**	23 09 14.7 +0.1
	SNR=130						
TKM2	**Tokmak 2**	61.62	321	P		**P**	23 09 15.3 -0.4
	SNR=254						
TKM2	**Tokmak 2**	61.62	321	*i* P		**P**	23 09 15.3 -0.4
TKM2				pmax		pmax	
	comp=Z,180nm,0.6s						
KUU	**Kurty**	61.66	322	*ce*P		**P**	23 09 14.9 -0.8
KUU				*e*S		**S**	23 17 32.1 -2.0
KUU				pmax		pmax	
	comp=Z,481nm,0.7s						
KUU	**Kurty**	61.66	322⇑	*e*P		**P**	23 09 14.9 -0.8
	comp=Z,480nm,0.7s						
KUU				*e*S		**S**	23 17 32.2 -2.0
KBK	**Karagaybulak**	61.91	320	P		**P**	23 09 17.4 -0.1
	SNR=72						
UCH	**Uchtor**	61.98	319	P		**P**	23 09 18.2 -0.2
	SNR=209						
YAK	**Yakutsk**	62.17	2	*e*P		**P**	23 09 19.1 +0.5
	comp=Z,659nm,0.7s						
YAK				LR		LR	
	comp=Z,400nm,20.0s						
YAK	**Yakutsk**	62.17	2*c*	*i* P		**P**	23 09 19.0 +0.3
YAK				*e**PP		**pP**	23 09 27.4 -5.4
YAK				*e*S		**S**	23 17 40.6 +0.7
YAK				*e**SS		**sS**	23 18 02.3 -1.3
YAK				*e*			23 19 04.2
AAK	**Ala-Archa**	62.19	320	P		**P**	23 09 21.7 +2.3
	SNR=69						
AAK	**Ala-Archa**	62.19	320	*e*P		**P**	23 09 19.3 -0.2
	comp=Z,142nm,0.9s						
AAK				LR		LR	
	comp=Z,700nm,19.0s						
AAK	**Ala-Archa**	62.19	320	*i* P		**P**	23 09 19.2 -0.2
	SNR=69						
AAK	**Ala-Archa**	62.19	320	*ce*P		**P**	23 09 19.1 -0.3
AAK				pmax		pmax	
	comp=Z,147nm,0.8s						
AAK	**Ala-Archa**	62.19	320	P		**P**	23 09 19.5 +0.1
	SNR=71						
CHMS	**Chumysh**	62.20	320	P		**P**	23 09 18.6 -0.8
	SNR=50						
AML	**Almayashu**	62.46	319	P		**P**	23 09 21.4 -0.2
	SNR=223						
USP	**Ospenovka**	62.49	321	P		**P**	23 09 20.8 -0.5
	SNR=98						
SGDS	**Sogindy**	62.50	321⇑	*i* P		**P**	23 09 20.1 -1.3
	comp=Z,65nm,0.7s						
SGDS				*e*S		**S**	23 17 42.3 -2.7
KBL	**Kabul**	62.63	310	*e*P		**P**	23 09 21.3 -1.3
	comp=Z,154nm,1.0s						
KBL				LR		LR	
	comp=Z,400nm,22.0s						
KBL	**Kabul**	62.63	310	*e*P		**P**	23 09 21.3 -1.3
KBL				pmax		pmax	
	comp=Z,154nm,1.0s						
KBL				MLR		MLR	
	comp=Z,400nm,22.0s						
EKS2	**Erkin-Say**	62.66	320	P		**P**	23 09 22.5 -0.1
	SNR=199						
MA2	**Magadan**	62.90	14	*e*P		**P**	23 09 24.9 +1.2
	comp=Z,265nm,0.9s						
MA2	**Magadan**	62.90	14*c*	*i* P		**P**	23 09 25.3 +1.6
MA2				pmax		pmax	
	comp=Z,172nm,0.8s						
ZALV	**Zalesovo Beam**	63.35	335	P		**P**	23 09 25.1 -1.6
	comp=Z,57nm,0.6s,baz=128,slow=4.9,SNR=102						
ZALV				S		**S**	23 17 49.2 -5.7
	comp=Z,2.9nm,0.7s,baz=150,slow=6.5,SNR=3.8						
ZALV				LR		LR	23 37 41.4
	comp=Z,710nm,19.5s,baz=82,slow=37						
ZALV				PKPPKP		**P'P'df**	23 38 26.9 +3.0
	comp=Z,2.8nm,0.6s,baz=318,slow=8.7,SNR=4.5						
GAR	**Garm**	63.39	315	PFAKE			23 09 40.0 +12
GAR				LR		LR	
	comp=Z,2μm,21.0s						
BTLS	**Baital**	63.65	322*c*	*i* P		**P**	23 09 27.6 -1.3
BTLS				*e*S		**S**	23 17 58.2 -0.9
BTLS				pmax		pmax	
	comp=Z,56nm,0.9s						
BTLS	**Baital**	63.65	322⇑	*i* P		**P**	23 09 27.7 -1.3
	comp=Z,56nm,0.9s						
BTLS				*e*S		**S**	23 17 58.2 -0.9
KURK	**Kurchatov**	64.18	329	*e*P		**P**	23 09 31.4 -0.8
	comp=Z,422nm,0.6s						
KURK	**Kurchatov**	64.18	329*c*	*i* P		**P**	23 09 31.2 -1.0
KURK				pmax		pmax	
	comp=Z,428nm,0.8s						
KURK	**Kurchatov**	64.18	329	P		**P**	23 09 31.6 -0.6
	SNR=136						
NVS	**Novosibirsk**	64.64	335⇓	*i* P		**P**	23 09 34.1 -1.0
NVS				*i* S		**S**	23 18 08.1 -2.8
NVS				pmax		pmax	
	comp=Z,133nm,0.8s						
NVS				pmax		pmax	
	comp=N,48nm,0.6s						
NVS				pmax		pmax	
	comp=E,63nm,0.7s						
NVS				smax		smax	
	comp=N,21nm,1.7s						
NVS				smax		smax	
	comp=E,42nm,1.2s						
JBG	**Jabagly**	64.68	318	*e*P		**P**	23 09 34.8 -1.1
JBG				*e*S		**S**	23 18 12.9 +0.7
JBG				pmax		pmax	
	comp=Z,210nm,0.9s						
IUG	**Iuzhnay**	64.90	318*c*	*i* P		**P**	23 09 36.5 -0.8
IUG				*e*S		**S**	23 18 15.0 +0.1
IUG				pmax		pmax	
	comp=Z,42nm,1.0s						
IUG	**Iuzhnay**	64.90	318⇑	*i* P		**P**	23 09 36.5 -0.8
	comp=Z,42nm,1.0s						
IUG				*e*S		**S**	23 18 15.0 +0.1
KK31	**Karatay Array**	65.00	319	*e*P		**P**	23 09 36.6 -1.2
	comp=Z,123nm,0.8s						
KK31	**Karatay Array**	65.00	319	*e*P		**P**	23 09 36.6 -1.2
KK31				pmax		pmax	
	comp=Z,123nm,0.8s						
SMY	**Shemya**	66.69	30	*e*P		**P**	23 09 49.1 +0.7
	comp=Z,180nm,1.0s						
SMY	**Shemya**	66.69	30	*e*P		**P**	23 09 49.1 +0.7
SMY				pmax		pmax	
	comp=Z,180nm,1.0s						
CASY	**Casey**	66.74	186	*e*P		**P**	23 09 49.4 +0.9
	comp=Z,63nm,0.8s						
BRZS	**Berezniki**	66.95	326	*e*P		**P**	23 09 48.9 -1.2
BRZS				pmax		pmax	
	comp=Z,123nm,0.8s						
BRZS	**Berezniki**	66.95	326	*e*P		**P**	23 09 49.0 -1.2
	comp=Z,123nm,0.8s						
MHTO	**MHTO**	68.72	293	P		**P**	23 10 01.2 -0.6
	SNR=6.1						
MRIV	**Mauritius Mete**	68.91	248	*e*P		**P**	23 10 04.2 +1.1
	comp=Z,156nm,0.8s						
MSEY	**Mahe Island**	69.61	265	P		**P**	23 10 07.1 -0.5
BRVK	**Borovoye**	69.78	328	*e*P		**P**	23 10 07.0 -0.8
	comp=Z,136nm,0.7s						
BRVK	**Borovoye**	69.78	328*ce*P			**P**	23 10 07.1 -0.8
BRVK				pmax		pmax	
	comp=Z,124nm,0.7s						
BRVK	**Borovoye**	69.78	328	P		**P**	23 10 07.9 +0.1
	SNR=74						
SOHO	**SOHO**	70.53	296	P		**P**	23 10 13.4 +0.4
RER	**Riviere de l'E**	70.65	248	*e*P		**P**	23 10 15.8 +1.9
	comp=Z,394nm,0.8s						
UOSS	**Minazif**	70.95	296	*e*P		**P**	23 10 13.7 -1.9
	comp=Z,27nm,0.6s						
UOSS	**Minazif**	70.95	296	P		**P**	23 10 13.4 -2.2
HATD	**Hatta, Dubai**	71.00	296	*i* P		**P**	23 10 13.8 -2.1
	SNR=12						
BANOM	**Banah**	71.03	297	P		**P**	23 10 14.7 -1.3
ASHO	**Ashiyiah**	71.04	296	*i* P		**P**	23 10 14.3 -1.8
	SNR=8.5						
ADK	**Adak**	71.14	34	*e*P		**P**	23 10 17.8 +1.7
	comp=Z,82nm,0.8s						
ADK	**Adak**	71.14	34	*e*P		**P**	23 10 17.8 +1.7
ADK				pmax		pmax	
	comp=Z,82nm,0.8s						
ALNE	**Al Ain**	71.22	295	*i* P		**P**	23 10 15.8 -1.4
	SNR=8.3						
NAZ	**Nazwa, Dubai**	71.45	296	P		**P**	23 10 16.3 -2.2
FAQ	**Al Faqa, Dubai**	71.47	296	*i* P		**P**	23 10 17.0 -1.6
	SNR=26						
ASUD	**Al Ashush, Dub**	71.69	296	*i* P		**P**	23 10 18.9 -1.1
	SNR=17						
ASUD	**Al Ashush, Dub**	71.69	296	P		**P**	23 10 19.9 0.0
	SNR=6.6						
TIXI	**Tiksi**	71.78	1	*e*P		**P**	23 10 18.9 -0.6
	comp=Z,84nm,0.6s						
TIXI				*e*PP		PP	23 12 50.9 -8.6
TIXI				LR		LR	
	comp=Z,600nm,22.0s						
TIXI	**Tiksi**	71.78	1*c*	*i* P		**P**	23 10 18.9 -0.6
TIXI				pmax		pmax	
	comp=Z,118nm,1.0s						
AJN	**Ajban**	71.99	296	*i* P		**P**	23 10 20.2 -1.5
	SNR=13						
AJN	**Ajban**	71.99	296	P		**P**	23 10 21.9 +0.2
	SNR=8.3						
GEYT	**Alibeck**	72.07	310	P		**P**	23 10 20.8 -1.3
	comp=Z,40nm,0.7s,baz=134,slow=4.3,SNR=72						
GEYT				LR		LR	23 45 56.8
	comp=Z,320nm,19.2s,baz=25,slow=39						
BILL	**Bilibino**	73.76	15	*e*P		**P**	23 10 31.1 -0.2
	comp=Z,26nm,0.9s						
BILL	**Bilibino**	73.76	15*c*	*i* P		**P**	23 10 31.7 +0.3
BILL				*e*			23 10 44.5
BILL				*e*			23 13 18.9
BILL				pmax		pmax	
	comp=Z,53nm,1.7s						
BILL				MLR		MLR	
	comp=Z,345nm,22.0s						
NIKH	**Nikolski High**	75.98	35	PFAKE			23 11 00.0 +15
NIKH				LR		LR	
	comp=Z,400nm,22.0s						
SVE	**Sverdlovsk**	76.43	329*d*	*i* P		**P**	23 10 46.5 -0.5
SVE				*e*S		**S**	23 20 25.8 -2.3
SVE				pmax		pmax	
	comp=Z,284nm,0.9s						
SPIA	**Saint Paul Isl**	76.72	30	PFAKE			23 11 00.0 +11
SPIA				LR		LR	
	comp=Z,400nm,20.0s						
ARU	**Arti**	77.36	329	*e*P		**P**	23 10 50.2 -2.0
	comp=Z,143nm,0.8s						
ARU	**Arti**	77.36	329*c*	*i* P		**P**	23 10 51.0 -1.2
ARU				*PP		**pP**	23 11 05.2 -1.5
ARU							23 13 44.5
ARU				S		**S**	23 20 37.1 -1.2
ARU				*SS		**ScS**	23 21 04.4 -1.1
ARU				SS		**SS**	23 25 34.1 -3.6
ARU				pmax		pmax	
	comp=Z,202nm,1.0s						
ABPO	**Ambohimpanom**	78.41	251	*e*P		**P**	23 10 59.7 +0.6
	comp=Z,73nm,0.7s						
ABPO				*e*PP		**PP**	23 13 53.5 -3.5
ABPO	**Ambohimpanom**	78.41	251	*e*P		**P**	23 10 59.7 +0.6
ABPO				*e*			23 13 53.5
ABPO				pmax		pmax	
	comp=Z,73nm,0.7s						
MAW	**Mawson**	79.51	200	P		**P**	23 11 04.8 +1.0
	comp=Z,40nm,1.0s,baz=63,slow=6.7,SNR=50						
MAW				S		**S**	23 21 02.8 +2.0
	comp=Z,0.4nm,0.3s,baz=331,slow=19,SNR=1.8						
MAW				PKKPbc		**PKKPbc**	23 29 53.0 -2.5
	comp=Z,3.3nm,0.7s,baz=216,slow=3.9,SNR=7.0						
MAW				LR		LR	23 42 26.3
	comp=Z,304nm,21.5s,baz=58,slow=33						
MAW	**Mawson**	79.51	200	*e*P		**P**	23 11 04.8 +1.0
	comp=Z,21nm,1.3s						
VNDA	**Vanda**	79.77	172	P		**P**	23 11 05.9 +0.8
	comp=Z,16nm,0.8s,baz=317,slow=6.1,SNR=105						
VNDA				PKKPbc		**PKKPbc**	23 29 53.0 -2.3
	comp=Z,1.3nm,0.9s,baz=201,slow=1.2,SNR=5.9						
VNDA				PKPPKP		**P'P'df**	23 37 56.7 +1.9
	comp=Z,1.2nm,0.9s,baz=313,slow=2.9,SNR=4.4						
VNDA				LR		LR	23 44 09.7
	comp=Z,350nm,21.9s,baz=332,slow=34						
VNDA	**Vanda**	79.77	172	*e*P		**P**	23 11 04.7 -0.4
	comp=Z,20nm,0.8s						
VNDA				*e*PP		**PP**	23 14 02.8 -4.0
VNDA	**Vanda**	79.77	172	*e*P		**P**	23 11 04.7 -0.4
VNDA				*e*			23 14 02.8
VNDA				pmax		pmax	
	comp=Z,20nm,0.8s						
MLH	**Mauna Loa**	80.24	70	*e*P		**P**	23 11 09.5 +0.4
	comp=Z,176nm,1.1s						
RAYN	**Ar Rayn**	80.48	294	*e*P		**P**	23 11 09.2 -0.9
	comp=Z,62nm,0.7s						
RAYN				LR		LR	
	comp=Z,900nm,22.0s						
RAYN	**Ar Rayn**	80.48	294	*i* P		**P**	23 11 09.0 -1.1
	SNR=87						
RAYN	**Ar Rayn**	80.48	294	*e*P		**P**	23 11 09.2 -0.9
RAYN				pmax		pmax	
	comp=Z,62nm,0.7s						
RAYN				MLR		MLR	
	comp=Z,900nm,22.0s						
AKT	**Akhty**	80.63	312⇑	*i* P		**P**	23 11 10.5 -0.1
AKT				*e*			23 11 16.8
AKT				*e*			23 14 16.8
AKT				*e*S		**S**	23 21 16.9 +2.9
AKT				pmax		pmax	
	comp=Z,242nm,0.6s						
SBA	**Scott Base**	80.71	172	*e*P		**P**	23 11 11.9 +1.8
	comp=Z,134nm,1.8s						
SBA	**Scott Base**	80.71	172	*e*P		**P**	23 11 11.9 +1.8
SBA				pmax		pmax	
	comp=Z,134nm,1.8s						
DAMY	**Dhamar**	81.00	285	PFAKE			23 11 20.0 +6.7
DAMY				LR		LR	
	comp=Z,500nm,22.0s						
MAK	**Makhachkala**	81.02	313	*e*P		**P**	23 11 11.1 -1.4
MAK				*e**PP		**pP**	23 11 28.9 +2.1
MAK				*e*			23 14 15.6
MAK				*e*S		**S**	23 21 15.0 -2.6
MAK				*e*SS		**SS**	23 26 32.2 -0.9
MAK				*e*SSS		SSS	23 30 00.5
MAK				pmax		pmax	
	comp=Z,104nm,0.7s						
GROC	**Groznyy**	82.29	314	*e*P		**P**	23 11 15.0 -4.2
GROC				*e**PP		**pP**	23 11 33.2 -0.4
GROC				*e*			23 14 28.0
GROC				*e*S		**S**	23 21 25.3 -5.5
GROC				pmax		pmax	
	comp=Z,301nm,1.1s						
GNI	**Garni**	82.71	310	*e*P		**P**	23 11 22.4 +0.8
	comp=Z,112nm,0.9s						
GNI	**Garni**	82.71	310	*i* P		**P**	23 11 21.9 +0.3
	SNR=40						
GNI	**Garni**	82.71	310*c*	*i* P		**P**	23 11 21.9 +0.3
GNI				pmax		pmax	
	comp=Z,468nm,1.3s						
GNI	**Garni**	82.71	310	P		**P**	23 11 22.5 +0.8
	SNR=22						
TASB	**TASBURUN-IGDIR**	83.07	310	P		**P**	23 11 23.9 +0.5
CLDR	**Caldiran**	83.23	309	P		**P**	23 11 25.1 +0.6
CUKT	**Cukurca**	83.29	307	P		**P**	23 11 24.4 -0.3
RDOG	**Red Dog Mine**	83.53	21	PFAKE			23 11 40.0 +15
RDOG				LR		LR	
	comp=Z,200nm,20.0s						
VANB	**Van**	83.59	309	P		**P**	23 11 25.9 -0.3
ZEI	**Tsey**	83.62	313	*e*P		**P**	23 11 25.3 -1.1
ZEI				pmax		pmax	
	comp=Z,326nm,1.5s						
AKH	**Akhalkalaki**	83.78	312⇑	*i* P		**P**	23 11 28.3 +1.1
AKDM	**Akdamar-Van**	83.89	308	P		**P**	23 11 28.5 +0.7
NCK	**Nalchik**	83.92	314⇓	*e*P		**P**	23 11 27.9 +0.2
NCK				pmax		pmax	
	comp=Z,117nm,0.7s						
AGRB	**Hanur-Agry**	83.99	310	P		**P**	23 11 29.3 +1.0
MLAZ	**Malazgirt-MUS**	84.29	309	P		**P**	23 11 30.8 +1.0
KBZ	**Khabaz**	84.45	314	P		**P**	23 11 30.2 0.0
	comp=Z,80nm,0.8s,baz=109,slow=3.7,SNR=184						
KBZ				S		**S**	23 21 50.3 -2.3
	comp=Z,2.1nm,1.1s,baz=39,slow=21,SNR=1.9						
KBZ				LR		LR	23 54 06.3
	comp=Z,120nm,20.6s,baz=68,slow=39						
GOF	**Gofitskoye**	84.48	315⇑	*e*P		**P**	23 11 30.3 -0.1
GOF				*e*S		**S**	23 21 52.6 -0.2
GOF				pmax		pmax	
	comp=Z,341nm,1.0s						
NEY	**Neytrino**	84.53	313⇑	*e*P		**P**	23 11 30.8 -0.2
NEY				pmax		pmax	
	comp=Z,21nm,0.7s						
SENK	**Senkaya-Erzuru**	84.56	311	P		**P**	23 11 32.1 +0.9
KIV	**Kislovodsk**	84.62	314	*e*P		**P**	23 11 31.0 -0.3
	comp=Z,89nm,0.7s						
KIV				LR		LR	
	comp=Z,300nm,18.0s						
KIV	**Kislovodsk**	84.62	314⇑	*i* P		**P**	23 11 31.3 0.0
KIV	**Kislovodsk**	84.62	314	*i* P		**P**	23 11 31.5 +0.2
	SNR=69						
KIV	**Kislovodsk**	84.62	314	*e*P		**P**	23 11 30.9 -0.3
KIV				*e*			23 14 47.0
KIV				*e*			23 21 48.8
KIV				pmax		pmax	
	comp=Z,367nm,1.0s						
KIV				pmax		pmax	
	comp=Z,258nm,4.1s						
KIV				MLR		MLR	
	comp=Z,664nm,20.0s						
KIV	**Kislovodsk**	84.62	314	P		**P**	23 11 31.3 0.0
	SNR=52						
KOPR	**Koprukoy-ERZUR**	84.90	310	P		**P**	23 11 34.6 +1.7
VRTB	**Varto-Mus**	85.14	309	P		**P**	23 11 36.2 +2.1
BATM	**Batumi**	85.15	312⇓	*i* P		**P**	23 11 34.8 +0.9
BCA	**Borcka**	85.19	311	P		**P**	23 11 34.3 +0.2
BCA	**Borcka**	85.19	311⇑	*i* P		**P**	23 11 34.3 +0.2
SVAN	**Silvan-Diyarba**	85.27	308	P		**P**	23 11 35.1 +0.5
ANKE	**Ethiopia-Afar**	85.40	280	*i* P		**P**	23 11 38.2 +2.0
KARO	**Karliova-Bingo**	85.47	309	P		**P**	23 11 37.4 +1.6
DESE	**Dese**	85.53	281	*e*P		**P**	23 11 35.1 -1.6
PPT	**Papeete**	85.54	107	LR		LR	23 49 08.2
	comp=Z,80nm,19.6s,baz=262,slow=35						
PPT2	**Papeete2**	85.54	108	*e*S		S	23 22 16.9 +12
	comp=Z,443nm,27.2s						
PPT2	**Papeete2**	85.54	108	*e*LR		LR	23 38 50.7
	comp=Z,842nm,26.5s						
OHAK	**Old Harbor**	85.65	33	PFAKE			23 11 50.0 +14
OHAK				LR		LR	
	comp=Z,400nm,19.0s						
BNGB	**Bingl**	85.73	309	P		**P**	23 11 37.9 +0.9
MAZI	**Mazidag**	85.82	307	P		**P**	23 11 37.8 +0.3
VRH	**Novokhopyorsk**	85.96	321	*e*P		**P**	23 11 37.2 -0.4
VRH				pmax		pmax	
	comp=Z,590nm,0.7s						
VRH				pmax		pmax	
	comp=Z,520nm,0.7s						
VRH				MLR		MLR	
	comp=Z,630nm,22.0s						
KDAK	**Kodiak Island**	86.09	32	*e*P		**P**	23 11 39.5 +1.3
	comp=Z,412nm,1.8s						
KDAK				LR		LR	
	comp=Z,500nm,20.0s						
KDAK	**Kodiak Island**	86.09	32	*i* P		**P**	23 11 39.5 +1.3
BAYT	**Aydıntepe-Bayb**	86.23	310	P		**P**	23 11 41.1 +1.6
FURI	**Furi**	86.43	279	PFAKE			23 11 50.0 +8.8
FURI				LR		LR	
	comp=Z,600nm,22.0s						
KTUT	**Trabzon**	86.55	311	P		**P**	23 11 41.0 +0.2
KTUT	**Trabzon**	86.55	311⇓	*i* P		**P**	23 11 41.4 +0.6
SOC	**Sochi**	86.74	313*c*	*i* P		**P**	23 11 40.7 -1.0
SOC				*e**PP		**pP**	23 11 56.2 -0.2
SOC				*e*			23 15 02.0
SOC				*e*PPP		PPP	23 16 56.2
SOC				*e*S		**SKSac**	23 22 01.9 -2.2
SOC				*e*SS		**SS**	23 27 56.2 -1.5
SOC				*e*SSS		SSS	23 31 21.6
SOC				pmax		pmax	
	comp=Z,133nm,0.7s						
SVRC	**Sivrice-ELAZID**	86.77	308	P		**P**	23 11 42.9 +0.7
URFA	**Urfa**	87.11	307	P		**P**	23 11 44.6 +0.9
VORD	**Divnogorie**	87.47	321	*e*P		**P**	23 11 44.3 -0.7
VORD				pmax		pmax	
	comp=Z,280nm,0.8s						
KTH	**Kantishna Hill**	87.51	26	PFAKE			23 12 00.0 +15
KTH				LR		LR	
	comp=Z,200nm,22.0s						
VORR	**Voronezh**	87.56	322⇑	*i* P		**P**	23 11 44.0 -1.4
VORR				pmax		pmax	
	comp=Z,750nm,1.2s						
VSR	**Storozhevoye**	87.56	321	*e*P		**P**	23 11 44.8 -0.7
VSR				pmax		pmax	
	comp=Z,410nm,1.4s						
VSR				pmax		pmax	
	comp=Z,390nm,1.1s						
VSR				MLR		MLR	
	comp=Z,440nm,22.0s						
MLY	**Manley**	87.73	25	PFAKE			23 12 00.0 +14
MLY				LR		LR	
	comp=Z,200nm,18.0s						
KMBO	**Kilima Mbogo**	87.78	269	P		**P**	23 11 49.5 +1.8
	comp=Z,163nm,0.9s,baz=67,slow=6.9,SNR=324						
KMBO				LR		LR	23 49 44.7
	comp=Z,725nm,20.4s,baz=94,slow=35						
KMBO	**Kilima Mbogo**	87.78	269	*e*P		**P**	23 11 49.4 +1.8
	comp=Z,255nm,1.0s						
KMBO				LR		LR	
	comp=Z,800nm,20.0s						
KMBO	**Kilima Mbogo**	87.78	269	*i* P		**P**	23 11 48.7 +1.1
	SNR=214						
KMBO	**Kilima Mbogo**	87.78	269	*e*P		**P**	23 11 49.4 +1.8
KMBO				pmax		pmax	
	comp=Z,255nm,1.0s						
KMBO				MLR		MLR	
	comp=Z,800nm,20.0s						
KMBO	**Kilima Mbogo**	87.78	269	P		**P**	23 11 49.1 +1.4
	SNR=71						
LPSR	**Galich'ya Gora**	87.79	322	*e*P		**P**	23 11 46.1 -0.4
LPSR				pmax		pmax	
	comp=Z,350nm,0.8s						
LPSR				pmax		pmax	
	comp=Z,390nm,0.8s						
LPSR				MLR		MLR	
	comp=Z,640nm,22.0s						
RC01	**Rabbit Creek A**	87.86	29	PFAKE			23 12 00.0 +13
RC01				LR		LR	
	comp=Z,200nm,20.0s						
KLMR	**Klimovskoe**	87.98	331	*e*P		**P**	23 11 44.8 -2.4
KLMR				*e*			23 15 11.4
KLMR				pmax		pmax	
	comp=Z,134nm,0.6s						
KLMR	**Klimovskoe**	87.98	331	*e*P		**P**	23 11 44.9 -2.3
KLMR				AMP			23 11 52.2
	comp=Z,134nm,0.6s						
KLMR				*e*PP		**PP**	23 15 11.5 -2.6
KLMR	**Klimovskoe**	87.98	331	*e*P		**P**	23 11 44.9 -2.3
KLMR				AMP			23 11 52.2
	comp=Z,134nm,0.6s						
KLMR				*e*PP		**PP**	23 15 11.4 -2.6
SYO	**Syowa Base**	88.17	201⇓	*i* P		**P**	23 11 47.5 -0.5
SYO	**Syowa Base**	88.17	201⇓	*i* PcP		**PcP**	23 11 49.4 -0.3
SYO	**Syowa Base**	88.17	201⇓	*i* sP		sP	23 12 07.0 -1.3
DARE	**Darende-Malaty**	88.21	308	P		**P**	23 11 50.1 +1.1
BWN	**Browne**	88.21	26	PFAKE			23 12 00.0 +12
BWN				LR		LR	
	comp=Z,200nm,19.0s						
NAI	**Nairobi**	88.23	269	PFAKE			23 12 00.0 +10
NAI				LR		LR	
	comp=Z,800nm,20.0s						
GAZ	**Gaziantep**	88.38	307	P		**P**	23 11 50.5 +0.7
ANN	**Anapa**	88.44	315	*e*P		**P**	23 11 48.9 -0.8
ANN				*e**PP		**pwP**	23 12 07.8 -0.8
ANN				*e*S		**SKSac**	23 22 12.0 -2.3
ANN				pmax		pmax	
	comp=Z,917nm,1.0s						
KNK	**Knik Glacier**	88.49	29	PFAKE			23 12 00.0

TOKT	Tokat	88.98	310	P	P	23 11 52.9 +0.4
DHY	Denali Highway	89.08	27	PFAKE		23 12 00.0 +7.4
DHY				LR	LR	
comp=Z,300nm,21.0s						
GLI	Glacier Island	89.13	29	PFAKE		23 12 00.0 +7.3
GLI				LR	LR	
comp=Z,300nm,20.0s						
POKR	Poker Plat Res	89.14	25	P	P	23 11 52.9 +0.3
baz=268						
OBN	Obninsk	89.28	325	*e*P	P	23 11 53.2 -0.3
comp=Z,363nm,0.8s						
OBN	Obninsk	89.28	325*c*	*i*P	P	23 11 52.9 -0.6
OBN				*e*		23 15 26.0
OBN				*e*PPP	PPP	23 17 21.3
OBN				pmax	pmax	
comp=Z,488nm,1.0s						
ILAR	Eielson Array	89.36	25	P	P	23 11 52.6 -1.1
comp=Z,12nm,0.6s,baz=241,slow=4.9,SNR=110						
ILAR				S	SKSac	23 22 23.5 +4.5
comp=Z,0.2nm,0.6s,baz=265,slow=23,SNR=1.5						
ILAR				PKKP	PKKPdf	23 29 24.4 -2.6
comp=Z,0.6nm,0.6s,baz=31,slow=1.6,SNR=4.9						
ILAR				PKKPbc	PKKPbc	23 29 30.5 -1.7
comp=Z,2.6nm,0.8s,baz=86,slow=1.6,SNR=15						
ILAR				PKPPKP	P'P'df	23 37 37.5 -0.4
comp=Z,0.9nm,0.9s,baz=141,slow=2.3,SNR=6.5						
HWQ	Hawqa	89.36	304	*e*P	P	23 11 55.3 +0.7
KVT	Kavak	89.37	311	P	P	23 11 54.6 +0.3
BNN	Bunyan	89.49	309	P	P	23 11 55.4 +0.3
KOZT	Kozan	89.49	307	P	P	23 11 55.3 +0.4
CEYT	Ceyhan	89.55	307	P	P	23 11 56.1 +0.9
BHL	Bhannes	89.60	304	*e*P	P	23 11 56.1 +0.5
YURE	YUREGIR	89.64	307	P	P	23 11 57.1 +1.4
DQRL	Deir Qamar	89.67	304	*e*P	P	23 11 56.6 +0.6
QSPA	South Pole Qui	89.73	180	*e*P	P	23 11 56.6 +1.0
comp=Z,61nm,0.8s						
QSPA				LR	LR	
comp=Z,700nm,21.0s						
DIV	Divide	89.78	29	PFAKE		23 12 10.0 +14
DIV				LR	LR	
comp=Z,400nm,21.0s						
YOZ	Yozgat	89.91	309	P	P	23 11 56.9 -0.1
DIKM	Dikmen	89.97	311	P	P	23 11 55.5 -1.5
KARA	Karaisali	90.11	307	P	P	23 11 58.1 +0.3
LVZ	Lovozero	90.33	338	*e*P	P	23 11 57.0 -1.2
comp=Z,47nm,0.9s						
LVZ				LR	LR	
comp=Z,600nm,18.0s						
LVZ	Lovozero	90.33	338*c*	*i*P	P	23 11 56.8 -1.4
LVZ				pmax	pmax	
comp=Z,40nm,0.8s						
CORM	Corum	90.44	310	P	P	23 11 59.9 +0.4
MERS	Mersin	90.53	307	P	P	23 11 59.8 -0.1
SIM	Simferopol'	90.80	315*c*	*e*P	P	23 12 00.5 -0.3
SIM				*e*S	SKSac	23 22 29.0 +0.8
SIM				pmax	pmax	
comp=Z,159nm,0.9s						
APA	Apatity	90.81	337⇑	*i*P	P	23 11 58.9 -1.5
APA				pmax	pmax	
comp=Z,10.0nm,1.3s						
EREN	Erenkoy	90.82	305	P	P	23 12 01.8 +0.6
KIZK	Mersin	90.84	306	P	P	23 12 01.1 -0.1
BZK	Bozkurt	90.90	312	P	P	23 12 01.6 +0.2
BZK	Bozkurt	90.90	312⇓	*i*P	P	23 12 01.1 -0.3
PHNC	Paralimni	90.94	305	P	P	23 12 02.0 +0.3
SILI	Silifke-Mersin	91.02	306	P	P	23 12 02.2 +0.2
ILGA	Ilgaz	91.13	311	PFAKE		23 12 10.0 +7.2
ILGA				LR	LR	
comp=Z,300nm,21.0s						
KEBE	Keben-Mersin	91.19	306	P	P	23 12 03.4 +0.5
BR131	Keskin Array S	91.21	310	P	P	23 12 02.5 -0.6
SNR=25						
BRTR	Keskin Array B	91.21	310	P	P	23 12 02.2 -0.9
comp=Z,33nm,0.9s,baz=122,slow=4.8,SNR=144						
BRTR				PKKPbc	PKKPbc	23 29 27.3 +0.6
comp=Z,0.6nm,0.7s,baz=175,slow=4.0,SNR=4.2						
BRTR				LR	LR	00 00 19.7
comp=Z,144nm,19.5s,baz=86,slow=40						
CANT	Cankiri	91.21	310	P	P	23 12 02.8 -0.1
IKL	Isikli	91.21	306	P	P	23 12 02.9 0.0
AKKU	Akkuyu-Mersin	91.32	306	P	P	23 12 03.6 +0.1
SULT	Sultanhani-AKS	91.32	308	P	P	23 12 02.9 -0.7
TEVE	Tevekalti-Mers	91.40	306	P	P	23 12 04.3 +0.3
CSS	Mathiatis	91.52	305	*e*P	P	23 12 04.0 -0.4
comp=Z,199nm,0.9s						
CSS	Mathiatis	91.52	305	P	P	23 12 04.8 +0.4
CSS	Mathiatis	91.52	305	P	P	23 12 04.0 -0.4
CSS	Mathiatis	91.52	305	P	P	23 12 04.4 0.0
comp=Z,58nm,1.0s						
BERE	Bereket-Mersin	91.58	306	P	P	23 12 04.9 0.0
TEKE	Tekeli-Mersin	91.67	306	P	P	23 12 04.9 -0.2
ANTO	Ankara	91.85	310	*e*P	P	23 12 05.3 -0.7
comp=Z,56nm,1.3s						
ANTO	Ankara	91.85	310	*e*P	P	23 12 05.3 -0.7
ANTO				pmax	pmax	
comp=Z,56nm,1.3s						
ANTO	Ankara	91.85	310	P	P	23 12 05.8 -0.1
SNR=7.6						
LEF	Lefka	91.87	305	P	P	23 12 05.3 -0.7
LEF	Lefka	91.87	305⇑	*i*P	P	23 12 05.8 -0.2
LOD	Lodumlu	91.88	310	P	P	23 12 05.7 -0.4
SZAC	Souni	91.89	305	P	P	23 12 06.4 +0.2
ALFC	Alefka	92.11	305	P	P	23 12 06.8 -0.4
LADK	Ladik-KONYA	92.23	308	P	P	23 12 06.4 -1.4
KONT	Konya--Tatoy	92.24	308	P	P	23 12 06.8 -0.9
PPCY	Paphos	92.33	305	P	P	23 12 08.2 +0.1
PUL	Pulkovo	92.56	330⇓	*e*P	P	23 12 09.0 +0.4
PUL				pmax	pmax	
comp=Z,94nm,0.9s						
KIZT	Kizilcal	92.59	309	P	P	23 12 08.8 -0.6
SVRH	Sivrihisar-ESK	92.85	309	P	P	23 12 10.2 -0.4
MDUB	Mudurnu	93.06	310	P	P	23 12 10.7 -0.8
MDUB	Mudurnu	93.06	310	PFAKE		23 12 20.0 +8.5
MDUB				LR	LR	
comp=Z,600nm,22.0s						
CIFT	Cifteler, Eski	93.21	309	P	P	23 12 11.1 -1.1
EPYK	Eagle Plains	93.50	24	P	P	23 12 13.3 +0.4
baz=278						
SRCK	Saricakaya, Es	93.51	310	P	P	23 12 12.6 -0.9
ARCES	ARCESS Array B	93.53	340	P	P	23 12 11.9 -1.0
comp=Z,22nm,0.7s,baz=89,slow=4.0,SNR=42						
ARE0	ARCESS Array S	93.53	340	*e*P	P	23 12 12.0 -0.9
SHUT	Suhut-Afyon	93.64	308	P	P	23 12 13.8 -0.5
ISP	Isparta	93.70	308	*e*P	P	23 12 12.8 -1.8
ISP	Isparta	93.70	308	P	P	23 12 12.8 -1.8
ISP	Isparta	93.70	308⇑	*i*P	P	23 12 12.9 -1.7
ISP	Isparta	93.70	308	*e*P	P	23 12 12.8 -1.8
AKASG	Malin Array Be	93.85	321	P	P	23 12 13.5 -1.3
comp=Z,41nm,0.7s,baz=72,slow=4.3,SNR=50						
AKASG				LR	LR	23 56 10.0
comp=Z,206nm,22.0s,baz=65,slow=37						
KORT	Korkueli	93.87	307	P	P	23 12 14.6 -0.8
HAMF	Hammerfest	93.95	341	*e*P	P	23 12 13.6 -1.3
SPA0	Spitsbergen Ar	93.98	349	*e*P	P	23 12 14.8 -0.1
ELL	Elmali	94.24	307	P	P	23 12 16.5 -0.6
MBAR	Mbarara	94.30	269	*e*P	P	23 12 18.1 +0.2
comp=Z,14nm,0.7s						
MBAR				LR	LR	
comp=Z,500nm,19.0s						
MBAR	Mbarara	94.30	269	*e*P	P	23 12 18.1 +0.2
MBAR				pmax	pmax	
comp=Z,14nm,0.7s						
MBAR				MLR	MLR	
comp=Z,500nm,19.0s						
MICGM	Minsk	94.33	325⇑	*e*P	P	23 12 17.0 +0.1
MICGM				PM		23 12 18.0
comp=Z,1.0nm,1.0s						
MICGM				PM		23 12 18.0
comp=E,0.4nm,1.6s						
MICGM				*e*pP	pP	23 12 29.0 -2.7
MICGM				*e*S	S	23 23 21.0 -3.3
MICGM				*e*		23 23 27.0
MICGM				*e*LR	LR	23 53 30.0
MNK	Minsk	94.33	325⇑	*e*P	P	23 12 17.0 +0.1
MNK				*e**PP	pP	23 12 29.0 -2.7
MNK				*e*S	S	23 23 21.0 -3.3
MNK				pmax	pmax	
comp=Z,1μm,1.0s						
MNK				pmax	pmax	
comp=E,350nm,1.6s						
HEF	Hetta	94.37	339	*e*P	P	23 12 15.6 -1.3
KIS	Kishinev	94.40	317	*e*P	P	23 12 16.0 -1.4
comp=E,180nm,1.5s						
KIS	Kishinev	94.40	317	*e*PP	PP	23 16 08.0 +2.8
KIS				*e*LR	LR	23 56 42.0
comp=E,500nm,24.0s						
KIS	Kishinev	94.40	317	*e*P	P	23 12 16.0 -1.4
KIS				*e*		23 12 26.0
KIS				*e*		23 16 08.0
KIS				*e*		23 22 54.0
KIS				pmax	pmax	
comp=Z,180nm,1.5s						
KIS				MLR	MLR	
comp=Z,500nm,24.0s						
MILM	Milestii Mici	94.41	317⇑	*i*P	P	23 12 16.4 -1.0
KTK1	Kautokeino	94.41	339	*e*P	P	23 12 15.5 -1.5
INK	Inuvik	94.42	21	PFAKE		23 12 30.0 +13
INK				LR	LR	
comp=Z,300nm,22.0s						
TVSB	Tavsanli	94.44	309	P	P	23 12 17.4 -0.5
YLV	Yalova	94.44	311	P	P	23 12 16.8 -1.1
YLV	Yalova	94.44	311⇓	*i*P	P	23 12 16.9 -1.0
FINES	FINESS Array B	94.47	332	P	P	23 12 16.2 -1.2
comp=Z,19nm,0.6s,baz=68,slow=5.6,SNR=97						
FINES				LR	LR	23 56 54.8
comp=Z,430nm,21.9s,baz=82,slow=37						
AKAS	Kas	94.51	306	P	P	23 12 16.9 -1.4
VSU	Vasula	94.52	329*c*	*i*P	P	23 12 16.5 -1.2
VSU				pmax	pmax	
comp=Z,150nm,0.8s						
VSU	Vasula	94.52	329	*e*P	P	23 12 16.6 -1.0
VSU				IAmb	IAmb	23 12 18.4
comp=Z,136nm,0.8s						
HSPB	Hornsund (broa	94.53	348	*e*P	P	23 12 17.2 -0.2
TLCR		94.54	315⇑	*i*P	P	23 12 18.3 +0.2
KBS	Kingsbay	94.55	350	PFAKE		23 12 30.0 +13
KBS				LR	LR	
comp=Z,500nm,20.0s						
KBS	Kingsbay	94.55	350	*e*P	P	23 12 17.6 +0.1
MANR	Mangalia	94.80	314⇓	*i*P	P	23 12 19.4 +0.1
TIRR	Tirgusor	94.88	314	PFAKE		23 12 30.0 +10
TIRR				LR	LR	
comp=Z,900nm,22.0s						
TIRR	Tirgusor	94.88	314⇑	*i*P	P	23 12 19.0 -0.6
MFTR	Murfatlar	94.89	314⇑	*i*P	P	23 12 20.0 +0.3
IDID	Didziasalis	94.90	325	*e*P	P	23 12 19.2 -0.3
IDID				IAmb	IAmb	23 12 20.9
comp=Z,57nm,1.0s						
FETY	Fethiye	94.91	307	P	P	23 12 19.2 -0.8
FETY	Fethiye	94.91	307	*e*P	P	23 12 18.8 -1.2
FETY	Fethiye	94.91	307	P	P	23 12 18.8 -1.2
NACGM	Naroch	94.92	325	*e*P	P	23 12 19.0 -0.6
NACGM				PM		23 13 20.0
comp=Z,0.4nm,1.0s						
NACGM				*e*LR	LR	23 55 54.0
CFR	Carcaliu	95.02	315⇑	*i*P	P	23 12 19.6 -0.7
PSN	Preselentsi	95.11	314	*i*P	P	23 12 19.6 -1.1
IZAR	Zarasai	95.12	326	*e*P	P	23 12 20.1 -0.4
IZAR				IAmb	IAmb	23 12 20.8
comp=Z,28nm,0.9s						
KULA	Kula-Manisa	95.12	308	P	P	23 12 20.6 -0.4
KULA	Kula-Manisa	95.12	308	P	P	23 12 20.3 -0.7
TLB	Topalu	95.13	315⇑	*i*P	P	23 12 20.3 -0.5
IIGN	Ignalina	95.19	325	*e*P	P	23 12 20.7 -0.2
IIGN				IAmb	IAmb	23 12 22.3
comp=Z,80nm,1.2s						
HARR	Harsova	95.20	315⇓	*i*P	P	23 12 21.2 +0.1
ISAL	Salakas	95.21	326	*e*P	P	23 12 20.5 -0.4
ISAL				IAmb	IAmb	23 12 22.3
comp=Z,30nm,1.0s						
IAS	Iasi	95.24	317⇑	*i*P	P	23 12 20.6 -0.6
KIF	Kilpisjarvi	95.27	339	*e*P	P	23 12 19.4 -1.4
ICOR	Ion Corvin	95.34	314⇓	*i*P	P	23 12 22.1 +0.3
BESE	Bessie Mountai	95.45	31	PFAKE		23 12 30.0 +8.0
BESE				LR	LR	
comp=Z,300nm,20.0s						
YER	Yerkesik	95.51	307	P	P	23 12 22.5 -0.3
PETR	Petresti	95.60	316⇑	*i*P	P	23 12 23.8 +0.9
PHSR	Pinarhisar	95.76	312⇓	*i*P	P	23 12 23.7 -0.1
TRO	Tromso	95.76	340	*e*P	P	23 12 20.9 -2.2
AYDB	Zeytinkoy-Aydi	95.77	308	P	P	23 12 23.9 -0.2
GRER		95.81	315⇓	*i*P	P	23 12 25.6 +1.7
TESR	Tescani	95.93	317⇑	*i*P	P	23 12 24.2 -0.2
VRI	Vrincioaia	95.94	316⇑	*i*P	P	23 12 24.5 0.0
BLWY	Bulawayo	95.97	250	*i*P	P	23 12 25.6 +0.2
BLWY	Bulawayo	95.97	250	*i*P	P	23 12 25.6 +0.2
PLOR	Plostina	96.00	316⇑	*i*P	P	23 12 24.7 -0.1
LEHL	Lehliu	96.01	315⇑	*i*P	P	23 12 24.9 +0.1
MATP	Matopo	96.06	250	*i*P	P	23 12 26.4 +0.7
MATP	Matopo	96.06	250	*i*P	P	23 12 26.4 +0.7
PRAR	RASCA	96.12	317⇓	*i*P	P	23 12 24.9 -0.4
BIZ	Bicaz	96.25	317⇓	*i*P	P	23 12 25.7 -0.2
SULR		96.39	315⇑	*i*P	P	23 12 26.8 +0.3
PABE	Paberze	96.44	326	*e*P	P	23 12 25.3 -1.2
PABE				IAmb	IAmb	23 12 27.4
comp=Z,204nm,0.7s						
MLR	Muntele Rosu	96.53	316	PFAKE		23 12 40.0 +13
MLR				LR	LR	
comp=Z,500nm,21.0s						
MLR	Muntele Rosu	96.53	316⇓	*i*P	P	23 12 27.1 -0.2
LSZ	Lusaka	96.56	255	*i*P	P	23 12 28.8 +0.7
LSZ	Lusaka	96.56	255	*e*P	P	23 12 28.4 +0.4
comp=Z,73nm,0.8s						
LSZ				*e*PP	PP	23 16 19.6 -3.4
LSZ				LR	LR	
comp=Z,2μm,22.0s						
LSZ	Lusaka	96.56	255	*i*P	P	23 12 28.8 +0.7
OZUR		96.57	316⇓	*i*P	P	23 12 27.3 -0.1
SGRR	Singureni	96.64	314⇑	*i*P	P	23 12 27.6 -0.1
BURAR	Bucovina Array	96.78	318⇑	*i*P	P	23 12 28.6 +0.2
EZN	Ezine	96.83	310	P	P	23 12 27.9 -0.7
EZN	Ezine	96.83	310	*e*P	P	23 12 27.3 -1.3
EZN	Ezine	96.83	310	P	P	23 12 27.3 -1.3
EZN	Ezine	96.83	310⇓	*i*P	P	23 12 27.7 -0.9
EZN	Ezine	96.83	310	*e*P	P	23 12 27.3 -1.3
DOPR	Dopca	96.86	316⇑	*i*P	P	23 12 28.5 -0.2
SUW	Suwalki	97.13	324	*e*P	P	23 12 29.1 -0.6
SUW	Suwalki	97.13	324	PFAKE		23 12 40.0 +10
SUW				LR	LR	
comp=Z,400nm,22.0s						
SUW	Suwalki	97.13	324	*e*P	P	23 12 29.1 -0.6
ZIMR		97.14	314⇑	*i*P	Pdif	23 12 30.2 +0.2
LVV	L'vov	97.26	320	*e*P	P	23 12 30.1 -0.3
HUMR	Humele	97.32	315⇑	*i*P	P	23 12 30.1 -0.6
KDZ	Kurdzhali	97.33	312	*i*P	Pdif	23 12 33.5 +2.5
ARCR	ARCALIA	97.42	317⇓	*i*P	Pdif	23 12 31.6 +0.3
ARR	Arges	97.46	316⇑	*i*P	P	23 12 31.0 -0.5
PBUR	Paburg	97.48	327	*e*P	P	23 12 30.3 -0.9
PBUR				IAmb	IAmb	23 12 32.2
comp=Z,134nm,1.0s						
MDB	Medias	97.53	316⇓	*i*P	Pdif	23 12 32.8 +1.0
STEI	Steigen	97.54	339	*e*P	P	23 12 30.1 -1.1
VLAD	Vladila	97.79	314⇑	*i*P	P	23 12 32.8 -0.1
NPS	Neapolis	97.82	305	P	P	23 12 33.1 -0.2
RZN	Rozhen	97.85	312	*i*P	P	23 12 30.3 -3.2
BMR	Baia Mare	97.92	318⇑	*i*P	Pdif	23 12 33.8 +0.4
LAST	Lasithi	97.94	305	P	P	23 12 33.6 -0.3
CJR	Cluj-Napoca	97.99	317⇑	*i*P	Pdif	23 12 34.3 +0.4
LOT	Lotru	98.05	316⇓	*i*P	Pdif	23 12 34.6 +0.4
KWP	Kalwaria Pacla	98.13	320	*e*P	P	23 12 34.3 0.0
KWP	Kalwaria Pacla	98.13	320	PFAKE		23 12 50.0 +16
KWP				LR	LR	
comp=Z,3μm,20.0s						
KWP	Kalwaria Pacla	98.13	320	*e*P	P	23 12 34.3 0.0
CRAR	CRAIOVA	98.18	315⇓	*i*P	Pdif	23 12 34.8 +0.1
MOR8	Moi Rana	98.40	337	*e*P	P	23 12 32.7 -2.4
TRPA	Tarpa	98.49	319⇑	*i*P	P	23 12 35.8 -0.1
TRPA	Tarpa	98.49	319⇑	EP	P	23 12 35.1 -0.8
BOSA	Boshof	98.49	241	*i*P	P	23 12 35.3 -1.3
BOSA	Boshof	98.49	241	P	Pdif	23 12 37.0 +0.4
comp=Z,11nm,0.7s,baz=98,slow=3.8,SNR=16						
BOSA				PP	PP	23 16 35.8 -1.7
comp=Z,15nm,1.1s,baz=21,slow=16,SNR=5.5						
BOSA				PKiKP	PKiKP	23 17 09.8 +1.2
comp=Z,4.1nm,0.8s,baz=356,slow=1.9,SNR=4.2						
BOSA				LR	LR	23 53 17.8
comp=Z,828nm,20.0s,baz=83,slow=33						
BOSA	Boshof	98.49	241	*i*P	P	23 12 35.3 -1.3
NVR	Nevrokopi	98.52	312	P	P	23 12 34.9 -1.4
KOLS	Kolonicke sedl	98.53	319	*e*P	Pdif	23 12 36.5 +0.4
KOLS	Kolonicke sedl	98.53	319	*e*PDIFF	Pdif	23 12 36.5 +0.4
SRE	Strehaia	98.56	315⇓	*i*P	Pdif	23 12 36.9 +0.6
UZH	Uzhgorod	98.57	319	*e*P	Pdif	23 12 36.6 +0.3
UZH				*e*		23 12 45.2
UZH				*e*		23 12 52.0
UZH				*e*S	S	23 23 58.8 -2.2
UZH				*e*SS	SS	23 30 47.8 +1.0
DRGR		98.58	317⇑	*i*P	P	23 12 36.5 0.0
DEV	Deva	98.59	316⇑	*i*P	Pdif	23 12 36.7 +0.3
MMB	Musomiste	98.59	312	*i*P	P	23 12 33.6 -3.0
KLNR	Kaliningrad	98.73	325	*de*P	Pdif	23 12 37.1 +0.3
KLNR				pmax	pmax	
comp=Z,200nm,0.8s						
GZR	Gura Zlata	98.75	316⇓	*i*P	P	23 12 37.3 0.0
KONS	Konsvik	98.79	338	*e*P	Pdif	23 12 37.9 +1.0
VTS	Vitosha	98.82	313	*e*P	P	23 12 36.5 -1.3
VTS	Vitosha	98.82	313	P	P	23 12 36.5 -1.3
VTS	Vitosha	98.82	313⇑	*i*P	P	23 12 37.0 -0.8
VTS	Vitosha	98.82	313	*e*P	P	23 12 36.5 -1.3
VTS	Vitosha	98.82	313	*i*P	P	23 12 36.9 -0.8
BEL	Belsk	98.94	322	*e*P	Pdif	23 12 38.1 +0.2
BEL	Belsk	98.94	322	*e*P	Pdif	23 12 38.1 +0.2
HERR	Herculane	99.08	315⇑	*i*P	Pdif	23 12 38.6 -0.1
KNT	Kendrikon	99.27	312	P	Pdif	23 12 37.8 -1.8
SIRR	Siria	99.38	317⇓	*i*P	Pdif	23 12 40.3 +0.3
VAY	Valandovo	99.49	312	*i*P	Pdif	23 12 39.0 -1.6
BZS	Buzias	99.52	316⇑	*i*P	Pdif	23 12 39.8 -0.8
KRND	KRANIDI	99.57	308	P	Pdif	23 12 38.8 -2.2
MDVR	Moldovita	99.59	315⇓	*i*P	Pdif	23 12 40.9 -0.1
NIE	Niedzica	99.72	320	*e*P	Pdif	23 12 42.0 +0.6
NIE	Niedzica	99.72	320	*e*P	Pdif	23 12 42.0 +0.6
KECS	Kecovo	99.77	319	*e*P	Pdif	23 12 41.9 +0.2
KECS	Kecovo	99.77	319	*e*PDIFF	Pdif	23 12 41.9 +0.2
OJC	Ojcow	99.88	321	*e*P	Pdif	23 12 42.2 +0.1
OJC	Ojcow	99.88	321	*e*P	Pdif	23 12 42.2 +0.1
BANR	Banloc	99.89	316⇑	*i*P	Pdif	23 12 42.6 +0.4
NSS	Namsos	99.94	336	*e*P	Pdif	23 12 40.9 -1.1
GUR	Goura	100.13	308	P	Pdif	23 12 40.6 -3.1
KALE	Kalithea	100.23	309	*e*Pdif	Pdif	23 12 43.2 -0.8
KALE	Kalithea	100.23	309	P	Pdif	23 12 43.2 -0.8
PSZ	Piszkesteto	100.27	319	*e*Pdif	Pdif	23 12 43.6 -0.4
PSZ				LR	LR	
comp=Z,400nm,20.0s						
PSZ	Piszkesteto	100.27	319⇑	*i*P	Pdif	23 12 43.8 -0.2
PSZ	Piszkesteto	100.27	319	*e*P	Pdif	23 12 43.6 -0.4
PSZ				MLR	MLR	
comp=Z,400nm,20.0s						
PSZ	Piszkesteto	100.27	319	⇑EP	Pdif	23 12 43.1 -0.9
LANS	Liptovska Anna	100.30	320	*e*P	Pdif	23 12 45.1 +1.0
LANS	Liptovska Anna	100.30	320	*e*PDIFF	Pdif	23 12 45.1 +1.0
ANX	Ano Chora	100.37	309	P	Pdif	23 12 43.2 -1.5
DRO	Drossia	100.62	308	P	Pdif	23 12 44.8 -0.9
GKP	Gorka Klasztor	100.74	324	*e*P	Pdif	23 12 45.8 -0.1
GKP	Gorka Klasztor	100.74	324	*e*P	Pdif	23 12 45.8 -0.1
OHR	Ohrid	100.84	312	*i*P	Pdif	23 12 35.6 -11
VYHS	Vyhne	100.85	319	*e*P	Pdif	23 12 46.4 -0.1
VYHS	Vyhne	100.85	319	*e*PDIFF	Pdif	23 12 46.4 -0.1
DAG	Danmarks Havn	100.89	352	*e*P	Pdif	23 12 45.8 -0.2
DAG				pmax	pmax	
comp=Z,11nm,0.6s						
DAG	Danmarks Havn	100.89	352	*i*P	Pdif	23 12 45.8 -0.2
comp=Z,17nm,0.6s						
DAG	Danmarks Havn	100.89	352	*i*P	PP	23 16 46.4 -7.7
DIVS	Divibare	100.92	315⇑	*i*P	Pdif	23 12 46.3 -0.7
OKC	Ostrava-Krasne	101.00	321	*e*P	Pdif	23 12 47.6 +0.5
OKC	Ostrava-Krasne	101.00	321	*e*PDIFF	Pdif	23 12 47.6 +0.5
OKC				AMS	AMS	00 05 00.0
comp=Z,300nm,19.0s						
JAN	Janina	101.03	310	P	Pdif	23 12 37.5 -10
TBLU	Trondheim	101.11	335	*e*P	Pdif	23 12 45.7 -1.6
SRO	Srobarova	101.33	319	*e*P	Pdif	23 12 49.2 +0.6
SRO	Srobarova	101.33	319	*e*PDIFF	Pdif	23 12 49.2 +0.6
NC303	NORSAR Array S	101.38	333	*e*P	Pdif	23 12 47.0 -1.5
BBLS	Lazići	101.38	315⇑	*i*P	Pdif	23 12 48.6 -0.4
MORC	Moravsky Berou	101.39	321⇑	*i*P	Pdif	23 12 49.3 +0.4
MORC	Moravsky Berou	101.39	321	*e*PDIFF	Pdif	23 12 49.3 +0.4
MORC				*e*PP	PP	23 17 00.8 +2.0
MORH	Mrgy, Hungar	101.45	317⇑	*i*P	Pdif	23 12 48.8 -0.3
MORH	Mrgy, Hungar	101.45	317	⇑EP	Pdif	23 12 48.1 -1.1
IGT	Igoumenitsa	101.45	310	P	Pdif	23 12 46.0 -3.4
RUDO	Rudo	101.45	314	*e*P	Pdif	23 12 47.7 -1.6
CSKK	Cskako	101.47	318	EP	Pdif	23 12 48.1 -1.1
TIR	Tirane	101.50	312	PFAKE		23 13 00.0 +10
TIR				LR	LR	
comp=Z,400nm,22.0s						
NB2	NORSAR Subarra	101.52	333	P	Pdif	23 12 47.4 -1.8
comp=Z,16nm,0.9s,baz=69,slow=4.6						
NB2	NORSAR Subarra	101.52	333	P	Pdif	23 12 47.4 -1.8
baz=69,slow=4.6						
NOA	NORSAR Array B	101.52	333	P	Pdif	23 12 47.7 -1.5
comp=Z,11nm,0.9s,baz=69,slow=4.5,SNR=20						
JAVC	Velka Javorina	101.52	320	*e*PDIFF	Pdif	23 12 50.7 +1.2
NC204	NORSAR Array S	101.63	333	*e*P	Pdif	23 12 48.2 -1.5
HAPS	Han Pijesak,Bl	101.66	315	*e*P	Pdif	23 12 47.9 -2.4
NBO00	NORSAR Array S	101.72	333	*e*Pdif	Pdif	23 12 49.1 -1.0
NAO01	NORSAR Array S	101.73	333	*e*Pdif	Pdif	23 12 49.1 -1.0
NAO01

comp=Z,5.4nm,0.8s
BRG SS SS 23 31 51.0 -1.9
BRG Berggiesshubel 103.34 323 *e*P **Pdif 23 12 57.9 +0.4**
BRG *e* 23 17 08.0
BRG pmax pmax
comp=Z,44nm,1.2s
BRG Berggiesshubel 103.34 323 *e*PDIFF **Pdif 23 12 57.9 +0.4**
comp=Z,44nm,1.2s
BRG *e* 23 17 08.0
CRES Cresnjev 103.70 317 ⇑*i*P **Pdif 23 12 59.2 0.0**
YKA Yellowknife Ar 103.75 24 Pdiff **Pdif 23 13 00.1 +1.1**
comp=Z,1.7nm,0.6s,baz=297,slow=4.7,SNR=7.3
YKA PKiKP **PKiKP 23 17 17.6 +0.9**
comp=Z,2.4nm,0.7s,baz=302,slow=1.9,SNR=12
YKA PKKPbc **PKKPbc 23 28 50.5 -2.2**
comp=Z,3.3nm,0.7s,baz=113,slow=2.8,SNR=9.1
SOKA Soboth 103.77 318 *i* Pdiff **Pdif 23 12 59.8 +0.2**
comp=Z,17nm,1.3s
SOKA Soboth 103.77 318 *i* PKiKP **PKiKP 23 17 17.2 -0.2**
comp=Z,12nm,1.6s
CLL Collm 103.78 323 PFAKE 23 13 10.0 +11
CLL LR LR
comp=Z,300nm,20.0s
CLL Collm 103.78 323 ⇑*i*Pdif **Pdif 23 12 58.3 -1.1**
comp=Z,20nm,1.2s
CLL *e* 23 16 22.0
CLL *e* 23 16 30.0
CLL *e*PP **PP 23 17 13.0 -3.5**
CLL *e*PPP PPP 23 19 23.0
CLL *e*SKKSac SKKSac 23 24 06.0 -11
CLL *e*Sdif **Sdif 23 24 41.0 -3.5**
CLL *e*(SP) 23 25 54.0
CLL *e*PPS PPS 23 27 00.0
CLL *e* 23 27 30.0
CLL *e*SS **SS 23 32 00.0 +1.1**
CLL *e*SSS SSS 23 35 54.0
CLL *e* 23 40 42.0
CLL Lm MLR 00 05 00.0
comp=Z,300nm,21.8s
CLL Collm 103.78 323 ⇑*i*P **Pdif 23 12 58.3 -1.1**
CLL *e*S **Sdif 23 24 41.0 -3.5**
CLL pmax pmax
comp=Z,20nm,1.2s
CLL MLR MLR
comp=Z,300nm,21.8s
MOA Molln 103.97 320 *i* Pdiff **Pdif 23 13 00.8 +0.4**
comp=Z,32nm,1.4s,SNR=10
MOA Molln 103.97 320 *i* PKiKP **PKiKP 23 17 20.0 +2.3**
comp=Z,13nm,1.6s
KHC Kasperske Hory 104.06 321 *e*P **Pdif 23 13 00.7 -0.1**
KHC Kasperske Hory 104.06 321 *e*PDIFF **Pdif 23 13 00.7 -0.1**
KHC *ex* x 23 26 37.0
KHC AMS AMS 00 02 10.0
comp=Z,600nm,23.8s
GEC2 GERESS Array S 104.06 321 PFAKE 23 13 10.0 +9.1
GEC2 LR LR
comp=Z,300nm,21.0s
GERES GERESS Array B 104.06 321 Pdiff **Pdif 23 13 01.1 +0.3**
comp=Z,5.5nm,0.9s,baz=76,slow=5.6,SNR=39
GERES PKiKP **PKiKP 23 17 18.3 +0.4**
comp=Z,3.6nm,0.8s,baz=57,slow=3.6,SNR=5.0
GERES PKKPbc **PKKPbc 23 28 51.4 -0.1**
comp=Z,0.5nm,0.7s,baz=242,slow=2.1,SNR=4.3
OBKA Obir 104.14 318 *i* Pdiff **Pdif 23 13 01.7 +0.4**
comp=Z,13nm,1.1s
MUD Monsted U'grnd 104.19 329 *e*P **Pdif 23 13 01.4 +0.3**
MUD Monsted U'grnd 104.19 329 *i* P **Pdif 23 13 01.4 +0.3**
TIP Timpagrande 104.24 310 ⇑*i*P **Pdif 23 13 01.5 -0.3**
CEY Cerknica 104.42 317 *e*P **Pdif 23 12 59.1 -3.3**
NKC Novy Kostel 104.44 322 *e*P **Pdif 23 13 03.0 +0.6**
NKC Novy Kostel 104.44 322 *e*PDIFF **Pdif 23 13 03.0 +0.6**
NKC AMS AMS 00 09 30.0
comp=Z,500nm,21.2s
MYKA Terra Mystica 104.71 318 *i* Pdiff **Pdif 23 13 03.6 -0.1**
comp=Z,4.1nm,0.8s
D03D Eldon 104.77 41 P **Pdif 23 13 05.3 +1.4**
baz=286
KBA Koelnbreinsper 104.78 319 *i* Pdiff **Pdif 23 13 04.4 +0.1**
comp=Z,4.5nm,0.6s
B05A Bryant 105.20 40 P **PKiKP 23 17 21.0 +1.2**
baz=287
GRA1 Grafenberg Arr 105.36 322 PFAKE 23 17 30.0 +10
GRA1 LR LR
comp=Z,500nm,22.0s
ABTA Abfaltersbach 105.42 319 *i* Pdiff **Pdif 23 13 06.5 -0.4**
comp=Z,12nm,0.9s,SNR=5.6
WTTA Wattenberg 105.85 319 *i* Pdiff **Pdif 23 13 08.8 -0.1**
comp=Z,18nm,1.0s,SNR=7.0
WTTA Wattenberg 105.85 319 *i* PKiKP **PKiKP 23 17 22.8 +1.4**
comp=Z,15nm,0.9s
WATA Walderalm 105.86 320 *i* Pdiff **Pdif 23 13 09.1 +0.1**
comp=Z,5.9nm,0.7s
AQU L'Aquila 106.00 314 PFAKE 23 17 30.0 +8.4
AQU LR LR
comp=Z,200nm,22.0s
SQTA Sankt Quirin 106.14 320 *i* Pdiff **Pdif 23 13 09.9 -0.3**
comp=Z,13nm,0.8s,SNR=6.7
MOTA Moosalm 106.17 320 *i* Pdiff **Pdif 23 13 10.2 -0.1**
comp=Z,8.6nm,0.8s,SNR=6.0
I04A Tendick Farm, 106.27 44 P **PKiKP 23 17 23.1 +1.0**
baz=286
RETA Reutte 106.34 320 *i* Pdiff **Pdif 23 13 11.8 +0.8**
comp=Z,5.4nm,0.8s
TSUM Tsumeb 106.40 250 PFAKE 23 17 40.0 +17
TSUM LR LR
comp=Z,1μm,21.0s
FETA Feichten 106.51 319 *i* Pdiff **Pdif 23 13 12.3 +0.5**
comp=Z,9.3nm,0.9s,SNR=5.1
M02C Callahan 106.59 47 P **PKiKP 23 17 24.3 +1.5**
baz=285
J04D Umpqua Nationa 106.63 45 P **PKiKP 23 17 24.0 +1.0**
baz=286
L04D Klamath Falls 106.77 46 P **PKiKP 23 17 24.2 +1.0**
baz=286
STU Stuttgart 106.92 322 PFAKE 23 17 30.0 +6.9
STU LR LR
comp=Z,400nm,22.0s
FUORN Ofenpass-Fuorn 106.94 319 *e*Pdif **Pdif 23 13 12.4 -1.5**
FUORN LR LR
comp=Z,300nm,21.0s
DAVA Damuels 106.97 320 *i* Pdiff **Pdif 23 13 14.0 0.0**
comp=Z,8.2nm,1.1s
DAVA Damuels 106.97 320 *i* PKiKP **PKiKP 23 17 24.4 +1.0**
comp=Z,9.9nm,0.9s
SUMG Summit 106.99 355 *i* P PKiKP 23 17 35.3 +12
comp=Z,61nm,1.3s
J05D Fort Rock, OR 107.23 44 P **PKiKP 23 17 25.5 +1.5**
baz=287
TUE Stuetta 107.58 319 PFAKE 23 17 40.0 +15
TUE LR LR
comp=Z,500nm,22.0s
BFO Black Forest 107.61 321 PFAKE 23 17 40.0 +16
BFO LR LR
comp=Z,300nm,22.0s
VLC Villacollemand 107.61 317 PFAKE 23 17 40.0 +15
VLC LR LR
comp=Z,200nm,19.0s
NEW Newport 108.34 38 P **PKiKP 23 17 27.7 +1.9**
baz=291
WLF Walferdange 108.45 323 PFAKE 23 17 40.0 +14
WLF LR LR
comp=Z,2μm,20.0s
BNI Bardonecchia 109.83 318 *e*Pdif **Pdif 23 13 26.5 -0.1**
BNI LR LR
comp=Z,400nm,22.0s
BNI Bardonecchia 109.83 318 *e*P **Pdif 23 13 26.5 -0.1**
BNI MLR MLR
comp=Z,400nm,22.0s
WALA Waterton Lakes 109.99 37 PFAKE 23 17 40.0 +11
WALA LR LR
comp=Z,400nm,22.0s
PKM Mcpherson Peak 110.57 53 P **PKiKP 23 17 32.0 +1.4**
baz=285
NVAR Mina Array Bea 110.77 49 Pdiff **Pdif 23 13 32.0 +0.9**
comp=Z,0.5nm,0.8s,baz=279,slow=5.9,SNR=3.4
NVAR PKiKP **PKiKP 23 17 33.0 +2.0**
comp=Z,2.6nm,0.8s,baz=248,slow=1.7,SNR=16
NVAR PKKPbc **PKKPbc 23 28 30.0 -0.4**
comp=Z,1.7nm,0.7s,baz=133,slow=4.8,SNR=9.9
NVAR PKKPab **PKKPab 23 28 40.8 +0.6**
comp=Z,2.5nm,0.8s,baz=131,slow=4.5,SNR=9.6
NVAR PKKP **PKKPdf 23 28 48.4 +0.5**
comp=Z,1.5nm,0.7s,baz=141,slow=5.5,SNR=4.8
KEST Kesra 110.78 308 PKiKP **PKiKP 23 17 31.9 +1.1**
comp=Z,7.7nm,1.0s,baz=135,slow=4.3,SNR=4.3
MSO Missoula 110.88 39 P **PKiKP 23 17 31.5 +0.8**
baz=294
ESK Eskdalemuir 110.90 331 PFAKE 23 17 40.0 +10
ESK LR LR
comp=Z,400nm,21.0s
ISA Isabella, Lake 111.42 52 P **PKiKP 23 17 32.8 +0.8**
baz=286
CWC Cottonwood Cre 111.51 51 P **PKiKP 23 17 33.1 +0.8**
baz=287
HLID Hailey 111.83 42 P **PKiKP 23 17 34.8 +2.1**
baz=292
EDW2 Edwards Air Fo 112.01 52 P **PKiKP 23 17 35.0 +1.8**
baz=286,SNR=6.1
CIS Catalina Islan 112.07 54 P **PKiKP 23 17 34.9 +1.6**
baz=285
MPMC Manual Prospec 112.08 51 P **PKiKP 23 17 35.3 +1.9**
baz=287
FURC Furnace Creek, 112.44 50 P **PKiKP 23 17 35.8 +2.0**
baz=288
TPNV Topopah Spring 112.77 50 P **PKiKP 23 17 35.9 +1.3**
baz=288
R11A Troy Canyon, C 112.82 48 P **PKiKP 23 17 36.4 +1.6**
baz=289
GSC Goldstone, Bar 112.83 51 P **PKiKP 23 17 36.7 +2.0**
baz=287
BOZ Bozeman (W) 112.85 40 P **PKiKP 23 17 36.1 +1.5**
baz=295
EGMT Eagleton 112.93 37 P **PKiKP 23 17 36.0 +1.5**
baz=298
MURC Murrieta 113.00 53 P **PKiKP 23 17 36.6 +1.6**
baz=286
109C Camp Elliot, M 113.27 54 P **PKiKP 23 17 37.4 +1.9**
baz=286
HEC Hector,Ludlow 113.34 52 P **PKiKP 23 17 37.6 +1.9**
baz=287
PFO Pinyon Flats O 113.59 53 P **PKiKP 23 17 38.0 +1.7**
baz=287,SNR=7.6
DSB Dublin 113.60 331 PFAKE 23 17 50.0 +14
DSB LR LR
comp=Z,400nm,21.0s
MONP2 Monument Peak 113.82 54 P **PKiKP 23 17 38.5 +1.7**
baz=286
BELC Belle Mtn. Jos 113.84 53 P **PKiKP 23 17 38.7 +1.9**
baz=287,SNR=7.0
GMRC Granite Mounta 113.88 52 P **PKiKP 23 17 38.6 +1.8**
baz=288
FCC Fort Churchill 114.03 21 PFAKE 23 17 50.0 +14
FCC LR LR
comp=Z,300nm,20.0s
IKP In-Ko-Pah, Jac 114.14 54 P **PKiKP 23 17 38.9 +1.6**
baz=286
DUG Dugway, Tooele 114.19 45 P **PKiKP 23 17 39.2 +1.9**
baz=292
SWSC Sam W. Stewart 114.31 54 P **PKiKP 23 17 39.7 +2.2**
baz=287
LOHW Long Hollow 114.35 41 PFAKE 23 17 50.0 +12
LOHW LR LR
comp=Z,700nm,22.0s
BC3 Big Chuckawall 114.38 53 P **PKiKP 23 17 39.8 +2.0**
baz=287,SNR=7.1
IRM Iron Mountain 114.47 52 P **PKiKP 23 17 40.0 +2.1**
baz=288,SNR=8.6
HWUT Hardware Ranch 114.53 43 PFAKE 23 17 50.0 +12
HWUT LR LR
comp=Z,300nm,19.0s
RLMT Red Lodge 114.55 39 P PKPdf 23 17 40.1 +2.1
baz=297
GLA Glamis 115.06 53 P **PKPdf 23 17 41.1 +2.1**
baz=287
Y12C Blythe 115.09 52 P **PKPdf 23 17 41.1 +2.1**
baz=288
PDMCI Parker Dam,Lak 115.22 52 P **PKPdf 23 17 40.9 +1.6**
baz=288
BW06 Boulder Array 115.40 42 P **PKPdf 23 17 40.5 +0.8**
baz=296
PDAR Pinedale Array 115.40 42 PKP **PKPdf 23 17 40.5 +0.8**
comp=Z,2.1nm,0.6s,baz=205,slow=2.8,SNR=18
PDAR PKKPbc **PKKPbc 23 28 14.1 -1.0**
comp=Z,1.9nm,0.6s,baz=124,slow=5.1,SNR=16
PDAR PKKPab **PKKPab 23 28 19.6 -0.1**
comp=Z,7.3nm,0.8s,baz=117,slow=5.7,SNR=28
PDAR PKKP **PKKPdf 23 28 37.3 -1.9**
comp=Z,3.6nm,0.8s,baz=123,slow=6.6,SNR=6.7
LAO LASA Array 115.68 37 P **PKPdf 23 17 41.1 +1.2**
baz=300
WUAZ Wupatki 116.96 50 P **PKiKP 23 17 44.6 +1.8**
baz=291
214A Organ Pipe Nat 117.01 54 P **PKiKP 23 17 44.1 +1.3**
baz=288
TAM Tamanrasset 117.13 296 PFAKE 23 18 00.0 +17
TAM LR LR
comp=Z,400nm,22.0s
O20A White River Ci 117.43 44 P **PKiKP 23 17 45.1 +1.5**
baz=296
K22A Casper 117.45 41 P **PKiKP 23 17 43.9 +0.4**
baz=298
PV22 Blue Mesa, Par 117.72 46 PFAKE 23 18 00.0 +16
PV22 LR LR
comp=Z,600nm,18.0s
PV07 Paradox Valley 117.86 46 PFAKE 23 18 00.0 +16
PV07 LR LR
comp=Z,600nm,21.0s
RSSD Black Hills 118.31 38 *e*PKPdf **PKiKP 23 17 45.8 +0.6**
RSSD Black Hills 118.31 38 *e*PKIKP **PKiKP 23 17 45.8 +0.6**
RSSD Black Hills 118.31 38 P **PKiKP 23 17 45.5 +0.3**
baz=301
W18A Petrified Fore 118.35 50 P **PKiKP 23 17 45.7 +0.2**
baz=292
MVCO Mesa Verde 118.46 47 P **PKiKP 23 17 47.2 +1.5**
baz=294
TUC Tucson 118.53 53 *e*PKPdf **PKiKP 23 17 47.7 +1.9**
TUC Tucson 118.53 53 *e*PKIKP **PKiKP 23 17 47.7 +1.9**
TUC Tucson 118.53 53 P **PKiKP 23 17 47.6 +1.9**
baz=290
N23A Red Feather La 118.66 42 P **PKiKP 23 17 46.9 +0.8**
baz=298
SMCO Snowmass 118.72 44 PFAKE 23 18 00.0 +14
SMCO LR LR
comp=Z,600nm,21.0s
MDND Maddock 118.81 33 P **PKiKP 23 17 46.1 +0.3**
baz=307
ULM Lac du Bonnet 119.20 29 PKP **PKPdf 23 17 46.2 -0.2**
comp=Z,12nm,0.6s,baz=137,slow=0.4,SNR=10
ULM PKKPbc **PKKPbc 23 28 00.2 -1.3**
comp=Z,4.5nm,0.5s,baz=113,slow=2.5,SNR=6.1
ESDC Sonseca Array 119.20 317 PKP **PKiKP 23 17 47.5 +0.6**
comp=Z,2.2nm,0.8s,baz=41,slow=2.4,SNR=8.7
ESDC PP **PP 23 19 08.8 +1.5**
comp=Z,2.7nm,0.8s,baz=51,slow=6.8,SNR=5.6
ESDC PKKPbc **PKKPbc 23 28 01.6 +0.5**
comp=Z,0.4nm,0.6s,baz=254,slow=4.3,SNR=4.4
ISCO Idaho Springs 119.39 43 PFAKE 23 18 00.0 +12
ISCO LR LR
comp=Z,400nm,22.0s
ISCO Idaho Springs 119.39 43 P **PKiKP 23 17 48.9 +1.3**
baz=298
S22A 4UR Ranch, Cre 119.45 46 PFAKE 23 18 00.0 +12
S22A LR LR
comp=Z,3μm,18.0s
S22A 4UR Ranch, Cre 119.45 46 P **PKiKP 23 17 49.1 +1.4**
baz=296
Q24A Divide 120.09 44 PFAKE 23 18 00.0 +11
Q24A LR LR
comp=Z,400nm,22.0s
Q24A Divide 120.09 44 P **PKiKP 23 17 50.0 +1.0**
baz=298
SDCO Great Sand Dun 120.39 45 P **PKiKP 23 17 50.7 +1.1**
baz=297
AGMN Agassiz Nation 120.48 30 P **PKiKP 23 17 50.6 +1.6**
baz=311
MVO Moncorvo 120.54 319 *e*PKPdf **PKiKP 23 17 50.9 +1.4**
MVO Moncorvo 120.54 319 *e*LR LR 00 06 09.3
comp=Z,244nm,20.0s
121A Cookes Peak, D 120.82 52 P **PKiKP 23 17 52.2 +1.8**
baz=292,SNR=9.2
TASM ASL Pad, Albuq 120.89 49 P **PKiKP 23 17 52.2 +1.7**
baz=294
TASM ASL Pad, Albuq 120.89 49 P **PKiKP 23 17 52.3 +1.8**
baz=294
ANMO Albuquerque 120.89 49 *e*PKPdf **PKiKP 23 17 52.2 +1.7**
ANMO Albuquerque 120.89 49 *e*PKIKP **PKiKP 23 17 52.2 +1.7**
ANMO Albuquerque 120.89 49 P **PKiKP 23 17 52.2 +1.7**
baz=294
PGAV Gavieira, Arco 120.92 321 *e*PKPdf **PKiKP 23 17 51.3 +1.1**
PGAV Gavieira, Arco 120.92 321 *e*LR LR 00 06 24.7
comp=Z,354nm,20.0s
POLO Lamas de Olo 120.93 320 *e*PKPdf **PKiKP 23 17 51.6 +1.3**
PVRL Vila Real 120.93 320 *e*PKPdf **PKiKP 23 17 51.5 +1.3**
SUSD Miller 121.18 36 P **PKiKP 23 17 50.8 +0.2**
baz=306
OGNE Ogallala 121.21 40 P **PKiKP 23 17 51.0 +0.1**
baz=301
MTE Manteigas 121.26 319 *e*PKPdf **PKiKP 23 17 52.2 +1.3**
MTE Manteigas 121.26 319 *e*LR LR 00 04 21.7
comp=Z,190nm,20.0s
PVIS Viseu 121.33 319 *e*PKPdf **PKiKP 23 17 51.7 +0.7**
T25A Trinidad 121.44 45 P **PKiKP 23 17 52.9 +1.4**
baz=297
PCBR Castelo Branco 121.50 318 *e*PKPdf **PKiKP 23 17 52.7 +1.4**
PMRV Marv??o 121.65 318 *e*PKPdf **PKiKP 23 17 52.8 +1.2**
PCAS Casmilo, Conde 122.07 319 *e*PKPdf **PKiKP 23 17 53.6 +1.2**
EPT El Paso 122.11 52 PFAKE 23 18 00.0 +7.1
EPT LR LR
comp=Z,400nm,18.0s
PTOM Tomar 122.23 318 *e*PKPdf **PKiKP 23 17 54.5 +1.8**
PMTG Montargil 122.39 318 *e*PKPdf **PKiKP 23 17 53.9 +0.8**
TOC2 Torodi Ar. Sit 122.40 285 PFAKE 23 18 10.0 +16
TOC2 LR LR
comp=Z,400nm,22.0s
TOC3 Torodi Ar. Sit 122.40 285 PFAKE 23 18 10.0 +16
TOC3 LR LR
comp=Z,400nm,21.0s
TOC1 Torodi Ar. Sit 122.42 285 PFAKE 23 18 10.0 +16
TOC1 LR LR
comp=Z,300nm,21.0s
TOB3 Torodi Ar. Sit 122.42 285 PFAKE 23 18 10.0 +16
TOB3 LR LR
comp=Z,300nm,22.0s
TOC4 Torodi Ar. Sit 122.42 285 PFAKE 23 18 10.0 +16
TOC4 LR LR
comp=Z,300nm,22.0s
TOA0 Torodi Ar. Sit 122.43 285 PFAKE 23 18 10.0 +16
TOA0 LR LR
comp=Z,300nm,22.0s
TOA0 Torodi Ar. Sit 122.43 285 P **PKiKP 23 17 55.3 +1.5**
SNR=6.9
TORD Torodi Ar. Bea 122.43 285 PKP **PKPdf 23 17 52.4 -1.1**
comp=Z,32nm,0.7s,baz=23,slow=4.6,SNR=124
TORD PKKPbc **PKKPab 23 27 50.6 +1.6**
comp=Z,3.3nm,0.9s,baz=265,slow=3.6,SNR=12
TOA1 Torodi Ar. Sit 122.43 285 PFAKE 23 18 10.0 +16
TOA1 LR LR
comp=Z,300nm,22.0s
TOB4 Torodi Ar. Sit 122.44 285 PFAKE 23 18 10.0 +16
TOB4 LR LR
comp=Z,300nm,22.0s
TOB5 Torodi Ar. Sit 122.44 285 PFAKE 23 18 10.0 +16
TOB5 LR LR
comp=Z,300nm,21.0s
TOC7 Torodi Ar. Sit 122.44 285 PFAKE 23 18 10.0 +16
TOC7 LR LR
comp=Z,300nm,20.0s
TOC5 Torodi Ar. Sit 122.45 285 PFAKE 23 18 10.0 +16
TOC5 LR LR
comp=Z,400nm,22.0s
ALMR Almeirim 122.58 318 *e*PKPdf **PKiKP 23 17 54.6 +1.2**
PBEJ Beja 122.67 317 *e*PKPdf **PKiKP 23 17 55.7 +2.1**
PVAQ Vaqueiros 122.87 316 *e*PKPdf **PKiKP 23 17 55.2 +1.1**
EYMN Ely 122.87 28 P **PKiKP 23 17 53.7 -0.1**
baz=315
ECSD EROS Data Cent 122.96 35 P **PKiKP 23 17 54.5 +0.4**
baz=308
PCVE Castro Verde 122.98 316 *e*PKPdf **PKiKP 23 17 55.8 +1.5**
MESJ Messejana 123.00 317 *e*PKPdf **PKiKP 23 17 54.4 0.0**
MESJ *e*PP **PP 23 19 33.8 +0.6**
MESJ Messejana 123.00 317 *e*PKPdf **PKiKP 23 17 55.8 +1.5**
MESJ Messejana 123.00 317 *e*PKIKP **PKiKP 23 17 54.3 0.0**
MESJ *e* 23 19 33.8
MNTX Cornudas Mount 123.02 52 *e*PKPdf **PKiKP 23 17 56.1 +1.5**
MNTX Cornudas Mount 123.02 52 P **PKiKP 23 17 55.9 +1.3**
baz=293,SNR=47
PNCL Nicolau / Gran 123.08 317 *e*PKPdf **PKiKP 23 17 55.8 +1.4**
PBDV Barranco-do-Ve 123.09 316 *e*PKPdf **PKiKP 23 17 56.9 +2.3**
BGNE Belgrade 123.42 38 P **PKiKP 23 17 55.0 0.0**
baz=305
MORF Marmelete 123.56 316 *e*PKPdf **PKiKP 23 17 55.5 -0.1**
MORF *e*PP **PP 23 19 37.8 +0.7**
MORF AMS AMS 00 21 51.6
comp=Z,228nm,18.3s
MORF Marmelete 123.56 316 *e*PKPdf **PKiKP 23 17 56.7 +1.2**
MORF Marmelete 123.56 316 *e*PKIKP **PKiKP 23 17 55.4 -0.1**
MORF *e* 23 19 37.8
PFVI Vila Bisbo 123.77 316 *e*PKPdf **PKiKP 23 17 57.7 +1.9**
E38A The Farm, Brul 123.78 30 P **PKiKP 23 17 55.6 0.0**
baz=314
CBKS Cedar Bluff 123.83 41 P **PKiKP 23 17 56.3 +0.3**
baz=302
F37A Hinrichs Farm, 123.85 31 P **PKiKP 23 17 56.1 +0.4**
baz=313
C40A Isle Royale Na 123.99 27 P **PKiKP 23 17 56.0 +0.1**
baz=317
MSTX Muleshoe 124.06 48 P **PKiKP 23 17 57.3 +0.6**
baz=297,SNR=13
F38A Pierce - Schro 124.07 30 P **PKiKP 23 17 56.3 +0.2**
baz=314
SPMN Marine on St. 124.09 32 P **PKiKP 23 17 56.4 +0.1**
baz=312
AMTX Amarillo 124.44 47 P **PKiKP 23 17 58.1 +0.7**
baz=298
F39A Loretta 124.58 30 P **PKiKP 23 17 57.4 +0.2**
baz=315
SCHQ Schefferville 124.68 8 PKP **PKiKP 23 17 57.8 +0.7**
comp=Z,44nm,0.9s,baz=13,slow=2.8,SNR=16
SCHQ PP **PP 23 19 46.8 +3.3**
comp=Z,17nm,0.9s,baz=354,slow=9.9,SNR=3.4
D41A Chassel 124.89 27 P **PKiKP 23 17 58.2 +0.4**
baz=318
G39A Holcombe 124.89 31 P **PKiKP 23 17 57.8 -0.1**
baz=314
F40A Park Falls 124.97 29 P **PKiKP 23 17 58.4 +0.4**
baz=316
TXAR Lajitas Array 125.31 54 PKP **PKiKP 23 17 59.9 +0.6**
comp=Z,9.5nm,0.8s,baz=241,slow=1.3,SNR=52
G40A Rib Lake 125.40 30 PFAKE 23 18 10.0 +11
G40A LR LR
comp=Z,300nm,19.0s
G40A Rib Lake 125.40 30 P **PKiKP 23 17 58.8 0.0**
baz=315
KSU1 Kansas State U 125.71 40 P **PKiKP 23 17 59.7 +0.1**
baz=305
F42A Maple Grove Fa 126.05 28 P **PKPdf 23 17 59.7 0.0**
baz=318
SCIA State Center 126.05 35 P **PKPdf 23 18 00.0 +0.2**
baz=310
E43A Lone Tree Farm 126.12 27 P **PKiKP 23 18 00.5 +0.3**
baz=319
I41A Arkdale 126.42 31 P **PKiKP 23 18 00.9 0.0**
baz=315
WMOK Wichita Mounta 126.60 45 P **PKiKP 23 18 01.9 +0.4**
baz=301,SNR=12
MATQ Matagami 126.94 18 P **PKPdf 23 18 01.1 -0.2**
baz=331,SNR=7.7
ABTX Abilene, Hawle 127.00 48 P **PKiKP 23 18 03.0 +0.5**
baz=298
D46A Sault St. Mari 127.01 25 P **PKiKP 23 18 02.2 +0.2**
baz=323
JFWS Jewell Farm 127.02 32 P **PKPdf 23 18 01.6 0.0**
baz=314
I42A Draeger Farm, 127.02 30 P **PKPdf 23 18 01.1 -0.5**
baz=316
L40A Anamosa 127.07 34 P **PKPdf 23 18 01.9 +0.2**
baz=312
H43A Windswept, Lux 127.17 29 P **PKPdf 23 18 01.8 -0.1**
baz=317
D47A Chapleau 127.26 24 P **PKiKP 23 18 02.8 +0.3**
baz=324
E46A Sault Ste Mari 127.31 25 P **PKiKP 23 18 02.7 +0.1**
baz=322
F45A CMU Biological 127.31 27 P **PKiKP 23 18 02.7 +0.1**
baz=320
N40A Mertquake, Sal 127.65 35 P **PKPdf 23 18 03.2 +0.3**
baz=311
E47A Iron Bridge 127.67 24 P **PKiKP 23 18 03.4 0.0**
baz=323
D48A Paudash Townsh 127.68 23 P **PKiKP 23 18 03.1 -0.2**
baz=325
G45A Suttons Bay 127.74 27 P **PKiKP 23 18 03.3 -0.2**
baz=320
CHGQ Chibougamau 127.76 16 P **PKPdf 23 18 02.8 -0.1**
baz=335,SNR=16
LSQQ Lebel-sur-Quev 127.77 18 P **PKPdf 23 18 03.0 +0.2**
baz=332
D49A Beulah Townshi 127.77 23 P **PKPdf 23 18 02.8 -0.1**
baz=326

JCT	Junction City	127.87	50	P	PKiKP	23 18 04.7	+0.5	
	baz=297							
H45A	Beulah	127.88	28	P	PKiKP	23 18 03.9	+0.1	
	baz=319							
G46A	Petoskey	127.89	26	P	PKiKP	23 18 04.0	+0.2	
	baz=321							
M41A	Milan	127.91	34	P	PKPdf	23 18 03.2	-0.2	
	baz=313							
L42A	Oliver, Polo	127.95	33	P	PKPdf	23 18 03.4	-0.1	
	baz=314							
TUL1	Leonard	128.04	42	P	PKiKP	23 18 04.5	+0.1	
	baz=304							
E48A	Lockeyer	128.10	24	P	PKiKP	23 18 04.3	+0.1	
	baz=325							
K43A	Burlington	128.17	31	P	PKPdf	23 18 03.9	0.0	
	baz=316							
N41A	Harden Midland	128.18	35	P	PKPdf	23 18 04.2	+0.2	
	baz=312							
I45A	Fountain	128.23	28	P	PKPdf	23 18 04.1	+0.2	
	baz=319							
H46A	Fife Lake	128.33	27	P	PKPdf	23 18 04.3	+0.2	
	baz=320							
GLMI	Grayling	128.38	27	P	PKiKP	23 18 04.8	0.0	
	baz=321							
G47A	Hillman	128.44	26	P	PKiKP	23 18 05.3	+0.4	
	baz=322							
F48A	Evansville	128.45	24	P	PKiKP	23 18 05.0	+0.2	
	baz=324							
J45A	Montague	128.61	29	PFAKE		23 18 20.0	+15	
J45A				LR	LR			
	comp=Z,300nm,21.0s							
I46A	Reed City	128.68	28	P	PKiKP	23 18 05.3	-0.2	
	baz=320							
E50A	Wahnapitae	128.71	23	P	PKiKP	23 18 05.4	0.0	
	baz=326,SNR=20							
M43A	Waltham Townsh	128.73	33	P	PKPdf	23 18 04.8	-0.1	
	baz=314							
F49A	Sandfield	128.74	24	P	PKPdf	23 18 05.0	+0.2	
	baz=324							
H47A	Mio	128.74	27	P	PKiKP	23 18 05.8	+0.3	
	baz=321							
L44A	Lake County Fo	128.76	31	P	PKPdf	23 18 05.2	+0.3	
	baz=316							
WHTX	Lake Whitney,	128.93	48	P	PKiKP	23 18 06.2	0.0	
	baz=300							
N43A	Stutzman Famil	128.96	33	P	PKPdf	23 18 05.3	-0.1	
	baz=314							
H48A	Harrisville	129.05	26	P	PKiKP	23 18 05.8	-0.3	
	baz=322							
I47A	Gladwin	129.05	27	P	PKPdf	23 18 05.3	-0.2	
	baz=321							
X37A	Clayton	129.06	44	PFAKE		23 18 20.0	+14	
X37A				LR	LR			
	comp=Z,400nm,22.0s							
E51A	G1948 Merrick	129.09	22	P	PKiKP	23 18 05.9	-0.3	
	baz=328,SNR=17							
D52A	ZEK Kipawa Sen	129.10	21	P	PKPdf	23 18 05.8	+0.3	
	baz=329,SNR=21							
833A	Chaparral WMA,	129.14	53	P	PKiKP	23 18 07.9	+1.1	
	baz=296							
HDIL	Hopedale	129.16	34	P	PKPdf	23 18 06.0	+0.2	
	baz=314							
M44A	Midewin, Midew	129.25	32	P	PKiKP	23 18 06.4	-0.3	
	baz=315							
D53A	Lac Vacive, Po	129.26	20	P	PKPdf	23 18 05.9	+0.1	
	baz=330,SNR=14							
I48A	Sherman Twp	129.29	27	P	PKiKP	23 18 06.8	+0.1	
	baz=322							
TOBO	Tobermory, Bru	129.39	24	P	PKiKP	23 18 06.5	-0.2	
	baz=325,SNR=9.5							
435B	Jarrell	129.42	49	P	PKPdf	23 18 06.3	-0.3	
	baz=299							
F51A	Arnstein	129.44	22	P	PKPdf	23 18 06.4	+0.2	
	baz=327,SNR=15							
K46A	Dorr	129.46	29	P	PKiKP	23 18 06.8	-0.3	
	baz=319							
J47A	Sunmer	129.51	28	P	PKPdf	23 18 06.7	+0.4	
	baz=320							
KIC	Kosan Boka	129.52	278	*e*PKP1	PKiKP	23 18 07.7	-0.3	
	comp=Z,162nm,1.3s							
D54A	Lac Fusel, La	129.55	19	P	PKPdf	23 18 06.1	-0.2	
	baz=331,SNR=9.0							
DBIC	Dimbokro	129.60	278	PKP	PKiKP	23 18 08.2	+0.2	
	comp=Z,22nm,0.7s,baz=77,slow=1.6,SNR=31							
E52A	Mattawa	129.61	21	P	PKPdf	23 18 06.8	+0.3	
	baz=329,SNR=12							
N44A	Piper City	129.62	33	P	PKPdf	23 18 06.1	-0.6	
	baz=315							
P43A	Skaggs, Pawnee	129.65	35	P	PKiKP	23 18 07.7	+0.2	
	baz=313							
M45A	Boilermakers S	129.67	31	P	PKiKP	23 18 07.2	-0.3	
	baz=316							
CCM	Cathedral Cave	129.68	37	*e*PKPdf	PKiKP	23 18 07.8	+0.2	
CCM	Cathedral Cave	129.68	37	P	PKiKP	23 18 07.3	-0.3	
	baz=310							
L46A	Eue Claire	129.71	30	P	PKPdf	23 18 07.1	+0.3	
	baz=318							
U40A	Yellville	129.72	40	P	PKPdf	23 18 07.3	+0.3	
	baz=307,SNR=27							
TIC	Toumodi	129.77	278	*e*PKP1	PKiKP	23 18 08.7	+0.2	
F52A	Sundridge	129.78	22	P	PKiKP	23 18 07.5	-0.1	
	baz=328,SNR=14							
W39A	Magazine	129.80	42	*e*PKPdf	PKiKP	23 18 08.1	+0.2	
W39A	Magazine	129.80	42	P	PKiKP	23 18 07.8	-0.1	
	baz=306,SNR=13							
KLBO	Killbear Provi	129.81	23	P	PKPdf	23 18 07.3	+0.4	
	baz=326,SNR=11							
LIC	Lamto	129.81	278	*e*PKP1	PKiKP	23 18 08.2	-0.3	
	comp=Z,95nm,0.7s							
K47A	Vermontville	129.85	29	P	PKPdf	23 18 07.4	+0.3	
	baz=319							
I49A	Point Hope	129.87	26	P	PKiKP	23 18 07.7	-0.1	
	baz=323,SNR=6.4							
E53A	Dumoine, Ponti	129.88	20	P	PKPdf	23 18 07.2	+0.2	
	baz=330,SNR=15							
O44A	Mansfield	129.89	33	P	PKPdf	23 18 07.6	+0.4	
	baz=314							
N45A	Kentland	129.92	32	P	PKiKP	23 18 07.9	-0.1	
	baz=316							
J48A	Bridge Port	129.94	27	P	PKiKP	23 18 07.7	-0.3	
	baz=321 ,SNR=9.9							
E54A	Lac Daplat, Po	130.00	20	P	PKPdf	23 18 07.2	0.0	
	baz=330,SNR=9.1							
BMRO	Meriville Lake	130.03	24	P	PKiKP	23 18 07.9	-0.2	
	baz=325,SNR=8.1							
BUKO	Buck Lake	130.05	22	P	PKiKP	23 18 07.8	-0.4	
	baz=327,SNR=8.2							
ALGO	Algonquin Park	130.11	21	P	PKPdf	23 18 07.7	+0.3	
	baz=329,SNR=11							
M46A	Old House Fiel	130.12	31	PFAKE		23 18 20.0	+12	
M46A				LR	LR			
	comp=Z,300nm,21.0s							
M46A	Old House Fiel	130.12	31	P	PKiKP	23 18 08.2	-0.2	
	baz=317							
K48A	Perry	130.17	28	P	PKPdf	23 18 08.0	+0.3	
	baz=320,SNR=11							
J49A	Marlette	130.19	27	P	PKPdf	23 18 07.8	+0.2	
	baz=322,SNR=6.0							
BRCO	Bruce Peninsul	130.22	25	P	PKPdf	23 18 07.7	0.0	
	baz=324							
O45A	Potomac	130.23	33	P	PKPdf	23 18 07.9	+0.1	
	baz=315							
L47A	Sherwood	130.28	29	P	PKPdf	23 18 08.1	+0.2	
	baz=319,SNR=7.6							
N46A	Monticello	130.30	32	P	PKiKP	23 18 08.6	-0.2	
	baz=316,SNR=9.4							
MIAR	Mount Ida	130.31	42	PFAKE		23 18 20.0	+11	
MIAR				LR	LR			
	comp=Z,300nm,20.0s							
MIAR	Mount Ida	130.31	42	P	PKiKP	23 18 09.3	+0.3	
	baz=305,SNR=18							
BASO	Ashfield	130.31	25	P	PKiKP	23 18 08.6	-0.1	
	baz=324,SNR=8.8							
BWLO	Walkerton	130.45	25	P	PKiKP	23 18 08.7	-0.3	
	baz=325,SNR=7.4							
SFIN	Lafayette	130.48	32	PFAKE		23 18 20.0	+11	
SFIN				LR	LR			
	comp=Z,300nm,22.0s							
SFIN	Lafayette	130.48	32	P	PKPdf	23 18 08.6	+0.3	
	baz=316							
K49A	Clarkson	130.49	28	P	PKPdf	23 18 08.2	0.0	
	baz=321							
LATQ	La Tuque	130.50	16	P	PKiKP	23 18 08.7	-0.3	
	baz=336,SNR=8.9							
H52A	Wyevale	130.53	23	P	PKPdf	23 18 08.4	+0.1	
	baz=326							
M47A	Cromwell	130.53	30	P	PKPdf	23 18 08.7	+0.3	
	baz=318							
G53A	Haliburton	130.61	22	P	PKPdf	23 18 08.8	+0.4	
	baz=328,SNR=10							
PEMO	Pembroke	130.63	21	P	PKPdf	23 18 08.6	+0.2	
	baz=330,SNR=15							
L48A	N Adams	130.68	29	P	PKiKP	23 18 09.1	-0.4	
	baz=320,SNR=19							
P45A	Graceland, Par	130.73	34	P	PKiKP	23 18 09.5	-0.1	
	baz=314,SNR=10							
I51A	Listowel	130.75	25	P	PKiKP	23 18 09.4	-0.2	
	baz=325,SNR=7.1							
AAM	Ann Arbor	130.78	28	P	PKiKP	23 18 09.6	-0.1	
	baz=321							
F55A	Otter Lake	130.80	20	P	PKPdf	23 18 08.8	0.0	
	baz=331							
W41B	Gary Mavity, V	130.83	41	P	PKPdf	23 18 09.5	+0.4	
	baz=307							
X40A	Basin Creek Fa	130.84	42	PFAKE		23 18 20.0	+10	
X40A				LR	LR			
	comp=Z,300nm,20.0s							
X40A	Basin Creek Fa	130.84	42	P	PKPdf	23 18 09.4	+0.2	
	baz=306							
N47A	Urbana	130.85	31	P	PKPdf	23 18 09.3	+0.4	
	baz=318,SNR=12							
L49A	Milan	130.87	28	P	PKPdf	23 18 09.4	+0.4	
	baz=320							
K50A	Casco	130.88	27	P	PKPdf	23 18 08.7	-0.2	
	baz=322							
I52A	Shelburne	130.89	24	P	PKiKP	23 18 09.8	-0.2	
	baz=326							
M48A	Edgerton	130.89	30	P	PKPdf	23 18 09.2	+0.2	
	baz=319							
Q45A	Warren Harvey,	130.93	34	P	PKiKP	23 18 09.9	-0.2	
	baz=314,SNR=12							
BANO	Bancroft	130.96	21	P	PKiKP	23 18 09.6	-0.3	
	baz=329,SNR=11							
P46A	Rosedale	130.96	33	P	PKiKP	23 18 09.9	-0.2	
	baz=315,SNR=9.5							
UALR	University of	131.00	41	*e*PKPdf	PKiKP	23 18 10.8	+0.4	
O47A	Sheridan	131.07	32	P	PKPdf	23 18 09.7	+0.3	
	baz=317,SNR=9.1							
NATX	Nacogdoches	131.09	46	P	PKiKP	23 18 10.3	-0.3	
	baz=302							
S44A	Carbondale	131.11	36	P	PKPdf	23 18 09.9	+0.4	
	baz=312,SNR=5.7							
G55A	Calabogie	131.19	20	P	PKPdf	23 18 09.8	+0.3	
	baz=331,SNR=6.6							
N48A	Decatur	131.20	30	P	PKPdf	23 18 09.9	+0.3	
	baz=318,SNR=7.2							
PLVO	Plevna	131.25	21	P	PKiKP	23 18 10.2	-0.4	
	baz=330,SNR=8.9							
M49A	Liberty Center	131.26	29	P	PKPdf	23 18 10.0	+0.3	
	baz=320,SNR=6.5							
R45A	Skylar, Fairfi	131.28	35	P	PKiKP	23 18 10.7	-0.1	
	baz=313,SNR=12							
Q46A	CEJHS Indians,	131.29	34	P	PKiKP	23 18 10.6	-0.2	
	baz=315							
ACTO	Acton	131.31	24	P	PKPdf	23 18 09.6	-0.2	
	baz=326							
I53A	Kortright Cn E	131.33	24	P	PKiKP	23 18 10.5	-0.3	
	baz=326							
L50A	Kingsville	131.37	28	P	PKPdf	23 18 10.1	+0.2	
	baz=322							
PKRO	Pickering	131.41	23	P	PKiKP	23 18 10.5	-0.4	
	baz=327							
K51A	Iona Station	131.42	26	P	PKPdf	23 18 09.7	-0.3	
	baz=324							
ORIO	Orleans, Innes	131.42	19	P	PKPdf	23 18 10.1	+0.2	
	baz=332,SNR=6.2							
J52A	Paris	131.44	25	P	PKPdf	23 18 10.2	+0.2	
	baz=325							
DELO	Deloro Mine	131.50	22	P	PKPdf	23 18 10.4	+0.3	
	baz=329							
P47A	Martinsville	131.56	33	P	PKPdf	23 18 10.8	+0.4	
	baz=316,SNR=7.3							
Z41A	Richland Creek	131.57	43	P	PKPdf	23 18 11.0	+0.4	
	baz=305							
N49A	Columbus Grove	131.58	30	P	PKPdf	23 18 10.8	+0.4	
	baz=319,SNR=10							
O48A	Farmland	131.58	31	P	PKPdf	23 18 10.7	+0.3	
	baz=318,SNR=6.8							
H55A	Tweed	131.63	21	P	PKPdf	23 18 10.7	+0.4	
	baz=330,SNR=5.3							
PLIO	Pelee Island,	131.68	28	P	PKPdf	23 18 10.6	+0.1	
	baz=322							
WLVO	Wesleyville	131.71	23	P	PKiKP	23 18 11.2	-0.3	
	baz=328,SNR=8.7							
I55A	Frankford	131.73	22	P	PKPdf	23 18 10.9	+0.3	
	baz=329							
M50A	Fremont	131.76	28	PFAKE		23 18 20.0	+8.3	
M50A				LR	LR			
	comp=Z,200nm,20.0s							
M50A	Fremont	131.76	28	P	PKPdf	23 18 10.6	-0.1	
	baz=321							
R46A	Gibon Southern	131.77	35	P	PKPdf	23 18 11.3	+0.5	
	baz=314,SNR=5.6							
TYNO	Tyneside	131.82	24	P	PKPdf	23 18 11.3	+0.5	
	baz=326							
Q47A	Bedord North L	131.87	33	P	PKPdf	23 18 11.4	+0.5	
	baz=316							
H56A	Elgin	131.92	20	P	PKiKP	23 18 11.6	-0.4	
	baz=331							
STCO	Saint Catharin	132.01	24	P	PKiKP	23 18 11.7	-0.4	
	baz=327							
S46A	Don Dixon Farm	132.02	35	P	PKPdf	23 18 11.6	+0.3	
	baz=313							
GLAT	Glass	132.02	38	PFAKE		23 18 20.0	+7.6	
GLAT				LR	LR			
	comp=Z,500nm,22.0s							
P48A	Milroy	132.03	32	P	PKPdf	23 18 11.7	+0.4	
	baz=317,SNR=8.6							
O49A	Covington	132.05	30	P	PKPdf	23 18 11.7	+0.4	
	baz=319,SNR=15							
X43A	Marvell	132.12	41	P	PKiKP	23 18 12.3	-0.3	
	baz=308							
BATG	Bathurst New B	132.12	10	PFAKE		23 18 20.0	+7.7	
BATG				LR	LR			
	comp=Z,300nm,22.0s							
J54A	Appleton	132.17	23	P	PKPdf	23 18 11.9	+0.5	
	baz=327							
N50A	Nevada	132.20	29	P	PKPdf	23 18 12.1	+0.5	
	baz=320,SNR=12							
M51A	Elyria	132.22	28	P	PKPdf	23 18 11.4	-0.2	
	baz=322							
PECO	Prince Edward	132.23	21	P	PKPdf	23 18 11.9	+0.4	
	baz=330,SNR=5.8							
Q48A	North Vernon	132.25	33	P	PKPdf	23 18 12.2	+0.5	
	baz=316,SNR=14							
R47A	Wooly Knot Far	132.27	34	P	PKPdf	23 18 12.2	+0.5	
	baz=315,SNR=17							
PQI	Presque Isle	132.33	12	PFAKE		23 18 20.0	+7.3	
PQI				LR	LR			
	comp=Z,300nm,19.0s							
MEDO	Medina	132.33	23	PFAKE		23 18 20.0	+7.2	
MEDO				LR	LR			
	comp=Z,300nm,21.0s							
MEDO	Medina	132.33	23	P	PKiKP	23 18 12.3	-0.5	
	baz=328							
P49A	Miami Univ. Ec	132.34	31	P	PKPdf	23 18 12.1	+0.3	
	baz=318,SNR=7.6							
T46A	Princeton	132.35	36	P	PKPdf	23 18 12.4	+0.4	
	baz=313,SNR=14							
M52A	Chesterland	132.43	27	PFAKE		23 18 20.0	+6.9	
M52A				LR	LR			
	comp=Z,200nm,22.0s							
M52A	Chesterland	132.43	27	P	PKPdf	23 18 12.4	+0.4	
	baz=323,SNR=5.1							
O50A	Cable	132.44	30	P	PKPdf	23 18 12.3	+0.2	
	baz=320,SNR=7.7							
WCI	Wyandotte Cave	132.44	34	*e*PKPpre	PKPpre	23 18 01.9		
WCI				*e*PKPdf	PKPdf	23 18 12.5	+0.4	
WCI	Wyandotte Cave	132.44	34	*e*PKHKP	PKPpre	23 18 01.9		
WCI				*e*		23 18 12.5		
WCI	Wyandotte Cave	132.44	34	P	PKPdf	23 18 12.5	+0.4	
	baz=315							
N51A	Ashland	132.45	28	P	PKPdf	23 18 12.4	+0.3	
	baz=322,SNR=6.6							
LONY	Lake Ozonia	132.46	19	P	PKPdf	23 18 12.3	+0.4	
	baz=333							
J55A	Hilton	132.49	23	P	PKiKP	23 18 12.6	-0.5	
	baz=328,SNR=11							
R48A	Northridge Ran	132.55	33	P	PKiKP	23 18 13.0	-0.4	
	baz=316,SNR=8.5							
S47A	Hartford	132.56	35	P	PKPdf	23 18 12.3	0.0	
	baz=314							
L53A	Girard	132.59	26	P	PKPdf	23 18 12.5	+0.2	
	baz=325							
U46A	Springville	132.64	37	P	PKiKP	23 18 13.2	-0.4	
	baz=312,SNR=6.9							
Q49A	Aurora	132.64	32	P	PKPdf	23 18 12.8	+0.3	
	baz=317,SNR=6.4							
ACSO	Alum Creek Sta	132.69	29	P	PKPdf	23 18 12.8	+0.3	
	baz=320,SNR=8.4							
K54A	Basiliko Farm,	132.70	24	P	PKPdf	23 18 12.4	-0.1	
	baz=327							
L54A	Sinclairville	132.76	25	P	PKPdf	23 18 12.9	+0.3	
	baz=326,SNR=7.8							
P50A	Jamestown	132.76	30	P	PKPdf	23 18 13.0	+0.3	
	baz=319,SNR=9.1							
M53A	WI Miller and	132.82	26	P	PKPdf	23 18 12.9	+0.2	
	baz=324,SNR=7.0							
T47A	Sharon Grove	132.85	36	P	PKPdf	23 18 13.5	+0.6	
	baz=314,SNR=6.0							
K55A	Perry	132.85	23	P	PKPdf	23 18 12.9	+0.2	
	baz=328,SNR=6.3							
N52A	McGinn's Farm,	132.86	28	P	PKPdf	23 18 13.0	+0.2	
	baz=322							
ALLY	Alegheny Colle	132.88	26	PFAKE		23 18 20.0	+6.0	
ALLY				LR	LR			
	comp=Z,400nm,22.0s							
O51A	Pataskala	132.94	29	P	PKiKP	23 18 13.6	-0.5	
	baz=321,SNR=14							
S48A	Wiedeman Farm,	132.98	34	P	PKPdf	23 18 13.6	+0.5	
	baz=315,SNR=17							
WVT	Waverly	133.00	37	*e*PKPdf	PKiKP	23 18 14.1	-0.3	
WVT	Waverly	133.00	37	*e*PKIKP	PKiKP	23 18 14.1	-0.3	
WVT	Waverly	133.00	37	P	PKPdf	23 18 13.7	+0.5	
	baz=312							
R49A	Shelbyville	133.01	33	P	PKiKP	23 18 13.9	-0.5	
	baz=317,SNR=7.1							
V46A	Holladay	133.05	37	P	PKPdf	23 18 13.4	+0.2	
	baz=312,SNR=8.2							
OXF	Oxford	133.07	40	PFAKE		23 18 30.0	+15	
OXF				LR	LR			
	comp=Z,300nm,20.0s							
OXF	Oxford	133.07	40	P	PKPdf	23 18 13.8	+0.5	
	baz=309							
U47A	Clarksville	133.11	36	P	PKiKP	23 18 14.2	-0.4	
	baz=313,SNR=8.8							
L55A	Hinsdale	133.16	24	P	PKPdf	23 18 14.0	+0.6	
	baz=327,SNR=10							
T48A	Bowling Green	133.17	35	P	PKiKP	23 18 14.3	-0.3	
	baz=314,SNR=15							
M54A	Oil Creek Stat	133.21	26	P	PKPdf	23 18 13.9	+0.5	
	baz=325,SNR=12							
P51A	Williamsport	133.23	30	P	PKPdf	23 18 13.3	-0.3	
	baz=320							
Q50A	Georgetown	133.24	31	P	PKPdf	23 18 13.8	+0.2	
	baz=318							
N53A	Lisbon	133.25	27	P	PKPdf	23 18 14.0	+0.5	
	baz=323,SNR=6.4							
S49A	Springfield	133.31	33	P	PKPdf	23 18 14.1	+0.3	
	baz=316,SNR=9.7							
W46A	Michie	133.32	38	P	PKPdf	23 18 13.9	+0.1	
	baz=311,SNR=7.3							
O52A	Adamsville	133.34	28	P	PKPdf	23 18 14.3	+0.5	
	baz=322,SNR=6.2							
PKME	Peaks-Kenny Pk	133.37	14	P	PKPdf	23 18 14.2	+0.6	
	baz=340							
V47A	Nunnelly	133.39	37	P	PKPdf	23 18 14.4	+0.4	
	baz=312,SNR=8.4							
Q51A	Peebles	133.43	31	PFAKE		23 18 30.0	+15	
Q51A				LR	LR			
	comp=Z,200nm,20.0s							
Q51A	Peebles	133.43	31	P	PKPdf	23 18 14.1	+0.2	
	baz=319,SNR=5.1							
R50A	Paris	133.47	32	P	PKPdf	23 18 14.0	0.0	
	baz=318,SNR=5.7							
U48A	Cassie Pea, Po	133.50	36	P	PKPdf	23 18 14.7	+0.5	
	baz=314,SNR=10							
N54A	Moraine State	133.51	26	PFAKE		23 18 30.0	+15	
N54A				LR	LR			
	comp=Z,300nm,21.0s							
N54A	Moraine State	133.51	26	P	PKPdf	23 18 14.3	+0.3	
	baz=324							
O53A	New Philadelph	133.53	28	P	PKPdf	23 18 14.5	+0.4	
	baz=322							
P52A	Corning	133.57	29	P	PKPdf	23 18 14.5	+0.3	
	baz=321,SNR=12							
X46A	Booneville	133.57	39	P	PKPdf	23 18 14.4	+0.1	
	baz=310							
M55A	Ridgway	133.62	25	P	PKPdf	23 18 14.5	+0.3	
	baz=326,SNR=7.7							
LBNH	Lisbon	133.62	17	P	PKPdf	23 18 14.3	+0.1	
	baz=336							
T49A	Edmonton	133.66	34	P	PKPdf	23 18 14.7	+0.3	
	baz=316,SNR=12							
LMN	Caledonia Moun	133.72	10	PFAKE		23 18 30.0	+14	
LMN				LR	LR			
	comp=Z,300nm,19.0s							
W47A	Westpoint	133.73	38	P	PKPdf	23 18 14.5	-0.1	
	baz=312,SNR=14							
VBMS	Vicksburg	133.74	43	P	PKPdf	23 18 14.7	0.0	
	baz=307							
M56A	Emporium	133.85	24	P	PKPdf	23 18 14.7	+0.1	
	baz=327,SNR=6.6							
R51A	Hillsboro	133.85	32	P	PKPdf	23 18 14.8	+0.1	
	baz=318,SNR=6.5							
ACCN	Adirondack Com	133.86	19	PFAKE		23 18 30.0	+14	
ACCN				LR	LR			
	comp=Z,300nm,18.0s							
V48A	Smith Brothers	133.87	37	P	PKPdf	23 18 14.7	-0.1	
	baz=313,SNR=6.8							
S50A	Richmond	133.88	33	P	PKPdf	23 18 15.2	+0.4	
	baz=317,SNR=7.7							
CLTN	Cedars of Leba	133.92	36	PFAKE		23 18 30.0	+14	
CLTN				LR	LR			
	comp=Z,200nm,20.0s							
U49A	Red Boiling Sp	133.94	35	P	PKPdf	23 18 15.3	+0.3	
	baz=315,SNR=9.6							
O54A	Avella	133.97	27	P	PKPdf	23 18 14.9	0.0	
	baz=324,SNR=7.4							
Q52A	Bidwell	134.02	30	P	PKPdf	23 18 15.3	+0.2	
	baz=320,SNR=11							
P53A	Whipple	134.04	29	P	PKPdf	23 18 15.6	+0.6	
	baz=322,SNR=15							
X47A	Russelville	134.05	39	P	PKPdf	23 18 15.3	+0.1	
	baz=311							
N55A	Marion Center	134.10	25	P	PKPdf	23 18 15.3	+0.1	
	baz=326							
BINY	Binghamton	134.10	22	PFAKE		23 18 30.0	+14	
BINY				LR	LR			
	comp=Z,200nm,22.0s							
BINY	Binghamton	134.10	22	P	PKPdf	23 18 15.4	+0.3	
	baz=330							
T50A	Nancy	134.11	34	P	PKPdf	23 18 15.5	+0.2	
	baz=316,SNR=14							
W48A	Pulaski	134.21	37	P	PKPdf	23 18 15.7	+0.2	
	baz=312							
N56A	West Decatur	134.28	25	P	PKPdf	23 18 16.0	+0.5	
	baz=326,SNR=6.3							
R52A	Catlettsburg	134.31	31	P	PKPdf	23 18 15.9	+0.3	
	baz=320,SNR=6.1							
S51A	Beattyville	134.34	32	P	PKPdf	23 18 16.2	+0.5	
	baz=318,SNR=11							
V49A	McMinnville

baz=327
P55A Reedsville 134.76 27 P **PKPdf 23 18 17.1 +0.6**
baz=324,SNR=5.7
Y48A Jasper 134.88 39 P **PKPdf 23 18 16.7 0.0**
baz=311
V50A Pikevile 134.93 35 P **PKPdf 23 18 17.0 +0.2**
baz=315
X49A Woodville 135.00 37 P **PKPdf 23 18 17.2 +0.2**
baz=313
U51A La Follette 135.03 34 P **PKPdf 23 18 17.3 +0.3**
baz=317
Q55A Buckhannon 135.05 28 P **PKPdf 23 18 17.1 +0.1**
baz=323
T52A Hallie 135.06 32 P **PKPdf 23 18 17.8 +0.8**
baz=318,SNR=5.3
S53A Williamson 135.07 31 P **PKPdf 23 18 17.5 +0.4**
baz=320
W50A Signal Mountai 135.13 36 PFAKE 23 18 30.0 +11
W50A LR LR
comp=Z,300nm,21.0s
W50A Signal Mountai 135.13 36 P **PKPdf 23 18 17.6 +0.4**
baz=314
O57A Amberson 135.14 25 P **PKPdf 23 18 17.8 +0.7**
baz=327
TZTN Tazewell 135.17 33 P **PKPdf 23 18 17.8 +0.5**
baz=317
P56A Dayton Farm, R 135.21 26 P **PKPdf 23 18 17.8 +0.6**
baz=325
R54A Victor 135.26 29 P **PKPdf 23 18 17.8 +0.4**
baz=322
V51A Loudon 135.26 35 P **PKPdf 23 18 18.2 +0.8**
baz=316
N59A State Game Lan 135.29 22 P **PKPdf 23 18 17.8 +0.4**
baz=330
HRV Adam Dziewonsk 135.32 17 *e*PKPdf **PKiKP 23 18 18.7 -0.1**
HRV Adam Dziewonsk 135.32 17 *e*PKIKP **PKiKP 23 18 18.7 -0.1**
HRV Adam Dziewonsk 135.32 17 P **PKiKP 23 18 18.2 -0.7**
baz=336
U52A Thorn Hill 135.38 33 P **PKiKP 23 18 18.5 -0.7**
baz=318
Y49A Blount Mountai 135.38 38 P **PKPdf 23 18 17.9 +0.1**
baz=312
T53A Wise 135.39 32 P **PKPdf 23 18 18.2 +0.4**
baz=319
S54A Dingess, Beckl 135.40 30 P **PKPdf 23 18 18.0 +0.3**
baz=321
Q56A Snyder Ridge, 135.43 27 P **PKPdf 23 18 18.0 +0.3**
baz=324
148A Greensboro 135.44 40 P **PKPdf 23 18 18.4 +0.5**
baz=310
X50B Fort Payne 135.44 37 P **PKPdf 23 18 17.9 0.0**
baz=314
W51A Cleveland 135.48 36 P **PKPdf 23 18 18.4 +0.5**
baz=315
LRAL Lakeview Retre 135.56 40 PFAKE 23 18 30.0 +10
LRAL LR LR
comp=Z,300nm,20.0s
LRAL Lakeview Retre 135.56 40 P **PKPdf 23 18 18.8 +0.7**
baz=311
P57A Homestead Farm 135.59 26 P **PKPdf 23 18 18.5 +0.6**
baz=326
O59A Robesonia 135.65 23 P **PKPdf 23 18 18.7 +0.7**
baz=329
V52A Sevierville 135.66 34 P **PKiKP 23 18 19.4 -0.4**
baz=317
M61A Granite Spring 135.68 20 P **PKiKP 23 18 19.2 -0.4**
baz=333
Z49A Columbiana 135.75 39 P **PKPdf 23 18 18.9 +0.5**
baz=312
Y50A Piedmont 135.78 38 P **PKPdf 23 18 18.6 +0.1**
baz=313
Q57A Strasburg 135.78 26 P **PKPdf 23 18 18.8 +0.4**
baz=325
S55A Lewisburg 135.82 29 P **PKPdf 23 18 18.7 +0.2**
baz=322
T54A Tazewell 135.83 31 P **PKPdf 23 18 19.0 +0.4**
baz=320
U53A Fall Branch 135.83 32 P **PKPdf 23 18 19.4 +0.8**
baz=318
X51A Calhoun 135.84 36 PFAKE 23 18 30.0 +10
X51A LR LR
comp=Z,200nm,22.0s
X51A Calhoun 135.84 36 P **PKPdf 23 18 19.3 +0.7**
baz=314
MVL Millersville 135.85 24 PFAKE 23 18 30.0 +10
MVL LR LR
comp=Z,600nm,20.0s
PAL Palisades 135.90 21 P **PKPdf 23 18 19.1 +0.6**
baz=332
O60A Telford 135.95 23 P **PKPdf 23 18 19.1 +0.5**
baz=330
YLE Yale 135.96 20 PFAKE 23 18 30.0 +10
YLE LR LR
comp=Z,200nm,20.0s
149A Jones 135.97 40 P **PKiKP 23 18 20.0 -0.5**
baz=311
W52A Murphy 136.01 35 P **PKPdf 23 18 19.3 +0.3**
baz=316
Z50A Ashland 136.09 38 P **PKPdf 23 18 19.8 +0.7**
baz=312
U54A Nelsons Funny 136.11 32 PFAKE 23 18 30.0 +9.2
U54A LR LR
comp=Z,300nm,22.0s
U54A Nelsons Funny 136.11 32 P **PKPdf 23 18 19.4 +0.3**
baz=320
P59A Jarrettsville 136.15 24 P **PKPdf 23 18 19.8 +0.8**
baz=328
249A Camden 136.16 41 P **PKPdf 23 18 19.8 +0.6**
baz=310
Y51A Rockmart 136.18 37 P **PKPdf 23 18 19.7 +0.5**
baz=314
T55A Pulaski 136.19 30 P **PKPdf 23 18 19.8 +0.6**
baz=321
V53A Saluda 136.22 33 P **PKPdf 23 18 20.0 +0.7**
baz=318
P60A Greenville 136.29 23 P **PKPdf 23 18 20.0 +0.8**
baz=329
BLA Blacksburg 136.30 30 P **PKPdf 23 18 19.7 +0.3**
baz=322
R57A Stanardsville 136.33 27 P **PKPdf 23 18 20.0 +0.7**
baz=325
S56A Natural Bridge 136.35 29 P **PKPdf 23 18 19.9 +0.5**
baz=323
X52A Dahlonega 136.38 35 P **PKPdf 23 18 19.8 +0.2**
baz=316
W53A Cullowhee 136.39 34 P **PKPdf 23 18 20.3 +0.6**
baz=317
M65A Busby, Falmout 136.45 17 P **PKiKP 23 18 20.4 -0.8**
baz=337
150A Eclectic 136.46 39 P **PKPdf 23 18 20.5 +0.7**
baz=312
O61A Allentown 136.46 22 P **PKPdf 23 18 20.0 +0.5**
baz=331
Z51A Franklin 136.51 38 P **PKPdf 23 18 20.1 +0.2**
baz=313
349A Repton 136.51 42 P **PKPdf 23 18 20.0 +0.1**
baz=309
U55A TA2, Sparta 136.53 31 P **PKPdf 23 18 20.3 +0.4**
baz=320
R58A Rapidan 136.57 27 P **PKPdf 23 18 20.4 +0.7**
baz=325
S57A Dark Hollow, R 136.57 28 PFAKE 23 18 30.0 +8.4
S57A LR LR
comp=Z,300nm,20.0s
S57A Dark Hollow, R 136.57 28 P **PKPdf 23 18 19.9 +0.1**
baz=324
V54A Nebo 136.60 32 P **PKPdf 23 18 19.9 -0.1**
baz=319
T56A Rocky Mt 136.63 30 P **PKPdf 23 18 20.4 +0.4**
baz=322
BG3 Lake Jocassee 136.65 34 PFAKE 23 18 30.0 +8.2
BG3 LR LR
comp=Z,200nm,18.0s
Q59A Harwood 136.68 25 P **PKPdf 23 18 20.9 +0.9**
baz=328
250A Grady 136.71 40 PFAKE 23 18 30.0 +8.0
250A LR LR
comp=Z,200nm,21.0s
250A Grady 136.71 40 P **PKPdf 23 18 21.0 +0.8**
baz=311
BRAL Brewton 136.72 42 PFAKE 23 18 30.0 +8.0
BRAL LR LR
comp=Z,300nm,20.0s
BRAL Brewton 136.72 42 P **PKPdf 23 18 20.8 +0.6**
baz=309
P61A Hammonton 136.74 22 P **PKPdf 23 18 20.4 +0.4**
baz=330
X53A Estanollee 136.79 35 P **PKPdf 23 18 20.9 +0.6**
baz=316
Y52A Lilburn 136.80 36 P **PKPdf 23 18 21.3 +0.9**
baz=315
PLCA Paso Flores 136.86 163 PKP **PKiKP 23 18 21.7 -0.5**
comp=Z,19nm,0.8s,baz=259,slow=1.4,SNR=23
PLCA SKPbc **SKiKP 23 21 52.0 -1.9**
comp=Z,14nm,1.1s,baz=215,slow=4.8,SNR=6.6
PLCA Paso Flores 136.86 163 *e*PKPdf **PKiKP 23 18 21.5 -0.7**
PLCA Paso Flores 136.86 163 *e*PKIKP **PKiKP 23 18 21.5 -0.7**
PLCA Paso Flores 136.86 163 *e*P **PKiKP 23 18 22.1 -0.1**
449A Pace 136.87 42 P **PKPdf 23 18 21.2 +0.7**
baz=309
R58B Mineral 136.90 27 P **PKPdf 23 18 21.3 +0.9**
baz=325
Q60A Greensboro 136.90 24 P **PKPdf 23 18 20.9 +0.6**
baz=329
CBN Corbin Frederi 136.93 26 P **PKPdf 23 18 20.8 +0.3**
baz=326
V55A Taylorsville 136.94 32 P **PKPdf 23 18 21.2 +0.6**
baz=320
151A Opelika 136.95 39 P **PKPdf 23 18 21.0 +0.3**
baz=312
U56A King 136.99 31 P **PKPdf 23 18 21.5 +0.8**
baz=321
W54A Cherokee Point 136.99 33 P **PKPdf 23 18 21.4 +0.7**
baz=318
350A Dozier 137.03 41 P **PKPdf 23 18 21.2 +0.3**
baz=310
T57A Hurt 137.04 29 PFAKE 23 18 30.0 +7.5
T57A LR LR
comp=Z,300nm,21.0s
T57A Hurt 137.04 29 P **PKPdf 23 18 21.2 +0.5**
baz=323
R59A King George, V 137.04 26 P **PKPdf 23 18 21.3 +0.7**
baz=326
Z52A Williamson 137.06 37 P **PKPdf 23 18 21.8 +0.9**
baz=314
Y53A Monroe 137.09 36 P **PKPdf 23 18 21.5 +0.6**
baz=315
S58A Poland Farm, P 137.11 27 P **PKPdf 23 18 21.4 +0.6**
baz=325
251A Midway 137.19 39 P **PKPdf 23 18 21.2 +0.1**
baz=312
Q61A Milford 137.22 24 P **PKPdf 23 18 21.6 +0.7**
baz=329
R60A Leonardtown, M 137.22 25 P **PKPdf 23 18 21.2 +0.2**
baz=327
152A Waverly Hall 137.23 38 P **PKPdf 23 18 21.5 +0.3**
baz=313
450A Crestview 137.26 42 P **PKPdf 23 18 21.7 +0.4**
baz=310
X54A Belton 137.28 34 P **PKPdf 23 18 21.2 0.0**
baz=317
S59A Mechanicsville 137.33 26 P **PKiKP 23 18 22.3 -0.8**
baz=326
V56A Mocksville 137.35 31 P **PKPdf 23 18 21.3 0.0**
baz=321
KMSC Kings Mountain 137.41 33 P **PKPdf 23 18 21.8 +0.3**
baz=319
T58A Grand View Acr 137.42 28 P **PKPdf 23 18 21.6 +0.2**
baz=324
U57A Blanch 137.45 29 P **PKPdf 23 18 21.7 +0.3**
baz=322
GOGA Godfrey 137.47 36 P **PKPdf 23 18 22.2 +0.6**
baz=315
Z53A Monticello 137.50 36 P **PKPdf 23 18 22.3 +0.7**
baz=315
HODGE Hodges 137.58 34 PFAKE 23 18 30.0 +6.3
HODGE LR LR
comp=Z,300nm,21.0s
351A Pinckard 137.60 40 P **PKPdf 23 18 22.4 +0.5**
baz=311
Y54A Tignall 137.60 35 P **PKPdf 23 18 22.5 +0.7**
baz=316
V57A Coltrane Farms 137.65 30 P **PKPdf 23 18 22.0 +0.1**
baz=322
S60A Water View 137.66 26 P **PKiKP 23 18 23.3 -0.4**
baz=327
252A Lumpkin 137.68 39 P **PKPdf 23 18 22.7 +0.7**
baz=313
R61A Willards 137.68 24 P **PKPdf 23 18 22.6 +0.7**
baz=329
X55A Gracelyn & Ava 137.75 33 P **PKPdf 23 18 22.8 +0.7**
baz=318
153A Fort Valley 137.79 37 P **PKPdf 23 18 23.0 +0.8**
baz=314
W56A Indian Trail 137.82 32 P **PKPdf 23 18 22.8 +0.6**
baz=320
T59A Double "B" Far 137.86 27 P **PKPdf 23 18 22.6 +0.4**
baz=325
U58A Oxford 137.86 29 P **PKPdf 23 18 22.6 +0.4**
baz=324
352A Blakely 137.90 40 P **PKPdf 23 18 22.6 +0.2**
baz=312
451A Vernon 137.94 41 P **PKPdf 23 18 22.8 +0.3**
baz=310
Z54A Sparta 137.96 36 P **PKPdf 23 18 23.4 +0.9**
baz=316
253A Americus 138.01 38 PFAKE 23 18 30.0 +5.3
253A LR LR
comp=Z,300nm,21.0s
253A Americus 138.01 38 P **PKPdf 23 18 23.1 +0.4**
baz=313
Y55A Saluda 138.02 34 P **PKPdf 23 18 23.4 +0.8**
baz=318
V58A Windy Hill, Pi 138.06 30 P **PKPdf 23 18 23.0 +0.4**
baz=322
X56A White Oak 138.06 33 P **PKPdf 23 18 23.2 +0.6**
baz=319
T60A Surry 138.09 26 P **PKPdf 23 18 22.8 +0.2**
baz=326
S61A Accomac 138.09 25 P **PKPdf 23 18 22.7 0.0**
baz=328
W57A Gilead 138.11 31 P **PKPdf 23 18 22.6 -0.1**
baz=321
452A Marianna 138.15 40 P **PKPdf 23 18 23.8 +0.9**
baz=311
154A Montrose 138.25 37 PFAKE 23 18 40.0 +15
154A LR LR
comp=Z,300nm,21.0s
154A Montrose 138.25 37 P **PKPdf 23 18 23.6 +0.5**
baz=315
U59A Littleton 138.25 28 P **PKPdf 23 18 23.4 +0.5**
baz=324
BIRD Birdtown, Kers 138.26 32 PFAKE 23 18 40.0 +15
BIRD LR LR
comp=Z,300nm,21.0s
Z55A Blythe 138.38 35 P **PKPdf 23 18 24.2 +0.9**
baz=317
Y56A Pelion 138.44 34 P **PKPdf 23 18 24.4 +1.0**
baz=318
353A Camilla 138.44 39 P **PKPdf 23 18 24.4 +1.0**
baz=313
U60A Pendleton 138.45 27 P **PKPdf 23 18 23.9 +0.6**
baz=325
V59A Middlesex 138.51 29 P **PKPdf 23 18 23.8 +0.3**
baz=324
552A Lynn Haven 138.54 41 P **PKiKP 23 18 24.9 -0.9**
baz=310
X57A Johnson Farm, 138.59 32 P **PKiKP 23 18 24.8 -1.0**
baz=320
254A Abbeville 138.60 38 P **PKPdf 23 18 24.7 +1.0**
baz=314
W58A Raeford 138.61 31 P **PKiKP 23 18 24.8 -1.0**
baz=322
155A Kite 138.62 36 P **PKPdf 23 18 24.7 +1.0**
baz=316
453A Whigham 138.71 40 P **PKPdf 23 18 24.9 +1.0**
baz=312
ASCN Ascension 138.73 258 *e*PKPpre PKPpre 23 18 12.9
ASCN *e*PKPdf **PKPdf 23 18 24.8 +0.3**
Z56A Williston 138.75 34 P **PKPdf 23 18 25.1 +1.1**
baz=318
TIGA Tifton 138.77 38 P **PKiKP 23 18 25.2 -1.0**
baz=314
Y57A Sumter 138.77 33 P **PKPdf 23 18 24.5 +0.5**
baz=320
U61A Possum Corner 138.89 27 P **PKPdf 23 18 24.8 +0.7**
baz=326
W59A Clinton 138.89 30 P **PKPdf 23 18 24.9 +0.8**
baz=323
X58A Rowland 138.91 31 P **PKPdf 23 18 24.9 +0.7**
baz=321
V60A Jim Taylor Roa 138.98 28 PFAKE 23 18 40.0 +13
V60A LR LR
comp=Z,300nm,18.0s
V60A Jim Taylor Roa 138.98 28 P **PKPdf 23 18 25.0 +0.7**
baz=325
553A Crawfordville 139.07 41 P **PKPdf 23 18 25.7 +1.1**
baz=312
CNNC Cliffs of the 139.10 29 PFAKE 23 18 40.0 +13
CNNC LR LR
comp=Z,300nm,18.0s
CNNC Cliffs of the 139.10 29 P **PKPdf 23 18 25.3 +0.8**
baz=324
255A Hazlehurst 139.11 37 P **PKPdf 23 18 25.7 +1.1**
baz=315
Z57A Bowman 139.14 34 P **PKPdf 23 18 25.8 +1.1**
baz=319
156A Sylvania 139.16 35 P **PKiKP 23 18 26.2 -0.8**
baz=317
454A Quitman 139.24 39 P **PKPdf 23 18 25.5 +0.6**
baz=313
Y58A Scranton 139.24 32 P **PKiKP 23 18 26.2 -0.9**
baz=320
V61A Roper 139.28 27 P **PKPdf 23 18 25.6 +0.8**
baz=326
X59A McDuffie Farm, 139.28 30 P **PKPdf 23 18 25.0 +0.1**
baz=322
355A Pearson 139.29 38 P **PKiKP 23 18 26.3 -1.0**
baz=314
W60A Pink Hill 139.34 29 P **PKiKP 23 18 26.2 -1.1**
baz=324
256A Glennville 139.42 36 P **PKiKP 23 18 26.4 -1.1**
baz=316
157A Early Branch 139.43 35 P **PKiKP 23 18 26.8 -0.8**
baz=318
NHSC New Hope 139.57 33 P **PKPdf 23 18 24.8 -0.6**
baz=319
W61A Ground Anchor 139.59 28 P **PKPdf 23 18 24.9 -0.5**
baz=325
X60A Albert Glenn T 139.59 30 P **PKPdf 23 18 26.3 +0.9**
baz=323
455A Stateville 139.60 39 P **PKPdf 23 18 26.7 +1.2**
baz=314
Z58A St. Stephen 139.60 33 P **PKiKP 23 18 26.8 -1.0**
baz=320
554A Perry 139.63 40 P **PKPdf 23 18 26.7 +1.1**
baz=312
356A Blackshear 139.75 37 P **PKiKP 23 18 27.2 -1.0**
baz=315
V62A Hyde County Ai 139.75 27 P **PKPdf 23 18 25.7 0.0**
baz=326
158A Hollywood 139.84 34 P **PKPdf 23 18 27.1 +1.2**
baz=319
Y60A Bolivia 139.92 31 P **PKPdf 23 18 26.9 +0.9**
baz=322
257A Skidaway Islan 139.93 35 P **PKPdf 23 18 26.9 +0.7**
baz=317
Z59A Georgetown, SC 139.96 32 P **PKPdf 23 18 27.2 +1.1**
baz=320
555A McAlpin 140.06 39 P **PKiKP 23 18 27.7 -1.2**
baz=313
357A Townsend 140.06 36 P **PKPdf 23 18 27.3 +0.9**
baz=316
456A Hilliard 140.23 38 P **PKPdf 23 18 27.5 +0.8**
baz=315
655A Horseshoe Beac 140.29 40 P **PKPdf 23 18 27.4 +0.6**
baz=312
556A Lake Butler 140.50 39 P **PKPdf 23 18 27.8 +0.6**
baz=314
457A Yulee 140.59 37 P **PKPdf 23 18 28.3 +0.9**
baz=315
656A Willston 140.84 40 P **PKPdf 23 18 28.8 +0.9**
baz=313
557A Orange Park 140.91 38 P **PKPdf 23 18 28.7 +0.8**
baz=315
657A Interlachen 141.12 39 P **PKPdf 23 18 29.5 +1.1**
baz=314
TRQA Tornquist 141.38 171 *e*PKPpre PKPpre 23 18 23.5
TRQA *e*PKPdf **PKPdf 23 18 28.7 +0.1**
TRQA Tornquist 141.38 171 *e*PKHKP PKPpre 23 18 23.5
TRQA *e* 23 18 28.7
TRQA Tornquist 141.38 171 *e*P **PKPdf 23 18 29.0 +0.3**
757A Oxford 141.43 40 P **PKPdf 23 18 30.0 +1.1**
baz=313
658A Bunnell 141.61 38 P **PKPdf 23 18 30.5 +1.2**
baz=315
857A Zephyrhills 141.78 41 P **PKiKP 23 18 31.2 -1.2**
baz=312
TEIG Tepich 141.81 57 *e*PKPdf **PKPdf 23 18 27.8 -2.0**
758A Lake Helen 141.97 39 P **PKPdf 23 18 30.6 +0.7**
baz=314
957A Wimauma 142.18 42 P **PKPdf 23 18 31.4 +1.1**
baz=312
858A St. Cloud 142.38 40 P **PKPdf 23 18 30.8 +0.1**
baz=313
DWPF Disney Wildern 142.41 40 P **PKPdf 23 18 31.4 +0.7**
baz=313
958A Wauchula 142.55 41 P **PKPdf 23 18 32.2 +1.3**
baz=312
859A Kempfer Cattle 142.79 40 P **PKPdf 23 18 32.5 +1.2**
baz=314
058A Arcadia 142.87 42 P **PKPdf 23 18 32.5 +0.9**
baz=312
959A Okeechobee 143.16 40 P **PKPdf 23 18 32.7 +0.7**
baz=313
059A Moore Haven 143.37 41 P **PKPdf 23 18 33.3 +0.9**
baz=312
059Z Ave Maria 143.59 42 P **PKPdf 23 18 33.4 +0.6**
baz=312
060A Indiantown 143.83 40 P **PKPdf 23 18 33.3 +0.1**
baz=314
060Z West Palm Beac 144.13 41 P **PKPdf 23 18 33.4 -0.4**
baz=313
061Z Ochoppi 144.26 42 P **PKPdf 23 18 33.8 -0.3**
baz=312
062Z Marathon 144.90 44 P **PKPdf 23 18 35.6 +0.4**
baz=310
TGUH Tegucigalpa,Un 145.19 65 *e*P **PKPdf 23 18 36.1 +0.1**
SACV Santiago Islan 145.72 297 *e*PKPbc **PKPab 23 18 38.7 +1.0**
CFA Coronel Fontan 145.96 160 PKPbc **PKPab 23 18 38.7 +0.6**
comp=Z,39nm,0.6s,baz=212,slow=3.3,SNR=79
GO04 Tololo Observa 146.24 155 *e*PKPbc **PKPbc 23 18 39.0 +0.3**
BBSR BB Station 146.71 15 *e*PKPbc **PKPbc 23 18 40.0 +0.3**
PLTB Pedras Altas 148.18 182 *e*P **PKPbc 23 18 42.4 -1.4**
PLTB Pedras Altas 148.18 182 *e*P **PKPdf 23 18 41.3 +0.7**
JTS Las Juntas de 148.54 70 *e*PKPdf **PKPdf 23 18 42.2 +0.7**
JTS *e*PKPbc **PKiKP 23 18 46.7 -0.1**
JTS Las Juntas de 148.54 70 *e*PKIKP **PKPdf 23 18 42.3 +0.7**
JTS *e* 23 18 46.7
ESPN Las Esperanzas 148.54 67 *e*PKPbc **PKiKP 23 18 46.3 -0.5**
CPSB Cacapava Do Su 149.53 183 *e*P **PKPdf 23 18 44.5 +1.8**
CNLB Canela 150.39 187 *e*P **PKPdf 23 18 44.7 +0.4**
CNLB Canela 150.39 187 *e*P **PKPbc 23 18 48.1 -1.4**
PB04 IPOC Station P 153.15 148 *e*PKPdf **PKPdf 23 18 48.0 -0.8**
PB04 *e*PKPbc **PKPbc 23 18 54.7 -1.5**
CPUP Villa Florida 153.52 175 PKP **PKPdf 23 18 49.2 +0.3**
comp=Z,13nm,0.9s,baz=75,slow=0.9,SNR=9.5
CPUP PKPbc **PKiKP 23 18 58.1 +1.4**
comp=Z,30nm,0.7s,baz=141,slow=1.5,SNR=35
CPUP PKPab **sPKPdf 23 19 10.6 +0.7**
comp=Z,32nm,0.9s,baz=177,slow=3.6,SNR=6.9
CPUP Villa Florida 153.52 175 *e*P **PKPdf 23 18 50.5 +1.6**
LVC Limon Verde 153.57 150 PKPbc **PKiKP 23 19 00.0 +2.6**
comp=Z,32nm,0.6s,baz=248,slow=3.0,SNR=12
LVC Limon Verde 153.57 150 *e*PKPdf **PKPdf 23 18 46.5 -3.0**
LVC Limon Verde 153.57 150 *e*PKIKP **PKPdf 23 18 46.6 -3.0**
LVC Limon Verde 153.57 150 *e*P **PKPdf 23 18 49.6 +0.1**
DUB01 Friburgo-RJ 154.68 208 *e*P **PKPdf 23 18 53.6 +2.9**
DUB01 Friburgo-RJ 154.68 208 *e*P **PKPab 23 19 13.4 -0.6**
ESAR Angra dos Reis 154.75 203 *e*P **PKPdf 23 18 53.0 +2.4**
VAS01 Vassouras-RJ 154.99 206 *e*P **PKPdf 23 18 53.5 +2.4**
VAS01 Vassouras-RJ 154.99 206 *e*P **PKPab 23 19 15.5 +0.2**
ALF01 Guarapari-ES 155.06 213 *e*P **PKPdf 23 18 53.0 +1.9**
NNA Nana 155.13 120 PKP **PKPdf 23 18 53.2 +1.7**
comp=Z,19nm,0.9s,baz=302,slow=10,SNR=5.1
SDDR Presa de Saban 155.40 40 PFAKE 23 19 00.0 +8.2
SDDR LR LR
comp=Z,400nm,18.0s
ATAH Atahualpa 155.52 108 PKP **PKPdf 23 18 54.7 +2.2**
comp=Z,16nm,0.9s,baz=336,slow=3.7,SNR=11
ATAH PKPbc **pPKPdf 23 19 04.5 -3.4**
comp=Z,20nm,0.8s,baz=199,slow=2.7,SNR=9.9
ATAH PKPab sPKPbc 23 19 21.6 -1.3
comp=Z,24nm,0.9s,baz=163,slow=13,SNR=7.0
FRTB Fartura 156.01 192 *e*P **PKPab 23 19 22.0 +2.4**
RCLB Rio Claro- Sao 156.38 197 *e*P **PKPab 23 19 23.1 +1.8**
OTAV Otavalo 156.51 90 *e*PKPdf **PKPdf 23 18 52.5 -1.4**
OTAV Otavalo 156.51 90 *e*PKIKP **PKPdf 23 18 52.5 -1.4**
OTAV Otavalo 156.51 90 *e*P **PKPdf 23 18 55.3 +1.4**
BSFB Barra de Sao F 156.55 215 *e*P **PKPdf 23 18 55.3 +2.1**
BSCB Bom Sucesso 156.70 205 *e*P **PKPdf 23 18 54.7 +1.2**
SJMB Sao Joao De Ma 156.85 215 *e*P **PKPdf 23 18 55.6 +2.0**

TRCB	Terra Rica	157.03	186	eP	PKPdf	23 18 55.7	+1.9
GCUF	Volcan Galeras	157.60	87	eP	PKPdf	23 18 56.4	+1.1
BBAC	Balboa, Cauca	157.65	85	eP	PKPdf	23 18 55.7	+0.7
DBBC	Dabeiba	157.75	72	eP	PKPdf	23 18 56.2	+1.2
POPC	Popayan, Colom	158.17	84	eP	PKPdf	23 18 56.8	+1.0
YOTC	Yotoco, Valle	158.31	80	eP	PKPdf	23 18 56.8	+1.0
HELC	Santa Helena	158.63	73	eP	PKPdf	23 18 51.5	-5.0
MARP	Paez Belalcaza	158.85	83	eP	PKPdf	23 18 56.8	+0.2
ZARC	Zaragoza, Cauc	158.88	69	eP	PKPdf	23 18 57.4	+1.2
GUY2C	Guyana, Caldas	159.03	76	eP	PKPdf	23 18 55.4	-1.6
SJG	San Juan	159.08	31	ePKPdf	PKPdf	23 18 54.5	-1.8
SJG				ePKPab	PKPab	23 19 29.2	-3.7
SJG	San Juan	159.08	31	ePKIKP	PKPdf	23 18 54.6	-1.8
SJG				e		23 19 29.2	
LPAZ	La Paz	159.09	142	PKP	PKPdf	23 18 58.8	+1.6
	comp=Z,7.7nm,0.8s,baz=302,slow=0.4,SNR=23						
LPAZ				PKPab	PKPab	23 19 36.5	+2.6
	comp=Z,12nm,0.8s,baz=69,slow=3.3,SNR=3.6						
LPAZ	La Paz	159.09	142	eP	PKPdf	23 18 59.2	+2.0
CODC	Agustn Codazz	159.22	62	eP	PKPdf	23 18 58.1	+1.5
CCODA	Codazzi, Cesar	159.23	62	eP	PKPdf	23 18 52.1	-4.5
FLOC	Florencia	159.27	86	eP	PKPdf	23 18 57.1	+0.3
BETC	Betania	159.38	83	eP	PKPdf	23 18 57.4	+0.5
MTP	Monte Pirata	159.39	30	ePKPdf	PKPdf	23 18 55.1	-1.7
MTP				ePKPab	PKPab	23 19 35.0	+0.7
NORC	Norcasia	159.42	75	eP	PKPdf	23 18 52.8	-4.2
AQDB	Aquidauana	159.44	178	eP	PKPdf	23 18 58.6	+1.9
AQDB	Aquidauana	159.44	178	eP	PKPab	23 19 56.2	+22
STVI	Saint Thomas	159.46	28	ePKPdf	PKPdf	23 18 56.4	-0.4
STVI				ePKPab	PKPab	23 19 32.2	-2.3
PTBC	PUERTO BERRIO	159.56	72	eP	PKPdf	23 18 57.4	+0.4
URIC	Uribia, Colomb	159.59	55	eP	PKPdf	23 18 57.4	+0.4
ITRB	Iturama	159.71	193	eP	PKPdf	23 18 59.2	+2.1
PRAC	Prado	159.79	80	eP	PKPdf	23 18 58.1	+0.7
RCBR	Riachuelo	160.05	252	eP	PKPdf	23 18 59.6	+2.0
BRRC	Barranca, Sant	160.08	69	eP	PKPdf	23 18 59.4	+1.8
ROSC	El Rosal	160.12	76	PKP	PKPdf	23 18 59.9	+1.7
	comp=Z,16nm,0.8s,baz=84,slow=3.6,SNR=13						
ROSC				PKPab	PKPab	23 19 41.7	+3.3
	comp=Z,14nm,0.6s,baz=99,slow=15,SNR=5.7						
ROSC	El Rosal	160.12	76	eP	PKPdf	23 18 59.4	+1.2
PTLC	Puerto Leguiza	160.16	90	eP	PKPdf	23 18 57.4	-0.3
CTAB	Cerro Tablazo,	160.20	76	eP	PKPdf	23 19 00.5	+2.1
NBLI	Livramento-PB	160.53	247	eP	PKPdf	23 19 00.1	+1.9
GUEC	Guerrero, Nort	160.56	67	eP	PKPdf	23 18 56.8	-1.8
CHIC	Chingaza	160.74	77	eP	PKPdf	23 18 58.8	-0.1
VILC	Villavicencio,	160.89	78	eP	PKPdf	23 19 00.1	+1.4
PAMC	Pamplona, Colo	160.94	68	eP	PKPdf	23 19 00.1	+0.9
RUSC	La Rusia	161.05	72	eP	PKPdf	23 18 59.4	+0.1
NBPA	Parau_RN	161.22	251	eP	PKPdf	23 19 00.8	+1.9
JANB	Januaria	161.54	214	eP	PKPdf	23 19 01.1	+1.9
YOPC	Yopal, Colombi	161.83	73	eP	PKPdf	23 19 01.4	+1.8
SDV	Santo Domingo	162.17	61	PKP	PKPdf	23 19 00.8	+0.7
	comp=Z,27nm,1.0s,baz=294,slow=0.8,SNR=22						
SDV				PKPab	PKPab	23 19 47.9	+0.9
	comp=Z,14nm,0.8s,baz=281,slow=4.8,SNR=4.2						
SDV	Santo Domingo	162.17	61	ePKPdf	PKPdf	23 18 60.0	-0.1
SDV				ePKPab	PKPab	23 19 47.9	+0.9
SDV	Santo Domingo	162.17	61	ePKPdf	23 18 52.1	-8.0	
SDV	Santo Domingo	162.17	61	eP	PKPdf	23 19 01.6	+1.5
GUVC	San Jose del G	162.19	82	eP	PKPdf	23 19 00.1	+0.2
SIV	San Ignacio	162.82	160	PKP	PKPdf	23 19 01.6	+1.1
	comp=Z,12nm,0.9s,baz=199,slow=1.2,SNR=38						
SIV				PKPab	PKPab	23 19 50.4	+1.1
	comp=Z,11nm,0.8s,baz=186,slow=3.5,SNR=8.9						
SIV				PP	PP	23 23 38.9	+6.4
	comp=Z,3.1nm,0.9s,baz=218,slow=4.0,SNR=3.7						
BDFB	Brasilia	162.83	203	PKP	PKPdf	23 19 01.6	+1.1
	comp=Z,15nm,1.0s,baz=110,slow=1.3,SNR=13						
BDFB				PKPab	PKPab	23 19 49.0	-0.4
	comp=Z,19nm,0.8s,baz=148,slow=3.7,SNR=10						
BDFB	Brasilia	162.83	203	ePKPdf	PKPdf	23 19 02.1	+1.5
BDFB				ePKPab	PKPab	23 19 47.0	-2.5
NBMO	Morrinhos-CE	164.68	257	eP	PKPdf	23 19 04.1	+1.9
PEXB	Peixe	166.10	208	eP	PKPdf	23 19 04.6	+1.2
SMTB	Santa Maria do	168.38	219	eP	PKPdf	23 19 06.1	+1.0
CLDB	Colider	168.97	176	eP	PKPdf	23 19 06.7	+1.2
MDP	Montagnes des	174.61	335	PKPab	PKPab	23 20 41.4	0.0
	comp=Z,22nm,0.8s,baz=28,slow=5.9,SNR=8.1						
PTGA	Pitinga	174.91	100	PKP	PKPdf	23 19 08.6	+0.3
	comp=Z,2.4nm,0.4s,baz=86,slow=2.3,SNR=11						
PTGA	Pitinga	174.91	100	eP	PKPdf	23 19 10.8	+2.6

ATH 26 23:05:01.9, 38°.33N×22°.19E, h8km±4km, ML0.6/2, Error ellipse: s-maj=4.0km s-min=1.2km az=310.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALE	Kalithea	0.07	327	P	Pg	23 05 04.2	+0.2
KALE				S	Sg	23 05 05.7	+0.3
KALE				AML	AML	23 05 05.9	
	comp=E,120μm,0.2s						
KALE				AML	AML	23 05 06.1	
	comp=N,175μm,0.2s						
TRIZ	Trizonia	0.10	291	P	Pg	23 05 03.9	-0.3
TRIZ				S	Sg	23 05 05.4	-0.4
SERG	Sergoula	0.13	308	P	Pg	23 05 04.7	-0.1
SERG				S	Sg	23 05 06.9	+0.1
SERG				AML	AML	23 05 07.3	
	comp=E,89μm,0.2s						
SERG				AML	AML	23 05 08.6	
	comp=N,70μm,0.3s						
LAKA	Lakka	0.19	242	P	Pg	23 05 06.5	+0.7
LAKA				S	Sg	23 05 09.0	+0.6
EFP	Efpalio	0.24	293	P	Pg	23 05 06.4	-0.3
EFP				S	Sg	23 05 10.3	+0.3
KLV	Kalavryta, Ach	0.29	186	P	Pg	23 05 07.3	-0.2
KLV				S	Sg	23 05 11.8	+0.4
ANX	Ano Chora	0.34	321	P	Pg	23 05 08.6	0.0
ANX				S	Sg	23 05 13.9	+0.8

*IDC **26** 23:17:23.0±2.5, 2°.52S×100°.43E, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.7/45, mbtmp4.1/6, Error ellipse: s-maj=117.1km s-min=20.1km az=54.0*
*ISCJB **26** 23:17:29.3±2.4, 2°.3S±0°.5×100°.8E±0°.6, h50km, mb4.2/6, Error ellipse: s-maj=108.4km s-min=18.2km az=144.5*
ISC 26 23:17:30.7±2.7, 2°.4S±0°.5×100°.7E±0°.7, h50km, n10, σ0°37/7, mb4.3/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	28.55	258	T	T	23 52 32.5	
	baz=81,slow=76,SNR=50						
H08S3	Diego Garcia H	28.56	258	T	T	23 52 31.4	
	baz=81,slow=76,SNR=6.2						
H08S1	Diego Garcia H	28.57	258	T	T	23 52 33.1	
	baz=81,slow=76,SNR=7.1						
WRA	Warramunga Arr	37.22	120	P	P	23 24 37.3	-0.4
	0.8nm,0.2s,baz=290,slow=10.0,SNR=12						
ASAR	Alice Springs	38.49	126	P	P	23 24 48.8	+0.4
	1.4nm,0.6s,baz=302,slow=8.0,SNR=14						
SONM	Songino Array	50.25	5	P	P	23 26 22.2	+0.3
	0.3nm,0.3s,baz=180,slow=7.2,SNR=3.0						
MKAR	Makanchi Array	51.57	344	P	P	23 26 31.9	+0.1
	2.4nm,0.6s,baz=150,slow=8.2,SNR=20						
ZALV	Zalesovo Beam	57.66	349	P	P	23 27 15.5	-0.3
	1.2nm,0.3s,baz=170,slow=7.7,SNR=8.0						
ARCES	ARCESS Array B	87.05	340	P	P	23 30 10.4	-0.2
	2.6nm,0.9s,baz=99,slow=5.7,SNR=2.8						
TXAR	Lajitas Array	144.57	38	PKP	PKPab	23 37 01.1	0.0
	0.5nm,0.6s,baz=222,slow=1.7,SNR=4.3						

*ISCJB **26** 23:18:03.1±0.4, 13°.54N±0°.04×120°.69E±0°.09, h145km±5km, mb4.0/10, Error ellipse: s-maj=14.0km s-min=6.2km az=167.5*
*IDC **26** 23:18:03.9±0.5, 13°.57N×120°.93E, h141km±5km, mb3.6/9, mb1 3.8/10, mb1mx3.5/44, mbtmp4.1/10, Error ellipse: s-maj=29.1km s-min=11.6km az=68.0*
*MAN **26** 23:18:04.7, 13°.58N×120°.62E, h119km, mb4.5, ML3.3, MS3.2*
ISC 26 23:18:04.0±0.7, 13°.59N±0°.04×120°.60E±0°.08, h136km±7km, n24, σ1°88/34, mb4.0/10, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.36	104⇑	eP	Pn	23 18 23.0	-0.1
PGP				i S	Sn	23 18 36.1	-1.4
TGY	Tagaytay City	0.61	33	P	Pn	23 18 25.7	+1.3
	2μm,0.3s,baz=216,slow=3.4,SNR=139						
TGY				S	Sn	23 18 41.4	+1.5
	835nm,0.3s,baz=243,slow=3.9,SNR=22						
TGY	Tagaytay City	0.61	33⇑	iP	Pn	23 18 25.6	+1.1
BOAC	Boac	1.22	96	eP	Pn	23 18 28.7	-0.8
BOAC				eS	Sn	23 18 47.5	-1.4
SJMP	San Jose	1.23	156	eP	Pn	23 18 30.2	+0.6
SJMP				eS	Sn	23 18 49.5	+0.2
POLP	Polilio Island	1.72	49	eP	Pn	23 18 36.1	+1.1
POLP				eS	Sn	23 18 59.6	+0.9
OTRP	Odiongan	1.85	131	eP	Pn	23 18 35.9	-0.6
OTRP				eS	Sn	23 19 00.2	-1.1
AUQP	San Andres	2.04	97	eP	Pn	23 18 40.3	+1.6
AUQP				eS	Sn	23 19 16.9	+12
SCZP	Santa Cruz	2.27	343	eP	Pn	23 18 42.4	+0.8
SCZP				eS	Sn	23 19 07.7	-2.8
BALP	Baler	2.34	24	eP	Pn	23 18 43.8	+1.3
BALP				eS	Sn	23 19 12.4	+0.5
SMPP	San Manuel, Pa	2.55	2	eP	Pn	23 18 45.8	+0.8
SMPP				eS	Sn	23 19 09.9	-6.8
BOLP	Bolinao	2.85	347	eP	Pn	23 18 49.4	+0.5
BOLP				eS	Sn	23 19 22.2	-1.4
LLP	Lapu-Lapu	4.63	134	eS	Pn	23 19 13.9	+1.6
KAPI	Kappang	18.50	183	P	P	23 22 09.7	-0.1
	3.2nm,0.3s,baz=350,slow=6.1,SNR=19						
CMAR	Chiang Mai Arr	21.36	286	P	P	23 22 44.0	+3.2
	5.1nm,0.8s,baz=94,slow=7.8,SNR=28						
BATI	Baumata	23.84	173	P	P	23 23 04.2	-0.6
	84nm,0.4s,baz=330,slow=1.8,SNR=22						
PSI	Prapat	23.95	245	P	P	23 23 07.8	+1.8
	6.9nm,0.7s,baz=94,slow=7.7,SNR=5.0						
FITZ	Fitzroy Crossi	31.88	171	P	P	23 24 15.3	-1.1
	1.5nm,0.8s,baz=354,slow=10,SNR=3.5						
WRA	Warramunga Arr	35.96	158	P	P	23 24 49.2	-2.5
	3.7nm,0.6s,baz=343,slow=11,SNR=22						
SONM	Songino Array	36.13	344	P	P	23 24 53.5	+0.5
	0.3nm,0.5s,baz=160,slow=8.4,SNR=2.9						
ASAR	Alice Springs	39.25	161	P	P	23 25 17.4	-2.0
	1.5nm,0.6s,baz=337,slow=6.7,SNR=14						
MKAR	Makanchi Array	46.06	324	P	P	23 26 15.1	+0.9
	0.3nm,0.3s,baz=123,slow=8.8,SNR=4.5						
NWAO	Narrogin (SRO)	46.37	184	P	P	23 26 15.8	-0.7
	8.2nm,0.7s,baz=326,slow=5.4,SNR=6.3						
ZALV	Zalesovo Beam	49.11	333	P	P	23 26 37.7	+0.3
	0.8nm,0.5s,baz=126,slow=7.3,SNR=2.7						

MAN 26 23:24:19.9, 7°.33N×124°.79E, h13km, mb3.8, ML2.6, MS2.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.55	259⇓	iP	Pb	23 24 31.3	-0.1
CTBH				i S	Sb	23 24 39.7	+0.6
BUKP	Musuan	0.61	26	eP	Pg	23 24 32.0	+0.1
BUKP				eS	Sn	23 24 44.1	+0.1
SKMP	Bagumbayan, Su	0.84	197	eP	Pg	23 24 35.5	-0.7
SKMP				eS	Sn	23 24 49.7	+0.1
CGP	Cagayan de Oro	1.12	355⇑	eP	Pb	23 24 40.6	-0.6
CGP				eS	Sb	23 24 55.1	-0.6
DDMP	Don Marcelino,	1.52	143	eP	Pn	23 24 45.9	-0.9
DDMP				eS	Sb	23 25 07.7	+0.5
IPIL	Ipil	2.25	282	eP	Pn	23 24 57.2	+0.4
IPIL				eS	Sb	23 25 26.3	-1.8

RSNC 26 23:35:34.9±0.7, 6°.83N×73°.18W, h142km±3km, ML3.3, Mw3.8, 4C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.23	181	i P	Pn	23 35 54.2	-0.4
BARC				eS	Sn	23 36 09.1	-0.5
GIRC	Giron, Santand	0.25	357	eP	Pn	23 35 54.1	-0.5
GIRC				eS	Sn	23 36 09.0	-0.5
BRRC	Barranca, Sant	0.60	298⇑	iP	Pn	23 35 56.0	+0.1
BRRC				i		23 36 16.7	
	comp=Z,417nm,0.2s						
PAMC	Pamplona, Colo	0.70	43	eP	Pn	23 35 57.0	-0.1
PAMC				eS	Sn	23 36 13.9	0.0
PAMC				i		23 36 16.4	
	comp=Z,439nm,0.5s						
RUSC	La Rusia	0.93	174⇑	iP	Pn	23 35 58.3	-0.6
RUSC				eS	Sn	23 36 16.5	-0.6
RUSC				i		23 36 18.9	
	comp=Z,122nm,0.3s						
PTBC	PUERTO BERRIO,	1.30	257⇑	iP	Pn	23 36 00.7	-1.1
PTBC				eS	Sn	23 36 22.0	-0.2
PTBC				i		23 36 24.6	
	comp=Z,293nm,0.2s						
OCAC	Ocana	1.41	354	eP	Pn	23 36 02.3	-0.8
OCAC				eS	Sn	23 36 23.8	-0.9
OCAC				i		23 36 27.3	
	comp=Z,262nm,0.3s						
TAMC	Tame, Arauca	1.43	106⇓	iP	Pn	23 36 02.6	-0.6
TAMC				i		23 36 03.0	
	comp=Z,150nm,0.4s						
TAMC				eS	Sn	23 36 24.2	-0.5
YOPC	Yopal, Colombi	1.65	153⇑	eP	Pn	23 36 05.1	-0.5
YOPC				eS	Sn	23 36 28.7	-0.4
YOPC				i		23 36 29.7	
	comp=Z,138nm,0.3s						
ZARC	Zaragoza, Cauc	1.79	292	eP	Pn	23 36 07.4	+0.2
ZARC				i		23 36 38.8	
	comp=Z,296nm,0.3s						
NORC	Norcasia	2.10	233	eP	Pn	23 36 10.2	-0.6
NORC				eS	Sn	23 36 37.9	-0.4
NORC				i		23 36 42.0	
	comp=Z,267nm,0.3s						
SMLC	San Martn de	2.15	336	eP	Pn	23 36 10.5	-0.9
SMLC				eS	Sn	23 36 38.7	-0.8
SMLC				i		23 36 46.7	
	comp=Z,224nm,0.1s						
CHIC	Chingaza	2.25	194	eP	Pn	23 36 12.6	-0.4
CHIC				eS	Sn	23 36 41.5	-0.7
CHIC				i		23 36 47.2	
	comp=Z,89nm,0.3s						
VILC	Villavicencio,	2.74	191	eP	Pn	23 36 18.8	0.0
PRAC	Prado	3.53	209	eP	Pn	23 36 28.8	0.0
PRAC				eS	Sn	23 37 10.4	-0.3
PRAC				i		23 37 16.9	
	comp=Z,102nm,0.3s						
YOTC	Yotoco, Valle	4.23	228	eP	Pn	23 36 37.4	-0.8

*ISCJB **26** 23:50:01.0±1.2, 29°.1N±0°.1×139°.3E±0°.4, h423km, mb3.3/7, Error ellipse: s-maj=42.8km s-min=14.2km az=168.6*
*IDC **26** 23:50:02.9±2.4, 29°.14N×139°.37E, h430km±27km, mb3.0/7, mb1 3.2/10, mb1mx2.9/36, mbtmp3.8/10, Error ellipse: s-maj=53.7km s-min=14.8km az=77.0*
ISC 26 23:50:02.0±1.3, 29°.1N±0°.1×139°.5E±0°.2, h423km, n10, σ0°75/10, mb3.5/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	7.46	352	P	P	23 51 51.2	-0.1
	0.1nm,0.3s,baz=177,slow=12,SNR=3.9						
KSRS	Korea Array	12.74	314	P	P	23 52 50.0	+0.8
	0.2nm,0.3s,baz=118,slow=12,SNR=7.6						
USRK	Ussuriysk Ar.	16.18	340	P	P	23 53 27.6	+1.3
	0.3nm,0.3s,baz=173,slow=8.5,SNR=4.5						
SONM	Songino Array	31.60	315	P	P	23 55 47.4	-0.7
	0.7nm,0.8s,baz=120,slow=8.5,SNR=3.9						
MKAR	Makanchi Array	47.35	308	P	P	23 57 55.2	-0.6
	0.6nm,0.8s,baz=92,slow=10.0,SNR=5.9						
WRA	Warramunga Arr	49.05	186	P	P	23 58 08.9	0.0
	0.6nm,0.3s,baz=359,slow=6.5,SNR=17						
ASAR	Alice Springs	52.78	186	P	P	23 58 36.5	+0.3
	0.3nm,0.5s,baz=16,slow=14,SNR=5.0						
ARCES	ARCESS Array B	70.83	340	P	P	00 00 34.5	+0.4
	3.1nm,0.9s,baz=58,slow=8.6,SNR=3.4						
KBZ	Khabaz	74.89	312	P	P	00 00 58.2	+0.2
	0.6nm,0.5s,baz=98,slow=7.6,SNR=3.6						
FINES	FINESS Array B	75.06	333	P	P	00 00 58.2	-0.5
	0.4nm,0.3s,baz=70,slow=2.2,SNR=6.1						

*IDC **27** 00:03:19.3±1.6, 43°.43N×127°.86W, h0km, mb3.4/4, mb1 3.7/7, mb1mx3.5/43, mbtmp3.4/7, ML3.1/3, MS3.2/4, Ms1 3.2/4, ms1mx2.9/24, Error ellipse: s-maj=32.4km s-min=16.7km az=44.0*
*ISCJB **27** 00:03:21.1±0.6, 43°.54N±0°.03×127°.41W±0°.05, h15km, mb3.3/3, MS2.8/2, Error ellipse: s-maj=5.6km s-min=4.0km az=165.8*
*NEIC **27** 00:03:21.9±1.8, 43°.54N×127°.49W, h10km±2km, ML3.1, Error ellipse: s-maj=23.0km s-min=15.6km az=83.0*
*ANF **27** 00:03:23.0±1.4, 43°.47N×127°.23W, h10km, ML3.4/13, Error ellipse: s-maj=15.1km s-min=8.0km az=76.0*
ISC 27 00:03:22.4±1.1, 43°.50N±0°.05×127°.43W±0°.08, h15km, n64, σ1°23/69, mb3.2/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.35	104	ePn	Pn	00 03 58.7	-1.9
J01E	Myrtle Point	2.58	96	P	Pn	00 04 01.6	-2.0
	baz=280						
J01E				S	Sn	00 04 33.2	-1.4
	baz=280						
I02D	Swisshome	2.67	76	P	Pn	00 04 03.5	-1.3
	baz=259						
I02D				S	Sn	00 04 34.9	-1.8
	baz=259						
K02D	Willamette Mer	2.87	105	P	Pn	00 04 06.0	-1.7
	baz=288,SNR=29						
K02D				S	Sn	00 04 40.4	-1.7
	baz=288						
I03D	Drain, OR	2.97	85	P	Pn	00 04 08.3	-0.7
	baz=268,SNR=16						
I03D				S	Sn	00 04 43.4	-1.0
	baz=268						
L02E	Cave Junction	3.12	114	P	Pn	00 04 10.5	-0.6
	baz=297,SNR=7.9						
COR	Corvallis	3.17	69	ePn	Pn	00 04 11.6	-0.1
COR				eSn	Sn	00 04 49.9	+0.7
HUMO	Hull Mountain	3.40	104	ePn	Pn	00 04 14.7	-0.3
HUMO				eSn	Sn	00 04 54.9	-0.1
G03D	McMinnville, O	3.44	59	P	Pn	00 04 14.9	-0.6
	baz=242,SNR=8.3						
G03D				S	Sn	00 04 55.9	-0.1
	baz=242						
H04D	Lebanon	3.54	72	P	Pn	00 04 16.8	0.0
	baz=256,SNR=7.1						
H04D				S	Sn	00 04 58.0	-0.3
	baz=256						
I04A	Tendick Farm,	3.66	84	P	Pn	00 04 18.7	+0.3
	baz=268,SNR=13						
F03A	Seaside	3.68	47	ePn	Pn	00 04 18.6	-0.1
JCC	Jacoby Creek,	3.69	136	ePn	Pn	00 04 19.7	+0.9
J04D	Umpqua Nationa	3.89	92	P	Pn	00 04 21.6	-0.2
	baz=276						
YBH	Yreka Blue Hor	3.91	115	Pn	Pn	00 04 23.0	+1.1
	1.1nm,0.3s,baz=290,slow=12,SNR=16						
YBH				Sn	Sn	00 05 09.2	+1.6
	0.1nm,0.3s,baz=218,slow=15,SNR=1.4						
H04A	Detroit Lake	3.96	71	ePn	Pn	00 04 23.1	+0.4
L04D	Klamath Falls	3.98	107	P	Pn	00 04 24.3	+1.3
	baz=291						
F04D	Rainier, OR	4.07	49	P	Pn	00 04 23.3	-0.8
	baz=233						
I05D	Terrebonne, OR	4.48	77	P	Pn	00 04 29.8	0.0
	baz=262,SNR=8.0						
E04D	Cinebar	4.61	47	P	Pn	00 04 31.2	-0.3
	baz=231,SNR=11						
NLWA	Neilton Lookou	4.63	32	ePn	Pn	00 04 31.7	-0.1
G05D	Wamic, OR	4.72	66	P	Pn	00 04 33.4	+0.4
	baz=251						
PINE	Pine Mountain	4.72	84	ePn	Pn	00 04 33.2	0.0
KCPM	Cahto Peak	4.78	142	ePn	Pn	00 04 34.9	+0.9
K05A	Summer Lake	4.85	97	ePn	Pn	00 04 35.5	+0.5
F05D	White Salmon	4.88	59	P	Pn	00 04 35.7	+0.5
	baz=243,SNR=8.7						
F05D				S	Sn	00 05 31.5	+0.1
	baz=243						
D04E	Lakebay	4.93	40	P	Pn	00 04 36.3	+0.4
	baz=224						
D04E				S	Sn	00 05 35.1	+2.5
	baz=224						
D03D	Eldon	5.06	36	P	Pn	00 04 37.2	-0.5
	baz=219,SNR=8.3						
D03D				S	Sn	00 05 36.1	+0.3
	baz=219						
LON	Longmire	5.14	49	ePn	Pn	00 04 39.6	+0.8
G06A	Carlson Farm,	5.17	68	ePn	Pn	00 04 39.0	-0.3
D05A	Enumclaw	5.32	44	ePn	Pn	00 04 42.3	+1.0
I07A	Izee	5.77	81	ePn	Pn	00 04 48.6	+1.1
PGC	Sidney	5.85	27	ePn	Pn	00 04 48.4	-0.1
F07A	Phinny Hill Vi	5.86	63	ePn	Pn	00 04 49.6	+1.0
ORV	Oroville	5.95	130	ePn	Pn	00 04 53.2	+3.3
B05A	Bryant	6.05	36	P	Pn	00 04 51.2	0.0
	baz=220						
B05A				S	Sn	00 06 00.7	+0.6
	baz=220						
LTY	Liberty	6.07	49	ePn	Pn	00 04 52.6	+1.1
A04D	Lummi Island	6.17	31	P	Pn	00 04 54.2	+1.4
	baz=214						
A04D				S	Sn	00 06 03.4	+0.3
	baz=214						
HAWA	Hanford	6.31	60	ePn	Pn	00 04 54.9	+0.1
G08A	Pilot Rock	6.33	71	ePn	Pn	00 04 54.8	-0.5
C06D	Leavenworth	6.36	44	P	Pn	00 04 55.8	+0.2
	baz=229						
B06A	Marblemount	6.51	37	ePn	Pn	00 04 57.9	+0.4
E08A	Dider Farm, El	6.65	60	ePn	Pn	00 04 59.3	-0.2
AFDM	Forest Hills D	6.66	131	ePn	Pn	00 05 02.8	+3.1
PAHR	Pah Rah Range	7.12	119	ePn	Pn	00 05 05.4	-0.8
CMB	Columbia Colle	7.64	133	ePn	Pn	00 05 15.1	+1.9
NVAR	Mina Array Bea	8.56	123	Pn	Pn	00 05 31.3	+5.3
	0.0nm,0.3s,baz=292,slow=13,SNR=5.0						
NEW	Newport	8.62	53	Pn	Pn	00 05 31.0	+4.3
	0.3nm,0.3s,baz=249,slow=14,SNR=2.9						
NEW	Newport	8.62	53	P	Pn	00 05 27.4	+0.8
	baz=241						
OMMB	Old Mammoth Mi	8.70	130	ePn	Pn	00 05 29.1	+1.1

GSPH			*i* S		**Sn**	**00 09 06.8 +1.3**
MATI	**Mati**	**2.46 358**	*e*P		**Pn**	**00 08 39.2 -4.4**
MATI			*e*S		**Sn**	**00 09 16.7 +3.3**
DAV	**Davao City (W)**	**2.69 344**	P		**Pn**	**00 08 48.0 +1.4**
	92nm,0.3s,baz=103,slow=3.1,SNR=4.9					
DAV			S		**Sn**	**00 09 21.9 +3.2**
	68nm,0.3s,baz=294,slow=16,SNR=4.2					
DAV	**Davao City (W)**	**2.69 344**	*e*Pn		**Pn**	**00 08 42.6 -4.0**
DAV			*e*Sn		Sn	00 09 05.6 -13
SKMP	**Bagumbayan, Su**	**2.71 319**	*e*P		**Pn**	**00 08 47.3 +0.5**
SKMP			*e*S		**Sn**	**00 09 18.8 -0.3**
CTBH	**Cotabato--PC H**	**3.44 323**	⇑*i*P		**Pn**	**00 08 57.8 +1.3**
BUKP	**Musuan**	**3.62 340**	*e*P		**Pn**	**00 09 00.8 +1.8**
BUKP			*e*S		**Sn**	**00 09 44.6 +3.6**
TNTI	**Ternate**	**3.81 164**	*e*Pn		**Pn**	**00 09 02.6 +1.0**
TNTI	**Ternate**	**3.81 164**	P		**Pn**	**00 09 02.7 +1.1**
TNTI			S		**Sn**	**00 09 43.8 -1.7**
PAGZ	**Pagadian**	**4.46 319**	*e*P		**Pn**	**00 09 10.1 -0.2**
SANI	**Sanana**	**6.48 183**	P		**Pn**	**00 09 35.7 -2.0**
SANI			S		Sn	00 10 41.8 -8.5
LUWI	**Luwuk**	**6.53 213**	*e*Pn		**Pn**	**00 09 40.1 +1.7**
LUWI	**Luwuk**	**6.53 213**	P		**Pn**	**00 09 42.4 +4.1**
APSI	**Ampana**	**7.10 221**	P		**Pn**	**00 09 50.2 +4.0**
SIJI	**Sorong**	**7.24 137**	P		**Pn**	**00 09 49.4 +1.4**
	6.9nm,0.3s,baz=326,slow=22,SNR=8.7					
SIJI			S		**Sn**	**00 11 07.1 -1.6**
	6.5nm,0.3s,baz=222,slow=23,SNR=7.6					
NLAI	**Namlea**	**7.69 174**	P		**Pn**	**00 09 54.1 -0.1**
	279nm,0.5s,9μm4.3nm					
NLAI			S		**Sn**	**00 11 13.1 -6.7**
	279nm,0.5s,9μm4.3nm					
FAKI	**Fak Fak**	**9.42 141**	*e*Pn		**Pn**	**00 10 18.9 +1.2**
TTSI	**Tana Toraja**	**9.90 221**	P		**Pn**	**00 10 27.4 +3.2**
	41nm,1.0s,1μm					
KKM	**Kota Kinabalu**	**10.20 279**	*e*Pn		**Pn**	**00 10 27.3 -1.1**
SPSI	**Sidrap Palu**	**10.64 218**	P		**Pn**	**00 10 36.2 +2.0**
	24nm,0.7s					
KAPI	**Kappang**	**11.48 215**	P		**Pn**	**00 10 47.2 +1.5**
	2.4nm,0.3s,baz=11,slow=8.5,SNR=14					
KAPI	**Kappang**	**11.48 215**	*e*Pn		**Pn**	**00 10 46.3 +0.6**
BSSI	**Bau Bau, Buton**	**12.04 209**	P		**Pn**	**00 10 55.7 +2.6**
	24nm,0.9s					
MMRI	**Maumere**	**13.64 197**	*e*Pn		**Pn**	**00 11 13.0 -1.1**
MMRI	**Maumere**	**13.64 197**	P		P	00 11 30.2 +11
EDFI	**Ende, Flores**	**13.92 199**	P		**Pn**	**00 11 18.6 +0.8**
	9.4nm,0.8s					
SBUM	**Sibu**	**14.23 262**	*e*Pn		**Pn**	**00 11 18.8 -2.9**
SOEI	**Soe**	**14.28 188**	*e*Pn		Pn	00 11 18.2 -4.2
BATI	**Baumata**	**14.82 190**	P		**Pn**	**00 11 30.7 +1.5**
	2.2nm,0.3s,baz=17,slow=11,SNR=1.7					
JAY	**Jayapura**	**15.95 116**	P		**Pn**	**00 11 43.4 0.0**
	0.3nm,0.3s,baz=278,slow=12,SNR=2.5					
KSM	**Kuching**	**16.27 260**	*e*Pn		**Pn**	**00 11 44.8 -2.7**
	16nm,0.8s					
MTN	**Manton Dam**	**17.85 165**	*e*P		**P**	**00 12 04.8 -1.1**
	17nm,0.9s					
SSLB	**Suanglung**	**19.90 345**	*e*P		**P**	**00 12 24.5 -3.7**
	11nm,1.0s					
FITZ	**Fitzroy Crossi**	**22.43 182**	P		**P**	**00 12 56.1 +0.9**
	5.1nm,0.5s,baz=13,slow=10,SNR=17					
FITZ			S		**S**	**00 16 53.0 -1.5**
	3.5nm,1.1s,baz=175,slow=18,SNR=2.6					
LWLI	**Liwa**	**24.16 247**	P		P	00 13 25.3 +14
COEN	**Coen**	**24.79 138**	*e*P		**P**	**00 13 17.8 +0.5**
	11nm,1.1s					
SKNT	**Sakolnakorn**	**25.19 301**	P		P	00 13 33.1 +12
WRAB	**Tennant Creek**	**25.50 162**	*e*P		**P**	**00 13 25.2 +1.5**
	32nm,1.1s					
WR1	**Warramunga Arr**	**25.50 162**	*e*P		**P**	**00 13 24.1 +0.4**
WR1			*e*S		**S**	**00 17 49.1 +5.5**
WRA	**Warramunga Arr**	**25.50 162**	P		**P**	**00 13 24.1 +0.4**
	24nm,0.6s,baz=336,slow=12,SNR=135					
WRA			S		**S**	**00 17 49.1 +5.5**
	1.1nm,0.9s,baz=353,slow=19,SNR=2.5					
WB2	**Warramunga Arr**	**25.50 162**	*e*P		**P**	**00 13 24.1 +0.4**
	34nm,1.1s					
WC3	**Warramunga Arr**	**25.53 162**	*e*P		**P**	**00 13 24.8 +0.9**
	23nm,0.6s					
PSAC1	**Pilbara Seismi**	**26.62 194**	*e*P		**P**	**00 13 33.8 0.0**
	14nm,1.0s					
PSAC2	**Pilbara Seismi**	**26.62 193**	*e*P		**P**	**00 13 33.4 -0.5**
	14nm,1.1s					
PSAB2	**Pilbara Seismi**	**26.63 194**	*e*P		**P**	**00 13 32.7 -1.2**
	14nm,1.1s					
PSAA2	**Pilbara Seismi**	**26.64 194**	*e*P		**P**	**00 13 32.5 -1.4**
	7.4nm,0.8s					
PSA00	**Pilbara Seismi**	**26.65 194**	*e*P		**P**	**00 13 33.8 -0.2**
	7.8nm,0.9s					
PSAB1	**Pilbara Seismi**	**26.65 194**	*e*P		**P**	**00 13 33.8 -0.3**
	13nm,1.0s					
PSAA3	**Pilbara Seismi**	**26.65 194**	*e*P		**P**	**00 13 34.4 +0.4**
	21nm,1.1s					
PSAA1	**Pilbara Seismi**	**26.65 194**	*e*P		**P**	**00 13 34.7 +0.6**
	16nm,1.1s					
PSAB3	**Pilbara Seismi**	**26.66 194**	*e*P		**P**	**00 13 34.6 +0.4**
	6.9nm,0.8s					
PSAC3	**Pilbara Seismi**	**26.70 194**	*e*P		**P**	**00 13 35.2 +0.7**
	12nm,1.0s					
PSAD3	**Pilbara Seismi**	**26.73 194**	*e*P		**P**	**00 13 35.4 +0.6**
	20nm,1.1s					
AS31	**Alice Springs**	**28.92 166**	*e*P		**P**	**00 13 54.3 0.0**
	1.8nm,0.4s					
AS31			*e*PcP		**PcP**	**00 17 01.8 +0.6**
ASAR	**Alice Springs**	**28.92 166**	P		**P**	**00 13 55.0 +0.7**
	2.6nm,0.5s,baz=345,slow=7.0,SNR=41					
ASAR			PcP		**PcP**	**00 17 01.8 +0.6**
	0.6nm,0.6s,baz=339,slow=2.4,SNR=2.8					
ASAR			S		S	00 18 53.6 +16
	0.1nm,0.3s,baz=346,slow=21,SNR=2.9					
CMAR	**Chiang Mai Arr**	**30.16 300**	P		**P**	**00 14 07.1 +1.7**
	1.3nm,0.3s,baz=104,slow=6.6,SNR=4.5					
MJAR	**Matsushiro Arr**	**33.74 17**	LR		LR	00 29 53.6
	comp=Z,26nm,19.4s,baz=210,slow=39					
HNR	**Honiara**	**36.23 112**	LR		LR	00 28 51.7
	comp=Z,46nm,20.0s,baz=242,slow=34					
STKA	**Stephens Creek**	**38.95 159**	P		**P**	**00 15 21.9 +1.0**
	11nm,0.5s,baz=334,slow=8.8,SNR=27					
STKA	**Stephens Creek**	**38.95 159**	*e*P		**P**	**00 15 21.9 +1.0**
	2.8nm,0.8s					
H11N1	**WAKE ISLAND Hy 42.31**	**66**	T		T	01 02 04.9
	baz=255,slow=75,SNR=13					
H11N2	**WAKE ISLAND Hy 42.32**	**65**	T		T	01 02 05.6
	baz=255,slow=75,SNR=14					
H11N3	**WAKE ISLAND Hy 42.33**	**66**	T		T	01 02 06.3
	baz=255,slow=75,SNR=13					
KLR	**Kul'dur**	**44.84 5**	P		**P**	**00 16 08.4 -0.2**
	1.7nm,0.7s,baz=177,slow=2.9,SNR=2.1					
SONA0	**Songino Array**	**46.48 342**	*e*P		**P**	**00 16 22.2 +0.6**
SONM	**Songino Array**	**46.48 342**	P		**P**	**00 16 22.2 +0.6**
	0.3nm,0.4s,baz=150,slow=7.3,SNR=2.7					
PETK	**Petropavlovsk-**	**54.90 23**	P		**P**	**00 17 25.2 +0.6**
	2.1nm,0.7s,baz=201,slow=5.3,SNR=4.6					
PEA1	**Petropavlovsk-**	**54.91 23**	*e*P		**P**	**00 17 25.2 +0.5**
MK32	**Makanchi Array**	**56.73 325**	*e*P		**P**	**00 17 37.8 -0.1**
MK32			*e*PcP		**PcP**	**00 18 32.7 0.0**
MK32			*e*ScP		**ScP**	**00 22 21.9 -1.0**
MKAR	**Makanchi Array**	**56.73 325**	P		**P**	**00 17 37.8 -0.1**
	0.7nm,0.3s,baz=120,slow=7.3,SNR=15					
MKAR			PcP		**PcP**	**00 18 32.7 0.0**
	0.7nm,0.6s,baz=113,slow=4.1,SNR=5.0					
MKAR			ScP		**ScP**	**00 22 22.0 -1.0**
	0.7nm,0.7s,baz=123,slow=4.5,SNR=5.0					
KSH	**Kashi**	**57.25 315**	*e*P		P	00 17 47.5 +5.7
MLY	**Manley**	**82.98 25**	*e*P		**P**	**00 20 18.6 +0.3**
	6.6nm,1.1s					
COLD	**Coldfoot**	**83.37 23**	*e*P		**P**	**00 20 20.5 +0.3**
	2.2nm,1.0s					
VNDA	**Vanda**	**84.20 173**	P		**P**	**00 20 25.1 +1.0**
	1.2nm,0.6s,baz=321,slow=6.2,SNR=13					
ILAR	**Eielson Array**	**84.61 25**	P		**P**	**00 20 25.0 -1.5**
	0.6nm,0.7s,baz=251,slow=4.7,SNR=4.7					
ILB	**Eielson Array**	**84.61 25**	*e*P		**P**	**00 20 25.0 -1.5**
	1.3nm,0.9s					
ARA0	**ARCESS Array S**	**89.62 340**	*e*P		**P**	**00 20 50.5 -0.2**
ARCES	**ARCESS Array B**	**89.62 340**	P		**P**	**00 20 50.5 -0.2**
	2.5nm,0.7s,baz=74,slow=8.9,SNR=5.7					
FIA0	**FINESS Array S**	**91.00 332**	*e*P		**P**	**00 20 56.6 -0.5**
FINES	**FINESS Array B**	**91.00 332**	P		**P**	**00 20 56.6 -0.5**
	1.1nm,0.7s,baz=44,slow=9.0,SNR=5.5					
NB200	**NORSAR Array S**	**97.95 334**	*e*P		**P**	**00 21 28.3 -0.8**
NOA	**NORSAR Array B**	**97.95 334**	P		**P**	**00 21 28.3 -0.8**
	0.7nm,0.7s,baz=65,slow=4.5,SNR=3.0					
TORD	**Torodi Ar. Bea**	**122.31 288**	PKP		**PKPdf**	**00 26 48.2 -0.6**
	6.5nm,0.2s,baz=68,slow=2.0,SNR=4.6					
TOA1	**Torodi Ar. Sit**	**122.31 289**	*e*PKPdf		**PKPdf**	**00 26 48.2 -0.6**

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NIED ***27*** *00:11:00,41.°00N×141.°70E,h80km,Mw3.8 Best double couple: M0:6.54000×1014 NP1:φ0=24.00000°,δ20.00000°, λ90.00000°. NP2:φ0=204.00000°,δ70.00000°,λ90.00000°.*
ISCJB ***27*** *00:11:46.7±0.4,40.°96N±0.°03×141.°62E±0.°06,h94km±3km, mb3.8/13,Error ellipse: s-maj=7.6km s-min=4.5km az=13.5*
JMA ***27*** *00:11:47.7±0.1,40.°96N×141.°67E,h85km±1km,M3.8 Broadband fault plane solution: P waves. NP1: φ0=193.00000°,δ75.00000°,λ79.00000°. NP2:φ0=50.00000°, δ19.00000°,λ126.00000°. Principal axes: T Plg59.0000°, Azm87.0000°; N Plg11.0000°, Azm196.0000°; P Plg29.0000°, Azm292.0000°;*
JMA Felt II J1.
IDC ***27*** *00:11:48.8±2.0,40.°88N×141.°55E,h101km±18km, mb3.6/13,mb1 3.7/17,mb1mx3.6/34,mbtmp3.9/17,MS2.5/1, Ms1 2.5/1,ms1mx2.1/42 Error ellipse: s-maj=16.9km s-min=14.2km az=124.0*

ISC 27 00:11:47.5±0.7,40.°95N±0.°03×141.°64E±0.°05,h87km±5km, n40,σ0°82/49,mb3.9/13,9C,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JARK	**Aomorirokkasho**	**0.22 284**		P	**Pn**	**00 12 00.4**	**+0.3**
JARK				*e*S	**Sn**	**00 12 09.6**	**+0.1**
JAHD	**Aomorihigashid**	**0.39 324**		⇑P	**Pn**	**00 12 01.3**	**+0.2**
JAHD				S	**Sn**	**00 12 11.4**	**+0.3**
JTM	**Tenmabayashi**	**0.47 249**		⇑P	**Pn**	**00 12 01.6**	**0.0**
JTM				S	**Sn**	**00 12 12.1**	**0.0**
JANG	**Nango**	**0.59 189**		⇑P	**Pn**	**00 12 02.6**	**-0.1**
JANG				S	**Sn**	**00 12 13.4**	**-0.5**
JOT	**Ohata**	**0.62 314**		⇑P	**Pn**	**00 12 02.8**	**-0.1**
JOT				*e*S	**Sn**	**00 12 14.4**	**0.0**
JKB	**Kayabe**	**1.04 334**		⇑P	**Pn**	**00 12 07.6**	**+0.2**
JKB				*e*S	**Sn**	**00 12 22.6**	**+0.3**
JAH	**Hinai**	**1.08 225**		⇑P	**Pn**	**00 12 08.6**	**+0.7**
JAH				S	**Sn**	**00 12 25.3**	**+2.1**
JSR	**Shiriuchi**	**1.09 302**		⇑P	**Pn**	**00 12 08.1**	**+0.2**
JSR				S	**Sn**	**00 12 23.0**	**-0.3**
JIW	**Iwasaki**	**1.29 254**		⇑P	**Pn**	**00 12 11.0**	**+0.5**
JOM	**Ohasama**	**1.50 190**		P	**Pn**	**00 12 13.7**	**+0.6**
JOM				S	**Sn**	**00 12 33.1**	**+0.6**
JYM2	**Yakumo 2**	**1.50 321**		P	**Pn**	**00 12 13.8**	**+0.7**
JYM2				S	**Sn**	**00 12 33.1**	**+0.6**
JEM	**Erimo**	**1.56 47**		P	**Pn**	**00 12 14.2**	**+0.4**
JEM				*e*S	**Sn**	**00 12 33.3**	**-0.4**
JNBK	**Urakawa-nobuka**	**1.56 32**		P	**Pn**	**00 12 14.3**	**+0.4**
JNB	**Noboribetsu**	**1.58 344**		P	**Pn**	**00 12 14.0**	**-0.1**
JNB				S	**Sn**	**00 12 33.9**	**-0.3**
JIAM	**Iburiatsuma**	**1.68 7**		P	**Pn**	**00 12 16.5**	**+1.1**
JIAM				*e*S	**Sn**	**00 12 38.3**	**+1.8**
JRG	**Rokugo**	**1.74 207**		⇑P	**Pn**	**00 12 17.5**	**+1.4**
ASAJ	**Asahikawa**	**3.24 12**		P	**Pn**	**00 12 37.4**	**+1.3**
	6.4nm,0.3s,baz=183,slow=8.1,SNR=11						
ASAJ				S	**Sn**	**00 13 13.8**	**+0.1**
	4.7nm,0.3s,baz=202,slow=20,SNR=3.3						
MJAR	**Matsushiro Arr**	**5.16 212**		P	**Pn**	**00 13 03.2**	**+0.9**
	0.1nm,0.3s,baz=26,slow=17,SNR=7.2						
MJAR				LR	LR	00 15 26.5	
	comp=Z,46nm,18.3s,baz=125,slow=43						
USRK	**Ussuriysk Ar.**	**7.83 298**		P	**Pn**	**00 13 40.0**	**+1.4**
	1.0nm,0.3s,baz=99,slow=13,SNR=12						
KSRS	**Korea Array**	**11.20 256**		P	**Pn**	**00 14 26.2**	**+1.7**
	0.4nm,0.3s,baz=64,slow=14,SNR=4.5						
SONM	**Songino Array**	**25.94 297**		P	**P**	**00 17 11.7**	**0.0**
	0.9nm,0.5s,baz=88,slow=9.3,SNR=6.9						
H11N2	**WAKE ISLAND Hy 30.18**	**127**		T	T	00 49 21.0	
	baz=320,slow=75,SNR=50						
H11N1	**WAKE ISLAND Hy 30.19**	**127**		T	T	00 49 34.8	
	baz=320,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy 30.20**	**127**		T	T	00 49 41.8	
	baz=320,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy 31.01**	**129**		T	T	00 51 19.9	
	baz=323,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy 31.01**	**129**		T	T	00 51 25.7	
	baz=323,slow=76,SNR=28						
H11S2	**WAKE ISLAND Hy 31.02**	**129**		T	T	00 51 22.1	
	baz=323,slow=76,SNR=25						
ZALV	**Zalesovo Beam**	**39.50 309**		P	**P**	**00 19 08.9**	**-0.3**
	2.4nm,0.4s,baz=98,slow=11,SNR=6.8						
ZALV				PcP	**PcP**	**00 21 14.5**	**-0.7**
	0.7nm,0.3s,baz=80,slow=3.7,SNR=2.3						
MKAR	**Makanchi Array**	**42.29 299**		P	**P**	**00 19 31.9**	**-0.5**
	2.5nm,0.4s,baz=83,slow=13,SNR=16						
CMAR	**Chiang Mai Arr**	**42.79 251**		P	**P**	**00 19 35.2**	**-1.4**
	0.5nm,0.3s,baz=45,slow=9.0,SNR=3.2						
ILAR	**Eielson Array**	**46.12 34**		P	**P**	**00 20 03.3**	**+0.7**
	0.7nm,0.6s,baz=268,slow=5.3,SNR=11						
INK	**Inuvik**	**50.84 29**		P	**P**	**00 20 39.4**	**+0.7**
	0.5nm,0.4s,baz=287,slow=5.8,SNR=6.2						
WRA	**Warramunga Arr**	**60.95 188**		P	**P**	**00 21 50.3**	**-1.2**
	0.7nm,0.6s,baz=9.5,slow=7.7,SNR=7.4						
GEYT	**Alibeck**	**62.15 297**		P	**P**	**00 21 58.4**	**-1.0**
	0.6nm,0.5s,baz=69,slow=10.0,SNR=2.6						
ASAR	**Alice Springs**	**64.69 188**		P	**P**	**00 22 15.1**	**-1.1**
	0.6nm,0.6s,baz=3.6,slow=5.9,SNR=5.7						
FINES	**FINESS Array B**	**65.44 332**		P	**P**	**00 22 20.4**	**-0.2**
	1.1nm,0.5s,baz=31,slow=9.1,SNR=11						
KBZ	**Khabaz**	**68.51 310**		P	**P**	**00 22 40.9**	**+0.5**
	0.8nm,0.5s,baz=38,slow=8.9,SNR=2.5						
NVAR	**Mina Array Bea**	**72.52 54**		P	**P**	**00 23 06.2**	**+1.0**
	0.3nm,0.7s,baz=293,slow=2.5,SNR=3.2						
PDAR	**Pinedale Array**	**74.81 46**		P	**P**	**00 23 18.8**	**+0.3**
	0.3nm,0.5s,baz=316,slow=3.8,SNR=4.0						
PLCA	**Paso Flores**	**155.71 100**		PKPab	**PKPab**	**00 31 57.8**	**-0.1**
	2.0nm,0.8s,baz=94,slow=16,SNR=3.5						

HEL ***27*** *00:11:57.0,67.°83N×20.°25E,h0km,ML1.7,Explosion*

UPP 27 00:11:56.0±0.0,67.°84N×20.°19E,h0km,ML1.6, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13 26**		P	Pg	00 11 58.7	+0.2
KUA				S	Sg	00 12 00.6	+0.4
KUA	**Kurravaara**	**0.13 26**		*i* P	Pg	00 11 58.7	+0.2
KUA				*i* S	Sg	00 12 00.6	+0.4
NIKU	**Nikkaluokta**	**0.44 275**		P	Pg	00 12 04.4	+0.1
NIKU	**Nikkaluokta**	**0.44 275**		*i* P	Pg	00 12 04.4	+0.1
LANU	**Lannavaara**	**0.71 72**		P	Pg	00 12 09.7	+0.1
LANU	**Lannavaara**	**0.71 72**		*e*P	Pg	00 12 09.7	+0.1
LANU				*e*S	Sg	00 12 19.4	+0.6
DUNU	**Dundret**	**0.73 168**		P	Pg	00 12 09.6	-0.5
DUNU	**Dundret**	**0.73 168**		*i* P	Pg	00 12 09.6	-0.5
MASU	**Masugnsbyn**	**0.79 118**		P	Pg	00 12 10.9	-0.2
MASU	**Masugnsbyn**	**0.79 118**		*i* P	Pg	00 12 10.9	-0.2
SALU	**Saltoluokta**	**0.79 235**		P	Pg	00 12 11.0	-0.1
SALU	**Saltoluokta**	**0.79 235**		*i* P	Pg	00 12 11.0	-0.1
KIF	**Kilpisjarvi**	**1.20 11**		*e*P	Pn	00 12 20.5	+0.6
KIF	**Kilpisjarvi**	**1.20 11**		*e*PN	Pn	00 12 21.8	+1.9
KIF				MSG		00 12 34.3	
	comp=Z,8.0nm,0.2s						
KIF				*e*S	Sg	00 12 34.7	+0.4
PAJU	**Pajala**	**1.39 125**		P	Pg	00 12 21.4	-1.3
PAJU	**Pajala**	**1.39 125**		*e*P	Pg	00 12 21.4	-1.3
HEF	**Hetta**	**1.42 65**		*e*P	Pn	00 12 21.3	-1.7
HEF	**Hetta**	**1.42 65**		*e*PG	Pn	00 12 22.2	-0.9
HEF				MSG		00 12 39.2	
	comp=Z,4.2nm,0.2s						
HEF				*e*SB	Sg	00 12 40.7	-0.9
ERTU	**Ertsjaerv**	**1.51 148**		*e*PG	Pn	00 12 24.0	-0.2
ERTU				*e*SN	Sg	00 12 44.1	-0.2
TOF	**Tornio**	**2.40 135**		*e*PG	Pb	00 12 39.3	-0.7
	baz=316						
TOF				MSG		00 13 07.5	
	comp=Z,5.3nm,0.2s						
TOF				*e*SB	Sb	00 13 09.4	-0.7
SGF	**Sodankyl**	**2.46 96**		*e*PB	Pb	00 12 39.9	-1.1
SGF				*e*SG	Sb	00 13 11.9	+0.2
RNF	**Rovaniemi**	**2.58 116**		*e*PB	Pn	00 12 40.8	+1.8
RNF				*e*SB	Sb	00 13 14.3	-1.0
ARE0	**ARCESS Array S**	**2.58 46**		*e*PB	Pb	00 12 41.2	-2.0
ARE0				*e*SB	Sb	00 13 14.9	-0.5
MSF	**Maaselka**	**3.99 115**		*e*P	Pn	00 13 00.8	+2.4

UPP 27 00:12:00.7±0.2,67.°83N×20.°21E,h0km,ML1.8, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13 21**		P	Pg	00 12 03.4	+0.2
KUA				S	Sg	00 12 05.2	+0.3
NIKU	**Nikkaluokta**	**0.45 275**		S	Sg	00 12 15.4	+0.3
LANU	**Lannavaara**	**0.71 71**		S	Sg	00 12 23.6	+0.3
PAJU	**Pajala**	**1.38 125**		P	Pg	00 12 26.2	-1.0

ISCJB ***27*** *00:25:20.7±0.3,0.°18N±0.°04×124.°98E±0.°03,h100km, mb3.9/17,Error ellipse: s-maj=6.4km s-min=4.6km az=156.8*
IDC ***27*** *00:25:22.0±2.4,0.°34N×124.°93E,h95km±23km,mb3.7/16, mb1 3.8/19,mb1mx3.8/32,mbtmp4.0/19,MS3.0/1, Ms1 3.0/1,ms1mx2.5/29,Error ellipse: s-maj=21.8km s-min=11.9km az=74.0*
DJA ***27*** *00:25:21.5±0.9,0.°N±2.°×12.°5E±.°,h36km±17km,M4.6/10, mb4.8/4,mB4.9/3,MLv4.5/10,Mw(mB)4.2/3*

ISC 27 00:25:22.1±0.5,0.°17N±0.°06×125.°03E±0.°05,h100km,n34, σ1°75/41,mb3.9/17,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**2.41 157**		P	**Pn**	**00 25 57.2**	**-2.8**
SANI				S	**Sn**	**00 26 23.4**	**-5.7**
TNTI	**Ternate**	**2.41 76**		P	**Pn**	**00 25 59.3**	**-0.8**
TNTI				S	**Sn**	**00 26 30.0**	**+0.8**
LUWI	**Luwuk**	**2.56 242**		P	**Pn**	**00 26 00.6**	**-1.4**
LUWI				S	**Sn**	**00 26 31.5**	**-1.2**
APSI	**Ampana**	**3.55 252**		P	**Pn**	**00 26 14.2**	**-1.0**
APSI				S	**Sn**	**00 26 56.8**	**+0.5**
NLAI	**Namlea**	**3.97 149**		P	**Pn**	**00 26 19.5**	**-1.4**
NLAI				S	**Sn**	**00 27 04.1**	**-2.4**
MSAI	**Masohi**	**5.23 132**		P	**Pn**	**00 26 38.8**	**+0.7**
	17nm,0.6s,2μm						
TTSI	**Tana Toraja**	**6.11 238**		P	**Pn**	**00 26 48.0**	**-2.0**
	102nm,0.6s,1μm						
SIJI	**Sorong**	**6.32 99**		P	**Pn**	**00 26 54.7**	**+1.9**
	1.8nm,0.3s,baz=248,slow=19,SNR=3.2						
SPSI	**Sidrap Palu**	**6.67 232**		P	**Pn**	**00 26 56.7**	**-0.9**
	32nm,0.5s,426nm0.1nm						
BKSI	**Bulukumba**	**7.33 222**		P	Pn	00 27 11.6	+5.0
KAPI	**Kappang**	**7.37 226**		P	**Pn**	**00 27 07.8**	**+0.7**
	2.3nm,0.3s,baz=58,slow=4.7,SNR=11						
KAPI				S	**Sn**	**00 28 26.9**	**-2.3**
	0.2nm,0.3s,baz=201,slow=19,SNR=1.9						
BSSI	**Bau Bau, Buton**	**7.74 216**		P	**Pn**	**00 27 14.6**	**+2.5**
SMPP	**San Manuel, Pa**	**16.45 345**		*e*P	**P**	**00 29 08.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**18.17 178**		P	**Pn**	**00 29 28.8**	**+0.9**
	0.2nm,0.3s,baz=346,slow=6.8,SNR=6.9						
WRA	**Warramunga Arr**	**21.97 156**		P	**P**	**00 30 08.7**	**+0.6**
	3.0nm,0.4s,baz=334,slow=9.4,SNR=20						
ASAR	**Alice Springs**	**25.22 161**		P	**P**	**00 30 40.7**	**+1.9**
	1.3nm,0.6s,baz=332,slow=6.6,SNR=15						
ASAR				PcP	**PcP**	**00 34 11.1**	**+1.0**
	1.0nm,0.5s,baz=354,slow=2.0,SNR=8.2						
CMAR	**Chiang Mai Arr**	**31.41 307**		P	**P**	**00 31 33.4**	**-0.6**
	0.7nm,0.4s,baz=130,slow=7.8,SNR=4.7						
CMAR				PcP	**PcP**	**00 34 25.1**	**-0.3**
	1.0nm,0.4s,baz=114,slow=2.2,SNR=4.1						
STKA	**Stephens Creek**	**35.52 155**		P	**P**	**00 32 11.8**	**+2.3**
	1.3nm,0.5s,baz=321,slow=9.5,SNR=5.7						
KSRS	**Korea Array**	**37.19 4**		LR	LR	00 46 57.1	
	comp=Z,22nm,21.4s,baz=185,slow=35						
MJAR	**Matsushiro Arr**	**38.20 17**		P	**P**	**00 32 31.7**	**-0.4**
	1.0nm,0.3s,baz=200,slow=10,SNR=5.0						
USRK	**Ussuriysk Ar.**	**44.27 7**		P	**P**	**00 33 22.5**	**+0.7**
	1.5nm,0.4s,baz=187,slow=7.6,SNR=6.6						
SONM	**Songino Array**	**50.16 344**		P	**P**	**00 34 06.1**	**-1.5**
	0.3nm,0.5s,baz=163,slow=8.9,SNR=3.7						
PETK	**Petropavlovsk-**	**59.34 22**		P	**P**	**00 35 15.6**	**+2.0**
	0.9nm,0.6s,baz=222,slow=4.3,SNR=2.9						
**KS

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.46**	**263**	*e*Pg	Pg	00 53 15.4	-0.7
JIS				*e*Sg	Sg	00 53 21.7	-0.3
BESE	**Bessie Mountai**	**0.74**	**290**	*e*Pg	Pg	00 53 20.8	-0.8
BESE				*e*Sg	Sg	00 53 30.1	-1.1
BESE	**Bessie Mountai**	**0.74**	**290**	P	Pg	00 53 20.5	-1.1
BESE				S	Sg	00 53 31.0	-0.2
SKAG	**Skagway**	**1.47**	**321**	*e*Pn	Pn	00 53 33.1	-1.8
SKAG				*e*Sg	Sg	00 53 51.5	-3.0
SIT	**Sitka**	**1.61**	**218**	*e*Pn	Pn	00 53 36.5	-0.3
SIT				*e*Sn	Sb	00 53 58.6	0.0
DLBC	**Dease Lake**	**1.84**	**85**	*e*Pn	Pn	00 53 40.0	-0.2
DLBC				*e*Sg	Sb	00 54 05.4	-0.1
DLBC	**Dease Lake**	**1.84**	**85**	Pn	Pn	00 53 38.8	-1.4
DLBC				Pg	Pb	00 53 40.0	-1.9
DLBC				Sn	Sn	00 54 04.4	+0.2
DLBC				Sg	Sb	00 54 05.4	-0.1
PLBC	**Pleasant Camp**	**1.85**	**309**	*e*Pn	Pn	00 53 40.9	+0.6
PLBC				*e*Sg	Sn	00 54 04.8	+0.5
PLBC	**Pleasant Camp**	**1.85**	**309**	Pg	Pn	00 53 40.9	+0.6
PLBC				Sg	Sn	00 54 04.8	+0.5
WRAK	**Wrangell Islan**	**2.03**	**161**	*e*Pn	Pn	00 53 40.4	-2.2
WRAK				*e*Sn	Sn	00 54 04.7	-3.8
WHY	**Whitehorse**	**2.43**	**344**	*e*Pn	Pn	00 53 46.3	-2.1
WHY	**Whitehorse**	**2.43**	**344**	Pg	Pb	00 53 51.4	-0.6
WHY				Sg	Sb	00 54 22.3	-0.1
HYT	**Haines Junctio**	**3.21**	**323**	*e*Pn	Pn	00 53 59.5	+0.4
HYT	**Haines Junctio**	**3.21**	**323**	Pg	Pb	00 54 04.8	-0.5
YUK5	**Granite Creek**	**3.56**	**324**	Pg	Pb	00 54 10.2	-1.0
YUK5				Sg	Sb	00 54 56.9	+2.0
YUK4	**Talbot Arm**	**3.97**	**322**	Sg	Sg	00 55 11.4	-3.5
FNBB	**Fort Nelson**	**5.53**	**80**	Sg	Sg	00 56 00.3	-4.5

MAN 27 01:08:26.5, 13°.68N×120°.66E, h21km, mb3.5, ML2.1, MS1.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.34**	**122⇑**	*e*P	Pb	01 08 34.7	+0.9
PGP				*i* S	Sb	01 08 40.0	+1.3
LUBP	**Lubang**	**0.40**	**278**	*e*P	Pb	01 08 35.6	+0.8
LUBP				*e*S	Sb	01 08 41.1	+0.6
SJMP	**San Jose**	**1.29**	**160**	*e*P	Pn	01 08 49.6	+0.3
SJMP				*e*S	Sb	01 09 06.3	0.0

*ISN **27** 01:24:11.6±0.3, 37°.13N×42°.52E, h0km, ML2.5*
*ISCJB **27** 01:24:14.4±1.0, 37°.18N±0°.06×42°.51E±0°.04, h8km±11km, Error ellipse: s-maj=9.3km s-min=5.9km az=5.5*
*ISK **27** 01:24:14.1, 37°.25N×42°.50E, h5km, ML2.5/4*
*DDA **27** 01:24:14.5, 37°.30N×42°.53E, h7km±5km, ML2.2*
ISC 27 01:24:14.2±1.3, 37°.20N±0°.06×42°.52E±0°.04, h11km±15km, n12, σ0s97/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**0.87**	**86**	PG	**Pb**	**01 24 31.6**	**+0.2**
CUKT				SG	**Sb**	**01 24 44.3**	**+1.2**
CUKT	**Cukurca**	**0.87**	**86**	*i* P	**Pn**	**01 24 32.7**	**+0.2**
CUKT				*i* S	**Sb**	**01 24 43.2**	**+0.1**
CUKT				IAML_P			
	comp=Z,199nm,0.1s						
MSL	**Mosul**	**0.93**	**149**	*e*Pg	**Pg**	**01 24 30.8**	**-1.1**
	baz=327						
MSL				AML	AML	01 24 35.4	
	comp=Z,200nm,0.4s						
MSL				*e*Sg	**Sg**	**01 24 44.3**	**+0.2**
HAKT	**HAKKARI**	**1.01**	**69**	*i* P	**Pb**	**01 24 34.0**	**+0.1**
HAKT				*i* S	**Sb**	**01 24 48.1**	**+0.8**
HAKT				IAML_P			
	comp=Z,386nm,0.2s						
AKDM	**Akdamar-Van**	**1.19**	**18**	PN	**Pb**	**01 24 36.5**	**-0.3**
AKDM				SN	**Sn**	**01 24 52.6**	**-0.6**
GEVA	**Gevas**	**1.19**	**21**	*i* P	**Pn**	**01 24 38.2**	**+1.2**
GEVA				IAML_P			
	comp=Z,235nm,0.2s						
BLIS	**Bitlis-Merkez**	**1.26**	**345**	*i* P	**Pn**	**01 24 39.3**	**+1.4**
BLIS				*i* S	**Sb**	**01 24 53.8**	**-0.6**
MARD	**Mardin**	**1.39**	**275**	*i* P	**Pg**	**01 24 41.6**	**+0.6**
SVAN	**Silvan-Diyarba**	**1.42**	**313**	PN	**Pb**	**01 24 40.5**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.42**	**313**	*i* P	**Pg**	**01 24 40.9**	**-0.5**
MAZI	**Mazidag**	**1.67**	**280**	PN	**Pn**	**01 24 44.4**	**+0.9**
MUSM	**Mu-Merkez**	**1.72**	**333**	*i* P	**Pb**	**01 24 45.5**	**-0.5**
MUSM				*i* S	**Sn**	**01 25 04.1**	**-2.2**

ISC 27 01:24:52.7±1.2, 50°.15N±0°.07×19°.21E±0°.05, h0km, n5, σ0s84/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.38**	**79**	*e*Pg	**Pg**	**01 25 00.1**	**+0.1**
OJC				*e*Sg	**Sg**	**01 25 05.1**	**+0.1**
LANS	**Liptovska Anna**	**1.01**	**171**	*e*PG	**Pg**	**01 25 12.5**	**+0.4**
LANS				*e*SG	**Sb**	**01 25 27.4**	**+0.4**
NIE	**Niedzica**	**1.01**	**136**	*e*Pg	**Pg**	**01 25 13.0**	**+0.8**
NIE				*e*Sg	**Sb**	**01 25 27.5**	**+0.5**
MORC	**Moravsky Berou**	**1.14**	**252**	*e*PG	**Pb**	**01 25 15.8**	**+0.5**
MORC				*e*SG	**Sb**	**01 25 31.3**	**+0.6**
VYHS	**Vyhne**	**1.67**	**189**	*e*PN	**Pn**	**01 25 22.4**	**-0.9**
VYHS				*e*SN	**Sn**	**01 25 43.9**	**-1.5**

MAN 27 01:25:05.8, 17°.49N×120°.79E, h35km, mb4.0, ML2.8, MS2.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.18**	**336**	*e*P	Pn	01 25 13.8	+1.5
ABRA				*e*S	Sn	01 25 18.9	+2.0
APYP	**Conner**	**0.57**	**49**	*e*P	Pn	01 25 18.5	+1.1
APYP				*e*S	Sn	01 25 27.3	+1.6
SMPP	**San Manuel, Pa**	**1.33**	**184**	*e*P	Pn	01 25 28.7	+0.8
SMPP				*e*S	Sn	01 25 44.4	0.0

*DDA **27** 01:26:22.5, 36°.58N×27°.92E, h7km±1km, ML1.6*
ISK 27 01:26:02.1, 35°.31N×27°.61E, h5km, ML2.3/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.43**	**303**	PG	Pb	01 26 11.7	-0.6
KARP				SG	Sb	01 26 18.7	-0.4
ARG	**Arkhangelos**	**1.00**	**25**	PG	Pb	01 26 22.3	+0.4
DAT	**Datca**	**1.42**	**359**	PN	Pg	01 26 29.9	+0.6
DAT	**Datca**	**1.42**	**359**	*i* P	Pg	01 26 29.6	+0.3
DAT				*i* S	Sn	01 26 48.9	+1.1
DAT				IAML_P			
	comp=Z,179nm,0.2s						
DALY	**Dalyan (Mula)**	**1.73**	**29**	PN	Pb	01 26 34.3	0.0
DALY	**Dalyan (Mula)**	**1.73**	**29**	*i* P	Pg	01 26 36.0	+0.8
DALY				IAML_P			
	comp=Z,227nm,0.2s						
BDRM	**Kayabasi**	**1.76**	**356**	*i* P	Pb	01 26 34.7	-0.1
BDRM				*i* S	Sn	01 26 55.3	-0.7
BDRM				IAML_P			
	comp=Z,119nm,0.2s						
TURN	**Turunc**	**1.76**	**27**	PN	Pn	01 26 31.9	-1.3
TURN	**Turunc**	**1.76**	**27**	*i* P	Pn	01 26 33.4	+0.2
TURN				IAML_P			
	comp=Z,446nm,0.2s						
YER	**Yerkesik**	**1.90**	**17**	PN	Pb	01 26 36.9	-0.4
AYDN	**Tasoluk**	**2.36**	**5**	*i* P	Pn	01 26 43.3	+1.8

*ISCJB **27** 01:32:28.5±0.9, 37°.11N±0°.03×20°.79E±0°.04, h2km±5km, mb3.5/5, Error ellipse: s-maj=5.7km s-min=4.6km az=153.5*
*IDC **27** 01:32:28.7±1.7, 37°.30N×21°.09E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/26, mbtmp3.5/4, Error ellipse: s-maj=52.0km s-min=28.5km az=116.0*
*ATH **27** 01:32:29.6, 37°.15N×20°.84E, h25km±3km, ML3.2/4, Error ellipse: s-maj=4.9km s-min=1.4km az=41.0*
*THE **27** 01:32:30.0, 37°.17N×20°.84E, h0km±1km, ML3.1/16, Error ellipse: s-maj=2.1km s-min=0.6km az=224.0*
ISC 27 01:32:30.1±1.5, 37°.16N±0°.04×20°.87E±0°.04, h7km±9km, n51, σ0s89/73, mb3.6/5, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MES3	**Kyparissia**	**0.65**	**82**	P	**Pb**	**01 32 43.4**	**-0.3**
MES3				S	**Sb**	**01 32 52.6**	**-0.3**
PYL	**PYLOS**	**0.75**	**111**	P	**Pg**	**01 32 44.9**	**+0.4**
PYL				S	**Sb**	**01 32 56.5**	**+0.7**
AMT	**Artemida-Makis**	**0.76**	**61**	P	**Pg**	**01 32 44.3**	**-0.5**
AMT				S	**Sb**	**01 32 56.3**	**0.0**
AMT	**Artemida-Makis**	**0.76**	**61**	P	**Pb**	**01 32 45.7**	**0.0**
AMT				S	**Sb**	**01 32 56.4**	**0.0**
AMT				AML	AML	01 32 58.4	
	comp=N,9788μm,0.9s						
AMT				AML	AML	01 33 00.2	
	comp=E,15486μm,0.7s						
VTN	**Vitineika**	**0.79**	**18**	P	**Pg**	**01 32 45.4**	**0.0**
VTN				S	**Sb**	**01 32 57.9**	**+0.8**
ITM	**Ithomi**	**0.84**	**89**	P	**Pg**	**01 32 46.2**	**-0.1**
ITM				S	**Sb**	**01 32 58.8**	**+0.2**
ITM	**Ithomi**	**0.84**	**89**	P	**Pg**	**01 32 46.4**	**0.0**
ITM				S	**Sb**	**01 32 58.6**	**0.0**
ITM				AML	AML	01 33 00.2	
	comp=N,1943μm,0.4s						
ITM				AML	AML	01 33 00.3	
	comp=E,3610μm,0.4s						
KFL	**Anninata**	**0.95**	**356**	P	**Pg**	**01 32 47.5**	**-0.8**
KFL				S	**Sb**	**01 33 01.4**	**-0.2**
KFL	**Anninata**	**0.95**	**356**	P	**Pg**	**01 32 48.1**	**-0.2**
KFL				S	**Sb**	**01 33 01.7**	**+0.2**
KFL				AML	AML	01 33 09.0	
	comp=E,2984μm,0.4s						
KFL				AML	AML	01 33 09.3	
	comp=N,2005μm,0.4s						
RLS	**Riolos of Patr**	**1.01**	**28**	P	**Pg**	**01 32 48.8**	**-0.7**
RLS				S	**Sb**	**01 33 04.2**	**+0.8**
RLS	**Riolos of Patr**	**1.01**	**28**	P	**Pg**	**01 32 48.9**	**-0.6**
DRO	**Drossia**	**1.03**	**40**	P	**Pg**	**01 32 49.0**	**-0.9**
DRO				S	**Sb**	**01 33 04.5**	**+0.5**
DRO	**Drossia**	**1.03**	**40**	P	**Pg**	**01 32 49.2**	**-0.7**
VLS	**Valsamata**	**1.04**	**348**	P	**Pg**	**01 32 49.3**	**-0.7**
VLS				S	**Sb**	**01 33 04.9**	**+0.8**
VLS	**Valsamata**	**1.04**	**348**	P	**Pg**	**01 32 49.6**	**-0.4**
VLS				S	**Sb**	**01 33 04.7**	**+0.6**
VLS				AML	AML	01 33 07.6	
	comp=N,1823μm,0.4s						
VLS				AML	AML	01 33 07.7	
	comp=E,1153μm,0.2s						
VLX	**Vlachokerasia**	**1.22**	**80**	P	**Pg**	**01 32 52.6**	**-0.9**
DYR	**Agios Nikonas**	**1.24**	**108**	P	**Pg**	**01 32 53.7**	**-0.2**
FSK	**Fiskardo**	**1.32**	**349**	P	**Pg**	**01 32 54.2**	**-1.2**
FSK				S	**Sn**	**01 33 13.9**	**+1.3**
KLV	**Kalavryta, Ach**	**1.34**	**49**	P	**Pg**	**01 32 54.2**	**-1.7**
KLV				S	**Sn**	**01 33 15.2**	**+1.8**
KLV	**Kalavryta, Ach**	**1.34**	**49**	P	**Pg**	**01 32 55.1**	**-0.8**
LAKA	**Lakka**	**1.39**	**39**	P	**Pg**	**01 32 55.9**	**-0.8**
LAKA				S	**Sn**	**01 33 16.1**	**+1.6**
GUR	**Goura**	**1.40**	**56**	P	**Pn**	**01 32 55.1**	**-1.0**
PDO	**Prodromos**	**1.45**	**10**	P	**Pn**	**01 32 56.2**	**-0.6**
PDO				S	**Sn**	**01 33 17.0**	**+0.9**
EVGI	**Lefkada island**	**1.47**	**353**	P	**Pn**	**01 32 57.2**	**+0.3**
EFP	**Efpalio**	**1.50**	**33**	P	**Pn**	**01 32 57.8**	**+0.4**
EFP				S	**Sn**	**01 33 19.2**	**+1.9**
TRIZ	**Trizonia**	**1.53**	**38**	P	**Pn**	**01 32 58.2**	**+0.4**
TRIZ				S	**Sg**	**01 33 20.1**	**+0.7**
PVO	**Paravola**	**1.54**	**19**	P	**Pn**	**01 32 58.2**	**+0.3**
SERG	**Sergoula**	**1.56**	**37**	P	**Pn**	**01 32 58.0**	**-0.3**
KALE	**Kalithea**	**1.58**	**39**	P	**Pn**	**01 32 58.4**	**-0.2**
KALE				S	**Sg**	**01 33 21.8**	**+0.7**
LKD2	**Lefkada island**	**1.63**	**354**	P	**Pn**	**01 32 59.0**	**-0.2**
LKD2				S	**Sg**	**01 33 23.4**	**+0.9**
ANX	**Ano Chora**	**1.65**	**30**	P	**Pn**	**01 32 59.6**	**0.0**
ANX				S	**Sb**	**01 33 22.6**	**+0.7**
TSLK	**Tsoukalades, L**	**1.67**	**354**	P	**Pg**	**01 33 01.9**	**-0.2**
THAL	**Thalero**	**1.67**	**58**	P	**Pb**	**01 33 01.3**	**+0.2**
VLI	**Veliai**	**1.71**	**104**	P	**Pb**	**01 33 01.9**	**0.0**
DSF	**Desfina**	**1.81**	**46**	P	**Pn**	**01 33 02.4**	**+0.7**
KRND	**KRANIDI**	**1.83**	**82**	P	**Pn**	**01 33 02.7**	**+0.8**
LOUT	**Loutraki**	**1.86**	**63**	P	**Pn**	**01 33 02.2**	**-0.2**
EVR	**Evrytania**	**1.90**	**23**	P	**Pb**	**01 33 05.4**	**+0.3**
DID	**Didima**	**1.92**	**79**	P	**Pn**	**01 33 03.2**	**0.0**
KTHR	**Kythira**	**1.94**	**117**	P	**Pb**	**01 33 05.4**	**-0.3**
PROD	**Prodromos**	**1.95**	**55**	P	**Pn**	**01 33 04.4**	**+0.9**
LKR	**Lokris**	**2.25**	**48**	P	**Pn**	**01 33 08.6**	**+1.0**
ATAL	**Atalanti**	**2.29**	**47**	P	**Pn**	**01 33 09.4**	**+1.2**
VLY	**Voula,Athens**	**2.42**	**73**	P	**Pn**	**01 33 10.3**	**+0.2**
PTL	**Penteli**	**2.54**	**69**	P	**Pn**	**01 33 12.3**	**+0.6**
KPRO	**Kipourio**	**2.81**	**8**	P	**Pn**	**01 33 17.9**	**+2.4**
FINES	**FINESS Array B**	**24.52**	**6**	P	**P**	**01 37 48.4**	**-1.5**
	comp=E,1.2nm,0.8s,baz=186,slow=9.8,SNR=5.3						
NOA	**NORSAR Array B**	**24.66**	**349**	P	**P**	**01 37 49.7**	**-1.6**
	comp=E,1.0nm,0.8s,baz=161,slow=9.4,SNR=1.5						
TORD	**Torodi Ar. Bea**	**29.43**	**221**	P	**P**	**01 38 36.0**	**+1.7**
	comp=E,0.3nm,0.8s,baz=34,slow=6.9,SNR=2.2						
ARCES	**ARCESS Array B**	**32.53**	**3**	P	**P**	**01 38 60.0**	**-1.2**
	comp=E,0.9nm,0.7s,baz=182,slow=6.7,SNR=5.2						
MKAR	**Makanchi Array**	**45.60**	**58**	P	**P**	**01 40 48.6**	**-2.2**
	comp=E,0.3nm,0.4s,baz=269,slow=7.0,SNR=4.6						

*BJI **27** 01:50:46.8±0.0, 54°.18N×153°.56E, h628km, mb4.9/37, mB4.7/23*
*KRSC **27** 01:50:47.0±1.7, 53°.93N×153°.90E, h663km±30km, ML4.9*
*MOS **27** 01:50:48.5±0.9, 54°.16N×153°.46E, h637km, mb4.3/52, Error ellipse: s-maj=6.8km s-min=5.7km az=79.9*
*IDC **27** 01:50:49.4±0.5, 54°.15N×153°.47E, h635km±5km, mb3.6/25, mb1 3.8/29, mb1mx3.7/34, mbtmp4.6/29, Error ellipse: s-maj=9.1km s-min=6.8km az=157.0*
*NEIC **27** 01:50:50.3±2.0, 54°.14N×153°.50E, h637km±8km, mb4.3/204, Error ellipse: s-maj=16.3km s-min=12.1km az=160.0*
ISC 27 01:50:49.2±0.4, 54°.02N±0°.05×153°.66E±0°.04, h638km±4km, n812, σ1s32/906, mb4.3/251, 17C-5D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**2.36**	**116**	*e*P	**P**	**01 52 08.5**	**+0.1**
APC				*e*S	**S**	**01 53 12.7**	**-0.4**
APC	**Apacha**	**2.36**	**116**	P	**P**	**01 52 08.5**	**+0.1**
APC				S	**S**	**01 53 12.7**	**-0.4**
GNL	**Ganaly**	**2.56**	**96**	*e*P	**P**	**01 52 09.6**	**+0.2**
GNL				*e*S	**S**	**01 53 14.9**	**-0.1**
GNL	**Ganaly**	**2.56**	**96**	P	**P**	**01 52 09.6**	**+0.2**
GNL				S	**S**	**01 53 14.9**	**-0.1**
PEA0B	**Petropavlovsk-**	**2.58**	**109**	*e*P	**P**	**01 52 09.5**	**+0.1**
PEA0B				*e*S	**S**	**01 53 16.3**	**+1.4**
PETK	**Petropavlovsk-**	**2.58**	**109**	P	**P**	**01 52 09.4**	**0.0**
	12nm,0.3s,baz=2.7,slow=2.6,SNR=279						
PETK				S	**S**	**01 53 15.1**	**+0.2**
	baz=252,slow=14,SNR=3.8						
KRMR	**Karymshinskiy**	**2.93**	**112**	*e*P	**P**	**01 52 11.1**	**0.0**
KRMR				*e*S	**S**	**01 53 17.5**	**-0.5**
KRMR	**Karymshinskiy**	**2.93**	**112**	P	**P**	**01 52 11.1**	**0.0**
KRMR				S	**S**	**01 53 17.5**	**-0.5**
KRX	**Arik**	**3.04**	**101**	*e*P	**P**	**01 52 12.2**	**+0.3**
KRX	**Arik**	**3.04**	**101**	P	**P**	**01 52 12.2**	**+0.3**
KOK	**Koryaka**	**3.05**	**102**	*e*P	**P**	**01 52 12.5**	**+0.6**
KOK	**Koryaka**	**3.05**	**102**	P	**P**	**01 52 12.5**	**+0.6**
KRER	**Koryakskii**	**3.11**	**101**	*e*P	**P**	**01 52 12.4**	**+0.1**
KRER				*e*S	**S**	**01 53 20.3**	**+0.1**
KRER	**Koryakskii**	**3.11**	**101**	P	**P**	**01 52 12.4**	**+0.1**
KRER				S	**S**	**01 53 20.3**	**+0.1**
AVH	**Avacha**	**3.12**	**102**	*e*P	**P**	**01 52 12.5**	**+0.3**
AVH				*e*S	**S**	**01 53 18.8**	**-1.2**
AVH	**Avacha**	**3.12**	**102**	P	**P**	**01 52 12.5**	**+0.3**
AVH				S	**S**	**01 53 18.8**	**-1.2**
MTVR	**Mutnovka**	**3.12**	**118**	*e*P	**P**	**01 52 12.6**	**+0.2**
MTVR				*e*S	**S**	**01 53 20.5**	**+0.3**
MTVR	**Mutnovka**	**3.12**	**118**	P	**P**	**01 52 12.6**	**+0.2**
MTVR				S	**S**	**01 53 20.5**	**+0.3**
PET	**Petropavlovsk**	**3.14**	**106**	*e*P	**P**	**01 52 11.7**	**-0.6**
PET				*e*S	**S**	**01 53 20.4**	**+0.3**
PET	**Petropavlovsk**	**3.14**	**106**	*e*P	**P**	**01 52 12.0**	**-0.2**
PET				*e*S	**S**	**01 53 19.4**	**-0.7**
PET				pmax	pmax		
	comp=Z,105nm,0.6s						
PET				smax	smax		
	comp=E,600nm,1.5s						
PET				smax	smax		
	comp=E,229nm,0.9s						
PET				smax	smax		
	comp=N,163nm,0.8s						
SMAR	**Somma**	**3.15**	**102**	*e*P	**P**	**01 52 12.7**	**+0.1**
SMAR				*e*S	**S**	**01 53 20.1**	**-0.6**
SMAR	**Somma**	**3.15**	**102**	P	**P**	**01 52 12.7**	**+0.1**
SMAR				S	**S**	**01 53 20.1**	**-0.6**
UGLR	**Uglovaya**	**3.18**	**103**	*e*P	**P**	**01 52 12.9**	**+0.3**
UGLR				*e*S	**S**	**01 53 20.7**	**0.0**
UGLR	**Uglovaya**	**3.18**	**103**	P	**P**	**01 52 12.9**	**+0.3**
UGLR				S	**S**	**01 53 20.7**	**0.0**
PAU	**Pauzhetka**	**3.19**	**142**	*e*P	**P**	**01 52 12.6**	**0.0**
PAU	**Pauzhetka**	**3.19**	**142**	P	**P**	**01 52 12.6**	**0.0**
SDLR	**Sedlovina**	**3.20**	**101**	*e*P	**P**	**01 52 12.6**	**-0.1**
SDLR				*e*S	**S**	**01 53 20.4**	**-0.5**
SDLR	**Sedlovina**	**3.20**	**101**	P	**P**	**01 52 12.6**	**-0.1**
SDLR				S	**S**	**01 53 20.4**	**-0.5**
DALK	**Dalny**	**3.20**	**106**	*e*P	**P**	**01 52 12.1**	**-0.4**
DALK				*e*S	**S**	**01 53 18.6**	**-2.0**
DALK	**Dalny**	**3.20**	**106**	P	**P**	**01 52 12.1**	**-0.4**
DALK				S	**S**	**01 53 18.6**	**-2.0**
RUS	**Russkaya**	**3.32**	**117**	*e*P	**P**	**01 52 12.4**	**-0.8**
RUS				*e*S	**S**	**01 53 18.5**	**-3.4**
RUS	**Russkaya**	**3.32**	**117**	P	**P**	**01 52 12.4**	**-0.8**
RUS				S	**S**	**01 53 18.5**	**-3.4**
ALID	**Alaid**	**3.36**	**159**	*e*P	**P**	**01 52 14.2**	**+0.4**
ALID	**Alaid**	**3.36**	**159**	P	**P**	**01 52 14.2**	**+0.4**
KDTR	**Khodutka, Kamc**	**3.47**	**128**	*e*P	**P**	**01 52 12.5**	**-1.6**
KDTR				*e*S	**S**	**01 53 18.8**	**-4.7**
KDTR	**Khodutka, Kamc**	**3.47**	**128**	P	**P**	**01 52 12.5**	**-1.6**
KDTR				S	**S**	**01 53 18.8**	**-4.7**
ESO	**Esso**	**3.48**	**55**	*e*P	**P**	**01 52 14.8**	**+0.8**
ESO				*e*S	**S**	**01 53 23.8**	**+0.2**
ESO	**Esso**	**3.48**	**55**	P	**P**	**01 52 14.8**	**+0.8**
ESO				S	**S**	**01 53 23.8**	**+0.2**
NLC	**Nalytchevo**	**3.49**	**102**	*e*P	**P**	**01 52 14.0**	**-0.2**
NLC				*e*S	**S**	**01 53 22.2**	**-1.5**
NLC	**Nalytchevo**	**3.49**	**102**	P	**P**	**01 52 14.0**	**-0.2**
NLC				S	**S**	**01 53 22.2**	**-1.5**
SKR	**Severo-Kuril's**	**3.67**	**155**	*e*P	**P**	**01 52 14.7**	**-0.7**
SKR				*e*S	**S**	**01 53 23.8**	**-1.8**
SKR				pmax	pmax		
	comp=Z,35nm,0.6s						
SKR				smax	smax		
	comp=E,159nm,0.7s						
SKR				smax	smax		
	comp=N,135nm,0.6s						
SPN	**Mys Shipunski**	**3.91**	**101**	*e*P	**P**	**01 52 15.8**	**-1.0**
SPN				*e*S	**S**	**01 53 24.0**	**-4.4**
SPN	**Mys Shipunski**	**3.91**	**101**	P	**P**	**01 52 15.8**	**-1.0**
SPN				S	**S**	**01 53 24.0**	**-4.4**
TUMR	**Tumrok**	**3.98**	**69**	*e*P	**P**	**01 52 17.3**	**0.0**
TUMR				*e*S	**S**	**01 53 29.1**	**-0.4**
TUMR	**Tumrok**	**3.98**	**69**	P	**P**	**01 52 17.3**	**0.0**
TUMR				S	**S**	**01 53 29.1**	**-0.4**
KZV	**Kizimen**	**4.01**	**71**	*e*P	**P**	**01 52 17.2**	**-0.4**
KZV	**Kizimen**	**4.01**	**71**	P	**P**	**01 52 17.2**	**-0.4**
TUMD	**Tumrok D**	**4.09**	**70**	*e*P	**P**	**01 52 17.4**	**-0.6**
TUMD				*e*S	**S**	**01 53 29.3**	**-1.4**
KOZ	**Kozyrevsk**	**4.12**	**58**	*e*P	**P**	**01 52 18.5**	**+0.4**
KOZ	**Kozyrevsk**	**4.12**	**58**	P	**P**	**01 52 18.5**	**+0.4**
SRDR	**Sredinnyy**	**4.17**	**54**	*e*P	**P**	**01 52 18.7**	**+0.3**
SRDR				*e*S	**S**	**01 53 32.3**	**+0.6**
SRDR	**Sredinnyy**	**4.17**	**54**	P	**P**	**01 52 18.7**	**+0.3**
SRDR				S	**S**	**01 53 32.3**	**+0.6**
KIRR	**Kirishev**	**4.31**	**61**	*e*P	**P**	**01 52 19.2**	**-0.3**
KIRR				*e*S	**S**	**01 53 32.4**	**-1.2**
KIRR	**Kirishev**	**4.31**	**61**	P	**P**	**01 52 19.2**	**-0.3**
KIRR				S	**S**	**01 53 32.4**	**-1.2**
BZMR	**Bezymyannaya**	**4.38**	**61**	*e*P	**P**	**01 52 20.1**	**+0.1**
BZMR	**Bezymyannaya**	**4.38**	**61**	P	**P**	**01 52 20.1**	**+0.1**
BZWR	**Bezymyannyi-We**	**4.39**	**61**	*e*P	**P**	**01 52 20.1**	**0.0**
BZWR	**Bezymyannyi-We**	**4.39**	**61**	P	**P**	**01 52 20.1**	**0.0**
BZGR	**Bezymyannyi-Gr**	**4.49**	**62**	*e*P	**P**	**01 52 21.0**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**4.49**	**62**	P	**P**	**01 52 21.0**	**+0.3**
KRSR	**Krestovskiy**	**4.54**	**58**	*e*P	**P**	**01 52 20.7**	**-0.3**
KRSR				*e*S	**S**	**01 53 35.2**	**-1.2**
KRSR	**Krestovskiy**	**4.54**	**58**	P	**P**	**01 52 20.7**	**-0.3**
KRSR				S	**S**	**01 53 35.2**	**-1.2**
LGNR	**Loginova**	**4.54**	**60**	*e*P	**P**	**01 52 21.8**	**+0.5**
LGNR	**Loginova**	**4.54**	**60**	P	**P**	**01 52 21.8**	**+0.5**
CIRR	**Tsirk**	**4.58**	**60**	*e*P	**P**	**01 52 21.6**	**+0.2**
CIRR	**Tsirk**	**4.58**	**60**	P	**P**	**01 52 21.6**	**+0.2**
KLY	**Klyuchi**	**4.62**	**57**	*e*P	**P**	**01 52 21.8**	**+0.3**
KLY				*e*S	**S**	**01 53 38.5**	**+1.3**
KLY	**Klyuchi**	**4.62**	**57**	P	**P**	**01 52 21.8**	**+0.3**
KLY				S	**S**	**01 53 38.5**	**+1.3**
MKZ	**Mys Kozlova**	**4.76**	**80**	*e*P	**P**	**01 52 20.6**	**-1.9**
MKZ				*e*S	**S**	**01 53 33.7**	**-5.3**
MKZ	**Mys Kozlova**	**4.76**	**80**	P	**P**	**01 52 20.6**	**-1.9**
MKZ				S	**S**	**01 53 33.7**	**-5.3**
BDR	**Baid

TEY pmax pmax
comp=E,50nm,0.6s
KLR Kul'dur 14.40 259 P **P 01 53 50.5 +0.2**
comp=E,9.2nm,0.3s,baz=63,slow=9.3,SNR=139
KLR S **S 01 56 19.9 +2.0**
baz=334,slow=23,SNR=1.4
YAK Yakutsk 14.95 312 *e*P **P 01 53 54.8 -0.1**
YAK *e*S **S 01 56 25.0 -1.3**
YAK Yakutsk 14.95 312 *e*P **P 01 53 53.8 -1.2**
YAK *e*S **S 01 56 23.2 -3.1**
ZEA Zeya 15.55 280 *e*P **P 01 54 00.5 -0.1**
ZEA *e*S **S 01 56 40.0 +3.6**
ZEA pmax pmax
comp=Z,27nm,0.6s
ZEA smax smax
comp=E,200nm,3.0s
ZEA smax smax
comp=E,96nm,1.8s
ZEA smax smax
comp=Z,80nm,1.8s
USA0B Ussuriysk Arra 17.19 244 *e*P **P 01 54 15.5 -0.3**
comp=Z,13nm,0.7s
USRK Ussuriysk Ar. 17.19 244 P **P 01 54 15.4 -0.4**
comp=Z,1.5nm,0.3s,baz=57,slow=8.1,SNR=31
USRK ScP **ScP 02 00 57.6 +0.7**
comp=Z,0.2nm,0.3s,baz=45,slow=1.1,SNR=5.4
MSHR Mys Shultsa 18.75 242⇓ *e*P **P 01 54 30.6 +0.7**
MJB9 Matsu-Tunnel 20.50 218 *e*P **P 01 54 47.0 +1.2**
comp=Z,10nm,0.6s
MAJO Matsuhiro 20.50 218 *e*P **P 01 54 47.0 +1.2**
comp=Z,9.9nm,0.6s
MAJO Matsushiro 20.50 218⇑ *e*P **P 01 54 45.6 -0.2**
MAJO pmax pmax
comp=Z,8.0nm,0.6s
MAT Matsushiro 20.50 218 P **P 01 54 46.6 +0.8**
MJAR Matsushiro Arr 20.50 218 P **P 01 54 47.1 +1.4**
comp=Z,10nm,0.6s,baz=28,slow=7.4,SNR=23
MJAR ScP **ScP 02 01 03.9 -0.8**
comp=Z,0.4nm,0.3s,baz=359,slow=1.9,SNR=4.5
TIXI Tiksi 20.70 338 P **P 01 54 46.7 -0.2**
comp=Z,5.3nm,0.4s,baz=135,slow=10,SNR=8.1
TIXI Tiksi 20.70 338 *e*P **P 01 54 46.4 -0.6**
comp=Z,9.9nm,1.2s
TIXI Tiksi 20.70 338 *e*P **P 01 54 46.4 -0.6**
TIXI pmax pmax
comp=Z,10.0nm,1.2s
CN2 Changchun 21.04 252 *e*P **P 01 54 49.3 -1.1**
CN2 pmax pmax
comp=Z,10.0nm,0.4s
BOD Bodaibo 22.31 296⇑ *i*P **P 01 55 00.4 -1.1**
BOD *e* 01 58 21.3
BOD pmax pmax
comp=Z,888nm,0.6s
KSRS Korea Array 24.23 237 P **P 01 55 19.9 +1.2**
comp=Z,23nm,0.5s,baz=32,slow=9.2,SNR=85
KSRS ScP **ScP 02 01 14.8 +0.4**
comp=Z,1.0nm,0.5s,baz=13,slow=3.1,SNR=6.2
KS15 Wonju Array Si 24.26 237 *e*P **P 01 55 19.6 +0.5**
comp=Z,28nm,0.9s
TJN Taejon 25.35 237⇑ *e*P **P 01 55 29.8 +1.2**
JNU Nakatsue 26.41 227 P **P 01 55 38.7 +0.8**
comp=Z,6.0nm,0.5s,baz=303,slow=1.8,SNR=6.7
JNU Nakatsue 26.41 227 *e*P **P 01 55 38.8 +0.8**
comp=Z,30nm,1.3s
BPAW Bear Paw Mtn. 29.23 48 *e*P **P 01 56 03.6 +1.6**
comp=Z,4.4nm,0.4s
BPAW *e*PcP **PcP 01 58 47.1 0.0**
MLY Manley 29.25 46 *e*P **P 01 56 03.7 +1.6**
comp=Z,2.2nm,0.5s
MLY *e*PcP **PcP 01 58 47.6 +0.5**
ULN Ulaanbaatar 29.56 277 *e*P **P 01 56 05.3 +0.2**
comp=Z,9.1nm,0.7s
ULN Ulaanbaatar 29.56 277 *c i*P **P 01 56 05.0 -0.1**
ULN pmax pmax
comp=Z,9.0nm,0.7s
TOLK Toolik Lake Re 29.58 38 P **P 01 56 05.8 +0.9**
baz=270
TRF Thorofare Moun 29.62 49 *e*P **P 01 56 07.1 +1.7**
comp=Z,8.3nm,1.0s
KDAK Kodiak Island 29.70 61 P **P 01 56 06.5 +0.5**
comp=Z,6.4nm,0.4s,baz=330,slow=1.4,SNR=25
KDAK PcP **PcP 01 58 48.7 +0.3**
comp=Z,7.9nm,1.0s,baz=188,slow=7.1,SNR=3.6
KDAK Kodiak Island 29.70 61 *e*P **P 01 56 06.4 +0.4**
comp=Z,47nm,1.4s
KDAK Kodiak Island 29.70 61 *e*P **P 01 56 06.4 +0.4**
KDAK pmax pmax
comp=Z,47nm,1.4s
TLY Talaya 29.79 286 *e*P **P 01 56 07.3 +0.4**
comp=Z,17nm,0.8s
TLY Talaya 29.79 286 *c i*P **P 01 56 07.5 +0.6**
BWN Browne 29.89 47 *e*P **P 01 56 10.2 +2.7**
comp=Z,26nm,0.4s
CNPM China Poot 29.93 57 *e*P **P 01 56 07.7 -0.2**
comp=Z,20nm,1.2s
CNPM *e*PcP **PcP 01 58 49.5 +0.5**
CNPM *e*S **S 02 00 23.1 +0.7**
SONM Songino Array 29.96 278 P **P 01 56 08.8 +0.3**
comp=Z,10nm,0.7s,baz=64,slow=7.7,SNR=50
SONM PcP **PcP 01 58 48.9 -0.5**
comp=Z,0.6nm,0.5s,baz=113,slow=3.3,SNR=2.4
SONM ScP **ScP 02 01 31.1 -1.0**
comp=Z,2.1nm,0.5s,baz=74,slow=2.0,SNR=12
RND Reindeer 30.27 49 *e*P **P 01 56 11.7 +0.9**
comp=Z,5.4nm,0.5s
RND Reindeer 30.27 49 *e*P **P 01 56 11.7 +0.9**
RND pmax pmax
comp=Z,5.0nm,0.5s
WRH Wood River Hil 30.44 47 *e*P **P 01 56 13.6 +1.4**
comp=Z,14nm,0.6s
WRH *e*ScP **ScP 02 01 32.7 -0.5**
TCOL CIGO, UAF Yank 30.49 46 P **P 01 56 13.9 +1.3**
baz=278
COLA College 30.49 46 *d i*P **P 01 56 13.7 +1.1**
COLA pmax pmax
comp=Z,5.0nm,0.5s
CCB Clear Creek Bu 30.54 46 *e*P **P 01 56 14.1 +1.1**
comp=Z,5.5nm,1.1s
ZAK Zakamensk 30.56 284 *e*P **P 01 56 12.9 -0.7**
ZAK pmax pmax
comp=Z,9.0nm,1.1s
POKR Poker Flat Res 30.64 45 P **P 01 56 15.6 +1.7**
baz=278
SML Sawmill 30.80 52 *e*P **P 01 56 16.5 +1.1**
comp=Z,15nm,0.5s
SML Sawmill 30.80 52 *e*P **P 01 56 16.5 +1.1**
SML pmax pmax
comp=Z,15nm,0.5s
ILAR Eielson Array 30.91 46 P **P 01 56 16.9 +0.7**
comp=Z,2.2nm,0.3s,baz=263,slow=5.9,SNR=62
ILAR PcP **PcP 01 58 49.8 -1.7**
comp=Z,0.4nm,0.4s,baz=278,slow=3.7,SNR=3.7
ILAR ScP **ScP 02 01 33.4 -1.4**
comp=Z,0.9nm,0.8s,baz=287,slow=4.4,SNR=7.1
ILB Eielson Array 30.91 46 *e*P **P 01 56 16.9 +0.7**
comp=Z,4.7nm,0.4s
HDA Harding Lake 30.94 47 *e*P **P 01 56 17.2 +0.7**
comp=Z,5.9nm,1.0s
DHY Denali Highway 30.98 49 *e*P **P 01 56 18.0 +1.0**
comp=Z,6.0nm,0.7s
MOY Mondy 31.29 288 *e*P **P 01 56 20.3 +0.5**
MOY pmax pmax
comp=Z,22nm,1.2s
FYU Fort Yukon 31.35 42 *e*P **P 01 56 21.5 +1.6**
comp=Z,7.4nm,1.0s
PRP Porcupine Dome 31.38 44 *e*P **P 01 56 21.9 +1.6**
comp=Z,13nm,1.0s
RIDG Independent Ri 31.97 48 *e*P **P 01 56 25.3 0.0**
comp=Z,13nm,1.0s
SCRK Sand Creek 32.30 47 *e*P **P 01 56 28.3 +0.2**
comp=Z,7.1nm,0.8s
EGAK Eagle 33.32 45 *e*P **P 01 56 36.9 +0.4**
comp=Z,10nm,0.8s
BALM Baldy 33.78 52 *e*P **P 01 56 42.4 +1.9**
comp=Z,9.1nm,0.7s
BALM Baldy 33.78 52 *e*P **P 01 56 42.4 +1.9**
BALM pmax pmax
comp=Z,9.0nm,0.7s
DAWY Dawson 34.24 46 *e*P **P 01 56 45.3 +1.1**
comp=Z,2.5nm,0.9s
EPYK Eagle Plains 34.75 42 *e*P **P 01 56 45.9 -2.4**
comp=Z,8.3nm,1.1s
EPYK Eagle Plains 34.75 42 P **P 01 56 49.5 +1.2**
baz=284
INK Inuvik 35.49 38 *e*P **P 01 56 55.2 +0.9**
comp=Z,9.3nm,0.4s
INK *e*PcP **PcP 01 59 04.5 -0.1**
INK Inuvik 35.49 38 *e*P **P 01 56 55.2 +0.9**
INK *e* 01 59 04.6
INK pmax pmax
comp=Z,9.0nm,0.4s
HYT Haines Junctio 36.08 51 *e*P **P 01 57 02.0 +2.5**
comp=Z,10nm,0.9s
WHN Wuhan 36.66 246⇓ P **P 01 57 04.3 -0.2**
WHN pmax pmax
comp=Z,50nm,0.6s
WHY Whitehorse 37.34 50 *e*P **P 01 57 12.1 +2.4**
comp=Z,5.2nm,0.6s
LZH Lanzhou 38.57 263 *e*P **P 01 57 20.8 +0.8**
LZH pmax pmax
comp=Z,67nm,1.1s
GTA Gaotai 38.72 270⇑ P **P 01 57 22.0 +0.9**
GTA pmax pmax
comp=Z,37nm,1.0s
GTA pmax pmax
comp=Z,54nm,7.5s
ZAA0 Zalesovo Array 39.00 299 *e*P **P 01 57 22.0 -1.0**
comp=Z,5.3nm,0.7s
ZALV Zalesovo Beam 39.00 299 P **P 01 57 21.9 -1.1**
comp=Z,4.8nm,0.4s,baz=56,slow=7.4,SNR=16
NVS Novosibirsk 39.38 301 *e*P **P 01 57 25.1 -0.9**
NVS pmax pmax
comp=Z,29nm,0.7s
NVS pmax pmax
comp=N,10.0nm,1.0s
NVS pmax pmax
comp=E,15nm,0.5s
ENH Enshi 39.55 251 *e*P **P 01 57 27.4 -0.3**
comp=E,46nm,0.8s
DGZ Jazzator, Alta 39.78 292 *c i*P **P 01 57 29.8 +0.3**
DGZ pmax pmax
comp=Z,13nm,0.8s
DLBC Dease Lake 40.53 52 *e*P **P 01 57 37.8 +2.7**
comp=Z,7.3nm,1.1s
DIB Dawson Inlet, 41.97 60 *e*P **P 01 57 48.7 +2.4**
comp=Z,32nm,1.4s
RES Resolute Bay 43.87 21 *e*P **P 01 58 01.3 +0.6**
comp=Z,31nm,1.5s
KURK Kurchatov 43.94 298 *e*P **P 01 58 01.0 -0.6**
comp=Z,35nm,0.5s
KURK Kurchatov 43.94 298 *c i*P **P 01 58 00.9 -0.7**
KURK pmax pmax
comp=Z,26nm,0.6s
MK31 Makanchi Array 44.26 291 *e*P **P 01 58 03.4 -0.8**
comp=Z,13nm,0.6s
MK31 Makanchi Array 44.26 291 *e*P **P 01 58 03.4 -0.8**
MK31 pmax pmax
comp=Z,13nm,0.6s
MKAR Makanchi Array 44.26 291 P **P 01 58 03.5 -0.7**
comp=Z,13nm,0.4s,baz=56,slow=6.6,SNR=215
MKAR PP **PP 01 59 58.2 -1.4**
comp=Z,0.5nm,0.4s,baz=45,slow=8.6,SNR=2.4
MKAR ScP **ScP 02 02 23.9 -2.0**
comp=Z,0.9nm,0.8s,baz=64,slow=5.5,SNR=4.5
MAKZ Makanchi 44.43 291 *e*P **P 01 58 04.7 -0.8**
comp=Z,18nm,0.4s
MAKZ Makanchi 44.43 291 *e*P **P 01 58 04.7 -0.8**
MAKZ pmax pmax
comp=Z,18nm,0.4s
BBB Bella Bella 44.74 59 *e*P **P 01 58 09.3 +1.6**
comp=Z,37nm,1.3s
YKW3 Yellowknife Ar 44.99 41 *e*P **P 01 58 10.4 +0.9**
comp=Z,4.4nm,0.6s
YKA Yellowknife Ar 45.03 41 P **P 01 58 10.4 +0.6**
comp=Z,7.5nm,0.7s,baz=305,slow=7.1,SNR=22
YKA PcP **PcP 01 59 36.5 +0.2**
comp=Z,0.8nm,0.5s,baz=310,slow=3.7,SNR=5.4
BRVK Borovoye 46.78 305 *e*P **P 01 58 22.4 -0.7**
comp=Z,20nm,0.6s
BRVK Borovoye 46.78 305 *c i*P **P 01 58 21.9 -1.2**
BRVK pmax pmax
comp=Z,15nm,0.6s
PDGK Podgornoye 47.97 289 P **P 01 58 31.5 -0.8**
PDGK pmax pmax
comp=Z,12nm,0.9s
OTUK Ortayu 48.70 298 P **P 01 58 37.0 -0.4**
OTUK pmax pmax
comp=Z,10.0nm,0.5s
LLLB Lilloоet 48.81 57 *e*P **P 01 58 39.9 +1.6**
comp=Z,6.0nm,0.5s
SVE Sverdlovsk 48.91 313 *e*P **P 01 58 38.7 0.0**
SVE pmax pmax
comp=Z,19nm,0.9s
A04D Lummi Island 49.59 60 P **P 01 58 45.5 +1.6**
baz=310
SLVN Son La 49.65 249 *e*P **P 01 58 45.4 +0.6**
comp=Z,13nm,0.8s
NLWA Neilton Lookou 49.84 62 *e*P **P 01 58 46.8 +1.0**
comp=Z,42nm,1.4s
KDJ Kajisay 50.04 289 *e*P **P 01 58 47.5 -0.1**
comp=Z,22nm,0.6s
KDJ Kajisay 50.04 289 *e*P **P 01 58 47.5 -0.1**
KDJ pmax pmax
comp=Z,23nm,0.6s
ARU Arti 50.05 314 *e*P **P 01 58 45.7 -1.4**
comp=Z,22nm,0.5s
ARU Arti 50.05 314 *c i*P **P 01 58 46.1 -1.0**
ARU 02 00 48.6
ARU S **S 02 05 11.7 -0.5**
ARU pmax pmax
comp=Z,13nm,0.5s
D03D Eldon 50.16 61 P **P 01 58 49.9 +1.9**
baz=310
B05A Bryant 50.20 60 P **P 01 58 49.7 +1.4**
baz=310
TKM2 Tokmak 2 50.40 291 P **P 01 58 50.0 -0.1**
SNR=10.0
TKM2 Tokmak 2 50.40 291 *i*P **P 01 58 49.7 -0.4**
TKM2 pmax pmax
comp=Z,7.0nm,0.6s
ULHL Ulahol 50.49 290 P **P 01 58 50.8 0.0**
SNR=12
BOOM Boomskoye usch 50.49 290 *e*P **P 01 58 50.3 -0.5**
comp=Z,10.0nm,0.8s
BOOM Boomskoye usch 50.49 290 *e*P **P 01 58 50.3 -0.5**
BOOM pmax pmax
comp=Z,10.0nm,0.8s
D04E Lakebay 50.55 61 P **P 01 58 52.9 +2.1**
baz=311
LSA Lhasa 50.58 268 *e*P **P 01 58 52.7 +0.8**
comp=Z,17nm,0.8s
LSA Lhasa 50.58 268 *e*P **P 01 58 52.7 +0.8**
LSA pmax pmax
comp=Z,17nm,0.8s
USP Ospenovka 50.77 292 P **P 01 58 52.7 +0.1**
SNR=9.2
CHMS Chumysh 50.81 292 P **P 01 58 52.7 -0.1**
SNR=5.6
KBK Karagaybulak 50.93 291 P **P 01 58 53.9 0.0**
SNR=11
E04D Cinebar 51.06 62 P **P 01 58 56.3 +1.8**
baz=311
ARCES ARCESS Array B 51.13 339 P **P 01 58 53.5 -1.2**
comp=Z,5.9nm,0.9s,baz=45,slow=7.7,SNR=19
KZA Kyzart 51.15 291 P **P 01 58 56.1 +0.3**
SNR=6.1
AAK Ala-Archa 51.19 292 P **P 01 58 55.8 0.0**
SNR=8.2
AAK Ala-Archa 51.19 292 *e*P **P 01 58 55.8 0.0**
comp=Z,16nm,0.5s
AAK Ala-Archa 51.19 292 *c i*P **P 01 58 55.6 -0.2**
AAK pmax pmax
comp=Z,10.0nm,0.5s
PRGR Permogore 51.53 325 *e*P **P 01 58 54.2 -3.4**
PRGR pmax pmax
comp=Z,15nm,0.6s
EKS2 Erkin-Say 51.57 292 P **P 01 58 58.5 +0.1**
SNR=22
LTY Liberty 51.58 60 *e*P **P 01 58 59.5 +1.1**
comp=Z,6.1nm,1.0s
F05D White Salmon 52.09 62 P **P 01 59 03.5 +1.6**
baz=312
H04D Lebanon 52.33 64 P **P 01 59 05.6 +2.0**
baz=312
C09A Chrisman Ranch 52.43 58 *e*P **P 01 59 05.7 +1.3**
comp=Z,8.1nm,0.5s
KSH Kashi 52.48 288 P **P 01 59 08.5 +3.5**
KSH PP **PP 02 01 16.3 +3.0**
KSH S **S 02 05 48.0 +2.6**
KSH SS **SS 02 09 40.0 +4.2**
KSH pmax pmax
comp=Z,24nm,1.0s
KSH pmax pmax
comp=Z,270nm,5.2s
I03D Drain, OR 52.56 65 P **P 01 59 07.4 +2.2**
baz=313
G05D Wamic, OR 52.59 62 P **P 01 59 07.4 +1.9**
baz=312
J01E Myrtle Point 52.60 66 P **P 01 59 08.0 +2.4**
baz=313
PANO Nakornpanom 52.67 245 P **P 01 59 07.8 +1.4**
comp=Z,0.6nm,0.8s
NEW Newport 52.70 57 *e*P **P 01 59 07.4 +1.2**
comp=Z,4.7nm,1.0s
NEW Newport 52.70 57 P **P 01 59 07.2 +1.0**
baz=312
ARSB Arslanbob 52.91 291 *e*P **P 01 59 08.1 +0.1**
comp=Z,20nm,1.1s
I04A Tendick Farm, 52.99 64 P **P 01 59 10.0 +1.6**
baz=313
KK31 Karatay Array 53.04 294 *e*P **P 01 59 07.4 -1.3**
comp=Z,11nm,0.8s
KK31 Karatay Array 53.04 294 *i* P **P 01 59 07.9 -0.8**
KK31 pmax pmax
comp=Z,8.0nm,0.6s
KKAR Karatay Array 53.04 294 *e*P **P 01 59 07.4 -1.3**
comp=Z,11nm,0.8s
KKAR Karatay Array 53.04 294 *e*P **P 01 59 07.4 -1.3**
KKAR pmax pmax
comp=Z,11nm,0.8s
K02D Willamette Mer 53.06 66 P **P 01 59 11.1 +2.1**
baz=313
SKNT Sakolnakorn 53.15 246 P **P 01 59 10.7 +0.9**
comp=Z,29nm,0.8s
I05D Terrebonne, OR 53.19 63 P **P 01 59 11.4 +1.6**
baz=313
E09A Wood Farm, Sta 53.37 59 *e*P **P 01 59 12.6 +1.6**
comp=Z,7.7nm,0.8s
L02E Cave Junction 53.47 67 P **P 01 59 13.8 +2.0**
baz=314
PAYA Payao 53.47 251 P **P 01 59 13.2 +1.1**
comp=Z,69μm,0.7s,comp=Z,719μm
HUMO Hull Mountain 53.51 66 *e*P **P 01 59 14.8 +2.8**
comp=Z,10nm,1.3s
J04D Umpqua Nationa 53.53 65 P **P 01 59 14.8 +2.4**
baz=313,SNR=5.4
WALA Waterton Lakes 53.73 55 *e*P **P 01 59 14.9 +1.3**
comp=Z,11nm,0.8s
PINE Pine Mountain 53.77 63 *e*P **P 01 59 16.5 +2.4**
comp=Z,13nm,0.8s
J05D Fort Rock, OR 53.96 64 P **P 01 59 17.9 +2.5**
baz=314,SNR=22
L04D Klamath Falls 54.12 66 P **P 01 59 18.8 +2.3**
baz=314,SNR=7.6
KLMR Klimovskoe 54.14 327 *e*P **P 01 59 14.4 -1.6**
KLMR pmax pmax
comp=Z,7.0nm,0.7s
KLMR Klimovskoe 54.14 327 *e*P **P 01 59 14.4 -1.6**
KLMR AMP 01 59 16.0
comp=Z,7.0nm,0.7s
K04D Chiloquin, OR 54.14 65 P **P 01 59 18.9 +2.4**
baz=314
F10A Beach Ranch, E 54.20 59 *e*P **P 01 59 18.5 +1.6**
comp=Z,5.5nm,0.8s
AB31 Akbulak array 54.21 306 *i* P **P 01 59 15.8 -0.9**
AB31 pmax pmax
comp=Z,10.0nm,0.8s
ABKAR Akbulak array 54.21 306 *e*P **P 01 59 16.0 -0.8**
comp=Z,11nm,0.8s
YBH Yreka Blue Hor 54.24 66 *e*P **P 01 59 19.8 +2.5**
comp=Z,6.1nm,0.6s
LAMP Lampang 54.28 251 P **P 01 59 19.0 +1.3**
comp=Z,89μm,0.7s,comp=Z,899μm
AKTO Aktyubinsk 54.30 308 P **P 01 59 15.9 -1.5**
AKTO pmax pmax
comp=Z,6.0nm,0.6s
I07A Izee 54.33 62 *e*P **P 01 59 20.0 +2.1**
comp=Z,6.4nm,1.1s
UTTA Uttaradit 54.40 250 P **P 01 59 19.6 +1.1**
comp=Z,42μm,0.8s,comp=Z,405μm
M02C Callahan 54.40 67 P **P 01 59 21.0 +2.7**
baz=314
CMMT Chiang Mai 54.43 252 P **P 01 59 19.3 +0.5**
comp=Z,16nm,0.7s
CHTO Chiang Mai 54.43 252 *e*P **P 01 59 19.5 +0.7**
comp=Z,21nm,0.6s
CHTO Chiang Mai 54.43 252 *e*P **P 01 59 19.5 +0.7**
CHTO pmax pmax
comp=Z,21nm,0.6s
M04C Macdoel 54.68 66 P **P 01 59 22.6 +2.3**
baz=314
CMAR Chiang Mai Arr 54.72 252 P **P 01 59 21.4 +0.7**
comp=Z,12nm,0.6s,baz=24,slow=7.1,SNR=45
CMAR ScP **ScP 02 03 10.2 -0.9**
comp=Z,0.9nm,0.3s,baz=27,slow=4.2,SNR=3.7
N02D Trinity Center 54.77 67 P **P 01 59 23.6 +2.7**
baz=314,SNR=9.0
BMO Blue Mountains 54.93 60 *e*P **P 01 59 23.6 +1.6**
comp=Z,3.8nm,0.7s
BTK Batken 54.97 292 *e*P **P 01 59 22.1 -0.2**
comp=Z,43nm,0.6s
BTK Batken 54.97 292 *e*P **P 01 59 22.1 -0.2**
BTK pmax pmax
comp=Z,43nm,0.6s
GUN Gumba 55.01 270 *e*P **P 01 59 22.8 -0.3**
comp=Z,27nm,0.3s
JIRN Jiri 55.01 270 *e*P **P 01 59 22.9 -0.2**
FFC Flin Flon 55.06 43 *e*P **P 01 59 23.4 +0.8**
comp=Z,90nm,0.8s
FFC Flin Flon 55.06 43 *e*P **P 01 59 23.4 +0.8**
FFC pmax pmax
comp=Z,90nm,0.8s
CHAI Chaiyaphum 55.11 247 P **P 01 59 24.0 +0.5**
comp=Z,33μm,0.6s
PBKT Sadao Pong 55.12 248 P **P 01 59 24.4 +0.9**
comp=Z,7.7nm,0.8s,comp=Z,359nm
WDC Whiskeytown Da 55.13 67 *e*P **P 01 59 25.5 +2.2**
comp=Z,3.6nm,0.6s
WDC Whiskeytown Da 55.13 67 *e*P **P 01 59 25.5 +2.2**
WDC pmax pmax
comp=Z,4.0nm,0.6s
MSO Missoula 55.25 57 *e*P **P 01 59 25.4 +1.3**
comp=Z,7.2nm,0.6s
MSO Missoula 55.25 57 P **P 01 59 25.3 +1.1**
baz=314,SNR=12
O02D Mt. Diablo Mer 55.28 68 P **P 01 59 26.9 +2.4**
baz=315
J08A Circle Bar Ran 55.37 62 *e*P **P 01 59 27.4 +2.3**
comp=Z,8.7nm,0.7s
MOD Modoc Plateau 55.42 65 *e*P **P 01 59 27.5 +2.0**
comp=Z,7.9nm,0.6s
KKN Kakani 55.45 271 *e*P **P 01 59 25.8 -0.2**
comp=Z,49nm,0.5s
PKI Pulchoki 55.54 270 *e*P **P 01 59 26.4 -0.3**
comp=Z,57nm,0.7s
PKIN Phulchoki 55.54 270 *e*P **P 01 59 26.4 -0.3**
comp=Z,42nm,0.7s
DMN Daman 55.69 271 *e*P **P 01 59 27.8 +0.1**
comp=Z,44nm,0.7s
O03E Paynes Creek 55.73 67 P **P 01 59 29.1 +1.5**
baz=315,SNR=9.1
WVOR Wild Horse Val 55.93 63 *e*P **P 01 59 30.9 +2.0**
comp=Z,7.5nm,0.8s
WVOR Wild Horse Val 55.93 63 *e*P **P 01 59 30.9 +2.0**
WVOR pmax pmax
comp=Z,8.0nm,0.8s
DANN Dangsing 55.94 272 *e*P **P 01 59 29.2 -0.2**
comp=Z,75nm,0.7s
GAR Garm 55.99 291 *e*P **P 01 59 29.1 -0.3**
comp=Z,50nm,0.5s
GAR Garm 55.99 291 *e*P **P 01 59 29.1 -0.3**
GAR pmax pmax
comp=Z,50nm,0.5s
GDXM Geysers 56.24 69 *e*P **P 01 59 34.3 +3.2**
comp=Z,8.6nm,1.0s
HRY Holter Researc 56.37 55 *e*P **P 01 59 33.5 +1.6**
EGMT Eagleton 56.43 53 *e*P **P 01 59 33.2 +1.0**
comp=Z,12nm,1.2s
EGMT Eagleton 56.43 53 P **P 01 59 33.1 +1.0**
baz=316,SNR=5.0
KOLN Koldanda 56.46 272 *e*P **P 01 59 32.4 -0.5**
comp=Z,33nm,0.4s
PYUN Piuthan 56.57 273 *e*P **P 01 59 33.4 -0.3**
comp=Z,31nm,0.3s
UMPA Umpang Tak 56.58 250 P **P 01 59 36.1 +2.5**
comp=Z,59μm,0.6s
BEKR Beckworth 56.82 67 *e*P **P 01 59 36.8 +1.7**
comp=Z,8.1nm,0.8s
CHGR Chuyangaron 56.87 291 *e*P **P 01 59 37.4 +2.0**
comp=Z,31nm,0.8s
DLMT Dillon 56.95 57 *e*P **P 01 59 37.7 +1.9**
comp=Z,15nm,1.1s

AFDM	Forest Hills D	57.14	68	eP		P	01 59 39.4 +2.3
	comp=Z,4.1nm,1.0s						
BOZ	Bozeman (W)	57.26	56	eP		P	01 59 39.5 +1.5
	comp=Z,9.2nm,0.6s						
BOZ	Bozeman (W)	57.26	56	eP		P	01 59 39.5 +1.5
BOZ					pmax	pmax	
	comp=Z,9.0nm,0.6s						
BOZ	Bozeman (W)	57.26	56	P		P	01 59 39.5 +1.5
	baz=316,SNR=18						
HLID	Hailey	57.32	60	eP		P	01 59 40.3 +1.9
	comp=Z,4.1nm,1.1s						
HLID	Hailey	57.32	60	P		P	01 59 40.0 +1.6
	baz=316,SNR=5.9						
PAHR	Pah Rah Range	57.46	66	eP		P	01 59 41.2 +1.8
	comp=Z,9.8nm,0.9s						
VCNR	Virginia City	57.61	67	eP		P	01 59 42.9 +2.3
	comp=Z,7.3nm,0.8s						
FINES	FINESS Array B	57.65	333	P		P	01 59 39.1 -1.0
	comp=Z,2.3nm,0.4s,baz=34,slow=8.2,SNR=34						
PNTR	Pine Nut	57.79	67	eP		P	01 59 44.0 +2.3
	comp=Z,9.4nm,1.0s						
PUL	Pulkovo	57.85	330⇑	eP		P	01 59 43.1 +1.7
PUL					pmax	pmax	
	comp=Z,41nm,0.7s						
QLMT	Earthquake Lak	57.91	57	eP		P	01 59 44.3 +1.9
YERR	Yerington	58.06	67	eP		P	01 59 45.8 +2.3
	comp=Z,17nm,0.6s						
GCMT	Greycliff	58.08	55	eP		P	01 59 45.6 +2.1
YHB	Horse Butte	58.08	57	eP		P	01 59 45.3 +1.7
	comp=Z,14nm,0.5s						
BMN	Battle Mountai	58.10	64	eP		P	01 59 46.0 +2.2
	comp=Z,4.8nm,0.7s						
CMB	Columbia Colle	58.12	68	eP		P	01 59 45.5 +1.8
	comp=Z,4.2nm,0.6s						
CMB	Columbia Colle	58.12	68	eP		P	01 59 45.5 +1.8
CMB					pmax	pmax	
	comp=Z,4.0nm,0.6s						
NIL	Nilore	58.18	285	eP		P	01 59 44.4 +0.2
	comp=Z,39nm,0.6s						
NIL	Nilore	58.18	285	eP		P	01 59 44.4 +0.2
NIL					pmax	pmax	
	comp=Z,39nm,0.6s						
YHH	Holmes Hill	58.22	56	eP		P	01 59 46.6 +2.0
	comp=Z,8.4nm,0.6s						
YMR	Madison River	58.25	57	eP		P	01 59 46.9 +2.2
	comp=Z,10nm,0.7s						
WAKR	Walker	58.30	67	eP		P	01 59 47.2 +2.1
	comp=Z,7.6nm,0.7s						
YFT	Old Faithful	58.47	57	eP		P	01 59 49.6 +3.3
	comp=Z,13nm,0.8s						
KVN	Kaiserville	58.62	66	eP		P	01 59 49.3 +2.0
	comp=Z,10nm,0.9s						
KVN	Kaiserville	58.62	66	eP		P	01 59 49.3 +2.0
KVN					pmax	pmax	
	comp=Z,11nm,0.9s						
H17A	Grant Village	58.64	57	P		P	01 59 50.2 +2.8
	baz=317						
DGMT	Dagmar	58.67	50	P		P	01 59 47.9 +0.7
	baz=318						
RYN	Ryan	58.70	66	eP		P	01 59 50.0 +2.2
	comp=Z,6.1nm,0.9s						
RLMT	Red Lodge	58.76	55	eP		P	01 59 50.0 +1.9
	comp=Z,12nm,0.8s						
RLMT	Red Lodge	58.76	55	P		P	01 59 49.9 +1.8
	baz=317,SNR=14						
FLWY	Flagg Ranch	58.81	57	eP		P	01 59 51.1 +2.6
	comp=Z,8.6nm,1.1s						
IMW	Indian Meadow	58.83	57	eP		P	01 59 51.0 +2.3
	comp=Z,3.8nm,0.6s						
PHET	Kaeng Krachan	58.85	247	P		P	01 59 50.4 +1.5
	comp=Z,51µm,0.7s,comp=Z,674µm						
ELK	Elko	58.92	62	eP		P	01 59 51.3 +2.0
	comp=Z,3.8nm,0.8s						
ELK	Elko	58.92	62	eP		P	01 59 51.3 +2.0
ELK					pmax	pmax	
	comp=Z,4.0nm,0.8s						
NVAR	Mina Array Bea	58.96	66	P		P	01 59 51.5 +1.9
	comp=Z,6.9nm,0.7s,baz=303,slow=6.2,SNR=40						
FXWY	Fox Creek	58.97	58	eP		P	01 59 48.2 -1.3
	comp=Z,4.5nm,0.7s						
NV11	Mina Array Sit	59.04	66	eP		P	01 59 51.9 +1.8
	comp=Z,0.3nm,0.6s						
LAO	LASA Array	59.06	52	P		P	01 59 51.1 +1.3
	baz=318						
TPAW	Teton Pass	59.12	58	eP		P	01 59 53.0 +2.5
	comp=Z,7.1nm,0.8s						
OMMB	Old Mammoth Mi	59.18	67	eP		P	01 59 53.5 +2.3
	comp=Z,2.3nm,0.7s						
LOHW	Long Hollow	59.20	57	eP		P	01 59 53.1 +2.1
	comp=Z,6.2nm,1.0s						
PAGB	Antelope Grade	59.86	70	eP		P	01 59 57.6 +2.3
	comp=Z,11nm,0.7s						
KBL	Kabul	59.91	288	eP		P	01 59 54.3 -1.6
	comp=Z,16nm,0.8s						
KBL	Kabul	59.91	288	eP		P	01 59 54.3 -1.6
KBL					pmax	pmax	
	comp=Z,16nm,0.8s						
BGU	Big Grassy Mou	59.93	61	eP		P	01 59 57.6 +1.7
	comp=Z,3.1nm,0.6s						
SPUT	South Promonto	59.95	60	eP		P	01 59 58.0 +2.0
	comp=Z,9.3nm,1.2s						
VSU	Vasula	59.97	331	ceP		P	01 59 54.4 -1.1
VSU					pmax	pmax	
	comp=Z,31nm,1.4s						
HWUT	Hardware Ranch	60.19	59	eP		P	01 59 59.4 +1.8
	comp=Z,5.5nm,0.7s						
BW06	Boulder Array	60.34	57	eP		P	01 59 59.4 +0.8
	comp=Z,7.7nm,0.9s						
BW06	Boulder Array	60.34	57	P		P	01 59 59.7 +1.0
	baz=318,SNR=12						
PD31	Pinedale Array	60.34	57	eP		P	01 59 59.9 +1.2
	comp=Z,7.6nm,1.0s						
PDAR	Pinedale Array	60.34	57	P		P	01 59 59.8 +1.2
	comp=Z,13nm,0.9s,baz=353,slow=1.9,SNR=69						
VES	Vestal, Richgr	60.42	69	P		P	01 59 59.9 +1.0
	baz=318						
R11A	Troy Canyon, C	60.48	65	eP		P	02 00 00.3 +0.7
	comp=Z,2.7nm,1.0s						
R11A	Troy Canyon, C	60.48	65	P		P	02 00 00.8 +1.3
	baz=318,SNR=6.6						
GRAC	Grapevine Rang	60.52	67	P		P	02 00 01.7 +2.1
	baz=318						
CWC	Cottonwood Cre	60.54	68	P		P	02 00 01.3 +1.4
	baz=318						
DUG	Dugway, Tooele	60.58	61	eP		P	02 00 02.2 +2.0
	comp=Z,7.8nm,0.8s						
DUG	Dugway, Tooele	60.58	61	eP		P	02 00 02.2 +2.0
DUG					pmax	pmax	
	comp=Z,8.0nm,0.8s						
DUG	Dugway, Tooele	60.58	61	P		P	02 00 01.8 +1.7
	baz=318,SNR=14						
TCUT	Toone Canyon	60.62	60	eP		P	02 00 02.5 +2.0
	comp=Z,9.5nm,0.6s						
LPSR	Galich'ya Gora	60.71	321	eP		P	01 59 58.9 -1.6
LPSR					pmax	pmax	
	comp=Z,10.0nm,0.6s						
PKM	Mcpherson Peak	60.72	70	P		P	02 00 03.1 +1.9
	baz=318						
VRH	Novokhopyorsk	60.74	318	eP		P	01 59 57.1 -3.6
VRH					pmax	pmax	
	comp=Z,10.0nm,0.4s						
ULM	Lac du Bonnet	60.89	44	P		P	02 00 01.6 -0.2
	comp=Z,2.9nm,0.3s,baz=325,slow=5.4,SNR=6.5						
DAC	Darwin (Calif)	60.92	68	eP		P	02 00 06.1 +3.6
	comp=Z,4.2nm,0.8s						
MPMC	Manual Prospec	61.14	68	P		P	02 00 05.5 +1.6
	baz=318,SNR=7.5						
NLU	North Lily Min	61.14	61	eP		P	02 00 05.1 +1.2
	comp=Z,21nm,0.8s						
TPNV	Topopah Spring	61.16	66	eP		P	02 00 05.7 +1.7
	comp=Z,14nm,0.5s						
TPNV	Topopah Spring	61.16	66	eP		P	02 00 05.7 +1.7
TPNV					pmax	pmax	
	comp=Z,14nm,0.5s						
TPNV	Topopah Spring	61.16	66	P		P	02 00 05.6 +1.7
	baz=318,SNR=12						
FURC	Furnace Creek,	61.18	67	P		P	02 00 05.8 +2.0
	baz=318,SNR=11						
PSUT	Pine Spring	61.26	63	eP		P	02 00 06.4 +1.7
	comp=Z,7.7nm,0.6s						
MPU	Maple Canyon	61.32	61	eP		P	02 00 07.0 +2.0
	comp=Z,7.7nm,0.6s						
LRMC	Laurel Mtn Rad	61.46	68	P		P	02 00 07.2 +1.3
	baz=318						
NB2	NORSAR Subarra	61.47	340	P		P	02 00 04.4 -1.0
	comp=Z,0.9nm,0.6s,baz=22,slow=6.9						
NOA	NORSAR Array B	61.47	340	P		P	02 00 04.5 -0.9
	comp=Z,1.5nm,0.7s,baz=24,slow=6.5,SNR=5.5						
SCZ2	Santa Cruz Isl	61.48	71	P		P	02 00 07.3 +1.4
	baz=318						
BLG	Laguna Peak, P	61.71	70	P		P	02 00 08.6 +1.2
	baz=318						
VSR	Storozhevoye	61.72	319	eP		P	02 00 05.5 -1.6
VSR					pmax	pmax	
	comp=Z,10.0nm,1.0s						
EDW2	Edwards Air Fo	61.73	69	P		P	02 00 09.2 +1.6
	baz=318,SNR=5.7						
VORD	Divnogorie	61.87	319	eP		P	02 00 06.1 -2.0
VORD					pmax	pmax	
	comp=Z,9.0nm,0.6s						
K22A	Casper	61.92	55	eP		P	02 00 09.7 +0.9
	comp=Z,5.5nm,0.6s						
K22A	Casper	61.92	55	P		P	02 00 09.5 +0.7
	baz=319,SNR=5.8						
RSSD	Black Hills	62.00	53	eP		P	02 00 10.3 +0.9
	comp=Z,19nm,0.8s						
RSSD	Black Hills	62.00	53	eP		P	02 00 10.3 +0.9
RSSD					pmax	pmax	
	comp=Z,19nm,0.8s						
RSSD	Black Hills	62.00	53	P		P	02 00 10.2 +0.9
	baz=320						
SHPR	Sheep Range	62.07	66	eP		P	02 00 12.0 +2.1
	comp=Z,3.0nm,0.9s						
GSC	Goldstone, Bar	62.07	68	eP		P	02 00 11.4 +1.6
	comp=Z,4.4nm,0.8s						
GSC	Goldstone, Bar	62.07	68	eP		P	02 00 11.4 +1.6
GSC					pmax	pmax	
	comp=Z,4.0nm,0.8s						
GSC	Goldstone, Bar	62.07	68	P		P	02 00 11.4 +1.6
	baz=318						
TMUT	Trail Mountain	62.08	61	eP		P	02 00 11.9 +1.8
	comp=Z,8.0nm,0.8s						
P17A	Butcher Ranch,	62.19	61	eP		P	02 00 12.3 +1.8
	comp=Z,14nm,1.4s						
CCUT	Cedar City	62.25	64	eP		P	02 00 13.1 +2.0
	comp=Z,3.0nm,0.6s						
SZCU	Shtz Canyon	62.37	64	eP		P	02 00 13.7 +1.9
	comp=Z,3.7nm,0.9s						
BFSC	Mount Baldy Ra	62.39	69	P		P	02 00 13.3 +1.3
	baz=319						
AGMN	Agassiz Nation	62.41	45	P		P	02 00 11.2 -0.4
	baz=322						
TUQ	Turquoise Moun	62.45	67	P		P	02 00 13.9 +1.6
	baz=319,SNR=5.6						
MTPU	Mount Pierson	62.51	63	eP		P	02 00 15.3 +2.5
	comp=Z,5.2nm,0.7s						
SRU	San Rafael Swe	62.57	61	eP		P	02 00 14.6 +1.5
	comp=Z,8.1nm,1.0s						
SRU	San Rafael Swe	62.57	61	eP		P	02 00 14.6 +1.5
SRU					pmax	pmax	
	comp=Z,8.0nm,1.0s						
CIS	Catalina Islan	62.60	70	P		P	02 00 14.8 +1.7
	baz=319						
HEC	Hector,Ludlow	62.68	68	P		P	02 00 15.3 +1.6
	baz=319,SNR=7.0						
LCMT	Little Creek M	62.72	64	eP		P	02 00 16.1 +2.1
	comp=Z,2.8nm,0.9s						
PKCU	Pink Cliffs	62.89	63	eP		P	02 00 17.9 +2.6
	comp=Z,9.2nm,0.9s						
KNB	Kanab	62.94	64	eP		P	02 00 17.6 +2.2
	comp=Z,4.0nm,0.9s						
KNB	Kanab	62.94	64	eP		P	02 00 17.6 +2.2
KNB					pmax	pmax	
	comp=Z,4.0nm,0.9s						
O20A	White River Ci	62.96	58	eP		P	02 00 16.7 +1.1
	comp=Z,17nm,0.6s						
O20A	White River Ci	62.96	58	P		P	02 00 16.5 +0.9
	baz=319,SNR=13						
GMRC	Granite Mounta	63.08	67	P		P	02 00 17.9 +1.6
	baz=319,SNR=8.5						
MURC	Murrieta	63.13	69	P		P	02 00 17.8 +1.3
	baz=319						
GEYT	Alibeck	63.31	298	P		P	02 00 17.6 -0.1
	comp=Z,14nm,0.7s,baz=29,slow=3.4,SNR=34						
GYA0B	ALIBECK ARRAY	63.31	298	eP		P	02 00 17.7 0.0
	comp=Z,15nm,0.7s						
BELC	Belle Mtn. Jos	63.48	68	P		P	02 00 19.9 +1.0
	baz=319						
PFO	Pinyon Flats O	63.52	69	P		P	02 00 20.0 +0.8
	baz=319						
N23A	Red Feather La	63.53	56	P		P	02 00 20.3 +1.1
	baz=320						
U15A	North Rim	63.66	64	eP		P	02 00 22.1 +2.0
	comp=Z,5.5nm,0.7s						
PV09	Paradox Valley	63.74	60	eP		P	02 00 22.3 +1.7
PV21	Cone Mtn., Par	63.78	60	eP		P	02 00 22.4 +1.6
	comp=Z,10.0nm,0.7s						
W13A	Hualapai Mount	63.81	66	eP		P	02 00 22.6 +1.6
	comp=Z,4.2nm,0.8s						
IRM	Iron Mountain	63.83	67	P		P	02 00 22.6 +1.6
	baz=319,SNR=6.7						
PV23	Carpenter Ridg	63.84	60	eP		P	02 00 22.8 +1.5
	comp=Z,15nm,0.6s						
PV22	Blue Mesa, Par	63.89	60	eP		P	02 00 22.8 +1.3
	comp=Z,15nm,0.7s						
PV14	Lion Creek, Pa	63.90	60	eP		P	02 00 23.1 +1.5
	comp=Z,11nm,0.7s						
PV04	Paradox Valley	63.94	60	eP		P	02 00 23.1 +1.4
	comp=Z,12nm,1.0s						
PV20	West Nyswonger	63.95	60	eP		P	02 00 23.4 +1.6
	comp=Z,9.7nm,0.7s						
PV19	Morning Glory	63.96	60	eP		P	02 00 23.5 +1.5
	comp=Z,12nm,0.9s						
PV16	Nyswonger Mesa	64.00	60	eP		P	02 00 23.4 +1.2
	comp=Z,12nm,1.1s						
PV17	East Wray Mesa	64.00	60	eP		P	02 00 23.5 +1.3
	comp=Z,13nm,0.6s						
PV11	David Mesa, Pa	64.03	60	eP		P	02 00 23.9 +1.5
	comp=Z,11nm,0.5s						
BC3	Big Chuckawall	64.04	68	P		P	02 00 23.5 +1.1
	baz=319						
PV18	Skein Mesa, Pa	64.05	60	eP		P	02 00 24.0 +1.5
	comp=Z,5.7nm,0.6s						
PV12	Saucer Basin,	64.05	60	eP		P	02 00 22.2 -0.3
	comp=Z,7.1nm,1.0s						
PV03	Paradox Valley	64.08	60	eP		P	02 00 24.0 +1.4
	comp=Z,9.3nm,1.2s						
PV05	Paradox Valley	64.08	61	eP		P	02 00 24.4 +1.6
	comp=Z,15nm,0.6s						
MONP2	Monument Peak	64.08	69	P		P	02 00 23.8 +1.0
	baz=319						
PV13	Radium Mtn., P	64.16	60	eP		P	02 00 24.7 +1.4
	comp=Z,8.2nm,0.6s						
PDMCI	Parker Dam,Lak	64.27	67	P		P	02 00 25.0 +1.3
	baz=319						
SMCO	Snowmass	64.32	58	eP		P	02 00 25.7 +1.2
	comp=Z,8.1nm,0.6s						
IKP	In-Ko-Pah, Jac	64.44	69	P		P	02 00 26.1 +1.3
	baz=319						
EYMN	Ely	64.47	43	eP		P	02 00 24.3 -0.5
	comp=Z,8.2nm,0.9s						
EYMN	Ely	64.47	43	P		P	02 00 24.3 -0.5
	baz=324,SNR=5.1						
Y12C	Blythe	64.48	67	eP		P	02 00 26.8 +1.8
	comp=Z,8.9nm,0.6s						
Y12C	Blythe	64.48	67	P		P	02 00 26.6 +1.6
	baz=320						
WUAZ	Wupatki	64.83	64	eP		P	02 00 29.6 +2.2
	comp=Z,12nm,1.3s						
WUAZ	Wupatki	64.83	64	P		P	02 00 29.3 +1.9
	baz=320,SNR=5.2						
GLA	Glamis	64.84	68	P		P	02 00 29.0 +1.7
	baz=320						
MVCO	Mesa Verde	65.05	61	eP		P	02 00 30.2 +1.4
	comp=Z,6.1nm,0.9s						
MVCO	Mesa Verde	65.05	61	P		P	02 00 29.6 +0.8
	baz=320						
Y14A	Wickenburg	65.16	66	eP		P	02 00 29.9 +0.6
	comp=Z,8.1nm,0.6s						
OGNE	Ogallala	65.38	54	eP		P	02 00 31.6 +1.0
	comp=Z,29nm,0.8s						
OGNE	Ogallala	65.38	54	P		P	02 00 31.5 +0.9
	baz=321,SNR=11						
Q24A	Divide	65.40	57	P		P	02 00 31.9 +0.8
	baz=321						
S22A	4UR Ranch, Cre	65.49	59	P		P	02 00 33.1 +1.5
	baz=320,SNR=6.1						
E38A	The Farm, Brul	65.53	43	eP		P	02 00 30.9 -0.5
	comp=Z,26nm,0.4s						
E38A	The Farm, Brul	65.53	43	P		P	02 00 30.9 -0.5
	baz=324,SNR=8.8						
X16A	Lo Mia Camp, P	65.64	65	eP		P	02 00 34.5 +2.1
	comp=Z,6.7nm,0.8s						
ECSD	EROS Data Cent	65.69	48	eP		P	02 00 32.5 +0.1
	comp=Z,15nm,0.5s						
ECSD	EROS Data Cent	65.69	48	P		P	02 00 32.5 +0.1
	baz=323,SNR=23						
AKT	Akhty	65.73	308	eP		P	02 00 32.1 -0.7
AKT				e			02 00 56.7
AKT				e*PP		pP	02 02 33.9 -3.2
AKT				e			02 03 09.0
AKT				eS		S	02 08 34.0 +3.4
AKT					pmax	pmax	
	comp=Z,8.0nm,0.7s						
AKASG	Malin Array Be	65.74	325	P		P	02 00 30.8 -1.7
	comp=Z,2.0nm,0.3s,baz=32,slow=6.6,SNR=3.3						
F38A	Pierce - Schro	65.92	44	P		P	02 00 33.7 -0.1
	baz=324,SNR=8.9						
W18A	Petrified Fore	66.00	63	P		P	02 00 36.0 +1.4
	baz=320						
NCK	Nalchik	66.02	312	↓i P		P	02 00 34.3 -0.2
NCK					pmax	pmax	
	comp=Z,12nm,0.6s						
KIV	Kislovodsk	66.05	312	eP		P	02 00 36.7 +2.0
KIV					pmax	pmax	
	comp=Z,16nm,1.1s						
SPMN	Marine on St.	66.13	45	P		P	02 00 34.9 -0.2
	baz=324						
KBZ	Khabaz	66.14	312	P		P	02 00 34.9 -0.3
	comp=Z,4.8nm,0.8s,baz=74,slow=5.4,SNR=11						
SDCO	Great Sand Dun	66.16	58	eP		P	02 00 36.9 +1.1
	comp=Z,5.2nm,1.0s						
SDCO	Great Sand Dun	66.16	58	P		P	02 00 36.8 +1.0
	baz=321,SNR=14						
X18A	Snowflake	66.34	64	eP		P	02 00 39.0 +2.2
	comp=Z,5.8nm,0.6s						
D41A	Chassel	66.35	41	P		P	02 00 36.1 -0.3
	baz=326						
F39A	Loretta	66.35	43	P		P	02 00 36.2 -0.2
	baz=325,SNR=6.0						
ZEI	Tsey	66.45	311	eP		P	02 00 35.8 -1.5
ZEI					pmax	pmax	
	comp=Z,5.0nm,0.5s						
F40A	Park Falls	66.67	43	P		P	02 00 38.0 -0.4
	baz=325,SNR=6.4						
214A	Organ Pipe Nat	66.78	67	P		P	02 00 40.6 +1.3
	baz=320						
BGNE	Belgrade	66.83	51	P		P	02 00 39.7 +0.2
	baz=323						
TBLG	Delisi	66.91	310	eP		P	02 00 40.1 +0.2
	comp=Z,7.1nm,0.6s						
TBLG	Delisi	66.91	310	eP		P	02 00 40.1 +0.2
TBLG					pmax	pmax	
	comp=Z,7.0nm,0.6s						
T25A	Trinidad	67.18	58	P		P	02 00 42.4 +0.5
	baz=322						
AKH	Akhalkalaki	67.73	310	eP		P	02 00 45.8 +0.7
	comp=Z,5.5nm,0.9s						
AKH	Akhalkalaki	67.73	310	eP		P	02 00 45.8 +0.7
AKH					pmax	pmax	
	comp=Z,6.0nm,0.9s						
TASM	ASL Pad, Albuq	67.84	61	P		P	02 00 47.0 +1.1
	baz=321						
TASM	ASL Pad, Albuq	67.84	61	P		P	02 00 47.0 +1.1
	baz=321						
ANMO	Albuquerque	67.84	61	i P		P	02 00 46.9 +1.0
ANMO					pmax	pmax	
	comp=Z,4.0nm,1.6s						
ANMO	Albuquerque	67.84	61	P		P	02 00 47.1 +1.1
	baz=321						
LAZ	Ladron	67.91	62	eP		P	02 00 48.2 +1.8
MATQ	Matagami	67.96	33	P		P	02 00 45.0 -1.1
	baz=330						
CBKS	Cedar Bluff	68.15	54	P		P	02 00 47.3 -0.2
	baz=323						
GNI	Garni	68.17	309⇑	eP		P	02 00 49.3 +1.5
GNI					pmax	pmax	
	comp=Z,21nm,1.4s						
D46A	Sault St. Mari	68.21	39	P		P	02 00 46.2 -1.5
	baz=328						
BNM	Barren Site	68.37	62	eP		P	02 00 50.7 +1.5
D47A	Chapleau	68.41	38	P		P	02 00 47.5 -1.4
	baz=328						
E46A	Sault Ste Mari	68.55	39	P		P	02 00 48.6 -1.1
	baz=328						
SCIA	State Center	68.64	47	P		P	02 00 50.4 0.0
	baz=325						
F45A	CMU Biological	68.67	40	P		P	02 00 49.5 -0.9
	baz=327						
D48A	Paudash Townsh	68.78	37	P		P	02 00 49.5 -1.6
	baz=329						
KWP	Kalwaria Pacla	68.78	328	eP		P	02 00 50.5 -0.6
	comp=Z,83nm,1.1s						
KWP	Kalwaria Pacla	68.78	328	eP		P	02 00 50.5 -0.6
KWP					pmax	pmax	
	comp=Z,83nm,1.1s						
LSQQ	Lebel-sur-Quev	68.78	33	P		P	02 00 50.3 -0.8
	baz=331						
H43A	Windswept, Lux	68.80	42	P		P	02 00 50.8 -0.5
	baz=326						
I42A	Draeger Farm,	68.83	43	P		P	02 00 51.0 -0.4
	baz=326,SNR=5.0						
D49A	Beulah Townshi	68.85	37	P		P	02 00 50.2 -1.3
	baz=329						
E47A	Iron Bridge	68.86	38	P		P	02 00 50.3 -1.2
	baz=328						
121A	Cookes Peak, D	69.03	63	P		P	02 00 54.9 +1.9
	baz=322,SNR=5.4						
JFWS	Jewell Farm	69.08	45	P		P	02 00 51.9 -1.1
	baz=326						
G46A	Petoskey	69.23	40	P		P	02 00 53.2 -0.6
	baz=328,SNR=6.4						
E48A	Lockeyer	69.24	38	P		P	02 00 52.3 -1.6
	baz=325						
L40A	Anamosa	69.37	46	P		P	02 00 54.3 -0.4
	baz=325						
KSU1	Kansas State U	69.39	51	P		P	02 00 54.2 -0.6
	baz=324						
VLDQ	Val d'Or	69.45	34	eP		P	02 00 53.7 -1.4
	comp=Z,16nm,0.7s						
D50A	G1974 Best Tow	69.47	36	P		P	02 00 53.8 -1.4
	baz=330						
F48A	Evansville	69.63	38	P		P	02 00 55.0 -1.2
	baz=329						
BUR08	Bucovina Ar. S	69.72	326	eP		P	02 00 56.1 -0.8
	comp=Z,4.2nm,1.0s						
E50A	Wahnapitae	69.80	37	P		P	02 00 55.8 -1.4
	baz=330						
F49A	Sandfield	69.90	38	P		P	02 00 56.3 -1.4
	baz=329						
CLL	Collm	70.00	335	eP		P	02 00 56.0 -2.2
K43A	Burlington	70.05	44	P		P	02 00 58.0 -0.7
	baz=327						
L42A	Oliver, Polo	70.08	45	P		P	02 00 58.0 -0.8
	baz=326						
D52A	ZEK Kipawa Sen	70.12	35	P		P	02 00 58.1 -1.0
	baz=331						
E51A	G1948 Merrick	70.14	36	P		P	02 00 58.0 -1.2
	baz=330,SNR=5.4						
N40A	Mertquake, Sal	70.18	47	P		P	02 00 59.2 -0.3
	baz=326						
M41A	Milan	70.23	46	P		P	02 00 58.8 -1.0
	baz=326						
D53A	Lac Vacive, Po	70.28	35	P		P	02 00 59.4 -0.6
	baz=331						
AMTX	Amarillo	70.31	58	eP		P	02 01 01.3 +0.8
	comp=Z,17nm,1.2s						
AMTX	Amarillo	70.31	58	P		P	02 01 01.2 +0.6
	baz=323						
H48A	Harrisville	70.33	39	P		P	02 00 59.8 -0.5
	baz=326

VYHS	Vyhne	70.97	330	eP		P	02 01 03.8	-0.2
VYHS	Vyhne	70.97	330	eP		P	02 01 03.8	-0.2
J47A	Sunmer comp=Z,13nm,0.8s	71.00	41	eP		P	02 01 04.6	+0.3
J47A	Sunmer baz=328	71.00	41	P		P	02 01 03.8	-0.4
E54A	Lac Daplat, Po baz=331	71.01	35	P		P	02 01 03.0	-1.3
K46A	Dorr baz=328	71.09	42	P		P	02 01 04.1	-0.7
BUKO	Buck Lake baz=330	71.12	36	P		P	02 01 03.9	-1.0
ALGO	Algonquin Park baz=331	71.14	35	P		P	02 01 03.6	-1.4
BMRO	Meriville Lake baz=330,SNR=5.9	71.20	38	P		P	02 01 04.9	-0.5
M44A	Midewin, Midew baz=327	71.26	44	P		P	02 01 05.3	-0.5
J48A	Bridge Port baz=329	71.35	41	P		P	02 01 06.3	+0.1
K47A	Vermontville baz=328	71.41	42	P		P	02 01 06.2	-0.4
HDIL	Hopedale baz=327	71.43	46	P		P	02 01 06.3	-0.5
L46A	Eue Claire baz=328	71.45	43	P		P	02 01 06.7	-0.2
BASO	Ashfield baz=330,SNR=7.7	71.53	39	P		P	02 01 07.1	-0.2
H52A	Wyevale baz=330	71.64	37	P		P	02 01 06.8	-1.1
BWLO	Walkerton baz=330	71.64	38	P		P	02 01 07.6	-0.3
K48A	Perry baz=328	71.64	41	P		P	02 01 07.6	-0.3
PEMO	Pembroke baz=331	71.65	35	P		P	02 01 06.8	-1.2
G53A	Haliburton baz=331,SNR=7.4	71.67	36	P		P	02 01 07.3	-0.8
N44A	Piper City baz=327	71.72	45	P		P	02 01 07.9	-0.6
F55A	Otter Lake baz=332	71.82	34	P		P	02 01 07.7	-1.2
WMOK	Wichita Mounta comp=Z,9.2nm,0.6s	71.86	56	eP		P	02 01 10.0	+0.6
WMOK WMOK	Wichita Mounta comp=Z,9.0nm,0.6s	71.86	56	eP pmax		P pmax	02 01 10.0	+0.6
WMOK	Wichita Mounta baz=324,SNR=14	71.86	56	P		P	02 01 09.9	+0.5
K49A	Clarkson baz=329	71.91	41	P		P	02 01 09.7	+0.1
L47A	Sherwood baz=328,SNR=12	71.92	42	P		P	02 01 09.2	-0.3
N45A	Kentland baz=327	71.93	44	P		P	02 01 09.4	-0.3
I51A	Listowel baz=330	71.95	38	P		P	02 01 09.4	-0.3
BANO	Bancroft baz=331	72.00	36	P		P	02 01 09.2	-0.8
TRQ	Mont Tremblant	72.06	33	eP		P	02 01 10.0	-0.4
GERES	GERESS Array B comp=Z,0.5nm,0.4s,baz=67,slow=4.5,SNR=6.6	72.08	333	P		P	02 01 09.9	-0.7
P43A	Skaggs, Pawnee baz=327	72.10	46	P		P	02 01 10.0	-0.7
O44A	Mansfield baz=327	72.12	45	P		P	02 01 10.1	-0.7
G55A	Calabogie baz=332	72.20	35	P		P	02 01 10.2	-1.0
K50A	Casco baz=329	72.24	40	P		P	02 01 11.2	-0.2
L48A	N Adams baz=328,SNR=5.7	72.25	42	P		P	02 01 11.4	-0.1
PLVO	Plevna baz=332	72.27	35	P		P	02 01 10.5	-1.0
TUL1	Leonard comp=Z,18nm,0.8s	72.35	53	eP		P	02 01 12.8	+0.6
TUL1	Leonard baz=325,SNR=7.7	72.35	53	P		P	02 01 12.5	+0.3
O45A	Potomac baz=327,SNR=10	72.35	45	P		P	02 01 11.8	-0.3
L49A	Milan baz=329	72.37	41	P		P	02 01 12.2	0.0
ORIO	Orleans, Innes baz=332	72.43	34	P		P	02 01 11.2	-1.2
I53A	Kortright Cn E baz=330	72.45	37	P		P	02 01 12.0	-0.6
SFIN	Lafayette baz=328	72.50	44	P		P	02 01 12.5	-0.4
DELO	Deloro Mine baz=331	72.54	36	P		P	02 01 12.3	-0.8
J52A	Paris baz=330	72.64	38	P		P	02 01 12.1	-1.6
N47A	Urbana baz=328,SNR=5.3	72.65	43	P		P	02 01 13.0	-0.8
CCM	Cathedral Cave baz=326	72.66	48	P		P	02 01 13.9	0.0
H55A	Tweed baz=332	72.66	36	P		P	02 01 13.1	-0.7
I55A	Frankford baz=331	72.78	36	P		P	02 01 13.4	-1.0
L50A	Kingsville baz=329	72.79	41	P		P	02 01 14.2	-0.3
M49A	Liberty Center baz=329	72.83	42	P		P	02 01 14.2	-0.6
HHAR	Hobbs comp=Z,8.1nm,0.8s	72.91	51	eP		P	02 01 15.5	+0.1
N48A	Decatur baz=328,SNR=5.2	72.93	43	P		P	02 01 14.8	-0.6
H56A	Elgin baz=332	72.94	35	P		P	02 01 14.5	-0.9
P45A	Graceland, Par baz=327	72.94	45	P		P	02 01 15.4	-0.1
ABTX	Abilene, Hawle comp=Z,8.4nm,0.6s	73.14	58	eP		P	02 01 17.3	+0.5
ABTX	Abilene, Hawle baz=324	73.14	58	P		P	02 01 17.3	+0.5
N49A	Columbus Grove baz=329	73.22	42	P		P	02 01 16.7	-0.3
PECO	Prince Edward baz=332	73.27	36	P		P	02 01 16.4	-0.8
Q45A	Warren Harvey, baz=327	73.30	46	P		P	02 01 17.4	-0.2
U40A	Yellville baz=326,SNR=22	73.34	51	P		P	02 01 17.6	-0.2
BR131	Keskin Array S comp=Z,1.6nm,0.8s	73.37	316	eP		P	02 01 17.8	-0.4
BRTR	Keskin Array B comp=Z,1.1nm,0.6s,baz=42,slow=3.2,SNR=8.5	73.37	316	P		P	02 01 17.6	-0.4
O48A	Farmland baz=328	73.39	43	P		P	02 01 17.6	-0.5
LONY	Lake Ozonia baz=333	73.47	34	P		P	02 01 17.6	-0.8
J55A	Hilton baz=332	73.57	37	P		P	02 01 17.9	-1.0
P47A	Martinsville baz=328,SNR=5.5	73.59	44	P		P	02 01 18.6	-0.6
M51A	Elyria baz=330	73.64	41	P		P	02 01 18.8	-0.6
TX31	Lajitas Ar. Si comp=Z,7.4nm,0.7s	73.71	63	eP		P	02 01 21.4	+1.3
TXAR	Lajitas Array comp=Z,5.3nm,0.4s,baz=301,slow=5.1,SNR=81	73.71	63	P		P	02 01 21.5	+1.3
N50A	Nevada baz=329	73.75	41	P		P	02 01 20.0	0.0
M52A	Chesterland baz=330	73.78	40	P		P	02 01 19.9	-0.3
L53A	Girard baz=330	73.83	39	P		P	02 01 20.2	-0.3
K54A	Basiliko Farm, baz=331	73.83	37	P		P	02 01 20.0	-0.5
S44A	Carbondale baz=327	73.83	47	P		P	02 01 20.6	+0.1
W39A	Magazine baz=326	73.87	52	P		P	02 01 21.4	+0.6
N51A	Ashland comp=Z,13nm,0.5s	73.92	41	eP		P	02 01 20.9	-0.1
N51A	Ashland baz=330	73.92	41	P		P	02 01 20.7	-0.4
L54A	Sinclairville baz=331	73.93	38	P		P	02 01 20.6	-0.4
K55A	Perry baz=331	73.95	37	P		P	02 01 20.5	-0.7
P48A	Milroy baz=328	73.96	44	P		P	02 01 20.6	-0.7
Q47A	Bedord North L baz=328,SNR=6.4	73.99	45	P		P	02 01 21.0	-0.4
FCAR	Ozark Folk Cen comp=Z,5.6nm,0.7s	74.06	50	eP		P	02 01 21.7	-0.2
PBMO	Poplar Bluff comp=Z,8.3nm,0.4s	74.08	49	eP		P	02 01 21.8	-0.1
O50A	Cable baz=329	74.10	42	P		P	02 01 21.8	-0.2
M53A	WI Miller and baz=330,SNR=5.7	74.12	39	P		P	02 01 21.9	-0.2
P49A	Miami Univ. Ec baz=329	74.19	43	P		P	02 01 22.0	-0.5
ACSO	Alum Creek Sta baz=329	74.28	42	P		P	02 01 22.7	-0.3
N52A	McGinn's Farm, baz=330	74.28	40	P		P	02 01 22.6	-0.4
Q48A	North Vernon baz=328	74.28	44	P		P	02 01 22.5	-0.6
L55A	Hinsdale baz=331	74.30	38	P		P	02 01 22.4	-0.8
M54A	Oil Creek Stat baz=331	74.44	39	P		P	02 01 23.4	-0.6
WHAR	Wooly Hollow comp=Z,11nm,0.7s	74.48	51	eP		P	02 01 24.5	+0.2
P50A	Jamestown baz=329	74.49	43	P		P	02 01 23.8	-0.4
R47A	Wooly Knot Far baz=328	74.49	45	P		P	02 01 24.3	+0.1
O51A	Pataskala baz=330	74.50	41	P		P	02 01 24.0	-0.3
MIAR	Mount Ida comp=Z,5.3nm,0.6s	74.50	52	eP		P	02 01 24.9	+0.6
MIAR MIAR	Mount Ida comp=Z,5.0nm,0.6s	74.50	52	eP pmax		P pmax	02 01 24.9	+0.6
MIAR	Mount Ida baz=326,SNR=6.3	74.50	52	P		P	02 01 24.5	+0.2
S46A	Don Dixon Farm baz=328	74.50	46	P		P	02 01 24.1	-0.3
W41B	Gary Mavity, V baz=326,SNR=12	74.60	51	P		P	02 01 24.9	+0.1
N53A	Lisbon baz=330	74.61	40	P		P	02 01 24.3	-0.5
WCI	Wyandotte Cave baz=328	74.64	45	P		P	02 01 25.0	-0.1
LBNH	Lisbon baz=334	74.67	32	P		P	02 01 24.0	-1.1
R48A	Northridge Ran baz=328	74.68	45	P		P	02 01 25.5	+0.2
WHTX	Lake Whitney, comp=Z,8.3nm,0.7s	74.73	56	eP		P	02 01 26.5	+0.8
WHTX	Lake Whitney, baz=325	74.73	56	P		P	02 01 26.3	+0.6
JCT	Junction City baz=324	74.79	59	P		P	02 01 27.0	+0.9
N54A	Moraine State baz=331	74.79	39	P		P	02 01 25.8	-0.1
M55A	Ridgway baz=331	74.80	38	P		P	02 01 25.3	-0.7
O52A	Adamsville baz=330	74.82	41	P		P	02 01 25.9	-0.1
X40A	Basin Creek Fa baz=326	74.89	52	P		P	02 01 27.2	+0.7
O53A	New Philadelph baz=330	74.95	40	P		P	02 01 26.2	-0.6
T46A	Princeton baz=328	74.97	47	P		P	02 01 26.9	0.0
M56A	Emporium baz=332	75.00	38	P		P	02 01 26.4	-0.6
R49A	Shelbyville baz=329	75.06	44	P		P	02 01 27.3	0.0
Q50A	Georgetown baz=329	75.07	43	P		P	02 01 27.1	-0.4
Q51A	Peebles baz=330	75.17	43	P		P	02 01 27.7	-0.3
S48A	Wiedeman Farm, baz=328,SNR=5.4	75.23	45	P		P	02 01 28.1	-0.3
N55A	Marion Center comp=Z,8.3nm,0.8s	75.32	39	eP		P	02 01 28.6	-0.3
N55A	Marion Center baz=331	75.32	39	P		P	02 01 28.2	-0.6
T47A	Sharon Grove comp=Z,9.5nm,0.7s	75.35	46	eP		P	02 01 29.4	+0.3
T47A	Sharon Grove baz=328	75.35	46	P		P	02 01 29.2	+0.2
R50A	Paris baz=329	75.41	44	P		P	02 01 29.2	-0.1
S49A	Springfield baz=329	75.44	45	P		P	02 01 29.5	0.0
N56A	West Decatur baz=332	75.46	38	P		P	02 01 29.1	-0.5
WRA	Warramunga Arr comp=Z,2.4nm,0.8s,baz=18,slow=5.5,SNR=9.9	75.51	199	P		P	02 01 30.3	+0.3
P53A	Whipple baz=330	75.54	41	P		P	02 01 30.4	+0.4
T48A	Bowling Green baz=328	75.55	46	P		P	02 01 30.1	-0.1
R51A	Hillsboro baz=329	75.70	43	P		P	02 01 31.1	+0.2
O55A	Ligonier baz=331	75.70	39	P		P	02 01 30.7	-0.3
U47A	Clarksville baz=328	75.74	47	P		P	02 01 31.4	+0.2
WVT	Waverly comp=Z,8.3nm,0.6s	75.77	47	eP		P	02 01 31.7	+0.3
WVT WVT	Waverly comp=Z,8.0nm,0.6s	75.77	47	eP pmax		P pmax	02 01 31.7	+0.3
WVT	Waverly baz=328	75.77	47	P		P	02 01 31.6	+0.3
P54A	Burton baz=331	75.79	40	P		P	02 01 31.1	-0.3
SSPA	Standing Stone baz=332	75.85	38	P		P	02 01 31.0	-0.7
N57A	Milroy baz=332	75.87	38	P		P	02 01 31.2	-0.6
S50A	Richmond baz=329	75.90	44	P		P	02 01 32.1	0.0
T49A	Edmonton comp=Z,8.0nm,0.7s	75.92	45	eP		P	02 01 32.1	0.0
T49A	Edmonton baz=329,SNR=7.3	75.92	45	P		P	02 01 32.0	-0.2
V46A	Holladay baz=328	75.92	48	P		P	02 01 31.3	-0.9
O56A	Blue Knob Stat baz=332	75.92	39	P		P	02 01 31.7	-0.5
U48A	Cassie Pea, Po baz=328	76.00	46	P		P	02 01 32.6	0.0
Q53A	Leroy baz=330,SNR=7.4	76.03	41	P		P	02 01 32.6	-0.2
R52A	Catlettsburg baz=330	76.04	42	P		P	02 01 32.4	-0.4
P55A	Reedsville baz=331	76.12	40	P		P	02 01 33.2	0.0
V47A	Nunnelly baz=328	76.16	47	P		P	02 01 33.3	-0.2
Q54A	Coxs Mills baz=331	76.19	41	P		P	02 01 33.1	-0.5
S51A	Beattyville baz=330	76.26	43	P		P	02 01 33.3	-0.7
T50A	Nancy baz=329,SNR=6.8	76.28	45	P		P	02 01 33.8	-0.3
NATX	Nacogdoches baz=326	76.28	55	P		P	02 01 35.6	+1.4
O57A	Amberson baz=332	76.32	38	P		P	02 01 33.6	-0.7
U49A	Red Boiling Sp baz=329,SNR=5.4	76.32	46	P		P	02 01 34.2	-0.2
R53A	Hurricane baz=330	76.32	42	P		P	02 01 34.1	-0.2
HRV	Adam Dziewonsk baz=335	76.34	33	P		P	02 01 32.4	-2.0
N59A	State Game Lan baz=333	76.36	36	P		P	02 01 33.8	-0.8
CLTN	Cedars of Leba comp=Z,4.9nm,0.7s	76.44	46	eP		P	02 01 35.3	+0.3
Q55A	Buckhannon baz=331	76.47	40	P		P	02 01 34.9	-0.3
P56A	Dayton Farm, R baz=332	76.49	39	P		P	02 01 35.2	0.0
V48A	Smith Brothers comp=Z,7.1nm,0.8s	76.53	47	eP		P	02 01 35.5	0.0
V48A	Smith Brothers baz=328,SNR=5.0	76.53	47	P		P	02 01 35.0	-0.5
W47A	Westpoint baz=328	76.61	48	P		P	02 01 35.5	-0.4
PLAL	Pickwick Lake comp=Z,6.6nm,0.8s	76.63	48	eP		P	02 01 35.8	-0.3
T51A	Gray baz=330	76.69	44	P		P	02 01 36.2	-0.2
833A	Chaparral WMA, baz=325	76.74	60	P		P	02 01 38.1	+1.3
X46A	Booneville baz=328	76.76	49	P		P	02 01 36.3	-0.5
U50A	Jamestown baz=329,SNR=6.3	76.79	45	P		P	02 01 36.7	-0.2
R54A	Victor baz=331	76.83	41	P		P	02 01 37.0	-0.1
V49A	McMinnville baz=329	76.90	46	P		P	02 01 37.2	-0.4
T52A	Hallie baz=330	76.96	43	P		P	02 01 37.9	0.0
W48A	Pulaski baz=328	76.99	47	P		P	02 01 37.8	-0.2
S54A	Dingess, Beckl baz=330	77.03	42	P		P	02 01 37.3	-1.0
X47A	Russelville baz=328	77.11	48	P		P	02 01 38.5	-0.2
U51A	La Follette baz=330	77.17	44	P		P	02 01 39.0	0.0
TZTN	Tazewell baz=330	77.22	44	P		P	02 01 39.1	-0.1
T53A	Wise baz=330	77.25	43	P		P	02 01 39.5	0.0
W49A	Belvidere baz=329	77.30	47	P		P	02 01 39.2	-0.5
V50A	Pikevile baz=329	77.32	46	P		P	02 01 39.4	-0.4
SWET	Sewanee comp=Z,8.7nm,0.9s	77.36	46	eP		P	02 01 39.5	-0.6
S55A	Lewisburg baz=331	77.37	41	P		P	02 01 39.6	-0.5
U52A	Thorn Hill baz=330,SNR=5.2	77.42	44	P		P	02 01 40.2	-0.2
V51A	Loudon baz=329	77.52	45	P		P	02 01 40.8	-0.1
X48A	Hartselle baz=328	77.53	48	P		P	02 01 40.5	-0.4
T54A	Tazewell baz=330	77.57	42	P		P	02 01 40.9	-0.3
W50A	Signal Mountai baz=329	77.63	46	P		P	02 01 41.2	-0.3
U53A	Fall Branch baz=330	77.77	43	P		P	02 01 42.2	0.0
X49A	Woodville baz=329,SNR=11	77.79	47	P		P	02 01 42.0	-0.3
V52A	Sevierville comp=Z,11nm,0.9s	77.80	44	eP		P	02 01 42.3	-0.1
V52A	Sevierville baz=330,SNR=5.7	77.80	44	P		P	02 01 42.2	-0.1
R58A	Rapidan baz=332	77.86	39	P		P	02 01 42.5	-0.1
BLA	Blacksburg baz=331	77.89	41	P		P	02 01 42.5	-0.4
W51A	Cleveland baz=329	77.90	46	P		P	02 01 42.5	-0.4
U54A	Nelsons Funny baz=330	77.94	43	P		P	02 01 43.0	-0.1
S57A	Dark Hollow, R baz=332	77.98	40	P		P	02 01 42.7	-0.6
X50B	Fort Payne baz=329	78.12	47	P		P	02 01 43.9	-0.2
U55A	TA2, Sparta baz=331	78.26	42	P		P	02 01 44.4	-0.5
V53A	Saluda baz=330	78.27	44	P		P	02 01 44.4	-0.6
Y49A	Blount Mountai comp=Z,6.1nm,0.6s	78.31	47	eP		P	02 01 44.9	-0.2
Y49A	Blount Mountai baz=329	78.31	47	P		P	02 01 44.5	-0.6
W52A	Murphy baz=330	78.31	45	P		P	02 01 45.3	+0.2
X51A	Calhoun baz=329	78.37	46	P		P	02 01 45.0	-0.4
S58A	Poland Farm, P baz=332	78.45	40	P		P	02 01 45.0	-0.7
T57A	Hurt baz=332	78.53	41	P		P	02 01 45.9	-0.4
V54A	Nebo baz=330	78.53	43	P		P	02 01 46.0	-0.3
Y50A	Piedmont baz=329	78.57	47	P		P	02 01 46.2	-0.3
S59A	Mechanicsville baz=332	78.60	39	P		P	02 01 46.8	+0.2
LRAL	Lakeview Retre comp=Z,5.4nm,0.6s	78.75	48	eP		P	02 01 46.3	-1.1
LRAL	Lakeview Retre baz=329	78.75	48	P		P	02 01 47.0	-0.4
V55A	Taylorsville baz=331	78.76	43	P		P	02 01 47.3	-0.2
Z49A	Columbiana baz=329,SNR=5.8	78.82	48	P		P	02 01 47.2	-0.6
Y51A	Rockmart baz=329	78.85	46	P		P	02 01 47.5	-0.5
T58A	Grand View Acr baz=332	78.85	40	P		P	02 01 47.4	-0.5
U57A	Blanch baz=332	78.99	41	P		P	02 01 48.3	-0.3
Z50A	Ashland comp=Z,17nm,0.6s	79.03	47	eP		P	02 01 48.5	-0.4
Z50A	Ashland baz=329,SNR=14	79.03	47	P		P	02 01 48.5	-0.4
W54A	Cherokee Point baz=330	79.03	44	P		P	02 01 48.7	-0.2
X53A	Estanollee baz=330	79.08	45	P		P	02 01 48.9	-0.3
V56A	Mocksville baz=331	79.08	42	P		P	02 01 48.8	-0.4
T59A	Double "B" Far baz=332	79.20	39	P		P	02 01 48.1	-1.6
149A	Jones baz=329,SNR=6.8	79.21	48	P		P	02 01 49.7	-0.1
ASAR	Alice Springs comp=Z,1.1nm,0.5s,baz=13,slow=4.9,SNR=16	79.22	198	P		P	02 01 50.6	+0.7
V57A	Coltrane Farms baz=331	79.30	42	P		P	02 01 49.9	-0.4
Z51A	Franklin baz=329	79.30	47	P		P	02 01 49.9	-0.4
KMSC	Kings Mountain baz=331	79.33	43	P		P	02 01 50.0	-0.4
U58A	Oxford baz=332	79.33	40	P		P	02 01 49.9	-0.5
X54A	Belton baz=330	79.42	44	P		P	02 01 51.0	0.0
Y53A	Monroe baz=330	79.52	45	P		P	02 01 51.5	0.0
150A	Eclectic baz=329,SNR=7.4	79.54	48	P		P	02 01 51.2	-0.4
V58A	Windy Hill, Pi baz=332	79.64	41	P		P	02 01 51.7	-0.3
U59A	Littleton baz=332	79.66	40	P		P	02 01 52.0	-0.1
Z52A	Williamson baz=330	79.74	46	P		P	02 01 52.3	-0.3
X55A	Gracelyn & Ava baz=331	79.79	44	P		P	02 01 52.5	-0.4
W57A	Gilead baz=331	79.86	42	P		P	02 01 52.9	-0.3
Y54A	Tignall baz=330	79.89	45	P		P	02 01 53.6	+0.3
151A	Opelika baz=329	79.91	47	P		P	02 01 53.1	-0.5
GOGA	Godfrey baz=330	79.95	46	P		P	02 01 53.5	-0.2
250A	Grady baz=329	79.97	48	P		P	02 01 53.6	-0.2
V59A	Middlesex baz=332	80.00	41	P		P	02 01 53.8	-0.2
X56A	White Oak baz=331	80.02	43	P		P	02 01 53.6	-0.4
152A	Waverly Hall baz=330	80.05	47	P		P	02 01 53.9	-0.4
Y55A	Saluda baz=331	80.16	44	P		P	02 01 54.5	-0.3
251A	Midway baz=329	80.25	48	P		P	02 01 55.3	0.0
W58A	Raeford baz=332	80.27	42	P		P	02 01 55.4	0.0
Z54A	Sparta baz=330	80.36	45	P		P	02 01 55.7	-0.2
V60A	Jim Taylor Roa baz=333	80.37	40	P		P	02 01 55.3	-0.5
449A	Pace baz=329	80.58	50	P		P	02 01 58.0	+1.0
252A	Lumpkin baz=330	80.62	47	P		P	02 01 57.4	+0.1
154A	Montrose baz=330	80.79	46	P		P	02 01 58.3	+0.2
352A	Blakely baz=330	80.98	48	P		P	02 01 59.5	+0.4

155A	Kite	81.05	45	P	P	02 01 59.6	+0.2
	baz=330						
Y58A	Scranton	81.08	42	P	P	02 01 59.5	0.0
	baz=332						
Z57A	Bowman	81.19	44	P	P	02 02 00.1	0.0
	baz=331						
RAYN	Ar Rayn	81.28	298	eP	P	02 01 59.9	-0.9
	comp=Z,4.2nm,0.9s						
RAYN	Ar Rayn	81.28	298	eP	P	02 01 59.9	-0.9
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
254A	Abbeville	81.29	46	P	P	02 02 00.9	+0.3
	baz=330						
353A	Camilla	81.41	47	P	P	02 02 01.7	+0.5
	baz=330						
156A	Sylvania	81.43	44	P	P	02 02 01.6	+0.3
	baz=331						
255A	Hazlehurst	81.65	46	P	P	02 02 02.5	+0.1
	baz=331						
355A	Pearson	81.99	46	P	P	02 02 04.4	+0.2
	baz=330						
LPAZ	La Paz	130.36	57	PKP	PKPdf	02 08 49.8	+0.3
	comp=Z,1.0nm,0.8s,baz=26,slow=9.5,SNR=4.2						
LPAZ				SKPbc	SKPbc	02 11 13.7	-0.8
	comp=Z,0.5nm,0.5s,baz=304,slow=3.6,SNR=3.3						
VNDA	Vanda	131.37	178	PKP	PKiKP	02 08 49.5	-0.3
	comp=Z,0.4nm,0.5s,baz=316,slow=3.9,SNR=4.3						
VNDA				SKPbc	SKPbc	02 11 15.1	-0.4
	comp=Z,1.5nm,0.6s,baz=339,slow=2.1,SNR=10						
PEL	Peldehue	142.50	74	ePKPpre	PKPdf	02 09 08.1	-2.6
PEL	Peldehue	142.50	74	ePKIKP	PKPdf	02 09 08.1	-2.6
CPUP	Villa Florida	144.11	52	PKP	PKPdf	02 09 13.6	0.0
	comp=Z,8.1nm,0.5s,baz=338,slow=2.4,SNR=22						
CPUP				SKPbc	SKiKP	02 11 54.9	+0.9
	comp=Z,3.8nm,1.0s,baz=0.0,slow=1.0,SNR=2.1						
PLCA	Paso Flores	147.80	84	PKPbc	PKPbc	02 09 23.9	+0.6
	comp=Z,3.4nm,0.8s,baz=330,slow=4.5,SNR=5.2						
PLCA				SKPbc	SKiKP	02 12 01.8	+0.6
	comp=Z,1.5nm,0.8s,baz=306,slow=14,SNR=2.9						
PLCA	Paso Flores	147.80	84	PKP2	PKPbc	02 09 24.0	+0.6

*ISCJB **27** 01:51:17.9±0.6, 55°.0N±0°.1×152°.6E±0°.2, h700km, mb3.4/8, Error ellipse: s-maj=15.5km s-min=14.5km az=41.1*
*IDC **27** 01:51:18.8±0.9, 54°.93N×152°.82E, h699km±15km, mb2.7/9, mb1 2.9/10, mb1mx2.7/30, mbtmp3.8/10, Error ellipse: s-maj=22.6km s-min=17.7km az=115.0*
ISC 27 01:51:18.9±0.8, 54°.9N±0°.1×152°.8E±0°.1, h700km, n10, σ0°.83/11, mb3.4/8, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	3.44	120	P	P	01 52 48.6	+0.2
	2.0nm,0.3s,baz=288,slow=6.8,SNR=1.8						
PETK				S	S	01 54 00.7	-0.7
	3.3nm,0.3s,baz=114,slow=18,SNR=1.5						
MJAR	Matsushiro Arr	20.95	215	P	P	01 55 18.2	+0.6
	1.0nm,0.3s,baz=16,slow=8.0,SNR=1.3						
ILAR	Eielson Array	30.65	47	P	P	01 56 42.1	+1.0
	0.5nm,0.6s,baz=275,slow=8.9,SNR=2.7						
ZALV	Zalesovo Beam	38.11	297	P	P	01 57 42.3	-0.2
	0.8nm,0.4s,baz=54,slow=13,SNR=1.3						
MKAR	Makanchi Array	43.46	290	P	P	01 58 25.0	+0.6
	2.2nm,0.4s,baz=45,slow=13,SNR=6.0						
YKA	Yellowknife Ar	44.67	41	P	P	01 58 32.6	-0.7
	0.8nm,0.6s,baz=294,slow=6.7,SNR=2.2						
ARCES	ARCESS Array B	50.08	339	P	P	01 59 13.8	+0.7
	1.9nm,0.7s,baz=38,slow=6.0,SNR=1.8						
FINES	FINESS Array B	56.59	333	P	P	01 59 57.1	-1.5
	1.2nm,0.7s,baz=26,slow=6.7,SNR=3.6						
WRA	Warramunga Arr	76.23	198	P	P	02 01 58.8	0.0
	1.4nm,1.1s,baz=0.6,slow=7.5,SNR=1.6						
ASAR	Alice Springs	79.95	198	P	P	02 02 18.0	-0.5
	0.3nm,0.6s,baz=14,slow=12,SNR=1.7						

*ISCJB **27** 01:56:00.2±0.8, 17°.29N±0°.05×61°.19W±0°.06, h92km±7km, Error ellipse: s-maj=11.7km s-min=3.2km az=139.5*
*TRN **27** 01:56:00.6, 17°.23N×61°.17W, h30km, MD4.0*
*NEIC **27** 01:56:01.1±0.0, 17°.24N×61°.16W, h42km, MD4.0(TRN), After TRN.*
ISC 27 01:56:00.4±1.9, 17°.32N±0°.07×61°.11W±0°.09, h74km±12km, n50, σ1°.10/82, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.73	298	ePn	Pn	01 56 16.3	+0.3
ANWB				eSn	Sn	01 56 27.7	+0.2
ANWB	Willy Bob	0.73	298	eP	Pn	01 56 16.3	+0.3
ANWB				eS	Sn	01 56 27.7	+0.2
ABD	La Joyeuse, An	0.92	204	eP	Pn	01 56 16.3	-1.9
MLYT	Lee's Yard	1.20	240	eP	Pn	01 56 21.7	0.0
MLYT				eS	Sn	01 56 36.8	-0.7
CBE	Ff, Capester	1.33	201	eP	Pn	01 56 23.2	-0.2
MAGL	Barre de l'ile	1.38	187	eP	Pn	01 56 23.7	-0.2
NVRH	Round Hill, Ne	1.44	265	eP	Pn	01 56 25.4	+0.7
NVRH				eS	Sn	01 56 43.2	+0.2
NVBH	Bath Hotel, Ne	1.46	262	eP	Pn	01 56 26.1	+1.1
NVBH				eS	Sn	01 56 44.0	+0.6
TDBA	Terre de Bas,	1.55	199	eP	Pn	01 56 26.5	+0.3
SKI	Saint Kitts	1.56	271	ePn	Pn	01 56 28.7	+2.4
SKI				eSn	Sn	01 56 44.3	-1.6
SKI	Saint Kitts	1.56	271	eP	Pn	01 56 27.7	+1.4
SKI				eS	Sn	01 56 47.4	+1.5
SKDB	Saint Kitts 2	1.63	273	ePn	Pn	01 56 27.9	+0.7
SKDB				eSn	Sn	01 56 48.6	+1.2
SKDB	Saint Kitts 2	1.63	273	eP	Pn	01 56 27.9	+0.7
SKDB				eS	Sn	01 56 48.6	+1.2
BSK	Brimstone Hill	1.66	271	ePn	Pn	01 56 28.5	+1.0
BSK				eSn	Sn	01 56 48.7	+0.6
BSK	Brimstone Hill	1.66	271	eP	Pn	01 56 28.5	+1.0
BSK				eS	Sn	01 56 48.7	+0.6
DWS	Wesley	1.75	186	ePn	Pn	01 56 29.5	+0.6
DWS				eSn	Sn	01 56 50.2	-0.3
DWS	Wesley	1.75	186	eP	Pn	01 56 29.5	+0.6
DWS				eS	Sn	01 56 50.2	-0.3
MDPO	Dominica; Chan	1.77	191	eP	Pn	01 56 29.8	+0.7
MDPO				eS	Sn	01 56 50.7	-0.1
SEUS	St. Eustatius	1.80	276	ePn	Pn	01 56 29.1	-0.3
SEUS				eSn	Sn	01 56 49.1	-2.4
DLPL	La Plaine	1.98	184	eP	Pn	01 56 32.4	+0.4
DLPL				eS	Sn	01 56 56.1	+0.1
MDN	Morne-Daniel	2.01	188	ePn	Pn	01 56 33.3	+1.0
MDN				eSn	Sn	01 56 55.9	-0.7
MDN	Morne-Daniel	2.01	188	eP	Pn	01 56 33.3	+1.0
MDN				eS	Sn	01 56 55.9	-0.7
SMRT	St. Maarten	2.01	291	ePn	Pn	01 56 32.2	-0.1
SMRT				eSn	Sn	01 56 55.8	-0.9
DBCT	Belle View Cho	2.05	186	ePn	Pn	01 56 33.9	+1.0
DBCT				eSn	Sn	01 56 57.4	-0.3
DBCT	Belle View Cho	2.05	186	eP	Pn	01 56 33.9	+1.0
DBCT				eS	Sn	01 56 57.4	-0.3
SABA	Saba	2.06	279	ePn	Pn	01 56 34.9	+1.9
SABA				eSn	Sn	01 56 57.7	-0.1
SABA	Saba	2.06	279	eP	Pn	01 56 34.9	+1.9
SABA				eS	Sn	01 56 57.7	-0.1
BAMF	Morne Balai	2.49	181	eP	Pn	01 56 40.1	+1.3
PCM	Pelee Case Pet	2.49	182	eP	Pn	01 56 39.1	+0.3
PML	Morne Lenard	2.53	182	eP	Pn	01 56 40.5	+1.2
FDF	Fort de France	2.57	181	ePn	Pn	01 56 37.9	-2.0
FDF				eSn	Sn	01 57 06.7	-3.6
FDF	Fort de France	2.57	181	eP	Pn	01 56 40.4	+0.4
FDF				eS	Sn	01 57 10.8	+0.5
ZAM	Aeronautique	2.73	178	eP	Pn	01 56 43.0	+0.9
LPMF	Morne Lapointe	2.73	177	eP	Pn	01 56 42.5	+0.4
TRMF	Trois Ilets	2.77	179	eP	Pn	01 56 43.8	+1.3
MPOM	Morne Pois Mar	2.87	175	eP	Pn	01 56 44.2	+0.2
SLBI	Saint Lucia, B	3.28	178	eP	Pn	01 56 51.2	+1.6
SLBI				eS	Sn	01 57 27.5	+0.1
SLB	Belfond	3.48	179	eP	Pn	01 56 54.2	+2.0
SLB				eS	Sn	01 57 31.9	-0.3
STVI	Saint Thomas	3.81	286	ePn	Pn	01 56 57.4	+0.7
STVI				eSn	Sn	01 57 38.8	-1.4
SVV	Soufriere Volc	3.98	182	ePn	Pn	01 56 59.8	+0.7
SVV	Soufriere Volc	3.98	182	eP	Pn	01 56 59.8	+0.7
SVCV	St. Vincent, C	4.03	181	eP	Pn	01 57 00.7	+1.0
SVB	Belmont	4.03	182	eP	Pn	01 57 00.7	+0.9
CUPR	Culebra, Puert	4.10	284	ePn	Pn	01 56 59.2	-1.4
CUPR				eSn	Sn	01 57 45.7	-1.6
MTP	Monte Pirata	4.31	281	ePn	Pn	01 57 04.1	+0.6
MTP				eSn	Sn	01 57 52.6	+0.1
HUMP	Col San Antoni	4.59	281	ePn	Pn	01 57 05.8	-1.6
HUMP				eSn	Sn	01 57 59.0	-0.5
CBYP	Canovanas	4.62	283	ePn	Pn	01 57 09.2	+1.3
CBYP				eSn	Sn	01 57 59.2	-1.2
SJG	San Juan	4.87	280	ePn	Pn	01 57 10.2	-1.0
OBIP	Obispado Ponce	5.29	279	ePn	Pn	01 57 17.4	+0.4
AOPR	Arecibo Observ	5.48	282	ePn	Pn	01 57 18.3	-1.2

*IDC **27** 02:09:06.8±0.7, 17°.13N×61°.01W, h0km, mb3.7/9, mb1 4.0/13, mb1mx3.8/37, mbtmp3.8/13, ML3.9/3, MS3.1/3, Ms1 3.2/3, ms1mx2.7/30, Error ellipse: s-maj=16.9km s-min=12.8km az=91.0*
*TRN **27** 02:09:08.6, 17°.13N×61°.25W, h7km, MD4.1*
*NEIC **27** 02:09:12.1±1.8, 17°.18N×61°.10W, h35km±3km, mb4.4/5, Error ellipse: s-maj=15.9km s-min=7.0km az=51.0*
ISC 27 02:09:07.6±1.7, 17°.23N±0°.04×61°.06W±0°.05, h7km±10km, n111, σ1°.33/141, mb4.0/14, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.82	302	ePn	Pn	02 09 25.9	+0.3
ANWB				eSn	Sn	02 09 38.3	+0.2
ANWB	Willy Bob	0.82	302	eP	Pn	02 09 26.0	+0.3
ANWB				eS	Sn	02 09 38.5	+0.5
ABD	La Joyeuse, An	0.85	209	eP	Pn	02 09 26.2	+0.2
H05N1	Guadeloupe/Mar	0.90	180	Pn	Pn	02 09 26.9	+0.1
H05N1				Sn	Sn	02 09 39.6	-0.5
DEG	La Desirade	0.91	180	eP	Pn	02 09 27.8	+0.9
DEG				eS	Sn	02 09 41.1	+0.9
MLYT	Lee's Yard	1.20	245	eP	Pg	02 09 31.0	+0.5
MLYT				eS	Sg	02 09 46.0	0.0
CBE	Ff, Capester	1.26	205	eP	Pg	02 09 33.2	+1.4
MAGL	Barre de l'ile	1.29	190	eP	Pg	02 09 33.3	+1.1
NVRH	Round Hill, Ne	1.48	269	eP	Pb	02 09 36.1	+0.8
NVRH				eS	Sb	02 09 53.9	-0.4
TDBA	Terre de Bas,	1.48	202	eP	Pg	02 09 36.3	+0.4
NVBH	Bath Hotel, Ne	1.50	266	eP	Pb	02 09 36.4	+0.7
NVBH				eS	Sn	02 09 53.6	-1.1
SKI	Saint Kitts	1.61	274	ePn	Pb	02 09 37.5	-0.2
SKI				eSn	Sn	02 09 57.2	-0.4
SKI	Saint Kitts	1.61	274	eP	Pb	02 09 37.4	-0.2
SKI				eS	Sb	02 09 58.3	+0.1
DWS	Wesley	1.67	188	eP	Pb	02 09 38.8	+0.2
DWS				eS	Sg	02 10 01.0	-0.2
SKDB	Saint Kitts 2	1.68	276	eP	Pn	02 09 38.3	+0.9
SKDB				eS	Sb	02 10 00.5	+0.2
MDPO	Dominica; Chan	1.68	193	eP	Pb	02 09 39.0	+0.1
BSK	Brimstone Hill	1.71	274	eP	Pn	02 09 38.4	+0.6
SEUS	St. Eustatius	1.86	279	eP	Pb	02 09 42.0	+0.2
DLPL	La Plaine	1.89	186	eP	Pn	02 09 41.3	+1.0
DLPL	La Plaine	1.89	186	eP	Pb	02 09 42.2	-0.3
DLPL				eS	Sg	02 10 07.2	-1.2
MDN	Morne-Daniel	1.92	190	eP	Pb	02 09 42.4	-0.6
MDN	Morne-Daniel	1.92	190	eP	Pb	02 09 44.0	+1.1
MDN				eS	Sb	02 10 07.9	+0.7
DBCT	Belle View Cho	1.96	188	eP	Pb	02 09 44.5	+0.8
DBCT				eS	Sb	02 10 09.0	+0.6
DPMT	Pointe Michel	1.98	189	eP	Pb	02 09 42.9	-1.0
DPMT				eS	Sb	02 10 07.8	-0.9
SMRT	St. Maarten	2.09	293	ePn	Pn	02 09 44.9	+1.8
SMRT				eSn	Sn	02 10 08.8	-0.7
SABA	Saba	2.12	281	ePn	Pb	02 09 46.0	-0.4
SABA				eSn	Sn	02 10 10.7	+0.5
BAMF	Morne Balai	2.40	182	eP	Pn	02 09 49.3	+2.0
PCM	Pelee Case Pet	2.40	184	eP	Pn	02 09 49.3	+2.0
CXM	Morne La Croix	2.40	183	eP	Pb	02 09 49.7	-1.6
GBMF	Grand Be	2.42	182	eP	Pn	02 09 49.4	+1.7
PML	Morne Lenard	2.43	183	eP	Pn	02 09 49.6	+1.8
ILAM	Ilet Lapin Mar	2.44	176	eP	Pn	02 09 49.4	+1.5
FDF	Fort de France	2.48	182	ePn	Pn	02 09 50.3	+1.8
FDF				eSn	Sn	02 10 16.7	-2.4
FDF	Fort de France	2.48	182	eP	Pn	02 09 49.6	+1.2
FDF				eS	Sb	02 10 21.8	-1.5
LPMF	Morne Lapointe	2.64	178	eP	Pn	02 09 51.6	+1.0
ZAM	Aeronautique	2.64	179	eP	Pn	02 09 51.8	+1.2
MVM	Montagne Vaucl	2.66	177	eP	Pn	02 09 52.4	+1.4
TRMF	Trois Ilets	2.67	180	eP	Pn	02 09 53.2	+2.1
BIM	Bigot	2.69	180	eP	Pn	02 09 53.7	+2.3
MPOM	Morne Pois Mar	2.77	176	eP	Pn	02 09 53.9	+1.5
H05S1	Guadeloupe/Mar	2.79	176	Pn	Pn	02 09 54.1	+1.4
H05S1				Sn	Sn	02 10 27.1	+0.5
	SNR=113						
SLBI	Saint Lucia, B	3.19	179	eP	Pn	02 09 59.3	+1.2
SLBI				eS	Sn	02 10 38.2	+1.9
SLW	Petit Monier	3.19	178	eP	Pn	02 09 59.8	+1.6
SLW				eS	Sn	02 10 38.1	+1.6
SLPA	Patience	3.35	178	eP	Pn	02 10 01.8	+1.4
SLPA				eS	Sn	02 10 42.1	+1.5
SLB	Belfond	3.38	180	eP	Pn	02 10 01.4	+0.6
SLB				eS	Sn	02 10 42.1	+0.9
SLDE	Delcer	3.40	180	eP	Pn	02 10 01.9	+0.8
SLDE				eS	Sn	02 10 43.3	+1.5
MCLT	Moule a Chique	3.50	178	eP	Pn	02 10 04.3	+1.8
MCLT				eS	Sn	02 10 45.6	+1.4
SFAN	Fancy Village	3.82	182	eP	Pn	02 10 09.3	+2.5
SFAN				eS	Sn	02 10 53.8	+1.6
SSV	Crater Summit	3.88	182	eP	Pn	02 10 09.2	+1.4
SSV	Crater Summit	3.88	182	eS	Sn	02 10 54.3	+0.7
STVI	Saint Thomas	3.88	287	ePn	Pn	02 10 08.0	+0.4
STVI				eSn	Sn	02 10 54.8	+1.4
SVV	Soufriere Volc	3.89	182	eP	Pn	02 10 10.2	+2.4
SVV				eS	Sn	02 10 55.2	+1.4
SVCV	St. Vincent, C	3.93	181	eP	Pn	02 10 10.3	+1.9
SVCV	St. Vincent, C	3.93	181	eS	Sn	02 10 56.6	+1.8
SVB	Belmont	3.94	183	ePn	Pn	02 10 10.5	+2.1
SVB				eSn	Sn	02 10 53.5	-1.4
SVB	Belmont	3.94	183	eP	Pn	02 10 09.9	+1.4
SVB	Belmont	3.94	183	eS	Sn	02 10 56.2	+1.3
FCV	Fort Charlotte	4.05	183	eP	Pn	02 10 11.2	+1.2
FCV	Fort Charlotte	4.05	183	eS	Sn	02 10 58.7	+1.0
CUPR	Culebra, Puert	4.17	286	ePn	Pn	02 10 12.2	+0.6
CUPR				eSn	Sn	02 10 59.0	-1.6
MTP	Monte Pirata	4.37	282	ePn	Pn	02 10 15.8	+1.3
MTP				eSn	Sn	02 11 06.4	+0.7
HUMP	Col San Antoni	4.66	282	ePn	Pn	02 10 20.2	+1.8
HUMP				eSn	Sn	02 11 12.7	0.0
CBYP	Canovanas	4.69	284	ePn	Pn	02 10 20.8	+1.9
CBYP				eSn	Sn	02 11 12.2	-1.5
SJG	San Juan	4.94	281	Pn	Pn	02 10 23.6	+1.4
	6.9nm,0.3s,baz=97,slow=13,SNR=17						
SJG				Sn	Sn	02 11 23.8	+4.2
	7.7nm,0.3s,baz=158,slow=22,SNR=2.8						
SJG				LR	LR	02 12 30.5	
	comp=Z,139nm,18.7s,baz=86,slow=41						
SJG	San Juan	4.94	281	ePn	Pn	02 10 23.7	+1.4
SJG				eSn	Sn	02 11 19.1	-0.5
GRGR	Grenville	5.10	187	ePn	Pn	02 10 25.1	+0.6
OBIP	Obispado Ponce	5.35	280	ePn	Pn	02 10 29.2	+1.2
OBIP				eSn	Sn	02 11 29.7	-0.2
AOPR	Arecibo Observ	5.54	282	ePn	Pn	02 10 30.1	-0.5
MPR	Mayaguez	5.88	281	ePn	Pn	02 10 36.8	+1.7
MPR				eSn	Sn	02 11 45.4	+2.5
TOSP	Speyside	5.91	175	eP	Pn	02 10 38.0	+2.3
TOSP	Speyside	5.91	175	eS	Sn	02 11 44.4	+0.6
SDDR	Presa de Saban	9.88	282	ePn	Pn	02 11 30.9	+0.7
SDV	Santo Domingo	12.47	230	Pn	Pn	02 12 06.1	+0.2
	0.2nm,0.3s,baz=47,slow=11,SNR=3.1						
CAPV	Capacho	14.39	231	eP	P	02 12 37.9	-1.2
MDP	Montagnes des	14.60	145	Pn	Pn	02 12 31.4	-3.3
	0.4nm,0.3s,baz=333,slow=14,SNR=4.1						
OCAC	Ocana	14.92	235	eP	P	02 12 43.0	-1.9
SMLC	San Martn de	15.19	238	eP	Pn	02 12 44.6	+1.9
CHIC	Chingaza	17.63	226	eP	P	02 13 16.0	+0.6
NORC	Norcasia	17.80	231	eP	Pn	02 13 15.6	-0.6
PTGA	Pitinga	17.88	176	P	Pn	02 13 15.6	-1.4
	0.5nm,0.3s,baz=322,slow=19,SNR=3.6						
ROSC	El Rosal	17.90	228	LR	LR	02 20 37.1	
	comp=Z,60nm,18.9s,baz=214,slow=39						
HELC	Santa Helena	17.90	234	eP	Pn	02 13 16.9	-0.7
DBBC	Dabeiba	17.94	237	eP	P	02 13 19.1	+0.6
RREF	El Recreo	18.60	230	eP	P	02 13 25.9	-0.3
MACC	Macarena, Meta	19.56	221	eP	P	02 13 34.5	-1.7
BBAC	Balboa, Cauca	21.94	228	eP	P	02 14 00.6	-1.6
JTS	Las Juntas de	24.20	257	P	P	02 14 24.4	-0.6
	1.8nm,0.6s,baz=93,slow=17,SNR=2.1						
LMN	Caledonia Moun	28.71	355	eP	P	02 15 05.0	-0.5
	27nm,1.5s						
UTMT	University of	31.11	313	eP	P	02 15 25.2	-1.5
	29nm,0.6s						
LPAZ	La Paz	34.02	192	P	P	02 15 51.5	-1.7
	0.5nm,0.5s,baz=27,slow=6.8,SNR=3.9						
LPAZ				LR	LR	02 31 14.5	
	comp=Z,37nm,18.6s,baz=24,slow=39						
H07N1	FLORES T-PHASE	34.28	43	T	T	02 52 44.5	
	SNR=117						
TXAR	Lajitas Array	40.74	295	P	P	02 16 49.7	+0.2
	0.2nm,0.5s,baz=102,slow=8.4,SNR=4.7						
ANMO	Albuquerque	44.02	303	P	P	02 17 16.2	-0.1
	0.6nm,0.6s,baz=106,slow=7.4,SNR=3.9						
PD31	Pinedale Array	48.28	312	eP	P	02 17 52.2	+2.4
	2.7nm,1.1s						
PDAR	Pinedale Array	48.28	312	P	P	02 17 52.2	+2.4
	0.3nm,0.4s,baz=128,slow=7.3,SNR=3.3						
H10N3	ASCENSION HYDR	52.32	115	T	T	03 14 60.0	
	baz=298,slow=75,SNR=8.4						
H10N2	ASCENSION HYDR	52.33	115	T	T	03 15 00.3	
	baz=298,slow=75,SNR=16						
H10N1	ASCENSION HYDR	52.34	115	T	T	03 15 01.5	
	baz=298,slow=75,SNR=21						
MSO	Missoula	52.41	316	eP	P	02 18 22.8	+1.9
	6.6nm,0.8s						
H10S3	ASCENSION HYDR	52.72	116	T	T	03 15 29.9	
	baz=299,slow=74						
H10S1	ASCENSION HYDR	52.73	116	T	T	03 15 29.1	
	baz=299						
H10S2	ASCENSION HYDR	52.74	116	T	T	03 15 32.1	
	baz=299,slow=74						
E09A	Wood Farm, Sta	55.15	315	eP	P	02 18 41.4	+0.7
	7.2nm,0.8s						
TOA1	Torodi Ar. Sit	60.47	84	eP	P	02 19 18.6	0.0
TORD	Torodi Ar. Bea	60.48	84	P	P	02 19 18.6	-0.1
	8.2nm,0.3s,baz=278,slow=6.3,SNR=9.8						
GERES	GERESS Array B	67.24	44	P	P	02 20 03.2	+0.4
	0.2nm,0.5s,baz=264,slow=6.8,SNR=3.2						
ILAR	Eielson Array	72.80	333	P	P	02 20 38.1	+1.5
	0.2nm,0.5s,baz=82,slow=6.5,SNR=3.2						
ARA0	ARCESS Array B	72.80	22	eP	P	02 20 37.6	+1.1
ARCES	ARCESS Array B	72.80	22	P	P	02 20 37.6	+1.1
	2.4nm,0.9s,baz=354,slow=3.7,SNR=3.7						
FIA0	FINESS Array S	73.68	30	eP	P	02 20 42.4	+0.6
FINES	FINESS Array B	73.68	30	P	P	02 20 42.4	+0.6
	0.9nm,0.6s,baz=275,slow=6.2,SNR=6.6						

*LDG **27** 02:11:42.3±0.1, 44°.18N×10°.21E, h2km, Ml2.3/14, Error ellipse: s-maj=1.3km s-min=1.0km az=30.0*
*GEN **27** 02:11:42.1, 44°.19N×10°.21E, h4km, Ml1.7*
ROM 27 02:11:41.5±0.1, 44°.182N±0°.007×10°.214E±0°.007, h8km, ML1.9/14, Error ellipse: s-maj=0.8km s-min=0.4km az=188.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0912	Minucciano (LU	0.01	193	P	Pg	02 11 43.3	+0.3
T0912				S	Sg	02 11 44.2	+0.2
EQUI	Equi	0.05	250	P	Pg	02 11 43.5	+0.4
EQUI				S	Sg	02 11 44.4	+0.1
EQUI	Equi	0.05	250	P	Pg	02 11 43.5	+0.4
EQUI				S	Sg	02 11 44.7	+0.3
EQUI				AML	AML		
	comp=E,3845μm,0.1s						
EQUI				AML	AML		
	comp=N,2780μm,0.7s						
EQUI				AML	AML		
	comp=E,3845μm,0.1s						
EQUI				AML	AML		
	comp=N,2780μm,0.7s						
EQUI				AML	AML		
	comp=E,3845μm,0.1s						
EQUI				AML	AML		
	comp=N,2780μm,0.7s						
T0911	Castelpoggio (	0.12	235	P	Pg	02 11 45.0	+0.7
T0911				S	Sg	02 11 47.1	+1.0
T0911				AML	AML		
	comp=E,1260μm,0.2s						
T0911				AML	AML		
	comp=N,1158μm,0.2s						
T0911				AML	AML		
	comp=E,1252μm,0.2s						
T0911				AML	AML		
	comp=N,1170μm,0.2s						
T0911				AML	AML		
	comp=E,1260μm,0.2s						
T0911				AML	AML		
	comp=N,1155μm,0.1s						
T0911				AML	AML		
	comp=E,1250μm,0.2s						
T0911				AML	AML		
	comp=N,1171μm,0.1s						
T0911				AML	AML		
	comp=E,1260μm,0.2s						
T0911				AML	AML		
	comp=E,1250μm,0.2s						
VLC	Villacollemand	0.13	100	P	Pg	02 11 45.0	+0.7
VLC				S	Sg	02 11 47.2	+1.0
VLC				AML	AML		
	comp=E,866μm,0.3s						
VLC				AML	AML		
	comp=N,435μm,0.6s						
VLC				AML	AML		
	comp=E,878μm,0.3s						
VLC				AML	AML		
	comp=N,442μm,0.6s						
VLC				AML	AML

BDI	**Bagni Di Lucca**	**0.30 113**	P	Pg	02 11 48.0	+0.5
BDI			S	Sg	02 11 52.8	+1.3
BDI			AML	AML		
	comp=E,282μm,0.4s					
BDI			AML	AML		
	comp=N,212μm,1.3s					
BDI			AML	AML		
	comp=E,316μm,0.4s					
BDI			AML	AML		
	comp=N,262μm,0.6s					
BDI			AML	AML		
	comp=E,282μm,0.4s					
BDI			AML	AML		
	comp=E,316μm,0.4s					
BDI			AML	AML		
	comp=N,262μm,0.6s					
BDI			AML	AML		
	comp=N,212μm,1.3s					
GRAM	**Graiana**	**0.33 341**	P	Pg	02 11 48.6	+0.6
GRAM			S	Sg	02 11 53.5	+1.1
GRAM	**Graiana**	**0.33 341**	P	Pg	02 11 48.7	+0.7
GRAM			S	Sg	02 11 53.7	+1.3
GRAM			AML	AML		
	comp=E,1370μm,0.3s					
GRAM			AML	AML		
	comp=N,1945μm,0.4s					
GRAM			AML	AML		
	comp=E,1370μm,0.3s					
GRAM			AML	AML		
	comp=N,1945μm,0.4s					
GRAM			AML	AML		
	comp=E,1370μm,0.3s					
GRAM			AML	AML		
	comp=N,1945μm,0.4s					
MAIM	**Mastiano**	**0.33 143**	P	Pb	02 11 49.0	-0.7
MAIM			S	Sg	02 11 53.8	+1.3
MAIM	**Mastiano**	**0.33 143**	P	Pb	02 11 49.1	-0.6
MAIM			S	Sg	02 11 53.6	+1.1
MAIM			AML	AML		
	comp=E,300μm,0.3s					
MAIM			AML	AML		
	comp=N,268μm,0.5s					
MAIM			AML	AML		
	comp=E,300μm,0.3s					
MAIM			AML	AML		
	comp=N,268μm,0.5s					
POPM	**Popiglio**	**0.41 109**	P	Pg	02 11 50.2	+0.6
POPM			S	Sb	02 11 56.4	-1.2
POPM	**Popiglio**	**0.41 109**	P	Pg	02 11 50.2	+0.6
POPM			AML	AML		
	comp=E,430μm,0.7s					
POPM			AML	AML		
	comp=N,348μm,0.8s					
POPM			AML	AML		
	comp=E,430μm,0.7s					
POPM			AML	AML		
	comp=N,348μm,0.8s					
POPM			AML	AML		
	comp=E,430μm,0.7s					
POPM			AML	AML		
	comp=N,348μm,0.8s					
MSSA	**Maissana**	**0.52 285**	P	Pg	02 11 52.1	+0.6
MSSA			AML	AML		
	comp=E,160μm,1.1s					
MSSA			AML	AML		
	comp=N,105μm,0.6s					
MSSA			AML	AML		
	comp=E,160μm,1.1s					
MSSA			AML	AML		
	comp=N,105μm,0.6s					
ZCCA	**Zocca**	**0.57 73**	P	Pb	02 11 54.7	+0.8
ZCCA			AML	AML		
	comp=E,257μm,0.4s					
ZCCA			AML	AML		
	comp=N,246μm,0.4s					
ZCCA			AML	AML		
	comp=N,246μm,0.4s					
ZCCA			AML	AML		
	comp=E,257μm,0.4s					
PTF	**Prato**	**0.66 110**	P	Pg	02 11 54.5	+0.4
CRMI	**Carmignano**	**0.67 125**	P	Pb	02 11 55.9	+0.4
GROG	**Isola di Gorgo**	**0.79 197**	P	Pb	02 11 57.6	+0.1
GROG			AML	AML		
	comp=E,120μm,1.0s					
GROG			AML	AML		
	comp=N,143μm,1.3s					
GROG			AML	AML		
	comp=E,120μm,1.0s					
GROG			AML	AML		
	comp=N,143μm,1.3s					
SEI	**Scarperia**	**0.83 98**	P	Pb	02 11 58.4	+0.1
SEI			AML	AML		
	comp=E,103μm,0.4s					
SEI			AML	AML		
	comp=N,198μm,0.4s					
SEI			AML	AML		
	comp=N,198μm,0.4s					
SEI			AML	AML		
	comp=E,103μm,0.4s					
RUFI	**Rufina**	**1.00 110**	P	Pn	02 12 02.0	+0.2
FINB	**Finale Ligure**	**1.36 270**	AML	AML		
	comp=N,26μm,0.4s					
FINB			AML	AML		
	comp=E,22μm,0.6s					
FINB			AML	AML		
	comp=E,22μm,0.6s					
FINB			AML	AML		
	comp=N,26μm,0.4s					
PGF	**Pioggiola**	**1.86 209**	*e*Pn	Pn	02 12 13.3	-0.5
PGF			*e*Sn	Sn	02 12 35.2	-2.3
	comp=N,2.0nm,0.2s					
SBF	**Sospel**	**2.03 262**	*e*Pn	Pn	02 12 16.0	-0.1
SBF			*e*Sn	Sn	02 12 39.7	-2.0
	comp=N,7.5nm,0.3s					
MBDF	**Montbardon**	**2.52 284**	*e*Pn	Pn	02 12 22.9	-0.1
MBDF			*e*Sn	Sn	02 12 52.0	-2.0
	comp=N,2.5nm,0.3s					
FRF	**La Foret Royal**	**2.65 258**	*e*Pn	Pn	02 12 24.5	-0.1
FRF			*e*Sn	Sn	02 12 54.9	-2.1
	comp=N,1.6nm,0.2s					
LPG	**La Plagne**	**2.79 299**	*e*Pn	Pn	02 12 26.5	-0.3
LPG			*e*Sn	Sn	02 12 59.3	-1.5
	comp=N,1.0nm,0.3s					
LPL	**La Plagne**	**2.81 300**	*e*Pn	Pn	02 12 26.6	-0.4
LPL			*e*Sn	Sn	02 12 58.9	-2.3
	comp=N,2.0nm,0.4s					
LMR	**La Mourre**	**2.81 254**	*e*Pn	Pn	02 12 26.5	-0.3
LMR			*e*Sn	Sn	02 12 58.4	-2.5
	comp=N,1.2nm,0.1s					
LAV9	**Lanuvio**	**3.10 143**	AML	AML		
	comp=N,202μm,1.4s					
LAV9			AML	AML		
	comp=E,218μm,0.8s					
LAV9			AML	AML		
	comp=N,202μm,1.4s					
LAV9			AML	AML		
	comp=E,218μm,0.8s					
ORIF	**Oris-en-Rattie**	**3.18 285**	*e*Pn	Pn	02 12 31.7	-0.3
ORIF			*e*Sn	Sn	02 13 07.9	-2.3
	comp=E,1.7nm,0.3s					
SMRF	**Simiane la Rot**	**3.35 268**	*e*Pn	Pn	02 12 33.6	-0.6
SMRF			*e*Sn	Sn	02 13 11.8	-2.4
	comp=E,1.0nm,0.2s					
LASF	**Ste Croix**	**4.58 271**	*e*Pn	Pn	02 12 50.2	-0.9
LASF			*e*Sn	Sn	02 13 40.5	-4.0
	comp=E,0.4nm,0.2s					
CDF	**Champ du Feu**	**4.70 335**	*e*Pn	Pn	02 12 52.3	-0.5
CDF			*e*Sn	Sn	02 13 43.1	-4.3
	comp=E,0.3nm,0.2s					
PAGF	**Fort de Pagny**	**5.36 326**	*e*Pn	Pn	02 13 01.1	-0.8
SFTF	**Sexfontaines**	**5.39 320**	*e*Pn	Pn	02 13 01.7	-0.6
SFTF			*e*Sn	Sn	02 14 00.8	-3.7
	comp=E,5.3nm,0.5s					
LOR	**Lormes**	**5.41 307**	*e*Pn	Pn	02 13 02.5	-0.1
LOR			*e*Sn	Sn	02 14 01.4	-3.7
	comp=E,0.7nm,0.3s					
MTLF	**Montolieu**	**5.85 265**	*e*Pn	Pn	02 13 07.4	-1.2
MTLF			*e*Sn	Sn	02 14 11.9	-3.9
	comp=E,0.7nm,0.5s					

ZUR 27 02:13:11.6, 46°23N×7°55E, h4km±2km, MLh1.0/4, 2C-1D, Error ellipse: s-maj=4.3km s-min=1.5km az=180.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANNI	**Vissoie, Val d**	**0.04 124**		⇓P*g*	P*g*	02 13 13.2	+0.3
VANNI				S*g*	S*g*	02 13 14.0	+0.2
SIEB	**Ecole de Borzu**	**0.06 353**		⇑P*g*	P*g*	02 13 13.3	+0.2
LKBD2	**Leukerbad 2**	**0.16 26**		P*g*	P*g*	02 13 15.0	+0.2
DIX	**Grande Dixence**	**0.18 212**		⇑P*g*	P*g*	02 13 15.4	+0.2
SATI	**Passo dei Sala**	**0.42 148**		P*g*	P*g*	02 13 19.8	-0.1

TRN 27 02:13:41.3, 17°20N×61°23W, h14km, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.70 311**		*e*P	P*n*	02 13 58.0	+1.1
ANWB				*e*S	S*n*	02 14 09.2	+1.6
DEG	**La Desirade**	**0.90 170**		*e*P	P*n*	02 14 01.1	+1.5
MLYT	**Lee's Yard**	**1.04 243**		*e*P	P*n*	02 14 03.4	+1.8
MLYT				*e*S	S*n*	02 14 19.0	+3.1
NVRH	**Round Hill, Ne**	**1.31 269**		*e*P	P*g*	02 14 07.2	+0.6
NVBH	**Bath Hotel, Ne**	**1.33 267**		*e*P	P*g*	02 14 08.0	+1.0
NVBH				*e*S	S*g*	02 14 26.0	+1.7
SKI	**Saint Kitts**	**1.45 275**		*e*P	P*g*	02 14 09.9	+0.7
SKI				*e*S	S*g*	02 14 29.2	+1.1
SKDB	**Saint Kitts 2**	**1.52 278**		*e*P	P*b*	02 14 09.5	+0.2
BSK	**Brimstone Hill**	**1.55 276**		*e*P	P*b*	02 14 10.0	+0.2
BSK				*e*S	S*g*	02 14 31.8	+0.6
MDPO	**Dominica; Chan**	**1.63 188**		*e*P	P*b*	02 14 11.5	+0.3
MDPO				*e*S	S*g*	02 14 33.9	0.0
FDF	**Fort de France**	**2.46 178**		*e*P	P*b*	02 14 24.7	-0.6
FDF				*e*S	S*n*	02 14 51.1	+0.2

MEX 27 02:17:55.0±0.6, 18°25N×103°10W, h63km±8km, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.23 280**		*i* P	P*n*	02 18 03.7	-1.4
MMIG				*i* S	S*n*	02 18 10.6	-1.8
EZ5V		**1.31 339**		*e*P	P*n*	02 18 16.6	-0.9
EZ5V				*i* S	S*n*	02 18 32.8	-1.6
ZIIG	**Zihuatanejo**	**1.68 112**		*i* P	P*n*	02 18 20.6	-1.6
ZIIG				*i* S	S*n*	02 18 40.0	-2.8

*ISCJB **27** 02:22:13.7±1.2, 20°46S±0°07×169°42E±0°07, h77km±9km, mb4.2/19, Error ellipse: s-maj=12.9km s-min=10.6km az=140.4*

*IDC **27** 02:22:14.8±0.7, 20°49S×169°49E, h74km±4km, mb3.9/12, mb1 4.1/13, mb1mx3.9/37, mbtmp4.2/13, MS3.4/8, Ms1 3.4/8, ms1mx3.2/27, Error ellipse: s-maj=19.7km s-min=11.2km az=143.0*

*NEIC **27** 02:22:15.1±1.7, 20°42S×169°40E, h79km±5km, mb4.4/15, Error ellipse: s-maj=16.8km s-min=11.6km az=131.0*

ISC 27 02:22:14.8±0.6, 20°43S±0°08×169°43E±0°08, h77km±4km, h77km:pP-P, n87, σ1°11/90, mb4.3/19, 5C-5D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.68 231**		*e*P*n*	**P*n***	**02 22 42.2**	**-0.1**
MARNC				*e*S*n*	**S*n***	**02 23 01.5**	**-1.7**
PINNC	**Pines Island,**	**2.85 220**		*e*P*n*	**P*n***	**02 22 58.3**	**+0.2**
PINNC				*e*S*n*	**S*n***	**02 23 29.4**	**-2.0**
DZM	**Mont Dzumac**	**3.23 239**		P	**P*n***	**02 23 03.7**	**+0.4**
	36nm,0.3s,baz=107,slow=12,SNR=783						
DZM				S	**S*n***	**02 23 40.3**	**-0.5**
	83nm,0.3s,baz=84,slow=20,SNR=6.8						
DZM				LR	LR	02 23 55.8	
	comp=Z,276nm,20.7s,baz=65,slow=31						
DZM	**Mont Dzumac**	**3.23 239**		*e*P*n*	**P*n***	**02 23 03.7**	**+0.4**
	540nm,0.8s						
DZM				*e*S*n*	**S*n***	**02 23 38.7**	**-2.1**
	2μm,0.8s						
DZM				*e*LR	LR	02 23 50.8	
	comp=Z,813nm,28.6s						
FUNA	**Funafuti**	**15.14 40**		*e*P*n*	**P*n***	**02 25 44.7**	**+0.3**
	77nm,1.0s						
ARMA	**Armidale**	**18.89 235**		*e*P	**P**	**02 26 28.9**	**-0.3**
	34nm,1.4s						
URZ	**Urewera**	**18.97 161**		LR	LR	02 32 23.9	
	comp=Z,153nm,19.2s,baz=336,slow=32						
BKZ	**Black Stump Fm**	**19.64 163**		*e*P	**P**	**02 26 37.4**	**+0.1**
	28nm,1.2s						
CTA	**Charters Tower**	**21.75 267**		P	**P**	**02 27 02.3**	**+2.2**
	1.3nm,0.3s,baz=94,slow=13,SNR=3.1						
CTA				pP	**pwP**	**02 27 19.4**	**-3.3**
	7.7nm,0.8s,baz=96,slow=13,SNR=6.4						
CTAO	**Charters Tower**	**21.75 267**		*e*P	**P**	**02 27 00.0**	**-0.1**
	7.5nm,1.1s						
RPZ	**Rata Peaks**	**23.26 177**		P	**P**	**02 27 15.0**	**-0.6**
	7.1nm,0.8s,baz=0.7,slow=16,SNR=2.1						
RPZ				LR	LR	02 34 00.0	
	comp=Z,170nm,19.8s,baz=24,slow=30						
LBZ	**Lake Benmore**	**23.90 179**		*e*P	**P**	**02 27 22.6**	**+1.3**
	25nm,1.3s						
STKA	**Stephens Creek**	**27.39 240**		P	**P**	**02 27 54.7**	**+1.7**
	0.8nm,0.4s,baz=81,slow=16,SNR=3.5						
STKA				LR	LR	02 37 22.7	
	comp=Z,101nm,21.3s,baz=44,slow=33						
RAR	**Rarotonga**	**28.77 97**		LR	LR	02 36 36.3	
	comp=Z,102nm,20.7s,baz=269,slow=30						
WB2	**Warramunga Arr**	**32.89 265**		*e*P	**P**	**02 28 41.7**	**-0.2**
	15nm,1.5s						
WR1	**Warramunga Arr**	**32.90 265**		*e*P	**P**	**02 28 42.0**	**+0.1**
WRA	**Warramunga Arr**	**32.91 265**		P	**P**	**02 28 42.0**	**+0.1**
	0.8nm,0.5s,baz=91,slow=8.7,SNR=6.6						
WRA				pP	**pP**	**02 28 59.4**	**+0.8**
AS31	**Alice Springs**	**33.03 258**		*e*P	**P**	**02 28 43.8**	**+0.7**
AS31				*e*pP	**pP**	**02 29 01.1**	**+0.9**
ASAR	**Alice Springs**	**33.04 258**		P	**P**	**02 28 43.5**	**+0.5**
	4.7nm,0.7s,baz=83,slow=8.9,SNR=42						
ASAR				pP	**pP**	**02 29 01.2**	**+1.1**
	8.5nm,0.7s,baz=82,slow=9.1,SNR=17						
ASAR				PcP	**PcP**	**02 31 24.8**	**-0.4**
	1.0nm,0.8s,baz=96,slow=1.9,SNR=5.6						
ASAR				LR	LR	02 42 11.1	
	comp=Z,81nm,18.2s,baz=82,slow=36						
PPT2	**Papeete2**	**38.79 93**		*e*LQ	LQ	02 38 33.1	
	190nm,29.0s						
PPT2				*e*LR	LR	02 40 27.0	
	comp=Z,140nm,27.0s						
FITZ	**Fitzroy Crossi**	**41.32 266**		P	**P**	**02 29 54.5**	**+1.3**
	5.4nm,0.7s,baz=92,slow=7.1,SNR=18						
PSA00	**Pilbara Seismi**	**46.15 259**		*e*P	**P**	**02 30 30.9**	**-1.0**
	13nm,1.1s						
TAOE	**Nuku Hiva Isla**	**49.94 84**		*e*LR	LR	02 45 33.0	
	comp=Z,216nm,30.1s						
VNDA	**Vanda**	**57.26 182**		P	**P**	**02 31 53.7**	**-0.1**
	0.7nm,0.5s,baz=359,slow=5.4,SNR=8.5						
VNDA				LR	LR	02 52 32.7	
	comp=Z,40nm,20.3s,baz=337,slow=32						
VNDA	**Vanda**	**57.26 182**		*e*P	**P**	**02 31 54.5**	**+0.7**
	1.4nm,0.9s						
SBA	**Scott Base**	**57.48 181**		*e*P	**P**	**02 31 57.2**	**+1.8**
	6.9nm,0.8s						
JNU	**Nakatsue**	**64.74 325**		LR	LR	02 56 53.7	
	comp=Z,20nm,21.8s,baz=169,slow=32						
QSPA	**South Pole Qui**	**69.63 180**		*e*P	**P**	**02 33 15.9**	**+0.1**
	8.2nm,0.8s						
QSPA				*e*pP	**pP**	**02 33 35.0**	**-0.4**
KLR	**Kul'dur**	**77.02 336**		P	**P**	**02 33 59.9**	**+0.7**
	0.6nm,0.4s,baz=36,slow=5.8,SNR=4.6						
MAW	**Mawson**	**77.41 202**		P	**P**	**02 34 02.2**	**+1.1**
	1.2nm,0.6s,baz=128,slow=11,SNR=4.6						
MAW				pP	**pP**	**02 34 21.3**	**+0.5**
	2.3nm,0.8s,baz=151,slow=5.1,SNR=3.6						
CM31	**Chiang Mai Arr**	**79.16 294**		*e*P	**P**	**02 34 13.6**	**+1.9**
	5.8nm,1.0s						
CM31				*e*pP	**pP**	**02 34 33.0**	**+1.0**
CMAR	**Chiang Mai Arr**	**79.16 294**		P	**P**	**02 34 13.6**	**+1.9**
	1.8nm,0.7s,baz=130,slow=4.0,SNR=10						
CMAR				pP	**pP**	**02 34 33.0**	**+1.0**
	1.1nm,0.3s,baz=136,slow=4.2,SNR=3.3						
SONA0	**Songino Array**	**88.28 323**		*e*P	**P**	**02 34 58.1**	**+0.4**
SONA0				*e*pP	**pP**	**02 35 18.1**	**-0.3**
SONM	**Songino Array**	**88.28 323**		P	**P**	**02 34 58.1**	**+0.4**
	2.6nm,0.8s,baz=135,slow=4.7,SNR=12						
SONM				pP	**pP**	**02 35 18.1**	**-0.3**
	2.2nm,0.9s,baz=154,slow=6.4,SNR=4.4						
NV01	**Mina Array Sit**	**89.45 48**		*e*P	**P**	**02 35 02.4**	**-1.2**
NV01				*e*pP	**pP**	**02 35 25.1**	**+0.9**
NVAR	**Mina Array Bea**	**89.45 48**		P	**P**	**02 35 02.4**	**-1.2**
	1.0nm,0.7s,baz=232,slow=7.7,SNR=7.5						
NVAR				pP	**pP**	**02 35 25.1**	**+0.9**
	1.2nm,0.9s,baz=218,slow=7.9,SNR=2.7						
ILAR	**Eielson Array**	**91.31 17**		P	**P**	**02 35 08.4**	**-2.9**
	0.7nm,0.7s,baz=229,slow=5.1,SNR=7.4						
ILB	**Eielson Array**	**91.31 17**		*e*P	**P**	**02 35 08.4**	**-2.9**
	1.2nm,0.6s						
MK32	**Makanchi Array**	**102.71 315**		*e*Pdif	**Pdif**	**02 36 03.0**	**-0.4**
MKAR	**Makanchi Array**	**102.71 315**		P	**Pdif**	**02 36 03.0**	**-0.4**
	0.3nm,0.5s,baz=121,slow=4.4,SNR=2.6						
ARA0	**ARCESS Array S**	**126.26 345**		*e*PKPdf	**PKPdf**	**02 41 06.8**	**-1.0**
ARCES	**ARCESS Array B**	**126.26 345**		PKP	**PKPdf**	**02 41 06.8**	**-1.0**
	1.5nm,0.8s,baz=73,slow=2.4,SNR=7.7						
FIA0	**FINESS Array S**	**131.75 337**		*e*PKPdf	**PKPdf**	**02 41 18.5**	**0.0**
FINES	**FINESS Array B**	**131.75 337**		PKP	**PKPdf**	**02 41 18.5**	**0.0**
	2.1nm,0.9s,baz=43,slow=2.5,SNR=3.8						
NB200	**NORSAR Array S**	**136.63 345**		*e*PKPdf	**PKPdf**	**02 41 26.8**	**-0.9**
NOA	**NORSAR Array B**	**136.63 345**		PKP	**PKPdf**	**02 41 26.8**	**-0.9**
	1.0nm,0.9s,baz=31,slow=2.9,SNR=3.0						
BR101	**Keskin Array S**	**137.68 307**		*e*PKPdf	**PKPdf**	**02 41 31.4**	**+0.9**
BRTR	**Keskin Array B**	**137.68 307**		PKP	**PKPdf**	**02 41 31.4**	**+0.9**
	0.6nm,0.8s,baz=71,slow=4.5,SNR=4.3						
GZR	**Gura Zlata**	**142.97 320**		⇑*i*P	**PKPdf**	**02 41 36.2**	**-3.5**
SIRR	**Siria**	**143.16 322**		⇑*i*P	PKPbc	02 41 37.4	+0.3
DPC	**Dobruska-Polom**	**143.35 331**		*e*PKP	PKPab	02 41 37.2	+0.9
VYHS	**Vyhne**	**143.38 327**		*e*PKP	PKPbc	02 41 39.0	+1.4
UPC	**Upice**	**143.38 331**		*e*PKP	PKPab	02 41 37.1	+0.7
HERR	**Herculane**	**143.45 319**		⇑*i*P	PKPab	02 41 36.4	-0.4
BZS	**Buzias**	**143.54 321**		⇓*i*P	PKPab	02 41 37.7	+0.5
JAVC	**Velka Javorina**	**143.73 328**		*e*PKP	**PKPdf**	**02 41 40.2**	**-0.7**
MDVR	**Moldovita**	**143.93 320**		⇑*i*P	PKPbc	02 41 39.5	+0.1
VRAC	**Vranov**	**143.95 329**		⇑*i*P	PKPab	02 41 38.8	+0.1
VRAC	**Vranov**	**143.95 329**		*e*PKP	PKPab	02 41 38.8	+0.1
PVCC	**Panska Ves**	**144.00 333**		*e*PKP	**PKPab**	**02 41 39.0**	**+0.2**
BRG	**Berggiesshubel**	**144.01 333**		*i* PKP	**PKPab**	**02 41 39.0**	**+0.2**
	14nm,0.8s						
BRG				*e*		02 42 00.2	
	6.4nm,0.9s						
VTS	**Vitosha**	**144.03 316**		⇓*i*P	PKPbc	02 41 40.2	+0.3
CLL	**Collm**	**144.07 335**		⇓*i*PKPdf	**PKPab**	**02 41 38.0**	**-1.0**
	comp=Z,13nm,1.2s						
KRUC	**Moravsky**	**144.21 329**		*e*PKP	**PKPab**	**02 41 39.9**	**+0.3**
GOPC	**GO Pecny, Ondr**	**144.35 332**		*e*PKP	**PKPab**	**02 41 39.2**	**-1.0**
GOPC				*ex*	x	02 42 02.8	
PRU	**Pruhonice**	**144.41 332**		*e*PKP	**PKPab**	**02 41 40.4**	**+0.1**
TREC	**Trest**	**144.48 330**		*e*PKP	**PKPab**	**02 41 40.5**	**-0.2**
NKC	**Novy Kostel**	**145.12 334**		*e*PKP	**PKPbc**	**02 41 43.0**	**+0.1**
NKC				*ex*	x	02 42 04.3	
CONA	**Conrad Observa**	**145.25 328**		*i* PKPdf	**PKPab**	**02 41 44.0**	**+0.4**
	comp=Z,27nm,1.0s,SNR=12						
KHC	**Kasperske Hory**	**145.46 332**		*e*PKP	**PKPdf**	**02 41 43.3**	**-0.6**
KHC				*ex*	x	02 42 05.0	
GEC2	**GERESS Array S**	**145.62 331**		*e*PKPdf	**PKPbc**	**02 41 44.8**	**+0.2**
GERES	**GERESS Array B**	**145.62 331**		PKPbc	**PKPdf**	**02 41 44.5**	**+0.2**
	comp=Z,9.4nm,0.9s,baz=46,slow=3.9,SNR=65						
GERES				pPKPbc	**pPKPdf**	**02 42 05.4**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=31,slow=3.1,SNR=8.0						
ARSA	**Arzberg**	**145.88 328**		*i* PKPab	**PKPab**	**02 41 46.3**	**+0.4**
	comp=Z,5.6nm,0.9s						
MOA	**Molln**	**146.07 330**		*i* PKPab	**PKPbc**	**02 41 46.0**	**0.0**
	comp=Z,8.9nm,0.8s						
SOKA	**Soboth**	**146.51 327**		*e*PKPab	**PKPbc**	**02 41 48.2**	**+0.8**
	comp=Z,11nm,1.2s						
BLY	**Banja Luka**	**146.60 323**		⇓*i*P	**PKPbc**	**02 41 47.8**	**+0.2**
PDG	**Podgorica**	**146.68 318**		⇓*i*P	**PKPbc**	**02 41 47.6**	**-0.3**
OBKA	**Obir**	**146.87 328**		*e*PKPab	**PKPbc**	**02 41 48.9**	**+0.5**
	comp=Z,15nm,1.4s						
KBA	**Koelnbreinsper**	**147.06 329**		*i* PKPbc	**PKPdf**	**02 41 47.9**	**+1.0**
	comp=Z,6.1nm,0.8s						
MYKA	**Terra Mystica**	**147.24 329**		*i* PKPbc	**PKPdf**	**02 41 48.4**	**+1.4**
	comp=Z,6.1nm,0.5s						
ABTA	**Abfaltersbach**	**147.70 330**		*i* PKPbc	**PKPbc**	**02 41 49.7**	**-1.0**
	comp=Z,8.5nm,1.0s						
WTTA	**Wattenberg**	**147.72 331**		*e*PKPbc	**PKPbc**	**02 41 50.3**	**-0.5**
	comp=Z,13nm,1.3s						
MOTA	**Moosalm**	**147.90 332**		*i* PKPbc	**PKPbc**	**02 41 50.9**	**-0.4**
	comp=Z,9.9nm,0.9s,SNR=7.5						
RETA	**Reutte**	**147.94 332**		*e*PKPbc	**PKPbc**	**02 41 50.5**	**-0.8**
	comp=Z,3.6nm,0.8s						
SQTA	**Sankt Quirin**	**147.95 332**		*i* PKPbc	**PKPbc**	**02 41 50.6**	**-0.7**
	comp=Z,12nm,0.9s						
FETA	**Feichten**	**148.31 332**		*i* PKPbc	**PKPbc**	**02 41 52.0**	**-0.4**
	comp=Z,12nm,1.1s						
DAVA	**Damuels**	**148.47 333**		*e*PKPbc	**PKPbc**	**02 41 52.1**	**-0.7**
	comp=Z,6.2nm,1.0s						

*IDC **27** 02:24:11.3±0.9, 9°86N×124°98E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.8/41, mbtmp3.9/10, ML4.0/1, MS3.6/17, Ms1 3.6/17, ms1mx3.4/36, Error ellipse: s-maj=48.7km s-min=15.4km az=68.0*

*MAN **27** 02:24:13.8, 9°82N×125°28E, h15km, mb4.9, ML3.8, MS3.8*

*NEIC **27** 02:24:14.4±1.6, 9°82N×124°90E, h21km±2km, mb4.4/8, Error ellipse: s-maj=21.1km s-min=11.6km az=64.0*

NEIC Felt [III PIVS] at Malimono and Surigao and [II PIVS] at Placer and San Jose.

*ISCJB **27** 02:24:15.1±0.4, 9°83N±0°03×125°33E±0°04, h41km±4km, mb4.1/15, MS3.5/12, Error ellipse: s-maj=7.5km s-min=4.4km az=146.1*

ISC 27 02:24:15.2±1.0, 9°87N±0°03×125°22E±0°03, h30km±7km, n62, σ2°12/59, mb4.0/15, MS3.6/13, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.28 109**		⇓*i*P	**P*n***	**02 24 24.5**	**+1.3**
SCPH				*i* S	S*b*	02 24 27.3	0.0
MSLP	**Maasin**	**0.44 306**		*e*P	**P*n***	**02 24 24.9**	**-0.6**
MSLP				*e*S	S*n*	02 24 35.6	+3.2
BUTP	**Butuan**	**0.98 156**		*e*P	**P*n***	**02 24 29.8**	**-3.2**
BUTP				*e*S	S*n*	02 24 48.5	+2.7
PLP	**Palo**	**1.30 349**		⇑*e*P	**P*n***	**02 24 35.8**	**-1.6**
PLP				*i* S	S*b*	02 24 57.5	+1.9
LLP	**Lapu-Lapu**	**1.31 290**		*e*P	**P*n***	**02 24 37.4**	**-0.2**
LLP				*e*S	S*b*	02 24 57.5	+1.7
TBP	**Tagbilaran**	**1.35 262**		*e*P	**P*b***	**02 24 39.1**	**-0.9**
TBP				*i* S	S*b*	02 24 59.7	+2.8
CGP	**Cagayan de Oro**	**1.50 200**		⇑*e*P	**P*n***	**02 24 39.5**	**-0.6**
CGP				*i* S	S*b*	02 25 06.3	+5.1
BESP	**Borongan**	**1.73 7**		*e*P	**P*n***	**02 24 40.7**	**-2.5**
BESP				*e*S	S*b*	02 25 10.6

comp=Z,147nm,18.1s,baz=173,slow=40
KSRS Korea Array 27.57 5 LR LR 02 40 19.0
comp=Z,84nm,21.6s,baz=204,slow=35
MJAR Matsushiro Arr 29.04 22 LR LR 02 39 44.0
comp=Z,123nm,21.9s,baz=215,slow=32
WR1 Warramunga Arr 30.96 163 *eP* **P 02 30 31.1 +1.2**
WRA Warramunga Arr 30.96 163 P **P 02 30 31.1 +1.2**
1.0nm,0.8s,baz=344,slow=12,SNR=2.2
AS31 Alice Springs 34.40 166 *eP* **P 02 31 01.2 +1.2**
0.5nm,0.7s
ASAR Alice Springs 34.40 166 P **P 02 31 01.2 +1.2**
0.5nm,0.5s,baz=349,slow=7.2,SNR=3.6
USRK Ussuriysk Ar. 34.70 9 LR LR 02 43 48.6
comp=Z,66nm,19.9s,baz=132,slow=34
H11S3 WAKE ISLAND Hy 41.02 73 T T 03 14 50.3
baz=261,slow=74
H11S1 WAKE ISLAND Hy 41.03 73 T T 03 14 55.0
baz=261,slow=74
H11S2 WAKE ISLAND Hy 41.04 73 T T 03 14 50.1
baz=261
SONA0 Songino Array 41.04 341 *eP* **P 02 31 56.0 0.0**
SONM Songino Array 41.04 341 P **P 02 31 56.0 0.0**
0.3nm,0.4s,baz=158,slow=9.3,SNR=2.5
SONM LR LR 02 50 49.9
comp=Z,92nm,18.4s,baz=133,slow=39
WAKE Wake Island 41.08 72 *eP* **P 02 31 59.4 +2.9**
136nm,1.1s
H11N1 WAKE ISLAND Hy 41.36 71 T T 03 15 20.3
baz=264,slow=74,SNR=52
H11N2 WAKE ISLAND Hy 41.37 71 T T 03 15 20.8
baz=264,slow=74,SNR=30
H11N3 WAKE ISLAND Hy 41.38 71 T T 03 15 21.6
baz=264,slow=74,SNR=37
BBOO Buckleboo 43.69 167 *eP* **P 02 32 17.8 +0.3**
35nm,1.4s
PETK Petropavlovsk- 50.42 25 LR LR 02 52 37.6
comp=Z,64nm,21.5s,baz=218,slow=34
MK32 Makanchi Array 51.72 323 *eP* **P 02 33 20.4 +0.6**
MKAR Makanchi Array 51.72 323 P **P 02 33 20.4 +0.6**
0.8nm,0.5s,baz=119,slow=10,SNR=4.7
ZALV Zalesovo Beam 54.48 332 LR LR 02 58 23.6
comp=Z,26nm,18.6s,baz=229,slow=38
KBL Kabul 56.71 305 *eP* **P 02 33 53.9 -2.6**
5.5nm,0.6s
GEYT Alibeck 65.96 307 LR LR 03 06 29.3
comp=Z,71nm,20.3s,baz=320,slow=39
ABKAR Akbulak array 66.50 320 *eP* **P 02 34 58.7 -3.4**
3.9nm,1.5s
BR101 Keskin Array S 84.98 309 *eP* **P 02 36 48.2 +0.1**
BRTR Keskin Array B 84.98 309 P **P 02 36 48.3 +0.1**
0.7nm,0.8s,baz=76,slow=6.1,SNR=2.9
BRTR LR LR 03 17 46.2
comp=Z,18nm,20.9s,baz=98,slow=38
FIA0 FINESS Array S 85.75 332 *eP* **P 02 36 52.6 +1.3**
FINES FINESS Array B 85.75 332 P **P 02 36 52.6 +1.3**
1.1nm,0.8s,baz=58,slow=3.4,SNR=3.3
VNDA Vanda 89.67 173 P **P 02 37 10.2 +0.5**
0.9nm,1.0s,baz=325,slow=4.4,SNR=3.6
VNDA LR LR 03 17 21.1
comp=Z,42nm,18.7s,baz=308,slow=36
NOA NORSAR Array B 92.65 334 LR LR 03 22 03.1
comp=Z,37nm,20.1s,baz=60,slow=38
GEC2 GERESS Array S 96.37 322 *eP* **P 02 37 41.6 +0.2**
1.6nm,0.9s
GERES GERESS Array B 96.37 322 P **P 02 37 41.6 +0.2**
0.1nm,0.3s,baz=88,slow=7.0,SNR=2.1
TXAR Lajitas Array 118.86 49 PKP **PKPdf 02 43 01.7 +0.1**
0.3nm,0.9s,baz=239,slow=3.0,SNR=2.5

IDC 27 02:30:32.6±4.2,57°.99N×31°.91W,h0km,mb3.7/5,
mb1 3.9/5,mb1mx3.5/33,mbtmp3.7/5,MS3.3/3,Ms1 3.3/3,
ms1mx2.7/30,Error ellipse: s-maj=117.2km
s-min=28.6km az=179.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GERES	GERESS Array B	28.17	89	LR	LR	02 47 21.0	
	comp=Z,36nm,18.8s,baz=322,slow=36						
FINES	FINESS Array B	28.61	58	P	P	02 36 30.0	-0.1
	1.3nm,0.9s,baz=296,slow=11,SNR=1.9						
SADO	Sadowa	31.61	266	LR	LR	02 48 29.0	
	comp=Z,46nm,19.2s,baz=104,slow=34						
YKA	Yellowknife Ar	38.65	312	P	P	02 37 56.9	-0.3
	0.8nm,0.8s,baz=57,slow=9.6,SNR=2.8						
ILAR	Eielson Array	48.07	329	P	P	02 39 13.2	+0.1
	1.2nm,1.0s,baz=28,slow=6.8,SNR=8.6						
PDAR	Pinedale Array	48.97	288	P	P	02 39 20.5	-0.3
	0.4nm,0.7s,baz=64,slow=7.1,SNR=2.5						
DBIC	Dimbokro	55.33	147	LR	LR	03 00 24.9	
	comp=Z,33nm,18.6s,baz=94,slow=32						
MKAR	Makanchi Array	62.29	45	P	P	02 40 56.1	0.0
	0.5nm,0.6s,baz=332,slow=6.7,SNR=5.1						

*ISCJB **27** 02:44:23.9±0.6,38°.30N±0°.05×42°.76E±0°.04,h7km±7km,*
Error ellipse: s-maj=8.1km s-min=4.7km az=14.6
*ISK **27** 02:44:23.3,38°.31N×42°.77E,h4km,ML2.2/6*
*DDA **27** 02:44:23.1,38°.24N×42°.74E,h7km±3km,ML2.5*
ISC 27 02:44:23.7±1.0,38°.30N±0°.04×42°.77E±0°.03,h13km±9km,
n13,σ0°92/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.17	79	PG	Pg	02 44 27.1	-0.8
AKDM				SG	Sg	02 44 30.6	-0.1
GEVA	Gevas	0.23	86	*i* P	Pg	02 44 28.8	0.0
GEVA				*i* S	Sg	02 44 33.8	+1.6
BLIS	Bitlis-Merkez	0.53	283	*i* P	Pb	02 44 34.8	-0.1
BLIS				*i* S	Sb	02 44 41.8	-0.7
TVAN	Van	0.55	65	*i* P	Pg	02 44 32.5	-2.1
VANB	Van	0.57	58	PG	Pg	02 44 34.6	-0.4
VANB				SG	Sg	02 44 42.6	0.0
MLAZ	Malazgirt-MUS	0.86	349	PG	Pg	02 44 40.2	-0.2
MLAZ				SG	Sb	02 44 52.5	+0.4
VMUR	Van-Muradiye	0.94	42	*eP*	Pn	02 44 44.0	+1.3
VMUR				IAML_P			
	comp=Z,93nm,0.1s						
HAKT	HAKKARI	1.05	134	*i* P	Pg	02 44 43.2	-0.8
HAKT				IAML_P			
	comp=Z,314nm,0.2s						
MUSM	Mu-Merkez	1.07	294	*i* P	Pg	02 44 44.1	-0.3
MUSM				*i* S	Sg	02 44 57.5	-1.0
MUSM				IAML_P			
	comp=Z,481nm,0.1s						
TUTA	Tutak	1.10	2	*i* P	Pn	02 44 45.8	+0.7
CUKT	Cukurca	1.24	147	PN	Pg	02 44 47.5	-0.1
SVAN	Silvan-Diyarba	1.24	264	PN	Pg	02 44 48.0	+0.4
MAZI	Mazidag	2.02	246	PN	Pb	02 44 59.6	-0.7

*BJI **27** 02:45:32.4±0.0,47°.80N×120°.70W,h9km,mb4.8/5,*
mB5.1/3
*ISCJB **27** 02:45:34.4±0.4,47°.84N±0°.01×120°.63W±0°.01,h9km±2km,*
mb4.0/18,MS3.0/1,Error ellipse: s-maj=2.2km
s-min=1.4km az=26.3
*IDC **27** 02:45:34.3±0.6,47°.93N×120°.74W,h0km,mb3.7/9,*
mb1 3.9/14,mb1mx3.8/44,mbtmp3.7/14,ML3.4/5,MS2.7/5,
Ms1 2.8/5,ms1mx2.5/55,Error ellipse: s-maj=9.4km
s-min=7.9km az=148.0
*NEIC **27** 02:45:35.9±0.0,47°.82N×120°.69W,h9km,mb4.0/15,*
MW3.8,ML4.3(SEA),MW4.1(OTT),Moment Tensor
Solution. s19 Moment tensor: Scale 10^14^Nm; M_{rr}1.03;
$M_{\theta\theta}$-4.51; $M_{\phi\phi}$3.48; $M_{r\theta}$3.46; $M_{\theta\phi}$1.29; $M_{\phi r}$1.16; Best
double couple: $M_0$5.60000×10^14^ NP1:ϕ_s325.00000°,
δ48.00000°,λ174.00000°. NP2:ϕ_s59.00000°,δ86.00000°,
λ42.00000°. Principal axes: T 4.7600, Plg32.0000°,
Azm291.0000°; N 1.4500, Plg47.0000°, Azm64.0000°; P
-6.2100, Plg25.0000°, Azm184.0000°; After SEA.
NEIC Felt [IV] at Entiat and Leavenworth; [III] at Cashmere,
Chelan, Cle Elum, East Wenatchee, Manson, North Bend,
Okanogan, Orondo, Peshastin, Snoqualmie and
Wenatchee; [II] at Brewster, Fall City, Issaquah, Maple
Valley, Moses Lake and Twisp. Felt in many parts of
north-central Washington.
*ANF **27** 02:45:35.4±0.5,47°.92N×120°.70W,h13km±3km,ML4.4/18*
Error ellipse: s-maj=4.9km s-min=3.4km az=167.0
*SEA **27** 02:45:35.5,47°.82N×120°.69W,h9km,ML4.0/32,ML4.0,*
Washington
ISC 27 02:45:34.4±1.0,47°.86N±0°.02×120°.72W±0°.02,h4km±7km,
n279,σ1°66/398,mb4.0/18,Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C06D	Leavenworth	0.13	299	P	Pg	02 45 38.5	+1.5
	baz=126,SNR=1000						
C06D				S	Sg	02 45 40.7	+1.9
	baz=126						
GPW	Glacier Peak	0.38	313	P	Pg	02 45 43.1	+1.3
GPW	Glacier Peak	0.38	313	P	Pg	02 45 43.1	+1.3
LTY	Liberty	0.60	177	*e*Pg	Pg	02 45 45.2	-0.7
LTY				*e*Sg	Sg	02 45 53.3	-0.4
LTY	Liberty	0.60	177	P	Pg	02 45 45.7	-0.2
LTY				S	Sg	02 45 53.2	-0.6
LTY	Liberty	0.60	177	P	Pg	02 45 45.7	-0.2
LTY				S	Sg	02 45 53.2	-0.6
C05A	Tolt Reservoir	0.67	256	P	Pg	02 45 47.3	+0.1
C05A				S	Sg	02 45 56.1	+0.1
C05A	Tolt Reservoir	0.67	256	P	Pg	02 45 47.3	+0.1
C05A				S	Sg	02 45 56.1	+0.1
RPW	Rockport	0.79	318	P	Pb	02 45 50.4	-0.3
RPW	Rockport	0.79	318	P	Pb	02 45 50.4	-0.3
B06A	Marblemount	0.83	323	*e*Pg	Pb	02 45 51.1	-0.2
B06A				*e*Sg	Sg	02 45 58.3	-2.9
B06A	Marblemount	0.83	323	P	Pb	02 45 51.1	-0.2
B06A				S	Sb	02 46 02.6	-0.3
B06A	Marblemount	0.83	323	P	Pb	02 45 51.1	-0.2
B06A				S	Sb	02 46 02.6	-0.3
JCW	Jim Creek	0.88	293	P	Pg	02 45 51.5	+0.3
JCW	Jim Creek	0.88	293	P	Pg	02 45 51.5	+0.3
B05A	Bryant	1.01	294	P	Pb	02 45 53.9	-0.5
	baz=114,SNR=432						
B05A				S	Sb	02 46 07.0	-0.9
	baz=114						
D05A	Enumclaw	1.09	232	*e*Pg	Pb	02 45 55.0	-0.7
D05A				*e*Sg	Sb	02 46 08.4	-1.8
D05A	Enumclaw	1.09	232	P	Pb	02 45 55.2	-0.6
D05A				S	Sb	02 46 08.8	-1.5
D05A	Enumclaw	1.09	232	P	Pb	02 45 55.2	-0.6
D05A				S	Sb	02 46 08.8	-1.5
FMW	Mount Fremont	1.13	215	P	Pb	02 45 55.0	-1.5
FMW	Mount Fremont	1.13	215	P	Pb	02 45 55.0	-1.5
MBW	Mount Baker	1.22	320	P	Pb	02 45 57.6	-0.4
MBW	Mount Baker	1.22	320	P	Pb	02 45 57.6	-0.4
LON	Longmire	1.33	214	*e*Pn	Pn	02 45 58.4	-1.4
LON				*e*Sg	Sn	02 46 14.6	-3.4
LON	Longmire	1.33	214	P	Pn	02 45 58.5	-1.3
LON				S	Sn	02 46 15.0	-3.0
LON	Longmire	1.33	214	P	Pn	02 45 58.5	-1.3
LON				S	Sn	02 46 15.0	-3.0
SVOH	Skagit Valley	1.35	289	P	Pb	02 46 00.4	+0.2
SVOH	Skagit Valley	1.35	289	P	Pb	02 46 00.4	+0.2
GNW	Green Mountain	1.45	259	P	Pn	02 46 00.7	-0.6
GNW				S	Sn	02 46 19.7	-1.0
GNW	Green Mountain	1.45	259	P	Pn	02 46 00.7	-0.6
GNW				S	Sn	02 46 19.7	-1.0
D08A	Wollman Farm,	1.46	123	*e*Pn	Pn	02 46 00.2	-1.2
D08A				*e*Sn	Sn	02 46 19.8	-1.2
VDB	Vedder Mountai	1.49	322	P	Pb	02 46 02.7	+0.2
VDB	Vedder Mountai	1.49	322	P	Pb	02 46 02.7	+0.2
BLN	Blyn Mountain	1.52	276	P	Pn	02 46 02.0	-0.4
BLN	Blyn Mountain	1.52	276	P	Pn	02 46 02.0	-0.4
D04E	Lakebay	1.55	245	P	Pn	02 46 03.4	+0.7
	baz=65,SNR=323						
D04E				Sb	Sb	02 46 25.1	+1.7
	baz=65						
A04D	Lummi Island	1.58	304	P	Pb	02 46 04.1	0.0
	baz=123,SNR=179						
HOPB	Hope	1.60	343	P	Pb	02 46 04.3	-0.1
HOPB				S	Sg	02 46 25.1	-0.6
HOPB	Hope	1.60	343	P	Pb	02 46 04.3	-0.1
HOPB				S	Sg	02 46 25.1	-0.6
MCW	Mount Constitu	1.63	301	P	Pb	02 46 04.7	-0.3
MCW				S	Sg	02 46 27.2	+0.5
MCW	Mount Constitu	1.63	301	P	Pb	02 46 04.7	-0.3
MCW				S	Sg	02 46 27.2	+0.5
D03D	Eldon	1.63	259	P	Pn	02 46 03.6	-0.2
	baz=79,SNR=1000						
D03D				S	Sn	02 46 24.6	-0.6
	baz=79						
PNT	Penticton	1.63	26	P	Pb	02 46 04.7	-0.3
PNT				Sg	Sg	02 46 27.2	+0.4
PNT	Penticton	1.63	26	P	Pb	02 46 04.7	-0.3
PNT				Sg	Sg	02 46 27.2	+0.4
C09A	Chrisman Ranch	1.65	91	*e*Pn	Pn	02 46 03.6	-0.5
C09A				*e*Sn	Sn	02 46 24.5	-1.3
C09A	Chrisman Ranch	1.65	91	P	Pn	02 46 03.7	-0.4
C09A				S	Sn	02 46 22.7	-3.1
C09A	Chrisman Ranch	1.65	91	P	Pn	02 46 03.7	-0.4
C09A				S	Sn	02 46 22.7	-3.1
HAWA	Hanford	1.68	151	*e*Pn	Pn	02 46 03.7	-0.8
HAWA				*e*Sn	Sn	02 46 25.7	-0.6
E08A	Dider Farm, El	1.78	140	*e*Pn	Pn	02 46 04.6	-1.2
E08A				*e*Sn	Sn	02 46 25.9	-3.0
E04D	Cinebar	1.81	225	P	Pn	02 46 06.9	+0.6
	baz=44,SNR=326						
E04D				S	Sn	02 46 30.5	+0.8
	baz=44						
VGZ	Gonzales	1.83	289	P	Pn	02 46 06.7	+0.2
VGZ				S	Sb	02 46 30.5	-1.0
VGZ	Gonzales	1.83	289	P	Pn	02 46 06.7	+0.2
VGZ				S	Sb	02 46 30.5	-1.0
SMW	South Mountain	1.85	254	P	Pn	02 46 07.5	+0.6
SMW	South Mountain	1.85	254	P	Pn	02 46 07.5	+0.6
CPW	Capitol Peak	1.86	243	P	Pn	02 46 07.8	+0.8
CPW				S	Sn	02 46 32.2	+1.2
CPW	Capitol Peak	1.86	243	P	Pn	02 46 07.8	+0.8
CPW				S	Sn	02 46 32.2	+1.2
SNB	Saturna Island	1.87	300	P	Pb	02 46 08.6	-0.6
SNB				S	Sb	02 46 32.9	0.0
SNB	Saturna Island	1.87	300	P	Pb	02 46 08.6	-0.6
SNB				S	Sb	02 46 32.9	0.0
PA05	PA05 Willingdo	1.98	295	P	Pn	02 46 09.6	+1.0
PA05				S	Sb	02 46 35.8	-0.2
PA05	PA05 Willingdo	1.98	295	P	Pn	02 46 09.6	+1.0
PA05				S	Sb	02 46 35.8	-0.2
PA03	PA03 Flamable	1.98	295	P	Pn	02 46 09.6	+1.0
PA03				S	Sb	02 46 35.2	-0.8
PA03	PA03 Flamable	1.98	295	P	Pn	02 46 09.6	+1.0
PA03				S	Sb	02 46 35.2	-0.8
PA04	PA04 Cage	1.98	295	P	Pn	02 46 09.4	+0.8
PA04				S	Sb	02 46 34.9	-1.1
PA04	PA04 Cage	1.98	295	P	Pn	02 46 09.4	+0.8
PA04				S	Sb	02 46 34.9	-1.1
B011	North Saanich	1.99	294	P	Pn	02 46 09.6	+0.9
B011				S	Sb	02 46 34.6	-1.4
B011	North Saanich	1.99	294	P	Pn	02 46 09.6	+0.9
B011				S	Sb	02 46 34.6	-1.4
PA02	PA02 Ocean	1.99	295	P	Pn	02 46 09.4	+0.7
PA02				S	Sb	02 46 35.4	-0.6
PA02	PA02 Ocean	1.99	295	P	Pn	02 46 09.4	+0.7
PA02				S	Sb	02 46 35.4	-0.6
PA12	PA12 Sannich	1.99	294	P	Pn	02 46 09.5	+0.8
PA12				S	Sb	02 46 35.3	-0.7
PA12	PA12 Sannich	1.99	294	P	Pn	02 46 09.5	+0.8
PA12				S	Sb	02 46 35.3	-0.7
B009	North Saanich	1.99	294	P	Pb	02 46 10.1	-0.9
B009				S	Sb	02 46 35.2	-0.9
B009	North Saanich	1.99	294	P	Pb	02 46 10.1	-0.9
B009				S	Sb	02 46 35.2	-0.9
B010	North Saanich	1.99	294	P	Pn	02 46 09.3	+0.6
B010				S	Sb	02 46 34.8	-1.3
B010	North Saanich	1.99	294	P	Pn	02 46 09.3	+0.6
B010				S	Sb	02 46 34.8	-1.3
PGC	Sidney	1.99	294	*e*Pn	Pn	02 46 07.6	-1.1
PGC				*e*Pg	Pb	02 46 08.9	-2.1
PGC				*e*Sn	Sn	02 46 31.8	-2.2
PGC	Sidney	1.99	294	P	Pn	02 46 09.3	+0.6
PGC				S	Sb	02 46 34.6	-1.5
PGC	Sidney	1.99	294	P	Pn	02 46 09.3	+0.6
PGC				S	Sb	02 46 34.6	-1.5
F05D	White Salmon	2.04	195	P	Pn	02 46 10.2	+0.8
	baz=15,SNR=208						
F05D				Sb	Sb	02 46 39.5	+1.9
	baz=15						
F07A	Phinny Hill Vi	2.04	164	*e*Pn	Pn	02 46 09.5	+0.1
F07A				*e*Sn	Sn	02 46 35.6	+0.3
GOBB	Galiano Island	2.15	301	P	Pn	02 46 12.3	+1.3
GOBB				S	Sb	02 46 40.8	-0.2
GOBB	Galiano Island	2.15	301	P	Pn	02 46 12.3	+1.3
GOBB				S	Sb	02 46 40.8	-0.2
NLWA	Neilton Lookou	2.18	259	*e*Pn	Pn	02 46 12.3	+0.9
NLWA				*e*Sn	Sn	02 46 35.6	-3.2
WISH	Wishkah	2.20	251	P	Pn	02 46 12.9	+1.4
WISH				S	Sn	02 46 39.0	-0.1
WISH	Wishkah	2.20	251	P	Pn	02 46 12.9	+1.4
WISH				S	Sn	02 46 39.0	-0.1
LZB	Mount Lazard	2.21	291	P	Pn	02 46 12.8	+1.0
LZB				S	Sb	02 46 41.7	-0.8
LZB	Mount Lazard	2.21	291	P	Pn	02 46 12.8	+1.0
LZB				S	Sb	02 46 41.7	-0.8
E09A	Wood Farm, Sta	2.21	126	*e*Pn	Pn	02 46 12.0	+0.2
E09A				*e*Sn	Sn	02 46 38.6	-1.0
OBC	Olympics--Boni	2.26	276	P	Pn	02 46 14.0	+1.4
OBC	Olympics--Boni	2.26	276	P	Pn	02 46 14.0	+1.4
F04D	Rainier, OR	2.37	222	P	Pn	02 46 15.0	+1.1
	baz=42,SNR=35						
F04D				Sb	Sb	02 46 47.7	+0.6
	baz=42						
NEW	Newport	2.45	79	Pn	Pn	02 46 14.9	-0.2
	217nm,0.3s,baz=256,slow=12,SNR=987						
NEW				Sn	Sn	02 46 45.1	-0.4
	88nm,0.3s,baz=110,slow=17,SNR=4.5						
NEW				Lg	Lg	02 46 52.1	
	160nm,0.3s,baz=32,slow=21,SNR=9.0						
NEW				LR	LR	02 46 52.5	
	comp=Z,38nm,20.9s,baz=288,slow=32						
NEW	Newport	2.45	79	*e*Pn	Pn	02 46 14.9	-0.2
NEW				*e*Sn	Sn	02 46 43.7	-1.8
NEW	Newport	2.45	79	P	Pn	02 46 14.9	-0.2
	baz=261						
NEW				S	Sn	02 46 43.9	-1.6
	baz=261						
B926	Mesachie Lake	2.47	294	P	Pn	02 46 16.9	+1.5
B926				S	Sb	02 46 48.0	-1.9
B926	Mesachie Lake	2.47	294	P	Pn	02 46 16.9	+1.5
B926				S	Sb	02 46 48.0	-1.9
NLLB	Nanaimo Lost L	2.57	303	P	Pn	02 46 18.0	+1.3
NLLB				S	Sb	02 46 50.6	-2.1
NLLB	Nanaimo Lost L	2.57	303	P	Pn	02 46 18.0	+1.3
NLLB				S	Sb	02 46 50.6	-2.1
YOUB	Youbou, Lake C	2.58	295	P	Pn	02 46 18.6	+1.7
YOUB				S	Sb	02 46 51.2	-2.0
YOUB	Youbou, Lake C	2.58	295	P	Pn	02 46 18.6	+1.7
YOUB				S	Sb	02 46 51.2	-2.0
PFB	Port Renfrew	2.59	287	P	Pn	02 46 18.4	+1.5
PFB				S	Sn	02 46 49.8	+1.0
PFB	Port Renfrew	2.59	287	P	Pn	02 46 18.4	+1.5
PFB				S	Sn	02 46 49.8	+1.0
G06A	Carlson Farm,	2.62	179	*e*Pn	Pn	02 46 17.5	0.0
G06A				*e*Sn	Sn	02 46 48.7	-1.1
G05D	Wamic, OR	2.65	189	P	Pn	02 46 19.0	+1.2
	baz=9.3,SNR=190						
G05D				S	Sn	02 46 49.3	-1.1
	baz=9.3						
OCP	Olym-Cheeka Pk	2.65	281	P	Pn	02 46 19.9	+2.0
OCP	Olym-Cheeka Pk	2.65	281	P	Pn	02 46 19.9	+2.0
WSLR	Whistler	2.69	328	P	Pb	02 46 22.9	-0.2
WSLR	Whistler	2.69	328	P	Pb	02 46 22.9	-0.2
SHB	Sechelt	2.72	311	P	Pn	02 46 20.9	+2.1
SHB				S	Sb	02 46 54.2	-3.1
SHB	Sechelt	2.72	311	P	Pn	02 46 20.9	+2.1
SHB				S	Sb	02 46 54.2	-3.1
GHNB	Nanoose	2.75	303	P	Pn	02 46 21.1	+2.0
GHNB				S	Sb	02 46 55.6	-2.3
GHNB	Nanoose	2.75	303	P	Pn	02 46 21.1	+2.0
GHNB				S	Sb	02 46 55.6	-2.3
G08A	Pilot Rock	2.84	154	*e*Pn	Pn	02 46 21.4	+0.8
G08A				*e*Sn	Sn	02 46 53.8	-1.5
LLLB	Lillooet	2.86	345	*e*Pn	Pn	02 46 21.9	+1.2
LLLB				*e*Sn	Sn	02 46 52.4	-3.1
LLLB	Lillooet	2.86	345	P	Pn	02 46 22.0	+1.3
LLLB				Sg	Sg	02 47 04.2	-1.9
LLLB	Lillooet	2.86	345	P	Pn	02 46 22.0	+1.3
LLLB				Sg	Sg	02 47 04.2	-1.9
MGB	Mount Grey	2.88	295	P	Pn	02 46 23.6	+2.5
MGB				S	Sb	02 46 58.9	-3.0
MGB	Mount Grey	2.88	295	P	Pn	02 46 23.6	+2.5
MGB				S	Sb	02 46 58.9	-3.0
B927	Port Alberni	3.04	298	P	Pn	02 46 25.9	+2.8
B927				S	Sb	02 47 04.6	-1.7
B927	Port Alberni	3.04	298	P	Pn	02 46 25.9	+2.8
B927				S	Sb	02 47 04.6	-1.7
F10A	Beach Ranch, E	3.05	127	*e*Pn	Pn	02 46 23.5	+0.1
F10A				*e*Sn	Sn	02 46 59.1	-1.2
TXB	Texada	3.07	308	P	Pn	02 46 25.9	+2.3
TXB	Texada	3.07	308	P	Pn	02 46 25.9	+2.3
B928	Bamfield	3.10	290	P	Pb	02 46 27.4	-2.6
B928				S	Sb	02 47 05.5	-2.5
B928	Bamfield	3.10	290	P	Pb	02 46 27.4	-2.6
B928				S	Sb	02 47 05.5	-2.5
G03D	McMinnville, O	3.18	214	P	Pn	02 46 26.6	+1.6
	baz=33,SNR=106						
H04A	Detroit Lake	3.33	198	*e*Pn	Pn	02 46 29.1	+1.8
H04A				*e*Sn	Sn	02 47 06.7	-0.6
OZB	Mount Ozzard	3.36	291	P	Pb	02 46 33.4	-1.1
OZB				Sg	Sb	02 47 15.8	+0.1
OZB	Mount Ozzard	3.36	291	P	Pb	02 46 33.4	-1.1
OZB				Sg	Sb	02 47 15.8	+0.1
B012	Ucluelet	3.38	290	P	Pb	02 46 32.7	-2.1
B012	Ucluelet	3.38	290	P	Pb	02 46 32.7	-2.1
I05D	Terrebonne, OR	3.55	187	P	Pn	02 46 31.5	+1.3
	baz=7.1,SNR=49						
BTB	Buttle Lake	3.56	299	P	Pb	02 46 34.8	-3.3
BTB				Sg	Sb	02 47 22.0	+0.3
BTB	Buttle Lake	3.56	299	P	Pb	02 46 34.8	-3.3
BTB				Sg	Sb	02 47 22.0	+0.3
H04D	Lebanon	3.62	203	P	Pn	02 46 32.9	+1.7
	baz=22,SNR=44						
TOFB	Tofino	3.68	293	P	Pn	02 46 34.5	+2.5
TOFB	Tofino	3.68	293	P	Pn	02 46 34.5	+2.5
SLEB	Sale Mountain	3.72	26	P	Pn	02 46 34.9	+2.2
SLEB				Sg	Sg	02 47 32.6	-1.1
SLEB	Sale Mountain	3.72	26	P	Pn	02 46 34.9	+2.2
SLEB				Sg	Sg	02 47 32.6	-1.1
COR	Corvallis	3.73	210	*e*Pn	Pn	02 46 35.9	+3.3
COR				*e*Sn	Sn	02 47 16.2	-0.8
CBB	Campbell River	3.75	307	P	Pn	02 46 35.9	+2.9
CBB	Campbell River	3.75	307	P	Pn	02 46 35.9	+2.9
BMO	Blue Mountains	3.83	141	*e*Pn	Pn	02 46 34.2	+0.1
BMO				*e*Sn	Sn	02 47 17.4	-2.1
BHMT	Big Hole Peak	3.85	92	P	Pn	02 46 34.0	-0.4
BHMT	Big Hole Peak	3.85	92	P	Pn	02 46

SLMT	Seeley Lake	4.93	95	P	Pn	02 46 48.5 -0.9
K05A	Summer Lake	5.13	181	ePn	Pn	02 46 54.6 +2.5
BPMT	Black Pine Rid	5.16	103	P	Pn	02 46 51.9 -0.7
BPMT	Black Pine Rid	5.16	103	P	Pn	02 46 51.9 -0.7
J01E	Myrtle Point	5.21	207	P	Pn	02 46 55.2 +2.3
	baz=25					
PHC	Port Hardy	5.24	305	P	Pn	02 46 55.6 +2.4
PHC	Port Hardy	5.24	305	P	Pn	02 46 55.6 +2.4
OVMT	Ovando	5.30	96	P	Pn	02 46 53.4 -1.0
OVMT	Ovando	5.30	96	P	Pn	02 46 53.4 -1.0
UBRB	Upper Baezaeko	5.48	338	P	Pn	02 46 58.5 +1.7
UBRB				Sg	Sg	02 48 25.9 -4.2
UBRB	Upper Baezaeko	5.48	338	P	Pn	02 46 58.5 +1.7
UBRB				Sg	Sg	02 48 25.9 -4.2
HUMO	Hull Mountain	5.48	198	ePn	Pn	02 47 00.5 +3.7
K02D	Willamette Mer	5.56	203	P	Pn	02 46 59.9 +1.9
	baz=21					
WVOR	Wild Horse Val	5.62	164	ePn	Pn	02 47 04.4 +5.6
L04D	Klamath Falls	5.75	192	P	Pn	02 47 03.7 +3.2
	baz=11					
ELMT	Elliston	5.76	100	P	Pn	02 47 00.1 -0.7
ELMT	Elliston	5.76	100	P	Pn	02 47 00.1 -0.7
LYMT	Lyon Mountain	5.79	96	P	Pn	02 47 00.3 -0.9
LYMT	Lyon Mountain	5.79	96	P	Pn	02 47 00.3 -0.9
HBMT	Mount Humbug	5.94	107	P	Pn	02 47 03.3 +0.1
HBMT	Mount Humbug	5.94	107	P	Pn	02 47 03.3 +0.1
MOD	Modoc Plateau	5.96	177	ePn	Pn	02 47 09.3 +5.8
LRM	Limekiln Ridge	6.03	107	ePn	Pn	02 47 04.7 +0.3
LRM	Limekiln Ridge	6.03	107	P	Pn	02 47 04.3 -0.2
LRM	Limekiln Ridge	6.03	107	P	Pn	02 47 04.3 -0.2
L02E	Cave Junction	6.05	201	P	Pn	02 47 06.8 +2.2
	baz=19					
DLMT	Dillon	6.13	111	ePn	Pn	02 47 06.1 +0.3
DLMT				eSn	Sn	02 48 16.1 -0.3
HRY	Holter Researc	6.16	97	ePn	Pn	02 47 05.6 -0.5
HRY				eSn	Sn	02 48 16.5 -0.5
HRY	Holter Researc	6.16	97	P	Pn	02 47 05.5 -0.7
HRY	Holter Researc	6.16	97	P	Pn	02 47 05.5 -0.7
HLID	Hailey	6.16	132	ePn	Pn	02 47 07.0 +0.7
HLID				eSn	Sn	02 48 13.5 -3.6
HLID	Hailey	6.16	132	P	Pn	02 47 06.5 +0.3
	baz=316					
HLID				S	Sn	02 48 15.2 -1.9
	baz=316					
MCMT	McKenzie Canyo	6.24	116	ePn	Pn	02 47 07.6 +0.3
YBH	Yreka Blue Hor	6.29	194	Pn	Pn	02 47 11.9 +4.0
	0.8nm,0.3s,baz=15,slow=9.1,SNR=15					
YBH				Sn	Sb	02 48 37.7 -2.2
	baz=13,slow=9.1,SNR=1.4					
YBH				Lg	Lg	02 48 52.6
	0.2nm,0.3s,baz=254,slow=22,SNR=1.5					
YBH				LR	LR	02 49 27.3
	comp=Z,95nm,21.1s,baz=3.5,slow=37					
YBH	Yreka Blue Hor	6.29	194	ePn	Pn	02 47 12.0 +4.2
BBB	Bella Bella	6.43	315	Pn	Pn	02 47 16.1 +6.4
	0.3nm,0.3s,baz=124,slow=15,SNR=2.4					
BBB				Lg	Lg	02 48 50.6
	1.6nm,0.3s,baz=217,slow=19,SNR=2.1					
BOZ	Bozeman (W)	6.65	107	ePn	Pn	02 47 12.7 -0.2
BOZ				eSn	Sn	02 48 24.6 -4.4
BOZ	Bozeman (W)	6.65	107	P	Pn	02 47 12.5 -0.4
	baz=293					
BOZ				S	Sn	02 48 25.2 -3.9
	baz=293					
FSB	Fort Saint Jam	7.00	342	P	Pn	02 47 20.8 +3.2
FSB	Fort Saint Jam	7.00	342	P	Pn	02 47 20.8 +3.2
TPMT	Tepee Creek	7.01	113	P	Pn	02 47 19.0 +1.1
TPMT	Tepee Creek	7.01	113	P	Pn	02 47 19.0 +1.1
QLMT	Earthquake Lak	7.11	112	ePn	Pn	02 47 19.5 +0.3
QLMT	Earthquake Lak	7.11	112	P	Pn	02 47 19.7 +0.4
QLMT	Earthquake Lak	7.11	112	P	Pn	02 47 19.7 +0.4
YHB	Horse Butte	7.29	112	ePn	Pn	02 47 22.8 +1.0
EGMT	Eagleton	7.37	85	ePn	Pn	02 47 22.5 -0.3
EGMT	Eagleton	7.37	85	P	Pn	02 47 22.4 -0.3
	baz=272					
YMR	Madison River	7.48	112	ePn	Pn	02 47 25.7 +1.3
YMR				eSn	Sn	02 48 51.1 +1.5
YHH	Holmes Hill	7.49	111	ePn	Pn	02 47 25.3 +0.7
YFT	Old Faithful	7.66	113	ePn	Pn	02 47 24.8 -2.1
YFT				eSn	Sn	02 48 52.5 -1.8
YPP	Pitchstone Pla	7.77	114	ePn	Pn	02 47 30.4 +2.0
YPP				eSn	Sn	02 48 55.2 -1.8
H17A	Grant Village	7.85	112	ePn	Pn	02 47 32.3 +2.8
GCMT	Greycliff	7.86	101	ePn	Pn	02 47 30.3 +0.8
IMW	Indian Meadow	7.89	117	ePn	Pn	02 47 31.9 +1.8
FLWY	Flagg Ranch	7.94	115	ePn	Pn	02 47 32.7 +2.1
FXWY	Fox Creek	7.99	118	ePn	Pn	02 47 33.6 +2.3
FXWY				eSn	Sn	02 48 57.2 -4.9
BEKR	Beckworth	7.99	178	ePn	Pn	02 47 36.9 +5.5
MOOW	Moose Ponds	8.09	117	ePn	Pn	02 47 36.7 +3.9
TPAW	Teton Pass	8.12	119	ePn	Pn	02 47 35.9 +2.8
ELK	Elko	8.12	149	Pn	Pn	02 47 36.5 +3.3
	0.1nm,0.3s,baz=316,slow=12,SNR=6.3					
ELK				Lg	Lg	02 49 49.0
	0.3nm,0.3s,baz=171,slow=23,SNR=3.2					
ELK				LR	LR	02 51 10.9
	comp=Z,62nm,19.3s,baz=336,slow=41					
ELK	Elko	8.12	149	ePn	Pn	02 47 37.7 +4.5
BMBC	Bull Mountain	8.24	354	Sg	Sg	02 49 49.0 -10
BMBC	Bull Mountain	8.24	354	Sg	Sg	02 49 49.0 -10
LOHW	Long Hollow	8.25	117	ePn	Pn	02 47 38.0 +3.1
RLMT	Red Lodge	8.37	105	ePn	Pn	02 47 38.0 +1.5
RLMT				eSn	Sn	02 49 08.1 -3.3
RLMT	Red Lodge	8.37	105	P	Pn	02 47 37.3 +0.8
	baz=293					
RLMT				S	Sn	02 49 09.2 -2.3
	baz=293					
KVN	Kaiserville	9.01	167	ePn	Pn	02 47 50.6 +5.4
PDAR	Pinedale Array	9.37	119	Pn	Pn	02 47 54.2 +4.0
	0.1nm,0.3s,baz=315,slow=10,SNR=8.6					
PDAR				Lg	Lg	02 50 24.7
	0.3nm,0.3s,baz=299,slow=29,SNR=3.7					
DUG	Dugway, Tooele	9.54	141	P	Pn	02 47 55.2 +2.6
	baz=326					
NV01	Mina Array Sit	9.59	169	ePn	Pn	02 47 57.9 +4.6
NVAR	Mina Array Bea	9.59	169	Pn	Pn	02 47 57.9 +4.6
	0.8nm,0.3s,baz=350,slow=13,SNR=17					
NVAR				Lg	Lg	02 50 45.4
	0.1nm,0.3s,baz=331,slow=31,SNR=2.5					
NVAR				LR	LR	02 52 07.9
	comp=Z,84nm,21.3s,baz=102,slow=41					
JLU	Jordanelle	9.84	134	ePn	Pn	02 47 56.6 -0.2
LAO	LASA Array	9.93	91	ePn	Pn	02 47 58.1 +0.4
DLBC	Dease Lake	11.96	336	Lg	Lg	02 51 45.4
	0.2nm,0.3s,baz=266,slow=20,SNR=1.7					
FFC	Flin Flon	13.57	53	ePn	Pn	02 48 45.6 -1.8
YKA	Yellowknife Ar	15.07	11	Pn	Pn	02 49 07.1 -0.6
	0.1nm,0.3s,baz=194,slow=12,SNR=3.1					
YKA				Lg	Lg	02 53 25.1
	0.1nm,0.3s,baz=193,slow=28,SNR=3.1					
ULM	Lac du Bonnet	16.44	72	Pn	P	02 49 30.5 +2.0
	0.4nm,0.3s,baz=269,slow=10.0,SNR=1.9					
ULM				Lg	Lg	02 54 04.6
	0.5nm,0.3s,baz=206,slow=5.2,SNR=2.5					
AGMN	Agassiz Nation	16.60	79	ePn	Pn	02 49 25.1 -2.7
	8.9nm,0.8s					
ANMO	Albuquerque	16.73	135	Pn	Pn	02 49 30.8 +1.2
	0.0nm,0.3s,baz=338,slow=12,SNR=2.7					
ECSD	EROS Data Cent	17.29	95	ePn	Pn	02 49 32.1 -4.4
	3.0nm,1.0s					
WMOK	Wichita Mounta	20.97	121	eP	P	02 50 17.9 -0.4
	4.9nm,0.8s					
C40A	Isle Royale Na	21.10	78	eP	P	02 50 19.8 +0.1
	16nm,0.8s					
INK	Inuvik	21.50	347	P	P	02 50 24.4 +0.7
	1.5nm,0.9s,baz=140,slow=10,SNR=3.9					
INK	Inuvik	21.50	347	eP	P	02 50 24.4 +0.7
	2.7nm,0.9s					
L40A	Anamosa	21.59	95	eP	P	02 50 24.8 -0.1
	8.2nm,0.8s					
JFWS	Jewell Farm	21.89	92	eP	P	02 50 29.9 +1.8
	6.4nm,0.7s					
ILAR	Eielson Array	22.04	330	P	P	02 50 30.3 +0.8
	0.9nm,0.8s,baz=129,slow=9.8,SNR=11					
ILB	Eielson Array	22.04	330	eP	P	02 50 30.3 +0.8
	4.1nm,1.2s					
CCB	Clear Creek Bu	22.27	329	eP	P	02 50 34.4 +2.3
	3.9nm,0.9s					
TX31	Lajitas Ar. Si	22.71	138	eP	P	02 50 40.6 +3.5
	5.8nm,1.4s					
TXAR	Lajitas Array	22.71	138	P	P	02 50 38.6 +1.5
	1.1nm,1.0s,baz=338,slow=9.7,SNR=10.0					
MLY	Manley	23.53	328	eP	P	02 50 46.5 +1.3
	5.7nm,1.4s					
BLO	Bloomington	26.10	97	eP	P	02 51 09.9 +0.8
	6.3nm,0.4s					
SADO	Sadowa	28.64	81	LR	LR	03 04 04.6
	comp=Z,33nm,18.6s,baz=252,slow=39					
PEA1	Petropavlovsk-	49.51	308	eP	P	02 54 26.2 +0.6
PETK	Petropavlovsk-	49.52	308	P	P	02 54 26.2 +0.5
	1.1nm,0.7s,baz=70,slow=12,SNR=3.2					
FINES	FINESS Array B	67.82	17	P	P	02 56 32.9 0.0
	1.4nm,0.9s,baz=336,slow=3.0,SNR=2.8					
ESDC	Sonseca Array	76.35	45	P	P	02 57 24.5 0.0
	0.9nm,0.6s,baz=310,slow=5.4,SNR=5.7					
AKASG	Malin Array Be	78.47	19	P	P	02 57 36.1 0.0
	1.0nm,0.4s,baz=341,slow=4.7,SNR=2.0					
LPAZ	La Paz	79.23	129	P	P	02 57 41.9 +0.5
	0.5nm,0.7s,baz=356,slow=8.2,SNR=3.3					
HHC	Hu-ho-hao-te	80.26	322	P	P	02 57 45.5 -0.7
HHC				pmax	pmax	
	comp=Z,9.0nm,0.8s					
HHC				pmax	pmax	
	comp=Z,31nm,5.7s					
MKAR	Makanchi Array	83.61	344	P	P	02 58 03.8 +0.1
	0.6nm,0.7s,baz=350,slow=3.8,SNR=6.2					
WMQ	Urumqi	85.33	340	eP	P	02 58 15.0 +2.5
LZH	Lanzhou	87.43	325	eP	P	02 58 25.0 +2.0
LZH				pP	sP	02 58 28.5 +3.1
LZH				sP	pP	02 58 30.5 +5.7
LZH				pmax	pmax	
	comp=Z,24nm,1.0s					
KMI	Kunming	97.53	321	P	Pdif	02 59 10.0 -0.1

*IDC **27** 02:48:15.4±0.6,2°.46S×124°.94E, h0km, mb4.1/10, mb1 4.3/16, mb1mx4.1/39, mbtmp4.2/16, ML3.9/6, MS3.1/5, Ms1 3.1/5, ms1mx2.8/42, Error ellipse: s-maj=23.1km s-min=13.1km az=71.0*

*BJI **27** 02:48:17.9±0.0,2°.32S×124°.97E, h14km, mb4.8/8, mB5.2/5, Ms5.0/2, Ms7 4.7/1*

*ISCJB **27** 02:48:18.2±0.3,2°.52S±0°.04×124°.99E±0°.03, h33km, mb4.5/26, Error ellipse: s-maj=5.1km s-min=3.8km az=7.5*

*DJA **27** 02:48:18.2±1.1,2°.5±3°.3×12°.5E±°, h15km±9km, M4.3/15, mb4.7/8, mB4.7/5, MLv4.3/15, Mw(mB)4.0/5*

*NEIC **27** 02:48:19.6±2.9,2°.52S×124°.91E, h27km±5km, mb4.6/18, Error ellipse: s-maj=12.0km s-min=7.4km az=211.0*

ISC 27 02:48:20.2±0.4,2°.46S±0°.05×124°.98E±0°.04, h35km, n61, σ1§54/67, mb4.5/26, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	Sanana	1.09	68	P	Pn	02 48 36.4	-2.6
SANI				S	Sn	02 48 49.7	-3.2
NLAI	Namlea	2.25	110	P	Pn	02 48 54.7	-0.3
NLAI				S	Sn	02 49 20.0	-1.6
LUWI	Luwuk	2.62	303	ePn	Pn	02 48 59.7	-0.3
LUWI				eSn	Sn	02 49 26.1	-4.5
LUWI	Luwuk	2.62	303	P	Pn	02 48 59.6	-0.5
KDI	Kendari	2.78	238	P	Pn	02 48 59.5	-2.8
AAI	Ambon	3.43	111	P	Pn	02 49 13.6	+2.3
APSI	Ampana	3.67	295	P	Pn	02 49 14.6	+0.1
MSAI	Masohi	4.04	103	P	Pn	02 49 27.7	+8.1
TTSI	Tana Toraja	5.19	263	P	Pn	02 49 35.7	+0.3
SPSI	Sidrap Palu	5.41	254	P	Pn	02 49 37.2	-1.3
SPSI				S	Sn	02 50 39.6	0.0
BKSI	Bulukumba	5.62	239	P	Pn	02 49 42.0	+0.7
BSSI	Bau Bau, Buton	5.78	231	P	Pn	02 49 43.5	0.0
KAPI	Kappang	5.80	244	Pn	Pn	02 49 42.8	-1.0
	3.3nm,0.3s,baz=92,slow=7.5,SNR=9.5						
KAPI				Sn	Sn	02 50 46.2	-2.9
	1.6nm,0.3s,baz=277,slow=21,SNR=1.3						
KAPI				LR	LR	02 51 52.5	
	comp=Z,200nm,20.2s,baz=316,slow=38						
KAPI	Kappang	5.80	244	ePn	Pn	02 49 45.1	+1.3
SIJI	Sorong	6.48	76	Pn	Pn	02 49 52.9	-0.4
	3.8nm,0.3s,baz=97,slow=5.7,SNR=11						
SIJI				Sn	Sn	02 51 02.5	-3.5
	baz=233,slow=23,SNR=0.8						
EDFI	Ende, Flores	7.05	208	P	Pn	02 50 01.0	-0.1
	28nm,0.5s,0.2nm						
FAKI	Fak Fak	7.28	94	ePn	Pn	02 50 04.2	+0.1
FAKI				eSn	Sn	02 51 23.9	-1.7
SOEI	Soe	7.28	186	P	Pn	02 50 10.7	+6.4
BATI	Baumata	7.80	190	Pn	Pn	02 50 09.7	-1.7
	3.6nm,0.3s,baz=7.1,slow=10,SNR=2.2						
SAUI	Saumlaki	8.35	131	ePn	Pn	02 50 20.9	+2.1
FITZ	Fitzroy Crossi	15.55	178	Pn	Pn	02 51 56.5	-0.4
	0.1nm,0.3s,baz=347,slow=18,SNR=3.1						
JAY	Jayapura	15.71	91	Pn	Pn	02 51 59.4	+0.2
	0.5nm,0.3s,baz=278,slow=15,SNR=2.2						
JAY				LR	LR	02 59 12.6	
	comp=Z,55nm,20.4s,baz=178,slow=42						
WRAB	Tennant Creek	19.63	153	eP	P	02 52 46.0	+0.1
	16nm,0.8s						
WR1	Warramunga Arr	19.63	153	eP	P	02 52 46.1	+0.2
WRA	Warramunga Arr	19.63	153	P	P	02 52 46.1	+0.2
	0.5nm,0.3s,baz=329,slow=13,SNR=19						
WB2	Warramunga Arr	19.64	153	eP	Pn	02 52 46.9	-0.7
	18nm,0.9s						
COEN	Coen	21.30	123	eP	P	02 53 03.5	-0.6
	19nm,1.2s						
AS31	Alice Springs	22.78	158	eP	P	02 53 19.6	-0.3
	3.1nm,0.6s						
ASAR	Alice Springs	22.78	158	P	P	02 53 20.2	+0.3
	6.9nm,0.8s,baz=342,slow=11,SNR=59						
ASAR				LR	LR	03 02 06.7	
	comp=Z,92nm,19.0s,baz=348,slow=36						
GUMO	Guam	25.37	51	LR	LR	03 02 06.7	
	comp=Z,18nm,21.4s,baz=182,slow=33						
GUMO	Guam	25.37	51	eP	P	02 53 47.5	+3.1
	226nm,1.3s						
FORT	Forrest	28.31	174	eP	P	02 54 07.8	-2.9
	18nm,0.9s						
CMAR	Chiang Mai Arr	33.00	310	P	P	02 54 52.0	-0.3
	0.8nm,0.3s,baz=144,slow=7.8,SNR=2.7						
STKA	Stephens Creek	33.18	154	P	P	02 54 54.0	+0.3
	2.5nm,0.8s,baz=332,slow=10,SNR=5.8						
STKA				LR	LR	03 09 11.6	
	comp=Z,54nm,19.0s,baz=216,slow=38						
STKA	Stephens Creek	33.18	154	eP	P	02 54 54.0	+0.3
	0.9nm,1.0s						
CHTO	Chiang Mai	33.21	311	eP	P	02 54 52.0	-2.1
	9.2nm,1.5s						
KSRS	Korea Array	39.81	4	P	P	02 55 49.6	-0.4
	3.0nm,0.9s,baz=183,slow=11,SNR=2.2						
MJAR	Matsushiro Arr	40.72	16	P	P	02 55 57.5	-0.2
	0.6nm,0.4s,baz=182,slow=9.4,SNR=2.9						
MAJO	Matsushiro	40.72	16	eP	P	02 55 57.5	-0.2
ULN	Ulaanbaatar	52.52	345	eP	P	02 57 32.2	+2.1
	8.6nm,1.1s						
SONA0	Songino Array	52.66	344	eP	P	02 57 31.8	+0.6
SONM	Songino Array	52.66	344	P	P	02 57 31.8	+0.6
	3.8nm,0.9s,baz=160,slow=8.9,SNR=14						
BFZ	Birch Farm	59.79	137	eP	P	02 58 21.2	-0.9
	158nm,1.5s						
KSH	Kashi	61.32	318	P	P	02 58 35.3	+2.6
KSH				pP	pP	02 58 42.0	+0.1
KSH				S	S	03 06 51.5	+0.5
KSH				ScS	SKKSac	03 08 20.5	-1.1
KSH				pmax	pmax		
	comp=Z,18nm,0.8s						
KSH				LR	LR		
	comp=N,470nm,13.7s						
KSH				LR	LR		
	comp=E,270nm,8.9s						
MK31	Makanchi Array	61.73	328	eP	P	02 58 37.0	+1.8
	5.3nm,0.9s						
MK32	Makanchi Array	61.73	328	eP	P	02 58 36.1	+0.9
MKAR	Makanchi Array	61.73	328	P	P	02 58 36.1	+0.9
	4.9nm,0.8s,baz=129,slow=8.1,SNR=34						
MAKZ	Makanchi	61.91	328	eP	P	02 58 37.9	+1.5
	7.5nm,1.1s						
BOOM	Boomskoye usch	62.89	321	eP	P	02 58 45.5	+2.3
	4.4nm,1.0s						
KBL	Kabul	64.03	310	eP	P	02 58 50.1	-0.8
	14nm,0.8s						
GAR	Garm	64.94	315	eP	P	02 58 58.2	+1.5
	15nm,0.9s						
ZALV	Zalesovo Beam	65.36	335	P	P	02 58 59.6	+0.7
	3.0nm,0.8s,baz=123,slow=5.5,SNR=6.7						
ZAA1	Zalesovo Array	65.36	335	eP	P	02 58 59.6	+0.7
KURK	Kurchatov	66.08	330	eP	P	02 59 05.0	+1.3
	8.1nm,0.7s						
GEYT	Alibeck	73.48	311	P	P	02 59 50.0	+0.4
	2.7nm,0.9s,baz=108,slow=4.7,SNR=3.8						
TIXI	Tiksi	74.03	1	eP	P	02 59 52.9	+0.9
VNDA	Vanda	77.55	172	P	P	03 00 11.9	-0.1
	0.3nm,0.7s,baz=318,slow=6.6,SNR=2.2						
RAYN	Ar Rayn	81.34	294	eP	P	03 00 35.0	+1.2
	5.9nm,1.0s						
TORD	Torodi Ar. Bea	122.94	284	PKP	PKPdf	03 07 13.6	-0.2
	0.4nm,0.9s,baz=86,slow=1.9,SNR=2.4						
TOA1	Torodi Ar. Sit	122.94	284	ePKPdf	PKPdf	03 07 13.6	-0.2
LPAZ	La Paz	157.31	146	PKPab	PKPab	03 08 47.0	+1.7
	0.5nm,0.7s,baz=242,slow=6.5,SNR=1.8						

RSNC 27 02:54:46.4±0.7, 3°.79N×71°.34W, h6km±6km, ML3.4, Mw3.8, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUVC	San Jose del G	1.78	226	eP	Pn	02 55 15.8	-2.0
GUVC				eS	Sn	02 55 40.1	-0.7
GUVC				i		02 55 44.8	
	comp=Z,459nm,0.2s						
YOPC	Yopal, Colombi	1.90	325	eP	Pn	02 55 18.1	-1.3
YOPC				eS	Sn	02 55 43.0	-0.8
YOPC				i		02 55 47.1	
	comp=Z,413nm,0.3s						
VILC	Villavicencio,	2.37	278	eP	Pn	02 55 25.0	-1.0
VILC				eS	Sn	02 55 54.6	-1.0
VILC				i		02 56 02.8	
	comp=Z,246nm,0.3s						
CHIC	Chingaza	2.53	289	eP	Pn	02 55 27.1	-1.4
CHIC				eS	Sn	02 55 58.7	-1.2
CHIC				i		02 56 20.0	
	comp=Z,100nm,0.4s						
TAMC	Tame, Arauca	2.67	350	eP	Pn	02 55 28.4	-1.7
TAMC				eS	Sn	02 56 01.4	-1.5
TAMC				i		02 56 09.9	
	comp=Z,169nm,0.4s						
RUSC	La Rusia	2.72	320	eP	Pn	02 55 29.6	-1.5
RUSC				eS	Sn	02 56 00.7	-4.0
MACC	Macarena, Meta	2.99	237	ePg	Pb	02 55 37.5	-2.7
MACC				eSg	Sb	02 56 16.7	-0.3
MACC				i		02 56 28.8	
	comp=Z,124nm,0.4s						
BARC	Barichara	3.34	327	eP	Pb	02 55 43.2	-3.1
PRAC	Prado	3.54	269	eP	Pn	02 55 41.9	-0.2
PRAC				eSg	Sb	02 56 34.3	+1.4
PRAC				i		02 56 48.4	
	comp=Z,40nm,0.5s						
PAMC	Pamplona, Colo	3.78	339	eP	Pb	02 55 50.7	-3.3
ORTC	Ortega, Tolima	3.90	272	eP	Pn	02 55 46.3	-0.7
NORC	Norcasia	3.94	297	eP	Pn	02 55 47.9	+0.3
BRRC	Barranca, Sant	4.06	324	eP	Pn	02 55 47.4	-1.7
BRRC				eS	Sn	02 56 34.8	-2.3
RREF	El Recreo	4.15	286	eP	Pn	02 55 51.2	+0.3
GUY2C	Guyana, Caldas	4.26	290	eP	Pn	02 55 51.4	-0.9
FLOC	Florencia	4.83	243	ePg	Pb	02 56 08.5	-3.1
FLOC				eSg	Sb	02 57 12.3	+2.2
FLOC				i		02 57 24.7	
	comp=Z,48nm,0.4s						
PTLC	Puerto Leguiza	4.98	224	eS	Sg	02 57 25.9	-0.7
YOTC	Yotoco, Valle	5.00	272	eP	Pn	02 56 00.1	-2.1
SDV	Santo Domingo	5.12	8	ePg	Pb	02 56 13.9	-2.6

*ATH **27** 02:56:02.6, 40°.32N×25°.77E, h26km±1km, ML2.4/5, Error ellipse: s-maj=1.7km s-min=1.1km az=274.0*

*ISCJB **27** 02:56:02.7±0.3, 40°.30N±0°.02×25°.77E±0°.02, h5km±3km, Error ellipse: s-maj=3.3km s-min=2.2km az=139.6*

*ISK **27** 02:56:02.2, 40°.28N×25°.76E, h4km, ML2.7/18*

*DDA **27** 02:56:03.4, 40°.23N×25°.83E, h28km±1km, ML3.0*

*THE **27** 02:56:03.2, 40°.30N×25°.80E, h7km±1km, ML2.3/8, Error ellipse: s-maj=1.2km s-min=0.4km az=162.0*

*BEO **27** 02:56:05.3±1.3, 40°.27N×25°.70E, h10km±5km, ML2.5/3*

*SOF **27** 02:56:05.1, 40°.24N×25°.40E, h13km*

ISC 27 02:56:03.2±0.9, 40°.28N±0°.02×25°.77E±0°.02, h8km±7km, n74, σ0§69/102, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOKC	Gokceada-Canak	0.14	124	PG	Pg	02 56 05.9	-0.3
GOKC				SG	Sg	02 56 08.6	+0.4
SMTH	Samothraki Isl	0.27	317	P	Pg	02 56 08.8	+0.3
SMTH				S	Sg	02 56 12.6	+0.5
SMTH	Samothraki Isl	0.27	317	P	Pg	02 56 08.8	+0.3
SMTH				S	Sg	02 56 12.8	+0.7
SMTH				AML	AML	02 56 13.2	
	comp=N,1426μm,0.2s						
SMTH				AML	AML	02 56 13.4	
	comp=E,1175μm,0.2s						
ENEZ	Enez	0.54	32	PG	Pg	02 56 12.9	-0.8
ENEZ				SG	Sg	02 56 21.5	+0.7
GELI	Tayfur-Gelibol	0.55	77	PG	Pg	02 56 13.9	+0.1
LIA	Limnos Island	0.59	230	P	Pb	02 56 15.3	-0.4
LIA				S	Sb	02 56 24.4	+0.2
LIA	Limnos Island	0.59	230	P	Pb	02 56 15.3	-0.4
LIA				S	Sb	02 56 24.3	+0.2
LIA				AML	AML	02 56 28.1	
	comp=E,849μm,0.4s						
LIA				AML	AML	02 56 28.4	
	comp=N,1200μm,0.6s						
EZN	Ezine	0.62	136	PG	Pg	02 56 14.6	-0.5
EZN	Ezine	0.62	136	P	Pg	02 56 14.7	-0.4
EZN				S	Sg	02 56 23.2	-0.1
ALN	Alexandroupoli	0.65	19	PG	Pg	02 56 14.9	-0.9
ALN	Alexandroupoli	0.65	19	P	Pg	02 56 14.9	-0.9
ALN				S	Sg	02 56 23.9	-0.5
ALN	Alexandroupoli	0.65	19	P	Pg	02 56 15.0	-0.8
ALN				S	Sg

EDC	**Edincik**	**1.60**	**87**	PN	**Pn**	**02 56 31.8**	**+0.1**
RZN	**Rozhen**	**1.62**	**331**	*i* P	**Pb**	**02 56 32.7**	**-0.7**
ZEDA	**zmir-Bergama**	**1.65**	**142**	*i* P	**Pn**	**02 56 32.3**	**-0.1**
ZEDA				*i* S	**Sb**	**02 56 54.2**	**-0.6**
EDRB	**Edirne**	**1.73**	**25**	PN	**Pb**	**02 56 34.6**	**-0.6**
EDRB	**Edirne**	**1.73**	**25**	P	**Pn**	**02 56 33.1**	**-0.4**
EDRB				S	**Sn**	**02 56 55.7**	**-0.1**
BALB	**Balikesir**	**1.74**	**111**	PN	**Pn**	**02 56 33.5**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.75**	**120**	*i* P	**Pn**	**02 56 34.2**	**+0.4**
STEP				*i* S	**Sn**	**02 56 56.2**	**0.0**
STEP				IAML_P			
	comp=Z,83nm,0.1s						
DIM	**Dimitrovgrad**	**1.78**	**354**	*i* P	**Pb**	**02 56 36.0**	**0.0**
PLG	**Polygyros**	**1.78**	**274**	P	**Pn**	**02 56 33.4**	**-0.8**
PLG	**Polygyros**	**1.78**	**274**	P	**Pn**	**02 56 33.3**	**-0.9**
NVR	**Nevrokopi**	**1.80**	**307**	P	**Pn**	**02 56 33.9**	**-0.6**
NVR	**Nevrokopi**	**1.80**	**307**	P	**Pn**	**02 56 34.0**	**-0.6**
SRS	**Serrai**	**1.86**	**298**	*e*Pg	**Pg**	**02 56 38.1**	**-0.7**
SRS				*e*Sg	**Sg**	**02 57 02.4**	**-0.4**
SRS	**Serrai**	**1.86**	**298**	P	**Pn**	**02 56 34.4**	**-0.8**
SRS	**Serrai**	**1.86**	**298**	P	**Pn**	**02 56 35.2**	**0.0**
CHOS	**Chios island**	**1.90**	**173**	PN	**Pn**	**02 56 35.5**	**-0.4**
CHOS	**Chios island**	**1.90**	**173**	P	**Pn**	**02 56 35.8**	**-0.1**
SOH	**Sokhos**	**1.92**	**287**	P	**Pn**	**02 56 35.5**	**-0.6**
KCTX	**Karacabey (Bur**	**1.98**	**90**	PN	**Pn**	**02 56 37.6**	**+0.7**
PLD	**Plovdiv**	**2.00**	**337**	*e*Pg	**Pg**	**02 56 41.2**	**-0.2**
PLD				*e*Sg	**Sg**	**02 57 07.9**	**+0.6**
PLD	**Plovdiv**	**2.00**	**337**	*i* P	**Pg**	**02 56 41.1**	**-0.3**
URLA	**Izmir**	**2.02**	**161**	PN	**Pn**	**02 56 37.3**	**-0.2**
URLA	**Izmir**	**2.02**	**161**	*i* P	**Pn**	**02 56 37.7**	**+0.2**
URLA				*i* S	**Sn**	**02 57 03.4**	**+0.5**
URLA				IAML_P			
	comp=Z,723nm,0.2s						
MMB	**Musomiste**	**2.03**	**311**	*i* P	**Pn**	**02 56 36.5**	**-1.1**
AKHS	**Akhisar**	**2.11**	**131**	*i* P	**Pn**	**02 56 39.4**	**+0.7**
AKHS				IAML_P			
	comp=Z,177nm,0.1s						
BLCB	**Balcova**	**2.13**	**152**	PN	**Pn**	**02 56 39.7**	**+0.7**
DURS	**Dursunbey**	**2.19**	**107**	*i* P	**Pn**	**02 56 41.2**	**+1.4**
DURS				IAML_P			
	comp=Z,169nm,0.2s						
JMB	**Yambol**	**2.27**	**15**	*i* P	**Pg**	**02 56 45.8**	**-0.9**
KNT	**Kendrikon**	**2.35**	**293**	PN	**Pn**	**02 56 42.8**	**+0.7**
KNT	**Kendrikon**	**2.35**	**293**	P	**Pn**	**02 56 41.9**	**-0.2**
ARMT	**Armutlu**	**2.38**	**82**	PN	**Pn**	**02 56 43.3**	**+0.9**
KKB	**Krupnik**	**2.58**	**309**	*i* P	**Pn**	**02 56 44.7**	**-0.5**
BUY	**Buyukada**	**2.61**	**76**	PN	**Pn**	**02 56 46.6**	**+1.0**
MANT	**Manisa**	**2.80**	**129**	*i* P	**Pn**	**02 56 49.9**	**+1.4**
MANT				IAML_P			
	comp=Z,138nm,0.1s						
VTS	**Vitosha**	**3.02**	**322**	*e*Pn	**Pn**	**02 56 52.7**	**+1.4**
VTS				*e*Sn	**Sn**	**02 57 28.6**	**+0.9**
VTS	**Vitosha**	**3.02**	**322**	*i* P	**Pn**	**02 56 51.4**	**+0.1**
ZAPS	**Zavoj**	**3.80**	**323**	*e*Pn	**Pn**	**02 57 03.3**	**+1.3**
BOVS	**Bovan**	**4.52**	**319**	*e*Pn	**Pn**	**02 57 12.2**	**+0.4**
GRUS	**Gruza**	**5.21**	**315**	*e*Pn	**Pn**	**02 57 22.6**	**+1.3**

BEO ***27*** *02:59:09.5±1.1, 39°.75N×26°.15E, h10km, ML2.9/3*
THE ***27*** *02:59:16.8, 40°.31N×25°.81E, h2km±1km, ML2.4/8, Error ellipse: s-maj=1.8km s-min=0.6km az=144.0*
ISK ***27*** *02:59:16.1, 40°.30N×25°.80E, h4km, ML2.8/15*
ISCJB ***27*** *02:59:16.5±0.4, 40°.31N±0°.02×25°.80E±0°.03, h6km±3km, Error ellipse: s-maj=3.5km s-min=2.9km az=146.1*
ATH ***27*** *02:59:16.4, 40°.31N×25°.78E, h26km±1km, ML2.5/5, Error ellipse: s-maj=2.3km s-min=1.1km az=77.0*
SOF ***27*** *02:59:17.0, 40°.21N×25°.46E, h5km*

ISC 27 02:59:16.8±0.9, 40°.29N±0°.02×25°.80E±0°.02, h9km±7km, n63, σ0s64/86, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOKC	**Gokceada-Canak**	**0.13**	**133**	PG	**Pg**	**02 59 19.8**	**0.0**
GOKC				SG	**Sg**	**02 59 21.9**	**+0.1**
SMTH	**Samothraki Isl**	**0.27**	**312**	P	**Pg**	**02 59 22.5**	**+0.2**
SMTH				S	**Sg**	**02 59 25.7**	**-0.3**
SMTH	**Samothraki Isl**	**0.27**	**312**	P	**Pg**	**02 59 22.5**	**+0.2**
SMTH				S	**Sg**	**02 59 26.7**	**+0.6**
SMTH				AML	AML	02 59 27.0	
	comp=N,2216μm,0.1s						
SMTH				AML	AML	02 59 27.2	
	comp=E,1456μm,0.1s						
ENEZ	**Enez**	**0.53**	**31**	PG	**Pg**	**02 59 26.7**	**-0.3**
ENEZ				SG	**Sb**	**02 59 34.5**	**-1.3**
GELI	**Tayfur-Gelibol**	**0.53**	**78**	PG	**Pg**	**02 59 26.9**	**-0.2**
GELI				SG	**Sb**	**02 59 34.8**	**-1.2**
LIA	**Limnos Island**	**0.61**	**231**	P	**Pg**	**02 59 28.9**	**+0.3**
LIA				S	**Sb**	**02 59 38.4**	**+0.1**
LIA	**Limnos Island**	**0.61**	**231**	P	**Pg**	**02 59 28.9**	**+0.3**
LIA				S	**Sb**	**02 59 38.3**	**+0.1**
LIA				AML	AML	02 59 41.6	
	comp=N,1147μm,0.5s						
LIA				AML	AML	02 59 41.9	
	comp=E,918μm,0.4s						
EZN	**Ezine**	**0.61**	**138**	PG	**Pg**	**02 59 28.6**	**-0.1**
EZN	**Ezine**	**0.61**	**138**	P	**Pg**	**02 59 28.3**	**-0.4**
EZN				S	**Sg**	**02 59 37.2**	**+0.4**
ALN	**Alexandroupoli**	**0.64**	**17**	PG	**Pg**	**02 59 28.7**	**-0.5**
ALN	**Alexandroupoli**	**0.64**	**17**	P	**Pg**	**02 59 28.5**	**-0.7**
ALN				S	**Sg**	**02 59 37.4**	**-0.2**
ALN	**Alexandroupoli**	**0.64**	**17**	P	**Pg**	**02 59 28.6**	**-0.5**
ALN				S	**Sg**	**02 59 37.6**	**+0.1**
ALN				AML	AML	02 59 38.0	
	comp=N,661μm,0.3s						
ALN				AML	AML	02 59 42.2	
	comp=E,404μm,0.2s						
LPK	**Lapseki**	**0.74**	**83**	PG	**Pg**	**02 59 30.8**	**-0.3**
RDO	**Rodhopi**	**0.88**	**347**	PG	**Pg**	**02 59 33.4**	**-0.4**
RDO	**Rodhopi**	**0.88**	**347**	P	**Pg**	**02 59 33.2**	**-0.6**
RDO				S	**Sg**	**02 59 45.2**	**0.0**
RDO	**Rodhopi**	**0.88**	**347**	P	**Pg**	**02 59 33.3**	**-0.4**
RDO				S	**Sb**	**02 59 45.5**	**-0.6**
RDO				AML	AML	02 59 48.2	
	comp=E,603μm,0.2s						
RDO				AML	AML	02 59 49.4	
	comp=N,546μm,0.3s						
THAS	**Thassos island**	**0.88**	**292**	P	**Pg**	**02 59 33.4**	**-0.4**
THAS				S	**Sb**	**02 59 46.5**	**+0.4**
THAS	**Thassos island**	**0.88**	**292**	P	**Pg**	**02 59 33.6**	**-0.1**
SIGR	**SIGRI**	**1.08**	**178**	PN	**Pg**	**02 59 37.3**	**-0.2**
SIGR	**SIGRI**	**1.08**	**178**	P	**Pg**	**02 59 36.9**	**-0.5**
SIGR				S	**Sn**	**02 59 53.2**	**+0.2**
SIGR	**SIGRI**	**1.08**	**178**	P	**Pg**	**02 59 37.0**	**-0.5**
SIGR				S	**Sn**	**02 59 53.1**	**+0.2**
SIGR				AML	AML	02 59 54.3	
	comp=N,1829μm,0.5s						
SIGR				AML	AML	02 59 54.3	
	comp=E,895μm,0.3s						
PRK	**Paraskevi**	**1.10**	**160**	P	**Pn**	**02 59 38.5**	**+0.1**
PRK				S	**Sn**	**02 59 54.6**	**+0.9**
PRK	**Paraskevi**	**1.10**	**160**	P	**Pn**	**02 59 38.8**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.13**	**69**	PN	**Pb**	**02 59 38.1**	**-0.4**
KAVA	**Kavala**	**1.21**	**306**	P	**Pg**	**02 59 39.3**	**-0.7**
KAVA				S	**Sb**	**02 59 55.9**	**+0.5**
KAVA	**Kavala**	**1.21**	**306**	P	**Pg**	**02 59 39.3**	**-0.7**
OUR	**Ouranopolis**	**1.39**	**273**	P	**Pn**	**02 59 41.2**	**-1.1**
OUR	**Ouranopolis**	**1.39**	**273**	P	**Pn**	**02 59 41.1**	**-1.1**
KDZ	**Kurdzhali**	**1.39**	**348**	PN	**Pn**	**02 59 42.4**	**0.0**
KDZ	**Kurdzhali**	**1.39**	**348**	*i* P	**Pg**	**02 59 45.7**	**+2.2**
GONE	**Gonen-Balikesi**	**1.47**	**99**	PN	**Pb**	**02 59 43.9**	**-0.3**
DKL	**Dikili**	**1.49**	**144**	PN	**Pn**	**02 59 44.0**	**+0.4**
TKR	**Tekirdag**	**1.50**	**62**	PN	**Pn**	**02 59 44.1**	**+0.3**
EDC	**Edincik**	**1.58**	**87**	PN	**Pn**	**02 59 45.2**	**+0.2**
RZN	**Rozhen**	**1.62**	**330**	*i* P	**Pn**	**02 59 45.4**	**-0.3**
EDRB	**Edirne**	**1.71**	**24**	PN	**Pn**	**02 59 47.2**	**+0.4**
EDRB	**Edirne**	**1.71**	**24**	P	**Pn**	**02 59 46.9**	**+0.1**
EDRB				S	**Sn**	**03 00 09.2**	**+0.4**
BALB	**Balikesir**	**1.73**	**111**	PN	**Pn**	**02 59 47.2**	**+0.2**
DIM	**Dimitrovgrad**	**1.77**	**354**	*i* P	**Pg**	**02 59 49.7**	**-1.1**
PLG	**Polygyros**	**1.80**	**274**	P	**Pn**	**02 59 47.2**	**-0.8**
PLG				S	**Sg**	**03 00 13.8**	**-0.8**
PLG	**Polygyros**	**1.80**	**274**	P	**Pn**	**02 59 47.2**	**-0.8**
NVR	**Nevrokopi**	**1.81**	**307**	P	**Pn**	**02 59 47.6**	**-0.6**
SRS	**Serrai**	**1.87**	**297**	*e*Pn	**Pn**	**02 59 48.1**	**-0.8**
SRS				*e*Sn	**Sg**	**03 00 17.5**	**+0.6**
SRS	**Serrai**	**1.87**	**297**	P	**Pn**	**02 59 48.3**	**-0.6**
SRS				S	**Sb**	**03 00 14.4**	**-0.1**
CHOS	**Chios island**	**1.91**	**174**	PN	**Pn**	**02 59 49.5**	**-0.1**
CHOS	**Chios island**	**1.91**	**174**	P	**Pn**	**02 59 49.4**	**-0.1**
CHOS	**Chios island**	**1.91**	**174**	P	**Pn**	**02 59 49.3**	**-0.2**
PLD	**Plovdiv**	**1.99**	**336**	*e*Pn	**Pn**	**02 59 51.0**	**+0.4**
PLD				*e*Sn	**Sg**	**03 00 23.0**	**+2.1**
PLD	**Plovdiv**	**1.99**	**336**	PN	**Pn**	**02 59 51.4**	**+0.8**
PLD	**Plovdiv**	**1.99**	**336**	*i* P	**Pg**	**02 59 55.1**	**+0.1**
URLA	**Izmir**	**2.02**	**162**	PN	**Pn**	**02 59 51.6**	**+0.5**
MMB	**Musomiste**	**2.04**	**310**	*i* P	**Pn**	**02 59 50.5**	**-0.8**
CTKS	**Kestanelik-??a**	**2.27**	**64**	PN	**Pn**	**02 59 55.3**	**+0.9**
KNT	**Kendrikon**	**2.37**	**293**	PN	**Pn**	**02 59 56.7**	**+0.9**
KNT	**Kendrikon**	**2.37**	**293**	P	**Pn**	**02 59 55.6**	**-0.2**
BGKT	**Bogazkoy**	**2.43**	**68**	PN	**Pn**	**02 59 57.4**	**+0.7**
KKB	**Krupnik**	**2.59**	**308**	*i* P	**Pn**	**02 59 58.3**	**-0.5**
VTS	**Vitosha**	**3.02**	**321**	*e*Pn	**Pn**	**03 00 05.4**	**+0.5**
VTS				*e*Sn	**Sb**	**03 00 47.8**	**0.0**
VTS	**Vitosha**	**3.02**	**321**	*i* P	**Pn**	**03 00 04.6**	**-0.3**
ZAPS	**Zavoj**	**3.81**	**323**	*e*Pn	**Pn**	**03 00 16.6**	**+1.0**
BARS	**Barje**	**3.91**	**312**	*e*Pn	**Pn**	**03 00 17.6**	**+0.6**
BOVS	**Bovan**	**4.53**	**319**	*e*Pn	**Pn**	**03 00 25.9**	**+0.5**
GRUS	**Gruza**	**5.22**	**315**	*e*Pn	**Pn**	**03 00 35.0**	**+0.1**

BEO ***27*** *03:03:12.3±1.2, 39°.74N×25°.94E, h10km, ML2.7/4*
ISK ***27*** *03:03:17.5, 40°.30N×25°.80E, h5km, ML2.5/10*
ISCJB ***27*** *03:03:17.7±0.4, 40°.31N±0°.02×25°.78E±0.03, h5km±3km, Error ellipse: s-maj=3.8km s-min=2.5km az=145.1*
ATH ***27*** *03:03:17.6, 40°.32N×25°.76E, h26km±1km, ML2.2/5, Error ellipse: s-maj=2.0km s-min=1.1km az=279.0*
THE ***27*** *03:03:18.1, 40°.30N×25°.79E, h8km±1km, ML2.2/7, Error ellipse: s-maj=1.7km s-min=0.5km az=89.0*
SOF ***27*** *03:03:18.1, 40°.15N×25°.51E, h13km*
DDA ***27*** *03:03:20.7, 40°.28N×26°.05E, h7km±4km, ML2.8*

ISC 27 03:03:18.1±0.9, 40°.29N±0°.02×25°.79E±0°.02, h8km±7km, n58, σ0s88/82, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOKC	**Gokceada-Canak**	**0.14**	**132**	PG	**Pg**	**03 03 20.9**	**-0.1**
GOKC				SG	**Sg**	**03 03 23.3**	**+0.3**
SMTH	**Samothraki Isl**	**0.27**	**313**	P	**Pg**	**03 03 23.7**	**+0.3**
SMTH				S	**Sg**	**03 03 27.7**	**+0.7**
SMTH	**Samothraki Isl**	**0.27**	**313**	P	**Pg**	**03 03 23.6**	**+0.3**
SMTH				S	**Sg**	**03 03 27.8**	**+0.9**
SMTH				AML	AML	03 03 28.1	
	comp=N,1609μm,0.1s						
SMTH				AML	AML	03 03 28.2	
	comp=E,1622μm,0.1s						
ENEZ	**Enez**	**0.53**	**32**	PG	**Pg**	**03 03 27.9**	**-0.3**
ENEZ				SG	**Sg**	**03 03 35.6**	**+0.5**
LIA	**Limnos Island**	**0.61**	**230**	P	**Pg**	**03 03 30.2**	**+0.4**
LIA				S	**Sg**	**03 03 38.5**	**+0.8**
LIA	**Limnos Island**	**0.61**	**230**	P	**Pg**	**03 03 30.4**	**+0.6**
LIA				S	**Sg**	**03 03 39.0**	**+1.2**
LIA				AML	AML	03 03 42.5	
	comp=E,343μm,0.4s						
LIA				AML	AML	03 03 43.8	
	comp=N,472μm,0.4s						
EZN	**Ezine**	**0.62**	**138**	PG	**Pg**	**03 03 30.0**	**-0.1**
EZN	**Ezine**	**0.62**	**138**	P	**Pg**	**03 03 29.7**	**-0.4**
EZN				S	**Sg**	**03 03 38.4**	**+0.2**
ALN	**Alexandroupoli**	**0.64**	**18**	PG	**Pg**	**03 03 29.9**	**-0.5**
ALN				SG	**Sb**	**03 03 39.3**	**-1.2**
ALN	**Alexandroupoli**	**0.64**	**18**	P	**Pg**	**03 03 29.9**	**-0.5**
ALN				S	**Sg**	**03 03 39.0**	**+0.3**
ALN	**Alexandroupoli**	**0.64**	**18**	P	**Pg**	**03 03 29.9**	**-0.5**
ALN				S	**Sg**	**03 03 38.5**	**-0.2**
ALN				AML	AML	03 03 39.4	
	comp=N,300μm,0.4s						
ALN				AML	AML	03 03 43.5	
	comp=E,212μm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.80**	**133**	*i* P	**Pb**	**03 03 34.1**	**-0.2**
BAYC				*i* S	**Sg**	**03 03 44.1**	**+0.2**
KESN	**Edirne-Kesan**	**0.86**	**52**	*i* P	**Pg**	**03 03 34.8**	**+0.1**
KESN				*i* S	**Sb**	**03 03 46.6**	**-0.8**
KESN				IAML_P			
	comp=Z,290nm,0.1s						
THAS	**Thassos island**	**0.87**	**291**	P	**Pg**	**03 03 34.5**	**-0.3**
THAS				S	**Sb**	**03 03 47.0**	**-0.2**
THAS	**Thassos island**	**0.87**	**291**	P	**Pg**	**03 03 34.5**	**-0.3**
RDO	**Rodhopi**	**0.88**	**348**	PG	**Pg**	**03 03 34.6**	**-0.3**
RDO	**Rodhopi**	**0.88**	**348**	P	**Pg**	**03 03 34.4**	**-0.5**
RDO				S	**Sb**	**03 03 46.6**	**-0.7**
RDO	**Rodhopi**	**0.88**	**348**	P	**Pg**	**03 03 34.4**	**-0.5**
RDO				S	**Sg**	**03 03 45.9**	**-0.3**
RDO				AML	AML	03 03 49.7	
	comp=E,376μm,0.2s						
RDO				AML	AML	03 03 51.1	
	comp=N,466μm,0.4s						
SIGR	**SIGRI**	**1.08**	**177**	PN	**Pb**	**03 03 38.8**	**-0.1**
SIGR	**SIGRI**	**1.08**	**177**	P	**Pb**	**03 03 38.0**	**-0.9**
SIGR				S	**Sn**	**03 03 54.4**	**-0.1**
SIGR	**SIGRI**	**1.08**	**177**	P	**Pb**	**03 03 38.5**	**-0.5**
SIGR				S	**Sn**	**03 03 54.2**	**-0.3**
SIGR				AML	AML	03 03 54.8	
	comp=E,497μm,0.4s						
SIGR				AML	AML	03 03 55.0	
	comp=N,1072μm,0.5s						
PRK	**Paraskevi**	**1.11**	**160**	P	**Pn**	**03 03 40.1**	**+0.2**
PRK				S	**Sn**	**03 03 55.1**	**-0.2**
PRK	**Paraskevi**	**1.11**	**160**	P	**Pn**	**03 03 40.0**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.13**	**69**	PN	**Pb**	**03 03 39.5**	**-0.4**
KAVA	**Kavala**	**1.20**	**306**	P	**Pb**	**03 03 40.3**	**-0.7**
KAVA				S	**Sg**	**03 03 56.8**	**+0.2**
KAVA	**Kavala**	**1.20**	**306**	P	**Pb**	**03 03 40.1**	**-0.8**
AYVA	**Ayvalik**	**1.20**	**144**	*i* P	**Pg**	**03 03 41.9**	**+0.8**
AYVA				*i* S	**Sn**	**03 03 57.5**	**-0.1**
AYVA				IAML_P			
	comp=Z,783nm,0.4s						
KNL	**Balıkesir**	**1.33**	**90**	*i* P	**Pn**	**03 03 42.2**	**-0.7**
KNL				IAML_P			
	comp=Z,667nm,0.1s						
OUR	**Ouranopolis**	**1.38**	**272**	P	**Pn**	**03 03 42.4**	**-1.2**
OUR	**Ouranopolis**	**1.38**	**272**	P	**Pn**	**03 03 42.2**	**-1.3**
KDZ	**Kurdzhali**	**1.39**	**348**	PN	**Pb**	**03 03 43.9**	**-0.3**
KDZ	**Kurdzhali**	**1.39**	**348**	*i* P	**Pg**	**03 03 47.7**	**+3.0**
DKL	**Dikili**	**1.49**	**144**	PN	**Pb**	**03 03 45.6**	**-0.4**
EDC	**Edincik**	**1.59**	**87**	PN	**Pn**	**03 03 46.7**	**+0.2**
RZN	**Rozhen**	**1.61**	**330**	*i* P	**Pn**	**03 03 46.6**	**-0.4**
ZEDA	**zmir-Bergama**	**1.66**	**143**	*i* P	**Pn**	**03 03 47.8**	**+0.5**
EDRB	**Edirne**	**1.71**	**25**	PN	**Pn**	**03 03 48.4**	**+0.2**
BALB	**Balikesir**	**1.73**	**111**	PN	**Pn**	**03 03 48.6**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.75**	**121**	*i* P	**Pb**	**03 03 50.5**	**+0.1**
STEP				IAML_P			
	comp=Z,525nm,0.2s						
DIM	**Dimitrovgrad**	**1.77**	**354**	*i* P	**Pb**	**03 03 51.0**	**+0.3**
PLG	**Polygyros**	**1.79**	**273**	P	**Pn**	**03 03 48.4**	**-0.9**
PLG	**Polygyros**	**1.79**	**273**	P	**Pn**	**03 03 48.2**	**-1.0**
NVR	**Nevrokopi**	**1.80**	**307**	P	**Pn**	**03 03 48.7**	**-0.7**
SRS	**Serrai**	**1.86**	**297**	*e*Pn	**Pn**	**03 03 49.4**	**-0.8**
SRS				*e*Sn	**Sg**	**03 04 17.5**	**-0.4**
SRS	**Serrai**	**1.86**	**297**	P	**Pn**	**03 03 49.3**	**-0.9**
SRS	**Serrai**	**1.86**	**297**	P	**Pn**	**03 03 49.6**	**-0.6**
CHOS	**Chios island**	**1.91**	**174**	PN	**Pn**	**03 03 51.6**	**+0.6**
CHOS	**Chios island**	**1.91**	**174**	P	**Pn**	**03 03 50.8**	**-0.2**
PLD	**Plovdiv**	**1.99**	**336**	*e*Pn	**Pb**	**03 03 53.5**	**-0.9**
PLD				*e*Sn	**Sg**	**03 04 24.6**	**+2.7**
PLD	**Plovdiv**	**1.99**	**336**	PN	**Pn**	**03 03 52.4**	**+0.5**
PLD	**Plovdiv**	**1.99**	**336**	*i* P	**Pg**	**03 03 56.3**	**+0.1**
MMB	**Musomiste**	**2.03**	**310**	*i* P	**Pn**	**03 03 51.7**	**-0.8**
KNT	**Kendrikon**	**2.36**	**293**	P	**Pn**	**03 03 56.7**	**-0.4**
KKB	**Krupnik**	**2.58**	**308**	P	**Pn**	**03 03 58.5**	**-1.6**
VTS	**Vitosha**	**3.01**	**321**	*e*Pn	**Pn**	**03 04 06.7**	**+0.5**
VTS				*e*Sn	**Sb**	**03 04 48.1**	**-0.9**
VTS	**Vitosha**	**3.01**	**321**	*i* P	**Pn**	**03 04 05.8**	**-0.4**
ZAPS	**Zavoj**	**3.80**	**323**	*e*Pn	**Pn**	**03 04 15.9**	**-1.0**
BARS	**Barje**	**3.90**	**312**	*e*Pn	**Pn**	**03 04 17.9**	**-0.4**
BARS				*e*Sn	**Sn**	**03 05 08.2**	**+3.9**

BEO ***27*** *03:06:09.8±0.7, 40°.80N×19°.63E, h5km±2km, ML3.1/9*
PDG ***27*** *03:06:09.4±0.3, 40°.78N×19°.61E, h13km, MD3.5/3, ML3.4/14, Error ellipse: s-maj=0.6km s-min=0.6km az=90.0*
ISCJB ***27*** *03:06:10.1±0.4, 40°.92N±0°.01×19°.66E±0°.02, h2km±3km, Error ellipse: s-maj=2.8km s-min=1.9km az=156.3*
TIR ***27*** *03:06:11.9, 40°.90N×19°.82E, h14km, Md3.4/8*
LDG ***27*** *03:06:12.1±0.1, 40°.97N×19°.83E, h2km, Ml3.5/5, Error ellipse: s-maj=3.5km s-min=2.5km az=41.0*
SKO ***27*** *03:06:12.5, 40°.92N×19°.78E, h4km, ML2.8*
THE ***27*** *03:06:12.1, 40°.91N×19°.82E, h0km±1km, ML2.9/12, Error ellipse: s-maj=1.8km s-min=0.5km az=283.0*

ISC 27 03:06:11.4±1.0, 40°.91N±0°.01×19°.75E±0°.02, h14km±8km, n133, σ1s56/190, 13C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.45**	**11**	*e*Pg	**Pb**	**03 06 20.7**	**-0.4**
TIR				*e*Sg	**Sb**	**03 06 29.2**	**+1.6**
TIR	**Tirane**	**0.45**	**11**	P	**Pb**	**03 06 20.5**	**-0.5**
TIR				S	**Sb**	**03 06 27.7**	**+0.1**
TIR	**Tirane**	**0.45**	**11**	⇓*i* P	**Pb**	**03 06 20.6**	**-0.5**
TIR	**Tirane**	**0.45**	**11**	*i* Pg	**Pb**	**03 06 20.5**	**-0.5**
TIR	**Tirane**	**0.45**	**11**	*i* PG	**Pb**	**03 06 21.1**	**0.0**
TIR				*i* SG	**Sb**	**03 06 28.1**	**+0.5**
VLO	**Vlora**	**0.48**	**204**	P	**Pb**	**03 06 21.8**	**+0.1**
VLO				S	**Sb**	**03 06 29.8**	**+1.2**
VLO	**Vlora**	**0.48**	**204**	*i* PG	**Pb**	**03 06 22.1**	**+0.5**
VLO				*i* SG	**Sb**	**03 06 30.1**	**+1.5**
TPE	**Tepelena**	**0.64**	**162**	P	**Pg**	**03 06 23.3**	**-0.6**
TPE				S	**Sb**	**03 06 33.3**	**0.0**
TPE	**Tepelena**	**0.64**	**162**	*i* PG	**Pb**	**03 06 24.2**	**-0.3**
TPE				*i* SG	**Sb**	**03 06 33.8**	**+0.5**
OHR	**Ohrid**	**0.82**	**75**	*i* Pg	**Pg**	**03 06 26.3**	**-0.9**
OHR				*i* Sg	**Sb**	**03 06 38.3**	**0.0**
OHR				*e*Lg	Lg	03 06 39.8	
	comp=E,552nm,0.6s						
PHP	**Peshkopia**	**0.93**	**34**	P	**Pg**	**03 06 27.9**	**-1.5**
PHP				S	**Sb**	**03 06 42.4**	**+0.7**
PHP	**Peshkopia**	**0.93**	**34**	*i* PG	**Pg**	**03 06 28.7**	**-0.7**
PHP				*i* SG	**Sn**	**03 06 43.4**	**+0.1**
SRN	**Sarande**	**1.05**	**170**	P	**Pn**	**03 06 32.0**	**+0.4**
SRN				S	**Sn**	**03 06 47.7**	**+1.6**
SRN	**Sarande**	**1.05**	**170**	*i* PG	**Pn**	**03 06 32.0**	**+0.4**
SRN				*i* SG	**Sn**	**03 06 47.3**	**+1.2**
ULC	**Ulcinj**	**1.12**	**340**	⇑*i* Pg	**Pb**	**03 06 32.7**	**+0.1**
ULC				*e*Sg	**Sn**	**03 06 51.3**	**+3.3**
ULC	**Ulcinj**	**1.12**	**340**	*i* Pg	**Pn**	**03 06 33.3**	**+0.6**
PUK	**Puka**	**1.14**	**5**	*i* PG	**Pn**	**03 06 33.7**	**+0.7**
PUK				*i* SG	**Sn**	**03 06 50.1**	**+1.6**
KEK	**Kerkira**	**1.20**	**178**	P	**Pb**	**03 06 34.2**	**+0.4**
KEK				S	**Sn**	**03 06 51.6**	**+1.8**
PENT	**Pentalofos**	**1.27**	**124**	P	**Pb**	**03 06 35.2**	**0.0**
SCTE	**Santa Cesarea**	**1.29**	**230**	*i* PN	**Pn**	**03 06 36.1**	**+1.1**
SCTE				*i* SN	**Sn**	**03 06 56.1**	**+4.0**
DRME	**Dracevica, Mon**	**1.35**	**342**	⇑*i* Pg	**Pn**	**03 06 36.3**	**+0.5**
DRME				*e*Sg	**Sn**	**03 06 57.3**	**+3.8**
DRME	**Dracevica, Mon**	**1.35**	**342**	*e*Pn	**Pn**	**03 06 36.3**	**+0.5**
IGT	**Igoumenitsa**	**1.45**	**162**	P	**Pb**	**03 06 38.2**	**+0.1**
IGT				S	**Sn**	**03 06 58.1**	**+2.1**
IGT	**Igoumenitsa**	**1.45**	**162**	*i* Pg	**Pg**	**03 06 38.3**	**-0.8**
IGT				*i* Sg	**Sn**	**03 06 59.7**	**+3.7**
BCI	**Bajram Curri**	**1.47**	**9**	*i* PN	**Pg**	**03 06 41.0**	**+1.2**
BCI				*i* SN	**Sn**	**03 07 00.8**	**+4.0**
JAN	**Janina**	**1.51**	**146**	P	**Pb**	**03 06 39.1**	**-0.1**
BUM	**Brajici-Budva**	**1.53**	**335**	⇑*i* PN	**Pn**	**03 06 38.1**	**-0.3**
BUM				*i* Sn	**Sg**	**03 07 00.8**	**+0.1**
KPRO	**Kipourio**	**1.56**	**127**	P	**Pn**	**03 06 39.5**	**+0.8**
KPRO				S	**Sg**	**03 07 00.9**	**-0.6

HAPS	Han Pijesak,BI	3.23	350	*e*Pn	Pn	03 07 02.0	+0.2
HAPS	Han Pijesak,BI	3.23	350	*e*Pn	Pn	03 06 51.1	-11
TRUS	Trudelj	3.35	8	*e*Pn	Pn	03 07 04.0	+0.7
ZAGS	Zajecar	3.43	32	*e*Pn	Pn	03 07 06.1	+1.6
TEKS	Tekeris	3.64	357	*e*Pn	Pn	03 07 08.3	+0.9
KUBS	Kucevo	3.78	21	*e*Pn	Pn	03 07 10.5	+1.3
BLY	Banja Luka	4.28	335	*e*Pn	Pn	03 07 16.9	+0.8
BLY	Banja Luka	4.28	335	*e*Pn	Pn	03 07 13.7	-2.4
UDBI	Udbina	4.66	322	*e*Pn	Pn	03 07 22.3	+0.9
BZS	Buzias	4.90	16	*e*Pn	Pn	03 07 25.5	+0.9
BZS	Buzias	4.90	16	⇑*i*P	Pn	03 07 25.3	+0.7
GZR	Gura Zlata	5.00	25	⇓*i*P	Pn	03 07 18.7	-7.3
NVLJ	Novalja	5.12	317	*e*Pn	Pn	03 07 27.7	0.0
NVLJ				Sn	Sn	03 08 24.0	-2.7
MORH	Mrgy, Hungar	5.36	352	*e*Pn	Pn	03 07 30.7	-0.3
BOJS	Bojanci	5.65	326	*i*Pn	Pn	03 07 35.2	+0.3
CRES	Cresnjev	5.83	329	*i*Pn	Pn	03 07 37.2	-0.2
CRES				*e*Sn	Sn	03 08 39.9	-4.1
CRES	Cresnjev	5.83	329	*e*Pn	Pn	03 07 35.0	-2.4
CEY	Cerknica	6.20	323	*e*Pn	Pn	03 07 40.5	-2.0
SKDS	Skadanscina	6.25	320	*i*Pn	Pn	03 07 42.8	-0.4
JAVS	Javornik	6.48	322	*i*Pn	Pn	03 07 46.0	-0.4
JAVS				*i*Sn	Sn	03 08 56.4	-3.8
SOKA	Soboth	6.70	331	*e*Pn	Pn	03 07 49.2	-0.2
	comp=E,1.9nm,0.4s						
OBKA	Obir	6.75	328	*e*Pn	Pn	03 07 50.7	+0.6
	comp=E,0.4nm,0.1s						
ARSA	Arzberg	7.03	336	*e*Pn	Pn	03 07 56.6	+2.7
	comp=E,1.0nm,0.4s						
CONA	Conrad Observa	7.55	340	*e*Pn	Pn	03 08 02.0	+0.9
	comp=E,0.9nm,0.4s						
ABTA	Abfaltersbach	7.84	321	*i*Pn	Pn	03 08 05.4	+0.3
	comp=E,0.4nm,0.2s						
MOA	Molln	7.97	332	*i*Pn	Pn	03 08 09.0	+2.2
	comp=E,0.6nm,0.2s						
PGF	Pioggiola	8.21	285	*e*Pn	Pn	03 08 10.9	+0.7
PGF				*e*Sn	Sn	03 09 39.7	-3.1
	comp=E,0.9nm,0.3s						
WTTA	Wattenberg	8.63	320	*e*Pn	Pn	03 08 17.2	+1.3
	comp=E,2.1nm,0.3s						
WATA	Walderalm	8.71	320	*i*Pn	Pn	03 08 16.7	-0.3
	comp=E,1.2nm,0.2s						
SQTA	Sankt Quirin	8.81	319	*e*Pn	Pn	03 08 19.2	+0.8
	comp=E,2.8nm,0.3s						
FETA	Feichten	8.92	316	*e*Pn	Pn	03 08 21.1	+1.1
	comp=E,0.3nm,0.3s						
MOTA	Moosalm	8.94	319	*e*Pn	Pn	03 08 20.8	+0.5
	comp=E,0.5nm,0.2s						
DAVA	Damuels	9.54	315	*e*Pn	Pn	03 08 29.7	+1.3
	comp=E,0.4nm,0.2s						
MBDF	Montbardon	10.27	296	*e*Pn	Pn	03 08 37.8	-0.7
MBDF				*e*Sn	Sn	03 10 27.1	-6.4
	comp=E,1.8nm,0.4s						
LPG	La Plagne	10.54	300	*e*Pn	Pn	03 08 42.4	+0.1
LPG				*e*Sn	Sn	03 10 35.3	-4.9
	comp=E,0.7nm,0.2s						
LPL	La Plagne	10.56	300	*e*Pn	Pn	03 08 42.7	+0.2
LPL				*e*Sn	Sn	03 10 33.8	-6.8
	comp=E,3.2nm,0.4s						
LOR	Lormes	13.06	304	*e*Pn	Pn	03 09 16.6	+0.1
LOR				*e*Sn	Sn	03 11 33.5	-8.1
	comp=E,1.3nm,0.2s						

ISK ***27*** *03:09:31.8, 40.′29N×25.°77E, h4km, ML2.3/12*
THE ***27*** *03:09:32.6, 40.′31N×25.°82E, h9km±1km, ML1.8/5, Error ellipse: s-maj=1.3km s-min=0.5km az=45.0*
ISCJB ***27*** *03:09:32.7±0.4, 40.′31N±0.′02×25.°80E±0.°03, h5km±4km, Error ellipse: s-maj=3.8km s-min=2.7km az=149.9*
ATH ***27*** *03:09:32.3, 40.′33N×25.°77E, h26km±1km, ML2.0/4, Error ellipse: s-maj=2.1km s-min=1.1km az=281.0*
DDA ***27*** *03:09:36.9, 40.′25N×26.°20E, h7km±7km, ML2.7*
SOF ***27*** *03:09:38.3, 40.′32N×25.°06E, h13km*
ISC 27 03:09:32.7±0.9, 40.′30N±0.′02×25.°78E±0.°02, h10km±7km, n48, σ0.°66/66, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOKC	Gokceada-Canak	0.14	132	PG	Pg	03 09 35.6	-0.3
GOKC				SG	Sg	03 09 38.2	+0.1
SMTH	Samothraki Isl	0.26	312	P	Pg	03 09 38.4	+0.4
SMTH				S	Sg	03 09 42.3	+0.7
SMTH	Samothraki Isl	0.26	312	P	Pg	03 09 38.4	+0.4
SMTH				S	Sg	03 09 42.5	+0.9
SMTH				AML	AML	03 09 43.0	
	comp=N,806μm,0.1s						
SMTH				AML	AML	03 09 43.0	
	comp=E,595μm,0.2s						
ENEZ	Enez	0.52	33	PG	Pg	03 09 42.7	-0.2
ENEZ				SG	Sb	03 09 50.7	-0.9
GELI	Tayfur-Gelibol	0.54	79	PG	Pg	03 09 43.1	-0.1
LIA	Limnos Island	0.61	229	P	Pb	03 09 45.0	-0.4
LIA				S	Sb	03 09 54.3	+0.3
LIA	Limnos Island	0.61	229	P	Pb	03 09 45.2	-0.2
LIA				S	Sb	03 09 54.4	+0.3
LIA				AML	AML	03 09 57.8	
	comp=E,281μm,0.3s						
LIA				AML	AML	03 09 58.0	
	comp=N,333μm,0.3s						
EZN	Ezine	0.63	138	PG	Pg	03 09 44.3	-0.5
EZN	Ezine	0.63	138	P	Pg	03 09 44.0	-0.8
EZN				S	Sg	03 09 52.9	-0.2
ALN	Alexandroupoli	0.63	18	PG	Pg	03 09 44.4	-0.5
ALN	Alexandroupoli	0.63	18	P	Pg	03 09 44.5	-0.5
ALN				S	Sg	03 09 53.3	0.0
ALN	Alexandroupoli	0.63	18	P	Pg	03 09 44.5	-0.5
ALN				S	Sg	03 09 53.5	+0.2
ALN				AML	AML	03 09 53.6	
	comp=E,148μm,0.3s						
ALN				AML	AML	03 09 53.9	
	comp=N,166μm,0.3s						
LPK	Lapseki	0.75	84	PG	Pg	03 09 46.8	-0.4
BAYC	CANAKKALE_Bayr	0.81	133	*i*P	Pg	03 09 48.1	-0.1
BAYC				*i*S	Sb	03 10 00.6	+0.8
BAYC				IAML_P			
	comp=Z,2μm,0.1s						
KESN	Edirne-Kesan	0.86	52	*i*P	Pb	03 09 49.9	-0.1
KESN				*i*S	Sg	03 10 00.8	+0.1
KESN				IAML_P			
	comp=Z,230nm,0.1s						
THAS	Thassos island	0.87	291	P	Pg	03 09 49.4	0.0
THAS				S	Sb	03 10 01.9	+0.4
THAS	Thassos island	0.87	291	P	Pb	03 09 49.5	-0.3
RDO	Rodhopi	0.87	348	PG	Pg	03 09 49.2	-0.3
RDO	Rodhopi	0.87	348	P	Pg	03 09 49.0	-0.4
RDO				S	Sb	03 10 01.2	-0.4
RDO	Rodhopi	0.87	348	P	Pg	03 09 49.1	-0.4
SIGR	SIGRI	1.08	177	PN	Pg	03 09 53.5	0.0
SIGR	SIGRI	1.08	177	P	Pg	03 09 53.2	-0.3
SIGR				S	Sn	03 10 08.9	-0.1
SIGR	SIGRI	1.08	177	P	Pg	03 09 53.4	-0.1
SIGR				S	Sn	03 10 09.0	-0.1
SIGR				AML	AML	03 10 10.1	
	comp=N,431μm,0.5s						
SIGR				AML	AML	03 10 10.2	
	comp=E,236μm,0.3s						
PRK	Paraskevi	1.11	160	P	Pn	03 09 54.8	+0.5
PRK	Paraskevi	1.11	160	P	Pn	03 09 54.6	+0.3
PRK				S	Sn	03 10 10.3	+0.6
RKY	Sarkoy-Tekirda	1.13	69	PN	Pn	03 09 54.6	-0.1
KAVA	Kavala	1.19	306	P	Pb	03 09 55.2	-0.2
KAVA				S	Sn	03 10 11.6	-0.1
KAVA	Kavala	1.19	306	P	Pb	03 09 55.2	-0.2
AYVA	Ayvalik	1.21	144	*i*P	Pb	03 09 55.9	+0.2
AYVA				*i*S	Sb	03 10 11.2	-0.1
AYVA				IAML_P			
	comp=Z,445nm,0.2s						
KNL	Balıkesir	1.33	90	*i*P	Pn	03 09 57.3	-0.1
OUR	Ouranopolis	1.38	272	P	Pn	03 09 57.1	-0.9
OUR	Ouranopolis	1.38	272	P	Pn	03 09 57.1	-0.9
KDZ	Kurdzhali	1.38	349	PN	Pb	03 09 58.4	-0.2
KDZ	Kurdzhali	1.38	349	*i*P	Pg	03 10 02.7	+3.5
DKL	Dikili	1.50	144	PN	Pn	03 10 00.1	+0.5
EDC	Edincik	1.59	87	PN	Pn	03 10 01.4	+0.5
RZN	Rozhen	1.61	330	*i*P	Pg	03 10 03.8	+0.2
ZEDA	zmir-Bergama	1.66	143	*i*P	Pg	03 10 04.8	+0.2
ZEDA				IAML_P			
	comp=Z,564nm,0.2s						
EDRB	Edirne	1.71	25	PN	Pn	03 10 03.1	+0.5
BALB	Balikesir	1.74	111	PN	Pn	03 10 03.6	+0.6
STEP	BALIKESIR_Sava	1.75	121	*i*P	Pg	03 10 06.7	+0.4
STEP				IAML_P			
	comp=Z,376nm,0.2s						
NVR	Nevrokopi	1.80	306	P	Pn	03 10 03.5	-0.3
NVR	Nevrokopi	1.80	306	P	Pn	03 10 03.5	-0.3
CHOS	Chios island	1.92	174	PN	Pn	03 10 05.4	-0.1
CHOS	Chios island	1.92	174	P	Pn	03 10 05.4	-0.1
MMB	Musomiste	2.02	310	*i*P	Pn	03 10 06.4	-0.5
VTS	Vitosha	3.01	321	*i*P	Pb	03 10 24.5	-1.9
KIS	Kishinev	7.05	17	*e*	Pb	03 11 35.0	-0.2

BEO ***27*** *03:16:45.8±0.9, 40.°76N×19.°56E, h8km±3km, ML2.7/7*
ISCJB ***27*** *03:16:47.4±0.5, 40.°95N±0.°01×19.°72E±0.°03, h3km±3km, Error ellipse: s-maj=4.3km s-min=2.5km az=175.1*
TIR ***27*** *03:16:47.8, 40.°91N×19.°86E, h15km, Md3.0/8*
THE ***27*** *03:16:48.5, 40.°93N×19.°80E, h0km±3km, ML2.2/7, Error ellipse: s-maj=3.6km s-min=0.8km az=291.0*
SKO ***27*** *03:16:49.6, 40.°93N×19.°81E, h12km*
ISC 27 03:16:48.4±1.0, 40.°92N±0.°02×19.°77E±0.°03, h12km±9km, n50, σ0.°97/74, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.43	10	*e*Pg	Pg	03 16 57.4	+0.5
TIR				*e*Sg	Sb	03 17 05.8	+1.4
TIR	Tirane	0.43	10	P	Pg	03 16 57.0	+0.1
TIR	Tirane	0.43	10	*i*Pg	Pg	03 16 57.4	+0.5
TIR	Tirane	0.43	10	*i*PG	Pg	03 16 57.0	+0.1
TIR				*i*SG	Sb	03 17 04.4	0.0
VLO	Vlora	0.50	205	P	Pg	03 16 58.0	-0.2
VLO				S	Sb	03 17 06.8	+0.4
VLO	Vlora	0.50	205	*i*PG	Pg	03 16 58.3	+0.1
VLO				*i*SG	Sb	03 17 06.7	+0.3
TPE	Tepelena	0.66	164	P	Pg	03 16 59.9	-1.2
TPE				S	Sb	03 17 10.3	-0.5
TPE	Tepelena	0.66	164	*i*PG	Pg	03 17 00.3	-0.8
TPE				*i*SG	Sg	03 17 09.9	+0.2
OHR	Ohrid	0.80	76	*i*Pg	Pg	03 17 02.8	-1.1
OHR				*i*Sg	Sb	03 17 15.2	0.0
PHP	Peshkopia	0.91	33	P	Pg	03 17 04.3	-1.7
PHP				S	Sb	03 17 18.9	+0.5
PHP	Peshkopia	0.91	33	*i*PG	Pg	03 17 04.1	-1.9
PHP				*i*SG	Sb	03 17 18.6	+0.3
SRN	Sarande	1.06	170	P	Pb	03 17 08.2	-0.4
SRN				S	Sn	03 17 23.6	-0.1
SRN	Sarande	1.06	170	*i*PG	Pb	03 17 07.0	-1.6
SRN				*i*SG	Sg	03 17 23.1	+0.6
ULC	Ulcinj	1.11	339	*i*Pg	Pb	03 17 09.6	+0.1
PUK	Puka	1.12	5	*i*PG	Pb	03 17 09.8	0.0
PUK				*i*SG	Sn	03 17 26.1	+0.7
KEK	Kerkira	1.21	179	P	Pn	03 17 11.0	-0.1
KEK				S	Sn	03 17 29.1	+1.6
SCTE	Santa Cesarea	1.31	230	*i*PN	Pn	03 17 12.9	+0.5
SCTE				*i*SN	Sg	03 17 32.8	+2.3
DRME	Dracevica, Mon	1.33	341	*e*Pn	Pn	03 17 12.8	-0.1
IGT	Igoumenitsa	1.46	163	P	Pb	03 17 15.6	+0.2
IGT				S	Sg	03 17 35.8	+0.6
IGT	Igoumenitsa	1.46	163	*i*Pg	Pb	03 17 15.7	+0.3
BCI	Bajram Curri	1.46	9	*i*PN	Pb	03 17 15.4	-0.1
BCI				*i*SN	Sg	03 17 36.1	+0.8
PDG	Podgorica	1.55	346	*e*Pn	Pn	03 17 15.9	0.0
PDG				*e*Sg	Sg	03 17 40.2	+1.8
PDG	Podgorica	1.55	346	*i*Pn	Pb	03 17 16.9	-0.2
PDG	Podgorica	1.55	346	*e*Pn	Pn	03 17 15.9	0.0
KPRO	Kipourio	1.56	128	P	Pb	03 17 16.8	-0.4
KPRO				S	Sg	03 17 38.9	+0.5
SKO	Skopje	1.64	50	*i*Pn	Pn	03 17 17.4	+0.4
KZN	Kozani	1.64	111	P	Pb	03 17 18.4	-0.3
KZN				S	Sg	03 17 40.1	-1.2
HCY	Herceg Novi	1.80	328	*e*Pn	Pn	03 17 18.2	-1.0
BEY	Berane	1.95	3	*i*Pn	Pb	03 17 22.9	-1.0
GRG	Griva	2.00	88	*i*Pn	Pn	03 17 22.7	+0.7
TREB	Trebinje	2.08	330	*e*Pn	Pn	03 17 21.9	-1.2
TREB				*e*Sn	Sn	03 17 48.3	-0.7
TREB	Trebinje	2.08	330	*e*Pn	Pn	03 17 21.8	-1.3
BRY	Bratogost	2.18	335	*e*Pn	Pn	03 17 24.0	-0.6
SJES	Sjenica	2.34	4	*e*Pn	Pn	03 17 28.1	+1.3
SJES				*e*Sn	Sb	03 17 58.8	-0.7
BARS	Barje	2.43	38	*e*Pn	Pn	03 17 29.2	+1.2
STON	Ston	2.48	322	*e*Pn	Pn	03 17 27.3	-1.3
STON				*e*Sn	Sn	03 17 57.5	-1.4
STON	Ston	2.48	322	*e*Pn	Pn	03 17 27.6	-1.0
STON	Ston	2.48	322	*e*Pn	Pn	03 17 26.5	-2.1
SELS	Selova	2.50	23	*e*Pn	Pn	03 17 28.9	-0.1
IVAS	Ivanjica	2.67	6	*e*Pn	Pn	03 17 31.1	-0.1
BBLS	Lazići	2.95	355	*e*Pn	Pn	03 17 35.0	-0.2
BBLS				*e*Sn	Sn	03 18 12.1	+1.5
BBLS	Lazići	2.95	355	*e*Pn	Pb	03 17 38.9	-2.1
GRUS	Gruza	3.04	13	*e*Pn	Pn	03 17 37.0	+0.6
VTS	Vitosha	3.10	56	*e*Pn	Pn	03 17 37.9	+0.7
VTS				*e*Sn	Sn	03 18 15.9	+1.7
DIVS	Divibare	3.18	3	*e*Pn	Pn	03 17 38.5	+0.2
DIVS	Divibare	3.18	3	*e*Pn	Pn	03 17 37.9	-0.4
HAPS	Han Pijesak,BI	3.22	349	*e*Pn	Pn	03 17 37.8	-1.1
TRUS	Trudelj	3.33	8	*e*Pn	Pn	03 17 40.9	+0.6
UDBI	Udbina	4.66	322	*e*Pn	Pn	03 17 59.5	+0.9
NVLJ	Novalja	5.12	317	*e*Pn	Pn	03 18 03.8	-1.1

ISCJB ***27*** *03:31:33.6±0.4, 51.°47N±0.°02×16.°11E±0.°02, h0km, mb3.3/4, Error ellipse: s-maj=2.9km s-min=1.9km az=7.3*
BGR ***27*** *03:31:34.9±0.7, 51.°56N×16.°10E, h1km, ML3.3/6, Error ellipse: s-maj=7.8km s-min=4.4km az=21.0*
IPEC ***27*** *03:31:34.5±0.3, 51.°57N×16.°19E, h1km±1km, ML3.1/5, Error ellipse: s-maj=2.0km s-min=1.3km az=29.0*
IDC ***27*** *03:31:35.5±0.7, 51.°50N×16.°08E, h0km, mb3.5/3, mb1 3.6/10, mb1mx3.4/42, mbtmp3.5/10, ML3.2/7, Error ellipse: s-maj=13.9km s-min=6.7km az=112.0*
LDG ***27*** *03:31:37.7±0.3, 51.°30N×15.°99E, h1km, Ml3.7/5, Error ellipse: s-maj=8.2km s-min=4.2km az=7.0, Suspected Mining induced.*
ISC 27 03:31:33.7±0.6, 51.°59N±0.°03×16.°11E±0.°02, h0km, n81, σ1.°53/145, mb3.2/4, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	171	*e*Pg	Pg	03 31 48.7	+0.6
KSP				*e*Sg	Sg	03 31 57.7	-0.3
KSP	Ksiaz	0.76	171	*e*Pg	Pg	03 31 48.8	+0.6
KSP				*e*Sg	Sg	03 31 58.0	0.0
CHVC	Chvalec	1.00	182	*e*PG	Pb	03 31 53.5	-0.5
CHVC				*e*SG	Sg	03 32 06.0	+0.1
	comp=Z,260nm,0.4s						
OSTC	Ostas	1.04	176	*e*PG	Pg	03 31 54.0	+0.4
OSTC				*e*SG	Sg	03 32 07.1	+0.1
	comp=Z,202nm,0.3s						
UPC	Upice	1.09	183	*e*PG	Pg	03 31 54.8	+0.3
UPC				*e*SG	Sg	03 32 08.2	-0.3
	comp=Z,421nm,0.7s						
DPC	Dobruska-Polom	1.25	174	*e*Pg	Pg	03 31 57.6	0.0
DPC				*e*Sg	Sg	03 32 13.3	-0.5
DPC	Dobruska-Polom	1.25	174	*e*PG	Pg	03 31 57.6	0.0
DPC				*e*SG	Sg	03 32 12.7	-1.1
	comp=Z,211nm,0.8s						
PVCC	Panska Ves	1.44	223	*e*PG	Pb	03 32 02.0	+0.6
PVCC				*e*SG	Sb	03 32 20.3	+0.1
	comp=Z,554nm,0.8s						
BRG	Berggiesshubel	1.54	243	PN	Pn	03 32 02.4	0.0
BRG				PG	Pg	03 32 04.2	+1.1
BRG				SG	Sg	03 32 24.2	+1.2
	227nm,0.5s						
BRG	Berggiesshubel	1.54	243	*e*Pn	Pn	03 32 02.4	0.0
BRG				*e*Sg	Sg	03 32 24.6	+1.5
ANAC	Anensky vrch	1.72	151	*e*Pn	Pn	03 32 04.6	-0.3
ANAC	baz=334						
				*e*Sg	Sn	03 32 26.9	-0.7
	138nm,0.4s,baz=334						
LIPC	Lipinka	1.85	161	*e*Pn	Pn	03 32 06.7	0.0
LIPC	baz=343						
				*e*Sg	Sn	03 32 30.9	+0.2
	200nm,0.2s,baz=343						
FBE	Freiberg	1.85	250	*e*Pn	Pn	03 32 07.0	+0.3
FBE				*e*Sg	Sg	03 32 33.0	-0.2
GOPC	GO Pecny, Ondr	1.88	207	*e*PN	Pn	03 32 07.8	+0.8
GOPC				*e*PG	Pb	03 32 09.2	+0.4
GOPC				*e*SG	Sb	03 32 33.2	+0.4
	comp=Z,117nm,0.6s						
PRU	Pruhonice	1.89	212	*e*PN	Pn	03 32 07.7	+0.5
PRU				*e*PG	Pb	03 32 08.9	-0.1
PRU				*e*SG	Sb	03 32 33.7	+0.6
	comp=Z,119nm,0.3s						
CLL	Collm	1.96	263	*i*Pn	Pn	03 32 07.7	-0.5
CLL				*i*Pg	Pg	03 32 11.1	-0.2
CLL				*i*		03 32 14.1	
CLL				*e*		03 32 32.0	
CLL				*i*Sg	Sg	03 32 37.1	+0.4
	comp=Z,140nm,0.6s						
CLL	Collm	1.96	263	*e*Pn	Pn	03 32 07.7	-0.5
RAC	Raciborz	2.01	138	*e*Pg	Pg	03 32 12.1	-0.1
RAC				*e*Sg	Sb	03 32 37.2	+0.7
MORC	Moravsky Berou	2.03	153	*e*PN	Pn	03 32 09.2	-0.1
MORC				*e*SG	Sb	03 32 36.9	-0.5
MORC	Moravsky Berou	2.03	153	*e*Pn	Pn	03 32 09.1	-0.1
	baz=335						
MORC				*e*Sg	Sb	03 32 36.8	-0.6
	comp=Z,78nm,0.4s,baz=335						
MORC	Moravsky Berou	2.03	153	*e*Pn	Pn	03 32 09.2	-0.1
OKC	Ostrava-Krasne	2.18	143	*e*Pn	Pn	03 32 11.0	-0.2
OKC	Ostrava-Krasne	2.18	143	*e*PN	Pn	03 32 11.7	+0.5
OKC				*e*PG	Pb	03 32 14.7	+0.7
OKC				*e*SG	Sg	03 32 43.0	-0.8
	comp=Z,217nm,0.7s						
CHZP	Chorzow	2.24	124	*e*Pg	Pg	03 32 17.1	+0.4
CHZP				*e*Sg	Sg	03 32 45.5	-0.2
VRAC	Vranov	2.31	172	Pn	Pn	03 32 13.3	+0.3
	comp=Z,3.9nm,0.3s,baz=347,slow=15,SNR=24						
VRAC				Pg	Pg	03 32 18.1	+0.2
	comp=Z,7.6nm,0.3s,baz=346,slow=17,SNR=23						
VRAC				Lg	Lg	03 32 45.8	
	comp=Z,22nm,0.3s,baz=86,slow=21,SNR=7.9						
VRAC	Vranov	2.31	172	*e*PN	Pn	03 32 13.2	+0.3
VRAC				*e*SG	Sb	03 32 45.6	+0.4
VRAC	Vranov	2.31	172	*e*Pn	Pn	03 32 13.2	+0.3
	baz=354						
VRAC				*e*Sg	Sb	03 32 45.6	+0.4
	comp=Z,89nm,0.4s,baz=354						
KRUC	Moravsky	2.54	176	*e*PN	Pn	03 32 16.5	+0.3
KRUC				*e*SG	Sb	03 32 53.1	+1.3
KRUC	Moravsky	2.54	176	*e*Pn	Pn	03 32 16.4	+0.3
	baz=357						
KRUC				*e*Sg	Sb	03 32 53.1	+1.3
	comp=Z,94nm,0.6s,baz=357						
TANN	Tannenbergstha	2.58	244	*e*Sg	Sg	03 32 55.5	-1.2
NKC	Novy Kostel	2.68	241	*e*PN	Pn	03 32 19.5	+1.3
NKC				*e*PG	Pb	03 32 23.7	+1.1
NKC				*e*SG	Sg	03 33 00.4	+0.5
	comp=Z,154nm,0.4s						
OJC	Ojcow	2.71	119	*e*Pn	Pn	03 32 17.3	-1.2
OJC				*e*Pg	Pg	03 32 26.3	+0.7
OJC				*e*Sn	Sn	03 32 49.7	-2.3
OJC				*e*Sg	Sg	03 33 01.1	+0.4
JAVC	Velka Javorina	2.91	159	*e*PN	Pn	03 32 22.5	+1.2
JAVC				*e*SG	Sg	03 33 07.2	0.0
KHC	Kasperske Hory	2.95	214	*e*PN	Pn	03 32 22.7	+0.9
KHC				*e*PG	Pb	03 32 28.4	+1.3
KHC				*e*SN	Sn	03 32 57.0	-0.8
KHC				*e*SG	Sg	03 33 08.1	-0.2
	comp=Z,52nm,0.4s						
GERES	GERESS Array B	3.15	210	Pn	Pn	03 32 24.5	-0.1
	comp=Z,3.0nm,0.3s,baz=34,slow=13,SNR=71						
GERES				Pg	Pb	03 32 31.8	+1.2
	comp=Z,4.9nm,0.3s,baz=30,slow=16,SNR=47						
GERES				Lg	Lg	03 33 12.3	
	comp=Z,13nm,0.3s,baz=30,slow=26,SNR=11						
LANS	Liptovska Anna	3.26	137	*e*PN	Pn	03 32 26.9	+0.9
LANS				*e*PG	Pg	03 32 36.4	+0.3
LANS				*e*SG	Sg	03 33 16.9	-1.3
MODS	Modra-Piesok	3.31	166	*e*PN	Pn	03 32 27.0	+0.3
MODS				*e*PG	Pg	03 32 35.9	-1.2
MODS				*e*SG	Sg	03 33 18.7	-1.2
MODS				*e*LG	Lg	03 33 24.1	
NIE	Niedzica	3.45	127	*e*Pn	Pn	03 32 30.1	+1.5
NIE				*e*Pg	Pg	03 32 39.5	-0.3
NIE				*e*Sg	Sg	03 33 24.1	-0.3
ZST	Bratislava	3.46	169	*e*PN	Pn	03 32 28.7	-0.1
ZST				*e*PG	Pg	03 32 39.4	-0.5
ZST				*e*SG	Sg	03 33 22.2	-2.5
VYHS	Vyhne	3.56	149	*e*Pn	Pn	03 32 30.2	0.0
VYHS				*e*PG	Pg	03 32 42.5	+0.5
VYHS				*e*SG	Sg	03 33 28.6	+0.5
CONA	Conrad Observa	3.67	183	*i*Pn	Pn	03 32 32.3	+0.6
	comp=Z,3.9nm,0.4s						
CONA				*e*Sg	Sg	03 33 30.9	-0.7
	comp=Z,38nm,0.4s						
MOA	Molln	3.93	198	*i*Pn	Pn	03 32 36.2	+0.9
	comp=Z,8.3nm,0.3s,SNR=14						
MOA				*e*Sg	Sg	03 33 40.4	+0.5
	comp=Z,18nm,0.5s						
STHS	Stebnicka Huta	3.94	122	*e*PN	Pn	03 32 37.2	+1.8
STHS				*e*PG	Pg	03 32 50.3	+1.2
STHS				*e*SG	Sg	03 33 44.7	+4.6
KECS	Kecovo	4.20	136	*e*PG	Pg	03 32 55.5	+1.3
KECS				*e*SG	Sg	03 33 48

FINES	FINESS Array B	11.29	25	Pn	Pn	03 34 15.7	-0.4
	comp=Z,0.3nm,0.3s,baz=198,slow=9.8,SNR=12						
EKA	Eskdalemuir Ar	12.07	296	Pn	Pn	03 34 24.8	-2.0
	baz=106,slow=13,SNR=4.1						
ARCES	ARCESS Array B	18.54	10	Pn	P	03 35 49.5	-2.1
	comp=Z,0.3nm,0.3s,baz=188,slow=12,SNR=12						
AKTO	Aktyubinsk	26.14	76	P	P	03 37 10.4	+1.1
	comp=Z,1.1nm,0.7s,baz=261,slow=11,SNR=3.7						
KURBB	Kurchatov Arra	38.15	66	P	P	03 38 54.6	+0.3
	comp=Z,0.3nm,0.5s,baz=297,slow=9.5,SNR=4.1						
TORD	Torodi Ar. Bea	40.07	202	P	P	03 39 10.7	0.0
	comp=Z,0.4nm,0.8s,baz=12,slow=7.4,SNR=3.6						
MKAR	Makanchi Array	42.19	69	P	P	03 39 29.5	+1.6
	comp=Z,0.2nm,0.4s,baz=252,slow=2.9,SNR=2.5						

*ISCJB **27** 03:51:53.9±0.3, 51°.54N±0°.02×16°.12E±0°.02, h0km, mb4.7/2, MS3.2/1, Error ellipse: s-maj=2.4km s-min=1.9km az=28.3*
*IDC **27** 03:51:56.0±0.7, 51°.58N×16°.04E, h0km, mb4.6/1, mb1 3.7/8, mb1mx3.4/52, mbtmp3.7/8, ML3.3/6, MS3.3/1, Ms1 3.3/1, ms1mx1.9/52, Error ellipse: s-maj=10.5km s-min=6.8km az=113.0*
*IPEC **27** 03:51:55.0±0.2, 51°.60N×16°.20E, h0km, ML3.0/5, Error ellipse: s-maj=2.2km s-min=1.4km az=71.0*
*BGR **27** 03:51:56.2±0.6, 51°.53N×16°.13E, h1km, ML3.4/8, Error ellipse: s-maj=7.8km s-min=3.3km az=25.0*
*PRU **27** 03:51:57.1±0.0, 51°.50N×16°.10E, h0km, Felt In Harrachov*
*UPP **27** 03:51:59.9±3.2, 51°.76N×15°.68E, h0km, ML2.4, Suspected explosion*
*LDG **27** 03:51:59.4±0.5, 51°.28N×15°.96E, h1km, Ml3.6/8, Error ellipse: s-maj=11.0km s-min=7.8km az=9.0, Suspected Mining induced.*

ISC 27 03:51:54.2±0.6, 51°.59N±0°.03×16°.09E±0°.02, h0km, n90, σ1°.64/163, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	170	ePg	Pg	03 52 09.8	+1.0
KSP				eSg	Sg	03 52 18.8	+0.2
KSP	Ksiaz	0.76	170	ePg	Pg	03 52 09.9	+1.1
KSP				eSg	Sg	03 52 19.0	+0.4
CHVC	Chvalec	1.01	181	ePG	Pb	03 52 14.6	+0.1
CHVC				eSG	Sg	03 52 27.0	+0.5
	comp=Z,220nm,0.4s						
OSTC	Ostas	1.04	176	ePG	Pb	03 52 15.2	+0.1
OSTC				eSG	Sg	03 52 28.2	+0.6
	comp=Z,256nm,0.3s						
UPC	Upice	1.09	183	ePG	Pg	03 52 15.9	+0.9
UPC				eSG	Sg	03 52 29.2	+0.1
	comp=Z,425nm,0.7s						
DPC	Dobruska-Polom	1.25	173	ePg	Pg	03 52 18.6	+0.4
DPC				eSg	Sg	03 52 33.4	-1.0
DPC	Dobruska-Polom	1.25	173	ePG	Pg	03 52 18.6	+0.4
DPC				eSG	Sg	03 52 34.2	-0.2
	comp=Z,208nm,0.8s						
PVCC	Panska Ves	1.43	223	ePG	Pb	03 52 22.8	+1.0
PVCC				eSG	Sn	03 52 41.7	+0.7
	comp=Z,446nm,0.2s						
BRG	Berggiesshubel	1.53	243	PN	Pn	03 52 23.3	+0.5
BRG				PG	Pg	03 52 26.3	+2.8
BRG				SG	Sn	03 52 45.4	+2.0
	278nm,0.4s						
BRG	Berggiesshubel	1.53	243	ePn	Pn	03 52 23.3	+0.5
BRG				eSg	Sn	03 52 44.9	+1.6
ANAC	Anensky vrch	1.73	151	ePn	Pn	03 52 25.7	+0.2
	baz=334						
ANAC				eSg	Sn	03 52 48.4	+0.1
	145nm,0.3s,baz=334						
FBE	Freiberg	1.84	250	ePn	Pb	03 52 28.7	0.0
FBE				eSg	Sg	03 52 54.3	+0.9
LIPC	Lipinka	1.85	160	ePn	Pn	03 52 27.9	+0.7
	baz=343						
LIPC				eSg	Sb	03 52 53.0	+0.3
	166nm,0.2s,baz=343						
GOPC	GO Pecny, Ondr	1.87	207	ePN	Pn	03 52 28.5	+1.0
GOPC				ePG	Pb	03 52 30.1	+0.8
GOPC				eSG	Sg	03 52 54.4	+0.1
	comp=Z,113nm,0.6s						
PRU	Pruhonice	1.88	212	ePN	Pn	03 52 28.7	+1.1
PRU				ePG	Pb	03 52 30.0	+0.6
PRU				eSG	Sg	03 52 54.6	0.0
	comp=Z,157nm,0.3s						
CLL	Collm	1.95	263	ePn	Pn	03 52 29.0	+0.4
CLL				ePg	Pg	03 52 32.0	+0.4
CLL				e		03 52 35.0	
CLL				eSg	Sg	03 52 58.0	+1.1
	comp=Z,148nm,0.6s						
CLL	Collm	1.95	263	ePn	Pn	03 52 28.7	+0.1
RAC	Raciborz	2.02	138	ePg	Pg	03 52 34.3	+1.5
RAC				eSg	Sg	03 53 00.2	+1.3
MORC	Moravsky Berou	2.04	152	ePN	Pn	03 52 30.1	+0.3
MORC				eSG	Sb	03 52 58.2	+0.2
MORC	Moravsky Berou	2.04	152	ePn	Pn	03 52 30.1	+0.3
	baz=336						
MORC				eSg	Sb	03 52 58.2	+0.2
	comp=Z,96nm,0.4s,baz=336						
MORC	Moravsky Berou	2.04	152	ePn	Pn	03 52 30.0	+0.3
MORC				eSg	Sb	03 52 58.1	0.0
OKC	Ostrava-Krasne	2.19	143	ePn	Pn	03 52 31.8	0.0
OKC	Ostrava-Krasne	2.19	143	ePN	Pn	03 52 32.6	+0.8
OKC				ePG	Pb	03 52 35.2	+0.5
OKC				eSG	Sb	03 53 03.6	+1.3
	comp=Z,176nm,0.8s						
CHZP	Chorzow	2.25	124	ePg	Pg	03 52 38.5	+1.2
CHZP				eSg	Sg	03 53 07.6	+1.2
VRAC	Vranov	2.31	172	Pn	Pn	03 52 34.5	+0.9
	comp=Z,2.6nm,0.3s,baz=350,slow=18,SNR=28						
VRAC				Pg	Pg	03 52 40.0	+1.6
	comp=Z,6.5nm,0.3s,baz=346,slow=16,SNR=20						
VRAC				Lg	Lg	03 53 06.4	
	comp=Z,19nm,0.3s,baz=73,slow=19,SNR=13						
VRAC	Vranov	2.31	172	ePN	Pn	03 52 34.4	+0.9
VRAC				eSG	Sg	03 53 07.4	-0.9
VRAC	Vranov	2.31	172	ePn	Pn	03 52 34.4	+0.9
	baz=354						
VRAC				eSg	Sg	03 53 07.3	-1.0
	comp=Z,82nm,0.4s,baz=354						
KRUC	Moravsky	2.54	175	ePN	Pn	03 52 37.7	+1.0
KRUC				eSG	Sg	03 53 14.7	-1.1
KRUC	Moravsky	2.54	175	ePn	Pn	03 52 37.7	+1.0
	baz=357						
KRUC				eSg	Sg	03 53 14.6	-1.2
	comp=Z,43nm,0.4s,baz=357						
TANN	Tannenbergstha	2.58	244	ePn	Pn	03 52 38.5	+1.3
TANN				eSg	Sg	03 53 18.1	+1.2
NKC	Novy Kostel	2.68	241	ePN	Pn	03 52 40.6	+2.1
NKC				ePG	Pg	03 52 45.6	+0.1
NKC				eSG	Sg	03 53 21.9	+1.8
	comp=Z,157nm,0.3s						
OJC	Ojcow	2.72	119	ePn	Pn	03 52 39.7	+0.6
OJC				ePg	Pg	03 52 47.3	+1.0
OJC				eSn	Sn	03 53 10.4	-2.4
OJC				eSg	Sg	03 53 22.5	+1.0
JAVC	Velka Javorina	2.92	159	ePN	Pn	03 52 43.1	+1.2
JAVC				eSG	Sg	03 53 26.7	-1.2
KHC	Kasperske Hory	2.94	214	ePN	Pn	03 52 43.6	+1.4
KHC				ePG	Pg	03 52 49.7	-0.9
KHC				eSN	Sn	03 53 18.5	+0.3
KHC				eSG	Sg	03 53 28.2	-0.5
	comp=Z,48nm,0.6s						
GERES	GERESS Array B	3.15	210	Pn	Pn	03 52 45.1	0.0
	comp=Z,2.9nm,0.3s,baz=34,slow=12,SNR=59						
GERES				Pg	Pg	03 52 53.7	-0.8
	comp=Z,6.7nm,0.3s,baz=31,slow=16,SNR=44						
GERES				Sn	Sn	03 53 23.8	+0.4
	comp=Z,4.7nm,0.3s,baz=26,slow=18,SNR=8.5						
GERES				Lg	Lg	03 53 36.3	
	comp=Z,18nm,0.3s,baz=28,slow=29,SNR=12						
LANS	Liptovska Anna	3.26	137	ePG	Pg	03 52 57.3	+0.6
LANS				eSG	Sg	03 53 38.7	-0.3
MODS	Modra-Piesok	3.31	166	ePN	Pn	03 52 48.7	+1.4
MODS				ePG	Pg	03 52 57.6	0.0
MODS				eSG	Sg	03 53 39.0	-1.5
MODS				eLG	Lg	03 53 44.7	
NIE	Niedzica	3.46	127	ePn	Pn	03 52 50.7	+1.4
NIE				ePg	Pg	03 53 00.6	+0.1
NIE				eSg	Sg	03 53 45.6	+0.4
ZST	Bratislava	3.46	169	eSG	Sg	03 53 43.4	-2.0
VYHS	Vyhne	3.57	149	ePN	Pn	03 52 51.4	+0.6
VYHS				eSG	Sg	03 53 47.9	-1.0
CONA	Conrad Observa	3.67	182	i Pn	Pn	03 52 54.1	+1.8
	comp=Z,2.2nm,0.2s						
CONA				eSg	Sb	03 53 48.7	+3.6
	comp=Z,26nm,0.3s						
MOA	Molln	3.93	198	i Pn	Pn	03 52 57.3	+1.6
	comp=Z,1.8nm,0.1s,SNR=18						
MOA				Sg	Sg	03 53 58.5	-1.8
	comp=Z,18nm,0.4s						
STHS	Stebnicka Huta	3.94	121	ePG	Pg	03 53 11.0	+1.2
STHS				eSG	Sg	03 54 04.5	+3.6
KECS	Kecovo	4.21	136	ePG	Pg	03 53 16.9	+2.1
KECS				eSG	Sg	03 54 08.5	-0.8
ARSA	Arzberg	4.36	185	ePn	Pn	03 53 04.0	+2.3
	comp=Z,1.0nm,0.3s						
ARSA				eSg	Sg	03 54 13.7	-0.5
	comp=Z,13nm,0.4s						
KBA	Koelnbreinsper	4.86	203	ePn	Pn	03 53 10.4	+1.7
	comp=Z,6.3nm,0.4s,SNR=8.9						
KBA				Sg	Sg	03 54 26.8	-3.4
	comp=Z,9.9nm,0.5s						
SOKA	Soboth	4.97	188	i Pn	Pn	03 53 11.8	+1.8
	comp=Z,0.3nm,0.1s						
SOKA				Sg	Sg	03 54 33.9	+0.2
	comp=Z,5.0nm,0.5s						
DEL	Delary	5.06	346	P	Pn	03 53 12.7	+1.5
DEL				S	Sn	03 54 09.0	-1.3
WATA	Walderalm	5.18	216	ePn	Pn	03 53 15.1	+2.0
	comp=Z,3.4nm,0.3s,SNR=5.1						
WATA				Sn	Sn	03 54 10.0	-3.5
	comp=Z,3.5nm,0.4s						
OBKA	Obir	5.19	192	i Pn	Pn	03 53 15.9	+2.8
	comp=Z,0.4nm,0.2s						
OBKA				Sg	Sg	03 54 40.2	-0.6
	comp=Z,17nm,0.7s						
WTTA	Wattenberg	5.22	216	i Pn	Pn	03 53 15.9	+2.3
	comp=Z,2.5nm,0.3s,SNR=4.3						
WTTA				eSn	Sn	03 54 12.1	-2.4
	comp=Z,2.8nm,0.3s						
MYKA	Terra Mystica	5.22	199	ePn	Pn	03 53 13.6	0.0
	comp=Z,0.5nm,0.2s						
MYKA				Sg	Sg	03 54 40.7	-1.1
	comp=Z,8.8nm,0.4s						
MOTA	Moosalm	5.35	219	i Pn	Pn	03 53 16.2	+0.8
	comp=Z,1.4nm,0.3s						
MOTA				Sg	Sg	03 54 45.9	-0.1
	comp=Z,4.1nm,0.4s						
RETA	Reutte	5.38	222	i Pn	Pn	03 53 15.6	0.0
	comp=Z,0.7nm,0.1s						
RETA				Sg	Sg	03 54 45.8	-1.0
	comp=Z,0.8nm,0.1s						
VXJU	Vaexsjoe	5.38	353	P	Pn	03 53 17.4	+1.8
ABTA	Abfaltersbach	5.39	207	ePn	Pn	03 53 17.5	+1.7
	comp=Z,1.5nm,0.3s						
ABTA				Sg	Sg	03 54 45.5	-1.6
	comp=Z,13nm,0.5s						
SQTA	Sankt Quirin	5.41	218	ePn	Pn	03 53 18.2	+1.9
	comp=Z,2.8nm,0.2s,SNR=6.2						
SQTA				Sg	Sg	03 54 45.9	-2.0
	comp=Z,2.9nm,0.2s						
DOBS	Dobrina	5.46	185	i Pn	Pn	03 53 19.8	+2.9
VNDS	Vrh nad Dolski	5.57	190	i Pn	Pn	03 53 20.3	+2.0
OSKU	Oskarshamn	5.61	0	P	Pn	03 53 20.7	+1.9
BYXU	Byxelkrok	5.74	5	P	Pn	03 53 22.8	+2.3
FETA	Feichten	5.76	220	i Pn	Pn	03 53 22.9	+1.8
	comp=Z,1.2nm,0.5s						
FETA				Sg	Sg	03 54 59.5	+0.3
	comp=Z,2.7nm,0.6s						
FABU	Falkenberg	5.77	341	P	Pn	03 53 21.9	+1.0
CRES	Cresnjev	5.79	184	i Pn	Pn	03 53 23.2	+2.0
GNOU	Gnosjoe	5.87	348	P	Pn	03 53 23.8	+1.5
DAVA	Damuels	5.91	226	ePn	Pn	03 53 24.9	+1.8
	comp=Z,2.0nm,0.3s						
DAVA				eSn	Sn	03 54 28.5	-3.1
	comp=Z,2.5nm,0.3s						
EKSU	Eksjoe	6.01	356	P	Pn	03 53 26.2	+2.0
VSTU	Vaestervik	6.09	2	P	Pn	03 53 27.3	+2.0
VSTU				S	Sn	03 54 34.5	-1.0
BOJS	Bojanci	6.12	186	i Pn	Pn	03 53 27.9	+2.1
DAVOX	Davos/Dischmat	6.30	223	Pn	Pn	03 53 29.4	+0.9
	comp=Z,0.4nm,0.3s,baz=18,slow=20,SNR=5.6						
DAVOX				Sn	Sn	03 54 40.9	-0.4
	comp=Z,0.3nm,0.3s,baz=53,slow=20,SNR=2.0						
DAVOX				Lg	Lg	03 55 14.8	
	comp=Z,0.9nm,0.3s,baz=336,slow=20,SNR=3.2						
CDF	Champ du Feu	6.51	244	ePn	Pn	03 53 32.6	+1.3
CDF				eSg	Sg	03 55 20.5	-2.7
	comp=Z,36nm,0.8s						
LNKU	Linkoeping	6.65	357	P	Pn	03 53 36.5	+3.4
FKPU	Falk	6.72	349	P	Pn	03 53 36.7	+2.7
HINF	Hinteralfeld	7.08	241	ePn	Pn	03 53 39.9	+0.9
HINF				eSg	Sg	03 55 36.2	-5.3
	comp=Z,22nm,0.7s						
HAU	Haudompre	7.25	244	ePn	Pn	03 53 42.0	+0.6
HAU	Haudompre	7.25	244	ePg	Pg	03 54 11.5	-1.6
HAU				eSg	Sg	03 55 41.0	-6.0
	comp=Z,7.3nm,0.4s						
GIVF	Givet	7.29	263	eSg	Sg	03 55 45.2	-2.9
PAGF	Fort de Pagny	7.33	250	eSg	Sg	03 55 47.5	-1.9
	comp=Z,17nm,0.7s						
MEZF	Maizieres J'vi	7.75	251	eSg	Sg	03 56 03.2	+0.3
	comp=Z,8.1nm,0.5s						
SFTF	Sexfontaines	7.90	249	eSg	Sg	03 56 07.9	+0.2
	comp=Z,3.7nm,0.4s						
CABF	La Chapelle	8.24	237	ePn	Pn	03 53 55.0	0.0
CABF				eSg	Sg	03 56 17.9	-0.7
	comp=Z,17nm,0.9s						
AKASG	Malin Array Be	8.31	91	Pn	Pn	03 53 54.1	-1.7
	comp=Z,1.9nm,0.3s,baz=280,slow=12,SNR=2.9						
AKASG				Sn	Sn	03 55 25.2	-5.1
	baz=277,slow=23,SNR=2.2						
AKASG				Lg	Lg	03 56 22.1	
	comp=Z,1.2nm,0.3s,baz=278,slow=28,SNR=2.3						
HFS	Hagfors	8.67	352	Pn	Pn	03 53 58.0	-2.7
	comp=Z,0.0nm,0.3s,baz=190,slow=31,SNR=2.4						
SSF	Saint Saulge	9.38	246	eSg	Sn	03 56 50.7	+54
	comp=Z,5.7nm,0.7s						
FINES	FINESS Array B	11.29	25	Pn	Pn	03 54 35.3	-1.3
	comp=Z,0.3nm,0.3s,baz=208,slow=4.7,SNR=9.1						
EKA	Eskdalemuir Ar	12.06	296	Pn	Pn	03 54 45.5	-1.7
	baz=104,slow=15,SNR=3.6						
ARCES	ARCESS Array B	18.54	10	Pn	P	03 56 09.8	-2.3
	comp=Z,0.3nm,0.3s,baz=195,slow=13,SNR=9.3						
BORG	Borgarnes	23.29	319	P	P	03 57 04.5	+1.4
	comp=Z,20nm,0.9s,baz=111,slow=14,SNR=1.9						
ASF	Jabal al Asfar	24.68	134	LR	LR	04 08 30.0	
	comp=Z,84nm,21.8s,baz=134,slow=40						
TORD	Torodi Ar. Bea	40.07	202	P	P	03 59 32.9	+1.7
	comp=Z,8.0nm,0.3s,baz=21,slow=8.7,SNR=2.4						

*ISCJB **27** 03:56:24.7±0.4, 40°.90N±0°.01×19°.68E±0°.03, h16km±4km, Error ellipse: s-maj=3.3km s-min=2.4km az=158.4*
*BEO **27** 03:56:24.5±1.0, 40°.90N×19°.71E, h10km±3km, ML3.1/4*
*TIR **27** 03:56:24.4, 40°.89N×19°.75E, h18km, Md3.5/8*
*SKO **27** 03:56:25.2, 40°.92N×19°.76E, h7km, M2.4, ML3.1*
*THE **27** 03:56:25.1, 40°.90N×19°.90E, h0km±2km, ML3.0/7, Error ellipse: s-maj=2.6km s-min=0.7km az=284.0*
*PDG **27** 03:56:26.3±0.2, 41°.03N×19°.58E, h10km, MD3.3/3, ML3.3/14, Error ellipse: s-maj=1.2km s-min=2.4km az=0.0*

ISC 27 03:56:24.8±1.0, 40°.91N±0°.02×19°.72E±0°.02, h12km±8km, n118, σ1°.17/168, 6C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.45	14	ePg	Pg	03 56 33.3	-0.4
TIR				eSg	Sb	03 56 41.3	-0.1
TIR	Tirane	0.45	14	P	Pg	03 56 33.4	-0.3
TIR				S	Sb	03 56 41.6	+0.2
TIR	Tirane	0.45	14	i Pg	Pg	03 56 33.5	-0.2
TIR	Tirane	0.45	14	i PG	Pg	03 56 34.0	+0.3
TIR				i SG	Sb	03 56 47.1	+5.8
VLO	Vlora	0.47	202	P	Pg	03 56 34.8	+0.8
VLO				S	Sb	03 56 44.1	+2.2
VLO	Vlora	0.47	202	i PG	Pg	03 56 34.0	0.0
VLO				i SG	Sg	03 56 41.5	+1.2
TPE	Tepelena	0.65	160	P	Pg	03 56 35.9	-1.5
TPE				S	Sb	03 56 46.6	-0.4
TPE	Tepelena	0.65	160	i PG	Pg	03 56 37.0	-0.3
TPE				i SG	Sb	03 56 46.7	-0.4
OHR	Ohrid	0.84	76	i Pg	Pg	03 56 39.1	-1.8
OHR				i Sg	Sg	03 56 51.8	-0.2
OHR				eLg	Lg	03 56 53.4	
	comp=E,750nm,0.6s						
OHR				eLg	Lg	03 56 56.7	
	comp=N,574nm,0.6s						
PHP	Peshkopia	0.94	35	P	Pg	03 56 40.7	-2.3
PHP	Peshkopia	0.94	35	i PG	Pg	03 56 42.0	-1.0
PHP				i SG	Sb	03 56 56.2	+0.6
SRN	Sarande	1.05	168	P	Pg	03 56 44.0	-0.9
SRN				S	Sn	03 56 59.8	0.0
SRN	Sarande	1.05	168	i PG	Pg	03 56 44.2	-0.8
SRN				i SG	Sg	03 56 58.3	-0.3
ULC	Ulcinj	1.11	341	⇑i Pg	Pb	03 56 44.3	-1.7
ULC				i Sg	Sg	03 56 59.1	-1.6
ULC	Ulcinj	1.11	341	i Pg	Pb	03 56 46.1	+0.2
PUK	Puka	1.14	6	i PG	Pb	03 56 46.4	0.0
PUK				i SG	Sn	03 57 03.1	+0.9
KEK	Kerkira	1.20	177	P	Pb	03 56 46.6	-0.7
KEK				S	Sn	03 57 04.6	+1.1
SCTE	Santa Cesarea	1.27	229	i PN	Pn	03 56 48.7	+0.4
SCTE				i SN	Sb	03 57 05.9	+1.0
DRME	Dracevica, Mon	1.34	343	⇑i Pg	Pn	03 56 48.6	-0.7
DRME				eSg	Sb	03 57 06.9	0.0
DRME	Dracevica, Mon	1.34	343	ePn	Pn	03 56 47.3	-2.0
IGT	Igoumenitsa	1.45	161	P	Pn	03 56 50.5	-0.3
IGT				S	Sg	03 57 12.1	+0.6
IGT	Igoumenitsa	1.45	161	ePg	Pn	03 56 50.6	-0.2
IGT				i Sg	Sg	03 57 12.5	+1.0
BCI	Bajram Curri	1.48	10	i PN	Pn	03 56 52.1	+0.9
BCI				i SN	Sg	03 57 13.2	+0.8
BUM	Brajici-Budva	1.52	336	⇓i Pg	Pn	03 56 51.6	-0.3
BUM				eSg	Sn	03 57 13.0	+1.3
PDG	Podgorica	1.56	347	ePg	Pn	03 56 52.3	0.0
PDG				eSg	Sb	03 57 14.2	+0.9
PDG	Podgorica	1.56	347	i Pg	Pn	03 56 52.6	+0.3
PDG				i Sg	Sg	03 57 14.9	0.0
PDG	Podgorica	1.56	347	ePn	Pn	03 56 52.3	0.0
TTG	Podgorica	1.56	347	⇓i Pg	Pn	03 56 52.1	-0.2
TTG				i Sg	Sb	03 57 14.1	+0.8
KPRO	Kipourio	1.57	127	P	Pn	03 56 52.0	-0.6
KPRO				S	Sb	03 57 13.6	-0.1
KZN	Kozani	1.67	110	P	Pn	03 56 54.1	+0.2
SKO	Skopje	1.67	50	ePg	Pn	03 56 54.5	+0.6
SKO				eSg	Sb	03 57 17.4	+0.9
SKO	Skopje	1.67	50	P	Pn	03 56 54.4	+0.6
SKO				S	Sb	03 57 17.3	+0.8
SKO	Skopje	1.67	50	i Pg	Pn	03 56 54.5	+0.6
SKO				i Sg	Sb	03 57 17.1	+0.6
SKO				eLg	Lg	03 57 17.6	
	comp=E,50nm,1.0s						
SKO				eLg	Lg	03 57 18.4	
	comp=N,36nm,0.5s						
PVY	Plav	1.69	6	⇓i Pn	Pn	03 56 55.4	+1.1
PVY				i Sn	Sg	03 57 19.2	-0.1
CGL1	Ceglie Messapi	1.73	262	ePn	Pn	03 56 54.0	-0.6
CEME	Cevo	1.74	340	⇑i Pn	Pn	03 56 54.8	-0.1
CEME				eSn	Sn	03 57 18.8	+1.7
HCY	Herceg Novi	1.79	329	⇑i Pn	Pn	03 56 55.4	-0.1
HCY				eSn	Sn	03 57 19.4	+1.2
HCY	Herceg Novi	1.79	329	ePn	Pn	03 56 53.8	-1.7
FASA	Fasano	1.80	268	ePn	Pn	03 56 55.0	-0.6
TAR1	Taranto	1.89	259	ePn	Pn	03 56 56.0	-0.9
NKME	Niksic	1.94	343	⇓i Pn	Pn	03 56 58.2	+0.5
NKME				eSn	Sn	03 57 23.5	+1.5
KOME	Kolasin	1.95	355	⇓i Pn	Pn	03 56 59.3	+1.6
KOME				eSn	Sb	03 57 24.5	0.0
IVA	Berane	1.97	4	⇑i Pn	Pn	03 56 59.0	+1.0
IVA				i Sn	Sb	03 57 25.4	+0.4
MASS	Massafra	1.98	263	ePn	Pn	03 56 57.2	-0.9
NKY	Niksic	1.98	344	⇓i Pn	Pn	03 56 59.2	+1.0
NKY				eSn	Sb	03 57 25.2	-0.3
GRG	Griva	2.03	88	P	Pn	03 56 56.9	-1.9
GRG	Griva	2.03	88	i Pn	Pn	03 56 57.3	-1.5
TREB	Trebinje	2.08	331	ePn	Pn	03 56 58.7	-0.7
TREB				eSn	Sn	03 57 25.8	+0.5
TREB	Trebinje	2.08	331	ePn	Pn	03 56 58.3	-1.1
BAI	Bari	2.16	276	ePn	Pb	03 57 05.3	+1.5
BRY	Bratogost	2.18	336	⇑i Pn	Pn	03 57 01.9	+0.9
BRY				i Sn	Sn	03 57 29.3	+1.3
BRY	Bratogost	2.18	336	ePn	Pn	03 57 02.4	+1.4
VAY	Valandovo	2.19	78	ePn	Pn	03 57 00.8	-0.1
VAY	Valandovo	2.19	78	P	Pn	03 57 00.8	-0.1
VAY				S	Sn	03 57 27.5	-0.5
VAY	Valandovo	2.19	78	i Pn	Pn	03 57 00.9	-0.1
VAY				i Sn	Sn	03 57 29.4	+1.4
VAY				eLg	Lg	03 57 34.3	
	comp=N,83nm,0.8s						
VAY				eLg	Lg	03 57 36.4	
	comp=E,84nm,0.7s						
THL	Klokotos Trika	2.21	127	P	Pn	03 57 02.7	+1.5
LKD2	Lefkada island	2.24	161	P	Pn	03 57 01.8	+0.2
LIT	Litokhoron	2.26	110	P	Pn	03 57 02.2	+0.3
LIT	Litokhoron	2.26	110	i Pn	Pn	03 57 02.5	+0.5
SG1	Sgolgore (BA)	2.31	269	ePn	Pn	03 57 02.0	-0.6
SJES	Sjenica	2.36	4	ePn	Pn	03 57 04.5	+1.1
UPM	Unac-Piva	2.37	345	⇓i Pn	Pn	03 57 04.4	+0.7
UPM				i Sn	Sn	03 57 34.5	+1.7
UPM	Unac-Piva	2.37	345	ePn	Pn	03 57 02.7	-1.0
KNT	Kendrikon	2.42	83	P	Pn	03 57 04.2	+0.1
KNT	Kendrikon	2.42	83	i Pn	Pn	03 57 04.6	+0.5
PLE	Pljevlja	2.43	354	⇓i Pn	Pn	03 57 05.3	+0.9
PLE				i Sn	Sn	03 57 36.3	+2.1
BARS	Barje	2.46	39	ePn	Pn	03 57 05.

WTTA			*e*Sn	**Sn**	**04 00 06.7**	**+0.3**
	comp=E,4.0nm,0.6s					
WATA	**Walderalm**	**8.69 320**	*e*Pn	**Pn**	**03 58 31.6**	**+1.2**
	comp=E,1.0nm,0.2s					
SQTA	**Sankt Quirin**	**8.79 319**	*e*Pn	**Pn**	**03 58 32.5**	**+0.8**
	comp=E,1.8nm,0.3s					
MOTA	**Moosalm**	**8.93 319**	*e*Pn	**Pn**	**03 58 33.4**	**-0.3**
	comp=E,1.8nm,0.4s					
KHC	**Kasperske Hory**	**9.30 334**	*e*PN	Pn	03 59 22.5	+44
KHC			*e*SN	**Sn**	**04 00 23.0**	**-0.1**

DSN ***27*** *04:37:55.6±1.8, 26°.53N×58°.10E, h10km, ML3.4/8, Error ellipse: s-maj=24.1km s-min=7.7km az=12.0*
OMAN ***27*** *04:37:58.5±3.9, 26°.40N×57°.88E, h0km, Error ellipse: s-maj=51.3km s-min=30.3km az=173.0*
TEH ***27*** *04:37:59.6, 26°.68N×57°.73E, h7km, ML3.5*

ISC 27 04:37:59.5±1.6, 26°.53N±0°.04×57°.70E±0°.09, h10km, n35, σ1°43/39, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.89**	**176**	*e*Pg	**Pn**	**04 38 20.3**	**+2.3**
NIAN	**Nian**	**1.29**	**323**	*e*Pg	**Pn**	**04 38 22.8**	**-0.8**
NIAN				IAMB	IAmb	04 38 24.5	
	comp=Z,0.0nm,0.2s						
NIAN				*e*Sg	**Sg**	**04 38 41.4**	**+0.4**
BANOM	**Banah**	**1.40**	**245**	*e*P	**Pg**	**04 38 25.6**	**-0.7**
	SNR=430						
BANOM	**Banah**	**1.40**	**245**	P	**Pg**	**04 38 25.7**	**-0.6**
	SNR=432						
BANOM				S	**Sg**	**04 38 48.8**	**+4.4**
SHME	**Shamm**	**1.48**	**252**	*e*P	**Pg**	**04 38 27.6**	**-0.3**
	SNR=40						
SHME				S	**Sg**	**04 38 51.1**	**+4.0**
SHME	**Shamm**	**1.48**	**252**	*e*Pn	**Pg**	**04 38 28.0**	**+0.1**
GENO	**Geno**	**1.62**	**303**	*e*Pn	**Pb**	**04 38 29.0**	**-0.6**
GENO				IAMB	IAmb	04 38 33.4	
	comp=Z,0.0nm,0.4s						
MDH	**Madha**	**1.76**	**226**	*e*P	**Pn**	**04 38 29.4**	**-0.7**
	SNR=15						
MDH	**Madha**	**1.76**	**226**	P	**Pn**	**04 38 30.0**	**-0.1**
	SNR=14						
MDH				S	**Sb**	**04 38 53.7**	**-0.3**
MDH	**Madha**	**1.76**	**226**	*e*Pn	**Pn**	**04 38 30.0**	**-0.1**
MSFE	**Esma-Masafi**	**1.81**	**230**	*e*Pn	**Pn**	**04 38 30.9**	**+0.1**
UOSS	**Minazif**	**2.07**	**221**	P	**Pn**	**04 38 33.8**	**-0.6**
UOSS	**Minazif**	**2.07**	**221**	P	**Pn**	**04 38 33.8**	**-0.6**
UOSS	**Minazif**	**2.07**	**221**	*e*Pn	**Pn**	**04 38 33.5**	**-0.9**
HATD	**Hatta, Dubai**	**2.21**	**220**	P	**Pn**	**04 38 36.0**	**-0.2**
HATD	**Hatta, Dubai**	**2.21**	**220**	P	**Pn**	**04 38 36.6**	**+0.3**
HATD	**Hatta, Dubai**	**2.21**	**220**	*e*Pn	**Pn**	**04 38 35.3**	**-1.0**
ASHO	**Ashiyiah**	**2.36**	**219**	*e*P	**Pn**	**04 38 38.9**	**+0.6**
	SNR=8.7						
ASHO	**Ashiyiah**	**2.36**	**219**	P	**Pb**	**04 38 39.7**	**-2.4**
	SNR=23						
ASHO	**Ashiyiah**	**2.36**	**219**	*e*Pn	**Pn**	**04 38 38.9**	**+0.6**
NAZ	**Nazwa, Dubai**	**2.39**	**231**	P	**Pn**	**04 38 38.1**	**-0.7**
NAZ	**Nazwa, Dubai**	**2.39**	**231**	*e*Pn	**Pn**	**04 38 39.2**	**+0.4**
FAQ	**Al Faqa, Dubai**	**2.60**	**227**	*e*P	**Pn**	**04 38 41.5**	**-0.1**
	SNR=8.2						
FAQ	**Al Faqa, Dubai**	**2.60**	**227**	P	**Pb**	**04 38 44.7**	**-1.5**
	SNR=8.2						
FAQ	**Al Faqa, Dubai**	**2.60**	**227**	*e*Pn	**Pb**	**04 38 44.8**	**-1.5**
SOHO	**SOHO**	**2.61**	**204**	P	**Pn**	**04 38 41.0**	**-0.7**
	SNR=26						
ASUD	**Al Ashush, Dub**	**2.86**	**229**	*i* P	**Pn**	**04 38 45.5**	**+0.3**
	SNR=10						
ASUD	**Al Ashush, Dub**	**2.86**	**229**	P	**Pb**	**04 38 48.6**	**-2.0**
	SNR=10						
ASUD	**Al Ashush, Dub**	**2.86**	**229**	*e*Pn	**Pb**	**04 38 48.6**	**-2.0**
NGRK	**Negar Kerman**	**3.22**	**345**	*e*Pn	**Pn**	**04 38 50.7**	**+0.2**
NGRK				IAMB	IAmb	04 38 56.9	
	comp=Z,0.0nm,0.2s						
TVBK	**TV Kerman**	**3.54**	**347**	*e*Pn	**Pn**	**04 38 56.1**	**+1.1**
TVBK				IAMB	IAmb	04 39 52.6	
	comp=Z,0.0nm,0.3s						
KHGB	**Koh Gabri**	**3.98**	**345**	IAMB	IAmb	04 39 15.8	
	comp=Z,0.0nm,0.4s						
KHGB				*e*Pn	**Pn**	**04 39 02.1**	**+1.2**
IPAR	**Pars**	**5.27**	**310**	*e*Pn	**Pn**	**04 39 20.2**	**+1.6**
IKAZ	**Kazeroun**	**6.11**	**303**	*e*Pn	**Pn**	**04 39 28.6**	**-1.5**
IRAM	**Ramesheh**	**7.02**	**320**	*e*Pn	**Pn**	**04 39 42.6**	**0.0**

DDA ***27*** *04:38:51.3, 38°.85N×43°.52E, h7km±3km, ML2.8*
ISK ***27*** *04:38:51.3, 38°.83N×43°.41E, h5km, ML2.2/4*
ISCJB ***27*** *04:38:52.1±1.0, 38°.81N±0°.04×43°.53E±0°.07, h21km±9km, Error ellipse: s-maj=9.5km s-min=5.4km az=26.6*

ISC 27 04:38:50.5±1.1, 38°.78N±0°.05×43°.59E±0°.06, h28km±8km, n10, σ0°76/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.21**	**357**	*i* P	**Pb**	**04 38 56.4**	**-0.4**
VMUR				*i* S	**Sb**	**04 39 00.8**	**-0.3**
VMUR				IAML_P			
	comp=Z,2μm,0.2s						
VANB	**Van**	**0.24**	**220**	PG	**Pn**	**04 38 58.1**	**-0.3**
VANB				SG	**Sb**	**04 39 03.2**	**+1.7**
TVAN	**Van**	**0.28**	**210**	*i* P	**Pn**	**04 38 58.8**	**-0.3**
TVAN				*i* S	**Sb**	**04 39 02.3**	**-0.4**
CLDR	**Caldiran**	**0.45**	**35**	PG	**Pn**	**04 39 01.7**	**+0.3**
CLDR				SG	**Sn**	**04 39 08.9**	**+0.2**
CLDR	**Caldiran**	**0.45**	**35**	*i* P	**Pb**	**04 39 00.1**	**-0.1**
AKDM	**Akdamar-Van**	**0.65**	**227**	PG	**Pn**	**04 39 03.9**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.67**	**273**	*i* P	**Pb**	**04 39 04.0**	**+0.2**
ADCV				*i* S	**Sn**	**04 39 14.0**	**-0.2**
ADCV				IAML_P			
	comp=Z,486nm,0.1s						
TUTA	**Tutak**	**0.87**	**316**	*i* P	**Pn**	**04 39 08.0**	**+0.8**
TUTA				*i* S	**Sb**	**04 39 17.5**	**-1.0**
TUTA				IAML_P			
	comp=Z,2μm,0.2s						
AGRB	**Hanur-Agry**	**0.92**	**330**	PG	**Pb**	**04 39 07.1**	**-0.9**
EATA	**Eleskirt**	**1.38**	**322**	*i* P	**Pb**	**04 39 16.6**	**+0.7**

IDC 27 04:56:55.2±15.0, 20°.84N×46°.34W, h0km, mb3.5/3, mb1 4.0/4, mb1mx3.5/49, mbtmp3.7/4, ML4.0/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/27, Error ellipse: s-maj=357.8km s-min=54.6km az=146.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**18.87**	**265**	P	P	05 01 16.9	-0.3
	0.5nm,0.3s,baz=90,slow=1.0,SNR=3.1						
H10N3	**ASCENSION HYDR**	**42.32**	**129**	T	T	05 48 16.0	
	baz=310,slow=75,SNR=7.1						
H10N2	**ASCENSION HYDR**	**42.32**	**129**	T	T	05 48 16.3	
	baz=310,slow=75,SNR=8.6						
H10N1	**ASCENSION HYDR**	**42.34**	**129**	T	T	05 48 17.4	
	baz=310,slow=75,SNR=17						
H10S3	**ASCENSION HYDR**	**42.96**	**130**	T	T	05 48 49.8	
	baz=312,slow=75,SNR=8.3						
H10S1	**ASCENSION HYDR**	**42.97**	**130**	T	T	05 48 43.4	
	baz=312,slow=75,SNR=11						
H10S2	**ASCENSION HYDR**	**42.98**	**130**	T	T	05 48 55.7	
	baz=312,slow=75,SNR=8.9						
TORD	**Torodi Ar. Bea**	**46.43**	**91**	LR	LR	05 22 46.3	
	comp=Z,57nm,18.6s,baz=305,slow=33						
TXAR	**Lajitas Array**	**52.17**	**291**	P	P	05 06 09.1	+1.0
	0.3nm,0.7s,baz=104,slow=6.6,SNR=4.4						
PDAR	**Pinedale Array**	**56.66**	**308**	P	P	05 06 39.6	-1.1
	0.3nm,0.7s,baz=96,slow=8.3,SNR=4.1						
ILAR	**Eielson Array**	**75.75**	**334**	P	P	05 08 42.8	+0.2
	0.7nm,0.7s,baz=77,slow=4.3,SNR=6.9						

SJA ***27*** *05:01:07.6±0.8, 21°.88S×68°.51W, h134km±6km, MD3.1*
GUC ***27*** *05:01:09.0±0.5, 21°.88S×68°.51W, h130km±3km, ML3.6*

ISC 27 05:01:08.6±2.3, 21°.88S±0°.05×68°.52W±0°.10, h131km±15km, n21, σ0°35/40, 1C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.68**	**277**	*e*P	**Pn**	**05 01 29.4**	**+0.3**
PB09				*e*S	**Sn**	**05 01 45.1**	**+0.4**
PB09	**IPOC Station P**	**0.68**	**277**	*e*P	**Pn**	**05 01 29.1**	**0.0**
PB09				*e*S	**Sn**	**05 01 44.3**	**-0.3**
LVC	**Limon Verde**	**0.81**	**207**	*e*P	**Pn**	**05 01 29.8**	**-0.6**
LVC				*e*S	**Sn**	**05 01 47.0**	**+0.1**
LVC	**Limon Verde**	**0.81**	**207**	*e*P	**Pn**	**05 01 30.0**	**-0.4**
LVC				*e*S	**Sn**	**05 01 46.8**	**-0.2**
PB03	**IPOC Station P**	**1.16**	**262**	*e*P	**Pn**	**05 01 33.6**	**+0.2**
PB03				*e*S	**Sn**	**05 01 52.3**	**+0.2**
PB03	**IPOC Station P**	**1.16**	**262**	*e*P	**Pn**	**05 01 33.5**	**+0.2**
PB03				*e*S	**Sn**	**05 01 52.2**	**+0.1**
PB03				IAML		05 01 52.9	
	comp=N,1μm,0.2s						
PB01	**IPOC Station P**	**1.23**	**312**	*e*P	**Pn**	**05 01 33.8**	**-0.2**
PB01				*e*S	**Sn**	**05 01 52.9**	**-0.3**
PB06	**IPOC Station P**	**1.28**	**230**	*e*P	**Pn**	**05 01 34.5**	**0.0**
PB06				*e*S	**Sn**	**05 01 55.1**	**+0.8**
PB06	**IPOC Station P**	**1.28**	**230**	*e*P	**Pn**	**05 01 34.6**	**0.0**
PB06				*e*S	**Sn**	**05 01 54.1**	**-0.1**
PB07	**IPOC Station P**	**1.28**	**277**	*e*P	**Pn**	**05 01 34.8**	**+0.2**
PB07				*e*S	**Sn**	**05 01 54.5**	**+0.1**
PB07	**IPOC Station P**	**1.28**	**277**	*e*P	**Pn**	**05 01 34.8**	**+0.2**
PB07				*e*S	**Sn**	**05 01 54.1**	**-0.3**
PB07				IAML		05 01 55.9	
	comp=N,1μm,0.1s						
PB02	**IPOC Station P**	**1.40**	**293**	*e*P	**Pn**	**05 01 35.5**	**-0.3**
PB02				*e*S	**Sn**	**05 01 56.4**	**0.0**
PB02	**IPOC Station P**	**1.40**	**293**	*e*P	**Pn**	**05 01 35.9**	**+0.1**
PB02				*e*S	**Sn**	**05 01 56.1**	**-0.3**
PB02				IAML		05 01 57.0	
	comp=E,951nm,0.3s						
PB04	**IPOC Station P**	**1.58**	**253**	*e*P	**Pn**	**05 01 37.8**	**0.0**
PB04				*e*S	**Sn**	**05 02 00.1**	**-0.1**
PB04	**IPOC Station P**	**1.58**	**253**	*i* P	**Pn**	**05 01 37.9**	**0.0**
PB04				*e*S	**Sn**	**05 01 59.6**	**-0.5**
PB04				IAML		05 02 02.5	
	comp=N,470nm,0.1s						
PB15	**IPOC Station P**	**1.59**	**214**	*e*P	**Pn**	**05 01 38.1**	**+0.1**
PB15				*e*S	**Sn**	**05 02 00.7**	**+0.2**
PB15	**IPOC Station P**	**1.59**	**214**	*e*P	**Pn**	**05 01 38.3**	**+0.2**
PB08	**IPOC Station P**	**1.83**	**341**	*e*P	**Pn**	**05 01 41.3**	**+0.2**
PB08	**IPOC Station P**	**1.83**	**341**	*e*P	**Pn**	**05 01 41.4**	**+0.4**
PB08				*e*S	**Sn**	**05 02 06.4**	**+0.6**
GO01	**Chusmiza**	**2.29**	**344**	*i* P	**Pn**	**05 01 46.6**	**-0.1**
GO01				*i* S	**Sn**	**05 02 16.5**	**+0.6**
PB11	**IPOC Station P**	**2.36**	**333**	*i* P	**Pn**	**05 01 46.5**	**-0.8**
PB11				*i* S	**Sn**	**05 02 16.7**	**-0.3**

IDC ***27*** *05:10:39.5±1.2, 60°.87N×150°.23W, h49km±14km, mb3.3/8, mb1 3.5/12, mb1mx3.4/38, mbtmp3.6/12, ML3.3/4, MS2.5/1, Ms1 2.6/1, ms1mx2.2/27, Error ellipse: s-maj=21.9km s-min=9.5km az=111.0*
NEIC ***27*** *05:10:40.1±0.0, 60°.85N×149°.71W, h32km, ML3.6(AEIC), After AEIC.*
NEIC Felt [IV] at Anchorage, [III] at Girdwood and [II] at Cooper Landing and Eagle River.

ISC 27 05:10:38.1±1.1, 60°.83N±0°.02×149°.77W±0°.03, h30km±9km, n83, σ1°63/101, mb3.8/8, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RC01	**Rabbit Creek A**	**0.26**	**4**	*e*Pg	**Pn**	**05 10 46.6**	**+0.6**
RC01				*e*Sg	**Sn**	**05 10 52.0**	**+1.1**
SLKM	**Skilak Lake**	**0.39**	**215**	*e*Pn	**Pn**	**05 10 49.0**	**+1.2**
SEW	**Seward**	**0.74**	**168**	*e*Pn	**Pn**	**05 10 53.8**	**+1.2**
SEW				*e*Sn	**Sn**	**05 11 04.5**	**+1.7**
SUA	**Susitna One**	**0.79**	**324**	*e*Pn	**Pn**	**05 10 53.5**	**+0.1**
SUA				*e*Sn	**Sb**	**05 11 04.2**	**+0.2**
PMR	**Palmer**	**0.83**	**22**	*e*Pn	**Pn**	**05 10 55.4**	**+1.7**
PMR				*e*Sn	**Sn**	**05 11 06.0**	**+1.1**
KNK	**Knik Glacier**	**0.86**	**47**	*e*Pn	**Pn**	**05 10 54.6**	**+0.2**
KNK				*e*Sn	**Sn**	**05 11 06.3**	**+0.4**
GHO	**Glory Hole Cre**	**1.03**	**23**	*e*Pn	**Pn**	**05 10 56.8**	**+0.2**
SPU	**Mount Spurr**	**1.17**	**289**	*e*Pn	**Pb**	**05 10 59.1**	**-0.6**
SPU				*e*Sn	**Sn**	**05 11 15.5**	**+2.1**
SML	**Sawmill**	**1.20**	**35**	*e*Pn	**Pn**	**05 10 59.2**	**+0.3**
BRLK	**Bradley Lake**	**1.21**	**208**	*e*Pn	**Pb**	**05 11 00.8**	**+0.5**
BRLK				*e*Sn	**Sn**	**05 11 16.9**	**+2.6**
GLI	**Glacier Island**	**1.31**	**87**	*e*Pn	**Pn**	**05 11 00.7**	**+0.3**
GLI				*e*Sn	**Sn**	**05 11 17.1**	**+0.3**
SPWE	**Spurr West**	**1.43**	**289**	*e*Pn	**Pb**	**05 11 03.3**	**-0.9**
SKT	**Skwentna**	**1.43**	**325**	*e*Pn	**Pb**	**05 11 03.3**	**-0.8**
SKT				*e*Sn	**Sb**	**05 11 21.7**	**-0.4**
CNPM	**China Poot**	**1.50**	**210**	*e*Pn	**Pb**	**05 11 04.8**	**-0.5**
CNPM				*e*Sn	**Sb**	**05 11 24.0**	**+0.1**
HOM	**Homer**	**1.50**	**219**	*e*Pn	**Pb**	**05 11 05.3**	**0.0**
HOM				*e*Sn	**Sb**	**05 11 25.4**	**+1.4**
RDJH	**Redoubt Jeurge**	**1.51**	**262**	*e*Pn	**Pb**	**05 11 04.4**	**-1.1**
RDJH				*e*Sn	**Sb**	**05 11 24.1**	**-0.2**
RSO	**Redoubt South**	**1.52**	**257**	*e*Pn	**Pb**	**05 11 04.9**	**-0.8**
SCM	**Sheep Creek Mo**	**1.55**	**48**	*e*Pn	**Pb**	**05 11 04.8**	**+1.0**
SCM				*e*Sn	**Sb**	**05 11 24.9**	**-0.5**
JPK	**Jack Peak**	**1.56**	**80**	*e*Pn	**Pn**	**05 11 04.5**	**+0.5**
VMT	**TAPS Tl Valdez**	**1.68**	**80**	*e*Pn	**Pn**	**05 11 06.3**	**+0.9**
IVE	**Iliamna Volcan**	**1.81**	**245**	*e*Pn	**Pb**	**05 11 09.0**	**-1.6**
ILS	**Iliamna Low So**	**1.86**	**243**	*e*Pn	**Pb**	**05 11 09.8**	**-1.6**
EYAK	**Cordova Ski Ar**	**2.00**	**96**	*e*Pn	**Pn**	**05 11 10.4**	**+0.6**
HUR	**Hurricane**	**2.16**	**2**	*e*Pn	**Pn**	**05 11 14.2**	**+2.1**
SGAM	**Sherman Glacie**	**2.27**	**96**	*e*Pn	**Pn**	**05 11 13.5**	**-0.1**
AUL	**Augustine Lava**	**2.34**	**233**	*e*Pn	**Pb**	**05 11 17.0**	**-2.6**
AUH	**Augustine H**	**2.35**	**233**	*e*Pn	**Pb**	**05 11 17.2**	**-2.7**
AUW	**Augustine West**	**2.36**	**233**	*e*Pn	**Pb**	**05 11 17.1**	**-2.8**
DHY	**Denali Highway**	**2.52**	**26**	*e*Pn	**Pn**	**05 11 19.3**	**+2.2**
RND	**Reindeer**	**2.62**	**9**	*e*Pn	**Pn**	**05 11 20.3**	**+1.8**
TRF	**Thorofare Moun**	**2.64**	**355**	*e*Pn	**Pn**	**05 11 20.7**	**+1.9**
HMT	**Hamilton**	**2.76**	**98**	*e*Pn	**Pn**	**05 11 19.9**	**-0.4**
KTH	**Kantishna Hill**	**2.79**	**349**	*e*Pn	**Pn**	**05 11 23.2**	**+2.5**
FONW	**Fourpeaked Sta**	**2.90**	**228**	*e*Pn	**Pn**	**05 11 24.2**	**+2.0**
MCK	**McKinley**	**2.94**	**7**	*e*Pn	**Pn**	**05 11 25.0**	**+2.2**
PAX	**Paxson**	**2.96**	**42**	*e*Pn	**Pn**	**05 11 24.4**	**+1.3**
BPAW	**Bear Paw Mtn.**	**3.33**	**351**	*e*Pn	**Pn**	**05 11 29.0**	**+0.9**
BWN	**Browne**	**3.36**	**2**	*e*Pn	**Pn**	**05 11 30.7**	**+2.2**
KDAK	**Kodiak Island**	**3.38**	**206**	P	**Pn**	**05 11 28.5**	**-0.3**
	8.0nm,0.3s,baz=33,slow=14,SNR=238						
KDAK				S	**Sn**	**05 12 07.6**	**-0.2**
	10nm,0.3s,baz=341,slow=13,SNR=3.8						
KDAK				Lg	Lg	05 12 21.1	
	10nm,0.3s,baz=230,slow=19,SNR=4.4						
KDAK	**Kodiak Island**	**3.38**	**206**	*e*Pn	**Pn**	**05 11 29.8**	**+1.0**
KAHC	**Katmai Hardscr**	**3.44**	**233**	*e*Pn	**Pn**	**05 11 31.1**	**+1.4**
SNH	**Sunshine Point**	**3.49**	**98**	*e*Pn	**Pn**	**05 11 29.8**	**-0.6**
TT01	**Tatalina**	**3.62**	**308**	*e*Pn	**Pn**	**05 11 32.9**	**+0.8**
BALM	**Baldy**	**3.63**	**83**	*e*Pn	**Pn**	**05 11 32.7**	**+0.4**
WRH	**Wood River Hil**	**3.74**	**11**	*e*Pn	**Pn**	**05 11 35.2**	**+1.6**
HDA	**Harding Lake**	**3.82**	**19**	*e*Pn	**Pn**	**05 11 37.4**	**+2.5**
KELA	**Mount Kelaz**	**3.86**	**234**	*e*Pn	**Pn**	**05 11 36.9**	**+1.4**
DOT	**Dot Lake**	**3.89**	**41**	*e*Pn	**Pn**	**05 11 37.1**	**+1.3**
CCB	**Clear Creek Bu**	**3.94**	**12**	*e*Pn	**Pn**	**05 11 38.1**	**+1.7**
SCRK	**Sand Creek**	**4.15**	**38**	*e*Pn	**Pn**	**05 11 42.5**	**+3.0**
COLA	**College**	**4.15**	**11**	*e*Pn	**Pn**	**05 11 42.0**	**+2.7**
ILAR	**Eielson Array**	**4.17**	**17**	P	**Pn**	**05 11 41.3**	**+1.6**
	4.3nm,0.3s,baz=203,slow=14,SNR=58						
ILAR				S	**Sn**	**05 12 30.0**	**+2.7**
	4.8nm,0.3s,baz=194,slow=14,SNR=4.9						
ILAR				LR	LR	05 13 30.4	
	comp=Z,52nm,19.4s,baz=181,slow=41						
ILB	**Eielson Array**	**4.17**	**17**	*e*Pn	**Pn**	**05 11 41.9**	**+2.2**
ILB				*e*Sn	**Sn**	**05 12 30.0**	**+2.7**
MDM	**Murphy Dome**	**4.21**	**9**	*e*Pn	**Pn**	**05 11 44.2**	**+4.1**
MLY	**Manley**	**4.24**	**354**	*e*Pn	**Pn**	**05 11 41.8**	**+1.1**
BCA3	**Beaver Creek A**	**4.39**	**56**	*e*Pn	**Pn**	**05 11 44.3**	**+1.6**
SII	**Sitkinak Islan**	**4.86**	**210**	*e*Pn	**Pn**	**05 11 50.4**	**+1.2**
PS06	**TAPS Pump Stn6**	**5.05**	**0**	*e*Pn	**Pn**	**05 11 54.1**	**+2.4**
PRP	**Porcupine Dome**	**5.08**	**20**	*e*Pn	**Pn**	**05 11 53.3**	**+1.0**
BCPM	**Bancas Point**	**5.10**	**95**	*e*Pn	**Pn**	**05 11 53.8**	**+1.3**
PNL	**Peninsula**	**5.30**	**98**	*e*Pn	**Pn**	**05 11 55.1**	**-0.1**
IM3	**Indian Mountai**	**5.47**	**343**	*e*Pn	**Pn**	**05 11 58.0**	**+0.4**
EGAK	**Eagle**	**5.59**	**41**	*e*Pn	**Pn**	**05 11 59.8**	**+0.7**
DAWY	**Dawson**	**5.81**	**52**	*e*Pn	**Pn**	**05 12 02.5**	**+0.3**
HYT	**Haines Junctio**	**6.00**	**85**	*e*Pn	**Pn**	**05 12 05.7**	**+0.8**
FYU	**Fort Yukon**	**6.10**	**17**	*e*Pn	**Pn**	**05 12 07.6**	**+1.5**
BM3	**Burnt Mountain**	**6.99**	**17**	*e*Pn	**Pn**	**05 12 19.6**	**+1.3**
WHY	**Whitehorse**	**7.30**	**85**	*e*Pn	**Pn**	**05 12 22.9**	**+0.2**
TOLK	**Toolik Lake Re**	**7.84**	**1**	*e*Pn	**Pn**	**05 12 33.3**	**+3.2**
JIS	**Juneau Island**	**8.22**	**101**	*e*Pn	**Pn**	**05 12 35.8**	**+0.6**
INK	**Inuvik**	**10.22**	**36**	P	**Pn**	**05 13 04.3**	**+1.8**
	0.1nm,0.3s,baz=229,slow=13,SNR=6.4						
INK				S	**Sn**	**05 14 58.0**	**+2.3**
	0.1nm,0.3s,baz=210,slow=8.1,SNR=2.4						
INK	**Inuvik**	**10.22**	**36**	*e*Pn	**Pn**	**05 13 05.8**	**+3.3**
INK				*e*Sn	**Sn**	**05 14 58.0**	**+2.3**
YKA	**Yellowknife Ar**	**16.65**	**69**	P	**P**	**05 14 30.4**	**-0.7**
	0.1nm,0.3s,baz=280,slow=10.0,SNR=2.5						
YKB5	**Yellowknife Ar**	**16.65**	**69**	*e*Pn	**P**	**05 14 30.4**	**-0.7**
NV01	**Mina Array Sit**	**29.80**	**124**	*e*P	**P**	**05 16 44.3**	**+2.0**
NVAR	**Mina Array Bea**	**29.80**	**124**	P	**P**	**05 16 44.3**	**+2.0**
	0.1nm,0.5s,baz=324,slow=8.9,SNR=2.8						
TXAR	**Lajitas Array**	**43.82**	**115**	P	**P**	**05 18 42.6**	**+1.4**
	0.1nm,0.6s,baz=282,slow=5.4,SNR=2.5						
ARCES	**ARCESS Array B**	**49.88**	**2**	P	**P**	**05 19 26.0**	**-2.0**
	2.0nm,0.8s,baz=18,slow=9.5,SNR=3.8						
SONM	**Songino Array**	**55.58**	**308**	P	**P**	**05 20 10.1**	**-0.5**
	0.9nm,0.7s,baz=42,slow=7.0,SNR=4.6						
NOA	**NORSAR Array B**	**57.58**	**11**	P	**P**	**05 20 23.2**	**-1.2**
	0.6nm,0.8s,baz=296,slow=21,SNR=2.1						
ZALV	**Zalesovo Beam**	**57.63**	**325**	P	**P**	**05 20 22.1**	**-2.7**
	1.1nm,0.6s,baz=38,slow=7.3,SNR=3.0						
FINES	**FINESS Array B**	**58.01**	**2**	P	**P**	**05 20 25.9**	**-1.5**
	0.4nm,0.4s,baz=322,slow=8.0,SNR=4.9						
MKAR	**Makanchi Array**	**64.76**	**323**	P	**P**	**05 21 10.7**	**-2.5**
	0.3nm,0.4s,baz=37,slow=6.2,SNR=3.7						

NEIC ***27*** *05:12:11.1±0.0, 17°.01N×100°.04W, h42km, MD4.2(MEX), After MEX.*

MEX 27 05:12:11.1±0.7, 17°.01N×100°.04W, h42km±8km, MD4.2, 1C, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.20**	**132**	*e*P	Pn	05 12 17.1	-1.5
ACP2				*i* S	Sn	05 12 22.5	-1.4
CAIG	**El Cayaco**	**0.22**	**281**	*e*Pn	Pn	05 12 17.3	-1.5
CAIG				*e*Sn	Sn	05 12 22.4	-1.8
CAIG	**El Cayaco**	**0.22**	**281**	*e*P	Pn	05 12 17.3	-1.5
CAIG				*i* S	Sn	05 12 22.4	-1.8
MEIG	**Mezcala**	**1.00**	**24**	*e*Pn	Pn	05 12 26.9	-1.9
MEIG				*e*Sn	Sn	05 12 39.4	-2.3
MEIG	**Mezcala**	**1.00**	**24**	*e*P	Pn	05 12 26.9	-1.9
MEIG				*e*S	Sn	05 12 39.4	-2.3
ARIG	**Puente Sto Nin**	**1.30**	**347**	*e*P	Pn	05 12 31.4	-1.4
ARIG				*e*S	Sn	05 12 46.5	-2.5
PLIG	**Platanillo**	**1.47**	**20**	*e*Pn	Pn	05 12 34.0	-1.2
PLIG				*e*Sn	Sn	05 12 51.0	-2.3
PLIG	**Platanillo**	**1.47**	**20**	*e*P	Pn	05 12 34.0	-1.2
PLIG				*i* S	Sn	05 12 51.0	-2.3
ZIIG	**Zihuatanejo**	**1.49**	**294**	*e*Pn	Pn	05 12 34.5	-0.9
ZIIG				*e*Sn	Sn	05 12 51.3	-2.3
ZIIG	**Zihuatanejo**	**1.49**	**294**	*i* P	Pn	05 12 34.5	-0.9
ZIIG				*e*S	Sn	05 12 51.3	-2.3
TLIG	**Tlapa**	**1.51**	**68**	*e*Pn	Pn	05 12 35.3	-0.5
TLIG				*e*Sn	Sn	05 12 55.4	+1.0
TLIG	**Tlapa**	**1.51**	**68**	*e*P	Pn	05 12 34.4	-1.4
TLIG				*e*S	Sn	05 12 52.2	-2.2
HMTT	**Tlapaneco**	**1.62**	**61**	*e*P	Pn	05 12 36.7	-0.6
MAVM	**Malinalco, Edo**	**2.01**	**15**	*e*P	Pn	05 12 42.4	-0.4
YAIG	**Yautepec**	**2.06**	**26**	*e*Pn	Pn	05 12 41.9	-1.6

mb4.0/2, Error ellipse: s-maj=11.8km s-min=5.9km az=149.2
*DJA **27** 05:48:11.9±1.0, 5°S±10°×13°0E±°, h20km±3km, M3.4/6, MLv3.4/6*
ISC 27 05:48:09.0±0.8, **4°90S**±0°06×**130°21E**±0°07, **h28km, n10, σ2§27/15, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.48**	**320**	P	**Pb**	**05 48 18.4**	**-0.7**
BNDI				S	**Sb**	**05 48 25.2**	**-0.8**
MSAI	**Masohi**	**2.00**	**320**	P	**Pn**	**05 48 41.5**	**+0.4**
MSAI				S	**Sn**	**05 49 03.9**	**-1.3**
AAI	**Ambon**	**2.34**	**301**	P	**Pn**	**05 48 47.5**	**+1.8**
AAI				S	**Sn**	**05 49 13.1**	**-0.5**
FAKI	**Fak Fak**	**2.83**	**46**	P	**Pn**	**05 48 53.8**	**+1.4**
SIJI	**Sorong**	**4.14**	**15**	Pn	**Pn**	**05 49 11.0**	**+0.6**
	5.7nm,0.3s,baz=223,slow=19,SNR=9.7						
SIJI				Sn	**Sn**	**05 49 55.9**	**-2.1**
	6.5nm,0.3s,baz=254,slow=23,SNR=6.5						
FITZ	**Fitzroy Crossi**	**13.86**	**198**	Pn	**Pn**	**05 51 23.4**	**-0.3**
	0.2nm,0.3s,baz=21,slow=8.6,SNR=7.1						
WRA	**Warramunga Arr**	**15.48**	**165**	Pn	**Pn**	**05 51 45.3**	**-0.3**
	0.3nm,0.3s,baz=341,slow=12,SNR=11						
WRA				Sn	**Sn**	**05 54 30.1**	**-6.4**
	0.1nm,0.3s,baz=343,slow=23,SNR=3.5						
ASAR	**Alice Springs**	**19.00**	**170**	P	**P**	**05 52 30.6**	**+1.9**
	0.7nm,0.3s,baz=349,slow=10,SNR=60						
STKA	**Stephens Creek**	**28.88**	**160**	P	**P**	**05 54 07.3**	**+1.8**
	1.0nm,0.4s,baz=338,slow=7.2,SNR=4.2						
MKAR	**Makanchi Array**	**66.60**	**326**	P	**P**	**05 58 57.6**	**+0.7**
	1.3nm,0.6s,baz=129,slow=7.9,SNR=7.4						

*IDC **27** 06:00:39.8±0.7, 58°.27N×31°.69W, h0km, mb3.8/15, mb1 4.0/17, mb1mx3.8/64, mbtmp3.9/17, ML3.7/2, MS3.3/24, Ms1 3.3/24, ms1mx3.1/50, Error ellipse: s-maj=23.0km s-min=13.5km az=4.0*
*ISCJB **27** 06:00:41.4±0.4, 58°.51N±0°.07×31°.64W±0°.09, h13km, mb4.0/28, MS3.2/20, Error ellipse: s-maj=10.5km s-min=6.6km az=174.3*
*NEIC **27** 06:00:43.5±2.3, 58°.65N×31°.56W, h10km±4km, mb4.2/16, Error ellipse: s-maj=18.3km s-min=12.7km az=195.0*
ISC 27 06:00:42.8±0.6, **58°.47N**±0°.09×**31°.76W**±0°.07, **h13km, n55, σ1§44/45, mb4.1/28, MS3.3/20, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANGG	**Ammassalik, Gr**	**7.69**	**341**	*e*Pn	**Pn**	**06 02 31.2**	**-3.0**
BORG	**Borgarnes**	**8.02**	**34**	Pn	**Pn**	**06 02 39.8**	**+1.0**
	0.7nm,0.3s,baz=233,slow=10,SNR=4.1						
BORG				Sn	**Sn**	**06 04 09.1**	**-0.1**
	0.3nm,0.3s,baz=236,slow=15,SNR=2.6						
BORG				LR	LR	06 04 12.8	
	comp=Z,45nm,21.4s,baz=186,slow=26						
SFJD	**Kangerlussuaq**	**12.11**	**323**	LR	LR	06 07 32.2	
	comp=Z,263nm,18.6s,baz=100,slow=34						
EKA	**Eskdalemuir Ar**	**15.88**	**89**	Pn	**Pn**	**06 04 24.7**	**-1.0**
	baz=60,slow=25,SNR=3.5						
FRB	**Frobisher Bay**	**18.34**	**302**	LR	LR	06 11 05.1	
	comp=Z,176nm,19.2s,baz=71,slow=34						
SCHQ	**Schefferville**	**19.48**	**274**	LR	LR	06 11 35.5	
	comp=Z,135nm,18.5s,baz=11,slow=34						
NOA	**NORSAR Array B**	**21.51**	**65**	LR	LR	06 12 25.1	
	comp=Z,37nm,21.3s,baz=290,slow=33						
HFS	**Hagfors**	**22.92**	**66**	P	**P**	**06 05 46.8**	**+0.7**
	3.6nm,0.8s,baz=269,slow=5.9,SNR=4.9						
ESDC	**Sonseca Array**	**25.87**	**124**	P	**P**	**06 06 16.8**	**+2.8**
	0.2nm,0.5s,baz=325,slow=7.6,SNR=4.1						
DAVOX	**Davos/Dischmat**	**27.39**	**97**	LR	LR	06 16 55.5	
	comp=Z,58nm,18.6s,baz=288,slow=36						
RES	**Resolute Bay**	**27.96**	**330**	LR	LR	06 16 26.9	
	comp=Z,47nm,20.7s,baz=16,slow=34						
GEC2	**GERESS Array S**	**28.09**	**90**	*e*P	**P**	**06 06 35.1**	**+1.2**
	2.1nm,0.8s						
GERES	**GERESS Array B**	**28.09**	**90**	LR	LR	06 17 24.7	
	comp=Z,60nm,18.6s,baz=290,slow=36						
FIA0	**FINESS Array S**	**28.29**	**59**	*e*P	**P**	**06 06 35.0**	**-0.5**
FINES	**FINESS Array B**	**28.29**	**59**	P	**P**	**06 06 35.0**	**-0.5**
	1.6nm,0.7s,baz=311,slow=8.5,SNR=2.8						
FINES				LR	LR	06 15 45.2	
	comp=Z,19nm,19.9s,baz=26,slow=32						
VRAC	**Vranov**	**29.33**	**87**	LR	LR	06 17 35.0	
	comp=Z,49nm,19.8s,baz=307,slow=35						
SADO	**Sadowa**	**31.72**	**265**	P	**P**	**06 07 05.9**	**-0.1**
	1.7nm,0.7s,baz=76,slow=8.0,SNR=3.9						
SADO				LR	LR	06 18 17.1	
	comp=Z,97nm,21.5s,baz=52,slow=33						
SADO	**Sadowa**	**31.72**	**265**	*e*P	**P**	**06 07 07.6**	**+1.6**
	2.5nm,0.8s						
KEST	**Kesra**	**35.23**	**112**	LR	LR	06 21 20.5	
	comp=Z,66nm,18.1s,baz=200,slow=35						
KEST	**Kesra**	**35.23**	**112**	*e*P	**P**	**06 07 38.7**	**+2.0**
	5.5nm,0.9s						
ULM	**Lac du Bonnet**	**36.91**	**286**	LR	LR	06 21 04.3	
	comp=Z,48nm,18.1s,baz=94,slow=33						
YKA	**Yellowknife Ar**	**38.38**	**312**	P	**P**	**06 08 04.7**	**+1.6**
	0.8nm,0.6s,baz=56,slow=9.5,SNR=5.1						
YKA				LR	LR	06 22 55.9	
	comp=Z,7.3nm,19.0s,baz=55,slow=35						
YKB5	**Yellowknife Ar**	**38.38**	**312**	*e*P	**P**	**06 08 04.7**	**+1.6**
JFWS	**Jewell Farm**	**38.83**	**273**	*e*P	**P**	**06 08 09.2**	**+2.1**
	4.6nm,0.4s						
INK	**Inuvik**	**41.42**	**327**	P	**P**	**06 08 29.3**	**+1.0**
	1.5nm,0.8s,baz=27,slow=11,SNR=7.0						
INK				LR	LR	06 24 26.8	
	comp=Z,48nm,18.5s,baz=45,slow=34						
INK	**Inuvik**	**41.42**	**327**	*e*P	**P**	**06 08 29.5**	**+1.3**
	2.3nm,0.9s						
EPYK	**Eagle Plains**	**43.62**	**326**	*e*P	**P**	**06 08 47.7**	**+1.4**
	12nm,1.5s						
BR101	**Keskin Array S**	**44.74**	**85**	*e*P	**P**	**06 08 55.9**	**+0.2**
BRTR	**Keskin Array B**	**44.74**	**85**	P	**P**	**06 08 55.9**	**+0.2**
	0.7nm,0.9s,baz=322,slow=9.8,SNR=3.6						
BRTR				LR	LR	06 28 26.4	
	comp=Z,31nm,19.6s,baz=276,slow=37						
TOLK	**Toolik Lake Re**	**45.43**	**333**	*e*P	**P**	**06 09 01.0**	**+0.3**
	2.3nm,0.9s						
DAWY	**Dawson**	**46.05**	**324**	*e*P	**P**	**06 09 07.0**	**+1.4**
	3.3nm,0.9s						
SCRK	**Sand Creek**	**47.48**	**326**	*e*P	**P**	**06 09 18.0**	**+1.0**
	4.3nm,1.1s						
ILAR	**Eielson Array**	**47.70**	**328**	P	**P**	**06 09 18.2**	**-0.3**
	1.0nm,0.8s,baz=32,slow=7.1,SNR=9.3						
ILAR				PcP	**PcP**	**06 10 46.4**	**-1.1**
	0.3nm,0.7s,baz=42,slow=1.5,SNR=3.3						
ILAR				LR	LR	06 29 26.6	
	comp=Z,24nm,18.1s,baz=358,slow=36						
ILB	**Eielson Array**	**47.70**	**328**	*e*P	**P**	**06 09 18.0**	**-0.5**
	8.2nm,1.5s						
DOT	**Dot Lake**	**47.75**	**326**	*e*P	**P**	**06 09 20.1**	**+1.2**
BOZ	**Bozeman (W)**	**47.88**	**291**	*e*P	**P**	**06 09 21.1**	**+0.8**
	1.5nm,0.8s						
NEW	**Newport**	**48.60**	**297**	P	**P**	**06 09 24.9**	**-0.7**
	1.0nm,0.6s,baz=72,slow=6.4,SNR=2.6						
PD31	**Pinedale Array**	**48.90**	**287**	*e*P	**P**	**06 09 27.5**	**-0.7**
	1.1nm,0.8s						
PDAR	**Pinedale Array**	**48.90**	**287**	P	**P**	**06 09 27.2**	**-1.1**
	0.7nm,0.6s,baz=57,slow=9.0,SNR=9.2						
PDAR				LR	LR	06 28 30.6	
	comp=Z,64nm,18.3s,baz=52,slow=34						
AKTO	**Aktyubinsk**	**49.05**	**58**	P	**P**	**06 09 28.7**	**-0.4**
	2.5nm,0.7s,baz=325,slow=8.7,SNR=7.9						
AKTO				LR	LR	06 29 25.2	
	comp=Z,26nm,20.6s,baz=123,slow=35						
ABKAR	**Akbulak array**	**50.77**	**58**	*e*P	**P**	**06 09 41.8**	**-0.3**
	4.1nm,1.0s						
TOA1	**Torodi Ar. Sit**	**51.72**	**137**	*e*P	**P**	**06 09 46.7**	**-2.9**
TORD	**Torodi Ar. Bea**	**51.73**	**137**	P	**P**	**06 09 46.7**	**-2.9**
	8.3nm,0.3s,baz=337,slow=6.7,SNR=6.3						
TORD				LR	LR	06 31 48.3	
	comp=Z,30nm,18.1s,baz=280,slow=36						
BVAR	**Borovoye Array**	**52.33**	**48**	P	**P**	**06 09 52.8**	**-0.9**
	1.3nm,0.8s,baz=330,slow=7.5,SNR=5.8						
DBIC	**Dimbokro**	**55.69**	**147**	P	**P**	**06 10 16.3**	**-2.3**
	1.2nm,0.5s,baz=7.3,slow=6.0,SNR=2.9						
DBIC				LR	LR	06 30 37.9	
	comp=Z,33nm,19.1s,baz=64,slow=32						
DBIC	**Dimbokro**	**55.69**	**147**	*e*P	**P**	**06 10 17.2**	**-1.4**
	8.7nm,1.3s						
KVN	**Kaiserville**	**55.95**	**290**	*e*P	**P**	**06 10 22.5**	**+2.0**
	2.9nm,1.0s						
TXAR	**Lajitas Array**	**56.14**	**272**	P	**P**	**06 10 22.7**	**+0.8**
	0.2nm,0.6s,baz=46,slow=5.4,SNR=4.1						
NV01	**Mina Array Sit**	**56.53**	**290**	*e*P	**P**	**06 10 23.6**	**-1.1**
NVAR	**Mina Array Bea**	**56.53**	**290**	P	**P**	**06 10 23.6**	**-1.1**
	0.4nm,0.6s,baz=60,slow=5.3,SNR=3.3						
NVAR				LR	LR	06 33 25.2	
	comp=Z,52nm,18.2s,baz=26,slow=35						
MK31	**Makanchi Array**	**61.90**	**45**	*e*P	**P**	**06 11 00.4**	**-1.1**
	0.9nm,0.7s						
MK32	**Makanchi Array**	**61.90**	**45**	*e*P	**P**	**06 11 00.6**	**-0.9**
MKAR	**Makanchi Array**	**61.90**	**45**	P	**P**	**06 11 00.6**	**-0.9**
	1.3nm,0.7s,baz=332,slow=6.3,SNR=13						
PETK	**Petropavlovsk-**	**68.52**	**354**	LR	LR	06 44 03.9	
	comp=Z,23nm,18.5s,baz=213,slow=38						
KMBO	**Kilima Mbogo**	**80.12**	**109**	LR	LR	06 47 53.7	
	comp=Z,28nm,21.3s,baz=110,slow=35						

*ISCJB **27** 06:01:59.1±0.3, 67°.17N±0°.02×20°.62E±0°.06, h0km, Error ellipse: s-maj=3.5km s-min=2.8km az=27.6*
*HEL **27** 06:02:00.9±0.1, 67°.18N×20°.65E, h1km, ML2.4, ML2.2(BER), ML2.6(UPP), Confirmed Induced event*
*NAO **27** 06:02:00.8±1.0, 67°.13N×21°.02E, ML2.7*
*IDC **27** 06:02:00.1±0.8, 67°.17N×20°.89E, h0km, mb1 3.4/5, mb1mx3.1/64, mbtmp3.4/5, ML2.6/5, Error ellipse: s-maj=13.9km s-min=5.8km az=109.0*
*BER **27** 06:02:02.7±4.2, 67°.12N×20°.86E, h0km, ML2.2, Suspected explosion*
ISC 27 06:01:58.8±0.7, **67°.10N**±0°.02×**20°.64E**±0°.02, **h0km, n49, σ1§51/79, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.64**	**55**	*i* P	**Pg**	**06 02 11.6**	**+0.6**
MASU				*i* S	**Sg**	**06 02 19.9**	**+0.7**
ERTU	**Ertsjaerv**	**0.82**	**131**	*i* P	**Pb**	**06 02 16.2**	**+0.3**
RATU	**Laukkuluspa**	**0.83**	**331**	*i* P	**Pg**	**06 02 14.6**	**-0.1**
SALU	**Saltoluokta**	**0.88**	**290**	*i* P	**Pb**	**06 02 16.4**	**-0.5**
HARU	**Harads**	**0.95**	**172**	*e*P	**Pb**	**06 02 19.1**	**+1.0**
PAJU	**Pajala**	**0.97**	**93**	*e*P	**Pg**	**06 02 18.1**	**+0.7**
NIKU	**Nikkaluokta**	**0.99**	**322**	*e*P	**Pg**	**06 02 17.6**	**-0.1**
LANU	**Lannavaara**	**1.08**	**28**	*e*P	**Pg**	**06 02 18.9**	**-0.6**
HEF	**Hetta**	**1.74**	**40**	Pg	**Pn**	**06 02 30.6**	**+0.3**
HEF				Lg	Lg	06 02 52.7	
HEF	**Hetta**	**1.74**	**40**	*e*P	**Pn**	**06 02 30.7**	**+0.3**
HEF				Sg	**Sn**	**06 02 52.7**	**-0.5**
HEF	**Hetta**	**1.74**	**40**	*e*P	**Pn**	**06 02 30.6**	**+0.3**
HEF				*e*S	**Sn**	**06 02 52.5**	**-0.7**
HEF				MSG		06 02 56.3	
	comp=Z,26nm,0.2s						
TOF	**Tornio**	**1.79**	**123**	*e*P	**Pb**	**06 02 33.2**	**+0.7**
TOF				*e*S	**Sg**	**06 02 57.3**	**+0.9**
TOF				MSG		06 03 00.5	
	comp=Z,36nm,0.2s						
LILU	**Lilltraesk**	**1.85**	**190**	*e*P	**Pg**	**06 02 34.8**	**+0.6**
KIF	**Kilpisjarvi**	**1.91**	**2**	Pn	**Pb**	**06 02 33.9**	**-0.6**
KIF				Sn	**Sg**	**06 02 59.9**	**-0.3**
KIF	**Kilpisjarvi**	**1.91**	**2**	Pn	**Pb**	**06 02 33.9**	**-0.6**
KIF				Sn	**Sg**	**06 02 59.9**	**-0.3**
KIF	**Kilpisjarvi**	**1.91**	**2**	*e*P	**Pb**	**06 02 33.8**	**-0.6**
KIF				*e*S	**Sb**	**06 02 57.9**	**-1.0**
KIF				MSG		06 03 01.2	
	comp=Z,40nm,0.2s						
KTK1	**Kautokeino**	**2.15**	**26**	*e*P	**Pb**	**06 02 37.8**	**-0.8**
KTK1	**Kautokeino**	**2.15**	**26**	*e*PG	**Pb**	**06 02 37.8**	**-0.8**
KTK1				*e*S	**Sn**	**06 03 03.7**	**+0.4**
RNF	**Rovaniemi**	**2.18**	**101**	*e*P	**Pn**	**06 02 38.2**	**+2.0**
RNF				*e*SG	**Sb**	**06 03 08.0**	**+1.4**
RNF				MSG		06 03 10.2	
	comp=Z,19nm,0.2s						
STEI	**Steigen**	**2.24**	**294**	*e*P	**Pb**	**06 02 40.2**	**+0.2**
STEI	**Steigen**	**2.24**	**294**	*e*P	**Pb**	**06 02 40.2**	**+0.2**
SGF	**Sodankyl**	**2.31**	**79**	*e*P	**Pn**	**06 02 39.5**	**+1.5**
SGF				*e*S	**Sn**	**06 03 08.9**	**+1.8**
BURU	**Burvik**	**2.55**	**173**	*e*P	**Pb**	**06 02 44.7**	**-0.6**
TRO	**Tromso**	**2.62**	**347**	*e*P	**Pn**	**06 02 43.7**	**+1.4**
TRO				*e*SB	**Sn**	**06 03 16.5**	**+1.8**
MOR8	**Moi Rana**	**2.64**	**252**	*e*P	**Pn**	**06 02 44.4**	**+1.7**
MOR8				*e*S	**Sn**	**06 03 16.5**	**+1.1**
MOR8				IAML		06 03 21.5	
	comp=Z,25nm,0.4s						
MOR8	**Moi Rana**	**2.64**	**252**	*e*P	**Pn**	**06 02 44.4**	**+1.7**
MOR8				*e*S	**Sn**	**06 03 16.5**	**+1.1**
MOR8				IAML		06 03 21.5	
	comp=Z,25nm,0.4s						
SVAU	**Svanoeiden**	**2.66**	**190**	*e*P	**Pb**	**06 02 46.2**	**-1.0**
ODEU	**Stanfors**	**2.71**	**179**	*e*P	**Pb**	**06 02 46.7**	**-1.3**
LOF	**Lofoten**	**2.91**	**294**	*e*Sg	**Sg**	**06 03 32.4**	**+0.3**
LOF	**Lofoten**	**2.91**	**294**	*e*SG	**Sg**	**06 03 32.4**	**+0.3**
OUL	**Oulu**	**2.95**	**131**	*e*PB	**Pb**	**06 02 51.9**	**-0.2**
ARE0	**ARCESS Array S**	**3.04**	**34**	*e*P	**Pn**	**06 02 49.4**	**+1.3**
ARE0	**ARCESS Array S**	**3.04**	**34**	*e*P	**Pn**	**06 02 48.9**	**+0.8**
ARE0				*e*S	**Sn**	**06 03 25.0**	**-0.1**
ARA0	**ARCESS Array S**	**3.04**	**34**	Pn	**Pn**	**06 02 48.9**	**+0.8**
	baz=209,slow=14						
ARA0				Sn	**Sn**	**06 03 25.3**	**+0.2**
	baz=211,slow=28						
ARA0	**ARCESS Array S**	**3.04**	**34**	Pn	**Pn**	**06 02 48.9**	**+0.8**
	baz=209,slow=14						
ARA0				Sn	**Sn**	**06 03 25.3**	**+0.2**
	baz=211,slow=28						
ARCES	**ARCESS Array B**	**3.04**	**34**	Pn	**Pn**	**06 02 48.1**	**0.0**
	comp=Z,2.7nm,0.3s,baz=216,slow=12,SNR=62						
ARCES				Pg	**Pb**	**06 02 51.8**	**-1.9**
	comp=Z,2.7nm,0.3s,baz=212,slow=15,SNR=62						
ARCES				Sn	**Sn**	**06 03 24.9**	**-0.2**
	comp=Z,3.0nm,0.3s,baz=214,slow=21,SNR=12						
ARCES				Lg	Lg	06 03 30.8	
	comp=Z,4.8nm,0.3s,baz=217,slow=30,SNR=13						
KONS	**Konsvik**	**3.04**	**262**	*e*P	**Pn**	**06 02 50.7**	**+2.7**
KONS	**Konsvik**	**3.04**	**262**	*e*P	**Pn**	**06 02 50.7**	**+2.7**
UMAU	**Umeaa**	**3.23**	**180**	*e*P	**Pn**	**06 02 52.2**	**+1.5**
UMAU				*e*S	**Sn**	**06 03 30.9**	**+1.1**
FIA0	**FINESS Array S**	**6.15**	**155**	Pn	**Pn**	**06 03 33.6**	**+2.9**
	baz=347,slow=14						
FIA0				Sn	**Sn**	**06 04 42.9**	**+1.1**
	baz=348,slow=28						
FIA0				Lg	Lg	06 05 11.1	
	baz=352,slow=22						
FIA0	**FINESS Array S**	**6.15**	**155**	Pn	**Pn**	**06 03 33.6**	**+2.9**
	baz=347,slow=14						
FIA0				Sn	**Sn**	**06 04 42.9**	**+1.1**
	baz=348,slow=28						
FIA0				Sg	**Sg**	**06 05 11.1**	**-5.1**
	baz=352,slow=22						
FIA0	**FINESS Array S**	**6.15**	**155**	*e*P	**Pn**	**06 03 33.6**	**+2.9**
FIA0				*e*S	**Sn**	**06 04 42.9**	**+1.1**
FIA0				*e*SG	**Sg**	**06 05 11.1**	**-5.1**
FINES	**FINESS Array B**	**6.15**	**155**	Pn	**Pn**	**06 03 33.7**	**+2.9**
	comp=Z,0.3nm,0.3s,baz=346,slow=14,SNR=11						
FINES				Pg	**Pb**	**06 03 44.5**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=348,slow=12,SNR=5.6						
FINES				Sn	**Sn**	**06 04 43.2**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=345,slow=26,SNR=8.7						
FINES				Lg	Lg	06 05 13.2	
	comp=Z,0.6nm,0.3s,baz=344,slow=31,SNR=4.7						
NOA	**NORSAR Array B**	**7.35**	**219**	Pn	**Pn**	**06 03 49.3**	**+2.0**
	comp=Z,0.0nm,0.3s,baz=308,slow=24,SNR=1.1						
NOA				Lg	Lg	06 05 52.5	
	comp=Z,0.1nm,0.3s,baz=322,slow=24,SNR=3.9						
HFS	**Hagfors**	**7.64**	**207**	Pn	**Pn**	**06 03 51.9**	**+0.6**
	baz=26,slow=12						
HFS				Sn	**Sn**	**06 05 17.2**	**-1.2**
	baz=32,slow=28						
HFS	**Hagfors**	**7.64**	**207**	Pn	**Pn**	**06 03 51.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=24,slow=11,SNR=5.8						
HFS				Sn	**Sn**	**06 05 17.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=24,slow=22,SNR=3.5						
HFS	**Hagfors**	**7.64**	**207**	Pn	**Pn**	**06 03 51.9**	**+0.6**
	baz=26,slow=12						
HFS				Sn	**Sn**	**06 05 17.2**	**-1.2**
	baz=32,slow=28						
HFS	**Hagfors**	**7.64**	**207**	*e*P	**Pn**	**06 03 51.9**	**+0.6**
HFS				*e*S	**Sn**	**06 05 17.2**	**-1.2**
SPITS	**Spitsbergen Ar**	**11.20**	**355**	Pn	**Pn**	**06 04 37.7**	**-2.2**
	baz=171,slow=19,SNR=3.3						

*JMA **27** 06:13:41.9±0.3, 30°.52N×139°.24E, h419km, M3.9*
*ISCJB **27** 06:13:43.9±0.6, 30°.60N±0°.05×139°.3E±0°.1, h400km, mb3.5/7, Error ellipse: s-maj=12.6km s-min=7.0km az=174.3*
*IDC **27** 06:13:45.0±1.0, 30°.49N×138°.72E, h365km±14km, mb3.3/7, mb1 3.3/13, mb1mx3.1/63, mbtmp4.0/13, Error ellipse: s-maj=32.3km s-min=12.0km az=68.0*
ISC 27 06:13:44.5±1.0, **30°.60N**±0°.09×**139°.3E**±0°.1, **h400km, n24, σ2§39/27, mb3.5/7, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.54**	**10**	P	**Pn**	**06 14 44.0**	**0.0**
JHJ	**Hachijo jima 2**	**2.55**	**9**	P	**Pn**	**06 14 44.3**	**+0.2**
	46nm,0.3s,baz=270,slow=20,SNR=6.9						
JHJ				S	**S**	**06 15 30.6**	**-1.8**
	28nm,0.3s,baz=73,slow=22,SNR=3.5						
TK02	**Tokai 2**	**3.59**	**339**	P	**Pn**	**06 14 52.7**	**+0.3**
TTO1	**TONANKAI O.B.S**	**3.70**	**325**	P	**Pn**	**06 14 52.8**	**-0.5**
BSO1	**Boso 1**	**4.28**	**19**	P	**Pn**	**06 14 59.0**	**+0.5**
BSO1				*e*S	**S**	**06 15 58.3**	**-0.5**
CBIJ	**Chichi jima**	**4.30**	**143**	*e*S	**S**	**06 15 57.6**	**-2.8**
JIE	**Ise**	**4.38**	**331**	P	**Pn**	**06 14 59.9**	**-0.2**
JTNC	**Tanabenakahech**	**4.49**	**317**	P	**Pn**	**06 14 59.6**	**-1.6**
JRY	**Ryogami san**	**5.42**	**356**	P	**Pn**	**06 15 10.6**	**-0.1**
MJAR	**Matsushiro Arr**	**6.00**	**351**	P	**Pn**	**06 15 17.8**	**+0.8**
	0.3nm,0.3s,baz=173,slow=11,SNR=11						
MJAR				S	**S**	**06 16 26.0**	**-6.5**
	0.2nm,0.3s,baz=130,slow=22,SNR=4.2						
MAT	**Matsushiro**	**6.00**	**351**	P	**Pn**	**06 15 17.9**	**+0.9**
MAT				S	**S**	**06 16 31.5**	**-1.0**
JMK	**Ichinoseki**	**8.48**	**10**	*e*S	**S**	**06 17 19.9**	**-3.6**
KSRS	**Korea Array**	**11.66**	**309**	P	**Pn**	**06 16 18.8**	**-2.7**
	0.3nm,0.3s,baz=119,slow=11,SNR=6.6						
ASAJ	**Asahikawa**	**13.74**	**10**	P	**Pn**	**06 16 48.7**	**+3.0**
	1.2nm,0.3s,baz=228,slow=12,SNR=4.2						
USRK	**Ussuriysk Ar.**	**14.76**	**339**	P	**P**	**06 16 55.8**	**+1.6**
	0.2nm,0.3s,baz=126,slow=9.7,SNR=4.2						
KLR	**Kul'dur**	**19.48**	**345**	P	**P**	**06 17 45.6**	**+1.8**
	0.4nm,0.3s,baz=174,slow=9.0,SNR=7.6						
SONM	**Songino Array**	**30.47**	**314**	P	**P**	**06 19 22.3**	**+0.1**
	0.9nm,0.4s,baz=128,slow=11,SNR=5.1						
ZALV	**Zalesovo Beam**	**45.21**	**317**	P	**P**	**06 21 24.8**	**+1.4**
	1.9nm,0.5s,baz=101,slow=9.3,SNR=2.6						
MKAR	**Makanchi Array**	**46.33**	**307**	P	**P**	**06 21 33.2**	**+0.9**
	0.6nm,0.6s,baz=96,slow=8.7,SNR=6.7						
KURBB	**Kurchatov Arra**	**48.81**	**312**	P	**P**	**06 21 51.8**	**+0.8**
	1.7nm,0.7s,baz=92,slow=9.3,SNR=14						
WRA	**Warramunga Arr**	**50.47**	**186**	P		06 22 05.9	+2.2
	2.6nm,0.6s,baz=1.0,slow=8.6,SNR=24						
WRA				PcP	**PcP**	**06 23 19.3**	**+4.2**
	0.9nm,1.0s,baz=354,slow=5.9,SNR=2.9						
BVAR	**Borovoye Array**	**53.78**	**316**	P	**P**	**06 22 29.1**	**+1.8**
	1.3nm,0.6s,baz=90,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**54.20**	**186**	P	P	06 22 33.0	+2.3
	1.3nm,0.5s,baz=4.8,slow=6.7,SNR=18						
LPAZ	**La Paz**	**151.17**	**67**	PKPbc	**PKPab**	**06 32 57.8**	**-4.2**
	0.6nm,0.7s,baz=314,slow=1.7,SNR=3.9						

IDC 27 06:15:03.4±3.5, **29°.96S×138°.86E, h0km, mb1 3.1/3, mb1mx3.0/33, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=132.0km s-min=16.5km az=48.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.03**	**130**	Pn	Pn	06 15 51.8	-0.9
	0.2nm,0.3s,baz=313,slow=14,SNR=2.6						
STKA				Pg	Pb	06 15 59.7	+1.4
	1.0nm,0.3s,baz=299,slow=17,SNR=8.3						
STKA				Sn	Sn	06 16 27.8	-2.0
	1.1nm,0.3s,baz=271,slow=19,SNR=3.5						
STKA				Lg	Lg	06 16 39.4	
	1.4nm,0.3s,baz=166,slow=22,SNR=4.4						
ASAR	**Alice Springs**	**7.67**	**324**	Pn	Pn	06 16 57.0	+0.5
	0.1nm,0.3s,baz=151,slow=12,SNR=3.7						
ASAR				Sn	Sn	06 18 21.1	-3.0
	0.2nm,0.3s,baz=154,slow=22,SNR=5.1						
WRA	**Warramunga Arr**	**10.78**	**337**	Pn	Pn	06 17 39.1	0.0
	0.1nm,0.3s,baz=158,slow=13,SNR=3.7						
WRA				Sn	Sn	06 19 40.6	0.0
	0.1nm,0.3s,baz=165,slow=22,SNR=3.5						

*ISCJB **27** 06:20:53.3±0.9, 30

TRUS	**Trudelj**	**1.27 352**	*e*Pg	**Pn**	**06 57 41.0**	**-0.2**
BBLS	**Lazići**	**1.27 315**	*e*Pg	**Pg**	**06 57 41.9**	**+0.4**
BBLS	**Lazići**	**1.27 315**	*e*Pg	**Pn**	**06 57 41.2**	**-0.2**
BBLS			*e*Sg	**Sg**	**06 57 58.5**	**+0.4**
UPM	**Unac-Piva**	**1.29 281**	*e*Pg	**Pn**	**06 57 41.6**	**-0.1**
UPM			*e*Sg	**Sg**	**06 57 58.9**	**+0.2**
DRME	**Dracevica, Mon**	**1.33 235**	*e*Pg	**Pn**	**06 57 41.5**	**-0.5**
DRME			*e*Sg	**Sg**	**06 58 00.3**	**+0.6**
ZAGS	**Zajecar**	**1.44 53**	*e*Pg	**Pb**	**06 57 44.1**	**0.0**
ZAGS			*e*Sg	**Sg**	**06 58 03.2**	**-0.1**
ZAPS	**Zavoj**	**1.49 77**	*e*Pg	**Pb**	**06 57 45.2**	**+0.1**
ZAPS			*e*Sg	**Sg**	**06 58 05.0**	**0.0**
BRY	**Bratogost**	**1.55 268**	*e*Pg	**Pb**	**06 57 45.9**	**-0.2**
BRY			*e*Sg	**Sg**	**06 58 06.5**	**-0.3**
KUBS	**Kucevo**	**1.63 27**	*e*Pg	**Pb**	**06 57 47.7**	**+0.2**
HAPS	**Han Pijesak,BI**	**1.67 313**	*e*Pg	**Pb**	**06 57 48.0**	**-0.1**
HAPS	**Han Pijesak,BI**	**1.67 313**	*e*Pn	**Pb**	**06 57 47.8**	**-0.3**
HAPS			*e*Sn	**Sb**	**06 58 10.0**	**+0.7**
TREB	**Trebinje**	**1.70 262**	*e*Pg	**Pb**	**06 57 48.8**	**+0.1**
TREB			*e*Sg	**Sg**	**06 58 13.0**	**+1.2**
TREB	**Trebinje**	**1.70 262**	*e*Pn	**Pb**	**06 57 48.5**	**-0.2**
TREB			*e*Sn	**Sb**	**06 58 10.5**	**+0.2**
TEKS	**Tekeris**	**1.78 333**	*e*Pg	**Pb**	**06 57 50.5**	**+0.5**
TEKS			*e*Sg	**Sg**	**06 58 13.9**	**-0.3**
TEKS	**Tekeris**	**1.78 333**	*e*Pn	**Pb**	**06 57 50.3**	**+0.3**
TEKS			*e*Sn	**Sb**	**06 58 12.3**	**-0.2**
VTS	**Vitosha**	**1.94 99**	*e*Pg	**Pn**	**06 57 51.2**	**+0.6**
VTS			*e*Sg	**Sg**	**06 58 18.9**	**-0.5**
VTS	**Vitosha**	**1.94 99**	⇓*i*P	**Pn**	**06 57 51.2**	**+0.6**
VTS	**Vitosha**	**1.94 99**	S	**Sg**	**06 58 18.4**	**-1.0**
MDVR	**Moldovita**	**1.98 23**	⇑*i*P	**Pn**	**06 57 51.5**	**+0.5**
MDVR	**Moldovita**	**1.98 23**	S	**Sb**	**06 58 19.0**	**+0.8**
STON	**Ston**	**2.16 269**	*e*Pn	**Pn**	**06 57 54.3**	**+0.8**
STON			*e*Sn	**Sb**	**06 58 22.0**	**-1.5**
HERR	**Herculane**	**2.31 33**	⇑*i*P	**Pn**	**06 57 56.9**	**+1.5**
HERR	**Herculane**	**2.31 33**	S	**Sn**	**06 58 24.3**	**+0.3**
BANR	**Banloc**	**2.44 8**	S	**Sb**	**06 58 29.9**	**-1.7**
BZS	**Buzias**	**2.74 14**	⇑*i*P	**Pn**	**06 58 02.3**	**+0.8**
BZS	**Buzias**	**2.74 14**	S	**Sb**	**06 58 38.2**	**-2.0**
GZR	**Gura Zlata**	**2.87 32**	⇓*i*P	**Pn**	**06 58 04.1**	**+0.8**

NEIC ***27*** *07:03:44.6±0.0, 58.°36N×133.°55W, h1km, ML2.7(OTT), After OTT.*

PGC 27 07:03:44.6±4.9, 58.°36N×133.°55W, h1km, ML2.7/7, 51km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.45**	**260**	*e*Pg	Pg	07 03 52.1	-1.0
JIS				*e*Sg	Sg	07 03 58.6	-0.3
BESE	**Bessie Mountai**	**0.72**	**288**	*e*Pg	Pg	07 03 57.5	-0.8
BESE				*e*Sg	Sg	07 04 07.7	0.0
BESE	**Bessie Mountai**	**0.72**	**288**	P	Pg	07 03 57.5	-0.9
SKAG	**Skagway**	**1.44**	**321**	*e*Pn	Pn	07 04 10.4	-1.4
SIT	**Sitka**	**1.62**	**217**	*e*Pn	Pn	07 04 13.6	-0.5
SIT				*e*Sn	Sn	07 04 34.0	-1.6
PLBC	**Pleasant Camp**	**1.83**	**308**	*e*Pn	Pn	07 04 17.2	+0.1
PLBC				*e*Sg	Sb	07 04 42.0	-0.2
PLBC	**Pleasant Camp**	**1.83**	**308**	Pg	Pn	07 04 17.2	+0.1
PLBC				Sg	Sb	07 04 42.0	-0.2
DLBC	**Dease Lake**	**1.86**	**86**	*e*Pn	Pn	07 04 16.8	-0.7
DLBC				*e*Sn	Sn	07 04 41.3	-0.4
DLBC	**Dease Lake**	**1.86**	**86**	Pn	Pn	07 04 16.7	-0.9
DLBC				Pg	Pb	07 04 17.7	-1.6
DLBC				Sg	Sn	07 04 42.2	+0.5
WRAK	**Wrangell Islan**	**2.05**	**161**	*e*Pn	Pn	07 04 16.5	-3.6
WRAK				*e*Sn	Sn	07 04 46.9	+0.5
WHY	**Whitehorse**	**2.41**	**344**	*e*Sg	Sb	07 04 59.3	+0.4
WHY	**Whitehorse**	**2.41**	**344**	Sg	Sb	07 04 59.3	+0.4
HYT	**Haines Junctio**	**3.19**	**323**	*e*Pn	Pn	07 04 34.4	-1.5
HYT				*e*Sn	Sn	07 05 16.3	+1.7
HYT	**Haines Junctio**	**3.19**	**323**	Sg	Sb	07 05 23.9	+2.6
YUK7	**Dusty Glacier**	**3.20**	**315**	Sg	Sg	07 05 24.7	-2.6
YUK5	**Granite Creek**	**3.53**	**324**	Sg	Sb	07 05 33.9	+2.5
YUK6	**Outpost Mounta**	**3.56**	**319**	Sg	Sb	07 05 34.5	+2.3
YUK4	**Talbot Arm**	**3.95**	**322**	Sg	Sg	07 05 48.4	-2.8
DIB	**Dawson Inlet,**	**5.20**	**173**	*e*Pn	Pn	07 05 02.3	-1.1
DAWY	**Dawson**	**6.38**	**336**	Sg	Sg	07 07 01.3	-8.0

IDC 27 07:04:57.6±7.0, 20.°16S×179.°15W, h688km±84km, mb2.7/5, mb1 3.1/5, mb1mx2.8/28, mbtmp3.8/5, Error ellipse: s-maj=117.2km s-min=29.0km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.55**	**257**	P	P	07 12 04.8	0.0
ASAR	1.7nm,0.5s,baz=96,slow=7.5,SNR=39			PcP	PcP	07 13 36.6	+0.5
	0.3nm,0.5s,baz=110,slow=3.9,SNR=4.5						
WRA	**Warramunga Arr**	**43.58**	**262**	P	P	07 12 04.9	-0.2
	0.9nm,0.3s,baz=92,slow=7.6,SNR=19						
NVAR	**Mina Array Bea**	**81.52**	**44**	P	P	07 16 06.5	-0.1
	0.2nm,0.5s,baz=221,slow=8.0,SNR=2.7						
TXAR	**Lajitas Array**	**87.78**	**58**	P	P	07 16 36.9	0.0
	0.3nm,0.8s,baz=199,slow=4.8,SNR=3.3						
ILAR	**Eielson Array**	**88.23**	**13**	P	P	07 16 38.5	+0.6
	0.1nm,0.5s,baz=225,slow=6.8,SNR=4.1						
AKASG	**Malin Array Be**	**142.19**	**330**	PKP	PKPdf	07 23 12.1	-1.9
	1.3nm,0.3s,baz=42,slow=4.4,SNR=3.1						

JMA ***27*** *07:07:26.2±0.4, 37.°03N×135.°19E, h369km±4km, M2.9*
ISCJB ***27*** *07:07:27.1±0.4, 37.°12N±0.°07×135.°18E±0.°08, h350km, mb2.8/3, Error ellipse: s-maj=9.5km s-min=8.7km az=149.0*
IDC ***27*** *07:07:27.3±1.1, 36.°97N×135.°18E, h364km±13km, mb2.6/3, mb1 2.9/8, mb1mx2.7/36, mbtmp3.5/8, Error ellipse: s-maj=21.7km s-min=18.0km az=85.0*

ISC 27 07:07:26.9±0.9, 37.°01N±0.°08×135.°21E±0.°08, h350km, n23, σ1§25/24, mb2.8/3, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.38**	**183**	P	**Pn**	**07 08 15.8**	**+1.2**
JKSM	**Kasumi**	**1.49**	**197**	P	**Pn**	**07 08 16.1**	**+1.0**
JOI	**OKI**	**1.73**	**246**	P	**Pn**	**07 08 18.0**	**+1.5**
JWT	**Wachi**	**1.73**	**175**	P	**Pn**	**07 08 17.7**	**+1.1**
JWT				*e*S	**S**	**07 08 57.8**	**+1.5**
JSZ	**Suzu**	**1.78**	**75**	P	**Pn**	**07 08 18.3**	**+1.6**
JNG	**Nsakai**	**2.40**	**104**	P	**Pn**	**07 08 22.9**	**+1.5**
MAT	**Matsushiro**	**2.46**	**100**	P	**Pn**	**07 08 22.2**	**+0.5**
MAT	**Matsushiro**	**2.46**	**100**	P	**Pn**	**07 08 22.8**	**+1.1**
MJAR	**Matsushiro Arr**	**2.46**	**100**	P	**Pn**	**07 08 23.2**	**+1.5**
	0.5nm,0.3s,baz=276,slow=9.7,SNR=44						
JHS	**Saijyo**	**2.63**	**221**	P	**Pn**	**07 08 24.2**	**+1.0**
JSD	**Sado**	**2.63**	**66**	P	**Pn**	**07 08 24.4**	**+1.4**
JIE	**Ise**	**2.89**	**155**	P	**Pn**	**07 08 26.7**	**+1.3**
JHK	**Hiroka**	**3.06**	**84**	P	**Pn**	**07 08 27.6**	**+0.9**
JMM	**Marumori**	**4.53**	**77**	P	**Pn**	**07 08 42.1**	**+0.7**
JTO	**Tosashimizu**	**4.59**	**206**	P	**Pn**	**07 08 43.2**	**+1.0**
BSO1	**Boso 1**	**5.25**	**115**	P	**Pn**	**07 08 48.4**	**-0.3**
JNU	**Nakatsue**	**5.26**	**224**	P	**Pn**	**07 08 50.1**	**+0.6**
	0.5nm,0.3s,baz=0.0,slow=14,SNR=3.8						
KSRS	**Korea Array**	**5.83**	**277**	P	**Pn**	**07 08 57.3**	**+1.6**
	0.5nm,0.3s,baz=96,slow=12,SNR=17						
USRK	**Ussuriysk Ar.**	**7.58**	**342**	P	**Pn**	**07 09 17.4**	**+1.4**
	0.5nm,0.3s,baz=157,slow=8.7,SNR=8.7						
KLR	**Kul'dur**	**12.47**	**349**	P	**P**	**07 10 13.1**	**-0.4**
	0.3nm,0.3s,baz=170,slow=18,SNR=3.9						
MKAR	**Makanchi Array**	**39.90**	**301**	P	**P**	**07 14 26.7**	**-1.3**
	0.3nm,0.4s,baz=85,slow=10.0,SNR=4.7						
ILAR	**Eielson Array**	**52.16**	**32**	P	**P**	**07 16 02.0**	**-0.3**
	0.2nm,0.5s,baz=290,slow=9.4,SNR=4.7						
WRA	**Warramunga Arr**	**56.65**	**181**	P	**P**	**07 16 33.6**	**-1.3**
	0.5nm,0.8s,baz=12,slow=7.8,SNR=4.0						

NIED ***27*** *07:13:00, 37.°00N×139.°80E, h5km, Mw3.9 Best double couple: M0:6.95000×10^14 NP1:φs154.00000°, δ44.00000°, λ24.00000°. NP2:φs47.00000°, δ74.00000°, λ131.00000°.*
IDC ***27*** *07:13:04.0±0.7, 37.°05N×139.°81E, h0km, mb3.8/8, mb1 4.0/12, mb1mx3.8/46, mbtmp3.8/12, ML3.4/4, MS2.9/5, Ms1 2.9/5, ms1mx2.6/41, Error ellipse: s-maj=19.3km s-min=12.4km az=145.0*
ISCJB ***27*** *07:13:04.1±0.7, 36.°97N±0.°02×139.°82E±0.°03, h13km±4km, mb4.1/16, MS2.9/3, Error ellipse: s-maj=4.5km s-min=3.4km az=144.8*
JMA ***27*** *07:13:04.5, 36.°98N×139.°78E, h7km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs56.00000°, δ86.00000°, λ128.00000°. NP2: φs150.00000°, δ38.00000°, λ6.00000°. Principal axes: T Plg37.0000°, Azm359.0000°; N Plg38.0000°, Azm233.0000°; P Plg31.0000°, Azm115.0000°;*
JMA Felt IV J1.
NEIC ***27*** *07:13:08.2±1.3, 37.°02N×139.°84E, h35km±2km, mb4.4/9 Error ellipse: s-maj=7.9km s-min=5.5km az=87.0*

ISC 27 07:13:04.9±0.9, 37.°01N±0.°03×139.°80E±0.°03, h8km±6km, n55, σ1§23/59, mb4.1/16, MS2.6/3, 4C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSB	**Shiboa**	**0.11**	**114**	⇓P	**Pg**	**07 13 07.2**	**-0.2**
JSB				S	**Sg**	**07 13 09.2**	**0.0**
JFY	**Yanaizu**	**0.40**	**349**	⇑P	**Pb**	**07 13 13.1**	**-1.1**
JFY				S	**Sb**	**07 13 18.9**	**-1.6**
JKT	**Katashina**	**0.51**	**241**	⇓P	**Pg**	**07 13 13.8**	**-0.9**
JKT				S	**Sg**	**07 13 20.4**	**-0.9**
JAG	**Ashikaga**	**0.65**	**205**	⇑P	**Pg**	**07 13 16.1**	**-1.3**
JFT	**Otama**	**0.66**	**40**	⇑P	**Pb**	**07 13 18.0**	**-0.7**
JFT				S	**Sb**	**07 13 27.5**	**-0.5**
JHK	**Hiroka**	**0.67**	**291**	⇓P	**Pg**	**07 13 17.5**	**-0.3**
JHK				S	**Sg**	**07 13 26.2**	**-0.3**
JNS	**Sasagawa**	**0.89**	**335**	⇑P	**Pb**	**07 13 22.0**	**-0.6**
JNS				S	**Sb**	**07 13 33.9**	**-0.7**
JFK	**Kawauchi**	**0.93**	**67**	P	**Pg**	**07 13 22.3**	**-0.4**
JFK				S	**Sg**	**07 13 34.6**	**-0.2**
MJAR	**Matsushiro Arr**	**1.36**	**250**	Pg	**Pn**	**07 13 29.5**	**-0.6**
	19nm,0.3s,baz=79,slow=16,SNR=232						
MJAR				Lg	Lg	07 13 47.2	
	4.1nm,0.3s,baz=80,slow=26,SNR=7.7						
MJAR				LR	LR	07 14 20.5	
	comp=Z,271nm,18.2s,baz=65,slow=56						
MAJO	**Matsushiro**	**1.36**	**250**	*e*Pn	**Pn**	**07 13 30.2**	**+0.1**
MAJO				*e*Sn	**Sb**	**07 13 48.1**	**0.0**
MAT	**Matsushiro**	**1.36**	**250**	P	**Pn**	**07 13 29.9**	**-0.2**
MAT				S	**Sb**	**07 13 47.0**	**-1.1**
MJB9	**Matsu-Tunnel**	**1.36**	**251**	*e*Pn	**Pn**	**07 13 30.1**	**0.0**
MJB9				*e*Sn	**Sb**	**07 13 47.7**	**-0.5**
INU	**Inuyama**	**2.80**	**234**	*e*Pn	**Pn**	**07 13 50.8**	**+1.0**
INU				*e*Sn	**Sn**	**07 14 22.8**	**-0.9**
JHJ	**Hachijo jima 2**	**3.88**	**180**	Pn	**Pn**	**07 14 04.6**	**-0.2**
	31nm,0.3s,baz=264,slow=18,SNR=6.5						
JHJ				Sn	**Sn**	**07 14 48.5**	**-2.0**
	20nm,0.3s,baz=73,slow=19,SNR=2.1						
JHJ2	**Mitsune**	**3.89**	**180**	*e*Pn	**Pn**	**07 14 04.2**	**-0.7**
JHJ2				*e*Sn	**Sn**	**07 14 50.1**	**-0.6**
ERM	**Erimo**	**5.63**	**26**	*e*Pn	**Pn**	**07 14 28.5**	**-0.3**
ERM				*e*Sn	**Sn**	**07 15 30.4**	**-3.1**
ASAJ	**Asahikawa**	**7.41**	**16**	LR	LR	07 18 40.1	
	comp=Z,35nm,18.3s,baz=56,slow=46						
JNU	**Nakatsue**	**8.28**	**245**	Pn	**Pn**	**07 15 07.3**	**+2.1**
	0.2nm,0.3s,baz=100,slow=6.1,SNR=2.9						
JNU	**Nakatsue**	**8.28**	**245**	*e*Pn	**Pn**	**07 15 06.5**	**+1.3**
USRK	**Ussuriysk Ar.**	**9.31**	**323**	Pn	**Pn**	**07 15 22.9**	**+3.5**
	0.2nm,0.3s,baz=156,slow=11,SNR=3.6						
KSRS	**Korea Array**	**9.48**	**276**	Pn	**Pn**	**07 15 24.4**	**+2.7**
	0.5nm,0.3s,baz=90,slow=14,SNR=6.8						
KSRS				LR	LR	07 18 56.6	
	comp=Z,65nm,18.0s,baz=102,slow=37						
KS15	**Wonju Array Si**	**9.51**	**276**	*e*Pn	**Pn**	**07 15 23.0**	**+0.9**
KLR	**Kul'dur**	**13.54**	**337**	Pn	**Pn**	**07 16 18.6**	**+1.5**
	0.1nm,0.3s,baz=132,slow=15,SNR=3.1						
JOW	**Kunigami**	**14.09**	**227**	*e*Pn	**Pn**	**07 16 28.1**	**+3.4**
PETK	**Petropavlovsk-**	**20.37**	**32**	LR	LR	07 26 10.2	
	comp=Z,27nm,18.3s,baz=206,slow=39						
MA2	**Magadan**	**23.67**	**14**	LR	LR	07 29 59.2	
	comp=Z,21nm,18.1s,baz=250,slow=43						
H11N2	**WAKE ISLAND Hy**	**29.26**	**119**	T	T	07 49 10.9	
	baz=313,slow=75,SNR=43						
H11N1	**WAKE ISLAND Hy**	**29.27**	**119**	T	T	07 49 10.2	
	baz=313,slow=75,SNR=39						
H11N3	**WAKE ISLAND Hy**	**29.28**	**119**	T	T	07 49 11.3	
	baz=313,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	**29.95**	**121**	T	T	07 49 58.9	
	baz=314,slow=75,SNR=34						
H11S3	**WAKE ISLAND Hy**	**29.95**	**121**	T	T	07 50 00.6	
	baz=314,slow=75,SNR=23						
H11S2	**WAKE ISLAND Hy**	**29.96**	**121**	T	T	07 50 01.4	
	baz=314,slow=75,SNR=21						
MK32	**Makanchi Array**	**43.03**	**302**	*e*P	**P**	**07 21 04.3**	**-0.5**
MKAR	**Makanchi Array**	**43.03**	**302**	P	**P**	**07 21 04.3**	**-0.5**
	0.1nm,0.5s,baz=88,slow=9.1,SNR=2.5						
KURK	**Kurchatov**	**44.93**	**308**	*e*P	**P**	**07 21 19.5**	**-0.4**
	2.4nm,0.8s						
ILAR	**Eielson Array**	**50.20**	**32**	P	**P**	**07 21 59.8**	**-0.9**
	0.6nm,0.7s,baz=273,slow=6.7,SNR=9.1						
ILB	**Eielson Array**	**50.20**	**32**	*e*P	**P**	**07 21 59.5**	**-1.3**
	10nm,1.8s						
MTN	**Manton Dam**	**50.26**	**191**	*e*P	**P**	**07 22 02.2**	**+0.6**
	8.1nm,1.1s						
PRP	**Porcupine Dome**	**50.73**	**31**	*e*P	**P**	**07 22 04.1**	**-0.8**
	11nm,2.0s						
EGAK	**Eagle**	**52.64**	**32**	*e*P	**P**	**07 22 19.5**	**+0.5**
	8.4nm,1.7s						
INK	**Inuvik**	**54.99**	**27**	*e*P	**P**	**07 22 36.2**	**+0.1**
	5.2nm,1.5s						
FITZ	**Fitzroy Crossi**	**56.42**	**196**	P	**P**	**07 22 48.5**	**+1.7**
	1.9nm,0.7s,baz=34,slow=7.3,SNR=5.1						
WB2	**Warramunga Arr**	**56.88**	**186**	*e*P	**P**	**07 22 49.2**	**-0.9**
	24nm,1.8s						
WR1	**Warramunga Arr**	**56.88**	**186**	*e*P	**P**	**07 22 49.4**	**-0.8**
WRA	**Warramunga Arr**	**56.88**	**186**	P	**P**	**07 22 49.4**	**-0.8**
	1.4nm,0.6s,baz=360,slow=6.7,SNR=11						
ABKAR	**Akbulak array**	**56.96**	**310**	*e*P	**P**	**07 22 50.0**	**-0.5**
	1.1nm,0.7s						
AS31	**Alice Springs**	**60.61**	**186**	*e*P	**P**	**07 23 15.6**	**-0.5**
	0.7nm,0.9s						
ASAR	**Alice Springs**	**60.61**	**186**	P	**P**	**07 23 16.9**	**+0.8**
	1.2nm,0.9s,baz=2.0,slow=6.4,SNR=8.0						
GNI	**Garni**	**70.68**	**306**	LR	LR	07 58 36.7	
	comp=Z,19nm,18.7s,baz=162,slow=39						
NB200	**NORSAR Array S**	**73.70**	**337**	*e*P	**P**	**07 24 38.5**	**-0.4**
NOA	**NORSAR Array B**	**73.70**	**337**	P	**P**	**07 24 38.5**	**-0.4**
	1.4nm,0.9s,baz=41,slow=5.9,SNR=2.7						
NV01	**Mina Array Sit**	**76.03**	**52**	*e*P	**P**	**07 24 54.4**	**+1.4**
NVAR	**Mina Array Bea**	**76.03**	**52**	P	**P**	**07 24 54.4**	**+1.4**
	0.3nm,0.6s,baz=286,slow=6.4,SNR=3.5						
TXAR	**Lajitas Array**	**91.15**	**51**	P	**P**	**07 26 11.2**	**+0.6**
	0.3nm,0.6s,baz=313,slow=3.4,SNR=6.4						
LPAZ	**La Paz**	**147.81**	**58**	PKPbc	**PKPbc**	**07 32 51.7**	**+0.2**
	0.6nm,0.8s,baz=270,slow=4.0,SNR=2.8						

ISCJB ***27*** *07:21:39.3±0.3, 11.°67N±0.°04×140.°36E±0.°06, h43km, mb4.4/55, Error ellipse: s-maj=7.9km s-min=5.6km az=10.0*
NEIC ***27*** *07:21:45.0±1.5, 11.°67N×140.°48E, h78km±7km, mb4.5/43, Error ellipse: s-maj=17.4km s-min=13.8km az=141.0*
IDC ***27*** *07:21:47.2±2.8, 11.°65N×140.°50E, h101km±26km, mb3.9/16, mb1 4.0/18, mb1mx3.8/48, mbtmp4.2/18, MS2.9/5, Ms1 3.0/5, ms1mx2.7/36, Error ellipse: s-maj=21.3km s-min=13.1km az=89.0*

ISC 27 07:21:41.1±0.5, 11.°64N±0.°07×140.°29E±0.°08, h43km, n83, σ1§19/78, mb4.5/55, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.87**	**66**	P	**Pn**	**07 22 56.1**	**+4.2**
	15nm,0.3s,baz=221,slow=20,SNR=3.4						
GUMO				S	**Sn**	**07 23 47.7**	**+0.6**
	51nm,0.3s,baz=198,slow=20,SNR=5.8						
GUMO				LR	LR	07 25 00.2	
	comp=Z,63nm,18.6s,baz=266,slow=41						
GUMO	**Guam**	**4.87**	**66**	*e*Pn	**Pn**	**07 22 53.5**	**+1.6**
GUMO				*e*Sn	**Sn**	**07 23 46.0**	**-1.1**
JAY	**Jayapura**	**14.07**	**178**	P	**P**	**07 25 02.7**	**-2.1**
	0.5nm,0.3s,baz=15,slow=17,SNR=2.3						
JAY				S	**Sn**	**07 27 34.7**	**+1.9**
	0.5nm,0.3s,baz=27,slow=18,SNR=3.2						
JAY				LR	LR	07 30 06.3	
	comp=Z,57nm,20.9s,baz=32,slow=36						
PATS	**Pohnpei**	**18.41**	**103**	*e*P	**P**	**07 25 51.2**	**-1.7**
	21nm,1.0s						
JNU	**Nakatsue**	**23.06**	**339**	LR	LR	07 34 24.1	
	comp=Z,21nm,20.5s,baz=170,slow=33						
MJAR	**Matsushiro Arr**	**24.87**	**356**	P	**P**	**07 26 58.5**	**-1.3**
	1.5nm,0.5s,baz=182,slow=12,SNR=5.4						
MAJO	**Matsushiro**	**24.87**	**356**	*e*P	**P**	**07 26 58.5**	**-1.4**
H11S3	**WAKE ISLAND Hy**	**26.36**	**72**	T	T	07 56 04.6	
	baz=253,slow=75						
H11S1	**WAKE ISLAND Hy**	**26.38**	**72**	T	T	07 56 09.0	
	baz=253,slow=75						
H11S2	**WAKE ISLAND Hy**	**26.38**	**72**	T	T	07 56 06.1	
	baz=253,slow=75						
H11N1	**WAKE ISLAND Hy**	**26.81**	**69**	T	T	07 56 31.8	
	baz=261,slow=74						
H11N2	**WAKE ISLAND Hy**	**26.82**	**69**	T	T	07 56 34.3	
	baz=261,slow=74						
H11N3	**WAKE ISLAND Hy**	**26.83**	**69**	T	T	07 56 38.8	
	baz=261,slow=74						
KSRS	**Korea Array**	**28.00**	**339**	LR	LR	07 36 55.2	
	comp=Z,35nm,20.1s,baz=218,slow=32						
WB2	**Warramunga Arr**	**31.92**	**191**	*e*P	**P**	**07 28 03.2**	**+0.4**
	2.1nm,1.0s						
WR1	**Warramunga Arr**	**31.92**	**191**	*e*P	**P**	**07 28 02.9**	**0.0**
WRA	**Warramunga Arr**	**31.92**	**191**	P	**P**	**07 28 02.9**	**0.0**
	0.5nm,0.5s,baz=0.3,slow=8.3,SNR=6.9						
WC3	**Warramunga Arr**	**31.93**	**191**	*e*P	**P**	**07 28 02.9**	**-0.1**
	5.1nm,1.4s						
AS31	**Alice Springs**	**35.64**	**190**	*e*P	**P**	**07 28 36.6**	**+1.4**
	0.4nm,0.8s						
ASAR	**Alice Springs**	**35.64**	**190**	P	**P**	**07 28 36.1**	**+0.9**
	0.3nm,0.6s,baz=19,slow=13,SNR=7.2						
KLR	**Kul'dur**	**38.14**	**351**	P	**P**	**07 28 58.0**	**+1.8**
	7.4nm,0.6s,baz=142,slow=6.3,SNR=17						
STKA	**Stephens Creek**	**43.28**	**178**	P	**P**	**07 29 38.8**	**0.0**
	1.2nm,0.5s,baz=4.8,slow=12,SNR=3.5						
STKA	**Stephens Creek**	**43.28**	**178**	*e*P	**P**	**07 29 39.1**	**+0.4**
	2.3nm,1.5s						
BBOO	**Buckleboo**	**44.38**	**185**	*e*P	**P**	**07 29 48.5**	**+0.9**
	13nm,1.4s						
SONA0	**Songino Array**	**45.89**	**328**	*e*P	**P**	**07 30 01.0**	**+1.5**
SONA0				*e*PcP	**PcP**	**07 31 35.4**	**-0.8**
SONM	**Songino Array**	**45.89**	**328**	P	**P**	**07 30 01.0**	**+1.5**
	0.7nm,0.6s,baz=142,slow=7.3,SNR=3.3						
SONM				PcP	**PcP**	**07 31 35.4**	**-0.8**
	0.9nm,0.6s,baz=148,slow=4.6,SNR=3.7						
CAN	**Canberra**	**47.42**	**170**	*e*P	**P**	**07 30 12.7**	**+1.2**
	18nm,1.3s						
MK31	**Makanchi Array**	**59.85**	**318**	*e*P	**P**	**07 31 43.9**	**+1.4**
	1.0nm,0.6s						
MK32	**Makanchi Array**	**59.85**	**318**	*e*P	**P**	**07 31 43.7**	**+1.3**
MKAR	**Makanchi Array**	**59.85**	**318**	P	**P**	**07 31 43.7**	**+1.3**
	1.1nm,0.5s,baz=96,slow=9.1,SNR=15						
MAKZ	**Makanchi**	**60.06**	**318**	*e*P	**P**	**07 31 45.2**	**+1.3**
	2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**60.66**	**326**	P	**P**	**07 31 47.0**	**-0.8**
	1.2nm,0.4s,baz=119,slow=8.6,SNR=3.7						
ZAA1	**Zalesovo Array**	**60.67**	**326**	*e*P	**P**	**07 31 47.0**	**-0.8**
KURK	**Kurchatov**	**63.24**	**321**	*e*P	**P**	**07 32 05.7**	**+0.5**
	6.9nm,0.7s						
KURBB	**Kurchatov Arra**	**63.27**	**321**	P	**P**	**07 32 06.2**	**+0.8**
	3.8nm,0.7s,baz=106,slow=6.9,SNR=39						
RDOG	**Red Dog Mine**	**67.21**	**20**	*e*P	**P**	**07 32 30.1**	**-0.5**
	8.2nm,0.6s						
BRVK	**Borovoye**	**68.78**	**323**	*e*P	**P**	**07 32 41.5**	**+0.8**
	4.2nm,0.9s						
BPAW	**Bear Paw Mtn.**	**70.35**	**26**	*e*P	**P**	**07 32 49.9**	**-0.4**
	4.1nm,0.8s						
MLY	**Manley**	**70.69**	**25**	*e*P	**P**	**07 32 52.2**	**-0.2**
	5.2nm,0.6s						
RND	**Reindeer**	**71.12**	**27**	*e*P	**P**	**07 32 53.2**	**-1.8**
	4.0nm,0.8s						
MCK	**McKinley**	**71.15**	**26**	*e*P	**P**	**07 32 54.2**	**-0.9**
	11nm,1.4s						
CCB	**Clear Creek Bu**	**71.83**	**26**	*e*P	**P**	**07 32 57.9**	**

0.5nm,0.8s,baz=100,slow=16,SNR=4.6
WRA Warramunga Arr 43.26 263 P P 07 33 09.3 -0.9
2.3nm,0.3s,baz=93,slow=7.4,SNR=72
NVAR Mina Array Bea 82.10 44 P P 07 37 17.0 -0.1
0.2nm,0.4s,baz=224,slow=7.5,SNR=3.4
TXAR Lajitas Array 88.29 58 P P 07 37 47.5 +0.7
0.2nm,0.6s,baz=240,slow=7.1,SNR=2.7
AKASG Malin Array Be 142.56 330 PKP PKPdf 07 44 19.4 -2.9
0.8nm,0.3s,baz=45,slow=4.3,SNR=2.9

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*ISCJB **27** 07:34:27.4±0.9, 20°.6S±0°.2×169°.5E±0°.1, h75km, mb3.7/7, Error ellipse: s-maj=30.3km s-min=10.9km az=149.6*
*IDC **27** 07:34:28.7±1.0, 20°.48S×169°.56E, h75km±7km, mb3.5/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.9/8, MS3.0/2, Ms1 3.0/2, ms1mx2.7/18, Error ellipse: s-maj=31.1km s-min=19.1km az=146.0*
ISC 27 07:34:28.7±0.9, 20°.5S±0°.2×169°.5E±0°.1, h75km, n15, σ1§23/17, mb3.8/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.23**	**241**	P	**Pn**	**07 35 17.9**	**+0.5**
	32nm,0.3s,baz=107,slow=10,SNR=832						
DZM				S	**Sn**	**07 35 54.1**	**-0.7**
	247nm,0.3s,baz=134,slow=21,SNR=19						
DZM				LR	LR	07 36 34.8	
	comp=Z,247nm,19.8s,baz=44,slow=38						
DZM	**Mont Dzumac**	**3.23**	**241**	*e*Pn	**Pn**	**07 35 17.8**	**+0.5**
	293nm,0.7s						
DZM				*e*Sn	**Sn**	**07 35 52.3**	**-2.5**
	778nm,0.8s						
DZM				*e*LR	LR	07 36 00.8	
	comp=Z,370nm,27.9s						
HNR	**Honiara**	**14.37**	**319**	LR	LR	07 42 39.9	
	comp=Z,56nm,18.1s,baz=154,slow=34						
CTA	**Charters Tower**	**21.80**	**267**	P	**P**	**07 39 17.1**	**+2.3**
	1.2nm,0.3s,baz=74,slow=7.4,SNR=3.5						
CTA				pP	**pwP**	**07 39 33.8**	**-1.6**
	3.2nm,0.7s,baz=96,slow=11,SNR=3.0						
STKA	**Stephens Creek**	**27.39**	**240**	pP	pP	07 40 23.9	+0.3
	0.6nm,0.4s,baz=58,slow=13,SNR=1.4						
WRA	**Warramunga Arr**	**32.96**	**265**	P	**P**	**07 40 56.3**	**-0.3**
	3.0nm,1.3s,baz=83,slow=9.3,SNR=5.6						
WRA				pP	**pP**	**07 41 13.7**	**+0.8**
	1.0nm,0.7s,baz=90,slow=8.6,SNR=2.6						
ASAR	**Alice Springs**	**33.07**	**258**	P	**P**	**07 40 58.1**	**+0.5**
	1.5nm,0.7s,baz=83,slow=9.1,SNR=18						
ASAR				pP	**pP**	**07 41 15.6**	**+1.1**
	4.9nm,0.7s,baz=83,slow=9.0,SNR=21						
PPT2	**Papeete2**	**38.73**	**93**	*e*LR	LR	07 52 42.6	
	comp=Z,69nm,26.8s						
VNDA	**Vanda**	**57.16**	**182**	P	**P**	**07 44 07.7**	**+0.4**
	0.3nm,0.5s,baz=11,slow=4.7,SNR=3.6						
CMAR	**Chiang Mai Arr**	**79.25**	**294**	pP	pP	07 46 47.7	+1.9
	0.6nm,0.3s,baz=132,slow=5.0,SNR=1.8						
SONM	**Songino Array**	**88.39**	**323**	P	**P**	**07 47 13.1**	**+0.6**
	0.6nm,0.4s,baz=130,slow=6.3,SNR=3.4						
SONM				pP	**pP**	**07 47 32.8**	**+0.2**
	0.7nm,0.6s,baz=130,slow=4.5,SNR=2.6						
NVAR	**Mina Array Bea**	**89.47**	**48**	P	**P**	**07 47 18.1**	**+0.2**
	0.3nm,0.6s,baz=222,slow=4.9,SNR=3.7						
ILAR	**Eielson Array**	**91.39**	**17**	P	**P**	**07 47 24.5**	**-1.4**
	0.4nm,0.9s,baz=231,slow=5.7,SNR=5.0						
ARCES	**ARCESS Array B**	**126.37**	**345**	PKP	**PKPdf**	**07 53 21.3**	**-0.9**
	0.9nm,0.7s,baz=29,slow=2.1,SNR=3.5						
GERES	**GERESS Array B**	**145.74**	**331**	PKPbc	**PKPdf**	**07 53 57.8**	**-0.9**
	3.0nm,0.9s,baz=70,slow=1.1,SNR=14						
GERES				pPKPbc	pPKPbc	07 54 19.9	0.0
	1.8nm,0.6s,baz=31,slow=2.5,SNR=4.8						

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*ATH **27** 07:35:50.3, 35°.77N×27°.34E, h26km±6km, ML2.7/1, Error ellipse: s-maj=14.2km s-min=1.1km az=140.0*
*ISK **27** 07:35:50.8, 35°.82N×27°.27E, h4km, ML2.3/8*
*ISCJB **27** 07:35:51.2±0.6, 35°.81N±0°.04×27°.27E±0°.04, h10km±6km, Error ellipse: s-maj=7.9km s-min=3.7km az=138.7*
*THE **27** 07:35:51.4, 35°.76N×27°.36E, h12km±2km, ML2.4/5, Error ellipse: s-maj=3.5km s-min=0.9km az=143.0*
ISC 27 07:35:50.9±1.1, 35°.77N±0°.04×27°.35E±0°.04, h16km±9km, n19, σ0§60/29, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.27**	**215**	P	**Pg**	**07 35 56.6**	**-0.2**
KARP				S	**Sb**	**07 36 01.6**	**-0.1**
KARP	**Karpathos**	**0.27**	**215**	P	**Pg**	**07 35 56.6**	**-0.2**
KARP				S	**Sb**	**07 36 01.8**	**+0.1**
KARP				AML	AML	07 36 02.3	
	comp=E,3092μm,0.3s						
KARP				AML	AML	07 36 02.5	
	comp=N,3765μm,0.2s						
ARG	**Arkhangelos**	**0.77**	**54**	PG	**Pb**	**07 36 06.7**	**+0.8**
ARG				SG	**Sn**	**07 36 18.5**	**+0.2**
ARG	**Arkhangelos**	**0.77**	**54**	P	**Pb**	**07 36 06.4**	**+0.5**
ARG				S	**Sb**	**07 36 16.8**	**+0.7**
ARG	**Arkhangelos**	**0.77**	**54**	P	**Pb**	**07 36 06.3**	**+0.5**
ARG				S	**Sg**	**07 36 16.3**	**+0.2**
DAT	**Datca**	**0.98**	**11**	PG	**Pg**	**07 36 09.5**	**-0.4**
DAT				SG	**Sb**	**07 36 23.1**	**+0.9**
ZKR	**Zakros**	**1.13**	**235**	PN	**Pg**	**07 36 12.5**	**-0.3**
ZKR	**Zakros**	**1.13**	**235**	P	**Pb**	**07 36 12.2**	**+0.1**
ZKR				S	**Sb**	**07 36 26.6**	**+0.1**
ZKR	**Zakros**	**1.13**	**235**	P	**Pn**	**07 36 12.3**	**+0.3**
BODT	**Bodrum**	**1.29**	**358**	PN	**Pb**	**07 36 15.1**	**+0.3**
ANAF	**Anafi Island**	**1.41**	**295**	P	**Pn**	**07 36 15.6**	**-0.3**
ANAF				S	**Sn**	**07 36 33.7**	**-0.4**
ANAF	**Anafi Island**	**1.41**	**295**	P	**Pn**	**07 36 16.1**	**+0.2**
DALY	**Dalyan (Mula)**	**1.48**	**45**	PN	**Pg**	**07 36 19.3**	**-0.2**
TURN	**Turunc**	**1.50**	**42**	PN	**Pn**	**07 36 14.9**	**-2.1**
NPS	**Neapolis**	**1.51**	**251**	P	**Pn**	**07 36 17.0**	**-0.2**
NPS				S	**Sn**	**07 36 36.3**	**-0.2**
LAST	**Lasithi**	**1.65**	**249**	P	**Pn**	**07 36 19.1**	**-0.1**
LAST				S	**Sn**	**07 36 39.7**	**-0.3**
LAST	**Lasithi**	**1.65**	**249**	P	**Pn**	**07 36 19.3**	**+0.1**
FETY	**Fethiye**	**1.65**	**58**	PN	**Pb**	**07 36 21.7**	**+0.9**
AKAS	**Kas**	**1.89**	**75**	PN	**Pb**	**07 36 25.5**	**+0.5**

ISC 27 07:57:40.0±1.7, 51°.57N±0°.08×16°.18E±0°.04, h0km, n17, σ0§65/29, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**175**	*e*Pg	**Pg**	**07 57 54.3**	**+0.4**
KSP				*e*Sg	**Sg**	**07 58 03.2**	**-0.2**
CHVC	**Chvalec**	**0.99**	**185**	*e*PG	**Pg**	**07 57 59.2**	**+0.4**
CHVC				*e*SG	**Sg**	**07 58 11.9**	**+0.3**
	comp=Z,18nm,0.3s						
OSTC	**Ostas**	**1.01**	**179**	*e*PG	**Pb**	**07 58 00.3**	**-0.1**
OSTC				*e*SG	**Sg**	**07 58 12.6**	**+0.1**
	comp=Z,30nm,0.4s						
UPC	**Upice**	**1.07**	**186**	*e*PG	**Pb**	**07 58 01.1**	**-0.2**
UPC				*e*SG	**Sg**	**07 58 14.1**	**-0.2**
	comp=Z,48nm,0.3s						
DPC	**Dobruska-Polom**	**1.22**	**176**	*e*PG	**Pg**	**07 58 03.0**	**-0.4**
DPC				*e*SG	**Sg**	**07 58 18.2**	**-1.0**
	comp=Z,10.0nm,0.3s						
PVCC	**Panska Ves**	**1.46**	**225**	*e*PG	**Pg**	**07 58 07.9**	**0.0**
PVCC				*e*SG	**Sg**	**07 58 26.2**	**-0.6**
	comp=Z,59nm,0.2s						
BRG	**Berggiesshubel**	**1.57**	**245**	PG	**Pg**	**07 58 10.1**	**0.0**
BRG				SG	**Sn**	**07 58 30.1**	**-0.1**
	16nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.88**	**209**	*e*SG	**Sg**	**07 58 40.1**	**-0.2**
	comp=Z,5.4nm,0.2s						
PRU	**Pruhonice**	**1.90**	**214**	*e*SG	**Sb**	**07 58 39.6**	**0.0**
	comp=Z,12nm,0.5s						
MORC	**Moravsky Berou**	**1.99**	**154**	*e*PN	**Pn**	**07 58 15.0**	**+0.1**
MORC				*e*SG	**Sb**	**07 58 42.2**	**-0.3**
CLL	**Collm**	**2.01**	**264**	*e*Pg	**Pn**	**07 58 15.0**	**-0.1**
CLL				*e*Sg	**Sb**	**07 58 43.0**	**+0.1**
	comp=Z,5.0nm,0.4s						
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*SG	**Sg**	**07 58 48.0**	**-0.6**
	comp=Z,8.4nm,0.4s						
VRAC	**Vranov**	**2.28**	**173**	*e*SG	**Sb**	**07 58 51.2**	**+0.5**
KRUC	**Moravsky**	**2.51**	**177**	*e*SG	**Sb**	**07 58 58.5**	**+1.1**
NKC	**Novy Kostel**	**2.72**	**242**	*e*SG	**Sg**	**07 59 06.7**	**-0.5**
	comp=Z,22nm,1.0s						
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN	**Pn**	**07 58 27.5**	**-0.7**
KHC				*e*PG	**Pb**	**07 58 34.9**	**+1.4**
KHC				*e*SG	**Sg**	**07 59 13.4**	**-1.5**
	comp=Z,3.9nm,0.3s						
LANS	**Liptovska Anna**	**3.21**	**138**	*e*PN	**Pn**	**07 58 32.1**	**+0.5**
LANS				*e*SG	**Sg**	**07 59 21.6**	**-1.3**

IDC 27 08:29:44.6±3.1, 54°.11N×87°.16E, h0km, mb1 2.7/2, mb1mx2.7/64, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=27.6km s-min=19.8km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.39**	**264**	*i*		**08 38 55.5**	
	baz=80,slow=298,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.39**	**264**	Pg	Pg	08 30 10.0	-1.2
	3.1nm,0.3s,baz=82,slow=13,SNR=17						
ZALV				Lg	Lg	08 30 28.4	
	1.2nm,0.3s,baz=83,slow=28,SNR=4.1						
KURBB	**Kurchatov Arra**	**6.33**	**240**	Pn	Pn	08 31 20.1	+1.1
	0.1nm,0.3s,baz=53,slow=13,SNR=3.6						
KURBB				Lg	Lg	08 33 05.7	
	0.0nm,0.3s,baz=60,slow=33,SNR=4.2						
MKAR	**Makanchi Array**	**7.95**	**205**	Pn	Pn	08 31 42.7	+1.3
	0.1nm,0.3s,baz=25,slow=15,SNR=2.5						
MKAR				Lg	Lg	08 33 53.8	
	0.0nm,0.3s,baz=27,slow=35,SNR=3.1						

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*ANF **27** 08:31:16.6±1.4, 35°.13N×97°.91W, h9km±12km, ML3.9/11, Error ellipse: s-maj=8.7km s-min=7.0km az=163.0*
*NEIC **27** 08:31:17.0±0.0, 35°.13N×97°.90W, h14km, ML2.8(TUL), After TUL.*
NEIC Felt [IV] at Chickasha. Also felt at Cement, Edmond and Oklahoma City.
*TUL **27** 08:31:17.0, 35°.13N×97°.90W, h14km, ML2.8*
ISC 27 08:31:15.8±1.1, 35°.11N±0°.03×97°.91W±0°.02, h11km±8km, n53, σ1§84/90, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.61**	**40**	*e*Pg	**Pg**	**08 31 28.0**	**+0.4**
OK009				*e*Sg	**Sg**	**08 31 35.3**	**-0.4**
OK001	**Jones High Sch**	**0.67**	**48**	*e*Pg	**Pg**	**08 31 29.6**	**+0.7**
OK001				*e*Sg	**Sg**	**08 31 38.5**	**+0.8**
WMOK	**Wichita Mounta**	**0.81**	**243**	*e*Pg	**Pg**	**08 31 31.8**	**+0.4**
WMOK				*e*Sg	**Sg**	**08 31 43.0**	**+0.9**
WMOK	**Wichita Mounta**	**0.81**	**243**	P	**Pg**	**08 31 31.9**	**+0.5**
	baz=61						
WMOK				S	**Sg**	**08 31 43.3**	**+1.2**
	baz=61						
U32A	**Winter Ranch,**	**1.55**	**325**	*e*Pn	**Pn**	**08 31 44.5**	**+1.2**
U32A				*e*Sn	**Sn**	**08 32 03.0**	**-0.3**
TUL1	**Leonard**	**1.90**	**65**	*e*Pn	**Pn**	**08 31 49.9**	**+1.8**
TUL1				*e*Sn	**Sn**	**08 32 12.6**	**+0.6**
TUL1	**Leonard**	**1.90**	**65**	P	**Pn**	**08 31 49.7**	**+1.6**
	baz=246						
TUL1				Sb	**Sb**	**08 32 16.0**	**+1.9**
	baz=246						
ABTX	**Abilene, Hawle**	**2.87**	**211**	*e*Pn	**Pn**	**08 32 04.0**	**+2.5**
ABTX	**Abilene, Hawle**	**2.87**	**211**	P	**Pn**	**08 32 03.4**	**+1.9**
	baz=30						
AMTX	**Amarillo**	**3.11**	**267**	*e*Pn	**Pn**	**08 32 07.9**	**+3.1**
AMTX				*e*Sn	**Sn**	**08 32 42.2**	**+0.3**
AMTX	**Amarillo**	**3.11**	**267**	P	**Pn**	**08 32 06.0**	**+1.2**
	baz=84						
AMTX				Sb	**Sb**	**08 32 51.9**	**+2.8**
	baz=84						
WHTX	**Lake Whitney,**	**3.14**	**173**	*e*Pn	**Pn**	**08 32 07.4**	**+2.3**
WHTX	**Lake Whitney,**	**3.14**	**173**	P	**Pn**	**08 32 07.4**	**+2.3**
	baz=353						
WHTX				S	**Sn**	**08 32 44.9**	**+2.3**
	baz=353						
W39A	**Magazine**	**3.38**	**87**	*e*Pn	**Pn**	**08 32 10.4**	**+2.0**
W39A				*e*Sn	**Sn**	**08 32 49.4**	**+0.9**
W39A	**Magazine**	**3.38**	**87**	P	**Pn**	**08 32 10.1**	**+1.7**
	baz=270						
W39A				S	**Sn**	**08 32 49.9**	**+1.5**
	baz=270						
HHAR	**Hobbs**	**3.43**	**69**	*e*Pn	**Pn**	**08 32 10.9**	**+1.7**
HHAR				*e*Sn	**Sn**	**08 32 49.9**	**+0.1**
MIAR	**Mount Ida**	**3.60**	**98**	*e*Pn	**Pn**	**08 32 14.1**	**+2.6**
MIAR				*e*Sn	**Sn**	**08 32 55.5**	**+1.5**
MIAR	**Mount Ida**	**3.60**	**98**	P	**Pn**	**08 32 13.8**	**+2.3**
	baz=281						
MIAR				S	**Sn**	**08 32 55.9**	**+1.8**
	baz=281						
CBKS	**Cedar Bluff**	**3.97**	**339**	*e*Pn	**Pn**	**08 32 16.0**	**-0.7**
CBKS				*e*Sn	**Sn**	**08 33 02.1**	**-1.1**
CBKS	**Cedar Bluff**	**3.97**	**339**	Pb	**Pb**	**08 32 27.4**	**+1.6**
	baz=158						
CBKS				S	**Sn**	**08 33 05.4**	**+2.1**
	baz=158						
KSU1	**Kansas State U**	**4.11**	**14**	P	**Pn**	**08 32 19.7**	**+1.2**
	baz=195						
KSU1				S	**Sn**	**08 33 08.0**	**+1.4**
	baz=195						
MSTX	**Muleshoe**	**4.18**	**256**	*e*Pn	**Pn**	**08 32 21.8**	**+2.3**
MSTX				*e*Sn	**Sn**	**08 33 05.6**	**-2.8**
MSTX	**Muleshoe**	**4.18**	**256**	P	**Pn**	**08 32 21.7**	**+2.2**
	baz=72						
WLAR	**White Oak Lake**	**4.21**	**108**	*e*Pn	**Pn**	**08 32 21.4**	**+1.5**
WLAR				*e*Sn	**Sn**	**08 33 05.1**	**-3.9**
X40A	**Basin Creek Fa**	**4.22**	**97**	*e*Pn	**Pn**	**08 32 21.2**	**+1.2**
X40A				*e*Sn	**Sn**	**08 33 09.0**	**-0.2**
U40A	**Yellville**	**4.29**	**72**	P	**Pn**	**08 32 22.3**	**+1.3**
	baz=255						
U40A				S	**Sn**	**08 33 11.9**	**+0.8**
	baz=255						
NATX	**Nacogdoches**	**4.31**	**140**	*e*Pn	**Pn**	**08 32 23.1**	**+1.9**
NATX				*e*Sn	**Sn**	**08 33 14.7**	**+3.3**
435B	**Jarrell**	**4.33**	**176**	*e*Pn	**Pn**	**08 32 22.1**	**+0.6**
435B				*e*Sn	**Sn**	**08 33 13.1**	**+1.2**
ETX06	**Route 59 and C**	**4.34**	**137**	*e*Pn	**Pn**	**08 32 21.2**	**-0.3**
ETX06				*e*Sn	**Sn**	**08 33 10.8**	**-1.3**
UALR	**University of**	**4.58**	**93**	*e*Pn	**Pn**	**08 32 24.9**	**-0.1**
UALR				*e*Sn	**Sn**	**08 33 18.2**	**+0.1**
WHAR	**Wooly Hollow**	**4.60**	**86**	*e*Pn	**Pn**	**08 32 27.3**	**+2.1**
WHAR				*e*Sn	**Sn**	**08 33 20.3**	**+1.7**
Z41A	**Richland Creek**	**4.62**	**112**	*e*Pn	**Pn**	**08 32 26.5**	**+1.0**
Z41A				*e*Sn	**Sn**	**08 33 19.0**	**0.0**
W41B	**Gary Mavity, V**	**4.64**	**88**	*e*Pn	**Pn**	**08 32 27.4**	**+1.7**
W41B				*e*Sn	**Sn**	**08 33 20.5**	**+1.1**
FCAR	**Ozark Folk Cen**	**4.78**	**79**	*e*Pn	**Pn**	**08 32 28.5**	**+0.8**
FCAR				*e*Sn	**Sn**	**08 33 23.6**	**+0.5**
JCT	**Junction City**	**4.89**	**200**	*e*Pn	**Pn**	**08 32 30.9**	**+1.6**
JCT				*e*Sn	**Sn**	**08 33 27.8**	**+1.9**
CPRX	**Cap Rock**	**5.37**	**249**	*e*Pn	**Pn**	**08 32 37.1**	**+1.2**
CPRX				*e*Sn	**Sn**	**08 33 36.7**	**-1.1**
KSCO	**Kaye Shedlock'**	**5.42**	**317**	*e*Pn	**Pn**	**08 32 35.0**	**-1.7**
KSCO				*e*Sn	**Sn**	**08 33 39.1**	**0.0**
HKT	**Hockley**	**5.44**	**161**	*e*Pn	**Pn**	**08 32 37.6**	**+0.9**
HKT				*e*Sn	**Sn**	**08 33 40.4**	**+1.2**
CCM	**Cathedral Cave**	**6.11**	**59**	*e*Pn	**Pn**	**08 32 46.2**	**+0.3**
SDCO	**Great Sand Dun**	**6.66**	**295**	*e*Pn	**Pn**	**08 32 54.8**	**+0.9**
OGNE	**Ogallala**	**6.67**	**332**	*e*Pn	**Pn**	**08 32 52.5**	**-1.2**
ANMO	**Albuquerque**	**7.02**	**271**	*e*Pn	**Pn**	**08 32 57.8**	**-0.8**
MNTX	**Cornudas Mount**	**7.12**	**244**	*e*Pn	**Pn**	**08 32 58.2**	**-1.7**
MNTX				*e*Sg	**Sg**	**08 34 58.1**	**-6.1**
LPM	**Los Pinos Moun**	**7.23**	**266**	*e*Pn	**Pn**	**08 32 59.9**	**-1.6**
BNM	**Barren Site**	**7.25**	**265**	*e*Pn	**Pn**	**08 33 01.1**	**-0.8**
LENM	**Lemitar**	**7.54**	**265**	*e*Pn	**Pn**	**08 33 06.2**	**+0.4**
TX31	**Lajitas Ar. Si**	**7.55**	**222**	*e*Pn	**Pn**	**08 33 06.8**	**+1.0**
LAZ	**Ladron**	**7.63**	**267**	*e*Pn	**Pn**	**08 33 08.9**	**+1.8**
S22A	**4UR Ranch, Cre**	**7.66**	**293**	*e*Pn	**Pn**	**08 33 07.6**	**+0.1**
ISCO	**Idaho Springs**	**7.71**	**310**	*e*Pn	**Pn**	**08 33 09.8**	**+1.6**
SCIA	**State Center**	**7.71**	**27**	*e*Pn	**Pn**	**08 33 06.8**	**-1.2**
PLAL	**Pickwick Lake**	**8.06**	**88**	*e*Pn	**Pn**	**08 33 10.9**	**-1.8**
PLAL				*e*Sg	**Sg**	**08 35 27.7**	**-6.8**
RSSD	**Black Hills**	**10.16**	**334**	*e*Pn	**Pn**	**08 33 41.7**	**0.0**
RSSD				*e*Sn	**Sn**	**08 35 34.6**	**-1.1**

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*BJI **27** 08:38:02.4±0.0, 0°.51N×127°.59E, h128km, mb5.8/83, mB5.8/67*
*NEIC **27** 08:38:08.3±1.5, 1°.11N×127°.13E, h120km, mb5.7/198, MW5.7, MW5.7, Error ellipse: s-maj=9.8km s-min=8.6km az=237.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^{17}Nm; M_{rr}1.18; $M_{\theta\theta}$1.70; $M_{\phi\phi}$-2.88; $M_{r\theta}$-2.81; $M_{\theta\phi}$1.08; $M_{\theta r}$-2.96; Best double couple: $M_0$4.90000×10^{17} NP1:ϕ_s211.00000°, δ82.00000°, λ123.00000°. NP2: ϕ_s313.00000°, δ34.00000°, λ15.00000°. Principal axes: T 5.2600, Plg43.0000°, Azm153.0000°; N -0.8000, Plg32.0000°, Azm26.0000°; P -4.4600, Plg29.0000°, Azm275.0000°;*
NEIC Felt [III] on Pulau Ternate. Also felt at Manado. Broadband depth 120 km.
*ISCJB **27** 08:38:08.1±0.2, 1°.14N±0°.01×127°.14E±0°.02, h129km±2km, mb5.6/323 Error ellipse: s-maj=2.6km s-min=1.9km az=159.8*
*KLM **27** 08:38:08.0, 1°.15N×127°.33E, h110km, mb6.2*
*NEIC **27** 08:38:09.0±0.0, 1°.09N×126°.92E, h140km, Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.20; $M_{\theta\theta}$3.14; $M_{\phi\phi}$-2.94; $M_{r\theta}$-2.89; $M_{\theta\phi}$-0.02; $M_{\theta r}$-2.86; Best double couple: $M_0$5.10000×10^{17} NP1: ϕ_s46.00000°, δ89.00000°, λ-126.00000°. NP2: ϕ_s314.00000°, δ37.00000°, λ-2.00000°. Principal axes: T 5.0900, Plg33.0000°, Azm166.0000°; N -0.0100, Plg36.0000°, Azm47.0000°; P -5.0800, Plg35.0000°, Azm284.0000°;*
*MOS **27** 08:38:09.7±1.0, 1°.16N×127°.13E, h143km, mb5.8/81, MS4.7/14 Error ellipse: s-maj=6.8km s-min=3.8km az=115.7*
*IDC **27** 08:38:09.6±0.5, 1°.14N×127°.17E, h131km±4km, mb5.2/49, mb1 5.2/56, mb1mx5.2/59, mbtmp5.6/56, MS4.6/23, Ms1 4.6/23, ms1mx4.4/37, Error ellipse: s-maj=8.7km s-min=5.8km az=63.0*
*DJA **27** 08:38:10.2±0.2, 1°.N±2°.×12°.7E±°, h123km±2km, M6.0/87, mB6.2/80, mb5.9/87, MLv6.4/19, Mw(mB)5.9/80, Mwp5.7/6*
*GCMT **27** 08:38:10.3±0.1, 1°.10N±0°.01×127°.06E±0°.01, h140km, MW5.8/132, Moment Tensor Solution. s121,c244; s132,c373; Duration: 1§9 Moment tensor: Scale 10^{17} Nm; M_{rr}0.00±.05; $M_{\theta\theta}$4.42±.05; $M_{\phi\phi}$-4.42±.06; $M_{r\theta}$-3.07±.04; $M_{\theta\phi}$0.63±.06; $M_{\theta r}$-2.44±.04; Best double couple: $M_0$5.91000×10^{17} NP1:ϕ_s222.00000°, δ88.00000°, λ139.00000°. NP2:ϕ_s313.00000°, δ49.00000°, λ3.00000°. Principal axes: T 6.2670, Plg29.0000°, Azm169.0000°; N -0.7100, Plg49.0000°, Azm39.0000°; P -5.5530, Plg26.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 27 08:38:10.0±0.3, 1°.10N±0°.02×127°.13E±0°.03, h136km±1km, h137km:pP-P, n1503, σ1§37/1731, mb5.7/326, 32C-56D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.41**	**144**	*e*Pn	**Pn**	**08 38 29.0**	**-0.3**
TNTI				*e*Sn	**Sn**	**08 38 38.5**	**-5.4**
TNTI	**Ternate**	**0.41**	**144**	P	**Pn**	**08 38 28.9**	**-0.4**
TNTI				S	**Sn**	**08 38 42.6**	**-1.4**
SGSI	**Sangihe**	**3.02**	**328**	P	**Pn**	**08 38 55.8**	**-1.3**
KMSI	**Cibinong**	**3.19**	**261**	P	**Pn**	**08 38 59.1**	**-0.1**
KMSI				S	**Sn**	**08 39 36.7**	**-0.6**
SANI	**Sanana**	**3.33**	**200**	P	**Pn**	**08 38 59.9**	**-1.2**
SANI				S	**Sn**	**08 39 36.3**	**-4.4**
NLAI	**Namlea**	**4.31**	**180**	P	**Pn**	**08 39 14.1**	**+0.1**
NLAI				S	**Sn**	**08 40 00.4**	**-3.4**
SWI	**Sorong**	**4.57**	**115**	P	**Pn**	**08 39 18.6**	**+1.1**
SIJI	**Sorong**	**4.58**	**115**	P	**Pn**	**08 39 18.6**	**+1.0**
	134nm,0.3s,baz=311,slow=9.4,SNR=372						
SIJI				S	**Sn**	**08 40 10.9**	**+0.7**
	20nm,0.3s,baz=150,slow=22,SNR=5.7						
MSAI	**Masohi**	**4.77**	**158**	P	**Pn**	**08 39 22.0**	**+1.8**
MSAI				S	**Sn**	**08 40 14.7**	**-0.1**
LUWI	**Luwuk**	**4.85**	**244**	*e*Pn	**Pn**	**08 39 20.1**	**-1.0**
LUWI				*e*Sn	**Sn**	**08 40 14.4**	**-2.1**
LUWI	**Luwuk**	**4.85**	**244**	P	**Pn**	**08 39 20.2**	**-0.9**
LUWI				S	**Sn**	**08 40 14.2**	**-2.3**
AAI	**Ambon**	**4.88**	**167**	P	**Pn**	**08 39 22.0**	**+0.5**
AAI				S	**Sn**	**08 40 11.0**	**-6.3**
DDMP	**Don Marcelino,**	**5.17**	**344**	*e*P	**Pn**	**08 39 22.1**	**-3.2**
DDMP				*e*S	**Sn**	**08 40 17.3**	**-6.9**
MRSI	**Marisa**	**5.22**	**263**	P	**Pn**	**08 39 24.9**	**-1.2**
	4μm,0.9s,45μm20μm19nm						
GSPH	**General Santos**	**5.41**	**336**	⇑*i*P	**Pn**	**08 39 27.9**	**-0.8**
GSPH				*i* S	Sn	08 40 46.6	+16
APSI	**Ampana**	**5.83**	**250**	P	**Pn**	**08 39 33.6**	**-0.7**
APSI				S	**Sn**	**08 40 38.3**	**-1.8**
MATI	**Mati**	**5.87**	**352**	*e*P	**Pn**	**08 39 33.6**	**-1.3**
MATI				*e*S	**Sn**	**08 40 39.8**	**-1.3**
SKMP	**Bagumbayan, Su**	**5.96**	**334**	*e*P	**Pn**	**08 39 33.4**	**-2.7**
SKMP				*e*S	**Sn**	**08 40 36.4**	**-7.0**
DAV	**Davao City (W)**	**6.12**	**345**	P	**Pn**	**08 39 37.8**	**-0.4**
	285nm,0.3s,baz=135,slow=1.4,SNR=42						
DAV				S	**Sn**	**08 40 47.4**	**+0.2**
	406nm,0.3s,baz=348,slow=19,SNR=4.2						
DAV				LR	LR	08 41 27.7	
	comp=Z,7μm,19.4s,baz=116,slow=32						
DAV	**Davao City (W)**	**6.12**	**345**	*e*Pn	**Pn**	**08 39 37.5**	**-0.8**
DAV

SOEI Soe 11.15 195 P **Pn 08 40 48.4 +2.6**
EDFI Ende, Flores 11.19 209 P **Pn 08 40 46.7 +0.6**
468nm,0.9s,6μm
BATI Baumata 11.75 197 P **Pn 08 40 55.8 +2.3**
26nm,0.3s,baz=67,slow=2.2,SNR=26
BATI Baumata 11.75 197 P **Pn 08 40 55.4 +1.9**
KKM Kota Kinabalu 11.94 295 *e*Pn **Pn 08 40 55.5 -0.6**
KKM *e*Sn **Sn 08 43 05.5 -2.5**
KKM Kota Kinabalu 11.94 295 P **Pn 08 40 57.0 +0.9**
BATP Bataraza 12.03 310 *e*P **Pn 08 40 55.2 -1.8**
MTKI Muara Teweh, K 12.40 261 P **Pn 08 41 00.3 -1.6**
ENPP El Nido 12.62 323 *e*P **Pn 08 41 03.8 -1.0**
ENPP *e*S **Sn 08 43 19.3 -4.8**
WSI Waingapu 12.68 212 P **Pn 08 41 06.5 +1.0**
PVCP Virac 12.76 347 *e*P **Pn 08 41 04.2 -2.3**
BASI Baing, Sumba 13.00 210 P **Pn 08 41 09.4 -0.3**
WBSI Waikabubak, Su 13.16 216 P **Pn 08 41 12.3 +0.5**
GENI Genyem 13.55 106 P **Pn 08 41 17.6 +0.8**
PLAI Plampang 13.57 223 P **P 08 41 19.7 -1.6**
JAY Jayapura 14.04 105 P **Pn 08 41 23.5 +0.3**
1.7nm,0.3s,baz=261,slow=7.6,SNR=18
JAY LR LR 08 47 10.7
comp=Z,5μm,20.9s,baz=266,slow=39
JAY Jayapura 14.04 105 P **Pn 08 41 23.5 +0.3**
LUBP Lubang 14.28 332 *e*P **Pn 08 41 24.7 -1.3**
LUBP *e*S **Sn 08 44 00.1 -4.0**
TGY Tagaytay City 14.29 335 P **Pn 08 41 26.2 0.0**
54nm,0.3s,baz=197,slow=6.9,SNR=4.1
TGY LR LR 08 47 48.5
comp=Z,4μm,18.2s,baz=156,slow=41
MTN Manton Dam 14.41 164 *e*Pn **Pn 08 41 25.0 -2.8**
MTN Manton Dam 14.41 164 P **Pn 08 41 26.3 -1.5**
baz=14,SNR=246
KDU Kakadu 14.69 159 P **Pn 08 41 28.7 -2.6**
baz=15,SNR=254
SBUM Sibu 14.96 275 *e*Pn **Pn 08 41 34.3 -0.3**
SBUM Sibu 14.96 275 P **Pn 08 41 35.0 +0.4**
SRBI Singaraja 14.98 232 P **P 08 41 38.0 +1.0**
KMMI Kalianget 15.43 238 P **P 08 41 42.6 +0.7**
BALP Baler 15.54 340 *e*P **Pn 08 41 39.6 -2.2**
PBKI Pangkalan Bun 15.91 256 P **Pn 08 41 45.9 -0.5**
JAGI Jajag, Banyuwa 16.05 233 *e*P **P 08 41 49.1 +0.2**
1μm,1.0s
JAGI Jajag, Banyuwa 16.05 233 P **P 08 41 52.0 +3.1**
SMPP San Manuel, Pa 16.25 337 *e*P **Pn 08 41 45.9 -4.6**
MMPI Merauke 16.28 126 P **P 08 41 54.7 +3.3**
GMJI Gumukmas 16.52 235 P **P 08 41 57.2 +3.2**
GRJI Gresik 16.64 241 P **P 08 41 58.0 +2.6**
KNRA Kununurra 16.75 175 P **P 08 41 55.7 -0.8**
baz=17,SNR=521
BOLP Bolinao 16.76 335 *e*P **P 08 41 55.7 -1.0**
KSM Kuching 16.82 271 *e*P **P 08 41 57.2 -0.1**
1μm,1.3s
KSM Kuching 16.82 271 P **Pn 08 41 59.0 +1.5**
NGJI Ngawi 17.75 241 P **Pn 08 42 11.7 +3.0**
PWJI Pagerwojo 17.76 239 P **Pn 08 42 10.2 +1.3**
1μm,1.6s,35μm
WOJI Wonogiri, Jawa 18.44 241 P **Pn 08 42 17.9 +1.0**
941nm,1.5s,16μm
SMRI Semarang 18.51 244 *e*P **P 08 42 15.6 -0.4**
2μm,1.2s
SMRI Semarang 18.51 244 P **Pn 08 42 19.2 +1.4**
UGM Wanagama 18.82 241 *e*P **P 08 42 17.2 -2.2**
3μm,1.3s
UGM Wanagama 18.82 241 P **Pn 08 42 22.8 +1.4**
YOGI Yogyakarta 18.98 242 P **Pn 08 42 24.9 +1.7**
FITZ Fitzroy Crossi 19.14 184 P **P 08 42 22.3 -0.4**
41nm,0.3s,baz=18,slow=8.6,SNR=504
FITZ S **S 08 45 45.6 -6.9**
baz=329,slow=18,SNR=5.8
FITZ ScP **ScP 08 50 06.0 +1.5**
2.0nm,0.3s,baz=52,slow=2.5,SNR=6.0
FITZ LR LR 08 50 13.0
comp=Z,1μm,18.5s,baz=10,slow=38
FITZ Fitzroy Crossi 19.14 184 *e*P **P 08 42 22.2 -0.5**
FITZ *e*S **S 08 45 47.8 -4.7**
FITZ Fitzroy Crossi 19.14 184 P **P 08 42 22.0 -0.7**
baz=19,SNR=346
TPI Tanjungpandan 19.84 259 P **P 08 42 30.9 +0.5**
484nm,1.4s,6μm
JCJI Jatiwangi 20.27 248 P Pn 08 42 37.6 -0.8
1μm,1.0s,18μm
MANU Manus Island 20.48 99 *e*P **P 08 42 37.2 0.0**
86nm,0.6s
LEM Lembang 21.00 248 P **P 08 42 44.4 +1.4**
395nm,0.9s,baz=58,slow=7.5,SNR=14
CISI Cisompet, Garu 21.09 246 *e*P **P 08 42 44.7 +0.8**
843nm,0.9s
CISI Cisompet, Garu 21.09 246 P **P 08 42 44.3 +0.4**
1μm,1.0s,10μm
PPBI Pangkal Pinang 21.23 261 P **P 08 42 45.6 +0.3**
447nm,1.5s,6μm
DLV T Lat 21.40 301 *e*P **P 08 42 46.2 -1.1**
993nm,1.6s
GUMO Guam 21.50 54 P **P 08 42 47.4 -0.8**
158nm,0.8s,baz=192,slow=12,SNR=10
GUMO Guam 21.50 54 *e*P **P 08 42 45.7 -2.5**
GUMO *e* 08 42 46.1
GUMO Guam 21.50 54 *e*P **P 08 42 45.7 -2.5**
CBJI Citeko 21.57 249 P **P 08 42 49.7 +0.7**
1μm,1.0s,17μm
TNG Tangerang 21.68 250 P **P 08 42 54.1 +4.0**
COEN Coen 21.84 134 *e*P **P 08 42 50.8 -0.9**
411nm,1.1s
COEN Coen 21.84 134 P **P 08 42 49.9 -1.8**
baz=22,SNR=218
WRAB Tennant Creek 22.07 162 *e*P **P 08 42 53.7 -0.5**
870nm,0.8s
WRAB Tennant Creek 22.07 162 *ce*P **P 08 42 53.5 -0.6**
WRAB pmax pmax
comp=Z,926nm,0.8s
WR1 Warramunga Arr 22.08 162 *e*P **P 08 42 53.6 -0.6**
WR1 *e*PcP **PcP 08 46 45.5 -1.3**
WRA Warramunga Arr 22.08 162 P **P 08 42 53.6 -0.6**
comp=Z,644nm,0.5s,baz=340,slow=13,SNR=2366
WRA S **S 08 46 45.5 -2.9**
comp=Z,202nm,0.9s,baz=344,slow=20,SNR=13
WB2 Warramunga Arr 22.08 162 *e*P **P 08 42 53.8 -0.4**
comp=Z,1μm,0.8s
WC3 Warramunga Arr 22.10 162 *e*P **P 08 42 54.1 -0.3**
comp=Z,2μm,1.0s
SBJI Serang 22.16 251 P **P 08 42 57.9 +2.9**
comp=Z,2μm,1.3s,comp=Z,34μm
TWG Pinlang 22.38 345 *e*P **P 08 42 54.8 -2.3**
comp=Z,459nm,0.6s
TWG *e*S **S 08 46 53.3 +0.1**
PMG Port Moresby 22.52 118 P **P 08 42 59.3 +0.7**
comp=Z,86nm,0.4s,baz=91,slow=5.9,SNR=53
PMG Port Moresby 22.52 118 *e*P **P 08 42 58.7 +0.1**
comp=Z,432nm,1.4s
PMG Port Moresby 22.52 118 *e*P **P 08 42 58.7 +0.1**
PMG pmax pmax
comp=Z,432nm,1.4s
TPRI Tanjung Pinang 22.60 270 P **P 08 42 59.9 +0.6**
comp=Z,386nm,1.6s,comp=Z,36μm
PMBI Palembang 22.70 260 P P 08 43 07.7 +7.4
CGJI Cibinong 22.72 250 P **P 08 43 00.7 +0.2**
comp=Z,1μm,1.3s,comp=Z,20μm
BLSI Bandar Lampung 22.78 253 P **P 08 43 03.0 +1.9**
comp=Z,1μm,0.9s,comp=Z,19μm
YULB Yu-li 22.87 346 *e*P **P 08 43 00.1 -1.7**
comp=Z,206nm,1.5s
TPUB Ta-pu 22.95 345 *e*P **P 08 43 00.5 -2.0**
comp=Z,516nm,1.2s
TPUB *e*S **S 08 47 02.0 -0.4**
KLI Kotabumi 23.02 255 P **P 08 43 04.4 +1.0**
comp=Z,618nm,1.3s,comp=Z,7μm
MBWA Marble Bar 23.28 198 P **P 08 43 05.3 -0.3**
SNR=25
MYKOM Kota Tinggi 23.28 272 *e*P **P 08 43 02.5 -3.3**
comp=Z,1μm,1.1s
MYKOM Kota Tinggi 23.28 272 P **P 08 43 07.0 +1.3**
SSLB Suanglung 23.33 346 *e*P **P 08 43 05.0 -1.1**
comp=Z,152nm,0.8s
PSAD1 Pilbara Seismi 23.53 197 *e*P **P 08 43 08.4 +0.5**
comp=Z,117nm,0.8s
KASI Kota Agung 23.54 254 P **P 08 43 10.2 +2.1**
comp=Z,1μm,1.2s,comp=Z,15μm
NACB Ninganchiao 23.55 347 *e*P **P 08 43 07.9 -0.2**
comp=Z,221nm,1.4s
YOJ Yonaguni jima 23.56 351 *e*P **P 08 43 06.9 -1.2**
comp=Z,543nm,1.4s
YOJ Yonaguni jima 23.56 351 *e*P **P 08 43 06.9 -1.2**
YOJ pmax pmax
comp=Z,543nm,1.4s

MDSI Maura Dua 23.59 256 P **P 08 43 08.9 +0.3**
comp=Z,491nm,1.3s,comp=Z,6μm
PSAC1 Pilbara Seismi 23.61 197 *e*P **P 08 43 08.6 -0.1**
comp=Z,603nm,1.4s
PSAC2 Pilbara Seismi 23.61 197 *e*P **P 08 43 08.6 0.0**
comp=Z,499nm,1.1s
PSAB2 Pilbara Seismi 23.61 197 *e*P **P 08 43 08.6 -0.1**
comp=Z,480nm,1.1s
PSAA2 Pilbara Seismi 23.62 197 *e*P **P 08 43 08.7 0.0**
comp=Z,396nm,1.0s
PSA00 Pilbara Seismi 23.63 197 *e*P **P 08 43 08.7 -0.1**
comp=Z,426nm,1.1s
PSAA3 Pilbara Seismi 23.64 197 *e*P **P 08 43 08.9 0.0**
comp=Z,406nm,1.0s
PSAB1 Pilbara Seismi 23.64 197 *e*P **P 08 43 09.0 +0.1**
comp=Z,344nm,1.0s
JMBI JAMBI 23.64 263 P **P 08 43 12.8 +3.8**
PSAA1 Pilbara Seismi 23.64 197 *e*P **P 08 43 09.0 +0.1**
comp=Z,385nm,1.0s
PSAD2 Pilbara Seismi 23.64 197 *e*P **P 08 43 09.0 +0.1**
comp=Z,403nm,0.9s
PSAB3 Pilbara Seismi 23.65 197 *e*P **P 08 43 09.2 +0.2**
comp=Z,463nm,1.1s
PSAC3 Pilbara Seismi 23.68 197 *e*P **P 08 43 07.7 -1.6**
comp=Z,328nm,0.9s
PSAD3 Pilbara Seismi 23.72 197 *e*P **P 08 43 08.7 -0.9**
comp=Z,321nm,0.9s
ANA2 Amatahan 23.76 49 *e*P **P 08 43 08.7 -1.4**
comp=Z,130nm,0.8s
LWLI Liwa 23.83 255 P **P 08 43 12.2 +1.3**
comp=Z,202nm,0.6s,comp=Z,22μm
SARN Sarigan 24.04 49 *e*P **P 08 43 12.9 +0.3**
comp=Z,46nm,0.9s
YHNB Yeheng 24.08 347 *e*P **P 08 43 12.5 -0.4**
comp=Z,194nm,0.6s
LHSI Lahat 24.09 258 P **P 08 43 14.9 +1.8**
comp=Z,475nm,1.3s,comp=Z,10μm
XMIS Christmas Isla 24.27 241 *e*P **P 08 43 14.8 +0.1**
comp=Z,3μm,1.0s
TATO Taipei 24.35 348 *e*P **P 08 43 14.1 -1.2**
comp=Z,763nm,1.6s
HKPS Hong Kong Po S 24.55 330 *e*P **P 08 43 18.0 +0.8**
comp=Z,564nm,1.6s
QIZ Qiongzhong 24.59 318 P **P 08 43 18.3 +0.8**
QIZ pmax pmax
comp=Z,160nm,0.8s
QIZ LR LR
comp=Z,9μm,18.6s
QIZ LR LR
comp=Z,6μm,16.1s
QIZ Qiongzhong 24.59 318 *e*P **P 08 43 18.1 +0.5**
comp=Z,838nm,1.5s
KNMB Chin-men Tao 24.71 341 *e*P **P 08 43 18.9 +0.3**
comp=Z,310nm,1.1s
MNAI Manna 24.75 257 *e*P **P 08 43 18.7 -0.4**
comp=Z,3μm,1.5s
MNAI Manna 24.75 257 P **P 08 43 21.7 +2.6**
comp=Z,1μm,1.3s,comp=Z,16μm
QIS Mount Isa 24.75 151 P **P 08 43 19.4 +0.3**
baz=25,SNR=997
QZH Quanzhou 25.09 341 ⇓*i*P **P 08 43 23.5 +1.4**
QZH S **S 08 47 38.3 +1.6**
QZH pmax pmax
comp=Z,180nm,1.2s
QZH LR LR
comp=Z,2μm,15.6s
AS31 Alice Springs 25.49 165 *e*P **P 08 43 25.3 -0.4**
comp=Z,84nm,0.4s
ASAR Alice Springs 25.49 165 P **P 08 43 25.1 -0.6**
comp=Z,99nm,0.5s,baz=352,slow=7.1,SNR=726
ASAR S **S 08 47 41.5 -1.5**
comp=Z,30nm,1.1s,baz=339,slow=12,SNR=2.8
ASAR ScP **ScP 08 50 20.6 -0.3**
comp=Z,15nm,0.7s,baz=347,slow=2.8,SNR=6.3
ASAR LR LR 08 55 38.6
comp=Z,961nm,18.7s,baz=345,slow=41
ASAR P3KPbc 09 16 17.6
comp=Z,1.2nm,0.9s,baz=148,slow=5.1,SNR=10.0
RABL Rabaul 25.57 102 *e*P **P 08 43 27.0 +0.5**
comp=Z,314nm,0.4s
JOW Kunigami 25.61 2 P **P 08 43 27.4 +0.8**
comp=Z,7.0nm,0.9s,baz=182,slow=15,SNR=4.0
JOW Kunigami 25.61 2 *e*P **P 08 43 27.4 +0.8**
comp=Z,61nm,0.8s
GZH Guangzhou 25.63 330 P **P 08 43 30.3 +3.4**
GZH pP **pwP 08 43 58.0 0.0**
GZH S **S 08 47 48.5 +3.4**
GZH pmax pmax
comp=Z,1μm,2.6s
KRJI Kerinci 25.85 263 P **P 08 43 31.4 +2.2**
comp=Z,1μm,1.6s,comp=Z,16μm
WRKA Warakurna 26.01 178 P **P 08 43 30.0 -0.4**
baz=26,SNR=1000
BKNI Bangkinang 26.09 268 *e*P **P 08 43 32.0 +0.7**
comp=Z,1μm,1.5s
BKNI Bangkinang 26.09 268 P **P 08 43 32.9 +1.6**
comp=Z,589nm,1.5s,comp=Z,10μm
IPM Ipoh 26.28 278 *e*P **P 08 43 33.0 0.0**
comp=Z,539nm,1.1s
IPM Ipoh 26.28 278 P **P 08 43 34.0 +1.0**
PDSI Padang 26.74 266 P **P 08 43 37.1 0.0**
comp=Z,268nm,1.6s,comp=Z,5μm
GIRL Giralia 26.74 207 *e*P **P 08 43 36.8 -0.1**
comp=Z,502nm,0.9s
GIRL Giralia 26.74 207 P **P 08 43 38.0 +1.1**
baz=27,SNR=49
KULM Kulim 26.75 280 *e*P **P 08 43 37.2 +0.1**
comp=Z,261nm,1.1s
KULM Kulim 26.75 280 P **P 08 43 38.0 +0.8**
SKLT Songkhla 27.10 284 P **P 08 43 41.3 +1.0**
comp=Z,131nm,1.5s,comp=Z,2μm
CHBT CHBT 27.16 296 P **P 08 43 41.8 +1.0**
comp=Z,230nm,0.5s,comp=Z,4μm
PANO Nakornpanom 27.29 307 P **P 08 43 42.7 +0.8**
comp=Z,7.9nm,1.2s,comp=Z,107nm
PPSI Pulau Pagai 27.38 262 P P 08 43 50.8 +8.0
MNSI Mandailing Nat 27.54 270 P **P 08 43 44.4 +0.2**
comp=Z,110nm,1.2s,comp=Z,3μm
SKNT Sakolnakorn 27.70 306 P **P 08 43 45.9 +0.3**
comp=Z,287nm,1.7s,comp=Z,6μm
SISI Saibi 28.14 265 P **P 08 43 50.4 +0.9**
comp=Z,181nm,1.3s,comp=Z,3μm
TRTT Trang 28.14 285 P **P 08 43 50.2 +0.6**
comp=Z,242nm,1.2s,comp=Z,3μm
CTA Charters Tower 28.20 139 P **P 08 43 51.1 +1.1**
comp=Z,25nm,0.5s,baz=318,slow=11,SNR=57
CTA ScP **ScP 08 50 30.6 +1.5**
comp=Z,31nm,0.7s,baz=349,slow=3.5,SNR=8.3
CTA LR LR 08 55 35.0
comp=Z,988nm,18.1s,baz=303,slow=37
CTAO Charters Tower 28.20 139 *e*P **P 08 43 50.3 +0.3**
comp=Z,204nm,1.3s
PSI Prapat 28.23 274 P **P 08 43 50.5 0.0**
comp=Z,191nm,0.8s,baz=111,slow=3.8,SNR=140
PSI PcP **PcP 08 47 01.7 +0.8**
comp=Z,21nm,0.8s,baz=180,slow=1.0,SNR=4.5
PSI ScP **ScP 08 50 29.1 -0.4**
comp=Z,8.9nm,0.7s,baz=112,slow=3.0,SNR=6.9
PSI Prapat 28.23 274 *e*P **P 08 43 50.3 -0.3**
comp=Z,353nm,1.0s
KHON Khomkaen 28.33 304 P **P 08 43 51.9 +0.7**
comp=Z,550μm,0.8s
TSI Tuntungan 28.63 275 P **P 08 43 55.3 +1.4**
comp=Z,208nm,1.0s,comp=Z,8μm
MEEK Meekatharra 28.77 196 P **P 08 43 54.7 -0.4**
baz=29,SNR=127
CHAI Chaiyaphum 28.82 302 P **P 08 43 55.6 0.0**
comp=Z,532μm,0.9s
NONG Nongkai 28.96 307 P **P 08 43 57.0 +0.2**
comp=Z,6.7nm,1.2s,comp=Z,91nm
KCSI Kotacane, Aceh 29.43 275 P **P 08 44 00.2 -0.8**
comp=Z,309nm,1.6s,comp=Z,4μm
PKDT Phuket 29.47 284 P **P 08 44 01.9 +0.6**
comp=Z,311nm,1.4s,comp=Z,5μm
GSI Gunungsitoli 29.54 271 *e*P **P 08 44 00.7 -1.3**
comp=Z,870nm,1.6s
GSI Gunungsitoli 29.54 271 P **P 08 44 01.3 -0.7**
comp=Z,300nm,1.6s,comp=Z,5μm
PHET Kaeng Krachan 29.66 295 P **P 08 44 03.7 +0.7**
comp=Z,319μm,1.1s
PBKT Sadao Pong 30.00 302 P **P 08 44 06.5 +0.6**
comp=Z,88nm,1.6s,comp=Z,1μm
TPTI 30.00 275 P **P 08 44 05.5 -0.5**
comp=Z,114nm,1.3s,comp=Z,2μm
SLVN Son La 30.28 313 *e*P **P 08 44 09.5 +1.0**
comp=Z,346nm,1.6s
LHMI Lhok Sumawe 30.40 278 *e*P **P 08 44 10.3 +0.7**
comp=Z,306nm,1.0s

LHMI Lhok Sumawe 30.40 278 P **P 08 44 11.2 +1.6**
comp=Z,403nm,1.2s,comp=Z,4μm
SRDT SRDT 30.65 297 P **P 08 44 13.1 +1.4**
comp=Z,201nm,1.6s,comp=Z,4μm
SNSI Sinabang, Aceh 30.81 273 P **P 08 44 15.1 +1.9**
comp=Z,282nm,1.4s
MLSI Meulaboh, Aceh 30.84 276 P **P 08 44 12.9 -0.6**
comp=Z,343nm,1.5s,comp=Z,6μm
UTTA Uttaradit 30.91 304 P **P 08 44 14.8 +0.8**
comp=Z,245μm,1.0s
NANT Nan 31.32 306 P **P 08 44 19.1 +1.5**
comp=Z,428μm,0.8s
UMPA Umpang Tak 31.64 300 P **P 08 44 20.9 +0.4**
comp=Z,328μm,1.0s
WHN Wuhan 31.69 339 ⇓P **P 08 44 23.0 +2.3**
WHN pmax pmax
comp=Z,1μm,1.6s
WHN LR LR
comp=Z,2μm,7.2s
WHN LR LR
comp=Z,4μm,5.7s
WHN LR LR
comp=Z,5μm,24.8s
FORT Forrest 31.72 178 *e*P **P 08 44 20.2 -0.7**
comp=Z,491nm,0.6s
FORT Forrest 31.72 178 P **P 08 44 20.6 -0.3**
baz=32,SNR=152
NJ2 Nanjing 31.76 347 *e*P **P 08 44 23.8 +2.6**
NJ2 S **S 08 49 23.8 +2.6**
NJ2 pmax pmax
comp=Z,55nm,1.2s
NJ2 pmax pmax
comp=Z,880nm,4.5s
NJ2 LR LR
comp=Z,1μm,8.5s
NJ2 LR LR
comp=Z,2μm,12.8s
NJ2 LR LR
comp=Z,2μm,19.0s
MORW Morawa 31.82 199 *e*P **P 08 44 21.5 -0.3**
comp=Z,554nm,1.5s
MORW Morawa 31.82 199 P **P 08 44 21.8 -0.1**
baz=32,SNR=144
GYA Guiyang 31.98 324 ⇓*i*P **P 08 44 24.0 +0.5**
GYA pP pP 08 44 51.8 -0.5
GYA sP sP 08 45 05.5 -2.3
GYA PP **PnPn 08 45 35.5 +1.1**
GYA PcP **PcP 08 47 11.8 +1.4**
GYA S **S 08 49 25.0 -0.2**
GYA ScP **ScP 08 50 42.0 +0.6**
GYA ScS **ScS 08 54 39.3 -1.2**
GYA pmax pmax
comp=Z,160nm,1.2s
GYA pmax pmax
comp=Z,710nm,6.5s
GYA LR LR
comp=Z,2μm,16.1s
GYA LR LR
comp=Z,1μm,17.4s
GYA LR LR
comp=Z,3μm,15.8s
JNU Nakatsue 32.05 6 *e*P **P 08 44 23.9 +0.1**
comp=Z,83nm,1.2s
LAMP Lampang 32.05 304 P **P 08 44 25.7 +1.7**
BSI Banda Aceh 32.07 279 P **P 08 44 21.1 -3.1**
PAYA Payao 32.28 306 P **P 08 44 26.9 +0.9**
comp=Z,207μm,1.2s
CM31 Chiang Mai Arr 32.59 304 *e*P **P 08 44 30.0 +1.2**
comp=Z,236nm,1.2s
CM31 Chiang Mai Arr 32.59 304 P **P 08 44 30.3 +1.5**
SNR=35
CMAR Chiang Mai Arr 32.59 304 P **P 08 44 29.6 +0.9**
comp=Z,81nm,1.1s,baz=123,slow=7.2,SNR=191
CMAR PcP **PcP 08 47 13.8 +1.7**
comp=Z,18nm,0.9s,baz=163,slow=2.0,SNR=10
CMAR ScP **ScP 08 50 43.5 0.0**
comp=Z,5.8nm,0.9s,baz=148,slow=2.3,SNR=8.1
KMBL Kambalda 32.67 188 P **P 08 44 29.0 -0.3**
baz=33,SNR=170
CMMT Chiang Mai 32.76 304 P **P 08 44 31.0 +0.8**
comp=Z,103nm,1.4s,comp=Z,2μm
CHTO Chiang Mai 32.76 304 *e*P **P 08 44 30.5 +0.3**
comp=Z,383nm,1.4s
CHTO Chiang Mai 32.76 304 *e*P **P 08 44 30.5 +0.3**
CHTO pmax pmax
comp=Z,383nm,1.4s
CHTO Chiang Mai 32.76 304 P **P 08 44 31.2 +0.9**
SNR=46
BLDU Ballidu 33.06 197 P **P 08 44 32.6 -0.1**
baz=33,SNR=132
ENH Enshi 33.50 332 *e*P **P 08 44 37.5 +1.0**
comp=Z,198nm,0.9s
KMI Kunming 33.54 317 P **P 08 44 39.0 +1.9**
KMI pP pP 08 45 08.3 +2.1
KMI sP sP 08 45 22.5 +0.7
KMI S **S 08 49 50.5 +1.0**
KMI SS **SnSn 08 52 13.5 +5.2**
KMI pmax pmax
comp=Z,260nm,1.6s
KMI pmax pmax
comp=Z,1μm,3.1s
KMI LR LR
comp=Z,1μm,16.7s
KMI LR LR
comp=Z,1μm,16.3s
KMI LR LR
comp=Z,2μm,19.9s
KMI Kunming 33.54 317 *e*P **P 08 44 39.0 +1.9**
comp=Z,552nm,1.4s
KMI Kunming 33.54 317 *e*P **P 08 44 39.0 +1.9**
KMI pmax pmax
comp=Z,552nm,1.4s
KLBR Kellerberrin 33.71 194 P **P 08 44 38.2 -0.1**
baz=34,SNR=198
HNR Honiara 34.32 108 *e*P **P 08 44 43.0 -0.7**
HNR Honiara 34.32 108 P **P 08 44 43.3 -0.5**
comp=Z,111nm,0.5s,baz=226,slow=5.5,SNR=5.9
HNR Honiara 34.32 108 *e*P **P 08 44 43.1 -0.7**
comp=Z,677nm,1.5s
HNR Honiara 34.32 108 *e*P **P 08 44 43.1 -0.7**
HNR pmax pmax
comp=Z,677nm,1.5s
RMQ Roma 34.47 144 P **P 08 44 45.2 +0.3**
baz=34,SNR=22
MUN Mundaring 34.49 197 P **P 08 44 45.0 0.0**
baz=35,SNR=104
BBOO Buckleboo 34.77 167 *e*P **P 08 44 46.9 -0.5**
comp=Z,159nm,0.8s
BBOO Buckleboo 34.77 167 P **P 08 44 47.0 -0.4**
baz=35,SNR=306
EIDS Eidsvold 35.07 140 *e*P **P 08 44 49.8 -0.2**
comp=Z,216nm,1.1s
EIDS Eidsvold 35.07 140 P **P 08 44 49.9 -0.2**
baz=35,SNR=57
TJN Taejon 35.10 0 *ce*P **P 08 44 50.0 -0.1**
NWAO Narrogin (SRO) 35.11 195 P **P 08 44 50.5 +0.2**
comp=Z,104nm,0.5s,baz=30,slow=7.9,SNR=95
NWAO Narrogin (SRO) 35.11 195 *e*P **P 08 44 50.5 +0.2**
NWAO *e*P **P 08 44 50.7 +0.3**
NWAO Narrogin (SRO) 35.11 195 P **P 08 44 51.2 +0.9**
SNR=14
INU Inuyama 35.30 14 *e*P **P 08 44 52.4 +0.6**
comp=Z,30nm,0.7s
STKA Stephens Creek 35.55 159 P **P 08 44 53.8 -0.4**
comp=Z,85nm,0.4s,baz=332,slow=8.3,SNR=218
STKA LR LR 09 00 11.6
comp=Z,1μm,19.7s,baz=348,slow=37
STKA Stephens Creek 35.55 159 *e*P **P 08 44 54.1 0.0**
comp=Z,35nm,0.8s
STKA Stephens Creek 35.55 159 P **P 08 44 54.0 -0.1**
baz=36,SNR=322
STKA Stephens Creek 35.55 159 *e*P **P 08 44 54.1 0.0**
STKA pmax pmax
comp=Z,35nm,0.8s
DGPR DIGLIPUR 35.92 291 *e*P **P 08 44 56.7 -0.7**
DGPR IAmb IAmb 08 45 12.4
comp=Z,104nm,0.6s
HTT Hallett 36.10 163 P **P 08 44 58.9 +0.1**
baz=36,SNR=28
TIA Tai'an 36.14 346 P **P 08 45 00.0 +0.9**
TIA S **S 08 50 28.5 -0.3**
TIA LR LR
comp=Z,650nm,14.7s
TIA LR LR
comp=Z,1μm,16.5s
KS15 Wonju Array Si 36.17 1 *e*P **P 08 44 59.4 +0.1**
comp=Z,22nm,0.9s

KSRS	**Korea Array**	**36.18**	**1**	P	**P**	**08 44 59.8 +0.5**
	comp=Z,16nm,0.8s,baz=180,slow=10,SNR=68					
KSRS				PcP	**PcP**	**08 47 23.1 +1.0**
	comp=Z,12nm,0.8s,baz=192,slow=2.5,SNR=11					
KSRS				ScP	**ScP**	**08 50 55.5 -0.3**
	comp=Z,4.7nm,0.7s,baz=180,slow=3.5,SNR=9.5					
MAJO	**Matsushiro**	**36.73**	**15**	*e*P	**P**	**08 45 03.4 -0.7**
	comp=Z,24nm,0.7s					
MAJO				*e*PcP	**PcP**	**08 47 24.2 +0.5**
MAJO				*e*ScP	**ScP**	**08 50 58.1 +0.1**
MAJO	**Matsushiro**	**36.73**	**15**	*e*P	**P**	**08 45 03.4 -0.7**
MAJO				*e*		08 47 24.2
MAJO				pmax	pmax	
	comp=Z,24nm,0.7s					
MAT	**Matsushiro**	**36.73**	**15**	P	**P**	**08 45 02.4 -1.7**
MAT				S	**S**	**08 50 40.6 +2.9**
MJAR	**Matsushiro Arr**	**36.73**	**15**	P	**P**	**08 45 02.4 -1.7**
	comp=Z,16nm,0.6s,baz=193,slow=9.7,SNR=49					
MJAR				PcP	**PcP**	**08 47 24.2 +0.5**
	comp=Z,9.5nm,0.8s,baz=195,slow=3.1,SNR=4.9					
MJAR				ScP	**ScP**	**08 50 58.1 +0.1**
	comp=Z,2.0nm,0.7s,baz=174,slow=4.7,SNR=4.1					
MJAR				LR	LR	09 00 41.5
	comp=Z,897nm,19.3s,baz=200,slow=37					
MJB9	**Matsu-Tunnel**	**36.73**	**15**	*e*P	**P**	**08 45 03.4 -0.7**
	comp=Z,24nm,0.7s					
RKGY	**Rocky Gully**	**36.78**	**194**	P	**P**	**08 45 05.8 +1.3**
	baz=37,SNR=101					
XAN	**Xi'an**	**36.93**	**334**	P	**P**	**08 45 06.5 +0.6**
XAN				S	**S**	**08 50 40.5 -0.4**
XAN				SS	**SS**	**08 53 24.0 -4.5**
XAN				pmax	pmax	
	comp=Z,340nm,1.6s					
XAN				pmax	pmax	
	comp=Z,2μm,3.7s					
XAN				LR	LR	
	comp=Z,2μm,15.2s					
XAN				LR	LR	
	comp=Z,2μm,11.9s					
XAN				LR	LR	
	comp=Z,2μm,32.8s					
XAN	**Xi'an**	**36.93**	**334**	*e*P	**P**	**08 45 06.7 +0.8**
	comp=Z,1μm,1.6s					
XAN	**Xi'an**	**36.93**	**334**	*e*P	**P**	**08 45 06.7 +0.8**
XAN				pmax	pmax	
	comp=Z,1μm,1.6s					
CMSA	**Cobar Meteorol**	**36.94**	**153**	P	**P**	**08 45 06.2 +0.3**
	baz=37,SNR=305					
CD2	**Chengdu**	**37.00**	**325**	⇓P	**P**	**08 45 07.3 +0.8**
CD2				pP	pP	08 45 36.0 +0.2
CD2				PP	**PP**	**08 46 33.5 -0.2**
CD2				S	**S**	**08 50 40.5 -1.6**
CD2				sS	sS	08 51 35.5 +2.0
CD2				SS	**SnSn**	**08 53 32.8 +1.5**
CD2				pmax	pmax	
	comp=Z,220nm,0.9s					
CD2				pmax	pmax	
	comp=Z,2μm,4.2s					
CD2				LR	LR	
	comp=Z,4μm,16.2s					
CD2				LR	LR	
	comp=Z,6μm,17.2s					
CD2				LR	LR	
	comp=Z,3μm,20.6s					
H01W3	**Cape Leeuwin H**	**37.81**	**198**	P	**P**	**08 45 15.2 +2.3**
	baz=34,slow=5.0,SNR=8.1					
H01W1	**Cape Leeuwin H**	**37.81**	**198**	P	**P**	**08 45 15.2 +2.3**
	baz=34,slow=5.0,SNR=12					
H01W2	**Cape Leeuwin H**	**37.82**	**198**	P	**P**	**08 45 15.0 +1.9**
	baz=34,slow=5.0,SNR=4.1					
DL2	**Dalian**	**37.96**	**353**	P	**P**	**08 45 13.8 -0.6**
DL2				pP	**pP**	**08 45 40.0 -3.8**
DL2				sP	**sP**	**08 45 56.5 -2.6**
DL2				S	**S**	**08 50 54.3 -1.8**
DL2				pmax	pmax	
	comp=Z,170nm,0.9s					
DL2				pmax	pmax	
	comp=Z,370nm,6.3s					
TIY	**Taiyuan**	**38.86**	**341**	*e*P	**P**	**08 45 23.5 +1.4**
TIY				pP	**pwP**	**08 45 54.5 0.0**
TIY				sP	**sP**	**08 46 08.8 +2.1**
TIY				S	**S**	**08 51 09.8 -0.2**
TIY				sS	**sS**	**08 52 02.8 +1.0**
TIY				ScS	**ScS**	**08 55 15.5 -2.0**
TIY				pmax	pmax	
	comp=Z,140nm,0.9s					
TIY				pmax	pmax	
	comp=Z,830nm,4.8s					
TIY				LR	LR	
	comp=Z,380nm,7.8s					
TIY				LR	LR	
	comp=Z,690nm,13.6s					
TIY				LR	LR	
	comp=Z,1μm,27.5s					
ARMA	**Armidale**	**39.08**	**145**	*e*P	**P**	**08 45 24.9 +0.9**
	comp=Z,256nm,0.8s					
ARMA	**Armidale**	**39.08**	**145**	P	**P**	**08 45 25.1 +1.1**
	baz=39,SNR=375					
SAIH	**SAIHA**	**39.41**	**305**	*e*P	**P**	**08 45 27.6 +0.6**
IMP	**Imphal**	**39.80**	**309**	*e*P	**P**	**08 45 29.9 -0.1**
BJT	**Baijiatuau**	**40.00**	**347**	*e*P	**P**	**08 45 31.8 +0.5**
	comp=Z,373nm,1.6s					
BJT	**Baijiatuau**	**40.00**	**347**	*e*P	**P**	**08 45 31.8 +0.5**
BJT				pmax	pmax	
	comp=Z,373nm,1.6s					
BJI	**Beijing**	**40.02**	**347**	P	**P**	**08 45 32.3 +0.8**
BJI				S	**S**	**08 51 25.0 -2.0**
BJI				pmax	pmax	
	comp=Z,58nm,0.8s					
BJI				LR	LR	
	comp=Z,310nm,12.9s					
BJI				LR	LR	
	comp=Z,390nm,19.3s					
BJI				LR	LR	
	comp=Z,370nm,29.2s					
ARPS	**Mount Arapiles**	**40.08**	**162**	P	**P**	**08 45 32.6 +0.5**
	baz=40,SNR=121					
KOHI	**KOHIMA**	**40.14**	**310**	*e*P	**P**	**08 45 33.1 +0.2**
MOKO	**MOKOCHONG**	**40.15**	**311**	*e*P	**P**	**08 45 33.4 +0.3**
YNG	**Young**	**40.48**	**152**	P	**P**	**08 45 36.5 +1.0**
	baz=41,SNR=58					
DIBR	**DIBRUGARH**	**40.50**	**313**	*e*P	**P**	**08 45 35.1 -0.6**
JORH	**JORHAT**	**40.58**	**312**	*e*P	**P**	**08 45 37.2 +0.9**
BRDH	**Bariadhala**	**40.60**	**305**	P	**P**	**08 45 38.4 +1.8**
	comp=Z,198nm,0.4s,baz=84,slow=9.8,SNR=12					
SILR	**SILCHAR**	**40.66**	**308**	*e*P	**P**	**08 45 38.8 +1.7**
SNY	**Shenyang**	**40.67**	**356**	⇓P	**P**	**08 45 37.5 +0.7**
SNY				S	**S**	**08 51 31.5 -5.1**
SNY				SS	**SS**	**08 54 43.8 +1.1**
SNY				pmax	pmax	
	comp=Z,110nm,0.8s					
SNY				LR	LR	
	comp=Z,1μm,13.9s					
SNY				LR	LR	
	comp=Z,1μm,15.3s					
SNY				LR	LR	
	comp=Z,1μm,13.5s					
MGCD	**Mangrove Creek**	**40.94**	**149**	P	**P**	**08 45 40.8 +1.6**
	baz=41,SNR=55					
LZH	**Lanzhou**	**40.96**	**331**	⇓*i*P	**P**	**08 45 42.0 +2.4**
LZH				pP	pP	08 46 08.5 -0.7
LZH				PcP	**PcP**	**08 47 38.3 +1.0**
LZH				ScP	**ScP**	**08 51 16.3 +1.8**
LZH				PcS	**PcS**	**08 51 30.3 +1.7**
LZH				S	**S**	**08 51 43.5 +1.9**
LZH				sS	sS	08 52 34.5 +0.8
LZH				SS	**SS**	**08 54 48.0 -1.1**
LZH				ScS	**ScS**	**08 55 30.5 +0.3**
LZH				pmax	pmax	
	comp=Z,520nm,1.3s					
LZH				pmax	pmax	
	comp=Z,2μm,4.1s					
LZH				LR	LR	
	comp=Z,4μm,13.6s					
LZH				LR	LR	
	comp=Z,3μm,15.2s					
LZH				LR	LR	
	comp=Z,6μm,21.7s					
BELO	**BELONIA**	**41.02**	**305**	*e*x	x	08 45 52.2
ITAN	**ITANAGAR**	**41.20**	**312**	*e*P	**P**	**08 45 42.5 +1.0**
ZIRO	**ZIRO**	**41.31**	**312**	*e*P	**P**	**08 45 43.5 +0.9**
RIV	**Riverview**	**41.45**	**149**	P	**P**	**08 45 44.1 +0.7**
	baz=42,SNR=4.8					
CAN	**Canberra**	**41.60**	**153**	*e*P	**P**	**08 45 46.1 +1.4**
	comp=Z,285nm,0.6s					
CAN	**Canberra**	**41.60**	**153**	*e*P	**P**	**08 45 46.1 +1.4**
CAN				pmax	pmax	
	comp=Z,285nm,0.6s					
TEZP	**TEZPUR**	**41.61**	**311**	*e*P	**P**	**08 45 44.5 -0.2**
CNB	**Canberra Magne**	**41.77**	**152**	P	**P**	**08 45 47.1 +1.1**
	baz=42,SNR=209					
SHL	**Shillong**	**41.78**	**309**	*e*P	**P**	**08 45 46.5 +0.1**
	comp=Z,627nm,1.4s					
SHL	**Shillong**	**41.78**	**309**	*e*P	**P**	**08 45 46.5 +0.1**
SHL				pmax	pmax	
	comp=Z,627nm,1.4s					
SHL	**Shillong**	**41.78**	**309**	*e*P	**P**	**08 45 46.2 -0.2**
SHL				*e*x	x	08 52 12.5
HHC	**Hu-ho-hao-te**	**42.00**	**342**	P	**P**	**08 45 49.5 +1.6**
HHC				sP	sP	08 46 29.3 -3.5
HHC				S	**S**	**08 52 01.8 +5.2**
HHC				SS	**SS**	**08 55 07.5 -1.7**
HHC				pmax	pmax	
	comp=Z,36nm,0.9s					
VLA	**Vladivostok**	**42.05**	**5**	*d i*P	**P**	**08 45 48.6 +0.6**
VLA				pmax	pmax	
	comp=Z,94nm,1.0s					
TOO	**Toolangi**	**42.07**	**158**	*e*P	**P**	**08 45 49.8 +1.4**
	comp=Z,438nm,1.6s					
TOO	**Toolangi**	**42.07**	**158**	P	**P**	**08 45 49.7 +1.3**
	baz=42,SNR=136					
TOO	**Toolangi**	**42.07**	**158**	*e*P	**P**	**08 45 49.8 +1.4**
TOO				pmax	pmax	
	comp=Z,438nm,1.6s					
GUWA	**GUWAHATI**	**42.24**	**309**	*e*P	**P**	**08 45 50.3 +0.4**
GUWA				IAmb	IAmb	08 45 51.5
	comp=Z,220nm,1.3s					
BTO	**Baotou**	**42.27**	**341**	*e*P	**P**	**08 45 50.8 +0.7**
CN2	**Changchun**	**42.54**	**358**	*e*P	**P**	**08 45 52.0 0.0**
CN2				*e*sP	sP	08 46 35.3 -1.8
CN2				*e*S	**S**	**08 52 00.0 -4.2**
CN2				*e*SS	**SS**	**08 55 15.0 -4.4**
CN2				pmax	pmax	
	comp=Z,200nm,4.0s					
CN2				LR	LR	
	comp=Z,700nm,16.0s					
CN2				LR	LR	
	comp=Z,500nm,16.0s					
CN2				LR	LR	
	comp=Z,700nm,16.0s					
TAWA	**Tawang**	**42.83**	**311**	*e*P	**P**	**08 45 56.9 +1.8**
TURI	**Tura**	**42.99**	**307**	*e*P	**P**	**08 45 56.3 +0.3**
MILA	**Mila**	**43.12**	**154**	P	**P**	**08 45 58.1 +1.2**
	baz=43,SNR=35					
USRK	**Ussuriysk Ar.**	**43.13**	**5**	P	**P**	**08 45 57.3 +0.5**
	comp=Z,58nm,0.9s,baz=201,slow=7.9,SNR=58					
USRK				ScP	**ScP**	**08 51 23.2 +0.5**
	comp=Z,2.5nm,0.7s,baz=177,slow=5.8,SNR=5.6					
ERM	**Erimo**	**43.21**	**17**	*c e*P	**P**	**08 45 58.3 +0.8**
ERM				pmax	pmax	
	comp=Z,59nm,1.1s					
MDJ	**Mudanjiang**	**43.38**	**3**	P	**P**	**08 45 59.8 +1.0**
MDJ				pP	pP	08 46 28.5 -0.4
MDJ				sP	sP	08 46 42.8 -1.2
MDJ				S	S	08 52 26.0 +9.5
MDJ				pmax	pmax	
	comp=Z,170nm,1.0s					
MDJ				LR	LR	
	comp=Z,740nm,9.4s					
MDJ				LR	LR	
	comp=Z,720nm,12.0s					
MDJ				LR	LR	
	comp=Z,1μm,13.3s					
MDJ	**Mudanjiang**	**43.38**	**3**	*e*P	**P**	**08 45 59.3 +0.5**
	comp=Z,175nm,1.1s					
LSA	**Lhasa**	**44.49**	**313**	*e*P	**P**	**08 46 10.2 +1.7**
	comp=Z,206nm,1.1s					
LSA	**Lhasa**	**44.49**	**313**	*i* P	**P**	**08 46 10.7 +2.3**
	SNR=22					
LSA	**Lhasa**	**44.49**	**313**	*e*P	**P**	**08 46 10.2 +1.7**
LSA				pmax	pmax	
	comp=Z,206nm,1.1s					
TEY	**Ternei**	**44.55**	**10**	⇓*e*P	**P**	**08 46 08.9 +0.9**
TEY				pmax	pmax	
	comp=Z,100nm,0.8s					
TEY				pmax	pmax	
	comp=N,60nm,0.7s					
BWNR	**Bhubaneshwar**	**44.65**	**298**	*e*x	P	08 46 01.8 -7.5
DZM	**Mont Dzumac**	**44.74**	**123**	P	**P**	**08 46 10.7 +0.6**
	comp=N,31nm,0.4s,baz=269,slow=9.1,SNR=84					
DZM	**Mont Dzumac**	**44.74**	**123**	*e*P	**P**	**08 46 11.0 +0.9**
	comp=N,208nm,1.8s					
DZM				*e*S	**S**	**08 52 37.0 0.0**
	comp=N,988nm,26.2s					
DZM				*e*LQ	LQ	08 56 57.0
	comp=N,2μm,27.1s					
DZM				*e*LR	LR	08 58 50.4
	comp=N,2μm,30.1s					
DZM	**Mont Dzumac**	**44.74**	**123**	*e*P	**P**	**08 46 10.2 +0.1**
	comp=N,107nm,1.4s					
ASAJ	**Asahikawa**	**44.98**	**16**	P	**P**	**08 46 11.9 +0.4**
	comp=N,20nm,0.8s,baz=228,slow=14,SNR=9.5					
ASAJ	**Asahikawa**	**44.98**	**16**	P	**P**	**08 46 12.0 +0.4**
GTK	**Tadong**	**45.20**	**309**	*e*P	**P**	**08 46 15.1 +1.4**
GTK				IAmb	IAmb	08 46 16.1
	comp=Z,131nm,0.6s					
GTA	**Gaotai**	**45.55**	**330**	*e*P	**P**	**08 46 18.0 +1.7**
GTA				pP	pP	08 46 45.5 -0.9
GTA				sP	sP	08 47 00.5 -0.9
GTA				ScP	**ScP**	**08 51 34.5 +1.5**
GTA				S	**S**	**08 52 48.5 +0.2**
GTA				sS	sS	08 53 41.3 +0.1
GTA				ScS	**ScS**	**08 55 58.5 -0.3**
GTA				pmax	pmax	
	comp=Z,160nm,1.3s					
GTA				pmax	pmax	
	comp=Z,1μm,7.1s					
GTA				LR	LR	
	comp=Z,2μm,19.7s					
GTA				LR	LR	
	comp=Z,2μm,17.8s					
GTA				LR	LR	
	comp=Z,1μm,18.4s					
PINNC	**Pines Island,**	**45.81**	**123**	*e*P	**P**	**08 46 17.6 -0.8**
	comp=Z,155nm,1.3s					
MARNC	**Mare, Loyalty**	**45.83**	**122**	*e*P	**P**	**08 46 20.3 +1.7**
	comp=Z,258nm,1.3s					
BOK	**Bokaro**	**45.87**	**303**	*e*P	**P**	**08 46 20.3 +1.4**
YUK	**Yuzh-Kuril'sk**	**45.88**	**19**	*e*P	**P**	**08 46 18.9 +0.3**
YUK				*e*		08 47 50.0
YUK				*e*		08 48 04.4
YUK				*e*PPP	PPP	08 48 54.6
YUK				*e*S	**S**	**08 52 53.6 +1.0**
YUK						08 55 54.5
YUK				*e*SSS	SSS	08 57 27.8
YUK				pmax	pmax	
	comp=Z,217nm,1.0s					
YUK				pmax	pmax	
	comp=N,132nm,1.1s					
YUK				pmax	pmax	
	comp=E,205nm,1.5s					
YUK				pmax	pmax	
	comp=Z,281nm,1.1s					
PALK	**Pallekele**	**46.67**	**279**	P	**P**	**08 46 25.7 +0.3**
	comp=Z,199nm,1.3s,baz=116,slow=7.0,SNR=22					
PALK				PcP	**PcP**	**08 47 58.1 +1.0**
	comp=Z,19nm,0.7s,baz=114,slow=1.5,SNR=5.6					
PALK	**Pallekele**	**46.67**	**279**	*e*P	**P**	**08 46 25.7 +0.3**
	comp=Z,397nm,1.4s					
PALK	**Pallekele**	**46.67**	**279**	*i* P	**P**	**08 46 26.1 +0.7**
	SNR=20					
PALK				*i* P	**P**	**08 46 26.6 +1.2**
	SNR=8.6					
MOO	**Moorlands**	**46.98**	**160**	P	**P**	**08 46 28.6 +1.4**
	baz=47,SNR=18					
JIRN	**Jiri**	**47.25**	**308**	*e*P	**P**	**08 46 30.9 +0.8**
	comp=Z,208nm,0.3s					
KUR	**Kuril'sk**	**47.61**	**20**	*e*P	**P**	**08 46 27.9 -4.1**
KUR				*e*S	**S**	**08 53 17.3 +0.2**
KUR				pmax	pmax	
	comp=Z,800nm,4.3s					
KUR				pmax	pmax	
	comp=Z,210nm,1.6s					
GUN	**Gumba**	**47.61**	**308**	*e*P	**P**	**08 46 33.6 +0.8**
	comp=Z,607nm,0.8s					
YSS	**Yuzh-Sakhalins**	**47.66**	**14**	*e*P	**P**	**08 46 33.0 +0.6**
	comp=Z,32nm,0.6s					
YSS	**Yuzh-Sakhalins**	**47.66**	**14**	*e*P	**P**	**08 46 33.0 +0.6**
YSS				pmax	pmax	
	comp=Z,32nm,0.6s					
PKI	**Pulchoki**	**47.83**	**307**	*e*P	**P**	**08 46 34.9 +0.4**
PKIN	**Phulchoki**	**47.84**	**307**	*e*P	**P**	**08 46 34.9 +0.4**
MDRS	**Chennai**	**47.91**	**287**	*e*P	**P**	**08 46 35.8 +0.9**
KKN	**Kakani**	**48.03**	**307**	*e*P	**P**	**08 46 36.5 +0.6**
DMN	**Daman**	**48.09**	**307**	*e*P	**P**	**08 46 37.1 +0.7**
	comp=Z,867nm,1.2s					
KLR	**Kul'dur**	**48.11**	**4**	P	**P**	**08 46 35.2 -0.7**
	comp=Z,54nm,0.9s,baz=203,slow=6.1,SNR=80					
KLR				ScP	**ScP**	**08 51 42.6 -0.7**
	comp=Z,3.6nm,0.5s,baz=161,slow=3.2,SNR=5.4					
KLR	**Kul'dur**	**48.11**	**4**	*d i*P	**P**	**08 46 35.9 +0.1**
KLR				pmax	pmax	
	comp=Z,93nm,1.1s					
HIA	**Hailar**	**48.40**	**354**	*e*P	**P**	**08 46 38.6 +0.6**
	comp=Z,75nm,1.3s					
HIA	**Hailar**	**48.40**	**354**	*e*P	**P**	**08 46 38.7 +0.6**
HIA				pmax	pmax	
	comp=Z,75nm,1.3s					
NFK	**Norfolk Island**	**49.20**	**131**	P	**P**	**08 46 45.0 +0.4**
	baz=49,SNR=3.1					
KOLN	**Koldanda**	**49.37**	**306**	*e*P	**P**	**08 46 47.1 +1.0**
	comp=Z,2μm,1.0s					
DANN	**Dangsing**	**49.48**	**307**	*e*P	**P**	**08 46 47.9 +0.8**
	comp=Z,1μm,0.8s					
SONA0	**Songino Array**	**49.90**	**342**	*e*P	**P**	**08 46 50.4 +0.7**
SONA0				*e*PcP	**PcP**	**08 48 07.7 -0.4**
SONA0				*e*ScP	**ScP**	**08 51 51.3 +0.1**
SONM	**Songino Array**	**49.90**	**342**	P	**P**	**08 46 50.4 +0.7**
	comp=Z,38nm,0.8s,baz=156,slow=8.0,SNR=155					
SONM				PcP	**PcP**	**08 48 07.7 -0.4**
	comp=Z,23nm,0.8s,baz=165,slow=4.3,SNR=4.4					
SONM				ScP	**ScP**	**08 51 51.3 +0.1**
	comp=Z,3.1nm,0.8s,baz=168,slow=4.9,SNR=3.5					
SONM				LR	LR	09 09 43.0
	comp=Z,954nm,20.9s,baz=148,slow=38					
PYUN	**Piuthan**	**49.99**	**307**	*e*P	**P**	**08 46 52.1 +1.2**
	comp=Z,2μm,0.9s					
GRNR	**Gornyy**	**50.11**	**8**	*e*P	**P**	**08 46 52.0 +0.9**
GRNR				pmax	pmax	
	comp=Z,46nm,1.0s					
HYB	**Hyderabad**	**50.41**	**292**	*i* P	**P**	**08 46 53.0 -0.9**
HYB				*e*S	**S**	**08 53 56.0 -1.3**
TRD	**Trivandrum**	**50.48**	**280**	*e*P	**P**	**08 46 55.2 +0.7**
NGP	**Nagpur**	**50.92**	**297**	⇑*i*P	**P**	**08 46 56.6 -1.1**
NGP				*e*x	x	08 46 59.3
CIT	**Chita**	**52.01**	**349**	*e*P	**P**	**08 47 05.4 +0.1**
CIT				*e*		08 48 10.4
CIT				pmax	pmax	
	comp=Z,153nm,1.3s					
ZEA	**Zeya**	**52.46**	**0**	*e*P	**P**	**08 47 08.8 +0.3**
ZEA				*e*		08 47 46.5
ZEA				*e*S	S	08 54 36.0 +12
ZEA				*e*		08 56 45.5
ZEA				pmax	pmax	
	comp=N,35nm,1.0s					
ZEA				pmax	pmax	
	comp=Z,52nm,1.0s					
ZEA				pmax	pmax	
	comp=Z,200nm,6.0s					
ZEA				smax	smax	
	comp=N,300nm,6.0s					
ZEA				MLR	MLR	
	comp=Z,700nm,16.0s					
ZEA				MLR	MLR	
	comp=E,400nm,15.0s					
ZEA				MLR	MLR	
	comp=N,300nm,18.0s					
BHPL	**Bhopal**	**52.96**	**299**	*e*P	**P**	**08 47 13.4 +0.6**
NKL	**Nikolayevsk**	**53.08**	**10**	*e*P	**P**	**08 47 13.8 +0.8**
NKL				*e*		08 48 13.3
NKL				*e*		08 49 10.6
NKL				*e*S	**S**	**08 54 31.9 -0.7**
NKL				*e*		08 56 50.3
NKL				*e*SS	**SKiKP**	**08 58 15.6 -1.4**
NKL				pmax	pmax	
	comp=Z,31nm,0.7s					
NKL				pmax	pmax	
	comp=N,81nm,1.2s					
NKL				pmax	pmax	
	comp=E,11nm,1.0s					
NKL				pmax	pmax	
	comp=Z,203nm,1.6s					
NKL				MLR	MLR	
	comp=Z,255nm,12.0s					
NKL				MLR	MLR	
	comp=E,604nm,14.0s					
NKL				MLR	MLR	
	comp=N,240nm,12.0s					
ZAK	**Zakamensk**	**53.12**	**341**	*e*P	**P**	**08 47 14.3 +0.7**
ZAK				pmax	pmax	
	comp=Z,30nm,1.5s					
TLY	**Talaya**	**54.13**	**342**	*e*P	**P**	**08 47 21.9 +1.0**
	comp=Z,37nm,1.1s					
TLY	**Talaya**	**54.13**	**342**	*d i*P	**P**	**08 47 21.8 +1.0**
TLY				*e*S	**S**	**08 54 48.0 +1.0**
TLY				*e*		08 56 55.4
TLY				*e*SS	**SS**	**08 58 33.5 +2.8**
TLY				pmax	pmax	
	comp=Z,131nm,1.6s					
TLY				MLR	MLR	
	comp=Z,961nm,14.0s					
TLY	**Talaya**	**54.13**	**342**	P	**P**	**08 47 19.0 -1.8**
	SNR=33					
TLY				P	**P**	**08 47 19.0 -1.8**
	SNR=33					
MNCI	**Minicoy**	**54.31**	**279**	*e*P	**P**	**08 47 24.2 +1.5**
	comp=Z,1μm,1.5s					
IRK	**Irkutsk**	**54.44**	**343**	*e*P	**P**	**08 47 23.2 +0.2**
IRK				pmax	pmax	
	comp=Z,140nm,2.3s					
GOA	**Goa**	**54.47**	**288**	*e*P	**P**	**08 47 24.4 +0.6**
DDI	**Dehra Dun**	**54.83**	**307**	*e*P	**P**	**08 47 27.1 +0.8**
NDI	**New Delhi**	**54.91**	**305**	*e*P	**P**	**08 47 27.5 +0.7**
MOY	**Mondy**	**54.97**	**340**	*e*P	**P**	**08 47 28.6 +1.6**
MOY				pmax	pmax	
	comp=Z,226nm,1.8s					
POO	**Poona**	**55.02**	**292**	*e*P	**P**	**08 47 27.5 -0.4**
WMQ	**Urumqi**	**55.10**	**326**	P	**P**	**08 47 29.5 +1.5**
WMQ				pP	pP	08 48 00.8 +1.6
WMQ				PcP	**PcP**	**08 48 29.0 +1.3**
WMQ				PP	**PP**	**08 49 35.8 +3.0**
WMQ				ScP	**ScP**	**08 52 14.5 +0.7**
WMQ				S	**S**	**08 55 02.3 +2.0**
WMQ				ScS	**ScS**	**08 57 01.3 -2.5**
WMQ				pmax	pmax	
	comp=Z,190nm,1.1s					
WMQ				pmax	pmax	
	comp=Z,800nm,4.7s					
WMQ				LR	LR	
	comp=Z,940nm,17.3s					
WMQ				LR	LR	
	comp=Z,1μm,19.3s					
WMQ				LR	LR	
	comp=Z,890nm,21.1s					
WMQ	**Urumqi**	**55.10**	**326**	*e*P	**P**	**08 47 29.2 +1.2**
	comp=Z,312nm,0.9s					
WMQ	**Urumqi**	**55.10**	**326**	*e*P	**P**	**08 47 29.2 +1.2**
WMQ				pmax	pmax	
	comp=Z,312nm,0.9s					
H08S2	**Diego Garcia H**	**55.17**	**260**	P	**P**	**08 47 30.6 +2.0**
	baz=50,slow=12,SNR=6.2					
SKR	**Severo-Kuril's**	**55.17**	**22**	*e*P	P	08 47 21.9 -6.4
SKR				*e*		08 48 12.9
SKR				*e*S	**S**	**08 54 53.2 -7.6**
SKR				pmax	pmax	
	comp=Z,200nm,14.0s					
SKR				pmax	pmax	
	comp=Z,300nm,4.4s					
SKR				MLR	MLR	
	comp=Z,300nm,15.0s					
H08S3	**Diego Garcia H**	**55.18**	**260**	P	**P**	**08 47 30.3 +1.6**
	baz=50,slow=12,SNR=4.1					
DGAR	**Diego Garcia**	**55.19**	**260**	*e*P	**P**	**08 47 30.5 +1.4**
	comp=Z,448nm,1.0s					
DGAR	**Diego Garcia**	**55.19**	**260**	*d i*P	**P**	**08 47 30.2 +1.2**
DGAR				pmax	pmax	
	comp=Z,437nm,1.1s					
H08S1	**Diego Carcia H**	**55.19**	**260**	P	**P**	**08 47 30.7 +1.9**
	baz=50,slow=12,SNR=3.1					
SMLA	**Simla**	**55.84**	**308**	*e*P	**P**	**08 47 35.0 +1.5**
H08N1	**Diego Carcia H**	**56.49**	**262**	P	**P**	**08 47 36.1 -1.9**
	baz=102,slow=4.0,SNR=7.2					
H08N2	**Diego Garcia H**	**56.51**	**262**	P	**P**	**08 47 36.3 -1.7**
	baz=102,slow=4.0,SNR=6.8					
H08N3	**Diego Garcia H**	**56.52**	**262**	P	**P**	**08 47 36.4 -1.8**
	baz=102,slow=4.0,SNR=4.6					

DHRM	DHARAMSHALA	56.95	308	eP	P	08 47 42.4 +0.8
BOD	Bodaibo	57.50	352	eP	P	08 47 44.5 -0.2
BOD				pmax	pmax	
	comp=Z,118nm,1.3s					
PEA0B	Petropavlovsk-	57.71	21	eP	P	08 47 47.5 +1.3
	comp=Z,30nm,0.7s					
PETK	Petropavlovsk-	57.71	21	P	P	08 47 47.1 +0.9
	comp=Z,40nm,0.8s,baz=189,slow=4.4,SNR=81					
PETK				LR	LR	09 12 50.6
	comp=Z,171nm,20.1s,baz=211,slow=36					
PEA1	Petropavlovsk-	57.71	21	eP	P	08 47 47.1 +0.8
PET	Petropavlovsk	57.99	22	eP	P	08 47 49.3 +1.1
PET				e*PP	pP	08 48 20.7 +0.9
PET				eS	S	08 55 36.3 -1.5
PET				pmax	pmax	
	comp=Z,31nm,0.9s					
PET				MLR	MLR	
	comp=Z,300nm,18.0s					
PET				MLR	MLR	
	comp=Z,200nm,14.0s					
DCZ	Deep Cove	58.32	148	eP	P	08 47 51.2 +0.6
	comp=Z,90nm,1.4s					
FOZ	Fox Glacier	58.58	145	eP	P	08 47 52.6 +0.2
	comp=Z,76nm,1.3s					
MLZ	Mavora Lakes	58.77	147	eP	P	08 47 55.2 +1.4
	comp=Z,60nm,1.4s					
ZSN	Zaisan	58.92	328	d iP	P	08 47 55.1 +0.4
ZSN				i S	S	08 55 51.8 +1.6
ZSN	Zaisan	58.92	328	⇓iP	P	08 47 55.2 +0.4
ZSN				i S	S	08 55 51.8 +1.6
WKZ	Wanaka	58.92	146	eP	P	08 47 55.7 +0.8
	comp=Z,99nm,1.4s					
HIZ	Hauiti	58.95	137	eP	P	08 47 56.7 +1.6
	comp=Z,57nm,0.9s					
WHZ	Wether Hill Ro	59.02	148	eP	P	08 47 55.7 +0.2
	comp=Z,85nm,1.2s					
DGZ	Jazzator, Alta	59.06	331	d iP	P	08 47 56.7 +0.8
DGZ				pmax	pmax	
	comp=Z,53nm,0.9s					
LBZ	Lake Benmore	59.31	145	eP	P	08 47 57.6 +0.2
	comp=Z,100nm,0.6s					
THZ	Tophouse	59.40	141	eP	P	08 47 58.2 -0.1
	comp=Z,92nm,0.5s					
RPZ	Rata Peaks	59.41	144	P	P	08 47 58.2 +0.1
	comp=Z,37nm,0.5s,baz=272,slow=2.5,SNR=31					
RPZ	Rata Peaks	59.41	144	eP	P	08 47 58.8 +0.6
	comp=Z,69nm,1.0s					
LTZ	Lake Taylor	59.59	143	eP	P	08 48 00.0 +0.5
	comp=Z,52nm,1.2s					
PDGK	Podgornoye	59.69	321	P	P	08 48 01.2 +0.9
PDGK				pmax	pmax	
	comp=Z,202nm,0.9s					
OXZ	Oxford	59.76	143	eP	P	08 47 59.8 -0.8
	comp=Z,89nm,0.5s					
NIL	Nilore	59.85	309	eP	P	08 48 01.2 -0.3
	comp=Z,397nm,1.4s					
NIL	Nilore	59.85	309	eP	P	08 48 01.2 -0.3
NIL				pmax	pmax	
	comp=Z,397nm,1.4s					
UZB	Uzynbulak	59.89	321	deP	P	08 48 02.4 +0.7
UZB				eS	S	08 56 03.8 +0.7
UZB				pmax	pmax	
	comp=Z,69nm,0.8s					
UZB				smax	smax	
	comp=N,131nm,5.0s					
UZB	Uzynbulak	59.89	321	⇓eP	P	08 48 02.4 +0.7
	comp=N,69nm,0.8s					
UZB				eS	S	08 56 03.8 +0.7
	comp=N,131nm,5.0s					
MK31	Makanchi Array	59.93	326	eP	P	08 48 02.3 +0.6
	comp=N,147nm,0.8s					
MK31	Makanchi Array	59.93	326	eP	P	08 48 02.3 +0.6
MK31				pmax	pmax	
	comp=Z,147nm,0.8s					
MK32	Makanchi Array	59.93	326	eP	P	08 48 02.2 +0.5
MK32				ePcP	sP	08 48 47.7 -0.5
MK32				eScP	ScP	08 52 34.6 -0.5
MK32				eS	S	08 56 03.5 +0.3
MKAR	Makanchi Array	59.93	326	P	P	08 48 02.2 +0.5
	comp=Z,315nm,0.9s,baz=120,slow=8.6,SNR=496					
MKAR				pP	pP	08 48 33.4 -0.1
	comp=Z,24nm,0.6s,baz=125,slow=7.6,SNR=2.1					
MKAR				sP	sP	08 48 47.7 -0.5
	comp=Z,35nm,0.6s,baz=122,slow=6.2,SNR=2.8					
MKAR				ScP	ScP	08 52 34.6 -0.5
	comp=Z,5.6nm,0.8s,baz=124,slow=4.5,SNR=6.2					
MKAR				S	S	08 56 03.5 +0.3
	comp=Z,0.7nm,0.4s,baz=128,slow=15,SNR=3.6					
MKAR				LR	LR	09 15 42.0
	comp=Z,530nm,19.0s,baz=113,slow=38					
MKAR				PKP2bc		09 17 35.9
	comp=Z,0.4nm,0.6s,baz=294,slow=3.3,SNR=3.9					
MKAR				P4KPbc		09 25 04.3
	comp=Z,0.3nm,0.4s,baz=131,slow=4.4,SNR=6.3					
PRZ	Przheval'sk	59.95	320	eP	P	08 48 03.1 +0.9
	comp=Z,584nm,1.4s					
PRZ	Przheval'sk	59.95	320	eP	P	08 48 03.1 +0.9
PRZ				pmax	pmax	
	comp=Z,584nm,1.4s					
MAKZ	Makanchi	60.12	326	eP	P	08 48 03.6 +0.6
	comp=Z,276nm,1.1s					
MAKZ	Makanchi	60.12	326	eP	P	08 48 03.6 +0.6
MAKZ				pmax	pmax	
	comp=Z,276nm,1.1s					
KHZ	Kahutara	60.16	142	eP	P	08 48 03.0 -0.2
	comp=Z,80nm,0.6s					
KSH	Kashi	60.18	316	P	P	08 48 06.0 +2.3
KSH				pP	pwP	08 48 37.0 -1.5
KSH				PP	PP	08 50 22.5 +4.4
KSH				S	S	08 56 06.8 -0.1
KSH				ScS	SKKSac	08 57 36.3 -5.0
KSH				pmax	pmax	
	comp=Z,400nm,1.1s					
KSH				pmax	pmax	
	comp=Z,2μm,8.1s					
KSH				LR	LR	
	comp=Z,3μm,19.7s					
KSH				LR	LR	
	comp=Z,880nm,13.2s					
KSH				LR	LR	
	comp=Z,2μm,19.9s					
SATY	Saty	60.23	321	eP	P	08 48 05.1 +1.1
SATY				eS	S	08 56 07.9 +0.5
SATY				pmax	pmax	
	comp=Z,173nm,0.6s					
SATY				smax	smax	
	comp=N,149nm,5.0s					
SATY	Saty	60.23	321	eP	P	08 48 05.1 +1.1
	comp=N,173nm,0.6s					
SATY				eS	S	08 56 08.0 +0.5
	comp=N,149nm,5.0s					
KPKS	Kokpek	60.26	321	eP	P	08 48 04.8 +0.7
KPKS				eS	S	08 56 08.4 +0.7
KPKS				pmax	pmax	
	comp=Z,249nm,1.1s					
KPKS				smax	smax	
	comp=N,290nm,5.4s					
KPKS	Kokpek	60.26	321	eP	P	08 48 04.9 +0.7
	comp=N,249nm,1.1s					
KPKS				eS	S	08 56 08.5 +0.7
	comp=N,290nm,5.5s					
MQZ	McQueen's Vall	60.34	143	eP	P	08 48 02.8 -1.7
	comp=N,108nm,1.3s					
URZ	Urewera	60.38	136	P	P	08 48 04.1 -0.8
	comp=N,39nm,0.5s,baz=251,slow=6.5,SNR=35					
URZ	Urewera	60.38	136	eP	P	08 48 04.7 -0.2
	comp=N,43nm,0.6s					
BKZ	Black Stump Fm	60.39	137	eP	P	08 48 04.5 -0.5
	comp=N,141nm,1.1s					
KDJ	Kajisay	60.57	319	eP	P	08 48 07.3 +0.9
	comp=N,154nm,0.6s					
YAK	Yakutsk	60.81	1	eP	P	08 48 07.1 -0.2
	comp=N,217nm,0.8s					
YAK	Yakutsk	60.81	1	d iP	P	08 48 07.7 +0.4
YAK				e		08 48 46.1
YAK				e		08 50 20.6
YAK				eS	S	08 56 13.9 +0.2
YAK				e*SS	pS	08 56 29.6 -19
YAK				e		08 57 42.2
BFZ	Birch Farm	60.97	139	eP	P	08 48 08.7 -0.2
	comp=N,202nm,1.7s					
MA2	Magadan	61.15	13	eP	P	08 48 10.1 +0.5
	comp=N,94nm,0.9s					
MA2	Magadan	61.15	13	d iP	P	08 48 11.2 +1.5
MA2				pmax	pmax	
	comp=Z,93nm,1.0s					
MDOK	Medeo	61.15	320	eP	P	08 48 11.2 +1.0
MDOK				eS	S	08 56 20.3 +1.1
MDOK				pmax	pmax	
	comp=Z,2μm,0.9s					
MDOK				smax	smax	
	comp=N,1μm,5.9s					
MDOK	Medeo	61.15	320	eP	P	08 48 11.3 +1.0
	comp=N,2μm,0.9s					
MDOK				eS	S	08 56 20.3 +1.1
	comp=N,1μm,5.9s					
TNSS	Tian-Shan	61.15	320	eP	P	08 48 11.8 +1.2
TNSS	Tian-Shan	61.15	320	eP	P	08 48 11.9 +1.2
ULHL	Ulahol	61.24	319	P	P	08 48 12.8 +1.8
	SNR=16					
AAA	Alma-Ata	61.26	320	eP	P	08 48 12.9 +2.0
AAA				eS	S	08 56 22.5 +2.2
AAA				pmax	pmax	
	comp=Z,700nm,5.4s					
AAA				smax	smax	
	comp=N,600nm,10.8s					
AAA				MLR	MLR	
	comp=Z,400nm,21.0s					
MCQ	Macquarie Isla	61.32	159	P	P	08 48 12.0 +1.2
	baz=61,SNR=3.7					
CHKK	Chushkaly	61.52	321	eP	P	08 48 12.7 +0.1
CHKK	Chushkaly	61.52	321	eP	P	08 48 12.7 +0.1
BOOM	Boomskoye usch	61.55	319	eP	P	08 48 14.3 +1.3
	comp=Z,218nm,1.3s					
BOOM	Boomskoye usch	61.55	319	eP	P	08 48 14.3 +1.3
BOOM				pmax	pmax	
	comp=Z,218nm,1.3s					
KZA	Kyzart	61.82	318	P	P	08 48 16.6 +1.6
	SNR=49					
KUU	Kurty	61.95	321	eP	P	08 48 16.0 +0.5
KUU				eS	S	08 56 28.2 -0.7
KUU				pmax	pmax	
	comp=Z,452nm,0.9s					
KUU				smax	smax	
	comp=N,352nm,4.8s					
KUU	Kurty	61.95	321	eP	P	08 48 16.0 +0.5
	comp=N,452nm,0.9s					
KUU				eS	S	08 56 28.3 -0.7
	comp=N,352nm,4.8s					
TKM2	Tokmak 2	61.97	319	P	P	08 48 17.0 +1.1
	SNR=82					
TKM2	Tokmak 2	61.97	319	i P	P	08 48 16.1 +0.2
TKM2				pmax	pmax	
	comp=Z,216nm,1.0s					
KBK	Karagaybulak	62.28	319	P	P	08 48 19.5 +1.7
	SNR=7.6					
UCH	Uchtor	62.37	318	P	P	08 48 20.4 +1.6
	SNR=107					
FRU1	Bishkek	62.55	319	eP	P	08 48 21.1 +1.5
	comp=Z,73nm,0.9s					
CHMS	Chumysh	62.56	319	P	P	08 48 20.3 +0.8
	SNR=20					
AAK	Ala-Archa	62.57	319	P	P	08 48 21.0 +1.2
	comp=Z,30nm,0.6s,baz=99,slow=5.4,SNR=39					
AAK				LR	LR	09 17 32.4
	comp=Z,622nm,20.6s,baz=94,slow=38					
AAK	Ala-Archa	62.57	319	P	P	08 48 20.9 +1.2
	SNR=21					
AAK	Ala-Archa	62.57	319	eP	P	08 48 21.0 +1.2
	comp=Z,83nm,1.0s					
AAK	Ala-Archa	62.57	319	i P	P	08 48 21.4 +1.6
	SNR=24					
AAK	Ala-Archa	62.57	319	d iP	P	08 48 21.4 +1.6
AAK				pmax	pmax	
	comp=Z,74nm,1.1s					
AAK	Ala-Archa	62.57	319	P	P	08 48 21.3 +1.6
	SNR=37					
AAK				P	P	08 48 21.3 +1.6
	SNR=37					
SGDS	Sogindy	62.84	320	eP	P	08 48 21.3 -0.2
	comp=Z,157nm,1.9s					
SGDS				eS	S	08 56 40.8 +0.6
	comp=Z,182nm,6.1s					
USP	Ospenovka	62.85	319	P	P	08 48 22.4 +1.0
	SNR=62					
AML	Almayashu	62.88	318	P	P	08 48 23.6 +1.5
	SNR=62					
EKS2	Erkin-Say	63.05	318	P	P	08 48 24.4 +1.5
	SNR=78					
ZAA0	Zalesovo Array	63.10	334	eP	P	08 48 22.6 -0.1
	comp=Z,163nm,1.4s					
ZALV	Zalesovo Beam	63.10	334	P	P	08 48 22.0 -0.7
	comp=Z,51nm,0.9s,baz=117,slow=5.5,SNR=65					
ZALV				LR	LR	09 17 14.9
	comp=Z,371nm,21.1s,baz=76,slow=37					
ZAA1	Zalesovo Array	63.10	334	eP	P	08 48 22.1 -0.8
KBL	Kabul	63.44	308	eP	P	08 48 26.4 +0.6
	comp=Z,172nm,0.8s					
KBL	Kabul	63.44	308	eP	P	08 48 26.4 +0.6
KBL				pmax	pmax	
	comp=Z,172nm,0.8s					
BTLS	Baital	63.94	321	eP	P	08 48 28.6 +0.1
BTLS				eS	S	08 56 52.2 -1.4
BTLS				pmax	pmax	
	comp=Z,84nm,1.3s					
BTLS				smax	smax	
	comp=N,87nm,5.0s					
BTLS	Baital	63.94	321	eP	P	08 48 28.7 +0.1
	comp=N,84nm,1.3s					
BTLS				eS	S	08 56 52.2 -1.4
	comp=N,87nm,5.0s					
GAR	Garm	63.99	313	eP	P	08 48 29.7 +0.5
	comp=N,684nm,1.1s					
BTK	Batken	64.03	315	eP	P	08 48 29.4 +0.1
	comp=N,126nm,0.8s					
BTK	Batken	64.03	315	eP	P	08 48 29.4 +0.1
BTK				pmax	pmax	
	comp=Z,126nm,0.8s					
KURBB	Kurchatov Arra	64.16	328	P	P	08 48 29.9 0.0
	comp=Z,172nm,0.7s,baz=127,slow=6.0,SNR=542					
KURBB				PKPPKP	P'P'df	09 17 19.7 +0.1
	comp=Z,0.8nm,0.8s,baz=286,slow=3.7,SNR=5.8					
KURK	Kurchatov	64.16	328	eP	P	08 48 29.9 0.0
	comp=Z,319nm,0.7s					
KURK	Kurchatov	64.16	328	d iP	P	08 48 30.2 +0.4
KURK				pmax	pmax	
	comp=Z,313nm,0.7s					
KURK	Kurchatov	64.16	328	P	P	08 48 30.5 +0.6
	SNR=111					
KURK				P	P	08 48 30.5 +0.6
	SNR=111					
NVS	Novosibirsk	64.38	334	eP	P	08 48 30.7 -0.5
NVS				e		08 49 09.5
NVS				eS	S	08 56 58.1 -0.6
NVS				e		08 58 04.0
NVS				pmax	pmax	
	comp=Z,132nm,1.3s					
NVS				pmax	pmax	
	comp=N,52nm,1.1s					
NVS				pmax	pmax	
	comp=E,68nm,1.2s					
NVS				smax	smax	
	comp=N,129nm,3.4s					
NVS				smax	smax	
	comp=E,46nm,1.5s					
SEY	Seymchan	64.49	12	d iP	P	08 48 33.7 +2.0
JBG	Jabagly	65.13	317	eP	P	08 48 37.5 +1.0
JBG				pmax	pmax	
	comp=Z,146nm,0.9s					
IUG	Iuzhnay	65.37	317	eP	P	08 48 38.7 +0.7
IUG				pmax	pmax	
	comp=Z,19nm,0.6s					
IUG	Iuzhnay	65.37	317	eP	P	08 48 38.8 +0.7
	comp=Z,19nm,0.6s					
KK31	Karatay Array	65.42	318	eP	P	08 48 38.4 +0.2
	comp=Z,176nm,0.9s					
KK31	Karatay Array	65.42	318	i P	P	08 48 39.0 +0.8
KK31				pmax	pmax	
	comp=Z,92nm,0.7s					
KKAR	Karatay Array	65.42	318	eP	P	08 48 38.1 -0.1
	comp=Z,176nm,0.9s					
KKAR	Karatay Array	65.42	318	eP	P	08 48 38.1 -0.1
KKAR				pmax	pmax	
	comp=Z,176nm,0.9s					
OTUK	Ortayu	66.45	323	P	P	08 48 44.7 0.0
OTUK				pmax	pmax	
	comp=Z,191nm,1.0s					
BRZS	Berezniki	67.05	325	eP	P	08 48 48.3 -0.1
BRZS	Berezniki	67.05	325	eP	P	08 48 48.4 -0.1
CASY	Casey	68.27	187	eP	P	08 48 56.1 +0.4
	comp=Z,49nm,0.6s					
KIWB	Kanaga Island	68.64	33	eP	P	08 48 59.2 +0.9
ADK	Adak	68.91	34	eP	P	08 48 59.7 -0.3
	comp=Z,31nm,1.0s					
ADK	Adak	68.91	34	eP	P	08 48 59.7 -0.3
ADK				pmax	pmax	
	comp=Z,31nm,1.0s					
JLN	Jalan Bani Buh	68.98	293	P	P	08 49 01.6 +0.6
	SNR=5.6					
BVAR	Borovoye Array	69.73	327	P	P	08 49 04.9 -0.2
	comp=Z,123nm,0.9s,baz=126,slow=7.5,SNR=234					
BRVK	Borovoye	69.80	327	eP	P	08 49 05.4 -0.1
	comp=Z,182nm,0.9s					
BRVK				eS	S	08 58 03.0 -0.8
BRVK	Borovoye	69.80	327	d iP	P	08 49 05.6 +0.1
BRVK				pmax	pmax	
	comp=Z,226nm,1.0s					
BRVK	Borovoye	69.80	327	P	P	08 49 06.0 +0.5
	SNR=96					
BRVK				P	P	08 49 06.0 +0.5
	SNR=96					
WSAR	Wadi Sarin	69.84	294	P	P	08 49 06.7 +0.3
	comp=Z,55nm,0.9s,baz=130,slow=7.5,SNR=25					
WSAR	Wadi Sarin	69.84	294	P	P	08 49 07.1 +0.8
	SNR=18					
MHTO	MHTO	70.17	292	P	P	08 49 08.7 +0.4
	SNR=25					
JMDO	Jabal Madar	70.21	293	P	P	08 49 10.0 +1.4
	SNR=5.8					
BIDO	Bidbid	70.34	294	P	P	08 49 11.0 +1.6
	SNR=23					
SMDO	Samad	70.35	294	P	P	08 49 11.4 +1.9
	SNR=6.0					
TIXI	Tiksi	70.45	1	P	P	08 49 08.4 -0.6
	comp=Z,28nm,0.5s,baz=158,slow=5.1,SNR=67					
TIXI				LR	LR	09 19 36.4
	comp=Z,511nm,21.2s,baz=193,slow=35					
TIXI	Tiksi	70.45	1	eP	P	08 49 08.6 -0.4
	comp=Z,44nm,0.7s					
TIXI	Tiksi	70.45	1	d iP	P	08 49 08.6 -0.4
TIXI				pmax	pmax	
	comp=Z,55nm,0.8s					
TIXI				MLR	MLR	
	comp=Z,642nm,20.0s					
BSY	Bisya	71.08	294	P	P	08 49 15.3 +1.4
	SNR=13					
HOQ	Hoqain	71.09	294	P	P	08 49 16.0 +2.1
	SNR=7.3					
ARQ	Araqi	71.78	294	P	P	08 49 19.4 +1.3
	SNR=13					
SOHO	SOHO	71.86	295	P	P	08 49 20.0 +1.4
	SNR=16					
BILL	Bilibino	71.98	14	eP	P	08 49 19.3 +0.9
	comp=Z,11nm,1.0s					
BILL	Bilibino	71.98	14	⇓iP	P	08 49 18.5 +0.2
BILL				pmax	pmax	
	comp=Z,23nm,1.5s					
BILL				MLR	MLR	
	comp=Z,415nm,18.0s					
UOSS	Minazif	72.26	296	eP	P	08 49 20.8 -0.1
	comp=Z,72nm,0.8s					
UOSS	Minazif	72.26	296	i P	P	08 49 21.1 +0.2
	SNR=11					
BANOM	Banah	72.30	297	i P	P	08 49 22.2 +1.0
	SNR=12					
HATD	Hatta, Dubai	72.31	296	i P	P	08 49 22.0 +0.8
	SNR=28					
HATD	Hatta, Dubai	72.31	296	P	P	08 49 23.0 +1.8
	SNR=15					
MSFE	Esma-Masafi	72.35	296	i P	P	08 49 22.2 +0.7
	SNR=20					
ASHO	Ashiyiah	72.36	295	i P	P	08 49 22.3 +0.8
	SNR=18					
ASHO	Ashiyiah	72.36	295	P	P	08 49 23.7 +2.1
	SNR=9.5					
SHME	Shamm	72.46	297	i P	P	08 49 22.9 +0.8
	SNR=9.8					
ALNE	Al Ain	72.56	295	i P	P	08 49 23.5 +0.8
	SNR=93					
NAZ	Nazwa, Dubai	72.75	296	i P	P	08 49 24.5 +0.6
	SNR=23					
NAZ	Nazwa, Dubai	72.75	296	P	P	08 49 24.5 +0.6
	SNR=14					
FAQ	Al Faqa, Dubai	72.79	295	i P	P	08 49 24.7 +0.6
	SNR=27					
FAQ	Al Faqa, Dubai	72.79	295	P	P	08 49 25.0 +1.0
	SNR=15					
UMQ	Umm Al-Quwin	72.82	296	i P	P	08 49 25.8 +1.7
	SNR=7.0					
UMQ	Umm Al-Quwin	72.82	296	P	P	08 49 26.3 +2.1
	SNR=7.3					
UMQ				P	P	08 49 26.3 +2.1
	SNR=7.3					
GEYT	Alibeck	72.85	309	P	P	08 49 25.4 +1.2
	comp=Z,66nm,0.8s,baz=134,slow=4.3,SNR=56					
GEYT				LR	LR	09 24 51.2
	comp=Z,303nm,19.6s,baz=80,slow=38					
GYA0B	ALIBECK ARRAY	72.85	309	eP	P	08 49 25.1 +0.9
ASUD	Al Ashush, Dub	73.01	295	i P	P	08 49 26.6 +1.3
	SNR=8.8					
ASUD	Al Ashush, Dub	73.01	295	P	P	08 49 26.8 +1.4
	SNR=22					
AJN	Ajban	73.31	295	i P	P	08 49 27.9 +0.8
	SNR=8.2					
AJN	Ajban	73.31	295	P	P	08 49 28.2 +1.1
	SNR=21					
AB31	Akbulak array	74.43	321	i P	P	08 49 33.0 -0.1
AB31				pmax	pmax	
	comp=Z,61nm,0.8s					
ABKAR	Akbulak array	74.43	321	eP	P	08 49 33.0 0.0
	comp=Z,131nm,1.1s					
MZR	Muzera	74.52	293	i P	P	08 49 35.1 +0.9
	SNR=12					
MZR	Muzera	74.52	293	P	P	08 49 35.7 +1.5
	SNR=7.2					
XMAS	Kiritimati	75.40	88	eP	P	08 49 41.0 +1.5
	comp=Z,34nm,0.8s					
AKTO	Aktyubinsk	75.95	322	P	P	08 49 41.8 0.0
	comp=Z,80nm,0.7s,baz=102,slow=6.7,SNR=103					
SVE	Sverdlovsk	76.39	329	c iP	P	08 49 44.4 +0.2
SVE				eS	S	08 59 12.3 -5.8
SVE				pmax	pmax	
	comp=Z,233nm,1.3s					
ARU	Arti	77.36	328	P	P	08 49 48.7 -0.8
	comp=Z,25nm,0.7s,baz=115,slow=2.8,SNR=83					
ARU	Arti	77.36	328	eP	P	08 49 49.2 -0.4
	comp=Z,93nm,0.8s					
ARU	Arti	77.36	328	d iP	P	08 49 49.2 -0.4
ARU				*PP	pP	08 50 21.9 -1.0
ARU						08 52 43.2
ARU				S	S	08 59 30.5 +1.9
ARU				pmax	pmax	
	comp=Z,110nm,0.9s					
MLH	Mauna Loa	77.84	70	eP	P	08 49 55.1 +1.8
	comp=Z,118nm,0.8s					
MLH	Mauna Loa	77.84	70	eP	P	08 49 55.1 +1.8
MLH				pmax	pmax	
	comp=Z,118nm,0.8s					
PUH	Pauahi	77.99	71	eP	P	08 49 54.8 +0.8
	comp=Z,88nm,0.9s					
SDPT	Sand Point	79.14	34	eP	P	08 49 59.6 +0.3
VNDA	Vanda	80.79	173	P	P	08 50 07.7 -0.2
	comp=Z,41nm,0.6s,baz=317,slow=6.1,SNR=274					
VNDA				LR	LR	09 24 26.3
	comp=Z,372nm,19.4s,baz=334,slow=34					
VNDA	Vanda	80.79	173	eP	P	08 50 07.7 -0.2
	comp=Z,43nm,0.6s					
ABPO	Ambohimpanom	80.81	251	eP	P	08 50 09.6 +0.3
	comp=Z,36nm,1.0s					
ABPO	Ambohimpanom	80.81	251	eP	P	08 50 09.6 +0.3
ABPO				pmax	pmax	
	comp=Z,36nm,1.0s					
AKT	Akhty	81.32	312	eP	P	08 50 12.4 +0.8
AKT				e*SP	sP	08 51 00.4 +0.9
AKT				eS	S	09 00 16.8 +5.5
AKT				pmax	pmax	
	comp=Z,64nm,0.7s					
MAW	Mawson	81.44	200	P	P	08 50 12.0 +0.5
	comp=Z,34nm,0.8s,baz=73,slow=5.6,SNR=62					
MAW	Mawson	81.44	200	eP	P	08 50 11.8 +0.4
	comp=Z,8.1nm,0.8s					
MAW	Mawson	81.44	200	P	P	08 50 11.9 +0.5
	baz=81,SNR=50					
MAW	Mawson	81.44	200	P	P	08 50 12.0 +0.5
RDOG	Red Dog Mine	81.58	21	eP	P	08 50 13.5 +1.2
	comp=Z,35nm,1.1s					
MAK	Makhachkala	81.65	313	eP	P	08 50 12.1 -1.0
MAK				e*PP	pP	08 50 44.3 -2.4
MAK				e*SP	sP	08 50 58.8 -2.2
MAK				e		08 53 19.4

MAK *e*PPP PPP 08 55 09.6
MAK *e*S **S** **09 00 13.1 -1.2**
MAK *e*SS **SS** **09 05 33.9 -0.8**
MAK pmax pmax
comp=Z,127nm,1.6s
SBA Scott Base 81.70 172 *e*P **P** **08 50 13.7 +1.1**
comp=Z,49nm,1.1s
SBA Scott Base 81.70 172 *e*P **P** **08 50 13.7 +1.1**
SBA pmax pmax
comp=Z,49nm,1.1s
RAYN Ar Rayn 81.88 293 *e*P **P** **08 50 14.9 +0.1**
comp=Z,133nm,1.0s
RAYN Ar Rayn 81.88 293 *i* P **P** **08 50 15.5 +0.7**
SNR=18
RAYN Ar Rayn 81.88 293 *e*P **P** **08 50 14.9 +0.1**
RAYN pmax pmax
comp=Z,133nm,1.0s
KIRV Kirov 82.66 329 P **P** **08 50 17.5 -0.5**
comp=Z,72nm,0.8s,baz=92,slow=2.3,SNR=24
DAMY Dhamar 82.69 284 *e*P **P** **08 50 19.5 +0.1**
comp=Z,104nm,0.9s
SVW2 Sparrevohn 82.90 29 *e*P **P** **08 50 17.9 -1.3**
comp=Z,21nm,1.0s
GROC Groznyy 82.92 313 *e*P **P** **08 50 20.1 +0.4**
GROC *e* 08 53 33.5
GROC *e*S **S** **09 00 25.4 -1.9**
GROC pmax pmax
comp=Z,216nm,1.2s
GNI Garni 83.46 310 *e*P **P** **08 50 23.4 +0.6**
GNI Garni 83.46 310 P **P** **08 50 22.6 -0.2**
comp=Z,16nm,0.7s,baz=188,slow=3.2,SNR=14
GNI Garni 83.46 310 *e*P **P** **08 50 21.6 -1.2**
comp=Z,50nm,0.8s
GNI Garni 83.46 310 *i* P **P** **08 50 24.0 +1.3**
SNR=14
GNI Garni 83.46 310 *d i* P **P** **08 50 24.1 +1.3**
GNI pmax pmax
comp=Z,99nm,1.2s
GNI Garni 83.46 310 P **P** **08 50 24.4 +1.6**
SNR=14
TBLG Delisi 83.58 312 *e*P **P** **08 50 23.9 +0.7**
comp=Z,88nm,0.9s
TBLG Delisi 83.58 312 *e*P **P** **08 50 23.9 +0.7**
TBLG pmax pmax
comp=Z,88nm,0.9s
KDAK Kodiak Island 83.89 32 *e*P **P** **08 50 25.4 +1.1**
comp=Z,32nm,0.9s
KDAK Kodiak Island 83.89 32 *i* P **P** **08 50 25.4 +1.1**
PPT Papeete 83.94 108 LR LR 09 26 37.1
comp=Z,100nm,18.7s,baz=268,slow=35
PPT2 Papeete2 83.94 108 *e*S **S** **09 00 37.7 -1.0**
comp=Z,410nm,24.5s
PPT2 *e*SS **SS** **09 06 07.6 -2.4**
comp=Z,621nm,25.0s
PPT2 *e*LQ LQ 09 13 34.8
comp=Z,709nm,24.0s
PPT2 *e*LR LR 09 17 02.0
comp=Z,867nm,29.5s
CLDR Caldiran 84.03 309 *e*P **P** **08 50 27.0 +1.2**
CUKT Cukurca 84.17 307 *e*P **P** **08 50 26.6 +0.2**
RSO Redoubt South 84.17 29 *e*P **P** **08 50 26.6 +0.7**
ATD Arta Tunnel 84.17 281 P **P** **08 50 28.0 +1.2**
comp=Z,37nm,0.8s,baz=98,slow=5.4,SNR=7.8
ZEI Tsey 84.27 313 *e*P **P** **08 50 23.1 -3.8**
ZEI *e*S **S** **09 00 34.7 -6.7**
ZEI pmax pmax
comp=Z,61nm,0.9s
VANB Van 84.41 308 *e*P **P** **08 50 26.8 -0.8**
AKH Akhalkalaki 84.49 311 *e*P **P** **08 50 29.6 +1.7**
comp=Z,278nm,1.2s
AKH Akhalkalaki 84.49 311 ⇓*i*P **P** **08 50 29.8 +1.8**
AKH Akhalkalaki 84.49 311 *e*P **P** **08 50 29.7 +1.7**
AKH pmax pmax
comp=Z,278nm,1.2s
ONI Oni 84.59 313 *e*P **P** **08 50 29.7 +1.4**
GEVA Gevas 84.66 308 *i* P **P** **08 50 29.8 +0.9**
GEVA IAML_P
comp=Z,4μm,0.6s
AKDM Akdamar-Van 84.72 308 *e*P **P** **08 50 29.9 +0.7**
AGRB Hanur-Agry 84.77 309 *e*P **P** **08 50 29.5 0.0**
CNPM China Poot 84.81 30 *e*P **P** **08 50 29.5 +0.5**
comp=Z,47nm,0.8s
TUTA Tutak 84.90 309 *i* P **P** **08 50 30.1 0.0**
TUTA IAML_P
comp=Z,34nm,0.4s
SKT Skwentna 84.96 28 *e*P **P** **08 50 30.2 +0.5**
comp=Z,26nm,1.0s
PRGR Permogore 84.99 332⇑*i*P **P** **08 50 29.7 0.0**
PRGR *e**PP **pP** **08 51 02.3 -1.3**
PRGR pmax pmax
comp=Z,73nm,0.9s
BRLK Bradley Lake 85.01 30 *e*P **P** **08 50 30.5 +0.5**
comp=Z,46nm,1.0s
GOF Gofitskoye 85.03 315⇓*i*P **P** **08 50 31.2 +0.8**
GOF *e*S **S** **09 00 41.6 -6.8**
GOF pmax pmax
comp=Z,153nm,1.0s
GOF smax smax
comp=E,55nm,1.0s
KBZ Khabaz 85.06 314 P **P** **08 50 30.1 -0.4**
comp=E,53nm,1.0s,baz=96,slow=2.7,SNR=95
NEY Neytrino 85.16 313 *d i*P **P** **08 50 32.4 +1.1**
NEY pmax pmax
comp=Z,16nm,0.8s
EATA Eleskirt 85.17 310 *i* P **P** **08 50 33.1 +1.5**
EATA IAML_P
comp=Z,16nm,0.4s
KIV Kislovodsk 85.23 314 *e*P **P** **08 50 31.6 0.0**
comp=Z,56nm,1.1s
KIV Kislovodsk 85.23 314⇑*i*P **P** **08 50 32.1 +0.6**
KIV Kislovodsk 85.23 314 *i* P **P** **08 50 31.9 +0.4**
SNR=27
KIV Kislovodsk 85.23 314 *e*P **P** **08 50 31.9 +0.4**
KIV pmax pmax
comp=Z,121nm,1.0s
KIV pmax pmax
comp=Z,237nm,4.0s
KIV MLR MLR
comp=Z,682nm,20.0s
KIV Kislovodsk 85.23 314 P **P** **08 50 32.2 +0.6**
SNR=28
KTH Kantishna Hill 85.42 26 *e*P **P** **08 50 32.6 +0.5**
comp=Z,9.3nm,1.2s
BPAW Bear Paw Mtn. 85.46 26 *e*P **P** **08 50 32.9 +0.7**
comp=Z,6.6nm,0.9s
HOMI Horasan 85.63 310 *i* P **P** **08 50 35.0 +1.2**
HOMI IAML_P
comp=Z,229nm,0.1s
DAGI Agillar 85.66 311 *i* P **P** **08 50 34.6 +0.9**
DAGI IAML_P
comp=Z,2μm,0.6s
KOPR Koprukoy-ERZUR 85.67 310 *e*P **P** **08 50 33.7 -0.2**
MLY Manley 85.68 25 *e*P **P** **08 50 34.0 +0.7**
comp=Z,8.3nm,0.9s
DBAD Bademkaya 85.83 311 *i* P **P** **08 50 36.2 +1.6**
DBAD IAML_P
comp=Z,9μm,0.8s
BATM Batumi 85.85 311⇓*i*P **P** **08 50 35.3 +0.8**
DBOC Borcka 85.86 311 *i* P **P** **08 50 35.7 +1.0**
DBOC IAML_P
comp=Z,3μm,0.7s
MUSM Mu-Merkez 85.89 309 *i* P **P** **08 50 35.1 +0.1**
MUSM IAML_P
comp=Z,694nm,0.7s
BCA Borcka 85.90 311 *e*P **P** **08 50 33.9 -0.9**
BCA Borcka 85.90 311⇓*i*P **P** **08 50 35.5 +0.7**
VRTB Varto-Mus 85.94 309 *e*P **P** **08 50 37.7 +2.5**
DOMR Dombai 85.97 313⇓*i*P **P** **08 50 36.2 +0.9**
DOMR pmax pmax
comp=Z,77nm,1.0s
BTMN Batman 86.05 308 *i* P **P** **08 50 37.4 +1.7**
BTMN IAML_P
comp=Z,1μm,0.8s
GHO Glory Hole Cre 86.16 28 *e*P **P** **08 50 36.9 +1.2**
comp=Z,14nm,0.9s
BNGL BINGOL 86.18 309 *i* P **P** **08 50 38.6 +2.2**
VRH Novokhopyorsk 86.26 321 *e*P **P** **08 50 35.6 -0.7**
VRH pmax pmax
comp=Z,250nm,1.3s
MCK McKinley 86.33 26 *e*P **P** **08 50 36.2 -0.2**
comp=Z,11nm,0.9s
RND Reindeer 86.33 27 *e*P **P** **08 50 36.1 -0.4**
comp=Z,9.5nm,0.9s
RND Reindeer 86.33 27 *e*P **P** **08 50 36.1 -0.4**
RND pmax pmax
comp=Z,10.0nm,0.9s

KNK Knik Glacier 86.36 29 *e*P **P** **08 50 37.0 +0.4**
comp=Z,26nm,1.0s
MARD Mardin 86.43 307 *i* P **P** **08 50 39.1 +1.5**
MARD IAML_P
comp=Z,123nm,0.3s
SML Sawmill 86.45 28 *e*P **P** **08 50 37.5 +0.4**
comp=Z,27nm,0.9s
SML Sawmill 86.45 28 *e*P **P** **08 50 37.5 +0.4**
SML pmax pmax
comp=Z,27nm,0.9s
TOLK Toolik Lake Re 86.53 21 *e*P **P** **08 50 38.4 +1.1**
comp=Z,21nm,0.8s
TOLK Toolik Lake Re 86.53 21 P **P** **08 50 38.5 +1.1**
baz=264
BNGB Bingl 86.54 309 *e*P **P** **08 50 39.3 +1.2**
MAZI Mazidag 86.69 307 *e*P **P** **08 50 39.5 +0.6**
KOPT Kop Dagi 86.71 310 *i* P **P** **08 50 41.0 +1.8**
HANI Diyarbakir_Han 86.75 308 *i* P **P** **08 50 39.2 +0.1**
HANI IAML_P
comp=Z,4μm,0.8s
COLA College 86.89 25⇓*i*P **P** **08 50 38.5 -0.5**
COLA pmax pmax
comp=Z,3.0nm,0.7s
CCB Clear Creek Bu 86.89 25 *e*P **P** **08 50 38.7 -0.4**
comp=Z,12nm,1.0s
SCM Sheep Creek Mo 86.92 28 *e*P **P** **08 50 39.9 +0.5**
comp=Z,23nm,1.0s
SCM Sheep Creek Mo 86.92 28 *e*P **P** **08 50 39.9 +0.5**
SCM pmax pmax
comp=Z,23nm,1.0s
GLI Glacier Island 86.98 29 *e*P **P** **08 50 39.9 +0.3**
comp=Z,18nm,0.7s
POKR Poker Plat Res 87.08 25 P **P** **08 50 41.2 +1.2**
baz=266
HDA Harding Lake 87.25 26 P **P** **08 50 39.9 -0.9**
baz=267
KTUT Trabzon 87.28 311⇑*i*P **P** **08 50 42.0 +0.5**
ILAR Eielson Array 87.29 25 P **P** **08 50 39.2 -1.8**
comp=Z,5.1nm,1.1s,baz=275,slow=4.1,SNR=30
ILAR PKKPbc **PKKPbc** **09 08 31.3 -2.7**
comp=Z,0.8nm,0.8s,baz=75,slow=0.4,SNR=6.5
ILB Eielson Array 87.29 25 *e*P **P** **08 50 39.8 -1.2**
comp=Z,6.7nm,1.1s
SOC Sochi 87.36 313 *d i*P **P** **08 50 40.6 -1.2**
SOC *e**PP **pP** **08 51 13.2 -2.7**
SOC *e**SP **sP** **08 51 28.6 -1.5**
SOC *e* 08 54 05.6
SOC *e*PPP PPP 08 56 02.4
SOC *e*S **SKSac** **09 00 54.3 -2.6**
SOC *e*SS **SS** **09 07 00.6 +1.8**
SOC *e*SSS SSS 09 10 36.0
SOC pmax pmax
comp=Z,30nm,0.6s
TNCL Tunceli-Merkez 87.43 309 *i* P **P** **08 50 44.5 +2.1**
TNCL IAML_P
comp=Z,838nm,0.7s
SVRC Sivrice-ELAZID 87.61 308 *e*P **P** **08 50 43.8 +0.4**
KELT Kelkit 87.66 310 *i* P **P** **08 50 44.8 +1.2**
KELT IAML_P
comp=Z,816nm,0.8s
VORD Divnogorie 87.78 321 *e*P **P** **08 50 42.3 -1.3**
VORD pmax pmax
comp=Z,40nm,0.8s
VSR Storozhevoye 87.86 321 *e*P **P** **08 50 42.7 -1.3**
VSR pmax pmax
comp=Z,40nm,0.8s
KLMR Klimovskoe 87.87 331 *e*P **P** **08 50 42.3 -1.5**
KLMR *e* 08 54 06.8
KLMR *e*S **SKSac** **09 00 56.1 -3.1**
KLMR pmax pmax
comp=Z,109nm,1.4s
KLMR Klimovskoe 87.87 331 *e*P **P** **08 50 42.3 -1.5**
KLMR AMP 08 50 45.3
comp=Z,109nm,1.4s
KLMR *e*PP **PP** **08 54 06.8 -4.8**
KLMR *e*S **SKSac** **09 00 56.1 -3.1**
KLMR *e*S **SKSac** **09 00 56.1 -3.1**
PRP Porcupine Dome 87.90 25 *e*P **P** **08 50 43.0 -1.1**
comp=Z,3.2nm,1.0s
LPSR Galich'ya Gora 88.03 322 *e*P **P** **08 50 44.1 -0.7**
LPSR pmax pmax
comp=Z,80nm,1.0s
FYU Fort Yukon 88.05 24 *e*P **P** **08 50 45.7 +1.1**
comp=Z,14nm,0.9s
SURC SANLIURFA_SURC 88.15 307 *i* P **P** **08 50 46.2 +0.4**
SURC IAML_P
comp=Z,582nm,0.9s
KEMA Kemaliye 88.25 309 *i* P **P** **08 50 47.6 +1.3**
KEMA IAML_P
comp=Z,870nm,0.7s
ATAB Bozova 88.41 307 *i* P **P** **08 50 47.5 +0.5**
ATAB IAML_P
comp=Z,73nm,0.1s
SUSE Susehri 88.47 310 *i* P **P** **08 50 48.9 +1.5**
SUSE IAML_P
comp=Z,623nm,0.9s
SCRK Sand Creek 88.53 26 *e*P **P** **08 50 47.4 +0.3**
comp=Z,5.5nm,0.9s
HEKM Malatya_Hekimh 88.66 309 *i* P **P** **08 50 49.7 +1.4**
HEKM IAML_P
comp=Z,2μm,0.4s
AKCD Akcadag 88.70 308 *i* P **P** **08 50 49.5 +1.0**
AKCD IAML_P
comp=Z,104nm,0.2s
MOS Moscow 88.81 326 *e*P **P** **08 50 46.6 -1.8**
MOS *e**SP **pwP** **08 51 27.1 +1.9**
MOS *e* 08 51 42.4
MOS *e* 08 54 18.2
MOS *e* 09 01 02.3
MOS *e*S **S** **09 01 28.4 +4.2**
MOS *e*PS PnS 09 02 24.2 -22
MOS pmax pmax
comp=Z,147nm,1.4s
MOS pmax pmax
comp=Z,200nm,1.5s
ANN Anapa 89.01 315 *i* P **P** **08 50 48.3 -1.3**
ANN *e**PP **pP** **08 51 22.2 -1.6**
ANN *e* 08 54 20.9
ANN *e*S **SKSac** **09 01 03.6 -3.1**
ANN *e* 09 01 16.2
ANN pmax pmax
comp=Z,147nm,1.0s
BALM Baldy 89.30 29 *e*P **P** **08 50 51.6 +0.9**
comp=Z,6.6nm,0.8s
BALM Baldy 89.30 29 *e*P **P** **08 50 51.6 +0.9**
BALM pmax pmax
comp=Z,7.0nm,0.8s
OBN Obninsk 89.42 325 P **P** **08 50 49.8 -1.5**
comp=Z,9.0nm,0.4s,baz=95,slow=1.7,SNR=26
OBN Obninsk 89.42 325 *e*P **P** **08 50 50.2 -1.0**
comp=Z,133nm,1.2s
OBN Obninsk 89.42 325 *d i*P **P** **08 50 50.2 -1.0**
OBN *e**PP **pwP** **08 51 31.4 +3.4**
OBN *e* 08 54 26.2
OBN *i* S **SKSac** **09 01 08.5 -0.1**
OBN pmax pmax
comp=Z,77nm,1.1s
OBN MLR MLR
comp=Z,384nm,21.0s
ASF Jabal al Asfar 89.61 302 P **P** **08 50 53.8 +1.0**
comp=Z,27nm,0.8s,baz=74,slow=0.8,SNR=39
ASF pP **pP** **08 51 25.9 -1.2**
comp=Z,17nm,0.9s,baz=44,slow=6.4,SNR=4.3
EGAK Eagle 89.75 25 *e*P **P** **08 50 52.7 +0.1**
comp=Z,10nm,0.9s
KMBO Kilima Mbogo 89.89 269 P **P** **08 50 55.1 +0.4**
comp=Z,30nm,0.9s,baz=62,slow=5.7,SNR=38
KMBO PP **PP** **08 54 26.9 -2.5**
comp=Z,4.5nm,0.9s,baz=73,slow=9.3,SNR=4.3
KMBO LR LR 09 29 34.8
comp=Z,283nm,19.6s,baz=94,slow=34
KMBO Kilima Mbogo 89.89 269 *e*P **P** **08 50 56.0 +1.3**
comp=Z,70nm,1.2s
KMBO Kilima Mbogo 89.89 269 *i* P **P** **08 50 55.7 +1.0**
SNR=26
KMBO Kilima Mbogo 89.89 269 *i* P **P** **08 50 56.0 +1.3**
KMBO pmax pmax
comp=Z,30nm,0.9s
KMBO Kilima Mbogo 89.89 269 P **P** **08 50 56.4 +1.7**
SNR=16
KMBO P **P** **08 50 56.4 +1.7**
SNR=16
LVZ Lovozero 89.92 338 *i* P **P** **08 50 53.5 +0.1**
LVZ pmax pmax
comp=Z,22nm,1.0s

KVT Kavak 90.10 311 *e*P **P** **08 50 55.3 +0.5**
SYO Syowa Base 90.13 201⇓*e*P **P** **08 50 53.8 -0.4**
SYO Syowa Base 90.13 201⇓*i*P **P** **08 50 56.2 +2.0**
SYO Syowa Base 90.13 201⇑*i*P P 08 51 02.6 +8.4
NAI Nairobi 90.34 269 *e*P **P** **08 50 59.3 +2.6**
comp=Z,111nm,0.9s
NAI Nairobi 90.34 269 *e*P **P** **08 50 59.3 +2.6**
NAI pmax pmax
comp=Z,111nm,0.9s
APA Apatity 90.42 337⇓*i*P **P** **08 50 52.8 -2.8**
APA pmax pmax
comp=Z,5.0nm,1.0s
APA MLR MLR
comp=Z,200nm,23.0s
DAWY Dawson 90.55 26 *e*P **P** **08 50 57.2 +0.8**
comp=Z,17nm,0.9s
MMAI Mount Meron Ar 90.85 303 P **P** **08 50 59.3 +0.8**
comp=Z,20nm,0.8s,baz=76,slow=7.1,SNR=24
QSPA South Pole Qui 91.03 180 *e*P **P** **08 50 58.7 0.0**
comp=Z,17nm,0.9s
EIL Elat 91.35 300 P **P** **08 51 01.1 +0.2**
comp=Z,18nm,0.8s,baz=101,slow=2.5,SNR=11
EIL Elat 91.35 300 P P 08 51 11.5 +11
SIM Simferopol' 91.36 315 *de*P **P** **08 51 00.1 -0.4**
SIM S **SKSac** **09 01 19.4 -0.9**
SIM pmax pmax
comp=Z,36nm,0.9s
EPYK Eagle Plains 91.47 24 *e*P **P** **08 51 00.8 +0.2**
comp=Z,23nm,1.1s
EPYK Eagle Plains 91.47 24 P **P** **08 51 00.9 +0.2**
baz=276
BZK Bozkurt 91.60 312⇓*i*P pP 08 51 39.0 +3.1
HYT Haines Junctio 91.67 29 *e*P **P** **08 51 03.2 +1.4**
comp=Z,9.0nm,0.8s
ILGA Ilgaz 91.86 311 *e*P **P** **08 51 03.2 -0.1**
comp=Z,42nm,1.1s
BR101 Keskin Array S 91.99 310 *e*P **P** **08 51 02.5 -1.2**
BR101 *e*PP **PP** **08 54 45.0 -0.2**
BR131 Keskin Array S 91.99 310 *e*P **P** **08 51 02.8 -0.9**
comp=Z,24nm,1.0s
BR131 Keskin Array S 91.99 310 P **P** **08 51 03.3 -0.5**
SNR=13
BRTR Keskin Array B 91.99 310 P **P** **08 51 02.5 -1.2**
comp=Z,17nm,0.9s,baz=120,slow=4.9,SNR=68
BRTR PP **PP** **08 54 45.0 -0.2**
comp=Z,14nm,1.2s,baz=96,slow=10,SNR=9.8
BRTR LR LR 09 37 47.1
comp=Z,116nm,20.8s,baz=70,slow=39
BRTR Keskin Array B 91.99 310 *i* P **P** **08 51 03.0 -0.8**
BRTR pmax pmax
comp=Z,17nm,0.9s
INK Inuvik 92.44 22 P **P** **08 51 04.4 -0.6**
comp=Z,10nm,1.0s,baz=284,slow=4.4,SNR=34
INK PKKP **PKKPdf** **09 08 17.3 -0.7**
comp=Z,1.8nm,0.7s,baz=66,slow=3.1,SNR=6.9
INK Inuvik 92.44 22 *e*P **P** **08 51 05.0 0.0**
comp=Z,20nm,1.1s
CSS Mathiatis 92.49 305 *e*P **P** **08 51 05.7 -0.3**
comp=Z,40nm,0.9s
CSS Mathiatis 92.49 305 P **P** **08 51 02.7 -3.3**
TAOE Nuku Hiva Isla 92.86 99 *e*SS SS 09 08 19.4 -0.5
comp=Z,215nm,27.1s
TAOE Nuku Hiva Isla 92.86 99 *e*LR LR 09 21 17.0
comp=Z,2μm,29.1s
WHY Whitehorse 92.97 29 *e*P **P** **08 51 09.0 +1.2**
comp=Z,21nm,0.8s
ARA0 ARCESS Array S 93.03 340 *e*P **P** **08 51 06.5 -1.3**
ARA0 *e*PKKPdf **PKKPdf** **09 08 15.0 -2.1**
ARCES ARCESS Array B 93.03 340 P **P** **08 51 06.5 -1.3**
comp=Z,26nm,0.8s,baz=83,slow=6.7,SNR=48
ARCES PKKPbc **PKKPdf** **09 08 15.0 -2.1**
comp=Z,0.5nm,0.4s,baz=270,slow=2.4,SNR=7.5
ARCES LR LR 09 36 39.7
comp=Z,266nm,19.5s,baz=96,slow=38
ARE0 ARCESS Array S 93.03 340 *e*P **P** **08 51 06.8 -0.9**
comp=Z,3.2nm,1.1s
ARE0 ARCESS Array S 93.03 340 *e*P **P** **08 51 07.0 -0.8**
SPA0 Spitsbergen Ar 93.12 349 *e*P **P** **08 51 07.0 -1.0**
HAMF Hammerfest 93.41 341 *e*P **P** **08 51 08.7 -0.7**
JIS Juneau Island 93.54 32 *e*P **P** **08 51 11.4 +1.1**
comp=Z,18nm,0.9s
MDUB Mudurnu 93.81 310 *e*P **P** **08 51 11.5 -0.6**
comp=Z,323nm,1.6s
HEF Hetta 93.92 339 *e*P **P** **08 51 10.3 -1.5**
KTK1 Kautokeino 93.94 339 *e*P **P** **08 51 10.9 -1.0**
AKASG Malin Array Be 94.17 321 P **P** **08 51 11.6 -1.7**
comp=Z,2.4nm,0.5s,baz=62,slow=5.1,SNR=9.9
AKASG pP **pP** **08 51 46.9 -0.7**
comp=Z,5.8nm,0.7s,baz=69,slow=4.3,SNR=2.6
AKASG PP **PP** **08 55 01.6 +0.1**
comp=Z,1.2nm,0.4s,baz=71,slow=7.6,SNR=4.1
AKASG LR LR 09 36 19.8
comp=Z,318nm,21.9s,baz=95,slow=37
AKBB Malin Array Si 94.17 321 *e*P **P** **08 51 12.5 -0.8**
comp=Z,29nm,1.5s
FIA1 FINESS Array S 94.32 332 *e*P **P** **08 51 12.9 -0.9**
comp=Z,41nm,1.4s
FIA0 FINESS Array S 94.32 332 *e*P **P** **08 51 11.9 -1.8**
FIA0 FINESS Array S 94.32 332 *e*P **P** **08 51 11.9 -1.8**
FINES FINESS Array B 94.32 332 P **P** **08 51 11.9 -1.8**
comp=Z,4.8nm,0.8s,baz=79,slow=9.9,SNR=12
FINES S **SKSac** **09 01 33.5 -2.4**
comp=Z,1.5nm,0.8s,baz=60,slow=8.2,SNR=3.8
FINES LR LR 09 37 47.2
comp=Z,534nm,19.3s,baz=82,slow=38
FINES FINESS Array B 94.32 332 *i* P **P** **08 51 13.0 -0.8**
FINES pmax pmax
comp=Z,5.0nm,0.8s
TSSL Sulina 94.45 315⇑*i*P P 08 51 31.0 +16
MICGM Minsk 94.48 325⇑*e*P **P** **08 51 14.0 -0.7**
MICGM PM 08 51 16.0
comp=Z,0.2nm,2.0s
MICGM *e*pP pP 08 51 38.0 -11
MICGM *e*sP **sP** **08 52 02.0 -1.0**
MICGM *e*PP **PP** **08 55 06.0 +2.1**
MICGM *e*SKS **SKSac** **09 01 38.0 +0.9**
MICGM *e*S **S** **09 02 11.0 -4.3**
MICGM *e*sS **pS** **09 03 04.0 +4.3**
MICGM *e*SP **SP** **09 03 26.0 -5.1**
MICGM *e*PS PS 09 03 43.0 -5.7
MICGM *e*SS **SS** **09 08 33.0 -7.5**
MICGM *e*SSS SSS 09 12 15.0
MICGM *e*LR LR 09 28 06.0
MICGM LRM MLR 09 34 28.0
comp=Z,1.7nm,12.0s
VSU Vasula 94.50 329 *i* P **P** **08 51 15.4 +0.7**
VSU pmax pmax
comp=Z,29nm,0.7s
KIF Kilpisjarvi 94.79 340 *e*P **P** **08 51 14.4 -1.3**
KIS Kishinev 94.87 317 *e*P **P** **08 51 15.0 -1.6**
comp=Z,110nm,1.8s
KIS Kishinev 94.87 317 *e*PP **PP** **08 55 13.0 +5.8**
KIS *e*SKS **SKSac** **09 01 36.0 -3.5**
KIS *e*S **S** **09 02 16.0 -3.0**
KIS *e*LR LR 09 32 05.0
comp=Z,400nm,24.0s
KIS Kishinev 94.87 317 *e*P **P** **08 51 15.0 -1.6**
KIS *e* 08 55 13.0
KIS *e* 09 01 36.0
KIS *e*S **S** **09 02 16.0 -3.0**
KIS *e* 09 03 38.0
KIS pmax pmax
comp=Z,110nm,1.8s
WRAK Wrangell Islan 94.91 33 *e*P **P** **08 51 17.5 +0.9**
comp=Z,10nm,0.9s
YLV Yalova 95.18 311⇑*i*P **P** **08 51 17.5 -0.8**
TRO Tromso 95.24 340 *e*P **P** **08 51 16.8 -1.0**
TIRR Tirgusor 95.46 315⇓*i*P **P** **08 51 18.7 -0.6**
GIUM Giurgiulesti 95.48 316⇑*i*P **P** **08 51 18.2 -1.2**
CFR Carcaliu 95.56 315⇓*i*P **P** **08 51 19.4 -0.4**
TLB Topalu 95.70 315⇑*i*P **P** **08 51 20.3 -0.2**
HARR Harsova 95.77 315⇓*i*P **P** **08 51 20.8 0.0**
DLBC Dease Lake 95.78 31 *e*P **P** **08 51 22.0 +1.4**
comp=Z,4.8nm,0.8s
MANT Manisa 96.03 309 *e*P **P** **08 51 22.0 -0.4**
comp=Z,127nm,1.1s
GRER 96.35 316⇑*i*P **P** **08 51 25.5 +2.1**
MBAR Mbarara 96.40 270 *e*P **P** **08 51 24.7 +0.1**
comp=Z,12nm,1.0s
MBAR Mbarara 96.40 270 *e*P **P** **08 51 24.7 +0.1**
MBAR pmax pmax
comp=Z,12nm,1.0s
TESR Tescani 96.42 317⇓*i*P **P** **08 51 23.5 -0.2**
BALB Balikesir 96.42 310 *e*P **P** **08 51 23.4 -0.5**
comp=Z,106nm,0.9s

PHSR	**Pinarhisar**	**96.45 312**	⇑	*i*P	**P**	**08 51 23.6**	**-0.4**
VRI	**Vrincioaia**	**96.45 316**	⇑	*i*P	**P**	**08 51 24.1**	**+0.2**
PLOR	**Plostina**	**96.51 316**	⇑	*i*P	**P**	**08 51 23.9**	**-0.3**
MLR	**Muntele Rosu**	**97.05 316**		PP	**PP**	**08 55 27.7**	**+3.5**
	comp=Z,63nm,1.3s,baz=37,slow=6.0,SNR=10						
MLR	**Muntele Rosu**	**97.05 316**		*e*P	**P**	**08 51 26.7**	**-0.1**
	comp=Z,41nm,0.9s						
MLR	**Muntele Rosu**	**97.05 316**	⇑	*i*P	**P**	**08 51 26.5**	**-0.3**
MLR	**Muntele Rosu**	**97.05 316**		*e*P	**P**	**08 51 26.7**	**-0.1**
MLR				pmax	pmax		
	comp=Z,41nm,0.9s						
STEI	**Steigen**	**97.07 339**		*e*P	**P**	**08 51 26.0**	**-0.2**
BURAR	**Bucovina Array**	**97.21 318**	⇓	*i*P	Pdif	08 51 27.4	-0.1
BUR08	**Bucovina Ar. S**	**97.22 318**		*e*P	**P**	**08 51 27.3**	**-0.1**
	comp=Z,28nm,0.9s						
SUW	**Suwalki**	**97.28 325**		*e*P	**P**	**08 51 26.6**	**-0.8**
SUW				*e*S	**SKSac**	**09 01 51.6**	**-0.2**
SUW	**Suwalki**	**97.28 325**		*e*P	**P**	**08 51 27.0**	**-0.4**
	comp=Z,70nm,0.9s						
SUW	**Suwalki**	**97.28 325**		*e*P	**P**	**08 51 26.6**	**-0.8**
SUW				*e*S	**SKSac**	**09 01 51.6**	**-0.2**
DOPR	**Dopca**	**97.36 316**	⇓	*i*P	**P**	**08 51 27.4**	**-0.6**
EZN	**Ezine**	**97.59 310**	⇓	*i*P	**P**	**08 51 28.7**	**-0.4**
LVV	**L'vov**	**97.59 320**		*e*P	**P**	**08 51 28.2**	**-0.7**
ALN	**Alexandroupoli**	**97.65 311**		*e*P	**P**	**08 51 28.9**	**-0.5**
	comp=Z,25nm,1.3s						
ALN	**Alexandroupoli**	**97.65 311**		*e*P	**P**	**08 51 28.9**	**-0.5**
ALN				pmax	pmax		
	comp=Z,25nm,1.3s						
VOIR		**97.68 316**	⇑	*i*P	**P**	**08 51 28.0**	**-1.5**
HUMR	**Humele**	**97.88 315**	⇑	*i*P	**P**	**08 51 28.9**	**-1.4**
PLD	**Plovdiv**	**98.47 313**		*e*P	**PP**	**08 55 38.1**	**+3.1**
KWP	**Kalwaria Pacla**	**98.47 320**		*e*P	Pdif	08 51 32.9	0.0
	comp=Z,203nm,1.0s						
KWP	**Kalwaria Pacla**	**98.47 320**		*e*P	Pdif	08 51 32.9	0.0
KWP				pmax	pmax		
	comp=Z,203nm,1.0s						
PGB	**Panagyurishte**	**98.79 313**		*e*P	**PP**	**08 55 42.0**	**+4.5**
KOLS	**Kolonicke sedl**	**98.89 320**		*e*P	Pdif	08 51 35.0	+0.2
KOLS	**Kolonicke sedl**	**98.89 320**		*e*PDIF	Pdif	08 51 35.0	+0.2
LSZ	**Lusaka**	**98.91 255**		*e*P	Pdif	08 51 35.9	+0.2
	comp=Z,21nm,1.0s						
LSZ	**Lusaka**	**98.91 255**		*e*P	Pdif	08 51 35.9	+0.2
LSZ				pmax	pmax		
	comp=Z,21nm,1.0s						
UZH	**Uzhgorod**	**98.94 320**	⇓	*i*P	**P**	**08 51 34.7**	**-0.3**
UZH				*i*		08 52 10.7	
UZH				*i*		09 01 59.0	
DRGR		**99.04 318**	⇑	*i*P	**Pdif**	**08 51 35.6**	**0.0**
GZR	**Gura Zlata**	**99.27 316**	⇓	*i*P	**Pdif**	**08 51 36.6**	**0.0**
MMB	**Musomiste**	**99.27 312**		*e*P	**PP**	**08 55 45.2**	**+4.0**
VTS	**Vitosha**	**99.45 313**		*e*Pdif	**Pdif**	**08 51 37.1**	**-0.5**
	comp=Z,18nm,0.9s						
VTS	**Vitosha**	**99.45 313**	⇑	*i*P	**Pdif**	**08 51 36.8**	**-0.8**
VTS	**Vitosha**	**99.45 313**		*e*P	**Pdif**	**08 51 37.2**	**-0.5**
VTS				pmax	pmax		
	comp=Z,18nm,0.9s						
VTS	**Vitosha**	**99.45 313**		*e*P	**PP**	**08 55 47.0**	**+4.4**
HERR	**Herculane**	**99.62 316**	⇓	*i*P	**Pdif**	**08 51 37.8**	**-0.3**
KKB	**Krupnik**	**99.70 313**		*e*P	**PP**	**08 55 46.9**	**+2.5**
SIRR	**Siria**	**99.86 317**	⇑	*i*P	**Pdif**	**08 51 39.0**	**-0.2**
DAG	**Danmarks Havn**	**99.89 352**	⇓	*i*P	**Pdif**	**08 51 38.0**	**-0.6**
DAG				pmax	pmax		
	comp=Z,14nm,0.7s						
DAG	**Danmarks Havn**	**99.89 352**	⇓	*i*P	**Pdif**	**08 51 38.0**	**-0.6**
	comp=Z,21nm,0.7s						
BZS	**Buzias**	**100.02 317**	⇓	*i*P	**Pdif**	**08 51 39.0**	**-0.9**
NIE	**Niedzica**	**100.05 321**		*e*P	**Pdif**	**08 51 40.5**	**+0.6**
NIE				*e*S	**SKSac**	**09 02 06.2**	**+0.2**
NIE	**Niedzica**	**100.05 321**		*e*P	**Pdif**	**08 51 40.5**	**+0.6**
NIE				*e*S	**SKSac**	**09 02 06.2**	**+0.2**
MDVR	**Moldovita**	**100.13 316**	⇓	*i*P	**Pdif**	**08 51 39.9**	**-0.5**
OJC	**Ojcow**	**100.17 321**		*e*P	**Pdif**	**08 51 40.3**	**-0.1**
OJC				*e*S	**SKSac**	**09 02 05.7**	**-0.8**
OJC	**Ojcow**	**100.17 321**		*e*P	**Pdif**	**08 51 40.3**	**-0.1**
OJC				*e*S	**SKSac**	**09 02 05.7**	**-0.8**
VAY	**Valandovo**	**100.18 312**		*i* P	**Pdif**	**08 51 39.4**	**-1.3**
SKO	**Skopje**	**100.88 313**		*i* P	**Pdif**	**08 51 42.8**	**-1.0**
BOSA	**Boshof**	**100.95 241**		P	**Pdif**	**08 51 44.7**	**+0.2**
	comp=Z,13nm,1.1s,baz=95,slow=5.6,SNR=8.5						
BOSA				PP	**PP**	**08 55 53.7**	**-0.7**
	comp=Z,7.4nm,0.9s,baz=60,slow=9.1,SNR=4.9						
BOSA	**Boshof**	**100.95 241**		*e*Pdif	**Pdif**	**08 51 45.5**	**+1.0**
BOSA	**Boshof**	**100.95 241**		*e*P	**Pdif**	**08 51 45.5**	**+1.0**
NC405	**NORSAR Array S**	**101.05 333**		*e*Pdif	**Pdif**	**08 51 43.0**	**-1.1**
NB2	**NORSAR Subarra**	**101.30 333**		P	**Pdif**	**08 51 43.5**	**-1.8**
	comp=Z,2.1nm,0.7s,baz=66,slow=4.6						
NB2	**NORSAR Subarra**	**101.30 333**		P	**Pdif**	**08 51 43.5**	**-1.8**
	baz=66,slow=4.6						
NB200	**NORSAR Array S**	**101.30 333**		*e*Pdif	**Pdif**	**08 51 43.9**	**-1.4**
NOA	**NORSAR Array B**	**101.30 333**		P	**Pdif**	**08 51 43.9**	**-1.4**
	comp=Z,4.6nm,0.8s,baz=68,slow=4.6,SNR=11						
NOA				PP	**PP**	**08 55 59.2**	**+3.5**
	comp=Z,2.2nm,0.9s,baz=75,slow=7.7,SNR=3.5						
NOA				PKKPbc	**PKKPbc**	**09 07 55.1**	**-1.7**
	comp=Z,0.8nm,0.8s,baz=312,slow=3.0,SNR=3.2						
OHR	**Ohrid**	**101.53 312**		*i* P	**Pdif**	**08 51 44.3**	**-2.5**
MORC	**Moravsky Berou**	**101.69 321**	⇑	*i*P	**Pdif**	**08 51 47.4**	**+0.1**
MORC	**Moravsky Berou**	**101.69 321**		*e*PDIFF	**Pdif**	**08 51 47.2**	**-0.1**
MORC				*e*PP	**PP**	**08 56 01.9**	**+2.8**
YKA	**Yellowknife Ar**	**101.71 25**		P	**Pdif**	**08 51 46.9**	**0.0**
	comp=Z,1.8nm,0.9s,baz=298,slow=4.9,SNR=6.1						
YKA				PKiKP	**PKiKP**	**08 56 09.7**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=303,slow=2.1,SNR=4.6						
YKA				PKKPbc	**PKKPbc**	**09 07 52.3**	**-3.3**
	comp=Z,1.4nm,0.8s,baz=114,slow=2.5,SNR=6.5						
YKB5	**Yellowknife Ar**	**101.71 25**		*e*Pdif	**Pdif**	**08 51 46.9**	**0.0**
YKB5				*e*PKiKP	**PKiKP**	**08 56 09.7**	**+0.1**
JAVC	**Velka Javorina**	**101.86 320**		*e*PDIFF	**Pdif**	**08 51 49.1**	**+1.0**
JAVC				*e*PP	**PP**	**08 56 03.3**	**+2.9**
KSP	**Ksiaz**	**102.16 323**		*e*P	**Pdif**	**08 51 49.5**	**+0.3**
KSP				*e*S	**SKSac**	**09 02 15.5**	**-0.5**
KSP	**Ksiaz**	**102.16 323**		*e*P	**Pdif**	**08 51 49.5**	**+0.3**
KSP				*e*S	**SKSac**	**09 02 15.5**	**-0.5**
DPC	**Dobruska-Polom**	**102.29 322**		*e*P	**Pdif**	**08 51 50.8**	**+0.9**
DPC				*e*		09 02 15.6	
DPC				MLR	MLR		
	comp=Z,400nm,16.8s						
DPC	**Dobruska-Polom**	**102.29 322**		*e*PDIFF	**Pdif**	**08 51 50.8**	**+0.9**
DPC				*e*SKS		09 02 15.6	
DPC				AMS	AMS	09 42 20.0	
	comp=Z,400nm,16.8s						
OSTC	**Ostas**	**102.29 322**		*e*SKS	**SKSac**	**09 02 15.7**	**-1.0**
OSTC				AMS	AMS	09 36 10.0	
	comp=Z,400nm,18.8s						
CHVC	**Chvalec**	**102.38 322**		*e*PDIFF	**Pdif**	**08 51 50.9**	**+0.6**
CHVC				AMS	AMS	09 40 10.0	
	comp=Z,400nm,18.2s						
VRAC	**Vranov**	**102.42 321**		PP	**PP**	**08 56 05.5**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=76,slow=7.8,SNR=3.8						
VRAC	**Vranov**	**102.42 321**		*e*PDIFF	**Pdif**	**08 51 50.8**	**+0.3**
VRAC				*e*PP	**PP**	**08 56 04.1**	**-0.4**
UPC	**Upice**	**102.43 322**		*e*SKS	**SKSac**	**09 02 11.7**	**-5.6**
KRUC	**Moravsky**	**102.61 321**		*e*PDIFF	**Pdif**	**08 51 51.6**	**+0.3**
KRUC				*e*PP	**PP**	**08 56 04.0**	**-2.0**
TREC	**Trest**	**103.11 321**		AMS	AMS	09 36 30.0	
	comp=Z,500nm,22.8s						
GOPC	**GO Pecny, Ondr**	**103.36 322**		*e*SKS	**SKSac**	**09 02 15.1**	**-6.6**
GOPC				AMS	AMS	09 36 20.0	
	comp=Z,400nm,20.7s						
PRU	**Pruhonice**	**103.49 322**		*e*P	**Pdif**	**08 51 56.1**	**+0.9**
PRU				*e*		09 02 20.6	
PRU				MLR	MLR		
	comp=Z,500nm,17.5s						
PRU	**Pruhonice**	**103.49 322**		*e*PDIFF	**Pdif**	**08 51 56.1**	**+0.9**
PRU				*e*SKS		09 02 20.6	
PRU				AMS	AMS	09 43 10.0	
	comp=Z,500nm,17.5s						
BRG	**Berggiesshubel**	**103.57 323**		*e*PDIFF	**Pdif**	**08 51 55.5**	**0.0**
	comp=Z,13nm,1.1s						
BRG				*e*pPDIFF		08 52 35.2	
	comp=Z,10.0nm,1.2s						
BRG	**Berggiesshubel**	**103.57 323**		*e*PKP	**PKiKP**	**08 56 14.0**	**+0.6**
BRG				SS	SS	09 10 44.0	-3.5
	comp=N,159nm,18.5s						
	comp=E,248nm,21.5s						
	comp=Z,241nm,18.4s						
BRG	**Berggiesshubel**	**103.57 323**		*e*P	**Pdif**	**08 51 55.5**	**0.0**
BRG				pmax	pmax		
	comp=Z,13nm,1.1s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CLL	**Collm**	**103.98 324**		*e*Pdif	**Pdif**	**08 51 57.0**	**-0.3**
CLL				*e*		08 52 08.0	
CLL				*e*		08 52 17.0	
CLL				*e*		08 52 37.0	
CLL				*e*PP	**PKiKP**	**08 56 14.0**	**-0.1**
	comp=Z,45nm,1.6s						
CLL				*e*sPP		08 56 53.0	
CLL				*e*PPP	PPP	08 58 30.0	
CLL				*e*SKSac	**SKSac**	**09 02 24.0**	**-0.5**
CLL				*e*Sdif	**Sdif**	**09 03 30.0**	**-5.7**
CLL				*e*SP	**SP**	**09 05 10.0**	**-3.1**
CLL				*e*PPS	PPS	09 06 18.0	
CLL				*e*SS	**SS**	**09 11 00.0**	**+6.9**
CLL				*e*sSS		09 11 42.0	
CLL				*e*SSS	SSS	09 14 48.0	
CLL				*e*sSSS		09 15 48.0	
CLL				*e*SSSS		09 18 18.0	
CLL				*e*		09 20 48.0	
CLL				LmV		09 43 00.0	
	comp=Z,300nm,20.9s						
CLL	**Collm**	**103.98 324**		*e*P	**Pdif**	**08 51 57.0**	**-0.3**
CLL				*e*		09 02 24.0	
KHC	**Kasperske Hory**	**104.36 322**		*e*P	**Pdif**	**08 51 59.2**	**+0.1**
KHC				*e*		09 02 23.7	
KHC				MLR	MLR		
	comp=Z,500nm,23.4s						
KHC	**Kasperske Hory**	**104.36 322**		*e*PDIFF	**Pdif**	**08 51 59.2**	**+0.1**
KHC				*e*SKS		09 02 23.7	
KHC				AMS	AMS	09 36 50.0	
	comp=Z,500nm,23.4s						
GEC2	**GERESS Array S**	**104.37 321**		*e*Pdif	**Pdif**	**08 51 59.8**	**+0.5**
GEC2	**GERESS Array S**	**104.37 321**		*e*P	**Pdif**	**08 51 59.8**	**+0.5**
GERES	**GERESS Array B**	**104.37 321**		Pdiff	**Pdif**	**08 51 59.1**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=52,slow=2.2,SNR=8.3						
GERES				PKiKP	**PKiKP**	**08 56 15.2**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=98,slow=2.7,SNR=4.8						
VNA2	**Neumayer--Watz**	**104.39 194**		Pdiff	**Pdif**	**08 51 47.5**	**-11**
NKC	**Novy Kostel**	**104.68 323**		AMS	AMS	09 44 30.0	
	comp=Z,400nm,15.8s						
O03E	**Paynes Creek**	**105.23 48**		P	**PKiKP**	**08 56 16.5**	**-0.3**
	baz=285						
VAE	**Valguarnera**	**107.19 310**		PP	**PP**	**08 56 45.5**	**+5.3**
	comp=Z,5.6nm,0.3s,baz=49,slow=6.5,SNR=3.9						
DAVOX	**Davos/Dischmat**	**107.50 320**		PKiKP	**PKiKP**	**08 56 21.1**	**+0.1**
	comp=Z,2.2nm,0.4s,baz=18,slow=3.2,SNR=4.2						
NV01	**Mina Array Sit**	**108.34 49**		*e*Pdif	**Pdif**	**08 52 17.4**	**+0.1**
NV01				*e*PKiKP	**PKiKP**	**08 56 23.4**	**+0.5**
NV01				*e*PKKPbc	**PKKPbc**	**09 07 35.5**	**+0.6**
NVAR	**Mina Array Bea**	**108.34 49**		Pdiff	**Pdif**	**08 52 17.4**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=253,slow=4.5,SNR=3.6						
NVAR				PKiKP	**PKiKP**	**08 56 23.4**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=238,slow=3.1,SNR=6.6						
NVAR				PKKPbc	**PKKPbc**	**09 07 35.5**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=141,slow=5.0,SNR=9.5						
NVAR				PKKP	**PKKPdf**	**09 07 48.6**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=131,slow=5.3,SNR=5.6						
HLID	**Hailey**	**109.47 43**		P	**PKiKP**	**08 56 25.5**	**+0.7**
	baz=291						
EDW2	**Edwards Air Fo**	**109.57 52**		P	**PKiKP**	**08 56 25.9**	**+0.8**
	baz=286						
FURC	**Furnace Creek,**	**110.01 50**		P	**PKiKP**	**08 56 26.5**	**+0.7**
	baz=287						
R11A	**Troy Canyon, C**	**110.40 48**		P	**PKiKP**	**08 56 27.3**	**+0.6**
	baz=289						
EGMT	**Eagleton**	**110.64 37**		P	**PKiKP**	**08 56 27.4**	**+0.6**
	baz=297						
EKA	**Eskdalemuir Ar**	**110.71 332**		PKKPab	PKKPab	09 07 35.6	-1.6
	comp=Z,0.3nm,0.4s,baz=235,slow=2.9,SNR=4.0						
TUQ	**Turquoise Moun**	**111.04 51**		P	**PKiKP**	**08 56 28.5**	**+0.6**
	baz=287						
PFO	**Pinyon Flats O**	**111.14 53**		P	**PKiKP**	**08 56 28.4**	**+0.2**
	baz=286						
FFC	**Flin Flon**	**111.36 28**		*i* PKIKP	**PKiKP**	**08 56 29.2**	**+1.4**
MONP2	**Monument Peak**	**111.37 54**		P	**PKiKP**	**08 56 29.2**	**+0.4**
	baz=286						
BELC	**Belle Mtn. Jos**	**111.40 53**		P	**PKiKP**	**08 56 29.1**	**+0.4**
	baz=287						
GMRC	**Granite Mounta**	**111.44 52**		P	**PKiKP**	**08 56 29.5**	**+0.8**
	baz=287						
IKP	**In-Ko-Pah, Jac**	**111.69 54**		P	**PKiKP**	**08 56 29.8**	**+0.6**
	baz=286						
DUG	**Dugway, Tooele**	**111.80 46**		P	**PKiKP**	**08 56 30.3**	**+1.0**
	baz=291						
SWSC	**Sam W. Stewart**	**111.86 54**		P	**PKiKP**	**08 56 30.2**	**+0.8**
	baz=286						
BC3	**Big Chuckawall**	**111.93 53**		P	**PKiKP**	**08 56 30.7**	**+1.0**
	baz=287						
IRM	**Iron Mountain**	**112.03 52**		P	**PKiKP**	**08 56 30.8**	**+1.0**
	baz=287						
PDMCI	**Parker Dam,Lak**	**112.78 52**		P	**PKiKP**	**08 56 32.2**	**+1.1**
	baz=288						
BW06	**Boulder Array**	**113.05 42**		P	**PKiKP**	**08 56 32.3**	**+0.6**
	baz=295						
PD31	**Pinedale Array**	**113.05 42**		*e*PKKPbc	PKKPbc	09 07 17.5	-2.4
PD31				*e*PKKPab	**PKKPab**	**09 07 25.8**	**-1.5**
PDAR	**Pinedale Array**	**113.05 42**		PKiKP	**PKiKP**	**08 56 32.0**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=258,slow=4.2,SNR=5.2						
PDAR				SKP		08 59 54.9	
	comp=Z,0.4nm,0.5s,baz=220,slow=2.4,SNR=4.0						
PDAR				PKKPbc	**PKKPbc**	**09 07 18.2**	**-1.7**
	comp=Z,2.5nm,0.8s,baz=119,slow=5.3,SNR=17						
PDAR				PKKPab	**PKKPab**	**09 07 26.1**	**-1.2**
	comp=Z,3.3nm,0.9s,baz=117,slow=5.9,SNR=12						
LAO	**LASA Array**	**113.39 37**		P	**PKiKP**	**08 56 33.0**	**+1.0**
	baz=299						
DGMT	**Dagmar**	**113.68 35**		P	**PKiKP**	**08 56 33.5**	**+1.0**
	baz=302						
WUAZ	**Wupatki**	**114.53 50**		P	**PKiKP**	**08 56 35.4**	**+0.7**
	baz=290						
O20A	**White River Ci**	**115.05 44**		P	**PKPdf**	**08 56 36.4**	**+0.8**
	baz=295						
K22A	**Casper**	**115.11 41**		P	**PKPdf**	**08 56 35.6**	**0.0**
	baz=297						
PV23	**Carpenter Ridg**	**115.19 46**		*e*PKPdf	**PKPdf**	**08 56 36.0**	**0.0**
PV14	**Lion Creek, Pa**	**115.21 46**		*e*PKPdf	**PKPdf**	**08 56 36.5**	**+0.5**
PV20	**West Nyswonger**	**115.26 46**		*e*PKPdf	**PKPdf**	**08 56 36.7**	**+0.7**
PV05	**Paradox Valley**	**115.27 47**		*e*PKPdf	**PKPdf**	**08 56 36.6**	**+0.5**
PV16	**Nyswonger Mesa**	**115.31 46**		*e*PKPdf	**PKPdf**	**08 56 36.4**	**+0.3**
PV22	**Blue Mesa, Par**	**115.32 46**		*e*PKPdf	**PKPdf**	**08 56 37.0**	**+0.8**
PV18	**Skein Mesa, Pa**	**115.34 46**		*e*PKPdf	**PKPdf**	**08 56 37.2**	**+0.9**
PV11	**David Mesa, Pa**	**115.35 46**		*e*PKPdf	**PKPdf**	**08 56 37.8**	**+1.6**
PV03	**Paradox Valley**	**115.38 46**		*e*PKPdf	**PKPdf**	**08 56 37.0**	**+0.7**
PV12	**Saucer Basin,**	**115.39 46**		*e*PKPdf	**PKPdf**	**08 56 37.3**	**+1.0**
PV13	**Radium Mtn., P**	**115.44 46**		*e*PKPdf	**PKPdf**	**08 56 37.5**	**+1.1**
X18A	**Snowflake**	**115.97 50**		*e*PKPdf	**PKiKP**	**08 56 38.8**	**+1.3**
RSSD	**Black Hills**	**116.00 39**		*e*PKPdf	**PKPdf**	**08 56 37.2**	**0.0**
RSSD	**Black Hills**	**116.00 39**		P	**PKPdf**	**08 56 37.3**	**0.0**
	baz=300						
MVCO	**Mesa Verde**	**116.05 47**		*e*PKPdf	**PKiKP**	**08 56 38.3**	**+0.7**
MVCO	**Mesa Verde**	**116.05 47**		P	**PKiKP**	**08 56 38.3**	**+0.7**
	baz=293						
TUC	**Tucson**	**116.08 53**		*e*PKPdf	**PKPdf**	**08 56 36.9**	**-0.7**
TUC	**Tucson**	**116.08 53**		*e*PKiKP	**PKPdf**	**08 56 36.9**	**-0.7**
TUC	**Tucson**	**116.08 53**		P	**PKiKP**	**08 56 38.3**	**+0.6**
	baz=290						
ISCO	**Idaho Springs**	**117.01 43**		P	**PKiKP**	**08 56 39.9**	**+0.4**
	baz=297						
S22A	**4UR Ranch, Cre**	**117.05 46**		P	**PKiKP**	**08 56 40.8**	**+1.1**
	baz=295						
ULM	**Lac du Bonnet**	**117.05 29**		PKP	**PKPdf**	**08 56 38.5**	**-0.4**
	comp=Z,7.6nm,0.8s,baz=333,slow=1.4,SNR=7.2						
ULM				SKP		09 00 00.9	
	comp=Z,5.1nm,0.7s,baz=23,slow=1.7,SNR=4.2						
ULM	**Lac du Bonnet**	**117.05 29**		*e*PKPdf	**PKiKP**	**08 56 38.9**	**0.0**
Q24A	**Divide**	**117.71 44**		P	**PKiKP**	**08 56 41.7**	**+0.8**
	baz=297						
SDCO	**Great Sand Dun**	**118.00 46**		*e*PKPdf	**PKiKP**	**08 56 42.2**	**+0.7**
SDCO	**Great Sand Dun**	**118.00 46**		P	**PKiKP**	**08 56 42.2**	**+0.7**
	baz=296						
AGMN	**Agassiz Nation**	**118.30 31**		P	**PKPdf**	**08 56 40.4**	**-0.9**
	baz=309						
121A	**Cookes Peak, D**	**118.38 52**		P	**PKiKP**	**08 56 43.1**	**+0.9**
	baz=292						
LENM	**Lemitar**	**118.39 50**		*e*PKPdf	**PKPdf**	**08 56 42.1**	**0.0**
TASM	**ASL Pad, Albuq**	**118.47 49**		P	**PKiKP**	**08 56 43.0**	**+0.7**
	baz=294						
TASM	**ASL Pad, Albuq**	**118.47 49**		P	**PKiKP**	**08 56 43.0**	**+0.7**
	baz=294						
ANMO	**Albuquerque**	**118.47 49**		*e*PKPdf	**PKiKP**	**08 56 43.1**	**+0.8**
ANMO	**Albuquerque**	**118.47 49**		*e*PKiKP	**PKiKP**	**08 56 43.1**	**+0.8**
ANMO	**Albuquerque**	**118.47 49**		P	**PKiKP**	**08 56 43.2**	**+0.8**
	baz=294						
LPM	**Los Pinos Moun**	**118.59 49**		*e*PKPdf	**PKiKP**	**08 56 43.5**	**+0.9**
BNM	**Barren Site**	**118.66 50**		*e*PKPdf	**PKiKP**	**08 56 43.2**	**+0.4**
UCM	**Universidad Co**	**118.88 318**		PP	PP	08 57 55.3	-7.6
UCM	**Universidad Co**	**118.88 318**		PS	**SP**	**09 07 31.1**	**-4.9**
T25A	**Trinidad**	**119.05 46**		P	**PKiKP**	**08 56 44.1**	**+0.7**
	baz=296						
KSCO	**Kaye Shedlock'**	**119.42 43**		P	**PKiKP**	**08 56 44.8**	**+0.8**
	baz=299						
ESDC	**Sonseca Array**	**119.67 318**		PKP	**PKPdf**	**08 56 44.2**	**0.0**
	comp=Z,0.8nm,0.5s,baz=22,slow=2.3,SNR=8.6						
ESDC				PP	**PP**	**08 58 09.5**	**+1.1**
	comp=Z,8.7nm,1.0s,baz=52,slow=6.1,SNR=11						
MNTX	**Cornudas Mount**	**120.58 52**		*e*PKPdf	**PKiKP**	**08 56 46.7**	**+0.3**
MNTX	**Cornudas Mount**	**120.58 52**		P	**PKiKP**	**08 56 47.2**	**+0.9**
	baz=293						
ECSD	**EROS Data Cent**	**120.69 36**		*e*PKPdf	**PKPdf**	**08 56 45.7**	**-0.3**
ECSD	**EROS Data Cent**	**120.69 36**		P	**PKPdf**	**08 56 45.8**	**-0.3**
	baz=307						
EYMN	**Ely**	**120.73 29**		*e*PKPdf	**PKPdf**	**08 56 46.0**	**-0.1**
EYMN	**Ely**	**120.73 29**		P	**PKPdf**	**08 56 45.7**	**-0.4**
	baz=314						
MVO	**Moncorvo**	**120.88 321**		*e*PKPdf	**PKiKP**	**08 56 48.3**	**+1.6**
BGNE	**Belgrade**	**121.11 39**		*e*PKPdf	**PKPdf**	**08 56 46.8**	**-0.1**
BGNE	**Belgrade**	**121.11 39**		P	**PKPdf**	**08 56 46.9**	**-0.1**
	baz=304						
PCAB	**Cabril**	**121.20 322**		*e*PKPdf	**PKiKP**	**08 56 48.2**	**+0.9**
PGAV	**Gavieira, Arco**	**121.21 322**		*e*PKPdf	**PKiKP**	**08 56 48.5**	**+1.1**
PVRL	**Vila Real**	**121.25 321**		*e*PKPdf	**PKiKP**	**08 56 48.3**	**+0.9**
EMAL	**Malaga-Limoner**	**121.41 315**		PP	PP	08 58 09.1	-11
EMAL	**Malaga-Limoner**	**121.41 315**		PS	SP	09 07 35.5	-23
CBKS	**Cedar Bluff**	**121.48 42**		P	**PKiKP**	**08 56 47.9**	**0.0**
	baz=301						
E38A	**The Farm, Brul**	**121.62 30**		*e*PKPdf	**PKPdf**	**08 56 47.6**	**-0.1**
E38A	**The Farm, Brul**	**121.62 30**		P	**PKPdf**	**08 56 47.5**	**-0.2**
	baz=313						
MTE	**Manteigas**	**121.63 320**		*e*PKPdf	**PKiKP**	**08 56 49.4**	**+1.2**
MSTX	**Muleshoe**	**121.64 48**		*e*PKPdf	**PKiKP**	**08 56 48.9**	**+0.4**
MSTX	**Muleshoe**	**121.64 48**		P	**PKiKP**	**08 56 48.9**	**+0.4**
	baz=296						
F37A	**Hinrichs Farm,**	**121.66 32**		P	**PKiKP**	**08 56 48.0**	**0.0**
	baz=311						
PVIS	**Viseu**	**121.68 321**		*e*PKPdf	**PKiKP**	**08 56 49.6**	**+1.3**
C40A	**Isle Royale Na**	**121.88 28**		*e*PKPdf	**PKPdf**	**08 56 48.0**	**-0.2**
C40A	**Isle Royale Na**	**121.88 28**		P	**PKPdf**	**08 56 48.1**	**0.0**
	baz=316						
F38A	**Pierce - Schro**	**121.89 31**		P	**PKiKP**	**08 56 48.4**	**0.0**
	baz=312						
SPMN	**Marine on St.**	**121.89 32**		*e*PKPdf	**PKPdf**	**08 56 47.6**	**-0.7**
SPMN	**Marine on St.**	**121.89 32**		P	**PKiKP**	**08 56 48.5**	**0.0**
	baz=311						
PCBR	**Castelo Branco**	**121.89 320**		*e*PKPdf	**PKiKP**	**08 56 49.8**	**+1.2**

	baz=311						
TUL1	Leonard	125.68	43	ePKPdf	PKiKP	08 56 56.3	0.0
TUL1	Leonard	125.68	43	P	PKPdf	08 56 56.1	+0.2
	baz=303						
L42A	Oliver, Polo	125.73	33	ePKPdf	PKPdf	08 56 55.8	0.0
L42A	Oliver, Polo	125.73	33	P	PKPdf	08 56 55.4	-0.3
	baz=313						
H45A	Beulah	125.75	29	P	PKPdf	08 56 55.7	0.0
	baz=318						
D49A	Beulah Townshi	125.76	24	P	PKPdf	08 56 55.2	-0.5
	baz=324						
G46A	Petoskey	125.79	27	P	PKPdf	08 56 55.9	+0.1
	baz=319						
LSQQ	Lebel-sur-Quev	125.87	19	P	PKPdf	08 56 55.6	-0.2
	baz=330						
N41A	Harden Midland	125.92	35	P	PKiKP	08 56 56.6	0.0
	baz=311						
CHGQ	Chibougamau	125.93	17	P	PKPdf	08 56 56.0	0.0
	baz=333						
K43A	Burlington	125.97	32	ePKPdf	PKPdf	08 56 56.3	+0.1
K43A	Burlington	125.97	32	P	PKPdf	08 56 56.1	-0.1
	baz=314						
E48A	Lockeyer	126.07	25	P	PKiKP	08 56 56.6	-0.1
	baz=323						
I45A	Fountain	126.09	29	P	PKiKP	08 56 56.6	-0.2
	baz=317						
H46A	Fife Lake	126.21	28	P	PKPdf	08 56 56.7	+0.1
	baz=319						
GLMI	Grayling	126.27	28	ePKPdf	PKPdf	08 56 56.3	-0.4
GLMI	Grayling	126.27	28	P	PKiKP	08 56 57.4	+0.3
	baz=319						
G47A	Hillman	126.36	27	P	PKiKP	08 56 57.4	0.0
	baz=320						
F48A	Evansville	126.39	26	P	PKPdf	08 56 57.1	+0.2
	baz=322						
J45A	Montague	126.45	30	P	PKiKP	08 56 57.4	-0.1
	baz=317						
M43A	Waltham Townsh	126.51	33	P	PKPdf	08 56 57.1	-0.1
	baz=313						
WHTX	Lake Whitney,	126.52	48	P	PKiKP	08 56 58.1	+0.1
	baz=299						
VLDQ	Val d'Or	126.52	20	ePKPdf	PKPdf	08 56 56.4	-0.7
L44A	Lake County Fo	126.56	32	P	PKPdf	08 56 57.3	0.0
	baz=314						
H47A	Mio	126.64	28	P	PKiKP	08 56 57.9	0.0
	baz=320						
D51A	Lot 18 Range I	126.69	22	P	PKPdf	08 56 57.2	-0.3
	baz=326						
833A	Chaparral WMA,	126.69	53	P	PKiKP	08 56 59.0	+0.5
	baz=295						
F49A	Sandfield	126.69	25	P	PKiKP	08 56 57.9	-0.1
	baz=323						
E50A	Wahnapitae	126.70	24	P	PKiKP	08 56 58.1	+0.1
	baz=324						
HHAR	Hobbs	126.72	41	ePKPdf	PKiKP	08 56 58.2	-0.2
N43A	Stutzman Famil	126.72	34	P	PKPdf	08 56 57.5	-0.2
	baz=312						
J46A	Howard City	126.88	30	P	PKPdf	08 56 58.0	0.0
	baz=318						
HDIL	Hopedale	126.92	34	ePKPdf	PKPdf	08 56 58.3	+0.2
HDIL	Hopedale	126.92	34	P	PKPdf	08 56 58.0	-0.1
	baz=312						
I47A	Gladwin	126.93	28	P	PKPdf	08 56 58.1	+0.1
	baz=319						
H48A	Harrisville	126.96	27	ePKPdf	PKiKP	08 56 58.4	-0.1
H48A	Harrisville	126.96	27	P	PKiKP	08 56 58.4	-0.1
	baz=321						
435B	Jarrell	127.00	49	P	PKPdf	08 56 58.6	+0.1
	baz=298						
M44A	Midewin, Midew	127.04	33	ePKPdf	PKPdf	08 56 58.5	+0.2
M44A	Midewin, Midew	127.04	33	P	PKPdf	08 56 58.2	0.0
	baz=314						
E51A	G1948 Merrick	127.10	23	P	PKPdf	08 56 58.0	-0.2
	baz=326						
D52A	ZEK Kipawa Sen	127.14	22	P	PKPdf	08 56 58.4	0.0
	baz=327						
I48A	Sherman Twp	127.18	28	P	PKPdf	08 56 58.7	+0.2
	baz=320						
K46A	Dorr	127.30	30	P	PKPdf	08 56 58.7	0.0
	baz=317						
D53A	Lac Vacive, Po	127.32	21	ePKPdf	PKPdf	08 56 58.9	+0.2
D53A	Lac Vacive, Po	127.32	21	P	PKPdf	08 56 58.6	-0.1
	baz=328						
TOBO	Tobermory, Bru	127.34	25	P	PKiKP	08 56 59.1	-0.2
	baz=323						
J47A	Sunmer	127.37	29	ePKPdf	PKiKP	08 56 59.2	-0.2
J47A	Sunmer	127.37	29	P	PKiKP	08 56 59.2	-0.2
	baz=318						
CCM	Cathedral Cave	127.38	38	ePKPdf	PKPdf	08 56 59.0	-0.1
CCM	Cathedral Cave	127.38	38	ePKIKP	PKPdf	08 56 59.0	-0.1
CCM	Cathedral Cave	127.38	38	P	PKPdf	08 56 59.1	+0.1
	baz=309						
U40A	Yellville	127.39	41	P	PKPdf	08 56 59.1	-0.1
	baz=306						
P43A	Skaggs, Pawnee	127.39	35	P	PKiKP	08 56 59.4	-0.2
	baz=311						
N44A	Piper City	127.40	33	P	PKPdf	08 56 59.2	+0.2
	baz=314						
F51A	Arnstein	127.44	24	P	PKPdf	08 56 59.2	+0.3
	baz=325						
W39A	Magazine	127.44	42	ePKPdf	PKiKP	08 56 59.7	-0.1
W39A	Magazine	127.44	42	P	PKiKP	08 56 59.5	-0.3
	baz=305						
D54A	Lac Fusel, La	127.62	20	P	PKPdf	08 56 58.7	-0.5
	baz=330						
E52A	Mattawa	127.63	22	P	PKPdf	08 56 58.9	-0.4
	baz=327						
O44A	Mansfield	127.65	34	P	PKPdf	08 56 59.6	+0.1
	baz=313						
K47A	Vermontville	127.70	30	P	PKPdf	08 56 59.6	+0.1
	baz=318						
N45A	Kentland	127.71	33	P	PKPdf	08 56 59.8	+0.3
	baz=314						
I49A	Point Hope	127.78	27	ePKPdf	PKiKP	08 56 60.0	-0.2
I49A	Point Hope	127.78	27	P	PKPdf	08 56 59.8	+0.2
	baz=321						
F52A	Sundridge	127.78	23	P	PKPdf	08 56 59.6	0.0
	baz=326						
KLBO	Killbear Provi	127.78	24	P	PKPdf	08 56 59.7	+0.1
	baz=325						
J48A	Bridge Port	127.82	28	ePKPdf	PKiKP	08 57 00.4	+0.1
J48A	Bridge Port	127.82	28	P	PKiKP	08 57 00.7	+0.4
	baz=320						
E53A	Dumoine, Ponti	127.92	22	P	PKPdf	08 56 59.6	-0.2
	baz=328						
M46A	Old House Fiel	127.93	32	P	PKiKP	08 57 00.4	-0.2
	baz=316						
MIAR	Mount Ida	127.94	43	ePKPdf	PKiKP	08 57 01.4	+0.6
MIAR	Mount Ida	127.94	43	ePKIKP	PKiKP	08 57 01.4	+0.6
MIAR	Mount Ida	127.94	43	P	PKiKP	08 57 00.5	-0.3
	baz=304						
BMRO	Meriville Lake	127.97	25	P	PKiKP	08 57 00.6	+0.1
	baz=323						
O45A	Potomac	128.00	34	P	PKPdf	08 57 00.4	+0.3
	baz=314						
K48A	Perry	128.04	29	P	PKPdf	08 57 00.1	-0.1
	baz=319						
BUKO	Buck Lake	128.04	24	P	PKPdf	08 57 00.1	0.0
	baz=326						
E54A	Lac Daplat, Po	128.05	21	P	PKPdf	08 57 00.1	0.0
	baz=329						
J49A	Marlette	128.08	28	P	PKPdf	08 56 60.0	-0.2
	baz=320						
N46A	Monticello	128.09	32	P	PKPdf	08 57 00.3	0.0
	baz=315						
L47A	Sherwood	128.12	30	P	PKPdf	08 57 00.5	+0.2
	baz=317						
ALGO	Algonquin Park	128.14	22	P	PKPdf	08 57 00.2	0.0
	baz=327						
FCAR	Ozark Folk Cen	128.14	41	ePKPdf	PKPdf	08 57 00.8	+0.3
BRCO	Bruce Peninsul	128.16	26	P	PKiKP	08 57 00.7	-0.3
	baz=323						
BASO	Ashfield	128.24	26	P	PKiKP	08 57 00.9	-0.2
	baz=322						
M47A	Cromwell	128.35	31	P	PKPdf	08 57 00.9	+0.1
	baz=316						
K49A	Clarkson	128.37	29	P	PKPdf	08 57 00.6	-0.2
	baz=320						
BWLO	Walkerton	128.39	26	P	PKiKP	08 57 01.5	+0.1
	baz=323						
W41B	Gary Mavity, V	128.48	42	P	PKPdf	08 57 00.8	-0.4
	baz=306						
X40A	Basin Creek Fa	128.48	43	P	PKPdf	08 57 00.6	-0.6
	baz=305						
P45A	Graceland, Par	128.49	34	P	PKiKP	08 57 01.6	-0.2
	baz=313						
H52A	Wyevale	128.50	24	P	PKPdf	08 57 01.0	0.0
	baz=325						
L48A	N Adams	128.53	30	P	PKPdf	08 57 01.0	-0.1
	baz=318						
G53A	Haliburton	128.61	23	P	PKPdf	08 57 01.1	-0.1
	baz=326						
AAM	Ann Arbor	128.64	29	P	PKPdf	08 57 01.1	-0.2
	baz=319						
N47A	Urbana	128.66	32	P	PKPdf	08 57 01.0	-0.4
	baz=316						
LATQ	La Tuque	128.67	17	P	PKPdf	08 57 01.3	+0.1
	baz=334						
PEMO	Pembroke	128.67	22	P	PKPdf	08 57 01.1	-0.2
	baz=328						
Q45A	Warren Harvey,	128.68	35	P	PKiKP	08 57 01.9	-0.3
	baz=312						
PBMO	Poplar Bluff	128.68	39	ePKPdf	PKPdf	08 57 01.4	-0.1
I51A	Listowel	128.69	26	P	PKPdf	08 57 01.6	+0.2
	baz=323						
SADO	Sadowa	128.70	24	ePKPdf	PKiKP	08 57 01.9	-0.2
M48A	Edgerton	128.72	31	P	PKPdf	08 57 01.5	0.0
	baz=318						
L49A	Milan	128.73	29	P	PKPdf	08 57 01.6	+0.1
	baz=319						
WLAR	White Oak Lake	128.74	44	ePKPdf	PKiKP	08 57 02.8	+0.4
K50A	Casco	128.77	28	ePKPdf	PKPdf	08 57 01.1	-0.5
K50A	Casco	128.77	28	P	PKPdf	08 57 00.8	-0.7
	baz=321						
OLIL	Olney	128.82	35	ePKPdf	PKiKP	08 57 02.5	+0.1
S44A	Carbondale	128.82	37	P	PKPdf	08 57 02.0	+0.2
	baz=311						
O47A	Sheridan	128.86	33	P	PKiKP	08 57 02.4	-0.1
	baz=315						
F55A	Otter Lake	128.87	21	P	PKPdf	08 57 01.5	-0.1
	baz=329						
BANO	Bancroft	128.97	23	P	PKiKP	08 57 02.3	-0.3
	baz=327						
R45A	Skylar, Fairfi	129.01	36	P	PKiKP	08 57 02.9	+0.1
	baz=312						
N48A	Decatur	129.02	31	P	PKiKP	08 57 02.7	-0.1
	baz=317						
M49A	Liberty Center	129.10	30	P	PKPdf	08 57 02.1	-0.1
	baz=318						
G55A	Calabogie	129.23	22	P	PKPdf	08 57 01.8	-0.5
	baz=329						
L50A	Kingsville	129.25	29	P	PKPdf	08 57 02.0	-0.4
	baz=320						
ACTO	Acton	129.26	25	P	PKiKP	08 57 03.0	-0.2
	baz=324						
PLVO	Plevna	129.28	22	ePKPdf	PKPdf	08 57 02.3	-0.1
PLVO	Plevna	129.28	22	P	PKPdf	08 57 02.7	+0.3
	baz=328						
K51A	Iona Station	129.33	27	P	PKPdf	08 57 02.7	+0.1
	baz=322						
P47A	Martinsville	129.34	33	P	PKPdf	08 57 03.0	+0.2
	baz=315						
J52A	Paris	129.38	26	P	PKPdf	08 57 02.9	+0.2
	baz=323						
O48A	Farmland	129.39	32	P	PKPdf	08 57 02.7	-0.2
	baz=316						
PKRO	Pickering	129.39	24	P	PKPdf	08 57 02.8	+0.1
	baz=325						
N49A	Columbus Grove	129.41	31	ePKPdf	PKiKP	08 57 03.6	+0.1
N49A	Columbus Grove	129.41	31	P	PKPdf	08 57 02.8	-0.1
	baz=318						
BLO	Bloomington	129.42	34	ePKPdf	PKiKP	08 57 03.5	-0.1
BLO	Bloomington	129.42	34	ePKIKP	PKiKP	08 57 03.5	-0.1
ORIO	Orleans, Innes	129.49	21	P	PKPdf	08 57 03.0	+0.2
	baz=330						
DELO	Deloro Mine	129.51	23	ePKPdf	PKiKP	08 57 03.3	-0.3
DELO	Deloro Mine	129.51	23	P	PKiKP	08 57 03.4	-0.3
	baz=327						
DRWO	Darlington Wes	129.61	24	P	PKPdf	08 57 03.4	+0.3
	baz=326						
M50A	Fremont	129.62	29	ePKPdf	PKPdf	08 57 03.5	+0.3
M50A	Fremont	129.62	29	P	PKPdf	08 57 03.4	+0.2
	baz=319						
Q47A	Bedord North L	129.63	34	P	PKPdf	08 57 03.6	+0.3
	baz=314						
K52A	Tillsonburg	129.64	27	P	PKPdf	08 57 03.3	+0.1
	baz=323						
H55A	Tweed	129.65	22	P	PKiKP	08 57 03.6	-0.4
	baz=328						
WLVO	Wesleyville	129.70	24	P	PKPdf	08 57 03.4	+0.2
	baz=326						
I55A	Frankford	129.74	23	P	PKPdf	08 57 03.2	-0.1
	baz=327						
TYNO	Tyneside	129.76	26	P	PKPdf	08 57 03.3	-0.1
	baz=324						
P48A	Milroy	129.82	33	ePKPdf	PKPdf	08 57 03.7	+0.1
P48A	Milroy	129.82	33	P	PKPdf	08 57 03.5	-0.1
	baz=316						
O49A	Covington	129.87	31	ePKPdf	PKiKP	08 57 04.4	-0.2
O49A	Covington	129.87	31	P	PKPdf	08 57 03.5	-0.3
	baz=317						
H56A	Elgin	129.96	22	P	PKPdf	08 57 03.6	-0.1
	baz=329						
STCO	Saint Catharin	129.97	25	P	PKiKP	08 57 04.4	-0.2
	baz=325						
R47A	Wooly Knot Far	130.02	35	P	PKPdf	08 57 04.0	0.0
	baz=314						
Q48A	North Vernon	130.03	34	P	PKPdf	08 57 04.3	+0.2
	baz=315						
N50A	Nevada	130.04	30	P	PKPdf	08 57 03.9	-0.2
	baz=319						
T46A	Princeton	130.07	37	P	PKPdf	08 57 04.5	+0.3
	baz=312						
M51A	Elyria	130.09	29	P	PKPdf	08 57 04.0	-0.1
	baz=320						
J54A	Appleton	130.14	25	P	PKPdf	08 57 04.4	+0.3
	baz=325						
P49A	Miami Univ. Ec	130.15	32	P	PKPdf	08 57 04.2	0.0
	baz=316						
WCI	Wyandotte Cave	130.20	35	ePKPdf	PKiKP	08 57 05.1	-0.1
WCI	Wyandotte Cave	130.20	35	P	PKiKP	08 57 05.0	-0.2
	baz=314						
PECO	Prince Edward	130.25	23	ePKPdf	PKPdf	08 57 04.5	+0.2
PECO	Prince Edward	130.25	23	P	PKPdf	08 57 04.4	+0.2
	baz=328						
O50A	Cable	130.27	31	P	PKiKP	08 57 05.0	-0.3
	baz=318						
S47A	Hartford	130.30	36	P	PKPdf	08 57 04.2	-0.4
	baz=313						
MEDO	Medina	130.30	24	P	PKPdf	08 57 04.2	-0.3
	baz=326						
N51A	Ashland	130.31	29	ePKPdf	PKiKP	08 57 05.2	-0.2
N51A	Ashland	130.31	29	P	PKPdf	08 57 04.5	-0.1
	baz=320						
R48A	Northridge Ran	130.32	34	P	PKPdf	08 57 05.0	+0.3
	baz=315						
M52A	Chesterland	130.32	28	ePKPdf	PKiKP	08 57 05.8	+0.4
M52A	Chesterland	130.32	28	P	PKPdf	08 57 04.4	-0.2
	baz=321						
U46A	Springville	130.34	38	P	PKPdf	08 57 05.0	+0.3
	baz=311						
Q49A	Aurora	130.43	33	P	PKPdf	08 57 04.8	-0.1
	baz=316						
J55A	Hilton	130.48	24	ePKPdf	PKPdf	08 57 04.6	-0.2
J55A	Hilton	130.48	24	P	PKPdf	08 57 04.8	+0.1
	baz=326						
L53A	Girard	130.50	27	P	PKPdf	08 57 04.9	0.0
	baz=323						
ACSO	Alum Creek Sta	130.53	30	ePKPdf	PKPdf	08 57 05.0	0.0
ACSO	Alum Creek Sta	130.53	30	P	PKPdf	08 57 05.0	0.0
	baz=319						
LONY	Lake Ozonia	130.54	20	P	PKPdf	08 57 05.2	+0.3
	baz=331						
T47A	Sharon Grove	130.57	36	P	PKPdf	08 57 05.2	+0.1
	baz=312						
P50A	Jamestown	130.57	32	P	PKPdf	08 57 05.1	0.0
	baz=318						
K54A	Basiliko Farm,	130.66	25	P	PKPdf	08 57 04.9	-0.3
	baz=325						
L54A	Sinclairville	130.69	26	P	PKPdf	08 57 05.1	-0.2
	baz=324						
WVT	Waverly	130.71	38	ePKPdf	PKPdf	08 57 04.5	-0.9
WVT	Waverly	130.71	38	ePKIKP	PKPdf	08 57 04.5	-0.9
WVT	Waverly	130.71	38	P	PKPdf	08 57 04.9	-0.5
	baz=311						
M53A	WI Miller and	130.72	28	P	PKPdf	08 57 04.9	-0.4
	baz=322						
N52A	McGinn's Farm,	130.73	29	P	PKPdf	08 57 05.5	+0.2
	baz=321						
S48A	Wiedeman Farm,	130.73	35	P	PKPdf	08 57 05.3	-0.1
	baz=314						
V46A	Holladay	130.74	38	P	PKPdf	08 57 04.8	-0.7
	baz=310						
O51A	Pataskala	130.78	30	P	PKPdf	08 57 05.3	-0.2
	baz=319						
R49A	Shelbyville	130.79	34	ePKPdf	PKPdf	08 57 05.7	+0.2
R49A	Shelbyville	130.79	34	P	PKPdf	08 57 04.6	-0.9
	baz=315						
K55A	Perry	130.82	24	P	PKPdf	08 57 05.7	+0.2
	baz=326						
U47A	Clarksville	130.83	37	P	PKPdf	08 57 06.0	+0.3
	baz=312						
MMNY	Mt. Morris Dam	130.89	24	ePKPdf	PKPdf	08 57 05.1	-0.5
T48A	Bowling Green	130.91	36	P	PKPdf	08 57 06.2	+0.4
	baz=313						
Q50A	Georgetown	131.04	32	P	PKPdf	08 57 05.8	-0.2
	baz=317						
P51A	Williamsport	131.05	31	ePKPdf	PKPdf	08 57 05.8	-0.2
P51A	Williamsport	131.05	31	P	PKPdf	08 57 05.3	-0.7
	baz=318						
S49A	Springfield	131.08	34	P	PKPdf	08 57 05.8	-0.3
	baz=315						
V47A	Nunnelly	131.09	38	P	PKPdf	08 57 06.4	+0.3
	baz=311						
L55A	Hinsdale	131.12	25	P	PKPdf	08 57 06.3	+0.2
	baz=325						
M54A	Oil Creek Stat	131.13	27	ePKPdf	PKPdf	08 57 05.9	-0.2
M54A	Oil Creek Stat	131.13	27	P	PKPdf	08 57 06.0	-0.2
	baz=323						
N53A	Lisbon	131.14	28	ePKPdf	PKiKP	08 57 06.8	-0.3
N53A	Lisbon	131.14	28	P	PKPdf	08 57 06.0	-0.1
	baz=322						
O52A	Adamsville	131.19	30	ePKPdf	PKiKP	08 57 06.9	-0.3
O52A	Adamsville	131.19	30	P	PKPdf	08 57 06.2	-0.1
	baz=320						
U48A	Cassie Pea, Po	131.23	36	P	PKPdf	08 57 06.5	0.0
	baz=313						
NCB	Newcomb	131.23	20	ePKPdf	PKiKP	08 57 07.1	-0.1
Q51A	Peebles	131.24	32	ePKPdf	PKiKP	08 57 07.6	+0.3
Q51A	Peebles	131.24	32	P	PKPdf	08 57 06.2	-0.2
	baz=318						
X46A	Booneville	131.24	40	P	PKPdf	08 57 05.9	-0.6
	baz=309						
R50A	Paris	131.26	33	ePKPdf	PKiKP	08 57 07.4	0.0
R50A	Paris	131.26	33	P	PKPdf	08 57 05.6	-0.8
	baz=316						
PLAL	Pickwick Lake	131.30	39	ePKPdf	PKPdf	08 57 06.5	0.0
VBMS	Vicksburg	131.37	44	P	PKPdf	08 57 06.1	-0.6
	baz=306						
KIC	Kosan Boka	131.38	279	ePKP1	PKiKP	08 57 08.2	-0.1
	comp=Z,50nm,0.8s						
KIC	Kosan Boka	131.38	279	ePKP1	SKPbc	09 00 20.4	+0.3
	comp=Z,648nm,1.9s						
O53A	New Philadelph	131.39	29	P	PKPdf	08 57 06.4	-0.2
	baz=321						
P52A	Corning	131.41	30	P	PKPdf	08 57 06.4	-0.2
	baz=320						
T49A	Edmonton	131.41	35	ePKPdf	PKiKP	08 57 07.5	-0.2
T49A	Edmonton	131.41	35	P	PKPdf	08 57 06.4	-0.4
	baz=314						
N54A	Moraine State	131.41	27	ePKPdf	PKPdf	08 57 06.8	+0.1
N54A	Moraine State	131.41	27	P	PKPdf	08 57 06.6	-0.1
	baz=323						
W47A	Westpoint	131.42	38	P	PKPdf	08 57 06.8	-0.1
	baz=311						
DBIC	Dimbokro	131.46	280	PKP	PKPdf	08 57 07.7	+0.3
	comp=Z,16nm,0.8s,baz=84,slow=1.3,SNR=14						
DBIC				SKPbc	SKPbc	09 00 20.4	+0.1
	comp=Z,8.7nm,0.7s,baz=61,slow=5.1,SNR=9.9						
DBIC	Dimbokro	131.46	280	ePKPdf	PKiKP	08 57 08.4	0.0
DBIC				eSKPbc	SKPbc	09 00 18.4	-1.9
M55A	Ridgway	131.56	26	P	PKPdf	08 57 06.9	0.0
	baz=324						
V48A	Smith Brothers	131.58	37	ePKPdf	PKiKP	08 57 07.7	-0.4
V48A	Smith Brothers	131.58	37	P	PKPdf	08 57 07.3	+0.2
	baz=312						
PKME	Peaks-Kenny Pk	131.59	15	P	PKPdf	08 57 07.1	+0.3
	baz=338						
TIC	Toumodi	131.62	280	ePKP1	PKiKP	08 57 09.3	+0.5
TIC	Toumodi	131.62	280	ePKP1	SKPbc	09 00 21.1	+0.1
CLTN	Cedars of Leba	131.64	37	ePKPdf	PKPdf	08 57 07.5	+0.4
R51A	Hillsboro	131.65	33	P	PKPdf	08 57 07.4	+0.2
	baz=317						
S50A	Richmond	131.65	34	P	PKPdf	08 57 07.3	+0.1
	baz=316						
U49A	Red Boiling Sp	131.68	36	P	PKPdf	08 57 07.4	+0.1
	baz=314						
LIC	Lamto	131.68	279	ePKP1	PKiKP	08 57 08.6	-0.3
	comp=Z,116nm,0.9s						
LIC	Lamto	131.68	279	ePKP1	SKPbc	09 00 21.2	+0.1
	comp=Z,343nm,2.0s						
X47A	Russelville	131.73	39	P	PKPdf	08 57 07.1	-0.3
	baz=310						
LBNH	Lisbon	131.76	18	ePKPdf	PKiKP	08 57 09.1	+0.9
LBNH	Lisbon	131.76	18	ePKIKP	PKiKP	08 57 09.1	+0.9
LBNH	Lisbon	131.76	18	P	PKPdf	08 57 07.7	+0.5
	baz=334						
M56A	Emporium	131.80	26	P	PKPdf	08 57 07.6	+0.2
	baz=325						
O54A	Avella	131.85	28	P	PKPdf	08 57 07.4	-0.1
	baz=322						
Q52A	Bidwell	131.85	31	P	PKPdf	08 57 07.2	-0.3
	baz=319						
T50A	Nancy	131.87	35	P	PKPdf	08 57 07.6	-0.1
	baz=315						
P53A	Whipple	131.89	30	ePKPdf	PKPdf	08 57 07.4	-0.2
P53A	Whipple	131.89	30	P	PKPdf	08 57 07.6	0.0
	baz=320						
W48A	Pulaski	131.91	38	P	PKPdf	08 57 07.8	+0.1
	baz=311						
N55A	Marion Center	132.01	27	P	PKPdf	08 57 08.0	+0.2
	baz=324						
BINY	Binghamton	132.11	23	ePKPdf	PKPdf	08 57 08.5	+0.5
BINY	Binghamton	132.11	23	P	PKPdf	08 57 08.0	+0.1
	baz=328						
V49A	McMinnville	132.11	37	P	PKPdf	08 57 08.1	0.0
	baz=313						
R52A	Catlettsburg	132.12	32	P	PKPdf	08 57 08.3	+0.2
	baz=318						
HNH	Hanover	132.12	19	ePKPdf	PKiKP	08 57 08.8	-0.2
S51A	Beattyville	132.12	33	ePKPdf	PKPdf	08 57 08.0	-0.1
S51A	Beattyville	132.12	33	P	PKPdf	08 57 08.3	+0.3
	baz=317						
N56A	West Decatur	132.21	26	P	PKPdf	08 57 08.4	+0.2
	baz=325						
P54A	Burton	132.25	29	P	PKPdf	08 57 08.5	+0.2
	baz=321						
U50A	Jamestown	132.29	35	P	PKPdf	08 57 08.7	+0.3
	baz=314						
Q53A	Leroy	132.31	30	P	PKPdf	08 57 08.4	0.0
	baz=320						
O55A	Ligonier	132.33	27	P	PKPdf	08 57 08.9	+0.4
	baz=323						
W49A	Belvidere	132.33	38	P	PKPdf	08 57 08.8	+0.2
	baz=312						
S52A	Salyersville	132.37	33	P	PKPdf	08 57 08.7	+0.2
	baz=317						
T51A	Gray	132.41	34	P	PKPdf	08 57 08.6	-0.1
	baz=316

baz=318
M59A Waymart 132.88 23 P PKPdf 08 57 09.6 +0.2
baz=328
Q55A Buckhannon 132.92 29 P PKPdf 08 57 09.6 0.0
baz=322
TZTN Tazewell 132.94 34 P PKPdf 08 57 10.3 +0.6
baz=316
V51A Loudon 133.00 35 P PKPdf 08 57 09.8 0.0
baz=315
Y49A Blount Mountai 133.07 39 P PKPdf 08 57 10.2 +0.2
baz=311
O57A Amberson 133.08 26 P PKPdf 08 57 09.8 0.0
baz=325
R54A Victor 133.09 31 P PKPdf 08 57 10.3 +0.4
baz=320
P56A Dayton Farm, R 133.11 28 P PKPdf 08 57 10.0 +0.1
baz=323
X50B Fort Payne 133.15 38 P PKPdf 08 57 09.7 -0.5
baz=312
U52A Thorn Hill 133.15 34 P PKPdf 08 57 10.3 +0.2
baz=316
T53A Wise 133.18 33 P PKPdf 08 57 10.1 -0.1
baz=317
W51A Cleveland 133.21 36 P PKPdf 08 57 09.8 -0.4
baz=314
S54A Dingess, Beckl 133.22 31 P PKPdf 08 57 10.6 +0.4
baz=319
LRAL Lakeview Retre 133.23 40 *e*PKPdf **PKPdf 08 57 10.6 +0.3**
LRAL Lakeview Retre 133.23 40 P PKPdf 08 57 10.3 0.0
baz=310
N59A State Game Lan 133.28 24 *e*PKPdf **PKPdf 08 57 10.0 -0.2**
N59A State Game Lan 133.28 24 P PKPdf 08 57 10.4 +0.3
baz=328
Q56A Snyder Ridge, 133.31 28 P PKPdf 08 57 10.5 +0.2
baz=323
V52A Sevierville 133.41 35 *e*PKPdf **PKPdf 08 57 10.1 -0.5**
V52A Sevierville 133.41 35 P PKPdf 08 57 10.9 +0.3
baz=316
Z49A Columbiana 133.43 40 P PKPdf 08 57 10.9 +0.3
baz=310
HRV Adam Dziewonsk 133.43 19 P PKPdf 08 57 10.8 +0.4
baz=334
O58A Lewisberry 133.46 25 P PKPdf 08 57 10.8 +0.3
baz=326
P57A Homestead Farm 133.50 27 P PKPdf 08 57 11.2 +0.5
baz=324
X51A Calhoun 133.56 37 P PKPdf 08 57 11.3 +0.5
baz=313
N60A Cedar Hill Far 133.59 23 P PKPdf 08 57 10.9 +0.1
baz=329
ODNJ Ogdensburg 133.60 23 *e*PKPdf **PKiKP 08 57 11.4 -0.6**
U53A Fall Branch 133.61 34 P PKPdf 08 57 11.5 +0.5
baz=317
O59A Robesonia 133.62 25 P PKPdf 08 57 11.4 +0.5
baz=327
T54A Tazewell 133.63 32 P PKPdf 08 57 11.5 +0.5
baz=319
149A Jones 133.64 41 P PKPdf 08 57 11.1 +0.1
baz=310
S55A Lewisburg 133.65 31 P PKPdf 08 57 11.5 +0.4
baz=320
Q57A Strasburg 133.68 28 P PKPdf 08 57 11.1 +0.1
baz=324
M61A Granite Spring 133.72 22 P PKPdf 08 57 11.4 +0.5
baz=330
W52A Murphy 133.75 36 *e*PKPdf **PKPdf 08 57 10.9 -0.4**
W52A Murphy 133.75 36 P PKPdf 08 57 11.8 +0.5
baz=315
Z50A Ashland 133.77 39 *e*PKPdf **PKPdf 08 57 10.9 -0.4**
Z50A Ashland 133.77 39 P PKPdf 08 57 11.5 +0.1
baz=311
MVL Millersville 133.81 25 *e*PKPdf **PKPdf 08 57 11.5 +0.4**
PAL Palisades 133.93 22 P PKPdf 08 57 11.8 +0.5
baz=330
O60A Telford 133.93 24 P PKiKP 08 57 12.4 -0.3
baz=328
V53A Saluda 133.98 34 *e*PKPdf **PKPdf 08 57 12.0 +0.3**
V53A Saluda 133.98 34 P PKPdf 08 57 12.0 +0.3
baz=316
T55A Pulaski 134.01 31 P PKPdf 08 57 11.7 0.0
baz=320
SDMD Soldier's Deli 134.08 26 *e*PKPdf **PKiKP 08 57 12.5 -0.6**
Q58A Fox Den Farm, 134.09 27 P PKPdf 08 57 12.1 +0.3
baz=324
P59A Jarrettsville 134.09 25 P PKPdf 08 57 11.7 0.0
baz=326
X52A Dahlonega 134.11 36 P PKPdf 08 57 12.6 +0.6
baz=314
BLA Blacksburg 134.12 31 *e*PKPdf **PKiKP 08 57 12.7 -0.6**
BLA Blacksburg 134.12 31 *e*PKIKP **PKiKP 08 57 12.7 -0.6**
BLA Blacksburg 134.12 31 P PKiKP 08 57 13.0 -0.3
baz=320
W53A Cullowhee 134.13 35 P PKiKP 08 57 12.9 -0.5
baz=316
349A Repton 134.16 42 P PKPdf 08 57 12.7 +0.7
baz=308
S56A Natural Bridge 134.20 30 P PKiKP 08 57 13.1 -0.2
baz=321
Z51A Franklin 134.20 39 P PKPdf 08 57 12.8 +0.6
baz=312
R57A Stanardsville 134.22 28 P PKPdf 08 57 12.1 +0.1
baz=323
PSUB Penn St. - Bra 134.24 24 *e*PKPdf **PKPdf 08 57 12.1 +0.1**
P60A Greenville 134.26 25 P PKPdf 08 57 12.4 +0.4
baz=327
U55A TA2, Sparta 134.33 32 P PKPdf 08 57 12.2 -0.1
baz=319
BRAL Brewton 134.36 42 P PKiKP 08 57 13.2 -0.7
baz=308
V54A Nebo 134.38 34 P PKPdf 08 57 12.6 +0.1
baz=317
BG3 Lake Jocassee 134.39 35 *e*PKPdf **PKPdf 08 57 12.8 +0.3**
S57A Dark Hollow, R 134.43 29 P PKPdf 08 57 12.6 +0.2
baz=322
R58A Rapidan 134.46 28 P PKPdf 08 57 12.8 +0.4
baz=324
T56A Rocky Mt 134.46 31 P PKPdf 08 57 12.5 -0.1
baz=320
Y52A Lilburn 134.52 37 *e*PKPdf **PKPdf 08 57 12.6 -0.1**
Y52A Lilburn 134.52 37 P PKPdf 08 57 13.1 +0.4
baz=314
Q59A Harwood 134.62 26 P PKiKP 08 57 13.9 -0.2
baz=326
151A Opelika 134.63 40 P PKiKP 08 57 13.8 -0.6
baz=311
350A Dozier 134.68 42 P PKPdf 08 57 13.2 +0.1
baz=309
V55A Taylorsville 134.73 33 P PKPdf 08 57 13.2 +0.2
baz=318
W54A Cherokee Point 134.75 34 P PKPdf 08 57 13.4 +0.3
baz=317
Z52A Williamson 134.76 38 P PKiKP 08 57 13.9 -0.7
baz=313
R58B Mineral 134.79 28 *e*PKPdf **PKPdf 08 57 12.7 -0.4**
R58B Mineral 134.79 28 P PKPdf 08 57 13.1 +0.1
baz=324
U56A King 134.80 32 P PKPdf 08 57 13.6 +0.4
baz=320
Y53A Monroe 134.81 37 P PKPdf 08 57 13.8 +0.5
baz=314
CMIG Matias Romero 134.82 64 SKP **SKPab 09 00 34.1 -1.3**
comp=Z,7.5nm,0.9s,baz=255,slow=2.5,SNR=8.4
CBN Corbin Frederi 134.83 27 P PKiKP 08 57 14.0 -0.6
baz=324
Q60A Greensboro 134.85 25 P PKPdf 08 57 13.8 +0.6
baz=327
251A Midway 134.86 40 P PKPdf 08 57 13.9 +0.5
baz=311
T57A Hurt 134.88 30 P PKPdf 08 57 13.7 +0.5
baz=321
152A Waverly Hall 134.92 39 *e*PKPdf **PKPdf 08 57 12.7 -0.8**
152A Waverly Hall 134.92 39 P PKiKP 08 57 14.3 -0.6
baz=312
R59A King George, V 134.95 27 P PKPdf 08 57 13.4 +0.1
baz=325
S58A Poland Farm, P 134.99 29 *e*PKPdf **PKPdf 08 57 13.3 -0.1**
S58A Poland Farm, P 134.99 29 P PKiKP 08 57 14.3 -0.7
baz=323
X54A Belton 135.03 35 P PKPdf 08 57 14.1 +0.5
baz=316
R60A Leonardtown, M 135.14 27 P PKPdf 08 57 13.9 +0.2
baz=325
V56A Mocksville 135.15 32 P PKPdf 08 57 14.2 +0.4
baz=319
PAULI Pauline 135.15 34 *e*PKPdf **PKPdf 08 57 14.5 +0.6**
GOGA Godfrey 135.19 37 P PKiKP 08 57 14.8 -0.7
baz=314
KMSC Kings Mountain 135.19 34 *e*PKPdf **PKiKP 08 57 15.2 -0.2**
KMSC Kings Mountain 135.19 34 P PKPdf 08 57 14.4 +0.5
baz=318
Z53A Monticello 135.21 37 P PKiKP 08 57 14.8 -0.7
baz=314
S59A Mechanicsville 135.22 28 P PKiKP 08 57 15.3 -0.1
baz=324
U57A Blanch 135.28 31 P PKiKP 08 57 15.3 -0.3
baz=321
T58A Grand View Acr 135.28 30 P PKiKP 08 57 15.5 -0.1
baz=322
Y54A Tignall 135.34 36 P PKiKP 08 57 15.1 -0.7
baz=315
252A Lumpkin 135.35 40 P PKiKP 08 57 15.5 -0.4
baz=312
V57A Coltrane Farms 135.47 32 P PKPdf 08 57 15.1 +0.7
baz=320
X55A Gracelyn & Ava 135.51 35 P PKPdf 08 57 15.0 +0.5
baz=317
S60A Water View 135.56 27 P PKiKP 08 57 15.7 -0.4
baz=325
352A Blakely 135.57 40 P PKPdf 08 57 15.3 +0.6
baz=311
W56A Indian Trail 135.61 33 P PKPdf 08 57 14.7 +0.1
baz=318
Z54A Sparta 135.68 37 P PKPdf 08 57 15.6 +0.7
baz=314
253A Americus 135.69 39 P PKPdf 08 57 15.6 +0.6
baz=312
U58A Oxford 135.71 30 P PKPdf 08 57 15.1 +0.2
baz=322
T59A Double "B" Far 135.74 29 *e*PKPdf **PKiKP 08 57 16.5 0.0**
T59A Double "B" Far 135.74 29 P PKiKP 08 57 16.4 0.0
baz=323
Y55A Saluda 135.77 35 P PKiKP 08 57 16.5 -0.1
baz=316
X56A White Oak 135.83 34 P PKiKP 08 57 16.1 -0.6
baz=318
W57A Gilead 135.91 32 P PKiKP 08 57 16.2 -0.6
baz=319
T60A Surry 135.99 28 P PKPdf 08 57 15.3 0.0
baz=324
U59A Littleton 136.11 29 P PKPdf 08 57 15.8 +0.2
baz=323
Z55A Blythe 136.12 36 P PKiKP 08 57 16.6 -0.8
baz=315
U60A Pendleton 136.33 29 P PKPdf 08 57 16.7 +0.8
baz=324
155A Kite 136.34 37 P PKiKP 08 57 17.0 -0.8
baz=314
V59A Middlesex 136.35 30 P PKPdf 08 57 16.7 +0.7
baz=322
453A Whigham 136.37 41 P PKiKP 08 57 17.2 -0.7
baz=311
W58A Raeford 136.42 32 P PKiKP 08 57 17.6 -0.3
baz=320
Z57A Bowman 136.89 35 P PKiKP 08 57 18.4 -0.5
baz=317
156A Sylvania 136.90 36 P PKPdf 08 57 17.4 +0.3
baz=316
Y58A Scranton 137.03 33 P PKPdf 08 57 17.7 +0.4
baz=319
256A Glennville 137.14 37 P PKPdf 08 57 18.0 +0.4
baz=315
W60A Pink Hill 137.18 30 P PKPdf 08 57 17.1 -0.4
baz=322
Y59A Loris 137.39 33 P PKPdf 08 57 18.4 +0.4
baz=320
X60A Albert Glenn T 137.41 31 P PKiKP 08 57 19.4 -0.6
baz=321
PLCA Paso Flores 137.42 160 PKhKP PKPpre 08 57 07.9
comp=Z,5.1nm,1.1s,baz=259,slow=6.0,SNR=5.0
PLCA PKP **PKiKP 08 57 19.2 -0.7**
comp=Z,7.0nm,0.8s,baz=262,slow=1.0,SNR=11
PLCA SKPbc **SKPbc 09 00 40.2 +1.2**
comp=Z,11nm,0.9s,baz=253,slow=3.9,SNR=9.3
PLCA Paso Flores 137.42 160 *e*PKPdf **PKiKP 08 57 19.8 -0.1**
V62A Hyde County Ai 137.63 28 P PKiKP 08 57 19.8 -0.6
baz=325
555A McAlpin 137.73 40 P PKPdf 08 57 19.5 +0.8
baz=312
857A Zephyrhills 139.44 42 P PKPdf 08 57 22.1 +0.2
baz=311
APG El Apazote 139.52 65 SKPbc **SKPbc 09 00 46.5 +0.7**
comp=Z,9.2nm,0.8s,baz=268,slow=3.8,SNR=5.4
959A Okeechobee 140.82 41 P PKPdf 08 57 25.1 +0.6
baz=312
BBSR BB Station 144.88 18 *e*PKPbc **PKPab 08 57 29.4 -1.4**
ACON Acoyapa 145.39 67 *e*PKPdf **PKPab 08 57 33.7 +0.4**
JTS Las Juntas de 146.13 70 PKPbc **PKPdf 08 57 34.6 +0.5**
comp=Z,11nm,0.6s,baz=349,slow=3.4,SNR=5.6
JTS Las Juntas de 146.13 70 *e*PKPbc **PKPab 08 57 35.9 -0.3**
JTS Las Juntas de 146.13 70 *i* PKP2 **PKPbc 08 57 35.3 0.0**
CFA Coronel Fontan 146.37 156 PKPbc **PKPbc 08 57 35.3 -0.2**
comp=Z,28nm,0.5s,baz=235,slow=3.7,SNR=43
CFA SKPbc **SKiKP 09 01 03.1 +0.9**
comp=Z,6.8nm,0.6s,baz=212,slow=3.3,SNR=5.2
GO03 Copiap 148.84 149 *e*PKPbc **PKPbc 08 57 42.9 +0.5**
GO02 Mina Guanaco 151.14 147 *e*PKPbc **PKPbc 08 57 47.6 -0.7**
GO02 *e*PKPab **PKPab 08 57 58.3 +1.9**
BCIP Isla Barro Col 151.27 69 *e*P **PKPdf 08 57 38.6 -3.8**
LVC Limon Verde 153.54 145 PKPbc **PKiKP 08 57 54.5 +0.6**
comp=Z,15nm,0.7s,baz=280,slow=2.3,SNR=9.9
LVC PP **PP 09 01 40.1 0.0**
comp=Z,5.2nm,0.7s,baz=270,slow=10,SNR=3.9
LVC Limon Verde 153.54 145 *e*PKPbc **PKiKP 08 57 54.6 +0.6**
LVC *e*PKPab **PKPab 08 58 08.4 +1.8**
ATAH Atahualpa 153.86 104 PKPbc **PKiKP 08 57 56.3 +1.4**
comp=Z,15nm,0.8s,baz=192,slow=1.3,SNR=9.2
NNA Nana 153.88 115 PKPbc **PKiKP 08 57 54.6 +0.2**
comp=Z,4.9nm,0.4s,baz=258,slow=6.7,SNR=4.6
CPUP Villa Florida 154.55 171 PKPbc **PKiKP 08 57 56.2 +0.8**
comp=Z,6.7nm,0.7s,baz=96,slow=1.4,SNR=9.7
CPUP PKPab **PKPab 08 58 11.2 +1.0**
comp=Z,16nm,0.8s,baz=208,slow=3.2,SNR=10
GCUF Volcan Galeras 155.42 85 *e*P PKPdf 08 57 57.6 +8.5
BBAC Balboa, Cauca 155.44 83 *e*P PKPdf 08 57 57.2 +8.4
MNMC Minye Minye 155.72 139 *e*PKPdf **PKPdf 08 57 51.0 +2.0**
MNMC *e*PKPab **PKPab 08 58 10.7 -5.2**
POPC Popayan, Colom 155.93 81 *e*P **PKPdf 08 57 47.5 -1.9**
SOTA Rioblanco 156.05 82 *e*P PKPdf 08 57 58.9 +9.0
MARP Paez Belalcaza 156.60 80 *e*P **PKPdf 08 57 52.3 +1.9**
GUY2C Guyana, Caldas 156.67 74 *e*P **PKPdf 08 57 50.2 -0.5**
FLOC Florencia 157.07 83 *e*P **PKPab 08 58 23.2 +1.4**
ORTC Ortega, Tolima 157.09 77 *e*P **PKPdf 08 57 50.6 -0.1**
PTBC PUERTO BERRIO 157.16 70 *e*P **PKPdf 08 57 48.9 -1.8**
PRAC Prado 157.49 78 *e*P **PKPdf 08 57 50.8 -0.3**
OCAC Ocana 157.60 65 *e*P **PKPdf 08 57 50.6 -0.8**
ROSC El Rosal 157.78 74 PKP **PKPdf 08 57 52.5 +0.5**
comp=Z,4.2nm,0.5s,baz=282,slow=17,SNR=3.3
ROSC PKPab **PKPab 08 58 24.5 -0.7**
comp=Z,6.9nm,0.5s,baz=212,slow=13,SNR=3.5
ROSC El Rosal 157.78 74 *e*PKPdf **PKPdf 08 57 51.6 -0.3**
ROSC *e*PKPab **PKPab 08 58 24.4 -0.8**
BARC Barichara 158.34 69 *e*P **PKPdf 08 57 52.8 +0.4**
CHIC Chingaza 158.40 75 *e*P **PKPdf 08 57 52.1 -0.6**
PAMC Pamplona, Colo 158.52 67 *e*P **PKPdf 08 57 53.7 +0.8**
RUSC La Rusia 158.66 71 *e*P **PKPdf 08 57 53.1 0.0**
LPAZ La Paz 158.70 136 PKP **PKPdf 08 57 53.1 -0.1**
comp=Z,3.8nm,0.8s,baz=256,slow=1.0,SNR=17
LPAZ PKPab **PKPab 08 58 27.2 -1.9**
comp=Z,6.4nm,0.9s,baz=168,slow=2.4,SNR=6.5
LPAZ La Paz 158.70 136 *e*PKPdf **PKPdf 08 57 53.4 +0.2**
LPAZ *e*PKPab **pPKPdf 08 58 30.7 +1.2**
LPAZ La Paz 158.70 136 *e*PKIKP **PKPdf 08 57 53.4 +0.2**
LPAZ *e* 08 58 30.7
MACC Macarena, Meta 158.78 81 *e*P **PKPdf 08 57 51.6 -1.1**
SDV Santo Domingo 159.71 60 PKP **PKPdf 08 57 53.8 -0.2**
comp=Z,17nm,0.6s,baz=12,slow=1.5,SNR=5.9
SIV San Ignacio 163.14 152 PKP **PKPdf 08 57 57.7 +0.4**
comp=Z,4.8nm,0.9s,baz=216,slow=2.0,SNR=26
SIV PKPab **PKPab 08 58 48.1 +0.3**
comp=Z,7.6nm,0.8s,baz=229,slow=3.2,SNR=11
BDFB Brasilia 164.78 198 PKP **PKPdf 08 57 59.4 +0.5**
comp=Z,3.5nm,0.7s,baz=38,slow=24,SNR=5.0
BDFB PKPab **PKPab 08 58 55.5 +0.5**
comp=Z,11nm,0.8s,baz=170,slow=0.9,SNR=10
BDFB Brasilia 164.78 198 *e*PKPdf **PKPdf 08 57 58.5 -0.4**
BDFB *e*PKPdf **PKPdf 08 57 59.4 +0.5**
BDFB *e*PKPab **PKPab 08 58 55.5 +0.5**
BDFB *e*PKPab **PKPab 08 58 55.6 +0.6**
BDFB Brasilia 164.78 198 *e*PKIKP **PKPdf 08 57 58.5 -0.4**
BDFB *e* 08 58 55.5
BDFB *e* 08 58 55.7

*IDC **27** 08:39:50.7±5.4, 35°.97N×69°.49E, h0km, mb3.7/2, mb1 3.7/7, mb1mx3.5/59, mbtmp3.7/7, ML3.5/5, MS3.6/1, Ms1 3.6/1, ms1mx2.7/51, Error ellipse: s-maj=69.8km s-min=37.2km az=21.0*
*NNC **27** 08:40:12.8±8.6, 37°.36N×70°.47E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=66.3km s-min=49.9km az=178.0*
ISC 27 08:40:07.2±1.9, 38°.1N±0°.1×70°.2E±0°.1, h12km, n15,
σ2$13/18, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.04**	**3**	⇑P	**Pb**	**08 41 36.0**	**+0.8**
	1.9nm,0.6s,baz=174,slow=10,SNR=12						
KK31				⇑S	**Sg**	**08 42 46.7**	**-2.2**
	5.2nm,0.6s,baz=178,slow=36						
UCH	**Uchtor**	**5.31**	**37**	P	**Pb**	**08 41 41.8**	**+1.6**
	SNR=12						
KZA	**Kyzart**	**5.57**	**42**	P	**Pb**	**08 41 45.1**	**+0.5**
	SNR=6.7						
AAK	**Ala-Archa**	**5.62**	**34**	Pn	**Pb**	**08 41 46.1**	**+0.8**
	2.7nm,0.3s,baz=195,slow=9.0,SNR=18						
AAK				Sn	**Sg**	**08 43 05.3**	**-2.3**
	0.8nm,0.3s,baz=45,slow=20,SNR=3.1						
AAK	**Ala-Archa**	**5.62**	**34**	P	**Pb**	**08 41 46.4**	**+1.1**
	SNR=8.5						
AAK	**Ala-Archa**	**5.62**	**34**	⇑P	**Pb**	**08 41 46.2**	**+0.9**
	13nm,0.7s						
AAK				⇓S	**Sb**	**08 42 57.6**	**+4.9**
	10nm,0.8s						
CHMS	**Chumysh**	**6.02**	**34**	P	**Pb**	**08 41 51.6**	**-0.5**
	SNR=9.8						
TKM2	**Tokmak 2**	**6.36**	**39**	P	**Pb**	**08 41 55.5**	**-2.3**
	SNR=11						
TKM2	**Tokmak 2**	**6.36**	**39**	⇓P	**Pb**	**08 41 55.0**	**-2.8**
	6.2nm,0.6s						
TKM2				⇑S	**Sb**	**08 43 12.8**	**-1.1**
	2.9nm,0.8s						
MKAR	**Makanchi Array**	**12.47**	**42**	Pn	**P**	**08 43 16.6**	**+0.3**
	0.1nm,0.3s,baz=225,slow=15,SNR=4.4						
KURBB	**Kurchatov Arra**	**13.88**	**23**	Pn	**P**	**08 43 33.8**	**+1.8**
	0.1nm,0.3s,baz=214,slow=9.7,SNR=5.7						
BVAR	**Borovoye Array**	**14.96**	**0**	Pn	**P**	**08 43 45.9**	**+2.0**
	0.2nm,0.3s,baz=178,slow=9.8,SNR=2.7						
AKTO	**Aktyubinsk**	**15.11**	**329**	Pn	**P**	**08 43 43.5**	**-2.1**
	0.1nm,0.3s,baz=146,slow=14,SNR=3.4						
AKTO				LR	LR	08 50 50.7	
	comp=Z,231nm,21.6s,baz=356,slow=40						
ZALV	**Zalesovo Beam**	**18.79**	**28**	P	Pn	08 44 34.8	+8.1
	1.8nm,0.4s,baz=205,slow=11,SNR=4.3						
SONM	**Songino Array**	**28.01**	**58**	P	**P**	**08 45 57.7**	**-0.3**
	0.5nm,0.5s,baz=260,slow=8.6,SNR=2.5						

*IDC **27** 08:42:08.8±2.2, 36°.57N×69°.56E, h0km, mb3.9/6, mb1 4.0/12, mb1mx3.8/57, mbtmp3.9/12, ML3.6/6, MS4.0/4, Ms1 4.0/4, ms1mx3.2/52, Error ellipse: s-maj=41.3km s-min=18.3km az=146.0*
*NNC **27** 08:42:13.9±5.0, 37°.21N×68°.86E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=40.3km s-min=25.3km az=178.0*
*ISCJB **27** 08:42:14.5±0.4, 37°.00N±0°.03×69°.23E±0°.05, h37km, mb4.3/8, MS4.1/4, Error ellipse: s-maj=6.0km s-min=4.2km az=28.0*
*NEIC **27** 08:42:17.1±2.7, 36°.96N×69°.48E, h51km±10km, mb4.4/8, Error ellipse: s-maj=10.4km s-min=3.4km az=109.0*
ISC 27 08:42:15.8±0.7, 36°.93N±0°.05×69°.24E±0°.06, h37km, n54,
σ2$09/61, mb3.9/8, MS4.3/4, 5C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGR	**Chuyangaron**	**1.73**	**358**	*e*Sn	**Sn**	**08 43 03.1**	**-1.1**
CHGR				*e*		08 43 36.4	
GAR	**Garm**	**2.24**	**22**	*e*Pn	**Pn**	**08 42 52.1**	**+1.6**
GAR				*e*Sn	**Sn**	**08 43 15.7**	**-1.2**
KBL	**Kabul**	**2.39**	**184**	*e*Pn	**Pn**	**08 42 54.0**	**+1.4**
KBL				*e*Sn	**Sn**	**08 43 23.4**	**+2.7**
BTK	**Batken**	**3.36**	**21**	*e*Pn	**Pn**	**08 43 05.4**	**-0.4**
BTK				*e*Sn	**Sn**	**08 43 41.3**	**-3.3**
NIL	**Nilore**	**4.63**	**134**	*e*Pn	**Pn**	**08 43 22.8**	**-0.5**
NIL				*e*Sn	**Sn**	**08 44 13.2**	**-2.7**
AML	**Almayashu**	**6.23**	**32**	P	**Pn**	**08 43 47.1**	**+1.5**
	SNR=9.0						
KK31	**Karatay Array**	**6.25**	**9**	*e*Pn	**Pn**	**08 43 48.2**	**+2.8**
KK31	**Karatay Array**	**6.25**	**9**	⇑P	**Pn**	**08 43 42.8**	**-2.6**
	14nm,0.9s,baz=200,slow=17						
KK31				⇓S	**Sn**	**08 44 55.3**	**-0.2**
	3.6nm,0.5s,baz=193,slow=21						
UCH	**Uchtor**	**6.68**	**36**	P	**Pn**	**08 43 53.2**	**+1.4**
	SNR=11						
KZA	**Kyzart**	**6.93**	**40**	P	**Pn**	**08 43 57.2**	**+2.0**
	SNR=9.3						
AAK	**Ala-Archa**	**6.99**	**34**	Pn	**Pn**	**08 43 57.1**	**+1.2**
	6.3nm,0.3s,baz=181,slow=7.5,SNR=13						
AAK				Sn	**Sn**	**08 45 17.6**	**+3.5**
	0.4nm,0.3s,baz=126,slow=19,SNR=2.0						
AAK				Lg	Lg	08 45 54.1	
	0.4nm,0.3s,baz=151,slow=19,SNR=2.1						
AAK	**Ala-Archa**	**6.99**	**34**	P	**Pn**	**08 43 57.5**	**+1.7**
	SNR=6.3						
AAK	**Ala-Archa**	**6.99**	**34**	*e*Pn	**Pn**	**08 43 55.6**	**-0.2**
AAK	**Ala-Archa**	**6.99**	**34**	⇑P	**Pn**	**08 43 57.0**	**+1.2**
	11nm,0.5s						
AAK				⇑S	**Sn**	**08 45 16.6**	**+2.6**
	10.0nm,0.7s						
CHMS	**Chumysh**	**7.39**	**33**	P	**Pn**	**08 44 02.7**	**+1.5**
	SNR=15						
USP	**Ospenovka**	**7.50**	**31**	P	**Pn**	**08 44 04.5**	**+1.8**
	SNR=7.3						
ULHL	**Ulahol**	**7.58**	**43**	P	**Pn**	**08 44 04.5**	**+0.6**
	SNR=7.5						
BOOM	**Boomskoye usch**	**7.58**	**41**	*e*Pn	**Pn**	**08 44 05.0**	**+1.1**
TKM2	**Tokmak 2**	**7.72**	**37**	P	**Pn**	**08 44 07.0**	**+1.1**
	SNR=8.5						
TKM2	**Tokmak 2**	**7.72**	**37**	⇑P	**Pn**	**08 44 06.2**	**+0.3**
	11nm,0.6s						
TKM2				⇓S	**Sn**	**08 45 38.1**	**+5.9**
	5.4nm,0.8s						
KDJ	**Kajisay**	**8.04**	**47**	*e*Pn	**Pn**	**08 44 09.6**	**-0.5**
GEYT	**Alibeck**	**8.90**	**280**	Pn	**Pn**	**08 44 21.7**	**-0.2**
	0.8nm,0.3s,baz=98,slow=10,SNR=3.4						
GEYT				Sn	**Sn**	**08 46 02.3**	**+1.4**
	1.6nm,0.3s,baz=106,slow=20,SNR=4.6						
GYA0B	**ALIBECK ARRAY**	**8.90**	**280**	*e*Pn	Pn	08 44 27.5	+5.6
MK31	**Makanchi Array**	**13.83**	**40**	*e*Pn	**Pn**	**08 45 28.4**	**-0.8**
MK32	**Makanchi Array**	**13.83**	**40**	*e*Pn	**Pn**	**08 45 27.9**	**-1.4**
MKAR	**Makanchi Array**	**13.83**	**40**	Pn	**Pn**	**08 45 27.9**	**-1.4**
	0.1nm,0.3s,baz=231,slow=17,SNR=4.5						
AB31	**Akbulak array**	**14.05**	**334**	⇓P	**Pn**	**08 45 30.7**	**-1.5**
	1.1nm,0.3s,baz=158,slow=12,SNR=56						
AB31				⇓S	**Sn**	**08 48 02.8**	**-3.9**
	1.4nm,0.6s,baz=174,slow=23,SNR=5.2						
ABKAR	**Akbulak array**	**14.05**	**334**	*e*Pn	**Pn**	**08 45 31.4**	**-0.7**
KURBB	**Kurchatov Arra**	**15.23**	**23**	Pn	**Pn**	**08 45 43.8**	**-4.2**
	0.0nm,0.3s,baz=213,slow=11,SNR=3.2						
KURK	**Kurchatov**	**15.34**	**23**	*e*Pn	**Pn**	**08 45 47.3**	**-2.1**
	1.9nm,0.9s						
AKTO	**Aktyubinsk**	**15.73**	**333**	Pn	**Pn**	**08 45 54.3**	**-0.2**
	0.6nm,0.3s,baz=139,slow=14,SNR=6.9						
AKTO				Sn	**Sn**	**08 48 41.6**	**-5.9**
	0.1nm,0.3s,baz=125,slow=18,SNR=2.6						
AKTO	**Aktyubinsk**	**15.73**	**333**	⇑P	**Pn**	**08 45 54.9**	**+0.4**
	4.9nm,1.0s						
AKTO				⇓S	**Sn**	**08 48 44.2**	**-3.2**
	4.1nm,0.8s						
BVAR	**Borovoye Array**	**16.12**	**3**	Pn	**Pn**	**08 45 57.9**	**-1.5**
	0.4nm,0.3s,baz=173,slow=14,SNR=4.6						
BRVK	**Borovoye**	**16.15**	**2**	*e*Pn	**Pn**	**08 46 01.0**	**+1.2**
	2.6nm,0.6s						
ZAA0	**Zalesovo Array**	**20.15**	**27**	*e*P	**P**	**08 46 46.3**	**-0.3**
	3.0nm,0.5s						
ZALV	**Zalesovo Beam**	**20.15**	**27**	P	**P**	**08 46 46.0**	**-0.7**
	2.8nm,0.4s,baz=220,slow=11,SNR=7.4						
ZAA1	**Zalesovo Array**	**20.15**	**27**	*e*P	**P**	**08 46 46.0**	**-0.7**
ARU	**Arti**	**20.79**	**343**	P	Pn	08 46 55.2	-0.9
	4.6nm,0.2s,baz=171,slow=11,SNR=3.7						
ARU	**Arti**	**20.79**	**343**	*e*P	**P**	**08 46 53.7**	**+0.1**
	15nm,0.2s						
RAYN	**Ar Rayn**	**24.39**	**243**	*e*P	**P**	**08 47 32.0**	**+1.2**
	3.6nm,0.9s						
FIA0	**FINESS Array S**	**36.34**	**326**	*e*P	**P**	**08 49 18.5**	**+2.7**
FINES	**FINESS Array B**	**36.34**	**326**	P	**P**	**08 49 18.5**	**+2.7**
	0.8nm,0.7s,baz=119,slow=11,SNR=2.9						
ARA0	**ARCESS Array S**	**40.21**	**338**	*e*P	**P**	**08 49 50.3**	**+2.0**
ARCES	**ARCESS Array B**	**40.21**	**338**	P	**P**	**08 49 50.3**	**+2.0**
	1.2nm,0.6s,baz=110,slow=7.0,SNR=7.6						
DLV	**T Lat**	**43.09**	**115**	*e*P	**P**	**08 50 11.8**	**-0.9**

45nm,1.1s
NB200 **NORSAR Array S** 43.19 323 *e*P P 08 50 14.6 +1.8
NOA **NORSAR Array B** 43.19 323 P P 08 50 14.6 +1.8
0.7nm,0.6s,baz=97,slow=7.9,SNR=4.0
ASAJ **Asahikawa** 54.53 58 LR LR 09 15 09.1
comp=Z,319nm,20.2s,baz=182,slow=36
MA2 **Magadan** 54.90 38 LR LR 09 14 53.1
comp=Z,344nm,20.0s,baz=204,slow=36
TOA1 **Torodi Ar. Sit** 64.32 267 *e*P P 08 52 47.9 0.0
TORD **Torodi Ar. Bea** 64.32 267 P P 08 52 47.9 0.0
8.1nm,0.3s,baz=48,slow=6.0,SNR=3.4
ILULI **Ilulissat** 65.52 340 *e*P P 08 52 54.1 -0.8
26nm,1.3s
ILAR **Eielson Array** 74.75 15 LR LR 09 30 07.9
comp=Z,117nm,19.2s,baz=256,slow=38
YKA **Yellowknife Ar** 80.87 2 P P 08 54 26.6 +1.0
0.4nm,0.5s,baz=354,slow=5.7,SNR=4.2
YKA LR LR 09 37 25.2
comp=Z,12nm,18.1s,baz=285,slow=41

*NEIC **27** 08:42:47.7±0.0, 17°.86N×95°.23W, h126km, mb3.8/3, MD4.2(MEX), After MEX.*
MEX 27 08:42:47.7±0.8, 17°.86N×95°.23W, h126km±5km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.84**	**156**	*e*Pn	Pn	08 43 07.5	-1.3
CMIG				*e*Sn	Sn	08 43 22.6	-2.2
CMIG	**Matias Romero**	**0.84**	**156**	*e*P	Pn	08 43 07.5	-1.3
CMIG				*i* S	Sn	08 43 22.6	-2.2
OXBJ	**Oaxaca**	**1.63**	**241**	*i* P	Pn	08 43 16.3	-0.9
OXBJ				*i* S	Sn	08 43 37.5	-2.2
VHO	**Vista Hermosa**	**1.63**	**241**	*e*Pn	Pn	08 43 16.3	-1.0
VHO				*e*Sn	Sn	08 43 37.9	-1.8
VHO	**Vista Hermosa**	**1.63**	**241**	*e*P	Pn	08 43 16.3	-1.0
VHO				*e*S	Sn	08 43 37.9	-1.8
LVIG	**Laguna Verde**	**2.16**	**329**	*e*Pn	Pn	08 43 20.9	-2.6
LVIG				*e*Pn	Pn	08 43 21.0	-2.5
LVIG				*e*Sn	Sn	08 43 47.0	-4.0
LVIG				*e*Sn	Sn	08 43 47.0	-3.9
LVIG	**Laguna Verde**	**2.16**	**329**	*e*P	Pn	08 43 21.0	-2.5
LVIG				*i* S	Sn	08 43 47.0	-4.0
HUIG	**Huatulco**	**2.25**	**202**	*e*Pn	Pn	08 43 22.2	-2.4
HUIG				*e*Sn	Sn	08 43 49.7	-3.1
HUIG	**Huatulco**	**2.25**	**202**	*e*P	Pn	08 43 22.2	-2.4
HUIG				*e*S	Sn	08 43 49.7	-3.1
TGIG		**2.29**	**118**	*e*Pn	Pn	08 43 23.8	-1.3
TGIG				*e*Sn	Sn	08 43 50.1	-3.6
TGIG		**2.29**	**118**	*e*P	Pn	08 43 23.8	-1.3
TGIG				*e*S	Sn	08 43 50.1	-3.6
PCIG		**2.89**	**138**	*e*Pn	Pn	08 43 31.4	-1.3
PCIG				*e*Sn	Sn	08 44 05.2	-2.2
PCIG		**2.89**	**138**	*e*P	Pn	08 43 31.4	-1.3
PCIG				*i* S	Sn	08 44 05.2	-2.2
TLIG	**Tlapa**	**3.19**	**265**	*e*Pn	Pn	08 43 35.0	-1.8
TLIG				*e*Sn	Sn	08 44 12.2	-2.5
TLIG	**Tlapa**	**3.19**	**265**	*e*P	Pn	08 43 35.1	-1.7
TLIG				*e*S	Sn	08 44 12.6	-2.1
CCIG	**Comitan**	**3.35**	**118**	*e*Pn	Pn	08 43 37.8	-1.1
CCIG				*e*Pn	Pn	08 43 38.6	-0.4
CCIG				*e*Sn	Sn	08 44 12.8	-5.8
CCIG				*e*Sn	Sn	08 44 17.5	-1.1
CCIG	**Comitan**	**3.35**	**118**	*e*P	Pn	08 43 37.8	-1.1
CCIG				*e*S	Sn	08 44 12.8	-5.8
TEIG	**Tepich**	**6.99**	**69**	*e*Pn	Pn	08 44 24.5	-3.0
TEIG				*e*Sn	Sn	08 45 43.7	-1.8
JTS	**Las Juntas de**	**12.49**	**126**	*e*Pn	Pn	08 45 39.5	-1.7
W39A	**Magazine**	**17.31**	**4**	*e*P	P	08 46 41.0	-0.1
3.8nm,0.7s							
T47A	**Sharon Grove**	**20.35**	**19**	*e*P	P	08 47 14.4	+0.2
7.4nm,0.7s							

*TIR **27** 08:44:06.4, 41°.19N×20°.21E, h2km, Md2.8/6*
*SKO **27** 08:44:07.1, 41°.13N×20°.14E, h5km*
*BEO **27** 08:44:08.1±0.2, 41°.27N×20°.15E, h2km, ML2.8/14, Error ellipse: s-maj=0.7km s-min=0.4km az=90.0*
ISC 27 08:44:07.0±1.1, 41°.15N±0°.03×20°.13E±0°.02, h9km±9km, n55, σ1°.24/80, 4C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.28**	**314**	*e*Pg	Pg	08 44 12.5	0.0
TIR				*e*Sg	Sb	08 44 18.6	-0.4
TIR	**Tirane**	**0.28**	**314**	⇑*i*Pg	Pg	08 44 12.6	0.0
TIR	**Tirane**	**0.28**	**314**	*i* PG	Pb	08 44 13.3	-0.9
TIR				*i* SG		04 34 18.5	
OHR	**Ohrid**	**0.51**	**95**	*i* Pg	Pg	08 44 15.9	-1.0
OHR				*i* Sg	Sg	08 44 23.8	+0.2
PHP	**Peshkopia**	**0.58**	**24**	*i* PG	Pg	08 44 17.8	-0.5
PHP				*i* SG		04 34 25.6	
TPE	**Tepelena**	**0.86**	**186**	*i* PG	Pn	08 44 24.6	-0.7
TPE				*i* SG		04 34 38.9	
PUK	**Puka**	**0.91**	**349**	*i* PG	Pg	08 44 24.2	-0.2
PUK				*i* SG		04 34 37.4	
ULC	**Ulcinj**	**1.05**	**321**	⇓*i*Pg	Pg	08 44 25.7	-1.4
ULC				*i* Sg	Sn	08 44 41.6	-1.0
BCI	**Bajram Curri**	**1.21**	**358**	*i* PN	Pn	08 44 29.8	-0.4
BCI				*i* SN		04 34 47.8	
DRME	**Dracevica, Mon**	**1.25**	**326**	⇓*i*Pg	Pn	08 44 29.6	-1.1
DRME				*e*Sg	Sn	08 44 48.1	+0.5
DRME	**Dracevica, Mon**	**1.25**	**326**	*e*Pn	Pn	08 44 28.3	-2.4
SRN	**Sarande**	**1.28**	**184**	*i* PN	Pg	08 44 33.4	+2.0
SRN				*i* SN		04 34 52.2	
SKO	**Skopje**	**1.28**	**50**	*e*Pg	Pg	08 44 31.7	+0.2
SKO				*e*Sg	Sb	08 44 47.9	+0.1
SKO	**Skopje**	**1.28**	**50**	*i* Pg	Pn	08 44 30.2	-0.9
SKO				*i* Sg	Sb	08 44 48.0	+0.1
PDG	**Podgorica**	**1.43**	**333**	*e*Pg	Pg	08 44 33.9	-0.6
PDG				*e*Sg	Sg	08 44 55.7	+2.6
PDG	**Podgorica**	**1.43**	**333**	*e*Pn	Pn	08 44 31.5	-1.6
TTG	**Podgorica**	**1.43**	**333**	⇑*i*Pg	Pn	08 44 32.7	-0.4
TTG				*i* Sg	Sg	08 44 54.4	+1.3
PVY	**Plav**	**1.45**	**355**	⇓*i*Pg	Pn	08 44 32.9	-0.6
PVY				*e*Sg	Sg	08 44 53.8	+0.3
BUM	**Brajici-Budva**	**1.47**	**322**	⇑*i*Pg	Pb	08 44 34.1	-0.5
BUM				*e*Sg	Sg	08 44 55.7	+1.4
IGT	**Igoumenitsa**	**1.63**	**174**	*i* Pg	Pb	08 44 35.9	-1.3
CEME	**Cevo**	**1.66**	**327**	⇓*i*Pn	Pb	08 44 37.2	-0.6
CEME				*e*Sn	Sg	08 45 01.9	+1.5
IVA	**Berane**	**1.73**	**354**	⇑*i*Pn	Pn	08 44 37.7	+0.4
IVA				*e*Sn	Sg	08 45 03.2	+0.7
GRG	**Griva**	**1.73**	**96**	*i* Pg	Pb	08 44 37.7	-1.2
KOME	**Kolasin**	**1.76**	**345**	⇓*i*Pn	Pb	08 44 39.0	-0.4
KOME				*e*Sn	Sg	08 45 04.2	+0.8
HCY	**Herceg Novi**	**1.78**	**317**	⇓*i*Pn	Pb	08 44 39.3	-0.5
HCY				*e*Sn	Sg	08 45 05.0	+0.8
HCY	**Herceg Novi**	**1.78**	**317**	*e*Pn	Pn	08 44 36.0	-1.9
NKME	**Niksic**	**1.83**	**332**	⇓*i*Pn	Pb	08 44 40.3	-0.4
NKME				*e*Sn	Sg	08 45 06.5	+0.5
VAY	**Valandovo**	**1.85**	**84**	*e*Pg	Pb	08 44 40.0	-0.9
VAY				*e*Sg	Sg	08 45 05.6	-0.8
VAY	**Valandovo**	**1.85**	**84**	*i* Pg	Pb	08 44 40.3	-0.7
VAY				*i* Sg	Sg	08 45 05.9	-0.5
NKY	**Niksic**	**1.86**	**333**	⇓*i*Pn	Pb	08 44 41.2	0.0
NKY				*e*Sn	Sg	08 45 05.9	-0.9
TREB	**Trebinje**	**2.05**	**320**	*e*Pn	Pg	08 44 45.2	-1.1
TREB				*e*Sn	Sb	08 45 10.1	+0.1
TREB	**Trebinje**	**2.05**	**320**	*e*Pn	Pn	08 44 40.6	-1.0
LIT	**Litokhoron**	**2.08**	**120**	*i* Pg	Pb	08 44 44.6	-0.4
BARS	**Barje**	**2.08**	**37**	*e*Pn	Pb	08 44 44.4	-0.6
KNT	**Kendrikon**	**2.09**	**89**	*i* Pg	Pb	08 44 44.5	-0.6
SJES	**Sjenica**	**2.11**	**357**	*e*Pg	Pb	08 44 46.0	+0.5
SJES				*e*Sg	Sg	08 45 17.0	+2.2
BRY	**Bratogost**	**2.11**	**326**	⇓*i*Pn	Pb	08 44 44.2	-1.3
BRY				*e*Sn	Sb	08 45 12.7	+0.8
BRY	**Bratogost**	**2.11**	**326**	*e*Pn	Pb	08 44 44.9	-0.6
SELS	**Selova**	**2.19**	**19**	*e*Pn	Pn	08 44 45.0	+1.4
UPM	**Unac-Piva**	**2.24**	**336**	⇓*i*Pn	Pb	08 44 46.0	-1.7
UPM				*e*Sn	Sb	08 45 15.8	+0.1
UPM	**Unac-Piva**	**2.24**	**336**	*e*Pn	Pb	08 44 46.3	-1.4
PLE	**Pljevlja**	**2.24**	**346**	*e*Pn	Pn	08 44 45.4	+1.0
PLE				*i* Sn	Sb	08 45 15.9	+0.2
IVAS	**Ivanjica**	**2.42**	**0**	*e*Pn	Pb	08 44 49.4	-1.4
IVAS				*e*Sn	Sb	08 45 19.6	-1.1
STON	**Ston**	**2.49**	**314**	*e*Pn	Pn	08 44 48.1	+0.4
STON				Sn	Sn	08 45 19.5	+1.2
STON	**Ston**	**2.49**	**314**	*e*Pn	Pn	08 44 47.9	+0.2
BOVS	**Bovan**	**2.74**	**25**	*e*Pn	Pb	08 44 54.1	-2.1
VTS	**Vitosha**	**2.74**	**57**	*e*Pn	Pn	08 44 52.6	+1.3
BBLS	**Lazići**	**2.76**	**349**	*e*Pn	Pn	08 44 53.6	+2.1
BBLS	**Lazići**	**2.76**	**349**	*e*Pn	Pb	08 44 54.9	-1.7
GRUS	**Gruza**	**2.77**	**9**	*e*Pn	Pn	08 44 53.8	+2.3
ZAPS	**Zavoj**	**2.82**	**40**	*e*Pn	Pn	08 44 54.3	+2.0
DIVS	**Divibare**	**2.94**	**358**	*e*Pn	Pb	08 44 57.0	-2.7
DIVS	**Divibare**	**2.94**	**358**	*e*Pn	Pn	08 44 56.0	+2.0
HAPS	**Han Pijesak,Bl**	**3.06**	**344**	*e*Pn	Pn	08 44 58.1	+2.5
HAPS	**Han Pijesak,Bl**	**3.06**	**344**	*e*Pn	Pn	08 44 58.0	+2.5

*ISCJB **27** 09:13:56.6±0.5, 47°.57N±0°.09×116°.30E±0°.08, h10km, mb3.8/12, MS3.8/1, Error ellipse: s-maj=13.2km s-min=7.6km az=12.9*
*BJI **27** 09:13:56.8±0.0, 47°.72N×116°.50E, h11km, mb4.3/5, mB4.4/1, ML4.5/10, Ms3.9/5, Ms7 3.9/4*
*IDC **27** 09:13:56.5±0.7, 47°.56N×116°.40E, h0km, mb3.9/12, mb1 4.0/15, mb1mx3.8/42, mbtmp3.8/15, ML3.7/3, MS3.8/1, Ms1 3.8/1, ms1mx2.9/40, Error ellipse: s-maj=18.2km s-min=15.9km az=11.0*
ISC 27 09:13:57.9±0.6, 47°.7N±0°.1×116°.44E±0°.06, h10km, n21, σ1°.36/21, mb3.9/12, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**6.78**	**275**	Pn	Pn	09 15 37.3	-0.2
1.6nm,0.3s,baz=91,slow=13,SNR=20							
SONM				Pg	Pg	09 16 00.2	-7.4
3.8nm,0.3s,baz=90,slow=16,SNR=10							
SONM				Sn	Sn	09 16 53.0	-1.8
11nm,0.3s,baz=89,slow=23,SNR=7.7							
SONM				Lg	Lg	09 17 25.9	
11nm,0.3s,baz=96,slow=28,SNR=5.0							
KLR	**Kul'dur**	**10.29**	**76**	Pn	Pn	09 16 24.1	-1.5
1.2nm,0.3s,baz=265,slow=13,SNR=12							
KLR				Sn	Sn	09 18 17.4	-3.5
0.5nm,0.3s,baz=240,slow=20,SNR=6.1							
KLR				Lg	Lg	09 19 20.9	
0.4nm,0.3s,baz=357,slow=19,SNR=3.8							
USRK	**Ussuriysk Ar.**	**11.37**	**102**	Lg	Lg	09 19 55.8	
0.7nm,0.3s,baz=288,slow=25,SNR=8.2							
KSRS	**Korea Array**	**13.24**	**136**	Pn	Pn	09 17 07.3	+1.6
0.1nm,0.3s,baz=328,slow=12,SNR=12							
KSRS				Lg	Lg	09 20 55.1	
0.3nm,0.3s,baz=323,slow=29,SNR=4.6							
GTA	**Gaotai**	**14.59**	**242**	*e*P	P	09 17 30.0	-0.9
GTA				pP	Pn	09 17 34.5	+10
GTA				sP		09 17 37.3	
GTA				pmax	pmax		
comp=Z,5.0nm,0.6s							
MJAR	**Matsushiro Arr**	**19.53**	**117**	Pn	Pn	09 18 28.0	+1.3
0.1nm,0.3s,baz=316,slow=14,SNR=4.3							
WMQ	**Urumqi**	**20.37**	**270**	*e*P	Pn	09 18 36.5	-0.2
MKAR	**Makanchi Array**	**23.11**	**281**	P	P	09 19 03.5	-0.3
0.2nm,0.3s,baz=79,slow=12,SNR=2.5							
MKAR				PcP	PcP	09 22 52.9	+0.6
0.2nm,0.3s,baz=63,slow=3.1,SNR=2.6							
TIXI	**Tiksi**	**24.76**	**9**	P	P	09 19 20.2	+1.0
6.3nm,0.9s,baz=249,slow=4.1,SNR=6.6							
KURBB	**Kurchatov Arra**	**24.80**	**291**	P	P	09 19 19.5	-0.3
1.9nm,0.8s,baz=82,slow=10,SNR=6.1							
SEY	**Seymchan**	**25.09**	**39**	P	P	09 19 24.3	+2.0
3.1nm,0.8s,baz=266,slow=13,SNR=4.0							
AKTO	**Aktyubinsk**	**37.55**	**297**	P	P	09 21 12.3	+0.4
0.5nm,0.3s,baz=80,slow=12,SNR=3.6							
DAV	**Davao City (W)**	**41.19**	**166**	LR	LR	09 40 18.0	
comp=Z,117nm,18.6s,baz=22,slow=38							
FINES	**FINESS Array B**	**49.90**	**321**	P	P	09 22 51.6	+0.6
1.1nm,0.7s,baz=87,slow=8.5,SNR=3.0							
ILAR	**Eielson Array**	**50.79**	**33**	P	P	09 22 58.4	+0.6
1.2nm,0.6s,baz=294,slow=7.5,SNR=15							
YKA	**Yellowknife Ar**	**62.91**	**24**	P	P	09 24 23.9	+0.1
0.4nm,0.5s,baz=328,slow=6.6,SNR=4.1							
WRA	**Warramunga Arr**	**69.19**	**162**	P	P	09 25 03.9	-0.6
1.6nm,0.8s,baz=344,slow=5.6,SNR=8.4							
ASAR	**Alice Springs**	**72.72**	**163**	P	P	09 25 25.9	-0.1
0.6nm,0.7s,baz=349,slow=6.2,SNR=8.8							
NVAR	**Mina Array Bea**	**81.39**	**40**	P	P	09 26 16.2	+1.2
0.7nm,0.8s,baz=308,slow=4.4,SNR=2.9							
STKA	**Stephens Creek**	**82.34**	**159**	P	P	09 26 19.6	+0.1
0.6nm,0.3s,baz=308,slow=7.5,SNR=4.3							
LPAZ	**La Paz**	**148.49**	**8**	PKPbc	PKiKP	09 33 45.6	-1.7
1.6nm,0.9s,baz=341,slow=7.9,SNR=4.0							

*IDC **27** 10:01:58.8±0.9, 10°.85N×42°.65W, h0km, mb4.4/6, mb1 4.5/6, mb1mx3.9/41, mbtmp4.4/6, ML5.4/1, MS3.6/2, Ms1 3.7/2, ms1mx2.9/41, Error ellipse: s-maj=29.7km s-min=19.1km az=160.0*
*ISCJB **27** 10:02:00.2±0.7, 10°.8N±0°.2×42°.7W±0°.1, h21km, mb4.2/9, MS3.6/2, Error ellipse: s-maj=24.9km s-min=11.1km az=156.0*
*NEIC **27** 10:02:00.7±0.9, 10°.69N×42°.57W, h10km, mb4.4/5, Error ellipse: s-maj=88.1km s-min=23.2km az=332.0*
ISC 27 10:02:02.0±0.8, 10°.8N±0°.2×42°.7W±0°.1, h21km, n23, σ0°.83/17, mb4.4/9, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**11.36**	**241**	Pn	Pn	10 04 41.7	-1.5
25nm,0.3s,baz=53,slow=15,SNR=139							
MDP				Sn	Sn	10 06 37.6	-12
2.1nm,0.3s,baz=171,slow=19,SNR=4.7							
PTGA	**Pitinga**	**20.65**	**237**	P	P	10 06 41.0	+0.5
12nm,0.3s,baz=53,slow=16,SNR=20							
PTGA	**Pitinga**	**20.65**	**237**	*e*P	P	10 06 41.6	+1.1
19nm,0.6s							
H10N3	**ASCENSION HYDR**	**33.61**	**122**	T	T	10 44 16.7	
baz=303,slow=75,SNR=14							
H10N2	**ASCENSION HYDR**	**33.61**	**122**	T	T	10 44 17.1	
baz=303,slow=75,SNR=17							
H10N1	**ASCENSION HYDR**	**33.63**	**122**	T	T	10 44 02.9	
baz=303,slow=75,SNR=18							
H10S3	**ASCENSION HYDR**	**34.09**	**124**	T	T	10 44 33.2	
baz=304,slow=75,SNR=10							
H10S1	**ASCENSION HYDR**	**34.09**	**124**	T	T	10 44 33.6	
baz=304,slow=75,SNR=10							
H10S2	**ASCENSION HYDR**	**34.11**	**124**	T	T	10 44 34.6	
baz=304,slow=75,SNR=9.3							
LPAZ	**La Paz**	**36.85**	**223**	P	P	10 09 10.9	+1.2
7.3nm,0.8s,baz=37,slow=6.6,SNR=26							
LPAZ				LR	LR	10 25 38.7	
comp=Z,88nm,18.7s,baz=50,slow=38							
LPAZ	**La Paz**	**36.85**	**223**	*e*P	P	10 09 09.9	+0.1
LPAZ				*e*pP	P	10 09 11.0	+1.2
DBIC	**Dimbokro**	**37.59**	**93**	P	P	10 09 15.2	-0.3
5.6nm,0.7s,baz=260,slow=13,SNR=5.1							
DBIC	**Dimbokro**	**37.59**	**93**	*e*P	P	10 09 15.2	-0.3
6.8nm,0.8s							
CPUP	**Villa Florida**	**39.55**	**201**	P	P	10 09 32.5	+0.8
2.3nm,0.6s,baz=41,slow=2.8,SNR=3.2							
MNMC	**Minye Minye**	**39.85**	**222**	*e*P	P	10 09 33.8	-0.8
8.1nm,1.1s							
TOA1	**Torodi Ar. Sit**	**43.44**	**82**	*e*P	P	10 10 03.2	-0.6
TOA0	**Torodi Ar. Sit**	**43.44**	**82**	*e*P	P	10 10 03.9	0.0
8.2nm,1.1s							
TORD	**Torodi Ar. Bea**	**43.44**	**82**	P	P	10 10 03.2	-0.6
3.4nm,0.3s,baz=284,slow=8.0,SNR=2.5							
GO02	**Mina Guanaco**	**44.33**	**216**	*e*P	P	10 10 11.6	+0.4
19nm,1.0s							
TXAR	**Lajitas Array**	**59.55**	**298**	P	P	10 12 04.2	-0.3
0.2nm,0.6s,baz=110,slow=8.0,SNR=3.5							
EIL	**Elat**	**74.06**	**62**	LR	LR	10 46 21.9	
comp=Z,39nm,19.6s,baz=252,slow=36							
ILAR	**Eielson Array**	**86.29**	**335**	P	P	10 14 42.9	+0.8
0.4nm,0.7s,baz=65,slow=4.3,SNR=3.7							
ASAR	**Alice Springs**	**166.79**	**166**	PKPab	PKPab	10 23 09.5	-0.2
0.4nm,0.9s,baz=186,slow=4.4,SNR=3.9							

*ISK **27** 10:11:04.3, 38°.88N×43°.93E, h26km, ML2.1/4*
*ISCJB **27** 10:11:06.7±1.0, 38°.92N±0°.04×43°.81E±0°.08, h20km±9km, Error ellipse: s-maj=11.4km s-min=5.1km az=21.5*
*DDA **27** 10:11:06.0, 38°.90N×43°.71E, h7km±3km, ML2.6*
ISC 27 10:11:06.4±1.1, 38°.92N±0°.04×43°.77E±0°.05, h17km±7km, n10, σ1°.08/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.17**	**294**	*i* P	Pg	10 11 10.5	-0.4
VMUR				*i* S	Sg	10 11 14.5	+0.6
VMUR				IAML_P			
comp=Z,5μm,0.1s							
CLDR	**Caldiran**	**0.25**	**27**	PG	Pg	10 11 11.3	-0.8
CLDR				SG	Sg	10 11 16.5	+0.4
CLDR	**Caldiran**	**0.25**	**27**	*i* P	Pg	10 11 12.2	0.0
CLDR				*i* S	Sb	10 11 17.6	+0.8
CLDR				IAML_P			
comp=Z,9μm,0.1s							
VANB	**Van**	**0.44**	**223**	PG	Pb	10 11 16.1	+0.3
VANB				SG	Sb	10 11 24.6	+2.4
TVAN	**Van**	**0.48**	**216**	*i* P	Pb	10 11 15.5	-1.1
TVAN				*i* S	Sb	10 11 24.6	+1.1
TVAN				IAML_P			
comp=Z,2μm,0.2s							
DYDN	**Diyadin**	**0.62**	**354**	*i* P	Pg	10 11 18.4	-0.4
DYDN				*i* S	Sb	10 11 29.2	+1.6
DYDN				IAML_P			
comp=Z,2μm,0.2s							
AKDM	**Akdamar-Van**	**0.86**	**227**	PG	Pb	10 11 22.0	-0.9
AKDM				SG	Sn	10 11 34.9	-1.2
TUTA	**Tutak**	**0.89**	**303**	*i* P	Pb	10 11 22.9	-0.5
TUTA				*i* S	Sb	10 11 35.5	+0.5
TUTA				IAML_P			
comp=Z,1μm,0.1s							
AGRB	**Hanur-Agry**	**0.89**	**318**	PG	Pg	10 11 23.1	-0.6
EATA	**Eleskirt**	**1.36**	**314**	*i* P	Pn	10 11 31.2	+0.2
EATA				IAML_P			
comp=Z,123nm,0.2s							

*ISCJB **27** 10:22:06.7±0.4, 38°.97N±0°.02×26°.94E±0°.03, h8km±3km, Error ellipse: s-maj=4.2km s-min=3.4km az=18.8*
*DDA **27** 10:22:06.4, 38°.97N×26°.95E, h9km±1km, ML2.7*
*ISK **27** 10:22:06.1, 38°.96N×26°.97E, h9km, ML2.4/12*
ISC 27 10:22:06.7±0.9, 38°.97N±0°.02×26°.96E±0°.03, h10km±6km, n24, σ0°.40/35, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEDA	**zmir-Bergama**	**0.10**	**93**	*i* P	Pg	10 22 09.3	0.0
ZEDA				*i* S	Sg	10 22 11.4	+0.2
ZEDA				IAML_P			
comp=Z,41μm,0.2s							
DKL	**Dikili**	**0.11**	**339**	PG	Pg	10 22 09.4	0.0
DKL				SG	Sg	10 22 11.6	+0.2
FOCM	**Foa**	**0.31**	**214**	PG	Pg	10 22 12.3	-0.7
AYVA	**Ayvalik**	**0.39**	**329**	*i* P	Pb	10 22 15.2	-0.6
AYVA				*i* S	Sb	10 22 21.1	-0.8
KRBN	**Karaburun**	**0.49**	**220**	PG	Pg	10 22 16.2	-0.1
KRBN				SG	Sg	10 22 23.1	+0.3
BLCB	**Balcova**	**0.59**	**173**	PG	Pg	10 22 17.9	-0.3
URLA	**Izmir**	**0.67**	**205**	PG	Pg	10 22 19.5	-0.2
URLA	**Izmir**	**0.67**	**205**	*i* P	Pg	10 22 19.9	+0.1
URLA				*i* S	Sb	10 22 30.8	+0.9
URLA				IAML_P			
comp=Z,7μm,0.2s							
AKHS	**Akhisar**	**0.68**	**98**	*i* P	Pb	10 22 20.6	0.0
AKHS				*i* S	Sb	10 22 29.5	-0.5
AKHS				IAML_P			
comp=Z,841nm,0.1s							
STEP	**BALIKESIR_Sava**	**0.72**	**55**	*i* P	Pg	10 22 20.8	+0.2
STEP				*i* S	Sb	10 22 32.0	+0.7
GPNR	**Gulpinar-Canak**	**0.80**	**307**	PG	Pg	10 22 22.4	+0.2
BAYC	**CANAKKALE_Bayr**	**0.83**	**338**	*i* P	Pg	10 22 22.7	0.0
BAYC				*i* S	Sb	10 22 34.5	0.0
BAYC				IAML_P			
comp=Z,1μm,0.1s							
SIGR	**SIGRI**	**0.89**	**286**	PG	Pg	10 22 23.8	0.0
CHOS	**Chios island**	**0.92**	**231**	PG	Pg	10 22 24.4	+0.1
DGB	**zmir**	**0.92**	**184**	*i* P	Pg	10 22 24.1	-0.3
DGB				*i* S	Sb	10 22 37.6	+0.6
DGB				IAML_P			
comp=Z,2μm,0.1s							
BALY	**Balya**	**0.93**	**34**	*i* P	Pg	10 22 24.7	+0.1
BALY				*i* S	Sn	10 22 39.8	+0.6
BALY				IAML_P			
comp=Z,2μm,0.3s							
BALB	**Balikesir**	**0.98**	**47**	PG	Pg	10 22 25.2	-0.4
EZN	**Ezine**	**0.98**	**330**	PG	Pg	10 22 25.6	0.0
GONE	**Gonen-Balikesi**	**1.21**	**28**	PN	Pn	10 22 29.6	-0.1
GCAM	**G?zelcaml?**	**1.29**	**170**	PN	Pn	10 22 30.5	-0.2
DURS	**Dursunbey**	**1.34**	**61**	*i* P	Pn	10 22 30.8	-0.7
DURS				*i* S	Sb	10 22 49.1	0.0
DURS				IAML_P			
comp=Z,375nm,0.3s							
LPK	**Lapseki**	**1.41**	**354**	PN	Pn	10 22 32.4	0.0
GELI	**Tayfur-Gelibol**	**1.47**	**346**	PN	Pn	10 22 33.4	+0.1
EDC	**Edincik**	**1.54**	**27**	PN	Pn	10 22 34.2	-0.1

SJA 27 10:32:44.4±0.3, 30°.87S×68°.81W, h112km±1km, ML3.5, MW3.8, San Juan Province

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

TXAR	Lajitas Array	56.02	272	P	P	10 51 43.5	+0.4
	0.1nm,0.5s,baz=38,slow=6.3,SNR=2.9						
NVAR	Mina Array Bea	56.45	290	P	P	10 51 47.4	+1.1
	0.2nm,0.6s,baz=44,slow=6.6,SNR=2.9						
MKAR	Makanchi Array	62.06	45	P	P	10 52 24.8	0.0
	1.1nm,0.7s,baz=339,slow=5.9,SNR=6.1						

*ISCJB **27** 10:48:14.2±0.3,0.″55N±0.″04×126.″13E±0.″04,h44km, mb4.2/20,MS4.3/1,Error ellipse: s-maj=5.8km s-min=5.4km az=1.8*
*DJA **27** 10:48:15.2±1.2,1.′N±4.′×12.′6E±.′,h18km±11km,M4.4/10, mb4.5/3,mB4.9/2,MLv4.4/10,Mw(mB)4.2/2*
*NEIC **27** 10:48:17.0±1.1,0.″57N×126.″17E,h57km±7km,mb4.2/10, Error ellipse: s-maj=10.8km s-min=9.4km az=161.0*
*IDC **27** 10:48:18.4±2.4,0.″50N×126.″06E,h65km±23km,mb3.8/11, mb1 4.0/14,mb1mx3.8/37,mbtmp4.1/14,Error ellipse: s-maj=20.8km s-min=12.4km az=87.0*
ISC 27 10:48:16.1±0.5,**0.″60N**±0.″07×**126.″11E**±0.″05,**h44**km,**n44,** σ**1**§**24**/49,**mb4.2**/20,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.27	82	ePn	Pn	10 48 37.2	-0.3
TNTI	Ternate	1.27	82	P	Pn	10 48 37.1	-0.3
TNTI				S	Sn	10 48 56.0	+2.6
KMSI	Cibinong	2.12	269	P	Pn	10 48 48.3	-0.8
KMSI				S	Sn	10 49 15.2	+0.9
LUWI	Luwuk	3.71	244	ePn	Pn	10 49 12.5	+1.6
LUWI	Luwuk	3.71	244	P	Pn	10 49 12.9	+1.9
MRSI	Marisa	4.17	268	P	Pn	10 49 17.6	+0.4
APSI	Ampana	4.70	251	P	Pn	10 49 27.6	+3.0
MSAI	Masohi	4.83	144	P	Pn	10 49 24.0	-2.4
SIJI	Sorong	5.36	106	P	Pn	10 49 37.5	+3.8
	1.4nm,0.3s,baz=270,slow=9.1,SNR=3.7						
FAKI	Fak Fak	7.07	120	ePn	Pn	10 49 57.3	+0.2
TTSI	Tana Toraja	7.25	240	P	Pn	10 49 59.7	+0.1
SPSI	Sidrap Palu	7.79	234	P	Pn	10 50 08.0	+1.0
BKSI	Bulukumba	8.39	225	P	Pn	10 50 19.9	+4.7
KAPI	Kappang	8.45	229	P	Pn	10 50 18.4	+2.4
	1.9nm,0.3s,baz=21,slow=8.6,SNR=8.8						
KAPI				S	Sn	10 51 49.7	-0.5
	1.0nm,0.3s,baz=144,slow=19,SNR=2.5						
KAPI	Kappang	8.45	229	ePn	Pn	10 50 18.2	+2.2
FITZ	Fitzroy Crossi	18.59	181	P	P	10 52 28.7	-1.0
	0.2nm,0.3s,baz=10,slow=8.3,SNR=5.0						
WRAB	Tennant Creek	21.95	159	eP	P	10 53 05.4	-0.8
	9.8nm,0.8s						
WR1	Warramunga Arr	21.96	159	eP	P	10 53 04.8	-1.5
WRA	Warramunga Arr	21.96	159	P	P	10 53 04.8	-1.5
	7.7nm,0.5s,baz=336,slow=12,SNR=67						
WB2	Warramunga Arr	21.96	159	eP	P	10 53 05.5	-0.8
	8.9nm,0.8s						
COEN	Coen	22.25	131	eP	P	10 53 09.6	+0.1
	6.0nm,0.8s						
ASAR	Alice Springs	25.29	163	P	P	10 53 37.9	-0.8
	3.3nm,0.3s,baz=345,slow=11,SNR=124						
ASAR				PcP	PcP	10 57 10.7	-0.4
	0.8nm,0.6s,baz=345,slow=2.3,SNR=10						
FORT	Forrest	31.26	177	eP	P	10 54 31.2	-0.6
	11nm,0.8s						
BBOO	Buckleboo	34.54	165	eP	P	10 54 59.5	-0.9
	3.1nm,0.9s						
STKA	Stephens Creek	35.48	157	P	P	10 55 08.2	-0.4
	2.9nm,0.6s,baz=326,slow=12,SNR=4.6						
KSRS	Korea Array	36.71	2	P	P	10 55 19.9	+0.9
	0.5nm,0.5s,baz=185,slow=10.0,SNR=3.6						
MAJO	Matsushiro	37.48	16	eP	P	10 55 25.4	-0.2
MJAR	Matsushiro Arr	37.48	16	P	P	10 55 25.4	-0.2
	1.2nm,0.5s,baz=191,slow=10,SNR=5.8						
USRK	Ussuriysk Ar.	43.72	6	P	P	10 56 18.6	+1.6
	2.2nm,0.7s,baz=198,slow=9.1,SNR=3.4						
SONA0	Songino Array	50.06	343	eP	P	10 57 06.8	+0.1
SONM	Songino Array	50.06	343	P	P	10 57 06.8	+0.1
	0.5nm,0.4s,baz=157,slow=7.7,SNR=3.4						
SONM				PcP	PcP	10 58 26.8	+0.9
	0.6nm,0.6s,baz=130,slow=3.4,SNR=4.4						
PETK	Petropavlovsk-	58.54	22	P	P	10 58 09.5	+1.4
	2.8nm,0.6s,baz=189,slow=4.1,SNR=7.0						
PEA1	Petropavlovsk-	58.55	22	eP	P	10 58 09.5	+1.4
MK31	Makanchi Array	59.78	327	eP	P	10 58 16.9	+0.1
	1.4nm,0.9s						
MK32	Makanchi Array	59.78	327	eP	P	10 58 17.1	+0.3
MKAR	Makanchi Array	59.78	327	P	P	10 58 17.1	+0.3
	1.4nm,0.3s,baz=122,slow=8.3,SNR=20						
KSH	Kashi	59.84	317	eP	P	10 58 17.8	+0.3
KSH				S	S	11 06 23.8	-2.4
KSH				pmax	pmax		
	comp=Z,19nm,1.3s						
KSH				pmax	pmax		
	comp=Z,200nm,5.0s						
KSH				LR	LR		
	comp=N,230nm,10.4s						
KSH				LR	LR		
	comp=E,220nm,8.5s						
KSH				LR	LR		
	comp=Z,170nm,14.7s						
MAKZ	Makanchi	59.96	326	eP	P	10 58 17.9	-0.2
	comp=Z,1.7nm,0.8s						
KURK	Kurchatov	64.05	329	eP	P	10 58 44.7	-0.6
	comp=Z,4.0nm,0.6s						
KURK				eS	S	11 07 16.7	-1.9
VNDA	Vanda	80.42	173	P	P	11 00 22.6	0.0
	comp=Z,1.0nm,0.6s,baz=336,slow=5.6,SNR=12						
ILAR	Eielson Array	86.18	25	P	P	11 01 01.4	-0.8
	comp=Z,0.4nm,0.4s,baz=257,slow=4.4,SNR=9.2						
TORD	Torodi Ar. Bea	123.24	286	PKP	PKPdf	11 07 08.5	-0.8
	comp=Z,2.9nm,0.3s,baz=66,slow=3.1,SNR=2.3						
TOA1	Torodi Ar. Sit	123.24	286	ePKPdf	PKPdf	11 07 08.5	-0.8
TXAR	Lajitas Array	123.97	54	PKP	PKiKP	11 07 11.2	+0.5
	comp=Z,0.3nm,0.7s,baz=264,slow=1.8,SNR=5.0						

*ISCJB **27** 10:49:46.4±0.5,38.″34N±0.″03×31.″84E±0.″04,h8km±6km, Error ellipse: s-maj=6.0km s-min=4.6km az=156.3*
*DDA **27** 10:49:46.0,38.″35N×31.″83E,h7km±3km,ML2.6*
*ISK **27** 10:49:46.3,38.″36N×31.″89E,h10km±2km,ML2.1/5*
ISC 27 10:49:46.2±1.1,**38.″36N**±0.″03×**31.″85E**±0.″03,**h12**km±13km, **n10**, σ0§**42**/18,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDHN	Kadinhani	0.27	52	i P	Pb	10 49 52.5	-0.5
KDHN				i S	Sb	10 49 57.0	-0.5
KDHN				IAML_P			
	comp=Z,4μm,0.2s						
DOGA	KONYA_Doganhis	0.29	210	i P	Pg	10 49 51.7	-0.5
DOGA				i S	Sg	10 49 56.5	+0.2
DOGA				IAML_P			
	comp=Z,2μm,0.2s						
LADK	Ladik-KONYA	0.43	111	PG	Pg	10 49 54.8	0.0
LADK				SG	Sg	10 50 00.9	+0.2
KIZT	Kizilcal	0.52	3	PG	Pg	10 49 56.9	+0.4
KIZT				SG	Sb	10 50 04.6	-0.4
KONT	Konya--Tatoy	0.57	135	PG	Pg	10 49 57.3	-0.1
KONT				SG	Sg	10 50 05.4	+0.3
KONT	Konya--Tatoy	0.57	135	i P	Pg	10 49 57.9	+0.4
KONT				i S	Sb	10 50 06.4	+0.1
KONT				IAML_P			
	comp=Z,1μm,0.1s						
KMER	Konya-Meram	0.71	145	i P	Pg	10 50 00.4	+0.3
KMER				i S	Sb	10 50 11.0	+0.6
KMER				IAML_P			
	comp=Z,243nm,0.2s						
BOLV	Bolvadin	0.79	297	i P	Pg	10 50 01.4	-0.2
BOLV				i S	Sb	10 50 13.1	+0.4
BOLV				IAML_P			
	comp=Z,1μm,0.2s						
CHBY	Cihanbeyli	0.85	74	PG	Pg	10 50 02.5	-0.1
CIFT	Cifteler, Eski	1.18	329	PN	Pg	10 50 09.5	+0.6

*ISCJB **27** 10:55:26.1±1.0,43.′17N±0.′06×146.′24E±0.′08, h70km±10km,Error ellipse: s-maj=12.8km s-min=5.9km az=139.1*
*SKHL **27** 10:55:26.8±0.1,43.′14N×146.′34E,h33km±2km,mb3.8/4*
*JMA **27** 10:55:27.2±0.2,43.′13N×146.′19E,h65km±1km,M2.7*
ISC 27 10:55:26.4±1.9,**43.′15N**±0.′09×**146.′26E**±0.′08,**h66**km±14km, **n14**, σ0§**75**/27,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.43	300	P	Pn	10 55 38.7	+0.5
NEM2				eS	Sn	10 55 47.1	+0.2
GLVR	Golovnino	0.80	318	eP	Pn	10 55 42.0	-0.2
GLVR				eS	Sn	10 55 55.0	+1.2
GLVR				A	A	10 55 55.0	
	48nm,0.2s						
GLVR				A	A	10 55 55.0	
	623nm,0.2s						
JKHN	Kushirohamanak	0.81	266	P	Pn	10 55 42.9	+0.6
GRPR	Tuman	0.91	337	eP	Pn	10 55 43.0	-0.6
GRPR				AMB	AMB	10 55 43.0	
	40nm,0.2s						
GRPR				AMB	AMB	10 55 43.0	
	36nm,0.2s						
GRPR				AMB	AMB	10 55 43.0	
	120nm,0.2s						
GRPR				eS	Sn	10 55 55.0	-1.4
GRPR				A	A	10 55 56.0	
	448nm,0.4s						
GRPR				A	A	10 55 56.0	
	460nm,0.4s						
YUK	Yuzh-Kuril'sk	0.93	342	eP	Pn	10 55 43.0	-0.8
YUK				AMB	AMB	10 55 45.0	
	38nm,0.7s						
YUK				AMB	AMB	10 55 45.0	
	33nm,0.7s						
YUK				AMB	AMB	10 55 45.0	
	152nm,0.7s						
YUK				eS	Sn	10 55 56.0	-0.7
YUK				A	A	10 56 02.0	
	201nm,0.3s						
YUK				A	A	10 56 02.0	
	70nm,0.3s						
LAGR	Lagunnoye	0.97	339	eP	Pn	10 55 44.0	-0.3
LAGR				AMB	AMB	10 55 44.0	
	16nm,0.3s						
LAGR				eS	Sn	10 55 57.0	-0.5
LAGR				A	A	10 55 59.0	
	458nm,0.3s						
LAGR				A	A	10 55 59.0	
	173nm,0.3s						
JRA	Rausu	1.14	314	P	Pn	10 55 47.2	+0.7
JRA				eS	Sn	10 56 02.1	+0.6
JAK	Akkeshi	1.16	263	P	Pn	10 55 46.7	0.0
JAK				eS	Sn	10 56 01.5	-0.3
JNK	Nakash	1.21	292	P	Pn	10 55 47.2	-0.1
JNK				eS	Sn	10 56 02.2	-0.8
JOB	Onbets	1.80	263	P	Pn	10 55 55.4	+0.2
JOB				eS	Sn	10 56 16.4	-0.6
JAR	Ashorobuto	1.83	275	P	Pn	10 55 56.2	+0.6
JAR				eS	Sn	10 56 17.7	-0.1
JTKR	Abashiri--Toko	1.90	296	P	Pn	10 55 57.3	+0.8
JTKR				eS	Sn	10 56 20.4	+1.0
JCH	Churui	2.20	257	P	Pn	10 56 00.6	0.0
JCH				eS	Sn	10 56 25.0	-1.7
KUR	Kuril'sk	2.38	28	eP	Pn	10 56 03.7	+0.6
KUR				AMB	AMB	10 56 04.1	
	8.0nm,0.3s						
KUR				AMB	AMB	10 56 04.1	
	5.0nm,0.3s						
KUR				AMB	AMB	10 56 04.1	
	10.0nm,0.3s						
KUR				eS	Sn	10 56 31.3	+0.1
KUR				A	A	10 56 35.5	
	22nm,0.3s						
KUR				A	A	10 56 35.5	
	23nm,0.3s						

*IDC **27** 11:05:17.8±0.9,34.″52N×25.″43E,h0km,mb4.0/14, mb1 4.1/21,mb1mx4.0/54,mbtmp4.0/21,ML3.9/7,MS3.0/5, Ms1 3.0/5,ms1mx2.7/39,Error ellipse: s-maj=19.5km s-min=12.3km az=22.0*
*NEIC **27** 11:05:19.7±2.8,34.″46N×25.″38E,h10km±2km,mb4.1/15, ML4.0(THE),Error ellipse: s-maj=5.6km s-min=1.8km az=221.0*
NEIC Felt at Irakleio.
*ISCJB **27** 11:05:19.2±0.8,34.″29N±0.″04×25.″42E±0.″02,h21km±5km, mb4.1/26,MS3.0/2,Error ellipse: s-maj=6.1km s-min=3.2km az=12.1*
*ATH **27** 11:05:21.3,34.″48N×25.″35E,h21km±1km,ML3.9/18,Error ellipse: s-maj=2.5km s-min=1.1km az=354.0*
*THE **27** 11:05:22.3,34.″54N×25.″36E,h0km±1km,ML4.0/11,Error ellipse: s-maj=2.7km s-min=0.9km az=167.0*
*ISK **27** 11:05:27.5,34.″79N×25.″55E,h98km±3km,ML3.7/14*
ISC 27 11:05:21.0±1.4,**34.″41N**±0.″05×**25.″38E**±0.″03,**h24**km±10km, **n193**, σ1§**69**/215,**mb4.1**/26,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	Lasithi	0.75	6	P	Pb	11 05 34.6	-0.9
LAST				S	Sb	11 05 44.8	-0.6
LAST	Lasithi	0.75	6	P	Pb	11 05 34.5	-1.0
LAST				S	Sb	11 05 45.0	-0.4
LAST				AML	AML	11 05 45.4	
	comp=E,27684μm,0.6s						
LAST				AML	AML	11 05 48.8	
	comp=N,15919μm,0.4s						
SIVA	Sivas	0.77	322	P	Pb	11 05 35.0	-0.7
SIVA				S	Sb	11 05 45.6	-0.1
SIVA	Sivas	0.77	322	P	Pb	11 05 35.1	-0.5
SIVA				S	Sb	11 05 45.4	-0.3
SIVA				AML	AML	11 05 50.9	
	comp=E,98504μm,0.5s						
SIVA				AML	AML	11 05 51.1	
	comp=N,65685μm,0.5s						
TMBK	Timbaki Herakl	0.83	323	P	Pb	11 05 36.6	-0.2
TMBK				S	Sb	11 05 47.9	+0.3
NPS	Neapolis	0.87	12	P	Pb	11 05 36.6	-0.8
NPS				S	Sb	11 05 48.7	0.0
NPS	Neapolis	0.87	12	P	Pb	11 05 36.7	-0.8
NPS				S	Sb	11 05 48.5	-0.2
NPS				AML	AML	11 05 52.8	
	comp=E,22376μm,0.8s						
NPS				AML	AML	11 05 53.2	
	comp=N,14070μm,0.5s						
KSTL	Kastelli Herak	0.93	344	P	Pb	11 05 35.2	-3.2
KSTL				S	Sb	11 05 47.4	-2.9
IACM	Heraklion	0.93	344	P	Pb	11 05 37.9	-0.5
IACM	Heraklion	0.93	344	P	Pb	11 05 37.9	-0.5
IDI	Anoyia	0.96	335	Pn	Pn	11 05 38.0	-1.1
	comp=N,215nm,0.3s,baz=146,slow=18,SNR=348						
IDI				Sn	Sb	11 05 50.7	-0.7
	comp=N,560nm,0.3s,baz=168,slow=22,SNR=14						
IDI	Anoyia	0.96	335	P	Pn	11 05 38.2	-0.9
IDI				S	Sb	11 05 50.5	-1.0
IDI				AML	AML	11 05 55.8	
	comp=N,9279μm,0.5s						
IDI				AML	AML	11 05 56.5	
	comp=E,13642μm,0.5s						
STIA	Sitia Lasithi	0.98	36	P	Pn	11 05 39.6	+0.4
STIA				S	Sb	11 05 52.7	+0.9
ZKR	Zakros	0.98	44	ePn	Pn	11 05 39.4	+0.1
ZKR				eSn	Sn	11 05 53.4	+1.0
ZKR	Zakros	0.98	44	P	Pn	11 05 39.4	+0.1
ZKR				S	Sn	11 05 53.4	+1.0
ZKR	Zakros	0.98	44	P	Pn	11 05 39.3	+0.1
ZKR				S	Sb	11 05 53.0	+1.2
ZKR				AML	AML	11 05 53.9	
	comp=N,6708μm,0.5s						
ZKR				AML	AML	11 05 58.1	
	comp=E,10002μm,0.3s						
GVD	Gavdhos	1.15	292	ePn	Pn	11 05 42.6	+1.0
GVD				eSn	Sb	11 05 59.0	+2.3
GVD	Gavdhos	1.15	292	P	Pn	11 05 42.6	+1.0
GVD				S	Sb	11 05 59.0	+2.3
GVD	Gavdhos	1.15	292	P	Pn	11 05 42.6	+1.0
GVD				AML	AML	11 06 04.0	
	comp=N,29021μm,0.3s						
GVD				AML	AML	11 06 09.1	
	comp=E,23653μm,0.5s						
PRNS	Prines Rethymn	1.20	323	P	Pn	11 05 42.7	+0.5
VAM	Vamos	1.39	316	P	Pn	11 05 45.8	+0.9
VAM				S	Sb	11 06 05.1	+1.4
VAM	Vamos	1.39	316	P	Pn	11 05 46.0	+1.1
VAM				S	Sb	11 06 05.0	+1.4
VAM				AML	AML	11 06 11.3	
	comp=N,15354μm,0.3s						
VAM				AML	AML	11 06 12.6	
	comp=E,16692μm,0.5s						
IMMV	Iera Moni Meta	1.56	313	P	Pn	11 05 48.4	+1.2
IMMV				S	Sn	11 06 08.6	+2.0
IMMV	Iera Moni Meta	1.56	313	P	Pn	11 05 48.9	+1.7
IMMV				S	Sb	11 06 09.4	+1.0
IMMV				AML	AML	11 06 17.7	
	comp=N,12329μm,0.6s						
IMMV				AML	AML	11 06 23.2	
	comp=E,10963μm,0.7s						
CHAN	Chania	1.56	316	P	Pn	11 05 49.0	+1.8
KARP	Karpathos	1.85	52	PN	Pb	11 05 54.7	+0.7
KARP				SN	Sn	11 06 14.7	+0.9
KARP	Karpathos	1.85	52	ePn	Pb	11 05 54.8	+0.7
KARP				e		11 06 23.4	
KARP	Karpathos	1.85	52	P	Pb	11 05 55.1	+1.0
KARP	Karpathos	1.85	52	P	Pb	11 05 54.9	+0.8
KARP				AML	AML	11 06 34.1	
	comp=E,3307μm,0.6s						
KARP				AML	AML	11 06 39.5	
	comp=N,3138μm,0.7s						
SNT2	Vlychada, Sant	1.93	1	P	Pb	11 05 55.3	-0.1
THR6	Thira Island,	1.94	0	P	Pn	11 05 54.7	+2.2
SAP1	Santorini-Akro	1.94	0	P	Pn	11 05 54.9	+2.4
SAP1	Santorini-Akro	1.94	0	P	Pn	11 05 54.6	+2.1
THR9	Santorini-Faro	1.94	359	P	Pb	11 05 55.7	0.0
THR9	Santorini-Faro	1.94	359	P	Pb	11 05 55.8	+0.1
SANT	Santorini	1.96	2	ePn	Pn	11 05 54.9	+2.1
SANT	Santorini	1.96	2	P	Pn	11 05 54.2	+1.5
ANAF	Anafi Island	1.97	9	P	Pn	11 05 55.0	+2.2
ANAF				AML	AML	11 06 27.5	
	comp=N,9761μm,0.6s						
ANAF				AML	AML	11 06 32.1	
	comp=E,10903μm,0.5s						
THR3	Thira Island,	1.99	0	ePn	Pn	11 05 54.5	+1.3
THR3	Thira Island,	1.99	0	P	Pn	11 05 54.5	+1.3
THR3	Thira Island,	1.99	0	P	Pn	11 05 55.3	+2.2
SAP2K	Karterados	2.00	1	P	Pb	11 05 56.2	-0.4
SAP3	Santorini-Thir	2.02	359	P	Pn	11 05 55.6	+2.1
SAP3	Santorini-Thir	2.02	359	P	Pn	11 05 55.6	+2.1
THR2	Thira island,	2.03	1	P	Pn	11 05 56.1	+2.4
ANKY	Antikythira Is	2.24	311	ePg	Pb	11 05 59.9	-0.9
ANKY	Antikythira Is	2.24	311	P	Pb	11 05 59.9	-0.9
ANKY	Antikythira Is	2.24	311	P	Pb	11 05 59.8	-0.9
ANKY				AML	AML	11 06 46.2	
	comp=E,3985μm,0.8s						
ANKY				AML	AML	11 06 49.5	
	comp=N,2204μm,0.6s						
IOSP	Ios island	2.31	358	P	Pn	11 05 59.1	+1.6
IOSP	Ios island	2.31	358	P	Pn	11 05 59.0	+1.6
IOSP				AML	AML	11 06 38.2	
	comp=E,2072μm,0.6s						
IOSP				AML	AML	11 06 39.3	
	comp=N,1775μm,0.5s						
MHLO	Agia Marina, M	2.41	341	P	Pn	11 06 00.2	+1.3
MHLO	Agia Marina, M	2.41	341	P	Pn	11 06 00.4	+1.5
MHLO				AML	AML	11 06 42.8	
	comp=N,8128μm,0.5s						
MHLO				AML	AML	11 06 43.1	
	comp=E,7125μm,0.5s						
AMGA	Amorgos Island	2.45	10	P	Pn	11 06 00.9	+1.5
AMGA	Amorgos Island	2.45	10	P	Pn	11 06 01.0	+1.5
AMGA				AML	AML	11 06 42.3	
	comp=E,2148μm,0.9s						
AMGA				AML	AML	11 06 43.0	
	comp=N,1618μm,0.8s						
MHLA	Plaka, Milos I	2.46	342	P	Pn	11 06 01.9	+2.4
APE	Apeiranthos	2.66	3	PN	Pn	11 06 03.9	+1.5
APE				SN	Sn	11 06 31.9	-1.9
APE	Apeiranthos	2.66	3	P	Pn	11 06 03.9	+1.5
APE	Apeiranthos	2.66	3	P	Pn	11 06 03.8	+1.5
APE				AML	AML	11 06 54.4	
	comp=N,694μm,0.7s						
APE				AML	AML	11 06 55.9	
	comp=E,661μm,0.9s						
KYTH	Kithira	2.66	315	P	Pn	11 06 04.2	+1.8
KYTH	Kithira	2.66	315	P	Pn	11 06 04.4	+2.0
KYTH				AML	AML	11 06 49.6	
	comp=N,1356μm,0.5s						
KYTH				AML	AML	11 06 57.6	
	comp=E,2633μm,0.6s						
ARG	Arkhangelos	2.88	50	PN	Pn	11 06 08.2	+2.9
ARG	Arkhangelos	2.88	50	P	Pn	11 06 08.2	+2.9
ARG	Arkhangelos	2.88	50	P	Pn	11 06 08.3	+3.0
ARG				AML	AML	11 06 58.5	
	comp=N,1021μm,1.1s						
ARG				AML	AML	11 06 59.8	
	comp=E,996μm,0.7s						
DAT	Datca	2.92	37	PN	Pn	11 06 07.9	+1.8
VLI	Veliai	3.05	320	ePn	Pn	11 06 09.1	+1.5
VLI	Veliai	3.05	320	P	Pn	11 06 09.1	+1.5
VLI	Veliai	3.05	320	P	Pn	11 06 08.9	+1.3
VLI				AML	AML	11 07 00.8	
	comp=N,755μm,0.6s						
VLI				AML	AML	11 07 13.1	
	comp=E,942μm,0.7s						
BODT	Bodrum	3.08	30	PN	Pn	11 06 10.1	+2.0
DYR	Agios Nikonas	3.42	314	P	Pn	11 06 15.0	+2.2
SMG	Samos	3.50	19	P	Pn	11 06 16.0	+2.2
SMG	Samos	3.50	19	P	Pn	11 06 15.8	+2.0
DID	Didima	3.55	331	ePn	Pn	11 06 15.4	+0.8
DID	Didima	3.55	331	P	Pn	11 06 15.4	+0.8
DID	Didima	3.55	331	P	Pn	11 06 15.6	+1.0
DALY	Dalyan (Mula)	3.59	47	PN	Pn	11 06 17.6	+2.6
TURN	Turunc	3.59	46	PN	Pn	11 06 13.4	-1.7
YER	Yerkesik	3.60	40	PN	Pn	11 06 17.4	+2.1
VLY	Voula,Athens	3.67	340	P	Pn	11 06 18.4	+2.2
EPID	Epidavros	3.69	331	P	Pn	11 06 17.5	+1.0
PYL	PYLOS	3.87	311	ePn	Pn	11 06 19.6	+0.7
PYL	PYLOS	3.87	311	P	Pn	11 06 19.6	+0.7
ITM	Ithomi	3.94	316	ePn	Pn	11 06 21.3	+1.3
ITM	Ithomi	3.94	316	P	Pn	11 06 21.6	+1.6
ITM	Ithomi	3.94	316	P	Pn	11 06 21.5	+1.5
CHOS	Chios island	4.00	8	PN	Pn	11 06 22.6	+1.7
URLA	Izmir	4.06	14	PN	Pn	11 06 23.2	+1.6
LOUT	Loutraki	4.07	332	P	Pn	11 06 24.9	+3.2
MES3	Kyparissia	4.14	314	P	Pn	11 06 23.7	+1.1
VIL2	Platees	4.16	336	P	Pn	11 06 24.1	+1.1
EREA	Eretria	4.17	344	P	Pn	11 06 24.8	+1.7
THAL	Thalero	4.24	330	P	Pn	11 06 26.1	+2.2
GUR	Goura	4.29	326	ePn	Pn	11 06 26.0	+1.1
GUR	Goura	4.29	326	P	Pn	11 06 26.0	+1.1
GUR	Goura	4.29	326	P	Pn	11 06 26.2	+1.3
AMT	Artemida-Makis	4.31	317	P	Pn	11 06 26.3	+1.2
AMT	Artemida-Makis	4.31	317	P	Pn	11 06 26.0	+1.0
PROD	Prodromos	4.33	333	P	Pn	11 06 26.5	+1.2
ELL	Elmali	4.36	56	PN	Pn	11 06 28.3	+2.4
KLV	Kalavryta, Ach	4.47	325	P	Pn	11 06 28.9	+1.6
KLV	Kalavryta, Ach	4.47	325	P	Pn	11 06 28.8	+1.5
MRKA	Markates	4.52	342	P	Pn	11 06 29.7	+1.7
DSF	Desfina	4.61	331	P	Pn	11 06 30.6	+1.4
DSF	Desfina	4.61	331	P	Pn	11 06 30.8	+1.6
DRO	Drossia	4.62	321	P	Pn	11 06 31.9	+2.6
DRO	Drossia	4.62	321	P	Pn	11 06 31.2	+1.9
ATAL	Atalanti	4.68	337	P	Pn	11 06 31.4	+1.4
LAKA	Lakka	4.71	325	ePn	Pn	11 06 34.4	+3.9

EIL	Elat	9.39	118	Pn	Pn	11 07 34.6 -0.2
	comp=E,1.7nm,0.3s,baz=313,slow=2.8,SNR=15					
EIL				Sn	Sn	11 09 14.1 -5.6
	comp=E,0.4nm,0.3s,baz=222,slow=4.7,SNR=2.2					
VAE	Valguarnera	9.41	292	Sn	Sn	11 09 14.8 -5.3
	comp=E,0.6nm,0.3s,baz=105,slow=13,SNR=3.0					
ASF	Jabal al Asfar	9.89	100	Pn	Pn	11 07 41.4 -0.4
	comp=E,0.3nm,0.3s,baz=254,slow=7.4,SNR=3.0					
ASF				Sn	Sn	11 09 27.6 -4.4
	baz=168,slow=23,SNR=1.2					
STON	Ston	10.36	327	ePn	Pn	11 07 46.2 -1.8
STON				Sn	Sn	11 09 33.1 -10
MLR	Muntele Rosu	11.08	2	Pn	Pn	11 08 02.9 +5.0
	comp=E,0.2nm,0.3s,baz=170,slow=11,SNR=2.4					
MLR				LR	LR	11 13 00.5
	comp=E,130nm,21.1s,baz=237,slow=42					
ARSA	Arzberg	14.82	333	ePn	P	11 08 56.0 +1.4
	comp=E,6.3nm,1.5s					
VYHS	Vyhne	14.89	343	epPN		11 08 52.5
KBA	Koelnbreinsper	15.57	328	ePn	Pn	11 09 01.7 +2.6
	comp=E,4.5nm,0.8s					
ABTA	Abfaltersbach	15.71	326	ePn	P	11 09 05.2 +0.7
	comp=E,4.2nm,0.7s					
VRAC	Vranov	16.24	339	Pn	P	11 09 10.2 -0.1
	comp=E,0.2nm,0.3s,baz=123,slow=12,SNR=1.9					
GNI	Garni	16.43	64	Pn	P	11 09 12.7 +0.1
	comp=E,1.5nm,0.3s,baz=280,slow=9.0,SNR=3.5					
KIV	Kislovodsk	16.43	49	ePn	P	11 09 14.5 +2.0
	comp=E,36nm,1.0s					
KVAR	Kislovodsk Arr	16.43	49	Pn	P	11 09 12.7 +0.1
	baz=276,slow=23,SNR=13					
KBZ	Khabaz	16.45	50	Pn	P	11 09 12.7 +0.1
	comp=E,0.9nm,0.3s,baz=230,slow=6.5,SNR=61					
KBZ				LR	LR	11 15 49.3
	comp=E,39nm,21.8s,baz=228,slow=39					
WTTA	Wattenberg	16.49	325	ePn	Pn	11 09 10.1 -0.7
	comp=E,1.1nm,0.4s					
AKASG	Malin Array Be	16.52	9	Pn	Pn	11 09 12.2 +1.2
	comp=E,6.2nm,0.3s,baz=199,slow=11,SNR=7.2					
AKBB	Malin Array Si	16.52	9	ePn	Pn	11 09 12.7 +1.8
	comp=E,12nm,0.8s					
SQTA	Sankt Quirin	16.66	324	P	P	11 09 20.3 +5.2
	comp=E,2.7nm,0.4s					
FETA	Feichten	16.76	323	Pn	Pn	11 09 15.0 +0.9
	comp=E,5.6nm,1.0s					
GEC2	GERESS Array S	16.83	332	ePn	Pn	11 09 15.3 +0.3
	comp=E,6.3nm,1.0s					
GERES	GERESS Array B	16.83	332	Pn	P	11 09 17.0 0.0
	comp=E,0.3nm,0.3s,baz=154,slow=13,SNR=2.8					
RETA	Reutte	17.07	324	ePn	P	11 09 25.7 +6.1
	comp=E,3.1nm,0.7s					
TUE	Stuetta	17.11	320	ePn	Pn	11 09 16.8 -1.9
	comp=E,4.4nm,0.6s					
DAVA	Damuels	17.36	322	ePn	P	11 09 25.0 +2.1
	comp=E,4.3nm,0.5s					
SENIN	Lac Senin/Sane	18.18	316	ePn	Pn	11 09 29.1 -2.8
	comp=E,3.2nm,0.6s					
CLL	Collm	19.13	336	ePn	P	11 09 42.0 -0.1
CLL				Lm	MLR	12 41 00.0
	comp=Z,100nm,20.5s					
ESDC	Sonseca Array	23.95	291	P	P	11 10 34.7 +1.3
	comp=Z,0.4nm,0.3s,baz=83,slow=9.1,SNR=5.6					
FIA0	FINESS Array S	27.05	1	eP	P	11 10 59.6 -1.6
FINES	FINESS Array B	27.05	1	P	P	11 10 59.6 -1.6
	comp=Z,1.4nm,0.7s,baz=165,slow=12,SNR=5.9					
FINES				LR	LR	11 22 12.1
	comp=Z,65nm,21.6s,baz=228,slow=38					
NOA	NORSAR Array B	28.17	345	LR	LR	11 23 35.9
	comp=Z,21nm,19.9s,baz=165,slow=39					
AKTO	Aktyubinsk	28.63	46	P	P	11 11 15.0 -0.4
	comp=Z,1.0nm,0.3s,baz=239,slow=8.6,SNR=4.9					
EKA	Eskdalemuir Ar	28.76	325	P	P	11 11 16.4 -0.1
	comp=Z,0.4nm,0.4s,baz=122,slow=10,SNR=3.1					
ABKAR	Akbulak array	29.41	49	eP	P	11 11 20.9 -1.5
	comp=Z,1.1nm,0.5s					
TOA1	Torodi Ar. Sit	30.15	231	eP	P	11 11 30.6 +1.3
TOA0	Torodi Ar. Sit	30.16	231	eP	P	11 11 31.8 +2.6
	comp=Z,6.0nm,0.5s					
TORD	Torodi Ar. Bea	30.16	231	P	P	11 11 30.6 +1.3
	comp=Z,3.4nm,0.4s,baz=38,slow=8.3,SNR=1.5					
ARU	Arti	31.55	36	eP	P	11 11 39.7 -1.5
	comp=Z,4.7nm,0.5s					
ARA0	ARCESS Array S	35.18	0	eP	P	11 12 11.1 -1.6
ARCES	ARCESS Array B	35.18	0	P	P	11 12 11.1 -1.5
	comp=Z,1.0nm,0.5s,baz=182,slow=9.7,SNR=10					
ARE0	ARCESS Array S	35.18	0	eP	P	11 12 12.8 +0.2
KK31	Karatay Array	35.88	62	eP	P	11 12 19.7 +0.7
	comp=Z,4.1nm,0.8s					
KKAR	Karatay Array	35.88	62	eP	P	11 12 20.4 +1.4
	comp=Z,4.1nm,0.8s					
KURK	Kurchatov	41.51	50	eP	P	11 13 05.9 -0.2
	comp=Z,2.2nm,0.5s					
MAKZ	Makanchi	43.82	56	eP	P	11 13 25.4 +0.5
	comp=Z,2.1nm,1.1s					
MK31	Makanchi Array	44.04	56	eP	P	11 13 27.1 +0.4
	comp=Z,2.2nm,0.7s					
MK32	Makanchi Array	44.04	56	eP	P	11 13 26.9 +0.2
MKAR	Makanchi Array	44.04	56	P	P	11 13 26.9 +0.2
	comp=Z,2.5nm,0.6s,baz=275,slow=7.0,SNR=22					
ZAA0	Zalesovo Array	45.39	46	eP	P	11 13 37.9 +0.5
	comp=Z,3.3nm,0.6s					
ZAA1	Zalesovo Array	45.39	46	eP	P	11 13 36.8 -0.5
ZALV	Zalesovo Beam	45.39	46	P	P	11 13 36.8 -0.5
	comp=Z,3.5nm,0.4s,baz=267,slow=8.9,SNR=8.8					
WMQ	Urumqi	48.22	59	eP	P	11 14 01.5 +1.8
GTA	Gaotai	58.16	61	eP	P	11 15 14.0 +1.0
GTA				pP	pP	11 15 18.0 -2.0
GTA				sP	sP	11 15 20.5 -2.2
GTA				pmax	pmax	
	comp=Z,3.0nm,0.8s					
SONA0	Songino Array	59.82	50	eP	P	11 15 25.3 +0.9
SONM	Songino Array	59.82	50	P	P	11 15 25.3 +0.9
	comp=Z,1.1nm,0.7s,baz=295,slow=9.7,SNR=5.0					
HHC	Hu-ho-hao-te	65.90	56	P	P	11 16 03.5 -1.5
HHC				pmax	pmax	
	comp=Z,21nm,0.6s					
HHC				pmax	pmax	
	comp=Z,24nm,5.7s					
KMI	Kunming	66.32	75	P	P	11 16 07.8 -0.3
KMI				pmax	pmax	
	comp=Z,8.0nm,0.7s					
CMAR	Chiang Mai Arr	66.48	83	P	P	11 16 07.6 -1.2
	comp=Z,0.7nm,0.5s,baz=304,slow=10,SNR=4.2					
INK	Inuvik	76.38	352	P	P	11 17 07.7 -0.1
	comp=Z,0.7nm,0.8s,baz=9.2,slow=3.3,SNR=3.6					
INK	Inuvik	76.38	352	eP	P	11 17 07.7 -0.1
	comp=Z,0.4nm,0.8s					
USRK	Ussuriysk Ar.	77.24	45	P	P	11 17 13.4 +0.4
	comp=Z,1.7nm,0.5s,baz=290,slow=5.4,SNR=6.3					
YKA	Yellowknife Ar	78.22	342	P	P	11 17 18.2 +0.1
	comp=Z,0.3nm,0.6s,baz=30,slow=5.1,SNR=3.6					
YKB5	Yellowknife Ar	78.22	342	eP	P	11 17 18.2 +0.1
KSRS	Korea Array	78.59	52	P	P	11 17 21.2 +0.6
	comp=Z,1.1nm,0.6s,baz=309,slow=4.2,SNR=5.8					

IDC 27 11:09:33.3±3.4, 23°.91S×116°.51W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.7/39, mbtmp3.6/5, MS3.5/5, Ms1 3.6/5, ms1mx3.3/23, Error ellipse: s-maj=97.2km s-min=39.5km az=39.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	7.22	118	LR	LR	11 13 09.6	
	comp=Z,504nm,18.2s,baz=288,slow=30						
PPT	Papeete	31.51	275	LR	LR	11 25 34.7	
	comp=Z,41nm,19.6s,baz=136,slow=30						
NNA	Nana	39.42	80	LR	LR	11 29 09.0	
	comp=Z,42nm,20.0s,baz=282,slow=30						
ATAH	Atahualpa	40.16	72	LR	LR	11 29 45.8	
	comp=Z,52nm,20.5s,baz=261,slow=30						
LPAZ	La Paz	45.88	90	P	P	11 17 58.5	0.0
	1.0nm,0.3s,baz=270,slow=9.1,SNR=6.6						
TXAR	Lajitas Array	54.36	14	P	P	11 19 02.0	0.0
	0.2nm,0.8s,baz=191,slow=3.7,SNR=2.7						
NVAR	Mina Array Bea	62.04	358	P	P	11 19 57.3	+1.6
	0.4nm,0.7s,baz=190,slow=9.8,SNR=4.1						
VNDA	Vanda	65.02	194	LR	LR	11 44 31.4	
	comp=Z,145nm,18.1s,baz=148,slow=32						
PDAR	Pinedale Array	66.66	6	P	P	11 20 24.7	-1.2
	0.4nm,0.7s,baz=168,slow=8.6,SNR=5.3						
H11S2	WAKE ISLAND Hy	85.90	292	T	T	12 57 44.4	
	baz=118,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	85.92	292	T	T	12 57 36.7	
	baz=118,slow=75,SNR=52						
H11S3	WAKE ISLAND Hy	85.92	292	T	T	12 57 45.4	
	baz=118,slow=75,SNR=37						
YKA	Yellowknife Ar	86.12	1	P	P	11 22 14.9	-0.7
	0.5nm,0.8s,baz=176,slow=5.3,SNR=4.4						
H11N3	WAKE ISLAND Hy	86.28	293	T	T	12 58 13.0	
	baz=113,slow=78,SNR=6.6						
H11N1	WAKE ISLAND Hy	86.30	293	T	T	12 58 14.0	
	baz=113,slow=78,SNR=6.8						
H11N2	WAKE ISLAND Hy	86.30	293	T	T	12 58 12.2	
	baz=113,slow=78,SNR=11						
ZALV	Zalesovo Beam	146.00	337	PKPbc	PKPdf	11 29 14.1	+0.1
	1.1nm,0.5s,baz=1.9,slow=8.7,SNR=2.3						

GCG 27 11:15:37.9±0.4, 13°.30N×92°.19W, h7km, MD4.2
IDC 27 11:15:40.8±3.1, 13°.48N×91°.95W, h0km, mb3.5/3, mb1 3.9/6, mb1mx3.6/37, mbtmp3.5/6, ML3.5/3, MS2.7/2, Ms1 2.7/2, ms1mx2.5/27, Error ellipse: s-maj=62.0km s-min=35.7km az=0.0

ISC 27 11:15:39.6±1.2, 13°.3N±0°.1×91°.95W±0°.07, h10km, n14, σ2.52/14, mb3.5/4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.49	14	eP	Pn	11 16 05.5	-1.2
FUG	Fuego 3	1.60	42	eP	Pn	11 16 08.7	+0.6
IXG	Ixpaco	1.72	58	eP	Pn	11 16 10.9	+1.0
NBG	Las Nubes	2.04	49	eP	Pb	11 16 16.6	-0.4
NBG				eS	Sn	11 16 42.9	+2.9
APG	El Apazote	2.25	39	Pn	Pn	11 16 18.4	+1.2
	24nm,0.3s,baz=223,slow=8.3,SNR=97						
APG				Sn	Sn	11 16 39.5	-5.7
	12nm,0.3s,baz=331,slow=5.3,SNR=5.7						
APG				LR	LR	11 16 40.0	
	comp=Z,71nm,19.5s,baz=160,slow=28						
CMIG	Matias Romero	4.75	324	Pn	Pn	11 16 50.6	-0.7
	0.8nm,0.3s,baz=134,slow=6.0,SNR=8.3						
CMIG				Sn	Sn	11 17 32.5	-14
	1.3nm,0.3s,baz=99,slow=15,SNR=6.1						
JTS	Las Juntas de	7.45	113	Pn	Pb	11 17 47.3	-1.8
	0.5nm,0.3s,baz=147,slow=13,SNR=4.8						
TXAR	Lajitas Array	19.34	328	P	Pn	11 20 06.4	-0.2
	0.0nm,0.3s,baz=147,slow=7.4,SNR=7.2						
ANMO	Albuquerque	25.27	331	P	P	11 21 10.5	+4.1
	0.8nm,0.6s,baz=148,slow=15,SNR=5.1						
SJG	San Juan	25.29	76	LR	LR	11 31 38.4	
	comp=Z,46nm,19.0s,baz=123,slow=38						
NVAR	Mina Array Bea	34.28	322	P	P	11 22 29.4	+3.0
	0.4nm,0.6s,baz=129,slow=8.5,SNR=5.0						
YKA	Yellowknife Ar	51.76	347	P	P	11 24 46.5	-0.6
	0.8nm,0.5s,baz=151,slow=7.6,SNR=11						
ILAR	Eielson Array	63.54	337	P	P	11 26 11.3	+1.3
	0.3nm,0.8s,baz=99,slow=5.6,SNR=2.9						
CMAR	Chiang Mai Arr	146.71	341	PKPbc	PKiKP	11 35 24.1	-1.5
	0.4nm,0.3s,baz=343,slow=2.8,SNR=3.4						

MAN 27 11:18:46.8, 8°.70N×124°.73E, h83km, mb5.1, ML4.0, MS4.1, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	0.25	188	↑iP	Pn	11 18 54.7	-4.4
CGP				iS	Sn	11 19 07.9	-0.3
DCPH	Dipolog City	1.37	265	↓eP	Pn	11 19 11.2	+0.7
DCPH				eS	Sn	11 19 29.9	+1.5
CTBH	Cotabato--PC H	1.55	198	↑iP	Pn	11 19 16.0	+3.2
SNPH	Sibulan	1.61	294	eP	Pn	11 19 13.6	0.0
LLP	Lapu-Lapu	1.77	335	↑eP	Pn	11 19 15.9	+0.1
LLP				eS	Sn	11 19 39.2	+1.4

BJI 27 11:40:43.0±0.0, 61°.30N×150°.00W, h46km, mb4.7/7, mB4.7/4, Ms4.6/2
ISCJB 27 11:40:45.5±0.2, 61°.36N±0°.02×150°.08W±0°.04, h61km±1km, mb4.2/50, Error ellipse: s-maj=3.0km s-min=2.7km az=36.0
AEIC 27 11:40:46.9, 61°.33N×150°.02W, h55km, ML4.3, MB4.2(NEIC), MW4.3(NEIC)
NEIC 27 11:40:46.9±0.0, 61°.33N×150°.02W, h55km, mb4.2/61, MW4.3, ML4.3(AEIC), Moment Tensor Solution. s29 Moment tensor: Scale 10^{15}Nm; M_{rr}=1.94; $M_{\theta\theta}$=1.29; $M_{\phi\phi}$=3.23; $M_{r\theta}$=1.98; $M_{\theta\phi}$=-0.62; $M_{r\phi}$=0.93; Best double couple: M_0=3.60000×10^{15} NP1:ϕ_s=320.00000°, δ=50.00000°, λ=-146.00000°. NP2:ϕ_s=206.00000°, δ=64.00000°, λ=-45.00000°. Principal axes: T 3.4100, Plg8.0000°, Azm266.0000°; N 0.3900, Plg40.0000°, Azm3.0000°; P -3.8000, Plg49.0000°, Azm166.0000°; After AEIC.
NEIC Felt [IV] at Anchorage, Eagle River, Elmendorf AFB and Wasilla; [III] at Chugiak, Fort Richardson and Palmer. Felt throughout the greater Anchorage area.
IDC 27 11:40:46.1±1.5, 61°.33N×150°.49W, h56km±14km, mb3.8/18, mb1 4.0/20, mb1mx3.9/35, mbtmp4.1/20, MS3.1/13, Ms1 3.1/13, ms1mx2.9/54 Error ellipse: s-maj=12.1km s-min=8.9km az=97.0

ISC 27 11:40:46.7±0.6, 61°.32N±0°.03×150°.09W±0°.03, h59km±5km, n333, σ1.01/344, mb4.1/50, MS3.2/11, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RC01	Rabbit Creek A	0.28	143	ePn	Pn	11 40 56.1	-0.5
RC01				eSn	Sn	11 41 03.2	-0.4
SUA	Susitna One	0.35	295	ePn	Pn	11 40 56.4	-0.8
SUA				eSn	Sn	11 41 03.8	-1.0
PMR	Palmer	0.54	58	ePn	Pn	11 40 59.8	+0.8
PMR				eSn	Sn	11 41 06.2	-1.7
GHO	Glory Hole Cre	0.72	50	ePn	Pn	11 41 00.1	-1.1
GHO				eSn	Sn	11 41 10.3	-1.5
KNK	Knik Glacier	0.79	82	ePn	Pn	11 41 01.3	-0.7
KNK				eSn	Sn	11 41 12.6	-0.6
SLKM	Skilak Lake	0.81	185	ePn	Pn	11 41 01.7	-0.6
SKT	Skwentna	0.96	315	ePn	Pn	11 41 03.5	-0.6
SKT				eSn	Sn	11 41 16.5	-0.5
SPU	Mount Spurr	0.96	263	ePn	Pn	11 41 03.7	-0.5
SML	Sawmill	0.97	59	ePn	Pn	11 41 03.4	-1.0
SML				eSn	Sn	11 41 15.9	-1.5
SPWE	Spurr West	1.19	269	ePn	Pn	11 41 07.1	-0.3
SCM	Sheep Creek Mo	1.42	67	ePn	Pn	11 41 09.6	-0.8
RDJH	Redoubt Jeurge	1.51	242	ePn	Pn	11 41 11.5	-0.1
RDJH				eSn	Sn	11 41 30.7	+0.4
GLI	Glacier Island	1.52	105	ePn	Pn	11 41 10.5	-1.1
GLI				eSn	Sn	11 41 29.3	-1.0
RSO	Redoubt South	1.56	238	ePn	Pn	11 41 12.2	-0.1
BRLK	Bradley Lake	1.60	195	ePn	Pn	11 41 12.5	-0.3
BRLK				eSn	Sn	11 41 33.0	+0.6
HUR	Hurricane	1.68	7	ePn	Pn	11 41 13.5	-0.3
VMT	TAPS TI Valdez	1.82	96	ePn	Pn	11 41 14.8	-0.8
HOM	Homer	1.83	206	ePn	Pn	11 41 16.1	+0.3
HOM				eSn	Sn	11 41 36.2	-1.7
CNPM	China Poot	1.88	198	ePn	Pn	11 41 16.1	-0.4
CNPM				eSn	Sn	11 41 38.4	-0.8
IVE	Iliamna Volcan	1.94	229	ePn	Pn	11 41 17.5	+0.1
ILS	Iliamna Low So	2.00	228	ePn	Pn	11 41 18.6	+0.3
TRF	Thorofare Moun	2.15	358	ePn	Pn	11 41 19.7	-0.5
RND	Reindeer	2.18	15	ePn	Pn	11 41 21.4	+0.8
DHY	Denali Highway	2.18	35	ePn	Pn	11 41 19.9	-0.8
KTH	Kantishna Hill	2.28	351	ePn	Pn	11 41 22.0	0.0
CAST	Castle Rocks	2.31	337	ePn	Pn	11 41 22.9	+0.6
PS11	TAPS Pump St11	2.33	69	ePn	Pn	11 41 22.6	0.0
PS12	TAPS Pump St12	2.38	84	ePn	Pn	11 41 22.0	-1.4
MCK	McKinley	2.48	12	ePn	Pn	11 41 24.6	-0.1
SGAM	Sherman Glacie	2.52	107	ePn	Pn	11 41 23.6	-1.6
AUL	Augustine Lava	2.56	222	ePn	Pn	11 41 27.1	+1.4
AUH	Augustine H	2.57	222	ePn	Pn	11 41 26.5	+0.5
AUW	Augustine West	2.58	222	ePn	Pn	11 41 26.6	+0.6
BPAW	Bear Paw Mtn.	2.83	352	ePn	Pn	11 41 28.9	-0.4
BWN	Browne	2.88	5	ePn	Pn	11 41 31.6	+1.4
PS10	TAPS Pump St10	2.92	42	ePn	Pn	11 41 32.1	+1.4
HMT	Hamilton	3.02	106	ePn	Pn	11 41 30.1	-1.9
FONW	Fourpeaked Sta	3.14	219	ePn	Pn	11 41 33.6	-0.2
TT01	Tatalina	3.21	302	ePn	Pn	11 41 34.0	-0.6
TTA	Tatalina	3.22	303	ePn	Pn	11 41 34.2	-0.7
WRH	Wood River Hil	3.30	15	ePn	Pn	11 41 36.7	+0.9
HDA	Harding Lake	3.42	23	ePn	Pn	11 41 38.9	+1.4
HDA	Harding Lake	3.42	23	P	Pn	11 41 37.5	0.0
	baz=206,SNR=131						
RIDG	Independent Ri	3.44	43	ePn	Pn	11 41 38.3	+0.5
CCB	Clear Creek Bu	3.50	16	ePn	Pn	11 41 38.9	+0.3
KAHG	Katmai Hook Gl	3.61	220	ePn	Pn	11 41 40.4	+0.2
KAHC	Katmai Hardscr	3.64	225	ePn	Pn	11 41 40.5	-0.1
KARR	Katmai Rainbow	3.66	221	ePn	Pn	11 41 41.1	+0.3
TCOL	CIGO, UAF Yank	3.71	15	P	Pn	11 41 41.3	-0.2
	baz=196,SNR=188						
COLA	College	3.71	15	ePn	Pn	11 41 42.2	+0.7
SNH	Sunshine Point	3.74	105	ePn	Pn	11 41 40.0	-1.8
MLY	Manley	3.74	356	ePn	Pn	11 41 40.9	-1.1
BALM	Baldy	3.76	91	ePn	Pn	11 41 40.9	-1.3
ILAR	Eielson Array	3.76	21	P	Pn	11 41 42.5	+0.3
	7.3nm,0.3s,baz=197,slow=14,SNR=124						
ILAR				S	Sn	11 42 27.7	+2.6
	27nm,0.3s,baz=242,slow=14,SNR=1.6						
KDAK	Kodiak Island	3.76	201	P	Pn	11 41 40.6	-1.6
	15nm,0.3s,baz=56,slow=7.9,SNR=585						
KDAK				S	Sn	11 42 23.0	-2.1
	55nm,0.3s,baz=103,slow=19,SNR=7.4						
KDAK				LR	LR	11 42 59.6	
	comp=Z,83nm,21.6s,baz=28,slow=36						
SCRK	Sand Creek	3.88	44	ePn	Pn	11 41 45.3	+1.4
POKR	Poker Plat Res	4.00	16	P	Pn	11 41 45.1	-0.3
	baz=198,SNR=41						
KELA	Mount Kelaz	4.05	227	ePn	Pn	11 41 46.1	-0.1
BCA3	Beaver Creek A	4.27	62	ePn	Pn	11 41 48.5	-0.7
IM3	Indian Mountai	4.96	342	ePn	Pn	11 41 57.7	-0.9
PCA	Pinnacle	4.98	100	ePn	Pn	11 41 57.2	-1.7
EGAK	Eagle	5.34	46	ePn	Pn	11 42 03.4	-0.3
PS05	TAPS Pump Stn5	5.53	358	ePn	Pn	11 42 06.5	+0.2
PNL	Peninsula	5.54	103	ePn	Pn	11 42 04.5	-2.0
DAWY	Dawson	5.64	56	ePn	Pn	11 42 07.3	-0.6
FYU	Fort Yukon	5.69	20	ePn	Pn	11 42 08.9	+0.4
COLD	Coldfoot	5.94	360	ePn	Pn	11 42 10.8	-1.0
CHIR	Chirikof Islan	6.22	210	ePn	Pn	11 42 16.6	+0.8
BM3	Burnt Mountain	6.57	19	ePn	Pn	11 42 20.8	+0.1
TOLK	Toolik Lake Re	7.36	1	P	Pn	11 42 32.9	+1.5
	baz=182,SNR=28						
ANM	Nome	7.69	302	ePn	Pn	11 42 36.4	+0.5
EPYK	Eagle Plains	7.77	44	ePn	Pn	11 42 35.8	-1.2
EPYK	Eagle Plains	7.77	44	P	Pn	11 42 35.7	-1.4
	baz=235,SNR=11						
RDOG	Red Dog Mine	8.69	327	ePn	Pn	11 42 50.1	+0.5
INK	Inuvik	9.92	38	P	Pn	11 43 04.2	-2.0
	0.1nm,0.3s,baz=141,slow=4.7,SNR=3.5						
INK				S	Sn	11 44 57.2	+1.4
	1.7nm,0.3s,baz=252,slow=6.4,SNR=3.9						
INK	Inuvik	9.92	38	ePn	Pn	11 43 05.0	-1.3
WRAK	Wrangell Islan	10.40	110	ePn	Pn	11 43 12.4	-0.5
DLBC	Dease Lake	10.47	97	P	Pn	11 43 13.1	-0.9
	1.6nm,0.3s,baz=327,slow=13,SNR=14						
DLBC	Dease Lake	10.47	97	ePn	Pn	11 43 13.3	-0.7
BBB	Bella Bella	15.05	117	LR	LR	11 49 34.0	
	comp=Z,33nm,19.0s,baz=217,slow=35						
YKA	Yellowknife Ar	16.63	70	P	Pn	11 44 33.3	-2.1
	0.6nm,0.3s,baz=279,slow=9.8,SNR=14						
YKA				LR	LR	11 51 02.6	
	comp=Z,11nm,19.8s,baz=270,slow=37						
YKB5	Yellowknife Ar	16.63	70	ePn	Pn	11 44 33.4	-2.1
A04D	Lummi Island	19.94	117	P	P	11 45 14.4	+0.9
	baz=320						
B05A	Bryant	20.55	117	P	Pn	11 45 21.9	-1.0
	baz=320						
E04D	Cinebar	21.69	120	P	P	11 45 34.2	+1.9
	baz=323						
NEW	Newport	22.76	110	P	P	11 45 44.5	+0.7
	2.2nm,0.7s,baz=345,slow=9.0,SNR=4.7						
NEW				LR	LR	11 55 09.5	
	comp=Z,45nm,18.1s,baz=306,slow=38						
NEW	Newport	22.76	110	eP	P	11 45 44.3	+0.5
NEW				epP	pP	11 45 59.6	+2.5
NEW	Newport	22.76	110	P	P	11 45 44.6	+0.7
	baz=317						
G05D	Wamic, OR	23.27	121	P	P	11 45 49.3	+0.4
	baz=324						
H04D	Lebanon	23.27	124	P	P	11 45 50.0	+1.1
	baz=326						
H04A	Detroit Lake	23.36	123	eP	P	11 45 50.4	+0.5
	10nm,1.1s						
RES	Resolute Bay	23.42	33	P	P	11 45 50.2	+0.2
	1.7nm,0.5s,baz=251,slow=18,SNR=6.2						
RES	Resolute Bay	23.42	33	eP	P	11 45 49.0	-1.1
	9.9nm,1.1s						
J01E	Myrtle Point	23.95	127	P	P	11 45 57.3	+2.2
	baz=329						
I05D	Terrebonne, OR	23.99	122	P	P	11 45 57.0	+1.4
	baz=325,SNR=6.5						
I04A	Tendick Farm,	24.01	124	P	P	11 45 56.8	+1.1
	baz=327						
G08A	Pilot Rock	24.22	117	eP	P	11 45 57.3	-0.5
	4.4nm,1.0s						
K02D	Willamette Mer	24.45	128	P	P	11 46 01.8	+2.0
	baz=329						
J04D	Umpqua Nationa	24.59	125	P	P	11 46 03.1	+1.8
	baz=327						
PINE	Pine Mountain	24.61	122	eP	P	11 46 01.9	+0.5
	10.0nm,1.0s						

RSSD	Black Hills baz=319	31.91	101	P	P	11 47 07.4 +0.8
CWC	Cottonwood Cre baz=331	32.01	126	P	P	11 47 09.1 +1.7
VES	Vestal, Richgr baz=332	32.15	128	P	P	11 47 10.1 +1.6
SMMC	Simmler baz=333	32.28	130	P	P	11 47 11.8 +2.2
TPNV	Topopah Spring baz=330,SNR=5.6	32.30	123	P	P	11 47 11.1 +1.2
FURC	Furnace Creek, baz=331	32.47	125	P	P	11 47 13.1 +1.9
ISA	Isabella, Lake baz=332,SNR=5.1	32.54	127	P	P	11 47 13.0 +1.1
MPMC	Manual Prospec baz=331,SNR=7.0	32.58	126	P	P	11 47 14.2 +1.8
MSU	Marysvale	32.67	117	eP	P	11 47 14.2 +0.9
PKM	Mcpherson Peak baz=333,SNR=5.6	32.72	130	P	P	11 47 15.8 +2.1
AGMN	Agassiz Nation baz=314	32.82	88	P	P	11 47 14.7 +0.5
CCUT	Cedar City 5.8nm,0.8s	32.97	119	eP	P	11 47 16.7 +0.8
LRMC	Laurel Mtn Rad baz=332	33.01	127	P	P	11 47 17.6 +1.5
O20A	White River Ci baz=324	33.08	110	P	P	11 47 17.4 +0.6
EDW2	Edwards Air Fo baz=332	33.42	128	P	P	11 47 21.0 +1.4
GSC	Goldstone, Bar baz=332,SNR=6.3	33.51	126	P	P	11 47 21.8 +1.5
KNB	Kanab 7.6nm,0.8s	33.65	119	eP	P	11 47 22.7 +1.0
TUQ	Turquoise Moun baz=331	33.74	124	P	P	11 47 23.9 +1.5
RRX	Edison Barstow baz=332	33.81	126	P	P	11 47 24.7 +1.8
PV23	Carpenter Ridg 5.8nm,1.0s	34.10	113	eP	P	11 47 26.2 +0.4
BFSC	Mount Baldy Ra baz=333	34.11	128	P	P	11 47 26.5 +0.8
PV22	Blue Mesa, Par 4.9nm,1.2s	34.13	113	eP	P	11 47 27.0 +1.1
GMRC	Granite Mounta baz=331,SNR=5.3	34.41	125	P	P	11 47 29.4 +1.1
BELC	Belle Mtn. Jos baz=332	34.97	126	P	P	11 47 34.0 +1.0
PFO	Pinyon Flats O 6.1nm,0.8s	35.13	127	eP	P	11 47 35.8 +1.4
PFO	Pinyon Flats O baz=332	35.13	127	P	P	11 47 35.7 +1.2
IRM	Iron Mountain baz=332,SNR=5.7	35.16	124	P	P	11 47 36.0 +1.4
EYMN	Ely 3.6nm,0.6s	35.17	85	eP	P	11 47 34.9 +0.4
EYMN	Ely baz=314	35.17	85	P	P	11 47 35.3 +0.8
MVCO	Mesa Verde baz=327	35.36	114	P	P	11 47 36.5 0.0
PDMCI	Parker Dam,Lak baz=331	35.44	123	P	P	11 47 38.1 +1.1
BC3	Big Chuckawall baz=332	35.48	125	P	P	11 47 38.8 +1.3
WUAZ	Wupatki baz=329,SNR=7.8	35.54	119	P	P	11 47 39.5 +1.5
S22A	4UR Ranch, Cre 1.6nm,0.6s	35.66	111	eP	P	11 47 37.8 -1.4
S22A	4UR Ranch, Cre baz=326	35.66	111	P	P	11 47 40.2 +1.0
Y12C	Blythe baz=332	35.77	124	P	P	11 47 41.4 +1.6
MONP2	Monument Peak baz=333,SNR=7.6	35.78	127	P	P	11 47 41.7 +1.5
SWSC	Sam W. Stewart baz=333	35.97	126	P	P	11 47 42.8 +1.3
IKP	In-Ko-Pah, Jac baz=333	36.11	127	P	P	11 47 44.4 +1.5
SDCO	Great Sand Dun baz=325	36.26	110	P	P	11 47 45.1 +0.8
GLA	Glamis baz=332	36.26	125	P	P	11 47 45.4 +1.3
C40A	Isle Royale Na 6.6nm,0.8s	36.32	83	eP	P	11 47 44.6 +0.3
C40A	Isle Royale Na baz=315	36.32	83	P	P	11 47 44.5 +0.3
F38A	Pierce - Schro baz=316	36.40	88	P	P	11 47 45.6 +0.6
F39A	Loretta baz=316	36.89	87	P	P	11 47 49.7 +0.4
G39A	Holcombe baz=317	37.23	88	P	P	11 47 53.0 +0.9
T25A	Trinidad baz=325	37.25	109	P	P	11 47 53.8 +1.2
F40A	Park Falls baz=316	37.27	86	P	P	11 47 53.1 +0.5
G40A	Rib Lake baz=317	37.71	87	P	P	11 47 56.4 +0.2
214A	Organ Pipe Nat baz=332	38.03	123	P	P	11 48 00.6 +1.6
TASM	ASL Pad, Albuq baz=328	38.15	113	P	P	11 48 01.7 +1.4
TASM	ASL Pad, Albuq baz=328	38.15	113	P	P	11 48 01.8 +1.5
ANMO	Albuquerque baz=328	38.16	113	P	P	11 48 01.6 +1.3
E43A	Lone Tree Farm baz=316	38.45	83	P	P	11 48 02.4 0.0
TUC	Tucson baz=331	38.55	121	P	P	11 48 04.5 +1.0
SUMG	Summit 7.4nm,1.1s	38.59	27	eP	P	11 48 04.2 +0.5
SFJD	Kangerlussuaq comp=Z,18nm,20.7s,baz=228,slow=37	39.26	38	LR	LR	12 05 11.4
JFWS	Jewell Farm baz=319	39.44	90	P	P	11 48 10.7 0.0
H43A	Windswept, Lux baz=318	39.47	86	P	P	11 48 11.4 +0.5
D46A	Sault St. Mari baz=316	39.49	80	P	P	11 48 11.7 +0.6
121A	Cookes Peak, D baz=330	39.62	117	P	P	11 48 13.7 +1.2
E46A	Sault Ste Mari baz=317	39.74	81	P	P	11 48 13.7 +0.5
D47A	Chapleau baz=316	39.81	79	P	P	11 48 13.7 -0.1
E47A	Iron Bridge baz=317	40.16	80	P	P	11 48 16.7 0.0
D48A	Paudash Townsh baz=316	40.34	78	P	P	11 48 17.7 -0.4
D49A	Beulah Townshi baz=316	40.48	78	P	P	11 48 19.8 +0.5
K43A	Burlington baz=319	40.52	88	P	P	11 48 19.7 0.0
MSTX	Muleshoe baz=327	40.62	110	P	P	11 48 21.3 +0.6
E48A	Lockeyer baz=317	40.67	79	P	P	11 48 20.7 -0.2
F48A	Evansville baz=317	40.93	80	P	P	11 48 23.5 +0.5
F49A	Sandfield baz=317	41.26	80	P	P	11 48 25.3 -0.3
MNTX	Cornudas Mount baz=329	41.38	115	P	P	11 48 27.7 +0.8
WMOK	Wichita Mounta baz=326	41.82	105	P	P	11 48 30.7 +0.3
D53A	Lac Vacive, Po baz=317	42.34	75	P	P	11 48 33.9 -0.5
BMRO	Meriville Lake baz=318	42.51	80	P	P	11 48 36.2 +0.3
F52A	Sundridge baz=318	42.52	78	P	P	11 48 36.0 0.0
BASO	Ashfield baz=319	42.73	81	P	P	11 48 37.8 +0.1
BUKO	Buck Lake baz=318	42.74	78	P	P	11 48 38.0 +0.2
L48A	N Adams baz=320	42.97	86	P	P	11 48 39.7 0.0
E54A	Lac Daplat, Po baz=318	43.05	76	P	P	11 48 39.5 -0.8
I51A	Listowel baz=319	43.20	81	P	P	11 48 42.1 +0.7
P45A	Graceland, Par baz=322	43.24	91	P	P	11 48 41.2 -0.7
SADO	Sadowa comp=Z,39nm,20.2s,baz=328,slow=36	43.37	79	LR	LR	12 07 13.4
P46A	Rosedale baz=322	43.43	90	P	P	11 48 43.3 -0.1
N48A	Decatur baz=321	43.52	87	P	P	11 48 43.6 -0.5
W39A	Magazine baz=325	43.80	100	P	P	11 48 47.1 +0.7
N49A	Columbus Grove baz=321	43.88	86	P	P	11 48 46.6 -0.4
O48A	Farmland baz=321	43.92	88	P	P	11 48 46.7 -0.6
TX31	Lajitas Ar. Si 2.7nm,0.9s	44.16	115	eP	P	11 48 47.6 -1.9
TXAR	Lajitas Array 1.5nm,0.7s,baz=333,slow=6.9,SNR=23	44.16	115	P	P	11 48 50.6 +1.2
O49A	Covington baz=321	44.37	87	P	P	11 48 50.3 -0.6
Q48A	North Vernon baz=322	44.68	89	P	P	11 48 52.6 -0.8
S46A	Don Dixon Farm baz=323	44.71	92	P	P	11 48 53.7 +0.1
J54A	Appleton baz=320	44.73	80	P	P	11 48 53.6 -0.1
O50A	Cable baz=321	44.75	87	P	P	11 48 53.7 -0.3
MEDO	Medina baz=320	44.90	80	P	P	11 48 54.9 -0.2
JCT	Junction City baz=328	44.91	110	P	P	11 48 56.1 +0.8
L53A	Girard baz=320	44.97	82	P	P	11 48 56.0 +0.3
ACSO	Alum Creek Sta baz=321	44.99	86	P	P	11 48 55.2 -0.6
M53A	WI Miller and baz=321	45.16	83	P	P	11 48 57.1 -0.1
K55A	Perry baz=320	45.42	80	P	P	11 48 59.0 -0.3
S48A	Wiedeman Farm, baz=323	45.53	91	P	P	11 49 00.3 +0.2
N53A	Lisbon baz=321	45.58	84	P	P	11 49 00.5 0.0
M54A	Oil Creek Stat baz=321	45.59	82	P	P	11 49 00.6 0.0
LONY	Lake Ozonia baz=319	45.62	75	P	P	11 49 00.9 0.0
L55A	Hinsdale baz=320	45.66	81	P	P	11 49 01.6 +0.4
Q51A	Peebles baz=322	45.76	87	P	P	11 49 01.5 -0.5
S49A	Springfield baz=323	45.80	90	P	P	11 49 01.8 -0.4
T48A	Bowling Green baz=323	45.80	92	P	P	11 49 01.9 -0.4
V46A	Holladay baz=324	46.02	94	P	P	11 49 03.9 -0.1
M55A	Ridgway baz=321	46.05	81	P	P	11 49 04.5 +0.2
T49A	Edmonton baz=323	46.22	91	P	P	11 49 05.4 -0.2
O54A	Avella baz=321	46.28	84	P	P	11 49 05.5 -0.5
S50A	Richmond baz=323	46.31	89	P	P	11 49 06.3 0.0
M56A	Emporium baz=321	46.32	81	P	P	11 49 06.1 -0.2
N55A	Marion Center baz=321	46.48	82	P	P	11 49 07.4 -0.2
U49A	Red Boiling Sp baz=323	46.57	92	P	P	11 49 08.2 -0.1
T50A	Nancy baz=323	46.62	90	P	P	11 49 09.0 +0.3
P54A	Burton baz=322	46.69	84	P	P	11 49 09.2 0.0
S51A	Beattyville baz=323	46.73	89	P	P	11 49 09.3 -0.3
Q53A	Leroy baz=322	46.77	86	P	P	11 49 09.4 -0.5
R53A	Hurricane baz=322	46.98	87	P	P	11 49 11.0 -0.4
Q54A	Coxs Mills baz=322	47.00	85	P	P	11 49 11.2 -0.5
O56A	Blue Knob Stat baz=321	47.08	82	P	P	11 49 12.1 -0.2
T51A	Gray baz=323	47.10	90	P	P	11 49 12.5 0.0
U50A	Jamestown baz=323	47.10	91	P	P	11 49 13.0 +0.5
V49A	McMinnville baz=324	47.11	92	P	P	11 49 12.3 -0.2
SSPA	Standing Stone baz=321	47.12	81	P	P	11 49 12.6 +0.1
W48A	Pulaski baz=324	47.12	94	P	P	11 49 12.4 -0.2
N57A	Milroy baz=321	47.19	81	P	P	11 49 12.3 -0.8
Q55A	Buckhannon baz=322	47.35	85	P	P	11 49 13.2 -1.2
O57A	Amberson baz=322	47.57	82	P	P	11 49 15.9 -0.2
V50A	Pikevile baz=324	47.58	92	P	P	11 49 16.2 0.0
X48A	Hartselle 3.4nm,0.6s	47.62	94	eP	P	11 49 16.9 +0.4
X48A	Hartselle baz=324	47.62	94	P	P	11 49 16.9 +0.4
TZTN	Tazewell baz=323	47.62	90	P	P	11 49 16.8 +0.3
T53A	Wise baz=323	47.76	88	P	P	11 49 17.4 -0.3
V51A	Loudon baz=324	47.83	91	P	P	11 49 17.9 -0.2
N59A	State Game Lan baz=321	47.91	79	P	P	11 49 18.5 -0.2
X49A	Woodville baz=324	47.92	94	P	P	11 49 18.9 +0.1
P57A	Homestead Farm baz=322	47.96	83	P	P	11 49 18.7 -0.4
S55A	Lewisburg baz=323	48.12	86	P	P	11 49 19.4 -0.9
Q57A	Strasburg baz=322	48.12	83	P	P	11 49 20.0 -0.4
X50B	Fort Payne baz=324	48.29	93	P	P	11 49 21.0 -0.7
U54A	Nelsons Funny baz=323	48.48	88	P	P	11 49 23.3 +0.1
O60A	Telford baz=322	48.55	80	P	P	11 49 23.7 +0.1
S56A	Natural Bridge baz=323	48.64	85	P	P	11 49 25.2 +0.8
R57A	Stanardsville baz=323	48.65	84	P	P	11 49 24.3 -0.1
V53A	Saluda baz=324	48.68	90	P	P	11 49 24.6 -0.2
Y50A	Piedmont baz=325	48.71	94	P	P	11 49 25.0 +0.1
U55A	TA2, Sparta baz=323	48.86	87	P	P	11 49 26.3 +0.1
Z49A	Columbiana baz=325	48.89	95	P	P	11 49 26.0 -0.3
W53A	Cullowhee baz=324	48.91	90	P	P	11 49 26.3 -0.4
X52A	Dahlonega baz=324	49.02	91	P	P	11 49 28.3 +1.0
Z50A	Ashland baz=325	49.14	94	P	P	11 49 28.2 0.0
ARA0	ARCESS Array S	49.40	2	eP	P	11 49 29.9 +0.1
ARA0				ePcP	PcP	11 50 49.7 -1.5
ARCES	ARCESS Array B 1.1nm,0.7s,baz=324,slow=11,SNR=3.3	49.40	2	P	P	11 49 29.9 +0.1
ARCES				PcP	PcP	11 50 49.7 -1.5
W54A	Cherokee Point baz=324	49.45	90	P	P	11 49 30.3 -0.3
Y52A	Lilburn baz=325	49.54	92	P	P	11 49 31.8 +0.5
150A	Eclectic baz=325	49.62	95	P	P	11 49 32.0 +0.1
V56A	Mocksville baz=324	49.69	88	P	P	11 49 32.2 -0.1
KMSC	Kings Mountain baz=324	49.82	89	P	P	11 49 34.4 +1.0
LNIG	Linares 5.0nm,0.7s	49.86	113	eP	P	11 49 33.8 0.0
250A	Grady baz=326	50.02	96	P	P	11 49 36.3 +1.4
Y54A	Tignall baz=325	50.20	91	P	P	11 49 36.0 -0.3
X55A	Gracelyn & Ava baz=324	50.22	90	P	P	11 49 36.0 -0.4
W57A	Gilead baz=324	50.46	88	P	P	11 49 38.1 -0.1
X56A	White Oak baz=324	50.49	89	P	P	11 49 38.0 -0.4
Y55A	Saluda baz=325	50.54	90	P	P	11 49 38.7 -0.2
Z54A	Sparta baz=325	50.64	92	P	P	11 49 39.0 -0.6
KSRS	Korea Array 0.8nm,0.4s,baz=37,slow=7.2,SNR=5.0	54.27	284	P	P	11 50 05.7 -0.7
KSRS				LR	LR	12 14 50.4
	comp=Z,21nm,18.2s,baz=97,slow=38					
KS15	Wonju Array Si	54.30	284	eP	P	11 50 05.7 -0.9
SONA0	Songino Array	55.16	307	eP	P	11 50 13.1 +0.2
SONM	Songino Array 1.8nm,0.7s,baz=32,slow=8.8,SNR=7.5	55.16	307	P	P	11 50 13.1 +0.2
NOA	NORSAR Array B	57.13	11	LR	LR	12 16 04.5
	comp=Z,9.0nm,19.1s,baz=180,slow=37					
ZAA1	Zalesovo Array	57.14	325	eP	P	11 50 25.3 -1.4
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=22,slow=5.8,SNR=2.7	57.14	325	P	P	11 50 25.3 -1.4
FIA0	FINESS Array S	57.53	2	eP	P	11 50 28.0 -1.3
FINES	FINESS Array B 1.5nm,0.6s,baz=23,slow=10,SNR=9.0	57.53	2	P	P	11 50 28.0 -1.3
HHC	Hu-ho-hao-te	58.83	299	P	P	11 50 40.8 +1.9
HHC				pmax	pmax	
	comp=Z,8.0nm,0.7s					
HHC				pmax	pmax	
	comp=Z,16nm,5.7s					
MKAR	Makanchi Array 0.5nm,0.6s,baz=188,slow=24,SNR=6.6	64.28	323	P	P	11 51 13.0 -2.4
MKAR				LR	LR	12 22 13.5
	comp=Z,37nm,20.8s,baz=140,slow=39					
GTA	Gaotai	64.82	306	eP	P	11 51 34.8 +16
GTA				pP	sP	11 51 38.8 -2.9
GTA				sP	pP	11 51 42.3 +7.2
GTA				pmax	pmax	
	comp=Z,4.0nm,0.9s					
WMQ	Urumqi	65.28	318	eP	P	11 51 26.0 +4.0
WMQ				pmax	pmax	
	comp=Z,94nm,5.9s					
WMQ				LR	LR	
	comp=Z,200nm,29.0s					
WMQ				LR	LR	
	comp=Z,480nm,29.3s					
LZH	Lanzhou	66.08	302	eP	P	11 51 26.8 -0.6
LZH				pP	pP	11 51 41.5 -1.8
LZH				sP	sP	11 51 47.0 -2.9
LZH				pmax	pmax	
	comp=Z,17nm,1.0s					
AKTO	Aktyubinsk	66.35	341	LR	LR	12 22 42.9
	comp=Z,21nm,19.2s,baz=74,slow=38					
ABKAR	Akbulak array	67.17	339	eP	P	11 51 32.6 -1.2
	comp=Z,3.6nm,0.8s					
LANS	Liptovska Anna	69.57	7	eP	P	11 51 49.5 +0.6
VYHS	Vyhne	70.18	8	eP	P	11 51 52.4 -0.3
KECS	Kecovo	70.29	7	eP	P	11 51 53.1 -0.2
KSH	Kashi	72.78	324	eP	P	11 52 10.5 +1.9
KBZ	Khabaz	74.78	350	P	P	11 52 19.8 -0.3
	comp=Z,1.6nm,0.6s,baz=297,slow=4.8,SNR=3.9					
ESDC	Sonseca Array	75.65	26	P	P	11 52 24.8 -0.4
	comp=Z,1.3nm,0.7s,baz=338,slow=5.8,SNR=4.6					
BR101	Keskin Array S	79.27	357	eP	P	11 52 44.9 -0.7
BRTR	Keskin Array B comp=Z,0.5nm,0.5s,baz=0.0,slow=4.1,SNR=4.3	79.27	357	P	P	11 52 44.9 -0.7
CMAR	Chiang Mai Arr comp=Z,1.8nm,0.8s,baz=15,slow=5.6,SNR=9.5	83.58	297	P	P	11 53 07.5 -0.9
CMAR				LR	LR	12 34 55.0
	comp=Z,26nm,18.5s,baz=170,slow=39					
BOSA	Boshof comp=Z,3.6nm,0.8s,baz=329,slow=3.7,SNR=5.2	147.15	8	PKPbc	PKPdf	12 00 20.9 +0.5

MEX 27 11:59:50.6±0.4, 13°.73N×92°.34W, h50km±257km, MD3.8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		2.14	337	eP	Pn	12 00 22.6	-1.2
PCIG				eS	Sn	12 00 47.1	-2.1

*IDC **27** 12:01:16.4±1.0, 29°.89N×88°.02E, h0km, mb3.8/11, mb1 4.0/13, mb1mx3.8/46, mbtmp3.8/13, ML3.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/40, Error ellipse: s-maj=34.5km s-min=17.2km az=58.0*

*ISCJB **27** 12:01:21.8±0.5, 30°.17N±0°.06×88°.20E±0°.09, h37km, mb3.8/11, MS3.0/2, Error ellipse: s-maj=12.2km s-min=7.3km az=28.2*

ISC 27 12:01:23.0±0.7, 30°.09N±0°.09×88°.15E±0°.08, h37km, n24, σ1§90/22, mb3.8/11, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	Gumba 324nm,0.8s	2.95	223	eP	Pn	12 02 11.5	+4.0
JIRN	Jiri 96nm,0.6s	2.97	216	eP	Pn	12 02 09.4	+1.5
KKN	Kakani 116nm,0.9s	3.40	228	eP	Pn	12 02 17.0	+3.3
PKI	Pulchoki 77nm,0.7s	3.48	224	eP	Pn	12 02 15.4	+0.6
PKIN	Phulchoki	3.48	225	eP	Pn	12 02 15.3	+0.5
DMN	Daman 73nm,0.8s	3.64	228	eP	Pn	12 02 18.2	+1.2
KOLN	Koldanda 26nm,0.7s	4.61	241	eP	Pn	12 02 31.3	+1.0
PYUN	Piuthan 61nm,0.9s	4.93	248	eP	Pn	12 02 36.6	+1.9
SHL	Shillong	5.59	143	eP	Pn	12 02 47.0	+3.3
CMAR	Chiang Mai Arr baz=339,slow=12,SNR=3.4	15.19	137	Pn	Pn	12 04 51.2	-3.6
MKAR	Makanchi Array 0.1nm,0.3s,baz=146,slow=13,SNR=10.0	17.29	346	P	Pn	12 05 21.1	-0.2
KURBB	Kurchatov Arra 3.1nm,0.2s,baz=157,slow=11,SNR=17	21.74	343	P	P	12 06 11.2	+0.3
SONM	Songino Array 2.4nm,0.8s,baz=222,slow=12,SNR=9.2	22.60	33	P	P	12 06 22.1	+1.8
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=169,slow=8.2,SNR=2.2	23.96	355	P	P	12 06 34.7	+1.1
KSRS	Korea Array comp=Z,19nm,18.3s,baz=265,slow=39	33.68	67	LR	LR	12 23 24.0	
JNU	Nakatsue comp=Z,31nm,20.4s,baz=182,slow=40	36.34	74	LR	LR	12 25 50.4	
BRTR	Keskin Array B 0.7nm,0.7s,baz=64,slow=8.4,SNR=3.7	45.12	298	P	P	12 09 35.6	-0.2
FINES	FINESS Array B 0.8nm,0.5s,baz=112,slow=8.5,SNR=6.3	50.76	327	P	P	12 10 19.1	+0.1
NOA	NORSAR Array B 0.7nm,0.7s,baz=89,slow=7.0,SNR=2.5	57.91	326	P	P	12 11 09.7	-1.4
WRA	Warramunga Arr 0.5nm,0.6s,baz=314,slow=7.7,SNR=5.2	66.72	132	P	P	12 12 09.3	-1.1
ASAR	Alice Springs 0.8nm,1.0s,baz=319,slow=6.5,SNR=7.3	69.19	135	P	P	12 12 25.0	-1.0
ILAR	Eielson Array 0.7nm,0.8s,baz=305,slow=4.3,SNR=5.1	76.24	21	P	P	12 13 07.3	+0.1
INK	Inuvik 1.9nm,0.9s,baz=349,slow=8.1,SNR=7.5	77.15	15	P	P	12 13 12.8	+0.5
YKA	Yellowknife Ar 0.7nm,0.8s,baz=321,slow=5.8,SNR=6.0	85.94	10	P	P	12 13 58.0	-0.8

*ISCJB **27** 12:15:54.3±0.4, 37°.43N±0°.03×72°.04E±0°.08, h200km, mb3.5/9, Error ellipse: s-maj=8.9km s-min=4.8km az=179.1*

*IDC **27** 12:15:54.4±4.7, 37°.37N×72°.10E, h190km±31km, mb3.3/8, mb1 3.3/14, mb1mx3.1/51, mbtmp3.8/14, Error ellipse: s-maj=43.6km s-min=22.1km az=171.0*

*NNC **27** 12:15:60.0±3.3, 37°.89N×72°.26E, h250km±32km, mb2.8, mpv4.0, Error ellipse: s-maj=32.2km s-min=21.9km az=21.0*

ISC 27 12:15:55.1±0.7, 37°.47N±0°.06×71°.99E±0°.09, h200km, n32, σ1§80/40, mb3.5/9, 8C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.64	181	P	Pn	12 16 52.1	-0.5
CEP				S	Sn	12 17 35.0	-2.6
CHCP	Chirah Chowk	3.94	164	⇑P	Pn	12 16 56.3	+0.1
THW	Thamme Wali	4.67	183	P	Pn	12 17 04.6	-0.8
AML	Almayashu SNR=11	4.84	15	P	Pn	12 17 08.3	+0.6
UCH	Uchtor SNR=40	5.13	21	P	Pn	12 17 11.9	+0.3
KZA	Kyzart SNR=7.0	5.24	28	P	Pn	12 17 12.5	-0.5
EKS2	Erkin-Say	5.37	14	P	Pn	12 17 14.9	+0.7

SNR=16
AAK Ala-Archa 5.51 20 P Pn 12 17 16.9 +0.8
7.7nm,0.3s,baz=182,slow=4.2,SNR=35
AAK S **Sn 12 18 18.9 -1.2**
2.7nm,0.3s,baz=2.6,slow=6.6,SNR=7.8
AAK Ala-Archa 5.51 20 P Pn 12 17 16.9 +0.8
SNR=16
AAK Ala-Archa 5.51 20 ⇑P Pn 12 17 16.4 +0.3
16nm,0.5s
AAK ⇑S **Sn 12 18 19.1 -1.0**
6.1nm,0.5s
KBK Karagaybulak 5.66 23 P Pn 12 17 19.1 +1.1
SNR=9.3
KK31 Karatay Array 5.74 349 ⇓P Pn 12 17 19.8 +0.9
9.5nm,0.5s,baz=174,slow=13,SNR=52
KK31 ⇑S **Sn 12 18 24.8 -0.5**
2.5nm,0.3s,baz=173,slow=22,SNR=4.5
ULHL Ulahol 5.79 33 P Pn 12 17 17.5 -2.2
SNR=7.8
CHMS Chumysh 5.91 20 P Pn 12 17 22.1 +0.9
SNR=8.6
TKM2 Tokmak 2 6.11 26 P Pn 12 17 24.1 +0.3
SNR=17
TKM2 Tokmak 2 6.11 26 ⇑P Pn 12 17 23.8 -0.1
6.8nm,0.5s
TKM2 ⇓S **Sn 12 18 29.4 -4.7**
4.3nm,0.6s
MKAR Makanchi Array 12.04 36 P Pn 12 18 41.4 +1.0
0.1nm,0.3s,baz=214,slow=10,SNR=1.5
KURBB Kurchatov Arra 13.96 18 P Pn 12 19 04.8 +0.6
0.1nm,0.3s,baz=199,slow=11,SNR=4.1
AB31 Akbulak array 14.66 327 ⇑P P 12 19 14.8 +0.9
1.1nm,0.5s,baz=146,slow=13,SNR=31
AB31 ⇑S **S 12 21 53.4 -2.2**
1.0nm,0.8s,baz=89,slow=28,SNR=4.1
BVAR Borovoye Array 15.60 356 P Pn 12 19 25.7 +1.4
0.3nm,0.3s,baz=168,slow=15,SNR=5.5
AKTO Aktyubinsk 16.37 327 P Pn 12 19 35.7 +2.1
0.5nm,0.3s,baz=124,slow=10,SNR=9.8
AKTO S **S 12 22 29.0 -4.9**
0.2nm,0.3s,baz=276,slow=10,SNR=1.4
AKTO Aktyubinsk 16.37 327 ⇓P P 12 19 31.5 -1.3
3.8nm,0.8s
AKTO ⇑S **S 12 22 28.7 -5.2**
1.9nm,0.9s
ZALV Zalesovo Beam 18.71 24 P P 12 19 58.6 +0.3
1.1nm,0.3s,baz=224,slow=10,SNR=12
SONM Songino Array 27.14 57 P P 12 21 20.7 +1.0
0.6nm,0.5s,baz=280,slow=9.6,SNR=2.7
FINES FINESS Array B 37.13 325 P P 12 22 47.9 +1.8
1.1nm,0.8s,baz=106,slow=10,SNR=3.7
ARCES ARCESS Array B 40.56 337 P P 12 23 16.3 +1.8
0.5nm,0.4s,baz=95,slow=8.6,SNR=7.9
NOA NORSAR Array B 44.09 322 P P 12 23 43.9 +0.8
0.5nm,0.5s,baz=94,slow=7.6,SNR=1.8
TIXI Tiksi 44.58 22 P P 12 23 47.3 +0.6
1.4nm,0.3s,baz=297,slow=6.4,SNR=4.7
TORD Torodi Ar. Bea 66.53 269 P P 12 26 23.6 -0.2
5.5nm,0.3s,baz=47,slow=6.0,SNR=1.8
INK Inuvik 72.82 10 P P 12 27 02.2 +0.9
0.7nm,0.4s,baz=339,slow=4.6,SNR=9.3
ILAR Eielson Array 73.63 16 P P 12 27 05.9 -0.2
0.3nm,0.9s,baz=332,slow=7.1,SNR=2.5
YKA Yellowknife Ar 80.24 3 P P 12 27 43.5 +0.5
0.4nm,0.5s,baz=350,slow=5.3,SNR=6.8

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*ISCJB **27** 12:17:19.0±2.0, 13°.22N×0°.07×92°.06W±0°.04, h22km±16km, mb3.8/6, MS3.0/1, Error ellipse: s-maj=12.6km s-min=6.4km az=178.5*
*IDC **27** 12:17:18.4±1.4, 13°.37N×91°.95W, h0km, mb3.8/6, mb1 4.1/9, mb1mx3.9/46, mbtmp3.8/9, ML3.6/3, MS2.6/2, Ms1 2.7/2, ms1mx2.5/28, Error ellipse: s-maj=31.8km s-min=23.1km az=41.0*
*GCG **27** 12:17:20.6±0.7, 13°.49N×92°.04W, h12km±17km, MD4.1*
*SNET **27** 12:17:22.7±1.7, 13°.34N×91°.79W, h15km, ML3.8*
*UCR **27** 12:17:23.1±2.9, 13°.41N×91°.92W, h40km±999km, MD3.7, ML3.7*
ISC 27 12:17:20.8±2.6, 13°.43N±0°.09×91°.99W±0°.05, h15km±15km, n30, σ0°.95/41, mb3.8/6, 2C-4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.34**	**18**	*eP*	**Pn**	**12 17 44.0**	**-1.3**
FUG	**Fuego 3**	**1.51**	**48**	*eP*	**Pn**	**12 17 47.4**	**-0.1**
FUG	**Fuego 3**	**1.51**	**48**	*eP*	**Pn**	**12 17 47.4**	**-0.1**
PCG	**Pacaya**	**1.65**	**54**	*eP*	**Pb**	**12 17 51.1**	**-0.1**
PCG				*eS*	**Sg**	**12 18 13.9**	**-0.3**
PCG	**Pacaya**	**1.65**	**54**	*eP*	**Pn**	**12 17 51.0**	**+0.4**
IXG	**Ixpaco**	**1.68**	**64**	*eP*	**Pb**	**12 17 51.4**	**-0.2**
IXG				*eS*	**Sg**	**12 18 15.0**	**0.0**
IXG	**Ixpaco**	**1.68**	**64**	*eP*	**Pn**	**12 17 49.6**	**-0.3**
NBG	**Las Nubes**	**1.97**	**54**	*eP*	**Pn**	**12 17 55.0**	**+1.0**
NBG				*eS*	**Sb**	**12 18 21.7**	**+0.5**
NBG	**Las Nubes**	**1.97**	**54**	*eP*	**Pn**	**12 17 55.0**	**+1.0**
NBG				*eS*	**Sb**	**12 18 20.7**	**-0.4**
APG	**El Apazote**	**2.16**	**43**	Pn	**Pn**	**12 17 56.8**	**+0.3**
	30nm,0.3s,baz=211,slow=7.5,SNR=198						
APG				LR	LR	12 18 17.4	
	comp=Z,68nm,21.3s,baz=180,slow=27						
APG				Sn	**Sb**	**12 18 26.1**	**-0.4**
	17nm,0.3s,baz=313,slow=17,SNR=3.8						
RTR	**El Retiro**	**2.33**	**78**	*⇓iP*	**Pn**	**12 17 59.8**	**+0.9**
RTR	**El Retiro**	**2.33**	**78**	*⇓iP*	**Pn**	**12 17 59.8**	**+0.9**
CEVE	**Cerro Verde**	**2.34**	**80**	*eP*	**Pn**	**12 17 58.3**	**-0.7**
CEVE				*eS*	**Sn**	**12 18 25.8**	**-1.8**
CEVE				IAML		12 18 44.1	
	comp=Z,669nm,0.4s						
CEVE	**Cerro Verde**	**2.34**	**80**	*eP*	**Pn**	**12 17 58.3**	**-0.7**
CEVE				*eS*	**Sn**	**12 18 25.8**	**-1.8**
CEVE				IAML		12 18 44.1	
	comp=Z,669nm,0.4s						
SBLS	**San Blas**	**2.34**	**80**	*⇓iP*	**Pn**	**12 17 58.2**	**-0.8**
SBLS	**San Blas**	**2.34**	**80**	*⇓iP*	**Pn**	**12 17 58.2**	**-0.8**
BOQS	**Boqueron**	**2.65**	**83**	*eP*	**Pn**	**12 18 03.0**	**-0.4**
BOQS				*eS*	**Sn**	**12 18 34.5**	**-1.0**
MTO3	**Montecristo**	**2.73**	**69**	*⇑iP*	**Pn**	**12 18 03.7**	**-0.7**
MTO3				*eS*	**Sn**	**12 18 38.1**	**+0.8**
MTO3	**Montecristo**	**2.73**	**69**	*⇑iP*	**Pn**	**12 18 03.7**	**-0.7**
MTO3				*eS*	**Sn**	**12 18 38.1**	**+0.8**
LFRS	**El Faro**	**2.86**	**86**	*eP*	**Pn**	**12 18 06.2**	**+0.2**
LFRS				*eS*	**Sn**	**12 18 38.7**	**-1.5**
CMIG	**Matias Romero**	**4.59**	**323**	Pn	**Pn**	**12 18 28.5**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=135,slow=8.6,SNR=12						
CMIG				Sn	**Sn**	**12 19 21.6**	**-1.3**
	comp=Z,1.8nm,0.3s,baz=118,slow=12,SNR=5.3						
TXAR	**Lajitas Array**	**19.18**	**327**	P	**Pn**	**12 21 46.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=150,slow=10,SNR=13						
ANMO	**Albuquerque**	**25.10**	**331**	P	**P**	**12 22 46.3**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=155,slow=13,SNR=6.0						
NVAR	**Mina Array Bea**	**34.12**	**322**	P	**P**	**12 24 07.5**	**+2.0**
	comp=Z,1.5nm,0.9s,baz=136,slow=8.3,SNR=7.1						
SIV	**San Ignacio**	**42.30**	**133**	P	**P**	**12 25 13.8**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=320,slow=9.4,SNR=4.0						
YKA	**Yellowknife Ar**	**51.58**	**347**	P	**P**	**12 26 25.2**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=151,slow=7.6,SNR=15						
INK	**Inuvik**	**60.99**	**344**	P	**P**	**12 27 32.5**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=118,slow=7.1,SNR=8.8						
ILAR	**Eielson Array**	**63.37**	**337**	P	**P**	**12 27 49.9**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=121,slow=4.9,SNR=4.9						
NOA	**NORSAR Array B**	**84.64**	**28**	LR	LR	13 05 40.4	
	comp=Z,7.7nm,21.6s,baz=205,slow=34						
CMAR	**Chiang Mai Arr**	**146.53**	**341**	PKPbc	**PKPdf**	**12 37 01.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=10,slow=3.8,SNR=5.2						

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*IDC **27** 12:21:50.6±7.0, 33°.35S×138°.31E, h0km, mb1 3.1/3, mb1mx3.1/18, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=86.7km s-min=25.2km az=2.0*
*AUST **27** 12:21:51.6±0.0, 33°.48S×138°.26E, h10km, Error ellipse: s-maj=0.1km s-min=0.1km az=40.0*
ISC 27 12:21:51.0±1.2, 33°.44S±0°.10×138°.31E±0°.04, h10km, n8, σ1°.77/14, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	**Hallett**	**0.52**	**89**	P	**Pg**	**12 22 02.1**	**+1.0**
	baz=0.6						
HTT				S	**Sg**	**12 22 09.3**	**+1.5**
	baz=0.6						
BBOO	**Buckleboo**	**1.99**	**288**	P	**Pn**	**12 22 25.1**	**+0.4**
	baz=2.0						
BBOO				S	**Sn**	**12 22 48.5**	**-1.2**
	baz=2.0						
STKA	**Stephens Creek**	**3.18**	**62**	Pn	**Pn**	**12 22 41.5**	**+0.3**
	0.1nm,0.3s,baz=243,slow=14,SNR=2.8						
STKA				Pg	**Pb**	**12 22 48.3**	**+0.7**
	0.3nm,0.3s,baz=239,slow=13,SNR=6.3						
STKA				Sn	**Sn**	**12 23 19.4**	**+0.2**
	1.0nm,0.3s,baz=216,slow=14,SNR=6.2						
STKA				Lg	Lg	12 23 30.1	
	1.6nm,0.3s,baz=336,slow=13,SNR=4.8						
STKA	**Stephens Creek**	**3.18**	**62**	P	**Pn**	**12 22 42.4**	**+1.3**
	baz=3.2						
STKA				S	**Sn**	**12 23 16.9**	**-2.3**
	baz=3.2						
ARPS	**Mount Arapiles**	**4.40**	**140**	P	**Pn**	**12 22 57.9**	**-0.1**
	baz=4.4						
CMSA	**Cobar Meteorol**	**6.52**	**75**	P	**Pn**	**12 23 26.6**	**-0.4**
	baz=6.6						
CMSA				S	**Sn**	**12 24 36.9**	**-4.7**
	baz=6.6						
ASAR	**Alice Springs**	**10.48**	**337**	Pn	**Pn**	**12 24 21.1**	**-0.2**
	0.0nm,0.3s,baz=171,slow=8.8,SNR=5.3						
ASAR				Sn	Sn	12 26 10.1	-8.8
	0.1nm,0.3s,baz=165,slow=22,SNR=6.3						
WRA	**Warramunga Arr**	**13.90**	**344**	Pn	**Pn**	**12 25 07.8**	**-0.4**
	0.0nm,0.3s,baz=173,slow=14,SNR=2.5						
WRA				Sn	Sn	12 27 31.6	-11
	0.0nm,0.3s,baz=174,slow=24,SNR=2.8						

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*ISCJB **27** 12:26:34.4±0.7, 58°.5N±0°.1×31°.7W±0°.1, h10km, mb3.9/20, MS3.5/14, Error ellipse: s-maj=16.9km s-min=8.4km az=7.5*
*IDC **27** 12:26:34.1±1.0, 58°.48N×31°.72W, h0km, mb3.9/15, mb1 4.0/16, mb1mx3.9/44, mbtmp3.9/16, ML3.2/1, MS3.5/17, Ms1 3.5/17, ms1mx3.4/32, Error ellipse: s-maj=27.4km s-min=14.5km az=7.0*
*NEIC **27** 12:26:36.4±0.8, 58°.45N×31°.64W, h10km, mb4.1/6, Error ellipse: s-maj=19.7km s-min=8.6km az=242.0*
ISC 27 12:26:35.8±0.9, 58°.5N±0°.2×31°.72W±0°.09, h10km, n42, σ1°.07/30, mb4.0/20, MS3.5/14, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**8.00**	**34**	Pn	**Pn**	**12 28 32.3**	**+0.5**
	0.3nm,0.3s,baz=230,slow=14,SNR=3.0						
BORG				LR	LR	12 30 45.2	
	comp=Z,182nm,21.7s,baz=212,slow=31						
SFJD	**Kangerlussuaq**	**12.11**	**323**	LR	LR	12 33 25.6	
	comp=Z,529nm,19.3s,baz=126,slow=34						
ESK	**Eskdalemuir**	**15.84**	**89**	*e*Pn	**Pn**	**12 30 19.1**	**+0.6**
	19nm,1.1s						
SCHQ	**Schefferville**	**19.50**	**274**	LR	LR	12 37 20.7	
	comp=Z,244nm,19.1s,baz=91,slow=33						
NB200	**NORSAR Array S**	**21.49**	**65**	*eP*	**P**	**12 31 24.9**	**+0.6**
NOA	**NORSAR Array B**	**21.49**	**65**	P	**P**	**12 31 24.9**	**+0.6**
	3.7nm,1.1s,baz=282,slow=9.1,SNR=3.0						
HFS	**Hagfors**	**22.89**	**66**	P	**P**	**12 31 39.6**	**+0.4**
	4.1nm,0.8s,baz=260,slow=6.9,SNR=5.8						
ESDC	**Sonseca Array**	**25.86**	**125**	P	**P**	**12 32 07.2**	**-0.1**
	0.1nm,0.3s,baz=318,slow=11,SNR=3.3						
ESDC				LR	LR	12 40 45.3	
	comp=Z,62nm,20.2s,baz=295,slow=33						
ARA0	**ARCESS Array S**	**26.29**	**42**	*eP*	**P**	**12 32 09.6**	**-1.4**
ARCES	**ARCESS Array B**	**26.29**	**42**	P	**P**	**12 32 09.6**	**-1.4**
	2.0nm,0.8s,baz=258,slow=9.8,SNR=4.3						
ARCES				LR	LR	12 40 48.8	
	comp=Z,47nm,19.1s,baz=273,slow=32						
GERES	**GERESS Array B**	**28.07**	**90**	LR	LR	12 43 28.9	
	comp=Z,141nm,19.0s,baz=296,slow=36						
FIA0	**FINESS Array S**	**28.27**	**59**	*eP*	**P**	**12 32 28.3**	**-0.4**
FINES	**FINESS Array B**	**28.27**	**59**	P	**P**	**12 32 28.3**	**-0.4**
	1.8nm,0.7s,baz=316,slow=5.8,SNR=2.8						
FINES				LR	LR	12 42 56.0	
	comp=Z,54nm,18.1s,baz=248,slow=35						
AKASG	**Malin Array Be**	**35.02**	**76**	P	**P**	**12 33 27.9**	**-0.2**
	0.8nm,0.3s,baz=311,slow=7.9,SNR=4.2						
AKASG				LR	LR	12 47 06.3	
	comp=Z,41nm,19.7s,baz=0.0,slow=35						
ULM	**Lac du Bonnet**	**36.93**	**286**	LR	LR	12 47 38.8	
	comp=Z,138nm,18.2s,baz=46,slow=34						
YKA	**Yellowknife Ar**	**38.39**	**312**	P	**P**	**12 33 55.4**	**-1.2**
	1.2nm,0.7s,baz=59,slow=8.5,SNR=7.0						
YKB5	**Yellowknife Ar**	**38.39**	**312**	*eP*	**P**	**12 33 55.4**	**-1.2**
INK	**Inuvik**	**41.42**	**327**	P	**P**	**12 34 22.5**	**+0.8**
	2.7nm,0.9s,baz=19,slow=9.2,SNR=9.3						
BR101	**Keskin Array S**	**44.72**	**85**	*eP*	**P**	**12 34 49.4**	**+0.4**
BRTR	**Keskin Array B**	**44.72**	**85**	P	**P**	**12 34 49.4**	**+0.4**
	0.9nm,0.8s,baz=330,slow=4.3,SNR=5.8						
BRTR				LR	LR	12 54 20.0	
	comp=Z,52nm,19.8s,baz=272,slow=37						
DAWY	**Dawson**	**46.05**	**324**	*eP*	**P**	**12 35 00.3**	**+1.2**
	6.0nm,1.0s						
EGAK	**Eagle**	**46.06**	**326**	*eP*	**P**	**12 35 01.9**	**+2.7**
	5.6nm,1.1s						
KBZ	**Khabaz**	**46.60**	**74**	LR	LR	12 55 33.1	
	comp=Z,52nm,18.2s,baz=6.0,slow=37						
SCRK	**Sand Creek**	**47.49**	**326**	*eP*	**P**	**12 35 12.1**	**+1.7**
	5.8nm,1.0s						
ILAR	**Eielson Array**	**47.70**	**328**	P	**P**	**12 35 12.3**	**+0.4**
	1.8nm,0.9s,baz=31,slow=6.7,SNR=12						
BW06	**Boulder Array**	**48.92**	**287**	*eP*	**P**	**12 35 22.9**	**+1.0**
	1.2nm,0.8s						
PDAR	**Pinedale Array**	**48.92**	**287**	P	**P**	**12 35 20.9**	**-1.0**
	0.9nm,0.6s,baz=39,slow=7.2,SNR=8.8						
PDAR				LR	LR	12 54 56.1	
	comp=Z,120nm,18.1s,baz=70,slow=35						
TIXI	**Tiksi**	**49.45**	**8**	P	**P**	**12 35 25.1**	**-0.2**
	1.3nm,0.4s,baz=325,slow=2.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**51.72**	**137**	LR	LR	12 54 58.7	
	comp=Z,47nm,22.0s,baz=315,slow=33						
TXAR	**Lajitas Array**	**56.16**	**272**	P	**P**	**12 36 16.1**	**+0.5**
	0.2nm,0.6s,baz=56,slow=3.2,SNR=4.5						
TXAR				LR	LR	12 59 50.4	
	comp=Z,50nm,18.6s,baz=0.0,slow=36						
NVAR	**Mina Array Bea**	**56.55**	**290**	LR	LR	12 59 32.7	
	comp=Z,66nm,19.4s,baz=19,slow=35						
GEYT	**Alibeck**	**58.53**	**68**	LR	LR	13 00 32.3	
	comp=Z,28nm,20.7s,baz=240,slow=35						
MK31	**Makanchi Array**	**61.88**	**45**	*eP*	**P**	**12 36 55.5**	**+0.6**
	1.1nm,0.7s						
MK32	**Makanchi Array**	**61.88**	**45**	*eP*	**P**	**12 36 53.2**	**-1.6**
MKAR	**Makanchi Array**	**61.88**	**45**	P	**P**	**12 36 53.2**	**-1.6**
	1.5nm,0.8s,baz=327,slow=5.8,SNR=8.6						
SONA0	**Songino Array**	**68.58**	**29**	*eP*	**P**	**12 37 38.9**	**+0.4**
SONM	**Songino Array**	**68.58**	**29**	P	**P**	**12 37 38.9**	**+0.4**
	0.5nm,0.3s,baz=332,slow=2.5,SNR=5.3						
H10S1	**ASCENSION HYDR**	**68.60**	**162**	T	T	13 51 46.4	
	baz=350,slow=75,SNR=8.5						
H10S3	**ASCENSION HYDR**	**68.61**	**162**	T	T	13 51 42.9	
	baz=350,slow=75,SNR=8.8						
H10S2	**ASCENSION HYDR**	**68.62**	**162**	T	T	13 51 52.3	
	baz=350,slow=75,SNR=10.0						
BOSA	**Boshof**	**98.83**	**132**	LR	LR	13 27 03.8	
	comp=Z,44nm,18.3s,baz=209,slow=37						
ASAR	**Alice Springs**	**143.73**	**23**	PKP	**PKPdf**	**12 46 09.7**	**-1.1**
	0.3nm,0.7s,baz=337,slow=2.9,SNR=4.6						

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*AZER **27** 12:45:47.0±1.8, 38°.78N×43°.35E, h5km, ml3.2/9, Error ellipse: s-maj=15.7km s-min=8.9km az=107.0*
*NSSP **27** 12:45:47.2, 38°.83N×43°.58E, h9km, Ms3.5*
*DDA **27** 12:45:48.6, 38°.88N×43°.50E, h10km±1km, ML3.7*
*ISK **27** 12:45:48.1, 38°.88N×43°.58E, h5km, ML3.5/16*
ISC 27 12:45:49.4±0.9, 38°.87N±0°.02×43°.51E±0°.02, h11km±6km, n61, σ1°.22/86, 2C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.13**	**21**	*iP*	**Pg**	**12 45 52.8**	**+0.1**
VMUR				*iS*	**Sg**	**12 45 55.0**	**-0.2**
VMUR				IAML_P			
	comp=Z,357μm,0.3s						
ERCV	**ERCIS-VAN**	**0.20**	**319**	PG	**Pg**	**12 45 53.3**	**-0.6**
ERCV				SG	**Sg**	**12 45 58.0**	**+1.0**
VANB	**Van**	**0.29**	**200**	PG	**Pb**	**12 45 57.1**	**+0.5**
VANB				SG	**Sb**	**12 46 03.6**	**+2.1**
TVAN	**Van**	**0.35**	**194**	*iP*	**Pb**	**12 45 57.8**	**+0.1**
TVAN				*iS*	**Sb**	**12 46 03.7**	**+0.4**
CLDR	**Caldiran**	**0.42**	**49**	PG	**Pg**	**12 45 56.3**	**-1.5**
CLDR				SG	**Sg**	**12 46 02.9**	**-0.5**
CLDR	**Caldiran**	**0.42**	**49**	*iP*	**Pg**	**12 45 57.0**	**-0.8**
CLDR				*iS*	**Sb**	**12 46 03.5**	**-1.9**
CLDR				IAML_P			
	comp=Z,101μm,0.1s						
GEVA	**Gevas**	**0.66**	**213**	*iP*	**Pb**	**12 46 03.0**	**0.0**
GEVA				*iS*	**Sg**	**12 46 09.8**	**-0.9**
GEVA				IAML_P			
	comp=Z,22μm,0.2s						
AKDM	**Akdamar-Van**	**0.68**	**218**	PG	**Pg**	**12 46 02.2**	**-0.4**
AKDM				SG	**Sb**	**12 46 14.3**	**+1.5**
DYDN	**Diyadin**	**0.69**	**11**	*iP*	**Pg**	**12 46 01.6**	**-1.2**
DYDN				*iS*	**Sb**	**12 46 12.5**	**-0.7**
DYDN				IAML_P			
	comp=Z,27μm,0.1s						
TUTA	**Tutak**	**0.76**	**315**	*iP*	**Pg**	**12 46 03.0**	**-1.2**
TUTA				*iS*	**Sb**	**12 46 14.9**	**-0.5**
MLAZ	**Malazgirt-MUS**	**0.80**	**290**	PG	**Pb**	**12 46 05.6**	**+0.2**
MLAZ				SG	**Sn**	**12 46 18.2**	**-0.6**
BLIS	**Bitlis-Merkez**	**1.18**	**248**	*iP*	**Pn**	**12 46 08.7**	**-3.3**
BLIS				*iS*	**Sb**	**12 46 26.7**	**-0.6**
TASB	**TASBURUN-IGDIR**	**1.25**	**27**	PN	**Pb**	**12 46 12.6**	**-0.5**
EATA	**Eleskirt**	**1.27**	**322**	*iP*	**Pn**	**12 46 12.8**	**-0.6**
EATA				*iS*	**Sn**	**12 46 30.5**	**-0.1**
EATA				IAML_P			
	comp=Z,9μm,0.2s						
HAKT	**HAKKARI**	**1.31**	**173**	*iP*	**Pn**	**12 46 13.2**	**-0.7**
HAKT				IAML_P			
	comp=Z,6μm,0.3s						
HYR	**Heyderabad**	**1.34**	**50**	P	**Pg**	**12 46 14.9**	**-0.4**
HYR				S	**Sg**	**12 46 35.5**	**+2.8**
ARUZ	**Aruch**	**1.48**	**17**	*⇑iP*	**Pb**	**12 46 16.9**	**-0.2**
ARUZ				*⇑iS*	**Sg**	**12 46 39.0**	**+1.8**
SRTM	**Siirt_Merkez**	**1.52**	**236**	*iP*	**Pg**	**12 46 18.7**	**+0.1**
SRTM				*iS*	**Sg**	**12 46 38.8**	**+0.4**
SRTM				IAML_P			
	comp=Z,4μm,0.3s						
DIGO	**Kars**	**1.55**	**356**	*iP*	**Pb**	**12 46 18.3**	**0.0**
DIGO				IAML_P			
	comp=Z,8μm,0.3s						
MUSM	**Mu-Merkez**	**1.57**	**265**	*iP*	**Pn**	**12 46 17.5**	**+0.2**
MUSM				*iS*	**Sg**	**12 46 40.0**	**+0.2**
MUSM				IAML_P			
	comp=Z,2μm,0.2s						
NAX	**Nakhchivan**	**1.57**	**78**	P	**Pb**	**12 46 17.9**	**-0.7**
NAX				S	**Sg**	**12 46 42.7**	**+2.6**
GNI	**Garni**	**1.60**	**36**	PN	**Pb**	**12 46 18.1**	**-0.9**
GNI	**Garni**	**1.60**	**36**	*⇓iP*	**Pb**	**12 46 18.7**	**-0.4**
GNI				*⇓iS*	**Sg**	**12 46 40.7**	**-0.1**
CUKT	**Cukurca**	**1.62**	**177**	PN	**Pb**	**12 46 19.1**	**-0.2**
CUKT	**Cukurca**	**1.62**	**177**	*iP*	**Pg**	**12 46 19.9**	**-0.5**
CUKT				IAML_P			
	comp=Z,3μm,0.5s						
SBZ	**Shahbuz**	**1.67**	**71**	P	**Pb**	**12 46 19.2**	**-1.1**
SBZ				S	**Sg**	**12 46 43.0**	**-0.2**
KOPR	**Koprukoy-ERZUR**	**1.71**	**312**	PN	**Pb**	**12 46 20.7**	**-0.2**
HOMI	**Horasan**	**1.71**	**314**	*iP*	**Pb**	**12 46 21.2**	**+0.2**
HOMI				IAML_P			
	comp=Z,5μm,0.4s						
KARS	**Kars**	**1.79**	**349**	PN	**Pb**	**12 46 21.6**	**-0.7**
EAK	**Akyaka**	**1.82**	**2**	*iP*	**Pg**	**12 46 24.7**	**+0.4**
EAK				IAML_P			
	comp=Z,5μm,0.3s						
BNGL	**BINGOL**	**1.84**	**273**	*iP*	**Pb**	**12 46 24.1**	**+0.8**
SENK	**Senkaya-Erzuru**	**1.92**	**333**	PN	**Pb**	**12 46 23.4**	**-1.1**
ORD	**Ordubad**	**1.94**	**87**	P	**Pn**	**12 46 21.8**	**-0.6**
ORD				S	**Sg**	**12 46 50.1**	**-1.6**
SVAN	**Silvan-Diyarba**	**1.95**	**249**	PN	**Pb**	**12 46 24.4**	**-0.6**
SVAN	**Silvan-Diyarba**	**1.95**	**249**	*iP*	**Pb**	**12 46 24.8**	**-0.1**
SVAN				IAML_P			
	comp=Z,3μm,0.3s						
BTMN	**Batman**	**2.01**	**242**	*iP*	**Pb**	**12 46 26.9**	**+0.8**
BTMN				*iS*	**Sn**	**12 46 45.4**	**-3.2**
BTMN				IAML_P			
	comp=Z,4μm,0.4s						
AKDA	**Akdag**	**2.07**	**307**	*iP*	**Pb**	**12 46 27.9**	**+0.7**
ECAT	**Cat-ERZURUM**	**2.10**	**291**	*iP*	**Pb**	**12 46 28.1**	**+0.4**
BNGB	**Bingl**	**2.21**	**274**	PN	**Pb**	**12 46 28.1**	**-1.4**
BGOL	**Bingol**	**2.22**	**274**	*iP*	**Pb**	**12 46 30.1**	**+0.5**
BGOL				IAML_P			
	comp=Z,839nm,0.3s						
STEZ	**Stepenevan**	**2.24**	**17**	*eP*	**Pn**	**12 46 27.0**	**+0.4**
HANI	**Diyarbakir_Han**	**2.48**	**261**	*iP*	**Pb**	**12 46 32.7**	**-1.3**
HANI				IAML_P			
	comp=Z,1μm,0.3s						
KRIK	**Erzurum-spir**	**2.48**	**307**	*iP*	**Pg**	**12 46 36.1**	**-0.8**
DAGI	**Agillar**	**2.53**	**331**	*iP*	**Pg**	**12 46 36.2**	**-1.6**
GDB	**GEDABAY**	**2.53**	**42**	P	**Pn**	**12 46 32.1**	**+1.5**
GDB				S	**Sb**	**12 47 06.8**	**+0.6**
DBAD	**Bademkaya**	**2.56**	**328**	*iP*	**Pb**	**12 46 36.6**	**+1.1**
KOPT	**Kop Dagi**	**2.60**	**297**	*iP*	**Pg**	**12 46 38.0**	**-1.3**
QZX	**Qazax, Azerbai**	**2.62**	**33**	P	**Pn**	**12 46 32.8**	**+1.1**
QZX				S	**Sb**	**12 47 07.9**	**-0.6**
MARD	**Mardin**	**2.66**	**235**	*iP*	**Pb**	**12 46 37.7**	**+0.7**
EPOS	**Posof**	**2.70**	**347**	*iP*	**Pb**	**12 46 38.8**	**+0.9**
MAZI	**Mazidag**	**2.79**	**241**	PN	**Pn**	**12 46 36.5**	**+2.3**
GANJ	**Ganja**	**2.80**	**50**	P	**Pn**	**12 46 35.1**	**+0.9**
GANJ				S	**Sb**	**12 47 13.2**	**-0.6**
DIYA	**Diyarbakir**	**2.83**	**252**	*iP*	**Pb**	**12 46 38.6**	**-1.3**
DIYA				IAML_P			

JMA 27 12:59:34.0±0.2,41°.25N×146°.52E,h33km,M3.4
SKHL 27 12:59:58.2±0.5,42°.16N×146°.41E,h54km±5km,mb4.1/1
ISC 27 12:59:34.5±3.2,41°.2N±0°.1×146°.6E±0°.1,h35km,n17,
σ0s82/26,Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	2.16	332	S	Sn	13 00 33.5	0.0
NEM2	Nemuro 2	2.26	345	P	Pn	13 00 09.9	+0.6
NEM2				S	Sn	13 00 35.8	-0.1
JAK	Akkeshi	2.28	323	P	Pn	13 00 10.0	+0.5
JAK				S	Sn	13 00 36.3	0.0
JOB	Onbets	2.66	311	P	Pn	13 00 15.5	+0.8
JOB				eS	Sn	13 00 45.6	-0.1
GLVR	Golovnino	2.66	344	eS	Sn	13 00 45.0	-0.8
JNK	Nakash	2.76	331	P	Pn	13 00 16.0	-0.1
JNK				eS	Sn	13 00 46.7	-1.5
JCH	Churui	2.78	302	P	Pn	13 00 16.9	+0.5
JCH				eS	Sn	13 00 48.3	-0.5
GRPR	Tuman	2.86	349	eP	Pn	13 00 27.0	+9.4
GRPR				eS	Sn	13 00 49.0	-1.8
GRPR				A	A	13 00 54.0	
	170nm,0.4s						
GRPR				A	A	13 00 54.0	
	37nm,0.4s						
YUK	Yuzh-Kuril'sk	2.89	350	eP	Pn	13 00 28.0	+10
YUK				AMB	AMB	13 00 28.0	
	9.0nm,0.3s						
YUK				AMB	AMB	13 00 28.0	
	18nm,0.3s						
YUK				AMB	AMB	13 00 28.0	
	61nm,0.3s						
YUK				eS	Sn	13 00 50.0	-1.5
YUK				A	A	13 00 58.0	
	56nm,0.4s						
YUK				A	A	13 00 58.0	
	117nm,0.4s						
LAGR	Lagunnoye	2.92	349	eS	Sn	13 00 51.0	-1.2
JRA	Rausu	2.95	339	P	Pn	13 00 19.5	+0.8
JRA				eS	Sn	13 00 52.6	-0.2
JAR	Ashorobuto	2.96	316	P	Pn	13 00 19.0	+0.1
JAR				eS	Sn	13 00 52.6	-0.5
JNBK	Urakawa-nobuka	3.05	292	P	Pn	13 00 21.1	+0.9
JNBK				eS	Sn	13 00 55.9	+0.5
JTKR	Abashiri--Toko	3.40	326	P	Pn	13 00 26.1	+1.1
JTKR				eS	Sn	13 01 04.6	+0.6
KUR	Kuril'sk	4.15	13	eS	Sn	13 01 23.0	+0.4
JOT	Ohata	4.16	274	P	Pn	13 00 34.7	-0.7
JKB	Kayabe	4.21	281	P	Pn	13 00 35.9	-0.2

IDC 27 13:08:14.4±6.3,3°.98S×153°.49E,h112km±53km,mb3.4/5,
mb1 3.6/6,mb1mx3.2/30,mbtmp3.8/6,MS3.1/1,Ms1 3.1/1,
ms1mx2.5/17,Error ellipse: s-maj=72.3km s-min=30.0km
az=119.0
ISC 27 13:08:24.8±2.0,4°.2S±0°.3×153°.0E±0°.4,h207km,n7,
σ2s89/7,mb3.6/5,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.80	228	P	Pn	13 10 13.5	-1.9
	1.0nm,0.3s,baz=58,slow=15,SNR=1.4						
PMG				S	S	13 11 41.9	-1.8
	0.3nm,0.3s,baz=172,slow=12,SNR=2.0						
JAY	Jayapura	12.40	277	LR	LR	13 15 09.9	
	comp=Z,76nm,19.5s,baz=348,slow=32						
WRA	Warramunga Arr	24.02	228	P	P	13 13 23.6	+2.7
	0.7nm,0.3s,baz=57,slow=10,SNR=3.8						
ASAR	Alice Springs	26.75	222	P	P	13 13 49.0	+3.4
	0.2nm,0.4s,baz=50,slow=8.3,SNR=6.9						
FITZ	Fitzroy Crossi	30.15	241	P	P	13 14 17.4	+1.7
	2.2nm,0.9s,baz=60,slow=11,SNR=2.4						
SONM	Songino Array	65.92	328	P	P	13 18 49.4	+0.7
	0.8nm,0.7s,baz=150,slow=6.7,SNR=2.2						
ILAR	Eielson Array	81.51	22	P	P	13 20 16.6	-2.1
	0.8nm,1.0s,baz=260,slow=5.4,SNR=4.1						

ISCJB 27 13:14:31.4±0.4,24°.62N±0°.03×122°.78E±0°.01,
h107km±3km,Error ellipse: s-maj=5.0km s-min=2.2km
az=174.9
JMA 27 13:14:31.3±0.1,24°.60N×122°.77E,h111km±1km,M3.1
TAP 27 13:14:31.4,24°.64N×122°.80E,h109km,ML3.3,C
ISC 27 13:14:31.5±1.3,24°.62N±0°.05×122°.77E±0°.02,h109km±7km,
n94,σ0s64/156,13C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.23	137	P	Pn	13 14 46.9	-0.1
JYNG				S	Sn	13 14 58.6	+0.1
YOJ	Yonaguni jima	0.27	126	P	Pn	13 14 47.1	0.0
	baz=141						
YOJ				S	Sn	13 14 58.4	-0.3
	baz=141						
YOJ	Yonaguni jima	0.27	126	P	Pn	13 14 47.1	0.0
YOJ				eS	Sn	13 14 58.9	+0.2
EOS1	EOS1	0.59	263	P	Pn	13 14 49.1	+0.2
	baz=255						
EOS1				S	Sn	13 15 02.7	+0.7
	baz=255						
EGS		0.80	287	eP	Pn	13 14 50.8	+0.2
	baz=277						
TWB1	Santiao Chiao	0.81	299	⇑P	Pn	13 14 51.0	+0.2
TWB1	baz=292						
				eS	Sn	13 15 05.1	-0.3
	baz=292						
TWC	Suao	0.84	269	⇑P	Pn	13 14 51.0	-0.1
TWC	baz=263						
				eS	Sn	13 15 04.9	-0.9
	baz=263						
NTC	Toucheng	0.89	285	eP	Pn	13 14 51.7	+0.1
NTC	baz=278						
				eS	Sn	13 15 06.7	0.0
	baz=278						
IRIF	Iriomote-Funau	0.92	108	P	Pn	13 14 51.8	0.0
IRIF				eS	Sn	13 15 07.3	+0.2
TIPB	Shuangxi	0.93	292	⇑P	Pn	13 14 52.3	+0.3
TIPB	baz=286						
				S	Sn	13 15 07.0	-0.5
	baz=286						
ILA	Ilan	0.94	279	eP	Pn	13 14 52.2	+0.2
	baz=272						
NANB	Nanao	0.95	259	P	Pn	13 14 52.4	+0.2
NANB	baz=252						
				S	Sn	13 15 08.0	+0.3
	baz=252						
ENA	Nanau	0.96	259	⇓P	Pn	13 14 52.4	+0.2
ENA	baz=252						
				eS	Sn	13 15 08.0	+0.1
	baz=252						
NWF	Wu-fen Shan	1.01	297	⇑P	Pn	13 14 53.3	+0.4
NWF	baz=288						
				eS	Sn	13 15 08.7	-0.3
	baz=288						
WFSB	Wu-fen Shan	1.01	297	P	Pn	13 14 53.2	+0.5
WFSB	baz=288						
				eS	Sn	13 15 08.4	-0.3
	baz=288						
TWE	Neicheng	1.01	276	P	Pn	13 14 53.0	+0.3
TWE	baz=270						
				eS	Sn	13 15 08.6	-0.2
	baz=270						
SLBB	Yuanshan	1.04	278	P	Pn	13 14 53.7	+0.5
	baz=275						
HATJ	Hateruma jima	1.09	121	P	Pn	13 14 54.2	+0.5
HATJ				eS	Sn	13 15 10.9	+0.5
ENTT	Nioudou	1.10	271	P	Pn	13 14 54.4	+0.7
	baz=266						
TWA	Mucha	1.14	289	P	Pn	13 14 54.3	+0.2
TWA	baz=279						
				eS	Sn	13 15 11.1	-0.2
	baz=279						
NACB	Ninganchiao	1.16	248	P	Pn	13 14 54.0	-0.4
NACB	baz=240						
				eS	Sn	13 15 11.4	-0.3
	baz=240						
NHDH	Xindian Distri	1.19	287	P	Pn	13 14 55.0	+0.3
NHDH	baz=277						
				eS	Sn	13 15 11.9	-0.3
	baz=277						
JKRS	Kuro-shima	1.19	108	P	Pn	13 14 55.1	+0.4
JKRS				eS	Sn	13 15 12.8	+0.6
TWD	Chiawan	1.20	244	⇑P	Pn	13 14 54.6	-0.3
	baz=236						
TWD				eS	Sn	13 15 11.5	-0.9
	baz=236						
YM01	YM01	1.21	296	P	Pn	13 14 55.3	+0.3
	baz=288						
TATO	Taipei	1.22	287	eP	Pn	13 14 54.8	-0.3
	baz=277						
YM10	YM10	1.22	296	eP	Pn	13 14 55.2	+0.1
	baz=286						
ETLH	Xiulin Townshi	1.25	251	P	Pn	13 14 55.4	-0.1
	baz=249						
ETLH				eS	Sn	13 15 13.2	-0.4
	baz=249						
JIJ	Ishigaki jima	1.27	101	P	Pn	13 14 55.5	-0.1
JIJ				S	Sn	13 15 13.3	-0.6
YHNB	Yeheng	1.27	273	⇑P	Pn	13 14 56.4	+0.6
	baz=264						
YHNB				S	Sn	13 15 14.2	+0.1
	baz=264						
NNSB	Datong	1.28	262	P	Pn	13 14 56.0	+0.1
	baz=253						
NNSB				eS	Sn	13 15 13.9	-0.4
	baz=253						
NNS	Nan Shan	1.29	262	P	Pn	13 14 56.2	+0.2
	baz=254						
NNS				eS	Sn	13 15 13.4	-1.0
	baz=254						
NSK	Sanguang	1.29	273	⇑P	Pn	13 14 56.4	+0.5
	baz=264						
NSK				eS	Sn	13 15 14.0	-0.4
	baz=264						
NTST	Danshui	1.32	295	eP	Pn	13 14 56.1	-0.1
	baz=286						
NTST				eS	Sn	13 15 15.1	+0.3
	baz=286						
TWS1	Kuangyinshan	1.32	292	eP	Pn	13 14 56.6	+0.5
	baz=282						
JISG	Ishigakijimahi	1.40	91	P	Pn	13 14 56.9	-0.2
JISG				eS	Sn	13 15 15.3	-1.2
WLTB	Daxi	1.40	280	P	Pn	13 14 57.8	+0.7
	baz=281						
WLTB				eS	Sn	13 15 17.1	+0.5
	baz=281						
WHF	Hehuan Shan	1.45	251	P	Pn	13 14 58.3	+0.1
	baz=249						
WHF				eS	Sn	13 15 17.8	-0.6
	baz=249						
ESL	Shilin	1.46	237	eP	Pn	13 14 57.5	-0.4
	baz=235						
NCU	National Centr	1.48	284	eP	Pn	13 14 59.0	+0.9
	baz=290						
NCU				eS	Sn	13 15 18.4	+0.1
	baz=290						
TWT	Tachien	1.50	256	eP	Pn	13 14 59.3	+0.8
	baz=251						
TWT				eS	Sn	13 15 19.1	+0.1
	baz=251						
TDCB	Techi	1.52	256	P	Pn	13 14 59.4	+0.7
	baz=251						
TDCB				eS	Sn	13 15 18.7	-0.6
	baz=251						
EGFH	Guangfu	1.55	233	eP	Pn	13 14 58.9	0.0
	baz=234						
EGFH				eS	Sn	13 15 19.8	0.0
	baz=234						
CHGB	Renai	1.56	249	⇑P	Pn	13 14 59.8	+0.5
	baz=241						
CHGB				eS	Sn	13 15 20.1	-0.2
	baz=241						
LIOB	Emei	1.60	271	P	Pn	13 15 00.0	+0.5
	baz=269						
LIOB				eS	Sn	13 15 21.1	+0.3
	baz=269						
OWD	Renai	1.60	246	eP	Pn	13 14 59.8	+0.1
	baz=239						
OWD				eS	Sn	13 15 20.2	-0.8
	baz=239						
NSTT	Nanjuang	1.61	271	⇑eP	Pn	13 15 00.0	+0.4
	baz=268						
NSTT				S	Sn	13 15 20.8	-0.3
	baz=268						
SBCB	Hsinchu	1.64	276	eP	Pn	13 14 59.9	0.0
	baz=274						
SBCB				eS	Sn	13 15 22.0	+0.4
	baz=274						
HGSD	Ruisui	1.67	228	P	Pn	13 15 00.1	-0.3
	baz=225						
HGSD				eS	Sn	13 15 21.8	-0.5
	baz=225						
WHP	Taichung City	1.70	259	⇑P	Pn	13 15 02.1	+1.3
	baz=254						
VWDT	VWDT	1.72	240	⇑P	Pn	13 15 01.5	+0.5
	baz=234						
VWDT				eS	Sn	13 15 23.1	-0.3
	baz=234						
EHY	Hungye	1.73	230	eP	Pn	13 15 00.6	-0.6
	baz=236						
JTJ	Tarama	1.75	89	P	Pn	13 15 01.7	+0.3
JTJ				S	Sn	13 15 23.7	-0.5
DPDB	Guoxing	1.78	251	eP	Pn	13 15 02.8	+1.0
	baz=247						
DPDB				eS	Sn	13 15 25.7	+0.8
	baz=247						
NMLH	Miaoli	1.81	268	P	Pn	13 15 02.9	+0.9
	baz=273						
NMLH				eS	Sn	13 15 25.3	-0.1
	baz=273						
YULB	Yu-li	1.82	228	⇑P	Pn	13 15 01.8	-0.4
	baz=233						
YULB				eS	Sn	13 15 25.1	-0.5
	baz=233						
TWQ1	Liyutan	1.84	262	eP	Pn	13 15 02.9	+0.4
	baz=259						
TWQ1				eS	Sn	13 15 25.6	-0.5
	baz=259						
TWF1	Yuli	1.85	227	⇑P	Pn	13 15 02.4	-0.3
	baz=234						
SSLB	Suanglung	1.86	244	P	Pn	13 15 03.1	+0.4
	baz=238						
SSLB				eS	Sn	13 15 27.4	+0.8
	baz=238						
SMLT	Sun Moon Lake	1.86	247	eP	Pn	13 15 03.8	+0.9
	baz=240						
SMLT				eS	Sn	13 15 27.2	+0.5
	baz=240						
TYC	Yuchr	1.89	248	eP	Pn	13 15 04.2	+1.1
	baz=241						
TYC				eS	Sn	13 15 28.1	+1.0
	baz=241						
PTSB	Yuanli	1.89	265	eP	Pn	13 15 02.9	-0.2
	baz=263						
WDJ	Dajia District	1.96	263	eP	Pn	13 15 04.6	+0.6
	baz=260						
WDJ				eS	Sn	13 15 28.6	-0.3
	baz=260						
WHYT	Xinyi Township	1.98	243	eP	Pn	13 15 05.3	+1.0
	baz=239						
YUS	Yu-Shan	2.01	236	eP	Pn	13 15 05.5	+0.4
	baz=229						
WJS	Zhushan	2.03	247	eP	Pn	13 15 06.0	+1.1
	baz=256						
WCHH	Zhanghua	2.09	256	eP	Pn	13 15 05.5	-0.2
	baz=253						
ELDTW	Lidau	2.15	229	eP	Pn	13 15 06.5	-0.1
	baz=227						
CHN5	Tsauling	2.17	242	eP	Pn	13 15 07.9	+1.2
	baz=234						
CHN5				eS	Sn	13 15 35.0	+1.4
	baz=234						
JIRB	Irabujima	2.19	84	P	Pn	13 15 07.0	+0.1
JIRB				S	Sn	13 15 33.6	-0.4
WGK	Gukeng	2.22	246	eP	Pn	13 15 08.8	+1.4
	baz=244						
JIKM	Ikemajima	2.27	82	S	Sn	13 15 36.7	+0.9
JMJ	Miyako jima 2	2.30	85	eP	Pn	13 15 08.5	+0.1
	baz=87						
JMJ				eS	Sn	13 15 35.8	-0.7
	baz=87						
RLNB	Erlin	2.32	252	eP	Pn	13 15 09.0	+0.4
	baz=249						
RLNB				eS	Sn	13 15 37.4	+0.4
	baz=249						
JMJ2	Miyako jima3	2.33	86	P	Pn	13 15 09.0	+0.3
JMJ2				eS	Sn	13 15 37.1	-0.1
TPUB	Ta-pu	2.36	237	eP	Pn	13 15 10.0	+0.8
	baz=228						
TPUB				eS	Sn	13 15 39.1	+1.1
	baz=228						
CHN4	Tsaushan	2.36	238	eP	Pn	13 15 10.5	+1.4
	baz=235						
CHN4				eS	Sn	13 15 38.6	+0.6
	baz=235						
TWGBT	Beinan	2.37	221	eP	Pn	13 15 08.8	-0.5
	baz=225						
TWG	Pinlang	2.38	221	eP	Pn	13 15 08.8	-0.6
	baz=225						
JOGS	Gusukube	2.40	86	P	Pn	13 15 10.2	+0.6
WTP	Ta-pu	2.40	236	eP	Pn	13 15 10.6	+0.9
	baz=242						
CHY	Chiayi	2.42	243	eP	Pn	13 15 09.5	-0.4
	baz=252						
TWK	Hsinying	2.49	238	eP	Pn	13 15 11.8	+0.9
	baz=236						
CHN1	Nanshi	2.50	236	eP	Pn	13 15 11.8	+0.8
	baz=233						
CHN1				eS	Sn	13 15 41.6	+0.3
	baz=233						
SGST	Jiashian	2.52	233	eP	Pn	13 15 12.3	+1.0
	baz=239						
SGST				eS	Sn	13 15 42.8	+1.1
	baz=239						
SLGT	Liugui	2.53	231	eP	Pn	13 15 12.5	+1.1
	baz=223						
SSD	Sandimen	2.71	227	eP	Pn	13 15 14.7	+1.0
	baz=225						
MASBT	Mashibuluo	2.80	225	eP	Pn	13 15 15.7	+0.7
	baz=228						
EAST	Anshuo	2.84	219	eP	Pn	13 15 15.7	+0.1
	baz=217						
PHUB	P'eng-hu	3.13	250	eP	Pn	13 15 17.8	-1.4
	baz=247						
PHUB				eS	Sn	13 15 53.4	-2.5
	baz=247						
WDGT	Dungji	3.15	245	eP	Pn	13 15 19.4	-0.1
	baz=242						
WDGT				eS	Sn	13 15 55.5	-1.1
	baz=242						
PTMZ	Houxiangcun	3.35	278	eP	Pn	13 15 22.1	0.0
	baz=276						
VCHM	Qimei	3.37	246	eP	Pn	13 15 22.1	-0.3
	baz=235						
VCHM				eS	Sn	13 15 59.9	-1.8
	baz=235						
KNMB	Chin-men Tao	4.00	269	eP	Pn	13 15 30.4	-0.4
	baz=267						

ISCJB 27 13:24:10.5±0.6,38°.10N±0°.03×27°.01E±0°.06,h8km±6km,
Error ellipse: s-maj=8.4km s-min=4.3km az=159.2
DDA 27 13:24:10.6,38°.08N×27°.01E,h7km±1km,ML2.6
ISK 27 13:24:10.0,38°.10N×27°.03E,h10km,ML2.2/7
ISC 27 13:24:10.6±1.0,38°.11N±0°.03×27°.03E±0°.04,h14km±8km,
n14,σ0s50/22,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.28	2	PG	Pg	13 24 16.2	-0.3
BLCB				SG	Sg	13 24 20.9	+0.3
URLA	Izmir	0.42	307	PG	Pg	13 24 18.9	-0.2
URLA				SG	Sg	13 24 25.4	+0.5
URLA	Izmir	0.42	307	i P	Pg	13 24 18.6	-0.6
URLA				i S	Sb	13 24 26.4	+0.2
URLA				IAML_P			
	comp=Z,2μm,0.2s						
GCAM	G?zelcaml?	0.44	158	PG	Pg	13 24 18.8	-0.5
GCAM				SG	Sg	13 24 25.2	0.0
GCAM	G?zelcaml?	0.44	158	i P	Pg	13 24 19.2	-0.2
GCAM				i S	Sb	13 24 26.2	-0.2
GCAM				IAML_P			
	comp=Z,4μm,0.2s						
AYDN	Tasoluk	0.81	123	i P	Pg	13 24 26.5	+0.2
AYDN				i S	Sn	13 24 38.8	-0.5
CHOS	Chios island	0.81	290	PG	Pg	13 24 26.3	-0.2
ZEDA	zmir-Bergama	0.86	3	i P	Pb	13 24 27.8	+0.5
ZEDA				i S	Sn	13 24 41.3	+0.7
ZEDA				IAML_P			
	comp=Z,558nm,0.1s						
DKL	Dikili	0.97	354	PG	Pb	13 24 29.3	+0.2
BODT	Bodrum	1.07	168	PG	Pb	13 24 30.8	0.0
KULA	Kula-Manisa	1.35	72	PN	Pn	13 24 35.6	+0.6
STEP	BALIKESIR_Sava	1.38	23	i P	Pg	13 24 36.9	-0.3
STEP				i S	Sn	13 24 52.5	-1.0
STEP				IAML_P			
	comp=Z,555nm,0.1s						
APE	Apeiranthos	1.58	229	PN	Pn	13 24 38.6	+0.5
BAYC	CANAKKALE_Bayr	1.68	347	i P	Pn	13 24 38.7	-0.8

PRE 27 13:44:52.2±1.7,28°.01S×26°.64E,h2km,ML3.2
EAF 27 13:44:54.1±0.8,27°.90S×26°.72E,h10km,MD3.9
ISC 27 13:44:52.8±1.3,27°.96S±0°.05×26°.64E±0°.04,h13km±10km,
n23,σ2s13/40,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	Parys	1.21	32	eP	Pg	13 45 16.2	0.0
PRYS				eS	Sg	13 45 32.7	+0.8
PRYS				AML	AML	13 45 37.8	
	comp=Z,474nm,0.4s						
BOSA	Boshof	1.39	241	i P	Pb	13 45 20.1	+1.4
BOSA				i S	Sn	13 45 38.4	+2.2
BOSA	Boshof	1.39	241	i P	Pb	13 45 20.1	+1.4
BOSA				i S	Sn	13 45 38.4	+2.2
BOSA	Boshof	1.39	241	eP	Pg	13 45 17.7	-1.8
BOSA				eS	Sg	13 45 36.1	-1.5
BOSA				AML	AML	13 45 40.4	
	comp=Z,240nm,0.3s						
SWZ	Schweizer	1.39	303	eP	Pb	13 45 20.2	+1.3
SWZ				eS	Sb	13 45 38.2	+1.7
SWZ				AML	AML	13 45 42.6	
	comp=Z,869nm,0.3s						
WDLM	Western Deep L	1.68	25	eP	Pb	13 45 24.6	+0.9
WDLM				eS	Sb	13 45 46.9	+2.1
WDLM				AML	AML	13 45 50.4	
	comp=Z,497nm,0.2s						
KLOF	Kloof	1.82	29	eP	Pn	13 45 25.8	+1.9
KLOF				eS	Sn	13 45 49.2	+2.2
KLOF				AML	AML	13 45 51.4	
	comp=Z,1μm,0.2s						
KSR	Koster	2.11	6	eP	Pn	13 45 30.3	+2.3
KSR				eS	Sb	13 45 58.5	+1.4
KSR				AML	AML	13 46 01.9	
	comp=Z,182nm,0.4s						
ERPM	east rand prop	2.15	42	eP	Pn	13 45 30.2	+1.7
ERPM				eS	Sb	13 46 00.1	+1.8
ERPM				AML	AML	13 46 02.7	
	comp=Z,203nm,0.5s						
LBTB	Lobatse	3.08	342	eP	Pn	13 45 42.9	+1.7
LBTB				eS	Sn	13 46 21.4	+3.5
LBTB				AML	AML	13 46 37.5	
	comp=Z,100nm,0.3s						
PKA	Prieska	3.81	242	eP	Pn	13 45 52.0	+0.7
PKA				eS	Sn	13 46 36.8	+0.7
PKA				AML	AML	13 46 54.5	
	comp=Z,33nm,0.7s						
UPI	Upington	4.77	264	eP	Pn	13 46 05.0	+0.5
UPI				eS	Sn	13 46 59.5	-0.2
UPI				AML	AML	13 47 23.1	
	comp=Z,69nm,0.4s						
SOE	Somerset East	4.83	191	eP	Pn	13 46 06.7	+1.3
SOE				eS	Sn	13 46 59.9	-1.3
SOE				AML	AML	13 47 30.0	
	comp=Z,45nm,0.5s						
KEIM	Keimoes	5.05	260	eP	Pn	13 46 10.3	+1.9
KEIM				eS	Sn	13 47 06.0	-0.7
KEIM				AML	AML	13 47 34.5	
	comp=Z,62nm,0.6s						
MSNA	Messina	6.37	29	i P	Pn	13 46 25.7	-0.8
MSNA				i S	Sn	13 47 33.2	-6.0
MSNA	Messina	6.37	29	i P	Pn	13 46 25.7	-0.8
MSNA				i S	Sn	13 47 33.2	-6.0
MATP	Matopo	7.69	13	i P	Pn	13 46 44.6	0.0
MATP				i S	Sn	13 48 04.8	-6.9
MATP	Matopo	7.69	13	i P	Pn	13 46 44.6	0.0
MATP				i S	Sn	13 48 04.8	-6.9
BLWY	Bulawayo	7.99	13	i P	Pn	13 46 48.1	-0.6
BLWY				i S	Sn	13 48 10.3	-8.8
BLWY	Bulawayo	7.99	13	i P	Pn	13 46 48.1	-0.6
BLWY				i S	Sn	13 48 10.3	-8.8
KOMG	Komaggas	8.23	255	eP	Pn	13 46 53.2	+1.2
KOMG				eS	Sn	13 48 22.6	-2.4
KOMG				AML	AML	13 49 13.7	
	comp=Z,32nm,0.7s						

TSUM	**Tsumeb**	**12.03 314**	*i* P		**Pn**	**13 47 42.3**	**-1.9**
TSUM	**Tsumeb**	**12.03 314**	*i* P		**Pn**	**13 47 42.3**	**-1.9**

ISK ***27*** *14:03:27.8, 38°.37N×37°.82E, h9km, ML1.7/3*
DDA ***27*** *14:03:28.6, 38°.33N×37°.87E, h7km±4km, ML2.7*
ISC 27 14:03:28.4±1.1, 38°.35N±0°.03×37°.82E±0°.04, h5km±9km, n9, σ0^{h}76/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.10**	**126**	*i* P	**Pg**	**14 03 30.0**	**-0.5**
AKCD				*i* S	**Sg**	**14 03 32.9**	**+0.9**
DARE	**Darende-Malaty**	**0.34**	**309**	PG	**Pg**	**14 03 34.6**	**-0.4**
DARE				SG	**Sg**	**14 03 40.1**	**+0.5**
HEKM	**Malatya_Hekimh**	**0.54**	**12**	*i* P	**Pb**	**14 03 39.4**	**-1.0**
HEKM				*i* S	**Sb**	**14 03 49.8**	**+1.3**
CUKAN	**kangal_SIVAS**	**1.00**	**344**	*i* P	**Pn**	**14 03 49.2**	**0.0**
CUKAN				*i* S	**Sn**	**14 04 03.3**	**-0.5**
GZT	**Gaziantep**	**1.02**	**192**	*i* P	**Pn**	**14 03 49.8**	**+0.4**
GZT				*i* S	**Sn**	**14 04 04.0**	**-0.2**
GZT				IAML_P			
	comp=Z,796nm,0.1s						
KEMA	**Kemaliye**	**1.05**	**30**	*i* P	**Pb**	**14 03 48.6**	**-0.6**
KEMA				*i* S	**Sn**	**14 04 06.1**	**+1.1**
KMRS	**Kahramanmaras**	**1.12**	**221**	PN	**Pg**	**14 03 49.8**	**0.0**
KMRS				SN	**Sn**	**14 04 05.9**	**-0.6**
URFA	**Urfa**	**1.21**	**139**	PN	**Pn**	**14 03 51.7**	**-0.3**
ANDN	**Andirin**	**1.40**	**237**	*i* P	**Pg**	**14 03 55.5**	**+0.3**
ANDN				IAML_P			
	comp=Z,211nm,0.1s						

VAO ***27*** *14:03:20.7±0.8, 20°.72S×72°.15W, h231km, mb4.4*
ISCJB ***27*** *14:03:41.2±0.2, 20°.42S±0°.02×68°.87W±0°.05, h122km±3km, mb4.7/16, Error ellipse: s-maj=7.3km s-min=3.6km az=174.6*
GUC ***27*** *14:03:43.1±0.7, 20°.42S×68°.97W, h111km±3km, ML4.3*
NEIC ***27*** *14:03:43.0±0.0, 20°.42S×69°.01W, h102km, mb4.7/15, ML4.3(GUC), After GUC.*
IDC ***27*** *14:03:43.2±0.7, 20°.50S×68°.59W, h112km±6km, mb4.0/6, mb1 4.1/10, mb1mx3.8/28, mbtmp4.4/10, MS3.0/2, Ms1 3.1/2, ms1mx2.8/20, Error ellipse: s-maj=24.3km s-min=9.3km az=100.0*
ISC 27 14:03:41.7±0.5, 20°.44S±0°.03×68°.88W±0°.06, h113km±4km, n102, σ1^{h}69/128, mb4.8/17, 10C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.39**	**319**	*e*P	**Pn**	**14 03 59.2**	**+0.4**
PB08				*e*S	**Sn**	**14 04 12.8**	**+1.4**
PB08	**IPOC Station P**	**0.39**	**319**	⇑*i*P	**Pn**	**14 03 59.1**	**+0.4**
PB08				*i* S	**Sn**	**14 04 11.4**	**0.0**
PB08				IAML		14 04 12.2	
	comp=E,26μm,0.4s						
GO01	**Chusmiza**	**0.82**	**339**	*e*Pn	**Pn**	**14 04 02.5**	**+0.6**
GO01				*e*Sn	**Sn**	**14 04 15.3**	**-1.9**
GO01	**Chusmiza**	**0.82**	**339**	⇑*i*P	**Pn**	**14 04 02.5**	**+0.6**
GO01				*e*S	**Sn**	**14 04 17.4**	**+0.2**
PB01	**IPOC Station P**	**0.83**	**223**	*e*Pn	**Pn**	**14 04 02.5**	**+0.9**
PB01				*e*Sn	**Sn**	**14 04 17.1**	**+0.6**
PB01	**IPOC Station P**	**0.83**	**223**	⇑*i*P	**Pn**	**14 04 02.2**	**+0.7**
PB01				*e*S	**Sn**	**14 04 16.1**	**-0.4**
PB01				IAML		14 04 18.6	
	comp=N,21μm,0.4s						
PB11	**IPOC Station P**	**0.99**	**313**	*e*Pn	**Pn**	**14 04 03.4**	**+0.1**
PB11				*e*Sn	**Sn**	**14 04 19.4**	**-0.1**
PB11	**IPOC Station P**	**0.99**	**313**	*e*P	**Pn**	**14 04 03.6**	**+0.4**
PB11				*e*S	**Sn**	**14 04 20.0**	**+0.6**
PB11	**IPOC Station P**	**0.99**	**313**	⇑*i*P	**Pn**	**14 04 03.5**	**+0.3**
PB11				*e*S	**Sn**	**14 04 19.1**	**-0.3**
PB11				IAML		14 04 20.2	
	comp=N,18μm,0.1s						
PB02	**IPOC Station P**	**1.29**	**227**	*e*P	**Pn**	**14 04 07.3**	**+0.9**
PB02	**IPOC Station P**	**1.29**	**227**	⇓*i*P	**Pn**	**14 04 07.2**	**+0.9**
PB02				*e*S	**Sn**	**14 04 25.1**	**0.0**
PB09	**IPOC Station P**	**1.39**	**194**	*e*P	**Pn**	**14 04 09.0**	**+1.4**
PB09	**IPOC Station P**	**1.39**	**194**	⇓*i*P	**Pn**	**14 04 09.1**	**+1.4**
PB09				*e*S	**Sn**	**14 04 28.8**	**+1.6**
PSGC	**Pisagua**	**1.44**	**305**	⇑*i*P	**Pn**	**14 04 08.1**	**+0.1**
PSGC				*e*S	**Sn**	**14 04 26.9**	**-1.1**
PSGCX	**Pisagua**	**1.44**	**305**	*e*P	**Pn**	**14 04 08.2**	**+0.2**
PSGCX				*e*S	**Sn**	**14 04 28.4**	**+0.3**
MNMC	**Minye Minye**	**1.47**	**333**	*e*Pn	**Pn**	**14 04 09.8**	**+1.2**
MNMC				*e*Sn	**Sn**	**14 04 30.0**	**+1.1**
MNMC	**Minye Minye**	**1.47**	**333**	⇑*i*P	**Pn**	**14 04 09.5**	**+1.0**
MNMC				*e*S	**Sn**	**14 04 28.9**	**0.0**
MNMCX	**Minye Minye**	**1.47**	**333**	*e*P	**Pn**	**14 04 09.6**	**+1.0**
MNMCX				*e*S	**Sn**	**14 04 30.1**	**+1.2**
PB07	**IPOC Station P**	**1.59**	**216**	*e*P	**Pn**	**14 04 10.8**	**+0.8**
PB07	**IPOC Station P**	**1.59**	**216**	⇓*i*P	**Pn**	**14 04 10.7**	**+0.7**
PB07				*e*S	**Sn**	**14 04 31.9**	**+0.5**
PB07				IAML		14 04 33.6	
	comp=N,3μm,0.3s						
PB07				IAML		14 04 35.5	
	comp=E,4μm,0.6s						
PB03	**IPOC Station P**	**1.80**	**207**	*e*P	**Pn**	**14 04 13.6**	**+1.1**
PB03				*e*S	**Sn**	**14 04 36.7**	**+0.8**
PB03	**IPOC Station P**	**1.80**	**207**	⇓*i*P	**Pn**	**14 04 13.3**	**+0.8**
PB03				*i* S	**Sn**	**14 04 36.4**	**+0.6**
PB03				IAML		14 04 38.6	
	comp=E,2μm,0.4s						
LVC	**Limon Verde**	**2.16**	**181**	P	**Pn**	**14 04 19.2**	**+2.0**
	comp=E,60nm,0.3s,baz=9.3,slow=7.6,SNR=208						
LVC				S	**Sn**	**14 04 45.2**	**+0.9**
	comp=E,75nm,0.3s,baz=312,slow=22,SNR=6.9						
LVC	**Limon Verde**	**2.16**	**181**	*e*Pn	**Pn**	**14 04 19.2**	**+2.0**
LVC				*e*Sn	**Sn**	**14 04 46.5**	**+2.1**
LVC	**Limon Verde**	**2.16**	**181**	*e*P	**Pn**	**14 04 19.0**	**+1.8**
LVC				IAML		14 04 52.3	
	comp=Z,363nm,0.2s						
LVC	**Limon Verde**	**2.16**	**181**	*e*P	**Pn**	**14 04 19.2**	**+2.0**
LVC				*i* S	**Sn**	**14 04 46.9**	**+2.5**
LVC	**Limon Verde**	**2.16**	**181**	*e*P	**Pn**	**14 04 19.0**	**+1.8**
PB16	**IPOC Station P**	**2.17**	**344**	*e*P	**Pn**	**14 04 18.9**	**+1.2**
PB16	**IPOC Station P**	**2.17**	**344**	⇑*i*P	**Pn**	**14 04 19.1**	**+1.5**
PB16				*i* S	**Sn**	**14 04 46.6**	**+1.6**
PB04	**IPOC Station P**	**2.23**	**212**	*e*Pn	**Pn**	**14 04 19.4**	**+1.6**
PB04	**IPOC Station P**	**2.23**	**212**	*e*P	**Pn**	**14 04 18.9**	**+1.1**
PB04	**IPOC Station P**	**2.23**	**212**	⇑*i*P	**Pn**	**14 04 19.1**	**+1.2**
PB04				IAML		14 04 54.9	
	comp=E,2μm,0.4s						
PB12	**IPOC Station P**	**2.27**	**323**	⇑*i*P	**Pn**	**14 04 18.0**	**-0.4**
PB12				*i* S	**Sn**	**14 04 46.1**	**-0.4**
PB06	**IPOC Station P**	**2.35**	**196**	*e*P	**Pn**	**14 04 21.0**	**+1.6**
PB06	**IPOC Station P**	**2.35**	**196**	*e*P	**Pn**	**14 04 20.7**	**+1.3**
PB05	**IPOC Station P**	**2.70**	**207**	*e*P	**Pn**	**14 04 24.6**	**+0.6**
PB05	**IPOC Station P**	**2.70**	**207**	⇑*i*P	**Pn**	**14 04 24.8**	**+0.8**
PB10	**IPOC Station P**	**3.43**	**207**	*e*Pn	**Pn**	**14 04 33.3**	**-0.2**
YJA	**Yavi**	**3.58**	**119**	*e*P	**Pn**	**14 04 39.3**	**+3.4**
YJA				IAML		14 04 43.2	
	comp=Z,118nm,0.7s						
LPAZ	**La Paz**	**4.19**	**10**	P	**Pn**	**14 04 46.8**	**+2.6**
	comp=Z,6.3nm,0.3s,baz=211,slow=3.3,SNR=121						
LPAZ				LR	LR	14 06 59.9	
	comp=Z,123nm,18.9s,baz=202,slow=47						
LPAZ	**La Paz**	**4.19**	**10**	*e*Pn	**Pn**	**14 04 46.9**	**+2.6**
LPAZ				*e*		14 04 47.2	
LPAZ	**La Paz**	**4.19**	**10**	*e*P	**Pn**	**14 04 46.6**	**+2.3**
GO02	**Mina Guanaco**	**4.75**	**188**	*e*Pn	**Pn**	**14 04 51.4**	**0.0**
AZAP	**Zapla**	**5.16**	**138**	*e*P	**Pn**	**14 04 59.1**	**+2.1**
AZAP				IAML		14 04 59.5	
	comp=Z,80nm,0.4s						
SLA	**San Lorenzo**	**5.28**	**144**	*e*P	**Pn**	**14 05 01.1**	**+2.6**
SLA				IAML		14 05 02.5	
	comp=Z,86nm,0.5s						
GO03	**Copiap**	**7.23**	**190**	*e*Pn	**Pn**	**14 05 22.6**	**-2.2**
SIV	**San Ignacio**	**8.64**	**60**	P	**Pn**	**14 05 42.4**	**-1.5**
	comp=Z,6.5nm,0.3s,baz=267,slow=9.6,SNR=66						
SIV				S	Sn	14 07 08.8	-11
	baz=270,slow=18,SNR=3.3						
SIV				LR	LR	14 09 47.5	
	comp=Z,137nm,18.6s,baz=202,slow=43						
GO04	**Tololo Observa**	**9.85**	**190**	*e*Pn	**Pn**	**14 05 57.0**	**-3.4**
CFA	**Coronel Fontan**	**11.13**	**177**	S	**Sn**	**14 08 12.2**	**-7.9**
	comp=Z,1.3nm,0.3s,baz=176,slow=12,SNR=6.8						
CPUP	**Villa Florida**	**12.12**	**121**	P	**Pn**	**14 06 29.2**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=305,slow=12,SNR=16						
CPUP	**Villa Florida**	**12.12**	**121**	*e*Pn	**Pn**	**14 06 29.8**	**-0.8**
ROC1	**El Roble**	**12.63**	**188**	*e*Pn	**Pn**	**14 06 37.9**	**+0.3**
GO05	**Huala**	**14.76**	**190**	*e*P	**P**	**14 07 08.1**	**+0.2**
CLDB	**Colider**	**15.78**	**55**	*e*P	**P**	**14 07 19.6**	**+0.3**
PTGB	**Pitanga**	**16.10**	**108**	*e*P	**P**	**14 07 25.4**	**+2.5**
ITAB	**Concordia**	**16.74**	**117**	*e*P	**Pn**	**14 07 28.9**	**-0.7**
FRTB	**Fartura**	**18.16**	**103**	*e*P	**Pn**	**14 07 47.8**	**+1.1**
TRQA	**Tornquist**	**18.55**	**163**	*e*P	**Pn**	**14 07 50.6**	**-0.6**
TRQA				*e*Pn	**Pn**	**14 07 50.9**	**-0.3**
CNLB	**Canela**	**18.57**	**122**	*e*P	**P**	**14 07 48.0**	**-2.1**
BB19B	**Bebedouro**	**19.05**	**95**	*e*P	**P**	**14 07 55.3**	**0.0**
GO06	**Curarrehue**	**19.21**	**186**	*e*P	**Pn**	**14 07 59.1**	**0.0**
	comp=Z,25nm,1.1s						
RCLB	**Rio Claro- Sao**	**19.97**	**100**	*e*P	**P**	**14 08 04.8**	**-0.5**
SPB	**Sao Paulo**	**20.13**	**103**	*e*P	**P**	**14 08 06.3**	**-0.7**
PLCA	**Paso Flores**	**20.28**	**184**	P	**P**	**14 08 09.7**	**+1.2**
	comp=Z,4.3nm,0.8s,baz=30,slow=12,SNR=6.2						
PLCA	**Paso Flores**	**20.28**	**184**	*e*P	**P**	**14 08 09.8**	**+1.3**
BDFB	**Brasilia**	**20.40**	**80**	P	**P**	**14 08 08.9**	**-1.1**
	comp=Z,5.1nm,0.5s,baz=270,slow=9.4,SNR=6.5						
BDFB	**Brasilia**	**20.40**	**80**	*e*P	**P**	**14 08 09.4**	**-0.7**
	comp=Z,10nm,1.1s						
PMNB	**Patos De Minas**	**21.24**	**89**	*e*P	**P**	**14 08 18.4**	**-0.6**
PEXB	**Peixe**	**21.41**	**70**	*e*P	**P**	**14 08 18.7**	**-2.0**
PTGA	**Pitinga**	**21.44**	**25**	P	**P**	**14 08 18.4**	**-2.6**
	comp=Z,2.9nm,0.4s,baz=143,slow=23,SNR=10						
PTGA	**Pitinga**	**21.44**	**25**	*e*P	**P**	**14 08 19.3**	**-1.7**
	comp=Z,3.6nm,0.9s						
BSCB	**Bom Sucesso**	**22.55**	**96**	*e*P	**P**	**14 08 28.6**	**-4.2**
ESAR	**Angra dos Reis**	**22.84**	**101**	*e*P	**P**	**14 08 30.7**	**-4.7**
GO07	**Milladeo Hill,**	**22.96**	**189**	*e*P	**P**	**14 08 36.4**	**0.0**
	comp=Z,58nm,1.0s						
VAS01	**Vassouras-RJ**	**23.75**	**99**	*e*P	**P**	**14 08 38.4**	**-5.6**
RIB01	**Linhares ES**	**26.80**	**93**	*e*P	**P**	**14 09 08.2**	**-3.3**
PAYG	**Puerto Ayora**	**28.70**	**311**	*e*P	**P**	**14 09 27.8**	**-0.7**
	comp=Z,21nm,0.8s						
GO09	**Cerro Castillo**	**30.89**	**184**	*e*P	**P**	**14 09 47.4**	**0.0**
	comp=Z,8.7nm,1.0s						
BCIP	**Isla Barro Col**	**31.33**	**339**	*e*P	**P**	**14 09 50.3**	**-1.3**
	comp=Z,12nm,0.8s						
NBMO	**Morrinhos-CE**	**32.85**	**63**	*e*P	P	14 09 56.5	-8.5
NBLI	**Livramento-PB**	**33.53**	**72**	*e*P	P	14 10 03.3	-7.7
RCBR	**Riachuelo**	**35.15**	**70**	*e*P	P	14 10 18.3	-6.6
OBIP	**Obispado Ponce**	**38.31**	**3**	*e*P	**P**	**14 10 52.4**	**+0.9**
	comp=Z,13nm,0.9s						
SJG	**San Juan**	**38.41**	**4**	*e*P	**P**	**14 10 54.4**	**+2.1**
	comp=Z,14nm,1.0s						
HUMP	**Col San Antoni**	**38.46**	**5**	*e*P	**P**	**14 10 54.0**	**+1.3**
	comp=Z,12nm,0.9s						
SDD	**Santo Domingo**	**38.67**	**358**	*e*P	**P**	**14 10 53.8**	**-0.8**
	comp=Z,139nm,0.6s						
957A	**Wimauma**	**49.54**	**344**	*e*P	**P**	**14 12 22.8**	**+1.6**
	comp=Z,27nm,0.6s						
LIC	**Lamto**	**68.07**	**74**	*e*P	**P**	**14 14 29.4**	**-0.4**
	comp=Z,67nm,1.4s						
TIC	**Toumodi**	**68.25**	**74**	*e*P	**P**	**14 14 32.1**	**+1.2**
KIC	**Kosan Boka**	**68.39**	**74**	*e*P	**P**	**14 14 31.4**	**-0.3**
	comp=Z,71nm,1.6s						
DBIC	**Dimbokro**	**68.41**	**74**	P	**P**	**14 14 31.7**	**-0.1**
	comp=Z,7.2nm,0.7s,baz=236,slow=6.9,SNR=8.9						
NVAR	**Mina Array Bea**	**74.68**	**322**	pP	pP	14 15 40.0	+1.6
	comp=Z,2.0nm,0.9s,baz=148,slow=6.7,SNR=11						
TORD	**Torodi Ar. Bea**	**76.98**	**71**	P	**P**	**14 15 22.0**	**-0.5**
	comp=Z,14nm,0.7s,baz=262,slow=5.1,SNR=1.9						
ESDC	**Sonseca Array**	**85.06**	**45**	P	**P**	**14 16 06.5**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=183,slow=17,SNR=3.7						
YKA	**Yellowknife Ar**	**90.20**	**341**	P	**P**	**14 16 30.4**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=132,slow=4.8,SNR=9.8						
YKA				pP	**pP**	**14 16 59.4**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=132,slow=4.6,SNR=6.6						
YKA				sP	**sP**	**14 17 12.2**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=134,slow=4.5,SNR=5.4						
YKB5	**Yellowknife Ar**	**90.20**	**341**	*e*P	**P**	**14 16 30.4**	**+1.5**
KSH	**Kashi**	**144.41**	**50**	*e*PKP	**PKPdf**	**14 23 06.0**	**+0.9**
MK32	**Makanchi Array**	**144.76**	**35**	*e*PKPbc	**PKPdf**	**14 23 05.9**	**+0.6**
MKAR	**Makanchi Array**	**144.76**	**35**	PKP	**PKPdf**	**14 23 05.9**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=305,slow=4.3,SNR=6.2						
MKAR				pPKP	**pPKPdf**	**14 23 36.7**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=320,slow=4.5,SNR=4.8						
MJAR	**Matsushiro Arr**	**151.43**	**310**	pPKPbc	pPKPbc	14 23 53.7	-0.7
	comp=Z,1.3nm,0.6s,baz=109,slow=1.6,SNR=3.8						
SONA0	**Songino Array**	**152.40**	**7**	*e*PKPdf	**PKPdf**	**14 23 20.2**	**+2.4**
SONA0				*e*PKPbc	**PKiKP**	**14 23 26.4**	**+1.4**
SONM	**Songino Array**	**152.40**	**7**	PKP	**PKPdf**	**14 23 20.2**	**+2.4**
	comp=Z,0.2nm,0.4s,baz=328,slow=47,SNR=1.4						
SONM				PKPbc	**PKiKP**	**14 23 26.4**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=121,slow=43,SNR=2.3						
SONM				pPKPbc	**pPKPbc**	**14 23 57.4**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=108,slow=39,SNR=2.5						

SOME ***27*** *14:13:56.3, 42°.12N×82°.70E, h20km*
NNC ***27*** *14:14:02.2±1.8, 41°.86N×82°.23E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=14.0km s-min=8.2km az=149.0*
ISC 27 14:14:05.5±2.3, 42°.04N±0°.10×82°.15E±0°.08, h10km, n27, σ2^{h}39/39, 12C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**2.35**	**304**	⇓Pn	**Pn**	**14 14 45.0**	**+0.7**
	18nm,0.6s						
PDGK				⇑Lg	Lg	14 15 20.9	
	155nm,0.9s						
UZB	**Uzynbulak**	**2.56**	**297**	*e*P	**Pn**	**14 14 48.2**	**+0.9**
	6.1nm,0.2s						
UZB				*e*S	**Sb**	**14 15 25.8**	**+2.5**
	88nm,0.3s						
DJR	**Jarkent**	**2.87**	**324**	Pg	**Pb**	**14 14 55.5**	**-1.4**
	23nm,0.5s						
DJR				Lg	Lg	14 15 39.9	
	31nm,0.3s						
DJR	**Jarkent**	**2.87**	**324**	*e*P	**Pn**	**14 14 52.1**	**+0.7**
	5.7nm,0.3s						
DJR				*e*S	**Sb**	**14 15 32.1**	**+0.1**
	34nm,0.5s						
KPKS	**Kokpek**	**2.92**	**300**	*e*P	**Pb**	**14 14 54.0**	**-3.9**
	24nm,0.2s						
KPKS				*e*S	**Sb**	**14 15 35.5**	**+1.8**
	190nm,0.5s						
SATY	**Saty**	**2.95**	**292**	Pg	**Pb**	**14 14 57.9**	**-0.4**
	21nm,0.5s						
SATY				Lg	Lg	14 15 43.4	
	61nm,0.9s						
ZHN	**Zhinishke**	**2.96**	**294**	*e*P	**Pb**	**14 14 55.3**	**-3.2**
	6.5nm,0.1s						
ZHN				*e*S	**Sb**	**14 15 37.7**	**+2.8**
	29nm,0.2s						
KURS	**Kuram**	**3.27**	**298**	Pg	**Pg**	**14 15 05.5**	**-2.7**
	5.5nm,0.8s						
KURS				Lg	Lg	14 15 56.7	
	13nm,0.5s						
KURS	**Kuram**	**3.27**	**298**	*e*P	**Pb**	**14 15 02.5**	**-1.1**
	3.4nm,0.7s						
KURS				*e*S	**Sg**	**14 15 50.4**	**-0.1**
	29nm,0.8s						
KAPS	**Kapalarasan**	**3.83**	**329**	Pg	**Pn**	**14 15 05.0**	**+0.5**
	16nm,0.7s						
KAPS				Lg	Lg	14 15 55.6	
	23nm,0.7s						
KAPS	**Kapalarasan**	**3.83**	**329**	*e*P	**Pb**	**14 15 09.1**	**-4.1**
	21nm,0.4s						
KAPS				*e*S	**Sb**	**14 16 01.4**	**+1.8**
	33nm,0.4s						
ARXS	**Arharly**	**3.84**	**306**	Pg	**Pb**	**14 15 13.8**	**+0.4**
	4.6nm,0.8s						
ARXS				Lg	Lg	14 16 10.3	
	16nm,0.7s						
KOTS	**Kotyrbulak**	**3.90**	**290**	Pg	**Pg**	**14 15 16.8**	**-3.5**
	8.4nm,1.1s						
KOTS				Lg	Lg	14 16 15.3	
	45nm,0.6s						
MDOK	**Medeo**	**3.93**	**288**	Pg	**Pb**	**14 15 13.6**	**-1.4**
	4.2nm,0.8s						
MDOK				Lg	Lg	14 16 10.0	
	6.7nm,0.8s						
MDOK	**Medeo**	**3.93**	**288**	*e*P	**Pb**	**14 15 13.5**	**-1.4**
	4.2nm,0.8s						
MDOK				*e*S	**Sg**	**14 16 09.2**	**-2.5**
	20nm,0.7s						
TNSS	**Tian-Shan**	**3.97**	**286**	Pg	**Pb**	**14 15 14.1**	**-1.7**
	7.7nm,1.0s						
TNSS				Lg	Lg	14 16 10.8	
	5.9nm,0.6s						
TNSS	**Tian-Shan**	**3.97**	**286**	*e*P	**Pb**	**14 15 15.5**	**-0.3**
	2.9nm,0.5s						
TNSS				*e*S	**Sg**	**14 16 12.4**	**-0.6**
	16nm,0.5s						
KTBS	**Karatobe**	**4.35**	**294**	Pg	**Pb**	**14 15 19.0**	**-3.1**
	1.7nm,0.7s						
KTBS				Lg	Lg	14 16 19.0	
	21nm,0.8s						
MTBS	**Maitube**	**4.36**	**286**	Pg	**Pb**	**14 15 18.2**	**-4.1**
	4.6nm,0.6s						
MTBS				Lg	Lg	14 16 17.9	
	6.9nm,0.7s						
KST	**Kastek**	**4.68**	**284**	Pg	**Pb**	**14 15 28.4**	**+0.7**
	8.6nm,0.8s						
KST				Lg	Lg	14 16 35.6	
	9.7nm,1.4s						
MK31	**Makanchi Array**	**4.76**	**1**	⇓Pn	**Pn**	**14 15 16.6**	**-0.7**
	1.8nm,0.5s,baz=308,slow=39,SNR=29						
MK31				⇑Pg	**Pg**	**14 15 33.8**	**-2.8**
	4.5nm,0.6s,baz=171,slow=16,SNR=12						
MK31				⇑Lg	Lg	14 16 38.4	
	12nm,0.6s,baz=179,slow=29,SNR=3.8						
MAKZ	**Makanchi**	**4.77**	**359**	⇑Pn	**Pn**	**14 15 20.3**	**+2.8**
	6.9nm,0.7s						
MAKZ				⇓Sn	**Sn**	**14 16 17.0**	**+4.1**
	4.6nm,0.4s						
MAKZ				⇓Lg	Lg	14 16 37.9	
	18nm,1.0s						
DGS	**Degeres**	**4.86**	**287**	Pg	**Pb**	**14 15 32.3**	**+1.6**
	4.9nm,0.7s						
DGS				Lg	Lg	14 16 41.9	
	16nm,0.7s						
TKM2	**Tokmak 2**	**4.92**	**283**	⇑Pn	**Pn**	**14 15 19.9**	**+0.1**
	2.1nm,0.5s						
TKM2				⇑Lg	Lg	14 16 44.8	
	9.0nm,0.6s						
AAK	**Ala-Archa**	**5.70**	**279**	⇑Pg	**Pb**	**14 15 48.0**	**+2.8**
	3.8nm,0.8s						
AAK				⇑Lg	Lg	14 17 09.8	
	6.3nm,0.7s						
KURBB	**Kurchatov Arra**	**8.94**	**345**	⇑Pn	**Pn**	**14 16 15.9**	**+1.2**
	1.0nm,0.7s						
KURBB				⇑Sn	**Sn**	**14 17 58.4**	**+3.0**
	4.7nm,0.6s						
KURBB				⇓Lg	Lg	14 18 53.8	
	20nm,0.8s						
KURK	**Kurchatov**	**9.02**	**346**	⇑Pn	**Pn**	**14 16 15.9**	**+0.2**
	1.5nm,1.0s						
KURK				⇑Sn	**Sn**	**14 18 02.2**	**+5.0**
	3.8nm,0.7s						
KURK				⇓Lg	Lg	14 18 57.9	
	10nm,0.9s						

NEIC ***27*** *14:25:42.3±0.0, 16°.74N×95°.17W, h102km, mb4.1/7, MD4.2(MEX), After MEX.*
MEX 27 14:25:42.3±1.1, 16°.74N×95°.17W, h102km±10km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.45**	**38**	*e*Pn	Pn	14 25 56.2	-1.7
CMIG				*e*Sn	Sn	14 26 07.8	-1.8
CMIG	**Matias Romero**	**0.45**	**38**	*e*P	Pn	14 25 56.2	-1.7
CMIG				*i* S	Sn	14 26 07.8	-1.8
HUIG	**Huatulco**	**1.32**	**223**	*e*Pn	Pn	14 26 05.4	-1.0
HUIG				*e*Sn	Sn	14 26 23.4	-1.3
HUIG	**Huatulco**	**1.32**	**223**	*e*P	Pn	14 26 05.4	-1.0
HUIG				*i* S	Sn	14 26 23.4	-1.3
VHO	**Vista Hermosa**	**1.53**	**283**	*e*Pn	Pn	14 26 08.3	-0.9
VHO				*e*Sn	Sn	14 26 28.2	-1.5
VHO	**Vista Hermosa**	**1.53**	**283**	*e*P	Pn	14 26 08.3	-0.9
VHO				*i* S	Sn	14 26 28.2	-1.5
PANG	**Puerto Angel**	**1.64**	**230**	*e*P	Pn	14 26 08.8	-1.6
PANG				*i* S	Sn	14 26 30.6	-1.2
TGIG		**1.96**	**89**	*e*Pn	Pn	14 26 13.4	-1.1
TGIG				*e*Sn	Sn	14 26 37.8	-1.4
TGIG		**1.96**	**89**	*i* P	Pn	14 26 13.4	-1.1
TGIG				*i* S	Sn	14 26 37.8	-1.4
PCIG		**2.14**	**118**	*e*Pn	Pn	14 26 17.4	+0.6
PCIG				*e*Sn	Sn	14 26 44.4	+1.3
PCIG		**2.14**	**118**	*e*P	Pn	14 26 17.4	+0.6
PCIG				*e*S	Sn	14 26 44.4	+1.3
CCIG	**Comitan**	**2.95**	**98**	*e*Pn	Pn	14 26 27.7	+0.1
CCIG				*e*Sn	Sn	14 27 03.5	+1.1
**LV

WRA				Sn	Sn	14 39 22.1	-13
WB2	**Warramunga Arr**	**13.83**	**154**	*e*Pn	**Pn**	**14 37 01.4**	**-1.1**
AS31	**Alice Springs**	**17.04**	**161**	*e*P	**P**	**14 37 43.3**	**+1.7**
	3.4nm,0.6s						
ASAR	**Alice Springs**	**17.04**	**161**	P	**P**	**14 37 43.2**	**+1.6**
	1.4nm,0.3s,baz=342,slow=11,SNR=239						
ASAR				S	S	14 40 43.7	-8.4
	0.5nm,0.3s,baz=316,slow=20,SNR=10						
SBUM	**Sibu**	**18.51**	**302**	*e*P	**Pn**	**14 38 01.5**	**+1.9**
	2.7nm,0.7s						
PMG	**Port Moresby**	**19.17**	**97**	*e*P	**P**	**14 38 05.1**	**+0.2**
	26nm,1.1s						
FORT	**Forrest**	**23.11**	**180**	*e*P	**P**	**14 38 46.1**	**+0.4**
	12nm,1.0s						
STKA	**Stephens Creek**	**27.38**	**154**	P	**P**	**14 39 28.8**	**+4.5**
	0.7nm,0.4s,baz=343,slow=10.0,SNR=4.1						
STKA	**Stephens Creek**	**27.38**	**154**	*e*P	**P**	**14 39 22.3**	**-2.0**
	0.2nm,0.7s						
GSI	**Gunungsitoli**	**31.47**	**285**	*e*P	**P**	**14 40 01.2**	**+0.4**
	18nm,1.1s						
ARMA	**Armidale**	**31.83**	**139**	*e*P	**P**	**14 40 01.3**	**-2.6**
	6.0nm,1.1s						
CAN	**Canberra**	**33.76**	**148**	*e*P	**P**	**14 40 19.3**	**-1.2**
	3.0nm,0.8s						
MK32	**Makanchi Array**	**67.55**	**328**	*e*P	**P**	**14 44 32.4**	**-0.9**
MKAR	**Makanchi Array**	**67.55**	**328**	P	**P**	**14 44 32.4**	**-0.9**
	0.3nm,0.4s,baz=121,slow=7.0,SNR=6.3						

DJA 27 14:35:01.4±1.0, 5°N±3°×9°6E±°, h10km, M3.5/6, MLv3.5/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.28**	**162**	P	Pg	14 35 07.3	+0.3
MLSI				S	Sb	14 35 12.1	-1.1
LHMI	**Lhok Sumawe**	**0.93**	**42**	P	Pg	14 35 19.3	-0.1
LHMI				S	Sb	14 35 32.2	0.0
TPTI		**1.53**	**146**	P	Pn	14 35 28.0	-0.7
TPTI				S	Sb	14 35 49.4	+0.2
KCSI	**Kotacane, Aceh**	**1.76**	**125**	P	Pb	14 35 33.1	-0.7
KCSI				S	Sn	14 35 54.3	-0.2

MAN 27 14:43:16.2, 13°22N×120°24E, h29km, mb4.5, ML3.3, MS3.1, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.51**	**0**	*e*P	Pn	14 43 27.4	-0.1
LUBP				*e*S	Sn	14 43 36.4	+1.0
PGP	**Puerto Galera**	**0.74**	**68**	||*i*P	Pb	14 43 30.1	-0.6
PGP				*i* S	Sb	14 43 39.7	-0.8
SJMP	**San Jose**	**1.14**	**131**	*e*P	Pn	14 43 35.5	-0.6
SJMP				*e*S	Sn	14 43 50.7	-0.2
BUSP	**Coron**	**1.21**	**182**	*e*P	Pn	14 43 37.6	+0.4
BUSP				*e*S	Sn	14 43 52.7	+0.1
BOAC	**Boac**	**1.58**	**81**	*e*P	Pb	14 43 44.1	-0.6
BOAC				*e*S	Sn	14 43 56.4	-5.2
ENPP	**El Nido**	**2.15**	**202**	*e*P	Pn	14 43 50.9	+0.7

ATH ***27*** *14:45:06.3, 40°.30N×20°.59E, h23km±2km, ML2.2/6, Error ellipse: s-maj=3.6km s-min=1.6km az=333.0*
TIR ***27*** *14:45:07.8, 40°.18N×20°.54E, h18km, Md2.7/4*
THE ***27*** *14:45:08.6, 40°.19N×20°.65E, h13km±8km, ML2.1/8, Error ellipse: s-maj=8.8km s-min=0.7km az=64.0*

ISC 27 14:45:08.0±1.0, 40°.18N±0°.03×20°.61E±0°.02, h17km±8km, n20, σ0°82/38, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PENT	**Pentalofos**	**0.40**	**88**	P	**Pg**	**14 45 15.6**	**-0.7**
PENT				S	**Sg**	**14 45 22.2**	**+0.3**
PENT	**Pentalofos**	**0.40**	**88**	P	**Pg**	**14 45 15.6**	**-0.7**
PENT				S	**Sg**	**14 45 21.8**	**-0.2**
PENT				AML	AML	14 45 25.1	
	comp=E,931μm,0.5s						
PENT				AML	AML	14 45 26.1	
	comp=N,735μm,0.2s						
TPE	**Tepelena**	**0.48**	**284**	P	**Pb**	**14 45 17.5**	**-0.5**
TPE				S	**Sn**	**14 45 26.7**	**-1.4**
TPE	**Tepelena**	**0.48**	**284**	*i* PG	**Pb**	**14 45 17.7**	**-0.2**
TPE				*i* SG	**Sb**	**14 45 25.0**	**+0.3**
JAN	**Janina**	**0.55**	**161**	P	**Pg**	**14 45 19.0**	**-0.1**
JAN				S	**Sb**	**14 45 27.4**	**+0.4**
JAN	**Janina**	**0.55**	**161**	P	**Pg**	**14 45 19.1**	**+0.1**
JAN				S	**Sb**	**14 45 27.9**	**+0.9**
JAN				AML	AML	14 45 31.0	
	comp=N,1042μm,0.5s						
JAN				AML	AML	14 45 31.1	
	comp=E,1595μm,0.3s						
SRN	**Sarande**	**0.56**	**238**	P	**Pb**	**14 45 19.0**	**-0.4**
SRN				S	**Sn**	**14 45 29.3**	**-0.8**
SRN	**Sarande**	**0.56**	**238**	*i* PG	**Pb**	**14 45 19.2**	**-0.2**
SRN				*i* SG	**Sn**	**14 45 28.0**	**-2.1**
MEV	**Metsovon**	**0.62**	**130**	P	**Pb**	**14 45 20.1**	**-0.4**
KPRO	**Kipourio**	**0.62**	**111**	P	**Pb**	**14 45 19.5**	**-0.9**
KPRO				S	**Sb**	**14 45 29.7**	**+0.8**
KPRO	**Kipourio**	**0.62**	**111**	P	**Pb**	**14 45 19.3**	**-1.1**
KPRO				S	**Sb**	**14 45 29.7**	**+0.8**
KPRO				AML	AML	14 45 38.3	
	comp=N,532μm,0.5s						
KPRO				AML	AML	14 45 39.0	
	comp=E,598μm,0.5s						
IGT	**Igoumenitsa**	**0.68**	**199**	P	**Pg**	**14 45 21.9**	**+0.4**
IGT				S	**Sn**	**14 45 32.8**	**-0.4**
IGT	**Igoumenitsa**	**0.68**	**199**	*i* PG	**Pn**	**14 45 22.6**	**-0.4**
IGT				*i* SG	**Sn**	**14 45 33.2**	**0.0**
IGT	**Igoumenitsa**	**0.68**	**199**	P	**Pg**	**14 45 21.9**	**+0.4**
IGT				S	**Sn**	**14 45 33.7**	**+0.5**
IGT				AML	AML	14 45 37.2	
	comp=N,322μm,0.5s						
IGT				AML	AML	14 45 41.9	
	comp=E,277μm,0.7s						
KEK	**Kerkira**	**0.78**	**234**	P	**Pg**	**14 45 23.1**	**-0.2**
KEK				S	**Sn**	**14 45 36.2**	**+0.6**
KEK	**Kerkira**	**0.78**	**234**	P	**Pb**	**14 45 22.2**	**-1.0**
KEK				S	**Sn**	**14 45 35.9**	**+0.2**
KZN	**Kozani**	**0.89**	**82**	P	**Pb**	**14 45 25.1**	**-0.1**
KZN				S	**Sn**	**14 45 38.6**	**0.0**
KZN	**Kozani**	**0.89**	**82**	P	**Pb**	**14 45 24.4**	**-0.8**
KZN				S	**Sn**	**14 45 38.3**	**-0.3**
KZN				AML	AML	14 45 41.7	
	comp=E,386μm,0.6s						
KZN				AML	AML	14 45 44.3	
	comp=N,205μm,0.3s						
THL	**Klokotos Trika**	**1.24**	**119**	P	**Pn**	**14 45 30.5**	**-0.1**
THL				S	**Sg**	**14 45 50.3**	**+2.1**
THL				AML	AML	14 45 55.7	
	comp=N,135μm,0.5s						
THL				AML	AML	14 45 56.2	
	comp=E,109μm,0.4s						
PHP	**Peshkopia**	**1.51**	**355**	*i* PN	**Pg**	**14 45 38.4**	**+1.3**

IDC 27 15:05:29.6±4.0, 7°23S×149°61E, h112km±32km, mb3.5/3, mb1 3.7/5, mb1mx3.3/34, mbtmp3.9/5, Error ellipse: s-maj=85.6km s-min=30.1km az=133.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.25**	**228**	P	Pn	15 06 18.5	-0.4
	14nm,0.3s,baz=44,slow=6.0,SNR=47						
PMG				S	Sn	15 06 57.8	+0.8
	9.8nm,0.3s,baz=36,slow=20,SNR=7.4						
WRA	**Warramunga Arr**	**19.47**	**228**	P	P	15 09 47.5	-0.3
	0.4nm,0.3s,baz=57,slow=12,SNR=9.4						
ASAR	**Alice Springs**	**22.23**	**221**	P	P	15 10 19.3	+1.9
	1.8nm,0.7s,baz=56,slow=8.8,SNR=59						
FITZ	**Fitzroy Crossi**	**25.72**	**243**	P	P	15 10 48.3	-1.5
	2.1nm,0.5s,baz=54,slow=9.0,SNR=16						
ILAR	**Eielson Array**	**85.60**	**23**	P	P	15 17 55.7	+0.5
	0.3nm,0.5s,baz=257,slow=5.0,SNR=6.7						

MEX 27 15:06:01.5±0.6, 14°84N×93°84W, h5km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.05**	**35**	*i* P	Pg	15 06 18.4	-3.3
PCIG				*e*S	Sg	15 06 32.8	-2.6
TGIG		**2.05**	**20**	*e*P	Pn	15 06 34.1	-2.6
TGIG				*e*S	Sn	15 06 58.6	-4.1
CCIG	**Comitan**	**2.18**	**49**	*e*P	Pn	15 06 35.9	-2.8
CCIG				*e*S	Sn	15 07 01.6	-4.6
CMIG	**Matias Romero**	**2.45**	**336**	*e*P	Pn	15 06 39.1	-3.1

DJA ***27*** *15:16:31.2±0.6, 4°S±4°×12°9E±°, h11km±5km, M4.0/9, mb4.4/1, MLv3.9/9*
IDC ***27*** *15:16:36.6±2.0, 4°.00S×129°.13E, h51km±24km, mb3.6/4, mb1 3.9/7, mb1mx3.6/29, mbtmp4.0/7, ML3.9/3, MS3.5/1, Ms1 3.5/1, ms1mx2.5/32, Error ellipse: s-maj=29.6km s-min=14.3km az=123.0*
NEIC ***27*** *15:16:36.4±2.3, 4°.14S×129°.04E, h57km±12km, mb4.1/12, Error ellipse: s-maj=21.6km s-min=18.5km az=104.0*

ISC 27 15:16:33.6±0.6, 4°.04S±0°.05×129°.21E±0°.06, h32km, n40, σ2°06/40, mb4.2/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.75**	**338**	P	**Pn**	**15 16 44.7**	**-3.2**
MSAI				S	**Sn**	**15 16 55.7**	**-2.5**
BNDI	**Bandanaira**	**0.84**	**124**	P	Pb	15 16 52.2	+2.5
AAI	**Ambon**	**1.07**	**289**	P	Pn	15 16 45.0	-7.4
NLAI	**Namlea**	**2.25**	**291**	P	Pn	15 17 02.6	-6.0
FAKI	**Fak Fak**	**3.23**	**70**	*e*Pn	**Pb**	**15 17 27.7**	**-2.7**
FAKI				*e*Sn	**Sb**	**15 18 05.8**	**-3.5**
FAKI	**Fak Fak**	**3.23**	**70**	P	**Pb**	**15 17 28.0**	**-2.3**
SIJI	**Sorong**	**3.77**	**33**	P	**Pn**	**15 17 33.0**	**+3.5**
	19nm,0.3s,baz=71,slow=6.7,SNR=107						
SIJI				S	**Sn**	**15 18 15.8**	**+3.1**
	9.5nm,0.3s,baz=223,slow=23,SNR=9.1						
SWI	**Sorong**	**3.77**	**33**	P	**Pn**	**15 17 32.7**	**+3.2**
SANI	**Sanana**	**3.78**	**302**	P	Pn	15 17 23.5	-6.1
LUWI	**Luwuk**	**7.09**	**295**	*e*Pn	**Pn**	**15 18 19.8**	**+4.7**
SOEI	**Soe**	**7.50**	**221**	*e*Pn	**Pn**	**15 18 22.7**	**+1.8**
SOEI	**Soe**	**7.50**	**221**	P	**Pn**	**15 18 18.9**	**-2.0**
BATI	**Baumata**	**8.23**	**222**	P	**Pn**	**15 18 33.1**	**+2.3**
	1.7nm,0.3s,baz=343,slow=2.9,SNR=5.4						
BATI	**Baumata**	**8.23**	**222**	*e*Pn	**Pn**	**15 18 33.1**	**+2.3**
BATI				*e*Pn	**Pn**	**15 18 33.1**	**+2.3**
MTN	**Manton Dam**	**8.95**	**168**	*e*Pn	**Pn**	**15 18 41.9**	**+1.2**
MTN				*e*Sn	**Sn**	**15 20 18.0**	**-2.4**
KAPI	**Kappang**	**9.48**	**264**	P	**Pn**	**15 18 48.5**	**+0.5**
	0.4nm,0.3s,baz=90,slow=20,SNR=2.4						
KAPI	**Kappang**	**9.48**	**264**	*e*Pn	**Pn**	**15 18 47.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**14.40**	**194**	P	**Pn**	**15 19 53.6**	**-1.6**
	0.1nm,0.3s,baz=11,slow=10,SNR=4.7						
FITZ	**Fitzroy Crossi**	**14.40**	**194**	*e*Pn	**Pn**	**15 19 54.2**	**-1.1**
JAGI	**Jajag, Banyuwa**	**15.60**	**253**	*e*Pn	**P**	**15 20 15.3**	**+0.1**
	43nm,0.9s						
WR1	**Warramunga Arr**	**16.57**	**163**	*e*Pn	**Pn**	**15 20 21.7**	**-2.0**
WRA	**Warramunga Arr**	**16.57**	**163**	P	**Pn**	**15 20 21.7**	**-2.0**
	0.3nm,0.3s,baz=338,slow=13,SNR=11						
WB2	**Warramunga Arr**	**16.58**	**163**	*e*Pn	**Pn**	**15 20 22.1**	**-1.6**
	14nm,1.3s						
WC3	**Warramunga Arr**	**16.60**	**163**	*e*Pn	**Pn**	**15 20 21.9**	**-2.1**
	22nm,1.5s						
COEN	**Coen**	**16.94**	**126**	*e*Pn	**P**	**15 20 30.0**	**-0.1**
	15nm,1.1s						
PSA00	**Pilbara Seismi**	**19.65**	**207**	*e*P	**P**	**15 20 58.0**	**-1.8**
	11nm,1.0s						
PSAA3	**Pilbara Seismi**	**19.65**	**207**	*e*P	**P**	**15 20 59.1**	**-0.7**
	11nm,0.9s						
PSAB1	**Pilbara Seismi**	**19.66**	**207**	*e*P	**P**	**15 20 59.3**	**-0.6**
	12nm,1.0s						
PSAB3	**Pilbara Seismi**	**19.67**	**207**	*e*P	**P**	**15 20 59.1**	**-0.9**
	24nm,1.3s						
AS31	**Alice Springs**	**20.03**	**167**	*e*P	**Pn**	**15 21 06.2**	**+0.3**
	5.9nm,0.7s						
ASAR	**Alice Springs**	**20.03**	**167**	P	**Pn**	**15 21 06.2**	**+0.4**
	14nm,0.7s,baz=351,slow=11,SNR=172						
FORT	**Forrest**	**26.61**	**182**	*e*P	**P**	**15 22 09.1**	**-0.1**
	10nm,0.8s						
BBOO	**Buckleboo**	**29.33**	**168**	*e*P	**P**	**15 22 33.5**	**0.0**
	22nm,1.5s						
STKA	**Stephens Creek**	**30.03**	**159**	LR	LR	15 36 21.3	
	comp=Z,91nm,18.2s,baz=300,slow=39						
CMAR	**Chiang Mai Arr**	**37.27**	**308**	P	**P**	**15 23 44.3**	**+1.5**
	0.2nm,0.4s,baz=133,slow=7.5,SNR=2.8						
MK32	**Makanchi Array**	**65.34**	**326**	*e*P	**P**	**15 27 11.7**	**-1.0**
MKAR	**Makanchi Array**	**65.34**	**326**	P	**P**	**15 27 11.7**	**-1.0**
	0.7nm,0.7s,baz=125,slow=8.2,SNR=6.5						
ZALV	**Zalesovo Beam**	**68.60**	**334**	P	**P**	**15 27 34.2**	**+0.9**
	0.5nm,0.3s,baz=116,slow=5.1,SNR=3.7						
ZAA1	**Zalesovo Array**	**68.60**	**334**	*e*P	**P**	**15 27 34.2**	**+0.9**
KURK	**Kurchatov**	**69.60**	**328**	*e*P	**P**	**15 27 38.9**	**-0.7**
	3.7nm,1.1s						

ISC 27 15:27:25.5±1.2, 50°.12N±0°.06×19°.24E±0°.04, h0km, n8, σ0°80/13, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.37**	**75**	*e*Pg	**Pg**	**15 27 32.4**	**-0.2**
OJC				*e*Sg	**Sg**	**15 27 37.4**	**0.0**
NIE	**Niedzica**	**0.98**	**135**	*e*Pg	**Pb**	**15 27 45.4**	**-0.1**
NIE				*e*Sg	**Sb**	**15 27 59.0**	**0.0**
LANS	**Liptovska Anna**	**0.98**	**171**	*e*PG	**Pg**	**15 27 44.4**	**0.0**
LANS				*e*SG	**Sg**	**15 27 57.7**	**+0.6**
MORC	**Moravsky Berou**	**1.15**	**253**	*e*PG	**Pg**	**15 27 47.7**	**+0.1**
MORC				*e*SG	**Sb**	**15 28 04.3**	**+0.5**
STHS	**Stebnicka Huta**	**1.48**	**118**	*e*SN	**Sn**	**15 28 15.2**	**+1.8**
VYHS	**Vyhne**	**1.65**	**189**	*e*PN	**Pn**	**15 27 55.0**	**-0.8**
VYHS				*e*SN	**Sn**	**15 28 16.5**	**-1.2**
VRAC	**Vranov**	**1.90**	**246**	*e*SG	**Sb**	**15 28 26.1**	**+0.7**
KRUC	**Moravsky**	**2.13**	**241**	*e*SG	**Sb**	**15 28 32.2**	**+0.1**

ISCJB ***27*** *15:31:35.0±0.6, 47°.69N±0°.06×91°.98W±0°.08, h0km, Error ellipse: s-maj=10.0km s-min=6.5km az=40.9*
NEIC ***27*** *15:31:36.5±0.9, 47°.70N×91°.89W, h0km, ML2.6, Error ellipse: s-maj=8.8km s-min=6.1km az=343.0, Suspected Mining explosion.*
NEIC 23 km [14 miles] S of Ely.
IDC ***27*** *15:31:36.3±4.1, 47°.67N×91°.95W, h0km, mb1 2.8/1, mb1mx2.7/28, mbtmp2.8/1, ML1.2/1, Error ellipse: s-maj=81.8km s-min=28.4km az=47.0*

ISC 27 15:31:35.1±1.0, 47°.71N±0°.06×91°.90W±0°.06, h0km, n13, σ1°15/13, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.36**	**49**	*e*Pg	**Pb**	**15 31 43.8**	**-0.6**
E38A	**The Farm, Brul**	**1.13**	**168**	*e*Pg	**Pg**	**15 31 55.6**	**-1.2**
C40A	**Isle Royale Na**	**1.86**	**83**	*e*Pn	**Pn**	**15 32 08.9**	**+0.6**
D41A	**Chassel**	**2.36**	**105**	*e*Pn	**Pn**	**15 32 16.6**	**+1.6**
COWI	**Conover**	**2.49**	**129**	*e*Pn	**Pn**	**15 32 18.3**	**+1.4**
SPMN	**Marine on St.**	**2.57**	**194**	*e*Pn	**Pn**	**15 32 19.0**	**+1.0**
G40A	**Rib Lake**	**2.71**	**154**	*e*Pn	**Pn**	**15 32 20.8**	**+0.8**
AGMN	**Agassiz Nation**	**2.73**	**284**	*e*Pn	**Pn**	**15 32 21.3**	**+1.2**
E43A	**Lone Tree Farm**	**3.61**	**110**	*e*Pn	**Pn**	**15 32 33.5**	**+1.2**
ULM	**Lac du Bonnet**	**3.65**	**316**	Pn	**Pn**	**15 32 32.9**	**+0.1**
	0.3nm,0.3s,baz=139,slow=8.1,SNR=1.7						
ULM				Sn	**Sn**	**15 33 16.5**	**0.0**
	0.3nm,0.3s,baz=109,slow=14,SNR=1.3						
ULM				Lg	Lg	15 33 28.7	
	0.6nm,0.3s,baz=41,slow=20,SNR=3.8						
ULM	**Lac du Bonnet**	**3.65**	**316**	*e*Pn	**Pn**	**15 32 34.3**	**+1.5**
ULM				Sn	**Sn**	**15 33 16.5**	**0.0**
ULM				Lg	Lg	15 33 28.7	
I10CA	**LAC DU BONNET**	**3.69**	**314**	*i*		15 54 50.0	
	baz=132,slow=323,SNR=4.3						
I56US	**NEWPORT INFRASI**	**6.88**	**281**	*i*		17 16 40.0	
	baz=84,slow=312,SNR=3.3						

GEN ***27*** *15:50:08.6, 45°.11N×7°.62E, h36km±4km, Ml1.7*
LDG ***27*** *15:50:12.7±2.8, 45°.13N×6°.15E, h2km, Md2.2/3, Error ellipse: s-maj=62.4km s-min=17.2km az=91.0*

ROM 27 15:50:08.1±0.2, 45°.10N±0°.01×7°.62E±0°.02, h36km±1km, ML1.4/8, Error ellipse: s-maj=1.3km s-min=0.8km az=125.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MONC	**Moncucco Torin**	**0.22**	**97**	P	Pn	15 50 15.9	-0.1
MONC				S	Sn	15 50 21.5	-1.2
MONC				AML	AML		
	comp=E,170μm,1.2s						
MONC				AML	AML		
	comp=N,130μm,0.2s						
MONC				AML	AML		
	comp=N,170μm,1.2s						
MONC				AML	AML		
	comp=N,131μm,0.2s						
MONC				AML	AML		
	comp=N,130μm,0.2s						
MONC				AML	AML		
	comp=E,170μm,1.2s						
RSP	**Reno Superiore**	**0.25**	**281**	P	Pn	15 50 15.9	-0.3
RSP				S	Sn	15 50 20.6	-2.0
RSP	**Reno Superiore**	**0.25**	**281**	P	Pn	15 50 15.9	-0.3
RSP				S	Sn	15 50 20.8	-1.8
RSP				AML	AML		
	comp=E,76μm,0.9s						
RSP				AML	AML		
	comp=N,124μm,1.4s						
RSP				AML	AML		
	comp=E,76μm,0.9s						
RSP				AML	AML		
	comp=N,124μm,1.4s						
RSP				AML	AML		
	comp=E,76μm,0.9s						
RSP				AML	AML		
	comp=N,124μm,1.4s						
BHB	**Bricherasio**	**0.36**	**224**	P	Pn	15 50 16.9	+0.2
BHB				S	Sn	15 50 22.4	-0.8
BHB	**Bricherasio**	**0.36**	**224**	P	Pn	15 50 16.9	+0.2
BHB				S	Sn	15 50 22.5	-0.7
BHB				AML	AML		
	comp=E,53μm,0.4s						
BHB				AML	AML		
	comp=N,48μm,0.1s						
BHB				AML	AML		
	comp=E,53μm,0.4s						
BHB				AML	AML		
	comp=N,48μm,0.1s						
BHB				AML	AML		
	comp=N,48μm,0.1s						
BHB				AML	AML		
	comp=E,53μm,0.4s						
TRAV	**Traversella**	**0.42**	**12**	P	Pn	15 50 17.4	-0.2
TRAV				S	Sn	15 50 23.2	-1.2
TRAV	**Traversella**	**0.42**	**12**	P	Pn	15 50 17.5	-0.2
TRAV				S	Sn	15 50 23.2	-1.2
TRAV				AML	AML		
	comp=E,73μm,0.3s						
TRAV				AML	AML		
	comp=N,80μm,1.0s						
TRAV				AML	AML		
	comp=E,73μm,0.3s						
TRAV				AML	AML		
	comp=N,80μm,1.0s						
TRAV				AML	AML		
	comp=E,73μm,0.3s						
TRAV				AML	AML		
	comp=N,80μm,1.0s						
LSD	**Lago del Serru**	**0.49**	**317**	P	Pn	15 50 19.6	+0.7
LSD				S	Sn	15 50 26.4	0.0
LSD	**Lago del Serru**	**0.49**	**317**	P	Pn	15 50 19.6	+0.7
LSD				S	Sn	15 50 26.4	0.0
LSD				AML	AML		
	comp=E,74μm,0.2s						
LSD				AML	AML		
	comp=N,61μm,1.4s						
LSD				AML	AML		
	comp=N,61μm,1.4s						
LSD				AML	AML		
	comp=E,74μm,0.2s						
RRL	**Rocca Remolon**	**0.61**	**253**	P	Pn	15 50 21.3	+0.6
RRL				S	Sn	15 50 29.6	+0.3
RRL	**Rocca Remolon**	**0.61**	**253**	P	Pn	15 50 21.5	+0.8
RRL				S	Sn	15 50 30.0	+0.7
BNI	**Bardonecchia**	**0.67**	**266**	P	Pn	15 50 22.7	+1.4
PZZ	**Stroppo**	**0.69**	**211**	P	Pn	15 50 21.6	0.0
PZZ				S	Sn	15 50 29.6	-1.6
PZZ	**Stroppo**	**0.69**	**211**	P	Pn	15 50 21.8	+0.2
MBDF	**Montbardon**	**0.71**	**238**	*e*Pg	Pn	15 50 22.9	+1.1
MBDF				*e*Sg	Sn	15 50 31.6	+0.1
	comp=E,3.3nm,0.2s						
LPG	**La Plagne**	**0.73**	**303**	*e*Pg	Pn	15 50 23.7	+1.5
LPG				*e*Sg	Sn	15 50 33.2	+1.0
	comp=E,7.2nm,0.2s						
LPL	**La Plagne**	**0.75**	**304**	*e*Pg	Pn	15 50 24.0	+1.6
LPL				*e*Sg	Sn	15 50 27.5	-5.1
	comp=E,3.2nm,0.2s						
MRGE	**Morge**	**0.78**	**330**	P	Pn	15 50 23.8	+1.1
MRGE				AML	AML		
	comp=E,18μm,1.6s						
MRGE				AML	AML		
	comp=N,25μm,0.5s						
MRGE				AML	AML		
	comp=E,18μm,1.6s						
MRGE				AML	AML		
	comp=N,25μm,0.5s						
SATI	**Passo del Sala**	**0.79**	**13**	P	Pn	15 50 23.0	-0.2
REMY	**Saint-Rhmy-en**	**0.81**	**336**	P	Pn	15 50 24.4	+1.2
GBOS	**Grotte di Boss**	**0.87**	**169**	P	Pn	15 50 24.4	+0.5
GBOS				AML	AML		
	comp=E,11μm,0.2s						
GBOS				AML	AML		
	comp=N,10μm,1.6s						
GBOS				AML	AML		
	comp=E,11μm,0.2s						
GBOS				AML	AML		
	comp=N,10μm,1.6s						
ENR	**Entracque**	**0.89**	**189**	P	Pn	15 50 23.7	-0.4
ENR				S	Sn	15 50 34.6	-1.2
ENR	**Entracque**	**0.89**	**189**	P	Pn	15 50 24.1	-0.1
ENR				AML	AML		
	comp=E,44μm,0.1s						
ENR				AML	AML		
	comp=N,22μm,0.5s						
ENR				AML	AML		
	comp=N,22μm,0.5s						
ENR				AML	AML		
	comp=E,44μm,0.1s						
MMK	**Mattmark**	**0.98**	**14**	P	Pn	15 50 26.1	+0.5
DIX	**Grande Dixence**	**0.99**	**352**	P	Pn	15 50 26.6	+0.9
NEGI	**Seborga**	**1.25**	**177**	P	Pn	15 50 30.4	+1.2

IDC 27 15:51:50.5±5.8, 19°07S×168°96E, h0km, mb4.0/3, mb1 4.0/4, mb1mx3.7/34, mbtmp3.9/4, ML2.7/1, MS2.7/2, Ms1 2.7/2, ms1mx2.6/19, Error ellipse: s-maj=152.0km s-min=40.8km az=114.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.80**	**218**	Pn	Pn	15 52 49.4	-1.0
	0.5nm,0.3s,baz=95,slow=9.1,SNR=46						
DZM				LR	LR	15 53 32.7	
	comp=Z,66nm,18.7s,baz=78,slow=27						
DZM				Sn	Sn	15 53 33.3	-2.6
	7.6nm,0.3s,baz=291,slow=22,SNR=10						
HNR	**Honiara**	**12.96**	**316**	LR	LR	15 59 51.6	
	comp=Z,55nm,18.1s,baz=272,slow=37						
STKA	**Stephens Creek**	**27.71**	**237**	P	P	15 57 41.2	+0.6
	1.4nm,0.5s,baz=67,slow=10,SNR=16						
ASAR	**Alice Springs**	**32.91**

NP1:$\phi_0$248.00000°,δ60.00000°,λ-106.00000°. NP2: $\phi_0$99.00000°,δ34.00000°,λ-64.00000°. Principal axes: T 2.4170, Plg13.0000°, Azm350.0000°; N 0.6060, Plg14.0000°, Azm257.0000°; P -3.0230, Plg70.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 27 15:53:28.6±0.3,30.63S±0.06×59.48E±0.06,h10km,n399,σ0.99/415,mb5.1/146,MS3.9/30,33C-9D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**10.01**	**340**	*e*Pn			**Pn**	**15 55 49.6**	**-3.0**
RER				*e*Sn			Sn	15 57 33.0	-12
ABPO	**Ambohimpanom**	**16.02**	**313**	*e*Pn			**Pn**	**15 57 15.0**	**+0.6**
ABPO	146nm,1.4s			*e*Sn			Sn	16 00 00.0	-12
ABPO	**Ambohimpanom**	**16.02**	**313**	*e*P			**Pn**	**15 57 15.0**	**+0.6**
ABPO				pmax			pmax		
	comp=Z,147nm,1.4s								
OPO	**Ambohidratompo**	**16.38**	**314**	Pn			**Pn**	**15 57 17.1**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=130,slow=13,SNR=13								
OPO				Sn			Sn	16 00 08.7	-12
	comp=Z,6.4nm,0.3s,baz=58,slow=8.9,SNR=7.3								
OPO				LR			LR	16 02 17.1	
	comp=Z,165nm,19.1s,baz=3.0,slow=32								
H08S1	**Diego Carcia H**	**25.90**	**31**	T			T	16 26 05.0	
	baz=206,slow=75,SNR=72								
H08S2	**Diego Garcia H**	**25.91**	**31**	T			T	16 26 05.6	
	baz=206,slow=75,SNR=67								
H08S3	**Diego Garcia H**	**25.92**	**31**	T			T	16 26 15.2	
	baz=206,slow=75,SNR=71								
H08N3	**Diego Garcia H**	**26.46**	**26**	T			T	16 26 41.5	
	baz=203,slow=75,SNR=25								
H08N1	**Diego Carcia H**	**26.48**	**26**	T			T	16 26 45.4	
	baz=203,slow=75,SNR=10								
H08N2	**Diego Garcia H**	**26.49**	**26**	T			T	16 26 43.3	
	baz=203,slow=75,SNR=15								
MATP	**Matopo**	**29.66**	**283**	P			**P**	**15 59 34.0**	**-0.8**
	comp=Z,8.3nm,0.8s,baz=115,slow=9.8,SNR=15								
MATP				LR			LR	16 09 14.8	
	comp=Z,214nm,21.7s,baz=113,slow=32								
BOSA	**Boshof**	**29.75**	**265**	P			**P**	**15 59 35.2**	**-0.3**
	comp=Z,5.4nm,0.7s,baz=94,slow=7.8,SNR=12								
BOSA				LR			LR	16 10 30.5	
	comp=Z,126nm,18.1s,baz=107,slow=34								
BOSA	**Boshof**	**29.75**	**265**	*e*P			**P**	**15 59 35.2**	**-0.3**
	comp=Z,16nm,0.9s								
BOSA	**Boshof**	**29.75**	**265**	*e*P			**P**	**15 59 35.2**	**-0.3**
BOSA				pmax			pmax		
	comp=Z,16nm,0.9s								
LBTB	**Lobatse**	**30.41**	**272**	*e*P			**P**	**15 59 40.9**	**-0.5**
	comp=Z,7.7nm,0.5s								
LBTB	**Lobatse**	**30.41**	**272**	*e*P			**P**	**15 59 40.9**	**-0.5**
LBTB				pmax			pmax		
	comp=Z,8.0nm,0.5s								
LSZ	**Lusaka**	**32.47**	**291**	*e*P			**P**	**16 00 00.4**	**+0.8**
	comp=Z,10nm,0.8s								
LSZ	**Lusaka**	**32.47**	**291**	*e*P			**P**	**16 00 00.4**	**+0.8**
LSZ				pmax			pmax		
	comp=Z,11nm,0.8s								
SUR	**Sutherland**	**32.90**	**257**	P			**P**	**16 00 02.5**	**-0.8**
	comp=Z,3.8nm,0.5s,baz=86,slow=13,SNR=7.3								
SUR	**Sutherland**	**32.90**	**257**	*e*P			**P**	**16 00 03.5**	**+0.2**
	comp=Z,12nm,1.0s								
KMBO	**Kilima Mbogo**	**36.13**	**320**	P			**P**	**16 00 31.8**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=102,slow=10.0,SNR=5.7								
KMBO				LR			LR	16 12 27.7	
	comp=Z,193nm,20.9s,baz=100,slow=32								
KMBO	**Kilima Mbogo**	**36.13**	**320**	*e*P			**P**	**16 00 31.8**	**+0.4**
KMBO				*e*pP			**pP**	**16 00 33.8**	**+0.7**
KMBO	**Kilima Mbogo**	**36.13**	**320**	*e*P			**P**	**16 00 31.8**	**+0.4**
KMBO				*e**PP			**pP**	**16 00 33.8**	**+0.7**
MAW	**Mawson**	**37.06**	**178**	P			**P**	**16 00 39.1**	**+0.6**
	comp=Z,14nm,0.8s,baz=349,slow=9.5,SNR=31								
MAW				LR			LR	16 12 00.0	
	comp=Z,332nm,19.9s,baz=326,slow=30								
MAW	**Mawson**	**37.06**	**178**	*e*P			**P**	**16 00 38.6**	**+0.1**
	comp=Z,4.1nm,0.9s								
MAW	**Mawson**	**37.06**	**178**	*e*P			**P**	**16 00 38.6**	**+0.1**
MAW				pmax			pmax		
	comp=Z,4.0nm,0.9s								
TSUM	**Tsumeb**	**39.46**	**277**	P			**P**	**16 01 00.3**	**+0.8**
	comp=Z,11nm,0.9s,baz=111,slow=8.4,SNR=19								
TSUM	**Tsumeb**	**39.46**	**277**	*e*P			**P**	**16 00 59.7**	**+0.2**
	comp=Z,17nm,1.1s								
SYO	**Syowa Base**	**40.10**	**191**	⇑*i*P			**P**	**16 01 02.9**	**-1.1**
SYO	**Syowa Base**	**40.10**	**191**	⇓*i*P			**P**	**16 01 05.0**	**+1.0**
SYO	**Syowa Base**	**40.10**	**191**	⇓*i*P			P	16 01 08.8	+4.8
H01W2	**Cape Leeuwin H**	**45.69**	**110**	T			T	16 50 32.4	
	baz=260,slow=75,SNR=101								
H01W3	**Cape Leeuwin H**	**45.69**	**110**	T			T	16 50 37.6	
	baz=260,slow=75,SNR=76								
H01W1	**Cape Leeuwin H**	**45.70**	**110**	T			T	16 50 38.6	
	baz=260,slow=75,SNR=66								
DAMY	**Dhamar**	**47.23**	**340**	*e*P			**P**	**16 02 05.5**	**+3.3**
	comp=Z,37nm,1.3s								
PDSI	**Padang**	**48.80**	**61**	P			**P**	**16 02 15.5**	**+1.2**
	comp=Z,25nm,1.2s								
MNSI	**Mandailing Nat**	**49.28**	**58**	P			**P**	**16 02 19.5**	**+1.6**
LHSI	**Lahat**	**49.32**	**66**	P			**P**	**16 02 20.2**	**+2.0**
KCSI	**Kotacane, Aceh**	**49.88**	**54**	P			**P**	**16 02 24.4**	**+1.9**
	comp=Z,15nm,0.9s								
PSI	**Prapat**	**50.19**	**56**	*e*P			**P**	**16 02 25.2**	**+0.2**
	comp=Z,7.2nm,1.0s								
PSI	**Prapat**	**50.19**	**56**	*e*P			**P**	**16 02 25.2**	**+0.2**
PSI				pmax			pmax		
	comp=Z,7.0nm,1.0s								
CBJI	**Citeko**	**50.47**	**71**	P			**P**	**16 02 28.2**	**+1.2**
	comp=Z,67nm,1.0s								
SNAA	**Sanae**	**52.59**	**201**	P			**P**	**16 02 42.0**	**-0.2**
SNAA	**Sanae**	**52.59**	**201**	P			**P**	**16 02 42.1**	**-0.1**
	comp=Z,24nm,0.7s,baz=91,slow=6.0,SNR=61								
SNAA	**Sanae**	**52.59**	**201**	*e*P			**P**	**16 02 41.9**	**-0.3**
	comp=Z,28nm,0.8s								
SNAA	**Sanae**	**52.59**	**201**	*e*P			**P**	**16 02 41.9**	**-0.2**
SNAA				pmax			pmax		
	comp=Z,28nm,0.8s								
IPM	**Ipoh**	**52.85**	**56**	*e*P			**P**	**16 02 45.9**	**+1.1**
	comp=Z,21nm,0.8s								
KULM	**Kulim**	**53.15**	**55**	*e*P			**P**	**16 02 48.2**	**+1.2**
	comp=Z,11nm,0.9s								
VNA2	**Neumayer--Watz**	**53.84**	**202**	P			**P**	**16 02 53.9**	**+2.5**
VNA1	**Neumayer--Stat**	**54.07**	**202**	P			**P**	**16 02 52.9**	**-0.1**
PSAD3	**Pilbara Seismi**	**54.32**	**96**	*e*P			**P**	**16 02 55.0**	**-0.6**
	comp=Z,12nm,0.6s								
PSAC3	**Pilbara Seismi**	**54.37**	**96**	*e*P			**P**	**16 02 55.4**	**-0.6**
	comp=Z,11nm,0.7s								
PSAB1	**Pilbara Seismi**	**54.39**	**96**	*e*P			**P**	**16 02 55.5**	**-0.6**
	comp=Z,16nm,1.1s								
PSAC1	**Pilbara Seismi**	**54.39**	**96**	*e*P			**P**	**16 02 55.5**	**-0.6**
	comp=Z,70nm,1.5s								
PSAA1	**Pilbara Seismi**	**54.40**	**96**	*e*P			**P**	**16 02 55.6**	**-0.5**
	comp=Z,37nm,1.4s								
PSA00	**Pilbara Seismi**	**54.41**	**96**	*e*P			**P**	**16 02 55.2**	**-1.0**
	comp=Z,15nm,1.0s								
PSAB3	**Pilbara Seismi**	**54.41**	**96**	*e*P			**P**	**16 02 55.7**	**-0.5**
	comp=Z,36nm,1.4s								
PSAA2	**Pilbara Seismi**	**54.41**	**96**	*e*P			**P**	**16 02 55.7**	**-0.5**
	comp=Z,44nm,1.5s								
PSAA3	**Pilbara Seismi**	**54.41**	**96**	*e*P			**P**	**16 02 55.9**	**-0.4**
	comp=Z,38nm,1.4s								
PSAB2	**Pilbara Seismi**	**54.43**	**96**	*e*P			**P**	**16 02 55.8**	**-0.6**
	comp=Z,14nm,0.8s								
PSAD1	**Pilbara Seismi**	**54.44**	**96**	*e*P			**P**	**16 02 56.0**	**-0.4**
	comp=Z,40nm,1.4s								
PSAC2	**Pilbara Seismi**	**54.46**	**96**	*e*P			**P**	**16 02 55.9**	**-0.7**
	comp=Z,12nm,0.9s								
PSAD2	**Pilbara Seismi**	**54.49**	**96**	*e*P			**P**	**16 02 56.4**	**-0.4**
	comp=Z,48nm,1.5s								
VNA3	**Neumayer Olymp**	**54.63**	**202**	P			**P**	**16 02 57.0**	**-0.1**
UOSS	**Minazif**	**55.34**	**356**	*e*P			**P**	**16 03 02.7**	**-0.1**
	comp=Z,20nm,1.1s								
JAGI	**Jajag, Banyuwa**	**55.44**	**79**	*e*P			**P**	**16 03 03.4**	**-0.4**
	comp=Z,56nm,0.8s								
RAYN	**Ar Rayn**	**55.48**	**344**	*e*P			**P**	**16 03 04.9**	**+1.1**
	comp=Z,32nm,1.3s								
RAYN	**Ar Rayn**	**55.48**	**344**	*e*P			**P**	**16 03 04.9**	**+1.1**
RAYN				pmax			pmax		
	comp=Z,32nm,1.3s								
FORT	**Forrest**	**58.06**	**109**	*e*P			**P**	**16 03 22.1**	**-0.1**
	comp=Z,22nm,0.7s								
H09N1	**TRISTAN DA CUN**	**58.69**	**243**	T			T	17 07 11.0	
	SNR=12								
QSPA	**South Pole Qui**	**59.54**	**180**	*e*P			**P**	**16 03 31.5**	**-0.5**
	comp=Z,23nm,0.8s								
SBUM	**Sibu**	**60.01**	**67**	*e*P			**P**	**16 03 36.6**	**+0.7**
	comp=Z,4.9nm,0.8s								
FITZ	**Fitzroy Crossi**	**60.80**	**95**	*e*P			**P**	**16 03 40.7**	**-0.5**
	comp=Z,11nm,0.9s								
PBKT	**Sadao Pong**	**61.60**	**46**	P			**P**	**16 03 49.6**	**+3.0**
	comp=Z,5.2nm,1.5s,comp=Z,400nm								
EDFI	**Ende, Flores**	**61.71**	**83**	P			**P**	**16 03 48.1**	**+0.5**
	comp=Z,20nm,1.0s								
CHAI	**Chaiyaphum**	**61.74**	**48**	P			**P**	**16 03 51.1**	**+3.6**
	comp=Z,427µmcomp=Z,16µm,0.7s								
CM31	**Chiang Mai Arr**	**61.83**	**43**	*e*P			**P**	**16 03 48.3**	**+0.3**
	comp=Z,16nm,0.9s								
CMAR	**Chiang Mai Arr**	**61.83**	**43**	P			**P**	**16 03 48.4**	**+0.3**
	comp=Z,9.5nm,0.7s,baz=229,slow=7.3,SNR=69								
CMAR				LR			LR	16 28 20.2	
	comp=Z,60nm,18.5s,baz=202,slow=34								
KAPI	**Kappang**	**61.98**	**79**	*c*e*P			**P**	**16 03 49.3**	**+0.1**
KAPI				pmax			pmax		
	comp=Z,3.0nm,0.4s								
CHTO	**Chiang Mai**	**62.10**	**43**	*e*P			**P**	**16 03 49.9**	**0.0**
	comp=Z,12nm,1.3s								
CHTO	**Chiang Mai**	**62.10**	**43**	*e*P			**P**	**16 03 49.9**	**0.0**
CHTO				pmax			pmax		
	comp=Z,12nm,1.3s								
CMMT	**Chiang Mai**	**62.10**	**43**	P			**P**	**16 03 51.9**	**+2.0**
	comp=Z,4.2nm,1.4s								
BKSI	**Bukumba**	**62.13**	**79**	P			**P**	**16 03 49.7**	**-0.6**
	comp=Z,10nm,1.2s								
MMRI	**Maumere**	**62.24**	**83**	*e*P			**P**	**16 03 50.4**	**-0.7**
	comp=Z,37nm,0.8s								
MMRI	**Maumere**	**62.24**	**83**	P			**P**	**16 03 51.9**	**+0.9**
	comp=Z,66nm,1.1s								
VNDA	**Vanda**	**62.96**	**166**	P			**P**	**16 03 54.6**	**-0.3**
	comp=Z,5.9nm,0.8s,baz=263,slow=6.5,SNR=42								
VNDA				LR			LR	16 28 56.0	
	comp=Z,48nm,19.0s,baz=234,slow=34								
VNDA	**Vanda**	**62.96**	**166**	*e*P			**P**	**16 03 54.5**	**-0.3**
VNDA				*e*sP			**P**	**16 03 54.6**	**-0.3**
VNDA	**Vanda**	**62.96**	**166**	*e*P			**P**	**16 03 54.5**	**-0.3**
VNDA				*e**SP			**P**	**16 03 54.6**	**-0.3**
SOEI	**Soe**	**63.43**	**86**	*e*P			**P**	**16 03 58.8**	**-0.3**
	comp=Z,28nm,0.9s								
SOEI	**Soe**	**63.43**	**86**	P			**P**	**16 04 00.5**	**+1.4**
	comp=Z,39nm,0.9s								
BBOO	**Buckleboo**	**63.78**	**114**	*e*P			**P**	**16 04 00.7**	**-0.3**
	comp=Z,31nm,1.4s								
SBA	**Scott Base**	**63.82**	**167**	*e*P			**P**	**16 04 00.8**	**+0.3**
	comp=Z,8.6nm,0.9s								
SBA	**Scott Base**	**63.82**	**167**	*e*P			**P**	**16 04 00.9**	**+0.3**
SBA				pmax			pmax		
	comp=Z,9.0nm,0.9s								
SHL	**Shillong**	**63.91**	**33**	*e*P			**P**	**16 04 02.6**	**+0.6**
	comp=Z,48nm,1.2s								
SHL	**Shillong**	**63.91**	**33**	*e*P			**P**	**16 04 02.6**	**+0.6**
SHL				pmax			pmax		
	comp=Z,49nm,1.2s								
SHL	**Shillong**	**63.91**	**33**	*e*P			**P**	**16 04 03.0**	**+1.0**
NIL	**Nilore**	**65.24**	**13**	*e*P			**P**	**16 04 10.1**	**-0.3**
	comp=Z,9.9nm,0.6s								
NIL	**Nilore**	**65.24**	**13**	*e*P			**P**	**16 04 10.1**	**-0.3**
NIL				pmax			pmax		
	comp=Z,10.0nm,0.6s								
KKM	**Kota Kinabalu**	**65.34**	**66**	*e*P			**P**	**16 04 11.7**	**+0.1**
	comp=Z,27nm,1.5s								
KBL	**Kabul**	**65.44**	**9**	*e*P			**P**	**16 04 12.5**	**+0.6**
	comp=Z,8.0nm,0.8s								
KBL	**Kabul**	**65.44**	**9**	*e*P			**P**	**16 04 12.5**	**+0.6**
KBL				pmax			pmax		
	comp=Z,8.0nm,0.8s								
ASAR	**Alice Springs**	**65.51**	**104**	P			**P**	**16 04 11.8**	**-0.8**
	comp=Z,12nm,0.7s,baz=241,slow=6.0,SNR=299								
ASAR				LR			LR	16 30 13.4	
	comp=Z,74nm,18.6s,baz=275,slow=34								
AS31	**Alice Springs**	**65.51**	**104**	*e*P			**P**	**16 04 11.6**	**-1.0**
	comp=Z,4.5nm,0.6s								
APSI	**Ampana**	**65.77**	**76**	P			**P**	**16 04 15.2**	**+1.0**
	comp=Z,26nm,1.0s								
LUWI	**Luwuk**	**66.64**	**77**	*e*P			**P**	**16 04 20.0**	**+0.2**
	comp=Z,18nm,0.8s								
LUWI	**Luwuk**	**66.64**	**77**	P			**P**	**16 04 20.9**	**+1.1**
	comp=Z,28nm,1.2s,comp=Z,884nm								
SLVN	**Son La**	**67.01**	**45**	*e*P			**P**	**16 04 22.6**	**+0.5**
	comp=Z,13nm,1.0s								
LSA	**Lhasa**	**67.14**	**30**	*e*P			**P**	**16 04 23.9**	**+0.7**
	comp=Z,10nm,1.1s								
LSA	**Lhasa**	**67.14**	**30**	*e*P			**P**	**16 04 23.9**	**+0.7**
LSA				pmax			pmax		
	comp=Z,10.0nm,1.1s								
WRA	**Warramunga Arr**	**67.44**	**100**	P			**P**	**16 04 24.5**	**-0.4**
	comp=Z,14nm,0.6s,baz=243,slow=6.5,SNR=90								
WB2	**Warramunga Arr**	**67.45**	**100**	*e*P			**P**	**16 04 24.4**	**-0.6**
	comp=Z,17nm,0.9s								
WRAB	**Tennant Creek**	**67.45**	**100**	*e*P			**P**	**16 04 24.5**	**-0.4**
	comp=Z,21nm,0.8s								
WRAB	**Tennant Creek**	**67.45**	**100**	*d i*P			**P**	**16 04 24.6**	**-0.4**
WRAB				pmax			pmax		
	comp=Z,47nm,1.4s								
WC3	**Warramunga Arr**	**67.46**	**100**	*e*P			**P**	**16 04 24.6**	**-0.5**
	comp=Z,59nm,1.3s								
MTN	**Manton Dam**	**67.88**	**92**	*e*P			**P**	**16 04 27.0**	**-0.7**
	comp=Z,12nm,0.9s								
GEYT	**Alibeck**	**68.21**	**359**	P			**P**	**16 04 30.0**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=227,slow=7.9,SNR=5.5								
GEYT				LR			LR	16 32 21.3	
	comp=Z,66nm,19.5s,baz=315,slow=34								
STKA	**Stephens Creek**	**68.47**	**115**	P			**P**	**16 04 31.1**	**-0.1**
	comp=Z,7.1nm,0.6s,baz=258,slow=4.7,SNR=53								
STKA				LR			LR	16 29 35.3	
	comp=Z,95nm,20.1s,baz=210,slow=32								
STKA	**Stephens Creek**	**68.47**	**115**	*e*P			**P**	**16 04 30.5**	**-0.7**
	comp=Z,1.9nm,0.7s								
STKA	**Stephens Creek**	**68.47**	**115**	*e*P			**P**	**16 04 30.5**	**-0.7**
STKA				pmax			pmax		
	comp=Z,2.0nm,0.7s								
CHGR	**Chuyangaron**	**69.52**	**8**	*e*P			**P**	**16 04 39.6**	**+2.2**
	comp=Z,18nm,1.0s								
TOA0	**Torodi Ar. Sit**	**70.55**	**299**	*e*P			**P**	**16 04 44.3**	**+0.1**
	comp=Z,10nm,1.0s								
TORD	**Torodi Ar. Bea**	**70.55**	**299**	LR			LR	16 34 07.6	
	comp=Z,125nm,20.9s,baz=335,slow=35								
BTK	**Batken**	**71.11**	**9**	*e*P			**P**	**16 04 48.1**	**+0.9**
	comp=Z,6.0nm,0.7s								
BTK	**Batken**	**71.11**	**9**	*e*P			**P**	**16 04 48.1**	**+0.9**
BTK				pmax			pmax		
	comp=Z,6.0nm,0.7s								
KSH	**Kashi**	**71.45**	**13**	P			**P**	**16 04 46.8**	**-2.5**
KSH				sP			sP	16 04 54.5	+2.6
KSH				S			S	16 13 59.3	-8.5
KSH				SS			**SS**	**16 18 34.8**	**-8.5**
KSH				pmax			pmax		
	comp=Z,41nm,0.7s								
KSH				pmax			pmax		
	comp=Z,170nm,4.5s								
KSH				LR			LR		
	comp=Z,300nm,14.0s								
KIC	**Kosan Boka**	**71.53**	**289**	*e*PKP1			**P**	**16 04 51.0**	**+0.8**
	comp=Z,35nm,1.1s								
LIC	**Lamto**	**71.69**	**289**	*e*PKP1			**P**	**16 04 51.7**	**+0.6**
	comp=Z,62nm,1.1s								
GNI	**Garni**	**71.73**	**348**	LR			LR	16 34 34.8	
	comp=Z,104nm,19.8s,baz=164,slow=34								
GNI	**Garni**	**71.73**	**348**	*i* P			**P**	**16 04 52.7**	**+1.7**
GNI				pmax			pmax		
	comp=Z,46nm,1.0s								
DBIC	**Dimbokro**	**71.80**	**290**	P			**P**	**16 04 52.8**	**+1.0**
	comp=Z,8.6nm,0.9s,baz=109,slow=7.0,SNR=6.8								
DBIC				LR			LR	16 34 38.7	
	comp=Z,70nm,20.4s,baz=110,slow=34								
DBIC	**Dimbokro**	**71.80**	**290**	*e*P			**P**	**16 04 52.4**	**+0.6**
	comp=Z,19nm,1.1s								
DBIC	**Dimbokro**	**71.80**	**290**	*e*P			**P**	**16 04 52.4**	**+0.6**
DBIC				pmax			pmax		
	comp=Z,19nm,1.1s								
TIC	**Toumodi**	**71.92**	**289**	*e*PKP1			**P**	**16 04 50.6**	**-2.0**
AKT	**Akhty**	**72.56**	**351**	*e*P			**P**	**16 04 56.5**	**+0.6**
AKT				*e*				16 05 13.0	
AKT				pmax			pmax		
	comp=Z,15nm,1.1s								
ARSB	**Arslanbob**	**72.67**	**11**	*e*P			**P**	**16 04 56.6**	**0.0**
	comp=Z,8.1nm,0.6s								
CAN	**Canberra**	**72.68**	**121**	*e*P			**P**	**16 04 58.0**	**+1.1**
	comp=Z,26nm,1.4s								
CAN	**Canberra**	**72.68**	**121**	*e*P			**P**	**16 04 58.0**	**+1.1**
CAN				pmax			pmax		
	comp=Z,26nm,1.4s								
AKH	**Akhalkalaki**	**73.18**	**348**	*e*P			**P**	**16 05 00.6**	**+1.0**
	comp=Z,8.6nm,1.0s								
AKH	**Akhalkalaki**	**73.18**	**348**	⇑*i*P			**P**	**16 05 01.3**	**+1.7**
AKH	**Akhalkalaki**	**73.18**	**348**	*e*P			**P**	**16 05 00.6**	**+1.0**
AKH				pmax			pmax		
	comp=Z,9.0nm,1.0s								
IDI	**Anoyia**	**73.20**	**331**	LR			LR	16 37 50.9	
	comp=Z,57nm,18.6s,baz=91,slow=36								
BCA	**Borcka**	**73.59**	**346**	⇑*i*P			**P**	**16 05 01.9**	**+0.1**
FAKI	**Fak Fak**	**73.70**	**84**	*e*P			**P**	**16 05 03.7**	**+0.6**
	comp=Z,19nm,0.8s								
BR131	**Keskin Array S**	**74.00**	**340**	*e*P			**P**	**16 05 04.6**	**+0.1**
	comp=Z,7.5nm,0.9s								
BRTR	**Keskin Array B**	**74.00**	**340**	P			**P**	**16 05 04.2**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=163,slow=8.0,SNR=16								
BRTR				LR			LR	16 35 28.8	
	comp=Z,20nm,19.1s,baz=116,slow=34								
BRTR	**Keskin Array B**	**74.00**	**340**	*i* P			**P**	**16 05 04.6**	**+0.1**
BRTR				pmax			pmax		
	comp=Z,3.0nm,0.7s								
KK31	**Karatay Array**	**74.06**	**8**	*e*P			**P**	**16 05 05.0**	**+0.4**
	comp=Z,7.4nm,1.0s								
KK31	**Karatay Array**	**74.06**	**8**	*e*P			**P**	**16 05 05.0**	**+0.4**
KK31				pmax			pmax		
	comp=Z,7.0nm,1.0s								
KKAR	**Karatay Array**	**74.06**	**8**	*e*P			**P**	**16 05 05.4**	**+0.8**
	comp=Z,7.4nm,1.0s								
KKAR	**Karatay Array**	**74.06**	**8**	*e*P			**P**	**16 05 05.4**	**+0.8**
KKAR				pmax			pmax		
	comp=Z,7.0nm,1.0s								
TAM	**Tamanrasset**	**74.17**	**309**	*e*P			**P**	**16 05 06.1**	**+0.3**
	comp=Z,2.9nm,0.8s								
AAK	**Ala-Archa**	**74.20**	**11**	LR			LR	16 34 54.5	
	comp=Z,52nm,19.9s,baz=186,slow=34								
AAK	**Ala-Archa**	**74.20**	**11**	*e*P			**P**	**16 05 06.4**	**+0.8**
	comp=Z,6.1nm,0.7s								
AAK	**Ala-Archa**	**74.20**	**11**	*c*e*P			**P**	**16 05 06.9**	**+1.3**
AAK				pmax			pmax		
	comp=Z,35nm,1.7s								
KDJ	**Kajisay**	**74.21**	**14**	*e*P			**P**	**16 05 05.7**	**0.0**
	comp=Z,8.7nm,0.7s								
KDJ	**Kajisay**	**74.21**	**14**	*e*P			**P**	**16 05 05.7**	**0.0**
KDJ				pmax			pmax		
	comp=Z,9.0nm,0.7s								
BOOM	**Boomskoye usch**	**74.32**	**13**	*e*P			**P**	**16 05 06.8**	**+0.5**
	comp=Z,7.4nm,0.9s								
BOOM	**Boomskoye usch**	**74.32**	**13**	*e*P			**P**	**16 05 06.8**	**+0.5**
BOOM				pmax			pmax		
	comp=Z,7.0nm,0.9s								
ZEI	**Tsey**	**74.44**	**348**	*e*P			**P**	**16 05 07.6**	**+0.6**
ZEI				pmax			pmax		
	comp=Z,13nm,0.9s								
PRZ	**Przheval'sk**	**74.81**	**14**	*e*P			**P**	**16 05 10.1**	**+1.0**
	comp=Z,26nm,0.6s								
PRZ	**Przheval'sk**	**74.81**	**14**	*e*P			**P**	**16 05 10.1**	**+1.0**
PRZ				pmax			pmax		
	comp=Z,26nm,0.6s								
NEY	**Neytrino**	**75.11**	**347**	*c*e*P			**P**	**16 05 11.5**	**+0.7**
NCK	**Nalchik**	**75.19**	**348**	*c*e*P			**P**	**16 05 11.5**	**+0.4**
NCK				pmax			pmax		
	comp=Z,7.0nm,1.0s								
KBZ	**Khabaz**	**75.54**	**348**	P			**P**	**16 05 13.7**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=157,slow=3.0,SNR=9.3								
KBZ				LR			LR	16 37 23.1	
	comp=Z,108nm,20.0s,baz=162,slow=35								
KVAR	**Kislovodsk Arr**	**75.79**	**348**	LR			LR	16 38 49.5	
	comp=Z,47nm,18.4s,baz=78,slow=36								
KIV	**Kislovodsk**	**75.80**	**348**	*e*P			**P**	**16 05 15.2**	**+0.6**
	comp=Z,15nm,1.0s								
KIV	**Kislovodsk**	**75.80**	**348**	*e*P			**P**	**16 05 15.7**	**+1.0**
KIV				pmax			p

FOZ Fox Glacier 82.53 137 *eP* **P 16 05 52.0 +0.3**
comp=Z,21nm,0.9s
MDVR Moldovita 82.56 334⇑ *iP* **P 16 05 52.0 +0.4**
GZR Gura Zlata 82.69 335⇑ *iP* **P 16 05 52.3 0.0**
KURK Kurchatov 82.74 12 *eP* **P 16 05 52.4 +0.1**
comp=Z,5.2nm,0.6s
KURK Kurchatov 82.74 12⇓ *iP* **P 16 05 51.4 -0.9**
KURK pmax pmax
comp=Z,4.0nm,1.0s
BIZ Bicaz 82.87 338⇑ *iP* **P 16 05 52.9 -0.2**
VRH Novokhopyorsk 82.97 349 *eP* **P 16 05 53.0 -0.4**
VRH pmax pmax
comp=Z,20nm,0.7s
BZS Buzias 83.31 334⇑ *iP* **P 16 05 55.6 +0.2**
VSR Storozhevoye 83.43 347 *eP* **P 16 05 55.5 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.6s
ARCR ARCALIA 83.59 337⇓ *iP* **P 16 05 57.9 +1.1**
DGZ Jazzator, Alta 83.75 18 *dP* **P 16 05 59.0 +1.2**
DGZ pmax pmax
comp=Z,14nm,1.6s
BURAR Bucovina Array 83.76 337⇑ *iP* **P 16 05 58.8 +1.0**
BUR08 Bucovina Ar. S 83.79 337 *eP* **P 16 05 58.4 +0.4**
comp=Z,5.6nm,1.0s
SIRR Siria 83.84 335⇑ *iP* **P 16 05 58.6 +0.5**
BRVK Borovoye 83.86 7 *ceP* **P 16 05 58.8 +0.8**
BRVK pmax pmax
comp=Z,20nm,1.7s
DRGR 83.91 336⇑ *iP* **P 16 05 58.5 0.0**
LTZ Lake Taylor 84.42 137 *eP* **P 16 06 01.7 +0.2**
comp=Z,29nm,1.0s
AKASG Malin Array Be 85.28 341 P **P 16 06 04.4 -0.9**
comp=Z,2.6nm,0.5s,baz=161,slow=4.0,SNR=5.7
AKBB Malin Array Si 85.28 341 *eP* **P 16 06 04.8 -0.4**
comp=Z,8.4nm,0.6s
AKBB Malin Array Si 85.28 341 *eP* **P 16 06 04.8 -0.4**
AKBB pmax pmax
comp=Z,8.0nm,0.6s
KOLS Kolonicke sedl 85.89 336 *eP* **P 16 06 08.7 +0.3**
KOLS Kolonicke sedl 85.89 336 *eP* **P 16 06 08.7 +0.3**
KWP Kalwaria Pacla 86.34 337 *eP* **P 16 06 10.1 -0.5**
comp=Z,53nm,0.8s
KWP Kalwaria Pacla 86.34 337 *eP* **P 16 06 10.1 -0.5**
KWP pmax pmax
comp=Z,53nm,0.8s
ARU Arti 86.71 359 *eP* **P 16 06 12.4 +0.2**
comp=Z,19nm,1.2s
ARU Arti 86.71 359 *dP* **P 16 06 12.7 +0.5**
ARU 16 09 34.5
ARU S S 16 16 38.9 -10
ARU pmax pmax
comp=Z,27nm,1.7s
VYHS Vyhne 86.76 334 *eP* **P 16 06 12.7 0.0**
VYHS Vyhne 86.76 334 *eP* **P 16 06 12.7 0.0**
ZAA0 Zalesovo Array 87.04 15 *eP* **P 16 06 12.8 -1.1**
comp=Z,5.6nm,0.8s
ZALV Zalesovo Beam 87.04 15 P **P 16 06 13.1 -0.8**
comp=Z,4.4nm,0.6s,baz=201,slow=5.4,SNR=16
SVE Sverdlovsk 87.11 1 *eP* **P 16 06 16.8 +2.6**
SVE pmax pmax
comp=Z,18nm,1.5s
MODS Modra-Piesok 87.25 333 *eP* **P 16 06 15.0 -0.1**
MODS Modra-Piesok 87.25 333 *eP* **P 16 06 15.0 -0.1**
CONA Conrad Observa 87.45 332 *iP* **P 16 06 16.5 +0.4**
comp=Z,13nm,1.1s,SNR=5.0
JAVC Velka Javorina 87.50 334 *eP* **P 16 06 17.0 +0.7**
NVS Novosibirsk 87.54 13 *eP* **P 16 06 15.6 -0.7**
OBN Obninsk 87.63 347 *ceP* **P 16 06 17.3 +0.6**
OBN *e* 16 09 47.2
OBN *i* S **S 16 16 56.9 -1.2**
OBN *e*SS **SS 16 22 44.6 -0.4**
OBN pmax pmax
comp=Z,28nm,0.8s
OBN MLR MLR
comp=Z,55nm,17.0s
OJC Ojcow 87.84 336 *eP* **P 16 06 17.7 -0.1**
comp=Z,10nm,1.0s
OJC Ojcow 87.84 336 *eP* **P 16 06 17.7 -0.1**
OJC pmax pmax
comp=Z,10.0nm,1.0s
MOS Moscow 88.03 348 *eP* **P 16 06 17.5 -1.0**
MOS pmax pmax
comp=Z,42nm,0.9s
KRUC Moravsky 88.15 333 *eP* **P 16 06 19.2 -0.1**
MORC Moravsky Berou 88.30 334 *eP* **P 16 06 19.9 -0.2**
comp=Z,7.2nm,1.2s
MORC Moravsky Berou 88.30 334⇑ *iP* **P 16 06 20.3 +0.2**
MORC Moravsky Berou 88.30 334 *eP* **P 16 06 19.9 -0.2**
MORC pmax pmax
comp=Z,7.0nm,1.2s
MORC Moravsky Berou 88.30 334 *eP* **P 16 06 20.0 -0.1**
WTTA Wattenberg 88.69 330 *iP* **P 16 06 22.7 +0.5**
comp=Z,9.5nm,0.5s,SNR=7.3
TREC Trest 88.69 333 *eP* **P 16 06 21.9 0.0**
TREC Trest 88.69 333 *eP* **P 16 06 21.9 0.0**
SONM Songino Array 88.73 29 P **P 16 06 22.3 0.0**
comp=Z,2.4nm,0.9s,baz=223,slow=4.2,SNR=10
SONM LR LR 16 44 03.2
comp=Z,97nm,20.0s,baz=244,slow=34
SQTA Sankt Quirin 88.84 329 *iP* **P 16 06 23.4 +0.5**
comp=Z,20nm,1.0s,SNR=6.8
FETA Feichten 88.90 329 *iP* **P 16 06 24.0 +0.8**
comp=Z,18nm,0.8s,SNR=9.3
MOTA Moosalm 88.98 329 *iP* **P 16 06 23.9 +0.4**
comp=Z,9.1nm,0.7s,SNR=6.9
GEC2 GERESS Array S 89.05 332 *eP* **P 16 06 23.0 -0.7**
comp=Z,4.4nm,0.8s
GEC2 GERESS Array S 89.05 332 *eP* **P 16 06 23.0 -0.7**
GEC2 pmax pmax
comp=Z,4.0nm,0.8s
GERES GERESS Array B 89.05 332 P **P 16 06 22.9 -0.7**
comp=Z,1.9nm,0.7s,baz=145,slow=4.6,SNR=17
GERES LR LR 16 44 44.3
comp=Z,40nm,20.8s,baz=159,slow=35
TUE Stuetta 89.11 328 *eP* **P 16 06 23.7 -0.5**
comp=Z,9.2nm,0.7s
DPC Dobruska-Polom 89.22 334 *eP* **P 16 06 25.0 +0.6**
DPC Dobruska-Polom 89.22 334 *eP* **P 16 06 25.0 +0.6**
RETA Reutte 89.24 329 *iP* **P 16 06 25.3 +0.6**
comp=Z,7.7nm,0.6s,SNR=5.9
KHC Kasperske Hory 89.32 332 *eP* **P 16 06 24.2 -0.7**
comp=Z,1.9nm,0.9s
KHC Kasperske Hory 89.32 332 *eP* **P 16 06 24.4 -0.5**
KHC Kasperske Hory 89.32 332 *eP* **P 16 06 24.4 -0.5**
KHC *ex* x 16 06 44.3
OSTC Ostas 89.43 334 *eP* **P 16 06 26.3 +0.9**
UPC Upice 89.46 334 *eP* **P 16 06 25.9 +0.4**
UPC Upice 89.46 334 *eP* **P 16 06 25.9 +0.4**
DAVA Damuels 89.48 329 *iP* **P 16 06 26.4 +0.5**
comp=Z,11nm,0.7s,SNR=6.5
CHVC Chvalec 89.51 334 *eP* **P 16 06 26.4 +0.6**
PRU Pruhonice 89.62 333 *eP* **P 16 06 26.6 +0.4**
PRU Pruhonice 89.62 333 *eP* **P 16 06 26.6 +0.4**
OUZ Omahuta 89.85 132 *eP* **P 16 06 25.5 -2.4**
comp=Z,75nm,1.2s
PVCC Panska Ves 90.03 333 *eP* **P 16 06 29.0 +0.8**
PVCC Panska Ves 90.03 333 *eP* **P 16 06 29.0 +0.8**
BRG Berggiesshubel 90.55 333 *eP* **P 16 06 31.4 +0.8**
comp=Z,9.8nm,1.1s
BRG Berggiesshubel 90.55 333 *eP* **P 16 06 31.4 +0.8**
BRG pmax pmax
comp=Z,10.0nm,1.1s
BFO Black Forest 90.96 329 *ceP* **P 16 06 33.9 +1.3**
BFO pmax pmax
comp=Z,2.0nm,1.7s
CLL Collm 91.26 333 *eP* **P 16 06 35.0 +1.2**
CLL Collm 91.26 333 *eP* **P 16 06 35.0 +1.2**
ESDC Sonseca Array 91.43 316 P **P 16 06 36.3 +1.3**
comp=Z,1.1nm,0.6s,baz=103,slow=3.6,SNR=5.9
TRQA Tornquist 92.52 222 *eP* **P 16 06 38.9 -1.4**
comp=Z,7.6nm,0.8s
TRQA Tornquist 92.52 222 *eP* **P 16 06 38.9 -1.4**
TRQA pmax pmax
comp=Z,8.0nm,0.8s
PRGR Permogore 92.62 353 *eP* **P 16 06 36.3 -3.5**
PRGR pmax pmax
comp=Z,6.0nm,0.6s
KS15 Wonju Array Si 93.12 48 *eP* **P 16 06 41.6 -1.2**
comp=Z,6.3nm,0.9s
KSRS Korea Array 93.15 48 P **P 16 06 42.5 -0.5**
comp=Z,2.6nm,0.8s,baz=237,slow=5.1,SNR=9.8
KSRS LR LR 16 49 44.7
comp=Z,24nm,18.0s,baz=230,slow=36
PUL Pulkovo 93.23 346 *dP* **P 16 06 45.0 +2.3**
PUL pmax pmax
comp=Z,36nm,0.8s
PLCA Paso Flores 95.27 216 LR LR 16 43 20.5
comp=Z,122nm,18.7s,baz=180,slow=31
HFS Hagfors 97.93 339 LR LR 16 50 03.2
comp=Z,18nm,19.0s,baz=162,slow=35
NOA NORSAR Array B 99.41 338 LR LR 16 51 52.6
comp=Z,18nm,19.5s,baz=130,slow=35
MAJO Matsushiro 99.49 53 *eP* **Pdif 16 07 10.8 -1.0**
MAJO Matsushiro 99.49 53 *eP* **Pdif 16 07 10.8 -1.0**
MJAR Matsushiro Arr 99.49 53 P **Pdif 16 07 10.8 -1.0**
comp=Z,2.2nm,1.0s,baz=228,slow=6.2,SNR=5.9
MJAR LR LR 16 49 41.6
comp=Z,27nm,21.2s,baz=260,slow=34
ARA0 ARCESS Array S 102.89 348 *e*Pdif **Pdif 16 07 25.3 -0.8**
ARCES ARCESS Array B 102.89 348 P **Pdif 16 07 25.3 -0.8**
comp=Z,1.3nm,0.7s,baz=194,slow=4.6,SNR=4.6
PETK Petropavlovsk- 118.60 43 PKP **PKPdf 16 12 15.2 -1.1**
comp=Z,1.6nm,0.8s,baz=260,slow=2.0,SNR=4.4
PEA1 Petropavlovsk- 118.60 43 *e*PKPdf **PKPdf 16 12 15.2 -1.1**
BANI BANI 133.10 267 *e*PKPdf **PKiKP 16 12 46.1 -0.3**
ILAR Eielson Array 142.09 18 PKP **PKPdf 16 12 59.5 -0.7**
comp=Z,2.0nm,0.9s,baz=298,slow=3.6,SNR=7.2
RC01 Rabbit Creek A 143.96 24 *e*PKPdf **PKPab 16 13 01.1 +0.2**
SSPA Standing Stone 144.24 298 *e*PKPdf **PKPab 16 13 02.3 -0.4**
R58B Mineral 144.26 294 *e*PKPdf **PKPab 16 13 02.4 -0.4**
BRLK Bradley Lake 144.45 26 *e*PKPdf **PKPab 16 13 02.7 -0.2**
DAWY Dawson 144.48 14 *e*PKPdf PKPbc 16 13 03.1 0.0
SADO Sadowa 144.74 305 *e*PKPdf **PKPab 16 13 04.2 -0.1**
O56A Blue Knob Stat 144.77 298 *e*PKPdf **PKPab 16 13 04.0 -0.7**
KDAK Kodiak Island 145.02 30 *e*PKPbc **PKPbc 16 13 04.8 -0.1**
KDAK Kodiak Island 145.02 30 *e*PKIKP **PKPbc 16 13 04.9 -0.1**
OHAK Old Harbor 145.05 31 *e*PKPbc **PKPbc 16 13 04.8 -0.2**
N55A Marion Center 145.07 298 *e*PKPbc **PKPbc 16 13 05.0 -0.8**
S57A Dark Hollow, R 145.11 293 *e*PKPbc **PKPbc 16 13 05.1 -0.8**
TGUH Tegucigalpa,Un 145.28 249 *e*PKPbc **PKPbc 16 13 05.7 -1.5**
T57A Hurt 145.33 292 *e*PKPbc **PKPbc 16 13 06.3 -0.3**
M54A Oil Creek Stat 145.52 300 *e*PKPdf **PKPdf 16 13 06.9 -0.1**
V56A Mocksville 146.29 290 *e*PKPdf **PKPdf 16 13 08.5 0.0**
BALM Baldy 146.34 19 *e*PKPdf **PKPbc 16 13 09.2 0.0**
BALM Baldy 146.34 19 *e*PKP2 **PKPbc 16 13 09.2 0.0**
N53A Lisbon 146.47 299 *e*PKPdf **PKPbc 16 13 09.5 -0.5**
Q54A Coxs Mills 146.57 295 *e*PKPdf **PKPbc 16 13 09.7 -0.7**
JSC Jenkinsville 146.81 287 *e*PKPdf **PKPdf 16 13 09.5 +0.1**
JSC Jenkinsville 146.81 287 *e*PKP2 **PKPdf 16 13 09.5 +0.1**
O52A Adamsville 147.28 298 *e*PKPdf **PKPdf 16 13 08.8 -1.2**
I49A Point Hope 147.48 305 *e*PKPdf **PKPdf 16 13 10.8 +0.6**
HYT Haines Junctio 147.76 16 *e*PKPbc **PKPbc 16 13 13.3 +0.1**
YKW3 Yellowknife Ar 147.83 355 *e*PKPbc **PKPbc 16 13 12.4 -0.7**
YKA Yellowknife Ar 147.89 355 PKP **PKPdf 16 13 09.1 -1.2**
comp=Z,3.9nm,0.7s,baz=358,slow=2.7,SNR=39
YKA PKPbc **PKPbc 16 13 12.9 -0.4**
comp=Z,8.5nm,0.5s,baz=359,slow=3.9,SNR=55
YKA PKPab **PKPab 16 13 15.9 +0.1**
comp=Z,8.5nm,0.5s,baz=358,slow=3.9,SNR=24
E46A Sault Ste Mari 147.92 310 *e*PKPdf **PKPdf 16 13 09.2 -1.7**
V53A Saluda 148.16 289 *e*PKPbc **PKPbc 16 13 14.2 -0.8**
BG3 Lake Jocassee 148.23 288 *e*PKPdf **PKPdf 16 13 11.1 -0.7**
BG3 *e*PKPbc **PKPbc 16 13 14.7 -0.4**
P51A Williamsport 148.27 296 *e*PKPdf **PKPdf 16 13 10.2 -1.5**
WHY Whitehorse 148.48 14 *e*PKPdf **PKPdf 16 13 11.8 +0.4**
WHY *e*PKPbc **PKPbc 16 13 14.2 -0.9**
N49A Columbus Grove 148.97 299 *e*PKPdf **PKPdf 16 13 12.5 -0.3**
N49A *e*PKPbc **PKPbc 16 13 16.4 -0.4**
TEIG Tepich 149.19 258 *e*PKPbc **PKPbc 16 13 17.5 -0.5**
M48A Edgerton 149.29 301 *e*PKPdf **PKPdf 16 13 12.4 -0.8**
M48A *e*PKPbc **PKPbc 16 13 17.5 -0.1**
152A Waverly Hall 149.54 283 *e*PKPdf **PKPdf 16 13 12.2 -1.7**
152A *e*PKPbc **PKPbc 16 13 18.2 -0.3**
E43A Lone Tree Farm 149.69 311 *e*PKPdf **PKPdf 16 13 12.9 -0.8**
E43A *e*PKPbc **PKPbc 16 13 18.4 0.0**
P48A Milroy 150.10 297 *e*PKPdf **PKPdf 16 13 12.1 -2.6**
P48A *e*PKPbc **PKPbc 16 13 18.2 -1.4**
W50A Signal Mountai 150.19 288 *e*PKPdf **PKPdf 16 13 13.3 -1.7**
W50A *e*PKPbc **PKPbc 16 13 19.9 -0.1**
Z50A Ashland 150.60 284 *e*PKPdf **PKPdf 16 13 14.2 -1.4**
Z50A *e*PKPbc **PKPbc 16 13 20.9 -0.2**
SWET Sewanee 150.70 288 *e*PKPdf **PKPdf 16 13 15.7 0.0**
SWET *e*PKPbc **PKPbc 16 13 20.8 -0.5**
250A Grady 150.77 282 *e*PKPbc **PKPbc 16 13 20.7 -0.8**
H43A Windswept, Lux 150.80 307 *e*PKPbc **PKPbc 16 13 20.9 -0.2**
CLTN Cedars of Leba 151.02 290 *e*PKPdf **PKPdf 16 13 14.8 -1.3**
CLTN *e*PKPbc **PKPbc 16 13 21.9 0.0**
COWI Conover 151.18 311 *e*PKPbc **PKPbc 16 13 21.6 -0.4**
SFIN Lafayette 151.25 299 *e*PKPdf **PKPdf 16 13 16.3 0.0**
SFIN *e*PKPbc **PKPbc 16 13 22.0 -0.3**
V48A Smith Brothers 151.43 289 *e*PKPdf **PKPdf 16 13 14.7 -2.1**
DLBC Dease Lake 151.44 10 *e*PKPbc **PKPbc 16 13 22.4 +0.1**
M44A Midewin, Midew 151.77 301 *e*PKPdf **PKPdf 16 13 15.2 -1.9**
M44A *e*PKPbc **PKiKP 16 13 23.9 0.0**
EYMN Ely 151.88 316 *e*PKPbc **PKPbc 16 13 23.3 -0.3**
G40A Rib Lake 152.17 310 *e*PKPdf **PKPdf 16 13 15.4 -2.2**
G40A *e*PKPbc **PKPbc 16 13 23.7 -0.6**
WVT Waverly 152.24 290 *e*PKPbc **PKPbc 16 13 23.6 -1.1**
WVT Waverly 152.24 290 *e*PKIKP **PKPbc 16 13 23.6 -1.1**
OLIL Olney 152.25 296 *e*PKPbc **PKPbc 16 13 24.2 -0.4**
PLAL Pickwick Lake 152.45 288 *e*PKPdf **PKPdf 16 13 17.3 -1.1**
PLAL *e*PKPbc **PKPbc 16 13 24.9 -0.3**
FFC Flin Flon 152.50 336 *e*PKPbc **PKPbc 16 13 24.1 -0.6**
FFC Flin Flon 152.50 336 *e*PKIKP **PKPbc 16 13 24.1 -0.6**
CCM Cathedral Cave 154.79 295 *e*PKPbc **PKPbc 16 13 28.9 -1.3**
X37A Clayton 158.47 287 *e*PKPab **PKPab 16 14 01.2 -0.1**
WMOK Wichita Mounta 161.25 288 *e*PKPab **PKPab 16 14 13.2 -0.3**
NEW Newport 162.19 353 *e*PKPdf **PKPdf 16 13 28.4 -1.8**
NEW *e*PKPab **PKPab 16 14 16.9 -0.1**
NEW Newport 162.19 353 *e*PKIKP **PKPdf 16 13 28.4 -1.8**
NEW *e* 16 14 16.9
HRY Holter Researc 162.58 340 *e*PKPab **PKPab 16 14 19.2 +0.3**
BOZ Bozeman (W) 163.51 338 *e*PKPdf **PKPdf 16 13 31.9 +0.1**
BOZ Bozeman (W) 163.51 338 *e*PKIKP **PKPdf 16 13 31.9 +0.1**
PHWY Pilot Hill 163.83 315 *e*PKPab **PKPab 16 14 24.9 0.0**
YHH Holmes Hill 163.94 334 *e*PKPdf **PKPdf 16 13 32.8 +0.5**
F10A Beach Ranch, E 164.46 351 *e*PKPab **PKPab 16 14 27.6 +0.6**
FXWY Fox Creek 164.98 332 *e*PKPdf **PKPdf 16 13 33.2 0.0**
BW06 Boulder Array 165.05 327 *e*PKPdf **PKPdf 16 13 32.6 -0.7**
PD31 Pinedale Array 165.05 327 *e*PKPdf **PKPdf 16 13 32.2 -1.2**
PD31 *e*PKPab **PKPab 16 14 29.4 -0.6**
PDAR Pinedale Array 165.05 327 PKP **PKPdf 16 13 32.5 -0.9**
comp=Z,1.5nm,0.8s,baz=70,slow=1.7,SNR=9.9
PDAR PKPab **PKPab 16 14 28.8 -1.2**
comp=Z,0.8nm,0.7s,baz=82,slow=3.3,SNR=5.9
SDCO Great Sand Dun 165.69 304 *e*PKPdf **PKPdf 16 13 34.5 +0.4**
SDCO *e*PKPab **PKPab 16 14 33.3 +0.1**
HLID Hailey 166.21 341 *e*PKPdf **PKPdf 16 13 34.5 +0.3**
S22A 4UR Ranch, Cre 166.63 306 *e*PKPdf **PKPdf 16 13 35.3 +0.5**
HWUT Hardware Ranch 166.88 329 *e*PKPab **PKPab 16 14 37.5 -0.5**
MNTX Cornudas Mount 166.99 279 *e*PKPdf **PKPdf 16 13 35.0 +0.1**
PV07 Paradox Valley 167.50 312 *e*PKPdf **PKPdf 16 13 35.4 +0.1**
PV07 *e*PKPab **PKPab 16 14 40.8 -0.2**
PV22 Blue Mesa, Par 167.53 312 *e*PKPdf **PKPdf 16 13 35.0 -0.3**
PV22 *e*PKPab **PKPab 16 14 41.2 +0.1**
PV13 Radium Mtn., P 167.77 311 *e*PKPdf **PKPdf 16 13 35.9 +0.3**
PV13 *e*PKPab **PKPab 16 14 43.0 +0.8**
SRU San Rafael Swe 168.22 319 *e*PKPdf **PKPdf 16 13 35.7 -0.1**
SRU *e*PKPab **PKPab 16 14 44.3 +0.2**
DUG Dugway, Tooele 168.57 329 *e*PKPdf **PKPdf 16 13 34.8 -1.1**
DUG *e*PKPab **PKPab 16 14 45.3 -0.2**
DUG Dugway, Tooele 168.57 329 *e*PKIKP **PKPdf 16 13 34.8 -1.1**
DUG *e* 16 14 45.3
ELK Elko 169.03 338 *e*PKPdf **PKPdf 16 13 36.7 +0.4**
ELK *e*PKPab **PKPab 16 14 47.8 +0.2**
ELK Elko 169.03 338 *e*PKIKP **PKPdf 16 13 36.7 +0.4**
ELK *e* 16 14 47.8
PSUT Pine Spring 170.39 327 *e*PKPdf **PKPdf 16 13 37.8 +0.6**
PSUT *e*PKPab **PKPab 16 14 54.3 +0.6**
CCUT Cedar City 170.90 321 *e*PKPdf **PKPdf 16 13 37.8 +0.3**
LCMT Little Creek M 171.22 318 *e*PKPdf **PKPdf 16 13 39.2 +1.6**
R11A Troy Canyon, C 171.29 333 *e*PKPab **PKPab 16 14 57.0 -0.6**
TUC Tucson 171.52 284 *e*PKPdf **PKPdf 16 13 38.0 +0.2**
TUC Tucson 171.52 284 *e*PKIKP **PKPdf 16 13 38.0 +0.2**
NV11 Mina Array Sit 171.97 347 *e*PKPdf **PKPdf 16 13 38.3 +0.4**
NVAR Mina Array Bea 172.00 347 PKP **PKPdf 16 13 39.2 +1.2**
comp=Z,0.7nm,0.7s,baz=142,slow=1.2,SNR=9.2
NVAR PKPab **PKPab 16 15 01.0 +0.2**
comp=Z,0.3nm,0.6s,baz=22,slow=5.3,SNR=2.2

NIED ***27*** *16:14:00.37°.10N×144°.30E, h14km, Mw3.5 Best double couple: M0=2.23000×10^14 NP1:φs=11.00000°, δ=33.00000°, λ=-127.00000°. NP2:φs=234.00000°, δ=64.00000°, λ=-68.00000°.*

IDC ***27*** *16:14:17.2±1.9, 36°.95N×144°.93E, h0km, mb3.7/3, mb1 3.9/8, mb1mx3.6/36, mbtmp3.8/8, ML3.3/5, MS3.0/3, Ms1 3.0/3, ms1mx2.5/46, Error ellipse: s-maj=43.5km s-min=22.5km az=68.0*

ISCJB ***27*** *16:14:20.2±0.7, 37°.05N±0°.05×144°.47E±0°.06, h26km, mb3.8/3, MS3.2/2, Error ellipse: s-maj=7.0km s-min=6.2km az=40.0*

JMA ***27*** *16:14:23.7±0.3, 37°.08N×144°.35E, h57km, M3.9*

ISC 27 16:14:21.3±1.4, 37°.10N±0°.06×144°.57E±0°.10, h26km, n32, σ2§45/39, mb4.0/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.74**	**297**	P	**Pn**	**16 15 04.4**	**+0.8**
JIKH				*e*S	**Sn**	**16 15 34.5**	**-1.3**
JIO	**Ouri**	**2.89**	**299**	P	**Pn**	**16 15 06.6**	**+1.0**
JIO				*e*S	**Sn**	**16 15 38.5**	**-0.9**
JFK	**Kawauchi**	**2.96**	**276**	P	**Pn**	**16 15 06.9**	**+0.3**
JFK				*e*S	**Sn**	**16 15 39.1**	**-2.2**
JKMT	**Kesennumamotoy**	**2.98**	**306**	P	**Pn**	**16 15 07.8**	**+0.9**
JKMT				*e*S	**Sn**	**16 15 40.9**	**-0.9**
ONAJ	**Iwakimizuishiy**	**3.02**	**271**	P	**Pn**	**16 15 07.6**	**+0.2**
ONAJ				*e*S	**Sn**	**16 15 40.2**	**-2.5**
JMK	**Ichinoseki**	**3.23**	**306**	P	**Pn**	**16 15 11.3**	**+1.1**
JFT	**Otama**	**3.40**	**278**	P	**Pn**	**16 15 14.1**	**+1.4**
JFT				*e*S	**Sn**	**16 15 50.5**	**-1.6**
BSO1	**Boso 1**	**3.80**	**231**	P	**Pn**	**16 15 17.6**	**-0.1**
BSO1				*e*S	**Sn**	**16 15 58.5**	**-2.8**
JRY	**Ryogami san**	**4.69**	**258**	P	**Pn**	**16 15 30.4**	**0.0**
JRY				*e*S	**Sn**	**16 16 20.1**	**-3.9**
JOT	**Ohata**	**5.07**	**328**	P	**Pn**	**16 15 37.0**	**+1.4**
MJAR	**Matsushiro Arr**	**5.13**	**266**	Pn	**Pn**	**16 15 38.0**	**+1.5**
	0.2nm,0.3s,baz=89,slow=14,SNR=11						
MJAR				Sn	**Sn**	**16 16 32.2**	**-2.7**
	0.2nm,0.3s,baz=118,slow=16,SNR=6.0						
MAT	**Matsushiro**	**5.13**	**266**	P	**Pn**	**16 15 37.4**	**+0.9**
MAT				S	**Sn**	**16 16 32.0**	**-2.9**
JKB	**Kayabe**	**5.51**	**331**	P	**Pn**	**16 15 43.3**	**+1.8**
JKB				*e*S	**Sn**	**16 16 41.1**	**-2.9**
JCH	**Churui**	**5.58**	**351**	P	**Pn**	**16 15 43.1**	**+0.5**
JCH				*e*S	**Sn**	**16 16 42.5**	**-3.4**
JHJ	**Hachijo jima 2**	**5.58**	**226**	Pn	**Pn**	**16 15 43.1**	**+0.4**
	19nm,0.3s,baz=84,slow=20,SNR=1.7						
JHJ				Sn	**Sn**	**16 16 40.1**	**-5.9**
	18nm,0.3s,baz=75,slow=23,SNR=3.5						
NEM2	**Nemuro 2**	**6.32**	**8**	P	**Pn**	**16 15 51.2**	**-1.5**
NEM2				*e*S	**Sn**	**16 16 58.4**	**-5.6**
JTKR	**Abashiri--Toko**	**6.88**	**356**	P	**Pn**	**16 16 00.9**	**+0.5**
JTKR				*e*S	**Sn**	**16 17 13.0**	**-4.8**
ASAJ	**Asahikawa**	**7.17**	**349**	Pn	**Pn**	**16 16 05.6**	**+1.3**
	1.5nm,0.3s,baz=206,slow=8.7,SNR=21						
ASAJ				Sn	**Sn**	**16 17 22.8**	**-2.1**
	0.8nm,0.3s,baz=266,slow=11,SNR=3.8						
USRK	**Ussuriysk Ar.**	**11.89**	**311**	Pn	**Pn**	**16 17 11.9**	**+2.9**
	0.3nm,0.3s,baz=151,slow=11,SNR=5.6						
KSRS	**Korea Array**	**13.27**	**277**	Pn	**Pn**	**16 17 31.2**	**+3.4**
	0.1nm,0.3s,baz=94,slow=15,SNR=5.8						
PETK	**Petropavlovsk-**	**18.44**	**26**	LR	LR	16 25 45.1	
	comp=Z,16nm,22.0s,baz=188,slow=37						
GUMO	**Guam**	**23.42**	**179**	LR	LR	16 26 28.9	
	comp=Z,22nm,20.5s,baz=192,slow=32						
H11N2	**WAKE ISLAND Hy**	**26.07**	**125**	T	T	16 46 43.9	
	baz=317,slow=75,SNR=522						
H11N1	**WAKE ISLAND Hy**	**26.08**	**126**	T	T	16 46 43.3	
	baz=317,slow=75,SNR=255						
H11N3	**WAKE ISLAND Hy**	**26.09**	**125**	T	T	16 46 39.6	
	baz=317,slow=75,SNR=462						
H11S1	**WAKE ISLAND Hy**	**26.84**	**128**	T	T	16 47 39.9	
	baz=319,slow=76,SNR=167						
H11S3	**WAKE ISLAND Hy**	**26.84**	**128**	T	T	16 47 40.0	
	baz=319,slow=76,SNR=128						
H11S2	**WAKE ISLAND Hy**	**26.85**	**128**	T	T	16 47 45.1	
	baz=319,slow=76,SNR=144						
MKAR	**Makanchi Array**	**46.22**	**303**	P	**P**	**16 22 46.8**	**+2.7**
	0.3nm,0.6s,baz=80,slow=7.0,SNR=3.2						
WRA	**Warramunga Arr**	**57.55**	**191**	P	**P**	**16 24 07.8**	**-0.8**
	1.0nm,0.6s,baz=2.3,slow=8.4,SNR=7.4						
ASAR	**Alice Springs**	**61.27**	**191**	P	**P**	**16 24 33.5**	**-0.9**
	0.9nm,0.8s,baz=12,slow=7.4,SNR=8.9						
PPT	**Papeete**	**82.43**	**119**	LR	LR	16 54 53.9	
	comp=Z,39nm,20.1s,baz=150,slow=30						

IDC ***27*** *16:34:34.9±0.8, 2°.25N×79°.98W, h0km, mb3.9/11, mb1 4.2/14, mb1mx4.1/35, mbtmp4.0/14, ML3.1/3, MS3.5/12, Ms1 3.5/12, ms1mx3.2/40, Error ellipse: s-maj=31.2km s-min=15.5km az=41.0*

ISCJB ***27*** *16:34:37.3±0.3, 2°.40N±0°.04×79°.76W±0°.03, h20km, mb4.3/35, MS3.5/9, Error ellipse: s-maj=6.3km s-min=3.3km az=21.2*

NEIC ***27*** *16:34:37.9±1.8, 2°.21N×79°.82W, h20km±5km, mb4.5/35, Error ellipse: s-maj=14.1km s-min=9.3km az=66.0*

RSNC ***27*** *16:34:39.4±0.9, 2°.38N×79°.67W, h19km±8km, ML3.5, Mw3.7*

ISC 27 16:34:38.1±0.5, 2°.29N±0°.05×79°.78W±0°.05, h20km, n81, σ1§52/87, mb4.5/35, MS3.6/9, 3C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUMC	**Tumaco**	**1.15**	**114**⇑	*iP*	**Pn**	**16 34 58.4**	**-0.7**
TUMC				*e*S	**Sb**	**16 35 13.9**	**+0.1**
TUMC				*i*		16 35 20.9	
	comp=Z,2μm,0.4s						
GRGC	**Isla de Gorgon**	**1.76**	**66**	*e*P	**Pn**	**16 35 05.4**	**-2.1**
GRGC				*e*S	**Sn**	**16 35 26.5**	**-2.8**
GRGC				*i*		16 35 27.6	
	comp=Z,168nm,0.3s						
OTAV	**Otavalo**	**2.43**	**147**	*e*Pn	**Pn**	**16 35 15.5**	**-1.6**
OTAV	**Otavalo**	**2.43**	**147**	*e*P	**Pn**	**16 35 15.5**	**-1.6**
OTAV				*e*S	**Sn**	**16 35 44.0**	**-2.5**
BBAC	**Balboa, Cauca**	**2.54**	**96**	*e*P	**Pn**	**16 35 17.4**	**-1.1**
BBAC				*e*S	**Sn**	**16 35 46.5**	**-2.5**
BBAC				*i*		16 35 57.0	
	comp=Z,324nm,0.4s						
GCUF	**Volcan Galeras**	**2.65**	**113**	*e*P	**Pn**	**16 35 20.1**	**-0.1**
GCUF				*e*S	**Sn**	**16 35 51.9**	**-0.1**
GCUF				*i*		16 35 56.4	
	comp=Z,246nm,0.5s						
MALC	**Bahia Malaga**	**2.98**	**55**	*e*P	**Pn**	**16 35 23.5**	**-0.8**
MALC				*e*S	**Sn**	**16 35 57.5**	**-2.1**
MALC				*i*		16 36 03.6	
	comp=Z,85nm,0.3s						
POPC	**Popayan, Colom**	**3.11**	**85**⇑	*iP*	**Pn**	**16 35 25.4**	**-

CMIG	Matias Romero	20.90	316	P	P	16 39 19.5	+0.1
	comp=Z,1.1nm,0.5s,baz=140,slow=10.0,SNR=2.4						
CUPR	Culebra, Puert	21.34	41	eP	P	16 39 25.6	+1.4
	comp=Z,32nm,0.8s						
STVI	Saint Thomas	21.59	41	eP	P	16 39 27.6	+0.7
	comp=Z,53nm,1.3s						
LPAZ	La Paz	21.75	148	P	P	16 39 29.8	+0.6
	comp=Z,4.4nm,0.8s,baz=335,slow=9.6,SNR=18						
LPAZ				LR	LR	16 50 11.7	
	comp=Z,93nm,21.2s,baz=319,slow=43						
LPAZ	La Paz	21.75	148	eP	P	16 39 29.5	+0.3
LPAZ				epP	P	16 39 29.7	+0.4
MNMC	Minye Minye	23.52	155	eP	P	16 39 49.2	+1.8
	comp=Z,15nm,1.0s						
PB11	IPOC Station P	24.06	156	eP	P	16 39 54.9	+2.5
	comp=Z,17nm,1.0s						
GO01	Chusmiza	24.17	155	eP	P	16 39 56.6	+2.8
	comp=Z,24nm,1.3s						
SIV	San Ignacio	25.92	135	P	P	16 40 10.8	+1.5
	comp=Z,0.7nm,0.6s,baz=337,slow=8.9,SNR=5.9						
LVC	Limon Verde	26.92	157	eP	P	16 40 24.6	+6.0
	comp=Z,11nm,1.0s						
WHAR	Wooly Hollow	34.84	342	eP	P	16 41 26.7	-1.2
	comp=Z,5.3nm,0.9s						
TXAR	Lajitas Array	35.21	322	PcP	PcP	16 44 02.4	+0.1
	comp=Z,0.8nm,0.8s,baz=142,slow=4.7,SNR=7.6						
TXAR				LR	LR	16 54 53.2	
	comp=Z,51nm,18.6s,baz=0.0,slow=35						
CPUP	Villa Florida	35.78	144	LR	LR	16 58 01.1	
	comp=Z,113nm,19.8s,baz=298,slow=39						
BDFB	Brasilia	36.11	121	LR	LR	16 57 34.5	
	comp=Z,140nm,21.4s,baz=246,slow=38						
MVL	Millersville	37.67	4	eP	P	16 41 52.5	+0.4
	comp=Z,14nm,1.2s						
KSPA	Keystone Colle	39.26	5	eP	P	16 42 06.0	+0.5
	comp=Z,12nm,1.0s						
ANMO	Albuquerque	40.88	326	eP	P	16 42 19.8	+0.6
	comp=Z,5.8nm,1.1s						
SDCO	Great Sand Dun	42.46	329	eP	P	16 42 33.5	+1.3
	comp=Z,2.2nm,0.9s						
WUAZ	Wupatki	44.17	322	eP	P	16 42 47.4	+1.4
	comp=Z,12nm,1.4s						
PV13	Radium Mtn., P	44.52	327	eP	P	16 42 49.5	+0.7
	comp=Z,3.5nm,0.7s						
PV03	Paradox Valley	44.60	327	eP	P	16 42 50.0	+0.6
	comp=Z,2.8nm,0.8s						
PV12	Saucer Basin,	44.62	327	eP	P	16 42 50.3	+0.7
	comp=Z,3.9nm,0.7s						
PV18	Skein Mesa, Pa	44.63	327	eP	P	16 42 49.8	+0.2
	comp=Z,3.6nm,0.7s						
PV17	East Wray Mesa	44.68	327	eP	P	16 42 50.9	+0.9
	comp=Z,3.4nm,0.7s						
RSSD	Black Hills	46.88	336	eP	P	16 43 07.2	-0.1
	comp=Z,3.8nm,0.8s						
PDAR	Pinedale Array	48.28	331	P	P	16 43 17.8	-0.5
	comp=Z,0.7nm,0.9s,baz=131,slow=8.6,SNR=5.3						
ELK	Elko	49.90	325	LR	LR	17 05 08.0	
	comp=Z,47nm,18.9s,baz=129,slow=37						
NV01	Mina Array Sit	50.32	321	ePcP	PcP	16 44 52.2	-0.3
NVAR	Mina Array Bea	50.32	321	P	P	16 43 34.1	+0.2
	comp=Z,0.2nm,0.3s,baz=130,slow=8.0,SNR=4.1						
NVAR				PcP	PcP	16 44 52.2	-0.3
	comp=Z,1.0nm,0.8s,baz=122,slow=4.4,SNR=5.6						
YBH	Yreka Blue Hor	54.98	322	LR	LR	17 07 53.5	
	comp=Z,53nm,18.2s,baz=134,slow=36						
NEW	Newport	55.92	331	LR	LR	17 09 47.2	
	comp=Z,49nm,18.8s,baz=106,slow=38						
YKA	Yellowknife Ar	65.42	343	P	P	16 45 18.6	-0.6
	comp=Z,0.9nm,0.6s,baz=134,slow=6.9,SNR=14						
SUMG	Summit	74.70	12	eP	P	16 46 15.6	-0.9
	comp=Z,13nm,1.2s						
DBIC	Dimbokro	74.77	84	P	P	16 46 18.8	+1.2
	comp=Z,2.9nm,0.8s,baz=282,slow=3.5,SNR=3.7						
DBIC				LR	LR	17 15 28.7	
	comp=Z,32nm,21.9s,baz=147,slow=33						
DBIC	Dimbokro	74.77	84	eP	P	16 46 17.9	+0.4
	comp=Z,14nm,1.4s						
INK	Inuvik	75.14	342	P	P	16 46 18.9	+0.3
	comp=Z,5.6nm,0.8s,baz=98,slow=6.1,SNR=20						
INK	Inuvik	75.14	342	eP	P	16 46 18.3	-0.2
	comp=Z,7.4nm,1.0s						
EGAK	Eagle	76.06	337	eP	P	16 46 23.9	0.0
	comp=Z,5.8nm,1.1s						
SCM	Sheep Creek Mo	77.53	333	eP	P	16 46 31.9	-0.5
	comp=Z,6.8nm,0.7s						
ESDC	Sonseca Array	77.63	50	P	P	16 46 34.0	+0.6
	comp=Z,0.6nm,0.5s,baz=258,slow=6.1,SNR=5.2						
HDA	Harding Lake	78.22	336	eP	P	16 46 36.0	-0.1
	comp=Z,8.7nm,0.7s						
ILAR	Eielson Array	78.32	336	P	P	16 46 36.4	-0.4
	comp=Z,2.7nm,0.8s,baz=119,slow=4.6,SNR=29						
ILB	Eielson Array	78.32	336	eP	P	16 46 36.3	-0.4
	comp=Z,3.3nm,0.7s						
RND	Reindeer	78.70	335	eP	P	16 46 39.3	+0.5
	comp=Z,9.5nm,0.7s						
TRF	Thorofare Moun	79.33	334	eP	P	16 46 42.4	-0.1
	comp=Z,3.7nm,0.8s						
BPAW	Bear Paw Mtn.	79.81	335	eP	P	16 46 44.4	-0.5
	comp=Z,7.4nm,0.8s						
MLY	Manley	79.97	336	eP	P	16 46 45.2	-0.5
	comp=Z,3.6nm,0.8s						
VRAC	Vranov	92.44	41	LR	LR	17 31 12.6	
	comp=Z,13nm,18.4s,baz=209,slow=37						
ZAA1	Zalesovo Array	122.51	11	ePKPdf	PKPdf	16 53 31.5	-0.6
ZALV	Zalesovo Beam	122.51	11	PKP	PKPdf	16 53 31.5	-0.7
	comp=Z,0.5nm,0.4s,baz=308,slow=51,SNR=2.6						
MK32	Makanchi Array	128.64	16	ePKPdf	PKPdf	16 53 42.9	-1.3
MKAR	Makanchi Array	128.64	16	PKP	PKPdf	16 53 42.9	-1.3
	comp=Z,0.4nm,0.6s,baz=240,slow=2.4,SNR=3.3						
SONA0	Songino Array	129.79	355	ePKPdf	PKPdf	16 53 46.1	-0.4
SONM	Songino Array	129.79	355	PKP	PKPdf	16 53 46.1	-0.4
	comp=Z,0.4nm,0.7s,baz=22,slow=43,SNR=2.5						
KSRS	Korea Array	132.85	330	PKP	PKPdf	16 53 52.0	-0.3
	comp=Z,0.4nm,0.5s,baz=346,slow=2.8,SNR=1.8						
ASAR	Alice Springs	141.09	234	PKP	PKPdf	16 54 06.5	-1.6
	comp=Z,0.6nm,0.8s,baz=116,slow=1.7,SNR=7.9						
WR1	Warramunga Arr	142.34	240	ePKPdf	PKPdf	16 54 08.9	-1.5
WRA	Warramunga Arr	142.34	240	PKP	PKPdf	16 54 08.9	-1.5
	comp=Z,1.7nm,0.8s						
CMAR	Chiang Mai Arr	159.35	3	PKPab	PKPab	16 55 12.4	-1.0
	comp=Z,0.6nm,0.8s,baz=336,slow=3.9,SNR=4.1						

*MEX **27** 16:48:30.6±0.7, 14°.39N×92°.11W, h75km±30km, MD3.8*
*ISCJB **27** 16:48:31.8±1.5, 14°.5N±0°.1×92°.34W±0°.09, h62km±14km, Error ellipse: s-maj=23.2km s-min=7.6km az=35.4*
*GCG **27** 16:48:33.4±0.6, 14°.38N×92°.19W, h26km±13km, MD3.5*
ISC 27 16:48:32.3±2.2, 14°.4N±0°.1×92°.3W±0°.1, h49km±22km, n8, σ1§00/13, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.49	9	eP	Pn	16 48 42.9	-0.5
THIG				i S	Sn	16 48 52.5	+1.2
STG3	Santiaguito 3,	0.80	69	eP	Pn	16 48 46.9	-0.6
FUG	Fuego 3	1.46	89	eP	Pn	16 48 56.0	-0.4
FUG				eS	Sn	16 49 14.2	-0.2
PCG	Pacaya	1.68	91	eP	Pn	16 49 00.3	+0.8
PCG				eS	Sn	16 49 20.5	+0.4
CCIG	Comitan	1.86	6	eP	Pn	16 49 03.2	+1.3
CCIG				eS	Sn	16 49 22.4	-1.9
IXG	Ixpaco	1.86	97	eP	Pn	16 49 01.9	0.0
IXG				eS	Sn	16 49 24.2	-0.2
TGIG		2.46	342	eP	Pn	16 49 10.7	+0.6
TGIG				i S	Sn	16 49 31.7	-7.2
CMIG	Matias Romero	3.61	318	eP	Pn	16 49 25.3	-0.4

*IDC **27** 17:00:26.2±2.1, 23°.60S×179°.84W, h498km±22km, mb3.5/11, mb1 3.7/12, mb1mx3.4/28, mbtmp4.3/12, Error ellipse: s-maj=18.5km s-min=17.1km az=140.0*
*ISCJB **27** 17:00:27.9±0.6, 23°.66S±0°.05×179°.9W±0°.1, h532km, mb3.9/11, Error ellipse: s-maj=16.2km s-min=7.2km az=1.0*
ISC 27 17:00:28.9±0.7, 23°.79S±0°.08×179°.8W±0°.1, h532km, n30, σ1§84/36, mb3.8/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.70	164	P	P	17 02 03.5	-0.2
WIAZ	Waiheke Island	13.69	198	P	P	17 03 29.0	+4.2
HAZ	Te Kaha	14.08	188	P	P	17 03 29.3	+0.4
HAZ				S	S	17 05 54.9	-2.3
PUZ	Puketiti	14.34	186	P	P	17 03 32.9	+1.3
PUZ				S	S	17 06 01.0	-1.3
TWGZ	Tauwhareparae	14.47	187	P	P	17 03 33.8	+0.8
TWGZ				S	S	17 06 06.2	+1.4
TOZ	Tahuroa Road	14.48	195	P	P	17 03 34.4	+1.4
URZ	Urewera	14.67	190	P	P	17 03 34.2	-0.8
	2.2nm,0.3s,baz=288,slow=3.8,SNR=14						
URZ				S	S	17 06 07.0	-1.5
	0.8nm,0.3s,baz=67,slow=23,SNR=9.0						
URZ	Urewera	14.67	190	P	P	17 03 33.2	-1.8
MWZ	Matawai	14.69	188	P	P	17 03 35.1	-0.1
MWZ				S	S	17 06 06.9	-2.0
MUGZ	Murupara	14.94	191	P	P	17 03 37.8	0.0
TLZ	Tolley Road	15.04	194	P	P	17 03 40.6	+1.6
HIZ	Hauiti	15.38	196	P	P	17 03 45.8	+3.4
BKZ	Black Stump Fm	15.66	191	P	P	17 03 42.9	-2.4
KRHZ	Kereru	16.14	191	P	P	17 03 48.9	-1.3
PNHZ	Pukenui	16.44	191	P	P	17 03 51.6	-1.4
DVHZ	Dannevirke	16.82	191	P	P	17 03 54.6	-2.0
RPZ	Rata Peaks	21.26	199	P	P	17 04 37.9	+0.8
	8.8nm,0.7s,baz=45,slow=4.1,SNR=8.0						
CTA	Charters Tower	31.69	270	P	P	17 06 08.7	-0.3
	17nm,0.3s,baz=95,slow=11,SNR=70						
STKA	Stephens Creek	34.96	248	P	P	17 06 36.4	-0.1
	1.8nm,0.4s,baz=95,slow=11,SNR=7.0						
ASAR	Alice Springs	42.26	260	P	P	17 07 35.0	-0.8
	5.2nm,0.6s,baz=96,slow=7.3,SNR=168						
ASAR				ScP	ScP	17 12 21.2	+3.8
	1.3nm,0.8s,baz=106,slow=4.4,SNR=16						
WRA	Warramunga Arr	42.62	266	P	P	17 07 37.0	-1.7
	9.2nm,0.5s,baz=91,slow=9.1,SNR=82						
WRA				ScP	ScP	17 12 23.0	+4.0
	2.0nm,0.9s,baz=72,slow=2.7,SNR=6.0						
VNDA	Vanda	54.51	185	P	P	17 09 07.6	+1.6
	0.8nm,0.6s,baz=356,slow=6.5,SNR=8.5						
MAW	Mawson	77.93	200	P	P	17 11 31.2	-0.2
	1.9nm,0.7s,baz=134,slow=4.9,SNR=4.6						
PETK	Petropavlovsk-	79.04	346	P	P	17 11 37.0	-0.5
	1.3nm,0.6s,baz=123,slow=5.5,SNR=3.5						
NVAR	Mina Array Bea	84.53	44	P	P	17 12 06.7	+0.5
	0.4nm,0.5s,baz=222,slow=8.5,SNR=4.6						
TXAR	Lajitas Array	90.19	58	P	P	17 12 34.0	+1.1
	0.9nm,0.7s,baz=214,slow=6.6,SNR=14						
ILAR	Eielson Array	91.87	13	P	P	17 12 38.3	-1.3
	0.4nm,0.9s,baz=224,slow=6.3,SNR=3.5						
BVAR	Borovoye Array	120.49	319	PKP	PKPdf	17 18 18.3	-1.4
	0.1nm,0.3s,baz=98,slow=2.1,SNR=3.7						
ARCES	ARCESS Array B	131.82	348	PKP	PKPdf	17 18 40.0	-0.8
	0.8nm,0.5s,baz=52,slow=2.2,SNR=5.0						
NOA	NORSAR Array B	142.00	351	PKhKP	PKPpre	17 18 55.0	
	0.2nm,0.5s,baz=22,slow=4.7,SNR=3.3						

*ISCJB **27** 17:08:18.2±1.4, 35°.33N±0°.06×27°.66E±0°.05, h4km±7km, Error ellipse: s-maj=11.3km s-min=4.6km az=149.1*
*ATH **27** 17:08:18.6, 35°.40N×27°.65E, h20km±2km, ML2.5/3, Error ellipse: s-maj=5.7km s-min=1.6km az=324.0*
*THE **27** 17:08:18.6, 35°.43N×27°.63E, h0km±1km, ML2.5/2, Error ellipse: s-maj=3.3km s-min=1.4km az=149.0*
*ISK **27** 17:08:18.3, 35°.38N×27°.62E, h5km, ML2.9/10*
*DDA **27** 17:09:06.6, 35°.47N×27°.66E, h41km, ML2.7*
ISC 27 17:08:18.3±1.7, 35°.34N±0°.07×27°.68E±0°.04, h7km±11km, n33, σ0§84/43, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.47	296	PG	Pg	17 08 26.9	-0.5
KARP				SG	Sg	17 08 34.4	+0.8
KARP	Karpathos	0.47	296	P	Pg	17 08 26.7	-0.7
KARP				S	Sg	17 08 34.4	+0.8
	1μm,0.5s						
KARP	Karpathos	0.47	296	P	Pg	17 08 26.8	-0.5
KARP				S	Sg	17 08 34.3	+0.7
KARP				AML	AML	17 08 35.5	
	comp=E,1489μm,0.4s						
KARP				AML	AML	17 08 36.0	
	comp=N,2244μm,0.4s						
ARG	Arkhangelos	0.94	22	PG	Pg	17 08 36.4	0.0
ARG				SG	Sn	17 08 51.3	-0.5
ARG	Arkhangelos	0.94	22	P	Pb	17 08 37.2	+0.2
ARG				S	Sb	17 08 49.7	-0.1
ARG	Arkhangelos	0.94	22	P	Pg	17 08 36.3	-0.1
ARG				S	Sg	17 08 48.7	0.0
ZKR	Zakros	1.22	260	P	Pn	17 08 40.9	-0.9
ZKR				S	Sn	17 08 59.3	+0.7
	comp=N,220nm,0.7s						
ZKR	Zakros	1.22	260	P	Pn	17 08 40.7	-1.1
ZKR				S	Sn	17 08 58.9	+0.3
ZKR				AML	AML	17 09 08.4	
	comp=N,269μm,0.6s						
ZKR				AML	AML	17 09 09.8	
	comp=E,605μm,0.8s						
DAT	Datca	1.39	357	PN	Pb	17 08 44.5	-0.1
DAT	Datca	1.39	357	i P	Pn	17 08 43.8	-0.4
DAT				i S	Sg	17 09 03.3	+0.4
DAT				IAML_P			
	comp=Z,422nm,0.2s						
DALY	Dalyan (Mula)	1.67	28	PN	Pg	17 08 49.8	-0.5
DALY	Dalyan (Mula)	1.67	28	i P	Pg	17 08 50.6	+0.3
DALY				IAML_P			
	comp=Z,306nm,0.2s						
TURN	Turunc	1.70	26	PN	Pn	17 08 47.1	-1.3
TURN	Turunc	1.70	26	i P	Pn	17 08 46.8	-1.6
TURN				IAML_P			
	comp=Z,862nm,0.2s						
FETY	Fethiye	1.72	41	PN	Pg	17 08 51.0	-0.3
FETY	Fethiye	1.72	41	i P	Pg	17 08 50.9	-0.3
FETY				IAML_P			
	comp=Z,818nm,0.2s						
BDRM	Kayabasi	1.73	354	i P	Pb	17 08 49.5	-0.9
BDRM				IAML_P			
	comp=Z,538nm,0.3s						
BODT	Bodrum	1.74	350	PN	Pb	17 08 50.2	-0.5
LAST	Lasithi	1.81	265	P	Pn	17 08 49.9	-0.1
LAST				S	Sn	17 09 12.6	-0.7
LAST	Lasithi	1.81	265	P	Pb	17 08 51.3	-0.6
LAST				AML	AML	17 09 25.5	
	comp=E,225μm,0.8s						
LAST				AML	AML	17 09 29.9	
	comp=N,192μm,0.6s						
ANAF	Anafi Island	1.85	304	P	Pn	17 08 49.9	-0.6
YER	Yerkesik	1.85	15	PN	Pb	17 08 52.1	-0.5
SANT	Santorini	2.08	300	P	Pn	17 08 54.1	+0.4
THR6	Thira Island,	2.11	299	P	Pn	17 08 54.3	+0.2
THR3	Thira Island,	2.13	301	P	Pn	17 08 54.1	-0.3
IDI	Anoyia	2.28	269	P	Pn	17 08 57.8	+1.3
APE	Apeiranthos	2.45	315	PN	Pn	17 08 59.9	+1.1
APE	Apeiranthos	2.45	315	P	Pn	17 08 58.6	-0.1
SMG	Samos	2.46	344	P	Pn	17 08 59.8	+0.9
AYDB	Zeytinkoy-Aydi	2.60	4	PN	Pn	17 09 02.8	+1.8
IMMV	Iera Moni Meta	3.02	273	P	Pn	17 09 08.7	+2.0
KEPZ	Antalya-Kepez	3.54	63	i P	Pn	17 09 15.2	+1.4
KEPZ				IAML_P			
	comp=Z,36nm,0.2s						
KTHA	Kythira Island	3.86	285	P	Pn	17 09 18.8	+0.6

TAP 27 17:10:41.5, 23°.76N×121°.69E, h36km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESL	Shilin	0.24	282	eP	Pn	17 10 48.8	-1.2
	baz=282						
ESL				S	Sn	17 10 53.9	-4.0
	baz=282						
EGFH	Guangfu	0.26	249	eP	Pn	17 10 49.1	-0.7
	baz=257						
EGFH				S	Sn	17 10 54.5	-2.8
	baz=257						
HGSD	Ruisui	0.36	222	eP	Pn	17 10 50.1	0.0
	baz=216						
HGSD				eS	Sn	17 10 57.7	+0.9
	baz=216						
NACB	Ninganchiao	0.42	348	eP	Pn	17 10 50.5	-0.3
	baz=354						
NACB				eS	Sn	17 10 57.3	-0.4
	baz=354						
EHY	Hungye	0.42	233	eP	Pn	17 10 50.8	-0.1
	baz=230						
EHY				eS	Sn	17 10 56.8	-0.9
	baz=230						
VWDT	VWDT	0.50	269	eP	Pn	17 10 51.9	-0.2
	baz=269						
VWDT				eS	Sn	17 10 59.3	-0.2
	baz=269						
OWD	Renai	0.51	292	eP	Pn	17 10 52.1	-0.3
	baz=292						
OWD				eS	Sn	17 11 00.1	+0.2
	baz=292						
YULB	Yu-li	0.52	224	eP	Pn	17 10 51.4	-1.0
	baz=233						
YULB				eS	Sn	17 10 59.3	-0.7
	baz=233						
WHF	Hehuan Shan	0.54	315	eP	Pn	17 10 52.7	-0.6
	baz=308						
WHF				eS	Sn	17 11 00.5	-0.8
	baz=308						
TWF1	Yuli	0.55	221	eP	Pn	17 10 52.4	-0.5
	baz=230						
TWF1				eS	Sn	17 11 00.4	-0.3
	baz=230						
CHGB	Renai	0.56	302	eS	Sn	17 11 01.2	-0.1
	baz=310						

TAP 27 17:10:44.4, 24°.41N×121°.43E, h8km, ML1.0, 1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	Datong	0.05	296	⇓i P	Pg	17 10 46.4	+0.1
	baz=296						
NNSB				S	Sg	17 10 47.8	+0.2
	baz=296						
NNS	Nan Shan	0.07	301	i P	Pg	17 10 46.4	0.0
	baz=303						
NNS				S	Sg	17 10 48.0	+0.2
	baz=303						
ETLH	Xiulin Townshi	0.20	168	P	Pg	17 10 49.4	+0.9
	baz=167						
ETLH				S	Sg	17 10 52.4	+1.1
	baz=167						
ENTT	Nioudou	0.26	27	eP	Pg	17 10 49.8	+0.1
	baz=28						
ENTT				S	Sg	17 10 53.9	+0.8
	baz=28						
YHNB	Yeheng	0.27	349	eP	Pg	17 10 49.9	+0.2
	baz=349						
YHNB				S	Sg	17 10 53.7	+0.3
	baz=349						
NACB	Ninganchiao	0.27	148	eP	Pg	17 10 49.8	0.0
	baz=147						
NACB				eS	Sg	17 10 54.1	+0.6
	baz=147						
NSK	Sanguang	0.28	346	eP	Pg	17 10 50.2	+0.3
	baz=347						
NSK				S	Sg	17 10 54.1	+0.5
	baz=347						
ENA	Nanau	0.28	85	eP	Pg	17 10 50.8	+0.8
	baz=86						
ENA				eS	Sg	17 10 54.8	+1.1
	baz=86						
NANB	Nanao	0.29	86	P	Pg	17 10 50.7	+0.6
	baz=86						
NANB				eS	Sg	17 10 54.9	+0.9
	baz=86						
WHF	Hehuan Shan	0.30	211	eP	Pg	17 10 51.2	+0.7
	baz=196						
WHF				eS	Sb	17 10 56.2	-1.4
	baz=196						
TWE	Neicheng	0.38	34	eP	Pb	17 10 52.6	-0.8
	baz=49						
CHGB	Renai	0.42	215	P	Pg	17 10 52.6	0.0
	baz=213						
CHGB				eS	Sg	17 10 59.0	+0.9
	baz=213						
CHGB	Renai	0.42	215	eP	Pg	17 10 52.5	-0.1
	baz=310						
LIOB	Emei	0.45	302	eP	Pb	17 10 54.1	-0.4
	baz=303						
LIOB				eS	Sb	17 11 00.5	-1.0
	baz=303						
OWD	Renai	0.51	208	eP	Pg	17 10 54.4	+0.2
	baz=198						
OWD				eS	Sg	17 11 01.9	+1.0
	baz=198						

TAP 27 17:22:06.5, 24°.59N×121°.36E, h8km, ML1.1, 2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YHNB	Yeheng	0.08	13	⇓P	Pg	17 22 09.4	+0.8
	baz=12						
YHNB				S	Sg	17 22 10.8	+0.6
	baz=12						
NSK	Sanguang	0.09	1	⇓i P	Pg	17 22 09.4	+0.7
	baz=6.0						
NSK				i S	Sg	17 22 10.9	+0.6
	baz=6.0						
NNS	Nan Shan	0.15	174	eP	Pg	17 22 11.2	+1.5
	baz=171						
NNS				S	Sg	17 22 13.3	+1.4
	baz=171						
NNSB	Datong	0.16	171	P	Pg	17 22 11.1	+1.2
	baz=171						
NNSB				S	Sg	17 22 13.4	+1.2
	baz=171						
ENTT	Nioudou	0.20	75	eP	Pg	17 22 11.7	+1.2
	baz=76						
ENTT				eS	Sg	17 22 14.8	+1.5
	baz=76						
TWE	Neicheng	0.31	65	eP	Pb	17 22 13.9	-0.4
	baz=66						
LIOB	Emei	0.32	280	P	Pb	17 22 14.1	-0.3
	baz=280						
LIOB				S	Sb	17 22 18.6	-1.2
	baz=280						
NSTT	Nanjuang	0.33	277	P	Pb	17 22 14.4	-0.2
	baz=277						
NSTT				S	Sg	17 22 18.5	+1.3
	baz=277						
ENA	Nanau	0.39	114	P	Pb	17 22 15.5	-0.1
	baz=114						
ENA				eS	Sb	17 22 21.0	-0.7
	baz=114						
NANB	Nanao	0.39	114	eP	Pb	17 22 15.6	-0.1
	baz=114						
NANB				eS	Sb	17 22 21.1	-0.8
	baz=114						
ETLH	Xiulin Townshi	0.40	163	eP	Pb	17 22 15.4	-0.5
	baz=163						
ETLH				eS	Sg	17 22 20.1	+0.6
	baz=163						

TAP 27 17:22:07.7, 24°.17N×121°.08E, h6km±1km, ML0.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDCB	Techi	0.11	43	P	Pg	17 22 10.5	+0.3
	baz=42						
TDCB				S	Sg	17 22 11.9	0.0
	baz=42						
TWT	Tachien	0.12	49	P	Pg	17 22 10.6	+0.2
	baz=44						
TWT				S	Sg	17 22 11.8	-0.4
	baz=44						
CHGB	Renai	0.14	142	P	Pg	17 22 11.4	+0.6
	baz=143						
CHGB				S	Sg	17 22 13.7	+0.9
	baz=143						
WHF	Hehuan Shan	0.17	100	eP	Pg	17 22 12.3	+0.9
	baz=100						
WHF				eS	Sg	17 22 15.4	+1.6
	baz=100						
DPDB	Guoxing	0.20	225	eP	Pg	17 22 12.5	+0.8
	baz=224						
OWD	Renai	0.24	158	P	Pg	17 22 13.0	+0.6
	baz=158						
OWD				S

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=185						
VWDT	**VWDT**	**0.42**	**172**	*e*P	Pb	17 22 16.9	-0.6
	baz=162						

JMA 27 17:23:05.0±0.2, 24°.87N×123°.37E, h34km, M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.52**	**219**	P	Pb	17 23 15.6	-0.4
YOJ				*e*S	Sb	17 23 23.2	-0.3
JYNG	**Yonagunijimaku**	**0.57**	**223**	P	Pn	17 23 16.3	-0.3
JYNG				S	Sb	17 23 23.8	-1.0
IRIF	**Iriomote-Funau**	**0.63**	**148**	P	Pn	17 23 17.2	-0.2
IRIF				S	Sn	17 23 26.0	-0.2
JKRS	**Kuro-shima**	**0.86**	**137**	P	Pb	17 23 21.1	-0.4
JKRS				S	Sb	17 23 32.6	-0.1
JIJ	**Ishigaki jima**	**0.86**	**125**	P	Pn	17 23 20.4	-0.4
JIJ				S	Sn	17 23 31.5	-0.7
JISG	**Ishigakijimahi**	**0.90**	**108**	*e*S	Sn	17 23 32.7	-0.3

PRU 27 17:24:05.2±0.0, 49°.84N×18°.46E, h0km, Mining Induced Event Darkov, E=3.2e+04, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**0.60**	**264**	*e*PG	Pg	17 24 16.6	0.0
MORC				*e*SG	Sg	17 24 24.8	+0.4
LANS	**Liptovska Anna**	**0.95**	**136**	*e*PG	Pg	17 24 22.3	-1.1
LANS				*e*SG	Sb	17 24 36.9	-0.9
JAVC	**Velka Javorina**	**1.11**	**208**	*e*PG	Pg	17 24 26.3	-0.1
VRAC	**Vranov**	**1.33**	**247**	*e*PG	Pg	17 24 29.6	-1.0
VRAC				*e*SG	Sg	17 24 46.9	-0.9
VYHS	**Vyhne**	**1.37**	**169**	*e*PG	Pg	17 24 29.7	-1.7
VYHS				*e*SG	Sg	17 24 48.9	-0.3
DPC	**Dobruska-Polom**	**1.47**	**291**	*e*PG	Pn	17 24 31.2	-1.8
DPC				*e*SG	Sg	17 24 52.3	-0.1
	comp=Z,4.4nm,0.6s						
KRUC	**Moravsky**	**1.56**	**241**	*e*PG	Pn	17 24 33.1	-1.0
KRUC				*e*SG	Sn	17 24 54.2	-0.8
OSTC	**Ostas**	**1.61**	**297**	*e*SG	Sg	17 24 57.6	+0.7
UPC	**Upice**	**1.71**	**294**	*e*SG	Sb	17 24 59.8	+0.3
	comp=Z,3.6nm,0.8s						
CHVC	**Chvalec**	**1.72**	**297**	*e*PG	Pn	17 24 36.3	-0.1
CHVC				*e*SG	Sg	17 25 00.2	-0.1
KHC	**Kasperske Hory**	**3.26**	**259**	*e*SN	Sn	17 25 33.9	-3.2

*TIR **27** 17:24:38.0, 38°.10N×22°.17E, h18km, Md3.8/4*
*THE **27** 17:24:43.8, 38°.23N×22°.14E, h12km±1km, ML3.7/15, Error ellipse: s-maj=1.2km s-min=0.4km az=345.0*
*ATH **27** 17:24:43.5, 38°.22N×22°.13E, h12km, ML3.5/27, Error ellipse: s-maj=0.8km s-min=0.5km az=289.0*
*ISCJB **27** 17:24:43.7±0.2, 38°.22N±0°.01×22°.13E±0°.02, h10km±1km, mb3.8/8, Error ellipse: s-maj=2.3km s-min=1.8km az=143.7*
*BEO **27** 17:24:45.6±0.7, 38°.19N×21°.96E, h10km, ML3.3/7*
*IDC **27** 17:24:46.9±4.1, 38°.16N×22°.24E, h31km±30km, mb3.7/9, mb1 3.8/13, mb1mx3.6/42, mbtmp3.8/13, ML3.3/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/46, Error ellipse: s-maj=24.3km s-min=15.8km az=33.0*

ISC 27 17:24:43.7±0.7, 38°.22N±0°.01×22°.15E±0°.01, h9km±3km, n167, σ1$36/226, mb3.8/8, 8C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG1	**Aigion**	**0.01**	**206**	P	**Pg**	**17 24 45.5**	**+0.2**
AIG1				S	**Sg**	**17 24 46.6**	**+0.1**
AIG3	**Aigion**	**0.05**	**322**	P	**Pg**	**17 24 45.7**	**0.0**
AIG3				S	**Sg**	**17 24 47.1**	**0.0**
ALIK	**Aliki, Aigiali**	**0.05**	**330**	P	**Pg**	**17 24 45.6**	**-0.1**
ALIK				S	**Sg**	**17 24 47.1**	**0.0**
AIG2	**Aigio**	**0.06**	**294**	P	**Pg**	**17 24 45.5**	**-0.2**
AIG2				S	**Sg**	**17 24 46.8**	**-0.5**
AIG4	**Aigion**	**0.07**	**305**	P	**Pg**	**17 24 45.8**	**0.0**
AIG4				S	**Sg**	**17 24 47.1**	**-0.2**
LAKA	**Lakka**	**0.13**	**280**	P	**Pg**	**17 24 47.8**	**+1.0**
LAKA				S	**Sg**	**17 24 49.8**	**+0.8**
LAKA	**Lakka**	**0.13**	**280**	P	**Pg**	**17 24 47.8**	**+1.0**
LAKA				S	**Sg**	**17 24 49.8**	**+0.8**
LAKA				AML	AML	17 24 50.2	
	comp=N,87942μm,0.4s						
LAKA				AML	AML	17 24 50.6	
	comp=E,57788μm,0.3s						
TRIZ	**Trizonia**	**0.16**	**339**	P	**Pg**	**17 24 47.1**	**-0.1**
TRIZ				S	**Sg**	**17 24 49.8**	**+0.2**
TRIZ	**Trizonia**	**0.16**	**339**	P	**Pg**	**17 24 47.2**	**0.0**
TRIZ				S	**Sg**	**17 24 49.5**	**-0.1**
KLV	**Kalavryta, Ach**	**0.17**	**178**	P	**Pg**	**17 24 47.5**	**+0.1**
KLV				S	**Sg**	**17 24 50.5**	**+0.5**
KLV	**Kalavryta, Ach**	**0.17**	**178**	P	**Pg**	**17 24 47.6**	**+0.1**
KLV				S	**Sg**	**17 24 50.0**	**0.0**
KLV				AML	AML	17 24 51.7	
	comp=N,27019μm,0.4s						
KLV				AML	AML	17 24 55.8	
	comp=E,20142μm,0.4s						
KALE	**Kalithea**	**0.17**	**359**	P	**Pg**	**17 24 47.6**	**+0.1**
KALE				S	**Sg**	**17 24 51.0**	**+0.9**
KALE	**Kalithea**	**0.17**	**359**	P	**Pg**	**17 24 47.7**	**+0.1**
KALE				S	**Sg**	**17 24 50.5**	**+0.4**
KALE				AML	AML	17 24 52.8	
KALE				AML	AML	17 24 53.2	
	comp=E,73429μm,0.3s						
SERG	**Sergoula**	**0.21**	**341**	P	**Pg**	**17 24 48.0**	**0.0**
SERG				S	**Sg**	**17 24 51.3**	**+0.3**
SERG	**Sergoula**	**0.21**	**341**	P	**Pg**	**17 24 48.1**	**0.0**
SERG				S	**Sg**	**17 24 51.4**	**+0.3**
SERG				AML	AML	17 24 52.5	
	comp=E,92760μm,0.3s						
SERG				AML	AML	17 24 54.2	
	comp=N,99520μm,0.3s						
EFP	**Efpalio**	**0.28**	**318**	P	**Pg**	**17 24 49.2**	**-0.2**
EFP				S	**Sg**	**17 24 53.5**	**+0.2**
EFP	**Efpalio**	**0.28**	**318**	P	**Pg**	**17 24 49.3**	**-0.2**
EFP				S	**Sg**	**17 24 53.4**	**+0.2**
EFP				AML	AML	17 24 54.8	
	comp=N,38178μm,0.4s						
EFP				AML	AML	17 24 55.2	
	comp=E,38365μm,0.2s						
UPR	**University Cam**	**0.29**	**284**	P	**Pg**	**17 24 49.5**	**-0.1**
UPR				S	**Sg**	**17 24 53.8**	**+0.4**
UPR	**University Cam**	**0.29**	**284**	P	**Pg**	**17 24 49.5**	**-0.1**
GUR	**Goura**	**0.32**	**151**	P	**Pg**	**17 24 50.2**	**+0.1**
GUR				S	**Sg**	**17 24 55.5**	**+1.1**
GUR	**Goura**	**0.32**	**151**	P	**Pg**	**17 24 50.3**	**+0.1**
GUR				S	**Sg**	**17 24 55.1**	**+0.7**
GUR				AML	AML	17 24 56.5	
	comp=N,62357μm,0.5s						
GUR				AML	AML	17 24 56.9	
	comp=E,52155μm,0.3s						
DSF	**Desfina**	**0.36**	**57**	P	**Pg**	**17 24 50.8**	**0.0**
DSF				S	**Sg**	**17 24 56.1**	**+0.5**
DSF	**Desfina**	**0.36**	**57**	P	**Pg**	**17 24 50.9**	**0.0**
DSF				S	**Sg**	**17 24 56.2**	**+0.5**
DSF				AML	AML	17 24 57.2	
	comp=N,15746μm,0.2s						
DSF				AML	AML	17 24 57.3	
	comp=E,17808μm,0.2s						
ANX	**Ano Chora**	**0.42**	**335**	P	**Pg**	**17 24 51.5**	**-0.4**
ANX				S	**Sg**	**17 24 57.8**	**+0.3**
ANX	**Ano Chora**	**0.42**	**335**	P	**Pg**	**17 24 51.6**	**-0.3**
ANX				S	**Sg**	**17 24 57.3**	**-0.2**
ANX				AML	AML	17 25 00.9	
	comp=E,46004μm,0.4s						
ANX				AML	AML	17 25 02.1	
	comp=N,41401μm,0.5s						
DRO	**Drossia**	**0.43**	**233**	P	**Pg**	**17 24 52.0**	**-0.2**
DRO				S	**Sb**	**17 24 59.5**	**-0.6**
DRO	**Drossia**	**0.43**	**233**	P	**Pg**	**17 24 52.0**	**-0.2**
DRO				S	**Sg**	**17 24 57.1**	**-0.8**
DRO				AML	AML	17 25 01.8	
	comp=N,31398μm,0.3s						
DRO				AML	AML	17 25 02.8	
	comp=E,33119μm,0.4s						
THAL	**Thalero**	**0.45**	**113**	P	**Pg**	**17 24 52.8**	**+0.4**
THAL				S	**Sb**	**17 24 59.8**	**-0.7**
THAL	**Thalero**	**0.45**	**113**	P	**Pg**	**17 24 52.8**	**+0.4**
RLS	**Riolos of Patr**	**0.56**	**254**	P	**Pg**	**17 24 54.1**	**-0.4**
RLS				S	**Sb**	**17 25 03.6**	**-0.1**
RLS	**Riolos of Patr**	**0.56**	**254**	P	**Pg**	**17 24 54.2**	**-0.4**
RLS				S	**Sb**	**17 25 02.9**	**-0.8**
RLS				AML	AML	17 25 05.9	
	comp=E,10600μm,0.4s						
RLS				AML	AML	17 25 08.8	
	comp=N,6047μm,0.4s						
PVO	**Paravola**	**0.63**	**310**	P	**Pg**	**17 24 55.5**	**-0.4**
PVO				S	**Sg**	**17 25 04.2**	**0.0**
PVO	**Paravola**	**0.63**	**310**	P	**Pg**	**17 24 55.6**	**-0.3**
PVO				AML	AML	17 25 08.7	
	comp=N,15059μm,0.4s						
PVO				AML	AML	17 25 09.5	
	comp=E,12050μm,0.3s						
ACOR	**Acrocorinthos**	**0.66**	**119**	P	**Pg**	**17 24 56.3**	**-0.1**
LOUT	**Loutraki**	**0.69**	**109**	P	**Pb**	**17 24 57.8**	**-0.2**
TRIP	**Tripoli**	**0.69**	**172**	P	**Pg**	**17 24 56.8**	**-0.4**
TRIP				S	**Sb**	**17 25 07.8**	**+0.1**
TRIP	**Tripoli**	**0.69**	**172**	P	**Pg**	**17 24 56.9**	**-0.2**
TRIP				S	**Sb**	**17 25 07.6**	**-0.1**
TRIP				AML	AML	17 25 11.8	
	comp=E,7175μm,0.4s						
TRIP				AML	AML	17 25 18.1	
	comp=N,5046μm,1.0s						
EVR	**Evrytania**	**0.75**	**339**	P	**Pg**	**17 24 57.5**	**-0.6**
EVR				S	**Sg**	**17 25 08.6**	**+0.6**
EVR	**Evrytania**	**0.75**	**339**	P	**Pg**	**17 24 57.6**	**-0.6**
EVR				S	**Sg**	**17 25 08.4**	**+0.4**
EVR				AML	AML	17 25 13.0	
	comp=N,11728μm,0.5s						
EVR				AML	AML	17 25 13.6	
	comp=E,9564μm,0.3s						
AMT	**Artemida-Makis**	**0.77**	**207**	P	**Pg**	**17 24 58.2**	**-0.3**
AMT				AML	AML	17 25 21.2	
	comp=N,10394μm,0.9s						
AMT				AML	AML	17 25 21.8	
	comp=E,11306μm,0.9s						
LKR	**Lokris**	**0.80**	**57**	P	**Pg**	**17 24 58.5**	**-0.6**
LKR				AML	AML	17 25 15.3	
	comp=E,7816μm,0.2s						
LKR				AML	AML	17 25 17.6	
	comp=N,6378μm,0.5s						
VTN	**Vitineika**	**0.81**	**249**	P	**Pb**	**17 25 00.1**	**+0.1**
ATAL	**Atalanti**	**0.84**	**55**	P	**Pg**	**17 24 59.1**	**-0.7**
PDO	**Prodromos**	**0.85**	**297**	P	**Pg**	**17 24 59.9**	**-0.2**
VLX	**Vlachokerasia**	**0.86**	**168**	P	**Pg**	**17 24 59.8**	**-0.6**
VLX				S	**Sg**	**17 25 11.4**	**-0.3**
VLX				AML	AML	17 25 16.2	
	comp=E,11301μm,0.7s						
VLX				AML	AML	17 25 19.9	
	comp=N,7883μm,0.6s						
VIL2	**Platees**	**0.89**	**90**	P	**Pn**	**17 25 01.9**	**-0.4**
VIL2				AML	AML	17 25 22.7	
	comp=N,9478μm,0.7s						
VIL2				AML	AML	17 25 23.7	
	comp=E,9843μm,0.9s						
EPID	**Epidavros**	**0.98**	**128**	P	**Pg**	**17 25 02.3**	**-0.2**
EPID				S	**Sb**	**17 25 16.5**	**+0.7**
MES3	**Kyparissia**	**1.04**	**201**	P	**Pg**	**17 25 02.6**	**-1.1**
MES3				S	**Sb**	**17 25 17.8**	**+0.4**
ITM	**Ithomi**	**1.05**	**190**	P	**Pg**	**17 25 03.0**	**-0.9**
ITM				S	**Sn**	**17 25 18.7**	**-0.6**
SMIA	**Simia**	**1.06**	**51**	P	**Pb**	**17 25 04.4**	**+0.1**
SMIA				S	**Sn**	**17 25 19.3**	**-0.4**
KFL	**Anninata**	**1.07**	**265**	P	**Pg**	**17 25 04.0**	**-0.4**
DID	**Didima**	**1.12**	**129**	P	**Pg**	**17 25 04.2**	**-1.0**
DID				S	**Sb**	**17 25 20.4**	**+0.5**
DID				AML	AML	17 25 23.8	
	comp=E,3573μm,0.4s						
DID				AML	AML	17 25 30.0	
	comp=N,3272μm,0.5s						
KRND	**KRANIDI**	**1.15**	**136**	P	**Pb**	**17 25 05.4**	**-0.4**
KRND				S	**Sn**	**17 25 21.9**	**+0.1**
KRND				AML	AML	17 25 26.0	
	comp=E,4012μm,0.4s						
KRND				AML	AML	17 25 28.7	
	comp=N,4593μm,0.8s						
VLS	**Valsamata**	**1.23**	**269**	P	**Pn**	**17 25 05.9**	**-1.1**
VLS				AML	AML	17 25 34.1	
	comp=N,3562μm,0.5s						
VLS				AML	AML	17 25 35.3	
	comp=E,2717μm,0.6s						
MRKA	**Markates**	**1.23**	**66**	P	**Pg**	**17 25 07.4**	**-0.1**
MRKA				S	**Sn**	**17 25 24.2**	**+0.3**
MRKA				AML	AML	17 25 26.5	
	comp=E,2084μm,0.7s						
MRKA				AML	AML	17 25 27.3	
	comp=N,2341μm,0.3s						
EVGI	**Lefkada island**	**1.24**	**290**	P	**Pn**	**17 25 07.1**	**0.0**
ATH	**Athens Observa**	**1.26**	**101**	P	**Pn**	**17 25 07.4**	**-0.1**
ATH				S	**Sn**	**17 25 24.7**	**+0.1**
ATH				AML	AML	17 25 30.2	
	comp=N,2508μm,0.5s						
ATH				AML	AML	17 25 30.6	
	comp=E,4135μm,0.8s						
FSK	**Fiskardo**	**1.27**	**282**	P	**Pn**	**17 25 06.5**	**-1.1**
FSK				S	**Sb**	**17 25 24.3**	**+0.1**
LKD2	**Lefkada island**	**1.30**	**297**	P	**Pn**	**17 25 07.5**	**-0.6**
LKD2				AML	AML	17 25 35.1	
	comp=N,6094μm,0.6s						
LKD2				AML	AML	17 25 43.0	
	comp=E,3291μm,0.6s						
TSLK	**Tsoukalades, L**	**1.32**	**298**	P	**Pn**	**17 25 08.2**	**0.0**
ATHU	**Athens Univers**	**1.32**	**100**	P	**Pn**	**17 25 08.2**	**-0.1**
FYTO	**Fytoko, Volos**	**1.34**	**27**	P	**Pn**	**17 25 08.6**	**0.0**
THL	**Klokotos Trika**	**1.35**	**356**	P	**Pb**	**17 25 09.1**	**0.0**
THL				S	**Sb**	**17 25 26.3**	**-0.2**
THL				AML	AML	17 25 31.6	
	comp=N,1615μm,0.3s						
THL				AML	AML	17 25 33.5	
	comp=E,2586μm,0.5s						
VLY	**Voula,Athens**	**1.35**	**105**	P	**Pn**	**17 25 08.9**	**+0.1**
VLY				S	**Sg**	**17 25 27.9**	**+0.6**
VLY				AML	AML	17 25 32.1	
	comp=N,1227μm,0.8s						
VLY				AML	AML	17 25 37.3	
	comp=E,1492μm,0.5s						
PYL	**PYLOS**	**1.36**	**194**	P	**Pn**	**17 25 08.1**	**-0.7**
PTL	**Penteli**	**1.37**	**96**	P	**Pn**	**17 25 08.6**	**-0.4**
PTL				S	**Sg**	**17 25 28.4**	**+0.7**
NEO	**Neokhori**	**1.38**	**37**	P	**Pb**	**17 25 09.5**	**-0.2**
XOR	**Xorichti**	**1.41**	**35**	P	**Pn**	**17 25 09.6**	**0.0**
EREA	**Eretria**	**1.42**	**81**	P	**Pb**	**17 25 10.1**	**-0.3**
EREA				AML	AML	17 25 37.6	
	comp=N,1747μm,0.3s						
EREA				AML	AML	17 25 38.0	
	comp=E,1959μm,0.7s						
DYR	**Agios Nikonas**	**1.46**	**174**	P	**Pn**	**17 25 10.0**	**-0.2**
VLI	**Veliai**	**1.62**	**157**	P	**Pb**	**17 25 13.5**	**-0.3**
VLI				AML	AML	17 25 44.7	
	comp=E,1779μm,1.0s						
VLI				AML	AML	17 25 45.2	
	comp=N,1715μm,0.8s						
JAN	**Janina**	**1.76**	**325**	P	**Pn**	**17 25 14.8**	**+0.5**
KPRO	**Kipourio**	**1.84**	**341**	P	**Pb**	**17 25 17.4**	**-0.2**
LIT	**Litokhoron**	**1.90**	**8**	P	**Pn**	**17 25 16.6**	**+0.3**
IGT	**Igoumenitsa**	**1.93**	**313**	*e*Pg	**Pg**	**17 25 20.1**	**-0.7**
IGT				*e*Sg	**Sb**	**17 25 44.0**	**+0.7**
IGT	**Igoumenitsa**	**1.93**	**313**	P	**Pb**	**17 25 18.4**	**-0.6**
KTHA	**Kythira Island**	**2.09**	**159**	P	**Pb**	**17 25 20.7**	**-1.1**
KZN	**Kozani**	**2.11**	**352**	P	**Pn**	**17 25 20.6**	**+1.4**
SERI	**Serifos**	**2.13**	**119**	P	**Pn**	**17 25 19.9**	**+0.4**
MHLO	**Agia Marina, M**	**2.35**	**130**	P	**Pn**	**17 25 23.6**	**+1.1**
SRN	**Sarande**	**2.35**	**316**	*i* PN	**Pb**	**17 25 27.0**	**+0.7**
SRN				*i* SN	Sg	17 26 10.3	+1.1
KEK	**Kerkira**	**2.36**	**310**	P	**Pb**	**17 25 25.2**	**-1.2**
PLG	**Polygyros**	**2.38**	**25**	P	**Pn**	**17 25 23.0**	**+0.1**
ANKY	**Antikythira Is**	**2.52**	**158**	P	**Pn**	**17 25 26.1**	**+1.3**
TPE	**Tepelena**	**2.66**	**322**	*i* PN	**Pg**	**17 25 34.8**	**+0.2**
TPE				*i* SN	**Sg**	**17 26 10.4**	**+1.3**
GRG	**Griva**	**2.74**	**4**	P	**Pn**	**17 25 28.4**	**+0.4**
SOH	**Sokhos**	**2.77**	**19**	P	**Pn**	**17 25 29.0**	**+0.8**
APE	**Apeiranthos**	**2.92**	**112**	*i*P	**Pn**	**17 25 30.6**	**+0.2**
APE	**Apeiranthos**	**2.92**	**112**	S	**Sn**	**17 26 04.3**	**-1.3**
APE	**Apeiranthos**	**2.92**	**112**	P	**Pn**	**17 25 31.4**	**+1.1**
KNT	**Kendrikon**	**3.00**	**11**	P	**Pn**	**17 25 32.2**	**+0.8**
OHR	**Ohrid**	**3.07**	**341**	*i* Pn	**Pb**	**17 25 36.4**	**-2.1**
CHOS	**Chios island**	**3.08**	**86**	P	**Pn**	**17 25 33.3**	**+0.7**
SRS	**Serrai**	**3.10**	**21**	*e*Pn	**Pn**	**17 25 35.0**	**+2.1**
SRS				*e*Sn	**Sb**	**17 26 13.7**	**-3.4**
SRS	**Serrai**	**3.10**	**21**	P	**Pn**	**17 25 33.6**	**+0.7**
VAY	**Valandovo**	**3.12**	**6**	*e*Pn	**Pn**	**17 25 35.3**	**+2.3**
VAY				*e*Sn	**Sb**	**17 26 14.1**	**-3.3**
VAY	**Valandovo**	**3.12**	**6**	*i* Pn	**Pn**	**17 25 35.2**	**+2.3**
IMMV	**Iera Moni Meta**	**3.12**	**151**	P	**Pn**	**17 25 34.8**	**+1.8**
VAM	**Vamos**	**3.25**	**149**	P	**Pn**	**17 25 35.9**	**+1.0**
TIR	**Tirane**	**3.59**	**331**	*i* PN	**Pg**	**17 25 52.6**	**+0.2**
TIR				*i* SN	**Sg**	**17 26 45.5**	**+6.5**
EZN	**Ezine**	**3.63**	**62**	⇑*i*P	**Pn**	**17 25 40.8**	**+0.7**
IDI	**Anoyia**	**3.66**	**142**	Pn	**Pn**	**17 25 39.7**	**-0.9**
	comp=N,1.2nm,0.3s,baz=326,slow=14,SNR=7.6						
IDI				Sn	**Sn**	**17 26 23.0**	**-0.8**
	comp=N,3.9nm,0.3s,baz=100,slow=22,SNR=8.5						
PHP	**Peshkopia**	**3.70**	**340**	*i* PN	**Pb**	**17 25 46.1**	**-3.2**
PHP				*i* SN	**Sg**	**17 26 45.5**	**+2.8**
SKO	**Skopje**	**3.79**	**352**	*e*Pn	**Pn**	**17 25 44.9**	**+2.6**
SKO	**Skopje**	**3.79**	**352**	*i* Pn	**Pb**	**17 25 48.0**	**-2.7**
TIP	**Timpagrande**	**4.32**	**285**	⇑*i*P	**Pn**	**17 25 51.9**	**+2.3**
TIP	**Timpagrande**	**4.32**	**285**	S	**Sn**	**17 26 42.5**	**+2.3**
PLD	**Plovdiv**	**4.35**	**26**	*e*Pn	**Pn**	**17 25 52.0**	**+2.0**
VTS	**Vitosha**	**4.47**	**10**	*e*Pn	**Pn**	**17 25 52.9**	**+1.1**
VTS				*e*Sn	**Sn**	**17 26 43.8**	**-0.2**
VTS	**Vitosha**	**4.47**	**10**	⇑*i*P	**Pn**	**17 25 53.7**	**+1.9**
VTS	**Vitosha**	**4.47**	**10**	S	**Sn**	**17 26 45.8**	**+1.8**
DRME	**Dracevica, Mon**	**4.57**	**331**	*e*Pn	**Pn**	**17 25 54.9**	**+1.9**
BARS	**Barje**	**4.60**	**357**	*e*Pn	**Pn**	**17 25 54.7**	**+1.3**
PDG	**Podgorica**	**4.75**	**333**	*e*Pn	**Pn**	**17 25 57.4**	**+1.9**
PDG	**Podgorica**	**4.75**	**333**	⇑*i*P	**Pn**	**17 25 57.4**	**+1.9**
PDG	**Podgorica**	**4.75**	**333**	S	**Sn**	**17 26 56.8**	**+6.2**
PDG	**Podgorica**	**4.75**	**333**	*e*Pn	**Pn**	**17 25 56.6**	**+1.1**
MATE	**Matera**	**4.86**	**302**	⇑*i*P	**Pn**	**17 25 59.8**	**+2.8**
MATE	**Matera**	**4.86**	**302**	S	**Sn**	**17 26 55.6**	**+2.3**
SELS	**Selova**	**5.06**	**351**	*e*Pn	**Pn**	**17 26 02.1**	**+2.4**
HCY	**Herceg Novi**	**5.06**	**328**	*e*Pn	**Pn**	**17 25 57.7**	**-2.1**
ZAPS	**Zavoj**	**5.07**	**4**	*e*Pn	**Pn**	**17 26 01.8**	**+2.0**
SJES	**Sjenica**	**5.30**	**343**	*e*Pn	**Pn**	**17 26 02.8**	**-0.3**
TREB	**Trebinje**	**5.35**	**328**	*e*Pn	**Pn**	**17 26 03.8**	**+0.2**
TREB				*e*Sn	**Sn**	**17 27 02.7**	**-2.6**
TREB	**Trebinje**	**5.35**	**328**	*e*Pn	**Pn**	**17 26 05.0**	**+1.4**
BOVS	**Bovan**	**5.42**	**357**	*e*Pn	**Pn**	**17 26 06.5**	**+1.8**
BRY	**Bratogost**	**5.43**	**331**	*e*Pn	**Pn**	**17 26 07.2**	**+2.3**
UPM	**Unac-Piva**	**5.56**	**335**	*e*Pn	**Pn**	**17 26 08.3**	**+1.6**
IVAS	**Ivanjica**	**5.56**	**345**	*e*Pn	**Pn**	**17 26 07.9**	**+1.2**
ZAGS	**Zajecar**	**5.59**	**1**	*e*Pn	**Pn**	**17 26 09.2**	**+2.2**
STON	**Ston**	**5.75**	**325**	*e*Sn	**Sn**	**17 27 12.8**	**-2.4**
STON	**Ston**	**5.75**	**325**	*e*Pn	**Pn**	**17 26 09.7**	**+0.6**
STON				Sn	**Sn**	**17 27 12.6**	**-2.6**
STON	**Ston**	**5.75**	**325**	*e*Pn	**Pn**	**17 26 07.9**	**-1.3**
GRUS	**Gruza**	**5.77**	**350**	*e*Pn	**Pn**	**17 26 10.8**	**+1.4**
BBLS	**Lazići**	**6.01**	**341**	*e*Pn	**Pn**	**17 26 13.0**	**+0.1**
BBLS	**Lazići**	**6.01**	**341**	*e*Pn	**Pn**	**17 26 12.1**	**-0.8**
DIVS	**Divibare**	**6.10**	**345**	*e*Pn	**Pn**	**17 26 15.1**	**+1.1**
DIVS	**Divibare**	**6.10**	**345**	*e*Pn	**Pn**	**17 26 14.9**	**+0.9**
TRUS	**Trudelj**	**6.14**	**348**	*e*Pn	**Pn**	**17 26 14.7**	**+0.1**
HAPS	**Han Pijesak,Bl**	**6.34**	**339**	*e*Pn	**Pn**	**17 26 17.4**	**0.0**
HAPS				*e*Sn	**Sn**	**17 27 27.4**	**-2.5**
HAPS	**Han Pijesak,Bl**	**6.34**	**339**	*e*Pn	**Pn**	**17 26 17.0**	**-0.4**
MDVR	**Moldovita**	**6.57**	**357**	⇓*i*P	**Pn**	**17 26 22.8**	**+2.3**
FRGS	**Fruska Gora**	**7.15**	**347**	*e*Pn	**Pn**	**17 26 28.2**	**-0.3**
MLR	**Muntele Rosu**	**7.80**	**20**	Pn	**Pn**	**17 26 39.7**	**+2.3**
	comp=N,0.4nm,0.3s,baz=203,slow=9.8,SNR=5.4						
MLR	**Muntele Rosu**	**7.80**	**20**	⇑*i*P	**Pn**	**17 26 40.6**	**+3.1**
UDBI	**Udbina**	**7.92**	**325**	*e*Pn	**Pn**	**17 26 41.2**	**+2.1**
PLOR	**Plostina**	**8.33**	**22**	⇑*i*P	**Pn**	**17 26 47.6**	**+3.0**
VRI	**Vrincioaia**	**8.37**	**23**	⇓*i*P	**Pn**	**17 26 48.2**	**+3.1**
NVLJ	**Novalja**	**8.37**	**322**	*e*Pn	**Pn**	**17 26 45.9**	**+0.8**
MORH	**Mrgy, Hungar**	**8.40**	**343**	*e*Pn	**Pn**	**17 26 42.6**	**-3.0**
BOJS	**Bojanci**	**8.91**	**327**	*i* Pn	**Pn**	**17 26 54.8**	**+2.3**
BOJS				*i* Sn	**Sn**	**17 28 30.6**	**-2.4**
BRTR	**Keskin Array B**	**9.08**	**77**	Pn	**Pn**	**17 26 55.8**	**+0.7**
	comp=N,0.4nm,0.3s,baz=259,slow=12,SNR=17						
CRES	**Cresnjev**	**9.08**	**329**	*e*Pn	**Pn**	**17 26 53.8**	**-1.1**
VYHS	**Vyhne**	**10.55**	**348**	*e*PN	**Pn**	**17 27 16.9**	**+1.9**
GERES	**GERESS Array B**	**12.25**	**333**	Pn	**Pn**	**17 27 42.2**	**+3.8**
	comp=N,0.0nm,0.3s,baz=163,slow=14,SNR=2.6						
GERES				LR	LR	17 33 04.9	
	comp=N,93nm,18.9s,baz=152,slow=40						
ESDC	**Sonseca Array**	**20.34**	**282**	P	Pn	17 29 22.1	-0.2
	comp=N,4.1nm,0.6s,baz=76,slow=11,SNR=28						
HFS	**Hagfors**	**22.59**	**349**	P	**P**	**17 29 45.7**	**+1.5**
	comp=N,1.7nm,0.6s,baz=133,slow=8.7,SNR=6.8						
FINES	**F

comp=E,95μm,0.1s
FOSD Fosdinovo 0.15 239 P Pg 17 24 47.8 +0.7
FOSD S Sg 17 24 50.6 +1.2
CARD Cardoso 0.27 127 P Pb 17 24 49.9 -0.8
CARD S Sg 17 24 53.9 +1.1
CARD Cardoso 0.27 127 P Pg 17 24 49.9 +0.8
CARD S Sb 17 24 54.1 -1.2
CARD AML AML
comp=E,268μm,0.1s
CARD AML AML
comp=N,236μm,1.1s
CARD AML AML
comp=E,269μm,0.1s
CARD AML AML
comp=N,236μm,1.1s
CARD AML AML
comp=E,269μm,0.1s
CARD AML AML
ERBM Eremo 0.28 36 P Pg 17 24 50.1 +0.6
ERBM S Sb 17 24 55.0 -0.8
CODM Codolo 0.31 311 P Pg 17 24 49.6 -0.3
CODM S Sg 17 24 54.4 +0.2
GRAM Graiana 0.32 345 P Pg 17 24 50.4 +0.4
GRAM S Sg 17 24 54.8 +0.6
GRAM Graiana 0.32 345 P Pg 17 24 50.4 +0.4
GRAM S Sb 17 24 55.8 -0.9
GRAM AML AML
comp=E,287μm,1.1s
GRAM AML AML
comp=N,358μm,0.2s
GRAM AML AML
comp=E,287μm,1.1s
GRAM AML AML
comp=N,358μm,0.2s
GRAM AML AML
comp=E,287μm,1.1s
GRAM AML AML
comp=N,358μm,0.2s
BDI Bagni Di Lucca 0.32 113 P Pg 17 24 50.9 +0.7
BDI S Sb 17 24 56.0 -1.0
MAIM Mastiano 0.35 141 P Pg 17 24 51.3 +0.7
MAIM S Sb 17 24 56.7 -1.0
MAIM Mastiano 0.35 141 P Pg 17 24 51.3 +0.7
MAIM S Sb 17 24 56.9 -0.8
MAIM AML AML
comp=E,61μm,0.2s
MAIM AML AML
comp=N,41μm,0.3s
MAIM AML AML
comp=E,61μm,0.2s
MAIM AML AML
comp=N,41μm,0.3s
MAIM AML AML
comp=E,61μm,0.2s
MAIM AML AML
comp=N,41μm,0.3s
POPM Popiglio 0.44 109 P Pg 17 24 52.8 +0.5
POPM S Sb 17 24 59.5 -0.7
POPM Popiglio 0.44 109 P Pb 17 24 52.9 -0.6
POPM S Sb 17 24 59.5 -0.7
POPM AML AML
comp=E,109μm,0.4s
POPM AML AML
comp=N,85μm,1.4s
POPM AML AML
comp=N,85μm,1.4s
POPM AML AML
comp=E,109μm,0.4s

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*IDC **27** 17:28:14.0±0.5,58.°66S×25.°37W, h0km, mb4.3/11, mb1 4.4/12, mb1mx4.3/26, mbtmp4.3/12, ML4.5/1, MS3.4/5, Ms1 3.4/5, ms1mx3.3/22, Error ellipse: s-maj=21.6km s-min=17.5km az=38.0*
*ISCJB **27** 17:28:17.5±0.5,58.°71S±0.°07×25.°4W±0.°2, h35km, mb4.3/14, MS3.5/4, Error ellipse: s-maj=14.5km s-min=9.4km az=152.8*
*NEIC **27** 17:28:24.7±1.2,58.°76S×24.°78W, h79km±2km, mb4.4/6, Error ellipse: s-maj=32.5km s-min=19.7km az=67.0*
ISC 27 17:28:19.2±0.5,58.°73S±0.°09×25.°3W±0.°1, h35km, n67, σ1§04/58, mb4.4/14, MS3.6/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.65**	**301**	*e*Pn	Pn	17 30 16.3	+8.4
VNA1	**Neumayer–Stat**	**13.91**	**156**	P	**Pn**	**17 31 33.6**	**+0.2**
VNA3	**Neumayer Olymp**	**14.10**	**159**	P	**Pn**	**17 31 36.0**	**-0.1**
SNAA	**Sanae**	**15.86**	**154**	P	**P**	**17 31 59.6**	**-3.2**
SNAA	**Sanae**	**15.86**	**154**	Pn	**P**	**17 31 59.4**	**-3.4**
	2.0nm,0.3s,baz=320,slow=18,SNR=45						
SNAA				LR	LR	17 37 10.6	
	comp=Z,52nm,18.1s,baz=5.0,slow=34						
SNAA	**Sanae**	**15.86**	**154**	*e*Pn	**P**	**17 31 59.6**	**-3.2**
	9.3nm,0.6s						
USHA	**Ushuaia**	**23.66**	**261**	P	**P**	**17 33 26.3**	**-0.7**
	4.9nm,0.8s,baz=203,slow=7.7,SNR=2.3						
QSPA	**South Pole Qui**	**31.51**	**180**	*e*P	**P**	**17 34 39.0**	**+1.5**
	8.3nm,0.6s						
PLCA	**Paso Flores**	**33.55**	**282**	P	P	17 34 54.0	-1.4
	1.7nm,0.6s,baz=131,slow=5.2,SNR=3.5						
PLCA				LR	LR	17 48 33.0	
	comp=Z,111nm,18.7s,baz=151,slow=36						
MAW	**Mawson**	**37.38**	**141**	P	**P**	**17 35 27.8**	**-0.1**
	1.5nm,0.6s,baz=208,slow=9.1,SNR=4.5						
MAW	**Mawson**	**37.38**	**141**	*e*P	**P**	**17 35 27.8**	**-0.1**
	0.7nm,1.0s						
CFA	**Coronel Fontan**	**39.60**	**294**	P	**P**	**17 35 45.8**	**-1.3**
	2.8nm,0.6s,baz=163,slow=7.3,SNR=5.1						
VNDA	**Vanda**	**43.93**	**182**	P	**P**	**17 36 23.2**	**+1.4**
	5.1nm,0.7s,baz=186,slow=7.4,SNR=44						
VNDA	**Vanda**	**43.93**	**182**	*e*P	**P**	**17 36 24.2**	**+2.4**
	6.2nm,0.8s						
BOSA	**Boshof**	**45.72**	**71**	P	**P**	**17 36 37.8**	**+1.0**
	1.6nm,0.7s,baz=171,slow=9.9,SNR=3.7						
BOSA				LR	LR	17 53 30.6	
	comp=Z,62nm,18.1s,baz=202,slow=33						
BDFB	**Brasilia**	**46.21**	**329**	LR	LR	17 52 49.4	
	comp=Z,60nm,19.4s,baz=122,slow=32						
H10S2	**ASCENSION HYDR**	**50.32**	**14**	T	T	18 31 43.2	
	baz=188,slow=75,SNR=26						
H10S3	**ASCENSION HYDR**	**50.32**	**14**	T	T	18 31 37.3	
	baz=188,slow=75,SNR=34						
H10S1	**ASCENSION HYDR**	**50.34**	**14**	T	T	18 31 39.4	
	baz=188,slow=75,SNR=30						
H10N1	**ASCENSION HYDR**	**51.44**	**14**	T	T	18 32 58.3	
	baz=181,slow=72,SNR=16						
H10N3	**ASCENSION HYDR**	**51.44**	**14**	T	T	18 32 57.6	
	baz=181,slow=72,SNR=22						
H10N2	**ASCENSION HYDR**	**51.45**	**14**	T	T	18 33 01.5	
	baz=181,slow=72,SNR=23						
LPAZ	**La Paz**	**52.78**	**305**	P	**P**	**17 37 30.8**	**-0.6**
	0.8nm,0.4s,baz=165,slow=7.0,SNR=6.0						
LPAZ				LR	LR	18 04 02.9	
	comp=Z,31nm,18.1s,baz=122,slow=41						
DBIC	**Dimbokro**	**67.22**	**22**	P	**P**	**17 39 08.3**	**-1.3**
	3.2nm,0.8s,baz=134,slow=2.1,SNR=3.2						
TOA0	**Torodi Ar. Sit**	**74.92**	**27**	*e*P	**P**	**17 39 57.6**	**+1.3**
	4.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**74.92**	**27**	P	**P**	**17 39 56.8**	**+0.6**
	7.9nm,0.3s,baz=196,slow=5.2,SNR=3.3						
TOA1	**Torodi Ar. Sit**	**74.93**	**27**	*e*P	**P**	**17 39 56.8**	**+0.5**
STKA	**Stephens Creek**	**89.07**	**169**	P	**P**	**17 41 10.7**	**+0.2**
	1.7nm,0.7s,baz=184,slow=8.8,SNR=5.1						
ASAR	**Alice Springs**	**96.11**	**161**	P	**P**	**17 41 43.0**	**-0.1**
	1.0nm,0.7s,baz=182,slow=4.1,SNR=29						
AS31	**Alice Springs**	**96.11**	**161**	*e*P	**P**	**17 41 42.5**	**-0.6**
	1.9nm,1.5s						
I42A	**Draeger Farm,**	**114.97**	**314**	*e*Pdif	**Pdif**	**17 43 07.0**	**+0.7**
PD31	**Pinedale Array**	**122.63**	**300**	*e*PKPdf	**PKPdf**	**17 47 09.7**	**-0.6**
PDAR	**Pinedale Array**	**122.63**	**300**	PKP	**PKPdf**	**17 47 09.8**	**-0.6**
	0.3nm,0.5s,baz=128,slow=6.1,SNR=5.2						
CMAR	**Chiang Mai Arr**	**123.14**	**110**	PKP	**PKiKP**	**17 47 12.1**	**+0.1**
	0.9nm,0.7s,baz=231,slow=3.7,SNR=6.3						
NV01	**Mina Array Sit**	**123.36**	**290**	*e*PKPdf	**PKiKP**	**17 47 13.2**	**+1.1**
NVAR	**Mina Array Bea**	**123.36**	**290**	PKP	**PKiKP**	**17 47 13.2**	**+1.1**
	0.9nm,0.7s,baz=119,slow=3.0,SNR=8.7						
FXWY	**Fox Creek**	**123.98**	**299**	*e*PKPdf	**PKPdf**	**17 47 13.6**	**+0.7**
FIA0	**FINESS Array S**	**126.27**	**28**	*e*PKPdf	**PKiKP**	**17 47 16.5**	**-0.3**
FINES	**FINESS Array B**	**126.27**	**28**	PKP	**PKiKP**	**17 47 16.5**	**-0.3**
	2.0nm,0.7s,baz=229,slow=2.0,SNR=9.1						
ABKAR	**Akbulak array**	**128.02**	**56**	*e*PKPdf	**PKiKP**	**17 47 20.2**	**-0.5**
G08A	**Pilot Rock**	**128.92**	**295**	*e*PKPdf	**PKPdf**	**17 47 22.8**	**+0.7**
ARA0	**ARCESS Array S**	**133.05**	**22**	*e*PKPdf	**PKPdf**	**17 47 28.7**	**-0.3**
ARCES	**ARCESS Array B**	**133.05**	**22**	PKP	**PKPdf**	**17 47 28.7**	**-0.3**
	1.6nm,0.7s,baz=241,slow=1.2,SNR=6.8						
YKA	**Yellowknife Ar**	**138.85**	**315**	PKP	**PKPdf**	**17 47 40.3**	**+0.3**
	2.5nm,0.6s,baz=125,slow=2.5,SNR=24						
YKB5	**Yellowknife Ar**	**138.85**	**315**	*e*PKPdf	**PKPdf**	**17 47 40.3**	**+0.3**
YKW3	**Yellowknife Ar**	**138.89**	**315**	*e*PKPdf	**PKPdf**	**17 47 40.8**	**+0.7**
INK	**Inuvik**	**148.52**	**317**	PKPbc	**PKPbc**	**17 48 00.5**	**+0.1**
	12nm,0.7s,baz=80,slow=3.0,SNR=53						
EPYK	**Eagle Plains**	**149.07**	**313**	*e*PKPbc	**PKPbc**	**17 48 01.9**	**0.0**
DAWY	**Dawson**	**149.33**	**308**	*e*PKPbc	**PKPbc**	**17 48 02.5**	**-0.2**
SONA0	**Songino Array**	**149.77**	**90**	*e*PKPbc	**PKiKP**	**17 48 04.7**	**-0.6**
SONM	**Songino Array**	**149.77**	**90**	PKPbc	**PKiKP**	**17 48 04.7**	**-0.6**
	1.4nm,0.5s,baz=219,slow=2.5,SNR=11						
HMT	**Hamilton**	**150.00**	**300**	*e*PKPbc	**PKPbc**	**17 48 05.0**	**+0.7**
EGAK	**Eagle**	**150.29**	**309**	*e*PKPbc	**PKPbc**	**17 48 05.0**	**+0.1**
RIDG	**Independent Ri**	**151.49**	**306**	*e*PKPbc	**PKiKP**	**17 48 08.8**	**+0.6**
SCM	**Sheep Creek Mo**	**151.94**	**301**	*e*PKPbc	**PKPbc**	**17 48 09.6**	**+0.7**
FYU	**Fort Yukon**	**152.41**	**312**	*e*PKPbc	**PKPbc**	**17 48 09.9**	**+0.2**
KSRS	**Korea Array**	**152.50**	**129**	PKPbc	**PKiKP**	**17 48 11.4**	**+0.4**
	0.7nm,0.6s,baz=194,slow=1.4,SNR=3.5						
HDA	**Harding Lake**	**152.57**	**307**	*e*PKPbc	**PKPbc**	**17 48 10.4**	**+0.2**
ILAR	**Eielson Array**	**152.64**	**307**	PKPbc	**PKPbc**	**17 48 10.4**	**+0.2**
	7.1nm,0.8s,baz=153,slow=2.7,SNR=58						
ILB	**Eielson Array**	**152.64**	**307**	*e*PKPbc	**PKPbc**	**17 48 10.5**	**+0.2**
CCB	**Clear Creek Bu**	**152.99**	**307**	*e*PKPbc	**PKPbc**	**17 48 11.1**	**+0.1**
WRH	**Wood River Hil**	**153.06**	**307**	*e*PKPbc	**PKPbc**	**17 48 11.4**	**+0.2**
RND	**Reindeer**	**153.10**	**304**	*e*PKPbc	**PKPbc**	**17 48 12.2**	**+0.7**
MCK	**McKinley**	**153.23**	**305**	*e*PKPbc	**PKiKP**	**17 48 12.4**	**+0.6**
BWN	**Browne**	**153.57**	**306**	*e*PKPbc	**PKPbc**	**17 48 12.8**	**+0.4**
TRF	**Thorofare Moun**	**153.74**	**304**	*e*PKPbc	**PKPbc**	**17 48 13.4**	**+0.4**
BPAW	**Bear Paw Mtn.**	**154.20**	**305**	*e*PKPbc	**PKPbc**	**17 48 13.8**	**0.0**

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*ISCJB **27** 17:40:45.0±0.6,47.°63N±0.°05×92.°52W±0.°07, h0km, Error ellipse: s-maj=8.7km s-min=5.3km az=43.7*
*NEIC **27** 17:40:45.5±1.8,47.°66N×92.°51W, h0km, ML2.7, Error ellipse: s-maj=7.5km s-min=4.0km az=261.0, Suspected Mining explosion.*
NEIC 15 km [10 miles] N of Virginia.
*IDC **27** 17:40:50.8±3.7,47.°66N×92.°63W, h0km, mb1 2.6/1, mb1mx2.6/42, mbtmp2.6/1, ML1.3/1, Error ellipse: s-maj=77.9km s-min=26.5km az=52.0*
ISC 27 17:40:45.5±1.0,47.°54N±0.°05×92.°55W±0.°05, h0km, n11, σ1§07/13, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.82**	**60**	*e*Pn	**Pb**	**17 41 02.8**	**+0.1**
E38A	**The Farm, Brul**	**1.16**	**144**	*e*Pn	**Pn**	**17 41 09.4**	**+0.4**
C40A	**Isle Royale Na**	**2.33**	**80**	*e*Pn	**Pn**	**17 41 25.8**	**+0.7**
SPMN	**Marine on St.**	**2.33**	**184**	*e*Pn	**Pn**	**17 41 26.6**	**+1.5**
SPMN				*e*Sn	**Sb**	**17 41 57.4**	**-0.2**
AGMN	**Agassiz Nation**	**2.35**	**290**	*e*Pn	**Pn**	**17 41 24.1**	**-1.3**
AGMN				*e*Sn	**Sn**	**17 41 56.1**	**+1.1**
COWI	**Conover**	**2.75**	**120**	*e*Pn	**Pn**	**17 41 30.4**	**-0.5**
D41A	**Chassel**	**2.76**	**99**	*e*Pn	**Pn**	**17 41 31.2**	**+0.2**
G40A	**Rib Lake**	**2.80**	**144**	*e*Pn	**Pn**	**17 41 31.3**	**-0.3**
ULM	**Lac du Bonnet**	**3.48**	**322**	Pn	**Pn**	**17 41 42.9**	**+2.0**
	0.5nm,0.3s,baz=180,slow=3.0,SNR=2.1						
ULM				Pg	**Pg**	**17 41 51.2**	**-1.1**
	0.4nm,0.3s,baz=132,slow=13,SNR=2.0						
ULM				Sn	**Sn**	**17 42 22.8**	**0.0**
	0.8nm,0.3s,baz=42,slow=8.8,SNR=1.7						
ULM				Lg	Lg	17 42 34.2	
	1.6nm,0.3s,baz=249,slow=18,SNR=6.8						
ULM				Rg	Rg	17 42 52.8	
	9.2nm,0.9s,baz=166,slow=3.7,SNR=4.8						
I10CA	**LAC DU BONNET**	**3.51**	**321**	*i*		18 01 35.0	
	baz=138,slow=318,SNR=6.4						
I56US	**NEWPORT INFRASI**	**6.48**	**282**	*i*		19 24 10.0	
	baz=83,slow=313,SNR=1.6						

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*NIED **27** 18:12:00.26.°00N×128.°70E, h14km, Mw4.9 Best double couple: M0 2.42000×10^16 NP1:φs221.00000°, δ40.00000°, λ83.00000°. NP2:φs50.00000°, δ51.00000°, λ96.00000°.*
*BJI **27** 18:12:15.3±0.0, 25.°76N×128.°84E, h10km, mb4.6/33, mB4.8/27, Ms4.9/37, Ms7 4.8/34*
*IDC **27** 18:12:19.7±0.6, 25.°94N×128.°36E, h0km, mb4.3/23, mb1 4.4/27, mb1mx4.3/43, mbtmp4.2/27, ML3.6/4, MS4.2/27, Ms1 4.2/27, ms1mx4.0/46, Error ellipse: s-maj=17.7km s-min=12.4km az=95.0*
*ISCJB **27** 18:12:21.5±0.7, 25.°96N±0.°03×128.°51E±0.°03, h25km±4km, mb4.5/87, MS4.5/53, Error ellipse: s-maj=5.1km s-min=3.8km az=136.4*
*MOS **27** 18:12:22.9±1.2, 25.°97N×128.°40E, h33km, mb5.0/35, MS4.8/7, Error ellipse: s-maj=8.1km s-min=5.2km az=105.0*
*NEIC **27** 18:12:22.6±1.5, 26.°00N×128.°27E, h18km±5km, mb4.9/55, Error ellipse: s-maj=11.5km s-min=6.7km az=137.0*
NEIC Recorded [1 JMA] on Okinawa.
*JMA **27** 18:12:23.0±0.3, 26.°03N×128.°51E, h44km±4km, M4.9*
JMA Felt I J1.
*GCMT **27** 18:12:24.6±0.3, 25.°84N±0.°02×128.°57E±0.°03, h20km, MW4.9/74, Moment Tensor Solution. s39,c47; s74,c114; Duration: 0 Moment tensor: Scale 10^16 Nm; M_rr 2.44±.14; M_θθ -1.40±.09; M_φφ -1.05±.09; M_rθ 1.57±.18; M_θφ -1.07±.05; M_φr 1.15±.18; Best double couple: M0 3.07000×10^16 NP1:φs52.00000°, δ65.00000°, λ92.00000°. NP2: φs227.00000°, δ25.00000°, λ86.00000°. Principal axes: T 3.1380, Plg70.0000°, Azm326.0000°; N -0.1450, Plg2.0000°, Azm231.0000°; P -3.0020, Plg20.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 18:12:22.9±0.7,25.°94N±0.°04×128.°54E±0.°03, h23km±3km, n243, σ2§26/261, mb4.7/95, MS4.4/53, 30C-4D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.71**	**287**	P	**Pb**	**18 12 36.2**	**-0.5**
JJT3				S	**Sb**	**18 12 45.9**	**-0.1**
JNTH	**Nagotoyohara**	**0.74**	**321**	P	**Pb**	**18 12 35.6**	**-1.6**
JNTH				*e*S	**Sb**	**18 12 45.3**	**-1.7**
JOW	**Kunigami**	**0.92**	**345**	Pn	**Pb**	**18 12 38.7**	**-1.7**
	141nm,0.3s,baz=158,slow=13,SNR=1384						
JOW				Sn	**Sb**	**18 12 49.7**	**-2.5**
	262nm,0.3s,baz=133,slow=12,SNR=18						
JOW	**Kunigami**	**0.92**	**345**	P	**Pb**	**18 12 38.6**	**-1.7**
JOW				*e*S	**Sb**	**18 12 49.7**	**-2.5**
JYRO	**Yoronjima**	**1.09**	**356**	P	**Pn**	**18 12 40.8**	**-2.0**
JYRO				*e*S	**Sb**	**18 12 53.7**	**-3.2**
JIH	**Iheya**	**1.21**	**335**	P	**Pn**	**18 12 43.3**	**-1.1**
JAGN	**Aguni-jima**	**1.33**	**299**	P	**Pn**	**18 12 45.1**	**-1.0**
JAGN				*e*S	**Sn**	**18 13 01.6**	**-1.6**
JOKE	**Okinoerabujima**	**1.42**	**1**	P	**Pn**	**18 12 45.8**	**-1.6**
JOKE				*e*S	**Sn**	**18 13 02.3**	**-3.0**
JKE	**Kume jima 2**	**1.62**	**284**	P	**Pn**	**18 12 48.6**	**-1.5**
JKE				*e*S	**Sn**	**18 13 08.4**	**-1.9**
JTK	**Tokunoshima**	**1.88**	**11**	P	**Pn**	**18 12 52.1**	**-1.6**
JTK				*e*S	**Sn**	**18 13 13.7**	**-3.0**
JMZ	**Minamidaito 2**	**2.42**	**92**	P	**Pn**	**18 12 58.6**	**-2.5**
JMZ				S	**Sn**	**18 13 25.2**	**-4.7**
YOJ	**Yonaguni jima**	**5.22**	**255**	*e*Pn	**Pn**	**18 13 37.4**	**-2.2**
YOJ	**Yonaguni jima**	**5.22**	**255**	*e*P	**Pn**	**18 13 37.4**	**-2.2**
TATO	**Taipei**	**6.45**	**263**	*e*Pn	**Pn**	**18 13 57.6**	**+1.1**
NACB	**Ninganchiao**	**6.54**	**256**	*e*Pn	**Pn**	**18 13 55.0**	**-2.8**
YHNB	**Yeheng**	**6.61**	**261**	*e*Pn	**Pn**	**18 13 58.3**	**-0.4**
YULB	**Yu-li**	**7.06**	**251**	*e*Pn	**Pn**	**18 14 00.5**	**-4.4**
SSLB	**Suanglung**	**7.21**	**254**	*e*Pn	**Pn**	**18 14 03.9**	**-3.2**
JNU	**Nakatsue**	**7.45**	**15**	Pn	**Pn**	**18 14 10.3**	**+0.2**
	5.3nm,0.3s,baz=209,slow=18,SNR=46						
JNU				LR	LR	18 17 28.9	
	comp=Z,2μm,19.6s,baz=202,slow=41						
JNU	**Nakatsue**	**7.45**	**15**	*e*Pn	**Pn**	**18 14 10.2**	**0.0**
TWG	**Pinlang**	**7.48**	**247**	*e*Pn	Pn	18 14 06.2	-4.5
TPUB	**Ta-pu**	**7.66**	**252**	*e*Pn	**Pn**	**18 14 11.4**	**-1.8**
QZH	**Quanzhou**	**9.05**	**266**	*e*P	**Pn**	**18 14 30.8**	**-1.3**
QZH				S	**Sn**	**18 16 15.8**	**+2.5**
QZH				LR	LR		
	comp=N,2μm,17.5s						
QZH				LR	LR		
	comp=E,2μm,13.3s						
QZH				LR	LR		
	comp=Z,3μm,11.8s						
TJN	**Taejon**	**10.46**	**355**	*i* P	**Pn**	**18 14 50.5**	**-0.9**
KS15	**Wonju Array Si**	**11.48**	**357**	*e*Pn	**Pn**	**18 15 02.9**	**-2.6**
KSRS	**Korea Array**	**11.50**	**358**	Pn	**Pn**	**18 15 06.0**	**+0.4**
	0.3nm,0.3s,baz=174,slow=14,SNR=10						
KSRS				LR	LR	18 19 41.7	
	comp=Z,1μm,20.0s,baz=177,slow=38						
WHN	**Wuhan**	**13.32**	**293**	⇓P	P	18 15 51.5	+11
WHN				S	**Sn**	**18 18 02.5**	**+4.5**
WHN				pmax	pmax		
	comp=Z,33nm,1.0s						
WHN				pmax	pmax		
	comp=Z,540nm,3.9s						
WHN				LR	LR		
	comp=N,5μm,17.3s						
WHN				LR	LR		
	comp=E,9μm,12.3s						
WHN				LR	LR		
	comp=Z,11μm,14.7s						
MAJO	**Matsushiro**	**13.41**	**36**	*e*Pn	**Pn**	**18 15 33.5**	**+1.6**
MAJO	**Matsushiro**	**13.41**	**36**	*e*P	**Pn**	**18 15 33.5**	**+1.6**
MAT	**Matsushiro**	**13.41**	**36**	P	**Pn**	**18 15 34.2**	**+2.3**
MAT				S	**Sn**	**18 18 08.0**	**+7.7**
MJAR	**Matsushiro Arr**	**13.41**	**36**	Pn	**Pn**	**18 15 33.5**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=242,slow=9.9,SNR=3.8						
DL2	**Dalian**	**14.18**	**337**	⇑P	**Pn**	**18 15 43.0**	**+0.7**
DL2				S	**Sn**	**18 18 22.5**	**+3.6**
DL2				pmax	pmax		
	comp=Z,48nm,1.1s						
DL2				pmax	pmax		
	comp=Z,360nm,4.4s						
DL2				LR	LR		
	comp=Z,1μm,16.9s						
DL2				LR	LR		
	comp=Z,3μm,18.3s						
DL2				LR	LR		
	comp=Z,3μm,13.5s						
ENH	**Enshi**	**17.35**	**289**	*e*Pn	**Pn**	**18 16 18.6**	**-5.1**
	comp=Z,29nm,1.3s						
CN2	**Changchun**	**18.00**	**353**	*e*P	**Pn**	**18 16 31.0**	**-0.6**
CN2				*e*S	**Sn**	**18 19 46.8**	**-4.9**
CN2				pmax	pmax		
	comp=Z,300nm,11.0s						
CN2				LR	LR		
	comp=Z,3μm,11.0s						
CN2				LR	LR		
	comp=Z,2μm,11.0s						
CN2				LR	LR		
	comp=Z,3μm,11.0s						
TIY	**Taiyuan**	**18.00**	**315**	*e*P	**P**	**18 16 32.8**	**+0.7**
TIY				pmax	pmax		
	comp=Z,330nm,4.0s						
TIY				LR	LR		
	comp=Z,3μm,12.0s						
TIY				LR	LR		
	comp=Z,1μm,11.7s						
TIY				LR	LR		
	comp=Z,3μm,13.2s						
USRK	**Ussuriysk Ar.**	**18.44**	**8**	P	**Pn**	**18 16 37.2**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=183,slow=8.7,SNR=11						
QIZ	**Qiongzhong**	**18.58**	**252**	P	**P**	**18 16 39.0**	**+0.5**
QIZ				pmax	pmax		
	comp=Z,270nm,4.1s						
QIZ				LR	LR		
	comp=Z,2μm,18.4s						
QIZ				LR	LR		
	comp=Z,690nm,17.9s						
QIZ				LR	LR		
	comp=Z,1μm,18.6s						
XAN	**Xi'an**	**18.80**	**300**	P	**P**	**18 16 40.5**	**-0.3**
XAN				S	**S**	**18 20 17.3**	**+4.1**
XAN				pmax	pmax		
	comp=Z,18nm,1.1s						
XAN				pmax	pmax		
	comp=Z,310nm,6.4s						
XAN				LR	LR		
	comp=Z,2μm,12.5s						
XAN				LR	LR		
	comp=Z,3μm,11.4s						
XAN				LR	LR		
	comp=Z,3μm,14.1s						
XAN	**Xi'an**	**18.80**	**300**	*e*P	**P**	**18 16 39.6**	**-1.2**
	comp=Z,71nm,1.6s						
XAN	**Xi'an**	**18.80**	**300**	*e*P	**P**	**18 16 39.6**	**-1.2**
XAN				pmax	pmax		
	comp=Z,71nm,1.6s						
GYA	**Guiyang**	**19.64**	**276**	P	**Pn**	**18 16 51.5**	**-0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BTO	**Baotou**	**21.24**	**318**	*e*P	**P**	**18 17 06.5**	**-0.9**
ASAJ	**Asahikawa**	**21.43**	**29**	P	**P**	**18 17 11.7**	**+2.5**
	comp=Z,9.4nm,0.9s,baz=227,slow=9.2,SNR=5.7						
YUK	**Yuzh-Kuril'sk**	**22.88**	**34**	*e*P	**P**	**18 17 22.8**	**-2.0**
YUK				S	**S**	**18 21 24.6**	**-8.6**
YUK				MLR	MLR		
	comp=N,505nm,19.0s						
YUK				MLR	MLR		
	comp=Z,469nm,19.0s						
YUK				MLR	MLR		
	comp=E,377nm,18.0s						
KLR	**Kul'dur**	**23.39**	**5**	P	**P**	**18 17 29.6**	**-0.3**
	comp=E,2.5nm,0.6s,baz=174,slow=8.9,SNR=9.4						
YSS	**Yuzh-Sakhalins**	**23.82**	**25**	*e*P	**P**	**18 17 34.4**	**+0.3**
	comp=E,227nm,1.4s						
YSS	**Yuzh-Sakhalins**	**23.82**	**25**	*e*P	**P**	**18 17 34.3**	**+0.3**
YSS				*e**SP	**pP**	**18 17 39.2**	**-0.7**
YSS				*e*		18 18 17.0	
YSS				*e*S	**S**	**18 21 47.0**	**-1.4**
YSS				*e*SS	**SnSn**	**18 22 34.6**	**+6.6**
YSS				pmax	pmax		
	comp=Z,90nm,1.4s						
YSS				pmax	pmax		
	comp=N,30nm,1.3s						
YSS				pmax	pmax		
	comp=E,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
PANO	**Nakornpanom**	**23.88**	**253**	P	**P**	**18 17 39.4**	**+4.5**
	comp=E,0.3nm,1.4s						
KUR	**Kuril'sk**	**24.74**	**34**	*e*P	**P**	**18 17 45.1**	**+2.5**
KUR				*e*S	**S**	**18 22 09.1**	**+5.8**
KUR				pmax	pmax		
	comp=Z,93nm,1.0s						
KUR				MLR	MLR		
	comp=N,400nm,14.0s						
KUR				MLR	MLR		
	comp=Z,320nm,14.0s						
NONG	**Nongkai**	**24.78**	**257**	P	**P**	**18 17 45.7**	**+2.5**
	comp=Z,0.2nm,1.3s						
GRNR	**Gornyy**	**25.52**	**12**	*e*P	**P**	**18 17 49.4**	**-0.2**
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
PBKT	**Sadao Pong**	**27.28**	**256**	P	**P**	**18 18 08.7**	**+2.9**
	comp=Z,4.8nm,1.3s						
ULN	**Ulaanbaatar**	**27.65**	**328**	*e*P	**P**	**18 18 07.3**	**-1.8**
ULN	**Ulaanbaatar**	**27.65**	**328**	*ce*P	**P**	**18 18 08.0**	**-1.1**
ULN				pmax	pmax		
	comp=Z,31nm,1.7s						
ZEA	**Zeya**	**27.79**	**358**	*e*P	P	18 18 20.8	+11
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR

TLY	**Talaya**	**31.91 330**	*e*P	**P**	**18 18 45.4 -1.1**
TLY			*e*		18 20 00.9
TLY			*e*S	**S**	**18 23 58.8 +2.7**
TLY			pmax	pmax	
	comp=Z,14nm,1.6s				
TLY			MLR	MLR	
	comp=Z,4μm,14.0s				
SHL	**Shillong**	**32.95 278**	*e*P	**P**	**18 18 53.9 -2.3**
	comp=Z,20nm,1.0s				
LSA	**Lhasa**	**33.19 285**	*e*P	P	18 18 53.1 -5.5
	comp=Z,19nm,1.8s				
LSA	**Lhasa**	**33.19 285**	*e*P	P	18 18 53.1 -5.5
LSA			pmax	pmax	
	comp=Z,19nm,1.8s				
BRDH	**Bariadhala**	**33.71 272**	LR	LR	18 32 13.4
	comp=Z,356nm,19.1s,baz=138,slow=36				
PETK	**Petropavlovsk-**	**34.80 31**	P	**P**	**18 19 12.2 +0.4**
	comp=Z,4.6nm,1.1s,baz=140,slow=5.0,SNR=4.5				
PETK			LR	LR	18 34 28.0
	comp=Z,187nm,18.6s,baz=228,slow=38				
PEA1	**Petropavlovsk-**	**34.81 31**	*e*P	**P**	**18 19 12.2 +0.4**
PET	**Petropavlovsk**	**35.20 32**	*e*P	**P**	**18 19 15.5 +0.4**
PET			*e*S	**S**	**18 24 45.1 -1.9**
PET			pmax	pmax	
	comp=Z,20nm,1.6s				
PET			MLR	MLR	
	comp=Z,300nm,17.0s				
PET			MLR	MLR	
	comp=Z,400nm,16.0s				
YAK	**Yakutsk**	**36.09 1**	*e*P	**P**	**18 19 22.0 -0.6**
	comp=Z,18nm,0.8s				
YAK	**Yakutsk**	**36.09 1**	*e*P	**P**	**18 19 22.3 -0.4**
YAK			*e**PP	**pwP**	**18 19 35.5 +3.3**
YAK			*e*S	**S**	**18 24 59.1 -1.4**
YAK			*e*SSS	SSS	18 27 56.3
BATI	**Baumata**	**36.24 188**	LR	LR	18 34 38.5
	comp=Z,300nm,19.6s,baz=351,slow=37				
PKI	**Pulchoki**	**38.41 282**	*e*P	**P**	**18 19 42.3 -0.9**
	comp=Z,22nm,0.5s				
PKIN	**Phulchoki**	**38.42 282**	*e*P	**P**	**18 19 42.1 -1.1**
	comp=Z,24nm,0.5s				
KKN	**Kakani**	**38.49 283**	*e*P	**P**	**18 19 43.4 -0.4**
	comp=Z,27nm,0.5s				
MTN	**Manton Dam**	**38.63 176**	*e*P	**P**	**18 19 44.3 -0.3**
	comp=Z,15nm,0.9s				
DMN	**Daman**	**38.67 282**	*e*P	**P**	**18 19 44.7 -0.6**
	comp=Z,48nm,0.9s				
GKN	**Gorkha**	**39.03 283**	*e*P	**P**	**18 19 48.1 -0.1**
	comp=Z,36nm,0.5s				
DGZ	**Jazzator, Alta**	**39.52 318**	*i* P	**P**	**18 19 50.8 -1.3**
DGZ			pmax	pmax	
	comp=Z,4.0nm,2.0s				
DANN	**Dangsing**	**39.75 284**	*e*P	**P**	**18 19 54.3 -0.1**
	comp=Z,57nm,0.4s				
KOLN	**Koldanda**	**39.97 283**	*e*P	**P**	**18 19 55.1 -1.0**
SEY	**Seymchan**	**40.22 17**	P	**P**	**18 19 58.8 +1.3**
	comp=Z,2.2nm,0.5s,baz=208,slow=9.4,SNR=8.5				
SEY	**Seymchan**	**40.22 17**	*i* P	**P**	**18 19 57.6 +0.2**
PYUN	**Piuthan**	**40.46 284**	*e*P	**P**	**18 20 00.0 -0.2**
	comp=Z,28nm,0.5s				
MK31	**Makanchi Array**	**41.94 312**	*e*P	**P**	**18 20 11.2 -0.7**
	comp=Z,23nm,1.6s				
MK31	**Makanchi Array**	**41.94 312**	*e*P	**P**	**18 20 11.2 -0.7**
MK31			pmax	pmax	
	comp=Z,23nm,1.6s				
MK32	**Makanchi Array**	**41.94 312**	*e*PcP	**PcP**	**18 22 08.0 +0.9**
MKAR	**Makanchi Array**	**41.94 312**	P	**P**	**18 20 10.8 -1.0**
	comp=Z,4.4nm,0.5s,baz=98,slow=10,SNR=52				
MKAR			PcP	**PcP**	**18 22 08.0 +0.9**
	comp=Z,1.2nm,0.7s,baz=88,slow=3.1,SNR=3.4				
MKAR			LR	LR	18 39 06.0
	comp=Z,148nm,18.6s,baz=100,slow=38				
MAKZ	**Makanchi**	**42.15 312**	*e*P	**P**	**18 20 12.2 -1.3**
	comp=Z,36nm,1.6s				
MAKZ	**Makanchi**	**42.15 312**	*e*P	**P**	**18 20 12.3 -1.3**
MAKZ			pmax	pmax	
	comp=Z,36nm,1.6s				
ZAA0	**Zalesovo Array**	**42.65 323**	*e*P	**P**	**18 20 15.9 -1.6**
	comp=Z,14nm,1.5s				
ZALV	**Zalesovo Beam**	**42.65 323**	P	**P**	**18 20 16.2 -1.3**
	comp=Z,1.8nm,0.5s,baz=120,slow=8.1,SNR=8.8				
ZALV			LR	LR	18 39 21.4
	comp=Z,392nm,18.3s,baz=74,slow=38				
ZAA1	**Zalesovo Array**	**42.65 323**	*e*P	**P**	**18 20 16.2 -1.3**
PDGK	**Podgornoye**	**43.27 306**	P	**P**	**18 20 20.8 -2.1**
PDGK			pmax	pmax	
	comp=Z,20nm,1.3s				
NVS	**Novosibirsk**	**43.85 324**	*e*P	**P**	**18 20 27.3 +0.1**
NVS			pmax	pmax	
	comp=Z,19nm,2.2s				
NVS			pmax	pmax	
	comp=N,18nm,2.6s				
NVS			pmax	pmax	
	comp=E,14nm,2.2s				
KURK	**Kurchatov**	**45.22 317**	*e*P	**P**	**18 20 37.4 -0.8**
	comp=E,42nm,1.6s				
KURK	**Kurchatov**	**45.22 317**	*ce*P	**P**	**18 20 36.1 -2.1**
KURK			pmax	pmax	
	comp=Z,23nm,1.7s				
KSH	**Kashi**	**45.65 301**	P	**P**	**18 20 45.5 +3.6**
KSH			PP	**PP**	**18 22 35.0 +6.1**
KSH			S	**S**	**18 27 30.0 +6.4**
KSH			SS	**SS**	**18 30 45.8 -1.8**
KSH			pmax	pmax	
	comp=Z,65nm,1.6s				
KSH			pmax	pmax	
	comp=Z,300nm,6.9s				
KSH			LR	LR	
	comp=Z,1μm,11.8s				
KSH			LR	LR	
	comp=Z,2μm,14.2s				
KSH			LR	LR	
	comp=Z,2μm,15.0s				
TIXI	**Tiksi**	**45.75 0**	*e*P	**P**	**18 20 41.1 -1.0**
	comp=Z,58nm,1.9s				
TIXI	**Tiksi**	**45.75 0**	*ce*P	**P**	**18 20 41.6 -0.4**
TIXI			pmax	pmax	
	comp=Z,21nm,1.7s				
WRAB	**Tennant Creek**	**45.94 172**	*e*P	**P**	**18 20 45.0 +0.8**
	comp=Z,12nm,0.8s				
WRAB	**Tennant Creek**	**45.94 172**	*ce*P	**P**	**18 20 43.9 -0.3**
WRAB			pmax	pmax	
	comp=Z,16nm,1.0s				
WRA	**Warramunga Arr**	**45.95 172**	P	**P**	**18 20 44.6 +0.4**
	comp=Z,5.2nm,0.6s,baz=351,slow=9.3,SNR=38				
WB2	**Warramunga Arr**	**45.95 172**	*e*P	**P**	**18 20 44.9 +0.6**
	comp=Z,12nm,0.8s				
TKM2	**Tokmak 2**	**46.07 306**	*i* P	**P**	**18 20 45.4 +0.1**
TKM2			pmax	pmax	
	comp=Z,5.0nm,0.7s				
HNR	**Honiara**	**46.57 135**	LR	LR	18 38 11.7
	comp=Z,78nm,19.1s,baz=321,slow=33				
AAK	**Ala-Archa**	**46.87 305**	*ce*P	**P**	**18 20 53.1 +1.6**
AAK			pmax	pmax	
	comp=Z,1.0nm,0.5s				
OTUK	**Ortayu**	**48.83 312**	P	**P**	**18 21 05.5 -0.9**
OTUK			pmax	pmax	
	comp=Z,7.0nm,0.8s				
PALK	**Pallekele**	**49.13 257**	LR	LR	18 44 47.3
	comp=Z,374nm,18.0s,baz=121,slow=40				
AS31	**Alice Springs**	**49.58 174**	*e*P	**P**	**18 21 13.4 +1.1**
	comp=Z,1.6nm,1.4s				
ASAR	**Alice Springs**	**49.58 174**	P	**P**	**18 21 13.3 +0.9**
	comp=Z,3.4nm,0.8s,baz=9.2,slow=9.4,SNR=58				
ASAR			LR	LR	18 40 53.6
	comp=Z,128nm,21.4s,baz=340,slow=35				
KK31	**Karatay Array**	**49.81 306**	*e*P	**P**	**18 21 11.8 -2.2**
	comp=Z,33nm,1.8s				
KK31	**Karatay Array**	**49.81 306**	*e*P	**P**	**18 21 14.1 +0.1**
KK31			pmax	pmax	
	comp=Z,2.0nm,0.7s				
KKAR	**Karatay Array**	**49.81 306**	*e*P	**P**	**18 21 11.6 -2.4**
	comp=Z,33nm,1.8s				
KKAR	**Karatay Array**	**49.81 306**	*e*P	**P**	**18 21 11.6 -2.4**
KKAR			pmax	pmax	
	comp=Z,33nm,1.8s				
BRVK	**Borovoye**	**50.75 318**	*e*P	**P**	**18 21 20.3 -0.6**
	comp=Z,11nm,0.5s				
BRVK	**Borovoye**	**50.75 318**	*ce*P	**P**	**18 21 21.1 +0.2**
BRVK			pmax	pmax	
	comp=Z,14nm,1.3s				
KBL	**Kabul**	**51.48 295**	*e*P	**P**	**18 21 25.5 -1.5**
	comp=Z,96nm,1.9s				
KBL	**Kabul**	**51.48 295**	*e*P	**P**	**18 21 25.5 -1.5**
KBL			pmax	pmax	
	comp=Z,96nm,1.9s				
SVE	**Sverdlovsk**	**56.66 322**	*e*P	**P**	**18 22 04.7 +0.5**
SVE			pmax	pmax	
	comp=Z,26nm,2.0s				
SVE			MLR	MLR	
	comp=Z,2μm,14.0s				
AB31	**Akbulak array**	**57.05 313**	P	**P**	**18 22 06.9 -0.2**
AB31			pmax	pmax	
	comp=Z,4.0nm,0.7s				
ABKAR	**Akbulak array**	**57.05 313**	*e*P	**P**	**18 22 06.0 -1.1**
	comp=Z,8.4nm,1.1s				
ARU	**Arti**	**57.80 322**	*e*P	**P**	**18 22 11.8 -0.3**
	comp=Z,37nm,1.8s				
ARU	**Arti**	**57.80 322**	*c i*P	**P**	**18 22 13.4 +1.2**
ARU					18 24 22.6
ARU			S	**S**	**18 30 13.7 +3.8**
ARU			SS	**SS**	**18 33 53.0 -7.3**
ARU			pmax	pmax	
	comp=Z,8.0nm,1.4s				
ARU			MLR	MLR	
	comp=Z,919nm,17.0s				
STKA	**Stephens Creek**	**58.83 167**	P	**P**	**18 22 18.9 -0.6**
	comp=Z,1.4nm,0.6s,baz=343,slow=6.5,SNR=6.5				
STKA	**Stephens Creek**	**58.83 167**	P	**P**	**18 22 19.0 -0.6**
GEYT	**Alibeck**	**59.68 300**	P	**P**	**18 22 24.2 -1.5**
	comp=Z,2.1nm,0.6s,baz=78,slow=3.6,SNR=5.9				
GEYT			LR	LR	18 51 25.8
	comp=Z,244nm,19.6s,baz=125,slow=39				
DZM	**Mont Dzumac**	**60.23 139**	*e*S	**S**	**18 30 37.0 -5.4**
	comp=Z,198nm,23.8s				
DZM			*e*LR	LR	18 40 19.9
	comp=Z,285nm,22.6s				
KDAK	**Kodiak Island**	**62.59 36**	*i* P	P	18 22 54.3 +9.3
BPAW	**Bear Paw Mtn.**	**62.85 29**	*e*P	**P**	**18 22 47.9 +1.2**
	comp=Z,13nm,1.5s				
MLY	**Manley**	**62.90 28**	*e*P	**P**	**18 22 47.7 +0.6**
MCK	**McKinley**	**63.79 29**	*e*P	**P**	**18 22 53.2 +0.3**
	comp=Z,12nm,1.2s				
MCK	**McKinley**	**63.79 29**	*e*P	**P**	**18 22 53.2 +0.3**
MCK			pmax	pmax	
	comp=Z,13nm,1.2s				
RND	**Reindeer**	**63.86 30**	*e*P	**P**	**18 22 53.5 0.0**
	comp=Z,11nm,0.9s				
RND	**Reindeer**	**63.86 30**	*e*P	**P**	**18 22 53.5 0.0**
RND			pmax	pmax	
	comp=Z,11nm,0.9s				
WRH	**Wood River Hil**	**64.08 29**	*e*P	**P**	**18 22 55.9 +1.1**
	comp=Z,15nm,1.6s				
ILAR	**Eielson Array**	**64.56 28**	P	**P**	**18 22 58.4 +0.5**
	comp=Z,0.5nm,0.6s,baz=283,slow=3.6,SNR=7.4				
ILAR			LR	LR	18 54 24.1
	comp=Z,107nm,18.4s,baz=306,slow=39				
HDA	**Harding Lake**	**64.58 29**	*e*P	**P**	**18 22 58.7 +0.6**
	comp=Z,4.7nm,0.7s				
RIDG	**Independent Ri**	**65.59 29**	*e*P	**P**	**18 23 05.7 +1.0**
MAK	**Makhachkala**	**66.52 308**	*e*P	P	18 23 05.9 -5.0
MAK			*e*S	**S**	**18 31 53.6 -6.8**
MAK			pmax	pmax	
	comp=Z,12nm,0.3s				
EGAK	**Eagle**	**66.98 28**	*e*P	**P**	**18 23 14.9 +1.4**
	comp=Z,5.8nm,1.2s				
GROC	**Groznyy**	**67.67 308**	*e*P	**P**	**18 23 18.0 -0.3**
GROC			*e*		18 25 46.3
GROC			pmax	pmax	
	comp=Z,13nm,0.5s				
EPYK	**Eagle Plains**	**68.40 26**	*e*P	**P**	**18 23 23.6 +1.1**
	comp=Z,9.9nm,1.0s				
INK	**Inuvik**	**69.05 23**	P	**P**	**18 23 26.4 0.0**
	comp=Z,1.9nm,0.7s,baz=307,slow=7.8,SNR=4.6				
INK	**Inuvik**	**69.05 23**	*e*P	**P**	**18 23 27.1 +0.7**
	comp=Z,8.8nm,1.3s				
INK	**Inuvik**	**69.05 23**	*e*P	**P**	**18 23 27.1 +0.7**
INK			pmax	pmax	
	comp=Z,9.0nm,1.3s				
ZEI	**Tsey**	**69.12 308**	*e*P	**P**	**18 23 23.4 -4.2**
ZEI			pmax	pmax	
	comp=Z,10.0nm,0.6s				
MOS	**Moscow**	**69.47 323**	*e*P	**P**	**18 23 26.4 -2.9**
MOS			*e*		18 23 36.3
MOS			MLR	MLR	
	comp=E,600nm,14.0s				
MOS			MLR	MLR	
	comp=Z,600nm,14.0s				
KBZ	**Khabaz**	**69.56 310**	P	**P**	**18 23 28.9 -1.1**
	comp=Z,3.5nm,0.7s,baz=61,slow=7.8,SNR=11				
KIV	**Kislovodsk**	**69.64 310**	*e*P	**P**	**18 23 29.4 -1.2**
	comp=Z,39nm,1.4s				
KIV	**Kislovodsk**	**69.64 310**	*e*P	**P**	**18 23 31.0 +0.3**
KIV			*e*S	**S**	**18 32 39.5 +1.6**
KIV			*e*SS	**SS**	**18 37 08.0 +2.4**
KIV			pmax	pmax	
	comp=Z,41nm,1.0s				
KIV			pmax	pmax	
	comp=Z,115nm,4.8s				
KIV			MLR	MLR	
	comp=Z,536nm,17.0s				
AKH	**Akhalkalaki**	**69.81 307**	*e*P	**P**	**18 23 30.7 -1.2**
	comp=Z,22nm,1.4s				
AKH	**Akhalkalaki**	**69.81 307**	⇑*i*P	**P**	**18 23 33.8 +1.9**
AKH	**Akhalkalaki**	**69.81 307**	*e*P	**P**	**18 23 30.7 -1.2**
AKH			pmax	pmax	
	comp=Z,23nm,1.4s				
NEY	**Neytrino**	**69.82 309**	*i* P	**P**	**18 23 31.3 -0.6**
NEY			pmax	pmax	
	comp=Z,2.0nm,1.0s				
OBN	**Obninsk**	**70.23 322**	⇑*e*P	**P**	**18 23 34.3 +0.4**
OBN			*e*		18 23 53.3
OBN			*e*		18 26 04.8
OBN			*e*S	**S**	**18 32 36.3 -7.8**
OBN			pmax	pmax	
	comp=Z,6.0nm,1.2s				
OBN			MLR	MLR	
	comp=Z,578nm,15.0s				
ARCES	**ARCESS Array B**	**70.38 339**	P	**P**	**18 23 34.6 0.0**
	comp=Z,4.4nm,0.9s,baz=69,slow=6.8,SNR=9.4				
ARCES			LR	LR	18 59 48.3
	comp=Z,176nm,18.6s,baz=47,slow=40				
BCA	**Borcka**	**71.14 308**	⇑*i*P	**P**	**18 23 40.4 +0.6**
SOC	**Sochi**	**71.80 310**	*e*P	**P**	**18 23 42.8 -0.9**
SOC			*e*		18 26 27.8
SOC			*e*PPP	PPP	18 27 58.9
SOC			*e*S	**S**	**18 33 04.4 +1.5**
SOC			MLR	MLR	
	comp=Z,171nm,13.0s				
FINES	**FINESS Array B**	**73.25 331**	P	**P**	**18 23 51.9 -0.1**
	comp=Z,3.1nm,0.6s,baz=70,slow=5.8,SNR=20				
FINES			LR	LR	18 59 32.1
	comp=Z,413nm,18.6s,baz=67,slow=39				
DLBC	**Dease Lake**	**73.97 32**	LR	LR	18 58 56.3
	comp=Z,87nm,18.6s,baz=264,slow=38				
SIM	**Simferopol'**	**75.11 313**	*de*P	**P**	**18 24 03.9 +0.7**
SIM			pmax	pmax	
	comp=Z,13nm,1.1s				
MICGM	**Minsk**	**75.15 324**	*e*	**P**	**18 24 03.0 -0.2**
MICGM			*e*LR	LR	18 58 28.0
RES	**Resolute Bay**	**75.78 11**	LR	LR	18 59 52.7
	comp=Z,136nm,19.6s,baz=328,slow=38				
AKASG	**Malin Array Be**	**75.94 320**	P	**P**	**18 24 07.7 -0.1**
	comp=Z,3.3nm,0.5s,baz=51,slow=6.2,SNR=7.9				
AKASG			LR	LR	19 00 16.4
	comp=Z,330nm,18.6s,baz=55,slow=38				
AKBB	**Malin Array Si**	**75.94 320**	*e*P	**P**	**18 24 07.5 -0.3**
	comp=Z,15nm,1.9s				
AKBB	**Malin Array Si**	**75.94 320**	*e*P	**P**	**18 24 07.5 -0.3**
AKBB			pmax	pmax	
	comp=Z,15nm,1.9s				
BR131	**Keskin Array S**	**77.43 308**	*e*P	**P**	**18 24 16.4 -0.2**
	comp=Z,13nm,1.0s				
BRTR	**Keskin Array B**	**77.43 308**	P	**P**	**18 24 16.5 -0.2**
	comp=Z,5.8nm,0.9s,baz=105,slow=4.2,SNR=32				
BRTR			LR	LR	19 02 58.2
	comp=Z,81nm,18.1s,baz=80,slow=39				
BRTR	**Keskin Array B**	**77.43 308**	*i* P	**P**	**18 24 17.2 +0.5**
BRTR			pmax	pmax	
	comp=Z,6.0nm,0.9s				
KIS	**Kishinev**	**77.70 316**	*e*P	**P**	**18 24 18.0 +0.2**
KIS			*e*S	S	18 34 18.0 +9.5
KIS			*e*LR	LR	18 59 05.0
	comp=Z,600nm,19.0s				
KIS	**Kishinev**	**77.70 316**	*e*P	**P**	**18 24 18.0 +0.2**
KIS			*e*S	S	18 34 18.0 +9.5
KIS			MLR	MLR	
	comp=Z,600nm,19.0s				
KIS			MLR	MLR	
	comp=N,300nm,14.0s				
TLCR		**78.46 315**	⇑*i*P	**P**	**18 24 22.5 +0.4**
TLCR		**78.46 315**	⇑P	**P**	**18 24 22.5 +0.4**
YKA	**Yellowknife Ar**	**78.67 25**	P	**P**	**18 24 23.8 +0.9**
	comp=N,1.0nm,0.6s,baz=299,slow=5.3,SNR=10				
YKA			LR	LR	19 03 58.0
	comp=N,6.6nm,18.8s,baz=318,slow=39				
TESR	**Tescani**	**79.25 317**	⇑*i*P	**P**	**18 24 26.5 +0.1**
BIZ	**Bicaz**	**79.40 317**	⇑*i*P	**P**	**18 24 26.5 -0.7**
NC405	**NORSAR Array S**	**79.46 334**	*e*P	**P**	**18 24 26.6 -0.6**
	comp=N,65nm,1.6s				
VRI	**Vrincioaia**	**79.49 316**	⇑*i*P	**P**	**18 24 29.1 +1.4**
VRI	**Vrincioaia**	**79.49 316**	⇑P	**P**	**18 24 29.1 +1.4**
BUR08	**Bucovina Ar. S**	**79.63 318**	*e*P	**P**	**18 24 27.0 -1.6**
	comp=N,4.6nm,0.9s				
BURAR	**Bucovina Array**	**79.64 318**	⇓*i*P	**P**	**18 24 29.3 +0.7**
BURAR	**Bucovina Array**	**79.64 318**	⇓P	**P**	**18 24 29.3 +0.7**
NB2	**NORSAR Subarra**	**79.70 334**	P	**P**	**18 24 27.6 -1.0**
	comp=Z,21nm,1.4s,baz=53,slow=5.6				
NOA	**NORSAR Array B**	**79.70 334**	P	**P**	**18 24 28.0 -0.6**
	comp=Z,1.9nm,0.5s,baz=52,slow=5.6,SNR=14				
NOA			LR	LR	19 03 21.4
	comp=Z,134nm,18.0s,baz=65,slow=38				
NOA	**NORSAR Array B**	**79.70 334**	P	**P**	**18 24 28.0 -0.6**
OZUR		**79.97 316**	⇑*i*P	**P**	**18 24 31.1 +0.7**
MLR	**Muntele Rosu**	**80.15 316**	⇑*i*P	**P**	**18 24 31.8 +0.3**
MLR	**Muntele Rosu**	**80.15 316**	⇑P	**P**	**18 24 31.8 +0.3**
SUMG	**Summit**	**81.35 356**	*e*P	**P**	**18 24 38.3 +0.7**
	comp=Z,31nm,1.3s				
SUMG	**Summit**	**81.35 356**	*i* P	**P**	**18 24 42.3 +4.6**
SUMG			pmax	pmax	
	comp=Z,20nm,0.8s				
SUMG	**Summit**	**81.35 356**	*i* P	**P**	**18 24 42.3 +4.6**
	comp=Z,20nm,0.8s				
GZR	**Gura Zlata**	**82.17 317**	⇑*i*P	**P**	**18 24 43.0 +0.9**
GZR	**Gura Zlata**	**82.17 317**	⇑P	**P**	**18 24 43.0 +0.9**
VYHS	**Vyhne**	**82.94 321**	*e*P	**P**	**18 24 47.6 +1.6**
VYHS			pmax	pmax	
	comp=Z,4.0nm,1.2s				
VYHS	**Vyhne**	**82.94 321**	*e*P	**P**	**18 24 47.6 +1.6**
MORC	**Moravsky Berou**	**82.99 322**	*e*P	**P**	**18 24 47.5 +1.2**
MDVR	**Moldovita**	**83.12 317**	⇑*i*P	**P**	**18 24 45.8 -1.3**
VTS	**Vitosha**	**83.22 314**	*e*P	**P**	**18 24 48.3 +0.5**
	comp=Z,30nm,1.5s				
VTS	**Vitosha**	**83.22 314**	⇑*i*P	**P**	**18 24 48.6 +0.8**
VTS	**Vitosha**	**83.22 314**	⇑P	**P**	**18 24 48.6 +0.8**
OSTC	**Ostas**	**83.29 324**	AMS	AMS	19 05 50.0
	comp=Z,900nm,13.3s				
DPC	**Dobruska-Polom**	**83.34 323**	*e*SKS	**S**	**18 35 14.6 +6.9**
DPC			AMS	AMS	19 06 10.0
	comp=Z,800nm,12.8s				
CHVC	**Chvalec**	**83.36 324**	AMS	AMS	19 06 00.0
	comp=Z,900nm,13.4s				
JAVC	**Velka Javorina**	**83.41 322**	*e*P	**P**	**18 24 49.7 +1.2**
UPC	**Upice**	**83.43 324**	*e*SKS	**S**	**18 35 14.5 +6.1**
UPC			AMS	AMS	19 06 10.0
	comp=Z,1μm,13.4s				
VRAC	**Vranov**	**83.76 322**	⇑*i*P	**P**	**18 24 53.0 +2.8**
VRAC	**Vranov**	**83.76 322**	⇑P	**P**	**18 24 53.0 +2.8**
VRAC	**Vranov**	**83.76 322**	*e*P	**P**	**18 24 51.2 +1.0**
KRUC	**Moravsky**	**84.01 322**	*e*P	**P**	**18 24 52.3 +0.8**
PVCC	**Panska Ves**	**84.18 324**	AMS	AMS	19 07 40.0
	comp=Z,700nm,14.7s				
BRG	**Berggiesshubel**	**84.31 325**	*e*P	**P**	**18 24 52.9 -0.2**
	comp=Z,14nm,1.8s				
BRG			*i*		18 25 02.0
	comp=Z,25nm,1.8s				
	comp=N,311nm,15.8s				
	comp=E,389nm,12.5s				
	comp=Z,588nm,15.1s				
BRG	**Berggiesshubel**	**84.31 325**	*e*P	**P**	**18 24 52.8 -0.2**
BRG			*i*		18 25 02.0
BRG			pmax	pmax	
	comp=Z,14nm,1.8s				
BRG			pmax	pmax	
	comp=Z,25nm,1.8s				
BRG			MLR	MLR	
	comp=N,311nm,15.8s				
BRG			MLR	MLR	
	comp=E,389nm,12.5s				
BRG			MLR	MLR	
	comp=Z,588nm,15.1s				
TREC	**Trest**	**84.38 323**	AMS	AMS	19 05 10.0
	comp=Z,500nm,18.4s				
GOPC	**GO Pecny, Ondr**	**84.41 324**	*e*SKS	**S**	**18 35 17.5 -0.9**
GOPC			AMS	AMS	19 06 50.0
	comp=Z,900nm,13.4s				
PRU	**Pruhonice**	**84.50 324**	*e*SKS	**S**	**18 35 18.9 -0.3**
PRU			AMS	AMS	19 06 50.0
	comp=Z,800nm,12.7s				
CLL	**Collm**	**84.55 325**	*e*P	**P**	**18 24 54.0 -0.2**
CLL			*es*P	**sP**	**18 25 03.0 0.0**
CLL			*e*		18 25 12.0
CLL			*e*PP	**PP**	**18 28 07.0 -2.2**
CLL			*e*S	**S**	**18 35 21.0 +1.4**
CLL			*e*PPS	PPS	18 36 30.0
CLL			*e*SS	**SS**	**18 40 48.0 -1.6**
CLL			*e*		18 42 00.0
CLL			*e*		18 45 36.0
CLL			LmH		18 59 00.0
	comp=N,900nm,21.5s				
CLL			LmH		18 59 00.0
	comp=E,800nm,21.8s				
CLL			Lmax		19 07 00.0
CLL	**Collm**	**84.55 325**	*e*P	**P**	**18 24 54.0 -0.2**
CLL			*e*		18 25 03.0
CLL			*e*S	**S**	**18 35 21.0 +1.4**
CONA	**Conrad Observa**	**84.93 321**	*i* PcP	**P**	**18 24 57.2 +1.0**
	comp=E,11nm,1.6s				
NKC	**Novy Kostel**	**85.46 325**	AMS	AMS	19 08 20.0
	comp=E,600nm,14.2s				
KHC	**Kasperske Hory**	**85.50 323**	*e*P	**P**	**18 25 02.5 +3.4**
KHC			*e*SKS	**S**	**18 35 23.9 -5.4**
KHC			AMS	AMS	19 07 20.0
	comp=E,900nm,12.2s				
GEC2	**GERESS Array S**	**85.60 323**	*e*P	**P**	**18 25 00.3 +0.7**
	comp=E,16nm,1.7s				
GEC2	**GERESS Array S**	**85.60 323**	*e*P	**P**	**18 25 00.4 +0.7**
GEC2			pmax	pmax	
	comp=Z,16nm,1.7s				
GERES	**GERESS Array B**	**85.60 323**	P	**P**	**18 25 00.3 +0.7**
	comp=Z,0.7nm,0.6s,baz=64,slow=6.1,SNR=7.8				
GERES			LR	LR	19 06 52.6
	comp=Z,500nm,18.5s,baz=54,slow=38				
MOA	**Molln**	**85.86 322**	pP	**P**	**18 25 05.6 +4.8**
	comp=Z,5.2nm,1.2s				
PINE	**Pine Mountain**	**85.91 43**	*e*P	**P**	**18 25 03.7 +2.3**
	comp=Z,11nm,1.3s				
SOKA	**Soboth**	**86.09 321**	*i* PcP	**P**	**18 25 03.5 +1.4**
	comp=Z,5.2nm,1.2s				
KBA	**Koelnbreinsper**	**86.81 322**	pP	**P**	**18 25 09.7 +4.0**
	comp=Z,1.7nm,0.5s				
SFJD	**Kangerlussuaq**	**87.36 360**	LR	LR	19 05 55.9
	comp=Z,98nm,19.6s,baz=358,slow=37				
ABTA	**Abfaltersbach**	**87.47 322**	*i* pP	**P**	**18 25 12.1 +3.3**
	comp=Z,2.7nm,0.5s				
WTTA	**Wattenberg**	**87.65 323**	*i* PcP	**P**	**18 25 11.1 +1.3**
	comp=Z,5.0nm,1.1s				
MOTA	**Moosalm**	**87.89 323**	*i* PcP	**P**	**18 25 11.6 +0.7**
	comp=Z,1.4nm,0.5s				
DAVA	**Damuels**	**88.59 323**	*i* pP	**P**	**18 25 17.1 +2.9**
	comp=Z,10nm,1.1s				
FFC	**Flin Flon**	**88.73 27**	*e*P	**P**	**18 25 15.2 +0.7**
	comp=Z,4.9nm,1.0s				
FFC	**Flin Flon**	**88.73 27**	*ce*P	**P**	**18 25 16.1 +1.6**
FRB	**Frobisher Bay**	**89.61 8**	LR	LR	19 06 34.7
	comp=Z,157nm,21.2s,baz=358,slow=36				
PPT	**Papeete**	**90.53 109**	LR	LR	19 00 55.1

VVLD				AML	AML		
	comp=N,290μm,0.5s						
VVLD				AML	AML		
	comp=E,314μm,0.3s						
VVLD				AML	AML		
	comp=N,290μm,0.5s						
INTR	**Introdacqua**	**0.18**	**75**	P	Pg	18 22 33.5	+0.6
INTR				S	Sg	18 22 36.7	+1.1
INTR				AML	AML		
	comp=E,268μm,0.5s						
INTR				AML	AML		
	comp=N,250μm,0.2s						
INTR				AML	AML		
	comp=E,268μm,0.5s						
INTR				AML	AML		
	comp=N,250μm,0.2s						
POFI	**Posta Fibreno**	**0.25**	**173**	P	Pg	18 22 34.9	+0.6
POFI				S	Sb	18 22 39.2	-1.3
POFI				AML	AML		
	comp=E,79μm,0.9s						
POFI				AML	AML		
	comp=N,40μm,1.5s						
POFI				AML	AML		
	comp=N,40μm,1.5s						
POFI				AML	AML		
	comp=E,79μm,0.9s						
LPEL	**Lama dei Peligi**	**0.39**	**78**	P	Pg	18 22 37.4	+0.5
LPEL				S	Sb	18 22 43.7	-0.8
VCEL	**Villa Celiera**	**0.45**	**16**	P	Pb	18 22 39.0	-0.4
CERA	**Filignano**	**0.45**	**145**	P	Pg	18 22 38.3	+0.4
CERA				S	Sb	18 22 46.1	-0.1
CERA				AML	AML		
	comp=E,49μm,0.5s						
CERA				AML	AML		
	comp=N,44μm,1.0s						
CERA				AML	AML		
	comp=E,49μm,0.5s						
CERA				AML	AML		
	comp=N,44μm,1.0s						
GIUL	**Giuliano Di Ro**	**0.51**	**217**	P	Pg	18 22 39.4	+0.3
GIUL				S	Sb	18 22 47.4	-0.5
CERT	**Cerreto**	**0.51**	**268**	P	Pg	18 22 39.5	+0.3
CERT				S	Sb	18 22 47.4	-0.6
MIDA	**Miranda**	**0.54**	**126**	P	Pg	18 22 40.0	+0.3

NIED ***27*** *18:28:00.25˝.90N×128˝.60E,h14km,Mw4.2 Best double couple: M₀2.07000×10^15 NP1:ϕ₀214.00000°,δ43.00000°, λ79.00000°. NP2:ϕ₀48.00000°,δ48.00000°,λ100.00000°.*
NEIC ***27*** *18:28:10.7±2.6,25˚.84N×128˚.53E,h6km±6km,mb4.5/5, Error ellipse: s-maj=23.3km s-min=11.9km az=82.0*
IDC ***27*** *18:28:10.4±1.1,25˚.95N×128˚.53E,h0km,mb4.0/11, mb1 4.1/13,mb1mx3.9/42,mbtmp3.9/13,ML3.7/1,Error ellipse: s-maj=46.8km s-min=16.0km az=76.0*
JMA ***27*** *18:28:13.1±0.3,25˚.94N×128˚.61E,h42km,M3.7*
ISC 27 18:28:10.6±2.1,25˚.94N±0˚.05×128˚.58E±0˚.05,h3km±13km, n47,σ1ϑ33/53,mb4.2/17,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.74**	**286**	P	**Pn**	**18 28 27.9**	**-0.1**
JJT3				*e*S	**Sn**	**18 28 38.7**	**-1.1**
JNTH	**Nagotoyohara**	**0.76**	**319**	P	**Pn**	**18 28 27.4**	**-0.8**
JNTH				*e*S	**Sn**	**18 28 38.2**	**-2.0**
JOW	**Kunigami**	**0.93**	**343**	Pn	**Pn**	**18 28 30.4**	**-0.2**
	50nm,0.3s,baz=147,slow=12,SNR=298						
JOW				Sn	**Sb**	**18 28 41.7**	**-0.4**
	62nm,0.3s,baz=217,slow=17,SNR=15						
JOW	**Kunigami**	**0.93**	**343**	*e*Pg	**Pn**	**18 28 30.3**	**-0.3**
JOW	**Kunigami**	**0.93**	**343**	P	**Pn**	**18 28 30.3**	**-0.3**
JYRO	**Yoronjima**	**1.08**	**354**	P	**Pn**	**18 28 32.5**	**-0.2**
JIH	**Iheya**	**1.22**	**333**	P	**Pn**	**18 28 34.8**	**+0.3**
JAGN	**Aguni-jima**	**1.36**	**298**	P	**Pg**	**18 28 36.8**	**0.0**
JAGN				S	**Sn**	**18 28 54.3**	**-0.8**
JOKE	**Okinoerabujima**	**1.41**	**360**	P	**Pb**	**18 28 37.4**	**-0.2**
JOKE				*e*S	**Sb**	**18 28 54.6**	**-1.5**
JKE	**Kume jima 2**	**1.66**	**284**	P	**Pn**	**18 28 40.3**	**-0.3**
JTK	**Tokunoshima**	**1.86**	**10**	P	**Pn**	**18 28 43.8**	**+0.4**
JTK				*e*S	**Sn**	**18 29 04.7**	**-2.8**
JMZ	**Minamidaito 2**	**2.38**	**92**	P	**Pn**	**18 28 50.3**	**-0.2**
JMZ				S	**Sn**	**18 29 16.7**	**-3.5**
NACB	**Ninganchiao**	**6.58**	**256**	*e*Pn	**Pn**	**18 29 46.4**	**-1.8**
YHNB	**Yeheng**	**6.64**	**261**	*e*Pn	**Pn**	**18 29 49.8**	**+0.6**
YULB	**Yu-li**	**7.09**	**251**	*e*Pn	**Pn**	**18 29 51.9**	**-3.4**
SSLB	**Suanglung**	**7.25**	**254**	*e*Pn	**Pn**	**18 29 55.6**	**-1.9**
JNU	**Nakatsue**	**7.43**	**15**	Pn	**Pn**	**18 30 00.0**	**0.0**
	1.0nm,0.3s,baz=205,slow=11,SNR=13						
JNU	**Nakatsue**	**7.43**	**15**	*e*Pn	**Pn**	**18 30 00.6**	**+0.6**
TWG	**Pinlang**	**7.52**	**247**	*e*Pn	**Pn**	**18 29 57.5**	**-3.6**
TPUB	**Ta-pu**	**7.70**	**252**	*e*Pn	**Pn**	**18 30 02.5**	**-1.1**
KSRS	**Korea Array**	**11.49**	**357**	Pn	**Pn**	**18 30 56.5**	**+1.0**
	baz=176,slow=13,SNR=3.2						
YSS	**Yuzh-Sakhalins**	**23.80**	**25**	*e*P	**P**	**18 33 26.2**	**+1.8**
	16nm,0.8s						
SONA0	**Songino Array**	**27.96**	**327**	*e*P	**P**	**18 34 04.1**	**+1.6**
SONM	**Songino Array**	**27.96**	**327**	P	**P**	**18 34 04.1**	**+1.6**
	1.9nm,0.5s,baz=136,slow=10,SNR=12						
MK31	**Makanchi Array**	**41.96**	**312**	*e*P	**P**	**18 36 01.7**	**-1.1**
	1.0nm,0.8s						
MK32	**Makanchi Array**	**41.96**	**312**	*e*P	**P**	**18 36 02.5**	**-0.3**
MKAR	**Makanchi Array**	**41.96**	**312**	P	**P**	**18 36 02.5**	**-0.3**
	1.1nm,0.5s,baz=100,slow=10,SNR=17						
ZALV	**Zalesovo Beam**	**42.66**	**323**	P	**P**	**18 36 07.7**	**-0.7**
	0.8nm,0.6s,baz=114,slow=8.3,SNR=3.5						
ZAA1	**Zalesovo Array**	**42.67**	**323**	*e*P	**P**	**18 36 07.7**	**-0.7**
KURBB	**Kurchatov Arra**	**45.28**	**317**	P	**P**	**18 36 28.4**	**-1.0**
	0.8nm,0.5s,baz=105,slow=8.3,SNR=8.5						
WR1	**Warramunga Arr**	**45.95**	**172**	*e*P	**P**	**18 36 34.9**	**-0.1**
WRA	**Warramunga Arr**	**45.95**	**172**	P	**P**	**18 36 34.9**	**-0.1**
	1.8nm,0.7s,baz=355,slow=9.4,SNR=2.9						
ASAR	**Alice Springs**	**49.59**	**174**	P	**P**	**18 37 03.8**	**+0.6**
	0.4nm,0.6s,baz=11,slow=13,SNR=5.8						
BRVK	**Borovoye**	**50.77**	**318**	*e*P	**P**	**18 37 11.5**	**-0.3**
	3.6nm,0.5s						
ABKAR	**Akbulak array**	**57.07**	**313**	*e*P	**P**	**18 37 59.3**	**+1.3**
	10nm,0.6s						
KBZ	**Khabaz**	**69.58**	**310**	P	**P**	**18 39 20.9**	**-0.1**
	2.1nm,0.8s,baz=84,slow=5.1,SNR=6.0						
FIA0	**FINESS Array S**	**73.27**	**331**	*e*P	**P**	**18 39 43.1**	**+0.1**
FINES	**FINESS Array B**	**73.27**	**331**	P	**P**	**18 39 43.1**	**+0.1**
	1.4nm,0.6s,baz=90,slow=3.8,SNR=5.6						
BR101	**Keskin Array S**	**77.46**	**308**	*e*P	**P**	**18 40 08.7**	**+1.0**
BRTR	**Keskin Array B**	**77.46**	**308**	P	**P**	**18 40 08.7**	**+1.0**
	1.9nm,0.9s,baz=94,slow=5.2,SNR=8.1						
BUR08	**Bucovina Ar. S**	**79.65**	**318**	*e*P	**P**	**18 40 20.4**	**+0.8**
	3.7nm,0.9s						
NB2	**NORSAR Subarra**	**79.71**	**334**	P	**P**	**18 40 19.7**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=53,slow=5.9						
NB200	**NORSAR Array S**	**79.71**	**334**	*e*P	**P**	**18 40 18.5**	**-1.0**
NOA	**NORSAR Array B**	**79.71**	**334**	P	**P**	**18 40 18.5**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=52,slow=5.5,SNR=3.7						
SUMG	**Summit**	**81.34**	**356**	*i* P	P	18 40 33.2	+4.6
	comp=Z,13nm,0.8s						
CLL	**Collm**	**84.56**	**325**	*e*P	**P**	**18 40 45.0**	**-0.2**
GERES	**GERESS Array B**	**85.62**	**323**	P	**P**	**18 40 52.2**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=26,slow=3.4,SNR=4.0						

IDC ***27*** *18:28:36.7±0.5,6˚.44S×104˚.43E,h0km,mb4.3/23, mb1 4.4/24,mb1mx4.3/41,mbtmp4.3/24,ML5.6/1,MS3.6/7, Ms1 3.6/7,ms1mx3.3/32,Error ellipse: s-maj=18.5km s-min=11.7km az=58.0*
KLM ***27*** *18:28:37.0,7˚.47S×103˚.70E,h65km,mb4.9*
MOS ***27*** *18:28:40.1±1.3,6˚.39S×104˚.42E,h33km,mb4.8/26,Error ellipse: s-maj=11.9km s-min=8.1km az=117.8*
DJA ***27*** *18:28:40.1±0.8,7˚S±3˚×10˚4E±˚,h13km±7km,M4.8/21, mb4.8/17,mB5.1/5,MLv5.0/21,Mw(mB)4.4/5*
NEIC ***27*** *18:28:42.2±1.6,6˚.40S×104˚.46E,h36km±6km,mb4.7/21, Error ellipse: s-maj=19.8km s-min=8.8km az=221.0*
BJI ***27*** *18:28:43.2±0.0,6˚.25S×104˚.77E,h55km,mb4.9/12, mB5.1/8,Ms4.9/2,Ms7 4.6/1*
ISC 27 18:28:41.5±1.1,6˚.57S±0˚.04×104˚.45E±0˚.04,h32km±7km, n151,σ1ϑ53/155,mb4.5/50,MS3.6/8,9C-3D,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.03**	**3**	P	**Pb**	**18 29 00.9**	**0.0**
KASI				S	**Sb**	**18 29 15.6**	**+1.4**
CGJI	**Cibinong**	**1.24**	**92**	P	**Pb**	**18 29 03.6**	**-0.7**
CGJI				S	**Sb**	**18 29 21.3**	**+1.4**
BLSI	**Bandar Lampung**	**1.43**	**34**	P	**Pb**	**18 29 07.3**	**-0.3**
BLSI				S	**Sb**	**18 29 27.0**	**+1.6**
LWLI	**Liwa**	**1.58**	**346**	P	**Pb**	**18 29 10.1**	**-0.2**
LWLI				S	**Sb**	**18 29 32.9**	**+2.9**
SBJI	**Serang**	**1.73**	**75**	P	**Pb**	**18 29 11.7**	**-0.9**
SBJI				S	**Sb**	**18 29 34.6**	**+0.6**
KLI	**Kotabumi**	**1.74**	**14**	P	**Pb**	**18 29 12.8**	**0.0**
KLI				S	**Sb**	**18 29 36.8**	**+2.5**
MDSI	**Maura Dua**	**2.08**	**353**	P	**Pb**	**18 29 16.6**	**-2.1**
MDSI				S	**Sb**	**18 29 46.2**	**+2.1**
TNG	**Tangerang**	**2.22**	**80**	P	**Pb**	**18 29 18.3**	**-2.7**
CBJI	**Citeko**	**2.39**	**87**	P	**Pb**	**18 29 22.7**	**-1.2**
MNAI	**Manna**	**2.65**	**326**	*e*Pn	**Pn**	**18 29 23.2**	**+1.2**
MNAI	**Manna**	**2.65**	**326**	P	**Pn**	**18 29 23.8**	**+1.8**
MNAI				S	**Sb**	**18 30 00.0**	**-0.4**
LHSI	**Lahat**	**2.87**	**341**	P	**Pn**	**18 29 26.2**	**+1.1**
LEM	**Lembang**	**3.16**	**95**	Pn	**Pn**	**18 29 32.3**	**+3.2**
	49nm,0.3s,baz=178,slow=17,SNR=86						
LEM				LR	LR	18 31 06.5	
	comp=Z,1μm,20.8s,baz=252,slow=47						
LEM	**Lembang**	**3.16**	**95**	P	**Pn**	**18 29 31.8**	**+2.7**
CISI	**Cisompet, Garu**	**3.48**	**107**	*e*Pn	**Pn**	**18 29 34.8**	**+1.2**
CISI	**Cisompet, Garu**	**3.48**	**107**	P	**Pn**	**18 29 36.5**	**+3.0**
PMBI	**Palembang**	**3.63**	**5**	P	**Pn**	**18 29 37.4**	**+1.9**
JCJI	**Jatiwangi**	**3.80**	**89**	P	Pb	18 30 01.4	+14
XMIS	**Christmas Isla**	**4.07**	**163**	*e*Pn	**Pn**	**18 29 37.5**	**-4.0**
PPBI	**Pangkal Pinang**	**4.69**	**21**	P	**Pn**	**18 29 52.0**	**+2.0**
TPI	**Tanjungpandan**	**4.95**	**40**	P	**Pn**	**18 29 56.0**	**+2.3**
KRJI	**Kerinci**	**5.35**	**326**	P	**Pn**	**18 29 58.9**	**-0.4**
PPSI	**Pulau Pagai**	**5.82**	**310**	P	**Pn**	**18 30 06.2**	**+0.6**
DSRI	**Dabo**	**6.05**	**1**	P	**Pn**	**18 30 07.9**	**-0.8**
PDSI	**Padang**	**6.88**	**325**	P	**Pn**	**18 30 21.9**	**+1.7**
	34nm,0.6s,0.4nm						
TPRI	**Tanjung Pinang**	**7.43**	**1**	P	**Pn**	**18 30 27.7**	**-0.1**
PWJI	**Pagerwojo**	**7.44**	**102**	P	**Pn**	**18 30 31.1**	**+3.2**
	66nm,1.0s,0.4nm						
SISI	**Saibi**	**7.46**	**314**	P	**Pn**	**18 30 29.4**	**+1.2**
	54nm,0.7s,0.3nm						
MYKOM	**Kota Tinggi**	**8.32**	**356**	*e*Pn	**Pn**	**18 30 40.2**	**+0.2**
MYKOM	**Kota Tinggi**	**8.32**	**356**	Pn	Pn	18 30 48.0	+8.0
MNSI	**Mandailing Nat**	**8.78**	**326**	P	**Pn**	**18 30 44.0**	**-2.3**
COCO	**West Island**	**9.36**	**233**	*e*P	**Pn**	**18 30 55.2**	**+0.9**
JAGI	**Jajag, Banyuwa**	**9.80**	**102**	*e*Pn	**Pn**	**18 31 00.9**	**+0.5**
JAGI	**Jajag, Banyuwa**	**9.80**	**102**	P	**Pn**	**18 31 03.3**	**+2.9**
	91nm,0.8s						
KSM	**Kuching**	**9.90**	**36**		Pn	18 31 12.0	+10
GSI	**Gunungsitoli**	**10.40**	**318**	*e*Pn	**Pn**	**18 31 06.5**	**-2.0**
GSI	**Gunungsitoli**	**10.40**	**318**	P	**Pn**	**18 31 05.8**	**-2.7**
SRBI	**Singaraja**	**10.78**	**99**	P	**Pn**	**18 31 16.6**	**+2.9**
	32nm,0.9s						
IPM	**Ipoh**	**11.49**	**343**		Pn	18 31 28.0	+4.5
MTKI	**Muara Teweh, K**	**11.82**	**62**	P	Pn	18 31 45.6	+18
BKSI	**Bulukumba**	**15.64**	**86**	P	**P**	**18 32 22.2**	**-1.3**
	31nm,0.8s						
BSSI	**Bau Bau, Buton**	**15.95**	**89**	P	**P**	**18 32 27.4**	**+0.4**
EDFI	**Ende, Flores**	**17.23**	**98**	P	**Pn**	**18 32 38.1**	**-1.8**
	13nm,0.8s						
APSI	**Ampana**	**18.05**	**73**	P	**P**	**18 32 53.5**	**+3.2**
	38nm,0.8s,302nm						
BATI	**Baumata**	**19.35**	**102**	P	**Pn**	**18 33 06.0**	**+0.2**
	17nm,0.3s,baz=281,slow=4.0,SNR=30						
BATI				S	**Sn**	**18 36 41.8**	**-0.3**
	5.9nm,0.3s,baz=275,slow=17,SNR=7.9						
BATI	**Baumata**	**19.35**	**102**	*e*P	**Pn**	**18 33 06.0**	**+0.2**
BATI				*e*P	**Pn**	**18 33 06.0**	**+0.2**
BATI				*e*S	**Sn**	**18 36 41.8**	**-0.3**
BATI				*e*S	**Sn**	**18 36 41.8**	**-0.3**
BATI	**Baumata**	**19.35**	**102**	P	**Pn**	**18 33 07.9**	**+2.1**
	30nm,0.9s						
SOEI	**Soe**	**19.87**	**100**	*e*P	**P**	**18 33 10.6**	**+0.2**
	79nm,0.8s						
SOEI	**Soe**	**19.87**	**100**	P	**Pn**	**18 33 13.8**	**+1.7**
FITZ	**Fitzroy Crossi**	**23.63**	**121**	P	**P**	**18 33 50.5**	**+0.4**
	4.7nm,0.6s,baz=292,slow=6.6,SNR=16						
FITZ				LR	LR	18 43 24.1	
	comp=Z,168nm,19.1s,baz=342,slow=37						
FITZ	**Fitzroy Crossi**	**23.63**	**121**	*e*P	**P**	**18 33 50.4**	**+0.4**
	36nm,1.8s						
DAV	**Davao City (W)**	**25.06**	**58**	LR	LR	18 43 33.3	
	comp=Z,90nm,20.6s,baz=298,slow=36						
CMAR	**Chiang Mai Arr**	**25.45**	**348**	P	**P**	**18 34 04.5**	**-2.1**
	0.9nm,0.3s,baz=182,slow=8.5,SNR=9.0						
CMAR				LR	LR	18 45 28.2	
	comp=Z,158nm,19.7s,baz=80,slow=40						
CHTO	**Chiang Mai**	**25.80**	**348**	*e*P	**P**	**18 34 07.0**	**-2.8**
	8.5nm,1.4s						
CHTO	**Chiang Mai**	**25.80**	**348**	*e*P	**P**	**18 34 07.0**	**-2.8**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TGY	**Tagaytay City**	**26.25**	**38**	LR	LR	18 47 06.1	
	comp=Z,43nm,19.0s,baz=176,slow=42						
MTN	**Manton Dam**	**27.02**	**105**	*e*P	**P**	**18 34 20.6**	**-0.3**
	comp=Z,18nm,0.4s						
NWAO	**Narrogin (SRO)**	**28.80**	**157**	LR	LR	18 44 20.7	
	comp=Z,148nm,19.8s,baz=329,slow=33						
H01W3	**Cape Leeuwin H**	**29.56**	**164**	T	T	19 06 29.7	
	baz=342,slow=76,SNR=25						
H01W1	**Cape Leeuwin H**	**29.58**	**164**	T	T	19 06 54.9	
	baz=342,slow=76,SNR=33						
H01W2	**Cape Leeuwin H**	**29.58**	**164**	T	T	19 06 30.8	
	baz=342,slow=76,SNR=41						
H08S2	**Diego Garcia H**	**31.73**	**266**	T	T	19 08 39.8	
	baz=89,slow=75,SNR=25						
H08S3	**Diego Garcia H**	**31.73**	**266**	T	T	19 08 47.6	
	baz=89,slow=75,SNR=27						
H08S1	**Diego Garcia H**	**31.74**	**266**	T	T	19 08 45.7	
	baz=89,slow=75,SNR=29						
WRA	**Warramunga Arr**	**31.91**	**118**	P	**P**	**18 35 04.4**	**0.0**
	comp=Z,2.8nm,0.6s,baz=284,slow=13,SNR=27						
WR1	**Warramunga Arr**	**31.91**	**118**	*e*P	**P**	**18 35 04.4**	**0.0**
WRAB	**Tennant Creek**	**31.92**	**117**	*c*e*P	**P**	**18 35 05.4**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WB2	**Warramunga Arr**	**31.92**	**118**	*e*P	**P**	**18 35 04.9**	**+0.4**
	comp=Z,8.2nm,1.1s						
FORT	**Forrest**	**32.72**	**140**	*e*P	**P**	**18 35 12.2**	**+0.9**
	comp=Z,48nm,1.8s						
ASAR	**Alice Springs**	**33.01**	**124**	P	**P**	**18 35 14.5**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=308,slow=8.5,SNR=29						
AS31	**Alice Springs**	**33.02**	**124**	*e*P	**P**	**18 35 15.7**	**+1.6**
	comp=Z,1.6nm,1.3s						
SHL	**Shillong**	**34.20**	**340**	*e*P	**P**	**18 35 22.1**	**-2.3**
	comp=Z,7.2nm,0.5s						
SHL	**Shillong**	**34.20**	**340**	*e*P	**P**	**18 35 22.1**	**-2.3**
SHL				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LSA	**Lhasa**	**38.26**	**341**	*e*P	**P**	**18 35 58.5**	**-0.9**
	comp=Z,6.8nm,1.2s						
LSA	**Lhasa**	**38.26**	**341**	*e*P	**P**	**18 35 58.5**	**-0.9**
LSA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PMG	**Port Moresby**	**42.37**	**97**	*i* P	**P**	**18 36 33.4**	**+0.2**
PMG				pmax	pmax		
	comp=Z,43nm,0.7s						
STKA	**Stephens Creek**	**42.82**	**131**	P	**P**	**18 36 37.8**	**+1.1**
	comp=Z,8.8nm,0.5s,baz=308,slow=7.9,SNR=54						
STKA	**Stephens Creek**	**42.82**	**131**	*e*P	**P**	**18 36 37.9**	**+1.2**
	comp=Z,5.5nm,1.4s						
STKA	**Stephens Creek**	**42.82**	**131**	*e*P	**P**	**18 36 37.9**	**+1.2**
STKA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KSRS	**Korea Array**	**48.97**	**25**	P	**P**	**18 37 24.9**	**0.0**
	comp=Z,1.6nm,0.7s,baz=217,slow=7.6,SNR=8.6						
NIL	**Nilore**	**49.74**	**326**	*e*P	**P**	**18 37 30.4**	**-0.5**
	comp=Z,13nm,0.5s						
NIL	**Nilore**	**49.74**	**326**	*e*P	**P**	**18 37 30.5**	**-0.5**
NIL				pmax	pmax		
	comp=Z,13nm,0.5s						
KSH	**Kashi**	**52.87**	**332**	*e*P	**P**	**18 37 56.3**	**+1.8**
MAJO	**Matsushiro**	**53.28**	**34**	*e*P	**P**	**18 37 55.6**	**-1.8**
MAJO	**Matsushiro**	**53.28**	**34**	*e*P	**P**	**18 37 55.6**	**-1.8**
MJAR	**Matsushiro Arr**	**53.28**	**34**	P	**P**	**18 37 55.6**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=224,slow=8.4,SNR=6.7						
WSAR	**Wadi Sarin**	**53.68**	**305**	P	**P**	**18 38 01.1**	**+0.5**
	comp=Z,2.1nm,0.6s,baz=154,slow=3.9,SNR=7.0						
SONA0	**Songino Array**	**54.19**	**2**	*e*P	**P**	**18 38 04.0**	**0.0**
SONA0				*e*PcP	**PcP**	**18 39 08.2**	**0.0**
SONM	**Songino Array**	**54.19**	**2**	P	**P**	**18 38 04.0**	**0.0**
	comp=Z,0.7nm,0.4s,baz=180,slow=9.3,SNR=8.9						
SONM				PcP	**PcP**	**18 39 08.2**	**0.0**
	comp=Z,1.3nm,0.5s,baz=183,slow=3.7,SNR=5.2						
KDJ	**Kajisay**	**54.48**	**335**	*e*P	**P**	**18 38 05.9**	**-0.4**
	comp=Z,21nm,1.4s						
KDJ	**Kajisay**	**54.48**	**335**	*e*P	**P**	**18 38 05.9**	**-0.4**
KDJ				pmax	pmax		
	comp=Z,21nm,1.4s						
AAK	**Ala-Archa**	**56.04**	**334**	*c*e*P	**P**	**18 38 17.2**	**-0.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**56.31**	**24**	P	**P**	**18 38 18.6**	**-0.6**
	comp=Z,7.2nm,0.5s,baz=203,slow=6.2,SNR=22						
MK31	**Makanchi Array**	**56.65**	**342**	*e*P	**P**	**18 38 20.9**	**-0.7**
	comp=Z,2.6nm,0.6s						
MK31	**Makanchi Array**	**56.65**	**342**	*e*P	**P**	**18 38 20.9**	**-0.7**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK32	**Makanchi Array**	**56.65**	**342**	*e*P	**P**	**18 38 20.8**	**-0.9**
MKAR	**Makanchi Array**	**56.65**	**342**	P	**P**	**18 38 20.8**	**-0.9**
	comp=Z,4.1nm,0.5s,baz=149,slow=8.9,SNR=43						
DGZ	**Jazzator, Alta**	**57.96**	**347**	*d i*P	**P**	**18 38 30.6**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KLR	**Kul'dur**	**60.46**	**20**	P	**P**	**18 38 47.5**	**-0.6**
	comp=Z,3.3nm,0.6s,baz=228,slow=6.1,SNR=10.0						
KLR	**Kul'dur**	**60.46**	**20**	*i* P	**P**	**18 38 46.6**	**-1.5**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**61.21**	**341**	P	**P**	**18 38 52.5**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=157,slow=6.2,SNR=13						
KURK	**Kurchatov**	**61.26**	**342**	*e*P	**P**	**18 38 52.9**	**-0.6**
	comp=Z,4.8nm,1.1s						
KURK	**Kurchatov**	**61.26**	**342**	*c*e*P*	**P**	**18 38 52.8**	**-0.6**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GEYT	**Alibeck**	**61.77**	**320**	P	**P**	**18 38 57.4**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=152,slow=5.9,SNR=6.8						
ZALV	**Zalesovo Beam**	**62.51**	**347**	P	**P**	**18 39 00.7**	**-1.1**
	comp=Z,5.4nm,0.3s,baz=156,slow=5.9,SNR=28						
ZAA1	**Zalesovo Array**	**62.52**	**347**	*e*P	**P**	**18 39 00.7**	**-1.1**
ZEA	**Zeya**	**63.08**	**15**	*e*P	**P**	**18 39 05.5**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RAYN	**Ar Rayn**	**64.83**	**300**	*e*P	**P**	**18 39 18.1**	**+0.3**
	comp=Z,9.8nm,1.4s						
RAYN	**Ar Rayn**	**64.83**	**300**	*e*P	**P**	**18 39 18.1**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BRVK	**Borovoye**	**66.07**	**338**	*e*P	**P**	**18 39 24.1**	**-1.1**
	comp=Z,2.2nm,0.6s						
BRVK	**Borovoye**	**66.07**	**338**	*c*e*P*	**P**	**18 39 25.5**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
NKL	**Nikolayevsk**	**66.92**	**23**	*e*P	**P**	**18 39 27.4**	**-3.1**
NKL				*e*		18 39 56.2	
NKL				*e*		18 41 55.6	
NKL				*e*S	**S**	**18 48 21.0**	**-0.3**
NKL				*e*		18 49 24.5	
NKL				*e*SS	**SS**	**18 52 39.0**	**-1.3**
NKL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,6.0nm,1.4s						
NKL				pmax	pmax		
	comp=E,8.0nm,1.2s						
NKL				pmax	pmax		
	comp=Z,44nm,4.3s						
NKL				MLR	MLR		
	comp=Z,146nm,17.0s						
MAW	**Mawson**	**67.06**	**196**	P	**P**	**18 39 32.6**	**+1.3**
	comp=Z,2.4nm,0.9s,baz=58,slow=7.0,SNR=7.2						
YAK	**Yakutsk**	**71.12**	**12**	*e*P	**P**	**18 39 54.0**	**-2.5**
	comp=Z,21nm,1.5s						
YAK	**Yakutsk**	**71.12**	**12**	*e*P	**P**	**18 39 54.0**	**-2.5**
YAK				pmax	pmax		
	comp=Z,21nm,1.5s						
SVE	**Sverdlovsk**	**72.59**	**336**	*e*P	**P**	**18 40 05.9**	**+0.5**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARU	**Arti**	**73.16**	**335**	*d i*P	**P**	**18 40 08.4**	**-0.4**
ARU						18 42 50.8	
ARU				S	**S**	**18 49 39.2**	**+4.9**
ARU				SS	**SS**	**18 54 22.4**	**+6.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZEI	**Tsey**	**73.58**	**318**	*e*P	**P**	**18 40 11.9**	**+0.1**
ZEI				pmax	pmax		
	comp=

BTK	**Batken**	**1.08**	**321**	⇑*i*P	**Pg**	**18 38 01.9**	**-0.3**
	baz=21						
BTK				⇑*i*S	**Sn**	**18 38 17.6**	**-0.2**
	baz=21						
ARSB	**Arslanbob**	**2.31**	**25**	⇑*i*P	**Pb**	**18 38 22.2**	**-1.1**
	baz=24						
ARSB				⇑*i*S	**Sg**	**18 38 53.6**	**-2.0**
	baz=24						
AML	**Almayashu**	**3.27**	**27**	⇑*i*P	**Pb**	**18 38 36.0**	**-3.8**
	baz=26						
AML				⇑*i*S	**Sb**	**18 39 16.6**	**-3.2**
	baz=26						
KSH	**Kashi**	**3.32**	**84**	Pn	**Pn**	**18 38 33.3**	**-0.2**
KSH				Sn	**Sn**	**18 39 15.3**	**+2.2**
KSH				smax	smax		
	comp=N,55nm,0.9s						
KSH				smax	smax		
	comp=E,46nm,1.0s						
UCH	**Uchtor**	**3.68**	**35**	⇑*i*P	**Pn**	**18 38 41.3**	**+2.5**
	baz=34						
UCH				⇑*i*S	**Sn**	**18 39 26.4**	**+4.0**
	baz=34						
KZA	**Kyzart**	**3.92**	**42**	⇑*i*P	**Pn**	**18 38 44.6**	**+2.6**
	baz=42						
KZA				⇑*i*S	**Sn**	**18 39 32.0**	**+3.7**
	baz=42						
KK31	**Karatay Array**	**3.98**	**347**	⇓Pn	**Pn**	**18 38 46.4**	**+3.9**
	comp=E,2.5nm,0.5s,baz=153,slow=12,SNR=38						
KK31				⇑Pg	**Pg**	**18 38 58.5**	**+0.9**
	comp=E,2.6nm,0.5s,baz=172,slow=17,SNR=7.5						
KK31				⇑Sn	**Sb**	**18 39 35.1**	**-4.6**
	comp=E,2.6nm,0.3s,baz=183,slow=26,SNR=4.1						
KK31				⇓Lg	Lg	18 39 50.1	
	comp=E,7.1nm,0.5s,baz=176,slow=31,SNR=4.3						
AAK	**Ala-Archa**	**4.00**	**31**	⇑Pn	**Pn**	**18 38 46.5**	**+3.5**
	comp=E,2.1nm,0.5s						
AAK				⇑Pg	**Pg**	**18 38 58.0**	**-0.2**
	comp=E,4.4nm,0.6s						
AAK				⇓Sn	**Sb**	**18 39 36.0**	**-4.7**
	comp=E,9.8nm,0.8s						
AAK				⇓Lg	Lg	18 39 48.7	
	comp=E,11nm,0.8s						
KBK	**Karagaybulak**	**4.21**	**35**	⇑*e*P	**Pn**	**18 38 48.6**	**+2.7**
	baz=34						
KBK				⇑*i*S	**Sn**	**18 39 38.9**	**+3.7**
	baz=34						
CHMS	**Chumysh**	**4.41**	**30**	⇑*i*P	**Pn**	**18 38 51.2**	**+2.7**
	baz=30						
CHMS				⇑*i*S	**Sn**	**18 39 43.9**	**+4.0**
	baz=30						
TKM2	**Tokmak 2**	**4.71**	**37**	⇑Pn	Pn	18 38 57.3	+4.5
	comp=E,1.6nm,0.5s						
TKM2				⇓Sn	**Sn**	**18 39 52.9**	**+5.2**
	comp=E,4.3nm,0.8s						
TKM2				⇑Lg	Lg	18 40 10.9	
	comp=E,4.6nm,0.6s						
MKAR	**Makanchi Array**	**10.82**	**42**	Pn	Pn	18 41 32.7	+76
	comp=E,0.1nm,0.3s,baz=229,slow=12,SNR=4.1						
ZALV	**Zalesovo Beam**	**17.22**	**27**	P	P	18 42 48.4	+65
	comp=E,1.8nm,0.6s,baz=222,slow=12,SNR=6.6						
TGY	**Tagaytay City**	**49.86**	**106**	LR	LR	19 11 04.8	
	comp=E,94nm,20.1s,baz=164,slow=38						
ASAJ	**Asahikawa**	**51.67**	**60**	LR	LR	19 13 31.8	
	comp=E,27nm,18.3s,baz=346,slow=38						
ASAR	**Alice Springs**	**85.37**	**126**	P	P	18 50 39.4	+20
	comp=E,0.3nm,0.7s,baz=307,slow=5.6,SNR=7.5						

MAN 27 18:45:18.5, 11°.88N×125°.36E, h31km, mb4.1, ML2.9, MS2.6, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.29**	**165**	*e*P	Pn	18 45 27.2	+0.6
BESP				*e*S	Sn	18 45 33.8	+1.9
PLP	**Palo**	**0.81**	**208**	⇑*e*P	Pn	18 45 33.6	-0.2
PLP				*i* S	Sn	18 45 45.1	+0.4
CNP	**Cataman**	**0.93**	**313**	*e*P	Pn	18 45 35.4	0.0
CNP				*e*S	Sb	18 45 48.0	-0.1
MSLP	**Maasin**	**1.81**	**196**	*e*P	Pb	18 45 49.6	-1.4
PVCP	**Virac**	**2.07**	**325**	*e*P	Pn	18 45 51.6	+0.4

DJA 27 18:47:26.8±0.6, 7°S±4°×10°4E±°, h10km, M3.7/6, MLv3.7/6, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.04**	**3**	P	Pg	18 47 46.1	-0.7
KASI				S	Sg	18 48 00.1	-0.3
CGJI	**Cibinong**	**1.24**	**92**	P	Pn	18 47 49.3	-0.8
CGJI				S	Sg	18 48 06.5	-0.1
BLSI	**Bandar Lampung**	**1.43**	**34**	P	Pn	18 47 52.6	-0.3
BLSI				S	Sb	18 48 12.0	+0.1
LWLI	**Liwa**	**1.59**	**346**	P	Pn	18 47 55.6	+0.5
LWLI				S	Sg	18 48 19.3	+1.3
MDSI	**Maura Dua**	**2.09**	**353**	P	Pn	18 48 02.3	+0.4
TNG	**Tangerang**	**2.22**	**80**	P	Pn	18 48 03.0	-0.7
MNAI	**Manna**	**2.65**	**326**	P	Pn	18 48 09.4	-0.3

JMA ***27*** *18:54:10.6±0.3, 22°.56N×121°.56E, h14km±4km, M3.5*
TAP ***27*** *18:54:10.6, 22°.43N×121°.42E, h25km, ML3.5, C*
ISC 27 18:54:08.9±1.0, 22°.47N±0°.02×121°.50E±0°.02, h9km±9km, n111, σ1.9°01/210, 4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.43**	**311**	*i* P	**Pn**	**18 54 19.8**	**-1.4**
	baz=326						
TTN				*e*S	**Sb**	**18 54 27.3**	**+2.2**
	baz=326						
LAY	**Lan-yu**	**0.43**	**173**	*i* P	**Pg**	**18 54 18.6**	**+1.3**
	baz=162						
LAY				S	**Sg**	**18 54 24.8**	**+1.7**
	baz=162						
TWGBT	**Beinan**	**0.52**	**312**	⇓*i*P	**Pb**	**18 54 20.6**	**+0.5**
	baz=307						
TWGBT				*e*S	**Sb**	**18 54 29.6**	**+1.9**
	baz=307						
ECL	**Taimali**	**0.52**	**284**	⇓*i*P	**Pb**	**18 54 19.7**	**-0.4**
	baz=291						
ECL				S	**Sb**	**18 54 26.6**	**-1.1**
	baz=291						
TWG	**Pinlang**	**0.52**	**311**	⇓*i*P	**Pb**	**18 54 20.6**	**+0.4**
	baz=307						
TWG				*e*S	**Sb**	**18 54 29.4**	**+1.5**
	baz=307						
TAW	**Tawu**	**0.57**	**258**	*i* P	**Pb**	**18 54 20.3**	**-0.7**
	baz=260						
TAW				S	**Sg**	**18 54 27.2**	**-0.1**
	baz=260						
EAST	**Anshuo**	**0.61**	**262**	*i* P	**Pb**	**18 54 20.9**	**-0.8**
	baz=263						
EAST				*e*S	**Sg**	**18 54 28.0**	**-0.6**
	baz=263						
CHKT	**Chengkung**	**0.64**	**349**	*i* P	**Pb**	**18 54 22.7**	**+0.6**
	baz=3.0						
CHKT				S	**Sb**	**18 54 32.0**	**+0.9**
	baz=3.0						
TSEB	**Hengchuen, Pin**	**0.80**	**224**	P	**Pg**	**18 54 24.3**	**+0.1**
	baz=233						
TSEB				S	**Sb**	**18 54 35.2**	**-0.4**
	baz=233						
MASBT	**Mashibuluo**	**0.81**	**280**	⇓*i*P	**Pg**	**18 54 24.3**	**-0.2**
	baz=283						
SCZT	**Fangliau**	**0.82**	**263**	*i* P	**Pg**	**18 54 24.4**	**-0.2**
	baz=265						
SCZT				*e*S	**Sg**	**18 54 34.3**	**-1.0**
	baz=265						
TWKBT	**Hengchun**	**0.83**	**230**	*i* P	**Pg**	**18 54 24.2**	**-0.6**
	baz=228						
TWKBT				S	**Sg**	**18 54 34.8**	**-0.8**
	baz=228						
TWK1	**Hengchun**	**0.83**	**231**	*i* P	**Pg**	**18 54 24.2**	**-0.6**
	baz=228						
TWK1				S	**Sg**	**18 54 34.7**	**-1.0**
	baz=228						
ELDTW	**Lidau**	**0.84**	**328**	*i* P	**Pb**	**18 54 25.3**	**-0.4**
	baz=324						
HEN	**Hengchun**	**0.84**	**237**	*i* P	**Pg**	**18 54 24.9**	**-0.2**
	baz=227						
HEN				S	**Sg**	**18 54 35.4**	**-0.8**
	baz=227						
SSD	**Sandimen**	**0.84**	**289**	*i* P	**Pg**	**18 54 24.9**	**-0.3**
	baz=297						
SSD				*e*S	**Sg**	**18 54 35.6**	**-0.6**
	baz=297						
SSPT	**Xinbi**	**0.86**	**271**	P	**Pb**	**18 54 25.6**	**-0.3**
	baz=273						
SSPT				*e*S	**Sg**	**18 54 36.1**	**-0.5**
	baz=273						
TWF1	**Yuli**	**0.89**	**348**	*i* P	**Pb**	**18 54 26.9**	**+0.3**
	baz=340						
TWF1				*e*S	**Sn**	**18 54 40.0**	**-0.7**
	baz=340						
YULB	**Yu-li**	**0.93**	**349**	P	**Pb**	**18 54 27.4**	**+0.2**
	baz=341						
YULB				*e*S	**Sb**	**18 54 40.1**	**+0.4**
	baz=341						
SLGT	**Liugui**	**0.94**	**304**	*i* P	**Pb**	**18 54 27.1**	**-0.3**
	baz=308						
SLGT				*e*S	**Sn**	**18 54 40.4**	**-1.4**
	baz=308						
SGLT	**Jiouru**	**0.96**	**285**	*e*P	**Pn**	**18 54 27.9**	**-0.6**
	baz=288						
SGLT				*e*S	**Sn**	**18 54 40.9**	**-1.4**
	baz=288						
STYT	**Tauyuan**	**0.97**	**315**	P	**Pb**	**18 54 27.9**	**0.0**
	baz=320						
STYT				*e*S	**Sb**	**18 54 40.6**	**-0.2**
	baz=320						
HGSD	**Ruisui**	**1.02**	**356**	*i* P	**Pb**	**18 54 28.6**	**0.0**
	baz=11						
HGSD				*e*S	**Sn**	**18 54 44.5**	**+0.8**
	baz=11						
SGST	**Jiashian**	**1.04**	**306**	*i* P	**Pn**	**18 54 29.9**	**+0.3**
	baz=310						
SGST				*e*S	**Sn**	**18 54 44.6**	**+0.4**
	baz=310						
EHY	**Hungye**	**1.04**	**351**	*i* P	**Pb**	**18 54 28.9**	**-0.2**
	baz=344						
WLCH	**Liuqiu**	**1.04**	**263**	*i* P	**Pn**	**18 54 31.1**	**+1.5**
	baz=264						
WLCH				*e*S	**Sn**	**18 54 44.6**	**+0.3**
	baz=264						
TWM1	**Shoushan**	**1.05**	**290**	P	**Pn**	**18 54 30.4**	**+0.6**
	baz=293						
TWM1				*e*S	**Sn**	**18 54 45.5**	**+0.9**
	baz=293						
TWP	**Hsiaoliuchiu**	**1.06**	**263**	P	**Pn**	**18 54 30.6**	**+0.8**
	baz=264						
TWP				*e*S	**Sn**	**18 54 44.4**	**-0.2**
	baz=264						
KAU	**Kaohsiung**	**1.10**	**275**	*e*S	**Sn**	**18 54 45.8**	**0.0**
	baz=277						
SNJT	**Kaohsiung City**	**1.11**	**285**	P	**Pn**	**18 54 32.2**	**+1.7**
	baz=287						
SNJT				S	**Sn**	**18 54 48.1**	**+2.2**
	baz=287						
WTP	**Ta-pu**	**1.12**	**314**	*i* P	**Pn**	**18 54 31.0**	**+0.3**
	baz=318						
WTP				S	**Sn**	**18 54 47.3**	**+1.0**
	baz=318						
CHN1	**Nanshi**	**1.14**	**309**	*i* P	**Pn**	**18 54 31.7**	**+0.7**
	baz=312						
CHN1				S	**Sn**	**18 54 48.5**	**+1.7**
	baz=312						
TPUB	**Ta-pu**	**1.15**	**316**	*i* P	**Pn**	**18 54 31.5**	**+0.4**
	baz=320						
TPUB				*e*S	**Sn**	**18 54 46.9**	**-0.1**
	baz=320						
WSSB	**Gushan**	**1.15**	**279**	P	**Pg**	**18 54 32.4**	**+1.4**
	baz=280						
WSSB				S	**Sn**	**18 54 48.3**	**+1.2**
	baz=280						
SNST	**Tainan City**	**1.18**	**309**	P	**Pg**	**18 54 32.6**	**+0.9**
	baz=313						
SNST				S	**Sn**	**18 54 49.5**	**+1.7**
	baz=313						
EGFH	**Guangfu**	**1.19**	**357**	*i* P	**Pg**	**18 54 31.9**	**+0.1**
	baz=347						
EGFH				*e*S	**Sn**	**18 54 47.6**	**-0.4**
	baz=347						
CHN3	**Shinhua**	**1.21**	**300**	P	**Pg**	**18 54 33.7**	**+1.7**
	baz=303						
CHN3				S	**Sn**	**18 54 50.5**	**+2.2**
	baz=303						
CHN4	**Tsaushan**	**1.21**	**317**	*i* P	**Pg**	**18 54 32.8**	**+0.7**
	baz=321						
CHN4				S	**Sn**	**18 54 50.2**	**+1.8**
	baz=321						
ALS	**Alishan**	**1.21**	**328**	*i* P	**Pg**	**18 54 32.4**	**+0.1**
	baz=333						
ALS				*e*S	**Sn**	**18 54 49.8**	**+0.9**
	baz=333						
TWK	**Hsinying**	**1.22**	**311**	*i* P	**Pg**	**18 54 32.8**	**+0.5**
	baz=315						
TWK				S	**Sn**	**18 54 50.0**	**+1.2**
	baz=315						
VWDT	**VWDT**	**1.32**	**346**	*i* P	**Pb**	**18 54 33.8**	**0.0**
	baz=357						
ESL	**Shilin**	**1.34**	**357**	*i* P	**Pn**	**18 54 33.7**	**0.0**
	baz=350						
ESL				*e*S	**Sb**	**18 54 50.6**	**-0.7**
	baz=350						
WHYT	**Xinyi Township**	**1.35**	**334**	P	**Pg**	**18 54 35.5**	**+0.6**
	baz=347						
WHYT				*e*S	**Sg**	**18 54 53.5**	**+1.0**
	baz=347						
SCLT	**Jiali**	**1.39**	**300**	P	**Pg**	**18 54 35.4**	**-0.2**
	baz=303						
SCLT				S	**Sg**	**18 54 54.1**	**+0.4**
	baz=303						
SSLB	**Suanglung**	**1.40**	**339**	*i* P	**Pg**	**18 54 35.5**	**-0.3**
	baz=352						
SSLB				S	**Sg**	**18 54 53.6**	**-0.3**
	baz=352						
CHN2	**Minshiung**	**1.41**	**318**	P	**Pg**	**18 54 36.5**	**+0.5**
	baz=322						
CHN2				S	**Sg**	**18 54 55.2**	**+0.9**
	baz=322						
CHY	**Chiayi**	**1.42**	**316**	P	**Pg**	**18 54 36.2**	**0.0**
	baz=320						
CHY				S	**Sg**	**18 54 55.1**	**+0.5**
	baz=320						
ENLB	**Shoufeng**	**1.43**	**4**	*e*P	**Pn**	**18 54 32.9**	**-2.0**
	baz=18						
ENLB				S	**Sn**	**18 54 52.9**	**-1.0**
	baz=18						
CHN8	**Yiju**	**1.47**	**306**	P	**Pg**	**18 54 36.5**	**-0.6**
	baz=310						
CHN8				S	**Sg**	**18 54 55.2**	**-1.0**
	baz=310						
WGK	**Gukeng**	**1.48**	**325**	*i* P	**Pg**	**18 54 37.7**	**+0.4**
	baz=328						
WGK				S	**Sg**	**18 54 56.7**	**+0.1**
	baz=328						
WDLH	**Douliu**	**1.50**	**324**	P	**Pg**	**18 54 38.0**	**+0.3**
	baz=327						
WDLH				S	**Sg**	**18 54 57.9**	**+0.8**
	baz=327						
HWA	**Hwalien**	**1.50**	**4**	P	**Pn**	**18 54 36.0**	**+0.1**
	baz=18						
HWA				*e*S	**Sb**	**18 54 56.6**	**+0.5**
	baz=18						
OWD	**Renai**	**1.50**	**349**	P	**Pb**	**18 54 37.1**	**+0.1**
	baz=4.0						
OWD				*e*S	**Sg**	**18 54 56.8**	**-0.6**
	baz=4.0						
SMLT	**Sun Moon Lake**	**1.51**	**339**	*i* P	**Pg**	**18 54 37.8**	**0.0**
	baz=351						
SMLT				S	**Sg**	**18 54 58.1**	**+0.7**
	baz=351						
WJS	**Zhushan**	**1.52**	**332**	*i* P	**Pg**	**18 54 38.4**	**+0.4**
	baz=317						
WJS				*e*S	**Sg**	**18 54 59.1**	**+1.4**
	baz=317						
TYC	**Yuchr**	**1.54**	**338**	*i* P	**Pg**	**18 54 38.5**	**0.0**
	baz=350						
WNT	**Mingjian**	**1.59**	**332**	*i* P	**Pg**	**18 54 39.6**	**+0.3**
	baz=318						
WNT				*i* S	**Sg**	**18 55 00.8**	**+0.9**
	baz=318						
TWD	**Chiawan**	**1.60**	**3**	P	**Pn**	**18 54 37.7**	**+0.4**
	baz=354						
TWD				*e*S	**Sb**	**18 54 59.4**	**+0.4**
	baz=354						
CHGB	**Renai**	**1.61**	**349**	P	**Pb**	**18 54 38.7**	**-0.1**
	baz=5.0						
CHGB				*e*S	**Sg**	**18 55 00.1**	**-0.6**
	baz=5.0						
DPDB	**Guoxing**	**1.64**	**341**	*i* P	**Pb**	**18 54 39.7**	**+0.4**
	baz=357						
DPDB				*e*S	**Sg**	**18 55 01.4**	**-0.2**
	baz=357						
WHF	**Hehuan Shan**	**1.68**	**353**	*i* P	**Pb**	**18 54 39.7**	**-0.4**
	baz=357						
WHF				*e*S	**Sb**	**18 55 00.8**	**-0.8**
	baz=357						
NACB	**Ninganchiao**	**1.69**	**3**	*i* P	**Pn**	**18 54 38.7**	**+0.1**
	baz=354						
NACB				S	**Sn**	**18 55 00.5**	**0.0**
	baz=354						
ETLH	**Xiulin Townshi**	**1.73**	**360**	P	**Pn**	**18 54 39.6**	**+0.4**
	baz=3.0						
ETLH				*e*S	**Sb**	**18 55 02.1**	**-0.5**
	baz=3.0						
RLNB	**Erlin**	**1.76**	**324**	*e*P	**Pb**	**18 54 41.2**	**-0.1**
	baz=327						
RLNB				S	**Sb**	**18 55 02.8**	**-0.6**
	baz=327						
TWT	**Tachien**	**1.80**	**351**	*e*P	**Pb**	**18 54 42.4**	**+0.3**
	baz=5.0						
TWT				*e*S	**Sb**	**18 55 04.2**	**-0.5**
	baz=5.0						
TDCB	**Techi**	**1.80**	**350**	*e*P	**Pb**	**18 54 41.5**	**-0.6**
	baz=4.0						
TDCB				*e*S	**Sn**	**18 55 03.4**	**+0.1**
	baz=4.0						
WCHH	**Zhanghua**	**1.82**	**332**	*e*P	**Pb**	**18 54 42.6**	**+0.3**
	baz=318						
WCHH				*e*S	**Sb**	**18 55 05.4**	**+0.3**
	baz=318						
TCU	**Taichung**	**1.83**	**336**	P	**Pg**	**18 54 43.2**	**-0.7**
	baz=339						
TCU				*e*S	**Sg**	**18 55 06.3**	**-1.4**
	baz=339						
WDGT	**Dungji**	**1.87**	**295**	P	**Pn**	**18 54 40.7**	**-0.3**
	baz=297						
WDGT				S	**Sn**	**18 55 02.2**	**-2.4**
	baz=297						
WHP	**Taichung City**	**1.87**	**344**	P	**Pb**	**18 54 43.8**	**+0.6**
	baz=358						
WHP				S	**Sg**	**18 55 07.6**	**-1.4**
	baz=358						
NNSB	**Datong**	**1.95**	**357**	P	**Pb**	**18 54 43.6**	**-1.1**
NNSB				*e*S	**Sn**	**18 55 07.6**	**+0.7**
ENA	**Nanau**	**1.96**	**7**	P	**Pn**	**18 54 43.0**	**+0.7**
	baz=357						
ENA				S	**Sn**	**18 55 07.6**	**+0.6**
	baz=357						
NANB	**Nanao**	**1.96**	**7**	P	**Pn**	**18 54 42.6**	**+0.3**
	baz=357						
NANB				*e*S	**Sn**	**18 55 07.9**	**+1.0**
	baz=357						
NNS	**Nan Shan**	**1.96**	**357**	*e*P	**Pb**	**18 54 44.6**	**-0.2**
NNS				S	**Sb**	**18 55 08.3**	**-1.2**
TWQ1	**Liyutan**	**1.98**	**341**	*i* P	**Pb**	**18 54 45.2**	**+0.1**
	baz=327						
TWQ1				S	**Sg**	**18 55 11.3**	**-1.3**
	baz=327						
WDJ	**Dajia District**	**2.02**	**337**	*e*P	**Pb**	**18 54 46.3**	**+0.5**
	baz=340						
WDJ				*e*S	**Sg**	**18 55 12.1**	**-1.9**
	baz=340						
VCHM	**Qimei**	**2.04**	**291**	P	**Pn**	**18 54 43.0**	**-0.4**
	baz=292						
VCHM				S	**Sn**	**18 55 06.8**	**-2.2**
	baz=292						
NSY	**Sanyi**	**2.05**	**341**	*e*P	**Pb**	**18 54 46.8**	**+0.6**
	baz=344						
NSY				S	**Sg**	**18 55 13.2**	**-1.6**
	baz=344						
PHUB	**P'eng-hu**	**2.05**	**301**	*i* P	**Pn**	**18 54 43.2**	**-0.3**
	baz=302						
PHUB				S	**Sn**	**18 55 06.7**	**-2.6**
	baz=302						
PNG	**Penghu**	**2.09**	**302**	P	**Pn**	**18 54 44.0**	**-0.1**
	baz=303						
PNG				*e*S	**Sn**	**18 55 08.1**	**-2.2**
	baz=303						
PTSB	**Yuanli**	**2.10**	**340**	*e*P	**Pb**	**18 54 47.0**	**0.0**
	baz=343						
PTSB				*e*S	**Sb**	**18 55 13.8**	**+0.6**
	baz=343						
EOS1	**EOS1**	**2.15**	**16**	P	**Pn**	**18 54 46.3**	**+1.5**
	baz=29						
EOS1				S	**Sn**	**18 55 12.9**	**+1.4**
	baz=29						
TWC	**Suao**	**2.15**	**9**	P	**Pb**	**18 54 47.1**	**-0.9**
	baz=22						
TWC				S	**Sb**	**18 55 13.8**	**-0.9**
	baz=22						
NMLH	**Miaoli**	**2.15**	**343**	*e*P	**Pb**	**18 54 48.1**	**0.0**
	baz=346						
NMLH				*e*S	**Sb**	**18 55 15.4**	**+0.5**
	baz=346						
ENTT	**Nioudou**	**2.16**	**2**	P	**Pb**	**18 54 46.7**	**-1.4**
	baz=5.0						
ENTT				*e*S	**Sn**	**18 55 12.7**	**+0.8**
	baz=5.0						
YHNB	**Yeheng**	**2.19**	**357**	*i* P	**Pb**	**18 54 47.6**	**-1.1**
	baz=1.0						
YHNB				*e*S	**Sb**	**18 55 14.2**	**-1.8**
	baz=1.0						
NSK	**Sanguang**	**2.20**	**357**	P	**Pb**	**18 54 47.3**	**-1.5**
NSK				*e*S	**Sb**	**18 55 14.2**	**-2.0**
NSTT	**Nanjuang**	**2.20**	**348**	P	**Pb**	**18 54 48.9**	**+0.2**
	baz=336						
NSTT				S	**Sb**	**18 55 15.9**	**-0.1**
	baz=336						
LIOB	**Emei**	**2.21**	**349**	P	**Pb**	**18 54 48.0**	**-0.9**
	baz=336						
LIOB				S	**Sb**	**18 55 16.1**	**-0.3**
	baz=336						
TWE	**Neicheng**	**2.24**	**4**	P	**Pb**	**18 54 48.0**	**-1.6**
	baz=357						
TWE				*e*S	**Sn**	**18 55 15.0**	**+1.1**
	baz=357						
JYNG	**Yonagunijimaku**	**2.38**	**34**	P	**Pn**	**18 54 48.7**	**+0.7**
JYNG				*e*S	**Sn**	**18 55 16.4**	**-0.8**
WLTB	**Daxi**	**2.38**	**355**	*e*P	**Pb**	**18 54 50.8**	**-1.1**
	baz=342						
WLTB				*e*S	**Sb**	**18 55 21.6**	**+0.2**
	baz=342						
NTC	**Toucheng**	**2.39**	**7**	*e*S	**Sn**	**18 55 19.2**	**+1.6**
	baz=358						
EGS		**2.40**	**10**	*e*P	**Pb**	**18 54 50.9**	**-1.2**
	baz=24						
EGS				*e*S	**Sb**	**18 55 20.2**	**-1.6**
	baz=24						
YOJ	**Yonaguni jima**	**2.42**	**35**	P	**Pn**	**18 54 50.5**	**+1.9**
	baz=48						
YOJ				S	**Sn**	**18 55 19.4**	**+1.1**
	baz=48						
YOJ	**Yonaguni jima**	**2.42**	**35**	P	**Pn**	**18 54 50.3**	**+1.7**
NHDH	**Xindian Distri**	**2.48**	**1**	*e*P	**Pb**	**18 54 52.0**	**-1.5**
	baz=4.0						
NHDH				*e*S	**Sb**	**18 55 22.3**	**-1.9**
	baz=4.0						
TIPB	**Shuangxi**	**2.51**	**7**	*i* P	**Pb**	**18 54 52.3**	**-1.7**
	baz=359						
TIPB				*e*S	**Sn**	**18 55 21.0**	**+0.5**
	baz=359						
NWF	**Wu-fen Shan**	**2.60**	**6**	*e*P	**Pb**	**18 54 53.6**	**-2.1**
	baz=359						
NWF				S	**Sn**	**18 55 24.4**	**+1.5**
	baz=359						
WFSB	**Wu-fen Shan**	**2.60**	**6**	*e*S	**Sn**	**18 55 23.9**	**+1.1**
	baz=359						
HATJ	**Hateruma jima**	**2.64**	**53**	P	**Pn**	**18 54 52.6**	**+0.9**
HATJ				*e*S	**Sn**	**18 55 22.5**	**-1.3**
YM01	**YM01**	**2.66**	**1**	P	**Pn**	**18 54 54.4**	**+2.4**
	baz=4.0						
YM01				*e*S	**Sn**	**18 55 25.4**	**+1.0**
	baz=4.0						
IRIF	**Iriomote-Funau**	**2.77**	**47**	P	**Pn**	**18 54 54.3**	**+1.0**
JKRS	**Kuro-shima**	**2.90**	**52**	P	**Pn**	**18 54 56.4**	**+1.2**
JKRS				*e*S	**Sn**	**18 55 29.2**	**-1.0**
JIJ	**Ishigaki jima**	**3.07**	**52**	P	**Pn**	**18 54 58.6**	**+1.0**
JIJ				S	**Sn**	**18 55 33.2**	**-1.3**
JISG	**Ishigakijimahi**	**3.33**	**50**	P	**Pn**	**18 55 01.7**	**+0.6**
JISG				*e*S	**Sn**	**18 55 39.6**	**-1.2**
JTJ	**Tarama**	**3.65**	**53**	P	**Pn**	**18 55 06.9**	**+1.4**
JTJ				S	**Sn**	**18 55 47.7**	**-0.9**
JIRB	**Irabujima**	**4.11**	**54**	P	**Pn**	**18 55 12.7**	**+0.9**
JIRB				*e*S	**Sn**	**18 55 59.4**	**-0.5**
JMJ2	**Miyako jima3**	**4.18**	**57**	P	**Pn**	**18 55 14.1**	**+1.4**
JMJ2				*e*S	**Sn**	**18 56 02.1**	**+0.4**
JOGS	**Gusukube**	**4.25**

IPEC ***27*** *18:59:50.9±0.1, 47.′64N×15.′88E, h9km±1km, ML2.7/2, Error ellipse: s-maj=1.4km s-min=0.8km az=127.0*
VIE ***27*** *18:59:50.5±0.3, 47.′63N×15.′83E, h11km±4km, mb2.2/8, ml2.7/8, Error ellipse: s-maj=2.4km s-min=1.4km az=124.0, felt 4-5 ems98 at Semmering / Lower Austria*
PRU ***27*** *18:59:52.4±0.0, 47.′72N×15.′96E, h1km*
ISC 27 18:59:50.6±1.0, 47.′69N±0.′02×15.′76E±0.′02, h10km±9km, n42, σ1§16/65, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.25**	**17**	*i* Pg	**Pb**	18 59 56.5	**+0.8**
	19nm,0.2s,SNR=101						
CONA				*e*Sg	**Sg**	**19 00 01.1**	**+2.0**
	120nm,0.2s						
ARSA	**Arzberg**	**0.47**	**200**	*e*Pg	**Pg**	18 59 59.5	**-0.2**
	66nm,0.2s,SNR=166						
ARSA				*e*Sg	**Sg**	**19 00 05.3**	**-0.6**
	51nm,0.1s						
SOP	**Sopron**	**0.54**	**91**	EPg		18 59 59.1	
SOP				ESg		19 00 06.1	
MOA	**Molln**	**1.02**	**279**	*e*Pg	**Pn**	**19 00 11.6**	**+0.6**
	7.4nm,0.1s						
MOA				*e*Sg	**Sn**	**19 00 28.1**	**+2.8**
	16nm,0.2s						
ZST	**Bratislava**	**1.04**	**60**	*e*PG	**Pb**	**19 00 09.3**	**-1.3**
ZST				*e*SG	**Sb**	**19 00 24.1**	**-0.1**
SOKA	**Soboth**	**1.13**	**206**	*e*Pg	**Pb**	**19 00 11.2**	**-1.0**
	3.7nm,0.2s,SNR=37						
SOKA				*e*Sg	**Sb**	**19 00 25.7**	**-1.2**
	18nm,0.3s						
MODS	**Modra-Piesok**	**1.23**	**56**	*e*PG	**Pn**	**19 00 12.8**	**-1.0**
MODS				*e*SG	**Sb**	**19 00 29.8**	**0.0**
MODS				*e*LG	Lg	19 00 31.6	
GROS	**Grobnik**	**1.24**	**188**	*i* Pg	**Pn**	**19 00 13.6**	**-0.5**
GROS				*i* Sg	**Sb**	**19 00 29.6**	**-0.6**
	comp=Z,18nm,0.2s						
KOGS	**Kog**	**1.29**	**165**	*i* Pg	**Pg**	**19 00 16.1**	**+0.8**
KOGS				*i* Sg	**Sn**	**19 00 32.1**	**+0.2**
	comp=Z,38nm,0.2s						
BEHE	**Becsehely**	**1.41**	**150**	EPn		19 00 18.0	
BEHE				Sn	**Sg**	**19 00 37.0**	**+1.3**
KRUC	**Moravsky**	**1.44**	**17**	*e*PG	**Pg**	**19 00 17.7**	**-0.4**
KRUC				*e*SG	**Sg**	**19 00 36.9**	**+0.2**
KRUC	**Moravsky**	**1.44**	**17**	*e*Pg	**Pg**	**19 00 17.7**	**-0.4**
	baz=194						
KRUC				*e*Sg	**Sg**	**19 00 36.8**	**+0.1**
	comp=Z,68nm,0.3s,baz=194						
OBKA	**Obir**	**1.44**	**215**	*e*Pg	**Pg**	**19 00 17.6**	**-0.6**
	comp=Z,8.0nm,0.2s,SNR=20						
OBKA				Sg	**Sg**	**19 00 38.8**	**+1.9**
	comp=Z,18nm,0.3s						
DOBS	**Dobrina**	**1.56**	**187**	*i* Pn	**Pg**	**19 00 19.9**	**-0.5**
	comp=Z,23nm,0.1s						
TIH	**Tihany**	**1.66**	**118**	EPn		19 00 22.0	
TIH				Sn	**Sg**	**19 00 45.0**	**+1.3**
MOZS	**Mozjanca**	**1.66**	**213**	*i* Pg	**Pg**	**19 00 21.5**	**-0.9**
	comp=Z,3.0nm,0.2s						
VRAC	**Vranov**	**1.71**	**19**	*e*PN	**Pb**	**19 00 21.5**	**-0.6**
VRAC				*e*SN	**Sb**	**19 00 44.3**	**+0.6**
VRAC	**Vranov**	**1.71**	**19**	*e*Pn	**Pb**	**19 00 21.5**	**-0.6**
	baz=196						
VRAC				*e*Sn	**Sb**	**19 00 44.3**	**+0.6**
	comp=Z,42nm,0.4s,baz=196						
CSKK	**Cskako**	**1.73**	**100**	EPn		19 00 23.1	
CSKK				Sn	**Sn**	**19 00 43.0**	**+0.3**
JAVC	**Velka Javorina**	**1.73**	**47**	*e*PN	**Pb**	**19 00 22.7**	**+0.2**
KBA	**Koelnbreinsper**	**1.75**	**250**	*e*Pg	**Pg**	**19 00 24.1**	**-0.1**
	comp=Z,2.5nm,0.2s,SNR=8.4						
KBA				Sg	**Sg**	**19 00 47.9**	**+1.0**
	comp=Z,25nm,0.4s						
MYKA	**Terra Mystica**	**1.79**	**234**	Pg	**Pg**	**19 00 24.2**	**-0.7**
	comp=Z,6.6nm,0.3s,SNR=8.2						
MYKA				*e*Sg	**Sg**	**19 00 47.7**	**-0.5**
	comp=Z,5.5nm,0.3s						
KHC	**Kasperske Hory**	**2.04**	**316**	*e*PN	**Pg**	**19 00 28.9**	**-0.8**
KHC				*e*PG	Pb	19 00 32.5	+4.7
KHC				*e*SN	**Sg**	**19 00 55.1**	**-1.1**
VOJS	**Vojsko**	**2.10**	**218**	*i* Pn	**Pb**	**19 00 28.2**	**-0.6**
	comp=Z,2.0nm,0.2s						
VYHS	**Vyhne**	**2.21**	**68**	*e*PN	**Pn**	**19 00 26.9**	**-0.5**
VYHS				*e*SN	**Sn**	**19 00 54.6**	**-0.2**
GOPC	**GO Pecny, Ondr**	**2.31**	**344**	*e*PN	**Pb**	**19 00 32.2**	**-0.2**
GOPC				*e*SG	**Sg**	**19 01 05.9**	**+1.0**
	comp=Z,42nm,0.9s						
MORC	**Moravsky Berou**	**2.40**	**29**	*e*PN	**Pn**	**19 00 30.5**	**+0.5**
MORC	**Moravsky Berou**	**2.40**	**29**	*e*Pn	**Pn**	**19 00 30.4**	**+0.5**
	baz=208						
PRU	**Pruhonice**	**2.44**	**341**	*e*PG	**Pg**	**19 00 37.1**	**-0.1**
PRU				*e*SG	**Sg**	**19 01 10.3**	**+1.6**
	comp=Z,22nm,0.4s						
MORH	**Mrgy, Hungar**	**2.47**	**126**	EPn		19 00 30.1	
MORH				Sn	**Sn**	**19 01 02.0**	**+1.0**
DPC	**Dobruska-Polom**	**2.69**	**8**	*e*SG	**Sg**	**19 01 17.0**	**+0.2**
	comp=Z,21nm,0.7s						
UPC	**Upice**	**2.82**	**3**	*e*SG	**Sg**	**19 01 20.1**	**-1.1**
	comp=Z,31nm,0.4s						
WTTA	**Wattenberg**	**2.83**	**263**	Pn	**Pb**	**19 00 40.3**	**-1.0**
	comp=Z,3.5nm,0.3s,SNR=4.2						
WTTA				Sg	**Sg**	**19 01 25.2**	**+3.8**
	comp=Z,8.9nm,0.4s						
LANS	**Liptovska Anna**	**2.87**	**58**	*e*PN	**Pn**	**19 00 38.1**	**+1.7**
OSTC	**Ostas**	**2.88**	**6**	*e*PG	**Pg**	**19 00 44.4**	**-1.4**
OSTC				*e*SG	**Sg**	**19 01 23.7**	**+0.6**
	comp=Z,62nm,1.0s						
CHVC	**Chvalec**	**2.91**	**4**	*e*SG	**Sg**	**19 01 24.0**	**+0.1**
	comp=Z,32nm,0.8s						
PVCC	**Panska Ves**	**2.94**	**345**	*e*SG	**Sg**	**19 01 25.7**	**+0.6**
	comp=Z,35nm,0.6s						
MOTA	**Moosalm**	**3.17**	**265**	*i* Pn	**Pb**	**19 00 44.4**	**-2.7**
	comp=Z,0.5nm,0.1s						
MOTA				Sg	**Sg**	**19 01 33.8**	**+1.4**
	comp=Z,10nm,0.4s						
NKC	**Novy Kostel**	**3.35**	**321**	*e*PG	**Pg**	**19 00 54.7**	**0.0**
NKC				*e*SG	**Sg**	**19 01 40.1**	**+2.0**
	comp=Z,17nm,0.4s						
BRG	**Berggiesshubel**	**3.40**	**340**	PG	**Pg**	**19 00 54.6**	**-1.1**
BRG				SG	**Sg**	**19 01 40.2**	**+0.6**
	comp=Z,12nm,0.4s						
DAVA	**Damuels**	**4.00**	**266**	Sg	**Sg**	**19 01 59.8**	**+0.7**
	comp=Z,6.6nm,0.4s						
CLL	**Collm**	**4.04**	**335**	*e*Sg	**Sg**	**19 01 58.0**	**-2.2**
	comp=Z,15nm,0.6s						

DJA ***27*** *19:04:26.8±0.2, 1.′N±2.″×12.′3E±.″, h10km, M4.8/33, mB5.3/13, mb5.0/33, MLv5.1/15, Mw(mB)4.7/13*
BJI ***27*** *19:04:27.3±0.0, 0.′94N×123.′37E, h42km, mb4.7/28, mB4.9/17, Ms4.6/4, Ms7 4.3/3*
KLM ***27*** *19:04:27.0, 1.′32N×123.′36E, h22km, mb4.7*
MOS ***27*** *19:04:28.4±0.8, 1.′32N×123.′04E, h33km, mb4.9/33, Error ellipse: s-maj=13.7km s-min=7.0km az=115.1*
ISCJB ***27*** *19:04:29.1±0.2, 1.′35N±0.′02×123.′12E±0.′03, h39km, mb4.6/86, Error ellipse: s-maj=3.9km s-min=2.9km az=175.7*
NEIC ***27*** *19:04:31.1±1.6, 1.′29N×123.′00E, h43km±6km, mb4.7/49, Error ellipse: s-maj=14.7km s-min=11.4km az=72.0*
IDC ***27*** *19:04:32.5±2.3, 1.′26N×123.′13E, h56km±21km, mb4.2/20, mb1 4.3/25, mb1mx4.2/36, mbtmp4.5/25, ML4.2/5, MS3.7/9, Ms1 3.7/9, ms1mx3.3/36, Error ellipse: s-maj=16.5km s-min=9.8km az=80.0*
ISC 27 19:04:31.0±0.3, 1.′41N±0.′03×123.′07E±0.′05, h39km, n196, σ1§52/209, mb4.7/86, 11C-3D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.23**	**132**	P	**Pn**	**19 04 50.5**	**-1.2**
KMSI				S	**Sn**	**19 05 13.1**	**+5.9**
LUWI	**Luwuk**	**2.45**	**187**	*e*Pn	**Pn**	**19 05 07.8**	**-0.7**
LUWI	**Luwuk**	**2.45**	**187**	P	**Pn**	**19 05 07.9**	**-0.6**
APSI	**Ampana**	**2.71**	**212**	P	**Pn**	**19 05 12.0**	**0.0**
APSI				S	**Sn**	**19 05 46.7**	**+3.2**
SGSI	**Sangihe**	**3.34**	**47**	P	Pn	19 05 34.5	+14
TNTI	**Ternate**	**4.34**	**98**	P	Pn	19 05 45.2	+11
SANI	**Sanana**	**4.51**	**140**	P	**Pn**	**19 05 35.1**	**-1.7**
SANI				S	**Sn**	**19 06 31.5**	**+3.5**
SKMP	**Bagumbayan, Su**	**5.29**	**16**	*e*P	**Pn**	**19 05 46.0**	**-1.6**
SKMP				*e*S	**Sn**	**19 06 42.1**	**-5.1**
KDI	**Kendari**	**5.35**	**185**	P	**Pn**	**19 05 48.9**	**+0.5**
	385nm,1.2s,4μm1.5nm						
DDMP	**Don Marcelino,**	**5.36**	**29**	*e*P	**Pn**	**19 05 48.8**	**+0.3**
DDMP				*e*S	**Sn**	**19 06 48.4**	**-0.6**
TTSI	**Tana Toraja**	**5.49**	**216**	P	**Pn**	**19 05 50.6**	**+0.3**
	877nm,0.8s,7μm2.7nm						
TTSI				S	**Sn**	**19 06 54.8**	**+2.6**
	877nm,0.8s,7μm2.7nm						
CTBH	**Cotabato--PC H**	**5.89**	**11⇑**	*i* P	**Pn**	**19 05 56.9**	**+1.0**
NLAI	**Namlea**	**6.13**	**139**	P	**Pn**	**19 05 57.7**	**-1.4**
SPSI	**Sidrap Palu**	**6.27**	**212**	P	**Pn**	**19 06 01.9**	**+0.8**
	160nm,0.7s,1μm0.6nm						
IPIL	**Ipil**	**6.36**	**356**	*e*P	**Pn**	**19 06 02.3**	**+0.1**
IPIL				*e*S	**Sn**	**19 07 08.3**	**-5.3**
PAGZ	**Pagadian**	**6.41**	**3**	*e*P	**Pn**	**19 06 02.6**	**-0.3**
BUKP	**Musuan**	**6.73**	**17**	*e*P	**Pn**	**19 06 08.7**	**+1.4**
BUKP				*e*S	**Sn**	**19 07 21.6**	**-1.3**
KAPI	**Kappang**	**7.19**	**207**	P	**Pn**	**19 06 13.2**	**-0.4**
	18nm,0.3s,baz=33,slow=8.2,SNR=78						
KAPI				S	**Sn**	**19 07 34.3**	**+0.2**
	4.7nm,0.3s,baz=201,slow=22,SNR=8.0						
KAPI				LR	LR	19 09 04.2	
	comp=Z,525nm,19.0s,baz=112,slow=38						
KAPI	**Kappang**	**7.19**	**207**	*e*Pn	**Pn**	**19 06 12.3**	**-1.3**
KAPI	**Kappang**	**7.19**	**207**	*e*P	**Pn**	**19 06 12.3**	**-1.3**
AAI	**Ambon**	**7.20**	**135**	P	**Pn**	**19 06 13.6**	**-0.2**
BKSI	**Bulukumba**	**7.30**	**204**	P	**Pn**	**19 06 15.7**	**+0.5**
MSAI	**Masohi**	**7.52**	**129**	P	**Pn**	**19 06 18.8**	**+0.5**
	49nm,1.0s,404nm0.2nm						
BSSI	**Bau Bau, Buton**	**7.93**	**199**	P	**Pn**	**19 06 24.5**	**+0.7**
KKM	**Kota Kinabalu**	**8.24**	**304**	*e*Pn	**Pn**	**19 06 28.8**	**+0.6**
KKM	**Kota Kinabalu**	**8.24**	**304**		**Pn**	**19 06 31.0**	**+2.7**
SIJI	**Sorong**	**8.50**	**105**	P	**Pn**	**19 06 32.0**	**+0.3**
	0.4nm,0.3s,baz=302,slow=11,SNR=3.8						
GUIM	**Jordan**	**9.17**	**357**	*e*P	**Pn**	**19 06 41.9**	**+1.0**
FAKI	**Fak Fak**	**10.13**	**115**	*e*Pn	**Pn**	**19 06 55.4**	**+1.3**
EDFI	**Ende, Flores**	**10.18**	**188**	P	**Pn**	**19 06 54.3**	**-0.6**
	31nm,0.6s,1μm						
SBUM	**Sibu**	**10.89**	**276**	*e*Pn	**Pn**	**19 07 04.0**	**-0.4**
SBUM	**Sibu**	**10.89**	**276**		**Pn**	**19 07 05.0**	**+0.5**
SOEI	**Soe**	**11.15**	**174**	*e*Pn	**Pn**	**19 07 06.5**	**-1.7**
SOEI	**Soe**	**11.15**	**174**	P	Pn	19 07 14.4	+6.2
BATI	**Baumata**	**11.55**	**177**	P	**Pn**	**19 07 14.2**	**+0.7**
	0.3nm,0.3s,baz=331,slow=18,SNR=1.8						
BATI				LR	LR	19 11 32.8	
	comp=Z,817nm,19.5s,baz=358,slow=37						
BATI	**Baumata**	**11.55**	**177**	*e*Pn	**Pn**	**19 07 14.2**	**+0.7**
BATI				*e*Pn	**Pn**	**19 07 14.2**	**+0.7**
BATI	**Baumata**	**11.55**	**177**	P	Pn	19 07 29.1	+16
MTN	**Manton Dam**	**16.26**	**151**	*e*Pn	**Pn**	**19 08 15.3**	**-1.4**
	13nm,0.6s						
JAY	**Jayapura**	**18.06**	**102**	P	**P**	**19 08 39.5**	**+0.2**
	0.6nm,0.3s,baz=344,slow=17,SNR=6.0						
TPRI	**Tanjung Pinang**	**18.55**	**269**	P	**P**	**19 08 43.4**	**-1.2**
MYKOM	**Kota Tinggi**	**19.21**	**271**	*e*P	**P**	**19 08 51.6**	**-0.4**
	15nm,0.8s						
MYKOM	**Kota Tinggi**	**19.21**	**271**		**Pn**	**19 08 53.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**19.55**	**173**	P	**P**	**19 08 54.0**	**-1.5**
	3.5nm,0.3s,baz=5.4,slow=8.2,SNR=42						
FITZ	**Fitzroy Crossi**	**19.55**	**173**	*e*P	**P**	**19 08 53.3**	**-2.2**
MDSI	**Maura Dua**	**19.76**	**253**	P	**P**	**19 08 57.0**	**-0.9**
	39nm,0.9s						
LHSI	**Lahat**	**20.21**	**255**	P	Pn	19 09 04.0	-1.0
	86nm,0.8s						
KRJI	**Kerinci**	**21.88**	**261**	P	**P**	**19 09 22.1**	**+1.2**
	79nm,1.0s						
TPUB	**Ta-pu**	**21.89**	**354**	*e*P	**P**	**19 09 23.4**	**+2.6**
	27nm,0.8s						
YULB	**Yu-li**	**21.92**	**356**	*e*P	**P**	**19 09 20.7**	**-0.4**
	18nm,1.0s						
BKNI	**Bangkinang**	**22.05**	**267**	*e*P	**P**	**19 09 21.3**	**-1.4**
	127nm,1.3s						
BKNI	**Bangkinang**	**22.05**	**267**	P	**P**	**19 09 23.0**	**+0.3**
IPM	**Ipoh**	**22.22**	**278**	*e*P	**P**	**19 09 23.4**	**-1.1**
	47nm,1.4s						
IPM	**Ipoh**	**22.22**	**278**		**P**	**19 09 26.0**	**+1.5**
SSLB	**Suanglung**	**22.34**	**355**	*e*P	**P**	**19 09 27.4**	**+1.7**
	23nm,1.0s						
KULM	**Kulim**	**22.71**	**280**		**P**	**19 09 31.0**	**+1.3**
PDSI	**Padang**	**22.72**	**264**	P	**P**	**19 09 28.2**	**-1.7**
	35nm,0.7s,730nm						
PSA00	**Pilbara Seismi**	**23.06**	**188**	*e*P	**P**	**19 09 29.5**	**-3.6**
	17nm,0.8s						
MNSI	**Mandailing Nat**	**23.49**	**269**	P	**P**	**19 09 38.0**	**+0.4**
	21nm,0.6s						
WRAB	**Tennant Creek**	**23.92**	**153**	*e*P	**P**	**19 09 40.5**	**-1.1**
	18nm,0.8s						
WRAB	**Tennant Creek**	**23.92**	**153**	*d i* P	**P**	**19 09 40.8**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	**23.93**	**153**	P	**P**	**19 09 38.9**	**-2.7**
	comp=Z,15nm,0.7s,baz=336,slow=11,SNR=87						
WR1	**Warramunga Arr**	**23.93**	**153**	*e*P	**P**	**19 09 38.9**	**-2.7**
WB2	**Warramunga Arr**	**23.93**	**153**	*e*P	**P**	**19 09 39.6**	**-2.0**
	comp=Z,20nm,0.8s						
PANO	**Nakornpanom**	**23.96**	**312**	P	**P**	**19 09 43.6**	**+1.6**
	comp=Z,0.5nm,1.1s						
SISI	**Saibi**	**24.13**	**264**	P	**P**	**19 09 44.0**	**+0.4**
	comp=Z,61nm,0.8s,comp=Z,2μm						
TRTT	**Trang**	**24.15**	**286**	P	**P**	**19 09 45.7**	**+2.0**
	comp=Z,30nm,1.1s						
PSI	**Prapat**	**24.17**	**274**	P	**P**	**19 09 44.3**	**+0.2**
	comp=Z,21nm,0.9s,baz=88,slow=7.1,SNR=20						
PSI				LR	LR	19 19 30.0	
	comp=Z,283nm,18.2s,baz=47,slow=37						
PSI	**Prapat**	**24.17**	**274**	*e*P	**P**	**19 09 44.5**	**+0.4**
	comp=Z,41nm,1.2s						
PSI	**Prapat**	**24.17**	**274**	*e*P	**P**	**19 09 44.5**	**+0.4**
PSI				pmax	pmax		
	comp=Z,41nm,1.2s						
MANU	**Manus Island**	**24.53**	**98**	*e*P	**P**	**19 09 48.3**	**+1.0**
	comp=Z,16nm,1.0s						
TSI	**Tuntungan**	**24.57**	**275**	P	**P**	**19 09 45.8**	**-1.8**
	comp=Z,53nm,0.8s						
KHON	**Khomkaen**	**24.86**	**308**	P	**P**	**19 09 53.1**	**+3.0**
KCSI	**Kotacane, Aceh**	**25.36**	**275**	P	**P**	**19 09 55.2**	**+0.4**
	comp=Z,30nm,1.3s						
GSI	**Gunungsitoli**	**25.49**	**270**	*e*P	**P**	**19 09 55.0**	**-0.9**
	comp=Z,49nm,0.7s						
GSI	**Gunungsitoli**	**25.49**	**270**	P	**P**	**19 09 55.6**	**-0.3**
	comp=Z,83nm,0.9s						
PMG	**Port Moresby**	**26.29**	**115**	LR	LR	19 22 36.3	
	comp=Z,133nm,20.6s,baz=325,slow=41						
PMG	**Port Moresby**	**26.29**	**115**	*i* P	**P**	**19 10 04.1**	**+0.9**
PMG				pmax	pmax		
	comp=Z,47nm,0.8s						
AS31	**Alice Springs**	**27.06**	**158**	*e*P	**P**	**19 10 08.3**	**-1.8**
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	**27.06**	**158**	P	**P**	**19 10 08.3**	**-1.7**
	comp=Z,4.1nm,0.9s,baz=331,slow=9.0,SNR=45						
ASAR				PcP	**PcP**	**19 13 30.4**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=343,slow=2.4,SNR=5.5						
ASAR				LR	LR	19 22 29.6	
	comp=Z,107nm,18.7s,baz=321,slow=40						
CMAR	**Chiang Mai Arr**	**29.11**	**307**	P	**P**	**19 10 29.7**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=159,slow=5.4,SNR=4.0						
CMAR				PcP	**PcP**	**19 13 35.9**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=136,slow=1.0,SNR=6.7						
CMAR				LR	LR	19 23 22.4	
	comp=Z,80nm,18.8s,baz=146,slow=39						
CHTO	**Chiang Mai**	**29.30**	**308**	*e*P	**P**	**19 10 31.2**	**+1.1**
	comp=Z,19nm,1.8s						
CHTO	**Chiang Mai**	**29.30**	**308**	*e*P	**P**	**19 10 31.2**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,19nm,1.8s						
RABL	**Rabaul**	**29.60**	**101**	*e*P	**P**	**19 10 33.9**	**+1.1**
	comp=Z,24nm,0.9s						
KMI	**Kunming**	**30.68**	**322**	P	**P**	**19 10 44.5**	**+2.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MORW	**Morawa**	**31.04**	**192**	*e*P	**P**	**19 10 42.4**	**-2.9**
	comp=Z,20nm,1.0s						
ENH	**Enshi**	**31.47**	**337**	*e*P	**P**	**19 10 49.5**	**+0.4**
ENH				*e*pP	**P**	**19 10 50.6**	**+1.5**
FORT	**Forrest**	**32.36**	**172**	*e*P	**P**	**19 10 54.2**	**-2.7**
	comp=Z,39nm,0.6s						
NWAO	**Narrogin (SRO)**	**34.59**	**189**	P	**P**	**19 11 13.8**	**-2.5**
	comp=Z,18nm,0.8s,baz=19,slow=6.5,SNR=6.9						
NWAO	**Narrogin (SRO)**	**34.59**	**189**	*e*P	**P**	**19 11 13.8**	**-2.5**
NWAO				*e*P	**P**	**19 11 14.0**	**-2.3**
XAN	**Xi'an**	**35.06**	**339**	P	**P**	**19 11 22.5**	**+2.1**
XAN				pP	sP	19 11 32.8	-1.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSRS	**Korea Array**	**36.15**	**7**	P	**P**	**19 11 30.6**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=186,slow=9.8,SNR=4.5						
STKA	**Stephens Creek**	**37.48**	**154**	P	**P**	**19 11 39.4**	**-1.7**
	comp=Z,6.9nm,0.5s,baz=330,slow=8.8,SNR=25						
STKA	**Stephens Creek**	**37.48**	**154**	*e*P	**P**	**19 11 40.0**	**-1.0**
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**37.48**	**154**	*e*P	**P**	**19 11 40.0**	**-1.0**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAJO	**Matsushiro**	**37.66**	**20**	*e*P	**P**	**19 11 42.4**	**-0.2**
MAJO	**Matsushiro**	**37.66**	**20**	*e*P	**P**	**19 11 42.4**	**-0.2**
MJAR	**Matsushiro Arr**	**37.66**	**20**	P	**P**	**19 11 42.4**	**-0.2**
	comp=Z,6.0nm,1.1s,baz=198,slow=9.4,SNR=9.6						
MJAR				LR	LR	19 25 40.7	
	comp=Z,37nm,21.8s,baz=210,slow=34						
SHL	**Shillong**	**38.47**	**311**	*e*P	**P**	**19 11 49.0**	**-0.7**
	comp=Z,16nm,0.8s						
SHL	**Shillong**	**38.47**	**311**	*e*P	**P**	**19 11 49.0**	**-0.7**
SHL				pmax	pmax		
	comp=Z,16nm,0.8s						
LSA	**Lhasa**	**41.38**	**316**	*e*P	**P**	**19 12 13.8**	**-0.4**
	comp=Z,5.9nm,0.8s						
LSA	**Lhasa**	**41.38**	**316**	*e*P	**P**	**19 12 13.8**	**-0.4**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**43.34**	**9**	P	**P**	**19 12 29.7**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=210,slow=11,SNR=4.4						
GTA	**Gaotai**	**43.37**	**334**	⇑P	**P**	**19 12 32.3**	**+2.5**
GTA				pP	sP	19 12 42.5	-1.3
GTA				sP	pwP	19 12 47.0	+2.1
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
CAN	**Canberra**	**43.85**	**149**	*e*P	**P**	**19 12 33.5**	**-0.2**
	comp=Z,72nm,1.8s						
CAN	**Canberra**	**43.85**	**149**	*e*P	**P**	**19 12 33.5**	**-0.2**
CAN				pmax	pmax		
	comp=Z,73nm,1.8s						
JIRN	**Jiri**	**43.90**	**310**	*e*P	**P**	**19 12 35.9**	**+1.3**
	comp=Z,48nm,0.7s						
GUN	**Gumba**	**44.26**	**310**	*e*P	**P**	**19 12 38.6**	**+1.1**
PKI	**Pulchoki**	**44.46**	**309**	*e*P	**P**	**19 12 39.8**	**+0.8**
	comp=Z,9.9nm,0.6s						
PKIN	**Phulchoki**	**44.47**	**309**	*e*P	**P**	**19 12 39.8**	**+0.8**
	comp=Z,7.8nm,0.7s						
KKN	**Kakani**	**44.66**	**309**	*e*P	**P**	**19 12 41.5**	**+1.0**
	comp=Z,14nm,0.7s						
DMN	**Daman**	**44.71**	**309**	*e*P	**P**	**19 12 42.1**	**+1.2**
	comp=Z,42nm,1.2s						
ASAJ	**Asahikawa**	**45.93**	**20**	P	**P**	**19 12 50.8**	**+0.8**
	comp=Z,12nm,0.8s,baz=213,slow=10,SNR=11						
KOLN	**Koldanda**	**45.96**	**308**	*e*P	**P**	**19 12 51.9**	**+1.1**
	comp=Z,38nm,0.7s						
DANN	**Dangsing**	**46.11**	**309**	*e*P	**P**	**19 12 53.2**	**+1.1**
	comp=Z,62nm,0.6s						
PYUN	**Piuthan**	**46.59**	**308**	*e*P	**P**	**19 12 57.1**	**+1.4**
	comp=Z,72nm,0.9s						
KLR	**Kul'dur**	**48.22**	**8**	*i* P	**P**	**19 13 07.6**	**-0.2**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**48.31**	**346**	*e*P	**P**	**19 13 10.4**	**+1.7**
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**48.31**	**346**	*ce*P	**P**	**19 13 10.3**	**+1.6**
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
SONA0	**Songino Array**	**48.45**	**345**	*e*P	**P**	**19 13 10.6**	**+0.8**
SONM	**Songino Array**	**48.45**	**345**	P	**P**	**19 13 10.6**	**+0.8**
	comp=Z,5.1nm,0.8s,baz=160,slow=8.6,SNR=29						
ZAK	**Zakamensk**	**51.61**	**344**	*e*P	**P**	**19 13 34.4**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY	**Talaya**	**52.69**	**345**	*e*P	**P**	**19 13 43.7**	**+2.1**
	comp=Z,8.1nm,0.9s						
TLY	**Talaya**	**52.69**	**345**	*c i* P	**P**	**19 13 42.8**	**+1.2**
MOY	**Mondy**	**53.41**	**343**	*e*P	**P**	**19 13 49.2**	**+2.2**
MOY				pmax	pmax		
	comp=Z,17nm,1.8s						
NIL	**Nilore**	**56.53**	**310**	*e*P	**P**	**19 14 10.2**	**+0.4**
	comp=Z,19nm,1.4s						
NIL	**Nilore**	**56.53**	**310**	*e*P	**P**	**19 14 10.2**	**+0.4**
NIL				pmax	pmax		
	comp=Z,19nm,1.4s						
BOD	**Bodaibo**	**56.71**	**354**	*e*P	**P**	**19 14 11.7**	**+1.2**

ARU SS **SS** **19 30 28.6 -3.4**
ARU pmax pmax
comp=Z,13nm,1.4s
RAYN Ar Rayn 78.04 294 *e*P **P** **19 16 25.8 -0.5**
comp=Z,13nm,0.9s
RAYN Ar Rayn 78.04 294 *e*P **P** **19 16 25.8 -0.5**
RAYN pmax pmax
comp=Z,13nm,0.9s
MAW Mawson 80.34 200 P **P** **19 16 36.2 -1.5**
comp=Z,5.6nm,1.0s,baz=59,slow=8.6,SNR=9.3
MAW LR LR 19 53 22.8
comp=Z,51nm,18.8s,baz=94,slow=36
MAW Mawson 80.34 200 *e*P **P** **19 16 36.8 -1.0**
comp=Z,2.0nm,1.1s
MAW Mawson 80.34 200 *e*P **P** **19 16 36.8 -1.0**
MAW pmax pmax
comp=Z,2.0nm,1.1s
ZEI Tsey 81.09 313 *e*P **P** **19 16 41.9 -0.8**
ZEI pmax pmax
comp=Z,12nm,1.0s
AKH Akhalkalaki 81.25 312 *e*P **P** **19 16 43.1 -0.4**
comp=Z,15nm,1.2s
AKH Akhalkalaki 81.25 312 *e*P **P** **19 16 43.1 -0.4**
AKH pmax pmax
comp=Z,15nm,1.2s
VNDA Vanda 81.62 172 P **P** **19 16 42.9 -1.6**
comp=Z,4.4nm,0.8s,baz=309,slow=6.2,SNR=34
VNDA Vanda 81.62 172 *e*P **P** **19 16 43.8 -0.7**
comp=Z,5.6nm,0.9s
VNDA Vanda 81.62 172 *e*P **P** **19 16 43.8 -0.7**
VNDA pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 81.92 314 P **P** **19 16 46.7 -0.1**
comp=Z,2.4nm,0.8s,baz=119,slow=0.7,SNR=7.8
KIV Kislovodsk 82.10 314 *e*P **P** **19 16 47.7 -0.1**
KIV pmax pmax
comp=Z,9.0nm,1.1s
VSR Storozhevoye 85.08 321 *e*P **P** **19 17 01.6 -1.2**
VSR pmax pmax
comp=Z,9.0nm,1.0s
LPSR Galich'ya Gora 85.32 322 *e*P **P** **19 17 03.2 -0.8**
LPSR pmax pmax
comp=Z,20nm,1.0s
OBN Obninsk 86.84 325⇓*e*P **P** **19 17 10.7 -0.7**
OBN *e* 19 20 36.4
OBN pmax pmax
comp=Z,5.0nm,0.9s
BPAW Bear Paw Mtn. 86.96 26 *e*P **P** **19 17 12.4 +0.5**
comp=Z,3.8nm,0.8s
MLY Manley 87.12 25 *e*P **P** **19 17 13.0 +0.3**
comp=Z,6.0nm,1.0s
ILAR Eielson Array 88.76 25 P **P** **19 17 18.7 -1.7**
comp=Z,0.5nm,0.8s,baz=270,slow=5.6,SNR=5.4
SYO Syowa Base 88.96 201⇓*e*P **P** **19 17 18.7 -2.5**
SYO Syowa Base 88.96 201⇑*e*P **P** **19 17 20.0 -1.2**
QSPA South Pole Qui 91.33 180 *e*P **P** **19 17 32.1 -0.4**
comp=Z,20nm,1.4s
ARA0 ARCESS Array S 91.34 340 *e*P **P** **19 17 31.0 -1.4**
ARCES ARCESS Array B 91.34 340 P **P** **19 17 31.0 -1.4**
comp=Z,1.5nm,0.8s,baz=87,slow=8.6,SNR=3.7
DAWY Dawson 92.05 26 *e*P **P** **19 17 34.4 -1.5**
comp=Z,7.1nm,1.4s
FIA0 FINESS Array S 92.12 331 *e*P **P** **19 17 34.8 -1.4**
FIA0 FINESS Array S 92.12 331 *e*P **P** **19 17 34.8 -1.4**
FINES FINESS Array B 92.12 331 P **P** **19 17 34.8 -1.3**
comp=Z,1.1nm,0.7s,baz=70,slow=6.3,SNR=4.4
FINES FINESS Array B 92.12 331 *i*P **P** **19 17 35.7 -0.4**
FINES pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 93.64 21 *e*P **P** **19 17 43.1 +0.1**
comp=Z,8.2nm,1.4s
INK Inuvik 93.64 21 *e*P **P** **19 17 43.1 +0.1**
INK pmax pmax
comp=Z,8.0nm,1.4s
TXAR Lajitas Array 125.90 52 PKP **PKPdf** **19 23 28.4 -1.3**
comp=Z,0.2nm,0.5s,baz=243,slow=1.6,SNR=2.8
CPUP Villa Florida 155.22 179 PKPab **PKPab** **19 24 45.6 0.0**
comp=Z,3.7nm,0.7s,baz=172,slow=6.5,SNR=4.0
LPAZ La Paz 161.55 144 PKPab **PKPab** **19 25 13.1 -1.0**
comp=Z,1.7nm,0.8s,baz=206,slow=6.0,SNR=5.5
BDFB Brasilia 163.34 211 PKPab **PKPab** **19 25 20.8 -0.6**
comp=Z,2.3nm,0.4s,baz=66,slow=5.4,SNR=3.8
SIV San Ignacio 164.94 164 PKPab **PKPab** **19 25 27.6 -0.6**
baz=214,slow=7.3

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*JMA **27** 19:27:08.3±0.3,26°.00N×128°.55E,h42km±4km,M3.3*
*IDC **27** 19:27:08.7±4.1,25°.84N×127°.67E,h0km,mb3.4/3,*
mb1 3.5/3,mb1mx3.3/34,mbtmp3.4/3,MS2.6/1,Ms1 2.6/1,
ms1mx2.4/31,Error ellipse: s-maj=243.4km s-min=29.1km
az=66.0
ISC 27 19:27:06.1±1.7,**25°.99N**±0°.06×**128°.55E**±0°.04,**h8**km±11km,
n14,σ1°**49**/21,**mb3.3**/3,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.70**	**282**	P	**Pn**	**19 27 22.1**	**-0.2**
JNTH	**Nagotoyohara**	**0.70**	**318**	P	**Pn**	**19 27 21.5**	**-0.8**
JNTH				*e*S	**Sn**	**19 27 31.7**	**-1.7**
JOW	**Kunigami**	**0.87**	**344**	P	**Pn**	**19 27 24.4**	**-0.2**
JYRO	**Yoronjima**	**1.03**	**355**	P	**Pg**	**19 27 26.5**	**+0.6**
JYRO				*e*S	**Sn**	**19 27 40.4**	**-1.0**
JIH	**Iheya**	**1.16**	**333**	P	**Pg**	**19 27 28.8**	**+0.4**
JIH				*e*S	**Sg**	**19 27 44.0**	**+0.5**
JAGN	**Aguni-jima**	**1.31**	**297**	P	**Pg**	**19 27 31.0**	**-0.3**
JAGN				*e*S	**Sg**	**19 27 47.6**	**-0.8**
JOKE	**Okinoerabujima**	**1.36**	**1**	P	**Pb**	**19 27 31.5**	**-0.4**
JOKE				*e*S	**Sn**	**19 27 48.8**	**-0.9**
JKE	**Kume jima 2**	**1.62**	**282**	P	**Pn**	**19 27 34.5**	**-0.4**
JKE				S	**Sb**	**19 27 54.9**	**-1.9**
JTK	**Tokunoshima**	**1.82**	**11**	P	**Pn**	**19 27 38.0**	**+0.3**
JTK				*e*S	**Sn**	**19 28 00.0**	**-1.0**
JMZ	**Minamidaito 2**	**2.41**	**94**	P	**Pn**	**19 27 44.6**	**-1.2**
JMZ				*e*S	**Sn**	**19 28 12.1**	**-3.4**
KSRS	**Korea Array**	**11.44**	**357**	LR	LR	19 34 27.0	
	comp=Z,30nm,19.5s,baz=240,slow=38						
SONM	**Songino Array**	**27.91**	**327**	P	**P**	**19 32 57.9**	**+1.3**
	0.5nm,0.6s,baz=129,slow=7.3,SNR=3.9						
MKAR	**Makanchi Array**	**41.91**	**312**	P	**P**	**19 34 56.7**	**-0.3**
	0.3nm,0.5s,baz=98,slow=9.8,SNR=5.1						
ASAR	**Alice Springs**	**49.64**	**174**	P	**P**	**19 36 01.6**	**+3.4**
	0.2nm,0.7s,baz=354,slow=6.0,SNR=4.2						

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*GUC **27** 19:29:27.4±0.7, 19°.44S×66°.99W,h372km±8km,ML4.8*
*IDC **27** 19:29:27.3±0.9, 19°.11S×65°.92W,h283km±8km,mb4.0/13,*
mb1 4.1/19,mb1mx4.0/32,mbtmp4.6/19,Error ellipse:
s-maj=11.9km s-min=9.5km az=99.0
*NEIC **27** 19:29:27.3±2.0, 19°.16S×65°.93W,h283km±2km,mb4.5/130,*
Error ellipse: s-maj=14.9km s-min=13.4km az=85.0
*ISCJB **27** 19:29:27.8±0.2, 19°.27S±0°.03×66°.12W±0°.03,h302km±2km,*
mb4.4/127,Error ellipse: s-maj=4.5km s-min=3.8km
az=135.3
*SCB **27** 19:29:27.4±3.0, 19°.20S×65°.96W,h322km±162km,ML4.0/2,*
Error ellipse: s-maj=10.0km s-min=6.3km az=1.0
*VAO **27** 19:29:29.2±0.4, 19°.08S×66°.16W,h318km±6km,mb4.3*
ISC 27 19:29:28.1±0.5,**19°.23S**±0°.04×**66°.17W**±0°.04,**h296**km±4km,
n255,σ1°**35**/293,**mb4.5**/127,**9C**,**Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BS10	**CO. Tuti**	**1.79**	**10**	P	**Pn**	**19 30 14.6**	**+1.0**
BS10				S	**S**	**19 30 48.9**	**-0.8**
BS10				AML	AML	19 30 50.8	
	323nm,0.7s						
MOCB	**Mochara**	**2.07**	**166**	P	**Pn**	**19 30 16.9**	**+1.3**
MOCB				S	**S**	**19 30 53.1**	**-0.3**
	362nm,1.0s						
GO01	**Chusmiza**	**2.89**	**261**	*e*Pn	**Pn**	**19 30 23.5**	**+0.5**
GO01	**Chusmiza**	**2.89**	**261**	*e*P	**Pn**	**19 30 23.8**	**+0.8**
GO01				*e*S	**S**	**19 31 08.1**	**+1.3**
BBOJ	**La Paz, Jacaqu**	**2.95**	**319**	P	**Pn**	**19 30 26.2**	**+2.4**
PB08	**IPOC Station P**	**2.95**	**252**⇑	*i*P	**Pn**	**19 30 24.5**	**+0.9**
PB08				*i*S	**S**	**19 31 08.7**	**+1.0**
PB08				IAML		19 31 16.1	
	comp=N,627nm,0.1s						
BBOE	**La Paz, Chanca**	**2.96**	**324**	P	**Pn**	**19 30 26.0**	**+2.1**
YJA	**Yavi**	**3.00**	**168**	*e*P	**Pn**	**19 30 25.4**	**+1.4**
YJA				IAML		19 30 25.6	
	comp=Z,96nm,0.3s						
YJA				*e*S	**S**	**19 31 09.7**	**+1.1**
MNMC	**Minye Minye**	**3.24**	**271**	*e*Pn	**Pn**	**19 30 26.8**	**+0.4**
MNMCX	**Minye Minye**	**3.24**	**271**	*e*P	**Pn**	**19 30 28.9**	**+2.6**
MNMCX				*e*S	**S**	**19 31 13.2**	**+0.5**
PB16	**IPOC Station P**	**3.28**	**285**	*e*P	**Pn**	**19 30 28.6**	**+1.4**
PB16				*e*S	**S**	**19 31 14.6**	**+0.4**
PB16	**IPOC Station P**	**3.28**	**285**	*i*S	**S**	**19 31 16.1**	**+2.0**
PB11	**IPOC Station P**	**3.33**	**260**	*e*Pn	**Pn**	**19 30 26.7**	**-0.4**
PB11	**IPOC Station P**	**3.33**	**260**	*e*P	**Pn**	**19 30 28.2**	**+1.1**
PB11				*e*S	**S**	**19 31 14.9**	**+0.7**
PB11	**IPOC Station P**	**3.33**	**260**⇑	*i*P	**Pn**	**19 30 27.2**	**0.0**
PB11				*i*S	**S**	**19 31 13.0**	**-1.2**
BBOD	**La Paz, Gloria**	**3.46**	**318**	P	**Pn**	**19 30 31.4**	**+2.4**
LPAZ	**La Paz**	**3.47**	**327**	P	**Pn**	**19 30 29.9**	**+0.8**
	comp=Z,26nm,0.3s,baz=107,slow=5.5,SNR=399						
LPAZ				S	**S**	**19 31 18.4**	**+0.6**
	baz=17,slow=20,SNR=3.0						
LPAZ	**La Paz**	**3.47**	**327**	*e*Pn	**Pn**	**19 30 30.3**	**+1.2**
LPAZ				*e*		19 30 30.6	
LPAZ	**La Paz**	**3.47**	**327**	*e*P	**Pn**	**19 30 30.5**	**+1.3**
LPAZ				*e*S	**S**	**19 31 18.0**	**+0.2**
LPAZ	**La Paz**	**3.47**	**327**	P	**Pn**	**19 30 30.7**	**+1.5**
LPAZ	**La Paz**	**3.47**	**327**	*e*P	**Pn**	**19 30 30.8**	**+1.7**
LPAZ				*e*S	**S**	**19 31 18.0**	**+0.2**
BBOB	**La Paz, Bander**	**3.60**	**328**	P	**Pn**	**19 30 32.5**	**+2.1**
PB01	**IPOC Station P**	**3.60**	**239**	*e*Pn	**Pn**	**19 30 29.7**	**-0.2**
PSGCX	**Pisagua**	**3.75**	**264**	*e*P	**Pn**	**19 30 32.3**	**+0.8**
PB09	**IPOC Station P**	**3.85**	**228**	*e*P	**Pn**	**19 30 33.4**	**+0.8**
PB09				*e*S	**S**	**19 31 23.2**	**-1.0**
PB09	**IPOC Station P**	**3.85**	**228**⇑	*i*P	**Pn**	**19 30 33.1**	**+0.4**
PB09				*i*S	**S**	**19 31 22.7**	**-1.5**
PB12	**IPOC Station P**	**3.98**	**278**	*e*P	**Pn**	**19 30 34.4**	**+0.3**
PB12	**IPOC Station P**	**3.98**	**278**⇑	*i*P	**Pn**	**19 30 33.5**	**-0.5**
PB12				*i*S	**S**	**19 31 24.3**	**-2.5**
PB02	**IPOC Station P**	**4.07**	**239**	*e*P	**Pn**	**19 30 35.8**	**+0.8**
LVC	**Limon Verde**	**4.23**	**217**	P	**Pn**	**19 30 37.9**	**+0.9**
	comp=Z,108nm,0.3s,baz=34,slow=7.4,SNR=302						
LVC				S	**S**	**19 31 30.3**	**-1.8**
	comp=Z,57nm,0.3s,baz=280,slow=21,SNR=10						
LVC	**Limon Verde**	**4.23**	**217**	*e*Pn	**Pn**	**19 30 37.1**	**+0.1**
LVC	**Limon Verde**	**4.23**	**217**	*e*P	**Pn**	**19 30 37.4**	**+0.4**
LVC				IAML		19 30 39.6	
	comp=Z,188nm,0.4s						
PB07	**IPOC Station P**	**4.28**	**234**	*e*P	**Pn**	**19 30 38.0**	**+0.6**
PB07	**IPOC Station P**	**4.28**	**234**	*i*S	**S**	**19 31 29.5**	**-3.4**
PB03	**IPOC Station P**	**4.37**	**229**	*e*P	**Pn**	**19 30 39.0**	**+0.5**
PB03	**IPOC Station P**	**4.37**	**229**⇑	*i*P	**Pn**	**19 30 38.3**	**-0.2**
PB03				*i*S	**S**	**19 31 31.4**	**-3.4**
PB06	**IPOC Station P**	**4.70**	**222**⇑	*i*P	**Pn**	**19 30 42.2**	**0.0**
PB06				*i*S	**S**	**19 31 38.6**	**-2.9**
PB04	**IPOC Station P**	**4.84**	**230**	*e*Pn	**Pn**	**19 30 43.8**	**+0.1**
PB04	**IPOC Station P**	**4.84**	**230**	*e*P	**Pn**	**19 30 43.9**	**+0.1**
PB04	**IPOC Station P**	**4.84**	**230**⇑	*i*P	**Pn**	**19 30 43.4**	**-0.4**
PB04				*i*S	**S**	**19 31 40.4**	**-4.1**
PB15	**IPOC Station P**	**5.01**	**217**	*e*P	**Pn**	**19 30 46.4**	**+0.5**
PB15	**IPOC Station P**	**5.01**	**217**⇑	*i*P	**Pn**	**19 30 46.5**	**+0.6**
PB15				*e*S	**S**	**19 31 46.0**	**-2.2**
AZAP	**Zapla**	**5.08**	**169**	*e*P	**Pn**	**19 30 46.6**	**0.0**
AZAP				IAML		19 30 47.1	
	comp=Z,46nm,0.5s						
PB05	**IPOC Station P**	**5.21**	**226**	*e*P	**Pn**	**19 30 48.1**	**0.0**
PB05	**IPOC Station P**	**5.21**	**226**⇑	*i*P	**Pn**	**19 30 47.6**	**-0.6**
PB05				*i*S	**S**	**19 31 47.9**	**-4.5**
SLA	**San Lorenzo**	**5.50**	**174**	*e*P	**Pn**	**19 30 51.9**	**+0.3**
SLA				IAML		19 30 52.9	
	comp=Z,47nm,0.6s						
SIV	**San Ignacio**	**5.83**	**57**	P	**Pn**	**19 30 52.7**	**-2.8**
	comp=Z,12nm,0.3s,baz=256,slow=9.7,SNR=228						
SIV				S	S	19 31 56.5	-9.2
	comp=Z,2.0nm,0.3s,baz=259,slow=18,SNR=3.1						
PB10	**IPOC Station P**	**5.90**	**223**	*e*Pn	**Pn**	**19 30 55.2**	**-0.9**
PB10	**IPOC Station P**	**5.90**	**223**	*e*P	**Pn**	**19 30 55.7**	**-0.5**
PB14	**IPOC Station P**	**6.65**	**215**	*e*P	**Pn**	**19 31 04.8**	**-0.7**
GO02	**Mina Guanaco**	**6.70**	**208**	*e*Pn	**Pn**	**19 31 05.2**	**-0.9**
GO03	**Copiap**	**9.12**	**203**	*e*Pn	**Pn**	**19 31 33.5**	**-2.0**
AQDB	**Aquidauana**	**9.93**	**99**	*e*P	**Pn**	**19 31 45.3**	**-0.2**
GO04	**Tololo Observa**	**11.68**	**200**	*e*Pn	**Pn**	**19 32 06.4**	**-0.7**
CFA	**Coronel Fontan**	**12.46**	**188**	P	**Pn**	**19 32 15.6**	**-0.8**
	comp=Z,2.9nm,0.3s,baz=48,slow=15,SNR=36						
CFA				S	S	19 34 24.4	-10
	comp=Z,6.0nm,0.3s,baz=174,slow=18,SNR=11						
NNA	**Nana**	**12.55**	**303**	S	**S**	**19 34 32.8**	**-4.2**
	comp=Z,8.7nm,0.3s,baz=224,slow=18,SNR=6.2						
CLDB	**Colider**	**13.01**	**52**	*e*P	**Pn**	**19 32 22.6**	**-0.6**
TRCB	**Terra Rica**	**13.13**	**108**	*e*P	**P**	**19 32 26.4**	**+1.4**
PTGB	**Pitanga**	**14.18**	**115**	*e*P	**Pn**	**19 32 37.8**	**+0.7**
ITRB	**Iturama**	**14.92**	**94**	*e*P	**P**	**19 32 44.7**	**0.0**
ITAB	**Concordia**	**15.16**	**124**	*e*P	**P**	**19 32 47.9**	**+0.7**
FRTB	**Fartura**	**16.01**	**108**	*e*P	**P**	**19 32 57.7**	**+1.1**
BB19B	**Bebedouro**	**16.67**	**99**	*e*P	**P**	**19 33 04.0**	**+0.2**
ATAH	**Atahualpa**	**16.90**	**314**	P	**Pn**	**19 33 09.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=125,slow=11,SNR=3.6						
BDFB	**Brasilia**	**17.69**	**81**	P	**P**	**19 33 13.7**	**-1.3**
	comp=Z,2.1nm,0.3s,baz=249,slow=14,SNR=20						
BDFB	**Brasilia**	**17.69**	**81**	*e*P	**P**	**19 33 13.7**	**-1.3**
BDFB				*e*P	**P**	**19 33 14.4**	**-0.5**
SPB	**Sao Paulo**	**17.98**	**107**	*e*P	**P**	**19 33 17.4**	**-0.5**
PEXB	**Peixe**	**18.60**	**70**	*e*P	**P**	**19 33 24.0**	**-0.7**
TRQA	**Tornquist**	**19.11**	**170**	*e*P	**P**	**19 33 29.4**	**-0.5**
	comp=Z,8.0nm,0.8s						
TRQA	**Tornquist**	**19.11**	**170**	*e*P	**P**	**19 33 30.6**	**+0.7**
PTGA	**Pitinga**	**19.36**	**19**	P	**P**	**19 33 30.6**	**-2.2**
	comp=Z,4.2nm,0.3s,baz=207,slow=13,SNR=28						
PTGA				S	**S**	**19 36 51.1**	**-4.6**
	comp=Z,0.5nm,0.3s,baz=218,slow=18,SNR=5.4						
PTGA	**Pitinga**	**19.36**	**19**	*e*P	**P**	**19 33 31.2**	**-1.6**
BSCB	**Bom Sucesso**	**20.17**	**99**	*e*P	**P**	**19 33 41.6**	**+0.3**
ESAR	**Angra dos Reis**	**20.61**	**104**	*e*P	**P**	**19 33 44.7**	**-0.9**
SMTB	**Santa Maria do**	**20.74**	**63**	*e*P	**P**	**19 33 44.6**	**-2.5**
GO06	**Curarrehue**	**20.80**	**192**	*e*P	**P**	**19 33 48.5**	**+1.1**
	comp=Z,32nm,1.1s						
JANB	**Januaria**	**21.29**	**82**	*e*P	**P**	**19 33 51.5**	**-0.9**
VAS01	**Vassouras-RJ**	**21.47**	**102**	*e*P	**P**	**19 33 54.0**	**+0.1**
PLCA	**Paso Flores**	**21.76**	**189**	P	**P**	**19 33 57.1**	**+0.8**
	comp=Z,22nm,0.8s,baz=32,slow=11,SNR=27						
PLCA	**Paso Flores**	**21.76**	**189**	*e*P	**P**	**19 33 56.5**	**+0.2**
	comp=Z,22nm,0.8s						
PLCA	**Paso Flores**	**21.76**	**189**	*e*P	**P**	**19 33 57.0**	**+0.8**
MDP	**Montagnes des**	**27.61**	**30**	P	**P**	**19 34 47.0**	**-2.1**
	comp=Z,6.4nm,0.5s,baz=209,slow=8.0,SNR=14						
USHA	**Ushuaia**	**35.58**	**182**	P	**P**	**19 35 58.7**	**+0.9**
	comp=Z,6.4nm,0.8s,baz=301,slow=5.9,SNR=3.4						
TEIG	**Tepich**	**44.80**	**330**	*e*P	**P**	**19 37 12.9**	**-0.5**
LNIG	**Linares**	**54.54**	**322**	*e*P	**P**	**19 38 26.0**	**-0.3**
	comp=Z,17nm,1.5s						
ZAIG	**Zacatecas**	**54.83**	**318**	*e*P	**P**	**19 38 30.8**	**+2.0**
V56A	**Mocksville**	**56.40**	**346**	*e*P	**P**	**19 38 38.2**	**-1.1**
	comp=Z,7.1nm,0.6s						
833A	**Chaparral WMA,**	**57.16**	**325**	*e*P	**P**	**19 38 45.5**	**+0.8**
	comp=Z,39nm,0.6s						
SWET	**Sewanee**	**57.30**	**341**	*e*P	**P**	**19 38 44.7**	**-1.0**
	comp=Z,5.0nm,0.7s						
V48A	**Smith Brothers**	**58.07**	**340**	*e*P	**P**	**19 38 50.0**	**-0.9**
	comp=Z,7.1nm,0.9s						
CLTN	**Cedars of Leba**	**58.24**	**341**	*e*P	**P**	**19 38 50.9**	**-1.1**
	comp=Z,3.3nm,0.8s						
WVT	**Waverly**	**58.75**	**340**	*e*P	**P**	**19 38 54.2**	**-1.4**
	comp=Z,8.8nm,0.8s						
T49A	**Edmonton**	**58.93**	**342**	*e*P	**P**	**19 38 55.7**	**-1.1**
	comp=Z,5.7nm,0.6s						
JCT	**Junction City**	**59.07**	**326**	*e*P	**P**	**19 38 57.7**	**-0.3**
	comp=Z,14nm,0.8s						
WHTX	**Lake Whitney,**	**59.10**	**329**	*e*P	**P**	**19 38 57.3**	**-0.7**
	comp=Z,24nm,0.8s						
T47A	**Sharon Grove**	**59.30**	**341**	*e*P	**P**	**19 38 58.2**	**-1.2**
	comp=Z,11nm,0.9s						
MIAR	**Mount Ida**	**59.49**	**334**	*e*P	**P**	**19 39 00.2**	**-0.5**
	comp=Z,30nm,1.3s						
W41B	**Gary Mavity, V**	**59.50**	**335**	*e*P	**P**	**19 39 00.0**	**-0.7**
	comp=Z,17nm,0.8s						
WHAR	**Wooly Hollow**	**59.62**	**335**	*e*P	**P**	**19 39 00.4**	**-1.1**
FCAR	**Ozark Folk Cen**	**60.08**	**336**	*e*P	**P**	**19 39 03.6**	**-1.0**
	comp=Z,6.9nm,0.7s						
W39A	**Magazine**	**60.14**	**334**	*e*P	**P**	**19 39 05.3**	**+0.2**
	comp=Z,5.3nm,0.8s						
PBMO	**Poplar Bluff**	**60.23**	**338**	*e*P	**P**	**19 39 05.1**	**-0.5**
	comp=Z,17nm,0.6s						
X37A	**Clayton**	**60.30**	**332**	*e*P	**P**	**19 39 06.3**	**+0.2**
	comp=Z,38nm,1.6s						
LTX	**Lajitas**	**60.33**	**322**	*e*P	**P**	**19 39 06.9**	**+0.3**
TXAR	**Lajitas Array**	**60.33**	**322**	P	**P**	**19 39 06.9**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=149,slow=7.8,SNR=32						
TX31	**Lajitas Ar. Si**	**60.33**	**322**	*e*P	**P**	**19 39 06.8**	**+0.2**
	comp=Z,1.9nm,0.6s						
ABTX	**Abilene, Hawle**	**60.70**	**328**	*e*P	**P**	**19 39 09.0**	**+0.1**
	comp=Z,12nm,1.1s						
HHAR	**Hobbs**	**61.14**	**335**	*e*P	**P**	**19 39 11.3**	**-0.5**
	comp=Z,4.9nm,0.7s						
TUL1	**Leonard**	**61.60**	**333**	*e*P	**P**	**19 39 14.2**	**-0.7**
	comp=Z,16nm,0.6s						
CCM	**Cathedral Cave**	**61.66**	**338**	*e*P	**P**	**19 39 14.2**	**-1.0**
	comp=Z,19nm,0.8s						
WMOK	**Wichita Mounta**	**61.98**	**330**	*e*P	**P**	**19 39 17.3**	**-0.1**
N49A	**Columbus Grove**	**62.14**	**345**	*e*P	**P**	**19 39 17.2**	**-1.1**
	comp=Z,11nm,0.7s						
MNTX	**Cornudas Mount**	**63.07**	**323**	*e*P	**P**	**19 39 24.2**	**-0.5**
	comp=Z,4.4nm,0.9s						
MSTX	**Muleshoe**	**63.36**	**326**	*e*P	**P**	**19 39 26.8**	**+0.2**
	comp=Z,14nm,0.8s						
AMTX	**Amarillo**	**63.52**	**328**	*e*P	**P**	**19 39 27.5**	**-0.1**
	comp=Z,6.1nm,0.8s						
SNAA	**Sanae**	**63.59**	**162**	*e*P	**P**	**19 39 28.1**	**+0.5**
	comp=Z,5.4nm,0.8s						
BNM	**Barren Site**	**65.59**	**324**	*e*P	**P**	**19 39 41.4**	**+0.3**
DBIC	**Dimbokro**	**65.62**	**73**	P	**P**	**19 39 39.7**	**-1.8**
	comp=Z,6.6nm,0.5s,baz=228,slow=3.6,SNR=19						
DBIC	**Dimbokro**	**65.62**	**73**	*e*P	**P**	**19 39 39.6**	**-1.8**
	comp=Z,12nm,0.8s						
LPM	**Los Pinos Moun**	**65.71**	**324**	*e*P	**P**	**19 39 43.0**	**+1.1**
CBKS	**Cedar Bluff**	**65.75**	**332**	*e*P	**P**	**19 39 42.3**	**+0.5**
	comp=Z,32nm,0.7s						
LENM	**Lemitar**	**65.79**	**324**	*e*P	**P**	**19 39 43.5**	**+1.1**
LAZ	**Ladron**	**66.06**	**324**	*e*P	**P**	**19 39 45.5**	**+1.4**
ANMO	**Albuquerque**	**66.08**	**324**	*e*P	**P**	**19 39 45.3**	**+1.1**
	comp=Z,21nm,1.8s						
T25A	**Trinidad**	**66.66**	**327**	*e*P	**P**	**19 39 48.5**	**+0.7**
	comp=Z,13nm,1.5s						
TUC	**Tucson**	**66.71**	**320**	*e*P	**P**	**19 39 48.5**	**+0.5**
	comp=Z,8.2nm,1.0s						
SDCO	**Great Sand Dun**	**67.68**	**327**	*e*P	**P**	**19 39 55.0**	**+0.8**
	comp=Z,10.0nm,0.8s						
W18A	**Petrified Fore**	**68.05**	**322**	*e*P	**P**	**19 39 57.8**	**+1.2**
	comp=Z,5.7nm,0.6s						
OGNE	**Ogallala**	**68.51**	**332**	*e*P	**P**	**19 39 59.8**	**+0.7**
	comp=Z,26nm,0.6s						
X16A	**Lo Mia Camp, P**	**68.56**	**321**	*e*P	**P**	**19 39 59.6**	**-0.1**
	comp=Z,9.1nm,1.2s						
ECSD	**EROS Data Cent**	**68.59**	**337**	*e*P	**P**	**19 39 59.0**	**-0.4**
	comp=Z,15nm,1.5s						
MVCO	**Mesa Verde**	**68.86**	**325**	*e*P	**P**	**19 40 02.1**	**+0.5**
	comp=Z,13nm,1.0s						
113A	**Mohawk Valley,**	**68.87**	**318**	*e*P	**P**	**19 40 02.1**	**+0.8**
	comp=Z,4.9nm,0.9s						
Y14A	**Wickenburg**	**69.18**	**320**	*e*P	**P**	**19 40 04.6**	**+1.3**
	comp=Z,8.2nm,0.9s						
WUAZ	**Wupatki**	**69.28**	**322**	*e*P	**P**	**19 40 05.4**	**+1.4**
	comp=Z,9.9nm,0.9s						
ISCO	**Idaho Springs**	**69.30**	**328**	*e*P	**P**	**19 40 04.9**	**+0.7**
	comp=Z,3.3nm,0.7s						
SMCO	**Snowmass**	**69.52**	**327**	*e*P	**P**	**19 40 06.9**	**+1.2**
	comp=Z,12nm,1.4s						
PV01	**Paradox Valley**	**69.58**	**325**	*e*P	**P**	**19 40 07.8**	**+2.0**
	comp=Z,8.1nm,0.9s						
PV13	**Radium Mtn., P**	**69.73**	**325**	*e*P	**P**	**19 40 08.3**	**+1.5**
	comp=Z,28nm,1.9s						
PV07	**Paradox Valley**	**69.84**	**326**	*e*P	**P**	**19 40 08.8**	**+1.4**
	comp=Z,4.4nm,0.6s						
PV22	**Blue Mesa, Par**	**69.99**	**326**	*e*P	**P**	**19 40 09.8**	**+1.5**
	comp=Z,10nm,1.1s						
PV21	**Cone Mtn., Par**	**70.11**	**325**	*e*P	**P**	**19 40 10.3**	**+1.3**
	comp=Z,7.4nm,0.9s						
N23A	**Red Feather La**	**70.30**	**329**	*e*P	**P**	**19 40 10.7**	**+0.4**
	comp=Z,5.4nm,0.8s						
U15A	**North Rim**	**70.45**	**322**	*e*P	**P**	**19 40 13.0**	**+1.8**
	comp=Z,13nm,1.0s						
W13A	**Hualapai Mount**	**70.50**	**320**	*e*P	**P**	**19 40 13.4**	**+2.0**
	comp=Z,5.8nm,0.7s						
O20A	**White River Ci**	**70.88**	**327**	*e*P	**P**	**19 40 13.5**	**-0.1**
	comp=Z,9.9nm,0.9s						
QSPA	**South Pole Qui**	**70.95**	**180**	*e*P	**P**	**19 40 14.9**	**+1.2**
	comp=Z,9.8nm,0.8s						
KNB	**Kanab**	**71

comp=Z,14nm,0.9s
YHH Holmes Hill 75.61 329 *e*P **P 19 40 43.0 +1.9**
comp=Z,14nm,0.7s
RYN Ryan 75.61 320 *e*P **P 19 40 41.3 +0.2**
comp=Z,9.7nm,1.1s
KVN Kaiserville 75.62 321 *e*P **P 19 40 42.4 +1.1**
comp=Z,9.3nm,0.7s
YHB Horse Butte 75.75 329 *e*P **P 19 40 42.2 +0.4**
comp=Z,12nm,0.7s
GCMT Greycliff 75.78 330 *e*P **P 19 40 43.0 +1.2**
YERR Yerington 76.27 320 *e*P **P 19 40 45.5 +0.6**
comp=Z,8.3nm,0.6s
HLID Hailey 76.55 326 *e*P **P 19 40 48.1 +1.8**
comp=Z,12nm,0.8s
PNTR Pine Nut 76.55 320 *e*P **P 19 40 48.5 +2.0**
comp=Z,16nm,0.8s
BOZ Bozeman (W) 76.57 329 *e*P **P 19 40 47.4 +1.0**
comp=Z,4.3nm,1.1s
MCMT McKenzie Canyo 76.63 328 *e*P **P 19 40 48.1 +1.3**
PAHR Pah Rah Range 76.81 321 *e*P **P 19 40 49.9 +2.1**
comp=Z,16nm,0.8s
DLMT Dillon 76.88 328 *e*P **P 19 40 49.6 +1.5**
comp=Z,25nm,1.8s
AFDM Forest Hills D 77.31 319 *e*P **P 19 40 51.6 +1.2**
comp=Z,5.2nm,1.0s
HRY Holter Researc 77.47 330 *e*P **P 19 40 52.8 +1.5**
BEKR Beckworth 77.50 320 *e*P **P 19 40 53.4 +1.8**
comp=Z,15nm,1.5s
PLID Pearl Lake 78.42 326 *e*P **P 19 40 58.0 +1.4**
comp=Z,8.9nm,0.8s
J08A Circle Bar Ran 78.61 324 *e*P **P 19 40 59.1 +1.5**
comp=Z,5.8nm,0.8s
MOD Modoc Plateau 78.73 322 *e*P **P 19 41 00.1 +1.8**
comp=Z,5.9nm,0.6s
BMO Blue Mountains 78.95 326 *e*P **P 19 41 00.5 +1.2**
comp=Z,9.6nm,0.8s
WDC Whiskeytown Da 79.25 320 *e*P **P 19 41 00.8 -0.1**
comp=Z,6.0nm,0.7s
VNDA Vanda 79.51 189 P **P 19 41 04.3 +2.5**
comp=Z,1.5nm,0.8s,baz=120,slow=3.6,SNR=14
VNDA Vanda 79.51 189 *e*P **P 19 41 04.3 +2.5**
comp=Z,3.3nm,1.0s
I07A Izee 79.65 324 *e*P **P 19 41 04.7 +1.5**
comp=Z,16nm,1.4s
F10A Beach Ranch, E 79.66 327 *e*P **P 19 41 04.4 +1.3**
comp=Z,5.5nm,0.7s
G08A Pilot Rock 80.13 325 *e*P **P 19 41 07.0 +1.3**
comp=Z,10nm,1.4s
PINE Pine Mountain 80.27 323 *e*P **P 19 41 08.3 +1.7**
comp=Z,12nm,0.9s
C09A Chrisman Ranch 81.40 327 *e*P **P 19 41 12.9 +0.7**
comp=Z,12nm,0.6s
LTY Liberty 82.30 326 *e*P **P 19 41 17.6 +0.7**
comp=Z,6.4nm,0.6s
ESDC Sonseca Array 82.42 44 P **P 19 41 16.8 -0.9**
comp=Z,0.7nm,0.6s,baz=244,slow=6.5,SNR=5.4
MAW Mawson 85.74 163 P **P 19 41 35.1 +1.2**
comp=Z,3.7nm,0.7s,baz=194,slow=5.0,SNR=14
MAW Mawson 85.74 163 *e*P **P 19 41 35.0 +1.2**
comp=Z,0.9nm,0.8s
YKA Yellowknife Ar 89.94 340 P **P 19 41 53.8 +0.3**
comp=Z,2.4nm,0.5s,baz=126,slow=4.7,SNR=30
YKA pP **pP 19 43 04.4 -1.0**
comp=Z,0.4nm,0.6s,baz=135,slow=5.2,SNR=4.6
YKB5 Yellowknife Ar 89.94 340 *e*P **P 19 41 53.9 +0.3**
YKB5 *e*pP **pP 19 43 04.4 -1.0**
YKW3 Yellowknife Ar 89.99 340 *e*P **P 19 41 54.2 +0.4**
comp=Z,3.8nm,0.5s
STKA Stephens Creek 122.63 208 PKP **PKiKP 19 47 50.1 +0.6**
comp=Z,1.6nm,0.7s,baz=357,slow=1.9,SNR=4.8
ARU Arti 124.84 34 PKP **PKPdf 19 47 52.7 +0.1**
comp=Z,1.4nm,0.4s,baz=325,slow=5.2,SNR=9.1
ARU Arti 124.84 34 *e*PKPdf **PKiKP 19 47 53.4 +0.4**
AKTO Aktyubinsk 126.24 41 PKP **PKPdf 19 47 55.6 +0.1**
comp=Z,0.5nm,0.4s,baz=108,slow=2.9,SNR=4.5
GEYT Alibeck 128.41 56 PKP **PKPdf 19 48 00.4 +0.3**
comp=Z,0.8nm,0.4s,baz=270,slow=3.0,SNR=4.5
SEY Seymchan 128.99 338 PKP **PKiKP 19 48 01.9 +0.8**
comp=Z,4.4nm,0.7s,baz=91,slow=5.4,SNR=11
ASAR Alice Springs 133.08 206 PKP **PKPdf 19 48 09.8 +0.4**
comp=Z,1.6nm,0.4s,baz=132,slow=1.8,SNR=29
AS31 Alice Springs 133.08 206 *e*PKPdf **PKPdf 19 48 09.9 +0.5**
WR1 Warramunga Arr 136.18 208 *e*PKPdf **PKPdf 19 48 15.9 +0.6**
WR1 *e*SKPbc **SKPbc 19 51 20.6 +1.5**
WRA Warramunga Arr 136.18 208 PKP **PKPdf 19 48 15.9 +0.6**
comp=Z,2.6nm,0.3s,baz=195,slow=2.1,SNR=25
WRA SKPbc **SKPbc 19 51 20.5 +1.4**
comp=Z,1.6nm,0.7s,baz=197,slow=2.6,SNR=7.4
ZAA1 Zalesovo Array 138.81 26 *e*PKPdf **PKPdf 19 48 19.9 +0.9**
ZAA1 *e*SKPbc **SKiKP 19 51 27.2 -1.5**
ZAA0 Zalesovo Array 138.81 26 *e*PKPdf **PKPdf 19 48 19.9 +0.9**
ZALV Zalesovo Beam 138.81 26 PKP **PKPdf 19 48 19.9 +0.9**
comp=Z,2.4nm,0.6s,baz=286,slow=2.9,SNR=11
ZALV SKPbc **SKiKP 19 51 27.2 -1.5**
comp=Z,5.1nm,0.7s,baz=301,slow=4.0,SNR=20
FITZ Fitzroy Crossi 141.13 198 PKP **PKiKP 19 48 27.0 -0.1**
comp=Z,1.0nm,0.6s,baz=206,slow=7.1,SNR=5.4
MK32 Makanchi Array 142.30 36 *e*PKPpre PKPpre 19 48 21.8
MK32 *e*PKPdf **PKiKP 19 48 27.5 -1.2**
MK32 *e*SKPdf **SKiKP 19 51 36.6 +0.3**
MKAR Makanchi Array 142.30 36 PKhKP PKPpre 19 48 21.8
comp=Z,0.7nm,0.6s,baz=349,slow=2.2,SNR=5.9
MKAR PKP **PKiKP 19 48 27.5 -1.2**
comp=Z,1.3nm,0.6s,baz=302,slow=1.2,SNR=8.0
MKAR SKPbc **SKiKP 19 51 36.6 +0.3**
comp=Z,1.3nm,0.7s,baz=305,slow=2.8,SNR=11
ASAJ Asahikawa 145.46 322 PKPbc **PKPab 19 48 33.0 +0.6**
comp=Z,7.8nm,0.8s,baz=62,slow=1.7,SNR=9.0
JAY Jayapura 145.87 234 PKPbc **PKPbc 19 48 34.2 +0.3**
comp=Z,5.6nm,0.6s,baz=182,slow=6.9,SNR=6.9
KLR Kul'dur 146.78 338 PKPbc **PKPdf 19 48 34.2 +1.0**
comp=Z,1.7nm,0.5s,baz=109,slow=3.2,SNR=8.3
BATI Baumata 149.19 199 PKPbc **PKiKP 19 48 43.4 -0.5**
comp=Z,4.0nm,0.5s,baz=182,slow=7.4,SNR=5.9
GUMO Guam 149.73 264 PKPbc **PKPbc 19 48 43.7 -0.3**
comp=Z,37nm,0.4s,baz=332,slow=23,SNR=5.4
SONA0 Songino Array 150.83 10 *e*PKPdf **PKPdf 19 48 41.2 +1.3**
SONA0 *e*PKPbc **PKiKP 19 48 46.4 0.0**
SONM Songino Array 150.83 10 PKP **PKPdf 19 48 41.2 +1.3**
comp=Z,1.0nm,0.7s,baz=296,slow=1.9,SNR=7.7
SONM PKPbc **PKiKP 19 48 46.4 0.0**
comp=Z,5.8nm,0.6s,baz=307,slow=1.4,SNR=33
USRK Ussuriysk Ar. 150.83 333 PKPbc **PKiKP 19 48 46.6 +0.3**
comp=Z,16nm,0.7s,baz=334,slow=1.4,SNR=35
MJAR Matsushiro Arr 152.52 314 PKPbc **PKPbc 19 48 49.4 -0.5**
comp=Z,2.3nm,0.7s,baz=111,slow=1.1,SNR=8.4
MJAR PKPab **PKPab 19 49 00.8 -0.7**
comp=Z,3.1nm,0.6s,baz=61,slow=3.2,SNR=7.2
MAJO Matsushiro 152.52 314 *e*PKPbc **PKiKP 19 48 50.6 +0.5**
MAJO *e*PKPab **PKPab 19 49 00.8 -0.7**
KSRS Korea Array 158.06 329 PKPab **PKPab 19 49 25.1 0.0**
comp=Z,1.0nm,0.5s,baz=38,slow=6.3,SNR=6.1

GCG 27 19:33:31.5±0.4, 15°.14N×90°.10W, h199km±30km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.90**	**213**	*e*P	Pn	19 34 01.6	+0.8
PCG				*e*S	Sn	19 34 25.3	+1.8
FUG	**Fuego 3**	**1.00**	**226**	*e*P	Pn	19 34 02.3	+0.8
IXG	**Ixpaco**	**1.02**	**199**	*e*P	Pn	19 34 02.3	+0.7
STG3	**Santiaguito 3,**	**1.49**	**253**	*e*P	Pn	19 34 06.1	+0.8

NIED ***27*** *19:38:00, 26°.10N×128°.50E, h11km, Mw4.3 Best double couple: M0=2.76000×10^15 NP1:φs=218.00000°, δ38.00000°, λ79.00000°. NP2:φs=52.00000°, δ53.00000°, λ99.00000°.*
IDC ***27*** *19:38:08.3±0.7, 26°.04N×128°.40E, h0km, mb4.0/20, mb1 4.1/24, mb1mx4.0/67, mbtmp4.0/24, ML3.2/3, MS3.4/8, Ms1 3.4/8, ms1mx3.0/36, Error ellipse: s-maj=21.3km s-min=14.3km az=94.0*
NEIC ***27*** *19:38:10.6±1.4, 25°.99N×128°.42E, h15km±6km, mb4.3/13, Error ellipse: s-maj=19.8km s-min=7.6km az=85.0*
JMA ***27*** *19:38:12.5±0.2, 26°.08N×128°.47E, h43km±3km, M3.6*
ISC 27 19:38:08.3±1.6, 25°.97N±0°.05×128°.54E±0°.04, h4km±10km, n70, σ1°§29/75, mb4.2/32, MS3.4/6, 5C, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.70**	**284**	P	**Pn**	**19 38 25.0**	**+0.1**
JJT3				*e*S	**Sn**	**19 38 34.2**	**-1.9**
JNTH	**Nagotoyohara**	**0.71**	**320**	P	**Pn**	**19 38 24.3**	**-0.8**
JOW	**Kunigami**	**0.89**	**345**	Pn	**Pg**	**19 38 26.1**	**+0.8**
	30nm,0.3s,baz=146,slow=12,SNR=185						
JOW				Sn	**Sb**	**19 38 37.2**	**-1.3**
	76nm,0.3s,baz=89,slow=17,SNR=18						
JOW	**Kunigami**	**0.89**	**345**	*e*Pg	**Pn**	**19 38 27.2**	**-0.4**
JOW	**Kunigami**	**0.89**	**345**	P	**Pn**	**19 38 27.2**	**-0.4**
JOW				*e*S	**Sb**	**19 38 37.1**	**-1.4**
JYRO	**Yoronjima**	**1.05**	**356**	P	**Pb**	**19 38 29.3**	**+0.3**
JYRO				*e*S	**Sb**	**19 38 42.1**	**-1.1**
JIH	**Iheya**	**1.18**	**334**	P	**Pg**	**19 38 31.7**	**+0.9**
JIH				*e*S	**Sg**	**19 38 45.3**	**-0.8**
JAGN	**Aguni-jima**	**1.31**	**298**	P	**Pg**	**19 38 33.9**	**+0.4**
JAGN				*e*S	**Sg**	**19 38 49.0**	**-1.5**
JOKE	**Okinoerabujima**	**1.39**	**1**	P	**Pn**	**19 38 34.3**	**-0.1**
JOKE				S	**Sb**	**19 38 50.8**	**-2.0**
JKE	**Kume jima 2**	**1.61**	**283**	P	**Pn**	**19 38 37.4**	**-0.1**
JKE				*e*S	**Sb**	**19 38 57.2**	**-2.0**
JTK	**Tokunoshima**	**1.84**	**12**	P	**Pn**	**19 38 40.6**	**-0.1**
JTK				*e*S	**Sn**	**19 39 02.2**	**-2.3**
JMZ	**Minamidaito 2**	**2.42**	**93**	P	**Pn**	**19 38 47.4**	**-1.2**
JMZ				S	**Sn**	**19 39 13.6**	**-5.1**
SSLB	**Suanglung**	**7.22**	**254**	*e*Pn	**Pn**	**19 39 52.6**	**-2.0**
JNU	**Nakatsue**	**7.41**	**15**	Pn	**Pn**	**19 39 58.6**	**+1.3**
	0.8nm,0.3s,baz=174,slow=2.8,SNR=13						
JNU				Sn	**Sn**	**19 41 18.6**	**-3.2**
	0.7nm,0.3s,baz=281,slow=19,SNR=5.7						
JNU	**Nakatsue**	**7.41**	**15**	*e*Pn	**Pn**	**19 39 58.2**	**+0.9**
KSRS	**Korea Array**	**11.46**	**358**	Pn	**Pn**	**19 40 51.7**	**-1.0**
	0.1nm,0.3s,baz=171,slow=16,SNR=5.5						
KSRS				LR	LR	19 45 29.9	
	comp=Z,156nm,20.5s,baz=177,slow=39						
MAJO	**Matsushiro**	**13.39**	**36**	*e*Pn	**Pn**	**19 41 21.8**	**+2.7**
MJAR	**Matsushiro Arr**	**13.39**	**36**	Pn	**Pn**	**19 41 21.8**	**+2.7**
	0.0nm,0.3s,baz=173,slow=9.2,SNR=3.1						
USRK	**Ussuriysk Ar.**	**18.40**	**8**	Pn	**P**	**19 42 25.6**	**+1.3**
	0.2nm,0.3s,baz=196,slow=10,SNR=3.9						
GUMO	**Guam**	**19.67**	**126**	LR	LR	19 48 13.6	
	comp=Z,68nm,20.1s,baz=320,slow=31						
ASAJ	**Asahikawa**	**21.40**	**29**	LR	LR	19 51 32.3	
	comp=Z,103nm,20.1s,baz=220,slow=38						
KLR	**Kul'dur**	**23.36**	**5**	P	**P**	**19 43 17.4**	**-0.2**
	0.8nm,0.5s,baz=178,slow=16,SNR=3.6						
YSS	**Yuzh-Sakhalins**	**23.79**	**25**	*e*P	**P**	**19 43 23.6**	**+1.8**
	27nm,0.8s						
ULN	**Ulaanbaatar**	**27.62**	**328**	*e*P	**P**	**19 43 58.3**	**+1.4**
	5.0nm,0.9s						
SONA0	**Songino Array**	**27.92**	**327**	*e*P	**P**	**19 43 59.4**	**-0.2**
SONM	**Songino Array**	**27.92**	**327**	P	**P**	**19 43 59.4**	**-0.2**
	2.1nm,0.5s,baz=136,slow=10,SNR=15						
CM31	**Chiang Mai Arr**	**28.35**	**261**	*e*P	**P**	**19 44 04.0**	**+0.4**
	6.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**28.35**	**261**	P	**P**	**19 44 04.1**	**+0.5**
	0.5nm,0.3s,baz=53,slow=7.8,SNR=5.0						
CMAR				LR	LR	19 54 48.7	
	comp=Z,64nm,20.1s,baz=18,slow=35						
MA2	**Magadan**	**36.97**	**19**	LR	LR	20 01 06.3	
	comp=Z,35nm,18.9s,baz=219,slow=37						
SEY	**Seymchan**	**40.19**	**17**	P	**P**	**19 45 45.4**	**0.0**
	0.8nm,0.5s,baz=229,slow=19,SNR=3.5						
MK31	**Makanchi Array**	**41.91**	**312**	*e*P	**P**	**19 45 59.5**	**-0.4**
	1.6nm,0.8s						
MK32	**Makanchi Array**	**41.91**	**312**	*e*P	**P**	**19 45 59.5**	**-0.4**
MKAR	**Makanchi Array**	**41.91**	**312**	P	**P**	**19 45 59.5**	**-0.4**
	1.4nm,0.6s,baz=100,slow=10,SNR=15						
MAKZ	**Makanchi**	**42.12**	**312**	*e*P	**P**	**19 46 01.9**	**+0.3**
	4.5nm,1.1s						
ZALV	**Zalesovo Beam**	**42.62**	**323**	P	**P**	**19 46 04.5**	**-0.9**
	0.9nm,0.5s,baz=105,slow=9.5,SNR=3.5						
ZAA1	**Zalesovo Array**	**42.62**	**323**	*e*P	**P**	**19 46 04.5**	**-1.0**
TIXI	**Tiksi**	**45.71**	**0**	LR	LR	20 06 18.9	
	comp=Z,57nm,20.0s,baz=183,slow=37						
WR1	**Warramunga Arr**	**45.99**	**172**	*e*P	**P**	**19 46 33.4**	**+0.6**
WRA	**Warramunga Arr**	**45.99**	**172**	P	**P**	**19 46 33.4**	**+0.6**
	1.8nm,0.7s,baz=358,slow=10,SNR=9.2						
AS31	**Alice Springs**	**49.62**	**174**	*e*P	**P**	**19 47 01.8**	**+0.9**
	1.4nm,0.4s						
ASAR	**Alice Springs**	**49.62**	**174**	P	**P**	**19 47 02.0**	**+1.1**
	0.9nm,0.8s,baz=4.0,slow=14,SNR=14						
KK31	**Karatay Array**	**49.78**	**306**	*e*P	**P**	**19 47 02.7**	**+0.6**
	1.8nm,0.8s						
KKAR	**Karatay Array**	**49.78**	**306**	*e*P	**P**	**19 47 02.7**	**+0.6**
	1.8nm,0.8s						
BRVK	**Borovoye**	**50.72**	**318**	*e*P	**P**	**19 47 09.2**	**+0.3**
	4.0nm,0.6s						
ABKAR	**Akbulak array**	**57.02**	**313**	*e*P	**P**	**19 47 55.3**	**+0.2**
	3.9nm,0.8s						
GEYT	**Alibeck**	**59.66**	**300**	P	**P**	**19 48 13.5**	**-0.4**
	1.0nm,0.6s,baz=54,slow=7.3,SNR=3.6						
GEYT				LR	LR	20 19 14.1	
	comp=Z,33nm,18.1s,baz=145,slow=41						
ILAR	**Eielson Array**	**64.53**	**28**	P	**P**	**19 48 46.3**	**+0.2**
	0.2nm,0.8s,baz=243,slow=5.9,SNR=3.2						
KBZ	**Khabaz**	**69.53**	**310**	P	**P**	**19 49 18.1**	**-0.2**
	2.1nm,0.7s,baz=87,slow=2.3,SNR=5.7						
FIA0	**FINESS Array S**	**73.22**	**331**	*e*P	**P**	**19 49 39.9**	**-0.3**
FINES	**FINESS Array B**	**73.22**	**331**	P	**P**	**19 49 39.9**	**-0.3**
	2.1nm,0.7s,baz=84,slow=5.9,SNR=6.4						
RES	**Resolute Bay**	**75.75**	**11**	P	**P**	**19 49 56.2**	**+1.6**
	2.7nm,0.6s,baz=284,slow=7.0,SNR=6.9						
AKASG	**Malin Array Be**	**75.91**	**320**	P	**P**	**19 49 55.8**	**-0.2**
	1.6nm,0.5s,baz=62,slow=6.6,SNR=3.4						
AKBB	**Malin Array Si**	**75.91**	**320**	*e*P	**P**	**19 49 55.6**	**-0.3**
	3.2nm,0.6s						
BR101	**Keskin Array S**	**77.41**	**308**	*e*P	**P**	**19 50 05.5**	**+0.5**
BRTR	**Keskin Array B**	**77.41**	**308**	P	**P**	**19 50 05.5**	**+0.5**
	2.6nm,0.8s,baz=104,slow=5.2,SNR=14						
YKA	**Yellowknife Ar**	**78.64**	**25**	P	**P**	**19 50 12.4**	**+1.3**
	0.1nm,0.4s,baz=290,slow=9.0,SNR=3.8						
YKB5	**Yellowknife Ar**	**78.64**	**25**	*e*P	**P**	**19 50 12.4**	**+1.3**
BIZ	**Bicaz**	**79.37**	**317⇑**	*i*P	**P**	**19 50 16.0**	**+0.6**
VRI	**Vrincioaia**	**79.46**	**316⇑**	*i*P	**P**	**19 50 17.7**	**+1.7**
PLOR	**Plostina**	**79.52**	**316⇑**	*i*P	**P**	**19 50 18.2**	**+1.9**
BURAR	**Bucovina Array**	**79.61**	**318⇑**	*i*P	**P**	**19 50 17.5**	**+0.7**
NB2	**NORSAR Subarra**	**79.67**	**334**	P	**P**	**19 50 16.4**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=51,slow=5.6						
NB200	**NORSAR Array S**	**79.67**	**334**	*e*P	**P**	**19 50 16.6**	**-0.2**
NOA	**NORSAR Array B**	**79.67**	**334**	P	**P**	**19 50 16.6**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=54,slow=5.3,SNR=5.4						
MLR	**Muntele Rosu**	**80.12**	**316**	P	**P**	**19 50 20.9**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=67,slow=3.6,SNR=4.1						
MLR	**Muntele Rosu**	**80.12**	**316⇑**	*i*P	**P**	**19 50 20.7**	**+1.0**
SUMG	**Summit**	**81.31**	**356**	*i*P	P	19 50 31.0	+5.1
	comp=Z,18nm,0.8s						
GERES	**GERESS Array B**	**85.57**	**323**	P	**P**	**19 50 47.3**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=46,slow=5.8,SNR=4.4						
DAVOX	**Davos/Dischmat**	**88.87**	**323**	P	**P**	**19 51 04.2**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=56,slow=3.6,SNR=2.0						
PPT	**Papeete**	**90.55**	**109**	LR	LR	20 28 01.3	
	comp=Z,40nm,18.1s,baz=134,slow=33						

NEIC ***27*** *19:49:20.7±0.0, 67°.87N×140°.99W, h6km, ML3.6(OTT), ML3.6(AEIC), After AEIC.*
ISCJB ***27*** *19:49:22.4±0.6, 67°.72N±0°.04×141°.06W±0°.09, h10km, Error ellipse: s-maj=6.5km s-min=4.8km az=3.2*
PGC ***27*** *19:49:25.2±1.1, 67°.82N×140°.95W, h10km, ML3.6/2, 279km west of Fort McPherson, Nt Northern Yukon Territory, Canada*
ISC 27 19:49:22.0±1.0, 67°.76N±0°.05×140°.97W±0°.04, h10km, n44, σ2°§13/57, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BM05	**Burnt Mountain**	**1.42**	**258**	*e*Pn	**Pn**	**19 49 48.4**	**+0.5**
BM05				*e*Sn	**Sb**	**19 50 08.7**	**+1.9**
FYU	**Fort Yukon**	**2.05**	**236**	*e*Pn	**Pn**	**19 49 57.3**	**+0.8**
EPYK	**Eagle Plains**	**2.18**	**128**	*e*Pn	**Pn**	**19 50 00.5**	**+2.2**
INK	**Inuvik**	**2.85**	**76**	*e*Pn	**Pn**	**19 50 08.5**	**+0.9**
INK	**Inuvik**	**2.85**	**76**	Pn	**Pn**	**19 50 09.2**	**+1.7**
INK				Sn	**Sn**	**19 50 43.6**	**+1.8**
PRP	**Porcupine Dome**	**2.89**	**221**	*e*Pn	**Pn**	**19 50 09.1**	**+0.8**
EGAK	**Eagle**	**3.00**	**182**	*e*Pn	**Pn**	**19 50 11.1**	**+1.5**
TOLK	**Toolik Lake Re**	**3.33**	**289**	*e*Pn	**Pn**	**19 50 15.8**	**+1.7**
COLD	**Coldfoot**	**3.59**	**266**	Pn	**Pn**	**19 50 19.9**	**+2.3**
COLD				Sg	**Sg**	**19 51 16.9**	**-0.2**
DAWY	**Dawson**	**3.77**	**169**	*e*Pn	**Pn**	**19 50 22.1**	**+1.9**
DAWY	**Dawson**	**3.77**	**169**	Pn	**Pn**	**19 50 22.8**	**+2.6**
DAWY				Sn	**Sn**	**19 51 06.3**	**+1.7**
ILB	**Eielson Array**	**3.84**	**221**	*e*Pn	**Pn**	**19 50 21.8**	**+0.7**
PS05	**TAPS Pump Stn5**	**3.88**	**260**	*e*Pn	**Pn**	**19 50 23.4**	**+1.8**
COLA	**College**	**4.01**	**227**	*e*Pn	**Pn**	**19 50 23.7**	**+0.2**
MDM	**Murphy Dome**	**4.06**	**229**	*e*Pn	**Pn**	**19 50 23.3**	**-0.8**
HDA	**Harding Lake**	**4.15**	**219**	*e*Pn	**Pn**	**19 50 26.4**	**+1.0**
CCB	**Clear Creek Bu**	**4.18**	**225**	*e*Pn	**Pn**	**19 50 26.5**	**+0.8**
DOT	**Dot Lake**	**4.33**	**199**	*e*Pn	**Pn**	**19 50 30.2**	**+2.4**
DOT	**Dot Lake**	**4.33**	**199**	Pn	**Pn**	**19 50 30.2**	**+2.4**
DOT				Sg	**Sg**	**19 51 41.2**	**+0.4**
RIDG	**Independent Ri**	**4.34**	**203**	*e*Pn	**Pn**	**19 50 30.4**	**+2.4**
WRH	**Wood River Hil**	**4.39**	**225**	*e*Pn	**Pn**	**19 50 30.6**	**+1.9**
BCA3	**Beaver Creek A**	**4.73**	**184**	*e*Pn	**Pn**	**19 50 35.9**	**+2.5**
MLY	**Manley**	**4.79**	**240**	*e*Pn	**Pn**	**19 50 33.6**	**-0.6**
MENT	**Mentasta**	**4.98**	**195**	*e*Pn	**Pn**	**19 50 36.6**	**-0.2**
PAX	**Paxson**	**5.17**	**203**	*e*Pn	**Pn**	**19 50 40.1**	**+0.7**
PAX	**Paxson**	**5.17**	**203**	Pn	**Pn**	**19 50 42.1**	**+2.7**
PAX				Sn	**Sn**	**19 51 40.3**	**+1.2**
PAX				Sg	**Sg**	**19 52 06.9**	**-0.9**
MCK	**McKinley**	**5.21**	**223**	*e*Pn	**Pn**	**19 50 40.8**	**+0.8**
IM3	**Indian Mountai**	**5.34**	**256**	*e*Pn	**Pn**	**19 50 41.7**	**0.0**
RND	**Reindeer**	**5.46**	**220**	*e*Pn	**Pn**	**19 50 44.6**	**+1.2**
BPAW	**Bear Paw Mtn.**	**5.50**	**233**	*e*Pn	**Pn**	**19 50 44.3**	**+0.4**
YUK1	**Sand Pete Hill**	**5.64**	**178**	Pn	**Pn**	**19 50 49.6**	**+3.6**
YUK1				Sg	**Sg**	**19 52 20.5**	**-2.3**
YUK2	**White River**	**6.00**	**179**	Pn	**Pn**	**19 50 53.2**	**+2.4**
YUK2				Sg	**Sg**	**19 52 33.7**	**-0.8**
YUK4	**Talbot Arm**	**6.52**	**170**	Pn	**Pn**	**19 50 59.7**	**+1.5**
YUK4				Sg	**Sg**	**19 52 45.8**	**-5.4**
SCM	**Sheep Creek Mo**	**6.54**	**207**	*e*Pn	**Pn**	**19 51 01.2**	**+3.0**
BALM	**Baldy**	**6.78**	**186**	*e*Pn	**Pn**	**19 51 04.0**	**+2.5**
BALM	**Baldy**	**6.78**	**186**	Pn	**Pn**	**19 51 05.2**	**+3.6**
YUK5	**Granite Creek**	**6.79**	**167**	Pn	**Pn**	**19 51 04.0**	**+2.2**
KIAG	**Kiagna River**	**6.89**	**186**	Pn	**Pn**	**19 51 06.7**	**+3.5**
KIAG				Sg	**Sg**	**19 53 01.3**	**-1.8**
YUK6	**Outpost Mounta**	**6.94**	**169**	Pn	**Pn**	**19 51 07.0**	**+3.1**
YUK6				Sg	**Sg**	**19 53 00.3**	**-4.2**
HYT	**Haines Junctio**	**7.13**	**166**	*e*Pn	**Pn**	**19 51 06.5**	**+0.2**
HYT	**Haines Junctio**	**7.13**	**166**	Pn	**Pn**	**19 51 09.3**	**+3.0**
HYT				Sg	**Sg**	**19 53 08.1**	**-2.4**
WHY	**Whitehorse**	**7.61**	**157**	Pn	**Pn**	**19 51 14.8**	**+1.9**
SWET	**Sewanee**	**44.81**	**108**	*e*P	**P**	**19 57 34.0**	**-1.7**
U54A	**Nelsons Funny**	**45.16**	**103**	*e*P	**P**	**19 57 35.9**	**-2.7**

IDC 27 20:30:57.0±2.5, 49°.49S×125°.05E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/14, mbtmp3.7/4, MS3.5/2, Ms1 3.5/2, ms1mx3.0/15, Error ellipse: s-maj=114.0km s-min=24.5km az=96.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.64**	**327**	T	T	20 52 04.3	
	baz=152,slow=74,SNR=9.8						
H01W2	**Cape Leeuwin H**	**16.64**	**327**	T	T	20 52 05.2	
	baz=152,slow=74,SNR=9.7						
H01W3	**Cape Leeuwin H**	**16.66**	**327**	T	T	20 52 21.6	
	baz=152,slow=74,SNR=7.8						
STKA	**Stephens Creek**	**21.53**	**41**	P	P	20 35 47.8	+0.2
	1.4nm,0.5s,baz=208,slow=12,SNR=6.5						
STKA				LR	LR	20 42 38.3	
	comp=Z,95nm,20.6s,baz=205,slow=33						
ASAR	**Alice Springs**	**26.70**	**18**	P	P	20 36 36.8	-1.0
	1.0nm,0.9s,baz=188,slow=10,SNR=7.6						
ASAR				LR	LR	20 47 02.1	
	comp=Z,135nm,18.1s,baz=230,slow=36						
WRA	**Warramunga Arr**	**30.40**	**17**	P	P	20 37 11.2	+0.3
	0.6nm,0.8s,baz=198,slow=7.4,SNR=2.5						
VNDA	**Vanda**	**31.40**	**166**	P	P	20 37 18.8	-0.4
	1.1nm,0.9s,baz=303,slow=8.7,SNR=9.1						
YKA	**Yellowknife Ar**	**145.53**	**45**	PKPbc	PKPbc	20 50 36.0	+0.1
	0.2nm,0.5s,baz=260,slow=3.7,SNR=3.2						

MAN 27 20:44:34.7, 8°.99N×123°.23E, h39km, mb4.0, ML2.8, MS2.4, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.35**	**0⇑**	*e*P	Pn	20 44 44.9	+1.4
DCPH	**Dipolog City**	**0.42**	**164⇑**	*e*P	Pn	20 44 45.9	+1.6
DCPH				*e*S	Sn	20 44 54.0	+2.8
GUIM	**Jordan**	**1.74**	**339**	*e*P	Pn	20 45 03.1	+0.7
GUIM				*e*S	Sn	20 45 24.4	+1.1

**MEX 27 20:47:39.0±0.4, 18°.15N×103

az=18.9

ISC 27 21:06:50.4±1.2, 37°57S±0'.07×73°5W±0'.1, h23km, n15, σ1°06/13, mb3.5/4, MS3.2/4, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	0.79	22	*e*P	Pb	21 07 04.5	-0.9
CCSP				*e*S	Sb	21 07 16.8	+1.2
CCSP				IAML		21 07 21.2	
	comp=E,25μm,0.6s						
CCHI	**Chillan**	1.48	50	*e*P	Pn	21 07 15.5	-0.1
CCHI				*e*S	Sn	21 07 32.5	-1.8
CCHI				IAML		21 07 47.9	
	comp=N,6μm,0.5s						
COCH	**Cobquecura**	1.54	21	*e*P	Pn	21 07 16.1	-0.4
COCH				*e*S	Sn	21 07 35.2	-0.6
COCH				IAML		21 07 46.7	
	comp=N,2μm,0.6s						
PLCA	**Paso Flores**	3.89	145	Pn	Pn	21 07 48.8	-0.1
	comp=N,0.8nm,0.3s,baz=325,slow=13,SNR=8.8						
PLCA				Lg	Lg	21 08 47.7	
	comp=N,3.2nm,0.3s,baz=232,slow=18,SNR=5.8						
PLCA				LR	LR	21 09 30.0	
	comp=N,486nm,18.9s,baz=326,slow=41						
CFA	**Coronel Fontan**	7.36	38	Pn	Pn	21 08 36.5	0.0
	comp=N,1.4nm,0.3s,baz=214,slow=12,SNR=7.5						
CFA				Sn	Sn	21 10 01.6	+2.3
	comp=N,1.1nm,0.3s,baz=114,slow=20,SNR=2.8						
CFA				LR	LR	21 11 37.8	
	comp=N,130nm,21.7s,baz=252,slow=39						
LVC	**Limon Verde**	15.43	16	LR	LR	21 16 55.6	
	comp=N,101nm,18.6s,baz=242,slow=39						
CPUP	**Villa Florida**	17.68	55	LR	LR	21 18 29.4	
	comp=N,158nm,19.2s,baz=226,slow=40						
LPAZ	**La Paz**	21.72	14	P	P	21 11 40.9	+0.2
	comp=N,0.8nm,0.8s,baz=194,slow=10.0,SNR=2.5						
SIV	**San Ignacio**	24.14	30	P	P	21 12 05.0	+0.3
	comp=N,0.4nm,0.3s,baz=224,slow=12,SNR=3.2						
NNA	**Nana**	25.66	352	LR	LR	21 19 58.0	
	comp=N,42nm,20.3s,baz=190,slow=31						
PMSA	**Palmer Station**	27.81	171	LR	LR	21 23 29.3	
	comp=N,100nm,18.2s,baz=260,slow=36						
ATAH	**Atahualpa**	30.63	350	LR	LR	21 23 07.9	
	comp=N,68nm,18.1s,baz=160,slow=32						
RPN	**Rapa Nui**	31.86	279	LR	LR	21 22 40.4	
	comp=N,49nm,21.0s,baz=172,slow=30						
TXAR	**Lajitas Array**	72.32	333	P	P	21 18 14.3	+0.1
	comp=N,0.5nm,0.8s,baz=154,slow=9.5,SNR=5.1						
PDAR	**Pinedale Array**	86.44	334	P	P	21 19 31.0	0.0
	comp=N,0.7nm,1.0s,baz=149,slow=7.4,SNR=4.1						

*DJA **27** 21:10:30.2±1.1, 6°S±7'×14°7E±1'.0, h109km±5km, M5.0/28, mB5.4/11, mb4.9/28, MLv5.4/3, Mw(mB)4.8/11*
*BJI **27** 21:10:31.9±0.0, 5°59S×147°33E, h85km, mb4.5/16, mB4.8/12, Ms4.6/3*
*ISCJB **27** 21:10:32.4±0.7, 6°02S±0'.03×146°98E±0'.04, h111km±6km, mb4.5/29, Error ellipse: s-maj=7.0km s-min=5.8km az=174.0*
*IDC **27** 21:10:33.7±0.6, 6°06S×147°07E, h110km±5km, mb3.9/15, mb1 4.1/18, mb1mx3.9/44, mbtmp4.3/18, MS3.2/7, Ms1 3.1/7, ms1mx2.9/25, Error ellipse: s-maj=15.1km s-min=8.0km az=92.0*
*NEIC **27** 21:10:34.3±1.9, 6°04S×146°90E, h110km±4km, mb4.6/18, Error ellipse: s-maj=16.6km s-min=12.1km az=94.0*

ISC 27 21:10:33.9±0.6, 6°11S±0'.05×146°95E±0'.06, h108km±5km, h109km; pP-P, n87, σ1°65/88, mb4.7/29, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.28	176	P	Pn	21 11 23.0	-0.6
	44nm,0.3s,baz=28,slow=5.4,SNR=98						
PMG				S	Sn	21 12 01.9	-0.1
	94nm,0.3s,baz=184,slow=19,SNR=14						
PMG				LR	LR	21 12 57.8	
	comp=Z,171nm,19.2s,baz=156,slow=43						
MANU	**Manus Island**	4.06	6	*e*Pn	Pn	21 11 33.6	-0.5
RABL	**Rabaul**	5.53	70	*e*Pn	Pn	21 11 54.7	+0.7
JAY	**Jayapura**	7.18	300	P	Pn	21 12 16.1	-0.3
	11nm,0.3s,baz=105,slow=5.3,SNR=61						
JAY				S	Sn	21 13 36.8	+0.3
	baz=108,slow=20,SNR=3.8						
JAY	**Jayapura**	7.18	300	P	Pn	21 12 15.7	-0.7
	259nm,0.6s,4μm1.7nm						
GENI	**Genyem**	7.61	297	P	Pn	21 12 21.5	-0.7
	187nm,0.8s,2μm0.8nm						
COEN	**Coen**	8.64	205	*e*Pn	Pn	21 12 36.4	+0.2
SRPI	**Serui, Papua**	11.48	291	P	Pn	21 13 14.7	0.0
	134nm,0.7s,5μm						
HNR	**Honiara**	13.29	105	P	Pn	21 13 38.8	+0.3
	13nm,0.3s,baz=191,slow=15,SNR=8.9						
HNR				LR	LR	21 17 23.9	
	comp=Z,59nm,20.7s,baz=326,slow=31						
CTA	**Charters Tower**	13.91	183	P	P	21 13 49.5	-1.6
	1.7nm,0.3s,baz=2.9,slow=14,SNR=11						
CTAO	**Charters Tower**	13.91	183	*e*Pn	P	21 13 48.8	-2.3
FAKI	**Fak Fak**	14.99	282	*e*Pn	Pn	21 14 01.0	+0.6
FAKI	**Fak Fak**	14.99	282	P	Pn	21 13 59.6	-0.8
	58nm,1.0s						
SIJI	**Sorong**	16.49	288	P	Pn	21 14 17.8	-1.3
	3.0nm,0.3s,baz=122,slow=10,SNR=12						
MTN	**Manton Dam**	16.97	246	*e*Pn	Pn	21 14 24.9	+0.1
	20nm,0.8s						
MSAI	**Masohi**	18.17	278	P	P	21 14 37.8	-0.5
WB2	**Warramunga Arr**	18.41	221	*e*P	P	21 14 41.4	+0.5
	20nm,0.8s						
WR1	**Warramunga Arr**	18.42	221	*e*P	P	21 14 41.6	+0.6
WR1				*e*S	S	21 18 03.4	-2.6
WRA	**Warramunga Arr**	18.42	221	P	P	21 14 41.6	+0.6
	1.8nm,0.3s,baz=45,slow=11,SNR=46						
WRA				S	S	21 18 03.4	-2.6
	0.3nm,0.3s,baz=44,slow=21,SNR=3.2						
AAI	**Ambon**	18.84	276	P	Pn	21 14 46.6	-0.8
	356nm,0.7s,3μm						
EIDS	**Eidsvold**	19.55	169	*e*P	Pn	21 14 54.6	-1.0
	15nm,0.8s						
GUMO	**Guam**	19.68	354	LR	LR	21 21 51.5	
	comp=Z,31nm,19.7s,baz=178,slow=34						
NLAI	**Namlea**	19.99	277	P	P	21 14 58.3	+0.2
SANI	**Sanana**	21.29	280	P	P	21 15 13.0	+0.9
	61nm,0.5s,707nm						
AS31	**Alice Springs**	21.50	214	*e*P	P	21 15 14.8	+0.5
	5.0nm,0.7s						
ASAR	**Alice Springs**	21.50	214	P	P	21 15 14.9	+0.6
	6.7nm,0.7s,baz=51,slow=8.8,SNR=94						
ASAR				S	S	21 19 09.1	+2.4
	4.0nm,0.9s,baz=34,slow=17,SNR=4.8						
ASAR				LR	LR	21 24 53.7	
	comp=Z,118nm,18.3s,baz=85,slow=40						
SOEI	**Soe**	22.75	259	*e*P	P	21 15 27.5	+0.1
	40nm,0.8s						
SOEI	**Soe**	22.75	259	P	P	21 15 26.6	-0.9
	50nm,0.8s						
BATI	**Baumata**	23.40	258	P	P	21 15 34.5	+1.0
	23nm,0.4s,baz=158,slow=2.6,SNR=13						
BATI	**Baumata**	23.40	258	P	P	21 15 34.8	+1.3
	25nm,0.6s						
FITZ	**Fitzroy Crossi**	23.97	238	P	P	21 15 39.1	+0.5
	25nm,0.8s,baz=47,slow=7.1,SNR=76						
FITZ				LR	LR	21 26 48.8	
	comp=Z,75nm,21.2s,baz=48,slow=40						
FITZ	**Fitzroy Crossi**	23.97	238	*e*P	P	21 15 39.0	+0.5
	33nm,1.0s						
LUWI	**Luwuk**	24.64	281	*e*P	P	21 15 44.9	+0.1
	185nm,0.8s						
LUWI	**Luwuk**	24.64	281	P	P	21 15 45.0	+0.3
EDFI	**Ende, Flores**	25.18	262	P	P	21 15 48.5	-1.3
APSI	**Ampana**	25.77	281	P	P	21 15 54.7	-0.2
STKA	**Stephens Creek**	26.12	190	P	P	21 15 58.6	+0.7
	5.2nm,0.7s,baz=357,slow=8.9,SNR=22						
STKA				LR	LR	21 27 38.0	
	comp=Z,68nm,20.0s,baz=219,slow=39						
STKA	**Stephens Creek**	26.12	190	*e*P	P	21 15 58.7	+0.8
	3.3nm,1.2s						
BSSI	**Bau Bau, Buton**	26.31	269	P	P	21 16 05.0	+5.2
BKSI	**Bulukumba**	26.71	270	P	P	21 16 00.1	-3.3
KAPI	**Kappang**	27.09	271	P	P	21 16 07.6	+0.8
	5.3nm,0.5s,baz=122,slow=8.9,SNR=4.9						
KAPI	**Kappang**	27.09	271	*e*P	P	21 16 07.4	+0.5
	22nm,1.3s						
TTSI	**Tana Toraja**	27.21	275	P	P	21 16 08.2	+0.3
TOO	**Toolangi**	31.34	182	*e*P	P	21 16 46.4	+2.1
	15nm,1.0s						
H11N1	**WAKE ISLAND Hy**	32.30	37	T	T	21 51 10.8	
	baz=218,slow=76,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	32.32	37	T	T	21 51 12.1	
	baz=218,slow=76,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	32.32	37	T	T	21 51 11.1	
	baz=218,slow=76,SNR=7.7						
NWAO	**Narrogin (SRO)**	38.42	222	P	P	21 17 46.1	+1.0
	12nm,0.9s,baz=56,slow=11,SNR=4.2						
TPRI	**Tanjung Pinang**	42.92	278	P	P	21 18 22.4	-0.1
MYKOM	**Kota Tinggi**	43.74	279	*e*P	P	21 18 29.4	+0.3
	13nm,0.8s						
NJ2	**Nanjing**	46.45	327	*e*P	P	21 18 53.3	+3.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KSRS	**Korea Array**	46.84	339	P	P	21 18 52.0	-1.0
	0.6nm,0.4s,baz=148,slow=7.4,SNR=4.6						
KSRS				LR	LR	21 37 38.0	
	comp=Z,31nm,19.4s,baz=208,slow=35						
KS15	**Wonju Array Si**	46.84	339	*e*P	P	21 18 52.0	-1.0
	72nm,2.0s						
MNSI	**Mandailing Nat**	47.78	277	P	P	21 19 00.8	0.0
	22nm,0.6s						
PSI	**Prapat**	48.77	279	*e*P	P	21 19 08.1	-0.5
	21nm,1.5s						
GSI	**Gunungsitoli**	49.84	277	*e*P	P	21 19 15.2	-1.4
	31nm,0.5s						
KCSI	**Kotacane, Aceh**	50.03	280	P	P	21 19 14.5	-3.5
KMI	**Kunming**	53.03	308	P	P	21 19 41.8	+1.4
KMI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CMAR	**Chiang Mai Arr**	53.26	298	P	P	21 19 42.6	+0.7
	0.8nm,0.5s,baz=127,slow=6.0,SNR=5.7						
CMAR				pP	pP	21 20 08.6	0.0
	1.3nm,0.6s,baz=121,slow=6.0,SNR=3.0						
HHC	**Hu-ho-hao-te**	56.90	328	P	P	21 20 13.3	+5.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,16nm,4.7s						
PETK	**Petropavlovsk-**	59.69	7	P	P	21 20 26.4	-0.5
	1.2nm,0.6s,baz=174,slow=5.7,SNR=3.3						
PETK				pP	pP	21 20 52.4	-0.4
	3.7nm,0.8s,baz=145,slow=5.4,SNR=4.3						
PEA1	**Petropavlovsk-**	59.70	7	*e*P	P	21 20 26.4	-0.5
PEA1				*e*pP	pP	21 20 52.4	-0.5
SONA0	**Songino Array**	64.48	331	*e*P	P	21 20 58.7	-0.4
SONM	**Songino Array**	64.48	331	P	P	21 20 58.7	-0.4
	0.4nm,0.3s,baz=158,slow=4.2,SNR=3.9						
VNDA	**Vanda**	71.81	177	P	P	21 21 45.1	+0.8
	1.1nm,0.8s,baz=334,slow=6.6,SNR=9.9						
WMQ	**Urumqi**	72.84	319	*e*P	P	21 21 53.3	+2.1
WMQ				sP	sP	21 22 27.0	-3.1
WMQ				LR	LR		
	comp=N,73nm,29.0s						
WMQ				LR	LR		
	comp=E,290nm,28.8s						
MK32	**Makanchi Array**	77.55	321	*e*P	P	21 22 17.2	-0.8
MK32				*e*pP	pP	21 22 46.3	+0.7
MKAR	**Makanchi Array**	77.55	321	P	P	21 22 17.2	-0.8
	0.5nm,0.7s,baz=103,slow=7.7,SNR=5.5						
MKAR				pP	pP	21 22 46.3	+0.7
	0.8nm,0.6s,baz=102,slow=7.6,SNR=3.2						
ZALV	**Zalesovo Beam**	79.08	328	P	P	21 22 24.1	-2.2
	0.8nm,0.5s,baz=115,slow=5.1,SNR=3.7						
ZAA1	**Zalesovo Array**	79.08	328	*e*P	P	21 22 24.1	-2.2
KSH	**Kashi**	79.42	312	*e*P	P	21 22 32.5	+3.9
ILAR	**Eielson Array**	85.60	23	P	P	21 22 58.0	-2.0
	3.1nm,0.7s,baz=254,slow=4.9,SNR=20						
ILAR				pP	pP	21 23 27.9	+0.2
	1.2nm,0.7s,baz=256,slow=4.8,SNR=2.8						
BCPM	**Bancas Point**	87.05	29	*e*P	P	21 23 04.5	-2.6
	176nm,1.0s						
INK	**Inuvik**	91.77	21	P	P	21 23 27.8	-1.4
	0.7nm,0.7s,baz=249,slow=7.0,SNR=3.4						
INK	**Inuvik**	91.77	21	*e*P	P	21 23 27.8	-1.4
	7.1nm,1.7s						
VYHS	**Vyhne**	119.16	323	*e*PDIF	Pdif	21 25 38.8	+6.6
GERES	**GERESS Array B**	121.97	325	pPKP	pPKPdf	21 29 45.7	-0.4
	0.4nm,0.6s,baz=52,slow=1.7,SNR=3.1						
CPNY	**Central Park**	129.75	40	*e*PKPdf	PKiKP	21 29 35.2	+3.5
LPAZ	**La Paz**	138.77	123	PKP	PKPdf	21 29 49.7	+0.4
	1.2nm,1.0s,baz=14,slow=3.5,SNR=3.6						
LPAZ	**La Paz**	138.77	123	*e*PKPdf	PKPdf	21 29 46.6	-2.6
TORD	**Torodi Ar. Bea**	145.07	284	PKPbc	PKPbc	21 29 58.9	-0.5
	1.4nm,0.7s,baz=100,slow=4.2,SNR=9.2						
TORD				pPKPbc	pPKPab	21 30 28.6	0.0
	5.7nm,0.7s,baz=56,slow=3.8,SNR=12						
TOA1	**Torodi Ar. Sit**	145.07	284	*e*PKPbc	PKPbc	21 29 58.9	-0.5
TOA1				*e*pPKPdf	pPKPab	21 30 28.6	-0.1
CDVI	**St. Croix**	146.94	67	*e*PKPdf	PKPbc	21 30 04.4	-0.5
KIC	**Kosan Boka**	151.86	272	*e*PKIKP	pPKPab	21 30 57.1	+1.1
	94nm,1.6s						
DBIC	**Dimbokro**	151.98	273	pPKPbc	pPKPbc	21 30 46.8	-0.8
	6.4nm,0.8s,baz=5.4,slow=3.8,SNR=4.7						
TIC	**Toumodi**	152.14	273	*e*PKIKP	pPKPab	21 30 56.8	-0.4
LIC	**Lamto**	152.14	272	*e*PKIKP	pPKPab	21 30 56.9	-0.3
	64nm,1.3s						

*SJA **27** 21:14:34.6±0.8, 24°.17S×66°.97W, h214km±6km, ML3.6, MW3.9*
*ISCJB **27** 21:14:35.6±0.3, 24°.15S±0°.03×67°.04W±0°.04, h191km±3km, mb3.8/9, Error ellipse: s-maj=6.5km s-min=3.6km az=150.9*
*IDC **27** 21:14:35.9±1.0, 24°.11S×66°.83W, h178km±9km, mb3.5/8, mb1 3.8/15, mb1mx3.6/37, mbtmp4.1/15, Error ellipse: s-maj=14.9km s-min=11.8km az=55.0*
*GUC **27** 21:14:37.8±0.4, 24°.01S×67°.33W, h231km±6km, ML4.6*

ISC 27 21:14:36.2±0.7, 24°16S±0°.04×67°03W±0°.05, h183km±7km, n54, σ1°44/75, mb3.6/9, 5C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	1.49	112	*e*P	Pn	21 15 10.3	+1.8
SLA				*e*S	Sn	21 15 35.4	+1.8
SLA				IAML		21 15 36.4	
	comp=Z,296nm,0.6s						
FSA	**Cafayete**	2.16	154	*e*P	Pn	21 15 16.2	+0.8
FSA				*e*S	Sn	21 15 47.5	+1.5
LVC	**Limon Verde**	2.32	311	P	Pn	21 15 18.7	+1.3
	comp=Z,51nm,0.3s,baz=129,slow=7.6,SNR=52						
LVC				S	Sn	21 15 50.6	+1.2
	comp=Z,78nm,0.3s,baz=312,slow=22,SNR=28						
LVC	**Limon Verde**	2.32	311	*e*P	Pn	21 15 18.9	+1.5
LVC				*e*S	Sn	21 15 51.5	+2.0
LVC				IAML		21 15 52.4	
	comp=Z,283nm,0.7s						
LVC	**Limon Verde**	2.32	311	↓*i*P	Pn	21 15 19.0	+1.5
LVC				*i* S	Sn	21 15 50.1	+0.7
YJA	**Yavi**	2.42	35	*e*P	Pn	21 15 19.6	+1.0
PB15	**IPOC Station P**	2.44	292	*e*P	Pn	21 15 20.1	+1.5
PB15	**IPOC Station P**	2.44	292	*e*P	Pn	21 15 20.0	+1.5
PB15				*i* S	Sn	21 15 52.4	+0.9
GO02	**Mina Guanaco**	2.54	246	↑*i*P	Pn	21 15 21.1	+1.3
GO02				*e*S	Sn	21 15 55.1	+1.4
PB06	**IPOC Station P**	2.75	301	*e*P	Pn	21 15 23.5	+1.3
PB06				*i* S	Sn	21 15 58.1	0.0
PB06				IAML		21 16 00.9	
	comp=E,1μm,0.6s						
PB14	**IPOC Station P**	3.11	261	*e*P	Pn	21 15 27.8	+1.1
PB09	**IPOC Station P**	3.12	319	*e*P	Pn	21 15 28.1	+1.5
PB09	**IPOC Station P**	3.12	319	*e*P	Pn	21 15 28.1	+1.5
PB09				*i* S	Sn	21 16 06.0	0.0
PB09				IAML		21 16 13.7	
	comp=E,446nm,0.6s						
PB05	**IPOC Station P**	3.19	293	*e*P	Pn	21 15 28.1	+0.6
PB05				*i* S	Sn	21 16 05.8	-1.7
PB05				IAML		21 16 07.8	
	comp=N,460nm,0.1s						
PB03	**IPOC Station P**	3.28	309	*e*P	Pn	21 15 29.5	+1.0
PB03	**IPOC Station P**	3.28	309	*e*P	Pn	21 15 29.2	+0.6
PB03				*i* S	Sn	21 16 08.2	-1.2
PB03				IAML		21 16 12.2	
	comp=E,861nm,0.2s						
PB10	**IPOC Station P**	3.29	281	*e*P	Pn	21 15 29.6	+1.0
PB10	**IPOC Station P**	3.29	281	*e*P	Pn	21 15 29.2	+0.6
PB10				*i* S	Sn	21 16 08.5	-1.0
PB04	**IPOC Station P**	3.40	302	*e*P	Pn	21 15 31.0	+0.9
PB04	**IPOC Station P**	3.40	302	*e*P	Pn	21 15 30.6	+0.5
PB04				*i* S	Sn	21 16 10.7	-1.4
PB04				IAML		21 16 14.0	
	comp=N,835nm,0.4s						
PB07	**IPOC Station P**	3.58	312	*e*P	Pn	21 15 32.8	+0.4
PB07				*i* S	Sn	21 16 14.3	-1.9
PB07				IAML		21 16 16.3	
	comp=E,829nm,0.7s						
PB01	**IPOC Station P**	3.85	323	↑*i*P	Pn	21 15 35.6	0.0
PB01				*i* S	Sn	21 16 20.2	-1.9
PB02	**IPOC Station P**	3.88	316	*e*P	Pn	21 15 36.5	+0.6
PB02	**IPOC Station P**	3.88	316	*e*P	Pn	21 15 36.3	+0.3
PB02				*i* S	Sn	21 16 20.6	-2.1
CYA	**Choya**	4.40	166	*e*P	Pn	21 15 42.0	-0.5
CYA				IAML		21 15 44.6	
	comp=Z,12nm,0.5s						
PB08	**IPOC Station P**	4.46	333	↑*i*P	Pn	21 15 44.4	+0.6
PB08				*i* S	Sn	21 16 35.5	-1.1
GO03	**Copiap**	4.47	220	*e*P	Pn	21 15 43.2	-0.2
VCA	**Vinchina**	4.68	193	*e*P	Pn	21 15 46.9	+0.8
GO01	**Chusmiza**	4.91	335	↓*i*P	Pn	21 15 49.6	+0.1
GO01				*i* S	Sn	21 16 45.4	-1.6
PB11	**IPOC Station P**	5.01	330	*e*P	Pn	21 15 50.1	-0.5
PB11	**IPOC Station P**	5.01	330	↑*i*P	Pn	21 15 49.4	-1.2
PB11				*i* S	Sn	21 16 45.5	-3.5
ACLC	**CERRO LA CRUZ**	5.24	179	*e*P	Pn	21 15 53.5	+0.1
ACLC				*e*S	Sn	21 16 52.5	-1.8
AGUA	**GUANDACOL**	5.46	194	*e*P	Pn	21 15 55.6	-0.7
APLL	**PUNTA DE LOS L**	6.22	176	*e*P	Pn	21 16 05.8	-0.4
APLL				IAML		21 17 15.1	
	comp=Z,37nm,0.7s						
CFA	**Coronel Fontan**	7.49	188	P	Pn	21 16 22.2	-0.6
	comp=Z,1.3nm,0.3s,baz=326,slow=10,SNR=15						
CFA				S	Sn	21 17 41.1	-6.1
	comp=Z,2.8nm,0.3s,baz=142,slow=19,SNR=12						
LPAZ	**La Paz**	7.90	352	P	Pn	21 16 29.1	+0.2
	comp=Z,1.6nm,0.3s,baz=107,slow=4.6,SNR=30						
LPAZ				S	Sn	21 17 55.9	-2.1
	comp=Z,0.4nm,0.3s,baz=254,slow=20,SNR=4.4						
CPUP	**Villa Florida**	9.04	106	P	Pn	21 16 41.8	-1.3
	comp=Z,0.3nm,0.3s,baz=272,slow=9.5,SNR=5.7						
SIV	**San Ignacio**	9.87	36	P	Pn	21 16 52.4	-1.7
	comp=Z,1.2nm,0.3s,baz=237,slow=11,SNR=20						
SIV				S	Sn	21 18 29.8	-14
	baz=224,slow=16,SNR=3.1						
PLCA	**Paso Flores**	16.79	189	P	P	21 18 20.6	+0.8
	comp=Z,0.2nm,0.3s,baz=11,slow=9.5,SNR=4.4						
BDFB	**Brasilia**	19.77	68	P	P	21 18 50.7	-1.8
	comp=Z,1.9nm,0.3s,baz=243,slow=9.7,SNR=30						
TXAR	**Lajitas Array**	63.80	324	P	P	21 24 49.7	+0.7
	comp=Z,0.2nm,0.4s,baz=125,slow=6.3,SNR=3.9						
ANMO	**Albuquerque**	69.67	326	P	P	21 25 27.5	+1.4
	comp=Z,1.5nm,0.7s,baz=146,slow=6.6,SNR=4.4						
SYO	**Syowa Base**	73.41	159	↑*e*P	P	21 25 46.8	-0.9
VNDA	**Vanda**	74.54	190	P	P	21 25 55.5	+1.4
	comp=Z,0.9nm,0.9s,baz=132,slow=4.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	76.65	69	P	P	21 26 06.1	-1.1
	comp=Z,22nm,0.4s,baz=259,slow=5.8,SNR=10						
PDAR	**Pinedale Array**	77.28	329	P	P	21 26 11.0	+0.6
	comp=Z,0.4nm,0.5s,baz=131,slow=8.8,SNR=5.2						
ELK	**Elko**	78.59	325	P	P	21 26 18.8	+1.1
	comp=Z,0.4nm,0.3s,baz=153,slow=6.8,SNR=4.0						
NVAR	**Mina Array Bea**	78.65	321	P	P	21 26 19.2	+1.1
	comp=Z,0.4nm,0.6s,baz=139,slow=4.7,SNR=3.8						
MAW	**Mawson**	81.29	163	P	P	21 26 32.1	+0.7
	comp=Z,5.2nm,0.8s,baz=215,slow=5.5,SNR=16						
YKA	**Yellowknife Ar**	94.27	340	P	P	21 27 34.2	+0.2
	comp=Z,0.8nm,0.5s,baz=134,slow=4.6,SNR=8.9						
ASAR	**Alice Springs**	128.30	205	PKP	PKPdf	21 33 21.3	-0.2
	comp=Z,1.2nm,0.7s,baz=134,slow=1.9,SNR=13						
WRA	**Warramunga Arr**	131.47	207	PKP	PKPdf	21 33 27.6	+0.1
	comp=Z,0.9nm,0.4s,baz=186,slow=2.3,SNR=10						
ZALV	**Zalesovo Beam**	143.55	28	PKP	PKPbc	21 33 46.9	+0.4
	comp=Z,1.8nm,0.5s,baz=293,slow=4.9,SNR=8.9						
MKAR	**Makanchi Array**	146.66	40	PKPbc	PKPdf	21 33 54.9	+0.6
	comp=Z,3.9nm,0.7s,baz=328,slow=2.3,SNR=29						

*ISCJB **27** 21:14:41.9±0.7, 74°.44N±0°.09×133°.0E±0°.4, h10km, mb3.7/9, MS3.5/2, Error ellipse: s-maj=20.5km s-min=7.9km az=36.0*
*IDC **27** 21:14:42.1±0.8, 74°.44N×133°.08E, h0km, mb3.8/9, mb1 4.1/10, mb1mx3.6/55, mbtmp3.7/10, ML5.4/1, MS3.4/2, Ms1 3.4/2, ms1mx2.5/45, Error ellipse: s-maj=28.2km s-min=12.3km az=130.0*

ISC 27 21:14:43.7±0.8, 74°4N±0°.1×133°2E±0°.1, h10km, n13, σ0°91/13, mb3.6/9, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	3.07	206	Pn	Pn	21 15 31.3	-0.8
	1.8nm,0.3s,baz=46,slow=13,SNR=17						
TIXI				Pg	Pb	21 15 39.6	+1.3
	6.0nm,0.3s,baz=34,slow=14,SNR=22						
TIXI				Sn	Sn	21 16 08.0	-0.9
	6.9nm,0.3s,baz=288,slow=12,SNR=6.7						
TIXI				Lg	Lg

GLBA	**Ciilabad**	1.78	50	P		Pb	21 32 56.4	-0.2
	SNR=56							
GLBA				S		Sb	21 33 19.7	+0.3
LKRN	**Lenkeran, Azer**	1.78	70	P		Pb	21 32 56.5	-0.2
	SNR=18							
LKRN				S		Sg	21 33 21.2	+0.6
MAKU	**Maku**	1.97	310	*e*Pn		Pb	21 32 59.0	-1.0
HYR	**Heyderabad**	2.12	320	P		Pb	21 33 01.4	-1.1
	SNR=9.1							
HYR				S		Sg	21 33 31.2	-0.3
ZNJK	**Zanjan**	2.18	131	*e*Pn		Pb	21 33 03.5	-0.1
BRDA	**Brd**	2.19	11	P		Pn	21 33 00.8	0.0
	SNR=18							
BRDA				S		Sn	21 33 28.8	+0.3
ZRD	**Zardab**	2.31	20	P		Pn	21 33 02.2	-0.2
	SNR=3.6							
ZRD				S		Sn	21 33 32.1	+0.6
GNI	**Garni**	2.51	325	⇓*i*P		Pb	21 33 08.8	-0.4
GNI				⇓*i*S		Sb	21 33 41.8	+1.1
GANJ	**Ganja**	2.54	355	P		Pn	21 33 05.9	+0.2
	SNR=31							
GANJ				S		Sn	21 33 37.4	+0.1
GDB	**GEDABAY**	2.69	346	P		Pn	21 33 08.0	+0.1
GDB				S		Sn	21 33 42.7	+1.5
IML	**Ismayilli**	2.93	24	P		Pn	21 33 10.9	-0.2
	SNR=7.8							
IML				S		Sn	21 33 45.4	-1.5
QBL	**Gabala**	2.98	18	P		Pn	21 33 11.7	0.0
	SNR=10							
QBL				S		Sn	21 33 46.8	-1.2
GBS	**Qobustan**	3.01	36	P		Pn	21 33 12.2	+0.1
	SNR=10							
GBS				S		Sn	21 33 48.4	-0.4
PQL	**Pirkuli**	3.07	29	P		Pn	21 33 13.4	+0.3
	SNR=10							
PQL				S		Sn	21 33 49.9	-0.6
SNGE	**Sanandaj**	3.07	169	*e*Pn		Pb	21 33 18.5	-0.3
QZX	**Qazax, Azerbai**	3.10	342	P		Pn	21 33 13.8	+0.5
SEKA	**Sheki**	3.12	8	P		Pn	21 33 14.2	+0.5
	SNR=27							
XNQ	**Khinaliq**	3.27	20	P		Pn	21 33 16.0	+0.2
	SNR=16							
XNQ				S		Sn	21 33 55.6	+0.1
ATGJ	**Altiaghaj**	3.27	32	P		Pn	21 33 15.9	+0.1
	SNR=12							
ATGJ				S		Sn	21 33 55.3	0.0
IGZV	**Ghazvin**	3.34	120	IAMB		IAmb	21 34 15.2	
	comp=Z,601nm,0.4s							
DDFL	**Dedoflistskaro**	3.35	353	P		Pn	21 33 17.1	+0.2
QABG	**Abgarm-Qazvin**	3.37	135	*e*Pn		Pb	21 33 21.0	-2.9
IDHR	**Dehrash**	3.42	183	*e*Pn		Pb	21 33 22.9	-1.8
SIZA	**Siyzn**	3.44	30	P		Pn	21 33 18.1	0.0
	SNR=7.7							
SIZA				S		Sn	21 33 59.4	0.0
ZKTA	**Zakatala**	3.52	360	P		Pn	21 33 19.3	+0.2
	SNR=6.3							
ZKTA				S		Sn	21 34 01.2	-0.2
QUBA	**Quba, Azerbaij**	3.54	23	P		Pn	21 33 19.2	-0.1
	SNR=11							
QSAR	**Qusar**	3.62	20	P		Pn	21 33 20.3	-0.2
	SNR=6.0							
KZRT	**Kazreti**	3.69	333	P		Pb	21 33 30.6	+1.3
LGD	**Lagodekhi**	3.73	355	P		Pn	21 33 24.8	+2.9
IRAZ	**Razeghan**	3.78	135	*e*Pn		Pb	21 33 26.9	-4.1
IRAZ				IAMB		IAmb	21 34 36.0	
	comp=N,644nm,0.9s							
TKB	**Tkibuli**	5.07	328	P		Pg	21 33 58.1	-2.2

*SOME **27** 21:33:00.6, 39.′82N×76.′62E, h20km*
*KRNET **27** 21:33:09.2±0.1, 40.′23N×76.′62E, mb3.2*
*NNC **27** 21:33:11.4±3.1, 40.′34N×76.′59E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=23.8km s-min=20.4km az=138.0
*ISCJB **27** 21:33:13.0±0.7, 40.′22N±0.′04×76.′54E±0.′04, h10km, Error ellipse: s-maj=6.3km s-min=4.9km az=178.6*

ISC 27 21:33:11.9±1.1, 40.′32N±0.′04×76.′61E±0.′03, h10km, n60, σ2§11/93, 31C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	0.94	211	Pg	Pn	21 33 31.0	-0.3
KSH				Sg	Sn	21 33 50.0	+5.2
KSH				smax	smax		
	comp=N,98nm,0.4s						
KSH				smax	smax		
	comp=E,76nm,0.5s						
KDJ	**Kajisay**	1.86	13	⇓*i*P		Pb	21 33 45.6	-0.4
	baz=13						
KDJ				⇓*i*S		Sg	21 34 11.8	+0.2
	baz=13						
ULHL	**Ulahol**	1.94	352	P		Pb	21 33 47.6	+0.1
	SNR=26						
ULHL	**Ulahol**	1.94	352	⇓*i*P		Pb	21 33 47.1	-0.3
	baz=52						
ULHL				⇓*i*S		Sg	21 34 14.2	0.0
	baz=52						
KZA	**Kyzart**	2.03	330	P		Pb	21 33 48.2	-0.9
	SNR=122						
KZA	**Kyzart**	2.03	330	⇑*i*P		Pb	21 33 48.2	-0.9
	baz=31						
KZA				⇑*i*S		Sg	21 34 16.6	-0.5
	baz=31						
ARLS	**Aral**	2.31	312	⇓*i*P		Pb	21 33 51.7	-2.0
	baz=14						
ARLS				⇓*i*S		Sb	21 34 22.5	+0.1
	baz=14						
UCH	**Uchtor**	2.47	321	P		Pb	21 33 54.3	-2.4
	SNR=16						
UCH	**Uchtor**	2.47	321	⇑*i*P		Pb	21 33 54.1	-2.5
	baz=22						
UCH				⇑*i*S		Sb	21 34 26.5	-0.8
	baz=22						
KBK	**Karagaybulak**	2.64	332	P		Pg	21 34 02.5	0.0
	SNR=15						
KBK	**Karagaybulak**	2.64	332	⇑*i*P		Pb	21 33 56.6	-2.8
	baz=33						
KBK				⇑*i*S		Sb	21 34 31.4	-0.6
	baz=33						
TKM2	**Tokmak 2**	2.70	344	P		Pb	21 33 58.3	-2.2
	SNR=36						
TKM2	**Tokmak 2**	2.70	344	⇑Pn		Pb	21 33 58.3	-2.2
	comp=E,12nm,0.5s						
TKM2				⇑Lg		Lg	21 34 37.8	
	comp=E,8.3nm,0.5s						
TKM2	**Tokmak 2**	2.70	344	⇑*e*P		Pb	21 33 57.6	-2.8
	baz=44						
TKM2				⇑*i*S		Sb	21 34 32.9	-0.8
	baz=44						
TNSS	**Tian-Shan**	2.72	5	Pg		Pb	21 33 58.4	-2.5
	comp=E,8.4nm,0.6s						
TNSS				Lg		Lg	21 34 41.2	
	comp=E,16nm,0.5s						
TNSS	**Tian-Shan**	2.72	5	*e*P		Pb	21 33 58.4	-2.5
	comp=E,8.4nm,0.6s						
TNSS				*e*S		Sg	21 34 41.3	+1.9
	comp=E,16nm,0.5s						
KST	**Kastek**	2.76	350	Pg		Pb	21 33 59.1	-2.2
	comp=E,8.9nm,0.6s						
KST				Lg		Lg	21 34 42.2	
	comp=E,9.4nm,0.7s						
KST	**Kastek**	2.76	350	*e*P		Pb	21 33 59.0	-2.4
	comp=E,8.9nm,0.6s						
KST				*e*S		Sg	21 34 41.9	+1.4
	comp=E,9.4nm,0.7s						
AAK	**Ala-Archa**	2.80	326	⇑Pn		Pb	21 33 59.7	-2.4
	comp=E,8.1nm,0.5s						
AAK				⇓Lg		Lg	21 34 41.6	
	comp=E,57nm,1.0s						
AAK	**Ala-Archa**	2.80	326	⇑*i*P		Pn	21 33 58.7	+1.8
	baz=27						
AAK				⇑*i*S		Sb	21 34 34.9	-1.7
	baz=27						
AML	**Almayashu**	2.84	310	P		Pn	21 33 59.3	+1.7
	SNR=13							
AML	**Almayashu**	2.84	310	⇑*i*P		Pn	21 33 58.9	+1.2
	baz=12						
AML				⇑*i*S		Sb	21 34 35.3	-2.6
	baz=12						
MDOK	**Medeo**	2.86	7	Pg		Pb	21 34 00.4	-2.6
	comp=E,3.6nm,0.6s						
MDOK				Lg		Lg	21 34 44.1	
	comp=E,15nm,0.9s						
MDOK	**Medeo**	2.86	7	*e*P		Pb	21 34 00.2	-2.8
	comp=E,3.6nm,0.6s							
MDOK				*e*S		Sg	21 34 44.1	+0.5
	comp=E,31nm,0.6s							
AAA	**Alma-Ata**	2.89	4	*e*P		Pb	21 34 02.1	-1.5
	comp=E,12nm,0.3s							
AAA				*e*S		Sg	21 34 46.4	+1.7
	comp=E,24nm,0.7s							
FRU1	**Bishkek**	2.89	330	⇑*i*P		Pn	21 33 59.7	+1.6
	baz=31							
FRU1				⇑*i*S		Sb	21 34 36.8	-2.2
	baz=31							
KNDC	**Almaty**	2.90	5	⇑Pn		Pb	21 34 00.7	-3.0
	comp=E,12nm,0.6s							
KNDC				⇑Lg		Lg	21 34 46.2	
	comp=E,49nm,0.5s							
ARSB	**Arslanbob**	2.92	291	⇑*i*P		Pn	21 33 59.8	+1.2
	baz=93							
ARSB				⇑*i*S		Sb	21 34 36.7	-3.4
	baz=93							
KOTS	**Kotyrbulak**	2.93	7	Pg		Pb	21 34 01.8	-2.6
	comp=E,6.6nm,0.5s							
KOTS				Lg		Lg	21 34 45.8	
	comp=E,61nm,0.9s							
KOTS	**Kotyrbulak**	2.93	7	*e*P		Pb	21 34 02.3	-2.0
	comp=E,3.2nm,0.5s							
KOTS				*e*S		Sg	21 34 46.9	+0.9
	comp=E,61nm,0.9s							
DGS	**Degeres**	2.98	348	Pg		Pb	21 34 02.3	-2.8
	comp=E,9.1nm,0.6s							
DGS				Lg		Lg	21 34 46.8	
	comp=E,13nm,0.6s							
DGS	**Degeres**	2.98	348	*e*P		Pb	21 34 04.4	-0.7
	comp=E,7.4nm,0.4s							
DGS				*e*S		Sg	21 34 50.6	+2.9
	comp=E,13nm,0.6s							
CHMS	**Chumysh**	3.01	333	P		Pb	21 34 02.6	-3.0
	SNR=11							
CHMS	**Chumysh**	3.01	333	⇑*i*P		Pn	21 34 01.9	+2.2
	baz=34							
CHMS				⇑*i*S		Sb	21 34 39.8	-2.6
	baz=34							
SATY	**Saty**	3.05	26	Pg		Pb	21 34 04.5	-1.8
	comp=E,9.2nm,0.9s							
SATY				Lg		Lg	21 34 50.6	
	comp=E,15nm,0.5s							
SATY	**Saty**	3.05	26	*e*P		Pb	21 34 02.8	-3.5
	comp=E,6.2nm,0.7s							
SATY				*e*S		Sg	21 34 48.0	-1.8
	comp=E,19nm,0.8s							
EKS2	**Erkin-Say**	3.16	319	P		Pb	21 34 04.5	-3.6
	SNR=14							
EKS2	**Erkin-Say**	3.16	319	⇑*i*P		Pn	21 34 03.4	+1.7
	baz=20							
EKS2				⇑*i*S		Sb	21 34 42.8	-3.9
	baz=20							
USP	**Ospenovka**	3.33	333	P		Pn	21 34 06.8	+2.7
	SNR=7.8							
USP	**Ospenovka**	3.33	333	⇑*i*P		Pn	21 34 06.1	+2.0
	baz=33							
USP				⇑*i*S		Sb	21 34 47.7	-4.1
	baz=33							
UZB	**Uzynbulak**	3.35	32	*e*P		Pb	21 34 09.2	-2.3
	comp=E,3.2nm,0.5s							
UZB				*e*S		Sg	21 34 58.7	-0.8
	comp=E,11nm,0.9s							
KURS	**Kuram**	3.37	20	Pg		Pb	21 34 09.1	-2.6
	comp=E,2.8nm,1.0s							
KURS				Lg		Lg	21 34 58.7	
	comp=E,5.3nm,1.1s							
KURS	**Kuram**	3.37	20	*e*P		Pb	21 34 09.8	-2.0
	comp=E,2.8nm,1.0s							
KURS				*e*S		Sg	21 34 60.0	-0.1
	comp=E,9.7nm,1.1s							
KTBS	**Karatobe**	3.39	1	Pg		Pb	21 34 10.1	-1.9
	comp=E,2.6nm,0.7s							
KTBS				Lg		Lg	21 35 00.1	
	comp=E,17nm,0.6s							
KTBS	**Karatobe**	3.39	1	*e*P		Pb	21 34 10.5	-1.5
	comp=E,2.6nm,0.7s							
KTBS				*e*S		Sg	21 35 01.0	+0.4
	comp=E,25nm,0.6s							
KPKS	**Kokpek**	3.50	26	*e*P		Pb	21 34 12.2	-1.8
	comp=E,11nm,1.0s							
KPKS				*e*S		Sg	21 35 03.9	-0.5
	comp=E,35nm,0.8s							
MRKS	**Merke**	3.50	315	Pg		Pn	21 34 08.1	+1.6
	comp=E,10.0nm,0.7s							
MRKS				Lg		Lg	21 34 56.8	
	comp=E,13nm,0.5s							
MRKS	**Merke**	3.50	315	*e*P		Pb	21 34 11.6	-2.5
	comp=E,5.5nm,0.4s							
MRKS				*e*S		Sg	21 35 03.0	-1.4
	comp=E,9.9nm,0.5s							
CHKK	**Chushkaly**	3.54	4	Pg		Pn	21 34 09.5	+2.6
	comp=E,4.6nm,0.7s							
CHKK				Lg		Lg	21 34 59.5	
	comp=E,7.8nm,0.7s							
CHKK	**Chushkaly**	3.54	4	*e*P		Pb	21 34 12.7	-1.9
	comp=E,1.0nm,0.4s							
CHKK				*e*S		Sg	21 35 05.2	-0.3
	comp=E,7.8nm,0.7s							
KUU	**Kurty**	3.57	357	Pg		Pb	21 34 13.3	-1.9
	comp=E,4.4nm,0.6s							
KUU				Lg		Lg	21 35 05.8	
	comp=E,7.2nm,0.8s							
KUU	**Kurty**	3.57	357	*e*P		Pb	21 34 13.2	-1.9
	comp=E,4.4nm,0.6s							
KUU				*e*S		Sg	21 35 05.9	-0.7
	comp=E,11nm,0.7s							
PDGK	**Podgornoye**	3.70	35	⇑Pn		Pb	21 34 15.2	-2.2
	comp=E,3.1nm,0.6s							
PDGK				⇑Lg		Lg	21 35 12.6	
	comp=E,9.3nm,0.6s							
PDGK	**Podgornoye**	3.70	35	⇑*i*P		Pn	21 34 10.8	+1.6
	baz=34							
PDGK				⇑*i*S		Sn	21 34 55.9	+3.1
	baz=34							
ARK	**Arkit**	3.81	294	⇓*i*P		Pn	21 34 11.5	+0.8
	baz=95							
ARK				⇓*i*S		Sn	21 34 58.0	+2.5
	baz=95							
ARXS	**Arharly**	3.99	13	Pg		Pb	21 34 20.0	-2.3
	comp=E,2.6nm,0.7s							
ARXS				Lg		Lg	21 35 17.2	
	comp=E,5.2nm,0.7s							
ARXS	**Arharly**	3.99	13	*e*P		Pb	21 34 22.1	-0.3
	comp=E,2.6nm,0.7s							
ARXS				*e*S		Sg	21 35 20.8	+0.8
	comp=E,7.6nm,0.5s							
DJR	**Jarkent**	4.65	29	Pg		Pb	21 34 31.8	-1.8
	comp=E,3.7nm,1.8s							
DJR				Lg		Lg	21 35 37.7	
	comp=E,1.7nm,0.7s							
DJR	**Jarkent**	4.65	29	*e*P		Pb	21 34 31.9	-1.6
	comp=E,3.7nm,1.8s							
DJR				*e*S		Sg	21 35 38.1	-3.0
	comp=E,2.4nm,0.6s							
KK31	**Karatay Array**	5.34	303	⇓Pg		Pb	21 34 46.0	+0.7
	comp=E,1.2nm,0.6s,baz=130,slow=18,SNR=12							
KK31				⇓Lg		Lg	21 35 57.8	
	comp=E,0.9nm,0.5s,baz=124,slow=29,SNR=6.1							

*IDC **27** 21:49:41.3±2.1, 17.′30S×179.′01W, h528km±20km, mb3.5/15, mb1 3.6/16, mb1mx3.5/34, mbtmp4.3/16, Error ellipse: s-maj=22.6km s-min=15.2km az=138.0*
*ISCJB **27** 21:49:42.2±0.7, 17.′3S±0.′1×179.′1W±0.′1, h550km, mb3.8/15, Error ellipse: s-maj=21.9km s-min=12.9km az=141.3*

ISC 27 21:49:42.8±0.8, 17.′3S±0.′2×179.′1W±0.′1, h550km, n66, σ1§37/70, mb3.9/15, 6C-13D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	14.43	248	P	P	21 52 46.3	-0.2
	0.2nm,0.3s,baz=71,slow=18,SNR=5.1						
STKA	**Stephens Creek**	38.36	240	P	P	21 56 18.1	+0.8
	0.8nm,0.4s,baz=102,slow=8.5,SNR=4.3						
JAY	**Jayapura**	42.12	286	P	P	21 56 48.8	+1.2
	9.6nm,0.6s,baz=160,slow=12,SNR=8.1						
WRA	**Warramunga Arr**	44.11	259	P	P	21 57 02.4	-0.6
	1.0nm,0.3s,baz=89,slow=8.0,SNR=11						
ASAR	**Alice Springs**	44.34	254	P	P	21 57 04.8	0.0
	5.5nm,0.4s,baz=89,slow=8.0,SNR=110						
ASAR				PcP	PcP	21 58 37.1	+0.2
	0.8nm,0.6s,baz=105,slow=4.0,SNR=5.1						
ASAR				ScP	ScP	22 01 39.1	+2.4
	0.5nm,0.7s,baz=104,slow=2.6,SNR=5.1						
ASAR				S	S	22 02 56.3	-3.1
	1.0nm,0.9s,baz=83,slow=16,SNR=8.4						
SIJI	**Sorong**	51.47	283	P	P	21 57 58.8	+0.8
	21nm,0.6s,baz=113,slow=5.0,SNR=8.2						
VNDA	**Vanda**	61.00	185	P	P	21 59 03.2	+0.6
	0.4nm,0.7s,baz=357,slow=7.4,SNR=3.6						
MJAR	**Matsushiro Arr**	67.03	324	P	P	21 59 42.1	+0.5
	4.5nm,0.6s,baz=166,slow=6.1,SNR=13						
MAT	**Matsushiro**	67.03	324	P	P	21 59 41.9	+0.3
PETK	**Petropavlovsk-**	72.93	346	P	P	22 00 16.7	+0.5
	4.5nm,0.7s,baz=118,slow=7.9,SNR=10.0						
KSRS	**Korea Array**	73.82	319	P	P	22 00 22.7	+1.1
	0.9nm,0.7s,baz=120,slow=4.8,SNR=4.4						
NVAR	**Mina Array Bea**	79.44	44	P	P	22 00 53.3	+0.7
	0.9nm,0.8s,baz=228,slow=6.5,SNR=5.0						
ILAR	**Eielson Array**	85.44	13	P	P	22 01 21.7	-0.4
	1.0nm,0.4s,baz=221,slow=5.3,SNR=13						
PDAR	**Pinedale Array**	87.36	44	P	P	22 01 32.4	+0.4
	0.5nm,0.5s,baz=202,slow=3.9,SNR=7.9						
CMAR	**Chiang Mai Arr**	88.07	290	P	P	22 01 37.2	+1.7
	0.9nm,0.4s,baz=140,slow=3.1,SNR=4.9						
SONM	**Songino Array**	92.67	319	P	P	22 01 56.0	-0.3
	0.4nm,0.4s,baz=131,slow=4.0,SNR=3.6						
YKA	**Yellowknife Ar**	94.05	25	P	P	22 02 02.2	+0.1
	0.6nm,0.6s,baz=252,slow=4.4,SNR=4.5						
MKAR	**Makanchi Array**	108.25	314	PKiKP	PKiKP	22 07 08.1	-0.6
	0.4nm,0.5s,baz=90,slow=0.5,SNR=4.5						
ARCES	**ARCESS Array B**	125.60	350	PKP	PKiKP	22 07 41.5	-0.2
	0.9nm,0.8s,baz=124,slow=1.7,SNR=4.0						
FINES	**FINESS Array B**	132.42	344	PKP	PKiKP	22 07 55.2	-0.4
	3.6nm,1.1s,baz=96,slow=2.8,SNR=3.9						
FINES				SKPbc	SKPab	22 10 31.9	-0.1
	1.1nm,0.8s,baz=35,slow=5.1,SNR=5.5						
TLCR		143.71	326	⇑*i*P	PKPdf	22 08 15.5	0.0
BURAR	**Bucovina Array**	143.77	332	⇓*i*P	PKiKP	22 08 16.2	-3.2
BIZ	**Bicaz**	143.86	330	⇓*i*P	PKiKP	22 08 16.3	-3.1
BRTR	**Keskin Array B**	143.89	315	PKP	PKPdf	22 08 16.1	-0.2
	1.2nm,0.5s,baz=149,slow=3.6,SNR=12						
TESR	**Tescani**	143.90	329	⇓*i*P	PKPdf	22 08 15.6	-0.2
CFR	**Carcaliu**	144.07	327	⇓*i*P	PKiKP	22 08 16.9	-3.0
VRI	**Vrincioaia**	144.32	329	⇑*i*P	PKiKP	22 08 18.3	-2.1
OSTC	**Ostas**	144.62	343	*e*PKP	PKiKP	22 08 18.1	-2.8
OZUR		144.62	330	⇓*i*P	PKiKP	22 08 20.3	-0.8
CHVC	**Chvalec**	144.64	343	*e*PKP	PKPab	22 08 17.8	-0.1
UPC	**Upice**	144.72	343	*e*PKP	PKPab	22 08 18.0	-0.1
CLL	**Collm**	144.72	347	⇓*i*PKPbc	PKPab	22 08 17.0	-1.1
	comp=Z,13nm,1.1s						
DPC	**Dobruska-Polom**	144.78	343	*e*PKP	PKiKP	22 08 18.6	-2.7
DOPR	**Dopca**	144.90	330	⇓*i*P	PKiKP	22 08 19.7	-1.9
BRG	**Berggiesshubel**	144.92	346	*i* PKP	PKPab	22 08 18.7	-0.2
	comp=Z,5.6nm,0.8s						
MORC	**Moravsky Berou**	144.93	341	*e*PKP	PKPab	22 08 18.8	-0.2
ISR	**Istrita**	144.94	328	⇓*i*P	PKiKP	22 08 20.0	-1.8
MLR	**Muntele Rosu**	144.97	329	⇑*i*P	PKPab	22 08 19.0	-0.5
PVCC	**Panska Ves**	145.08	345	*e*PKP	PKPab	22 08 19.1	-0.4
CJR	**Cluj-Napoca**	145.18	332	⇓*i*P	PKiKP	22 08 20.0	-2.2
VOIR		145.45	329	⇓*i*P	PKPab	22 08 20.5	-0.8
DRGR		145.50	333	⇑*i*P	PKiKP	22 08 20.8	-2.1
PRU	**Pruhonice**	145.59	344	*e*PKP	PKPab	22 08 20.6	-0.9
GOPC	**GO Pecny, Ondr**	145.59	344	*e*PKP	PKPab	22 08 20.5	-1.1
VRAC	**Vranov**	145.63	342	*e*PKP	PKPab	22 08 20.9	-0.8
JAVC	**Velka Javorina**	145.69	340	*e*PKP	PKiKP	22 08 22.2	-1.0
ARR	**Arges**	145.70	330	⇓*i*P	PKiKP	22 08 22.8	-0.6
KRUC	**Moravsky**	145.91	342	*e*PKP	PKPab	22 08 21.4	-1.4
SIRR	**Siria**	146.37	334	⇑*i*P	PKiKP	22 08 23.3	-1.3
KHC	**Kasperske Hory**	146.62	345	*e*PKP	PKiKP	22 08 23.8	-1.3
GERES	**GERESS Array B**	146.85	344	PKPbc	PKiKP	22 08 24.0	-1.6
	comp=Z,1.9nm,0.5s,baz=23,slow=3.2,SNR=20						
BZS	**Buzias**	146.90	333	⇑*i*P	PKiKP	22 08 24.3	-1.4
CONA	**Conrad Observa**	147.08	341	*i* PKPbc	PKPab	22 08 25.5	-2.1
	comp=Z,5.4nm,0.6s,SNR=8.4						
HERR	**Herculane**	147.11	331	⇓*i*P	PKiKP	22 08 24.6	-1.6
MDVR	**Moldovita**	147.51	332	⇓*i*P	PKiKP	22 08 25.6	-1.5
ARSA	**Arzberg**	147.79	341	*i* PKPbc	PKiKP	22 08 25.9	-1.6
	comp=Z,2.9nm,0.9s						
SOKA	**Soboth**	148.45	341	*i* PKPbc	PKiKP	22 08 27.7	-1.3
	comp=Z,1.1nm,0.5s						
KBA	**Koelnbreinsper**	148.57	344	*i* PKPbc	PKiKP	22 08 28.0	-1.3
	comp=Z,2.4nm,0.5s						
WATA	**Walderalm**	148.78	346	*i* PKPbc	PKiKP	22 08 29.1	-0.6
	comp=Z,2.3nm,0.5s						
RETA	**Reutte**	148.82	347	*i* PKPbc	PKiKP	22 08 29.3	-0.4
	comp=Z,2.2nm,0.5s						
WTTA	**Wattenberg**	148.83	346	*i* PKPbc	PKiKP	22 08 29.4	-0.5
	comp=Z,5.0nm,0.4s						
MOTA	**Moosalm**	148.88	347	*i* PKPbc	PKiKP	22 08 29.2	-0.8
	comp=Z,1.9nm,0.4s,SNR=5.5						
MYKA	**Terra Mystica**	148.90	343	*i* PKPbc	PKiKP	22 08 28.8	-1.1
	comp=Z,3.2nm,0.4s,SNR=4.2						
SQTA	**Sankt Quirin**	148.97	346	*i* PKPbc	PKiKP	22 08 29.5	-0.6
	comp=Z,4.4nm,0.5s,SNR=4.5						
ABTA	**Abfaltersbach**	149.10	344	*i* PKPbc	PKiKP	22 08 29.5	-0.8
	comp=Z,4.4nm,0.6s,SNR=4.9						
FETA	**Feichten**	149.27	347	*i* PKPbc	PKiKP	22 08 30.7	0.0
	comp=Z,4.7nm,1.0s						

ISC 27 22:06:03.4±1.3, 50.′13N±0.′06×19.′24E±0.′04, h0km, n5, σ0§75/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.37	76	*e*Pg	Pg	22 06 10.7	+0.1
OJC				*e*Sg	Sg	22 06 15.8	+0.4
LANS	**Liptovska Anna**	0.99	171	*e*PG	Pg	22 06 22.7	+0.3
LANS				*e*SG	Sg	22 06 36.0	+0.8
NIE	**Niedzica**	0.99	136	*e*Pg	Pb	22 06 23.5	0.0
N

SONM Songino Array 32.70 316 P **P 22 21 22.5 +0.3**
1.0nm,0.4s,baz=128,slow=8.8,SNR=7.8
ZALV Zalesovo Beam 47.51 319 P **P 22 23 21.5 -0.3**
0.6nm,0.4s,baz=88,slow=8.3,SNR=4.4
ZALV PcP **PcP 22 24 43.7 -0.8**
0.9nm,0.5s,baz=88,slow=3.6,SNR=4.6
WRA Warramunga Arr 48.13 187 P **P 22 23 25.5 -1.4**
1.9nm,0.4s,baz=357,slow=6.9,SNR=30
WRA PcP **PcP 22 24 47.1 -0.1**
1.0nm,0.5s,baz=5.5,slow=4.2,SNR=3.5
WRA ScP **ScP 22 28 01.8 -1.0**
0.5nm,0.5s,baz=8.9,slow=5.9,SNR=4.5
MKAR Makanchi Array 48.41 309 P **P 22 23 28.5 -0.2**
0.3nm,0.4s,baz=87,slow=10,SNR=7.4
MKAR PcP **PcP 22 24 47.5 -0.4**
0.8nm,0.6s,baz=82,slow=3.1,SNR=6.6
MKAR ScP **ScP 22 28 03.1 -0.7**
0.3nm,0.7s,baz=87,slow=4.9,SNR=3.1
ASAR Alice Springs 51.86 187 P **P 22 23 53.0 -1.6**
0.7nm,0.5s,baz=354,slow=5.3,SNR=13
KDAK Kodiak Island 54.62 37 P **P 22 24 15.2 +1.3**
2.0nm,0.3s,baz=312,slow=7.5,SNR=24
ILAR Eielson Array 57.67 29 P **P 22 24 35.9 +0.9**
1.3nm,0.9s,baz=244,slow=6.3,SNR=7.7
STKA Stephens Creek 59.71 179 P **P 22 24 48.6 -0.7**
0.5nm,0.3s,baz=0.0,slow=5.1,SNR=3.2
INK Inuvik 62.83 25 P **P 22 25 10.3 +0.8**
0.6nm,0.4s,baz=299,slow=5.8,SNR=3.3
ARCES ARCESS Array B 71.95 340 P **P 22 26 06.4 +0.5**
3.1nm,0.5s,baz=70,slow=8.3,SNR=31
YKA Yellowknife Ar 72.08 28 P **P 22 26 07.5 +0.7**
1.7nm,0.4s,baz=296,slow=5.7,SNR=15
KBZ Khabaz 75.96 312 P **P 22 26 29.7 +0.4**
5.7nm,0.7s,baz=59,slow=5.9,SNR=20
FINES FINESS Array B 76.20 333 P **P 22 26 30.2 -0.1**
3.7nm,0.3s,baz=71,slow=4.9,SNR=68
NVAR Mina Array Bea 81.28 51 P **P 22 26 60.0 +1.5**
2.0nm,0.6s,baz=289,slow=5.6,SNR=20
NB2 NORSAR Subarra 81.96 338 P **P 22 27 00.4 -0.8**
comp=Z,1.1nm,0.5s,baz=49,slow=4.6
NOA NORSAR Array B 81.96 338 P **P 22 27 00.6 -0.6**
comp=Z,1.6nm,0.6s,baz=47,slow=4.8,SNR=7.4
BRTR Keskin Array B 83.96 312 P **P 22 27 11.2 -0.7**
comp=Z,1.0nm,0.7s,baz=88,slow=3.9,SNR=6.8
PDAR Pinedale Array 84.73 44 P **P 22 27 16.5 +0.7**
comp=Z,0.2nm,0.3s,baz=45,slow=2.9,SNR=5.3
MMAI Mount Meron Ar 86.23 305 P **P 22 27 22.8 -0.3**
comp=Z,0.7nm,0.6s,baz=98,slow=2.9,SNR=3.0
GERES GERESS Array B 89.67 328 P **P 22 27 38.0 -0.9**
comp=Z,0.3nm,0.5s,baz=32,slow=5.3,SNR=5.1
TXAR Lajitas Array 96.41 52 P **P 22 28 11.4 +1.1**
comp=Z,0.4nm,0.7s,baz=264,slow=1.3,SNR=3.7
TORD Torodi Ar. Bea 122.52 310 PKP **PKPdf 22 33 33.6 -0.9**
comp=Z,15nm,0.3s,baz=132,slow=2.7,SNR=5.1
LPAZ La Paz 151.37 72 PKPbc **PKiKP 22 34 34.2 +0.2**
comp=Z,1.1nm,0.7s,baz=292,slow=3.8,SNR=6.4
PLCA Paso Flores 151.90 125 PKPbc **PKiKP 22 34 33.9 +0.1**
comp=Z,1.7nm,0.5s,baz=261,slow=3.1,SNR=5.8

BJI ***27*** *22:26:58.1±0.0,31°.16N×141°.86E,h29km,mb4.5/24, mB4.8/14,Ms4.1/11,Ms7 3.9/8*
IDC ***27*** *22:26:58.8±0.6,31°.36N×141°.61E,h0km,mb4.1/20, mb1 4.2/23,mb1mx4.1/45,mbtmp4.0/23,ML3.7/3,MS3.3/13, Ms1 3.4/13,ms1mx3.1/46,Error ellipse: s-maj=19.5km s-min=14.7km az=68.0*
NIED ***27*** *22:27:00,31°.70N×141°.70E,h5km,Mw4.6 Best double couple: M₀8.29000×10¹⁵ NP1:φ=34.00000°,δ3.00000°, λ-8.00000°. NP2:φ=133.00000°,δ90.00000°,λ-93.00000°.*
JMA ***27*** *22:27:00.7±0.2,31°.72N×141°.69E,h0km,M4.3*
MOS ***27*** *22:27:01.7±0.9,31°.34N×141°.65E,h33km,mb4.7/21,Error ellipse: s-maj=16.8km s-min=6.4km az=113.7*
NEIC ***27*** *22:27:02.0±1.5,31°.33N×141°.59E,h22km±6km,mb4.6/25, Error ellipse: s-maj=18.9km s-min=17.4km az=101.0*
ISCJB ***27*** *22:27:03.4±0.3,31°.51N±0°.03×141°.58E±0°.05,h40km, mb4.4/47,MS3.6/12,Error ellipse: s-maj=6.8km s-min=3.8km az=152.2*
ISC 27 22:27:04.8±0.5,31°.46N±0°.06×141°.61E±0°.07,h40km,n134, σ1§33/138**,mb4.4**/47**,MS3.6**/12**,1C-1D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.86**	**303**	P	**Pn**	**22 27 33.4**	**-0.9**
JHCJ	**Hachijojimakas**	**2.23**	**317**	P	**Pn**	**22 27 37.3**	**-1.9**
JHCJ				S	**Sn**	**22 28 04.4**	**-1.1**
JHJ2	**Mitsune**	**2.25**	**318**	*e*Pn	**Pn**	**22 27 38.9**	**-0.6**
JHJ2	**Mitsune**	**2.25**	**318**	P	**Pn**	**22 27 38.1**	**-1.4**
JHJ2				S	**Sn**	**22 28 05.2**	**-0.7**
JHJ	**Hachijo jima 2**	**2.27**	**317**	Pn	**Pn**	**22 27 38.5**	**-1.3**
24nm,0.3s,baz=23,slow=23,SNR=12							
JHJ				Sn	**Sn**	**22 28 05.5**	**-1.0**
52nm,0.3s,baz=63,slow=22,SNR=4.3							
JMKN	**Mikurajimanish**	**2.97**	**325**	*e*S	**Sn**	**22 28 22.7**	**-1.1**
BSO1	**Boso 1**	**3.23**	**351**	P	**Pn**	**22 27 50.5**	**-2.1**
BSO3	**Boso 3**	**3.46**	**345**	P	**Pn**	**22 27 54.3**	**-1.7**
BSO4	**Boso 4**	**3.68**	**343**	P	**Pn**	**22 27 57.9**	**-1.2**
BSO4				S	**Sn**	**22 28 39.9**	**-1.3**
JIM2	**Oshima 3**	**3.73**	**331**	P	**Pn**	**22 27 59.2**	**-0.7**
TATJ	**Tateyama 2**	**3.85**	**338**	S	**Sn**	**22 28 45.1**	**-0.3**
JKUC	**kamogawauchiur**	**3.88**	**343**	P	**Pn**	**22 27 59.8**	**-2.1**
JKUC				S	**Sn**	**22 28 43.7**	**-2.5**
JYO	**Yokosk**	**4.10**	**337**	S	**Sn**	**22 28 50.3**	**-1.3**
JHU	**Hanno**	**4.79**	**337**	P	**Pn**	**22 28 13.4**	**-1.1**
JHU				S	**Sn**	**22 29 06.7**	**-2.1**
JYT	**Yasato**	**4.90**	**346**	P	**Pn**	**22 28 14.1**	**-1.9**
JIE	**Ise**	**5.06**	**307**	P	**Pn**	**22 28 18.6**	**+0.5**
JHO	**Hitachi**	**5.21**	**351**	P	**Pn**	**22 28 17.3**	**-3.0**
JAG	**Ashikaga**	**5.27**	**341**	P	**Pn**	**22 28 20.2**	**-0.9**
INU	**Inuyama**	**5.46**	**317**	*e*Pn	**Pn**	**22 28 23.7**	**0.0**
MJA0	**Matsu Arr-Jizo**	**5.79**	**332**	*e*P	**Pn**	**22 28 28.8**	**+0.5**
MJA0				pmax	pmax		
comp=Z,1.0nm,0.3s							
MJAR	**Matsushiro Arr**	**5.81**	**332**	Pn	**Pn**	**22 28 28.6**	**+0.2**
comp=Z,0.9nm,0.3s,baz=154,slow=11,SNR=31							
MJAR				Sn	**Sn**	**22 29 34.9**	**+1.1**
comp=Z,0.3nm,0.3s,baz=151,slow=18,SNR=3.0							
MJAR				LR	LR	22 30 35.5	
comp=Z,133nm,19.3s,baz=120,slow=37							
MAJO	**Matsushiro**	**5.81**	**332**	*e*Pn	**Pn**	**22 28 29.2**	**+0.7**
MAJO				*e*Sn	**Sn**	**22 29 34.9**	**+1.1**
MAJO	**Matsushiro**	**5.81**	**332**	*e*P	**Pn**	**22 28 29.2**	**+0.7**
MAJO				*e*		22 29 34.9	
MAT	**Matsushiro**	**5.81**	**332**	P	**Pn**	**22 28 28.3**	**-0.1**
MAT				*e*S	**Sn**	**22 29 31.9**	**-1.9**
MJB9	**Matsu-Tunnel**	**5.81**	**332**	*e*Pn	**Pn**	**22 28 29.1**	**+0.5**
JNU	**Nakatsue**	**9.24**	**283**	Pn	**Pn**	**22 29 16.6**	**+1.1**
comp=Z,0.2nm,0.3s,baz=245,slow=3.2,SNR=4.1							
JNU				LR	LR	22 32 54.8	
comp=Z,346nm,18.8s,baz=168,slow=38							
JNU	**Nakatsue**	**9.24**	**283**	*e*Pn	**Pn**	**22 29 15.3**	**-0.2**
ERM	**Erimo**	**10.61**	**6**	*i* P	**Pn**	**22 29 35.1**	**+0.9**
ASAJ	**Asahikawa**	**12.66**	**3**	Pn	**Pn**	**22 29 58.5**	**-3.8**
comp=Z,1.0nm,0.3s,baz=187,slow=1.7,SNR=5.0							
ASAJ				Sn	Sn	22 32 10.9	-11
comp=Z,0.4nm,0.3s,baz=170,slow=19,SNR=3.1							
ASAJ				LR	LR	22 34 28.1	
comp=Z,68nm,20.8s,baz=182,slow=35							
KSRS	**Korea Array**	**12.78**	**302**	Pn	**Pn**	**22 30 08.5**	**+4.6**
comp=Z,0.2nm,0.3s,baz=105,slow=12,SNR=5.2							
KSRS				LR	LR	22 35 07.8	
comp=Z,140nm,18.3s,baz=110,slow=38							
KSRS	**Korea Array**	**12.78**	**302**	*e*P	**P**	**22 30 09.5**	**-4.6**
USRK	**Ussuriysk Ar.**	**14.81**	**332**	LR	LR	22 36 21.7	
comp=Z,115nm,20.1s,baz=146,slow=38							
CN2	**Changchun**	**17.73**	**319**	*e*P	**Pn**	**22 31 08.0**	**-0.6**
CN2				*e*S	**Sn**	**22 34 25.5**	**+0.4**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
CN2				pmax	pmax		
comp=Z,200nm,3.0s							
CN2				LR	LR		
comp=Z,300nm,15.0s							
CN2				LR	LR		
comp=Z,200nm,15.0s							
CN2				LR	LR		
comp=Z,300nm,13.0s							
KLR	**Kul'dur**	**19.25**	**340**	P	**P**	**22 31 24.8**	**-0.9**
comp=Z,0.7nm,0.3s,baz=248,slow=4.5,SNR=12							
KLR	**Kul'dur**	**19.25**	**340**	*i* P	**P**	**22 31 26.1**	**+0.4**
KLR				pmax	pmax		
comp=Z,3.0nm,0.9s							
NJ2	**Nanjing**	**19.36**	**278**	P	**P**	**22 31 27.5**	**+0.5**
NJ2				pmax	pmax		
comp=Z,14nm,0.5s							
YULB	**Yu-li**	**19.72**	**251**	*e*P	**P**	**22 31 29.9**	**-1.2**
comp=Z,19nm,1.1s							
HIA	**Hailar**	**24.23**	**324**	*i* P	**P**	**22 32 19.0**	**+1.2**
HIA				pmax	pmax		
comp=Z,28nm,0.8s							
ZEA	**Zeya**	**24.56**	**339**	*e*P	**P**	**22 32 22.0**	**+1.3**
ZEA				pmax	pmax		
comp=Z,31nm,0.8s							
PETK	**Petropavlovsk-**	**24.58**	**24**	LR	LR	22 44 55.1	
comp=Z,63nm,18.4s,baz=220,slow=44							
H11N2	**WAKE ISLAND Hy**	**25.55**	**111**	T	T	22 59 01.7	
baz=304,slow=74,SNR=11							
H11N1	**WAKE ISLAND Hy**	**25.56**	**111**	T	T	22 58 59.4	
baz=304,slow=74,SNR=10							
H11N3	**WAKE ISLAND Hy**	**25.57**	**111**	T	T	22 59 03.3	
baz=304,slow=74,SNR=10							
HHC	**Hu-ho-hao-te**	**25.91**	**300**	P	**P**	**22 32 33.8**	**+0.6**
HHC				pmax	pmax		
comp=Z,11nm,0.8s							
HHC				LR	LR		
comp=Z,230nm,14.2s							
HHC				LR	LR		
comp=Z,160nm,17.0s							
H11S3	**WAKE ISLAND Hy**	**26.06**	**114**	T	T	22 59 45.1	
baz=304,slow=74,SNR=7.8							
H11S1	**WAKE ISLAND Hy**	**26.07**	**114**	T	T	23 00 03.8	
baz=304,slow=74,SNR=10							
H11S2	**WAKE ISLAND Hy**	**26.08**	**114**	T	T	22 59 54.3	
baz=304,slow=74,SNR=7.1							
MA2	**Magadan**	**28.79**	**10**	LR	LR	22 46 52.0	
comp=Z,34nm,18.4s,baz=150,slow=41							
ULN	**Ulaanbaatar**	**30.93**	**312**	*e*P	**P**	**22 33 18.6**	**+0.7**
comp=Z,2.6nm,0.7s							
ULN	**Ulaanbaatar**	**30.93**	**312**	*i* P	**P**	**22 33 18.2**	**+0.3**
ULN				pmax	pmax		
comp=Z,8.0nm,1.7s							
SONA0	**Songino Array**	**31.34**	**312**	*e*P	**P**	**22 33 22.0**	**+0.5**
SONM	**Songino Array**	**31.34**	**312**	P	**P**	**22 33 22.0**	**+0.5**
comp=Z,2.8nm,0.8s,baz=117,slow=8.2,SNR=14							
SONM	**Songino Array**	**31.34**	**312**	*e*P	**P**	**22 33 21.7**	**+0.2**
SONM				pmax	pmax		
comp=Z,3.0nm,0.8s							
LZH	**Lanzhou**	**31.60**	**289**	*e*P	**P**	**22 33 24.0**	**0.0**
LZH				pP	pP	22 33 30.3	-3.5
LZH				sP	sP	22 33 35.0	-3.1
LZH				pmax	pmax		
comp=Z,15nm,1.3s							
LZH				LR	LR		
comp=Z,210nm,13.6s							
LZH				LR	LR		
comp=Z,160nm,15.2s							
LZH				LR	LR		
comp=Z,190nm,17.4s							
CD2	**Chengdu**	**32.29**	**279**	*e*P	**P**	**22 33 28.0**	**-2.0**
CD2				pmax	pmax		
comp=Z,10.0nm,0.5s							
TLY	**Talaya**	**34.33**	**317**	*e*P	**P**	**22 33 48.5**	**+1.0**
TLY				pmax	pmax		
comp=Z,8.0nm,0.9s							
TLY				MLR	MLR		
comp=Z,151nm,11.0s							
KMI	**Kunming**	**34.68**	**269**	P	**P**	**22 33 49.8**	**-1.2**
KMI				pmax	pmax		
comp=Z,5.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**40.55**	**262**	LR	LR	22 52 31.1	
comp=Z,63nm,18.4s,baz=158,slow=38							
TIXI	**Tiksi**	**40.84**	**354**	*i* P	**P**	**22 34 42.9**	**+0.8**
WMQ	**Urumqi**	**43.73**	**302**	*e*P	**P**	**22 35 07.5**	**+1.3**
WMQ				pP	pP	22 35 14.8	-1.4
WMQ				sP	sP	22 35 18.5	-1.9
DGZ	**Jazzator, Alta**	**43.97**	**311**	*i* P	**P**	**22 35 09.0**	**+0.8**
DGZ				pmax	pmax		
comp=Z,4.0nm,0.7s							
ZAA0	**Zalesovo Array**	**45.93**	**317**	*e*P	**P**	**22 35 23.6**	**+0.1**
comp=Z,3.0nm,0.6s							
ZAA1	**Zalesovo Array**	**45.93**	**317**	*e*P	**P**	**22 35 23.1**	**-0.4**
ZALV	**Zalesovo Beam**	**45.93**	**317**	P	**P**	**22 35 23.1**	**-0.4**
comp=Z,3.3nm,0.6s,baz=101,slow=8.4,SNR=13							
ZALV				LR	LR	22 56 51.8	
comp=Z,30nm,18.1s,baz=72,slow=39							
ZALV	**Zalesovo Beam**	**45.93**	**317**	*e*P	**P**	**22 35 24.0**	**+0.5**
ZALV				pmax	pmax		
comp=Z,3.0nm,0.6s							
NVS	**Novosibirsk**	**46.94**	**318**	*e*P	**P**	**22 35 30.8**	**-0.5**
NVS				*e*		22 35 49.2	
NVS				pmax	pmax		
comp=Z,6.0nm,0.7s							
NVS				pmax	pmax		
comp=E,3.0nm,0.7s							
MK31	**Makanchi Array**	**47.40**	**307**	*e*P	**P**	**22 35 34.6**	**-0.5**
comp=E,3.4nm,1.2s							
MK31	**Makanchi Array**	**47.40**	**307**	*e*P	**P**	**22 35 34.7**	**-0.5**
MK31				pmax	pmax		
comp=Z,3.0nm,1.2s							
MK32	**Makanchi Array**	**47.40**	**307**	*e*P	**P**	**22 35 35.1**	**0.0**
MKAR	**Makanchi Array**	**47.40**	**307**	P	**P**	**22 35 35.1**	**0.0**
comp=Z,1.7nm,0.5s,baz=88,slow=8.7,SNR=18							
MKAR				LR	LR	22 54 45.8	
comp=Z,30nm,18.4s,baz=93,slow=35							
MAKZ	**Makanchi**	**47.61**	**307**	*e*P	**P**	**22 35 36.2**	**-0.6**
comp=Z,19nm,1.9s							
MAKZ	**Makanchi**	**47.61**	**307**	*e*P	**P**	**22 35 36.2**	**-0.6**
MAKZ				pmax	pmax		
comp=Z,19nm,1.9s							
KURK	**Kurchatov**	**49.64**	**312**	*e*P	**P**	**22 35 52.0**	**-0.2**
comp=Z,6.4nm,0.8s							
KURK	**Kurchatov**	**49.64**	**312**	*i* P	**P**	**22 35 52.9**	**+0.6**
KURK				pmax	pmax		
comp=Z,8.0nm,1.2s							
KDAK	**Kodiak Island**	**51.23**	**39**	*i* P	**P**	**22 36 03.6**	**-0.6**
WB2	**Warramunga Arr**	**51.58**	**189**	*e*P	**P**	**22 36 04.7**	**-2.4**
comp=Z,21nm,1.7s							
WR1	**Warramunga Arr**	**51.58**	**189**	*e*P	**P**	**22 36 05.8**	**-1.3**
WRA	**Warramunga Arr**	**51.58**	**189**	P	**P**	**22 36 05.8**	**-1.3**
comp=Z,4.2nm,0.7s,baz=351,slow=8.4,SNR=22							
KSH	**Kashi**	**53.00**	**298**	*e*P	**P**	**22 36 21.5**	**+3.7**
ILAR	**Eielson Array**	**54.17**	**30**	P	**P**	**22 36 25.2**	**-0.6**
comp=Z,1.6nm,0.9s,baz=263,slow=6.2,SNR=8.6							
ILAR	**Eielson Array**	**54.17**	**30**	*e*P	**P**	**22 36 25.5**	**-0.3**
ILAR				pmax	pmax		
comp=Z,2.0nm,0.9s							
ILB	**Eielson Array**	**54.17**	**30**	*e*P	**P**	**22 36 25.5**	**-0.3**
comp=Z,6.6nm,1.3s							
BRVK	**Borovoye**	**54.61**	**315**	*e*P	**P**	**22 36 29.0**	**-0.1**
comp=Z,2.5nm,0.9s							
BRVK	**Borovoye**	**54.61**	**315**	*i* P	**P**	**22 36 29.9**	**+0.8**
BRVK				pmax	pmax		
comp=Z,3.0nm,1.0s							
ASAR	**Alice Springs**	**55.31**	**189**	P	**P**	**22 36 33.2**	**-1.3**
comp=Z,1.6nm,0.4s,baz=6.3,slow=5.2,SNR=27							
KK31	**Karatay Array**	**56.20**	**304**	*e*P	**P**	**22 36 40.6**	**-0.2**
comp=Z,4.7nm,0.7s							
KK31	**Karatay Array**	**56.20**	**304**	*e*P	**P**	**22 36 40.6**	**-0.2**
KK31				pmax	pmax		
comp=Z,5.0nm,0.7s							
BCPM	**Bancas Point**	**57.82**	**36**	*e*P	**P**	**22 36 53.3**	**+1.4**
comp=Z,153nm,1.3s							
EPYK	**Eagle Plains**	**58.32**	**28**	*e*P	**P**	**22 36 56.1**	**+0.7**
comp=Z,5.4nm,0.8s							
CHGR	**Chuyangaron**	**58.35**	**299**	*e*P	**P**	**22 36 56.0**	**-0.2**
comp=Z,9.5nm,0.9s							
HYT	**Haines Junctio**	**58.73**	**34**	*e*P	**P**	**22 36 59.9**	**+1.4**
comp=Z,4.1nm,0.7s							
INK	**Inuvik**	**59.30**	**26**	P	**P**	**22 37 02.4**	**+0.3**
comp=Z,0.9nm,0.5s,baz=277,slow=6.3,SNR=3.4							
INK	**Inuvik**	**59.30**	**26**	*e*P	**P**	**22 37 02.2**	**+0.1**
comp=Z,2.1nm,1.0s							
INK	**Inuvik**	**59.30**	**26**	*e*P	**P**	**22 37 02.2**	**+0.1**
INK				pmax	pmax		
comp=Z,2.0nm,1.0s							
SVE	**Sverdlovsk**	**59.50**	**321**	*e*P	**P**	**22 37 04.7**	**+1.0**
SVE				pmax	pmax		
comp=Z,8.0nm,0.7s							
ARU	**Arti**	**60.71**	**321**	*e*P	**P**	**22 37 11.8**	**-0.1**
comp=Z,11nm,0.7s							
ARU	**Arti**	**60.71**	**321**	*c i*P	**P**	**22 37 12.2**	**+0.2**
ARU				*PP	**pP**	**22 37 23.5**	**+1.1**
ARU				S	**S**	**22 45 29.5**	**+3.8**
ARU				SS	**SS**	**22 49 22.0**	**-2.2**
ARU				pmax	pmax		
comp=Z,12nm,0.8s							
ABKAR	**Akbulak array**	**61.74**	**313**	*e*P	**P**	**22 37 19.1**	**0.0**
comp=Z,3.0nm,0.8s							
STKA	**Stephens Creek**	**62.99**	**180**	P	**P**	**22 37 27.3**	**-0.1**
comp=Z,0.6nm,0.4s,baz=0.0,slow=8.1,SNR=3.0							
STKA				LR	LR	23 04 10.1	
comp=Z,60nm,18.6s,baz=208,slow=36							
STKA	**Stephens Creek**	**62.99**	**180**	*e*P	**P**	**22 37 26.2**	**-1.2**
STKA				pmax	pmax		
comp=Z,1.0nm,0.4s							
GEYT	**Alibeck**	**66.77**	**301**	P	**P**	**22 37 52.5**	**+0.2**
comp=Z,1.4nm,0.6s,baz=64,slow=6.6,SNR=4.5							
YKA	**Yellowknife Ar**	**68.57**	**29**	P	**P**	**22 38 04.6**	**+1.5**
comp=Z,0.2nm,0.4s,baz=284,slow=5.7,SNR=3.1							
YKB5	**Yellowknife Ar**	**68.57**	**29**	*e*P	**P**	**22 38 04.6**	**+1.5**
ARA0	**ARCESS Array S**	**69.28**	**340**	*e*P	**P**	**22 38 08.0**	**+0.6**
ARCES	**ARCESS Array B**	**69.28**	**340**	P	**P**	**22 38 08.0**	**+0.6**
comp=Z,1.1nm,0.7s,baz=64,slow=8.2,SNR=3.9							
ARCES	**ARCESS Array B**	**69.28**	**340**	*e*P	**P**	**22 38 08.6**	**+1.2**
ARCES				pmax	pmax		
comp=Z,1.0nm,0.8s							
AKT	**Akhty**	**72.59**	**308**	*e*P	**P**	**22 38 28.9**	**+0.7**
AKT				*e*		22 38 46.3	
AKT				pmax	pmax		
comp=Z,5.0nm,0.7s							
OBN	**Obninsk**	**72.69**	**324**	*e*P	**P**	**22 38 29.1**	**+0.8**
OBN				*e*		22 38 45.5	
OBN				*e*		22 41 11.5	
OBN				*e*S	**S**	**22 47 52.2**	**+1.8**
OBN				pmax	pmax		
comp=Z,2.0nm,0.6s							
OBN				MLR	MLR		
comp=Z,56nm,17.0s							
FIA0	**FINESS Array S**	**73.83**	**333**	*e*P	**P**	**22 38 35.4**	**+0.4**
FIA0	**FINESS Array S**	**73.83**	**333**	*e*P	**P**	**22 38 35.4**	**+0.4**
FINES	**FINESS Array B**	**73.83**	**333**	P	**P**	**22 38 35.4**	**+0.5**
comp=Z,2.0nm,0.6s,baz=97,slow=6.5,SNR=9.6							
FINES	**FINESS Array B**	**73.83**	**333**	*i* P	**P**	**22 38 35.5**	**+0.6**
FINES				pmax	pmax		
comp=Z,2.0nm,0.6s							
KBZ	**Khabaz**	**74.70**	**312**	P	**P**	**22 38 41.3**	**+1.0**
comp=Z,0.9nm,0.6s,baz=36,slow=8.0,SNR=4.0							
NVAR	**Mina Array Bea**	**78.23**	**52**	P	**P**	**22 39 01.0**	**+0.3**
comp=Z,0.5nm,0.7s,baz=300,slow=5.4,SNR=3.8							
NB2	**NORSAR Subarra**	**79.39**	**338**	P	**P**	**22 39 05.9**	**-0.5**
comp=Z,1.0nm,0.7s,baz=41,slow=5.6							
NOA	**NORSAR Array B**	**79.39**	**338**	P	**P**	**22 39 06.4**	**-0.1**
comp=Z,1.1nm,0.6s,baz=41,slow=5.3,SNR=8.9							
NOA	**NORSAR Array B**	**79.39**	**338**	*e*P	**P**	**22 39 05.5**	**-0.9**
NOA				pmax	pmax		
comp=Z,1.0nm,0.6s							
PDAR	**Pinedale Array**	**81.48**	**45**	P	**P**	**22 39 19.0**	**+0.8**
comp=Z,0.1nm,0.3s,baz=321,slow=7.0,SNR=4.5							
BR101	**Keskin Array S**	**82.69**	**312**	*e*P	**P**	**22 39 25.0**	**+0.4**
BRTR	**Keskin Array B**	**82.69**	**312**	P	**P**	**22 39 25.0**	**+0.4**
comp=Z,1.3nm,0.9s,baz=132,slow=4.5,SNR=5.8							
BRTR	**Keskin Array B**	**82.69**	**312**	*e*P	**P**	**22 39 29.1**	**+4.5**
BRTR				pmax	pmax		
comp=Z,2.0nm,1.0s							
RAYN	**Ar Rayn**	**82.96**	**293**	*e*P	**P**	**22 39 26.0**	**-0.1**
comp=Z,3.5nm,0.6s							
RAYN	**Ar Rayn**	**82.96**	**293**	*e*P	**P**	**22 39 26.0**	**-0.1**
RAYN				pmax	pmax		
comp=Z,4.0nm,0.6s							
ASF	**Jabal al Asfar**	**84.77**	**305**	P	**P**	**22 39 35.6**	**+0.3**
comp=Z,1.0nm,0.6s,baz=79,slow=10,SNR=3.9							
MMAI	**Mount Meron Ar**	**85.34**	**306**	P	**P**	**22 39 39.0**	**+0.8**
comp=Z,1.1nm,0.6s,baz=80,slow=9.7,SNR=4.8							
VYHS	**Vyhne**	**85.41**	**326**	*e*P	**P**	**22 39 38.9**	**+0.8**
VYHS	**Vyhne**	**85.41**	**326**	*e*P	**P**	**22 39 38.9**	**+0.8**
CLL	**Collm**	**86.01**	**331**	*e*P	**P**	**22 39 41.0**	**+0.1**
CLL	**Collm**	**86.01**	**331**	*e*P	**P**	**22 39 41.0**	**+0.1**
CLL				*e*PP	**pP**	**22 39 53.0**	**+1.3**
LPIG	**La Paz**	**91.80**	**60**	LR	LR	23 24 08.2	
comp=Z,34nm,18.4s,baz=266,slow=37							
TX31	**Lajitas Ar. Si**	**93.38**	**53**	*e*P	**P**	**22 40 15.9**	**-0.3**
comp=Z,2.6nm,1.1s							
TXAR	**Lajitas Array**	**93.38**	**53**	P	**P**	**22 40 16.4**	**+0.1**
comp=Z,1.3nm,0.8s,baz=299,slow=3.0,SNR=8.3							
TXAR				LR	LR	23 16 00.9	
comp=Z,16nm,21.9s,baz=0.0,slow=32							
LPAZ	**La Paz**	**149.02**	**68**	PKPbc	**PKPbc**	**22 46 50.4**	**+0.4**
comp=Z,0.5nm,0.5s,baz=117,slow=2.3,SNR=3.6							
LPAZ	**La Paz**	**149.02**	**68**	*e*PKPdf	**PKPdf**	**22 46 43.8**	**-2.1**

ISCJB ***27*** *22:31:15.7±0.3,15°.84N±0°.04×94°.21W±0°.03,h84km±4km, mb4.0/19,Error ellipse: s-maj=7.4km s-min=3.3km az=27.8*
SNET ***27*** *22:31:17.3±0.5,13°.58N×94°.46W,h13km,ML4.2*
IDC ***27*** *22:31:17.3±1.2,15°.97N×94°.02W,h78km±6km,mb3.7/13, mb1 4.0/16,mb1mx3.8/38,mbtmp4.1/16,MS3.1/3, Ms1 3.1/3,ms1mx2.8/26,Error ellipse: s-maj=29.8km s-min=6.6km az=38.0*
MEX ***27*** *22:31:18.0±1.0,15°.74N×94°.23W,h46km±73km,MD4.3*
GCG ***27*** *22:31:18.6±0.7,16°.42N×93°.84W,h35km±458km,MD4.5*
NEIC ***27*** *22:31:18.0±0.0,15°.74N×94°.23W,h46km,mb4.2/23, MD4.3(MEX),After MEX.*
UCR ***27*** *22:31:21.5±2.4,16°.07N×93°.76W,h35km±999km,MD4.1, ML3.7,mb4.2(NEIC)*
**ISC 27

CEVE				IAML			22 33 30.0
	comp=Z,607nm,0.3s						
CEVE	**Cerro Verde**	**4.87**	**113**	*eP*	**Pn**		**22 32 29.0 +1.6**
CEVE				IAML			22 33 30.0
	comp=Z,607nm,0.3s						
SNJE	**San Jose**	**4.87**	**113**	*eP*	**Pn**		**22 32 29.4 +2.0**
SNJE	**San Jose**	**4.87**	**113**	*eP*	**Pn**		**22 32 29.4 +2.0**
LFRS	**El Faro**	**5.45**	**113**	*eP*	**Pn**		**22 32 36.0 +0.7**
LFRS				*eS*	**Sn**		**22 33 37.3 +0.6**
MYIG	**Mrida**	**6.66**	**39**	*ePn*	**Pn**		**22 32 52.3 +0.7**
TGUH	**Tegucigalpa,Un**	**6.94**	**104**	*ePn*	**Pn**		**22 32 55.1 -0.4**
CSGN	**Cosiguina Volc**	**7.05**	**113**	*ePn*	**Pn**		**22 32 58.5 +1.4**
ACON	**Acoyapa**	**9.58**	**112**	*ePn*	**Pn**		**22 33 29.2 -2.4**
LNIG	**Linares**	**10.29**	**332**	*ePn*	**Pn**		**22 33 41.8 +0.6**
JTS	**Las Juntas de**	**10.57**	**120**	P	**Pn**		**22 33 44.8 -0.3**
	comp=Z,9.8nm,0.3s,baz=356,slow=9.7,SNR=14						
833A	**Chaparral WMA,**	**13.34**	**340**	*ePn*	**Pn**		**22 34 24.9 +2.5**
435B	**Jarrell**	**15.21**	**349**	*ePn*	**P**		**22 34 49.0 -1.0**
	comp=Z,31nm,0.5s						
TX31	**Lajitas Ar. Si**	**16.02**	**329**	*eP*	**P**		**22 34 59.4 +0.4**
	comp=Z,17nm,1.8s						
TXAR	**Lajitas Array**	**16.02**	**329**	P	**P**		**22 34 59.4 +0.4**
	comp=Z,0.2nm,0.3s,baz=138,slow=11,SNR=20						
TXAR				LR	LR		22 42 38.4
	comp=Z,35nm,21.0s,baz=0.0,slow=43						
WHTX	**Lake Whitney,**	**16.37**	**350**	*ePn*	**P**		**22 35 03.4 +0.7**
	comp=Z,17nm,0.6s						
ABTX	**Abilene, Hawle**	**17.44**	**345**	*eP*	**P**		**22 35 14.7 +0.1**
	comp=Z,10nm,0.8s						
MIAR	**Mount Ida**	**18.66**	**2**	*eP*	**P**		**22 35 27.4 -0.5**
	comp=Z,11nm,0.8s						
X37A	**Clayton**	**18.72**	**357**	*eP*	**P**		**22 35 28.2 -0.5**
	comp=Z,7.4nm,0.5s						
Z50A	**Ashland**	**18.92**	**22**	*eP*	**P**		**22 35 30.4 -0.5**
	comp=Z,27nm,1.5s						
WMOK	**Wichita Mounta**	**19.28**	**349**	*eP*	**P**		**22 35 34.8 0.0**
	comp=Z,5.2nm,0.6s						
W41B	**Gary Mavity, V**	**19.36**	**5**	*eP*	**P**		**22 35 35.5 -0.1**
	comp=Z,5.4nm,0.9s						
X48A	**Hartselle**	**19.65**	**18**	*eP*	**P**		**22 35 37.2 -1.5**
	comp=Z,33nm,1.9s						
MSTX	**Muleshoe**	**19.65**	**338**	*eP*	**Pn**		**22 35 40.6 -0.4**
	comp=Z,11nm,0.8s						
AMTX	**Amarillo**	**20.13**	**342**	*eP*	**P**		**22 35 45.1 +1.0**
	comp=Z,30nm,0.5s						
W50A	**Signal Mountai**	**20.89**	**21**	*eP*	**P**		**22 35 53.1 +0.9**
	comp=Z,15nm,0.7s						
CPCT	**Cooper Cave**	**21.40**	**22**	*eP*	**P**		**22 35 56.4 -1.2**
	comp=Z,10nm,0.6s						
BG3	**Lake Jocassee**	**21.62**	**26**	*eP*	**P**		**22 35 59.1 -0.9**
	comp=Z,9.2nm,1.0s						
ANMO	**Albuquerque**	**21.99**	**332**	P	**P**		**22 36 06.6 +2.5**
	comp=Z,0.8nm,0.5s,baz=143,slow=12,SNR=3.0						
T47A	**Sharon Grove**	**22.02**	**15**	*eP*	**P**		**22 36 03.4 -0.7**
	comp=Z,8.4nm,0.8s						
TUC	**Tucson**	**22.27**	**320**	*eP*	**P**		**22 36 07.5 +0.4**
	comp=Z,4.7nm,1.0s						
T25A	**Trinidad**	**23.08**	**339**	*eP*	**P**		**22 36 16.1 +0.6**
	comp=Z,4.6nm,0.9s						
NVAR	**Mina Array Bea**	**30.92**	**321**	P	**P**		**22 37 28.6 +2.8**
	comp=Z,2.2nm,0.8s,baz=134,slow=9.0,SNR=17						
GCMT	**Greycliff**	**32.57**	**340**	*eP*	**P**		**22 37 38.4 -1.7**
FFC	**Flin Flon**	**39.29**	**353**	*eP*	**P**		**22 38 36.3 -0.9**
	comp=Z,44nm,0.6s						
LPAZ	**La Paz**	**41.00**	**140**	P	**P**		**22 38 52.0 -0.4**
	comp=Z,1.1nm,0.7s,baz=307,slow=10,SNR=2.8						
YKA	**Yellowknife Ar**	**48.79**	**348**	P	**P**		**22 39 53.3 +0.3**
	comp=Z,1.0nm,0.5s,baz=151,slow=7.4,SNR=12						
YKA				pP	**pP**		**22 40 13.0 0.0**
	comp=Z,0.4nm,0.5s,baz=154,slow=7.7,SNR=2.3						
BDFB	**Brasilia**	**55.30**	**122**	P	**P**		**22 40 41.3 -0.9**
	comp=Z,3.4nm,0.5s,baz=304,slow=9.4,SNR=7.5						
BDFB	**Brasilia**	**55.30**	**122**	*eP*	**P**		**22 40 39.8 -2.4**
	comp=Z,4.7nm,0.7s						
INK	**Inuvik**	**58.10**	**344**	P	**P**		**22 41 02.1 +1.1**
	comp=Z,1.1nm,0.6s,baz=133,slow=4.3,SNR=4.1						
INK				pP	**pP**		**22 41 22.9 +1.2**
	comp=Z,1.8nm,0.7s,baz=104,slow=6.2,SNR=2.3						
ILAR	**Eielson Array**	**60.34**	**337**	P	**P**		**22 41 18.7 +2.1**
	comp=Z,0.4nm,0.8s,baz=129,slow=5.3,SNR=4.3						
ILAR				pP	**pP**		**22 41 38.3 +1.1**
	comp=Z,0.5nm,0.6s,baz=160,slow=4.1,SNR=4.2						
EKA	**Eskdalemuir Ar**	**77.76**	**36**	P	**P**		**22 43 03.6 -0.9**
	comp=Z,2.6nm,0.6s,baz=291,slow=5.2,SNR=16						
ESDC	**Sonseca Array**	**80.28**	**52**	P	**P**		**22 43 17.9 -0.9**
	comp=Z,0.9nm,0.7s,baz=292,slow=4.8,SNR=6.3						
NB2	**NORSAR Subarra**	**83.58**	**28**	P	**P**		**22 43 36.0 +0.4**
	comp=Z,1.0nm,0.6s,baz=293,slow=5.3						
NOA	**NORSAR Array B**	**83.58**	**28**	P	**P**		**22 43 35.9 +0.3**
	comp=Z,2.0nm,0.8s,baz=292,slow=5.2,SNR=9.2						
HFS	**Hagfors**	**85.05**	**29**	LR	LR		23 21 06.7
	comp=Z,29nm,19.4s,baz=37,slow=35						
ARCES	**ARCESS Array B**	**85.09**	**18**	P	**P**		**22 43 43.2 +0.2**
	comp=Z,2.3nm,0.6s,baz=290,slow=5.3,SNR=20						
GERES	**GERESS Array B**	**89.56**	**39**	P	**P**		**22 44 04.9 -0.2**
	comp=Z,1.2nm,0.9s,baz=316,slow=3.7,SNR=7.7						
FINES	**FINESS Array B**	**89.76**	**25**	P	**P**		**22 44 05.9 +0.2**
	comp=Z,0.6nm,0.6s,baz=318,slow=1.9,SNR=4.2						
WRA	**Warramunga Arr**	**133.72**	**257**	PKP	**PKiKP**		**22 50 25.8 -0.2**
	comp=Z,1.2nm,0.8s,baz=101,slow=2.6,SNR=4.4						
ASAR	**Alice Springs**	**134.20**	**252**	PKP	**PKPdf**		**22 50 26.4 +0.9**
	comp=Z,0.1nm,0.4s,baz=136,slow=1.8,SNR=4.8						

*ISCJB **27** 23:03:00.7±0.2,36°.61N±0°.02×31°.26E±0°.02,h101km±2km, mb3.6/6,Error ellipse: s-maj=3.5km s-min=2.2km az=140.6*
*HLW **27** 23:03:01.0,36°.42N×31°.26E,h10km±22km,Md4.1,Ml4.2*
*ISK **27** 23:03:01.4,36°.75N×31°.26E,h86km,ML3.7/27*
*IDC **27** 23:03:01.5±1.3,36°.70N×31°.31E,h92km±15km,mb3.5/6, mb1 3.7/15,mb1mx3.4/49,mbtmp3.9/15,MS2.8/1, Ms1 2.8/1,ms1mx2.1/32,Error ellipse: s-maj=13.4km s-min=11.2km az=82.0*
*GII **27** 23:03:01.2±0.6,36°.51N×31°.14E,h40km,MD3.7/1*
*DDA **27** 23:03:02.6,36°.75N×31°.24E,h51km±3km,ML4.1*
*NIC **27** 23:03:05.7±0.4,36°.53N×31°.65E,h50km,mb4.1,ML3.7*
ISC 27 23:03:01.5±0.7,36°.59N±0°.03×31°.27E±0°.03,h96km±6km, n148,σ1§45/173,mb3.6/6,10C-13D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNVG	**Manavgat-Antal**	**0.23**	**30**	PG	**Pn**	**23 03 14.4**	**-1.0**
MNVG				SG	**Sn**	**23 03 23.0**	**-2.7**
KEMT	**Kemer-ANTALYA**	**0.58**	**271**	PG	**Pn**	**23 03 17.2**	**-0.3**
KEMT				SG	**Sn**	**23 03 28.8**	**-0.6**
ALAN	**Alanya-ANTALYA**	**0.61**	**93**	PG	**Pn**	**23 03 17.8**	**0.0**
ALAN				SG	**Sn**	**23 03 28.9**	**-1.1**
AKUM	**Antalya-Kumluc**	**0.80**	**250**	*iP*	**Pn**	**23 03 20.4**	**+0.9**
AKUM				*i S*	**Sn**	**23 03 38.1**	**+5.2**
KORT	**Korkueli**	**0.84**	**299**	*iP*	**Pn**	**23 03 19.5**	**-0.6**
KORT				*i S*	**Sn**	**23 03 35.3**	**+1.2**
KORT				IAML_P			
	comp=Z,17μm,0.2s						
GAZI	**Gazipasa**	**0.92**	**113**	*iP*	**Pn**	**23 03 21.6**	**+0.8**
GAZI				*i S*	**Sn**	**23 03 36.4**	**+1.2**
BCK	**Bucak**	**1.02**	**328**	PG	**Pn**	**23 03 20.5**	**-1.5**
ELL	**Elmali**	**1.11**	**278**	PN	**Pn**	**23 03 22.8**	**-0.2**
ERMK	**Ermenek**	**1.32**	**87**	*iP*	**Pn**	**23 03 27.4**	**+1.8**
ERMK				*i S*	**Sn**	**23 03 45.0**	**+1.3**
ERMK				IAML_P			
	comp=Z,16μm,0.1s						
ISP	**Isparta**	**1.36**	**334**	PN	**Pn**	**23 03 24.5**	**-1.6**
ISP	**Isparta**	**1.36**	**334**	Pn	**Pn**	**23 03 24.4**	**-1.6**
ISP				Sn	**Sn**	**23 03 42.0**	**-2.6**
AKAS	**Kas**	**1.39**	**256**	*iP*	**Pn**	**23 03 27.6**	**+1.2**
AKAS				*i S*	**Sn**	**23 03 46.5**	**+1.3**
AKAS				IAML_P			
	comp=Z,47μm,0.2s						
BAGO	**Egridir - ISPA**	**1.45**	**345**	*iP*	**Pn**	**23 03 26.1**	**-1.0**
BAGO				*i S*	**Sn**	**23 03 43.6**	**-2.7**
BAGO				IAML_P			
	comp=Z,13μm,0.3s						
KMER	**Konya-Meram**	**1.46**	**36**	*iP*	**Pn**	**23 03 27.4**	**+0.1**
KMER				*i S*	**Sn**	**23 03 45.3**	**-1.4**
KMER				IAML_P			
	comp=Z,5μm,0.2s						
TEKE	**Tekeli-Mersin**	**1.55**	**106**	PN	**Pn**	**23 03 29.6**	**+1.4**
BERE	**Bereket-Mersin**	**1.59**	**98**	PN	**Pn**	**23 03 29.9**	**+1.0**
KONT	**Konya--Tatoy**	**1.60**	**32**	PN	**Pn**	**23 03 27.9**	**-1.0**
TEVE	**Tevekalti-Mers**	**1.76**	**94**	PN	**Pn**	**23 03 31.9**	**+1.0**
FETY	**Fethiye**	**1.76**	**272**	PN	**Pn**	**23 03 31.5**	**+0.6**
YORU	**Yoruktepe-Mers**	**1.78**	**104**	PN	**Pn**	**23 03 32.5**	**+1.4**
ALFC	**Alefka**	**1.79**	**143**	P	**Pn**	**23 03 31.3**	**-0.1**
	baz=330						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALFC				S	**Sn**	**23 03 51.5**	**-2.5**
OREN	**Orenkoy-Mersin**	**1.81**	**102**	PN	**Pn**	**23 03 32.8**	**+1.4**
LADK	**Ladik-KONYA**	**1.82**	**28**	PN	**Pn**	**23 03 30.6**	**-1.2**
TEPE	**Tepekoy-Mersin**	**1.88**	**101**	PN	**Pn**	**23 03 33.9**	**+1.4**
AKK1	**Akkuyu-Mersin**	**1.89**	**103**	PN	**Pn**	**23 03 33.9**	**+1.5**
AKKU	**Akkuyu-Mersin**	**1.89**	**103**	PN	**Pn**	**23 03 33.9**	**+1.4**
AKK2	**Akkuyu-Mersin**	**1.89**	**103**	PN	**Pn**	**23 03 33.8**	**+1.3**
PPCY	**Paphos**	**1.92**	**153**	P	**Pn**	**23 03 33.8**	**+0.9**
	baz=341						
YESI	**Yesilovacik-Me**	**1.95**	**101**	PN	**Pn**	**23 03 34.8**	**+1.5**
KEBE	**Keben-Mersin**	**1.97**	**94**	PN	**Pn**	**23 03 34.8**	**+1.2**
IKL	**Isikli**	**1.98**	**100**	PN	**Pn**	**23 03 35.1**	**+1.5**
TISA	**Tisan-Mersin**	**1.99**	**102**	PN	**Pn**	**23 03 35.3**	**+1.5**
KARG	**Kargicak-Mersi**	**2.00**	**100**	PN	**Pn**	**23 03 35.6**	**+1.6**
KDHN	**Kadinhani**	**2.04**	**19**	*iP*	**Pn**	**23 03 33.4**	**-1.2**
KDHN				*i S*	**Sn**	**23 03 57.2**	**-2.5**
KDHN				IAML_P			
	comp=Z,2μm,0.2s						
SHUT	**Suhut-Afyon**	**2.04**	**344**	PN	**Pn**	**23 03 33.3**	**-1.3**
DALY	**Dalyan (Mula)**	**2.12**	**277**	PN	**Pn**	**23 03 35.9**	**+0.5**
DENT	**Denizli**	**2.13**	**304**	PN	**Pn**	**23 03 35.4**	**-0.3**
BOLV	**Bolvadin**	**2.14**	**353**	*iP*	**Pn**	**23 03 35.7**	**-0.2**
BOLV				*i S*	**Sn**	**23 03 58.3**	**-3.7**
BOLV				IAML_P			
	comp=Z,13μm,0.3s						
SILI	**Silifke-Mersin**	**2.15**	**95**	PN	**Pn**	**23 03 37.4**	**+1.5**
TURN	**Turunc**	**2.16**	**278**	*i P*	Pn	23 03 40.7	+4.6
SLFK	**Silifke-Mersin**	**2.16**	**95**	PN	**Pn**	**23 03 37.4**	**+1.3**
KHL	**Karahalli**	**2.22**	**322**	PN	**Pn**	**23 03 36.2**	**-0.7**
SZAC	**Souni**	**2.25**	**144**	P	**Pn**	**23 03 38.5**	**+1.2**
	baz=330						
KHAL	**Karahalli**	**2.27**	**322**	*iP*	**Pn**	**23 03 37.5**	**-0.1**
KHAL				*i S*	**Sn**	**23 04 04.0**	**-1.2**
KHAL				IAML_P			
	comp=Z,12μm,0.3s						
KIZK	**Mersin**	**2.31**	**92**	*i P*	**Pn**	**23 03 40.8**	**+2.8**
KIZK				*i S*	**Sn**	**23 04 08.2**	**+2.2**
KIZT	**Kizilcal**	**2.33**	**12**	PN	**Pn**	**23 03 37.4**	**-1.0**
CSS	**Mathiatis**	**2.33**	**134**	P	**Pn**	**23 03 37.9**	**-0.4**
	baz=319						
CSS				S	**Sn**	**23 04 04.5**	**-2.1**
CSS	**Mathiatis**	**2.33**	**134**	Pn	**Pn**	**23 03 37.6**	**-0.8**
CSS				Sn	**Sn**	**23 04 05.1**	**-1.5**
CSS	**Mathiatis**	**2.33**	**134**	P	**Pn**	**23 03 38.0**	**-0.4**
CHBY	**Cihanbeyli**	**2.37**	**32**	PN	**Pn**	**23 03 38.1**	**-0.7**
SULT	**Sultanhani-AKS**	**2.40**	**47**	PN	**Pn**	**23 03 39.1**	**-0.2**
KERG	**Konya-Eregli**	**2.43**	**69**	*iP*	**Pn**	**23 03 40.0**	**+0.3**
KERG				*i S*	**Sn**	**23 04 09.2**	**+0.3**
KERG				IAML_P			
	comp=Z,3μm,0.2s						
YER	**Yerkesik**	**2.46**	**284**	PN	**Pn**	**23 03 40.6**	**+0.6**
MRSB	**Marmaris-Mugla**	**2.48**	**274**	PN	**Pn**	**23 03 41.2**	**+1.0**
EREN	**Erenkoy**	**2.58**	**113**	PN	**Pn**	**23 03 42.8**	**+1.3**
BBRN	**Bozburun-Marma**	**2.59**	**273**	PN	**Pn**	**23 03 42.7**	**+1.1**
MERS	**Mersin**	**2.62**	**83**	PN	**Pn**	**23 03 43.4**	**+1.2**
CIFT	**Cifteler, Eski**	**2.77**	**357**	PN	**Pn**	**23 03 43.0**	**-1.2**
CIFT	**Cifteler, Eski**	**2.77**	**357**	*iP*	**Pn**	**23 03 43.9**	**-0.2**
CIFT				*i S*	**Sn**	**23 04 13.5**	**-3.4**
KULU	**Kulu**	**2.80**	**29**	PN	**Pn**	**23 03 43.8**	**-0.8**
AUSIV	**SIVRIHISAR**	**2.85**	**4**	*i P*	**Pn**	**23 03 44.7**	**-0.6**
SVRH	**Sivrihisar-ESK**	**2.86**	**4**	PN	**Pn**	**23 03 44.1**	**-1.2**
GDZ	**Gediz**	**2.87**	**331**	*i P*	**Pn**	**23 03 45.0**	**-0.6**
GDZ				IAML_P			
	comp=Z,5μm,0.2s						
KKUL	**Konya-Kulu**	**2.88**	**26**	*i P*	**Pn**	**23 03 45.7**	**0.0**
KKUL				*i S*	**Sn**	**23 04 17.8**	**-1.9**
KKUL				IAML_P			
	comp=Z,971nm,0.2s						
BRTR	**Keskin Array B**	**3.64**	**30**	P	**Pn**	**23 03 54.9**	**-1.0**
	comp=Z,2.1nm,0.3s,baz=308,slow=27,SNR=94						
BRTR				S	**Sn**	**23 04 35.0**	**-2.9**
	comp=Z,6.2nm,0.3s,baz=209,slow=17,SNR=18						
HWQ	**Hawqa**	**4.46**	**120**	*eP*	**Pn**	**23 04 07.1**	**+0.1**
BHL	**Bhannes**	**4.48**	**126**	*eP*	**Pn**	**23 04 06.4**	**-0.8**
DQRL	**Deir Qamar**	**4.55**	**128**	*eP*	**Pn**	**23 04 07.6**	**-0.5**
HNTI	**Hanita**	**4.75**	**136**	Pn	**Pn**	**23 04 10.9**	**+0.1**
RCY	**Rachaya**	**4.85**	**128**	*eP*	**Pn**	**23 04 12.5**	**+0.1**
SHBL	**Chebaa**	**4.89**	**130**	*eP*	**Pn**	**23 04 13.3**	**+0.4**
MMA0B	**Mount Meron ar**	**4.93**	**135**	Pn	**Pn**	**23 04 13.6**	**+0.3**
MMAI	**Mount Meron Ar**	**4.93**	**135**	P	**Pn**	**23 04 13.9**	**+0.6**
	comp=Z,69nm,0.3s,baz=304,slow=12,SNR=760						
MMAI				S	**Sn**	**23 05 07.1**	**-2.0**
	comp=Z,41nm,0.3s,baz=259,slow=30,SNR=17						
GEM	**Giv'at Ha'Em**	**4.94**	**132**	Pn	**Pn**	**23 04 13.7**	**+0.3**
KSDI	**Kefar Szold**	**4.95**	**132**	Pn	**Pn**	**23 04 13.9**	**+0.4**
KSDI	**Kefar Szold**	**4.95**	**132**	P	**Pn**	**23 04 14.6**	**+1.1**
OFRI	**`Ofer**	**5.01**	**141**	Pn	**Pn**	**23 04 14.1**	**-0.3**
IDI	**Anoyia**	**5.34**	**258**	P	**Pn**	**23 04 18.2**	**-0.7**
	comp=Z,7.8nm,0.3s,baz=40,slow=7.4,SNR=58						
IDI				S	**Sn**	**23 05 15.9**	**-3.2**
	comp=Z,5.9nm,0.3s,baz=317,slow=24,SNR=6.4						
SLTI	**Sal'it**	**5.34**	**143**	Pn	**Pn**	**23 04 18.4**	**-0.5**
SHMJ	**Saham**	**5.34**	**135**	P	**Pn**	**23 04 20.2**	**+1.3**
	comp=Z,68nm,0.6s,comp=Z,0.6nmcomp=Z,1.0nm						
MMLI	**Mount Malkishu**	**5.38**	**139**	Pn	**Pn**	**23 04 19.7**	**+0.3**
MMLI	**Mount Malkishu**	**5.38**	**139**	P	**Pn**	**23 04 20.2**	**+0.8**
	comp=Z,49nm,0.6s,comp=Z,0.2nm						
HMDT	**Nahal Hemdat**	**5.58**	**140**	Pn	**Pn**	**23 04 22.8**	**+0.8**
HMDT				Sn	**Sn**	**23 05 23.5**	**-1.3**
AMAZ	**Amatzia**	**5.88**	**148**	Pn	**Pn**	**23 04 26.7**	**+0.5**
AMAZ	**Amatzia**	**5.88**	**148**	P	**Pn**	**23 04 26.8**	**+0.5**
	comp=Z,161nm,0.6s,comp=Z,1.0nm						
HSUJ	**Al Zarqa**	**6.05**	**136**	P	**Pn**	**23 04 29.8**	**+1.3**
	comp=Z,68nm,0.8s,comp=Z,0.3nmcomp=Z,0.5nm						
DSI	**Dead Sea**	**6.06**	**145**	Pn	**Pn**	**23 04 29.3**	**+0.7**
DSI				Sn	**Sn**	**23 05 35.7**	**-0.9**
YTIR	**Yattir**	**6.12**	**147**	Pn	**Pn**	**23 04 29.8**	**+0.3**
HBRG	**Burj al `Arab**	**6.12**	**192**	P	**Pn**	**23 04 30.8**	**+1.3**
	baz=192						
HBRG				S	**Sn**	**23 05 33.7**	**-4.4**
	baz=192						
MZDA	**Masada**	**6.27**	**146**	Pn	**Pn**	**23 04 32.1**	**+0.7**
WALJ	**Wala**	**6.27**	**142**	P	**Pn**	**23 04 32.6**	**+1.1**
	comp=Z,111nm,0.5s,comp=Z,0.6nmcomp=Z,0.0nm						
LISJ	**El Lisan**	**6.38**	**146**	P	**Pn**	**23 04 34.5**	**+1.5**
	comp=Z,37nm,0.6s,comp=Z,0.2nm						
ASF	**Jabal al Asfar**	**6.41**	**132**	P	**Pn**	**23 04 35.7**	**+2.3**
	comp=Z,0.9nm,0.3s,baz=269,slow=6.9,SNR=11						
ASF				S	**Sn**	**23 05 47.0**	**+1.8**
	comp=Z,2.1nm,0.3s,baz=35,slow=18,SNR=3.7						
ASF	**Jabal al Asfar**	**6.41**	**132**	P	**Pn**	**23 04 35.7**	**+2.3**
	comp=Z,15nm,0.9s,comp=Z,0.1nm						
HHAG	**Hagoal**	**6.66**	**174**	P	**Pn**	**23 04 36.3**	**-0.5**
	baz=173						
HHAG				AMP			23 05 00.0
	baz=173						
HHAG				S	**Sn**	**23 05 46.2**	**-5.0**
	baz=173						
KOT	**Kottamia**	**6.66**	**176**	P	**Pn**	**23 04 37.0**	**+0.1**
	baz=175						
HMYD	**Mayadein**	**6.79**	**183**	P	**Pn**	**23 04 38.0**	**-0.6**
	baz=184						
ZFRI	**Zfri**	**6.85**	**150**	Pn	**Pn**	**23 04 38.8**	**-0.5**
SUZ	**Suez**	**6.86**	**169**	P	**Pn**	**23 04 39.9**	**+0.4**
	baz=168						
JDRJ	**Daraweish**	**6.90**	**147**	P	**Pn**	**23 04 41.4**	**+1.2**
PRNI	**Paran**	**6.96**	**152**	Pn	**Pn**	**23 04 40.7**	**-0.2**
HNAT	**Natroun**	**6.96**	**185**	P	**Pn**	**23 04 42.1**	**+1.1**
	baz=185						
KRMI	**Paran Flat**	**7.07**	**155**	Pn	**Pn**	**23 04 42.1**	**-0.4**
HRFI	**Mount Harif**	**7.26**	**153**	Pn	**Pn**	**23 04 44.8**	**-0.2**
HRFI	**Mount Harif**	**7.26**	**153**	P	**Pn**	**23 04 45.0**	**0.0**
	comp=Z,81nm,0.7s,comp=Z,0.4nm						
MBRI	**Mt Berech**	**7.43**	**155**	Pn	**Pn**	**23 04 47.2**	**-0.2**
AQBJ	**Aqaba**	**7.54**	**154**	P	**Pn**	**23 04 49.4**	**+0.6**
EIL	**Elat**	**7.56**	**155**	P	**Pn**	**23 04 49.1**	**0.0**
	comp=Z,9.3nm,0.3s,baz=354,slow=3.8,SNR=81						
EIL				S	**Sn**	**23 06 10.2**	**-3.0**
	comp=Z,3.4nm,0.3s,baz=74,slow=13,SNR=4.2						
EIL	**Elat**	**7.56**	**155**	Pn	**Pn**	**23 04 48.8**	**-0.3**
EIL	**Elat**	**7.56**	**155**	P	Pn	23 04 58.8	+10
HBST	**Basata**	**7.91**	**157**	P	**Pn**	**23 04 54.8**	**+1.0**
	baz=156						
NBNS	**Bani Suef**	**7.95**	**180**	P	**Pn**	**23 04 54.2**	**-0.2**
	baz=179						
TLB	**Topalu**	**8.35**	**344**	*iP*	**Pn**	**23 05 01.5**	**+1.8**
HKAT	**Jabal Katrina**	**8.37**	**163**	P	**Pn**	**23 04 60.0**	**-0.3**
	baz=162						
VTS	**Vitosha**	**8.64**	**317**	*iP*	**Pn**	**23 05 06.1**	**+2.3**
CFR	**Carcaliu**	**8.90**	**346**	*iP*	**Pn**	**23 05 07.2**	**+0.1**
HFRF	**Wahat Farafira**	**9.75**	**196**	P	**Pn**	**23 05 18.3**	**-0.6**
	baz=196						
MLR	**Muntele Rosu**	**9.75**	**337**	P	**Pn**	**23 05 19.6**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=242,slow=20,SNR=5.4						
MLR	**Muntele Rosu**	**9.75**	**337**	*iP*	**Pn**	**23 05 21.1**	**+2.2**
VRI	**Vrincioaia**	**9.87**	**341**	*iP*	Pn	23 05 30.8	+10
PLOR	**Plostina**	**9.88**	**341**	*iP*	Pn	23 05 31.3	+11
ARR	**Arges**	**10.10**	**332**	*iP*	**Pn**	**23 05 24.1**	**+0.6**
DOPR	**Dopca**	**10.36**	**337**	*iP*	**Pn**	**23 05 29.0**	**+2.0**
GZR	**Gura Zlata**	**10.88**	**327**	*iP*	**Pn**	**23 05 34.5**	**+0.3**
MDVR	**Moldovita**	**10.93**	**321**	*iP*	**Pn**	**23 05 36.9**	**+2.1**
BZS	**Buzias**	**11.58**	**324**	*iP*	**Pn**	**23 05 43.8**	**+0.3**
KOLS	**Kolonicke sedl**	**13.98**	**335**	*eP*	**Pn**	**23 06 17.8**	**+2.6**
AKASG	**Malin Array Be**	**14.18**	**355**	P	**Pn**	**23 06 17.8**	**0.0**
	comp=Z,0.9nm,0.3s,baz=177,slow=9.1,SNR=2.5						
VYHS	**Vyhne**	**14.99**	**326**	*eP*	**P**		**23 06 32.2 +0.9**
LANS	**Liptovska Anna**	**15.22**	**329**	*eP*	**P**		**23 06 35.3 +1.4**
MODS	**Modra-Piesok**	**15.63**	**323**	*eP*	**Pn**		**23 06 38.5 +2.3**
GERES	**GERESS Array B**	**17.74**	**319**	P	**P**		**23 07 02.3 +0.5**
	comp=Z,0.2nm,0.3s,baz=119,slow=11,SNR=7.2						
WTTA	**Wattenberg**	**18.04**	**312**	*i* Pn	**P**		**23 07 06.4 +1.3**
	comp=Z,6.3nm,1.1s						
WATA	**Walderalm**	**18.11**	**312**	*i* Pn	**Pn**		**23 07 08.1 +1.4**
	comp=Z,2.2nm,0.5s						
SQTA	**Sankt Quirin**	**18.27**	**312**	*i* Pn	**P**		**23 07 08.9 +1.2**
	comp=Z,5.2nm,0.8s						
MOTA	**Moosalm**	**18.39**	**312**	*i* P	**P**		**23 07 09.7 +0.7**
	comp=Z,2.4nm,0.4s						
FETA	**Feichten**	**18.47**	**311**	*i* Pn	**P**		**23 07 11.6 +1.8**
	comp=Z,8.2nm,1.2s						
RETA	**Reutte**	**18.66**	**312**	*i* P	**P**		**23 07 12.6 +0.7**
	comp=Z,4.0nm,0.6s						
DAVOX	**Davos/Dischmat**	**18.89**	**309**	P	**P**		**23 07 16.0 +1.5**
	comp=Z,0.4nm,0.3s,baz=138,slow=13,SNR=6.6						
BRG	**Berggiesshubel**	**18.92**	**324**	*i* PKP	**P**		**23 07 15.0 +0.4**
	comp=Z,5.0nm,0.9s						
DAVA	**Damuels**	**19.11**	**311**	*i* P	**P**		**23 07 17.2 +0.4**
	comp=Z,8.6nm,0.8s						
GEYT	**Alibeck**	**21.39**	**78**	P	**P**		**23 07 41.8 +0.4**
	comp=Z,1.5nm,0.7s,baz=297,slow=8.2,SNR=5.6						
AKTO	**Aktyubinsk**	**23.66**	**46**	LR	LR		23 18 22.4
	comp=Z,20nm,18.4s,baz=170,slow=39						

SPB	Sao Paulo	19.90	87	eP		P	23 27 21.1	-0.1
RCLB	Rio Claro- Sao	20.08	84	eP		P	23 27 23.5	+0.2
ATAH	Atahualpa	20.87	334	LR		LR	23 36 22.7	
	comp=N,200nm,19.0s,baz=155,slow=39							
PMNB	Patos De Minas	22.34	75	eP		P	23 27 47.3	-0.5
BDFB	Brasilia	22.35	66	P		P	23 27 46.2	-1.6
	comp=N,5,9nm,0.9s,baz=244,slow=6.7,SNR=8.4							
BDFB				LR		LR	23 36 25.8	
	comp=N,157nm,18.9s,baz=254,slow=37							
BDFB	Brasilia	22.35	66	eP		P	23 27 46.2	-1.6
BDFB				eP		P	23 27 46.6	-1.2
ESAR	Angra dos Reis	22.71	87	eP		P	23 27 49.6	-1.9
BSCB	Bom Sucesso	22.94	82	eP		P	23 27 53.6	-0.5
VAS01	Vassouras-RJ	23.78	86	eP		P	23 28 01.8	-0.6
PEXB	Peixe	24.13	59	eP		P	23 28 06.1	+0.2
DUB01	Friburgo-RJ	24.79	86	eP		P	23 28 11.9	+0.1
CAM01	Campos-RJ	25.49	86	eP		P	23 28 18.4	+0.2
JANB	Januaria	25.72	69	eP		P	23 28 20.2	-0.1
ALF01	Guarapari-ES	26.67	84	eP		P	23 28 28.9	+0.1
SMTB	Santa Maria do	26.76	54	eP		P	23 28 30.6	+0.9
PTGA	Pitinga	26.80	21	P		P	23 28 30.2	+0.2
	comp=N,16nm,1.0s,baz=212,slow=9.2,SNR=9.6							
PTGA				LR		LR	23 40 17.5	
	comp=N,69nm,19.9s,baz=182,slow=39							
PTGA	Pitinga	26.80	21	eP		P	23 28 30.2	+0.2
	comp=N,19nm,1.1s							
PTGA	Pitinga	26.80	21	eP		P	23 28 31.2	+1.2
SJMB	Sao Joao De Ma	26.89	80	eP		P	23 28 30.9	+0.1
BSFB	Barra de Sao F	27.14	80	eP		P	23 28 33.1	0.0
RIB01	Linhares ES	27.38	82	eP		P	23 28 35.5	+0.3
OTAV	Otavalo	27.73	340	eP		P	23 28 39.2	+0.4
SDV	Santo Domingo	34.87	357	eP		P	23 29 42.5	+1.1
MDP	Montagnes des	34.98	30	P		P	23 29 43.0	+0.8
	comp=N,14nm,0.9s,baz=198,slow=7.0,SNR=8.4							
RCBR	Riachuelo	37.66	63	eP		P	23 30 05.2	+0.1
SNAA	Sanae	57.98	160	P		P	23 32 42.6	+0.6
SNAA	Sanae	57.98	160	P		P	23 32 42.6	+0.6
	comp=N,4.2nm,0.8s,baz=294,slow=5.9,SNR=17							
SNAA	Sanae	57.98	160	eP		P	23 32 41.9	-0.1
	comp=N,8.1nm,0.8s							
W50A	Signal Mountai	62.92	345	eP		P	23 33 15.4	-0.7
	comp=N,7.4nm,0.8s							
V48A	Smith Brothers	63.79	344	eP		P	23 33 21.4	-0.4
	comp=N,34nm,1.9s							
QSPA	South Pole Qui	64.04	180	eP		P	23 33 23.2	-0.2
	comp=N,8.3nm,0.8s							
TX31	Lajitas Ar. Si	64.34	327	eP		P	23 33 22.2	-3.5
	comp=N,10nm,1.8s							
TXAR	Lajitas Array	64.34	327	P		P	23 33 27.1	+1.4
	comp=N,1.0nm,0.8s,baz=156,slow=8.9,SNR=8.1							
WVT	Waverly	64.42	343	eP		P	23 33 23.8	-2.1
	comp=N,5.4nm,1.0s							
MIAR	Mount Ida	64.66	338	eP		P	23 33 26.2	-1.3
	comp=N,4.1nm,0.9s							
WHAR	Wooly Hollow	64.92	339	eP		P	23 33 23.7	-5.5
	comp=N,5.9nm,1.0s							
T47A	Sharon Grove	65.05	344	eP		P	23 33 28.2	-1.8
	comp=N,11nm,1.1s							
ABTX	Abilene, Hawle	65.27	332	eP		P	23 33 27.2	-4.4
	comp=N,19nm,1.4s							
X37A	Clayton	65.33	336	eP		P	23 33 31.6	-0.3
	comp=N,15nm,1.5s							
MNTX	Cornudas Mount	67.12	327	eP		P	23 33 42.4	-1.1
	comp=N,4.8nm,1.1s							
CCM	Cathedral Cave	67.16	341	eP		P	23 33 42.6	-1.0
	comp=N,9.5nm,1.1s							
MSTX	Muleshoe	67.78	330	eP		P	23 33 47.9	+0.1
	comp=N,8.8nm,0.8s							
ANMO	Albuquerque	70.28	328	P		P	23 34 05.0	+1.6
	comp=N,1.7nm,0.6s,baz=136,slow=7.3,SNR=6.1							
ANMO	Albuquerque	70.28	328	eP		P	23 34 04.3	+0.9
	comp=N,2.2nm,0.8s							
DBIC	Dimbokro	70.36	72	P		P	23 34 04.4	+0.3
	comp=N,6.5nm,0.8s,baz=201,slow=9.2,SNR=6.6							
DBIC	Dimbokro	70.36	72	eP		P	23 34 04.4	+0.3
	comp=N,43nm,1.7s							
TUC	Tucson	70.38	323	eP		P	23 34 05.8	+1.9
	comp=N,5.8nm,1.3s							
T25A	Trinidad	71.16	331	eP		P	23 34 10.1	+1.3
	comp=N,15nm,1.6s							
SDCO	Great Sand Dun	72.14	330	eP		P	23 34 16.4	+1.7
	comp=N,8.9nm,1.5s							
VNDA	Vanda	72.23	190	LR		LR	00 04 08.0	
	comp=N,54nm,19.4s,baz=346,slow=34							
SYO	Syowa Base	72.24	159	eP		P	23 34 14.0	-0.6
X16A	Lo Mia Camp, P	72.36	324	eP		P	23 34 18.5	+2.5
	comp=N,6.6nm,1.1s							
WUAZ	Wupatki	73.17	325	eP		P	23 34 22.4	+1.7
	comp=N,7.3nm,1.0s							
Y12C	Blythe	73.52	322	eP		P	23 34 24.8	+2.1
	comp=N,8.0nm,1.0s							
ECSD	EROS Data Cent	73.98	340	eP		P	23 34 25.2	+0.1
	comp=N,6.3nm,1.0s							
SMCO	Snowmass	73.98	330	eP		P	23 34 27.8	+2.1
	comp=N,4.6nm,0.7s							
PV13	Radium Mtn., P	74.00	328	eP		P	23 34 27.1	+1.4
	comp=N,10nm,1.4s							
W13A	Hualapai Mount	74.18	323	eP		P	23 34 28.5	+1.8
	comp=N,2.7nm,0.8s							
PV22	Blue Mesa, Par	74.28	329	eP		P	23 34 28.3	+1.0
	comp=N,10nm,1.6s							
U15A	North Rim	74.35	325	eP		P	23 34 29.6	+1.9
	comp=N,11nm,1.3s							
LDFC	Landfair	74.83	322	eP		P	23 34 32.6	+2.2
	comp=N,7.7nm,1.1s							
KNB	Kanab	75.07	325	eP		P	23 34 34.1	+2.3
	comp=N,14nm,1.1s							
LCMT	Little Creek M	75.29	325	eP		P	23 34 35.8	+2.8
	comp=N,3.8nm,0.8s							
O20A	White River Ci	75.32	330	eP		P	23 34 35.5	+2.2
	comp=N,8.3nm,0.8s							
MTPU	Mount Pierson	75.54	326	eP		P	23 34 37.1	+2.4
	comp=N,2.4nm,0.8s							
SRU	San Rafael Swe	75.56	328	eP		P	23 34 36.5	+1.9
	comp=N,4.8nm,0.7s							
CCUT	Cedar City	75.76	325	eP		P	23 34 39.0	+3.1
	comp=N,6.8nm,0.8s							
MSU	Marysvale	75.90	327	eP		P	23 34 38.9	+2.3
SHPR	Sheep Range	75.92	323	eP		P	23 34 38.9	+2.3
	comp=N,8.6nm,1.3s							
P17A	Butcher Ranch,	75.95	328	eP		P	23 34 38.6	+1.8
	comp=N,4.7nm,0.9s							
PSUT	Pine Spring	76.76	325	epP		pP	23 34 44.5	+0.4
TPNV	Topopah Spring	76.83	323	epP		pP	23 34 45.0	+0.5
DAC	Darwin (Calif)	77.08	322	eP		P	23 34 46.9	+3.6
	comp=N,26nm,1.9s							
R11A	Troy Canyon, C	77.51	324	eP		P	23 34 47.4	+1.7
	comp=N,3.8nm,1.4s							
PDAR	Pinedale Array	78.03	331	P		P	23 34 50.0	+1.5
	comp=N,0.8nm,0.5s,baz=133,slow=7.9,SNR=9.0							
HVU	Hansel Valley	78.72	328	eP		P	23 34 53.3	+1.1
	comp=N,4.1nm,1.0s							
OMMB	Old Mammoth Mi	78.82	322	eP		P	23 34 55.5	+2.4
	comp=N,3.7nm,0.8s							
MDPB	Devils Postpil	78.88	322	eP		P	23 34 56.3	+2.9
	comp=N,12nm,1.2s							
NVAR	Mina Array Bea	79.02	323	P		P	23 34 55.8	+1.7
	comp=N,2.2nm,0.9s,baz=153,slow=6.4,SNR=11							
ELK	Elko	79.13	326	eP		P	23 34 56.3	+1.7
	comp=N,3.2nm,0.8s							
TOA0	Torodi Ar. Sit	79.19	70	eP		P	23 34 55.9	+0.6
	comp=N,7.7nm,0.7s							
TOA1	Torodi Ar. Sit	79.19	70	eP		P	23 34 54.0	-1.2
TORD	Torodi Ar. Bea	79.19	70	P		P	23 34 54.0	-1.2
	comp=N,5.6nm,0.7s,baz=269,slow=5.8,SNR=31							
TPAW	Teton Pass	79.22	330	eP		P	23 34 56.7	+1.5
	comp=N,6.7nm,1.1s							
WAKR	Walker	79.70	322	eP		P	23 35 00.7	+3.0
	comp=N,11nm,1.3s							
MAW	Mawson	79.95	163	P		P	23 34 59.2	+0.7
	comp=N,4.1nm,1.0s,baz=288,slow=7.9,SNR=5.9							
PNTR	Pine Nut	80.20	323	eP		P	23 35 01.6	+1.1
	comp=N,9.3nm,0.9s							
YHH	Holmes Hill	80.21	331	eP		P	23 35 02.5	+2.0
	comp=N,9.9nm,1.2s							
GCMT	Greycliff	80.51	333	eP		P	23 35 03.4	+1.4
PAHR	Pah Rah Range	80.52	323	eP		P	23 35 04.6	+2.5
	comp=N,11nm,1.1s							
PINE	Pine Mountain	84.24	325	eP		P	23 35 23.6	+2.1
	comp=N,7.8nm,1.0s							
MCQ	Macquarie Isla	89.63	206	eP		P	23 35 43.8	-3.7
	comp=N,334nm,1.2s							
YKA	Yellowknife Ar	95.49	341	P		P	23 36 14.9	+0.8
	comp=N,1.0nm,0.9s,baz=138,slow=4.6,SNR=6.6							
MODS	Modra-Piesok	106.85	44	ePDIF		Pdif	23 37 10.0	+4.7
VYHS	Vyhne	107.87	44	ePDIF		Pdif	23 37 14.9	+5.1
KBZ	Khabaz	123.17	53	PKP		PKiKP	23 41 47.6	+0.9

	comp=N,2.9nm,0.9s,baz=185,slow=4.7,SNR=7.5							
ASAR	Alice Springs	125.65	206	PKP		PKiKP	23 41 52.2	-0.3
	comp=N,1.8nm,0.8s,baz=148,slow=2.5,SNR=13							
WR1	Warramunga Arr	128.79	209	ePKPdf		PKiKP	23 41 58.5	-0.2
WRA	Warramunga Arr	128.79	209	PKP		PKiKP	23 41 58.5	-0.2
	comp=N,2.0nm,0.7s,baz=159,slow=2.0,SNR=5.9							
GAR	Garm	143.84	59	ePKPdf		PKPdf	23 42 25.0	-0.4
KURK	Kurchatov	145.29	37	ePKPdf		PKPdf	23 42 27.2	-0.2
AAK	Ala-Archa	146.13	52	ePKPab		PKiKP	23 42 32.1	-1.4
ZAA1	Zalesovo Array	146.22	28	ePKPbc		PKPab	23 42 30.3	-0.3
ZAA0	Zalesovo Array	146.23	28	ePKPab		PKPab	23 42 30.3	-0.3
ZALV	Zalesovo Beam	146.23	28	PKPbc		PKPab	23 42 30.3	-0.4
	comp=N,10nm,0.6s,baz=293,slow=3.8,SNR=30							
NIL	Nilore	146.73	68	ePKPdf		PKPbc	23 42 31.2	-1.0
BOOM	Boomskoye usch	147.19	51	ePKPab		PKPbc	23 42 33.5	+0.1
KSH	Kashi	148.05	57	PKPbc		PKPbc	23 42 34.0	-1.8
KSH				PP		PP	23 46 08.5	+4.7
KSH				SKKS			23 52 52.3	
KSH				SS		SS	00 05 06.5	-4.7
KSH				LR		LR		
	comp=N,170nm,7.1s							
KSH				LR		LR		
	comp=N,160nm,8.5s							
KSH				LR		LR		
	comp=N,230nm,10.6s							
KDJ	Kajisay	148.18	51	ePKPbc		PKPdf	23 42 34.0	+1.1
MAKZ	Makanchi	149.26	40	ePKPbc		PKiKP	23 42 39.1	-0.6
MK31	Makanchi Array	149.45	40	ePKPbc		PKiKP	23 42 39.2	-0.8
MK32	Makanchi Array	149.45	40	ePKPbc		PKiKP	23 42 39.9	-0.2
MKAR	Makanchi Array	149.45	40	PKPbc		PKiKP	23 42 39.9	-0.2
	comp=N,10nm,0.9s,baz=316,slow=2.2,SNR=25							
WMQ	Urumqi	154.27	41	ePKPbc		PKPdf	23 42 43.0	+1.1
WMQ				AMB		AMB		
	comp=N,64nm,4.1s							
HHC	Hu-ho-hao-te	165.34	358	PKP		PKPdf	23 42 50.8	-3.8
NJ2	Nanjing	170.85	312	ePKP		PKPdf	23 42 59.3	+0.9

*ISCJB **27** 23:23:36.1±0.7, 29°.70S±0°.08×72°.0W±0°.1, h10km, mb4.4/8, MS3.7/2, Error ellipse: s-maj=14.5km s-min=9.3km az=141.3*

*IDC **27** 23:23:38.1±0.8, 29°.88S×71°.90W, h0km, mb4.6/6, mb1 4.6/8, mb1mx4.2/37, mbtmp4.6/8, ML4.4/2, MS3.9/7, Ms1 3.9/7, ms1mx3.5/24, Error ellipse: s-maj=33.3km s-min=20.7km az=70.0*

*NEIC **27** 23:23:40.5±2.4, 29°.58S×71°.50W, h35km±2km, mb4.6/5, Error ellipse: s-maj=21.5km s-min=14.6km az=77.0*

ISC 27 23:23:38.8±0.6, 29°.75S±0°.07×71°.80W±0°.08, h10km, n42, σ1§96/32, mb4.6/8, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.97	116	ePn	Pg	23 23 55.6	-1.9
GO04	Tololo Observa	0.97	116	ePn	Pg	23 23 55.9	-1.6
GO04				eSn	Sg	23 24 07.1	-3.1
PEL	Peldehue	3.52	165	ePn	Pn	23 24 35.6	+2.0
PEL				eSn	Sb	23 25 25.3	+1.3
CFA	Coronel Fontan	3.59	122	Pn	Pn	23 24 36.8	+2.2
	34nm,0.3s,baz=323,slow=14,SNR=18						
CFA				Sn	Sn	23 25 19.2	+2.2
	48nm,0.3s,baz=311,slow=9.6,SNR=4.3						
CFA				Lg	Lg	23 25 27.8	
	107nm,0.3s,baz=1.9,slow=9.9,SNR=7.7						
LVC	Limon Verde	7.57	21	LR	LR	23 28 44.7	
	comp=Z,891nm,21.5s,baz=202,slow=40						
GO06	Curarrehue	9.82	178	ePn	Pn	23 26 00.7	+0.5
GO06	Curarrehue	9.82	178	ePn	Pn	23 26 00.7	+0.5
PLCA	Paso Flores	11.01	175	LR	LR	23 30 16.1	
	comp=Z,777nm,18.6s,baz=18,slow=37						
PLCA	Paso Flores	11.01	175	ePn	Pn	23 26 15.8	-0.5
LPAZ	La Paz	13.81	15	Pn	Pn	23 26 58.5	+3.2
	0.6nm,0.3s,baz=179,slow=13,SNR=2.7						
LPAZ				LR	LR	23 32 31.2	
	comp=Z,439nm,20.4s,baz=194,slow=38						
LPAZ	La Paz	13.81	15	ePn	Pn	23 26 57.4	+2.1
SIV	San Ignacio	16.87	38	LR	LR	23 35 13.3	
	comp=Z,559nm,19.4s,baz=218,slow=41						
NNA	Nana	18.28	344	LR	LR	23 33 25.2	
	comp=Z,338nm,18.3s,baz=171,slow=32						
USHA	Ushuaia	25.19	175	P	P	23 29 04.9	+0.7
	15nm,0.8s,baz=336,slow=11,SNR=10						
USHA				LR	LR	23 39 06.7	
	comp=Z,487nm,20.6s,baz=314,slow=37						
ROSC	El Rosal	34.47	356	LR	LR	23 43 45.6	
	comp=Z,63nm,18.2s,baz=210,slow=35						
SNAA	Sanae	55.46	159	P	P	23 33 13.3	0.0
	7.5nm,0.7s,baz=275,slow=7.2,SNR=17						
SNAA	Sanae	55.46	159	eP	P	23 33 13.2	-0.1
	8.1nm,0.8s						
154A	Montrose	62.94	349	eS	S	23 42 29.6	-5.7
CCM	Cathedral Cave	69.86	344	epP	pP	23 34 57.4	+5.2
SMCO	Snowmass	76.00	333	epP	pP	23 35 34.2	+5.1
PV19	Morning Glory	76.09	331	eP	P	23 35 24.6	-2.2
	31nm,1.1s						
MAW	Mawson	77.19	164	P	P	23 35 33.1	+0.7
	4.0nm,0.8s,baz=222,slow=5.2,SNR=7.5						
MAW	Mawson	77.19	164	eP	P	23 35 30.3	-2.1
	1.0nm,0.8s						
EYMN	Ely	79.33	347	eP	P	23 35 40.3	-4.1
	12nm,1.1s						
PD31	Pinedale Array	80.07	333	eP	P	23 35 47.1	-1.7
PD31				epP	pP	23 35 52.9	+1.4
PDAR	Pinedale Array	80.07	333	P	P	23 35 51.3	+2.5
	0.4nm,0.6s,baz=134,slow=7.7,SNR=2.8						
BOSA	Boshof	81.88	118	P	P	23 35 58.6	-0.2
	4.0nm,0.8s,baz=211,slow=4.6,SNR=5.8						
TORD	Torodi Ar. Bea	82.58	70	P	P	23 36 04.7	+2.2
	1.1nm,0.5s,baz=244,slow=4.9,SNR=2.7						
BRTR	Keskin Array B	119.53	59	PKP	PKPdf	23 42 28.6	-0.3
	0.2nm,0.4s,baz=248,slow=6.5,SNR=3.6						
BR101	Keskin Array S	119.53	59	ePKPdf	PKPdf	23 42 28.6	-0.3
ASAR	Alice Springs	121.43	208	PKP	PKPdf	23 42 33.2	+0.2
	1.0nm,0.8s,baz=143,slow=1.9,SNR=3.6						
WR1	Warramunga Arr	124.55	210	ePKPdf	PKPdf	23 42 38.7	-0.3
WRA	Warramunga Arr	124.55	210	PKP	PKPdf	23 42 38.7	-0.3
	3.8nm,0.8s,baz=148,slow=4.9,SNR=8.0						
H11S2	WAKE ISLAND Hyl	25.92	272	T	T	02 01 17.9	
	baz=115,slow=75,SNR=61						
H11S1	WAKE ISLAND Hyl	25.94	272	T	T	02 01 17.9	
	baz=115,slow=75,SNR=74						
H11S3	WAKE ISLAND Hyl	25.94	272	T	T	02 01 37.8	
	baz=115,slow=75,SNR=68						
H11N3	WAKE ISLAND Hyl	26.23	274	T	T	02 01 42.9	
	baz=112,slow=75,SNR=23						
H11N1	WAKE ISLAND Hyl	26.25	274	T	T	02 01 41.6	
	baz=112,slow=75,SNR=11						
H11N2	WAKE ISLAND Hyl	26.25	274	T	T	02 01 42.3	
	baz=112,slow=75,SNR=35						
CHGR	Chuyangaron	146.72	64	ePKPdf	PKPdf	23 43 18.3	-1.1
ZAA0	Zalesovo Array	150.46	28	ePKPdf	PKPdf	23 43 23.0	-1.9
ZALV	Zalesovo Beam	150.46	28	PKPbc	PKPbc	23 43 31.0	+0.8
	10nm,0.7s,baz=295,slow=3.4,SNR=8.5						

*IDC **27** 23:28:10.1±0.6, 9°.89S×160°.68E, h0km, mb4.3/19, mb1 4.4/20, mb1mx4.3/36, mbtmp4.3/20, ML4.6/1, MS3.6/9, Ms1 3.6/9, ms1mx3.4/22, Error ellipse: s-maj=17.7km s-min=14.5km az=125.0*

*ISCJB **27** 23:28:14.3±0.3, 9°.88S±0°.05×160°.60E±0°.06, h37km, mb4.4/29, MS3.7/9, Error ellipse: s-maj=8.3km s-min=6.9km az=149.2*

*NEIC **27** 23:28:16.3±1.8, 9°.80S×160°.52E, h40km±7km, mb4.6/16, Error ellipse: s-maj=19.6km s-min=12.5km az=62.0*

*BJI **27** 23:28:16.5±0.0, 9°.87S×159°.86E, h14km, mb4.9/9, mB5.1/7*

ISC 27 23:28:16.1±0.5, 9°.93S±0°.06×160°.57E±0°.08, h37km, n60, σ1§67/57, mb4.4/29, MS3.6/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.79	309	iP	Pn	23 28 29.0	-1.7
HNR				iS	Sn	23 28 41.0	-0.2
HNR	Honiara	0.79	309	Pn	Pn	23 28 29.3	-1.4
	716nm,0.3s,baz=158,slow=3.2,SNR=181						
HNR				Sn	Sn	23 28 39.6	-1.6
	2μm,0.3s,baz=34,slow=18,SNR=69						
HNR				LR	LR	23 28 58.2	
	comp=Z,502nm,18.1s,baz=275,slow=56						
PMG	Port Moresby	13.23	271	LR	LR	23 36 01.7	
	comp=Z,564nm,21.5s,baz=106,slow=35						
DZM	Mont Dzumac	13.32	156	Pn	Pn	23 31 24.4	+1.6
	2.3nm,0.3s,baz=18,slow=9.9,SNR=28						
DZM				Sn	Sn	23 33 45.9	-3.8
	0.3nm,0.3s,baz=198,slow=20,SNR=2.7						
DZM				LR	LR	23 36 00.3	
	comp=Z,217nm,20.8s,baz=35,slow=35						
DZM	Mont Dzumac	13.32	156	ePn	Pn	23 31 25.2	+2.4
	12nm,0.3s						
DZM				eSn	Sn	23 33 44.4	-5.3
	16nm,0.7s						
DZM				eLR	LR	23 34 29.2	
	comp=Z,288nm,23.7s						
DZM	Mont Dzumac	13.32	156	ePn	Pn	23 31 24.3	+1.5
MARNC	Mare, Loyalty	13.54	149	ePn	Pn	23 31 26.7	+1.0
MANU	Manus Island	15.28	300	eS	S	23 34 48.5	-4.5
PATS	Pohnpei	16.81	352	ePn	Pn	23 31 59.1	-10
	46nm,0.9s						
CTA	Charters Tower	17.10	232	P	Pn	23 32 11.9	-0.5
	1.2nm,0.3s,baz=62,slow=13,SNR=23						
CTAO	Charters Tower	17.10	232	ePn	P	23 32 13.8	0.0
	35nm,0.9s						
EIDS	Eidsvold	17.80	209	ePn	P	23 32 23.3	+1.8
	18nm,1.1s						
JAY	Jayapura	21.06	289	P	P	23 32 57.3	0.0
	6.0nm,0.7s,baz=126,slow=19,SNR=3.4						
WB2	Warramunga Arr	27.17	245	eP	P	23 33 55.9	-0.4
	17nm,1.0s						
WR1	Warramunga Arr	27.18	246	eP	P	23 33 56.6	+0.2
WRA	Warramunga Arr	27.18	246	P	P	23 33 56.6	+0.2
	10.0nm,0.9s,baz=75,slow=8.6,SNR=11						
STKA	Stephens Creek	28.03	216	P	P	23 34 04.4	+0.6
	5.1nm,0.5s,baz=27,slow=9.0,SNR=21						
STKA	Stephens Creek	28.03	216	eP	P	23 34 03.9	+0.1
	1.6nm,0.8s						
GUMO	Guam	28.09	326	LR	LR	23 44 16.2	
	comp=Z,71nm,21.3s,baz=184,slow=34						
ASAR	Alice Springs	28.87	238	P	P	23 34 11.2	-0.3
	2.2nm,0.7s,baz=57,slow=9.8,SNR=9.7						
ASAR				LR	LR	23 44 58.5	
	comp=Z,172nm,20.7s,baz=92,slow=35						
FITZ	Fitzroy Crossi	34.79	253	P	P	23 35 02.9	-0.6
	4.1nm,0.6s,baz=89,slow=6.6,SNR=5.7						
FITZ	Fitzroy Crossi	34.79	253	eP	P	23 35 02.1	-1.4
	6.9nm,0.8s						
KAPI	Kappang	40.74	274	P	P	23 35 53.7	-0.1
	2.6nm,0.3s,baz=138,slow=17,SNR=3.7						
MBWA	Marble Bar	40.78	249	ePcP	PcP	23 37 56.3	+1.4
PPT	Papeete	48.91	105	LR	LR	23 53 03.0	
	comp=Z,56nm,21.6s,baz=319,slow=31						
PPT2	Papeete2	48.91	105	eLR	LR	23 51 13.6	
	comp=Z,98nm,22.8s						
KSRS	Korea Array	56.19	329	P	P	23 37 52.9	+0.5
	0.5nm,0.5s,baz=147,slow=7.2,SNR=3.3						
KSRS				LR	LR	00 02 04.3	
	comp=Z,27nm,18.0s,baz=148,slow=36						
NJ2	Nanjing	57.72	318	eP	P	23 38 05.5	+2.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TAOE	Nuku Hiva Isla	58.44	94	eLR	LR	23 55 33.4	
	comp=Z,177nm,24.7s						
USRK	Ussuriysk Ar.	59.79	337	P	P	23 38 17.2	-0.3
	2.0nm,0.7s,baz=188,slow=9.5,SNR=3.8						
PSI	Prapat	62.67	278	LR	LR	00 08 52.9	
	comp=Z,103nm,18.7s,baz=198,slow=39						
PETK	Petropavlovsk-	62.84	358	P	P	23 38 37.1	-0.9
	1.4nm,0.5s,baz=152,slow=7.0,SNR=5.0						
PETK				LR	LR	00 02 23.6	
	comp=Z,54nm,21.0s,baz=152,slow=33						
PEA1	Petropavlovsk-	62.84	358	eP	P	23 38 37.1	-0.9
KMI	Kunming	66.22	303	P	P	23 39 04.3	+3.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CMAR	Chiang Mai Arr	67.01	295	P	P	23 39 06.7	+0.8
	0.6nm,0.5s,baz=129,slow=5.6,SNR=3.8						
VNDA	Vanda	67.57	180	P	P	23 39 09.0	+0.7
	3.4nm,0.7s,baz=341,slow=6.3,SNR=26						
VNDA	Vanda	67.57	180	eP	P	23 39 09.4	+1.1
	8.4nm,1.1s						
HHC	Hu-ho-hao-te	67.75	322	P	P	23 39 13.0	+2.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,16nm,6.6s						
SBA	Scott Base	67.98	179	eP	P	23 39 12.5	+1.6
	25nm,1.2s						
SONA0	Songino Array	74.82	326	eP	P	23 39 52.9	+0.1
SONM	Songino Array	74.82	326	P	P	23 39 52.9	+0.1
	2.3nm,0.8s,baz=116,slow=4.4,SNR=8.4		

CTA	Charters Tower	61.17	102	P	P	00 09 49.2	-0.7
	0.9nm,0.4s,baz=270,slow=13,SNR=3.1						
MKAR	Makanchi Array	68.17	1	P	P	00 10 34.4	-0.5
	1.0nm,0.7s,baz=187,slow=6.7,SNR=6.8						
SONM	Songino Array	73.04	18	P	P	00 11 05.3	+0.5
	0.2nm,0.4s,baz=228,slow=5.6,SNR=2.6						
BRTR	Keskin Array B	75.04	324	P	P	00 11 17.4	+0.7
	0.5nm,0.8s,baz=120,slow=5.7,SNR=3.7						
ZALV	Zalesovo Beam	75.41	3	P	P	00 11 17.7	-0.6
	1.1nm,0.6s,baz=199,slow=2.2,SNR=4.4						

*ISCJB **27** 23:59:47.0±0.4, 10°.56N±0°.08×42°.49W±0°.05, h10km, mb4.9/27, MS3.4/12, Error ellipse: s-maj=10.9km s-min=7.7km az=1.4*
*IDC **27** 23:59:47.9±1.1, 10°.49N×42°.54W, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/38, mbtmp4.1/5, ML5.2/1, MS3.4/13, Ms1 3.4/13, ms1mx3.2/30, Error ellipse: s-maj=37.3km s-min=21.7km az=148.0*
*NEIC **27** 23:59:48.7±2.0, 10°.56N×42°.46W, h10km±1km, mb5.0/30, Error ellipse: s-maj=16.7km s-min=12.0km az=169.0*
ISC 27 23:59:48.3±0.6, 10°.48N±0°.10×42°.47W±0°.07, h10km, n53, σ1°14/39, mb5.0/27, MS3.4/12, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	Montagnes des	11.41	243	Pn	Pn	00 02 29.5	-1.9
	17nm,0.3s,baz=52,slow=12,SNR=57						
MDP				LR	LR	00 06 17.0	
	comp=Z,239nm,21.4s,baz=63,slow=34						
BBGH	Gun Hill	16.94	281	eP	P	00 03 48.6	+1.0
	2μm,1.9s						
RCBR	Riachuelo	17.47	158	ePn	P	00 03 53.3	-0.2
	85nm,1.9s						
GRGR	Grenville	18.89	277	eP	P	00 04 08.3	-0.7
	189nm,1.0s						
SACV	Santiago Islan	18.92	74	eP	P	00 04 06.8	-2.7
	29nm,0.9s						
ANWB	Willy Bob	20.04	293	eP	P	00 04 19.5	-2.2
PTGA	Pitinga	20.67	238	P	P	00 04 29.4	+0.9
	24nm,0.6s,baz=305,slow=22,SNR=15						
PTGA				LR	LR	00 11 52.6	
	comp=Z,133nm,21.4s,baz=64,slow=35						
PTGA	Pitinga	20.67	238	eP	Pn	00 04 30.9	+0.1
	24nm,0.8s						
STVI	Saint Thomas	23.12	292	eP	P	00 04 54.4	-0.3
	62nm,1.2s						
SJG	San Juan	24.15	291	LR	LR	00 13 20.6	
	comp=Z,79nm,18.6s,baz=94,slow=34						
BDFB	Brasília	26.53	192	LR	LR	00 15 22.3	
	comp=Z,233nm,19.1s,baz=92,slow=35						
SDV	Santo Domingo	27.81	269	P	P	00 05 37.2	-1.0
	2.5nm,0.4s,baz=271,slow=12,SNR=3.8						
GRTK	Grand Turk	29.60	295	eP	P	00 05 54.7	+0.9
	139nm,1.1s						
BBSR	BB Station	29.92	320	eP	P	00 05 56.9	+0.4
MACI	Morro de la Ar	30.09	50	eP	P	00 05 58.3	0.0
	150nm,1.2s						
ROSA	Rosais	30.86	22	eP	P	00 06 05.0	+0.2
	62nm,1.0s						
CMLA	Cha da Macela	31.14	27	eP	P	00 06 06.1	-1.2
	154nm,1.2s						
ROSC	El Rosal	32.05	262	LR	LR	00 19 59.8	
	comp=Z,167nm,18.7s,baz=64,slow=38						
H10N3	ASCENSION HYDR	33.26	122	T	T	00 42 19.1	
	baz=303,slow=75,SNR=9.7						
H10N2	ASCENSION HYDR	33.27	122	T	T	00 42 13.6	
	baz=303,slow=75,SNR=10						
H10N1	ASCENSION HYDR	33.28	122	T	T	00 42 17.8	
	baz=303,slow=75,SNR=11						
H10S3	ASCENSION HYDR	33.74	124	T	T	00 42 57.3	
	baz=304,slow=74,SNR=6.0						
H10S1	ASCENSION HYDR	33.74	124	T	T	00 43 01.5	
	baz=304,slow=74,SNR=5.2						
H10S2	ASCENSION HYDR	33.76	124	T	T	00 42 58.9	
	baz=304,slow=74,SNR=3.8						
MTDJ	Mount Denham	34.78	287	eP	P	00 06 40.0	+0.5
	36nm,1.0s						
LPAZ	La Paz	36.78	224	P	P	00 06 58.7	+1.6
	3.6nm,0.9s,baz=18,slow=5.6,SNR=14						
LPAZ				LR	LR	00 22 05.1	
	comp=Z,65nm,20.1s,baz=66,slow=36						
LPAZ	La Paz	36.78	224	eP	P	00 06 58.2	+1.1
LPAZ				epP	P	00 06 58.9	+1.8
OTAV	Otavalo	37.20	256	eP	P	00 06 59.8	-0.8
	18nm,1.7s						
DBIC	Dimbokro	37.37	93	LR	LR	00 20 11.9	
	comp=Z,42nm,21.0s,baz=248,slow=33						
DBIC	Dimbokro	37.37	93	eP	P	00 07 01.9	+0.4
	55nm,1.9s						
V62A	Hyde County Ai	39.34	315	eP	P	00 07 18.9	+1.1
	315nm,0.9s						
U61A	Possum Corner	40.08	315	eP	P	00 07 23.9	-0.1
	170nm,1.4s						
LMN	Caledonia Moun	40.08	336	eP	P	00 07 24.6	+0.6
	63nm,1.9s						
Y60A	Bolivia	40.21	311	eP	P	00 07 23.9	-1.3
	224nm,1.1s						
EMMW	East Machias	40.33	332	eP	P	00 07 25.5	-0.4
	28nm,1.4s						
DRLN	Deer Lake	40.63	345	eP	P	00 07 28.5	+0.1
	141nm,2.0s						
V56A	Mocksville	42.69	312	eP	P	00 07 44.5	-1.0
	34nm,1.7s						
MTE	Manteigas	42.90	40	eP	P	00 07 46.4	-0.8
	13nm,1.1s						
TOA1	Torodi Ar. Sit	43.26	82	eP	P	00 07 51.4	+0.9
TOA0	Torodi Ar. Sit	43.27	82	eP	P	00 07 51.2	+0.7
	13nm,1.5s						
TORD	Torodi Ar. Bea	43.27	82	P	P	00 07 51.4	+0.9
	13nm,0.3s,baz=288,slow=8.7,SNR=7.8						
TORD				LR	LR	00 23 43.6	
	comp=Z,95nm,20.2s,baz=300,slow=33						
J55A	Hilton	44.81	323	eP	P	00 08 02.5	+0.1
	7.2nm,0.8s						
PLCA	Paso Flores	57.19	205	LR	LR	00 33 56.3	
	comp=Z,35nm,19.2s,baz=80,slow=36						
NOA	NORSAR Array B	63.80	26	LR	LR	00 33 54.3	
	comp=Z,23nm,19.1s,baz=280,slow=32						
PV07	Paradox Valley	64.92	308	eP	P	00 10 27.9	-0.6
	11nm,1.7s						
PV13	Radium Mtn., P	65.03	307	eP	P	00 10 28.2	-1.1
	8.5nm,1.5s						
PV10	Paradox Valley	65.22	307	eP	P	00 10 30.1	-0.4
	14nm,1.2s						
PDAR	Pinedale Array	66.16	312	LR	LR	00 35 14.7	
	comp=Z,37nm,21.9s,baz=116,slow=32						
MDUB	Mudurnu	70.86	51	eP	P	00 11 05.6	-0.2
	72nm,1.3s						
YKA	Yellowknife Ar	72.53	332	P	P	00 11 16.8	+1.6
	0.1nm,0.3s,baz=104,slow=6.4,SNR=3.7						
YKA				LR	LR	00 41 10.8	
	comp=Z,4.7nm,18.6s,baz=118,slow=34						
YKB5	Yellowknife Ar	72.53	332	eP	P	00 11 16.8	+1.6
BRTR	Keskin Array B	72.71	52	LR	LR	00 43 31.7	
	comp=Z,17nm,18.6s,baz=187,slow=36						
ILAR	Eielson Array	86.65	335	P	P	00 12 33.8	+1.8
	0.5nm,0.8s,baz=57,slow=5.3,SNR=4.7						

WEL 28 00:10:16.3±1.2, 37°S±16°×177°8E±1°6, h125km±21km, M3.3/14, ML3.6/7, MLv3.3/14, Error ellipse: s-maj=0.0km s-min=0.0km az=136.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.31	183	P	Pn	00 10 42.3	+0.5
WMGZ				S	Sn	00 11 01.3	-0.1
PKGZ	Pakihiroa	1.41	193	P	Pn	00 10 43.9	+0.8
PKGZ				S	Sn	00 11 04.4	+0.8
PUZ	Puketiti	1.57	187	P	Pn	00 10 44.7	-0.1
PUZ				S	Sn	00 11 06.0	-0.7
RUGZ	Raukumara Rang	1.59	204	P	Pn	00 10 44.9	-0.3
RUGZ				S	Sn	00 11 07.5	+0.2
TWGZ	Tauwhareparae	1.71	194	P	Pn	00 10 46.9	+0.4
TWGZ				S	Sn	00 11 12.0	+2.4
MWZ	Matawai	1.98	203	P	Pn	00 10 50.1	+0.4
MWZ				S	Sn	00 11 15.5	+0.2
CNGZ	Carnagh Statio	1.98	187	P	Pn	00 10 49.8	+0.1
TKGZ	Te Karaka	1.99	195	P	Pn	00 10 49.8	0.0
TKGZ				S	Sn	00 11 16.0	+0.4
URZ	Urewera	2.06	212	P	Pn	00 10 50.5	-0.3
URZ				S	Sn	00 11 16.7	-0.4
RIGZ	Rimuhau	2.27	195	P	Pn	00 10 53.4	0.0
RIGZ				S	Sn	00 11 21.7	-0.1
MUGZ	Murupara	2.39	214	P	Pn	00 10 55.3	+0.4
RTZ	Ruatahuna	2.42	209	P	Pn	00 10 54.6	-0.7
SNGZ	Shannon Statio	2.44	202	P	Pn	00 10 55.5	-0.1
SNGZ				S	Sn	00 11 26.6	+0.8
ALRZ	Allen Road	2.67	219	P	Pn	00 10 59.0	+0.6
MTHZ	Maungataniwha	2.68	209	P	Pn	00 10 57.9	-0.7
MTHZ				S	Sn	00 11 32.5	+1.3
BKZ	Black Stump Fm	3.09	210	P	Pn	00 11 03.2	-0.7
MCHZ	McNeill Hill	3.25	205	P	Pn	00 11 04.5	-1.5
KWHZ	Kaweka Forest	3.34	209	P	Pn	00 11 05.7	-1.5
HIZ	Hauiti	3.52	234	P	Pn	00 11 11.0	+1.6
TWVZ	Taurewa	3.52	223	P	Pn	00 11 10.6	+1.0
BHHZ	Black Hill Sta	3.54	212	P	Pn	00 11 09.2	-0.7
KRHZ	Kereru	3.55	208	P	Pn	00 11 07.6	-2.3
TUVZ	Tukino	3.55	218	P	Pn	00 11 09.6	-0.5
FWVZ	Far West T-bar	3.59	219	P	Pn	00 11 11.0	+0.3
WHVZ	Whangaehu Hut	3.60	219	P	Pn	00 11 11.6	+0.8
MOVZ	Moawhango	3.61	216	P	Pn	00 11 09.8	-1.0
PNHZ	Pukenui	3.85	207	P	Pn	00 11 11.2	-2.7
PNHZ				S	Sn	00 11 56.6	-2.0
TSZ	Takapari Road	4.06	209	P	Pn	00 11 13.8	-2.9
BFZ	Birch Farm	4.52	202	P	Pn	00 11 18.3	-4.5
MRZ	Mangatainoka R	4.73	208	P	Pn	00 11 21.7	-3.9
HOWZ	Holdsworth Sta	4.96	207	P	Pn	00 11 24.3	-4.4
OGWZ	Otaki Gorge	5.02	210	P	Pn	00 11 26.2	-3.4
MTW	Mount Morrison	5.19	206	P	Pn	00 11 27.2	-4.6

*ISCJB **28** 00:34:25.4±0.6, 23°.1S±0°.1×180°.0W±0°.1, h600km, mb3.9/15, Error ellipse: s-maj=18.7km s-min=13.5km az=165.7*
*IDC **28** 00:34:27.6±3.9, 23°.10S×179°.97E, h612km±49km, mb3.3/14, mb1 3.6/15, mb1mx3.5/22, mbtmp4.3/15, Error ellipse: s-maj=20.3km s-min=15.2km az=57.0*
ISC 28 00:34:26.6±0.7, 23°.1S±0°.1×180°.0W±0°.1, h600km, n16, σ0°59/16, mb3.8/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.57	272	P	P	00 37 11.2	0.0
	1.3nm,0.3s,baz=93,slow=18,SNR=17						
STKA	Stephens Creek	35.04	247	P	P	00 40 30.8	0.0
	5.8nm,0.5s,baz=89,slow=10,SNR=18						
ASAR	Alice Springs	42.18	260	P	P	00 41 28.3	-0.2
	12nm,0.8s,baz=95,slow=8.0,SNR=95						
WRA	Warramunga Arr	42.47	265	P	P	00 41 30.3	-0.5
	6.5nm,0.4s,baz=96,slow=8.5,SNR=38						
JAY	Jayapura	43.20	292	P	P	00 41 36.8	+0.3
	6.4nm,0.7s,baz=70,slow=5.3,SNR=3.7						
VNDA	Vanda	55.20	185	P	P	00 43 03.4	-0.2
	0.8nm,0.5s,baz=6.9,slow=6.4,SNR=15						
RPN	Rapa Nui	63.35	110	P	P	00 43 59.8	+1.2
	39nm,0.3s,baz=259,slow=5.2,SNR=6.5						
MJAR	Matsushiro Arr	71.22	325	P	P	00 44 46.7	+0.4
	0.7nm,0.3s,baz=156,slow=9.3,SNR=2.7						
PETK	Petropavlovsk-	78.30	346	P	P	00 45 26.0	+0.6
	1.6nm,0.7s,baz=111,slow=8.1,SNR=4.2						
MAW	Mawson	78.53	200	P	P	00 45 26.2	-0.3
	2.4nm,0.8s,baz=110,slow=3.8,SNR=8.0						
NVAR	Mina Array Bea	84.16	44	P	P	00 45 55.9	-0.1
	0.8nm,0.8s,baz=224,slow=9.3,SNR=4.7						
CMAR	Chiang Mai Arr	89.24	290	P	P	00 46 20.8	+0.5
	0.7nm,0.3s,baz=128,slow=2.6,SNR=4.8						
TXAR	Lajitas Array	89.99	58	P	P	00 46 23.0	-0.6
	0.9nm,0.8s,baz=218,slow=5.7,SNR=6.7						
ILAR	Eielson Array	91.23	14	P	P	00 46 27.5	-0.8
	0.3nm,0.6s,baz=224,slow=7.0,SNR=4.4						
PDAR	Pinedale Array	92.09	44	P	P	00 46 32.4	-0.8
	0.4nm,0.7s,baz=199,slow=4.1,SNR=5.7						
SONM	Songino Array	96.48	319	P	P	00 46 52.7	0.0
	0.2nm,0.3s,baz=101,slow=4.6,SNR=3.0						

*ISCJB **28** 00:54:53.8±0.5, 36°.29N±0°.02×27°.90E±0°.03, h8km±4km, Error ellipse: s-maj=4.1km s-min=3.6km az=28.9*
*ATH **28** 00:54:53.4, 36°.34N×27°.90E, h20km±4km, ML3.2/1, Error ellipse: s-maj=6.0km s-min=1.4km az=133.0*
*ISK **28** 00:54:53.6, 36°.31N×27°.91E, h10km, ML2.8/14*
*THE **28** 00:54:54.6, 36°.31N×27°.97E, h10km±1km, ML2.4/2, Error ellipse: s-maj=1.8km s-min=0.5km az=132.0*
*DDA **28** 00:54:54.8, 36°.37N×27°.99E, h13km±2km, ML2.9*
ISC 28 00:54:54.2±0.8, 36°.33N±0°.02×27°.98E±0°.03, h17km±6km, n53, σ1°25/69, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.16	132	PG	Pg	00 54 58.3	-0.2
ARG				SG	Sg	00 55 01.6	+0.2
ARG	Arkhangelos	0.16	132	P	Pg	00 54 58.3	-0.2
ARG				S	Sg	00 55 00.9	-0.6
ARG	Arkhangelos	0.16	132	P	Pg	00 54 58.3	-0.2
ARG				S	Sg	00 55 01.7	+0.2
ARG				AML	AML	00 55 01.9	
	comp=N,14516μm,0.2s						
ARG				AML	AML	00 55 01.9	
	comp=E,16411μm,0.3s						
BBRN	Bozburun-Marma	0.36	11	PG	Pg	00 55 01.9	+0.2
BBRN				SG	Sb	00 55 08.1	+0.7
MRSB	Marmaris-Mugla	0.43	25	PG	Pb	00 55 03.5	+0.2
MRSB				SG	Sb	00 55 10.5	+1.1
DATC	Datca-Mugla	0.50	330	PG	Pg	00 55 03.8	-0.4
DATC				SG	Sg	00 55 10.9	-0.1
DAT	Datca	0.51	322	PG	Pg	00 55 04.4	-0.1
DAT	Datca	0.51	322	*i* P	Pg	00 55 04.7	+0.1
DAT				IAML_P			
	comp=Z,912nm,0.1s						
DALY	Dalyan (Mula)	0.73	48	PG	Pg	00 55 08.6	+0.1
DALY	Dalyan (Mula)	0.73	48	*i* P	Pg	00 55 08.8	+0.3
TURN	Turunc	0.74	43	PG	Pg	00 55 04.1	-4.6
TURN				SG	Sg	00 55 12.9	-5.7
TURN	Turunc	0.74	43	*i* P	Pg	00 55 04.3	-4.4
TURN				IAML_P			
	comp=Z,5μm,0.1s						
YER	Yerkesik	0.84	17	PG	Pg	00 55 10.7	+0.1
YER	Yerkesik	0.84	17	P	Pg	00 55 10.4	-0.2
YER				S	Sn	00 55 23.8	+0.5
BDRM	Kayabasi	0.85	330	*i* P	Pn	00 55 11.8	+0.4
BDRM				*i* S	Sb	00 55 23.3	+1.6
BODT	Bodrum	0.91	324	PG	Pg	00 55 11.6	-0.2
BODT	Bodrum	0.91	324	P	Pg	00 55 11.6	-0.2
BODT				S	Sn	00 55 24.8	0.0
FETY	Fethiye	0.94	71	PG	Pb	00 55 12.5	+0.4
FETY	Fethiye	0.94	71	P	Pb	00 55 12.1	0.0
FETY				S	Sb	00 55 26.0	+1.7
FETY	Fethiye	0.94	71	*i* P	Pb	00 55 12.7	+0.7
FETY				IAML_P			
	comp=Z,2μm,0.2s						
KARP	Karpathos	1.02	221	PG	Pb	00 55 12.7	-0.7
KARP	Karpathos	1.02	221	P	Pb	00 55 12.6	-0.8
KARP				S	Sb	00 55 26.9	+0.5
KARP	Karpathos	1.02	221	P	Pb	00 55 12.5	-0.8
KARP				S	Sb	00 55 26.9	+0.5
KSL	Kastellorizon	1.31	97	P	Pg	00 55 20.0	+0.6
AKAS	Kas	1.32	94	PN	Pg	00 55 20.2	+0.6
AKAS	Kas	1.32	94	*i* P	Pg	00 55 20.3	+0.6
AKAS				IAML_P			
	comp=Z,4μm,0.2s						
AYDN	Tasoluk	1.33	357	*i* P	Pb	00 55 19.4	+0.7
GCAM	G?zelcaml?	1.49	337	PN	Pn	00 55 20.8	+0.7
GCAM	G?zelcaml?	1.49	337	*i* P	Pn	00 55 21.4	+1.3
AYDB	Zeytinkoy-Aydi	1.62	358	PN	Pn	00 55 22.7	+0.7
SMG	Samos	1.65	327	P	Pn	00 55 22.7	+0.3
SMG				S	Sn	00 55 43.2	0.0
SMG	Samos	1.65	327	P	Pn	00 55 22.4	0.0
ZKR	Zakros	1.87	230	PN	Pn	00 55 26.1	+0.8
ZKR	Zakros	1.87	230	P	Pn	00 55 25.9	+0.5
ZKR				S	Sn	00 55 47.8	-0.8
ZKR	Zakros	1.87	230	P	Pn	00 55 26.2	+0.8
AKUM	Antalya-Kumluc	1.91	89	*i* P	Pb	00 55 28.1	-0.4
THR8	Santorini-Mono	2.02	273	P	Pn	00 55 28.5	+1.2
KORT	Korkueli	2.02	70	PN	Pb	00 55 30.1	-0.4
KORT	Korkueli	2.02	70	*i* P	Pb	00 55 31.7	+1.2
KORT				IAML_P			
	comp=Z,2μm,0.4s						
THR3	Thira Island,	2.08	273	P	Pn	00 55 28.3	+0.1
THR6	Thira Island,	2.08	272	P	Pn	00 55 28.6	+0.4
THR6	Thira Island,	2.08	272	P	Pn	00 55 28.5	+0.3
NPS	Neapolis	2.19	242	P	Pn	00 55 30.1	+0.3
NPS				S	Sn	00 55 55.7	-0.9
NPS	Neapolis	2.19	242	P	Pn	00 55 30.1	+0.3
IOSP	Ios island	2.20	281	P	Pn	00 55 31.1	+1.3
LAST	Lasithi	2.34	241	P	Pn	00 55 32.3	+0.5
LAST	Lasithi	2.34	241	P	Pn	00 55 32.4	+0.5
KHAL	Karahalli	2.37	30	*i* P	Pb	00 55 36.4	0.0
KHAL				IAML_P			
	comp=Z,148nm,0.2s						
CHOS	Chios island	2.56	324	P	Pn	00 55 35.4	+0.4
CHOS	Chios island	2.56	324	P	Pn	00 55 35.4	+0.4
IDI	Anoyia	2.71	248	P	Pn	00 55 37.2	+0.2
TMBK	Timbaki Herakl	2.90	245	P	Pn	00 55 38.8	-0.6
PRK	Paraskevi	3.21	336	P	Pn	00 55 45.8	+2.0

*THE **28** 00:55:23.8, 34°.65N×23°.92E, h20km±1km, ML2.6/4, Error ellipse: s-maj=1.5km s-min=1.0km az=65.0*
ATH 28 00:55:23.8, 34°.67N×23°.95E, h23km±4km, ML2.7/4, Error ellipse: s-maj=5.9km s-min=2.7km az=40.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.20	33	P	Pb	00 55 29.5	+0.3
GVD				S	Sb	00 55 33.6	+0.6
GVD	Gavdhos	0.20	33	P	Pb	00 55 29.5	+0.3
GVD				S	Sb	00 55 33.8	+0.8
GVD				AML	AML	00 55 34.1	
	comp=E,19795μm,0.2s						
GVD				AML	AML	00 55 35.5	
	comp=N,12232μm,0.3s						
GVDS	Gavdos	0.21	32	P	Pb	00 55 29.4	+0.1
GVDS				S	Sb	00 55 33.1	0.0
VAM	Vamos	0.76	15	P	Pb	00 55 38.1	-0.3
VAM				S	Sn	00 55 49.9	-0.1
VAM	Vamos	0.76	15	P	Pb	00 55 38.0	-0.4
VAM				S	Sn	00 55 49.8	-0.3
VAM				AML	AML	00 55 55.7	
	comp=E,526μm,0.6s						
VAM				AML	AML	00 55 58.4	
	comp=N,491μm,0.3s						
SIVA	Sivas	0.79	63	P	Pb	00 55 39.0	+0.2
SIVA				S	Sn	00 55 50.6	+0.1
SIVA	Sivas	0.79	63	P	Pb	00 55 39.0	+0.3
SIVA	Sivas	0.79	63	P	Pb	00 55 39.0	+0.3
SIVA				S	Sn	00 55 50.6	0.0
SIVA				AML	AML	00 55 55.1	
	comp=N,971μm,0.7s						
SIVA				AML	AML	00 55 57.4	
	comp=E,1470μm,0.6s						
IMMV	Iera Moni Meta	0.79	2	P	Pb	00 55 38.4	-0.5
IMMV				S	Sn	00 55 50.8	+0.1
IMMV	Iera Moni Meta	0.79	2	P	Pb	00 55 38.5	-0.3
IMMV				S	Sn	00 55 51.1	+0.3
IMMV				AML	AML	00 55 53.1	
	comp=N,804μm,0.3s						
IMMV				AML	AML	00 55 54.0	
	comp=E,889μm,0.4s						
PRNS	Prines Rethymn	0.83	33	P	Pb	00 55 38.7	-0.8
PRNS				S	Sb	00 55 50.4	+0.2
ANKY	Antikythira Is	1.31	336	P	Pb	00 55 49.2	+1.5

GUC 28 01:13:46.8±0.6, 26°.18S×69°.07W, h11km±6km, ML3.6, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	Mina Guanaco	1.12	335	‖ *i* P	Pb	01 14 06.9	-1.5
GO02				*i* S	Sg	01 14 21.9	-1.0
GO02				IAML		01 14 26.1	
	comp=N,1μm,0.9s						
GO03	Copiap	1.75	216	eP	Pn	01 14 17.3	+0.2
GO03				*i* S	Sb	01 14 40.3	-0.7
GO03				IAML		01 14 45.2	
PB14	IPOC Station P	1.96	322	eP	Pn	01 14 21.2	+0.9
PB14				*i* S	Sb	01 14 47.2	-0.2
PB14				IAML		01 14 49.1	
	comp=E,1μm,0.4s						
PB10	IPOC Station P	2.98	333	eP	Pn	01 14 35.6	+1.6
PB10				*i* S	Sn	01 15 12.8	+3.0
PB10				IAML		01 15 23.3	
	comp=N,161nm,0.2s						
PB05	IPOC Station P	3.47	342	eP	Pn	01 14 43.6	+2.7
PB05				*e*S	Sn	01 15 25.5	+3.4
PB05				IAML		01 15 41.0	
	comp=E,133nm,0.4s						

*ISCJB **28** 01:23:01.0±0.7, 44°.11N±0°.08×145°.9E±0°.1, h142km±4km, mb3.7/3, Error ellipse: s-maj=16.0km s-min=7.1km az=137.1*
*MOS **28** 01:23:02.0±0.8, 44°.58N×145°.06E, h109km, mb3.8/4, Error ellipse: s-maj=20.5km s-min=15.2km az=93.2*
*SKHL **28** 01:23:03.7±0.0, 44°.54N×145°.12E, h101km±4km, mb4.2/5, msh4.6/4*
*JMA **28** 01:23:04.5±0.3, 44°.04N×145°.87E, h121km±3km, M2.9*
ISC 28 01:23:01.4±0.8, 44°.09N±0°.08×145°.86E±0°.07, h139km±6km, n31, σ1°62/47, mb3.7/3, 2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.05	177	*d i* PN	Pn	01 23 21.5	+1.4
YUK				*i* S	Sn	01 23 34.5	+0.2
YUK				pmax	pmax		
	comp=E,38nm,0.2s						
YUK				pmax	pmax		
	comp=Z,217nm,0.2s						
YUK				pmax	pmax		
	comp=N,41nm,0.1s						
YUK				smax	smax		
	comp=N,574nm,0.4s						
YUK				smax	smax		
	comp=E,809nm,0.6s						
YUK	Yuzh-Kuril'sk	0.05	177	*i* P	Pn	01 23 21.0	+0.9
YUK				AMB	AMB	01 23 21.0	
	comp=E,41nm,0.4s						
YUK				AMB	AMB	01 23 21.0	
	comp=E,38nm,0.4s						
YUK				AMB	AMB	01 23 21.0	
	comp=E,217nm,0.4s						
YUK				*i* S	Sn	01 23 34.0	-0.3
YUK				A	A	01 23 35.0	
	comp=E,50nm,0.3s						
YUK				A	A	01 23 35.0	
	comp=E,80nm,0.3s						
LAGR	Lagunnoye	0.06	239	*e*PN	Pn	01 23 21.4	+1.3
LAGR				*e*S	Sn	01 23 34.5	+0.3
LAGR				pmax	pmax		
	comp=Z,260nm,0.1s						
LAGR				smax	smax		
	comp=E,298nm,0.6s						
LAGR				smax	smax		
	comp=N,2μm,0.5s						
LAGR	Lagunnoye

GLVR				*i* S		**Sn**	**01 23 37.4 +1.4**
GLVR				pmax		pmax	
	comp=Z,389nm,0.1s						
GLVR				smax		smax	
	comp=E,1.0nm,0.3s						
GLVR	**Golovnino**	**0.43**	**215**	*i* P		**Pn**	**01 23 22.0 +0.9**
GLVR				AMB		AMB	01 23 23.0
	comp=E,39nm,0.3s						
GLVR				*i* S		**Sn**	**01 23 37.0 +1.0**
GLVR				A		A	01 23 39.0
	comp=E,180nm,0.3s						
GLVR				A		A	01 23 39.0
	comp=E,65nm,0.3s						
JRA	**Rausu**	**0.55**	**255**	P		**Pn**	**01 23 22.8 +1.1**
NEM2	**Nemuro 2**	**0.73**	**187**	P		**Pn**	**01 23 23.7 +0.8**
NEM2				*e*S		**Sn**	**01 23 38.0 -1.2**
JNK	**Nakash**	**0.96**	**239**	P		**Pn**	**01 23 26.2 +1.4**
JKHN	**Kushirohamanak**	**1.12**	**207**	P		**Pn**	**01 23 27.5 +1.2**
JKHN				*e*S		**Sn**	**01 23 44.9 -0.3**
JAK	**Akkeshi**	**1.38**	**218**	P		**Pn**	**01 23 30.2 +1.4**
JAK				*e*S		**Sn**	**01 23 49.9 +0.2**
JTKR	**Abashiri--Toko**	**1.41**	**266**	P		**Pn**	**01 23 30.7 +1.6**
JTKR				*e*S		**Sn**	**01 23 51.2 +0.9**
JAR	**Ashorobuto**	**1.71**	**243**	P		**Pn**	**01 23 34.7 +2.2**
JMP	**Maruseppu**	**1.80**	**268**	P		**Pn**	**01 23 35.4 +1.8**
KUR	**Kuril'sk**	**1.83**	**51**	PN		**Pn**	**01 23 37.5 +3.6**
KUR				S		**Sn**	**01 23 57.8 -1.0**
KUR				pmax		pmax	
	comp=Z,92nm,0.6s						
KUR				smax		smax	
	comp=N,18nm,0.5s						
KUR				smax		smax	
	comp=E,14nm,0.4s						
KUR	**Kuril'sk**	**1.83**	**51**	*e*P		**Pn**	**01 23 37.5 +3.6**
KUR				AMB		AMB	01 23 38.0
	comp=E,92nm,0.6s						
KUR				*e*S		**Sn**	**01 24 00.1 +1.3**
JOB	**Onbets**	**1.89**	**232**	P		**Pn**	**01 23 36.7 +2.2**
JOB				*e*S		**Sn**	**01 24 01.4 +1.5**
JCH	**Churui**	**2.34**	**232**	P		**Pn**	**01 23 42.0 +2.0**
JCH				*e*S		**Sn**	**01 24 10.2 +0.6**
ASAJ	**Asahikawa**	**2.35**	**272**	P		**Pn**	**01 23 43.0 +2.9**
ERM	**Erimo**	**2.87**	**225**	*i* PN		**Pn**	**01 23 49.3 +2.7**
MA2	**Magadan**	**15.80**	**9**	*i* P		**P**	**01 26 35.2 -1.7**
MA2				pmax		pmax	
	comp=Z,8.0nm,1.0s						
MA2	**Magadan**	**15.80**	**9**	*e*P		**P**	**01 26 35.2 -1.7**
HIA	**Hailar**	**18.61**	**295**	*i* P		**P**	**01 27 04.8 -3.1**
HIA				pmax		pmax	
	comp=Z,19nm,0.8s						
ULN	**Ulaanbaatar**	**27.04**	**292**	*i* P		**P**	**01 28 29.6 -1.0**
ULN				pmax		pmax	
	comp=Z,4.0nm,1.9s						
ULN	**Ulaanbaatar**	**27.04**	**292**	*e*P		**P**	**01 28 29.6 -1.0**
TIXI	**Tiksi**	**28.85**	**349**	*e*P		**P**	**01 28 45.7 -0.5**
TIXI				pmax		pmax	
	comp=Z,2.0nm,0.9s						
TIXI	**Tiksi**	**28.85**	**349**	*e*P		**P**	**01 28 45.7 -0.5**
DGZ	**Jazzator, Alta**	**39.44**	**299**	*i* P		**P**	**01 30 16.5 -1.3**
DGZ				pmax		pmax	
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**46.73**	**252**	*i* P		**P**	**01 31 18.1 +1.5**
CMAR				pmax		pmax	
	comp=Z,1.0nm,0.3s						

MEX 28 01:38:45.9±9.9, 24°38N×99°76W, h18km, MD3.5, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	**Linares**	**0.58**	**28**	*e*P	Pg	01 38 55.7	-1.9
	baz=254,slow=14						
LNIG				*e*S	Sg	01 39 02.1	-3.2

MEX 28 01:51:01.2±5.8, 24°40N×99°79W, h18km, MD3.6, 1C, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	**Linares**	**0.58**	**31⇑**	*e*P	Pg	01 51 10.8	-1.9
	baz=237,slow=9.3						
LNIG				*e*S	Sg	01 51 17.4	-3.2

*ISCJB **28** 02:08:13.2±0.3, 29°81S±0°03×71°77W±0°04, h10km, mb4.3/19, MS3.8/2, Error ellipse: s-maj=5.9km s-min=4.3km az=152.2*
*IDC **28** 02:08:13.5±0.6, 29°80S×71°53W, h0km, mb4.1/9, mb1 4.2/12, mb1mx4.1/23, mbtmp4.1/12, ML3.8/3, MS3.2/4, Ms1 3.2/4, ms1mx2.9/25, Error ellipse: s-maj=25.6km s-min=16.8km az=92.0*
*NEIC **28** 02:08:14.1±1.4, 29°83S×71°60W, h5km±1km, mb4.5/13, ML4.2(GUC), Error ellipse: s-maj=18.8km s-min=10.5km az=85.0*
NEIC Felt [III] at Ovalle and [II] at Coquimbo, La Serena, Paiguano and Rio Hurtado.
*GUC **28** 02:08:15.3±0.6, 29°83S×71°58W, h34km±3km, ML4.2*

ISC 28 02:08:14.7±0.5, 29°82S±0°04×71°57W±0°07, h10km, n77, σ1§01/76, mb4.6/19, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.29**	**108⇑**	*i* P		**Pb**	**02 08 23.3 +1.2**
LSCH				*i* S		**Sb**	**02 08 29.4 +2.4**
LSCH				IAML			02 08 29.9
	comp=E,24μm,0.2s						
GO04	**Tololo Observa**	**0.76**	**118**	*e*Pn		**Pn**	**02 08 31.1 -0.6**
GO04	**Tololo Observa**	**0.76**	**118**	*e*P		**Pn**	**02 08 31.1 -0.6**
GO04				*i* S		**Sn**	**02 08 42.6 -0.7**
CO02	**Combarbal**	**1.47**	**161⇓**	*e*P		**Pb**	**02 08 41.5 -0.7**
CO02				*i* S		**Sg**	**02 09 01.6 -0.4**
GO03	**Copiap**	**2.50**	**28**	*e*Pn		**Pn**	**02 08 57.0 +1.5**
GO03	**Copiap**	**2.50**	**28**	*e*P		**Pn**	**02 08 56.5 +0.9**
GO03				*e*S		**Sb**	**02 09 28.6 -2.1**
GO03				IAML			02 09 39.6
	comp=E,3μm,0.4s						
CFA	**Coronel Fontan**	**3.38**	**123**	Pn		**Pb**	**02 09 11.2 -3.5**
	comp=E,25nm,0.3s,baz=316,slow=11,SNR=96						
CFA				Lg		Lg	02 10 01.3
	comp=E,176nm,0.3s,baz=254,slow=15,SNR=8.1						
CFA				LR		LR	02 10 28.5
	comp=E,335nm,21.1s,baz=54,slow=40						
PEL	**Peldehue**	**3.40**	**167**	*e*Pn		**Pn**	**02 09 09.5 +1.6**
GO02	**Mina Guanaco**	**4.96**	**21**	*e*Pn		**Pn**	**02 09 29.1 -0.4**
GO05	**Huala**	**5.19**	**183**	*e*Pn		**Pn**	**02 09 31.1 -1.4**
PB10	**IPOC Station P**	**6.34**	**8**	*e*Pn		**Pn**	**02 09 45.1 -3.1**
PB04	**IPOC Station P**	**7.56**	**10**	*e*Pn		**Pn**	**02 10 05.8 +0.6**
LVC	**Limon Verde**	**7.56**	**19**	Pn		**Pn**	**02 10 03.5 -1.8**
	comp=E,0.6nm,0.3s,baz=200,slow=6.2,SNR=9.2						
LVC				Lg		Lg	02 12 00.5
	comp=E,7.4nm,0.3s,baz=98,slow=14,SNR=4.0						
LVC				LR		LR	02 13 22.0
	comp=E,224nm,18.3s,baz=214,slow=41						
LVC	**Limon Verde**	**7.56**	**19**	*e*Pn		**Pn**	**02 10 03.7 -1.7**
PLCA	**Paso Flores**	**10.92**	**176**	Pn		**Pn**	**02 10 51.3 +0.1**
	comp=E,0.4nm,0.3s,baz=359,slow=10.0,SNR=7.0						
TRQA	**Tornquist**	**11.44**	**138**	*e*Pn		**Pn**	**02 10 59.4 +1.3**
LPAZ	**La Paz**	**13.83**	**14**	Pn		**Pn**	**02 11 30.2 -1.2**
	comp=E,0.1nm,0.3s,baz=213,slow=8.3,SNR=3.1						
LPAZ				LR		LR	02 16 55.5
	comp=E,83nm,20.0s,baz=212,slow=38						
LPAZ	**La Paz**	**13.83**	**14**	*e*Pn		**Pn**	**02 11 32.1 +0.7**
USHA	**Ushuaia**	**25.10**	**176**	P		**P**	**02 13 40.1 +0.7**
	comp=E,9.9nm,0.7s,baz=355,slow=8.6,SNR=9.5						
BDFB	**Brasilia**	**25.83**	**62**	P		**P**	**02 13 46.9 +0.4**
	comp=E,3.2nm,0.6s,baz=216,slow=7.4,SNR=7.2						
BDFB	**Brasilia**	**25.83**	**62**	*e*P		**P**	**02 13 46.8 +0.2**
	comp=E,30nm,1.9s						
BDFB				*e*P		**P**	**02 13 46.9 +0.4**
MDP	**Montagnes des**	**39.18**	**31**	LR		LR	02 32 49.5
	comp=E,26nm,21.1s,baz=203,slow=38						
VNA3	**Neumayer Olymp**	**53.09**	**159**	P		**P**	**02 17 32.1 +0.2**
VNA1	**Neumayer--Stat**	**53.38**	**158**	P		**P**	**02 17 35.3 +1.3**
VNA2	**Neumayer--Watz**	**53.73**	**158**	P		**P**	**02 17 37.2 +0.7**
SNAA	**Sanae**	**55.32**	**159**	P		**P**	**02 17 48.6 +0.4**
SNAA	**Sanae**	**55.32**	**159**	*e*P		**P**	**02 17 47.9 -0.3**
	comp=E,6.5nm,0.8s						
QSPA	**South Pole Qui**	**60.41**	**180**	*e*P		**P**	**02 18 24.4 +0.3**
	comp=E,18nm,1.8s						
LTX	**Lajitas**	**66.31**	**330**	*e*P		**P**	**02 19 04.2 +0.6**
TXAR	**Lajitas Array**	**66.31**	**330**	P		**P**	**02 19 04.2 +0.6**
	comp=E,0.4nm,0.6s,baz=163,slow=8.9,SNR=4.6						
WVT	**Waverly**	**67.36**	**346**	*e*P		**P**	**02 19 09.6 -0.3**
	comp=E,3.8nm,0.9s						
VNDA	**Vanda**	**68.27**	**191**	P		**P**	**02 19 16.2 +0.9**
	comp=E,0.8nm,0.9s,baz=119,slow=7.4,SNR=4.2						
SYO	**Syowa Base**	**69.61**	**159⇑**	*e*X		P	02 19 17.0 -6.7
DBIC	**Dimbokro**	**73.49**	**72**	P		**P**	**02 19 48.5 +0.6**
	comp=E,3.7nm,0.7s,baz=190,slow=6.4,SNR=4.3						
DBIC	**Dimbokro**	**73.49**	**72**	*e*P		**P**	**02 19 48.5 +0.6**
	comp=E,55nm,1.9s						
ECSD	**EROS Data Cent**	**76.71**	**342**	*e*P		**P**	**02 20 05.7 -0.2**
	comp=E,4.1nm,0.8s						
MAW	**Mawson**	**77.07**	**164**	P		**P**	**02 20 08.2 +0.5**
	comp=E,2.4nm,0.8s,baz=239,slow=10,SNR=6.6						
MAW	**Mawson**	**77.07**	**164**	*e*P		**P**	**02 20 07.6 -0.1**
	comp=E,1.2nm,1.1s						
RWWY	**Rawlins**	**78.39**	**334**	*e*P		**P**	**02 20 15.2 -0.5**
	comp=E,8.8nm,1.2s						
K22A	**Casper**	**78.96**	**334**	*e*P		**P**	**02 20 18.7 +0.1**
	comp=E,6.3nm,0.9s						
PD31	**Pinedale Array**	**80.23**	**333**	*e*P		**P**	**02 20 26.0 +0.4**
	comp=E,6.0nm,1.8s						
PDAR	**Pinedale Array**	**80.23**	**333**	P		**P**	**02 20 26.0 +0.4**
	comp=E,0.4nm,0.6s,baz=116,slow=3.4,SNR=6.4						
NV01	**Mina Array Sit**	**80.70**	**325**	*e*P		**P**	**02 20 29.6 +1.3**
NVAR	**Mina Array Bea**	**80.70**	**325**	P		**P**	**02 20 29.6 +1.3**
	comp=E,0.6nm,0.8s,baz=141,slow=4.4,SNR=3.1						
HVU	**Hansel Valley**	**80.76**	**330**	*e*P		**P**	**02 20 28.0 -0.4**
	comp=E,3.0nm,0.9s						
BOSA	**Boshof**	**81.67**	**118**	P		**P**	**02 20 34.2 +0.5**
	comp=E,1.4nm,0.6s,baz=261,slow=2.3,SNR=7.9						
TOA0	**Torodi Ar. Sit**	**82.41**	**70**	*e*P		**P**	**02 20 38.3 +0.7**
	comp=E,19nm,1.8s						
TORD	**Torodi Ar. Bea**	**82.41**	**70**	P		**P**	**02 20 37.3 -0.2**
	comp=E,15nm,0.3s,baz=283,slow=5.4,SNR=17						
TOA1	**Torodi Ar. Sit**	**82.42**	**70**	*e*P		**P**	**02 20 37.3 -0.2**
HLID	**Hailey**	**82.91**	**330**	*e*P		**P**	**02 20 40.4 +0.7**
	comp=E,2.1nm,1.0s						
AS31	**Alice Springs**	**121.46**	**208**	*e*PKPdf		**PKPdf**	**02 27 07.8 -1.2**
ASAR	**Alice Springs**	**121.46**	**208**	PKP		**PKPdf**	**02 27 07.8 -1.2**
	comp=E,0.6nm,0.8s,baz=192,slow=2.8,SNR=5.8						
WR1	**Warramunga Arr**	**124.59**	**210**	*e*PKPdf		**PKPdf**	**02 27 14.4 -0.6**
WRA	**Warramunga Arr**	**124.59**	**210**	PKP		**PKPdf**	**02 27 14.4 -0.6**
	comp=E,1.5nm,0.5s,baz=174,slow=0.8,SNR=11						
H11S2	**WAKE ISLAND Hyl**	**26.13**	**272**	T		T	04 46 07.5
	baz=115,slow=75,SNR=62						
H11S1	**WAKE ISLAND Hyl**	**26.14**	**272**	T		T	04 46 09.1
	baz=115,slow=75,SNR=52						
H11S3	**WAKE ISLAND Hyl**	**26.15**	**272**	T		T	04 46 04.4
	baz=115,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hyl**	**26.44**	**273**	T		T	04 46 37.8
	baz=110,slow=74						
H11N1	**WAKE ISLAND Hyl**	**26.45**	**273**	T		T	04 46 30.0
	baz=110						
H11N2	**WAKE ISLAND Hyl**	**26.46**	**273**	T		T	04 46 37.9
	baz=110,slow=74						
CHGR	**Chuyangaron**	**146.56**	**64**	*e*PKPdf		**PKPdf**	**02 27 54.1 -0.9**
KK31	**Karatay Array**	**147.03**	**56**	*e*pPKPdf		**PKPbc**	**02 27 57.5 -0.1**
KKAR	**Karatay Array**	**147.03**	**56**	*e*PKPbc		**PKPbc**	**02 27 57.8 +0.1**
GAR	**Garm**	**147.44**	**63**	*e*PKPbc		**PKPbc**	**02 27 59.2 +0.1**
KURK	**Kurchatov**	**149.46**	**38**	*e*PKPbc		**PKiKP**	**02 28 04.1 -0.8**
AAK	**Ala-Archa**	**149.99**	**55**	*e*PKPbc		**PKiKP**	**02 28 06.6 +0.1**
ZAA1	**Zalesovo Array**	**150.42**	**29**	*e*PKPbc		**PKiKP**	**02 28 06.5 -0.2**
ZAA0	**Zalesovo Array**	**150.43**	**29**	*e*PKPbc		**PKiKP**	**02 28 06.5 -0.3**
ZALV	**Zalesovo Beam**	**150.43**	**29**	PKPbc		**PKiKP**	**02 28 06.5 -0.3**
	comp=E,13nm,0.7s,baz=294,slow=3.3,SNR=37						
PSI	**Prapat**	**151.66**	**160**	*e*PKPbc		**PKPbc**	**02 28 09.3 -1.0**
KSH	**Kashi**	**151.73**	**61**	*e*PKPbc		**PKPdf**	**02 28 02.8 -0.6**
MK32	**Makanchi Array**	**153.57**	**43**	*e*PKPbc		**PKiKP**	**02 28 13.8 +0.2**
MK32				*e*PKPab		**PKPab**	**02 28 26.3 +0.4**
MKAR	**Makanchi Array**	**153.57**	**43**	PKPbc		**PKiKP**	**02 28 13.7 +0.2**
	comp=E,0.7nm,0.7s,baz=303,slow=1.7,SNR=4.5						
MKAR				PKPab		**PKPab**	**02 28 26.3 +0.4**
	comp=E,2.0nm,0.9s,baz=328,slow=4.4,SNR=7.0						
WMQ	**Urumqi**	**158.38**	**44**	*e*PKP		**PKPdf**	**02 28 11.5 -0.7**
WMQ				AMB		AMB	
	comp=E,77nm,5.9s						
WMQ				LR		LR	
	comp=E,110nm,28.7s						
HHC	**Hu-ho-hao-te**	**168.70**	**348**	*e*PKP		**PKPdf**	**02 28 21.5 -0.5**
NJ2	**Nanjing**	**170.78**	**287**	*e*PKP		**PKPdf**	**02 28 24.3 +0.9**
WHN	**Wuhan**	**174.83**	**280**	PKP		**PKPdf**	**02 28 24.5 -0.6**

IDC 28 02:25:16.5±2.6, 7°24S×128°43E, h0km, mb3.9/1, mb1 4.4/3, mb1mx3.7/26, mbtmp4.2/3, ML4.4/2, Error ellipse: s-maj=294.6km s-min=31.2km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.87**	**156**	Pn	Pn	02 28 33.4	-1.0
	2.4nm,0.3s,baz=334,slow=13,SNR=39						
WRA				Sn	Sn	02 30 57.7	-12
	2.9nm,0.3s,baz=336,slow=23,SNR=11						
ASAR	**Alice Springs**	**17.16**	**163**	P		Pn	02 29 18.6 +0.8
	1.1nm,0.3s,baz=340,slow=8.5,SNR=28						
ASAR				S		Sn	02 32 16.2 -13
	0.2nm,0.3s,baz=343,slow=24,SNR=4.3						
MKAR	**Makanchi Array**	**67.58**	**328**	P		P	02 36 15.0 0.0
	0.4nm,0.4s,baz=115,slow=8.0,SNR=9.0						

*ISCJB **28** 02:26:42.8±0.7, 52°1N±0°1×153°8E±0°2, h550km, mb3.0/2, Error ellipse: s-maj=19.0km s-min=10.1km az=146.1*
*MOS **28** 02:26:42.1±1.4, 52°43N×152°49E, h506km, mb3.9/1, Error ellipse: s-maj=27.0km s-min=13.2km az=140.2*
*IDC **28** 02:26:43.2±1.6, 52°46N×152°60E, h507km±56km, mb2.8/2, mb1 2.9/4, mb1mx2.5/32, mbtmp3.6/4, Error ellipse: s-maj=93.5km s-min=31.5km az=110.0*
*KRSC **28** 02:26:45.3±2.4, 52°25N×153°28E, h494km±32km, ML4.3*

ISC 28 02:26:42.0±1.0, 52°0N±0°1×153°51E±0°09, h550km, n39, σ2§30/51, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.68**	**130**	*e*P		**P**	**02 27 50.7 +0.2**
ALID	**Alaid**	**1.68**	**130**	P		**P**	**02 27 50.7 +0.2**
APC	**Apacha**	**2.44**	**65**	*e*P		**P**	**02 27 53.1 -0.5**
APC	**Apacha**	**2.44**	**65**	P		**P**	**02 27 53.1 -0.5**
PETK	**Petropavlovsk-**	**2.81**	**64**	P		**P**	**02 27 55.7 0.0**
	0.8nm,0.3s,baz=258,slow=8.2,SNR=14						
KDTR	**Khodutka, Kamc**	**2.84**	**91**	*e*P		**P**	**02 27 55.7 -0.2**
KDTR				*e*S		**S**	**02 28 53.4 -2.9**
KDTR	**Khodutka, Kamc**	**2.84**	**91**	P		**P**	**02 27 55.7 -0.2**
KDTR				S		**S**	**02 28 53.4 -2.9**
RUS	**Russkaya**	**3.12**	**79**	*e*P		**P**	**02 27 58.2 +0.6**
RUS				*e*S		**S**	**02 28 55.8 -3.6**
RUS	**Russkaya**	**3.12**	**79**	P		**P**	**02 27 58.2 +0.6**
RUS				S		**S**	**02 28 55.8 -3.6**
GNL	**Ganaly**	**3.20**	**55**	*e*P		**P**	**02 27 58.5 +0.3**
GNL	**Ganaly**	**3.20**	**55**	P		**P**	**02 27 58.5 +0.3**
KRX	**Arik**	**3.43**	**64**	*e*P		**P**	**02 28 00.9 +1.1**
KRX	**Arik**	**3.43**	**64**	P		**P**	**02 28 00.9 +1.1**
AVH	**Avacha**	**3.45**	**66**	*e*P		**P**	**02 28 00.8 +1.0**
AVH	**Avacha**	**3.45**	**66**	P		**P**	**02 28 00.8 +1.0**
UGLR	**Uglovaya**	**3.48**	**67**	*e*P		**P**	**02 28 02.1 +2.0**
UGLR	**Uglovaya**	**3.48**	**67**	P		**P**	**02 28 02.1 +2.0**
SMAR	**Somma**	**3.48**	**66**	*e*P		**P**	**02 28 01.7 +1.5**
SMAR	**Somma**	**3.48**	**66**	P		**P**	**02 28 01.7 +1.5**
SDLR	**Sedlovina**	**3.53**	**66**	*e*P		**P**	**02 28 01.8 +1.3**
SDLR				*e*S		**S**	**02 29 01.4 -3.3**
SDLR	**Sedlovina**	**3.53**	**66**	P		**P**	**02 28 01.8 +1.3**
SDLR				S		**S**	**02 29 01.4 -3.3**
SPN	**Mys Shipunski**	**4.14**	**71**	*e*P		**P**	**02 28 04.6 -0.1**
SPN				*e*S		**S**	**02 29 07.7 -4.8**
SPN	**Mys Shipunski**	**4.14**	**71**	P		**P**	**02 28 04.6 -0.1**
SPN				S		**S**	**02 29 07.7 -4.8**
ESO	**Esso**	**5.02**	**36**	P		**P**	**02 28 11.9 +0.2**
ESO	**Esso**	**5.02**	**36**	P		**P**	**02 28 11.9 +0.2**
KZV	**Kizimen**	**5.13**	**49**	P		**P**	**02 28 14.5 +1.6**
KZV	**Kizimen**	**5.13**	**49**	P		**P**	**02 28 14.5 +1.6**
TUMR	**Tumrok**	**5.17**	**47**	*e*P		**P**	**02 28 15.3 +2.2**
TUMR	**Tumrok**	**5.17**	**47**	P		**P**	**02 28 15.3 +2.2**
TUMD	**Tumrok D**	**5.24**	**49**	*e*P		**P**	**02 28 16.3 +2.7**
MKZ	**Mys Kozlova**	**5.58**	**59**	P		**P**	**02 28 16.9 +0.4**
MKZ				*e*S		**S**	**02 29 29.3 -4.8**
MKZ	**Mys Kozlova**	**5.58**	**59**	P		**P**	**02 28 16.9 +0.4**
MKZ				S		**S**	**02 29 29.3 -4.8**
KBTR	**Krutoberegovo**	**6.94**	**48**	*e*P		**P**	**02 28 28.4 -0.6**
KBTR				*e*S		**S**	**02 29 53.2 -3.8**
KBTR	**Krutoberegovo**	**6.94**	**48**	P		**P**	**02 28 28.4 -0.6**
KBTR				S		**S**	**02 29 53.2 -3.8**
BKI	**Bering**	**8.10**	**61**	*e*P		P	02 28 46.4 +6.0
BKI				*e*S		**S**	**02 30 19.9 +2.2**
BKI	**Bering**	**8.10**	**61**	P		P	02 28 46.4 +6.0
BKI				S		**S**	**02 30 19.9 +2.2**
MJAR	**Matsushiro Arr**	**18.85**	**221**	P		**P**	**02 30 31.2 +3.6**
	0.1nm,0.3s,baz=17,slow=8.7,SNR=4.8						
MKAR	**Makanchi Array**	**44.95**	**293**	P		**P**	**02 34 06.7 -1.3**
	0.2nm,0.3s,baz=57,slow=7.2,SNR=4.8						
FINES	**FINESS Array B**	**59.45**	**334**	P		**P**	**02 35 51.3 -0.2**
	0.7nm,0.7s,baz=43,slow=8.6,SNR=5.0						

*MDD **28** 02:37:00.5±1.7, 37°1N×13°43W, h0km, mb4.2/2, Error ellipse: s-maj=14.9km s-min=13.9km az=42.0, PRXIMO*
*IGIL **28** 02:37:00.7, 37°05N×13°70W, h29km, ML2.5*
*INMG **28** 02:37:02.5±1.3, 36°94N×13°78W, h10km, ML2.5, Error ellipse: s-maj=6.7km s-min=4.3km az=120.0*

ISC 28 02:37:00.0±3.6, 37°20N±0°10×13°4W±0°2, h10km, n61, σ1§49/103, 2C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.65**	**90⇑**	*e*Pn		**Pn**	**02 37 57.2 +0.7**
PFVI				*e*Sn		**Sn**	**02 38 38.6 -1.0**
PFVI				A		A	02 38 42.7
	6.7nm,0.3s						
PFVI	**Vila Bisbo**	**3.65**	**90**	⇑P		**Pn**	**02 37 57.2 +0.7**
	2.4nm,0.1s,SNR=18						
PFVI				S		**Sn**	**02 38 38.3 -1.3**
	5.7nm,0.4s,SNR=8.2						
PMAFR	**Mafra**	**3.69**	**60**	*e*Pn		**Pn**	**02 37 59.0 +1.9**
PMAFR				*e*Sn		**Sn**	**02 38 41.9 +1.3**
PMAFR				A		A	02 38 45.2
	12nm,0.2s						
PMAFR	**Mafra**	**3.69**	**60**	P		**Pn**	**02 37 59.0 +1.9**
	2.6nm,0.1s,SNR=7.0						
PMAFR				S		**Sn**	**02 38 41.0 +0.4**
	11nm,0.2s,SNR=9.0						
PTEO	**Sao Teotonio**	**3.73**	**83**	*e*Pn		**Pn**	**02 37 58.9 +1.2**
PTEO				*e*Sn		**Sn**	**02 38 40.9 -0.8**
PTEO				A		A	02 38 43.3
	5.4nm,0.7s						
PTEO	**Sao Teotonio**	**3.73**	**83**	P		**Pn**	**02 37 58.9 +1.2**
PTEO				S		**Sn**	**02 38 40.9 -0.8**
	2.7nm,0.7s						
MORF	**Marmelete**	**3.78**	**87**	*e*P		**Pn**	**02 37 59.1 +0.7**
MORF				*e*S		**Sn**	**02 38 41.8 -1.3**
MORF				AML		AML	02 38 45.2
	comp=N,9.7nm,0.1s						
MORF	**Marmelete**	**3.78**	**87**	*e*Pn		**Pn**	**02 37 59.3 +0.8**
MORF				*e*Sn		**Sn**	**02 38 42.1 -1.0**
MORF				A		A	02 38 47.0
	comp=N,7.7nm,0.2s						
MORF	**Marmelete**	**3.78**	**87**	P		**Pn**	**02 37 59.1 +0.7**
MORF				P		**Pn**	**02 37 59.3 +0.8**
MORF				S		**Sn**	**02 38 41.8 -1.3**
	comp=N,9.7nm,0.1s						
MORF				S		**Sn**	**02 38 42.1 -1.0**
	comp=N,7.7nm,0.2s						
PNCL	**Nicolau / Gran**	**3.96**	**75**	*e*Pn		**Pn**	**02 38 01.9 +1.0**
PNCL				*e*Sn		**Sn**	**02 38 46.5 -0.9**
PNCL				A		A	02 38 53.1
	comp=N,5.6nm,0.1s						
PNCL	**Nicolau / Gran**	**3.96**	**75**	P		**Pn**	**02 38 01.9 +1.0**
PNCL				S		**Sn**	**02 38 46.5 -0.9**
	comp=N,5.6nm,0.1s						
MESJ	**Messejana**	**4.16**	**80**	*e*P		**Pn**	**02 38 04.5 +0.9**
MESJ				*e*S		**Sn**	**02 38 51.0 -1.3**
MESJ				AML		AML	02 38 55.5
	comp=N,7.2nm,0.2s						
MESJ	**Messejana**	**4.16**	**80**	*e*Pn		**Pn**	**02 38 04.8 +1.2**
MESJ				*e*Sn		**Sn**	**02 38 51.6 -0.7**
MESJ				A		A	02 38 56.7
	comp=N,5.0nm,0.2s						
MESJ	**Messejana**	**4.16**	**80**	P		**Pn**	**02 38 04.5 +0.9**
MESJ				P		**Pn**	**02 38 04.8 +1.2**
MESJ				S		**Sn**	**02 38 51.0 -1.3**
	comp=N,7.2nm,0.2s						
MESJ				S		**Sn**	**02 38 51.6 -0.7**
	comp=N,5.0nm,0.2s						
ALMR	**Almeirim**	**4.27**	**61**	*e*P		**Pn**	**02 38 06.1 +1.1**
ALMR				*e*S		**Sn**	**02 38 54.1 -0.8**
ALMR				AML		AML	02 38 58.5
	comp=N,14nm,0.3s						
ALMR	**Almeirim**	**4.27**	**61**	*e*Sn		**Sn**	**02 38 56.0 +1.1**
ALMR				A		A	02 38 59.8
	comp=N,20nm,0.3s						
ALMR	**Almeirim**	**4.27**	**61**	P		**Pn**	**02 38 06.1 +1.1**
ALMR				S		**

MTE				A	A	02 39 29.3		
	comp=N,3.8nm,0.3s							
MTE	**Manteigas**	**5.58**	**53**	P	**Pn**	**02 38 24.8**	**+1.7**	
MTE				S	**Sn**	**02 39 27.2**	**-0.1**	
	comp=N,1.9nm,0.3s							
PVRL	**Vila Real**	**6.00**	**45**	*e*Sn	**Sn**	**02 39 37.1**	**-0.6**	
PVRL	**Vila Real**	**6.00**	**45**	S	**Sn**	**02 39 37.1**	**-0.6**	
POLO	**Lamas de Olo**	**6.02**	**44**	*e*Sn	**Sn**	**02 39 37.9**	**-0.3**	
POLO	**Lamas de Olo**	**6.02**	**44**	S	**Sn**	**02 39 37.9**	**-0.3**	
ESPR	**Espera**	**6.04**	**91**	S	**Sn**	**02 39 38.5**	**0.0**	
	comp=N,4.0nm,0.2s,SNR=7.9							
PCAB	**Cabril**	**6.13**	**41**	*e*Sn	**Sn**	**02 39 40.1**	**-0.7**	
PCAB	**Cabril**	**6.13**	**41**	S	**Sn**	**02 39 40.1**	**-0.7**	
PGAV	**Gavieira, Arco**	**6.19**	**38**	*e*Pn	**Pn**	**02 38 32.9**	**+1.3**	
PGAV				*e*Sn	**Sn**	**02 39 39.9**	**-2.5**	
PGAV				A	A	02 39 41.6		
	comp=N,4.8nm,0.9s							
PGAV	**Gavieira, Arco**	**6.19**	**38**	P	**Pn**	**02 38 32.9**	**+1.3**	
PGAV				S	**Sn**	**02 39 39.9**	**-2.5**	
	comp=N,4.8nm,0.9s							
ELOB	**Lobios**	**6.22**	**40**	P	**Pn**	**02 38 33.2**	**+1.2**	
	comp=N,0.4nm,0.2s,SNR=7.9							
ELOB				S	**Sn**	**02 39 40.3**	**-2.9**	
	SNR=7.9							
MVO	**Moncorvo**	**6.33**	**49**	*e*Pn	**Pn**	**02 38 34.5**	**+1.0**	
MVO				*e*Sn	**Sn**	**02 39 44.0**	**-1.9**	
MVO				A	A	02 40 03.4		
	comp=N,2.6nm,0.6s							
MVO	**Moncorvo**	**6.33**	**49**	P	**Pn**	**02 38 34.5**	**+1.0**	
	comp=N,0.8nm,0.2s,SNR=7.9							
MVO				S	**Sn**	**02 39 43.4**	**-2.5**	
	comp=N,1.3nm,0.1s,SNR=6.0							
EPLA	**Plasencia**	**6.40**	**61**	P	**Pn**	**02 38 35.9**	**+1.5**	
	comp=N,0.5nm,0.2s,SNR=7.9							
EPLA				S	**Sn**	**02 39 45.9**	**-1.6**	
	comp=N,1.6nm,0.3s,SNR=8.2							
EAGO	**Agolada(Pontev**	**6.92**	**34**	P	**Pn**	**02 38 42.3**	**+0.8**	
	comp=N,0.7nm,0.1s,SNR=7.9							
EAGO				S	**Sn**	**02 39 54.8**	**-5.6**	
	comp=N,0.9nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**7.06**	**79**	P	**Pn**	**02 38 44.3**	**+0.9**	
	comp=N,0.3nm,0.2s,SNR=7.9							
EADA				S	**Sn**	**02 40 01.5**	**-2.2**	
	comp=N,0.8nm,0.1s,SNR=7.9							
PAB	**San Pablo**	**7.48**	**69**	P	**Pn**	**02 38 50.2**	**+0.9**	
	comp=N,0.3nm,0.2s,SNR=7.9							
PAB				S	**Sn**	**02 40 10.9**	**-3.3**	
	comp=N,0.3nm,0.2s,SNR=7.9							
EPON	**Pontenova**	**7.76**	**36**	S	**Sn**	**02 40 16.9**	**-4.1**	
	comp=N,0.4nm,0.1s,SNR=4.0							
EQES	**Quesada**	**8.23**	**83**	S	**Sn**	**02 40 28.6**	**-4.0**	
	comp=N,0.1nm,0.2s,SNR=7.9							

KRNET ***28*** *02:39:22.1±0.1,39°.53N×71°.82E,mb2.5*
ISC 28 02:39:18.2±3.6,**39°.5N**±0°.2×**72°.09E**±0°.07,**h33**km,**n6,**
σ0$85/10,10C-2D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.11**	**299**	⇑*i*P	**Pb**	**02 39 39.6**	**+0.6**
	baz=5.0						
BTK				⇑*i*S	**Sb**	**02 39 52.5**	**-0.7**
	baz=5.0						
AML	**Almayashu**	**2.87**	**25**	⇑*i*P	**Pb**	**02 40 09.9**	**+1.0**
	baz=28						
AML				⇑*i*S	**Sb**	**02 40 44.4**	**+0.7**
	baz=28						
UCH	**Uchtor**	**3.26**	**34**	⇑*e*P	**Pb**	**02 40 15.6**	**0.0**
	baz=36						
UCH				⇑*i*S	**Sb**	**02 40 54.5**	**-0.6**
	baz=36						
KZA	**Kyzart**	**3.50**	**42**	⇑*i*P	**Pb**	**02 40 19.3**	**-0.3**
	baz=44						
KZA				⇑*i*S	**Sb**	**02 41 00.7**	**-1.1**
	baz=44						
AAK	**Ala-Archa**	**3.60**	**30**	⇓Pg	**Pb**	**02 40 22.2**	**+1.0**
	2.5nm,0.7s						
AAK				⇑Lg	Lg	02 41 01.1	
	3.3nm,0.7s						
KK31	**Karatay Array**	**3.76**	**342**	⇓Pn	**Pb**	**02 40 23.5**	**-0.4**
	0.1nm,0.2s,baz=152,slow=13,SNR=4.8						
KK31				⇑Lg	Lg	02 41 10.4	
	2.9nm,0.8s,baz=154,slow=27,SNR=6.4						

ISCJB ***28*** *03:00:57.6±1.0,34°.36N±0°.03×34°.55E±0°.05,h11km±9km,*
Error ellipse: s-maj=7.4km s-min=3.9km az=151.1
GII ***28*** *03:00:57.8±0.0,34°.31N×34°.58E,h1km,MD2.3/2*
GRAL ***28*** *03:01:00.2±0.3,34°.33N×34°.61E,h17km±6km,MD3.5*
ISK ***28*** *03:01:02.2,34°.75N×34°.47E,h7km,ML2.3/8*
DDA ***28*** *03:01:14.1,36°.66N×34°.57E,h7km,ML2.0*
ISC 28 03:00:57.0±1.2,**34°.38N**±0°.04×**34°.59E**±0°.04,**h4**km±**11**km,
n37,σ1$09/47,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**1.00**	**118**	*e*P	**Pg**	**03 01 17.0**	**+0.7**
BHL				*e*S	**Sg**	**03 01 29.5**	**+0.2**
DQRL	**Deir Qamar**	**1.06**	**129**	*e*P	**Pb**	**03 01 17.9**	**0.0**
DQRL				*e*S	**Sg**	**03 01 30.9**	**-0.1**
HWQ	**Hawqa**	**1.13**	**95**	*e*P	**Pg**	**03 01 19.4**	**+0.7**
CSS	**Mathiatis**	**1.19**	**300**	PG	**Pg**	**03 01 20.6**	**+0.8**
CSS				SG	**Sg**	**03 01 34.9**	**-0.3**
CSS	**Mathiatis**	**1.19**	**300**	Pg	**Pg**	**03 01 20.2**	**+0.4**
RCY	**Rachaya**	**1.36**	**130**	*e*P	**Pg**	**03 01 22.8**	**-0.3**
RCY				*e*S	**Sg**	**03 01 39.4**	**-1.3**
HNTI	**Hanita**	**1.38**	**159**	Pn	**Pg**	**03 01 21.8**	**-1.6**
SHBL	**Chebaa**	**1.41**	**136**	*e*P	**Pg**	**03 01 23.6**	**-0.4**
SHBL				*e*S	**Sg**	**03 01 40.8**	**-1.4**
NATI	**Neve Ativ**	**1.47**	**139**	Pn	**Pg**	**03 01 24.9**	**-0.2**
GEM	**Giv'at Ha'Em**	**1.47**	**142**	Pn	**Pn**	**03 01 24.1**	**-0.1**
KSDI	**Kefar Szold**	**1.48**	**143**	Pn	**Pn**	**03 01 24.7**	**+0.3**
MMA0B	**Mount Meron ar**	**1.52**	**153**	Pn	**Pn**	**03 01 25.2**	**+0.2**
KSHT	**Keshet**	**1.73**	**143**	Pn	**Pn**	**03 01 28.6**	**+0.8**
OFRI	**`Ofer**	**1.78**	**169**	Pn	**Pn**	**03 01 28.7**	**+0.1**
OFRI				Sn	**Sn**	**03 01 51.1**	**-0.6**
AKKU	**Akkuyu-Mersin**	**1.97**	**335**	PN	**Pn**	**03 01 31.6**	**+0.5**
AKKU				SN	**Sn**	**03 01 52.8**	**-3.5**
GULN	**MERSIN_Gulnar**	**2.00**	**335**	*i* P	**Pn**	**03 01 31.1**	**-0.4**
GULN				IAML_P			
	comp=Z,56nm,0.2s						
IKL	**Isikli**	**2.00**	**339**	PN	**Pn**	**03 01 31.8**	**+0.3**
MMLI	**Mount Malkishu**	**2.06**	**160**	Pn	**Pn**	**03 01 33.0**	**+0.7**
MMLI				Sn	**Sn**	**03 01 57.8**	**-0.6**
KIZK	**Mersin**	**2.13**	**350**	PN	**Pn**	**03 01 33.7**	**+0.3**
KIZK	**Mersin**	**2.13**	**350**	*i* P	**Pn**	**03 01 34.3**	**+1.0**
KIZK				IAML_P			
	comp=Z,649nm,0.1s						
TEKE	**Tekeli-Mersin**	**2.13**	**326**	PN	**Pn**	**03 01 34.1**	**+0.7**
SLTI	**Sal'it**	**2.16**	**170**	Pn	**Pn**	**03 01 34.1**	**+0.3**
KEBE	**Keben-Mersin**	**2.19**	**341**	PN	**Pn**	**03 01 34.5**	**+0.3**
TEVE	**Tevekalti-Mers**	**2.26**	**336**	PN	**Pn**	**03 01 35.6**	**+0.4**
HMDT	**Nahal Hemdat**	**2.26**	**159**	Pn	**Pn**	**03 01 36.8**	**+1.7**
HMDT				Sn	**Sn**	**03 02 03.8**	**+0.4**
BERE	**Bereket-Mersin**	**2.26**	**331**	PN	**Pn**	**03 01 35.9**	**+0.6**
MERS	**Mersin**	**2.49**	**359**	PN	**Pn**	**03 01 38.9**	**+0.6**
AMAZ	**Amatzia**	**2.85**	**174**	Pn	**Pn**	**03 01 45.0**	**+1.7**
DSI	**Dead Sea**	**2.88**	**166**	Pn	**Pn**	**03 01 44.8**	**+1.2**
KARA	**Karaisali**	**2.90**	**7**	PN	**Pn**	**03 01 44.9**	**+0.9**
YTIR	**Yattir**	**3.04**	**171**	Pn	**Pn**	**03 01 46.6**	**+0.7**
KERG	**Konya-Eregli**	**3.06**	**353**	*i* P	**Pn**	**03 01 48.5**	**+2.2**
KERG				IAML_P			
	comp=Z,145nm,0.2s						
PRNI	**Paran**	**4.03**	**175**	Pn	**Pn**	**03 02 01.3**	**+1.8**
KRMI	**Paran Flat**	**4.25**	**178**	Pn	**Pn**	**03 02 03.5**	**+1.0**
HRFI	**Mount Harif**	**4.34**	**175**	Pn	**Pn**	**03 02 05.2**	**+1.4**
MBRI	**Mt Berech**	**4.58**	**176**	Pn	**Pn**	**03 02 08.2**	**+1.1**
MBRI				Sn	**Sn**	**03 03 01.1**	**+0.4**
EIL	**Elat**	**4.70**	**176**	Pn	**Pn**	**03 02 10.7**	**+2.0**

ISCJB ***28*** *03:18:59.9±0.7,20°.9S±0°.2×178°.9W±0°.1,h619km,*
mb3.7/11,Error ellipse: s-maj=25.4km s-min=12.8km
az=151.2
IDC ***28*** *03:19:00.6±2.8,20°.80S×178°.85W,h613km±33km,*
mb3.2/11,mb1 3.5/12,mb1mx3.3/29,mbtmp4.2/12,Error
ellipse: s-maj=22.9km s-min=14.5km az=150.0
ISC 28 03:19:01.0±0.8,**20°.8S**±0°.2×**178°.9W**±0°.1,**h619**km,**n25,**
σ0$88/27,mb3.7/11,7C-1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.74**	**262**	P	**P**	**03 21 55.9**	**-1.0**
	0.3nm,0.3s,baz=79,slow=19,SNR=5.0						
STKA	**Stephens Creek**	**36.93**	**244**	P	**P**	**03 25 20.2**	**+0.6**
	1.6nm,0.5s,baz=101,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**43.66**	**257**	P	**P**	**03 26 13.2**	**0.0**
	5.7nm,0.6s,baz=90,slow=8.2,SNR=51						
ASAR				PcP	**PcP**	**03 27 46.5**	**+0.3**
	1.4nm,0.6s,baz=103,slow=3.5,SNR=9.3						
ASAR				S	**S**	**03 32 00.4**	**+0.6**
	0.8nm,0.8s,baz=92,slow=16,SNR=5.7						
WRA	**Warramunga Arr**	**43.76**	**263**	P	**P**	**03 26 13.5**	**-0.4**
	2.8nm,0.3s,baz=88,slow=8.0,SNR=49						
VNDA	**Vanda**	**57.54**	**185**	P	**P**	**03 27 52.7**	**+0.2**
	0.4nm,0.5s,baz=359,slow=6.7,SNR=7.4						
MJAR	**Matsushiro Arr**	**69.98**	**324**	P	**P**	**03 29 12.2**	**+0.4**
	1.8nm,0.6s,baz=154,slow=5.5,SNR=5.7						
PETK	**Petropavlovsk-**	**76.36**	**346**	P	**P**	**03 29 48.3**	**+0.6**
	2.5nm,0.7s,baz=130,slow=7.8,SNR=6.0						
NVAR	**Mina Array Bea**	**81.80**	**44**	P	**P**	**03 30 17.5**	**+0.5**
	0.6nm,0.5s,baz=227,slow=8.1,SNR=4.0						
TXAR	**Lajitas Array**	**87.90**	**58**	P	**P**	**03 30 47.3**	**+0.8**
	0.5nm,0.8s,baz=224,slow=8.8,SNR=4.4						
ILAR	**Eielson Array**	**88.78**	**13**	P	**P**	**03 30 49.1**	**-0.6**
	0.7nm,0.7s,baz=223,slow=5.3,SNR=11						
CMAR	**Chiang Mai Arr**	**89.46**	**290**	P	**P**	**03 30 55.2**	**+1.3**
	2.0nm,0.6s,baz=121,slow=3.3,SNR=7.8						
PDAR	**Pinedale Array**	**89.73**	**44**	P	**P**	**03 30 54.7**	**-0.3**
	0.6nm,0.6s,baz=193,slow=4.4,SNR=7.2						
ARCES	**ARCESS Array B**	**129.06**	**349**	PKP	**PKPdf**	**03 36 58.6**	**-0.5**
	1.0nm,0.6s,baz=108,slow=0.4,SNR=8.0						
FINES	**FINESS Array B**	**135.83**	**343**	PKP	**PKPdf**	**03 37 11.8**	**-0.2**
	0.9nm,0.7s,baz=48,slow=2.1,SNR=5.4						
AKASG	**Malin Array Be**	**142.88**	**330**	PKP	**PKPdf**	**03 37 22.6**	**-2.4**
	6.0nm,0.5s,baz=42,slow=4.8,SNR=6.5						
BRTR	**Keskin Array B**	**146.44**	**311**	PKPbc	**PKPbc**	**03 37 34.1**	**-0.2**
	1.7nm,0.6s,baz=135,slow=4.9,SNR=14						
BURAR	**Bucovina Array**	**146.92**	**330**	⇑*i*P	**PKPbc**	**03 37 35.6**	**+0.3**
BIZ	**Bicaz**	**146.96**	**328**	⇑*i*P	**PKiKP**	**03 37 36.6**	**-0.5**
TESR	**Tescani**	**146.98**	**327**	⇑*i*P	**PKPbc**	**03 37 35.3**	**-0.1**
DOPR	**Dopca**	**147.99**	**327**	⇑*i*P	**PKiKP**	**03 37 39.1**	**-0.2**
ARR	**Arges**	**148.79**	**327**	⇑*i*P	**PKiKP**	**03 37 41.4**	**+0.4**
GZR	**Gura Zlata**	**149.69**	**329**	⇑*i*P	**PKPbc**	**03 37 41.9**	**-0.3**
HERR	**Herculane**	**150.24**	**329**	⇑*i*P	**PKPbc**	**03 37 43.2**	**-0.2**
GERES	**GERESS Array B**	**150.26**	**343**	PKPbc	**PKPbc**	**03 37 43.7**	**+0.2**
	1.0nm,0.5s,baz=29,slow=3.0,SNR=12						
MDVR	**Moldovita**	**150.65**	**329**	⇓*i*P	**PKPbc**	**03 37 41.9**	**-2.5**

IDC 28 03:28:29.8±2.7,**0°.53N**×**126°.90E,h0**km,**mb3.6**/3,
mb1 3.8/3,**mb1mx3.5**/26,**mbtmp3.6**/3,**Error ellipse:**
s-maj=276.1km s-min=26.0km az=66.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.61**	**161**	P	P	03 33 21.2	-0.4
	1.1nm,0.6s,baz=342,slow=12,SNR=11						
ASAR	**Alice Springs**	**24.99**	**165**	P	P	03 33 55.7	+0.3
	0.6nm,0.4s,baz=346,slow=12,SNR=15						
MKAR	**Makanchi Array**	**60.28**	**326**	P	P	03 38 40.1	-0.1
	0.3nm,0.4s,baz=119,slow=8.3,SNR=5.5						

ISCJB ***28*** *03:52:37.5±0.4,36°.67N±0°.03×121°.51W±0°.04,h10km,*
mb2.8/1,MS2.2/1,Error ellipse: s-maj=5.8km s-min=2.5km
az=148.6
NCEDC ***28*** *03:52:39.4,36°.75N×121°.47W,h7km,MW3.9(BRK)*
NEIC ***28*** *03:52:39.4±0.0,36°.75N×121°.47W,h7km,MW3.9(BRK),*
After NCEDC.
NEIC Felt [III] at Castroville, Gilroy, Hollister, Marina, Pacific
Grove, Salinas, Santa Cruz, San Jose, San Juan Bautista
and Seaside; [II] at Aptos, Aromas, Ben Lomond, Carmel,
Carmel Valley, Felton, Monterey, Morgan Hill, San Martin,
Scotts Valley, Soquel and Watsonville. Felt from San
Francisco to Soledad.
IDC ***28*** *03:52:39.2±1.4,36°.68N×121°.32W,h0km,mb3.0/1,*
mb1 3.6/8,mb1mx3.4/36,mbtmp3.2/8,ML3.3/7,MS2.8/7,
Ms1 2.8/7,ms1mx2.8/11,Error ellipse: s-maj=15.3km
s-min=12.1km az=72.0
ANF ***28*** *03:52:41.6±1.1,36°.58N×121°.35W,h15km±9km,ML3.9/30,*
Error ellipse: s-maj=4.7km s-min=2.5km az=71.0
ISC 28 03:52:39.7±0.9,**36°.73N**±0°.04×**121°.40W**±0°.06,**h10**km,
n120,σ1$25/123,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAO	**San Andreas Ge**	**0.05**	**311**	*e*Pg	**Pg**	**03 52 40.6**	**-1.1**
C055	**Cottonwood Ave**	**1.09**	**329**	*e*Pg	**Pg**	**03 52 59.0**	**-1.5**
PAGB	**Antelope Grade**	**1.36**	**137**	*e*Pn	**Pn**	**03 53 04.0**	**-0.8**
CMB	**Columbia Colle**	**1.53**	**31**	*e*Pn	**Pn**	**03 53 06.1**	**-1.0**
VOG	**Valley Oaks Go**	**1.68**	**104**	P	**Pn**	**03 53 08.4**	**-0.6**
	baz=285,SNR=15						
VOG				S	**Sn**	**03 53 30.4**	**-0.2**
	baz=285						
SMMC	**Simmler**	**1.81**	**141**	P	**Pn**	**03 53 10.4**	**-0.6**
	baz=321,SNR=58						
SMMC				S	**Sn**	**03 53 33.4**	**-0.7**
	baz=321						
MCCM	**Marconi Confer**	**1.84**	**321**	*e*Pn	**Pn**	**03 53 08.2**	**-3.1**
VES	**Vestal, Richgr**	**2.07**	**115**	P	**Pn**	**03 53 14.0**	**-0.5**
	baz=296,SNR=96						
VES				S	**Sn**	**03 53 39.6**	**-0.8**
	baz=296						
OMMB	**Old Mammoth Mi**	**2.11**	**65**	*e*Pn	**Pn**	**03 53 16.1**	**+0.7**
MLAC	**Mammoth, Mammo**	**2.24**	**66**	P	**Pn**	**03 53 18.6**	**+1.6**
	baz=248,SNR=86						
AFDM	**Forest Hills D**	**2.24**	**9**	*e*Pn	**Pn**	**03 53 15.7**	**-1.2**
PKM	**Mcpherson Peak**	**2.25**	**144**	P	**Pn**	**03 53 16.5**	**-0.6**
	baz=325,SNR=22						
GDXM	**Geysers**	**2.35**	**332**	*e*Pn	**Pn**	**03 53 15.7**	**-2.8**
WAKR	**Walker**	**2.36**	**41**	*e*Pn	**Pn**	**03 53 19.5**	**+0.8**
RUBR	**Rubicon Trail**	**2.52**	**23**	*e*Pn	**Pn**	**03 53 21.6**	**+0.7**
TIN	**Tinemaha, Big**	**2.56**	**82**	P	**Pn**	**03 53 23.0**	**+1.6**
	baz=264,SNR=78						
ISA	**Isabella, Lake**	**2.59**	**113**	*e*Pn	**Pn**	**03 53 22.0**	**+0.2**
ISA	**Isabella, Lake**	**2.59**	**113**	P	**Pn**	**03 53 22.2**	**+0.4**
	baz=295,SNR=90						
HOPS	**Hopland Field**	**2.62**	**330**	*e*Pn	**Pn**	**03 53 19.7**	**-2.4**
ARVC	**Arvin**	**2.63**	**127**	P	**Pn**	**03 53 22.1**	**0.0**
	baz=308,SNR=34						
SBC	**Santa Barbara**	**2.67**	**148**	P	**Pn**	**03 53 22.4**	**-0.3**
	baz=329						
CWC	**Cottonwood Cre**	**2.69**	**95**	P	**Pn**	**03 53 24.1**	**+0.9**
	baz=278						
PNTR	**Pine Nut**	**2.75**	**31**	*e*Pn	**Pn**	**03 53 24.4**	**+0.4**
ORV	**Oroville**	**2.82**	**358**	*e*Pn	**Pn**	**03 53 24.5**	**-0.4**
YERR	**Yerington**	**2.83**	**37**	*e*Pn	**Pn**	**03 53 25.7**	**+0.6**
VCNR	**Virginia City**	**2.91**	**28**	*e*Pn	**Pn**	**03 53 26.7**	**+0.5**
RYN	**Ryan**	**2.97**	**49**	*e*Pn	**Pn**	**03 53 27.4**	**+0.4**
NV01	**Mina Array Sit**	**2.99**	**54**	*e*Pn	**Pn**	**03 53 28.5**	**+1.2**
NV01				*e*Pg	**Pb**	**03 53 31.7**	**-1.4**
NV01				*e*Lg	Lg	03 54 13.9	
NVAR	**Mina Array Bea**	**2.99**	**54**	**Pn**	**Pn**	**03 53 28.5**	**+1.2**
	9.2nm,0.3s,baz=240,slow=15,SNR=47						
NVAR				Pg	**Pb**	**03 53 31.7**	**-1.4**
	9.1nm,0.3s,baz=236,slow=20,SNR=65						
NVAR				Lg	Lg	03 54 13.9	
	21nm,0.3s,baz=229,slow=32,SNR=5.8						
NVAR				LR	LR	03 54 54.6	
	comp=Z,182nm,19.0s,baz=132,slow=44						
OSI	**Osito Audit: C**	**3.03**	**133**	*e*Pn	**Pn**	**03 53 28.9**	**+1.1**
SCZ2	**Santa Cruz Isl**	**3.09**	**152**	P	**Pn**	**03 53 27.9**	**-0.6**
	baz=332						
NV11	**Mina Array Sit**	**3.09**	**56**	*e*Pn	**Pn**	**03 53 29.2**	**+0.6**
DAC	**Darwin (Calif)**	**3.10**	**97**	*e*Pn	**Pn**	**03 53 30.1**	**+1.3**
MPMC	**Manual Prospec**	**3.23**	**101**	P	**Pn**	**03 53 31.0**	**+0.4**
	baz=283,SNR=90						
BEKR	**Beckworth**	**3.24**	**14**	*e*Pn	**Pn**	**03 53 30.8**	**+0.1**
BLG	**Laguna Peak, P**	**3.24**	**143**	P	**Pn**	**03 53 29.6**	**-0.9**
	baz=324						
BLG				S	**Sn**	**03 54 08.3**	**-0.9**
	baz=324						
GRAC	**Grapevine Rang**	**3.25**	**84**	P	**Pn**	**03 53 31.8**	**+1.1**
	baz=267,SNR=26						
EDW2	**Edwards Air Fo**	**3.33**	**123**	P	**Pn**	**03 53 32.3**	**+0.4**
	baz=305,SNR=23						
PAHR	**Pah Rah Range**	**3.37**	**27**	*e*Pn	**Pn**	**03 53 33.4**	**+0.9**
KCPM	**Cahto Peak**	**3.42**	**330**	*e*Pn	**Pn**	**03 53 31.7**	**-1.4**
KVN	**Kaiserville**	**3.49**	**47**	*e*Pn	**Pn**	**03 53 34.2**	**0.0**
O03E	**Paynes Creek**	**3.57**	**355**	P	**Pn**	**03 53 34.4**	**-0.8**
	baz=176,SNR=25						
O02D	**Mt. Diablo Mer**	**3.61**	**343**	P	**Pn**	**03 53 36.2**	**+0.4**
	baz=163						
FURC	**Furnace Creek,**	**3.66**	**93**	P	**Pn**	**03 53 36.9**	**+0.6**
	baz=276,SNR=21						
PASC	**Pasadena Art C**	**3.66**	**133**	*e*Pn	**Pn**	**03 53 36.6**	**+0.2**
MWC	**Mount Wilson**	**3.70**	**132**	*e*Pn	**Pn**	**03 53 36.9**	**-0.2**
KMRM	**Mail Ridge**	**3.93**	**333**	*e*Pn	**Pn**	**03 53 38.5**	**-1.6**
BFSC	**Mount Baldy Ra**	**3.94**	**128**	P	**Pn**	**03 53 40.0**	**-0.3**
	baz=310,SNR=18						
WDC	**Whiskeytown Da**	**3.95**	**347**	*e*Pn	**Pn**	**03 53 40.4**	**+0.1**
GSC	**Goldstone, Bar**	**3.99**	**110**	*e*Pn	**Pn**	**03 53 41.2**	**+0.2**
GSC	**Goldstone, Bar**	**3.99**	**110**	P	**Pn**	**03 53 40.9**	**0.0**
	baz=292,SNR=23						
CIS	**Catalina Islan**	**4.12**	**143**	P	**Pn**	**03 53 42.3**	**-0.5**
	baz=324						
CIS				S	**Sn**	**03 54 28.2**	**-2.9**
	baz=324						
TPNV	**Topopah Spring**	**4.14**	**85**	*e*Pn	**Pn**	**03 53 43.7**	**+0.6**
TPNV	**Topopah Spring**	**4.14**	**85**	P	**Pn**	**03 53 44.4**	**+1.3**
	baz=269,SNR=58						
SHOC	**Shoshone, Teco**	**4.22**	**100**	P	**Pn**	**03 53 44.1**	**0.0**
	baz=283,SNR=5.5						
SCI2	**San Clemente I**	**4.42**	**147**	P	**Pn**	**03 53 45.8**	**-1.0**
	baz=328,SNR=5.7						
SCI2				S	**Sn**	**03 54 37.0**	**-1.2**
	baz=328						
KHMM	**Horse Mountain**	**4.52**	**337**	*e*Pn	**Pn**	**03 53 47.7**	**-0.6**
HEC	**Hector,Ludlow**	**4.53**	**113**	P	**Pn**	**03 53 47.9**	**-0.5**
	baz=296,SNR=18						
TUQ	**Turquoise Moun**	**4.62**	**105**	P	**Pn**	**03 53 49.3**	**-0.3**
	baz=288,SNR=12						
MURC	**Murrieta**	**4.65**	**131**	P	**Pn**	**03 53 49.7**	**-0.3**
	baz=313						
M02C	**Callahan**	**4.79**	**347**	P	**Pn**	**03 53 55.2**	**+3.2**
	baz=166,SNR=9.7						
R11A	**Troy Canyon, C**	**4.89**	**69**	*e*Pn	**Pn**	**03 53 54.0**	**+0.4**
R11A	**Troy Canyon, C**	**4.89**	**69**	P	**Pn**	**03 53 55.0**	**+1.5**
	baz=253						
BMN	**Battle Mountai**	**4.94**	**40**	*e*Pn	**Pn**	**03 53 54.3**	**+0.2**
SHPR	**Sheep Range**	**5.02**	**91**	*e*Pn	**Pn**	**03 53 56.4**	**+1.1**
GMRC	**Granite Mounta**	**5.05**	**111**	P	**Pn**	**03 53 55.3**	**-0.3**
	baz=294,SNR=16						
M04C	**Macdoel**	**5.06**	**356**	P	Pn	03 53 59.8	+4.2
	baz=177						
YBH	**Yreka Blue Hor**	**5.10**	**349**	Pn	**Pn**	**03 53 58.9**	**+2.7**
	0.2nm,0.3s,baz=160,slow=8.1,SNR=8.5						
YBH				LR	LR	03 56 03.9	
	comp=Z,112nm,18.8s,baz=164,slow=40						
YBH	**Yreka Blue Hor**	**5.10**	**349**	*e*Pn	**Pn**	**03 53 55.8**	**-0.4**
PFO	**Pinyon Flats O**	**5.10**	**126**	Pn	**Pn**	**03 53 56.6**	**+0.2**
	1.8nm,0.3s,baz=302,slow=9.7,SNR=14						
PFO	**Pinyon Flats O**	**5.10**	**126**	*e*Pn	**Pn**	**03 53 56.8**	**+0.5**
PFO	**Pinyon Flats O**	**5.10**	**126**	P	**Pn**	**03 53 56.2**	**-0.1**
	baz=309						
KRMB	**Red Mountain**	**5.17**	**339**	*e*Pn	**Pn**	**03 53 56.5**	**-0.7**
BELC	**Belle Mtn. Jos**	**5.19**	**120**	P	**Pn**	**03 53 57.4**	**-0.1**
	baz=303,SNR=8.7						
LDFC	**Landfair**	**5.37**	**106**	*e*Pn	**Pn**	**03 53 59.3**	**-0.6**
L04D	**Klamath Falls**	**5.53**	**353**	P	**Pn**	**03 54 06.2**	**+4.1**
	baz=173						
MONP2	**Monument Peak**	**5.61**	**132**	P	**Pn**	**03 54 02.9**	**-0.4**
	baz=314						
L02E	**Cave Junction**	**5.68**	**343**	P	**Pn**	**03 54 06.0**	**+1.9**
	baz=162						
IRM	**Iron Mountain**	**5.71**	**115**	P	**Pn**	**03 54 04.0**	**-0.6**
	baz=299,SNR=7.3						
BC3	**Big Chuckawall**	**5.75**	**120**	P	**Pn**	**03 54 04.9**	**-0.4**
	baz=304,SNR=6.6						
HUMO	**Hull Mount

PDGK ⇓S **Sn** **04 07 40.2 -1.4**
0.4nm,0.3s
MNBS Baschi 0.92 1 P **Pn** **04 07 30.6 0.0**
0.9nm,0.1s
MNBS S **Sg** **04 07 42.3 +0.3**
2.1nm,0.1s
MNBS Baschi 0.92 1 *e*P **Pn** **04 07 30.8 +0.1**
0.7nm,0.1s
MNBS *e*S **Sn** **04 07 43.0 -0.7**
2.8nm,0.1s
TKM2 Tokmak 2 2.05 264 ⇓Pg **Pg** **04 07 52.4 +0.9**
1.6nm,0.9s
TKM2 ⇓Lg Lg 04 08 19.1
0.5nm,0.3s

MEX 28 04:10:22.9±0.3, 14°81N×92°97W, h57km±39km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.69**	**82**	*e*P	Pn	04 10 35.8	-1.1
THIG				*e*S	Sn	04 10 44.8	-2.3
TGIG		**1.96**	**356**	*e*P	Pn	04 10 52.6	-1.3

MEX 28 04:18:17.3±7.5, 24°38N×99°77W, h18km, MD3.5, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	**Linares**	**0.59**	**28**	*e*P	Pg	04 18 27.4	-1.7
	baz=243,slow=14						
LNIG				*e*S	Sg	04 18 33.8	-3.1

TAP 28 04:19:04.6, 24°02N×121°60E, h9km±1km, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**179**	*e*P	Pg	04 19 06.4	0.0
	baz=169						
HWA				*e*S	Sg	04 19 07.8	+0.1
	baz=169						
TWD	**Chiawan**	**0.06**	**353**	P	Pg	04 19 06.6	0.0
TWD				S	Sg	04 19 08.1	0.0
NACB	**Ninganchiao**	**0.15**	**357**	P	Pg	04 19 07.9	-0.1
	baz=356						
NACB				S	Sg	04 19 10.3	+0.1
	baz=356						
ETLH	**Xiulin Townshi**	**0.22**	**329**	*e*P	Pg	04 19 09.3	+0.2
	baz=328						
ETLH				*e*S	Sg	04 19 12.4	+0.3
	baz=328						
WHF	**Hehuan Shan**	**0.33**	**292**	P	Pg	04 19 11.3	-0.1
	baz=291						
WHF				S	Sg	04 19 15.9	0.0
	baz=291						
CHGB	**Renai**	**0.40**	**276**	*e*P	Pg	04 19 12.7	+0.2
	baz=275						
OWD	**Renai**	**0.40**	**260**	*e*P	Pg	04 19 11.8	-0.6
	baz=260						
OWD				*e*S	Sg	04 19 17.4	-0.3
	baz=260						
NNSB	**Datong**	**0.45**	**334**	*e*S	Sg	04 19 19.6	+0.1
	baz=333						

JMA 28 04:19:47.2±0.2, 24°90N×123°26E, h27km, M2.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.49**	**207**	P	Pb	04 19 57.1	-0.3
YOJ				*e*S	Sb	04 20 04.0	-0.2
JYNG	**Yonagunijimaku**	**0.53**	**213**	P	Pb	04 19 57.9	-0.1
JYNG				S	Sb	04 20 04.8	-0.5
IRIF	**Iriomote-Funau**	**0.71**	**143**	P	Pb	04 20 00.8	-0.1
IRIF				*e*S	Sb	04 20 10.1	-0.2
JKRS	**Kuro-shima**	**0.95**	**134**	P	Pn	04 20 04.5	-0.2
JKRS				*e*S	Sb	04 20 16.9	-0.3
JIJ	**Ishigaki jima**	**0.96**	**123**	P	Pn	04 20 04.4	-0.6
JIJ				*e*S	Sb	04 20 17.1	-0.6
HATJ	**Hateruma jima**	**0.97**	**149**	P	Pb	04 20 05.3	-0.2
HATJ				*e*S	Sb	04 20 17.8	-0.2
JISG	**Ishigakijimahi**	**1.00**	**108**	P	Pn	04 20 05.0	-0.5

NIED ***28*** *04:36:00, 36°80N×141°40E, h11km, Mw4.1 Best double couple: M₀1.44000×10¹⁵ NP1:φs151.00000°, δ52.00000°, λ-143.00000°. NP2:φs36.00000°, δ62.00000°, λ-44.00000°.*
IDC ***28*** *04:36:15.8±0.8, 36°87N×141°34E, h0km, mb4.0/17, mb1 4.2/20, mb1mx4.1/41, mbtmp4.0/20, ML3.9/3, MS3.1/9, Ms1 3.1/9, ms1mx3.0/44, Error ellipse: s-maj=20.4km s-min=16.6km az=161.0*
ISCJB ***28*** *04:36:17.9±0.8, 36°84N±0°03×141°37E±0°05, h24km±5km, mb4.2/36, MS3.1/6, Error ellipse: s-maj=6.7km s-min=5.2km az=28.1*
JMA ***28*** *04:36:18.2±0.1, 36°82N×141°32E, h43km±1km, M4.2*
JMA Felt II J1.
NEIC ***28*** *04:36:20.1±1.1, 36°99N×141°23E, h24km±5km, mb4.4/20, Error ellipse: s-maj=11.1km s-min=9.8km az=100.0*
NEIC Recorded [2 JMA] in Fukushima.

ISC 28 04:36:18.1±1.6, 36°84N±0°04×141°36E±0°06, h16km±8km, n84, σ1°10/81, mb4.2/36, MS3.2/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.52**	**300**	P	**Pg**	**04 36 28.9**	**+0.3**
ONAJ				S	**Sg**	**04 36 36.3**	**+0.7**
JFK	**Kawauchi**	**0.65**	**324**	P	**Pg**	**04 36 30.7**	**-0.3**
JFK				S	**Sg**	**04 36 39.2**	**-0.6**
JHO	**Hitachi**	**0.68**	**251**	P	**Pb**	**04 36 30.7**	**-0.8**
JHO				S	**Sg**	**04 36 39.9**	**-0.5**
JFFD	**Fukushimafurud**	**0.69**	**292**	P	**Pb**	**04 36 31.1**	**-0.6**
JFFD				S	**Sb**	**04 36 40.0**	**-1.0**
JHYU	**Hitachinakayam**	**0.80**	**232**	P	**Pb**	**04 36 32.3**	**-1.3**
JHYU				*e*S	**Sb**	**04 36 43.0**	**-1.1**
JFT	**Otama**	**1.06**	**310**	P	**Pb**	**04 36 37.7**	**-0.4**
JFT				S	**Sb**	**04 36 51.2**	**-0.6**
JMM	**Marumori**	**1.12**	**336**	P	**Pn**	**04 36 37.6**	**-1.5**
JMM				*e*S	**Sb**	**04 36 52.2**	**-1.2**
JFY	**Yanaizu**	**1.44**	**294**	P	**Pn**	**04 36 43.3**	**-0.2**
JFY				S	**Sn**	**04 37 01.9**	**-0.2**
MJAR	**Matsushiro Arr**	**2.55**	**264**	Pn	**Pn**	**04 36 58.9**	**0.0**
	5.4nm,0.3s,baz=89,slow=15,SNR=73						
MAJO	**Matsushiro**	**2.55**	**264**	*e*Pn	**Pn**	**04 36 59.0**	**+0.2**
MAT	**Matsushiro**	**2.55**	**264**	P	**Pn**	**04 36 59.3**	**+0.5**
MAT				S	**Sn**	**04 37 29.2**	**-0.3**
MJB9	**Matsu-Tunnel**	**2.55**	**264**	*e*Pn	**Pn**	**04 36 59.1**	**+0.3**
INU	**Inuyama**	**3.82**	**248**	*e*Pn	**Pn**	**04 37 16.8**	**+0.6**
JHJ	**Hachijo jima 2**	**3.93**	**200**	Pn	**Pn**	**04 37 18.6**	**+0.8**
	15nm,0.3s,baz=334,slow=22,SNR=9.2						
ERM	**Erimo**	**5.35**	**15**	*e*Pn	**Pn**	**04 37 36.0**	**-1.3**
ASAJ	**Asahikawa**	**7.33**	**7**	Pn	**Pn**	**04 38 03.8**	**-0.6**
	4.6nm,0.3s,baz=224,slow=13,SNR=12						
ASAJ				LR	LR	04 41 51.1	
	comp=Z,89nm,18.5s,baz=201,slow=46						
JNU	**Nakatsue**	**9.37**	**250**	LR	LR	04 42 28.3	
	comp=Z,148nm,19.2s,baz=358,slow=40						
USRK	**Ussuriysk Ar.**	**10.24**	**319**	Pn	**Pn**	**04 38 47.8**	**+3.5**
	0.4nm,0.3s,baz=138,slow=12,SNR=4.4						
KSRS	**Korea Array**	**10.74**	**277**	Pn	Pn	04 38 55.8	+4.6
	0.4nm,0.3s,baz=89,slow=14,SNR=4.3						
KSRS				LR	LR	04 42 54.6	
	comp=Z,56nm,19.3s,baz=85,slow=37						
KS15	**Wonju Array Si**	**10.78**	**277**	*e*Pn	**Pn**	**04 38 55.8**	**+4.1**
KLR	**Kul'dur**	**14.22**	**334**	LR	LR	04 45 03.2	
	comp=Z,120nm,18.0s,baz=141,slow=37						
PETK	**Petropavlovsk-**	**19.88**	**30**	LR	LR	04 47 56.9	
	comp=Z,27nm,20.6s,baz=224,slow=35						
GUMO	**Guam**	**23.36**	**171**	LR	LR	04 51 17.5	
	comp=Z,14nm,19.8s,baz=96,slow=38						
HHC	**Hu-ho-hao-te**	**23.49**	**289**	*e*P	**P**	**04 41 24.8**	**-2.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,21nm,5.8s						
HHC				LR	LR		
	comp=N,110nm,10.7s						
HHC				LR	LR		
	comp=E,140nm,9.9s						
HHC				LR	LR		
	comp=Z,10.0nm,11.6s						
MA2	**Magadan**	**23.55**	**12**	LR	LR	04 52 10.3	
	comp=Z,37nm,18.9s,baz=202,slow=41						
SEY	**Seymchan**	**26.99**	**11**	P	**P**	**04 41 58.9**	**0.0**
	comp=Z,1.5nm,0.4s,baz=198,slow=13,SNR=6.9						
SONA0	**Songino Array**	**27.86**	**304**	*e*P	**P**	**04 42 07.9**	**+0.9**
SONM	**Songino Array**	**27.86**	**304**	P	**P**	**04 42 07.9**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=109,slow=10.0,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**28.09**	**120**	T	T	05 11 23.4	
	baz=313,slow=75,SNR=992						
H11N1	**WAKE ISLAND Hy**	**28.09**	**120**	T	T	05 11 36.0	
	baz=313,slow=75,SNR=1153						
H11N3	**WAKE ISLAND Hy**	**28.10**	**120**	T	T	05 11 24.7	
	baz=313,slow=75,SNR=688						
H11S1	**WAKE ISLAND Hy**	**28.79**	**123**	T	T	05 12 18.5	
	baz=315,slow=76,SNR=346						
H11S3	**WAKE ISLAND Hy**	**28.79**	**123**	T	T	05 12 21.5	
	baz=315,slow=76,SNR=482						
H11S2	**WAKE ISLAND Hy**	**28.81**	**123**	T	T	05 12 27.7	
	baz=315,slow=76,SNR=377						
LZH	**Lanzhou**	**30.06**	**280**	*e*P	**P**	**04 42 24.0**	**-2.7**
LZH				pP	pP	04 42 33.0	+1.4
LZH				sP	sP	04 42 37.5	+3.8
LZH				SS	SS	04 48 51.8	-41
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
LZH				LR	LR		
	comp=N,130nm,14.9s						
LZH				LR	LR		
	comp=E,220nm,14.1s						
LZH				LR	LR		
	comp=Z,140nm,17.4s						
WMQ	**Urumqi**	**40.89**	**297**	*e*P	**P**	**04 44 00.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**41.41**	**255**	LR	LR	05 03 37.5	
	comp=Z,33nm,19.0s,baz=205,slow=40						
ZAA0	**Zalesovo Array**	**42.01**	**313**	*e*P	**P**	**04 44 07.9**	**-0.5**
	comp=Z,4.2nm,0.8s						
ZAA1	**Zalesovo Array**	**42.01**	**313**	*e*P	**P**	**04 44 08.2**	**-0.3**
ZALV	**Zalesovo Beam**	**42.01**	**313**	P	**P**	**04 44 08.2**	**-0.3**
	comp=Z,1.9nm,0.4s,baz=86,slow=6.1,SNR=8.7						
MK31	**Makanchi Array**	**44.19**	**302**	*e*P	**P**	**04 44 25.6**	**-0.5**
	comp=Z,2.8nm,1.0s						
MK32	**Makanchi Array**	**44.19**	**302**	*e*P	**P**	**04 44 26.0**	**-0.1**
MKAR	**Makanchi Array**	**44.19**	**302**	P	**P**	**04 44 26.0**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=89,slow=9.8,SNR=14						
KURK	**Kurchatov**	**46.02**	**308**	*e*P	**P**	**04 44 39.8**	**-0.7**
	comp=Z,7.6nm,0.8s						
KURBB	**Kurchatov Arra**	**46.09**	**308**	P	**P**	**04 44 41.1**	**0.0**
	comp=Z,2.9nm,0.5s,baz=85,slow=8.0,SNR=27						
ILAR	**Eielson Array**	**49.68**	**32**	P	**P**	**04 45 08.8**	**0.0**
	comp=Z,2.6nm,0.7s,baz=269,slow=6.5,SNR=38						
ILB	**Eielson Array**	**49.68**	**32**	*e*P	**P**	**04 45 08.7**	**-0.1**
	comp=Z,4.1nm,0.9s						
PRP	**Porcupine Dome**	**50.23**	**31**	*e*P	**P**	**04 45 13.7**	**+0.6**
	comp=Z,2.1nm,0.8s						
KSH	**Kashi**	**50.45**	**294**	*e*P	P	04 45 19.5	+4.4
BVAR	**Borovoye Array**	**50.67**	**312**	P	**P**	**04 45 15.9**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=79,slow=7.7,SNR=5.5						
BVAR				PcP	**PcP**	**04 46 33.3**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=90,slow=3.6,SNR=4.0						
EPYK	**Eagle Plains**	**53.72**	**30**	*e*P	**P**	**04 45 39.7**	**+0.8**
	comp=Z,8.2nm,0.8s						
INK	**Inuvik**	**54.58**	**27**	*e*P	**P**	**04 45 45.1**	**0.0**
	comp=Z,6.2nm,1.5s						
ABKAR	**Akbulak array**	**58.03**	**310**	*e*P	**P**	**04 46 09.2**	**-0.8**
	comp=Z,1.9nm,0.7s						
AS31	**Alice Springs**	**60.59**	**188**	*e*P	**P**	**04 46 27.6**	**-0.3**
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**60.59**	**188**	P	**P**	**04 46 27.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=15,slow=7.2,SNR=5.0						
YKA	**Yellowknife Ar**	**64.00**	**30**	P	**P**	**04 46 50.0**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=306,slow=7.2,SNR=4.4						
YKA				PcP	**PcP**	**04 47 25.5**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=301,slow=3.6,SNR=4.9						
YKB5	**Yellowknife Ar**	**64.00**	**30**	*e*P	**P**	**04 46 50.0**	**-0.3**
YKB5				*e*PcP	**PcP**	**04 47 25.6**	**-0.1**
ARA0	**ARCESS Array S**	**64.16**	**339**	*e*P	**P**	**04 46 52.8**	**+1.4**
ARCES	**ARCESS Array B**	**64.16**	**339**	P	**P**	**04 46 52.8**	**+1.4**
	comp=Z,1.6nm,0.9s,baz=39,slow=7.8,SNR=4.8						
FIA0	**FINESS Array S**	**68.97**	**332**	*e*P	**P**	**04 47 21.5**	**-0.6**
FINES	**FINESS Array B**	**68.97**	**332**	P	**P**	**04 47 21.5**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=64,slow=8.7,SNR=7.3						
PINE	**Pine Mountain**	**70.50**	**50**	*e*P	**P**	**04 47 33.5**	**+1.3**
	comp=Z,3.8nm,0.8s						
KBZ	**Khabaz**	**71.00**	**311**	P	**P**	**04 47 35.3**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=36,slow=3.1,SNR=3.6						
BEKR	**Beckworth**	**73.01**	**53**	*e*P	**P**	**04 47 48.2**	**+0.9**
	comp=Z,2.5nm,0.9s						
CMB	**Columbia Colle**	**74.02**	**54**	*e*P	**P**	**04 47 54.3**	**+1.2**
	comp=Z,18nm,2.0s						
LRM	**Limekiln Ridge**	**74.32**	**44**	*e*P	**P**	**04 47 52.8**	**-2.1**
NB2	**NORSAR Subarra**	**74.35**	**337**	P	**P**	**04 47 53.6**	**-1.0**
	comp=Z,2.9nm,1.0s,baz=41,slow=5.9						
NB200	**NORSAR Array S**	**74.35**	**337**	*e*P	**P**	**04 47 54.0**	**-0.6**
NOA	**NORSAR Array B**	**74.35**	**337**	P	**P**	**04 47 54.0**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=43,slow=5.4,SNR=5.3						
BOZ	**Bozeman (W)**	**74.91**	**44**	*e*P	**P**	**04 47 58.9**	**+0.6**
	comp=Z,5.0nm,1.6s						
KVN	**Kaiserville**	**74.91**	**52**	*e*P	**P**	**04 47 59.3**	**+0.8**
	comp=Z,3.4nm,0.9s						
NV01	**Mina Array Sit**	**75.14**	**53**	*e*P	**P**	**04 48 01.1**	**+1.3**
NVAR	**Mina Array Bea**	**75.14**	**53**	P	**P**	**04 48 01.1**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=292,slow=6.0,SNR=11						
R11A	**Troy Canyon, C**	**76.92**	**52**	*e*P	**P**	**04 48 10.7**	**+0.8**
	comp=Z,5.3nm,1.4s						
PD31	**Pinedale Array**	**77.83**	**45**	*e*P	**P**	**04 48 15.4**	**+0.4**
	comp=Z,8.1nm,1.9s						
PDAR	**Pinedale Array**	**77.83**	**45**	P	**P**	**04 48 15.4**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=222,slow=2.1,SNR=6.3						
MTPU	**Mount Pierson**	**79.23**	**50**	*e*P	**P**	**04 48 24.4**	**+1.4**
	comp=Z,12nm,1.9s						
MLR	**Muntele Rosu**	**79.51**	**320**	LR	LR	05 25 46.5	
	comp=Z,67nm,18.1s,baz=119,slow=37						
PV21	**Cone Mtn., Par**	**80.85**	**48**	*e*P	**P**	**04 48 32.7**	**+1.1**
	comp=Z,7.2nm,1.2s						
PV13	**Radium Mtn., P**	**81.21**	**49**	*e*P	**P**	**04 48 34.2**	**+0.8**
	comp=Z,4.1nm,0.8s						
CLL	**Collm**	**81.24**	**330**	*e*P	**P**	**04 48 31.0**	**-2.1**
GEC2	**GERESS Array S**	**82.85**	**328**	*e*P	**P**	**04 48 41.0**	**-0.8**
GERES	**GERESS Array B**	**82.85**	**328**	P	**P**	**04 48 41.0**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=28,slow=9.9,SNR=5.5						
TXAR	**Lajitas Array**	**90.27**	**52**	P	**P**	**04 49 18.9**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=324,slow=3.2,SNR=7.7						

IDC 28 04:56:41.6±6.0, 12°68S×170°01E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/23, mbtmp3.7/3, MS3.1/4, Ms1 3.1/4, ms1mx2.8/30, Error ellipse: s-maj=351.1km s-min=34.2km az=141.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.94**	**200**	LR	LR	05 01 48.3	
	comp=Z,74nm,21.3s,baz=240,slow=31						
ASAR	**Alice Springs**	**35.91**	**247**	P	P	05 03 43.8	-0.1
	0.5nm,0.6s,baz=72,slow=9.3,SNR=6.3						
MJAR	**Matsushiro Arr**	**57.41**	**330**	LR	LR	05 28 48.6	
	comp=Z,9.3nm,20.3s,baz=230,slow=34						
PETK	**Petropavlovsk-**	**66.37**	**352**	LR	LR	05 34 14.0	
	comp=Z,15nm,18.7s,baz=130,slow=34						
YBH	**Yreka Blue Hor**	**82.10**	**44**	LR	LR	05 40 28.9	
	comp=Z,22nm,18.1s,baz=250,slow=32						
ILAR	**Eielson Array**	**83.78**	**17**	P	P	05 09 13.1	+0.7
	0.9nm,0.8s,baz=236,slow=5.6,SNR=9.5						
YKA	**Yellowknife Ar**	**94.52**	**27**	P	P	05 10 02.6	-1.0
	0.2nm,0.6s,baz=255,slow=4.4,SNR=3.8						

ATH ***28*** *05:01:54.0, 39°42N×26°25E, h26km±1km, ML3.1/5, Error ellipse: s-maj=3.0km s-min=1.1km az=243.0*
ISK ***28*** *05:01:53.9, 39°43N×26°24E, h6km, ML3.4/31*
DDA ***28*** *05:01:54.0, 39°44N×26°27E, h24km±1km, ML3.5*
ISCJB ***28*** *05:01:54.4±0.3, 39°43N±0°02×26°23E±0°03, h8km±3km, Error ellipse: s-maj=3.6km s-min=2.8km az=169.6*
SOF ***28*** *05:01:55.2, 39°54N×26°14E, h5km*
THE ***28*** *05:01:55.0, 39°43N×26°22E, h7km±2km, ML3.1/7, Error ellipse: s-maj=2.1km s-min=0.7km az=155.0*

ISC 28 05:01:54.8±0.8, 39°43N±0°02×26°24E±0°02, h13km±6km, n79, σ0°65/96, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.08**	**289**	PG	**Pg**	**05 01 56.8**	**-0.9**
PRK	**Paraskevi**	**0.18**	**171**	P	**Pg**	**05 01 59.4**	**+0.4**
PRK				S	**Sg**	**05 02 02.4**	**+0.5**
PRK	**Paraskevi**	**0.18**	**171**	P	**Pg**	**05 01 59.5**	**+0.4**
PRK				S	**Sg**	**05 02 02.6**	**+0.6**
PRK				AML	AML	05 02 02.7	
	comp=E,12091μm,0.2s						
PRK				AML	AML	05 02 04.0	
	comp=N,19083μm,0.4s						
SIGR	**SIGRI**	**0.36**	**234**	PG	**Pg**	**05 02 02.0**	**-0.2**
SIGR				SG	**Sg**	**05 02 07.3**	**+0.1**
SIGR	**SIGRI**	**0.36**	**234**	P	**Pg**	**05 02 02.0**	**-0.2**
SIGR				S	**Sg**	**05 02 07.6**	**+0.4**
SIGR	**SIGRI**	**0.36**	**234**	P	**Pg**	**05 02 02.1**	**-0.2**
SIGR				S	**Sg**	**05 02 07.6**	**+0.4**
SIGR				AML	AML	05 02 07.9	
	comp=N,5808μm,0.5s						
SIGR				AML	AML	05 02 09.3	
	comp=E,7339μm,0.3s						
AYVA	**Ayvalik**	**0.37**	**109**	*i* P	**Pg**	**05 02 02.0**	**-0.4**
AYVA				*i* S	**Sg**	**05 02 06.9**	**-0.5**
AYVA				IAML_P			
	comp=Z,16μm,0.1s						
BAYC	**CANAKKALE_Bayr**	**0.40**	**38**	*i* P	**Pg**	**05 02 02.5**	**-0.3**
BAYC				IAML_P			
	comp=Z,18μm,0.1s						
EZN	**Ezine**	**0.40**	**10**	PG	**Pg**	**05 02 02.2**	**-0.7**
EZN	**Ezine**	**0.40**	**10**	P	**Pg**	**05 02 02.3**	**-0.7**
EZN				S	**Sg**	**05 02 08.2**	**-0.2**
DKL	**Dikili**	**0.63**	**124**	PG	**Pg**	**05 02 06.4**	**-0.8**
ZEDA	**zmir-Bergama**	**0.80**	**125**	*i* P	**Pg**	**05 02 10.1**	**-0.3**
GOKC	**Gokceada-Canak**	**0.81**	**343**	PG	**Pg**	**05 02 09.8**	**-0.7**
FOCM	**Foa**	**0.81**	**151**	PG	**Pg**	**05 02 10.4**	**-0.2**
KRBN	**Karaburun**	**0.87**	**163**	PG	**Pg**	**05 02 10.8**	**-0.9**
LIA	**Limnos Island**	**0.94**	**300**	P	**Pb**	**05 02 12.8**	**-0.1**
LIA				S	**Sb**	**05 02 25.3**	**+0.1**
LIA	**Limnos Island**	**0.94**	**300**	P	**Pb**	**05 02 12.8**	**-0.1**
LIA				S	**Sb**	**05 02 25.6**	**+0.4**
LIA				AML	AML	05 02 28.3	
	comp=E,1882μm,0.4s						
LIA				AML	AML	05 02 28.6	
	comp=N,1986μm,0.3s						
GELI	**Tayfur-Gelibol**	**0.99**	**11**	PG	**Pb**	**05 02 13.1**	**-0.6**
LPK	**Lapseki**	**1.03**	**23**	PG	**Pb**	**05 02 13.7**	**-0.7**
PSRA	**Psara**	**1.03**	**211**	P	**Pn**	**05 02 15.2**	**+0.3**
CHOS	**Chios island**	**1.05**	**188**	PG	**Pb**	**05 02 14.8**	**-0.1**
CHOS	**Chios island**	**1.05**	**188**	P	**Pb**	**05 02 14.0**	**-0.9**
CHOS				S	**Sg**	**05 02 29.1**	**+0.3**
CHOS	**Chios island**	**1.05**	**188**	P	**Pb**	**05 02 14.0**	**-0.9**
CHOS				S	**Sg**	**05 02 29.1**	**+0.3**
CHOS				AML	AML	05 02 32.6	
	comp=N,1962μm,0.3s						
CHOS				AML	AML	05 02 34.7	
	comp=E,3422μm,0.3s						
URLA	**Izmir**	**1.10**	**165**	PN	**Pb**	**05 02 15.1**	**-0.7**
URLA	**Izmir**	**1.10**	**165**	*i* P	**Pb**	**05 02 15.1**	**-0.7**
URLA				IAML_P			
	comp=Z,15μm,0.3s						
STEP	**BALIKESIR_Sava**	**1.15**	**92**	*i* P	**Pb**	**05 02 16.1**	**-0.5**
STEP				IAML_P			
	comp=Z,4μm,0.1s						
SMTH	**Samothraki Isl**	**1.17**	**333**	P	**Pn**	**05 02 16.6**	**-0.3**
SMTH				S	**Sn**	**05 02 33.6**	**+0.8**
SMTH	**Samothraki Isl**	**1.17**	**333**	P	**Pn**	**05 02 16.7**	**-0.3**
SMTH				S	**Sn**	**05 02 33.0**	**+0.2**
SMTH				AML	AML	05 02 34.0	
	comp=E,1475μm,0.4s						
SMTH				AML	AML	05 02 36.9	
	comp=N,1265μm,0.2s						
BLCB	**Balcova**	**1.22**	**149**	PN	**Pb**	**05 02 17.7**	**0.0**
GONE	**Gonen-Balikesi**	**1.28**	**61**	PN	**Pn**	**05 02 18.4**	**+0.1**
BALB	**Balikesir**	**1.29**	**80**	PN	**Pb**	**05 02 18.1**	**-0.4**
ENEZ	**Enez**	**1.31**	**357**	PN	**Pb**	**05 02 19.3**	**+0.1**
KESN	**Edirne-Kesan**	**1.44**	**14**	*i* P	**Pb**	**05 02 21.3**	**-0.4**
KESN				*i* S	**Sb**	**05 02 40.5**	**+0.5**
KESN				IAML_P			
	comp=Z,3μm,0.3s						
RKY	**Sarkoy-Tekirda**	**1.45**	**30**	PN	**Pn**	**05 02 20.5**	**-0.3**
SART	**Tekirdag**	**1.45**	**30**	*i* P	**Pb**	**05 02 21.7**	**0.0**
SART				*i* S	**Sg**	**05 02 40.9**	**-0.8**
SART				IAML_P			
	comp=Z,10μm,0.1s						
ALN	**Alexandroupoli**	**1.47**	**354**	PN	**Pn**	**05 02 21.3**	**+0.2**
ALN	**Alexandroupoli**	**1.47**	**354**	P	**Pn**	**05 02 21.2**	**+0.2**
ALN				S	**Sb**	**05 02 41.2**	**+0.5**
ALN	**Alexandroupoli**	**1.47**	**354**	P	**Pn**	**05 02 21.4**	**+0.4**
EDC	**Edincik**	**1.55**	**53**	PN	**Pb**	**05 02 23.1**	**-0.3**
THAS	**Thassos island**	**1.66**	**316**	P	**Pn**	**05 02 23.0**	**-0.5**
THAS				S	**Sn**	**05 02 44.2**	**-0.4**
THAS	**Thassos island**	**1.66**	**316**	P	**Pn**	**05 02 23.2**	**-0.3**
DURS	**Dursunbey**	**1.74**	**84**	*i* P	**Pb**	**05 02 25.7**	**-1.0**
DURS				IAML_P			
	comp=Z,1μm,0.3s						
SMG	**Samos**	**1.78**	**164**	P	**Pn**	**05 02 24.3**	**-0.9**
SMG	**Samos**	**1.78**	**164**	P	**Pn**	**05 02 24.4**	**-0.9**
RDO	**Rodhopi**	**1.80**	**343**	PN	**Pn**	**05 02 25.6**	**+0.1**
RDO	**Rodhopi**	**1.80**	**343**	P	**Pn**	**05 02 25.8**	**+0.4**
RDO	**Rodhopi**	**1.80**	**343**	P	**Pn**	**05 02 25.9**	**+0.4**
KCTX	**Karacabey (Bur**	**1.83**	**62**	PN	**Pn**	**05 02 26.7**	**+0.7**
TKR	**Tekirdag**	**1.85**	**32**	PN	**Pb**	**05 02 27.3**	**-1.2**
GCAM	**G?zelcaml?**	**1.90**	**155**	PN	**Pn**	**05 02 27.9**	**+1.1**
OUR	**Ouranopolis**	**1.96**	**298**	PN	**Pn**	**05 02 27.9**	**+0.3**
OUR	**Ouranopolis**	**1.96**	**298**	P	**Pn**	**05 02 28.0**	**+0.3**
**AY

	SNR=7.0						
EKS2	Erkin-Say	5.53	16	P		Pn	05 05 57.0 +1.0
	SNR=9.2						
AAK	Ala-Archa	5.69	21	P		Pn	05 05 59.3 +1.1
	SNR=5.3						
AAK	Ala-Archa	5.69	21	⇑P		Pn	05 05 58.6 +0.4
	5.0nm,0.3s						
AAK				⇓S		Sn	05 07 01.9 -0.3
	11nm,0.5s						
KK31	Karatay Array	5.82	351	⇓P		Pn	05 06 00.5 +0.6
	4.3nm,0.3s,baz=176,slow=13,SNR=62						
KK31				⇑S		Sn	05 07 04.7 -0.6
	15nm,0.3s,baz=175,slow=24,SNR=5.9						
TKM2	Tokmak 2	6.30	27	⇓P		Pn	05 06 06.9 +0.3
	2.1nm,0.6s						
TKM2				⇓S		Sn	05 07 16.5 -0.7
	3.8nm,0.6s						
AB31	Akbulak array	14.65	328	P		P	05 08 00.9 -0.8
	0.4nm,0.4s,baz=138,slow=14,SNR=20						
AB31				S		Sn	05 10 40.0 +0.5
	1.0nm,0.5s,baz=152,slow=21,SNR=8.7						

KRSC 28 05:10:20.0±0.5, 59°.86N×163°.69E, h53km±18km, ML4.4,
Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSR	Ossora	0.69	208	eP	Pn	05 10 33.9	+0.2
OSSR				eS	Sn	05 10 46.1	+2.5
TILK	Tilichiki	1.36	63	eP	Pn	05 10 42.8	+0.2
TILK				eS	Sn	05 11 01.8	+2.3
PALN	Palana	2.05	249	eP	Pn	05 10 52.4	+0.4
PALN				eS	Sn	05 11 20.3	+3.9
KMSK	Kamenskaya	2.89	24	P	Pn	05 11 05.4	+2.0
KMSK				S	Sn	05 11 42.5	+5.7
KBTR	Krutoberegovo	3.69	188	eP	Pn	05 11 19.1	+4.6
BKI	Bering	4.83	164	eP	Pn	05 11 34.1	+4.1

AZER ***28*** *05:13:07.0±0.3, 38°.52N×45°.34E, h2km±1km, ml4.5/29, Error ellipse: s-maj=3.4km s-min=1.2km az=237.0*
NEIC ***28*** *05:13:08.6±0.0, 38°.38N×45°.46E, h15km, mb4.2/30, ML4.2(THR), MN4.3(TEH), After TEH.*
NEIC Felt at Orumiyeh.
TEH ***28*** *05:13:08.9, 38°.40N×45°.41E, h5km, ML4.2*
ISK ***28*** *05:13:08.4, 38°.42N×45°.53E, h3km, ML4.3/12*
NSSP ***28*** *05:13:08.8, 38°.50N×45°.38E, h10km, Ms4.3*
IDC ***28*** *05:13:09.2±0.8, 38°.46N×45°.45E, h0km, mb3.9/11, mb1 4.0/14, mb1mx3.8/42, mbtmp3.9/14, ML3.4/3, MS3.4/15, Ms1 3.4/15, ms1mx3.1/56, Error ellipse: s-maj=13.5km s-min=10.7km az=41.0*
MOS ***28*** *05:13:10.5±1.8, 38°.28N×45°.49E, h17km, mb4.3/12, Error ellipse: s-maj=8.1km s-min=4.5km az=107.2*
NNC ***28*** *05:13:15.8±12.0, 38°.51N×46°.10E, h0km, mb4.2, Error ellipse: s-maj=116.8km s-min=71.5km az=58.0*
DDA ***28*** *05:13:15.3, 38°.39N×44°.87E, h28km±4km, ML3.9*
ISC 28 05:13:10.2±1.0, 38°.40N±0°.02×45°.44E±0°.02, h4km±7km,
n252, σ1°.60/280, mb4.2/36, MS3.3/10, 9C-6D,
Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	Shabestar	0.18	130	ePg	Pg	05 13 12.9	-0.9
ISHB				eSg	Sg	05 13 16.2	+0.1
IMRD	Marand	0.38	33	ePg	Pg	05 13 16.3	-1.1
IMRD				eSg	Sg	05 13 22.1	-0.3
ITBZ	Tabriz	0.58	106	ePg	Pg	05 13 20.0	-1.3
ITBZ				eSg	Sg	05 13 30.1	+1.3
ITBZ				IAMB	IAmb	05 13 31.8	
	comp=Z,4μm,0.3s						
ORD	Ordubad	0.68	39	ePg	Pg	05 13 22.4	-0.9
ORD	Ordubad	0.68	39	P	Pg	05 13 22.4	-0.9
	SNR=3150						
ORD				S	Sg	05 13 32.3	+0.2
NAX	Nakhchivan	0.77	3	ePg	Pg	05 13 23.8	-1.2
NAX	Nakhchivan	0.77	3	P	Pg	05 13 23.9	-1.2
	SNR=486						
NAX				S	Sg	05 13 35.2	+0.1
IAZR	Azarshahr	0.84	149	ePg	Pg	05 13 24.8	-1.4
IAZR				IAMB	IAmb	05 13 25.6	
	comp=Z,62μm,0.5s						
SBZ	Shahbuz	1.00	5	ePg	Pg	05 13 27.7	-1.6
SBZ	Shahbuz	1.00	5	P	Pg	05 13 27.8	-1.6
	SNR=292						
SBZ				S	Sg	05 13 41.7	-0.6
MAKU	Maku	1.12	328	ePg	Pg	05 13 28.9	-2.8
IBST	Bostanabad	1.34	121	ePg	Pg	05 13 32.5	-3.4
IBST				IAMB	IAmb	05 13 55.0	
	comp=Z,55μm,0.2s						
HYR	Heyderabad	1.40	341	P	Pn	05 13 34.1	-2.4
	SNR=211						
HYR				S	Sg	05 13 53.8	-1.2
VMUR	Van-Muradiye	1.58	293	iP	Pn	05 13 37.5	-1.6
VMUR	Van-Muradiye	1.58	293	ePn	Pn	05 13 37.2	-1.9
TVAN	Van	1.60	275	iP	Pb	05 13 39.7	-0.8
TVAN				IAML_P			
	comp=Z,15μm,0.3s						
TVAN	Van	1.60	275	ePn	Pn	05 13 39.3	-0.2
HAKT	HAKKARI	1.61	239	iP	Pn	05 13 38.1	-1.5
HAKT				IAML_P			
	comp=Z,16μm,0.5s						
HAKT	HAKKARI	1.61	239	ePn	Pn	05 13 38.0	-1.5
VANB	Van	1.62	278	PN	Pn	05 13 39.1	-0.6
VANB				SN	Sg	05 14 02.0	-0.3
VANB	Van	1.62	278	ePn	Pn	05 13 39.2	-0.5
MAHB	Mahabad	1.64	173	ePn	Pn	05 13 38.2	-1.8
DYDN	Diyadin	1.78	310	iP	Pn	05 13 42.2	+0.2
DYDN				iS	Sg	05 14 06.7	-0.7
DYDN				IAML_P			
	comp=Z,67μm,0.6s						
DYDN	Diyadin	1.78	310	ePn	Pn	05 13 42.0	0.0
GNI	Garni	1.83	343	PN	Pn	05 13 41.8	-0.8
GNI	Garni	1.83	343	Pg	Pn	05 13 42.0	-0.6
	comp=Z,477nm,0.3s,baz=274,slow=1.7,SNR=305						
GNI				LR	LR	05 14 06.0	
	comp=Z,328nm,19.3s,baz=161,slow=32						
GNI				Lg	Lg	05 14 07.2	
	comp=Z,800nm,0.3s,baz=197,slow=19,SNR=14						
GNI	Garni	1.83	343	ePn	Pn	05 13 42.0	-0.6
GNI				eSn	Sg	05 14 11.2	+2.2
GNI	Garni	1.83	343	PN	Pn	05 13 42.0	-0.6
GNI	Garni	1.83	343	⇓iP	Pn	05 13 41.9	-0.6
GNI				⇓iS	Sn	05 14 04.8	-1.5
GNI	Garni	1.83	343	ePn	Pn	05 13 42.0	-0.6
TASB	TASBURUN-IGDIR	1.84	330	PN	Pn	05 13 41.6	-1.0
TASB				SN	Sn	05 14 06.5	+0.1
TASB	TASBURUN-IGDIR	1.84	330	ePn	Pg	05 13 45.8	+0.4
ISRB	Sarab	1.85	107	ePn	Pn	05 13 43.3	+0.5
ISRB				IAMB	IAmb	05 14 20.1	
	comp=Z,54μm,0.6s						
CUKT	Cukurca	1.85	232	PN	Pn	05 13 42.8	0.0
CUKT	Cukurca	1.85	232	iP	Pb	05 13 43.5	-1.2
CUKT				IAML_P			
	comp=Z,25μm,0.4s						
CUKT	Cukurca	1.85	232	ePn	Pb	05 13 43.2	-1.5
GEVA	Gevas	1.88	268	iP	Pb	05 13 44.0	-1.1
GEVA				IAML_P			
	comp=Z,17μm,0.5s						
GEVA	Gevas	1.88	268	ePn	Pn	05 13 42.9	-0.3
AKDM	Akdamar-Van	1.94	269	PN	Pn	05 13 44.1	+0.1
ARUZ	Aruch	2.15	331	⇑iP	Pn	05 13 46.5	-0.5
ARUZ				⇑iS	Sb	05 14 17.4	+0.5
TUTA	Tutak	2.28	297	iP	Pb	05 13 50.3	-1.7
TUTA				IAML_P			
	comp=Z,20μm,0.4s						
TUTA	Tutak	2.28	297	ePn	Pb	05 13 50.1	-2.0
LRK	Lerik	2.29	83	ePn	Pn	05 13 49.5	+0.7
LRK	Lerik	2.29	83	P	Pn	05 13 49.5	+0.7
	SNR=268						
LRK				S	Sg	05 14 23.0	-0.6
BRDA	Brd	2.30	35	ePn	Pn	05 13 48.4	-0.4
BRDA	Brd	2.30	35	P	Pn	05 13 48.4	-0.4
	SNR=26						
BRDA				S	Sb	05 14 20.5	-0.5
GDB	GEDABAY	2.33	6	ePn	Pn	05 13 49.1	-0.4
GDB	GEDABAY	2.33	6	P	Pn	05 13 49.1	-0.4
	SNR=436						
GDB				S	Sb	05 14 21.4	-0.7
GANJ	Ganja	2.34	17	ePn	Pn	05 13 49.3	-0.2
GANJ	Ganja	2.34	17	P	Pn	05 13 49.4	-0.2
	SNR=137						
GANJ				S	Sn	05 14 20.8	+2.0
MLAZ	Malazgirt-MUS	2.38	289	PN	Pn	05 13 50.4	+0.3
MLAZ	Malazgirt-MUS	2.38	289	ePn	Pb	05 13 53.8	+0.1
GLBA	Clilabad	2.45	69	ePn	Pn	05 13 52.0	+1.0
GLBA	Clilabad	2.45	69	P	Pn	05 13 51.6	+0.6
	SNR=64						
GLBA				S	Sb	05 14 26.1	+0.6
ZRD	Zardab	2.56	42	ePn	Pn	05 13 52.7	+0.3
ZRD	Zardab	2.56	42	P	Pn	05 13 52.7	+0.3
	SNR=19						
ZRD				S	Sb	05 14 27.3	-1.1
DIGO	Kars	2.57	322	iP	Pn	05 13 53.1	+0.3
DIGO	Kars	2.57	322	ePn	Pn	05 13 53.0	+0.1
BLIS	Bitlis-Merkez	2.61	271	iP	Pb	05 13 55.7	-2.0
BLIS				IAML_P			
	comp=Z,3μm,0.3s						
ASTR	Astara	2.63	85	ePn	Pn	05 13 54.9	+1.5
ASTR	Astara	2.63	85	P	Pn	05 13 55.0	+1.5
	SNR=54						
ASTR				S	Sb	05 14 32.0	+1.4
LKRN	Lenkeran, Azer	2.63	82	ePn	Pn	05 13 54.9	+1.5
LKRN	Lenkeran, Azer	2.63	82	P	Pn	05 13 55.0	+1.5
	SNR=12						
LKRN				S	Sb	05 14 31.4	+0.8
QZX	Qazax, Azerbai	2.66	359	ePn	Pn	05 13 53.0	-0.8
QZX	Qazax, Azerbai	2.66	359	P	Pn	05 13 53.0	-0.8
	SNR=169						
QZX				S	Sn	05 14 27.4	+1.0
EAK	Akyaka	2.69	329	iP	Pb	05 13 56.5	-2.5
EAK				IAML_P			
	comp=Z,10μm,0.7s						
EAK	Akyaka	2.69	329	ePn	Pn	05 13 55.7	+1.3
MNGR	Mingechevir, A	2.69	28	ePn	Pn	05 13 53.7	-0.5
MNGR	Mingechevir, A	2.69	28	P	Pn	05 13 53.8	-0.5
	SNR=5.4						
MNGR				S	Sn	05 14 28.6	+1.4
STEZ	Stepenevan	2.72	343	eP	Pn	05 13 53.0	-1.8
STEZ				eS	Sn	05 14 28.0	-0.2
SAAT	Saatly	2.74	57	ePn	Pn	05 13 55.2	+0.3
SAAT	Saatly	2.74	57	P	Pn	05 13 55.3	+0.3
	SNR=7.3						
SAAT				S	Sb	05 14 33.0	-0.6
SRTM	Siirt_Merkez	2.80	263	iP	Pn	05 13 56.8	+1.0
SRTM				IAML_P			
	comp=Z,4μm,0.5s						
SRTM	Siirt_Merkez	2.80	263	ePn	Pn	05 13 56.4	+0.5
KARS	Kars	2.88	321	ePn	Pb	05 14 02.0	-0.2
KARS	Kars	2.88	321	ePN	Pb	05 14 02.0	-0.2
KZRT	Kazreti	3.09	345	iP	Pb	05 14 05.1	-0.6
ZNJK	Zanjan	3.10	123	ePn	Pn	05 13 59.9	-0.3
SEKA	Sheki	3.12	25	ePn	Pn	05 14 00.8	+0.7
SEKA	Sheki	3.12	25	P	Pn	05 14 00.8	+0.7
	SNR=16						
SEKA				S	Sn	05 14 39.5	+1.6
QBL	Gabala	3.14	35	ePn	Pn	05 14 00.8	+0.3
QBL	Gabala	3.14	35	P	Pn	05 14 00.8	+0.3
	SNR=7.4						
QBL				S	Sn	05 14 40.2	+1.7
ALIB	Äli-Bayra	3.18	60	ePn	Pn	05 14 01.7	+0.8
ALIB	Äli-Bayra	3.18	60	P	Pn	05 14 01.8	+0.8
	SNR=14						
ALIB				S	Sb	05 14 43.4	-2.9
IML	Ismayilli	3.19	41	ePn	Pn	05 14 01.4	+0.2
IML	Ismayilli	3.19	41	P	Pn	05 14 01.5	+0.2
	SNR=5.3						
IML				S	Sn	05 14 41.8	+2.1
HOMI	Horasan	3.20	302	iP	Pb	05 14 08.4	+0.6
HOMI				IAML_P			
	comp=Z,2μm,0.4s						
KOPR	Koprukoy-ERZUR	3.21	301	PN	Pn	05 14 02.3	+0.8
SENK	Senkaya-Erzuru	3.22	313	PN	Pn	05 14 02.3	+0.5
SVAN	Silvan-Diyarba	3.35	267	PN	Pn	05 14 04.2	+0.9
SVAN	Silvan-Diyarba	3.35	267	ePn	Pn	05 14 05.8	+2.5
AKH	Akhalkalaki	3.36	334	PN	Pn	05 14 03.7	+0.1
AKH	Akhalkalaki	3.36	334	ePg	Pb	05 14 08.4	-2.0
AKH				eSn	Sg	05 14 55.7	-2.4
AKH	Akhalkalaki	3.36	334	ePN	Pb	05 14 08.4	-2.0
AKH				e		05 14 55.7	
ZKTA	Zakatala	3.36	15	P	Pn	05 14 03.4	-0.1
	SNR=47						
ZKTA				S	Sn	05 14 45.5	+1.6
TBLG	Delisi	3.37	351	PN	Pn	05 14 03.9	+0.3
TBLG	Delisi	3.37	351	ePg	Pb	05 14 08.5	-2.0
TBLG	Delisi	3.37	351	ePN	Pb	05 14 08.5	-2.0
TBLG	Delisi	3.37	351	iP	Pb	05 14 10.6	+0.1
PQL	Pirkuli	3.41	45	ePn	Pn	05 14 04.6	+0.4
PQL	Pirkuli	3.41	45	P	Pn	05 14 04.7	+0.4
	SNR=9.7						
PQL				S	Sn	05 14 48.3	+3.0
GBS	Qobustan	3.45	51	ePn	Pn	05 14 05.7	+1.0
GBS	Qobustan	3.45	51	P	Pn	05 14 05.7	+1.0
	SNR=15						
GBS				S	Sn	05 14 49.6	+3.5
XNQ	Khinaliq	3.46	36	P	Pn	05 14 05.5	+0.4
	SNR=32						
XNQ				S	Sn	05 14 49.5	+2.8
AKT	Akhty	3.54	29	ePN	Pb	05 14 11.0	-2.5
AKT				e		05 14 20.3	
AKT				e		05 14 24.6	
AKT				eS	Sb	05 14 58.6	+1.7
AKT				e		05 15 11.3	
AKT				pmax	pmax		
	comp=Z,91nm,0.9s						
AKT				smax	smax		
	comp=E,316nm,0.4s						
AKT				smax	smax		
	comp=N,164nm,0.4s						
AKT				smax	smax		
	comp=E,368nm,0.5s						
SNGE	Sanandaj	3.64	155	ePn	Pn	05 14 06.8	-0.7
ATGJ	Altiaghaj	3.65	47	ePn	Pn	05 14 08.0	+0.5
ATGJ	Altiaghaj	3.65	47	P	Pn	05 14 08.1	+0.5
	SNR=21						
ATGJ				S	Sn	05 14 54.4	+3.2
QUB	Quba	3.73	36	ePn	Pn	05 14 09.6	+1.0
IDHR	Dehrash	3.77	168	ePn	Pn	05 14 09.4	+0.1
QUBA	Quba, Azerbaij	3.77	38	P	Pn	05 14 09.6	+0.5
	SNR=5.4						
QUBA				S	Sn	05 14 57.0	+3.0
SIZA	Siyzn	3.77	44	ePn	Pn	05 14 09.0	-0.2
SIZA	Siyzn	3.77	44	P	Pn	05 14 09.0	-0.2
	SNR=12						
SIZA				S	Sn	05 14 56.3	+2.1
QSAR	Qusar	3.79	34	ePn	Pn	05 14 09.7	+0.3
QSAR	Qusar	3.79	34	P	Pn	05 14 09.8	+0.3
	SNR=8.2						
QSAR				S	Sn	05 14 54.4	-0.1
GOBA	Gobu	3.88	58	ePn	Pn	05 14 10.8	+0.3
GOBA	Gobu	3.88	58	P	Pn	05 14 10.9	+0.3
MAZI	Mazidag	4.06	258	PN	Pn	05 14 14.5	+1.3
NDR	Nardaran	4.14	57	ePn	Pn	05 14 14.3	+0.2
NDR	Nardaran	4.14	57	P	Pn	05 14 14.4	+0.2
IGHG	Ghaleghazi	4.16	167	ePn	Pn	05 14 18.0	+3.3
IGHG				IAMB	IAmb	05 14 29.3	
	comp=Z,5μm,0.7s						
QABG	Abgarm-Qazvin	4.26	128	ePn	Pn	05 14 17.4	+1.3
IGZV	Ghazvin	4.30	116	ePn	Pn	05 14 16.4	-0.2
IKOM	Komasi	4.54	158	ePn	Pn	05 14 22.8	+3.0
ZEI	Tsey	4.54	346	cePN	Pn	05 14 24.3	+4.5
HAGD	Aghdareh	4.65	139	ePn	Pn	05 14 22.4	+1.0
IRAZ	Razeghan	4.68	128	ePn	Pn	05 14 23.4	+1.6
IRAZ				IAMB	IAmb	05 14 43.4	
	comp=Z,2μm,0.6s						
GROC	Groznyy	4.81	3	PN	Pn	05 14 23.9	+0.6
GROC				e		05 14 38.1	
GROC				e		05 15 20.0	
GROC				e		05 15 37.6	
GROC				e		05 15 51.0	
GROC				pmax	pmax		
	comp=Z,48nm,0.8s						
GROC				smax	smax		
	comp=N,151nm,0.9s						
GROC				smax	smax		
	comp=E,166nm,1.4s						
GROC				smax	smax		
	comp=E,294nm,0.9s						
MAK	Makhachkala	4.82	18	ePN	Pn	05 14 24.6	+1.1
MAK				eS	Sn	05 15 21.4	+1.7
MAK				pmax	pmax		
	comp=Z,31nm,0.4s						
MAK				MLR	MLR		
	comp=Z,430nm,16.0s						
SVRC	Sivrice-ELAZID	4.82	272	PN	Pn	05 14 24.1	+0.4
LSNR	Lesken	5.03	346	cePN	Pn	05 14 32.3	+5.9
IDOB	Doab	5.11	153	ePn	Pn	05 14 28.6	+0.9
CHTH	Charan	5.18	117	ePn	Pn	05 14 28.6	-0.1
IKFM	Kafar-mosalman	5.24	157	ePn	Pn	05 14 31.9	+2.6
NEY	Neytrino	5.26	338	⇓iPN	Pn	05 14 34.3	+4.5
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	Khabaz	5.66	341	Pn	Pn	05 14 38.3	+3.3
	comp=Z,0.4nm,0.3s,baz=150,slow=10,SNR=13						
KBZ				LR	LR	05 17 02.2	
	comp=Z,714nm,18.4s,baz=144,slow=42						
DOMR	Dombai	5.68	331	iP	Pn	05 14 38.7	+3.2
KVAR	Kislovodsk Arr	5.92	340	LR	LR	05 17 07.6	
	comp=Z,384nm,18.2s,baz=78,slow=41						
KIV	Kislovodsk	5.93	340	ePn	Pn	05 14 42.1	+3.3
KIV	Kislovodsk	5.93	340	eP	Pn	05 14 42.5	+3.7
KIV				pmax	pmax		
	comp=Z,48nm,1.1s						
KIV				MLR	MLR		
	comp=Z,303nm,8.0s						
IDMV	Damavand	5.98	116	IAMB	IAmb	05 16 32.1	
	comp=Z,1μm,1.2s						
SOC	Sochi	6.75	322	eP	Pn	05 14 51.3	+1.3
SOC				e		05 16 10.2	
SOC				pmax	pmax		
	comp=Z,32nm,0.7s						
SOC				MLR	MLR		
	comp=Z,196nm,9.0s						
KRSH	Karshahi	6.99	127	ePn	Pn	05 14 54.8	+1.3
ANN	Anapa	8.77	319	eP	Pn	05 15 21.4	+3.8
ANN				pmax	pmax		
	comp=Z,27nm,0.9s						
ANN				MLR	MLR		
	comp=Z,166nm,11.0s						
BR101	Keskin Array S	9.28	282	ePn	Pn	05 15 28.5	+3.7
BR131	Keskin Array S	9.28	282	ePn	Pn	05 15 29.7	+4.9
BRTR	Keskin Array B	9.28	282	Pn	Pn	05 15 28.5	+3.7
	comp=Z,0.1nm,0.3s,baz=104,slow=14,SNR=24						
BRTR	Keskin Array B	9.28	282	iP	Pn	05 15 30.2	+5.4
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GEYT	Alibeck	9.99	89	Pn	Pn	05 15 35.2	+0.6
	comp=Z,2.1nm,0.3s,baz=269,slow=18,SNR=5.1						
GYA0B	ALIBECK ARRAY	9.99	89	ePn	Pn	05 15 34.2	-0.4
GYA0B	ALIBECK ARRAY	9.99	89	⇓P	Pn	05 15 34.9	+0.4
GYA0B				⇑S	Sn	05 17 23.4	-3.8
ISFR	Sfrayin	10.04	94	ePn	Pn	05 15 36.9	+1.5
EIL	Elat	12.30	228	LR	LR	05 21 16.7	
	comp=Z,106nm,18.8s,baz=64,slow=40						
VRH	Novokhopyorsk	13.07	350	eP	Pn	05 16 16.4	-0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	13.56	343	eP	Pn	05 16 22.9	-0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RAYN	Ar Rayn	14.83	180	ePn	Pn	05 16 34.8	-5.9
RAYN	Ar Rayn	14.83	180	eP	Pn	05 16 34.8	-6.0
LPSR	Galich'ya Gora	14.91	344	eP	Pn	05 16 42.0	+0.4
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
AKTO	Aktyubinsk	14.99	33	Pn	Pn	05 16 44.6	+1.9
	comp=Z,0.6nm,0.3s,baz=227,slow=7.6,SNR=11						
AKTO				LR	LR	05 23 45.8	
	comp=Z,67nm,18.4s,baz=220,slow=43						
AKTO	Aktyubinsk	14.99	33	⇑P	Pn	05 16 42.7	0.0
	comp=Z,5.5nm,0.7s						
AKTO				⇑S	Sn	05 19 28.1	-1.1
	comp=Z,7.3nm,1.3s						
AB31	Akbulak array	15.05	39	⇓P	Pn	05 16 42.3	-1.2
	comp=Z,2.0nm,0.6s,baz=222,slow=13,SNR=18						
AB31				⇑S	Sn	05 19 28.4	-2.1
	comp=Z,1.2nm,0.6s,baz=220,slow=24						
ABKAR	Akbulak array	15.05	39	ePn	Pn	05 16 43.0	-0.5
	comp=Z,2.5nm,0.6s						
UOSS	Minazif	16.23	143	ePn	P	05 17 01.4	-0.8
	comp=Z,17nm,1.0s						
IDI	Anoyia	16.74	266	Pn	P	05 17 07.8	-0.1
	comp=Z,0.7nm,0.3s,baz=39,slow=12,SNR=8.8						
IDI				LR	LR	05 23 44.9	
	comp=Z,43nm,21.2s,baz=100,slow=38						
AKASG	Malin Array Be	16.83	322	Pn	P	05 17 07.9	-0.9
	comp=Z,1.3nm,0.3s,baz=133,slow=11,SNR=5.7						
AKBB	Malin Array Si	16.83	322	ePn	Pn	05 17 06.2	-0.4
	comp=Z,20nm,1.4s						
AKBB	Malin Array Si	16.83	322	eP	Pn	05 17 06.2	-0.4
AKBB				pmax	pmax		
	comp=Z,20nm,1.4s						
VTS	Vitosha	17.39	291	ePn	P	05 17 16.2	+1.0
	comp=Z,6.6nm,1.4s						
VTS	Vitosha	17.39	291	eP	P	05 17 16.2	+1.0
VTS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BUR08	Bucovina Ar. S	17.41	309	ePn	P	05 17 15.8	+0.5
	comp=Z,4.4nm,1.0s						
OBN	Obninsk	17.77	343	ePn	P	05 17 20.6	+1.6
	comp=Z,50nm,0.4s						
WSAR	Wadi Sarin	18.85	139	LR	LR	05 26 08.7	
	comp=Z,88nm,19.4s,baz=328,slow=41						
GAR	Garm	19.41	80	eP	Pn	05 17 38.3	-0.2
	comp=Z,16nm,0.8s						
GAR	Garm	19.41	80	eP	Pn	05 17 38.3	-0.2
GAR				pmax	pmax		
	comp=Z,16nm,0.8s						
KK31	Karatay Array	19.54	68	eP	P	05 17 39.4	+0.7
	comp=Z,6.8nm,0.8s						
KK31	Karatay Array	19.54	68	⇑P	P	05 17 38.4	-0.3
	comp=Z,5.4nm,0.8s,baz=301,slow=7.8,SNR=27						
KK31	Karatay Array	19.54	68	eP	P	05 17 39.4	+0.7
KK31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KKAR	Karatay Array	19.54	68	eP	Pn	05 17 39.9	0.0
	comp=Z,6.8nm,0.8s						
KKAR	Karatay Array	19.54	68	eP	Pn	05 17 39.9	0.0
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BTK	Batken	19.71	77	eP	Pn	05 17 41.9	-0.2
	comp=Z,14nm,1.4s						
BTK	Batken	19.71	77	eP	Pn	05 17 41.9	-0.2
BTK				pmax	pmax		
	comp=Z,14nm,1.4s						
KWP	Kalwaria Pacla	19.75	312	eP	Pn	05 17 43.5	+1.2
	comp=Z,170nm,0.9s						
KWP	Kalwaria Pacla	19.75	312	eP	Pn	05 17 43.6	+1.2
KWP				pmax	pmax		
	comp=Z,171nm,0.9s						
KIRV	Kirov	20.36	6	LR	LR	05 27 12.6	
	comp=Z,172nm,18

CEL	Celeste	23.14	279	eP	P	05 18 17.7	+0.2
	comp=Z,13nm,0.7s						
VRAC	Vranov	23.35	307	LR	LR	05 28 36.0	
	comp=Z,41nm,18.4s,baz=134,slow=40						
BOOM	Boomskoye usch	23.50	70	eP	P	05 18 22.3	+1.1
	comp=Z,8.2nm,1.0s						
BOOM	Boomskoye usch	23.50	70	eP	P	05 18 22.3	+1.1
BOOM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSH	Kashi	23.72	78	P	P	05 18 21.8	-1.5
KSH				pP	sP	05 18 25.5	-0.3
KSH				PP	PnPn	05 18 53.0	+2.6
KSH				S	S	05 22 31.0	-8.1
KSH				SS	SnSn	05 23 18.3	+2.1
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,380nm,5.2s						
KSH				LR	LR		
	comp=N,1μm,12.4s						
KSH				LR	LR		
	comp=E,950nm,13.9s						
KSH				LR	LR		
	comp=Z,140nm,13.2s						
DPC	Dobruska-Polom	23.84	310	eP	P	05 18 25.8	+1.5
DPC				e		05 18 34.2	
DPC	Dobruska-Polom	23.84	310	eP	P	05 18 25.8	+1.5
DPC				ex	x	05 18 34.2	
KDJ	Kajisay	24.43	71	eP	P	05 18 31.5	+1.4
	comp=Z,4.3nm,0.8s						
KDJ	Kajisay	24.43	71	eP	P	05 18 31.5	+1.4
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBA	Koelnbreinsper	24.98	301	epP	P	05 18 35.8	+0.8
	comp=Z,2.6nm,0.6s						
GEC2	GERESS Array S	25.07	305	eP	P	05 18 35.5	-0.1
	comp=Z,5.0nm,1.0s						
GEC2	GERESS Array S	25.07	305	eP	P	05 18 35.5	-0.1
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GERES	GERESS Array B	25.07	305	P	P	05 18 34.2	-1.5
	comp=Z,2.0nm,0.6s,baz=99,slow=8.2,SNR=15						
KHC	Kasperske Hory	25.21	306	eP	P	05 18 37.1	+0.3
	comp=Z,1.6nm,0.8s						
KHC	Kasperske Hory	25.21	306	eP	P	05 18 37.2	+0.3
KHC	Kasperske Hory	25.21	306	eP	P	05 18 37.2	+0.3
KHC				ex	x	05 19 06.0	
FIA0	FINESS Array S	26.02	339	eP	P	05 18 41.8	-2.1
FIA0	FINESS Array S	26.02	339	eP	P	05 18 41.8	-2.1
FINES	FINESS Array B	26.02	339	P	P	05 18 41.8	-2.1
	comp=Z,1.1nm,0.4s,baz=142,slow=12,SNR=6.8						
FINES				LR	LR	05 29 25.8	
	comp=Z,92nm,19.7s,baz=108,slow=38						
CLL	Collm	26.13	310	epP	pP	05 18 47.0	0.0
WTTA	Wattenberg	26.16	301	P	P	05 18 51.0	+5.4
	comp=Z,0.9nm,0.2s						
KURBB	Kurchatov Arra	26.34	52	P	P	05 18 47.2	+0.2
	comp=Z,1.7nm,0.6s,baz=262,slow=9.1,SNR=4.8						
KURK	Kurchatov	26.42	51	eP	P	05 18 48.1	+0.4
	comp=Z,14nm,0.2s						
KURK	Kurchatov	26.42	51	P	P	05 18 47.2	-0.6
MOTA	Moosalm	26.53	301	epP	P	05 18 50.1	+1.1
	comp=Z,4.1nm,0.6s						
ATD	Arta Tunnel	26.86	186	LR	LR	05 30 35.5	
	comp=Z,82nm,18.7s,baz=78,slow=39						
MK31	Makanchi Array	28.18	61	eP	P	05 19 04.3	+0.6
	comp=Z,2.2nm,0.8s						
MK31	Makanchi Array	28.18	61	eP	P	05 19 04.3	+0.6
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	28.18	61	P	P	05 19 03.7	0.0
	comp=Z,2.2nm,0.6s,baz=263,slow=6.7,SNR=16						
MKAR				LR	LR	05 32 48.4	
	comp=Z,59nm,19.2s,baz=253,slow=42						
MKAR	Makanchi Array	28.18	61	eP	P	05 19 04.3	+0.6
HFS	Hagfors	29.55	328	P	P	05 19 13.7	-1.9
	comp=Z,2.0nm,0.7s,baz=146,slow=11,SNR=4.9						
HFS				LR	LR	05 31 51.7	
	comp=Z,118nm,20.7s,baz=116,slow=38						
ZAA0	Zalesovo Array	30.91	47	eP	P	05 19 26.4	-1.4
	comp=Z,2.8nm,1.1s						
NOA	NORSAR Array B	31.07	328	LR	LR	05 32 48.0	
	comp=Z,134nm,20.4s,baz=120,slow=38						
WMQ	Urumqi	32.03	67	eP	P	05 19 40.8	+3.0
ARA0	ARCESS Array S	32.98	347	eP	P	05 19 45.1	-0.6
ARCES	ARCESS Array B	32.98	347	P	P	05 19 45.1	-0.7
	comp=Z,0.6nm,0.4s,baz=149,slow=9.9,SNR=15						
TAM	Tamanrasset	37.40	257	eP	P	05 20 26.2	+1.7
	comp=Z,6.1nm,1.3s						
TAM	Tamanrasset	37.40	257	eP	P	05 20 26.2	+1.7
TAM				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ESDC	Sonseca Array	38.01	288	P	P	05 20 28.9	-0.4
	comp=Z,0.3nm,0.4s,baz=71,slow=8.0,SNR=4.8						
ULN	Ulaanbaatar	44.86	57	eP	P	05 21 26.9	+1.3
	comp=Z,7.8nm,1.2s						
ULN	Ulaanbaatar	44.86	57	iP	P	05 21 30.0	+4.4
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LZH	Lanzhou	45.88	74	eP	P	05 21 32.3	-1.6
LZH				pP	sP	05 21 36.5	+0.1
LZH				sP	pP	05 21 39.0	+3.3
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
TOA1	Torodi Ar. Sit	46.15	249	eP	P	05 21 35.0	-1.0
TORD	Torodi Ar. Bea	46.15	249	P	P	05 21 35.0	-1.0
	comp=Z,11nm,0.3s,baz=37,slow=8.3,SNR=10						
HHC	Hu-ho-hao-te	49.89	65	eP	P	05 22 04.8	0.0
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,18nm,5.3s						
CM31	Chiang Mai Arr	50.34	98	eP	P	05 22 07.3	-1.0
	comp=Z,4.7nm,0.8s						
CMAR	Chiang Mai Arr	50.34	98	P	P	05 22 07.3	-1.0
	comp=Z,1.1nm,0.5s,baz=296,slow=9.3,SNR=7.0						
WHN	Wuhan	56.17	76	P	P	05 22 49.0	-2.2
KS15	Wonju Array Si	62.82	62	eP	P	05 23 36.1	-0.9
	comp=Z,10nm,1.3s						
KSRS	Korea Array	62.84	62	P	P	05 23 36.1	-1.0
	comp=Z,0.9nm,0.6s,baz=289,slow=7.6,SNR=3.8						
TOLK	Toolik Lake Re	72.69	6	eP	P	05 24 42.3	+3.6
	comp=Z,2.9nm,0.9s						
YKA	Yellowknife Ar	78.17	351	P	P	05 25 08.7	-1.6
	comp=Z,0.2nm,0.6s,baz=10,slow=5.9,SNR=5.2						
YKB5	Yellowknife Ar	78.17	351	eP	P	05 25 08.7	-1.6

IDC 28 05:14:52.8±16.0, 16°.27S×174°.89W, h202km±147km, mb3.4/6, mb1 3.6/6, mb1mx3.3/35, mbtmp4.0/6, Error ellipse: s-maj=47.4km s-min=32.3km az=73.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.36	240	P	P	05 22 27.5	+0.3
	1.0nm,0.4s,baz=101,slow=10,SNR=4.8						
WRA	Warramunga Arr	48.25	258	P	P	05 23 13.4	-0.3
	0.4nm,0.3s,baz=93,slow=9.3,SNR=6.1						
ASAR	Alice Springs	48.48	253	P	P	05 23 15.2	-0.2
	2.6nm,0.5s,baz=89,slow=8.0,SNR=38						
ASAR				PcP	PcP	05 24 38.6	+0.1
	0.5nm,0.6s,baz=88,slow=5.8,SNR=3.6						
VNDA	Vanda	62.37	186	P	P	05 24 53.6	+0.1
	0.5nm,0.6s,baz=358,slow=8.2,SNR=7.0						
ILAR	Eielson Array	83.58	12	P	P	05 26 57.9	0.0
	0.2nm,0.5s,baz=210,slow=5.0,SNR=4.3						
MAW	Mawson	86.51	199	P	P	05 27 12.0	-0.5
	1.0nm,0.5s,baz=148,slow=7.6,SNR=11						

NNC 28 05:21:07.3±3.1, 36°.67N×70°.79E, h0km, mb3.8, mpv3.5, 4C-4D, Error ellipse: s-maj=25.1km s-min=20.3km az=162.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.42	358	⇓P	Pn	05 22 44.9	+1.7
	2.2nm,0.3s,baz=179,slow=12,SNR=79						
KK31				⇓S	Sn	05 23 58.5	+1.3
	6.9nm,0.5s,baz=190,slow=22,SNR=15						
AAK	Ala-Archa	6.61	24	⇓P	Pn	05 22 45.2	-0.6
	1.2nm,0.3s						
AAK				⇑S	Sn	05 24 03.2	+1.4
	1.9nm,0.7s						
TKM2	Tokmak 2	7.25	29	⇓P	Pn	05 22 54.4	-0.3
	1.6nm,0.7s						
TKM2				⇑S	Sn	05 24 18.7	+0.8
	1.3nm,0.7s						
AB31	Akbulak array	14.85	331	⇑P	Pn	05 24 36.8	-1.6
	0.4nm,0.5s,baz=161,slow=10,SNR=15						
AB31				⇑S	Sn	05 27 23.7	+0.2
	0.8nm,0.6s,baz=156,slow=22,SNR=4.0						

MEX 28 05:35:41.5±0.5, 14°.66N×92°.86W, h44km±39km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.63	67	eP	Pn	05 35 52.9	-1.3
THIG				i S	Sn	05 36 01.2	-2.0
CCIG	Comitan	1.76	23	eP	Pn	05 36 09.2	-0.6
CCIG				i S	Sn	05 36 29.1	-1.9
TGIG		2.12	353	eP	Pn	05 36 13.0	-1.6

*ISCJB **28** 05:35:48.7±0.5, 8°.61S±0°.06×122°.74E±0°.06, h187km±5km, mb3.7/5, Error ellipse: s-maj=12.0km s-min=7.3km az=43.6*
*DJA **28** 05:35:50.2±0.4, 9°.S±3°.×12°.3E±°, h168km±4km, M4.3/12, mb4.7/1, mB6.2/1, MLv4.0/12, Mw(mB)5.9/1*
*IDC **28** 05:35:50.0±0.8, 8°.57S×122°.91E, h185km±9km, mb3.5/5, mb1 3.6/9, mb1mx3.3/39, mbtmp4.0/9, MS2.9/1, Ms1 2.9/1, ms1mx2.3/25, Error ellipse: s-maj=58.8km s-min=9.9km az=59.0*
ISC 28 05:35:49.6±0.8, 8°.62S±0°.07×122°.75E±0°.07, h183km±7km, n21, σ0°.77/26, mb3.7/5, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	0.51	269	P	Pn	05 36 14.7	0.0
MMRI				S	Sn	05 36 33.4	-0.6
EDFI	Ende, Flores	1.06	263	P	Pn	05 36 18.7	+0.6
EDFI				S	Sn	05 36 40.2	+0.1
BATI	Baumata	1.81	150	P	Pn	05 36 25.7	+0.8
	49nm,0.3s,baz=20,slow=2.4,SNR=20						
BATI				S	Sn	05 36 52.8	+0.5
	394nm,0.3s,baz=238,slow=7.6,SNR=46						
BATI	Baumata	1.81	150	P	Pn	05 36 25.9	+1.0
BATI				S	Sn	05 36 51.9	-0.5
SOEI	Soe	1.87	127	P	Pn	05 36 25.4	-0.2
WSI	Waingapu	2.64	247	S	Sn	05 37 08.3	-0.4
BASI	Baing, Sumba	2.67	233	P	Pn	05 36 35.4	+1.0
BASI				S	Sn	05 37 08.8	-0.5
BSSI	Bau Bau, Buton	3.33	318	P	Pn	05 36 42.9	+0.4
WBSI	Waikabubak, Su	3.47	253	P	Pn	05 36 43.1	-1.1
BKSI	Bulukumba	4.19	321	P	Pn	05 36 53.0	-0.3
KAPI	Kappang	4.66	320	P	Pn	05 37 00.5	+1.2
	4.7nm,0.3s,baz=132,slow=7.3,SNR=14						
PLAI	Plampang	4.92	267	P	Pn	05 37 03.3	+0.6
FITZ	Fitzroy Crossi	9.83	164	P	Pn	05 38 06.3	-0.5
	0.5nm,0.3s,baz=350,slow=9.0,SNR=13						
WRA	Warramunga Arr	15.88	136	P	Pn	05 39 22.8	-0.7
	0.9nm,0.3s,baz=314,slow=14,SNR=24						
ASAR	Alice Springs	18.38	146	P	Pn	05 39 52.5	-0.6
	0.5nm,0.3s,baz=328,slow=13,SNR=34						
ASAR				S	S	05 43 10.3	-0.9
	0.3nm,0.3s,baz=316,slow=22,SNR=11						
STKA	Stephens Creek	29.02	145	P	P	05 41 33.9	+1.4
	0.7nm,0.4s,baz=328,slow=13,SNR=3.0						
MJAR	Matsushiro Arr	47.22	17	LR	LR	06 06 27.5	
	comp=Z,14nm,19.7s,baz=200,slow=39						
MKAR	Makanchi Array	65.88	331	P	P	05 46 15.8	+0.2
	0.7nm,0.5s,baz=128,slow=8.1,SNR=5.5						
PETK	Petropavlovsk-	68.30	22	P	P	05 46 29.7	-0.9
	1.9nm,0.8s,baz=224,slow=8.3,SNR=4.0						
ZALV	Zalesovo Beam	70.07	337	P	P	05 46 42.2	+0.6
	0.9nm,0.6s,baz=108,slow=3.2,SNR=3.4						
KURBB	Kurchatov Arra	70.33	332	P	P	05 46 43.0	-0.2
	0.4nm,0.6s,baz=142,slow=5.8,SNR=4.9						

*ISCJB **28** 05:38:35.8±0.7, 31°.02N±0°.08×99°.07E±0°.06, h10km, mb3.8/7, MS3.0/2, Error ellipse: s-maj=12.4km s-min=6.7km az=18.0*
*BJI **28** 05:38:35.3±0.0, 30°.95N×99°.01E, h20km, ML3.9/7, Ms3.7/4, Ms7 3.6/5*
*IDC **28** 05:38:36.3±1.1, 31°.03N×99°.04E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.7/51, mbtmp3.8/10, ML3.6/1, MS3.0/3, Ms1 3.1/3, ms1mx2.7/43, Error ellipse: s-maj=33.9km s-min=19.5km az=58.0*
ISC 28 05:38:37.8±0.8, 31°.04N±0°.07×99°.09E±0°.06, h10km, n18, σ1s63/17, mb3.9/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	4.01	91	Pn	Pn	05 39 41.0	+1.6
CD2				Pg	Pg	05 39 52.0	-2.7
CD2				Sn	Sn	05 40 27.5	+1.0
CD2				Sg	Sg	05 40 47.3	+0.6
CD2				smax	smax		
	comp=N,90nm,0.9s						
CD2				smax	smax		
	comp=E,100nm,1.1s						
LZH	Lanzhou	6.41	37	Pg	Pg	05 40 38.3	-2.3
LZH				Sg	Sg	05 42 02.0	-1.7
LZH				smax	smax		
	comp=N,36nm,1.0s						
LZH				smax	smax		
	comp=E,30nm,1.3s						
LZH				LR	LR		
	comp=N,780nm,4.9s						
LZH				LR	LR		
	comp=E,1μm,4.7s						
LZH				LR	LR		
	comp=Z,300nm,6.5s						
LZH	Lanzhou	6.41	37	eP	Pg	05 40 44.3	+3.7
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
KMI	Kunming	6.71	150	P	Pg	05 40 50.0	+3.6
KMI				LR	LR		
	comp=N,560nm,8.7s						
KMI				LR	LR		
	comp=E,340nm,7.3s						
KMI				LR	LR		
	comp=Z,470nm,8.7s						
CMAR	Chiang Mai Arr	12.52	181	Pn	Pn	05 41 36.6	+0.5
	baz=355,slow=11,SNR=8.4						
CMAR				LR	LR	05 46 15.9	
	comp=Z,54nm,20.9s,baz=208,slow=37						
WHN	Wuhan	13.13	88	P	P	05 42 10.5	+16
WMQ	Urumqi	15.62	328	eP	Pn	05 42 16.5	-1.6
SONM	Songino Array	17.69	16	P	P	05 42 44.4	-0.8
	comp=Z,0.2nm,0.3s,baz=210,slow=11,SNR=9.3						
MKAR	Makanchi Array	20.39	325	P	Pn	05 43 14.5	-2.2
	comp=Z,2.6nm,0.7s,baz=146,slow=13,SNR=14						
AAK	Ala-Archa	22.75	307	LR	LR	05 54 36.2	
	comp=Z,36nm,19.4s,baz=196,slow=42						
KSRS	Korea Array	24.62	67	P	P	05 43 58.4	+0.1
	comp=Z,1.6nm,0.6s,baz=256,slow=9.9,SNR=7.4						
KURBB	Kurchatov Arra	24.85	328	P	P	05 44 00.1	-0.1
	comp=Z,1.5nm,0.8s,baz=144,slow=8.8,SNR=12						
ZALV	Zalesovo Beam	25.11	340	P	P	05 44 02.4	-0.1
	comp=Z,3.2nm,0.6s,baz=150,slow=10.0,SNR=12						
KIRV	Kirov	43.28	324	LR	LR	06 07 41.2	
	comp=Z,29nm,18.5s,baz=185,slow=40						
FINES	FINESS Array B	55.22	326	P	P	05 48 10.3	-0.2
	comp=Z,0.9nm,0.6s,baz=93,slow=7.6,SNR=4.3						
WRA	Warramunga Arr	60.95	142	P	P	05 48 51.2	0.0
	comp=Z,0.9nm,0.5s,baz=322,slow=7.7,SNR=7.9						
ILAR	Eielson Array	71.72	24	P	P	05 50 00.0	+0.3
	comp=Z,0.4nm,0.9s,baz=266,slow=3.7,SNR=4.1						
INK	Inuvik	73.59	18	P	P	05 50 11.4	+0.7
	comp=Z,0.5nm,0.5s,baz=329,slow=5.5,SNR=5.1						

*IDC **28** 05:48:50.7±5.4, 28°.97S×178°.18W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/33, mbtmp4.1/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/28, Error ellipse: s-maj=199.0km s-min=81.6km az=156.0*
*NEIC **28** 05:48:59.7±1.2, 29°.80S×178°.16W, h74km±15km, mb4.4/5, Error ellipse: s-maj=31.4km s-min=20.9km az=92.0*
ISC 28 05:48:51.8±1.9, 30°.34S±0°.07×177°.4W±0°.2, h33km, n17, σ1s83/17, mb4.3/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.19	335	ePn	Pb	05 49 13.5	-0.2
RAO				eSn	Sb	05 49 28.6	-0.1
OUZ	Omahuta	9.04	235	ePn	Pn	05 51 03.8	+3.9
URZ	Urewera	9.13	209	ePn	Pn	05 51 03.2	+2.0
URZ				eSn	Sn	05 52 39.8	-3.0
BKZ	Black Stump Fm	10.16	208	ePn	Pn	05 51 17.1	+1.7
THZ	Tophouse	13.85	212	ePn	P	05 52 13.8	+0.1
DZM	Mont Dzumac	16.69	296	LR	LR	05 57 07.7	
	comp=Z,75nm,20.2s,baz=247,slow=32						
STKA	Stephens Creek	35.03	257	P	P	05 55 41.7	+0.2
	3.4nm,0.7s,baz=90,slow=11,SNR=9.5						
STKA	Stephens Creek	35.03	257	eP	P	05 55 42.0	+0.5
	1.3nm,1.0s						
BBOO	Buckleboo	39.52	254	eP	P	05 56 18.4	-1.2
	12nm,1.4s						
ASAR	Alice Springs	43.67	267	P	P	05 56 52.2	-1.5
	1.0nm,0.6s,baz=104,slow=7.1,SNR=11						
WB2	Warramunga Arr	44.64	272	eP	P	05 56 59.6	-1.9
	5.5nm,1.1s						
WR1	Warramunga Arr	44.65	272	eP	P	05 56 59.9	-1.7
WRA	Warramunga Arr	44.65	272	P	P	05 56 59.9	-1.7
	2.0nm,0.6s,baz=106,slow=8.8,SNR=17						
FORT	Forrest	46.60	255	eP	P	05 57 16.3	-0.6
	16nm,1.1s						
QSPA	South Pole Qui	59.77	180	eP	P	05 59 00.9	+7.5
	2.3nm,0.8s						
FIA0	FINESS Array S	145.27	340	ePKPdf	PKPdf	06 08 26.4	+1.0
FINES	FINESS Array B	145.27	340	PKP	PKPdf	06 08 26.3	+1.0
	2.4nm,0.8s,baz=66,slow=4.7,SNR=6.0						

*IDC **28** 05:51:55.8±0.8, 24°.35N×125°.17E, h0km, mb4.0/13, mb1 4.2/13, mb1mx4.0/42, mbtmp4.0/13, MS3.4/10, Ms1 3.4/10, ms1mx3.2/30, Error ellipse: s-maj=34.8km s-min=17.7km az=64.0*
*JMA **28** 05:52:00.3±0.1, 24°.35N×125°.22E, h41km±2km, M3.7*
*NIED **28** 05:52:00, 24°.30N×125°.20E, h38km, Mw4.4 Best double couple: M0:3.77000×10^15 NP1:φ=271.00000°, δ=22.00000°, λ=124.00000°. NP2:φ=56.00000°, δ=72.00000°, λ=78.00000°.*
*NEIC **28** 05:52:02.6±2.9, 24°.23N×125°.12E, h45km±9km, mb4.6/17, Error ellipse: s-maj=19.4km s-min=14.8km az=162.0*
ISC 28 05:51:59.3±1.6, 24°.36N±0°.06×125°.22E±0°.05, h19km±5km, n72, σ1s13/67, mb4.4/29, MS3.5/7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.39	15	P	Pn	05 52 09.6	-0.5
JMJ2				S	Sn	05 52 16.6	-0.5
JOGS	Gusukube	0.44	24	P	Pn	05 52 10.3	-0.4
JOGS				S	Sn	05 52 17.3	-0.8
JIRB	Irabujima	0.47	355	P	Pn	05 52 10.5	-0.6
JIRB				S	Sn	05 52 18.0	-0.9
JTJ	Tarama	0.55	301	P	Pn	05 52 11.7	-0.5
JTJ				S	Sn	05 52 20.2	-0.6
JIKM	Ikemajima	0.56	3	P	Pn	05 52 12.0	-0.4
JIKM				eS	Sn	05 52 20.5	-0.8
JISG	Ishigakijimahi	0.85	286	P	Pg	05 52 16.0	-0.1
JIJ	Ishigaki jima	0.98	271	P	Pb	05 52 18.0	+0.3
JIJ				S	Sg	05 52 31.0	-0.3
JKRS	Kuro-shima	1.11	264	P	Pb	05 52 20.3	+0.4
HATJ	Hateruma jima	1.32	257	P	Pn	05 52 23.0	+0.2
HATJ				eS	Sn	05 52 39.5	-0.5
IRIF	Iriomote-Funau	1.35	269	P	Pn	05 52 23.8	+0.5
IRIF				eS	Sn	05 52 40.4	-0.4
YOJ	Yonaguni jima	2.01	273	ePn	Pn	05 52 33.1	+0.8
NACB	Ninganchiao	3.31	268	ePn	Pn	05 52 49.8	-0.4
TATO	Taipei	3.45	281	ePn	Pn	05 52 54.5	+2.4
YHNB	Yeheng	3.51	276	ePn	Pn	05 52 55.6	+2.6
JOW	Kunigami	3.70	48	ePn	Pn	05 52 56.9	+1.3
YULB	Yu-li	3.71	256	ePn	Pn	05 52 54.5	-1.2
SSLB	Suanglung	3.94	263	ePn	Pn	05 52 58.7	-0.2
TWG	Pinlang	4.10	249	ePn	Pn	05 52 59.6	-1.4
TPUB	Ta-pu	4.33	257	ePn	Pn	05 53 05.2	+0.9
JNU	Nakatsue	10.04	28	LR	LR	05 57 40.9	
	comp=Z,28nm,19.8s,baz=178,slow=34						
KSRS	Korea Array	13.26	9	LR	LR	06 00 33.9	
	comp=Z,96nm,20.1s,baz=183,slow=39						
JHJ	Hachijo jima 2	15.46	52	LR	LR	06 01 18.6	
	comp=Z,127nm,18.2s,baz=282,slow=36						
MAJO	Matsushiro	16.50	40	ePn	P	05 55 53.1	+0.7
MJAR	Matsushiro Arr	16.50	40	Pn	P	05 55 53.1	+0.7
	0.1nm,0.3s,baz=231,slow=12,SNR=8.3						
CMAR	Chiang Mai Arr	25.13	262	LR	LR	06 08 08.4	
	comp=Z,66nm,21.7s,baz=234,slow=39						
SONA0	Songino Array	27.79	332	eP	P	05 57 45.5	-1.8
SONM	Songino Array	27.79	332	P	P	05 57 45.5	-1.8
	0.7nm,0.6s,baz=141,slow=7.3,SNR=4.5						
PETK	Petropavlovsk-	37.72	32	LR	LR	06 15 27.7	
	comp=Z,44nm,19.0s,baz=239,slow=37						
H11N1	WAKE ISLAND Hy	38.80	88	T	T	06 40 40.9	
	baz=283,slow=74,SNR=4.1						
H11N2	WAKE ISLAND Hy	38.80	88	T	T	06 40 43.0	
	baz=283,slow=74,SNR=5.2						
H11N3	WAKE ISLAND Hy	38.82	88	T	T	06 40 43.9	
	baz=283,slow=74,SNR=5.5						
H11S3	WAKE ISLAND Hy	38.94	90	T	T	06 40 53.1	
	baz=274,slow=74						
H11S1	WAKE ISLAND Hy	38.95	90	T	T	06 40 54.8	
	baz=274,slow=74						
H11S2	WAKE ISLAND Hy	38.96	90	T	T	06 40 50.9	
	baz=274						
MK31	Makanchi Array	40.81	314	eP	P	05 59 38.7	-1.0
	2.5nm,0.6s						
MK32	Makanchi Array	40.81	314	eP	P	05 59 39.0	-0.7
MKAR	Makanchi Array	40.81	314	P	P	05 59 39.0	-0.7
	2.1nm,0.3s,baz=96,slow=9.8,SNR=20						
MAKZ	Makanchi	41.02	314	eP	P	05 59 40.6	-0.8
	20nm,1.4s						
ZALV	Zalesovo Beam	42.15	325	P	P	05 59 48.9	-1.6
	2.1nm,0.5s,baz=120,slow=8.6,SNR=2.0						
ZAA1	Zalesovo Array	42.15	325	eP	P	05 59 48.9	-1.7
KDJ	Kajisay	43.30	306	eP	P	06 00 01.5	+1.2
	6.6nm,1.3s						
KURBB	Kurchatov Arra	44.38	318	P	P	06 00 07.6	-0.9
	3.2nm,0.7s,baz=106,slow=8.7,SNR=9.6						
WR1	Warramunga Arr	44.92	168	eP	P	06 00 12.0	-1.2
WRA	Warramunga Arr	44.92	168	P	P	06 00 12.0	-1.2
	1.6nm,0.6s,baz=343,slow=11,SNR=11						
WB2	Warramunga Arr	44.92	168	eP	P	06 00 12.1	-1.1
	8.7nm,1.3s						
NIL	Nilore	45.98	294	eP	P	06 00 21.5	-0.1
	10nm,0.8s						
GAR	Garm	48.26	301	eP	P

NB2	NORSAR Subarra	79.76	333	P	P	06 04 04.5	-1.6
	comp=Z,0.7nm,0.7s,baz=56,slow=5.3						
NB200	NORSAR Array S	79.76	333	eP	P	06 04 04.7	-1.3
NOA	NORSAR Array B	79.76	333	P	P	06 04 04.7	-1.3
	comp=Z,1.6nm,0.8s,baz=56,slow=5.5,SNR=5.2						
NOA				LR	LR	06 43 50.1	
	comp=Z,22nm,18.3s,baz=60,slow=39						
YKA	Yellowknife Ar	81.35	24	P	P	06 04 14.4	-0.1
	comp=Z,0.5nm,0.6s,baz=304,slow=5.0,SNR=6.8						
YKB5	Yellowknife Ar	81.35	24	eP	P	06 04 14.4	-0.1
SUMG	Summit	82.68	355	eP	P	06 04 23.7	+1.9
	comp=Z,9.5nm,1.4s						

*NNC **28** 05:55:32.0±1.5, 53°.80N×90°.44E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=11.1km s-min=8.1km az=62.0, Suspected Mining explosion.*

ASRS 28 05:55:24.1, 53°.75N×91°.03E, M3.1, 7C-6D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.68	276	⇓Pg		Pb	05 56 32.0	+2.0
	1.9nm,0.8s							
ZAA0				⇓Lg		Lg	05 57 18.5	
	7.8nm,0.9s							
KURK	Kurchatov	8.20	253	⇓Pn		Pn	05 57 28.0	+3.8
	4.5nm,1.0s							
KURK				⇑Sn		Sn	05 58 59.6	+2.1
	8.5nm,0.9s							
KURK				⇓Lg		Lg	05 59 43.1	
	25nm,1.0s							
KURBB	Kurchatov Arra	8.29	253	⇑Pn		Pn	05 57 29.9	+4.4
	5.5nm,0.9s							
KURBB				⇓Sn		Sn	05 59 00.7	+0.9
	40nm,0.8s							
KURBB				⇑Lg		Lg	05 59 45.5	
	68nm,0.9s							
MK31	Makanchi Array	8.93	222	⇑Pn		Pn	05 57 40.2	+5.9
	1.7nm,0.7s,baz=35,slow=15,SNR=5.8							
MK31				⇑Sn		Sn	05 59 19.2	+3.7
	2.8nm,0.7s,baz=34,slow=21							
MK31				⇑Lg		Lg	06 00 11.5	
	11nm,0.8s,baz=33,slow=33,SNR=4.2							
MAKZ	Makanchi	9.04	223	⇑Sn		Sn	05 59 22.7	+4.4
	3.9nm,1.0s							
MAKZ				⇓Lg		Lg	06 00 13.3	
	15nm,1.1s							

LJU 28 05:59:09.0, 45°.76N×14°.87E, h0km, ML0.2, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VISS	Visnje	0.05	331	⇓iPg		Pg	05 59 09.8	-0.1
VISS				i Sg		Sg	05 59 10.9	+0.3
	comp=Z,11nm,0.1s							
GBRS	Gornja Briga	0.23	191	i Sg		Sg	05 59 17.0	+0.6

*VIE **28** 05:59:55.8±0.2, 46°.65N×12°.30E, h8km, mb0.9/3, ml1.7/4, Error ellipse: s-maj=2.4km s-min=1.3km az=1.0*

ROM 28 05:59:55.2±0.1, 46°.672N±0°.010×12°.33E±0°.01, h10km, ML1.5/2, 5C-3D, Error ellipse: s-maj=1.2km s-min=0.6km az=31.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ABTA	Abfaltersbach	0.14	58	⇑ePg		Pg	05 59 59.8	+1.2
ABTA				eSg		Sg	06 00 02.2	+1.3
ABTA	Abfaltersbach	0.14	58	i Pg		Pg	05 59 59.8	+1.2
	11nm,0.1s							
ABTA				i Sg		Sg	06 00 02.2	+1.3
	22nm,0.0s							
AFL	Alpe Faloria	0.18	217	⇑ePg		Pg	05 59 59.6	+0.4
AFL				eSg		Sg	06 00 02.2	+0.3
CSMI	Casera Mimoias	0.27	126	⇑ePg		Pg	06 00 01.5	+0.8
CSMI				eSg		Sg	06 00 05.6	+1.1
FVI	Forni Avoltri	0.32	104	⇓ePg		Pb	06 00 02.4	-0.6
FVI	Forni Avoltri	0.32	104	P		Pb	06 00 02.4	-0.6
FVI				S		Sg	06 00 06.9	+1.1
FVI				AML		AML		
	comp=E,105μm,0.4s							
FVI				AML		AML		
	comp=N,113μm,0.4s							
FVI				AML		AML		
	comp=E,105μm,0.4s							
FVI				AML		AML		
	comp=N,113μm,0.4s							
RISI	Rein	0.33	328	⇓ePg		Pb	06 00 02.8	-0.5
RISI				eSg		Sg	06 00 07.3	+1.0
RISI	Rein	0.33	328	P		Pb	06 00 02.8	-0.5
RISI				S		Sg	06 00 07.2	+1.0
RISI				AML		AML		
	comp=E,154μm,0.4s							
RISI				AML		AML		
	comp=N,108μm,0.8s							
RISI				AML		AML		
	comp=E,154μm,0.4s							
RISI				AML		AML		
	comp=N,108μm,0.8s							
CIMO	Cimolais	0.37	169	⇑ePg		Pg	06 00 02.9	+0.4
CIMO				eSg		Sg	06 00 07.8	+0.4
CLUD	Cludinico	0.43	119	⇓ePg		Pb	06 00 04.5	-0.5
CLUD				eSg		Sb	06 00 10.7	-0.9
ZOU	Zoufplan	0.46	104	⇑ePg		Pg	06 00 04.8	+0.6
STAL	STALIGIAL	0.49	148	ePg		Pg	06 00 05.1	+0.4
STAL	STALIGIAL	0.49	148	P		Pg	06 00 05.3	+0.6
STAL				S		Sb	06 00 12.1	-1.0
KOSI	Kohlern	0.69	253	P		Pg	06 00 08.6	-0.1
ABSI	Aberstueckl	0.70	275	P		Pg	06 00 08.7	-0.1
ABSI				S		Sg	06 00 18.3	+0.4

*NIED **28** 06:15:00, 24°.00N×122°.60E, h32km, Mw3.9 Best double couple: M07.47000×10^14 NP1:φ±249.00000°, δ25.00000°, λ95.00000°. NP2:φ±64.00000°, δ65.00000°, λ88.00000°.*
*ISCJB **28** 06:15:46.7±0.5, 23°.99N±0°.02×122°.65E±0°.02, h27km±4km, mb3.6/4, MS3.1/4, Error ellipse: s-maj=3.6km s-min=2.3km az=157.8*
*JMA **28** 06:15:46.8±0.2, 24°.03N×122°.63E, h24km±4km, M3.6*
*TAP **28** 06:15:46.5, 24°.03N×122°.71E, h40km, ML4.2, C*
*IDC **28** 06:15:55.4±6.5, 24°.18N×122°.57E, h110km±62km, mb3.3/4, mb1 3.6/5, mb1mx3.2/45, mbtmp3.8/5, MS3.0/6, Ms1 3.1/6, ms1mx2.8/29, Error ellipse: s-maj=35.2km s-min=27.1km az=103.0*

ISC 28 06:15:46.4±1.0, 24°.02N±0°.03×122°.64E±0°.02, h32km±8km, n108, σ1§04/149, mb3.7/4, MS3.2/4, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.52	32	P		Pn	06 15 57.0	-0.6
JYNG				S		Sb	06 16 04.1	-0.4
YOJ	Yonaguni jima	0.56	37	eP		Pn	06 15 57.7	-0.5
	baz=31							
YOJ				eS		Sb	06 16 05.5	-0.2
	baz=31							
YOJ	Yonaguni jima	0.56	37	P		Pn	06 15 57.7	-0.5
YOJ				S		Sb	06 16 05.5	-0.2
EOS1	EOS1	0.71	319	P		Pn	06 16 00.9	+0.7
	baz=313							
NANB	Nanao	0.91	297	⇑eP		Pb	06 16 03.9	+0.2
	baz=294							
ENA	Nanau	0.92	297	P		Pb	06 16 04.0	+0.1
	baz=294							
TWC	Suao	0.94	309	P		Pb	06 16 03.9	-0.2
	baz=306							
TWC				eS		Sn	06 16 17.4	+1.7
	baz=306							
TWD	Chiawan	0.96	274	eP		Pb	06 16 04.1	-0.4
	baz=273							
NACB	Ninganchiao	0.97	280	eP		Pb	06 16 04.4	-0.3
	baz=266							
NACB				eS		Sn	06 16 17.7	+1.2
	baz=266							
IRIF	Iriomote-Funau	1.04	72	P		Pb	06 16 05.5	-0.4
IRIF				eS		Sb	06 16 19.8	+0.5
EGS		1.05	322	eP		Pb	06 16 05.5	-0.6
	baz=328							
HATJ	Hateruma jima	1.06	88	P		Pb	06 16 07.3	+1.0
HATJ				eS		Sb	06 16 21.2	+1.3
ETLH	Xiulin Townshi	1.08	280	P		Pb	06 16 06.2	-0.4
	baz=279							
ILA	Ilan	1.11	313	eP		Pb	06 16 07.6	+0.6
	baz=309							
NTC	Toucheng	1.12	319	eP		Pb	06 16 07.0	-0.1
	baz=324							
ESL	Shilin	1.12	260	eP		Pn	06 16 05.9	-0.1
	baz=260							
TWE	Neicheng	1.13	309	eP		Pb	06 16 07.5	0.0
	baz=306							
TWE				eS		Sb	06 16 22.8	+1.0
	baz=306							
ENTT	Nioudou	1.16	303	P		Pb	06 16 08.0	+0.1
	baz=299							
EGFH	Guangfu	1.16	253	eP		Pn	06 16 07.2	+0.7
	baz=242							
EGFH				eS		Sb	06 16 22.6	-0.1
	baz=242							
TIPB	Shuangxi	1.21	322	eP		Pb	06 16 08.1	-0.6
	baz=331							
TIPB				eS		Sb	06 16 24.7	+0.7
	baz=331							
NNSB	Datong	1.22	290	eP		Pb	06 16 08.4	-0.6
	baz=288							
HGSD	Ruisui	1.23	245	eP		Pn	06 16 07.7	+0.3
	baz=245							
HGSD				eS		Sn	06 16 22.4	-0.6
	baz=245							
NNS	Nan Shan	1.23	290	P		Pb	06 16 08.7	-0.5
	baz=289							
WHF	Hehuan Shan	1.27	276	P		Pn	06 16 09.0	+0.7
	baz=275							
JKRS	Kuro-shima	1.27	80	P		Pb	06 16 09.8	+0.1
JKRS				eS		Sb	06 16 26.1	+0.4
EHY	Hungye	1.31	248	P		Pn	06 16 09.2	+0.7
	baz=247							
EHY				eS		Sn	06 16 25.9	+0.9
	baz=247							
NWF	Wu-fen Shan	1.31	323	eP		Pb	06 16 09.4	-1.1
	baz=320							
NWF				eS		Sn	06 16 25.4	+0.2
	baz=320							
WFSB	Wu-fen Shan	1.31	323	eP		Pb	06 16 09.5	-1.0
	baz=320							
YHNB	Yeheng	1.33	300	⇑eP		Pb	06 16 11.2	+0.4
	baz=286							
OWD	Renai	1.34	268	eP		Pn	06 16 09.9	+0.9
	baz=267							
CHGB	Renai	1.34	272	eP		Pb	06 16 10.3	-0.8
	baz=272							
CHGB				eS		Sn	06 16 26.5	+0.4
	baz=272							
NSK	Sanguang	1.34	300	P		Pb	06 16 10.4	-0.6
	baz=286							
TWT	Tachien	1.36	280	eP		Pb	06 16 11.1	-0.3
	baz=279							
TWA	Mucha	1.36	315	eP		Pb	06 16 10.8	-0.5
	baz=312							
TWA				eS		Sb	06 16 30.2	+1.8
	baz=312							
TDCB	Techi	1.38	280	eP		Pb	06 16 11.0	-0.6
	baz=279							
YULB	Yu-li	1.38	244	eP		Pn	06 16 10.1	+0.6
	baz=234							
YULB				eS		Sn	06 16 27.5	+0.8
	baz=234							
TWF1	Yuli	1.40	242	eP		Pn	06 16 10.5	+0.7
	baz=233							
TWF1				eS		Sn	06 16 28.3	+1.1
	baz=233							
VWDT	VWDT	1.40	260	eP		Pb	06 16 11.0	-0.9
	baz=259							
VWDT				eS		Sn	06 16 28.4	+1.3
	baz=259							
JIJ	Ishigaki jima	1.41	75	P		Pb	06 16 11.0	-1.2
JIJ				eS		Sb	06 16 29.3	-0.5
TATO	Taipei	1.42	313	eP		Pb	06 16 12.1	-0.2
	baz=324							
TATO				eS		Sb	06 16 29.6	-0.5
	baz=324							
CHKT	Chengkung	1.48	232	eP		Pn	06 16 11.1	+0.2
	baz=223							
YM01	YM01	1.49	319	eP		Pb	06 16 12.4	-1.1
	baz=316							
YM10	YM10	1.50	319	eP		Pn	06 16 12.1	+0.9
	baz=316							
YM05	YM05	1.51	320	eP		Pn	06 16 11.9	+0.6
	baz=316							
YM08	YM08	1.51	321	eP		Pn	06 16 12.3	+1.0
	baz=317							
YM04	YM04	1.52	319	eP		Pn	06 16 12.2	+0.9
	baz=315							
WLTB	Daxi	1.52	304	eP		Pb	06 16 13.6	-0.3
	baz=300							
YM03	YM03	1.53	319	eP		Pn	06 16 12.8	+1.1
	baz=316							
TWS1	Kuangyinshan	1.55	314	eP		Pb	06 16 14.0	-0.5
	baz=311							
SSLB	Suanglung	1.56	262	eP		Pb	06 16 13.4	-1.3
	baz=262							
SSLB				eS		Sn	06 16 31.1	-0.1
	baz=262							
DPDB	Guoxing	1.57	271	eP		Pb	06 16 13.9	-0.9
	baz=270							
DPDB				eS		Sb	06 16 33.8	-0.6
	baz=270							
WHP	Taichung City	1.57	280	eP		Pb	06 16 14.3	-0.6
	baz=270							
SMLT	Sun Moon Lake	1.60	266	P		Pb	06 16 14.2	-1.2
	baz=265							
SMLT				eS		Sn	06 16 32.2	0.0
	baz=265							
LIOB	Emei	1.61	293	eP		Pb	06 16 15.2	-0.3
	baz=291							
NSTT	Nanjuang	1.62	293	eP		Pb	06 16 15.1	-0.5
	baz=292							
NSTT				eS		Sb	06 16 35.0	-0.7
	baz=292							
JISG	Ishigakijimahi	1.63	69	P		Pn	06 16 13.6	+0.8
JISG				eS		Sn	06 16 33.7	+1.0
YUS	Yu-Shan	1.64	252	eP		Pb	06 16 14.9	-1.3
	baz=251							
YUS				eS		Sn	06 16 34.2	+0.5
	baz=251							
TYC	Yuchr	1.64	266	P		Pb	06 16 14.7	-1.2
	baz=266							
TYC				eS		Sn	06 16 34.2	+1.2
	baz=266							
PCYT	Pengchaiyu	1.69	342	eP		Pn	06 16 14.3	+0.6
	baz=339							
ELDTW	Lidau	1.70	241	eP		Pn	06 16 14.7	+0.6
	baz=242							
WJS	Zhushan	1.76	264	eP		Pb	06 16 18.3	+0.2
	baz=264							
NSY	Sanyi	1.76	283	eP		Pb	06 16 17.6	-0.5
	baz=283							
NMLH	Miaoli	1.77	287	eP		Pb	06 16 17.2	-1.0
	baz=287							
WNT	Mingjian	1.80	266	eP		Pb	06 16 18.2	-0.4
	baz=266							
WNT				eS		Sb	06 16 40.9	+0.1
	baz=266							
TCU	Taichung	1.80	275	eP		Pb	06 16 18.3	-0.4
	baz=274							
PTSB	Yuanli	1.82	284	eP		Pb	06 16 18.2	-0.9
	baz=283							
CHN5	Tsauling	1.85	257	eP		Pb	06 16 18.7	-0.8
	baz=248							
CHN5				eS		Sb	06 16 42.1	-0.2
	baz=248							
WDJ	Dajia District	1.86	281	eP		Pb	06 16 18.8	-0.9
	baz=280							
TTN	Taitung	1.86	228	eP		Pn	06 16 16.6	+0.6
	baz=219							
TTN				eS		Sn	06 16 39.7	+1.2
	baz=219							
TWGBT	Beinan	1.86	231	eP		Pn	06 16 16.5	+0.3
	baz=222							
TWGBT				eS		Sn	06 16 38.3	-0.3
	baz=222							
TWG	Pinlang	1.87	231	eP		Pn	06 16 16.7	+0.5
	baz=222							
TWG				eS		Sn	06 16 38.6	-0.1
	baz=222							
WGK	Gukeng	1.93	261	eP		Pb	06 16 20.5	-0.5
	baz=260							
TPUB	Ta-pu	1.98	249	eP		Pb	06 16 20.5	-1.2
	baz=240							
TPUB				eS		Sb	06 16 45.0	-1.0
	baz=240							
JTJ	Tarama	1.98	71	P		Pb	06 16 19.5	-2.3
JTJ				eS		Sn	06 16 43.4	+1.9
CHN4	Tsaushan	1.99	251	eP		Pb	06 16 21.2	-0.7
	baz=251							
CHN4				eS		Sb	06 16 45.7	-0.7
	baz=251							
WTP	Ta-pu	2.01	248	eP		Pb	06 16 20.9	-1.5
	baz=238							
RLNB	Erlin	2.09	267	eP		Pb	06 16 22.2	-1.5
	baz=279							
RLNB				eS		Sb	06 16 47.7	-1.6
	baz=279							
SGST	Jiashian	2.10	244	eP		Pb	06 16 23.3	-0.6
	baz=236							
SGST				eS		Sb	06 16 48.7	-1.0
	baz=236							
CHN1	Nanshi	2.11	247	eP		Pb	06 16 22.6	-1.4
	baz=247							
CHN1				eS		Sb	06 16 48.3	-1.5
	baz=247							
TWK	Hsinying	2.11	250	eP		Pb	06 16 22.4	-1.6
	baz=249							
TWK				eS		Sb	06 16 48.3	-1.6
	baz=249							
SNST	Tainan City	2.12	249	eP		Pb	06 16 23.1	-1.1
	baz=249							
SSD	Sandimen	2.24	236	eP		Pn	06 16 23.6	+2.4
	baz=230							
EAST	Anshuo	2.32	226	eP		Pn	06 16 23.1	+0.7
	baz=234							
EAST				eS		Sn	06 16 49.6	-0.2
	baz=234							
MASBT	Mashibuluo	2.32	233	eP		Pn	06 16 23.9	+1.5
	baz=228							
MASBT				eS		Sn	06 16 51.5	+1.7
	baz=228							
SSPT	Xinbi	2.44	232	eP		Pn	06 16 26.4	+2.3
	baz=228							
SCZT	Fangliau	2.48	229	eP		Pn	06 16 26.9	+2.3
	baz=223							
SCZT				eS		Sn	06 16 54.4	+0.6
	baz=223							
TWKBT	Hengchun	2.67	220	eP		Pn	06 16 28.2	+1.1
	baz=219							
TWKBT				eS		Sn	06 16 59.2	+0.8
	baz=219							
TWK1	Hengchun	2.67	220	eP		Pn	06 16 28.5	+1.3
	baz=219							
TWK1				eS		Sn	06 16 58.9	+0.5
	baz=219							
WDGT	Dungji	2.84	255	eP		Pn	06 16 31.7	+2.2
	baz=255							
PHUB	P'eng-hu	2.86	261	eP		Pn	06 16 31.8	+2.0
	baz=275							
PHUB				eS		Sn	06 17 04.7	+1.6
	baz=275							
PNG	Penghu	2.86	262	eP		Pn	06 16 31.7	+1.8
	baz=276							
VCHM	Qimei	3.05	255	eP		Pn	06 16 34.5	+2.0
	baz=255							
MATB	Ma-tsu	3.24	312	eP		Pn	06 16 35.5	+0.5
	baz=309							
LYJJ	Jianjiangzhen	3.63	315	eP		Pn	06 16 41.1	+0.7
	baz=312							
XPSS	Dashiqiu	3.65	323	eP		Pn	06 16 41.6	+0.9
	baz=320							
KNMB	Chin-men Tao	3.91	277	eP		Pn	06 16 45.1	+0.9
	baz=277							
AXDP	Jialang	4.35	283	eP		Pn	06 16 51.1	+0.8
	baz=273							
ZPLA	Ao Xicun	4.48	270	eP		Pn	06 16 52.9	+0.9
	baz=270							
JNU	Nakatsue	11.60	37	LR		LR	06 24 00.5	
	comp=Z,39nm,19.1s,baz=180,slow=42							
KSRS	Korea Array	14.14	17	P		P	06 19 08.5	-3.1
	1.0nm,0.3s,baz=198,slow=12,SNR=27							
KSRS				LR		LR	06 25 13.1	
	comp=Z,39nm,18.6s,baz=245,slow=40							
CMAR	Chiang Mai Arr	22.76	260	P		P	06 20 48.2	+2.0
	1.0nm,0.3s,baz=103,slow=15,SNR=6.6							
ASAJ	Asahikawa	25.86	34	LR		LR	06 31 05.6	
	comp=Z,24nm,21.8s,baz=344,slow=35							
KLR	Kul'dur	26.17	14	LR		LR	06 32 09.1	
	comp=Z,47nm,18.2s,baz=245,slow=37							
ZALV	Zalesovo Beam	41.11	327	LR		LR	06 41 13.2	
	comp=Z,39nm,19.4s,baz=74,slow=37							
ASAR	Alice Springs	48.64	166	P		P	06 24 29.6	+2.1
	0.4nm,0.6s,baz=344,slow=6.7,SNR=4.6							
FINES	FINESS Array B	72.26	330	P		P	06 27 07.6	-0.8
	1.7nm,0.9s,baz=55,slow=5.3,SNR=3.7							
NOA	NORSAR Array B	78.99	333	LR		LR	07 06 32.0	
	comp=Z,21nm,18.3s,baz=185,slow=38							
YKA	Yellowknife Ar	82.60	23	P		P	06 28 05.4	-0.8
	0.2nm,0.7s,baz=316,slow=4.8,SNR=3.8							

*SOME **28** 06:22:17.6, 44°.72N×82°.23E, h20km*
*NNC **28** 06:22:18.2±1.2, 44°.72N×82°.00E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=14.1km s-min=5.5km az=126.0*
*ISCJB **28** 06:22:20.4±0.9, 44°.71N±0°.07×82°.24E±0°.09, h10km, Error ellipse: s-maj=12.4km s-min=4.8km az=136.3*

ISC 28 06:22:15.5±1.3, 44°.72N±0°.05×82°.28E±0°.06, h10km, n16, σ1§00/24, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.82	259	eP		Pg	06 22 49.9	-0.5
	11nm,0.1s							
DJR				eS		Sg	06 23 13.3	-0.8
	6.3nm,0.3s							
KTMS	Ketmen	1.89	228	eP		Pg	06 22 51.4	-0.3
	8.9nm,0.1s							
KTMS				eS		Sg	06 23 15.5	-0.6
	23nm,0.4s							
MK31	Makanchi Array	2.07	0	⇑Pn		Pg	06 22 54.6	-0.6
	2.0nm,0.2s,baz=182,slow=13,SNR=123							
MK31				⇓Lg		Lg	06 23 22.4	
	2.4nm,0.2s,baz=184,slow=27,SNR=26							
MAKZ	Makanchi	2.10	354	⇑Pn		Pg	06 22 54.8	-0.9
	1.0nm,0.2s							
MAKZ				⇑Lg		Lg	06 23 22.8	
	5.5nm,0.3s							
KAPS	Kapalarasan	2.15	286	Pg		Pb	06 22 54.8	+0.3
	3.8nm,0.2s							
KAPS				Lg		Lg	06 23 22.2	
	11nm,0.4s							
KAPS	Kapalarasan	2.15	286	eP		Pg	06 22 55.8	-0.9
	2.7nm,0.2s							
KAPS				eS		Sg	06 23 23.0	-1.5
	11nm,0.3s							
PDGK	Podgornoye	2.45	236	Pg		Pb	06 22 59.2	-0.5
	1.6nm,0.3s							
PDGK				Lg		Lg	06 23 29.0	
	9.0nm,0.5s							
PDGK	Podgornoye	2.45	236	⇑Pn		Pb	06 22 58.1	-1.6
	2.4nm,0.3s							
PDGK				⇓Lg		Lg	06 23 30.8	
	27nm,0.7s							
UZB	Uzynbulak	2.83	237	Pg		Pb	06 23 05.3	-0.9
	2.2nm,0.2s							
UZB				Lg		Lg	06 23 39.4	
	4.5nm,0.5s							
UZB	Uzynbulak	2.83	237	eP		Pb	06 23 07.0	+0.8
	2.2nm,0.2s							
UZB				eS		Sb	06 23 42.7	+1.7
	4.5nm,0.5s							
MNBS	Baschi	2.85	258	Pg		Pb	06 23 06.9	+0.4
	3.7nm,0.2s							
MNBS				Lg		Lg	06 23 42.5	
	15nm,0.3s							
MNBS	Baschi	2.85	258	eP		Pb	06 23 07.4	+0.9
	2.9nm,0.1s							
MNBS				eS		Sb	06 23 42.9	+1.3
	15nm,0.3s							
KPKS	Kokpek	2.88	245	eP		Pb	06 23 07.4	+0.5
	11nm,0.1s							
KPKS				eS		Sb	06 23 43.1	+0.8
	33nm,0.4s							
ARXS	Arharly	3.23	262	Pg		Pb	06 23 13.9	+1.0
	6.0nm,0.5s							
ARXS				Lg		Lg	06 23 54.1	
	8.9nm,0.5s							
ARXS	Arharly	3.23	262	eP		Pb	06 23 13.5	+0.6
	6.0nm,0.5s							
ARXS				eS		Sb	06 23 53.9	+1.5
	9.5nm,0.4s							

ZSN	**Zaisan**	**3.27**	**32**	*eP*		**Pb**	**06 23 14.0**	**+0.5**
	1.5nm,0.3s							
ZSN				*eS*		**Sb**	**06 23 54.4**	**+0.9**
	1.2nm,0.4s							

*ISCJB **28** 06:35:13.2±0.5, 18°.60N±0°.06×68°.42W±0°.03, h141km±5km, Error ellipse: s-maj=9.4km s-min=4.0km az=7.2*
*NEIC **28** 06:35:13.8±0.0, 18°.61N×68°.42W, h140km, MD3.5(RSPR), After RSPR.*
*RSPR **28** 06:35:13.8, 18°.61N×68°.42W, h140km, MD3.5/13*
ISC 28 06:35:14.3±1.0, 18°.59N±0°.08×68°.42W±0°.03, h136km±7km, n64, σ1♀16/78, 18C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.08**	**156**	⇓*eP*	**Pn**	**06 35 32.3**	**-0.4**
PCDR				*eS*	**Sn**	**06 35 46.8**	**+0.2**
PCDR	**Punta Cana, DR**	**0.08**	**156**	⇓*eP*	**Pn**	**06 35 32.3**	**-0.4**
PCDR	**Punta Cana, DR**	**0.08**	**156**	*ePn*	**Pn**	**06 35 32.2**	**-0.5**
PCDR				*eSn*	**Sn**	**06 35 46.8**	**+0.2**
DR12	**Loma Pena Alta**	**0.93**	**282**	⇑*eP*	**Pn**	**06 35 36.7**	**-0.5**
DR12				*eS*	**Sn**	**06 35 54.4**	**-0.2**
AGP	**Aguadilla**	**1.23**	**98**	*ePn*	**Pn**	**06 35 40.2**	**+0.2**
AGP				*eSn*	**Sn**	**06 36 02.6**	**+3.2**
AGPR	**Aguadilla, PR**	**1.25**	**95**	⇑*eP*	**Pn**	**06 35 40.8**	**+0.7**
AGPR	**Aguadilla, PR**	**1.25**	**95**	*eS*	**Sn**	**06 36 01.1**	**+1.4**
MPR	**Mayaguez**	**1.27**	**107**	⇑*eP*	**Pn**	**06 35 40.9**	**+0.6**
MPRT	**Mayaguez**	**1.27**	**107**	*eS*	**Sn**	**06 36 01.3**	**+0.8**
MPR	**Mayaguez**	**1.27**	**107**	*ePn*	**Pn**	**06 35 40.6**	**+0.2**
MPR				*eSn*	**Sn**	**06 36 00.8**	**+0.7**
LSP	**Las Mesas**	**1.33**	**108**	⇑*eP*	**Pn**	**06 35 41.3**	**+0.2**
LSP	**Las Mesas**	**1.33**	**108**	*eS*	**Sn**	**06 36 02.0**	**+0.6**
LSP	**Las Mesas**	**1.33**	**108**	*ePn*	**Pn**	**06 35 41.3**	**+0.2**
LSP				*eSn*	**Sn**	**06 36 02.0**	**+0.6**
SDD	**Santo Domingo**	**1.43**	**265**	*ePn*	**Pn**	**06 35 42.1**	**+0.1**
SDD				*eSn*	**Sn**	**06 36 01.6**	**-1.4**
MLPR	**Magueyes Islan**	**1.45**	**115**	⇑*eP*	**Pn**	**06 35 42.3**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.58**	**112**	⇑*eP*	**Pn**	**06 35 43.8**	**0.0**
GBPR	**Guanica, Bosqu**	**1.58**	**112**	*ePn*	**Pn**	**06 35 43.8**	**0.0**
AOPR	**Arecibo Observ**	**1.60**	**98**	⇑*eP*	**Pn**	**06 35 43.8**	**-0.1**
AOPR	**Arecibo Observ**	**1.60**	**98**	⇑*eP*	**Pn**	**06 35 44.1**	**+0.1**
AOPR				*eS*	**Sn**	**06 36 07.2**	**+0.6**
AOPR	**Arecibo Observ**	**1.60**	**98**	*eS*	**Sn**	**06 36 06.2**	**-0.4**
AOPR	**Arecibo Observ**	**1.60**	**98**	*ePn*	**Pn**	**06 35 43.5**	**-0.4**
AOPR				*eSn*	**Sn**	**06 36 06.6**	**+0.1**
EMPR	**Esperanza - Ma**	**1.79**	**93**	⇑*eP*	**Pn**	**06 35 45.9**	**-0.3**
EMPR	**Esperanza - Ma**	**1.79**	**93**	*eS*	**Sn**	**06 36 11.2**	**+0.7**
EMPR	**Esperanza - Ma**	**1.79**	**93**	*ePn*	**Pn**	**06 35 45.5**	**-0.7**
EMPR				*eSn*	**Sn**	**06 36 10.4**	**-0.2**
OBIP	**Obispado Ponce**	**1.81**	**107**	⇑*eP*	**Pn**	**06 35 46.4**	**+0.1**
OBIP	**Obispado Ponce**	**1.81**	**107**	*eS*	**Sn**	**06 36 11.4**	**+0.6**
OBIP	**Obispado Ponce**	**1.81**	**107**	*ePn*	**Pn**	**06 35 45.7**	**-0.6**
OBIP				*eSn*	**Sn**	**06 36 10.4**	**-0.3**
BANI	**BANI**	**1.85**	**264**	*ePn*	**Pn**	**06 35 46.6**	**-0.3**
SJG	**San Juan**	**2.21**	**102**	⇑*eP*	**Pn**	**06 35 50.8**	**-0.3**
SJG	**San Juan**	**2.21**	**102**	*eS*	**Sn**	**06 36 19.6**	**+0.2**
SJG	**San Juan**	**2.21**	**102**	*ePn*	**Pn**	**06 35 50.2**	**-0.9**
SJG				*eSn*	**Sn**	**06 36 19.1**	**-0.3**
SJG	**San Juan**	**2.21**	**102**	*eP*	**Pn**	**06 35 49.9**	**-1.2**
IGPR	**InterUniversit**	**2.28**	**105**	⇑*eP*	**Pn**	**06 35 51.9**	**-0.1**
IGPR	**InterUniversit**	**2.28**	**105**	*eS*	**Sn**	**06 36 21.6**	**+0.6**
PDPR	**Patillas Dam,**	**2.35**	**104**	⇑*eP*	**Pn**	**06 35 52.8**	**0.0**
PDPR	**Patillas Dam,**	**2.35**	**104**	*eS*	**Sn**	**06 36 23.0**	**+0.5**
HUMP	**Col San Antoni**	**2.48**	**100**	⇑*eP*	**Pn**	**06 35 54.0**	**-0.6**
HUMP	**Col San Antoni**	**2.48**	**100**	⇑*eP*	**Pn**	**06 35 53.9**	**-0.6**
HUMP	**Col San Antoni**	**2.48**	**100**	*ePn*	**Pn**	**06 35 53.5**	**-1.1**
HUMP				*eSn*	**Sn**	**06 36 23.8**	**-1.6**
SDDR	**Presa de Saban**	**2.75**	**279**	*ePn*	**Pn**	**06 35 59.8**	**+1.8**
MTP	**Monte Pirata**	**2.77**	**100**	⇑*eP*	**Pn**	**06 35 57.9**	**-0.3**
MTP	**Monte Pirata**	**2.77**	**100**	*eS*	**Sn**	**06 36 32.2**	**+0.3**
MTP	**Monte Pirata**	**2.77**	**100**	*ePn*	**Pn**	**06 35 56.9**	**-1.2**
CUPR	**Culebra, Puert**	**2.99**	**95**	⇑*eP*	**Pn**	**06 36 00.5**	**-0.5**
CUPR	**Culebra, Puert**	**2.99**	**95**	*ePn*	**Pn**	**06 35 59.3**	**-1.7**
CUPR				*eSn*	**Sn**	**06 36 35.7**	**-1.3**
STVI	**Saint Thomas**	**3.30**	**94**	⇑*eP*	**Pn**	**06 36 04.5**	**-0.4**
STVI	**Saint Thomas**	**3.30**	**94**	*ePn*	**Pn**	**06 36 04.6**	**-0.4**
STVI				*eSn*	**Sn**	**06 36 41.3**	**-2.8**
CDVI	**St. Croix**	**3.57**	**103**	*ePn*	**Pn**	**06 36 09.5**	**+0.9**
GRTK	**Grand Turk**	**3.87**	**319**	*ePn*	**Pn**	**06 36 12.7**	**+0.2**
GRTK				*eSn*	**Sn**	**06 36 56.5**	**-1.0**
SMRT	**St. Maarten**	**5.10**	**95**	*ePn*	**Pn**	**06 36 29.3**	**+0.4**
URIC	**Uribia, Colomb**	**7.67**	**207**	*eP*	**Pn**	**06 36 59.7**	**-3.7**
SMRC	**Santa Marta, M**	**9.27**	**218**	*eP*	Pn	06 37 19.1	-5.8
SDV	**Santo Domingo**	**9.88**	**193**	*ePn*	**Pn**	**06 37 32.6**	**-0.6**
CODC	**Agustn Codazz**	**9.89**	**210**	*eP*	**Pn**	**06 37 28.7**	**-4.4**
SMLC	**San Martn de**	**11.17**	**210**	*eP*	Pn	06 37 44.9	-5.4
OCAC	**Ocana**	**11.34**	**205**	*eP*	**Pn**	**06 37 50.2**	**-2.4**
ZARC	**Zaragoza, Cauc**	**12.69**	**210**	*eP*	**Pn**	**06 38 08.9**	**-1.2**
BARC	**Barichara**	**12.80**	**202**	*eP*	**Pn**	**06 38 09.8**	**-2.0**
RUSC	**La Rusia**	**13.42**	**200**	*eP*	**Pn**	**06 38 19.4**	**-0.5**
HELC	**Santa Helena**	**14.14**	**210**	*eP*	**Pn**	**06 38 30.0**	**+1.0**
NORC	**Norcasia**	**14.40**	**207**	*eP*	**Pn**	**06 38 32.2**	**+0.1**
CHIC	**Chingaza**	**14.82**	**201**	*eP*	**Pn**	**06 38 37.5**	**-0.1**
GUY2C	**Guyana, Caldas**	**14.92**	**208**	*eP*	**Pn**	**06 38 38.6**	**-0.3**
RREF	**El Recreo**	**15.20**	**207**	*eP*	**P**	**06 38 46.8**	**+2.3**

*NEIC **28** 06:45:51.8±0.0, 45°.47S×167°.16E, h78km, mb4.1/2, ML4.5(WEL), After WEL.*
WEL 28 06:45:52.3±0.9, 45°S±5°×167°E±°, h63km±7km, M4.2/15, ML4.5/12, MLv4.2/15, Error ellipse: s-maj=0.0km s-min=0.0km az=114.2, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.05**	**139**	*ePn*	Pn	06 46 02.2	+0.6
DCZ				*eSn*	Sn	06 46 09.8	+1.4
DCZ	**Deep Cove**	**0.05**	**139**	P	Pn	06 46 02.2	+0.6
DCZ				S	Sn	06 46 09.7	+1.3
MLZ	**Mavora Lakes**	**0.72**	**86**	*ePn*	Pn	06 46 07.8	+0.8
MLZ				*eSn*	Sn	06 46 18.7	+1.0
MLZ	**Mavora Lakes**	**0.72**	**86**	P	Pn	06 46 07.7	+0.7
MLZ				S	Sn	06 46 19.5	+1.7
WHZ	**Wether Hill Ro**	**0.75**	**129**	*ePn*	Pn	06 46 08.1	+0.8
WHZ				*eSn*	Sn	06 46 20.2	+1.8
WHZ	**Wether Hill Ro**	**0.75**	**129**	P	Pn	06 46 08.2	+0.8
WHZ				S	Sn	06 46 20.0	+1.6
PYZ	**Puysegur Point**	**0.80**	**202**	*ePn*	Pn	06 46 08.3	+0.4
PYZ				*eSn*	Sn	06 46 20.6	+1.2
PYZ	**Puysegur Point**	**0.80**	**202**	P	Pn	06 46 08.3	+0.4
PYZ				S	Sn	06 46 20.8	+1.4
MSZ	**Milford Sound**	**0.95**	**38**	P	Pn	06 46 10.1	+0.3
MSZ				S	Sn	06 46 24.3	+1.5
WKZ	**Wanaka**	**1.48**	**67**	*ePn*	Pn	06 46 17.6	+0.8
WKZ				*eSn*	Sn	06 46 35.1	-0.1
WKZ	**Wanaka**	**1.48**	**67**	P	Pn	06 46 17.6	+0.8
WKZ				S	Sn	06 46 35.8	+0.6
APZ	**The Paps**	**1.54**	**157**	P	Pn	06 46 17.8	+0.3
APZ				S	Sn	06 46 37.1	+0.6
EAZ	**Earnscleugh**	**1.57**	**84**	P	Pn	06 46 18.7	+0.8
SYZ	**Scrubby Hill**	**1.80**	**129**	P	Pn	06 46 21.5	+0.4
TUZ	**Tuapeka**	**1.85**	**108**	P	Pn	06 46 22.7	+1.0
TUZ				S	Sn	06 46 43.7	-0.3
LBZ	**Lake Benmore**	**2.42**	**66**	*ePn*	Pn	06 46 28.7	-0.9
LBZ				*eSn*	Sn	06 46 56.1	-2.0
LBZ	**Lake Benmore**	**2.42**	**66**	P	Pn	06 46 28.7	-0.9
HHSZ	**Highcliff Hill**	**2.49**	**102**	P	Pn	06 46 30.9	+0.4
ODZ	**Otahua Downs**	**2.53**	**83**	*ePn*	Pn	06 46 30.0	-0.9
ODZ				*eSn*	Sn	06 46 58.5	-2.1
ODZ	**Otahua Downs**	**2.53**	**83**	P	Pn	06 46 30.4	-0.6
FOZ	**Fox Glacier**	**2.71**	**47**	*ePn*	Pn	06 46 32.0	-1.5
FOZ	**Fox Glacier**	**2.71**	**47**	P	Pn	06 46 32.4	-1.0
RPZ	**Rata Peaks**	**3.30**	**60**	*ePn*	Pn	06 46 39.6	-1.9
RPZ				*eSn*	Sn	06 47 18.3	-1.2
RPZ	**Rata Peaks**	**3.30**	**60**	P	Pn	06 46 39.8	-1.7
WVZ	**Waitaha Valley**	**3.51**	**49**	P	Pn	06 46 42.5	-1.8
OXZ	**Oxford**	**4.11**	**61**	*ePn*	Pn	06 46 49.8	-2.8
OXZ				*eSn*	Sn	06 47 35.7	-3.7
OXZ	**Oxford**	**4.11**	**61**	P	Pn	06 46 49.8	-2.8
INZ	**Inchbonnie**	**4.13**	**51**	P	Pn	06 46 51.3	-1.5
MQZ	**McQueen's Vall**	**4.32**	**69**	*ePn*	Pn	06 46 53.0	-2.4
MQZ				*eSn*	Sn	06 47 38.0	-6.5
MQZ	**McQueen's Vall**	**4.32**	**69**	P	Pn	06 46 53.3	-2.1
CRLZ	**Canterbury Las**	**4.36**	**67**	*ePn*	Pn	06 46 53.7	-2.2
CRLZ	**Canterbury Las**	**4.36**	**67**	P	Pn	06 46 53.7	-2.2
LTZ	**Lake Taylor**	**4.56**	**56**	*ePn*	Pn	06 46 56.2	-2.6
LTZ	**Lake Taylor**	**4.56**	**56**	P	Pn	06 46 56.3	-2.5
AMCZ	**Amberley**	**4.57**	**62**	P	Pn	06 46 56.6	-2.3
OKCZ	**Okains Bay**	**4.58**	**70**	P	Pn	06 46 57.4	-1.6

GVZ	**Greta Valley S**	**4.92**	**62**	P	Pn	06 47 01.2	-2.4
DSZ	**Denniston Nort**	**5.02**	**44**	P	Pn	06 47 02.7	-2.4
KHZ	**Kahutara**	**5.54**	**59**	*ePn*	Pn	06 47 10.2	-1.8
KHZ	**Kahutara**	**5.54**	**59**	P	Pn	06 47 09.4	-2.6
THZ	**Tophouse**	**5.58**	**51**	*ePn*	Pn	06 47 09.2	-3.5
THZ				*eSn*	Sn	06 48 10.9	-4.6
THZ	**Tophouse**	**5.58**	**51**	P	Pn	06 47 10.0	-2.8
QRZ	**Quartz Range**	**6.07**	**43**	P	Pn	06 47 18.0	-1.4
TUWZ	**Tuamarina**	**6.38**	**54**	P	Pn	06 47 22.1	-1.6
DUWZ	**D'Urville Isla**	**6.80**	**50**	P	Pn	06 47 28.5	-0.8
CAW	**Cannon Point**	**7.24**	**56**	P	Pn	06 47 31.6	-3.7
MTW	**Mount Morrison**	**7.46**	**58**	P	Pn	06 47 34.8	-3.6
MRZ	**Mangatainoka R**	**7.82**	**55**	P	Pn	06 47 40.0	-3.4
NBEZ	**Newall Road No**	**7.93**	**41**	P	Pn	06 47 42.9	-1.9
KHEZ	**Kahui Hut**	**7.98**	**42**	P	Pn	06 47 44.4	-1.2
LREZ	**Lake Rotokare**	**8.04**	**45**	P	Pn	06 47 46.2	-0.1
PKE	**Pukeiti**	**8.05**	**42**	P	Pn	06 47 44.9	-1.6
WAZ	**Wanganui**	**8.12**	**48**	P	Pn	06 47 46.6	-0.8
BFZ	**Birch Farm**	**8.20**	**58**	*ePn*	Pn	06 47 46.4	-2.1
VRZ	**Vera Road**	**8.47**	**45**	P	Pn	06 47 50.5	-1.8
NGZ	**Ngauruhoe**	**8.86**	**48**	P	Pn	06 47 58.6	+0.8
HIZ	**Hauiti**	**9.00**	**43**	*ePn*	Pn	06 47 58.3	-1.1
HIZ	**Hauiti**	**9.00**	**43**	P	Pn	06 47 57.4	-2.0
BKZ	**Black Stump Fm**	**9.35**	**51**	*ePn*	Pn	06 48 06.1	+1.8
TLZ	**Tolley Road**	**9.47**	**44**	P	Pn	06 48 03.0	-3.0
AWAZ	**Awhitu Peninsu**	**10.09**	**37**	P	Pn	06 48 13.2	-1.2
MKAZ	**Moumakai**	**10.28**	**39**	P	Pn	06 48 15.3	-1.7
URZ	**Urewera**	**10.34**	**50**	*ePn*	Pn	06 48 16.4	-1.3
URZ				*eSn*	Sn	06 50 02.6	-9.3
MBAZ	**Motutapu North**	**10.45**	**37**	P	Pn	06 48 18.0	-1.3
WIAZ	**Waiheke Island**	**10.53**	**38**	P	Pn	06 48 20.0	-0.4
WCZ	**Waipu Caves**	**10.95**	**33**	P	Pn	06 48 24.9	-1.2
OUZ	**Omahuta**	**11.33**	**28**	*ePn*	Pn	06 48 30.6	-0.7
OUZ	**Omahuta**	**11.33**	**28**	P	Pn	06 48 30.2	-1.1
TAU	**Tasmania Unive**	**14.42**	**273**	*ePn*	Pn	06 49 09.2	-3.7
TOO	**Toolangi**	**17.96**	**288**	*eP*	Pn	06 50 01.5	+4.0
	6.0nm,1.1s						
WB2	**Warramunga Arr**	**37.07**	**302**	*eP*	P	06 52 54.9	-1.4
	9.8nm,1.4s						

*IDC **28** 06:57:14.0±0.9, 56°.98S×24°.96W, h0km, mb4.5/4, mb1 4.4/5, mb1mx4.0/21, mbtmp4.3/5, ML4.0/1, MS3.7/3, Ms1 3.6/3, ms1mx3.1/22, Error ellipse: s-maj=41.5km s-min=24.6km az=74.0*
*ISCJB **28** 06:57:15.8±0.6, 57°.03S±0°.09×25°.1W±0°.2, h22km, mb4.5/13, MS3.7/3, Error ellipse: s-maj=17.9km s-min=7.6km az=140.4*
*NEIC **28** 06:57:21.2±1.1, 57°.03S×25°.15W, h51km±7km, mb4.7/12, Error ellipse: s-maj=18.1km s-min=7.9km az=102.0*
ISC 28 06:57:17.9±0.7, 57°.0S±0°.1×24°.9W±0°.1, h22km, n42, σ0♀97/40, mb4.7/13, MS3.6/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.09**	**288**	*ePn*	**Pn**	**06 59 02.3**	**+2.2**
VNA1	**Neumayer--Stat**	**15.45**	**159**	P	**Pn**	**07 00 53.4**	**-0.7**
VNA3	**Neumayer Olymp**	**15.68**	**162**	P	**Pn**	**07 00 56.6**	**-0.5**
VNA2	**Neumayer--Watz**	**15.84**	**159**	P	**Pn**	**07 00 57.3**	**-1.9**
SNAA	**Sanae**	**17.36**	**157**	P	**P**	**07 01 21.1**	**+1.4**
SNAA	**Sanae**	**17.36**	**157**	P	**Pn**	**07 01 18.3**	**-0.2**
	0.5nm,0.3s,baz=316,slow=15,SNR=28						
SNAA	**Sanae**	**17.36**	**157**	*ePn*	**Pn**	**07 01 18.5**	**+0.1**
	5.8nm,1.0s						
EFI	**East Falkland**	**19.91**	**271**	*eP*	**P**	**07 01 47.1**	**-0.5**
	72nm,1.3s						
GO09	**Cerro Castillo**	**27.89**	**261**	*eP*	**P**	**07 03 03.9**	**-1.8**
	52nm,1.5s						
QSPA	**South Pole Qui**	**33.24**	**180**	*eP*	**P**	**07 03 52.8**	**-0.3**
	5.6nm,1.4s						
PLCA	**Paso Flores**	**33.40**	**279**	LR	LR	07 17 15.0	
	comp=Z,51nm,18.2s,baz=166,slow=36						
MAW	**Mawson**	**38.63**	**142**	*eP*	**P**	**07 04 40.8**	**+1.9**
	0.9nm,1.0s						
BOSA	**Boshof**	**45.02**	**73**	LR	LR	07 20 31.6	
	comp=Z,68nm,18.6s,baz=221,slow=31						
GO02	**Mina Guanaco**	**45.04**	**296**	*eP*	**P**	**07 05 30.9**	**-1.3**
	5.8nm,0.9s						
VNDA	**Vanda**	**45.67**	**182**	P	**P**	**07 05 36.0**	**-0.2**
	1.1nm,0.6s,baz=186,slow=6.5,SNR=17						
VNDA	**Vanda**	**45.67**	**182**	*eP*	**P**	**07 05 36.1**	**0.0**
LVC	**Limon Verde**	**46.86**	**298**	*eP*	**P**	**07 05 46.0**	**-0.6**
	16nm,1.4s						
PB01	**IPOC Station P**	**48.47**	**299**	*eP*	**P**	**07 05 57.8**	**-0.9**
	11nm,1.5s						
GO01	**Chusmiza**	**49.51**	**300**	*eP*	**P**	**07 06 06.4**	**-0.8**
	5.5nm,0.8s						
PB11	**IPOC Station P**	**49.65**	**300**	*eP*	**P**	**07 06 06.8**	**-1.1**
	9.2nm,1.1s						
MNMC	**Minye Minye**	**50.16**	**300**	*eP*	**P**	**07 06 11.2**	**-0.7**
	13nm,1.3s						
LPAZ	**La Paz**	**51.95**	**303**	P	**P**	**07 06 25.4**	**-0.3**
	5.0nm,0.5s,baz=136,slow=6.0,SNR=44						
LPAZ	**La Paz**	**51.95**	**303**	*eP*	**P**	**07 06 25.4**	**-0.3**
	7.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.30**	**27**	P	**P**	**07 08 47.3**	**-0.1**
	6.7nm,0.3s,baz=188,slow=10,SNR=3.6						
TOA1	**Torodi Ar. Sit**	**73.31**	**27**	*eP*	**P**	**07 08 47.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**84.87**	**149**	LR	LR	07 43 34.6	
	comp=Z,106nm,18.6s,baz=328,slow=33						
ASAR	**Alice Springs**	**97.69**	**160**	P	**P**	**07 10 50.0**	**-0.9**
	0.3nm,0.9s,baz=197,slow=5.0,SNR=4.1						
YKA	**Yellowknife Ar**	**137.72**	**316**	PKP	**PKPdf**	**07 16 37.8**	**-0.8**
	0.3nm,0.5s,baz=134,slow=1.9,SNR=6.1						
YKB5	**Yellowknife Ar**	**137.72**	**316**	*e*PKPdf	**PKPdf**	**07 16 37.8**	**-0.8**
INK	**Inuvik**	**147.34**	**319**	*e*PKPdf	**PKPbc**	**07 16 57.2**	**-0.7**
EPYK	**Eagle Plains**	**147.98**	**315**	*e*PKPbc	**PKPbc**	**07 16 59.1**	**-0.8**
DAWY	**Dawson**	**148.36**	**310**	*e*PKPbc	**PKPbc**	**07 17 00.1**	**-0.9**
SONA0	**Songino Array**	**149.54**	**86**	*e*PKPbc	**PKPbc**	**07 17 04.0**	**-0.5**
SONM	**Songino Array**	**149.54**	**86**	PKPbc	**PKPbc**	**07 17 04.0**	**-0.5**
	1.3nm,0.8s,baz=194,slow=3.5,SNR=5.0						
ILAR	**Eielson Array**	**151.69**	**310**	PKPbc	**PKPbc**	**07 17 07.9**	**-1.0**
	1.3nm,0.6s,baz=144,slow=3.8,SNR=24						
ILB	**Eielson Array**	**151.69**	**310**	*e*PKPbc	**PKPbc**	**07 17 08.8**	**-0.1**
CCB	**Clear Creek Bu**	**152.05**	**310**	*e*PKPdf	**PKPdf**	**07 17 04.3**	**+1.2**
CCB				*e*PKPbc	**PKPbc**	**07 17 08.8**	**-0.8**
WRH	**Wood River Hil**	**152.13**	**309**	*e*PKPbc	**PKPbc**	**07 17 09.9**	**0.0**
SKT	**Skwentna**	**153.11**	**303**	*e*PKPbc	**PKiKP**	**07 17 14.0**	**+1.6**
KTH	**Kantishna Hill**	**153.18**	**307**	*e*PKPbc	**PKPbc**	**07 17 12.5**	**+0.1**
TOLK	**Toolik Lake Re**	**153.22**	**318**	*e*PKPbc	**PKPbc**	**07 17 12.2**	**-0.1**
BPAW	**Bear Paw Mtn.**	**153.31**	**308**	*e*PKPbc	**PKPbc**	**07 17 11.9**	**-0.7**

GUC 28 06:59:09.9±0.7, 22°.95S×68°.95W, h107km±3km, ML2.5, 9C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.34**	**6**	*e*pP	Pn	06 59 25.4	-0.6
LVC	**Limon Verde**	**0.34**	**6**	⇑*i*P	Pn	06 59 25.4	-0.6
LVC				*i* S	Sn	06 59 36.7	-1.3
PB15	**IPOC Station P**	**0.55**	**242**	⇑*i*P	Pn	06 59 26.9	-0.1
PB15				*i* S	Sn	06 59 39.5	-0.3
PB06	**IPOC Station P**	**0.63**	**293**	⇑*i*P	Pn	06 59 27.3	-0.2
PB06				*i* S	Sn	06 59 40.4	-0.4
PB06				IAML		06 59 41.5	
	comp=N,261nm,0.1s						
PB05	**IPOC Station P**	**1.16**	**275**	⇑*i*P	Pn	06 59 32.6	-0.1
PB05				*i* S	Sn	06 59 49.3	-0.7
PB05				IAML		06 59 50.8	
	comp=E,57nm,0.3s						
PB03	**IPOC Station P**	**1.17**	**320**	⇑*e*P	Pn	06 59 32.8	-0.1
PB03				*i* S	Sn	06 59 49.7	-0.4
PB03				IAML		06 59 50.7	
	comp=E,177nm,0.3s						
PB09	**IPOC Station P**	**1.18**	**347**	*e*P	Pn	06 59 33.6	+0.5
PB09				*i* S	Sn	06 59 50.5	+0.1
PB09				IAML		06 59 52.0	
	comp=E,137nm,0.6s						
PB04	**IPOC Station P**	**1.27**	**299**	⇑*e*P	Pn	06 59 33.9	-0.1
PB04				*i* S	Sn	06 59 52.0	-0.3
PB04				IAML		06 59 55.6	
	comp=N,96nm,0.3s						
PB07	**IPOC Station P**	**1.50**	**324**	⇑*i*P	Pn	06 59 36.7	0.0
PB07				*i* S	Sn	06 59 56.7	-0.3
PB07				IAML		06 59 58.4	
	comp=N,87nm,0.2s						
PB10	**IPOC Station P**	**1.58**	**249**	⇑*e*P	Pn	06 59 37.8	+0.3
PB10				*e*S	Sn	06 59 58.0	-0.5
PB10				IAML		07 00 02.4	
	comp=E,27nm,0.6s						
PB02	**IPOC Station P**	**1.85**	**331**	*e*P	Pn	06 59 40.9	0.0
PB02				*i* S	Sn	07 00 04.4	-0.1
PB02				IAML		07 00 07.9	
	comp=E,139nm,0.4s						
PB01	**IPOC Station P**	**1.96**	**345**	⇑*i*P	Pn	06 59 42.5	+0.1
PB01				*i* S	Sn	07 00 07.1	-0.1
PB01				IAML		07 00 09.0	
	comp=E,80nm,0.3s						
GO02	**Mina Guanaco**	**2.28**	**195**	*e*P	Pn	06 59 46.7	+0.1

JMA 28 07:05:54.5, 34°.86N×136°.69E, h38km±1km, M2.6, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUJ	**Tsu 2**	**0.27**	**236**	P	Pn	07 06 01.9	-0.8
TSUJ				S	Sn	07 06 07.3	-2.6
JEG	**Eigenji**	**0.37**	**318**	P	Pn	07 06 03.3	0.0
JEG				S	Sn	07 06 09.4	-0.6
JIE	**Ise**	**0.47**	**178**	P	Pn	07 06 04.7	+0.1
JIE				S	Sn	07 06 12.0	+0.2
JKN2	**Miekihoku**	**0.71**	**209**	P	Pn	07 06 08.0	0.0
JKN2				S	Sn	07 06 17.6	-0.1
JYTA	**Yamagatataniai**	**0.73**	**3**	P	Pn	07 06 08.4	+0.1
JYTA				S	Sn	07 06 18.4	+0.1
JHE	**Heguri**	**0.85**	**256**	P	Pn	07 06 10.2	+0.2
JHE				S	Sn	07 06 21.8	+0.5
JWY	**Kouya**	**1.11**	**235**	P	Pn	07 06 13.6	+0.1
JWY				S	Sn	07 06 28.0	+0.4
JWT	**Wachi**	**1.14**	**292**	P	Pn	07 06 14.4	+0.5
JWT				S	Sn	07 06 29.1	+0.9
TTO2	**TONANKAI O.B.S**	**1.16**	**166**	P	Pn	07 06 14.8	+0.9
TTO1	**TONANKAI O.B.S**	**1.24**	**176**	P	Pn	07 06 15.5	+0.5
TK02	**Tokai 2**	**1.27**	**136**	P	Pn	07 06 15.3	-0.2
TK02				*e*S	Sn	07 06 31.1	0.0
MAT	**Matsushiro**	**2.08**	**36**	P	Pn	07 06 31.2	+4.3
MAT				S	Sn	07 06 57.1	+5.5

*ISCJB **28** 07:13:09.4±0.6, 8°.3S±0°.1×111°.40E±0°.05, h135km±8km, mb3.8/4, Error ellipse: s-maj=20.2km s-min=7.2km az=5.0*
*DJA **28** 07:13:11.9±0.6, 8°S±7°×11°1E±°, h113km±5km, M3.4/9, MLv3.4/9*
*IDC **28** 07:13:14.7±20.0, 7°.98S×111°.67E, h182km±197km, mb3.5/4, mb1 3.6/5, mb1mx3.3/34, mbtmp4.0/5, ML3.7/1, Error ellipse: s-maj=

MRSI	Marisa	5.55 232	P	Pn	07 29 14.0	+1.9
SANI	Sanana	5.92 183	P	Pn	07 29 16.9	-0.3
LUWI	Luwuk	6.07 216	ePn	Pn	07 29 23.2	+4.1
LUWI	Luwuk	6.07 216	P	Pn	07 29 23.3	+4.1
APSI	Ampana	6.69 224	P	Pn	07 29 31.6	+3.8
SIJI	Sorong	6.84 134	P	Pn	07 29 34.0	+4.2
	7.3nm,0.3s,baz=323,slow=9.4,SNR=10					
NLAI	Namlea	7.13 174	P	Pn	07 29 34.5	+0.6
MPSI	Mapaga	7.34 241	P	Pn	07 29 38.6	+1.9
KDI	Kendari	8.64 205	P	Pn	07 29 56.6	+2.0
FAKI	Fak Fak	8.99 139	ePn	Pn	07 30 03.5	+4.1
TTSI	Tana Toraja	9.49 223	P	Pn	07 30 09.1	+2.9
RKPI	Ransiki, Papua	9.51 124	S	Sn	07 31 49.6	-2.5
SPPI	Sidrap Palu	10.20 220	P	Pn	07 30 19.6	+3.6
KAPI	Kappang	11.03 217	LR	LR	07 35 07.9	
	comp=Z,270nm,18.6s,baz=19,slow=40					
KAPI	Kappang	11.03 217	ePn	Pn	07 30 29.8	+2.4
MMRI	Maumere	13.11 198	ePn	P	07 31 06.2	+0.7
EDFI	Ende, Flores	13.39 200	P	Pn	07 31 04.6	+4.8
SOEI	Soe	13.72 189	P	Pn	07 31 07.7	+3.4
SBUM	Sibu	14.17 265	ePn	P	07 31 19.9	+2.6
BATI	Baumata	14.27 191	P	Pn	07 31 15.7	+4.1
PLAI	Plampang	15.26 214	P	Pn	07 31 28.3	+3.5
JAY	Jayapura	15.71 114	LR	LR	07 36 38.9	
	comp=Z,92nm,20.4s,baz=341,slow=33					
JAGI	Jajag, Banyuwa	17.28 225	ePn	P	07 31 55.5	+3.7
	49nm,1.0s					
MTN	Manton Dam	17.31 164	ePn	Pn	07 31 48.7	-2.3
	19nm,0.6s					
FITZ	Fitzroy Crossi	21.87 182	P	P	07 32 41.1	-0.7
	16nm,0.4s,baz=9.2,slow=8.0,SNR=32					
FITZ	Fitzroy Crossi	21.87 182	eP	P	07 32 41.0	-0.9
	65nm,1.2s					
WR1	Warramunga Arr	24.97 162	eP	P	07 33 11.7	-0.7
WRA	Warramunga Arr	24.97 162	P	P	07 33 11.7	-0.7
	12nm,0.4s,baz=340,slow=12,SNR=106					
WB2	Warramunga Arr	24.97 162	eP	P	07 33 11.7	-0.7
	34nm,1.1s					
PSA00	Pilbara Seismi	26.10 194	eP	P	07 33 22.1	-0.5
	31nm,1.1s					
AS31	Alice Springs	28.38 165	eP	P	07 33 42.7	-0.4
	3.7nm,0.6s					
ASAR	Alice Springs	28.38 165	P	P	07 33 42.5	-0.7
	3.7nm,0.7s,baz=346,slow=7.2,SNR=50					
ASAR			PcP	PcP	07 36 54.1	-1.2
	1.1nm,0.6s,baz=356,slow=1.4,SNR=5.0					
ASAR			S	S	07 38 23.5	-4.4
	0.9nm,0.8s,baz=344,slow=20,SNR=4.3					
WHN	Wuhan	28.82 338	P	P	07 33 53.5	+6.6
NJ2	Nanjing	28.87 347	eP	P	07 33 47.0	-0.3
NJ2			pmax	pmax		
	comp=Z,13nm,0.5s					
JNU	Nakatsue	29.38 8	P	P	07 33 51.4	-0.5
	20nm,0.7s,baz=154,slow=3.2,SNR=16					
JNU	Nakatsue	29.38 8	eP	P	07 33 51.7	-0.2
	20nm,0.8s					
CM31	Chiang Mai Arr	30.44 300	eP	P	07 34 00.9	-0.6
	8.4nm,0.3s					
CMAR	Chiang Mai Arr	30.44 300	P	P	07 34 00.9	-0.6
	0.9nm,0.3s,baz=111,slow=7.0,SNR=5.3					
KMI	Kunming	30.98 315	P	P	07 34 06.5	+0.1
KMI			pmax	pmax		
	comp=Z,8.0nm,0.5s					
KMI			pmax	pmax		
	comp=Z,67nm,5.0s					
JHJ	Hachijo jima 2	31.67 22	LR	LR	07 44 43.6	
	comp=Z,48nm,21.8s,baz=280,slow=32					
KS15	Wonju Array Si	33.41 2	eP	P	07 34 27.5	+0.2
	23nm,1.4s					
KSRS	Korea Array	33.42 2	P	P	07 34 27.5	+0.1
	6.8nm,0.8s,baz=179,slow=10,SNR=26					
KSRS			LR	LR	07 50 51.1	
	comp=Z,11nm,18.1s,baz=170,slow=41					
MORW	Morawa	34.24 196	eP	P	07 34 33.4	-1.2
	15nm,1.3s					
MJAR	Matsushiro Arr	34.27 17	P	P	07 34 33.6	-1.3
	1.0nm,0.4s,baz=210,slow=9.4,SNR=7.0					
MJAR			LR	LR	07 47 22.5	
	comp=Z,28nm,21.7s,baz=235,slow=34					
CD2	Chengdu	34.27 324	eP	P	07 34 33.5	-1.5
CD2			pmax	pmax		
	comp=Z,10.0nm,0.5s					
MAJO	Matsushiro	34.27 17	eP	P	07 34 33.6	-1.3
FORT	Forrest	34.53 177	eP	P	07 34 36.5	-0.5
	20nm,0.7s					
NWAO	Narrogin (SRO)	37.63 193	P	P	07 35 02.6	-1.0
	6.8nm,0.3s,baz=23,slow=9.4,SNR=19					
NWAO	Narrogin (SRO)	37.63 193	eP	P	07 35 02.6	-1.0
	41nm,1.3s					
BBOO	Buckleboo	37.66 167	eP	P	07 35 03.7	-0.2
	8.2nm,0.7s					
EIDS	Eidsvold	37.73 142	eP	P	07 35 05.5	+1.0
	13nm,1.4s					
LZH	Lanzhou	38.16 330	eP	P	07 35 09.5	+1.3
LZH			pP	sP	07 35 26.3	+4.9
LZH			sP	pwP	07 35 33.5	+12
LZH			pmax	pmax		
	comp=Z,19nm,1.1s					
STKA	Stephens Creek	38.43 159	P	P	07 35 10.2	-0.2
	4.1nm,0.7s,baz=335,slow=8.6,SNR=9.6					
STKA	Stephens Creek	38.43 159	eP	P	07 35 10.5	+0.1
	1.2nm,0.9s					
HHC	Hu-ho-hao-te	39.11 342	eP	P	07 35 16.3	+0.2
HHC			S	S	07 41 03.0	-11
HHC			pmax	pmax		
	comp=Z,19nm,1.1s					
HHC			pmax	pmax		
	comp=Z,20nm,6.9s					
HHC			LR	LR		
	comp=N,120nm,14.1s					
HHC			LR	LR		
	comp=E,170nm,13.7s					
SHL	Shillong	39.46 306	eP	P	07 35 17.3	-2.0
	16nm,0.6s					
USRK	Ussuriysk Ar.	40.44 6	P	P	07 35 27.3	+0.3
	11nm,0.7s,baz=204,slow=8.4,SNR=22					
USA0B	Ussuriysk Arra	40.44 6	eP	P	07 35 26.7	-0.2
	13nm,0.8s					
MDJ	Mudanjiang	40.65 4	eP	P	07 35 29.0	+0.3
	15nm,0.8s					
ARMA	Armidale	41.83 146	eP	P	07 35 39.8	+1.1
	18nm,1.4s					
DZM	Mont Dzumac	46.96 125	eP	P	07 36 23.8	+4.0
	7.8nm,1.0s					
SONA0	Songino Array	47.01 342	eP	P	07 36 19.1	-0.8
SONM	Songino Array	47.01 342	P	P	07 36 19.1	-0.8
	1.8nm,0.5s,baz=158,slow=8.0,SNR=10					
SONM			PcP	PcP	07 37 50.8	-1.0
	1.8nm,0.7s,baz=167,slow=2.9,SNR=5.3					
SONM			LR	LR	07 56 36.0	
	comp=Z,50nm,20.7s,baz=81,slow=37					
WMQ	Urumqi	52.36 325	eP	P	07 37 00.5	-0.1
WMQ			sP	sP	07 37 23.5	+10
WMQ			pmax	pmax		
	comp=Z,16nm,0.7s					
WMQ			pmax	pmax		
	comp=Z,59nm,4.3s					
WMQ			LR	LR		
	comp=N,86nm,27.1s					
WMQ			LR	LR		
	comp=E,320nm,27.1s					
WMQ			LR	LR		
	comp=Z,160nm,19.1s					
PETK	Petropavlovsk-	55.42 22	P	P	07 37 23.2	+0.4
	2.6nm,0.7s,baz=183,slow=2.7,SNR=6.2					
MK31	Makanchi Array	57.19 325	eP	P	07 37 33.3	-2.2
MK32	Makanchi Array	57.19 325	eP	P	07 37 32.9	-2.6
MK32			ePcP	PcP	07 38 27.8	-2.0
MKAR	Makanchi Array	57.19 325	P	P	07 37 32.9	-2.6
	2.1nm,0.5s,baz=118,slow=7.4,SNR=22					
MKAR			PcP	PcP	07 38 27.8	-2.0
	5.8nm,0.7s,baz=120,slow=4.6,SNR=16					
KSH	Kashi	57.64 315	eP	P	07 37 40.5	+1.5
KSH			PP	PP	07 39 53.0	+5.9
KSH			S	S	07 45 33.0	-2.2
KSH			SS	SS	07 49 25.0	-0.9
KSH			pmax	pmax		
	comp=Z,18nm,1.1s					
KSH			pmax	pmax		
	comp=Z,230nm,4.3s					
KSH			LR	LR		
	comp=N,1μm,14.2s					
KSH			LR	LR		
	comp=E,700nm,12.6s					
KSH			LR	LR		
	comp=Z,200nm,20.4s					

KDJ	Kajisay	57.96 318	eP	P	07 37 38.7	-2.5
	3.7nm,0.9s					
YAK	Yakutsk	58.05 2	eP	P	07 37 40.5	-0.7
	25nm,0.5s					
KURK	Kurchatov	61.38 328	eP	P	07 38 01.8	-2.7
	5.8nm,0.8s					
GAR	Garm	61.52 313	eP	P	07 38 03.2	-2.5
	14nm,0.9s					
SEY	Seymchan	61.95 13	P	P	07 38 09.1	+1.0
	3.2nm,1.0s,baz=205,slow=12,SNR=4.7					
LBZ	Lake Benmore	62.05 146	eP	P	07 38 09.4	+0.4
	20nm,1.4s					
KK31	Karatay Array	62.84 317	eP	P	07 38 12.4	-2.0
	4.4nm,1.1s					
BRVK	Borovoye	67.03 327	eP	P	07 38 38.8	-2.6
	5.0nm,0.9s					
TIXI	Tiksi	67.68 1	P	P	07 38 43.9	-1.2
	3.4nm,0.4s,baz=206,slow=6.6,SNR=7.4					
ABKAR	Akbulak array	71.77 321	eP	P	07 39 07.2	-3.6
	2.1nm,0.6s					
MWH	Moku'aweowe	77.47 71	eP	P	07 39 46.1	+1.0
	108nm,0.9s					
SII	Sitkinak Islan	80.96 33	eP	P	07 40 03.8	+1.0
	18nm,1.2s					
KDAK	Kodiak Island	81.96 32	P	P	07 40 08.5	+0.5
	9.8nm,0.7s,baz=263,slow=4.4,SNR=22					
KDAK	Kodiak Island	81.96 32	eP	P	07 40 08.7	+0.7
	11nm,0.6s					
CNPM	China Poot	82.81 31	eP	P	07 40 12.5	+0.1
	11nm,1.2s					
BPAW	Bear Paw Mtn.	83.31 26	eP	P	07 40 15.7	+0.8
	5.8nm,1.0s					
MLY	Manley	83.49 25	eP	P	07 40 15.9	0.0
	8.0nm,0.8s					
VNDA	Vanda	83.65 173	P	P	07 40 15.4	-1.0
	1.2nm,0.6s,baz=321,slow=6.2,SNR=18					
VNDA	Vanda	83.65 173	eP	P	07 40 15.6	-0.7
	1.6nm,0.7s					
RC01	Rabbit Creek A	83.66 29	eP	P	07 40 16.4	-0.4
	12nm,0.9s					
MCK	McKinley	84.19 26	eP	P	07 40 19.9	+0.4
	5.6nm,0.7s					
RND	Reindeer	84.20 27	eP	P	07 40 19.5	-0.1
	6.0nm,0.8s					
TOLK	Toolik Lake Re	84.23 21	eP	P	07 40 20.9	+1.3
	9.0nm,0.8s					
SML	Sawmill	84.37 28	eP	P	07 40 20.1	-0.4
	13nm,0.8s					
SBA	Scott Base	84.56 172	eP	P	07 40 21.9	+0.9
	3.2nm,1.0s					
CCB	Clear Creek Bu	84.72 26	eP	P	07 40 21.4	-0.7
	3.3nm,1.0s					
SCM	Sheep Creek Mo	84.85 28	eP	P	07 40 22.9	0.0
	11nm,1.1s					
HDA	Harding Lake	85.08 26	eP	P	07 40 22.7	-1.2
	2.2nm,0.6s					
ILAR	Eielson Array	85.12 25	P	P	07 40 22.5	-1.7
	0.5nm,0.5s,baz=248,slow=5.0,SNR=13					
BR101	Keskin Array S	89.61 310	eP	P	07 40 43.3	-3.3
BRTR	Keskin Array B	89.61 310	P	P	07 40 43.3	-3.3
	0.9nm,0.8s,baz=126,slow=6.3,SNR=4.5					
INK	Inuvik	90.15 21	P	P	07 40 47.2	-1.0
	1.9nm,0.9s,baz=248,slow=2.1,SNR=6.9					
ARCES	ARCESS Array B	90.15 340	P	P	07 40 45.7	-2.6
	3.8nm,0.6s,baz=82,slow=6.0,SNR=31					
ARE0	ARCESS Array S	90.15 340	eP	P	07 40 45.4	-2.8
HAMF	Hammerfest	90.52 341	eP	P	07 40 47.3	-2.6
HEF	Hetta	91.04 339	eP	P	07 40 49.4	-3.1
HEF			e		07 41 11.3	
KTK1	Kautokeino	91.05 339	eP	P	07 40 48.9	-3.5
FINES	FINESS Array B	91.49 332	P	P	07 40 51.6	-3.0
	1.0nm,0.4s,baz=102,slow=4.5,SNR=9.4					
KIF	Kilpisjarvi	91.90 340	eP	P	07 40 53.3	-3.0
KIF			e		07 41 10.9	
TRO	Tromso	92.36 340	eP	P	07 40 55.9	-2.5
NB2	NORSAR Subarra	98.46 334	P	P	07 41 22.9	-3.6
	comp=Z,1.3nm,0.6s,baz=67,slow=4.6					
NOA	NORSAR Array B	98.46 334	P	P	07 41 23.1	-3.4
	comp=Z,2.8nm,0.8s,baz=66,slow=4.5,SNR=10					
YKA	Yellowknife Ar	99.50 24	P	Pdif	07 41 30.4	-0.6
	comp=Z,0.5nm,0.6s,baz=300,slow=4.7,SNR=6.8					
C40A	Isle Royale Na	119.77 27	ePKPdf	PKPdf	07 46 39.4	+0.8
TXAR	Lajitas Array	121.80 52	PKP	PKPdf	07 46 42.6	-0.6
	comp=Z,0.3nm,0.6s,baz=222,slow=1.7,SNR=5.3					
ACON	Acoyapa	144.93 63	ePKPbc	PKPbc	07 47 23.8	-1.9
TRQA	Tornquist	145.17 168	ePKPbc	PKPbc	07 47 24.5	-1.3

*JMA **28** 07:31:28.8±0.4, 22°.20N×121°.44E, h14km, M3.7*
*ISCJB **28** 07:31:29.0±0.4, 22°.18N±0°.03×121°.48E±0°.02, h22km±4km,*
Error ellipse: s-maj=5.3km s-min=3.7km az=173.5
*TAP **28** 07:31:29.9, 22°.20N×121°.40E, h21km, ML3.8, B*
ISC 28 07:31:29.3±1.0, 22°.20N±0°.03×121°.44E±0°.03, h27km±9km,
n81, σ1°12/107, 8D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.19	146	↓iP	Pb	07 31 35.2	+0.2
	baz=132						
LAY				S	Sb	07 31 39.4	+0.4
	baz=132						
TAW	Tawu	0.53	288	P	Pb	07 31 39.6	-0.3
	baz=288						
TAW				S	Sb	07 31 46.6	-0.7
	baz=288						
EAST	Anshuo	0.58	289	↓iP	Pb	07 31 40.5	-0.4
	baz=290						
EAST				S	Sb	07 31 47.6	-1.1
	baz=290						
TSEB	Hengchuen, Pin	0.58	239	eP	Pb	07 31 41.4	+0.5
	baz=251						
TSEB				S	Sn	07 31 50.3	-0.1
	baz=251						
TTN	Taitung	0.61	334	P	Pn	07 31 42.4	+0.1
	baz=347						
TTN				eS	Sn	07 31 51.9	+0.6
	baz=347						
TWKBT	Hengchun	0.63	246	↓P	Pb	07 31 41.6	-0.2
	baz=254						
TWKBT				S	Sb	07 31 49.4	-0.9
	baz=254						
TWK1	Hengchun	0.64	247	↓iP	Pb	07 31 41.5	-0.3
	baz=254						
TWK1				S	Sb	07 31 49.7	-0.8
	baz=254						
TWGBT	Beinan	0.70	332	↓P	Pb	07 31 42.3	-0.7
	baz=320						
TWGBT				eS	Sb	07 31 51.1	-1.1
	baz=320						
TWG	Pinlang	0.71	331	P	Pb	07 31 42.2	-0.8
	baz=320						
TWG				eS	Sb	07 31 51.0	-1.4
	baz=320						
SCZT	Fangliau	0.78	283	↓P	Pb	07 31 43.6	-0.6
	baz=291						
MASBT	Mashibuluo	0.85	299	eP	Pb	07 31 44.8	-0.7
	baz=300						
CHKT	Chengkung	0.90	356	eP	Pb	07 31 45.5	-0.8
	baz=5.0						
SSD	Sandimen	0.92	306	eP	Pn	07 31 45.6	-0.9
	baz=314						
WLCH	Liuqiu	0.99	279	eP	Pb	07 31 49.6	+1.8
	baz=279						
TWP	Hsiaoliuchiu	1.01	279	eP	Pb	07 31 49.7	+1.7
	baz=278						
SGLT	Jiouru	1.02	301	eP	Pb	07 31 50.0	+1.7
	baz=312						
ELDTW	Lidau	1.06	339	eP	Pb	07 31 49.1	+0.1
	baz=341						
TWM1	Shoushan	1.13	304	eP	Pb	07 31 51.8	+1.7
	baz=304						
TWF1	Yuli	1.16	354	eP	Pn	07 31 49.5	-0.2
	baz=343						
SNJT	Kaohsiung City	1.16	299	eP	Pb	07 31 51.6	+0.9
	baz=299						
WSSB	Gushan	1.17	292	eP	Pb	07 31 51.4	+0.5
	baz=292						
SGST	Jiashian	1.18	318	eP	Pb	07 31 51.1	0.0
	baz=324						
YULB	Yu-li	1.20	354	eP	Pn	07 31 50.5	+0.2
	baz=343						
HGSD	Ruisui	1.29	359	eP	Pb	07 31 53.1	+0.2
	baz=14						
CHN1	Nanshi	1.29	320	eP	Pb	07 31 53.9	+0.9
	baz=320						
CHN1				eS	Sb	07 32 11.1	+1.9
	baz=320						

EHY	Hungye	1.31 355	eP	Pn	07 31 52.0	+0.1
	baz=346					
TPUB	Ta-pu	1.33 326	eP	Pb	07 31 53.1	-0.5
	baz=327					
TPUB			eS	Sb	07 32 11.0	+0.9
	baz=327					
SNST	Tainan City	1.34 320	eP	Pb	07 31 53.9	+0.2
	baz=320					
YUS	Yu-Shan	1.36 341	eP	Pn	07 31 53.3	+0.3
	baz=342					
TWK	Hsinying	1.38 321	eP	Pb	07 31 54.6	+0.1
	baz=321					
TWK			eS	Sb	07 32 12.4	+0.7
	baz=321					
CHN4	Tsaushan	1.39 326	eP	Pb	07 31 54.6	0.0
	baz=338					
CHN4			eS	Sb	07 32 15.0	+3.1
	baz=338					
ALS	Alishan	1.43 336	eP	Pb	07 31 55.8	+0.3
	baz=337					
ALS			eS	Sb	07 32 15.4	+2.0
	baz=337					
EGFH	Guangfu	1.46 360	eP	Pb	07 31 55.0	-0.9
	baz=349					
CHN5	Tsauling	1.56 333	eP	Pb	07 31 57.5	-0.1
	baz=334					
CHN5			eS	Sb	07 32 17.9	+1.0
	baz=334					
VWDT	VWDT	1.57 350	eP	Pb	07 31 57.1	-0.6
	baz=346					
WHYT	Xinyi Township	1.58 340	eP	Pb	07 31 57.6	-0.4
	baz=341					
CHY	Chiayi	1.60 324	eP	Pb	07 31 57.0	-1.1
	baz=325					
ESL	Shilin	1.61 360	eP	Pn	07 31 57.1	+1.1
	baz=350					
SSLB	Suanglung	1.64 344	eP	Pb	07 31 57.9	-1.1
	baz=355					
WDLH	Douliu	1.70 331	eP	Pb	07 31 59.5	-0.4
	baz=313					
WJS	Zhushan	1.74 338	eP	Pn	07 31 59.2	+1.4
	baz=321					
SMLT	Sun Moon Lake	1.75 344	P	Pb	07 32 00.3	-0.5
	baz=345					
SMLT			eS	Sb	07 32 22.2	-0.2
	baz=345					
OWD	Renai	1.77 352	eP	Pb	07 31 59.9	-1.2
	baz=5.0					
WNT	Mingjian	1.81 338	eP	Pb	07 32 01.0	-0.8
	baz=320					
CHGB	Renai	1.87 353	eP	Pn	07 32 00.6	+0.8
	baz=5.0					
TWD	Chiawan	1.88 4	eP	Pn	07 32 00.3	+0.6
	baz=17					
WHF	Hehuan Shan	1.94 355	eP	Pn	07 32 01.7	+0.7
	baz=8.0					
WDGT	Dungji	1.95 303	↓↓P	Pn	07 32 00.8	+0.1
	baz=302					
WDGT			eS	Sn	07 32 23.4	-0.9
	baz=302					
NACB	Ninganchiao	1.97 4	eP	Pn	07 32 01.1	+0.1
	baz=354					
ETLH	Xiulin Townshi	2.00 1	eP	Pn	07 32 02.8	+1.4
	baz=2.0					
TWT	Tachien	2.06 353	eP	Pb	07 32 05.8	-0.4
	baz=5.0					
VCHM	Qimei	2.11 299	↓↓P	Pn	07 32 03.0	+0.1
	baz=298					
VCHM			eS	Sn	07 32 26.8	-1.4
	baz=298					
WHP	Taichung City	2.12 348	eP	Pb	07 32 05.5	-1.6
	baz=359					
PHUB	P'eng-hu	2.16 308	P	Pn	07 32 03.4	-0.2
	baz=307					
PHUB			eS	Sn	07 32 27.8	-1.7
	baz=307					
PNG	Penghu	2.21 308	eP	Pn	07 32 04.3	+0.1
	baz=308					
NNSB	Datong	2.22 359	eP	Pn	07 32 05.6	+1.1
	baz=360					
NNS	Nan Shan	2.23 358	eP	Pb	07 32 08.2	-0.9
	baz=12					
ENA	Nanau	2.24 7	eP	Pn	07 32 05.2	+0.6
	baz=357					
NANB	Nanao	2.24 7	eP	Pn	07 32 05.8	+1.1
	baz=357					
NSY	Sanyi	2.29 344	eP	Pn	07 32 07.5	+2.1
	baz=329					
PTSB	Yuanli	2.34 343	eP	Pn	07 32 06.7	+0.7
	baz=327					
EOS1	EOS1	2.42 15	eP	Pn	07 32 08.7	+1.6
	baz=17					
TWC	Suao	2.43 9	eP	Pn	07 32 09.1	+1.8
	baz=11					
NSTT	Nanjuang	2.46 351	eP	Pb	07 32 11.1	-1.7
	baz=336					
YHNB	Yeheng	2.46 359	eP	Pn	07 32 09.7	+1.9
	baz=11					
NSK	Sanguang	2.47 358	eP	Pn	07 32 09.8	+1.9
	baz=11					
JYNG	Yonagunijimaku	2.64 31	eS	Sn	07 32 41.2	0.0
YOJ	Yonaguni jima	2.68 32	eP	Pn	07 32 11.8	+1.2
	baz=34					
YOJ	Yonaguni jima	2.68 32	P	Pn	07 32 13.4	+2.7
YOJ			eS	Sn	07 32 44.6	+2.4
TIPB	Shuangxi	2.78 7	eP	Pn	07 32 14.6	+2.5
	baz=358					
HATJ	Hateruma jima	2.86 49	P	Pn	07 32 13.6	+0.4
HATJ			eS	Sn	07 32 45.1	-1.6
IRIF	Iriomote-Funau	3.00 44	P	Pn	07 32 15.9	+0.9
IRIF			eS	Sn	07 32 50.0	-0.1
JKRS	Kuro-shima	3.12 49	P	Pn	07 32 17.7	+1.0
JKRS			S	Sn	07 32 52.1	-1.0
JIJ	Ishigaki jima	3.29 49	P	Pn	07 32 19.3	+0.2
JIJ			eS	Sn	07 32 54.9	-2.5
PTMZ	Houxiangcun	3.54 324	eP	Pn	07 32 23.1	+0.6
	baz=322					
JISG	Ishigakijimahi	3.55 47	P	Pn	07 32 23.1	+0.4
JISG			eS	Sn	07 33 02.2	-1.6
KNMB	Chin-men Tao	3.60 309	eP	Pn	07 32 23.8	+0.4
	baz=307					
ZPLA	Ao Xicun	3.81 298	eP	Pn	07 32 26.6	+0.4
	baz=295					
JTJ	Tarama	3.86 50	P	Pn	07 32 27.7	+0.8
JTJ			eS	Sn	07 33 10.1	-1.3
AXDP	Jialang	4.17 311	eP	Pn	07 32 31.5	+0.3
	baz=308					
ZZJH	Jiuhuzhen	4.17 304	eP	Pn	07 32 31.5	+0.4
	baz=301					

*KRSC **28** 07:37:43.6±0.9, 56°.12N×160°.93E, h174km±7km, ML4.2*
*ISCJB **28** 07:37:44.4±0.3, 56°.13N±0°.03×160°.81E±0°.07,*
h175km±2km, mb3.7/17, Error ellipse: s-maj=6.9km
s-min=4.5km az=29.1
*IDC **28** 07:37:46.2±2.2, 56°.22N×160°.58E, h171km±23km,*
mb3.5/18, mb1 3.6/20, mb1mx3.5/51, mbtmp3.9/20, Error
ellipse: s-maj=20.3km s-min=11.8km az=173.0
ISC 28 07:37:45.5±0.6, 56°.09N±0°.04×160°.80E±0°.05, h171km±4km,
n64, σ1°08/83, mb3.5/17, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CIRR	Tsirk	0.04	314	eP	Pn	07 38 08.3	-0.1
CIRR				eS	Sn	07 38 25.5	-0.4
LGNR	Loginova	0.06	267	eP	Pn	07 38 08.3	-0.3
LGNR				eS	Sn	07 38 27.2	+1.0
BZGR	Bezymyannyi-Gr	0.16	202	eP	Pn	07 38 08.4	-0.1
BZGR				eS	Sn	07 38 26.8	+0.8
KRSR	Krestovskiy	0.19	315	eP	Pn	07 38 07.6	-0.9
KRSR				eS	Sn	07 38 25.5	-0.6
BZWR	Bezymyannyi-We	0.21	235	eP	Pn	07 38 08.3	-0.3
BZMR	Bezymyannaya	0.23	229	eP	Pn	07 38 08.3	-0.3
BZMR				eS	Sn	07 38 26.5	+0.2
KLY	Klyuchi	0.24	340	eP	Pn	07 38 07.8	-0.6
KLY				eS	Sn	07 38 26.0	-0.1
KIRR	Kirishev	0.29	243	eP	Pn	07 38 08.2	-0.6
KIRR				eS	Sn	07 38 26.2	-0.3
KPT	Kopyto	0.35	250	eP	Pn	07 38 08.4	-0.5
KOZ	Kozyrevsk	0.52	267	eP	Pn	07 38 08.9	-0.5
BDR	Baidarnaya	0.53	25	eP	Pn	07 38 09.2	-0.3
BDR				eS	Sn	07 38 28.6	+0.5
SRKR

SMKR eS **Sn** **07 38 28.7 -0.1**
SRDR Sredinnyy 0.65 291 eP **Pn** **07 38 09.0 -1.1**
SRDR eS **Sn** **07 38 27.9 -1.1**
TUMR Tumrok 0.89 205 eP **Pn** **07 38 12.3 +0.6**
TUMR eS **Sn** **07 38 33.1 +1.4**
TUMD Tumrok D 0.91 195 eP **Pn** **07 38 11.7 -0.1**
TUMD eS **Sn** **07 38 32.2 +0.3**
KZV Kizimen 1.02 197 eP **Pn** **07 38 12.7 0.0**
KZV eS **Sn** **07 38 33.7 +0.2**
KBG Krutoberegovo 1.08 80 eP **Pn** **07 38 12.2 -0.7**
KBG eS **Sn** **07 38 33.8 -0.2**
KBTR Krutoberegovo 1.14 83 eP **Pn** **07 38 12.6 -0.8**
KBTR eS **Sn** **07 38 32.7 -2.2**
ESO Esso 1.19 263 eP **Pn** **07 38 13.3 -0.6**
MKZ Mys Kozlova 1.62 161 eP **Pn** **07 38 17.2 -0.7**
MKZ eS **Sn** **07 38 42.5 -0.4**
GNL Ganaly 2.91 216 eP **Pn** **07 38 33.4 +0.6**
KRX Arik 3.00 205 eP **Pn** **07 38 35.2 +1.2**
SDLR Sedlovina 3.03 202 eP **Pn** **07 38 35.4 +1.2**
SPN Mys Shipunski 3.03 189 eP **Pn** **07 38 32.1 -2.0**
SPN eS **Sn** **07 39 08.3 -3.5**
KRER Koryakskii 3.03 204 eP **Pn** **07 38 35.5 +1.2**
NLC Nalytchevo 3.04 197 P **Pn** **07 38 34.0 -0.2**
NLC eS **Sn** **07 39 10.8 -1.3**
SMAR Somma 3.06 203 eP **Pn** **07 38 35.5 +0.8**
BKI Bering 3.06 105 eP **Pn** **07 38 34.4 0.0**
BKI eS **Sn** **07 39 11.6 -0.8**
AVH Avacha 3.07 204 eP **Pn** **07 38 36.0 +1.3**
UGLR Uglovaya 3.10 203 eP **Pn** **07 38 36.0 +0.9**
DALK Dalny 3.29 202 eP **Pn** **07 38 37.2 -0.1**
DALK eS **Sn** **07 39 17.5 0.0**
PET Petropavlovsk 3.31 203 eP **Pn** **07 38 38.0 +0.4**
OSSR Ossora 3.40 20 eP **Pn** **07 38 37.9 -0.6**
PETK Petropavlovsk- 3.49 212 P **Pn** **07 38 40.4 +0.6**
4.4nm,0.3s,baz=58,slow=15,SNR=55
KRMR Karymshinskiy 3.62 207 eP **Pn** **07 38 41.4 0.0**
APC Apacha 3.81 215 eP **Pn** **07 38 45.6 +1.7**
RUS Russkaya 3.90 201 eP **Pn** **07 38 44.0 -1.0**
MTVR Mutnovka 3.92 204 eP **Pn** **07 38 46.5 +1.0**
ASAK Asacha 4.08 206 eP **Pn** **07 38 47.6 +0.1**
KDTR Khodutka, Kamc 4.58 202 eP **Pn** **07 38 52.0 -1.7**
KDTR eS **Sn** **07 39 43.1 -4.0**
KLR Kul'dur 18.81 261 P **P** **07 41 52.1 +0.2**
0.2nm,0.3s,baz=50,slow=14,SNR=4.0
TIXI Tiksi 20.58 332 P **P** **07 42 11.1 +0.5**
13nm,0.8s,baz=113,slow=6.9,SNR=14
ILAR Eielson Array 26.48 50 P **P** **07 43 06.5 +0.2**
0.5nm,0.5s,baz=265,slow=7.3,SNR=5.8
INK Inuvik 31.28 41 P **P** **07 43 49.4 +0.6**
1.0nm,0.9s,baz=324,slow=8.7,SNR=3.0
SONM Songino Array 33.72 279 P **P** **07 44 10.4 0.0**
0.9nm,0.4s,baz=63,slow=10,SNR=5.9
H11N2 WAKE ISLAND Hy 36.59 170 T T 08 24 00.7
baz=357,slow=76,SNR=6.5
H11N3 WAKE ISLAND Hy 36.60 170 T T 08 24 01.4
baz=357,slow=76,SNR=8.5
H11N1 WAKE ISLAND Hy 36.60 170 T T 08 24 03.0
baz=357,slow=76,SNR=7.2
YKA Yellowknife Ar 40.71 45 P **P** **07 45 09.2 +0.4**
0.8nm,0.7s,baz=302,slow=7.8,SNR=8.2
KURBB Kurchatov Arra 46.65 300 P **P** **07 45 55.9 -0.4**
0.7nm,0.4s,baz=57,slow=8.0,SNR=5.3
MKAR Makanchi Array 47.28 294 P **P** **07 46 00.6 -0.7**
0.4nm,0.4s,baz=58,slow=8.5,SNR=6.3
ARCES ARCESS Array B 50.57 341 P **P** **07 46 23.8 -2.2**
2.0nm,0.9s,baz=22,slow=9.8,SNR=3.0
AAK Ala-Archa 54.16 295 P **P** **07 46 52.5 -0.4**
2.2nm,0.5s,baz=79,slow=5.2,SNR=5.6
NVAR Mina Array Bea 54.39 73 P **P** **07 46 57.0 +2.2**
0.8nm,0.9s,baz=273,slow=8.8,SNR=3.6
PDAR Pinedale Array 55.74 63 P **P** **07 47 05.9 +1.5**
0.2nm,0.5s,baz=318,slow=2.1,SNR=3.6
FINES FINESS Array B 57.54 336 P **P** **07 47 15.2 -1.2**
2.3nm,0.7s,baz=20,slow=8.5,SNR=8.8
NB2 NORSAR Subarra 60.78 344 P **P** **07 47 37.7 -1.0**
comp=Z,0.8nm,0.6s,baz=19,slow=6.9
NOA NORSAR Array B 60.78 344 P **P** **07 47 38.0 -0.7**
comp=Z,0.8nm,0.5s,baz=19,slow=6.9,SNR=7.5
GEYT Alibeck 65.82 302 P **P** **07 48 11.8 -0.4**
comp=Z,3.2nm,0.7s,baz=43,slow=5.0,SNR=7.3
KBZ Khabaz 67.65 316 P **P** **07 48 23.5 0.0**
comp=Z,3.5nm,0.8s,baz=81,slow=2.2,SNR=8.6
TXAR Lajitas Array 69.12 68 P **P** **07 48 34.6 +1.5**
comp=Z,0.5nm,0.6s,baz=304,slow=4.5,SNR=6.4
BRTR Keskin Array B 74.57 320 P **P** **07 49 04.6 -0.9**
comp=Z,0.7nm,0.8s,baz=40,slow=2.5,SNR=3.2
ASAR Alice Springs 82.66 205 P **P** **07 49 50.0 +0.5**
comp=Z,0.3nm,0.3s,baz=18,slow=4.9,SNR=4.1

ISCJB ***28*** *07:42:29.4±0.7, 17°.9S±0°.2×177°.9W±0°.2, h590km, mb3.8/11, Error ellipse: s-maj=30.7km s-min=13.4km az=145.9*
IDC ***28*** *07:42:33.6±4.7, 17°.92S×177°.98W, h629km±60km, mb3.3/11, mb1 3.6/12, mb1mx3.3/35, mbtmp4.3/12, Error ellipse: s-maj=24.7km s-min=21.6km az=102.0*
ISC 28 07:42:30.5±0.8, 17°.9S±0°.2×177°.9W±0°.2, h590km, n14, σ0 877/14, mb3.9/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.33**	**252**	P	**P**	**07 45 43.1**	**+0.9**
0.3nm,0.3s,baz=127,slow=15,SNR=6.1							
CTA	**Charters Tower**	**33.96**	**260**	P	**P**	**07 48 26.7**	**+0.2**
4.0nm,0.6s,baz=90,slow=12,SNR=7.3							
STKA	**Stephens Creek**	**39.11**	**241**	P	**P**	**07 49 08.7**	**+0.3**
3.2nm,0.7s,baz=84,slow=14,SNR=5.9							
WRA	**Warramunga Arr**	**45.15**	**259**	P	**P**	**07 49 55.4**	**-0.6**
1.8nm,0.4s,baz=88,slow=8.4,SNR=16							
ASAR	**Alice Springs**	**45.30**	**254**	P	**P**	**07 49 56.6**	**-0.4**
5.5nm,0.6s,baz=87,slow=8.5,SNR=58							
VNDA	**Vanda**	**60.55**	**185**	P	**P**	**07 51 43.8**	**-0.4**
1.2nm,0.7s,baz=356,slow=7.5,SNR=14							
PETK	**Petropavlovsk-**	**73.76**	**345**	P	**P**	**07 53 05.8**	**+0.5**
3.4nm,0.8s,baz=111,slow=8.1,SNR=4.6							
NVAR	**Mina Array Bea**	**79.03**	**44**	P	**P**	**07 53 35.7**	**+1.0**
2.0nm,0.7s,baz=224,slow=9.0,SNR=15							
TXAR	**Lajitas Array**	**85.53**	**57**	P	**P**	**07 54 08.6**	**+1.1**
2.1nm,0.7s,baz=222,slow=5.3,SNR=27							
ILAR	**Eielson Array**	**85.72**	**13**	P	**P**	**07 54 06.5**	**-0.9**
0.8nm,0.6s,baz=218,slow=5.0,SNR=13							
PDAR	**Pinedale Array**	**86.96**	**43**	P	**P**	**07 54 14.2**	**0.0**
0.8nm,0.7s,baz=218,slow=3.4,SNR=11							
YKA	**Yellowknife Ar**	**94.06**	**25**	P	**P**	**07 54 45.3**	**-0.8**
0.7nm,0.8s,baz=242,slow=4.1,SNR=5.9							
BRTR	**Keskin Array B**	**145.11**	**315**	PKPbc	**PKPdf**	**08 01 02.1**	**+0.1**
0.6nm,0.5s,baz=93,slow=2.9,SNR=3.1							
GERES	**GERESS Array B**	**147.69**	**346**	PKPbc	**PKPbc**	**08 01 08.7**	**-0.9**
0.5nm,0.2s,baz=42,slow=2.2,SNR=3.9							

IDC ***28*** *07:45:15.9±0.9, 23°.03S×171°.45E, h0km, mb4.3/13, mb1 4.5/15, mb1mx4.3/32, mbtmp4.4/15, ML4.8/2, MS4.4/19, Ms1 4.4/19, ms1mx4.4/21, Error ellipse: s-maj=26.7km s-min=20.8km az=140.0*
MOS ***28*** *07:45:21.7±1.8, 22°.81S×171°.21E, h33km, mb5.1/16, MS4.8/9, Error ellipse: s-maj=11.1km s-min=9.9km az=127.0*
BJI ***28*** *07:45:21.0±0.0, 22°.80S×171°.30E, h35km, mb5.0/25, mB5.2/21, Ms5.0/15, Ms7 4.7/11*
ISCJB ***28*** *07:45:23.1±0.2, 22°.89S±0°.04×171°.12E±0°.04, h49km, mb4.7/55, MS4.6/35, Error ellipse: s-maj=5.9km s-min=5.5km az=43.1*
NEIC ***28*** *07:45:23.6±2.3, 22°.81S×171°.23E, h38km±6km, mb4.9/72, Error ellipse: s-maj=17.2km s-min=14.1km az=48.0*
GCMT ***28*** *07:45:23.5±0.1, 22°.95S±0°.01×171°.22E±0°.01, h15km, MW5.3/107, Moment Tensor Solution. s85,c150; s107,c178; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr0.94±.02; Mθθ-0.94±.02; Mφφ0.00±.01; Mrθ0.91±.06; Mθφ0.17±.01; Mφr-0.09±.05; Best double couple: M0:1.32100×10^17 NP1:φs97.00000°, δ67.00000°, λ88.00000°. NP2:φs283.00000°, δ23.00000°, λ95.00000°. Principal axes: T 1.3040, Plg68.0000°, Azm3.0000°; N 0.0340, Plg2.0000°, Azm98.0000°; P -1.3370, Plg22.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 28 07:45:23.7±0.4, 22°.85S±0°.06×171°.35E±0°.06, h49km, n220, σ1°58/224, mb4.8/55, MS4.7/36, 8C-13D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.37**	**293**	*e*Pn	**Pn**	**07 46 11.6**	**-2.2**
PINNC	**Pines Island,**	**3.61**	**273**	*e*Pn	**Pn**	**07 46 14.0**	**-3.2**
ONTNC	**Ouen Toro**	**4.56**	**276**	*e*Pn	**Pn**	**07 46 27.7**	**-2.5**
ONTNC				*e*Sn	**Sn**	**07 47 26.0**	**+4.1**
DZM	**Mont Dzumac**	**4.61**	**279**	Pn	**Pn**	**07 46 27.1**	**-3.8**
7.8nm,0.3s,baz=132,slow=13,SNR=67							
DZM				Sn	**Sn**	**07 47 20.0**	**-3.2**
9.2nm,0.3s,baz=136,slow=23,SNR=2.6							
DZM	**Mont Dzumac**	**4.61**	**279**	*e*Pn	**Pn**	**07 46 27.8**	**-3.1**
47nm,0.3s							
DZM				*e*Sn	**Sn**	**07 47 21.4**	**-1.8**
56nm,0.3s							
DZM	**Mont Dzumac**	**4.61**	**279**	*e*Pn	**Pn**	**07 46 27.4**	**-3.5**
DZM				*e*Sn	**Sn**	**07 47 24.5**	**+1.3**
OUZ	**Omahuta**	**12.48**	**171**	*e*Pn	**Pn**	**07 48 19.9**	**+1.3**
HIZ	**Hauiti**	**15.90**	**170**	*e*Pn	**P**	**07 49 07.0**	**-0.1**
117nm,1.3s							
FUNA	**Funafuti**	**16.11**	**29**	*e*Pn	**P**	**07 49 11.4**	**+1.9**
87nm,1.0s							
URZ	**Urewera**	**16.14**	**163**	LR	LR	07 53 51.8	
comp=Z,5μm,20.9s,baz=342,slow=32							
URZ	**Urewera**	**16.14**	**163**	*e*Pn	**P**	**07 49 11.3**	**+1.6**
45nm,1.3s							
BKZ	**Black Stump Fm**	**16.85**	**166**	*e*P	**P**	**07 49 19.6**	**+2.0**
54nm,1.2s							
HNR	**Honiara**	**17.25**	**319**	P	**P**	**07 49 21.0**	**-1.1**
17nm,0.3s,baz=229,slow=2.0,SNR=8.6							
HNR				LR	LR	07 55 19.2	
comp=Z,2μm,20.5s,baz=147,slow=35							
HNR	**Honiara**	**17.25**	**319**	*e*Pn	**P**	**07 49 20.9**	**-1.3**
170nm,1.0s							
HNR	**Honiara**	**17.25**	**319**	*e*P	**P**	**07 49 20.9**	**-1.3**
HNR				pmax	pmax		
comp=Z,170nm,1.0s							
EIDS	**Eidsvold**	**18.68**	**258**	*e*P	**Pn**	**07 49 38.4**	**-0.2**
comp=Z,19nm,1.0s							
THZ	**Tophouse**	**18.91**	**176**	*e*P	**Pn**	**07 49 41.3**	**-0.1**
comp=Z,30nm,1.2s							
LTZ	**Lake Taylor**	**19.89**	**178**	*e*P	**P**	**07 49 50.9**	**-0.1**
comp=Z,33nm,1.1s							
FOZ	**Fox Glacier**	**20.67**	**183**	*e*P	**P**	**07 50 00.1**	**+0.7**
comp=Z,60nm,1.2s							
RPZ	**Rata Peaks**	**20.81**	**181**	LR	LR	07 56 57.0	
comp=Z,1μm,18.9s,baz=1.0,slow=34							
RPZ	**Rata Peaks**	**20.81**	**181**	*e*P	**P**	**07 50 01.5**	**+0.5**
comp=Z,83nm,1.3s							
LBZ	**Lake Benmore**	**21.50**	**182**	*e*P	**P**	**07 50 08.9**	**+0.5**
comp=Z,57nm,1.4s							
MLZ	**Mavora Lakes**	**22.62**	**186**	*e*P	**P**	**07 50 23.1**	**+2.7**
comp=Z,60nm,1.5s							
CAN	**Canberra**	**23.09**	**232**	*e*P	**P**	**07 50 26.2**	**+0.8**
CAN	**Canberra**	**23.09**	**232**	*e*P	**P**	**07 50 26.2**	**+0.8**
CTA	**Charters Tower**	**23.51**	**272**	P	**P**	**07 50 30.5**	**+1.0**
comp=Z,8.2nm,0.9s,baz=84,slow=13,SNR=6.7							
CTAO	**Charters Tower**	**23.51**	**272**	*e*P	**P**	**07 50 30.4**	**+0.9**
comp=Z,38nm,1.4s							
CTAO	**Charters Tower**	**23.51**	**272**	*e*P	**P**	**07 50 30.4**	**+0.9**
CTAO				pmax	pmax		
comp=Z,38nm,1.4s							
TOO	**Toolangi**	**26.62**	**231**	*e*P	**P**	**07 50 58.5**	**+0.8**
comp=Z,22nm,1.4s							
TOO	**Toolangi**	**26.62**	**231**	*e*P	**P**	**07 50 58.5**	**+0.8**
TOO				pmax	pmax		
comp=Z,22nm,1.4s							
PMG	**Port Moresby**	**26.75**	**296**	*e*P	**P**	**07 51 01.0**	**+2.0**
comp=Z,27nm,0.8s							
PMG	**Port Moresby**	**26.75**	**296**	*e*P	**P**	**07 51 01.0**	**+2.0**
PMG				pmax	pmax		
comp=Z,27nm,0.8s							
RAR	**Rarotonga**	**26.80**	**92**	LR	LR	07 59 10.1	
comp=Z,357nm,20.9s,baz=262,slow=31							
STKA	**Stephens Creek**	**27.84**	**245**	LR	LR	08 01 26.7	
comp=Z,953nm,18.1s,baz=73,slow=35							
COEN	**Coen**	**28.12**	**283**	*e*P	**P**	**07 51 10.8**	**-0.5**
comp=Z,17nm,0.9s							
BBOO	**Buckleboo**	**32.62**	**244**	*e*P	**P**	**07 51 51.8**	**+0.9**
comp=Z,15nm,1.2s							
AS31	**Alice Springs**	**34.35**	**261**	*e*P	**P**	**07 52 05.2**	**-0.9**
comp=Z,2.0nm,0.8s							
ASAR	**Alice Springs**	**34.35**	**261**	P	**P**	**07 52 04.7**	**-1.4**
comp=Z,5.0nm,0.9s,baz=84,slow=8.8,SNR=18							
ASAR				LR	LR	08 06 20.3	
comp=Z,422nm,21.3s,baz=102,slow=37							
WB2	**Warramunga Arr**	**34.52**	**268**	*e*P	**P**	**07 52 05.3**	**-2.3**
comp=Z,11nm,1.4s							
WRAB	**Tennant Creek**	**34.52**	**268**	↑*e*P	**P**	**07 52 05.6**	**-2.0**
WRAB				pmax	pmax		
comp=Z,4.0nm,1.4s							
WRA	**Warramunga Arr**	**34.53**	**268**	P	**P**	**07 52 05.0**	**-2.6**
comp=Z,1.5nm,0.6s,baz=92,slow=8.9,SNR=12							
PPT2	**Papeete2**	**36.96**	**89**	*e*S	**S**	**07 58 04.5**	**-6.2**
comp=Z,175nm,26.5s							
PPT2				*e*LQ	LQ	08 00 43.7	
comp=Z,541nm,26.8s							
PPT2				*e*LR	LR	08 02 14.8	
comp=Z,528nm,22.5s							
PPT	**Papeete**	**36.97**	**89**	LR	LR	08 03 57.9	
comp=Z,432nm,19.0s,baz=254,slow=30							
FORT	**Forrest**	**39.25**	**249**	*e*P	**P**	**07 52 48.2**	**+0.6**
comp=Z,20nm,1.0s							
FITZ	**Fitzroy Crossi**	**42.96**	**268**	*e*P	**P**	**07 53 17.6**	**-0.7**
comp=Z,20nm,0.9s							
NWAO	**Narrogin (SRO)**	**48.43**	**246**	*e*P	**P**	**07 53 59.7**	**-1.6**
comp=Z,32nm,1.3s							
NWAO	**Narrogin (SRO)**	**48.43**	**246**	*e*P	**P**	**07 53 59.7**	**-1.6**
NWAO				pmax	pmax		
comp=Z,32nm,1.3s							
TAOE	**Nuku Hiva Isla**	**48.46**	**81**	*e*LR	LR	08 07 37.5	
comp=Z,412nm,23.5s							
SANI	**Sanana**	**48.59**	**289**	P	**P**	**07 54 01.7**	**-1.1**
comp=Z,43nm,1.6s							
BKSI	**Bulukumba**	**52.36**	**281**	P	**P**	**07 54 31.2**	**0.0**
VNDA	**Vanda**	**54.92**	**183**	*e*P	**P**	**07 54 50.5**	**+1.4**
comp=Z,7.6nm,1.4s							
VNDA	**Vanda**	**54.92**	**183**	*e*P	**P**	**07 54 50.5**	**+1.4**
VNDA				pmax	pmax		
comp=Z,8.0nm,1.4s							
SBA	**Scott Base**	**55.10**	**181**	*e*P	**P**	**07 54 52.3**	**+1.9**
comp=Z,19nm,1.4s							
SBA	**Scott Base**	**55.10**	**181**	*e*P	**P**	**07 54 52.3**	**+1.9**
SBA				pmax	pmax		
comp=Z,19nm,1.4s							
JOW	**Kunigami**	**64.61**	**318**	*e*P	**P**	**07 55 54.7**	**-1.6**
comp=Z,38nm,0.7s							
MJAR	**Matsushiro Arr**	**66.85**	**331**	P	**P**	**07 56 10.8**	**+0.2**
comp=Z,1.0nm,0.4s,baz=156,slow=10,SNR=3.8							
MJAR				LR	LR	08 25 38.9	
comp=Z,117nm,19.0s,baz=145,slow=36							
MAJO	**Matsushiro**	**66.85**	**331**	*e*P	**P**	**07 56 10.8**	**+0.2**
MAJO	**Matsushiro**	**66.85**	**331**	*e*P	**P**	**07 56 10.8**	**+0.2**
QSPA	**South Pole Qui**	**67.22**	**180**	*e*P	**P**	**07 56 11.5**	**-1.3**
comp=Z,19nm,1.2s							
MDSI	**Maura Dua**	**67.25**	**275**	P	**P**	**07 56 10.8**	**-2.8**
JMBI	**JAMBI**	**68.86**	**277**	P	**P**	**07 56 25.1**	**+1.4**
KUR	**Kuril'sk**	**71.06**	**343**	*e*P	**P**	**07 56 34.8**	**-1.6**
KUR				*e*		07 56 54.3	
KUR				S	**S**	**08 05 43.1**	**-5.8**
TJN	**Taejon**	**72.08**	**324**	↑*e*P	**P**	**07 56 43.9**	**+1.1**
KSRS	**Korea Array**	**72.58**	**325**	P	**P**	**07 56 45.5**	**-0.2**
comp=Z,0.4nm,0.3s,baz=150,slow=5.8,SNR=4.8							
KSRS				LR	LR	08 27 58.6	
comp=Z,146nm,18.4s,baz=126,slow=35							
YSS	**Yuzh-Sakhalins**	**74.12**	**340**	*e*P	**P**	**07 56 56.8**	**+2.2**
YSS				*e*S	**S**	**08 06 29.7**	**+5.8**
YSS				pmax	pmax		
comp=Z,200nm,5.3s							
YSS				MLR	MLR		
comp=Z,500nm,13.0s							
NJ2	**Nanjing**	**74.16**	**316**	*e*P	**P**	**07 56 56.5**	**+1.3**
NJ2				pmax	pmax		
comp=Z,12nm,0.5s							
USRK	**Ussuriysk Ar.**	**75.83**	**332**	P	**P**	**07 57 05.9**	**+1.4**
comp=Z,1.4nm,0.6s,baz=144,slow=6.8,SNR=5.5							
USRK				LR	LR	08 26 57.5	
comp=Z,151nm,20.2s,baz=129,slow=33							
MAW	**Mawson**	**75.84**	**202**	P	**P**	**07 57 03.7**	**-0.7**
comp=Z,3.7nm,0.7s,baz=138,slow=7.9,SNR=9.9							
MAW				LR	LR	08 27 55.9	
comp=Z,341nm,18.5s,baz=92,slow=34							
WHN	**Wuhan**	**76.22**	**312**	P	**P**	**07 57 10.3**	**+3.2**
WHN				pP	**PcP**	**07 57 15.5**	**-3.4**
PET	**Petropavlovsk**	**76.35**	**352**	*e*P	**P**	**07 57 05.7**	**-1.6**
PET				*e*S	**S**	**08 06 48.6**	**+0.2**
PET				pmax	pmax		
comp=Z,100nm,9.8s							
PETK	**Petropavlovsk-**	**76.56**	**352**	P	**P**	**07 57 09.8**	**+1.2**
comp=Z,1.8nm,0.7s,baz=134,slow=6.2,SNR=3.9							
PETK				LR	LR	08 27 59.4	
comp=Z,438nm,19.1s,baz=152,slow=33							
KLR	**Kul'dur**	**79.96**	**335**	P	**P**	**07 57 29.2**	**+1.9**
comp=Z,2.9nm,0.9s,baz=143,slow=5.4,SNR=9.5							
KLR	**Kul'dur**	**79.96**	**335**	*e*P	**P**	**07 57 28.6**	**+1.2**
KLR				pmax	pmax		
comp=Z,10.0nm,1.5s							
CM31	**Chiang Mai Arr**	**81.77**	**294**	*e*P	**P**	**07 57 40.8**	**+3.0**
comp=Z,7.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**81.77**	**294**	P	**P**	**07 57 38.8**	**+1.0**
comp=Z,2.2nm,0.5s,baz=127,slow=4.3,SNR=12							
CMAR				LR	LR	08 36 19.8	
comp=Z,115nm,18.9s,baz=174,slow=37							
CHTO	**Chiang Mai**	**81.93**	**294**	*e*P	**P**	**07 57 41.6**	**+3.0**
comp=Z,11nm,1.1s							
CHTO	**Chiang Mai**	**81.93**	**294**	*e*P	**P**	**07 57 41.6**	**+3.0**
CHTO				pmax	pmax		
comp=Z,11nm,1.1s							
SYO	**Syowa Base**	**82.02**	**196**	‖*e*PcP	**PcP**	**07 57 45.2**	**+1.6**
SYO	**Syowa Base**	**82.02**	**196**	‖*e*PcP	PcP	07 57 51.6	+8.0
CD2	**Chengdu**	**83.98**	**307**	*e*P	**P**	**07 57 51.0**	**+2.0**
HHC	**Hu-ho-hao-te**	**84.23**	**319**	*e*P	**P**	**07 57 52.5**	**+2.4**
HHC				S	**S**	**08 08 14.5**	**+2.7**
HHC				pmax	pmax		
comp=Z,14nm,1.2s							
HHC				pmax	pmax		
comp=Z,20nm,7.0s							
HHC				LR	LR		
comp=Z,220nm,17.5s							
HHC				LR	LR		
comp=Z,240nm,16.4s							
ZEA	**Zeya**	**85.24**	**335**	*e*P	**P**	**07 57 55.8**	**+1.0**
ZEA				pmax	pmax		
comp=Z,36nm,1.2s							
SNAA	**Sanae**	**85.65**	**182**	P	**P**	**07 57 54.3**	**-2.5**
SNAA	**Sanae**	**85.65**	**182**	*e*P	**P**	**07 57 54.4**	**-2.4**
comp=Z,11nm,1.4s							
SNAA	**Sanae**	**85.65**	**182**	↑*e*P	**P**	**07 57 56.1**	**-0.7**
VNA3	**Neumayer Olymp**	**86.16**	**180**	P	P	07 57 53.3	-6.0
LZH	**Lanzhou**	**86.59**	**311**	*e*P	**P**	**07 58 03.8**	**+1.7**
LZH				pP	pP	07 58 14.3	-0.7
LZH				sP	pwP	07 58 19.0	-2.0
LZH				*e*S	**S**	**08 08 36.8**	**+1.4**
LZH				pmax	pmax		
comp=Z,23nm,1.1s							
LZH				pmax	pmax		
comp=Z,230nm,5.7s							
LZH				LR	LR		
comp=Z,1μm,13.8s							
LZH				LR	LR		
comp=Z,1μm,14.9s							
LZH				LR	LR		
comp=Z,1μm,15.2s							
VNA1	**Neumayer--Stat**	**86.76**	**180**	P	**P**	**07 57 59.0**	**-3.2**
KHMM	**Horse Mountain**	**87.43**	**43**	*e*P	**P**	**07 58 06.6**	**+0.6**
comp=Z,13nm,1.0s							
WDC	**Whiskeytown Da**	**88.03**	**44**	*e*P	**P**	**07 58 09.9**	**+1.2**
comp=Z,7.1nm,1.1s							
WDC	**Whiskeytown Da**	**88.03**	**44**	*e*P	**P**	**07 58 09.9**	**+1.2**
WDC				pmax	pmax		
comp=Z,7.0nm,1.1s							
CMB	**Columbia Colle**	**88.11**	**47**	*e*P	**P**	**07 58 10.8**	**+1.5**
comp=Z,14nm,1.5s							
CMB	**Columbia Colle**	**88.11**	**47**	*e*P	**P**	**07 58 10.8**	**+1.5**
CMB				pmax	pmax		
comp=Z,14nm,1.5s							
AFDM	**Forest Hills D**	**88.19**	**46**	*e*P	**P**	**07 58 11.0**	**+1.4**
comp=Z,8.8nm,1.2s							
ISA	**Isabella, Lake**	**88.24**	**50**	*e*P	**P**	**07 58 10.9**	**+1.0**
comp=Z,11nm,1.0s							
ISA	**Isabella, Lake**	**88.24**	**50**	*e*P	**P**	**07 58 10.9**	**+1.0**
ISA				pmax	pmax		
comp=Z,11nm,1.0s							
YBH	**Yreka Blue Hor**	**88.54**	**43**	*e*P	**P**	**07 58 13.2**	**+1.9**
comp=Z,9.9nm,1.3s							
YBH	**Yreka Blue Hor**	**88.54**	**43**	*e*P	**P**	**07 58 13.2**	**+1.9**
YBH				pmax	pmax		
comp=Z,10.0nm,1.3s							
WAKR	**Walker**	**89.00**	**47**	*e*P	**P**	**07 58 14.9**	**+1.3**
comp=Z,11nm,1.2s							
NVAR	**Mina Array Bea**	**89.73**	**48**	P	**P**	**07 58 16.5**	**-0.5**
comp=Z,3.5nm,0.8s,baz=227,slow=8.0,SNR=13							
NVAR				LR	LR	08 30 07.7	
comp=Z,390nm,21.2s,baz=233,slow=30							
K05A	**Summer Lake**	**90.21**	**43**	*e*P	**P**	**07 58 19.8**	**+0.6**
comp=Z,8.2nm,0.9s							
SML	**Sawmill**	**90.33**	**18**	*e*P	**P**	**07 58 16.9**	**-2.1**
comp=Z,11nm,0.6s							
SML	**Sawmill**	**90.33**	**18**	*e*P	**P**	**07 58 16.9**	**-2.1**
SML				pmax	pmax		
comp=Z,11nm,0.6s							
PINE	**Pine Mountain**	**90.73**	**42**	*e*P	**P**	**07 58 21.3**	**-0.3**
comp=Z,7.7nm,0.9s							
ULN	**Ulaanbaatar**	**90.92**	**323**	*e*P	**P**	**07 58 23.4**	**+1.1**
comp=Z,20nm,1.5s							
ULN	**Ulaanbaatar**	**90.92**	**323**	‖*e*P	**P**	**07 58 22.1**	**-0.2**
ULN				pmax	pmax		
comp=Z,9.0nm,1.3s							
GTA	**Gaotai**	**91.02**	**313**	*e*P	**P**	**07 58 26.5**	**+3.6**
GTA				pP	pP	07 58 37.3	+1.5
GTA				pmax	pmax		
comp=Z,3.0nm,0.8s							
GTA				pmax	pmax		
comp=Z,130nm,7.6s							
GTA				LR	LR		
comp=Z,110nm,20.3s							
GTA				LR	LR		
comp=Z,210nm,20.0s							
GTA				LR	LR		
comp=Z,240nm,18.4s							
W13A	**Hualapai Mount**	**91.

MANT	**Manisa**	**144.67 305**	*e*PKPdf	**PKPdf**	**08 04 56.2**	**+0.7**
OJC	**Ojcow**	**144.78 328**	*e*PKPdf	**PKPdf**	**08 04 55.0**	**0.0**
OJC	**Ojcow**	**144.78 328**	*e*PKIKP	**PKPdf**	**08 04 55.0**	**0.0**
ARR	**Arges**	**144.83 318**	⇓*i*P	**PKPdf**	**08 04 56.1**	**+0.8**
DRGR		**145.26 321**	⇓*i*P	**PKPdf**	**08 04 56.3**	**+0.3**
KECS	**Kecovo**	**145.52 325**	*e*PKP	**PKPab**	**08 04 56.9**	**+0.1**
OKC	**Ostrava-Krasne**	**145.83 329**	*e*PKP2	**PKPab**	**08 04 58.0**	**+0.1**
OKC			MLR	MLR		
	comp=Z,200nm,23.5s					
OKC	**Ostrava-Krasne**	**145.83 329**	*e*PKP	**PKPab**	**08 04 58.0**	**+0.1**
OKC			AMS	AMS	09 03 40.0	
	comp=Z,200nm,23.5s					
SIRR	**Siria**	**146.15 321**	⇑*i*P	**PKPab**	**08 04 58.7**	**-0.5**
MORC	**Moravsky Berou**	**146.16 329**	*e*PKPdf	**PKPab**	**08 04 58.8**	**-0.4**
MORC	**Moravsky Berou**	**146.16 329**	⇓*i*P	**PKPbc**	**08 04 58.5**	**0.0**
MORC	**Moravsky Berou**	**146.16 329**	*e*PKP	**PKPab**	**08 04 59.3**	**+0.1**
PSZ	**Piszkesteto**	**146.18 325**	*e*PKPdf	**PKPbc**	**08 04 58.7**	**+0.1**
PSZ	**Piszkesteto**	**146.18 325**	⇓*i*P	**PKPab**	**08 04 59.2**	**-0.2**
PSZ	**Piszkesteto**	**146.18 325**	EP	**PKPab**	**08 05 00.0**	**+0.6**
OSTC	**Ostas**	**146.22 331**	*e*PKP	**PKPab**	**08 04 58.8**	**-0.6**
OSTC			*ex*	x	08 05 08.6	
OSTC			AMS	AMS	09 04 50.0	
	comp=Z,200nm,24.0s					
CHVC	**Chvalec**	**146.27 331**	*e*PKP	**PKPdf**	**08 04 57.0**	**-0.6**
CHVC			AMS	AMS	09 04 20.0	
	comp=Z,200nm,23.1s					
DPC	**Dobruska-Polom**	**146.32 331**	*e*PKP2	**PKPbc**	**08 04 58.9**	**0.0**
DPC			MLR	MLR		
	comp=Z,200nm,21.2s					
DPC	**Dobruska-Polom**	**146.32 331**	*e*PKP	**PKPbc**	**08 04 58.9**	**0.0**
DPC			*ep*PKP	**pPKPdf**	**08 05 08.0**	**-3.4**
DPC			AMS	AMS	09 09 00.0	
	comp=Z,200nm,21.2s					
UPC	**Upice**	**146.35 331**	*e*PKP2	**PKPbc**	**08 04 58.6**	**-0.4**
UPC			MLR	MLR		
	comp=Z,200nm,20.8s					
UPC	**Upice**	**146.35 331**	*e*PKP	**PKPbc**	**08 04 58.6**	**-0.4**
UPC			AMS	AMS	09 04 00.0	
	comp=Z,200nm,20.8s					
VYHS	**Vyhne**	**146.37 326**	*e*PKP	**PKPab**	**08 05 00.4**	**+0.4**
HERR	**Herculane**	**146.44 318**	⇑*i*P	**PKPbc**	**08 04 59.4**	**0.0**
JAVC	**Velka Javorina**	**146.72 328**	*e*PKP	**PKPab**	**08 05 01.0**	**-0.4**
MDVR	**Moldovita**	**146.92 319**	⇑*i*P	**PKPbc**	**08 05 00.9**	**+0.1**
VRAC	**Vranov**	**146.93 329**	⇑*i*P	**PKiKP**	**08 05 02.6**	**-0.6**
VRAC	**Vranov**	**146.93 329**	*e*PKP	**PKPab**	**08 05 01.9**	**-0.2**
PVCC	**Panska Ves**	**146.96 333**	*e*PKP2	**PKPab**	**08 05 01.7**	**-0.5**
PVCC			MLR	MLR		
	comp=Z,200nm,19.7s					
PVCC	**Panska Ves**	**146.96 333**	*e*PKP	**PKPab**	**08 05 01.7**	**-0.5**
PVCC			AMS	AMS	09 05 10.0	
	comp=Z,200nm,19.7s					
BRG	**Berggiesshubel**	**146.96 333**	*e*PKP	**PKPab**	**08 05 01.8**	**-0.4**
	comp=Z,22nm,1.1s					
VTS	**Vitosha**	**147.00 314**	*e*PKPdf	**PKPbc**	**08 05 01.7**	**+0.4**
VTS	**Vitosha**	**147.00 314**	⇓*i*P	**PKPab**	**08 05 02.9**	**+0.1**
CLL	**Collm**	**147.01 335**	*e*PKPdf	**PKPdf**	**08 04 58.5**	**-0.2**
CLL	**Collm**	**147.01 335**	*e*PKPdf	**PKPdf**	**08 04 59.0**	**+0.3**
CLL			*i* PKPbc	**PKPbc**	**08 05 00.5**	**-0.3**
	comp=Z,12nm,0.6s					
CLL			*i*		08 05 01.8	
CLL			*e*PP	**PP**	**08 08 24.0**	**-1.2**
CLL			*e*SS	SS	08 27 36.0	+14
CLL			*e*SSS	SSS	08 32 42.0	
CLL			Lm	MLR	09 12 00.0	
	comp=Z,200nm,20.0s					
CLL	**Collm**	**147.01 335**	*e*PKIKP	**PKPdf**	**08 04 58.5**	**-0.2**
KRUC	**Moravsky**	**147.19 329**	*e*PKP	**PKPbc**	**08 05 00.9**	**-0.5**
MODS	**Modra-Piesok**	**147.24 327**	*e*PKP	**PKPab**	**08 05 02.7**	**-0.7**
GOPC	**GO Pecny, Ondr**	**147.32 332**	*e*PKP2	**PKPbc**	**08 05 01.3**	**-0.5**
GOPC			MLR	MLR		
	comp=Z,200nm,21.5s					
GOPC	**GO Pecny, Ondr**	**147.32 332**	*e*PKP	**PKPbc**	**08 05 01.3**	**-0.5**
GOPC			AMS	AMS	09 06 20.0	
	comp=Z,200nm,21.5s					
PRU	**Pruhonice**	**147.37 332**	*e*PKP2	**PKPbc**	**08 05 01.5**	**-0.4**
PRU			MLR	MLR		
	comp=Z,200nm,22.7s					
PRU	**Pruhonice**	**147.37 332**	*e*PKP	**PKPbc**	**08 05 01.5**	**-0.4**
PRU			AMS	AMS	09 05 20.0	
	comp=Z,200nm,22.7s					
CSKK	**Cskako**	**147.39 325**	EP	**PKiKP**	**08 05 04.1**	**-0.1**
ZST	**Bratislava**	**147.44 327**	*e*PKP	**PKiKP**	**08 05 05.4**	**+1.1**
TREC	**Trest**	**147.46 330**	AMS	AMS	09 05 20.0	
	comp=Z,300nm,23.8s					
TIH	**Tihany**	**147.88 325**	EP	**PKPab**	**08 05 07.0**	**+1.1**
MORH	**Mrgy, Hungar**	**147.89 323**	EP	**PKPbc**	**08 05 03.0**	**-0.3**
SOP	**Sopron**	**148.06 327**	EP	**PKPbc**	**08 05 04.0**	**+0.3**
NKC	**Novy Kostel**	**148.06 334**	*e*PKP2	**PKPbc**	**08 05 03.8**	**0.0**
NKC			MLR	MLR		
	comp=Z,100nm,16.5s					
NKC	**Novy Kostel**	**148.06 334**	*e*PKP	**PKPbc**	**08 05 03.8**	**0.0**
NKC			AMS	AMS	09 13 30.0	
	comp=Z,100nm,16.5s					
CONA	**Conrad Observa**	**148.24 328**	*i* PKPbc	**PKPbc**	**08 05 02.9**	**-1.5**
	comp=Z,16nm,0.9s					
KHC	**Kasperske Hory**	**148.43 332**	*e*PKPdf	**PKPbc**	**08 05 03.4**	**-1.4**
KHC			*e*PKPbc	**PKiKP**	**08 05 06.6**	**+0.2**
KHC	**Kasperske Hory**	**148.43 332**	*e*PKIKP	**PKPbc**	**08 05 03.8**	**-1.0**
KHC			*e*		08 05 07.0	
KHC			MLR	MLR		
	comp=Z,300nm,20.6s					
KHC	**Kasperske Hory**	**148.43 332**	*e*PKP	**PKPbc**	**08 05 03.8**	**-1.0**
KHC			*ex*	x	08 05 07.0	
KHC			*ep*PKP	**pPKPab**	**08 05 21.0**	**-0.4**
KHC			AMS	AMS	09 05 30.0	
	comp=Z,300nm,20.6s					
GEC2	**GERESS Array S**	**148.59 331**	*e*PKPdf	**PKPdf**	**08 05 02.9**	**+1.3**
GEC2			*e*PKPbc	**PKiKP**	**08 05 05.8**	**-1.0**
GEC2	**GERESS Array S**	**148.59 331**	*e*PKIKP	**PKPdf**	**08 05 02.9**	**+1.3**
GEC2			*e*		08 05 05.8	
GERES	**GERESS Array B**	**148.59 331**	PKPbc	**PKPbc**	**08 05 04.5**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=46,slow=3.9,SNR=12					
BEHE	**Becsehely**	**148.74 325**	EP	**PKPdf**	**08 05 02.0**	**+0.3**
ARSA	**Arzberg**	**148.87 327**	PKPbc	**PKPbc**	**08 05 06.1**	**+0.2**
	comp=Z,4.1nm,0.6s					
MOA	**Molln**	**149.06 329**	PKPbc	**PKPbc**	**08 05 06.2**	**-0.2**
	comp=Z,17nm,1.5s					
SOKA	**Soboth**	**149.50 327**	*i* PKiKP	**PKiKP**	**08 05 08.9**	**+0.2**
	comp=Z,29nm,1.6s					
BLY	**Banja Luka**	**149.60 322**	*e*PKPbc	**PKiKP**	**08 05 09.1**	**+0.2**
TTG	**Podgorica**	**149.66 317**	*e*PKPbc	**PKiKP**	**08 05 09.1**	**+0.1**
TTG	**Podgorica**	**149.66 317**	*e*PKP2	**PKiKP**	**08 05 09.1**	**+0.1**
OBKA	**Obir**	**149.86 327**	*i* PKPbc	**PKPbc**	**08 05 07.1**	**-1.4**
	comp=Z,20nm,1.1s					
MEM	**Membach**	**150.02 341**	PKPbc	**PKiKP**	**08 05 09.2**	**-0.3**
KBA	**Koelnbreinsper**	**150.04 329**	*i* PKiKP	**PKiKP**	**08 05 10.8**	**+0.8**
	comp=Z,25nm,1.2s					
MYKA	**Terra Mystica**	**150.22 328**	*i* PKPbc	**PKPbc**	**08 05 08.5**	**-0.8**
	comp=Z,9.2nm,0.7s					
STU	**Stuttgart**	**150.51 336**	*e*PKPbc	**PKiKP**	**08 05 10.5**	**-0.1**
STU	**Stuttgart**	**150.51 336**	*e*PKIKP	**PKiKP**	**08 05 10.5**	**-0.1**
WATA	**Walderalm**	**150.66 331**	*i* PKPbc	**PKiKP**	**08 05 11.1**	**-0.1**
	comp=Z,8.1nm,0.6s					
ABTA	**Abfaltersbach**	**150.68 330**	*i* PKPbc	**PKPbc**	**08 05 09.6**	**-0.8**
	comp=Z,28nm,1.3s					
WTTA	**Wattenberg**	**150.69 331**	*i* PKPbc	**PKPbc**	**08 05 10.0**	**-0.6**
	comp=Z,49nm,1.5s					
WLF	**Walferdange**	**150.81 340**	PKPbc	**PKiKP**	**08 05 12.3**	**+1.1**
MOTA	**Moosalm**	**150.87 332**	*i* PKPbc	**PKPbc**	**08 05 10.1**	**-0.9**
	comp=Z,12nm,0.9s					
DOU	**Dourbes**	**150.89 342**	PKPbc	**PKiKP**	**08 05 11.5**	**+0.2**
RETA	**Reutte**	**150.90 332**	*i* PKPbc	**PKiKP**	**08 05 11.6**	**0.0**
	comp=Z,9.3nm,0.9s					
SQTA	**Sankt Quirin**	**150.91 332**	*i* PKPbc	**PKPbc**	**08 05 10.4**	**-0.7**
	comp=Z,28nm,1.2s					
BFO	**Black Forest**	**151.20 336**	*e*PKPbc	**PKiKP**	**08 05 12.6**	**+0.5**
BFO	**Black Forest**	**151.20 336**	*i* PKIKP	**PKiKP**	**08 05 13.4**	**+1.3**
FETA	**Feichten**	**151.28 332**	*i* PKPbc	**PKPbc**	**08 05 11.7**	**-0.3**
	comp=Z,24nm,1.2s					
DAVA	**Damuels**	**151.43 333**	*i* PKiKP	**PKiKP**	**08 05 14.0**	**+1.2**
	comp=Z,20nm,1.5s					
ECH	**Echery**	**151.72 337**	*e*PKPbc	**PKiKP**	**08 05 14.1**	**+0.9**
ECH	**Echery**	**151.72 337**	*e*PKIKP	**PKiKP**	**08 05 14.1**	**+0.9**
FUORN	**Ofenpass-Fuorn**	**151.79 332**	*e*PKPbc	**PKiKP**	**08 05 14.8**	**+1.1**
TUE	**Stuetta**	**152.30 333**	*e*PKPbc	**PKPbc**	**08 05 13.6**	**-0.7**
TIP	**Timpagrande**	**152.94 313**	*e*PKPbc	**PKiKP**	**08 05 17.7**	**+1.7**
TORD	**Torodi Ar. Bea**	**166.23 227**	PKPab	**PKPab**	**08 06 24.1**	**-1.2**
	comp=Z,11nm,0.4s,baz=139,slow=5.2,SNR=6.5					
TOA1	**Torodi Ar. Sit**	**166.24 227**	*e*PKPab	**PKPab**	**08 06 24.1**	**-1.2**

TRN 28 07:53:20.8, 14°.00N×60°.52W, h14km, MD3.6, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLW	**Petit Monier**	**0.41**	**273**	*e*P	Pn	07 53 31.8	-0.5
SLPA	**Patience**	**0.41**	**250**	*e*P	Pn	07 53 32.3	-0.1
SLBI	**Saint Lucia, B**	**0.44**	**273**	*e*P	Pn	07 53 33.5	+0.7
MCLT	**Moule a Chique**	**0.50**	**235**	*e*P	Pn	07 53 33.5	-0.1
MCLT				*e*S	Sn	07 53 41.5	-0.6
MPOM	**Morne Pois Mar**	**0.55**	**324**	*e*P	Pb	07 53 33.1	+0.7
SLDE	**Delcer**	**0.56**	**250**	*e*P	Pn	07 53 34.4	0.0
SLDE				*e*S	Sn	07 53 44.3	+0.8
MVM	**Montagne Vaucl**	**0.66**	**327**	*e*P	Pb	07 53 34.7	+0.5
LPMF	**Morne Lapointe**	**0.72**	**323**	*e*P	Pb	07 53 35.5	+0.4
BIM	**Bigot**	**0.74**	**314**	*e*P	Pn	07 53 36.4	-0.6
TRMF	**Trois Ilets**	**0.74**	**316**	*e*P	Pn	07 53 36.5	-0.5
ZAM	**Aeronautique**	**0.76**	**319**	*e*P	Pb	07 53 36.3	+0.5
ILAM	**Ilet Lapin Mar**	**0.84**	**336**	*e*P	Pn	07 53 37.9	-0.4
SVCV	**St. Vincent, C**	**0.94**	**220**	*e*P	Pn	07 53 40.5	+0.8
SVCV				*e*S	Sn	07 53 54.4	+1.4
FDF	**Fort de France**	**0.95**	**320**	*e*P	Pn	07 53 42.5	+2.6
FDF				*e*S	Sn	07 53 56.1	+2.7
PML	**Morne Lenard**	**1.01**	**321**	*e*P	Pn	07 53 41.5	+0.8
GBMF	**Grand Be**	**1.01**	**322**	*e*P	Pg	07 53 40.5	+0.1
SVB	**Belmont**	**1.01**	**225**	*e*P	Pn	07 53 41.6	+0.9
SVB				*e*S	Sn	07 53 55.3	+0.6
BAMF	**Morne Balai**	**1.02**	**323**	*e*P	Pn	07 53 41.0	+0.2
CXM	**Morne La Croix**	**1.02**	**322**	*e*P	Pn	07 53 43.2	+2.2
PCM	**Pelee Case Pet**	**1.05**	**321**	*e*P	Pg	07 53 41.2	0.0
BBGH	**Gun Hill**	**1.26**	**132**	*e*P	Pg	07 53 46.2	+1.0
DBCT	**Belle View Cho**	**1.50**	**328**	*e*P	Pg	07 53 49.9	+0.2
DBCT				*e*S	Sg	07 54 08.9	-0.2
DLPL	**La Plaine**	**1.50**	**332**	*e*P	Pb	07 53 48.4	-0.1
DLPL				*e*S	Sb	07 54 08.2	+0.7
MDN	**Morne-Daniel**	**1.56**	**327**	*e*P	Pb	07 53 49.4	-0.2
MDN				*e*S	Sb	07 54 10.0	+0.8
DWS	**Wesley**	**1.74**	**334**	*e*P	Pb	07 53 52.2	-0.4
DWS				*e*S	Sb	07 54 15.5	+1.2
MDPO	**Dominica; Chan**	**1.81**	**330**	*e*P	Pb	07 53 53.7	-0.1
MDPO				*e*S	Sb	07 54 17.4	+1.1
MAGL	**Barre de l'ile**	**2.08**	**339**	*e*P	Pn	07 53 56.1	+0.8
TDBA	**Terre de Bas,**	**2.13**	**330**	*e*P	Pb	07 53 58.2	-1.1
CBE	**Ff, Capester**	**2.31**	**333**	*e*P	Pb	07 54 00.6	-1.8
ABD	**La Joyeuse, An**	**2.63**	**339**	*e*P	Pn	07 54 03.2	+0.2
TOSP	**Speyside**	**2.68**	**180**	*e*P	Pn	07 54 05.8	+2.1
MLYT	**Lee's Yard**	**3.15**	**329**	*e*P	Pb	07 54 13.6	-3.2
MLYT				*e*S	Sn	07 54 49.7	+2.1
ANWB	**Willy Bob**	**3.85**	**342**	*e*P	Pn	07 54 21.7	+2.1
ANWB				*e*S	Sn	07 55 04.4	-0.4
SKI	**Saint Kitts**	**3.95**	**328**	*e*P	Pn	07 54 23.3	+2.3
SKI	**Saint Kitts**	**3.95**	**328**	*e*S	Sn	07 55 11.1	+3.9

ASRS ***28*** *08:41:35.5, 55°.65N×86°.20E, M3.0, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 28 08:41:38.1±3.2, 55°.52N×86°.04E, h0km, mb1 3.3/2, mb1mx3.1/50, mbtmp3.3/2, ML3.0/2, 6C-2D, Error ellipse: s-maj=29.2km s-min=26.1km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**205**	*i*		08 53 00.0	
	baz=21,slow=320,SNR=3.8						
ZALV	**Zalesovo Beam**	**1.73**	**205**	Pn	Pn	08 42 08.4	-0.9
	13nm,0.3s,baz=24,slow=16,SNR=49						
ZALV				Lg	Lg	08 42 33.2	
	9.4nm,0.3s,baz=28,slow=29,SNR=11						
KURK	**Kurchatov**	**6.56**	**226**	⇑Pg	Sn	08 44 29.4	-1.9
	2.2nm,1.0s						
KURK				⇓Lg	Lg	08 45 04.5	
	8.6nm,0.9s						
KURBB	**Kurchatov Arra**	**6.67**	**226**	Pn	Pn	08 43 17.4	+0.2
	0.1nm,0.3s,baz=42,slow=14,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.67**	**226**	⇑Pg	Sn	08 44 32.6	-1.4
	2.4nm,0.9s,baz=55,slow=16						
KURBB				⇑Lg	Lg	08 45 06.4	
	13nm,0.8s,baz=62,slow=29						
MK31	**Makanchi Array**	**9.05**	**197**	⇑Pn	Sn	08 45 31.3	-1.2
	2.0nm,0.3s,baz=113,slow=16,SNR=60						
MK31				⇑Lg	Lg	08 45 55.7	
	0.7nm,0.2s,baz=122,slow=27,SNR=5.5						
MKAR	**Makanchi Array**	**9.05**	**197**	Pn	Pn	08 43 50.0	+0.1
	0.3nm,0.3s,baz=25,slow=13,SNR=8.4						
MKAR				Lg	Lg	08 46 23.7	
	baz=23,slow=30,SNR=5.9						
MAKZ	**Makanchi**	**9.09**	**198**	⇑Pn	Sn	08 45 34.1	+0.6
	5.5nm,0.5s						
MAKZ				⇓Lg	Lg	08 46 01.2	
	3.0nm,0.4s						

BEO 28 08:46:03.3±0.4, 44°.43N×22°.00E, h0km, ML1.8/10, 5C, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUBS	**Kucevo**	**0.24**	**266**	*e*Pg	Pg	08 46 05.7	-2.1
MDVR	**Moldovita**	**0.41**	**330**	⇑*i*P	Pg	08 46 10.8	-0.3
MDVR	**Moldovita**	**0.41**	**330**	S	Sg	08 46 16.8	+0.3
HERR	**Herculane**	**0.54**	**33**	⇑*i*P	Pg	08 46 14.2	+0.6
HERR	**Herculane**	**0.54**	**33**	S	Sb	08 46 22.5	-1.5
BOVS	**Bovan**	**0.82**	**195**	*e*Pg	Pg	08 46 18.5	-0.5
GRUS	**Gruza**	**1.07**	**240**	*e*Pg	Pg	08 46 23.3	-0.5
GRUS				*e*Sg	Sg	08 46 37.9	+0.2
GZR	**Gura Zlata**	**1.11**	**29**	⇑*i*P	Pb	08 46 25.2	-0.2
GZR	**Gura Zlata**	**1.11**	**29**	S	Sn	08 46 41.7	-0.5
TRUS	**Trudelj**	**1.16**	**260**	*e*Pg	Pg	08 46 24.5	-1.1
TRUS				*e*Sg	Sg	08 46 41.3	+0.6
BZS	**Buzias**	**1.22**	**347**	*e*Pg	Pg	08 46 25.9	-0.8
BZS				*e*Sg	Sg	08 46 41.9	-0.6
BZS	**Buzias**	**1.22**	**347**	⇑*i*P	Pg	08 46 26.2	-0.5
BZS	**Buzias**	**1.22**	**347**	S	Sb	08 46 43.1	-0.4
ZAPS	**Zavoj**	**1.24**	**158**	*e*Pg	Pg	08 46 26.0	-1.1
ZAPS				*e*Sg	Sg	08 46 43.6	+0.4
SELS	**Selova**	**1.37**	**208**	*e*Pg	Pg	08 46 27.4	-2.1
SELS				*e*Sg	Sg	08 46 47.4	+0.2
DIVS	**Divibare**	**1.48**	**258**	*e*Pg	Pn	08 46 29.1	-2.2
DIVS				*e*Sg	Sg	08 46 50.5	-0.4
IVAS	**Ivanjica**	**1.58**	**238**	*e*Pg	Pn	08 46 31.9	-0.8
IVAS				*e*Sg	Sn	08 46 52.9	-1.0
SIRR	**Siria**	**1.85**	**353**	⇑*i*P	Pn	08 46 35.3	-1.1
SIRR	**Siria**	**1.85**	**353**	S	Sn	08 46 59.4	-1.1
SJES	**Sjenica**	**1.88**	**232**	*e*Pg	Pn	08 46 37.1	+0.4
SJES				*e*Sg	Sg	08 47 03.2	-0.3
BBLS	**Lazići**	**1.95**	**254**	*e*Pg	Pn	08 46 38.3	+0.5
BBLS				*e*Sg	Sb	08 47 04.8	+0.1

IDC ***28*** *08:46:13.6±1.4, 18°.42N×121°.56E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.6/45, mbtmp3.8/4, MS3.3/6, Ms1 3.3/6, ms1mx2.9/47, Error ellipse: s-maj=46.2km s-min=27.1km az=54.0*

MAN ***28*** *08:46:14.3, 18°.70N×120°.89E, h3km, MS3.6*

NEIC ***28*** *08:46:19.2±1.2, 18°.36N×121°.38E, h38km±10km, mb4.3/8, Error ellipse: s-maj=13.8km s-min=7.4km az=175.0*

NEIC Felt [II PIVS] at Claveria.

ISCJB ***28*** *08:46:20.2±0.5, 18°.59N±0°.03×121°.16E±0°.05, h44km±8km, mb4.1/11, MS3.2/5, Error ellipse: s-maj=8.7km s-min=5.4km az=6.6*

ISC 28 08:46:21.2±1.1, 18°.53N±0°.04×121°.21E±0°.06, h47km±12km, n42, σ2=41/38, mb4.1/11, MS3.0/5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.67**	**177**	*e*P	**Pn**	**08 46 31.9**	**-2.6**
APYP				*e*S	**Sn**	**08 46 42.7**	**-1.3**
SGCP	**Mt. Cagua**	**0.85**	**110**	*e*P	**Pn**	**08 46 36.4**	**-0.4**
SGCP				*e*S	**Sn**	**08 46 50.1**	**+1.9**
ABRA	**Dolores**	**1.00**	**208**	*e*P	Pn	08 46 35.4	-3.5
ABRA				*e*S	**Sn**	**08 46 50.6**	**-1.3**
CVP	**Callao Caves**	**1.01**	**145**	⇑*i*P	**Pn**	**08 46 38.6**	**-0.4**
CVP				*i* S	**Sn**	**08 46 53.4**	**+1.2**
CAUP	**Cauayan**	**1.69**	**160**	*e*P	**Pn**	**08 46 49.8**	**+1.6**
CAUP				*e*S	**Sn**	**08 47 16.9**	**+8.2**
PALP	**Palanan**	**1.87**	**141**	*e*P	**Pn**	**08 46 52.3**	**+1.6**
PALP				*e*S	Sn	08 47 20.4	+7.3
BOLP	**Bolinao**	**2.47**	**210**	*e*P	**Pn**	**08 46 58.8**	**-0.3**
BOLP				*e*S	**Sn**	**08 47 30.9**	**+2.9**
BALP	**Baler**	**2.80**	**173**	*e*P	**Pn**	**08 47 04.0**	**+0.4**
BALP				*e*S	**Sn**	**08 47 40.1**	**+4.0**
SCZP	**Santa Cruz**	**3.01**	**205**	*e*P	**Pn**	**08 47 08.7**	**+2.2**
SCZP				*e*S	**Sn**	**08 47 46.2**	**+4.9**
TWG	**Pinlang**	**4.27**	**358**	*e*Pn	**Pn**	**08 47 24.1**	**+0.4**
TPUB	**Ta-pu**	**4.77**	**354**	*e*Pn	**Pn**	**08 47 30.6**	**-0.1**
YULB	**Yu-li**	**4.83**	**1**	*e*Pn	**Pn**	**08 47 31.9**	**+0.4**
SSLB	**Suanglung**	**5.23**	**357**	*e*Pn	**Pn**	**08 47 38.2**	**+1.2**
NACB	**Ninganchiao**	**5.62**	**4**	*e*Pn	**Pn**	**08 47 41.2**	**-1.2**
YHNB	**Yeheng**	**6.11**	**1**	*e*Pn	**Pn**	**08 47 50.3**	**+1.3**
YOJ	**Yonaguni jima**	**6.13**	**16**	*e*Pn	**Pn**	**08 47 50.5**	**+1.2**
DAV	**Davao City (W)**	**12.16**	**159**	LR	LR	08 54 38.0	
	comp=Z,163nm,18.9s,baz=53,slow=42						
SBUM	**Sibu**	**18.25**	**210**	*e*P	**P**	**08 50 28.5**	**-2.4**
	9.7nm,1.2s						
CMAR	**Chiang Mai Arr**	**21.12**	**273**	P	**P**	**08 51 04.2**	**+2.0**
	1.5nm,0.4s,baz=80,slow=8.7,SNR=9.8						
CMAR				LR	LR	08 59 19.1	
	comp=Z,39nm,18.6s,baz=75,slow=37						
GUMO	**Guam**	**23.25**	**99**	LR	LR	08 57 51.1	
	comp=Z,41nm,20.8s,baz=274,slow=30						
KAPI	**Kappang**	**23.44**	**184**	LR	LR	09 00 41.9	
	comp=Z,45nm,18.2s,baz=82,slow=37						
SARN	**Sarigan**	**23.48**	**91**	*e*P	**P**	**08 51 24.1**	**-2.9**
	20nm,1.0s						
JAY	**Jayapura**	**28.39**	**135**	LR	LR	09 01 11.7	
	comp=Z,65nm,19.5s,baz=144,slow=32						
ULN	**Ulaanbaatar**	**31.45**	**342**	*e*P	**P**	**08 52 39.5**	**+1.2**
	6.4nm,0.7s						
WR1	**Warramunga Arr**	**40.35**	**161**	*e*P	**P**	**08 53 51.1**	**-3.4**
WRA	**Warramunga Arr**	**40.35**	**161**	P	**P**	**08 53 51.1**	**-3.4**
	0.6nm,0.5s,baz=348,slow=12,SNR=6.6						
WB2	**Warramunga Arr**	**40.35**	**161**	*e*P	**P**	**08 53 52.0**	**-2.6**
	9.9nm,1.3s						
MK31	**Makanchi Array**	**42.55**	**320**	*e*P	**P**	**08 54 13.1**	**+0.7**
	4.1nm,1.1s						
MK32	**Makanchi Array**	**42.55**	**320**	*e*P	**P**	**08 54 12.8**	**+0.4**
MKAR	**Makanchi Array**	**42.55**	**320**	P	**P**	**08 54 12.8**	**+0.4**
	2.6nm,0.9s,baz=116,slow=8.4,SNR=13						
H11S3	**WAKE ISLAND Hy**	**43.03**	**83**	T	T	09 39 45.7	
	baz=277,slow=74,SNR=31						
H11S1	**WAKE ISLAND Hy**	**43.04**	**82**	T	T	09 39 46.6	
	baz=277,slow=74,SNR=14						
H11S2	**WAKE ISLAND Hy**	**43.05**	**83**	T	T	09 39 46.8	
	baz=277,slow=74,SNR=23						
H11N1	**WAKE ISLAND Hy**	**43.08**	**81**	T	T	09 39 50.0	
	baz=277,slow=75,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**43.08**	**81**	T	T	09 40 21.6	
	baz=277,slow=75,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**43.09**	**81**	T	T	09 39 50.3	
	baz=277,slow=75,SNR=5.5						
KURK	**Kurchatov**	**46.53**	**324**	*e*P	**P**	**08 54 44.5**	**+0.5**
	4.3nm,0.9s						
KK31	**Karatay Array**	**49.06**	**311**	*e*P	**P**	**08 55 04.1**	**+0.3**
	2.6nm,1.0s						
BVAR	**Borovoye Array**	**52.13**	**324**	LR	LR	09 20 25.3	
	comp=Z,103nm,18.7s,baz=183,slow=39						
MLY	**Manley**	**72.56**	**26**	*e*P	**P**	**08 57 43.1**	**-0.1**
	1.8nm,0.7s						
YKA	**Yellowknife Ar**	**88.15**	**23**	P	**P**	**08 59 06.7**	**-0.1**
	0.4nm,0.8s,baz=314,slow=3.9,SNR=3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.54**	**35**	*e*Pn	**Pn**	**10 10 19.3**	**+2.6**
FAKI				*e*Sn	**Sn**	**10 11 02.9**	**-5.5**
SOEI	**Soe**	**6.15**	**240**	*e*Pn	**Pn**	**10 10 37.6**	**-1.1**
SOEI				*e*Sn	**Sn**	**10 11 46.4**	**-1.4**
WRAB	**Tennant Creek**	**13.93**	**161**	*e*Pn	**Pn**	**10 12 25.8**	**+2.6**
WR1	**Warramunga Arr**	**13.94**	**161**	*e*Pn	**Pn**	**10 12 24.4**	**+1.1**
WR1				*e*Sn	**Sn**	**10 14 52.8**	**-4.0**
WRA	**Warramunga Arr**	**13.94**	**161**	Pn	**Pn**	**10 12 24.4**	**+1.1**
	0.2nm,0.3s,baz=338,slow=12,SNR=11						
WRA				Sn	**Sn**	**10 14 52.8**	**-4.0**
	0.7nm,0.3s,baz=330,slow=21,SNR=8.8						
WB2	**Warramunga Arr**	**13.94**	**161**	*e*Pn	**Pn**	**10 12 24.4**	**+1.0**
COEN	**Coen**	**15.12**	**120**	*e*Pn	**Pn**	**10 12 40.4**	**+1.9**
	29nm,1.5s						
AS31	**Alice Springs**	**17.36**	**167**	*e*P	**P**	**10 13 06.6**	**+0.5**
	2.9nm,1.8s						
ASAR	**Alice Springs**	**17.37**	**167**	P	**Pn**	**10 13 09.7**	**+3.4**
	0.1nm,0.3s,baz=352,slow=10,SNR=13						
PSA00	**Pilbara Seismi**	**17.58**	**212**	*e*Pn	**Pn**	**10 13 10.8**	**+1.9**
	43nm,1.6s						
MK32	**Makanchi Array**	**67.79**	**327**	*e*P	**P**	**10 19 57.0**	**-0.3**
MKAR	**Makanchi Array**	**67.79**	**327**	P	**P**	**10 19 57.0**	**-0.3**
	0.9nm,0.5s,baz=122,slow=8.3,SNR=7.2						

TIR ***28*** *10:17:10.2,41°.14N×19°.87E,h24km,Md2.7/4*
ISCJB ***28*** *10:17:11.1±0.8,41°.22N±0°.04×19°.67E±0°.05,h17km±8km, Error ellipse: s-maj=7.2km s-min=5.2km az=143.2*
BEO ***28*** *10:17:11.1±0.7,41°.27N×19°.65E,h10km±3km,ML2.5/5*
ISC 28 10:17:10.5±1.2,41°.22N±0°.04×19°.68E±0°.04,h14km±8km, n23,σ0ˢ.97/36,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.19**	**48**	*e*Pg	**Pg**	**10 17 15.3**	**+0.5**
TIR				*e*Sg	**Sb**	**10 17 19.4**	**+0.1**
TIR	**Tirane**	**0.19**	**48**	*i* PG	**Pg**	**10 17 15.4**	**+0.5**
TIR				*i* SG	**Sb**	**10 17 19.3**	**0.0**
PHP	**Peshkopia**	**0.73**	**51**	*i* PG	**Pb**	**10 17 23.5**	**-1.7**
PHP				*i* SG	**Sg**	**10 17 34.5**	**0.0**
PUK	**Puka**	**0.83**	**11**	*i* PG	**Pg**	**10 17 27.4**	**+0.7**
PUK				*i* SG	**Sn**	**10 17 41.2**	**+1.0**
OHR	**Ohrid**	**0.85**	**97**	*i* Pg	**Pb**	**10 17 25.4**	**-1.8**
OHR				*i* Sg	**Sb**	**10 17 37.9**	**-0.6**
TPE	**Tepelena**	**0.96**	**165**	*i* PG	**Pb**	**10 17 29.1**	**+0.1**
TPE				*i* SG	**Sn**	**10 17 42.7**	**-0.5**
PDG	**Podgorica**	**1.25**	**345**	*e*Pg	**Pn**	**10 17 33.7**	**+0.1**
PDG				*e*Sg	**Sn**	**10 17 50.0**	**-0.2**
SKO	**Skopje**	**1.52**	**60**	*e*Pg	**Pb**	**10 17 38.4**	**-0.1**
SKO				*e*Sg	**Sb**	**10 17 58.3**	**+0.7**
SKO	**Skopje**	**1.52**	**60**	*e*Pn	**Pn**	**10 17 37.3**	**-0.1**
TREB	**Trebinje**	**1.79**	**327**	*e*Pg	**Pn**	**10 17 41.7**	**+0.6**
TREB				*e*Sg	**Sb**	**10 18 05.8**	**+0.3**
STIP	**Stip**	**1.94**	**75**	*i* Pn	**Pb**	**10 17 45.3**	**-0.5**
SJES	**Sjenica**	**2.05**	**6**	*e*Pg	**Pb**	**10 17 46.6**	**-1.0**
SJES				*e*Sg	**Sg**	**10 18 15.0**	**-1.4**
VAY	**Valandovo**	**2.18**	**86**	*e*Pn	**Pn**	**10 17 47.6**	**+1.2**
VAY	**Valandovo**	**2.18**	**86**	*e*Pn	**Pn**	**10 17 46.1**	**-0.4**
STON	**Ston**	**2.21**	**319**	*e*Pn	**Pn**	**10 17 46.7**	**-0.1**
STON				*e*Sn	**Sn**	**10 18 14.3**	**+0.4**
STON	**Ston**	**2.21**	**319**	*e*Pn	**Pn**	**10 17 46.9**	**+0.1**
BARS	**Barje**	**2.25**	**44**	*e*Pn	**Pn**	**10 17 48.3**	**+0.9**
IVAS	**Ivanjica**	**2.38**	**8**	*e*Pn	**Pn**	**10 17 49.6**	**+0.4**
GRUS	**Gruza**	**2.77**	**16**	*e*Pn	**Pn**	**10 17 55.7**	**+1.1**
BOVS	**Bovan**	**2.84**	**31**	*e*Pn	**Pn**	**10 17 56.2**	**+0.7**
ZAPS	**Zavoj**	**3.00**	**46**	*e*Pn	**Pn**	**10 17 59.4**	**+1.6**
UDBI	**Udbina**	**4.38**	**320**	*e*Pn	**Pn**	**10 18 18.6**	**+1.8**
UDBI				Sn	**Sn**	**10 19 09.2**	**+1.6**
NVLJ	**Novalja**	**4.86**	**315**	*e*Pn	**Pn**	**10 18 22.6**	**-0.7**
NVLJ				Sn	**Sn**	**10 19 17.2**	**-2.1**

IDC ***28*** *10:17:40.6±1.5,35°.03S×111°.18W,h0km,mb3.9/4, mb1 4.4/4,mb1mx3.9/24,mbtmp3.9/4,Error ellipse: s-maj=89.6km s-min=42.3km az=104.0*
ISCJB ***28*** *10:17:41.3±0.3,34°.87S±0°.06×109°.5W±0°.1,h10km, mb4.5/103,Error ellipse: s-maj=12.7km s-min=7.5km az=163.6*
NEIC ***28*** *10:17:43.3±1.6,34°.84S×109°.55W,h10km,mb4.6/102, Error ellipse: s-maj=19.9km s-min=18.4km az=255.0*
ISC 28 10:17:43.0±0.4,34°.84S±0°.08×109°.6W±0°.1,h10km,n130, σ1ˢ.00/127,mb4.5/103,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**31.22**	**113**	*e*P	**P**	**10 24 01.8**	**-0.8**
GO09	**Cerro Castillo**	**31.37**	**133**	*e*P	**P**	**10 24 04.2**	**+0.5**
	42nm,1.4s						
GO10	**Punta Arenas**	**32.70**	**136**	*e*P	**P**	**10 24 14.0**	**-1.5**
	97nm,1.3s						
PB10	**IPOC Station P**	**35.70**	**82**	*e*P	**P**	**10 24 40.1**	**-1.6**
	27nm,1.0s						
PMSA	**Palmer Station**	**40.47**	**152**	*e*P	**P**	**10 25 20.2**	**-1.2**
	90nm,1.4s						
OTAV	**Otavalo**	**45.44**	**47**	*e*P	**P**	**10 26 02.9**	**+0.1**
	5.9nm,1.4s						
RAR	**Rarotonga**	**45.89**	**274**	*e*P	**P**	**10 26 04.4**	**-1.4**
TGUH	**Tegucigalpa,Un**	**53.05**	**27**	*e*P	**P**	**10 26 59.1**	**-1.2**
	8.9nm,0.5s						
HOPE	**Hope Point**	**53.07**	**135**	*e*P	**P**	**10 27 00.2**	**0.0**
	53nm,1.4s						
TLIG	**Tlapa**	**53.16**	**13**	*e*P	**P**	**10 27 01.6**	**+0.3**
	27nm,1.4s						
SBA	**Scott Base**	**54.90**	**195**	*e*P	**P**	**10 27 15.2**	**+2.0**
	6.8nm,1.5s						
NIUE	**Niue**	**55.27**	**270**	*e*P	**P**	**10 27 14.8**	**-1.9**
	208nm,1.3s						
QSPA	**South Pole Qui**	**55.36**	**180**	*e*P	**P**	**10 27 16.4**	**-0.5**
	7.1nm,1.3s						
VNDA	**Vanda**	**55.97**	**195**	*e*P	**P**	**10 27 23.2**	**+2.3**
	5.4nm,1.4s						
ZAIG	**Zacatecas**	**57.68**	**8**	*e*P	**P**	**10 27 34.9**	**+0.9**
	3.5nm,1.2s						
SRIG	**Santa Rosalia**	**61.87**	**357**	*e*P	**P**	**10 28 01.9**	**-0.5**
	38nm,1.3s						
SNAA	**Sanae**	**62.32**	**160**	*e*P	**P**	**10 28 06.9**	**+1.8**
	5.5nm,1.0s						
KVTX	**Kingsville**	**63.03**	**12**	*e*P	**P**	**10 28 12.5**	**+2.4**
	68nm,1.4s						
HSIG		**63.53**	**359**	*e*P	**P**	**10 28 12.8**	**-0.6**
	6.2nm,0.5s						
TXAR	**Lajitas Array**	**64.07**	**6**	P	**P**	**10 28 18.8**	**+1.7**
	0.5nm,0.9s,baz=183,slow=8.4,SNR=4.3						
JCT	**Junction City**	**65.62**	**9**	*e*P	**P**	**10 28 29.8**	**+2.6**
	3.7nm,0.8s						
435B	**Jarrell**	**66.25**	**11**	*e*P	**P**	**10 28 31.1**	**0.0**
	15nm,1.3s						
MNTX	**Cornudas Mount**	**66.31**	**4**	*e*P	**P**	**10 28 32.7**	**+1.2**
	2.6nm,1.2s						
OBIP	**Obispado Ponce**	**66.58**	**45**	*e*P	**P**	**10 28 33.9**	**+0.4**
	22nm,1.3s						
113A	**Mohawk Valley,**	**67.37**	**356**	*e*P	**P**	**10 28 37.4**	**-0.8**
	4.3nm,1.3s						
FDF	**Fort de France**	**67.40**	**52**	*e*P	**P**	**10 28 38.6**	**-0.2**
	119nm,1.3s						
NATX	**Nacogdoches**	**67.72**	**14**	*e*P	**P**	**10 28 40.6**	**+0.2**
	12nm,0.7s						
ETX06	**Route 59 and C**	**67.86**	**14**	*e*P	**P**	**10 28 39.9**	**-1.5**
	14nm,0.5s						
ETX01	**County Road 47**	**67.88**	**14**	*e*P	**P**	**10 28 41.8**	**+0.3**
ETX02	**Prairie Street**	**67.91**	**14**	*e*P	**P**	**10 28 42.0**	**+0.3**
Z41A	**Richland Creek**	**69.55**	**15**	*e*P	**P**	**10 28 53.9**	**+2.0**
	9.7nm,0.6s						
W13A	**Hualapai Mount**	**69.69**	**356**	*e*P	**P**	**10 28 53.2**	**+0.2**
	0.8nm,0.6s						
LDFC	**Landfair**	**69.75**	**355**	*e*P	**P**	**10 28 55.0**	**+1.8**
	12nm,1.1s						
AMTX	**Amarillo**	**69.76**	**7**	*e*P	**P**	**10 28 53.3**	**0.0**
	10nm,1.3s						
FUNA	**Funafuti**	**69.77**	**274**	*e*P	**P**	**10 28 51.7**	**-2.1**
	79nm,1.0s						
KKH	**Kailua Kona**	**69.87**	**313**	*e*P	**P**	**10 28 55.3**	**+1.2**
WUAZ	**Wupatki**	**70.02**	**358**	*e*P	**P**	**10 28 53.8**	**-1.1**
	2.8nm,1.0s						
GSC	**Goldstone, Bar**	**70.11**	**354**	*e*P	**P**	**10 28 54.3**	**-1.1**
	6.0nm,1.3s						
ISA	**Isabella, Lake**	**70.63**	**352**	*e*P	**P**	**10 28 58.7**	**+0.2**
	9.9nm,1.5s						
PAGB	**Antelope Grade**	**70.91**	**351**	*e*P	**P**	**10 28 59.8**	**-0.4**
SHPR	**Sheep Range**	**71.17**	**355**	*e*P	**P**	**10 29 02.4**	**+0.4**
	6.4nm,1.3s						
KNB	**Kanab**	**71.56**	**357**	*e*P	**P**	**10 29 04.7**	**+0.4**
	9.1nm,1.4s						
MVCO	**Mesa Verde**	**71.69**	**1**	*e*P	**P**	**10 29 05.7**	**+0.5**
	9.9nm,1.4s						
TPNV	**Topopah Spring**	**71.69**	**354**	*e*P	**P**	**10 29 04.4**	**-0.7**
	1.5nm,0.8s						
PKCU	**Pink Cliffs**	**71.96**	**358**	*e*P	**P**	**10 29 07.4**	**+0.5**
	5.7nm,1.2s						
CCUT	**Cedar City**	**72.11**	**357**	*e*P	**P**	**10 29 08.8**	**+1.1**
	11nm,1.4s						
SZCU	**Shurtz Canyon**	**72.14**	**357**	*e*P	**P**	**10 29 08.0**	**+0.1**
	4.7nm,1.2s						
HHAR	**Hobbs**	**72.25**	**13**	*e*P	**P**	**10 29 08.8**	**+0.5**
	3.7nm,0.9s						
S22A	**4UR Ranch, Cre**	**72.27**	**2**	*e*P	**P**	**10 29 07.6**	**-1.1**
	1.9nm,1.3s						
SDCO	**Great Sand Dun**	**72.32**	**3**	*e*P	**P**	**10 29 10.0**	**+1.1**
	3.7nm,1.3s						
PV16	**Nyswonger Mesa**	**72.79**	**1**	*e*P	**P**	**10 29 10.4**	**-1.2**
	2.0nm,0.9s						
PV12	**Saucer Basin,**	**72.79**	**1**	*e*P	**P**	**10 29 12.3**	**+0.6**
	5.5nm,1.1s						
PV20	**West Nyswonger**	**72.82**	**1**	*e*P	**P**	**10 29 12.1**	**+0.3**
	5.7nm,1.5s						
PV23	**Carpenter Ridg**	**72.93**	**0**	*e*P	**P**	**10 29 12.8**	**+0.2**
	11nm,1.4s						
PV09	**Paradox Valley**	**72.97**	**0**	*e*P	**P**	**10 29 13.2**	**+0.3**
PV22	**Blue Mesa, Par**	**73.01**	**1**	*e*P	**P**	**10 29 12.7**	**-0.3**
	4.6nm,1.2s						
MSU	**Marysvale**	**73.03**	**358**	*e*P	**P**	**10 29 11.9**	**-1.2**
R11A	**Troy Canyon, C**	**73.03**	**355**	*e*P	**P**	**10 29 13.9**	**+0.8**
	0.5nm,1.2s						
PV21	**Cone Mtn., Par**	**73.04**	**1**	*e*P	**P**	**10 29 14.9**	**+1.7**
	5.9nm,1.3s						
PSUT	**Pine Spring**	**73.11**	**357**	*e*P	**P**	**10 29 14.4**	**+0.9**
	6.5nm,1.4s						
TCRU	**Three Creeks R**	**73.13**	**358**	*e*P	**P**	**10 29 16.3**	**+2.6**
	6.4nm,1.2s						
NV11	**Mina Array Sit**	**73.34**	**353**	*e*P	**P**	**10 29 15.1**	**+0.3**
	0.3nm,1.0s						
NV01	**Mina Array Sit**	**73.35**	**353**	*e*P	**P**	**10 29 15.4**	**+0.4**
NVAR	**Mina Array Bea**	**73.35**	**353**	P	**P**	**10 29 15.4**	**+0.4**
	1.1nm,0.8s,baz=187,slow=6.0,SNR=9.0						
Q16A	**Castle Valley**	**73.40**	**359**	*e*P	**P**	**10 29 15.8**	**+0.5**
	3.7nm,1.0s						
SRU	**San Rafael Swe**	**73.59**	**359**	*e*P	**P**	**10 29 16.5**	**+0.2**
	5.0nm,1.0s						
TMUT	**Trail Mountain**	**73.78**	**359**	*e*P	**P**	**10 29 18.0**	**+0.4**
	6.1nm,1.3s						
BG3	**Lake Jocassee**	**73.81**	**23**	*e*P	**P**	**10 29 16.9**	**-0.6**
	11nm,1.3s						
KVN	**Kaiserville**	**73.94**	**353**	*e*P	**P**	**10 29 18.8**	**+0.4**
	5.2nm,1.1s						
P17A	**Butcher Ranch,**	**73.95**	**359**	*e*P	**P**	**10 29 19.8**	**+1.3**
	5.8nm,1.1s						
YERR	**Yerington**	**74.00**	**352**	*e*P	**P**	**10 29 19.3**	**+0.5**
	1.2nm,0.9s						
RUBR	**Rubicon Trail**	**74.17**	**351**	*e*P	**P**	**10 29 20.5**	**+0.7**
	6.4nm,0.8s						
NLU	**North Lily Min**	**74.46**	**358**	*e*P	**P**	**10 29 22.4**	**+1.0**
	7.4nm,1.3s						
MPU	**Maple Canyon**	**74.51**	**358**	*e*P	**P**	**10 29 21.6**	**-0.1**
	5.8nm,1.4s						
DUG	**Dugway, Tooele**	**74.72**	**357**	*e*P	**P**	**10 29 23.9**	**+1.0**
	5.5nm,1.4s						
JLU	**Jordanelle**	**75.09**	**359**	*e*P	**P**	**10 29 25.7**	**+0.5**
	6.9nm,1.3s						
CTU	**Camp Tracy**	**75.19**	**358**	*e*P	**P**	**10 29 25.7**	**+0.1**
	3.2nm,1.1s						
BMN	**Battle Mountai**	**75.23**	**354**	*e*P	**P**	**10 29 25.5**	**-0.3**
	6.3nm,1.1s						
N23A	**Red Feather La**	**75.44**	**3**	*e*P	**P**	**10 29 27.6**	**+0.5**
	6.6nm,1.4s						
HVU	**Hansel Valley**	**76.31**	**358**	*e*P	**P**	**10 29 31.7**	**-0.3**
	2.2nm,0.8s						
MOD	**Modoc Plateau**	**77.00**	**352**	*e*P	**P**	**10 29 35.9**	**+0.1**
	7.7nm,1.4s						
K22A	**Casper**	**77.17**	**2**	*e*P	**P**	**10 29 35.3**	**-1.5**
	11nm,1.2s						
BW06	**Boulder Array**	**77.23**	**0**	*e*P	**P**	**10 29 37.1**	**-0.2**
	7.1nm,1.2s						
PD31	**Pinedale Array**	**77.23**	**0**	*e*P	**P**	**10 29 37.4**	**+0.1**
	7.4nm,1.3s						
PDAR	**Pinedale Array**	**77.23**	**0**	P	**P**	**10 29 37.0**	**-0.3**
	3.0nm,1.0s,baz=157,slow=4.2,SNR=18						
WVOR	**Wild Horse Val**	**77.35**	**353**	*e*P	**P**	**10 29 38.2**	**+0.5**
	9.7nm,1.5s						
Q51A	**Peebles**	**77.41**	**21**	*e*P	**P**	**10 29 39.1**	**+1.1**
	5.5nm,0.7s						
K05A	**Summer Lake**	**77.88**	**352**	*e*P	**P**	**10 29 41.5**	**+0.6**
	5.2nm,1.1s						
TPAW	**Teton Pass**	**77.97**	**359**	*e*P	**P**	**10 29 41.5**	**+0.1**
	5.4nm,1.0s						
LOHW	**Long Hollow**	**78.09**	**359**	*e*P	**P**	**10 29 41.9**	**-0.1**
	7.7nm,1.4s						
FXWY	**Fox Creek**	**78.12**	**359**	*e*P	**P**	**10 29 42.3**	**+0.1**
	6.0nm,1.3s						
HLID	**Hailey**	**78.16**	**356**	*e*P	**P**	**10 29 42.6**	**+0.3**
	14nm,1.4s						
J08A	**Circle Bar Ran**	**78.25**	**353**	*e*P	**P**	**10 29 42.5**	**-0.3**
	2.9nm,1.1s						
L40A	**Anamosa**	**78.36**	**14**	*e*P	**P**	**10 29 42.3**	**-1.0**
	7.1nm,1.2s						
IMW	**Indian Meadow**	**78.38**	**359**	*e*P	**P**	**10 29 44.2**	**+0.5**
FLWY	**Flagg Ranch**	**78.56**	**359**	*e*P	**P**	**10 29 45.3**	**+0.7**
	3.3nm,0.8s						
RSSD	**Black Hills**	**78.75**	**4**	*e*P	**P**	**10 29 45.6**	**-0.1**
	6.4nm,1.3s						
PINE	**Pine Mountain**	**78.94**	**352**	*e*P	**P**	**10 29 46.5**	**-0.2**
	11nm,1.4s						
I07A	**Izee**	**79.07**	**353**	*e*P	**P**	**10 29 47.7**	**+0.5**
	6.9nm,1.3s						
ECSD	**EROS Data Cent**	**79.09**	**10**	*e*P	**P**	**10 29 48.5**	**+1.3**
YMR	**Madison River**	**79.15**	**359**	*e*P	**P**	**10 29 49.1**	**+1.3**
	9.1nm,1.3s						
YHB	**Horse Butte**	**79.23**	**359**	*e*P	**P**	**10 29 49.3**	**+1.0**
	2.6nm,1.0s						
YHH	**Holmes Hill**	**79.26**	**359**	*e*P	**P**	**10 29 49.5**	**+0.9**
	3.8nm,1.2s						
QLMT	**Earthquake Lak**	**79.32**	**359**	*e*P	**P**	**10 29 49.2**	**+0.4**
MCMT	**McKenzie Canyo**	**79.35**	**358**	*e*P	**P**	**10 29 49.5**	**+0.6**
BMO	**Blue Mountains**	**79.63**	**354**	*e*P	**P**	**10 29 50.1**	**-0.2**
	3.7nm,1.1s						
DLMT	**Dillon**	**79.88**	**358**	*e*P	**P**	**10 29 52.1**	**+0.4**
	4.1nm,1.2s						
BOZ	**Bozeman (W)**	**80.09**	**359**	*e*P	**P**	**10 29 53.8**	**+1.0**
	1.6nm,0.9s						
G08A	**Pilot Rock**	**80.21**	**353**	*e*P	**P**	**10 29 51.7**	**-1.7**
	1.4nm,0.9s						
I41A	**Arkdale**	**80.55**	**14**	*e*P	**P**	**10 29 56.1**	**+0.9**
	5.0nm,0.4s						
HRY	**Holter Researc**	**81.20**	**358**	*e*P	**P**	**10 29 58.9**	**+0.2**
E09A	**Wood Farm, Sta**	**81.35**	**354**	*e*P	**P**	**10 29 59.0**	**-0.3**
	2.5nm,0.9s						
HAWA	**Hanford**	**81.36**	**353**	*e*P	**P**	**10 29 59.1**	**-0.3**
	3.8nm,0.9s						
MSO	**Missoula**	**81.39**	**357**	*e*P	**P**	**10 30 00.5**	**+0.8**
	8.5nm,1.4s						
PAL	**Palisades**	**82.30**	**26**	*e*P	**P**	**10 30 02.1**	**-2.3**
	43nm,1.4s						
GLMI	**Grayling**	**82.47**	**18**	*e*P	**P**	**10 30 06.5**	**+1.2**
	38nm,1.3s						
NEW	**Newport**	**83.01**	**355**	*e*P	**P**	**10 30 08.7**	**+0.6**
	7.2nm,1.3s						
H11S2	**WAKE ISLAND Hy**	**95.38**	**289**	T	T	12 15 28.1	
	baz=131						
H11S1	**WAKE ISLAND Hy**	**95.39**	**289**	T	T	12 15 30.7	
	baz=131						
H11S3	**WAKE ISLAND Hy**	**95.39**	**289**	T	T	12 15 32.3	
	baz=131						
YKA	**Yellowknife Ar**	**97.08**	**358**	P	**P**	**10 31 14.1**	**-0.4**
	0.4nm,1.0s,baz=177,slow=4.9,SNR=4.1						
YKB5	**Yellowknife Ar**	**97.08**	**358**	*e*P	**P**	**10 31 14.1**	**-0.4**
NJ2	**Nanjing**	**139.79**	**280**	*e*PKP	**PKPdf**	**10 37 11.8**	**+0.5**
WHN	**Wuhan**	**143.00**	**276**	PKP	**PKiKP**	**10 37 21.5**	**+1.2**
HHC	**Hu-ho-hao-te**	**147.18**	**293**	*e*PKPbc	**PKPdf**	**10 37 23.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**149.87**	**245**	PKPbc	**PKPdf**	**10 37 29.9**	**+0.8**
	3.0nm,0.9s,baz=164,slow=1.2,SNR=16						
SONM	**Songino Array**	**150.31**	**307**	PKPbc	**PKPdf**	**10 37 29.9**	**+0.8**
	1.5nm,0.9s,baz=56,slow=3.7,SNR=5.8						
BRTR	**Keskin Array B**	**150.47**	**70**	PKPbc	**PKiKP**	**10 37 37.2**	**+1.5**
	1.3nm,1.0s,baz=150,slow=5.1,SNR=6.3						
WMQ	**Urumqi**	**163.92**	**309**	*e*PKP	**PKPdf**	**10 37 47.0**	**+0.7**
WMQ				AMB	AMB		
	comp=Z,68nm,3.9s						
KSH	**Kashi**	**173.56**	**318**	*e*PKP	**PKPdf**	**10 37 53.5**	**+0.8**

ISCJB ***28*** *10:18:48.1±0.4,36°.30S±0°.07×110°.6W±0°.1,h10km, mb4.6/166,MS4.1/6,Error ellipse: s-maj=13.4km s-min=9.8km az=167.8*
NEIC ***28*** *10:18:49.9±1.7,36°.29S×110°.69W,h10km,mb4.6/166, Error ellipse: s-maj=25.1km s-min=19.3km az=101.0*
GCMT ***28*** *10:18:55.9±0.3,35°.23S±0°.03×111°.38W±0°.02,h12km, MW4.9/77,Moment Tensor Solution. s24,c28; s77,c105; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.07±.10; Mθθ-0.31±.10; Mφφ2.38±.07; Mrθ-0.72±.38; Mθφ-0.72±.08; Mφr-0.72±.25; Best double couple: M0 2.56500×10^16 NP1:φs7.00000°,δ56.00000°,λ-62.00000°. NP2: φs144.00000°,δ43.00000°,λ-125.00000°. Principal axes: T 2.6250, Plg7.0000°, Azm78.0000°; N -0.1160, Plg23.0000°, Azm171.0000°; P -2.5060, Plg66.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***28*** *10:18:55.7±0.9,35°.02S×111°.87W,h0km,mb4.2/7, mb1 4.5/7,mb1mx4.2/24,mbtmp4.1/7,MS3.8/4,Ms1 3.7/4, ms1mx3.6/10 Error ellipse: s-maj=42.2km s-min=27.0km az=106.0*
ISC 28 10:18:50.2±0.5,36°.27S±0°.10×110°.6W±0°.1,h10km,n200, σ0ˢ.95/183,mb4.7/165,MS4.1/6,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**9.18**	**7**	LR	LR	10 23 10.7	
	comp=Z,434nm,19.9s,baz=184,slow=31						
GO07	**Milladeo Hill,**	**29.05**	**115**	*e*P	**P**	**10 24 51.3**	**+0.8**
	49nm,1.0s						
GO06	**Curarrehue**	**30.87**	**108**	*e*P	**P**	**10 25 05.9**	**-0.9**
	4.8nm,1.0s						
MEH	**Mehetia**	**37.77**	**289**	*e*T	T	11 04 45.5	
	7.9nm,0.2s						
TAOE	**Nuku Hiva Isla**	**38.30**	**308**	*e*LR	LR	10 35 59.8	
	comp=Z,496nm,26.3s,baz=116						
TVO	**Taravao**	**38.73**	**288**	*e*T	T	11 05 59.6	
	0.7nm,0.2s						
TIAR	**Tiarei**	**38.94**	**288**	*e*T	T	11 06 14.7	
	2.8nm,0.3s						
PPT2	**Papeete2**	**39.10**	**288**	*e*S	S	10 32 03.0	-15
	80nm,25.0s						
PPT2				*e*LR	LR	10 36 24.7	
	comp=Z,1μm,26.5s,baz=118						
PPT	**Papeete**	**39.11**	**288**	LR	LR	10 37 47.0	
	comp=Z,179nm,20.1s,baz=123,slow=30						
LPAZ	**La Paz**	**42.54**	**74**	P	P	10 26 59.6	+13
	1.0nm,0.8s,baz=224,slow=13,SNR=3.6						
RAR	**Rarotonga**	**45.19**	**276**	LR	LR	10 40 53.0	
	comp=Z,190nm,20.9s,baz=111,slow=30						
OTAV	**Otavalo**	**47.01**	**47**	*e*P	**P**	**10 27 22.0**	**-0.3**
	5.4nm,1.4s						
QSPA	**South Pole Qui**	**53.93**	**180**	*e*P	**P**	**10 28 12.4**	**-1.3**
	10.0nm,1.4s						
ESTN	**Estel**	**54.17**	**30**	*e*P	**P**	**10 28 16.1**	**+0.3**
	7.1nm,1.0s						
ESPN	**Las Esperanzas**	**54.21**	**32**	*e*P	**P**	**10 28 17.4**	**+1.3**
	10nm,0.9s						
VNDA	**Vanda**	**54.38**	**196**	*e*P	**P**	**10 28 16.1**	**-0.5**
	5.4nm,1.5s						
TLIG	**Tlapa**	**54.73**	**14**	*e*P	**P**	**10 28 20.1**	**+0.1**
	11nm,0.9s						
LBZ	**Lake Benmore**	**58.74**	**235**	*e*P	**P**	**10 28 47.5**	**-0.7**
	23nm,1.4s						
SNAA	**Sanae**	**61.27**	**160**	*e*P	**P**	**10 29 05.8**	**+0.7**
MTDJ	**Mount Denham**	**62.57**	**36**	*e*P	**P**	**10 29 13.9**	**-0.6**
	31nm,1.1s						
SRIG	**Santa Rosalia**	**63.27**	**358**	*e*P	**P**	**10 29 18.9**	**+0.1**
	63nm,1.4s						
KVTX	**Kingsville**	**64.59**	**12**	*e*P	**P**	**10 29 26.5**	**-1.0**
	47nm,1.3s						
HSIG		**64.94**	**360**	*e*P	**P**	**10 29 28.7**	**-1.2**
	12nm,1.2s						
833A	**Chaparral WMA,**	**65.11**	**11**	*e*P	**P**	**10 29 30.4**	**-0.5**
	4.9nm,0.6s						
TXAR	**Lajitas Array**	**65.58**	**7**	P	**P**	**10 29 34.5**	**+0.4**
	1.3nm,1.1s,baz=191,slow=9.0,SNR=6.1						
TXAR				LR	LR	10 51 47.7	
	comp=Z,34nm,19.0s,baz=0.0,slow=31						
JCT	**Junction City**	**67.16**	**10**	*e*P	**P**	**10 29 45.1**	**+1.0**

PKCU	Pink Cliffs 12nm,1.2s	73.36	359	eP	P	10 30 21.5	-0.8
CCUT	Cedar City 9.9nm,1.1s	73.49	358	eP	P	10 30 23.1	+0.1
SZCU	Shurtz Canyon 8.1nm,1.2s	73.53	358	eP	P	10 30 23.6	+0.4
S22A	4UR Ranch, Cre 5.3nm,1.4s	73.73	3	eP	P	10 30 23.9	-0.5
SDCO	Great Sand Dun 4.1nm,1.1s	73.79	4	eP	P	10 30 25.2	+0.3
GOGA	Godfrey 6.8nm,1.2s	73.81	23	eP	P	10 30 25.4	+0.7
HHAR	Hobbs 8.4nm,1.1s	73.82	14	eP	P	10 30 25.4	+0.7
MDPB	Devils Postpil 3.1nm,1.1s	73.95	353	eP	P	10 30 26.3	+0.6
PV03	Paradox Valley 5.3nm,1.2s	74.17	1	eP	P	10 30 26.2	-0.7
PV17	East Wray Mesa 6.2nm,1.1s	74.19	1	eP	P	10 30 25.7	-1.4
PV11	David Mesa, Pa 6.8nm,1.1s	74.21	1	eP	P	10 30 27.2	0.0
PV19	Morning Glory 6.3nm,1.2s	74.22	1	eP	P	10 30 26.7	-0.6
PV16	Nyswonger Mesa 7.4nm,1.4s	74.22	1	eP	P	10 30 26.6	-0.7
PV12	Saucer Basin, 9.4nm,1.2s	74.23	1	eP	P	10 30 26.5	-0.8
PV20	West Nyswonger 7.1nm,1.4s	74.25	1	eP	P	10 30 26.3	-1.1
PV14	Lion Creek, Pa 12nm,1.3s	74.28	1	eP	P	10 30 26.4	-1.3
PV10	Paradox Valley 5.0nm,0.9s	74.29	1	eP	P	10 30 26.7	-1.0
PV04	Paradox Valley 7.4nm,1.1s	74.31	1	eP	P	10 30 25.9	-1.8
PV23	Carpenter Ridg 8.4nm,1.1s	74.36	1	eP	P	10 30 27.0	-1.2
R11A	Troy Canyon, C 6.3nm,1.4s	74.39	356	eP	P	10 30 28.6	+0.4
PV09	Paradox Valley	74.41	1	eP	P	10 30 27.6	-0.8
MSU	Marysvale	74.42	359	eP	P	10 30 28.3	-0.2
X51A	Calhoun 17nm,1.5s	74.44	22	eP	P	10 30 28.0	-0.4
PV22	Blue Mesa, Par 4.4nm,1.2s	74.45	1	eP	P	10 30 28.3	-0.3
PV21	Cone Mtn., Par 12nm,1.5s	74.47	1	eP	P	10 30 27.9	-0.9
CMB	Columbia Colle 10nm,1.5s	74.49	352	eP	P	10 30 29.4	+0.9
PSUT	Pine Spring 8.1nm,1.3s	74.49	357	eP	P	10 30 28.9	+0.1
TCRU	Three Creeks R 6.8nm,1.0s	74.53	358	eP	P	10 30 29.7	+0.6
NV11	Mina Array Sit 0.4nm,1.0s	74.66	354	eP	P	10 30 28.9	-0.8
NV01	Mina Array Sit	74.67	354	eP	P	10 30 30.0	+0.1
NVAR	Mina Array Bea 3.2nm,0.9s,baz=184,slow=7.8,SNR=9.3	74.67	354	P	P	10 30 30.0	+0.1
Q16A	Castle Valley 12nm,1.4s	74.82	360	eP	P	10 30 29.9	-0.7
WAKR	Walker 7.6nm,1.2s	74.85	353	eP	P	10 30 30.6	-0.2
RYN	Ryan 6.5nm,1.2s	74.88	354	eP	P	10 30 30.9	-0.2
V48A	Smith Brothers 11nm,1.4s	74.98	20	eP	P	10 30 31.2	-0.2
SRU	San Rafael Swe 7.2nm,1.2s	75.01	0	eP	P	10 30 31.6	-0.2
PBMO	Poplar Bluff 6.9nm,1.0s	75.05	17	eP	P	10 30 29.2	-2.6
SMCO	Snowmass 8.8nm,1.3s	75.15	3	eP	P	10 30 31.1	-1.8
TMUT	Trail Mountain 10.0nm,1.3s	75.19	360	eP	P	10 30 32.0	-1.0
KVN	Kaiserville 8.2nm,1.1s	75.27	354	eP	P	10 30 33.6	+0.3
YERR	Yerington 6.0nm,1.3s	75.31	353	eP	P	10 30 33.3	-0.2
P17A	Butcher Ranch, 9.3nm,1.1s	75.37	360	eP	P	10 30 33.5	-0.3
BG3	Lake Jocassee 11nm,1.3s	75.44	23	eP	P	10 30 35.2	+1.2
PNTR	Pine Nut 3.9nm,1.0s	75.44	353	eP	P	10 30 34.2	-0.1
RUBR	Rubicon Trail 10.0nm,1.0s	75.47	352	eP	P	10 30 34.7	+0.3
Y58A	Scranton 40nm,0.6s	75.55	26	eP	P	10 30 35.1	+0.4
VCNR	Virginia City 7.1nm,1.5s	75.65	353	eP	P	10 30 36.4	+0.9
ISCO	Idaho Springs 6.3nm,1.4s	75.83	4	eP	P	10 30 37.3	+0.7
NLU	North Lily Min 15nm,1.3s	75.86	359	eP	P	10 30 37.0	+0.4
MPU	Maple Canyon 12nm,1.4s	75.92	359	eP	P	10 30 36.1	-0.8
PAHR	Pah Rah Range 4.4nm,1.1s	76.03	353	eP	P	10 30 37.1	-0.5
O20A	White River Ci 3.0nm,1.1s	76.06	2	eP	P	10 30 37.5	-0.3
T47A	Sharon Grove 5.5nm,0.8s	76.08	19	eP	P	10 30 37.2	-0.4
CCM	Cathedral Cave 7.2nm,1.3s	76.09	16	eP	P	10 30 36.8	-1.0
DUG	Dugway, Tooele 6.3nm,1.4s	76.12	358	eP	P	10 30 37.7	-0.4
BEKR	Beckworth 3.2nm,1.1s	76.29	352	eP	P	10 30 38.4	-0.7
MAW	Mawson 2.3nm,0.9s,baz=213,slow=7.5,SNR=3.7	76.33	177	P	P	10 30 53.0	+14
JLU	Jordanelle 8.7nm,1.2s	76.50	359	eP	P	10 30 39.6	-0.8
BMN	Battle Mountai 12nm,1.2s	76.57	355	eP	P	10 30 40.4	-0.2
CTU	Camp Tracy 5.8nm,1.2s	76.59	359	eP	P	10 30 40.9	+0.2
USIN	University of 12nm,0.6s	76.85	18	eP	P	10 30 42.6	+0.6
BGU	Big Grassy Mou 6.0nm,1.4s	76.85	358	eP	P	10 30 41.9	-0.3
N23A	Red Feather La 8.2nm,1.2s	76.91	4	eP	P	10 30 40.6	-2.1
OGNE	Ogallala 22nm,1.4s	77.24	7	eP	P	10 30 44.6	+0.3
WDC	Whiskeytown Da 4.6nm,0.9s	77.26	351	eP	P	10 30 43.4	-0.9
PHWY	Pilot Hill 6.3nm,1.3s	77.34	4	eP	P	10 30 46.1	+1.0
HWUT	Hardware Ranch 1.7nm,0.8s	77.50	359	eP	P	10 30 46.6	+0.7
RWWY	Rawlins 9.9nm,1.4s	77.64	3	eP	P	10 30 46.3	-0.5
R49A	Shelbyville 3.2nm,0.9s	77.82	20	eP	P	10 30 47.8	+0.3
MOD	Modoc Plateau 5.8nm,1.0s	78.30	353	eP	P	10 30 50.2	-0.1
V62A	Hyde County Ai 611nm,1.2s	78.39	28	eP	P	10 30 51.2	+0.5
K22A	Casper 13nm,1.1s	78.63	3	eP	P	10 30 52.4	+0.3
AHID	Auburn Hatcher 11nm,1.4s	78.66	360	eP	P	10 30 52.7	+0.4
BW06	Boulder Array 8.7nm,1.0s	78.66	1	eP	P	10 30 52.1	-0.2
PD31	Pinedale Array 8.0nm,1.0s	78.66	1	eP	P	10 30 51.9	-0.4
PDAR	Pinedale Array 6.0nm,1.0s,baz=174,slow=5.8,SNR=13	78.66	1	P	P	10 30 51.5	-0.9
WVOR	Wild Horse Val 5.8nm,1.3s	78.67	354	eP	P	10 30 53.5	+1.2
K05A	Summer Lake 10nm,1.1s	79.18	352	eP	P	10 30 55.5	+0.4
SFIN	Lafayette 7.7nm,1.3s	79.27	18	eP	P	10 30 54.4	-1.0
SNOW	Snow King Moun 7.7nm,1.3s	79.35	360	eP	P	10 30 55.3	-0.8
TPAW	Teton Pass 6.3nm,1.0s	79.38	360	eP	P	10 30 56.7	+0.3
LOHW	Long Hollow 5.0nm,1.1s	79.50	360	eP	P	10 30 55.0	-1.9
FXWY	Fox Creek 6.6nm,1.1s	79.53	360	eP	P	10 30 57.0	-0.1
HLID	Hailey 11nm,1.0s	79.53	357	eP	P	10 30 56.9	-0.2
J08A	Circle Bar Ran	79.58	354	eP	P	10 30 56.5	-0.7
IMW	Indian Meadow 6.1nm,1.0s	79.79	360	eP	P	10 30 59.0	+0.5
L40A	Anamosa 17nm,1.4s	79.94	15	eP	P	10 30 58.3	-0.7
FLWY	Flagg Ranch 8.3nm,1.0s	79.97	360	eP	P	10 30 58.7	-0.8
L42A	Oliver, Polo 16nm,1.4s	80.22	16	eP	P	10 30 58.8	-1.7
RSSD	Black Hills 13nm,1.4s	80.23	5	eP	P	10 31 01.0	+0.2
PINE	Pine Mountain 7.3nm,0.9s	80.24	352	eP	P	10 31 00.7	-0.2
I07A	Izee 6.0nm,1.0s	80.38	353	eP	P	10 31 01.8	+0.3
YMR	Madison River 14nm,1.4s	80.56	360	eP	P	10 31 00.2	-2.4
ECSD	EROS Data Cent 4.6nm,0.9s	80.63	10	eP	P	10 31 01.8	-0.9
YHB	Horse Butte 5.7nm,1.1s	80.64	360	eP	P	10 31 03.6	+0.6
YHH	Holmes Hill 6.0nm,1.2s	80.68	360	eP	P	10 31 02.7	-0.7
QLMT	Earthquake Lak	80.73	359	eP	P	10 31 02.4	-1.0
MCMT	McKenzie Canyo	80.75	358	eP	P	10 31 03.0	-0.6
BMO	Blue Mountains 3.5nm,1.1s	80.97	355	eP	P	10 31 05.0	+0.3
PLID	Pearl Lake 6.1nm,1.2s	81.13	356	eP	P	10 31 04.6	-1.1
K43A	Burlington 9.2nm,1.0s	81.18	16	eP	P	10 31 06.4	+0.8
DLMT	Dillon 5.4nm,1.3s	81.27	359	eP	P	10 31 06.8	+0.5
BOZ	Bozeman (W) 4.4nm,1.2s	81.49	359	eP	P	10 31 08.5	+1.0
G08A	Pilot Rock 4.1nm,0.9s	81.53	354	eP	P	10 31 07.1	-0.5
LRM	Limekiln Ridge	81.73	359	eP	P	10 31 09.0	+0.1
F10A	Beach Ranch, E 4.2nm,1.1s	82.08	355	eP	P	10 31 10.7	+0.2
I41A	Arkdale 14nm,1.4s	82.14	15	eP	P	10 31 11.5	+0.8
I42A	Draeger Farm, 11nm,1.4s	82.18	16	eP	P	10 31 11.4	+0.5
HRY	Holter Researc	82.61	359	eP	P	10 31 12.1	-1.2
LAO	LASA Array 8.0nm,1.0s	82.67	3	eP	P	10 31 13.8	+0.3
HAWA	Hanford 4.7nm,0.8s	82.68	354	eP	P	10 31 11.9	-1.6
E09A	Wood Farm, Sta 2.6nm,0.8s	82.69	355	eP	P	10 31 12.9	-0.6
MSO	Missoula 7.9nm,1.3s	82.78	358	eP	P	10 31 13.2	-0.9
NEW	Newport 5.8nm,1.3s	84.36	356	eP	P	10 31 22.6	+0.5
E43A	Lone Tree Farm 12nm,1.2s	84.97	16	eP	P	10 31 25.6	+0.5
AGMN	Agassiz Nation 2.9nm,1.1s	85.21	10	eP	P	10 31 26.5	+0.2
D41A	Chassel 25nm,1.4s	85.28	15	eP	P	10 31 26.0	-0.7
VLDQ	Val d'Or 3.7nm,1.1s	89.06	21	eP	P	10 31 44.6	-0.4
ASAR	Alice Springs 1.1nm,1.0s,baz=139,slow=6.3,SNR=5.6	94.82	236	P	P	10 32 17.4	+4.8
H11S2	WAKE ISLAND Hy 95.06 289 baz=126,slow=75,SNR=5.6			T	T	12 16 42.9	
H11S1	WAKE ISLAND Hy 95.08 289 baz=126,slow=75,SNR=6.6			T	T	12 16 39.3	
H11S3	WAKE ISLAND Hy 95.08 289 baz=126,slow=75,SNR=5.8			T	T	12 16 40.8	
YKA	Yellowknife Ar 0.5nm,0.9s,baz=175,slow=4.5,SNR=4.4	98.47	358	P	Pdif	10 32 28.7	+0.8
YKB5	Yellowknife Ar	98.47	358	eP	Pdif	10 32 28.7	+0.8
NJ2	Nanjing	139.22	279	eP	PKPdf	10 38 16.5	-0.9
NJ2	comp=Z,12nm,0.5s			pmax	pmax		
HHC	Hu-ho-hao-te	146.96	291	eP	PKPbc	10 38 31.8	-1.1
CMAR	Chiang Mai Arr comp=Z,7.6nm,0.9s,baz=167,slow=2.1,SNR=12	148.51	244	PKPbc	PKPab	10 38 44.8	+3.8
SONM	Songino Array comp=Z,2.1nm,0.9s,baz=82,slow=1.2,SNR=5.8	150.48	305	PKPbc	PKiKP	10 38 44.8	+2.3
WMQ	Urumqi	164.11	304	eP	PKPdf	10 38 53.3	-0.3
WMQ	comp=Z,100nm,3.6s			pmax	pmax		
KSH	Kashi	173.88	304	ePKP	PKPdf	10 39 01.0	+1.1

ISCJB ***28*** *10:35:13.4±1.0, 67°.80N±0°.03×33°.7E±0°.2, h0km, Error ellipse: s-maj=8.7km s-min=4.0km az=171.9*
UPP ***28*** *10:35:14.4±2.9, 67°.57N×33°.92E, h0km, ML2.5, Suspected explosion*
NAO ***28*** *10:35:15.8±1.3, 67°.68N×33°.80E, ML3.2*
KOLA ***28*** *10:35:15.3, 67°.63N×33°.92E, h0km*
IDC ***28*** *10:35:16.5±1.8, 67°.73N×33°.76E, h0km, mb1 3.6/5, mb1mx3.2/42, mbtmp3.7/5, ML3.1/5, Error ellipse: s-maj=21.8km s-min=11.0km az=76.0*

ISC 28 10:35:13.5±1.6, 67°.76N±0°.04×33°.84E±0°.09, h0km, n38, σ1§43/61, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.26	221	P	Pg	10 35 19.0	+0.7
APA				S	Sg	10 35 21.7	+0.1
APZ9	Apatity	0.26	221	Pg	Pg	10 35 19.1	+0.7
APZ9				Lg	Lg	10 35 22.2	
APZ9				Rg	Rg	10 35 23.3	
APZ9	Apatity	0.26	221	Pg	Pg	10 35 19.1	+0.7
APZ9				Sg	Sg	10 35 22.2	+0.6
APZ9				Rg	Rg	10 35 23.3	
APA0	Apatity Array baz=99,slow=18	0.36	245	Pg	Pb	10 35 21.7	-1.0
APA0				Lg	Lg	10 35 26.5	
APA0	baz=68,slow=28			Rg	Rg	10 35 28.3	
APA0	baz=76,slow=37						
APA0	Apatity Array baz=99,slow=18	0.36	245	P	Pb	10 35 21.7	-1.0
APA0				S	Sg	10 35 26.3	+1.3
APA0	Apatity Array baz=99,slow=18	0.36	245	Pg	Pb	10 35 21.7	-1.0
APA0				Sg	Sg	10 35 26.5	+1.5
APA0	baz=68,slow=28			Rg	Rg	10 35 28.3	
APA0	baz=76,slow=37						
ARA0	ARCESS Array S baz=122,slow=16	3.53	304	Pn	Pn	10 36 12.2	+2.7
ARA0				Pg	Pg	10 36 20.2	-0.9
ARA0	baz=119,slow=16			Sn	Sn	10 36 54.0	+2.0
ARA0	baz=125,slow=28			Lg	Lg	10 37 06.6	
ARA0	baz=129,slow=37						
ARA0	ARCESS Array S baz=122,slow=16	3.53	304	Pn	Pn	10 36 12.2	+2.7
ARA0				Pg	Pg	10 36 20.2	-0.9
ARA0	baz=119,slow=16			Sn	Sn	10 36 54.0	+2.0
ARA0	baz=125,slow=28			Sg	Sg	10 37 06.6	-0.1
ARA0	baz=129,slow=37						
ARCES	ARCESS Array B 12nm,0.3s,baz=122,slow=15,SNR=537	3.53	304	Pn	Pn	10 36 12.2	+2.7
ARCES				Sn	Sn	10 36 54.1	+2.2
ARCES	7.6nm,0.3s,baz=120,slow=24,SNR=16			Lg	Lg	10 37 05.7	
ARCES	14nm,0.3s,baz=117,slow=36,SNR=14						
ARE0	ARCESS Array S	3.53	304	eP	Pn	10 36 12.4	+2.9
ARE0				eS	Sn	10 36 54.0	+2.1
ARE0				IAML		10 37 10.3	
ARE0	comp=Z,2.0nm,0.4s						
HEF	Hetta	3.87	284	Pn	Pn	10 36 16.0	+1.8
HEF				Pg	Pg	10 36 26.8	-0.8
HEF				Sn	Sn	10 37 02.0	+1.7
HEF				Lg	Lg	10 37 16.4	
HEF	Hetta	3.87	284	Pn	Pn	10 36 16.0	+1.8
HEF				eP	Pn	10 36 16.1	+1.8
HEF				Pg	Pg	10 36 26.8	-0.8
HEF				Sn	Sn	10 37 02.0	+1.7
HEF				Sg	Sg	10 37 16.4	-1.3
KTK1	Kautokeino	4.12	293	eP	Pn	10 36 20.1	+2.5
KTK1				IAML		10 37 30.2	
KTK1	comp=Z,36nm,0.4s						
PAJU	Pajala	4.21	265	P	Pn	10 36 19.4	+0.6
PAJU				S	Sn	10 37 09.1	+0.5
LANU	Lannavaara	4.49	279	P	Pn	10 36 23.5	+0.8
MASU	Masugnsbyn	4.54	272	P	Pn	10 36 24.1	+0.8
HAMF	Hammerfest	4.63	313	eP	Pn	10 36 27.6	+3.0
HAMF				eS	Sn	10 37 19.6	+0.6
ERTU	Ertsjaerv	4.70	261	P	Pn	10 36 26.1	+0.5
KIF	Kilpisjarvi	4.98	291	Pn	Pn	10 36 31.2	+1.9
KIF				Sn	Sn	10 37 27.1	-0.4
KIF	Kilpisjarvi	4.98	291	eP	Pn	10 36 31.2	+1.9
KIF				eS	Sn	10 37 27.3	-0.3
KUA	Kurravaara	5.11	278	P	Pn	10 36 32.1	+0.9
DUNU	Dundret	5.15	269	P	Pn	10 36 32.1	+0.3
HARU	Harads	5.30	258	P	Pn	10 36 33.0	-0.7
SJUU	Sjulsmark	5.37	251	P	Pn	10 36 34.3	-0.4
RATU	Laukkuluspa	5.41	277	P	Pn	10 36 36.0	+0.8
RATU				S	Sn	10 37 37.8	-0.3
NIKU	Nikkaluokta	5.61	278	P	Pn	10 36 38.9	+0.9
NIKU				S	Sn	10 37 43.1	0.0
SALU	Saltoluokta	5.88	273	P	Pn	10 36 42.0	+0.3
LILU	Lilltraesk	6.12	253	P	Pn	10 36 44.3	-0.6
FINES	FINESS Array B comp=Z,0.4nm,0.3s,baz=29,slow=14,SNR=7.3	7.16	211	Pn	Pn	10 36 58.8	-0.5
SPA0	Spitsbergen Ar baz=141,slow=16	11.56	342	Pn	Pn	10 37 59.0	-0.5
SPA0	Spitsbergen Ar baz=141,slow=16	11.56	342	Pn	Pn	10 37 59.0	-0.5
SPITS	Spitsbergen Ar baz=148,slow=14,SNR=6.8	11.56	342	Pn	Pn	10 37 59.0	-0.5
HFS	Hagfors baz=32,slow=12	11.64	239	Pn	Pn	10 37 59.3	-1.3
HFS	Hagfors comp=Z,0.2nm,0.3s,baz=42,slow=12,SNR=7.8	11.64	239	Pn	Pn	10 37 59.5	-1.2
HFS	Hagfors baz=32,slow=12	11.64	239	Pn	Pn	10 37 59.3	-1.3
NB2	NORSAR Subarra baz=57,slow=12	11.82	246	Pn	Pn	10 38 01.4	-1.7
NB2	NORSAR Subarra baz=57,slow=12	11.82	246	Pn	Pn	10 38 01.4	-1.7
NOA	NORSAR Array B comp=Z,0.0nm,0.3s,baz=52,slow=11,SNR=4.1	11.82	246	Pn	Pn	10 38 01.8	-1.3

GEN ***28*** *11:21:53.4, 44°.18N×10°.16E, h4km±1km, Ml0.8*
ROM 28 11:21:52.9±0.3, 44°.16N±0°.02×10°.17E±0°.01, h9km±1km, ML1.2/1, Error ellipse: s-maj=2.5km s-min=0.3km az=346.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	Equi	0.01	293	P	Pg	11 21 54.5	0.0
EQUI				S	Sg	11 21 55.2	-0.4
EQUI	Equi	0.01	293	P	Pg	11 21 54.5	0.0
EQUI				S	Sg	11 21 55.2	-0.3
EQUI				AML	AML		
EQUI	comp=E,326μm,0.8s			AML	AML		
EQUI	comp=N,506μm,0.3s			AML	AML		
EQUI	comp=E,326μm,0.8s			AML	AML		
EQUI	comp=N,506μm,0.3s			AML	AML		
EQUI	comp=N,506μm,0.3s			AML	AML		
EQUI	comp=E,326μm,0.8s			AML	AML		
T0912	Minucciano (LU	0.03	79	P	Pg	11 21 54.9	+0.3
T0912				S	Sg	11 21 56.0	+0.1
T0911	Castelpoggio (	0.08	233	P	Pg	11 21 55.8	+0.7
T0911				S	Sg	11 21 57.6	+0.8
FOSD	Fosdinovo	0.13	246	P	Pg	11 21 56.6	+0.8
FOSD				S	Sg	11 21 58.9	+1.0
VLC	Villacollemand	0.16	91	P	Pg	11 21 57.1	+0.8
VLC				S	Sg	11 21 59.8	+1.2
VLC				AML	AML		
VLC	comp=E,40μm,0.9s			AML	AML		
VLC	comp=N,35μm,0.1s			AML	AML		
VLC	comp=N,35μm,0.1s			AML	AML		
VLC	comp=E,40μm,0.9s			AML	AML		
PLMA	Palmaria, Port	0.25	244	P	Pg	11 21 58.8	+0.8
PLMA				S	Sg	11 22 02.6	+1.2
PLMA				AML	AML		
PLMA	comp=E,102μm,0.3s			AML	AML		
PLMA	comp=N,80μm,0.1s			AML	AML		
PLMA	comp=E,102μm,0.3s			AML	AML		
PLMA	comp=N,80μm,0.1s			AML	AML		
GRAM	Graiana	0.34	348	P	Pg	11 21 59.9	+0.3
GRAM				S	Sg	11 22 04.8	+0.7
MAIM	Mastiano	0.34	136	P	Pb	11 22 00.5	-0.7
MAIM				S	Sb	11 22 05.5	-1.2
MAIM	Mastiano	0.34	136	P	Pg	11 22 00.0	+0.4
MAIM				S	Sb	11 22 05.8	-1.0
RISI	Rein	3.09	25	AML	AML		
RISI	comp=E,219μm,0.4s			AML	AML		
RISI	comp=E,219μm,0.4s			AML	AML		
RISI	comp=N,232μm,1.1s			AML	AML		
RISI	comp=N,232μm,1.1s			AML	AML		

ISCJB ***28*** *11:26:35.9±1.0, 39°.72N±0°.06×52°.51E±0°.06, h35km, Error ellipse: s-maj=8.3km s-min=6.7km az=160.1*
AZER ***28*** *11:26:40.1±0.2, 39°.65N×52°.15E, h55km±10.3km, ml3.3/17, Error ellipse: s-maj=8.6km s-min=3.3km az=269.0*

ISC 28 11:26:34.9±1.5, 39°.69N±0°.08×52°.68E±0°.08, h35km, n19, σ2§49/32, 3C, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOBA	Gobu	2.37	288	S	Sn	11 27 39.6	+0.4
ATGJ	Altiaghaj	3.09	293	P	Pn	11 27 23.5	+2.1
ATGJ				S	Sn	11 27 57.4	+0.3
LKRN	Lenkeran, Azer	3.19	253	P	Pn	11 27 23.9	+1.4
LKRN				S	Sn	11 27 56.7	-2.5
SIZA	Siyzn	3.20	297	P	Pn	11 27 26.5	+3.6
SIZA				S	Sn	11 28 00.7	+0.8
ASTR	Astara	3.23	251	P	Pn	11 27 24.7	+1.6
ASTR				S	Sn	11 27 58.9	-1.5
PQL	Pirkuli	3.32	291	P	Pn	11 27 29.5	+5.1
PQL				S	Sn	11 27 59.2	-3.5
GLBA	Clilabad	3.35	264	P	Pn	11 27 26.7	+1.9
GLBA				S	Sn	11 28 02.5	-0.8
LRK	Lerik	3.53	254	P	Pn	11 27 29.0	+1.6
LRK				S	Sn	11 28 05.8	-2.3
QUBA	Quba, Azerbaij	3.60	299	S	Sn	11 28 09.6	+0.1
XNQ	Khinaliq	3.77	295	P	Pn	11 27 33.2	+2.5
XNQ				S	Sn	11 28 13.2	-0.7
QSAR	Qusar	3.83	300	P	Pn	11 27 33.4	+2.1
QSAR				S	Sn	11 28 14.4	-0.7
ZRD	Zardab	3.88	280	S	Sn	11 28 15.8	-0.6
QBL	Gabala	3.91	290	P	Pn	11 27 34.0	+1.5
QBL				S	Sn	11 28 16.0	-1.2
SEKA	Sheki	4.45	292	S	Sn	11 28 28.2	-2.4
GANJ	Ganja	4.96	283	S	Sn	11 28 39.2	-4.0
ZKTA	Zakatala	5.00	295	P	Pn	11 27 48.3	+0.8
ZKTA				S	Sn	11 28 44.6	+0.5
GDB	GEDABAY	5.40	283	P	Pn	11 27 54.7	+1.6
GDB				S	Sn	11 28 49.5	-4.7
AB31	Akbulak array 0.2nm,0.3s,baz=208,slow=14,SNR=7.9	10.87	26	P	Pn	11 29 10.3	+2.4
AB31	0.4nm,0.3s,baz=207,slow=24,SNR=5.2			⇑S	Sn	11 31 03.0	-5.3
AKTO	Aktyubinsk 0.7nm,0.3s	11.38	18	⇑P	Pn	11 29 17.4	+2.5
AKTO	1.3nm,0.5s			⇑S	Sn	11 31 16.2	-4.6

SOME ***28*** *11:37:49.5, 40°.87N×69°.95E, h0km*
NNC ***28*** *11:37:53.8±1.6, 41°.12N×69°.64E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=13.7km s-min=7.5km az=21.0*

ISC 28 11:37:52.2±4.3, 41°.0N±0°.2×70°.2E±0°.1, h10km, n7, σ2§32/11, 4C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay 30nm,0.2s	1.15	355	eP	Pg	11 38 14.3	-0.1
IUG	54nm,0.2s			eS	Sg	11 38 30.8	+1.4
KK31	Karatay Array 2.6nm,0.3s,baz=200,slow=14,SNR=106	2.12	7	⇓Pn	Pb	11 38 30.1	-0.7

KK31 ⇑Lg Lg 11 39 00.3
14nm,0.5s,baz=199,slow=28,SNR=4.7
MRKS Merke 2.87 52 *eP* **Pg 11 38 47.2 -0.1**
4.6nm,0.5s
MRKS *e*S **Sg 11 39 25.7 +1.2**
4.7nm,0.3s
AAK Ala-Archa 3.62 62 ⇑Pg **Pg 11 39 06.2 +4.6**
2.3nm,0.5s
AAK Lg Lg 11 39 58.5
3.5nm,0.7s
TKM2 Tokmak 2 4.48 63 ⇑Pg **Pg 11 39 20.1 +2.1**
1.7nm,0.8s
TKM2 ⇑Lg Lg 11 40 24.6
2.4nm,0.5s
DGS Degeres 4.73 60 *eP* **Pg 11 39 21.5 -1.3**
2.4nm,0.5s
DGS *e*S **Sg 11 40 23.5 -0.5**
3.6nm,0.5s
KST Kastek 4.77 63 *eP* **Pg 11 39 21.0 -2.7**
2.0nm,0.3s
KST *e*S **Sg 11 40 23.3 -2.2**
3.5nm,0.5s

IDC ***28*** *11:39:05.5±2.0, 22°.06S×69°.61W, h0km, mb3.6/2, mb1 4.1/3, mb1mx3.7/23, mbtmp3.7/3, ML4.2/1, Error ellipse: s-maj=62.5km s-min=41.6km az=21.0*
SJA ***28*** *11:39:20.9±0.8, 21°.02S×69°.08W, h125km±5km, ML3.3, MW3.6*
ISCJB ***28*** *11:39:22.2±0.5, 21°.03S±0°.02×69°.14W±0°.07, h118km±4km, mb3.5/3, Error ellipse: s-maj=10.9km s-min=3.7km az=2.5*
GUC ***28*** *11:39:22.3±0.6, 21°.01S×69°.04W, h115km±3km, ML3.8*
ISC 28 11:39:22.8±0.8, 21°.02S±0°.03×69°.12W±0°.06, h115km±6km, n37, σ0°.88/60, mb3.6/3, 10C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.34**	**267**	*e*P	**Pn**	**11 39 38.8**	**-0.7**
PB01				*i* S	**Sn**	**11 39 51.5**	**-0.4**
PB01	**IPOC Station P**	**0.34**	**267**	⇑*i*P	**Pn**	**11 39 38.7**	**-0.7**
PB01				*i* S	**Sn**	**11 39 51.4**	**-0.4**
PB01				IAML		11 39 52.6	
	comp=E,4μm,0.5s						
PB02	**IPOC Station P**	**0.78**	**248**	*e*P	**Pn**	**11 39 42.6**	**+0.2**
PB02				*i* S	**Sn**	**11 39 58.1**	**+0.9**
PB02	**IPOC Station P**	**0.78**	**248**	⇑*i*P	**Pn**	**11 39 42.6**	**+0.2**
PB02				*i* S	**Sn**	**11 39 57.9**	**+0.7**
PB02				IAML		11 39 59.1	
	comp=E,8μm,0.2s						
PB08	**IPOC Station P**	**0.88**	**358**	*e*P	**Pn**	**11 39 43.3**	**-0.4**
PB08				*i* S	**Sn**	**11 39 58.8**	**-0.5**
PB08	**IPOC Station P**	**0.88**	**358**	⇑*i*P	**Pn**	**11 39 43.0**	**-0.6**
PB08				*i* S	**Sn**	**11 39 58.8**	**-0.5**
PB08				IAML		11 40 00.1	
	comp=E,1μm,0.5s						
PB07	**IPOC Station P**	**1.00**	**225**	*e*P	**Pn**	**11 39 44.6**	**0.0**
PB07				*i* S	**Sn**	**11 40 02.0**	**+1.0**
PB07	**IPOC Station P**	**1.00**	**225**	⇑*i*P	**Pn**	**11 39 44.5**	**0.0**
PB07				*i* S	**Sn**	**11 40 01.4**	**+0.4**
PB07				IAML		11 40 03.1	
	comp=E,2μm,0.5s						
PB03	**IPOC Station P**	**1.18**	**210**	*e*P	**Pn**	**11 39 46.6**	**+0.2**
PB03				*i* S	**Sn**	**11 40 05.0**	**+0.7**
PB03	**IPOC Station P**	**1.18**	**210**	⇑*i*P	**Pn**	**11 39 46.4**	**0.0**
PB03				*i* S	**Sn**	**11 40 04.8**	**+0.5**
PB03				IAML		11 40 05.4	
	comp=N,2μm,0.2s						
GO01	**Chusmiza**	**1.35**	**357**	⇑*i*P	**Pn**	**11 39 48.2**	**-0.5**
GO01				*i* S	**Sn**	**11 40 07.9**	**-0.3**
GO01				IAML		11 40 09.6	
	comp=N,2μm,0.1s						
PB11	**IPOC Station P**	**1.35**	**338**	*e*P	**Pn**	**11 39 48.1**	**-0.3**
PB11				*i* S	**Sn**	**11 40 08.0**	**+0.3**
PB11	**IPOC Station P**	**1.35**	**338**	⇑*i*P	**Pn**	**11 39 47.9**	**-0.5**
PB11				*i* S	**Sn**	**11 40 07.7**	**-0.1**
LVC	**Limon Verde**	**1.59**	**173**	*e*P	**Pn**	**11 39 51.3**	**-0.1**
LVC				*i* S	**Sn**	**11 40 13.4**	**+0.4**
LVC				IAML		11 40 15.9	
	comp=Z,267nm,0.1s						
LVC	**Limon Verde**	**1.59**	**173**	*e*P	**Pn**	**11 39 51.2**	**-0.1**
LVC				*e*S	**Sn**	**11 40 13.2**	**+0.2**
PB04	**IPOC Station P**	**1.62**	**216**	*e*P	**Pn**	**11 39 51.6**	**+0.1**
PB04	**IPOC Station P**	**1.62**	**216**	⇑*i*P	**Pn**	**11 39 51.6**	**+0.1**
PB04				*i* S	**Sn**	**11 40 14.1**	**+0.8**
PB04				IAML		11 40 17.4	
	comp=E,1μm,0.2s						
PSGC	**Pisagua**	**1.70**	**326**	⇑*i*P	**Pn**	**11 39 51.8**	**-0.7**
PSGC				*i* S	**Sn**	**11 40 14.9**	**-0.1**
PSGCX	**Pisagua**	**1.70**	**326**	*e*P	**Pn**	**11 39 51.8**	**-0.7**
PSGCX				*i* S	**Sn**	**11 40 15.8**	**+0.7**
PB06	**IPOC Station P**	**1.73**	**194**	*e*P	**Pn**	**11 39 50.3**	**-2.5**
PB06	**IPOC Station P**	**1.73**	**194**	*e*P	**Pn**	**11 39 52.9**	**+0.1**
PB06				*i* S	**Sn**	**11 40 15.6**	**0.0**
MNMC	**Minye Minye**	**1.94**	**347**	⇓*i*P	**Pn**	**11 39 55.5**	**0.0**
MNMC				*e*S	**Sn**	**11 40 20.4**	**-0.1**
MNMCX	**Minye Minye**	**1.94**	**347**	*e*P	**Pn**	**11 39 55.5**	**0.0**
PB05	**IPOC Station P**	**2.08**	**209**	*e*P	**Pn**	**11 39 57.2**	**0.0**
PB05				*i* S	**Sn**	**11 40 22.1**	**-1.2**
PB05	**IPOC Station P**	**2.08**	**209**	⇑*i*P	**Pn**	**11 39 56.9**	**-0.2**
PB05				IAML		11 40 24.0	
	comp=E,398nm,0.2s						
PB15	**IPOC Station P**	**2.20**	**188**	*e*P	Pn	11 39 52.4	-6.4
PB12	**IPOC Station P**	**2.65**	**334**	*e*P	**Pn**	**11 40 03.5**	**-1.1**
PB12				*i* S	**Sn**	**11 40 36.4**	**-0.2**
PB12	**IPOC Station P**	**2.65**	**334**	*e*P	**Pn**	**11 40 03.3**	**-1.3**
PB12				*i* S	**Sn**	**11 40 35.4**	**-1.1**
PB16	**IPOC Station P**	**2.70**	**352**	*e*P	**Pn**	**11 40 06.5**	**+0.9**
PB10	**IPOC Station P**	**2.81**	**208**	*e*P	**Pn**	**11 40 05.7**	**-0.8**
YJA	**Yavi**	**3.55**	**110**	*e*P	**Pn**	**11 40 16.2**	**-0.4**
PB14	**IPOC Station P**	**3.77**	**198**	*e*P	**Pn**	**11 40 19.0**	**-0.5**
PB14				*i* S	**Sn**	**11 41 01.9**	**-1.5**
LPAZ	**La Paz**	**4.80**	**11**	Pn	**Pn**	**11 40 35.0**	**+1.3**
	comp=E,3.3nm,0.3s,baz=201,slow=5.4,SNR=81						
NVAR	**Mina Array Bea**	**75.00**	**322**	P	**P**	**11 50 52.8**	**+0.8**
	comp=E,0.2nm,0.5s,baz=156,slow=7.9,SNR=2.4						
TORD	**Torodi Ar. Bea**	**77.38**	**71**	P	**P**	**11 51 07.4**	**+1.7**
	comp=E,0.9nm,0.4s,baz=263,slow=5.4,SNR=11						
YKA	**Yellowknife Ar**	**90.67**	**341**	P	**P**	**11 52 12.4**	**+0.4**
	comp=E,0.3nm,0.7s,baz=133,slow=4.5,SNR=4.6						
MKAR	**Makanchi Array**	**145.36**	**35**	PKPbc	**PKiKP**	**11 58 47.5**	**-3.7**
	comp=E,0.7nm,0.8s,baz=309,slow=3.9,SNR=4.0						

ISCJB ***28*** *11:40:45.6±0.6, 28°.69N±0°.02×82°.27E±0°.02, h9km±3km, mb4.9/168, MS4.3/49, Error ellipse: s-maj=3.6km s-min=2.2km az=23.3*
BJI ***28*** *11:40:48.1±0.0, 28°.98N×82°.46E, h10km, mb4.8/66, mB5.1/51, Ms4.8/64, Ms7 4.6/59*
IDC ***28*** *11:40:48.5±2.1, 28°.70N×82°.25E, h17km±12km, mb4.6/30, mb1 4.7/32, mb1mx4.6/47, mbtmp4.7/32, ML4.9/3, MS4.1/22, Ms1 4.1/22, ms1mx4.0/28, Error ellipse: s-maj=12.3km s-min=9.8km az=40.0*
NDI ***28*** *11:40:49.0±2.7, 28°.71N×82°.29E, h12km±9km, ML5.0, mb5.0(NEIC)*
MOS ***28*** *11:40:49.1±0.9, 28°.69N×82°.26E, h33km, mb5.2/61, MS4.3/12, Error ellipse: s-maj=5.8km s-min=4.4km az=109.4*
NNC ***28*** *11:40:49.1±1.9, 29°.14N×82°.42E, h0km, mb4.9, Error ellipse: s-maj=30.7km s-min=25.2km az=73.0*
NEIC ***28*** *11:40:49.4±1.1, 28°.66N×82°.28E, h25km±4km, mb5.0/115, Error ellipse: s-maj=11.2km s-min=10.8km az=155.0*
NEIC Felt [III] at Kathmandu.
GCMT ***28*** *11:40:50.4±0.3, 28°.49N±0°.02×82°.18E±0°.02, h18km±1km, MW5.0/78, Moment Tensor Solution. s28,c30; s78,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.78±.15; $M_{\theta\theta}$-2.74±.11; $M_{\phi\phi}$-0.04±.09; $M_{r\theta}$2.30±.26; $M_{\theta\phi}$1.22±.06; $M_{\phi r}$-0.72±.22; Best double couple: Mo3.84500×10^{16} NP1:ϕ_s109.00000°, δ64.00000°, λ88.00000°. NP2: ϕ_s294.00000°, δ26.00000°, λ95.00000°. Principal axes: T 3.6330, Plg70.0000°, Azm13.0000°; N 0.4210, Plg2.0000°, Azm110.0000°; P -4.0570, Plg19.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DMN ***28*** *11:40:56.4±0.5, 28°.48N×82°.68E, h2km, Ml5.6/4 Error ellipse: s-maj=8.2km s-min=6.6km az=82.0*
ISC 28 11:40:48.8±0.5, 28°.71N±0°.03×82°.29E±0°.03, h20km±2km, h20km:pP-P, n451, σ1°87/510, mb5.0/172, MS4.3/50, 41C-19D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYUN	**Piuthan**	**0.87**	**134**	*e*Pg	**Pg**	**11 41 04.9**	**-0.9**
PYUN				*e*Sg	**Sg**	**11 41 11.7**	**-5.6**
	96μm,0.7s						
DANN	**Dangsing**	**1.34**	**105**	*e*Pg	**Pb**	**11 41 14.1**	**+0.6**
DANN				*e*Sg	**Sb**	**11 41 28.2**	**-2.2**
KOLN	**Koldanda**	**1.49**	**129**	*e*Pg	**Pg**	**11 41 17.5**	**-0.1**
KOLN				*e*Sg	**Sn**	**11 41 30.6**	**-3.0**
GKN	**Gorkha**	**2.19**	**108**	*e*Pn	**Pb**	**11 41 27.0**	**-0.8**
DMN	**Daman**	**2.72**	**113**	*e*Pn	**Pn**	**11 41 34.2**	**+2.6**
DMN				*e*Sn	**Sn**	**11 42 00.7**	**-3.4**
	4μm,0.5s						
KKN	**Kakani**	**2.79**	**108**	*e*Pn	**Pn**	**11 41 35.3**	**+2.7**
KKN				*e*Sn	**Sn**	**11 42 03.4**	**-2.5**
	18μm,0.6s						
PKIN	**Phulchoki**	**2.97**	**112**	*e*Pn	**Pn**	**11 41 37.6**	**+2.6**
PKIN				*e*Sn	**Sn**	**11 42 07.6**	**-2.6**
	9μm,0.4s						
PKI	**Pulchoki**	**2.98**	**112**	*e*Pn	**Pn**	**11 41 37.7**	**+2.4**
JOSI	**Joshimath**	**3.01**	**308**	*e*P	**Pn**	**11 41 37.1**	**+1.6**
JOSI				*e*S	**Sn**	**11 42 10.7**	**-0.4**
JOSI				IAML		11 42 39.3	
	comp=E,7μm,0.7s						
JOSI				IAML		11 42 39.6	
	comp=N,111μm,1.1s						
GUN	**Gumba**	**3.26**	**103**	*e*Pn	**Pn**	**11 41 41.9**	**+2.7**
GUN				*e*Sn	**Sn**	**11 42 15.6**	**-2.1**
	comp=N,7μm,0.5s						
DDI	**Dehra Dun**	**4.03**	**295**	*e*P	**Pn**	**11 41 50.2**	**+0.8**
DDI				*e*S	**Sn**	**11 42 35.7**	**-0.3**
SMLA	**Simla**	**5.06**	**300**	*e*P	**Pn**	**11 42 04.0**	**+0.5**
SMLA				*e*S	**Sn**	**11 43 00.9**	**-0.4**
KHET	**Khetri**	**5.75**	**265**	*e*P	**Pn**	**11 42 12.8**	**-0.2**
KHET				*ex*	x	11 43 12.0	
GTK	**Tadong**	**5.75**	**102**	*e*P	**Pn**	**11 42 14.2**	**+1.0**
GTK				*e*S	**Sn**	**11 43 15.3**	**-3.3**
GTK				IAML		11 43 54.7	
	comp=N,2μm,0.5s						
GTK				IAML		11 43 54.8	
	comp=E,1μm,0.4s						
BOK	**Bokaro**	**5.86**	**146**	*e*P	**Pn**	**11 42 16.7**	**+2.0**
BOK				*e*S	**Sn**	**11 43 18.5**	**-2.8**
BOK				IAML		11 43 56.1	
	comp=N,1μm,0.6s						
BOK				IAML		11 43 57.7	
	comp=E,2μm,1.1s						
JBP	**Jabalpur**	**5.90**	**201**	*e*P	**Pn**	**11 42 16.5**	**+1.4**
JBP				*e*S	**Sn**	**11 43 20.0**	**-2.1**
DHRM	**DHARAMSHALA**	**6.26**	**306**	*e*P	**Pn**	**11 42 21.3**	**+1.0**
DHRM				*e*S	**Sn**	**11 43 29.0**	**-2.3**
BHPL	**Bhopal**	**6.99**	**220**	*e*P	**Pn**	**11 42 29.5**	**-0.6**
BHPL				*e*S	**Sn**	**11 43 46.1**	**-3.0**
LSA	**Lhasa**	**7.81**	**81**	*e*Pn	**Pn**	**11 42 41.2**	**-0.5**
LSA				*e*Sn	**Sn**	**11 44 11.1**	**+1.3**
LSA	**Lhasa**	**7.81**	**81**	Pn	**Pn**	**11 42 44.7**	**+2.9**
LSA	**Lhasa**	**7.81**	**81**	*e*P	**Pn**	**11 42 41.2**	**-0.5**
LSA				*e*		11 44 11.1	
TURI	**Tura**	**7.83**	**112**	*e*P	**Pn**	**11 42 41.4**	**-0.2**
TURI				*e*S	**Sn**	**11 44 03.2**	**-6.5**
TURI				IAML		11 44 11.8	
	comp=E,1μm,0.4s						
TURI				IAML		11 44 11.8	
	comp=N,1μm,0.3s						
NGP	**Nagpur**	**8.08**	**202**	⇑*e*P	**Pn**	**11 42 44.8**	**-0.3**
NGP				*e*S	**Sn**	**11 44 12.7**	**-3.2**
TAWA	**Tawang**	**8.53**	**95**	*e*P	**Pn**	**11 42 51.9**	**+0.4**
GUWA	**GUWAHATI**	**8.72**	**105**	*e*P	**Pn**	**11 42 53.5**	**-0.4**
GUWA				*e*S	**Sn**	**11 44 26.1**	**-5.5**
GUWA				IAML		11 44 52.5	
	comp=N,370nm,0.3s						
SARP	**Sargodha**	**8.91**	**293**	P	**Pn**	**11 42 56.6**	**+0.2**
SHL	**Shillong**	**9.10**	**108**	*e*Pn	**Pn**	**11 42 57.9**	**-1.3**
SHL				*e*Sn	**Sn**	**11 44 38.1**	**-3.2**
SHL	**Shillong**	**9.10**	**108**	*e*P	**Pn**	**11 42 57.9**	**-1.3**
SHL				*e*		11 44 38.1	
SHL	**Shillong**	**9.10**	**108**	*e*P	**Pn**	**11 42 58.4**	**-0.9**
SHL				*ex*	x	11 44 37.7	
CHCP	**Chirah Chowk**	**9.17**	**305**	P	**Pn**	**11 43 00.1**	**+0.1**
NIL	**Nilore**	**9.17**	**305**	*e*Pn	**Pn**	**11 43 00.0**	**-0.1**
NIL	**Nilore**	**9.17**	**305**	*e*P	**Pn**	**11 43 00.0**	**-0.1**
AGT	**Agartala**	**9.37**	**119**	*e*P	**Pn**	**11 43 02.9**	**+0.2**
AGT				*e*S	**Sn**	**11 44 42.5**	**-4.9**
AGT				IAML		11 46 07.5	
	comp=N,405nm,0.5s						
AGT				IAML		11 46 12.7	
	comp=E,440nm,0.9s						
TEZP	**TEZPUR**	**9.55**	**100**	*e*P	**Pn**	**11 43 05.0**	**-0.2**
TEZP				*e*S	**Sn**	**11 44 45.2**	**-6.7**
BELO	**BELONIA**	**9.87**	**121**	*e*P	**Pn**	**11 43 12.5**	**+2.9**
BELO				*e*S	Sn	11 44 51.0	-8.9
BELO				IAML		11 46 16.7	
	comp=N,465nm,0.5s						
BELO				IAML		11 46 17.7	
	comp=E,339nm,0.7s						
THW	**Thamme Wali**	**9.94**	**297**	P	**Pn**	**11 43 09.2**	**-1.4**
CEP	**Cherat**	**10.24**	**302**	P	**Pn**	**11 43 13.3**	**-1.5**
CEP				S	**Sn**	**11 45 02.0**	**-7.1**
ZIRO	**ZIRO**	**10.28**	**94**	*e*P	**Pn**	**11 43 15.3**	**0.0**
ZIRO				*e*S	**Sn**	**11 45 02.6**	**-7.5**
BRDH	**Bariadhala**	**10.35**	**123**	Pn	**Pn**	**11 43 18.3**	**+2.0**
	comp=E,85nm,0.3s,baz=272,slow=7.1,SNR=7.5						
BRDH				Sn	**Sn**	**11 45 10.0**	**-1.7**
	comp=E,116nm,0.3s,baz=150,slow=22,SNR=8.7						
KOHI	**KOHIMA**	**10.93**	**103**	*e*P	**Pn**	**11 43 24.8**	**+0.4**
KOHI				*e*S	**Sn**	**11 45 19.4**	**-6.8**
KOHI				IAML		11 45 30.7	
	comp=N,348nm,0.6s						
KOHI				IAML		11 45 31.2	
	comp=E,381nm,0.6s						
VIS	**Vishakhapatnam**	**10.98**	**175**	*i* P	**Pn**	**11 43 24.5**	**-0.3**
VIS				*ex*	x	11 45 24.5	
	comp=E,4μm,0.9s						
VIS				*ex*	x	11 45 29.5	
	comp=N,1μm,1.0s						
VIS				*i* x	x	11 46 23.6	
MOKO	**MOKOCHONG**	**11.11**	**99**	*e*P	**Pn**	**11 43 27.2**	**+0.5**
MOKO				*e*S	Sn	11 45 22.3	-8.3
MOKO				IAML		11 45 30.6	
	comp=E,383nm,0.8s						
MOKO				IAML		11 45 32.1	
	comp=N,447nm,0.5s						
HYB	**Hyderabad**	**11.75**	**198**	*i* P	**Pn**	**11 43 32.0**	**-3.5**
	comp=N,380nm,1.0s						
HYB				*e*S	**Sn**	**11 45 50.0**	**+3.8**
KSH	**Kashi**	**11.98**	**336**	P	**Pn**	**11 43 34.8**	**-3.7**
KSH				sP		11 43 42.0	
KSH				PP	**PnPn**	**11 43 44.8**	**-1.6**
KSH				S	**Sn**	**11 45 44.3**	**-7.3**
KSH				SS		11 45 58.0	
KSH				pmax	pmax		
	comp=N,330nm,3.9s						
KSH				LR	LR		
	comp=N,4μm,8.5s						
KSH				LR	LR		
	comp=N,3μm,7.9s						
KSH				LR	LR		
	comp=N,5μm,8.9s						
LKP	**Lekhapani**	**12.06**	**93**	*e*P	**Pn**	**11 43 38.7**	**-0.8**
LKP				*ex*	x	11 45 41.1	
LKP				IAML		11 45 52.7	
	comp=N,266nm,0.3s						
LKP				IAML		11 45 54.0	
	comp=E,264nm,0.2s						
KBL	**Kabul**	**12.69**	**301**	*e*Pn	**Pn**	**11 43 46.2**	**-2.2**
KBL	**Kabul**	**12.69**	**301**	*e*P	**Pn**	**11 43 46.2**	**-2.2**
KDJ	**Kajisay**	**14.02**	**344**	*e*Pn	**Pn**	**11 44 05.2**	**-1.3**
KDJ	**Kajisay**	**14.02**	**344**	*e*P	**Pn**	**11 44 05.2**	**-1.3**
PRZ	**Przheval'sk**	**14.10**	**348**	*e*Pn	**Pn**	**11 44 06.0**	**-1.6**
PRZ	**Przheval'sk**	**14.10**	**348**	*e*P	**Pn**	**11 44 06.0**	**-1.6**
GAR	**Garm**	**14.28**	**319**	*e*Pn	**Pn**	**11 44 06.7**	**-3.3**
GAR	**Garm**	**14.28**	**319**	*e*P	**Pn**	**11 44 06.7**	**-3.3**
KZA	**Kyzart**	**14.51**	**339**	P	**P**	**11 44 21.1**	**+1.1**
	SNR=5.4						
BOOM	**Boomskoye usch**	**14.68**	**341**	*e*Pn	**Pn**	**11 44 14.2**	**-1.3**
BTK	**Batken**	**14.74**	**323**	*e*Pn	**Pn**	**11 44 13.0**	**-3.3**
BTK	**Batken**	**14.74**	**323**	*e*P	**Pn**	**11 44 13.0**	**-3.3**
PDGK	**Podgornoye**	**14.76**	**352**	⇑P	**Pn**	**11 44 14.1**	**-2.5**
	comp=E,47nm,1.5s						
PDGK	**Podgornoye**	**14.76**	**352**	P	**Pn**	**11 44 14.0**	**-2.5**
PDGK				pmax	pmax		
	comp=Z,35nm,0.9s						
UCH	**Uchtor**	**14.89**	**337**	P	**Pn**	**11 44 18.1**	**-0.5**
	SNR=7.9						
AML	**Almayashu**	**15.10**	**335**	P	**Pn**	**11 44 22.6**	**+1.3**
	SNR=6.3						
KBK	**Karagaybulak**	**15.13**	**339**	P	**Pn**	**11 44 21.5**	**0.0**
	SNR=11						
TKM2	**Tokmak 2**	**15.18**	**341**	⇑P	**Pn**	**11 44 20.0**	**-2.2**
	comp=Z,43nm,1.3s						
TKM2	**Tokmak 2**	**15.18**	**341**	P	**P**	**11 44 27.2**	**+0.1**
TKM2				S	**S**	**11 47 19.6**	**-7.0**
TKM2				pmax	pmax		
	comp=Z,27nm,1.2s						
TKM2				smax	smax		
	comp=N,40nm,1.4s						
AAK	**Ala-Archa**	**15.26**	**338**	Pn	**Pn**	**11 44 23.1**	**-0.2**
	comp=N,2.2nm,0.3s,baz=167,slow=13,SNR=18						
AAK				LR	LR	11 49 52.9	
	comp=N,353nm,18.4s,baz=138,slow=36						
AAK	**Ala-Archa**	**15.26**	**338**	P	**P**	**11 44 27.2**	**-0.9**
	SNR=8.2						
AAK	**Ala-Archa**	**15.26**	**338**	*e*Pn	**Pn**	**11 44 22.6**	**-0.7**
	comp=N,46nm,0.9s						
AAK	**Ala-Archa**	**15.26**	**338**	⇑P	**Pn**	**11 44 23.0**	**-0.2**
	comp=N,46nm,0.9s						
AAK				⇑S	**Sn**	**11 47 07.0**	**-4.8**
	comp=N,25nm,1.2s						
AAK	**Ala-Archa**	**15.26**	**338**	*i* P	**P**	**11 44 26.9**	**-1.2**
	SNR=11						
AAK	**Ala-Archa**	**15.26**	**338**	⇑*i*P	**Pn**	**11 44 23.3**	**0.0**
AAK				pmax	pmax		
	comp=Z,38nm,1.7s						
AAK	**Ala-Archa**	**15.26**	**338**	P	**Pn**	**11 44 23.4**	**+0.2**
	SNR=33						
EKS2	**Erkin-Say**	**15.53**	**336**	P	**Pn**	**11 44 26.9**	**+0.2**
	SNR=9.6						
WMQ	**Urumqi**	**15.69**	**15**	*e*P	**Pn**	**11 44 30.0**	**+1.2**
WMQ				sP	pP	11 44 37.5	-1.3
WMQ				PP	**sP**	**11 44 42.8**	**+1.4**
WMQ				S	**Sn**	**11 47 22.3**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,25nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,6.1s						
WMQ				LR	LR		
	comp=Z,580nm,11.1s						
WMQ				LR	LR		
	comp=Z,680nm,10.5s						
WMQ				LR	LR		
	comp=Z,990nm,16.7s						
WMQ	**Urumqi**	**15.69**	**15**	*e*Pn	**Pn**	**11 44 30.2**	**+1.4**
	comp=Z,31nm,1.0s						
WMQ	**Urumqi**	**15.69**	**15**	*e*P	**Pn**	**11 44 30.2**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,31nm,1.0s						
USP	**Ospenovka**	**15.82**	**339**	P	**P**	**11 44 34.9**	**+0.8**
	SNR=11						
KK31	**Karatay Array**	**17.22**	**330**	*e*Pn	**Pn**	**11 44 44.2**	**-3.9**
	comp=Z,110nm,1.5s						
KK31	**Karatay Array**	**17.22**	**330**	P	**Pn**	**11 44 44.6**	**-3.6**
	comp=Z,52nm,1.1s,baz=144,slow=13,SNR=88						
KK31				⇑S	**Sn**	**11 47 57.3**	**-1.7**
	comp=Z,19nm,0.8s,baz=139,slow=22,SNR=5.1						
KK31	**Karatay Array**	**17.22**	**330**	*i* P	**Pn**	**11 44 44.5**	**-3.6**
KK31				S	Sn	11 47 47.9	-11
KK31				pmax	pmax		
	comp=Z,40nm,1.1s						
KK31				smax	smax		
	comp=N,19nm,0.9s						
KKAR	**Karatay Array**	**17.22**	**330**	*e*Pn	**Pn**	**11 44 44.5**	**-3.6**
	comp=N,110nm,1.5s						
KKAR	**Karatay Array**	**17.22**	**330**	*e*P	**Pn**	**11 44 44.5**	**-3.6**
KKAR				pmax	pmax		
	comp=Z,110nm,1.5s						
GTA	**Gaotai**	**17.99**	**49**	*e*P	**Pn**	**11 44 56.0**	**-1.8**
GTA				pP	P	11 45 00.3	+2.0
GTA				sP	pP	11 45 03.5	-0.8
GTA				S	**Sn**	**11 48 16.5**	**-1.5**
GTA				sS	S	11 48 22.3	-1.6
GTA				pmax	pmax		
	comp=Z,150nm,7.3s						
GTA				LR	LR		
	comp=Z,1μm,15.6s						
GTA				LR	LR		
	comp=Z,1μm,12.1s						
GTA				LR	LR		
	comp=Z,1μm,12.4s						
MK31	**Makanchi Array**	**18.05**	**0**	*e*Pn	**Pn**	**11 44 56.2**	**-2.1**
	comp=Z,28nm,1.0s						
MK31	**Makanchi Array**	**18.05**	**0**	P	**Pn**	**11 44 56.4**	**-2.1**
	comp=Z,23nm,0.8s,baz=185,slow=14,SNR=109						
MK31	**Makanchi Array**	**18.05**	**0**	*e*P	**Pn**	**11 44 56.3**	**-2.1**
MK31				pmax	pmax		
	comp=Z,28nm,1.0s						
MK32	**Makanchi Array**	**18.05**	**0**	*e*Pn	**Pn**	**11 44 56.4**	**-2.0**
MKAR	**Makanchi Array**	**18.05**	**0**	P	**Pn**	**11 44 56.4**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=184,slow=13,SNR=20						
MKAR				LR	LR	11 52 51.9	
	comp=Z,631nm,19.7s,baz=174,slow=40						
MKAR				ScP	**ScP**	**11 53 07.2**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=164,slow=2.3,SNR=3.6						
MAKZ	**Makanchi**	**18.07**	**359**	*e*Pn	**Pn**	**11 44 56.4**	**-2.2**
	comp=Z,97nm,1.4s						
MAKZ	**Makanchi**	**18.07**	**359**	⇑P	**Pn**	**11 44 56.3**	**-2.4**
	comp=Z,73nm,1.2s						
MAKZ	**Makanchi**	**18.07**	**359**	*e*P	**Pn**	**11 44 56.4**	**-2.2**
MAKZ				pmax	pmax		
	comp=Z,97nm,1.4s						
CHTO	**Chiang Mai**	**18.13**	**119**	*e*Pn	**Pn**	**11 44 59.3**	**-0.2**
	comp=Z,56nm,1.3s						
CHTO	**Chiang Mai**	**18.13**	**119**	P	**P**	**11 45 01.2**	**+1.4**
	SNR=16						
CMMT	**Chiang Mai**	**18.13**	**119**	P	**P**	**11 45 02.8**	**+2.9**
	comp=Z,20nm,1.3s,comp=Z,417nm						
CM31	**Chiang Mai Arr**	**18.34**

LZH pmax pmax
comp=Z,620nm,4.3s
LZH LR LR
comp=Z,1μm,11.1s
LZH LR LR
comp=Z,2μm,10.8s
LZH LR LR
comp=Z,2μm,13.3s
UMPA Umpang Tak 19.70 126 P **Pn 11 45 24.4 +5.8**
comp=Z,86μm,1.1s
UTTA Uttaradit 19.99 119 P **Pn 11 45 23.0 +1.0**
comp=Z,98μm,1.3s
SLVN Son La 20.90 106 *e*P **P 11 45 30.3 +0.2**
comp=Z,111nm,1.4s
OTUK Ortayu 20.97 341 ⇑P **P 11 45 30.0 -0.7**
comp=Z,35nm,1.5s
OTUK Ortayu 20.97 341 P **P 11 45 29.9 -0.7**
OTUK pmax pmax
comp=Z,10.0nm,0.6s
PBKT Sadao Pong 21.02 121 P **P 11 45 33.1 +1.8**
comp=Z,40nm,0.8s,comp=Z,820nm
DGZ Jazzator, Alta 21.33 9*d i*P **P 11 45 36.2 +1.6**
DGZ pmax pmax
comp=Z,19nm,1.3s
PALK Pallekele 21.38 184 *e*P **P 11 45 34.9 -0.3**
comp=Z,52nm,1.3s
PALK Pallekele 21.38 184 *e*P **P 11 45 34.9 -0.3**
PALK pmax pmax
comp=Z,52nm,1.3s
JLN Jalan Bani Buh 21.65 258 P **P 11 45 45.0 +6.8**
SNR=8.1
GYA Guiyang 21.71 90⇓*i*P **P 11 45 39.3 +0.4**
GYA PP **PnPn 11 46 04.0 +4.1**
GYA S **S 11 49 38.8 +0.2**
GYA pmax pmax
comp=Z,70nm,0.9s
GYA pmax pmax
comp=Z,90nm,5.5s
GYA LR LR
comp=Z,560nm,10.5s
GYA LR LR
comp=Z,670nm,10.8s
GYA LR LR
comp=Z,650nm,12.1s
WSAR Wadi Sarin 21.94 261 P **P 11 45 43.9 +2.6**
comp=Z,36nm,0.7s,baz=107,slow=12,SNR=19
WSAR Wadi Sarin 21.94 261 P **P 11 45 46.0 +4.7**
SNR=9.8
KURBB Kurchatov Arra 22.07 354 P **P 11 45 41.8 -0.6**
comp=Z,19nm,0.8s,baz=177,slow=9.7,SNR=43
KURBB S **S 11 49 45.2 +0.4**
comp=Z,8.9nm,1.2s,baz=168,slow=18,SNR=5.3
KURBB ScP **ScP 11 53 16.5 +0.6**
comp=Z,3.1nm,0.8s,baz=189,slow=2.2,SNR=11
KURBB Kurchatov Arra 22.07 354 ⇑P **P 11 45 41.7 -0.6**
comp=Z,74nm,1.2s
GEYT Alibeck 22.14 301 P **P 11 45 43.2 -0.2**
comp=Z,14nm,1.0s,baz=136,slow=12,SNR=13
GEYT LR LR 11 55 48.5
comp=Z,700nm,19.1s,baz=110,slow=41
GYA0B ALIBECK ARRAY 22.14 301 *e*P **P 11 45 43.5 +0.1**
comp=Z,24nm,0.9s
KURK Kurchatov 22.15 354 *e*P **P 11 45 42.6 -0.7**
comp=Z,53nm,0.8s
KURK Kurchatov 22.15 354 ⇓P **P 11 45 42.3 -0.9**
comp=Z,61nm,0.9s
KURK Kurchatov 22.15 354*ce*P **P 11 45 42.8 -0.5**
KURK pmax pmax
comp=Z,54nm,1.3s
KURK Kurchatov 22.15 354 P **P 11 45 43.7 +0.4**
SNR=10
CHAI Chaiyaphum 22.20 121 P **P 11 45 46.2 +2.2**
comp=Z,166μm,1.0s
BIDO Bidbid 22.29 262 P **P 11 45 51.0 +6.0**
SNR=6.8
PHET Kaeng Krachan 22.53 131 P **P 11 45 54.6 +7.0**
comp=Z,86μm,1.0s,comp=Z,719μm
KHON Khomkaen 22.57 119 P **P 11 45 49.8 +1.8**
comp=Z,234μm,1.7s
SKNT Sakolnakorn 23.11 116 P **P 11 45 55.0 +1.3**
comp=Z,68nm,1.1s
XAN Xi'an 23.32 70 P **P 11 45 55.3 -0.4**
XAN pP sP 11 46 04.0 -0.7
XAN S **S 11 50 04.0 -3.4**
XAN pmax pmax
comp=Z,12nm,1.2s
XAN pmax pmax
comp=Z,250nm,3.6s
XAN LR LR
comp=Z,830nm,8.7s
XAN LR LR
comp=Z,2μm,9.8s
XAN LR LR
comp=Z,2μm,10.8s
XAN Xi'an 23.32 70 *e*P **P 11 45 55.8 +0.1**
comp=Z,73nm,1.2s
XAN Xi'an 23.32 70 *e*P **P 11 45 55.8 +0.1**
XAN pmax pmax
comp=Z,73nm,1.2s
PANO Nakornpanom 23.52 114 P **P 11 45 59.2 +1.5**
comp=Z,2.5nm,1.1s
UOSS Minazif 23.56 267 P **P 11 45 58.9 +0.7**
HATD Hatta, Dubai 23.66 267 P **P 11 45 60.0 +0.9**
ENH Enshi 23.71 80 *e*P **P 11 46 00.4 +0.9**
comp=Z,124nm,1.1s
ASHO Ashiyiah 23.76 266 *i* P **P 11 46 01.6 +1.5**
SNR=12
ASHO Ashiyiah 23.76 266 P **P 11 46 06.8 +6.7**
SNR=7.7
NAZ Nazwa, Dubai 24.03 267 P **P 11 46 05.5 +3.0**
FAQ Al Faqa, Dubai 24.15 267 P **P 11 46 06.9 +3.2**
ALNE Al Ain 24.20 265 *i* P **P 11 46 07.2 +3.0**
SNR=13
ASUD Al Ashush, Dub 24.41 267 P **P 11 46 09.3 +3.2**
ZAA0 Zalesovo Array 25.29 4 *e*P **P 11 46 14.1 +0.4**
comp=Z,46nm,0.8s
ZALV Zalesovo Beam 25.29 4 P **P 11 46 14.2 +0.6**
comp=Z,37nm,0.6s,baz=193,slow=9.7,SNR=108
BTO Baotou 25.60 55 *e*P **P 11 46 17.3 +0.4**
BTO S **S 11 50 40.8 -3.2**
PKDT Phuket 25.64 141 P P 11 46 25.5 +8.2
comp=Z,56nm,0.9s,comp=Z,5μm
BVAR Borovoye Array 25.84 343 P **P 11 46 18.4 -0.4**
comp=Z,6.9nm,0.9s,baz=146,slow=8.6,SNR=12
BRVK Borovoye 25.89 343 *e*P **P 11 46 19.4 +0.2**
comp=Z,19nm,0.9s
BRVK Borovoye 25.89 343 ⇓P **P 11 46 17.9 -1.4**
comp=Z,27nm,1.1s
BRVK Borovoye 25.89 343*c i*P **P 11 46 19.4 +0.2**
BRVK pmax pmax
comp=Z,8.0nm,1.1s
NVS Novosibirsk 26.12 1 *e*P **P 11 46 20.6 -0.7**
NVS pmax pmax
comp=Z,58nm,2.0s
NVS pmax pmax
comp=N,47nm,2.1s
TRTT Trang 26.46 138 P **P 11 46 28.1 +3.4**
comp=N,70nm,1.1s,comp=N,908nm
TIY Taiyuan 26.68 62 *e*P **P 11 46 29.5 +2.9**
TIY S **S 11 51 03.8 +2.8**
TIY pmax pmax
comp=N,280nm,7.4s
TIY LR LR
comp=N,270nm,7.6s
TIY LR LR
comp=N,940nm,9.8s
TIY LR LR
comp=N,1μm,10.5s
SONA0 Songino Array 26.70 38 *e*P **P 11 46 28.9 +2.1**
SONM Songino Array 26.70 38 P **P 11 46 28.9 +2.1**
comp=N,13nm,0.7s,baz=228,slow=9.6,SNR=36
SONM PcP **PcP 11 49 50.8 +0.8**
comp=N,3.1nm,0.6s,baz=194,slow=5.6,SNR=4.3
SONM ScP **ScP 11 53 29.9 +0.9**
comp=N,2.7nm,1.0s,baz=236,slow=4.0,SNR=6.6
AB31 Akbulak array 26.70 326 ⇑P **P 11 46 27.4 +0.8**
comp=N,19nm,0.9s,baz=122,slow=10,SNR=134
AB31 Akbulak array 26.70 326 *i* P **P 11 46 27.1 +0.5**
AB31 pmax pmax
comp=Z,19nm,0.9s
ABKAR Akbulak array 26.70 326 *e*P **P 11 46 27.3 +0.7**
comp=Z,24nm,1.0s
HHC Hu-ho-hao-te 26.79 55 *e*P **P 11 46 29.8 +2.1**
HHC sP sP 11 46 37.0 +0.2
HHC S **S 11 51 04.3 +1.5**
HHC SS **SnSn 11 52 07.5 +0.2**
HHC pmax pmax
comp=Z,17nm,1.0s
HHC LR LR
comp=Z,540nm,12.5s
HHC LR LR
comp=Z,680nm,10.7s
ZAK Zakamensk 26.85 31 *e*P **P 11 46 29.1 +1.0**
ZAK *e* 11 49 50.2
ZAK pmax pmax
comp=Z,27nm,1.2s
ZAK pmax pmax
comp=Z,7.0nm,1.1s
MOY Mondy 26.86 26 *e*P **P 11 46 30.1 +1.9**
MOY pmax pmax
comp=Z,35nm,1.4s
ULN Ulaanbaatar 27.07 38 *e*P **P 11 46 31.2 +1.0**
comp=Z,35nm,1.1s
ULN Ulaanbaatar 27.07 38*ce*P **P 11 46 31.8 +1.6**
ULN pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 27.07 38 P **P 11 46 32.2 +2.1**
SNR=28
WHN Wuhan 27.88 78 P **P 11 46 38.5 +1.1**
WHN pP **pP 11 46 43.0 -0.8**
WHN LR LR
comp=Z,2μm,10.5s
WHN LR LR
comp=Z,1μm,9.9s
WHN LR LR
comp=Z,3μm,18.0s
TLY Talaya 27.95 29 *e*P **P 11 46 38.7 +0.9**
comp=Z,10nm,1.1s
TLY Talaya 27.95 29*c i*P **P 11 46 39.5 +1.7**
TLY Talaya 27.95 29 P **P 11 46 40.4 +2.6**
SNR=9.8
AKTO Aktyubinsk 28.42 326 P **P 11 46 42.6 +0.6**
comp=Z,3.3nm,0.5s,baz=116,slow=11,SNR=11
AKTO Aktyubinsk 28.42 326 ⇓P **P 11 46 43.0 +1.0**
comp=Z,16nm,1.2s
AKTO Aktyubinsk 28.42 326 P **P 11 46 41.9 -0.1**
AKTO pmax pmax
comp=Z,16nm,1.3s
IRK Irkutsk 28.63 29 *e*P **P 11 46 46.4 +2.6**
IRK *e* 11 47 35.0
IRK pmax pmax
comp=Z,40nm,1.8s
KULM Kulim 29.08 140 *e*P **P 11 46 47.4 -0.8**
comp=Z,28nm,0.9s
KULM Kulim 29.08 140 **P 11 46 52.0 +3.9**
IPM Ipoh 29.95 140 *e*P **P 11 46 56.0 +0.1**
comp=Z,12nm,0.7s
IPM Ipoh 29.95 140 P 11 47 01.0 +5.1
BJT Baijiatuau 29.99 59 *e*P **P 11 46 58.3 +2.3**
comp=Z,16nm,0.7s
BJT Baijiatuau 29.99 59 *e*P **P 11 46 58.3 +2.3**
BJT pmax pmax
comp=Z,16nm,0.7s
BJI Beijing 30.00 59 P **P 11 46 58.3 +2.2**
BJI S **S 11 51 51.3 -1.7**
BJI pmax pmax
comp=Z,9.0nm,0.8s
BJI LR LR
comp=Z,500nm,16.5s
BJI LR LR
comp=Z,380nm,11.9s
TIA Tai'an 30.21 67 P **P 11 46 59.5 +1.5**
TIA pmax pmax
comp=Z,10.0nm,1.0s
PSI Prapat 30.25 145 *e*P **P 11 46 59.2 +0.6**
comp=Z,8.8nm,0.8s
PSI Prapat 30.25 145 *e*P **P 11 46 59.2 +0.6**
PSI pmax pmax
comp=Z,9.0nm,0.8s
AKT Akhty 30.81 304 *e*P **P 11 47 04.5 +1.1**
AKT *e* 11 48 04.0
AKT pmax pmax
comp=Z,26nm,1.0s
GSI Gunungsitoli 30.91 149 *e*P **P 11 47 04.0 -0.4**
comp=Z,77nm,0.8s
MAK Makhachkala 31.34 306 *e*P **P 11 47 03.9 -4.0**
MAK *e*S **S 11 52 09.4 -4.5**
MAK pmax pmax
comp=Z,31nm,0.5s
MAK MLR MLR
comp=Z,192nm,12.0s
NJ2 Nanjing 31.62 75 *e*P **P 11 47 10.0 -0.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
NJ2 LR LR
comp=Z,1μm,14.2s
NJ2 LR LR
comp=Z,1μm,11.8s
NJ2 LR LR
comp=Z,1μm,14.7s
SVE Sverdlovsk 32.00 337 *e*P **P 11 47 14.7 +1.1**
SVE pmax pmax
comp=Z,33nm,1.4s
SVE MLR MLR
comp=Z,817nm,13.0s
GROC Groznyy 32.61 306 *e*P **P 11 47 20.4 +1.3**
GROC *e* 11 48 26.3
GROC *e* 11 50 02.8
GROC *e*S **S 11 52 35.5 +1.7**
GROC pmax pmax
comp=Z,62nm,1.1s
GNI Garni 32.78 300 *i* P **P 11 47 21.6 +0.8**
GNI pmax pmax
comp=Z,31nm,1.1s
GNI Garni 32.78 300 P P 11 47 26.6 +5.7
SNR=6.3
TBLG Delisi 33.05 303 *e*P **P 11 47 23.5 +0.5**
comp=Z,13nm,0.9s
TBLG Delisi 33.05 303 *e*P **P 11 47 23.5 +0.5**
TBLG pmax pmax
comp=Z,13nm,0.9s
RAYN Ar Rayn 33.34 270 *e*P **P 11 47 26.4 +0.6**
comp=Z,29nm,1.3s
RAYN Ar Rayn 33.34 270 *i* P **P 11 47 26.3 +0.6**
SNR=17
RAYN Ar Rayn 33.34 270 *e*P **P 11 47 26.4 +0.6**
RAYN pmax pmax
comp=Z,29nm,1.3s
BKNI Bangkinang 33.44 144 *e*P **P 11 47 26.1 -0.4**
comp=Z,118nm,0.9s
MYKOM Kota Tinggi 33.76 139 *e*P **P 11 47 28.5 -0.8**
comp=Z,32nm,1.1s
MYKOM Kota Tinggi 33.76 139 **P 11 47 31.0 +1.7**
ZEI Tsey 33.87 305 *e*P **P 11 47 29.6 -0.7**
ZEI pmax pmax
comp=Z,29nm,1.3s
AKH Akhalkalaki 33.91 302 *e*P **P 11 47 31.2 +0.5**
comp=Z,15nm,0.8s
AKH Akhalkalaki 33.91 302 *e*P **P 11 47 31.2 +0.5**
AKH pmax pmax
comp=Z,15nm,0.8s
DL2 Dalian 34.00 62 P **P 11 47 32.5 +1.2**
DL2 *e*S **S 11 52 58.5 +3.0**
DL2 pmax pmax
comp=Z,61nm,0.7s
DL2 pmax pmax
comp=Z,110nm,4.7s
DL2 LR LR
comp=Z,510nm,14.1s
DL2 LR LR
comp=Z,910nm,14.7s
DL2 LR LR
comp=Z,1μm,14.0s
NCK Nalchik 34.24 306 *i* P **P 11 47 34.1 +0.8**
NCK pmax pmax
comp=Z,14nm,0.3s
KBZ Khabaz 34.78 306 P **P 11 47 38.8 +0.8**
comp=Z,4.8nm,0.8s,baz=127,slow=7.4,SNR=9.4
NEY Neytrino 34.81 305 *e*P **P 11 47 40.7 +2.2**
NEY pmax pmax
comp=Z,3.0nm,1.0s
KIV Kislovodsk 34.98 307 *e*P **P 11 47 39.8 -0.1**
comp=Z,12nm,1.1s
KIV Kislovodsk 34.98 307 *e*P **P 11 47 40.8 +1.0**
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,479nm,16.0s
HIA Hailar 35.13 44 *i* P **P 11 47 41.6 +0.7**
HIA pmax pmax
comp=Z,30nm,1.3s
YULB Yu-li 35.33 89 *e*P **P 11 47 43.9 +0.9**
comp=Z,59nm,1.2s
SNY Shenyang 35.83 57 ⇑P **P 11 47 48.0 +1.1**
SNY pmax pmax
comp=Z,40nm,0.8s
SNY pmax pmax
comp=Z,260nm,3.1s
SNY LR LR
comp=Z,600nm,16.7s
SNY LR LR
comp=Z,800nm,17.7s
CN2 Changchun 37.48 54 *e*P **P 11 48 01.8 +0.8**
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,240nm,11.0s
CN2 LR LR
comp=Z,1μm,11.0s
CN2 LR LR
comp=Z,1μm,11.0s
VRH Novokhopyorsk 37.70 318 *e*P **P 11 48 02.8 0.0**
VRH pmax pmax
comp=Z,40nm,1.0s
DAMY Dhamar 37.76 256 *e*P **P 11 48 03.1 -0.9**
comp=Z,19nm,1.1s
KSM Kuching 38.05 130 *e*P **P 11 48 05.6 -0.6**
comp=Z,15nm,1.2s
TJN Taejon 38.48 67⇑*i*P **P 11 48 09.4 -0.2**
SBUM Sibu 38.66 127 *e*P **P 11 48 11.5 +0.2**
comp=Z,25nm,1.3s
SBUM Sibu 38.66 127 **P 11 48 15.0 +3.7**
ANN Anapa 38.84 307 *e*P **P 11 48 15.6 +3.1**
ANN pmax pmax
comp=Z,22nm,0.9s
ANN MLR MLR
comp=Z,293nm,16.0s
KS15 Wonju Array Si 38.87 65 *e*P **P 11 48 12.8 -0.1**
comp=Z,21nm,0.8s
KSRS Korea Array 38.90 65 P **P 11 48 13.2 +0.1**
comp=Z,18nm,0.7s,baz=274,slow=8.9,SNR=44
KSRS PcP **PcP 11 50 24.1 +0.3**
comp=Z,1.1nm,0.8s,baz=256,slow=3.1,SNR=4.4
KSRS ScP **S 11 54 12.0 +1.6**
comp=Z,2.1nm,0.8s,baz=272,slow=3.8,SNR=8.0
KSRS LR LR 12 05 50.6
comp=Z,597nm,18.4s,baz=269,slow=39
VORD Divnogorie 39.06 317 *e*P **P 11 48 13.3 -0.9**
VORD pmax pmax
comp=Z,30nm,1.1s
KKM Kota Kinabalu 39.21 119 **P 11 48 20.0 +4.0**
VSR Storozhevoye 39.22 317 *e*P **P 11 48 15.4 -0.1**
VSR pmax pmax
comp=Z,7.0nm,0.5s
MDJ Mudanjiang 40.54 54 P **P 11 48 26.5 -0.2**
MDJ pmax pmax
comp=Z,21nm,0.8s
MDJ Mudanjiang 40.54 54 *e*P **P 11 48 27.5 +0.9**
comp=Z,47nm,1.5s
PRGR Permogore 40.85 334 *e*P **P 11 48 25.6 -3.4**
PRGR pmax pmax
comp=Z,17nm,0.9s
ZEA Zeya 41.09 40 *e*P **P 11 48 32.6 +1.5**
ZEA pmax pmax
comp=Z,29nm,1.0s
ZEA MLR MLR
comp=Z,1μm,12.0s
ZEA MLR MLR
comp=E,900nm,11.0s
SIM Simferopol' 41.20 307 *e*P **P 11 48 33.4 +1.3**
SIM S **S 11 54 47.0 +2.4**
SIM pmax pmax
comp=Z,15nm,1.1s
BR131 Keskin Array S 41.26 299 *e*P **P 11 48 33.0 +0.1**
comp=Z,10nm,1.0s
BR131 Keskin Array S 41.26 299 P **P 11 48 33.8 +1.0**
SNR=6.7
BRTR Keskin Array B 41.26 299 P **P 11 48 33.1 +0.2**
comp=Z,4.8nm,1.0s,baz=117,slow=7.5,SNR=17
BRTR Keskin Array B 41.26 299*ce*P **P 11 48 33.4 +0.6**
BRTR pmax pmax
comp=Z,5.0nm,1.0s
JNU Nakatsue 41.63 71 *e*P **P 11 48 36.0 +0.2**
comp=Z,23nm,1.1s
MOS Moscow 41.63 323 *e*P **P 11 48 32.9 -2.5**
MOS *e* 11 48 50.1
MOS *e* 11 50 16.9
MOS pmax pmax
comp=Z,42nm,0.8s
USA0B Ussuriysk Arra 42.21 55 *e*P **P 11 48 40.4 0.0**
comp=Z,57nm,1.6s
USRK Ussuriysk Ar. 42.21 55 P **P 11 48 41.7 +1.3**
comp=Z,6.4nm,0.7s,baz=254,slow=6.1,SNR=17
USRK LR LR 12 07 51.7
comp=Z,361nm,19.1s,baz=259,slow=38
KLR Kul'dur 42.68 47*c i*P **P 11 48 45.2 +1.1**
KLR pmax pmax
comp=Z,22nm,1.4s
MILM Milestii Mici 45.06 309⇓*i*P **P 11 49 02.8 -0.5**
AKASG Malin Array Be 45.21 314 P **P 11 49 04.1 -0.3**
comp=Z,3.0nm,0.7s,baz=69,slow=6.9,SNR=8.5
AKASG LR LR 12 11 16.8
comp=Z,128nm,18.2s,baz=180,slow=40
AKBB Malin Array Si 45.21 314 *e*P **P 11 49 04.0 -0.4**
comp=Z,16nm,0.8s
AKBB Malin Array Si 45.21 314 *e*P **P 11 49 04.0 -0.4**
AKBB pmax pmax
comp=Z,16nm,0.8s
TIRR Tirgusor 45.22 305⇑*i*P **P 11 49 06.1 +1.5**
YAK Yakutsk 45.43 29 *e*P **P 11 49 05.8 -0.1**
YAK *e* 11 59 04.2
CFR Carcaliu 45.44 306⇑*i*P **P 11 49 07.7 +0.8**
TLB Topalu 45.49 306⇓*i*P **P 11 49 07.7 +1.0**
TEY Ternei 45.55 54⇑*e*P **P 11 49 07.6 +0.5**
TEY pmax pmax
comp=E,10.0nm,1.4s
TEY pmax pmax
comp=Z,20nm,1.1s
ICOR Ion Corvin 45.65 305⇑*i*P **P 11 49 08.4 +0.4**
GRNR Gornyy 45.89 46 *e*P **P 11 49 10.2 +0.3**
GRNR pmax pmax
comp=Z,36nm,1.0s
INU Inuyama 46.38 67 *e*P **P 11 49 14.1 +0.2**
comp=Z,14nm,0.9s
VRI Vrincioaia 46.45 307⇑*i*P **P 11 49 15.5 +1.2**
PLOR Plostina 46.51 307⇑*i*P **P 11 49 16.2 +1.4**
EZN Ezine 46.88 299⇓*i*P **P 11 49 18.6 +0.8**
BIZ Bicaz 46.92 309⇑*i*P **P 11 49 18.8 +0.8**
MLR Muntele Rosu 46.99 307 P **P 11 49 20.3 +1.6**
comp=Z,33nm,0.9s,baz=83,slow=2.7,SNR=20
MLR Muntele Rosu 46.99 307 *e*P **P 11 49 19.6 +0.9**
comp=Z,51nm,1.0s
MLR Muntele Rosu 46.99 307⇑*i*P **P 11 49 20.5 +1.8**
MLR Muntele Rosu 46.99 307 *e*P **P 11 49 19.6 +0.9**
MLR pmax pmax
comp=Z,51nm,1.0s
MAJO Matsushiro 47.18 65 *e*P **P 11 49 19.8 -0.3**
comp=Z,6.9nm,0.8s
MAJO Matsushiro 47.18 65*c i*P **P 11 49 20.6 +0.5**
MAJO pmax pmax
comp=Z,6.0nm,0.9s
MAT Matsushiro 47.18 65 P **P 11 49 20.4 +0.2**
MJAR Matsushiro Arr 47.18 65 P **P 11 49 20.8 +0.6**
comp=Z,4.2nm,0.7s,baz=282,slow=10,SNR=12
MJAR PcP **PcP 11 50 52.3 +0.7**
comp=Z,5.0nm,1.2s,baz=268,slow=2.1,SNR=4.2
MJAR LR LR 12 10 36.0
comp=Z,200nm,19.9s,baz=270,slow=38
DOPR Dopca 47.39 307⇑*i*P **P 11 49 22.8 +1.1**
BURAR Bucovina Array 47.55 310⇑*i*P **P 11 49 23.7 +0.7**
BUR08 Bucovina Ar. S 47.56 310 *e*P **P 11 49 23.3 +0.2**
comp=Z,8.8nm,0.9s
VOIR 47.62 307⇑*i*P **P 11 49 24.7 +1.1**
IIGN Ignalina 47.75 320 *e*P **P 11 49 24.7 +0.4**
IIGN IAmb IAmb 11 49 35.2
comp=Z,8.7nm,0.5s
IZAR Zarasai 47.81 321 *e*P **P 11 49 25.0 +0.3**
IZAR IAmb IAmb 11 49 31.8
comp=Z,14nm,0.5s
ISAL Salakas 47.84 320 *e*P **P 11 49 25.2 +0.2**
ISAL IAmb IAmb 11 49 32.9
comp=Z,9.6nm,0.8s
ARR Arges 47.91 307⇓*i*P **P 11 49 26.6 +0.8**
VSU Vasula 48.11 324⇓*i*P **P 11 49 27.6 +0.6**
VSU pmax pmax
comp=Z,34nm,1.1s
VSU Vasula 48.11 324 *e*P **P 11 49 27.3 +0.3**

VSU IAmb IAmb 11 49 32.4
comp=Z,46nm,1.0s
LVV L'vov 48.44 313 *e*P **P 11 49 29.8 +0.1**
LVV *e* 11 51 25.1
LVV *e*S **S 11 56 28.1 -1.3**
LVV MLR MLR
comp=Z,100nm,15.0s
APA Apatity 48.47 337⇓*i*P **P 11 49 28.0 -1.7**
APA pmax pmax
comp=Z,3.0nm,0.8s
APA MLR MLR
comp=Z,400nm,12.0s
NKL Nikolayevsk 48.79 43 *e*P **P 11 49 32.5 +0.2**
NKL *e* 11 50 56.9
NKL *e* 11 51 25.4
NKL *e*S **S 11 56 33.7 -0.5**
NKL *e* 11 59 24.2
NKL *e*SS **SS 12 00 06.6 +2.1**
NKL pmax pmax
comp=Z,10.0nm,1.6s
NKL pmax pmax
comp=N,11nm,1.2s
NKL pmax pmax
comp=E,26nm,1.0s
NKL pmax pmax
comp=Z,50nm,1.9s
NKL MLR MLR
comp=Z,235nm,14.0s
NKL MLR MLR
comp=N,175nm,11.0s
NKL MLR MLR
comp=E,169nm,11.0s
VTS Vitosha 49.02 303 *e*P **P 11 49 34.9 +0.4**
comp=E,17nm,1.1s
VTS Vitosha 49.02 303⇓*i*P **P 11 49 35.6 +1.1**
PABE Paberze 49.05 320 *e*P **P 11 49 34.2 0.0**
PABE IAmb IAmb 11 49 39.5
comp=Z,47nm,1.2s
FIA0 FINESS Array S 49.17 328 *e*P **P 11 49 34.9 -0.2**
FIA0 FINESS Array S 49.17 328 *e*P **P 11 49 34.9 -0.2**
FINES FINESS Array B 49.17 328 P **P 11 49 34.9 -0.2**
comp=Z,4.4nm,0.6s,baz=114,slow=8.2,SNR=20
FINES LR LR 12 12 06.6
comp=Z,274nm,18.8s,baz=101,slow=38
GZR Gura Zlata 49.22 307⇓*i*P **P 11 49 34.6 -1.3**
KAPI Kappang 49.22 127 *e*P **P 11 49 35.7 -0.4**
comp=Z,42nm,1.2s
KWP Kalwaria Pacla 49.29 312 *e*P **P 11 49 37.3 +1.0**
KWP Kalwaria Pacla 49.29 312 *e*P **P 11 49 37.0 +0.8**
comp=Z,375nm,1.1s
KWP Kalwaria Pacla 49.29 312 *e*P **P 11 49 37.0 +0.8**
KWP pmax pmax
comp=Z,375nm,1.1s
SUW Suwalki 49.31 318 *e*P **P 11 49 36.3 0.0**
TRPA Tarpa 49.36 310⇓*i*P **P 11 49 36.8 0.0**
UZH Uzhgorod 49.53 311 *e*P **P 11 49 36.2 -1.9**
UZH *e* 11 49 45.4
UZH *e* 11 49 48.5
YSS Yuzh-Sakhalins 49.85 51 *e*P **P 11 49 40.7 +0.2**
comp=Z,23nm,0.7s
YSS Yuzh-Sakhalins 49.85 51 *e*P **P 11 49 41.1 +0.6**
YSS *e* 11 49 56.0
YSS pmax pmax
comp=Z,30nm,1.3s
YSS MLR MLR
comp=Z,500nm,15.0s
TIXI Tiksi 49.87 18 P **P 11 49 40.5 +0.2**
comp=Z,2.7nm,0.4s,baz=221,slow=4.1,SNR=11
TIXI Tiksi 49.87 18 *e*P **P 11 49 40.3 +0.1**
comp=Z,41nm,1.6s
TIXI Tiksi 49.87 18*ce*P **P 11 49 40.4 +0.1**
TIXI pmax pmax
comp=Z,26nm,1.6s
SIRR Siria 49.98 308⇑*i*P **P 11 49 42.9 +1.3**
MDVR Moldovita 50.00 306⇑*i*P **P 11 49 42.5 +0.7**
ERM Erimo 50.41 58 *e*P **P 11 49 45.9 +1.1**
comp=Z,24nm,0.9s
ERM Erimo 50.41 58 *e*P **P 11 49 45.9 +1.1**
ERM pmax pmax
comp=Z,24nm,0.9s
NIE Niedzica 50.85 312 *e*P **P 11 49 49.6 +1.4**
PSZ Piszkesteto 51.14 310 *e*P **P 11 49 50.6 +0.2**
PSZ Piszkesteto 51.14 310 *e*P **P 11 49 50.6 +0.2**
PSZ Piszkesteto 51.14 310⇓EP **P 11 49 53.0 +2.7**
ARCES ARCESS Array B 51.93 338 P **P 11 49 56.9 +1.0**
comp=Z,13nm,0.9s,baz=99,slow=7.7,SNR=13
ARCES LR LR 12 12 27.1
comp=Z,254nm,19.9s,baz=104,slow=37
ARE0 ARCESS Array S 51.93 338 *e*P **P 11 49 56.7 +0.8**
comp=Z,0.6nm,0.8s
PDG Podgorica 51.97 303⇓*i*P **P 11 49 56.1 -0.4**
MORH Mrgy, Hungar 52.07 308 EP **P 11 49 57.1 -0.2**
YUK Yuzh-Kuril'sk 52.19 55*c i*P **P 11 49 59.1 +0.9**
OKC Ostrava-Krasne 52.25 313 *e*P **P 11 49 59.5 +1.0**
OKC Ostrava-Krasne 52.25 313 *e*P **P 11 49 59.5 +1.0**
KMBO Kilima Mbogo 52.32 243 P **P 11 50 00.8 +1.1**
comp=Z,4.7nm,0.9s,baz=34,slow=9.7,SNR=8.8
KMBO LR LR 12 12 00.9
comp=Z,204nm,18.5s,baz=88,slow=36
KMBO Kilima Mbogo 52.32 243 *e*P **P 11 49 59.6 -0.1**
comp=Z,6.2nm,0.9s
KMBO Kilima Mbogo 52.32 243*ce*P **P 11 50 01.2 +1.4**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
TIH Tihany 52.55 309 EP **P 11 49 57.1 -3.7**
MORC Moravsky Berou 52.64 312 *e*P **P 11 50 01.8 +0.3**
comp=Z,9.1nm,1.2s
MORC Moravsky Berou 52.64 312⇓*i*P **P 11 50 01.8 +0.3**
MORC Moravsky Berou 52.64 312 *e*P **P 11 50 01.8 +0.3**
MORC pmax pmax
comp=Z,9.0nm,1.2s
DPC Dobruska-Polom 53.41 313 *e*P **P 11 50 08.0 +0.8**
DPC *e* 11 50 13.0
DPC MLR MLR
comp=Z,200nm,16.1s
DPC Dobruska-Polom 53.41 313 *e*P **P 11 50 08.0 +0.8**
DPC *ep*P **pP 11 50 13.0 -1.0**
DPC AMS AMS 12 14 50.0
comp=Z,200nm,16.1s
OSTC Ostas 53.47 313 AMS AMS 12 14 50.0
comp=Z,300nm,15.4s
KUR Kuril'sk 53.50 53 *e*P P 11 50 00.9 -6.9
KUR *e*SS **SS 12 01 20.1 +0.5**
KUR MLR MLR
comp=Z,301nm,17.0s
CHVC Chvalec 53.57 314 *e*P **P 11 50 09.0 +0.7**
CHVC *ex* x 11 50 12.1
CHVC AMS AMS 12 15 00.0
comp=Z,300nm,15.6s
UPC Upice 53.60 313 *e*P **P 11 50 12.3 +3.8**
UPC MLR MLR
comp=Z,300nm,15.3s
UPC Upice 53.60 313 *e*P **P 11 50 12.3 +3.8**
UPC *ep*P **sP 11 50 16.7 -1.1**
UPC AMS AMS 12 15 10.0
comp=Z,300nm,15.3s
GOPC GO Pecny, Ondr 54.42 313 AMS AMS 12 15 40.0
comp=Z,200nm,17.4s
PVCC Panska Ves 54.52 314 AMS AMS 12 16 00.0
comp=Z,200nm,13.0s
PRU Pruhonice 54.57 313 *e*P **P 11 50 16.4 +0.8**
PRU MLR MLR
comp=Z,200nm,15.2s
PRU Pruhonice 54.57 313 *e*P **P 11 50 16.4 +0.8**
PRU *ep*P **pP 11 50 19.4 -3.1**
PRU AMS AMS 12 15 50.0
comp=Z,200nm,15.2s
BRG Berggiesshubel 54.89 314 *e*P **P 11 50 18.3 +0.4**
comp=Z,4.6nm,0.8s
BRG *i* 11 50 21.1
comp=Z,6.3nm,0.9s
HFS Hagfors 54.96 325 P **P 11 50 17.6 -0.6**
comp=Z,5.3nm,0.6s,baz=118,slow=8.6,SNR=19
GEC2 GERESS Array S 55.21 312 *e*P **P 11 50 20.6 +0.2**
comp=Z,2.9nm,0.9s
GEC2 GERESS Array S 55.21 312 *e*P **P 11 50 20.6 +0.2**
GEC2 pmax pmax
comp=Z,3.0nm,0.9s
GERES GERESS Array B 55.21 312 P **P 11 50 20.5 +0.2**
comp=Z,1.3nm,0.7s,baz=90,slow=6.8,SNR=6.0
GERES LR LR 12 18 29.6
comp=Z,109nm,19.7s,baz=62,slow=41
KHC Kasperske Hory 55.26 312 *e*P **P 11 50 22.6 +1.9**
KHC MLR MLR
comp=Z,200nm,14.4s
KHC Kasperske Hory 55.26 312 *e*P **P 11 50 22.6 +1.9**
KHC AMS AMS 12 19 00.0
comp=Z,200nm,14.4s
CLL Collm 55.46 315 *e*P **P 11 50 21.0 -1.0**
CLL LmV 12 17 00.0
comp=Z,200nm,18.4s
SOEI Soe 55.72 127 *e*P **P 11 50 23.8 -0.6**
comp=Z,75nm,1.2s
SEY Seymchan 55.82 31⇑*i*P **P 11 50 24.9 +0.5**
NKC Novy Kostel 55.89 313 AMS AMS 12 16 30.0
comp=Z,200nm,14.5s
NC405 NORSAR Array S 55.97 326 *e*P **P 11 50 25.4 -0.1**
comp=Z,68nm,1.5s
NB2 NORSAR Subarra 56.21 326 P **P 11 50 26.6 -0.7**
comp=Z,4.6nm,0.7s,baz=91,slow=6.9
NB200 NORSAR Array S 56.21 326 *e*P **P 11 50 26.4 -0.9**
NOA NORSAR Array B 56.21 326 P **P 11 50 26.4 -0.9**
comp=Z,1.9nm,0.7s,baz=91,slow=6.9,SNR=6.4
NOA LR LR 12 15 21.4
comp=Z,151nm,19.1s,baz=75,slow=37
MBAR Mbarara 57.23 249 *e*P **P 11 50 34.8 -0.5**
comp=Z,15nm,0.9s
MBAR Mbarara 57.23 249⇑*i*P **P 11 50 35.6 +0.2**
MBAR pmax pmax
comp=Z,13nm,1.1s
ABPO Ambohimpanom 58.30 220 *e*P **P 11 50 42.2 -0.5**
comp=Z,18nm,1.3s
ABPO Ambohimpanom 58.30 220 *e*P **P 11 50 42.2 -0.5**
ABPO pmax pmax
comp=Z,18nm,1.3s
PEA1 Petropavlovsk- 59.02 43 *e*P **P 11 50 46.7 -0.5**
PETK Petropavlovsk- 59.02 43 P **P 11 50 46.7 -0.5**
comp=Z,2.6nm,0.9s,baz=90,slow=1.5,SNR=4.0
PETK LR LR 12 17 58.3
comp=Z,152nm,19.0s,baz=260,slow=38
SENIN Lac Senin/Sane 59.85 309 *e*P **P 11 50 53.3 0.0**
comp=Z,9.3nm,0.8s
WLF Walferdange 60.00 313 sP **P 11 50 57.8 +3.8**
WLF Walferdange 60.00 313 PcP **PcP 11 51 36.6 -3.3**
KEST Kesra 60.83 297 LR LR 12 24 06.2
comp=Z,121nm,18.2s,baz=282,slow=43
BILL Bilibino 61.48 25 *e*P **P 11 51 04.3 +0.6**
comp=Z,15nm,1.2s
BILL Bilibino 61.48 25 *i* P **P 11 51 03.4 -0.3**
BILL *i* 11 51 11.4
BILL *i* 11 51 46.3
BILL pmax pmax
comp=Z,7.0nm,1.1s
BILL MLR MLR
comp=Z,219nm,16.0s
FITZ Fitzroy Crossi 62.61 133 *e*P **P 11 51 11.7 -0.2**
comp=Z,20nm,1.3s
DAG Danmarks Havn 64.75 346 *i* P **P 11 51 29.3 +4.1**
DAG pmax pmax
comp=Z,28nm,1.1s
DAG Danmarks Havn 64.75 346 *i* P **P 11 51 29.3 +4.1**
comp=Z,22nm,1.1s
MORW Morawa 65.90 148 *e*P **P 11 51 32.8 -0.5**
comp=Z,34nm,1.3s
LSZ Lusaka 68.16 237 *e*P **P 11 51 48.3 +0.2**
comp=Z,13nm,1.0s
LSZ Lusaka 68.16 237 *e*P **P 11 51 48.3 +0.2**
LSZ pmax pmax
comp=Z,13nm,1.0s
TAM Tamanrasset 68.31 285 *e*P **P 11 51 49.2 +0.1**
comp=Z,3.2nm,0.9s
TAM Tamanrasset 68.31 285 *e*P **P 11 51 49.2 +0.1**
TAM pmax pmax
comp=Z,3.0nm,0.9s
MANU Manus Island 69.33 104 *e*P **P 11 51 55.2 -0.1**
comp=Z,33nm,1.4s
ESDC Sonseca Array 69.62 305 P **P 11 51 57.0 +0.1**
comp=Z,5.2nm,0.9s,baz=57,slow=6.2,SNR=10
NWAO Narrogin (SRO) 69.69 149 *e*P **P 11 51 56.9 -0.3**
comp=Z,40nm,1.1s
NWAO Narrogin (SRO) 69.69 149 *e*P **P 11 51 56.9 -0.3**
NWAO pmax pmax
comp=Z,40nm,1.1s
WRA Warramunga Arr 69.75 128 P **P 11 51 58.1 +0.3**
comp=Z,22nm,0.6s,baz=308,slow=6.8,SNR=72
WR1 Warramunga Arr 69.75 128 *e*P **P 11 51 58.1 +0.3**
WRAB Tennant Creek 69.75 128 *e*P **P 11 51 58.0 +0.3**
comp=Z,38nm,1.0s
WRAB Tennant Creek 69.75 128*c i*P **P 11 51 58.2 +0.4**
WRAB pmax pmax
comp=Z,36nm,1.0s
WB2 Warramunga Arr 69.75 128 *e*P **P 11 51 58.0 +0.2**
comp=Z,41nm,1.0s
SUMG Summit 71.31 344 *e*P **P 11 52 07.3 +0.3**
comp=Z,43nm,1.0s
SUMG Summit 71.31 344⇓*i*P **P 11 52 08.2 +1.1**
SUMG pmax pmax
comp=Z,96nm,1.0s
SUMG Summit 71.31 344⇓*i*P **P 11 52 08.2 +1.1**
comp=Z,96nm,1.0s
AS31 Alice Springs 71.98 131 *e*P **P 11 52 11.4 +0.1**
comp=Z,6.5nm,0.8s
ASAR Alice Springs 71.98 131 P **P 11 52 11.4 +0.1**
comp=Z,22nm,0.7s,baz=315,slow=6.1,SNR=195
ASAR S **S 12 01 30.5 -1.5**
comp=Z,0.4nm,0.9s,baz=297,slow=10,SNR=5.7
ASAR LR LR 12 27 45.2
comp=Z,22nm,19.2s,baz=296,slow=39
TULEG Thule 73.48 353 *e*P **P 11 52 19.3 -0.1**
comp=Z,24nm,1.1s
FORT Forrest 73.50 140 *e*P **P 11 52 19.6 -0.5**
comp=Z,24nm,1.3s
KULLO Kullorsuaq 73.64 350 *i* P **P 11 52 20.3 -0.1**
KULLO pmax pmax
comp=Z,39nm,0.9s
KULLO Kullorsuaq 73.64 350 *i* P **P 11 52 20.3 -0.1**
comp=Z,39nm,0.9s
ANGG Ammassalik, Gr 75.36 338 *e*P **P 11 52 30.6 +0.2**
comp=Z,29nm,1.1s
TOA0 Torodi Ar. Sit 75.65 277 *e*P **P 11 52 32.6 -0.5**
comp=Z,23nm,1.2s
TORD Torodi Ar. Bea 75.65 277 P **P 11 52 31.6 -1.5**
comp=Z,8.8nm,1.0s,baz=31,slow=6.0,SNR=32
TORD LR LR 12 29 19.4
comp=Z,221nm,18.9s,baz=25,slow=38
TOLK Toolik Lake Re 75.76 17 *e*P **P 11 52 33.1 +0.2**
comp=Z,20nm,0.9s
LBTB Lobatse 76.31 231 *e*P **P 11 52 36.6 -0.1**
comp=Z,20nm,0.8s
LBTB Lobatse 76.31 231 *e*P **P 11 52 36.6 -0.1**
LBTB pmax pmax
comp=Z,20nm,0.8s
TTA Tatalina 77.66 23 *e*P **P 11 52 44.5 +0.8**
TTA Tatalina 77.66 23 *e*P **P 11 52 44.5 +0.8**
MLY Maley 77.97 20 *e*P **P 11 52 45.6 +0.3**
comp=Z,20nm,1.3s
FYU Fort Yukon 78.42 18 *e*P **P 11 52 48.2 +0.4**
comp=Z,51nm,1.4s
CTAO Charters Tower 78.51 120 *e*P **P 11 52 48.7 -0.3**
comp=Z,15nm,1.0s
CTAO Charters Tower 78.51 120 *e*P **P 11 52 48.7 -0.3**
CTAO pmax pmax
comp=Z,15nm,1.0s
BPAW Bear Paw Mtn. 78.54 21 *e*P **P 11 52 49.0 +0.5**
comp=Z,8.4nm,1.1s
BOSA Boshof 78.90 229 P **P 11 52 49.7 -1.3**
comp=Z,7.6nm,0.7s,baz=24,slow=6.1,SNR=11
BOSA LR LR 12 25 48.4
comp=Z,157nm,19.1s,baz=32,slow=34
BOSA Boshof 78.90 229 *e*P **P 11 52 50.1 -1.0**
comp=Z,14nm,0.8s
BOSA Boshof 78.90 229 *e*P **P 11 52 50.1 -1.0**
BOSA pmax pmax
comp=Z,14nm,0.8s
COLA College 78.94 20 *e*P **P 11 52 51.1 +0.5**
comp=Z,16nm,1.0s
COLA College 78.94 20 *e*P **P 11 52 51.1 +0.5**
COLA pmax pmax
comp=Z,16nm,1.0s
KTH Kantishna Hill 78.94 21 *e*P **P 11 52 51.2 +0.4**
comp=Z,26nm,1.5s
CCB Clear Creek Bu 79.12 20 *e*P **P 11 52 51.6 0.0**
comp=Z,3.8nm,0.9s
PRP Porcupine Dome 79.13 18 *e*P **P 11 52 52.6 +0.7**
comp=Z,32nm,1.4s
WRH Wood River Hil 79.17 20 *e*P **P 11 52 51.8 -0.1**
comp=Z,3.6nm,0.8s
ILAR Eielson Array 79.30 19 P **P 11 52 51.8 -0.8**
comp=Z,5.9nm,1.0s,baz=302,slow=4.8,SNR=46
ILAR LR LR 12 30 48.9
comp=Z,82nm,18.4s,baz=302,slow=38
ILB Eielson Array 79.30 19 *e*P **P 11 52 52.2 -0.4**
comp=Z,7.5nm,1.0s
HDA Harding Lake 79.55 20 *e*P **P 11 52 53.6 -0.5**
comp=Z,17nm,1.6s
BBOO Buckleboo 79.66 136 *e*P **P 11 52 54.6 -0.4**
comp=Z,20nm,1.2s
INK Inuvik 79.70 13 *e*P **P 11 52 55.2 +0.6**
comp=Z,12nm,1.0s
INK Inuvik 79.70 13 *e*P **P 11 52 55.3 +0.6**
INK pmax pmax
comp=Z,12nm,1.0s
RND Reindeer 79.70 21 *e*P **P 11 52 54.8 -0.2**
comp=Z,19nm,1.5s
RND Reindeer 79.70 21 *e*P **P 11 52 54.8 -0.2**
RND pmax pmax
comp=Z,19nm,1.5s
SKT Skwentna 79.84 23 *e*P **P 11 52 56.1 +0.4**
EPYK Eagle Plains 80.67 15 *e*P **P 11 52 59.8 -0.2**
comp=Z,15nm,1.1s
SCRK Sand Creek 80.73 19 *e*P **P 11 53 01.0 +0.5**
comp=Z,37nm,1.4s
EGAK Eagle 80.88 17 *e*P **P 11 53 01.3 +0.2**
comp=Z,6.6nm,0.9s
SML Sawmill 81.03 22 *e*P **P 11 53 02.5 +0.4**
comp=Z,23nm,0.9s
SML Sawmill 81.03 22 *e*P **P 11 53 02.5 +0.4**
SML pmax pmax
comp=Z,23nm,0.9s
SCM Sheep Creek Mo 81.34 21 *e*P **P 11 53 04.1 +0.4**
comp=Z,20nm,1.1s
SCM Sheep Creek Mo 81.34 21 *e*P **P 11 53 04.1 +0.4**
SCM pmax pmax
comp=Z,21nm,1.1s
DAWY Dawson 81.91 17 *e*P **P 11 53 06.8 +0.1**
comp=Z,14nm,1.2s
KDAK Kodiak Island 82.37 26 *e*P **P 11 53 09.8 +0.7**
comp=Z,35nm,1.4s
KDAK Kodiak Island 82.37 26*ce*P **P 11 53 09.8 +0.7**
STKA Stephens Creek 82.51 132 P **P 11 53 09.7 -0.4**
comp=Z,5.2nm,0.8s,baz=325,slow=7.5,SNR=8.9
STKA LR LR 12 36 46.9
comp=Z,44nm,18.3s,baz=229,slow=41
STKA Stephens Creek 82.51 132 *e*P **P 11 53 09.8 -0.4**
comp=Z,4.1nm,1.5s
STKA Stephens Creek 82.51 132 *e*P **P 11 53 09.8 -0.4**
STKA pmax pmax
comp=Z,4.0nm,1.5s
BALM Baldy 83.50 20 *e*P **P 11 53 16.1 +1.0**
comp=Z,15nm,1.0s
BALM Baldy 83.50 20 *e*P **P 11 53 16.1 +1.0**
BALM pmax pmax
comp=Z,15nm,1.0s
DBIC Dimbokro 84.34 274 P **P 11 53 21.1 +1.0**
comp=Z,8.1nm,1.0s,baz=45,slow=8.5,SNR=3.6
DBIC LR LR 12 35 24.4
comp=Z,102nm,18.9s,baz=44,slow=39
DBIC Dimbokro 84.34 274 *e*P **P 11 53 20.3 +0.2**
comp=Z,38nm,1.4s
DBIC Dimbokro 84.34 274 *e*P **P 11 53 20.3 +0.2**
DBIC pmax pmax
comp=Z,38nm,1.4s
HYT Haines Junctio 85.07 18 *e*P **P 11 53 23.7 +0.6**
comp=Z,11nm,0.8s
WHY Whitehorse 85.92 17 *e*P **P 11 53 27.4 +0.1**
comp=Z,7.8nm,0.9s
YKW3 Yellowknife Ar 88.04 8 *e*P **P 11 53 37.1 -0.3**
comp=Z,9.6nm,0.8s
JIS Juneau Island 88.08 18 *e*P **P 11 53 38.5 +0.8**
comp=Z,9.8nm,1.0s
YKA Yellowknife Ar 88.11 8 P **P 11 53 37.3 -0.4**
comp=Z,6.5nm,0.7s,baz=341,slow=4.8,SNR=72
YKA LR LR 12 36 19.1
comp=Z,5.7nm,20.0s,baz=344,slow=38
YKB5 Yellowknife Ar 88.11 8 *e*P **P 11 53 37.4 -0.4**
ARMA Armidale 88.45 126 *e*P **P 11 53 40.0 0.0**
comp=Z,39nm,1.6s
TOO Toolangi 88.59 135 *e*P **P 11 53 40.7 +0.3**
comp=Z,13nm,1.1s
TOO Toolangi 88.59 135 *e*P **P 11 53 40.7 +0.3**
TOO pmax pmax
comp=Z,13nm,1.1s
DLBC Dease Lake 89.08 16 *e*P **P 11 53 43.2 +0.6**
comp=Z,11nm,0.9s
FFC Flin Flon 96.83 2 *e*P **P 11 54 18.0 -0.2**
comp=Z,7.4nm,1.2s
FFC Flin Flon 96.83 2*ce*P **P 11 54 19.2 +1.0**
MAW Mawson 97.12 187 LR LR 12 33 04.0
comp=Z,124nm,18.6s,baz=34,slow=32
PDAR Pinedale Array 108.05 9 PKiKP **PKiKP 11 59 15.9 +0.3**
comp=Z,0.7nm,0.6s,baz=63,slow=3.5,SNR=7.3
NVAR Mina Array Bea 110.49 17 PKiKP **PKiKP 11 59 21.6 +1.3**
comp=Z,0.7nm,0.7s,baz=272,slow=1.1,SNR=5.6
MNTX Cornudas Mount 119.48 8 *e*PKPdf **PKPdf 11 59 37.9 +0.4**
JCT Junction City 121.11 2 *e*PKPdf **PKPdf 11 59 40.6 -0.1**
JCT Junction City 121.11 2 *e*PKIKP **PKPdf 11 59 40.6 -0.1**
TXAR Lajitas Array 122.00 6 PKP **PKPdf 11 59 43.1 +0.6**
comp=Z,0.8nm,0.5s,baz=180,slow=0.7,SNR=18
CPUP Villa Florida 144.23 264 PKP **PKPab 12 00 22.2 +0.6**
comp=Z,8.7nm,0.7s,baz=107,slow=3.3,SNR=4.4
OTAV Otavalo 145.82 324 *e*PKPdf **PKPdf 12 00 27.1 -0.4**
OTAV Otavalo 145.82 324 *e*PKP2 **PKPdf 12 00 27.1 -0.4**
LPAZ La Paz 150.10 288 PKP **PKPdf 12 00 35.5 +1.0**
comp=Z,5.4nm,1.0s,baz=70,slow=4.1,SNR=3.7
LPAZ PKPbc **PKPbc 12 00 39.6 0.0**
comp=Z,9.7nm,1.1s,baz=46,slow=3.4,SNR=12
LPAZ La Paz 150.10 288 *e*PKPdf **PKPdf 12 00 34.6 0.0**

IDC 28 11:49:52.0±57.0, 18°.75S×176°.79W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/28, mbtmp4.0/3, Error ellipse: s-maj=1064.0km s-min=177.0km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.59**	**242**	P	P	11 57 24.8	-0.5
	0.8nm,0.5s,baz=80,slow=9.3,SNR=3.0						
WRA	**Warramunga Arr**	**46.00**	**260**	P	P	11 58 17.8	+0.3
	0.6nm,0.3s,baz=95,slow=7.4,SNR=12						
ASAR	**Alice Springs**	**46.05**	**255**	P	P	11 58 17.7	-0.3
	2.5nm,0.5s,baz=92,slow=7.5,SNR=63						

TEH 28 12:03:33.6, 35°.25N×59°.01E, h10km, ML3.7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOG	**Moghan**	**0.90**	**17**	*e*Pg	Pb	12 03 51.9	+0.4
IMOG				IAMB	IAmb	12 04 12.1	
	comp=Z,8μm,0.4s						
IPAY	**Payeh**	**1.20**	**359**	*e*Pg	Pg	12 03 57.1	+0.4
IPAY				IAMB	IAmb	12 04 18.2	
	comp=N,17μm,0.4s						
JRKH	**Jarkhoshk**	**1.27**	**58**	*e*Pg	Pn	12 03 57.6	0.0
IAKL	**Akhelmad**	**1.37**	**351**	*e*Pg	Pb	12 03 59.3	-0.2
IAKL				IAMB	IAmb	12 04 26.1	
	comp=Z,7μm,0.3s						
IMYA	**Miami**	**1.41**	**39**	*e*Pg	Pg	12 04 00.6	0.0
IMYA				IAMB	IAmb	12 04 02.6	
	comp=Z,5μm,0.4s						
IKRD	**Kardeh**	**1.58**	**345**	*e*Pn	Pg	12 04 03.7	-0.3
IKRD				IAMB	IAmb	12 04 33.0	
	comp=Z,6μm,0.5s						
SBZV	**Sabzevar**	**1.61**	**315**	*e*Pg	Pb	12 04 03.5	-0.1
SHRT	**Shahrakht**	**1.91**	**146**	*e*Pg	Pb	12 04 08.2	-0.4
ISFR	**Sfrayin**	**1.98**	**336**	*e*Pn	Pb	12 04 10.2	+0.2
ISFR				IAMB	IAmb	12 04 15.3	
	comp=Z,8μm,0.7s						
IEMG	**Emamgholi**	**2.19**	**352**	*e*Pn	Pb	12 04 14.2	+0.8
IEMG				IAMB	IAmb	12 04 45.8	
	comp=Z,5μm,0.8s						
TABS	**Tabas**	**2.23**	**225**	*e*Pn	Pb	12 04 12.9	-1.2
TKDS	**Koohdasht(Taba**	**2.26**	**224**	*e*Pn	Pb	12 04 13.1	-1.4
ITEG	**Tejag**	**2.35**	**185**	*e*Pn	Pb	12 04 16.2	0.0
ITEG				IAMB	IAmb	12 04 58.7	
	comp=Z,6μm,0.5s						
TNSJ	**Nastanj**	**2.36**	**238**	*e*Pn	Pb	12 04 14.4	-1.9
IDAH	**Dahanechah**	**2.60**	**164**	*e*Pn	Pn	12 04 18.1	+2.2
IDAH				IAMB	IAmb	12 05 08.9	
	comp=N,10μm,0.3s						
IKOO	**Kooshah**	**2.81**	**180**	*e*Pn	Pn	12 04 20.7	+1.8
IKOO				IAMB	IAmb	12 05 18.4	
	comp=Z,4μm,0.6s						
BSRN	**Basiran**	**3.27**	**178**	*e*Pn	Pn	12 04 25.7	+0.6
MRVT	**Maraveh tapeh**	**3.37**	**316**	*e*Pn	Pn	12 04 28.5	+2.1
IANJ	**Anjilo**	**4.17**	**275**	*e*Pn	Pn	12 04 39.4	+1.8

IBAF	**Bafgh**	**4.65**	**219**	*e*Pn	Pn	12 04 46.5 +2.5
ISHM	**Shahmirzad**	**4.70**	**278**	*e*Pn	Pn	12 04 48.1 +3.3
ISHM				IAMB	IAmb	12 06 19.0
	comp=Z,731nm,0.4s					
ANAR	**Anarak**	**4.83**	**246**	*e*Pn	Pn	12 04 48.3 +1.7
ILAS	**Lasjerd**	**4.95**	**273**	*e*Pn	Pn	12 04 50.0 +1.7
ILAS				IAMB	IAmb	12 06 31.3
	comp=Z,591nm,0.7s					
KHGB	**Koh Gabri**	**5.30**	**204**	*e*Pn	Pn	12 04 56.1 +3.0
IMEH	**Mehriz**	**5.32**	**225**	*e*Pn	Pn	12 04 56.0 +2.6
IMEH				IAMB	IAmb	12 06 32.0
	comp=Z,675nm,0.5s					
KRSH	**Karshahi**	**5.81**	**259**	*e*Pn	Pn	12 05 01.3 +1.3
IZEF	**Zefreh**	**6.02**	**249**	*e*Pn	Pn	12 05 04.9 +1.9
IZEF				IAMB	IAmb	12 07 01.0
	comp=Z,220nm,0.5s					
IGAR	**Gharneh**	**6.46**	**246**	*e*Pn	Pn	12 05 11.3 +2.4
IRAM	**Ramesheh**	**6.51**	**240**	*e*Pn	Pn	12 05 13.9 +4.2

WEL 28 12:12:41.6±1.5, 35°S±27′×17°9E±2°8, h252km±20km, M3.7/17, mB4.3/1, MLv3.7/17, Mw(mB)3.4/1, Error ellipse: s-maj=0.0km s-min=0.0km az=133.1, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.50**	**195**	P	Pn	12 13 28.7	-0.2
WMGZ				S	S	12 14 05.8	-0.6
HAZ	**Te Kaha**	**2.62**	**206**	P	Pn	12 13 30.6	+0.4
HAZ				S	S	12 14 08.1	-0.6
PUZ	**Puketiti**	**2.77**	**196**	P	Pn	12 13 31.6	-0.2
PUZ				S	S	12 14 11.5	0.0
RUGZ	**Raukumara Rang**	**2.85**	**206**	P	Pn	12 13 32.7	+0.1
RUGZ				S	S	12 14 12.3	-0.8
TWGZ	**Tauwhareparae**	**2.94**	**200**	P	Pn	12 13 34.3	+0.8
TWGZ				S	S	12 14 17.3	+2.5
CNGZ	**Carnagh Statio**	**3.18**	**195**	P	Pn	12 13 36.7	+0.6
MWZ	**Matawai**	**3.23**	**205**	P	Pn	12 13 37.0	+0.3
MWZ				S	S	12 14 21.5	+1.1
URZ	**Urewera**	**3.32**	**211**	P	Pn	12 13 37.9	+0.2
URZ				S	S	12 14 23.1	+0.9
RAGZ	**Rawiri**	**3.41**	**205**	P	Pn	12 13 39.0	+0.2
RIGZ	**Rimuhau**	**3.50**	**200**	P	Pn	12 13 39.4	-0.2
MUGZ	**Murupara**	**3.65**	**212**	P	Pn	12 13 41.6	+0.3
RTZ	**Ruatahuna**	**3.68**	**209**	P	Pn	12 13 41.5	-0.3
RAHZ	**Arahi**	**3.90**	**206**	P	Pn	12 13 44.4	+0.1
NMHZ	**Naumai**	**4.17**	**207**	P	Pn	12 13 47.8	+0.4
BKZ	**Black Stump Fm**	**4.35**	**210**	P	Pn	12 13 49.5	-0.1
KWHZ	**Kaweka Forest**	**4.60**	**209**	P	Pn	12 13 52.4	-0.2
KAHZ	**Kahuranaki**	**4.77**	**203**	P	Pn	12 13 54.4	-0.2
TSZ	**Takapari Road**	**5.32**	**208**	P	Pn	12 14 00.6	-0.8
TIWZ	**Tintock**	**5.98**	**205**	P	Pn	12 14 08.5	-0.9

MEX 28 12:29:26.7±0.3, 16°05N×96°97W, h9km±999km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.04**	**12**	*i* P	Pg	12 29 43.5	-3.2
VHO				*e*S	Sg	12 29 57.3	-2.9

*SOME **28** 12:43:03.2, 41°85N×76°72E, h20km*
*KRNET **28** 12:43:03.5±0.1, 41°91N×76°72E, h17km, mb2.1*
*NNC **28** 12:43:03.8±0.5, 41°91N×76°67E, h0km, mb3.0, mpv3.0, Error ellipse: s-maj=3.5km s-min=2.0km az=169.0*
ISC 28 12:43:02.9±1.4, 41°86N±0°05×76°68E±0°03, h9km±10km, n37, σ0°64/67, 23C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.46**	**54**	⇑*i*P	Pg	12 43 11.7	-0.3
	baz=59						
KDJ				⇑*i*S	Sg	12 43 17.7	-0.3
	baz=59						
ULHL	**Ulahol**	**0.50**	**320**	⇑*i*P	Pg	12 43 13.0	+0.3
	baz=13						
ULHL				⇑*i*S	Sg	12 43 19.9	+0.6
	baz=13						
BOOM	**Boomskoye usch**	**0.83**	**319**	⇑*i*P	Pg	12 43 18.9	-0.1
	baz=15						
BOOM				⇑*i*S	Sg	12 43 30.1	+0.3
	baz=15						
KZA	**Kyzart**	**1.08**	**282**	⇑*i*P	Pb	12 43 24.1	0.0
	baz=79						
KZA				⇑*i*S	Sb	12 43 39.1	+0.5
	baz=79						
TNSS	**Tian-Shan**	**1.19**	**10**	P	Pb	12 43 25.2	-0.7
	5.4nm,0.2s						
TNSS				S	Sb	12 43 41.3	-0.4
	17nm,0.2s						
TNSS	**Tian-Shan**	**1.19**	**10**	⇓*i*P	Pb	12 43 25.3	-0.7
	5.4nm,0.2s						
TNSS				*e*S	Sb	12 43 41.3	-0.4
	17nm,0.2s						
KST	**Kastek**	**1.29**	**336**	P	Pn	12 43 27.3	-0.1
	2.7nm,0.1s						
KST				S	Sn	12 43 44.5	-0.3
	5.6nm,0.5s						
KST	**Kastek**	**1.29**	**336**	⇑*i*P	Pb	12 43 27.5	-0.1
	3.5nm,0.2s						
KST				⇓*i*S	Sn	12 43 44.5	-0.3
	6.6nm,0.3s						
TKM2	**Tokmak 2**	**1.32**	**323**	⇓P	Pn	12 43 27.9	0.0
	0.6nm,0.3s						
TKM2				⇑S	Sg	12 43 46.0	+0.4
	1.8nm,0.3s						
TKM2	**Tokmak 2**	**1.32**	**323**	⇑*i*P	Pn	12 43 27.8	0.0
	baz=21						
TKM2				⇑*i*S	Sb	12 43 45.3	0.0
	baz=21						
MDOK	**Medeo**	**1.33**	**12**	Pg	Pn	12 43 27.5	-0.3
	11nm,0.2s						
MDOK				Lg	Lg	12 43 45.2	
	21nm,0.3s						
MDOK	**Medeo**	**1.33**	**12**	⇑*i*P	Pn	12 43 27.6	-0.3
	11nm,0.2s						
MDOK				⇑*i*S	Sn	12 43 45.6	-0.2
	21nm,0.2s						
KNDC	**Almaty**	**1.37**	**9**	⇑P	Pb	12 43 28.5	-0.3
	9.9nm,0.4s						
KNDC				⇑S	Sn	12 43 46.6	-0.1
	15nm,0.3s						
KOTS	**Kotyrbulak**	**1.41**	**13**	P	Pb	12 43 29.2	-0.3
	14nm,0.2s						
KOTS				S	Sg	12 43 48.4	+0.2
	177nm,0.6s						
KOTS	**Kotyrbulak**	**1.41**	**13**	*e*P	Pb	12 43 29.2	-0.3
	14nm,0.2s						
KOTS				*e*S	Sg	12 43 48.5	+0.2
	177nm,0.6s						
DGS	**Degeres**	**1.53**	**334**	P	Pb	12 43 31.8	+0.2
	2.3nm,0.1s						
DGS				S	Sg	12 43 52.4	+0.2
	7.9nm,0.2s						
DGS	**Degeres**	**1.53**	**334**	⇑*e*P	Pb	12 43 31.8	+0.2
	2.9nm,0.2s						
DGS				⇑*e*S	Sg	12 43 52.4	+0.2
	7.6nm,0.2s						
UCH	**Uchtor**	**1.65**	**283**	⇓*i*P	Pb	12 43 33.9	+0.1
	baz=82						
UCH				⇓*i*S	Sg	12 43 56.5	+0.4
	baz=82						
SATY	**Saty**	**1.75**	**46**	P	Pb	12 43 35.1	-0.2
	3.9nm,0.2s						
SATY				S	Sb	12 43 58.2	+0.7
	23nm,0.1s						
SATY	**Saty**	**1.75**	**46**	⇑*e*P	Pb	12 43 35.1	-0.2
	3.9nm,0.2s						
SATY				⇓*i*S	Sb	12 43 57.9	+0.4
	52nm,0.2s						
AAK	**Ala-Archa**	**1.79**	**296**	⇓P	Pb	12 43 36.1	0.0
	0.9nm,0.4s						
AAK				⇑S	Sb	12 43 59.1	+0.3
	1.6nm,0.4s						
KTBS	**Karatobe**	**1.85**	**0**	P	Pb	12 43 37.0	0.0
	2.2nm,0.2s						
KTBS				S	Sg	12 44 01.4	-0.9
	20nm,0.3s						
KTBS	**Karatobe**	**1.85**	**0**	⇓*e*P	Pb	12 43 37.0	0.0
	2.3nm,0.3s						
KTBS				⇑*i*S	Sg	12 44 01.4	-0.9
	20nm,0.2s						
KURS	**Kuram**	**1.96**	**34**	P	Pb	12 43 38.6	-0.3
	3.3nm,0.3s						
KURS				S	Sb	12 44 04.0	+0.5
	3.6nm,0.3s						
KURS	**Kuram**	**1.96**	**34**	*e*P	Pb	12 43 38.6	-0.3
	3.3nm,0.3s						
KURS				*e*S	Sb	12 44 04.0	+0.5
	3.6nm,0.3s						
CHKK	**Chushkaly**	**2.00**	**6**	Pg	Pb	12 43 39.5	-0.1
	3.5nm,0.1s						
CHKK				Lg	Lg	12 44 06.0	
	28nm,0.3s						
CHKK	**Chushkaly**	**2.00**	**6**	*e*P	Pb	12 43 39.5	-0.1
	3.5nm,0.1s						
CHKK				*e*S	Sg	12 44 06.0	-1.3
	28nm,0.3s						
KUU	**Kurty**	**2.04**	**353**	Pg	Pb	12 43 40.4	+0.2
	5.2nm,0.1s						
KUU				Lg	Lg	12 44 07.2	
	17nm,0.2s						
KUU	**Kurty**	**2.04**	**353**	*e*P	Pb	12 43 40.4	+0.2
	5.2nm,0.1s						
KUU				*e*S	Sg	12 44 07.2	-1.4
	17nm,0.2s						
KPKS	**Kokpek**	**2.18**	**42**	*e*P	Pb	12 43 42.5	-0.2
	4.2nm,0.2s						
KPKS				*e*S	Sb	12 44 10.6	+0.7
	17nm,0.3s						
AML	**Almayashu**	**2.24**	**278**	⇑*i*P	Pb	12 43 42.9	-0.9
	baz=77						
AML				⇑*i*S	Sb	12 44 11.3	-0.5
	baz=77						
ARXS	**Arharly**	**2.50**	**19**	Pg	Pb	12 43 47.7	-0.3
	1.4nm,0.3s						
ARXS				Lg	Lg	12 44 19.5	
	7.7nm,0.2s						
ARXS	**Arharly**	**2.50**	**19**	*e*P	Pb	12 43 47.7	-0.3
	1.4nm,0.3s						
ARXS				*e*S	Sb	12 44 19.5	+0.6
	7.7nm,0.2s						
PDGK	**Podgornoye**	**2.54**	**54**	Pg	Pb	12 43 48.0	-0.8
	0.5nm,0.2s						
PDGK				Lg	Lg	12 44 20.2	
	4.6nm,0.5s						
PDGK	**Podgornoye**	**2.54**	**54**	⇓Pg	Pb	12 43 50.0	+1.2
	1.6nm,0.5s						
PDGK				⇓Lg	Lg	12 44 23.9	
	4.4nm,0.6s						
KAPS	**Kapalarasan**	**3.94**	**29**	Pg	Pb	12 44 13.3	+0.8
	0.7nm,0.3s						
KAPS				Lg	Lg	12 45 03.4	
	1.7nm,0.3s						
KAPS	**Kapalarasan**	**3.94**	**29**	*e*P	Pb	12 44 13.3	+0.8
	0.7nm,0.3s						
KAPS				*e*S	Sb	12 45 03.4	+3.1
	1.7nm,0.3s						

*ISCJB **28** 12:46:17.0±0.6, 63°14N±0°02×151°55W±0°08, h20km±7km, mb3.2/1, Error ellipse: s-maj=5.8km s-min=3.8km az=15.1*
*IDC **28** 12:46:16.7±2.0, 63°34N×151°84W, h0km, mb3.2/1, mb1 3.5/5, mb1mx3.3/35, mbtmp3.2/5, ML3.1/4, MS2.5/1, Ms1 2.6/1, ms1mx2.0/24, Error ellipse: s-maj=33.3km s-min=14.0km az=119.0*
*NEIC **28** 12:46:17.2±0.0, 63°13N×151°53W, h16km, ML3.3(AEIC), After AEIC.*
ISC 28 12:46:16.8±1.3, 63°11N±0°03×151°56W±0°04, h7km±10km, n55, σ0°81/62, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAST	**Castle Rocks**	**0.39**	**323**	*e*Pg	Pg	12 46 25.0	+0.6
CAST				*e*Sg	Sg	12 46 30.2	+0.6
KTH	**Kantishna Hill**	**0.53**	**32**	*e*Pg	Pg	12 46 27.3	+0.3
TRF	**Thorofare Moun**	**0.67**	**58**	*e*Pg	Pg	12 46 29.7	+0.1
BPAW	**Bear Paw Mtn.**	**1.03**	**14**	*e*Pg	Pg	12 46 36.2	-0.3
BPAW				*e*Sn	Sb	12 46 50.5	-0.1
SKT	**Skwentna**	**1.13**	**179**	*e*Pn	Pg	12 46 37.5	-0.9
SKT				*e*Sn	Sg	12 46 52.1	-0.9
RND	**Reindeer**	**1.26**	**75**	*e*Pn	Pn	12 46 39.9	-1.0
RND				*e*Sn	Sb	12 46 56.6	-0.7
MCK	**McKinley**	**1.33**	**61**	*e*Pn	Pn	12 46 41.1	-0.7
MCK				*e*Sn	Sb	12 46 58.5	-0.9
BWN	**Browne**	**1.42**	**40**	*e*Pn	Pn	12 46 42.6	-0.4
SUA	**Susitna One**	**1.69**	**167**	*e*Pn	Pn	12 46 46.9	0.0
SUA				*e*Sn	Sn	12 47 09.2	+0.4
GHO	**Glory Hole Cre**	**1.81**	**136**	*e*Pn	Pn	12 46 48.2	-0.3
GHO				*e*Sn	Sn	12 47 11.3	-0.5
SPWE	**Spurr West**	**1.90**	**195**	*e*Pn	Pn	12 46 49.4	-0.3
DHY	**Denali Highway**	**1.90**	**89**	*e*Pn	Pn	12 46 49.5	-0.3
MLY	**Manley**	**1.96**	**10**	*e*Pn	Pn	12 46 49.8	-0.7
SML	**Sawmill**	**1.99**	**131**	*e*Pn	Pn	12 46 50.2	-0.6
TTA	**Tatalina**	**2.04**	**267**	*e*Pn	Pn	12 46 50.3	-1.3
TT01	**Tatalina**	**2.05**	**266**	*e*Pn	Pn	12 46 50.5	-1.1
WRH	**Wood River Hil**	**2.06**	**47**	*e*Pn	Pn	12 46 50.4	-1.3
RC01	**Rabbit Creek A**	**2.20**	**156**	*e*Pn	Pn	12 46 53.4	-0.3
KNK	**Knik Glacier**	**2.23**	**138**	*e*Pn	Pn	12 46 54.9	+0.7
MDM	**Murphy Dome**	**2.37**	**37**	*e*Pn	Pn	12 46 55.1	-0.9
COLA	**College**	**2.41**	**41**	*e*Pn	Pn	12 46 55.4	-1.2
HDA	**Harding Lake**	**2.43**	**55**	*e*Pn	Pn	12 46 55.8	-1.0
PS08	**TAPS Pump Stn8**	**2.55**	**53**	*e*Pn	Pn	12 46 57.8	-0.6
ILAR	**Eielson Array**	**2.65**	**49**	Pn	Pn	12 46 57.9	-2.0
	0.8nm,0.3s,baz=235,slow=14,SNR=16						
ILAR				Lg	Lg	12 47 39.5	
	22nm,0.3s,baz=241,slow=32,SNR=16						
ILAR				LR	LR	12 48 16.9	
	comp=Z,92nm,20.1s,baz=320,slow=46						
ILB	**Eielson Array**	**2.65**	**49**	*e*Pn	Pn	12 46 58.4	-1.5
SLKM	**Skilak Lake**	**2.69**	**166**	*e*Pn	Pn	12 47 00.8	+0.5
RSO	**Redoubt South**	**2.72**	**193**	*e*Pn	Pn	12 47 02.0	+1.1
PS06	**TAPS Pump Stn6**	**2.87**	**15**	*e*Pn	Pn	12 47 02.8	0.0
IM3	**Indian Mountai**	**3.04**	**343**	*e*Pn	Pn	12 47 05.0	-0.2
GLI	**Glacier Island**	**3.07**	**135**	*e*Pn	Pn	12 47 05.9	+0.3
BRLK	**Bradley Lake**	**3.37**	**174**	*e*Pn	Pn	12 47 11.8	+2.0
DOT	**Dot Lake**	**3.42**	**78**	*e*Pn	Pn	12 47 10.6	+0.1
SCRK	**Sand Creek**	**3.50**	**72**	*e*Pn	Pn	12 47 11.2	-0.5
PRP	**Porcupine Dome**	**3.57**	**45**	*e*Pn	Pn	12 47 12.0	-0.7
CNPM	**China Poot**	**3.60**	**177**	*e*Pn	Pn	12 47 13.8	+0.8
EYAK	**Cordova Ski Ar**	**3.76**	**130**	*e*Pn	Pn	12 47 15.7	+0.6
COLD	**Coldfoot**	**4.18**	**7**	*e*Pn	Pn	12 47 20.5	-0.3
FYU	**Fort Yukon**	**4.40**	**35**	*e*Pn	Pn	12 47 23.1	-0.7
BCA3	**Beaver Creek A**	**4.44**	**86**	*e*Pn	Pn	12 47 25.1	+0.6
HMT	**Hamilton**	**4.45**	**125**	*e*Pn	Pn	12 47 25.0	+0.4
BALM	**Baldy**	**4.80**	**112**	*e*Pn	Pn	12 47 29.6	+0.1
EGAK	**Eagle**	**4.88**	**65**	*e*Pn	Pn	12 47 30.3	-0.2
BM3	**Burnt Mountain**	**5.22**	**31**	*e*Pn	Pn	12 47 34.6	-0.5
KDAK	**Kodiak Island**	**5.37**	**186**	Pn	Pn	12 47 38.2	+1.0
	0.9nm,0.3s,baz=11,slow=10,SNR=14						
KDAK	**Kodiak Island**	**5.37**	**186**	*e*Pn	Pn	12 47 37.0	-0.1
DAWY	**Dawson**	**5.52**	**75**	*e*Pn	Pn	12 47 38.5	-0.8
TOLK	**Toolik Lake Re**	**5.62**	**7**	*e*Pn	Pn	12 47 41.9	+1.3
PNL	**Peninsula**	**6.78**	**115**	*e*Pn	Pn	12 47 56.1	-0.4
HYT	**Haines Junctio**	**7.01**	**103**	*e*Pn	Pn	12 47 59.1	-0.7
EPYK	**Eagle Plains**	**7.14**	**56**	*e*Pn	Pn	12 48 01.1	-0.4
INK	**Inuvik**	**9.05**	**47**	Pn	Pn	12 48 27.6	-0.1
	0.2nm,0.3s,baz=237,slow=13,SNR=4.1						
INK	**Inuvik**	**9.05**	**47**	*e*Pn	Pn	12 48 26.4	-1.2
YKA	**Yellowknife Ar**	**16.76**	**75**	Pn	Pn	12 50 12.2	+0.6
	0.1nm,0.3s,baz=289,slow=9.8,SNR=8.4						
YKB5	**Yellowknife Ar**	**16.76**	**75**	*e*Pn	Pn	12 50 12.2	+0.6
TXAR	**Lajitas Array**	**45.55**	**115**	P	P	12 54 37.6	+0.6
	0.2nm,0.6s,baz=336,slow=5.9,SNR=3.5						

IDC 28 12:47:52.6±13.0, 26°49N×140°07E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/29, mbtmp3.8/3, Error ellipse: s-maj=513.4km s-min=33.0km az=69.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.49**	**187**	P	P	12 56 21.5	-0.2
	2.6nm,0.6s,baz=6.2,slow=9.2,SNR=17						
MKAR	**Makanchi Array**	**49.41**	**310**	P	P	12 56 44.0	-0.2
	0.3nm,0.5s,baz=105,slow=10,SNR=4.2						
ASAR	**Alice Springs**	**50.22**	**187**	P	P	12 56 50.6	+0.1
	0.2nm,0.3s,baz=13,slow=7.4,SNR=6.0						

*IDC **28** 13:22:49.2±0.7, 7°10S×155°52E, h0km, mb4.1/13, mb1 4.3/13, mb1mx4.1/23, mbtmp4.1/13, MS3.6/11, Ms1 3.6/11, ms1mx3.4/23, Error ellipse: s-maj=28.2km s-min=17.2km az=110.0*

*NEIC **28** 13:22:58.5±2.6, 7°16S×155°37E, h76km±6km, mb4.3/15, Error ellipse: s-maj=13.8km s-min=10.6km az=48.0*
ISC 28 13:22:49.9±0.5, 7°07S±0°07×155°60E±0°07, h10km, n48, σ2°07/44, mb4.3/24, MS3.7/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.45**	**310**	*e*Pn	Pb	13 24 06.7	-1.6
HNR	**Honiara**	**4.91**	**119**	*e*P	Pb	13 24 12.0	-4.0
HNR				*e*S	Sb	13 25 20.0	+4.9
HNR	**Honiara**	**4.91**	**119**	LR	LR	13 26 09.2	
	comp=Z,1μm,18.9s,baz=258,slow=40						
HNR	**Honiara**	**4.91**	**119**	*e*Pn	Pb	13 24 12.0	-4.0
PMG	**Port Moresby**	**8.67**	**254**	LR	LR	13 28 11.5	
	comp=Z,306nm,20.2s,baz=94,slow=38						
PMG	**Port Moresby**	**8.67**	**254**	*e*Pn	Pn	13 24 57.4	+1.9
PATS	**Pohnpei**	**14.07**	**11**	*e*Pn	P	13 26 14.1	-3.2
CTAO	**Charters Tower**	**15.80**	**214**	*e*Pn	Pn	13 26 31.8	-0.8
	8.4nm,1.1s						
GUMO	**Guam**	**23.12**	**333**	*e*P	P	13 27 55.5	-0.8
	121nm,1.1s						
WRAB	**Tennant Creek**	**24.26**	**236**	*e*P	P	13 28 02.3	-5.1
	11nm,0.8s						
WR1	**Warramunga Arr**	**24.27**	**236**	*e*P	P	13 28 06.7	-0.8
WR1				*e*PcP	PcP	13 31 48.4	+0.6
WRA	**Warramunga Arr**	**24.27**	**236**	P	P	13 28 06.7	-0.8
	3.1nm,0.9s,baz=64,slow=8.8,SNR=4.8						
WRA				PcP	PcP	13 31 48.4	+0.6
	1.1nm,0.7s,baz=56,slow=3.5,SNR=2.6						
MTN	**Manton Dam**	**24.76**	**255**	*e*P	P	13 28 08.3	-3.7
	13nm,1.0s						
ANA2	**Anatahan**	**25.23**	**337**	*e*P	P	13 28 15.7	-0.6
	46nm,0.8s						
AS31	**Alice Springs**	**26.57**	**229**	*e*P	P	13 28 27.9	-0.5
	0.9nm,0.9s						
ASAR	**Alice Springs**	**26.57**	**229**	P	P	13 28 27.9	-0.5
	1.1nm,0.9s,baz=60,slow=9.3,SNR=7.1						
ASAR				LR	LR	13 38 22.0	
	comp=Z,106nm,18.4s,baz=140,slow=35						
STKA	**Stephens Creek**	**27.93**	**206**	P	P	13 28 42.1	+1.6
	3.7nm,0.8s,baz=17,slow=14,SNR=8.5						
STKA				LR	LR	13 39 41.0	
	comp=Z,129nm,18.4s,baz=33,slow=36						
STKA	**Stephens Creek**	**27.93**	**206**	*e*P	P	13 28 38.8	-1.6
	1.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**31.17**	**247**	*e*P	P	13 29 09.0	-0.4
	6.7nm,0.8s						
MJAR	**Matsushiro Arr**	**46.34**	**341**	LR	LR	13 48 58.4	
	comp=Z,22nm,21.4s,baz=165,slow=34						
KSRS	**Korea Array**	**51.28**	**332**	P	P	13 31 55.1	+0.9
	1.4nm,0.9s,baz=147,slow=8.3,SNR=6.2						
KSRS				LR	LR	13 50 36.6	
	comp=Z,26nm,21.4s,baz=165,slow=32						
KS15	**Wonju Array Si**	**51.29**	**332**	*e*P	P	13 31 55.1	+0.8
	1.2nm,0.8s						
ASAJ	**Asahikawa**	**52.28**	**348**	P	P	13 32 03.3	+1.7
	2.1nm,0.7s,baz=181,slow=6.1,SNR=4.4						
PETK	**Petropavlovsk-**	**59.97**	**1**	P	P	13 32 58.3	+1.9
	2.1nm,0.8s,baz=136,slow=6.7,SNR=7.9						
PEA1	**Petropavlovsk-**	**59.98**	**1**	*e*P	P	13 32 58.3	+1.9
CM31	**Chiang Mai Arr**	**61.35**	**295**	*e*P	P	13 33 07.9	+1.4
	5.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.35**	**295**	P	P	13 33 07.9	+1.4
	3.2nm,0.8s,baz=115,slow=5.3,SNR=16						
CHTO	**Chiang Mai**	**61.47**	**296**	*e*P	P	13 33 06.0	-1.2
	2.7nm,0.7s						
SONA0	**Songino Array**	**69.72**	**327**	*e*P	P	13 34 00.6	+0.4
SONM	**Songino Array**	**69.72**	**327**	P	P	13 34 00.6	+0.4
	3.7nm,0.9s,baz=130,slow=5.5,SNR=9.7						
QSPA	**South Pole Qui**	**82.91**	**180**	*e*P	P	13 35 15.3	+0.5
	5.7nm,1.1s						
ILAR	**Eielson Array**	**83.22**	**21**	P	P	13 35 15.7	-0.6
	0.9nm,0.5s,baz=245,slow=4.5,SNR=12						
ILAR				LR	LR	14 07 32.7	
	comp=Z,36nm,20.7s,baz=273,slow=32						
ILB	**Eielson Array**	**83.22**	**21**	*e*P	P	13 35 15.7	-0.6
	1.6nm,0.6s						
MK32	**Makanchi Array**	**83.85**	**319**	*e*P	P	13 35 20.5	+0.5
MKAR	**Makanchi Array**	**83.85**	**319**	P	P	13 35 20.5	+0.6
	0.9nm,0.6s,baz=91,slow=8.5,SNR=4.4						
MAW	**Mawson**	**84.56**	**203**	P	P	13 35 23.4	+0.4
	1.0nm,0.7s,baz=98,slow=8.0,SNR=4.5						
MAW	**Mawson**	**84.56**	**203**	*e*P	P	13 35 21.4	-1.6
	0.8nm,0.9s						
BBB	**Bella Bella**	**87.22**	**37**	LR	LR	14 10 29.3	
	comp=Z,49nm,18.1s,baz=196,slow=33						
YBH	**Yreka Blue Hor**	**88.50**	**48**	LR	LR	14 11 19.6	
	comp=Z,56nm,18.6s,baz=287,slow=33						
NV01	**Mina Array Sit**	**91.30**	**52**	*e*P	P	13 35 59.5	+3.2
NVAR	**Mina Array Bea**	**91.30**	**52**	P	P	13 35 59.5	+3.2
	0.3nm,0.5s,baz=258,slow=4.3,SNR=3.7						
BAR	**Barrett**	**91.86**	**57**	*e*P	P	13 35 55.9	-3.0
	23nm,0.6s						
NEW	**Newport**	**93.41**	**42**	LR	LR	14 14 26.7	
	comp=Z,50nm,18.4s,baz=278,slow=33						
YKA	**Yellowknife Ar**	**96.12**	**28**	P	P	13 36 18.5	+0.8
	0.5nm,0.5s,baz=266,slow=4.5,SNR=9.3						
YKB5	**Yellowknife Ar**	**96.12**	**28**	*e*P	P	13 36 18.5	+0.8
PDAR	**Pinedale Array**	**98.30**	**48**	LR	LR	14 17 09.1	
	comp=Z,42nm,18.6s,baz=276,slow=33						
LPAZ	**La Paz**	**130.90**	**119**	PKP	PKiKP	13 42 04.2	-0.2
	1.8nm,0.9s,baz=34,slow=3.6,SNR=4.5						
BDFB	**Brasilia**	**147.50**

SUUS			Sgmax		13 49 29.5	
	900nm,0.7s					
OCHR	**Omchak**	**4.61 245**	*e*P	**Pn**	**13 48 23.5**	**-0.5**
OCHR			*e*P	**Pg**	**13 48 40.0**	**-2.4**
OCHR			Pgmax		13 48 46.3	
	100nm,0.6s					
OCHR			*e*S	**Sg**	**13 49 39.0**	**-3.0**
OCHR			Sgmax		13 49 44.8	
	400nm,0.7s					
MGD	**Magadan 1**	**4.75 219**	*e*P	**Pn**	**13 48 26.6**	**+0.7**
MGD			*e*Pg	**Pg**	**13 48 44.1**	**-1.1**
MGD			Pgmax		13 48 46.2	
	90nm,0.5s					
MGD			*e*Sg	**Sg**	**13 49 46.0**	**-0.7**
MGD			Sgmax		13 49 54.8	
	380nm,0.4s					
MA2	**Magadan**	**5.14 216**	*e*P	**Pn**	**13 48 32.7**	**+1.4**
MA2			*e*Pg	**Pg**	**13 48 50.8**	**-1.9**
MA2			Pgmax		13 48 53.5	
	40nm,0.5s					
MA2			*e*Sg	**Sg**	**13 49 59.4**	**+0.2**
MA2			Sgmax		13 50 04.0	
	220nm,0.7s					
OKHR	**Okhotsk**	**7.82 241**	*e*S	Pn	13 49 02.3	-5.7
OKHR			Sgmax		13 49 12.6	
	1μm,0.8s					
KLR	**Kul'dur**	**19.89 234**	LR	LR	13 58 59.2	
	comp=Z,43nm,21.2s,baz=158,slow=35					
ILAR	**Eielson Array**	**23.80 62**	P	**P**	**13 52 25.0**	**-1.7**
	1.0nm,0.6s,baz=282,slow=9.6,SNR=19					
USRK	**Ussuriysk Ar.**	**24.17 227**	P	**P**	**13 52 31.8**	**+1.4**
	2.4nm,0.7s,baz=48,slow=12,SNR=4.9					
YKA	**Yellowknife Ar**	**36.99 50**	P	**P**	**13 54 22.1**	**-1.2**
	0.4nm,0.6s,baz=308,slow=8.3,SNR=4.9					
KURBB	**Kurchatov Arra**	**41.47 290**	P	**P**	**13 55 04.3**	**+3.4**
	baz=42,slow=7.8					
PDAR	**Pinedale Array**	**54.19 65**	P	**P**	**13 56 39.4**	**-0.4**
	0.1nm,0.4s,baz=298,slow=1.9,SNR=2.9					
BRTR	**Keskin Array B**	**67.37 316**	LR	LR	14 32 57.6	
	comp=Z,10nm,18.9s,baz=96,slow=40					

*KRNET **28** 13:48:18.1±0.1, 41°.07N×69°.24E, mb2.9*
*NNC **28** 13:48:25.7±2.1, 41°.22N×69°.45E, h0km, mb3.3, mpv2.9,*
Error ellipse: s-maj=17.6km s-min=10.0km az=24.0

ISC 28 13:48:19.6±2.0, 41°.07N±0°.10×69°.40E±0°.09, h7km±20km, n7, σ0§75/11, 5C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	**Tashkent**	**0.27**	**342**	⇑*i*P	**Pg**	**13 48 24.2**	**-0.8**
TAS				⇑*i*S	**Sg**	**13 48 29.7**	**+1.1**
	baz=10.0						
BTK	**Batken**	**1.48**	**133**	⇓*i*P	**Pn**	**13 48 46.7**	**0.0**
BTK				⇓*i*S	**Sn**	**13 49 07.0**	**+0.6**
	baz=29						
ARK	**Arkit**	**2.06**	**68**	⇓*i*P	**Pn**	**13 48 55.0**	**+0.3**
ARK				⇓*i*S	**Sb**	**13 49 22.1**	**-1.2**
	baz=70						
KK31	**Karatay Array**	**2.19**	**22**	⇑Pn	**Pg**	**13 49 01.7**	**0.0**
	2.1nm,0.3s,baz=201,slow=15,SNR=61						
KK31				⇑Lg	Lg	13 49 31.0	
	9.3nm,0.4s,baz=204,slow=26,SNR=17						
DRK	**Karamyk**	**2.43**	**130**	⇓*i*P	**Pn**	**13 49 00.1**	**+0.2**
DRK				⇓*i*S	**Sn**	**13 49 30.0**	**-0.1**
	baz=28						
AAK	**Ala-Archa**	**4.12**	**66**	Pg	**Pg**	**13 49 38.7**	**+0.3**
	2.1nm,0.5s						
AAK				Lg	Lg	13 50 32.2	
	2.1nm,0.6s						
TKM2	**Tokmak 2**	**4.97**	**66**	⇑Pg	**Pg**	**13 49 54.4**	**-0.5**
	0.6nm,0.3s						
TKM2				⇓Lg	Lg	13 50 59.1	
	1.9nm,0.5s						

IDC 28 13:56:40.0±1.6, 29°.17N×104°.16E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.3/52, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=62.4km s-min=29.2km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.68**	**205**	Pn	Pn	13 59 29.1	+1.1
	0.2nm,0.3s,baz=7.2,slow=16,SNR=7.9						
MKAR	**Makanchi Array**	**24.50**	**322**	P	P	14 02 01.0	0.0
	0.4nm,0.5s,baz=142,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**56.84**	**146**	P	P	14 06 27.0	+0.5
	1.0nm,0.5s,baz=331,slow=7.8,SNR=5.9						
ASAR	**Alice Springs**	**59.82**	**148**	P	P	14 06 46.5	-0.8
	0.3nm,0.5s,baz=327,slow=6.9,SNR=7.3						

*ROM **28** 14:15:51.9±0.2, 41°.64N±0°.01×16°.28E±0°.01, h6km±1km,*
ML2.8/28, Error ellipse: s-maj=1.2km s-min=1.0km
az=28.0
*BEO **28** 14:15:51.5±1.9, 41°.32N×16°.32E, h3km, ML2.1/2*
*ISCJB **28** 14:15:52.3±0.4, 41°.64N±0°.02×16°.27E±0°.02, h7km±4km,*
Error ellipse: s-maj=3.4km s-min=2.9km az=42.2

ISC 28 14:15:53.0±1.1, 41°.55N±0°.03×16°.22E±0°.03, h12km±9km, n54, σ1§11/56, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAG	**Monte S. Angel**	**0.28**	**305**	P	**Pg**	**14 15 58.3**	**-0.6**
MSAG				S	**Sg**	**14 16 03.1**	**+0.4**
MSAG				AML	AML		
	comp=E,1910μm,0.5s						
MSAG				AML	AML		
	comp=N,2840μm,1.4s						
MSAG				AML	AML		
	comp=E,2110μm,0.5s						
MSAG				AML	AML		
	comp=N,2995μm,1.4s						
MSAG				AML	AML		
	comp=E,1915μm,0.5s						
MSAG				AML	AML		
	comp=N,2840μm,1.4s						
MSAG				AML	AML		
	comp=E,2110μm,0.5s						
MSAG				AML	AML		
	comp=N,2995μm,1.4s						
MSAG				AML	AML		
	comp=E,1910μm,0.5s						
MSAG				AML	AML		
	comp=N,2840μm,1.4s						
MSAG				AML	AML		
	comp=E,2110μm,0.5s						
MSAG				AML	AML		
	comp=N,2995μm,1.4s						
MSAG				AML	AML		
	comp=N,2840μm,1.4s						
MSAG				AML	AML		
	comp=N,2995μm,1.4s						
MSAG				AML	AML		
	comp=E,2110μm,0.5s						
MSAG				AML	AML		
	comp=E,1915μm,0.5s						
SGRT	**San Giovanni R**	**0.41**	**300**	P	**Pg**	**14 16 00.5**	**-0.7**
SGRT				S	**Sg**	**14 16 07.1**	**+0.4**
SGRT				AML	AML		
	comp=E,1715μm,0.4s						
SGRT				AML	AML		
	comp=N,2145μm,1.5s						
SGRT				AML	AML		
	comp=E,1715μm,0.4s						
SGRT				AML	AML		
	comp=N,2145μm,1.5s						
SGRT				AML	AML		
	comp=E,1715μm,0.4s						
SGRT				AML	AML		
	comp=N,2150μm,1.5s						
SGRT				AML	AML		
	comp=N,2145μm,1.5s						
SGRT				AML	AML		
	comp=E,1715μm,0.4s						
MRVN	**Minervino Murg**	**0.49**	**182**	P	**Pb**	**14 16 02.7**	**-0.9**
MRVN				AML	AML		
	comp=E,3445μm,0.2s						
MRVN				AML	AML		
	comp=N,1265μm,0.3s						
MRVN				AML	AML		
	comp=E,3445μm,0.2s						
MRVN				AML	AML		
	comp=N,1265μm,0.3s						
MRVN				AML	AML		
	comp=E,3445μm,0.2s						
MRVN				AML	AML		
	comp=N,1265μm,0.3s						
MRVN				AML	AML		
	comp=E,3445μm,0.2s						
MRVN				AML	AML		
	comp=N,1265μm,0.3s						
PALZ	**Palazzo San Ge**	**0.64**	**198**	P	**Pn**	**14 16 06.2**	**-1.7**
PALZ				S	**Sn**	**14 16 16.1**	**-1.9**
PALZ				AML	AML		
	comp=E,1635μm,1.5s						
PALZ				AML	AML		
	comp=N,1490μm,0.4s						
PALZ				AML	AML		
	comp=E,1635μm,1.5s						
PALZ				AML	AML		
	comp=N,1490μm,0.4s						
PALZ				AML	AML		
	comp=N,1490μm,0.4s						
PALZ				AML	AML		
	comp=E,1635μm,1.5s						
BAI	**Bari**	**0.67**	**132**	*e*Pg	**Pn**	**14 16 06.8**	**-1.4**
BAI				Sg	**Sn**	**14 16 18.1**	**-0.5**
AMUR	**Altamura**	**0.70**	**156**	P	**Pn**	**14 16 06.8**	**-2.0**
AMUR				S	**Sn**	**14 16 19.2**	**-0.5**
AMUR				AML	AML		
	comp=E,2595μm,1.4s						
AMUR				AML	AML		
	comp=N,1345μm,0.3s						
AMUR				AML	AML		
	comp=E,2595μm,1.4s						
AMUR				AML	AML		
	comp=N,1350μm,0.3s						
AMUR				AML	AML		
	comp=E,2595μm,1.4s						
AMUR				AML	AML		
	comp=N,1345μm,0.3s						
AMUR				AML	AML		
	comp=E,2595μm,1.4s						
AMUR				AML	AML		
	comp=N,1350μm,0.3s						
VULT	**Monte Vulture**	**0.75**	**218**	P	**Pn**	**14 16 08.6**	**-1.0**
VULT				AML	AML		
	comp=E,884μm,1.4s						
VULT				AML	AML		
	comp=N,1440μm,0.3s						
VULT				AML	AML		
	comp=E,1010μm,0.8s						
VULT				AML	AML		
	comp=N,1545μm,0.3s						
VULT				AML	AML		
	comp=E,885μm,1.4s						
VULT				AML	AML		
	comp=N,1440μm,0.2s						
VULT				AML	AML		
	comp=E,1010μm,0.8s						
VULT				AML	AML		
	comp=N,1545μm,0.3s						
VULT				AML	AML		
	comp=E,885μm,1.4s						
VULT				AML	AML		
	comp=N,1442μm,0.2s						
VULT				AML	AML		
	comp=E,1010μm,0.8s						
VULT				AML	AML		
	comp=N,1545μm,0.3s						
VULT				AML	AML		
	comp=E,885μm,1.4s						
VULT				AML	AML		
	comp=E,1010μm,0.8s						
VULT				AML	AML		
	comp=N,1545μm,0.3s						
VULT				AML	AML		
	comp=N,1440μm,0.2s						
SGTA	**Sant Agata di**	**0.77**	**237**	P	**Pb**	**14 16 08.7**	**+0.3**
SGTA				S	**Sn**	**14 16 21.4**	**0.0**
SGTA				AML	AML		
	comp=E,890μm,0.4s						
SGTA				AML	AML		
	comp=N,480μm,0.3s						
SGTA				AML	AML		
	comp=E,902μm,0.4s						
SGTA				AML	AML		
	comp=N,484μm,0.3s						
SGTA				AML	AML		
	comp=E,890μm,0.4s						
SGTA				AML	AML		
	comp=N,480μm,0.3s						
SGTA				AML	AML		
	comp=E,902μm,0.4s						
SGTA				AML	AML		
	comp=N,485μm,0.3s						
SGTA				AML	AML		
	comp=N,480μm,0.3s						
SGTA				AML	AML		
	comp=N,484μm,0.3s						
SGTA				AML	AML		
	comp=E,902μm,0.4s						
SGTA				AML	AML		
	comp=E,890μm,0.4s						
SG1	**Sgolgore (BA)**	**0.79**	**154**	*e*Pg	**Pn**	**14 16 09.1**	**-0.9**
SG1				Sg	**Sn**	**14 16 22.0**	**+0.2**
ACER	**Acerenza**	**0.79**	**195**	P	**Pn**	**14 16 09.6**	**-0.5**
ACER				S	**Sn**	**14 16 21.3**	**-0.6**
ACER				AML	AML		
	comp=E,3825μm,0.9s						
ACER				AML	AML		
	comp=N,1520μm,0.3s						
ACER				AML	AML		
	comp=E,4040μm,0.9s						
ACER				AML	AML		
	comp=N,1590μm,0.3s						
ACER				AML	AML		
	comp=E,3825μm,0.9s						
ACER				AML	AML		
	comp=N,1520μm,0.3s						
ACER				AML	AML		
	comp=E,4040μm,0.9s						
ACER				AML	AML		
	comp=N,1590μm,0.3s						
ACER				AML	AML		
	comp=N,1590μm,0.3s						
ACER				AML	AML		
	comp=E,4040μm,0.9s						
ACER				AML	AML		
	comp=E,3825μm,0.9s						
ACER				AML	AML		
	comp=N,1520μm,0.3s						
MOCO	**Biccari - m.te**	**0.82**	**258**	P	**Pb**	**14 16 09.6**	**+0.4**
MOCO				AML	AML		
	comp=E,308μm,0.7s						
MOCO				AML	AML		
	comp=N,143μm,0.6s						
MOCO				AML	AML		
	comp=E,314μm,0.7s						
MOCO				AML	AML		
	comp=N,166μm,0.6s						
MOCO				AML	AML		
	comp=E,314μm,0.7s						
MOCO				AML	AML		
	comp=N,166μm,0.6s						
MOCO				AML	AML		
	comp=N,143μm,0.6s						
MOCO				AML	AML		
	comp=E,314μm,0.7s						
MOCO				AML	AML		
	comp=N,166μm,0.6s						
MOCO				AML	AML		
	comp=E,308μm,0.7s						
MELA	**Melanico ??? S**	**0.83**	**281**	P	**Pg**	**14 16 08.7**	**-0.4**
MELA				S	**Sg**	**14 16 21.4**	**+1.4**
MELA				AML	AML		
	comp=E,1670μm,0.3s						
MELA				AML	AML		
	comp=N,1565μm,1.2s						
MELA				AML	AML		
	comp=E,1770μm,0.2s						
MELA				AML	AML		
	comp=N,1625μm,0.3s						
MELA				AML	AML		
	comp=E,1675μm,0.3s						
MELA				AML	AML		
	comp=N,1565μm,1.2s						
MELA				AML	AML		
	comp=E,1770μm,0.2s						
MELA				AML	AML		
	comp=N,1625μm,0.3s						
MELA				AML	AML		
	comp=E,1675μm,0.3s						
MELA				AML	AML		
	comp=N,1565μm,1.2s						
MELA				AML	AML		
	comp=E,1770μm,0.2s						
MELA				AML	AML		
	comp=N,1625μm,0.3s						
MELA				AML	AML		
	comp=E,1675μm,0.3s						
MIGL	**Miglionico**	**0.96**	**170**	P	**Pn**	**14 16 11.8**	**-0.5**
MIGL				AML	AML		
	comp=E,2470μm,0.5s						
MIGL				AML	AML		
	comp=N,2870μm,0.3s						
MIGL				AML	AML		
	comp=E,2470μm,0.5s						
MIGL				AML	AML		
	comp=N,2870μm,0.3s						
MIGL				AML	AML		
	comp=N,2870μm,0.3s						
MIGL				AML	AML		
	comp=E,2470μm,0.5s						
MRLC	**Muro Lucano**	**0.97**	**215**	P	**Pn**	**14 16 12.1**	**-0.4**
MRLC				AML	AML		
	comp=E,365μm,0.3s						
MRLC				AML	AML		
	comp=N,380μm,0.3s						
MRLC				AML	AML		
	comp=E,366μm,0.3s						
MRLC				AML	AML		
	comp=N,380μm,0.3s						
MRLC				AML	AML		
	comp=E,365μm,0.3s						
MRLC				AML	AML		
	comp=N,380μm,0.3s						
MATE	**Matera**	**0.97**	**158**	P	**Pn**	**14 16 11.8**	**-0.7**
MATE				S	**Sn**	**14 16 26.8**	**+0.6**
MATE				AML	AML		
	comp=E,1295μm,0.4s						
MATE				AML	AML		
	comp=N,973μm,0.4s						
MATE				AML	AML		
	comp=E,1295μm,0.4s						
MATE				AML	AML		
	comp=N,973μm,0.4s						
MATE				AML	AML		
	comp=N,973μm,0.4s						
MATE				AML	AML		
	comp=E,1295μm,0.4s						
GATE	**Gambatesa**	**0.98**	**268**	AML	AML		
	comp=N,437μm,0.9s						
GATE				AML	AML		
	comp=E,460μm,1.0s						
GATE				AML	AML		
	comp=N,437μm,0.9s						
GATE				AML	AML		
	comp=E,189μm,0.4s						
GATE				AML	AML		
	comp=N,436μm,1.0s						
GATE				AML	AML		
	comp=E,459μm,1.0s						
GATE				AML	AML		
	comp=E,188μm,0.4s						
GATE				AML	AML		
	comp=N,436μm,1.0s						
GATE				AML	AML		
	comp=N,436μm,1.0s						
GATE				AML	AML		
	comp=N,437μm,0.9s						
GATE				AML	AML		
	comp=E,460μm,1.0s						
GATE				AML	AML		
	comp=E,189μm,0.4s						
SNAL	**S. Angelo Dei**	**0.99**	**231**	P	**Pn**	**14 16 12.3**	**-0.5**
SNAL				AML	AML		
	comp=E,262μm,0.6s						
SNAL				AML	AML		
	comp=N,249μm,1.3s						
SNAL				AML	AML		
	comp=E,262μm,0.6s						
SNAL				AML	AML		
	comp=N,249μm,1.3s						
SNAL				AML	AML		
	comp=E,262μm,0.6s						
SNAL				AML	AML		
	comp=N,249μm,1.3s						
CIGN	**Sant'Elia a Pi**	**0.99**	**276**	P	**Pg**	**14 16 12.3**	**+0.2**
CIGN				AML	AML		
	comp=E,254μm,0.4s						
CIGN				AML	AML		
	comp=N,254μm,1.5s						
CIGN				AML	AML		
	comp=E,254μm,0.4s						
CIGN				AML	AML		
	comp=N,255μm,1.5s						
CIGN				AML	AML		
	comp=N,254μm,1.5s						
CIGN				AML	AML		
	comp=E,254μm,0.4s						
NOCI	**Noci**	**0.99**	**140**	P	**Pn**	**14 16 12.2**	**-0.7**
NOCI				AML	AML		
	comp=E,944μm,0.3s						
NOCI				AML	AML		
	comp=N,1710μm,0.2s						
NOCI				AML	AML		
	comp=E,944μm,0.3s						
NOCI				AML	AML		
	comp=N,1710μm,0.2s						
NOCI				AML	AML		
	comp=E,944μm,0.3s						
NOCI				AML	AML		
	comp=N,1710μm,0.2s						
MRB1	**Monte Rocchett**	**1.03**	**246**	P	**Pn**	**14 16 13.8**	**+0.5**
MRB1				AML	AML		
	comp=E,376μm,0.7s						
MRB1				AML	AML		
	comp=N,399μm,0.3s						
MRB1				AML	AML		
	comp=E,376μm,0.7s						
MRB1				AML	AML		
	comp=N,399μm,0.3s						
MRB1				AML	AML		
	comp=N,399μm,0.3s						
MRB1				AML	AML		
	comp=E,376μm,0.7s						
FASA	**Fasano**	**1.13**	**130**	*e*Pg	**Pn**	**14 16 14.5**	**-0.1**
FASA				Sg	**Sn**	**14 16 31.4**	**+1.3**
MASS	**Massafra**	**1.15**	**142**	*e*Pg	**Pn**	**14 16 15.0**	**0.0**
MASS				Sg	**Sn**	**14 16 33.2**	**+2.5**
CRAC	**Craco**	**1.20**	**172**	P	**Pn**	**14 16 15.8**	**+0.3**
CRAC				AML	AML		
	comp=E,1305μm,0.3s						
CRAC				AML	AML		
	comp=N,956μm,0.5s						
CRAC				AML	AML		
	comp=E,1305μm,0.3s						
CRAC				AML	AML		
	comp=N,956μm,0.5s						
CRAC				AML	AML		
	comp=N,956μm,0.5s						
CRAC				AML	AML		
	comp=E,1305μm,0.3s						
BSSO	**Busso**	**1.22**	**270**	P	**Pg**	**14 16 16.2**	**-0.3**
BSSO				AML	AML		
	comp=E,85μm,0.3s						
BSSO				AML	AML		
	comp=N,88μm,0.6s						
BSSO				AML	AML		
	comp=E,85μm,0.3s						
BSSO				AML	AML		
	comp=N,88μm,0.6s						
BSSO				AML	AML		
	comp=E,85μm,0.3s						
BSSO				AML	AML		
	comp=N,88μm,0.6s						
SLCN	**Sala Consilina**	**1.24**	**201**	P	**Pn**	**14 16 17.2**	**+0.9**
SLCN				AML	AML		
	comp=E,416μm,0.4s						
SLCN				AML	AML		

comp=N,282μm,1.5s
SLCN AML AML
comp=E,416μm,0.4s
SLCN AML AML
comp=N,282μm,1.5s
SLCN AML AML
comp=N,282μm,1.5s
SLCN AML AML
comp=E,416μm,0.4s
MCEL Monticello 1.27 195 P **Pn 14 16 17.2 +0.6**
MCEL AML AML
comp=E,268μm,0.8s
MCEL AML AML
comp=N,225μm,0.3s
MCEL AML AML
comp=E,258μm,0.8s
MCEL AML AML
comp=N,237μm,0.2s
MCEL AML AML
comp=E,258μm,0.8s
MCEL AML AML
comp=N,236μm,0.2s
MCEL AML AML
comp=N,237μm,0.2s
MCEL AML AML
comp=N,225μm,0.3s
MCEL AML AML
comp=E,268μm,0.8s
MCEL AML AML
comp=E,258μm,0.8s
CDRU Civita di Ruta 1.27 213 AML AML
comp=N,96μm,0.2s
CDRU AML AML
comp=E,161μm,1.2s
CDRU AML AML
comp=N,96μm,0.2s
CDRU AML AML
comp=E,160μm,1.2s
CDRU AML AML
comp=E,161μm,1.2s
CDRU AML AML
comp=N,96μm,0.2s
TAR1 Taranto 1.30 142 *e*Pg **Pn 14 16 17.0 0.0**
CGL1 Ceglie Messapi 1.30 133 *e*Pg **Pn 14 16 16.9 -0.2**
CGL1 Sg **Sn 14 16 37.9 +3.4**
SIRI Monte Sirino - 1.39 191 P **Pb 14 16 18.8 -0.2**
SIRI AML AML
comp=E,242μm,0.3s
SIRI AML AML
comp=N,212μm,0.2s
SIRI AML AML
comp=E,242μm,0.3s
SIRI AML AML
comp=N,212μm,0.2s
SIRI AML AML
comp=E,242μm,0.3s
SIRI AML AML
comp=N,212μm,0.2s
VAGA Valle Agricola 1.50 265 P **Pn 14 16 20.0 +0.2**
VAGA AML AML
comp=E,176μm,0.5s
VAGA AML AML
comp=N,289μm,0.5s
VAGA AML AML
comp=E,176μm,0.5s
VAGA AML AML
comp=N,289μm,0.5s
VAGA AML AML
comp=E,176μm,0.5s
VAGA AML AML
comp=N,289μm,0.5s
MGR Morigerati 1.50 200 AML AML
comp=N,134μm,0.3s
MGR AML AML
comp=E,113μm,0.4s
MGR AML AML
comp=N,134μm,0.3s
MGR AML AML
comp=E,114μm,0.4s
MGR AML AML
comp=N,134μm,0.3s
MGR AML AML
comp=E,113μm,0.4s
CAFR Castel Frentan 1.55 296 AML AML
comp=E,936μm,0.3s
CAFR AML AML
comp=N,1073μm,0.3s
CUC Castrocucco 1.59 191 AML AML
comp=N,78μm,0.3s
CUC AML AML
comp=E,93μm,0.5s
CUC AML AML
comp=N,78μm,0.3s
CUC AML AML
comp=E,82μm,0.7s
CUC AML AML
comp=N,76μm,1.0s
CUC AML AML
comp=E,93μm,0.5s
CUC AML AML
comp=N,78μm,0.3s
CUC AML AML
comp=E,93μm,0.5s
LPEL Lama dei Pelig 1.60 289 P **Pn 14 16 21.3 0.0**
LPEL AML AML
comp=E,282μm,0.2s
LPEL AML AML
comp=N,208μm,0.9s
LPEL AML AML
comp=E,282μm,0.2s
LPEL AML AML
comp=N,208μm,0.9s
LPEL AML AML
comp=N,208μm,0.9s
LPEL AML AML
comp=E,282μm,0.2s
BULG Bulgheria - Ca 1.60 204 AML AML
comp=E,97μm,0.7s
BULG AML AML
comp=N,164μm,0.3s
SALB San Lorenzo Be 1.68 177 AML AML
comp=N,109μm,0.6s
SALB AML AML
comp=E,158μm,0.4s
STON Ston 1.72 39 *e*Pg **Pb 14 16 23.9 -0.6**
STON *e*Sg **Sg 14 16 51.2 +3.0**
STON Ston 1.72 39 *e*Pn **Pn 14 16 22.0 -0.7**
STON Ston 1.72 39 P **Pn 14 16 21.9 -0.8**
STON AML AML
comp=E,27μm,1.0s
STON AML AML
comp=N,24μm,1.2s
STON AML AML
comp=E,57μm,1.2s
STON AML AML
comp=N,55μm,0.7s
STON AML AML
comp=E,27μm,1.0s
STON AML AML
comp=N,24μm,1.2s
INTR Introdacqua 1.79 286 AML AML
comp=E,163μm,1.0s
INTR AML AML
comp=N,238μm,0.5s
TREB Trebinje 1.96 53 *e*Pg **Pg 14 16 29.2 -1.5**
TREB *e*Sg **Sg 14 16 56.1 -0.1**
CELI Celico 2.16 174 AML AML
comp=N,76μm,0.8s
CELI AML AML
comp=E,88μm,0.5s
TERO Teramo 2.22 300 AML AML
comp=E,29μm,0.3s
TERO AML AML
comp=N,30μm,1.1s
SCTE Santa Cesarea 2.26 130 AML AML
comp=E,162μm,0.8s
SCTE AML AML
comp=N,138μm,1.4s
FDMO Fiordimonte 2.76 304 AML AML
comp=E,38μm,0.5s
FDMO AML AML
comp=N,54μm,0.4s
NVLJ Novalja 3.17 342 *i* Pn **Pn 14 16 41.8 -0.9**
NVLJ Sn **Sn 14 17 18.3 -2.1**
SJES Sjenica 3.26 57 *e*Pn **Pn 14 16 44.3 +0.2**
BBLS Lazići 3.29 44 *e*Pn **Pn 14 16 45.1 +0.6**
MSCL Scilla 3.33 186 AML AML
comp=N,905μm,0.1s
MSCL AML AML
comp=E,545μm,0.1s
IVAS Ivanjica 3.54 54 *e*Pn **Pn 14 16 48.5 +0.6**
CPGN Carpegna, Ital 3.65 309 AML AML
comp=N,215μm,1.0s
CPGN AML AML
comp=E,408μm,1.2s
TEKS Tekeris 3.85 38 *e*Pn **Pn 14 16 53.4 +1.3**
SELS Selova 3.99 64 *e*Pn **Pn 14 16 54.2 +0.1**

ISCJB ***28*** *14:27:31.0±0.7, 39°.47N±0°.04×31°.01E±0°.05, h11km±7km, Error ellipse: s-maj=7.0km s-min=5.3km az=139.8*
DDA ***28*** *14:27:30.2, 39°.43N×31°.04E, h17km±1km, ML2.7*
ISK ***28*** *14:27:30.4, 39°.50N×31°.05E, h2km, ML1.8/6*
ISC 28 14:27:30.7±0.9, 39°.48N±0°.04×31°.04E±0°.04, h13km±7km, n11, σ0°44/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CIFT	**Cifteler, Eski**	**0.12**	**171**	PG	**Pg**		**14 27 33.9**	**-0.1**
CIFT				SG	**Sg**		**14 27 36.3**	**0.0**
CIFT	**Cifteler, Eski**	**0.12**	**171**	*i* P	**Pg**		**14 27 34.5**	**+0.5**
CIFT				*i* S	**Sg**		**14 27 36.4**	**0.0**
ESKT	**Eskisehir**	**0.15**	**286**	PG	**Pg**		**14 27 34.0**	**-0.5**
SVRH	**Sivrihisar-ESK**	**0.38**	**95**	PG	**Pb**		**14 27 38.6**	**-0.7**
AUSIV	**SIVRIHISAR**	**0.39**	**95**	*i* P	**Pg**		**14 27 38.4**	**-0.2**
AUSIV				*i* S	**Sb**		**14 27 45.5**	**+0.1**
AUKIR	**Kırka- Seyitga**	**0.44**	**243**	*i* P	Pg		14 27 34.0	-5.4
AUKIR				*i* S	**Sg**		**14 27 45.5**	**+0.1**
AUMIH	**MIHALICIK**	**0.52**	**41**	*i* P	**Pb**		**14 27 42.5**	**+0.8**
AUMIH				*i* S	**Sb**		**14 27 49.6**	**+0.4**
SRCK	**Saricakaya, Es**	**0.65**	**331**	PG	**Pb**		**14 27 43.7**	**-0.1**
BOLV	**Bolvadin**	**0.76**	**185**	*i* P	**Pb**		**14 27 46.2**	**+0.3**
BOLV				*i* S	**Sb**		**14 27 55.7**	**-0.4**
BOLV				IAML_P				
	comp=Z,983nm,0.1s							
KIZT	**Kizilcal**	**0.89**	**132**	PG	**Pn**		**14 27 48.5**	**-0.4**
SHUT	**Suhut-Afyon**	**1.00**	**202**	PG	**Pn**		**14 27 50.8**	**+0.4**

ISCJB ***28*** *14:32:24.1±1.5, 37°.04N±0°.05×28°.41E±0°.06, h15km±35km, Error ellipse: s-maj=10.1km s-min=5.4km az=138.3*
DDA ***28*** *14:32:24.3, 37°.03N×28°.41E, h7km±3km, ML2.5*
ISK ***28*** *14:32:24.3, 37°.03N×28°.41E, h15km±1km, ML2.2/4*
ISC 28 14:32:25.0±1.1, 37°.04N±0°.06×28°.42E±0°.04, h18km±3km, n10, σ1°07/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.14**	**312**	PG	**Pg**		**14 32 28.5**	**-0.7**
TURN	**Turunc**	**0.22**	**138**	PG	**Pb**		**14 32 30.6**	**+0.3**
TURN				SG	**Sg**		**14 32 35.4**	**+1.6**
TURN	**Turunc**	**0.22**	**138**	*i* P	**Pb**		**14 32 31.4**	**+1.1**
TURN				*i* S	**Sg**		**14 32 35.2**	**+1.4**
TURN				IAML_P				
	comp=Z,3μm,0.1s							
DALY	**Dalyan (Mula)**	**0.29**	**139**	PG	**Pb**		**14 32 30.8**	**-0.8**
DALY				SG	**Sb**		**14 32 35.2**	**-0.9**
DALY	**Dalyan (Mula)**	**0.29**	**139**	*i* P	**Pg**		**14 32 30.6**	**-0.8**
DALY				*i* S	**Sb**		**14 32 35.4**	**-0.6**
DALY				IAML_P				
	comp=Z,1μm,0.1s							
DAT	**Datca**	**0.74**	**246**	*i* P	**Pg**		**14 32 38.3**	**-1.2**
DAT				*i* S	**Sb**		**14 32 50.6**	**+1.5**
AYDN	**Tasoluk**	**0.76**	**326**	*i* P	**Pn**		**14 32 40.4**	**-0.4**
AYDN				*i* S	**Sb**		**14 32 50.1**	**+0.5**
AYDN				IAML_P				
	comp=Z,1μm,0.2s							
BDRM	**Kayabasi**	**0.78**	**272**	*i* P	Pg		14 32 32.4	-7.8
BDRM				*i* S	**Sn**		**14 32 53.1**	**+0.9**
ARG	**Arkhangelos**	**0.85**	**196**	PG	**Pb**		**14 32 40.9**	**-0.3**
BODT	**Bodrum**	**0.88**	**272**	PG	**Pb**		**14 32 41.7**	**-0.1**

ISK ***28*** *14:56:06.2, 40°.95N×42°.59E, h5km, ML2.1/3*
DDA ***28*** *14:56:07.4, 40°.91N×42°.61E, h7km±2km, ML2.5*
ISC 28 14:56:06.7±1.7, 40°.90N±0°.05×42°.62E±0°.04, h8km±15km, n8, σ0°51/14, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SENK	**Senkaya-Erzuru**	**0.40**	**212**	PG	**Pb**		**14 56 15.7**	**-0.3**
SENK				SG	**Sb**		**14 56 23.0**	**+0.7**
DAGI	**Agillar**	**0.56**	**289**	*i* P	**Pb**		**14 56 19.0**	**+0.1**
DAGI				*i* S	**Sb**		**14 56 27.2**	**+0.1**
DAGI				IAML_P				
	comp=Z,2μm,0.3s							
EPOS	**Posof**	**0.61**	**7**	*i* P	**Pb**		**14 56 20.1**	**+0.4**
EPOS				*i* S	**Sb**		**14 56 28.2**	**-0.2**
DBAD	**Bademkaya**	**0.71**	**280**	*i* P	**Pb**		**14 56 21.8**	**+0.4**
DBAD				*i* S	**Sb**		**14 56 32.3**	**+0.9**
DBAD				IAML_P				
	comp=Z,2μm,0.2s							
AKH	**Akhalkalaki**	**0.83**	**52**	PG	**Pg**		**14 56 22.9**	**+0.2**
AKH				SG	**Sn**		**14 56 36.7**	**-0.7**
DBOC	**Borcka**	**0.85**	**302**	*i* P	**Pb**		**14 56 23.9**	**+0.2**
DBOC				*i* S	**Sb**		**14 56 35.2**	**0.0**
DBOC				IAML_P				
	comp=Z,744nm,0.2s							
BCA	**Borcka**	**0.93**	**306**	PG	**Pg**		**14 56 24.3**	**-0.3**
BATM	**Batumi**	**0.99**	**315**	PG	**Pg**		**14 56 25.3**	**-0.5**

SOME ***28*** *14:59:22.3, 44°.67N×82°.05E, h10km*
NNC ***28*** *14:59:22.7±1.4, 44°.69N×81°.95E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=15.5km s-min=6.5km az=127.0*
ISC 28 14:59:18.5±1.6, 44°.66N±0°.06×82°.30E±0°.07, h4km±21km, n15, σ0°61/23, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.83**	**261**	*e*P	**Pg**		**14 59 53.5**	**0.0**
	11nm,0.2s							
DJR				*e*S	**Sb**		**15 00 15.8**	**0.0**
	5.6nm,0.4s							
KTMS	**Ketmen**	**1.86**	**230**	*e*P	**Pg**		**14 59 54.5**	**+0.4**
	7.1nm,0.1s							
KTMS				*e*S	**Sb**		**15 00 17.3**	**+0.6**
	21nm,0.4s							
MK31	**Makanchi Array**	**2.14**	**360**	⇑Pn	**Pg**		**14 59 59.7**	**+0.3**
	3.3nm,0.2s,baz=187,slow=16,SNR=107							
MK31				⇑Lg	Lg		15 00 27.8	
	1.7nm,0.2s,baz=184,slow=28,SNR=17							
MAKZ	**Makanchi**	**2.16**	**354**	⇑Pn	**Pg**		**14 59 59.7**	**-0.2**
	4.1nm,0.5s							
MAKZ				⇑Lg	Lg		15 00 28.0	
	3.8nm,0.3s							
KAPS	**Kapalarasan**	**2.18**	**288**	Pg	**Pg**		**14 59 59.6**	**-0.7**
	4.8nm,0.2s							
KAPS				Lg	Lg		15 00 26.3	
	14nm,0.3s							
KAPS	**Kapalarasan**	**2.18**	**288**	*e*P	**Pg**		**14 59 59.6**	**-0.7**
	4.8nm,0.2s							
KAPS				*e*S	**Sb**		**15 00 26.0**	**-0.1**
	11nm,0.3s							
PDGK	**Podgornoye**	**2.43**	**238**	⇓Pn	**Pb**		**15 00 02.1**	**-0.7**
	3.4nm,0.4s							
PDGK				⇓Lg	Lg		15 00 33.0	
	13nm,0.6s							
UZB	**Uzynbulak**	**2.81**	**239**	Pg	**Pb**		**15 00 09.4**	**+0.1**
	1.8nm,0.3s							
UZB				Lg	Lg		15 00 42.9	
	5.7nm,0.2s							
UZB	**Uzynbulak**	**2.81**	**239**	*e*P	**Pb**		**15 00 09.6**	**+0.2**
	4.1nm,0.3s							
UZB				*e*S	**Sb**		**15 00 43.0**	**-1.2**
	5.3nm,0.3s							
MNBS	**Baschi**	**2.86**	**260**	Pg	**Pb**		**15 00 10.8**	**+0.7**
	3.1nm,0.2s							
MNBS				Lg	Lg		15 00 45.4	
	11nm,0.2s							
MNBS	**Baschi**	**2.86**	**260**	*e*P	**Pb**		**15 00 10.8**	**+0.7**
	3.1nm,0.2s							
MNBS				*e*S	**Sb**		**15 00 45.4**	**-0.1**
	11nm,0.2s							
KPKS	**Kokpek**	**2.87**	**247**	*e*P	**Pb**		**15 00 10.3**	**0.0**
	11nm,0.2s							
KPKS				*e*S	**Sb**		**15 00 44.8**	**-1.0**
	15nm,0.5s							
ARXS	**Arharly**	**3.24**	**264**	Pg	**Pb**		**15 00 17.4**	**+0.8**
	2.3nm,0.3s							
ARXS				Lg	Lg		15 00 56.5	
	8.0nm,0.3s							
ARXS	**Arharly**	**3.24**	**264**	*e*P	**Pb**		**15 00 17.4**	**+0.8**
	2.3nm,0.3s							
ARXS				*e*S	**Sb**		**15 00 56.5**	**+0.2**
	8.0nm,0.3s							
ZSN	**Zaisan**	**3.31**	**32**	*e*P	**Pg**		**15 00 21.5**	**-0.5**
	1.5nm,0.2s							
ZSN				*e*S	**Sg**		**15 01 05.0**	**+0.1**
	1.8nm,0.3s							

BJI ***28*** *15:35:52.8±0.0, 10°.59N×93°.43E, h103km, mb4.8/43, mB4.6/33*
ISCJB ***28*** *15:35:54.9±0.4, 10°.64N±0°.02×93°.50E±0°.03, h121km±3km, mb4.7/141, Error ellipse: s-maj=4.8km s-min=2.9km az=141.9*
MOS ***28*** *15:35:54.1±1.0, 10°.67N×93°.58E, h111km, mb4.8/44, Error ellipse: s-maj=10.4km s-min=5.4km az=116.2*
NDI ***28*** *15:35:55.6±3.5, 10°.82N×93°.70E, h109km±20km, mb4.7, ML4.6, mb4.8(NEIC)*
NEIC ***28*** *15:35:55.3±2.0, 10°.62N×93°.51E, h110km±3km, mb4.8/89, Error ellipse: s-maj=10.8km s-min=7.3km az=67.0*
GCMT ***28*** *15:35:56.3±0.4, 10°.62N±0°.03×93°.68E±0°.02, h105km±3km, MW4.9/77, Moment Tensor Solution. s16,c18; s77,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.32±.09; $M_{\theta\theta}$-1.56±.11; $M_{\phi\phi}$0.24±.11; $M_{r\theta}$-0.53±.08; $M_{\theta\phi}$1.75±.12; $M_{\phi r}$-0.84±.07; Best double couple: $M_0$2.46800×10^{16} NP1:ϕ_s266.00000°, δ60.00000°, λ36.00000°. NP2: ϕ_s157.00000°, δ60.00000°, λ145.00000°. Principal axes: T 2.3080, Plg45.0000°, Azm122.0000°; N 0.3200, Plg45.0000°, Azm301.0000°; P -2.6280, Plg0.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***28*** *15:35:56.2±1.1, 10°.64N×93°.53E, h118km±8km, mb4.3/40, mb1 4.4/44, mb1mx4.3/54, mbtmp4.7/44, MS3.5/18, Ms1 3.5/18, ms1mx3.4/37 Error ellipse: s-maj=11.1km s-min=7.0km az=45.0*
KLM ***28*** *15:35:56.0, 10°.69N×93°.48E, h99km, mb5.0*
DJA ***28*** *15:35:57.4±1.3, 11°.N±4°.×9°.4E±1°.7, h82km±10km, M4.9/14, mB5.2/8, mb4.9/14, MLv5.3/2, Mw(mB)4.6/8*
ISC 28 15:35:55.4±0.4, 10°.68N±0°.03×93°.46E±0°.04, h111km±3km, h111km:pP-P, n393, σ1°72/455, mb4.7/143, 25C-22D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.20**	**324**	*e*Pn		Pn	15 36 18.9	+0.1
PBA				*e*Sn		Sn	15 36 38.7	+2.2
PBA	**Port Blair**	**1.20**	**324**	*e*P		Pn	15 36 18.9	+0.1
PBA				*e*S		Sn	15 36 38.0	+1.5
PBA				IAML			15 36 42.5	
	comp=E,14μm,1.7s							
DGPR	**DIGLIPUR**	**2.54**	**348**	*e*P		**Pn**	**15 36 34.9**	**-0.5**
DGPR				*e*S		**Sn**	**15 37 04.5**	**-1.5**
DGPR				IAML			15 37 17.9	
	comp=E,3μm,1.5s							
PKDT	**Phuket**	**5.55**	**120**	P		**Pn**	**15 37 16.0**	**+0.3**
	comp=E,341nm,0.9s,comp=E,3μmcomp=E,1.1nm							
LHMI	**Lhok Sumawe**	**6.42**	**147**	*e*Pn		**Pn**	**15 37 27.6**	**+0.1**
LHMI	**Lhok Sumawe**	**6.42**	**147**	P		**Pn**	**15 37 28.7**	**+1.2**
PHET	**Kaeng Krachan**	**6.43**	**69**	P		**Pn**	**15 37 28.2**	**+0.5**
	comp=E,406μm,0.8s,comp=E,1μm							
TRTT	**Trang**	**6.77**	**114**	P		**Pn**	**15 37 33.2**	**+1.0**
	comp=E,83nm,0.7s,comp=E,1μmcomp=E,0.4nm							
MLSI	**Meulaboh, Aceh**	**7.01**	**155**	P		**Pn**	**15 37 34.1**	**-1.4**
MLSI				S		**Sn**	**15 38 50.8**	**-2.9**
UMPA	**Umpang Tak**	**7.60**	**43**	P		**Pn**	**15 37 42.4**	**-1.1**
	comp=E,670μm,0.8s,comp=E,2μm							
SKLT	**Songkhla**	**7.88**	**116**	P		**Pn**	**15 37 48.4**	**+1.0**
	comp=E,82nm,1.0s,comp=E,705nmcomp=E,0.3nm							
TPTI		**8.24**	**153**	P		**Pn**	**15 37 49.5**	**-2.8**
KCSI	**Kotacane, Aceh**	**8.30**	**149**	P		**Pn**	**15 37 52.3**	**-0.7**
TSI	**Tuntungan**	**8.75**	**144**	P		**Pn**	**15 38 03.2**	**+4.1**
KULM	**Kulim**	**8.91**	**126**	*e*Pn		**Pn**	**15 38 00.3**	**-1.0**
KULM	**Kulim**	**8.91**	**126**			**Pn**	**15 38 02.0**	**+0.7**
CHBT	**CHBT**	**8.93**	**76**	P		**Pn**	**15 38 05.9**	**+4.4**
	comp=E,59nm,0.5s,comp=E,803nm							
PBKT	**Sadao Pong**	**9.36**	**50**	P		**Pn**	**15 38 07.8**	**+0.5**
	comp=E,69nm,1.2s,comp=E,706nm							
CM31	**Chiang Mai Arr**	**9.38**	**34**	*e*Pn		**Pn**	**15 38 08.6**	**+1.0**
CMAR	**Chiang Mai Arr**	**9.38**	**34**	P		**Pn**	**15 38 08.4**	**+0.8**
	comp=E,12nm,0.3s,baz=222,slow=15,SNR=298							
CMAR				LR		LR	15 42 31.9	
	comp=E,184nm,18.0s,baz=222,slow=42							
PSI	**Prapat**	**9.52**	**145**	P		**Pn**	**15 38 09.8**	**+0.1**
	comp=E,1.0nm,0.3s,baz=330,slow=15,SNR=15							
PSI				S		**Sn**	**15 39 55.7**	**+0.6**
	comp=E,1.3nm,0.3s,baz=30,slow=20,SNR=2.9							
PSI				LR		LR	15 41 48.1	
	comp=E,124nm,20.4s,baz=282,slow=37							
PSI	**Prapat**	**9.52**	**145**	*e*Pn		**Pn**	**15 38 09.6**	**-0.1**
PSI	**Prapat**	**9.52**	**145**	*e*P		**Pn**	**15 38 09.6**	**-0.1**
CHTO	**Chiang Mai**	**9.67**	**33**	*e*Pn		**Pn**	**15 38 12.1**	**+0.5**
CHTO	**Chiang Mai**	**9.67**	**33**	*e*P		**Pn**	**15 38 12.1**	**+0.5**
CHTO	**Chiang Mai**	**9.67**	**33**	P		**Pn**	**15 38 12.4**	**+0.8**
	SNR=35							
CMMT	**Chiang Mai**	**9.67**	**33**	P		**Pn**	**15 38 12.0**	**+0.4**
	comp=E,80nm,1.0s,comp=E,812nm							
IPM	**Ipoh**	**9.70**	**129**	*e*Pn		**Pn**	**15 38 11.2**	**-0.9**
IPM	**Ipoh**	**9.70**	**129**			**Pn**	**15 38 12.0**	**-0.1**
CHAI	**Chaiyaphum**	**9.79**	**57**	P		**Pn**	**15 38 13.9**	**+0.7**
	comp=E,110μm,1.2s							
UTTA	**Uttaradit**	**9.83**	**44**	P		**Pn**	**15 38 14.2**	**+0.5**
	comp=E,74μm,0.9s,comp=E,585μm							
GSI	**Gunungsitoli**	**10.17**	**156**	*e*Pn		**Pn**	**15 38 16.0**	**-2.4**
KHON	**Khomkaen**	**10.70**	**57**	P		**Pn**	**15 38 26.5**	**+0.9**
	comp=E,184μm,1.1s							
MNSI	**Mandailing Nat**	**11.55**	**148**	P		**Pn**	**15 38 39.2**	**+2.2**
	comp=E,12nm,0.4s							
NONG	**Nongkai**	**11.91**	**51**	P		**Pn**	**15 38 43.1**	**+1.4**
	comp=E,0.9nm,0.9s							
SKNT	**Sakolnakorn**	**11.98**	**57**	P		**Pn**	**15 38 43.8**	**+1.2**
	comp=E,44nm,1.2s							
BRDH	**Bariadhala**	**12.06**	**352**	P		**Pn**	**15 38 45.2**	**+1.6**
	comp=E,26nm,0.3s,baz=270,slow=20,SNR=3.1							
BRDH				S		**Sn**	**15 40 48.9**	**-7.4**
	comp=E,32nm,0.3s,baz=44,slow=21,SNR=5.6							
VIS	**Vishakhapatnam**	**12.06**	**307**	*i* P		**Pn**	**15 38 43.5**	**-0.1**
VIS				*i* S		Sn	15 40 45.6	-11
PANO	**Nakornpanom**	**12.59**	**58**	P		**Pn**	**15 38 51.8**	**+1.2**
	comp=E,0.7nm,1.2s							
BKNI	**Bangkinang**	**12.75**	**143**	P		**Pn**	**15 38 53.9**	**+1.1**
PALK	**Pallekele**	**13.05**	**256**	P		**Pn**	**15 38 58.0**	**+1.2**
	comp=E,0.4nm,0.3s,baz=112,slow=3.3,SNR=2.5							
PALK				S		Sn	15 41 10.4	-10
	comp=E,18nm,0.3s,baz=116,slow=17,SNR=17							
PALK				LR		LR	15 43 42.8	
	comp=E,213nm,19.4s,baz=116,slow=36							
PALK	**Pallekele**	**13.05**	**256**	*e*P		**P**	**15 39 01.8**	**-1.1**
PALK	**Pallekele**	**13.05**	**256**	*e*P		**P**	**15 39 01.8**	**-1.1**
PDSI	**Padang**	**13.46**	**148**	P		**P**	**15 39 11.0**	**+3.6**
MYKOM	**Kota Tinggi**	**13.58**	**130**	*e*Pn		**Pn**	**15 39 04.1**	**+0.5**
MYKOM	**Kota Tinggi**	**13.58**	**130**			**Pn**	**15 39 05.0**	**+1.4**
SLVN	**Son La**	**14.59**	**42**	*e*Pn		**Pn**	**15 39 17.0**	**+0.4**
TPRI	**Tanjung Pinang**	**14.66**	**131**	P		**Pn**	**15 39 18.4**	**+0.9**
DLV	**T Lat**	**14.79**	**84**	*e*P		**P**	**15 39 22.6**	**+0.2**
SHL	**Shillong**	**14.88**	**354**	*e*P		**P**	**15 39 23.0**	**-0.3**
SHL	**Shillong**	**14.88**	**354**	*e*P		**P**	**15 39 23.0**	**-0.3**
SHL	**Shillong**	**14.88**	**354**	*e*P		**Pn**	**15 39 21.8**	**+1.4**
SHL				*e*x		x	15 41 52.9	
BOK	**Bokaro**	**14.91**	**332**	*e*P		**Pn**	**15 39 21.6**	**+1.1**
BOK				IAmb		IAmb	15 39 26.0	
	comp=Z,18nm,0.3s							
KOHI	**KOHIMA**	**14.97**	**2**	*e*P		**Pn**	**15 39 19.3**	**-2.2**
MOKO	**MOKOCHONG**	**15.59**	**4**	*e*P		**Pn**	**15 39 26.9**	**-2.4**
DSRI	**Dabo**	**15.66**	**134**	P		**P**	**15 39 31.1**	**-0.7**
TEZP	**TEZPUR**	**15.87**	**358**	*e*P		**Pn**	**15 39 29.9**	**-2.7**
HYB	**Hyderabad**	**15.93**	**297**	*i* P		**P**	**15 39 38.0**	**+3.1**
HYB				*e*S		**Sn**	**15 42 29.0**	**-1.1**
JORH	**JORHAT**	**16.00**	**3**	*e*P		**Pn**	**15 39 30.9**	**-3.3**
LKP	**Lekhapani**	**16.72**	**7**	*e*P		**Pn**	**15 39 41.0**	**-2.0**
ZIRO	**ZIRO**	**16.76**	**1**	*e*P		**Pn**	**15 39 41.1**	**-2.6**
KMI	**Kunming**	**16.85**	**30**	P		**P**	**15 39 47.0**	**+1.8**
KMI				pP		pP	15 40 02.5	-2.4
KMI				sP		sP	15 40 17.5	-1.2
KMI				pmax		pmax		
	comp=Z,60nm,1.0s							
KMI				pmax		pmax		
	comp=Z,150nm,5.0s							
KMI	**Kunming**	**16.85**	**30**	*e*P		**P**	**15 39 47.5**	**+2.4**

comp=Z,51nm,0.9s
KMI Kunming 16.85 30 *e*P **P 15 39 47.5 +2.4**
KMI pmax pmax
comp=Z,51nm,0.9s
TAWA Tawang 16.89 355 *e*P **Pn 15 39 45.5 0.0**
NGP Nagpur 17.32 309⇓*e*P **Pn 15 39 51.0 +0.6**
NGP AMB AMB 15 40 00.2
comp=Z,42nm,0.9s
NGP *ex* x 15 42 51.4
QIZ Qiongzhong 17.87 60 P **Pn 15 40 03.8 +6.8**
QIZ S **Sn 15 43 24.3 +7.7**
QIZ LR LR
comp=N,270nm,16.2s
QIZ LR LR
comp=E,130nm,7.6s
QIZ LR LR
comp=Z,170nm,14.3s
PPBI Pangkal Pinang 17.94 135 P **P 15 39 57.0 0.0**
JIRN Jiri 18.22 339 *e*P **Pn 15 40 02.4 +0.8**
comp=Z,213nm,0.9s
JIRN Jiri 18.22 339 *e*P **S 15 43 18.8 -4.9**
comp=Z,318nm,0.8s
PKI Pulchoki 18.43 337 *e*P **Pn 15 40 04.4 +0.4**
comp=Z,65nm,0.6s
PKI Pulchoki 18.43 337 *e*P **S 15 43 23.4 -4.4**
comp=Z,222nm,0.8s
PKIN Phulchoki 18.44 337 *e*P **Pn 15 40 04.3 +0.2**
comp=Z,23nm,0.3s
PKIN Phulchoki 18.44 337 *e*P **S 15 43 23.5 -4.4**
comp=Z,127nm,0.7s
GUN Gumba 18.56 338 *e*P **Pn 15 40 06.2 +0.6**
comp=Z,91nm,0.5s
GUN Gumba 18.56 338 *e*P **S 15 43 22.7 -7.7**
comp=Z,394nm,0.9s
DMN Daman 18.59 336 *e*P **Pn 15 40 06.0 +0.2**
comp=Z,83nm,0.7s
DMN Daman 18.59 336 *e*P **S 15 43 26.6 -4.1**
comp=Z,208nm,0.8s
KKN Kakani 18.68 337 *e*P **Pn 15 40 06.8 -0.1**
comp=Z,135nm,1.1s
LWLI Liwa 18.83 145 P Pn 15 40 20.3 +12
LSA Lhasa 19.05 354 *e*P **P 15 40 09.9 +0.4**
LSA *e*Pn **Pn 15 40 10.0 -1.4**
LSA Lhasa 19.05 354 *e*P **P 15 40 09.9 +0.4**
KSM Kuching 19.07 118 *e*P **P 15 40 08.7 -0.7**
comp=Z,110nm,0.9s
KSM Kuching 19.07 118 **P 15 40 10.0 +0.6**
KOLN Koldanda 19.36 333 *e*P **Pn 15 40 14.7 -0.2**
comp=Z,189nm,0.9s
KOLN Koldanda 19.36 333 *e*P **S 15 43 44.7 -1.3**
comp=Z,500nm,0.8s
BHPL Bhopal 19.75 311 *e*P **Pn 15 40 19.6 +0.3**
BHPL lAmb lAmb 15 40 20.6
comp=Z,62nm,1.7s
DANN Dangsing 19.80 334 *e*P **Pn 15 40 19.4 -0.6**
comp=Z,345nm,0.9s
DANN Dangsing 19.80 334 *e*P **S 15 43 46.4 -8.3**
comp=Z,292nm,0.7s
PYUN Piuthan 19.93 332 *e*P **Pn 15 40 20.6 -0.8**
comp=Z,116nm,0.7s
PYUN Piuthan 19.93 332 *e*P **S 15 43 53.9 -3.3**
comp=Z,303nm,0.8s
GYA Guiyang 20.05 37⇓*i*P **P 15 40 20.8 +0.8**
GYA pP pP 15 40 39.3 -0.8
GYA PP **sP 15 40 48.5 -5.4**
GYA SS Sn 15 44 33.0 +24
GYA pmax pmax
comp=Z,40nm,0.7s
GYA pmax pmax
comp=Z,80nm,5.0s
GYA LR LR
comp=Z,70nm,13.7s
GYA LR LR
comp=Z,110nm,11.0s
GYA LR LR
comp=Z,140nm,13.8s
SBUM Sibu 20.34 112 *e*P **P 15 40 24.1 +1.0**
comp=Z,138nm,1.1s
SBUM Sibu 20.34 112 **P 15 40 24.0 +0.9**
CD2 Chengdu 22.29 24 *e*P **P 15 40 44.5 +0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
COCO West Island 22.97 172 *e*P **P 15 40 48.8 -1.8**
COCO West Island 22.97 172 *ce*P **P 15 40 50.1 -0.4**
KKM Kota Kinabalu 22.97 100 *e*P **P 15 40 51.0 +0.2**
comp=Z,105nm,1.1s
KKM Kota Kinabalu 22.97 100 **P 15 40 52.0 +1.2**
DDI Dehra Dun 24.24 326 *e*P **P 15 41 01.9 -0.2**
DDI *ex* x 15 45 32.9
ENH Enshi 24.55 35 *e*P **P 15 41 03.4 -1.5**
comp=Z,25nm,0.5s
SMLA Simla 25.35 326 *e*P **P 15 41 13.7 +1.6**
SMLA lAmb lAmb 15 41 15.8
comp=Z,16nm,0.9s
DHRM DHARAMSHALA 26.68 326 *e*P **P 15 41 25.6 +1.2**
DHRM lAmb lAmb 15 41 27.4
comp=Z,14nm,0.6s
LZH Lanzhou 26.99 19 *e*P **P 15 41 32.3 +5.2**
LZH pP pwP 15 41 52.3 +1.5
LZH sP sP 15 42 02.8 -0.8
LZH pmax pmax
comp=Z,26nm,1.1s
TGY Tagaytay City 27.04 80 P **P 15 41 29.1 +1.4**
comp=Z,219nm,0.8s,baz=208,slow=4.5,SNR=6.5
XAN Xi'an 27.22 29 P **P 15 41 26.3 -2.8**
XAN pmax pmax
comp=Z,6.0nm,0.7s
XAN Xi'an 27.22 29 *e*P **P 15 41 26.1 -2.9**
comp=Z,11nm,0.8s
XAN Xi'an 27.22 29 *e*P **P 15 41 26.1 -2.9**
XAN pmax pmax
comp=Z,11nm,0.8s
DGAR Diego Garcia 27.57 230 *e*P **P 15 41 30.2 -2.1**
comp=Z,201nm,1.1s
DGAR Diego Garcia 27.57 230 *e*P **P 15 41 30.2 -2.1**
DGAR pmax pmax
comp=Z,201nm,1.1s
H08S3 Diego Garcia H 27.69 230 T T 16 09 08.4
baz=48,slow=75,SNR=174
H08S2 Diego Garcia H 27.70 230 T T 16 09 21.1
baz=48,slow=75,SNR=231
WHN Wuhan 27.71 41 P **P 15 41 37.8 +4.5**
WHN S **S 15 46 12.5 +4.9**
WHN LR LR
comp=Z,610nm,11.2s
H08S1 Diego Carcia H 27.71 230 T T 16 09 12.4
baz=48,slow=75,SNR=173
GTA Gaotai 29.17 10⇑P **P 15 41 47.3 +0.9**
GTA pP pP 15 42 08.8 -1.6
GTA sP sP 15 42 20.3 -2.8
GTA PcP **PcP 15 44 52.3 +1.0**
GTA S **S 15 46 32.3 +1.6**
GTA ScP **ScP 15 48 22.5 -0.5**
GTA PcS **PcS 15 48 34.0 -0.3**
GTA ScS **ScS 15 52 16.0 -1.4**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,41nm,7.1s
GTA LR LR
comp=Z,49nm,16.8s
GTA LR LR
comp=Z,89nm,16.5s
GTA LR LR
comp=Z,92nm,17.1s
SSLB Suanglung 29.24 60 *e*P **P 15 41 44.6 -2.6**
comp=Z,8.4nm,0.8s
YULB Yu-li 29.39 61 *e*P **P 15 41 47.9 -0.6**
comp=Z,24nm,0.8s
NIL Nilore 29.43 324 *e*P **P 15 41 49.2 +0.5**
comp=Z,11nm,0.7s
NIL Nilore 29.43 324 *e*P **P 15 41 49.2 +0.5**
NIL pmax pmax
comp=Z,11nm,0.7s
KAPI Kappang 30.47 120 *e*P **P 15 41 56.5 -1.5**
comp=Z,21nm,1.0s
KAPI Kappang 30.47 120 *e*P **P 15 41 56.5 -1.5**
KAPI pmax pmax
comp=Z,21nm,1.0s
KAPI Kappang 30.47 120 P **P 15 41 58.7 +0.7**
SNR=5.0
NJ2 Nanjing 31.65 44 *e*P **P 15 42 09.3 +1.1**
NJ2 pmax pmax
comp=Z,11nm,0.6s
KBL Kabul 32.57 321 *e*P **P 15 42 16.8 +0.3**
comp=Z,6.6nm,0.7s
KBL Kabul 32.57 321 *e*P **P 15 42 16.8 +0.3**
KBL pmax pmax
comp=Z,7.0nm,0.7s
KSH Kashi 32.66 334 P **P 15 42 16.5 -0.7**
KSH sP sP 15 42 54.8 +1.0
KSH PP **PnPn 15 43 31.0 +1.6**
KSH S **S 15 47 20.5 -4.8**
KSH SS **SnSn 15 49 24.8 -7.9**
KSH pmax pmax
comp=Z,26nm,0.8s
KSH pmax pmax
comp=Z,290nm,4.7s
KSH LR LR
comp=Z,370nm,9.5s
KSH LR LR
comp=Z,280nm,10.2s
KSH LR LR
comp=Z,290nm,12.4s
WMQ Urumqi 33.40 352 *e*P **P 15 42 26.8 +3.4**
WMQ pP pP 15 42 48.3 +0.4
WMQ pmax pmax
comp=Z,19nm,0.8s
WMQ pmax pmax
comp=Z,58nm,5.3s
HHC Hu-ho-hao-te 34.04 25 *e*P **P 15 42 29.5 +0.5**
HHC S **S 15 47 43.3 -3.2**
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,21nm,5.3s
KDJ Kajisay 34.42 338 *e*P **P 15 42 33.7 +1.2**
comp=Z,9.4nm,0.8s
KDJ Kajisay 34.42 338 *e*P **P 15 42 33.7 +1.2**
KDJ pmax pmax
comp=Z,9.0nm,0.8s
MMRI Maumere 34.47 123 *e*P **P 15 42 31.6 -1.4**
comp=Z,15nm,0.7s
PDGK Podgornoye 34.72 342 P **P 15 42 35.1 +0.1**
PDGK pmax pmax
comp=Z,9.0nm,1.0s
KZA Kyzart 35.11 336 P **P 15 42 38.7 0.0**
SNR=5.1
WSAR Wadi Sarin 35.48 295 P **P 15 42 43.6 +2.0**
comp=Z,4.8nm,0.9s,baz=233,slow=5.1,SNR=2.4
WSAR LR LR 15 56 38.8
comp=Z,46nm,21.4s,baz=126,slow=35
BTK Batken 35.48 329 *e*P **P 15 42 42.5 +1.0**
comp=Z,19nm,0.8s
BTK Batken 35.48 329 *e*P **P 15 42 42.5 +1.0**
BTK pmax pmax
comp=Z,19nm,0.8s
UCH Uchtor 35.54 335 P **P 15 42 43.7 +1.4**
SNR=6.2
TKM2 Tokmak 2 35.70 337 P **P 15 42 44.7 +1.3**
SNR=12
TKM2 Tokmak 2 35.70 337 P **P 15 42 44.2 +0.8**
TKM2 pmax pmax
comp=Z,5.0nm,0.6s
KBK Karagaybulak 35.72 336 P **P 15 42 45.6 +2.1**
SNR=16
AAK Ala-Archa 35.89 336 P **P 15 42 46.7 +1.7**
comp=Z,3.2nm,0.4s,baz=169,slow=7.0,SNR=8.8
AAK PcP **PcP 15 45 11.5 +1.7**
comp=Z,4.2nm,0.5s,baz=117,slow=4.5,SNR=3.7
AAK ScP **ScP 15 48 45.8 -0.2**
comp=Z,3.0nm,0.6s,baz=187,slow=4.0,SNR=4.1
AAK Ala-Archa 35.89 336⇑*e*P **P 15 42 47.0 +2.0**
AAK pmax pmax
comp=Z,10.0nm,0.9s
AAK Ala-Archa 35.89 336 P **P 15 42 47.3 +2.3**
SNR=6.6
CHMS Chumysh 36.09 336 P **P 15 42 48.0 +1.4**
SNR=5.3
EKS2 Erkin-Say 36.20 335 P **P 15 42 49.5 +1.9**
SNR=12
USP Ospenovka 36.41 336 P **P 15 42 50.7 +1.4**
SNR=10
SOEI Soe 36.76 122 *e*P **P 15 42 51.0 -1.7**
comp=Z,34nm,0.8s
MK31 Makanchi Array 37.22 347 *i* P **P 15 42 55.8 -0.3**
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MK32 Makanchi Array 37.22 347 *e*PcP **PcP 15 45 14.3 +0.7**
MKAR Makanchi Array 37.22 347 P **P 15 42 56.4 +0.3**
comp=Z,3.9nm,0.6s,baz=170,slow=7.5,SNR=42
MKAR PcP **PcP 15 45 14.3 +0.7**
comp=Z,3.5nm,0.8s,baz=145,slow=4.4,SNR=4.6
MKAR S **S 15 48 32.6 -2.2**
comp=Z,0.4nm,0.8s,baz=170,slow=18,SNR=2.0
MKAR LR LR 16 02 46.2
comp=Z,37nm,19.5s,baz=160,slow=43
MAKZ Makanchi 37.30 347 *e*P **P 15 42 57.2 +0.4**
comp=Z,4.4nm,0.6s
MAKZ Makanchi 37.30 347 *e*P **P 15 42 57.2 +0.4**
MAKZ pmax pmax
comp=Z,4.0nm,0.6s
KK31 Karatay Array 37.98 332 *i* P **P 15 43 03.5 +1.0**
KK31 pmax pmax
comp=Z,10.0nm,1.0s
SONA0 Songino Array 38.60 14 *e*P **P 15 43 07.8 0.0**
SONA0 *e*PcP **PcP 15 45 19.0 +0.9**
SONA0 *e*ScP **ScP 15 48 53.6 -2.5**
SONM Songino Array 38.60 14 P **P 15 43 07.8 0.0**
comp=Z,1.3nm,0.4s,baz=195,slow=10,SNR=4.9
SONM PcP **PcP 15 45 19.0 +0.9**
comp=Z,9.0nm,0.7s,baz=203,slow=3.4,SNR=13
SONM ScP **ScP 15 48 53.6 -2.5**
comp=Z,1.5nm,0.5s,baz=176,slow=4.3,SNR=4.5
SONM LR LR 16 00 30.9
comp=Z,133nm,20.7s,baz=256,slow=38
ULN Ulaanbaatar 38.79 15⇓*e*P **P 15 43 09.0 -0.4**
ULN pmax pmax
comp=Z,3.0nm,1.0s
DGZ Jazzator, Alta 39.22 354 *de*P **P 15 43 14.4 +1.4**
DGZ pmax pmax
comp=Z,4.0nm,0.5s
TJN Taejon 39.91 45⇓*e*P **P 15 43 18.7 +0.1**
KS15 Wonju Array Si 40.82 43 *e*P **P 15 43 25.9 -0.3**
comp=Z,4.6nm,1.0s
KS15 *e*ScP **ScP 15 49 03.3 -1.5**
KSRS Korea Array 40.85 44 P **P 15 43 25.9 -0.5**
comp=Z,2.9nm,0.5s,baz=239,slow=8.2,SNR=28
KSRS ScP **ScP 15 49 03.3 -1.6**
comp=Z,1.4nm,0.8s,baz=256,slow=4.1,SNR=8.0
KSRS LR LR 16 01 50.3
comp=Z,61nm,18.1s,baz=242,slow=38
FAKI Fak Fak 40.90 107 *e*P **P 15 43 26.6 -0.5**
comp=Z,18nm,0.8s
JNU Nakatsue 40.95 51 *e*P **P 15 43 27.6 +0.2**
comp=Z,14nm,0.8s
PSA00 Pilbara Seismi 41.21 141 *e*P **P 15 43 27.6 -1.9**
comp=Z,16nm,0.8s
OTUK Ortayu 41.43 339 P **P 15 43 31.6 +0.6**
OTUK pmax pmax
comp=Z,12nm,0.6s
KURBB Kurchatov Arra 41.68 346 P **P 15 43 33.6 +0.7**
comp=Z,2.6nm,0.7s,baz=166,slow=7.8,SNR=15
KURBB PcP **PcP 15 45 28.4 +0.7**
comp=Z,3.5nm,0.6s,baz=158,slow=2.7,SNR=10
KURBB ScP **ScP 15 49 06.4 -1.5**
comp=Z,0.5nm,0.4s,baz=152,slow=3.3,SNR=4.4
GEYT Alibeck 41.70 317 P **P 15 43 36.3 +2.9**
comp=Z,45nm,0.5s,baz=146,slow=8.8,SNR=105
GEYT LR LR 16 03 25.4
comp=Z,43nm,19.3s,baz=130,slow=40
KURK Kurchatov 41.74 346 *e*P **P 15 43 34.2 +0.7**
comp=Z,5.2nm,1.0s
KURK Kurchatov 41.74 346⇑*e*P **P 15 43 33.9 +0.4**
KURK *i* *PP **pP 15 44 00.9 +2.3**
KURK pmax pmax
comp=Z,11nm,1.7s
FITZ Fitzroy Crossi 42.74 132 PcP **PcP 15 45 31.7 -0.1**
baz=336,slow=4.8
FITZ LR LR 16 02 25.0
comp=Z,51nm,19.6s,baz=306,slow=37
ZALV Zalesovo Beam 43.70 353 P **P 15 43 49.8 +0.5**
comp=Z,6.2nm,0.4s,baz=177,slow=8.6,SNR=40
ZALV S **S 15 50 10.5 -0.5**
comp=Z,2.1nm,0.8s,baz=169,slow=17,SNR=5.2
NVS Novosibirsk 44.79 352 *e*P **P 15 43 57.7 -0.2**
NVS *e* *e* 15 50 24.3
MORW Morawa 45.13 152 *e*P **P 15 44 00.3 -0.7**
comp=Z,10.0nm,1.1s
BVAR Borovoye Array 46.13 341 P **P 15 44 08.8 +0.2**
comp=Z,2.6nm,0.6s,baz=138,slow=8.5,SNR=23
BVAR PcP **PcP 15 45 42.7 -0.1**
comp=Z,5.8nm,0.8s,baz=163,slow=4.1,SNR=7.1
BVAR ScP **ScP 15 49 25.1 -0.9**
comp=Z,0.9nm,0.8s,baz=123,slow=5.5,SNR=3.8
BVAR S **S 15 50 45.1 -1.0**
comp=Z,3.3nm,0.8s,baz=148,slow=17,SNR=14
BRVK Borovoye 46.20 341 *e*P **P 15 44 08.4 -0.6**
comp=Z,5.2nm,0.8s
BRVK Borovoye 46.20 341 *c i*P **P 15 44 09.2 +0.1**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
USRK Ussuriysk Ar. 47.08 38 P **P 15 44 16.0 -0.1**
comp=Z,2.1nm,0.8s,baz=260,slow=6.6,SNR=5.6
RAYN Ar Rayn 47.37 292 *e*P **P 15 44 20.8 +2.0**
comp=Z,8.8nm,0.8s
RAYN Ar Rayn 47.37 292 *e*P **P 15 44 20.8 +2.0**
RAYN pmax pmax
comp=Z,9.0nm,0.8s
AB31 Akbulak array 47.47 331 *i* P **P 15 44 19.9 +0.9**
AB31 pmax pmax
comp=Z,6.0nm,0.5s
MAJO Matsushiro 47.83 50 *e*P **P 15 44 22.4 +0.3**
MAJO *e*PcP **PcP 15 45 48.7 -0.6**
MAJO *e*ScP **ScP 15 49 31.5 -2.1**
MAJO Matsushiro 47.83 50 *e*P **P 15 44 22.4 +0.3**
MAJO *e* 15 45 48.7
MAT Matsushiro 47.83 50 P **P 15 44 21.5 -0.6**
MJAR Matsushiro Arr 47.83 50 P **P 15 44 22.4 +0.3**
comp=Z,2.5nm,0.8s,baz=217,slow=6.5,SNR=10
MJAR PcP **PcP 15 45 48.7 -0.6**
comp=Z,1.8nm,0.7s,baz=243,slow=5.1,SNR=4.7
MJAR ScP **ScP 15 49 31.5 -2.1**
comp=Z,6.2nm,0.9s,baz=242,slow=4.2,SNR=14
MJAR LR LR 16 06 49.9
comp=Z,46nm,18.1s,baz=230,slow=39
NWAO Narrogin (SRO) 48.94 153 PcP **PcP 15 45 52.9 -0.3**
comp=Z,5.7nm,0.6s,baz=354,slow=7.1,SNR=4.2
AKTO Aktyubinsk 49.19 331 P **P 15 44 32.9 +0.7**
comp=Z,6.3nm,0.4s,baz=115,slow=7.7,SNR=28
AKTO PcP **PcP 15 45 54.0 +0.1**
comp=Z,5.9nm,0.7s,baz=99,slow=4.7,SNR=5.1
AKTO ScP **ScP 15 49 38.3 -0.7**
comp=Z,1.7nm,0.7s,baz=103,slow=6.1,SNR=3.7
AKTO S **S 15 51 26.8 -2.6**
comp=Z,1.0nm,0.4s,baz=279,slow=20,SNR=7.1
AKTO Aktyubinsk 49.19 331 P **P 15 44 32.4 +0.2**
AKTO pmax pmax
comp=Z,6.0nm,0.5s
KLR Kul'dur 49.85 32⇓*e*P **P 15 44 37.2 -0.1**
KLR pmax pmax
comp=Z,1.0nm,1.0s
AKT Akhty 50.43 316 *e*P **P 15 44 43.7 +1.8**
AKT *e**PP **pP 15 45 05.1 -2.4**
AKT *e* 15 45 56.4
AKT *e* 15 46 41.4
AKT pmax pmax
comp=Z,30nm,1.1s
WR1 Warramunga Arr 50.45 127 *e*PcP **PcP 15 45 59.0 -0.1**
WR1 *e*ScP **ScP 15 49 41.7 -3.3**
WRA Warramunga Arr 50.45 127 P **P 15 44 41.0 -1.3**
comp=Z,9.8nm,0.7s
WRA PcP **PcP 15 45 59.0 -0.1**
comp=Z,2.9nm,0.6s,baz=298,slow=5.4,SNR=3.0
WRA ScP **ScP 15 49 41.7 -3.3**
comp=Z,1.5nm,0.6s,baz=299,slow=5.2,SNR=5.8
WRA S **S 15 51 47.3 -0.5**
WRAB Tennant Creek 50.45 127 *ce*P **P 15 44 41.2 -1.1**
WRAB pmax pmax
comp=Z,9.0nm,0.6s
WB2 Warramunga Arr 50.46 127 *e*P **P 15 44 40.8 -1.5**
comp=Z,12nm,0.6s
GNI Garni 52.03 313 P **P 15 44 55.5 +1.6**
comp=Z,16nm,0.7s,baz=227,slow=22,SNR=3.8
GNI Garni 52.03 313 *e*P **P 15 44 53.5 -0.4**
comp=Z,23nm,0.9s
GNI Garni 52.03 313 *d i*P **P 15 44 56.0 +2.1**
GNI pmax pmax
comp=Z,72nm,0.9s
GNI Garni 52.03 313 P **P 15 44 56.4 +2.5**
SNR=5.6
AS31 Alice Springs 52.24 131 *e*PcP **PcP 15 46 05.6 0.0**
AS31 *e*ScP **ScP 15 49 49.8 -2.9**
ASAR Alice Springs 52.24 131 P **P 15 44 53.8 -1.8**
comp=Z,10nm,0.5s,baz=304,slow=7.3,SNR=206
ASAR PcP **PcP 15 46 05.6 0.0**
comp=Z,5.2nm,0.8s,baz=310,slow=3.7,SNR=8.8
ASAR ScP **ScP 15 49 49.8 -2.9**
comp=Z,2.2nm,1.0s,baz=302,slow=3.9,SNR=8.1
ASAR S **S 15 52 07.6 -4.7**
comp=Z,2.1nm,0.8s,baz=300,slow=14,SNR=14
ASAR LR LR 16 08 13.6
comp=Z,78nm,19.1s,baz=280,slow=37
GROC Groznyy 52.44 317 *e*P **P 15 44 57.3 +0.6**
GROC *e**SP **sP 15 45 35.9 +1.2**
GROC *e* 15 46 53.7
GROC *e*S **S 15 52 16.3 +1.8**
GROC *e**SS **sS 15 53 01.4 +3.3**
GROC pmax pmax
comp=Z,31nm,0.5s
SVE Sverdlovsk 52.56 338 *e*P **P 15 44 58.0 +0.6**
SVE pmax pmax
comp=Z,19nm,0.8s
FORT Forrest 52.94 142 *e*P **P 15 44 59.9 -0.7**
comp=Z,26nm,1.0s
ARU Arti 53.06 337 P **P 15 45 01.6 +0.6**
comp=Z,2.4nm,0.6s,baz=136,slow=7.0,SNR=12
ARU PcP **PcP 15 46 08.2 +0.1**
comp=Z,2.0nm,0.5s,baz=77,slow=4.5,SNR=5.3
ARU S **S 15 52 20.6 -2.0**
comp=Z,0.4nm,0.3s,baz=7.6,slow=15,SNR=3.6
ARU Arti 53.06 337 *e*P **P 15 45 01.7 +0.6**
comp=Z,7.2nm,0.6s
ARU *e*PcP **PcP 15 46 08.2 +0.1**
ARU Arti 53.06 337 *c i*P **P 15 45 01.3 +0.2**
ARU 15 46 07.3
ARU 15 46 59.8
ARU S **S 15 52 27.3 +4.8**
ARU SS **SS 15 56 06.1 +2.9**
ARU pmax pmax
comp=Z,7.0nm,0.7s
AKH Akhalkalaki 53.35 314⇑*i*P **P 15 45 05.6 +1.9**
ZEI Tsey 53.56 316 *e*P **P 15 45 05.7 +0.5**
ZEI pmax pmax
comp=Z,13nm,0.4s
NCK Nalchik 54.03 317⇓*e*P **P 15 45 10.2 +1.8**
NCK pmax pmax
comp=Z,8.0nm,0.9s
ABPO Ambohimpanom 54.30 237 *e*P **P 15 45 10.7 -0.1**
comp=Z,14nm,0.8s
ABPO Ambohimpanom 54.30 237 *e*P **P 15 45 10.7 -0.1**
ABPO pmax pmax
comp=Z,14nm,0.8s
NEY Neytrino 54.53 316⇓*e*P **P 15 45 14.6 +2.3**
NEY pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 54.59 317 P **P 15 45 13.6 +1.2**
comp=Z,13nm,0.9s,baz=114,slow=8.3,SNR=22
KBZ LR LR 16 11 07.0
comp=Z,26nm,18.1s,baz=124,slow=39
BCA Borcka 54.69 314⇓*i*P **P 15 45 14.5 +1.3**
BATM Batumi 54.69 314⇑*i*P **P 15 45 15.0 +1.8**
KIV Kislovodsk 54.81 317 *e*P **P 15 45 14.7 +0.5**
comp=Z,37nm,0.8s
KIV Kislovodsk 54.81 317 *e*P **P 15 45 15.3 +1.1**
KIV *e*S **S 15 52 50.5 +3.7**
KIV pmax pmax
comp=Z,129nm,0.9s
KIV pmax pmax
comp=Z,70nm,4.2s
KIV MLR MLR
comp=Z,54nm,17.0s
KIV Kislovodsk 54.81 317 P **P 15 45 15.9 +1.7**
SNR=16
COEN Coen 55.05 115 *e*P **P 15 45 15.6 -0.5**
comp=Z,10nm,1.1s
MANU Manus Island 55.10 100 *e*P **P 15 45 16.5 0.0**
comp=Z,7.6nm,0.6s
ASF Jabal al Asfar 56.16 302 P **P 15 45 24.6 +0.5**
comp=Z,2.7nm,0.8s,baz=88,slow=4.4,SNR=4.6
PMG Port Moresby 57.02 109 *e*P **P 15 45 28.8 -1.4**
comp=Z,28nm,0.8s
PMG Port Moresby 57.02 109 *e*P **P 15 45 28.8 -1.4**
PMG pmax pmax
comp=Z,28nm,0.8s
KMBO Kilima Mbogo 57.11 262 P **P 15 45 34.3 +3.1**
comp=Z,0.8nm,0.3s,baz=57,slow=6.3,SNR=5.5
KMBO PcP **PcP 15 46 26.1 +1.2**
comp=Z,0.5nm,0.3s,baz=79,slow=9.9,SNR=4.1

EIL Elat 57.48 298 P **P 15 45 34.4 +1.1**
comp=Z,6.6nm,0.6s,baz=124,slow=3.6,SNR=9.7
KIRV Kirov 58.20 335 P **P 15 45 37.8 0.0**
comp=Z,8.2nm,0.5s,baz=110,slow=3.8,SNR=4.6
BBOO Buckleboo 59.34 138 *eP* **P 15 45 44.8 -1.2**
comp=Z,16nm,0.8s
VORD Divnogorie 59.57 324 *eP* **P 15 45 46.7 -0.6**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 59.74 324 *eP* **P 15 45 47.5 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.6s
BR101 Keskin Array S 60.12 310 *e*ScP **ScP 15 50 26.0 -1.3**
BR131 Keskin Array S 60.12 310 P **P 15 45 51.6 +0.1**
SNR=6.5
BRTR Keskin Array B 60.12 310 P **P 15 45 51.1 -0.4**
comp=Z,9.9nm,0.7s,baz=123,slow=7.3,SNR=59
BRTR ScP **ScP 15 50 26.0 -1.3**
comp=Z,1.6nm,0.9s,baz=106,slow=4.5,SNR=4.2
RABL Rabaul 60.27 101 *eP* **P 15 45 53.5 +0.7**
comp=Z,36nm,0.6s
CTA Charters Tower 60.28 120 P **P 15 45 52.7 -0.1**
comp=Z,12nm,0.9s,baz=294,slow=9.0,SNR=11
CTAO Charters Tower 60.28 120 *eP* **P 15 45 52.2 -0.5**
comp=Z,18nm,1.1s
CTAO Charters Tower 60.28 120 *eP* **P 15 45 52.2 -0.5**
CTAO pmax pmax
comp=Z,18nm,1.1s
BZK Bozkurt 60.32 312 ⇓*iP* **P 15 45 53.6 +1.0**
ILGA Ilgaz 60.33 311 *eP* **P 15 45 54.0 +0.9**
comp=Z,87nm,0.6s
LPSR Galich'ya Gora 60.41 325 *eP* **P 15 45 52.6 -0.5**
LPSR pmax pmax
comp=Z,20nm,1.2s
SIM Simferopol' 60.95 316 *eP* **P 15 45 57.6 +0.7**
SIM *e**PP **pwP 15 46 26.0 0.0**
SIM S **S 15 54 06.0 -0.6**
SIM pmax pmax
comp=Z,19nm,0.8s
SIM MLR MLR
comp=Z,60nm,18.0s
MOS Moscow 62.35 328 *eP* **P 15 46 03.4 -2.7**
MOS *e* 15 46 28.3
STKA Stephens Creek 62.53 134 P **P 15 46 06.2 -1.4**
comp=Z,5.2nm,0.5s,baz=318,slow=5.0,SNR=32
STKA LR LR 16 16 17.3
comp=Z,62nm,18.4s,baz=220,slow=39
STKA Stephens Creek 62.53 134 *eP* **P 15 46 06.9 -0.7**
comp=Z,1.0nm,0.6s
STKA Stephens Creek 62.53 134 *eP* **P 15 46 06.9 -0.7**
STKA pmax pmax
comp=Z,1.0nm,0.6s
MBAR Mbarara 63.35 264 ⇓*eP* **P 15 46 16.3 +2.6**
MBAR pmax pmax
comp=Z,8.0nm,1.0s
TIXI Tiksi 64.63 12 *eP* **P 15 46 20.1 -0.7**
comp=Z,5.7nm,0.6s
TIXI Tiksi 64.63 12*c iP* **P 15 46 20.4 -0.4**
TIXI pmax pmax
comp=Z,5.0nm,0.6s
TLCR 64.67 315 ⇑*iP* **P 15 46 21.9 +0.4**
TIRR Tirgusor 64.82 314 ⇓*iP* **P 15 46 22.8 +0.3**
PHSR Pinarhisar 65.02 311 ⇑*iP* **P 15 46 23.8 -0.1**
CFR Carcaliu 65.14 315 ⇓*iP* **P 15 46 25.0 +0.4**
HARR Harsova 65.20 314 ⇑*iP* **P 15 46 25.2 +0.2**
AKASG Malin Array Be 65.56 321 P **P 15 46 26.0 -1.2**
comp=Z,4.3nm,0.6s,baz=83,slow=5.1,SNR=8.2
EZN Ezine 65.70 309 ⇑*iP* **P 15 46 28.3 0.0**
PETK Petropavlovsk- 66.14 36 LR LR 16 18 40.2
comp=Z,34nm,19.5s,baz=237,slow=39
VRI Vrincioaia 66.23 315 ⇑*iP* **P 15 46 32.9 +1.2**
PLOR Plostina 66.28 315 ⇑*iP* **P 15 46 33.2 +1.2**
TESR Tescani 66.39 316 ⇑*iP* **P 15 46 32.7 0.0**
IDI Anoyia 66.44 304 P **P 15 46 33.2 -0.1**
comp=Z,8.6nm,0.6s,baz=111,slow=8.6,SNR=1.4
MLR Muntele Rosu 66.72 315 P **P 15 46 35.9 +1.1**
comp=Z,16nm,0.8s,baz=134,slow=2.6,SNR=26
MLR Muntele Rosu 66.72 315 *eP* **P 15 46 34.3 -0.6**
MLR Muntele Rosu 66.72 315 ⇑*iP* **P 15 46 35.7 +0.8**
MLR Muntele Rosu 66.72 315 *eP* **P 15 46 34.3 -0.6**
DOPR Dopca 67.17 315 ⇑*iP* **P 15 46 37.7 +0.1**
VOIR 67.33 315 ⇓*iP* **P 15 46 38.5 -0.2**
BURAR Bucovina Array 67.54 317 ⇑*iP* **P 15 46 40.2 +0.2**
TOO Toolangi 68.36 138 *eP* **P 15 46 45.3 +0.1**
comp=Z,12nm,1.1s
TOO Toolangi 68.36 138 *eP* **P 15 46 45.3 +0.1**
TOO pmax pmax
comp=Z,12nm,1.1s
AGG Agios Georgios 68.71 308 *eP* **P 15 46 46.2 -1.2**
comp=Z,18nm,1.2s
AGG Agios Georgios 68.71 308 *eP* **P 15 46 46.2 -1.2**
AGG pmax pmax
comp=Z,18nm,1.2s
LVZ Lovozero 68.71 340 *eP* **P 15 46 47.5 +0.6**
comp=Z,7.9nm,0.8s
LVZ Lovozero 68.71 340 *eP* **P 15 46 47.5 +0.6**
LVZ pmax pmax
comp=Z,8.0nm,0.8s
ITM Ithomi 68.93 306 *eP* **P 15 46 48.1 -0.7**
comp=Z,19nm,0.8s
HNR Honiara 69.09 104 P **P 15 46 49.0 -1.1**
comp=Z,40nm,0.7s,baz=220,slow=2.8
HERR Herculane 69.12 314 ⇑*iP* **P 15 46 49.3 -0.5**
DRGR 69.12 316 ⇓*iP* **P 15 46 50.7 +0.9**
ARMA Armidale 69.20 128 *eP* **P 15 46 50.8 +0.2**
comp=Z,15nm,0.9s
TRPA Tarpa 69.39 317 ⇓*iP* **P 15 46 51.2 -0.2**
CAN Canberra 69.58 134 *eP* **P 15 46 52.0 -0.8**
comp=Z,5.2nm,0.8s
CAN Canberra 69.58 134 *eP* **P 15 46 52.0 -0.8**
CAN pmax pmax
comp=Z,5.0nm,0.8s
LSZ Lusaka 69.60 249 *eP* **P 15 46 53.1 -0.2**
comp=Z,5.2nm,0.6s
LSZ Lusaka 69.60 249 *eP* **P 15 46 53.1 -0.2**
LSZ pmax pmax
comp=Z,5.0nm,0.6s
MDVR Moldovita 69.61 314 ⇓*iP* **P 15 46 52.2 -0.6**
SIRR Siria 69.78 315 ⇓*iP* **P 15 46 54.5 +0.6**
FIA1 FINESS Array S 69.93 332 *eP* **P 15 46 54.0 -0.5**
comp=Z,6.6nm,0.8s
FINES FINESS Array B 69.94 332 P **P 15 46 54.3 -0.2**
comp=Z,5.2nm,0.7s,baz=93,slow=5.9,SNR=24
PSZ Piszkesteto 71.14 317 *eP* **P 15 47 02.5 +0.3**
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 71.14 317 ⇓*iP* **P 15 47 02.2 +0.1**
PSZ Piszkesteto 71.14 317 *eP* **P 15 47 02.5 +0.3**
PSZ pmax pmax
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 71.14 317 EP **P 15 47 02.0 -0.1**
PDG Podgorica 71.23 311 ⇑*iP* **P 15 47 01.9 -0.8**
MORH Mrgy, Hungar 71.87 315 ⇑EP **P 15 47 06.0 -0.4**
VYHS Vyhne 71.89 318 *eP* **P 15 47 06.7 +0.1**
CSKK Cskako 72.20 316 EP **P 15 47 13.1 +4.7**
ARCES ARCESS Array B 72.42 340 P **P 15 47 09.9 +0.7**
comp=Z,8.3nm,0.7s,baz=90,slow=7.0,SNR=25
ARCES LR LR 16 22 20.6
comp=Z,46nm,18.8s,baz=132,slow=38
ARE0 ARCESS Array S 72.42 340 *eP* **P 15 47 10.0 +0.7**
OKC Ostrava-Krasne 72.44 319 *eP* **P 15 47 10.4 +0.6**
OKC *e* 15 47 34.4
OKC Ostrava-Krasne 72.44 319 *eP* **P 15 47 10.4 +0.6**
OKC epP **pP 15 47 34.4 -2.7**
TAU Tasmania Unive 72.48 142 *eP* **P 15 47 09.9 -0.2**
comp=Z,13nm,1.0s
TAU Tasmania Unive 72.48 142 *eP* **P 15 47 09.9 -0.2**
TAU pmax pmax
comp=Z,13nm,1.0s
JAVC Velka Javorina 72.69 318 *eP* **P 15 47 12.3 +0.9**
BLY Banja Luka 72.82 314 ⇑*iP* **P 15 47 12.4 +0.2**
MORC Moravsky Berou 72.83 319 *eP* **P 15 47 12.4 +0.3**
comp=Z,8.6nm,0.9s
MORC Moravsky Berou 72.83 319 ⇓*iP* **P 15 47 12.4 +0.3**
MORC Moravsky Berou 72.83 319 *eP* **P 15 47 12.5 +0.3**
MORC pmax pmax
comp=Z,9.0nm,0.9s
MORC Moravsky Berou 72.83 319 *eP* **P 15 47 12.7 +0.5**
TIP Timpagrande 73.05 308 *eP* **P 15 47 14.3 +0.6**
comp=Z,5.0nm,0.7s
BEHE Becsehely 73.17 315 EP **P 15 47 14.1 -0.1**
DPC Dobruska-Polom 73.65 319 *eP* **P 15 47 18.0 +1.0**
DPC *e* 15 47 42.1
DPC Dobruska-Polom 73.65 319 *eP* **P 15 47 18.0 +1.0**
DPC epP **pP 15 47 42.1 -2.3**
BILL Bilibino 73.75 22 *iP* **P 15 47 18.4 +1.3**

BILL *i* 15 47 31.3
BILL *i* 15 47 54.6
BILL pmax pmax
comp=Z,1.0nm,1.2s
BILL MLR MLR
comp=Z,61nm,21.0s
CHVC Chvalec 73.83 320 *eP* **P 15 47 18.6 +0.6**
CONA Conrad Observa 73.85 317 *eP* **P 15 47 18.3 +0.1**
comp=Z,1.5nm,0.6s
ARSA Arzberg 74.06 316 *iP* **P 15 47 19.0 -0.4**
comp=Z,4.2nm,0.7s
TREC Trest 74.14 318 *eP* **P 15 47 20.4 +0.6**
TREC Trest 74.14 318 *eP* **P 15 47 20.4 +0.6**
SOKA Soboth 74.38 316 *eP* **P 15 47 21.7 +0.4**
comp=Z,12nm,1.0s,SNR=6.6
GOPC GO Pecny, Ondr 74.62 319 *eP* **P 15 47 23.0 +0.4**
GOPC GO Pecny, Ondr 74.62 319 *eP* **P 15 47 23.0 +0.4**
OBKA Obir 74.71 315 *eP* **P 15 47 23.7 +0.4**
comp=Z,6.8nm,0.7s
PRU Pruhonice 74.78 319 *eP* **P 15 47 24.1 +0.6**
PRU *e* 15 47 47.7
PRU Pruhonice 74.78 319 *eP* **P 15 47 24.1 +0.6**
PRU epP **pP 15 47 47.7 -3.2**
MOA Molln 74.92 317 *eP* **P 15 47 24.1 -0.3**
comp=Z,3.3nm,1.0s
LBTB Lobatse 75.01 240 *eP* **P 15 47 27.0 +1.6**
comp=Z,16nm,0.6s
LBTB Lobatse 75.01 240 *eP* **P 15 47 27.0 +1.6**
LBTB pmax pmax
comp=Z,16nm,0.6s
BRG Berggiesshubel 75.18 320 *eP* **P 15 47 26.3 +0.5**
comp=Z,6.8nm,0.8s
BRG *e* 15 47 49.8
comp=Z,7.3nm,1.2s
GERES GERESS Array B 75.31 318 P **P 15 47 27.0 +0.3**
comp=Z,6.1nm,0.7s,baz=86,slow=5.6,SNR=56
MYKA Terra Mystica 75.34 315 *iP* **P 15 47 26.4 -0.4**
comp=Z,3.9nm,0.8s
KHC Kasperske Hory 75.39 318 *eP* **P 15 47 27.3 +0.2**
KHC *e* 15 47 51.7
KHC Kasperske Hory 75.39 318 *eP* **P 15 47 27.3 +0.2**
KHC epP **pP 15 47 51.7 -2.8**
KBA Koelnbreinsper 75.54 316 *iP* **P 15 47 27.6 -0.6**
comp=Z,9.2nm,1.2s
HFS Hagfors 75.71 329 P **P 15 47 27.7 -0.9**
comp=Z,2.8nm,0.5s,baz=103,slow=4.1,SNR=16
CLL Collm 75.78 320 *eP* **P 15 47 29.0 -0.2**
comp=Z,4.0nm,0.9s
CLL *e* 15 47 45.0
CLL *i* 15 47 52.9
ABTA Abfaltersbach 76.11 316 *eP* **P 15 47 30.7 -0.6**
comp=Z,4.0nm,0.8s
BOSA Boshof 76.52 237 P **P 15 47 35.0 +1.1**
comp=Z,13nm,0.6s,baz=75,slow=3.9,SNR=39
BOSA LR LR 16 16 06.8
comp=Z,55nm,20.6s,baz=60,slow=32
BOSA Boshof 76.52 237 *eP* **P 15 47 35.5 +1.6**
comp=Z,15nm,0.6s
BOSA Boshof 76.52 237 *eP* **P 15 47 35.5 +1.6**
BOSA pmax pmax
comp=Z,15nm,0.6s
WTTA Wattenberg 76.70 316 *iP* **P 15 47 34.2 -0.5**
comp=Z,8.7nm,0.5s
WATA Walderalm 76.74 316 *iP* **P 15 47 34.2 -0.7**
comp=Z,4.2nm,0.5s
SPA0 Spitsbergen Ar 76.97 348 *eP* **P 15 47 36.3 +0.8**
comp=Z,41nm,1.1s
NB2 NORSAR Subarra 76.97 330 P **P 15 47 34.8 -1.0**
comp=Z,1.5nm,0.7s,baz=91,slow=5.9
NOA NORSAR Array B 76.97 330 P **P 15 47 35.2 -0.6**
comp=Z,3.9nm,0.9s,baz=92,slow=5.6,SNR=8.6
NOA LR LR 16 24 43.7
comp=Z,32nm,19.1s,baz=80,slow=38
SQTA Sankt Quirin 77.00 316 *iP* **P 15 47 35.8 -0.5**
comp=Z,10.0nm,0.5s
MOTA Moosalm 77.06 316 *eP* **P 15 47 36.0 -0.7**
comp=Z,4.2nm,0.5s,SNR=5.2
RETA Reutte 77.29 316 *iP* **P 15 47 37.7 -0.2**
comp=Z,9.1nm,0.5s,SNR=6.2
FETA Feichten 77.33 316 *eP* **P 15 47 38.0 -0.2**
comp=Z,5.1nm,0.6s
DAVA Damuels 77.90 316 *eP* **P 15 47 41.3 0.0**
comp=Z,11nm,0.6s,SNR=5.9
DAVOX Davos/Dischmat 77.92 316 P **P 15 47 41.8 +0.2**
comp=Z,7.4nm,0.5s,baz=142,slow=4.2,SNR=11
KEST Kesra 79.10 304 P **P 15 47 48.6 +0.5**
comp=Z,8.5nm,0.6s,baz=264,slow=0.6,SNR=9.0
TSUM Tsumeb 80.42 248 *eP* **P 15 47 57.7 +2.2**
comp=Z,5.5nm,1.0s
MAW Mawson 81.13 191 P **P 15 47 58.4 +0.3**
comp=Z,7.1nm,0.9s,baz=7.8,slow=6.4,SNR=18
MAW Mawson 81.13 191 *eP* **P 15 47 58.8 +0.7**
comp=Z,1.4nm,0.8s
MAW Mawson 81.13 191 *eP* **P 15 47 58.8 +0.7**
MAW pmax pmax
comp=Z,1.0nm,0.8s
WIN Windhoek 81.72 245 *eP* **P 15 48 04.6 +2.1**
comp=Z,9.7nm,0.7s
WIN Windhoek 81.72 245 *eP* **P 15 48 04.6 +2.1**
WIN pmax pmax
comp=Z,10.0nm,0.7s
EKA Eskdalemuir Ar 85.05 325 P **P 15 48 19.4 +0.8**
comp=Z,5.5nm,0.8s,baz=94,slow=6.1,SNR=9.9
SYO Syowa Base 87.88 197 ⇑*eP* **P 15 48 31.0 -1.0**
SYO Syowa Base 87.88 197 ⇓*e*PcP **P 15 48 32.7 +0.7**
ESDC Sonseca Array 88.91 310 P **P 15 48 37.8 +0.1**
comp=Z,0.6nm,0.5s,baz=61,slow=3.5,SNR=3.7
TORD Torodi Ar. Bea 89.31 283 P **P 15 48 39.2 -0.8**
comp=Z,4.3nm,0.4s,baz=72,slow=4.9,SNR=11
TORD PKKPbc **PKKPbc 16 06 15.3 -0.1**
comp=Z,0.7nm,0.6s,baz=271,slow=2.9,SNR=4.0
SUMG Summit 91.28 347 *eP* **P 15 48 49.3 +0.8**
comp=Z,4.7nm,0.7s
SUMG Summit 91.28 347 *eP* **P 15 48 49.3 +0.8**
SUMG pmax pmax
comp=Z,5.0nm,0.7s
ILAR Eielson Array 92.41 22 P **P 15 48 52.9 -0.5**
comp=Z,1.2nm,0.8s,baz=302,slow=3.9,SNR=15
ILAR PKKPbc **PKKPdf 16 06 06.8 +0.9**
comp=Z,0.7nm,0.5s,baz=142,slow=1.4,SNR=12
JPK Jack Peak 94.46 25 *eP* **P 15 49 04.4 +1.4**
INK Inuvik 94.50 16 *eP* **P 15 49 03.3 +0.4**
comp=Z,4.1nm,0.8s
INK Inuvik 94.50 16 *eP* **P 15 49 03.3 +0.4**
INK pmax pmax
comp=Z,4.0nm,0.8s
MENT Mentasta 94.58 23 *eP* **P 15 49 03.4 -0.1**
RES Resolute Bay 94.64 2 *eP* **P 15 49 04.5 +1.0**
comp=Z,14nm,0.9s
RES Resolute Bay 94.64 2 *eP* **P 15 49 04.5 +1.0**
RES pmax pmax
comp=Z,14nm,0.9s
DIV Divide 94.76 25 *eP* **P 15 49 02.2 -2.2**
VNDA Vanda 95.80 168 P **P 15 49 08.2 -0.4**
comp=Z,1.1nm,0.6s,baz=288,slow=6.0,SNR=14
VNDA Vanda 95.80 168 *eP* **P 15 49 08.2 -0.4**
comp=Z,2.5nm,1.0s
VNDA Vanda 95.80 168 *eP* **P 15 49 08.2 -0.4**
VNDA pmax pmax
comp=Z,3.0nm,1.0s
DBIC Dimbokro 96.89 278 LR LR 16 31 54.0
comp=Z,31nm,19.1s,baz=102,slow=35
YKA Yellowknife Ar 103.86 13 PKKPbc PKKPbc 16 05 33.8 -3.7
comp=Z,0.9nm,0.8s,baz=153,slow=2.7,SNR=6.6
ULM Lac du Bonnet 118.78 7 PKP **PKPdf 15 54 29.7 -1.1**
comp=Z,5.9nm,0.7s,baz=232,slow=0.8,SNR=4.6
PDAR Pinedale Array 122.79 20 PKP **PKPdf 15 54 38.8 -0.2**
comp=Z,4.9nm,0.7s,baz=157,slow=0.6,SNR=50
PDAR PKKPbc **PKKPbc 16 04 30.7 -2.8**
comp=Z,0.6nm,0.6s,baz=134,slow=5.2,SNR=7.2
NVAR Mina Array Bea 122.85 29 PKP **PKiKP 15 54 40.2 +0.8**
comp=Z,5.5nm,0.6s,baz=318,slow=2.0,SNR=44
CCUT Cedar City 125.83 26 *e*PKPdf **PKiKP 15 54 46.5 +1.0**
WVT Waverly 133.43 1 *e*PKPdf **PKPdf 15 54 59.4 +0.3**
WVT Waverly 133.43 1 *e*PKIKP **PKPdf 15 54 59.4 +0.3**
MIAR Mount Ida 134.53 8 *e*PKPdf **PKiKP 15 55 02.4 -0.3**
MIAR Mount Ida 134.53 8 *e*PKIKP **PKiKP 15 55 02.4 -0.3**
TXAR Lajitas Array 136.92 22 PKP **PKPdf 15 55 06.5 +0.5**
comp=Z,2.6nm,0.5s,baz=192,slow=0.7,SNR=44
TXAR SKPbc **SKPbc 15 58 28.2 -0.7**
comp=Z,3.2nm,0.9s,baz=263,slow=1.8,SNR=18
FDF Fort de France 144.35 315 *e*PKPdf PKPbc 15 55 18.6 +0.4
FDF Fort de France 144.35 315 *e*PKIKP PKPbc 15 55 18.6 +0.4
MTP Monte Pirata 144.69 324 *e*PKPbc **PKPdf 15 55 19.9 -0.2**
TRQA Tornquist 144.96 215 *e*PKPbc **PKPab 15 55 19.7 +0.1**
TRQA Tornquist 144.96 215 *e*PKIKP **PKPab 15 55 19.7 +0.1**

SJG San Juan 145.02 325 PKPbc **PKPdf 15 55 20.6 0.0**
comp=Z,18nm,0.4s,baz=35,slow=2.7,SNR=7.4
PLCA Paso Flores 146.90 203 PKPbc **PKPbc 15 55 26.0 +0.7**
comp=Z,26nm,0.8s,baz=193,slow=3.8,SNR=36
CPUP Villa Florida 148.34 237 PKPbc **PKPbc 15 55 29.3 -0.3**
comp=Z,11nm,0.8s,baz=122,slow=4.0,SNR=12
PTGA Pitinga 151.81 289 *e*PKPbc **PKiKP 15 55 38.6 -0.1**
ROSC El Rosal 160.36 321 PKPab **PKPab 15 56 25.1 +0.4**
comp=Z,8.3nm,0.3s,baz=197,slow=19,SNR=3.6
LPAZ La Paz 161.26 251 PKP **PKPdf 15 55 45.4 +0.7**
comp=Z,2.3nm,0.9s,baz=43,slow=2.4,SNR=6.2
LPAZ PKPab **PKPab 15 56 26.9 -2.0**
comp=Z,1.6nm,0.7s,baz=102,slow=1.8,SNR=4.8

*ISCJB **28** 15:38:10.9±0.3,21°.51S±0°.02×68°.62W±0°.04, h151km±3km, mb4.3/8, Error ellipse: s-maj=5.9km s-min=3.8km az=163.3*
*SJA **28** 15:38:10.9±1.1,21°.50S×68°.53W, h142km±7km, ML2.9*
*NEIC **28** 15:38:12.2±1.4,21°.50S×68°.68W, h143km±7km, mb4.1/8, ML4.0(GUC), Error ellipse: s-maj=19.4km s-min=6.7km az=86.0*
*IDC **28** 15:38:12.4±1.1,21°.67S×67°.89W, h109km±20km, mb4.4/2, mb1 3.8/5, mb1mx3.4/32, mbtmp4.2/5, Error ellipse: s-maj=46.2km s-min=19.0km az=117.0*
*GUC **28** 15:38:13.1±0.6,21°.47S×68°.56W, h130km±4km, ML4.0*
ISC 28 15:38:11.5±0.7,21°.51S±0°.03×68°.56W±0°.04, h141km±6km, n58, σ1.920/89, mb4.4/8, 8C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time (h m s)	Res (ISC)
PB09	**IPOC Station P**	**0.69**	**246**	*iP*	**Pn**	**Pn**	**15 38 33.7**	**+0.5**
PB09				*i S*	**Sn**	**Sn**	**15 38 49.6**	**-0.1**
PB09	**IPOC Station P**	**0.69**	**246**	⇑*iP*	**Pn**	**Pn**	**15 38 33.7**	**+0.5**
PB09				*i S*	**Sn**	**Sn**	**15 38 49.3**	**-0.4**
PB01	**IPOC Station P**	**0.98**	**298**	*e*Pn	**Pn**	**Pn**	**15 38 35.7**	**+0.3**
PB01				*e*Sn	**Sn**	**Sn**	**15 38 53.6**	**+0.1**
PB01	**IPOC Station P**	**0.98**	**298**	⇑*iP*	**Pn**	**Pn**	**15 38 35.1**	**-0.2**
PB01				*e*S	**Sn**	**Sn**	**15 38 52.4**	**-1.1**
PB01				IAML			15 38 54.8	
comp=N,3μm,0.4s								
LVC	**Limon Verde**	**1.14**	**196**	P	**Pn**	**Pn**	**15 38 37.7**	**+0.6**
comp=N,31nm,0.3s,baz=13,slow=7.8,SNR=15								
LVC				S	**Sn**	**Sn**	**15 38 56.4**	**-0.2**
comp=N,164nm,0.3s,baz=285,slow=4.0,SNR=6.6								
LVC				LR	LR		15 39 04.8	
comp=N,37nm,19.7s,baz=62,slow=39								
LVC	**Limon Verde**	**1.14**	**196**	*e*Pn	**Pn**	**Pn**	**15 38 37.8**	**+0.6**
LVC				*e*Sn	**Sn**	**Sn**	**15 38 57.3**	**+0.6**
LVC	**Limon Verde**	**1.14**	**196**	*i P*	**Pn**	**Pn**	**15 38 37.6**	**+0.4**
LVC				*i S*	**Sn**	**Sn**	**15 38 56.8**	**+0.1**
LVC	**Limon Verde**	**1.14**	**196**	*e*P	**Pn**	**Pn**	**15 38 37.9**	**+0.7**
LVC				*i S*	**Sn**	**Sn**	**15 38 56.5**	**-0.2**
PB03	**IPOC Station P**	**1.23**	**244**	*i P*	**Pn**	**Pn**	**15 38 38.5**	**+0.7**
PB03				*i S*	**Sn**	**Sn**	**15 38 58.1**	**+0.3**
PB03	**IPOC Station P**	**1.23**	**244**	*e*P	**Pn**	**Pn**	**15 38 38.3**	**+0.6**
PB03				*e*S	**Sn**	**Sn**	**15 38 57.6**	**-0.2**
PB07	**IPOC Station P**	**1.25**	**260**	*i P*	**Pn**	**Pn**	**15 38 38.7**	**+0.7**
PB07				*i S*	**Sn**	**Sn**	**15 38 58.5**	**+0.3**
PB07	**IPOC Station P**	**1.25**	**260**	⇑*iP*	**Pn**	**Pn**	**15 38 38.8**	**+0.7**
PB07				*e*S	**Sn**	**Sn**	**15 38 57.8**	**-0.3**
PB07				IAML			15 39 00.2	
comp=E,3μm,0.4s								
PB02	**IPOC Station P**	**1.26**	**279**	*i P*	**Pn**	**Pn**	**15 38 38.5**	**+0.5**
PB02				*i S*	**Sn**	**Sn**	**15 38 58.9**	**+0.7**
PB02	**IPOC Station P**	**1.26**	**279**	⇑*iP*	**Pn**	**Pn**	**15 38 38.1**	**+0.1**
PB02				*e*S	**Sn**	**Sn**	**15 38 57.5**	**-0.7**
PB02				IAML			15 38 59.9	
comp=N,4μm,0.3s								
PB02				IAML			15 39 03.2	
comp=Z,3μm,0.4s								
PB08	**IPOC Station P**	**1.47**	**338**	*i P*	**Pn**	**Pn**	**15 38 40.9**	**+0.3**
PB08				*i S*	**Sn**	**Sn**	**15 39 03.3**	**+0.6**
PB08	**IPOC Station P**	**1.47**	**338**	⇑*iP*	**Pn**	**Pn**	**15 38 41.1**	**+0.6**
PB08				*e*S	**Sn**	**Sn**	**15 39 02.3**	**-0.3**
PB06	**IPOC Station P**	**1.51**	**218**	*i P*	**Pn**	**Pn**	**15 38 41.6**	**+0.9**
PB06				*i S*	**Sn**	**Sn**	**15 39 04.1**	**+1.1**
PB04	**IPOC Station P**	**1.68**	**241**	*e*P	**Pn**	**Pn**	**15 38 44.1**	**+1.4**
PB04				*i S*	**Sn**	**Sn**	**15 39 06.9**	**+0.5**
PB04				IAML			15 39 16.5	
comp=N,807nm,0.2s								
GO01	**Chusmiza**	**1.93**	**342**	*e*Pn	**Pn**	**Pn**	**15 38 46.2**	**+0.4**
GO01				*e*Sn	**Sn**	**Sn**	**15 39 13.1**	**+1.1**
GO01	**Chusmiza**	**1.93**	**342**	⇑*iP*	**Pn**	**Pn**	**15 38 46.2**	**+0.4**
GO01				*i S*	**Sn**	**Sn**	**15 39 11.9**	**-0.1**
PB11	**IPOC Station P**	**2.02**	**329**	*e*Pn	**Pn**	**Pn**	**15 38 46.8**	**+0.3**
PB11				*e*Sn	**Sn**	**Sn**	**15 39 13.7**	**+0.3**
PB11	**IPOC Station P**	**2.02**	**329**	*i P*	**Pn**	**Pn**	**15 38 46.5**	**-0.1**
PB11				*i S*	**Sn**	**Sn**	**15 39 13.5**	**+0.1**
PB11	**IPOC Station P**	**2.02**	**329**	⇑*iP*	**Pn**	**Pn**	**15 38 46.6**	**+0.1**
PB11				*e*S	**Sn**	**Sn**	**15 39 12.6**	**-0.8**
PB11				IAML			15 39 15.5	
comp=E,1μm,0.3s								
PB05	**IPOC Station P**	**2.02**	**228**	*i P*	**Pn**	**Pn**	**15 38 48.6**	**+2.1**
PB05				*i S*	**Sn**	**Sn**	**15 39 13.8**	**+0.4**
PSGCX	**Pisagua**	**2.40**	**322**	*i P*	**Pn**	**Pn**	**15 38 50.8**	**-0.3**
PSGCX				*i S*	**Sn**	**Sn**	**15 39 20.9**	**-0.7**
PSGC	**Pisagua**	**2.40**	**322**	*e*P	**Pn**	**Pn**	**15 38 51.6**	**+0.5**
PSGC				*i S*	**Sn**	**Sn**	**15 39 20.8**	**-0.7**
PSGC				IAML			15 39 22.1	
comp=E,707nm,0.5s								
MNMC	**Minye Minye**	**2.56**	**338**	*e*Pn	**Pn**	**Pn**	**15 38 54.2**	**+0.9**
MNMC	**Minye Minye**	**2.56**	**338**	⇑*iP*	**Pn**	**Pn**	**15 38 53.9**	**+0.6**
MNMC				*i S*	**Sn**	**Sn**	**15 39 25.2**	**-0.1**
MNMCX	**Minye Minye**	**2.56**	**338**	*i P*	**Pn**	**Pn**	**15 38 53.9**	**+0.6**
MNMCX				*i S*	**Sn**	**Sn**	**15 39 25.9**	**+0.5**
PB10	**IPOC Station P**	**2.71**	**222**	*e*Pn	**Pn**	**Pn**	**15 38 55.5**	**+0.7**
YJA	**Yavi**	**2.91**	**104**	*i P*	**Pn**	**Pn**	**15 38 57.9**	**+0.1**
YJA				*i S*	**Sn**	**Sn**	**15 39 33.7**	**+0.2**
YJA				IAML			15 39 36.2	
comp=Z,21nm,0.8s								
PB12	**IPOC Station P**	**3.33**	**330**	*i P*	**Pn**	**Pn**	**15 39 02.1**	**-0.7**
PB12	**IPOC Station P**	**3.33**	**330**	*e*P	**Pn**	**Pn**	**15 39 02.4**	**-0.5**
HJA	**Humahuaca**	**3.37**	**121**	*i P*	**Pn**	**Pn**	**15 39 04.7**	**+1.0**
HJA				IAML			15 39 05.7	
comp=Z,40nm,0.4s								
HJA				*i S*	**Sn**	**Sn**	**15 39 46.6**	**+2.6**
GO02	**Mina Guanaco**	**3.75**	**194**	*e*Pn	**Pn**	**Pn**	**15 39 09.5**	**+0.9**
AZAP	**Zapla**	**4.21**	**131**	*i P*	**Pn**	**Pn**	**15 39 14.3**	**-0.2**
AZAP				IAML			15 39 17.4	
comp=Z,8.5nm,0.3s								
AZAP				*i S*	**Sn**	**Sn**	**15 40 04.4**	**+1.0**
LPAZ	**La Paz**	**5.21**	**5**	P	**Pn**	**Pn**	**15 39 30.3**	**+2.0**
comp=Z,0.8nm,0.3s,baz=246,slow=2.6,SNR=16								
LPAZ	**La Paz**	**5.21**	**5**	*e*Pn	**Pn**	**Pn**	**15 39 29.9**	**+1.8**
LPAZ	**La Paz**	**5.21**	**5**	*i P*	**Pn**	**Pn**	**15 39 30.1**	**+1.8**
GO03	**Copiap**	**6.24**	**194**	*e*Pn	**Pn**	**Pn**	**15 39 40.6**	**-0.9**
GO04	**Tololo Observa**	**8.86**	**193**	*e*Pn	**Pn**	**Pn**	**15 40 15.0**	**-1.6**
SIV	**San Ignacio**	**8.97**	**54**	P	**Pn**	**Pn**	**15 40 14.1**	**-3.9**
comp=Z,1.1nm,0.3s,baz=244,slow=12,SNR=17								
SIV				S	Sn		15 41 46.6	-11
comp=Z,0.2nm,0.3s,baz=136,slow=24,SNR=7.8								
CFA	**Coronel Fontan**	**10.06**	**178**	P	**Pn**	**Pn**	**15 40 30.9**	**-1.6**
comp=Z,0.4nm,0.3s,baz=344,slow=15,SNR=1.8								
CFA				S	**Sn**	**Sn**	**15 42 17.6**	**-6.1**
comp=Z,0.6nm,0.3s,baz=311,slow=19,SNR=2.2								
NNA	**Nana**	**12.35**	**319**	*e*Pn	Pn		15 40 59.0	-3.7
GO05	**Huala**	**13.77**	**192**	*e*P	**P**		**15 41 26.2**	**+1.6**
**

*NEIC **28** 15:53:11.7±0.0, 19°.33N×68°.57W, h143km, MD2.9(RSPR), After RSPR.*

RSPR 28 15:53:11.7, 19°.33N×68°.57W, h143km±4km, MD2.9/6, 1C-4D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.83	167	eP	Pn	15 53 34.1	-0.3
PCDR	Punta Cana, DR	0.83	167	eP	Pn	15 53 34.9	+0.4
PCDR				eS	Sn	15 53 51.7	0.0
PCDR	Punta Cana, DR	0.83	167	ePn	Pn	15 53 34.9	+0.4
PCDR				eSn	Sn	15 53 51.7	0.0
DR12	Loma Pena Alta	0.93	235	iP	Pn	15 53 35.0	-0.3
DR12				eS	Sn	15 53 53.3	0.0
IDE	Isla Desecheo	1.40	132	eP	Pn	15 53 39.8	0.0
IDE	Isla Desecheo	1.40	132	eS	Sn	15 54 01.2	+0.1
IDE	Isla Desecheo	1.40	132	ePn	Pn	15 53 39.8	0.0
IDE				eSn	Sn	15 54 01.2	+0.1
SDD	Santo Domingo	1.54	236	ePn	Pn	15 53 40.6	-0.5
AGPR	Aguadilla, PR	1.63	121	eP	Pn	15 53 41.7	-0.4
AGPR	Aguadilla, PR	1.63	121	eS	Sn	15 54 05.7	+0.3
AGP	Aguadilla	1.64	124	ePn	Pn	15 53 41.7	-0.6
AGP				eSn	Sn	15 54 05.7	+0.1
BANI	BANI	1.93	241	ePn	Pn	15 53 42.5	-3.2
EMPR	Esperanza - Ma	2.11	113	ePn	Pn	15 53 48.0	+0.3
SDDR	Presa de Saban	2.59	263	ePn	Pn	15 53 50.3	-3.3
MTP	Monte Pirata	3.11	113	eP	Pn	15 54 00.7	+0.4
MTP	Monte Pirata	3.11	113	eS	Sn	15 54 39.2	+1.3

MEX 28 15:59:58.4±0.8, 18°.01N×103°.16W, h1km, MD3.6, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.33	327	eP	Pg	16 00 03.8	-1.0
MMIG				i S	Sg	16 00 09.6	+0.5
EZ5V		1.52	344	eP	Pn	16 00 23.4	-3.6
EZ5V				i S	Sg	16 00 42.8	-4.6

MEX 28 16:23:24.0±0.5, 16°.05N×97°.02W, h30km±6km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PANG	Puerto Angel	0.65	126	i P	Pb	16 23 35.3	-1.6
PANG				i S	Sb	16 23 43.2	-2.5
HUIG	Huatulco	0.92	107	eP	Pn	16 23 38.6	-2.3
HUIG				eS	Sn	16 23 50.1	-3.0
VHO	Vista Hermosa	1.06	15	i P	Pn	16 23 40.6	-2.4
VHO				eS	Sn	16 23 53.6	-3.2

*ISCJB **28** 16:29:31.8±0.7, 16°.1S±0°.1×174°.42W±0°.08, h35km, mb4.2/10, Error ellipse: s-maj=15.6km s-min=10.6km az=12.8*
*NEIC **28** 16:29:31.8±1.6, 16°.06S×174°.43W, h23km±8km, mb4.3/10, Error ellipse: s-maj=18.2km s-min=4.0km az=222.0*
*IDC **28** 16:29:31.8±67.0, 16°.20S×174°.59W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.6/33, mbtmp4.0/3, Error ellipse: s-maj=1265.0km s-min=203.3km az=79.0*

ISC 28 16:29:33.2±0.8, 16°.1S±0°.1×174°.42W±0°.09, h35km, n20, σ1°.64/20, mb4.4/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.23	126	ePn	Pn	16 30 48.9	0.0
FUNA	Funafuti	9.75	320	ePn	Pn	16 31 50.6	-0.5
RAO	Raoul Island	13.51	193	ePn	Pn	16 32 42.1	-0.3
RAR	Rarotonga	14.79	112	eP	P	16 33 05.0	-0.5
MARNC	Mare, Loyalty	17.46	249	eP	P	16 33 35.0	-0.1
	63nm,1.1s						
DZM	Mont Dzumac	19.04	249	eP	P	16 33 50.3	-2.3
	6.6nm,1.0s						
PPT	Papeete	23.83	97	eP	P	16 34 43.2	0.0
HNR	Honiara	25.84	282	eP	P	16 35 00.1	-1.5
	31nm,1.1s						
CAN	Canberra	37.84	233	eP	P	16 36 45.2	-1.6
	6.8nm,1.1s						
TOO	Toolangi	41.28	231	eP	P	16 37 15.5	+0.1
	1.4nm,0.8s						
STKA	Stephens Creek	42.85	240	P	P	16 37 30.4	+2.2
	0.9nm,0.7s,baz=99,slow=13,SNR=4.5						
STKA	Stephens Creek	42.85	240	eP	P	16 37 30.4	+2.2
	0.3nm,0.8s						
WB2	Warramunga Arr	48.72	257	eP	P	16 38 15.3	+0.5
	3.5nm,1.1s						
WRAB	Tennant Creek	48.73	257	eP	P	16 38 11.7	-3.1
	17nm,1.1s						
WR1	Warramunga Arr	48.73	257	eP	P	16 38 16.5	+1.6
WRA	Warramunga Arr	48.73	257	P	P	16 38 16.5	+1.6
	0.4nm,0.4s,baz=88,slow=7.8,SNR=1.8						
AS31	Alice Springs	48.97	252	eP	P	16 38 18.1	+1.5
	0.8nm,0.7s						
ASAR	Alice Springs	48.97	252	P	P	16 38 19.1	+2.4
	3.4nm,0.6s,baz=90,slow=8.4,SNR=136						
FORT	Forrest	54.24	243	eP	P	16 38 57.4	+1.5
	7.6nm,0.8s						
CPRX	Cap Rock	83.13	53	eP	P	16 41 56.4	+0.4

EAF 28 16:33:24.4±0.3, 3°.75S×35°.77E, h37km±12km, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOND	Kondoa	1.16	179	i P	Pn	16 33 44.0	-0.2
KOND				i S	Sn	16 33 58.3	-0.5
KIBA	Kibaya	1.75	153	i P	Pn	16 33 52.1	-0.2
KIBA				i S	Sn	16 34 12.3	-1.1

*NEIC **28** 16:41:44.0±0.0, 49°.44N×119°.81W, h10km, MD2.6(SEA), ML2.0(OTT), After OTT.*
NEIC Felt [II] at Penticton.

PGC 28 16:41:44.4±0.4, 49°.44N×119°.81W, h10km, ML2.0/7, 17km Wsw of Penticton, Bc British Columbia, Canada, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPB	Hope	1.05	268	P	Pg	16 42 03.9	-0.8
HOPB				S	Sg	16 42 17.2	-1.1
B06A	Marblemount	1.44	231	ePn	Pn	16 42 07.5	-3.0
B06A	Marblemount	1.44	231	P	Pn	16 42 09.8	-0.6
B06A				S	Sb	16 42 29.5	-0.1
MBW	Mount Baker	1.52	245	P	Pn	16 42 11.5	-0.4
VDB	Vedder Mountai	1.56	256	P	Pn	16 42 12.4	+0.2
GPW	Glacier Peak	1.59	214	Pn	Pn	16 42 12.4	-0.4
LLLB	Lillooet	1.78	312	ePn	Pb	16 42 16.3	-0.9
LLLB				eSn	Sb	16 42 39.4	0.0
LLLB	Lillooet	1.78	312	Pn	Pn	16 42 15.3	0.0
LLLB				Sn	Sn	16 42 38.5	+0.6
JCW	Jim Creek	1.88	229	Pn	Pn	16 42 16.5	0.0
C09A	Chrisman Ranch	1.93	148	ePn	Pn	16 42 17.1	-0.2
C09A				eSn	Sn	16 42 41.8	+0.2
C09A	Chrisman Ranch	1.93	148	Sn	Sn	16 42 42.1	+0.5
SLEB	Sale Mountain	2.04	31	Pn	Pn	16 42 18.7	-0.3
SLEB				Sn	Sn	16 42 42.6	-2.0
NEW	Newport	2.13	122	ePn	Pn	16 42 19.2	-0.9
NEW				eSn	Sn	16 42 47.2	+0.6
WSLR	Whistler	2.13	290	Sg	Sb	16 42 50.3	+0.6
LTY	Liberty	2.26	195	ePn	Pn	16 42 22.8	+1.0
LTY				eSn	Sn	16 42 49.5	-0.3
LTY	Liberty	2.26	195	Pg	Pb	16 42 24.6	-0.6
LTY				Sn	Sn	16 42 49.2	-0.5
LTY				Sg	Sb	16 42 54.7	+1.4
SNB	Saturna Island	2.31	255	Sg	Sg	16 42 56.6	-1.9
D08A	Wollman Farm,	2.46	166	ePn	Pn	16 42 25.1	+0.5
D08A				eSg	Sb	16 42 58.7	-0.2
BLBC	Blue River	2.63	8	Pn	Pn	16 42 26.9	-0.3
SHB	Sechelt	2.65	275	Sg	Sb	16 43 05.6	+0.8
D05A	Enumclaw	2.68	214	eSn	Sn	16 43 02.2	+2.1
NLLB	Nanaimo Lost L	2.74	267	Sg	Sb	16 43 07.7	+0.6
LZB	Mount Lazard	2.77	254	Sg	Sb	16 43 09.6	+1.7
GHNB	Nanoose	2.90	269	Sg	Sb	16 43 13.2	+1.6
YOUB	Youbou, Lake C	2.97	261	Sg	Sb	16 43 14.7	+0.9
E08A	Dider Farm, El	2.99	170	ePn	Pn	16 42 30.6	-1.3
HAWA	Hanford	3.05	176	ePn	Pn	16 42 30.3	-2.5
HAWA				eSn	Sn	16 43 08.6	-0.8
MGB	Mount Grey	3.23	264	Sg	Sb	16 43 24.5	+3.2
WALA	Waterton Lakes	3.88	93	ePn	Pn	16 42 43.1	-1.1
I07A	Izee	5.36	178	ePn	Pn	16 43 03.2	-1.4
PINE	Pine Mountain	5.70	188	ePn	Pn	16 43 05.9	-3.4
BOZ	Bozeman (W)	6.74	122	ePn	Pn	16 43 23.2	-0.4
K05A	Summer Lake	6.76	187	ePn	Pn	16 43 23.1	-0.7

JMA 28 16:53:43.2±0.2, 24°.93N×123°.30E, h23km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.58	214	P	Pb	16 53 54.4	-0.2
JYNG				eS	Sb	16 54 02.2	-0.2
IRIF	Iriomote-Funau	0.71	146	P	Pb	16 53 56.6	-0.3
IRIF				eS	Sb	16 54 06.1	-0.1
JKRS	Kuro-shima	0.94	137	P	Pb	16 54 00.6	-0.3
JKRS				eS	Sb	16 54 12.9	-0.1
JISG	Ishigakijimahi	0.98	110	P	Pb	16 54 00.9	-0.6

TAP 28 16:54:41.7, 24°.48N×121°.93E, h11km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.15	332	i P	Pb	16 54 46.2	-0.3
	baz=335						
TWC				i S	Sg	16 54 48.4	+0.8
	baz=335						
NANB	Nanao	0.17	254	eP	Pb	16 54 46.5	-0.4
	baz=253						
NANB				eS	Sg	16 54 49.4	+1.3
	baz=253						
ENA	Nanau	0.18	255	i P	Pb	16 54 46.5	-0.5
	baz=253						
ENA				i S	Sg	16 54 49.5	+1.3
	baz=253						
EOS1	EOS1	0.20	68	eP	Pb	16 54 46.6	-0.7
	baz=68						
EOS1				eS	Sg	16 54 50.1	+1.3
	baz=68						
ENTT	Nioudou	0.37	297	P	Pb	16 54 50.4	+0.1
	baz=296						
ENTT				i S	Sb	16 54 55.8	-0.3
	baz=296						
NACB	Ninganchiao	0.43	225	eP	Pb	16 54 50.7	-0.5
	baz=225						
NACB				eS	Sg	16 54 56.5	+0.8
	baz=225						
ETLH	Xiulin Townshi	0.49	237	eP	Pg	16 54 51.7	+0.5
	baz=236						
ETLH				eS	Sb	16 54 59.7	+0.2
	baz=236						
NNSB	Datong	0.50	265	eP	Pb	16 54 52.3	-0.3
	baz=264						
NNSB				eS	Sb	16 54 59.3	-0.6
	baz=264						
NNS	Nan Shan	0.51	266	P	Pg	16 54 52.0	+0.4
	baz=265						
NNS				S	Sb	16 54 60.0	-0.2
	baz=265						
YHNB	Yeheng	0.54	291	eP	Pb	16 54 53.3	+0.1
	baz=291						
YHNB				eS	Sb	16 55 00.8	-0.2
	baz=291						
NSK	Sanguang	0.56	291	P	Pb	16 54 53.4	-0.2
	baz=291						
NSK				S	Sb	16 55 01.5	0.0
	baz=291						
WHF	Hehuan Shan	0.69	242	eP	Pb	16 54 55.7	-0.2
	baz=241						
WHF				eS	Sb	16 55 05.6	-0.1
	baz=241						
CHGB	Renai	0.80	239	eS	Sb	16 55 09.3	+0.6
	baz=238						

MEX 28 16:57:23.8±0.3, 25°.50N×109°.90W, h5km, MD3.5, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.44	195	eP	Pn	16 57 46.2	-4.3

MEX 28 17:01:05.2±0.3, 25°.44N×109°.86W, h5km, MD3.6, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.40	197	eP	Pn	17 01 27.6	-3.7

*ISCJB **28** 17:01:54.7±0.3, 67°.08N±0°.02×21°.00E±0°.06, h0km, Error ellipse: s-maj=3.5km s-min=3.2km az=150.2*
*UPP **28** 17:01:54.9±0.1, 67°.05N×20°.89E, h0km, ML1.6, Explosion*
*HEL **28** 17:01:56.3, 67°.06N×21°.07E, h0km, ML1.9, Explosion*
*IDC **28** 17:01:57.6±1.3, 67°.06N×21°.29E, h0km, mb1 2.7/3, mb1mx2.7/36, mbtmp2.6/3, ML1.8/3, Error ellipse: s-maj=24.7km s-min=10.0km az=103.0*

ISC 28 17:01:55.9±0.8, 67°.06N±0°.02×20°.96E±0°.02, h0km, n37, σ1°.33/47, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.16	291	P	Pg	17 01 57.9	-1.1
DUNU				S	Sg	17 02 00.7	-0.3
DUNU	Dundret	0.16	291	i P	Pg	17 01 57.9	-1.1
DUNU				i S	Sg	17 02 00.7	-0.3
MASU	Masugnsbyn	0.56	45	P	Pg	17 02 06.1	-0.6
MASU	Masugnsbyn	0.56	45	i P	Pg	17 02 06.1	-0.6
ERTU	Ertsjaerv	0.71	136	P	Pg	17 02 08.4	-1.0
ERTU	Ertsjaerv	0.71	136	eP	Pg	17 02 08.2	-1.2
PAJU	Pajala	0.85	92	P	Pg	17 02 11.5	-0.6
PAJU	Pajala	0.85	92	i P	Pg	17 02 11.5	-0.6
HARU	Harads	0.91	180	P	Pg	17 02 11.7	-1.5
HARU	Harads	0.91	180	i P	Pg	17 02 11.7	-1.5
KUA	Kurravaara	0.93	345	P	Pg	17 02 12.3	-1.2
KUA	Kurravaara	0.93	345	eP	Pg	17 02 12.3	-1.2
RATU	Laukkuluspa	0.93	326	P	Pg	17 02 12.5	-1.2
RATU	Laukkuluspa	0.93	326	eP	Pg	17 02 12.5	-1.2
SALU	Saltoluokta	1.00	290	P	Pg	17 02 13.8	-1.3
SALU	Saltoluokta	1.00	290	eP	Pg	17 02 13.8	-1.3
LANU	Lannavaara	1.07	21	P	Pg	17 02 15.3	-0.9
LANU	Lannavaara	1.07	21	ePB	Pg	17 02 15.4	-0.9
NIKU	Nikkaluokta	1.09	318	P	Pg	17 02 15.4	-1.5
NIKU	Nikkaluokta	1.09	318	eP	Pg	17 02 15.4	-1.5
SJUU	Sjulsmark	1.58	170	P	Pn	17 02 24.1	-1.1
SJUU	Sjulsmark	1.58	170	eP	Pn	17 02 24.1	-1.1
TOF	Tornio	1.67	125	eP	Pn	17 02 25.7	-0.7
TOF				MSG		17 02 45.3	
	comp=Z,13nm,0.2s						
TOF				eSN	Sb	17 02 48.9	-0.1
HEF	Hetta	1.70	36	eP	Pn	17 02 26.3	-0.5
HEF				MSG		17 02 46.3	
	comp=Z,7.9nm,0.2s						
HEF				eSG	Sn	17 02 48.8	-0.4
KIF	Kilpisjarvi	1.95	358	eP	Pb	17 02 31.6	-0.6
KIF	Kilpisjarvi	1.95	358	ePG	Pb	17 02 31.4	-0.8
KIF				MSG		17 02 55.6	
	comp=Z,18nm,0.2s						
KIF				eSG	Sg	17 02 58.7	+0.2
RNF	Rovaniemi	2.05	101	eP	Pn	17 02 31.6	+0.1
RNF				eSG	Sg	17 03 00.8	-0.9
KTK1	Kautokeino	2.14	23	eP	Pb	17 02 34.2	-1.2
SGF	Sodankyl	2.20	78	ePB	Pn	17 02 34.1	+0.5
SGF				eSG	Sg	17 03 07.1	+0.7
BURU	Burvik	2.50	176	ePB	Pn	17 02 38.5	+0.8
	baz=354						
OUL	Oulu	2.83	132	ePB	Pb	17 02 45.0	-2.2
ARCES	ARCESS Array B	3.00	32	Pn	Pn	17 02 45.2	+0.6
	comp=Z,0.2nm,0.3s,baz=211,slow=13,SNR=13						
ARCES				Sn	Sn	17 03 22.9	+1.6
	comp=Z,0.6nm,0.3s,baz=220,slow=22,SNR=8.3						
OUF	Merijarvi	3.12	148	eP	Pn	17 02 47.8	+1.5
OUF				MSG		17 03 27.2	
	comp=Z,1.7nm,0.2s						
MSF	Maaselka	3.44	106	eP	Pn	17 02 51.9	+1.2
HEMU	Hemsoen	4.58	197	eP	Pn	17 03 08.1	+1.9
	baz=16						
FINES	FINESS Array B	6.07	156	Pn	Pn	17 03 28.0	+1.3
	comp=Z,0.1nm,0.3s,baz=351,slow=14,SNR=8.1						
FINES				Sn	Sn	17 04 37.1	+0.4
	comp=Z,0.1nm,0.3s,baz=342,slow=22,SNR=1.3						
NOA	NORSAR Array B	7.40	220	Pn	Pn	17 03 46.6	+1.7
	comp=Z,0.0nm,0.3s,baz=54,slow=18,SNR=1.5						
NOA				Sn	Sn	17 05 14.4	+4.9
	comp=Z,0.0nm,0.3s,baz=45,slow=27,SNR=1.2						

IDC 28 17:10:31.7±6.6, 17°.80S×178°.31W, h600km±74km, mb3.3/9, mb1 3.4/9, mb1mx3.1/32, mbtmp4.2/9, Error ellipse: s-maj=43.9km s-min=25.5km az=117.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.76	241	P	P	17 17 06.6	+0.3
	2.5nm,0.5s,baz=75,slow=8.1,SNR=8.5						
JAY	Jayapura	42.97	286	P	P	17 17 38.9	-1.0
	9.5nm,0.9s,baz=152,slow=18,SNR=4.8						
WRA	Warramunga Arr	44.74	259	P	P	17 17 53.5	0.0
	1.8nm,0.4s,baz=91,slow=8.0,SNR=10						
ASAR	Alice Springs	44.91	254	P	P	17 17 54.5	-0.1
	5.6nm,0.7s,baz=90,slow=8.0,SNR=72						
ASAR				PcP	PcP	17 19 22.0	-1.0
	0.7nm,0.4s,baz=104,slow=3.8,SNR=10.0						
MJAR	Matsushiro Arr	67.88	323	P	P	17 20 32.2	+0.6
	1.2nm,0.6s,baz=168,slow=5.5,SNR=5.2						
PETK	Petropavlovsk-	73.60	345	P	P	17 21 05.3	+0.5
	1.4nm,0.6s,baz=95,slow=8.4,SNR=6.7						
SEY	Seymchan	83.69	347	P	P	17 21 58.4	+0.3
	1.2nm,0.4s,baz=258,slow=22,SNR=5.3						
ILAR	Eielson Array	85.76	13	P	P	17 22 06.7	-1.4
	0.4nm,0.4s,baz=221,slow=4.8,SNR=9.0						
TXAR	Lajitas Array	85.86	58	P	P	17 22 09.6	+0.1
	0.4nm,0.8s,baz=214,slow=6.0,SNR=5.2						
BRTR	Keskin Array B	144.77	315	PKP	PKPdf	17 29 01.9	+0.2
	1.3nm,0.8s,baz=130,slow=5.0,SNR=6.0						
GERES	GERESS Array B	147.53	345	PKPbc	PKPbc	17 29 09.1	-0.4
	0.6nm,0.5s,baz=31,slow=3.4,SNR=6.9						

*SOF **28** 17:13:45.0, 39°.59N×21°.64E, h15km*
*ATH **28** 17:13:46.2, 39°.84N×21°.46E, h20km±1km, ML3.3/12, Error ellipse: s-maj=1.3km s-min=0.7km az=326.0*
*PDG **28** 17:13:47.5±0.5, 39°.84N×21°.43E, h14km, ML3.3/11, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*BEO **28** 17:13:47.5±0.5, 39°.82N×21°.45E, h9km±3km, ML3.4/6*
*THE **28** 17:13:47.0, 39°.83N×21°.47E, h6km, ML3.2/12, Error ellipse: s-maj=0.4km s-min=0.2km az=327.0*
*TIR **28** 17:13:47.4, 39°.83N×21°.51E, h9km, Md3.4/7*

ISC 28 17:13:46.8±0.9, 39°.83N±0°.02×21°.48E±0°.01, h9km±6km, n153, σ0°.98/200, 11C-14D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPRO	Kipourio	0.15	324	P	Pg	17 13 50.2	+0.1
KPRO				S	Sg	17 13 52.7	+0.3
KPRO	Kipourio	0.15	324	P	Pg	17 13 50.5	+0.4
KPRO				S	Sg	17 13 53.0	+0.6
KPRO				AML	AML	17 13 53.7	
	comp=E,78123μm,0.5s						
KPRO				AML	AML	17 13 53.8	
	comp=N,50080μm,0.5s						
MEV	Metsovon	0.20	256	P	Pg	17 13 50.8	-0.1
MEV	Metsovon	0.20	256	P	Pg	17 13 50.9	-0.1
PENT	Pentalofos	0.45	324	P	Pg	17 13 55.2	-0.4
PENT				S	Sg	17 14 02.0	+0.5
PENT	Pentalofos	0.45	324	P	Pg	17 13 55.2	-0.4
PENT				S	Sg	17 14 01.2	-0.3
PENT				AML	AML	17 14 02.9	
	comp=E,8266μm,0.4s						
PENT				AML	AML	17 14 07.2	
	comp=N,7746μm,0.5s						
THL	Klokotos Trika	0.49	123	P	Pg	17 13 56.3	-0.1
THL				S	Sg	17 14 03.7	+0.9
THL	Klokotos Trika	0.49	123	P	Pg	17 13 56.4	+0.1
THL				S	Sg	17 14 04.3	+1.5
THL				AML	AML	17 14 07.4	
	comp=N,10760μm,0.3s						
THL				AML	AML	17 14 09.4	
	comp=E,9041μm,0.4s						
JAN	Janina	0.52	250	P	Pg	17 13 55.7	-1.1
JAN				S	Sg	17 14 03.6	+0.1
JAN				AML	AML	17 14 04.0	
	comp=E,3603μm,0.8s						
JAN				AML	AML	17 14 04.3	
	comp=N,3494μm,0.4s						
KZN	Kozani	0.52	25	P	Pg	17 13 56.9	-0.1
KZN				S	Sg	17 14 04.8	+0.9
KZN	Kozani	0.52	25	P	Pg	17 13 57.0	-0.1
KZN				S	Sg	17 14 05.0	+1.1
KZN				AML	AML	17 14 07.4	
	comp=N,8359μm,0.4s						
KZN				AML	AML	17 14 08.3	
	comp=E,11504μm,0.3s						
LRSO	Larissa Observ	0.72	103	P	Pg	17 14 00.6	-0.1
LRSO				S	Sg	17 14 11.3	+1.1
LRSO	Larissa Observ	0.72	103	P	Pg	17 14 00.8	+0.1
LRSO				S	Sb	17 14 11.4	-0.1
LRSO				AML	AML	17 14 16.2	
	comp=E,13999μm,0.3s						
LRSO				AML	AML	17 14 17.9	
	comp=N,19221μm,0.5s						
LIT	Litokhoron	0.82	71	P	Pg	17 14 02.3	-0.3
LIT				S	Sb	17 14 14.7	+0.2
LIT	Litokhoron	0.82	71	P	Pg	17 14 02.4	-0.3
LIT				AML	AML	17 14 20.7	
	comp=E,5086μm,0.2s						
LIT				AML	AML	17 14 23.1	
	comp=N,4677μm,0.6s						
IGT	Igoumenitsa	0.93	252	ePg	Pb	17 14 03.8	-1.4
IGT				eSg	Sb	17 14 16.8	-0.9
IGT	Igoumenitsa	0.93	252	P	Pb	17 14 04.4	-0.8
IGT	Igoumenitsa	0.93	252	i PG	Pg	17 14 05.5	+0.7
IGT				i SG	Sn	17 14 20.4	+0.8
IGT	Igoumenitsa	0.93	252	P	Pb	17 14 03.6	-1.5
EVR	Evrytania	0.95	164	P	Pb	17 14 04.4	-1.1
EVR				S	Sg	17 14 19.0	+1.6
EVR	Evrytania	0.95	164	P	Pb	17 14 04.1	-1.4
EVR				AML	AML	17 14 21.5	
	comp=N,3610μm,0.3s						
EVR				AML	AML	17 14 22.2	
	comp=E,3105μm,0.4s						
FNA	Florina	0.95	355	ePg	Pb	17 14 04.5	-1.0
FNA				eSg	Sb	17 14 18.2	-0.1
FNA	Florina	0.95	355	P	Pb	17 14 04.9	-0.6
FNA				S	Sg	17 14 18.7	+1.2
AGG	Agios Georgios	1.04	141	P	Pb	17 14 06.7	-0.4
AGG	Agios Georgios	1.04	141	P	Pb	17 14 06.9	-0.2
AGG				AML	AML	17 14 26.8	
	comp=E,3351μm,0.3s						
AGG				AML	AML	17 14 28.7	
	comp=N,2365μm,0.4s						
SRN	Sarande	1.14	273	P	Pb	17 14 08.4	-0.2
SRN				S	Sn	17 14 25.0	+0.4
SRN	Sarande	1.14	273	i PN	Pg	17 14 10.1	+1.5
SRN				i SN	Sn	17 14 25.4	+0.8
KASA	Kassiopi	1.19	266	P	Pn	17 14 08.9	-0.7
TSLK	Tsoukalades, L	1.19	213	P	Pn	17 14 09.3	-0.3
TSLK	Tsoukalades, L	1.19	213	P	Pn	17 14 09.7	0.0
FYTO	Fytoko, Volos	1.21	110	P	Pn	17 14 09.6	-0.2
FYTO				S	Sg	17 14 27.3	+1.7
FYTO	Fytoko, Volos	1.21	110	P	Pn	17 14 09.7	-0.1
TPE	Tepelena	1.22	293	i PN	Pg	17 14 10.7	+0.5
TPE				i SN	Sg	17 14 28.7	+2.8
LKD2	Lefkada island	1.22	212	P	Pn	17 14 09.6	-0.5
LKD2	Lefkada island	1.22	212	P	Pn	17 14 10.0	-0.1
KEK	Kerkira	1.30	265	P	Pn	17 14 10.6	-0.6
KEK				S	Sg	17 14 29.3	+0.7
KEK	Kerkira	1.30	265	P	Pn	17 14 10.5	-0.6

NEO	**Neokhori**	**1.45 111**	P	**Pn**	**17 14 13.5**	**+0.3**
KALE	**Kalithea**	**1.53 160**	P	**Pn**	**17 14 14.3**	**-0.1**
KALE	**Kalithea**	**1.53 160**	P	**Pn**	**17 14 14.7**	**+0.3**
KALE			AML	AML	17 14 42.8	
	comp=N,1940μm,0.8s					
KALE			AML	AML	17 14 47.5	
	comp=E,1536μm,0.9s					
TRIZ	**Trizonia**	**1.54 162**	P	**Pn**	**17 14 14.4**	**0.0**
TRIZ	**Trizonia**	**1.54 162**	P	**Pn**	**17 14 15.0**	**+0.7**
LAKA	**Lakka**	**1.64 166**	P	**Pb**	**17 14 17.2**	**0.0**
SMIA	**Simia**	**1.65 125**	P	**Pb**	**17 14 17.5**	**+0.2**
VLO	**Vlora**	**1.65 293**	*i* PN	**Pg**	**17 14 18.6**	**+0.2**
VLO			*i* SN	**Sg**	**17 14 41.7**	**+2.0**
ATAL	**Atalanti**	**1.65 133**	P	**Pn**	**17 14 15.6**	**-0.4**
ATAL	**Atalanti**	**1.65 133**	P	**Pn**	**17 14 16.2**	**+0.2**
ATAL			AML	AML	17 14 46.2	
	comp=E,506μm,0.9s					
ATAL			AML	AML	17 14 53.2	
	comp=N,689μm,0.9s					
LKR	**Lokris**	**1.67 135**	P	**Pn**	**17 14 17.0**	**+0.8**
VAY	**Valandovo**	**1.70 29**	P	**Pn**	**17 14 16.7**	**0.0**
VAY	**Valandovo**	**1.70 29**	*i* Pn	**Pn**	**17 14 16.9**	**+0.2**
KNT	**Kendrikon**	**1.71 39**	P	**Pn**	**17 14 16.9**	**+0.1**
KNT	**Kendrikon**	**1.71 39**	P	**Pn**	**17 14 17.4**	**+0.5**
SOH	**Sokhos**	**1.74 55**	P	**Pn**	**17 14 17.2**	**0.0**
SOH			S	**Sb**	**17 14 40.4**	**-0.6**
SOH	**Sokhos**	**1.74 55**	P	**Pn**	**17 14 17.3**	**0.0**
RLS	**Riolos of Patr**	**1.77 180**	P	**Pb**	**17 14 19.0**	**-0.4**
VLS	**Valsamata**	**1.79 203**	P	**Pb**	**17 14 19.5**	**-0.3**
KLV	**Kalavryta, Ach**	**1.86 163**	P	**Pb**	**17 14 20.2**	**-0.8**
PROD	**Prodromos**	**1.92 144**	P	**Pn**	**17 14 19.1**	**-0.6**
STIP	**Stip**	**1.94 16**	*i* Pn	**Pb**	**17 14 21.5**	**-0.7**
TIR	**Tirane**	**1.95 321**	⇓*i*P	**Pn**	**17 14 20.9**	**+0.8**
TIR	**Tirane**	**1.95 321**	S	**Sb**	**17 14 46.9**	**0.0**
TIR	**Tirane**	**1.95 321**	*i* PN	**Pb**	**17 14 23.2**	**+0.8**
TIR			*i* SN	**Sg**	**17 14 48.5**	**-0.9**
OUR	**Ouranopolis**	**1.98 75**	P	**Pn**	**17 14 20.5**	**0.0**
OUR	**Ouranopolis**	**1.98 75**	P	**Pn**	**17 14 20.8**	**+0.2**
MRKA	**Markates**	**1.99 124**	P	**Pn**	**17 14 20.6**	**0.0**
MRKA	**Markates**	**1.99 124**	P	**Pn**	**17 14 20.7**	**0.0**
PHP	**Peshkopia**	**2.01 337**	P	**Pn**	**17 14 21.0**	**0.0**
PHP	**Peshkopia**	**2.01 337**	*i* PN	**Pb**	**17 14 23.0**	**-0.5**
PHP			*i* SN	**Sb**	**17 14 50.2**	**+1.5**
SRS	**Serrai**	**2.06 51**	*e*Pn	**Pn**	**17 14 22.3**	**+0.7**
SRS	**Serrai**	**2.06 51**	P	**Pn**	**17 14 21.7**	**+0.1**
SRS	**Serrai**	**2.06 51**	P	**Pn**	**17 14 21.8**	**+0.2**
VIL2	**Platees**	**2.14 139**	P	**Pn**	**17 14 24.0**	**+1.3**
SCTE	**Santa Cesarea**	**2.33 277**	P	**Pn**	**17 14 25.5**	**+0.3**
NVR	**Nevrokopi**	**2.37 49**	P	**Pn**	**17 14 26.0**	**+0.2**
NVR	**Nevrokopi**	**2.37 49**	P	**Pn**	**17 14 26.0**	**+0.2**
KKB	**Krupnik**	**2.37 30**	P	**Pn**	**17 14 26.2**	**+0.3**
EREA	**Eretria**	**2.37 126**	P	**Pn**	**17 14 25.8**	**-0.1**
MMB	**Musomiste**	**2.45 44**	P	**Pn**	**17 14 26.2**	**-0.8**
KAVA	**Kavala**	**2.59 62**	P	**Pn**	**17 14 28.6**	**-0.3**
THAS	**Thassos island**	**2.60 72**	P	**Pn**	**17 14 28.4**	**-0.6**
VLY	**Voula,Athens**	**2.68 137**	P	**Pn**	**17 14 30.6**	**+0.5**
ULC	**Ulcinj**	**2.72 322**	⇓*i*Pn	**Pn**	**17 14 32.3**	**+1.6**
ULC			*e*Sn	**Sn**	**17 15 05.4**	**+1.7**
BCI	**Bajram Curri**	**2.75 338**	*i* PN	**Pb**	**17 14 33.8**	**-2.3**
KRND	**KRANIDI**	**2.77 151**	P	**Pn**	**17 14 31.8**	**+0.4**
DRME	**Dracevica, Mon**	**2.92 324**	⇓*i*Pn	**Pn**	**17 14 34.8**	**+1.3**
DRME			*e*Sn	**Sn**	**17 15 10.9**	**+2.2**
DRME	**Dracevica, Mon**	**2.92 324**	*e*Pn	**Pn**	**17 14 34.8**	**+1.3**
PVY	**Plav**	**2.99 338**	⇑*i*Pn	**Pn**	**17 14 35.4**	**+0.9**
PVY			*i* Sn	**Sn**	**17 15 12.0**	**+1.5**
BARS	**Barje**	**2.99 5**	*e*Pn	**Pn**	**17 14 34.6**	**+0.2**
RZN	**Rozhen**	**3.08 52**	P	**Pn**	**17 14 36.6**	**+0.8**
VTS	**Vitosha**	**3.08 25**	*e*Pn	**Pn**	**17 14 36.4**	**+0.6**
VTS			*e*Sn	**Sn**	**17 15 12.5**	**-0.3**
VTS	**Vitosha**	**3.08 25**	P	**Pn**	**17 14 36.0**	**+0.2**
PDG	**Podgorica**	**3.09 328**	*e*Pn	**Pn**	**17 14 36.7**	**+1.0**
PDG	**Podgorica**	**3.09 328**	⇓*i*P	**Pn**	**17 14 36.9**	**+1.2**
PDG	**Podgorica**	**3.09 328**	S	**Sn**	**17 15 14.7**	**+1.9**
PDG	**Podgorica**	**3.09 328**	*e*Pn	**Pn**	**17 14 36.5**	**+0.8**
TTG	**Podgorica**	**3.09 328**	⇑*i*Pn	**Pn**	**17 14 36.9**	**+1.2**
TTG			*i* Sn	**Sn**	**17 15 15.4**	**+2.6**
BUM	**Brajici-Budva**	**3.15 322**	⇑*i*Pn	**Pn**	**17 14 37.6**	**+1.0**
BUM			*i* Sn	**Sn**	**17 15 16.3**	**+2.0**
IVA	**Berane**	**3.26 339**	⇓*i*Pn	**Pn**	**17 14 39.2**	**+1.0**
IVA			*i* Sn	**Sn**	**17 15 18.5**	**+1.3**
CEME	**Cevo**	**3.33 325**	⇓*i*Pn	**Pn**	**17 14 40.5**	**+1.4**
CEME			*e*Sn	**Sn**	**17 15 20.6**	**+1.8**
PLD	**Plovdiv**	**3.33 46**	*e*Pn	**Pn**	**17 14 40.5**	**+1.4**
KOME	**Kolasin**	**3.36 335**	⇓*i*Pn	**Pn**	**17 14 41.4**	**+1.9**
KOME			*e*Sn	**Sn**	**17 15 21.4**	**+1.9**
SELS	**Selova**	**3.39 356**	*e*Pn	**Pn**	**17 14 40.7**	**+0.7**
HCY	**Herceg Novi**	**3.45 320**	⇑*i*Pn	**Pn**	**17 14 41.3**	**+0.6**
HCY			*e*Sn	**Sn**	**17 15 22.7**	**+1.0**
HCY	**Herceg Novi**	**3.45 320**	*e*Pn	**Pn**	**17 14 41.0**	**+0.3**
NKME	**Niksic**	**3.49 328**	⇓*i*Pn	**Pn**	**17 14 42.4**	**+1.0**
NKME			*e*Sn	**Sn**	**17 15 24.0**	**+1.1**
ZAPS	**Zavoj**	**3.54 14**	*e*Pn	**Pn**	**17 14 42.3**	**+0.2**
SJES	**Sjenica**	**3.61 342**	*e*Pn	**Pn**	**17 14 42.6**	**-0.4**
TIP	**Timpagrande**	**3.71 261**	⇓*i*P	**Pn**	**17 14 44.8**	**+0.5**
TREB	**Trebinje**	**3.72 322**	*e*Pn	**Pn**	**17 14 45.0**	**+0.5**
TREB			*e*Sn	**Sn**	**17 15 28.6**	**+0.2**
TREB	**Trebinje**	**3.72 322**	*e*Pn	**Pn**	**17 14 44.8**	**+0.3**
MATE	**Matera**	**3.74 284**	⇓*i*P	**Pn**	**17 14 45.1**	**+0.4**
BRY	**Bratogost**	**3.78 325**	⇓*i*Pn	**Pn**	**17 14 46.3**	**+0.9**
BRY			*i* Sn	**Sn**	**17 15 31.8**	**+1.8**
BRY	**Bratogost**	**3.78 325**	*e*Pn	**Pn**	**17 14 46.0**	**+0.6**
BOVS	**Bovan**	**3.80 2**	*e*Pn	**Pn**	**17 14 45.5**	**0.0**
BOVS			*e*Sn	**Sn**	**17 15 31.5**	**+1.1**
IVAS	**Ivanjica**	**3.87 346**	*e*Pn	**Pn**	**17 14 46.1**	**-0.4**
UPM	**Unac-Piva**	**3.88 331**	⇑*i*Pn	**Pn**	**17 14 49.9**	**+3.1**
UPM			*i* Sn	**Sn**	**17 15 33.5**	**+0.9**
UPM	**Unac-Piva**	**3.88 331**	*e*Pn	**Pn**	**17 14 49.5**	**+2.7**
ZAGS	**Zajecar**	**4.02 8**	*e*Pn	**Pn**	**17 14 48.9**	**+0.4**
GRUS	**Gruza**	**4.09 352**	*e*Pn	**Pn**	**17 14 49.8**	**+0.3**
STON	**Ston**	**4.16 318**	*e*Pn	**Pn**	**17 14 51.0**	**+0.6**
STON			*e*Sn	**Sn**	**17 15 37.5**	**-1.6**
STON	**Ston**	**4.16 318**	*e*Pn	**Pn**	**17 14 51.4**	**+0.9**
STON			Sn	**Sn**	**17 15 38.3**	**-0.9**
STON	**Ston**	**4.16 318**	*e*Pn	**Pn**	**17 14 50.7**	**+0.3**
BBLS	**Lazići**	**4.32 340**	*e*Pn	**Pn**	**17 14 53.2**	**+0.5**
BBLS	**Lazići**	**4.32 340**	*e*Pn	**Pn**	**17 14 54.0**	**+1.3**
DIVS	**Divibare**	**4.40 346**	*e*Pn	**Pn**	**17 14 55.4**	**+1.5**
DIVS			*e*Sn	**Sn**	**17 15 43.6**	**-1.7**
DIVS	**Divibare**	**4.40 346**	*e*Pn	**Pn**	**17 14 53.6**	**-0.3**
TRUS	**Trudelj**	**4.46 350**	*e*Pn	**Pn**	**17 14 55.4**	**+0.8**
HAPS	**Han Pijesak,BI**	**4.65 337**	*e*Pn	**Pb**	**17 15 05.1**	**-3.5**
MDVR	**Moldovita**	**4.95 2**	⇑*i*P	**Pn**	**17 15 00.5**	**-0.8**
FRGS	**Fruska Gora**	**5.46 348**	*e*Pn	**Pn**	**17 15 07.4**	**-1.0**
GZR	**Gura Zlata**	**5.64 9**	⇑*i*P	**Pn**	**17 15 11.1**	**+0.3**
BZS	**Buzias**	**5.78 1**	⇓*i*P	**Pn**	**17 15 12.0**	**-0.7**
BLY	**Banja Luka**	**5.85 328**	⇑*i*P	**Pn**	**17 15 14.2**	**+0.5**
BLY	**Banja Luka**	**5.85 328**	*e*Pn	**Pn**	**17 15 13.4**	**-0.3**
VOIR		**6.19 24**	⇑*i*P	**Pn**	**17 15 17.9**	**-0.5**
UDBI	**Udbina**	**6.33 320**	*e*Pn	**Pn**	**17 15 21.1**	**+0.9**
MLR	**Muntele Rosu**	**6.54 29**	⇓*i*P	**Pn**	**17 15 22.3**	**-1.0**
PLOR	**Plostina**	**7.11 31**	⇓*i*P	**Pn**	**17 15 30.0**	**-0.5**
VRI	**Vrincioaia**	**7.16 31**	⇑*i*P	**Pn**	**17 15 31.1**	**-0.5**
CRES	**Cresnjev**	**7.45 326**	*e*Pn	**Pn**	**17 15 32.7**	**-2.9**
CEY	**Cerknica**	**7.85 321**	*e*Pn	**Pn**	**17 15 41.4**	**+0.2**
PSZ	**Piszkesteto**	**8.16 352**	⇑*i*P	**Pn**	**17 15 44.6**	**-0.9**
NB2	**NORSAR Subarra**	**22.16 347**	P	**P**	**17 18 41.2**	**-1.6**
	comp=Z,1.3nm,0.6s,baz=161,slow=11					

IDC ***28*** *17:23:23.8±0.5,50°.15N×87°.92E,h0km,mb4.2/22, mb1 4.4/29,mb1mx4.3/41,mbtmp4.3/29,ML4.0/7,MS3.0/7, Ms1 3.0/7,ms1mx2.7/38,Error ellipse: s-maj=11.4km s-min=7.3km az=161.0*
MOS ***28*** *17:23:23.7±1.0,50°.09N×87°.78E,h11km,mb4.8/12,Error ellipse: s-maj=7.6km s-min=5.4km az=67.4*
BJI ***28*** *17:23:24.1±0.0,50°.14N×87°.66E,h15km,mb4.4/32, mB4.5/25,ML4.5/8,Ms4.2/21,Ms7 3.9/20*
ISCJB ***28*** *17:23:24.1±0.2,50°.13N±0°.02×87°.75E±0°.03,h11km, mb4.4/64,MS3.5/5,Error ellipse: s-maj=2.9km s-min=2.6km az=144.5*
NNC ***28*** *17:23:26.2±1.4,50°.18N×87°.67E,h0km,mb4.9,mpv4.7, Error ellipse: s-maj=12.7km s-min=6.7km az=103.0*
NEIC ***28*** *17:23:26.5±2.0,50°.11N×87°.80E,h16km±4km,mb4.5/48, Error ellipse: s-maj=10.2km s-min=8.4km az=92.0*
ISC 28 17:23:25.6±0.3,50°.17N±0°.03×87°.76E±0°.04,h11km,n193, $_{\sigma}$**1$60/219,mb4.4/64,MS3.2/5,23C-26D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGZ	**Jazzator, Alta**	**0.51**	**204**	*d iPG*	**Pg**	**17 23 33.0**	**-2.7**
ZAA0	**Zalesovo Array**	**4.20**	**336**	*e*Pn	**Pn**	**17 24 31.8**	**+2.3**
ZAA0	**Zalesovo Array**	**4.20**	**336**	⇑Pn	**Pn**	**17 24 31.6**	**+2.1**
	6.5nm,0.6s						
ZAA0				⇓Pg	**Pg**	**17 24 43.4**	**-2.6**
	33nm,0.8s						
ZAA0				⇓Lg	Lg	17 25 40.0	
	119nm,0.8s						
ZALV	**Zalesovo Beam**	**4.20**	**336**	Pn	**Pn**	**17 24 31.8**	**+2.2**
	20nm,0.3s,baz=158,slow=13,SNR=179						
ZALV				Pg	**Pg**	**17 24 43.8**	**-2.2**
	25nm,0.3s,baz=155,slow=17,SNR=33						
ZALV				Sn	**Sn**	**17 25 18.2**	**-0.3**
	23nm,0.3s,baz=143,slow=18,SNR=5.2						
ZALV				Lg	Lg	17 25 36.0	
	28nm,0.3s,baz=74,slow=22,SNR=5.0						
ZALV				LR	LR	17 26 27.8	
	comp=Z,132nm,19.2s,baz=68,slow=43						
ZALV	**Zalesovo Beam**	**4.20**	**336**	*i* PN	**Pn**	**17 24 31.7**	**+2.2**
ZALV				pmax	pmax		
	comp=Z,58nm,0.4s						
ZAA1	**Zalesovo Array**	**4.20**	**336**	*e*Pn	**Pn**	**17 24 31.8**	**+2.2**
ZAA1				*e*Pg	**Pg**	**17 24 43.8**	**-2.2**
ZAA1				*e*Sn	**Sn**	**17 25 18.2**	**-0.4**
ZAA1				*e*Lg	Lg	17 25 36.0	
ABNR	**Abakan**	**4.23**	**31**	*de*PN	**Pn**	**17 24 30.6**	**+0.7**
MK31	**Makanchi Array**	**4.96**	**229**	*e*Pn	**Pn**	**17 24 42.7**	**+2.6**
MK31	**Makanchi Array**	**4.96**	**229**	⇑Pn	**Pn**	**17 24 42.7**	**+2.6**
	comp=Z,354nm,0.8s,baz=62,slow=12,SNR=1392						
MK31				⇓Sn	**Sn**	**17 25 42.2**	**+4.7**
	comp=Z,43nm,0.5s,baz=53,slow=28,SNR=4.3						
MK31				⇑Lg	Lg	17 26 01.0	
	comp=Z,180nm,0.6s,baz=55,slow=28,SNR=5.4						
MK31	**Makanchi Array**	**4.96**	**229**	*e*PN	**Pn**	**17 24 42.7**	**+2.6**
MK32	**Makanchi Array**	**4.96**	**229**	*e*Pn	**Pn**	**17 24 43.0**	**+3.0**
MK32				*e*Sn	**Sn**	**17 25 41.1**	**+3.7**
MK32				*e*Lg	Lg	17 26 01.6	
MKAR	**Makanchi Array**	**4.96**	**229**	Pn	**Pn**	**17 24 43.0**	**+3.0**
	comp=Z,37nm,0.3s,baz=58,slow=12,SNR=1084						
MKAR				Sn	**Sn**	**17 25 41.1**	**+3.7**
	comp=Z,34nm,0.3s,baz=51,slow=27,SNR=8.3						
MKAR				Lg	Lg	17 26 01.6	
	comp=Z,42nm,0.3s,baz=50,slow=29,SNR=9.2						
MKAR				LR	LR	17 27 00.4	
	comp=Z,101nm,19.6s,baz=16,slow=43						
MKAR	**Makanchi Array**	**4.96**	**229**	*i* PN	**Pn**	**17 24 42.7**	**+2.6**
MKAR				pmax	pmax		
	comp=Z,169nm,0.6s						
MAKZ	**Makanchi**	**5.11**	**231**	*e*Pn	**Pn**	**17 24 44.6**	**+2.6**
MAKZ	**Makanchi**	**5.11**	**231**	⇓Pn	**Pn**	**17 24 44.3**	**+2.2**
	comp=Z,204nm,0.9s						
MAKZ				⇓Sn	**Sn**	**17 25 44.9**	**+3.9**
	comp=Z,158nm,0.8s						
MAKZ				⇓Lg	Lg	17 26 07.1	
	comp=Z,429nm,1.1s						
MAKZ	**Makanchi**	**5.11**	**231**	PN	**Pn**	**17 24 44.2**	**+2.2**
MAKZ						17 25 44.9	
MAKZ				pmax	pmax		
	comp=Z,204nm,0.9s						
MAKZ				smax	smax		
	comp=N,158nm,0.8s						
NVS	**Novosibirsk**	**5.43**	**331**	*e*PN	**Pn**	**17 24 47.9**	**+1.4**
NVS				*e*		17 25 06.3	
NVS				*e*		17 25 51.8	
KURK	**Kurchatov**	**5.87**	**279**	*e*Pn	**Pn**	**17 24 54.1**	**+1.7**
KURK	**Kurchatov**	**5.87**	**279**	⇓Pn	**Pn**	**17 24 54.1**	**+1.7**
	comp=N,120nm,0.8s						
KURK				⇓Sn	**Sn**	**17 26 00.2**	**+0.6**
	comp=N,188nm,0.9s						
KURK				⇑Lg	Lg	17 26 31.1	
	comp=N,596nm,0.8s						
KURK	**Kurchatov**	**5.87**	**279**	*c i*PN	**Pn**	**17 24 54.0**	**+1.6**
KURK				pmax	pmax		
	comp=Z,97nm,0.6s						
KURBB	**Kurchatov Arra**	**5.92**	**278**	Pn	**Pn**	**17 24 55.0**	**+1.9**
	comp=Z,7.0nm,0.3s,baz=93,slow=14,SNR=453						
KURBB				Sn	**Sn**	**17 26 02.9**	**+2.0**
	comp=Z,5.6nm,0.3s,baz=82,slow=21,SNR=6.1						
KURBB				Lg	Lg	17 26 30.9	
	comp=Z,8.4nm,0.3s,baz=91,slow=32,SNR=12						
KURBB	**Kurchatov Arra**	**5.92**	**278**	⇓Pn	**Pn**	**17 24 55.1**	**+1.9**
	comp=Z,212nm,0.8s						
KURBB				⇑Sn	**Sn**	**17 26 03.8**	**+2.8**
	comp=Z,219nm,0.5s						
KURBB				⇑Lg	Lg	17 26 30.1	
	comp=Z,768nm,0.7s						
WMQ	**Urumqi**	**6.35**	**180**	*e*Pn	**Pn**	**17 25 00.0**	**+0.8**
WMQ				Sn	**Sn**	**17 26 11.0**	**-0.7**
WMQ				smax	smax		
	comp=Z,90nm,0.9s						
WMQ				smax	smax		
	comp=Z,230nm,1.1s						
WMQ				LR	LR		
	comp=Z,340nm,11.5s						
WMQ				LR	LR		
	comp=Z,570nm,8.3s						
WMQ				LR	LR		
	comp=Z,430nm,12.5s						
WMQ	**Urumqi**	**6.35**	**180**	*e*Pn	**Pn**	**17 24 58.5**	**-0.7**
WMQ	**Urumqi**	**6.35**	**180**	*e*PN	**Pn**	**17 24 58.5**	**-0.7**
PDGK	**Podgornoye**	**8.88**	**223**	⇓Pn	**Pn**	**17 25 33.5**	**-0.5**
	comp=Z,33nm,0.9s						
PDGK				⇑Sn	**Sn**	**17 27 16.2**	**+2.1**
	comp=Z,56nm,0.9s						
PDGK				⇓Lg	Lg	17 28 09.6	
	comp=Z,97nm,1.0s						
PDGK	**Podgornoye**	**8.88**	**223**	P	**Pn**	**17 25 33.5**	**-0.5**
PDGK						17 27 12.2	
PDGK				pmax	pmax		
	comp=Z,33nm,0.9s						
PDGK				smax	smax		
	comp=N,57nm,0.9s						
PRZ	**Przheval'sk**	**10.04**	**224**	*e*Pn	**Pn**	**17 25 51.4**	**+1.5**
PRZ	**Przheval'sk**	**10.04**	**224**	*e*P	**Pn**	**17 25 51.4**	**+1.5**
KNDC	**Almaty**	**10.16**	**231**	⇑Pn	**Pn**	**17 25 50.2**	**-1.1**
	comp=N,39nm,0.9s						
KNDC				⇓Sn	**Sn**	**17 27 45.6**	**+0.4**
	comp=N,83nm,0.8s						
KNDC				⇑Lg	Lg	17 28 49.9	
	comp=N,193nm,1.1s						
OTUK	**Ortayu**	**10.28**	**265**	⇓Pn	**Pn**	**17 25 52.5**	**-0.4**
	comp=N,23nm,0.6s						
OTUK				⇓Sn	**Sn**	**17 27 51.8**	**+3.7**
	comp=N,20nm,0.7s						
OTUK				⇑Lg	Lg	17 28 50.6	
	comp=N,96nm,1.0s						
OTUK	**Ortayu**	**10.28**	**265**	P	**Pn**	**17 25 52.3**	**-0.6**
OTUK				pmax	pmax		
	comp=Z,21nm,0.7s						
IRK	**Irkutsk**	**10.57**	**72**	*e*P	Pn	17 26 03.1	+6.2
KDJ	**Kajisay**	**10.88**	**226**	*e*Pn	**Pn**	**17 26 02.5**	**+1.2**
KDJ	**Kajisay**	**10.88**	**226**	*e*P	**Pn**	**17 26 02.5**	**+1.2**
TKM2	**Tokmak 2**	**11.07**	**234**	P	**Pn**	**17 26 03.9**	**-0.1**
	SNR=16						
TKM2	**Tokmak 2**	**11.07**	**234**	⇓Pn	**Pn**	**17 26 03.1**	**-0.9**
	comp=Z,8.1nm,0.6s						
TKM2				⇓Sn	**Sn**	**17 28 09.6**	**+1.8**
	comp=Z,23nm,0.8s						
TKM2				⇑Lg	Lg	17 29 18.0	
	comp=Z,76nm,1.1s						
TKM2	**Tokmak 2**	**11.07**	**234**	*i* P	**Pn**	**17 26 03.0**	**-0.9**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BVAR	**Borovoye Array**	**11.18**	**291**	Pn	**Pn**	**17 26 05.4**	**+0.2**
	comp=Z,7.0nm,0.3s,baz=102,slow=14,SNR=49						
BVAR				Sn	**Sn**	**17 28 05.5**	**-4.6**
	comp=Z,4.3nm,0.3s,baz=98,slow=21,SNR=8.9						
BOOM	**Boomskoye usch**	**11.20**	**231**	*e*Pn	**Pn**	**17 26 05.4**	**-0.4**
BOOM	**Boomskoye usch**	**11.20**	**231**	*e*P	**Pn**	**17 26 05.4**	**-0.4**
BRVK	**Borovoye**	**11.24**	**292**	*e*Pn	**Pn**	**17 26 06.3**	**+0.3**
BRVK	**Borovoye**	**11.24**	**292**	⇑Pn	**Pn**	**17 26 06.4**	**+0.3**
	comp=Z,11nm,0.6s						
BRVK				⇓Sn	**Sn**	**17 28 13.0**	**+1.3**
	comp=Z,33nm,0.6s						
BRVK	**Borovoye**	**11.24**	**292**	*d iP*	**Pn**	**17 26 06.4**	**+0.3**
USP	**Ospenovka**	**11.41**	**238**	P	**Pn**	**17 26 09.5**	**+1.0**
	SNR=25						
CHMS	**Chumysh**	**11.46**	**236**	P	**Pn**	**17 26 11.4**	**+2.3**
	SNR=11						
KBK	**Karagaybulak**	**11.59**	**234**	P	**Pn**	**17 26 13.8**	**+2.7**
	SNR=18						
FRU1	**Bishkek**	**11.65**	**236**	*e*Pn	**Pn**	**17 26 12.3**	**+0.5**
FRU1	**Bishkek**	**11.65**	**236**	*e*P	**Pn**	**17 26 12.3**	**+0.5**
AAK	**Ala-Archa**	**11.84**	**236**	Pn	**Pn**	**17 26 14.5**	**-0.1**
	comp=Z,2.6nm,0.3s,baz=74,slow=7.6,SNR=14						
AAK				Sn	**Sn**	**17 28 26.0**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=255,slow=20,SNR=4.7						
AAK				Lg	Lg	17 29 35.6	
	comp=Z,0.6nm,0.3s,baz=54,slow=19,SNR=2.7						
AAK				LR	LR	17 31 04.9	
	comp=Z,75nm,21.2s,baz=58,slow=39						
AAK	**Ala-Archa**	**11.84**	**236**	P	**Pn**	**17 26 17.2**	**+2.7**
	SNR=7.3						
AAK	**Ala-Archa**	**11.84**	**236**	*e*Pn	**Pn**	**17 26 14.1**	**-0.5**
AAK	**Ala-Archa**	**11.84**	**236**	Pn	**Pn**	**17 26 14.1**	**-0.5**
	comp=Z,16nm,0.8s						
AAK				Sn	**Sn**	**17 28 30.8**	**+4.1**
	comp=Z,18nm,0.8s						
AAK				⇓Lg	Lg	17 29 40.5	
	comp=Z,58nm,0.9s						
AAK	**Ala-Archa**	**11.84**	**236**	*c e*P	**Pn**	**17 26 15.0**	**+0.5**
KZA	**Kyzart**	**11.85**	**232**	P	**Pn**	**17 26 16.6**	**+1.7**
	SNR=10						
UCH	**Uchtor**	**12.12**	**234**	P	**Pn**	**17 26 19.1**	**+0.4**
	SNR=14						
EKS2	**Erkin-Say**	**12.21**	**237**	P	**Pn**	**17 26 22.0**	**+2.4**
	SNR=9.2						
SONA0	**Songino Array**	**12.46**	**94**	*e*Pn	**Pn**	**17 26 25.1**	**+2.2**
SONM	**Songino Array**	**12.46**	**94**	Pn	**Pn**	**17 26 25.1**	**+2.2**
	comp=Z,0.4nm,0.3s,baz=283,slow=14,SNR=5.4						
SONM				Lg	Lg	17 29 51.5	
	comp=Z,0.5nm,0.3s,baz=276,slow=33,SNR=5.4						
ULN	**Ulaanbaatar**	**12.87**	**93**	⇑*e*P	**Pn**	**17 26 29.7**	**+1.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH	**Kashi**	**13.52**	**223**	P	**P**	**17 26 45.8**	**-0.9**
KSH				pP	Pn	17 26 53.5	+16
KSH				PP	PnPn	17 26 58.0	+13
KSH				S	S	17 29 19.5	-12
KSH				SS	SnSn	17 29 35.5	+16
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
KSH				pmax	pmax		
	comp=Z,170nm,5.9s						
KSH				LR	LR		
	comp=Z,1μm,11.6s						
KSH				LR	LR		
	comp=Z,660nm,11.1s						
KSH				LR	LR		
	comp=Z,980nm,15.5s						
GTA	**Gaotai**	**13.73**	**137**	*e*P	**Pn**	**17 26 40.3**	**+0.1**
GTA				pP	P	17 26 44.8	-4.2
GTA				sP		17 26 47.3	
GTA				S	**Sn**	**17 29 15.0**	**+2.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,45nm,7.1s						
GTA				LR	LR		
	comp=Z,250nm,10.5s						
GTA				LR	LR		
	comp=Z,360nm,10.2s						
GTA				LR	LR		
	comp=Z,340nm,8.6s						
KK31	**Karatay Array**	**13.78**	**246**	*e*Pn	**Pn**	**17 26 38.0**	**-2.8**
KK31	**Karatay Array**	**13.78**	**246**	⇓Pn	**Pn**	**17 26 42.0**	**+1.2**
	comp=Z,2.3nm,0.3s,baz=50,slow=14,SNR=72						
KK31				⇓Sn	**Sn**	**17 29 17.3**	**+3.5**
	comp=Z,10.0nm,0.8s						
KK31				⇓Lg	Lg	17 30 40.7	
	comp=Z,32nm,0.8s,baz=40,slow=33,SNR=4.7						
KK31	**Karatay Array**	**13.78**	**246**	*e*P	**Pn**	**17 26 38.0**	**-2.8**
KKAR	**Karatay Array**	**13.78**	**246**	*e*Pn	**Pn**	**17 26 37.8**	**-3.0**
**KK

YAK	Yakutsk	25.72	47	eP	P	17 28 55.9	+0.3
YAK				e*PP	sP	17 29 04.6	+3.6
YAK				eS	S	17 33 18.6	-5.3
YAK				eSSS	SSS	17 34 26.2	
WHN	Wuhan	27.95	125	P	P	17 29 07.0	-8.9
WHN				S	S	17 33 58.0	-1.6
WHN				LR	LR		
comp=Z,490nm,10.1s							
KLR	Kul'dur	28.16	75	P	P	17 29 17.9	+0.2
comp=Z,0.9nm,0.7s,baz=286,slow=15,SNR=3.0							
KLR				LR	LR	17 40 58.6	
comp=Z,62nm,19.3s,baz=243,slow=38							
KLR	Kul'dur	28.16	75	eP	P	17 29 18.4	+0.7
TIXI	Tiksi	28.38	26	P	P	17 29 19.2	-0.2
comp=Z,1.9nm,0.7s,baz=296,slow=8.6,SNR=2.9							
TIXI	Tiksi	28.38	26	eP	P	17 29 21.3	+2.0
comp=Z,4.4nm,0.5s							
TIXI	Tiksi	28.38	26	eP	P	17 29 22.4	+3.1
TIXI				pmax	pmax		
comp=Z,10.0nm,1.5s							
NJ2	Nanjing	29.30	116	eP	P	17 29 28.5	+0.5
NJ2				pmax	pmax		
comp=Z,7.0nm,0.5s							
USRK	Ussuriysk Ar.	30.29	84	P	P	17 29 37.1	+0.5
comp=Z,5.6nm,0.8s,baz=288,slow=7.9,SNR=8.9							
KBZ	Khabaz	30.91	276	P	P	17 29 42.5	+0.4
comp=Z,0.9nm,0.6s,baz=72,slow=3.2,SNR=2.9							
KIV	Kislovodsk	30.94	276	eP	P	17 29 43.0	+0.5
KIV				pmax	pmax		
comp=Z,12nm,1.1s							
KIV				MLR	MLR		
comp=Z,41nm,15.0s							
NEY	Neytrino	31.25	275	eP	P	17 29 44.4	-1.0
NEY				pmax	pmax		
comp=Z,1.0nm,0.9s							
KSRS	Korea Array	31.26	98	P	P	17 29 45.2	0.0
comp=Z,2.0nm,0.7s,baz=300,slow=7.0,SNR=8.4							
KSRS				LR	LR	17 43 44.3	
comp=Z,44nm,18.4s,baz=192,slow=39							
GNI	Garni	31.54	268	ceP	P	17 29 49.0	+1.1
GNI				pmax	pmax		
comp=Z,16nm,0.9s							
DOMR	Dombai	31.94	276	eP	P	17 29 53.1	+1.8
DOMR				pmax	pmax		
comp=Z,10.0nm,0.9s							
CM31	Chiang Mai Arr	32.88	160	eP	P	17 29 59.1	-0.5
comp=Z,3.4nm,0.9s							
CMAR	Chiang Mai Arr	32.88	160	P	P	17 29 59.0	-0.5
comp=Z,1.3nm,0.7s,baz=347,slow=8.4,SNR=10							
FIA1	FINESS Array S	35.09	313	eP	P	17 30 19.4	+0.9
comp=Z,9.3nm,1.2s							
FIA0	FINESS Array S	35.10	313	eP	P	17 30 18.9	+0.5
FIA0				ePcP	PcP	17 32 48.6	-1.1
FIA0	FINESS Array S	35.10	313	eP	P	17 30 18.9	+0.5
FIA0				e		17 32 48.6	
FINES	FINESS Array B	35.10	313	P	P	17 30 18.9	+0.5
comp=Z,4.6nm,1.1s,baz=87,slow=6.7,SNR=12							
FINES				PcP	PcP	17 32 48.6	-1.1
comp=Z,1.2nm,0.7s,baz=86,slow=6.1,SNR=4.1							
VSU	Vasula	35.39	307	eP	P	17 30 21.5	+0.5
VSU				pmax	pmax		
comp=Z,17nm,0.9s							
SEY	Seymchan	36.19	44	P	P	17 30 27.6	-0.2
comp=Z,1.1nm,0.6s,baz=233,slow=20,SNR=3.0							
BR101	Keskin Array S	38.91	276	eP	P	17 30 52.3	+1.0
BR131	Keskin Array S	38.91	276	eP	P	17 30 52.0	+0.8
comp=Z,8.6nm,0.8s							
BRTR	Keskin Array B	38.91	276	P	P	17 30 52.3	+1.0
comp=Z,6.5nm,0.8s,baz=80,slow=7.4,SNR=31							
BUR08	Bucovina Ar. S	40.13	291	eP	P	17 31 02.1	+0.8
comp=Z,3.1nm,0.9s							
KWP	Kalwaria Pacla	40.70	295	eP	P	17 31 06.6	+0.7
comp=Z,40nm,0.8s							
KWP	Kalwaria Pacla	40.70	295	eP	P	17 31 06.6	+0.7
KWP				pmax	pmax		
comp=Z,40nm,0.8s							
BILL	Bilibino	40.73	34	i P	P	17 31 04.3	-1.6
BILL				i		17 32 40.7	
BILL				pmax	pmax		
comp=Z,2.0nm,1.1s							
BILL				MLR	MLR		
comp=Z,56nm,16.0s							
NC405	NORSAR Array S	41.86	315	eP	P	17 31 15.6	+0.3
comp=Z,22nm,0.9s							
CSS	Mathiatis	41.92	270	eP	P	17 31 17.2	+1.1
comp=Z,12nm,1.1s							
PEA1	Petropavlovsk-	41.93	58	eP	P	17 31 16.0	+0.1
PETK	Petropavlovsk-	41.93	58	P	P	17 31 16.0	+0.1
comp=Z,3.1nm,0.8s,baz=336,slow=3.3,SNR=5.3							
NB201	NORSAR Array S	42.07	315	eP	P	17 31 17.2	+0.2
comp=Z,41nm,1.4s							
NC602	NORSAR Array S	42.08	315	eP	P	17 31 17.3	+0.2
comp=Z,19nm,1.0s							
NB2	NORSAR Subarra	42.11	315	P	P	17 31 17.1	-0.3
comp=Z,3.1nm,0.7s,baz=64,slow=7.9							
NOA	NORSAR Array B	42.11	315	P	P	17 31 17.5	+0.1
comp=Z,2.1nm,0.8s,baz=64,slow=7.9,SNR=11							
RAYN	Ar Rayn	42.20	247	eP	P	17 31 17.8	-0.7
comp=Z,7.3nm,0.9s							
RAYN	Ar Rayn	42.20	247	eP	P	17 31 17.8	-0.7
RAYN				pmax	pmax		
comp=Z,7.0nm,0.9s							
NAO01	NORSAR Array S	42.33	315	eP	P	17 31 18.4	-0.7
comp=Z,52nm,1.5s							
KULM	Kulim	46.02	162	eP	P	17 31 48.2	-0.9
comp=Z,8.2nm,0.8s							
KHC	Kasperske Hory	46.16	299	eP	P	17 31 51.7	+1.7
KHC	Kasperske Hory	46.16	299	eP	P	17 31 51.7	+1.7
GEC2	GERESS Array S	46.24	298	eP	P	17 31 51.7	+1.0
comp=Z,1.9nm,1.1s							
GEC2	GERESS Array S	46.24	298	eP	P	17 31 51.7	+1.0
GEC2				pmax	pmax		
comp=Z,2.0nm,1.1s							
GERES	GERESS Array B	46.24	298	P	P	17 31 51.0	+0.3
comp=Z,0.7nm,0.7s,baz=54,slow=7.4,SNR=4.7							
GERES	GERESS Array B	46.24	298	P	P	17 31 51.0	+0.3
MLY	Manley	56.58	26	eP	P	17 33 09.9	+2.1
comp=Z,3.7nm,1.2s							
BPAW	Bear Paw Mtn.	57.22	27	eP	P	17 33 12.7	+0.3
comp=Z,3.0nm,1.0s							
COLA	College	57.49	25	eP	P	17 33 15.3	+1.1
COLA				pmax	pmax		
comp=Z,3.0nm,0.9s							
PRP	Porcupine Dome	57.59	23	eP	P	17 33 15.7	+0.6
comp=Z,2.6nm,0.8s							
KTH	Kantishna Hill	57.65	27	eP	P	17 33 15.9	+0.5
comp=Z,8.4nm,1.0s							
CCB	Clear Creek Bu	57.68	25	eP	P	17 33 15.8	+0.3
comp=Z,2.2nm,0.9s							
WRH	Wood River Hil	57.74	25	eP	P	17 33 16.0	0.0
comp=Z,6.1nm,1.4s							
ILAR	Eielson Array	57.83	24	P	P	17 33 16.3	-0.3
comp=Z,1.9nm,0.8s,baz=316,slow=4.9,SNR=13							
ILB	Eielson Array	57.83	24	eP	P	17 33 15.5	-1.1
comp=Z,3.6nm,1.1s							
INK	Inuvik	57.91	17	eP	P	17 33 16.9	-0.2
comp=Z,3.8nm,0.9s							
INK	Inuvik	57.91	17	eP	P	17 33 16.9	-0.2
INK				pmax	pmax		
comp=Z,4.0nm,0.9s							
RDJH	Redoubt Jeurge	59.33	30	ePcP	PcP	17 34 15.0	-0.2
AUI	Augustine Isla	60.09	31	ePcP	PcP	17 34 20.6	+2.6
KDAK	Kodiak Island	61.56	32	i P	P	17 33 43.0	+0.7
ESDC	Sonseca Array	61.83	299	P	P	17 33 44.6	+0.1
comp=Z,2.5nm,0.8s,baz=44,slow=6.9,SNR=14							
YKA	Yellowknife Ar	66.29	11	P	P	17 34 12.6	-0.8
comp=Z,0.9nm,0.6s,baz=342,slow=6.9,SNR=8.4							
SCHQ	Schefferville	73.23	345	P	P	17 34 57.1	+0.8
comp=Z,9.0nm,0.6s,baz=268,slow=15,SNR=6.4							
SCHQ	Schefferville	73.23	345	eP	P	17 34 57.5	+1.2
comp=Z,9.3nm,0.6s							
CMLA	Cha da Macela	74.60	311	i P	P	17 35 05.0	+0.4
TOA1	Torodi Ar. Sit	77.52	276	eP	P	17 35 20.7	-0.8
TOA0	Torodi Ar. Sit	77.52	276	eP	P	17 35 21.2	-0.3
comp=Z,7.3nm,1.0s							
TORD	Torodi Ar. Bea	77.52	276	P	P	17 35 20.7	-0.8
comp=Z,3.6nm,0.9s,baz=17,slow=8.1,SNR=15							
WR1	Warramunga Arr	81.02	136	eP	P	17 35 38.5	-1.9
WRA	Warramunga Arr	81.02	136	P	P	17 35 38.5	-1.9
comp=Z,2.1nm,0.8s,baz=331,slow=6.7,SNR=6.8							
F10A	Beach Ranch, E	81.82	17	eP	P	17 35 44.7	+0.1
comp=Z,3.2nm,0.9s							
PLID	Pearl Lake	82.90	17	eP	P	17 35 50.7	+0.3
comp=Z,6.4nm,0.9s							
PINE	Pine Mountain	83.13	21	eP	P	17 35 52.0	+0.5
comp=Z,5.8nm,1.0s							
I07A	Izee	83.17	19	eP	P	17 35 52.4	+0.7
comp=Z,2.6nm,1.0s							
DLMT	Dillon	83.22	14	eP	P	17 35 52.1	+0.2
comp=Z,3.0nm,0.9s							
MCMT	McKenzie Canyo	83.70	15	eP	P	17 35 54.6	0.0
HUMO	Hull Mountain	83.78	22	eP	P	17 35 55.8	+1.1
comp=Z,9.2nm,1.4s							
AS31	Alice Springs	84.10	138	eP	P	17 35 54.4	-2.0
comp=Z,0.5nm,0.8s							
ASAR	Alice Springs	84.10	138	P	P	17 35 54.5	-1.8
comp=Z,1.3nm,0.8s,baz=331,slow=5.0,SNR=19							
K05A	Summer Lake	84.15	21	eP	P	17 35 58.1	+1.3
comp=Z,8.0nm,1.0s							
IMW	Indian Meadow	84.91	13	eP	P	17 36 01.0	+0.2
comp=Z,2.9nm,0.8s							
MOD	Modoc Plateau	85.07	21	eP	P	17 36 02.3	+0.9
comp=Z,4.3nm,0.9s							
PD31	Pinedale Array	86.22	13	eP	P	17 36 08.9	+1.7
comp=Z,4.1nm,1.6s							
PDAR	Pinedale Array	86.22	13	P	P	17 36 05.8	-1.5
comp=Z,0.5nm,0.7s,baz=67,slow=3.9,SNR=4.2							
DUG	Dugway, Tooele	88.22	16	eP	P	17 36 17.5	+0.7
comp=Z,3.9nm,0.8s							
DUG	Dugway, Tooele	88.22	16	eP	P	17 36 17.5	+0.7
DUG				pmax	pmax		
comp=Z,4.0nm,0.8s							
NVAR	Mina Array Bea	88.84	20	P	P	17 36 20.9	+1.1
comp=Z,0.8nm,0.7s,baz=333,slow=3.4,SNR=4.2							
R11A	Troy Canyon, C	89.49	18	eP	P	17 36 23.2	+0.4
CPUP	Villa Florida	144.20	299	PKP	PKPab	17 42 59.1	0.0
comp=Z,6.6nm,0.9s,baz=42,slow=2.6,SNR=5.5							

DJA 28 18:00:34.3±0.5, 9°S±5°×11°9E±°, h34km±12km, M4.0/8, MLv4.0/8, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.38	165	P	Pn	18 00 44.3	+0.7
WSI	Waingapu	1.07	112	P	Pn	18 00 52.4	-0.5
PLAI	Plampang	1.56	286	P	Pn	18 00 59.5	-0.1
PLAI				S	Sn	18 01 18.6	-0.1
EDFI	Ende, Flores	2.43	78	P	Pn	18 01 11.7	0.0
MMRI	Maumere	2.98	78	P	Pn	18 01 20.1	+0.9
BSSI	Bau Bau, Buton	3.33	21	P	Pn	18 01 23.6	-0.4
BSSI				S	Sn	18 02 02.3	-0.1
BKSI	Bulukumba	4.01	12	P	Pn	18 01 33.6	+0.2

TAP 28 18:17:14.2, 24°85N×122°02E, h10km, ML2.3, 6C-3D, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.08	268	⇑i P	Pg	18 17 17.1	+0.6
EGS	baz=265			i S	Sg	18 17 19.1	+0.8
TWB1	Santiao Chiao	0.16	350	⇑i P	Pg	18 17 18.2	+0.4
TWB1	baz=352			i S	Sg	18 17 20.6	+0.3
NTC	Toucheng	0.17	272	⇑P	Pb	18 17 18.8	-0.6
NTC	baz=272			S	Sg	18 17 21.8	+1.3
TIPB	Shuangxi	0.21	305	⇑i P	Pb	18 17 19.6	-0.6
TIPB	baz=305			i S	Sg	18 17 23.0	+1.2
TWC	Suao	0.28	213	⇓i P	Pg	18 17 20.3	+0.4
NWF	Wu-fen Shan	0.31	316	⇑i P	Pb	18 17 21.5	-0.3
NWF	baz=315			i S	Sb	18 17 26.7	-0.3
WFSB	Wu-fen Shan	0.31	316	⇑eP	Pb	18 17 21.6	-0.3
WFSB	baz=315			eS	Sb	18 17 26.8	-0.2
EOS1	EOS1	0.31	162	⇓eP	Pb	18 17 21.3	-0.5
EOS1	baz=161			eS	Sb	18 17 26.0	-0.9
TWE	Neicheng	0.34	249	⇓i P	Pg	18 17 21.7	+0.6
TWA	Mucha	0.42	288	eP	Pg	18 17 21.8	-0.6
TWA	baz=288			eS	Sb	18 17 29.1	-0.9
ENTT	Nioudou	0.46	243	P	Pb	18 17 24.2	-0.2
NANB	Nanao	0.49	210	eP	Pg	18 17 23.8	+0.1
ENA	Nanau	0.49	211	eP	Pg	18 17 24.0	+0.2
ENA	baz=210			eS	Sg	18 17 31.1	+0.9
TATO	Taipei	0.50	285	eP	Pb	18 17 25.1	0.0
TATO	baz=284			eS	Sb	18 17 31.6	-0.8
YM01	YM01	0.51	306	i P	Pb	18 17 25.5	+0.3
YM08	YM08	0.52	311	i P	Pb	18 17 25.4	+0.1
YM10	YM10	0.52	306	i P	Pb	18 17 25.7	+0.3
YM05	YM05	0.52	307	P	Pb	18 17 25.7	+0.3
YM04	YM04	0.53	305	eP	Pb	18 17 25.9	+0.3
YM03	YM03	0.55	307	eP	Pb	18 17 25.9	0.0
ANP	Anpu	0.56	307	eP	Pb	18 17 27.0	+0.8
TWY	Chenhua	0.57	318	P	Pb	18 17 26.7	+0.4
TWS1	Kuangyinshan	0.60	295	i P	Pb	18 17 27.8	+1.0
TWS1	baz=295			eS	Sg	18 17 34.4	+0.5
NTST	Danshui	0.61	301	eP	Pb	18 17 27.1	+0.3
YHNB	Yeheng	0.61	253	eP	Pg	18 17 26.5	+0.4
YHNB	baz=253			eS	Sb	18 17 35.0	-0.7
NSK	Sanguang	0.63	254	P	Pg	18 17 26.7	+0.4
NNS	Nan Shan	0.71	236	eP	Pb	18 17 29.4	+0.6
NNS	baz=234			eS	Sb	18 17 39.6	+0.9
NNSB	Datong	0.71	234	eP	Pb	18 17 28.8	+0.1
NACB	Ninganchiao	0.78	210	eP	Pb	18 17 29.6	-0.1
NACB	baz=210			eS	Sb	18 17 39.8	-0.5
PCYT	Pengchaiyu	0.78	3	eP	Pb	18 17 30.2	+0.4
ETLH	Xiulin Townshi	0.81	218	eP	Pb	18 17 30.8	+0.5
TWD	Chiawan	0.86	207	eP	Pb	18 17 31.3	+0.2
LIOB	Emei	0.94	258	eP	Pn	18 17 34.7	+1.3
NSTT	Nanjuang	0.95	257	eP	Pn	18 17 34.7	+1.1
TWT	Tachien	0.97	233	eP	Pn	18 17 34.1	+0.1
YOJ	Yonaguni jima	0.98	113	eP	Pb	18 17 33.2	0.0
WHF	Hehuan Shan	0.98	225	eP	Pn	18 17 34.2	-0.2
TDCB	Techi	0.98	233	eP	Pn	18 17 34.5	+0.4
CHGB	Renai	1.10	225	eP	Pg	18 17 35.0	-0.4
ESL	Shilin	1.16	208	P	Pb	18 17 36.1	-0.2
OWD	Renai	1.18	221	eP	Pg	18 17 37.2	+0.4
VWDT	VWDT	1.35	217	eP	Pb	18 17 39.8	+0.3
SSLB	Suanglung	1.44	223	eP	Pb	18 17 41.2	+0.2
HGSD	Ruisui	1.46	202	eP	Pn	18 17 39.3	-1.2
EHY	Hungye	1.48	206	eP	Pg	18 17 42.9	+0.2
TWF1	Yuli	1.63	204	eP	Pn	18 17 43.1	+0.2

TAP 28 18:17:20.2, 24°87N×122°03E, h9km±1km, ML2.4, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.09	257	P	Pg	18 17 23.3	+0.8
EGS	baz=254			S	Sg	18 17 25.1	+0.8
TWB1	Santiao Chiao	0.15	345	i P	Pg	18 17 24.2	+0.8
TWB1	baz=348			S	Sg	18 17 26.7	+1.0
NTC	Toucheng	0.18	267	P	Pg	18 17 25.1	+1.0
NTC	baz=266			S	Sg	18 17 28.4	+1.7
TIPB	Shuangxi	0.21	300	P	Pg	18 17 25.8	+1.2
TIPB	baz=299			S	Sg	18 17 29.1	+1.5
TWC	Suao	0.30	213	eP	Pg	18 17 26.4	+0.2
TWC	baz=211			S	Sb	18 17 32.3	-0.6
TWC	Suao	0.30	213	i S	Pg	18 17 26.4	+0.1
NWF	Wu-fen Shan	0.30	312	eP	Pb	18 17 27.8	-0.1
NWF	baz=312			eS	Sb	18 17 32.8	-0.3
WFSB	Wu-fen Shan	0.30	312	eP	Pb	18 17 27.4	-0.5
WFSB	baz=312			eS	Sb	18 17 32.6	-0.3
EOS1	EOS1	0.33	164	eP	Pb	18 17 28.0	-0.2
EOS1	baz=164			eS	Sb	18 17 32.5	-1.0
TWE	Neicheng	0.36	247	eP	Pg	18 17 28.0	+0.7
TWE	baz=245			eS	Sb	18 17 33.4	-1.1
TWE	Neicheng	0.36	247	eS	Pg	18 17 27.9	+0.6
ENTT	Nioudou	0.48	242	eP	Pb	18 17 30.4	-0.4
ENTT	baz=241			eS	Sb	18 17 37.8	-0.2
ENTT	Nioudou	0.48	242	eS	Pb	18 17 30.3	-0.5
YM01	YM01	0.50	304	eP	Pb	18 17 31.8	+0.6
YM01	YM01	0.50	304	i S	Pb	18 17 31.9	+0.6
NANB	Nanao	0.51	210	eP	Pg	18 17 30.6	+0.6
NANB	baz=210			eS	Sb	18 17 38.7	+0.1
NANB	Nanao	0.51	210	eS	Pb	18 17 30.8	-0.5
YM10	YM10	0.52	304	eP	Pb	18 17 32.1	+0.7
YM10	baz=304			eS	Sg	18 17 36.6	-0.4
YM10	YM10	0.52	304	eS	Pb	18 17 32.2	+0.7
ETLH	Xiulin Townshi	0.82	217	eP	Pb	18 17 36.7	0.0
ETLH	baz=217			eS	Sb	18 17 49.0	+1.0

IDC 28 18:22:33.3±5.3, 3°00S×102°38E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/24, mbtmp3.4/3, Error ellipse: s-maj=291.0km s-min=29.2km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	30.11	260	T	T	18 58 24.9	
H08S3	Diego Garcia H	30.11	260	T	T	18 58 26.2	
H08S1	Diego Carcia H	30.12	260	T	T	18 58 24.0	
WRA	Warramunga Arr	35.44	121	P	P	18 29 32.1	+0.5
ASAR	Alice Springs	36.75	127	P	P	18 29 42.3	-0.5
0.2nm,0.5s,baz=299,slow=8.1,SNR=7.3							
MKAR	Makanchi Array	52.65	343	P	P	18 31 49.6	+0.3
0.3nm,0.5s,baz=159,slow=8.3,SNR=3.7							
TXAR	Lajitas Array	143.97	41	PKP	PKPbc	18 42 09.5	0.0
0.2nm,0.5s,baz=240,slow=0.7,SNR=3.9							

JMA 28 18:27:11.4±0.1, 24°10N×123°55E, h17km±2km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.24	100	P	Pg	18 27 16.5	-0.3
HATJ				eS	Sg	18 27 20.7	+0.2
IRIF	Iriomote-Funau	0.29	35	P	Pg	18 27 17.4	-0.2
IRIF				S	Sg	18 27 21.8	-0.1
JKRS	Kuro-shima	0.44	72	P	Pg	18 27 20.3	-0.1
JKRS				S	Sb	18 27 27.1	0.0
JIJ	Ishigaki jima	0.60	64	P	Pg	18 27 22.6	-0.7
JIJ				S	Sg	18 27 30.6	-0.8
YOJ	Yonaguni jima	0.61	306	P	Pg	18 27 23.3	-0.2
YOJ				S	Sg	18 27 31.7	+0.1
JYNG	Yonagunijimaku	0.65	302	P	Pg	18 27 24.0	-0.3
JYNG				S	Sg	18 27 32.9	-0.1
JISG	Ishigakijimahi	0.85	55	P	Pb	18 27 27.2	-0.5
JISG				S	Sb	18 27 38.5	-0.2
JTJ	Tarama	1.18	63	P	Pb	18 27 33.4	+0.1
JTJ				S	Sn	18 27 49.0	+0.2

TAP 28 18:27:16.6, 24°42N×121°41E, h8km, ML0.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	Datong	0.03	288	P	Pg	18 27 18.1	-0.2
NNSB	baz=287			S	Sg	18 27 19.1	-0.4
NNS	Nan Shan	0.04	299	i P	Pg	18 27 18.2	-0.2
NNS	baz=301			i S	Sg	18 27 19.3	-0.4
ETLH	Xiulin Townshi	0.22	164	S	Sg	18 27 24.2	+0.2
YHNB	Yeheng	0.25	352	eS	Sg	18 27 24.9	-0.2
ENTT	Nioudou	0.26	32	eP	Pg	18 27 21.8	+0.1
ENTT	baz=33			eS	Sg	18 27 25.6	+0.3
NSK	Sanguang	0.26	349	S	Sg	18 27 25.4	+0.1

*LDG **28** 18:39:37.1±0.1, 42°78N×0°90W, h2km, Md2.6/2, Ml2.3/1, Error ellipse: s-maj=2.9km s-min=0.6km az=16.0*
*ISCJB **28** 18:39:38.0±0.4, 42°93N±0°05×0°82W±0°03, h12km±7km, Error ellipse: s-maj=8.5km s-min=3.4km az=11.6*
*STR **28** 18:39:38.9±0.9, 43°1N±9°×°±°, h1km±11km, MLv1.8/4*
*MDD **28** 18:39:39.0±0.3, 42°98N×0°81W, h10km±4km, mbLg1.8/12, Error ellipse: s-maj=5.7km s-min=2.1km az=9.0, PRXIMO*

ISC 28 18:39:38.4±1.0, 43°01N±0°05×0°84W±0°02, h11km±9km, n22, σ0°85/31, 1C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETSF	Etsaut	0.24	118	ePg	Pg	18 39 42.6	-0.7
ETSF				eSg	Sg	18 39 46.4	-0.3
78nm,0.2s							
ETSF	Etsaut	0.24	118	Pg	Pg	18 39 42.6	-0.7

ETSF				Lg	Lg	18 39 46.4	
	39nm,0.2s						
SJPF	**Ste Jean**	**0.30**	**290**	*e*Pg	**Pb**	**18 39 45.0**	**-0.8**
SJPF				*e*Sg	**Sb**	**18 39 50.3**	**-0.4**
	28nm,0.2s						
SJPF	**Ste Jean**	**0.30**	**290**	Pg	**Pb**	**18 39 45.0**	**-0.8**
SJPF				Lg	Lg	18 39 50.3	
	14nm,0.2s						
EORO	**Oroz-Betelu**	**0.36**	**251**	⇑Pg	**Pg**	**18 39 45.8**	**+0.2**
	26nm,0.2s,SNR=18						
EORO				Lg	Lg	18 39 52.1	
	30nm,0.2s,SNR=39						
IZUN	**Zunzarren**	**0.47**	**252**	Pg	**Pg**	**18 39 48.2**	**+0.5**
	1.8nm,0.1s,SNR=7.9						
IZUN				Lg	Lg	18 39 55.1	
	22nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**0.53**	**294**	Pg	**Pb**	**18 39 49.5**	**-0.3**
	0.6nm,0.1s,SNR=9.0						
EALK				Lg	Lg	18 39 57.9	
	12nm,0.2s,SNR=21						
EALK	**Alkurruntz**	**0.53**	**294**	Pg	**Pb**	**18 39 49.4**	**-0.3**
EALK				Sg	**Sb**	**18 39 57.5**	**+0.1**
IUNC	**Unciti**	**0.54**	**242**	Pg	**Pg**	**18 39 49.7**	**+0.7**
	1.2nm,0.1s,SNR=7.9						
IUNC				Lg	Lg	18 39 57.1	
	26nm,0.3s,SNR=7.9						
EARA	**Aranguren**	**0.59**	**247**	Pg	**Pg**	**18 39 50.4**	**+0.5**
	3.6nm,0.1s,SNR=8.0						
EARA				Lg	Lg	18 39 58.3	
	5.8nm,0.2s						
ECHI	**Chisagues Biel**	**0.84**	**114**	Pg	**Pg**	**18 39 53.8**	**-0.8**
	0.7nm,0.1s,SNR=7.9						
ECHI				Lg	Lg	18 40 04.8	
	4.7nm,0.1s,SNR=7.9						
ECHI	**Chisagues Biel**	**0.84**	**114**	Pg	**Pg**	**18 39 55.2**	**+0.7**
ECHI				Sg	**Sg**	**18 40 06.6**	**+1.1**
EPF	**Esparros**	**0.87**	**88**	*e*Pg	**Pg**	**18 39 54.8**	**-0.3**
EPF				*e*Sg	**Sb**	**18 40 07.1**	**-0.1**
	6.3nm,0.2s						
EPF	**Esparros**	**0.87**	**88**	Pg	**Pg**	**18 39 54.8**	**-0.3**
EPF				Lg	Lg	18 40 07.1	
	3.2nm,0.2s						
ESAC	**San Caprasio**	**1.32**	**168**	Pg	**Pn**	**18 40 03.5**	**+0.7**
	15nm,0.2s,SNR=5.7						
ESAC				Lg	Lg	18 40 20.8	
	22nm,0.2s						
MLS	**Moulis**	**1.42**	**91**	Pg	**Pg**	**18 40 06.6**	**+0.9**
MLS				Sg	**Sg**	**18 40 26.2**	**+2.1**
CSOR	**Sort**	**1.59**	**113**	Pn	**Pn**	**18 40 05.5**	**-1.1**
	0.2nm,0.1s,SNR=7.9						
CSOR				Pg	**Pb**	**18 40 07.8**	**-0.1**
	2.6nm,0.3s,SNR=6.0						
CSOR				Lg	Lg	18 40 29.3	
	2.6nm,0.3s						
MONQ	**Montcuq**	**2.01**	**47**	Pg	**Pg**	**18 40 17.5**	**+0.6**
MONQ				Sn	**Sg**	**18 40 43.2**	**+0.3**
EMIR	**Miracle**	**2.07**	**121**	Pg	**Pb**	**18 40 15.4**	**-0.6**
	0.8nm,0.2s,SNR=7.9						
EMIR				Lg	Lg	18 40 44.1	
	3.9nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**2.14**	**103**	Pg	**Pb**	**18 40 17.6**	**+0.3**
	0.1nm,0.1s,SNR=4.0						
CLLI				Lg	Lg	18 40 47.3	
	1.1nm,0.2s,SNR=8.7						
EPOB	**Poblet**	**2.19**	**139**	Pg	**Pb**	**18 40 17.4**	**-0.6**
	0.3nm,0.1s,SNR=7.9						
EPOB				Sn	**Sn**	**18 40 40.6**	**-1.3**
	0.2nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	18 40 46.5	
	1.6nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**2.73**	**116**	Pg	**Pb**	**18 40 29.1**	**+1.8**
	1.4nm,0.2s,SNR=7.9						
CFON				Lg	Lg	18 41 04.9	
	7.9nm,0.2s,SNR=7.9						

*IDC **28** 18:45:55.6±0.8, 10.°21S×107.°39E, h0km, mb4.0/8, mb1 4.2/11, mb1mx3.9/32, mbtmp4.1/11, ML4.0/3, Error ellipse: s-maj=28.1km s-min=15.4km az=59.0*
*ISCJB **28** 18:45:56.2±0.3, 10.°20S±0.°04×107.°39E±0.°04, h23km, mb4.4/19, Error ellipse: s-maj=5.7km s-min=4.4km az=42.0*
*NEIC **28** 18:45:56.2±2.1, 10.°22S×107.°41E, h7km±3km, mb4.5/17, Error ellipse: s-maj=10.2km s-min=7.6km az=167.0*
*DJA **28** 18:45:59.8±0.6, 10.°S±6.°×10.°E±.°, h55km±65km, M4.4/15, mb4.2/8, mB4.9/4, MLv4.6/15, Mw(mB)4.2/4*
ISC 28 18:45:58.3±0.5, 10.°20S±0.°05×107.°39E±0.°05, h23km, n59, σ1°74/63, mb4.4/19, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.73**	**261**	*e*Pn	**Pn**	**18 46 26.0**	**-1.0**
XMIS				*e*Sn	**Sn**	**18 46 44.8**	**-3.7**
CISI	**Cisompet, Garu**	**2.66**	**9**	*e*Pn	**Pn**	**18 46 38.1**	**-1.8**
CISI	**Cisompet, Garu**	**2.66**	**9**	P	**Pn**	**18 46 38.0**	**-1.8**
CISI				S	**Sn**	**18 47 09.1**	**-2.3**
LEM	**Lembang**	**3.36**	**4**	Pn	**Pn**	**18 46 50.6**	**+1.1**
	22nm,0.3s,baz=271,slow=21,SNR=10						
LEM				Sn	**Sn**	**18 47 29.9**	**+1.1**
	51nm,0.3s,baz=322,slow=21,SNR=12						
LEM	**Lembang**	**3.36**	**4**	P	**Pn**	**18 46 50.1**	**+0.6**
UGM	**Wanagama**	**3.84**	**54**	*e*Pn	**Pn**	**18 46 55.2**	**-0.9**
UGM				*e*Sn	**Sn**	**18 47 34.8**	**-5.7**
UGM	**Wanagama**	**3.84**	**54**	P	**Pn**	**18 46 55.2**	**-0.9**
CGJI	**Cibinong**	**3.94**	**335**	P	**Pn**	**18 46 56.1**	**-1.3**
WOJI	**Wonogiri, Jawa**	**4.21**	**56**	P	**Pn**	**18 47 01.0**	**-0.1**
SMRI	**Semarang**	**4.35**	**44**	*e*Pn	**Pn**	**18 47 06.7**	**+3.7**
PWJI	**Pagerwojo**	**4.87**	**64**	P	**Pn**	**18 47 09.3**	**-0.8**
NGJI	**Ngawi**	**4.91**	**55**	P	**Pn**	**18 47 11.0**	**+0.3**
KASI	**Kota Agung**	**5.46**	**328**	P	**Pn**	**18 47 17.6**	**-0.7**
	36nm,1.9s,0.4nm						
LWLI	**Liwa**	**6.12**	**327**	P	**Pn**	**18 47 26.5**	**-0.9**
	15nm,0.5s,0.3nm						
GMJI	**Gumukmas**	**6.28**	**73**	P	**Pn**	**18 47 30.3**	**+0.8**
MDSI	**Maura Dua**	**6.51**	**330**	P	**Pn**	**18 47 31.6**	**-1.1**
JAGI	**Jajag, Banyuwa**	**6.89**	**76**	*e*Pn	**Pn**	**18 47 38.8**	**+0.8**
JAGI				*e*Sn	**Sn**	**18 48 53.5**	**-2.2**
JAGI	**Jajag, Banyuwa**	**6.89**	**76**	P	**Pn**	**18 47 38.5**	**+0.5**
	93nm,1.5s,3µm0.6nm						
MNAI	**Manna**	**7.28**	**323**	*e*Pn	**Pn**	**18 47 46.0**	**+2.6**
MNAI				*e*Sn	**Sn**	**18 48 58.4**	**-6.9**
SRBI	**Singaraja**	**8.01**	**75**	P	**Pn**	**18 47 53.0**	**-0.3**
	23nm,1.3s,0.1nm						
PPBI	**Pangkal Pinang**	**8.08**	**351**	P	**Pn**	**18 47 53.5**	**-0.8**
	6.4nm,1.1s,936nm0.0nm						
PLAI	**Plampang**	**10.34**	**83**	P	**Pn**	**18 48 24.7**	**-0.6**
	32nm,0.9s						
GIRL	**Giralia**	**14.00**	**153**	*e*Pn	**Pn**	**18 49 12.8**	**-2.5**
BATI	**Baumata**	**16.02**	**91**	Pn	**Pn**	**18 49 42.2**	**-0.1**
	1.1nm,0.3s,baz=96,slow=18,SNR=2.5						
PSA00	**Pilbara Seismi**	**16.46**	**135**	*e*Pn	**Pn**	**18 49 45.8**	**-2.1**
	58nm,1.7s						
SOEI	**Soe**	**16.63**	**90**	*e*Pn	**Pn**	**18 49 49.9**	**-0.3**
	30nm,1.2s						
KULM	**Kulim**	**16.79**	**336**	*e*Pn	**Pn**	**18 49 51.2**	**-0.9**
	7.9nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.35**	**116**	P	**Pn**	**18 50 23.9**	**+0.3**
	0.1nm,0.3s,baz=275,slow=8.1,SNR=5.9						
FITZ				S	S	18 53 38.8	-21
	0.1nm,0.3s,baz=181,slow=17,SNR=2.7						
FITZ	**Fitzroy Crossi**	**19.35**	**116**	*e*P	**Pn**	**18 50 24.2**	**+0.7**
DLV	**T Lat**	**22.02**	**3**	*e*P	**P**	**18 50 52.1**	**+0.6**
	22nm,1.1s						
FAKI	**Fak Fak**	**25.72**	**75**	*e*P	**P**	**18 51 26.2**	**-1.0**
	52nm,1.3s						
WRA	**Warramunga Arr**	**27.73**	**114**	P	**P**	**18 51 45.4**	**+0.1**
	2.3nm,0.7s,baz=278,slow=12,SNR=13						
WR1	**Warramunga Arr**	**27.73**	**114**	*e*P	**P**	**18 51 45.4**	**+0.1**
WB2	**Warramunga Arr**	**27.74**	**114**	*e*P	**P**	**18 51 45.9**	**+0.5**
	15nm,1.4s						
FORT	**Forrest**	**28.08**	**140**	*e*P	**P**	**18 51 46.9**	**-1.4**
	16nm,1.3s						
ASAR	**Alice Springs**	**28.61**	**121**	P	**P**	**18 51 53.4**	**+0.2**
	1.8nm,0.7s,baz=298,slow=9.0,SNR=23						
ASAR				PcP	**PcP**	**18 55 05.2**	**+1.1**
	0.4nm,0.7s,baz=310,slow=2.0,SNR=6.1						
AS31	**Alice Springs**	**28.61**	**121**	*e*P	**P**	**18 51 53.4**	**+0.2**
	0.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.67**	**344**	P	**P**	**18 52 04.2**	**+1.8**
	0.6nm,0.8s,baz=180,slow=9.5,SNR=5.9						
H08S2	**Diego Garcia H**	**34.56**	**271**	T	T	19 30 46.5	
	baz=89						
H08S3	**Diego Garcia H**	**34.57**	**271**	T	T	19 31 07.9	
	baz=89						
H08S1	**Diego Carcia H**	**34.58**	**271**	T	T	19 30 40.6	
	baz=89						
STKA	**Stephens Creek**	**38.27**	**129**	P	**P**	**18 53 18.1**	**+1.0**
	4.6nm,0.6s,baz=305,slow=8.4,SNR=17						
STKA	**Stephens Creek**	**38.27**	**129**	*e*P	**P**	**18 53 18.2**	**+1.2**
	1.2nm,0.8s						
GUMO	**Guam**	**44.07**	**58**	*e*P	**P**	**18 54 05.8**	**+0.9**
	150nm,1.2s						
CAN	**Canberra**	**45.32**	**130**	*e*P	**P**	**18 54 16.8**	**+2.0**
	40nm,1.7s						
MK31	**Makanchi Array**	**61.01**	**341**	*e*P	**P**	**18 56 10.7**	**+0.8**
	5.2nm,1.6s						
MK32	**Makanchi Array**	**61.01**	**341**	*e*P	**P**	**18 56 10.8**	**+0.8**
MKAR	**Makanchi Array**	**61.01**	**341**	P	**P**	**18 56 10.8**	**+0.8**
	0.7nm,0.6s,baz=142,slow=7.2,SNR=8.9						
ODZ	**Otahua Downs**	**64.02**	**135**	*e*P	**P**	**18 56 29.8**	**-0.4**
	57nm,1.5s						
MAW	**Mawson**	**64.44**	**197**	P	**P**	**18 56 33.0**	**+0.6**
	1.0nm,0.7s,baz=46,slow=12,SNR=3.8						
MAW	**Mawson**	**64.44**	**197**	*e*P	**P**	**18 56 32.7**	**+0.2**
	1.9nm,1.6s						
BKZ	**Black Stump Fm**	**67.44**	**128**	*e*P	**P**	**18 56 53.6**	**+1.2**
	115nm,1.9s						
ABKAR	**Akbulak array**	**72.34**	**330**	*e*P	**P**	**18 57 21.9**	**-0.3**
	2.1nm,0.9s						
PETK	**Petropavlovsk-**	**76.19**	**29**	P	**P**	**18 57 44.9**	**+0.3**
	3.2nm,0.8s,baz=247,slow=1.5,SNR=5.1						
PEA1	**Petropavlovsk-**	**76.19**	**29**	*e*P	**P**	**18 57 44.9**	**+0.3**
BR101	**Keskin Array S**	**84.23**	**312**	*e*P	**P**	**18 58 28.7**	**+0.3**
BRTR	**Keskin Array B**	**84.23**	**312**	P	**P**	**18 58 28.7**	**+0.3**
	0.4nm,0.6s,baz=120,slow=8.7,SNR=2.4						
TXAR	**Lajitas Array**	**145.29**	**52**	PKPbc	**PKPdf**	**19 05 36.4**	**+1.4**
	0.9nm,0.6s,baz=266,slow=1.9,SNR=12						
LPAZ	**La Paz**	**153.31**	**190**	PKPab	**PKPab**	**19 06 09.7**	**+1.7**
	0.8nm,0.6s,baz=222,slow=6.4,SNR=3.9						

*ISCJB **28** 18:46:35.7±0.4, 2.°92S±0.°04×76.°24W±0.°07, h100km, mb4.2/8, Error ellipse: s-maj=9.9km s-min=5.1km az=1.8*
*IDC **28** 18:46:38.4±3.2, 2.°93S×76.°38W, h132km±36km, mb3.8/3, mb1 3.7/8, mb1mx3.4/33, mbtmp4.1/8, Error ellipse: s-maj=33.9km s-min=17.3km az=25.0*
*NEIC **28** 18:46:38.3±2.4, 2.°79S×76.°33W, h126km±9km, mb4.2/9, Error ellipse: s-maj=27.7km s-min=11.7km az=77.0*
ISC 28 18:46:36.0±0.6, 2.°89S±0.°06×76.°30W±0.°08, h100km, n39, σ2°16/38, mb4.4/9, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTLC	**Puerto Leguiza**	**3.39**	**26**	*e*P	**Pn**	**18 47 26.2**	**-0.9**
OTAV	**Otavalo**	**3.78**	**325**	*e*Pn	**Pn**	**18 47 34.1**	**+1.5**
OTAV	**Otavalo**	**3.78**	**325**	*e*P	**Pn**	**18 47 33.8**	**+1.1**
GCUF	**Volcan Galeras**	**4.22**	**346**	*e*P	**Pn**	**18 47 40.0**	**+1.4**
CRUC	**La Cruz**	**4.47**	**352**	*e*P	**Pn**	**18 47 43.4**	**+1.4**
FLOC	**Florencia**	**4.49**	**8**	*e*P	**Pn**	**18 47 43.4**	**+1.5**
ATAH	**Atahualpa**	**4.70**	**206**	P	**Pn**	**18 47 46.7**	**+1.6**
	15nm,0.3s,baz=24,slow=9.5,SNR=77						
ATAH				S	**Sn**	**18 48 37.8**	**-1.0**
	13nm,0.3s,baz=268,slow=20,SNR=12						
BBAC	**Balboa, Cauca**	**4.97**	**349**	*e*P	**Pn**	**18 47 50.1**	**+1.6**
POPC	**Popayan, Colom**	**5.41**	**356**	*e*P	**Pn**	**18 47 58.2**	**+3.7**
MACC	**Macarena, Meta**	**5.57**	**26**	*e*P	**Pn**	**18 47 58.6**	**+2.0**
ORTC	**Ortega, Tolima**	**6.83**	**9**	*e*P	**Pn**	**18 48 16.7**	**+2.9**
CHIC	**Chingaza**	**7.90**	**19**	*e*P	**Pn**	**18 48 30.9**	**+2.4**
GUY2C	**Guyana, Caldas**	**8.11**	**7**	*e*P	Pn	18 48 36.9	+5.4
NNA	**Nana**	**9.05**	**183**	P	**Pn**	**18 48 47.4**	**+3.5**
	3.4nm,0.3s,baz=333,slow=14,SNR=4.5						
NNA				S	Sn	18 50 15.4	-8.8
	5.4nm,0.3s,baz=286,slow=23,SNR=6.7						
NNA	**Nana**	**9.05**	**183**	*e*Pn	**Pn**	**18 48 46.5**	**+2.5**
NNA				*e*Sn	**Sn**	**18 50 18.4**	**-5.8**
LPAZ	**La Paz**	**15.55**	**149**	P	**Pn**	**18 50 11.4**	**+1.0**
	0.1nm,0.3s,baz=212,slow=9.5,SNR=2.3						
PTGA	**Pitinga**	**16.47**	**83**	P	**Pn**	**18 50 21.5**	**+0.3**
	0.6nm,0.3s,baz=308,slow=23,SNR=5.5						
PTGA				S	Sn	18 53 13.6	-10
	0.5nm,0.3s,baz=307,slow=20,SNR=2.2						
PTGA	**Pitinga**	**16.47**	**83**	*e*P	**Pn**	**18 50 22.1**	**+0.9**
	9.5nm,1.1s						
MNMC	**Minye Minye**	**17.42**	**158**	*e*P	**Pn**	**18 50 35.3**	**+2.2**
	8.3nm,0.6s						
PB11	**IPOC Station P**	**17.98**	**159**	*e*P	**P**	**18 50 40.9**	**+1.9**
	11nm,1.0s						
GO01	**Chusmiza**	**18.07**	**158**	*e*P	**Pn**	**18 50 42.6**	**+1.5**
	9.1nm,1.2s						
PB01	**IPOC Station P**	**19.23**	**160**	*e*Pn	**Pn**	**18 50 58.9**	**+4.4**
	12nm,1.3s						
SIV	**San Ignacio**	**19.85**	**132**	P	**P**	**18 50 58.0**	**-1.3**
	0.4nm,0.3s,baz=323,slow=12,SNR=6.5						
CUPR	**Culebra, Puert**	**23.70**	**27**	*e*P	**P**	**18 51 37.0**	**-1.9**
	22nm,1.0s						
MDP	**Montagnes des**	**24.93**	**71**	P	**P**	**18 51 50.6**	**+0.4**
	6.4nm,0.4s,baz=245,slow=8.2,SNR=12						
TXAR	**Lajitas Array**	**41.40**	**323**	P	**P**	**18 54 12.0**	**-0.8**
	0.2nm,0.7s,baz=157,slow=12,SNR=2.6						
PDAR	**Pinedale Array**	**54.47**	**330**	P	**P**	**18 55 52.0**	**-1.5**
	0.2nm,0.5s,baz=119,slow=7.3,SNR=2.5						
DBIC	**Dimbokro**	**71.95**	**82**	P	**P**	**18 57 49.5**	**+0.2**
	2.3nm,0.4s,baz=300,slow=2.8,SNR=6.8						
DBIC	**Dimbokro**	**71.95**	**82**	*e*P	**P**	**18 57 49.6**	**+0.2**
	21nm,1.5s						
TOA1	**Torodi Ar. Sit**	**78.99**	**76**	*e*P	**P**	**18 58 29.0**	**-0.6**
TOA0	**Torodi Ar. Sit**	**78.99**	**76**	*e*P	**P**	**18 58 29.2**	**-0.4**
	11nm,1.6s						
TORD	**Torodi Ar. Bea**	**78.99**	**76**	P	**P**	**18 58 29.0**	**-0.6**
	7.2nm,0.3s,baz=277,slow=5.4,SNR=24						
ILAR	**Eielson Array**	**84.43**	**336**	pP	pP	18 59 27.2	+3.9
	0.7nm,0.8s,baz=106,slow=4.2,SNR=6.7						
QSPA	**South Pole Qui**	**87.18**	**180**	*e*P	**P**	**18 59 11.0**	**0.0**
	3.4nm,0.9s						
ZAA1	**Zalesovo Array**	**126.79**	**14**	*e*PKPdf	**PKPdf**	**19 05 25.6**	**-2.4**
ZALV	**Zalesovo Beam**	**126.80**	**14**	PKP	**PKPdf**	**19 05 25.5**	**-2.4**
	0.6nm,0.5s,baz=298,slow=3.1,SNR=3.4						
ASAR	**Alice Springs**	**140.48**	**226**	PKhKP	PKPpre	19 05 44.0	
	0.3nm,0.7s,baz=123,slow=3.4,SNR=4.7						
WR1	**Warramunga Arr**	**142.32**	**232**	*e*PKPdf	**PKPdf**	**19 05 55.6**	**-2.2**
WRA	**Warramunga Arr**	**142.32**	**232**	PKP	**PKPdf**	**19 05 55.7**	**-2.3**
	0.4nm,0.3s,baz=111,slow=1.5,SNR=3.9						

TRN 28 18:52:46.9, 15.°26N×60.°35W, h45km, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**0.70**	**227**	*e*P	Pn	18 53 01.5	+1.0
MVM	**Montagne Vaucl**	**0.88**	**217**	*e*P	Pn	18 53 04.2	+1.3
BAMF	**Morne Balai**	**0.89**	**241**	*e*P	Pn	18 53 05.1	+2.0
LPMF	**Morne Lapointe**	**0.91**	**222**	*e*P	Pn	18 53 03.9	+0.6
CXM	**Morne La Croix**	**0.91**	**241**	*e*P	Pn	18 53 05.0	+1.5
GBMF	**Grand Be**	**0.91**	**240**	*e*P	Pn	18 53 05.3	+1.8
FDF	**Fort de France**	**0.94**	**236**	*e*P	Pn	18 53 04.8	+1.1
FDF				*e*S	Sn	18 53 18.1	+2.1
PML	**Morne Lenard**	**0.94**	**240**	*e*P	Pn	18 53 05.5	+1.8
PCM	**Pelee Case Pet**	**0.94**	**243**	*e*P	Pn	18 53 05.3	+1.5
MPOM	**Morne Pois Mar**	**0.95**	**212**	*e*P	Pn	18 53 04.7	+0.9
ZAM	**Aeronautique**	**0.95**	**224**	*e*P	Pn	18 53 04.6	+0.8
DWS	**Wesley**	**0.98**	**289**	*e*P	Pn	18 53 05.5	+1.1
DWS				*e*S	Sn	18 53 19.4	+2.3
TRMF	**Trois Ilets**	**0.99**	**224**	*e*P	Pn	18 53 05.8	+1.5
BIM	**Bigot**	**1.01**	**224**	*e*P	Pn	18 53 06.4	+1.6
SLW	**Petit Monier**	**1.35**	**205**	*e*P	Pn	18 53 11.3	+1.9
SLW				*e*S	Sn	18 53 28.7	+2.4
SLBI	**Saint Lucia, B**	**1.37**	**207**	*e*P	Pn	18 53 11.0	+1.4
SLBI				*e*S	Sn	18 53 28.0	+1.5
CBE	**Ff, Capester**	**1.46**	**304**	*e*P	Pn	18 53 13.1	+2.2
MCLT	**Moule a Chique**	**1.64**	**201**	*e*P	Pn	18 53 15.4	+2.1
MCLT				*e*S	Sn	18 53 36.3	+3.0
SVCV	**St. Vincent, C**	**2.12**	**202**	*e*P	Pn	18 53 21.9	+2.0
SVCV				*e*S	Sn	18 53 47.6	+2.6
SVB	**Belmont**	**2.16**	**204**	*e*P	Pn	18 53 22.6	+2.1
SVB				*e*S	Sn	18 53 47.4	+1.4

*KRNET **28** 19:09:39.6±0.1, 40.°74N×77.°75E, mb2.4*
*NNC **28** 19:09:40.0±2.5, 40.°74N×77.°60E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=16.8km s-min=12.8km az=2.0*
*SOME **28** 19:09:41.0, 40.°72N×77.°63E, h15km*
ISC 28 19:09:38.2±2.9, 40.°7N±0.°1×77.°65E±0.°04, h17km±17km, n27, σ0°78/42, 9C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.45**	**346**	⇑*i*P	**Pg**	**19 10 06.5**	**+0.3**
	baz=44						
KDJ				⇑*i*S	**Sg**	**19 10 26.2**	**+1.1**
	baz=44						
BOOM	**Boomskoye usch**	**2.18**	**325**	⇓*i*P	**Pb**	**19 10 18.8**	**+1.4**
	baz=23						
BOOM				⇓*i*S	**Sg**	**19 10 47.4**	**-1.1**
	baz=23						
KZA	**Kyzart**	**2.26**	**308**	⇑*i*P	**Pb**	**19 10 20.2**	**+1.4**
	baz=6.0						
KZA				⇑*i*S	**Sg**	**19 10 49.9**	**-1.0**
	baz=6.0						
TNSS	**Tian-Shan**	**2.37**	**347**	Pg	**Pg**	**19 10 24.0**	**+0.2**
	1.4nm,0.2s						
TNSS				Lg	Lg	19 10 55.3	
	9.7nm,0.5s						
TNSS	**Tian-Shan**	**2.37**	**347**	*e*P	**Pg**	**19 10 24.0**	**+0.2**
	1.4nm,0.2s						
TNSS				*e*S	**Sg**	**19 10 55.3**	**+0.7**
	9.7nm,0.5s						
SATY	**Saty**	**2.40**	**13**	Pg	**Pg**	**19 10 25.0**	**+0.7**
	1.6nm,0.3s						
SATY				Lg	Lg	19 10 56.6	
	4.0nm,0.2s						
SATY	**Saty**	**2.40**	**13**	*e*P	**Pg**	**19 10 25.0**	**+0.7**
	1.6nm,0.3s						
SATY				*e*S	**Sg**	**19 10 56.6**	**+1.1**
	4.0nm,0.2s						
MDOK	**Medeo**	**2.48**	**350**	Pg	**Pg**	**19 10 26.2**	**+0.4**
	1.8nm,0.4s						
MDOK				Lg	Lg	19 10 58.7	
	8.8nm,0.5s						
MDOK	**Medeo**	**2.48**	**350**	*e*P	**Pg**	**19 10 26.2**	**+0.4**
	1.8nm,0.4s						
MDOK				*e*S	**Sg**	**19 10 58.5**	**+0.5**
	8.8nm,0.5s						
KOTS	**Kotyrbulak**	**2.54**	**351**	Pg	**Pg**	**19 10 27.0**	**0.0**
	1.4nm,0.3s						
KOTS				Lg	Lg	19 11 00.3	
	6.6nm,0.4s						
KOTS	**Kotyrbulak**	**2.54**	**351**	*e*P	**Pg**	**19 10 27.0**	**0.0**
	1.6nm,0.2s						
KOTS				*e*S	**Sg**	**19 11 00.4**	**+0.5**
	27nm,0.4s						
UZB	**Uzynbulak**	**2.63**	**22**	Pg	**Pg**	**19 10 29.1**	**+0.4**
	1.1nm,0.4s						
UZB				Lg	Lg	19 11 03.8	
	2.3nm,0.5s						
UZB	**Uzynbulak**	**2.63**	**22**	*e*P	**Pg**	**19 10 29.1**	**+0.4**
	1.1nm,0.4s						
UZB				*e*S	**Sg**	**19 11 03.8**	**+1.0**
	2.3nm,0.5s						
KST	**Kastek**	**2.64**	**332**	Pg	**Pg**	**19 10 28.7**	**-0.1**
	1.5nm,0.3s						
KST				Lg	Lg	19 11 02.9	
	2.3nm,0.5s						
KST	**Kastek**	**2.64**	**332**	*e*P	**Pg**	**19 10 28.7**	**-0.1**
	1.5nm,0.3s						
KST				*e*S	**Sg**	**19 11 02.9**	**-0.1**
	2.3nm,0.5s						
TKM2	**Tokmak 2**	**2.68**	**326**	⇓Pg	**Pb**	**19 10 25.4**	**-0.4**
	1.2nm,1.1s						
TKM2				⇑Lg	Lg	19 11 03.0	
	1.2nm,0.8s						
UCH	**Uchtor**	**2.80**	**304**	⇓*i*P	**Pb**	**19 10 28.0**	**0.0**
	baz=3.0						
UCH				⇓*i*S	**Sb**	**19 11 03.0**	**+0.9**
	baz=3.0						
DGS	**Degeres**	**2.88**	**332**	Pg	**Pg**	**19 10 33.0**	**-0.5**
	1.6nm,0.5s						
DGS				Lg	Lg	19 11 10.2	
	3.5nm,0.3s						
DGS	**Degeres**	**2.88**	**332**	*e*P	**Pg**	**19 10 33.0**	**-0.5**
	1.6nm,0.5s						
DGS				*e*S	**Sg**	**19 11 10.2**	**-0.6**
	3.5nm,0.3s						
PDGK	**Podgornoye**	**2.94**	**27**	Pg	**Pg**	**19 10 34.2**	**-0.5**
	0.6nm,0.4s						
PDGK				Lg	Lg	19 11 12.9	
	1.4nm,0.5s						
PDGK	**Podgornoye**	**2.94**	**27**	⇑Pg	**Pb**	**19 10 30.6**	**+0.4**
	1.7nm,0.9s						
PDGK				⇑Lg	Lg	19 11 12.1	
	2.4nm,0.6s						
PDGK	**Podgornoye**	**2.94**	**27**	⇑*i*P	**Pb**	**19 10 29.3**	**-1.0**
	baz=26						
PDGK				⇑*i*S	**Sb**	**19 11 05.7**

NVR					AML	AML	19 22 00.2	
	comp=N,67μm,0.2s							
NVR					AML	AML	19 22 00.6	
	comp=E,62μm,0.2s							
SOH	**Sokhos**	**1.04**	**156**	*i* Pg		Pb	19 21 46.4	+1.2
SOH				*i* Sg		Sn	19 22 00.3	+1.3
BARS	**Barje**	**1.27**	**326**	*e*Pg		Pb	19 21 49.2	+0.2
BARS				*e*Sg		Sb	19 22 05.0	+0.1
PGB	**Panagyurishte**	**1.28**	**52**	P		Pb	19 21 50.5	+1.2
PGB	**Panagyurishte**	**1.28**	**52**	P		Pb	19 21 50.5	+1.2
RZN	**Rozhen**	**1.44**	**93**	P		Pb	19 21 53.4	+1.3
RZN	**Rozhen**	**1.44**	**93**	P		Pb	19 21 53.4	+1.3
ZAPS	**Zavoj**	**1.50**	**356**	*e*Pg		Pb	19 21 54.6	+1.6
ZAPS				*e*Sg		Sb	19 22 15.3	+3.6
KAVA	**Kavala**	**1.51**	**120**	P		Pb	19 21 53.6	+0.5
SELS	**Selova**	**1.90**	**320**	*e*Pg		Pb	19 22 01.4	+1.6
SELS				*e*Sg		Sb	19 22 26.0	+2.9
KDZ	**Kurdzhali**	**1.97**	**93**	P		Pb	19 22 02.2	+1.2
KDZ	**Kurdzhali**	**1.97**	**93**	P		Pb	19 22 02.2	+1.2

NNC 28 19:22:03.8±6.7, 37°.15N×71°.17E, h0km, mb3.6, mpv3.4, 3C-1D, Error ellipse: s-maj=57.2km s-min=47.7km az=141.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.96**	**355**	⇑Pn	Pn	19 23 33.1	-0.2
	1.0nm,0.4s,baz=180,slow=12,SNR=25						
KK31				Sn	Sn	19 24 44.3	+1.9
	1.6nm,0.3s,baz=189,slow=21,SNR=9.2						
AAK	**Ala-Archa**	**6.04**	**24**	⇓Pn	Pn	19 23 35.4	+0.9
	2.6nm,0.5s						
AAK				⇑Sn	Sn	19 24 44.7	+0.2
	1.9nm,0.6s						
AB31	**Akbulak array**	**14.59**	**330**	⇑Pn	Pn	19 25 29.9	-1.4
	0.3nm,0.6s,baz=158,slow=13,SNR=8.3						

NEIC 28 19:26:42.2±0.0, 58°.08N×151°.54W, h15km, ML2.9(AEIC), After AEIC., Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**0.63**	**243**	*e*Pg	Pg	19 26 52.3	-2.3
KDAK				*e*Sg	Sg	19 27 00.9	-2.1
CNPM	**China Poot**	**1.46**	**6**	*e*Pn	Pn	19 27 04.0	-4.0
HOM	**Homer**	**1.59**	**358**	*e*Pn	Pn	19 27 05.8	-3.9
AUL	**Augustine Lava**	**1.64**	**324**	*e*Pn	Pn	19 27 06.3	-4.2
BRLK	**Bradley Lake**	**1.73**	**11**	*e*Pn	Pn	19 27 07.2	-4.5
SII	**Sitkinak Islan**	**2.09**	**224**	*e*Pn	Pn	19 27 12.4	-4.3
SEW	**Seward**	**2.30**	**27**	*e*Pn	Pn	19 27 14.7	-4.8
RSO	**Redoubt South**	**2.47**	**346**	*e*Pn	Pn	19 27 17.4	-4.7
SPU	**Mount Spurr**	**3.12**	**355**	*e*Pn	Pn	19 27 26.0	-4.9
CHIA	**Chirikof Islan**	**3.15**	**226**	*e*P	Pn	19 27 26.6	-4.6
RC01	**Rabbit Creek A**	**3.16**	**16**	*e*Pn	Pn	19 27 26.7	-4.6
RC01				*e*Sn	Sn	19 28 01.8	-6.9
SUA	**Susitna One**	**3.42**	**6**	*e*Pn	Pn	19 27 30.4	-4.6
GLI	**Glacier Island**	**3.61**	**37**	*e*Pn	Pn	19 27 33.1	-4.4
KNK	**Knik Glacier**	**3.69**	**24**	*e*Pn	Pn	19 27 34.5	-4.1
SKT	**Skwentna**	**3.92**	**0**	*e*Pn	Pn	19 27 37.0	-4.8
GHO	**Glory Hole Cre**	**3.93**	**18**	*e*Pn	Pn	19 27 37.5	-4.5
SGAM	**Sherman Glacie**	**4.05**	**51**	*e*Pn	Pn	19 27 40.4	-3.3
HMT	**Hamilton**	**4.37**	**56**	*e*Pn	Pn	19 27 44.2	-3.8
TT01	**Tatalina**	**5.33**	**337**	*e*Pn	Pn	19 27 55.8	-5.3
TRF	**Thorofare Moun**	**5.42**	**6**	*e*Pn	Pn	19 27 58.5	-4.2
KTH	**Kantishna Hill**	**5.50**	**3**	*e*Pn	Pn	19 28 00.2	-3.3
RND	**Reindeer**	**5.51**	**13**	*e*Pn	Pn	19 27 59.9	-3.7
BALM	**Baldy**	**5.54**	**54**	*e*Pn	Pn	19 28 00.9	-3.2
CHX	**Chaix Hills**	**5.73**	**65**	*e*Pn	Pn	19 28 04.3	-2.5
MCK	**McKinley**	**5.81**	**12**	*e*Pn	Pn	19 28 03.5	-4.3
BPAW	**Bear Paw Mtn.**	**6.05**	**2**	*e*Pn	Pn	19 28 05.5	-5.5
BWN	**Browne**	**6.20**	**8**	*e*Pn	Pn	19 28 08.3	-4.7
BCPM	**Bancas Point**	**6.43**	**68**	*e*Pn	Pn	19 28 13.6	-2.6
BCPM				*e*Sn	Sn	19 29 21.5	-7.7
PNL	**Peninsula**	**6.50**	**71**	*e*Pn	Pn	19 28 14.1	-3.0
WRH	**Wood River Hil**	**6.63**	**13**	*e*Pn	Pn	19 28 14.2	-4.8
HDA	**Harding Lake**	**6.73**	**17**	*e*Pn	Pn	19 28 16.8	-3.5
CCB	**Clear Creek Bu**	**6.83**	**14**	*e*Pn	Pn	19 28 17.0	-4.7
CCB				*e*Sn	Sn	19 29 27.6	-11
MLY	**Manley**	**6.99**	**3**	*e*Pn	Pn	19 28 19.2	-4.8
ILB	**Eielson Array**	**7.08**	**16**	*e*Pn	Pn	19 28 20.8	-4.3
ILB				*e*Sn	Sn	19 29 35.9	-9.2
HYT	**Haines Junctio**	**7.66**	**63**	*e*Pn	Pn	19 28 28.4	-4.8
PRP	**Porcupine Dome**	**7.99**	**18**	*e*Pn	Pn	19 28 32.6	-5.1
WHY	**Whitehorse**	**8.88**	**66**	*e*Pn	Pn	19 28 46.7	-3.3

*ISCJB **28** 20:18:33.5±0.8, 16°.12N±0°.04×95°.62W±0°.03, h11km±5km, mb4.0/27, MS3.2/3, Error ellipse: s-maj=7.1km s-min=4.5km az=150.4*
*IDC **28** 20:18:35.0±4.0, 16°.00N×95°.48W, h18km±23km, mb3.6/6, mb1 3.8/8, mb1mx3.6/33, mbtmp3.6/8, ML3.4/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/28, Error ellipse: s-maj=23.2km s-min=18.5km az=38.0*
*MEX **28** 20:18:36.8±0.6, 15°.97N×95°.69W, h51km±10km, MD4.2*
*NEIC **28** 20:18:37.3±0.0, 16°.06N×95°.68W, h11km, mb4.1/45, MD4.4(MEX), After MEX.*

ISC 28 20:18:33.3±1.4, 16°.07N±0°.05×95°.63W±0°.03, h8km±10km, n73, σ2§40/79, mb4.1/27, MS3.3/3, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.55**	**237**	*e*Pg	**Pn**	20 18 46.3	-1.1
HUIG				*e*Sg	**Sb**	20 18 53.3	+0.2
HUIG	**Huatulco**	**0.55**	**237**	*e*P	**Pn**	20 18 46.3	-1.1
HUIG				*e*S	**Sb**	20 18 53.3	+0.2
PANG	**Puerto Angel**	**0.91**	**244**	*e*P	**Pb**	20 18 50.6	-0.7
PANG				*e*S	**Sg**	20 19 01.9	-0.6
CMIG	**Matias Romero**	**1.24**	**35**	Pg	**Pg**	20 18 57.7	+0.5
	390nm,0.3s,baz=220,slow=14,SNR=1716						
CMIG				Lg	Lg	20 19 14.6	
	1μm,0.3s,baz=331,slow=19,SNR=43						
CMIG	**Matias Romero**	**1.24**	**35**	*e*Pn	**Pg**	20 18 57.6	+0.5
CMIG				*e*Sg	**Sb**	20 19 12.4	-0.8
CMIG	**Matias Romero**	**1.24**	**35**	*e*P	**Pg**	20 18 57.6	+0.5
CMIG				*i* S	**Sn**	20 19 14.4	+0.5
VHO	**Vista Hermosa**	**1.46**	**313**	*e*Pn	**Pn**	20 18 59.7	-0.4
VHO				*e*Sn	**Sn**	20 19 16.8	-2.6
VHO	**Vista Hermosa**	**1.46**	**313**	*e*P	**Pn**	20 18 59.7	-0.4
VHO				*i* S	**Sn**	20 19 17.6	-1.9
TGIG		**2.51**	**73**	*e*Pn	**Pb**	20 19 16.8	-1.8
TGIG		**2.51**	**73**	*i* P	**Pn**	20 19 14.6	+0.3
TLIG	**Tlapa**	**3.18**	**298**	*e*Pn	**Pn**	20 19 24.6	+0.9
TLIG				*e*Sn	**Sb**	20 20 05.8	-3.4
CCIG	**Comitan**	**3.36**	**86**	*e*Pn	**Pn**	20 19 27.2	+0.9
CCIG				*e*Sn	**Sb**	20 20 11.2	-3.2
LVIG	**Laguna Verde**	**3.71**	**348**	*e*Pn	**Pn**	20 19 29.7	-1.2
APG	**El Apazote**	**5.09**	**101**	Pn	**Pn**	20 19 48.4	-1.7
	0.7nm,0.3s,baz=15,slow=14,SNR=4.6						
APG				Sn	**Sn**	20 20 45.9	-3.3
	8.2nm,0.3s,baz=273,slow=18,SNR=4.0						
MYIG	**Mrida**	**7.41**	**48**	*e*Pn	**Pn**	20 20 23.7	+2.0
TGUH	**Tegucigalpa,Un**	**8.31**	**103**	*e*Pn	**Pn**	20 20 38.0	+3.9
ZAIG	**Zacatecas**	**9.34**	**317**	*e*Pn	**Pn**	20 20 49.9	+1.4
LNIG	**Linares**	**9.49**	**338**	*e*Pn	**Pn**	20 20 50.6	+0.3
833A	**Chaparral WMA,**	**12.68**	**345**	*e*Pn	**Pn**	20 21 36.1	+2.1
HKT	**Hockley**	**13.82**	**359**	*e*Pn	**Pn**	20 21 52.0	+2.5
435B	**Jarrell**	**14.76**	**353**	*e*Pn	**P**	20 22 06.2	-2.2
JCT	**Junction City**	**14.85**	**346**	*e*Pn	**P**	20 22 06.5	-3.0
TX31	**Lajitas Ar. Sí**	**15.13**	**332**	*e*Pn	**Pn**	20 22 08.3	+0.8
	3.0nm,1.0s						
TXAR	**Lajitas Array**	**15.13**	**332**	Pn	**P**	20 22 10.7	-2.1
	0.1nm,0.3s,baz=151,slow=15,SNR=6.3						
TXAR				LR	LR	20 28 27.7	
	comp=Z,56nm,20.3s,baz=0.0,slow=39						
WHTX	**Lake Whitney,**	**15.94**	**354**	*e*P	**Pn**	20 22 16.5	-1.4
	11nm,0.6s						
ABTX	**Abilene, Hawle**	**16.88**	**348**	*e*P	**P**	20 22 31.0	-1.1
	8.0nm,0.6s						
Z41A	**Richland Creek**	**17.30**	**8**	*e*Pn	**Pn**	20 22 32.6	-2.6
	37nm,0.9s						
WLAR	**White Oak Lake**	**17.69**	**7**	*e*P	**Pn**	20 22 37.0	-3.0
	49nm,1.2s						
MNTX	**Cornudas Mount**	**17.92**	**332**	*e*P	**P**	20 22 43.6	+0.1
	5.2nm,1.2s						
X37A	**Clayton**	**18.45**	**1**	*e*P	**P**	20 22 48.8	-0.5
	10nm,0.8s						
MIAR	**Mount Ida**	**18.49**	**5**	*e*P	**Pn**	20 22 50.0	+0.1
	11nm,0.9s						
WMOK	**Wichita Mounta**	**18.81**	**352**	*e*P	**Pn**	20 22 54.0	+0.3
	3.6nm,0.9s						
MSTX	**Muleshoe**	**18.95**	**341**	*e*P	**Pn**	20 22 55.4	-0.2
	8.1nm,0.9s						
W39A	**Magazine**	**19.12**	**5**	*e*P	**P**	20 22 55.9	-0.8
	12nm,0.6s						
W41B	**Gary Mavity, V**	**19.27**	**8**	*e*P	**P**	20 22 57.3	-0.9
	8.0nm,0.7s						
WHAR	**Wooly Hollow**	**19.38**	**8**	*e*P	**P**	20 22 57.2	-2.3
	9.0nm,0.8s						
TUL1	**Leonard**	**19.76**	**360**	*e*P	**P**	20 23 01.5	-2.3
	11nm,0.8s						
FCAR	**Ozark Folk Cen**	**19.99**	**8**	*e*P	**P**	20 23 05.0	-1.2
	9.9nm,0.6s						
HHAR	**Hobbs**	**20.19**	**4**	*e*P	**P**	20 23 06.1	-2.3
	5.3nm,0.8s						
BNM	**Barren Site**	**20.55**	**333**	*e*P	Pn	20 23 13.8	-0.9
Y52A	**Lilburn**	**20.56**	**28**	*e*P	**P**	20 23 12.4	0.0
	30nm,1.1s						
SWET	**Sewanee**	**20.95**	**23**	*e*P	Pn	20 23 24.3	+5.1
	41nm,0.7s						
LAZ	**Ladron**	**20.98**	**333**	*e*P	**P**	20 23 19.1	+1.8
PBMO	**Poplar Bluff**	**21.14**	**12**	*e*P	**P**	20 23 16.1	-2.5
	7.7nm,0.7s						
ANMO	**Albuquerque**	**21.16**	**335**	P	**P**	20 23 21.1	+1.9
	1.2nm,0.6s,baz=162,slow=9.6,SNR=3.4						
ANMO				LR	LR	20 32 01.3	
	comp=Z,63nm,18.1s,baz=184,slow=38						
ANMO	**Albuquerque**	**21.16**	**335**	*e*P	**P**	20 23 21.6	+2.4
	6.0nm,0.9s						
TUC	**Tucson**	**21.23**	**322**	*e*P	**P**	20 23 21.7	+1.9
	4.2nm,1.1s						
CCM	**Cathedral Cave**	**22.24**	**9**	*e*P	**P**	20 23 30.3	-0.2
	6.1nm,0.8s						
T25A	**Trinidad**	**22.39**	**341**	*e*P	**P**	20 23 34.3	+2.0
	12nm,1.1s						
X18A	**Snowflake**	**22.44**	**328**	*e*P	**P**	20 23 36.1	+3.2
	3.4nm,0.6s						
X16A	**Lo Mia Camp, P**	**23.15**	**325**	*e*P	**P**	20 23 41.6	+1.2
	4.6nm,0.9s						
SDCO	**Great Sand Dun**	**23.29**	**340**	*e*P	**P**	20 23 42.8	+1.0
	3.9nm,1.1s						
PV01	**Paradox Valley**	**24.76**	**335**	*e*P	**P**	20 23 51.9	-3.8
	6.2nm,0.7s						
PV18	**Skein Mesa, Pa**	**25.00**	**335**	*e*P	**P**	20 24 02.8	+5.0
	18nm,1.5s						
PV12	**Saucer Basin,**	**25.01**	**335**	*e*P	**P**	20 24 02.8	+4.8
	7.9nm,1.1s						
PV11	**David Mesa, Pa**	**25.03**	**335**	*e*P	**P**	20 24 04.2	+6.1
	6.0nm,1.0s						
W13A	**Hualapai Mount**	**25.03**	**323**	*e*P	**P**	20 24 03.4	+5.2
	1.6nm,1.0s						
PV07	**Paradox Valley**	**25.05**	**335**	*e*P	**P**	20 24 03.2	+4.9
	3.8nm,0.8s						
PV16	**Nyswonger Mesa**	**25.06**	**335**	*e*P	**P**	20 24 03.3	+5.0
	2.4nm,0.7s						
PV04	**Paradox Valley**	**25.12**	**335**	*e*P	**P**	20 24 01.6	+2.7
	12nm,1.0s						
PV10	**Paradox Valley**	**25.16**	**335**	*e*P	**P**	20 24 05.5	+6.2
	7.6nm,0.9s						
PV22	**Blue Mesa, Par**	**25.20**	**335**	*e*P	**P**	20 23 59.7	+0.1
	7.4nm,1.1s						
ISCO	**Idaho Springs**	**25.20**	**342**	*e*P	**P**	20 24 01.3	+1.5
	3.1nm,0.9s						
PV23	**Carpenter Ridg**	**25.21**	**335**	*e*P	**P**	20 24 00.5	+0.7
	12nm,1.2s						
PV21	**Cone Mtn., Par**	**25.29**	**335**	*e*P	**P**	20 24 02.9	+2.4
	6.8nm,1.1s						
SDV	**Santo Domingo**	**25.41**	**103**	P	**P**	20 24 00.4	-1.3
	2.4nm,0.3s,baz=291,slow=14,SNR=2.0						
KNB	**Kanab**	**25.84**	**327**	*e*P	**P**	20 24 08.1	+2.6
	6.1nm,1.1s						
ATAH	**Atahualpa**	**28.68**	**142**	LR	LR	20 33 49.3	
	comp=Z,68nm,19.2s,baz=282,slow=32						
PDAR	**Pinedale Array**	**29.16**	**339**	P	**P**	20 24 35.4	+0.2
	0.1nm,0.3s,baz=134,slow=3.9,SNR=2.4						
NVAR	**Mina Array Bea**	**29.89**	**323**	P	**P**	20 24 43.6	+1.9
	0.2nm,0.4s,baz=146,slow=10,SNR=2.6						
SCHQ	**Schefferville**	**44.62**	**23**	LR	LR	20 47 58.0	
	comp=Z,31nm,18.1s,baz=330,slow=40						
YKA	**Yellowknife Ar**	**48.26**	**348**	P	**P**	20 27 14.6	+0.2
	0.8nm,0.8s,baz=150,slow=7.3,SNR=4.4						
INK	**Inuvik**	**57.49**	**344**	P	**P**	20 28 24.4	+1.8
	0.7nm,0.4s,baz=153,slow=6.8,SNR=2.7						

*ISCJB **28** 21:03:13.7±0.7, 24°.22S±0°.10×179°.9E±0°.1, h517km, mb3.8/8, Error ellipse: s-maj=15.7km s-min=13.1km az=8.5*
*IDC **28** 21:03:14.9±2.8, 24°.23S×179°.89E, h521km±29km, mb3.3/8, mb1 3.6/9, mb1mx3.2/29, mbtmp4.2/9, Error ellipse: s-maj=26.4km s-min=19.3km az=161.0*

ISC 28 21:03:14.2±0.7, 24°.3S±0°.1×180°.0E±0°.1, h517km, n17, σ1§16/17, mb3.9/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.66**	**277**	P	**P**	21 06 01.1	+1.3
	0.7nm,0.3s,baz=86,slow=16,SNR=10						
URZ	**Urewera**	**14.12**	**189**	S	**S**	21 08 43.8	+0.1
	0.7nm,0.3s,baz=227,slow=22,SNR=5.7						
PPT2	**Papeete2**	**29.15**	**83**	*e*LR	LR	21 07 25.2	
	comp=Z,83nm,26.2s						
STKA	**Stephens Creek**	**34.57**	**249**	P	**P**	21 09 19.6	+0.2
	2.5nm,0.5s,baz=94,slow=12,SNR=5.1						
ASAR	**Alice Springs**	**41.97**	**261**	P	**P**	21 10 19.4	-0.5
	2.3nm,0.5s,baz=93,slow=6.6,SNR=79						
ASAR				ScP	**ScP**	21 15 04.9	+0.6
	0.4nm,0.8s,baz=99,slow=4.9,SNR=5.2						
WRA	**Warramunga Arr**	**42.38**	**267**	P	**P**	21 10 22.3	-0.8
	7.1nm,0.4s,baz=96,slow=8.2,SNR=44						
JAY	**Jayapura**	**43.67**	**294**	P	**P**	21 10 32.7	-0.5
	6.0nm,0.5s,baz=127,slow=17,SNR=7.1						
VNDA	**Vanda**	**53.97**	**185**	P	**P**	21 11 49.8	+1.1
	0.5nm,0.8s,baz=14,slow=6.2,SNR=3.4						
SNAA	**Sanae**	**84.26**	**179**	P	**P**	21 14 49.6	-1.2
VNA3	**Neumayer Olymp**	**84.47**	**177**	P	**P**	21 14 51.1	-0.7
NVAR	**Mina Array Bea**	**85.05**	**44**	P	**P**	21 14 57.1	+1.8
	0.3nm,0.5s,baz=233,slow=8.9,SNR=3.6						
TXAR	**Lajitas Array**	**90.65**	**58**	P	**P**	21 15 22.4	+0.8
	1.1nm,0.7s,baz=216,slow=6.9,SNR=11						
PDAR	**Pinedale Array**	**92.98**	**44**	P	**P**	21 15 31.9	-0.4
	0.3nm,0.7s,baz=216,slow=4.5,SNR=3.5						
HFS	**Hagfors**	**142.94**	**349**	PKP	**PKPdf**	21 21 45.4	-2.8
	1.4nm,0.4s,baz=64,slow=3.4,SNR=15						
MMAI	**Mount Meron Ar**	**147.87**	**294**	PKPbc	**PKPbc**	21 22 01.9	+0.5
	0.7nm,0.4s,baz=88,slow=7.6,SNR=4.5						
EKA	**Eskdalemuir Ar**	**148.92**	**3**	PKPbc	**PKPbc**	21 22 02.4	-0.7
	0.4nm,0.4s,baz=347,slow=2.8,SNR=5.1						
TORD	**Toraodi Ar. Bea**	**168.78**	**189**	PKPab	**PKPab**	21 23 36.0	-0.2
	0.6nm,1.1s,baz=205,slow=4.2,SNR=4.2						

IDC 28 21:15:41.7±7.9, 5°.58S×152°.22E, h44km±69km, mb3.4/3, mb1 3.8/4, mb1mx3.3/33, mbtmp3.7/4, ML1.8/1, Error ellipse: s-maj=142.2km s-min=35.7km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.29**	**233**	P	Pn	21 17 12.7	+0.6
	1.4nm,0.3s,baz=21,slow=8.6,SNR=3.5						
PMG				S	Sn	21 18 22.5	-0.2
	2.5nm,0.3s,baz=203,slow=19,SNR=5.1						
WRA	**Warramunga Arr**	**22.50**	**229**	P	P	21 20 38.4	+0.7
	1.1nm,0.7s,baz=56,slow=10,SNR=3.5						
ASAR	**Alice Springs**	**25.19**	**223**	P	P	21 21 03.1	-0.2
	0.6nm,0.6s,baz=54,slow=8.9,SNR=8.8						
ILAR	**Eielson Array**	**83.10**	**22**	P	P	21 28 02.4	-0.2
	1.0nm,0.9s,baz=251,slow=5.0,SNR=7.6						

BJI 28 21:15:48.1±0.0, 39°.03N×113°.37E, h5km, ML3.6/11, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIY	**Taiyuan**	**1.51**	**210**	*e*Pn	Pn	21 16 16.0	+0.2
TIY				Pg	Pg	21 16 17.0	0.0
TIY				Sn	Sn	21 16 34.8	-1.1
TIY				Sg	Sb	21 16 36.0	0.0
TIY				smax	smax		
	comp=N,730nm,1.0s						
TIY				smax	smax		
	comp=E,920nm,1.0s						
BJI	**Beijing**	**2.39**	**64**	Pn	Pn	21 16 29.0	+1.1
BJI				Pg	Pg	21 16 33.0	-0.9
BJI				Sg	Sb	21 17 02.5	+1.1
BJI				smax	smax		
	comp=N,92nm,0.3s						
BJI				smax	smax		
	comp=E,93nm,0.5s						
BTO	**Baotou**	**3.02**	**302**	*e*Pg	Pg	21 16 44.5	-1.5
BTO				Sg	Sg	21 17 24.5	-0.7

*ISK **28** 21:16:18.4, 38°.59N×44°.82E, h5km, ML4.1/17*
*DDA **28** 21:16:19.9, 38°.69N×44°.54E, h1km±4km, ML3.8*
*NSSP **28** 21:16:19.6, 38°.70N×44°.63E, h10km, Ms4.1*
*NEIC **28** 21:16:20.8±2.9, 38°.58N×44°.80E, h6km±6km, mb4.1/15, ML4.1(ISK), ML4.1(ISK), MN4.1(TEH), Error ellipse: s-maj=6.9km s-min=2.4km az=190.0*
*ISCJB **28** 21:16:20.4±0.4, 38°.66N±0°.02×44°.73E±0°.01, h1km±3km, mb4.2/33, MS3.2/14, Error ellipse: s-maj=2.9km s-min=1.7km az=168.1*
*IDC **28** 21:16:20.0±0.7, 38°.62N×44°.68E, h0km, mb3.9/20, mb1 4.0/28, mb1mx3.9/48, mbtmp3.9/28, ML3.3/7, MS3.3/18, Ms1 3.3/18, ms1mx3.1/43, Error ellipse: s-maj=11.8km s-min=9.9km az=170.0*
*TEH **28** 21:16:20.2, 38°.65N×44°.71E, h10km, ML4.0*
*MOS **28** 21:16:21.8±1.6, 38°.65N×44°.77E, h20km, mb4.2/14, Error ellipse: s-maj=7.7km s-min=4.5km az=101.9*
*AZER **28** 21:16:23.1±0.3, 38°.74N×44°.77E, h10km±1km, ml4.3/30, Error ellipse: s-maj=3.3km s-min=2.5km az=156.0*

ISC 28 21:16:20.2±1.1, 38°.66N±0°.02×44°.71E±0°.02, h1km±7km, n307, σ1§85/343, mb4.1/36, MS3.3/14, 26C-12D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKU	**Maku**	**0.69**	**359**	*e*Pg	**Pg**	21 16 32.0	-1.4
IMRD	**Marand**	**0.78**	**86**	*e*Pg	**Pg**	21 16 34.5	-0.6
IMRD				*e*Sg	**Sb**	21 16 48.2	+0.3
IMRD				IAMB	IAmb	21 16 53.1	
	comp=Z,70μm,0.5s						
NAX	**Nakhchivan**	**0.80**	**50**	*e*Pg	**Pg**	21 16 35.5	0.0
NAX	**Nakhchivan**	**0.80**	**50**	P	**Pg**	21 16 35.5	0.0
	SNR=287						
NAX				S	**Sb**	21 16 47.8	-0.5
ISHB	**Shabestar**	**0.81**	**118**	*e*Pg	**Pg**	21 16 35.1	-0.6
ISHB				*e*Sg	**Sg**	21 16 47.3	+1.1
ISHB				IAMB	IAmb	21 16 53.2	
	comp=Z,6μm,0.3s						
VMUR	**Van-Muradiye**	**0.94**	**291**	*i* P	**Pg**	21 16 36.4	-1.9
VMUR				*i* S	**Sg**	21 16 49.4	-1.1
SBZ	**Shahbuz**	**0.99**	**42**	*e*Pg	**Pg**	21 16 38.8	-0.3
SBZ	**Shahbuz**	**0.99**	**42**	P	**Pg**	21 16 38.8	-0.3
	SNR=60						
SBZ				S	**Sb**	21 16 53.3	-0.4
TVAN	**Van**	**1.03**	**263**	*i* P	**Pg**	21 16 38.8	-1.1
TVAN				*i* S	**Sn**	21 16 56.0	-1.1
TVAN				IAML_P			
	comp=Z,16μm,0.1s						
VANB	**Van**	**1.03**	**267**	PN	**Pg**	21 16 40.2	+0.2
ORD	**Ordubad**	**1.04**	**75**	*e*Pg	**Pg**	21 16 39.9	-0.2
ORD	**Ordubad**	**1.04**	**75**	P	**Pg**	21 16 40.0	-0.2
	SNR=1051						
ORD				S	**Sb**	21 16 54.6	-0.7
HYR	**Heyderabad**	**1.06**	**6**	P	**Pg**	21 16 39.9	-0.6
	SNR=405						
HYR				S	**Sb**	21 16 55.2	-0.6
DYDN	**Diyadin**	**1.18**	**318**	*i* P	**Pb**	21 16 41.4	-2.2
DYDN				*i* S	**Sg**	21 16 54.3	-3.9
DYDN				IAML_P			
	comp=Z,11μm,0.4s						
ITBZ	**Tabriz**	**1.21**	**110**	*e*Pg	**Pn**	21 16 42.1	-2.3
ITBZ				IAMB	IAmb	21 17 07.3	
	comp=Z,29μm,0.4s						
GEVA	**Gevas**	**1.34**	**255**	*i* P	**Pn**	21 16 43.5	-2.7
GEVA				*i* S	**Sb**	21 17 02.8	-1.2
GEVA				IAML_P			
	comp=Z,11μm,0.4s						
HAKT	**HAKKARI**	**1.36**	**216**	*i* P	**Pn**	21 16 45.1	-1.4
HAKT				*i* S	**Sg**	21 17 05.4	+1.7
HAKT	**HAKKARI**	**1.36**	**216**	*e*Pg	**Pn**	21 16 44.5	-2.0
TASB	**TASBURUN-IGDIR**	**1.37**	**345**	PN	**Pb**	21 16 46.2	-0.4
TASB	**TASBURUN-IGDIR**	**1.37**	**345**	*e*Pn	**Pb**	21 16 46.1	-0.5
AKDM	**Akdamar-Van**	**1.40**	**257**	PN	**Pn**	21 16 45.6	-1.4
AKDM				SN	**Sg**	21 17 07.8	+2.8
AKDM	**Akdamar-Van**	**1.40**	**257**	*e

KZRT Kazreti 2.73 355 *i* P **Pb 21 17 10.2 +0.4**
BGD Bogdanovka 2.73 342 P **Pb 21 17 09.1 -0.9**
BNGL BINGOL 2.79 277 *i* P **Pb 21 17 11.5 +0.5**
MNGR Mingechevir, A 2.79 40 *e*Pn **Pn 21 17 07.8 +1.8**
MNGR Mingechevir, A 2.79 40 P **Pn 21 17 07.8 +1.8**
SNR=31
MNGR S **Sb 21 17 41.8 -3.8**
SVAN Silvan-Diyarba 2.80 261 PN **Pn 21 17 07.5 +1.3**
SVAN Silvan-Diyarba 2.80 261 *i* P **Pb 21 17 10.3 -0.8**
SVAN Silvan-Diyarba 2.80 261 *e*Pn **Pn 21 17 07.5 +1.3**
BTMN Batman 2.81 255 *i* P **Pb 21 17 09.1 -2.1**
BTMN IAML_P
comp=Z,755nm,0.5s
ZRD Zardab 2.81 54 *e*Pn **Pn 21 17 07.5 +1.2**
ZRD Zardab 2.81 54 P **Pn 21 17 07.5 +1.2**
SNR=54
ZRD S **Sn 21 17 42.1 +1.3**
LRK Lerik 2.84 89 *e*Pn **Pb 21 17 09.0 -2.9**
LRK Lerik 2.84 89 P **Pb 21 17 09.0 -2.9**
SNR=410
LRK S **Sb 21 17 46.9 -0.3**
AKH Akhalkalaki 2.90 342 PN **Pn 21 17 08.9 +1.2**
AKH Akhalkalaki 2.90 342 P **Pb 21 17 13.3 +0.4**
AKH Akhalkalaki 2.90 342 *e*Pn **Pb 21 17 09.5 -3.2**
AKH Akhalkalaki 2.90 342⇑ *i*P **Pb 21 17 13.7 +0.9**
AKH Akhalkalaki 2.90 342 *e*PN **Pb 21 17 13.2 +0.4**
KARO Karliova-Bingo 2.92 284 PN **Pn 21 17 09.6 +1.6**
GLBA Clilabad 2.93 77 *e*Pn **Pb 21 17 10.3 -2.9**
GLBA Clilabad 2.93 77 P **Pb 21 17 10.3 -2.9**
SNR=93
GLBA S **Sb 21 17 46.9 -2.7**
AKDA Akdag 2.96 300 *i* P **Pb 21 17 13.1 -0.8**
DDFL Dedoflistskaro 2.98 21 P **Pn 21 17 08.2 -0.5**
DDFL Dedoflistskaro 2.98 21 *i* P **Pn 21 17 08.2 -0.5**
BTNK Botanikuri 3.02 1 P **Pb 21 17 14.8 +0.1**
BTNK Botanikuri 3.02 1 *i* P **Pb 21 17 15.7 +1.0**
ECAT Cat-ERZURUM 3.05 289 *i* P **Pb 21 17 15.2 -0.2**
TBLG Delisi 3.06 0 PN **Pn 21 17 10.7 +0.9**
TBLG Delisi 3.06 0 P **Pb 21 17 15.8 +0.3**
TBLG Delisi 3.06 0 *e*Pn **Pn 21 17 10.3 +0.5**
TBLG Delisi 3.06 0 *e*PN **Pn 21 17 10.3 +0.5**
TBLG Delisi 3.06 0 *i* P **Pg 21 17 17.0 -1.8**
SAAT Saatly 3.12 66 P **Pn 21 17 12.5 +1.9**
SAAT S **Sn 21 17 50.0 +1.5**
BNGB Bingl 3.16 277 PN **Pn 21 17 12.9 +1.7**
BGOL Bingol 3.17 277 *i* P **Pb 21 17 16.5 -0.8**
SEKA Sheki 3.18 36 *e*Pn **Pn 21 17 13.1 +1.6**
SEKA Sheki 3.18 36 P **Pn 21 17 13.2 +1.6**
SNR=32
SEKA S **Sn 21 17 51.5 +1.4**
KDMR Kurdemir 3.19 56 *e*Pn **Pn 21 17 13.6 +2.2**
KDMR Kurdemir 3.19 56 P **Pn 21 17 13.6 +2.2**
KDMR S **Sn 21 17 51.8 +1.7**
LKRN Lenkeran, Azer 3.19 88 *e*Pn **Pn 21 17 13.9 +2.5**
LKRN Lenkeran, Azer 3.19 88 P **Pn 21 17 13.9 +2.5**
SNR=94
LKRN S **Sb 21 17 53.6 -3.4**
ASTR Astara 3.20 91 *e*Pn **Pn 21 17 14.1 +2.5**
ASTR Astara 3.20 91 P **Pn 21 17 14.2 +2.5**
SNR=77
ASTR S **Sb 21 17 54.3 -3.0**
EPOS Posof 3.22 332 *i* P **Pb 21 17 19.3 +1.1**
DAGI Agillar 3.23 319 *i* P **Pb 21 17 18.5 +0.1**
DBAD Bademkaya 3.30 316 *i* P **Pb 21 17 17.8 -1.9**
ZKTA Zakatala 3.31 26 P **Pn 21 17 15.0 +1.7**
SNR=22
ZKTA S **Sn 21 17 53.3 0.0**
QBL Gabala 3.32 46 *e*Pn **Pn 21 17 15.6 +2.3**
QBL Gabala 3.32 46 P **Pn 21 17 15.6 +2.3**
QBL S **Sn 21 17 55.0 +1.5**
YEDI Yedisu-Bingol 3.33 285 PN **Pn 21 17 15.6 +2.0**
LGD Lagodekhi 3.38 20 P **Pb 21 17 19.9 -1.0**
LGD Lagodekhi 3.38 20 *e*PN **Pb 21 17 19.9 -1.0**
MARD Mardin 3.38 248 *i* P **Pn 21 17 15.0 +0.7**
MARD IAML_P
comp=Z,4μm,0.6s
HANI Diyarbakir_Han 3.39 267 *i* P **Pb 21 17 19.9 -1.2**
IML Ismayilli 3.42 50 P **Pn 21 17 16.7 +1.9**
IML S **Sn 21 17 57.5 +1.5**
KOPT Kop Dagi 3.53 294 *i* P **Pb 21 17 24.1 +0.4**
DBOC Borcka 3.55 320 *i* P **Pb 21 17 21.8 -2.1**
MAZI Mazidag 3.57 252 PN **Pn 21 17 17.7 +0.8**
ALIB Äli-Bayra 3.58 67 P **Pn 21 17 18.6 +1.8**
ALIB S **Sn 21 18 01.5 +1.8**
XNQ Khinaliq 3.64 45 P **Pn 21 17 19.1 +1.2**
XNQ S **Sn 21 18 03.2 +1.5**
AKT Akhty 3.65 39 *e*PN **Pb 21 17 21.3 -4.2**
AKT *e* 21 17 28.9
AKT *e* 21 17 30.6
AKT *e*S **Sn 21 18 02.8 +1.2**
AKT *e* 21 18 15.3
AKT *e* 21 18 21.0
AKT pmax pmax
comp=Z,79nm,0.6s
AKT smax smax
comp=E,230nm,0.7s
AKT smax smax
comp=E,247nm,0.7s
AKT smax smax
comp=N,129nm,0.6s
BCA Borcka 3.65 321 PN **Pn 21 17 20.2 +2.4**
BCA Borcka 3.65 321⇑ *i*P **Pb 21 17 27.1 +1.6**
DYBB Diyarbakir 3.66 260 PN **Pn 21 17 19.8 +1.7**
PQL Pirkuli 3.67 53 *e*Pn **Pn 21 17 19.5 +1.2**
PQL Pirkuli 3.67 53 P **Pn 21 17 19.5 +1.2**
PQL S **Sn 21 18 03.8 +1.4**
DIYA Diyarbakir 3.68 260 *i* P **Pb 21 17 21.8 -4.3**
ZNJK Zanjan 3.73 121 *e*Pn **Pn 21 17 20.8 +1.6**
BATM Batumi 3.74 323 P **Pg 21 17 29.6 -2.2**
BATM Batumi 3.74 323⇑ *i*P **Pb 21 17 28.6 +1.6**
BATM Batumi 3.74 323 *i* P **Pg 21 17 29.1 -2.6**
GBS Qobustan 3.77 59 *e*Pn **Pn 21 17 20.9 +1.4**
GBS Qobustan 3.77 59 P **Pn 21 17 20.9 +1.4**
GBS S **Sn 21 18 06.0 +1.4**
GUDG Gudauri 3.80 357 P **Pn 21 17 22.7 +2.6**
QUB Quba 3.90 45 *e*Pn **Pn 21 17 24.9 +3.5**
TKB Tkibuli 3.91 341 P **Pb 21 17 28.1 -1.8**
ATGJ Altiaghaj 3.93 55 *e*Pn **Pn 21 17 23.3 +1.5**
ATGJ Altiaghaj 3.93 55 P **Pn 21 17 23.3 +1.5**
ATGJ S **Sn 21 18 10.1 +1.5**
QSAR Qusar 3.94 43 *e*Pn **Pn 21 17 23.6 +1.7**
QSAR Qusar 3.94 43 P **Pn 21 17 23.6 +1.7**
QSAR S **Sn 21 18 10.5 +1.7**
QUBA Quba, Azerbaij 3.96 46 P **Pn 21 17 24.9 +2.8**
SNR=9.0
QUBA S **Sn 21 18 10.9 +1.6**
SIZA Siyzn 4.03 52 *e*Pn **Pn 21 17 25.4 +2.3**
SIZA Siyzn 4.03 52 P **Pn 21 17 25.4 +2.3**
SIZA S **Sn 21 18 12.7 +1.7**
EUZM Uzumlu 4.03 287 *i* P **Pb 21 17 32.7 +0.7**
ONI Oni 4.04 347 PN **Pn 21 17 25.8 +2.6**
ONI Oni 4.04 347 P **Pb 21 17 34.4 +2.3**
ONI Oni 4.04 347 *e*PN **Pb 21 17 34.4 +2.3**
TNCL Tunceli-Merkez 4.05 278 *i* P **Pb 21 17 31.1 -1.4**
SNGE Sanandaj 4.14 148 *e*Pn **Pn 21 17 27.4 +2.6**
ZEI Tsey 4.17 352 *e*PN **Pg 21 17 37.4 -2.6**
ZEI *e*S **Sg 21 18 40.3 +6.3**
ZEI pmax pmax
comp=Z,33nm,0.4s
ZEI smax smax
comp=E,93nm,0.7s
IDHR Dehrash 4.18 161 *e*Pn **Pn 21 17 27.3 +2.0**
SVRC Sivrice-ELAZID 4.25 268 PN **Pn 21 17 27.4 +1.2**
GOBA Gobu 4.26 64 *e*Pn **Pn 21 17 28.3 +2.2**
GOBA Gobu 4.26 64 P **Pn 21 17 28.4 +2.2**
GOBA S **Sn 21 18 18.1 +1.6**
KTUT Trabzon 4.46 303⇑ *i*P **Pb 21 17 40.5 +1.3**
KELT Kelkit 4.47 291 *i* P **Pb 21 17 41.4 +1.7**
NDR Nardaran 4.50 63 P **Pn 21 17 30.9 +1.3**
NDR S **Sn 21 18 24.2 +1.6**
GALA Gala 4.56 66 P **Pn 21 17 31.8 +1.5**
GALA S **Sn 21 18 25.8 +1.9**
IGHG Ghaleghazi 4.58 160 *e*Pn **Pn 21 17 34.5 +3.7**
IGHG IAMB IAmb 21 19 04.8
comp=E,6μm,1.0s
GROC Groznyy 4.61 10 *e*PN **Pn 21 17 31.4 +0.4**
GROC *e* 21 17 46.6
GROC *e* 21 18 26.8
GROC *e* 21 18 43.8
GROC *e* 21 18 53.1
GROC pmax pmax
comp=Z,123nm,1.3s
GROC smax smax
comp=N,372nm,1.3s
GROC smax smax
comp=N,148nm,1.2s
GROC smax smax
comp=E,306nm,1.2s
MAK Makhachkala 4.79 25 *e*PN **Pn 21 17 30.5 -3.0**
MAK pmax pmax
comp=Z,12nm,0.6s
MAK MLR MLR
comp=Z,164nm,12.0s
NEY Neytrino 4.82 342 *i* PN Pb 21 17 39.1 -6.5
QABG Abgarm-Qazvin 4.88 126 *e*Pn **Pn 21 17 36.2 +1.2**
NCK Nalchik 4.90 350 *i* PN **Pn 21 17 36.6 +1.6**
IGZV Ghazvin 4.94 116 *e*Pn **Pn 21 17 37.4 +1.7**
IGZV IAMB IAmb 21 19 29.9
comp=N,1μm,0.8s
IKOM Komasi 5.02 152 *e*Pn **Pn 21 17 40.9 +4.1**
SURC SANLIURFA_SURC 5.14 252 *i* P **Pn 21 17 41.2 +2.8**
HAGD Aghdareh 5.23 136 *e*Pn **Pn 21 17 41.6 +1.8**
KBZ Khabaz 5.24 345 Pn Pn 21 17 44.1 +4.4
comp=N,0.1nm,0.3s,baz=155,slow=9.5,SNR=9.1
KBZ Pg **Pg 21 17 57.7 -2.8**
comp=N,0.1nm,0.3s,baz=171,slow=11,SNR=6.6
KBZ Lg Lg 21 19 10.9
baz=251,slow=22,SNR=1.7
IRAZ Razeghan 5.29 126 *e*Pn **Pn 21 17 42.4 +1.8**
KIV Kislovodsk 5.50 345 *e*Pn **Pn 21 17 40.4 -2.9**
KIV Kislovodsk 5.50 345 *e*P **Pn 21 17 45.9 +2.5**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,78nm,9.0s
CUZAR Zara_SIVAS 5.52 285 *i* P **Pb 21 17 59.7 +2.2**
IDOB Doab 5.62 149 *e*Pn **Pn 21 17 47.8 +2.7**
IKFM Kafar-mosalman 5.72 153 *e*Pn **Pn 21 17 49.5 +3.2**
CHTH Charan 5.81 116 *e*Pn **Pn 21 17 49.2 +1.4**
SOC Sochi 6.19 324 *e*P **Pn 21 17 52.2 -0.5**
SOC *e* 21 19 02.6
SOC pmax pmax
comp=Z,11nm,1.0s
SOC MLR MLR
comp=Z,468nm,10.0s
ANN Anapa 8.19 321 *e*P **Pn 21 18 20.8 +0.6**
ANN MLR MLR
comp=Z,404nm,11.0s
ANN MLR MLR
comp=N,185nm,11.0s
ANN MLR MLR
comp=E,197nm,11.0s
BR101 Keskin Array S 8.66 280 *e*Pn **Pn 21 18 30.1 +3.4**
BRTR Keskin Array B 8.66 280 Pn **Pn 21 18 30.2 +3.4**
comp=E,0.1nm,0.3s,baz=105,slow=14,SNR=12
BRTR LR LR 21 22 14.2
comp=E,435nm,19.4s,baz=92,slow=41
BRTR Keskin Array B 8.66 280 *i* P Pn 21 18 31.7 +4.9
BRTR pmax pmax
comp=Z,3.0nm,0.9s
ASF Jabal al Asfar 9.08 227 Pn **Pn 21 18 33.0 +0.5**
comp=Z,0.4nm,0.3s,baz=30,slow=8.1,SNR=2.5
MMAI Mount Meron Ar 9.42 236 Pn **Pn 21 18 39.0 +1.9**
comp=Z,0.3nm,0.3s,baz=58,slow=17,SNR=2.4
MMAI LR LR 21 22 29.7
comp=Z,284nm,19.4s,baz=40,slow=39
GEYT Alibeck 10.57 90 Pn **Pn 21 18 55.6 +2.8**
comp=Z,0.4nm,0.3s,baz=277,slow=13,SNR=6.9
GYA0B ALIBECK ARRAY 10.57 90 *e*Pn **Pn 21 18 49.7 -3.1**
VORD Divnogorie 12.88 344 *e*P **Pn 21 19 25.8 +1.5**
VORD pmax pmax
comp=Z,10.0nm,1.4s
VSR Storozhevoye 13.14 345 *e*P **Pn 21 19 28.8 +0.9**
VSR pmax pmax
comp=Z,10.0nm,1.7s
LPSR Galich'ya Gora 14.51 346 *e*P **Pn 21 19 46.7 +0.2**
LPSR pmax pmax
comp=Z,20nm,0.8s
AKTO Aktyubinsk 15.09 34 Pn **Pn 21 19 53.3 -1.1**
comp=Z,0.1nm,0.3s,baz=211,slow=8.9,SNR=7.6
AKTO LR LR 21 27 16.1
comp=Z,44nm,18.0s,baz=226,slow=43
VRI Vrincioaia 15.11 304⇑/*P* **P 21 19 57.8 -2.4**
VRI Vrincioaia 15.11 304⇑P **P 21 19 57.8 -2.4**
PLOR Plostina 15.16 304⇑/*P* **P 21 19 58.3 -2.5**
PLOR Plostina 15.16 304⇑P **P 21 19 58.3 -2.5**
ABKAR Akbulak array 15.22 41 *e*Pn **Pn 21 19 54.4 -1.8**
comp=Z,5.1nm,0.9s
TESR Tescani 15.42 306⇓/*P* **P 21 20 02.4 -1.2**
MLR Muntele Rosu 15.49 302 Pn **P 21 20 01.2 -3.4**
comp=Z,0.1nm,0.3s,baz=285,slow=20,SNR=4.5
MLR Muntele Rosu 15.49 302⇓/*P* **P 21 20 02.5 -2.1**
MLR Muntele Rosu 15.49 302⇓P **P 21 20 02.5 -2.1**
BIZ Bicaz 15.94 307⇑/*P* **P 21 20 10.0 +0.7**
DOPR Dopca 16.02 303⇑/*P* **P 21 20 12.4 +2.1**
VOIR 16.07 301⇑/*P* **P 21 20 11.2 +0.2**
VOIR 16.07 301⇑P **P 21 20 11.2 +0.2**
IDI Anoyia 16.19 264 LR LR 21 26 38.8
comp=Z,61nm,20.5s,baz=50,slow=38
AKASG Malin Array Be 16.27 323 Pn **P 21 20 10.6 -2.4**
comp=Z,1.2nm,0.3s,baz=130,slow=12,SNR=6.0
AKASG Malin Array Be 16.27 323 *i* P **P 21 20 13.1 +0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 16.27 323 *e*Pn **P 21 20 10.4 -2.6**
comp=Z,5.5nm,1.0s
AKBB Malin Array Si 16.27 323 *e*P **P 21 20 10.4 -2.6**
AKBB pmax pmax
comp=Z,6.0nm,1.0s
ARR Arges 16.33 301⇑/*P* **P 21 20 15.4 +1.6**
VTS Vitosha 16.76 290 *e*P **P 21 20 17.4 -1.3**
comp=Z,6.0nm,1.2s
VTS Vitosha 16.76 290⇑/*P* **P 21 20 17.6 -1.1**
VTS Vitosha 16.76 290 ⇑P **P 21 20 17.6 -1.1**
BURAR Bucovina Array 16.77 309⇑/*P* **P 21 20 19.1 +0.4**
LOT Lotru 16.94 300⇑/*P* **P 21 20 21.7 +1.1**
OBN Obninsk 17.35 344 P **P 21 20 23.2 -1.7**
baz=120,slow=14,SNR=8.7
OBN LR LR 21 27 58.9
comp=Z,31nm,18.3s,baz=175,slow=40
OBN Obninsk 17.35 344 *e*P **Pn 21 20 22.2 -1.2**
comp=Z,15nm,0.9s
MOS Moscow 17.73 347 *e*P **Pn 21 20 25.7 -2.5**
MDVR Moldovita 18.19 297⇓/*P* **P 21 20 36.4 +2.0**
BZS Buzias 18.44 300⇑/*P* **Pn 21 20 38.6 +1.6**
BZS Buzias 18.44 300 ⇑P **Pn 21 20 38.6 +1.6**
SIRR Siria 18.58 302⇑/*P* **Pn 21 20 39.1 +0.3**
WSAR Wadi Sarin 19.43 138 P **Pn 21 20 48.6 -0.5**
comp=Z,0.1nm,0.3s,baz=318,slow=12,SNR=1.7
WSAR LR LR 21 30 14.0
comp=Z,125nm,20.2s,baz=328,slow=43
TTG Podgorica 19.68 289 *e*Pn **Pn 21 20 53.1 +1.1**
comp=Z,17nm,1.4s
GAR Garm 19.94 81 *e*P **Pn 21 20 53.6 -1.7**
comp=Z,22nm,1.0s
KK31 Karatay Array 19.98 69 *e*P **P 21 20 53.8 -0.1**
comp=Z,9.0nm,0.8s
KKAR Karatay Array 19.98 69 *e*P **Pn 21 20 54.2 -1.3**
comp=Z,9.0nm,0.8s
ARU Arti 20.02 23 P Pn 21 20 54.9 -0.9
comp=Z,3.1nm,0.6s,baz=206,slow=8.3,SNR=20
ARU LR LR 21 30 22.6
comp=Z,33nm,20.7s,baz=256,slow=42
ARU Arti 20.02 23 *e*P **P 21 20 52.6 -1.6**
comp=Z,12nm,0.8s
ARU Arti 20.02 23*d i*P Pn 21 20 54.2 -1.7
ARU 21 21 11.0
ARU S **S 21 24 38.1 -1.7**
ARU SS **SnSn 21 24 48.9 -6.8**
ARU pmax pmax
comp=Z,14nm,0.9s
KIRV Kirov 20.17 7 P Pn 21 20 56.1 -1.5
comp=Z,6.3nm,0.9s,baz=233,slow=5.1,SNR=6.0
LANS Liptovska Anna 20.89 308 *e*P Pn 21 21 06.7 +0.4
SVE Sverdlovsk 21.00 25⇑/*e*P 21 21 06.0
SVE pmax pmax
comp=Z,24nm,1.0s
VYHS Vyhne 21.07 306 *e*P **P 21 21 08.1 +2.4**
SRO2 Moca 21.14 304 *e*P **P 21 21 08.2 +1.8**
SUW Suwalki 21.24 323 *e*P **P 21 21 03.2 -4.2**
comp=Z,48nm,1.3s
SUW Suwalki 21.24 323 *e*P **P 21 21 03.2 -4.2**
SUW pmax pmax
comp=Z,48nm,1.3s
VRAC Vranov 22.73 307 P **P 21 21 22.6 -1.0**
comp=Z,1.1nm,0.4s,baz=333,slow=11,SNR=2.1
VRAC LR LR 21 32 35.7
comp=Z,69nm,19.7s,baz=110,slow=43
BRVK Borovoye 22.74 42 *e*P **P 21 21 21.7 -1.8**
comp=Z,6.6nm,0.8s
BRVK Borovoye 22.74 42⇑/*e*P **P 21 21 24.6 +1.1**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 22.78 43 P **P 21 21 23.6 -0.4**
comp=Z,1.5nm,0.8s,baz=251,slow=7.7,SNR=9.4
AAK Ala-Archa 22.89 70 P **P 21 21 26.9 +1.5**
comp=Z,2.0nm,0.3s,baz=225,slow=7.2,SNR=5.5
AAK LR LR 21 33 26.9
comp=Z,98nm,18.4s,baz=261,slow=45
AAK Ala-Archa 22.89 70⇓/*e*P **P 21 21 27.2 +1.8**
AAK pmax pmax
comp=Z,4.0nm,0.8s
VSU Vasula 22.97 335*ce*P **P 21 21 26.2 +0.3**
VSU pmax pmax
comp=Z,26nm,0.8s
PRGR Permogore 23.01 1 *e*P **P 21 21 24.0 -2.2**
PRGR pmax pmax
comp=Z,6.0nm,0.7s
DPC Dobruska-Polom 23.22 309 *e*P **P 21 21 31.7 +3.0**
DPC Dobruska-Polom 23.22 309 *e*P **P 21 21 31.7 +3.0**
TREC Trest 23.42 306 AMS AMS 21 32 50.0
comp=Z,100nm,17.6s
OBKA Obir 23.44 299 *e*P **P 21 21 34.1 +3.1**
comp=Z,5.1nm,1.0s
VAE Valguarnera 23.83 277 LR LR 21 32 10.3
comp=Z,46nm,19.8s,baz=359,slow=40
PRU Pruhonice 24.20 308 AMS AMS 21 33 20.0
comp=Z,100nm,17.5s
GEC2 GERESS Array S 24.44 305 *e*P **P 21 21 41.0 +0.5**
comp=Z,3.6nm,1.0s
GEC2 GERESS Array S 24.44 305 *e*P **P 21 21 41.0 +0.5**
GEC2 pmax pmax
comp=Z,4.0nm,1.0s
GERES GERESS Array B 24.44 305 P **P 21 21 41.0 +0.5**
comp=Z,1.5nm,0.8s,baz=94,slow=7.4,SNR=11
GERES LR LR 21 34 08.8
comp=Z,72nm,18.0s,baz=79,slow=44
GERES GERESS Array B 24.44 305 P **P 21 21 41.0 +0.5**
KHC Kasperske Hory 24.59 305 *e*P **P 21 21 41.7 -0.1**
KHC Kasperske Hory 24.59 305 *e*P **P 21 21 41.7 -0.1**
KDJ Kajisay 24.89 72 *e*P **P 21 21 42.7 -2.0**
comp=Z,9.4nm,1.0s
KDJ Kajisay 24.89 72 *e*P **P 21 21 42.7 -2.0**
KDJ pmax pmax
comp=Z,9.0nm,1.0s
CLL Collm 25.52 310 *e*S **S 21 26 18.0 -0.3**
WTTA Wattenberg 25.53 300 *e*pP **P 21 21 51.5 +1.1**
comp=Z,8.6nm,1.5s
FIA0 FINESS Array S 25.56 339 *e*P **P 21 21 49.6 -0.8**
FIA0 FINESS Array S 25.56 339 *e*P **P 21 21 49.6 -0.8**
FINES FINESS Array B 25.56 339 P **P 21 21 49.6 -0.8**
comp=Z,1.1nm,0.7s,baz=155,slow=10,SNR=5.2
FINES LR LR 21 31 37.6
comp=Z,92nm,18.4s,baz=146,slow=36
FINES FINESS Array B 25.56 339 *i* P **P 21 21 51.5 +1.2**
FINES pmax pmax
comp=Z,3.0nm,0.9s
MOTA Moosalm 25.90 300 *e*pP **P 21 21 58.1 +4.4**
comp=Z,5.2nm,1.0s
KURBB Kurchatov Arra 26.63 52 P **P 21 22 00.8 +0.7**
comp=Z,1.5nm,0.7s,baz=262,slow=9.1,SNR=11
DAVOX Davos/Dischmat 26.67 299 P **P 21 22 01.8 +1.0**
comp=Z,0.8nm,0.5s,baz=2.9,slow=16,SNR=2.4
DAVOX LR LR 21 35 15.8
comp=Z,44nm,18.9s,baz=57,slow=43
KURK Kurchatov 26.71 52 *e*P **P 21 22 01.0 +0.1**
comp=Z,3.2nm,0.9s
KURK Kurchatov 26.71 52⇑/*e*P **P 21 22 03.0 +2.1**
KURK pmax pmax
comp=Z,3.0nm,0.9s
KEST Kesra 28.21 275 LR LR 21 35 39.2
comp=Z,87nm,21.9s,baz=214,slow=41
MKAR Makanchi Array 28.56 61 P **P 21 22 19.0 +1.5**
comp=Z,1.0nm,0.7s,baz=264,slow=6.2,SNR=14
HFS Hagfors 29.02 328 P **P 21 22 21.5 +0.1**
comp=Z,2.3nm,0.8s,baz=94,slow=6.1,SNR=3.5
HFS LR LR 21 35 14.4
comp=Z,102nm,20.6s,baz=118,slow=39
NOA NORSAR Array B 30.54 328 LR LR 21 36 11.5
comp=Z,92nm,19.2s,baz=130,slow=39
ZALV Zalesovo Beam 31.16 47 P **P 21 22 41.3 +0.9**
comp=Z,0.5nm,0.4s,baz=282,slow=7.2,SNR=3.4
ZALV LR LR 21 36 20.5
comp=Z,31nm,19.1s,baz=248,slow=38
ZAA1 Zalesovo Array 31.16 47 *e*P **P 21 22 41.3 +0.9**
DGZ Jazzator, Alta 32.16 56⇓/*e*P **P 21 22 50.3 +0.9**
DGZ pmax pmax
comp=Z,1.0nm,0.6s
WMQ Urumqi 32.46 67 *e*P **P 21 22 55.3 +3.3**
WMQ sP 21 23 01.3
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ pmax pmax
comp=Z,68nm,3.7s
ARCES ARCESS Array B 32.60 348 LR LR 21 37 02.3
comp=Z,76nm,18.6s,baz=104,slow=38
EKA Eskdalemuir Ar 35.84 314 P **P 21 23 21.7 +0.6**
comp=Z,1.5nm,0.7s,baz=95,slow=9.4,SNR=4.9
ESDC Sonseca Array 37.38 287 P **P 21 23 33.4 -1.2**
comp=Z,1.1nm,0.7s,baz=58,slow=9.1,SNR=8.1
GTA Gaotai 42.24 71 *e*P **P 21 24 16.5 +1.4**
GTA pP 21 24 22.8
GTA sP 21 24 25.8
GTA pmax pmax
comp=Z,2.0nm,1.1s
ULN Ulaanbaatar 45.20 57 *e*P **P 21 24 38.5 -0.3**
comp=Z,5.7nm,1.1s
ULN Ulaanbaatar 45.20 57⇑/*e*P **P 21 24 40.2 +1.4**
ULN pmax pmax
comp=Z,8.0nm,1.7s
TOA1 Torodi Ar. Sit 45.71 248 *e*P **P 21 24 41.0 -2.0**
TORD Torodi Ar. Bea 45.71 248 P **P 21 24 41.0 -2.1**
comp=Z,5.6nm,0.3s,baz=35,slow=5.9,SNR=5.5
HHC Hu-ho-hao-te 50.30 65 *e*P **P 21 25 21.8 +3.3**
HHC pmax pmax
comp=Z,17nm,1.0s
HHC pmax pmax
comp=Z,22nm,5.9s
CMAR Chiang Mai Arr 50.94 97 P **P 21 25 23.1 -0.4**
comp=Z,1.0nm,0.8s,baz=296,slow=9.0,SNR=5.8
CMAR Chiang Mai Arr 50.94 97 *i* P **P 21 25 26.3 +2.8**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
WHN Wuhan 56.66 76 P **P 21 26 06.5 +1.3**
KLR Kul'dur 60.24 49*de*P **P 21 26 30.0 +0.1**
KLR pmax pmax
comp=Z,3.0nm,1.1s
USRK Ussuriysk Ar. 62.68 54 P **P 21 26 46.7 +0.2**
comp=Z,2.1nm,0.9s,baz=207,slow=3.8,SNR=4.0
KSRS Korea Array 63.23 62 P **P 21 26 49.7 -0.6**
comp=Z,1.3nm,0.5s,baz=296,slow=6.6,SNR=5.1
SEY Seymchan 63.61 29⇓/*e*P **P 21 26 53.5 +1.2**
BILL Bilibino 65.02 21⇓/*e*P **P 21 27 00.8 -0.7**
BILL pmax pmax
comp=Z,2.0nm,0.9s
BOSA Boshof 69.35 198 P **P 21 27 29.1 -0.5**
comp=Z,2.7nm,0.7s,baz=354,slow=4.7,SNR=7.2
SCHQ Schefferville 70.05 325 P **P 21 27 32.9 -0.6**
comp=Z,3.8nm,0.6s,baz=226,slow=17,SNR=2.6
YKA Yellowknife Ar 77.82 350 P **P 21 28 18.4 -0.5**
comp=Z,0.5nm,0.8s,baz=13,slow=5.7,SNR=5.5
YKB5 Yellowknife Ar 77.82 350 *e*P **P 21 28 18.4 -0.5**

ISCJB ***28*** *21:27:48.8*±*0.3,24°.81N*±*0°.02*×*122°.05E*±*0°.02,h4km*±*3km,*
Error ellipse: s-maj=3.1km s-min=2.7km az=27.4
TAP ***28*** *21:27:48.6,24°.81N*×*121°.99E,h7km,ML3.0,B*
JMA ***28*** *21:27:48.9*±*0.1,24°.76N*×*121°.89E,h49km,M2.6*
ISC 28 21:27:48.9±0.8**,24°.82N**±0°.02×**122°.01E**±0°.02**,h9**km±6km,
n57,σ0°**.68/**87**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.07**	**291**	P	**Pg**	**21 27 50.0**	**-1.0**
	baz=307						
EGS				*e*S	**Sg**	**21 27 51.6**	**-0.9**
	baz=307						
NTC	**Toucheng**	**0.17**	**283**	P	**Pg**	**21 27 53.0**	**+0.6**
	baz=286						
NTC				*e*S	**Sg**	**21 27 55.6**	**+0.7**
	baz=286						
TWB1	**Santiao Chiao**	**0.19**	**355**	P	**Pg**	**21 27 53.4**	**+0.6**

MW5.2/116, Moment Tensor Solution. s84, c112; s116, c194; Duration: 1ˢ0 Moment tensor: Scale 10^{16} Nm; M_{rr}0.29±.17; $M_{\theta\theta}$-3.49±.17; $M_{\phi\phi}$3.20±.16; $M_{r\theta}$0.11±.33; $M_{r\phi}$-7.76±.15; $M_{\theta r}$-3.70±.40; Best double couple: $M_0$9.22300×10^{16} NP1:ϕ_s193.00000°, δ85.00000°, λ23.00000°. NP2:ϕ_s101.00000°, δ67.00000°, λ175.00000°. Principal axes: T 9.4180, Plg19.0000°, Azm59.0000°; N -0.3870, Plg67.0000°, Azm203.0000°; P -9.0280, Plg13.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 28 21:40:25.9±0.4, **34°.88S**±0°.09×**109°.16W**±0°.09, **h15**km, **n66**, σ1ˢ**29**/55, **mb4.5**/24, **MS4.3**/21, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**7.73**	**359**	*e*Pn	**Pn**	**21 42 18.9**	**+1.0**
RKT	**Rikitea**	**25.36**	**291**	*e*T	T	22 11 54.9	
3.8nm,0.2s							
PLCA	**Paso Flores**	**30.88**	**112**	P	**P**	**21 46 40.7**	**-1.1**
3.5nm,1.1s,baz=273,slow=9.6,SNR=3.0							
PLCA				LR	LR	21 55 12.6	
comp=Z,432nm,21.5s,baz=298,slow=29							
PLCA	**Paso Flores**	**30.88**	**112**	*e*P	**P**	**21 46 40.7**	**-1.1**
10nm,1.2s							
CFA	**Coronel Fontan**	**34.22**	**96**	P	**P**	**21 47 10.2**	**-0.8**
3.3nm,0.6s,baz=251,slow=7.9,SNR=4.8							
CFA				LR	LR	21 57 41.9	
comp=Z,461nm,18.3s,baz=261,slow=30							
TBI	**Tubuai**	**36.81**	**277**	*e*LQ	LQ	21 55 55.6	
1μm,33.5s							
TBI				*e*LR	LR	21 57 27.9	
comp=Z,1μm,23.2s							
LVC	**Limon Verde**	**37.11**	**82**	P	**P**	**21 47 37.0**	**+0.6**
2.2nm,0.5s,baz=244,slow=12,SNR=3.8							
LVC				LR	LR	21 58 56.6	
comp=Z,656nm,19.0s,baz=249,slow=30							
NNA	**Nana**	**37.12**	**60**	LR	LR	21 58 36.9	
comp=Z,1μm,21.7s,baz=234,slow=30							
MEH	**Mehetia**	**38.47**	**286**	*e*T	T	22 28 20.2	
61nm,0.2s							
TVO	**Taravao**	**39.46**	**285**	*e*T	T	22 29 34.9	
2.1nm,0.3s							
TIAR	**Tiarei**	**39.66**	**285**	*e*T	T	22 29 49.6	
9.5nm,0.3s							
PPT2	**Papeete2**	**39.82**	**285**	*e*S	**S**	**21 54 00.7**	**-2.2**
86nm,25.8s							
PPT2				*e*LQ	LQ	21 57 09.0	
2μm,27.8s							
PPT2				*e*LR	LR	21 58 51.2	
comp=Z,523nm,23.5s,baz=108							
PPT	**Papeete**	**39.84**	**285**	LR	LR	21 59 33.9	
comp=Z,342nm,21.2s,baz=128,slow=29							
LPAZ	**La Paz**	**41.03**	**74**	P	**P**	**21 48 08.4**	**-1.1**
2.6nm,0.8s,baz=286,slow=5.0,SNR=7.2							
LPAZ				LR	LR	22 01 04.1	
comp=Z,379nm,18.6s,baz=232,slow=30							
LPAZ	**La Paz**	**41.03**	**74**	*e*P	**P**	**21 48 07.2**	**-2.4**
LPAZ				*es*P	**P**	**21 48 07.5**	**-2.1**
CPUP	**Villa Florida**	**45.00**	**94**	LR	LR	22 04 22.2	
comp=Z,290nm,18.9s,baz=250,slow=32							
SIV	**San Ignacio**	**46.84**	**79**	P	**P**	**21 48 54.7**	**-0.8**
1.3nm,0.7s,baz=232,slow=7.4,SNR=7.2							
ROSC	**El Rosal**	**51.34**	**47**	LR	LR	22 07 12.7	
comp=Z,358nm,19.6s,baz=229,slow=31							
ROSC	**El Rosal**	**51.34**	**47**	*e*P	**P**	**21 49 29.2**	**-1.1**
11nm,1.0s							
QSPA	**South Pole Qui**	**55.32**	**180**	*e*P	**P**	**21 49 59.4**	**+0.6**
21nm,1.6s							
VNDA	**Vanda**	**56.03**	**195**	P	**P**	**21 50 06.2**	**+2.7**
1.0nm,0.8s,baz=97,slow=7.2,SNR=7.7							
VNDA				LR	LR	22 08 58.3	
comp=Z,300nm,20.6s,baz=98,slow=31							
VNDA	**Vanda**	**56.03**	**195**	*e*P	**P**	**21 50 05.3**	**+1.8**
BDFB	**Brasilia**	**57.67**	**87**	P	**P**	**21 50 16.7**	**+0.6**
1.2nm,0.3s,baz=231,slow=6.5,SNR=3.3							
BDFB				LR	LR	22 12 48.5	
comp=Z,319nm,18.7s,baz=252,slow=34							
VNA3	**Neumayer Olymp**	**60.34**	**158**	P	**P**	**21 50 34.6**	**+0.8**
VNA1	**Neumayer--Stat**	**60.99**	**158**	P	**P**	**21 50 38.2**	**0.0**
SNAA	**Sanae**	**62.17**	**160**	P	**P**	**21 50 47.2**	**+1.1**
SNAA	**Sanae**	**62.17**	**160**	*e*P	**P**	**21 50 46.2**	**+0.1**
9.4nm,1.1s							
TXAR	**Lajitas Array**	**64.08**	**5**	P	**P**	**21 51 00.9**	**+1.6**
0.5nm,0.6s,baz=180,slow=2.5,SNR=5.4							
TXAR				LR	LR	22 13 53.6	
comp=Z,51nm,20.7s,baz=0.0,slow=31							
JCT	**Junction City**	**65.60**	**9**	*e*P	**P**	**21 51 09.2**	**+0.1**
14nm,0.7s							
MSTX	**Muleshoe**	**68.75**	**6**	*e*P	**P**	**21 51 29.9**	**+0.8**
15nm,1.1s							
W41B	**Gary Mavity, V**	**71.46**	**15**	*e*P	**P**	**21 51 47.5**	**+1.9**
8.3nm,0.8s							
PV04	**Paradox Valley**	**72.90**	**0**	*e*P	**P**	**21 51 56.4**	**+2.0**
11nm,1.1s							
PV23	**Carpenter Ridg**	**72.96**	**0**	*e*P	**P**	**21 51 56.4**	**+1.6**
9.3nm,1.0s							
DZM	**Mont Dzumac**	**73.31**	**255**	*e*S	**S**	**22 01 21.6**	**-4.2**
236nm,26.6s							
DZM	**Mont Dzumac**	**73.31**	**255**	*e*LR	LR	22 14 24.0	
comp=Z,897nm,30.8s							
NV01	**Mina Array Sit**	**73.43**	**353**	*e*P	**P**	**21 51 58.6**	**+1.0**
NVAR	**Mina Array Bea**	**73.43**	**353**	P	**P**	**21 51 58.6**	**+1.0**
6.3nm,0.9s,baz=184,slow=8.3,SNR=11							
NVAR				LR	LR	22 17 52.3	
comp=Z,129nm,19.6s,baz=180,slow=31							
ELK	**Elko**	**75.46**	**355**	*e*P	**P**	**21 52 09.9**	**+0.5**
3.2nm,1.0s							
PD31	**Pinedale Array**	**77.27**	**360**	*e*P	**P**	**21 52 19.1**	**-0.5**
6.9nm,1.0s							
PDAR	**Pinedale Array**	**77.27**	**360**	P	**P**	**21 52 19.6**	**0.0**
2.9nm,0.9s,baz=158,slow=6.1,SNR=16							
PDAR				LR	LR	22 21 21.5	
comp=Z,106nm,18.5s,baz=177,slow=32							
MAW	**Mawson**	**77.66**	**177**	P	**P**	**21 52 20.7**	**-0.5**
1.9nm,0.9s,baz=228,slow=8.4,SNR=4.2							
MAW				LR	LR	22 24 29.0	
comp=Z,130nm,18.4s,baz=190,slow=34							
MAW	**Mawson**	**77.66**	**177**	*e*P	**P**	**21 52 20.7**	**-0.5**
3.4nm,1.9s							
IMW	**Indian Meadow**	**78.42**	**359**	*e*P	**P**	**21 52 28.1**	**+2.1**
5.5nm,0.8s							
I07A	**Izee**	**79.15**	**352**	*e*P	**P**	**21 52 30.5**	**+0.7**
11nm,1.0s							
MCMT	**McKenzie Canyo**	**79.40**	**357**	*e*P	**P**	**21 52 31.4**	**+0.1**
STKA	**Stephens Creek**	**86.07**	**234**	P	**P**	**21 53 07.0**	**+0.8**
0.6nm,0.2s,baz=170,slow=4.4,SNR=3.2							
STKA				LR	LR	22 26 05.8	
comp=Z,306nm,18.2s,baz=175,slow=32							
STKA	**Stephens Creek**	**86.07**	**234**	*e*P	**P**	**21 53 05.9**	**-0.4**
5.8nm,1.9s							
SCHQ	**Schefferville**	**96.47**	**23**	LR	LR	22 31 49.4	
comp=Z,160nm,21.5s,baz=211,slow=32							
ASAR	**Alice Springs**	**96.56**	**235**	P	**P**	**21 53 55.6**	**+0.1**
0.8nm,1.0s,baz=113,slow=3.3,SNR=4.3							
ASAR				LR	LR	22 36 30.1	
comp=Z,196nm,18.3s,baz=174,slow=35							
YKA	**Yellowknife Ar**	**97.13**	**357**	LR	LR	22 32 11.2	
comp=Z,6.7nm,20.0s,baz=170,slow=32							
H01W1	**Cape Leeuwin H**	**99.65**	**215**	T	T	23 46 15.4	
baz=143,slow=75,SNR=26							
H01W2	**Cape Leeuwin H**	**99.65**	**215**	T	T	23 46 14.3	
baz=143,slow=75,SNR=29							
H01W3	**Cape Leeuwin H**	**99.67**	**215**	T	T	23 46 15.1	
baz=143,slow=75,SNR=28							
ENH	**Enshi**	**147.25**	**273**	*e*PKPbc	**PKPbc**	**22 00 09.4**	**+0.5**
XAN	**Xi'an**	**148.71**	**280**	*ep*PKPdf	**PKPbc**	**22 00 12.0**	**-0.7**
BR101	**Keskin Array S**	**150.16**	**70**	*e*PKPbc	**PKPbc**	**22 00 15.7**	**-0.5**
BR131	**Keskin Array S**	**150.16**	**70**	*e*PKPbc	**PKPbc**	**22 00 15.5**	**-0.7**
BRTR	**Keskin Array B**	**150.16**	**70**	PKPbc	**PKPbc**	**22 00 15.7**	**-0.5**
1.5nm,1.1s,baz=243,slow=1.4,SNR=6.8							
ULN	**Ulaanbaatar**	**150.17**	**307**	*e*PKPbc	**PKPbc**	**22 00 15.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**150.17**	**244**	PKPbc	**PKiKP**	**22 00 17.9**	**+0.4**
10.0nm,0.9s,baz=183,slow=1.9,SNR=49							
CMAR				PKPab	**PKPab**	**22 00 25.0**	**+2.3**
17nm,0.8s,baz=163,slow=0.9,SNR=25							
CHTO	**Chiang Mai**	**150.39**	**245**	*e*PKPbc	**PKPbc**	**22 00 16.2**	**-1.0**
SONA0	**Songino Array**	**150.61**	**307**	*e*PKPbc	**PKPbc**	**22 00 16.6**	**-0.4**
SONA0				*e*PKPab	**PKPab**	**22 00 24.6**	**+0.7**
SONM	**Songino Array**	**150.61**	**307**	PKPbc	**PKPbc**	**22 00 16.6**	**-0.4**
5.2nm,0.8s,baz=91,slow=1.7,SNR=16							
SONM				PKPab	**PKPab**	**22 00 24.6**	**+0.7**
6.9nm,0.9s,baz=100,slow=2.8,SNR=11							
TLY	**Talaya**	**151.13**	**316**	*e*PKPbc	**PKPbc**	**22 00 16.9**	**-1.1**
MK32	**Makanchi Array**	**165.30**	**327**	*e*PKPab	**PKPab**	**22 01 26.6**	**-0.4**
MKAR	**Makanchi Array**	**165.30**	**327**	PKPab	**PKPab**	**22 01 26.6**	**-0.4**
0.4nm,0.9s,baz=34,slow=5.4,SNR=2.7							

*ISCJB **28** 21:40:24.8±0.4, 34°.90S±0°.06×109°.0W±0°.1, h15km, mb4.4/24, MS4.3/21, Error ellipse: s-maj=14.1km s-min=9.2km az=171.6*
*IDC **28** 21:40:24.2±0.6, 34°.84S×109°.01W, h0km, mb4.2/13, mb1 4.4/13, mb1mx4.3/30, mbtmp4.2/13, MS4.3/17, Ms1 4.3/17, ms1mx4.3/18, Error ellipse: s-maj=20.5km s-min=17.5km az=168.0*
*NEIC **28** 21:40:25.0±2.3, 34°.97S×109°.06W, h10km±1km, mb4.7/19, Error ellipse: s-maj=16.4km s-min=14.4km az=177.0*
*GCMT **28** 21:40:30.0±0.2, 34°.77S±0°.01×108°.89W±0°.01, h20km±1km,*

*ISCJB **28** 22:13:02.0±0.3, 24°.41N±0°.01×121°.87E±0°.01, h7km±2km, Error ellipse: s-maj=2.4km s-min=1.7km az=36.2*
*JMA **28** 22:13:01.1±0.1, 24°.41N×121°.86E, h0km, M3.0*
*TAP **28** 22:13:02.2, 24°.42N×121°.83E, h12km, ML3.5, B*
ISC 28 22:13:01.9±0.8, **24°.41N**±0°.02×**121°.86E**±0°.02, **h12**km±5km, **n100**, σ0ˢ**65**/156, **15C-18D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.10**	**280**	⇑P	**Pg**	**22 13 05.0**	**+0.2**
baz=280							
NANB				S	**Sg**	**22 13 06.5**	**-0.3**
baz=280							
ENA	**Nanau**	**0.11**	**279**	⇑*i*P	**Pg**	**22 13 05.0**	**+0.1**
baz=278							
ENA				*i*S	**Sg**	**22 13 06.6**	**-0.4**
baz=278							
TWC	**Suao**	**0.20**	**358**	⇓P	**Pg**	**22 13 06.7**	**+0.4**
baz=15							
TWC				S	**Sg**	**22 13 09.3**	**+0.1**
baz=15							
EOS1	**EOS1**	**0.28**	**61**	⇓P	**Pb**	**22 13 09.0**	**+0.1**
baz=55							
EOS1				S	**Sb**	**22 13 14.2**	**+0.7**
baz=55							
NACB	**Ninganchiao**	**0.34**	**226**	⇓P	**Pg**	**22 13 08.6**	**-0.2**
baz=213							
NACB				S	**Sg**	**22 13 13.3**	**0.0**
baz=213							
ENTT	**Nioudou**	**0.35**	**311**	⇑*i*P	**Pb**	**22 13 09.4**	**-0.7**
baz=314							
ENTT				S	**Sg**	**22 13 13.7**	**0.0**
baz=314							
TWE	**Neicheng**	**0.35**	**331**	⇑*i*P	**Pb**	**22 13 09.5**	**-0.6**
baz=336							
TWE				S	**Sg**	**22 13 13.8**	**0.0**
baz=336							
ILA	**Ilan**	**0.37**	**344**	*e*P	**Pb**	**22 13 09.9**	**-0.5**
baz=341							
ILA				*e*S	**Sb**	**22 13 15.1**	**-0.9**
baz=341							
ETLH	**Xiulin Townshi**	**0.40**	**239**	⇓*e*P	**Pg**	**22 13 09.8**	**-0.1**
baz=237							
ETLH				*e*S	**Sg**	**22 13 15.3**	**+0.1**
baz=237							
TWD	**Chiawan**	**0.41**	**216**	⇓*i*P	**Pg**	**22 13 10.0**	**0.0**
baz=212							
TWD				*e*S	**Sg**	**22 13 15.8**	**+0.4**
baz=212							
NNSB	**Datong**	**0.43**	**272**	⇑P	**Pb**	**22 13 10.7**	**-0.8**
baz=272							
NNSB				S	**Sg**	**22 13 16.0**	**-0.4**
baz=272							
EGS		**0.44**	**9**	⇓*i*P	**Pb**	**22 13 11.2**	**-0.3**
baz=20							
EGS				*e*S	**Sg**	**22 13 17.2**	**+0.8**
baz=20							
NTC	**Toucheng**	**0.44**	**357**	⇓*e*P	**Pb**	**22 13 11.2**	**-0.4**
NTC				*e*S	**Sg**	**22 13 17.2**	**+0.6**
NNS	**Nan Shan**	**0.44**	**274**	⇑*i*P	**Pg**	**22 13 10.8**	**+0.1**
baz=273							
NNS				S	**Sg**	**22 13 16.3**	**-0.3**
baz=273							
HWA	**Hwalien**	**0.49**	**208**	*e*P	**Pb**	**22 13 12.0**	**-0.5**
baz=212							
YHNB	**Yeheng**	**0.51**	**300**	⇑P	**Pb**	**22 13 12.4**	**-0.4**
baz=307							
YHNB				S	**Sg**	**22 13 19.0**	**+0.3**
baz=307							
NSK	**Sanguang**	**0.53**	**300**	⇑*i*P	**Pb**	**22 13 12.6**	**-0.5**
baz=302							
NSK				*e*S	**Sg**	**22 13 19.6**	**+0.3**
baz=302							
ENLB	**Shoufeng**	**0.56**	**205**	*e*P	**Pg**	**22 13 11.2**	**-1.6**
baz=210							
ENLB				*e*S	**Sb**	**22 13 22.0**	**+0.5**
baz=210							
TIPB	**Shuangxi**	**0.56**	**357**	⇓P	**Pb**	**22 13 13.4**	**-0.3**
baz=360							
TIPB				S	**Sg**	**22 13 20.1**	**-0.2**
baz=360							
WHF	**Hehuan Shan**	**0.60**	**244**	⇑P	**Pg**	**22 13 13.7**	**0.0**
baz=242							
WHF				S	**Sg**	**22 13 21.3**	**-0.6**
baz=242							
TWB1	**Santiao Chiao**	**0.61**	**11**	⇓P	**Pb**	**22 13 14.1**	**-0.3**
baz=14							
TWB1				*e*S	**Sg**	**22 13 21.6**	**-0.2**
baz=14							
TWA	**Mucha**	**0.62**	**336**	P	**Pb**	**22 13 14.7**	**0.0**
baz=327							
TWA				*e*S	**Sg**	**22 13 22.0**	**-0.2**
baz=327							
NHDH	**Xindian Distri**	**0.63**	**331**	P	**Pb**	**22 13 14.9**	**+0.1**
baz=333							
NHDH				*e*S	**Sg**	**22 13 22.8**	**+0.3**
baz=333							
TWT	**Tachien**	**0.64**	**256**	P	**Pb**	**22 13 14.9**	**-0.2**
baz=248							
TWT				*e*S	**Sg**	**22 13 22.8**	**-0.1**
baz=248							
TATO	**Taipei**	**0.66**	**329**	⇑P	**Pb**	**22 13 15.4**	**+0.1**
baz=331							
TATO				S	**Sg**	**22 13 23.3**	**0.0**
baz=331							
TDCB	**Techi**	**0.66**	**256**	P	**Pb**	**22 13 15.1**	**-0.3**
baz=248							
TDCB				S	**Sg**	**22 13 23.0**	**-0.4**
baz=248							
NWF	**Wu-fen Shan**	**0.66**	**354**	*e*P	**Pn**	**22 13 16.9**	**-0.3**
baz=347							
NWF				*e*S	**Sb**	**22 13 24.0**	**-0.6**
baz=347							
WFSB	**Wu-fen Shan**	**0.66**	**354**	*e*P	**Pb**	**22 13 16.1**	**+0.7**
baz=347							
WFSB				*e*S	**Sb**	**22 13 24.0**	**-0.5**
baz=347							
TAP	**Taipei**	**0.70**	**333**	*e*P	**Pb**	**22 13 16.4**	**+0.4**
baz=335							
TAP				*e*S	**Sb**	**22 13 25.3**	**-0.4**
baz=335							
WLTB	**Daxi**	**0.70**	**309**	⇑P	**Pb**	**22 13 16.8**	**+0.7**
baz=301							
WLTB				*e*S	**Sb**	**22 13 26.2**	**+0.5**
baz=301							
ESL	**Shilin**	**0.71**	**213**	⇓P	**Pg**	**22 13 15.2**	**-0.5**
baz=210							
CHGB	**Renai**	**0.71**	**241**	⇓P	**Pg**	**22 13 15.8**	**0.0**
baz=240							
CHGB				S	**Sb**	**22 13 25.9**	**-0.3**
baz=240							
OWD	**Renai**	**0.77**	**234**	⇓P	**Pg**	**22 13 16.5**	**-0.3**
baz=226							
OWD				*e*S	**Sg**	**22 13 26.7**	**-0.3**
baz=226							
YM01	**YM01**	**0.78**	**340**	⇑*i*P	**Pb**	**22 13 18.1**	**+0.7**
baz=342							
YM01				*e*S	**Sg**	**22 13 27.3**	**+0.1**
baz=342							
YM10	**YM10**	**0.79**	**340**	*e*P	**Pb**	**22 13 18.2**	**+0.6**
baz=342							
YM10				*e*S	**Sg**	**22 13 27.6**	**0.0**
baz=342							
TWS1	**Kuangyinshan**	**0.80**	**330**	P	**Pn**	**22 13 18.6**	**-0.3**
baz=320							
LIOB	**Emei**	**0.80**	**287**	⇑*i*P	**Pb**	**22 13 18.3**	**+0.5**
baz=287							
LIOB				*e*S	**Sb**	**22 13 28.7**	**+0.1**
baz=287							
NSTT	**Nanjuang**	**0.81**	**286**	⇑*i*P	**Pb**	**22 13 18.3**	**+0.4**
baz=286							
NSTT				S	**Sb**	**22 13 28.7**	**-0.1**
baz=286							
YM08	**YM08**	**0.81**	**343**	⇑P	**Pb**	**22 13 18.3**	**+0.3**
baz=345							
NCU	**National Centr**	**0.83**	**313**	P	**Pn**	**22 13 19.0**	**-0.3**
baz=308							
NCU				*e*S	**Sn**	**22 13 31.3**	**-0.2**
baz=308							
NCUH	**Zhongli**	**0.83**	**312**	*e*P	**Pn**	**22 13 19.4**	**0.0**
baz=313							
ANP	**Anpu**	**0.83**	**338**	*e*P	**Pb**	**22 13 18.6**	**+0.2**
baz=341							
EGFH	**Guangfu**	**0.84**	**208**	⇓P	**Pg**	**22 13 17.5**	**-0.6**

	baz=220						
NTST	Danshui	0.84	334	eP	Pn	22 13 19.5	0.0
	baz=335						
WHP	Taichung City	0.84	261	P	Pb	22 13 18.7	+0.2
	baz=261						
WHP				eS	Sb	22 13 29.4	-0.5
	baz=261						
SBCB	Hsinchu	0.88	296	eP	Pn	22 13 20.7	+0.6
	baz=290						
TWY	Chenhua	0.89	345	eP	Pn	22 13 20.2	-0.1
	baz=347						
TWY				eS	Sb	22 13 31.2	0.0
	baz=347						
HSN	Hsinchu	0.90	296	eP	Pb	22 13 19.9	+0.5
	baz=299						
VWDT	VWDT	0.93	225	⇓P	Pg	22 13 19.5	-0.3
	baz=217						
VWDT				eS	Sb	22 13 32.1	-0.1
	baz=217						
DPDB	Guoxing	0.93	246	⇓P	Pb	22 13 19.9	0.0
	baz=246						
DPDB				eS	Sg	22 13 31.3	-0.7
	baz=246						
NMLH	Miaoli	0.98	278	eP	Pn	22 13 21.8	+0.3
	baz=277						
TWQ1	Liyutan	0.99	267	eP	Pn	22 13 22.1	+0.4
	baz=265						
JYNG	Yonagunijimaku	0.99	87	P	Pb	22 13 21.3	+0.3
JYNG				S	Sg	22 13 34.1	+0.1
HGSD	Ruisui	1.00	204	eP	Pb	22 13 21.6	+0.4
	baz=217						
NSY	Sanyi	1.00	271	eP	Pn	22 13 21.8	0.0
	baz=270						
SMLT	Sun Moon Lake	1.02	239	⇓P	Pb	22 13 21.4	-0.2
	baz=238						
SMLT				S	Sg	22 13 34.4	-0.6
	baz=238						
EHY	Hungye	1.03	209	eP	Pg	22 13 20.8	-0.8
	baz=218						
SSLB	Suanglung	1.03	233	⇓P	Pg	22 13 21.4	-0.5
	baz=232						
SSLB				S	Sg	22 13 34.0	-1.4
	baz=232						
TYC	Yuchr	1.04	241	⇓iP	Pb	22 13 21.8	-0.1
	baz=240						
TYC				eS	Sg	22 13 35.1	-0.6
	baz=240						
PTSB	Yuanli	1.05	272	eP	Pn	22 13 23.6	+1.2
	baz=272						
PTSB				eS	Sn	22 13 37.4	+0.3
	baz=272						
YOJ	Yonaguni jima	1.05	87	eP	Pg	22 13 22.0	-0.2
	baz=75						
YOJ				eS	Sg	22 13 36.2	+0.3
	baz=75						
YOJ	Yonaguni jima	1.05	87	P	Pg	22 13 22.0	-0.2
YOJ				S	Sg	22 13 36.0	+0.1
TCU	Taichung	1.11	257	eP	Pn	22 13 24.4	+1.1
	baz=255						
WDJ	Dajia District	1.11	267	eP	Pn	22 13 25.0	+1.7
	baz=274						
YULB	Yu-li	1.14	207	eP	Pg	22 13 22.8	-1.0
	baz=215						
WHYT	Xinyi Township	1.16	232	eP	Pn	22 13 24.4	+0.4
	baz=230						
TWF1	Yuli	1.17	206	eP	Pg	22 13 23.5	-1.0
	baz=216						
WJS	Zhushan	1.19	241	eP	Pn	22 13 25.2	+0.9
	baz=231						
WNT	Mingjian	1.20	244	eP	Pn	22 13 25.6	+1.1
	baz=235						
PCYT	Pengchaiyu	1.23	9	eP	Pg	22 13 23.9	-1.6
	baz=12						
YUS	Yu-Shan	1.24	222	eP	Pg	22 13 25.0	-0.8
	baz=208						
WGK	Gukeng	1.39	239	eP	Pg	22 13 29.3	+0.7
	baz=220						
WDLH	Douliu	1.40	239	eP	Pg	22 13 29.2	+0.3
	baz=221						
ELDTW	Lidau	1.44	213	eP	Pn	22 13 27.9	0.0
	baz=210						
CHN4	Tsaushan	1.57	228	eP	Pg	22 13 31.9	-0.1
	baz=215						
CHN4				eS	Sg	22 13 54.7	+2.3
	baz=215						
CHY	Chiayi	1.60	236	eP	Pg	22 13 32.5	-0.1
	baz=219						
WTP	Ta-pu	1.62	225	eP	Pg	22 13 32.8	-0.3
	baz=209						
TWK	Hsinying	1.69	228	eP	Pg	22 13 33.9	-0.5
	baz=213						
TWK				eS	Sg	22 13 58.1	+1.6
	baz=213						
WLGB	Puzi	1.70	237	eP	Pb	22 13 33.1	0.0
	baz=235						
IRIF	Iriomote-Funau	1.71	92	P	Pn	22 13 31.6	+0.1
IRIF				eS	Sn	22 13 54.4	+1.2
SNST	Tainan City	1.72	227	eP	Pg	22 13 35.0	+0.1
	baz=213						
SNST				eS	Sg	22 13 58.9	+1.7
	baz=213						
CHN1	Nanshi	1.72	225	eP	Pg	22 13 34.5	-0.6
	baz=213						
CHN1				eS	Sg	22 13 58.8	+1.4
	baz=213						
TWG	Pinlang	1.74	205	eP	Pn	22 13 31.2	-0.7
	baz=188						
TWGBT	Beinan	1.74	204	eP	Pn	22 13 30.8	-1.1
	baz=188						
SGST	Jiashian	1.77	222	eP	Pb	22 13 34.8	+0.6
	baz=208						
HATJ	Hateruma jima	1.81	101	S	Sn	22 13 56.6	+0.8
JKRS	Kuro-shima	1.97	95	P	Pn	22 13 34.8	-0.3
JKRS				S	Sn	22 13 59.9	+0.2
JIJ	Ishigaki jima	2.08	91	P	Pn	22 13 37.1	+0.4
JIJ				eS	Sn	22 14 02.4	-0.1
MASBT	Mashibuluo	2.12	212	eP	Pb	22 13 39.0	-1.1
	baz=212						
EAST	Anshuo	2.22	205	eP	Pn	22 13 39.9	+1.3
	baz=192						
JISG	Ishigakijimahi	2.24	85	P	Pn	22 13 39.1	+0.3
JISG				S	Sn	22 14 06.2	-0.2
PHUB	P'eng-hu	2.27	247	eP	Pn	22 13 40.1	+0.9
	baz=245						
WDGT	Dunqji	2.32	241	eP	Pb	22 13 41.9	-1.7
	baz=252						
WDGT				eS	Sb	22 14 11.0	-1.2
	baz=252						
SCZT	Fangliau	2.33	210	eP	Pb	22 13 43.1	-0.7
	baz=193						
MATB	Ma-tsu	2.45	315	eP	Pn	22 13 41.9	+0.2
	baz=314						
VCHM	Qimei	2.53	242	eP	Pn	22 13 44.2	+1.5
	baz=224						
PTMZ	Houxiangcun	2.57	285	eP	Pn	22 13 43.6	+0.3
	baz=283						
XPSS	Dashiqiu	2.92	329	eP	Pn	22 13 48.7	+0.5
	baz=328						
KNMB	Chin-men Tao	3.16	272	eP	Pn	22 13 51.9	+0.5
	baz=269						
AXDP	Jialang	3.57	279	eP	Pn	22 13 57.3	+0.2
	baz=276						

IDC 28 22:33:17.6±3.9, 3°.93S×129°.74E, h0km, mb3.9/2, mb1 3.9/4, mb1mx3.5/29, mbtmp3.8/4, ML3.1/2, MS3.2/2, Ms1 3.3/2, ms1mx2.8/32, Error ellipse: s-maj=90.1km s-min=37.2km az=83.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	11.69	339	LR	LR	22 41 41.6	
	comp=Z,89nm,20.5s,baz=126,slow=43						
FITZ	Fitzroy Crossi	14.64	196	Pn	Pn	22 36 48.1	+2.0
	0.0nm,0.3s,baz=21,slow=8.6,SNR=2.1						
WRA	Warramunga Arr	16.53	165	Pn	Pn	22 37 09.7	-1.3
	0.1nm,0.3s,baz=343,slow=12,SNR=3.7						
ASAR	Alice Springs	20.03	169	P	Pn	22 37 54.1	+0.2
	2.7nm,0.6s,baz=350,slow=10,SNR=35						
ASAR				S	S	22 41 39.1	+0.8
	1.1nm,1.0s,baz=346,slow=20,SNR=6.2						
STKA	Stephens Creek	29.95	160	P	P	22 39 26.8	-0.8
	0.5nm,0.3s,baz=337,slow=13,SNR=3.0						
CMAR	Chiang Mai Arr	37.63	307	LR	LR	22 57 58.6	
	comp=Z,42nm,21.2s,baz=175,slow=39						

IDC 28 22:36:46.7±8.2, 33°.61S×179°.69W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/26, mbtmp3.6/2, Error ellipse: s-maj=395.5km s-min=57.5km az=163.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.32	208	Sn	Sn	22 39 06.3	-2.9
	4.0nm,0.3s,baz=338,slow=19,SNR=4.0						
ASAR	Alice Springs	41.62	271	P	P	22 44 36.1	-0.7
	0.6nm,0.7s,baz=110,slow=7.9,SNR=5.4						
WRA	Warramunga Arr	42.91	277	P	P	22 44 47.7	+0.4
	1.0nm,0.8s,baz=117,slow=7.8,SNR=2.6						
FINES	FINESS Array B	147.60	337	PKPbc	PKPbc	22 56 31.3	-0.8
	0.6nm,0.7s,baz=67,slow=11,SNR=3.1						

*TIR **28** 22:47:04.0, 40°.59N×19°.73E, h12km, Md2.7/7*

ATH 28 22:47:03.8, 40°.64N×19°.60E, h35km±4km, ML1.8/2, Error ellipse: s-maj=6.9km s-min=1.8km az=222.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	Vlora	0.19	205	i PG	Pn	22 47 09.0	-2.1
VLO				i SG	Sn	22 47 12.9	-3.8
TPE	Tepelena	0.47	138	i PG	Pn	22 47 11.2	-2.7
TPE				i SG	Sn	22 47 17.4	-3.6
TIR	Tirane	0.73	16	i PG	Pn	22 47 19.1	+1.5
TIR				i SG	Sn	22 47 30.6	+3.0
SRN	Sarande	0.82	158	i PG	Pn	22 47 18.9	+0.1
SRN				i SG	Sn	22 47 30.2	+0.5
KEK	Kerkira	0.94	171	P	Pn	22 47 21.6	+1.1
KEK				S	Sn	22 47 35.9	+3.2
SCTE	Santa Cesarea	1.04	237	i PN	Pn	22 47 25.5	+3.8
SCTE				i SN	Sn	22 47 41.3	+6.2
SCTE	Santa Cesarea	1.04	237	P	Pn	22 47 23.5	+1.8
SCTE				S	Sn	22 47 37.1	+2.1
SCTE				AML	AML	22 47 42.1	
	comp=N,76μm,0.3s						
SCTE				AML	AML	22 47 42.2	
	comp=E,61μm,0.4s						
IGT	Igoumenitsa	1.24	153	i PN	Pn	22 47 27.4	+2.8
IGT				i SN	Sn	22 47 43.4	+3.3
IGT	Igoumenitsa	1.24	153	P	Pn	22 47 26.5	+1.9
IGT				S	Sn	22 47 43.1	+2.9
IGT				AML	AML	22 47 45.7	
	comp=N,75μm,0.5s						
IGT				AML	AML	22 47 46.6	
	comp=E,111μm,0.6s						
PUK	Puka	1.42	9	i PN	Pn	22 47 31.5	+4.4
PUK				i SN	Sn	22 47 52.3	+7.7
NOCI	Noci	1.93	275	P	Pn	22 47 36.3	+2.2
STON	Ston	2.64	328	i Pn	Pn	22 47 45.6	+1.8
STON				Sn	Sn	22 48 17.4	+2.8

ROM 28 22:47:52.3±0.1, 42°.760N±0°.004×12°.550E±0°.006, h8km, ML1.4/7, Error ellipse: s-maj=0.5km s-min=0.4km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMA	Monte Martano	0.05	19	P	Pg	22 47 54.3	+0.2
MOMA				S	Sg	22 47 55.3	-0.1
MOMA				AML	AML		
	comp=E,2810μm,0.2s						
MOMA				AML	AML		
	comp=N,3020μm,0.2s						
MOMA				AML	AML		
	comp=E,3060μm,0.2s						
MOMA				AML	AML		
	comp=N,3075μm,0.3s						
MOMA				AML	AML		
	comp=E,2815μm,0.2s						
MOMA				AML	AML		
	comp=N,3020μm,0.2s						
MOMA				AML	AML		
	comp=E,3065μm,0.2s						
MOMA				AML	AML		
	comp=N,3080μm,0.3s						
MOMA				AML	AML		
	comp=E,3065μm,0.2s						
MOMA				AML	AML		
	comp=E,2815μm,0.2s						
MOMA				AML	AML		
	comp=N,3080μm,0.3s						
MOMA				AML	AML		
	comp=N,3020μm,0.2s						
CESX	Cesi	0.15	172	P	Pg	22 47 56.3	+0.8
CESX				S	Sg	22 47 59.1	+1.4
CESX				AML	AML		
	comp=E,221μm,1.5s						
CESX				AML	AML		
	comp=N,250μm,0.6s						
CESX				AML	AML		
	comp=E,221μm,1.5s						
CESX				AML	AML		
	comp=N,250μm,0.6s						
CESX				AML	AML		
	comp=E,221μm,1.5s						
CESX				AML	AML		
	comp=N,250μm,0.6s						
MGAB	Montegabbione	0.36	295	P	Pg	22 48 00.1	+0.8
MGAB				S	Sb	22 48 06.2	-0.6
MGAB				AML	AML		
	comp=E,98μm,1.3s						
MGAB				AML	AML		
	comp=N,98μm,1.2s						
MGAB				AML	AML		
	comp=E,97μm,1.3s						
MGAB				AML	AML		
	comp=N,98μm,1.2s						
MGAB				AML	AML		
	comp=N,98μm,1.2s						
MGAB				AML	AML		
	comp=E,97μm,1.3s						
CESI	CESI - Serrava	0.36	47	P	Pg	22 48 00.1	+0.8
CESI				S	Sb	22 48 05.8	-1.0
CESI				AML	AML		
	comp=E,37μm,0.5s						
CESI				AML	AML		
	comp=N,26μm,0.2s						
CESI				AML	AML		
	comp=E,37μm,0.5s						
CESI				AML	AML		
	comp=N,26μm,0.2s						
CESI				AML	AML		
	comp=N,26μm,0.2s						
CESI				AML	AML		
	comp=E,37μm,0.5s						
LNSS	Leonessa	0.39	113	P	Pg	22 48 00.6	+0.5
LNSS				S	Sb	22 48 07.2	-0.7
LNSS				AML	AML		
	comp=E,94μm,0.3s						
LNSS				AML	AML		
	comp=N,128μm,0.4s						
LNSS				AML	AML		
	comp=E,94μm,0.3s						
LNSS				AML	AML		
	comp=N,128μm,0.4s						
LNSS				AML	AML		
	comp=E,94μm,0.3s						
LNSS				AML	AML		
	comp=N,128μm,0.4s						
NRCA	Norcia	0.42	80	P	Pg	22 48 01.1	+0.6
NRCA				S	Sb	22 48 08.4	-0.3
NRCA				AML	AML		
	comp=E,68μm,0.1s						
NRCA				AML	AML		
	comp=N,58μm,1.2s						
NRCA				AML	AML		
	comp=E,68μm,0.1s						
NRCA				AML	AML		
	comp=N,58μm,1.2s						
FDMO	Fiordimonte	0.48	55	P	Pg	22 48 02.3	+0.6
FDMO				S	Sb	22 48 09.8	-0.5
FDMO				AML	AML		
	comp=E,38μm,0.4s						
FDMO				AML	AML		
	comp=N,33μm,0.4s						
FDMO				AML	AML		
	comp=E,38μm,0.4s						
FDMO				AML	AML		
	comp=N,33μm,0.4s						
FDMO				AML	AML		
	comp=N,33μm,0.4s						
FDMO				AML	AML		
	comp=E,38μm,0.4s						
CSP1	Cessapalombo	0.58	55	P	Pg	22 48 04.0	+0.3
CSP1				S	Sb	22 48 13.3	-0.1
CSP1				AML	AML		
	comp=E,77μm,1.6s						
CSP1				AML	AML		
	comp=N,225μm,1.6s						
CSP1				AML	AML		
	comp=E,77μm,1.6s						
CSP1				AML	AML		
	comp=N,225μm,1.6s						
SMA1	SAN MARTINO	0.59	102	P	Pg	22 48 04.2	+0.5
SMA1				S	Sg	22 48 12.6	+1.0
EL6	Elcito	0.70	35	P	Pg	22 48 06.1	+0.3
EL6				S	Sb	22 48 16.5	-0.1
T0104	Madonna delle	0.71	124	P	Pg	22 48 06.1	+0.2

JMA 28 23:09:37.9±0.2, 37°.81N×144°.59E, h42km, M3.9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.52	282	P	Pn	23 10 17.6	+1.3
JIKH				S	Sn	23 10 46.9	+1.2
OFUJ	Ofunato	2.62	300	P	Pn	23 10 19.0	+1.3
OFUJ				S	Sn	23 10 49.8	+1.5
JIO	Ouri	2.64	285	P	Pn	23 10 19.3	+1.4
JIO				S	Sn	23 10 50.4	+1.8
JKMT	Kesennumamotoy	2.65	293	P	Pn	23 10 19.5	+1.4
JKMT				S	Sn	23 10 50.5	+1.6
JMK	Ichinoseki	2.88	294	P	Pn	23 10 23.1	+1.8
JMK				S	Sn	23 10 57.0	+2.3
JOM	Ohasama	3.07	304	P	Pn	23 10 26.2	+2.3
JOM				S	Sn	23 11 01.5	+2.2
JFT	Otama	3.39	266	P	Pn	23 10 30.6	+2.3
JFT				S	Sn	23 11 09.5	+2.3
JYK	Kaneyama	3.50	290	P	Pn	23 10 32.4	+2.5
JYK				S	Sn	23 11 13.3	+3.2
BSO1	Boso 1	4.29	224	P	Pn	23 10 40.4	+0.2
BSO1				eS	Sn	23 11 29.9	+1.1
JOT	Ohata	4.50	324	P	Pn	23 10 45.4	+2.0
JOT				eS	Sn	23 11 33.3	-1.1
JCH	Churui	4.89	349	P	Pn	23 10 48.3	-0.6
JCH				eS	Sn	23 11 41.0	-3.1
JRY	Ryogami san	4.90	250	P	Pn	23 10 50.2	+1.2
JRY				S	Sn	23 11 44.2	-0.2
MAT	Matsushiro	5.25	258	P	Pn	23 10 58.2	+4.3
MAT				S	Sn	23 11 55.2	+2.0
NEM2	Nemuro 2	5.62	9	P	Pn	23 10 55.6	-3.2
NEM2				eS	Sn	23 11 54.6	-7.4
JTKR	Abashiri--Toko	6.18	355	P	Pn	23 11 05.7	-0.8
JTKR				eS	Sn	23 12 09.4	-6.4

IDC 28 23:19:52.1±2.5, 26°.58N×96°.04E, h0km, mb3.3/2, mb1 3.4/3, mb1mx3.2/39, mbtmp3.3/3, Error ellipse: s-maj=74.3km s-min=31.9km az=76.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.52	161	Pn	Pn	23 21 56.8	0.0
	baz=340,slow=15,SNR=4.7						
SONM	Songino Array	22.72	18	P	P	23 24 56.0	+0.3
	0.9nm,0.4s,baz=209,slow=12,SNR=2.4						
MKAR	Makanchi Array	22.93	335	P	P	23 24 57.5	-0.3
	0.3nm,0.5s,baz=134,slow=9.0,SNR=5.5						

IDC 28 23:23:20.9±15.0, 17°.68S×178°.47W, h653km±154km, mb3.2/3, mb1 3.4/3, mb1mx2.8/33, mbtmp4.3/3, Error ellipse: s-maj=134.0km s-min=83.0km az=111.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.69	241	P	P	23 29 51.7	-0.1
	4.0nm,0.8s,baz=88,slow=9.6,SNR=10						
WRA	Warramunga Arr	44.62	259	P	P	23 30 38.2	0.0
	1.0nm,0.4s,baz=92,slow=7.9,SNR=6.3						
ASAR	Alice Springs	44.80	254	P	P	23 30 40.1	+0.5
	7.7nm,1.0s,baz=84,slow=8.4,SNR=40						
ASAR				PcP	PcP	23 32 06.0	-0.8
	0.3nm,0.4s,baz=105,slow=3.5,SNR=4.1						
GERES	GERESS Array B	147.38	345	PKPbc	PKPbc	23 41 52.9	-0.3
	0.3nm,0.5s,baz=70,slow=1.1,SNR=3.0						

*EAF **28** 23:32:47.8±0.3, 4°.47S×35°.94E, h6km±3km*

ISC 28 23:32:38.6±1.6, 4°.13S±0°.04×35°.9E±0°.2, h10km, n5, σ1°69/8, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOND	Kondoa	0.78	187	i P	Pn	23 32 56.1	+0.2
KOND				i S	Sg	23 33 02.3	-1.7
KIBA	Kibaya	1.36	149	i P	Pg	23 33 06.6	+1.8
KIBA				i S	Sb	23 33 20.1	-1.6
KMBO	Kilima Mbogo	3.28	25	i P	Pg	23 33 42.5	+0.9
KMBO				i S	Sg	23 34 22.7	-1.5
KMBO	Kilima Mbogo	3.28	25	i P	Pg	23 33 42.7	+1.1
KMBO	Kilima Mbogo	3.28	25	i P	Pg	23 33 42.7	+1.1

*ISCJB **28** 23:34:54.9±0.9, 50°.2S±0°.1×112°.3E±0°.4, h10km, mb4.2/6, MS3.5/2, Error ellipse: s-maj=40.1km s-min=13.9km az=16.7*

*IDC **28** 23:34:55.3±1.0, 50°.22S×112°.21E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/24, mbtmp4.0/5, MS3.6/3, Ms1 3.5/3, ms1mx3.4/24, Error ellipse: s-maj=49.2km s-min=21.0km az=105.0*

*NEIC **28** 23:34:56.8±2.2, 50°.26S×112°.22E, h10km±1km, mb4.7/2, Error ellipse: s-maj=45.7km s-min=21.0km az=99.0*

ISC 28 23:34:56.8±0.8, 50°.2S±0°.1×112°.1E±0°.3, h10km, n40, σ0°79/28, mb4.2/6, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.35	6	T	T	23 54 16.9	
	baz=183,slow=74,SNR=667						
H01W1	Cape Leeuwin H	15.36	6	T	T	23 54 17.8	
	baz=183,slow=74,SNR=599						
H01W3	Cape Leeuwin H	15.37	6	T	T	23 54 17.5	
	baz=183,slow=74,SNR=533						
NWAO	Narrogin (SRO)	17.66	14	LR	LR	23 44 26.2	
	comp=Z,177nm,18.9s,baz=232,slow=32						
MAW	Mawson	29.73	216	LR	LR	23 50 44.2	
	comp=Z,78nm,18.6s,baz=70,slow=32						
ASAR	Alice Springs	31.45	41	P	P	23 41 18.0	-0.4
	1.4nm,0.9s,baz=215,slow=8.7,SNR=6.8						
VNDA	Vanda	33.06	162	P	P	23 41 31.4	-0.6
	1.6nm,0.9s,baz=305,slow=8.3,SNR=14						
VNDA				LR	LR	23 53 49.7	
	comp=Z,106nm,19.9s,baz=303,slow=34						
VNDA	Vanda	33.06	162	eP	P	23 41 31.2	-0.6
VNDA				epP	P	23 41 31.4	-0.6
WRA	Warramunga Arr	34.96	38	P	P	23 41 48.8	-0.2
	2.0nm,0.7s,baz=205,slow=9.2,SNR=4.6						
WR1	Warramunga Arr	34.96	38	eP	P	23 41 48.8	-0.2
QSPA	South Pole Qui	39.94	180	eP	P	23 42 31.0	+0.1
	22nm,1.9s						
SNAA	Sanae	50.14	202	P	P	23 43 51.5	-0.3
	1.4nm,0.7s,baz=133,slow=12,SNR=10.0						
SNAA	Sanae	50.14	202	eP	P	23 43 51.5	-0.3
	24nm,2.0s						
H08S2	Diego Garcia H	53.71	308	T	T	00 42 26.6	
	baz=149,slow=76,SNR=6.5						
H08S1	Diego Carcia H	53.72	308	T	T	00 42 26.6	
	baz=149,slow=76,SNR=9.1						
H08S3	Diego Garcia H	53.73	308	T	T	00 42 26.0	
	baz=149,slow=76,SNR=7.7						
QIZ	Qiongzhong	68.94	358	eS	S	23 55 04.7	-1.5
CMAR	Chiang Mai Arr	69.33	347	P	P	23 46 05.0	+0.7
	0.6nm,0.3s,baz=184,slow=5.2,SNR=4.3						
H10S2	ASCENSION HYDR	105.17	235	T	T	01 47 40.4	
	baz=146,slow=75,SNR=8.3						
H10S3	ASCENSION HYDR	105.18	235	T	T	01 47 39.9	
	baz=146,slow=75,SNR=7.2						
H10S1	ASCENSION HYDR	105.18	235	T	T	01 47 41.0	
	baz=146,slow=75,SNR=8.3						
BUR08	Bucovina Ar. S	122.76	307	eSdif	Sdif	00 03 26.6	+1.0
U15A	North Rim	145.41	96	ePKPbc	PKPbc	23 54 34.7	-0.1
KNB	Kanab	145.42	95	ePKPbc	PKPab	23 54 36.6	+1.7

PSUT	Pine Spring	145.65	92	*e*PKPdf	PKPdf	23 54 35.0	-0.1
LTY	Liberty	145.65	74	*e*PKPdf	PKPab	23 54 35.5	+0.2
G08A	Pilot Rock	145.85	78	*e*PKPdf	PKPab	23 54 36.4	+0.2
TX31	Lajitas Ar. Si	145.96	114	*e*PKPdf	PKPab	23 54 36.9	-0.1
TXAR	Lajitas Array	145.96	114	PKPbc	PKPab	23 54 36.7	-0.3
	0.6nm,0.6s,baz=219,slow=3.2,SNR=5.6						
ELK	Elko	145.98	88	*e*PKPdf	PKPab	23 54 36.6	-0.3
MTPU	Mount Pierson	146.44	94	*e*PKPdf	PKPbc	23 54 37.8	-0.2
MNTX	Cornudas Mount	146.64	109	*e*PKPdf	PKPdf	23 54 37.5	+0.7
DUG	Dugway, Tooele	147.24	90	*e*PKPdf	PKPdf	23 54 36.9	-0.8
PV12	Saucer Basin,	148.76	96	*e*PKPdf	PKPdf	23 54 41.7	+1.4
DLMT	Dillon	149.91	82	*e*pPKPdf	pPKPdf	23 54 45.0	+0.9
REDW	Red Top Meadow	150.12	86	*e*PKPdf	PKPdf	23 54 44.1	+1.7
BOZ	Bozeman (W)	150.63	82	*e*PKPbc	PKiKP	23 54 50.2	+1.1
PDAR	Pinedale Array	150.66	88	PKPbc	PKiKP	23 54 49.0	-0.4
	0.5nm,0.7s,baz=236,slow=2.7,SNR=6.7						
YKA	Yellowknife Ar	152.01	46	PKPbc	PKPbc	23 54 50.3	-0.5
	0.7nm,0.6s,baz=285,slow=1.9,SNR=11						
YKB5	Yellowknife Ar	152.01	46	*e*PKPbc	PKPbc	23 54 50.3	-0.5

NIED ***28*** *23:51:00,24˚.00N×122˚.20E,h38km,Mw5.6 Best double couple: M0:3.06000×10¹⁷ NP1:φs.339.00000°,δ66.00000°, λ171.00000°. NP2:φs.73.00000°,δ81.00000°,λ25.00000°.*
BJI ***28*** *23:51:47.5±0.0,24˚.00N×122˚.30E,h10km,mb5.1/71, mB5.8/68,ML5.9/7,Ms5.8/89,Ms7 5.8/82*
NEIC ***28*** *23:51:49.5±1.6,24˚.09N×122˚.23E,h15km,mb5.6/210, MS5.5/533,MW5.5,MW5.7,ML5.6(TAP),Error ellipse: s-maj=12.3km s-min=9.4km az=155.0,Moment Tensor Solution. s55 Moment tensor: Scale 10¹⁷Nm; Mrr1.07; Mθθ-1.77; Mφφ0.70; Mrθ1.68; Mθφ0.52; Mφr0.82; Best double couple: M0:2.50000×10¹⁷ NP1:φs.315.00000°, δ32.00000°,λ151.00000°. NP2:φs.71.00000°,δ75.00000°, λ61.00000°. Principal axes: T 2.4000, Plg52.0000°, Azm307.0000°; N 0.1600, Plg28.0000°, Azm79.0000°; P -2.5600, Plg24.0000°, Azm183.0000°;*
NEIC Felt [III] at Taipei. Also felt at Luzhou, Sanxia, Shulin, Taichung and Yunghe. Recorded [3 TAP] in Hualien and Yilan; [2 TAP] in Changhua, Nantou, Taitung and Yunlin and at Taipei and Taichung; [1 TAP] in Chiayi, Hsinchu and Miaoli and at Kaohsiung and Keelung. Recorded [2 JMA] on Yonaguni-jima, Ryukyu Islands. Broadband depth 15 km.
TAP ***28*** *23:51:50.3,24˚.03N×122˚.24E,h20km,ML5.7,D*
JMA ***28*** *23:51:50.4±0.1,23˚.96N×122˚.21E,h26km±2km,M5.8 JMA Felt II J1.*
MOS ***28*** *23:51:50.2±1.3,24˚.06N×122˚.21E,h33km,mb5.7/39, MS5.7/30,Error ellipse: s-maj=8.4km s-min=5.1km az=109.4*
NEIC ***28*** *23:51:50.0±0.0,24˚.08N×122˚.32E,h19km,Moment Tensor Solution. s32 Moment tensor: Scale 10¹⁷Nm; Mrr1.40; Mθθ-2.05; Mφφ0.65; Mrθ2.98; Mθφ0.88; Mφr1.32; Best double couple: M0:3.80000×10¹⁷ NP1:φs.73.00000°, δ78.00000°,λ66.00000°. NP2:φs.318.00000°,δ26.00000°, λ153.00000°. Principal axes: T 3.8900, Plg50.0000°, Azm315.0000°; N -0.1200, Plg23.0000°, Azm77.0000°; P -3.7700, Plg29.0000°, Azm181.0000°;*
IDC ***28*** *23:51:51.0±2.7,24˚.17N×122˚.31E,h26km±18km,mb4.7/39, mb1 4.7/43,mb1mx4.7/54,mbtmp4.8/43,ML3.8/3,MS5.4/35, Ms1 5.4/35,ms1mx5.4/36 Error ellipse: s-maj=11.2km s-min=9.2km az=65.0*
ASIES ***28*** *23:51:51.0,24˚.03N×122˚.17E,h27km,MW5.3*
GCMT ***28*** *23:51:51.5±0.1,23˚.86N±0˚.01×122˚.05E±0˚.01,h32km, MW5.7/119,Moment Tensor Solution. s113,c225; s119,c284; Duration: 1ᵗ7 Moment tensor: Scale 10¹⁷ Nm; Mrr2.22±.04; Mθθ-3.01±.03; Mφφ0.79±.03; Mrθ2.45±.06; Mθφ0.39±.03; Mφr1.28±.06; Best double couple: M0:3.88200×10¹⁷ NP1:φs.71.00000°,δ70.00000°, λ67.00000°. NP2:φs.303.00000°,δ30.00000°,λ.137.00000°. Principal axes: T 3.7820, Plg58.0000°, Azm309.0000°; N 0.2000, Plg22.0000°, Azm79.0000°; P -3.9810, Plg22.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISCJB ***28*** *23:51:51.5±0.2,24˚.00N±0˚.01×122˚.24E±0˚.01,h43km±1km, mb5.4/212,MS5.5/557 Error ellipse: s-maj=2.0km s-min=1.6km az=36.5*
ISC 28 23:51:50.9±0.5,24˚.00N±0˚.02×122˚.25E±0˚.02,h25km±3km, n1354,σ1ᵗ81/1084,mb5.4/219,MS5.5/565,171C-51D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.56**	**348**	⇓P	**Pb**	**23 52 01.4**	**-0.8**
	baz=347						
EOS1				*e*S	**Sb**	**23 52 09.4**	**-0.4**
	baz=347						
HWA	**Hwalien**	**0.59**	**268**	⇑P	**Pb**	**23 52 02.3**	**-0.4**
	baz=250						
HWA				*e*S	**Sn**	**23 52 11.5**	**-1.0**
	baz=250						
TWD	**Chiawan**	**0.61**	**278**	⇑P	**Pb**	**23 52 02.1**	**-0.8**
	baz=276						
TWD				S	**Sb**	**23 52 10.7**	**-0.4**
	baz=276						
NACB	**Ninganchiao**	**0.63**	**287**	*e*Pg	**Pb**	**23 52 02.2**	**-1.0**
NACB	**Ninganchiao**	**0.63**	**287**	⇑P	**Pb**	**23 52 02.3**	**-1.0**
	baz=267						
NACB				S	**Sb**	**23 52 11.3**	**-0.4**
	baz=267						
NANB	**Nanao**	**0.63**	**313**	⇓P	**Pb**	**23 52 02.1**	**-1.2**
	baz=323						
NANB				*e*S	**Sb**	**23 52 10.8**	**-1.0**
	baz=323						
ENA	**Nanau**	**0.64**	**313**	⇓*i*P	**Pb**	**23 52 02.1**	**-1.4**
	baz=323						
ENA				*e*S	**Sb**	**23 52 11.7**	**-0.2**
	baz=323						
TWC	**Suao**	**0.71**	**329**	⇓*i*P	**Pb**	**23 52 03.2**	**-1.6**
	baz=337						
TWC				S	**Sb**	**23 52 13.2**	**-1.0**
	baz=337						
ETLH	**Xiulin Townshi**	**0.74**	**287**	⇑P	**Pb**	**23 52 04.2**	**-0.9**
	baz=270						
ETLH				S	**Sb**	**23 52 15.0**	**+0.2**
	baz=270						
ESL	**Shilin**	**0.77**	**257**	P	**Pb**	**23 52 04.2**	**-1.5**
	baz=254						
JYNG	**Yonagunijimaku**	**0.78**	**54**	P	**Pb**	**23 52 05.8**	**0.0**
JYNG				*e*S	**Sb**	**23 52 15.9**	**-0.1**
EGFH	**Guangfu**	**0.82**	**247**	*e*P	**Pb**	**23 52 05.5**	**-1.1**
	baz=245						
YOJ	**Yonaguni jima**	**0.83**	**56**	*e*Pg	**Pn**	**23 52 06.9**	**-0.1**
YOJ	**Yonaguni jima**	**0.83**	**56**	⇓P	**Pn**	**23 52 07.3**	**+0.3**
	baz=57						
YOJ				S	**Sn**	**23 52 18.6**	**+0.2**
	baz=57						
YOJ	**Yonaguni jima**	**0.83**	**56**	*e*P	**Pn**	**23 52 06.9**	**-0.1**
YOJ	**Yonaguni jima**	**0.83**	**56**	P	**Pn**	**23 52 06.8**	**-0.1**
YOJ				*e*S	**Sn**	**23 52 18.1**	**-0.4**
EGS		**0.89**	**341**	⇓P	**Pn**	**23 52 06.9**	**-0.9**
	baz=340						
EGS				*e*S	**Sb**	**23 52 19.3**	**-0.1**
	baz=340						
ILA	**Ilan**	**0.89**	**329**	*e*P	**Pn**	**23 52 07.0**	**-0.8**
	baz=328						
ILA				*e*S	**Sn**	**23 52 20.1**	**+0.1**
	baz=328						
ENTT	**Nioudou**	**0.90**	**316**	⇓P	**Pn**	**23 52 07.0**	**-1.0**
	baz=315						
TWE	**Neicheng**	**0.90**	**324**	⇓*i*P	**Pn**	**23 52 06.8**	**-1.1**
	baz=330						
TWE				S	**Sb**	**23 52 19.3**	**-0.2**
	baz=330						
NNSB	**Datong**	**0.90**	**299**	⇑P	**Pb**	**23 52 07.1**	**-0.9**
	baz=283						
NNSB				*e*S	**Sb**	**23 52 18.9**	**-0.8**
	baz=283						
HGSD	**Ruisui**	**0.91**	**237**	⇓P	**Pn**	**23 52 06.6**	**-1.5**
	baz=235						
HGSD				S	**Sb**	**23 52 19.1**	**-0.7**
	baz=235						
WHF	**Hehuan Shan**	**0.92**	**280**	⇑*i*P	**Pb**	**23 52 07.1**	**-1.3**
	baz=278						
WHF				S	**Sb**	**23 52 19.0**	**-1.4**
	baz=278						
NNS	**Nan Shan**	**0.92**	**299**	⇑*i*P	**Pn**	**23 52 07.4**	**-0.9**
	baz=286						
NTC	**Toucheng**	**0.94**	**336**	⇓P	**Pn**	**23 52 07.9**	**-0.6**
	baz=348						
NTC				*e*S	**Sn**	**23 52 20.8**	**-0.3**
	baz=348						
EHY	**Hungye**	**0.98**	**240**	⇓P	**Pn**	**23 52 07.9**	**-1.2**
	baz=239						
EHY				*e*S	**Sb**	**23 52 20.1**	**-1.7**
	baz=239						
OWD	**Renai**	**0.99**	**268**	⇑P	**Pn**	**23 52 08.1**	**-1.2**
	baz=266						
OWD				S	**Sb**	**23 52 20.0**	**-2.1**
	baz=266						
CHGB	**Renai**	**0.99**	**274**	⇑P	**Pn**	**23 52 08.4**	**-1.0**
	baz=260						
TDCB	**Techi**	**1.03**	**285**	⇑P	**Pn**	**23 52 09.3**	**-0.6**
	baz=272						
TDCB				*e*S	**Sb**	**23 52 21.3**	**-2.1**
	baz=272						
TWB1	**Santiao Chiao**	**1.04**	**347**	⇑*i*P	**Pn**	**23 52 09.2**	**-0.6**
	baz=345						
TWB1				*e*S	**Sb**	**23 52 23.8**	**+0.4**
	baz=345						
YHNB	**Yeheng**	**1.04**	**310**	*e*Pn	**Pn**	**23 52 09.4**	**-0.6**
YHNB	**Yeheng**	**1.04**	**310**	⇑P	**Pn**	**23 52 09.5**	**-0.6**
	baz=309						
YHNB				*e*S	**Sb**	**23 52 23.5**	**-0.2**
	baz=309						
VWDT	**VWDT**	**1.05**	**257**	⇑P	**Pn**	**23 52 09.2**	**-0.7**
	baz=246						
TIPB	**Shuangxi**	**1.05**	**338**	⇓*i*P	**Pn**	**23 52 09.6**	**-0.4**
	baz=337						
TIPB				*e*S	**Sn**	**23 52 23.0**	**-0.9**
	baz=337						
NSK	**Sanguang**	**1.06**	**310**	⇑*i*P	**Pn**	**23 52 09.6**	**-0.6**
	baz=308						
NSK				*e*S	**Sb**	**23 52 24.3**	**+0.2**
	baz=308						
YULB	**Yu-li**	**1.06**	**236**	*e*Pn	**Pn**	**23 52 08.9**	**-1.3**
YULB	**Yu-li**	**1.06**	**236**	⇓P	**Pn**	**23 52 08.9**	**-1.3**
	baz=253						
YULB				*e*S	**Sn**	**23 52 22.0**	**-2.2**
	baz=253						
TWF1	**Yuli**	**1.09**	**234**	⇓*i*P	**Pn**	**23 52 09.4**	**-1.1**
	baz=233						
NWF	**Wu-fen Shan**	**1.15**	**338**	⇑*i*P	**Pn**	**23 52 11.5**	**0.0**
	baz=353						
NWF				*e*S	**Sb**	**23 52 28.4**	**+1.6**
	baz=353						
WFSB	**Wu-fen Shan**	**1.15**	**338**	⇑P	**Pn**	**23 52 11.4**	**0.0**
	baz=354						
TWA	**Mucha**	**1.15**	**328**	⇑*i*P	**Pb**	**23 52 12.1**	**-0.1**
	baz=327						
TWA				*e*S	**Sb**	**23 52 27.9**	**+1.1**
	baz=327						
NHDH	**Xindian Distri**	**1.17**	**326**	⇑P	**Pb**	**23 52 12.3**	**-0.1**
	baz=338						
NHDH				*e*S	**Sb**	**23 52 27.4**	**+0.2**
	baz=338						
TATO	**Taipei**	**1.20**	**325**	*e*Pn	**Pn**	**23 52 12.2**	**+0.1**
TATO	**Taipei**	**1.20**	**325**	⇑P	**Pb**	**23 52 12.4**	**-0.5**
	baz=323						
TATO				S	**Sb**	**23 52 28.1**	**+0.1**
	baz=323						
SSLB	**Suanglung**	**1.21**	**260**	*e*Pn	**Pn**	**23 52 11.4**	**-0.8**
SSLB				*e*Pg	**Pb**	**23 52 12.2**	**-1.0**
SSLB	**Suanglung**	**1.21**	**260**	⇑P	**Pn**	**23 52 11.5**	**-0.8**
	baz=259						
SSLB				*e*S	**Sn**	**23 52 25.2**	**-2.6**
	baz=259						
CHKT	**Chengkung**	**1.21**	**223**	⇓*e*P	**Pn**	**23 52 10.4**	**-1.7**
	baz=209						
CHKT				*e*S	**Sn**	**23 52 24.5**	**-3.2**
	baz=209						
DPDB	**Guoxing**	**1.21**	**272**	⇑*i*P	**Pn**	**23 52 12.0**	**-0.3**
	baz=271						
DPDB				S	**Sn**	**23 52 26.8**	**-1.2**
	baz=271						
WHP	**Taichung City**	**1.23**	**283**	⇑*i*P	**Pn**	**23 52 12.4**	**-0.1**
	baz=270						
WHP				S	**Sb**	**23 52 28.8**	**-0.1**
	baz=270						
TAP	**Taipei**	**1.24**	**327**	⇑*i*P	**Pn**	**23 52 12.3**	**-0.3**
	baz=325						
TAP				*e*S	**Sb**	**23 52 30.8**	**+1.5**
	baz=325						
SMLT	**Sun Moon Lake**	**1.24**	**265**	⇑*i*P	**Pn**	**23 52 12.4**	**-0.4**
	baz=252						
SMLT				*e*S	**Sn**	**23 52 27.5**	**-1.3**
	baz=252						
WLTB	**Daxi**	**1.25**	**313**	⇑*i*P	**Pb**	**23 52 13.4**	**-0.4**
	baz=312						
WLTB				*e*S	**Sb**	**23 52 30.9**	**+1.4**
	baz=312						
TYC	**Yuchr**	**1.28**	**266**	⇑*i*P	**Pn**	**23 52 12.8**	**-0.4**
	baz=265						
TYC				*e*S	**Sn**	**23 52 27.3**	**-2.2**
	baz=265						
YUS	**Yu-Shan**	**1.29**	**247**	⇓P	**Pn**	**23 52 13.1**	**-0.7**
	baz=247						
YUS				S	**Sn**	**23 52 28.9**	**-1.7**
	baz=247						
LIOB	**Emei**	**1.30**	**300**	⇑*i*P	**Pb**	**23 52 14.0**	**-0.8**
	baz=299						
LIOB				*e*S	**Sb**	**23 52 32.7**	**+1.7**
	baz=299						
YM01	**YM01**	**1.30**	**332**	⇑*i*P	**Pn**	**23 52 13.6**	**+0.1**
	baz=346						
YM01				*e*S	**Sb**	**23 52 31.8**	**+0.7**
	baz=346						
NSTT	**Nanjuang**	**1.31**	**299**	⇑*i*P	**Pb**	**23 52 14.1**	**-0.7**
	baz=285						
NSTT				*e*S	**Sn**	**23 52 29.8**	**-0.4**
	baz=285						
YM10	**YM10**	**1.31**	**332**	⇑*i*P	**Pn**	**23 52 13.6**	**-0.1**
	baz=346						
YM10				*e*S	**Sb**	**23 52 31.4**	**-0.1**
	baz=346						
WHYT	**Xinyi Township**	**1.32**	**257**	*e*P	**Pn**	**23 52 13.7**	**0.0**
	baz=248						
YM05	**YM05**	**1.32**	**332**	⇑*i*P	**Pn**	**23 52 13.6**	**-0.2**
	baz=347						
YM05				S	**Sb**	**23 52 31.7**	**+0.1**
	baz=347						
YM04	**YM04**	**1.32**	**331**	⇑*i*P	**Pn**	**23 52 14.0**	**+0.2**
	baz=329						
YM04				*e*S	**Sb**	**23 52 32.5**	**+0.8**
	baz=329						
YM08	**YM08**	**1.33**	**333**	⇑*i*P	**Pn**	**23 52 13.5**	**-0.4**
	baz=331						
YM08				*e*S	**Sn**	**23 52 29.4**	**-1.5**
	baz=331						
TWS1	**Kuangyinshan**	**1.34**	**325**	P	**Pn**	**23 52 14.5**	**+0.5**
	baz=337						
TWS1				*e*S	**Sb**	**23 52 33.8**	**+1.7**
	baz=337						
YM03	**YM03**	**1.34**	**331**	⇑*i*P	**Pn**	**23 52 14.2**	**+0.1**
	baz=329						
YM03				*e*S	**Sb**	**23 52 32.3**	**-0.1**
	baz=329						
ANP	**Anpu**	**1.36**	**331**	⇑*i*P	**Pn**	**23 52 14.5**	**+0.1**
	baz=330						
NCUH	**Zhongli**	**1.37**	**315**	⇑*i*P	**Pn**	**23 52 14.7**	**+0.2**
	baz=314						
NCU	**National Centr**	**1.37**	**315**	⇓*e*P	**Pn**	**23 52 14.9**	**+0.4**
	baz=315						
NTST	**Danshui**	**1.37**	**328**	⇑P	**Pn**	**23 52 14.7**	**+0.3**
	baz=327						
ELDTW	**Lidau**	**1.39**	**235**	*e*P	**Pn**	**23 52 13.5**	**-1.3**
	baz=234						
IRIF	**Iriomote-Funau**	**1.39**	**76**	P	**Pb**	**23 52 15.5**	**-0.7**
IRIF				*e*S	**Sb**	**23 52 34.2**	**+0.7**
TWQ1	**Liyutan**	**1.40**	**285**	⇑*i*P	**Pb**	**23 52 15.8**	**-0.5**
	baz=284						
TWQ1				S	**Sb**	**23 52 33.8**	**0.0**
	baz=284						
SBCB	**Hsinchu**	**1.40**	**305**	⇑P	**Pb**	**23 52 15.5**	**-0.9**
	baz=303						
SBCB				*e*S	**Sb**	**23 52 35.2**	**+1.3**
	baz=303						
TWY	**Chenhua**	**1.41**	**335**	P	**Pn**	**23 52 15.2**	**+0.2**
	baz=351						
WJS	**Zhushan**	**1.41**	**263**	*e*P	**Pb**	**23 52 16.1**	**-0.4**
	baz=263						
ALS	**Alishan**	**1.41**	**250**	⇑*i*P	**Pn**	**23 52 15.4**	**+0.1**
	baz=250						
ALS				*e*S	**Sn**	**23 52 32.5**	**-0.7**
	baz=250						
HSN	**Hsinchu**	**1.42**	**305**	*e*P	**Pn**	**23 52 15.5**	**+0.5**
	baz=305						
HSN				*e*S	**Sb**	**23 52 35.2**	**+0.8**
	baz=305						
HATJ	**Hateruma jima**	**1.42**	**87**	P	**Pb**	**23 52 16.0**	**-0.7**
HATJ				*e*S	**Sb**	**23 52 34.4**	**0.0**
NSY	**Sanyi**	**1.43**	**287**	⇑*i*P	**Pb**	**23 52 16.4**	**-0.4**
	baz=286						
NSY				S	**Sb**	**23 52 34.1**	**-0.5**
	baz=286						
NMLH	**Miaoli**	**1.44**	**292**	P	**Pb**	**23 52 16.6**	**-0.5**
	baz=292						
WNT	**Mingjian**	**1.44**	**266**	P	**Pb**	**23 52 16.7**	**-0.4**
	baz=265						
WNT				S	**Sb**	**23 52 34.8**	**-0.2**
	baz=265						
TCU	**Taichung**	**1.45**	**276**	⇑P	**Pb**	**23 52 16.9**	**-0.4**
	baz=275						
TCU				S	**Sb**	**23 52 36.0**	**+0.7**
	baz=275						
PTSB	**Yuanli**	**1.48**	**288**	⇑*i*P	**Pb**	**23 52 16.8**	**-1.0**
	baz=287						
PTSB				S	**Sb**	**23 52 36.4**	**+0.2**
	baz=287						
CHN5	**Tsauling**	**1.50**	**255**	⇑*i*P	**Pn**	**23 52 16.8**	**+0.6**
	baz=255						
WDJ	**Dajia District**	**1.51**	**284**	⇑*i*P	**Pb**	**23 52 17.4**	**-0.9**
	baz=283						
WDJ				*e*S	**Sb**	**23 52 36.7**	**-0.4**
	baz=283						
WCHH	**Zhanghua**	**1.55**	**273**	⇑*e*P	**Pb**	**23 52 18.1**	**-0.8**
	baz=272						
WCHH				*e*S	**Sb**	**23 52 39.4**	**+1.2**
	baz=272						
WGK	**Gukeng**	**1.58**	**259**	*e*P	**Pb**	**23 52 19.4**	**-0.1**
	baz=259						
WGK				*e*S	**Sb**	**23 52 37.7**	**-1.3**
	baz=259						
TWGBT	**Beinan**	**1.59**	**223**	⇓P	**Pn**	**23 52 16.1**	**-1.4**
	baz=235						
TWGBT				*e*S	**Sn**	**23 52 35.2**	**-2.1**
	baz=235						
TWG	**Pinlang**	**1.60**	**223**	*e*Pn	**Pn**	**23 52 16.3**	**-1.2**
TWG	**Pinlang**	**1.60**	**223**	⇓P	**Pn**	**23 52 16.0**	**-1.5**
	baz=222						
WDLH	**Douliu**	**1.60**	**259**	*e*P	**Pn**	**23 52 18.4**	**+0.9**
	baz=259						
TTN	**Taitung**	**1.60**	**220**	*e*P	**Pn**	**23 52 17.8**	**+0.2**
	baz=208						
TTN				*e*S	**Sn**	**23 52 37.3**	**-0.2**
	baz=208						
STYT	**Tauyuan**	**1.60**	**239**	*e*P	**Pn**	**23 52 17.8**	**+0.1**
	baz=226						
JKRS	**Kuro-shima**	**1.62**	**81**	P	**Pb**	**23 52 19.1**	**-1.1**
JKRS				*e*S	**Sb**	**23 52 39.9**	**-0.3**
PCYT	**Pengchaiyu**	**1.64**	**354**	*e*P	**Pn**	**23 52 17.6**	**-0.5**
	baz=353						
CHN4	**Tsaushan**	**1.65**	**247**	*e*P	**Pn**	**23 52 19.2**	**+0.9**
	baz=247						
CHN4				*e*S	**Sb**	**23 52 41.0**	**-0.1**
	baz=247						
WTP	**Ta-pu**	**1.68**	**244**	P	**Pn**	**23 52 19.4**	**+0.7**
	baz=244						
CHN2	**Minshiung**	**1.69**	**255**	*e*P	**Pb**	**23 52 20.9**	**-0.5**
	baz=255						
RLNB	**Erlin**	**1.74**	**267**	⇑P	**Pb**	**23 52 20.6**	**-1.5**
	baz=266						
RLNB				S	**Sb**	**23 52 42.4**	**-1.1**
	baz=266						
CHY	**Chiayi**	**1.75**	**254**	*e*P	**Pn**	**23 52 20.4**	**+0.8**
	baz=254						
CHY				*e*S	**Sn**	**23 52 42.1**	**+1.0**
	baz=254						
JIJ	**Ishigaki jima**	**1.76**	**78**	P	**Pn**	**23 52 20.4**	**+0.6**
JIJ				S	**Sn**	**23 52 42.3**	**+0.8**
TWK	**Hsinying**	**1.77**	**246**	⇑P	**Pn**	**23 52 21.1**	**+1.1**
	baz=246						
TWK				S	**Sb**	**23 52 43.9**	**-0.8**
	baz=246						
CHN1	**Nanshi**	**1.78**	**243**	*e*P	**Pb**	**23 52 21.4**	**-1.5**
	baz=243						
SGST	**Jiashian**	**1.78**	**240**	*e*P	**Pn**	**23 52 21.1**	**+1.0**
	baz=240						
SGST				*e*S	**Sb**	**23 52 43.9**	**-0.9**
	baz=240						
SNST	**Tainan City**	**1.79**	**245**	*e*P	**Pb**	**23 52 21.8**	**-1.2**
	baz=245						
WTCT	**Ta-ch'eng**	**1.81**	**266**	P	**Pn**	**23 52 21.5**	**+1.0**
	baz=266						
WTCT				S	**Sb**	**23 52 44.9**	**-0.7**
	baz=266						
WMLT	**Mailiao**	**1.87**	**265**	*e*P	**Pb**	**23 52 22.6**	**-1.7**
	baz=264						
WMLT				*e*S	**Sb**	**23 52 47.1**	**-0.2**
	baz=264						
SSD	**Sandimen**	**1.94**	**230**	*e*P	**Pn**	**23 52 22.9**	**+0.6**
	baz=220						
CHN3	**Shinhua**	**1.96**	**243**	*e*P	**Pb**	**23 52 25.2**	**-0.8**
	baz=243						
CHN3				*e*S	**Sb**	**23 52 49.8**	**-0.1**
	baz=243						
JISG	**Ishigakijimahi**	**1.97**	**72**	P	**Pn**	**23 52 23.2**	**+0.6**
JISG				S	**Sn**	**23 52 47.9**	**+1.4**
CHN8	**Yiju**	**1.98**	**251**	*e*P	**Pn**	**23 52 24.1**	**+1.3**
	baz=251						
CHN8				*e*S	**Sn**	**23 52 48.2**	**+1.4**
	baz=251						
MASBT	**Mashibuluo**	**2.03**	**228**	⇓P	**Pn**	**23 52 23.2**	**-0.3**
	baz=220						
MASBT				*e*S	**Sn**	**23 52 49.7**	**+1.7**
	baz=220						
TWM1	**Shoushan**	**2.05**	**236**	*e*P	**Pb**	**23 52 26.9**	**-0.6**
	baz=234						
LAY	**Lan-yu**	**2.05**	**199**	⇓P	**Pn**	**23 52 21.8**	**-2.0**
	baz=209						
LAY				*e*S	**Sn**	**23 52 45.2**	**-3.4**
	baz=209						
TAW	**Tawu**	**2.05**	**218**	*e*P	**Pn**	**23 52 22.8**	**-1.0**
	baz=217						
SGLT	**Jiouru**	**2.06**	**232**	*e*P	**Pb**	**23 52 27.0**	**-0.6**
	baz=232						
SCLT	**Jiali**	**2.06**	**247**	*e*P	**Pb**	**23 52 26.0**	**-1.6**
	baz=247						
EAST	**Anshuo**	**2.06**	**219**	⇓P	**Pn**	**23 52 22.8**	**-1.1**
	baz=219						
TAI1	**Yung-k'ang**	**2.09**	**243**	*e*P	**Pb**	**23 52 26.1**	**-2.0**
	baz=243						
SNJT	**Kaohsiung City**	**2.15**	**235**	*e*P	**Pb**	**23 52 27.8**	**-1.4**
	baz=236						
SSPT	**Xinbi**	**2.16**	**226**	⇓P	**Pn**	**23 52 25.8**	**+0.6**
	baz=220						
SSPT				*e*S	**Sb**	**23 52 53.6**	**-2.1**
	baz=220						
SCZT	**Fangliau**	**2.21**	**223**	*e*P	**Pn**	**23 52 26.1**	**+0.2**
	baz=217						
SCZT				*e*S	**Sn**	**23 52 53.8**	**+1.4**
	baz=217						
WSSB	**Gushan**	**2.27**	**234**	*e*P	**Pb**	**23 52 29.2**	**-2.1**
	baz=234						
KAU	**Kaohsiung**	**2.29**	**232**	*e*P	**Pb**	**23 52 30.1**	**-1.4**
	baz=232						
WLCH	**Liuqiu**	**2.38**	**227**	⇓P	**Pb**	**23 52 31.7**	**-1.4**
	baz=228						
WLCH				*e*S	**Sb**	**23 53 02.8**	**+0.8**
	baz=228						
TWP	**Hsiaoliuchiu**	**2.39**	**227**	*e*P	**Pb**	**23 52 31.4**	**-1.9**
	baz=227						
HEN	**Hengchun**	**2.42**	**215**	⇓P	**Pn**	**23 52 28.9**	**0.0**

baz=259
PNG Penghu 2.51 261 *e*P **Pn 23 52 30.1 +0.1**
baz=260
PNG *e*S **Sn 23 52 59.3 -0.5**
baz=260
VCHM Qimei 2.71 254 ⇑P **Pn 23 52 33.5 +0.7**
baz=254
JMJ Miyako jima 2 2.89 73 *e*P **Pn 23 52 37.1 +1.8**
baz=74
MATB Ma-tsu 3.00 316⇑*e*P **Pn 23 52 36.3 -0.5**
baz=315
PTMZ Houxiangcun 3.04 291⇑*e*P **Pn 23 52 36.8 -0.6**
baz=290
LYJJ Jianjiangzhen 3.40 319⇑*e*P **Pn 23 52 41.8 -0.5**
baz=319
XPSS Dashiqiu 3.47 328⇑*e*P **Pn 23 52 42.8 -0.4**
baz=339
QZH Quanzhou 3.47 287⇑*i*Pn **Pn 23 52 42.5 -0.7**
QZH Sn **Sn 23 53 21.3 -2.2**
QZH smax smax
comp=N,7μm,1.2s
QZH smax smax
comp=E,3μm,1.0s
QZH LR LR
comp=N,95μm,13.6s
QZH LR LR
comp=E,112μm,11.7s
QZH LR LR
comp=Z,137μm,14.4s
KNMB Chin-men Tao 3.56 278 *e*Pn **Pn 23 52 43.9 -0.6**
KNMB Chin-men Tao 3.56 278⇑*e*P **Pn 23 52 43.7 -0.8**
baz=278
MHZQ Yeshan 3.60 306⇑*e*P **Pn 23 52 44.1 -0.9**
baz=305
AXDP Jialang 4.01 284⇑*e*P **Pn 23 52 50.2 -0.5**
baz=283
ZPLA Ao Xicun 4.12 270⇑*e*P **Pn 23 52 51.3 -0.9**
baz=269
ZZJH Jiuhuzhen 4.25 277⇑*e*P **Pn 23 52 53.3 -0.6**
baz=276
VDOS Pratas Island 6.07 238 *e*P **Pn 23 53 20.3 +1.2**
baz=238
JOW Kunigami 6.13 61 Pn **Pn 23 53 19.6 -0.3**
7.6nm,0.3s,baz=161,slow=13,SNR=38
JOW Sn **Sn 23 54 26.7 -2.6**
5.1nm,0.3s,baz=240,slow=20,SNR=2.8
JOW Kunigami 6.13 61 *e*P **Pn 23 53 19.6 -0.3**
baz=62
JOW Kunigami 6.13 61 P **Pn 23 53 20.0 +0.1**
SSE Sheshan 7.13 353 Pn **Pn 23 53 31.0 -2.7**
SSE Sn **Sn 23 54 55.5 +1.6**
SSE Sheshan 7.13 353 *e*Pn **Pn 23 53 31.3 -2.3**
HKPS Hong Kong Po S 7.66 259 *e*Pn **Pn 23 53 40.7 -0.2**
JAM Amami Oshima 7.93 55 P **Pn 23 53 43.5 -1.1**
MCO Taipa Grande 8.22 259 P Pb 23 54 07.0 -5.6
GZH Guangzhou 8.22 265 P **Pn 23 53 44.5 -4.1**
GZH S Sn 23 55 08.0 -13
GZH smax smax
comp=E,20μm,1.3s
NJ2 Nanjing 8.57 340 *e*P **Pn 23 53 52.5 -0.8**
NJ2 S **Sn 23 55 29.5 +0.3**
NJ2 pmax pmax
comp=E,33nm,0.6s
NJ2 pmax pmax
comp=E,1μm,10.1s
NJ2 smax smax
comp=E,2μm,0.9s
NJ2 smax smax
comp=E,1μm,1.6s
NJ2 LR LR
comp=E,92μm,14.2s
NJ2 LR LR
comp=E,44μm,11.4s
NJ2 LR LR
comp=E,103μm,12.4s
WHN Wuhan 9.59 315 P **Pn 23 54 07.3 0.0**
WHN S **Sn 23 55 54.8 +0.6**
WHN LR LR
comp=E,88μm,10.5s
WHN LR LR
comp=E,54μm,8.6s
WHN LR LR
comp=E,160μm,13.8s
TGY Tagaytay City 9.92 187 Pn **Pn 23 54 15.1 +3.1**
comp=E,45nm,0.3s,baz=322,slow=7.3,SNR=6.9
TGY LR LR 23 59 04.0
comp=E,15μm,18.6s,baz=66,slow=43
JFU Fukue jima 2 10.35 32 P Pn 23 54 22.9 +5.2
JNU Nakatsue 11.83 38 Pn **Pn 23 54 37.7 -0.4**
baz=242,slow=17,SNR=2.2
JNU LR LR 00 00 15.2
comp=E,18μm,18.0s,baz=216,slow=43
JNU Nakatsue 11.83 38 *e*Pn **Pn 23 54 40.2 +2.1**
JNU Nakatsue 11.83 38 P Pn 23 54 44.0 +5.9
JTU Tsushima 12.20 29 P **Pn 23 54 47.2 +4.1**
QIZ Qiongzhong 12.56 249 P **Pn 23 54 48.8 +0.7**
QIZ S **Sn 23 57 08.8 +1.6**
QIZ pmax pmax
comp=E,390nm,6.7s
QIZ LR LR
comp=E,24μm,17.9s
QIZ LR LR
comp=E,18μm,17.8s
TIA Tai'an 12.96 341 P **Pn 23 54 54.0 +0.6**
TIA S Sn 23 57 28.5 +12
TIA pmax pmax
comp=E,1μm,4.8s
TIA LR LR
comp=E,38μm,13.7s
TIA LR LR
comp=E,26μm,13.9s
ENH Enshi 12.97 302 *e*Pn **Pn 23 54 55.9 +2.2**
TJN Taejon 13.10 18 *ce*P **Pn 23 54 58.4 +3.0**
MSLP Maasin 14.01 169 *e*P **Pn 23 55 10.7 +2.8**
KS15 Wonju Array Si 14.24 19 *e*Pn **P 23 55 14.7 -3.4**
KSRS Korea Array 14.27 19 Pn **Pn 23 55 10.4 -0.9**
comp=E,0.6nm,0.3s,baz=199,slow=11,SNR=44
KSRS LR LR 00 01 15.5
comp=E,12μm,19.4s,baz=191,slow=40
GYA Guiyang 14.32 283⇑*i*P **Pn 23 55 12.5 +0.3**
GYA PP **PnPn 23 55 24.5 +4.3**
GYA S **Sn 23 57 47.0 -3.4**
GYA PcP **PcP 00 00 32.8 +4.2**
GYA pmax pmax
comp=E,110nm,0.9s
GYA pmax pmax
comp=E,2μm,8.2s
GYA LR LR
comp=E,18μm,10.7s
GYA LR LR
comp=E,36μm,15.1s
GYA LR LR
comp=E,48μm,13.7s
DL2 Dalian 14.87 358⇑*i*P **Pn 23 55 21.5 +2.0**
DL2 S **Sn 23 58 07.5 +4.0**
DL2 pmax pmax
comp=E,30nm,1.3s
DL2 pmax pmax
comp=E,2μm,4.4s
DL2 LR LR
comp=E,27μm,13.8s
DL2 LR LR
comp=E,3μm,13.9s
DL2 LR LR
comp=E,35μm,13.2s
BUTP Butuan 15.29 167 *e*P P 23 55 39.0 +9.3
XAN Xi'an 15.35 314 P **Pn 23 55 25.8 -0.1**
XAN pmax pmax
comp=E,43nm,2.1s
XAN pmax pmax
comp=E,3μm,6.1s
XAN LR LR
comp=E,20μm,9.8s
XAN LR LR
comp=E,30μm,13.6s
XAN LR LR
comp=E,40μm,11.9s
XAN Xi'an 15.35 314 *e*Pn **Pn 23 55 25.8 -0.1**
comp=E,282nm,1.4s
XAN Xi'an 15.35 314 *e*P **Pn 23 55 25.8 -0.1**
XAN pmax pmax
comp=Z,282nm,1.4s
TIY Taiyuan 16.05 331 *e*P **P 23 55 38.0 -0.2**
TIY S **Sn 23 58 33.0 +0.8**
TIY sS **S 23 58 44.0 -1.4**
TIY pmax pmax
comp=Z,130nm,1.1s
TIY pmax pmax
comp=Z,4μm,4.5s
TIY LR LR
comp=Z,49μm,14.3s
TIY LR LR
comp=Z,12μm,11.5s
TIY LR LR
comp=Z,42μm,14.4s
BUKP Musuan 16.25 170 *e*P **Pn 23 55 38.5 +0.9**
BJT Baijiatuau 16.78 344 *e*P **P 23 55 45.7 -0.5**
comp=Z,121nm,1.1s
BJT Baijiatuau 16.78 344 *e*P **P 23 55 45.7 -0.5**
BJT pmax pmax
comp=Z,121nm,1.1s
CTBH Cotabato--PC H 16.79 173⇑*i*P **P 23 55 47.0 +0.6**
BJI Beijing 16.80 344 P **P 23 55 45.5 -0.9**
BJI S **Sn 23 58 53.3 +3.1**
BJI LR LR
comp=Z,3μm,14.4s
BJI LR LR
comp=Z,10μm,20.2s
BJI LR LR
comp=Z,7μm,18.2s
DAV Davao City (W) 17.13 169 LR LR 00 02 35.0
comp=Z,12μm,19.3s,baz=3.0,slow=37
SLVN Son La 17.14 265 *e*P **P 23 55 50.4 0.0**
comp=Z,282nm,1.7s
DLV T Lat 17.73 230 *e*P **P 23 56 00.3 +3.2**
comp=Z,243nm,1.7s
KMI Kunming 17.79 278 P **P 23 55 57.8 +0.1**
KMI pP pP 23 56 01.5 -2.3
KMI PP **pwP 23 56 11.0 +3.3**
KMI S **Sn 23 59 14.0 -0.8**
KMI SS **SnSn 23 59 38.0 +10**
KMI pmax pmax
comp=Z,91nm,1.7s
KMI pmax pmax
comp=Z,830nm,3.9s
KMI LR LR
comp=Z,51μm,14.3s
KMI LR LR
comp=Z,53μm,12.9s
KMI LR LR
comp=Z,62μm,12.9s
CD2 Chengdu 17.79 297 P **P 23 55 57.8 +0.3**
CD2 pP pP 23 56 04.0 +0.4
CD2 sP pwP 23 56 08.0 +0.5
CD2 S **Sn 23 59 16.0 +1.5**
CD2 pmax pmax
comp=Z,120nm,0.7s
CD2 pmax pmax
comp=Z,6μm,6.7s
CD2 LR LR
comp=Z,33μm,8.6s
CD2 LR LR
comp=Z,59μm,11.8s
CD2 LR LR
comp=Z,78μm,13.5s
SNY Shenyang 17.82 3⇑P **P 23 55 57.5 -0.1**
SNY S **S 23 59 18.3 -2.9**
SNY pmax pmax
comp=Z,6μm,13.3s
SNY LR LR
comp=Z,30μm,12.5s
SNY LR LR
comp=Z,8μm,10.6s
SNY LR LR
comp=Z,49μm,12.7s
PANO Nakornpanom 17.86 251 P **P 23 56 03.2 +4.9**
comp=Z,2.1nm,1.6s
JHJ Hachijo jima 2 17.86 55 LR LR 00 02 41.3
comp=Z,3μm,19.0s,baz=255,slow=37
DDMP Don Marcelino, 18.10 169 *e*P **Pn 23 55 59.6 -1.0**
SKNT Sakolnakorn 18.48 251 P **Pn 23 56 09.8 +4.5**
comp=Z,105nm,1.3s,comp=Z,6μm
MAJO Matsushiro 18.57 44 *e*P **Pn 23 56 08.2 +1.8**
comp=Z,24nm,1.0s
MAJO Matsushiro 18.57 44⇑*e*P **Pn 23 56 09.0 +2.6**
MAT Matsushiro 18.57 44 P **Pn 23 56 08.7 +2.3**
MAT S **S 23 59 36.8 +0.4**
MJB9 Matsu-Tunnel 18.57 44 *e*P **Pn 23 56 07.6 +1.2**
comp=Z,24nm,1.0s
MJAR Matsushiro Arr 18.58 44 P **P 23 56 04.6 -1.4**
comp=Z,0.1nm,0.3s,baz=231,slow=11,SNR=8.3
MJAR LR LR 00 03 43.2
comp=Z,3μm,20.5s,baz=240,slow=39
KKM Kota Kinabalu 18.77 199 *e*P **Pn 23 56 11.0 +2.0**
comp=Z,306nm,1.5s
KKM Kota Kinabalu 18.77 199 Pn 23 56 11.0 +2.0
NONG Nongkai 18.78 255 P **Pn 23 56 12.7 +3.7**
comp=Z,1.9nm,1.8s
HHC Hu-ho-hao-te 19.05 334 P **Pn 23 56 12.8 +0.6**
HHC sP pwP 23 56 26.0 +4.6
HHC PP sP 23 56 33.5 +13
HHC S **S 23 59 49.0 +3.1**
HHC pmax pmax
comp=Z,34nm,1.1s
HHC pmax pmax
comp=Z,420nm,4.5s
HHC LR LR
comp=Z,44μm,13.7s
HHC LR LR
comp=Z,22μm,13.0s
BTO Baotou 19.49 331 *e*P **Pn 23 56 18.5 +1.0**
BTO S **S 23 59 54.8 -0.2**
KHON Khomkaen 19.75 251 P **Pn 23 56 23.7 +3.0**
comp=Z,108μm,1.4s
CN2 Changchun 19.93 7 *e*P **P 23 56 19.5 -1.3**
CN2 *e*S **S 23 59 57.3 -6.4**
CN2 pmax pmax
comp=Z,30nm,1.3s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,30μm,14.0s
CN2 LR LR
comp=Z,8μm,14.0s
CN2 LR LR
comp=Z,32μm,16.0s
LZH Lanzhou 19.94 311 *e*P **Pn 23 56 23.0 +0.1**
LZH pP pP 23 56 27.5 +0.3
LZH sP pwP 23 56 31.3 -0.1
LZH PP **PnPn 23 56 40.0 +2.7**
LZH *e*S **S 00 00 00.8 -3.6**
LZH pmax pmax
comp=Z,220nm,1.4s
LZH pmax pmax
comp=Z,6μm,6.2s
LZH LR LR
comp=Z,28μm,12.8s
LZH LR LR
comp=Z,33μm,12.7s
LZH LR LR
comp=Z,48μm,14.6s
MSHR Mys Shultsa 19.95 20⇑*e*P **Pn 23 56 22.7 -0.1**
SGSI Sangihe 20.44 171 P **P 23 56 21.7 -4.8**
CHAI Chaiyaphum 20.66 251 P Pn 23 56 31.9 +0.5
comp=Z,121μm,1.0s
VLA Vladivostok 20.67 20⇑*e*P **P 23 56 29.2 +0.4**
VLA pmax pmax
comp=Z,20nm,1.0s
UTTA Uttaradit 21.20 257 P **P 23 56 37.9 +3.2**
comp=Z,55μm,1.1s,comp=Z,674μm
PBKT Sadao Pong 21.27 254 P **P 23 56 38.6 +3.1**
comp=Z,81nm,1.5s,comp=Z,1μm
PAYA Payao 21.30 262 P **P 23 56 40.0 +4.1**
comp=Z,128μm,1.1s
MDJ Mudanjiang 21.43 14 P **P 23 56 37.5 +0.5**
MDJ pP pP 23 56 43.3 +0.2
MDJ S **S 00 00 34.8 +1.4**
MDJ pmax pmax
comp=Z,27nm,1.7s
MDJ pmax pmax
comp=Z,1μm,4.3s
MDJ LR LR
comp=Z,19μm,12.8s
MDJ LR LR
comp=Z,29μm,15.2s
MDJ LR LR
comp=Z,26μm,14.2s
MDJ Mudanjiang 21.43 14 *e*P **P 23 56 37.8 +0.8**
comp=Z,111nm,1.3s
MDJ LR LR
comp=Z,10μm,20.0s
USA0B Ussuriysk Arra 21.68 19 *e*P **P 23 56 38.7 -0.9**
comp=Z,81nm,1.3s
USA0B LR LR
comp=Z,7μm,19.0s
USRK Ussuriysk Ar. 21.68 19 P **P 23 56 38.0 -1.6**
comp=Z,14nm,0.7s,baz=198,slow=5.9,SNR=20
USRK LR LR 00 05 36.6
comp=Z,7μm,19.7s,baz=188,slow=38
LAMP Lampang 21.76 260 P **P 23 56 44.0 +3.2**
comp=Z,144μm,1.1s
CMMT Chiang Mai 22.29 261 P **P 23 56 48.4 +1.9**
comp=Z,61nm,1.3s,comp=Z,1μm
CHTO Chiang Mai 22.30 261 *e*P **P 23 56 47.8 +1.3**
comp=Z,148nm,1.2s
CHTO LR LR
comp=Z,9μm,21.0s
CHTO Chiang Mai 22.30 261 *e*P **P 23 56 47.8 +1.3**
CHTO pmax pmax
comp=Z,148nm,1.2s
CHTO MLR MLR
comp=Z,9μm,21.0s
CM31 Chiang Mai Arr 22.40 260 *e*P **P 23 56 49.6 +1.9**
comp=Z,84nm,1.0s
CM31 *e*PcP **PcP 00 00 42.5 +0.3**
CMAR Chiang Mai Arr 22.40 260 P **P 23 56 49.6 +1.9**
comp=Z,25nm,1.0s,baz=64,slow=8.0,SNR=48
CMAR PcP **PcP 00 00 42.5 +0.3**
comp=Z,1.9nm,0.6s,baz=28,slow=0.6,SNR=4.8
CMAR LR LR 00 07 09.0
comp=Z,11μm,18.1s,baz=72,slow=41
CMAR Chiang Mai Arr 22.40 260 *ce*P **P 23 56 49.9 +2.2**
CMAR pmax pmax
comp=Z,25nm,1.0s
UMPA Umpang Tak 23.27 255 P **P 23 57 03.5 +6.7**
comp=Z,113μm,1.1s
SBUM Sibu 23.52 206 *e*P **P 23 57 00.1 +0.9**
comp=Z,256nm,2.0s
SBUM LR LR
comp=Z,2μm,21.0s
SBUM Sibu 23.52 206 P 23 57 00.0 +0.9
TNTI Ternate 23.61 167 *e*P **P 23 57 02.5 +2.5**
comp=Z,282nm,1.2s
TNTI Ternate 23.61 167 P **P 23 57 00.1 +0.1**
GUMO Guam 23.75 112 P **P 23 57 00.8 -0.5**
comp=Z,37nm,0.8s,baz=15,slow=20,SNR=3.1
GUMO Guam 23.75 112 PFAKE 23 57 10.0 +8.6
GUMO LR LR
comp=Z,5μm,18.0s
SRDT SRDT 23.83 250 P **P 23 57 06.9 +4.7**
comp=Z,41nm,2.5s,comp=Z,1μm
PHET Kaeng Krachan 24.09 247 P **P 23 57 09.2 +4.6**
comp=Z,52μm,1.0s,comp=Z,652μm
GTA Gaotai 24.41 314⇑P **P 23 57 07.0 -0.5**
GTA pP pP 23 57 11.0 -3.0
GTA sP sP 23 57 13.8 -3.1
GTA S **S 00 01 20.8 -5.2**
GTA SS **SnSn 00 02 16.3 +5.7**
GTA pmax pmax
comp=Z,60nm,2.1s
GTA pmax pmax
comp=Z,2μm,7.9s
GTA LR LR
comp=Z,8μm,15.9s
GTA LR LR
comp=Z,21μm,14.3s
GTA LR LR
comp=Z,27μm,15.6s
APSI Ampana 24.77 181 P **P 23 57 10.2 -0.5**
SGKI Sangatta, Kali 24.79 191 P P 23 57 02.9 -8.1
LUWI Luwuk 24.89 179 P **P 23 57 08.2 -3.7**
ERM Erimo 24.99 39 PFAKE 23 57 20.0 +7.4
ERM LR LR
comp=Z,5μm,19.0s
ERM Erimo 24.99 39⇑*e*P **P 23 57 13.5 +0.9**
ERM pmax pmax
comp=Z,13nm,1.1s
KSM Kuching 25.20 209 *e*P **P 23 57 15.2 +0.5**
comp=Z,159nm,1.3s
KSM LR LR
comp=Z,4μm,18.0s
KSM Kuching 25.20 209 P 23 57 15.0 +0.3
HIA Hailar 25.30 356 *e*P **P 23 57 15.1 -0.3**
comp=Z,45nm,1.0s
HIA LR LR
comp=Z,12μm,18.0s
HIA Hailar 25.30 356 *de*P **P 23 57 14.9 -0.4**
HIA pmax pmax
comp=Z,175nm,1.0s
MTKI Muara Teweh, K 25.80 197 P **P 23 57 20.1 0.0**
ASAJ Asahikawa 26.08 35 P **P 23 57 20.1 -2.3**
comp=Z,6.8nm,0.4s,baz=243,slow=12,SNR=5.8
ASAJ LR LR 00 07 40.0
comp=Z,7μm,21.1s,baz=240,slow=37
SANI Sanana 26.14 172 P **P 23 57 18.5 -4.7**
SIJI Sorong 26.22 159 P **P 23 57 22.2 -1.8**
comp=Z,19nm,0.6s,baz=332,slow=15,SNR=3.0
KLR Kul'dur 26.27 14 P **P 23 57 22.2 -1.9**
comp=Z,7.1nm,0.8s,baz=225,slow=12,SNR=7.0
KLR PcP **PcP 00 00 49.9 -0.2**
comp=Z,3.7nm,0.6s,baz=200,slow=4.9,SNR=4.7
KLR LR LR 00 08 21.2
comp=Z,10μm,20.6s,baz=198,slow=38
KLR Kul'dur 26.27 14⇑*e*P **P 23 57 24.7 +0.6**
KLR pmax pmax
comp=Z,8.0nm,0.9s
ULN Ulaanbaatar 26.71 337 *e*P **P 23 57 27.4 -0.9**
comp=Z,119nm,1.0s
ULN LR LR
comp=Z,31μm,19.0s
ULN Ulaanbaatar 26.71 337 *c i*P **P 23 57 27.3 -1.0**
ULN pmax pmax
comp=Z,226nm,1.7s
SONA0 Songino Array 26.93 336 *e*PcP **PcP 00 00 51.5 -0.3**
SONA0 *e*ScP **ScP 00 04 30.2 -0.2**
SONM Songino Array 26.93 336 P **P 23 57 29.4 -0.8**
comp=Z,100nm,1.0s,baz=150,slow=9.8,SNR=98
SONM PcP **PcP 00 00 51.5 -0.3**
comp=Z,4.5nm,0.9s,baz=162,slow=3.4,SNR=2.9
SONM ScP **ScP 00 04 30.2 -0.2**
comp=Z,3.3nm,0.9s,baz=165,slow=6.2,SNR=5.5
SONM LR LR 00 09 21.3
comp=Z,29μm,18.5s,baz=149,slow=39
TTSI Tana Toraja 26.98 185 P **P 23 57 26.0 -4.8**
NLAI Namlea 27.48 169 P **P 23 57 35.2 0.0**
SHL Shillong 27.59 280 PFAKE 23 57 50.0 +14
SHL LR LR
comp=Z,16μm,18.0s
SHL Shillong 27.59 280 *e*P **P 23 57 36.4 -0.1**
SHL *e*P **P 23 57 38.0 +1.5**
SHL IAmb IAmb 23 57 42.9
comp=Z,4μm,5.4s
SHL *i* x x 00 02 38.0
YUK Yuzh-Kuril'sk 27.80 38 *e*P **P 23 57 35.9 -2.0**
YUK *e* 23 58 21.5
YUK *e*PPP PPP 23 58 33.9
YUK *e*S **S 00 02 21.8 +2.5**
YUK *e*SS **SnSn 00 03 36.4 +3.3**
YUK *e*SSS SSS 00 03 55.7
YUK pmax pmax
comp=Z,139nm,1.7s
YUK pmax pmax
comp=Z,107nm,0.8s
YUK pmax pmax
comp=N,104nm,0.6s
YUK MLR MLR
comp=Z,3μm,16.0s
YUK MLR MLR
comp=N,3μm,15.0s
YUK MLR MLR
comp=E,2μm,16.0s
KULM Kulim 27.90 232 PFAKE 23 57 50.0 +11
KULM LR LR
comp=Z,3μm,20.0s
SPSI Sidrap Palu 27.90 185 P **P 23 57 35.8 -3.2**
MSAI Masohi 27.94 166 P **P 23 57 38.0 -1.4**
BRDH Bariadhala 28.11 274 LR LR 00 09 53.1
comp=Z,8μm,18.1s,baz=105,slow=38
AAI Ambon 28.12 167 P P 23 57 35.0 -6.0
YSS Yuzh-Sakhalins 28.18 31 PFAKE 23 57 50.0 +8.7
YSS LR LR
comp=Z,1μm,18.0s
YSS Yuzh-Sakhalins 28.18 31 *e*P **P 23 57 37.8 -3.5**
YSS *e* 23 58 41.6
YSS *e*S **S 00 02 18.6 -6.6**
YSS *e*SSS SSS 00 04 03.3
YSS pmax pmax
comp=Z,500nm,7.1s

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YSS                                  MLR     MLR
     comp=Z,5µm,15.0s
IPM  Ipoh          28.20 230 eP      P       23 57 41.9 +0.2
     comp=Z,148nm,1.4s
IPM                                  LR      LR
     comp=Z,4µm,20.0s
IPM  Ipoh          28.20 230         P       23 57 42.0 +0.2
LSA  Lhasa         28.27 288 P       P       23 57 43.0 +0.1
LSA                                  LR      LR
     comp=Z,2µm,14.1s
LSA                                  LR      LR
     comp=Z,5µm,13.0s
LSA                                  LR      LR
     comp=Z,6µm,15.1s
LSA  Lhasa         28.27 288 eP      P       23 57 44.4 +1.5
     comp=Z,40nm,0.8s
LSA                                  LR      LR
     comp=Z,14µm,18.0s
LSA  Lhasa         28.27 288 P       P       23 57 44.3 +1.5
LSA  Lhasa         28.27 288 eP      P       23 57 44.4 +1.5
LSA                                  pmax    pmax
     comp=Z,40nm,0.8s
LSA                                  MLR     MLR
     comp=Z,14µm,18.0s
MYKOM Kota Tinggi  28.36 222         PFAKE   23 58 00.0 +17
MYKOM                                LR      LR
     comp=Z,7µm,20.0s
MYKOM Kota Tinggi  28.36 222         P       23 57 45.0 +1.8
FAKI Fak Fak       28.47 159 eP      P       23 57 44.2 +0.1
     comp=Z,120nm,0.9s
FAKI                                 LR      LR
     comp=Z,4µm,20.0s
FAKI Fak Fak       28.47 159 P       P       23 57 44.6 +0.5
     comp=Z,164nm,1.1s,comp=Z,2µmcomp=Z,3µm
TPRI Tanjung Pinang 28.66 219 P      P       23 57 42.9 -2.9
CIT  Chita         28.77 349 eP      P       23 57 45.3 -1.2
CIT                          e               23 57 58.7
CIT                          e               23 58 38.2
KAPI Kappang       28.94 185 P       P       23 57 47.9 -0.3
     comp=Z,5.1nm,0.4s,baz=322,slow=12,SNR=6.3
KAPI Kappang       28.94 185 eP      P       23 57 48.6 +0.3
     comp=Z,38nm,1.0s
KAPI                                 LR      LR
     comp=Z,4µm,21.0s
KAPI Kappang       28.94 185 eP      P       23 57 48.6 +0.3
KAPI                                 pmax    pmax
     comp=Z,38nm,1.0s
KAPI                                 MLR     MLR
     comp=Z,4µm,21.0s
BKSI Bulukumba     29.21 184 P       P       23 57 44.7 -6.0
BNDI Bandanaira    29.31 164 P       P       23 57 47.3 -4.3
KUR  Kuril'sk      29.67 38d iP      P       23 57 56.6 +2.1
KUR                          e               23 59 01.2
KUR                          e               00 00 59.5
KUR                          eS      S       00 02 50.0 +1.4
KUR                          i SS    SnSn    00 04 15.8 -2.7
KUR                                  MLR     MLR
     comp=Z,5µm,17.0s
KUR                                  MLR     MLR
     comp=N,6µm,18.0s
KUR                                  MLR     MLR
     comp=E,1µm,16.0s
TPI  Tanjungpandan 30.15 210 P       P       23 57 55.9 -3.1
ZAK  Zakamensk     30.19 336 eP      P       23 57 57.0 -2.2
ZAK                                  pmax    pmax
     comp=Z,19nm,1.1s
PBA  Port Blair    30.58 252         PFAKE   23 58 20.0 +17
PBA                                  LR      LR
     comp=Z,10µm,18.0s
PBA  Port Blair    30.58 252         IAMs_20 IAMs_20 00 12 53.0
     comp=Z,9µm,10.8s
PSI  Prapat        30.86 230 eP      P       23 58 06.7 +1.3
     comp=Z,131nm,1.4s
PSI                                  LR      LR
     comp=Z,3µm,20.0s
TLY  Talaya        31.12 337 eP      P       23 58 06.3 -0.9
     comp=Z,62nm,0.9s
TLY                                  LR      LR
     comp=Z,26µm,21.0s
TLY  Talaya        31.12 337c iP     P       23 58 06.3 -0.9
TLY                          e               23 59 06.4
TLY                          ePPP    PPP     23 59 22.0
TLY                          eS      S       00 03 09.8 -1.5
TLY                                  pmax    pmax
     comp=Z,300nm,1.5s
TLY                                  MLR     MLR
     comp=Z,53µm,14.0s
TYV  Tymovskoe     31.12  25 eP      P       23 58 12.2 +4.9
TYV                                  pmax    pmax
     comp=Z,11nm,1.8s
TYV                                  MLR     MLR
     comp=Z,3µm,16.0s
BKNI Bangkinang    31.25 224         PFAKE   23 58 20.0 +11
BKNI                                 LR      LR
     comp=Z,5µm,19.0s
BKNI Bangkinang    31.25 224         P       23 58 05.7 -3.1
IRK  Irkutsk       31.37 339 eP      P       23 58 07.9 -1.6
IRK                                  pmax    pmax
     comp=Z,219nm,2.5s
MLSI Meulaboh, Aceh 31.71 236        P       23 58 22.6 +10
MNSI Mandailing Nat 31.85 227        P       23 58 12.4 -1.7
MOY  Mondy         32.09 335 eP      P       23 58 14.5 -1.4
MOY                                  pmax    pmax
     comp=Z,150nm,2.3s
NKL  Nikolayevsk   32.28  21 eP      P       23 58 15.5 -1.9
NKL                          e               00 01 00.6
NKL                          eS      S       00 03 28.5 -0.8
NKL                          e               00 08 47.1
NKL                                  pmax    pmax
     comp=Z,13nm,1.9s
NKL                                  pmax    pmax
     comp=E,7.0nm,1.8s
NKL                                  pmax    pmax
     comp=N,16nm,1.2s
NKL                                  MLR     MLR
     comp=N,7µm,14.0s
NKL                                  MLR     MLR
     comp=Z,11µm,16.0s
NKL                                  MLR     MLR
     comp=E,5µm,14.0s
EDFI Ende, Flores  32.55 181         P       P       23 58 19.5 -0.7
     comp=E,96nm,0.7s,comp=E,1µm
PDSI Padang        32.57 224         P       P       23 58 19.9 -0.5
JIRN Jiri          32.59 284 eP      P       23 58 21.4 +0.4
     comp=E,504nm,1.6s
GUN  Gumba         32.86 285 eP      P       23 58 23.8 +0.5
     comp=E,290nm,1.6s
GSI  Gunungsitoli  32.86 230         P       P       23 58 21.9 -1.0
     comp=E,66nm,0.7s
NGJI Ngawi         32.91 200         P       P       23 58 31.1 +7.9
LHSI Lahat         33.13 216         P       P       23 58 32.6 +7.4
BOK  Bokaro        33.19 277 eP      P       P       23 58 25.6 -0.2
BOK                                  IAmb    IAmb    23 58 29.1
     comp=Z,43nm,1.2s
JAGI Jajag, Banyuwa 33.22 195        PFAKE   23 58 40.0 +14
JAGI                                 LR      LR
     comp=Z,3µm,21.0s
PKI  Pulchoki      33.29 284 eP      P       23 58 26.9 -0.1
     comp=Z,161nm,1.6s
PKIN Phulchoki     33.30 284 eP      P       23 58 27.0 0.0
     comp=Z,47nm,1.1s
MDSI Maura Dua     33.34 214         P       P       23 58 21.9 -5.2
KKN  Kakani        33.40 285 eP      P       23 58 27.7 -0.1
     comp=Z,51nm,0.9s
WOJI Wonogiri, Jawa 33.52 201        P       P       23 58 39.5 +11
DMN  Daman         33.56 284 eP      P       23 58 29.1 -0.1
     comp=Z,275nm,1.4s
SOEI Soe           33.60 176         P       P       23 58 25.5 -4.0
SISI Saibi         33.76 225         P       P       23 58 42.0 +11
LWLI Liwa          33.86 214         P       P       23 58 45.9 +14
MNAI Manna         33.88 216         PFAKE   23 58 40.0 +8.2
MNAI                                 LR      LR
     comp=Z,4µm,20.0s
BWNR Bhubaneshwar  33.90 271 ex      P       23 58 23.7 -8.2
WMQ  Urumqi        34.49 314 eP      P       23 58 38.0 +1.1
WMQ                          pP      pP      23 58 44.5 +0.9
WMQ                          PP      PP      23 59 54.3 -0.9
WMQ                          S       S       00 04 06.5 +2.4
WMQ                          SS      SS      00 06 17.8 -16
WMQ                                  pmax    pmax
     comp=Z,38nm,1.5s
WMQ                                  pmax    pmax
     comp=Z,700nm,6.3s
WMQ                                  LR      LR
     comp=Z,3µm,15.1s
WMQ                                  LR      LR
     comp=Z,7µm,13.3s
WMQ                                  LR      LR
     comp=Z,6µm,16.3s
WMQ  Urumqi        34.49 314         PFAKE   23 58 50.0 +13
WMQ                                  LR      LR
     comp=Z,8µm,20.0s
DANN Dangsing      34.72 286 eP      P       23 58 39.5 +0.1
     comp=Z,482nm,1.6s
KOLN Koldanda      34.88 285 eP      P       23 58 41.0 +0.3
     comp=Z,184nm,1.0s
PYUN Piuthan       35.41 285 eP      P       23 58 45.4 +0.2
     comp=Z,371nm,1.3s
MANU Manus Island  35.58 133         PFAKE   23 59 00.0 +13
MANU                                 LR      LR
     comp=Z,4µm,19.0s
SKR  Severo-Kuril's 37.33  36 eP     P       23 58 56.5 -4.5
SKR                          e               00 00 29.9
SKR                          ePPP    PPP     00 01 20.7
SKR                          eSSS    SSS     00 07 47.0
SKR                                  pmax    pmax
     comp=Z,300nm,5.9s
SKR                                  pmax    pmax
     comp=Z,200nm,9.9s
SKR                                  MLR     MLR
     comp=Z,3µm,17.0s
SKR                                  MLR     MLR
     comp=Z,3µm,17.0s
DGZ  Jazzator, Alta 37.34 322de eP   P       23 59 01.2 -0.2
DGZ                                  pmax    pmax
     comp=Z,8.0nm,1.2s
MTN  Manton Dam    37.63 166 eP      P       23 59 02.7 -1.2
     comp=Z,105nm,0.7s
YAK  Yakutsk       38.35   6 PFAKE   23 59 20.0 +10
YAK                                  LR      LR
     comp=Z,5µm,19.0s
YAK  Yakutsk       38.35   6 eP      P       23 59 06.7 -2.8
PATS Pohnpei       38.56 110         PFAKE   23 59 20.0 +8.2
PATS                                 LR      LR
     comp=Z,3µm,20.0s
JBP  Jabalpur      38.64 278⇑ eP     P       23 59 14.5 +2.0
JBP                          eS      S       00 05 11.9 +4.2
JBP                                  AMS     AMS     00 16 42.5
     comp=Z,6µm,14.3s
MK31 Makanchi Array 39.15 316 eP     P       23 59 15.9 -0.6
     comp=Z,44nm,1.0s
MK31 Makanchi Array 39.15 316 eP     P       23 59 15.9 -0.6
MK31                                 pmax    pmax
     comp=Z,44nm,1.0s
MK32 Makanchi Array 39.15 316 ePcP   PcP     00 01 25.0 -0.7
MKAR Makanchi Array 39.15 316 P      P       23 59 15.8 -0.7
     comp=Z,19nm,0.7s,baz=99,slow=8.0,SNR=90
MKAR                                 PcP     PcP     00 01 25.0 -0.7
     comp=Z,5.1nm,0.9s,baz=150,slow=3.2,SNR=2.8
MKAR                                 LR      LR      00 17 07.8
     comp=Z,14µm,18.4s,baz=106,slow=39
MAKZ Makanchi      39.36 316 eP      P       23 59 17.8 -0.4
     comp=Z,103nm,1.3s
MAKZ                                 LR      LR
     comp=Z,16µm,18.0s
MAKZ Makanchi      39.36 316 eP      P       23 59 17.8 -0.4
MAKZ                                 pmax    pmax
     comp=Z,103nm,1.3s
MAKZ                                 MLR     MLR
     comp=Z,16µm,18.0s
PEA0B Petropavlovsk- 39.48  33       PFAKE   23 59 30.0 +11
PEA0B                                LR      LR
     comp=Z,5µm,18.0s
PETK Petropavlovsk- 39.48  33        P       P       23 59 18.2 -0.9
     comp=Z,3.4nm,1.1s,baz=193,slow=9.8,SNR=2.7
PETK                                 LR      LR      00 16 26.1
     comp=Z,5µm,18.7s,baz=225,slow=38
PEA1 Petropavlovsk- 39.48  33        eP      P       23 59 18.2 -0.9
DDI  Dehra Dun     39.64 289 eP      P       23 59 21.7 +0.9
DDI                                  IAmb    IAmb    23 59 23.9
     comp=Z,352nm,1.9s
NGP  Nagpur        39.88 275 eP      P       23 59 21.8 -1.1
PET  Petropavlovsk 39.92  34         PFAKE   23 59 30.0 +7.3
PET                                  LR      LR
     comp=Z,4µm,19.0s
PET  Petropavlovsk 39.92  34d iP     P       23 59 11.3 -11
PET                                  pmax    pmax
     comp=Z,400nm,18.1s
PET                                  pmax    pmax
     comp=Z,300nm,10.8s
PET                                  pmax    pmax
     comp=Z,19nm,1.1s
PET                                  MLR     MLR
     comp=Z,4µm,18.0s
PET                                  MLR     MLR
     comp=Z,4µm,17.0s
SMLA Simla         40.38 290 eP      P       23 59 26.4 -0.5
RABL Rabaul        40.42 130         PFAKE   23 59 40.0 +13
RABL                                 LR      LR
     comp=Z,3µm,20.0s
PRZ  Przheval'sk   40.54 308 eP      P       23 59 29.1 +0.8
     comp=Z,144nm,1.5s
PRZ                                  LR      LR
     comp=Z,8µm,20.0s
PRZ  Przheval'sk   40.54 308 eP      P       23 59 29.1 +0.8
PRZ                                  pmax    pmax
     comp=Z,144nm,1.5s
PRZ                                  MLR     MLR
     comp=Z,8µm,20.0s
MA2  Magadan       40.79  22        LR      LR      00 17 14.7
     comp=Z,5µm,19.6s,baz=222,slow=38
MA2  Magadan       40.79  22        PFAKE   23 59 40.0 +10
MA2                                  LR      LR
     comp=Z,6µm,19.0s
ZAA0 Zalesovo Array 40.94 327 eP     P       23 59 29.4 -1.7
     comp=Z,58nm,1.0s
ZAA0                                 LR      LR
     comp=Z,16µm,18.0s
ZALV Zalesovo Beam 40.94 327         P       P       23 59 29.4 -1.7
     comp=Z,28nm,0.7s,baz=115,slow=7.3,SNR=77
ZALV                                 PcP     PcP     00 01 30.2 -1.0
     comp=Z,2.9nm,0.7s,baz=128,slow=5.9,SNR=2.7
ZALV                                 LR      LR      00 17 57.0
     comp=Z,16µm,18.2s,baz=134,slow=38
ZAA1 Zalesovo Array 40.94 327 ePcP   PcP     00 01 30.2 -1.0
BHPL Bhopal        40.95 278 eP      P       23 59 32.8 +1.1
DHRM DHARAMSHALA   41.10 292 eP      P       23 59 32.6 -0.5
MDRS Chennai       41.14 262 eP      P       23 59 32.7 -0.6
MDRS                                 IAMs_20 IAMs_20 00 18 02.3
     comp=Z,4µm,21.4s
PMG  Port Moresby  41.16 141 eP      P       23 59 33.4 0.0
     comp=Z,110nm,1.3s
PMG                                  LR      LR
     comp=Z,3µm,19.0s
PMG  Port Moresby  41.16 141de P     P       23 59 34.4 +1.0
PMG                                  pmax    pmax
     comp=Z,228nm,1.0s
HYB  Hyderabad     41.27 269 i P     P       23 59 36.0 +1.5
HYB                          eS      S       00 05 50.0 +2.7
KDJ  Kajisay       41.35 307 eP      P       23 59 35.7 +0.7
     comp=Z,92nm,1.4s
KDJ                                  LR      LR
     comp=Z,6µm,18.0s
KDJ  Kajisay       41.35 307 eP      P       23 59 35.7 +0.7
KDJ                                  pmax    pmax
     comp=Z,92nm,1.4s
KDJ                                  MLR     MLR
     comp=Z,6µm,18.0s
H11N1 WAKE ISLAND Hy 41.52  87       T       T       00 45 08.7
     baz=283,slow=75,SNR=22
H11N2 WAKE ISLAND Hy 41.52  87       T       T       00 45 08.7
     baz=283,slow=75,SNR=31
H11N3 WAKE ISLAND Hy 41.54  87       T       T       00 45 08.1
     baz=283,slow=75,SNR=30
H11S3 WAKE ISLAND Hy 41.65  89       T       T       00 45 16.6
     baz=284,slow=75,SNR=5.2
H11S1 WAKE ISLAND Hy 41.66  89       T       T       00 45 19.6
     baz=284,slow=75,SNR=19
H11S2 WAKE ISLAND Hy 41.66  89       T       T       00 45 17.2
     baz=284,slow=75,SNR=19
KSH  Kashi         41.82 303         P       P       23 59 41.8 +3.0
KSH                          pP      sP      23 59 48.5 +0.2
KSH                          PP      PnPn    00 01 21.0 +0.3
KSH                          S       S       00 05 58.8 +3.6
KSH                          SS      SS      00 09 00.5 -1.1
KSH                                  pmax    pmax
     comp=Z,190nm,1.5s
KSH                                  pmax    pmax
     comp=Z,2µm,5.2s
KSH                                  LR      LR
     comp=Z,13µm,12.2s
KSH                                  LR      LR
     comp=Z,19µm,15.5s
KSH                                  LR      LR
     comp=Z,44µm,16.9s
ULHL Ulahol        42.05 307         P       P       23 59 43.0 +2.2
     SNR=12
NVS  Novosibirsk   42.19 327 eP      P       23 59 40.1 -1.3
NVS                                  pmax    pmax
     comp=Z,175nm,2.0s
NVS                                  pmax    pmax
     comp=N,87nm,2.1s
NVS                                  pmax    pmax
     comp=E,105nm,2.1s
TKM2 Tokmak 2      42.65 308         P       P       23 59 46.2 +0.5
     SNR=59
KZA  Kyzart        42.75 307         P       P       23 59 47.9 +1.2
     SNR=25
KURK Kurchatov     42.86 320 eP      P       P       23 59 45.9 -1.1
     comp=E,348nm,1.8s
KURK                                 LR      LR
     comp=Z,4µm,18.0s
KURK Kurchatov     42.86 320c iP     P       23 59 45.8 -1.1
KURK                                 pmax    pmax
     comp=Z,172nm,1.7s
KURBB Kurchatov Arra 42.88 320       P       P       23 59 46.0 -1.1
     comp=Z,50nm,1.2s,baz=120,slow=7.6,SNR=6.4
COEN Coen          42.91 149 eP      P       23 59 48.9 +1.2
     comp=Z,109nm,1.0s
COEN                                 LR      LR
     comp=Z,4µm,19.0s
KBK  Karagaybulak  43.07 307         P       P       23 59 50.5 +1.5
     SNR=8.8
PALK Pallekele     43.12 254         LR      LR      00 19 37.7
     comp=Z,3µm,18.6s,baz=151,slow=39
PALK Pallekele     43.12 254         PFAKE   00 00 00.0 +10
PALK                                 LR      LR
     comp=Z,4µm,18.0s
CHMS Chumysh       43.27 308         P       P       23 59 50.5 0.0
     SNR=28
UCH  Uchtor        43.31 307         P       P       23 59 52.5 +1.2
     SNR=71
FRU1 Bishkek       43.33 308         PFAKE   00 00 00.0 +9.0
FRU1                                 LR      LR
     comp=Z,13µm,18.0s
AAK  Ala-Archa     43.40 307         P       P       23 59 51.5 -0.1
     comp=Z,12nm,0.9s,baz=87,slow=9.2,SNR=27
AAK                                  LR      LR      00 20 47.4
     comp=Z,10µm,19.6s,baz=77,slow=40
AAK  Ala-Archa     43.40 307         P       P       23 59 52.1 +0.5
     SNR=7.0
AAK  Ala-Archa     43.40 307         eP      P       23 59 52.2 +0.6
     comp=Z,114nm,1.8s
AAK                                  LR      LR
     comp=Z,11µm,19.0s
AAK  Ala-Archa     43.40 307 i P     P       23 59 52.1 +0.5
     SNR=7.2
AAK  Ala-Archa     43.40 307c iP     P       23 59 52.0 +0.5
AAK                                  pmax    pmax
     comp=Z,29nm,1.3s
USP  Ospenovka     43.50 308         P       P       23 59 52.5 +0.2
     SNR=21
NIL  Nilore        43.65 294 eP      P       23 59 53.4 -0.3
     comp=Z,82nm,1.4s
NIL                                  LR      LR
     comp=Z,3µm,19.0s
NIL  Nilore        43.65 294 eP      P       23 59 53.4 -0.3
NIL                                  pmax    pmax
     comp=Z,83nm,1.4s
NIL                                  MLR     MLR
     comp=Z,3µm,19.0s
SEY  Seymchan      43.82  19         P       P       23 59 53.0 -1.5
     comp=Z,1.5nm,0.2s,baz=180,slow=20,SNR=3.3
SEY                                  PcP     PcP     00 01 38.8 -1.8
     comp=Z,4.2nm,0.6s,baz=230,slow=15,SNR=2.5
SEY  Seymchan      43.82  19⇓ eP    P       23 59 55.3 +0.8
AML  Almayashu     43.90 306         P       P       23 59 57.4 +1.4
     SNR=18
EKS2 Erkin-Say     43.92 307         P       P       23 59 56.3 +0.5
     SNR=15
WRAB Tennant Creek 45.23 164de       P       P       00 00 06.3 +0.1
WRAB                                 pmax    pmax
     comp=Z,61nm,1.3s
WRA  Warramunga Arr 45.23 164        P       P       00 00 06.7 +0.5
     comp=Z,20nm,0.6s,baz=347,slow=11,SNR=77
WRA                                  S       S       00 06 41.1 -3.9
     comp=Z,1.7nm,0.8s,baz=0.3,slow=19,SNR=5.8
WB2  Warramunga Arr 45.24 164 eP     P       00 00 06.5 +0.2
     comp=Z,246nm,1.6s
POO  Poona         45.27 273 eP      P       00 00 06.8 0.0
BTK  Batken        45.83 303         PFAKE   00 00 20.0 +9.0
BTK                                  LR      LR
     comp=Z,8µm,19.0s
KWAJ Kwajalein Atol 45.84 101        PFAKE   00 00 20.0 +8.8
KWAJ                                 LR      LR
     comp=Z,3µm,20.0s
TRD  Trivandrum    45.91 258 eP      P       00 00 11.7 -0.1
GAR  Garm          46.15 302         PFAKE   00 00 20.0 +6.5
GAR                                  LR      LR
     comp=Z,20µm,20.0s
GOA  Goa           46.18 269 eP      P       00 00 14.3 +0.4
CHGR Chuyangaron   47.03 301         PFAKE   00 00 30.0 +10
CHGR                                 LR      LR
     comp=Z,16µm,18.0s
KBL  Kabul         47.13 296 eP      P       00 00 21.6 +0.2
     comp=Z,75nm,1.1s
KBL                                  LR      LR
     comp=Z,6µm,18.0s
TIXI Tiksi         47.83   3         P       P       00 00 23.3 -2.7
     comp=Z,24nm,0.8s,baz=172,slow=6.7,SNR=55
TIXI Tiksi         47.83   3 eP      P       00 00 23.3 -2.7
     comp=Z,114nm,1.4s
TIXI                                 LR      LR
     comp=Z,15µm,18.0s
TIXI Tiksi         47.83   3ceP      P       00 00 23.5 -2.5
TIXI                                 pmax    pmax
     comp=Z,42nm,1.1s
TIXI                                 MLR     MLR
     comp=Z,15µm,16.0s
BVAR Borovoye Array 48.44 321        P       P       00 00 28.8 -2.2
     comp=Z,8.8nm,0.7s,baz=103,slow=7.0,SNR=2.7
BRVK Borovoye      48.51 321 eP      P       00 00 30.8 -0.8
     comp=Z,123nm,1.4s
BRVK                                 LR      LR
     comp=Z,6µm,18.0s
BRVK Borovoye      48.51 321ceP      P       00 00 30.6 -0.9
BRVK                                 pmax    pmax
     comp=Z,38nm,1.1s
AS31 Alice Springs 48.71 166 eScP    ScP     00 05 51.7 0.0
ASAR Alice Springs 48.71 166         P       P       00 00 34.0 +0.5
     comp=Z,9.6nm,0.6s,baz=343,slow=7.0,SNR=51
ASAR                                 ScP     ScP     00 05 51.7 0.0
     comp=Z,1.3nm,0.9s,baz=337,slow=4.3,SNR=3.7
ASAR                                 S       S       00 07 29.3 -5.3
     comp=Z,0.2nm,0.6s,baz=348,slow=18,SNR=2.4
ASAR                                 LR      LR      00 21 09.1
     comp=Z,1µm,20.8s,baz=328,slow=36
HNR  Honiara       49.59 128         PFAKE   00 00 50.0 +10
HNR                                  LR      LR
     comp=Z,2µm,19.0s
CTAO Charters Tower 49.67 150 eP     P       00 00 42.2 +1.5
     comp=Z,76nm,1.3s
CTAO                                 LR      LR
     comp=Z,3µm,21.0s
BILL Bilibino      51.53  20         PFAKE   00 01 10.0 +16
BILL                                 LR      LR
     comp=Z,8µm,19.0s
BILL Bilibino      51.53  20de P     P       00 00 54.0 -0.3
BILL                         e*SP    pwP     00 01 05.1 +0.5
BILL                         i       00 02 08.2
BILL                         e       00 02 54.9
BILL                         ePPP    PPP     00 03 55.2
BILL                         S       S       00 08 16.0 +3.1
BILL                         eSSS    SSS     00 13 26.2
BILL                                 pmax    pmax
     comp=Z,28nm,2.5s
BILL                                 MLR     MLR
     comp=Z,7µm,17.0s
MORW Morawa        53.10 187         PFAKE   00 01 20.0 +14
MORW                                 LR      LR
     comp=Z,1µm,19.0s
TARA Tarawa        53.91 107         PFAKE   00 01 30.0 +17
TARA                                 LR      LR
     comp=Z,2µm,19.0s
FORT Forrest       54.75 174 eP      P       00 01 18.6 +0.3
     comp=Z,106nm,1.2s
SVE  Sverdlovsk    54.77 324d iP     P       00 01 17.3 -1.0
SVE                          e               00 03 20.9
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SVE			*e*PPP	PPP		00 04 31.6
SVE			*e*S	**S**		**00 08 59.7 +2.4**
SVE			pmax	pmax		
	comp=Z,108nm,2.0s					
SVE			MLR	MLR		
	comp=Z,8μm,17.0s					
GEYT	**Alibeck**	**55.73 301**	P	**P**		**00 01 26.2 +0.6**
	comp=Z,7.2nm,0.7s,baz=86,slow=2.1,SNR=35					
GEYT			LR	LR		00 29 43.0
	comp=Z,5μm,19.4s,baz=90,slow=41					
GYA0B	**ALIBECK ARRAY**	**55.73 301**	*e*P	**P**		**00 01 25.9 +0.2**
	comp=Z,69nm,1.1s					
GYA0B			LR	LR		
	comp=Z,5μm,19.0s					
ARU	**Arti**	**55.84 323**	*e*P	**P**		**00 01 23.9 -2.1**
	comp=Z,170nm,1.7s					
ARU			LR	LR		
	comp=Z,5μm,22.0s					
ARU	**Arti**	**55.84 323**	*c i*P	**P**		**00 01 24.4 -1.6**
ARU						00 02 19.9
ARU						00 03 26.2
ARU			PPP	PPP		00 04 44.3
ARU			S	**S**		**00 09 11.7 0.0**
ARU						00 11 08.5
ARU			SS	**SS**		**00 12 53.6 -3.6**
ARU			pmax	pmax		
	comp=Z,73nm,1.2s					
ARU			MLR	MLR		
	comp=Z,4μm,19.0s					
EIDS	**Eidsvold**	**56.46 148**	PFAKE			00 01 40.0 +9.3
EIDS			LR	LR		
	comp=Z,2μm,19.0s					
STKA	**Stephens Creek**	**58.56 161**	P	**P**		**00 01 46.5 +1.2**
	comp=Z,25nm,0.6s,baz=342,slow=7.2,SNR=70					
STKA			LR	LR		00 29 23.2
	comp=Z,1μm,19.5s,baz=334,slow=38					
STKA	**Stephens Creek**	**58.56 161**	*e*P	**P**		**00 01 46.3 +0.9**
	comp=Z,7.8nm,0.7s					
SHME	**Shamm**	**59.35 287**	P	**P**		**00 01 52.8 +1.5**
UOSS	**Minazif**	**59.56 286**	PFAKE			00 02 00.0 +7.3
UOSS			LR	LR		
	comp=Z,3μm,21.0s					
ASHO	**Ashiyiah**	**59.75 286**	P	**P**		**00 01 54.5 +0.4**
FAQ	**Al Faqa, Dubai**	**60.15 286**	P	**P**		**00 01 56.8 +0.1**
ARMA	**Armidale**	**61.01 151**	*e*P	**P**		**00 02 03.1 +0.6**
	comp=Z,32nm,1.1s					
ARMA			LR	LR		
	comp=Z,3μm,21.0s					
ANM	**Nome**	**61.03 28**	PFAKE			00 02 10.0 +7.9
ANM			LR	LR		
	comp=Z,2μm,18.0s					
RDOG	**Red Dog Mine**	**62.31 24**	PFAKE			00 02 20.0 +9.3
RDOG			LR	LR		
	comp=Z,2μm,20.0s					
DZM	**Mont Dzumac**	**62.79 133**	P	**P**		**00 02 15.1 +0.5**
	comp=Z,6.0nm,0.7s,baz=277,slow=3.6,SNR=4.1					
DZM	**Mont Dzumac**	**62.79 133**	*e*P	**P**		**00 02 18.6 +4.0**
	comp=Z,94nm,1.4s					
DZM			*e*S	**S**		**00 10 46.8 +4.3**
	comp=Z,4μm,28.6s					
DZM			*e*SS	**SS**		**00 14 53.0 +4.9**
	comp=Z,2μm,24.8s					
DZM			*e*LR	LR		00 21 02.8
	comp=Z,6μm,24.8s					
DZM	**Mont Dzumac**	**62.79 133**	PFAKE			00 02 30.0 +15
DZM			LR	LR		
	comp=Z,2μm,20.0s					
PRGR	**Permogore**	**62.85 329**⇓	*i*P	**P**		**00 02 13.3 -1.0**
PRGR			pmax	pmax		
	comp=Z,19nm,0.6s					
MAK	**Makhachkala**	**63.18 307**	*e*P	**P**		**00 02 15.2 -1.6**
MAK			*e*			00 04 31.6
MAK			*e*S	**S**		**00 10 45.5 -1.2**
MAK			*e*SS	**SS**		**00 14 48.8 -3.9**
MAK			pmax	pmax		
	comp=Z,79nm,1.3s					
MAK			MLR	MLR		
	comp=Z,3μm,16.0s					
AKT	**Akhty**	**63.24 306**	*e*P	**P**		**00 02 17.1 -0.4**
AKT			*e*			00 02 54.6
AKT			*e*			00 04 36.5
AKT			*e*S	**S**		**00 10 47.4 -0.5**
AKT			pmax	pmax		
	comp=Z,47nm,1.0s					
CAN	**Canberra**	**64.21 156**	*e*P	**P**		**00 02 26.1 +2.4**
	comp=Z,44nm,1.3s					
CAN			LR	LR		
	comp=Z,2μm,18.0s					
GROC	**Groznyy**	**64.38 308**	*e*P	**P**		**00 02 23.8 -0.9**
GROC			*e*			00 02 58.2
GROC			*e*			00 04 45.4
GROC			pmax	pmax		
	comp=Z,84nm,1.2s					
TOO	**Toolangi**	**65.03 160**	*e*P	**P**		**00 02 30.7 +1.8**
	comp=Z,42nm,1.0s					
GNI	**Garni**	**65.71 305**	*e*P	**P**		**00 02 34.9 +1.2**
	comp=Z,69nm,1.1s					
GNI			LR	LR		
	comp=Z,3μm,19.0s					
GNI	**Garni**	**65.71 305**	*i* P	**P**		**00 02 35.4 +1.6**
	SNR=15					
GNI	**Garni**	**65.71 305**	*c i*P	**P**		**00 02 34.3 +0.6**
GNI			pmax	pmax		
	comp=Z,568nm,1.7s					
ZEI	**Tsey**	**65.82 308**	*e*P	**P**		**00 02 31.8 -2.6**
ZEI			pmax	pmax		
	comp=Z,33nm,0.9s					
NCK	**Nalchik**	**65.90 309**⇓	*e*P	**P**		**00 02 34.4 -0.3**
NCK			pmax	pmax		
	comp=Z,15nm,1.2s					
GOF	**Gofitskoye**	**66.01 310**⇑	*i*P	**P**		**00 02 35.1 -0.2**
GOF			*e*S	S		00 11 11.4 -10
GOF			pmax	pmax		
	comp=Z,170nm,1.6s					
KBZ	**Khabaz**	**66.36 309**	P	**P**		**00 02 37.4 -0.2**
	comp=Z,17nm,1.0s,baz=77,slow=7.8,SNR=56					
KBZ			LR	LR		00 35 15.9
	comp=Z,4μm,20.0s,baz=66,slow=39					
AKH	**Akhalkalaki**	**66.39 306**	PFAKE			00 02 50.0 +12
AKH			LR	LR		
	comp=Z,5μm,19.0s					
AKH	**Akhalkalaki**	**66.39 306**⇓	*i*P	**P**		**00 02 39.3 +1.3**
KVAR	**Kislovodsk Arr**	**66.46 309**	P	**P**		**00 02 38.2 -0.1**
	comp=Z,9.0nm,0.9s,baz=90,slow=20					
KIV	**Kislovodsk**	**66.46 309**	*e*P	**P**		**00 02 37.9 -0.5**
	comp=Z,297nm,1.7s					
KIV			LR	LR		
	comp=Z,4μm,19.0s					
KIV	**Kislovodsk**	**66.46 309**⇑	*i*P	**P**		**00 02 38.6 +0.2**
KIV	**Kislovodsk**	**66.46 309**	*i* P	**P**		**00 02 38.6 +0.2**
	SNR=51					
KIV	**Kislovodsk**	**66.46 309**	*e*P	**P**		**00 02 38.2 -0.2**
KIV			*e*			00 05 04.3
KIV			*e*S	**S**		**00 11 27.7 +0.3**
KIV			*e*SS	**SS**		**00 15 45.4 +1.3**
KIV			pmax	pmax		
	comp=Z,216nm,1.1s					
KIV			pmax	pmax		
	comp=Z,550nm,4.2s					
KIV			MLR	MLR		
	comp=Z,8μm,17.0s					
NEY	**Neytrino**	**66.58 308**⇓	*e*P	**P**		**00 02 40.1 +0.9**
NEY			pmax	pmax		
	comp=Z,11nm,1.9s					
SII	**Sitkinak Islan**	**66.83 37**	PFAKE			00 02 50.0 +10
SII			LR	LR		
	comp=Z,1μm,20.0s					
LVZ	**Lovozero**	**67.12 336**	PFAKE			00 02 50.0 +7.9
LVZ			LR	LR		
	comp=Z,5μm,19.0s					
TOLK	**Toolik Lake Re**	**67.23 23**	PFAKE			00 02 50.0 +7.2
TOLK			LR	LR		
	comp=Z,3μm,18.0s					
TOLK	**Toolik Lake Re**	**67.23 23**	P	**P**		**00 02 41.3 -1.5**
	baz=278					
MLY	**Manley**	**67.27 27**	PFAKE			00 02 50.0 +6.9
MLY			LR	LR		
	comp=Z,2μm,18.0s					
BPAW	**Bear Paw Mtn.**	**67.29 28**	PFAKE			00 03 00.0 +17
BPAW			LR	LR		
	comp=Z,1μm,18.0s					
LPSR	**Galich'ya Gora**	**67.34 319**	*e*P	**P**		**00 02 42.3 -1.3**
LPSR			pmax	pmax		
	comp=Z,110nm,1.4s					
SKT	**Skwentna**	**67.36 31**	*e*P	**P**		**00 02 43.6 0.0**
	comp=Z,23nm,1.3s					
SKT			LR	LR		
	comp=Z,1μm,18.0s					
KTH	**Kantishna Hill**	**67.40 29**	PFAKE			00 03 00.0 +16
KTH			LR	LR		
	comp=Z,2μm,20.0s					
VORD	**Divnogorie**	**67.41 317**	*e*P	**P**		**00 02 42.5 -1.6**
VORD			pmax	pmax		
	comp=Z,40nm,1.2s					
VSR	**Storozhevoye**	**67.44 317**	*e*P	**P**		**00 02 42.9 -1.4**
VSR			pmax	pmax		
	comp=Z,100nm,1.4s					
VSR			MLR	MLR		
	comp=Z,3μm,16.0s					
KDAK	**Kodiak Island**	**67.49 35**	P	**P**		**00 02 43.3 -1.2**
	comp=Z,9.8nm,0.9s,baz=299,slow=3.0,SNR=15					
KDAK	**Kodiak Island**	**67.49 35**	*e*P	**P**		**00 02 44.2 -0.4**
	comp=Z,158nm,1.8s					
KDAK			LR	LR		
	comp=Z,1μm,22.0s					
KDAK	**Kodiak Island**	**67.49 35**	*c e*P	**P**		**00 02 44.1 -0.4**
MOS	**Moscow**	**67.55 322**	*e*P	P		00 02 39.3 -5.6
MOS			*e*			00 03 09.4
MOS			*e*S	**S**		**00 11 33.4 -6.4**
MOS			pmax	pmax		
	comp=Z,206nm,2.3s					
MOS			pmax	pmax		
	comp=Z,600nm,2.8s					
MOS			pmax	pmax		
	comp=E,200nm,2.7s					
MOS			pmax	pmax		
	comp=N,300nm,4.0s					
MOS			MLR	MLR		
	comp=Z,5μm,18.0s					
MOS			MLR	MLR		
	comp=N,2μm,17.0s					
MOS			MLR	MLR		
	comp=E,3μm,17.0s					
APA	**Apatity**	**67.64 335**⇑	*i*P	**P**		**00 02 47.9 +2.6**
APA			pmax	pmax		
	comp=Z,2.0nm,1.0s					
APA			MLR	MLR		
	comp=Z,100nm,22.0s					
BATM	**Batumi**	**67.67 307**⇓	*i*P	**P**		**00 02 47.0 +1.1**
HOM	**Homer**	**67.67 33**	PFAKE			00 03 00.0 +14
HOM			LR	LR		
	comp=Z,900nm,19.0s					
TRF	**Thorofare Moun**	**67.70 29**	*e*P	**P**		**00 02 46.2 +0.2**
	comp=Z,26nm,1.2s					
TRF			LR	LR		
	comp=Z,1μm,20.0s					
BCA	**Borcka**	**67.75 307**⇑	*i*P	**P**		**00 02 47.2 +0.7**
SUA	**Susitna One**	**67.81 31**	*e*P	**P**		**00 02 46.0 -0.6**
	comp=Z,16nm,0.8s					
CNPM	**China Poot**	**67.89 33**	PFAKE			00 03 00.0 +13
CNPM			LR	LR		
	comp=Z,800nm,19.0s					
BWN	**Browne**	**67.94 28**	PFAKE			00 03 00.0 +13
BWN			LR	LR		
	comp=Z,1μm,18.0s					
BRLK	**Bradley Lake**	**68.03 33**	*e*P	**P**		**00 02 47.2 -0.7**
	comp=Z,35nm,1.0s					
BRLK			LR	LR		
	comp=Z,1μm,18.0s					
MCK	**McKinley**	**68.25 29**	PFAKE			00 03 00.0 +11
MCK			LR	LR		
	comp=Z,1μm,18.0s					
OBN	**Obninsk**	**68.25 322**	PFAKE			00 03 00.0 +11
OBN			LR	LR		
	comp=Z,5μm,19.0s					
OBN	**Obninsk**	**68.25 322**	*c i*P	**P**		**00 02 47.5 -1.8**
OBN			*e**SP	**sP**		**00 02 58.9 -0.1**
OBN			*i*			00 03 03.8
OBN			*e*			00 03 15.3
OBN						00 05 28.0
OBN			*e*PPP	PPP		00 07 04.1
OBN			*i* S	**S**		**00 11 44.5 -3.7**
OBN			*e*			00 12 41.5
OBN			pmax	pmax		
	comp=Z,199nm,2.5s					
OBN			MLR	MLR		
	comp=Z,5μm,19.0s					
MDM	**Murphy Dome**	**68.33 27**	*e*P	**P**		**00 02 50.3 +0.6**
	comp=Z,42nm,1.1s					
RND	**Reindeer**	**68.34 29**	PFAKE			00 03 00.0 +10
RND			LR	LR		
	comp=Z,2μm,21.0s					
RC01	**Rabbit Creek A**	**68.35 31**	PFAKE			00 03 00.0 +10
RC01			LR	LR		
	comp=Z,1μm,20.0s					
WRH	**Wood River Hil**	**68.48 28**	*e*P	**P**		**00 02 50.8 +0.2**
	comp=Z,30nm,1.1s					
WRH			LR	LR		
	comp=Z,1μm,18.0s					
TCOL	**CIGO, UAF Yank**	**68.50 27**	P	**P**		**00 02 49.4 -1.4**
	baz=281					
COLA	**College**	**68.51 27**	PFAKE			00 03 00.0 +9.3
COLA			LR	LR		
	comp=Z,1μm,18.0s					
COLA	**College**	**68.51 27**⇓	*e*P	**P**		**00 02 50.4 -0.3**
COLA			pmax	pmax		
	comp=Z,44nm,2.4s					
CCB	**Clear Creek Bu**	**68.57 28**	PFAKE			00 03 00.0 +8.8
CCB			LR	LR		
	comp=Z,2μm,18.0s					
POKR	**Poker Plat Res**	**68.64 27**	P	**P**		**00 02 50.7 -1.0**
	baz=281					
SOC	**Sochi**	**68.64 309**	*c i*P	**P**		**00 02 51.3 -0.7**
SOC			*e*			00 05 21.5
SOC			*e*PPP	PPP		00 07 05.0
SOC			*e*S	**S**		**00 11 54.3 +0.9**
SOC			*e*SS	**SS**		**00 16 22.3 +4.7**
SOC			pmax	pmax		
	comp=Z,65nm,1.0s					
SOC			MLR	MLR		
	comp=Z,3μm,17.0s					
KNK	**Knik Glacier**	**68.90 31**	*e*P	**P**		**00 02 53.3 -0.1**
	comp=Z,89nm,1.5s					
KNK			LR	LR		
	comp=Z,1μm,21.0s					
ILAR	**Eielson Array**	**68.93 27**	P	**P**		**00 02 51.7 -1.8**
	comp=Z,1.4nm,0.5s,baz=284,slow=5.4,SNR=11					
ILAR			LR	LR		00 35 46.0
	comp=Z,1μm,18.5s,baz=299,slow=38					
ILB	**Eielson Array**	**68.93 27**	*e*P	**P**		**00 02 54.0 +0.6**
	comp=Z,10nm,1.1s					
HDA	**Harding Lake**	**68.98 28**	PFAKE			00 03 10.0 +16
HDA			LR	LR		
	comp=Z,1μm,18.0s					
HDA	**Harding Lake**	**68.98 28**	P	**P**		**00 02 51.2 -2.6**
	baz=282					
KTUT	**Trabzon**	**69.22 307**⇑	*i*P	**P**		**00 02 56.1 +0.4**
FYU	**Fort Yukon**	**69.23 25**	PFAKE			00 03 10.0 +15
FYU			LR	LR		
	comp=Z,700nm,19.0s					
RAYN	**Ar Rayn**	**69.33 287**	*e*P	**P**		**00 02 56.2 -0.5**
	comp=Z,47nm,1.3s					
RAYN			LR	LR		
	comp=Z,2μm,18.0s					
RAYN	**Ar Rayn**	**69.33 287**	*i* P	**P**		**00 02 56.3 -0.5**
	SNR=8.4					
PRP	**Porcupine Dome**	**69.34 26**	PFAKE			00 03 10.0 +14
PRP			LR	LR		
	comp=Z,1μm,21.0s					
GLI	**Glacier Island**	**69.66 31**	*e*P	**P**		**00 02 57.8 -0.2**
	comp=Z,30nm,0.9s					
GLI			LR	LR		
	comp=Z,1μm,20.0s					
SPA0	**Spitsbergen Ar**	**69.87 348**	*e*P	**P**		**00 02 57.3 -1.8**
	comp=Z,44nm,1.1s					
SPA0	**Spitsbergen Ar**	**69.87 348**	*e*P	**P**		**00 02 57.5 -1.5**
ANN	**Anapa**	**69.95 311**	*e*P	**P**		**00 02 58.8 -1.3**
ANN			*e*S	**S**		**00 12 06.8 -2.0**
ANN			pmax	pmax		
	comp=Z,213nm,1.8s					
ANN			MLR	MLR		
	comp=E,2μm,18.0s					
ANN			MLR	MLR		
	comp=N,2μm,18.0s					
ANN			MLR	MLR		
	comp=Z,4μm,18.0s					
ARCES	**ARCESS Array B**	**70.08 338**	P	**P**		**00 02 59.0 -1.4**
	comp=Z,0.9nm,0.3s,baz=85,slow=7.9,SNR=34					
ARCES			LR	LR		00 38 46.7
	comp=Z,4μm,18.1s,baz=78,slow=40					
ARE0	**ARCESS Array S**	**70.08 338**	PFAKE			00 03 10.0 +10
ARE0			LR	LR		
	comp=Z,200nm,18.0s					
ARE0	**ARCESS Array S**	**70.08 338**	*e*P	**P**		**00 03 00.8 +0.4**
KBS	**Kingsbay**	**70.40 349**	PFAKE			00 03 10.0 +7.7
KBS			LR	LR		
	comp=Z,8μm,18.0s					
KBS	**Kingsbay**	**70.40 349**⇓	*e*P	**P**		**00 03 02.9 +0.6**
KBS			pmax	pmax		
	comp=Z,145nm,2.5s					
HSPB	**Hornsund (broa**	**70.47 347**	*e*P	**P**		**00 03 00.8 -1.9**
PUL	**Pulkovo**	**70.54 328**	*e*P	**P**		**00 03 01.8 -1.5**
SUSE	**Susehri**	**70.57 306**	*i* P	**P**		**00 03 05.3 +1.1**
SUSE			IAML_P			
	comp=Z,2.9nm,0.2s					
MSEY	**Mahe Island**	**70.93 256**	PFAKE			00 03 20.0 +13
MSEY			LR	LR		
	comp=Z,1μm,22.0s					
CUZAR	**Zara_SIVAS**	**70.98 306**	*i* P	**P**		**00 03 07.1 +0.5**
KTK1	**Kautokeino**	**71.00 338**	*e*P	**P**		**00 03 05.9 -0.2**
HEF	**Hetta**	**71.03 337**	*e*P	**P**		**00 03 05.8 -0.5**
HMT	**Hamilton**	**71.15 32**	PFAKE			00 03 20.0 +13
HMT			LR	LR		
	comp=Z,2μm,21.0s					
EGAK	**Eagle**	**71.31 27**	PFAKE			00 03 20.0 +12
EGAK			LR	LR		
	comp=Z,2μm,18.0s					
ERBA	**Erbaa**	**71.51 307**	*i* P	**P**		**00 03 09.7 -0.1**
ERBA			IAML_P			
	comp=Z,2.1nm,0.3s					
KIF	**Kilpisjarvi**	**71.83 338**	*e*P	**P**		**00 03 10.7 -0.4**
BALM	**Baldy**	**71.86 31**	*e*P	**P**		**00 03 10.9 -0.6**
	comp=Z,33nm,1.3s					
BALM			LR	LR		
	comp=Z,1μm,22.0s					
CUALT	**Altinyayla-SIV**	**71.90 306**	*i* P	**P**		**00 03 14.3 +2.1**
FINES	**FINESS Array B**	**72.10 330**	P	**P**		**00 03 11.9 -0.8**
	comp=Z,2.7nm,0.3s,baz=66,slow=5.5,SNR=44					
FINES			LR	LR		00 38 11.7
	comp=Z,14μm,18.8s,baz=74,slow=39					
HAVZ	**Havza**	**72.15 308**	*i* P	**P**		**00 03 13.5 -0.1**
HAVZ			IAML_P			
	comp=Z,119nm,0.4s					
CUSAR	**Sarkisla-SIVAS**	**72.24 306**	*i* P	**P**		**00 03 12.7 -1.6**
DAWY	**Dawson**	**72.26 27**	*e*P	**P**		**00 03 13.4 -0.4**
	comp=Z,97nm,1.9s					
DIKM	**Dikmen**	**72.32 308**⇓	*i*P	**P**		**00 03 14.3 -0.2**
EPYK	**Eagle Plains**	**72.57 24**	PFAKE			00 03 30.0 +14
EPYK			LR	LR		
	comp=Z,2μm,19.0s					
EPYK	**Eagle Plains**	**72.57 24**	P	**P**		**00 03 14.3 -1.3**
	baz=290					
SEVA	**Sevastopol**	**72.61 311**⇑	*i*P	**P**		**00 03 16.7 +0.5**
VSU	**Vasula**	**72.67 327**⇓	*e*P	**P**		**00 03 15.6 -0.7**
VSU			pmax	pmax		
	comp=Z,258nm,2.5s					
VSU	**Vasula**	**72.67 327**	*e*P	**P**		**00 03 14.5 -1.8**
VSU			IAmb	IAmb		00 03 17.9
	comp=Z,137nm,1.1s					
ANDN	**Andirin**	**72.70 304**	*i* P	**P**		**00 03 17.9 +0.9**
ANDN			IAML_P			
	comp=Z,385nm,0.9s					
COAL	**Corum-Alaca**	**72.92 307**	*i* P	**P**		**00 03 19.5 +1.2**
COAL			IAML_P			
	comp=Z,96nm,0.4s					
INK	**Inuvik**	**73.03 22**	P	**P**		**00 03 16.4 -1.8**
	comp=Z,11nm,1.0s,baz=287,slow=7.4,SNR=30					
INK	**Inuvik**	**73.03 22**	PFAKE			00 03 30.0 +12
INK			LR	LR		
	comp=Z,2μm,19.0s					
KAGI	**orum-Kargı**	**73.03 308**	*i* P	**P**		**00 03 19.6 +0.8**
KAGI			IAML_P			
	comp=Z,329nm,0.4s					
MICGM	**Minsk**	**73.27 323**⇑	*e*P	**P**		**00 03 18.0 -1.9**
MICGM		⇑	*e*P	**P**		**00 03 18.0 -1.9**
MICGM			PM			00 03 20.0
	comp=Z,0.4nm,2.0s					
MICGM			*e*PcP	**PcP**		**00 03 35.0 -1.3**
MICGM			*e*PP	PP		00 05 54.0 -8.9
MICGM			*e*PPP	PPP		00 07 48.0
MICGM			*e*S	**S**		**00 12 44.0 -2.7**
MICGM			*e*PS	**PnS**		**00 13 22.0 +1.7**
MICGM			*e*SS	**SS**		**00 17 24.0 -4.0**
MICGM			*e*SSS	SSS		00 21 22.0
MICGM			*e*LQ	LQ		00 29 00.0
MICGM			*e*L:R			00 32 40.0
MICGM			LRM	MLR		00 39 50.0
	comp=Z,6.3nm,17.0s					
MICGM			LRM	MLR		00 39 52.0
	comp=E,3.3nm,17.0s					
MNK	**Minsk**	**73.27 323**	*o e*P	**P**		**00 03 18.0 -1.9**
MNK			*e*			00 03 35.0
MNK			*e*PPP	PPP		00 07 48.0
MNK			*e*S	**S**		**00 12 44.0 -2.7**
MNK			*e*PS			00 13 22.0
MNK			*e*SS	**SS**		**00 17 24.0 -4.0**
MNK			pmax	pmax		
	comp=Z,350nm,2.0s					
MNK			MLR	MLR		
	comp=E,3μm,17.0s					
MNK			MLR	MLR		
	comp=Z,6μm,17.0s					
DAMY	**Dhamar**	**73.30 279**	PFAKE			00 03 30.0 +8.9
DAMY			LR	LR		
	comp=Z,1μm,20.0s					
BCPM	**Bancas Point**	**73.47 31**	PFAKE			00 03 30.0 +9.0
BCPM			LR	LR		
	comp=Z,1μm,22.0s					
CDAG	**Cicekdag**	**73.56 306**	*i* P	**P**		**00 03 21.6 -0.5**
CDAG			IAML_P			
	comp=Z,396nm,0.3s					
ILGA	**Ilgaz**	**73.61 308**	*i* P	**P**		**00 03 24.0 +1.6**
ILGA			IAML_P			
	comp=Z,109nm,0.1s					
IDID	**Didziasalis**	**73.65 324**	*e*P	**P**		**00 03 21.0 -1.1**
IDID			IAmb	IAmb		00 03 23.9
	comp=Z,21nm,0.9s					
AKASG	**Malin Array Be**	**73.66 319**	P	**P**		**00 03 20.7 -1.5**
	comp=Z,13nm,0.8s,baz=58,slow=6.5,SNR=29					
AKASG			LR	LR		00 39 39.7
	comp=Z,2μm,18.3s,baz=85,slow=39					
AKBB	**Malin Array Si**	**73.66 319**	PFAKE			00 03 30.0 +7.8
AKBB			LR	LR		
	comp=Z,3μm,18.0s					
NACGM	**Naroch**	**73.75 323**	*e*P	**P**		**00 03 22.0 -0.7**
NACGM			*e*P	**pP**		**00 03 23.0 -6.8**
NACGM			*e*PPP	PPP		00 08 10.0
NACGM			*e*S	**S**		**00 12 52.0 -0.1**
NACGM			*e*PS	**PnS**		**00 13 40.0 +13**
NACGM			*e*SS	SS		00 18 14.0 +39
NACGM			*e*SSS	SSS		00 21 16.0
NACGM			*e*LQ	LQ		00 30 12.0
NACGM			*e*LR	LR		00 37 26.0
NACGM			LRM	MLR		00 40 16.0
	comp=N,6.4nm,16.0s					
NACGM			LRM	MLR		00 40 32.0
	comp=E,5.6nm,16.0s					
NACGM			LRM	MLR		00 40 36.0
	comp=Z,5.5nm,15.0s					
DELI	**KIRIKKALE**	**73.78 307**	*i* P	**P**		**00 03 23.0 -0.3**
DELI			IAML_P			
	comp=Z,1μm,1.0s					
ISAL	**Salakas**	**73.89 324**	*e*P	**P**		**00 03 22.8 -0.8**
ISAL			IAmb	IAmb		00 03 24.7
	comp=Z,12nm,1.2s					
IIGN	**Ignalina**	**73.92 324**	*e*P	**P**		**00 03 22.8 -0.9**
IIGN			IAmb	IAmb		00 03 25.6
	comp=Z,11nm,0.8s					
ELDT	**Eldivan**	**73.99 308**	*i* P	**P**		**00 03 24.8 +0.2**
ELDT			IAML_P			
	comp=Z,13nm,0.4s					
KIRS	**Kırehir-Merke**	**74.05 306**	*i* P	**P**		**00 03 25.2 +0.3**
KIRS			IAML_P			
	comp=Z,29nm,0.2s					
BRTR	**Keskin Array B**	**74.07 307**	P	**P**		**00 03 24.4 -0.7**
	comp=Z,36nm,1.1s,baz=96,slow=5.9,SNR=89					
BRTR			LR	LR		00 42 17.2
	comp=Z,818nm,18.6s,baz=70,slow=41					
STEI	**Steigen**	**74.14 338**	*e*P	**P**		**00 03 24.4 -0.4**
AKSY	**AKSARAY - Alti**	**74.31 306**	*i* P	**P**		**00 03 26.8 +0.4**
AKSY			IAML_P			
	comp=Z,178nm,0.6s					
KERG	**Konya-Eregli**	**74.43 304**	*i* P	**P**		**00 03 26.1 -1.1**
KERG			IAML_P			
	comp=Z,69nm,0.5s					
BTIN	**Bartın**	**74.48 309**	*i* P	**P**		**00 03 25.6 -1.7**
BTIN			IAML_P			

comp=Z,546nm,0.5s
BBAL Bala 74.50 307 *i* P **P 00 03 27.9 +0.3**
BBAL IAML_P
comp=Z,287nm,0.6s
ANTO Ankara 74.64 307 *e*P **P 00 03 28.0 -0.3**
comp=Z,246nm,1.7s
ANTO *e*PcP **PcP 00 03 41.9 -0.7**
ANTO LR LR
comp=Z,1μm,22.0s
CMDR Camlidere-ANKA 74.68 308 *i* P **P 00 03 28.9 +0.3**
CMDR IAML_P
comp=Z,1μm,0.7s
KKUL Konya-Kulu 74.77 306 *i* P **P 00 03 29.6 +0.5**
KKUL IAML_P
comp=Z,403nm,0.8s
BCAM Yenicaga 74.87 308 *i* P **P 00 03 29.7 0.0**
BCAM IAML_P
comp=Z,258nm,0.8s
PABE Paberze 75.07 324 *e*P **P 00 03 28.7 -1.7**
PABE IAmb IAmb 00 03 31.8
comp=Z,232nm,1.6s
KIS Kishinev 75.09 315 *e*P **P 00 03 29.0 -1.7**
comp=Z,210nm,2.0s
KIS Kishinev 75.09 315 *e*PcP **PcP 00 03 42.0 -2.2**
KIS Kishinev 75.09 315 *e*PP PP 00 06 16.0 -2.5
KIS Kishinev 75.09 315 *e*P **P 00 03 29.0 -1.7**
KIS *e* 00 03 42.0
KIS *e* 00 06 16.0
KIS *e*PPP PPP 00 08 02.0
KIS *e*S **S 00 13 02.0 -5.4**
KIS *e*PS 00 13 44.0
KIS pmax pmax
comp=Z,210nm,2.0s
KIS pmax pmax
comp=Z,500nm,16.0s
KIS MLR MLR
comp=Z,4μm,19.0s
KIBS BOLU 75.15 308 *i* P **P 00 03 32.0 +0.7**
KIBS IAML_P
comp=Z,310nm,0.9s
MOR8 Moi Rana 75.18 336 *e*P **P 00 03 30.0 -0.8**
SLIT Slitere, Latvi 75.18 327 *e*P **P 00 03 28.2 -2.7**
SLIT IAmb IAmb 00 03 31.8
comp=Z,131nm,0.8s
YIGI Dzce 75.26 308 *i* P **P 00 03 32.0 +0.1**
YIGI IAML_P
comp=Z,499nm,0.6s
WHY Whitehorse 75.42 30 *e*P **P 00 03 32.3 -0.2**
comp=Z,143nm,1.8s
WHY LR LR
comp=Z,1μm,22.0s
KONS Konsvik 75.51 337 *e*P **P 00 03 33.8 +1.1**
KDHN Kadinhani 75.58 306 *i* P **P 00 03 33.3 -0.5**
KDHN IAML_P
comp=Z,447nm,0.4s
AUMIH MIHALICIK 75.60 307 *i* P **P 00 03 34.0 +0.1**
MDUB Mudurnu 75.61 308 PFAKE 00 03 50.0 +16
MDUB LR LR
comp=Z,5μm,22.0s
TLCR 75.69 313⇑*i*P **P 00 03 33.8 -0.3**
SAHE Sakarya_HENDEK 75.73 309 *i* P **P 00 03 32.7 -1.8**
SAHE IAML_P
comp=Z,4.6nm,0.2s
CSS Mathiatis 75.83 302 PFAKE 00 03 50.0 +15
CSS LR LR
comp=Z,2μm,21.0s
CSS Mathiatis 75.83 302 P **P 00 03 34.2 -1.0**
PBUR Paburg 75.96 325 *e*P **P 00 03 34.1 -1.3**
PBUR IAmb IAmb 00 03 37.0
comp=Z,313nm,1.7s
SUW Suwalki 76.03 323 *e*P **P 00 03 34.7 -1.2**
SUW LMZ LR 00 40 09.1
comp=Z,6μm,19.9s
SUW Suwalki 76.03 323 PFAKE 00 03 50.0 +14
SUW LR LR
comp=Z,6μm,20.0s
CFR Carcaliu 76.15 313⇑*i*P **P 00 03 35.6 -1.1**
SRCK Saricakaya, Es 76.16 308 *i* P **P 00 03 37.3 +0.3**
SRCK IAML_P
comp=Z,61nm,0.1s
TIRR Tirgusor 76.21 313 *e*P **P 00 03 36.9 -0.2**
comp=Z,192nm,1.5s
TIRR LR LR
comp=Z,8μm,20.0s
TIRR Tirgusor 76.21 313⇓*i*P **P 00 03 36.0 -1.1**
GEYV SAKARYA_Geyve 76.25 308 *i* P **P 00 03 37.1 -0.3**
GEYV IAML_P
comp=Z,724nm,0.9s
BOLV Bolvadin 76.37 306 *i* P **P 00 03 39.7 +1.3**
BOLV IAML_P
comp=Z,726nm,0.9s
TLB Topalu 76.41 313⇑*i*P **P 00 03 38.3 0.0**
JIS Juneau Island 76.61 32 PFAKE 00 03 50.0 +11
JIS LR LR
comp=Z,2μm,18.0s
TESR Tescani 76.66 315⇑*i*P **P 00 03 38.6 -1.1**
DAG Danmarks Havn 76.70 351⇑*i*P **P 00 03 37.1 -2.2**
DAG pmax pmax
comp=Z,23nm,1.1s
DAG Danmarks Havn 76.70 351⇑*i*P **P 00 03 37.1 -2.2**
comp=Z,18nm,1.1s
BAGO Egridir - ISPA 76.74 306 *i* P **P 00 03 38.7 -1.7**
BAGO IAML_P
comp=Z,236nm,0.7s
ICOR Ion Corvin 76.74 312⇑*i*P **P 00 03 39.4 -0.7**
VRI Vrincioaia 76.83 314⇓*i*P **P 00 03 40.7 0.0**
NSS Namsos 76.85 335 *e*P **P 00 03 39.8 -0.5**
BIZ Bicaz 76.86 316⇓*i*P **P 00 03 40.8 0.0**
YLV Yalova 76.88 309⇑*i*P **P 00 03 40.9 -0.2**
PLOR Plostina 76.89 314⇑*i*P **P 00 03 41.3 +0.3**
ISP Isparta 76.99 306 PFAKE 00 03 50.0 +8.2
ISP LR LR
comp=Z,1μm,20.0s
LVV L'vov 77.09 319 *e*P **P 00 03 39.5 -2.5**
LVV *e* 00 06 31.9
LVV *e*S **S 00 13 23.1 -6.3**
LVV MLR MLR
comp=Z,3μm,18.0s
BURAR Bucovina Array 77.17 316⇓*i*P **P 00 03 42.3 -0.4**
PRD Provadia 77.33 312 *i* P **P 00 03 43.2 -0.3**
OZUR 77.36 315⇑*i*P **P 00 03 44.2 +0.5**
KLNR Kaliningrad 77.42 324⇑*e*P **P 00 03 44.0 +0.3**
KLNR pmax pmax
comp=Z,30nm,1.1s
MLR Muntele Rosu 77.48 314 PFAKE 00 04 00.0 +16
MLR LR LR
comp=Z,4μm,20.0s
MLR Muntele Rosu 77.48 314⇑*i*P **P 00 03 44.7 +0.2**
SECR 77.57 314⇑*i*P **P 00 03 45.4 +0.6**
DOPR Dopca 77.67 315⇑*i*P **P 00 03 45.0 -0.4**
PHSR Pinarhisar 77.81 310⇑*i*P **P 00 03 45.3 -0.9**
ARCR ARCALIA 77.92 316⇑*i*P **P 00 03 46.4 -0.3**
KWP Kalwaria Pacla 77.96 319 *e*P **P 00 03 46.5 -0.4**
KWP LMZ LR 00 38 32.7
comp=Z,3μm,24.8s
KWP Kalwaria Pacla 77.96 319 PFAKE 00 04 00.0 +13
KWP LR LR
comp=Z,26μm,18.0s
VOIR 78.09 314⇑*i*P **P 00 03 47.9 +0.1**
KULA Kula-Manisa 78.12 307 P **P 00 03 47.1 -1.0**
TBLU Trondheim 78.13 335 *e*P **P 00 03 46.9 -0.6**
JMB Yambol 78.16 311 *i* P **P 00 03 47.7 -0.4**
MANT Manisa 78.21 307 *e*P **P 00 03 48.7 0.0**
comp=Z,89nm,0.9s
BEL Belsk 78.21 322 *e*P **P 00 03 47.6 -0.6**
BEL LMZ LR 00 41 46.4
comp=Z,3μm,19.9s
BMR Baia Mare 78.23 317⇑*i*P **P 00 03 48.6 +0.2**
BALB Balikesir 78.28 308 PFAKE 00 04 00.0 +11
BALB LR LR
comp=Z,4μm,22.0s
ARR Arges 78.39 314⇑*i*P **P 00 03 48.9 -0.5**
WRAK Wrangell Islan 78.39 33 PFAKE 00 04 00.0 +11
WRAK LR LR
comp=Z,800nm,20.0s
HUMR Humele 78.47 314⇑*i*P **P 00 03 49.3 -0.5**
ZIMR 78.55 313⇑*i*P **P 00 03 48.8 -1.4**
NC405 NORSAR Array S 78.60 332 *e*P **P 00 03 49.3 -0.9**
comp=Z,168nm,1.4s
UZH Uzhgorod 78.60 318 *e*P **P 00 03 47.5 -2.9**
UZH *e* 00 03 58.1
UZH *e* 00 06 42.9
UZH *e*S **S 00 13 38.6 -7.0**
UZH *e*PS **PnS 00 14 27.5 -1.6**
UZH *e*SS **SS 00 18 54.4 +5.5**
UZH MLR MLR
comp=N,400nm,17.0s
UZH MLR MLR
comp=E,600nm,17.0s
UZH MLR MLR
comp=Z,300nm,17.0s
DLBC Dease Lake 78.61 31 P **P 00 03 49.5 -0.9**
comp=Z,13nm,1.1s,baz=315,slow=4.4,SNR=29
TRPA Tarpa 78.65 318⇑*i*P **P 00 03 49.9 -0.8**
NC303 NORSAR Array S 78.69 333 *e*P **P 00 03 50.2 -0.5**
RES Resolute Bay 78.69 9 PFAKE 00 04 00.0 +10
RES LR LR
comp=Z,3μm,19.0s
NB201 NORSAR Array S 78.81 332 *e*P **P 00 03 49.4 -2.0**
comp=Z,98nm,1.4s
NB201 NORSAR Array S 78.81 332 *e*P **P 00 03 50.6 -0.8**
NB2 NORSAR Subarra 78.84 332 P **P 00 03 49.9 -1.7**
comp=Z,212nm,2.0s,baz=61,slow=5.3
NB2 NORSAR Subarra 78.84 332 P **P 00 03 49.9 -1.7**
baz=61,slow=5.3
NOA NORSAR Array B 78.84 332 P **P 00 03 50.1 -1.5**
comp=Z,8.3nm,0.9s,baz=58,slow=5.6,SNR=15
NOA LR LR 00 42 24.0
comp=Z,10μm,18.4s,baz=65,slow=38
NC602 NORSAR Array S 78.86 332 *e*P **P 00 03 51.6 +0.1**
YER Yerkesik 78.90 306 P **P 00 03 51.7 -0.7**
LOT Lotru 78.92 315⇓*i*P **P 00 03 52.1 -0.3**
NC204 NORSAR Array S 78.92 333 *e*P **P 00 03 51.1 -0.9**
comp=Z,216nm,1.6s
NC204 NORSAR Array S 78.92 333 *e*P **P 00 03 51.3 -0.7**
DRGR 79.07 316⇑*i*P **P 00 03 53.0 -0.1**
NAO01 NORSAR Array S 79.08 332 *e*P **P 00 03 53.2 +0.3**
ALN Alexandroupoli 79.12 310 *e*P **P 00 03 52.7 -0.7**
comp=Z,58nm,1.6s
ALN LR LR
comp=Z,600nm,21.0s
ALN Alexandroupoli 79.12 310 P **P 00 03 52.0 -1.4**
DOMB Dombas 79.22 334 *e*P **P 00 03 53.5 -0.1**
KDZ Kurdzhali 79.27 311 *i* P **P 00 03 54.2 -0.1**
EZN Ezine 79.33 309⇑*i*P **P 00 03 53.5 -1.1**
HIZ Hauiti 79.34 141 PFAKE 00 04 10.0 +16
HIZ LR LR
comp=Z,1μm,20.0s
RDO Rodhopi 79.38 310 P **P 00 03 53.8 -1.0**
OJC Ojcow 79.44 320 *e*P **P 00 03 54.4 -0.6**
OJC *e*S **S 00 13 52.2 -2.4**
OJC LMZ LR 00 43 37.0
comp=Z,2μm,19.9s
TULEG Thule 79.46 3 *e*P **P 00 03 51.5 -3.1**
comp=Z,60nm,1.4s
TULEG LR LR
comp=Z,2μm,18.0s
NIE Niedzica 79.48 319 *e*P **P 00 03 55.0 -0.3**
NIE LMZ LR 00 44 22.6
comp=Z,2μm,18.2s
GKP Gorka Klasztor 79.57 324 *e*P **P 00 03 54.6 -1.0**
GKP LMZ LR 00 43 17.2
comp=Z,7μm,20.2s
PRK Paraskevi 79.58 308 P **P 00 03 56.0 0.0**
SMTH Samothraki Isl 79.64 310 P **P 00 03 54.6 -1.7**
DIB Dawson Inlet, 79.74 36 *e*P **P 00 03 55.5 -1.0**
comp=Z,44nm,1.2s
RZN Rozhen 79.74 311 *i* P **P 00 03 56.2 -0.9**
PUNG Punghina 79.92 314⇓*i*P **P 00 03 56.9 -0.8**
SIRR Siria 79.94 316⇑*i*P **P 00 03 57.3 -0.6**
AKN Aaknes 79.98 334 *e*P **P 00 03 58.6 +0.9**
HERR Herculane 80.02 315⇑*i*P **P 00 03 57.4 -0.9**
THAS Thassos island 80.16 310 P **P 00 03 57.7 -1.4**
BZS Buzias 80.24 316⇑*i*P **P 00 03 58.0 -1.4**
KONO Kongsberg 80.24 332 PFAKE 00 04 10.0 +11
KONO LR LR
comp=Z,16μm,18.0s
KARP Karpathos 80.34 305 PFAKE 00 04 10.0 +10
KARP LR LR
comp=Z,1μm,21.0s
PSZ Piszkesteto 80.35 318 PFAKE 00 04 10.0 +10
PSZ LR LR
comp=Z,3μm,19.0s
PSZ Piszkesteto 80.35 318⇑*i*P **P 00 03 59.0 -1.1**
VTS Vitosha 80.39 312 *e*P **P 00 04 00.1 -0.4**
VTS LR LR
comp=Z,2μm,20.0s
VTS Vitosha 80.39 312 P **P 00 04 00.1 -0.4**
VTS Vitosha 80.39 312⇑*i*P **P 00 04 00.6 +0.1**
VTS Vitosha 80.39 312 *i* P **P 00 04 00.2 -0.3**
MMB Musomiste 80.46 311 *i* P **P 00 03 59.7 -1.1**
NVR Nevrokopi 80.46 311 P **P 00 03 59.4 -1.4**
THZ Tophouse 80.47 144 PFAKE 00 04 10.0 +9.4
THZ LR LR
comp=Z,1μm,20.0s
URZ Urewera 80.50 139 P **P 00 04 01.5 +0.7**
comp=Z,4.2nm,0.7s,baz=17,slow=11,SNR=3.4
MDVR Moldovita 80.52 315⇑*i*P **P 00 04 00.5 -0.5**
OKC Ostrava-Krasne 80.57 320 *e*P **P 00 04 01.6 +0.5**
OKC *e* 00 14 04.3
OKC MLR MLR
comp=Z,2μm,15.8s
OKC Ostrava-Krasne 80.57 320⇑*e*P **P 00 04 01.6 +0.5**
OKC *e*x x 00 04 21.4
OKC *e*SKS **S 00 14 04.3 -2.2**
OKC AMS AMS 00 43 30.0
comp=Z,2μm,15.8s
FURI Furi 80.60 276 PFAKE 00 04 10.0 +7.7
FURI LR LR
comp=Z,800nm,20.0s
SRS Serrai 80.74 311 P **P 00 04 00.4 -1.9**
OUR Ouranopolis 80.78 310 *e*P **P 00 04 01.1 -1.3**
OUR Ouranopolis 80.78 310 P **P 00 04 01.1 -1.3**
KKB Krupnik 80.79 312 *i* P **P 00 04 01.8 -0.7**
RPZ Rata Peaks 80.89 146 P **P 00 04 04.5 +1.7**
comp=Z,10nm,0.8s,baz=290,slow=4.1,SNR=6.0
RPZ Rata Peaks 80.89 146 *e*pP pP 00 04 07.7 -2.2
MORC Moravsky Berou 80.95 321 PFAKE 00 04 10.0 +6.8
MORC LR LR
comp=Z,3μm,18.0s
MORC Moravsky Berou 80.95 321⇑*i*P **P 00 04 02.5 -0.7**
MORC Moravsky Berou 80.95 321⇑*i*P **P 00 04 02.6 -0.7**
MORC Moravsky Berou 80.95 321 *e*S **S 00 14 09.7 -0.9**
RGN Rugen 81.04 326 PFAKE 00 04 10.0 +6.5
RGN LR LR
comp=Z,9μm,18.0s
PLG Polygyros 81.14 310 P **P 00 04 02.9 -1.5**
SNZO South Karori 81.14 143 PFAKE 00 04 20.0 +16
SNZO LR LR
comp=Z,2μm,19.0s
KSP Ksiaz 81.18 322 *e*P **P 00 04 03.7 -0.7**
KSP *e*S **S 00 14 11.2 -1.7**
KSP LMZ LR 00 43 35.2
comp=Z,6μm,19.7s
KNT Kendrikon 81.20 311 P **P 00 04 03.4 -1.3**
JAVC Velka Javorina 81.28 320⇑*i*P **P 00 04 05.7 +0.7**
JAVC Velka Javorina 81.28 320 *e*S **S 00 14 13.7 -0.4**
SANT Santorini 81.29 306 *e*P **P 00 04 03.4 -1.9**
comp=Z,125nm,1.1s
SANT LR LR
comp=Z,1μm,20.0s
OSTC Ostas 81.36 322⇑*e*P **P 00 04 05.0 -0.3**
OSTC *e*x x 00 04 22.3
OSTC *e*SKS **S 00 14 14.3 -0.4**
OSTC AMS AMS 00 43 20.0
comp=Z,5μm,20.2s
VAY Valandovo 81.36 311 *e*P **P 00 04 04.2 -1.3**
VAY Valandovo 81.36 311 P **P 00 04 04.2 -1.3**
VAY Valandovo 81.36 311⇑*i*P **P 00 04 04.0 -1.5**
DPC Dobruska-Polom 81.39 321 *e*P **P 00 04 05.4 -0.2**
DPC *e* 00 14 13.8
DPC MLR MLR
comp=Z,4μm,18.6s
DPC Dobruska-Polom 81.39 321 *e*P **P 00 04 05.4 -0.2**
DPC *e*SKS **S 00 14 13.8 -1.3**
DPC AMS AMS 00 43 30.0
comp=Z,4μm,18.6s
CHVC Chvalec 81.43 322 *e*P **P 00 04 04.1 -1.7**
STIP Stip 81.47 312⇑*i*P **P 00 04 03.9 -2.2**
UPC Upice 81.50 322 *e*P **P 00 04 06.7 +0.6**
UPC *e* 00 14 15.7
UPC MLR MLR
comp=Z,6μm,19.0s
UPC Upice 81.50 322⇑*e*P **P 00 04 06.7 +0.6**
UPC *e*SKS **S 00 14 15.7 -0.4**
UPC AMS AMS 00 43 30.0
comp=Z,6μm,19.0s
FRGS Fruska Gora 81.58 316⇑*i*P **P 00 04 05.7 -1.0**
GRG Griva 81.63 311 P **P 00 04 05.3 -1.7**
KULLO Kullorsuaq 81.66 360⇑*i*P **P 00 04 05.1 -1.4**
KULLO Kullorsuaq 81.66 360⇑*i*P **P 00 04 05.1 -1.4**
VRAC Vranov 81.71 320⇑*i*P **P 00 04 07.0 -0.2**
VRAC Vranov 81.71 320⇑*i*P **P 00 04 07.0 -0.2**
VRAC Vranov 81.71 320 *e*S **S 00 14 17.2 -1.2**
LAST Lasithi 81.75 305 P **P 00 04 07.1 -0.7**
RUE Ruedersdorf 81.80 324 *e*P **P 00 04 05.8 -1.7**
MORH Mrgy, Hungar 81.86 317⇑*i*P **P 00 04 07.2 -0.8**
SKO Skopje 81.87 312⇑*i*P **P 00 04 07.5 -0.7**
DIVS Divibare 81.92 315⇑*i*P **P 00 04 07.2 -1.4**
LIT Litokhoron 81.92 310 PFAKE 00 04 20.0 +11
LIT LR LR
comp=Z,1μm,21.0s
LIT Litokhoron 81.92 310 P **P 00 04 06.8 -1.8**
KRUC Moravsky 81.94 320⇑*i*P **P 00 04 08.0 -0.4**
KRUC Moravsky 81.94 320 *e*S **S 00 14 21.0 +0.3**
MUD Monsted U'grnd 82.11 329 *e*P **P 00 04 09.8 +0.7**
MUD Monsted U'grnd 82.11 329 *i* P **P 00 04 09.8 +0.7**
ATAL Atalanti 82.13 309 *e*P **P 00 04 07.1 -2.5**
ATAL Atalanti 82.13 309 P **P 00 04 07.1 -2.5**
PVCC Panska Ves 82.30 322 *e*P **P 00 04 11.0 +0.7**
PVCC *e* 00 14 23.4
PVCC MLR MLR
comp=Z,7μm,17.6s
PVCC Panska Ves 82.30 322⇑*e*P **P 00 04 11.0 +0.7**
PVCC *e*SKS **S 00 14 23.4 -1.0**
PVCC AMS AMS 00 45 30.0
comp=Z,7μm,17.6s
TREC Trest 82.36 321 *e*P **P 00 04 10.3 -0.4**
TREC MLR MLR
comp=Z,4μm,17.8s
TREC Trest 82.36 321⇑*e*P **P 00 04 10.3 -0.4**
TREC AMS AMS 00 44 20.0
comp=Z,4μm,17.8s
BBLS Lazići 82.41 315⇑*i*P **P 00 04 10.5 -0.6**
FNA Florina 82.41 311 *e*P **P 00 04 11.6 +0.5**
comp=Z,210nm,1.2s
FNA LR LR
comp=Z,10μm,18.0s
SCO Scoresbysund 82.44 349 PFAKE 00 04 20.0 +9.4
SCO LR LR
comp=Z,3μm,22.0s
GOPC GO Pecny, Ondr 82.47 322 *e*P **P 00 04 10.3 -0.9**
GOPC MLR MLR
comp=Z,4μm,16.8s
GOPC GO Pecny, Ondr 82.47 322 *e*P **P 00 04 10.3 -0.9**
GOPC *e*x x 00 04 30.9
GOPC AMS AMS 00 45 30.0
comp=Z,4μm,16.8s
AGG Agios Georgios 82.48 309 *e*P **P 00 04 08.6 -2.9**
comp=Z,70nm,1.4s
AGG LR LR
comp=Z,900nm,21.0s
AGG Agios Georgios 82.48 309 P **P 00 04 08.9 -2.6**
BRG Berggiesshubel 82.48 323 *e*P **P 00 04 10.4 -0.9**
comp=Z,129nm,2.3s
BRG *e* 00 04 30.5
comp=Z,40nm,1.8s
BRG PP **PP 00 07 20.0 0.0**
BRG S **S 00 14 29.0 +2.8**
BRG SS **SS 00 19 51.0 +4.3**
comp=N,2μm,17.7s
comp=E,3μm,14.6s
comp=Z,8μm,15.3s
BBB Bella Bella 82.56 36 *e*P **P 00 04 11.0 -0.6**
comp=Z,87nm,1.8s
BBB LR LR
comp=Z,900nm,20.0s
PRU Pruhonice 82.57 322 *e*P **P 00 04 11.4 -0.3**
PRU *e* 00 04 28.1
PRU *e* 00 14 23.5
PRU MLR MLR
comp=Z,4μm,16.6s
PRU Pruhonice 82.57 322⇑*e*P **P 00 04 11.4 -0.3**
PRU *e*x x 00 04 28.1
PRU *e*SKS **S 00 14 23.5 -3.7**
PRU AMS AMS 00 45 30.0
comp=Z,4μm,16.6s
VAM Vamos 82.61 305 P **P 00 04 11.1 -1.1**
OHR Ohrid 82.67 312⇑*i*P **P 00 04 10.7 -1.8**
YKW3 Yellowknife Ar 82.71 23 PFAKE 00 04 20.0 +7.8
YKW3 LR LR
comp=Z,1μm,20.0s
YKA Yellowknife Ar 82.76 23 P **P 00 04 11.2 -1.2**
comp=Z,9.7nm,1.0s,baz=314,slow=4.9,SNR=56
YKA LR LR 00 44 52.2
comp=Z,77nm,18.8s,baz=308,slow=38
CONA Conrad Observa 82.78 319 *i* P **P 00 04 12.7 -0.2**
comp=Z,38nm,1.3s,SNR=25
CLL Collm 82.79 323 PFAKE 00 04 20.0 +7.2
CLL LR LR
comp=Z,6μm,20.0s
CLL Collm 82.79 323⇑*i*P **P 00 04 11.6 -1.2**
comp=Z,41nm,1.4s
CLL *i*pP **PcP 00 04 17.1 -0.5**
CLL *i* 00 04 31.3
CLL *e*PP **PP 00 07 21.0 -1.5**
CLL *e* 00 07 40.0
CLL *e*PPP PPP 00 09 14.0
CLL *e*PPPP 00 10 48.0
CLL *e*S **S 00 14 30.0 +0.7**
CLL *e*PS 00 15 25.0
CLL *e*SS **SS 00 19 59.0 +7.8**
CLL *e* 00 24 06.0
CLL *e*SSSS 00 25 54.0
CLL Lm MLR 00 45 00.0
comp=N,5μm,18.5s
CLL Lm MLR 00 45 00.0
comp=E,3μm,19.8s
CLL Lm MLR 00 45 00.0
comp=Z,7μm,19.2s
SUMG Summit 82.79 354 PFAKE 00 04 20.0 +7.1
SUMG LR LR
comp=Z,2μm,22.0s
SUMG Summit 82.79 354 *i* P **P 00 04 11.7 -1.2**
SUMG Summit 82.79 354 *i* P **P 00 04 11.7 -1.2**
BEHE Becsehely 82.90 318⇑*i*P **P 00 04 12.9 -0.6**
UPM Unac-Piva 83.02 314 *e*P **P 00 04 13.5 -0.9**
PDG Podgorica 83.13 313⇑*i*P **P 00 04 13.7 -1.1**
PDG Podgorica 83.13 313⇑*i*P **P 00 04 13.6 -1.2**
TTG Podgorica 83.13 313 PFAKE 00 04 30.0 +15
TTG LR LR
comp=Z,2μm,19.0s
TIR Tirane 83.20 312 *e*P **P 00 04 14.9 -0.3**
comp=Z,145nm,1.5s
KOGS Kog 83.23 318⇑*i*P **P 00 04 14.0 -1.2**
KOGS *e*PP **PP 00 07 25.7 -0.6**
DRME Dracevica, Mon 83.29 313⇑*i*P **P 00 04 14.6 -1.0**
ARSA Arzberg 83.30 319 *i* P **P 00 04 14.7 -0.9**
comp=Z,21nm,1.4s,SNR=6.0
BRY Bratogost 83.40 314 *e*P **P 00 04 14.8 -1.5**
BLY Banja Luka 83.44 316 *e*P **P 00 04 15.5 -0.8**
comp=Z,112nm,1.7s
BLY LR LR
comp=Z,4μm,19.0s
BLY Banja Luka 83.44 316⇑*i*P **P 00 04 16.1 -0.2**
BLY Banja Luka 83.44 316⇑*i*P **P 00 04 15.7 -0.6**
KHC Kasperske Hory 83.54 321 PFAKE 00 04 30.0 +13
KHC LR LR
comp=Z,2μm,21.0s
KHC Kasperske Hory 83.54 321 *e*P **P 00 04 15.9 -0.9**
KHC *e* 00 04 28.4
KHC *e* 00 14 34.9
KHC MLR MLR
comp=Z,5μm,16.7s
KHC Kasperske Hory 83.54 321⇑*e*P **P 00 04 15.9 -0.9**
KHC *e*x x 00 04 28.4
KHC *e*SKS **S 00 14 34.9 -2.2**
KHC AMS AMS 00 46 20.0
comp=Z,5μm,16.7s
ITM Ithomi 83.55 308 PFAKE 00 04 30.0 +13
ITM LR LR
comp=Z,1μm,19.0s
GEC2 GERESS Array S 83.61 321 PFAKE 00 04 30.0 +13
GEC2 LR LR
comp=Z,4μm,20.0s
GERES GERESS Array B 83.61 321 P **P 00 04 16.4 -0.8**
comp=Z,10nm,0.9s,baz=57,slow=4.9,SNR=61
GERES LR LR 00 45 09.4
comp=Z,4μm,19.9s,baz=66,slow=38
NKC Novy Kostel 83.63 323 *e*P **P 00 04 17.1 -0.1**
NKC *e* 00 14 36.6
NKC MLR MLR

comp=Z,7μm,16.6s
NKC Novy Kostel 83.63 323⇑ eP P 00 04 17.1 -0.1
NKC eSKS S 00 14 36.6 -1.4
NKC AMS AMS 00 46 10.0
comp=Z,7μm,16.6s
GROS Grobnik 83.69 318⇑ iP P 00 04 16.4 -1.2
MOA Molln 83.76 320 iP **P 00 04 17.5 -0.4**
comp=Z,25nm,0.9s,SNR=15
SOKA Soboth 83.87 319 iP **P 00 04 17.7 -0.8**
comp=Z,32nm,1.1s,SNR=18
STON Ston 83.96 314⇑ iP P 00 04 17.1 -1.9
CRES Cresnjev 84.01 318⇑ iP P 00 04 18.4 -0.9
VLS Valsamata 84.08 309 P **P 00 04 17.8 -1.9**
OBKA Obir 84.24 319 iP **P 00 04 19.4 -1.1**
comp=Z,16nm,0.8s,SNR=7.7
BOJS Bojanci 84.29 317⇑ iP P 00 04 20.1 -0.6
BOJS eSKSac SKSac 00 14 37.8 -5.0
BOJS eS S 00 14 43.6 -1.2
BOJS eSS SS 00 20 28.7 +15
VISS Visnje 84.40 318 iP **P 00 04 20.4 -0.9**
LJU Ljubljana 84.48 318⇑ iP P 00 04 20.8 -0.8
LJU Ljubljana 84.48 318⇑ iP P 00 04 20.6 -1.0
GRA1 Grafenberg Arr 84.59 322 PFAKE 00 04 30.0 +7.9
GRA1 LR LR
comp=Z,6μm,20.0s
GRFO Grafenberg 84.59 322 eP **P 00 04 22.7 +0.6**
comp=Z,102nm,1.5s
GRFO LR LR
comp=Z,5μm,20.0s
KBA Koelnbreinsper 84.68 320 iP **P 00 04 21.5 -1.3**
comp=Z,28nm,1.0s,SNR=19
ABPO Ambohimpanom 84.69 247 eP **P 00 04 23.9 +0.7**
comp=Z,29nm,1.0s
CEY Cerknica 84.69 318⇑ iP P 00 04 21.6 -1.1
MYKA Terra Mystica 84.73 319 iP **P 00 04 21.6 -1.4**
comp=Z,13nm,1.0s,SNR=8.3
RIY Rijeka 84.85 318⇑ iP P 00 04 22.3 -1.2
CADS Cadrg 84.87 319⇑ iP P 00 04 21.9 -1.7
TRI Trieste 85.11 318 PFAKE 00 04 40.0 +15
TRI LR LR
comp=Z,4μm,19.0s
ABTA Abfaltersbach 85.34 320 iP **P 00 04 24.2 -1.9**
comp=Z,30nm,1.1s,SNR=14
WATA Walderalm 85.59 320 eP **P 00 04 26.0 -1.4**
comp=Z,25nm,1.1s
WTTA Wattenberg 85.60 320 iP **P 00 04 26.1 -1.3**
comp=Z,32nm,1.1s,SNR=12
MOTA Moosalm 85.87 321 iP **P 00 04 27.1 -1.6**
comp=Z,19nm,1.2s,SNR=8.0
SQTA Sankt Quirin 85.87 320 iP **P 00 04 27.2 -1.5**
comp=Z,36nm,1.4s,SNR=14
KMBO Kilima Mbogo 85.88 267 P **P 00 04 30.1 +0.6**
comp=Z,11nm,1.0s,baz=54,slow=5.2,SNR=19
KMBO LR LR 00 44 55.0
comp=Z,718nm,18.6s,baz=60,slow=37
KMBO Kilima Mbogo 85.88 267 eP **P 00 04 29.9 +0.4**
KMBO ePcP P 00 04 30.5 +1.0
KMBO LR LR
comp=Z,800nm,20.0s
KMBO Kilima Mbogo 85.88 267 iP **P 00 04 30.3 +0.8**
SNR=15
RETA Reutte 85.99 321 eP **P 00 04 28.2 -1.0**
comp=Z,10.0nm,1.3s
STU Stuttgart 86.20 322 PFAKE 00 04 40.0 +10
STU LR LR
comp=Z,7μm,18.0s
FETA Feichten 86.25 320 iP **P 00 04 29.4 -1.3**
comp=Z,22nm,1.1s,SNR=10
TIP Timpagrande 86.30 311 eP **P 00 04 29.8 -1.1**
comp=Z,114nm,1.6s
TIP LR LR
comp=Z,2μm,21.0s
NAI Nairobi 86.35 267 PFAKE 00 04 40.0 +8.2
NAI LR LR
comp=Z,1μm,19.0s
DAVA Damuels 86.61 321 iP **P 00 04 31.3 -1.1**
comp=Z,20nm,1.4s,SNR=6.3
LLLB Lilloet 86.71 35 eP **P 00 04 32.1 -0.6**
comp=Z,62nm,1.3s
FUORN Ofenpass-Fuorn 86.73 320 PFAKE 00 04 40.0 +6.9
FUORN LR LR
comp=Z,5μm,18.0s
MEM Membach 86.91 325 P **P 00 04 32.7 -0.8**
BFO Black Forest 86.92 322 eP **P 00 04 33.0 -0.8**
comp=Z,60nm,1.7s
BFO LR LR
comp=Z,6μm,19.0s
BFO Black Forest 86.92 322 ceP **P 00 04 34.0 +0.3**
ILULI Ilulissat 86.94 358 PFAKE 00 04 40.0 +6.7
ILULI LR LR
comp=Z,2μm,19.0s
ILULI Ilulissat 86.94 358⇑ iP P 00 04 31.4 -1.9
ILULI Ilulissat 86.94 358⇑ iP P 00 04 31.4 -1.9
PGC Sidney 86.95 37 eP **P 00 04 33.7 0.0**
comp=Z,61nm,1.4s
PGC LR LR
comp=Z,700nm,19.0s
BEBN Eben Emael 86.97 325 P **P 00 04 32.9 -0.9**
AQU L'Aquila 87.00 315 eP **P 00 04 33.9 -0.3**
comp=Z,130nm,1.4s
AQU LR LR
comp=Z,2μm,22.0s
AQU L'Aquila 87.00 315⇑ iP P 00 04 33.6 -0.6
BHOU Houvegnez 87.05 325 P **P 00 04 33.7 -0.6**
BLCH La Chartreuse 87.10 325 P **P 00 04 33.6 -0.8**
BSTI Sart Tilman 87.15 325 P **P 00 04 33.9 -0.8**
BORG Borgarnes 87.16 345 PFAKE 00 04 50.0 +16
BORG LR LR
comp=Z,4μm,18.0s
A04D Lummi Island 87.33 37 P **P 00 04 35.8 +0.2**
baz=304
CEL Celeste 87.33 311 eP **P 00 04 35.8 -0.1**
comp=Z,106nm,1.2s
CEL LR LR
comp=Z,2μm,20.0s
TUE Stuetta 87.35 320 eP **P 00 04 34.9 -1.2**
comp=Z,71nm,1.6s
TUE LR LR
comp=Z,4μm,20.0s
WLF Walferdange 87.37 324 eP **P 00 04 35.1 -0.7**
comp=Z,412nm,1.5s
WLF LR LR
comp=Z,22μm,18.0s
WLF Walferdange 87.37 324 P **P 00 04 35.2 -0.7**
BCLA Clavier 87.38 325 P **P 00 04 34.5 -1.4**
comp=Z,26nm,1.9s
NLWA Neilton Lookou 87.41 38 eP **P 00 04 36.7 +0.6**
comp=Z,82nm,1.5s
NLWA LR LR
comp=Z,700nm,22.0s
BGES Gesves 87.52 325 P **P 00 04 36.0 -0.5**
ECH Echery 87.64 323 PFAKE 00 04 50.0 +13
ECH LR LR
comp=Z,4μm,19.0s
UCC Uccle 87.65 326 PFAKE 00 04 50.0 +13
UCC LR LR
comp=Z,7μm,18.0s
UCC Uccle 87.65 326 P **P 00 04 36.0 -1.1**
BMRD Maredsous 87.73 325 P **P 00 04 36.8 -0.7**
D03D Eldon 87.77 38 P **P 00 04 38.5 +0.7**
baz=304
B05A Bryant 87.92 37 P **P 00 04 38.6 +0.2**
baz=305
DOU Dourbes 87.94 325 P **P 00 04 37.5 -1.0**
VLC Villacollemand 87.96 318 PFAKE 00 04 50.0 +11
VLC LR LR
comp=Z,4μm,18.0s
B06A Marblemount 88.11 37 eP **P 00 04 39.7 +0.4**
comp=Z,93nm,1.4s
B06A LR LR
comp=Z,600nm,19.0s
D04E Lakebay 88.15 38 P **P 00 04 40.5 +1.0**
baz=304
ESK Eskdalemuir 88.36 332 PFAKE 00 04 50.0 +10
ESK LR LR
comp=Z,7μm,18.0s
D05A Enumclaw 88.59 38 eP **P 00 04 42.1 +0.5**
comp=Z,152nm,1.5s
D05A LR LR
comp=Z,600nm,18.0s
SENIN Lac Senin/Sane 88.59 321 eP **P 00 04 40.8 -1.2**
comp=Z,14nm,1.3s
SENIN LR LR
comp=Z,5μm,20.0s
E04D Cinebar 88.61 39 P **P 00 04 41.2 -0.7**
baz=304
F04D Rainier, OR 88.62 39 P **P 00 04 42.2 +0.4**
baz=304
C06D Leavenworth 88.77 37 P **P 00 04 42.1 -0.5**
baz=305
LON Longmire 88.94 38 PFAKE 00 04 50.0 +6.6
LON LR LR
comp=Z,600nm,20.0s
G03D McMinnville, O 88.96 40 P **P 00 04 43.8 +0.4**
baz=304
SFJD Kangerlussuaq 89.13 357 eP **P 00 04 42.4 -1.3**
comp=Z,24nm,1.0s
SFJD LR LR
comp=Z,2μm,18.0s
SFJD Kangerlussuaq 89.13 357 iP **P 00 04 41.8 -2.0**
SFJD Kangerlussuaq 89.13 357 iP **P 00 04 41.8 -2.0**
I02D Swisshome 89.22 41 P **P 00 04 43.7 -1.0**
baz=303
LTY Liberty 89.28 37 PFAKE 00 05 00.0 +15
LTY LR LR
comp=Z,600nm,20.0s
COR Corvallis 89.28 41 eP **P 00 04 46.0 +1.0**
comp=Z,36nm,0.8s
ANGG Ammassalik, Gr 89.35 352 PFAKE 00 05 00.0 +15
ANGG LR LR
comp=Z,2μm,18.0s
WDD Wied Dalam 89.46 309 PFAKE 00 05 00.0 +14
WDD LR LR
comp=Z,700nm,20.0s
CLTB Caltabellotta 89.51 311 PFAKE 00 05 00.0 +14
CLTB LR LR
comp=Z,2μm,20.0s
KEBM Edson Butte 89.60 42 eP **P 00 04 46.6 0.0**
comp=Z,52nm,1.1s
F05D White Salmon 89.63 39 P **P 00 04 47.0 +0.4**
baz=305
H04D Lebanon 89.66 40 P **P 00 04 47.1 +0.4**
baz=304,SNR=8.1
J01E Myrtle Point 89.69 42 P **P 00 04 47.1 +0.2**
baz=303
BNI Bardonecchia 89.69 320 PFAKE 00 05 00.0 +13
BNI LR LR
comp=Z,7μm,18.0s
I03D Drain, OR 89.75 41 P **P 00 04 47.1 -0.1**
baz=304,SNR=7.8
H04A Detroit Lake 89.89 40 eP **P 00 04 48.6 +0.7**
comp=Z,32nm,1.2s
G05D Wamic, OR 90.08 39 P **P 00 04 49.0 +0.3**
baz=305
K02D Willamette Mer 90.11 42 P **P 00 04 48.8 -0.3**
baz=304
I04A Tendick Farm, 90.26 41 P **P 00 04 49.3 -0.3**
baz=304,SNR=17
C09A Chrisman Ranch 90.27 36 PFAKE 00 05 00.0 +10
C09A LR LR
comp=Z,1μm,18.0s
D08A Wollman Farm, 90.37 37 PFAKE 00 05 00.0 +10
D08A LR LR
comp=Z,700nm,19.0s
CLF Chambon-Foret 90.41 324 PFAKE 00 05 00.0 +10
CLF LR LR
comp=Z,8μm,19.0s
HAWA Hanford 90.42 38 PFAKE 00 05 00.0 +10
HAWA LR LR
comp=Z,700nm,18.0s
L02E Cave Junction 90.44 43 P **P 00 04 51.2 +0.7**
baz=304
G06A Carlson Farm, 90.48 39 PFAKE 00 05 00.0 +9.4
G06A LR LR
comp=Z,600nm,20.0s
F07A Phinny Hill Vi 90.50 38 eP **P 00 04 51.2 +0.6**
comp=Z,78nm,1.5s
F07A LR LR
comp=Z,1μm,19.0s
I05D Terrebonne, OR 90.58 40 P **P 00 04 51.4 +0.2**
baz=305,SNR=6.5
HUMO Hull Mountain 90.59 42 eP **P 00 04 51.4 +0.2**
comp=Z,51nm,1.8s
NEW Newport 90.60 35 PFAKE 00 05 00.0 +8.9
NEW LR LR
comp=Z,1μm,18.0s
NEW Newport 90.60 35 P **P 00 04 51.6 +0.5**
baz=308
E08A Dider Farm, El 90.63 37 eP **P 00 04 52.1 +0.9**
comp=Z,106nm,1.8s
E08A LR LR
comp=Z,600nm,22.0s
J04D Umpqua Nationa 90.75 41 P **P 00 04 52.2 0.0**
baz=305,SNR=5.6
SSB Saint Sauveur 90.80 321 eP **P 00 04 49.4 -2.8**
comp=Z,62nm,1.8s
SSB LR LR
comp=Z,4μm,18.0s
E09A Wood Farm, Sta 91.12 37 PFAKE 00 05 00.0 +6.5
E09A LR LR
comp=Z,600nm,20.0s
DSB Dublin 91.14 332 PFAKE 00 05 00.0 +6.5
DSB LR LR
comp=Z,4μm,19.0s
L04D Klamath Falls 91.21 42 P **P 00 04 54.6 +0.3**
baz=304
YBH Yreka Blue Hor 91.23 43 eP **P 00 04 54.8 +0.5**
comp=Z,27nm,1.3s
YBH LR LR
comp=Z,600nm,21.0s
J05D Fort Rock, OR 91.25 41 P **P 00 04 54.7 +0.3**
baz=305,SNR=15
K04D Chiloquin, OR 91.32 42 P **P 00 04 54.9 +0.2**
baz=305
M02C Callahan 91.33 43 P **P 00 04 54.9 +0.2**
baz=304
G08A Pilot Rock 91.40 38 eP **P 00 04 56.0 +1.0**
comp=Z,65nm,1.8s
G08A LR LR
comp=Z,700nm,18.0s
MBAR Mbarara 91.63 270 PFAKE 00 05 10.0 +13
MBAR LR LR
comp=Z,2μm,19.0s
N02D Trinity Center 91.66 43 P **P 00 04 57.1 +0.8**
baz=304
WALA Waterton Lakes 91.74 33 PFAKE 00 05 10.0 +13
WALA LR LR
comp=Z,2μm,18.0s
M04C Macdoel 91.74 42 P **P 00 04 56.4 -0.3**
baz=305
I07A Izee 91.81 39 PFAKE 00 05 10.0 +13
I07A LR LR
comp=Z,500nm,20.0s
F10A Beach Ranch, E 91.95 37 eP **P 00 04 58.1 +0.6**
comp=Z,114nm,2.0s
F10A LR LR
comp=Z,700nm,21.0s
WDC Whiskeytown Da 91.98 44 eP **P 00 04 57.9 +0.2**
comp=Z,12nm,1.1s
WDC LR LR
comp=Z,700nm,19.0s
O02D Mt. Diablo Mer 92.05 44 P **P 00 04 58.7 +0.6**
baz=304
FCC Fort Churchill 92.22 18 PFAKE 00 05 10.0 +12
FCC LR LR
comp=Z,1μm,20.0s
BMO Blue Mountains 92.60 38 eP **P 00 05 00.8 +0.3**
comp=Z,55nm,1.8s
BMO LR LR
comp=Z,700nm,21.0s
O03E Paynes Creek 92.61 44 P **P 00 04 59.9 -0.8**
baz=305
MOD Modoc Plateau 92.61 42 eP **P 00 05 01.0 +0.3**
comp=Z,46nm,1.5s
J08A Circle Bar Ran 92.84 40 eP **P 00 05 01.6 -0.1**
comp=Z,46nm,1.5s
FFC Flin Flon 92.91 24 eP **P 00 05 00.8 -0.8**
comp=Z,2μm,1.9s
FFC LR LR
comp=Z,1μm,19.0s
FFC Flin Flon 92.91 24 ceP **P 00 05 01.1 -0.5**
KEST Kesra 93.12 311 P **P 00 05 02.8 -0.4**
comp=Z,13nm,1.1s,baz=223,slow=4.2,SNR=5.6
KEST LR LR 00 54 13.5
comp=Z,2μm,18.4s,baz=352,slow=40
KEST Kesra 93.12 311 eP **P 00 05 03.1 -0.1**
comp=Z,56nm,1.5s
KEST LR LR
comp=Z,2μm,19.0s
MSO Missoula 93.17 35 PFAKE 00 05 10.0 +6.8
MSO LR LR
comp=Z,1μm,19.0s
MSO Missoula 93.17 35 P **P 00 05 02.9 -0.3**
baz=311
PLID Pearl Lake 93.18 37 eP **P 00 05 03.2 -0.2**
comp=Z,18nm,1.4s
AFDM Forest Hills D 93.91 44 eP **P 00 05 06.6 0.0**
comp=Z,18nm,1.4s
EGMT Eagleton 94.48 32 PFAKE 00 05 20.0 +11
EGMT LR LR
comp=Z,900nm,21.0s
EGMT Eagleton 94.48 32 P **P 00 05 08.5 -0.6**
baz=314
NRS Narsarsuaq 94.56 354 PFAKE 00 05 20.0 +11
NRS LR LR
comp=Z,2μm,18.0s
LRM Limekiln Ridge 94.61 35 eP **P 00 05 09.6 -0.4**
IVI Ivigtut 94.75 355 PFAKE 00 05 20.0 +10
IVI LR LR
comp=Z,3μm,19.0s
DLMT Dillon 94.84 35 eP **P 00 05 11.0 +0.1**
comp=Z,54nm,1.7s
DLMT LR LR
comp=Z,1μm,22.0s
HLID Hailey 95.03 38 PFAKE 00 05 20.0 +8.2
HLID LR LR
comp=Z,1μm,21.0s
HLID Hailey 95.03 38 P **P 00 05 12.6 +0.7**
baz=310
MCMT McKenzie Canyo 95.06 36 eP **P 00 05 12.9 +0.8**
WAKR Walker 95.14 44 eP **P 00 05 12.9 +0.5**
comp=Z,9.9nm,1.2s
BOZ Bozeman (W) 95.19 35 PFAKE 00 05 20.0 +7.5
BOZ LR LR
comp=Z,900nm,20.0s
BOZ Bozeman (W) 95.19 35 P **P 00 05 12.2 -0.3**
baz=312
PPT Papeete 95.36 107 LR LR 00 47 40.3
comp=Z,597nm,18.1s,baz=318,slow=35
PPT2 Papeete2 95.37 107 eS **S 00 16 28.3 -0.3**
comp=Z,1μm,24.5s
PPT2 Papeete2 95.37 107 eLR LR 00 36 02.5
comp=Z,2μm,23.5s,baz=292
RYN Ryan 95.64 43 eP **P 00 05 13.2 -1.5**
comp=Z,8.0nm,1.0s
KVN Kaiserville 95.65 43 eP **P 00 05 14.6 -0.2**
comp=Z,22nm,1.4s
NVAR Mina Array Bea 95.90 43 P **P 00 05 15.2 -0.7**
comp=Z,2.2nm,0.7s,baz=298,slow=5.4,SNR=17
MLAC Mammoth, Mammo 96.04 44 P **P 00 05 16.2 -0.4**
baz=307
LKWY Lake 96.53 35 PFAKE 00 05 30.0 +11
LKWY LR LR
comp=Z,2μm,22.0s
H17A Grant Village 96.56 35 PFAKE 00 05 30.0 +11
H17A LR LR
comp=Z,2μm,22.0s
H17A Grant Village 96.56 35 P **P 00 05 19.9 +1.0**
baz=313
IMW Indian Meadow 96.70 36 PFAKE 00 05 30.0 +10
IMW LR LR
comp=Z,600nm,19.0s
FLWY Flagg Ranch 96.70 35 eP **P 00 05 20.9 +1.4**
comp=Z,7.7nm,0.9s
FLWY LR LR
comp=Z,500nm,20.0s
RLMT Red Lodge 96.74 34 PFAKE 00 05 30.0 +10
RLMT LR LR
comp=Z,900nm,18.0s
RLMT Red Lodge 96.74 34 P **P 00 05 19.8 +0.1**
baz=314
DGMT Dagmar 96.75 29 PFAKE 00 05 30.0 +11
DGMT LR LR
comp=Z,1μm,18.0s
DGMT Dagmar 96.75 29 P **P 00 05 18.9 -0.4**
baz=318
TIN Tinemaha, Big 96.77 45 P **P 00 05 19.8 -0.1**
baz=307
MOOW Moose Ponds 96.91 36 eP **P 00 05 21.3 +0.8**
comp=Z,12nm,1.9s
PKM Mcpherson Peak 97.00 47 P **P 00 05 20.5 -0.5**
baz=306
LOHW Long Hollow 97.07 36 PFAKE 00 05 30.0 +8.7
LOHW LR LR
comp=Z,500nm,21.0s
SNOW Snow King Moun 97.09 36 PFAKE 00 05 30.0 +8.6
SNOW LR LR
comp=Z,700nm,18.0s
LAO LASA Array 97.13 31 PFAKE 00 05 30.0 +8.7
LAO LR LR
comp=Z,1μm,19.0s
CWC Cottonwood Cre 97.23 45 P **P 00 05 21.8 -0.2**
baz=307
AHID Auburn Hatcher 97.38 37 PFAKE 00 05 30.0 +7.4
AHID LR LR
comp=Z,1μm,20.0s
BGU Big Grassy Mou 97.52 39 eP **P 00 05 23.0 -0.2**
comp=Z,13nm,1.7s
R11A Troy Canyon, C 97.64 42 P Pdif 00 05 24.4 +0.5
baz=309
TBI Tubuai 97.71 112 eS **S 00 16 47.9 -0.5**
comp=Z,695nm,26.5s
TBI Tubuai 97.71 112 eLR LR 00 37 07.0
comp=Z,849nm,30.8s,baz=297
MPMC Manual Prospec 97.84 45 P Pdif 00 05 25.3 +0.4
baz=307
FURC Furnace Creek, 98.00 44 P Pdif 00 05 25.5 +0.3
baz=308
TPNV Topopah Spring 98.09 44 eP **P 00 05 25.6 -0.2**
comp=Z,17nm,1.5s
TPNV Topopah Spring 98.09 44 P Pdif 00 05 26.1 +0.2
baz=308
BW06 Boulder Array 98.21 36 PFAKE 00 05 40.0 +14
BW06 LR LR
comp=Z,700nm,19.0s
BW06 Boulder Array 98.21 36 P Pdif 00 05 26.8 +0.4
baz=314
PDAR Pinedale Array 98.21 36 P **P 00 05 25.7 -0.7**
comp=Z,0.2nm,0.4s,baz=332,slow=1.2,SNR=5.8
PDAR LR LR 00 52 23.4
comp=Z,171nm,18.4s,baz=346,slow=37
EDW2 Edwards Air Fo 98.22 46 P Pdif 00 05 26.4 0.0
baz=307
ULM Lac du Bonnet 98.73 24 LR LR 00 54 54.4
comp=Z,1μm,18.6s,baz=338,slow=38
GSC Goldstone, Bar 98.74 45 eP Pdif 00 05 29.6 +0.8
comp=Z,16nm,1.5s
ESDC Sonseca Array 99.20 321 LR LR 00 55 44.0
comp=Z,2μm,18.5s,baz=20,slow=39
ESLA Sonseca Array 99.20 321 PFAKE 00 05 40.0 +9.4
ESLA LR LR
comp=Z,2μm,20.0s
MDND Maddock 99.20 27 PFAKE 00 05 40.0 +10
MDND LR LR
comp=Z,2μm,21.0s
PBRG Braganca 99.31 324 eP **Pdif 00 05 36.9 +5.9**
PBRG Braganca 99.31 324 ePP **PP 00 09 39.4 +6.0**
PAB San Pablo 99.51 321 PFAKE 00 05 40.0 +8.0
PAB LR LR
comp=Z,2μm,19.0s
MSU Marysvale 99.59 40 eP **Pdif 00 05 33.9 +1.3**
LSZ Lusaka 99.70 258 PFAKE 00 05 40.0 +6.7
LSZ LR LR
comp=Z,1μm,20.0s
K22A Casper 99.88 34 PFAKE 00 05 40.0 +6.2
K22A LR LR
comp=Z,1μm,19.0s
MVO Moncorvo 99.91 324 eP **Pdif 00 05 38.6 +4.9**
MVO Moncorvo 99.91 324 ePP **PP 00 09 42.0 +4.0**
MVO eSKS SKSac 00 16 19.1 +8.0
MVO Moncorvo 99.91 324 eLQ LQ 00 36 49.9
MVO eLR LR 00 45 34.6
comp=Z,3μm,20.0s
PGAV Gavieira, Arco 100.01 325 eP **Pdif 00 05 38.5 +4.3**
PGAV Gavieira, Arco 100.01 325 ePP **PP 00 09 38.5 -0.2**
PGAV Gavieira, Arco 100.01 325 eLQ LQ 00 36 36.1
PGAV eLR LR 00 45 09.2
comp=Z,4μm,18.0s
RSSD Black Hills 100.06 32 PFAKE 00 05 50.0 +15
RSSD LR LR
comp=Z,1μm,20.0s
POLO Lamas de Olo 100.17 324 eP **Pdif 00 05 39.9 +4.9**
POLO Lamas de Olo 100.17 324 ePP **PP 00 09 44.6 +4.6**
RWWY Rawlins 100.21 35 PFAKE 00 05 50.0 +15
RWWY LR LR
comp=Z,1μm,18.0s
AGMN Agassiz Nation 100.34 25 PFAKE 00 05 50.0 +15
AGMN LR LR
comp=Z,2μm,20.0s

MTE	**Manteigas**	**100.72**	**323**	*e*P	**Pdif**	**00 05 43.3**	**+5.9**
MTE	**Manteigas**	**100.72**	**323**	*e*PP	**PP**	**00 09 48.3**	**+4.2**
MTE				*e*SKS	**SKSac**	**00 16 16.7**	**+1.6**
MTE	**Manteigas**	**100.72**	**323**	*e*LQ	LQ	00 37 43.0	
MTE				*e*LR	LR	00 46 04.0	
	comp=Z,4μm,18.0s						
MTE	**Manteigas**	**100.72**	**323**	PFAKE		00 05 50.0	+13
MTE				LR	LR		
	comp=Z,4μm,18.0s						
MAW	**Mawson**	**101.25**	**200**	PFAKE		00 05 50.0	+11
MAW				LR	LR		
	comp=Z,100nm,20.0s						
PMRV	**Marv??o**	**101.31**	**323**	*e*P	**Pdif**	**00 05 45.5**	**+5.5**
PMRV	**Marv??o**	**101.31**	**323**	*e*PP	**PP**	**00 09 51.6**	**+3.0**
PMRV				*e*SKS	**SKSac**	**00 16 19.8**	**+1.9**
PMRV	**Marv??o**	**101.31**	**323**	*e*LQ	LQ	00 36 55.3	
PMRV				*e*LR	LR	00 46 34.1	
	comp=Z,4μm,18.0s						
COI	**Coimbra**	**101.33**	**324**	*e*P	**Pdif**	**00 05 46.7**	**+6.7**
COI	**Coimbra**	**101.33**	**324**	*e*PP	**PP**	**00 09 52.8**	**+4.2**
COI	**Coimbra**	**101.33**	**324**	PFAKE		00 05 50.0	+10
COI				LR	LR		
	comp=Z,4μm,20.0s						
PHWY	**Pilot Hill**	**101.41**	**35**	PFAKE		00 05 50.0	+9.3
PHWY				LR	LR		
	comp=Z,800nm,19.0s						
N23A	**Red Feather La**	**101.44**	**35**	PFAKE		00 05 50.0	+9.1
N23A				LR	LR		
	comp=Z,1μm,18.0s						
PCAS	**Casmilo, Conde**	**101.48**	**324**	*e*P	**Pdif**	**00 05 40.0**	**-0.7**
PCAS	**Casmilo, Conde**	**101.48**	**324**	*e*PP	PP	00 09 58.9	+9.1
PCAS				*e*SKS	**SKSac**	**00 16 24.6**	**+5.9**
PV14	**Lion Creek, Pa**	**101.52**	**39**	PFAKE		00 05 50.0	+8.8
PV14				LR	LR		
	comp=Z,1μm,21.0s						
PV22	**Blue Mesa, Par**	**101.54**	**38**	PFAKE		00 05 50.0	+8.7
PV22				LR	LR		
	comp=Z,1μm,18.0s						
PV18	**Skein Mesa, Pa**	**101.67**	**39**	PFAKE		00 05 50.0	+8.1
PV18				LR	LR		
	comp=Z,1μm,21.0s						
PV12	**Saucer Basin,**	**101.68**	**39**	PFAKE		00 05 50.0	+8.1
PV12				LR	LR		
	comp=Z,1μm,19.0s						
PV07	**Paradox Valley**	**101.69**	**38**	PFAKE		00 05 50.0	+8.1
PV07				LR	LR		
	comp=Z,900nm,20.0s						
PV03	**Paradox Valley**	**101.70**	**39**	PFAKE		00 05 50.0	+8.0
PV03				LR	LR		
	comp=Z,900nm,20.0s						
PV02	**Paradox Valley**	**101.80**	**39**	PFAKE		00 05 50.0	+7.6
PV02				LR	LR		
	comp=Z,1μm,19.0s						
PMTG	**Montargil**	**102.03**	**323**	*e*SKS	**SKSac**	**00 16 24.3**	**+3.0**
EYMN	**Ely**	**102.23**	**22**	PFAKE		00 05 50.0	+6.1
EYMN				LR	LR		
	comp=Z,2μm,19.0s						
ISCO	**Idaho Springs**	**102.41**	**36**	PFAKE		00 06 00.0	+15
ISCO				LR	LR		
	comp=Z,900nm,19.0s						
MVCO	**Mesa Verde**	**102.62**	**39**	PFAKE		00 06 00.0	+14
MVCO				LR	LR		
	comp=Z,1μm,21.0s						
SFS	**San Fernando**	**102.66**	**320**	PFAKE		00 06 00.0	+14
SFS				LR	LR		
	comp=Z,2μm,20.0s						
PMAFR	**Mafra**	**102.69**	**323**	*e*P	**Pdif**	**00 05 53.0**	**+6.9**
PMAFR	**Mafra**	**102.69**	**323**	*e*PP	**PP**	**00 10 00.2**	**+1.3**
PMAFR				*e*SKS	**SKSac**	**00 16 25.4**	**+1.0**
PNCL	**Nicolau / Gran**	**102.87**	**322**	*e*P	**Pdif**	**00 05 53.3**	**+6.4**
PNCL	**Nicolau / Gran**	**102.87**	**322**	*e*PP	**PP**	**00 10 00.8**	**+0.6**
PNCL				*e*SKS	**SKSac**	**00 16 28.9**	**+3.6**
PVAQ	**Vaqueiros**	**102.90**	**321**	*e*P	**Pdif**	**00 05 54.6**	**+7.6**
PVAQ	**Vaqueiros**	**102.90**	**321**	*e*PP	**PP**	**00 10 04.6**	**+4.1**
PVAQ				*e*SKS	**SKSac**	**00 16 28.1**	**+2.6**
PCVE	**Castro Verde**	**102.93**	**322**	*e*P	**Pdif**	**00 05 49.1**	**+1.9**
PCVE	**Castro Verde**	**102.93**	**322**	*e*PP	**PP**	**00 10 04.0**	**+3.3**
TAM	**Tamanrasset**	**102.94**	**302**	PFAKE		00 06 00.0	+12
TAM				LR	LR		
	comp=Z,1μm,20.0s						
C40A	**Isle Royale Na**	**103.06**	**21**	PFAKE		00 06 00.0	+13
C40A				LR	LR		
	comp=Z,1μm,20.0s						
PBDV	**Barranco-do-Ve**	**103.14**	**321**	*e*P	**Pdif**	**00 05 53.2**	**+5.1**
PBDV	**Barranco-do-Ve**	**103.14**	**321**	*e*PP	**PP**	**00 10 06.0**	**+3.7**
PBDV				*e*SKS	**SKSac**	**00 16 27.9**	**+1.3**
S22A	**4UR Ranch, Cre**	**103.20**	**38**	PFAKE		00 06 00.0	+11
S22A				LR	LR		
	comp=Z,1μm,21.0s						
Q24A	**Divide**	**103.26**	**36**	PFAKE		00 06 00.0	+11
Q24A				LR	LR		
	comp=Z,800nm,20.0s						
W18A	**Petrified Fore**	**103.30**	**42**	PFAKE		00 06 00.0	+11
W18A				LR	LR		
	comp=Z,800nm,20.0s						
E38A	**The Farm, Brul**	**103.36**	**23**	PFAKE		00 06 00.0	+11
E38A				LR	LR		
	comp=Z,1μm,20.0s						
OGNE	**Ogallala**	**103.41**	**33**	PFAKE		00 06 00.0	+11
OGNE				LR	LR		
	comp=Z,1μm,18.0s						
MORF	**Marmelete**	**103.50**	**322**	*e*PP	**PP**	**00 10 06.5**	**+1.4**
PFVI	**Vila Bisbo**	**103.72**	**322**	*e*P	**Pdif**	**00 05 57.7**	**+7.0**
PFVI	**Vila Bisbo**	**103.72**	**322**	*e*PP	**PP**	**00 10 06.7**	**0.0**
PFVI	**Vila Bisbo**	**103.72**	**322**	PFAKE		00 06 00.0	+9.3
PFVI				LR	LR		
	comp=Z,5μm,19.0s						
ECSD	**EROS Data Cent**	**103.75**	**28**	PFAKE		00 06 00.0	+9.3
ECSD				LR	LR		
	comp=Z,2μm,18.0s						
SDCO	**Great Sand Dun**	**103.94**	**37**	PFAKE		00 06 00.0	+7.9
SDCO				LR	LR		
	comp=Z,1μm,18.0s						
D41A	**Chassel**	**104.00**	**21**	PFAKE		00 06 00.0	+8.3
D41A				LR	LR		
	comp=Z,1μm,20.0s						
SPMN	**Marine on St.**	**104.06**	**25**	PFAKE		00 06 00.0	+8.0
SPMN				LR	LR		
	comp=Z,1μm,20.0s						
KSCO	**Kaye Shedlock'**	**104.56**	**35**	PFAKE		00 06 10.0	+15
KSCO				LR	LR		
	comp=Z,1μm,20.0s						
COWI	**Conover**	**104.64**	**22**	PFAKE		00 06 10.0	+15
COWI				LR	LR		
	comp=Z,2μm,18.0s						
RTC	**Rabat Centre**	**104.73**	**318**	PFAKE		00 06 10.0	+15
RTC				LR	LR		
	comp=Z,8μm,20.0s						
BGNE	**Belgrade**	**104.92**	**30**	PFAKE		00 06 10.0	+14
BGNE				LR	LR		
	comp=Z,1μm,18.0s						
T25A	**Trinidad**	**104.98**	**37**	PFAKE		00 06 10.0	+13
T25A				LR	LR		
	comp=Z,900nm,18.0s						
G40A	**Rib Lake**	**104.99**	**23**	PFAKE		00 06 10.0	+14
G40A				LR	LR		
	comp=Z,1μm,18.0s						
E43A	**Lone Tree Farm**	**105.11**	**21**	PFAKE		00 10 20.0	+8.9
E43A				LR	LR		
	comp=Z,2μm,18.0s						
E44A	**Grand Marais A**	**105.23**	**20**	PFAKE		00 10 20.0	+8.7
E44A				LR	LR		
	comp=Z,1μm,20.0s						
Y22D	**IRIS PASSCAL I**	**105.71**	**41**	PFAKE		00 10 20.0	+7.3
Y22D				LR	LR		
	comp=Z,1μm,18.0s						
E46A	**Sault Ste Mari**	**105.95**	**19**	PFAKE		00 10 20.0	+7.4
E46A				LR	LR		
	comp=Z,2μm,18.0s						
I41A	**Arkdale**	**106.15**	**24**	PFAKE		00 10 20.0	+6.9
I41A				LR	LR		
	comp=Z,2μm,18.0s						
CBKS	**Cedar Bluff**	**106.18**	**33**	PFAKE		00 10 20.0	+6.7
CBKS				LR	LR		
	comp=Z,1μm,18.0s						
H43A	**Windswept, Lux**	**106.54**	**22**	PFAKE		00 10 30.0	+16
H43A				LR	LR		
	comp=Z,1μm,20.0s						
I42A	**Draeger Farm,**	**106.64**	**23**	PFAKE		00 10 30.0	+16
I42A				LR	LR		
	comp=Z,2μm,19.0s						
SCIA	**State Center**	**106.67**	**27**	PFAKE		00 10 30.0	+16
SCIA				LR	LR		
	comp=Z,1μm,19.0s						
G45A	**Suttons Bay**	**106.73**	**20**	PFAKE		00 10 30.0	+16
G45A				LR	LR		
	comp=Z,2μm,18.0s						
JFWS	**Jewell Farm**	**107.00**	**24**	PFAKE		00 10 30.0	+15
JFWS				LR	LR		
	comp=Z,2μm,18.0s						
D53A	**Lac Vacive, Po**	**107.00**	**14**	PFAKE		00 10 30.0	+15
D53A				LR	LR		
	comp=Z,2μm,19.0s						
GLMI	**Grayling**	**107.25**	**20**	PFAKE		00 10 30.0	+15
GLMI				LR	LR		
	comp=Z,1μm,18.0s						
L40A	**Anamosa**	**107.35**	**25**	PFAKE		00 10 30.0	+15
L40A				LR	LR		
	comp=Z,1μm,19.0s						
I45A	**Fountain**	**107.44**	**21**	PFAKE		00 10 30.0	+15
I45A				LR	LR		
	comp=Z,1μm,18.0s						
KSU1	**Kansas State U**	**107.46**	**31**	PFAKE		00 10 30.0	+14
KSU1				LR	LR		
	comp=Z,1μm,19.0s						
EPT	**El Paso**	**107.56**	**42**	PFAKE		00 10 30.0	+14
EPT				LR	LR		
	comp=Z,600nm,18.0s						
H48A	**Harrisville**	**107.75**	**19**	PFAKE		00 10 30.0	+14
H48A				LR	LR		
	comp=Z,2μm,18.0s						
K43A	**Burlington**	**107.88**	**23**	PFAKE		00 10 30.0	+14
K43A				LR	LR		
	comp=Z,2μm,20.0s						
J45A	**Montague**	**107.92**	**22**	PFAKE		00 10 30.0	+14
J45A				LR	LR		
	comp=Z,1μm,22.0s						
L42A	**Oliver, Polo**	**108.00**	**24**	PFAKE		00 10 30.0	+13
L42A				LR	LR		
	comp=Z,1μm,19.0s						
I47A	**Gladwin**	**108.00**	**20**	PFAKE		00 10 30.0	+13
I47A				LR	LR		
	comp=Z,2μm,20.0s						
AMTX	**Amarillo**	**108.13**	**37**	PFAKE		00 10 30.0	+13
AMTX				LR	LR		
	comp=Z,700nm,18.0s						
MSTX	**Muleshoe**	**108.20**	**38**	PFAKE		00 10 30.0	+13
MSTX				LR	LR		
	comp=Z,900nm,20.0s						
MNTX	**Cornudas Mount**	**108.29**	**42**	PFAKE		00 10 30.0	+13
MNTX				LR	LR		
	comp=Z,1μm,21.0s						
U32A	**Winter Ranch,**	**108.42**	**34**	PFAKE		00 10 30.0	+12
U32A				LR	LR		
	comp=Z,1μm,19.0s						
I49A	**Point Hope**	**108.59**	**19**	PFAKE		00 10 30.0	+12
I49A				LR	LR		
	comp=Z,1μm,18.0s						
J47A	**Sunmer**	**108.61**	**21**	PFAKE		00 10 30.0	+12
J47A				LR	LR		
	comp=Z,1μm,21.0s						
N41A	**Harden Midland**	**108.64**	**26**	PFAKE		00 10 30.0	+12
N41A				LR	LR		
	comp=Z,2μm,18.0s						
J48A	**Bridge Port**	**108.88**	**20**	PFAKE		00 10 30.0	+12
J48A				LR	LR		
	comp=Z,2μm,22.0s						
PQI	**Presque Isle**	**109.06**	**7**	PFAKE		00 10 30.0	+12
PQI				LR	LR		
	comp=Z,3μm,20.0s						
PLVO	**Plevna**	**109.07**	**14**	PFAKE		00 10 30.0	+12
PLVO				LR	LR		
	comp=Z,2μm,19.0s						
M44A	**Midewin, Midew**	**109.14**	**24**	PFAKE		00 10 30.0	+11
M44A				LR	LR		
	comp=Z,1μm,19.0s						
L46A	**Eue Claire**	**109.21**	**22**	PFAKE		00 10 30.0	+11
L46A				LR	LR		
	comp=Z,1μm,18.0s						
HDIL	**Hopedale**	**109.39**	**25**	PFAKE		00 10 30.0	+11
HDIL				LR	LR		
	comp=Z,1μm,19.0s						
DELO	**Deloro Mine**	**109.44**	**15**	PFAKE		00 10 30.0	+11
DELO				LR	LR		
	comp=Z,2μm,20.0s						
K50A	**Casco**	**109.71**	**19**	PFAKE		00 10 30.0	+10
K50A				LR	LR		
	comp=Z,2μm,19.0s						
M46A	**Old House Fiel**	**109.73**	**22**	PFAKE		00 10 30.0	+10
M46A				LR	LR		
	comp=Z,2μm,18.0s						
WMOK	**Wichita Mounta**	**109.80**	**35**	PFAKE		00 10 30.0	+10
WMOK				LR	LR		
	comp=Z,1μm,18.0s						
AAM	**Ann Arbor**	**109.82**	**20**	PFAKE		00 10 30.0	+10
AAM				LR	LR		
	comp=Z,2μm,22.0s						
FRNY	**Flat Rock**	**109.99**	**12**	PFAKE		00 10 30.0	+10
FRNY				LR	LR		
	comp=Z,1μm,18.0s						
LONY	**Lake Ozonia**	**110.00**	**13**	PFAKE		00 10 30.0	+10
LONY				LR	LR		
	comp=Z,2μm,20.0s						
RKT	**Rikitea**	**110.12**	**107**	*e*LR	LR	00 42 52.2	
	comp=Z,2μm,23.8s						
PECO	**Prince Edward**	**110.13**	**15**	PFAKE		00 10 30.0	+10
PECO				LR	LR		
	comp=Z,2μm,19.0s						
M48A	**Edgerton**	**110.22**	**21**	PFAKE		00 10 30.0	+9.3
M48A				LR	LR		
	comp=Z,2μm,18.0s						
PKME	**Peaks-Kenny Pk**	**110.27**	**9**	PFAKE		00 10 30.0	+9.3
PKME				LR	LR		
	comp=Z,2μm,19.0s						
J54A	**Appleton**	**110.36**	**16**	PFAKE		00 10 30.0	+9.1
J54A				LR	LR		
	comp=Z,2μm,20.0s						
SFIN	**Lafayette**	**110.37**	**24**	PFAKE		00 10 30.0	+9.0
SFIN				LR	LR		
	comp=Z,1μm,19.0s						
TUL1	**Leonard**	**110.40**	**32**	PFAKE		00 10 30.0	+8.7
TUL1				LR	LR		
	comp=Z,1μm,18.0s						
MEDO	**Medina**	**110.50**	**16**	PFAKE		00 10 30.0	+8.8
MEDO				LR	LR		
	comp=Z,2μm,19.0s						
TSUM	**Tsumeb**	**110.55**	**258**	PFAKE		00 10 30.0	+8.0
TSUM				LR	LR		
	comp=Z,1μm,19.0s						
J55A	**Hilton**	**110.57**	**16**	PFAKE		00 10 30.0	+8.7
J55A				LR	LR		
	comp=Z,2μm,20.0s						
VT1	**Waterbury**	**110.63**	**11**	PFAKE		00 10 30.0	+8.5
VT1				LR	LR		
	comp=Z,2μm,21.0s						
SLM	**Saint Louis**	**110.65**	**27**	PFAKE		00 10 30.0	+8.4
SLM				LR	LR		
	comp=Z,900nm,18.0s						
NCB	**Newcomb**	**110.70**	**13**	PFAKE		00 10 30.0	+8.4
NCB				LR	LR		
	comp=Z,2μm,18.0s						
CCM	**Cathedral Cave**	**110.72**	**28**	PFAKE		00 10 30.0	+8.2
CCM				LR	LR		
	comp=Z,1μm,19.0s						
M50A	**Fremont**	**110.83**	**20**	PFAKE		00 10 30.0	+8.1
M50A				LR	LR		
	comp=Z,1μm,22.0s						
M50A	**Fremont**	**110.83**	**20**	P	**PKiKP**	**00 10 21.1**	**-0.8**
	baz=335						
GBN	**Guysborough**	**110.85**	**3**	PFAKE		00 10 30.0	+8.2
GBN				LR	LR		
	comp=Z,2μm,21.0s						
LBNH	**Lisbon**	**110.87**	**11**	PFAKE		00 10 30.0	+8.1
LBNH				LR	LR		
	comp=Z,2μm,20.0s						
LBNH	**Lisbon**	**110.87**	**11**	P	**PKiKP**	**00 10 21.5**	**-0.4**
	baz=346						
P45A	**Graceland, Par**	**110.87**	**24**	PFAKE		00 10 30.0	+8.0
P45A				LR	LR		
	comp=Z,1μm,18.0s						
N49A	**Columbus Grove**	**110.90**	**21**	PFAKE		00 10 30.0	+8.0
N49A				LR	LR		
	comp=Z,2μm,21.0s						
WVL	**Waterville**	**110.91**	**9**	PFAKE		00 10 30.0	+8.1
WVL				LR	LR		
	comp=Z,2μm,20.0s						
ABTX	**Abilene, Hawle**	**110.95**	**37**	PFAKE		00 10 30.0	+7.6
ABTX				LR	LR		
	comp=Z,1μm,19.0s						
K54A	**Basiliko Farm,**	**110.97**	**16**	P	**PKiKP**	**00 10 21.6**	**-0.6**
	baz=340						
HHAR	**Hobbs**	**110.98**	**31**	PFAKE		00 10 30.0	+7.6
HHAR				LR	LR		
	comp=Z,2μm,18.0s						
MMNY	**Mt. Morris Dam**	**111.05**	**16**	PFAKE		00 10 30.0	+7.7
MMNY				LR	LR		
	comp=Z,2μm,19.0s						
EMMW	**East Machias**	**111.05**	**7**	PFAKE		00 10 30.0	+7.8
EMMW				LR	LR		
	comp=Z,2μm,20.0s						
O48A	**Farmland**	**111.16**	**22**	P	**PKiKP**	**00 10 21.9**	**-0.7**
	baz=333						
TOC2	**Torodi Ar. Sit**	**111.17**	**296**	PFAKE		00 10 30.0	+6.8
TOC2				LR	LR		
	comp=Z,1μm,21.0s						
TOC1	**Torodi Ar. Sit**	**111.18**	**296**	PFAKE		00 10 30.0	+6.8
TOC1				LR	LR		
	comp=Z,2μm,21.0s						
TOC3	**Torodi Ar. Sit**	**111.18**	**296**	PFAKE		00 10 30.0	+6.8
TOC3				LR	LR		
	comp=Z,1μm,20.0s						
TOB3	**Torodi Ar. Sit**	**111.19**	**296**	PFAKE		00 10 30.0	+6.8
TOB3				LR	LR		
	comp=Z,1μm,21.0s						
TOA0	**Torodi Ar. Sit**	**111.20**	**296**	PFAKE		00 10 30.0	+6.8
TOA0				LR	LR		
	comp=Z,1μm,20.0s						
TOC7	**Torodi Ar. Sit**	**111.20**	**296**	PFAKE		00 10 30.0	+6.7
TOC7				LR	LR		
	comp=Z,1μm,21.0s						
TOB5	**Torodi Ar. Sit**	**111.20**	**296**	PFAKE		00 10 30.0	+6.7
TOB5				LR	LR		
	comp=Z,1μm,20.0s						
TOC4	**Torodi Ar. Sit**	**111.21**	**296**	PFAKE		00 10 30.0	+6.7
TOC4				LR	LR		
	comp=Z,1μm,20.0s						
TOB4	**Torodi Ar. Sit**	**111.21**	**296**	PFAKE		00 10 30.0	+6.7
TOB4				LR	LR		
	comp=Z,1μm,20.0s						
M52A	**Chesterland**	**111.22**	**19**	PFAKE		00 10 30.0	+7.3
M52A				LR	LR		
	comp=Z,2μm,18.0s						
M52A	**Chesterland**	**111.22**	**19**	P	**PKiKP**	**00 10 21.8**	**-0.8**
	baz=337						
TOC5	**Torodi Ar. Sit**	**111.22**	**296**	PFAKE		00 10 30.0	+6.7
TOC5				LR	LR		
	comp=Z,1μm,20.0s						
HNH	**Hanover**	**111.32**	**11**	PFAKE		00 10 30.0	+7.2
HNH				LR	LR		
	comp=Z,2μm,20.0s						
N50A	**Nevada**	**111.37**	**20**	P	**PKiKP**	**00 10 22.2**	**-0.7**
	baz=335						
ACCN	**Adirondack Com**	**111.37**	**12**	PFAKE		00 10 30.0	+7.1
ACCN				LR	LR		
	comp=Z,2μm,21.0s						
OLIL	**Olney**	**111.42**	**25**	PFAKE		00 10 30.0	+6.9
OLIL				LR	LR		
	comp=Z,1μm,19.0s						
N51A	**Ashland**	**111.48**	**20**	PFAKE		00 10 30.0	+6.8
N51A				LR	LR		
	comp=Z,2μm,20.0s						
CMLA	**Cha da Macela**	**111.50**	**333**	PFAKE		00 10 30.0	+6.7
CMLA				LR	LR		
	comp=Z,2μm,21.0s						
O49A	**Covington**	**111.51**	**22**	PFAKE		00 10 30.0	+6.8
O49A				LR	LR		
	comp=Z,1μm,22.0s						
PMOZ	**Porto Moniz, M**	**111.53**	**324**	*e*PP	**PP**	**00 11 08.9**	**+5.0**
PMOZ	**Porto Moniz, M**	**111.53**	**324**	*e*LR	LR	00 51 10.6	
	comp=Z,1μm,18.0s						
BLO	**Bloomington**	**111.64**	**24**	PFAKE		00 10 40.0	+16
BLO				LR	LR		
	comp=Z,1μm,18.0s						
FFD	**Franklin Falls**	**111.66**	**11**	PFAKE		00 10 30.0	+6.6
FFD				LR	LR		
	comp=Z,2μm,20.0s						
M54A	**Oil Creek Stat**	**111.73**	**18**	PFAKE		00 10 40.0	+16
M54A				LR	LR		
	comp=Z,1μm,20.0s						
P48A	**Milroy**	**111.78**	**23**	PFAKE		00 10 40.0	+16
P48A				LR	LR		
	comp=Z,1μm,19.0s						
ACSO	**Alum Creek Sta**	**111.91**	**21**	PFAKE		00 10 40.0	+16
ACSO				LR	LR		
	comp=Z,1μm,19.0s						
W39A	**Magazine**	**111.94**	**31**	PFAKE		00 10 40.0	+16
W39A				LR	LR		
	comp=Z,1μm,18.0s						
TRY	**Troy**	**112.00**	**13**	PFAKE		00 10 40.0	+16
TRY				LR	LR		
	comp=Z,2μm,20.0s						
BINY	**Binghamton**	**112.01**	**15**	PFAKE		00 10 40.0	+16
BINY				LR	LR		
	comp=Z,2μm,21.0s						
BINY	**Binghamton**	**112.01**	**15**	P	**PKiKP**	**00 10 23.5**	**-0.6**
	baz=342						
N53A	**Lisbon**	**112.05**	**19**	PFAKE		00 10 40.0	+16
N53A				LR	LR		
	comp=Z,1μm,20.0s						
FCAR	**Ozark Folk Cen**	**112.14**	**30**	PFAKE		00 10 40.0	+15
FCAR				LR	LR		
	comp=Z,1μm,18.0s						
PBMO	**Poplar Bluff**	**112.14**	**28**	PFAKE		00 10 40.0	+15
PBMO				LR	LR		
	comp=Z,1μm,19.0s						
N54A	**Moraine State**	**112.15**	**18**	PFAKE		00 10 40.0	+16
N54A				LR	LR		
	comp=Z,2μm,20.0s						
USIN	**University of**	**112.26**	**25**	PFAKE		00 10 40.0	+15
USIN				LR	LR		
	comp=Z,1μm,20.0s						
O52A	**Adamsville**	**112.38**	**20**	PFAKE		00 10 40.0	+15
O52A				LR	LR		
	comp=Z,1μm,18.0s						
JCT	**Junction City**	**112.47**	**39**	PFAKE		00 10 40.0	+15
JCT				LR	LR		
	comp=Z,1μm,22.0s						
PARMO	**Parma**	**112.53**	**27**	PFAKE		00 10 40.0	+15
PARMO				LR	LR		
	comp=Z,1μm,20.0s						
WCI	**Wyandotte Cave**	**112.55**	**24**	PFAKE		00 10 40.0	+15
WCI				LR	LR		
	comp=Z,1μm,19.0s						
WHAR	**Wooly Hollow**	**112.56**	**30**	PFAKE		00 10 40.0	+15
WHAR				LR	LR		
	comp=Z,1μm,18.0s						
P51A	**Williamsport**	**112.57**	**21**	PFAKE		00 10 40.0	+15
P51A				LR	LR		
	comp=Z,1μm,21.0s						
MIAR	**Mount Ida**	**112.57**	**32**	PFAKE		00 10 40.0	+15
MIAR				LR	LR		
	comp=Z,1μm,18.0s						
N55A	**Marion Center**	**112.59**	**17**	PFAKE		00 10 40.0	+15
N55A				LR	LR		
	comp=Z,1μm,18.0s						
HRV	**Adam Dziewonsk**	**112.61**	**11**	PFAKE		00 10 40.0	+15
HRV				LR	LR		
	comp=Z,2μm,21.0s						
WHTX	**Lake Whitney,**	**112.62**	**36**	PFAKE		00 10 40.0	+14
WHTX				LR	LR		
	comp=Z,900nm,18.0s						
KSPA	**Keystone Colle**	**112.67**	**15**	PFAKE		00 10 40.0	+15
KSPA				LR	LR		
	comp=Z,2μm,20.0s						
W41B	**Gary Mavity, V**	**112.68**	**30**	PFAKE		00 10 40.0	+14
W41B				LR	LR		
	comp=Z,1μm,18.0s						
T45A	**Paducah**	**112.69**	**26**	PFAKE		00 10 40.0	+14
T45A				LR	LR		
	comp=Z,1μm,18.0s						
QUA2	**Belchertown**	**112.69**	**12**	PFAKE		00 10 40.0	+15
QUA2				LR	LR		
	comp=Z,2μm,19.0s						
PVMO	**Portageville**	**112.77**	**28**	PFAKE		00 10 40.0	+14
PVMO				LR	LR		
	comp=Z,1μm,20.0s						
WES	**Weston**	**112.77**	**11**	PFAKE		00 10 40.0	+14
WES				LR	LR		
	comp=Z,2μm,20.0s						
Q51A	**Peebles**	**112.88**	**21**	PFAKE		00 10 40.0	+14
Q51A				LR	LR		
	comp=Z,2μm,20.0s						
R49A	**Shelbyville**	**112.91**	**23**	PFAKE		00 10 40.0	+14
R49A				LR	LR		

	comp=Z,1μm,19.0s							
UALR	**University of**	**112.96**	**31**	PFAKE			00 10 40.0	+14
UALR				LR	LR			
	comp=Z,2μm,19.0s							
X40A	**Basin Creek Fa**	**112.97**	**31**	PFAKE			00 10 40.0	+14
X40A				LR	LR			
	comp=Z,1μm,19.0s							
KSCT	**Kent School, K**	**113.00**	**13**	PFAKE			00 10 40.0	+14
KSCT				LR	LR			
	comp=Z,2μm,19.0s							
GNAR	**Gosnell**	**113.01**	**28**	PFAKE			00 10 40.0	+14
GNAR				LR	LR			
	comp=Z,900nm,19.0s							
SSPA	**Standing Stone**	**113.02**	**17**	PFAKE			00 10 40.0	+14
SSPA				LR	LR			
	comp=Z,2μm,20.0s							
GLAT	**Glass**	**113.06**	**27**	PFAKE			00 10 40.0	+14
GLAT				LR	LR			
	comp=Z,2μm,19.0s							
HBAR	**Harrisburg**	**113.08**	**29**	PFAKE			00 10 40.0	+14
HBAR				LR	LR			
	comp=Z,1μm,19.0s							
P53A	**Whipple**	**113.09**	**20**	PFAKE			00 10 40.0	+14
P53A				LR	LR			
	comp=Z,2μm,19.0s							
BRYW	**Bryant College**	**113.19**	**11**	PFAKE			00 10 40.0	+14
BRYW				LR	LR			
	comp=Z,2μm,20.0s							
O56A	**Blue Knob Stat**	**113.19**	**17**	PFAKE			00 10 40.0	+14
O56A				LR	LR			
	comp=Z,1μm,19.0s							
O56A	**Blue Knob Stat**	**113.19**	**17**	P	**PKiKP**		**00 10 26.0**	**-0.5**
	baz=339							
R50A	**Paris**	**113.22**	**23**	PFAKE			00 10 40.0	+13
R50A				LR	LR			
	comp=Z,1μm,22.0s							
N59A	**State Game Lan**	**113.28**	**15**	PFAKE			00 10 40.0	+13
N59A				LR	LR			
	comp=Z,2μm,18.0s							
N59A	**State Game Lan**	**113.28**	**15**	P	**PKiKP**		**00 10 26.3**	**-0.3**
	baz=342							
T47A	**Sharon Grove**	**113.33**	**25**	PFAKE			00 10 40.0	+13
T47A				LR	LR			
	comp=Z,1μm,20.0s							
HALT	**Halls**	**113.35**	**28**	PFAKE			00 10 40.0	+13
HALT				LR	LR			
	comp=Z,1μm,19.0s							
ODNJ	**Ogdensburg**	**113.39**	**14**	PFAKE			00 10 40.0	+13
ODNJ				LR	LR			
	comp=Z,2μm,21.0s							
MCWV	**Mont Chateau**	**113.40**	**18**	PFAKE			00 10 40.0	+13
MCWV				LR	LR			
	comp=Z,800nm,18.0s							
N60A	**Cedar Hill Far**	**113.48**	**14**	P	**PKiKP**		**00 10 26.2**	**-0.7**
	baz=343							
435B	**Jarrell**	**113.48**	**37**	PFAKE			00 10 40.0	+13
435B				LR	LR			
	comp=Z,1μm,20.0s							
WLAR	**White Oak Lake**	**113.49**	**32**	PFAKE			00 10 40.0	+13
WLAR				LR	LR			
	comp=Z,1μm,20.0s							
YLE	**Yale**	**113.51**	**12**	PFAKE			00 10 40.0	+13
YLE				LR	LR			
	comp=Z,2μm,19.0s							
PAL	**Palisades**	**113.61**	**13**	PFAKE			00 10 40.0	+13
PAL				LR	LR			
	comp=Z,2μm,20.0s							
LUPA	**Lehigh Univers**	**113.68**	**15**	PFAKE			00 10 40.0	+13
LUPA				LR	LR			
	comp=Z,200nm,21.0s							
PAGS	**Pennsylvania G**	**113.70**	**16**	PFAKE			00 10 40.0	+13
PAGS				LR	LR			
	comp=Z,2μm,20.0s							
Q54A	**Coxs Mills**	**113.72**	**20**	PFAKE			00 10 40.0	+13
Q54A				LR	LR			
	comp=Z,2μm,19.0s							
S50A	**Richmond**	**113.73**	**23**	P	**PKiKP**		**00 10 27.1**	**-0.5**
	baz=334							
MET	**Memphis--Engin**	**113.76**	**28**	PFAKE			00 10 40.0	+12
MET				LR	LR			
	comp=Z,1μm,18.0s							
BRNJ	**Basking Ridge**	**113.78**	**14**	PFAKE			00 10 40.0	+12
BRNJ				LR	LR			
	comp=Z,2μm,21.0s							
WVT	**Waverly**	**113.78**	**26**	PFAKE			00 10 40.0	+12
WVT				LR	LR			
	comp=Z,1μm,20.0s							
QSPA	**South Pole Qui**	**113.79**	**180**	PFAKE			00 10 40.0	+13
QSPA				LR	LR			
	comp=Z,700nm,20.0s							
T49A	**Edmonton**	**113.83**	**24**	PFAKE			00 10 40.0	+12
T49A				LR	LR			
	comp=Z,1μm,19.0s							
X43A	**Marvell**	**113.85**	**30**	PFAKE			00 10 40.0	+12
X43A				LR	LR			
	comp=Z,1μm,19.0s							
CCAR	**Cane Creek**	**113.94**	**31**	PFAKE			00 10 40.0	+12
CCAR				LR	LR			
	comp=Z,2μm,20.0s							
R53A	**Hurricane**	**113.97**	**21**	PFAKE			00 10 40.0	+12
R53A				LR	LR			
	comp=Z,1μm,18.0s							
Z41A	**Richland Creek**	**113.99**	**32**	PFAKE			00 10 40.0	+12
Z41A				LR	LR			
	comp=Z,1μm,20.0s							
S51A	**Beattyville**	**114.05**	**22**	PFAKE			00 10 40.0	+12
S51A				LR	LR			
	comp=Z,2μm,22.0s							
NATX	**Nacogdoches**	**114.27**	**34**	PFAKE			00 10 40.0	+11
NATX				LR	LR			
	comp=Z,1μm,19.0s							
ETX06	**Route 59 and C**	**114.29**	**34**	PFAKE			00 10 40.0	+11
ETX06				LR	LR			
	comp=Z,600nm,19.0s							
PSUB	**Penn St. - Bra**	**114.30**	**15**	PFAKE			00 10 40.0	+11
PSUB				LR	LR			
	comp=Z,2μm,19.0s							
833A	**Chaparral WMA,**	**114.31**	**40**	PFAKE			00 10 40.0	+11
833A				LR	LR			
	comp=Z,1μm,18.0s							
CLTN	**Cedars of Leba**	**114.41**	**25**	PFAKE			00 10 40.0	+11
CLTN				LR	LR			
	comp=Z,800nm,20.0s							
R54A	**Victor**	**114.41**	**20**	P	**PKiKP**		**00 10 28.5**	**-0.4**
	baz=337							
SDMD	**Soldier's Deli**	**114.45**	**16**	PFAKE			00 10 40.0	+11
SDMD				LR	LR			
	comp=Z,1μm,19.0s							
OXF	**Oxford**	**114.50**	**28**	PFAKE			00 10 40.0	+11
OXF				LR	LR			
	comp=Z,900nm,18.0s							
S53A	**Williamson**	**114.50**	**21**	P	**PKiKP**		**00 10 28.3**	**-0.7**
	baz=336							
V48A	**Smith Brothers**	**114.53**	**26**	PFAKE			00 10 40.0	+11
V48A				LR	LR			
	comp=Z,1μm,19.0s							
R55A	**Marlinton**	**114.59**	**19**	PFAKE			00 10 40.0	+11
R55A				LR	LR			
	comp=Z,1μm,20.0s							
PLAL	**Pickwick Lake**	**114.67**	**27**	PFAKE			00 10 40.0	+11
PLAL				LR	LR			
	comp=Z,1μm,19.0s							
U50A	**Jamestown**	**114.69**	**24**	P	**PKiKP**		**00 10 28.8**	**-0.6**
	baz=333							
T52A	**Hallie**	**114.73**	**22**	PFAKE			00 10 40.0	+10
T52A				LR	LR			
	comp=Z,1μm,20.0s							
R57A	**Stanardsville**	**115.04**	**18**	P	**PKiKP**		**00 10 29.2**	**-0.8**
	baz=339							
TZTN	**Tazewell**	**115.05**	**23**	PFAKE			00 10 40.0	+10
TZTN				LR	LR			
	comp=Z,1μm,18.0s							
HKT	**Hockley**	**115.08**	**36**	PFAKE			00 10 40.0	+10
HKT				LR	LR			
	comp=Z,1μm,18.0s							
SWET	**Sewanee**	**115.33**	**25**	PFAKE			00 10 40.0	+9.2
SWET				LR	LR			
	comp=Z,1μm,18.0s							
S57A	**Dark Hollow, R**	**115.42**	**19**	PFAKE			00 10 40.0	+9.2
S57A				LR	LR			
	comp=Z,1μm,19.0s							
V51A	**Loudon**	**115.42**	**24**	PFAKE			00 10 40.0	+9.2
V51A				LR	LR			
	comp=Z,1μm,20.0s							
CBN	**Corbin Frederi**	**115.44**	**17**	PFAKE			00 10 40.0	+9.2
CBN				LR	LR			
	comp=Z,2μm,19.0s							
BLA	**Blacksburg**	**115.48**	**20**	PFAKE			00 10 40.0	+9.0
BLA				LR	LR			
	comp=Z,2μm,18.0s							
R58B	**Mineral**	**115.53**	**18**	PFAKE			00 10 40.0	+9.0
R58B				LR	LR			
	comp=Z,2μm,20.0s							
R58B	**Mineral**	**115.53**	**18**	P	**PKiKP**		**00 10 30.6**	**-0.3**
	baz=340							
X48A	**Hartselle**	**115.56**	**27**	PFAKE			00 10 40.0	+8.9
X48A				LR	LR			
	comp=Z,1μm,19.0s							
X48A	**Hartselle**	**115.56**	**27**	P	**PKiKP**		**00 10 29.6**	**-1.5**
	baz=330							
W50A	**Signal Mountai**	**115.59**	**25**	PFAKE			00 10 40.0	+8.8
W50A				LR	LR			
	comp=Z,1μm,20.0s							
V52A	**Sevierville**	**115.66**	**23**	PFAKE			00 10 40.0	+8.7
V52A				LR	LR			
	comp=Z,1μm,18.0s							
V52A	**Sevierville**	**115.66**	**23**	P	**PKiKP**		**00 10 30.7**	**-0.6**
	baz=334							
U54A	**Nelsons Funny**	**115.66**	**21**	PFAKE			00 10 40.0	+8.6
U54A				LR	LR			
	comp=Z,1μm,22.0s							
CPCT	**Cooper Cave**	**115.67**	**24**	PFAKE			00 10 40.0	+8.7
CPCT				LR	LR			
	comp=Z,1μm,18.0s							
X49A	**Woodville**	**115.79**	**26**	P	**PKiKP**		**00 10 30.5**	**-1.1**
	baz=331							
S58A	**Poland Farm, P**	**115.81**	**18**	PFAKE			00 10 40.0	+8.5
S58A				LR	LR			
	comp=Z,2μm,20.0s							
VBMS	**Vicksburg**	**115.93**	**31**	PFAKE			00 10 40.0	+8.1
VBMS				LR	LR			
	comp=Z,1μm,19.0s							
T57A	**Hurt**	**116.03**	**19**	PFAKE			00 10 40.0	+8.0
T57A				LR	LR			
	comp=Z,2μm,19.0s							
V53A	**Saluda**	**116.09**	**23**	PFAKE			00 10 40.0	+7.8
V53A				LR	LR			
	comp=Z,2μm,22.0s							
W52A	**Murphy**	**116.20**	**24**	PFAKE			00 10 40.0	+7.6
W52A				LR	LR			
	comp=Z,1μm,22.0s							
ZAIG	**Zacatecas**	**116.31**	**47**	PFAKE			00 10 40.0	+6.8
ZAIG				LR	LR			
	comp=Z,1μm,19.0s							
X51A	**Calhoun**	**116.32**	**25**	PFAKE			00 10 40.0	+7.4
X51A				LR	LR			
	comp=Z,1μm,18.0s							
Y49A	**Blount Mountai**	**116.33**	**26**	PFAKE			00 10 40.0	+7.3
Y49A				LR	LR			
	comp=Z,1μm,20.0s							
S61A	**Accomac**	**116.38**	**16**	PFAKE			00 10 40.0	+7.4
S61A				LR	LR			
	comp=Z,2μm,18.0s							
W53A	**Cullowhee**	**116.42**	**23**	P	**PKiKP**		**00 10 32.2**	**-0.7**
	baz=334							
T59A	**Double "B" Far**	**116.55**	**18**	PFAKE			00 10 40.0	+7.0
T59A				LR	LR			
	comp=Z,2μm,20.0s							
T60A	**Surry**	**116.61**	**17**	PFAKE			00 10 40.0	+6.9
T60A				LR	LR			
	comp=Z,2μm,19.0s							
BG3	**Lake Jocassee**	**116.66**	**23**	PFAKE			00 10 40.0	+6.7
BG3				LR	LR			
	comp=Z,800nm,20.0s							
V56A	**Mocksville**	**116.74**	**21**	PFAKE			00 10 40.0	+6.6
V56A				LR	LR			
	comp=Z,2μm,19.0s							
LNIG	**Linares**	**116.78**	**43**	PFAKE			00 10 50.0	+16
LNIG				LR	LR			
	comp=Z,600nm,21.0s							
LRAL	**Lakeview Retre**	**116.80**	**27**	PFAKE			00 10 50.0	+16
LRAL				LR	LR			
	comp=Z,1μm,19.0s							
Z50A	**Ashland**	**117.05**	**26**	PFAKE			00 10 50.0	+16
Z50A				LR	LR			
	comp=Z,1μm,20.0s							
U59A	**Littleton**	**117.06**	**18**	PFAKE			00 10 50.0	+16
U59A				LR	LR			
	comp=Z,2μm,20.0s							
KMSC	**Kings Mountain**	**117.08**	**22**	PFAKE			00 10 50.0	+16
KMSC				LR	LR			
	comp=Z,2μm,21.0s							
PAULI	**Pauline**	**117.20**	**22**	PFAKE			00 10 50.0	+16
PAULI				LR	LR			
	comp=Z,2μm,19.0s							
Y52A	**Lilburn**	**117.25**	**25**	PFAKE			00 10 50.0	+16
Y52A				LR	LR			
	comp=Z,1μm,20.0s							
U61A	**Possum Corner**	**117.45**	**17**	PFAKE			00 10 50.0	+15
U61A				LR	LR			
	comp=Z,2μm,19.0s							
W57A	**Gilead**	**117.51**	**20**	PFAKE			00 10 50.0	+15
W57A				LR	LR			
	comp=Z,2μm,18.0s							
HODGE	**Hodges**	**117.58**	**23**	PFAKE			00 10 50.0	+15
HODGE				LR	LR			
	comp=Z,1μm,20.0s							
V60A	**Jim Taylor Roa**	**117.76**	**18**	PFAKE			00 10 50.0	+15
V60A				LR	LR			
	comp=Z,2μm,18.0s							
BIRD	**Birdtown, Kers**	**117.82**	**21**	PFAKE			00 10 50.0	+15
BIRD				LR	LR			
	comp=Z,2μm,18.0s							
GOGA	**Godfrey**	**117.88**	**24**	PFAKE			00 10 50.0	+14
GOGA				LR	LR			
	comp=Z,2μm,21.0s							
JSC	**Jenkinsville**	**117.88**	**22**	PFAKE			00 10 50.0	+14
JSC				LR	LR			
	comp=Z,2μm,22.0s							
V61A	**Roper**	**117.92**	**17**	PFAKE			00 10 50.0	+14
V61A				LR	LR			
	comp=Z,2μm,19.0s							
250A	**Grady**	**118.02**	**27**	PFAKE			00 10 50.0	+14
250A				LR	LR			
	comp=Z,900nm,20.0s							
152A	**Waverly Hall**	**118.05**	**26**	PFAKE			00 10 50.0	+14
152A				LR	LR			
	comp=Z,1μm,19.0s							
152A	**Waverly Hall**	**118.05**	**26**	P	**PKPdf**		**00 10 34.6**	**-1.4**
	baz=332							
CNNC	**Cliffs of the**	**118.07**	**19**	PFAKE			00 10 50.0	+14
CNNC				LR	LR			
	comp=Z,1μm,19.0s							
X58A	**Rowland**	**118.27**	**20**	PFAKE			00 10 50.0	+14
X58A				LR	LR			
	comp=Z,2μm,20.0s							
V62A	**Hyde County Ai**	**118.31**	**17**	P	**PKPdf**		**00 10 36.1**	**-0.3**
	baz=341							
BRAL	**Brewton**	**118.38**	**28**	PFAKE			00 10 50.0	+13
BRAL				LR	LR			
	comp=Z,2μm,19.0s							
Y57A	**Sumter**	**118.42**	**21**	PFAKE			00 10 50.0	+13
Y57A				LR	LR			
	comp=Z,2μm,18.0s							
154A	**Montrose**	**118.72**	**24**	PFAKE			00 10 50.0	+13
154A				LR	LR			
	comp=Z,2μm,18.0s							
Y58A	**Scranton**	**118.76**	**21**	PFAKE			00 10 50.0	+13
Y58A				LR	LR			
	comp=Z,2μm,18.0s							
253A	**Americus**	**118.82**	**26**	PFAKE			00 10 50.0	+12
253A				LR	LR			
	comp=Z,2μm,19.0s							
352A	**Blakely**	**119.01**	**27**	PFAKE			00 10 50.0	+12
352A				LR	LR			
	comp=Z,1μm,21.0s							
Y60A	**Bolivia**	**119.12**	**19**	PFAKE			00 10 50.0	+12
Y60A				LR	LR			
	comp=Z,2μm,19.0s							
NHSC	**New Hope**	**119.32**	**22**	PFAKE			00 10 50.0	+12
NHSC				LR	LR			
	comp=Z,2μm,19.0s							
451A	**Vernon**	**119.42**	**28**	PFAKE			00 10 50.0	+11
451A				LR	LR			
	comp=Z,1μm,22.0s							
255A	**Hazlehurst**	**119.57**	**24**	PFAKE			00 10 50.0	+11
255A				LR	LR			
	comp=Z,2μm,22.0s							
TIGA	**Tifton**	**119.58**	**25**	PFAKE			00 10 50.0	+11
TIGA				LR	LR			
	comp=Z,1μm,19.0s							
453A	**Whigham**	**119.81**	**26**	PFAKE			00 10 50.0	+11
453A				LR	LR			
	comp=Z,1μm,18.0s							
552A	**Lynn Haven**	**120.03**	**28**	P	**PKPdf**		**00 10 39.1**	**-0.7**
	baz=331							
257A	**Skidaway Islan**	**120.06**	**23**	PFAKE			00 10 50.0	+10
257A				LR	LR			
	comp=Z,2μm,20.0s							
356A	**Blackshear**	**120.24**	**24**	P	**PKPdf**		**00 10 39.6**	**-0.6**
	baz=334							
456A	**Hilliard**	**120.82**	**24**	PFAKE			00 10 50.0	+8.6
456A				LR	LR			
	comp=Z,2μm,22.0s							
555A	**McAlpin**	**121.00**	**26**	PFAKE			00 10 50.0	+8.2
555A				LR	LR			
	comp=Z,1μm,20.0s							
656A	**Willston**	**121.83**	**26**	PFAKE			00 10 50.0	+6.5
656A				LR	LR			
	comp=Z,1μm,18.0s							
658A	**Bunnell**	**122.28**	**24**	PFAKE			00 11 00.0	+16
658A				LR	LR			
	comp=Z,2μm,21.0s							
SNAA	**Sanae**	**123.36**	**198**	P	**PKPdf**		**00 10 43.9**	**-1.1**
SNAA	**Sanae**	**123.36**	**198**	PFAKE			00 11 00.0	+15
SNAA				LR	LR			
	comp=Z,600nm,20.0s							
DWPF	**Disney Wildern**	**123.39**	**25**	PFAKE			00 11 00.0	+13
DWPF				LR	LR			
	comp=Z,1μm,18.0s							
957A	**Wimauma**	**123.46**	**26**	PFAKE			00 11 00.0	+13
957A				LR	LR			
	comp=Z,2μm,20.0s							
BBSR	**BB Station**	**123.56**	**7**	PFAKE			00 11 00.0	+13
BBSR				LR	LR			
	comp=Z,1μm,21.0s							
059A	**Moore Haven**	**124.52**	**25**	PFAKE			00 11 00.0	+11
059A				LR	LR			
	comp=Z,1μm,20.0s							
060A	**Indiantown**	**124.76**	**25**	PFAKE			00 11 00.0	+11
060A				LR	LR			
	comp=Z,1μm,20.0s							
VNA3	**Neumayer Olymp**	**125.47**	**197**	P	**PKPdf**		**00 10 48.1**	**-0.9**
061Z	**Ochoppi**	**125.60**	**26**	PFAKE			00 11 00.0	+9.0
061Z				LR	LR			
	comp=Z,1μm,18.0s							
CCIG	**Comitan**	**127.75**	**43**	PFAKE			00 11 10.0	+14
CCIG				LR	LR			
	comp=Z,800nm,21.0s							
SACV	**Santiago Islan**	**128.89**	**316**	PFAKE			00 11 10.0	+12
SACV				LR	LR			
	comp=Z,2μm,18.0s							
TGUH	**Tegucigalpa,Un**	**132.43**	**40**	PFAKE			00 11 20.0	+15
TGUH				LR	LR			
	comp=Z,700nm,19.0s							
GRTK	**Grand Turk**	**132.93**	**17**	PFAKE			00 11 20.0	+14
GRTK				LR	LR			
	comp=Z,1μm,20.0s							
GTBY	**Guantanamo Bay**	**133.18**	**23**	PFAKE			00 11 20.0	+14
GTBY				LR	LR			
	comp=Z,1μm,20.0s							
MTDJ	**Mount Denham**	**133.81**	**26**	PFAKE			00 11 20.0	+12
MTDJ				LR	LR			
	comp=Z,1μm,21.0s							
SDDR	**Presa de Saban**	**135.29**	**18**	PFAKE			00 11 20.0	+9.2
SDDR				LR	LR			
	comp=Z,2μm,22.0s							
ESPN	**Las Esperanzas**	**135.64**	**39**	PFAKE			00 11 20.0	+8.5
ESPN				LR	LR			
	comp=Z,700nm,19.0s							
JTS	**Las Juntas de**	**136.78**	**41**	PFAKE			00 11 20.0	+6.1
JTS				LR	LR			
	comp=Z,900nm,22.0s							
SJG	**San Juan**	**137.35**	**12**	PFAKE			00 11 20.0	+5.1
SJG				LR	LR			
	comp=Z,900nm,21.0s							
ICMP	**Isla Caja de M**	**137.50**	**12**	PFAKE			00 11 30.0	+15
ICMP				LR	LR			
	comp=Z,300nm,18.0s							
SMRT	**St. Maarten**	**137.89**	**8**	PFAKE			00 11 30.0	+14
SMRT				LR	LR			
	comp=Z,700nm,20.0s							
SABA	**Saba**	**138.29**	**8**	PFAKE			00 11 30.0	+13
SABA				LR	LR			
	comp=Z,800nm,20.0s							
ANWB	**Willy Bob**	**138.40**	**6**	PFAKE			00 11 30.0	+13
ANWB				LR	LR			
	comp=Z,500nm,21.0s							
SEUS	**St. Eustatius**	**138.45**	**8**	PFAKE			00 11 30.0	+13
SEUS				LR	LR			
	comp=Z,1μm,20.0s							
SKI	**Saint Kitts**	**138.63**	**7**	PFAKE			00 11 30.0	+12
SKI				LR	LR			
	comp=Z,900nm,20.0s							
BCIP	**Isla Barro Col**	**140.60**	**36**	PFAKE			00 11 30.0	+8.4
BCIP				LR	LR			
	comp=Z,600nm,20.0s							
ZARC	**Zaragoza, Cauc**	**144.52**	**30**	*e*P		**PKPab**	**00 11 22.4**	**-1.9**
SDV	**Santo Domingo**	**144.98**	**23**	PFAKE			00 11 40.0	+9.1
SDV				LR	LR			
	comp=Z,1μm,21.0s							
SDV	**Santo Domingo**	**144.98**	**23**	*e*P		**PKPab**	**00 11 23.6**	**-2.7**
HELC	**Santa Helena**	**145.34**	**32**	*e*P		**PKPbc**	**00 11 25.8**	**-1.8**
BRRC	**Barranca, Sant**	**145.38**	**29**	*e*P		**PKPbc**	**00 11 26.2**	**-1.2**
PTBC	**PUERTO BERRIO**	**145.55**	**30**	*e*P		**PKPdf**	**00 11 26.0**	**-1.8**
PAMC	**Pamplona, Colo**	**145.60**	**27**	*e*P		**PKPdf**	**00 11 27.6**	**-0.9**
PLMC	**San Jos del P**	**146.06**	**35**	*e*P		**PKPdf**	**00 11 28.9**	**+0.1**
BARC	**Barichara**	**146.07**	**28**	*e*P		**PKPdf**	**00 11 28.9**	**-0.1**
NORC	**Norcasia**	**146.21**	**32**	*e*P		**PKPdf**	**00 11 28.1**	**-0.8**
GUY2C	**Guyana, Caldas**	**146.26**	**33**	*e*P		**PKPdf**	**00 11 28.9**	**-0.7**
RREF	**El Recreo**	**146.54**	**33**	*e*P		**PKPdf**	**00 11 29.2**	**-1.1**
RUSC	**La Rusia**	**146.74**	**29**	*e*P		**PKPdf**	**00 11 30.6**	**+0.1**
TAMC	**Tame, Arauca**	**146.79**	**26**	*e*P		**PKPbc**	**00 11 31.2**	**-0.5**
YOTC	**Yotoco, Valle**	**146.81**	**36**	*e*P		**PKPdf**	**00 11 29.6**	**-0.5**
ROSC	**El Rosal**	**147.10**	**32**	PKPbc		**PKPdf**	**00 11 31.5**	**+0.6**
	comp=Z,3.1nm,0.3s,baz=40,slow=2.8,SNR=14							
ROSC	**El Rosal**	**147.10**	**32**	*e*PKPbc		**PKPbc**	**00 11 32.6**	**-0.4**
ROSC	**El Rosal**	**147.10**	**32**	*e*P		**PKPbc**	**00 11 31.9**	**-1.1**
ORTC	**Ortega, Tolima**	**147.44**	**34**	*e*P		**PKPdf**	**00 11 30.7**	**-0.4**
YOPC	**Yopal, Colombi**	**147.51**	**28**	*e*P		**PKPbc**	**00 11 33.5**	**-0.3**
CHIC	**Chingaza**	**147.56**	**31**	*e*P		**PKPdf**	**00 11 31.6**	**-0.1**
PRAC	**Prado**	**147.79**	**33**	*e*P		**PKPdf**	**00 11 31.9**	**+0.2**
POPC	**Popayan, Colom**	**147.83**	**37**	*e*P		**PKPdf**	**00 11 32.4**	**+0.4**
BBAC	**Balboa, Cauca**	**147.93**	**39**	*e*P		**PKPdf**	**00 11 32.9**	**+0.8**
VILC	**Villavicencio,**	**148.03**	**31**	*e*P		**PKPbc**	**00 11 34.2**	**-1.1**
BETC	**Betania**	**148.38**	**35**	*e*P		**PKPbc**	**00 11 34.4**	**-1.7**
CRUC	**La Cruz**	**148.47**	**39**	*e*P		**PKiKP**	**00 11 38.5**	**+0.2**
OTAV	**Otavalo**	**148.63**	**43**	*e*PKPdf		**PKPdf**	**00 11 33.8**	**+0.3**
OTAV				LR	LR			
	comp=Z,800nm,20.0s							
FLOC	**Florencia**	**149.19**	**37**	*e*P		**PKPdf**	**00 11 33.4**	**-0.5**
MACC	**Macarena, Meta**	**149.66**	**33**	*e*P		**PKPdf**	**00 11 34.4**	**-0.3**
RCBR	**Riachuelo**	**152.30**	**307**	PFAKE			00 11 50.0	+4.2
RCBR				LR	LR			
	comp=Z,22μm,22.0s							
PTGA	**Pitinga**	**156.77**	**6**	PFAKE			00 12 00.0	-14
PTGA				LR	LR			
	comp=Z,900nm,20.0s							
LPAZ	**La Paz**	**167.60**	**54**	PKP		**PKPdf**	**00 11 57.2**	**+0.8**
	comp=Z,7.8nm,1.1s,baz=20,slow=2.2,SNR=18							
BDFB	**Brasilia**	**167.64**	**310**	PKPab		**PKPab**	**00 13 01.6**	**-0.3**
	comp=Z,4.8nm,0.8s,baz=36,slow=6.9,SNR=5.5							
BDFB	**Brasilia**	**167.64**	**310**	*e*PKPdf		**PKPdf**	**00 11 56.2**	**+0.4**
BDFB				*e*PKPab		**PKPab**	**00 13 01.6**	**-0.3**

IDC ***29*** *00:00:31.7±0.8, 33.02N×92.78E, h0km, mb3.8/10, mb1 4.0/13, mb1mx3.8/51, mbtmp

0.9nm,0.3s,baz=209,slow=12,SNR=6.5
KURBB **Kurchatov Arra** 20.38 333 P P 00 05 11.6 +0.5
7.9nm,0.9s,baz=143,slow=10,SNR=11
KURK **Kurchatov** 20.42 333 eP P 00 05 11.7 +0.2
15nm,1.0s
BVAR **Borovoye Array** 25.58 327 P P 00 06 04.5 +1.1
3.0nm,0.7s,baz=134,slow=11,SNR=4.6
PEA1 **Petropavlovsk-** 49.32 46 eP P 00 09 24.5 +1.0
PETK **Petropavlovsk-** 49.32 46 P P 00 09 24.5 +1.0
0.8nm,0.7s,baz=228,slow=6.4,SNR=2.2
FIA0 **FINESS Array S** 50.50 325 eP P 00 09 31.7 -0.6
FINES **FINESS Array B** 50.50 325 P P 00 09 31.7 -0.6
0.7nm,0.5s,baz=98,slow=8.0,SNR=10.0
NB2 **NORSAR Subarra** 57.69 325 P P 00 10 23.5 -1.3
comp=Z,3.5nm,1.4s,baz=78,slow=7.4
NB200 **NORSAR Array S** 57.69 325 eP P 00 10 23.4 -1.3
NOA **NORSAR Array B** 57.69 325 P P 00 10 23.4 -1.3
comp=Z,1.0nm,0.8s,baz=78,slow=7.0,SNR=4.5
GEC2 **GERESS Array S** 59.21 311 eP P 00 10 33.9 -1.8
comp=Z,9.9nm,1.8s
GERES **GERESS Array B** 59.21 311 P P 00 10 33.9 -1.8
comp=Z,0.2nm,0.5s,baz=67,slow=7.7,SNR=3.5
WRA **Warramunga Arr** 65.96 137 P P 00 11 19.6 -1.3
comp=Z,1.1nm,0.8s,baz=331,slow=7.1,SNR=2.4
WR1 **Warramunga Arr** 65.96 137 eP P 00 11 19.6 -1.3
ASAR **Alice Springs** 68.69 140 P P 00 11 37.9 -0.3
comp=Z,1.2nm,0.8s,baz=325,slow=6.2,SNR=9.0
ILAR **Eielson Array** 71.74 23 P P 00 11 57.0 +0.7
comp=Z,0.6nm,0.8s,baz=310,slow=5.4,SNR=6.2
YKA **Yellowknife Ar** 82.02 13 P P 00 12 55.1 +0.8
comp=Z,0.5nm,0.7s,baz=327,slow=4.9,SNR=5.4
YKB5 **Yellowknife Ar** 82.02 13 eP P 00 12 55.1 +0.8
TOA1 **Torodi Ar. Sit** 84.04 282 eP P 00 13 02.8 -2.8
TORD **Torodi Ar. Bea** 84.04 282 P P 00 13 02.8 -2.8
comp=Z,1.5nm,0.9s,baz=79,slow=4.7,SNR=5.3

*SOME **29** 00:10:17.4, 44°.10N×84°.10E, h10km*
*NNC **29** 00:10:19.6±1.5, 44°.29N×83°.93E, h12km±10km, mb3.6, mpv3.4, Error ellipse: s-maj=12.7km s-min=5.0km az=125.0*
ISC 29 00:10:19.0±1.7, 44°.26N±0°.07×83°.94E±0°.07, h10km, n37, σ2°59/55, 4C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.72**	**254**	Pg	**Pb**	**00 11 08.6**	**+0.9**
	5.6nm,0.2s						
KTMS				Lg	Lg	00 11 45.9	
	21nm,0.5s						
KTMS	**Ketmen**	**2.72**	**254**	eP	**Pb**	**00 11 08.6**	**+0.9**
	5.6nm,0.2s						
KTMS				eS	**Sg**	**00 11 45.9**	**-0.4**
	21nm,0.5s						
MK31	**Makanchi Array**	**2.79**	**336**	Pn	**Pn**	**00 11 02.8**	**-0.9**
	baz=171,slow=26,SNR=41						
MK31				⇑Pg	**Pb**	**00 11 08.7**	**-0.2**
	1.6nm,0.4s,baz=149,slow=17,SNR=18						
MK31				⇑Lg	Lg	00 11 45.4	
	1.3nm,0.2s,baz=148,slow=28,SNR=6.4						
MAKZ	**Makanchi**	**2.90**	**332**	Pg	**Pb**	**00 11 11.4**	**+0.6**
MAKZ				Lg	Lg	00 11 49.6	
DJR	**Jarkent**	**2.98**	**273**	Pg	**Pb**	**00 11 14.4**	**+2.3**
	4.4nm,0.3s						
DJR				Lg	Lg	00 11 55.7	
	13nm,0.5s						
DJR	**Jarkent**	**2.98**	**273**	eP	**Pb**	**00 11 14.4**	**+2.3**
	3.2nm,0.2s						
DJR				eS	**Sg**	**00 11 55.7**	**+1.0**
	11nm,0.5s						
ZSN	**Zaisan**	**3.26**	**11**	Pg	**Pb**	**00 11 18.9**	**+2.1**
	1.8nm,0.1s						
ZSN				Lg	Lg	00 12 03.3	
	9.7nm,0.2s						
ZSN	**Zaisan**	**3.26**	**11**	eP	**Pb**	**00 11 18.9**	**+2.1**
	1.6nm,0.4s						
ZSN				eS	**Sg**	**00 12 03.3**	**-0.2**
	9.7nm,0.2s						
PDGK	**Podgornoye**	**3.35**	**255**	Pg	**Pb**	**00 11 19.4**	**+0.9**
	1.4nm,0.3s						
PDGK				Lg	Lg	00 12 04.2	
	5.0nm,0.4s						
PDGK	**Podgornoye**	**3.35**	**255**	⇓Pn	**Pn**	**00 11 13.0**	**+1.5**
	0.9nm,0.4s						
PDGK				⇑Pg	**Pg**	**00 11 22.8**	**-0.3**
	2.2nm,0.5s						
PDGK				⇑Lg	Lg	00 12 05.1	
	9.6nm,0.6s						
KAPS	**Kapalarasan**	**3.42**	**289**	Pg	**Pg**	**00 11 23.7**	**-0.8**
	2.0nm,0.1s						
KAPS				Lg	Lg	00 12 11.7	
	16nm,0.8s						
KAPS	**Kapalarasan**	**3.42**	**289**	eP	**Pg**	**00 11 23.7**	**-0.8**
	1.5nm,0.2s						
KAPS				⇓iS	**Sg**	**00 12 11.7**	**+3.0**
	19nm,0.7s						
UZB	**Uzynbulak**	**3.73**	**254**	eP	**Pb**	**00 11 26.8**	**+1.8**
	1.0nm,0.3s						
UZB				eS	**Sg**	**00 12 16.4**	**-2.4**
	5.1nm,0.6s						
KPKS	**Kokpek**	**3.88**	**260**	eP	**Pb**	**00 11 29.0**	**+1.5**
	6.4nm,0.2s						
KPKS				eS	**Sg**	**00 12 20.3**	**-3.2**
	28nm,0.4s						
MNBS	**Baschi**	**3.99**	**269**	Pg	**Pb**	**00 11 31.6**	**+2.3**
	1.5nm,0.1s						
MNBS				Lg	Lg	00 12 25.0	
	15nm,0.4s						
MNBS	**Baschi**	**3.99**	**269**	eP	**Pb**	**00 11 31.6**	**+2.3**
	1.5nm,0.1s						
MNBS				eS	**Sg**	**00 12 25.0**	**-2.0**
	15nm,0.4s						
TDK	**Taldyqorghan**	**4.02**	**283**	Pg	**Pg**	**00 11 34.5**	**-1.4**
	24nm,0.3s						
TDK				Lg	Lg	00 12 30.2	
	32nm,0.5s						
TDK	**Taldyqorghan**	**4.02**	**283**	eP	**Pg**	**00 11 34.5**	**-1.4**
	24nm,0.3s						
TDK				eS	**Sg**	**00 12 30.2**	**+2.2**
	32nm,0.5s						
SATY	**Saty**	**4.19**	**255**	Pg	**Pb**	**00 11 35.8**	**+3.0**
	4.8nm,0.3s						
SATY				Lg	Lg	00 12 32.2	
	14nm,0.3s						
SATY	**Saty**	**4.19**	**255**	eP	**Pb**	**00 11 35.8**	**+3.0**
	2.4nm,0.2s						
SATY				eS	**Sg**	**00 12 32.2**	**-1.2**
	14nm,0.3s						
KURS	**Kuram**	**4.24**	**262**	Pg	**Pb**	**00 11 36.8**	**+3.2**
	3.7nm,0.7s						
KURS				Lg	Lg	00 12 33.8	
	5.7nm,0.7s						
KURS	**Kuram**	**4.24**	**262**	eP	**Pb**	**00 11 36.8**	**+3.2**
	3.7nm,0.7s						
KURS				eS	**Sg**	**00 12 33.8**	**-1.3**
	5.7nm,0.7s						
ARXS	**Arharly**	**4.39**	**272**	Pg	**Pb**	**00 11 39.4**	**+3.2**
	3.1nm,0.4s						
ARXS				Lg	Lg	00 12 38.5	
	12nm,0.5s						
ARXS	**Arharly**	**4.39**	**272**	eP	**Pb**	**00 11 39.4**	**+3.2**
	3.1nm,0.4s						
ARXS				eS	**Sg**	**00 12 38.5**	**-1.4**
	12nm,0.5s						
CHKK	**Chushkaly**	**5.03**	**268**	Pg	**Pb**	**00 11 50.9**	**+3.9**
	0.9nm,0.3s						
CHKK				Lg	Lg	00 12 57.9	
	7.6nm,0.3s						
CHKK	**Chushkaly**	**5.03**	**268**	eP	**Pb**	**00 11 50.9**	**+3.9**
	0.9nm,0.3s						
CHKK				eS	**Sg**	**00 12 57.9**	**-2.3**
	7.6nm,0.3s						
KOTS	**Kotyrbulak**	**5.05**	**261**	Pg	**Pb**	**00 11 51.3**	**+3.8**
	1.6nm,0.3s						
KOTS				Lg	Lg	00 12 58.7	
	6.3nm,0.6s						
KOTS	**Kotyrbulak**	**5.05**	**261**	eP	**Pb**	**00 11 51.3**	**+3.8**
	1.6nm,0.3s						
KOTS				eS	**Sg**	**00 12 58.7**	**-2.4**
	6.3nm,0.6s						
MDOK	**Medeo**	**5.11**	**260**	Pg	**Pb**	**00 11 52.9**	**+4.3**
	1.8nm,0.4s						
MDOK				Lg	Lg	00 13 01.7	
	7.2nm,0.7s						
MDOK	**Medeo**	**5.11**	**260**	eP	**Pb**	**00 11 52.9**	**+4.3**
	1.8nm,0.4s						
MDOK				eS	**Sg**	**00 13 01.7**	**-1.4**
	7.2nm,0.7s						
TNSS	**Tian-Shan**	**5.22**	**259**	Pg	**Pb**	**00 11 54.6**	**+4.1**
	1.8nm,0.3s						
TNSS				Lg	Lg	00 13 04.7	
	3.6nm,0.6s						
TNSS	**Tian-Shan**	**5.22**	**259**	eP	**Pb**	**00 11 54.6**	**+4.1**
	1.8nm,0.3s						
TNSS				eS	**Sg**	**00 13 04.7**	**-1.8**
	3.6nm,0.6s						
KTBS	**Karatobe**	**5.26**	**267**	Pg	**Pg**	**00 11 56.4**	**-3.3**
	1.4nm,0.4s						
KTBS				Lg	Lg	00 13 07.6	
	16nm,0.5s						
KTBS	**Karatobe**	**5.26**	**267**	eP	**Pg**	**00 11 56.4**	**-3.3**
	1.4nm,0.4s						
KTBS				eS	**Sg**	**00 13 07.6**	**-0.3**
	16nm,0.5s						
KUU	**Kurty**	**5.49**	**269**	Pg	**Pg**	**00 11 60.0**	**-4.0**
	0.8nm,0.3s						
KUU				Lg	Lg	00 13 14.1	
	7.0nm,0.4s						
KUU	**Kurty**	**5.49**	**269**	eP	**Pg**	**00 11 60.0**	**-4.0**
	0.8nm,0.3s						
KUU				eS	**Sg**	**00 13 14.1**	**-0.9**
	7.0nm,0.4s						
KURBB	**Kurchatov Arra**	**7.35**	**332**	⇓Lg	Lg	00 14 14.6	
	11nm,0.8s						

IDC 29 00:34:47.8±4.9, 7°.76N×126°.86E, h144km±106km, mb3.4/3, mb1 3.5/3, mb1mx3.1/29, mbtmp3.8/3, Error ellipse: s-maj=209.8km s-min=51.3km az=15.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.45**	**242**	P	Pn	00 35 16.6	+0.3
	28nm,0.3s,baz=61,slow=5.2,SNR=4.0						
DAV				S	Sn	00 35 38.1	-0.1
	37nm,0.3s,baz=260,slow=23,SNR=6.1						
MKAR	**Makanchi Array**	**54.37**	**324**	P	P	00 44 00.1	+0.3
	0.8nm,0.6s,baz=126,slow=7.8,SNR=9.4						
ZALV	**Zalesovo Beam**	**57.10**	**332**	P	P	00 44 18.4	-0.6
	0.9nm,0.4s,baz=139,slow=7.3,SNR=3.5						
ILAR	**Eielson Array**	**81.43**	**26**	P	P	00 46 48.5	-0.1
	0.2nm,0.5s,baz=249,slow=5.9,SNR=5.3						

LDG 29 00:45:16.4±0.1, 42°.74N×0°.63W, h2km, Md0.3/1, Error ellipse: s-maj=3.6km s-min=1.4km az=6.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETSF	**Etsaut**	**0.17**	**18**	ePg	Pg	00 45 20.1	+0.4
ETSF				eSg	Sg	00 45 22.2	+0.3
	9.8nm,0.3s						
SJPF	**Ste Jean**	**0.57**	**311**	ePg	Pg	00 45 27.3	-0.1
SJPF				eSg	Sg	00 45 35.0	+0.1
	1.7nm,0.2s						
EPF	**Esparros**	**0.77**	**67**	ePg	Pg	00 45 31.0	-0.2
EPF				eSg	Sg	00 45 40.9	-0.2
	1.4nm,0.2s						

*STR **29** 00:45:20.3±0.7, 43°.1N±6°.×±°, h5km, MLv1.4/3*
*LDG **29** 00:45:20.2±0.1, 42°.87N×0°.61W, h15km, Md1.8/2, Ml1.8/4, Error ellipse: s-maj=2.4km s-min=1.3km az=3.0*
MDD 29 00:45:21.0±0.4, 43°.01N×0°.57W, h9km±6km, mbLg1.5/3, Error ellipse: s-maj=5.8km s-min=2.5km az=7.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETSF	**Etsaut**	**0.11**	**175**	ePg	Pg	00 45 23.2	-0.5
ETSF				eSg	Sg	00 45 25.3	-0.3
ETSF	**Etsaut**	**0.11**	**175**	Pg	Pg	00 45 23.2	-0.5
ETSF				Lg	Lg	00 45 25.3	
SJPF	**Ste Jean**	**0.49**	**282**	ePg	Pg	00 45 30.3	-0.2
SJPF				eSg	Sg	00 45 37.4	+0.5
	3.6nm,0.3s						
SJPF	**Ste Jean**	**0.49**	**282**	Pg	Pg	00 45 30.3	-0.2
EORO	**Oroz-Betelu**	**0.55**	**258**	Pg	Pg	00 45 31.8	+0.1
	0.3nm,0.1s,SNR=7.9						
EORO				Lg	Lg	00 45 38.6	
	0.6nm,0.1s,SNR=7.9						
ECHI	**Chisagues Biel**	**0.66**	**121**	Pg	Pg	00 45 32.5	-1.3
	0.5nm,0.2s,SNR=7.9						
ECHI				Lg	Lg	00 45 41.1	
	1.7nm,0.0s,SNR=7.9						
ECHI	**Chisagues Biel**	**0.66**	**121**	Pg	Pg	00 45 32.5	-1.3
ECHI				Sg	Sg	00 45 40.8	-1.7
IZUN	**Zunzarren**	**0.67**	**257**	Pg	Pg	00 45 33.3	-0.5
	0.1nm,0.1s,SNR=7.9						
IZUN				Lg	Lg	00 45 42.8	
	0.4nm,0.1s,SNR=7.9						
EPF	**Esparros**	**0.67**	**88**	ePg	Pg	00 45 34.0	+0.1
EPF				eSg	Sg	00 45 43.5	+0.8
	1.6nm,0.2s						
EPF	**Esparros**	**0.67**	**88**	Pg	Pg	00 45 34.0	+0.1
EALK	**Alkurruntz**	**0.71**	**287**	Pg	Pg	00 45 34.1	-0.7
	0.2nm,0.1s,SNR=7.9						
EALK				Lg	Lg	00 45 44.3	
	2.4nm,0.2s,SNR=11						
EALK	**Alkurruntz**	**0.71**	**287**	Pg	Pg	00 45 34.0	-0.8
EALK				Sg	Sb	00 45 45.0	-0.6
TERF	**Tercis-les-Bai**	**0.78**	**330**	Pg	Pb	00 45 36.9	+0.3
TERF				Sg	Sn	00 45 50.3	+0.4
ESAC	**San Caprasio**	**1.29**	**177**	Pg	Pn	00 45 44.8	-0.5
	0.3nm,0.1s,SNR=7.9						
ESAC				Lg	Lg	00 46 02.6	
	4.5nm,0.1s,SNR=12						
CSOR	**Sort**	**1.41**	**116**	Pg	Pn	00 45 46.8	-0.1
	0.0nm,0.2s,SNR=7.9						
CSOR				Lg	Lg	00 46 06.5	
	0.4nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**1.90**	**124**	Pg	Pg	00 45 56.8	-0.6
	16nm,0.6s,SNR=7.9						
EMIR				Lg	Lg	00 46 21.5	
	0.6nm,0.1s,SNR=7.9						
CLLI	**Llivia**	**1.95**	**105**	Pg	Pg	00 45 57.9	-0.5
	0.2nm,0.3s,SNR=7.9						
CLLI				Lg	Lg	00 46 24.9	
	0.4nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**2.06**	**143**	Pg	Pg	00 46 00.5	0.0
	0.1nm,0.3s,SNR=7.9						
EPOB				Lg	Lg	00 46 25.7	
	0.2nm,0.1s,SNR=7.9						
MTLF	**Montolieu**	**2.07**	**80**	ePn	Pn	00 45 53.4	-2.5
MTLF	**Montolieu**	**2.07**	**80**	ePg	Pb	00 45 59.6	+0.9
MTLF				eSn	Sn	00 46 17.9	-3.9
MTLF				eSg	Sg	00 46 26.7	-0.7
	0.8nm,0.3s						
MTLF	**Montolieu**	**2.07**	**80**	Pn	Pn	00 45 53.4	-2.5
MTLF				Pg	Pb	00 45 59.6	+0.9
MTLF				Sn	Sn	00 46 17.9	-3.9
MTLF				Lg	Lg	00 46 26.7	
	0.4nm,0.3s						
LFF	**La Frestale**	**2.15**	**26**	ePn	Pn	00 45 55.7	-1.3
LFF	**La Frestale**	**2.15**	**26**	ePg	Pg	00 46 02.8	+0.6
LFF				eSn	Sn	00 46 21.0	-2.8
LFF				eSg	Sg	00 46 32.6	+2.6
	3.7nm,0.4s						
LFF	**La Frestale**	**2.15**	**26**	Pn	Pn	00 45 55.7	-1.3
LFF				Pg	Pg	00 46 02.8	+0.6
LFF				Sn	Sn	00 46 21.0	-2.8
LFF				Lg	Lg	00 46 32.6	
	1.9nm,0.4s						
CAF	**Calviac**	**2.70**	**44**	ePn	Pn	00 46 03.3	-1.3
CAF	**Calviac**	**2.70**	**44**	ePg	Pg	00 46 12.6	-0.1
CAF				eSn	Sn	00 46 34.1	-3.3
CAF				eSg	Sg	00 46 48.9	+1.2
	0.5nm,0.2s						
CAF	**Calviac**	**2.70**	**44**	Pn	Pn	00 46 03.3	-1.3
CAF				Pg	Pg	00 46 12.6	-0.1
CAF				Sn	Sn	00 46 34.1	-3.3
CAF				Lg	Lg	00 46 48.9	
	0.2nm,0.2s						
RJF	**Les Rejaudoux**	**2.74**	**33**	ePn	Pn	00 46 04.3	-0.9
RJF				eSn	Sn	00 46 36.1	-2.3
	1.9nm,0.3s						
RJF	**Les Rejaudoux**	**2.74**	**33**	Pn	Pn	00 46 04.3	-0.9
RJF				Sn	Sn	00 46 36.1	-2.3
	0.9nm,0.3s						

*ANF **29** 00:46:26.8±0.9, 35°.63N×97°.09W, h5km, ML4.2/9, Error ellipse: s-maj=22.0km s-min=4.6km az=161.0*

*ISCJB **29** 00:46:27.5±0.6, 35°.59N±0°.06×97°.04W±0°.03, h11km±5km, Error ellipse: s-maj=10.0km s-min=4.1km az=167.5*
*CERI **29** 00:46:28.0±0.0, 35°.61N×97°.07W, h6km*
ISC 29 00:46:28.5±1.0, 35°.64N±0°.05×97°.06W±0°.03, h14km±8km, n30, σ1°46/38, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.11**	**280**	ePg	**Pg**	**00 46 32.4**	**+0.8**
OK001	**Jones High Sch**	**0.20**	**248**	ePg	**Pg**	**00 46 32.4**	**-0.6**
OK009	**Oakdale Elemen**	**0.30**	**260**	ePg	**Pb**	**00 46 34.5**	**-1.1**
TUL1	**Leonard**	**1.07**	**75**	ePg	**Pg**	**00 46 47.0**	**-2.1**
TUL1	**Leonard**	**1.07**	**75**	P	**Pg**	**00 46 47.2**	**-1.9**
	baz=254						
TUL1				S	**Sg**	**00 47 02.2**	**-0.9**
	baz=254						
WMOK	**Wichita Mounta**	**1.67**	**238**	ePn	**Pn**	**00 46 55.9**	**-1.4**
WMOK	**Wichita Mounta**	**1.67**	**238**	P	**Pn**	**00 46 56.3**	**-1.1**
	baz=58						
WMOK				S	**Sn**	**00 47 18.0**	**-0.6**
	baz=58						
HHAR	**Hobbs**	**2.62**	**75**	ePn	**Pn**	**00 47 10.5**	**+0.1**
W39A	**Magazine**	**2.71**	**98**	ePn	**Pn**	**00 47 11.1**	**-0.6**
W39A	**Magazine**	**2.71**	**98**	P	**Pn**	**00 47 12.1**	**+0.4**
	baz=280						
W39A				S	**Sn**	**00 47 46.2**	**+1.9**
	baz=280						
MIAR	**Mount Ida**	**3.06**	**110**	ePn	**Pn**	**00 47 16.3**	**-0.2**
MIAR	**Mount Ida**	**3.06**	**110**	P	**Pn**	**00 47 16.0**	**-0.5**
	baz=291						
MIAR				S	**Sn**	**00 47 53.2**	**+0.3**
	baz=291						
U40A	**Yellville**	**3.49**	**77**	P	**Pn**	**00 47 22.9**	**+0.5**
	baz=259						
U40A				Sb	**Sb**	**00 48 15.8**	**+3.5**
	baz=259						
WHTX	**Lake Whitney,**	**3.65**	**185**	ePn	**Pn**	**00 47 25.3**	**+0.7**
X40A	**Basin Creek Fa**	**3.65**	**107**	ePn	**Pn**	**00 47 25.7**	**+1.1**
X40A	**Basin Creek Fa**	**3.65**	**107**	P	**Pn**	**00 47 25.0**	**+0.4**
	baz=289						
ABTX	**Abilene, Hawle**	**3.69**	**216**	ePn	**Pn**	**00 47 27.6**	**+2.5**
ABTX	**Abilene, Hawle**	**3.69**	**216**	Pb	**Pb**	**00 47 32.2**	**-1.3**
	baz=35						
CBKS	**Cedar Bluff**	**3.82**	**327**	ePn	**Pn**	**00 47 28.9**	**+1.9**
CBKS				ePg	**Pg**	**00 47 38.7**	**-3.0**
AMTX	**Amarillo**	**3.85**	**260**	P	**Pn**	**00 47 28.1**	**+0.7**
	baz=78						
AMTX				S	**Sn**	**00 48 14.3**	**+1.7**
	baz=78						
UALR	**University of**	**3.96**	**101**	ePn	**Pn**	**00 47 29.1**	**+0.3**
W41B	**Gary Mavity, V**	**3.96**	**95**	ePn	**Pn**	**00 47 28.6**	**-0.2**
W41B	**Gary Mavity, V**	**3.96**	**95**	P	**Pn**	**00 47 28.7**	**-0.2**
	baz=278						
W41B				Sb	**Sb**	**00 48 29.4**	**+3.5**
	baz=278						
FCAR	**Ozark Folk Cen**	**4.03**	**85**	ePn	**Pn**	**00 47 29.4**	**-0.3**
Z41A	**Richland Creek**	**4.25**	**123**	ePn	**Pn**	**00 47 32.2**	**-0.5**
NATX	**Nacogdoches**	**4.35**	**152**	ePn	**Pn**	**00 47 35.2**	**+0.9**
CCAR	**Cane Creek**	**4.68**	**110**	ePn	**Pn**	**00 47 38.2**	**-0.6**
435B	**Jarrell**	**4.86**	**185**	ePn	**Pn**	**00 47 40.2**	**-1.0**
MSTX	**Muleshoe**	**4.98**	**252**	ePn	**Pn**	**00 47 42.7**	**-0.3**
CCM	**Cathedral Cave**	**5.25**	**61**	ePn	**Pn**	**00 47 47.0**	**+0.4**

IDC 29 00:50:48.9±35.0, 9°.28N×122°.91E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.4/53, mbtmp3.9/4, Error ellipse: s-maj=614.5km s-min=151.0km az=154.0, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**27.34**	**174**	P	P	00 56 35.5	-0.3
	0.9nm,0.5s,baz=1.7,slow=9.1,SNR=5.4						
WRA	**Warramunga Arr**	**31.14**	**159**	P	P	00 57 09.7	+0.1
	0.6nm,0.3s,baz=344,slow=14,SNR=5.2						
ASAR	**Alice Springs**	**34.46**	**162**	P	P	00 57 38.6	0.0
	0.3nm,0.4s,baz=332,slow=7.5,SNR=4.8						
STKA	**Stephens Creek**	**44.66**	**157**	P	P	00 59 03.5	-0.1
	0.8nm,0.4s,baz=325,slow=5.9,SNR=3.9						

*IDC **29** 00:55:30.6±1.2, 28°.38N×51°.61E, h0km, mb3.6/9, mb1 3.7/13, mb1mx3.5/50, mbtmp3.6/13, ML3.6/4, Error ellipse: s-maj=24.9km s-min=18.8km az=4.0*
*ISCJB **29** 00:55:33.4±0.4, 28°.40N±0°.03×51°.51E±0°.04, h24km, mb3.6/10, Error ellipse: s-maj=6.3km s-min=3.7km az=146.1*
*TEH **29** 00:55:34.2, 28°.49N×51°.66E, h16km, ML3.7*
*DSN **29** 00:55:38.1±1.0, 28°.53N×52°.10E, h10km, ML4.0/9, Error ellipse: s-maj=18.8km s-min=5.2km az=16.0*
ISC 29 00:55:34.5±0.7, 28°.40N±0°.06×51°.60E±0°.07, h24km, n64, σ1°67/67, mb3.7/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**1.23**	**95**	ePg	**Pn**	**00 55 57.4**	**+1.0**
SHI	**Shiraz**	**1.48**	**33**	ePg	**Pn**	**00 56 00.3**	**+0.5**
SHI				eSg	**Sn**	**00 56 18.3**	**-0.2**
SHI				IAMB	IAmb	00 56 22.6	
	comp=Z,14μm,0.6s						
LMD1	**Lamerd**	**1.74**	**127**	ePn	**Pb**	**00 56 06.5**	**+0.6**
JHRM	**Jahrom**	**1.75**	**86**	IAMB	IAmb	00 56 38.5	
	comp=Z,0.0nm,0.6s						
JHRM				ePn	**Pn**	**00 56 05.3**	**+1.9**
IRAM	**Ramesheh**	**3.47**	**11**	ePn	**Pn**	**00 56 27.7**	**+0.5**
IRAM				IAMB	IAmb	00 56 39.1	
	comp=Z,1μm,0.5s						
ZNGN	**Zangian**	**3.76**	**350**	ePn	**Pn**	**00 56 32.0**	**+0.6**
JHBN	**Jahan bin**	**3.91**	**348**	ePn	**Pn**	**00 56 34.2**	**+0.9**
ISAD	**Sadrabad**	**3.94**	**27**	ePn	**Pn**	**00 56 35.6**	**+1.8**
ISAD				IAMB	IAmb	00 56 47.6	
	comp=Z,811nm,0.4s						
ROKH	**ROKH**	**3.96**	**353**	ePn	**Pn**	**00 56 34.7**	**+0.6**
IMEH	**Mehriz**	**3.97**	**41**	ePn	**Pn**	**00 56 36.3**	**+2.2**
IMEH				IAMB	IAmb	00 56 38.1	
	comp=Z,2μm,0.3s						
IGAR	**Gharneh**	**4.01**	**5**	ePn	**Pn**	**00 56 35.8**	**+1.1**
IGAR				IAMB	IAmb	00 56 50.3	
	comp=Z,604nm,0.4s						
GENO	**Geno**	**4.17**	**103**	ePn	**Pn**	**00 56 39.7**	**+2.9**
IPIR	**Pirpir**	**4.32**	**352**	ePn	**Pn**	**00 56 39.7**	**+0.7**
IPIR				IAMB	IAmb	00 57 38.8	
	comp=Z,527nm,0.6s						
NASN	**Na'in**	**4.51**	**13**	ePn	**Pn**	**00 56 42.1**	**+0.5**
IZEF	**Zefreh**	**4.53**	**8**	ePn	**Pn**	**00 56 42.6**	**+0.8**
IZEF				IAMB	IAmb	00 56 43.7	
	comp=Z,451nm,0.2s						
NGRK	**Negar Kerman**	**4.66**	**73**	ePn	**Pn**	**00 56 45.0**	**+1.2**
SHME	**Shamm**	**4.67**	**119**	iP	**Pn**	**00 56 44.6**	**+1.0**
	SNR=12						
SHME				S	**Sn**	**00 57 36.6**	**-0.6**
SHME	**Shamm**	**4.67**	**119**	ePn	**Pn**	**00 56 44.9**	**+1.2**
IBAF	**Bafgh**	**4.69**	**46**	ePn	**Pn**	**00 56 45.0**	**+1.0**
IBAF				IAMB	IAmb	00 56 46.2	
	comp=Z,826nm,0.2s						

ALNE	**Al Ain**	**5.71 138**	P	**Pn**	**00 57 00.7**	**+2.8**
ALNE	**Al Ain**	**5.71 138**	*e*Pn	**Pn**	**00 57 01.0**	**+3.1**
IDOB	**Doab**	**6.12 332**	*e*Pn	**Pn**	**00 57 05.9**	**+2.2**
HSAM	**Samen**	**6.34 337**	*e*Pn	**Pn**	**00 57 09.5**	**+2.8**
IVRN	**Varamin**	**6.58 1**	*e*Pn	**Pn**	**00 57 09.8**	**0.0**
HOQ	**Hoqain**	**7.03 132**	*e*Pn	**Pn**	**00 57 18.2**	**+2.2**
IRAZ	**Razeghan**	**7.13 349**	*e*Pn	**Pn**	**00 57 18.4**	**+0.9**
IKOO	**Kooshah**	**7.55 56**	*e*Pn	**Pn**	**00 57 25.7**	**+2.3**
ITEG	**Tejag**	**7.62 52**	*e*Pn	**Pn**	**00 57 24.9**	**+0.7**
WSAR	**Wadi Sarin**	**8.16 127**	Pn	**Pn**	**00 57 32.2**	**+0.7**
	comp=Z,3.0nm,0.3s,baz=314,slow=6.4,SNR=71					
WSAR			Sn	**Sn**	**00 58 58.6**	**-4.3**
	comp=Z,2.6nm,0.3s,baz=236,slow=22,SNR=5.9					
ASF	**Jabal al Asfar**	**13.25 290**	Pn	**Pn**	**00 58 42.2**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=73,slow=17,SNR=3.9					
MMAI	**Mount Meron Ar**	**14.67 292**	Pn	**Pn**	**00 58 59.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=88,slow=16,SNR=2.4					
BRTR	**Keskin Array B**	**18.64 312**	P	**P**	**00 59 50.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=132,slow=11,SNR=6.0					
AKTO	**Aktyubinsk**	**22.54 11**	P	**P**	**01 00 33.1**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=204,slow=20,SNR=1.9					
BVAR	**Borovoye Array**	**28.25 24**	P	**P**	**01 01 26.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=207,slow=16,SNR=2.8					
KURBB	**Kurchatov Arra**	**30.11 35**	P	**P**	**01 01 42.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=233,slow=9.4,SNR=2.4					
MKAR	**Makanchi Array**	**30.20 44**	P	**P**	**01 01 41.8**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=237,slow=10,SNR=2.1					
ZALV	**Zalesovo Beam**	**35.19 34**	P	**P**	**01 02 24.6**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=249,slow=9.3,SNR=3.2					
FINES	**FINESS Array B**	**37.16 340**	P	**P**	**01 02 43.7**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=151,slow=8.0,SNR=9.2					
HFS	**Hagfors**	**40.75 332**	P	**P**	**01 03 13.3**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=134,slow=11,SNR=12					
NB2	**NORSAR Subarra**	**42.27 332**	P	**P**	**01 03 25.6**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=124,slow=9.3					
NOA	**NORSAR Array B**	**42.27 332**	P	**P**	**01 03 25.6**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=127,slow=8.1,SNR=2.5					
TORD	**Torodi Ar. Bea**	**48.72 263**	P	**P**	**01 04 16.3**	**-1.1**
	comp=Z,8.7nm,0.3s,baz=67,slow=8.2,SNR=4.2					
ASAR	**Alice Springs**	**94.63 114**	P	**P**	**01 08 53.9**	**0.0**
	comp=Z,0.3nm,0.6s,baz=303,slow=5.2,SNR=3.1					

MAN 29 01:11:13.8, 7°.26N×124°.77E, h1km, mb4.3, ML3.1, MS2.8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.52**	**266**	⇓*i*P		Pb	01 11 26.5	+0.8
CTBH				*i* S		Sb	01 11 35.2	+1.4
BUKP	**Musuan**	**0.68**	**25**	*e*P		Pg	01 11 27.2	+0.4
BUKP				*e*S		Sg	01 11 36.6	+1.0
SKMP	**Bagumbayan, Su**	**0.77**	**197**	*e*P		Pg	01 11 28.7	+0.1
SKMP				*e*S		Sb	01 11 41.7	+0.7
CGP	**Cagayan de Oro**	**1.19**	**356**	⇑*i*P		Pg	01 11 36.3	-0.3
CGP				*i* S		Sg	01 11 50.9	-1.1
DDMP	**Don Marcelino,**	**1.48**	**141**	*e*P		Pn	01 11 41.3	-0.2
DDMP				*e*S		Sn	01 12 04.6	+3.1
PAGZ	**Pagadian**	**1.50**	**293**	*e*P		Pn	01 11 41.0	-0.8
PAGZ				*e*S		Sn	01 12 02.7	+0.7

MEX 29 01:21:28.2±0.4, 15°.39N×95°.95W, h6km±6km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.41**	**339**	*e*P		Pg	01 21 35.6	-0.5
HUIG				*e*S		Sg	01 21 41.8	+0.3
CMIG	**Matias Romero**	**1.98**	**31**	*e*P		Pn	01 21 59.0	-3.3
CMIG				*i* S		Sn	01 22 22.9	-4.7

IDC ***29*** *01:40:14.7±0.6, 41°.94N×20°.70E, h0km, mb4.1/10, mb1 3.9/25, mb1mx3.8/44, mbtmp3.9/25, ML3.4/14, MS2.9/4, Ms1 2.9/4, ms1mx2.5/47, Error ellipse: s-maj=10.3km s-min=9.5km az=20.0*
ATH ***29*** *01:40:15.7, 41°.98N×20°.82E, h13km±1km, ML3.6/7, Error ellipse: s-maj=3.7km s-min=1.3km az=334.0*
ISCJB ***29*** *01:40:15.4±0.2, 42°.013N±0°.009×20°.73E±0°.01, h8km±1km, mb4.1/21, Error ellipse: s-maj=1.7km s-min=1.2km az=40.5*
PDG ***29*** *01:40:15.8±0.4, 41°.99N×20°.76E, h6km, MD4.0/13, ML4.0/6, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
PRU ***29*** *01:40:16.8±0.0, 41°.80N×20°.77E, h10km, M4.1*
MOS ***29*** *01:40:16.3±1.1, 41°.98N×20°.59E, h22km, mb4.3/11, Error ellipse: s-maj=5.7km s-min=4.3km az=119.2*
SKO ***29*** *01:40:16.2, 41°.88N×20°.83E, h15km, M3.7, ML4.0*
NEIC ***29*** *01:40:16.8±3.0, 41°.96N×20°.66E, h10km±2km, mb4.1/5, ML3.9(TIR), ML4.0(SKO), Error ellipse: s-maj=7.3km s-min=6.0km az=126.0*
NEIC Felt at Gostivar, Kicevo and Tetovo, Macedonia.
LDG ***29*** *01:40:16.7±0.2, 42°.01N×20°.84E, h2km, Ml4.1/18, Error ellipse: s-maj=5.3km s-min=2.7km az=1.0*
BEO ***29*** *01:40:16.6±0.2, 41°.96N×20°.82E, h13km±2km, ML3.5/10*
THE ***29*** *01:40:17.1, 41°.98N×20°.82E, h7km±2km, ML3.5/8, Error ellipse: s-maj=4.5km s-min=0.9km az=333.0*
SIK ***29*** *01:40:17.2, 42°.03N×20°.66E, h2km, M3.6*
ISC 29 01:40:16.8±0.9, 41°.97N±0°.02×20°.74E±0°.02, h13km±6km, n454, σ1§96/562, mb4.2/21, 47C-18D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.36**	**218**	P		**Pg**	**01 40 22.8**	**-1.2**
PHP				S		**Sg**	**01 40 28.9**	**0.0**
SKO	**Skopje**	**0.52**	**89**	*e*Pg		**Pg**	**01 40 25.9**	**-1.2**
SKO				*e*Sg		**Sg**	**01 40 33.1**	**-0.9**
SKO	**Skopje**	**0.52**	**89**	P		**Pg**	**01 40 25.8**	**-1.2**
SKO				S		**Sg**	**01 40 33.3**	**-0.7**
SKO	**Skopje**	**0.52**	**89**	⇑*i*Pg		**Pg**	**01 40 25.9**	**-1.2**
SKO				⇑*i*Sg		**Sg**	**01 40 33.3**	**-0.7**
PVY	**Plav**	**0.85**	**318**	⇑*i*Pg		**Pg**	**01 40 31.2**	**-2.1**
PVY				*i* Sg		**Sb**	**01 40 44.9**	**-0.1**
OHR	**Ohrid**	**0.86**	**177**	*i* Pg		**Pg**	**01 40 31.5**	**-1.8**
OHR				*i* Sg		**Sb**	**01 40 45.0**	**0.0**
OHR				*e*Lg		Lg	01 40 45.1	
	comp=E,5μm,0.5s							
OHR				*e*Lg		Lg	01 40 47.1	
	comp=N,5μm,0.5s							
TIR	**Tirane**	**0.90**	**227**	*e*Pg		**Pg**	**01 40 33.8**	**-0.3**
TIR				*e*Sg		**Sb**	**01 40 47.2**	**+1.0**
TIR	**Tirane**	**0.90**	**227**	*e*Pg		**Pg**	**01 40 33.1**	**-1.1**
TIR	**Tirane**	**0.90**	**227**	P		**Pg**	**01 40 33.6**	**-0.6**
TIR				S		**Sn**	**01 40 48.2**	**+0.1**
TIR	**Tirane**	**0.90**	**227**	⇓*i*P		**Pg**	**01 40 34.2**	**0.0**
TIR	**Tirane**	**0.90**	**227**	S		**Sn**	**01 40 47.5**	**-0.6**
TIR	**Tirane**	**0.90**	**227**	*i* Pg		**Pg**	**01 40 33.8**	**-0.3**
TIR	**Tirane**	**0.90**	**227**	*e*P		**Pg**	**01 40 33.1**	**-1.1**
TIR	**Tirane**	**0.90**	**227**	P		**Pg**	**01 40 33.5**	**-0.7**
TIR				S		**Sb**	**01 40 46.9**	**+0.7**
TIR				AML	AML		01 40 51.9	
	comp=E,6521μm,0.6s							
TIR				AML	AML		01 41 00.9	
	comp=N,7265μm,0.5s							
BEY	**Berane**	**1.10**	**326**	*i* Pg		**Pb**	**01 40 36.1**	**-1.7**
IVA	**Berane**	**1.10**	**326**	⇓*i*Pg		**Pb**	**01 40 36.0**	**-1.7**
IVA				*i* Sg		**Sn**	**01 40 53.2**	**0.0**
ULC	**Ulcinj**	**1.11**	**270**	⇑*i*Pg		**Pb**	**01 40 36.7**	**-1.3**
ULC				*i* Sg		**Sn**	**01 40 54.6**	**+1.2**
ULC	**Ulcinj**	**1.11**	**270**	*i* Pg		**Pb**	**01 40 36.9**	**-1.1**
STIP	**Stip**	**1.12**	**104**	⇑*i*Pg		**Pn**	**01 40 39.1**	**+0.9**
STIP				*i* Sg		**Sn**	**01 40 56.0**	**+2.6**
BARS	**Barje**	**1.17**	**43**	*e*Pg		**Pb**	**01 40 37.8**	**-1.0**
BARS				*e*Sg		**Sb**	**01 40 52.5**	**-1.4**
BARS	**Barje**	**1.17**	**43**	*e*Pn		**Sb**	**01 40 53.5**	**-0.4**
DRME	**Dracevica, Mon**	**1.18**	**281**	⇓*i*Pg		**Pn**	**01 40 37.7**	**-1.3**
DRME				*e*Sg		**Sn**	**01 40 56.4**	**+1.5**
DRME	**Dracevica, Mon**	**1.18**	**281**	⇑*i*Pn		**Pn**	**01 40 36.7**	**-2.3**
PDG	**Podgorica**	**1.20**	**293**	*e*Pg		**Pn**	**01 40 37.5**	**-1.7**
PDG				*e*Sg		**Sn**	**01 40 56.7**	**+1.3**
PDG	**Podgorica**	**1.20**	**293**	⇑*i*P		**Pn**	**01 40 37.8**	**-1.4**
PDG	**Podgorica**	**1.20**	**293**	S		**Sn**	**01 40 55.7**	**+0.3**
PDG	**Podgorica**	**1.20**	**293**	⇑*i*Pg		**Pn**	**01 40 37.2**	**-2.0**
PDG				*e*Sg		**Sg**	**01 40 55.4**	**+0.1**
PDG	**Podgorica**	**1.20**	**293**	⇑*i*Pn		**Pn**	**01 40 37.1**	**-2.1**
TTG	**Podgorica**	**1.20**	**293**	⇑*i*Pg		**Pn**	**01 40 37.2**	**-2.0**
TTG				*i* Sg		**Sn**	**01 40 56.6**	**+1.2**
TTG	**Podgorica**	**1.20**	**293**	*e*Pn		**Pn**	**01 40 37.3**	**-2.0**
TTG	**Podgorica**	**1.20**	**293**	*e*P		**Pn**	**01 40 37.3**	**-2.0**
KOME	**Kolasin**	**1.27**	**315**	*e*Pg		**Pn**	**01 40 38.7**	**-1.6**
KOME				*e*Sg		**Sg**	**01 40 59.3**	**+1.7**
FNA	**Florina**	**1.28**	**158**	*e*P		**Pn**	**01 40 38.9**	**-1.5**
FNA	**Florina**	**1.28**	**158**	*e*Pn		**Pn**	**01 40 39.5**	**-0.9**
FNA	**Florina**	**1.28**	**158**	P		**Pn**	**01 40 39.8**	**-0.6**
FNA				S		**Sg**	**01 40 58.0**	**+0.1**
FNA	**Florina**	**1.28**	**158**	*i* Pg		**Pn**	**01 40 39.2**	**-1.2**
FNA				*i* Sg		**Sn**	**01 40 57.5**	**0.0**
FNA	**Florina**	**1.28**	**158**	*e*P		**Pn**	**01 40 39.5**	**-0.9**
SELS	**Selova**	**1.28**	**13**	*e*Pg		**Pn**	**01 40 39.5**	**-1.0**
SELS				*e*Sg		**Sb**	**01 40 56.9**	**-0.4**
SJES	**Sjenica**	**1.41**	**337**	*e*Pg		**Pn**	**01 40 42.3**	**0.0**
SJES				*e*Sg		**Sg**	**01 41 03.4**	**+1.1**
SJES				*e*Sg		**Sb**	**01 41 03.6**	**+2.5**
BUM	**Brajici-Budva**	**1.41**	**284**	⇓*i*Pg		**Pn**	**01 40 42.1**	**-0.2**
BUM				*i* Sg		**Sg**	**01 41 04.7**	**+2.4**
CEME	**Cevo**	**1.47**	**294**	*e*Pg		**Pn**	**01 40 42.9**	**-0.2**
CEME				*e*Sg		**Sg**	**01 41 06.2**	**+2.1**
VAY	**Valandovo**	**1.52**	**115**	*e*Pg		**Pn**	**01 40 43.2**	**-0.4**
VAY	**Valandovo**	**1.52**	**115**	P		**Pn**	**01 40 43.1**	**-0.6**
VAY	**Valandovo**	**1.52**	**115**	⇑*i*Pg		**Pn**	**01 40 43.3**	**-0.4**
VAY				*i* Sg		**Sb**	**01 41 03.6**	**-0.3**
VAY				*e*Lg		Lg	01 41 04.2	
	comp=E,1μm,0.7s							
VAY				*e*Lg		Lg	01 41 04.5	
	comp=N,2μm,0.9s							
NKY	**Niksic**	**1.54**	**304**	⇓*i*Pg		**Pn**	**01 40 44.0**	**-0.2**
NKY				*i* Sg		**Sg**	**01 41 07.9**	**+1.4**
NKME	**Niksic**	**1.55**	**302**	*e*Pg		**Pn**	**01 40 43.9**	**-0.2**
NKME				*e*Sg		**Sg**	**01 41 07.7**	**+1.2**
GRG	**Griva**	**1.61**	**128**	*e*P		**Pn**	**01 40 45.1**	**+0.2**
GRG	**Griva**	**1.61**	**128**	P		**Pn**	**01 40 45.2**	**+0.3**
GRG				S		**Sb**	**01 41 06.1**	**-0.5**
GRG	**Griva**	**1.61**	**128**	*i* Pn		**Pn**	**01 40 45.2**	**+0.3**
GRG	**Griva**	**1.61**	**128**	P		**Pn**	**01 40 45.2**	**+0.3**
GRG				S		**Sb**	**01 41 07.0**	**+0.4**
GRG				AML	AML		01 41 12.2	
	comp=E,3364μm,0.7s							
GRG				AML	AML		01 41 15.9	
	comp=N,3380μm,0.4s							
IVAS	**Ivanjica**	**1.67**	**345**	*e*Pg		**Pn**	**01 40 45.4**	**-0.4**
IVAS				*e*Sg		**Sg**	**01 41 10.4**	**0.0**
PLE	**Pljevlja**	**1.69**	**324**	⇓*i*Pn		**Pb**	**01 40 47.1**	**-0.7**
PLE				*i* Sn		**Sg**	**01 41 10.6**	**-0.5**
HCY	**Herceg Novi**	**1.73**	**287**	⇓*i*Pn		**Pn**	**01 40 47.7**	**+1.0**
HCY				*i* Sn		**Sg**	**01 41 12.9**	**+0.3**
HCY	**Herceg Novi**	**1.73**	**287**	⇑*i*Pn		**Pn**	**01 40 47.3**	**+0.6**
PENT	**Pentalofos**	**1.79**	**170**	P		**Pb**	**01 40 49.7**	**+0.1**
PENT				S		**Sb**	**01 41 12.7**	**+0.6**
PENT				AML	AML		01 41 21.9	
	comp=E,3238μm,1.1s							
PENT				AML	AML		01 41 22.1	
	comp=N,3294μm,0.5s							
KNT	**Kendrikon**	**1.81**	**116**	*e*P		**Pn**	**01 40 47.7**	**0.0**
KNT	**Kendrikon**	**1.81**	**116**	P		**Pn**	**01 40 48.0**	**+0.3**
KNT				S		**Sn**	**01 41 11.2**	**+0.7**
KNT	**Kendrikon**	**1.81**	**116**	*i* Pn		**Pn**	**01 40 48.1**	**+0.3**
KNT	**Kendrikon**	**1.81**	**116**	P		**Pn**	**01 40 48.3**	**+0.6**
KNT				S		**Sn**	**01 41 10.8**	**+0.3**
KNT				AML	AML		01 41 12.3	
	comp=E,1999μm,0.5s							
KNT				AML	AML		01 41 15.2	
	comp=N,1570μm,0.5s							
BOVS	**Bovan**	**1.81**	**23**	*e*Pg		**Pn**	**01 40 47.4**	**-0.3**
BOVS				*e*Sg		**Sg**	**01 41 14.2**	**-0.9**
KZN	**Kozani**	**1.83**	**154**	P		**Pn**	**01 40 48.8**	**+0.7**
KZN	**Kozani**	**1.83**	**154**	P		**Pn**	**01 40 48.7**	**+0.6**
KZN				S		**Sb**	**01 41 13.5**	**+0.4**
KZN				AML	AML		01 41 20.1	
	comp=E,4056μm,0.6s							
KZN				AML	AML		01 41 20.8	
	comp=N,3296μm,0.5s							
UPM	**Unac-Piva**	**1.83**	**313**	⇑*i*Pn		**Pb**	**01 40 50.3**	**0.0**
UPM				*i* Sn		**Sg**	**01 41 14.6**	**-1.2**
UPM	**Unac-Piva**	**1.83**	**313**	*e*Pn		**Pn**	**01 40 49.2**	**+1.0**
BRY	**Bratogost**	**1.88**	**301**	⇓*i*Pn		**Pn**	**01 40 49.3**	**+0.5**
BRY				*i* Sn		**Sg**	**01 41 16.2**	**-1.0**
BRY	**Bratogost**	**1.88**	**301**	*e*Pn		**Pn**	**01 40 48.9**	**+0.1**
GRUS	**Gruza**	**1.92**	**360**	*e*Pg		**Pn**	**01 40 49.6**	**+0.4**
TREB	**Trebinje**	**1.92**	**294**	*e*Pg		**Pb**	**01 40 51.4**	**-0.3**
TREB				*e*Sg		**Sg**	**01 41 19.8**	**+1.2**
TREB	**Trebinje**	**1.92**	**294**	*e*Pn		**Pb**	**01 40 51.0**	**-0.7**
RUDO	**Rudo**	**1.93**	**329**	*e*Pn		**Pn**	**01 40 48.9**	**-0.5**
VTS	**Vitosha**	**1.96**	**70**	*e*Pg		**Pn**	**01 40 50.1**	**+0.1**
VTS				*e*Sg		**Sb**	**01 41 16.1**	**-0.9**
VTS	**Vitosha**	**1.96**	**70**	*e*Pn		**Pn**	**01 40 49.9**	**0.0**
VTS	**Vitosha**	**1.96**	**70**	P		**Pn**	**01 40 50.1**	**+0.1**
VTS	**Vitosha**	**1.96**	**70**	⇑*i*P		**Pn**	**01 40 50.0**	**+0.1**
VTS	**Vitosha**	**1.96**	**70**	S		**Sb**	**01 41 16.3**	**-0.7**
VTS	**Vitosha**	**1.96**	**70**	⇓*i*Pn		**Pn**	**01 40 50.1**	**+0.1**
VTS	**Vitosha**	**1.96**	**70**	*e*P		**Pn**	**01 40 49.9**	**0.0**
KPRO	**Kipourio**	**2.06**	**167**	P		**Pn**	**01 40 52.3**	**+1.0**
KPRO	**Kipourio**	**2.06**	**167**	P		**Pn**	**01 40 52.2**	**+0.9**
BBLS	**Lazići**	**2.14**	**333**	*e*Pn		**Pn**	**01 40 52.8**	**+0.5**
BBLS	**Lazići**	**2.14**	**333**	⇑*i*Pn		**Pn**	**01 40 52.5**	**+0.2**
THE	**Thessaloniki**	**2.14**	**128**	P		**Pn**	**01 40 52.9**	**+0.6**
THE				S		**Sn**	**01 41 20.0**	**+1.3**
THE	**Thessaloniki**	**2.14**	**128**	*i* Pn		**Pn**	**01 40 52.7**	**+0.4**
ZAGS	**Zajecar**	**2.15**	**30**	*e*Pg		**Pb**	**01 40 55.3**	**-0.2**
ZAGS				*e*Sg		**Sg**	**01 41 24.1**	**-1.7**
SRN	**Sarande**	**2.16**	**195**	P		**Pb**	**01 40 54.5**	**-1.2**
DIVS	**Divibare**	**2.20**	**346**	*e*Pg		**Pb**	**01 40 56.3**	**-0.2**
DIVS	**Divibare**	**2.20**	**346**	⇑*i*Pn		**Pn**	**01 40 52.9**	**-0.2**
MMB	**Musomiste**	**2.27**	**99**	*i* Pn		**Pn**	**01 40 55.0**	**+0.9**
TRUS	**Trudelj**	**2.27**	**354**	*e*Pn		**Pn**	**01 40 54.0**	**0.0**
SOH	**Sokhos**	**2.28**	**119**	P		**Pn**	**01 40 54.6**	**+0.4**
SOH	**Sokhos**	**2.28**	**119**	*i* Pn		**Pn**	**01 40 54.7**	**+0.6**
SOH	**Sokhos**	**2.28**	**119**	P		**Pn**	**01 40 54.5**	**+0.3**
LIT	**Litokhoron**	**2.29**	**144**	*e*Pn		**Pn**	**01 40 55.2**	**+1.0**
LIT	**Litokhoron**	**2.29**	**144**	P		**Pn**	**01 40 55.1**	**+0.8**
LIT	**Litokhoron**	**2.29**	**144**	*i* Pn		**Pn**	**01 40 55.3**	**+1.0**
LIT	**Litokhoron**	**2.29**	**144**	*e*P		**Pn**	**01 40 55.3**	**+1.0**
LIT	**Litokhoron**	**2.29**	**144**	P		**Pn**	**01 40 55.1**	**+0.8**
SRS	**Serrai**	**2.30**	**111**	P		**Pn**	**01 40 55.2**	**+0.7**
SRS				S		**Sn**	**01 41 22.6**	**-0.2**
SRS	**Serrai**	**2.30**	**111**	*i* Pn		**Pn**	**01 40 55.2**	**+0.7**
SRS	**Serrai**	**2.30**	**111**	P		**Pn**	**01 40 55.2**	**+0.7**
SRS				S		**Sn**	**01 41 23.8**	**+1.0**
SRS				AML	AML		01 41 35.0	
	comp=E,585μm,0.7s							
SRS				AML	AML		01 41 36.1	
	comp=N,737μm,0.6s							
SVIS	**Svilajnac**	**2.32**	**8**	*e*Pn		**Pn**	**01 40 55.2**	**+0.5**
KEK	**Kerkira**	**2.36**	**198**	P		**Pn**	**01 40 57.0**	**+1.7**
KEK				S		**Sb**	**01 41 26.7**	**-1.6**
KEK	**Kerkira**	**2.36**	**198**	P		**Pn**	**01 40 56.9**	**+1.6**
NVR	**Nevrokopi**	**2.42**	**104**	P		**Pn**	**01 40 56.4**	**+0.3**
NVR	**Nevrokopi**	**2.42**	**104**	P		**Pn**	**01 40 57.0**	**+0.8**
STON	**Ston**	**2.42**	**293**	*i* Pn		**Pb**	**01 40 58.6**	**-1.6**
STON				Sn		**Sg**	**01 41 32.6**	**-2.1**
STON	**Ston**	**2.42**	**293**	⇑*i*Pn		**Pb**	**01 40 58.5**	**-1.8**
IGT	**Igoumenitsa**	**2.45**	**187**	P		**Pn**	**01 40 58.5**	**+2.0**
IGT				S		**Sn**	**01 41 28.3**	**+1.9**
IGT	**Igoumenitsa**	**2.45**	**187**	P		**Pn**	**01 40 58.8**	**+2.2**
IGT				S		**Sb**	**01 41 29.0**	**-1.9**
IGT				AML	AML		01 41 36.0	
	comp=E,1411μm,0.7s							
IGT				AML	AML		01 41 40.9	
	comp=N,1143μm,0.4s							
HAPS	**Han Pijesak,Bl**	**2.49**	**329**	*e*Pn		**Pn**	**01 40 56.8**	**-0.4**
HAPS	**Han Pijesak,Bl**	**2.49**	**329**	*e*Pn		**Pn**	**01 40 56.4**	**-0.8**
KUBS	**Kucevo**	**2.54**	**15**	*e*Pn		**Pn**	**01 40 56.8**	**-0.9**
THL	**Klokotos Trika**	**2.59**	**158**	P		**Pn**	**01 40 59.4**	**+1.0**
THL				S		**Sn**	**01 41 31.1**	**+1.4**
PLG	**Polygyros**	**2.59**	**127**	P		**Pn**	**01 40 59.2**	**+0.7**
PLG	**Polygyros**	**2.59**	**127**	P		**Pn**	**01 40 59.1**	**+0.7**
TEKS	**Tekeris**	**2.73**	**342**	*e*Pn		**Pn**	**01 41 00.6**	**+0.2**
TEKS	**Tekeris**	**2.73**	**342**	*e*Pn		**Pn**	**01 41 00.4**	**0.0**
CGL1	**Ceglie Messapi**	**2.79**	**243**	*e*Pn		**Pn**	**01 41 02.3**	**+1.2**
CGL1				Sn		**Sn**	**01 41 37.3**	**+2.7**
FASA	**Fasano**	**2.79**	**247**	*e*Pn		**Pn**	**01 41 03.0**	**+1.8**
PUNG	**Punghina**	**2.81**	**34**	⇑*i*P		**Pn**	**01 41 01.8**	**+0.3**
MDVR	**Moldovita**	**2.90**	**14**	⇑*i*P		**Pn**	**01 41 02.5**	**-0.3**
MDVR	**Moldovita**	**2.90**	**14**	S		**Sn**	**01 41 39.1**	**+1.5**
OUR	**Ouranopolis**	**2.94**	**123**	*e*P		**Pn**	**01 41 03.9**	**+0.7**
OUR	**Ouranopolis**	**2.94**	**123**	P		**Pn**	**01 41 03.9**	**+0.7**
OUR	**Ouranopolis**	**2.94**	**123**	P		**Pn**	**01 41 03.9**	**+0.7**
PLD	**Plovdiv**	**2.96**	**86**	*e*P		**Pn**	**01 41 03.4**	**-0.1**
TAR1	**Taranto**	**2.98**	**242**	*e*Pn		**Pn**	**01 41 05.0**	**+1.3**
TAR1				Sn		**Sn**	**01 41 41.3**	**+2.0**
KAVA	**Kavala**	**3.00**	**108**	P		**Pn**	**01 41 04.8**	**+0.8**
MASS	**Massafra**	**3.02**	**245**	*e*Pn		**Pn**	**01 41 05.0**	**+0.7**
MASS				Sn		**Sn**	**01 41 41.2**	**+0.9**
BAI	**Bari**	**3.02**	**255**	*e*Pn		**Pn**	**01 41 05.5**	**+1.2**
BAI				Sn		**Sn**	**01 41 41.8**	**+1.4**
FYTO	**Fytoko, Volos**	**3.06**	**146**	P		**Pn**	**01 41 05.6**	**+0.8**
EVR	**Evrytania**	**3.15**	**165**	P		**Pn**	**01 41 07.8**	**+1.5**
HERR	**Herculane**	**3.16**	**22**	⇓*i*P		**Pn**	**01 41 06.6**	**+0.4**
HERR	**Herculane**	**3.16**	**22**	S		**Sn**	**01 41 45.5**	**+1.7**
LKD2	**Lefkada island**	**3.17**	**181**	P		**Pn**	**01 41 08.3**	**+1.8**
AGG	**Agios Georgios**	**3.18**	**157**	*e*P		**Pn**	**01 41 06.9**	**+0.3**
AGG	**Agios Georgios**	**3.18**	**157**	*e*Pn		**Pn**	**01 41 07.6**	**+1.0**
AGG	**Agios Georgios**	**3.18**	**157**	P		**Pn**	**01 41 07.8**	**+1.2**
AGG	**Agios Georgios**	**3.18**	**157**	*e*P		**Pn**	**01 41 07.6**	**+1.0**
XOR	**Xorichti**	**3.20**	**144**	P		**Pn**	**01 41 07.4**	**+0.6**
SRE	**Strehaia**	**3.24**	**33**	⇑*i*P		**Pn**	**01 41 07.1**	**-0.3**
SG1	**Sgolgore (BA)**	**3.25**	**251**	*e*Pn		**Pn**	**01 41 08.7**	**+1.1**
SG1				Sn		**Sn**	**01 41 47.1**	**+0.9**
FRGS	**Fruska Gora**	**3.26**	**348**	*e*Pn		**Pn**	**01 41 07.8**	**+0.1**
FRGS	**Fruska Gora**	**3.26**	**348**	⇑*i*Pn		**Pn**	**01 41 07.7**	**+0.1**
NEO	**Neokhori**	**3.26**	**144**	P		**Pn**	**01 41 08.3**	**+0.6**
THAS	**Thassos island**	**3.29**	**113**	P		**Pn**	**01 41 08.6**	**+0.5**
MATE	**Matera**	**3.31**	**248**	⇓*i*P		**Pn**	**01 41 09.4**	**+1.1**
MATE	**Matera**	**3.31**	**248**	S		**Sn**	**01 41 47.4**	**-0.1**
EVGI	**Lefkada island**	**3.34**	**181**	P		**Pn**	**01 41 10.2**	**+1.4**
DOB	**Doboj**	**3.37**	**326**	*e*Pn		**Pn**	**01 41 08.9**	**-0.2**
VLAD	**Vladila**	**3.37**	**52**	⇑*i*P		**Pn**	**01 41 10.3**	**+1.2**
BANR	**Banloc**	**3.43**	**5**	⇑*i*P		**Pn**	**01 41 10.4**	**+0.5**
BANR	**Banloc**	**3.43**	**5**	S		**Sn**	**01 41 50.4**	**0.0**
KDZ	**Kurdzhali**	**3.51**	**94**	*e*P		**Pn**	**01 41 10.9**	**-0.2**
SMIA	**Simia**	**3.62**	**148**	P		**Pn**	**01 41 13.7**	**+1.2**
RDO	**Rodhopi**	**3.69**	**101**	*e*

ISK Istanbul-Kandi 6.31 95 *e*P **Pn 01 41 50.8 +1.3**
OBKA Obir 6.35 318 *i* Pn **Pn 01 41 51.7 +1.5**
comp=Z,5.8nm,0.3s
BUY Buyukada 6.40 97 *e*P **Pn 01 41 51.8 +1.1**
BUY Buyukada 6.40 97 *i* P **Pn 01 41 51.9 +1.1**
BUY IAML_P
comp=Z,949nm,0.4s
SOP Sopron 6.44 334 EPn **Pn 01 41 52.1 +0.8**
SOP Sn **Sn 01 43 08.0 +3.3**
ARSA Arzberg 6.46 327 *i* Pn **Pn 01 41 52.4 +0.8**
comp=Z,14nm,0.4s,SNR=14
ARSA *e*Sn **Sn 01 43 05.0 -0.3**
comp=Z,7.5nm,0.5s
BURAR Bucovina Array 6.48 28⇑ *i*P **Pn 01 41 53.9 +1.9**
BUR08 Bucovina Ar. S 6.50 28 *e*Pn **Pn 01 41 53.3 +1.0**
ULDT Uludag 6.60 103 *i* P **Pn 01 41 56.0 +2.2**
ULDT IAML_P
comp=Z,7.4nm,0.1s
VAE Valguarnera 6.62 229 Pn **Pn 01 41 51.9 -2.0**
comp=Z,0.6nm,0.3s,baz=78,slow=3.2,SNR=2.6
VYHS Vyhne 6.66 349 *e*PN **Pn 01 41 55.0 +0.6**
VYHS *e*SN **Sn 01 43 05.9 -4.3**
UZH Uzhgorod 6.75 9 *e*P **Pn 01 41 58.3 +2.7**
UZH *e*S **Sn 01 43 15.3 +3.0**
AYDB Zeytinkoy-Aydi 6.80 124 *e*P **Pn 01 41 58.4 +1.9**
HRT Hereke 6.81 97 *e*P **Pn 01 41 58.0 +1.5**
KOLL Kolacno 6.81 347 *e*PN **Pn 01 41 56.8 +0.4**
MODS Modra-Piesok 6.86 340 *e*PN **Pn 01 41 57.2 +0.2**
MODS *e*SN **Sn 01 43 09.8 -5.1**
CONA Conrad Observa 6.89 332 *e*Pn **Pn 01 41 58.5 +1.0**
comp=Z,3.5nm,0.6s
MYKA Terra Mystica 6.90 315 *i* Pn **Pn 01 42 00.7 +3.0**
comp=Z,3.1nm,0.3s
MYKA *e*Sn **Sn 01 43 16.8 +0.6**
comp=Z,9.6nm,0.5s
MANT Manisa 6.92 118 *e*Pn **Pn 01 42 00.4 +2.3**
MANT Manisa 6.92 118 *i* P **Pn 01 42 01.7 +3.6**
MANT IAML_P
comp=Z,1μm,0.5s
KULA Kula-Manisa 6.97 117 *e*P **Pn 01 42 00.6 +1.9**
IMMV Iera Moni Meta 6.97 158 *e*P **Pn 01 42 00.5 +1.8**
AYDN Tasoluk 6.98 126 *i* P **Pn 01 42 01.1 +2.3**
AYDN IAML_P
comp=Z,483nm,0.2s
KOLS Kolonicke sedl 7.05 8 *e*PN **Pn 01 42 00.8 +1.1**
TVSB Tavsanli 7.09 108 *e*P **Pn 01 42 02.0 +1.7**
USAK Uak-Merkez 7.11 114 *i* P **Pn 01 42 03.6 +3.0**
USAK IAML_P
comp=Z,576nm,0.4s
JAVC Velka Javorina 7.22 344 *e*PN **Pn 01 42 03.9 +1.8**
GDZ Gediz 7.25 110 *i* P **Pn 01 42 04.8 +2.2**
GDZ IAML_P
comp=Z,19nm,0.3s
CLTB Caltabellotta 7.26 235 *e*Pn **Pn 01 42 04.0 +1.2**
KBA Koelnbreinsper 7.35 317 *i* Pn **Pn 01 42 07.2 +3.3**
comp=Z,2.4nm,0.3s
KBA *e*Sn **Sn 01 43 25.6 -1.7**
comp=Z,7.4nm,0.6s
GEYV SAKARYA_Geyve 7.36 98 *i* P **Pn 01 42 06.1 +2.2**
GEYV IAML_P
comp=Z,553nm,0.3s
IDI Anoyia 7.42 153 *e*P **Pn 01 42 06.8 +2.0**
IDI Anoyia 7.42 153 Pn **Pn 01 42 04.4 -0.5**
comp=Z,0.4nm,0.3s,baz=298,slow=17,SNR=6.8
IDI Sn **Sn 01 43 25.5 -3.4**
comp=Z,0.6nm,0.3s,baz=307,slow=20,SNR=3.4
IDI LR LR 01 45 06.1
comp=Z,71nm,20.3s,baz=329,slow=39
MOA Molln 7.46 324 *e*Pn **Pn 01 42 06.7 +1.3**
comp=Z,4.2nm,0.3s,SNR=5.6
MOA *i* Sn **Sn 01 43 30.4 +0.5**
comp=Z,6.0nm,0.4s
GULT Gulveren 7.53 99 *e*P **Pn 01 42 08.2 +1.8**
YER Yerkesik 7.56 127 *e*P **Pn 01 42 08.8 +2.0**
GVD Gavdhos 7.59 159 *e*P **Pn 01 42 09.0 +1.9**
ABTA Abfaltersbach 7.59 312 *i* Pn **Pn 01 42 09.1 +1.9**
comp=Z,12nm,0.4s,SNR=9.0
ABTA *e*Sn **Sn 01 43 34.6 +1.5**
comp=Z,20nm,0.6s
KHAL Karahalli 7.60 115 *i* P **Pn 01 42 10.3 +2.9**
KHAL IAML_P
comp=Z,571nm,0.4s
SAHE Sakarya_HENDEK 7.69 95 *i* P **Pn 01 42 10.6 +2.1**
SAHE IAML_P
comp=Z,110nm,0.4s
KRUC Moravsky 7.72 338 *e*PN **Pn 01 42 10.8 +1.9**
SRCK Saricakaya, Es 7.72 101 *e*P **Pn 01 42 10.9 +2.0**
SRCK Saricakaya, Es 7.72 101 *i* P **Pn 01 42 11.5 +2.6**
SRCK IAML_P
comp=Z,404nm,0.3s
KWP Kalwaria Pacla 7.79 9 *e*Pn **Pn 01 42 11.5 +1.7**
KWP Kalwaria Pacla 7.79 9 *e*P **Pn 01 42 11.5 +1.7**
BTAS Taskesti 7.86 97 *i* P **Pn 01 42 12.7 +1.9**
BTAS IAML_P
comp=Z,514nm,0.5s
VLC Villacollemand 7.89 290 *e*Pn **Pn 01 42 13.0 +1.8**
VRAC Vranov 7.89 340 Pn **Pn 01 42 11.6 +0.3**
comp=Z,0.2nm,0.3s,baz=159,slow=14,SNR=5.3
VRAC Sn **Sn 01 43 36.3 -4.2**
comp=Z,0.2nm,0.3s,baz=227,slow=19,SNR=1.7
VRAC LR LR 01 46 07.3
comp=Z,31nm,20.5s,baz=216,slow=45
VRAC Vranov 7.89 340 *e*PN **Pn 01 42 12.6 +1.3**
MDUB Mudurnu 8.03 97 *e*Pn **Pn 01 42 15.6 +2.4**
MORC Moravsky Berou 8.12 345 *e*PN **Pn 01 42 14.3 -0.1**
SHUT Suhut-Afyon 8.24 111 *e*P **Pn 01 42 17.4 +1.2**
BRDR BURDUR-Merkez 8.34 118 *i* P **Pn 01 42 21.3 +3.7**
BRDR IAML_P
comp=Z,474nm,0.5s
WTTA Wattenberg 8.38 312 *e*Pn **Pn 01 42 20.3 +2.3**
comp=Z,6.6nm,0.3s,SNR=14
WTTA *e*Sn **Sn 01 43 54.3 +1.8**
comp=Z,37nm,0.7s
BOLV Bolvadin 8.45 109 *i* P **Pn 01 42 22.3 +3.3**
BOLV IAML_P
comp=Z,39nm,0.1s
WATA Walderalm 8.45 313 *i* Pn **Pn 01 42 21.6 +2.6**
comp=Z,6.2nm,0.4s,SNR=13
WATA *e*Sn **Sn 01 43 56.7 +2.3**
comp=Z,22nm,0.6s
GEC2 GERESS Array S 8.47 327 *e*Pn **Pn 01 42 21.4 +2.1**
GEC2 GERESS Array S 8.47 327 *e*P **Pn 01 42 21.4 +2.1**
GERES GERESS Array B 8.47 327 Pn **Pn 01 42 20.4 +1.1**
comp=Z,0.3nm,0.3s,baz=148,slow=13,SNR=18
GERES LR LR 01 46 15.9
comp=Z,147nm,18.1s,baz=88,slow=43
KIBS BOLU 8.52 97 *i* P **Pn 01 42 22.4 +2.4**
KIBS IAML_P
comp=Z,255nm,0.3s
SQTA Sankt Quirin 8.59 311 *i* Pn **Pn 01 42 23.8 +2.9**
comp=Z,5.2nm,0.2s,SNR=10
SQTA *e*Sn **Sn 01 44 00.1 +2.4**
comp=Z,24nm,0.5s
BCAM Yenicaga 8.59 94 *i* P **Pn 01 42 23.7 +2.7**
BCAM IAML_P
comp=Z,41nm,0.2s
MOTA Moosalm 8.72 311 *e*Pn **Pn 01 42 25.0 +2.3**
comp=Z,14nm,0.6s,SNR=21
MOTA *e*Sn **Sn 01 44 01.9 +1.0**
comp=Z,7.1nm,0.4s
PGF Pioggiola 8.73 278 *e*Pn **Pn 01 42 24.2 +1.4**
PGF *e*Sn **Sn 01 43 56.1 -5.0**
comp=Z,2.2nm,0.5s
PGF Pioggiola 8.73 278 *e*Pn **Pn 01 42 24.2 +1.4**
PGF *e*Sn **Sn 01 43 56.1 -5.0**
KHC Kasperske Hory 8.75 327 *e*Pn **Pn 01 42 24.1 +1.1**
KHC Kasperske Hory 8.75 327 *e*P **Pn 01 42 24.1 +1.1**
KHC Kasperske Hory 8.75 327 *e*PN **Pn 01 42 24.1 +1.1**
KHC *ex* x 01 43 10.0
KHC *e*SN **Sn 01 44 00.2 -1.2**
KHC *ex* x 01 44 33.5
FETA Feichten 8.76 309 *i* Pn **Pn 01 42 26.4 +3.2**
comp=Z,1.3nm,0.2s
FETA *e*Sn **Sn 01 44 03.3 +1.4**
comp=Z,8.9nm,0.5s
FUORN Ofenpass-Fuorn 8.83 305 *e*Pn **Pn 01 42 25.9 +1.5**
DPC Dobruska-Polom 8.93 341 *e*P **Pn 01 42 27.7 +2.3**
DPC Dobruska-Polom 8.93 341 *e*PN **Pn 01 42 27.7 +2.3**
RETA Reutte 8.99 311 *i* Pn **Pn 01 42 29.9 +3.6**
comp=Z,2.5nm,0.3s
RETA *e*Sn **Sn 01 44 09.0 +1.5**
comp=Z,10nm,0.5s
DAVOX Davos/Dischmat 9.14 305 Pn **Pn 01 42 29.4 +0.8**
comp=Z,3.1nm,0.3s,baz=129,slow=13,SNR=26
DAVOX Sn **Sn 01 44 11.2 -0.1**
comp=Z,1.3nm,0.3s,baz=196,slow=24,SNR=4.8
DAVOX LR LR 01 46 00.0
comp=Z,124nm,18.5s,baz=172,slow=38
TUE Stuetta 9.33 303 *e*Pn **Pn 01 42 32.6 +1.4**
DAVA Damuels 9.39 308 *i* Pn **Pn 01 42 36.2 +4.3**
comp=Z,1.6nm,0.3s
DAVA *e*Sn **Sn 01 44 17.1 -0.3**
comp=Z,17nm,0.6s
SBF Sospel 9.94 285 *e*Pn **Pn 01 42 40.4 +1.0**
SBF *e*Sn **Sn 01 44 24.8 -6.1**
comp=Z,13nm,0.6s
SBF Sospel 9.94 285 *e*Pn **Pn 01 42 40.4 +1.0**
SBF *e*Sn **Sn 01 44 24.8 -6.1**
SBF Sospel 9.94 285 *e*P **Pn 01 42 40.4 +1.0**
SBF *e* 01 44 24.8
BR101 Keskin Array S 10.03 99 *e*Pn **Pn 01 42 42.1 +1.4**
BR131 Keskin Array S 10.03 99 *e*Pn **Pn 01 42 42.2 +1.5**
BRTR Keskin Array B 10.03 99 Pn **Pn 01 42 42.1 +1.4**
comp=Z,0.5nm,0.3s,baz=278,slow=14,SNR=16
FRF La Foret Royal 10.49 283 *e*Pn **Pn 01 42 45.3 -1.5**
FRF *e*Sn **Sn 01 44 40.2 -3.9**
comp=Z,5.7nm,0.7s
FRF La Foret Royal 10.49 283 *e*Pn **Pn 01 42 45.3 -1.5**
FRF *e*Sn **Sn 01 44 40.2 -3.9**
FRF La Foret Royal 10.49 283 *e*P **Pn 01 42 45.3 -1.5**
FRF *e* 01 44 40.2
AKASG Malin Array Be 10.52 31 Pn **Pn 01 42 48.0 +0.8**
comp=Z,0.8nm,0.3s,baz=222,slow=12,SNR=2.8
AKASG Malin Array Be 10.52 31 P **Pn 01 42 48.0 +0.8**
AKBB Malin Array Si 10.52 31 *e*Pn **Pn 01 42 48.0 +0.8**
AKBB Malin Array Si 10.52 31 *e*P **Pn 01 42 48.0 +0.8**
MBDF Montbardon 10.54 290 *e*Pn **Pn 01 42 46.0 -1.7**
MBDF *e*Sn **Sn 01 44 39.2 -6.5**
comp=Z,13nm,0.8s
MBDF Montbardon 10.54 290 *e*Pn **Pn 01 42 46.0 -1.7**
MBDF *e*Sn **Sn 01 44 39.2 -6.5**
MBDF Montbardon 10.54 290 *e*P **Pn 01 42 46.0 -1.7**
MBDF *e* 01 44 39.2
LMR La Mourre 10.57 282 *e*Pn **Pn 01 42 47.9 -0.1**
LMR *e*Sn **Sn 01 44 40.0 -6.2**
comp=Z,1.6nm,0.3s
LMR La Mourre 10.57 282 *e*Pn **Pn 01 42 47.9 -0.1**
LMR *e*Sn **Sn 01 44 40.0 -6.2**
LMR La Mourre 10.57 282 *e*P **Pn 01 42 47.9 -0.1**
LMR *e* 01 44 40.0
SENIN Lac Senin/Sane 10.61 299 *e*Pn **Pn 01 42 50.8 +2.1**
LPG La Plagne 10.72 294 *e*Pn **Pn 01 42 49.8 -0.4**
LPG *e*Sn **Sn 01 44 43.6 -6.6**
comp=Z,24nm,0.6s
LPG La Plagne 10.72 294 *e*Pn **Pn 01 42 49.8 -0.4**
LPL La Plagne 10.74 294 *e*Pn **Pn 01 42 49.7 -0.7**
LPL *e*Sn **Sn 01 44 44.0 -6.6**
comp=Z,29nm,0.7s
LPL La Plagne 10.74 294 *e*Pn **Pn 01 42 49.7 -0.7**
LPL La Plagne 10.74 294 *e*P **Pn 01 42 49.7 -0.7**
BFO Black Forest 10.82 310 *e*Pn **Pn 01 42 52.9 +1.5**
BFO Black Forest 10.82 310 *e*P **Pn 01 42 52.9 +1.5**
ORIF Oris-en-Rattie 11.20 290 *e*Pn **Pn 01 42 56.0 -0.6**
ORIF *e*Sn **Sn 01 44 54.8 -6.9**
comp=Z,10nm,0.7s
ORIF Oris-en-Rattie 11.20 290 *e*Pn **Pn 01 42 56.0 -0.6**
ORIF Oris-en-Rattie 11.20 290 *e*P **Pn 01 42 56.0 -0.6**
HINF Hinteralfeld 11.45 305 *e*Pn **Pn 01 42 59.1 -0.9**
HINF *e*Sn **Sn 01 45 00.6 -7.1**
comp=Z,14nm,0.6s
HINF Hinteralfeld 11.45 305 *e*Pn **Pn 01 42 59.1 -0.9**
HINF Hinteralfeld 11.45 305 *e*P **Pn 01 42 59.1 -0.9**
CDF Champ du Feu 11.47 309 *e*Pn **Pn 01 42 59.6 -0.7**
CDF *e*Sn **Sn 01 45 01.2 -7.1**
comp=Z,8.4nm,0.8s
CDF Champ du Feu 11.47 309 *e*Pn **Pn 01 42 59.6 -0.7**
CDF Champ du Feu 11.47 309 *e*P **Pn 01 42 59.6 -0.7**
CABF La Chapelle 11.48 299 *e*Pn **Pn 01 42 59.9 -0.5**
CABF *e*Sn **Sn 01 45 01.9 -6.6**
comp=Z,37nm,1.3s
CABF La Chapelle 11.48 299 *e*Pn **Pn 01 42 59.9 -0.5**
CABF La Chapelle 11.48 299 *e*P **Pn 01 42 59.9 -0.5**
HAU Haudompre 11.84 306 *e*Pn **Pn 01 43 05.5 +0.2**
HAU *e*Sn **Sn 01 45 10.5 -6.7**
comp=Z,14nm,0.6s
HAU Haudompre 11.84 306 *e*Pn **Pn 01 43 05.5 +0.2**
HAU Haudompre 11.84 306 *e*P **Pn 01 43 05.5 +0.2**
VIVF Saint-Julien-l 12.04 289 *e*Pn **Pn 01 43 07.1 -0.9**
VIVF Saint-Julien-l 12.04 289 *e*Pn **Pn 01 43 07.1 -0.9**
VIVF Saint-Julien-l 12.04 289 *e*P **Pn 01 43 07.1 -0.9**
ANN Anapa 12.47 71 *e*P **Pn 01 43 13.6 -0.3**
ANN *e*S **Sn 01 45 32.1 -0.6**
ANN pmax pmax
comp=Z,69nm,1.3s
MEZF Maizieres J'vi 12.83 306 *e*Pn **Pn 01 43 18.2 -0.6**
MEZF *e*Sn **Sn 01 45 33.7 -7.7**
comp=Z,3.8nm,0.4s
MEZF Maizieres J'vi 12.83 306 *e*Pn **Pn 01 43 18.2 -0.6**
SMF Signal de Mont 12.97 297 *e*Pn **Pn 01 43 20.0 -0.8**
SMF *e*Sn **Sn 01 45 36.8 -8.1**
comp=Z,7.1nm,0.6s
SMF Signal de Mont 12.97 297 *e*Pn **Pn 01 43 20.0 -0.8**
SMF Signal de Mont 12.97 297 *e*P **Pn 01 43 20.0 -0.8**
LOR Lormes 13.13 300 *e*Pn **Pn 01 43 22.9 -0.1**
LOR *e*Sn **Sn 01 45 41.1 -7.8**
comp=Z,3.8nm,0.3s
LOR Lormes 13.13 300 *e*Pn **Pn 01 43 22.9 -0.1**
LOR Lormes 13.13 300 *e*P **Pn 01 43 22.9 -0.1**
SSF Saint Saulge 13.30 298 *e*Pn **Pn 01 43 24.6 -0.7**
SSF *e*Sn **Sn 01 45 45.4 -7.6**
comp=Z,4.3nm,0.6s
SSF Saint Saulge 13.30 298 *e*Pn **Pn 01 43 24.6 -0.7**
SSF Saint Saulge 13.30 298 *e*P **Pn 01 43 24.6 -0.7**
AVF Avril sur Loir 13.33 297 *e*Pn **Pn 01 43 25.0 -0.7**
AVF *e*Sn **Sn 01 45 45.4 -8.3**
comp=Z,13nm,1.1s
AVF Avril sur Loir 13.33 297 *e*Pn **Pn 01 43 25.0 -0.7**
AVF Avril sur Loir 13.33 297 *e*P **Pn 01 43 25.0 -0.7**
BGF Bois d'Agland 13.61 296 *e*Pn **Pn 01 43 28.8 -0.7**
BGF *e*Sn **Sn 01 45 52.5 -8.1**
comp=Z,5.6nm,0.5s
BGF Bois d'Agland 13.61 296 *e*Pn **Pn 01 43 28.8 -0.7**
BGF Bois d'Agland 13.61 296 *e*P **Pn 01 43 28.8 -0.7**
TCF Toulx Ste Croi 13.99 294 *e*Pn **Pn 01 43 33.6 -1.0**
TCF Toulx Ste Croi 13.99 294 *e*Pn **Pn 01 43 33.6 -1.0**
TCF Toulx Ste Croi 13.99 294 *e*P **Pn 01 43 33.6 -1.0**
MMAI Mount Meron Ar 14.66 123 Pn **Pn 01 43 44.7 +0.8**
comp=Z,0.1nm,0.3s,baz=327,slow=10,SNR=1.9
KZIT Kziot 15.56 131 P **P 01 44 06.6 +6.5**
KIV Kislovodsk 16.19 76 *e*P **P 01 44 06.2 -0.9**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 16.34 76 Pn **P 01 44 08.7 -0.1**
comp=Z,0.1nm,0.3s,baz=283,slow=14,SNR=2.7
OBN Obninsk 16.76 33⇓ *e*P **P 01 44 13.0 -0.3**
OBN pmax pmax
comp=Z,8.0nm,1.2s
OBN MLR MLR
comp=Z,42nm,15.0s
EIL Elat 16.81 132 Pn **Pn 01 44 10.7 -1.2**
comp=Z,0.2nm,0.3s,baz=267,slow=13,SNR=2.4
GNI Garni 18.18 88 P **P 01 44 29.5 +0.1**
comp=Z,0.4nm,0.3s,baz=275,slow=4.3,SNR=5.7
GNI Garni 18.18 88 *e*P **P 01 44 31.0 +1.7**
comp=Z,6.6nm,0.8s
GNI Garni 18.18 88 *ce*P **P 01 44 33.4 +4.1**
GROC Groznyy 18.48 78 *e*P **P 01 44 30.8 -1.6**
GROC pmax pmax
comp=Z,9.0nm,0.5s
HFS Hagfors 18.70 349 P **P 01 44 34.6 -0.1**
comp=Z,0.1nm,0.3s,baz=154,slow=14,SNR=5.9
FIA0 FINESS Array S 19.77 8 *e*P **P 01 44 45.9 -0.5**
FIA0 FINESS Array S 19.77 8 *e*P **P 01 44 45.9 -0.5**
FINES FINESS Array B 19.77 8 P **P 01 44 45.9 -0.5**
comp=Z,0.2nm,0.3s,baz=180,slow=9.3,SNR=11
FINES FINESS Array B 19.77 8 *i* P **Pn 01 44 48.4 +0.5**
FINES pmax pmax
comp=Z,1.0nm,0.6s
NB2 NORSAR Subarra 19.96 346 P **Pn 01 44 51.4 +1.2**
comp=Z,1.1nm,0.8s,baz=159,slow=11
NB200 NORSAR Array S 19.96 346 *e*P **P 01 44 48.7 +0.2**
NOA NORSAR Array B 19.96 346 P **P 01 44 48.7 +0.2**
comp=Z,0.0nm,0.3s,baz=153,slow=10,SNR=4.8
AKT Akhty 20.13 82 *e*P Pn 01 44 53.1 +0.7
AKT *e* 01 45 08.9
AKT pmax pmax
comp=Z,9.0nm,1.0s
EKA Eskdalemuir Ar 20.55 319 P **P 01 44 54.4 -0.6**
comp=Z,1.9nm,0.6s,baz=113,slow=9.9,SNR=7.5
PRGR Permogore 24.71 29 *e*P **P 01 45 36.6 -0.8**
PRGR pmax pmax
comp=Z,6.0nm,0.8s
AKTO Aktyubinsk 26.92 59 P **P 01 45 57.3 -0.2**
comp=Z,0.4nm,0.4s,baz=270,slow=15,SNR=3.2
ARA0 ARCESS Array S 27.75 4 *e*P **P 01 46 04.0 -0.8**
ARCES ARCESS Array B 27.75 4 P **P 01 46 04.0 -0.8**
comp=Z,1.9nm,0.8s,baz=201,slow=8.9,SNR=8.0
ARCES ARCESS Array B 27.75 4 P **P 01 46 04.0 -0.8**
ARU Arti 28.21 46*c i*P **P 01 46 13.3 +4.3**
ARU 01 47 02.4
ARU SS SS 01 52 19.3 -34
ARU pmax pmax
comp=Z,4.0nm,1.3s
GEYT Alibeck 28.79 85 P **P 01 46 14.1 -0.3**
comp=Z,2.1nm,0.6s,baz=288,slow=5.8,SNR=6.5
TOA1 Torodi Ar. Sit 33.14 216 *e*P **P 01 46 52.2 -0.7**
TORD Torodi Ar. Bea 33.15 216 P **P 01 46 52.2 -0.7**
comp=Z,3.9nm,0.9s,baz=22,slow=7.0,SNR=30
BRVK Borovoye 34.59 54⇑ *e*P **P 01 47 06.3 +1.1**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
KK31 Karatay Array 36.26 71 *e*P **P 01 47 21.8 +2.1**
comp=Z,3.5nm,1.1s
KK31 Karatay Array 36.26 71 *e*P **P 01 47 21.8 +2.1**
KK31 pmax pmax
comp=Z,4.0nm,1.1s
KKAR Karatay Array 36.26 71 *e*P **P 01 47 21.8 +2.1**
comp=Z,3.5nm,1.1s
KKAR Karatay Array 36.26 71 *e*P **P 01 47 21.8 +2.1**
KKAR pmax pmax
comp=Z,4.0nm,1.1s
AAK Ala-Archa 39.20 70⇓ *e*P **P 01 47 47.2 +2.5**
AAK pmax pmax
comp=Z,3.0nm,1.3s
KURK Kurchatov 39.98 57⇓ *e*P **P 01 47 52.3 +1.5**
KURK pmax pmax
comp=Z,2.0nm,1.1s
DBIC Dimbokro 41.84 220 P **P 01 48 06.2 -0.4**
comp=Z,3.9nm,0.7s,baz=27,slow=11,SNR=4.9
DBIC Dimbokro 41.84 220 *e*P **P 01 48 06.2 -0.4**
comp=Z,59nm,1.8s
ZAA1 Zalesovo Array 43.11 51 *e*P **P 01 48 17.5 +1.0**
ZALV Zalesovo Beam 43.11 51 P **P 01 48 17.5 +1.0**
comp=Z,4.0nm,0.6s,baz=271,slow=8.2,SNR=10.0
ZALV Zalesovo Beam 43.11 51 *i* P **P 01 48 17.7 +1.2**
ZALV pmax pmax
comp=Z,4.0nm,0.6s
MK31 Makanchi Array 43.27 62 *e*P **P 01 48 19.3 +1.3**
comp=Z,2.3nm,1.1s
MK31 Makanchi Array 43.27 62 *e*P **P 01 48 19.3 +1.3**
MK31 pmax pmax
comp=Z,2.0nm,1.1s
MK32 Makanchi Array 43.27 62 *e*P **P 01 48 19.0 +1.1**
MKAR Makanchi Array 43.27 62 P **P 01 48 19.0 +1.1**
comp=Z,1.8nm,0.8s,baz=287,slow=7.4,SNR=14
DGZ Jazzator, Alta 45.71 56⇑ *e*P **P 01 48 38.7 +1.1**
DGZ pmax pmax
comp=Z,1.0nm,0.8s
WMQ Urumqi 47.86 64 *e*P **P 01 48 58.3 +4.0**
SONA0 Songino Array 57.97 52 *e*P **P 01 50 07.7 -1.3**
SONM Songino Array 57.97 52 P **P 01 50 07.7 -1.3**
comp=Z,0.8nm,0.3s,baz=286,slow=5.7,SNR=3.0
LZH Lanzhou 62.41 65 *e*P **P 01 50 41.3 +1.7**
LZH pP sP 01 50 46.3 +0.3
LZH sP pP 01 50 49.3 +5.0
LZH pmax pmax
comp=Z,19nm,1.2s
HHC Hu-ho-hao-te 64.79 57 P **P 01 50 57.0 +1.8**
HHC pmax pmax
comp=Z,11nm,1.1s
HHC pmax pmax
comp=Z,34nm,5.5s
BOSA Boshof 70.35 176 P **P 01 51 30.8 +0.5**
comp=Z,1.8nm,0.9s,baz=36,slow=9.6,SNR=3.6
WHN Wuhan 72.76 64 *e*P P 01 51 50.0 +5.1
KS15 Wonju Array Si 76.80 51 *e*P **P 01 52 06.9 -1.3**
KSRS Korea Array 76.82 51 P **P 01 52 06.9 -1.4**
comp=Z,0.4nm,0.3s,baz=325,slow=4.2,SNR=3.1

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*ISCJB **29** 02:01:22.5±1.0, 36°.50N±0°.10×42°.05E±0°.04, h8km±13km,*
Error ellipse: s-maj=16.6km s-min=4.8km az=3.8
*ISN **29** 02:01:23.7±0.3, 36°.65N×42°.27E, h0km, ML2.4*
*ISK **29** 02:01:24.1, 36°.51N×42°.04E, h26km±1km, ML2.8/6*
*DDA **29** 02:01:25.3, 36°.81N×42°.10E, h3km±5km, ML2.7*
ISC 29 02:01:23.2±1.4, **36°.60N**±0°.07×**42°.07E**±0°.03, **h3**km±12km,
n19, σ0**s56**/30, **Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSL	**Mosul**	**0.86**	**103**	*e*Pg	**Pg**	**02 01 39.7**	**-0.1**
	baz=290						
MSL				AML	AML	02 01 42.3	
	comp=Z,206nm,0.5s						
MSL				*e*Sg	**Sg**	**02 01 50.9**	**0.0**
MARD	**Mardin**	**1.26**	**305**	*i* P	**Pg**	**02 01 47.1**	**-0.2**
MARD				*i* S	**Sg**	**02 02 03.8**	**+0.2**
MARD				IAML_P			
	comp=Z,2μm,0.2s						
CUKT	**Cukurca**	**1.39**	**62**	PN	**Pn**	**02 01 49.1**	**-0.5**
CUKT				SN	**Sb**	**02 02 07.6**	**-0.5**
CUKT	**Cukurca**	**1.39**	**62**	*i* P	**Pb**	**02 01 50.6**	**+0.7**
CUKT				*i* S	**Sn**	**02 02 08.3**	**-0.3**
CUKT				IAML_P			
	comp=Z,495nm,0.1s						
SRTM	**Siirt_Merkez**	**1.39**	**355**	*i* P	**Pb**	**02 01 50.1**	**+0.1**
SRTM				*i* S	**Sn**	**02 02 09.6**	**+1.0**
SRTM				IAML_P			
	comp=Z,241nm,0.1s						
BTMN	**Batman**	**1.44**	**334**	*i* P	**Pn**	**02 01 50.2**	**-0.1**
BTMN				IAML_P			
	comp=Z,490nm,0.3s						
MAZI	**Mazidag**	**1.56**	**304**	PN	**Pn**	**02 01 51.9**	**0.0**
HAKT	**HAKKARI**	**1.62**	**53**	*i* P	**Pn**	**02 01 53.4**	**+0.5**
HAKT				*i* S	**Sg**	**02 02 15.1**	**-0.3**
HAKT				IAML_P			
	comp=Z,331nm,0.1s						
SVAN	**Silvan-Diyarba**	**1.70**	**336**	PN	**Pn**	**02 01 53.2**	**-0.6**
SVAN				SN	**Sn**	**02 02 15.1**	**-0.9**
SVAN	**Silvan-Diyarba**	**1.70**	**336**	*i* P	**Pn**	**02 01 53.9**	**+0.1**
SVAN				*i* S	**Sb**	**02 02 16.5**	**-0.3**
SVAN				IAML_P			
	comp=Z,211nm,0.1s						
AKDM	**Akdamar-Van**	**1.87**	**22**	PN	**Pn**	**02 01 56.5**	**+0.2**
AKDM				SN	**Sb**	**02 02 21.0**	**-1.0**
GEVA	**Gevas**	**1.88**	**24**	*i* P	Pn	02 01 49.5	-7.0
GEVA				*i* S	**Sg**	**02 02 23.5**	**-0.2**
GEVA				IAML_P			
	comp=Z,241nm,0.1s						
DYBB	**Diyarbakir**	**2.05**	**312**	PN	**Pn**	**02 01 58.5**	**-0.1**
MUSM	**Mu-Merkez**	**2.17**	**348**	*i* P	**Pn**	**02 01 59.3**	**-1.0**
MUSM				*i* S	**Sn**	**02 02 27.6**	**-0.1**
MUSM				IAML_P			
	comp=Z,69nm,0.2s						
HANI	**Diyarbakir_Han**	**2.25**	**324**	*i* P	**Pb**	**02 02 05.0**	**+0.5**
HANI				*i* S	**Sb**	**02 02 33.6**	**+0.9**
HANI				IAML_P			
	comp=Z,226nm,0.2s						
VANB	**Van**	**2.25**	**27**	PN	**Pn**	**02 02 01.6**	**+0.2**
URFA	**Urfa**	**2.73**	**289**	PN	**Pn**	**02 02 07.4**	**-0.6**
SVRC	**Sivrice-ELAZID**	**2.83**	**310**	PN	**Pn**	**02 02 09.6**	**+0.2**
AGRB	**Hanur-Agry**	**3.06**	**13**	PN	**Pn**	**02 02 13.5**	**+0.9**

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*ISCJB **29** 02:01:42.6±0.6, 50°.1S±0°.1×112°.5E±0°.3, h10km, mb4.3/10,*
Error ellipse: s-maj=29.4km s-min=11.4km az=20.2
*IDC **29** 02:01:42.7±0.9, 50°.11S×112°.52E, h0km, mb4.1/6,*
mb1 4.3/6, mb1mx4.0/22, mbtmp4.1/6, Error ellipse:
s-maj=43.1km s-min=18.7km az=111.0
*NEIC **29** 02:01:45.5±1.6, 50°.08S×112°.53E, h10km±4km, mb4.3/7,*
Error ellipse: s-maj=35.7km s-min=17.9km az=106.0
ISC 29 02:01:44.6±0.7, **50°.1S**±0°.1×**112°.4E**±0°.2, **h10**km, **n36,**
σ0**s80/27, mb4.3**/10, **Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.22**	**5**	T	T	02 21 04.7	
	baz=183,slow=74,SNR=236						
H01W1	**Cape Leeuwin H**	**15.22**	**5**	T	T	02 21 05.2	
	baz=183,slow=74,SNR=72						
H01W3	**Cape Leeuwin H**	**15.23**	**5**	T	T	02 21 03.6	
	baz=183,slow=74,SNR=72						

MAW	Mawson	29.94	216	P		P	02 07 51.1	-1.2
	2.2nm,1.0s,baz=52,slow=7.6,SNR=4.3							
ASAR	Alice Springs	31.24	40	P		P	02 08 04.0	-0.4
	1.8nm,0.9s,baz=207,slow=8.4,SNR=12							
AS31	Alice Springs	31.25	40	*e*P		P	02 08 04.0	-0.4
	1.0nm,1.1s							
VNDA	Vanda	33.12	162	P		P	02 08 20.1	-0.1
	2.2nm,0.7s,baz=296,slow=8.4,SNR=14							
VNDA	Vanda	33.12	162	*e*P		P	02 08 20.1	-0.1
	4.6nm,0.9s							
WR1	Warramunga Arr	34.75	38	*e*P		P	02 08 34.7	-0.2
WRA	Warramunga Arr	34.75	38	P		P	02 08 34.7	-0.2
	4.8nm,1.0s,baz=204,slow=10.0,SNR=5.9							
QSPA	South Pole Qui	40.05	180	*e*P		P	02 09 19.3	-0.3
	4.7nm,0.8s							
SNAA	Sanae	50.32	202	P		P	02 10 41.0	+0.1
	3.2nm,0.9s,baz=121,slow=9.9,SNR=9.8							
SNAA	Sanae	50.32	202	*e*P		P	02 10 41.7	+0.8
	5.8nm,0.9s							
H08S2	Diego Garcia H	53.78	308	T		T	03 09 13.2	
	baz=149,slow=76,SNR=4.3							
H08S1	Diego Carcia H	53.79	308	T		T	03 09 15.2	
	baz=149,slow=76,SNR=5.2							
H08S3	Diego Garcia H	53.80	308	T		T	03 09 15.4	
	baz=149,slow=76,SNR=5.6							
PMSA	Palmer Station	65.46	182	*e*P		P	02 12 28.5	+1.5
	78nm,0.6s							
CM31	Chiang Mai Arr	69.26	346	*e*P		P	02 12 52.2	+0.6
	14nm,1.2s							
CMAR	Chiang Mai Arr	69.26	346	P		P	02 12 52.2	+0.6
	0.9nm,0.4s,baz=187,slow=5.1,SNR=4.7							
H10S2	ASCENSION HYDR	105.39	235	T		T	04 14 33.8	
	baz=146,slow=75,SNR=8.8							
H10S3	ASCENSION HYDR	105.40	235	T		T	04 14 28.8	
	baz=146,slow=75,SNR=7.4							
H10S1	ASCENSION HYDR	105.40	235	T		T	04 14 32.7	
	baz=146,slow=75,SNR=9.1							
WVOR	Wild Horse Val	144.48	82	*e*PKPdf		PKPdf	02 21 21.6	+0.9
I07A	Izee	144.74	79	*e*PKPdf		PKPdf	02 21 21.8	+0.8
LCMT	Little Creek M	144.97	94	*e*PKPdf		PKPdf	02 21 22.6	+1.0
J08A	Circle Bar Ran	145.05	81	*e*PKPbc		PKPdf	02 21 22.3	+0.8
X18A	Snowflake	145.54	100	*e*PKPdf		PKPab	02 21 24.1	+0.9
G08A	Pilot Rock	145.65	78	*e*PKPdf		PKPab	02 21 23.5	+0.3
ELK	Elko	145.79	87	*e*PKPdf		PKPab	02 21 24.5	+0.5
TX31	Lajitas Ar. Si	145.84	114	*e*PKPdf		PKPab	02 21 24.1	-0.2
TXAR	Lajitas Array	145.84	114	PKPbc		PKPdf	02 21 21.4	-1.9
	1.2nm,0.9s,baz=208,slow=3.1,SNR=9.3							
PD31	Pinedale Array	150.47	88	*e*PKPbc		PKiKP	02 21 36.9	+0.1
PDAR	Pinedale Array	150.47	88	PKPbc		PKPbc	02 21 34.6	-1.4
	1.4nm,0.9s,baz=219,slow=1.9,SNR=9.4							
YKA	Yellowknife Ar	151.79	46	PKPbc		PKPbc	02 21 37.7	-0.4
	0.6nm,0.6s,baz=272,slow=1.7,SNR=10							
YKB5	Yellowknife Ar	151.79	46	*e*PKPbc		PKPbc	02 21 37.7	-0.4
WMOK	Wichita Mounta	152.59	112	*e*PKPbc		PKiKP	02 21 41.2	+0.1

IDC ***29*** *02:16:55.8±0.5, 50.°68S×113.°50E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.3/18, mbtmp4.2/14, MS4.4/13, Ms1 4.4/13, ms1mx4.4/13, Error ellipse: s-maj=22.3km s-min=15.0km az=123.0*

BJI ***29*** *02:16:59.7±0.0, 50.°30S×110.°80E, h10km, mb5.2/34, mB5.3/21, Ms4.9/19, Ms7 4.6/20*

MOS ***29*** *02:17:01.5±1.7, 50.°41S×112.°65E, h10km, mb5.3/19, Error ellipse: s-maj=23.5km s-min=12.5km az=82.8*

ISCJB ***29*** *02:17:01.9±0.3, 50.°37S±0.°05×112.°56E±0.°08, h10km, mb5.0/76, MS4.5/21, Error ellipse: s-maj=7.6km s-min=6.8km az=16.6*

NEIC ***29*** *02:17:03.0±2.2, 50.°39S×112.°67E, h9km±2km, mb5.2/57, Error ellipse: s-maj=15.5km s-min=9.4km az=128.0*

GCMT ***29*** *02:17:04.0±0.2, 50.°25S±0.°01×112.°58E±0.°03, h12km, MW5.1/95, Moment Tensor Solution. s59,c70; s95,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.78±.11; $M_{\theta\theta}$4.92±.09; $M_{\phi\phi}$-0.14±.11; $M_{r\theta}$0.97±.32; $M_{\theta\phi}$-1.33±.11; $M_{\phi r}$-0.35±.43; Best double couple: $M_0$5.12000×10^{16} NP1:ϕ_s285.00000°, δ51.00000°, λ-88.00000°. NP2: ϕ_s102.00000°, δ39.00000°, λ-92.00000°. Principal axes: T 5.3530, Plg6.0000°, Azm14.0000°; N -0.4690, Plg1.0000°, Azm104.0000°; P -4.8870, Plg84.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 02:16:59.9±0.3, 50.°65S±0.°06×113.°43E±0.°08, h10km, h10km:pP-P, n312, σ2s42/262, mb5.2/76, MS4.5/23, 11C-3D, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.75	2	T	T	02 36 22.7	
	baz=183,slow=74,SNR=1995						
H01W1	Cape Leeuwin H	15.76	2	T	T	02 36 23.5	
	baz=183,slow=74,SNR=1440						
H01W3	Cape Leeuwin H	15.77	2	T	T	02 36 24.2	
	baz=183,slow=74,SNR=1639						
NWAO	Narrogin (SRO)	17.93	10	LR	LR	02 26 14.0	
	comp=Z,3μm,21.6s,baz=174,slow=31						
KLBR	Kellerberrin	19.31	11	P	Pn	02 21 26.6	+0.5
	baz=19,SNR=12						
BLDU	Ballidu	20.17	8	P	Pn	02 21 35.5	-0.7
	baz=20,SNR=6.7						
KMBL	Kambalda	20.27	21	P	Pn	02 21 35.8	-1.6
	baz=20,SNR=4.9						
MORW	Morawa	21.65	6	*e*P	P	02 21 50.3	0.0
	113nm,1.0s						
MORW	Morawa	21.65	6	P	P	02 21 48.2	-2.1
	baz=21,SNR=5.1						
FORT	Forrest	22.66	34	*e*P	P	02 22 05.5	+4.3
	229nm,1.3s						
FORT	Forrest	22.66	34	P	P	02 22 01.5	+0.3
	baz=23,SNR=20						
TAU	Tasmania Unive	24.30	85	*e*P	P	02 22 26.1	+8.8
	202nm,1.7s						
TAU	Tasmania Unive	24.30	85	*e*P	P	02 22 26.1	+8.8
TAU				pmax	pmax		
	comp=Z,203nm,1.7s						
MEEK	Meekatharra	24.30	11	P	P	02 22 17.2	-0.4
	baz=24,SNR=3.6						
BBOO	Buckleboo	24.39	52	*e*P	P	02 22 23.5	+5.2
	comp=Z,52nm,1.1s						
BBOO	Buckleboo	24.39	52	P	P	02 22 24.2	+5.9
	baz=25,SNR=12						
MOO	Moorlands	24.45	84	P	P	02 22 29.0	+10
	baz=25,SNR=4.6						
ARPS	Mount Arapiles	24.59	67	P	P	02 22 28.4	+8.4
	baz=25,SNR=5.6						
HTT	Hallett	25.39	57	P	P	02 22 33.9	+6.6
	baz=26,SNR=9.7						
STKA	Stephens Creek	28.02	59	P	P	02 22 49.5	-1.5
	comp=Z,0.8nm,0.7s,baz=211,slow=19,SNR=1.8						
STKA				PcP	PcP	02 26 01.9	-3.7
	comp=Z,0.7nm,0.5s,baz=225,slow=6.4,SNR=1.8						
STKA				LR	LR	02 32 03.9	
	comp=Z,601nm,21.9s,baz=212,slow=32						
STKA	Stephens Creek	28.02	59	*e*P	P	02 22 49.5	-1.5
STKA				*ep*P	pwP	02 22 57.0	-0.5
STKA				*e*PcP	PcP	02 26 01.9	-3.7
STKA	Stephens Creek	28.02	59	P	P	02 22 57.0	+6.0
	baz=28,SNR=9.0						
STKA	Stephens Creek	28.02	59	*e*P	P	02 22 49.5	-1.5
STKA				*e*PP	pwP	02 22 57.0	-0.5
WRKA	Warakurna	28.03	30	P	P	02 22 55.0	+3.9
	baz=28,SNR=8.3						
MAW	Mawson	29.85	216	P	P	02 23 04.3	-2.6
	comp=Z,0.9nm,0.5s,baz=17,slow=14,SNR=2.6						
MAW				LR	LR	02 33 19.2	
	comp=Z,1μm,18.7s,baz=75,slow=33						
MAW	Mawson	29.85	216	*e*P	P	02 23 09.3	+2.4
	comp=Z,8.4nm,1.3s						
MAW	Mawson	29.85	216	P	P	02 23 11.2	+4.3
	baz=30,SNR=10						
MAW	Mawson	29.85	216	*e*P	P	02 23 09.3	+2.4
MAW				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CMSA	Cobar Meteorol	30.56	64	P	P	02 23 21.0	+7.5
	baz=31,SNR=5.2						
ASAR	Alice Springs	31.28	38	P	P	02 23 16.3	-3.7
	comp=Z,1.2nm,0.8s,baz=206,slow=7.9,SNR=9.4						
ASAR				PcP	PcP	02 26 11.2	-2.9
	comp=Z,0.3nm,0.7s,baz=198,slow=2.3,SNR=2.4						
ASAR				LR	LR	02 34 26.3	
	comp=Z,1μm,21.1s,baz=203,slow=34						
AS31	Alice Springs	31.28	38	*e*P	P	02 23 16.3	-3.7
AS31				*e*pP	P	02 23 23.9	+3.9
AS31				*e*PcP	PcP	02 26 11.2	-2.9
VNDA	Vanda	32.37	162	P	P	02 23 25.6	-3.4
	comp=Z,1.7nm,0.7s,baz=289,slow=9.8,SNR=15						
VNDA				LR	LR	02 35 56.2	
	comp=Z,1μm,20.4s,baz=302,slow=35						
VNDA	Vanda	32.37	162	*e*P	P	02 23 34.0	+5.1
	comp=Z,34nm,1.0s						
VNDA	Vanda	32.37	162	*e*P	P	02 23 34.1	+5.1
VNDA				pmax	pmax		
	comp=Z,34nm,1.0s						
SBA	Scott Base	33.46	162	*e*P	P	02 23 44.1	+5.6
	comp=Z,46nm,1.3s						
SBA	Scott Base	33.46	162	*e*P	P	02 23 44.1	+5.6
SBA				pmax	pmax		
	comp=Z,46nm,1.3s						
FITZ	Fitzroy Crossi	33.91	21	*e*P	P	02 23 45.9	+3.0
	comp=Z,112nm,1.0s						
FITZ	Fitzroy Crossi	33.91	21	P	P	02 23 41.5	-1.5
	baz=34,SNR=24						
WC3	Warramunga Arr	34.82	36	*e*P	P	02 23 54.3	+3.5
	comp=Z,46nm,1.0s						
WR1	Warramunga Arr	34.82	36	*e*P	P	02 23 46.5	-4.4
WR1				*e*PcP	PcP	02 26 23.0	-1.0
WRA	Warramunga Arr	34.82	36	P	P	02 23 46.6	-4.4
	comp=Z,0.8nm,0.5s,baz=200,slow=8.7,SNR=3.5						
WRA				PcP	PcP	02 26 23.0	-1.1
	comp=Z,2.9nm,0.9s,baz=235,slow=4.0,SNR=2.1						
WB2	Warramunga Arr	34.83	36	*e*P	P	02 23 54.6	+3.6
	comp=Z,49nm,1.0s						
WRAB	Tennant Creek	34.83	36	*e*P	P	02 23 54.9	+3.9
	comp=Z,55nm,1.0s						
WRAB	Tennant Creek	34.83	36	*d i*P	P	02 23 54.5	+3.5
WRAB				pmax	pmax		
	comp=Z,43nm,1.1s						
RMQ	Roma	36.14	61	P	P	02 24 09.7	+7.5
	baz=36,SNR=8.7						
KNRA	Kununurra	37.02	25	P	P	02 24 12.7	+3.0
	baz=37,SNR=11						
WKZ	Wanaka	37.07	103	*e*P	P	02 24 19.8	+10
	comp=Z,72nm,1.2s						
ODZ	Otahua Downs	37.97	104	*e*P	P	02 24 26.5	+8.9
	comp=Z,54nm,1.4s						
SYO	Syowa Base	38.44	214⇑	*i*P	P	02 24 24.0	+2.8
SYO	Syowa Base	38.44	214⇑	*e*P	P	02 24 28.6	+7.4
QSPA	South Pole Qui	39.48	180	*e*P	P	02 24 35.2	+5.0
	comp=Z,32nm,0.8s						
CTAO	Charters Tower	39.99	52	*e*P	P	02 24 41.1	+6.3
	comp=Z,23nm,1.3s						
CTAO	Charters Tower	39.99	52	*e*P	P	02 24 41.1	+6.4
CTAO				pmax	pmax		
	comp=Z,23nm,1.3s						
MTN	Manton Dam	40.38	27	*e*P	P	02 24 40.1	+2.2
	comp=Z,61nm,1.2s						
MTN	Manton Dam	40.38	27	P	P	02 24 42.1	+4.2
	baz=40,SNR=5.0						
BATI	Baumata	41.20	15	P	P	02 24 46.6	+1.9
SOEI	Soe	41.74	16	*e*P	P	02 24 52.3	+3.0
	comp=Z,106nm,1.3s						
SOEI	Soe	41.74	16	P	P	02 24 51.3	+2.0
EDFI	Ende, Flores	42.33	12	P	P	02 24 56.6	+2.5
	comp=Z,38nm,1.3s						
NGJI	Ngawi	43.17	357	P	P	02 25 03.7	+2.9
COEN	Coen	43.83	44	*e*P	P	02 25 10.7	+4.6
	comp=Z,38nm,1.1s						
COEN	Coen	43.83	44	P	P	02 25 11.6	+5.5
	baz=44,SNR=4.8						
LEM	Lembang	43.95	352	P	P	02 25 08.6	+1.4
CGJI	Cibinong	44.37	349	P	P	02 25 11.4	+1.0
BSSI	Bau Bau, Buton	44.75	10	P	P	02 25 17.1	+3.6
	comp=Z,38nm,1.4s						
BKZ	Black Stump Frn	44.82	101	*e*P	P	02 25 22.5	+8.6
	comp=Z,50nm,1.3s						
BKSI	Bulukumba	45.52	9	P	P	02 25 23.2	+3.6
	comp=Z,6.9nm,1.6s,comp=Z,331nm						
URZ	Urewera	45.75	100	P	P	02 25 20.0	-1.3
	comp=Z,9.8nm,1.1s,baz=216,slow=19,SNR=1.9						
URZ	Urewera	45.75	100	*e*P	P	02 25 29.1	+7.9
	comp=Z,49nm,1.3s						
KAPI	Kappang	45.79	9	*e*P	P	02 25 23.6	+2.0
	comp=Z,47nm,1.3s						
KAPI	Kappang	45.79	9	*e*P	P	02 25 23.7	+2.0
KAPI				pmax	pmax		
	comp=Z,47nm,1.3s						
MDSI	Maura Dua	46.66	347	P	P	02 25 30.0	+1.5
SPSI	Sidrap Palu	46.83	9	P	P	02 25 33.2	+3.3
	comp=Z,42nm,1.3s,comp=Z,581nm						
PBKI	Pangkalan Bun	47.80	358	P	P	02 25 41.3	+3.9
	comp=Z,245nm,1.2s						
PPBI	Pangkal Pinang	48.71	350	P	P	02 25 45.0	+0.5
SANI	Sanana	49.58	17	P	P	02 25 53.2	+2.1
PMG	Port Moresby	49.63	46⇑	*e*P	P	02 25 55.3	+3.7
PMG				pmax	pmax		
	comp=Z,176nm,1.2s						
SNAA	Sanae	50.03	202	P	P	02 25 51.2	-2.8
SNAA	Sanae	50.03	202	P	P	02 25 49.6	-4.4
	comp=Z,2.6nm,0.8s,baz=138,slow=8.8,SNR=9.8						
SNAA	Sanae	50.03	202	*e*P	P	02 25 56.6	+2.6
	comp=Z,62nm,1.0s						
SNAA	Sanae	50.03	202	*ce*P	P	02 25 50.4	-3.6
DSRI	Dabo	50.55	348	P	P	02 25 58.9	+0.4
SISI	Saibi	50.63	341	P	P	02 26 00.9	+1.8
	comp=Z,42nm,1.3s						
PDSI	Padang	50.77	343	P	P	02 26 00.6	+0.4
VNA3	Neumayer Olymp	51.88	200	P	P	02 26 04.5	-3.5
KSM	Kuching	51.99	356	*e*P	P	02 26 11.5	+2.2
	comp=Z,27nm,1.0s						
KSM	Kuching	51.99	356		P	02 26 12.0	+2.7
VNA1	Neumayer--Stat	52.00	201	P	P	02 26 06.0	-2.7
MNSI	Mandailing Nat	52.60	342	P	P	02 26 15.0	+1.2
MYKOM	Kota Tinggi	52.88	348	*e*P	P	02 26 16.6	+0.7
	comp=Z,50nm,1.3s						
MYKOM	Kota Tinggi	52.88	348		P	02 26 17.0	+1.1
SBUM	Sibu	52.91	358	*e*P	P	02 26 17.3	+1.2
	comp=Z,22nm,1.2s						
SBUM	Sibu	52.91	358		P	02 26 19.0	+2.9
JAY	Jayapura	53.21	35	LR	LR	02 48 07.9	
	comp=Z,938nm,20.3s,baz=209,slow=35						
JAY	Jayapura	53.21	35	P	P	02 26 24.1	+5.7
	comp=Z,211nm,1.2s						
GSI	Gunungsitoli	53.50	340	*e*P	P	02 26 21.6	+1.1
	comp=Z,40nm,1.0s						
GSI	Gunungsitoli	53.50	340	P	P	02 26 21.1	+0.6
H08S2	Diego Garcia H	54.65	307	T	T	03 24 31.9	
	baz=149,slow=76,SNR=11						
H08S1	Diego Carcia H	54.66	307	T	T	03 24 31.2	
	baz=149,slow=76,SNR=12						
H08S3	Diego Garcia H	54.67	307	T	T	03 24 32.9	
	baz=149,slow=76,SNR=13						
PSI	Prapat	54.68	342	*e*P	P	02 26 29.2	0.0
	comp=Z,39nm,1.3s						
PSI	Prapat	54.68	342	*e*P	P	02 26 29.2	0.0
PSI				pmax	pmax		
	comp=Z,39nm,1.3s						
KCSI	Kotacane, Aceh	55.62	341	P	P	02 26 34.1	-1.7
IPM	Ipoh	55.94	345	*e*P	P	02 26 38.8	+0.6
	comp=Z,20nm,0.8s						
HNR	Honiara	56.10	60	LR	LR	02 47 54.4	
	comp=Z,157nm,20.9s,baz=178,slow=33						
MLSI	Meulaboh, Aceh	56.63	340	P	P	02 26 44.6	+1.5
KULM	Kulim	56.80	345	*e*P	P	02 26 44.4	+0.1
	comp=Z,58nm,1.1s						
BOSA	Boshof	67.34	252	P	P	02 27 52.9	-2.4
	comp=Z,7.0nm,0.9s,baz=120,slow=7.3,SNR=8.3						
BOSA				LR	LR	02 51 19.5	
	comp=Z,216nm,19.5s,baz=136,slow=31						
BOSA	Boshof	67.34	252	*e*P	P	02 27 55.6	+0.4
	comp=Z,16nm,1.1s						
BOSA	Boshof	67.34	252	*e*P	P	02 27 55.6	+0.4
BOSA				pmax	pmax		
	comp=Z,16nm,1.1s						
LBTB	Lobatse	69.75	255	*e*P	P	02 28 10.2	-0.1
	comp=Z,12nm,1.2s						
LBTB	Lobatse	69.75	255	*e*P	P	02 28 10.2	-0.1
LBTB				pmax	pmax		
	comp=Z,12nm,1.2s						
CMAR	Chiang Mai Arr	69.98	345	P	P	02 28 09.4	-2.0
	comp=Z,13nm,0.8s,baz=191,slow=5.6,SNR=41						
CHTO	Chiang Mai	70.33	345	*e*P	P	02 28 14.9	+1.4
	comp=Z,13nm,1.1s						
CHTO	Chiang Mai	70.33	345	*e*P	P	02 28 14.9	+1.4
CHTO				pmax	pmax		
	comp=Z,13nm,1.1s						
SLVN	Son La	72.16	351	*e*P	P	02 28 26.1	+1.5
	comp=Z,21nm,1.1s						
YULB	Yu-li	74.04	8	*e*P	P	02 28 38.0	+2.3
	comp=Z,42nm,1.6s						
SSLB	Suanglung	74.41	7	*e*P	P	02 28 39.8	+1.9
	comp=Z,25nm,1.2s						
LSZ	Lusaka	75.35	264	*e*P	P	02 28 44.2	+0.4
	comp=Z,33nm,1.2s						
LSZ	Lusaka	75.35	264	*e*P	P	02 28 44.2	+0.4
LSZ				pmax	pmax		
	comp=Z,33nm,1.2s						
KMI	Kunming	76.03	350	P	P	02 28 51.5	+4.1
KMI				pP	PcP	02 28 55.5	-4.1
KMI				pmax	pmax		
	comp=Z,47nm,1.0s						
KMI				pmax	pmax		
	comp=Z,170nm,3.1s						
KMI				LR	LR		
	comp=Z,430nm,24.3s						
KMI				LR	LR		
	comp=Z,210nm,21.9s						
KMI				LR	LR		
	comp=Z,550nm,23.0s						
TBI	Tubuai	76.61	110	*e*LR	LR	02 53 17.4	
	comp=Z,356nm,32.0s						
GYA	Guiyang	77.00	354⇑	*i*P	P	02 28 55.8	+3.1
GYA				PP	PP	02 31 45.5	-1.0
GYA				pmax	pmax		
	comp=Z,20nm,1.1s						
GYA				pmax	pmax		
	comp=Z,80nm,6.9s						
GYA				LR	LR		
	comp=Z,180nm,14.8s						
GYA				LR	LR		
	comp=Z,160nm,16.7s						
GYA				LR	LR		
	comp=Z,220nm,17.3s						
SHL	Shillong	78.24	340	*e*P	P	02 29 02.0	+2.2
JOW	Kunigami	78.25	14	*e*P	P	02 29 02.5	+3.0
	comp=Z,40nm,1.1s						
TSUM	Tsumeb	79.00	253	*e*P	P	02 29 04.6	+0.3
	comp=Z,14nm,1.2s						
KMBO	Kilima Mbogo	80.38	280	P	P	02 29 10.7	-1.2
	comp=Z,3.7nm,1.0s,baz=133,slow=5.2,SNR=7.0						
KMBO	Kilima Mbogo	80.38	280	*e*P	P	02 29 12.7	+0.8
	comp=Z,8.8nm,1.1s						
KMBO	Kilima Mbogo	80.38	280	*e*P	P	02 29 12.7	+0.8
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ENH	Enshi	80.64	357	*e*P	P	02 29 14.9	+2.3
	comp=Z,59nm,1.4s						
WHN	Wuhan	80.84	1⇑	*i*P	P	02 29 16.3	+2.8
WHN				pP	pwP	02 29 22.8	+2.6
WHN				pmax	pmax		
	comp=Z,130nm,1.3s						
PPT2	Papeete2	80.92	107	*e*LR	LR	02 55 15.3	
	comp=Z,77nm,22.2s						
PPT	Papeete	80.94	107	LR	LR	03 00 40.1	
	comp=Z,88nm,18.2s,baz=232,slow=32						
CD2	Chengdu	81.65	352	P	P	02 29 14.0	-3.9
CD2				S	S	02 39 26.0	-4.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,390nm,17.2s						
CD2				LR	LR		
	comp=Z,250nm,14.2s						
CD2				LR	LR		
	comp=Z,350nm,15.7s						
LSA	Lhasa	82.40	341	*e*P	P	02 29 24.1	+1.8
	comp=Z,28nm,1.0s						
LSA	Lhasa	82.40	341	*e*P	P	02 29 24.2	+1.8
LSA				pmax	pmax		
	comp=Z,28nm,1.0s						
NJ2	Nanjing	82.48	5	*e*P	P	02 29 20.0	-2.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
XAN	Xi'an	84.42	356	P	P	02 29 35.0	+2.8
XAN				S	S	02 39 54.5	-3.6
XAN				pmax	pmax		
	comp=Z,28nm,1.2s						
XAN				pmax	pmax		
	comp=Z,130nm,3.6s						
XAN				LR	LR		
	comp=Z,200nm,19.5s						
XAN				LR	LR		
	comp=Z,240nm,26.0s						
XAN	Xi'an	84.42	356	*e*P	P	02 29 34.1	+1.9
	comp=Z,38nm,1.2s						
XAN	Xi'an	84.42	356	*e*P	P	02 29 34.1	+1.9
XAN				pmax	pmax		
	comp=Z,38nm,1.2s						
RKT	Rikitea	85.10	121	*e*T	T	04 04 15.7	
	comp=Z,1.3nm,0.3s						
LZH	Lanzhou	86.78	352	*e*P	P	02 29 43.3	-0.7
LZH				pP	pwP	02 29 47.0	-3.8
LZH				sP	sP	02 29 50.3	+3.3
LZH				pmax	pmax		
	comp=Z,27nm,0.9s						
LZH				pmax	pmax		
	comp=Z,200nm,4.9s						
LZH				LR	LR		
	comp=Z,1μm,16.8s						
DAMY	Dhamar	88.42	295	*e*P	P	02 29 53.0	+0.5
	comp=Z,26nm,1.2s						
KSRS	Korea Array	88.66	11	P	P	02 29 50.0	-2.8
	comp=Z,0.5nm,0.3s,baz=197,slow=3.8,SNR=2.7						
PLCA	Paso Flores	88.93	177	P	P	02 29 52.4	-2.1
	comp=Z,1.0nm,0.7s,baz=153,slow=3.9,SNR=1.7						
PLCA				LR	LR	03 10 19.3	
	comp=Z,311nm,19.6s,baz=201,slow=36						
PLCA	Paso Flores	88.93	177	*e*PcP	PcP	02 29 59.7	+3.6
	comp=Z,20nm,1.1s						
MJAR	Matsushiro Arr	89.53	20	P	P	02 29 54.0	-2.9
	comp=Z,0.6nm,0.4s,baz=199,slow=5.7,SNR=2.3						
MJAR				LR	LR	03 06 51.7	
	comp=Z,99nm,21.5s,baz=190,slow=34						
MAJO	Matsushiro	89.53	20	*e*P	P	02 29 54.0	-2.9
MAJO				*e*PcP	pwP	02 30 00.2	-3.4
MAJO	Matsushiro	89.53	20⇓	*e*P	P	02 29 57.1	+0.2
MAJO				pmax	pmax		
	comp=Z,11nm,1.1s						
MJB9	Matsu-Tunnel	89.53	20	*e*P	P	02 30 00.6	+3.6
	comp=Z,24nm,1.2s						
GO06	Curarrehue	90.04	176	*e*P	P	02 30 04.8	+5.0
	comp=Z,32nm,1.4s						
GTA	Gaotai	90.48	349	⇑P	P	02 30 04.0	+2.6
GTA				pP	pwP	02 30 08.5	+0.3
GTA				sP	sP	02 30 11.3	+6.9
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GTA				pmax

KSH				LR	LR			
	comp=Z,220nm,6.7s							
KSH				LR	LR			
	comp=Z,620nm,20.5s							
USRK	**Ussuriysk Ar.**	**95.84**	**13**	P	**P**	**02 30 23.7**	**-2.1**	
	comp=Z,0.7nm,0.5s,baz=225,slow=3.5,SNR=3.7							
USRK				LR	LR	03 15 23.5		
	comp=Z,76nm,19.9s,baz=185,slow=37							
WMQ	**Urumqi**	**96.72**	**342**	*e*P	**P**	**02 30 25.8**	**-4.2**	
WMQ				sP	pwP	02 30 33.0	-3.7	
WMQ				pmax	pmax			
	comp=Z,14nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,60nm,3.9s							
WMQ				LR	LR			
	comp=Z,170nm,28.3s							
WMQ				LR	LR			
	comp=Z,370nm,25.3s							
WMQ				LR	LR			
	comp=Z,170nm,20.5s							
SONM	**Songino Array**	**98.29**	**355**	LR	LR	03 13 18.5		
	comp=Z,132nm,21.6s,baz=250,slow=34							
YUK	**Yuzh-Kuril'sk**	**98.43**	**23**	*e*P	Pdif	02 30 37.3	-0.3	
YUK				*e*S	**SKSac**	**02 41 16.0**	**+1.2**	
YUK				*e*SS	**SS**	**02 48 51.1**	**+0.2**	
YUK				*e*SSS	SSS	02 52 42.2		
YUK				MLR	MLR			
	comp=Z,82nm,20.0s							
AAK	**Ala-Archa**	**98.92**	**332⇑**	*e*P	P	02 30 32.3	-7.7	
AAK				pmax	pmax			
	comp=Z,1.0nm,0.9s							
H10S2	**ASCENSION HYDR**	**105.58**	**234**	T	T	04 29 47.5		
	baz=146,slow=75,SNR=17							
H10S3	**ASCENSION HYDR**	**105.59**	**234**	T	T	04 29 48.5		
	baz=146,slow=75,SNR=13							
H10S1	**ASCENSION HYDR**	**105.60**	**234**	T	T	04 29 48.2		
	baz=146,slow=75,SNR=18							
TIXI	**Tiksi**	**122.49**	**6⇓**	*i*PKIKP	**PKPdf**	**02 35 50.3**	**-3.5**	
BILL	**Biiibino**	**124.75**	**21⇑**	*i*PKIKP	**PKiKP**	**02 36 01.9**	**+3.3**	
BILL				*e*		02 36 08.7		
BILL						02 43 06.0		
BILL				SS	SS	02 55 00.0	+19	
BILL				pmax	pmax			
	comp=Z,10.0nm,1.2s							
BLY	**Banja Luka**	**126.19**	**299**	*e*PKPdf	**PKiKP**	**02 36 04.0**	**+1.8**	
KWP	**Kalwaria Pacla**	**126.24**	**306**	*e*PKPdf	**PKiKP**	**02 36 03.1**	**+0.9**	
KWP	**Kalwaria Pacla**	**126.24**	**306**	*e*PKIKP	**PKiKP**	**02 36 03.1**	**+0.9**	
GEC2	**GERESS Array S**	**130.55**	**301**	*e*PKPdf	**PKiKP**	**02 36 12.0**	**+1.0**	
GERES	**GERESS Array B**	**130.55**	**301**	PKP	**PKPdf**	**02 36 08.2**	**-1.9**	
	comp=Z,0.7nm,0.8s,baz=170,slow=2.3,SNR=9.3							
WTTA	**Wattenberg**	**130.79**	**298**	*e*PKPdf	**PKPdf**	**02 36 06.6**	**-4.1**	
	comp=Z,8.3nm,1.3s							
WTTA				*e*SKPab	**SKPab**	**02 39 38.1**	**+3.4**	
	comp=Z,5.9nm,1.2s							
WATA	**Walderalm**	**130.87**	**298**	*i* SKPab	**SKiKP**	**02 39 40.9**	**-6.5**	
	comp=Z,3.1nm,0.9s							
SQTA	**Sankt Quirin**	**131.01**	**298**	*e*PKPdf	**PKPdf**	**02 36 07.4**	**-3.6**	
	comp=Z,7.7nm,1.4s							
SQTA				*e*SKPab	**SKPab**	**02 39 37.9**	**+2.4**	
	comp=Z,5.9nm,1.3s							
FETA	**Feichten**	**131.17**	**298**	*e*PKPdf	**PKPdf**	**02 36 06.4**	**-5.0**	
	comp=Z,7.2nm,1.2s							
FIA0	**FINESS Array S**	**131.47**	**320**	*e*PKPdf	**PKPdf**	**02 36 09.7**	**-1.5**	
FIA0	**FINESS Array S**	**131.47**	**320**	*e*PKIKP	**PKPdf**	**02 36 09.7**	**-1.5**	
FINES	**FINESS Array B**	**131.47**	**320**	PKP	**PKPdf**	**02 36 09.7**	**-1.5**	
	comp=Z,1.2nm,0.8s,baz=126,slow=7.2,SNR=2.0							
BRG	**Berggiesshubel**	**131.54**	**303**	*e*P	PKiKP	02 36 20.7	+8.0	
	comp=Z,8.1nm,1.4s							
CLL	**Collm**	**132.28**	**303**	*e*PKPdf	**PKiKP**	**02 36 16.0**	**+1.8**	
	comp=Z,5.0nm,1.1s							
CLL				LmV		03 44 00.0		
	comp=Z,100nm,18.6s							
ESDC	**Sonseca Array**	**135.76**	**281**	PKP	**PKiKP**	**02 36 19.1**	**-2.6**	
	comp=Z,1.4nm,1.0s,baz=45,slow=2.0,SNR=2.7							
PMR	**Palmer**	**135.78**	**43**	*e*PKPdf	**PKiKP**	**02 36 24.0**	**+3.0**	
PMR	**Palmer**	**135.78**	**43**	*e*PKIKP	**PKiKP**	**02 36 24.0**	**+3.0**	
BPAW	**Bear Paw Mtn.**	**136.06**	**39**	*e*PKPdf	**PKiKP**	**02 36 23.6**	**+2.1**	
MLY	**Manley**	**136.53**	**38**	*e*PKPdf	**PKiKP**	**02 36 25.2**	**+2.7**	
MCK	**McKinley**	**136.74**	**40**	*e*PKPdf	**PKiKP**	**02 36 25.6**	**+2.7**	
MCK	**McKinley**	**136.74**	**40**	*e*PKIKP	**PKiKP**	**02 36 25.6**	**+2.7**	
CCB	**Clear Creek Bu**	**137.54**	**39**	*e*PKPdf	**PKiKP**	**02 36 25.6**	**+1.1**	
COLA	**College**	**137.61**	**39⇑**	*i*PKIKP	**PKiKP**	**02 36 23.8**	**-0.8**	
HDA	**Harding Lake**	**137.81**	**40**	P	**PKiKP**	**02 36 26.3**	**+1.2**	
	baz=251							
ILAR	**Eielson Array**	**137.96**	**39**	PKP	**PKPdf**	**02 36 18.3**	**-5.1**	
	comp=Z,0.3nm,0.9s,baz=278,slow=3.0,SNR=2.8							
MONP2	**Monument Peak**	**139.65**	**97**	P	**PKiKP**	**02 36 30.7**	**+0.6**	
	baz=229							
BFSC	**Mount Baldy Ra**	**139.74**	**94**	P	**PKiKP**	**02 36 31.0**	**+0.9**	
	baz=230							
VES	**Vestal, Richgr**	**139.85**	**91**	P	**PKiKP**	**02 36 30.6**	**+0.5**	
	baz=232							
ISA	**Isabella, Lake**	**140.12**	**92**	P	**PKiKP**	**02 36 31.8**	**+1.0**	
	baz=232							
N02D	**Trinity Center**	**140.56**	**82**	P	**PKiKP**	**02 36 32.9**	**+1.4**	
	baz=237							
BELC	**Belle Mtn. Jos**	**140.64**	**96**	P	**PKiKP**	**02 36 33.3**	**+1.3**	
	baz=230							
O03E	**Paynes Creek**	**140.75**	**83**	P	**PKiKP**	**02 36 33.6**	**+1.7**	
	baz=237							
BC3	**Big Chuckawall**	**140.76**	**97**	P	**PKiKP**	**02 36 33.5**	**+1.3**	
	baz=230							
GLA	**Glamis**	**140.76**	**98**	P	**PKiKP**	**02 36 33.3**	**+1.1**	
	baz=229							
CWC	**Cottonwood Cre**	**140.85**	**91**	P	**PKiKP**	**02 36 33.9**	**+1.5**	
	baz=233							
K02D	**Willamette Mer**	**140.89**	**79**	P	**PKiKP**	**02 36 33.9**	**+1.7**	
	baz=239							
J01E	**Myrtle Point**	**140.97**	**78**	P	**PKiKP**	**02 36 34.1**	**+2.0**	
	baz=239							
MPMC	**Manual Prospec**	**141.00**	**92**	P	**PKiKP**	**02 36 34.1**	**+1.4**	
	baz=232							
IRM	**Iron Mountain**	**141.28**	**96**	P	**PKiKP**	**02 36 34.6**	**+1.4**	
	baz=230							
214A	**Organ Pipe Nat**	**141.30**	**101**	P	**PKiKP**	**02 36 33.6**	**+0.3**	
	baz=227							
Y12C	**Blythe**	**141.41**	**97**	P	**PKiKP**	**02 36 33.9**	**+0.5**	
	baz=229							
L04D	**Klamath Falls**	**141.49**	**80**	P	**PKiKP**	**02 36 33.9**	**+0.5**	
	baz=239							
I02D	**Swisshome**	**141.51**	**77**	P	**PKiKP**	**02 36 33.9**	**+0.7**	
	baz=240							
M04C	**Macdoel**	**141.55**	**81**	P	**PKiKP**	**02 36 34.2**	**+0.6**	
	baz=238							
TUQ	**Turquoise Moun**	**141.60**	**94**	P	**PKiKP**	**02 36 35.1**	**+1.1**	
	baz=231							
I03D	**Drain, OR**	**141.62**	**78**	P	**PKiKP**	**02 36 34.1**	**+0.6**	
	baz=240							
FURC	**Furnace Creek,**	**141.65**	**92**	P	**PKiKP**	**02 36 35.0**	**+1.3**	
	baz=232							
GRAC	**Grapevine Rang**	**141.65**	**91**	P	**PKiKP**	**02 36 35.1**	**+1.3**	
	baz=233							
NVAR	**Mina Array Bea**	**141.90**	**88**	PKP	**PKPdf**	**02 36 27.4**	**-4.2**	
	comp=Z,0.2nm,0.4s,baz=224,slow=8.3,SNR=4.3							
PDMCI	**Parker Dam,Lak**	**142.01**	**97**	P	**PKiKP**	**02 36 34.5**	**-0.1**	
	baz=230							
I04A	**Tendick Farm,**	**142.25**	**78**	P	**PKiKP**	**02 36 35.1**	**+0.2**	
	baz=240							
TPNV	**Topopah Spring**	**142.33**	**92**	*e*PKPdf	**PKiKP**	**02 36 36.4**	**+0.9**	
TPNV	**Topopah Spring**	**142.33**	**92**	P	**PKiKP**	**02 36 35.6**	**+0.2**	
	baz=233							
H04D	**Lebanon**	**142.41**	**77**	P	**PKiKP**	**02 36 35.4**	**+0.3**	
	baz=241							
G03D	**McMinnville, O**	**142.43**	**76**	P	**PKiKP**	**02 36 35.5**	**+0.4**	
	baz=242							
EPYK	**Eagle Plains**	**142.46**	**38**	P	**PKiKP**	**02 36 34.5**	**0.0**	
	baz=262							
J05D	**Fort Rock, OR**	**142.72**	**80**	P	**PKiKP**	**02 36 36.3**	**+0.3**	
	baz=240							
TUC	**Tucson**	**142.80**	**102**	*e*PKPdf	**PKiKP**	**02 36 36.8**	**+0.3**	
TUC	**Tucson**	**142.80**	**102**	P	**PKiKP**	**02 36 35.4**	**-1.0**	
	baz=227							
PINE	**Pine Mountain**	**143.16**	**79**	*e*PKPdf	**PKiKP**	**02 36 38.4**	**+1.5**	
I05D	**Terrebonne, OR**	**143.19**	**78**	P	**PKiKP**	**02 36 36.5**	**-0.3**	
	baz=241							
E04D	**Cinebar**	**143.49**	**74**	P	**PKiKP**	**02 36 37.4**	**+0.1**	
	baz=244							
R11A	**Troy Canyon, C**	**143.59**	**90**	P	**PKiKP**	**02 36 38.6**	**+0.6**	
	baz=235							
D03D	**Eldon**	**143.62**	**72**	P	**PKiKP**	**02 36 37.9**	**+0.4**	
	baz=245,SNR=6.3							
F05D	**White Salmon**	**143.86**	**76**	P	**PKiKP**	**02 36 38.9**	**+0.9**	
	baz=243							
INK	**Inuvik**	**143.96**	**36**	*e*PKPdf	**PKiKP**	**02 36 36.2**	**-1.2**	
INK	**Inuvik**	**143.96**	**36**	*e*PKIKP	**PKiKP**	**02 36 36.3**	**-1.2**	
A04D	**Lummi Island**	**144.37**	**71**	P	**PKiKP**	**02 36 39.9**	**+1.0**	
	baz=247							
WUAZ	**Wupatki**	**144.53**	**98**	P	**PKiKP**	**02 36 41.7**	**+1.7**	
	baz=231							
B05A	**Bryant**	**144.54**	**72**	P	**PKiKP**	**02 36 40.4**	**+1.1**	
	baz=246,SNR=18							
SZCU	**Shurtz Canyon**	**144.73**	**93**	*e*PKPbc	**PKiKP**	**02 36 40.4**	**0.0**	
121A	**Cookes Peak, D**	**144.81**	**105**	P	**PKiKP**	**02 36 42.4**	**+1.8**	
	baz=226,SNR=13							
TXAR	**Lajitas Array**	**145.01**	**113**	PKP	**PKPbc**	**02 36 34.8**	**-1.8**	
	comp=Z,1.1nm,1.0s,baz=214,slow=6.0,SNR=6.4							
W18A	**Petrified Fore**	**145.31**	**100**	P	**PKiKP**	**02 36 43.8**	**+2.1**	
	baz=230							
MNTX	**Cornudas Mount**	**145.69**	**109**	P	**PKiKP**	**02 36 44.9**	**+2.6**	
	baz=225							
DUG	**Dugway, Tooele**	**146.41**	**90**	P	**PKiKP**	**02 36 47.4**	**+3.8**	
	baz=237							
833A	**Chaparral WMA,**	**146.68**	**120**	*e*PKPbc	**PKiKP**	**02 36 47.3**	**+3.0**	
833A	**Chaparral WMA,**	**146.68**	**120**	P	**PKiKP**	**02 36 48.4**	**+4.0**	
	baz=218							
TMUT	**Trail Mountain**	**146.92**	**93**	*e*PKPbc	**PKiKP**	**02 36 47.9**	**+3.0**	
HLID	**Hailey**	**147.16**	**84**	P	**PKiKP**	**02 36 49.2**	**+4.0**	
	baz=242							
TASM	**ASL Pad, Albuq**	**147.24**	**103**	P	**PKiKP**	**02 36 49.4**	**+3.7**	
	baz=229,SNR=12							
TASM	**ASL Pad, Albuq**	**147.24**	**103**	P	**PKiKP**	**02 36 49.4**	**+3.7**	
	baz=229,SNR=10							
ANMO	**Albuquerque**	**147.25**	**103⇑**	*e*PKHKP	**PKPdf**	**02 36 40.5**	**-0.5**	
ANMO	**Albuquerque**	**147.25**	**103**	P	**PKiKP**	**02 36 49.5**	**+3.9**	
	baz=229							
MVCO	**Mesa Verde**	**147.40**	**98**	P	**PKiKP**	**02 36 50.0**	**+4.0**	
	baz=232							
PV05	**Paradox Valley**	**147.55**	**96**	*e*PKPbc	**PKPab**	**02 36 47.7**	**+1.5**	
NEW	**Newport**	**147.57**	**74**	*e*PKPbc	**PKPab**	**02 36 48.7**	**+2.9**	
NEW	**Newport**	**147.57**	**74**	P	**PKPab**	**02 36 49.3**	**+3.5**	
	baz=248,SNR=8.4							
PV17	**East Wray Mesa**	**147.76**	**96**	*e*PKPbc	**PKPab**	**02 36 48.2**	**+1.1**	
PV19	**Morning Glory**	**147.76**	**96**	*e*PKPbc	**PKPab**	**02 36 48.5**	**+1.4**	
PV18	**Skein Mesa, Pa**	**147.77**	**96**	*e*PKPbc	**PKPab**	**02 36 47.9**	**+0.8**	
PV09	**Paradox Valley**	**147.78**	**95**	*e*PKPbc	**PKPab**	**02 36 49.3**	**+2.0**	
PV20	**West Nyswonger**	**147.79**	**96**	*e*PKPbc	**PKPab**	**02 36 48.0**	**+0.9**	
PV16	**Nyswonger Mesa**	**147.80**	**96**	*e*PKPbc	**PKPab**	**02 36 50.7**	**+3.5**	
PV11	**David Mesa, Pa**	**147.82**	**96**	*e*PKPbc	**PKPab**	**02 36 48.5**	**+1.2**	
PV04	**Paradox Valley**	**147.86**	**96**	*e*PKPbc	**PKPab**	**02 36 48.7**	**+1.3**	
PV22	**Blue Mesa, Par**	**148.02**	**96**	*e*PKPdf	**PKiKP**	**02 36 45.0**	**-2.1**	
JCT	**Junction City**	**148.09**	**116**	P	**PKPab**	**02 36 50.9**	**+2.6**	
	baz=220							
S22A	**4UR Ranch, Cre**	**148.78**	**99**	P	**PKPab**	**02 36 54.2**	**+2.9**	
	baz=233							
MSTX	**Muleshoe**	**148.85**	**108**	P	**PKPab**	**02 36 53.2**	**+1.8**	
	baz=226							
MSO	**Missoula**	**148.95**	**78**	P	**PKPab**	**02 36 52.9**	**+1.4**	
	baz=247,SNR=8.9							
O20A	**White River Ci**	**149.28**	**94**	P	**PKPab**	**02 36 54.9**	**+1.8**	
	baz=236							
TPAW	**Teton Pass**	**149.31**	**86**	*e*PKPdf	**PKPbc**	**02 36 47.1**	**-1.4**	
TPAW				*e*PKPbc	**PKPbc**	**02 36 54.5**	**+5.9**	
435B	**Jarrell**	**149.57**	**119**	P	**PKPab**	**02 36 55.2**	**+0.9**	
	baz=219							
SDCO	**Great Sand Dun**	**149.62**	**100**	*e*PKPdf	**PKPbc**	**02 36 47.5**	**-2.0**	
SDCO				*e*		02 36 56.2		
SDCO				*e*pPKPab	PKPab	02 37 01.9	+7.2	
SDCO	**Great Sand Dun**	**149.62**	**100**	P	**PKPab**	**02 36 55.6**	**+0.9**	
	baz=232							
ABTX	**Abilene, Hawle**	**149.76**	**114**	P	**PKPab**	**02 36 55.4**	**+0.3**	
	baz=223							
FLWY	**Flagg Ranch**	**149.76**	**85**	*e*PKPdf	**PKPbc**	**02 36 48.1**	**-1.4**	
BW06	**Boulder Array**	**149.84**	**88**	P	**PKPab**	**02 36 55.4**	**0.0**	
	baz=241							
PDAR	**Pinedale Array**	**149.84**	**88**	PKPbc	**PKPbc**	**02 36 46.8**	**-3.1**	
	comp=Z,1.8nm,1.0s,baz=222,slow=2.0,SNR=11							
BOZ	**Bozeman (W)**	**149.87**	**82**	*e*PKPdf	**PKPdf**	**02 36 47.6**	**+2.7**	
BOZ				*e*PKPbc	**PKPbc**	**02 36 55.5**	**+5.8**	
BOZ				*e*PKPab	PKPab	02 37 06.0	+11	
BOZ	**Bozeman (W)**	**149.87**	**82**	*e*PKIKP	**PKPdf**	**02 36 47.6**	**+2.7**	
BOZ				*e*		02 36 55.5		
BOZ	**Bozeman (W)**	**149.87**	**82**	P	**PKPab**	**02 36 56.1**	**+0.8**	
	baz=245,SNR=62							
T25A	**Trinidad**	**149.92**	**102**	P	**PKPab**	**02 36 56.5**	**+0.6**	
	baz=231							
H17A	**Grant Village**	**149.99**	**85**	P	**PKPab**	**02 36 57.3**	**+1.3**	
	baz=243							
AMTX	**Amarillo**	**150.13**	**108**	P	**PKPab**	**02 36 56.5**	**-0.1**	
	baz=227							
WHTX	**Lake Whitney,**	**150.55**	**117**	P	**PKPab**	**02 36 57.4**	**-0.9**	
	baz=220							
Q24A	**Divide**	**150.57**	**98**	P	**PKPab**	**02 36 58.0**	**-0.6**	
	baz=234							
ISCO	**Idaho Springs**	**150.76**	**97**	*e*PKPdf	**PKPbc**	**02 36 50.3**	**-1.9**	
ISCO				*e*		02 36 59.1		
ISCO	**Idaho Springs**	**150.76**	**97**	*e*PKIKP	**PKPbc**	**02 36 50.3**	**-1.9**	
ISCO				*e*		02 36 59.1		
ISCO	**Idaho Springs**	**150.76**	**97**	P	**PKPab**	**02 36 58.8**	**-0.6**	
	baz=235,SNR=14							
RLMT	**Red Lodge**	**151.15**	**84**	P	**PKPab**	**02 36 59.6**	**-1.1**	
	baz=245,SNR=8.2							
N23A	**Red Feather La**	**151.16**	**94**	P	**PKPab**	**02 36 59.6**	**-1.4**	
	baz=237,SNR=11							
K22A	**Casper**	**151.72**	**91**	P	**PKPab**	**02 36 59.8**	**-3.3**	
	baz=240,SNR=6.4							
YKW3	**Yellowknife Ar**	**151.72**	**47**	*e*PKPdf	**PKPbc**	**02 36 49.8**	**-3.4**	
YKA	**Yellowknife Ar**	**151.72**	**47**	PKPbc	**PKPbc**	**02 36 48.8**	**-4.4**	
	comp=Z,0.9nm,0.7s,baz=284,slow=1.5,SNR=12							
WMOK	**Wichita Mounta**	**151.76**	**112**	P	**PKPab**	**02 36 59.7**	**-3.6**	
	baz=225							
RES	**Resolute Bay**	**153.17**	**16**	*e*PKPbc	**PKiKP**	**02 36 58.9**	**+2.6**	
RSSD	**Black Hills**	**154.01**	**90**	*e*PKPdf	**PKPdf**	**02 36 55.7**	**+4.5**	
RSSD				*e*PKPab	PKPab	02 37 19.1	+6.3	
RSSD	**Black Hills**	**154.01**	**90**	*e*PKIKP	**PKPdf**	**02 36 55.7**	**+4.5**	
SUMG	**Summit**	**154.76**	**341**	*e*PKPab	**PKPab**	**02 37 17.6**	**+2.2**	
SUMG	**Summit**	**154.76**	**341**	*i* PKP2	**PKPab**	**02 37 17.5**	**+2.2**	
SUMG				pmax	pmax			
	comp=Z,56nm,1.3s							
SUMG	**Summit**	**154.76**	**341**	*i* P	**PKPab**	**02 37 17.5**	**+2.2**	
	comp=Z,56nm,1.3s							
ECSD	**EROS Data Cent**	**158.54**	**97**	*e*PKPdf	**PKPdf**	**02 37 01.1**	**+4.2**	
ECSD				*e*PKPab	PKPab	02 37 38.4	+6.4	
CLTN	**Cedars of Leba**	**159.64**	**128**	*e*PKPdf	**PKPdf**	**02 37 02.8**	**+4.4**	
WCI	**Wyandotte Cave**	**161.29**	**124**	*e*PKPdf	**PKPdf**	**02 37 04.8**	**+4.7**	
WCI				*e*PKPab	**sPKPab**	**02 37 48.9**	**+1.8**	
WCI	**Wyandotte Cave**	**161.29**	**124**	*e*PKIKP	**PKPdf**	**02 37 04.8**	**+4.7**	
WCI				*e*		02 37 48.9		
LLM	**Lac du Bonnet**	**161.38**	**80**	*e*PKPab	**PKPab**	**02 37 49.9**	**+5.7**	
COWI	**Conover**	**164.35**	**98**	*e*PKPdf	**PKPdf**	**02 37 07.2**	**+4.3**	
COWI				*e*PKPab	**sPKPab**	**02 38 03.7**	**+3.3**	

MEX 29 02:32:18.9±0.4, 15°.99N×96°.36W, h51km±6km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.32**	**133**	*i* P	Pn	02 32 26.9	-1.5
HUIG				*i* S	Sn	02 32 33.1	-2.0
PANG	**Puerto Angel**	**0.34**	**200**	*i* P	Pn	02 32 27.1	-1.4
PANG				*i* S	Sn	02 32 34.0	-1.4
VHO	**Vista Hermosa**	**1.14**	**341**	*e*P	Pn	02 32 37.3	-1.4
VHO				*e*S	Sn	02 32 51.2	-2.1
CMIG	**Matias Romero**	**1.79**	**52**	*e*P	Pn	02 32 45.4	-2.0

*IDC **29** 03:16:49.6±0.5, 35°.12N×72°.16E, h0km, mb4.4/21, mb1 4.6/28, mb1mx4.5/38, mbtmp4.5/28, ML4.0/7, MS3.5/4, Ms1 3.5/4, ms1mx3.1/29, Error ellipse: s-maj=14.1km s-min=11.3km az=14.0*

*ISCJB **29** 03:16:53.2±0.2, 35°.12N±0°.02×72°.18E±0°.02, h33km, mb4.6/69, MS3.6/8, Error ellipse: s-maj=3.3km s-min=2.4km az=136.2*

*BJI **29** 03:16:54.6±0.0, 35°.20N×72°.20E, h50km, mb4.7/31, mB4.6/24, ML4.6/1, Ms4.0/17, Ms7 3.8/16*

*MOS **29** 03:16:55.7±1.1, 35°.22N×72°.25E, h53km, mb4.7/21, Error ellipse: s-maj=6.6km s-min=4.3km az=98.4*

*NEIC **29** 03:16:56.9±1.8, 35°.17N×72°.20E, h51km±4km, mb4.6/52, Error ellipse: s-maj=13.9km s-min=9.4km az=199.0*

*NNC **29** 03:16:58.1±2.1, 35°.26N×72°.12E, h82km±22km, mb4.4, mpv5.0, Error ellipse: s-maj=18.7km s-min=12.9km az=166.0*

ISC 29 03:16:55.3±0.3, 35°.16N±0°.04×72°.19E±0°.04, h35km, n260, σ1°.75/285, mb4.6/69, MS3.6/8, 32C-21D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.35**	**190**	P	**Pn**	**03 17 17.6**	**-0.2**
CEP				S	**Sn**	**03 17 36.0**	**+1.4**
CHCP	**Chirah Chowk**	**1.75**	**149**	P	**Pn**	**03 17 25.4**	**+2.3**
NIL	**Nilore**	**1.75**	**149**	*e*Pn	**Pn**	**03 17 25.3**	**+2.2**
NIL	**Nilore**	**1.75**	**149**	*e*PN	**Pn**	**03 17 25.3**	**+2.2**
THW	**Thamme Wali**	**2.39**	**189**	P	**Pn**	**03 17 34.8**	**+2.8**
KBL	**Kabul**	**2.66**	**257**	*e*Pn	**Pn**	**03 17 39.4**	**+3.6**
KBL	**Kabul**	**2.66**	**257**	*e*PN	**Pn**	**03 17 39.4**	**+3.6**
SARP	**Sargodha**	**3.26**	**173**	P	**Pn**	**03 17 45.8**	**+2.0**
GAR	**Garm**	**4.11**	**339**	*e*Pn	**Pn**	**03 17 58.7**	**+3.0**
GAR	**Garm**	**4.11**	**339**	*e*PN	**Pn**	**03 17 58.7**	**+3.0**
DHRM	**DHARAMSHALA**	**4.49**	**129**	*e*P	**Pn**	**03 18 03.5**	**+2.5**
DHRM				*e*S	**Sn**	**03 18 54.8**	**+2.5**
DHRM				IAML		03 19 22.0	
	comp=N,2μm,0.7s						
DHRM				IAML		03 19 22.8	
	comp=E,2μm,0.8s						
BTK	**Batken**	**5.01**	**348**	*e*Pn	**Pn**	**03 18 11.4**	**+3.4**
BTK	**Batken**	**5.01**	**348**	*e*PN	**Pn**	**03 18 11.4**	**+3.4**
KSH	**Kashi**	**5.29**	**34**	P	**Pn**	**03 18 10.3**	**-1.6**
KSH				S	**Sn**	**03 19 03.8**	**-7.9**
KSH				smax	smax		
	comp=E,830nm,0.9s						
KSH				smax	smax		
	comp=E,830nm,1.0s						
SMLA	**Simla**	**5.80**	**133**	*e*P	**Pn**	**03 18 20.8**	**+2.0**
SMLA				*e*S	**Sn**	**03 19 24.6**	**+0.6**
SMLA				IAML		03 19 58.0	
	comp=N,519nm,0.7s						
SMLA				IAML		03 19 58.0	
	comp=E,591nm,0.7s						
DDI	**Dehra Dun**	**6.91**	**133**	*e*P	**Pn**	**03 18 33.1**	**-1.0**
DDI				*e*S	**Sn**	**03 19 51.4**	**-0.1**
DDI				IAML		03 20 47.7	
DDI				IAML		03 20 48.1	
	comp=E,598nm,0.6s						
AML	**Almayashu**	**7.06**	**9**	P	**Pn**	**03 18 38.7**	**+2.3**
	SNR=10						
UCH	**Uchtor**	**7.29**	**14**	P	**Pn**	**03 18 42.1**	**+2.5**
	SNR=62						
KZA	**Kyzart**	**7.31**	**18**	P	**Pn**	**03 18 42.2**	**+2.3**
	SNR=25						
EKS2	**Erkin-Say**	**7.59**	**9**	P	**Pn**	**03 18 46.5**	**+3.0**
	SNR=28						
MRKS	**Merke**	**7.62**	**6**	Lg	Lg	03 20 10.6	
	comp=E,56nm,0.7s						
AAK	**Ala-Archa**	**7.68**	**13**	Pn	**Pn**	**03 18 46.5**	**+1.7**
	comp=E,5.5nm,0.3s,baz=170,slow=7.0,SNR=19						
AAK				Sn	**Sn**	**03 20 10.0**	**-0.6**
	comp=E,2.3nm,0.3s,baz=162,slow=20,SNR=8.6						
AAK				LR	LR	03 21 52.5	
	comp=E,488nm,19.9s,baz=187,slow=39						
AAK	**Ala-Archa**	**7.68**	**13**	P	**Pn**	**03 18 47.9**	**+3.1**
	SNR=24						
AAK	**Ala-Archa**	**7.68**	**13**	*e*Pn	**Pn**	**03 18 46.7**	**+2.0**
AAK	**Ala-Archa**	**7.68**	**13**	⇑P	**Pn**	**03 18 46.9**	**+2.2**
	comp=E,30nm,0.6s						
AAK				⇓S	**Sn**	**03 20 12.3**	**+1.7**
	comp=E,66nm,0.8s						
AAK	**Ala-Archa**	**7.68**	**13**	*c i*P	**Pn**	**03 18 47.4**	**+2.7**
AAK				pmax	pmax		
	comp=Z,30nm,0.5s						
JOSI	**Joshimath**	**7.72**	**124**	*e*x	**Pn**	**03 18 49.3**	**+4.0**
JOSI				*e*S	**Sn**	**03 20 10.6**	**-1.0**
JOSI				IAML		03 20 22.5	
	comp=N,312nm,0.4s						
JOSI				IAML		03 20 25.2	
	comp=E,372nm,0.7s						
DZA	**Taraz**	**7.75**	**355**	Lg	Lg	03 20 14.9	
	comp=E,145nm,0.1s						
ULHL	**Ulahol**	**7.75**	**23**	P	**Pn**	**03 18 48.4**	**+2.6**
	SN

comp=N,16nm,1.2s
MAKZ Makanchi 13.77 29 *e*P **Pn 03 20 08.3 +0.4**
MK31 Makanchi Array 13.89 30 *e*Pn **Pn 03 20 09.8 +0.2**
MK31 Makanchi Array 13.89 30 ⇑P **Pn 03 20 09.5 -0.1**
comp=N,4.0nm,0.9s,baz=205,slow=12,SNR=44
MK31 Makanchi Array 13.89 30 *i* P **Pn 03 20 09.4 -0.1**
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MK32 Makanchi Array 13.89 30 *e*Pn **Pn 03 20 09.6 0.0**
MKAR Makanchi Array 13.89 30 Pn **Pn 03 20 09.6 +0.1**
comp=Z,0.2nm,0.3s,baz=213,slow=13,SNR=20
MKAR LR LR 03 25 51.9
comp=Z,312nm,20.2s,baz=196,slow=39
MKAR Makanchi Array 13.89 30 *i* P **Pn 03 20 10.1 +0.6**
MKAR pmax pmax
comp=Z,8.0nm,1.0s
JIRN Jiri 14.10 118 *e*P **Pn 03 20 10.4 -2.4**
comp=Z,227nm,0.4s
WMQ Urumqi 14.75 49 *e*P **Pn 03 20 23.5 +2.2**
WMQ pP P 03 20 33.5 +6.6
WMQ sP 03 20 40.0
WMQ pmax pmax
comp=Z,18nm,0.7s
WMQ pmax pmax
comp=Z,67nm,4.3s
WMQ LR LR
comp=Z,99nm,12.7s
WMQ LR LR
comp=Z,200nm,16.7s
WMQ LR LR
comp=Z,160nm,14.1s
NGP Nagpur 15.21 155 *ex* **Pn 03 20 24.5 -3.0**
NGP *ex* **Sn 03 23 07.7 -7.0**
KURBB Kurchatov Arra 16.13 15 Pn **Pn 03 20 35.9 -3.2**
comp=Z,0.1nm,0.3s,baz=208,slow=12,SNR=20
KURK Kurchatov 16.23 15 *e*Pn **Pn 03 20 38.3 -2.1**
comp=Z,11nm,0.8s
KURK Kurchatov 16.23 15 ⇑P **Pn 03 20 37.0 -3.4**
comp=Z,11nm,0.8s
KURK Kurchatov 16.23 15 *i* P **Pn 03 20 36.9 -3.6**
BOK Bokaro 16.43 130 *e*P **Pn 03 20 43.3 +0.1**
BOK lAmb lAmb 03 20 50.7
comp=Z,18nm,0.9s
POO Poona 16.63 174 *e*P **Pn 03 20 46.2 +0.5**
AB31 Akbulak array 16.72 331 ⇑P **Pn 03 20 45.8 -0.9**
comp=Z,6.0nm,0.5s,baz=140,slow=12,SNR=191
AB31 ⇓S **Sn 03 23 46.4 -4.7**
comp=Z,4.4nm,0.5s
AB31 Akbulak array 16.72 331 *i* P **Pn 03 20 45.7 -0.9**
AB31 S **Sn 03 23 46.4 -4.7**
AB31 pmax pmax
comp=Z,6.0nm,0.5s
AB31 smax smax
comp=N,4.0nm,0.5s
ABKAR Akbulak array 16.72 331 *e*Pn **Pn 03 20 46.0 -0.6**
comp=N,23nm,0.8s
WSAR Wadi Sarin 16.75 228 Pn **Pn 03 20 47.1 0.0**
comp=N,0.2nm,0.3s,baz=100,slow=11,SNR=2.6
LSA Lhasa 16.91 103 *e*Pn **Pn 03 20 49.3 -0.3**
comp=N,18nm,0.8s
LSA Lhasa 16.91 103 *e*P **Pn 03 20 49.3 -0.3**
LSA pmax pmax
comp=Z,18nm,0.8s
BVAR Borovoye Array 17.91 356 P **Pn 03 20 59.2 -2.2**
comp=Z,1.2nm,0.3s,baz=156,slow=11,SNR=68
BRVK Borovoye 17.94 356 *e*Pn **Pn 03 21 01.1 -0.7**
comp=Z,26nm,0.8s
BRVK Borovoye 17.94 356 ⇑P **Pn 03 21 00.0 -1.8**
comp=Z,28nm,0.9s
BRVK Borovoye 17.94 356 *d i* P **Pn 03 21 00.0 -1.8**
BRVK pmax pmax
comp=Z,28nm,0.9s
DGZ Jazzator, Alta 18.32 33 *ce*P **P 03 21 06.4 -0.1**
TURI Tura 18.34 117 *ex* **Pn 03 21 10.1 +3.3**
AKTO Aktyubinsk 18.42 330 P **Pn 03 21 07.7 +0.1**
comp=Z,1.6nm,0.3s,baz=138,slow=9.8,SNR=76
AKTO S **Sn 03 24 25.1 -7.2**
comp=Z,0.2nm,0.3s,baz=114,slow=20,SNR=2.6
AKTO Aktyubinsk 18.42 330 ⇓P **Pn 03 21 07.5 -0.1**
comp=Z,35nm,0.9s
SHL Shillong 19.47 114 *e*P **P 03 21 18.3 -1.0**
comp=Z,23nm,0.8s
SHL Shillong 19.47 114 *e*P **P 03 21 18.3 -1.0**
SHL pmax pmax
comp=Z,23nm,0.8s
SHL Shillong 19.47 114 *e*P **P 03 21 19.7 +0.4**
SHL lAmb lAmb 03 21 27.0
comp=Z,131nm,2.0s
TEZP TEZPUR 19.61 110 *e*P **Pn 03 21 21.8 -0.3**
TEZP lAmb lAmb 03 21 25.4
comp=Z,12nm,0.6s
ZIRO ZIRO 19.98 106 *e*P **P 03 21 24.4 -0.5**
AKT Akhty 20.16 296 *e*P **P 03 21 26.6 -0.1**
AKT *e* 03 21 43.8
AKT pmax pmax
comp=Z,12nm,0.7s
ZAA0 Zalesovo Array 20.77 21 *e*P **P 03 21 32.1 -0.8**
comp=Z,25nm,0.8s
ZAA0 Zalesovo Array 20.77 21 ⇓P **P 03 21 31.9 -1.1**
comp=Z,4.1nm,0.8s
ZALV Zalesovo Beam 20.77 21 P **P 03 21 32.1 -0.9**
comp=Z,16nm,0.4s,baz=220,slow=9.9,SNR=64
ZALV LR LR 03 29 56.6
comp=Z,117nm,19.4s,baz=56,slow=38
ZAA1 Zalesovo Array 20.77 21 *e*P **P 03 21 32.1 -0.9**
KOHI KOHIMA 21.08 111 *ex* **P 03 21 37.8 +1.1**
MOKO MOKOCHONG 21.09 109 *e*P **P 03 21 37.1 +0.3**
IMP Imphal 21.43 113 *e*P **P 03 21 39.7 -0.7**
GROC Groznyy 21.91 299 *e*P **P 03 21 46.3 +1.0**
GROC *e* 03 22 09.7
GROC *e*S **S 03 25 47.4 +2.0**
GROC pmax pmax
comp=Z,112nm,1.7s
GNI Garni 22.25 291 P **P 03 21 49.1 -0.1**
comp=Z,7.0nm,0.5s,baz=79,slow=19,SNR=5.3
GNI Garni 22.25 291 *e*P **P 03 21 50.4 +1.2**
comp=Z,22nm,0.8s
GNI Garni 22.25 291 *de*P **P 03 21 51.8 +2.6**
GNI pmax pmax
comp=Z,105nm,1.0s
GTA Gaotai 22.35 71 ⇑P **P 03 21 50.8 +0.5**
GTA pP pP 03 22 02.5 +2.2
GTA sP sP 03 22 06.5 +1.4
GTA pmax pmax
comp=Z,7.0nm,0.8s
GTA pmax pmax
comp=Z,47nm,5.4s
GTA LR LR
comp=Z,340nm,15.9s
GTA LR LR
comp=Z,390nm,15.2s
GTA LR LR
comp=Z,140nm,18.7s
TBLG Delisi 22.42 295 *e*P **P 03 21 51.8 +0.9**
comp=Z,28nm,1.1s
TBLG Delisi 22.42 295 *e*P **P 03 21 51.8 +0.9**
TBLG pmax pmax
comp=Z,28nm,1.1s
SVE Sverdlovsk 23.04 344 *e*P **P 03 21 57.8 +0.6**
SVE pmax pmax
comp=Z,18nm,0.9s
ZEI Tsey 23.20 298 *e*P **P 03 21 59.9 +0.8**
ZEI pmax pmax
comp=Z,11nm,0.5s
ARU Arti 23.21 341 P **P 03 21 58.5 -0.4**
comp=Z,7.6nm,0.8s,baz=167,slow=9.5,SNR=22
ARU Arti 23.21 341 *e*P **P 03 21 58.3 -0.6**
comp=Z,18nm,0.9s
ARU Arti 23.21 341 *c i*P **P 03 21 59.1 +0.2**
ARU 03 22 26.7
ARU S **S 03 26 10.1 +1.9**
ARU SS **SnSn 03 26 46.4 +2.9**
ARU pmax pmax
comp=Z,21nm,1.0s
ARU MLR MLR
comp=Z,214nm,14.0s
AKH Akhalkalaki 23.31 294 ⇑*i*P **P 03 21 59.6 -0.6**
NCK Nalchik 23.54 299 ⇓*e*P **P 03 22 02.6 +0.3**
NCK pmax pmax
comp=Z,9.0nm,0.9s
KBZ Khabaz 24.08 300 P **P 03 22 07.0 -0.3**
comp=Z,2.9nm,0.7s,baz=117,slow=9.7,SNR=9.2
NEY Neytrino 24.12 298 ⇑*e*P **P 03 22 08.9 +0.9**
NEY pmax pmax
comp=Z,2.0nm,0.8s
KIV Kislovodsk 24.28 300 *e*P **P 03 22 06.6 -2.6**
KIV pmax pmax
comp=Z,28nm,1.0s
KIV MLR MLR
comp=Z,174nm,15.0s
LZH Lanzhou 25.70 79 *e*P **P 03 22 24.0 +1.7**
LZH pP pP 03 22 34.0 +0.7
LZH sP sP 03 22 39.5 +1.5
LZH pmax pmax
comp=Z,22nm,1.0s
RAYN Ar Rayn 25.91 251 *e*P **P 03 22 25.0 +0.9**
comp=Z,23nm,1.5s
RAYN Ar Rayn 25.91 251 *e*P **P 03 22 25.0 +0.9**
RAYN pmax pmax
comp=Z,23nm,1.5s
MOY Mondy 26.41 42 *e*P **P 03 22 30.1 +1.6**
MOY pmax pmax
comp=Z,13nm,2.3s
CD2 Chengdu 26.75 90 *e*P **P 03 22 31.5 -0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ZAK Zakamensk 27.18 46 *e*P **P 03 22 36.1 +0.7**
ZAK pmax pmax
comp=Z,5.0nm,1.0s
KIRV Kirov 27.86 334 P **P 03 22 41.0 -0.3**
comp=Z,56nm,0.7s,baz=150,slow=3.3,SNR=18
KMI Kunming 28.16 102 P **P 03 22 46.3 +1.7**
KMI pmax pmax
comp=Z,12nm,0.5s
KMI pmax pmax
comp=Z,56nm,4.0s
SONA0 Songino Array 28.34 53 *e*P **P 03 22 45.9 +0.1**
SONM Songino Array 28.34 53 P **P 03 22 45.9 +0.1**
comp=Z,2.4nm,0.4s,baz=231,slow=9.4,SNR=5.7
ULN Ulaanbaatar 28.78 53 *ce*P **P 03 22 50.5 +0.7**
ULN pmax pmax
comp=Z,9.0nm,1.7s
CM31 Chiang Mai Arr 28.97 118 *e*P **P 03 22 51.3 -0.3**
comp=Z,11nm,1.0s
CMAR Chiang Mai Arr 28.97 118 P **P 03 22 51.3 -0.3**
comp=Z,2.7nm,0.3s,baz=296,slow=8.3,SNR=13
CMAR LR LR 03 36 33.0
comp=Z,42nm,21.8s,baz=315,slow=41
XAN Xi'an 30.15 81 P **P 03 23 02.3 +0.3**
XAN pP pP 03 23 10.0 -3.1
XAN pmax pmax
comp=Z,7.0nm,1.3s
XAN pmax pmax
comp=Z,83nm,3.5s
XAN LR LR
comp=Z,120nm,20.6s
XAN LR LR
comp=Z,120nm,20.6s
BRTR Keskin Array B 30.78 290 P **P 03 23 08.8 +1.3**
comp=Z,2.3nm,0.6s,baz=96,slow=9.0,SNR=21
MOS Moscow 31.30 322 *e*P **P 03 23 08.6 -3.2**
HHC Hu-ho-hao-te 31.35 68 P **P 03 23 14.3 +1.7**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,24nm,5.5s
PRGR Permogore 31.39 336 *e*P **P 03 23 11.0 -1.5**
PRGR pmax pmax
comp=Z,41nm,0.7s
OBN Obninsk 31.58 320 ⇓*e*P **P 03 23 15.7 +1.5**
OBN *SP **sP 03 23 32.0 +2.5**
OBN 03 24 22.0
OBN *e*S **S 03 28 15.1 -5.3**
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,106nm,18.0s
PBKT Sadao Pong 31.66 118 P **P 03 23 17.9 +2.5**
comp=Z,3.3nm,0.9s
NONG Nongkai 32.32 114 P **P 03 23 22.3 +1.2**
comp=Z,0.3nm,1.1s
CHAI Chaiyaphum 32.84 118 P **P 03 23 27.5 +1.8**
comp=Z,29μm,0.9s
SKNT Sakolnakorn 33.62 114 P **P 03 23 33.3 +0.8**
comp=Z,20nm,0.9s
YLV Yalova 33.98 292 ⇑*i*P **P 03 23 34.1 -1.4**
YLV Yalova 33.98 292 ⇑P **P 03 23 34.1 -1.4**
PANO Nakornpanom 33.98 113 P **P 03 23 36.9 +1.3**
comp=Z,0.4nm,1.1s
AKASG Malin Array Be 34.54 310 P **P 03 23 40.2 +0.1**
comp=Z,1.0nm,0.4s,baz=82,slow=7.1,SNR=3.5
CFR Carcaliu 34.73 300 ⇑*i*P **P 03 23 43.0 +1.1**
CFR Carcaliu 34.73 300 ⇑P **P 03 23 43.0 +1.1**
WHN Wuhan 35.53 85 *e*P **P 03 23 50.5 +1.6**
PLOR Plostina 35.79 301 ⇑*i*P **P 03 23 52.3 +1.2**
PLOR Plostina 35.79 301 ⇑P **P 03 23 52.4 +1.3**
MLR Muntele Rosu 36.28 301 ⇓*i*P **P 03 23 56.6 +1.2**
MLR Muntele Rosu 36.28 301 ⇓P **P 03 23 56.6 +1.2**
DOPR Dopca 36.67 302 ⇓*i*P **P 03 23 59.6 +1.0**
BURAR Bucovina Array 36.83 304 ⇑*i*P **P 03 24 00.8 +0.8**
BURAR Bucovina Array 36.83 304 ⇑P **P 03 24 00.8 +0.8**
VOIR 36.91 301 ⇑*i*P **P 03 24 01.3 +0.6**
VOIR 36.91 301 ⇑P **P 03 24 01.3 +0.6**
ARR Arges 37.21 301 ⇑*i*P **P 03 24 03.6 +0.4**
VTS Vitosha 38.38 296 *e*P **P 03 24 13.9 +0.7**
comp=Z,5.4nm,1.2s
VTS Vitosha 38.38 296 *e*P **P 03 24 13.9 +0.7**
VTS pmax pmax
comp=Z,5.0nm,1.2s
DRGR 38.52 303 ⇑*i*P **P 03 24 14.5 +0.2**
DRGR 38.52 303 ⇑P **P 03 24 14.5 +0.2**
NJ2 Nanjing 38.72 81 *e*P **P 03 24 15.3 -0.7**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
FIA0 FINESS Array S 39.13 327 *e*P **P 03 24 19.2 +0.2**
FIA0 FINESS Array S 39.13 327 *e*P **P 03 24 19.2 +0.2**
FINES FINESS Array B 39.13 327 P **P 03 24 19.2 +0.2**
comp=Z,11nm,0.7s,baz=107,slow=10,SNR=51
BZS Buzias 39.32 301 ⇑*i*P **P 03 24 21.8 +0.9**
BZS Buzias 39.32 301 ⇑P **P 03 24 21.8 +0.9**
ARCES ARCESS Array B 42.75 338 P **P 03 24 49.1 +0.4**
comp=Z,9.3nm,0.7s,baz=117,slow=9.0,SNR=21
ARE0 ARCESS Array S 42.75 338 *e*P **P 03 24 48.8 +0.1**
comp=Z,2.2nm,1.3s
ARE0 ARCESS Array S 42.75 338 *e*P **P 03 24 48.9 +0.2**
HEF Hetta 42.83 336 *e*P **P 03 24 49.7 +0.3**
KTK1 Kautokeino 43.23 337 *e*P **P 03 24 53.1 +0.5**
HAMF Hammerfest 43.82 339 *e*P **P 03 24 58.3 +1.0**
KIF Kilpisjarvi 44.02 336 *e*P **P 03 24 59.1 +0.2**
BRG Berggiesshubel 44.21 309 *e*P **P 03 25 01.0 +0.2**
comp=Z,3.0nm,0.9s
SALU Saltoluokta 44.24 333 *e*P **P 03 25 01.1 +0.3**
KS15 Wonju Array Si 44.39 70 *e*P **P 03 25 03.5 +1.1**
comp=Z,25nm,1.5s
KS15 *e*PcP **PcP 03 26 45.1 -0.8**
KSRS Korea Array 44.42 70 P **P 03 25 03.4 +0.9**
comp=Z,1.5nm,0.6s,baz=276,slow=6.7,SNR=8.3
KSRS PcP **PcP 03 26 45.1 -0.8**
comp=Z,1.9nm,0.8s,baz=292,slow=3.6,SNR=5.9
GEC2 GERESS Array S 44.49 307 *e*P **P 03 25 03.1 -0.1**
comp=Z,11nm,1.8s
GEC2 *e*PcP **PcP 03 26 45.1 -1.0**
GEC2 GERESS Array S 44.49 307 *e*P **P 03 25 03.1 -0.1**
GEC2 *e* 03 26 45.2
GEC2 pmax pmax
comp=Z,11nm,1.8s
GERES GERESS Array B 44.49 307 P **P 03 25 03.1 -0.1**
comp=Z,0.2nm,0.5s,baz=72,slow=5.7,SNR=3.5
GERES PcP **PcP 03 26 45.1 -1.0**
comp=Z,0.7nm,0.7s,baz=101,slow=4.2,SNR=5.6
TRO Tromso 44.88 337 *e*P **P 03 25 05.6 -0.2**
KBA Koelnbreinsper 44.91 304 *e*PcP **PcP 03 26 46.0 -1.7**
comp=Z,4.8nm,1.1s
MOR8 Moi Rana 45.45 331 *e*P **P 03 25 09.8 -0.7**
STEI Steigen 45.60 334 *e*P **P 03 25 12.0 +0.5**
NC405 NORSAR Array S 45.79 324 *e*P **P 03 25 12.2 -1.0**
comp=Z,30nm,0.8s
NB201 NORSAR Array S 45.99 324 *e*P **P 03 25 14.5 -0.3**
NB2 NORSAR Subarra 46.03 324 P **P 03 25 14.2 -0.9**
comp=Z,11nm,0.6s,baz=96,slow=7.9
NB2 NORSAR Subarra 46.03 324 P **P 03 25 14.2 -0.9**
baz=96,slow=7.9
NOA NORSAR Array B 46.03 324 P **P 03 25 14.5 -0.6**
comp=Z,10nm,0.6s,baz=97,slow=7.7,SNR=65
WTTA Wattenberg 46.04 305 *e*PcP **PcP 03 26 51.6 0.0**
comp=Z,4.6nm,0.8s
KONS Konsvik 46.05 331 *e*P **P 03 25 15.3 +0.3**
NBO00 NORSAR Array S 46.24 324 *e*P **P 03 25 16.3 -0.4**
NC204 NORSAR Array S 46.27 324 *e*P **P 03 25 16.6 -0.4**
SQTA Sankt Quirin 46.34 305 *i* PcP **PcP 03 26 52.2 -0.4**
comp=Z,3.8nm,0.6s
TIXI Tiksi 46.66 21 *e*P **P 03 25 19.5 -0.3**
comp=Z,4.6nm,0.7s
TIXI Tiksi 46.66 21 ⇓*e*P **P 03 25 19.9 +0.1**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
FETA Feichten 46.69 304 *e*PcP **PcP 03 26 54.4 +0.5**
comp=Z,7.1nm,1.1s
BMRD Maredsous 50.08 309 P **P 03 25 47.3 +0.8**
BMRD pP **sP 03 26 01.0 -1.1**
KBS Kingsbay 50.13 347 *e*P **P 03 25 47.1 +0.6**
comp=Z,14nm,0.8s
KBS Kingsbay 50.13 347 ⇓*e*P **P 03 25 47.6 +1.1**
KBS pmax pmax
comp=Z,174nm,2.5s
DOU Dourbes 50.23 309 P **P 03 25 45.9 -1.7**
DOU Dourbes 50.23 309 pP pP 03 26 00.8 +2.1
MJB9 Matsu-Tunnel 52.55 68 *e*P **P 03 26 05.2 0.0**
comp=Z,8.4nm,0.7s
MAJO Matsushiro 52.55 68 *e*P **P 03 26 05.4 +0.1**
comp=Z,8.3nm,0.7s
MAJO Matsushiro 52.55 68 *de*P **P 03 26 05.6 +0.3**
MAJO pmax pmax
comp=Z,7.0nm,0.8s
MAT Matsushiro 52.55 68 P **P 03 26 05.5 +0.2**
MJAR Matsushiro Arr 52.55 68 P **P 03 26 05.8 +0.5**
comp=Z,5.5nm,0.8s,baz=288,slow=10,SNR=22
SEY Seymchan 55.00 33 ⇓*e*P **P 03 26 23.8 +1.1**
DAG Danmarks Havn 56.28 344 *i* P **P 03 26 31.7 0.0**
DAG pmax pmax
comp=Z,16nm,0.8s
DAG Danmarks Havn 56.28 344 *i* P **P 03 26 31.7 0.0**
comp=Z,22nm,0.8s
ESDC Sonseca Array 58.94 299 P **P 03 26 50.5 -0.5**
comp=Z,0.9nm,0.7s,baz=54,slow=7.9,SNR=8.4
BILL Bilibino 59.39 26 ⇓*e*P **P 03 26 54.2 +0.5**
BILL *e*PP **pP 03 27 06.8 +1.3**
BILL *e*SP **sP 03 27 14.6 +4.5**
BILL *e* 03 27 43.4
BILL S **S 03 35 01.0 +1.3**
BILL pmax pmax
comp=Z,10.0nm,1.3s
BILL MLR MLR
comp=Z,383nm,20.0s
SUMG Summit 62.63 341 *e*P **P 03 27 16.9 +0.8**
comp=Z,20nm,0.8s
SUMG Summit 62.63 341 *i* P **P 03 27 16.7 +0.6**
SUMG pmax pmax
comp=Z,50nm,0.8s
SUMG Summit 62.63 341 *i* P **P 03 27 16.7 +0.6**
comp=Z,50nm,0.8s
TOA0 Torodi Ar. Sit 66.66 270 *e*P **P 03 27 42.2 -0.6**
comp=Z,8.4nm,0.6s
TOA1 Torodi Ar. Sit 66.66 270 *e*P **P 03 27 40.9 -1.9**
TORD Torodi Ar. Bea 66.66 270 P **P 03 27 40.9 -1.9**
comp=Z,7.6nm,0.3s,baz=56,slow=4.3,SNR=86
INK Inuvik 75.06 10 *e*P **P 03 28 33.3 +0.4**
comp=Z,12nm,0.6s
INK Inuvik 75.06 10 *e*P **P 03 28 33.3 +0.4**
INK pmax pmax
comp=Z,12nm,0.6s
COLA College 75.49 16 *e*P **P 03 28 35.6 +0.3**
comp=Z,22nm,0.3s
COLA College 75.49 16 *de*P **P 03 28 35.7 +0.3**
COLA pmax pmax
comp=Z,8.0nm,1.0s
DBIC Dimbokro 75.60 268 P **P 03 28 35.4 -1.5**
comp=Z,3.8nm,0.7s,baz=37,slow=6.2,SNR=5.8
DBIC Dimbokro 75.60 268 *e*P **P 03 28 35.4 -1.5**
comp=Z,72nm,1.8s
KIC Kosan Boka 75.68 268 *e*PKIKP **P 03 28 37.3 -0.1**
comp=Z,20nm,0.8s
TIC Toumodi 75.75 268 *e*PKIKP **P 03 28 37.5 -0.3**
ILAR Eielson Array 75.80 16 P **P 03 28 36.2 -1.0**
comp=Z,1.7nm,0.7s,baz=304,slow=4.7,SNR=25
LIC Lamto 75.99 268 *e*PKIKP **P 03 28 37.9 -1.3**
comp=Z,42nm,1.1s
EGAK Eagle 77.01 14 *e*P **P 03 28 44.0 -0.1**
comp=Z,3.3nm,0.9s
BOSA Boshof 77.36 221 P **P 03 28 47.2 +0.6**
comp=Z,2.4nm,1.0s,baz=39,slow=14,SNR=2.8
KDAK Kodiak Island 80.07 23 *i* P **P 03 29 01.4 +0.4**
BALM Baldy 80.08 16 *e*P **P 03 29 01.1 -0.1**
comp=Z,7.8nm,0.6s
BALM Baldy 80.08 16 *e*P **P 03 29 01.2 -0.1**
BALM pmax pmax
comp=Z,8.0nm,0.6s
WRA Warramunga Arr 80.46 122 P **P 03 29 03.4 -0.3**
comp=Z,1.5nm,0.7s,baz=303,slow=6.1,SNR=4.3
WR1 Warramunga Arr 80.47 122 *e*P **P 03 29 03.4 -0.3**
YKA Yellowknife Ar 82.53 3 P **P 03 29 13.8 -0.2**
comp=Z,9.8nm,0.6s,baz=350,slow=5.3,SNR=170
AS31 Alice Springs 82.70 126 *e*P **P 03 29 15.5 +0.1**
comp=Z,1.6nm,1.1s
ASAR Alice Springs 82.70 126 P **P 03 29 15.5 +0.1**
comp=Z,1.2nm,0.8s,baz=321,slow=5.0,SNR=8.8
FFC Flin Flon 90.33 357 *e*P **P 03 29 52.4 -0.1**
comp=Z,5.5nm,0.9s
FFC Flin Flon 90.33 357 *i* P **P 03 29 52.6 +0.1**
PLCA Paso Flores 150.25 248 PKPbc **PKPbc 03 36 41.6 -0.9**
comp=Z,4.2nm,1.1s,baz=79,slow=5.2,SNR=3.8
PLCA Paso Flores 150.25 248 *e*PKPbc **PKiKP 03 36 44.6 +1.3**

WEL 29 03:39:25.1±0.6, **44°S**±2°×**17°3E**±°, **h8**km±3km, **M3.5**/9, **ML3.7**/7, **MLv3.5**/9, **Error ellipse: s-maj=0.0km s-min=0.0km az=84.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLZ	**Canterbury Las**	**0.06**	**242**	P	Pg	03 39 27.4	+0.6
CRLZ				S	Sg	03 39 28.9	+0.9
MQZ	**McQueen's Vall**	**0.16**	**189**	P	Pg	03 39 29.0	+0.6
MQZ				S	Sg	03 39 31.7	+1.1
EYCZ	**Eyrewell**	**0.28**	**298**	P	Pg	03 39 30.9	+0.5
OKCZ	**Okains Bay**	**0.32**	**123**	P	Pg	03 39 32.0	+0.6
OKCZ				S	Sb	03 39 37.3	-1.2
AKCZ	**Akaroa Harbour**	**0.36**	**154**	P	Pg	03 39 32.8	+0.7
AMCZ	**Amberley**	**0.37**	**356**	P	Pg	03 39 32.9	+0.6
AMCZ				S	Sg	03 39 37.9	+0.7
OXZ	**Oxford**	**0.53**	**295**	P	Pg	03 39 35.3	+0.1
OXZ				S	Sg	03 39 43.1	+1.1
GVZ	**Greta Valley S**	**0.63**	**24**	P	Pg	03 39 37.8	+0.5
GVZ				S	Sb	03 39 47.5	0.0
LTZ	**Lake Taylor**	**0.83**	**338**	P	Pg	03 39 41.1	+0.2
LTZ				S	Sg	03 39 52.0	+0.4
RPZ	**Rata Peaks**	**1.20**	**262**	P	Pb	03 39 46.8	-1.3
INZ	**Inchbonnie**	**1.23**	**312**	P	Pb	03 39 48.1	-0.5
KHZ	**Kahutara**	**1.29**	**29**	P	Pn	03 39 47.5	-1.9
WVZ	**Waitaha Valley**	**1.50**	**288**	P	Pn	03 39 52.6	+0.3
THZ	**Tophouse**	**1.79**	**5**	P	Pn	03 39 54.7	-1.7
DSZ	**Denniston Nort**	**1.92**	**340**	P	Pn	03 39 57.1	-1.0
LBZ	**Lake Benmore**	**1.99**	**244**	P	Pn	03 39 58.2	-0.9
BSWZ	**Blackbirch Sta**	**2.03**	**26**	P	Pn	03 39 57.9	-1.7
FOZ	**Fox Glacier**	**2.09**	**269**	P	Pn	03 40 00.5	+0.1
ODZ	**Otahua Downs**	**2.10**	**224**	P	Pn	03 39 59.3	-1.2
TUWZ	**Tuamarina**	**2.31**	**24**	P	Pn	03 40 01.4	-2.1
NNZ	**Nelson**	**2.39**	**13**	P	Pn	03 40 03.1	-1.3
QRZ	**Quartz Range**	**2.73**	**357**	P	Pn	03 40 07.5	-1.6
PLWZ	**Palliser**	**2.74**	**45**	P	Pn	03 40 06.5	-2.8
JCZ	**Jackson Bay**	**2.87**	**258**	P	Pn	03 40 10.3	-1.0
EAZ	**Earnscleugh**	**2.95**	**234**	P	Pn	03 40 10.9	-1.3
CAW	**Cannon Point**	**3.01**	**37**	P	Pn	03 40 10.3	-2.8
OGWZ	**Otaki Gorge**	**3.29**	**35**	P	Pn	03 40 14.2	-2.8
MRZ	**Mangatainoka R**	**3.60**	**38**	P	Pn	03 40 17.8	-3.4
MLZ	**Mavora Lakes**	**3.74**	**239**	P	Pn	03 40 21.4	-1.7
BFZ	**Birch Farm**	**3.90**	**44**	P	Pn	03 40 21.9	-3.4
SYZ	**Scrubby Hill**	**3.91**	**219**	P	Pn	03 40 24.9	-0.5
WHZ	**Wether Hill Ro**	**4.11**	**234**	P	Pn	03 40 25.8	-2.4
KHEZ	**Kahui Hut**	**4.37**	**14**	P	Pn	03 40 30.6	-1.2
PKE	**Pukeiti**	**4.46**	**13**	P	Pn	03 40 32.6	-0.4
WHVZ	**Whangaehu Hut**	**4.79**	**28**	P	Pn	03 40 36.3	-1.4
TUVZ	**Tukino**	**4.82**	**29**	P	Pn	03 40 36.6	-1.6

SOME ***29*** *03:48:32.3, 43°.97N×83°.70E, h10km*
NNC ***29*** *03:48:36.4±2.2, 44°.24N×83°.37E, h5km±18km, mb3.6, mpv3.3, Error ellipse: s-maj=18.3km s-min=7.3km az=128.0*

ISC 29 03:48:37.7±2.0, **44°.11N**±0°.09×**83°.57E**±0°.09, **h20**km, **n25**, σ2°51/33, **4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.42**	**255**	Pg	**Pb**	**03 49 18.5**	**-2.2**

28nm,0.3s
KTMS Lg Lg 03 49 51.7
18nm,0.4s
KTMS Ketmen 2.42 255 *e*P **Pb 03 49 18.5 -2.2**
28nm,0.3s
KTMS *e*S **Sb 03 49 51.6 +1.6**
18nm,0.4s
DJR Jarkent 2.72 276 Pg **Pb 03 49 23.8 -2.1**
18nm,0.4s
DJR Lg Lg 03 50 01.0
13nm,0.4s
DJR Jarkent 2.72 276 *e*P **Pb 03 49 23.8 -2.1**
19nm,0.2s
DJR *e*S **Sb 03 50 00.2 +1.4**
14nm,0.3s
MK31 Makanchi Array 2.83 342 Pn **Pn 03 49 20.0 -1.9**
0.1nm,0.2s,baz=155,slow=15,SNR=24
MK31 ⇑Pg **Pb 03 49 23.3 -4.3**
2.7nm,0.4s,baz=158,slow=17,SNR=7.3
MK31 ⇑Lg Lg 03 49 57.4
3.6nm,0.4s,baz=160,slow=38,SNR=11
MAKZ Makanchi 2.92 338 ⇑Pg **Pb 03 49 24.7 -4.5**
1.3nm,0.4s
MAKZ ⇓Lg Lg 03 50 00.9
7.0nm,0.5s
PDGK Podgornoye 3.06 257 Pg **Pb 03 49 29.7 -1.8**
1.7nm,0.3s
PDGK Lg Lg 03 50 10.8
6.0nm,0.3s
PDGK Podgornoye 3.06 257 ⇓Pg **Pb 03 49 29.1 -2.4**
1.8nm,0.5s
PDGK ⇑Lg Lg 03 50 09.6
7.9nm,0.5s
KAPS Kapalarasan 3.22 293 Pg **Pb 03 49 33.1 -1.2**
3.3nm,0.2s
KAPS Lg Lg 03 50 16.4
5.4nm,0.3s
KAPS Kapalarasan 3.22 293 *e*P **Pb 03 49 33.1 -1.2**
3.3nm,0.2s
KAPS *e*S **Sb 03 50 16.4 +3.2**
5.4nm,0.3s
ZSN Zaisan 3.46 15 Pg **Pb 03 49 39.6 +1.2**
3.1nm,0.3s
ZSN Lg Lg 03 50 27.6
3.5nm,0.5s
ZSN Zaisan 3.46 15 *e*P **Pb 03 49 37.6 -0.8**
1.5nm,0.3s
ZSN *e*S **Sb 03 50 24.9 +4.8**
3.5nm,0.5s
KPKS Kokpek 3.59 261 *e*P **Pb 03 49 37.8 -2.8**
5.3nm,0.2s
KPKS *e*S **Sb 03 50 24.7 +0.9**
21nm,0.4s
MNBS Baschi 3.72 271 Pg **Pb 03 49 40.7 -2.1**
6.9nm,0.3s
MNBS Lg Lg 03 50 29.1
9.6nm,0.3s
MNBS Baschi 3.72 271 *e*P **Pb 03 49 40.5 -2.3**
6.9nm,0.3s
MNBS *e*S **Sb 03 50 29.1 +1.6**
9.6nm,0.3s
SATY Saty 3.89 256 Pg **Pb 03 49 44.0 -1.8**
6.3nm,0.3s
SATY Lg Lg 03 50 35.6
9.4nm,0.3s
SATY Saty 3.89 256 *e*P **Pb 03 49 44.0 -1.8**
2.6nm,0.3s
SATY *e*S **Sb 03 50 35.6 +3.1**
7.1nm,0.3s
ARXS Arharly 4.13 273 Pg **Pb 03 49 49.9 +0.1**
5.8nm,0.3s
ARXS Lg Lg 03 50 45.3
8.2nm,0.3s
ARXS Arharly 4.13 273 *e*P **Pb 03 49 49.9 +0.1**
5.8nm,0.3s
ARXS *e*S **Sb 03 50 45.3 +6.0**
8.2nm,0.3s
CHKK Chushkaly 4.75 269 Pg **Pb 03 50 00.6 +0.3**
3.8nm,0.3s
CHKK Lg Lg 03 51 03.9
6.0nm,0.5s
CHKK Chushkaly 4.75 269 *e*P **Pb 03 50 00.6 +0.3**
3.8nm,0.3s
CHKK *e*S Sb 03 51 03.9 +6.8
6.0nm,0.5s
KTBS Karatobe 4.99 268 Pg **Pb 03 50 05.3 +1.0**
1.5nm,0.5s
KTBS Lg Lg 03 51 12.1
7.1nm,0.4s
KTBS Karatobe 4.99 268 *e*P **Pb 03 50 05.3 +1.0**
1.5nm,0.5s
KTBS *e*S Sb 03 51 12.1 +8.2
7.1nm,0.4s
KUU Kurty 5.22 270 Pg **Pb 03 50 09.5 +1.2**
1.6nm,0.6s
KUU Lg Lg 03 51 19.3
3.9nm,0.2s
KURBB Kurchatov Arra 7.36 334 ⇓Lg Lg 03 52 24.2
4.0nm,0.7s

TAP 29 04:24:52.0,24°.85N×122°.04E,h7km,ML2.3,4C-1D,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=345	**0.16 343**	⇑	*i*P	Pg	04 24 56.0	+0.6
TWB1	baz=345			*i* S	Sg	04 24 58.8	+1.2
NTC	**Toucheng** baz=270	**0.19 271**	⇑	*i*P	Pg	04 24 57.1	+1.2
NTC	baz=270			S	Sg	04 25 00.4	+1.9
TIPB	**Shuangxi** baz=301	**0.23 302**	⇑	*i*P	Pg	04 24 57.8	+1.2
TIPB	baz=301			S	Sg	04 25 01.6	+1.9
TWC	**Suao** baz=214	**0.30 216**	P		Pg	04 24 58.7	+0.9
TWC	baz=214			*e*S	Sg	04 25 02.5	+0.7
EOS1	**EOS1** baz=165	**0.31 165**	P		Pb	04 24 59.3	-0.6
EOS1	baz=165			*e*S	Sb	04 25 04.8	-0.3
NWF	**Wu-fen Shan** baz=312	**0.32 313**	*e*P		Pb	04 24 59.7	-0.4
NWF	baz=312			*e*S	Sb	04 25 04.7	-0.8
WFSB	**Wu-fen Shan** baz=312	**0.32 313**	P		Pb	04 24 59.7	-0.4
WFSB	baz=312			*e*S	Sb	04 25 04.9	-0.5
TWE	**Neicheng** baz=247	**0.36 249**	P		Pb	04 25 00.0	-0.7
TWA	**Mucha** baz=287	**0.43 287**	*e*P		Pg	04 25 01.2	+0.8
TWA	baz=287			*e*S	Sb	04 25 08.0	-0.7
ENTT	**Nioudou** baz=243	**0.48 244**	*i*P		Pb	04 25 02.4	-0.4
ENTT	baz=243			*e*S	Sb	04 25 09.8	-0.3
NHDH	**Xindian Distri** baz=283	**0.48 283**	*e*S		Sb	04 25 09.5	-0.6
NANB	**Nanao** baz=212	**0.50 212**	P		Pb	04 25 02.6	-0.5
NANB	baz=212			*e*S	Sb	04 25 10.1	-0.4
ENA	**Nanau** baz=212	**0.50 213**	*e*P		Pb	04 25 02.9	-0.3
ENA	baz=212			*e*S	Sg	04 25 08.8	+0.6
TATO	**Taipei** baz=283	**0.52 284**	*e*S		Sb	04 25 10.9	-0.2
YM01	**YM01** baz=304	**0.52 305**	P		Pb	04 25 03.5	+0.1
YM01	baz=304			*e*S	Sb	04 25 10.9	-0.3
YM08	**YM08** baz=309	**0.53 309**	P		Pb	04 25 03.6	0.0
YM10	**YM10** baz=304	**0.53 305**	⇓	*i*P	Pb	04 25 03.9	+0.3
YM05	**YM05** baz=305	**0.53 306**	*e*P		Pb	04 25 03.9	+0.2
YM04	**YM04** baz=303	**0.55 303**	*e*P		Pb	04 25 04.2	+0.2
YHNB	**Yeheng** baz=253	**0.63 253**	P		Pb	04 25 04.9	-0.5
YHNB	baz=253			*e*S	Sb	04 25 14.3	-0.2
NSK	**Sanguang** baz=253	**0.64 254**	*e*P		Pg	04 25 04.8	+0.4
NACB	**Ninganchiao** baz=211	**0.79 211**	P		Pb	04 25 08.3	+0.3
NACB	baz=211			*e*S	Sb	04 25 18.8	-0.1
ETLH	**Xiulin Townshi** baz=218	**0.82 218**	P		Pb	04 25 09.0	+0.4
ETLH	baz=218			*e*S	Sb	04 25 19.6	-0.3
YOJ	**Yonaguni jima** baz=113	**0.96 114**	P		Pb	04 25 10.8	-0.2
YOJ	baz=113			*e*S	Sb	04 25 23.6	-0.4
OWD	**Renai** baz=221	**1.19 222**	P		Pn	04 25 15.3	+0.1
EGFH	**Guangfu** baz=205	**1.30 206**	*e*S		Sn	04 25 35.1	+0.8

TAP 29 04:25:16.3,23°.25N×121°.81E,h22km±1km,ML2.2,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui** baz=304	**0.43 305**		P	Pb	04 25 24.5	-0.7
HGSD	baz=304			*e*S	Sn	04 25 34.1	-0.3
CHKT	**Chengkung** baz=240	**0.43 251**		P	Pb	04 25 24.7	-0.6
CHKT	baz=240			S	Sb	04 25 30.3	-1.0
TWF1	**Yuli** baz=283	**0.48 283**		P	Pb	04 25 25.5	-0.6
TWF1	baz=283			*e*S	Sb	04 25 31.1	-1.7
YULB	**Yu-li** baz=287	**0.49 287**		*e*P	Pb	04 25 26.0	-0.3
YULB	baz=287			*e*S	Sb	04 25 33.2	+0.1
EHY	**Hungye** baz=300	**0.52 300**		P	Pb	04 25 26.4	-0.4
EHY	baz=300			*e*S	Sb	04 25 34.7	+0.8
EGFH	**Guangfu** baz=320	**0.55 320**		*e*P	Pb	04 25 26.3	-1.0
EGFH	baz=320			S	Sb	04 25 34.5	-0.3
ESL	**Shilin** baz=329	**0.66 329**		*e*P	Pb	04 25 29.0	-0.2
ESL	baz=329			*e*S	Sb	04 25 38.4	+0.3
ELDTW	**Lidau** baz=265	**0.73 266**		*e*S	Sb	04 25 39.4	-0.7
TWGBT	**Beinan** baz=230	**0.80 238**		*e*S	Sb	04 25 41.2	-0.6
VWDT	**VWDT** baz=309	**0.80 310**		*e*P	Pb	04 25 31.6	+0.1
VWDT	baz=309			*e*S	Sb	04 25 41.8	0.0
TWG	**Pinlang** baz=230	**0.80 238**		*e*S	Sb	04 25 41.1	-0.8
YUS	**Yu-Shan** baz=287	**0.82 287**		*e*P	Pb	04 25 32.6	+0.4
YUS	baz=287			*e*S	Sb	04 25 43.0	-0.1
TWD	**Chiawan** baz=347	**0.85 347**		*e*S	Sb	04 25 43.1	-0.4
OWD	**Renai** baz=320	**0.91 321**		*e*P	Pb	04 25 32.6	-1.0
OWD	baz=320			*e*S	Sb	04 25 43.7	-1.7
OWD	**Renai** baz=221	**0.91 321**		*e*S	Pb	04 25 32.6	-1.0
SSLB	**Suanglung** baz=304	**0.95 305**		P	Pb	04 25 32.6	-1.6
SSLB	baz=304			*e*S	Sb	04 25 45.8	-0.6
ALS	**Alishan** baz=277	**0.96 286**		*e*P	Pb	04 25 34.2	-0.3
CHGB	**Renai** baz=324	**1.00 324**		*e*P	Pb	04 25 34.7	-0.4
CHGB	baz=324			*e*S	Sb	04 25 46.6	-1.3
ETLH	**Xiulin Townshi** baz=354	**1.00 343**		*e*S	Sb	04 25 45.8	-2.1
WHF	**Hehuan Shan** baz=330	**1.02 331**		*e*S	Sb	04 25 47.7	-1.1
CHN5	**Tsauling** baz=289	**1.10 289**		*e*P	Pb	04 25 37.2	+0.6
CHN5	baz=289			*e*S	Sn	04 25 52.7	+1.8
WTP	**Ta-pu** baz=260	**1.10 270**		*e*P	Pb	04 25 36.6	-0.1
WTP	baz=260			*e*S	Sn	04 25 51.3	+0.3
CHN4	**Tsaushan** baz=269	**1.12 276**		*e*P	Pb	04 25 37.1	0.0
CHN4	baz=269			*e*S	Sn	04 25 52.9	+1.4
TWT	**Tachien** baz=329	**1.16 330**		*e*S	Sb	04 25 51.5	-1.0
NANB	**Nanao** baz=357	**1.18 357**		*e*S	Sb	04 25 51.0	-1.9
NNSB	**Datong** baz=341	**1.24 342**		*e*S	Sn	04 25 52.7	-1.9
MASBT	**Mashibuluo** baz=234	**1.25 240**		*e*S	Sb	04 25 58.4	+3.4

*IDC **29** 04:27:58.7±0.5, 64°.72S×177°.01E, h0km, mb4.5/13, mb1 4.6/14, mb1mx4.5/22, mbtmp4.5/14, ML4.2/1, MS4.4/15, Ms1 4.4/15, ms1mx4.3/19, Error ellipse: s-maj=23.3km s-min=14.9km az=48.0*

*ISCJB **29** 04:27:59.4±0.3, 64°.82S±0°.04×176°.7E±0°.2, h10km, mb4.7/26, MS4.4/16, Error ellipse: s-maj=11.4km s-min=6.2km az=169.9*

*GCMT **29** 04:28:00.7±0.2, 64°.60S±0°.01×176°.91E±0°.03, h16km±1km, MW5.2/106, Moment Tensor Solution. s40,c51; s106,c156; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.22±.03; Mθθ=0.72±.02; Mφφ=-0.50±.02; Mrθ=-0.54±.08; Mrφ=-0.13±.01; Mθφ=0.04±.05; Best double couple: M0=0.75600×10^17 NP1:φs=233.00000°, δ=85.00000°, λ=150.00000°. NP2:φs=326.00000°, δ=61.00000°, λ=6.00000°. Principal axes: T 0.9850, Plg24.0000°, Azm186.0000°; N -0.4570, Plg60.0000°, Azm44.0000°; P -0.5280, Plg16.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **29** 04:28:01.7±1.5, 64°.83S×176°.69E, h10km±2km, mb4.8/22 Error ellipse: s-maj=22.1km s-min=15.9km az=67.0*

ISC 29 04:28:01.0±0.4, 64°.81S±0°.07×177°.0E±0°.1, h10km, n94, σ1§01/69, mb4.8/26, MS4.5/16, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**13.47 189**		*e*Pn	**Pn**	**04 31 11.8**	**0.0**
VNDA	**Vanda** 1.2nm,0.3s,baz=39,slow=18,SNR=251	**13.59 194**		Pn	**Pn**	**04 31 12.8**	**-0.6**
VNDA	comp=Z,3μm,18.7s,baz=26,slow=32			LR	LR	04 35 19.1	
VNDA	**Vanda**	**13.59 194**		*e*Pn	**Pn**	**04 31 13.0**	**-0.4**
ODZ	**Otahua Downs** 126nm,1.8s	**20.11 347**		*e*P	Pn	04 32 36.0	-0.5
WKZ	**Wanaka** 316nm,2.0s	**20.50 344**		*e*P	Pn	04 32 40.0	-1.1
LBZ	**Lake Benmore** 257nm,1.9s	**20.81 346**		*e*P	Pn	04 32 42.6	-2.0
MQZ	**McQueen's Vall** 248nm,1.9s	**21.28 351**		*e*P	**P**	**04 32 48.7**	**+1.5**
RPZ	**Rata Peaks** 18nm,1.0s,baz=136,slow=9.7,SNR=5.3	**21.39 348**		P	**P**	**04 32 45.4**	**-3.1**
RPZ	comp=Z,2μm,19.9s,baz=190,slow=32			LR	LR	04 39 21.7	
RPZ	**Rata Peaks** 170nm,1.8s	**21.39 348**		*e*P	**P**	**04 32 48.4**	**-0.1**
LTZ	**Lake Taylor** 143nm,1.6s	**22.23 351**		*e*P	**P**	**04 32 58.2**	**+0.8**
BFZ	**Birch Farm** 293nm,1.8s	**24.17 359**		*e*P	**P**	**04 33 17.5**	**+0.5**
QSPA	**South Pole Qui**	**25.28 180**		*e*P	**P**	**04 33 28.0**	**+0.8**
	124nm,1.7s						
BKZ	**Black Stump Fm** 126nm,1.7s	**25.68 359**		*e*P	**P**	**04 33 32.1**	**+1.3**
URZ	**Urewera** 6.0nm,0.9s,baz=196,slow=7.4,SNR=2.7	**26.58 0**		P	**P**	**04 33 37.7**	**-1.2**
URZ	comp=Z,1μm,21.0s,baz=174,slow=32			LR	LR	04 42 16.2	
STKA	**Stephens Creek** 3.6nm,0.8s,baz=135,slow=8.1,SNR=5.0	**39.47 309**		P	**P**	**04 35 30.2**	**-1.0**
STKA	**Stephens Creek** 4.7nm,1.4s	**39.47 309**		*e*P	**P**	**04 35 31.2**	**0.0**
MAW	**Mawson** 3.9nm,1.0s,baz=152,slow=9.5,SNR=7.9	**39.84 213**		P	**P**	**04 35 33.8**	**-0.1**
MAW	comp=Z,1μm,18.1s,baz=140,slow=36			LR	LR	04 52 00.1	
MAW	**Mawson** 2.5nm,1.3s	**39.84 213**		*e*P	**P**	**04 35 34.4**	**+0.6**
BBOO	**Buckleboo** 26nm,1.2s	**40.55 302**		*e*P	**P**	**04 35 40.4**	**+0.3**
EIDS	**Eidsvold** 10nm,0.9s	**42.82 324**		*e*P	**P**	**04 36 00.4**	**+1.6**
DZM	**Mont Dzumac** comp=Z,969nm,18.0s,baz=196,slow=35	**43.28 346**		LR	LR	04 53 10.3	
DZM	**Mont Dzumac** comp=Z,2μm,24.4s	**43.28 346**		*e*LR	LR	04 48 12.0	
PMSA	**Palmer Station** comp=Z,396nm,20.1s,baz=224,slow=31	**43.31 147**		LR	LR	04 50 28.4	
SNAA	**Sanae**	**43.79 180**		P	**P**	**04 36 06.3**	**+0.1**
SNAA	**Sanae** 18nm,1.3s	**43.79 180**		*e*P	**P**	**04 36 06.5**	**+0.3**
VNA3	**Neumayer Olymp**	**44.14 177**		P	**P**	**04 36 09.2**	**+0.2**
VNA1	**Neumayer--Stat**	**44.77 178**		P	**P**	**04 36 14.5**	**+0.6**
FORT	**Forrest** 23nm,0.8s	**45.38 294**		*e*P	**P**	**04 36 18.6**	**-0.7**
RAR	**Rarotonga** comp=Z,612nm,20.8s,baz=190,slow=29	**46.21 31**		LR	LR	04 50 15.4	
TBI	**Tubuai** 75nm,26.0s	**46.85 44**		*e*S	**S**	**04 43 21.0**	**-0.1**
TBI	1μm,29.0s			*e*LQ	LQ	04 47 14.5	
TBI	comp=Z,900nm,28.8s,baz=205			*e*LR	LR	04 49 21.4	
TBI	**Tubuai** 93nm,0.3s	**46.85 44**		*e*T	T	05 26 11.8	
H01W1	**Cape Leeuwin H** baz=148,slow=75,SNR=108	**47.51 277**		T	T	05 27 48.9	
H01W2	**Cape Leeuwin H** baz=148,slow=75,SNR=160	**47.52 277**		T	T	05 27 49.3	
H01W3	**Cape Leeuwin H** baz=148,slow=75,SNR=5.1	**47.53 277**		T	T	05 27 50.2	
CTAO	**Charters Tower** 18nm,1.4s	**49.12 321**		*e*P	**P**	**04 36 49.0**	**+0.5**
ASAR	**Alice Springs** 5.9nm,0.9s,baz=154,slow=7.8,SNR=34	**49.65 305**		P	**P**	**04 36 50.9**	**-1.7**
ASAR	1.7nm,0.8s,baz=146,slow=4.4,SNR=4.6			PcP	**PcP**	**04 38 13.4**	**-0.3**
AS31	**Alice Springs** 2.6nm,1.0s	**49.65 305**		*e*P	**P**	**04 36 52.2**	**-0.4**
AS31				*e*PcP	**PcP**	**04 38 13.4**	**-0.3**
USHA	**Ushuaia** comp=Z,266nm,20.2s,baz=262,slow=30	**50.65 137**		LR	LR	04 53 09.2	
RKT	**Rikitea** 30nm,0.3s	**51.96 60**		*e*T	T	05 32 40.5	
TVO	**Taravao** 16nm,0.3s	**52.17 42**		*e*T	T	05 32 56.8	
PAE	**Paea** 7.9nm,0.3s	**52.19 42**		*e*T	T	05 33 04.3	
PPT2	**Papeete2** 147nm,26.2s	**52.26 42**		*e*S	**S**	**04 44 37.2**	**+0.1**
PPT2	692nm,23.8s			*e*LQ	LQ	04 49 29.0	
PPT2	comp=Z,743nm,25.5s,baz=201			*e*LR	LR	04 52 02.0	
PPT2	**Papeete2** 16nm,0.3s	**52.26 42**		*e*T	T	05 33 03.3	
PPT	**Papeete** comp=Z,245nm,20.3s,baz=202,slow=29	**52.28 42**		LR	LR	04 52 55.7	
TIAR	**Tiarei** 5.8nm,0.3s	**52.36 42**		*e*T	T	05 33 08.7	
MEH	**Mehetia** 23nm,0.3s	**52.43 44**		*e*T	T	05 33 20.0	
WB2	**Warramunga Arr** 32nm,1.5s	**52.93 307**		*e*P	**P**	**04 37 16.5**	**-0.6**
WR1	**Warramunga Arr**	**52.93 307**		*e*P	**P**	**04 37 15.1**	**-2.1**
WRA	**Warramunga Arr** 5.5nm,0.8s,baz=150,slow=6.8,SNR=8.8	**52.93 307**		P	**P**	**04 37 15.1**	**-2.1**
VAH	**Vaihoa** 600nm,0.3s	**55.05 43**		*e*T	T	05 36 37.3	
PMOR	**Pomariorio Ree** 14nm,0.4s	**55.20 43**		*e*T	T	05 36 38.2	
FITZ	**Fitzroy Crossi** comp=Z,308nm,18.0s,baz=158,slow=35	**57.76 299**		LR	LR	05 01 19.3	
PLCA	**Paso Flores** 4.3nm,1.2s,baz=202,slow=4.2,SNR=3.3	**62.42 128**		P	**P**	**04 38 23.1**	**-0.6**
PLCA	comp=Z,101nm,20.6s,baz=232,slow=30			LR	LR	04 58 39.5	
PLCA	**Paso Flores** 16nm,1.3s	**62.42 128**		*e*P	**P**	**04 38 25.1**	**+1.4**
BATI	**Baumata** comp=Z,337nm,21.3s,baz=218,slow=33	**65.74 300**		LR	LR	05 04 11.2	
CFA	**Coronel Fontan** 5.8nm,0.7s,baz=199,slow=6.8,SNR=13	**71.45 125**		P	**P**	**04 39 20.3**	**-1.0**
LVC	**Limon Verde** 8.8nm,0.8s,baz=203,slow=7.5,SNR=5.6	**79.41 121**		P	**P**	**04 40 06.9**	**-0.7**
LVC	**Limon Verde** 26nm,1.3s	**79.41 121**		*e*P	**P**	**04 40 09.1**	**+1.5**
CPUP	**Villa Florida** 3.9nm,0.7s,baz=209,slow=5.0,SNR=5.5	**79.95 132**		P	**P**	**04 40 09.6**	**-0.4**
CPUP	comp=Z,112nm,18.7s,baz=200,slow=33			LR	LR	05 12 08.7	
MNMC	**Minye Minye** 17nm,0.9s	**82.33 119**		*e*P	**P**	**04 40 24.2**	**+1.1**
BOSA	**Boshof** 1.9nm,0.9s,baz=215,slow=3.1,SNR=3.5	**84.31 205**		P	**P**	**04 40 31.9**	**-1.0**
BOSA	comp=Z,580nm,21.2s,baz=158,slow=33			LR	LR	05 14 48.1	
LPAZ	**La Paz** 4.2nm,0.8s,baz=202,slow=5.3,SNR=18	**85.48 119**		P	**P**	**04 40 39.2**	**-0.4**
LPAZ	comp=Z,56nm,21.7s,baz=239,slow=29			LR	LR	05 09 36.8	
LPAZ	**La Paz** 7.6nm,0.9s	**85.48 119**		*e*P	**P**	**04 40 40.2**	**+0.7**
SIV	**San Ignacio** 2.8nm,0.9s,baz=221,slow=4.2,SNR=12	**88.31 125**		P	**P**	**04 40 51.5**	**-1.2**
H08S2	**Diego Garcia H** baz=155,slow=76,SNR=72	**89.23 254**		T	T	06 20 17.4	
H08S1	**Diego Carcia H** baz=155,slow=76,SNR=50	**89.24 254**		T	T	06 20 18.1	
H08S3	**Diego Garcia H** baz=155,slow=76,SNR=70	**89.25 254**		T	T	06 20 19.0	
CD2	**Chengdu**	**110.83 298**		PKP	**PKiKP**	**04 46 35.0**	**+1.5**
HHC	**Hu-ho-hao-te**	**116.98 309**		*e*PKP	**PKiKP**	**04 46 47.5**	**+2.5**
PD31	**Pinedale Array**	**121.45 56**		*e*PKPdf	**PKiKP**	**04 46 54.1**	**+0.2**
PDAR	**Pinedale Array** 0.6nm,0.8s,baz=231,slow=2.9,SNR=3.7	**121.45 56**		PKP	**PKiKP**	**04 46 54.1**	**+0.2**
MSO	**Missoula**	**123.52 50**		*e*PKPdf	**PKiKP**	**04 46 57.2**	**-0.4**
ECSD	**EROS Data Cent**	**127.10 65**		*e*PKPdf	**PKPdf**	**04 47 03.8**	**-0.5**
WMQ	**Urumqi**	**128.29 293**		*e*PKP	**PKiKP**	**04 47 08.8**	**+1.6**
KSH	**Kashi**	**129.49 280**		*e*PKP	**PKiKP**	**04 47 11.8**	**+2.0**
DHY	**Denali Highway**	**130.27 20**		*e*PKPdf	**PKiKP**	**04 47 10.4**	**-0.2**
ILAR	**Eielson Array** 2.2nm,0.9s,baz=249,slow=2.4,SNR=14	**131.94 20**		PKP	**PKPdf**	**04 47 12.1**	**-0.6**
ILB	**Eielson Array**	**131.94 20**		*e*PKPdf	**PKiKP**	**04 47 12.8**	**-0.9**
MK32	**Makanchi Array**	**132.89 291**		*e*PKPdf	**PKPdf**	**04 47 14.7**	**-0.4**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=180,slow=0.9,SNR=2.8	**132.89 291**		PKP	**PKPdf**	**04 47 14.7**	**-0.4**
YKA	**Yellowknife Ar** 0.6nm,0.7s,baz=202,slow=2.3,SNR=5.2	**136.67 39**		PKP	**PKPdf**	**04 47 22.0**	**+0.4**
YKB5	**Yellowknife Ar**	**136.67 39**		*e*PKPdf	**PKPdf**	**04 47 22.0**	**+0.4**
ABKAR	**Akbulak array**	**144.11 275**		*e*PKPdf	PKPbc	04 47 33.4	-0.3
AKH	**Akhalkalaki**	**144.79 251**		*e*PKPdf	**PKPdf**	**04 47 36.9**	**-0.3**
AKTO	**Aktyubinsk** 7.3nm,0.8s,baz=146,slow=4.6,SNR=20	**145.82 275**		PKPbc	**PKPdf**	**04 47 38.2**	**-0.2**
KBZ	**Khabaz** 9.6nm,0.8s,baz=160,slow=2.3,SNR=23	**146.96 253**		PKPbc	**PKPbc**	**04 47 42.0**	**-0.5**
BR131	**Keskin Array S** 4.7nm,0.8s,baz=153,slow=5.6,SNR=26	**147.15 238**		*e*PKPdf	**PKPdf**	**04 47 41.9**	**+0.7**
BRTR	**Keskin Array B** 2.9nm,0.5s,baz=105,slow=20,SNR=8.3	**147.15 238**		PKPbc	**PKPdf**	**04 47 42.0**	**+0.7**
BR101	**Keskin Array S**	**147.15 238**		*e*PKPdf	**PKPdf**	**04 47 42.0**	**+0.8**
KVAR	**Kislovodsk Arr**	**147.23 253**		PKPbc	**PKPbc**	**04 47 43.6**	**+0.1**
KIV	**Kislovodsk**	**147.24 253**		*e*PKPbc	**PKPbc**	**04 47 43.1**	**-0.4**
SCHQ	**Schefferville** 15nm,1.0s,baz=222,slow=5.5,SNR=3.7	**147.83 77**		PKPbc	**PKPbc**	**04 47 43.3**	**-1.4**
SCHQ	**Schefferville**	**147.83 77**		*e*PKPbc	**PKPbc**	**04 47 44.7**	**0.0**
RES	**Resolute Bay**	**150.18 32**		*ep*PKPdf	**PKPbc**	**04 47 49.0**	**-0.9**

*ISCJB **29** 04:30:25.8±0.6,24.′02N±0.′02×122.′20E±0.′02,h8km±3km, Error ellipse: s-maj=3.7km s-min=2.4km az=147.8*
*TAP **29** 04:30:25.7,24.′06N×122.′15E,h9km,ML2.6,D*
*JMA **29** 04:30:26.3±0.1,23.′97N×122.′17E,h20km±2km,M2.0*
ISC 29 04:30:26.1±1.0,24.′02N±0.′02×122.′16E±0.′02,h15km±8km, n47,σ0s65/80,2C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.52**	**277**	*e*P	**Pb**	**04 30 37.0**	**+0.1**
	baz=272						
TWD				S	**Sb**	**04 30 45.8**	**+1.6**
	baz=272						
ENLB	**Shoufeng**	**0.53**	**257**	*e*S	**Sb**	**04 30 45.0**	**+0.6**
	baz=253						
EOS1	**EOS1**	**0.53**	**357**	P	**Pg**	**04 30 36.4**	**-0.1**
	baz=357						
EOS1				S	**Sg**	**04 30 44.0**	**+0.3**
	baz=357						
NACB	**Ninganchiao**	**0.54**	**286**	P	**Pb**	**04 30 37.6**	**+0.4**
	baz=282						
NACB				*e*S	**Sn**	**04 30 47.6**	**-0.4**
	baz=282						
NANB	**Nanao**	**0.55**	**317**	P	**Pg**	**04 30 37.0**	**-0.1**
	baz=315						
NANB				*e*S	**Sg**	**04 30 44.3**	**-0.1**
	baz=315						
ENA	**Nanau**	**0.56**	**317⇑**	*i*P	**Pg**	**04 30 36.9**	**-0.2**
	baz=314						
ENA				*e*S	**Sg**	**04 30 44.9**	**+0.2**
	baz=314						
ETLH	**Xiulin Townshi**	**0.65**	**287**	P	**Pb**	**04 30 39.2**	**0.0**
	baz=283						
ETLH				*e*S	**Sb**	**04 30 49.4**	**+1.3**
	baz=283						
TWC	**Suao**	**0.65**	**334**	P	**Pg**	**04 30 38.4**	**-0.5**
	baz=333						
TWC				*e*S	**Sg**	**04 30 47.2**	**-0.3**
	baz=333						
ESL	**Shilin**	**0.70**	**253**	*e*P	**Pb**	**04 30 39.9**	**-0.1**
	baz=249						
ESL				*e*S	**Sb**	**04 30 50.5**	**+1.1**
	baz=249						
EGFH	**Guangfu**	**0.76**	**243**	*e*S	**Sn**	**04 30 52.2**	**-1.1**
	baz=239						
NNSB	**Datong**	**0.82**	**300**	P	**Pb**	**04 30 42.2**	**+0.1**
	baz=297						
NNSB				*e*S	**Sn**	**04 30 54.6**	**-0.4**
	baz=297						
ENTT	**Nioudou**	**0.82**	**319**	P	**Pg**	**04 30 42.0**	**-0.1**
	baz=317						
WHF	**Hehuan Shan**	**0.83**	**279**	P	**Pb**	**04 30 42.6**	**+0.2**
	baz=276						
WHF				*e*S	**Sb**	**04 30 54.2**	**+0.7**
	baz=276						
TWE	**Neicheng**	**0.83**	**327**	*e*P	**Pb**	**04 30 42.7**	**+0.5**
	baz=326						
NNS	**Nan Shan**	**0.83**	**300⇑**	*i*P	**Pb**	**04 30 42.7**	**+0.4**
	baz=298						
NNS				*e*S	**Sb**	**04 30 54.1**	**+0.7**
	baz=298						
JYNG	**Yonagunijimaku**	**0.83**	**59**	P	**Pb**	**04 30 42.4**	**+0.2**
JYNG				*e*S	**Sg**	**04 30 52.5**	**-0.8**
EGS		**0.85**	**346**	*e*S	**Sg**	**04 30 53.5**	**-0.2**
	baz=346						
HGSD	**Ruisui**	**0.86**	**232**	*e*P	**Pg**	**04 30 42.9**	**+0.2**
	baz=229						
HGSD				*e*S	**Sb**	**04 30 54.3**	**+0.4**
	baz=229						
YOJ	**Yonaguni jima**	**0.89**	**60**	P	**Pb**	**04 30 43.1**	**-0.1**
	baz=62						
YOJ				*e*S	**Sn**	**04 30 56.6**	**0.0**
	baz=62						
YOJ	**Yonaguni jima**	**0.89**	**60**	P	**Pb**	**04 30 43.0**	**-0.2**
YOJ				*e*S	**Sg**	**04 30 55.8**	**+0.7**
CHGB	**Renai**	**0.90**	**273**	P	**Pb**	**04 30 43.6**	**0.0**
	baz=270						
CHGB				S	**Sn**	**04 30 56.5**	**-0.8**
	baz=270						
OWD	**Renai**	**0.90**	**266**	P	**Pb**	**04 30 43.1**	**-0.4**
	baz=263						
OWD				*e*S	**Sg**	**04 30 55.4**	**-0.2**
	baz=263						
EHY	**Hungye**	**0.93**	**237**	*e*S	**Sg**	**04 30 56.4**	**+0.3**
	baz=233						
TWT	**Tachien**	**0.93**	**285**	*e*P	**Pn**	**04 30 45.1**	**+0.3**
	baz=281						
TWT				*e*S	**Sn**	**04 30 58.8**	**+0.9**
	baz=281						
TDCB	**Techi**	**0.95**	**284**	*e*P	**Pb**	**04 30 44.2**	**0.0**
	baz=282						
TDCB				*e*S	**Sn**	**04 30 57.6**	**-0.6**
	baz=282						
YHNB	**Yeheng**	**0.96**	**312**	P	**Pb**	**04 30 44.5**	**-0.1**
	baz=310						
VWDT	**VWDT**	**0.97**	**254**	P	**Pn**	**04 30 45.1**	**0.0**
	baz=251						
VWDT				*e*S	**Sn**	**04 30 58.4**	**-0.2**
	baz=251						
NSK	**Sanguang**	**0.98**	**312**	P	**Pb**	**04 30 44.9**	**+0.1**
	baz=310						
TIPB	**Shuangxi**	**0.99**	**342**	P	**Pb**	**04 30 45.0**	**0.0**
	baz=341						
TIPB				*e*S	**Sb**	**04 30 57.6**	**-0.4**
	baz=341						
YULB	**Yu-li**	**1.01**	**232**	*e*P	**Pb**	**04 30 45.0**	**-0.2**
	baz=229						
YULB				*e*S	**Sb**	**04 30 58.1**	**-0.2**
	baz=229						
TWF1	**Yuli**	**1.03**	**230**	*e*P	**Pb**	**04 30 45.3**	**-0.4**
	baz=227						
TWF1				*e*S	**Sb**	**04 30 58.5**	**-0.5**
	baz=227						
NWF	**Wu-fen Shan**	**1.10**	**342**	P	**Pb**	**04 30 46.9**	**0.0**
	baz=341						
NWF				*e*S	**Sb**	**04 31 01.5**	**+0.5**
	baz=341						
WFSB	**Wu-fen Shan**	**1.10**	**342**	*e*P	**Pn**	**04 30 47.2**	**+0.3**
	baz=341						
WFSB				*e*S	**Sb**	**04 31 01.3**	**+0.3**
	baz=341						
DPDB	**Guoxing**	**1.13**	**271**	*e*P	**Pb**	**04 30 47.0**	**-0.3**
	baz=268						
SSLB	**Suanglung**	**1.13**	**258**	*e*P	**Pn**	**04 30 47.5**	**+0.1**
	baz=256						
SMLT	**Sun Moon Lake**	**1.16**	**263**	*e*P	**Pn**	**04 30 47.5**	**-0.4**
	baz=261						
SMLT				*e*S	**Sb**	**04 31 03.2**	**+0.4**
	baz=261						
TYC	**Yuchr**	**1.20**	**265**	*e*P	**Pg**	**04 30 50.8**	**+1.5**
	baz=262						
LIOB	**Emei**	**1.22**	**301**	*e*P	**Pg**	**04 30 49.4**	**-0.2**
	baz=299						
LIOB				*e*S	**Sb**	**04 31 00.9**	**-3.5**
	baz=299						
NSTT	**Nanjuang**	**1.22**	**300**	*e*P	**Pg**	**04 30 49.4**	**-0.3**
	baz=298						
NSTT				*e*S	**Sg**	**04 31 05.8**	**+0.2**
	baz=298						
YUS	**Yu-Shan**	**1.23**	**245**	*e*P	**Pn**	**04 30 48.7**	**-0.4**
	baz=242						
YUS				*e*S	**Sb**	**04 31 05.2**	**+0.1**
	baz=242						
YM03	**YM03**	**1.28**	**334**	*e*S	**Sb**	**04 31 06.2**	**-0.1**
	baz=333						
TWQ1	**Liyutan**	**1.31**	**285**	*e*P	**Pg**	**04 30 51.0**	**-0.3**
	baz=282						
TWQ1				*e*S	**Sg**	**04 31 09.5**	**+1.0**
	baz=282						
CHN5	**Tsauling**	**1.42**	**253**	*e*P	**Pg**	**04 30 53.1**	**-0.4**
	baz=251						
CHN5				S	**Sg**	**04 31 11.6**	**-0.5**
	baz=251						
IRIF	**Iriomote-Funau**	**1.47**	**77**	*e*S	**Sb**	**04 31 11.5**	**+0.1**
CHN4	**Tsaushan**	**1.58**	**245**	*e*P	**Pb**	**04 30 55.2**	**+0.1**
	baz=243						
CHN4				*e*S	**Sg**	**04 31 16.9**	**-0.3**
	baz=243						
JKRS	**Kuro-shima**	**1.70**	**82**	P	**Pn**	**04 30 55.3**	**+0.1**
JKRS				*e*S	**Sn**	**04 31 16.8**	**+0.2**
JJJ	**Ishigaki jima**	**1.84**	**79**	*e*S	**Sn**	**04 31 20.7**	**+0.6**

*IDC **29** 04:32:47.5±1.4,34.′19N×100.′66E,h0km,mb3.4/4, mb1 3.5/5,mb1mx3.3/47,mbtmp3.5/5,MS3.1/1,Ms1 3.1/1, ms1mx2.6/28,Error ellipse: s-maj=47.9km s-min=21.6km az=46.0*
*BJI **29** 04:32:49.4±0.0,34.′29N×100.′78E,h6km,ML3.7/15, Ms3.4/6,Ms7 3.3/4*
ISC 29 04:32:50.1±1.2,34.′40N±0.′09×100.′86E±0.′06,h10km,n10, σ1s77/13,mb3.5/4,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**2.97**	**55**	*e*Pg	**Pb**	**04 33 42.5**	**-0.7**
LZH				Sg	**Sg**	**04 34 26.0**	**+0.5**
LZH				smax	smax		
	comp=N,440nm,0.8s						
LZH				smax	smax		
	comp=E,420nm,1.0s						
LZH				LR	LR		
	comp=N,650nm,5.7s						
LZH				LR	LR		
	comp=E,890nm,4.6s						
LZH				LR	LR		
	comp=Z,570nm,6.5s						
GTA	**Gaotai**	**5.07**	**351**	Pn	**Pn**	**04 34 09.8**	**+3.5**
GTA				Pg	**Pg**	**04 34 24.8**	**-2.5**
GTA				Sg	**Sg**	**04 35 31.5**	**-1.5**
GTA				smax	smax		
	comp=N,37nm,0.8s						
GTA				smax	smax		
	comp=E,54nm,0.8s						
GTA				LR	LR		
	comp=N,290nm,15.6s						
GTA				LR	LR		
	comp=E,570nm,12.1s						
XAN	**Xi'an**	**6.69**	**91**	Pn	**Pn**	**04 34 27.5**	**-1.0**
XAN				Sg	**Sg**	**04 36 26.0**	**+1.1**
XAN				smax	smax		
	comp=N,41nm,1.2s						
XAN				smax	smax		
	comp=E,38nm,0.9s						
XAN				LR	LR		
	comp=N,580nm,9.2s						
XAN				LR	LR		
	comp=Z,240nm,13.6s						
KMI	**Kunming**	**9.39**	**169**	P	Pn	04 35 51.0	+45
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,100nm,4.5s						
WMQ	**Urumqi**	**13.88**	**317**	*e*P	**Pn**	**04 36 08.8**	**+2.0**
MKAR	**Makanchi Array**	**18.71**	**317**	P	**P**	**04 37 08.1**	**-0.5**
	baz=119,slow=12,SNR=2.0						
MKAR				LR	LR	04 44 04.2	
	comp=Z,58nm,19.1s,baz=34,slow=36						
KSRS	**Korea Array**	**22.10**	**74**	P	**P**	**04 37 46.4**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=263,slow=8.4,SNR=6.3						
ZALV	**Zalesovo Beam**	**22.58**	**335**	P	**P**	**04 37 50.5**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=143,slow=9.3,SNR=9.3						
KURBB	**Kurchatov Array**	**22.97**	**322**	P	**P**	**04 37 53.8**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=124,slow=12,SNR=3.3						
ASAR	**Alice Springs**	**65.73**	**147**	P	**P**	**04 43 33.6**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=335,slow=6.3,SNR=3.7						

*BJI **29** 04:44:34.0±0.0,10.′34S×161.′63E,h51km,mb4.8/24, mB4.9/17,Ms4.5/6,Ms7 4.2/2*
*ISCJB **29** 04:44:36.8±0.3,10.′44S±0.′04×161.′08E±0.′04,h62km, mb4.6/55,Error ellipse: s-maj=6.3km s-min=5.5km az=10.5*
*NEIC **29** 04:44:38.0±1.2,10.′37S×161.′13E,h57km±5km,mb4.7/66, Error ellipse: s-maj=17.8km s-min=8.9km az=91.0*
*IDC **29** 04:44:38.6±1.7,10.′43S×161.′10E,h63km±14km,mb4.3/29, mb1 4.4/31,mb1mx4.3/44,mbtmp4.6/31,MS3.9/11, Ms1 3.9/11,ms1mx3.7/27,Error ellipse: s-maj=14.7km s-min=10.2km az=90.0*
ISC 29 04:44:38.4±0.4,10.′46S±0.′06×161.′07E±0.′07,h62km,n107, σ1s12/92,mb4.7/54,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.50**	**313**	*i* P	**Pn**	**04 45 01.5**	**-1.7**
HNR				*i* S	**Sn**	**04 45 22.0**	**+0.1**
HNR	**Honiara**	**1.50**	**313**	P	**Pn**	**04 45 02.2**	**-1.0**
	675nm,0.3s,baz=172,slow=4.5,SNR=58						
HNR				S	**Sn**	**04 45 22.4**	**+0.5**
	4μm,0.3s,baz=148,slow=15,SNR=21						
HNR				LR	LR	04 45 37.1	
	comp=Z,352nm,21.9s,baz=136,slow=39						
DZM	**Mont Dzumac**	**12.64**	**157**	P	**Pn**	**04 47 34.9**	**-0.7**
	1.6nm,0.3s,baz=6.2,slow=10,SNR=93						
DZM				S	Sn	04 49 43.6	-11
	0.3nm,0.3s,baz=299,slow=19,SNR=2.1						
DZM	**Mont Dzumac**	**12.64**	**157**	*e*Pn	**Pn**	**04 47 34.4**	**-1.2**
	7.5nm,0.3s						
DZM				*e*Sn	Sn	04 49 46.0	-8.8
	5.2nm,0.3s						
DZM	**Mont Dzumac**	**12.64**	**157**	*e*Pn	**Pn**	**04 47 34.7**	**-0.9**
MARNC	**Mare, Loyalty**	**12.84**	**149**	*e*Pn	**Pn**	**04 47 36.4**	**-1.7**
PMG	**Port Moresby**	**13.74**	**273**	LR	LR	04 52 51.9	
	comp=Z,665nm,20.1s,baz=126,slow=36						
CTA	**Charters Tower**	**17.19**	**234**	P	**Pn**	**04 48 36.1**	**+1.6**
	2.9nm,0.3s,baz=66,slow=12,SNR=33						
CTA				S	**Sn**	**04 51 39.8**	**-5.4**
	0.3nm,0.3s,baz=348,slow=19,SNR=2.5						
CTAO	**Charters Tower**	**17.19**	**234**	*e*Pn	**P**	**04 48 36.3**	**+1.0**
	161nm,1.5s						
EIDS	**Eidsvold**	**17.60**	**211**	*e*Pn	**P**	**04 48 41.4**	**+1.6**
	72nm,0.9s						
COEN	**Coen**	**17.83**	**257**	*e*P	**Pn**	**04 48 44.4**	**+2.0**
	36nm,1.3s						
JAY	**Jayapura**	**21.70**	**290**	P	**P**	**04 49 23.3**	**-1.2**
	11nm,0.7s,baz=178,slow=5.5,SNR=4.3						
ARMA	**Armidale**	**21.72**	**203**	*e*P	**P**	**04 49 25.8**	**+1.2**
	21nm,0.9s						
WB2	**Warramunga Arr**	**27.42**	**247**	*e*P	**P**	**04 50 19.4**	**+0.9**
	19nm,1.1s						
WR1	**Warramunga Arr**	**27.43**	**247**	*e*P	**P**	**04 50 19.2**	**+0.6**
WRA	**Warramunga Arr**	**27.43**	**247**	P	**P**	**04 50 19.2**	**+0.6**
	8.9nm,0.8s,baz=77,slow=8.1,SNR=25						
STKA	**Stephens Creek**	**27.91**	**217**	P	**P**	**04 50 23.6**	**+0.9**
	5.4nm,0.6s,baz=37,slow=12,SNR=16						
STKA				LR	LR	05 01 43.8	
	comp=Z,596nm,18.6s,baz=28,slow=37						
STKA	**Stephens Creek**	**27.91**	**217**	*e*P	**P**	**04 50 23.7**	**+1.0**
	3.6nm,1.0s						
GUMO	**Gumi**	**28.80**	**326**	LR	LR	05 00 49.3	
	comp=Z,105nm,21.5s,baz=132,slow=34						
AS31	**Alice Springs**	**29.03**	**240**	*e*P	**P**	**04 50 33.0**	**+0.2**
	1.9nm,0.4s						
ASAR	**Alice Springs**	**29.03**	**240**	P	**P**	**04 50 32.9**	**0.0**
	3.6nm,0.8s,baz=70,slow=9.2,SNR=29						
ASAR				LR	LR	05 02 16.5	
	comp=Z,667nm,18.5s,baz=78,slow=36						
H11S2	**WAKE ISLAND Hy**	**29.30**	**11**	T	T	05 19 59.2	
	baz=194,slow=76,SNR=109						
H11S3	**WAKE ISLAND Hy**	**29.30**	**11**	T	T	05 19 54.4	
	baz=194,slow=76,SNR=84						
H11S1	**WAKE ISLAND Hy**	**29.31**	**11**	T	T	05 19 57.8	
	baz=194,slow=76,SNR=35						
TOO	**Toolangi**	**30.42**	**205**	*e*P	**P**	**04 50 46.0**	**+1.0**
	16nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**30.52**	**11**	T	T	05 21 21.7	
	baz=193,slow=76,SNR=43						
H11N3	**WAKE ISLAND Hy**	**30.53**	**11**	T	T	05 21 20.0	
	baz=193,slow=76,SNR=25						
H11N2	**WAKE ISLAND Hy**	**30.54**	**11**	T	T	05 21 19.2	
	baz=193,slow=76,SNR=69						
URZ	**Urewera**	**31.20**	**155**	P	**P**	**04 50 51.9**	**+0.1**
	4.5nm,0.8s,baz=333,slow=6.8,SNR=3.4						
BBOO	**Buckleboo**	**32.02**	**222**	*e*P	**P**	**04 50 60.0**	**+0.9**
	67nm,0.8s						
FITZ	**Fitzroy Crossi**	**35.12**	**253**	P	**P**	**04 51 26.6**	**+0.4**
	21nm,0.7s,baz=84,slow=6.9,SNR=50						
FITZ	**Fitzroy Crossi**	**35.12**	**253**	*e*P	**P**	**04 51 26.7**	**+0.6**
	21nm,0.8s						
SANI	**Sanana**	**35.82**	**281**	P	**P**	**04 51 32.5**	**+0.2**
	28nm,0.8s,757nm						
BATI	**Baumata**	**36.79**	**267**	P	**P**	**04 51 41.2**	**+0.6**
	29nm,0.5s,baz=149,slow=2.8,SNR=3.5						
EDFI	**Ende, Flores**	**38.85**	**269**	P	**P**	**04 51 56.9**	**-1.2**
	7.7nm,0.8s,1μm						
LUWI	**Luwuk**	**39.19**	**281**	P	P	04 52 13.0	+12
DAV	**Davao City (W)**	**39.39**	**295**	LR	LR	05 04 58.5	
	comp=Z,92nm,21.4s,baz=336,slow=31						
APSI	**Ampana**	**40.31**	**281**	P	P	04 52 21.0	+11
BSSI	**Bau Bau, Buton**	**40.36**	**273**	P	**P**	**04 52 09.7**	**-0.8**
KAPI	**Kappang**	**41.27**	**274**	*e*P	**P**	**04 52 18.9**	**+0.9**
	8.1nm,0.7s						
SPSI	**Sidrap Palu**	**41.45**	**276**	P	**P**	**04 52 18.2**	**-1.3**
JAGI	**Jajag, Banyuwa**	**46.29**	**268**	P	**P**	**04 52 55.2**	**-3.1**
PPT	**Papeete**	**48.30**	**104**	LR	LR	05 08 41.0	
	comp=Z,78nm,21.9s,baz=294,slow=30						
PPT2	**Papeete2**	**48.30**	**104**	*e*LR	LR	05 07 05.3	
	comp=Z,136nm,22.2s						
INU	**Inuyama**	**50.92**	**335**	*e*P	**P**	**04 53 32.5**	**-0.9**
	12nm,0.8s						
MJAR	**Matsushiro Arr**	**51.46**	**336**	P	**P**	**04 53 36.2**	**-1.3**
	4.6nm,0.6s,baz=173,slow=8.8,SNR=15						
MAJO	**Matsushiro**	**51.47**	**336**	*e*P	**P**	**04 53 36.6**	**-1.0**
	8.8nm,0.8s						
MAT	**Matsushiro**	**51.47**	**336**	P	**P**	**04 53 36.6**	**-1.0**
MJB9	**Matsu-Tunnel**	**51.47**	**336**	*e*P	**P**	**04 53 36.5**	**-1.2**
	8.8nm,0.7s						
JNU	**Nakatsue**	**52.02**	**328**	P	**P**	**04 53 41.1**	**-0.7**
	6.6nm,0.5s,baz=147,slow=14,SNR=4.8						
ASAJ	**Asahikawa**	**56.85**	**344**	P	**P**	**04 54 17.2**	**+0.7**
	12nm,0.6s,baz=214,slow=8.9,SNR=13						
KSRS	**Korea Array**	**56.89**	**329**	P	**P**	**04 54 17.2**	**+0.2**
	3.0nm,0.6s,baz=139,slow=7.1,SNR=16						
TAOE	**Nuku Hiva Isla**	**57.90**	**94**	*e*LR	LR	05 11 30.3	
	comp=Z,408nm,26.6s						
NJ2	**Nanjing**	**58.44**	**318**	*e*P	**P**	**04 54 28.8**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
USA0B	**Ussuriysk Arra**	**60.46**	**336**	*e*P	**P**	**04 54 42.6**	**+0.9**
	12nm,0.8s						
USRK	**Ussuriysk Ar.**	**60.46**	**336**	P	**P**	**04 54 42.3**	**+0.6**
	11nm,0.7s,baz=150,slow=6.1,SNR=26						
WHN	**Wuhan**	**60.62**	**314**	*e*P	**P**	**04 54 42.5**	**-0.6**
MNSI	**Mandailing Nat**	**62.16**	**276**	P	**P**	**04 54 53.9**	**+0.1**
	25nm,0.7s,4μm						
PETK	**Petropavlovsk-**	**63.38**	**358**	P	**P**	**04 55 01.5**	**+0.4**
	2.4nm,0.6s,baz=147,slow=8.8,SNR=3.7						
PEA1	**Petropavlovsk-**	**63.38**	**358**	*e*P	**P**	**04 55 01.5**	**+0.3**
XAN	**Xi'an**	**66.38**	**314**	P	**P**	**04 55 23.0**	**+1.9**
VNDA	**Vanda**	**67.05**	**180**	P	**P**	**04 55 25.4**	**+0.7**
	2.7nm,0.8s,baz=325,slow=4.8,SNR=18						
VNDA				LR	LR	05 22 04.5	
	comp=Z,51nm,18.0s,baz=329,slow=34						
VNDA	**Vanda**	**67.05**	**180**	*e*P	**P**	**04 55 25.3**	**+0.7**
	14nm,1.5s						
CM31	**Chiang Mai Arr**	**67.68**	**295**	*e*P	**P**	**04 55 30.7**	**+1.1**
	22nm,1.6s						
CMAR	**Chiang Mai Arr**	**67.68**	**295**	P	**P**	**04 55 30.7**	**+1.1**
	1.5nm,0.7s,baz=120,slow=5.1,SNR=5.0						
CMAR				LR	LR	05 25 01.9	
	comp=Z,144nm,19.7s,baz=176,slow=36						
HHC	**Hu-ho-hao-te**	**68.47**	**322**	P	**P**	**04 55 35.8**	**+1.6**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,33nm,5.8s						
CD2	**Chengdu**	**68.63**	**309**	*e*P	**P**	**04 55 36.0**	**+0.6**
GTA	**Gaotai**	**75.38**	**315**	*e*P	P	04 56 20.5	+4.8
GTA				pP	pP	04 56 31.5	-0.7
GTA				sP	pwP	04 56 35.8	+1.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONA0	**Songino Array**	**75.53**	**325**	*e*P	**P**	**04 56 16.5**	**+0.2**
SONM	**Songino Array**	**75.53**	**325**	P	**P**	**04 56 16.5**	**+0.2**
	7.1nm,0.7s,baz=136,slow=5.9,SNR=8.0						
KDAK	**Kodiak Island**	**77.79**	**23**	P	**P**	**04 56 28.5**	**-0.2**
	8.4nm,0.8s,baz=257,slow=4.7,SNR=7.1						
KDAK	**Kodiak Island**	**77.79**	**23**	*e*P	**P**	**04 56 28.9**	**+0.1**
	13nm,1.1s						
BILL	**Bilibino**	**78.38**	**2**	*e*P	**P**	**04 56 31.6**	**-0.2**
	15nm,1.2s						
QSPA	**South Pole Qui**	**79.54**	**180**	*e*P	**P**	**04 56 38.9**	**+0.4**
	9.9nm,0.9s						
KTH	**Kantishna Hill**	**82.33**	**20**	*e*P	**P**	**04 56 52.2**	**-1.0**
	10.0nm,1.1s						
RND	**Reindeer**	**82.93**	**20**	*e*P	**P**	**04 56 55.6**	**-0.7**
	16nm,1.4s						
MAW	**Mawson**	**83.52**	**202**	P	**P**	**04 56 59.3**	**+0.1**
	5.3nm,0.8s,baz=84,slow=5.8,SNR=15						
MAW				LR	LR	05 28 51.3	
	comp=Z,82nm,21.5s,baz=64,slow=32						
MAW	**Mawson**	**83.52**	**202**	*e*P	**P**	**04 56 60.0**	**+0.7**
	1.8nm,1.0s						
ILAR	**Eielson Array**	**84.47**	**20**	P	**P**	**04 57 02.6**	**-1.4**
	1.5nm,0.6s,baz=248,slow=5.3,SNR=13						
ILB	**Eielson Array**	**84.47**	**20**	*e*P	**P**	**04 57 03.4**	**-0.7**
	6.6nm,1.3s						
WMQ	**Urumqi**	**85.45**	**316**	*e*P	**P**	**04 57 11.3**	**+1.7**
WMQ				LR	LR		
	comp=N,190nm,23.5s						
WMQ				LR	LR		
	comp=E,270nm,21.9s						
YBH	**Yreka Blue Hor**	**86.80**	**47**	P	**P**	**04 57 16.8**	**+0.5**
	2.0nm,0.7s,baz=286,slow=1.5,SNR=8.1						
HUMO	**Hull Mountain**	**86.88**	**46**	*e*P	**P**	**04 57 16.7**	**+0.1**
	4.5nm,1.0s						
LON	**Longmire**	**88.86**	**42**	*e*P	**P**	**04 57 25.0**	**-0.9**
	4.0nm,0.9s						
NVAR	**Mina Array Bea**	**89.19**	**51**	P	**P**	**04 57 28.4**	**+0.4**
	1.5nm,0.8s,baz=230,slow=7.1,SNR=10						
DAC	**Darwin (Calif)**	**89.23**	**53**	*e*P	**P**	**04 57 27.2**	**-0.9**
	5.1nm,1.0s						
MK31	**Makanchi Array**	**89.97**	**318**	*e*P	**P**	**04 57 30.7**	**-0.4**
	1.1nm,0.8s						
MK32	**Makanchi Array**	**89.97**	**318**	*e*P	**P**	**04 57 30.9**	**-0.3**
MKAR	**Makanchi Array**	**89.97**	**318**	P	**P**	**04 57 30.9**	**-0.3**
	1.7nm,0.7s,baz=99,slow=5.8,SNR=16						
ZALV	**Zalesovo Beam**	**90.42**	**325**	P	**P**	**04 57 31.5**	**-1.4**
	0.6nm,0.4s,baz=83,slow=4.5,SNR=2.7						
INK	**Inuvik**	**90.87**	**20**	P	**P**	**04 57 36.1**	**+1.4**
	1.0nm,0.9s,baz=325,slow=2.3,SNR=4.0						
SHPR	**Sheep Range**	**91.19**	**53**	*e*P	**P**	**04 57 37.0**	**-0.3**
	5.8nm,1.0s						
ELK	**Elko**	**92.01**	**49**	P	**P**	**04 57 41.1**	**0.0**
	2.3nm,0.9s,baz=250,slow=7.8,SNR=3.5						
ELK	**Elko**	**92.01**	**49**	*e*P	**P**	**04 57 40.7**	**-0.4**
	2.4nm,0.9s						
NEW	**Newport**	**92.32**	**41**	P	**P**	**04 57 41.7**	**-0.3**
	4.2nm,1.1s,baz=270,slow=7.1,SNR=2.9						
KSH	**Kashi**	**92.82**	**309**	*e*P	**P**	**04 57 46.3**	**+1.6**
PDAR	**Pinedale Array**	**96.55**	**48**	P	**P**	**04 58 01.8**	**0.0**
	0.3nm,0.8s,baz=266,slow=6.0,SNR=3.2						
YKA	**Yellowknife Ar**	**96.58**	**28**	P	**P**	**04 57 59.9**	**-1.2**
	0.8nm,0.7s,baz=260,slow=4.7,SNR=6.7						
YKA				LR	LR	05 40 44.0	

JAK				*e*S	**Sn**	**04 48 29.8**	**+0.2**
JRA	**Rausu**	**0.65**	**346**	P	**Pn**	**04 48 20.2**	**+0.1**
JRA				*e*S	**Sn**	**04 48 31.4**	**+0.4**
GRPR	**Tuman**	**0.75**	**25**	*i* P	**Pn**	**04 48 20.0**	**-1.2**
GRPR				AMB	AMB	04 48 21.0	
	35nm,0.4s						
GRPR				*i* S	**Sn**	**04 48 32.0**	**-1.0**
GRPR				A	A	04 48 34.0	
	918nm,0.3s						
GRPR				A	A	04 48 34.0	
	831nm,0.3s						
LAGR	**Lagunnoye**	**0.81**	**23**	*e*P	**Pn**	**04 48 22.0**	**+0.2**
LAGR				*i* S	**Sn**	**04 48 35.0**	**+0.8**
LAGR				A	A	04 48 36.0	
	666nm,0.2s						
LAGR				A	A	04 48 36.0	
	616nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.82**	**27**	*i* P	**Pn**	**04 48 22.0**	**+0.1**
YUK				AMB	AMB	04 48 22.0	
	75nm,0.3s						
YUK				AMB	AMB	04 48 22.0	
	154nm,0.3s						
YUK				*i* S	**Sn**	**04 48 35.0**	**+0.7**
YUK				A	A	04 48 37.0	
	848nm,0.2s						
YUK				A	A	04 48 37.0	
	219nm,0.2s						
JAR	**Ashorobuto**	**1.15**	**270**	P	**Pn**	**04 48 25.9**	**0.0**
JAR				*e*S	**Sn**	**04 48 41.5**	**+0.2**
JOB	**Onbets**	**1.17**	**250**	P	**Pn**	**04 48 26.4**	**+0.2**
JOB				*e*S	**Sn**	**04 48 42.1**	**+0.2**
JTKR	**Abashiri--Toko**	**1.23**	**303**	P	**Pn**	**04 48 27.1**	**+0.2**
JMP	**Maruseppu**	**1.60**	**297**	P	**Pn**	**04 48 32.0**	**+0.3**
JCH	**Churui**	**1.61**	**245**	P	**Pn**	**04 48 31.7**	**-0.1**
JCH				*e*S	**Sn**	**04 48 51.0**	**-0.9**

*LDG **29** 05:16:44.8±0.1, 40°.14N×14°.85E, h315km, Ml2.9/9, Error ellipse: s-maj=5.2km s-min=1.3km az=40.0*
*ROM **29** 05:16:45.5±0.2, 40°.13N±0°.02×15°.12E±0°.04, h310km±1km, ML3.3/14, Error ellipse: s-maj=3.5km s-min=0.8km az=69.0*
*ISCJB **29** 05:16:46.4±0.4, 40°.13N±0°.05×14°.97E±0°.06, h303km±3km, mb3.6/4, Error ellipse: s-maj=9.2km s-min=4.1km az=42.2*
*IDC **29** 05:16:48.4±1.8, 40°.30N×14°.99E, h312km±24km, mb2.9/3, mb1 2.9/11, mb1mx2.8/39, mbtmp3.6/11, Error ellipse: s-maj=18.0km s-min=13.5km az=66.0*
ISC 29 05:16:46.0±0.6, **40°.17N**±0°.07×**14°.97E**±0°.06, **h301**km±7km, **n75**, σ1§**55**/94, **mb3.4**/4, **Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMPR	**Campora**	**0.30**	**59**	P	**Pn**	**05 17 25.7**	**+1.3**
BULG	**Bulgheria - Ca**	**0.33**	**105**	*i* P	**Pn**	**05 17 26.0**	**+1.5**
CDRU	**Civita di Ruta**	**0.41**	**39**	*i* P	**Pn**	**05 17 26.0**	**+1.4**
MGR	**Morigerati**	**0.45**	**93**	*i* P	**Pn**	**05 17 25.9**	**+1.3**
MGR				S	**S**	**05 17 55.5**	**+0.2**
SLCN	**Sala Consilina**	**0.56**	**66**	*i* P	**Pn**	**05 17 26.2**	**+1.2**
SLCN				AML	AML		
	comp=E,112μm,0.5s						
SLCN				AML	AML		
	comp=N,80μm,1.5s						
SLCN				AML	AML		
	comp=E,112μm,0.5s						
SLCN				AML	AML		
	comp=N,80μm,1.5s						
SLCN				AML	AML		
	comp=N,80μm,1.5s						
SLCN				AML	AML		
	comp=E,112μm,0.5s						
MTSN	**Montesano sull**	**0.61**	**80**	P	**Pn**	**05 17 26.2**	**+1.0**
MTSN				AML	AML		
	comp=E,54μm,0.6s						
MTSN				AML	AML		
	comp=N,44μm,0.7s						
MTSN				AML	AML		
	comp=E,54μm,0.6s						
MTSN				AML	AML		
	comp=N,44μm,0.7s						
MTSN				AML	AML		
	comp=N,44μm,0.7s						
MTSN				AML	AML		
	comp=E,54μm,0.6s						
MCRV	**Calabrutti - M**	**0.64**	**14**	*i* P	**Pn**	**05 17 26.5**	**+1.3**
MCEL	**Monticello**	**0.66**	**76**	*i* P	**Pn**	**05 17 26.9**	**+1.7**
MCEL				S	**S**	**05 17 56.5**	**0.0**
CUC	**Castrocucco**	**0.68**	**105**	*i* P	**Pn**	**05 17 26.2**	**+0.9**
CUC				S	**S**	**05 17 55.5**	**-1.0**
SIRI	**Monte Sirino -**	**0.69**	**88**	P	**Pn**	**05 17 27.1**	**+1.7**
MRLC	**Muro Lucano**	**0.71**	**34**	P	**Pn**	**05 17 26.7**	**+1.3**
SNAL	**S. Angelo Dei**	**0.78**	**14**	P	**Pn**	**05 17 27.0**	**+1.4**
SCHR	**S. Chirico Rap**	**0.85**	**87**	P	**Pn**	**05 17 26.9**	**+0.9**
CAFE	**Carife**	**0.89**	**13**	P	**Pn**	**05 17 27.6**	**+1.5**
CAFE				AML	AML		
	comp=E,2480μm,1.3s						
CAFE				AML	AML		
	comp=N,2270μm,1.3s						
CAFE				AML	AML		
	comp=E,3070μm,0.6s						
CAFE				AML	AML		
	comp=N,3000μm,0.6s						
CAFE				AML	AML		
	comp=E,3070μm,0.6s						
CAFE				AML	AML		
	comp=N,3000μm,0.6s						
T0702	**Acquaformosa (**	**0.97**	**117**	P	**Pn**	**05 17 27.5**	**+1.0**
T0702				S	**S**	**05 17 57.8**	**-0.8**
CET2	**Cetraro**	**0.99**	**130**	P	**Pn**	**05 17 27.5**	**+1.0**
CET2				S	**S**	**05 17 58.1**	**-0.7**
CET2				AML	AML		
	comp=E,370μm,0.9s						
CET2				AML	AML		
	comp=N,242μm,0.6s						
CET2				AML	AML		
	comp=N,242μm,0.6s						
CET2				AML	AML		
	comp=E,370μm,0.9s						
SALB	**San Lorenzo Be**	**1.10**	**105**	P	**Pn**	**05 17 27.9**	**+0.8**
SALB				S	**S**	**05 17 59.4**	**-0.4**
SALB				AML	AML		
	comp=E,91μm,0.7s						
SALB				AML	AML		
	comp=N,64μm,1.2s						
SALB				AML	AML		
	comp=E,91μm,0.7s						
SALB				AML	AML		
	comp=N,64μm,1.2s						
PIGN	**Pignataro Magg**	**1.19**	**330**	*i* P	**Pn**	**05 17 29.5**	**+2.1**
CAR1	**CAROLEI**	**1.32**	**133**	P	**Pn**	**05 17 28.7**	**+0.4**
CAR1				S	**S**	**05 18 00.9**	**-1.1**
CAR1				AML	AML		
	comp=E,120μm,1.4s						
CAR1				AML	AML		
	comp=N,170μm,0.8s						
CAR1				AML	AML		
	comp=N,170μm,0.8s						
CAR1				AML	AML		
	comp=E,120μm,1.4s						
CELI	**Celico**	**1.41**	**122**	P	**Pn**	**05 17 30.4**	**+1.5**
CELI				AML	AML		
	comp=E,126μm,0.7s						
CELI				AML	AML		
	comp=N,134μm,0.8s						
CELI				AML	AML		
	comp=E,316μm,1.0s						
CELI				AML	AML		
	comp=N,322μm,0.9s						
CELI				AML	AML		
	comp=N,322μm,0.9s						
CELI				AML	AML		
	comp=E,316μm,1.0s						
CELI				AML	AML		
	comp=E,126μm,0.7s						
CELI				AML	AML		
	comp=N,134μm,0.8s						
TIP	**Timpagrande**	**1.70**	**125**	*i* P	**Pn**	**05 17 31.4**	**+0.6**
TIP				S	**S**	**05 18 04.9**	**-1.5**
TIP				AML	AML		
	comp=E,118μm,0.8s						
TIP				AML	AML		
	comp=N,63μm,0.6s						
TIP				AML	AML		
	comp=E,118μm,0.8s						
TIP				AML	AML		
	comp=N,63μm,0.6s						
JOPP	**Joppolo**	**1.71**	**155**	*e*P	**Pn**	**05 17 31.3**	**+0.5**
JOPP				S	**S**	**05 18 06.6**	**+0.1**
JOPP				AML	AML		
	comp=E,130μm,0.8s						
JOPP				AML	AML		
	comp=N,170μm,1.2s						
JOPP				AML	AML		
	comp=N,170μm,1.2s						
JOPP				AML	AML		
	comp=E,130μm,0.8s						
SERS	**Sersale**	**1.75**	**130**	*i* P	**Pn**	**05 17 31.7**	**+0.6**
SERS				S	**S**	**05 18 06.2**	**-0.9**
SERS				AML	AML		
	comp=E,88μm,0.4s						
SERS				AML	AML		
	comp=N,108μm,0.5s						
SERS				AML	AML		
	comp=N,108μm,0.5s						
SERS				AML	AML		
	comp=E,88μm,0.4s						
GRI	**Girifalco**	**1.75**	**140**	P	**Pn**	**05 17 32.2**	**+1.1**
GRI				AML	AML		
	comp=E,135μm,0.4s						
GRI				AML	AML		
	comp=N,186μm,0.6s						
GRI				AML	AML		
	comp=E,135μm,0.4s						
GRI				AML	AML		
	comp=N,186μm,0.6s						
MILZ	**Milazzo**	**1.90**	**174**	P	**Pn**	**05 17 34.2**	**+2.0**
MSRU	**Castanea**	**1.95**	**167**	P	**Pn**	**05 17 33.8**	**+1.2**
MSCL	**Scilla**	**2.04**	**161**	P	**Pn**	**05 17 34.2**	**+0.8**
MSCL				AML	AML		
	comp=E,330μm,0.7s						
MSCL				AML	AML		
	comp=N,277μm,1.3s						
MSCL				AML	AML		
	comp=N,277μm,1.3s						
MSCL				AML	AML		
	comp=E,330μm,0.7s						
PLAC	**Placanica**	**2.06**	**146**	*i* P	**Pn**	**05 17 34.0**	**+0.6**
PLAC				S	**S**	**05 18 10.5**	**-0.8**
PLAC				AML	AML		
	comp=E,188μm,0.4s						
PLAC				AML	AML		
	comp=N,160μm,0.5s						
PLAC				AML	AML		
	comp=E,188μm,0.4s						
PLAC				AML	AML		
	comp=N,160μm,0.5s						
MUCR	**Ucria**	**2.12**	**182**	P	**Pn**	**05 17 36.0**	**+1.9**
SOI	**Samo**	**2.26**	**158**	P	**Pn**	**05 17 35.8**	**+0.7**
SOI				AML	AML		
	comp=E,124μm,0.7s						
SOI				AML	AML		
	comp=N,112μm,0.7s						
SOI				AML	AML		
	comp=E,124μm,0.7s						
SOI				AML	AML		
	comp=N,112μm,0.7s						
SCTE	**Santa Cesarea**	**2.69**	**91**	P	**Pn**	**05 17 39.2**	**+0.4**
NVLJ	**Novalja**	**4.39**	**359**	P	**Pn**	**05 17 57.2**	**+0.8**
PGF	**Pioggiola**	**5.08**	**300**	*e*P	**Pn**	**05 18 04.1**	**-0.4**
SBF	**Sospel**	**6.71**	**306**	*e*Pn	**Pn**	**05 18 26.2**	**+2.3**
ABTA	**Abfaltersbach**	**6.82**	**346**	*e*Pn	**Pn**	**05 18 27.6**	**+2.5**
	comp=N,7.6nm,0.5s						
FRF	**La Foret Royal**	**7.07**	**301**	*e*P	**Pn**	**05 18 27.5**	**-0.7**
FRF				*e*Sn	**S**	**05 19 49.7**	**-1.1**
	comp=N,0.8nm,0.3s						
FETA	**Feichten**	**7.51**	**337**	*i* Pn	**Pn**	**05 18 37.9**	**+4.3**
	comp=N,12nm,0.8s						
SQTA	**Sankt Quirin**	**7.56**	**340**	*e*Pn	**Pn**	**05 18 37.5**	**+3.3**
	comp=N,9.5nm,0.6s						
DAVOX	**Davos/Dischmat**	**7.57**	**332**	P	**Pn**	**05 18 36.7**	**+2.3**
	comp=N,0.3nm,0.3s,baz=145,slow=8.1,SNR=8.0						
WATA	**Walderalm**	**7.57**	**342**	*i* Pn	**Pn**	**05 18 37.6**	**+3.3**
	comp=N,2.1nm,0.3s						
MBDF	**Montbardon**	**7.58**	**310**	*e*Pn	**Pn**	**05 18 37.3**	**+2.8**
MBDF				*e*Sn	**S**	**05 20 01.9**	**-0.4**
	comp=N,1.0nm,0.3s						
MOA	**Molln**	**7.70**	**356**	Pn	**Pn**	**05 18 37.6**	**+1.9**
	comp=N,3.8nm,0.9s						
MOTA	**Moosalm**	**7.70**	**340**	*i* Pn	**Pn**	**05 18 38.9**	**+3.0**
	comp=N,1.5nm,0.3s						
RETA	**Reutte**	**7.92**	**339**	*e*Pn	**Pn**	**05 18 41.0**	**+2.5**
	comp=N,3.7nm,0.7s						
SMRF	**Simiane la Rot**	**7.95**	**302**	*e*Sn	**S**	**05 20 09.6**	**-1.0**
	comp=N,1.0nm,0.4s						
DAVA	**Damuels**	**8.01**	**334**	*e*Pn	**P**	**05 18 42.5**	**-2.6**
	comp=N,5.1nm,0.5s						
LPG	**La Plagne**	**8.05**	**314**	*e*Pn	**Pn**	**05 18 39.7**	**-0.6**
LPG	**La Plagne**	**8.05**	**314**	*e*Pn	**P**	**05 18 43.4**	**-2.3**
LPG				*e*Sn	**S**	**05 20 12.4**	**-0.6**
	comp=N,0.6nm,0.3s						
LPL	**La Plagne**	**8.07**	**314**	*e*P	**Pn**	**05 18 39.9**	**-0.7**
LPL	**La Plagne**	**8.07**	**314**	*e*Pn	**P**	**05 18 43.5**	**-2.4**
LPL				*e*Sn	**S**	**05 20 12.8**	**-0.6**
	comp=N,0.8nm,0.2s						
ORIF	**Oris-en-Rattie**	**8.22**	**308**	*e*P	**Pn**	**05 18 41.6**	**-0.6**
ORIF	**Oris-en-Rattie**	**8.22**	**308**	*e*Pn	**P**	**05 18 45.3**	**-2.1**
ORIF				*e*Sn	**S**	**05 20 15.7**	**-0.8**
	comp=N,2.1nm,0.4s						
GERES	**GERESS Array B**	**8.72**	**354**	P	**Pn**	**05 18 49.3**	**+0.9**
	comp=N,0.1nm,0.3s,baz=173,slow=12,SNR=4.7						
CABF	**La Chapelle**	**9.12**	**318**	*e*P	**Pn**	**05 18 52.6**	**-0.7**
CABF				*e*Sn	**S**	**05 20 36.6**	**-0.3**
	comp=N,0.5nm,0.2s						
IDI	**Anoyia**	**9.25**	**119**	P	**P**	**05 18 56.9**	**-2.4**
	comp=N,0.5nm,0.3s,baz=324,slow=17,SNR=4.0						
HINF	**Hinteralfeld**	**9.62**	**325**	*e*P	**Pn**	**05 18 58.6**	**-0.8**
HINF				*e*Sn	**S**	**05 20 48.2**	**+0.1**
	comp=N,0.8nm,0.2s						
CDF	**Champ du Feu**	**9.91**	**329**	*e*P	**P**	**05 19 04.5**	**-2.1**
HAU	**Haudompre**	**9.99**	**325**	*e*P	**Pn**	**05 19 03.5**	**-0.3**
HAU				*e*Sn	**S**	**05 20 56.5**	**+0.2**
	comp=N,1.4nm,0.3s						
SMF	**Signal de Mont**	**10.36**	**312**	*e*P	**Pn**	**05 19 08.9**	**+0.5**
PAGF	**Fort de Pagny**	**10.67**	**325**	*e*P	**Pn**	**05 19 10.4**	**-1.8**
LOR	**Lormes**	**10.72**	**315**	*e*P	**Pn**	**05 19 12.0**	**-0.8**
AVF	**Avril sur Loir**	**10.72**	**312**	*e*P	**Pn**	**05 19 12.0**	**-0.8**
AVF	**Avril sur Loir**	**10.72**	**312**	*e*Pn	**P**	**05 19 17.8**	**+2.3**
SSF	**Saint Saulge**	**10.79**	**313**	*e*P	**Pn**	**05 19 12.8**	**-0.8**
RJF	**Les Rejaudoux**	**11.14**	**302**	*e*P	**Pn**	**05 19 16.5**	**-1.5**
BRTR	**Keskin Array B**	**14.34**	**86**	P	**Pn**	**05 19 58.8**	**+2.1**
	comp=N,0.1nm,0.3s,baz=261,slow=12,SNR=3.7						
ESDC	**Sonseca Array**	**14.54**	**274**	P	**Pn**	**05 20 01.4**	**+2.5**
	comp=N,0.3nm,0.3s,baz=80,slow=11,SNR=5.2						
MMAI	**Mount Meron Ar**	**17.88**	**107**	P	**Pn**	**05 20 36.0**	**-2.1**
	comp=N,0.4nm,0.3s,baz=304,slow=10,SNR=3.2						
EKA	**Eskdalemuir Ar**	**19.37**	**328**	P	**P**	**05 20 49.5**	**-0.4**
	baz=135,slow=10,SNR=5.1						
HFS	**Hagfors**	**20.01**	**358**	P	**P**	**05 20 56.4**	**-0.1**
	comp=N,0.4nm,0.3s,baz=178,slow=11,SNR=14						
NB2	**NORSAR Subarra**	**21.03**	**355**	P	**P**	**05 21 07.1**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=172,slow=11						
NOA	**NORSAR Array B**	**21.03**	**355**	P	**P**	**05 21 06.6**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=163,slow=12,SNR=4.0						
FINES	**FINESS Array B**	**22.37**	**14**	P	**P**	**05 21 20.0**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=191,slow=10,SNR=11						
TORD	**Torodi Ar. Bea**	**29.34**	**207**	P	**P**	**05 22 24.3**	**+2.7**
	comp=Z,7.4nm,0.4s,baz=12,slow=9.7,SNR=2.2						
MKAR	**Makanchi Array**	**47.95**	**59**	P	**P**	**05 24 55.3**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=278,slow=6.9,SNR=5.5						

*ISK **29** 05:22:31.4, 36°.13N×42°.39E, h27km, ML3.2/3*
*ISN **29** 05:22:31.8±0.5, 36°.61N×42°.48E, h1km±2km, ML3.4*
*DDA **29** 05:22:34.3, 36°.60N×42°.38E, h4km±3km, ML3.4*
ISC 29 05:22:29.8±1.3, **36°.31N**±0°.04×**42°.30E**±0°.03, **h6**km±14km, **n18**, σ0§**89**/33, **Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSL	**Mosul**	**0.66**	**82**	*e*Pg	**Pb**	**05 22 43.9**	**+0.2**
	baz=292						
MSL				*e*Sg	**Sg**	**05 22 52.4**	**+1.3**
CUKT	**Cukurca**	**1.41**	**48**	PN	**Pg**	**05 22 56.9**	**+0.1**
CUKT				SN	**Sg**	**05 23 15.4**	**+0.4**
CUKT	**Cukurca**	**1.41**	**48**	*i* P	**Pg**	**05 22 57.1**	**+0.4**
CUKT				*i* S	**Sb**	**05 23 13.9**	**-0.8**
CUKT				IAML_P			
	comp=Z,4μm,0.3s						
MARD	**Mardin**	**1.58**	**310**	*i* P	**Pg**	**05 23 00.6**	**+0.4**
MARD				*i* S	**Sg**	**05 23 22.0**	**+1.3**
HAKT	**HAKKARI**	**1.68**	**42**	*i* P	**Pg**	**05 23 01.9**	**-0.2**
HAKT				*i* S	**Sb**	**05 23 21.9**	**-0.9**
HAKT				IAML_P			
	comp=Z,6μm,0.2s						
SRTM	**Siirt_Merkez**	**1.70**	**350**	*i* P	**Pg**	**05 23 02.4**	**-0.2**
SRTM				*i* S	**Sb**	**05 23 22.7**	**-0.7**
SRTM				IAML_P			
	comp=Z,3μm,0.2s						
BTMN	**Batman**	**1.78**	**333**	*i* P	**Pb**	**05 23 03.0**	**+0.1**
BTMN				*i* S	**Sg**	**05 23 26.8**	**-0.3**
BTMN				IAML_P			
	comp=Z,454nm,0.2s						
MAZI	**Mazidag**	**1.88**	**308**	PN	**Pb**	**05 23 04.6**	**0.0**
MAZI				SN	**Sg**	**05 23 29.5**	**-0.7**
SVAN	**Silvan-Diyarba**	**2.04**	**335**	PN	**Pb**	**05 23 07.6**	**+0.3**
SVAN				SN	**Sg**	**05 23 33.8**	**-1.5**
SVAN	**Silvan-Diyarba**	**2.04**	**335**	*i* P	**Pg**	**05 23 09.1**	**+0.2**
SVAN				*i* S	**Sb**	**05 23 33.2**	**+0.3**
SVAN				IAML_P			
	comp=Z,810nm,0.2s						
AKDM	**Akdamar-Van**	**2.08**	**15**	PN	**Pb**	**05 23 07.8**	**-0.4**
AKDM				SN	**Sb**	**05 23 34.3**	**-0.1**
GEVA	**Gevas**	**2.09**	**17**	*i* P	**Pb**	**05 23 08.7**	**+0.5**
GEVA				IAML_P			
	comp=Z,1μm,0.3s						
DIYA	**Diyarbakir**	**2.37**	**313**	*i* P	**Pb**	**05 23 13.1**	**+0.1**
DIYA				*i* S	**Sg**	**05 23 46.6**	**+0.5**
DIYA				IAML_P			
	comp=Z,1μm,0.2s						
DYBB	**Diyarbakir**	**2.38**	**314**	PN	**Pb**	**05 23 12.9**	**-0.3**
HANI	**Diyarbakir_Han**	**2.59**	**325**	*i* P	**Pg**	**05 23 19.2**	**-0.3**
BNGL	**BINGOL**	**2.79**	**341**	*i* P	**Pg**	**05 23 22.6**	**-0.8**
BNGL				*i* S	**Sg**	**05 23 56.8**	**-2.7**
SURC	**SANLIURFA_SURC**	**3.02**	**282**	*i* P	**Pn**	**05 23 19.7**	**+1.4**
SURC				*i* S	**Sg**	**05 24 06.8**	**-0.1**
SURC				IAML_P			
	comp=Z,112nm,0.1s						
BHD	**Baghdad**	**3.48**	**150**	*e*Pn	**Pb**	**05 23 31.0**	**-0.9**
BHD				*e*Sn	**Sb**	**05 24 13.0**	**-1.4**

*BEO **29** 05:24:17.1±0.6, 41°.43N×20°.11E, h5km, ML2.7/5*
*ISCJB **29** 05:24:18.9±0.3, 41°.57N±0°.01×19°.97E±0°.02, h2km±2km, Error ellipse: s-maj=3.0km s-min=2.2km az=156.6*
*TIR **29** 05:24:18.9, 41°.56N×19°.96E, h1km, Md2.8/6*
*THE **29** 05:24:19.3, 41°.59N×19°.93E, h11km±1km, ML2.3/2, Error ellipse: s-maj=3.6km s-min=1.0km az=311.0*
*PDG **29** 05:24:20.1±0.4, 41°.60N×19°.91E, h3km, MD2.9/2, ML2.8/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
ISC 29 05:24:19.6±1.0, **41°.57N**±0°.02×**19°.96E**±0°.02, **h7**km±8km, **n78**, σ1§**18**/113, **10C-13D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**198**	P	**Pg**	**05 24 24.1**	**-0.1**
TIR				S	**Sg**	**05 24 27.6**	**+0.3**
TIR	**Tirane**	**0.23**	**198**	*i* PG	**Pg**	**05 24 24.4**	**+0.2**
TIR				*i* SG	**Sg**	**05 24 28.3**	**+1.0**
PHP	**Peshkopia**	**0.38**	**72**	P	**Pg**	**05 24 26.8**	**-0.2**
PHP				S	**Sb**	**05 24 33.3**	**-1.5**
PHP	**Peshkopia**	**0.38**	**72**	*i* PG	**Pg**	**05 24 27.2**	**+0.2**
PHP				*i* SG	**Sb**	**05 24 33.5**	**-1.3**
PUK	**Puka**	**0.47**	**354**	*i* PG	**Pb**	**05 24 29.2**	**-1.1**
PUK				*i* SG	**Sb**	**05 24 37.2**	**-0.5**
ULC	**Ulcinj**	**0.67**	**307**	⇓*i*Pg	**Pg**	**05 24 31.6**	**-0.8**
ULC				*e*Sg	**Sb**	**05 24 41.5**	**-1.5**
OHR	**Ohrid**	**0.78**	**126**	*i* Pg	**Pg**	**05 24 34.0**	**-0.6**
OHR				*i* Sg	**Sb**	**05 24 46.4**	**0.0**
BCI	**Bajram Curri**	**0.80**	**6**	*i* PG	**Pb**	**05 24 35.3**	**-0.5**
BCI				*i* SG	**Sb**	**05 24 47.6**	**+0.7**
DRME	**Dracevica, Mon**	**0.85**	**317**	⇓*i*Pg	**Pg**	**05 24 35.0**	**-0.9**
DRME				*e*Sg	**Sb**	**05 24 47.1**	**-1.1**
DRME	**Dracevica, Mon**	**0.85**	**317**	⇑*i*Pn	**Pg**	**05 24 34.8**	**-1.1**
PDG	**Podgorica**	**1.01**	**329**	*e*Pg	**Pg**	**05 24 37.7**	**-1.2**
PDG				*e*Sg	**Sn**	**05 24 55.1**	**+0.5**
PDG	**Podgorica**	**1.01**	**329**	⇓*i*P	**Pg**	**05 24 37.8**	**-1.2**
PDG				S	**Sn**	**05 24 55.3**	**+0.7**
PDG	**Podgorica**	**1.01**	**329**	*e*Pn	**Pg**	**05 24 37.5**	**-1.4**
TTG	**Podgorica**	**1.01**	**329**	⇓*i*Pg	**Pg**	**05 24 37.8**	**-1.2**
TTG				*i* Sg	**Sb**	**05 24 52.6**	**-0.2**
PVY	**Plav**	**1.02**	**360**	⇑*i*Pg	**Pg**	**05 24 38.4**	**-0.9**
PVY				*i* Sg	**Sn**	**05 24 53.9**	**-1.3**
BUM	**Brajici-Budva**	**1.08**	**313**	⇑*i*Pg	**Pg**	**05 24 39.2**	**-1.1**
BUM				*e*Sg	**Sn**	**05 24 55.6**	**-0.9**
SKO	**Skopje**	**1.18**	**70**	P	**Pn**	**05 24 42.2**	**-0.3**
SKO				S	**Sn**	**05 24 58.7**	**-0.1**
SKO	**Skopje**	**1.18**	**70**	*e*Pg	**Pg**	**05 24 41.5**	**-0.7**
SKO				*i* Sg	**Sn**	**05 24 58.1**	**-0.7**
CEME	**Cevo**	**1.25**	**322**	⇓*i*Pg	**Pg**	**05 24 41.7**	**-1.8**
CEME				*e*Sg	**Sn**	**05 25 00.9**	**+0.3**
TPE	**Tepelena**	**1.27**	**178**	*i* PG	**Pb**	**05 24 44.7**	**+0.7**
TPE				*i* SG	**Sn**	**05 25 03.3**	**+2.1**
IVA	**Berane**	**1.30**	**358**	⇑*i*Pg	**Pg**	**05 24 43.7**	**-0.9**
IVA				*i* Sg	**Sn**	**05 25 03.5**	**+1.5**
KOME	**Kolasin**	**1.32**	**346**	⇓*i*Pg	**Pn**	**05 24 43.7**	**-0.9**
KOME				*e*Sg	**Sn**	**05 25 03.5**	**+1.0**
FNA	**Florina**	**1.33**	**126**	P	**Pn**	**05 24 43.5**	**-1.1**
FNA				S	**Sb**	**05 25 02.4**	**+0.3**
HCY	**Herceg Novi**	**1.40**	**309**	⇓*i*Pg	**Pn**	**05 24 44.8**	**-0.8**
HCY				*e*Sg	**Sn**	**05 25 06.4**	**+2.0**
HCY	**Herceg Novi**	**1.40**	**309**	*e*Pn	**Pn**	**05 24 45.0**	**-0.6**
NKME	**Niksic**	**1.41**	**328**	⇓*i*Pg	**Pn**	**05 24 45.0**	**-0.8**
NKME				*e*Sg	**Sn**	**05 25 06.8**	**+2.1**
NKY	**Niksic**	**1.44**	**330**	⇑*i*Pg	**Pn**	**05 24 45.3**	**-0.9**
NKY				*i* Sg	**Sn**	**05 25 07.3**	**+2.0**
TREB	**Trebinje**	**1.66**	**314**	*e*Pg	**Pb**	**05 24 49.9**	**-0.6**
TREB				*e*Sg	**Sg**	**05 25 14.4**	**+1.5**
TREB	**Trebinje**	**1.66**	**314**	*e*Pn	**Pn**	**05 24 49.0**	**-0.1**
STIP	**Stip**	**1.67**	**85**	*e*Pn	**Pg**	**05 24 52.4**	**+0.7**
SRN	**Sarande**	**1.69**	**179**	*i* PG	**Pg**	**05 24 52.1**	**+0.1**
SJES	**Sjenica**	**1.69**	**0**	*e*Pg	**Pb**	**05 24 50.6**	**-0.5**
SJES				*e*Sg	**Sg**	**05 25 15.9**	**+2.0**
BRY	**Bratogost**	**1.70**	**322**	*e*Pn	**Pn**	**05 24 49.6**	**-0.2**
BRY				*i* Sn	**Sg**	**05 25 15.8**	**+1.6**
BRY	**Bratogost**	**1.70**	**322**	*e*Pn	**Pn**	**05 24 50.1**	**+0.3**
PLE	**Pljevlja**	**1.81**	**347**	⇓*i*Pn	**Pg**	**05 24 54.4**	**+0.1**
PLE				*i* Sn	**Sg**	**05 25 18.9**	**+1.2**
UPM	**Unac-Piva**	**1.81**	**335**	⇓*i*Pn	**Pb**	**05 24 52.5**	**-0.7**
UPM				*i* Sn	**Sg**	**

BLY	Banja Luka	3.77	328	ePn	Pb	05 25 25.3 -1.2
BZS	Buzias	4.22	16	⇑iP	Pn	05 25 25.5 +1.2
BZS	Buzias	4.22	16	S	Sn	05 26 15.3 +1.4
UDBI	Udbina	4.26	315	ePn	Pn	05 25 26.9 +1.8
LOT	Lotru	4.76	34	⇑iP	Pn	05 25 32.8 +0.9
LOT	Lotru	4.76	34	S	Sn	05 26 28.5 +1.1
NVLJ	Novalja	4.78	310	ePn	Pn	05 25 31.9 0.0
SIRR	Siria	4.85	14	⇓iP	Pn	05 25 33.7 +0.6
SIRR	Siria	4.85	14	S	Sn	05 26 31.3 +1.8

*ISCJB **29** 05:40:37.9±0.5, 24°.55N±0°.02×122°.29E±0°.02, h67km±5km, Error ellipse: s-maj=4.1km s-min=2.8km az=169.0*
*JMA **29** 05:40:37.5±0.2, 24°.54N×122°.27E, h73km±3km, M1.9*
*TAP **29** 05:40:37.9, 24°.58N×122°.26E, h68km, ML2.9, B*
ISC 29 05:40:38.2±1.3, 24°.55N±0°.04×122°.29E±0°.02, h68km±8km, n53, σ0s70/94, 4C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1 baz=254	0.14	269	P	Pn	05 40 48.4	+0.2
EOS1	baz=254			S	Sn	05 40 57.0	+1.4
TWC	Suao baz=273	0.40	278	P	Pn	05 40 49.8	-0.1
TWC	baz=273			*i* S	Sn	05 40 58.2	-0.3
EGS	baz=311	0.44	312	*e*S	Sn	05 40 58.8	-0.2
NANB	Nanao baz=251	0.50	256	P	Pn	05 40 51.1	+0.3
NANB	baz=251			*e*S	Sn	05 41 00.6	+0.4
ENA	Nanau baz=251	0.51	256	*e*P	Pn	05 40 51.0	0.0
ENA	baz=251			*e*S	Sn	05 41 00.7	+0.4
NTC	Toucheng baz=304	0.51	306	P	Pn	05 40 50.9	0.0
NTC	baz=304			S	Sn	05 40 60.0	-0.3
TWE	Neicheng baz=284	0.59	287	P	Pn	05 40 51.7	0.0
TWE	baz=284			*e*S	Sn	05 41 01.2	-0.4
TIPB	Shuangxi baz=314	0.59	315	P	Pn	05 40 51.4	-0.4
TIPB	baz=314			*i* S	Sn	05 41 01.3	-0.5
JYNG	Yonaguni jima	0.61	99	P	Pn	05 40 51.9	0.0
JYNG				*e*S	Sn	05 41 02.2	+0.2
ENTT	Nioudou baz=274	0.66	278	⇑iP	Pn	05 40 53.0	+0.5
ENTT	baz=274			*e*S	Sn	05 41 03.1	0.0
YOJ	Yonaguni jima baz=99	0.67	98	*e*P	Pn	05 40 52.6	+0.1
YOJ	baz=99			*e*S	Sn	05 41 03.2	+0.1
YOJ	Yonaguni jima	0.67	98	P	Pn	05 40 52.6	+0.1
YOJ				*e*S	Sn	05 41 03.5	+0.4
NWF	Wu-fen Shan baz=317	0.69	319	P	Pn	05 40 52.8	-0.2
NWF	baz=317			S	Sn	05 41 03.9	+0.1
WFSB	Wu-fen Shan baz=317	0.69	319	P	Pn	05 40 52.9	0.0
WFSB	baz=317			S	Sn	05 41 03.5	-0.1
NACB	Ninganchiao baz=236	0.73	239	*e*P	Pn	05 40 52.9	-0.5
NACB	baz=236			*e*S	Sn	05 41 05.0	+0.5
TWA	Mucha baz=302	0.77	304	P	Pn	05 40 53.6	-0.1
TWA	baz=302			*e*S	Sn	05 41 04.2	-1.1
TWD	Chiawan baz=230	0.79	233	P	Pn	05 40 53.9	0.0
TWD	baz=230			S	Sn	05 41 05.3	-0.3
ETLH	Xiulin Townshi baz=242	0.81	245	P	Pn	05 40 54.1	-0.3
ETLH	baz=242			*e*S	Sn	05 41 06.0	-0.3
NNSB	Datong baz=259	0.83	262	P	Pn	05 40 54.7	+0.1
NNSB	baz=259			*e*S	Sn	05 41 06.7	-0.1
YHNB	Yeheng baz=276	0.84	278	P	Pn	05 40 54.7	0.0
YHNB	baz=276			S	Sn	05 41 07.1	+0.3
NSK	Sanguang baz=276	0.85	279	P	Pn	05 40 55.0	+0.1
NSK	baz=276			S	Sn	05 41 07.4	+0.2
YM01	YM01 baz=311	0.88	312	P	Pn	05 40 54.9	-0.2
YM01	baz=311			*e*S	Sn	05 41 07.4	-0.3
YM10	YM10 baz=311	0.89	313	⇑*i*P	Pn	05 40 55.0	-0.3
YM10	baz=311			*e*S	Sn	05 41 07.8	-0.2
YM05	YM05 baz=312	0.90	313	⇑*i*P	Pn	05 40 55.0	-0.3
YM05	baz=312			*e*S	Sn	05 41 07.3	-0.8
YM08	YM08 baz=314	0.90	315	P	Pn	05 40 54.8	-0.5
ENLB	Shoufeng baz=221	0.90	224	*e*S	Sn	05 41 06.1	-1.9
YM04	YM04 baz=310	0.91	312	⇑*i*P	Pn	05 40 55.2	-0.3
YM04	baz=310			S	Sn	05 41 07.6	-0.7
WHF	Hehuan Shan baz=244	1.02	247	*e*P	Pn	05 40 57.6	+0.4
WHF	baz=244			S	Sn	05 41 10.8	-0.5
TWT	Tachien baz=251	1.05	254	*e*S	Sn	05 41 12.3	+0.6
ESL	Shilin baz=224	1.07	227	*e*S	Sn	05 41 10.7	-1.2
TDCB	Techi baz=251	1.07	254	*e*P	Pn	05 40 58.1	+0.5
TDCB	baz=251			*e*S	Sn	05 41 11.3	-0.8
PCYT	Pengchaiyu baz=350	1.09	350	P	Pn	05 40 57.9	+0.1
CHGB	Renai baz=242	1.13	245	*e*P	Pn	05 40 58.7	+0.3
CHGB	baz=242			*e*S	Sn	05 41 13.6	+0.2
LIOB	Emei baz=273	1.16	275	P	Pn	05 40 58.6	0.0
LIOB	baz=273			*e*S	Sn	05 41 15.2	+1.3
NSTT	Nanjuang baz=272	1.17	274	*e*S	Sn	05 41 14.4	+0.2
OWD	Renai baz=237	1.18	240	*e*P	Pn	05 40 59.1	+0.1
OWD	baz=237			*e*S	Sn	05 41 13.4	-1.1
EGFH	Guangfu baz=219	1.18	222	*e*S	Sn	05 41 14.2	-0.2
WHP	Taichung City baz=255	1.25	258	*e*P	Pn	05 41 00.7	+0.8
WHP	baz=255			*e*S	Sn	05 41 17.0	+0.8
VWDT	VWDT baz=231	1.31	233	P	Pn	05 41 01.0	+0.4
VWDT	baz=231			S	Sn	05 41 17.5	+0.1
HGSD	Ruisui baz=215	1.32	217	*e*P	Pn	05 41 01.1	+0.4
HGSD	baz=215			*e*S	Sn	05 41 18.5	+1.0
IRIF	Iriomote-Funau	1.33	99	P	Pn	05 41 00.6	-0.3
IRIF				S	Sn	05 41 17.5	-0.4
EHY	Hungye baz=218	1.36	220	*e*S	Sn	05 41 16.9	-1.7
SSLB	Suanglung baz=236	1.44	238	*e*P	Pn	05 41 03.0	+0.7
SSLB				*e*S	Sn	05 41 21.2	+0.8
TYC	Yuchr baz=242	1.46	244	*e*P	Pn	05 41 03.4	+0.9
TYC	baz=242			*e*S	Sn	05 41 22.4	+1.6
YULB	Yu-li baz=216	1.47	218	*e*P	Pn	05 41 01.8	-0.9
YULB	baz=216			*e*S	Sn	05 41 19.4	-1.7
HATJ	Hateruma jima	1.47	109	S	Sn	05 41 21.7	+0.6
TWF1	Yuli baz=215	1.50	217	*e*P	Pn	05 41 02.2	-0.9
TWF1	baz=215			*e*S	Sn	05 41 19.4	-2.5
JKRS	Kuro-shima	1.60	101	P	Pn	05 41 04.8	+0.4
JKRS				S	Sn	05 41 24.6	+0.3
YUS	Yu-Shan baz=227	1.61	229	*e*P	Pn	05 41 05.2	+0.1
YUS	baz=227			*e*S	Sn	05 41 25.0	-0.4
JIJ	Ishigaki jima	1.70	96	P	Pn	05 41 05.7	-0.1
JIJ				*e*S	Sn	05 41 25.8	-0.9
CHN5	Tsauling baz=235	1.75	237	*e*S	Sn	05 41 29.0	+1.0
JISG	Ishigakijimahi	1.84	88	P	Pn	05 41 07.9	+0.2
JISG				*e*S	Sn	05 41 30.5	+0.4
CHN4	Tsaushan baz=231	1.96	233	*e*S	Sn	05 41 34.7	+1.8

*DJA **29** 06:34:35.5±1.0, 5°.S±5°.×15°.2E±°, h73km±5km, M5.5/23, mB5.8/8, mb5.1/23, MLv5.9/1, Mw(mB)5.4/8*
*BJI **29** 06:34:38.3±0.0, 5°.18S×152°.08E, h109km, mb5.0/38, mB5.0/23*
*IDC **29** 06:34:39.8±1.3, 5°.31S×151°.51E, h97km±11km, mb4.2/20, mb1 4.3/25, mb1mx4.3/28, mbtmp4.6/25, MS3.7/17, Ms1 3.7/17, ms1mx3.6/24, Error ellipse: s-maj=11.0km s-min=8.6km az=102.0*
*MOS **29** 06:34:39.8±1.5, 5°.28S×151°.46E, h100km, mb4.9/19, Error ellipse: s-maj=10.6km s-min=8.1km az=108.6*
*ISCJB **29** 06:34:39.3±0.2, 5°.36S±0°.03×151°.45E±0°.03, h100km, mb4.8/104, Error ellipse: s-maj=4.7km s-min=3.7km az=24.1*
*NEIC **29** 06:34:40.9±2.1, 5°.35S×151°.51E, h100km±5km, mb4.9/77, Error ellipse: s-maj=12.9km s-min=10.9km az=111.0*
*GCMT **29** 06:34:40.9±0.2, 5°.49S±0°.01×151°.55E±0°.01, h94km±2km, MW5.0/108, Moment Tensor Solution. s59,c74; s108,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.23±.13; $M_{\theta\theta}$-0.35±.11; $M_{\phi\phi}$-1.88±.14; $M_{r\theta}$-0.25±.08; $M_{r\phi}$0.26±.13; $M_{\theta\phi}$4.16±.07; Best double couple: $M_0$4.65600×10^{16} NP1:ϕ_s356.00000°, δ77.00000°, λ92.00000°. NP2:ϕ_s167.00000°, δ13.00000°, λ82.00000°. Principal axes: T 4.8160, Plg58.0000°, Azm268.0000°; N -0.3210, Plg2.0000°, Azm175.0000°; P -4.4960, Plg32.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 06:34:40.5±0.3, 5°.36S±0°.04×151°.56E±0°.04, h100km, n248, σ1s39/263, mb4.8/104, 4C-5D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.31	28	*e*Pn	Pn	06 35 03.7	-0.8
RABL				*e*Sn	Sn	06 35 22.8	+0.1
MANU	Manus Island	5.32	308	*e*Pn	Pn	06 36 00.2	+2.5
PMG	Port Moresby 150nm,0.3s,baz=57,slow=6.1,SNR=131	5.93	227	P	Pn	06 36 05.8	-0.1
PMG				S	Sn	06 37 11.4	-1.2
PMG	Port Moresby 152nm,0.3s,baz=162,slow=19,SNR=16	5.93	227	*e*Pn	Pn	06 36 06.5	+0.6
PMG				*e*Sn	Sn	06 37 15.3	+2.8
PMG	Port Moresby	5.93	227	*i* P	Pn	06 36 05.6	-0.3
HNR	Honiara	9.25	116	*e*P	Pn	06 37 03.0	+12
HNR				*e*S	Sn	06 38 34.0	+0.5
HNR	Honiara 18nm,0.3s,baz=258,slow=8.7,SNR=3.5	9.25	116	P	Pn	06 36 51.4	+0.2
HNR	6.9nm,0.3s,baz=258,slow=9.3,SNR=2.1			S	Sn	06 38 34.4	+0.9
HNR	comp=Z,374nm,20.0s,baz=285,slow=40			LR	LR	06 40 51.0	
JAY	Jayapura 0.5nm,0.3s,baz=95,slow=18,SNR=2.5	11.19	284	P	Pn	06 37 16.6	-0.9
JAY	comp=Z,508nm,21.1s,baz=74,slow=37			LR	LR	06 41 35.2	
GENI	Genyem 64nm,1.5s,2μm	11.69	283	P	Pn	06 37 22.6	-1.5
COEN	Coen	11.88	223	*e*Pn	Pn	06 37 28.3	+1.6
COEN	Coen baz=12,SNR=14	11.88	223	P	Pn	06 37 27.5	+0.7
CTA	Charters Tower 1.1nm,0.3s,baz=2.3,slow=12,SNR=2.4	15.52	199	P	Pn	06 38 13.7	-0.2
CTAO	Charters Tower 23nm,1.1s	15.52	199	*e*P	P	06 38 17.8	+1.6
CTAO	Charters Tower comp=Z,23nm,1.1s	15.52	199	*e*P	P	06 38 17.8	+1.6
CTAO				pmax	pmax		
QIS	Mount Isa baz=19,SNR=65	19.05	216	P	P	06 38 55.9	+0.8
FAKI	Fak Fak comp=Z,90nm,1.4s	19.41	276	*e*P	P	06 38 59.5	+0.5
EIDS	Eidsvold comp=Z,71nm,1.9s	19.90	181	*e*P	P	06 39 05.5	+1.3
EIDS	Eidsvold baz=20,SNR=3.7	19.90	181	P	Pn	06 39 06.7	0.0
GUMO	Guam comp=Z,6.5nm,0.3s,baz=188,slow=9.0,SNR=8.0	19.96	341	P	P	06 39 05.2	+0.3
GUMO				LR	LR	06 45 54.4	
GUMO	Guam comp=Z,81nm,18.5s,baz=128,slow=34	19.96	341	*e*P	Pn	06 39 06.9	-0.6
GUMO	Guam comp=Z,152nm,0.9s	19.96	341	*e*P	Pn	06 39 06.9	-0.6
GUMO				pmax	pmax		
KDU	Kakadu baz=20,SNR=179	20.19	248	P	P	06 39 06.6	-0.8
SIJI	Sorong comp=Z,43nm,0.9s,baz=83,slow=8.1,SNR=16	20.74	282	P	P	06 39 13.8	+0.3
RMQ	Roma baz=21,SNR=7.3	21.18	187	P	P	06 39 19.4	+1.4
PALU	Palau baz=21,SNR=5.8	21.21	306	P	P	06 39 18.0	-0.4
MTN	Manton Dam comp=Z,142nm,0.8s	21.48	248	*e*P	P	06 39 20.4	-0.9
MTN	Manton Dam baz=22,SNR=147	21.48	248	P	P	06 39 20.6	-0.7
DZM	Mont Dzumac comp=Z,27nm,0.9s,baz=262,slow=8.0,SNR=20	21.99	140	P	P	06 39 27.2	+0.5
DZM				LR	LR	06 45 09.6	
DZM	Mont Dzumac comp=Z,217nm,21.6s,baz=290,slow=29	21.99	140	*e*P	P	06 39 27.4	+0.7
DZM	comp=Z,47nm,0.9s			*e*S	S	06 43 13.0	-11
DZM	comp=Z,208nm,23.4s			*e*LR	LR	06 44 39.6	
DZM	Mont Dzumac comp=Z,1μm,27.7s	21.99	140	*e*P	P	06 39 27.5	+0.7
WRAB	Tennant Creek comp=Z,105nm,0.6s	22.14	228	*e*P	P	06 39 27.4	-0.9
WRAB	Tennant Creek	22.14	228	*ce*P	P	06 39 27.5	-0.7
WRAB				pmax	pmax		
WB2	Warramunga Arr comp=Z,100nm,0.8s	22.14	228	*e*P	P	06 39 27.7	-0.6
WRA	Warramunga Arr comp=Z,113nm,0.4s	22.15	228	P	P	06 39 27.4	-1.0
WRA	Warramunga Arr comp=Z,87nm,0.5s,baz=55,slow=9.9,SNR=161	22.15	228	P	P	06 39 27.4	-1.0
WRA				S	S	06 43 23.8	-2.5
WRA	comp=Z,14nm,0.9s,baz=46,slow=22,SNR=13			ScP	ScP	06 46 51.5	+1.0
ANA2	Anatahan comp=Z,104nm,0.6s	22.32	345	*e*P	P	06 39 30.6	+0.4
MARNC	Mare, Loyalty comp=Z,192nm,1.2s	22.62	137	*e*P	P	06 39 34.2	+1.0
SARN	Sarigan comp=Z,48nm,1.1s	22.65	345	*e*P	P	06 39 33.9	+0.3
KNRA	Kununurra baz=25,SNR=120	24.61	244	P	P	06 39 51.2	-0.5
AS31	Alice Springs comp=Z,27nm,0.6s	24.91	221	*e*P	P	06 39 54.4	0.0
ASAR	Alice Springs comp=Z,75nm,0.6s,baz=56,slow=8.9,SNR=425	24.91	221	P	P	06 39 54.1	-0.3
ASAR				S	S	06 44 10.0	-0.6
ASAR	comp=Z,0.8nm,0.7s,baz=111,slow=38,SNR=3.0			ScP	ScP	06 46 59.6	+1.7
ASAR	comp=Z,3.2nm,0.7s,baz=52,slow=3.1,SNR=12			LR	LR	06 50 25.3	
ARMA	Armidale comp=Z,24nm,1.4s	24.93	180	*e*P	P	06 39 55.7	+1.1
CMSA	Cobar Meteorol baz=27,SNR=8.4	26.62	191	P	P	06 40 09.9	+0.1
SOEI	Soe comp=Z,99nm,1.1s	27.39	259	*e*P	P	06 40 17.6	+0.6
SOEI	Soe comp=Z,77nm,0.9s	27.39	259	P	P	06 40 15.4	-1.6
STKA	Stephens Creek comp=Z,3.6nm,0.5s,baz=35,slow=16,SNR=12	27.98	198	P	P	06 40 21.4	-0.5
STKA				LR	LR	06 51 16.2	
STKA	comp=Z,192nm,19.2s,baz=20,slow=36	27.98	198	*e*P	P	06 40 21.8	-0.1
STKA	Stephens Creek comp=Z,2.6nm,1.3s	27.98	198	P	P	06 40 21.6	-0.4
STKA	Stephens Creek baz=28,SNR=9.9	27.98	198	P	P	06 40 21.8	-0.1
STKA	Stephens Creek comp=Z,3.0nm,1.3s	27.98	198	*e*P	P	06 40 21.8	-0.1
STKA				pmax	pmax		
BATI	Baumata comp=Z,106nm,0.7s,baz=7.1,slow=0.8,SNR=10	28.04	258	P	P	06 40 23.1	+0.4
BATI				LR	LR	06 53 32.4	
BATI	Baumata comp=Z,616nm,21.6s,baz=124,slow=40	28.04	258	P	P	06 40 22.4	-0.3
BATI	Baumata comp=Z,64nm,0.9s	28.04	258	P	P	06 40 24.0	-1.0
FITZ	Fitzroy Crossi comp=Z,55nm,0.5s,baz=53,slow=8.2,SNR=131	28.30	241	P	P	06 40 24.0	-1.0
FITZ				LR	LR	06 50 50.8	
FITZ	Fitzroy Crossi comp=Z,226nm,20.9s,baz=41,slow=34	28.30	241	*e*P	P	06 40 24.0	-1.0
FITZ	Fitzroy Crossi comp=Z,66nm,0.7s	28.30	241	P	P	06 40 23.6	-1.4
FITZ	Fitzroy Crossi baz=28,SNR=102	28.30	241	P	P	06 40 23.6	-1.4
DAV	Davao City (W) comp=Z,156nm,19.5s,baz=138,slow=32	28.71	295	LR	LR	06 49 49.4	
WRKA	Warakurna baz=30,SNR=50	29.68	226	P	P	06 40 36.1	-1.0
EDFI	Ende, Flores comp=Z,16nm,0.6s,comp=Z,794nm	29.82	262	P	P	06 40 37.0	-1.6
HTT	Hallett baz=30,SNR=26	30.30	201	P	P	06 40 42.4	-0.1
BBOO	Buckleboo comp=Z,10nm,0.6s	30.90	206	*e*P	P	06 40 46.5	-1.2
BBOO	Buckleboo baz=31,SNR=15	30.90	206	P	P	06 40 47.1	-0.7
KAPI	Kappang comp=Z,5.0nm,1.0s	31.67	269	*ce*P	P	06 40 57.7	+2.9
KAPI				pmax	pmax		
WBSI	Waikabubak, Su comp=Z,88nm,0.8s,comp=Z,2um	32.16	260	P	P	06 40 57.6	-1.5
ARPS	Mount Arapiles baz=33,SNR=5.3	32.51	195	P	P	06 41 02.1	+0.3
FORT	Forrest comp=Z,40nm,0.6s	33.58	218	*e*P	P	06 41 10.0	-1.2
FORT	Forrest baz=34,SNR=39	33.58	218	P	P	06 41 10.3	-0.9
PSA00	Pilbara Seismi comp=Z,81nm,1.5s	34.68	239	*e*P	P	06 41 20.1	-0.8
JAGI	Jajag, Banyuwa comp=Z,50nm,0.8s	37.25	263	*e*P	P	06 41 41.0	-1.9
MEEK	Meekatharra baz=38,SNR=270	37.88	232	P	P	06 41 47.2	-1.0
KMBL	Kambalda baz=38,SNR=7.5	37.99	223	P	P	06 41 48.3	-0.7
GIRL	Giralia comp=Z,911nm,1.6s	39.91	241	*e*P	P	06 42 04.9	-0.2
GIRL	Giralia baz=40,SNR=14	39.91	241	P	P	06 42 04.7	-0.4
URZ	Urewera comp=Z,5.8nm,0.9s,baz=240,slow=4.0,SNR=5.2	40.15	148	P	P	06 42 07.5	+0.7
URZ				LR	LR	06 57 17.7	
URZ	comp=Z,124nm,18.1s,baz=338,slow=34	40.15	148	*e*P	P	06 42 07.9	+1.1
URZ	Urewera comp=Z,20nm,1.2s	40.15	148	*e*P	P	06 42 07.9	+1.1
YOJ	Yonaguni jima comp=Z,39nm,0.6s	40.64	318	*e*P	P	06 42 11.8	+0.9
YOJ	Yonaguni jima comp=Z,39nm,0.6s	40.64	318	*e*P	P	06 42 11.9	+0.9
YOJ				pmax	pmax		
KLBR	Kellerberrin baz=41,SNR=16	41.02	226	P	P	06 42 12.6	-1.6
MORW	Morawa comp=Z,31nm,0.5s	41.03	231	*e*P	P	06 42 13.2	-1.1
MORW	Morawa baz=41,SNR=26	41.03	231	P	P	06 42 13.1	-1.1
YULB	Yu-li comp=Z,16nm,0.8s	41.10	315	*e*P	P	06 42 14.9	+0.1
BLDU	Ballidu baz=41,SNR=15	41.28	228	P	P	06 42 14.8	-1.5
BFZ	Birch Farm comp=Z,160nm,2.0s	41.56	151	*e*P	P	06 42 19.2	+0.8
SSLB	Suanglung comp=Z,13nm,0.8s	41.59	315	*e*P	P	06 42 20.4	+1.4
YHNB	Yeheng comp=Z,41nm,0.8s	41.88	317	*e*P	P	06 42 22.0	+0.8
RPZ	Rata Peaks comp=Z,212nm,20.7s,baz=324,slow=32	41.89	159	LR	LR	06 57 09.7	
RPZ	Rata Peaks comp=Z,137nm,2.0s	41.89	159	*e*P	P	06 42 24.3	+3.3
NWAO	Narrogin (SRO) comp=Z,42nm,1.4s	42.12	225	*e*P	P	06 42 23.4	+0.3
NWAO	Narrogin (SRO) baz=42,SNR=5.8	42.12	225	P	P	06 42 23.6	+0.6
NWAO	Narrogin (SRO) comp=Z,42nm,1.4s	42.12	225	*e*P	P	06 42 23.4	+0.3
NWAO				pmax	pmax		
MUN	Mundaring baz=42,SNR=9.2	42.35	227	P	P	06 42 23.8	-1.1
JNU	Nakatsue comp=Z,74nm,1.7s	43.01	334	*e*P	P	06 42 30.2	0.0
MJAR	Matsushiro Arr comp=Z,1.6nm,0.5s,baz=173,slow=9.9,SNR=4.5	43.51	344	P	P	06 42 32.3	-1.9
MJAR				PcP	PcP	06 44 17.7	-2.8
MJAR	comp=Z,1.6nm,0.6s,baz=167,slow=3.8,SNR=3.4			LR	LR	07 00 02.1	
MJAR	comp=Z,52nm,19.2s,baz=205,slow=35			LR	LR	07 00 02.1	
MAJO	Matsushiro	43.52	344	*e*P	P	06 42 32.3	-1.9
MAJO				*e*PP	PcP	06 44 17.7	-2.8
MAJO	Matsushiro	43.52	344	*e*P	P	06 42 32.3	-1.9
MAJO				*e*		06 44 17.7	
TPI	Tanjungpandan	43.86	272	P	P	06 42 36.3	-1.1
DLV	T Lat comp=Z,39nm,1.1s	46.15	292	*e*P	P	06 42 56.2	+0.5
MDSI	Maura Dua	47.20	269	P	P	06 42 59.0	-4.7
KSRS	Korea Array comp=Z,2.6nm,0.6s,baz=156,slow=8.3,SNR=13	47.95	335	P	P	06 43 08.8	-0.2
KSRS				PcP	PcP	06 44 36.0	+0.1
KSRS	comp=Z,1.9nm,0.7s,baz=178,slow=2.5,SNR=8.8			LR	LR	07 04 09.2	
KS15	Wonju Array Si comp=Z,50nm,1.9s	47.96	335	*e*P	P	06 43 09.2	+0.1
NJ2	Nanjing comp=Z,10.0nm,0.5s	48.51	322	*e*P	P	06 43 15.0	+1.5
NJ2				pmax	pmax		
IPM	Ipoh comp=Z,12nm,1.0s	51.40	280	*e*P	P	06 43 35.0	-0.7
PANO	Nakornpanom	51.48	297	P	P	06 43 39.4	+3.2
SKNT	Sakolnakorn comp=Z,19nm,1.7s	51.98	296	P	P	06 43 41.5	+1.5
MNSI	Mandailing Nat	52.27	275	P	P	06 43 40.1	-2.1
USRK	Ussuriysk Ar. comp=Z,3.1nm,0.8s,baz=198,slow=12,SNR=6.1	52.38	342	P	P	06 43 41.0	-1.4
NONG	Nongkai comp=Z,0.3nm,0.9s,comp=Z,32nm	53.12	297	P	P	06 43 48.7	+0.4
GSI	Gunungsitoli comp=Z,25nm,1.2s	54.32	275	*e*P	P	06 43 56.3	-0.9
UTTA	Uttaradit	55.31	296	P	P	06 44 05.1	+0.8
XAN	Xi'an	56.18	317	P	P	06 44 10.0	-0.3
XAN	comp=Z,12nm,0.7s			pmax	pmax		
XAN	comp=Z,170nm,7.4s			pmax	pmax		
XAN				LR	LR		
XAN	comp=Z,160nm,20.6s	56.18	317	*e*P	P	06 44 10.6	+0.3
XAN	Xi'an comp=Z,9.1nm,0.7s	56.18	317	*e*P	P	06 44 10.6	+0.3
XAN	Xi'an comp=Z,9.0nm,0.7s			pmax	pmax		
OPA	Opana comp=Z,390nm,2.0s	56.24	60	*e*P	P	06 44 14.2	+3.4
OPA	Opana	56.24	60	*e*P	P	06 44 14.3	+3.4

OPA pmax pmax
comp=Z,390nm,2.0s
KMI Kunming 56.28 305 P P 06 44 13.8 +2.4
KMI pP pP 06 44 36.8 +1.1
KMI pmax pmax
comp=Z,11nm,0.6s
KMI pmax pmax
comp=Z,140nm,4.5s
CM31 Chiang Mai Arr 57.00 296 *e*P **P 06 44 17.0 +0.7**
comp=Z,37nm,1.4s
CMAR Chiang Mai Arr 57.00 296 P **P 06 44 16.2 -0.1**
comp=Z,6.5nm,0.8s,baz=113,slow=5.2,SNR=22
CMAR LR LR 07 08 07.0
comp=Z,108nm,19.4s,baz=183,slow=35
KLR Kul'dur 57.04 345 P **P 06 44 15.0 -1.0**
comp=Z,4.0nm,0.7s,baz=190,slow=2.3,SNR=10
KLR Kul'dur 57.04 345 *i*P **P 06 44 15.2 -0.8**
KLR pmax pmax
comp=Z,4.0nm,0.6s
CHTO Chiang Mai 57.11 296 *e*P **P 06 44 17.7 +0.6**
comp=Z,14nm,1.1s
CHTO Chiang Mai 57.11 296 *e*P **P 06 44 17.7 +0.6**
CHTO pmax pmax
comp=Z,14nm,1.1s
KHU Kahuku 57.45 63 *e*P **P 06 44 22.5 +2.7**
comp=Z,424nm,1.7s
KHU Kahuku 57.45 63 *e*P **P 06 44 22.5 +2.7**
KHU pmax pmax
comp=Z,424nm,1.7s
MWH Moku'aweowe 57.55 63 *e*P **P 06 44 20.7 -0.1**
comp=Z,90nm,0.9s
CD2 Chengdu 58.17 311 *e*P **P 06 44 25.0 +0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
PEA0B Petropavlovsk- 58.48 4 *e*P **P 06 44 25.6 -0.4**
comp=Z,63nm,1.7s
PEA0B Petropavlovsk- 58.48 4 *e*P **P 06 44 25.6 -0.4**
PEA0B pmax pmax
comp=Z,63nm,1.7s
PETK Petropavlovsk- 58.48 4 P **P 06 44 25.1 -0.9**
comp=Z,1.7nm,0.6s,baz=140,slow=7.1,SNR=5.4
PEA1 Petropavlovsk- 58.48 4 *e*P **P 06 44 25.1 -1.0**
PPT2 Papeete2 58.74 107 *e*S **S 06 52 21.9 -4.5**
comp=Z,126nm,26.8s
PPT2 *e*LR LR 07 01 36.5
comp=Z,190nm,35.5s
HHC Hu-ho-hao-te 58.78 325 P **P 06 44 31.0 +2.5**
HHC S **S 06 52 28.0 +1.8**
HHC sS sS 06 53 12.5 +5.3
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,17nm,5.0s
TBI Tubuai 59.46 114 *e*LR LR 07 01 59.0
comp=Z,472nm,35.8s,baz=293
LZH Lanzhou 60.77 317 *e*P **P 06 44 42.5 +0.2**
LZH pP pP 06 45 06.0 -1.1
LZH pmax pmax
comp=Z,15nm,0.9s
HIA Hailar 61.04 337 *c e*P **P 06 44 44.6 +0.9**
GTA Gaotai 65.23 318 *e*P **P 06 45 12.0 +0.3**
GTA pP pP 06 45 37.5 +0.5
GTA sP sP 06 45 48.3 +0.3
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,57nm,8.6s
GTA LR LR
comp=Z,83nm,18.7s
GTA LR LR
comp=Z,140nm,20.3s
GTA LR LR
comp=Z,94nm,18.4s
SHL Shillong 65.53 301 *e*P **P 06 45 12.4 -1.6**
comp=Z,26nm,1.2s
SHL Shillong 65.53 301 *e*P **P 06 45 12.4 -1.6**
SHL pmax pmax
comp=Z,26nm,1.2s
SONA0 Songino Array 66.14 329 *e*P **P 06 45 17.8 +0.4**
SONM Songino Array 66.14 329 P **P 06 45 17.8 +0.4**
comp=Z,7.2nm,0.6s,baz=141,slow=4.4,SNR=16
SONM PcP **PcP 06 45 46.3 -0.7**
comp=Z,3.8nm,0.7s,baz=147,slow=4.4,SNR=4.6
TAOE Nuku Hiva Isla 67.79 97 *e*LR LR 07 05 50.9
comp=Z,2μm,31.5s
ZAK Zakamensk 69.33 329 *e*P **P 06 45 36.7 -0.7**
ZAK pmax pmax
comp=Z,12nm,0.9s
JIRN Jiri 71.02 302 *e*P **P 06 45 48.7 +0.2**
comp=Z,32nm,0.6s
MOY Mondy 71.26 329 *e*P **P 06 45 49.4 +0.3**
GUN Gumba 71.35 302 *e*P **P 06 45 50.1 -0.4**
comp=Z,50nm,0.6s
PKI Pulchoki 71.66 301 *e*P **P 06 45 51.5 -0.8**
comp=Z,17nm,0.8s
PKIN Phulchoki 71.67 301 *e*P **P 06 45 51.4 -0.9**
comp=Z,14nm,0.8s
PALK Pallekele 71.80 279 *e*P **P 06 45 53.5 +0.5**
comp=Z,53nm,1.4s
PALK Pallekele 71.80 279 *e*P **P 06 45 53.5 +0.5**
PALK pmax pmax
comp=Z,53nm,1.4s
DMN Daman 71.92 301 *e*P **P 06 45 53.4 -0.4**
comp=Z,36nm,0.7s
VNDA Vanda 72.32 178 P **P 06 45 55.1 +0.2**
comp=Z,1.0nm,0.8s,baz=321,slow=6.3,SNR=7.1
VNDA Vanda 72.32 178 *e*P **P 06 45 55.8 +0.9**
comp=Z,3.0nm,0.9s
VNDA Vanda 72.32 178 *e*P **P 06 45 55.8 +0.9**
VNDA pmax pmax
comp=Z,3.0nm,0.9s
GKN Gorkha 72.43 301 *e*P **P 06 45 56.3 -0.4**
comp=Z,37nm,0.3s
KOLN Koldanda 73.25 301 *e*P **P 06 46 00.5 -1.1**
comp=Z,55nm,0.7s
DANN Dangsing 73.27 302 *e*P **P 06 46 01.3 -0.5**
comp=Z,42nm,0.6s
PYUN Piuthan 73.86 301 *e*P **P 06 46 03.7 -1.5**
comp=Z,71nm,0.7s
BILL Bilibino 73.96 6⇑*e*P **P 06 46 08.3 +3.7**
BILL *e* 06 46 20.4
BILL *PP **pP 06 46 31.0 +0.8**
BILL *e* 06 46 47.9
BILL SSS SSS 07 03 23.0
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,112nm,16.0s
CHIA Chirikof Islan 74.78 28 *e*P **P 06 46 11.2 +1.6**
comp=Z,21nm,1.1s
WMQ Urumqi 75.31 318 *e*P **P 06 46 14.0 +0.9**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,130nm,4.7s
WMQ LR LR
comp=Z,150nm,21.7s
WMQ LR LR
comp=Z,180nm,26.3s
WMQ LR LR
comp=Z,76nm,20.3s
SII Sitkinak Islan 75.83 28 *e*P **P 06 46 19.1 +3.4**
comp=Z,12nm,0.8s
DGZ Jazzator, Alta 77.78 323 *d i*P **P 06 46 26.5 -0.5**
DGZ pmax pmax
comp=Z,5.0nm,0.8s
TIXI Tiksi 78.29 353 P **P 06 46 27.1 -2.0**
comp=Z,1.1nm,0.3s,baz=100,slow=4.0,SNR=3.1
CNPM China Poot 78.75 26 *e*P **P 06 46 32.4 +0.5**
comp=Z,10nm,0.8s
MK31 Makanchi Array 79.93 319 *e*P **P 06 46 38.2 -0.4**
comp=Z,8.3nm,1.1s
MK31 Makanchi Array 79.93 319 *e*P **P 06 46 38.2 -0.4**
MK31 pmax pmax
comp=Z,8.0nm,1.1s
MKAR Makanchi Array 79.93 319 P **P 06 46 38.2 -0.5**
comp=Z,5.3nm,0.7s,baz=102,slow=6.9,SNR=31
MAKZ Makanchi 80.14 319 *e*P **P 06 46 39.5 -0.2**
comp=Z,11nm,1.1s
MAKZ Makanchi 80.14 319 *e*P **P 06 46 39.5 -0.2**
MAKZ pmax pmax
comp=Z,11nm,1.1s
ZAA0 Zalesovo Array 80.93 327 *e*P **P 06 46 43.4 -0.4**
comp=Z,7.3nm,0.6s
ZALV Zalesovo Beam 80.93 327 P **P 06 46 42.2 -1.6**
comp=Z,6.2nm,0.4s,baz=115,slow=5.7,SNR=20
ZALV LR LR 07 22 54.4
comp=Z,19nm,20.7s,baz=68,slow=36
ZAA1 Zalesovo Array 80.93 327 *e*P **P 06 46 42.2 -1.6**
KTH Kantishna Hill 81.00 22 *e*P **P 06 46 44.0 0.0**
comp=Z,17nm,1.8s
TRF Thorofare Moun 81.19 23 *e*P **P 06 46 44.4 -0.8**
comp=Z,1.0nm,1.1s
BPAW Bear Paw Mtn. 81.26 22 *e*P **P 06 46 46.3 +0.9**
comp=Z,12nm,2.0s
SCM Sheep Creek Mo 81.57 25 *e*P **P 06 46 49.0 +1.9**
comp=Z,7.9nm,1.1s
RND Reindeer 81.72 23 *e*P **P 06 46 48.7 +0.8**
comp=Z,4.7nm,0.8s
RND Reindeer 81.72 23 *e*P **P 06 46 48.7 +0.8**
RND pmax pmax
comp=Z,5.0nm,0.8s
MLY Manley 81.85 21 *e*P **P 06 46 48.1 -0.3**
comp=Z,3.4nm,0.7s
KDJ Kajisay 82.10 314 *e*P **P 06 46 50.5 0.0**
comp=Z,19nm,0.8s
KDJ Kajisay 82.10 314 *e*P **P 06 46 50.5 0.0**
KDJ pmax pmax
comp=Z,19nm,0.8s
KSH Kashi 82.36 311 P **P 06 46 55.3 +3.5**
KSH pP pP 06 47 20.0 +2.0
KSH PP **PP 06 50 08.8 +6.8**
KSH S **S 06 57 00.8 +0.9**
KSH SS **SS 07 02 25.8 +3.0**
KSH pmax pmax
comp=Z,14nm,1.1s
KSH pmax pmax
comp=Z,260nm,4.2s
KSH LR LR
comp=Z,620nm,14.6s
KSH LR LR
comp=Z,320nm,12.9s
KSH LR LR
comp=Z,190nm,15.8s
CCB Clear Creek Bu 82.73 22 *e*P **P 06 46 52.8 -0.2**
comp=Z,6.9nm,1.3s
ULHL Ulahol 82.80 314 P **P 06 46 53.9 -0.2**
SNR=6.5
BOOM Boomskoye usch 83.08 314 *e*P **P 06 46 55.5 0.0**
comp=Z,14nm,0.7s
BOOM Boomskoye usch 83.08 314 *e*P **P 06 46 55.5 0.0**
BOOM pmax pmax
comp=Z,14nm,0.7s
ILAR Eielson Array 83.14 22 P **P 06 46 53.3 -1.8**
comp=Z,2.0nm,0.7s,baz=250,slow=4.8,SNR=31
ILB Eielson Array 83.14 22 *e*P **P 06 46 55.0 -0.1**
comp=Z,2.3nm,0.8s
NIL Nilore 83.27 305 *e*P **P 06 46 56.4 -0.1**
comp=Z,26nm,0.8s
TKM2 Tokmak 2 83.42 314 P **P 06 46 56.8 -0.5**
SNR=18
KURK Kurchatov 83.44 322 *e*P **P 06 46 55.9 -1.1**
comp=Z,15nm,1.0s
KURK Kurchatov 83.44 322⇓*e*P **P 06 46 55.2 -1.7**
KURK pmax pmax
comp=Z,16nm,1.1s
RIDG Independent Ri 83.46 24 *e*P **P 06 46 57.7 +0.8**
comp=Z,22nm,2.0s
KZA Kyzart 83.48 313 P **P 06 46 58.1 +0.2**
SNR=13
CHMS Chumysh 84.05 314 P **P 06 46 59.9 -0.4**
SNR=7.7
UCH Uchtor 84.05 313 P **P 06 47 01.4 +0.5**
SNR=14
TOLK Toolik Lake Re 84.13 18 *e*P **P 06 47 00.5 +0.3**
comp=Z,8.7nm,1.4s
AAK Ala-Archa 84.15 314 P **P 06 47 00.9 0.0**
SNR=5.7
AAK Ala-Archa 84.15 314 *e*P **P 06 47 01.7 +0.7**
comp=Z,13nm,1.0s
AAK Ala-Archa 84.15 314⇓*i*P **P 06 47 00.8 -0.2**
AAK pmax pmax
comp=Z,11nm,0.9s
USP Ospenovka 84.28 314 P **P 06 47 01.2 -0.3**
SNR=19
MAW Mawson 84.58 203 P **P 06 47 02.4 0.0**
comp=Z,5.0nm,0.7s,baz=101,slow=3.8,SNR=4.7
MAW LR LR 07 21 46.0
comp=Z,29nm,20.8s,baz=52,slow=33
MAW Mawson 84.58 203 *e*P **P 06 47 02.8 +0.4**
comp=Z,1.2nm,0.9s
MAW Mawson 84.58 203 *e*P **P 06 47 02.8 +0.4**
MAW pmax pmax
comp=Z,1.0nm,0.9s
QSPA South Pole Qui 84.61 180 *e*P **P 06 47 02.8 0.0**
comp=Z,30nm,2.0s
EKS2 Erkin-Say 84.67 314 P **P 06 47 03.5 -0.1**
SNR=23
EGAK Eagle 85.36 23 *e*P **P 06 47 07.3 +1.0**
comp=Z,3.4nm,0.9s
HYT Haines Junctio 85.50 28 *e*P **P 06 47 09.0 +1.8**
comp=Z,3.7nm,0.9s
BRVK Borovoye 89.01 323 *i*P **P 06 47 23.6 -0.6**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
HUMO Hull Mountain 90.27 47 *e*P **P 06 47 31.6 +1.3**
comp=Z,2.6nm,0.9s
K05A Summer Lake 91.80 47 *e*P **P 06 47 39.4 +1.7**
comp=Z,11nm,1.4s
PNTR Pine Nut 92.44 51 *e*P **P 06 47 42.6 +1.8**
comp=Z,3.3nm,0.8s
SYO Syowa Base 92.73 200⇓*e*P **P 06 47 39.2 -2.0**
SYO Syowa Base 92.73 200⇓*e*PcP **P 06 47 40.8 -0.4**
NVAR Mina Array Bea 93.40 52 P **P 06 47 46.3 +1.1**
comp=Z,1.9nm,0.7s,baz=258,slow=6.5,SNR=19
NVAR LR LR 07 23 23.7
comp=Z,70nm,20.6s,baz=280,slow=31
KVN Kaiserville 93.61 51 *e*P **P 06 47 47.6 +1.5**
comp=Z,15nm,2.0s
KVN Kaiserville 93.61 51 *e*P **P 06 47 47.6 +1.5**
KVN pmax pmax
comp=Z,15nm,2.0s
ABKAR Akbulak array 95.07 319 *e*P **P 06 47 50.6 -1.7**
comp=Z,2.3nm,0.8s
GEYT Alibeck 95.97 307 P **P 06 47 55.5 -1.2**
comp=Z,1.6nm,0.6s,baz=132,slow=8.0,SNR=2.9
YKA Yellowknife Ar 96.50 28 P **P 06 47 58.3 -0.2**
comp=Z,0.3nm,0.6s,baz=271,slow=5.0,SNR=6.8
YKA PKKPbc **PKKPbc 07 04 39.8 -5.5**
comp=Z,0.4nm,0.8s,baz=78,slow=3.0,SNR=4.1
PDAR Pinedale Array 100.14 48 P **Pdif 06 48 15.3 -0.3**
comp=Z,0.3nm,0.6s,baz=247,slow=1.3,SNR=4.4
TXAR Lajitas Array 105.48 61 PKKPab PKKPab 07 04 35.3 +0.3
comp=Z,1.2nm,0.8s,baz=114,slow=6.3,SNR=15
ARCES ARCESS Array B 107.03 343 PKiKP **PKiKP 06 52 53.1 -1.2**
comp=Z,2.5nm,0.8s,baz=37,slow=0.6,SNR=7.7
FIA0 FINESS Array S 111.04 335 *e*Pdif **Pdif 06 49 01.4 -1.9**
FIA0 FINESS Array S 111.04 335 *e*P **Pdif 06 49 01.4 -1.9**
FINES FINESS Array B 111.04 335 Pdiff **Pdif 06 49 01.4 -1.9**
comp=Z,1.8nm,1.0s,baz=87,slow=4.0,SNR=5.6
FINES PKiKP **PKiKP 06 53 00.9 -1.1**
comp=Z,0.9nm,0.7s,baz=132,slow=2.8,SNR=5.8
HFS Hagfors 116.73 338 PKP **PKPdf 06 53 11.4 -1.5**
comp=Z,1.8nm,0.9s,baz=46,slow=4.2,SNR=3.1
NOA NORSAR Array B 117.01 340 PKP **PKPdf 06 53 11.8 -1.7**
comp=Z,0.5nm,0.6s,baz=46,slow=1.9,SNR=2.8
BOSA Boshof 118.30 234 PKP **PKPdf 06 53 17.3 +0.2**
comp=Z,1.1nm,0.5s,baz=191,slow=2.8,SNR=4.0
MATP Matopo 118.50 243 PKP **PKPdf 06 53 16.9 -0.8**
comp=Z,1.8nm,0.3s,baz=115,slow=1.5,SNR=14
LBTB Lobatse 119.44 237 PKP **PKPdf 06 53 18.1 -1.3**
comp=Z,2.6nm,0.8s,baz=214,slow=18,SNR=4.0
LBTB Lobatse 119.44 237 *e*PKPdf **PKiKP 06 53 20.1 +0.7**
LBTB Lobatse 119.44 237 *e*PKiKP **PKiKP 06 53 20.1 +0.7**
SUR Sutherland 120.03 228 PKP **PKiKP 06 53 21.4 +0.9**
comp=Z,3.6nm,0.9s,baz=159,slow=23,SNR=2.9
SUR Sutherland 120.03 228 *e*PKPdf **PKiKP 06 53 21.6 +1.0**
GEC2 GERESS Array S 123.87 328 *e*PKPdf **PKPdf 06 53 26.1 -1.1**
GEC2 GERESS Array S 123.87 328 *e*PKiKP **PKPdf 06 53 26.1 -1.1**
GERES GERESS Array B 123.87 328 PKP **PKPdf 06 53 26.5 -0.7**
comp=Z,1.6nm,0.6s,baz=72,slow=1.7,SNR=9.7
EKA Eskdalemuir Ar 126.20 342 PKP **PKPdf 06 53 31.1 -0.1**
comp=Z,0.5nm,0.4s,baz=14,slow=3.0,SNR=9.6
DAVOX Davos/Dischmat 127.17 328 PKP **PKPdf 06 53 33.4 -0.3**
comp=Z,2.9nm,0.4s,baz=227,slow=11,SNR=3.6
AQU L'Aquila 127.74 321 *e*PKPdf **PKiKP 06 53 36.9 +1.6**
AQU L'Aquila 127.74 321 *e*PKiKP **PKiKP 06 53 36.9 +1.6**
LPAZ La Paz 135.24 119 PKP **PKPdf 06 53 49.7 -0.6**
comp=Z,0.6nm,0.4s,baz=2.8,slow=4.9,SNR=7.1
LPAZ La Paz 135.24 119 *e*PKPdf **PKPdf 06 53 49.4 -0.9**
LPAZ La Paz 135.24 119 *e*PKiKP **PKPdf 06 53 49.4 -0.9**
MDT Midelt 144.78 324 PKP **PKPab 06 54 03.8 -1.8**
comp=Z,2.3nm,0.3s,baz=349,slow=2.1,SNR=16
PTGA Pitinga 147.94 100 *e*PKPbc **PKPbc 06 54 15.7 +0.3**
TOA0 Torodi Ar. Sit 149.29 287 *e*PKPbc **PKPbc 06 54 18.0 -0.7**
TORD Torodi Ar. Bea 149.29 287 PKPbc **PKPdf 06 54 16.1 +1.8**
comp=Z,19nm,0.7s,baz=92,slow=3.0,SNR=7.2
TOA1 Torodi Ar. Sit 149.29 287 *e*PKPdf **PKPdf 06 54 16.1 +1.8**
BDFB Brasilia 151.52 137 PKPbc **PKPbc 06 54 24.2 0.0**
comp=Z,2.9nm,0.4s,baz=198,slow=3.2,SNR=10
BDFB Brasilia 151.52 137 *e*PKPbc **PKPbc 06 54 24.2 0.0**
BDFB *e*PKPbc **PKiKP 06 54 24.5 -0.2**

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*KRNET **29** 06:42:35.6±0.1, 41.°50N×70.°53E, mb2.2*
*SOME **29** 06:42:37.4, 41.°13N×71.°05E, h0km*
*NNC **29** 06:42:39.0±3.6, 41.°17N×71.°09E, h0km, mb3.7, mpv3.6,*
Error ellipse: s-maj=28.9km s-min=16.8km az=28.0
ISC 29 06:42:39.8±1.4,**41.°33N**±0.°04×**71.°11E**±0.°04,**h11**km±11km,
n11,σ2º**68**/20,**9C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.79**	**53**	⇑*i*P	**Pn**	**06 42 57.2**	**+0.1**
	baz=75						
ARK				⇑*i*S	**Sn**	**06 43 12.7**	**+3.7**
	baz=75						
BTK	**Batken**	**1.29**	**190**	⇓*i*P	**Pg**	**06 43 03.2**	**-1.3**
	baz=71						
BTK				⇓*i*S	**Sn**	**06 43 23.4**	**+2.3**
	baz=71						
DZA	**Taraz**	**1.57**	**6**	P	**Pn**	**06 43 03.6**	**-4.1**
	101nm,0.1s						
DZA				S	**Sn**	**06 43 21.1**	**-7.0**
	152nm,0.1s						
KK31	**Karatay Array**	**1.83**	**346**	⇓Pn	**Pb**	**06 43 13.8**	**+0.5**
	1.8nm,0.3s,baz=171,slow=17,SNR=22						
KK31				⇑Sn	**Sg**	**06 43 41.0**	**+2.3**
	6.2nm,0.5s,baz=168,slow=32,SNR=18						
BRLS	**Boroldoy**	**1.95**	**331**	*e*P	**Pn**	**06 43 13.7**	**+0.8**
	0.9nm,0.2s						
BRLS				*e*S	**Sn**	**06 43 38.9**	**+1.5**
	9.2nm,0.6s						
MRKS	**Merke**	**2.12**	**47**	Pg	**Pg**	**06 43 20.6**	**+0.1**
	3.1nm,0.4s						
MRKS				Lg	Lg	06 43 50.6	
	3.7nm,0.3s						
MRKS	**Merke**	**2.12**	**47**	*e*P	**Pg**	**06 43 20.4**	**0.0**
	2.8nm,0.3s						
MRKS				*e*S	**Sg**	**06 43 50.2**	**+2.3**
	4.2nm,0.3s						
EKS2	**Erkin-Say**	**2.39**	**55**⇑	*e*P	**Pb**	**06 43 21.9**	**-1.1**
	baz=63						
EKS2				⇑*i*S	**Sg**	**06 43 56.5**	**-0.2**
	baz=63						
UCH	**Uchtor**	**2.70**	**69**⇑	*i*P	**Pb**	**06 43 27.7**	**-0.7**
	baz=75						
UCH				⇑*i*S	**Sg**	**06 44 06.2**	**-0.4**
	baz=75						
KZA	**Kyzart**	**3.19**	**75**⇑	*i*P	**Pb**	**06 43 34.8**	**-1.9**
	baz=79						
KZA				⇑*i*S	**Sb**	**06 44 18.7**	**+3.0**
	baz=79						
BTLS	**Baital**	**4.29**	**29**	Pg	**Pb**	**06 43 55.6**	**+0.4**
	1.0nm,0.3s						
BTLS				Lg	Lg	06 44 50.5	
	4.4nm,0.5s						

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*ISCJB **29** 06:49:02.4±0.5, 34.°84N±0.°02×25.°33E±0.°02, h7km±3km,*
mb4.1/25, MS3.7/1, Error ellipse: s-maj=4.0km
s-min=2.7km az=0.8
*ISK **29** 06:49:02.2, 34.°87N×25.°31E, h10km, ML4.0/22*
*NEIC **29** 06:49:03.5±0.0, 34.°96N×25.°34E, h17km, mb4.0/21,*
ML3.8(ATH), ML4.0(THE), After ATH.
*THE **29** 06:49:03.5, 34.°91N×25.°32E, h1km±1km, ML4.0/9, Error*
ellipse: s-maj=1.9km s-min=0.6km az=182.0
*ATH **29** 06:49:03.5, 34.°96N×25.°34E, h17km±1km, ML3.8/14, Error*
ellipse: s-maj=1.7km s-min=0.9km az=343.0
*IDC **29** 06:49:06.0±1.9, 35.°03N×25.°17E, h25km±10km, mb3.9/14,*
mb1 4.0/20, mb1mx3.8/42, mbtmp4.0/20, ML3.4/4, MS3.2/2,
Ms1 3.1/2, ms1mx2.5/35, Error ellipse: s-maj=21.4km
s-min=15.4km az=173.0
ISC 29 06:49:03.3±1.1,**34.°90N**±0.°03×**25.°33E**±0.°02,**h7**km±7km,
n175,σ1º**69**/198,**mb4.0**/25,**5C-2D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.28**	**25**	P	**Pg**	**06 49 09.3**	**+0.4**
LAST				S	**Sb**	**06 49 13.8**	**-1.9**
LAST	**Lasithi**	**0.28**	**25**	P	**Pg**	**06 49 09.2**	**+0.3**
LAST				S	**Sg**	**06 49 12.1**	**-0.6**
LAST				AML	AML	06 49 14.5	
	comp=E,95552μm,0.6s						
LAST				AML	AML	06 49 14.9	
	comp=N,38662μm,0.8s						
NPS	**Neapolis**	**0.42**	**33**	P	**Pg**	**06 49 11.6**	**+0.1**
NPS				S	**Sb**	**06 49 18.4**	**-1.3**
NPS	**Neapolis**	**0.42**	**33**	P	**Pg**	**06 49 11.6**	**+0.1**
NPS				S	**Sg**	**06 49 16.9**	**-0.2**
NPS				AML	AML	06 49 21.1	
	comp=N,24565μm,0.5s						
NPS				AML	AML	06 49 23.3	
	comp=E,29746μm,0.4s						
SIVA	**Sivas**	**0.44**	**285**	P	**Pg**	**06 49 12.2**	**+0.3**
SIVA				S	**Sb**	**06 49 18.7**	**-1.5**
SIVA	**Sivas**	**0.44**	**285**	P	**Pg**	**06 49 12.4**	**+0.5**
SIVA				S	**Sg**	**06 49 18.3**	**+0.6**
SIVA				AML	AML	06 49 22.6	
	comp=E,59908μm,0.3s						
SIVA				AML	AML	06 49 26.2	
	comp=N,66849μm,0.5s						
KSTL	**Kastelli Herak**	**0.45**	**332**	P	**Pg**	**06 49 09.7**	**-2.3**
KSTL				S	**Sg**	**06 49 15.0**	**-3.0**
IACM	**Heraklion**	**0.45**	**332**	P	**Pg**	**06 49 12.4**	**+0.3**
IACM				S	**Sb**	**06 49 19.7**	**-0.8**
IACM	**Heraklion**	**0.45**	**332**	P	**Pb**	**06 49 12.7**	**-0.9**
IACM				S	**Sg**	**06 49 18.4**	**+0.3**
TMBK	**Timbaki Herakl**	**0.49**	**290**	P	**Pb**	**06 49 13.3**	**-1.0**
IDI	**Anoyia**	**0.53**	**317**	PG	**Pg**	**06 49 13.0**	**-0.5**
IDI				SG	**Sb**	**06 49 21.5**	**-1.2**
IDI	**Anoyia**	**0.53**	**317**	Pg	**Pg**	**06 49 13.2**	**-0.2**
	comp=N,283nm,0.3s,baz=165,slow=13,SNR=1723						
IDI				Lg	Lg	06 49 21.0	
	comp=N,912nm,0.3s,baz=18,slow=20,SNR=34						
IDI	**Anoyia**	**0.53**	**317**	P	**Pg**	**06 49 13.3**	**-0.2**
IDI				S	**Sg**	**06 49 20.9**	**+0.5**
IDI				AML	AML	06 49 26.2	
	comp=N,16689μm,0.4s						
IDI				AML	AML	06 49 28.6	
	comp=E,12049μm,0.3s						
STIA	**Sitia Lasithi**	**0.69**	**64**	P	**Pg**	**06 49 16.6**	**+0.1**
STIA				S	**Sb**	**06 49 28.2**	**+0.9**
ZKR	**Zakros**	**0.76**	**74**	PG	**Pg**	**06 49 17.2**	**-0.6**
ZKR				SG	**Sb**	**06 49 29.8**	**+0.6**
ZKR	**Zakros**	**0.76**	**74**	P	**Pg**	**06 49 17.3**	**-0.6**
ZKR				S	**Sb**	**06 49 29.6**	**+0.4**
ZKR	**Zakros**	**0.76**	**74**	P	**Pg**	**06 49 17.1**	**-0.6**
ZKR				S	**Sb**	**06 49 28.7**	**-0.5**
ZKR				AML	AML	06 49 34.6	
	comp=N,8977μm,0.5s						
ZKR				AML	AML	06 49 34.7	
	comp=E,19426μm,0.6s						
PRNS	**Prines Rethymn**	**0.82**	**304**	P	**Pb**	**06 49 19.3**	**-0.5**
PRNS				S	**Sn**	**06 49 32.2**	**-1.4**
GVDS	**Gavdos**	**1.02**	**267**	P	**Pn**	**06 49 23.7**	**-0.3**
GVD	**Gavdhos**	**1.03**	**267**	PG	**Pg**	**06 49 22.5**	**-0.4**
GVD	**Gavdhos**	**1.03**	**267**	P	**Pg**	**06 49 22.9**	**-0.1**
GVD	**Gavdhos**	**1.03**	**267**	P	**Pg**	**06 49 22.8**	**-0.1**
GVD				AML	AML	06 49 43.2	
	comp=N,9790μm,0.4s						
GVD				AML	AML	06 49 43.4	
	comp=E,10423μm,0.3s						
VAM	**Vamos**	**1.05**	**299**	P	**Pg**	**06 49 22.7**	**-0.8**
VAM	**Vamos**	**1.05**	**299**	P	**Pg**	**06 49 22.6**	**-0.9**
VAM				AML	AML	06 49 41.8	
	comp=N,7772μm,0.7s						
VAM				AML	AML	06 49 44.0	
	comp=E,7615μm,0.5s						
CHAN	**Chania**	**1.22**	**301**	P	**Pb**	**06 49 25.9**	**-0.8**
IMMV	**Iera Moni Meta**	**1.24**	**297**	PN	**Pn**	**06 49 26.4**	**-0.6**
IMMV	**Iera Moni Meta**	**1.24**	**297**	P	**Pn**	**06 49 26.1**	**-0.9**
IMMV	**Iera Moni Meta**	**1.24**	**297**	P	**Pn**	**06 49 25.9**	**-1.1**
IMMV				AML	AML	06 49 55.2	
	comp=N,9778μm,0.5s						
IMMV				AML	AML	06 49 56.2	
	comp=E,12968μm,0.7s						

THR6	Thira Island,	1.45	2	P	Pb	06 49 29.9	-0.7
SANT	Santorini	1.47	4	PN	Pn	06 49 29.9	-0.3
SANT	Santorini	1.47	4	*e*Pn	Pg	06 49 31.3	-0.1
SANT				*e*Sn	Sg	06 49 52.1	+1.7
SANT	Santorini	1.47	4	P	Pn	06 49 29.9	-0.3
SANT				S	Sb	06 49 49.5	-0.3
SANT	Santorini	1.47	4 ⇑	*i*P	Pn	06 49 29.9	-0.3
SANT	Santorini	1.47	4	S	Sg	06 49 51.6	+1.1
SANT	Santorini	1.47	4	P	Pn	06 49 29.9	-0.3
SANT				S	Sb	06 49 49.3	-0.5
SANT				AML	AML	06 49 52.8	
	comp=E,39875μm,0.5s						
SANT				AML	AML	06 49 53.7	
	comp=N,7941μm,0.6s						
ANAF	Anafi Island	1.49	14	P	Pn	06 49 30.4	-0.1
ANAF				S	Sb	06 49 50.1	-0.4
ANAF	Anafi Island	1.49	14	P	Pb	06 49 30.9	-0.4
ANAF				S	Sb	06 49 50.3	-0.2
THR5	Thira Island,	1.51	0	P	Pb	06 49 30.9	-0.7
SAP3	Santorini-Thir	1.53	0	P	Pb	06 49 31.1	-0.8
SAP3	Santorini-Thir	1.53	0	P	Pb	06 49 31.2	-0.8
SAP3				S	Sg	06 49 51.8	-0.6
CMBO	Columbo, Santo	1.56	2	P	Pn	06 49 30.6	-0.8
CMBO	Columbo, Santo	1.56	2	P	Pn	06 49 31.1	-0.4
KARP	Karpathos	1.63	66	PN	Pb	06 49 33.3	-0.3
KARP	Karpathos	1.63	66	*e*Pn	Pb	06 49 33.7	0.0
KARP	Karpathos	1.63	66	P	Pg	06 49 33.8	-0.7
KARP				S	Sg	06 49 54.9	-0.7
KARP	Karpathos	1.63	66	P	Pb	06 49 33.7	0.0
KARP				AML	AML	06 50 01.9	
	comp=N,1797μm,0.5s						
KARP				AML	AML	06 50 06.5	
	comp=E,3725μm,0.7s						
IOSP	Ios island	1.81	359	P	Pn	06 49 34.9	0.0
IOSP	Ios island	1.81	359	P	Pn	06 49 34.9	0.0
IOSP				S	Sn	06 49 58.3	+0.1
IOSP				AML	AML	06 50 03.0	
	comp=E,6714μm,0.4s						
IOSP				AML	AML	06 50 03.8	
	comp=N,7502μm,0.7s						
ANKY	Antikythira Is	1.92	301	P	Pb	06 49 38.1	-0.4
ANKY				S	Sb	06 50 02.4	-0.3
ANKY				AML	AML	06 50 14.5	
	comp=N,2662μm,0.6s						
ANKY				AML	AML	06 50 16.4	
	comp=E,4519μm,0.7s						
MHLO	Agia Marina, M	1.94	337	P	Pn	06 49 37.0	+0.5
AMGA	Amorgos Island	1.98	13	P	Pn	06 49 36.9	-0.3
AMGA	Amorgos Island	1.98	13	P	Pn	06 49 36.9	-0.3
AMGA				S	Sn	06 50 02.5	+0.3
AMGA				AML	AML	06 50 08.4	
	comp=E,4192μm,0.4s						
AMGA				AML	AML	06 50 10.7	
	comp=N,5398μm,0.7s						
MHLA	Plaka, Milos I	1.98	338	P	Pb	06 49 38.8	-0.8
APE	Apeiranthos	2.17	4	PN	Pn	06 49 39.9	+0.1
APE	Apeiranthos	2.17	4 ⇓	*i*P	Pb	06 49 40.9	-1.9
APE	Apeiranthos	2.17	4	S	Sg	06 50 12.7	-0.2
APE	Apeiranthos	2.17	4	P	Pn	06 49 40.3	+0.5
KTHA	Kythira Island	2.29	307	P	Pb	06 49 42.9	-2.0
SERI	Serifos	2.35	343	P	Pn	06 49 42.1	-0.2
DAT	Datca	2.58	44	PN	Pn	06 49 45.5	0.0
DAT	Datca	2.58	44	*i* P	Pn	06 49 46.2	+0.7
DAT				IAML_P			
	comp=Z,40nm,0.3s						
ARG	Arkhangelos	2.63	59	PN	Pn	06 49 45.9	-0.2
ARG	Arkhangelos	2.63	59	P	Pn	06 49 47.5	+1.4
ARG				S	Sb	06 50 20.1	-3.0
ARG	Arkhangelos	2.63	59	P	Pn	06 49 47.8	+1.7
ARG				AML	AML	06 50 32.8	
	comp=N,1050μm,1.0s						
ARG				AML	AML	06 50 34.6	
	comp=E,1261μm,0.5s						
VLI	Veliai	2.66	314	P	Pn	06 49 46.9	+0.4
VLI	Veliai	2.66	314	P	Pn	06 49 46.9	+0.4
BODT	Bodrum	2.69	36	PN	Pn	06 49 46.9	0.0
BDRM	Kayabasi	2.75	38	*i* P	Pb	06 49 50.8	-2.1
BDRM				IAML_P			
	comp=Z,184nm,0.3s						
BBRN	Bozburun-Marma	2.84	51	PN	Pn	06 49 49.7	+0.7
SMG	Samos	3.05	23	P	Pn	06 49 51.9	0.0
DYR	Agios Nikonas	3.06	308	P	Pb	06 49 54.7	-3.4
GCAM	G?zelcaml?	3.19	28	PN	Pn	06 49 54.5	+0.8
VLY	Voula,Athens	3.19	338	P	Pn	06 49 56.0	+2.1
YER	Yerkesik	3.27	46	PN	Pn	06 49 55.9	+1.0
TURN	Turunc	3.30	53	PN	Pn	06 49 52.3	-3.0
TURN	Turunc	3.30	53	*i* P	Pn	06 49 53.1	-2.2
TURN				IAML_P			
	comp=Z,1μm,0.5s						
DALY	Dalyan (Mula)	3.30	54	PN	Pn	06 49 57.1	+1.7
DALY	Dalyan (Mula)	3.30	54	*i* P	Pn	06 49 58.2	+2.9
DALY				IAML_P			
	comp=Z,800nm,0.3s						
AYDN	Tasoluk	3.44	36	*i* P	Pb	06 50 00.7	-3.7
AYDN				IAML_P			
	comp=Z,924nm,0.7s						
FETY	Fethiye	3.50	59	PN	Pn	06 49 58.9	+0.7
FETY	Fethiye	3.50	59	*i* P	Pn	06 50 00.3	+2.1
FETY				IAML_P			
	comp=Z,3μm,0.3s						
CHOS	Chios island	3.52	9	PN	Pn	06 49 58.9	+0.4
ITM	Ithomi	3.57	310	*e*Pn	Pn	06 50 02.1	+3.0
ITM	Ithomi	3.57	310	P	Pn	06 50 01.8	+2.7
URLA	Izmir	3.59	16	PN	Pn	06 49 59.9	+0.5
TRIP	Tripoli	3.60	317	P	Pn	06 50 01.8	+2.2
AYDB	Zeytinkoy-Aydi	3.67	33	PN	Pn	06 50 01.5	+1.0
VIL2	Platees	3.69	334	P	Pn	06 50 01.8	+1.0
AKAS	Kas	3.73	68	PN	Pn	06 50 02.2	+0.9
AKAS	Kas	3.73	68	*i* P	Pn	06 50 02.3	+0.9
AKAS				IAML_P			
	comp=Z,894nm,0.4s						
BLCB	Balcova	3.74	21	PN	Pn	06 50 01.9	+0.6
ELL	Elmali	4.15	62	PN	Pn	06 50 08.6	+1.5
SIGR	SIGRI	4.32	5	PN	Pn	06 50 10.4	+1.1
AKUM	Antalya-Kumluc	4.32	69	*i* P	Pn	06 50 11.4	+2.1
AKUM				IAML_P			
	comp=Z,539nm,0.3s						
KULA	Kula-Manisa	4.49	36	PN	Pn	06 50 13.2	+1.5
AGG	Agios Georgios	4.76	331	PN	Pn	06 50 17.5	+2.1
AGG	Agios Georgios	4.76	331	*e*Pn	Pn	06 50 18.0	+2.6
KHAL	Karahalli	4.81	43	*i* P	Pn	06 50 19.3	+3.1
KHAL				IAML_P			
	comp=Z,55nm,0.1s						
USAK	Uak-Merkez	4.82	37	*i* P	Pn	06 50 19.8	+3.6
USAK				IAML_P			
	comp=Z,1μm,0.6s						
EZN	Ezine	4.98	9 ⇓	*i*P	Pn	06 50 18.5	+0.2
BALB	Balikesir	5.14	23	*e*Pn	Pn	06 50 25.6	+4.9
BALY	Balya	5.16	20	*i* P	Pn	06 50 24.5	+3.6
BALY				IAML_P			
	comp=Z,404nm,0.3s						
GDZ	Gediz	5.33	37	*i* P	Pn	06 50 27.0	+3.6
GDZ				IAML_P			
	comp=Z,773nm,0.5s						
KEPZ	Antalya-Kepez	5.47	67	*i* P	Pn	06 50 28.1	+3.0
KEPZ				IAML_P			
	comp=Z,296nm,0.8s						
LIT	Litokhoron	5.66	337	*e*Pn	Pn	06 50 31.5	+3.7
CSS	Mathiatis	6.57	87	*e*Pn	Pn	06 50 42.7	+2.4
FNA	Florina	6.65	333	*e*Pn	Pn	06 50 45.0	+3.6
VTS	Vitosha	7.87	349	*e*Pn	Pn	06 51 03.4	+5.1
VTS	Vitosha	7.87	349 ⇑	*i*P	Pn	06 50 56.5	-1.8
TIP	Timpagrande	8.07	304	*e*Pn	Pn	06 51 01.4	+0.4
TIP	Timpagrande	8.07	304 ⇑	*i*P	Pn	06 51 01.2	+0.2
BR131	Keskin Array S	8.18	52	*e*Pn	Pn	06 51 05.8	+3.3
BRTR	Keskin Array B	8.18	52	Pn	Pn	06 51 04.1	+1.6
	comp=Z,0.2nm,0.3s,baz=219,slow=14,SNR=7.1						
BR101	Keskin Array S	8.18	52	*e*Pn	Pn	06 51 04.1	+1.6
MMAI	Mount Meron Ar	8.58	100	Pn	Pn	06 51 07.2	-0.6
	comp=Z,1.8nm,0.3s,baz=296,slow=12,SNR=8.2						
MMAI				Sn	Sn	06 52 38.7	-6.2
	baz=269,slow=20,SNR=2.1						
SHMJ	Saham	8.95	101	P	Pn	06 51 12.9	0.0
	comp=Z,42nm,0.8s,comp=Z,0.1nm						
WALJ	Wala	9.39	108	P	Pn	06 51 20.2	+1.3
	comp=Z,48nm,0.8s						
HRFI	Mount Harif	9.53	118	P	Pn	06 51 33.3	+12
EIL	Elat	9.67	120	Pn	Pn	06 51 22.1	-0.6
	comp=Z,0.7nm,0.3s,baz=27,slow=18,SNR=4.5						
EIL				Sn	Sn	06 53 04.8	-6.9
	comp=Z,0.5nm,0.3s,baz=48,slow=18,SNR=2.8						
STON	Ston	9.93	326	*e*Pn	Pn	06 51 21.1	-5.1
ASF	Jabal al Asfar	10.03	103	Pn	Pn	06 51 30.1	+2.3
	comp=Z,0.4nm,0.3s,baz=164,slow=5.7,SNR=2.7						
ASF				Sn	Sn	06 53 18.5	-2.2
	comp=Z,0.1nm,0.3s,baz=92,slow=14,SNR=2.0						
ASF	Jabal al Asfar	10.03	103	P	Pn	06 51 29.7	+1.9
VOIR		10.52	359 ⇑	*i*P	Pn	06 51 44.6	+10
MLR	Muntele Rosu	10.59	2	Pn	Pn	06 51 35.4	0.0
	baz=129,slow=16,SNR=2.1						
MLR	Muntele Rosu	10.59	2 ⇑	*i*P	Pn	06 51 45.3	+10
AKH	Akhalkalaki	15.68	60	*e*Pn	P	06 52 46.9	-2.1
	comp=Z,9.3nm,1.0s						
AKASG	Malin Array Be	16.04	9	Pn	Pn	06 52 49.0	-0.1
	comp=Z,2.6nm,0.3s,baz=200,slow=11,SNR=6.1						
AKBB	Malin Array Si	16.04	9	*e*Pn	P	06 52 51.5	-1.1
	comp=Z,11nm,0.8s						
KIV	Kislovodsk	16.14	51	*e*Pn	P	06 52 55.6	+1.6
	comp=Z,12nm,1.0s						
KBZ	Khabaz	16.18	52	Pn	P	06 52 55.2	+1.1
	comp=Z,0.2nm,0.3s,baz=249,slow=6.9,SNR=12						
KBZ				LR	LR	07 01 12.4	
	comp=Z,30nm,18.4s,baz=261,slow=45						
FUORN	Ofenpass-Fuorn	16.32	320	*e*Pn	P	06 52 57.9	+1.9
	comp=Z,6.1nm,0.8s						
GEC2	GERESS Array S	16.37	332	*e*Pn	P	06 52 58.5	+2.0
	comp=Z,2.6nm,0.8s						
GERES	GERESS Array B	16.37	332	Pn	Pn	06 52 54.0	+0.4
	comp=Z,0.1nm,0.3s,baz=141,slow=13,SNR=2.8						
TBLG	Delisi	16.67	60	*e*Pn	P	06 53 02.5	+2.8
	comp=Z,8.1nm,0.5s						
BNI	Bardonecchia	17.49	311	*e*Pn	P	06 53 12.7	+3.8
	comp=Z,7.3nm,1.2s						
SENIN	Lac Senin/Sane	17.80	315	*e*Pn	P	06 53 13.4	+1.1
	comp=Z,5.2nm,0.7s						
CLL	Collm	18.66	335	*e*PKPdf	Pn	06 53 24.0	+2.1
CLL	Collm	18.66	335	*e*pP	Pn	06 53 24.0	+2.1
RAYN	Ar Rayn	20.90	117	*e*P	Pn	06 53 50.8	+2.0
	comp=Z,4.3nm,0.8s						
TAM	Tamanrasset	21.09	240	*e*P	P	06 53 51.5	+3.0
	comp=Z,6.7nm,1.2s						
ESDC	Sonseca Array	23.73	290	P	P	06 54 13.7	-2.4
	comp=Z,1.1nm,0.6s,baz=80,slow=9.5,SNR=5.8						
HFS	Hagfors	26.36	347	P	P	06 54 37.4	-2.3
	comp=Z,0.9nm,0.7s,baz=181,slow=9.7,SNR=2.7						
FIA0	FINESS Array S	26.56	1	*e*P	P	06 54 38.9	-2.6
FINES	FINESS Array B	26.56	1	P	P	06 54 38.9	-2.6
	comp=Z,1.2nm,0.5s,baz=158,slow=12,SNR=10						
AKTO	Aktyubinsk	28.32	47	P	P	06 54 57.3	-0.1
	comp=Z,1.2nm,0.5s,baz=237,slow=12,SNR=5.5						
EKA	Eskdalemuir Ar	28.33	325	P	P	06 54 56.9	-0.6
	comp=Z,2.4nm,0.8s,baz=125,slow=9.2,SNR=5.2						
ABKAR	Akbulak array	29.13	50	*e*P	P	06 55 04.5	-0.1
	comp=Z,1.2nm,0.8s						
TOA1	Torodi Ar. Sit	30.43	230	*e*P	P	06 55 16.1	-0.4
TOA0	Torodi Ar. Sit	30.43	230	*e*P	P	06 55 17.6	+1.1
	comp=Z,7.4nm,1.0s						
TORD	Torodi Ar. Bea	30.43	230	P	P	06 55 16.1	-0.4
	comp=Z,6.6nm,0.4s,baz=31,slow=8.8,SNR=2.3						
ARA0	ARCESS Array S	34.69	0	*e*P	P	06 55 51.1	-2.0
ARCES	ARCESS Array B	34.69	0	P	P	06 55 51.1	-2.0
	comp=Z,1.7nm,0.5s,baz=173,slow=8.9,SNR=22						
KK31	Karatay Array	35.69	63	*e*P	P	06 55 58.2	-4.0
	comp=Z,1.6nm,0.6s						
KKAR	Karatay Array	35.69	63	*e*P	P	06 55 59.3	-2.9
	comp=Z,1.6nm,0.6s						
BRVK	Borovoye	36.37	46	*e*P	P	06 56 09.4	+1.6
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	41.23	51	*e*P	P	06 56 49.4	+0.8
	comp=Z,3.4nm,0.7s						
MK31	Makanchi Array	43.80	56	*e*P	P	06 57 10.3	+0.7
	comp=Z,2.5nm,1.0s						
MK32	Makanchi Array	43.80	56	*e*PcP	PcP	06 58 57.2	+1.1
MKAR	Makanchi Array	43.80	56	P	P	06 57 10.2	+0.6
	comp=Z,0.7nm,0.4s,baz=262,slow=8.6,SNR=12						
MKAR				PcP	PcP	06 58 57.2	+1.1
	comp=Z,0.4nm,0.6s,baz=286,slow=5.4,SNR=3.2						
KBS	Kingsbay	44.48	356	*e*P	P	06 57 16.8	+2.2
	comp=Z,7.4nm,0.5s						
ZAA1	Zalesovo Array	45.08	46	*e*P	P	06 57 19.3	-0.4
ZALV	Zalesovo Beam	45.08	46	P	P	06 57 19.3	-0.4
	comp=Z,1.2nm,0.4s,baz=262,slow=7.9,SNR=3.8						
WMQ	Urumqi	48.01	60	*e*P	P	06 57 45.8	+2.9
SCHQ	Schefferville	63.47	320	P	P	06 59 33.5	-0.2
	comp=Z,3.5nm,0.5s,baz=58,slow=4.7,SNR=4.6						
SCHQ	Schefferville	63.47	320	*e*P	P	06 59 34.1	+0.4
	comp=Z,4.7nm,0.7s						
HHC	Hu-ho-hao-te	65.66	56	P	P	06 59 50.0	+1.6
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,19nm,5.0s						
BCX	Boston College	71.75	309	*e*P	P	07 00 28.0	+1.9
	comp=Z,49nm,1.3s						
WHN	Wuhan	72.53	65	*e*P	P	07 00 34.0	+3.0
INK	Inuvik	75.89	352	P	P	07 00 49.4	-0.6
	comp=Z,0.4nm,0.5s,baz=2.4,slow=6.6,SNR=5.1						
INK	Inuvik	75.89	352	*e*P	P	07 00 49.5	-0.4
	comp=Z,3.9nm,1.4s						
USRK	Ussuriysk Ar.	76.92	45	P	P	07 00 57.0	+0.8
	comp=Z,1.9nm,0.8s,baz=316,slow=6.3,SNR=3.1						
YKA	Yellowknife Ar	77.73	342	P	P	07 00 58.7	-1.8
	comp=Z,0.6nm,0.5s,baz=54,slow=7.6,SNR=7.3						
YKB5	Yellowknife Ar	77.73	342	*e*P	P	07 00 58.7	-1.8
KSRS	Korea Array	78.33	52	P	P	07 01 03.9	-0.3
	comp=Z,0.3nm,0.3s,baz=286,slow=4.2,SNR=2.6						
CPUP	Villa Florida	99.04	244	LR	LR	07 48 45.2	
	comp=Z,25nm,19.1s,baz=200,slow=36						

*NEIC **29** 06:57:31.2±0.0, 10°.05N×59°.05W, h77km, MD4.1(TRN), After TRN.*
*TRN **29** 06:57:32.0, 10°.14N×59°.06W, h106km, MD4.1*
ISC 29 06:57:34.5±3.9, 10°.4N±0°.2×59°.2W±0°.1, h10km, n46, σ0s73/66, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSP	Speyside	1.58	305	*e*P	Pn	06 58 02.5	-0.1
TOSP				*e*S	Sn	06 58 24.7	+1.6
BBSP	Saint Philip	2.71	355	*e*Pn	Pn	06 58 18.0	-0.2
BBSP				*e*Sn	Sn	06 58 52.3	+1.2
BBSP	Saint Philip	2.71	355	*e*P	Pn	06 58 18.0	-0.2
BBSP				*e*S	Sn	06 58 52.3	+1.2
BBGH	Gun Hill	2.76	353	*e*Pn	Pn	06 58 19.1	+0.2
BBGH				*e*Sn	Sn	06 58 52.6	+0.3
BBGH	Gun Hill	2.76	353	*e*P	Pn	06 58 19.1	+0.2
BBGH				*e*S	Sn	06 58 52.6	+0.3
GRGR	Grenville	2.95	306	*e*Pn	Pn	06 58 21.8	+0.3
GRGR				*e*Sn	Sn	06 58 58.2	+1.1
GRHS	Sauteurs	3.00	308	*e*Pn	Pn	06 58 21.8	-0.4
GRHS				*e*Sn	Sn	06 58 57.6	-0.5
GRHS	Sauteurs	3.00	308	*e*P	Pn	06 58 21.8	-0.4
GRHS				*e*S	Sn	06 58 57.6	-0.5
GRSS	Sisters	3.02	309	*e*Pn	Pn	06 58 22.4	-0.1
GRSS				*e*Sn	Sn	06 58 59.1	+0.4
GRSS	Sisters	3.02	309	*e*P	Pn	06 58 22.4	-0.1
GRSS				*e*S	Sn	06 58 59.1	+0.4
FCV	Fort Charlotte	3.39	324	*e*Pn	Pn	06 58 26.6	-1.0
FCV				*e*Sn	Sn	06 59 08.2	+0.3
FCV	Fort Charlotte	3.39	324	*e*P	Pn	06 58 26.6	-1.0
FCV				*e*S	Sn	06 59 08.2	+0.3
SVB	Belmont	3.49	325	*e*Pn	Pn	06 58 28.3	-0.6
SVB				*e*Sn	Sn	06 59 11.9	+1.6
SVB	Belmont	3.49	325	*e*P	Pn	06 58 28.4	-0.6
SVB				*e*S	Sn	06 59 10.9	+0.5
SSV	Crater Summit	3.50	327	*e*Pn	Pn	06 58 28.2	-1.0
SSV				*e*Sn	Sn	06 59 11.3	+0.5
SSV	Crater Summit	3.50	327	*e*P	Pn	06 58 28.2	-1.0
SSV				*e*S	Sn	06 59 11.3	+0.5
SVV	Soufriere Volc	3.51	326	*e*Pn	Pn	06 58 28.1	-1.1
SVV				*e*Sn	Sn	06 59 11.6	+0.8
SVV	Soufriere Volc	3.51	326	*e*P	Pn	06 58 28.1	-1.1
SVV				*e*S	Sn	06 59 11.6	+0.8
SFAN	Fancy Village	3.54	327	*e*S	Sn	06 59 11.2	-0.3
MCLT	Moule a Chique	3.71	333	*e*P	Pn	06 58 31.2	-0.8
MCLT				*e*S	Sn	06 59 15.4	-0.3
SLPA	Patience	3.83	334	*e*Pn	Pn	06 58 32.9	-0.7
SLPA				*e*Sn	Sn	06 59 18.7	+0.1
SLPA	Patience	3.83	334	*e*P	Pn	06 58 32.9	-0.7
SLPA	Patience	3.83	334	*e*S	Sn	06 59 18.7	+0.1
SLDE	Delcer	3.84	332	*e*Pn	Pn	06 58 33.3	-0.5
SLDE				*e*Sn	Sn	06 59 19.8	+0.7
SLDE	Delcer	3.84	332	*e*P	Pn	06 58 33.3	-0.5
SLDE	Delcer	3.84	332	*e*S	Sn	06 59 19.8	+0.7
SLB	Belfond	3.86	333	*e*P	Pn	06 58 33.6	-0.4
SLB	Belfond	3.86	333	*e*S	Sn	06 59 19.1	-0.4
SLW	Petit Monier	3.98	335	*e*P	Pn	06 58 35.8	0.0
SLW	Petit Monier	3.98	335	*e*S	Sn	06 59 22.9	+0.4
SLBI	Saint Lucia, B	4.00	335	*e*P	Pn	06 58 35.8	-0.2
SLBI	Saint Lucia, B	4.00	335	*e*S	Sn	06 59 23.7	+0.8
MPOM	Morne Pois Mar	4.34	339	*e*P	Pn	06 58 39.2	-1.4
BIM	Bigot	4.49	336	*e*P	Pn	06 58 41.5	-1.2
TRMF	Trois Ilets	4.50	337	*e*P	Pn	06 58 41.3	-1.5
LPMF	Morne Lapointe	4.50	338	*e*P	Pn	06 58 42.0	-0.8
ZAM	Aeronautique	4.52	337	*e*P	Pn	06 58 42.2	-0.8
FDF	Fort de France	4.71	337	*e*Pn	Pn	06 58 45.5	-0.3
FDF				*e*Sn	Sn	06 59 40.7	+0.1
FDF	Fort de France	4.71	337	*e*P	Pn	06 58 45.0	-0.8
FDF	Fort de France	4.71	337	*e*S	Sn	06 59 39.8	-0.8
PML	Morne Lenard	4.77	336	*e*P	Pn	06 58 46.7	+0.2
GBMF	Grand Be	4.78	337	*e*P	Pn	06 58 46.2	-0.5
BAMF	Morne Balai	4.79	337	*e*P	Pn	06 58 46.3	-0.5
CXM	Morne La Croix	4.79	337	*e*P	Pn	06 58 46.8	-0.1
MDPO	Dominica; Chan	5.60	337	*e*S	Sn	06 59 54.4	-7.9
PTGA	Pitinga	11.07	184	*e*Pn	Pn	07 00 02.5	-11

*MAN **29** 07:23:08.9, 5°.46N×126°.88E, h7km, mb5.0, ML3.9, MS3.9*
*IDC **29** 07:23:12.0±1.0, 5°.70N×126°.52E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/37, mbtmp3.9/8, ML3.8/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/41, Error ellipse: s-maj=79.3km s-min=13.2km az=65.0*
*ISCJB **29** 07:23:13.9±2.0, 5°.86N±0°.06×126°.93E±0°.08, h30km±14km, mb4.1/12, MS3.1/3, Error ellipse: s-maj=15.0km s-min=5.9km az=145.9*
*NEIC **29** 07:23:19.0±1.7, 5°.72N×126°.46E, h48km±7km, mb4.4/9, Error ellipse: s-maj=45.3km s-min=15.3km az=69.0*
ISC 29 07:23:15.1±2.6, 5°.81N±0°.06×126°.84E±0°.09, h23km±19km, n31, σ1s19/34, mb4.1/12, MS3.0/3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.16	285	*e*P	Pn	07 23 33.1	-2.8
DDMP				*e*S	Sb	07 23 52.7	+1.7
MATI	Mati	1.27	333	*e*P	Pn	07 23 36.4	-1.1
MATI				*e*S	Sb	07 24 06.2	+12
DAV	Davao City (W)	1.77	315	Pn	Pn	07 23 44.1	-0.3
	106nm,0.3s,baz=123,slow=2.7,SNR=9.1						
DAV				Sn	Sn	07 24 07.0	+0.8
	83nm,0.3s,baz=24,slow=22,SNR=8.4						
DAV				LR	LR	07 24 23.5	
	comp=Z,388nm,21.6s,baz=174,slow=43						
DAV	Davao City (W)	1.77	315	*e*Pn	Pn	07 23 44.6	+0.3
DAV				*e*Sn	Sn	07 24 06.4	+0.2
SKMP	Bagumbayan, Su	2.39	287	*e*P	Pn	07 23 52.5	-0.4
SKMP				*e*S	Sn	07 24 22.3	+0.9
BUKP	Musuan	2.71	320	*e*P	Pn	07 23 57.0	-0.4
BUKP				*e*S	Sb	07 24 35.4	-0.4
CTBH	Cotabato--PC H	2.93	299 ⇑	*i*P	Pn	07 23 54.2	-6.1
BUTP	Butuan	3.37	339	*e*P	Pn	07 24 08.5	+2.2
BUTP				*e*S	Sn	07 24 44.8	-0.8
SIJI	Sorong	7.97	146	Pn	Pn	07 25 08.8	-0.9
	1.4nm,0.3s,baz=233,slow=20,SNR=2.7						
JAGI	Jajag, Banyuwa	19.00	222	*e*P	P	07 27 33.2	-2.2
	32nm,0.6s						
MTN	Manton Dam	19.01	167	*e*P	Pn	07 27 36.3	0.0
	17nm,1.3s						
GUMO	Guam	19.37	65	LR	LR	07 34 44.0	
	comp=Z,25nm,19.9s,baz=178,slow=35						
FITZ	Fitzroy Crossi	23.78	183	P	P	07 28 27.1	+0.9
	3.7nm,0.7s,baz=359,slow=10,SNR=7.0						
FITZ	Fitzroy Crossi	23.78	183	*e*P	P	07 28 27.1	+0.9
	11nm,1.3s						
WRA	Warramunga Arr	26.63	164	P	P	07 28 51.8	-0.3
	1.5nm,0.5s,baz=336,slow=10,SNR=10						
WR1	Warramunga Arr	26.63	164	*e*P	P	07 28 51.9	-0.3
WB2	Warramunga Arr	26.63	164	*e*P	P	07 28 54.5	+2.3
	4.5nm,0.8s						
JHJ	Hachijo jima 2	29.73	22	LR	LR	07 39 42.7	
	comp=Z,36nm,20.2s,baz=27,slow=33						
ASAR	Alice Springs	30.09	167	P	P	07 29 23.3	+0.2
	0.5nm,0.4s,baz=342,slow=7.1,SNR=13						
MJAR

NSK				*e*S	Sg	07 26 55.4	-0.1
	baz=259						
NACB	**Ninganchiao**	**0.88 222**		P	Pn	07 26 46.1	-0.1
	baz=222						
NACB				*e*S	Sg	07 26 57.4	+0.1
	baz=222						
NNS	**Nan Shan**	**0.88 244**		*e*S	Sn	07 26 58.9	0.0
	baz=243						

NNC 29 07:37:56.8±1.1, 50.°03N×78.°27E, h0km, mb3.1, mpv3.3, 17C-8D, Error ellipse: s-maj=13.2km s-min=5.2km az=87.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.57**	**16**	⇑P	Pg	07 38 08.2	+0.3
KUR07				⇓S	Sg	07 38 16.7	+1.4
KUR06	**Kurchatov Arra**	**0.59**	**16**	⇑P	Pg	07 38 08.4	+0.1
KUR06				⇑S	Sg	07 38 17.3	+1.3
KUR16	**Kurchatov Arra**	**0.61**	**14**	⇑P	Pg	07 38 08.8	+0.2
KUR16				⇑S	Sg	07 38 17.5	+1.0
KUR17	**Kurchatov Arra**	**0.61**	**12**	⇑P	Pg	07 38 09.0	+0.4
KUR17				⇓S	Sg	07 38 17.9	+1.4
KURBB	**Kurchatov Arra**	**0.61**	**16**	⇑P	Pg	07 38 08.6	0.0
	18nm,0.3s						
KURBB				⇑S	Sg	07 38 17.5	+1.0
	68nm,0.7s						
KUR15	**Kurchatov Arra**	**0.62**	**18**	⇓P	Pg	07 38 08.4	-0.2
KUR15				⇑S	Sg	07 38 17.2	+0.5
KUR14	**Kurchatov Arra**	**0.62**	**20**	⇑P	Pg	07 38 08.3	-0.4
KUR14				⇑S	Sg	07 38 17.1	+0.3
KUR05	**Kurchatov Arra**	**0.63**	**16**	⇓P	Pg	07 38 08.8	-0.2
KUR05				⇑S	Sg	07 38 18.1	+0.9
KUR04	**Kurchatov Arra**	**0.66**	**16**	⇓P	Pg	07 38 09.3	-0.1
KUR04				⇑S	Sg	07 38 18.2	+0.3
SEM	**Semipalatinsk**	**1.33**	**73**	P	Pn	07 38 26.8	+4.0
	8.0nm,0.1s						
SEM				S	Sn	07 38 42.0	+0.7
	62nm,0.2s						
MAKZ	**Makanchi**	**4.06**	**141**	⇑Pn	Pn	07 38 59.3	-1.0
	0.4nm,0.5s						
MAKZ				⇓Pg	Pb	07 39 07.7	-1.6
	1.2nm,0.5s						
MAKZ				⇑Lg	Lg	07 39 59.8	
	3.7nm,0.6s						
MK31	**Makanchi Array**	**4.21**	**139**	⇑Pn	Pn	07 39 01.0	-1.2
	0.1nm,0.1s,baz=323,slow=10,SNR=39						
MK31				⇓Pg	Pb	07 39 10.7	-0.9
	0.2nm,0.2s,baz=306,slow=9.7,SNR=16						
MK31				⇓Sn	Sn	07 39 50.5	-1.5
	0.1nm,0.2s,baz=316,slow=26,SNR=8.3						
MK31				⇑Lg	Lg	07 40 06.9	
	3.2nm,0.5s,baz=335,slow=36,SNR=12						
KAPS	**Kapalarasan**	**4.81**	**171**	Pg	Pg	07 39 28.1	-0.8
	0.9nm,0.2s						
KAPS				Lg	Lg	07 40 27.2	
	5.9nm,0.7s						
BTLS	**Baital**	**5.75**	**211**	Pg	Pg	07 39 50.2	+3.2
	5.0nm,0.1s						
BTLS				Lg	Lg	07 41 05.1	
	2.1nm,0.3s						
ARXS	**Arharly**	**5.83**	**183**	Pg	Pg	07 39 47.2	-1.3
	1.0nm,0.4s						
ARXS				Lg	Lg	07 40 60.0	
	4.3nm,0.5s						
KUU	**Kurty**	**6.28**	**193**	Pg	Pg	07 39 57.1	-0.1
	1.6nm,0.1s						
KUU				Lg	Lg	07 41 16.8	
	4.0nm,0.6s						

NNC 29 07:38:41.6±1.0, 48.°27N×70.°09E, h0km, mb3.2, mpv3.0, 6C-1D, Error ellipse: s-maj=9.3km s-min=6.7km az=14.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTUK	**Ortayu**	**1.50**	**90**	P	Pn	07 39 08.5	-1.3
	7.1nm,0.2s						
OTUK	**Ortayu**	**1.50**	**90**	⇑P	Pn	07 39 08.4	-1.3
	6.7nm,0.3s						
OTUK				⇓S	Sn	07 39 30.0	-0.1
	27nm,0.4s						
BRVK	**Borovoye**	**4.79**	**1**	⇑Pn	Pn	07 39 56.3	+1.3
	2.7nm,0.8s						
BRVK				⇑Sn	Sn	07 40 51.6	+0.4
	0.9nm,0.3s						
KK31	**Karatay Array**	**5.18**	**177**	Pn	Pn	07 40 00.6	+0.3
	0.5nm,0.5s,baz=2.9,slow=13,SNR=5.5						
KK31				⇑Sn	Sn	07 41 01.6	+0.8
	0.3nm,0.3s						
KK31				⇑Lg	Lg	07 41 25.6	
	1.3nm,0.6s						
AB31	**Akbulak array**	**6.78**	**282**	Pn	Pn	07 40 23.9	+1.6
	0.3nm,0.5s,baz=234,slow=22,SNR=6.1						
AB31				⇑Lg	Lg	07 42 16.7	
	0.2nm,0.3s						

*JMA **29** 07:40:34.9±0.1, 24.°66N×122.°39E, h87km±2km, M1.9*
*ISCJB **29** 07:40:35.5±0.5, 24.°66N±0.°03×122.°41E±0.°02, h80km±5km, Error ellipse: s-maj=4.5km s-min=3.1km az=168.8*
*TAP **29** 07:40:35.1, 24.°69N×122.°40E, h83km±1km, ML3.0, B*
ISC 29 07:40:35.8±1.5, 24.°66N±0.°04×122.°41E±0.°03, h80km±9km, n61, σ0°83/100, 4C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.28**	**246**	P	**Pn**	**07 40 48.2**	**+0.3**
	baz=240						
EOS1				S	**Sn**	**07 40 58.4**	**+1.6**
	baz=240						
TWC	**Suao**	**0.51**	**264**	*i* P	**Pn**	**07 40 49.2**	**-0.4**
	baz=260						
TWC				S	**Sn**	**07 40 59.3**	**-0.6**
	baz=260						
TWB1	**Santiao Chiao**	**0.51**	**312**	*e*P	**Pn**	**07 40 49.2**	**-0.5**
	baz=310						
JYNG	**Yonagunijimaku**	**0.53**	**113**	P	**Pn**	**07 40 49.8**	**-0.1**
JYNG				*e*S	**Sn**	**07 41 01.0**	**+0.8**
NTC	**Toucheng**	**0.56**	**290**	P	**Pn**	**07 40 49.7**	**-0.4**
	baz=287						
NTC				*e*S	**Sn**	**07 41 00.4**	**-0.3**
	baz=287						
YOJ	**Yonaguni jima**	**0.59**	**110**	P	**Pn**	**07 40 50.2**	**-0.1**
	baz=112						
YOJ				S	**Sn**	**07 41 01.5**	**+0.4**
	baz=112						
TIPB	**Shuangxi**	**0.61**	**300**	⇓*i* P	**Pn**	**07 40 50.2**	**-0.4**
	baz=297						
TIPB				*i* S	**Sn**	**07 41 01.1**	**-0.5**
	baz=297						
NANB	**Nanao**	**0.64**	**249**	P	**Pn**	**07 40 51.0**	**+0.1**
	baz=246						
NANB				*e*S	**Sn**	**07 41 02.7**	**+0.6**
	baz=246						
ENA	**Nanau**	**0.65**	**249**	⇑*i* P	**Pn**	**07 40 51.1**	**+0.1**
	baz=245						
ENA				S	**Sn**	**07 41 02.9**	**+0.7**
	baz=245						
TWE	**Neicheng**	**0.68**	**275**	P	**Pn**	**07 40 51.1**	**-0.1**
	baz=272						
TWE				*e*S	**Sn**	**07 41 02.3**	**-0.3**
	baz=272						
NWF	**Wu-fen Shan**	**0.70**	**306**	*e*P	**Pn**	**07 40 51.3**	**-0.3**
	baz=303						
NWF				*e*S	**Sn**	**07 41 03.7**	**+0.5**
	baz=303						
WFSB	**Wu-fen Shan**	**0.70**	**306**	P	**Pn**	**07 40 51.3**	**-0.2**
	baz=303						
WFSB				*e*S	**Sn**	**07 41 03.5**	**+0.4**
	baz=303						
ENTT	**Nioudou**	**0.77**	**269**	⇑*i*P	**Pn**	**07 40 52.4**	**+0.2**
	baz=265						
ENTT				*e*S	**Sn**	**07 41 05.5**	**+1.1**
	baz=265						
TWA	**Mucha**	**0.81**	**293**	*e*P	**Pn**	**07 40 52.4**	**-0.3**
	baz=291						
NACB	**Ninganchiao**	**0.89**	**237**	*i* P	**Pn**	**07 40 52.9**	**-0.6**
	baz=234						
NACB				*e*S	**Sn**	**07 41 06.6**	**-0.1**
	baz=234						
TATO	**Taipei**	**0.89**	**291**	P	**Pn**	**07 40 53.3**	**-0.3**
	baz=288						
YM01	**YM01**	**0.90**	**303**	⇑*i*P	**Pn**	**07 40 53.3**	**-0.5**
	baz=300						
YM01				*e*S	**Sn**	**07 41 07.4**	**+0.3**
	baz=300						
YM08	**YM08**	**0.91**	**305**	*e*P	**Pn**	**07 40 52.8**	**-1.0**
	baz=303						
YM10	**YM10**	**0.91**	**303**	P	**Pn**	**07 40 53.4**	**-0.5**
	baz=301						
YM05	**YM05**	**0.91**	**303**	*e*P	**Pn**	**07 40 53.3**	**-0.6**
	baz=301						
YM05				*e*S	**Sn**	**07 41 07.2**	**-0.2**
	baz=301						
YM04	**YM04**	**0.93**	**302**	P	**Pn**	**07 40 53.3**	**-0.8**
	baz=300						
YM04				*e*S	**Sn**	**07 41 07.8**	**+0.1**
	baz=300						
YHNB	**Yeheng**	**0.94**	**271**	P	**Pn**	**07 40 54.2**	**0.0**
	baz=268						
YHNB				S	**Sn**	**07 41 08.0**	**+0.1**
	baz=268						
TWD	**Chiawan**	**0.94**	**232**	P	**Pn**	**07 40 54.0**	**-0.1**
	baz=230						
TWD				*e*S	**Sn**	**07 41 07.6**	**-0.2**
	baz=230						
NSK	**Sanguang**	**0.95**	**271**	⇓*i*P	**Pn**	**07 40 54.3**	**-0.1**
	baz=268						
NSK				*e*S	**Sn**	**07 41 08.2**	**-0.1**
	baz=268						
ETLH	**Xiulin Townshi**	**0.96**	**242**	P	**Pn**	**07 40 54.0**	**-0.5**
	baz=240						
ETLH				S	**Sn**	**07 41 07.9**	**-0.4**
	baz=240						
NNSB	**Datong**	**0.96**	**256**	P	**Pn**	**07 40 54.4**	**-0.1**
	baz=254						
NNSB				*e*S	**Sn**	**07 41 08.3**	**-0.2**
	baz=254						
NNS	**Nan Shan**	**0.97**	**257**	P	**Pn**	**07 40 54.5**	**-0.1**
	baz=254						
NNS				*e*S	**Sn**	**07 41 08.4**	**-0.2**
	baz=254						
PCYT	**Pengchaiyu**	**1.01**	**343**	P	**Pn**	**07 40 54.7**	**-0.3**
	baz=342						
ENLB	**Shoufeng**	**1.05**	**224**	*e*S	**Sn**	**07 41 07.9**	**-2.3**
	baz=222						
WHF	**Hehuan Shan**	**1.16**	**244**	⇑*i*P	**Pn**	**07 40 57.0**	**-0.2**
	baz=242						
WHF				S	**Sn**	**07 41 12.8**	**-0.4**
	baz=242						
TDCB	**Techi**	**1.21**	**251**	*e*P	**Pn**	**07 40 57.9**	**+0.3**
	baz=248						
TDCB				*e*S	**Sn**	**07 41 13.5**	**-0.4**
	baz=248						
ESL	**Shilin**	**1.23**	**227**	*e*P	**Pn**	**07 40 57.0**	**-0.7**
	baz=224						
ESL				*e*S	**Sn**	**07 41 12.9**	**-1.1**
	baz=224						
IRIF	**Iriomote-Funau**	**1.25**	**105**	P	**Pn**	**07 40 57.9**	**0.0**
IRIF				*e*S	**Sn**	**07 41 14.8**	**+0.3**
LIOB	**Emei**	**1.27**	**270**	P	**Pn**	**07 40 58.2**	**0.0**
	baz=267						
LIOB				S	**Sn**	**07 41 15.0**	**+0.1**
	baz=267						
CHGB	**Renai**	**1.27**	**242**	P	**Pn**	**07 40 58.6**	**+0.1**
	baz=240						
CHGB				*e*S	**Sn**	**07 41 16.0**	**+0.5**
	baz=240						
NSTT	**Nanjuang**	**1.28**	**269**	*e*P	**Pn**	**07 40 58.3**	**0.0**
	baz=267						
NSTT				*e*S	**Sn**	**07 41 15.3**	**+0.1**
	baz=267						
OWD	**Renai**	**1.32**	**238**	P	**Pn**	**07 40 58.9**	**-0.1**
	baz=236						
OWD				*e*S	**Sn**	**07 41 15.9**	**-0.6**
	baz=236						
EGFH	**Guangfu**	**1.33**	**222**	*e*S	**Sn**	**07 41 15.5**	**-1.0**
	baz=221						
WHP	**Taichung City**	**1.38**	**254**	*e*P	**Pn**	**07 41 00.3**	**+0.6**
	baz=252						
WHP				*e*S	**Sn**	**07 41 18.6**	**+0.8**
	baz=252						
VWDT	**VWDT**	**1.47**	**232**	P	**Pn**	**07 41 00.8**	**+0.1**
	baz=230						
VWDT				S	**Sn**	**07 41 19.3**	**-0.1**
	baz=230						
HGSD	**Ruisui**	**1.47**	**218**	*e*S	**Sn**	**07 41 19.9**	**+0.3**
	baz=216						
DPDB	**Guoxing**	**1.49**	**245**	*e*S	**Sn**	**07 41 20.8**	**+0.7**
	baz=243						
EHY	**Hungye**	**1.52**	**221**	*e*P	**Pn**	**07 41 01.8**	**+0.4**
	baz=219						
JKRS	**Kuro-shima**	**1.52**	**106**	P	**Pn**	**07 41 01.6**	**+0.2**
JKRS				*e*S	**Sn**	**07 41 21.4**	**+0.7**
SMLT	**Sun Moon Lake**	**1.58**	**241**	*e*P	**Pn**	**07 41 03.3**	**+1.0**
	baz=239						
SMLT				*e*S	**Sn**	**07 41 23.9**	**+1.6**
	baz=239						
SSLB	**Suanglung**	**1.59**	**237**	*e*P	**Pn**	**07 41 03.0**	**+0.7**
	baz=235						
SSLB				*e*S	**Sn**	**07 41 24.0**	**+1.7**
	baz=235						
TYC	**Yuchr**	**1.60**	**242**	P	**Pn**	**07 41 03.5**	**+1.1**
	baz=240						
TYC				*e*S	**Sn**	**07 41 24.3**	**+1.7**
	baz=240						
JIJ	**Ishigaki jima**	**1.61**	**100**	P	**Pn**	**07 41 02.2**	**-0.4**
JIJ				*e*S	**Sn**	**07 41 22.5**	**-0.3**
YULB	**Yu-li**	**1.62**	**219**	*e*P	**Pn**	**07 41 02.5**	**-0.2**
	baz=217						
YULB				*e*S	**Sn**	**07 41 21.0**	**-2.1**
	baz=217						
TWF1	**Yuli**	**1.65**	**218**	P	**Pn**	**07 41 03.6**	**+0.4**
	baz=216						
TWF1				*e*S	**Sn**	**07 41 23.0**	**-0.8**
	baz=216						
WHYT	**Xinyi Township**	**1.71**	**236**	*e*S	**Sn**	**07 41 26.6**	**+1.2**
	baz=234						
WNT	**Mingjian**	**1.75**	**244**	*e*S	**Sn**	**07 41 27.2**	**+1.0**
	baz=242						
CHKT	**Chengkung**	**1.82**	**212**	*e*S	**Sn**	**07 41 25.6**	**-2.2**
	baz=210						
CHN5	**Tsauling**	**1.90**	**236**	*e*S	**Sn**	**07 41 31.6**	**+1.8**
	baz=235						
ELDTW	**Lidau**	**1.94**	**221**	*e*S	**Sn**	**07 41 29.7**	**-1.1**
	baz=220						
RLNB	**Erlin**	**2.02**	**248**	*e*S	**Sn**	**07 41 32.4**	**0.0**
	baz=246						
CHN4	**Tsaushan**	**2.11**	**232**	*e*S	**Sn**	**07 41 36.5**	**+1.9**
	baz=231						
TWGBT	**Beinan**	**2.20**	**214**	*e*S	**Sn**	**07 41 35.3**	**-1.6**
	baz=212						
TWK	**Hsinying**	**2.24**	**232**	*e*S	**Sn**	**07 41 39.0**	**+1.2**
	baz=230						
CHN1	**Nanshi**	**2.26**	**230**	*e*S	**Sn**	**07 41 39.8**	**+1.5**
	baz=228						
PHUB	**P'eng-hu**	**2.83**	**247**	*e*S	**Sn**	**07 41 49.8**	**-2.2**
	baz=245						

*ISCJB **29** 07:50:46.6±0.7, 21.°2S±0.°1×178.°7W±0.°1, h579km, mb3.6/9, Error ellipse: s-maj=20.6km s-min=15.3km az=43.2*
*IDC **29** 07:50:46.6±4.3, 21.°09S×178.°65W, h564km±51km, mb3.1/9, mb1 3.4/11, mb1mx3.2/40, mbtmp4.1/11, Error ellipse: s-maj=24.4km s-min=20.0km az=62.0*
ISC 29 07:50:47.7±0.9, 21.°1S±0.°2×178.°7W±0.°2, h579km, n13, σ0°89/12, mb3.6/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.84**	**263**	P	**P**	**07 53 45.1**	**-0.3**
	0.5nm,0.3s,baz=126,slow=17,SNR=4.5						
URZ	**Urewera**	**17.45**	**191**	P	**P**	**07 54 17.3**	**-1.8**
	1.3nm,0.3s,baz=342,slow=5.4,SNR=10						
CTA	**Charters Tower**	**32.77**	**265**	P	**P**	**07 56 34.8**	**+0.4**
	3.0nm,0.4s,baz=86,slow=11,SNR=13						
ASAR	**Alice Springs**	**43.73**	**257**	P	**P**	**07 58 03.3**	**+0.3**
	3.0nm,0.6s,baz=94,slow=7.8,SNR=46						
WRA	**Warramunga Arr**	**43.86**	**263**	P	**P**	**07 58 03.8**	**-0.2**
	1.3nm,0.4s,baz=92,slow=7.6,SNR=16						
VNDA	**Vanda**	**57.23**	**185**	P	**P**	**07 59 41.6**	**+1.5**
	0.5nm,0.5s,baz=6.2,slow=7.1,SNR=6.4						
MJAR	**Matsushiro Arr**	**70.32**	**324**	P	**P**	**08 01 04.0**	**+0.1**
	1.0nm,0.3s,baz=148,slow=1.9,SNR=2.8						
PETK	**Petropavlovsk-**	**76.70**	**346**	P	**P**	**08 01 40.1**	**+0.4**
	1.5nm,0.6s,baz=107,slow=7.7,SNR=3.6						
NVAR	**Mina Array Bea**	**81.93**	**44**	P	**P**	**08 02 07.4**	**-0.5**
	0.2nm,0.5s,baz=218,slow=5.6,SNR=3.2						
ILAR	**Eielson Array**	**89.07**	**13**	P	**P**	**08 02 40.9**	**-0.5**
	0.3nm,0.4s,baz=215,slow=5.4,SNR=5.2						
PDAR	**Pinedale Array**	**89.87**	**43**	P	**P**	**08 02 46.5**	**+0.6**
	0.3nm,0.7s,baz=180,slow=6.3,SNR=3.1						
AKASG	**Malin Array Be**	**143.23**	**330**	PKP	PKPab	08 09 14.2	-0.3
	3.2nm,0.5s,baz=42,slow=4.3,SNR=5.0						
BRTR	**Keskin Array B**	**146.75**	**311**	PKPbc	**PKPbc**	**08 09 25.1**	**-0.7**
	0.4nm,0.5s,baz=116,slow=3.4,SNR=2.5						

*ISCJB **29** 07:55:41.0±0.2, 7.°37S±0.°03×128.°61E±0.°03, h151km, mb4.3/41, Error ellipse: s-maj=4.9km s-min=4.0km az=176.0*
*DJA **29** 07:55:42.5±0.3, 8.°S±4.°×12.°9E±.°, h151km±11km, M4.7/8, mb4.6/7, mB5.2/7, MLv4.8/8, Mw(mB)4.6/7*
*NEIC **29** 07:55:44.0±2.3, 7.°38S×128.°49E, h163km±3km, mb4.4/32, Error ellipse: s-maj=14.4km s-min=12.0km az=73.0*
*IDC **29** 07:55:43.6±1.8, 7.°32S×128.°51E, h159km±16km, mb3.9/16, mb1 4.0/20, mb1mx3.8/45, mbtmp4.4/20, Error ellipse: s-maj=17.5km s-min=9.3km az=72.0*
ISC 29 07:55:42.6±0.3, 7.°37S±0.°04×128.°56E±0.°05, h151km, n113, σ1°44/120, mb4.4/41, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.78**	**103**	*e*Pn	**Pn**	**07 56 30.5**	**+3.2**
SAUI				*e*Sn	**Sn**	**07 57 01.1**	**-0.6**
SOEI	**Soe**	**4.87**	**241**	*e*Pn	**Pn**	**07 56 54.8**	**+0.4**
SOEI	**Soe**	**4.87**	**241**	P	**Pn**	**07 56 55.2**	**+0.8**
SOEI				S	**Sn**	**07 57 50.8**	**+0.4**
BATI	**Baumata**	**5.61**	**239**	P	**Pn**	**07 57 04.7**	**+0.6**
	131nm,0.3s,baz=292,slow=2.2,SNR=66						
BATI				S	**Sn**	**07 58 04.2**	**-3.6**
	94nm,0.3s,baz=297,slow=2.3,SNR=12						
BATI	**Baumata**	**5.61**	**239**	P	**Pn**	**07 57 04.7**	**+0.6**
	172nm,0.5s,4μm1.0nm						
FAKI	**Fak Fak**	**5.74**	**40**	*e*Pn	**Pn**	**07 57 06.7**	**+0.7**
FAKI				*e*Sn	**Sn**	**07 58 11.1**	**0.0**
FAKI	**Fak Fak**	**5.74**	**40**	P	**Pn**	**07 57 06.3**	**+0.3**
MTN	**Manton Dam**	**6.00**	**155**	*e*Pn	**Pn**	**07 57 09.1**	**-0.3**
MTN				*e*Sn	**Sn**	**07 58 13.1**	**-4.1**
MMRI	**Maumere**	**6.39**	**258**	*e*Pn	**Pn**	**07 57 11.1**	**-3.5**
MMRI	**Maumere**	**6.39**	**258**	P	**Pn**	**07 57 15.3**	**+0.7**
EDFI	**Ende, Flores**	**6.94**	**258**	P	**Pn**	**07 57 23.1**	**+1.1**
	27nm,1.0s,1μm0.1nm						
SIJI	**Sorong**	**7.00**	**23**	P	**Pn**	**07 57 23.8**	**+1.1**
	11nm,0.3s,baz=226,slow=23,SNR=15						
SIJI				S	**Sn**	**07 58 37.8**	**-3.4**
	1.3nm,0.3s,baz=221,slow=20,SNR=1.8						
KAPI	**Kappang**	**9.07**	**284**	P	**Pn**	**07 57 51.8**	**+1.6**
	0.9nm,0.3s,baz=88,slow=17,SNR=2.2						
FITZ	**Fitzroy Crossi**	**11.04**	**195**	P	**Pn**	**07 58 12.8**	**-3.6**
	6.9nm,0.3s,baz=27,slow=10,SNR=100						
FITZ				S	Sn	08 00 07.6	-11
	2.9nm,0.3s,baz=18,slow=20,SNR=4.2						
WRAB	**Tennant Creek**	**13.69**	**156**	*e*Pn	**Pn**	**07 58 48.1**	**-2.6**
WR1	**Warramunga Arr**	**13.70**	**156**	*e*Pn	**Pn**	**07 58 47.6**	**-3.1**
WR1				*e*Sn	Sn	08 01 09.4	-13
WRA	**Warramunga Arr**	**13.70**	**156**	P	**Pn**	**07 58 47.6**	**-3.2**
	3.8nm,0.3s,baz=324,slow=12,SNR=34						
WRA				S	Sn	08 01 09.4	-13
	3.5nm,0.3s,baz=127,slow=26,SNR=6.8						
WB2	**Warramunga Arr**	**13.70**	**156**	*e*Pn	**Pn**	**07 58 47.7**	**-3.1**
COEN	**Coen**	**15.78**	**116**	*e*Pn	**P**	**07 59 19.1**	**+1.7**
	8.9nm,0.6s						
PSA00	**Pilbara Seismi**	**16.44**	**210**	*e*P	**Pn**	**07 59 24.3**	**-0.4**
	24nm,0.5s						
AS31	**Alice Springs**	**17.00**	**163**	*e*P	**P**	**07 59 30.9**	**0.0**
	6.0nm,0.4s						
ASAR	**Alice Springs**	**17.00**	**163**	P	**Pn**	**07 59 31.7**	**+0.2**
	2.2nm,0.3s,baz=335,slow=10,SNR=163						
ASAR				S	S	08 02 28.5	-12
	0.9nm,0.3s,baz=306,slow=19,SNR=5.0						
SBUM	**Sibu**	**19.00**	**300**	*e*P	**Pn**	**07 59 56.3**	**+1.0**
	5.8nm,0.6s						
KSM	**Kuching**	**20.22**	**295**	*e*P	**P**	**08 00 06.9**	**+0.9**
	26nm,0.6s						
CTA	**Charters Tower**	**21.30**	**128**	P	**P**	**08 00 18.5**	**+0.9**
	2.6nm,0.6s,baz=308,slow=15,SNR=4.0						
FORT	**Forrest**	**23.30**	**181**	*e*P	**P**	**08 00 38.0**	**+1.0**
	9.9nm,0.7s						
MORW	**Morawa**	**24.60**	**207**	*e*P	**P**	**08 00 50.0**	**+1.1**
	8.4nm,1.1s						
BBOO	**Buckleboo**	**26.26**	**166**	*e*P	**P**	**08 01 04.0**	**+0.2**
	5.2nm,0.6s						
STKA	**Stephens Creek**	**27.25**	**155**	P	**P**	**08 01 12.8**	**+0.2**
	3.7nm,0.5s,baz=329,slow=9.5,SNR=16						
STKA	**Stephens Creek**	**27.25**	**155**	*e*P	**P**	**08 01 13.2**	**+0.5**
	2.9nm,1.4s						
NWAO	**Narrogin (SRO)**	**27.52**	**201**	*e*P	**P**	**08 01 14.7**	**-0.4**
	32nm,1.4s						
YOJ	**Yonaguni jima**	**32.10**	**350**	*e*P	**P**	**08 01 55.1**	**-0.4**
	69nm,1.4s						
CAN	**Canberra**	**33.55**	**149**	*e*P	**P**	**08 02 09.9**	**+1.7**
	7.2nm,1.2s						
TOO	**Toolangi**	**33.77**	**155**	*e*P	**P**	**08 02 12.1**	**+2.1**
	13nm,1.4s						
WHN	**Wuhan**	**40.09**	**341**	P	**P**	**08 03 04.3**	**+1.0**
MAJO	**Matsushiro**	**44.61**	**11**	*e*P	**P**	**08 03 38.1**	**-1.7**
MJAR	**Matsushiro Arr**	**44.61**	**11**	P	**P**	**08 03 38.1**	**-1.7**
	1.5nm,0.6s,baz=190,slow=9.6,SNR=4.3						
XAN	**Xi'an**	**45.19**	**337**	P	**P**	**08 03 43.5**	**-1.1**
XAN				pP	pP	08 03 58.5	-18
XAN				sP	pwP	08 04 05.0	-18
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
XAN				pmax	pmax		
	comp=Z,84nm,4.3s						
XAN				LR	LR		
	comp=E,120nm,21.7s						
XAN				LR	LR		
	comp=Z,150nm,20.6s						
XAN	**Xi'an**	**45.19**	**337**	*e*P	**P**	**08 03 44.0**	**-0.5**
	comp=Z,12nm,0.8s						
WAKE	**Wake Island**	**45.93**	**54**	*e*P	**P**	**08 03 47.2**	**-3.3**
	comp=Z,169nm,1.3s						
LZH	**Lanzhou**	**49.07**	**333**	*e*P	**P**	**08 04 19.3**	**+4.5**
LZH				pP	pwP	08 04 55.8	+1.7
LZH				sP	sP	08 05 09.3	+5.6
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC	**Hu-ho-hao-te**	**50.47**	**343**	P	**P**	**08 04 29.3**	**+4.2**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,28nm,5.5s						
WHZ	**Wether Hill Ro**	**51.20**	**145**	*e*P	**P**	**08 04 31.2**	**+0.7**
	comp=Z,49nm,1.5s						
USRK	**Ussuriysk Ar.**	**51.42**	**3**	P	**P**	**08 04 32.1**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=176,slow=6.4,SNR=3.7						
RPZ	**Rata Peaks**	**51.83**	**141**	P	**P**	**08 04 36.0**	**+0.8**
	comp=Z,5.0nm,0.4s,ba

ZAA0	Zalesovo Array	71.29	334	*e*P	P	08 06 45.3	-0.1
	comp=Z,4.2nm,0.7s						
ZALV	Zalesovo Beam	71.29	334	P	P	08 06 44.6	-0.8
	comp=Z,4.7nm,0.6s,baz=134,slow=5.2,SNR=13						
ZAA1	Zalesovo Array	71.29	334	*e*P	P	08 06 44.6	-0.8
KURBB	Kurchatov Arra	72.08	329	P	P	08 06 49.9	-0.3
	comp=Z,6.3nm,0.7s,baz=130,slow=5.0,SNR=54						
KURK	Kurchatov	72.09	329	*e*P	P	08 06 50.6	+0.3
	comp=Z,9.6nm,1.0s						
VNDA	Vanda	72.26	173	P	P	08 06 50.8	-0.1
	comp=Z,0.8nm,0.5s,baz=316,slow=7.4,SNR=12						
VNDA	Vanda	72.26	173	*e*P	P	08 06 51.1	+0.2
	comp=Z,1.5nm,0.9s						
KK31	Karatay Array	72.68	319	*e*P	P	08 06 54.2	+0.2
	comp=Z,3.4nm,1.1s						
KKAR	Karatay Array	72.68	319	*e*P	P	08 06 54.3	+0.2
	comp=Z,3.4nm,1.1s						
SBA	Scott Base	73.17	172	*e*P	P	08 06 57.7	+1.5
MAW	Mawson	74.09	201	P	P	08 07 02.1	+0.3
	comp=Z,0.5nm,0.4s,baz=56,slow=7.3,SNR=5.6						
MAW	Mawson	74.09	201	*e*P	P	08 07 02.6	+0.9
	comp=Z,1.0nm,1.4s						
BVAR	Borovoye Array	77.62	328	P	P	08 07 21.9	-0.1
	comp=Z,1.1nm,0.4s,baz=111,slow=6.5,SNR=12						
TIXI	Tiksi	78.85	0	P	P	08 07 27.6	-0.8
	comp=Z,2.7nm,0.6s,baz=181,slow=1.8,SNR=4.1						
TIXI	Tiksi	78.85	0	*e*P	P	08 07 27.9	-0.5
	comp=Z,3.2nm,0.6s						
ABKAR	Akbulak array	81.91	322	*e*P	P	08 07 44.8	-0.4
	comp=Z,3.2nm,0.9s						
QSPA	South Pole Qui	82.61	180	*e*P	P	08 07 48.5	-0.3
	comp=Z,3.1nm,1.4s						
AKTO	Aktyubinsk	83.50	323	P	P	08 07 53.2	-0.2
	comp=Z,2.8nm,0.7s,baz=119,slow=8.4,SNR=11						
ILAR	Eielson Array	94.28	25	P	P	08 08 42.5	-2.0
	comp=Z,0.7nm,1.0s,baz=238,slow=4.5,SNR=4.7						
ILB	Eielson Array	94.28	25	*e*P	P	08 08 42.5	-2.0
	comp=Z,2.1nm,1.3s						
YKA	Yellowknife Ar	108.70	26	PKiKP	PKiKP	08 13 52.6	-0.7
	comp=Z,0.1nm,0.3s,baz=308,slow=1.8,SNR=8.8						
YKB5	Yellowknife Ar	108.70	26	*e*PKiKP	PKiKP	08 13 52.6	-0.7
GEC2	GERESS Array S	111.78	320	*e*PKiKP	PKiKP	08 13 58.5	-1.2
GERES	GERESS Array B	111.78	320	PKiKP	PKiKP	08 13 59.0	-0.7
	comp=Z,0.5nm,0.5s,baz=40,slow=2.3,SNR=4.9						
REDW	Red Top Meadow	117.08	45	*e*PKPdf	PKiKP	08 14 11.2	+1.0
SNOW	Snow King Moun	117.12	45	*e*PKPdf	PKiKP	08 14 11.4	+1.0
PD31	Pinedale Array	118.16	45	*e*PKPdf	PKPdf	08 14 11.7	-0.6
PDAR	Pinedale Array	118.16	45	PKP	PKPdf	08 14 11.7	-0.6
	comp=Z,0.3nm,0.7s,baz=168,slow=1.4,SNR=3.5						
EKA	Eskdalemuir Ar	118.80	331	PKP	PKPdf	08 14 11.7	-1.1
	comp=Z,0.5nm,0.5s,baz=36,slow=4.0,SNR=5.5						
PV01	Paradox Valley	120.19	50	*e*PKPdf	PKiKP	08 14 17.3	+0.8
MVCO	Mesa Verde	120.48	51	*e*PKPdf	PKiKP	08 14 18.2	+1.1
TXAR	Lajitas Array	126.34	59	PKP	PKiKP	08 14 28.6	-0.1
	comp=Z,0.3nm,0.4s,baz=190,slow=2.4,SNR=12						
TORD	Torodi Ar. Bea	127.48	281	PKP	PKPdf	08 14 29.2	-1.4
	comp=Z,4.7nm,0.3s,baz=95,slow=2.2,SNR=2.0						
TOA1	Torodi Ar. Sit	127.48	281	*e*PKPdf	PKPdf	08 14 29.2	-1.4
C40A	Isle Royale Na	128.47	32	*e*PKPdf	PKPdf	08 14 31.4	-0.2
JCT	Junction City	129.28	56	*e*PKPdf	PKiKP	08 14 34.8	+0.3
BATG	Bathurst New B	138.31	15	*e*PKPdf	PKiKP	08 14 52.0	-0.2
LRAL	Lakeview Retre	138.32	47	*e*PKPdf	PKiKP	08 14 52.4	-0.3
GO02	Mina Guanaco	143.15	152	*e*PKPdf	PKPbc	08 14 57.5	+0.3
LVC	Limon Verde	145.64	151	PKPbc	PKPab	08 15 05.9	+0.6
	comp=Z,1.9nm,0.4s,baz=198,slow=3.2,SNR=4.4						
CPUP	Villa Florida	146.02	171	PKPbc	PKPbc	08 15 05.4	0.0
	comp=Z,2.8nm,0.8s,baz=146,slow=1.6,SNR=5.4						
CPUP	Villa Florida	146.02	171	*e*PKPdf	PKPbc	08 15 05.6	+0.2
061Z	Ochoppi	146.44	53	*e*PKPbc	PKPbc	08 15 06.9	+0.3
ESPN	Las Esperanzas	147.28	79	*e*PKPbc	PKPbc	08 15 10.3	+0.9
PB11	IPOC Station P	147.62	147	*e*PKPbc	PKPbc	08 15 10.9	+0.6
GO01	Chusmiza	147.94	147	*e*PKPbc	PKPbc	08 15 11.6	0.0
MNMC	Minye Minye	148.16	146	*e*PKPbc	PKPbc	08 15 12.1	+0.2
ATAH	Atahualpa	149.50	118	PKPbc	PKiKP	08 15 16.6	0.0
	comp=Z,5.1nm,0.7s,baz=53,slow=5.3,SNR=3.9						
LPAZ	La Paz	151.27	145	PKPbc	PKiKP	08 15 20.5	0.0
	comp=Z,1.4nm,0.4s,baz=34,slow=4.2,SNR=15						
LPAZ				PKPab	PKPab	08 15 29.2	+0.9
	comp=Z,4.3nm,0.8s,baz=283,slow=1.5,SNR=15						
LPAZ	La Paz	151.27	145	*e*PKPbc	PKPbc	08 15 19.8	-0.2
LPAZ				*e*PKPab	PKPab	08 15 29.0	+0.6
SIV	San Ignacio	154.91	158	PKPab	PKPab	08 15 43.2	+0.2
	comp=Z,1.1nm,0.6s,baz=246,slow=4.9,SNR=6.7						

*ISCJB **29** 08:00:21.8±0.5, 38°.86N±0°.03×29°.13E±0°.05, h9km±6km, Error ellipse: s-maj=7.8km s-min=4.5km az=32.8*
*DDA **29** 08:00:21.5, 38°.85N×29°.16E, h7km±2km, ML2.9*
*ISK **29** 08:00:21.1, 38°.88N×29°.11E, h6km, ML2.1/7*

ISC 29 08:00:21.7±1.0, 38°.87N±0°.03×29°.14E±0°.04, h12km±10km, n12, σ0°45/17, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
USAK	Uak-Merkez	0.18	211	*i* P	Pg	08 00 26.0	+0.2
USAK				*i* S	Sg	08 00 28.8	+0.1
USAK				IAML_P			
	comp=Z,10μm,0.1s						
GDZ	Gediz	0.35	50	*i* P	Pb	08 00 29.7	-0.2
GDZ				*i* S	Sb	08 00 34.8	-0.7
KULA	Kula-Manisa	0.51	227	PG	Pg	08 00 31.4	-0.4
KULA				SG	Sg	08 00 38.4	-0.3
KHAL	Karahalli	0.57	151	*i* P	Pb	08 00 33.7	0.0
KHAL				*i* S	Sg	08 00 40.1	-0.3
TVSB	Tavsanli	0.63	23	PG	Pg	08 00 33.8	-0.3
TVSB				SG	Sg	08 00 42.5	0.0
DURS	Dursunbey	0.90	325	*i* P	Pb	08 00 39.5	+0.2
DURS				IAML_P			
	comp=Z,1μm,0.1s						
SHUT	Suhut-Afyon	1.15	105	PN	Pn	08 00 44.5	+0.8
BALB	Balikesir	1.24	309	PN	Pn	08 00 45.3	+0.4
AYDB	Zeytinkoy-Aydi	1.34	227	PN	Pb	08 00 46.7	-0.2
KCTX	Karacabey (Bur	1.52	337	PN	Pn	08 00 48.1	+0.3
GONE	Gonen-Balikesi	1.63	317	PN	Pb	08 00 51.5	-0.2
ARMT	Armutlu	1.71	353	PN	Pn	08 00 52.2	+0.9

*NEIC **29** 08:10:01.2±0.0, 59°.13N×152°.40W, h60km, ML3.0(AEIC), After AEIC.*
*IDC **29** 08:10:02.1±4.2, 58°.98N×150°.80W, h0km, mb2.9/1, mb1 3.5/3, mb1mx3.3/38, mbtmp3.0/3, ML2.9/2, Error ellipse: s-maj=77.6km s-min=21.1km az=84.0*

ISC 29 08:10:00.0±2.0, 59°.09N±0°.04×152°.27W±0°.03, h38km±4km, n60, σ1°30/80, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUE	Augustine Isla	0.63	296	*e*Pn	Pn	08 10 13.3	+0.8
AUI	Augustine Isla	0.64	293	*e*Pn	Pn	08 10 13.2	+0.6
AUI				*e*Sn	Sn	08 10 23.0	+1.3
HOM	Homer	0.65	29	*e*Pn	Pn	08 10 14.5	+1.7
AUL	Augustine Lava	0.67	296	*e*Pn	Pn	08 10 13.7	+0.7
CNPM	China Poot	0.69	50	*e*Pn	Pn	08 10 14.9	+1.7
CNPM				*e*Sn	Sn	08 10 25.7	+3.0
FONW	Fourpeaked Sta	0.89	254	*e*Pn	Pn	08 10 16.6	+0.5
ILS	Iliamna Low So	0.96	335	*e*Pn	Pn	08 10 17.1	+0.1
BRLK	Bradley Lake	0.98	46	*e*Pn	Pn	08 10 18.2	+1.0
IVE	Iliamna Volcan	1.00	338	*e*Pn	Pn	08 10 17.7	0.0
KDAK	Kodiak Island	1.32	187	*e*Pn	Pn	08 10 22.9	+1.0
KAHG	Katmai Hook Gl	1.33	244	*e*Pn	Pn	08 10 22.6	+0.6
RSO	Redoubt South	1.40	350	*e*Pn	Pn	08 10 23.3	+0.2
RSO				*e*Sn	Sn	08 10 41.1	+0.7
KARR	Katmai Rainbow	1.40	246	*e*Pn	Pn	08 10 23.5	+0.5
KAHC	Katmai Hardscr	1.49	254	*e*Pn	Pn	08 10 24.2	-0.1
RDJH	Redoubt Jeurge	1.53	350	*e*Pn	Pn	08 10 25.3	+0.5
RDJH				*e*Sn	Sn	08 10 44.2	+0.7
SEW	Seward	1.76	54	*e*Pn	Pn	08 10 28.3	+0.4
SLKM	Skilak Lake	1.76	35	*e*Pn	Pn	08 10 28.8	+0.9
KABU	Katmai Buttres	1.78	244	*e*Pn	Pn	08 10 28.7	+0.5
KELA	Mount Kelaz	1.92	252	*e*Pn	Pn	08 10 30.1	-0.1
OHAK	Old Harbor	1.95	196	*e*Pn	Pn	08 10 31.1	+0.6
SPU	Mount Spurr	2.10	3	*e*Pn	Pn	08 10 33.4	+0.8
SPU				*e*Sn	Sn	08 10 58.5	+1.0
SPWE	Spurr West	2.19	356	*e*Pn	Pn	08 10 35.6	+1.6
RC01	Rabbit Creek A	2.37	31	*e*Pn	Pn	08 10 37.7	+1.4
RC01				*e*Sn	Sn	08 11 05.4	+1.3
SUA	Susitna One	2.50	17	*e*Pn	Pn	08 10 40.8	+2.6
SUA				*e*Sn	Sn	08 11 09.7	+2.3
SVW2	Sparrevohn	2.61	322	*e*Pn	Pn	08 10 38.7	-0.9
SII	Sitkinak Islan	2.74	203	*e*Pn	Pn	08 10 41.8	+0.4
SKT	Skwentna	2.92	7	*e*Pn	Pn	08 10 45.0	+1.1
SKT				*e*Sn	Sn	08 11 19.7	+2.1
PMR	Palmer	2.95	31	*e*Pn	Pn	08 10 44.6	+0.3
KNK	Knik Glacier	3.00	38	*e*Pn	Pn	08 10 45.4	+0.4
KNK				*e*Sn	Sn	08 11 18.7	-1.1
GLI	Glacier Island	3.16	53	*e*Pn	Pn	08 10 46.7	-0.4
GLI				*e*Sn	Sn	08 11 21.5	-2.0
SML	Sawmill	3.35	34	*e*Pn	Pn	08 10 49.8	0.0
SML				*e*Sn	Sn	08 11 28.3	0.0
EYAK	Cordova Ski Ar	3.60	63	*e*Pn	Pn	08 10 53.2	0.0
SCM	Sheep Creek Mo	3.68	40	*e*Pn	Pn	08 10 55.0	+0.6
SCM				*e*Sn	Sn	08 11 35.6	-0.9
CHIA	Chirikof Islan	3.72	210	*e*Pn	Pn	08 10 54.4	-0.4
CHIR	Chirikof Islan	3.75	210	*e*Pn	Pn	08 10 54.6	-0.6
TT01	Tatalina	4.24	336	*e*Pn	Pn	08 11 01.8	-0.1
HMT	Hamilton	4.24	69	*e*Pn	Pn	08 11 03.2	+1.2
TRF	Thorofare Moun	4.48	11	*e*Pn	Pn	08 11 06.2	+0.9
KTH	Kantishna Hill	4.52	8	*e*Pn	Pn	08 11 07.2	+1.3
RND	Reindeer	4.63	19	*e*Pn	Pn	08 11 08.0	+0.6
RND				*e*Sn	Sn	08 11 59.7	-0.2
DHY	Denali Highway	4.65	29	*e*Pn	Pn	08 11 09.0	+1.3
MCK	McKinley	4.92	18	*e*Pn	Pn	08 11 12.7	+1.3
MCK				*e*Sn	Sn	08 12 06.2	-0.7
BPAW	Bear Paw Mtn.	5.06	6	*e*Pn	Pn	08 11 13.7	+0.5
PAX	Paxson	5.10	37	*e*Pn	Pn	08 11 14.7	+0.8
BALM	Baldy	5.34	64	*e*Pn	Pn	08 11 17.9	+0.8
BALM				*e*Sn	Sn	08 12 13.6	-3.8
WRH	Wood River Hil	5.75	18	*e*Pn	Pn	08 11 22.6	-0.1
WRH				*e*Sn	Sn	08 12 25.2	-2.1
RIDG	Independent Ri	5.87	34	*e*Pn	Pn	08 11 25.2	+0.9
HDA	Harding Lake	5.90	23	*e*Pn	Pn	08 11 25.6	+0.8
HDA				*e*Sn	Sn	08 12 28.9	-2.1
CCB	Clear Creek Bu	5.96	19	*e*Pn	Pn	08 11 25.1	-0.4
MLY	Manley	6.00	6	*e*Pn	Pn	08 11 27.1	+0.9
COLA	College	6.16	18	*e*Pn	Pn	08 11 28.7	+0.4
COLA				*e*Sn	Sn	08 12 34.4	-2.9
ILAR	Eielson Array	6.24	22	Pn	Pn	08 11 29.1	-0.2
	0.4nm,0.3s,baz=206,slow=14,SNR=13						
ILAR				Sn	Sn	08 12 35.5	-3.8
	1.6nm,0.3s,baz=198,slow=10.0,SNR=14						
ILB	Eielson Array	6.24	22	*e*Pn	Pn	08 11 29.4	0.0
ILB				*e*Sn	Sn	08 12 36.4	-2.8
BCPM	Bancas Point	6.49	77	*e*Pn	Pn	08 11 33.4	+0.5
PNL	Peninsula	6.60	79	*e*Pn	Pn	08 11 35.1	+0.7
PRP	Porcupine Dome	7.17	23	*e*Pn	Pn	08 11 42.0	-0.3
HYT	Haines Junctio	7.61	71	*e*Pn	Pn	08 11 50.0	+1.7
YKA	Yellowknife Ar	18.51	63	P	P	08 14 12.2	-0.3
	0.1nm,0.3s,baz=277,slow=10,SNR=4.3						
YKB5	Yellowknife Ar	18.51	63	*e*P	P	08 14 12.2	-0.3
TXAR	Lajitas Array	44.32	110	P	P	08 18 06.8	+0.8
	0.1nm,0.7s,baz=307,slow=7.7,SNR=2.1						

*ISCJB **29** 08:10:48.8±2.0, 55°.99S±0°.09×27°.4W±0°.2, h91km±20km, mb4.2/14, Error ellipse: s-maj=19.6km s-min=9.9km az=136.7*
*NEIC **29** 08:10:51.6±1.4, 55°.98S×27°.46W, h104km±6km, mb4.3/9, Error ellipse: s-maj=25.0km s-min=10.3km az=220.0*
*IDC **29** 08:10:51.2±0.7, 55°.96S×27°.46W, h103km±6km, mb3.9/8, mb1 4.0/9, mb1mx3.7/33, mbtmp4.3/9, Error ellipse: s-maj=20.0km s-min=15.0km az=44.0*

ISC 29 08:10:51.3±0.7, 56°.00S±0°.10×27°.66W±0°.09, h105km±5km, h105km:pP-P, n51, σ1°01/58, mb4.1/13, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.35	285	*e*Pn	Pn	08 12 09.2	+0.6
HOPE				*e*Sn	Sn	08 13 04.8	-4.2
VNA1	Neumayer--Stat	16.94	158	P	Pn	08 14 40.6	-0.9
VNA3	Neumayer Olymp	17.13	160	P	Pn	08 14 43.2	-0.5
SNAA	Sanae	18.89	156	P	P	08 15 03.2	0.0
SNAA	Sanae	18.89	156	P	P	08 15 03.2	0.0
	3.7nm,0.3s,baz=306,slow=10,SNR=372						
SNAA				PcP	PcP	08 19 24.8	+0.2
	0.1nm,0.3s,baz=319,slow=8.7,SNR=4.3						
SNAA				ScP	ScP	08 22 48.7	-1.7
	0.1nm,0.3s,baz=270,slow=4.0,SNR=7.4						
SNAA	Sanae	18.89	156	*e*P	P	08 15 03.0	-0.3
	17nm,0.5s						
TRQA	Tornquist	29.06	294	*e*P	P	08 16 43.1	+1.6
	2.9nm,1.0s						
QSPA	South Pole Qui	34.25	180	*e*P	P	08 17 27.5	+0.6
	9.3nm,1.4s						
MAW	Mawson	40.34	144	P	P	08 18 18.1	+0.1
	2.1nm,0.6s,baz=221,slow=7.9,SNR=11						
MAW	Mawson	40.34	144	*e*P	P	08 18 18.4	+0.4
	0.5nm,0.8s						
LVC	Limon Verde	45.05	301	P	P	08 18 57.7	+0.8
	2.2nm,0.7s,baz=153,slow=2.3,SNR=2.6						
PB10	IPOC Station P	45.09	298	*e*P	P	08 18 59.1	+2.3
	58nm,1.2s						
BOSA	Boshof	46.21	76	P	P	08 19 05.2	-0.5
	1.7nm,0.9s,baz=197,slow=17,SNR=2.0						
VNDA	Vanda	46.61	183	P	P	08 19 08.7	+0.6
	0.9nm,0.5s,baz=181,slow=7.0,SNR=17						
VNDA	Vanda	46.61	183	*e*P	P	08 19 09.1	+1.0
	3.3nm,1.4s						
GO01	Chusmiza	47.70	302	*e*P	P	08 19 18.7	+0.9
	8.8nm,1.4s						
H10S2	ASCENSION HYDR	48.03	17	T	T	09 11 38.1	
	baz=190						
H10S3	ASCENSION HYDR	48.03	17	T	T	09 11 42.5	
	baz=190						
H10S1	ASCENSION HYDR	48.05	17	T	T	09 11 40.1	
	baz=190						
MNMC	Minye Minye	48.35	302	*e*P	P	08 19 23.6	+1.0
	9.0nm,1.0s						
H10N1	ASCENSION HYDR	49.15	17	T	T	09 13 03.9	
	baz=189						
H10N3	ASCENSION HYDR	49.15	17	T	T	09 12 59.3	
	baz=189						
H10N2	ASCENSION HYDR	49.16	17	T	T	09 13 01.1	
	baz=189						
LBTB	Lobatse	49.24	74	P	P	08 19 27.8	-1.4
	2.0nm,0.8s,baz=198,slow=9.6,SNR=2.6						
LBTB				PcP	PcP	08 20 49.9	-0.7
	0.7nm,0.4s,baz=270,slow=3.0,SNR=2.5						
LPAZ	La Paz	50.13	306	P	P	08 19 37.1	+0.6
	0.5nm,0.3s,baz=166,slow=4.2,SNR=7.8						
LPAZ				pP	pP	08 20 01.2	+0.8
	1.1nm,0.7s,baz=162,slow=3.2,SNR=2.8						
LPAZ	La Paz	50.13	306	*e*P	P	08 19 37.5	+0.9
TOA0	Torodi Ar. Sit	73.14	30	*e*P	P	08 22 11.6	+1.4
	1.9nm,0.7s						
TORD	Torodi Ar. Bea	73.14	30	P	P	08 22 10.6	+0.4
	4.9nm,0.3s,baz=195,slow=7.5,SNR=5.0						
TORD				pP	pP	08 22 35.9	+0.2
	7.0nm,0.4s,baz=200,slow=6.9,SNR=2.4						
TOA1	Torodi Ar. Sit	73.14	30	*e*P	P	08 22 10.6	+0.3
TOA1				*e*pP	pP	08 22 35.9	+0.2
ASAR	Alice Springs	99.12	163	P	Pdif	08 24 19.7	-0.9
	1.1nm,1.1s,baz=182,slow=3.7,SNR=2.5						
FIA0	FINESS Array S	124.46	28	*e*PKPdf	PKPdf	08 29 35.3	-1.2
FINES	FINESS Array B	124.46	28	PKP	PKPdf	08 29 35.3	-1.2
	1.3nm,0.7s,baz=191,slow=1.9,SNR=5.6						
ARA0	ARCESS Array S	130.99	22	*e*PKPdf	PKPdf	08 29 48.2	-0.6
ARCES	ARCESS Array B	130.99	22	PKP	PKPdf	08 29 48.2	-0.6
	1.3nm,0.8s,baz=192,slow=2.6,SNR=5.8						
YKA	Yellowknife Ar	135.96	318	PKP	PKPdf	08 29 57.5	-0.8
	0.4nm,0.6s,baz=129,slow=2.1,SNR=8.8						
YKA				pPKP	pPKPdf	08 30 26.3	-0.2
	0.2nm,0.6s,baz=133,slow=2.3,SNR=2.1						
YKA				SKPbc	SKPbc	08 33 19.3	-0.9
	0.3nm,0.7s,baz=120,slow=4.3,SNR=3.9						
YKB5	Yellowknife Ar	135.96	318	*e*PKPdf	PKPdf	08 29 57.5	-0.8
YKB5				*e*pPKPdf	pPKPdf	08 30 26.2	-0.2
MK32	Makanchi Array	137.12	72	*e*PKPdf	PKPdf	08 30 00.4	-0.7
MKAR	Makanchi Array	137.12	72	PKP	PKPdf	08 30 00.4	-0.7
	0.2nm,0.2s,baz=259,slow=1.5,SNR=2.5						
INK	Inuvik	145.60	321	*e*PKPdf	PKPdf	08 30 15.9	+0.5
EPYK	Eagle Plains	146.21	317	*e*PKPdf	PKPbc	08 30 17.8	-0.1
DAWY	Dawson	146.56	312	*e*PKPdf	PKPbc	08 30 18.7	-0.3
RIDG	Independent Ri	148.77	310	*e*PKPbc	PKPbc	08 30 25.6	+0.6
ILAR	Eielson Array	149.89	312	PKPbc	PKPbc	08 30 27.6	0.0
	3.2nm,0.8s,baz=130,slow=2.2,SNR=32						
ILAR				PKPab	PKPab	08 30 33.7	0.0
	0.6nm,0.6s,baz=94,slow=2.7,SNR=4.4						
ILAR				pPKPbc	pPKPbc	08 30 55.0	-0.6
	0.6nm,0.7s,baz=130,slow=1.2,SNR=3.4						
ILB	Eielson Array	149.89	312	*e*PKPbc	PKPbc	08 30 28.2	+0.6
ILB				*e*PKPab	PKPab	08 30 35.8	+2.1
WRH	Wood River Hil	150.33	311	*e*PKPbc	PKPbc	08 30 28.5	-0.2
RND	Reindeer	150.43	309	*e*PKPbc	PKPbc	08 30 29.7	+0.7
MCK	McKinley	150.54	309	*e*PKPbc	PKiKP	08 30 30.0	+0.1
SONA0	Songino Array	150.99	87	*e*PKPbc	PKPbc	08 30 30.6	-0.4
SONM	Songino Array	150.99	87	PKPbc	PKPbc	08 30 30.6	-0.4
	3.9nm,0.5s,baz=208,slow=4.9,SNR=4.6						
TOLK	Toolik Lake Re	151.47	319	*e*PKPbc	PKPbc	08 30 31.5	+0.2
BPAW	Bear Paw Mtn.	151.50	310	*e*PKPbc	PKPbc	08 30 31.3	-0.1

NEIC 29 08:16:15.6±0.0, 53°.70N×164°.22W, h25km, ML2.9(AEIC), After AEIC., Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WESP	Westdahl Peak	0.85	340	*e*Pg	Pb	08 16 31.2	-0.6
WESP				*e*Sn	Sn	08 16 44.1	+0.4
AKSA	Akutan Strait	0.98	297	*e*Pn	Pn	08 16 33.0	-0.6
AKSA				*e*Sn	Sn	08 16 47.0	+0.3
AKUT	Akutan	1.01	296	*e*Pn	Pn	08 16 33.9	-0.3
AKUT				*e*Sn	Sb	08 16 47.0	-0.4
UNV	Unalaska Valle	1.36	277	*e*Pn	Pn	08 16 38.2	-0.8
MREP	Makushin Rep't	1.50	275	*e*Pn	Pn	08 16 40.6	-0.3
MSW	Makushin Switc	1.53	279	*e*Pn	Pn	08 16 40.9	-0.5
MCIR	Makushin Cirqu	1.60	280	*e*Pn	Pn	08 16 42.5	+0.2
CHIA	Chirikof Islan	5.45	63	*e*Pn	Pn	08 17 35.5	+0.4
SII	Sitkinak Islan	6.43	59	*e*Pn	Pn	08 17 49.4	+0.8
KDAK	Kodiak Island	7.74	53	*e*Pn	Pn	08 18 06.3	-0.2
ADK	Adak	7.77	262	*e*Pn	Pn	08 18 09.8	+2.9

IDC 29 08:17:37.7±1.4, 49°.09S×127°.16E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/24, mbtmp4.0/5, Error ellipse: s-maj=78.5km s-min=19.8km az=101.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	17.13	321	T	T	08 39 21.3	
	baz=146,slow=73,SNR=17						
H01W2	Cape Leeuwin H	17.13	321	T	T	08 39 18.7	
	baz=146,slow=73,SNR=15						
H01W3	Cape Leeuwin H	17.15	321	T	T	08 39 21.9	
	baz=146,slow=73,SNR=12						
STKA	Stephens Creek	20.34	38	P	P	08 22 15.8	+0.3
	0.6nm,0.3s,baz=217,slow=10,SNR=1.8						
ASAR	Alice Springs	25.93	14	P	P	08 23 11.8	+0.2
	6.7nm,0.9s,baz=188,slow=8.9,SNR=50						
WRA	Warramunga Arr	29.65	14	P	P	08 23 44.4	-0.5
	2.3nm,0.9s,baz=185,slow=8.4,SNR=4.4						
VNDA	Vanda	31.45	166	P	P	08 24 00.0	-0.2
	2.0nm,0.9s,baz=314,slow=8.7,SNR=12						
SNAA	Sanae	54.47	197	P	P	08 27 06.5	+0.2
	1.6nm,0.9s,baz=163,slow=4.6,SNR=6.8						

*SJA **29** 08:21:35.9±0.7, 31°.89S×69°.12W, h125km±2km, ML4.0, MW4.1*
*ISCJB **29** 08:21:36.2±0.2, 31°.87S±0°.02×69°.16W±0°.03, h123km±1km, mb4.4/41, Error ellipse: s-maj=4.8km s-min=3.5km az=15.5*
*GUC **29** 08:21:36.6±0.8, 31°.89S×69°.38W, h135km±4km, ML4.0*
*NEIC **29** 08:21:36.1±1.5, 31°.93S×69°.13W, h105km±2km, mb4.5/47, MD4.1(SJA), Error ellipse: s-maj=17.1km s-min=10.6km az=88.0*
*IDC **29** 08:21:37.5±0.7, 31°.93S×68°.97W, h120km±4km, mb3.6/7, mb1 3.7/11, mb

comp=Z,1.5nm,0.3s,baz=167,slow=8.3,SNR=28
LVC S **Sn** **08 25 24.2 -6.0**
comp=Z,0.7nm,0.3s,baz=205,slow=18,SNR=2.2
LVC Limon Verde 9.24 2 *e*Pn **Pn** **08 23 44.5 -3.3**
PB01 IPOC Station P 10.80 358 *e*Pn **Pn** **08 24 05.7 -2.9**
CPUP Villa Florida 11.74 65 P **Pn** **08 24 19.0 -2.0**
comp=Z,0.2nm,0.3s,baz=229,slow=18,SNR=3.7
PB11 IPOC Station P 12.08 358 *e*Pn **Pn** **08 24 28.5 +2.9**
GO01 Chusmiza 12.16 360 *e*Pn **Pn** **08 24 25.0 -2.0**
MNMC Minye Minye 12.70 358 *e*Pn **Pn** **08 24 32.4 -1.6**
LPAZ La Paz 15.55 4 P **Pn** **08 25 10.8 +0.2**
comp=Z,0.2nm,0.3s,baz=184,slow=7.9,SNR=10
LPAZ La Paz 15.55 4 *e*Pn **Pn** **08 25 10.0 -0.6**
comp=Z,8.6nm,1.2s
SIV San Ignacio 17.45 27 P **Pn** **08 25 32.8 -0.5**
comp=Z,0.7nm,0.3s,baz=211,slow=9.7,SNR=28
GO09 Cerro Castillo 19.51 186 *e*P **P** **08 25 55.5 +0.5**
comp=Z,29nm,1.0s
EFI East Falkland 21.39 161 *e*P **P** **08 26 13.3 -1.8**
comp=Z,72nm,1.4s
USHA Ushuaia 22.95 179 P **P** **08 26 30.6 -0.3**
comp=Z,5.6nm,0.8s,baz=14,slow=7.6,SNR=3.0
BDFB Brasilia 25.15 55 P **P** **08 26 50.8 -0.7**
comp=Z,3.5nm,0.6s,baz=223,slow=9.7,SNR=7.7
BDFB Brasilia 25.15 55 *e*P **P** **08 26 52.5 +0.9**
comp=Z,7.7nm,1.0s
PTGA Pitinga 32.18 17 *e*P **P** **08 27 53.9 0.0**
comp=Z,3.9nm,0.6s
RCBR Riachuelo 40.48 57 *e*P **P** **08 29 05.6 +1.2**
comp=Z,17nm,1.2s
CUPR Culebra, Puert 50.04 5 *e*P **P** **08 30 19.8 +0.1**
comp=Z,29nm,1.1s
SNAA Sanae 52.65 159 P **P** **08 30 38.6 -0.1**
comp=Z,1.1nm,0.6s,baz=194,slow=22,SNR=10.0
SNAA Sanae 52.65 159 *e*P **P** **08 30 39.0 +0.3**
comp=Z,6.1nm,1.4s
CCIG Comitan 52.71 332 *e*P **P** **08 30 39.6 -0.3**
comp=Z,14nm,1.4s
QSPA South Pole Qui 58.35 180 *e*P **P** **08 31 19.5 -0.2**
comp=Z,6.6nm,1.4s
061Z Ochoppi 58.51 348 *e*P **P** **08 31 21.9 +1.0**
comp=Z,88nm,1.0s
V56A Mocksville 68.17 350 *e*P **P** **08 32 25.3 +0.9**
comp=Z,8.0nm,1.1s
V53A Saluda 68.41 348 *e*P **P** **08 32 26.1 +0.1**
comp=Z,17nm,1.4s
W50A Signal Mountai 68.43 346 *e*P **P** **08 32 26.3 +0.2**
comp=Z,6.0nm,0.9s
SWET Sewanee 68.58 345 *e*P **P** **08 32 27.5 +0.5**
comp=Z,4.9nm,0.7s
PLAL Pickwick Lake 68.84 343 *e*P **P** **08 32 28.7 +0.1**
comp=Z,8.6nm,1.4s
TXAR Lajitas Array 69.14 328 P **P** **08 32 31.6 +0.9**
comp=Z,0.9nm,0.8s,baz=160,slow=8.1,SNR=9.8
TXAR pP **pP** **08 33 02.3 +1.5**
comp=Z,0.4nm,0.7s,baz=156,slow=7.8,SNR=3.7
V48A Smith Brothers 69.28 345 *e*P **P** **08 32 31.9 +0.6**
comp=Z,3.7nm,0.6s
CLTN Cedars of Leba 69.51 345 *e*P **P** **08 32 33.0 +0.3**
comp=Z,6.5nm,1.4s
WVT Waverly 69.88 344 *e*P **P** **08 32 35.3 +0.3**
comp=Z,9.6nm,0.6s
W41B Gary Mavity, V 70.14 340 *e*P **P** **08 32 37.5 +1.0**
comp=Z,5.9nm,1.5s
T49A Edmonton 70.31 346 *e*P **P** **08 32 37.6 0.0**
comp=Z,3.0nm,0.6s
R55A Marlinton 70.55 351 *e*P **P** **08 32 40.6 +1.5**
comp=Z,17nm,1.3s
PBMO Poplar Bluff 71.14 342 *e*P **P** **08 32 43.2 +0.5**
comp=Z,7.8nm,0.9s
DBIC Dimbokro 72.21 70 P **P** **08 32 49.1 -0.4**
comp=Z,1.5nm,0.4s,baz=196,slow=3.7,SNR=4.2
DBIC Dimbokro 72.21 70 *e*P **P** **08 32 49.8 +0.3**
comp=Z,22nm,1.5s
CCM Cathedral Cave 72.56 342 *e*P **P** **08 32 51.6 +0.5**
comp=Z,4.1nm,0.6s
N55A Marion Center 72.87 352 *e*P **P** **08 32 53.9 +1.0**
comp=Z,15nm,1.3s
M54A Oil Creek Stat 73.67 352 *e*P **P** **08 32 58.5 +1.0**
comp=Z,13nm,1.2s
SUR Sutherland 73.72 118 *e*P **P** **08 32 59.4 +0.8**
comp=Z,18nm,1.4s
N49A Columbus Grove 73.76 348 *e*P **P** **08 32 58.3 +0.3**
comp=Z,21nm,1.5s
MAW Mawson 74.50 163 *e*P **P** **08 33 02.5 +0.4**
comp=Z,0.9nm,1.2s
PECO Prince Edward 75.79 354 *e*P **P** **08 33 10.6 +0.9**
comp=Z,10nm,1.5s
SDCO Great Sand Dun 77.12 331 *e*P **P** **08 33 19.2 +1.5**
comp=Z,0.9nm,0.8s
GLA Glamis 77.64 322 *e*P **P** **08 33 23.1 +2.6**
comp=Z,6.3nm,0.4s
ECSD EROS Data Cent 79.33 340 *e*P **P** **08 33 29.9 +0.6**
comp=Z,5.0nm,1.1s
D41A Chassel 80.50 347 *e*P **P** **08 33 36.4 +0.8**
comp=Z,7.7nm,0.8s
LBTB Lobatse 80.98 114 *e*P **P** **08 33 38.8 -0.2**
comp=Z,10nm,1.4s
TOA0 Torodi Ar. Sit 81.21 69 *e*P **P** **08 33 40.6 +0.5**
comp=Z,3.0nm,0.8s
TORD Torodi Ar. Bea 81.21 69 P **P** **08 33 40.1 -0.1**
comp=Z,6.8nm,0.4s,baz=242,slow=3.1,SNR=2.0
TORD pP **pP** **08 34 11.0 +0.1**
comp=Z,5.4nm,0.3s,baz=223,slow=4.8,SNR=1.8
PDAR Pinedale Array 83.02 331 P **P** **08 33 49.6 +0.4**
comp=Z,0.2nm,0.7s,baz=72,slow=4.8,SNR=3.8
NVAR Mina Array Bea 83.58 323 P **P** **08 33 52.9 +0.7**
comp=Z,0.1nm,0.4s,baz=146,slow=6.6,SNR=3.0
J08A Circle Bar Ran 87.42 326 *e*P **P** **08 34 12.8 +1.8**
comp=Z,3.7nm,0.8s
ASAR Alice Springs 120.52 205 PKP **PKPdf** **08 40 14.1 -1.1**
comp=Z,0.5nm,0.7s,baz=136,slow=1.5,SNR=6.5
WB2 Warramunga Arr 123.75 207 *e*PKPdf **PKPdf** **08 40 20.8 -0.8**
WRA Warramunga Arr 123.76 207 PKP **PKPdf** **08 40 20.7 -0.9**
comp=Z,0.6nm,0.6s,baz=128,slow=12,SNR=9.2
GAR Garm 146.45 66 *e*PKPdf **PKPab** **08 41 05.2 -0.5**
YAK Yakutsk 147.47 344 *e*PKPdf **PKPdf** **08 41 04.5 +0.9**
NIL Nilore 148.47 77 *e*PKPbc **PKPbc** **08 41 09.8 -0.2**
AAK Ala-Archa 149.37 59 *e*PKPbc **PKiKP** **08 41 13.1 -0.2**
ZAA0 Zalesovo Array 151.15 32 *e*PKPbc **PKiKP** **08 41 16.3 0.0**
ZALV Zalesovo Beam 151.15 32 PKPbc **PKPbc** **08 41 15.4 -0.4**
comp=Z,2.9nm,0.7s,baz=276,slow=2.4,SNR=10
ZALV pPKPbc **pPKPbc** **08 41 48.8 -0.1**
comp=Z,2.9nm,0.6s,baz=294,slow=4.0,SNR=3.2
KDJ Kajisay 151.41 59 *e*PKPbc **PKiKP** **08 41 17.4 -0.1**
MKAR Makanchi Array 153.56 47 PKPbc **PKPbc** **08 41 21.6 +0.1**
comp=Z,0.8nm,0.7s,baz=293,slow=3.4,SNR=5.8
MKAR PKPab **PKPab** **08 41 34.5 0.0**
comp=Z,0.7nm,0.6s,baz=311,slow=4.0,SNR=7.5
MKAR pPKPbc **pPKPbc** **08 41 54.0 -0.7**
comp=Z,0.2nm,0.2s,baz=321,slow=2.0,SNR=2.1

MOS ***29*** *08:36:43.4±1.0, 46°.18N×149°.79E, h182km, mb4.1/5, Error ellipse: s-maj=11.4km s-min=8.0km az=71.3*
ISCJB ***29*** *08:36:44.4±0.5, 45°.90N±0°.05×149°.65E±0°.08, h200km, mb3.6/25, Error ellipse: s-maj=10.3km s-min=4.1km az=43.1*
SKHL ***29*** *08:36:44.1±0.9, 45°.85N×149°.81E, h175km±3km, mb4.9/3, msh5.5/3*
IDC ***29*** *08:36:45.8±1.6, 46°.26N×149°.65E, h182km±14km, mb3.5/22, mb1 3.6/29, mb1mx3.6/52, mbtmp4.0/29, Error ellipse: s-maj=15.8km s-min=9.8km az=148.0*
JMA ***29*** *08:36:46.6±0.6, 45°.28N×149°.96E, h175km, M3.8*
ISC 29 08:36:45.1±0.6, 45°.92N±0°.08×149°.71E±0°.08, h200km, n81, σ2°19/81, mb3.7/25, 1C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.47**	**243**	*d* PN	**Pn**	**08 37 17.9**	**-0.6**
KUR				*i* S	**Sn**	**08 37 42.7**	**-1.6**
KUR	comp=Z,164nm,0.4s			pmax	pmax		
KUR	comp=N,81nm,0.3s			pmax	pmax		
KUR	comp=E,108nm,0.4s			pmax	pmax		
KUR	comp=N,913nm,0.3s			smax	smax		
KUR	comp=E,574nm,0.2s			smax	smax		
KUR	**Kuril'sk**	**1.47**	**243**	*i* P	**Pn**	**08 37 17.0**	**-1.5**
KUR	comp=E,81nm,0.4s			AMB	AMB	08 37 21.0	
KUR	comp=E,108nm,0.4s			AMB	AMB	08 37 21.0	
KUR	comp=E,164nm,0.4s			AMB	AMB	08 37 21.0	
KUR	comp=E,450nm,0.3s			*i* S	**Sn**	**08 37 42.0**	**-2.3**
KUR	comp=E,280nm,0.3s			A	A	08 37 47.0	
KUR				A	A	08 37 47.0	
YUK	**Yuzh-Kuril'sk**	**3.32**	**237**	*d i* PN	**Pn**	**08 37 37.9**	**-0.6**
YUK				*i* S	**Sn**	**08 38 19.5**	**-0.8**
YUK	comp=Z,165nm,0.4s			pmax	pmax		
YUK	comp=N,31nm,0.2s			pmax	pmax		
YUK	comp=E,52nm,0.3s			pmax	pmax		
YUK	comp=N,17nm,0.3s			smax	smax		
YUK	comp=E,337nm,0.3s			smax	smax		
YUK	**Yuzh-Kuril'sk**	**3.32**	**237**	*i* P	**Pn**	**08 37 37.0**	**-1.5**
YUK				AMB	AMB	08 37 39.0	
YUK	comp=E,31nm,0.4s			AMB	AMB	08 37 39.0	
YUK	comp=E,52nm,0.4s			AMB	AMB	08 37 39.0	
YUK	comp=E,165nm,0.4s			*i* S	**Sn**	**08 38 19.0**	**-1.3**
YUK				A	A	08 38 23.0	
YUK	comp=E,17nm,0.3s			A	A	08 38 23.0	
YUK	comp=E,337nm,0.3s						
GRPR	**Tuman**	**3.40**	**237**	*e*PN	**Pn**	**08 37 38.6**	**-0.9**
GRPR				*e*S	**Sn**	**08 38 20.9**	**-1.1**
GRPR	comp=Z,50nm,0.2s			pmax	pmax		
GRPR	comp=E,171nm,0.5s			smax	smax		
GRPR	comp=N,194nm,0.2s			smax	smax		
GRPR	**Tuman**	**3.40**	**237**	*e*P	**Pn**	**08 37 38.0**	**-1.5**
GRPR				AMB	AMB	08 37 41.0	
GRPR	comp=N,50nm,0.2s			*e*S	**Sn**	**08 38 20.0**	**-2.0**
GRPR	comp=N,194nm,0.5s			A	A	08 38 22.0	
GRPR	comp=N,171nm,0.5s			A	A	08 38 22.0	
JRA	**Rausu**	**3.82**	**240**	P	**Pn**	**08 37 44.5**	**0.0**
NEM2	**Nemuro 2**	**3.82**	**229**	P	**Pn**	**08 37 42.3**	**-2.3**
NEM2				*e*S	**Sn**	**08 38 25.9**	**-5.3**
JNK	**Nakash**	**4.26**	**238**	P	**Pn**	**08 37 50.1**	**+0.1**
JTKR	**Abashiri--Toko**	**4.56**	**247**	P	**Pn**	**08 37 54.1**	**+0.3**
JAK	**Akkeshi**	**4.63**	**233**	P	**Pn**	**08 37 53.4**	**-1.4**
JAK				*e*S	**Sn**	**08 38 45.4**	**-4.2**
JAR	**Ashorobuto**	**4.99**	**240**	P	**Pn**	**08 38 00.1**	**+0.8**
JOB	**Onbets**	**5.18**	**236**	*e*S	**Sn**	**08 38 59.2**	**-3.0**
JKK2	**Kamakawa 2**	**5.36**	**250**	P	**Pn**	**08 38 05.3**	**+1.3**
JKA	**Kamikawa-asahi**	**5.36**	**253**	*e*P	**Pn**	**08 38 05.6**	**+1.6**
ASAJ	**Asahikawa**	**5.36**	**253**	P	**Pn**	**08 38 05.6**	**+1.6**
comp=N,1.0nm,0.3s,baz=76,slow=13,SNR=8.7							
ASAJ				S	**Sn**	**08 39 08.2**	**+1.9**
comp=N,1.0nm,0.3s,baz=189,slow=29,SNR=6.7							
ASAJ	**Asahikawa**	**5.36**	**253**	P	**Pn**	**08 38 05.8**	**+1.8**
JCH	**Churui**	**5.63**	**236**	P	**Pn**	**08 38 07.3**	**-0.3**
JCH				*e*S	**Sn**	**08 39 08.0**	**-4.7**
JEM	**Erimo**	**6.13**	**233**	*e*S	**Sn**	**08 39 20.6**	**-3.8**
ERM	**Erimo**	**6.13**	**233**	*d i* PN	**Pn**	**08 38 14.3**	**+0.3**
JNBK	**Urakawa-nobuka**	**6.19**	**236**	P	**Pn**	**08 38 13.5**	**-1.3**
JKB	**Kayabe**	**7.45**	**240**	*e*S	**Sn**	**08 39 49.1**	**-6.3**
JYM2	**Yakumo 2**	**7.73**	**244**	P	**Pn**	**08 38 34.6**	**-0.2**
JTM	**Tenmabayashi**	**8.12**	**234**	*e*S	Sn	08 40 02.6	-8.7
PETK	**Petropavlovsk-**	**8.87**	**33**	P	**Pn**	**08 38 45.7**	**-3.7**
comp=N,0.5nm,0.3s,baz=164,slow=8.9,SNR=9.9							
JRG	**Rokugo**	**9.34**	**229**	*e*S	Sn	08 40 34.0	-6.2
KLR	**Kul'dur**	**12.57**	**292**	P	**P**	**08 39 37.0**	**-3.8**
baz=110,slow=16,SNR=7.1							
KLR	**Kul'dur**	**12.57**	**292**	*i* PN	**P**	**08 39 37.7**	**-3.1**
KLR	**Kul'dur**	**12.57**	**292**	*e*P	**P**	**08 39 37.7**	**-3.1**
USRK	**Ussuriysk Ar.**	**12.65**	**269**	P	**P**	**08 39 39.5**	**-2.3**
comp=N,0.7nm,0.3s,baz=72,slow=11,SNR=10							
MJAR	**Matsushiro Arr**	**12.75**	**227**	P	**P**	**08 39 43.7**	**+0.7**
baz=30,slow=8.7,SNR=3.2							
EKMR	**Ekimchan**	**13.01**	**309**	*e*P	**P**	**08 39 43.0**	**-2.8**
EKMR				AMB	AMB	08 39 48.8	
comp=N,6.0nm,0.7s							
MA2	**Magadan**	**13.69**	**2**	P	P	08 39 47.7	-5.4
comp=N,0.4nm,0.3s,baz=198,slow=15,SNR=2.6							
BMKR	**Bomnak**	**15.92**	**311**	*e*P	**Pn**	**08 40 18.2**	**0.0**
BMKR				AMB	AMB	08 40 21.0	
comp=N,11nm,0.2s							
ZEA	**Zeya**	**16.42**	**307**	*e*P	**Pn**	**08 40 24.4**	**+0.2**
ZEA				pmax	pmax		
comp=Z,23nm,1.0s							
ZEA	**Zeya**	**16.42**	**307**	*e*P	**Pn**	**08 40 24.4**	**+0.2**
ZEA				AMB	AMB	08 40 25.6	
comp=Z,23nm,1.0s							
KROS	**Kirovskiy**	**16.81**	**309**	*e*P	**Pn**	**08 40 28.2**	**-0.7**
KROS				AMB	AMB	08 40 30.4	
comp=Z,6.0nm,0.5s							
SEY	**Seymchan**	**17.11**	**4**	*i* P	**Pn**	**08 40 28.7**	**-3.6**
SEY	**Seymchan**	**17.11**	**4**	*e*P	**Pn**	**08 40 28.7**	**-3.6**
KSRS	**Korea Array**	**18.30**	**250**	P	**Pn**	**08 40 48.3**	**+1.8**
comp=Z,0.4nm,0.3s,baz=55,slow=11,SNR=11							
YAK	**Yakutsk**	**19.84**	**332**	*i* P	**Pn**	**08 40 59.6**	**-4.9**
HIA	**Hailar**	**20.42**	**290**	*i* P	**P**	**08 41 05.4**	**-1.4**
HIA				pmax	pmax		
comp=Z,17nm,0.7s							
BILL	**Bilibino**	**23.77**	**15**	*e*P	P	08 41 42.3	+3.3
BILL				S	**S**	**08 45 41.0**	**+1.8**
BILL	comp=Z,5.0nm,1.5s			pmax	pmax		
BILL	**Bilibino**	**23.77**	**15**	*i* P	**P**	**08 41 39.3**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**29.71**	**146**	T	T	09 13 55.0	
baz=334,slow=76,SNR=149							
H11N1	**WAKE ISLAND Hy**	**29.73**	**146**	T	T	09 13 56.6	
baz=334,slow=76,SNR=82							
H11N3	**WAKE ISLAND Hy**	**29.73**	**146**	T	T	09 13 55.9	
baz=334,slow=76,SNR=95							
H11S1	**WAKE ISLAND Hy**	**30.75**	**147**	T	T	09 15 14.9	
baz=339							
H11S3	**WAKE ISLAND Hy**	**30.76**	**147**	T	T	09 15 10.8	
baz=338							
H11S2	**WAKE ISLAND Hy**	**30.77**	**147**	T	T	09 15 15.1	
baz=338							
KDAK	**Kodiak Island**	**36.44**	**50**	P	**P**	**08 43 30.2**	**-0.1**
comp=Z,4.1nm,0.9s,baz=296,slow=6.8,SNR=3.7							
ILAR	**Eielson Array**	**38.66**	**38**	P	**P**	**08 43 49.0**	**+0.2**
comp=Z,0.8nm,1.2s,baz=286,slow=10.0,SNR=6.0							
ILAR	**Eielson Array**	**38.66**	**38**	P	**P**	**08 43 49.0**	**+0.2**
ZALV	**Zalesovo Beam**	**41.18**	**306**	P	**P**	**08 44 08.8**	**-0.8**
comp=Z,0.8nm,0.4s,baz=73,slow=6.5,SNR=2.7							
INK	**Inuvik**	**43.60**	**32**	P	**P**	**08 44 29.9**	**+1.0**
comp=Z,0.6nm,0.4s,baz=300,slow=7.3,SNR=6.9							
MKAR	**Makanchi Array**	**45.22**	**297**	P	**P**	**08 44 43.5**	**+1.4**
comp=Z,1.9nm,0.7s,baz=69,slow=8.1,SNR=17							
KURK	**Kurchatov**	**45.85**	**303**	*c i* P	**P**	**08 44 47.7**	**+0.8**
KURK				pmax	pmax		
comp=Z,4.0nm,0.9s							
KURK	**Kurchatov**	**45.85**	**303**	*i* P	**P**	**08 44 47.7**	**+0.8**
BRVK	**Borovoye**	**49.59**	**309**	*i* P	**P**	**08 45 16.6**	**+1.0**
BRVK				pmax	pmax		
comp=Z,2.0nm,0.9s							
BRVK	**Borovoye**	**49.59**	**309**	*i* P	**P**	**08 45 16.6**	**+1.0**
CMAR	**Chiang Mai Arr**	**49.88**	**254**	P	**P**	**08 45 20.9**	**+2.7**
comp=Z,1.4nm,0.3s,baz=30,slow=7.1,SNR=3.5							
RES	**Resolute Bay**	**52.35**	**18**	P	**P**	**08 45 36.6**	**+0.8**
comp=Z,2.3nm,0.6s,baz=338,slow=6.8,SNR=9.7							
YKA	**Yellowknife Ar**	**52.98**	**35**	P	**P**	**08 45 40.8**	**+0.2**
comp=Z,0.2nm,0.4s,baz=296,slow=6.2,SNR=5.1							
FINES	**FINESS Array B**	**63.76**	**334**	P	**P**	**08 46 55.0**	**-0.1**
comp=Z,2.0nm,0.7s,baz=51,slow=6.1,SNR=8.2							
FINES	**FINESS Array B**	**63.76**	**334**	P	**P**	**08 46 55.0**	**-0.1**
NVAR	**Mina Array Bea**	**64.90**	**60**	P	P	08 47 05.4	+2.2
comp=Z,0.6nm,0.6s,baz=296,slow=6.6,SNR=8.9							
GEYT	**Alibeck**	**64.98**	**299**	P	**P**	**08 47 05.7**	**+2.2**
comp=Z,2.7nm,0.5s,baz=46,slow=4.2,SNR=4.8							
WRA	**Warramunga Arr**	**67.02**	**196**	P	**P**	**08 47 19.9**	**+3.4**
comp=Z,0.5nm,0.7s,baz=13,slow=6.3,SNR=0.9							
PDAR	**Pinedale Array**	**67.12**	**52**	P	**P**	**08 47 19.0**	**+1.7**
comp=Z,0.9nm,0.7s,baz=312,slow=0.8,SNR=9.2							
NB2	**NORSAR Subarra**	**68.22**	**340**	P	**P**	**08 47 23.6**	**+0.1**
comp=Z,0.9nm,0.6s,baz=29,slow=6.5							
NOA	**NORSAR Array B**	**68.22**	**340**	P	**P**	**08 47 23.8**	**+0.3**
comp=Z,1.6nm,0.7s,baz=29,slow=6.4,SNR=6.9							
HFS	**Hagfors**	**68.37**	**338**	P	**P**	**08 47 24.4**	**0.0**
comp=Z,3.5nm,0.9s,baz=40,slow=4.8,SNR=5.6							
KBZ	**Khabaz**	**69.70**	**312**	P	**P**	**08 47 33.7**	**+0.8**
comp=Z,2.4nm,0.7s,baz=93,slow=5.4,SNR=6.5							
ASAR	**Alice Springs**	**70.73**	**195**	P	**P**	**08 47 43.5**	**+4.2**
comp=Z,0.4nm,0.8s,baz=6.5,slow=4.9,SNR=6.0							
AKASG	**Malin Array Be**	**70.89**	**325**	P	**P**	**08 47 40.6**	**+0.6**
comp=Z,2.7nm,0.6s,baz=36,slow=6.2,SNR=4.5							
MLR	**Muntele Rosu**	**76.35**	**323**	P	**P**	**08 48 13.4**	**+1.4**
comp=Z,0.9nm,0.3s,baz=41,slow=19,SNR=2.8							
EKA	**Eskdalemuir Ar**	**76.54**	**344**	P	**P**	**08 48 13.5**	**+0.8**
comp=Z,0.3nm,0.4s,baz=21,slow=5.5,SNR=3.5							
BRTR	**Keskin Array B**	**77.34**	**315**	P	**P**	**08 48 19.0**	**+1.3**
comp=Z,0.5nm,0.5s,baz=41,slow=4.6,SNR=2.9							
BRTR	**Keskin Array B**	**77.34**	**315**	P	**P**	**08 48 19.0**	**+1.3**
GERES	**GERESS Array B**	**78.12**	**332**	P	**P**	**08 48 22.4**	**+0.7**
comp=Z,0.8nm,0.5s,baz=38,slow=6.2,SNR=8.3							
PLCA	**Paso Flores**	**150.49**	**94**	PKPbc	**PKPab**	**08 56 15.8**	**-4.2**
comp=Z,1.2nm,0.6s,baz=242,slow=3.5,SNR=5.4							

NIED ***29*** *08:40:00, 36°.40N×141°.10E, h41km, Mw4.1 Best double couple: M0=1.85000×10^15 NP1:φ=167.00000°, δ=35.00000°, λ=-14.00000°. NP2:φ=268.00000°, δ=82.00000°, λ=-124.00000°.*
ISCJB ***29*** *08:40:54.8±0.8, 36°.44N±0°.03×141°.20E±0°.06, h39km±7km, mb3.9/17, MS3.4/7, Error ellipse: s-maj=9.0km s-min=5.3km az=19.1*
JMA ***29*** *08:40:55.7±0.1, 36°.45N×141°.10E, h46km±1km, M3.9*
JMA Felt I J1.
IDC ***29*** *08:40:58.0±2.0, 36°.39N×141°.10E, h53km±19km, mb3.6/17, mb1 3.8/20, mb1mx3.7/47, mbtmp3.9/20, ML2.4/2, MS3.1/14, Ms1 3.2/14, ms1mx3.1/29, Error ellipse: s-maj=15.5km s-min=9.7km az=74.0*
ISC 29 08:40:54.8±1.6, 36°.46N±0°.04×141°.23E±0°.07, h24km±11km, n46, σ1°12/45, mb4.0/17, MS3.5/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.53**	**258**	P	**Pb**	**08 41 05.9**	**+0.4**
JHYU				S	**Sb**	**08 41 12.9**	**+0.1**
JHO	**Hitachi**	**0.56**	**286**	P	**Pb**	**08 41 06.0**	**+0.1**
JHO				S	**Sb**	**08 41 13.2**	**-0.3**
ONAJ	**Iwakimizuishiy**	**0.73**	**332**	P	**Pb**	**08 41 08.8**	**-0.1**
ONAJ				S	**Sb**	**08 41 18.1**	**-0.5**
JFFD	**Fukushimafurud**	**0.83**	**320**	P	**Pb**	**08 41 10.2**	**-0.4**
JFFD				*e*S	**Sb**	**08 41 20.6**	**-0.8**
JYT	**Yasato**	**0.87**	**255**	P	**Pb**	**08 41 10.1**	**-1.1**
JYT				S	**Sb**	**08 41 20.1**	**-2.2**
JFK	**Kawauchi**	**0.95**	**343**	P	**Pb**	**08 41 12.0**	**-0.7**
JFT	**Otama**	**1.28**	**326**	P	**Pn**	**08 41 17.6**	**+0.5**
JFT				S	**Sn**	**08 41 33.3**	**-0.2**
JAG	**Ashikaga**	**1.43**	**269**	P	**Pn**	**08 41 18.3**	**-0.9**
JAG				S	**Sn**	**08 41 35.0**	**-2.3**
JMM	**Marumori**	**1.45**	**346**	P	**Pn**	**08 41 19.6**	**+0.1**
JMM				S	**Sn**	**08 41 36.8**	**-0.9**
MJAR	**Matsushiro Arr**	**2.44**	**273**	P	**Pn**	**08 41 33.4**	**+0.3**
2.6nm,0.3s,baz=117,slow=8.0,SNR=112							
MJAR				S	**Sn**	**08 42 01.3**	**-0.8**
3.5nm,0.3s,baz=98,slow=28,SNR=11							
MJAR				LR	LR	08 42 32.2	
comp=Z,119nm,18.8s,baz=205,slow=41							
MAT	**Matsushiro**	**2.44**	**273**	P	**Pn**	**08 41 33.9**	**+0.8**
MAT				S	**Sn**	**08 42 02.8**	**+0.7**
JHJ	**Hachijo jima 2**	**3.54**	**200**	P	**Pn**	**08 41 49.0**	**+0.9**
34nm,0.3s,baz=81,slow=24,SNR=14							
JHJ				S	**Sn**	**08 42 29.6**	**+0.4**
79nm,0.3s,baz=126,slow=23,SNR=8.1							
JHJ				LR	LR	08 43 23.7	
comp=Z,336nm,20.4s,baz=62,slow=42							
ASAJ	**Asahikawa**	**7.72**	**7**	P	**Pn**	**08 42 45.0**	**-0.6**
2.7nm,0.3s,baz=221,slow=11,SNR=13							
ASAJ				S	**Sn**	**08 44 10.0**	**-2.2**
0.7nm,0.3s,baz=46,slow=33,SNR=2.0							
ASAJ				LR	LR	08 46 13.9	
comp=Z,68nm,20.8s,baz=194,slow=40							
JNU	**Nakatsue**	**9.14**	**252**	LR	LR	08 46 49.8	
comp=Z,45nm,20.8s,baz=318,slow=39							
USRK	**Ussuriysk Ar.**	**10.46**	**320**	P	**Pn**	**08 43 25.2**	**+2.0**
0.1nm,0.3s,baz=130,slow=15,SNR=4.5							
USRK				LR	LR	08 47 12.4	
comp=Z,82nm,19.6s,baz=141,slow=36							
KSRS	**Korea Array**	**10.70**	**279**	P	**Pn**	**08 43 30.3**	**+3.9**
0.2nm,0.3s,baz=95,slow=15,SNR=9.2							
KSRS				LR	LR	08 47 22.8	
comp=Z,112nm,18.4s,baz=167,slow=36							
KLR	**Kul'dur**	**14.52**	**334**	LR	LR	08 49 21.0	
comp=Z,76nm,21.2s,baz=168,slow=35							
PETK	**Petropavlovsk-**	**20.26**	**30**	LR	LR	08 52 38.2	
comp=Z,41nm,21.5s,baz=223,slow=34							
MA2	**Magadan**	**23.95**	**12**	P	**P**	**08 46 07.7**	**+0.9**
2.2nm,0.4s,baz=211,slow=12,SNR=1.9							
H11N2	**WAKE ISLAND Hy**	**27.98**	**120**	T	T	09 15 59.9	
baz=312,slow=75,SNR=29							
H11N1	**WAKE ISLAND Hy**	**27.99**	**120**	T	T	09 16 14.7	
baz=312,slow=75,SNR=28							
H11N3	**WAKE ISLAND Hy**	**28.00**	**120**	T	T	09 16 05.3	
baz=312,slow=75,SNR=26							
H11S1	**WAKE ISLAND Hy**	**28.68**	**122**	T	T	09 17 02.2	
baz=314,slow=76,SNR=238							
H11S3	**WAKE ISLAND Hy**	**28.68**	**122**	T	T	09 17 02.4	
baz=314,slow=76,SNR=129							
H11S2	**WAKE ISLAND Hy**	**28.69**	**122**	T	T	09 17 03.5	
baz=314,slow=76,SNR=76							
ZALV	**Zalesovo Beam**	**42.20**	**313**	P	**P**	**08 48 45.2**	**-0.2**
2.0nm,0.6s,baz=93,slow=5.9,SNR=5.8							
MKAR	**Makanchi Array**	**44.30**	**303**	P	**P**	**08 49 02.8**	**+0.2**
0.2nm,0.2s,baz=83,slow=9.9,SNR=3.8							
MKAR				LR	LR	09 07 55.2	
comp=Z,35nm,18.8s,baz=168,slow=36							
KDAK	**Kodiak Island**	**47.63**	**42**	P	**P**	**08 49 28.1**	**-0.4**
2.5nm,0.8s,baz=267,slow=5.6,SNR=4.4							
ILAR	**Eielson

BERE	**Bereket-Mersin**	**0.65 167**	PG	**Pg**	**08 46 34.3**	**-0.2**
BERE			SG	**Sb**	**08 46 44.5**	**-0.3**
KEBE	**Keben-Mersin**	**0.76 135**	PG	**Pb**	**08 46 37.1**	**-0.3**
TEKE	**Tekeli-Mersin**	**0.84 176**	PG	**Pg**	**08 46 37.8**	**-0.3**
TEKE			SG	**Sb**	**08 46 49.9**	**-0.2**
IKL	**Isikli**	**0.90 145**	PG	**Pb**	**08 46 39.8**	**0.0**
AKKU	**Akkuyu-Mersin**	**0.91 153**	PG	**Pg**	**08 46 39.5**	**-0.1**
GAZI	**Gazipasa**	**0.95 219**	PG	**Pb**	**08 46 40.6**	**0.0**
GAZI	**Gazipasa**	**0.95 219**	*i* P	**Pg**	**08 46 40.0**	**-0.2**
GAZI			IAML_P			
	comp=Z,830nm,0.1s					
KERG	**Konya-Eregli**	**0.96 63**	*i* P	**Pg**	**08 46 40.3**	**-0.2**
KERG			*i* S	**Sn**	**08 46 55.9**	**+0.1**
KERG			IAML_P			
	comp=Z,172nm,0.2s					
KIZK	**Mersin**	**1.01 119**	PG	**Pb**	**08 46 42.0**	**+0.3**
KIZK			SG	**Sn**	**08 46 56.6**	**-0.2**
KIZK	**Mersin**	**1.01 119**	*i* P	**Pn**	**08 46 42.8**	**+0.3**
KIZK			IAML_P			
	comp=Z,401nm,0.1s					
KONT	**Konya--Tatoy**	**1.11 331**	PN	**Pn**	**08 46 43.9**	**+0.1**
MERS	**Mersin**	**1.19 95**	PN	**Pn**	**08 46 45.4**	**+0.5**

ISK ***29*** *08:54:31.4, 39°.70N×30°.67E, h12km, ML2.0/8, Suspected Mining explosion.*
ISCJB ***29*** *08:54:32.5±0.5, 39°.76N±0°.03×30°.83E±0°.05, h0km, Error ellipse: s-maj=6.0km s-min=3.4km az=148.3*
DDA ***29*** *08:54:32.1, 39°.77N×30°.72E, h7km±2km, ML2.7*
ISC 29 08:54:32.5±0.9, **39°.70N**±0°.03×**30.73E**±0°.03, **h0**km, **n16**, σ**1**§**11**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESKT	**Eskisehir**	**0.21**	**152**	PG	**Pg**	**08 54 36.2**	**-0.2**
ESKT				SG	**Sg**	**08 54 40.3**	**+1.2**
BORA	**Eskisehir**	**0.28**	**310**	*i* P	**Pg**	**08 54 37.2**	**-0.5**
BORA				IAML_P			
	comp=Z,14μm,0.1s						
SRCK	**Saricakaya, Es**	**0.35**	**347**	*i* P	**Pg**	**08 54 38.5**	**-0.7**
SRCK				*i* S	**Sg**	**08 54 43.6**	**0.0**
SRCK				IAML_P			
	comp=Z,4μm,0.2s						
CIFT	**Cifteler, Eski**	**0.43**	**143**	PG	**Pg**	**08 54 41.6**	**+0.9**
CIFT				SG	**Sg**	**08 54 47.9**	**+1.6**
CIFT	**Cifteler, Eski**	**0.43**	**143**	*i* P	**Pb**	**08 54 42.4**	**-0.6**
CIFT				*i* S	**Sb**	**08 54 49.4**	**-0.6**
CIFT				IAML_P			
	comp=Z,2μm,0.1s						
AUMIH	**MIHALICIK**	**0.61**	**74**	*i* P	**Pg**	**08 54 44.1**	**0.0**
SVRH	**Sivrihisar-ESK**	**0.67**	**112**	PG	**Pg**	**08 54 44.4**	**-0.9**
AUSIV	**SIVRIHISAR**	**0.68**	**112**	*i* P	**Pg**	**08 54 45.1**	**-0.4**
GULT	**Gulveren**	**0.75**	**348**	PG	**Pg**	**08 54 46.5**	**-0.3**
MDUB	**Mudurnu**	**0.85**	**25**	PG	**Pg**	**08 54 48.6**	**-0.2**
BOLV	**Bolvadin**	**1.00**	**170**	*i* P	**Pn**	**08 54 53.7**	**-0.2**
BOLV				*i* S	**Sn**	**08 55 08.2**	**-0.5**
TVSB	**Tavsanli**	**1.01**	**256**	PG	**Pg**	**08 54 50.1**	**-1.7**
SHUT	**Suhut-Afyon**	**1.16**	**187**	PN	**Pg**	**08 54 53.9**	**-0.8**
KIZT	**Kizilcal**	**1.22**	**132**	PN	**Pg**	**08 54 54.9**	**-0.9**
ULDT	**Uludag**	**1.30**	**290**	*i* P	**Pg**	**08 54 57.2**	**-0.2**
ULDT				*i* S	**Sn**	**08 55 17.9**	**+1.7**
ULDT				IAML_P			
	comp=Z,729nm,0.1s						
DURS	**Dursunbey**	**1.74**	**267**	*i* P	**Pb**	**08 55 05.0**	**-0.4**
DURS				*i* S	**Sg**	**08 55 31.5**	**+3.0**
DURS				IAML_P			
	comp=Z,272nm,0.1s						

PRU ***29*** *09:00:46.8±0.0, 44°.09N×10°.08E, h0km, M3.7*
ROM ***29*** *09:00:47.7±0.1, 44°.151N±0°.005×10°.170E±0°.006, h6km, ML3.5/73, Error ellipse: s-maj=0.6km s-min=0.2km az=11.0*
ISCJB ***29*** *09:00:48.0±0.2, 44°.12N±0°.01×10°.15E±0°.02, h7km±1km, mb3.4/2, MS3.8/1, Error ellipse: s-maj=2.3km s-min=1.9km az=166.6*
IDC ***29*** *09:00:48.0±1.5, 44°.04N×10°.32E, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.5/28, mbtmp3.5/5, ML3.7/3, MS3.0/3, Ms1 3.0/3, ms1mx2.7/21, Error ellipse: s-maj=44.9km s-min=16.8km az=122.0*
GEN ***29*** *09:00:48.2, 44°.17N×10°.18E, h3km, Ml3.4*
LDG ***29*** *09:00:49.8±0.3, 44°.05N×10°.10E, h2km, Ml3.8/21, Error ellipse: s-maj=7.3km s-min=5.8km az=163.0*
STR ***29*** *09:00:50.5±0.7, 44°.N±4°×1°.0E±°, h0km, MLv3.4/7*
ISC 29 09:00:48.0±0.8, **44°.10N**±0°.02×**10.10E**±0°.02, **h7**km±5km, **n174**, σ**2**§**15**/210, **2C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOSD	**Fosdinovo**	**0.07**	**277**	P	**Pg**	**09 00 51.5**	**+1.6**
FOSD				S	**Sg**	**09 00 53.9**	**+2.8**
EQUI	**Equi**	**0.08**	**32**	P	**Pg**	**09 00 49.0**	**-1.0**
EQUI				S	**Sg**	**09 00 49.4**	**-1.9**
EQUI	**Equi**	**0.08**	**32**	*i* P	**Pg**	**09 00 49.0**	**-1.0**
EQUI				S	**Sg**	**09 00 49.5**	**-1.9**
T0912	**Minucciano (LU**	**0.11**	**50**	*i* P	**Pg**	**09 00 49.3**	**-1.1**
T0912				S	**Sg**	**09 00 50.0**	**-2.1**
PLMA	**Palmaria, Port**	**0.18**	**254**	*i* P	**Pg**	**09 00 53.7**	**+2.0**
PLMA				S	**Sg**	**09 00 57.3**	**+3.1**
PLMA				AML	AML		
	comp=E,6445μm,0.5s						
PLMA				AML	AML		
	comp=N,9170μm,0.9s						
PLMA				AML	AML		
	comp=E,6445μm,0.5s						
PLMA				AML	AML		
	comp=N,9170μm,0.9s						
PLMA				AML	AML		
	comp=E,6445μm,0.5s						
PLMA				AML	AML		
	comp=N,9170μm,0.9s						
PLMA				AML	AML		
	comp=E,6445μm,0.5s						
PLMA				AML	AML		
	comp=N,9170μm,0.9s						
VLC	**Villacollemand**	**0.22**	**74**	‖ *e*Pg	**Pg**	**09 00 51.6**	**-0.8**
VLC				*e*Sg	**Sg**	**09 00 54.3**	**-1.0**
VLC	**Villacollemand**	**0.22**	**74**	*i* P	**Pg**	**09 00 51.6**	**-0.8**
VLC				S	**Sg**	**09 00 54.2**	**-1.0**
VLC				AML	AML		
	comp=E,35350μm,0.4s						
VLC				AML	AML		
	comp=N,30150μm,0.1s						
VLC				AML	AML		
	comp=E,36450μm,0.4s						
VLC				AML	AML		
	comp=N,31800μm,0.1s						
VLC				AML	AML		
	comp=E,35350μm,0.4s						
VLC				AML	AML		
	comp=N,30150μm,0.1s						
VLC				AML	AML		
	comp=E,36450μm,0.4s						
VLC				AML	AML		
	comp=N,31850μm,0.1s						
VLC				AML	AML		
	comp=N,30150μm,0.1s						
VLC				AML	AML		
	comp=N,31850μm,0.1s						
VLC				AML	AML		
	comp=E,36450μm,0.4s						
VLC				AML	AML		
	comp=E,35350μm,0.4s						
CARD	**Cardoso**	**0.29**	**105**	P	**Pg**	**09 00 53.7**	**0.0**
CARD				S	**Sg**	**09 00 57.5**	**-0.1**
CARD	**Cardoso**	**0.29**	**105**	P	**Pg**	**09 00 53.7**	**0.0**
CARD				S	**Sg**	**09 00 57.4**	**-0.1**
CARD				AML	AML		
	comp=E,16500μm,1.0s						
CARD				AML	AML		
	comp=N,19700μm,0.8s						
CARD				AML	AML		
	comp=E,16500μm,1.0s						
CARD				AML	AML		
	comp=N,19700μm,0.8s						
CARD				AML	AML		
	comp=E,16500μm,1.0s						
CARD				AML	AML		
	comp=N,19700μm,0.8s						
CARD				AML	AML		
	comp=E,16500μm,1.0s						
MAIM	**Mastiano**	**0.34**	**123**	P	**Pg**	**09 00 54.9**	**+0.2**
MAIM				S	**Sg**	**09 00 59.6**	**+0.4**
MAIM	**Mastiano**	**0.34**	**123**	P	**Pg**	**09 00 55.2**	**+0.5**
MAIM				S	**Sg**	**09 00 59.9**	**+0.8**
MAIM				AML	AML		
	comp=E,22600μm,0.4s						
MAIM				AML	AML		
	comp=N,13550μm,0.4s						
MAIM				AML	AML		
	comp=E,22600μm,0.4s						
MAIM				AML	AML		
	comp=N,13550μm,0.4s						
MAIM				AML	AML		
	comp=E,22600μm,0.4s						
MAIM				AML	AML		
	comp=N,13550μm,0.4s						
MAIM				AML	AML		
	comp=E,22600μm,0.4s						
MAIM				AML	AML		
	comp=N,13550μm,0.4s						
BDI	**Bagni Di Lucca**	**0.36**	**96**	*e*P	**Pg**	**09 00 54.5**	**-0.6**
BDI				S	**Sg**	**09 00 59.4**	**-0.5**
BDI				AML	AML		
	comp=E,9990μm,0.9s						
BDI				AML	AML		
	comp=N,6500μm,0.6s						
BDI				AML	AML		
	comp=E,9660μm,0.6s						
BDI				AML	AML		
	comp=N,8645μm,0.7s						
BDI				AML	AML		
	comp=E,10015μm,0.9s						
BDI				AML	AML		
	comp=N,6500μm,0.6s						
BDI				AML	AML		
	comp=E,9660μm,0.6s						
BDI				AML	AML		
	comp=N,8645μm,0.7s						
BDI				AML	AML		
	comp=N,8645μm,0.7s						
BDI				AML	AML		
	comp=E,10015μm,0.9s						
BDI				AML	AML		
	comp=E,9660μm,0.6s						
BDI				AML	AML		
	comp=N,6500μm,0.6s						
GRAM	**Graiana**	**0.39**	**357**	P	**Pg**	**09 00 55.1**	**-0.5**
GRAM				S	**Sg**	**09 00 60.0**	**-0.9**
GRAM	**Graiana**	**0.39**	**357**	*i* P	**Pg**	**09 00 55.2**	**-0.5**
GRAM				S	**Sg**	**09 01 00.3**	**-0.6**
GRAM				AML	AML		
	comp=E,46700μm,0.3s						
GRAM				AML	AML		
	comp=N,42850μm,0.3s						
GRAM				AML	AML		
	comp=E,46700μm,0.3s						
GRAM				AML	AML		
	comp=N,42850μm,0.3s						
GRAM				AML	AML		
	comp=E,46700μm,0.3s						
GRAM				AML	AML		
	comp=N,42850μm,0.3s						
GRAM				AML	AML		
	comp=N,42850μm,0.3s						
GRAM				AML	AML		
	comp=E,46700μm,0.3s						
ERBM	**Eremo**	**0.39**	**35**	*i* P	**Pg**	**09 00 54.9**	**-0.8**
ERBM				S	**Sg**	**09 01 00.0**	**-0.9**
ERBM				AML	AML		
	comp=E,17600μm,0.9s						
ERBM				AML	AML		
	comp=N,20550μm,1.0s						
ERBM				AML	AML		
	comp=E,17550μm,0.9s						
ERBM				AML	AML		
	comp=N,20600μm,1.0s						
ERBM				AML	AML		
	comp=E,17550μm,0.9s						
ERBM				AML	AML		
	comp=N,20600μm,1.0s						
ERBM				AML	AML		
	comp=N,20600μm,1.0s						
ERBM				AML	AML		
	comp=E,17550μm,0.9s						
MSSA	**Maissana**	**0.47**	**298**	*e*P	**Pg**	**09 00 57.8**	**+0.7**
MSSA				AML	AML		
	comp=E,5595μm,1.6s						
MSSA				AML	AML		
	comp=N,4800μm,0.7s						
MSSA				AML	AML		
	comp=E,5595μm,1.6s						
MSSA				AML	AML		
	comp=N,4800μm,0.7s						
MSSA				AML	AML		
	comp=E,5595μm,1.6s						
MSSA				AML	AML		
	comp=N,4800μm,0.7s						
POPM	**Popiglio**	**0.48**	**96**	P	**Pg**	**09 00 56.6**	**-0.6**
POPM				S	**Sg**	**09 01 03.3**	**-0.3**
POPM	**Popiglio**	**0.48**	**96**	*e*P	**Pg**	**09 00 56.7**	**-0.6**
POPM				S	**Sg**	**09 01 03.4**	**-0.1**
POPM				AML	AML		
	comp=E,12450μm,0.4s						
POPM				AML	AML		
	comp=N,12900μm,0.3s						
POPM				AML	AML		
	comp=E,12450μm,0.4s						
POPM				AML	AML		
	comp=N,12900μm,0.3s						
POPM				AML	AML		
	comp=N,12900μm,0.3s						
POPM				AML	AML		
	comp=E,12450μm,0.4s						
MTCR	**Monte La Croce**	**0.66**	**96**	P	**Pg**	**09 00 59.9**	**-0.7**
MTCR				S	**Sg**	**09 01 09.3**	**+0.1**
MTCR				AML	AML		
	comp=E,6225μm,0.5s						
MTCR				AML	AML		
	comp=N,9355μm,0.6s						
MTCR				AML	AML		
	comp=E,6230μm,0.5s						
MTCR				AML	AML		
	comp=N,9345μm,0.6s						
MTCR				AML	AML		
	comp=E,6230μm,0.5s						
MTCR				AML	AML		
	comp=N,9345μm,0.6s						
ZCCA	**Zocca**	**0.68**	**68**	*i* P	**Pg**	**09 01 01.5**	**+0.3**
ZCCA				AML	AML		
	comp=E,3270μm,0.5s						
ZCCA				AML	AML		
	comp=N,6285μm,0.8s						
ZCCA				AML	AML		
	comp=E,3415μm,0.8s						
ZCCA				AML	AML		
	comp=N,6315μm,0.8s						
ZCCA				AML	AML		
	comp=E,3270μm,0.5s						
ZCCA				AML	AML		
	comp=N,6285μm,0.8s						
ZCCA				AML	AML		
	comp=E,3415μm,0.8s						
ZCCA				AML	AML		
	comp=N,6315μm,0.8s						
ZCCA				AML	AML		
	comp=E,3415μm,0.8s						
ZCCA				AML	AML		
	comp=N,6315μm,0.8s						
ZCCA				AML	AML		
	comp=N,6285μm,0.8s						
ZCCA				AML	AML		
	comp=E,3270μm,0.5s						
PRMA	**PARMA**	**0.68**	**13**	*e*P	**Pg**	**09 01 01.4**	**+0.2**
PRMA				AML	AML		
	comp=E,12090μm,1.6s						
PRMA				AML	AML		
	comp=N,22900μm,0.5s						
PRMA				AML	AML		
	comp=E,12090μm,1.6s						
PRMA				AML	AML		
	comp=N,22900μm,0.5s						
PRMA				AML	AML		
	comp=E,12090μm,1.6s						
PRMA				AML	AML		
	comp=N,22900μm,0.5s						
GROG	**Isola di Gorgo**	**0.69**	**192**	P	**Pb**	**09 01 03.0**	**+0.6**
GROG				S	**Sn**	**09 01 13.5**	**-1.6**
GROG				AML	AML		
	comp=E,4325μm,0.6s						
GROG				AML	AML		
	comp=N,2745μm,0.5s						
GROG				AML	AML		
	comp=E,4330μm,0.6s						
GROG				AML	AML		
	comp=N,2745μm,0.5s						
GROG				AML	AML		
	comp=N,2745μm,0.5s						
GROG				AML	AML		
	comp=E,4330μm,0.6s						
CRMI	**Carmignano**	**0.70**	**116**	P	**Pb**	**09 01 01.9**	**-0.7**
CRMI				AML	AML		
	comp=E,3970μm,0.6s						
CRMI				AML	AML		
	comp=N,5475μm,0.9s						
CRMI				AML	AML		
	comp=E,1630μm,0.6s						
CRMI				AML	AML		
	comp=N,2275μm,0.9s						
CRMI				AML	AML		
	comp=E,1630μm,0.6s						
CRMI				AML	AML		
	comp=N,2275μm,0.9s						
CRMI				AML	AML		
	comp=N,2275μm,0.9s						
CRMI				AML	AML		
	comp=E,1630μm,0.6s						
GORR	**Gorreto**	**0.77**	**312**	*e*P	**Pg**	**09 01 02.7**	**-0.1**
GORR				AML	AML		
	comp=E,3680μm,0.9s						
GORR				AML	AML		
	comp=N,3775μm,0.6s						
GORR				AML	AML		
	comp=E,3680μm,0.9s						
GORR				AML	AML		
	comp=N,3775μm,0.6s						
GORR				AML	AML		
	comp=E,3680μm,0.9s						
GORR				AML	AML		
	comp=N,3775μm,0.6s						
BOB	**Bobbio (Coli)**	**0.81**	**325**	*e*P	**Pg**	**09 01 03.5**	**-0.2**
BOB				AML	AML		
	comp=E,3960μm,0.5s						
BOB				AML	AML		
	comp=N,4185μm,1.6s						
BOB				AML	AML		
	comp=E,4510μm,1.1s						
BOB				AML	AML		
	comp=N,4500μm,1.6s						
BOB				AML	AML		
	comp=E,3960μm,0.5s						
BOB				AML	AML		
	comp=N,4185μm,1.6s						
BOB				AML	AML		
	comp=E,4510μm,1.1s						
BOB				AML	AML		
	comp=N,4500μm,1.6s						
BOB				AML	AML		
	comp=N,4500μm,1.6s						
BOB				AML	AML		
	comp=N,4185μm,1.6s						
BOB				AML	AML		
	comp=E,4510μm,1.1s						
BOB				AML	AML		
	comp=E,3960μm,0.5s						
SEI	**Scarperia**	**0.91**	**92**	P	**Pg**	**09 01 04.7**	**-0.8**
NDIM	**Novi di Modena**	**0.97**	**36**	AML	AML		
	comp=E,3615μm,0.5s						
NDIM				AML	AML		
	comp=E,3615μm,0.5s						
NDIM				AML	AML		
	comp=N,2590μm,1.3s						
NDIM				AML	AML		
	comp=N,2590μm,1.3s						
RAVA	**Ravarino**	**0.98**	**48**	AML	AML		
	comp=E,7750μm,0.6s						
RAVA				AML	AML		
	comp=E,7755μm,0.6s						
RAVA				AML	AML		
	comp=N,5375μm,1.1s						
RAVA				AML	AML		
	comp=N,5370μm,1.1s						
RAVA				AML	AML		
	comp=E,7750μm,0.6s						
RAVA				AML	AML		
	comp=N,5370μm,1.1s						
BRIS	**BRISIGHELLA**	**1.02**	**87**	AML	AML		
	comp=N,1840μm,0.6s						
BRIS				AML	AML		
	comp=E,1470μm,0.7s						
BRIS				AML	AML		
	comp=E,1485μm,0.5s						
BRIS				AML	AML		
	comp=N,1840μm,0.6s						
BRIS				AML	AML		
	comp=N,1840μm,0.6s						
BRIS				AML	AML		
	comp=E,1485μm,0.5s						
RUFI	**Rufina**	**1.05**	**104**	P	**Pg**	**09 01 07.5**	**-0.7**
RUFI				AML	AML		
	comp=E,1590μm,0.7s						
RUFI				AML	AML		
	comp=N,1485μm,0.8s						
CSNT	**Castellina Chi**	**1.07**	**125**	P	**Pb**	**09 01 08.8**	**0.0**
CSNT				S	**Sb**	**09 01 23.3**	**+0.2**
CSNT				AML	AML		
	comp=E,2130μm,1.0s						
CSNT				AML	AML		
	comp=N,2525μm,1.4s						
CSNT				AML	AML		
	comp=E,2130μm,1.0s						
CSNT				AML	AML		
	comp=N,2525μm,1.4s						
CSNT				AML	AML		
	comp=N,2525μm,1.4s						
CSNT				AML	AML		
	comp=E,2130μm,1.0s						
FIU	**Minerbio Fiu**	**1.14**	**61**	AML	AML		
	comp=N,2960μm,0.7s						
FIU				AML	AML		
	comp=E,6070μm,0.6s						
FIU				AML	AML		
	comp=N,2960μm,0.7s						
FIU				AML	AML		
	comp=E,6070μm,0.6s						
TRIF	**Trifonti**	**1.15**	**149**	*e*P	**Pn**	**09 01 10.4**	**-0.2**
TRIF				AML	AML		
	comp=E,1398μm,0.6s						
TRIF				AML	AML		
	comp=N,1120μm,1.1s						
TRIF				AML	AML		
	comp=E,1398μm,0.6s						
TRIF				AML	AML		
	comp=N,1120μm,1.1s						
FROS	**Frosini**	**1.18**	**139**	P	**Pg**	**09 01 10.4**	**-0.2**
FROS				AML	AML		
	comp=E,3040μm,1.1s						
FROS				AML	AML		
	comp=N,3130μm,0.6s						
FROS				AML	AML		
	comp=E,3040μm,1.1s						
FROS				AML	AML		
	comp=N,3130μm,0.6s						
PCP	**Piancastagn**	**1.20**	**292**	P	**Pg**	**09 01 10.7**	**-0.3**
PCP				AML	AML		
	comp=E,829μm,0.5s						
PCP				AML	AML		
	comp=N,898μm,0.6s						
PCP				AML	AML		
	comp=E,828μm,0.5s						
PCP				AML	AML		
	comp=N,898μm,0.6s						
PCP				AML	AML		
	comp=N,898μm,0.6s						
PCP				AML	AML		
	comp=E,828μm,0.5s						
GAZZ	**Gazzo Veronese**	**1.24**	**35**	*e*Pg	**Pn**	**09 01 13.1**	**+1.3**

GAZZ *e*Sg **Sn** **09 01 30.5 +1.8**
SERM Sermide 1.25 43 AML AML
comp=N,1303µm,0.7s
SERM AML AML
comp=E,2270µm,1.0s
SERM AML AML
comp=E,4365µm,0.7s
SERM AML AML
comp=N,2335µm,0.7s
SERM AML AML
comp=E,4390µm,0.7s
SERM AML AML
comp=N,2335µm,0.7s
SERM AML AML
comp=N,2335µm,0.7s
SERM AML AML
comp=E,4390µm,0.7s
QLNO Quiliano 1.28 281 P **Pn** **09 01 12.4 +0.1**
QLNO AML AML
comp=E,572µm,0.3s
QLNO AML AML
comp=N,745µm,0.7s
QLNO AML AML
comp=E,572µm,0.3s
QLNO AML AML
comp=N,746µm,0.7s
QLNO AML AML
comp=N,746µm,0.7s
QLNO AML AML
comp=E,572µm,0.3s
SFI Santa Sofia 1.28 98 P **Pn** **09 01 11.3 -1.0**
SFI AML AML
comp=E,1052µm,1.0s
SFI AML AML
comp=N,1259µm,0.7s
SFI AML AML
comp=E,966µm,1.6s
SFI AML AML
comp=N,1345µm,0.6s
SFI AML AML
comp=E,1054µm,1.0s
SFI AML AML
comp=N,1255µm,0.7s
SFI AML AML
comp=E,966µm,1.6s
SFI AML AML
comp=N,1350µm,0.6s
SFI AML AML
comp=N,1255µm,0.7s
SFI AML AML
comp=E,1054µm,1.0s
SFI AML AML
comp=N,1350µm,0.6s
SFI AML AML
comp=E,966µm,1.6s
CELB S.Piero in Cam 1.35 176 P **Pn** **09 01 13.3 -0.1**
CELB AML AML
comp=E,436µm,0.8s
CELB AML AML
comp=N,750µm,0.1s
CELB AML AML
comp=E,436µm,0.8s
CELB AML AML
comp=N,750µm,0.1s
CASP Castiglione de 1.42 157 P **Pn** **09 01 14.3 0.0**
CASP AML AML
comp=E,626µm,0.5s
CASP AML AML
comp=N,652µm,0.6s
CASP AML AML
comp=E,626µm,0.5s
CASP AML AML
comp=N,652µm,0.6s
CASP AML AML
comp=E,626µm,0.5s
CASP AML AML
comp=N,652µm,0.6s
CRE Caprese Michel 1.43 109 P **Pn** **09 01 13.3 -1.1**
CRE AML AML
comp=E,1140µm,0.6s
CRE AML AML
comp=N,1018µm,0.3s
CRE AML AML
comp=E,1140µm,0.6s
CRE AML AML
comp=N,1017µm,0.3s
CRE AML AML
comp=E,1140µm,0.6s
CRE AML AML
comp=N,1017µm,0.3s
CAFI Castiglion Fio 1.56 119 P **Pn** **09 01 15.6 -0.6**
CAFI AML AML
comp=E,396µm,0.5s
CAFI AML AML
comp=N,512µm,0.6s
CAFI AML AML
comp=E,396µm,0.5s
CAFI AML AML
comp=N,512µm,0.6s
IMI Imperia 1.60 264 P **Pn** **09 01 16.7 -0.1**
IMI AML AML
comp=E,374µm,0.7s
IMI AML AML
comp=N,678µm,0.4s
IMI AML AML
comp=N,678µm,0.4s
IMI AML AML
comp=E,374µm,0.7s
PARC Parchiule 1.61 105 P **Pn** **09 01 16.2 -0.8**
PARC AML AML
comp=E,452µm,0.8s
PARC AML AML
comp=N,622µm,0.8s
PARC AML AML
comp=E,452µm,0.8s
PARC AML AML
comp=N,622µm,0.8s
PARC AML AML
comp=E,452µm,0.8s
PARC AML AML
comp=N,622µm,0.8s
GBOS Grotte di Boss 1.63 276 P **Pn** **09 01 17.3 +0.1**
GBOS AML AML
comp=E,250µm,0.5s
GBOS AML AML
comp=N,314µm,0.5s
GBOS AML AML
comp=N,314µm,0.5s
GBOS AML AML
comp=E,250µm,0.5s
MGRO Montegrosso 1.65 269 P **Pn** **09 01 17.7 +0.1**
MGRO AML AML
comp=E,778µm,0.4s
MGRO AML AML
comp=N,596µm,0.9s
MGRO AML AML
comp=E,778µm,0.4s
MGRO AML AML
comp=N,596µm,0.9s
MGRO AML AML
comp=E,778µm,0.4s
MGRO AML AML
comp=N,596µm,0.9s
ADRI Adria, Italy 1.66 55 *e*Pg **Pg** **09 01 19.8 -0.1**
BALD Monte Baldo 1.67 18 *e*Pg **Pb** **09 01 18.8 -0.3**
BALD *e*Sg **Sg** **09 01 41.6 +0.1**
TEOL Teolo 1.69 41 *e*Pg **Pn** **09 01 18.3 +0.3**
TEOL *e*Sg **Sg** **09 01 43.2 +1.0**
TEOL Teolo 1.69 41 P **Pn** **09 01 17.7 -0.2**
TEOL AML AML
comp=E,3150µm,1.0s
TEOL AML AML
comp=N,2260µm,0.9s
TEOL AML AML
comp=E,3150µm,1.0s
TEOL AML AML
comp=N,2260µm,0.9s
ROVR Rover Verones 1.70 24 P **Pn** **09 01 18.2 0.0**
MDI Monti di Nese 1.70 351 AML AML
comp=N,1265µm,0.4s
MDI AML AML
comp=E,1465µm,0.3s
MDI AML AML
comp=N,1265µm,0.4s
MDI AML AML
comp=E,1465µm,0.3s
MAGA Magasa 1.72 13 *e*Pg **Pb** **09 01 19.4 -0.6**
MAGA Magasa 1.72 13 P **Pn** **09 01 18.4 -0.1**
MAGA AML AML
comp=E,6090µm,0.7s
MAGA AML AML
comp=N,2550µm,0.6s
MAGA AML AML
comp=N,2550µm,0.6s
MAGA AML AML
comp=E,6090µm,0.7s
MARN Marana (Italy) 1.73 27 *e*Pg **Pb** **09 01 19.8 -0.4**
NEGI Seborga 1.75 263 AML AML
comp=E,312µm,0.5s
NEGI AML AML
comp=E,312µm,0.5s
NEGI AML AML
comp=N,330µm,0.5s
NEGI AML AML
comp=N,330µm,0.5s
PGF Pioggiola 1.75 208 *e*Pn **Pn** **09 01 19.4 +0.6**
SNR=1.0
PGF *e*Sn **Sn** **09 01 39.0 -2.3**
comp=N,104nm,0.3s
ATVO AVT- Monte Val 1.82 112 P **Pn** **09 01 18.8 -1.0**
ATVO AML AML
comp=E,418µm,0.6s
ATVO AML AML
comp=N,543µm,0.9s
ATVO AML AML
comp=E,418µm,0.6s
ATVO AML AML
comp=N,543µm,0.9s
MONC Moncucco Torin 1.83 303 AML AML
comp=N,1605µm,0.5s
MONC AML AML
comp=E,1590µm,0.5s
MONC AML AML
comp=N,1605µm,0.5s
MONC AML AML
comp=E,1590µm,0.5s
MAON Monte Argentar 1.83 155 P **Pn** **09 01 20.2 +0.2**
MAON AML AML
comp=E,272µm,1.1s
MAON AML AML
comp=N,324µm,0.8s
MAON AML AML
comp=N,324µm,0.8s
MAON AML AML
comp=E,272µm,1.1s
SAOF Saorge 1.83 267 Pn **Pn** **09 01 20.7 +0.7**
SAOF Sn **Sn** **09 01 42.7 -0.8**
SAOF Saorge 1.83 267 AML AML
comp=E,872µm,0.7s
SAOF AML AML
comp=N,976µm,0.7s
SAOF AML AML
comp=E,872µm,0.7s
SAOF AML AML
comp=N,976µm,0.7s
ATTE AVT- Monte Tez 1.87 118 P **Pn** **09 01 20.1 -0.4**
ATTE AML AML
comp=E,558µm,0.4s
ATTE AML AML
comp=N,378µm,0.9s
ATTE AML AML
comp=E,558µm,0.4s
ATTE AML AML
comp=N,378µm,0.9s
RNI Roncone 1.92 11⇑ *e*Pn **Pn** **09 01 21.9 +0.6**
ENR Entracque 1.93 275 AML AML
comp=E,248µm,1.5s
ENR AML AML
comp=N,458µm,0.7s
ENR AML AML
comp=N,458µm,0.7s
ENR AML AML
comp=E,248µm,1.5s
SBF Sospel 1.94 264 *e*Pn **Pn** **09 01 21.7 +0.3**
SNR=1.0
SBF *e*Sn **Sn** **09 01 42.3 -3.7**
comp=E,182nm,0.3s,SNR=1.0
DOSS Dosso del Somm 1.94 23 *e*Pn **Pn** **09 01 21.9 +0.3**
MURB Monte Urbino 1.95 115 AML AML
comp=E,844µm,1.1s
MURB AML AML
comp=E,844µm,1.1s
MURB AML AML
comp=N,794µm,1.0s
MURB AML AML
comp=N,794µm,1.0s
MABI Malga Bissina 1.98 8⇓ *e*Pn **Pn** **09 01 22.6 +0.5**
MABI Malga Bissina 1.98 8 P **Pn** **09 01 22.4 +0.3**
MABI AML AML
comp=E,388µm,0.8s
MABI AML AML
comp=N,316µm,1.0s
MABI AML AML
comp=N,316µm,1.0s
MABI AML AML
comp=E,388µm,0.8s
ESCA l'Escarene 1.98 263 Pn **Pn** **09 01 22.5 +0.5**
VARE Varese 2.00 332 AML AML
comp=N,1016µm,0.6s
VARE AML AML
comp=E,934µm,1.6s
VARE AML AML
comp=N,1016µm,0.6s
VARE AML AML
comp=E,934µm,1.6s
GAGG Gaggia 2.08 17⇑ *e*Pn **Pn** **09 01 23.6 +0.2**
SMPL Sampolo 2.09 197 Pn **Pb** **09 01 25.1 -1.1**
SMPL Sn **Sn** **09 01 50.1 +0.3**
CGRP Cima Grappa 2.15 34 *e*Pn **Pn** **09 01 24.7 +0.2**
CGRP *e*Sn **Sn** **09 01 52.8 +1.3**
CGRP Cima Grappa 2.15 34 AML AML
comp=E,855µm,1.6s
CGRP AML AML
comp=N,1017µm,1.1s
CGRP AML AML
comp=E,855µm,1.6s
CGRP AML AML
comp=N,1017µm,1.1s
BHB Bricherasio 2.16 291 AML AML
comp=N,275µm,1.5s
BHB AML AML
comp=E,354µm,0.7s
BHB AML AML
comp=E,354µm,0.7s
BHB AML AML
comp=N,275µm,1.5s
TRAV Traversella 2.19 311 P **Pn** **09 01 25.7 +0.8**
TRAV AML AML
comp=E,608µm,0.5s
TRAV AML AML
comp=N,526µm,0.5s
TRAV AML AML
comp=N,526µm,0.5s
TRAV AML AML
comp=E,608µm,0.5s
ISO Isola 2.19 273 Pn **Pb** **09 01 26.8 -1.3**
ISO Sn **Sn** **09 01 51.8 -0.6**
CTI Castel Tesino 2.24 29 AML AML
comp=E,726µm,0.6s
CTI AML AML
comp=E,726µm,0.6s
CTI AML AML
comp=N,718µm,0.3s
CTI AML AML
comp=N,718µm,0.3s
CALF Calern 2.32 262 Pn **Pn** **09 01 27.4 +0.7**
CIRO Champorcher 2.34 311 P **Pn** **09 01 27.6 +0.4**
CIRO AML AML
comp=E,320µm,0.6s
CIRO AML AML
comp=N,350µm,1.3s
CIRO AML AML
comp=N,350µm,1.3s
CIRO AML AML
comp=E,320µm,0.6s
SURF Saint Ours 2.39 280 Pn **Pn** **09 01 28.4 +0.7**
SURF Sn **Sn** **09 01 56.4 -0.9**
FDMO Fiordimonte 2.42 115 AML AML
comp=N,162µm,0.5s
FDMO AML AML
comp=E,150µm,0.4s
FDMO AML AML
comp=N,162µm,0.5s
FDMO AML AML
comp=E,150µm,0.4s
TUE Stuetta 2.43 348 AML AML
comp=N,393µm,1.3s
TUE AML AML
comp=E,642µm,0.5s
TUE AML AML
comp=N,393µm,1.3s
TUE AML AML
comp=E,850µm,0.5s
TUE AML AML
comp=N,487µm,0.5s
TUE AML AML
comp=E,642µm,0.5s
TUE AML AML
comp=E,850µm,0.5s
TUE AML AML
comp=N,487µm,0.5s
MBDF Montbardon 2.46 286 *e*Pn **Pn** **09 01 29.1 +0.4**
SNR=1.0
MMK Mattmark 2.47 323 AML AML
comp=E,274µm,0.9s
MMK AML AML
comp=E,274µm,0.9s
MMK AML AML
comp=N,388µm,0.3s
MMK AML AML
comp=N,388µm,0.3s
FUORN Ofenpass-Fuorn 2.52 3 AML AML
comp=E,297µm,0.7s
FUORN AML AML
comp=E,297µm,0.7s
FUORN AML AML
comp=N,252µm,1.5s
FUORN AML AML
comp=N,252µm,1.5s
KOSI Kohlern 2.53 21 AML AML
comp=N,546µm,0.7s
KOSI AML AML
comp=E,660µm,0.9s
KOSI AML AML
comp=N,546µm,0.7s
KOSI AML AML
comp=E,660µm,0.9s
MOSI Grossmontoni 2.54 7 AML AML
comp=E,760µm,0.8s
MOSI AML AML
comp=E,760µm,0.8s
MOSI AML AML
comp=N,1310µm,0.8s
MOSI AML AML
comp=N,1310µm,0.8s
FRF La Foret Royal 2.55 259 *e*Pn **Pn** **09 01 30.0 +0.2**
SNR=1.0
FRF *e*Sn **Sn** **09 01 57.7 -3.5**
comp=N,72nm,0.4s,SNR=1.0
FUSIO Fusio 2.56 337 AML AML
comp=N,323µm,1.4s
FUSIO AML AML
comp=E,465µm,0.5s
FUSIO AML AML
comp=N,323µm,1.4s
FUSIO AML AML
comp=E,465µm,0.5s
DAVOX Davos/Dischmat 2.69 357 AML AML
comp=E,346µm,0.5s
DAVOX AML AML
comp=E,346µm,0.5s
DAVOX AML AML
comp=N,344µm,0.5s
DAVOX AML AML
comp=N,344µm,0.5s
LMR La Mourre 2.71 255 *e*Pn **Pn** **09 01 31.9 -0.1**
SNR=1.0
LMR *e*Sn **Sn** **09 02 00.4 -4.6**
comp=N,37nm,0.4s,SNR=1.0
REMY Saint-Rhmy-en 2.71 311 AML AML
comp=E,572µm,0.6s
REMY AML AML
comp=N,722µm,0.7s
REMY AML AML
comp=E,572µm,0.6s
REMY AML AML
comp=N,722µm,0.7s
LPG La Plagne 2.76 302 *e*Pn **Pn** **09 01 34.4 +1.4**
SNR=1.0
LPG *e*Sn **Sn** **09 02 03.7 -3.0**
comp=N,102nm,0.6s
ABSI Aberstueckl 2.77 18 AML AML
comp=N,1010µm,0.6s
ABSI AML AML
comp=E,1098µm,0.6s
ABSI AML AML
comp=N,1010µm,0.6s
ABSI AML AML
comp=E,1098µm,0.6s
LPL La Plagne 2.78 302 *e*Pn **Pn** **09 01 34.4 +1.2**
SNR=1.0
RSL Roselend 2.93 304 Pn **Pn** **09 01 38.1 +2.9**
FETA Feichten 2.96 8 *e*Pn **Pn** **09 01 37.7 +2.2**
comp=E,2.8nm,0.2s,SNR=18
FETA *e*Sn **Sn** **09 02 12.8 +1.4**
comp=E,33nm,0.7s
ROSI Rosskopf 2.98 18 AML AML
comp=E,568µm,0.9s
ROSI AML AML
comp=E,568µm,0.9s
ROSI AML AML
comp=N,898µm,0.6s
ROSI AML AML
comp=N,898µm,0.6s
PLONS Plons/SG 2.99 351 AML AML
comp=E,280µm,0.4s
PLONS AML AML
comp=E,280µm,0.4s
PLONS AML AML
comp=N,302µm,0.5s
PLONS AML AML
comp=N,302µm,0.5s
BNALP Bannalp 3.01 338 AML AML
comp=E,243µm,0.5s
BNALP AML AML
comp=E,243µm,0.5s
BNALP AML AML
comp=N,220µm,1.0s
BNALP AML AML
comp=N,220µm,1.0s
TRI Trieste 3.06 57 AML AML
comp=E,126µm,0.6s
TRI AML AML
comp=N,94µm,1.2s
TRI AML AML
comp=E,126µm,0.6s
TRI AML AML
comp=N,94µm,1.2s
SABO M.te Sabotino 3.12 52 AML AML
comp=N,489µm,1.0s
SABO AML AML
comp=E,382µm,0.3s
SABO AML AML
comp=N,489µm,1.0s
SABO AML AML
comp=E,382µm,0.3s
ORIF Oris-en-Rattie 3.12 287 *e*Pn **Pn** **09 01 38.9 +1.1**
SNR=1.0
FVI Forni Avoltri 3.13 36 AML AML
comp=N,193µm,0.7s
FVI AML AML
comp=E,262µm,0.8s
FVI AML AML
comp=N,193µm,0.7s
FVI AML AML
comp=E,262µm,0.8s
SKDS Skadanscina 3.14 61 *i* Pn **Pn** **09 01 37.1 -0.8**
ARTF Artigues 3.15 262 Pn **Pn** **09 01 39.6 +1.5**
ABTA Abfaltersbach 3.15 32 *i* Pn **Pn** **09 01 39.1 +1.0**
comp=E,13nm,0.4s,SNR=12
ABTA *e*Sn **Sn** **09 02 15.2 -0.7**
comp=E,38nm,0.5s
RISI Rein 3.17 25 AML AML
comp=N,726µm,1.0s
RISI AML AML
comp=E,726µm,0.4s
RISI AML AML
comp=N,726µm,1.0s
RISI AML AML
comp=E,726µm,0.4s
DAVA Damuels 3.19 357 *i* Pn **Pn** **09 01 41.1 +2.4**
comp=E,82nm,0.5s,SNR=52

DAVA *i* Sn **Sn** **09 02 20.2 +3.0**
comp=E,82nm,0.5s
SQTA **Sankt Quirin** **3.22 14** *e*Pn **Pn** **09 01 41.7 +2.6**
comp=E,34nm,0.2s,SNR=39
SQTA *e*Sn **Sb** **09 02 21.8 -3.2**
comp=E,64nm,0.5s
SMRF **Simiane la Rot** **3.26 269** *e*Pn **Pn** **09 01 40.0 +0.4**
SNR=1.0
SMRF *e*Sn **Sn** **09 02 14.0 -4.7**
comp=E,57nm,0.5s
MOTA **Moosalm** **3.32 12** *i* Pn **Pn** **09 01 42.9 +2.3**
comp=E,31nm,0.3s,SNR=43
MOTA *i* Sn **Sn** **09 02 23.7 +3.4**
comp=E,25nm,0.3s
WTTA **Wattenberg** **3.34 18** *i* Pn **Pn** **09 01 42.8 +1.9**
comp=E,26nm,0.3s,SNR=25
WTTA *i* Sn **Sn** **09 02 23.5 +2.6**
comp=E,205nm,0.8s
WATA **Walderalm** **3.40 17** *i* Pn **Pn** **09 01 43.7 +2.1**
comp=E,29nm,0.3s,SNR=39
WATA *e*Sn **Sn** **09 02 25.3 +3.1**
comp=E,16nm,0.3s
RETA **Reutte** **3.42 8** *e*Pn **Pn** **09 01 44.2 +2.4**
comp=E,12nm,0.3s,SNR=8.4
RETA *e*Sn **Sn** **09 02 25.5 +2.8**
comp=E,18nm,0.4s
OG02 **Monnetier-Morn** **3.43 308** Pn **Pn** **09 01 45.2 +3.3**
ACOM **Acomizza, Ital** **3.44 43** AML AML
comp=E,406μm,0.7s
ACOM AML AML
comp=E,406μm,0.7s
ACOM AML AML
comp=N,322μm,0.8s
ACOM AML AML
comp=N,322μm,0.8s
NVLJ **Novalja** **3.46 81** *e*Pn **Pn** **09 01 42.7 +0.4**
OGSM **Saint Maurice** **3.47 297** Pn **Pn** **09 01 44.9 +2.4**
MYKA **Terra Mystica** **3.56 43** *i* Pn **Pn** **09 01 45.1 +1.4**
comp=N,5.2nm,0.2s,SNR=5.2
MYKA *i* Sn **Sn** **09 02 29.1 +3.1**
comp=N,28nm,0.4s
LJU **Ljubljana** **3.69 57** AML AML
comp=N,524μm,0.4s
LJU AML AML
comp=E,282μm,1.0s
LJU AML AML
comp=N,524μm,0.4s
LJU AML AML
comp=E,282μm,1.0s
OG35 **Corcelles** **3.75 303** Pn **Pn** **09 01 48.3 +2.0**
KBA **Koelnbreinsper** **3.75 36** *i* Pn **Pn** **09 01 48.1 +1.6**
comp=E,2.3nm,0.2s,SNR=8.3
KBA *e*Sn **Sn** **09 02 33.2 +2.2**
comp=E,32nm,0.6s
VISS **Visnje** **3.77 62** *i* Pn **Pn** **09 01 46.6 0.0**
CABF **La Chapelle** **3.78 313** *e*P **Pn** **09 01 49.0 +2.2**
CABF *e*Sn **Sn** **09 02 27.8 -3.8**
comp=E,54nm,0.4s,SNR=1.0
VIVF **Saint-Julien-l** **3.95 283** *e*P **Pn** **09 01 50.6 +1.5**
SNR=1.0
OBKA **Obir** **3.96 51** *i* Pn **Pn** **09 01 50.3 +1.1**
comp=E,6.6nm,0.2s
OBKA *i* Sn **Sn** **09 02 36.8 +0.8**
comp=E,32nm,0.5s
UDBI **Udbina** **4.09 82** *i* Pn **Pn** **09 01 52.6 +1.6**
SOKA **Soboth** **4.33 52** *i* Pn **Pn** **09 01 54.5 +0.2**
comp=E,17nm,0.5s,SNR=13
SOKA *e*Sn **Sn** **09 02 44.2 -0.9**
comp=E,17nm,0.7s
HINF **Hinteralfeld** **4.35 330** *e*P **Pn** **09 01 56.1 +1.5**
HINF *e*Sn **Sn** **09 02 43.0 -2.6**
comp=E,99nm,0.4s,SNR=1.0
LASF **Ste Croix** **4.50 272** *e*P **Pn** **09 01 57.6 +1.1**
SNR=1.0
LASF *e*Sn **Sn** **09 02 42.8 -6.3**
comp=E,13nm,0.4s,SNR=1.0
HAU **Haudompre** **4.70 328** *e*P **Pn** **09 02 01.1 +1.8**
HAU *e*Sn **Sn** **09 02 50.9 -3.2**
comp=E,235nm,0.6s,SNR=1.0
CDF **Champ du Feu** **4.74 337** *e*P **Pn** **09 02 01.0 +1.1**
SNR=1.0
CDF *e*Sn **Sn** **09 02 52.6 -2.5**
comp=E,58nm,0.5s
MOA **Molln** **4.75 36** *i* Pn **Pn** **09 02 01.1 +1.1**
comp=E,3.6nm,0.2s
MOA *e*Sn **Sn** **09 02 56.2 +0.9**
comp=E,12nm,0.4s
ARSA **Arzberg** **4.94 48** *i* Pn **Pn** **09 02 02.5 -0.2**
comp=E,30nm,0.4s,SNR=24
SMF **Signal de Mont** **5.09 302** *e*P **Pn** **09 02 08.3 +3.6**
SMF *e*Sn **Sn** **09 02 58.4 -5.3**
comp=E,67nm,0.5s
GERES **GERESS Array B** **5.36 26** Pn **Pn** **09 02 09.0 +0.5**
comp=E,2.2nm,0.3s,baz=205,slow=13,SNR=40
GERES Sn **Sn** **09 03 09.7 -0.8**
comp=E,2.9nm,0.3s,baz=204,slow=24,SNR=5.8
GERES Lg Lg 09 03 36.0
comp=E,0.8nm,0.3s,baz=206,slow=26,SNR=3.5
GERES LR LR 09 04 36.9
comp=E,58nm,18.7s,baz=276,slow=43
PAGF **Fort de Pagny** **5.39 327** *e*P **Pn** **09 02 11.3 +2.5**
PAGF *e*Sn **Sn** **09 03 05.5 -5.5**
comp=E,65nm,0.6s
LOR **Lormes** **5.40 308** *e*P **Pn** **09 02 10.9 +2.0**
LOR *e*Sn **Sn** **09 03 06.2 -5.1**
comp=E,37nm,0.3s,SNR=1.0
SFTF **Sexfontaines** **5.40 321** *e*P **Pn** **09 02 11.0 +2.0**
SFTF *e*Sn **Sn** **09 03 06.0 -5.4**
AVF **Avril sur Loir** **5.45 302** *e*P **Pn** **09 02 11.8 +2.1**
AVF *e*Sn **Sn** **09 03 06.7 -5.9**
comp=E,7.9nm,0.3s
SSF **Saint Saulge** **5.49 305** *e*P **Pn** **09 02 12.1 +1.9**
SSF *e*Sn **Sn** **09 03 09.2 -4.4**
comp=E,21nm,0.4s,SNR=1.0
CONA **Conrad Observa** **5.55 44** *i* Pn **Pn** **09 02 11.7 +0.6**
comp=E,3.5nm,0.3s,SNR=9.2
CONA *e*Sn **Sn** **09 03 15.0 -0.1**
comp=E,17nm,0.7s
KHC **Kasperske Hory** **5.58 24** *e*PN **Pn** **09 02 11.3 -0.1**
KHC *e*SN **Sn** **09 03 12.1 -3.6**
KHC *e*SG **Sg** **09 03 46.5 -0.4**
comp=E,35nm,0.9s
MEZF **Maizieres J'vi** **5.62 323** *e*P **Pn** **09 02 14.3 +2.3**
MEZF *e*Sn **Sn** **09 03 14.5 -2.2**
comp=E,32nm,0.5s
STON **Ston** **5.67 100** *e*Pn **Pn** **09 02 12.8 +0.2**
STON Sn **Sn** **09 03 17.0 -0.9**
BGF **Bois d'Agland** **5.67 298** *e*P **Pn** **09 02 16.1 +3.4**
SNR=1.0
BGF *e*Sn **Sn** **09 03 12.1 -5.9**
comp=E,42nm,0.4s
MTLF **Montolieu** **5.76 265** *e*P **Pn** **09 02 15.2 +1.3**
SNR=1.0
MTLF *e*Sn **Sn** **09 03 14.2 -6.0**
comp=E,18nm,0.7s
CAF **Calviac** **5.80 281** *e*P **Pn** **09 02 16.5 +2.0**
SNR=1.0
TCF **Toulx Ste Croi** **5.99 294** *e*P **Pn** **09 02 21.3 +4.3**
TCF *e*Sn **Sn** **09 03 19.9 -5.9**
comp=E,10nm,0.3s
HYF **Humbligny** **6.11 304** *e*P **Pn** **09 02 22.0 +3.3**
HYF *e*Sn **Sn** **09 03 22.6 -6.2**
NKC **Novy Kostel** **6.34 14** *e*PN **Pn** **09 02 22.8 +0.9**
MODS **Modra-Piesok** **6.56 47** *e*PN **Pn** **09 02 25.1 +0.2**
KRUC **Moravsky** **6.59 39** *e*PN **Pn** **09 02 26.1 +0.8**
KRUC *e*SN **Sn** **09 03 38.6 -2.1**
GOPC **GO Pecny, Ondr** **6.64 27** *e*PN **Pn** **09 02 26.5 +0.5**
GOPC *e*SN **Sn** **09 03 38.6 -3.3**
JAVC **Velka Javorina** **7.07 45** *e*PN **Pn** **09 02 34.5 +2.6**
EPF **Esparros** **7.17 265** *e*P **Pn** **09 02 37.6 +4.3**
BAIF **Baives** **7.19 328** *e*Pn **Pn** **09 02 34.9 +1.4**
SNR=1.0
BAIF *e*Sn **Sn** **09 03 51.9 -3.4**
comp=E,18nm,0.8s
BRG **Berggiesshubel** **7.26 20** PN **Pn** **09 02 35.6 +1.1**
BRG SN **Sn** **09 03 53.8 -3.3**
BRG SG **Sg** **09 04 40.9 0.0**
comp=E,8.7nm,0.9s
VYHS **Vyhne** **7.48 51** *e*PN **Pn** **09 02 37.7 +0.2**
MFF **Saint Martin d** **7.64 293** *e*P Pn 09 02 44.9 +5.3
ETSF **Etsaut** **7.84 265** *e*P **Pn** **09 02 47.2 +4.7**
GRR **Gorron** **8.72 303** *e*P **Pn** **09 02 59.1 +4.7**
ESDC **Sonseca Array** **11.37 252** Pn **Pn** **09 03 34.0 +3.1**
comp=E,0.3nm,0.3s,baz=56,slow=14,SNR=3.7
NOA **NORSAR Array B** **16.98 2** LR LR 09 11 57.0
comp=E,25nm,18.6s,baz=80,slow=39

FINES **FINESS Array B** **19.78 23** P **Pn** **09 05 20.1 +0.1**
comp=E,0.2nm,0.3s,baz=222,slow=9.3,SNR=11
MKAR **Makanch Array** **49.06 60** P **P** **09 09 36.2 +0.5**
comp=E,0.6nm,0.6s,baz=281,slow=8.0,SNR=7.5
SONM **Songino Array** **62.66 49** LR LR 09 43 30.8
comp=E,59nm,18.3s,baz=253,slow=41
ILAR **Eielson Array** **69.98 350** P **P** **09 12 01.2 +1.5**
comp=E,0.1nm,0.5s,baz=24,slow=6.9,SNR=2.5
ASAR **Alice Springs** **130.12 85** PKP **PKPdf** **09 19 58.2 -0.7**
comp=E,0.1nm,0.7s,baz=336,slow=2.0,SNR=4.1

*ISCJB **29** 09:11:34.8±0.2, 47°.59N±0°.02×7°.57E±0°.03, h11km±1km, Error ellipse: s-maj=3.7km s-min=2.9km az=27.4*
*ZUR **29** 09:11:35.6, 47°.59N×7°.60E, h6km, MLh1.7/11, Error ellipse: s-maj=1.3km s-min=0.6km az=232.0*
*STR **29** 09:11:35.7±0.5, 48°.N±.3°×°.±°, h20km±4km, MLv1.9/6*
*LDG **29** 09:11:36.1±0.1, 47°.59N×7°.60E, h3km, Md2.6/2, Ml2.4/9, Error ellipse: s-maj=1.3km s-min=1.0km az=177.0*
ISC 29 09:11:35.2±0.8, 47°.59N±0°.02×7°.58E±0°.02, h8km±4km, n44, σ0°69/65, 6C-11D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SBAF	**Basel-Friedhof**	**0.01**	**130**	⇓Pg		**Pg**	**09 11 36.9**	**+0.3**
SBAF				Sg		**Sg**	**09 11 37.9**	**+0.3**
OTER1	**Otterbach 1 (B**	**0.02**	**129**	⇓Pg		**Pg**	**09 11 36.7**	**+0.1**
OTER1				Sg		**Sg**	**09 11 37.4**	**-0.2**
OTER2	**Otterbach 2 (B**	**0.02**	**125**	Pg		**Pg**	**09 11 36.2**	**-0.5**
OTTER	**Otterbach**	**0.02**	**129**	Pg		**Pg**	**09 11 36.9**	**+0.3**
OTTER				Sg		**Sg**	**09 11 38.0**	**+0.3**
SBAP	**Basel-PUK**	**0.02**	**209**	⇓Pg		**Pg**	**09 11 37.0**	**+0.4**
SBAP				Sg		**Sg**	**09 11 38.0**	**+0.4**
SBAT	**Basel-Tropenha**	**0.03**	**177**	⇑Pg		**Pg**	**09 11 37.1**	**+0.4**
SRHB	**Riehen-Baumlih**	**0.04**	**123**	⇑Pg		**Pg**	**09 11 37.0**	**+0.3**
MATTE	**Schuetzenmatte**	**0.04**	**190**	⇑Pg		**Pg**	**09 11 37.0**	**+0.2**
SMZW	**Muttenz-Waldha**	**0.06**	**133**	⇓Pg		**Pg**	**09 11 37.3**	**+0.3**
SRER	**Reinach, Raine**	**0.08**	**171**	⇑Pg		**Pg**	**09 11 37.8**	**+0.5**
SKAF	**Kaiseraugst-Fr**	**0.11**	**119**	⇓Pg		**Pg**	**09 11 37.9**	**+0.2**
SAUR	**Augst-Roemermu**	**0.11**	**120**	⇓Pg		**Pg**	**09 11 38.0**	**+0.3**
SFRA	**Frenkendorf**	**0.12**	**135**	⇓Pg		**Pg**	**09 11 38.3**	**+0.3**
SFRA				Sg		**Sg**	**09 11 40.1**	**+0.3**
ROTHE	**Rothenfluh**	**0.26**	**116**	⇓Pg		**Pg**	**09 11 40.9**	**+0.5**
BALST	**Balsthal**	**0.27**	**163**	⇓Pg		**Pg**	**09 11 41.1**	**+0.6**
BOURR	**Bourrignon**	**0.31**	**230**	⇑Pg		**Pg**	**09 11 42.3**	**+0.9**
EMMET	**Emmethof**	**0.33**	**117**	Pg		**Pg**	**09 11 42.3**	**+0.6**
SULZ	**Cheisacher**	**0.37**	**100**	⇓Pg		**Pg**	**09 11 42.8**	**+0.4**
SULZ				Sg		**Sg**	**09 11 47.7**	**+0.5**
MOF	**Molkenrain**	**0.40**	**311**	Pg		**Pg**	**09 11 44.1**	**+1.1**
KIZ	**Kirchzarten**	**0.43**	**32**	Pg		**Pg**	**09 11 44.1**	**+0.5**
KIZ				Sg		**Sg**	**09 11 49.7**	**+0.4**
KIZ	**Kirchzarten**	**0.43**	**32**	⇑Pg		**Pg**	**09 11 44.1**	**+0.5**
DAGMA	**Lutertal, Dagm**	**0.47**	**141**	⇓Pg		**Pg**	**09 11 44.8**	**+0.6**
METMA	**Mettma DE**	**0.47**	**75**	Pg		**Pg**	**09 11 44.6**	**+0.2**
HINF	**Hinteralfeld**	**0.54**	**295**	*e*Pg		**Pg**	**09 11 46.0**	**+0.3**
HINF				*e*Sg		**Sg**	**09 11 53.5**	**+0.7**
12nm,0.2s								
SLE	**Schleitheim**	**0.64**	**74**	Pg		**Pg**	**09 11 47.7**	**+0.1**
SLE				PmP			09 11 49.6	
FLACH	**Flaach**	**0.67**	**91**	Pg		**Pg**	**09 11 48.8**	**+0.7**
ECH	**Echery**	**0.69**	**336**	Pg		**Pb**	**09 11 49.7**	**+0.1**
ECH	**Echery**	**0.69**	**336**	Pn		**Pg**	**09 11 49.3**	**+0.8**
CHMF	**Charmoille**	**0.72**	**242**	Pg		**Pg**	**09 11 49.8**	**+0.7**
WLS	**Welschbruch**	**0.84**	**350**	Pg		**Pb**	**09 11 52.6**	**+0.5**
WLS				Pn		**Pg**	**09 11 52.1**	**+0.7**
WLS				Sg		**Sg**	**09 12 03.4**	**+1.2**
CDF	**Champ du Feu**	**0.85**	**346**	*e*Pg		**Pg**	**09 11 52.1**	**+0.6**
CDF				*e*Sg		**Sg**	**09 12 02.8**	**+0.3**
16nm,0.2s								
HAU	**Haudompre**	**0.93**	**297**	*e*Pg		**Pg**	**09 11 53.3**	**+0.2**
HAU				*e*Sg		**Sg**	**09 12 05.9**	**+0.8**
29nm,0.3s								
OPP	**Oppenau**	**0.99**	**24**	Pn		**Pg**	**09 11 54.2**	**-0.1**
CABF	**La Chapelle**	**1.41**	**227**	*e*Pn		**Pn**	**09 12 02.1**	**+0.7**
CABF				*e*Sn		**Sb**	**09 12 19.9**	**-0.3**
7.5nm,0.3s								
PAGF	**Fort de Pagny**	**1.57**	**308**	*e*Pn		**Pn**	**09 12 03.2**	**-0.3**
PAGF				*e*Sn		**Sn**	**09 12 22.9**	**-1.2**
4.9nm,0.2s								
DAVA	**Damuels**	**1.59**	**100**	*e*Pn		**Pn**	**09 12 04.1**	**+0.3**
1.2nm,0.1s								
DAVA				Sn		**Sn**	**09 12 25.3**	**+0.6**
13nm,0.2s								
SFTF	**Sexfontaines**	**1.82**	**291**	*e*Pn		**Pn**	**09 12 06.6**	**-0.2**
SFTF				*e*Sn		**Sn**	**09 12 28.7**	**-1.4**
3.9nm,0.2s								
MEZF	**Maizieres J'vi**	**1.93**	**299**	*e*Pn		**Pn**	**09 12 08.4**	**+0.1**
MEZF				*e*Sn		**Sn**	**09 12 31.1**	**-1.6**
1.9nm,0.2s								
LPG	**La Plagne**	**2.17**	**196**	*e*Pn		**Pn**	**09 12 12.5**	**+0.5**
LPG				*e*Sn		**Sn**	**09 12 38.7**	**-0.5**
2.2nm,0.3s								
FETA	**Feichten**	**2.22**	**104**	*e*Sg		**Sg**	**09 12 46.5**	**0.0**
1.2nm,0.3s								
MOTA	**Moosalm**	**2.40**	**95**	*e*Pg		**Pg**	**09 12 20.8**	**-0.5**
0.5nm,0.2s								
MOTA				*e*Sg		**Sg**	**09 12 52.1**	**-0.3**
0.8nm,0.1s								
LOR	**Lormes**	**2.55**	**264**	*e*Pg		**Pg**	**09 12 23.6**	**-0.4**
LOR				*e*Sn		**Sn**	**09 12 46.4**	**-1.7**
6.2nm,0.3s								
SMF	**Signal de Mont**	**2.72**	**251**	*e*Sn		**Sn**	**09 12 50.8**	**-1.6**
3.9nm,0.3s								
SSF	**Saint Saulge**	**2.82**	**261**	*e*Pn		**Pn**	**09 12 20.7**	**+0.1**
SSF				*e*Sn		**Sn**	**09 12 53.1**	**-1.7**
2.5nm,0.3s								

KRSC 29 09:19:32.9±0.8, 53°.79N×160°.98E, h40km±15km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.88**	**30**	*e*P		Pn	09 19 50.4	+1.6
MKZ				*e*S		Sn	09 20 01.5	+1.1
SPN	**Mys Shipunski**	**0.90**	**220**	*i* P		Pn	09 19 50.5	+1.5
SPN				*e*S		Sn	09 20 01.7	+0.9
NLC	**Nalytchevo**	**1.16**	**238**	*e*P		Pn	09 19 54.0	+1.5
NLC				*e*S		Sn	09 20 08.1	+1.0
SDLR	**Sedlovina**	**1.35**	**249**	*e*P		Pn	09 19 57.3	+2.0
SDLR				*e*S		Sn	09 20 13.6	+1.5
KZV	**Kizimen**	**1.38**	**343**	*e*P		Pn	09 19 57.6	+1.8
KZV				*e*S		Sn	09 20 14.1	+1.1
SMAR	**Somma**	**1.41**	**249**	*e*P		Pn	09 19 58.2	+2.1
SMAR				*e*S		Sn	09 20 15.1	+1.6
KRER	**Koryakskii**	**1.42**	**251**	*e*P		Pn	09 19 58.7	+2.4
KRER				*e*S		Sn	09 20 15.9	+2.1
AVH	**Avacha**	**1.44**	**249**	*i* P		Pn	09 19 58.8	+2.3
AVH				*e*S		Sn	09 20 16.4	+2.2
TUMD	**Tumrok D**	**1.46**	**347**	*e*P		Pn	09 19 58.2	+1.5
TUMD				*e*S		Sn	09 20 15.0	+0.5
KRX	**Arik**	**1.46**	**254**	*e*P		Pn	09 19 58.8	+2.0
KRX				*e*S		Sn	09 20 16.3	+1.6
KOK	**Koryaka**	**1.49**	**251**	*e*P		Pn	09 19 59.3	+2.2
DALK	**Dalny**	**1.54**	**241**	*e*P		Pn	09 19 59.7	+2.0
DALK				*e*S		Sn	09 20 18.1	+1.7
TUMR	**Tumrok**	**1.57**	**342**	*e*P		Pn	09 20 00.6	+2.3
TUMR				*e*S		Sn	09 20 19.2	+1.7
GNL	**Ganaly**	**1.81**	**268**	*e*P		Pn	09 20 04.1	+2.5
GNL				*e*S		Sn	09 20 25.5	+2.2
KRMR	**Karymshinskiy**	**1.96**	**242**	*e*P		Pn	09 20 06.4	+2.8
KRMR				*e*S		Sn	09 20 29.6	+2.7
RUS	**Russkaya**	**2.02**	**229**	*e*P		Pn	09 20 06.2	+1.9
RUS				*e*S		Sn	09 20 29.4	+1.2
MTVR	**Mutnovka**	**2.13**	**233**	*e*P		Pn	09 20 08.5	+2.4
MTVR				*e*S		Sn	09 20 33.4	+2.0
BZGR	**Bezymyannyi-Gr**	**2.16**	**356**	*e*P		Pn	09 20 09.1	+2.7
BZWR	**Bezymyannyi-We**	**2.20**	**353**	*e*P		Pn	09 20 09.5	+2.5
KPT	**Kopyto**	**2.22**	**349**	*e*P		Pn	09 20 10.4	+3.1
LGNR	**Loginova**	**2.30**	**356**	*e*P		Pn	09 20 12.7	+4.2
ASAK	**Asacha**	**2.33**	**234**	*e*P		Pn	09 20 12.2	+3.4
ASAK				*e*S		Sn	09 20 39.5	+3.3
CIRR	**Tsirk**	**2.33**	**357**	*e*P		Pn	09 20 12.4	+3.6
KOZ	**Kozyrevsk**	**2.36**	**345**	*e*P		Pn	09 20 11.6	+2.5
KRSR	**Krestovskiy**	**2.44**	**355**	*e*P		Pn	09 20 13.3	+3.0
APC	**Apacha**	**2.45**	**251**	*e*P		Pn	09 20 14.2	+3.9
APC				*e*S		Sn	09 20 43.3	+4.4
ESO	**Esso**	**2.51**	**329**	*e*P		Pn	09 20 13.2	+2.0
KLY	**Klyuchi**	**2.54**	**356**	*e*P		Pn	09 20 14.3	+2.9
SRDR	**Sredinnyy**	**2.63**	**344**	*e*P		Pn	09 20 14.9	+2.0
KBTR	**Krutoberegovo**	**2.64**	**23**	*e*P		Pn	09 20 17.1	+4.2
KDTR	**Khodutka, Kamc**	**2.66**	**223**	*e*P		Pn	09 20 15.6	+2.5
KDTR				*e*S		Sn	09 20 46.1	+2.1
KBG	**Krutoberegovo**	**2.66**	**21**	*e*P		Pn	09 20 15.8	+2.7
BDR	**Baidarnaya**	**2.79**	**3**	*e*P		Pn	09 20 18.6	+3.6
SMKR	**Semkarok**	**2.81**	**6**	*e*P		Pn	09 20 18.9	+3.6
BKI	**Bering**	**3.24**	**62**	*e*P		Pn	09 20 24.5	+3.5
BKI				*e*S		Sn	09 20 59.9	+1.6

*ISK **29** 09:49:54.9, 37°.17N×37°.48E, h8km, ML2.0/4, Suspected Mining explosion.*
*ISCJB **29** 09:49:55.9±0.8, 37°.12N±0°.05×37°.43E±0°.04, h0km, Error ellipse: s-maj=7.4km s-min=4.6km az=1.2*
*DDA **29** 09:49:56.3, 37°.16N×37°.44E, h7km±7km, ML2.5*
ISC 29 09:49:55.2±1.2, 37°.09N±0°.06×37°.48E±0°.04, h0km, n10, σ0°45/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.23**	**290**	PG		**Pg**	**09 49 59.6**	**+0.1**
GAZ				SG		**Sg**	**09 50 03.3**	**+0.8**
GZT	**Gaziantep**	**0.27**	**15**	*i* P		**Pg**	**09 50 00.5**	**+0.1**
GZT				*i* S		**Sg**	**09 50 04.3**	**+0.4**
GZT				IAML_P				
comp=Z,5μm,0.2s								
GZT	**Gaziantep**	**0.27**	**15**	*i* P		**Pg**	**09 50 00.4**	**+0.1**
GZT				*i* S		**Sg**	**09 50 04.1**	**+0.2**
GZT				IAML_P				
comp=Z,5μm,0.2s								
KMRS	**Kahramanmaras**	**0.62**	**312**	PG		**Pg**	**09 50 06.4**	**-0.6**
KAMA	**Osmaniye**	**0.65**	**278**	*i* P		**Pg**	**09 50 07.9**	**+0.2**
SURC	**SANLIURFA_SURC**	**0.94**	**103**	*i* P		**Pn**	**09 50 15.8**	**+0.2**
SURC				*i* S		**Sn**	**09 50 29.5**	**-0.2**
SURC				IAML_P				
comp=Z,315nm,0.2s								
URFA	**Urfa**	**1.13**	**72**	PN		**Pg**	**09 50 16.5**	**-0.3**
AKCD	**Akcadag**	**1.25**	**16**	*i* P		**Pn**	**09 50 20.2**	**+0.1**
AKCD				*i* S		**Sn**	**09 50 37.4**	**-0.3**
AKCD				IAML_P				
comp=Z,666nm,0.2s								
AKCD	**Akcadag**	**1.25**	**16**	*i* P		**Pb**	**09 50 19.8**	**0.0**
AKCD				*i* S		**Sn**	**09 50 37.3**	**-0.4**
AKCD				IAML_P				
comp=Z,666nm,0.2s								
KOZT	**Kozan**	**1.37**	**287**	PN		**Pg**	**09 50 20.6**	**-0.9**

JMA 29 10:15:51.6, 34°.04N×135°.18E, h6km±1km, M-0.1, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.24**	**143**	P		Pg	10 15 56.4	+0.1
JWM				S		Sg	10 15 59.7	+0.2

JMA 29 10:16:46.9, 36°.19N×138°.05E, h9km±1km, M1.2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**0.22**	**11**	P		Pg	10 16 51.4	-0.1
JNG				S		Sg	10 16 54.8	+0.3
JNT	**Takato**	**0.32**	**167**	P		Pg	10 16 53.3	0.0
JNT				S		Sg	10 16 57.7	+0.1
MAT	**Matsushiro**	**0.37**	**20**	P		Pg	10 16 53.9	-0.4
MAT				S		Sg	10 16 58.5	-0.8
MAT	**Matsushiro**	**0.37**	**20**	P		Pg	10 16 53.9	-0.4
JRY	**Ryogami san**	**0.71**	**104**	P		Pg	10 17 00.3	-0.3
JRY				S		Sg	10 17 09.4	-0.5
JYN	**Shimob**	**0.80**	**150**	P		Pg	10 17 02.3	0.0
JYN				S		Sg	10 17 13.2	+0.5

*ISCJB **29** 10:50:20.1±0.2, 49°.49N±0°.02×156°.13E±0°.04, h57km, mb4.5/107, MS3.4/5, Error ellipse: s-maj=4.7km s-min=2.2km az=39.0*
*KRSC **29** 10:50:20.2±2.1, 49°.44N×156°.81E, h72km±36km, ML5.1*
*MOS **29** 10:50:21.8±0.9, 49°.58N×156°.09E, h74km, mb4.7/26, Error ellipse: s-maj=8.5km s-min=3.0km az=77.0*
MOS Felt (II-III) at Gornyi;(II) at Severo-Kuril'sk.
*NEIC **29** 10:50:23.1±1.2, 49°.59N×155°.95E, h69km±7km, mb4.6/77, Error ellipse: s-maj=11.2km s-min=8.0km az=181.0*
*IDC **29** 10:50:23.9±1.9, 49°.66N×155°.96E, h75km±16km, mb4.0/22, mb1 4.1/29, mb1mx4.0/37, mbtmp4.2/29, MS3.3/8, Ms1 3.3/8, ms1mx3.1/30, Error ellipse: s-maj=15.8km s-min=10.0km az=138.0*
ISC 29 10:50:20.7±0.5, 49°.43N±0°.06×156°.43E±0°.05, h57km, n311, σ1°85/349, mb4.5/107, MS3.4/5, 24C-13D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.27**	**351**	*e*P		**Pn**	**10 50 43.4**	**+1.2**
SKR				*e*S		**Sn**	**10 50 58.9**	**+0.7**
SKR	**Severo-Kuril's**	**1.27**	**351**	*d i*PN		**Pn**	**10 50 43.3**	**+1.1**
ALID	**Alaid**	**1.55**	**339**	*e*P		**Pn**	**10 50 47.9**	**+1.8**
ALID				*e*S		**Sn**	**10 51 07.4**	**+2.2**
ALID	**Alaid**	**1.55**	**339**	PN		**Pn**	**10 50 47.9**	**+1.8**
ALID				S		**Sn**	**10 51 07.4**	**+2.2**
PAU	**Pauzhetka**	**2.05**	**7**	*e*P		**Pn**	**10 50 54.5**	**+1.7**
PAU				*e*S		**Sn**	**10 51 18.4**	**+1.1**
PAU	**Pauzhetka**	**2.05**	**7**	PN		**Pn**	**10 50 54.5**	**+1.7**
PAU				S		**Sn**	**10 51 18.4**	**+1.1**
KDTR	**Khodutka, Kamc**	**2.60**	**23**	*i* P		**Pn**	**10 51 01.4**	**+1.1**
KDTR				*e*S		**Sn**	**10 51 30.5**	**-0.2**
KDTR	**Khodutka, Kamc**	**2.60**	**23**	PN		**Pn**	**10 51 01.4**	**+1.1**
KDTR				S		**Sn**	**10 51 30.5**	**-0.2**
ASAK	**Asacha**	**3.10**	**17**	*e*P		**Pn**	**10 51 09.0**	**+1.8**
ASAK	**Asacha**	**3.10**	**17**	PN		**Pn**	**10 51 09.0**	**+1.8**
MTVR	**Mutnovka**	**3.25**	**19**	*e*P		**Pn**	**10 51 11.2**	**+1.9**
MTVR				*e*S		**Sn**	**10 51 47.6**	**+0.8**
MTVR	**Mutnovka**	**3.25**	**19**	PN		**Pn**	**10 51 11.2**	**+1.9**
MTVR				S		**Sn**	**10 51 47.6**	**+0.8**
RUS	**Russkaya**	**3.28**	**23**	*e*P		**Pn**	**10 51 10.7**	**+1.1**
RUS				*e*S		**Sn**	**10 51 47.1**	**-0.3**
RUS	**Russkaya**	**3.28**	**23**	PN		**Pn**	**10 51 10.7**	**+1.1**
RUS				S		**Sn**	**10 51 47.1**	**-0.3**
**GRL

UGLR Uglovaya 4.07 21 PN **Pn 10 51 22.8 +2.3**
UGLR S **Sn 10 52 07.8 +0.9**
AVH Avacha 4.10 20 *e*P **Pn 10 51 23.7 +2.8**
AVH *e*S **Sn 10 52 09.0 +1.3**
AVH Avacha 4.10 20 PN **Pn 10 51 23.7 +2.8**
AVH S **Sn 10 52 09.0 +1.3**
KOK Koryaka 4.11 19 *e*P **Pn 10 51 23.7 +2.7**
KOK *e*S **Sn 10 52 09.2 +1.4**
KOK Koryaka 4.11 19 PN **Pn 10 51 23.7 +2.7**
KOK S **Sn 10 52 09.2 +1.4**
SMAR Somma 4.12 20 *e*P **Pn 10 51 23.3 +2.1**
SMAR *e*S **Sn 10 52 09.7 +1.6**
SMAR Somma 4.12 20 PN **Pn 10 51 23.3 +2.1**
SMAR S **Sn 10 52 09.7 +1.6**
KRER Koryakskii 4.14 20 *e*P **Pn 10 51 24.4 +2.8**
KRER Koryakskii 4.14 20 PN **Pn 10 51 24.4 +2.8**
SDLR Sedlovina 4.15 21 *e*P **Pn 10 51 23.5 +1.9**
SDLR *e*S **Sn 10 52 09.0 +0.2**
SDLR Sedlovina 4.15 21 PN **Pn 10 51 23.5 +1.9**
SDLR S **Sn 10 52 09.0 +0.2**
NLC Nalytchevo 4.17 25 *e*P **Pn 10 51 22.0 +0.3**
NLC *e*S **Sn 10 52 07.4 -1.7**
NLC Nalytchevo 4.17 25 PN **Pn 10 51 22.0 +0.3**
NLC S **Sn 10 52 07.4 -1.7**
KRX Arik 4.17 19 *e*P **Pn 10 51 24.8 +2.9**
KRX Arik 4.17 19 PN **Pn 10 51 24.8 +2.9**
SPN Mys Shipunski 4.31 30 *i* P **Pn 10 51 24.9 +1.2**
SPN *e*S **Sn 10 52 12.0 -0.6**
SPN Mys Shipunski 4.31 30 PN **Pn 10 51 24.9 +1.2**
SPN S **Sn 10 52 12.0 -0.6**
GNL Ganaly 4.38 12 *e*P **Pn 10 51 27.5 +2.8**
GNL Ganaly 4.38 12 PN **Pn 10 51 27.5 +2.8**
MKZ Mys Kozlova 6.09 31 *e*P **Pn 10 51 47.8 -0.2**
MKZ *e*S **Sn 10 52 52.8 -3.4**
MKZ Mys Kozlova 6.09 31 PN **Pn 10 51 47.8 -0.2**
KZV Kizimen 6.17 21 *e*P **Pn 10 51 50.9 +1.7**
KZV Kizimen 6.17 21 PN **Pn 10 51 50.9 +1.7**
TUMD Tumrok D 6.27 21 *e*P **Pn 10 51 52.2 +1.6**
TUMD *e*S **Sn 10 53 01.1 +0.3**
TUMR Tumrok 6.29 20 *e*P **Pn 10 51 53.5 +2.7**
TUMR Tumrok 6.29 20 PN **Pn 10 51 52.2 +1.4**
TUMR S **Sn 10 53 01.1 -0.2**
ESO Esso 6.65 11 *e*P **Pn 10 51 58.2 +2.5**
ESO Esso 6.65 11 PN **Pn 10 51 58.2 +2.5**
KPT Kopyto 6.94 18 *e*P **Pn 10 52 02.8 +3.1**
KPT Kopyto 6.94 18 PN **Pn 10 52 02.8 +3.1**
KOZ Kozyrevsk 6.96 16 *e*P **Pn 10 52 01.9 +2.0**
KOZ Kozyrevsk 6.96 16 PN **Pn 10 52 01.9 +2.0**
BZWR Bezymyannyi-We 7.00 19 *e*P **Pn 10 52 02.8 +2.2**
BZWR Bezymyannyi-We 7.00 19 PN **Pn 10 52 02.8 +2.2**
BZGR Bezymyannyi-Gr 7.02 20 *e*P **Pn 10 52 03.5 +2.7**
BZGR Bezymyannyi-Gr 7.02 20 PN **Pn 10 52 03.5 +2.7**
KUR Kuril'sk 7.17 237 *e*PN **Pn 10 52 07.2 +4.4**
KUR *e*S **Sn 10 53 28.1 +5.3**
KUR pmax pmax
comp=N,39nm,0.4s
KUR pmax pmax
comp=Z,90nm,0.4s
KUR pmax pmax
comp=E,18nm,0.3s
SRDR Sredinnyy 7.18 15 *e*P **Pn 10 52 04.6 +1.6**
SRDR Sredinnyy 7.18 15 PN **Pn 10 52 04.6 +1.6**
CIRR Tsirk 7.19 20 *e*P **Pn 10 52 05.6 +2.4**
CIRR Tsirk 7.19 20 PN **Pn 10 52 05.6 +2.4**
KRSR Krestovskiy 7.25 19 *e*P **Pn 10 52 05.9 +2.0**
KRSR Krestovskiy 7.25 19 PN **Pn 10 52 05.9 +2.0**
KLY Klyuchi 7.35 19 *e*P **Pn 10 52 07.7 +2.4**
KLY Klyuchi 7.35 19 PN **Pn 10 52 07.7 +2.4**
BDR Baidarnaya 7.71 20 *e*P **Pn 10 52 12.4 +2.2**
BDR Baidarnaya 7.71 20 PN **Pn 10 52 12.4 +2.2**
SRKR Sorokina 7.78 20 *e*P **Pn 10 52 13.0 +1.8**
SRKR Sorokina 7.78 20 PN **Pn 10 52 13.0 +1.8**
KBTR Krutoberegovo 7.81 27 *e*P **Pn 10 52 12.3 +0.7**
KBTR *e*S **Sn 10 53 34.5 -4.0**
KBTR Krutoberegovo 7.81 27 PN **Pn 10 52 12.3 +0.7**
KBG Krutoberegovo 7.82 27 *e*P **Pn 10 52 12.1 +0.5**
KBG Krutoberegovo 7.82 27 PN **Pn 10 52 12.1 +0.5**
BKI Bering 8.22 42 *e*P **Pn 10 52 16.8 -0.3**
BKI *e*S **Sn 10 53 41.7 -6.7**
BKI Bering 8.22 42 PN **Pn 10 52 16.8 -0.3**
YUK Yuzh-Kuril'sk 9.04 237 PN **Pn 10 52 29.4 +1.0**
YUK pmax pmax
comp=Z,181nm,0.5s
YUK pmax pmax
comp=N,52nm,0.3s
YUK pmax pmax
comp=E,103nm,0.6s
UGL Uglegorsk 9.40 273 PN Pn 10 52 40.7 +7.4
UGL S **Sn 10 54 23.8 +6.4**
UGL pmax pmax
comp=Z,68nm,1.2s
UGL smax smax
comp=N,75nm,0.6s
UGL smax smax
comp=E,72nm,0.6s
YSS Yuzh-Sakhalins 9.46 260 *e*PN Pn 10 52 39.2 +5.0
YSS *e*S **Sn 10 54 18.6 -0.4**
MA2 Magadan 10.68 344 P **Pn 10 52 49.8 -1.0**
comp=E,2.0nm,0.3s,baz=176,slow=12,SNR=7.9
MA2 S **Sn 10 54 41.7 -7.0**
comp=E,0.5nm,0.3s,baz=259,slow=20,SNR=1.0
MA2 LR LR 10 57 22.2
comp=E,109nm,19.0s,baz=162,slow=40
MA2 Magadan 10.68 344 *e*Pn **Pn 10 52 49.6 -1.1**
MA2 Magadan 10.68 344 *ce*PN **Pn 10 52 51.0 +0.3**
MA2 pmax pmax
comp=Z,25nm,1.0s
ASAJ Asahikawa 10.87 246 P **Pn 10 52 53.6 +0.3**
comp=Z,0.5nm,0.3s,baz=94,slow=18,SNR=24
ERM Erimo 11.86 236 *e*Pn **Pn 10 53 06.4 -0.6**
ERM Erimo 11.86 236 *i* PN **Pn 10 53 06.3 -0.7**
SEY Seymchan 13.72 352 P **Pn 10 53 31.5 -0.6**
comp=Z,0.1nm,0.3s,baz=146,slow=13,SNR=3.8
SEY Seymchan 13.72 352 *i* P **Pn 10 53 31.7 -0.4**
KLR Kul'dur 16.07 279 P **Pn 10 54 01.2 -1.6**
comp=Z,0.1nm,0.3s,baz=78,slow=17,SNR=1.7
KLR Kul'dur 16.07 279 *i* P **Pn 10 54 01.4 -1.4**
USRK Ussuriysk Ar. 17.49 262 P **Pn 10 54 19.5 -1.0**
comp=Z,0.1nm,0.3s,baz=58,slow=14,SNR=2.6
MJB9 Matsu-Tunnel 18.47 233 *e*P **P 10 54 31.4 -0.4**
comp=Z,8.9nm,1.0s
MAJO Matsushiro 18.47 233 *e*P **P 10 54 31.1 -0.7**
comp=Z,9.2nm,1.0s
MAJO Matsushiro 18.47 233 *i* P **Pn 10 54 33.2 +0.7**
MJAR Matsushiro Arr 18.47 233 P **Pn 10 54 32.6 +0.1**
comp=Z,0.1nm,0.3s,baz=25,slow=8.1,SNR=8.5
MJAR LR LR 11 01 50.8
comp=Z,45nm,20.4s,baz=275,slow=37
MSHR Mys Shultsa 18.79 258 *i* P **P 10 54 34.6 -0.6**
BILL Bilibino 19.30 11 *e*P **P 10 54 40.6 0.0**
comp=Z,18nm,0.5s
BILL Bilibino 19.30 11 *de*P **P 10 54 40.5 -0.1**
BILL pmax pmax
comp=Z,23nm,1.0s
YAK Yakutsk 19.46 320 *e*P **P 10 54 40.4 -2.0**
comp=Z,33nm,0.7s
YAK Yakutsk 19.46 320 *e*P **P 10 54 40.6 -1.8**
YAK *e*S **S 10 58 13.5 -5.5**
HIA Hailar 23.75 284 *i* P **P 10 55 25.0 -2.6**
HIA pmax pmax
comp=Z,23nm,0.8s
KSRS Korea Array 23.76 251 P **P 10 55 28.4 +0.7**
comp=Z,0.9nm,0.8s,baz=54,slow=9.3,SNR=5.2
KS15 Wonju Array Si 23.79 251 *e*P **P 10 55 28.4 +0.4**
comp=Z,23nm,1.6s
ANM Nome 25.21 39 *e*P **P 10 55 41.9 +1.2**
comp=Z,35nm,1.1s
ANM Nome 25.21 39 *e*P **P 10 55 41.9 +1.2**
ANM pmax pmax
comp=Z,35nm,1.1s
TIXI Tiksi 25.61 340 P **P 10 55 42.5 -1.7**
comp=Z,22nm,0.6s,baz=129,slow=10,SNR=38
TIXI Tiksi 25.61 340 *e*P **P 10 55 42.3 -1.9**
comp=Z,22nm,0.6s
TIXI Tiksi 25.61 340 *ce*P **P 10 55 42.2 -1.9**
TIXI pmax pmax
comp=Z,20nm,0.7s
H11N2 WAKE ISLAND Hy 30.80 160 T T 11 29 28.5
baz=347,slow=74
H11N1 WAKE ISLAND Hy 30.81 160 T T 11 29 28.2
baz=347,slow=74
H11N3 WAKE ISLAND Hy 30.81 160 T T 11 29 32.9
baz=347

BPAW Bear Paw Mtn. 31.27 42 *e*P **P 10 56 36.9 +2.2**
comp=Z,5.3nm,0.8s
MLY Manley 31.43 40 *e*P **P 10 56 37.9 +1.7**
comp=Z,4.7nm,0.8s
TRF Thorofare Moun 31.56 43 *e*P **P 10 56 39.3 +1.8**
comp=Z,1.6nm,1.0s
H11S1 WAKE ISLAND Hy 31.94 161 T T 11 30 56.0
baz=347,slow=76,SNR=981
BWN Browne 31.94 42 *e*P **P 10 56 43.2 +2.6**
comp=Z,49nm,1.1s
H11S3 WAKE ISLAND Hy 31.95 161 T T 11 30 54.4
baz=347,slow=76,SNR=1046
H11S2 WAKE ISLAND Hy 31.96 161 T T 11 30 56.7
baz=347,slow=76,SNR=844
MCK McKinley 32.17 43 *e*P **P 10 56 44.4 +1.8**
comp=Z,9.0nm,0.9s
RND Reindeer 32.21 44 *e*P **P 10 56 44.2 +1.2**
comp=Z,8.3nm,0.8s
RND Reindeer 32.21 44 *e*P **P 10 56 44.2 +1.2**
RND pmax pmax
comp=Z,8.0nm,0.8s
TOLK Toolik Lake Re 32.29 34 *e*P **P 10 56 45.5 +1.8**
comp=Z,17nm,0.6s
HHC Hu-ho-hao-te 32.37 272 P **P 10 56 44.0 -0.8**
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,23nm,6.4s
WRH Wood River Hil 32.55 42 *e*P **P 10 56 47.5 +1.7**
comp=Z,7.1nm,0.8s
SONM Songino Array 32.62 287 LR LR 11 11 36.1
comp=Z,67nm,18.2s,baz=142,slow=39
COLA College 32.66 41 *e*P **P 10 56 49.0 +2.3**
comp=Z,26nm,0.8s
COLA College 32.66 41 *i* P **P 10 56 48.6 +1.8**
COLA pmax pmax
comp=Z,17nm,0.9s
CCB Clear Creek Bu 32.67 41 *e*P **P 10 56 48.4 +1.5**
comp=Z,6.0nm,0.8s
NJ2 Nanjing 32.92 252 *e*P **P 10 56 50.5 +1.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
TLY Talaya 33.01 294 *i* P **P 10 56 49.4 -0.7**
HDA Harding Lake 33.04 42 *e*P **P 10 56 51.5 +1.2**
comp=Z,8.6nm,0.5s
ILAR Eielson Array 33.07 41 P **P 10 56 51.8 +1.4**
comp=Z,4.2nm,0.8s,baz=251,slow=7.4,SNR=46
ILB Eielson Array 33.07 41 *e*P **P 10 56 51.9 +1.4**
comp=Z,8.3nm,1.0s
PRP Porcupine Dome 33.64 40 *e*P **P 10 56 57.7 +2.1**
comp=Z,18nm,0.9s
FYU Fort Yukon 33.77 38 *e*P **P 10 56 59.0 +2.5**
comp=Z,32nm,0.7s
SCRK Sand Creek 34.35 42 *e*P **P 10 57 03.2 +1.4**
comp=Z,9.8nm,1.1s
EGAK Eagle 35.52 41 *e*P **P 10 57 12.8 +1.2**
comp=Z,15nm,0.7s
DAWY Dawson 36.36 42 *e*P **P 10 57 20.4 +1.6**
comp=Z,4.0nm,0.9s
EPYK Eagle Plains 37.19 38 *e*P **P 10 57 28.1 +2.2**
comp=Z,13nm,0.8s
HYT Haines Junctio 37.81 47 *e*P **P 10 57 34.6 +3.3**
comp=Z,4.3nm,0.9s
INK Inuvik 38.19 34 P **P 10 57 36.3 +2.1**
comp=Z,6.6nm,0.4s,baz=275,slow=6.4,SNR=14
INK Inuvik 38.19 34 *e*P **P 10 57 36.3 +2.1**
comp=Z,9.5nm,0.6s
LZH Lanzhou 40.05 271 *e*P **P 10 57 49.0 -1.3**
LZH pP pP 10 58 06.5 +1.7
LZH sP sP 10 58 14.8 +3.4
LZH pmax pmax
comp=Z,12nm,1.1s
ZAA1 Zalesovo Array 42.88 304 *e*P **P 10 58 11.3 -1.8**
ZAA0 Zalesovo Array 42.88 304 *e*P **P 10 58 11.1 -2.0**
comp=Z,4.7nm,0.6s
ZALV Zalesovo Beam 42.88 304 P **P 10 58 11.3 -1.8**
comp=Z,4.4nm,0.5s,baz=54,slow=7.1,SNR=14
ZALV PcP **PcP 11 00 02.9 0.0**
comp=Z,0.3nm,0.3s,baz=64,slow=3.4,SNR=2.1
ZALV LR LR 11 18 21.6
comp=Z,44nm,19.5s,baz=74,slow=40
ZALV Zalesovo Beam 42.88 304 *i* P **P 10 58 12.0 -1.1**
ZALV pmax pmax
comp=Z,4.0nm,0.5s
CD2 Chengdu 43.33 265 *e*P **P 10 58 16.0 -1.0**
WMQ Urumqi 46.05 290 *e*P **P 10 58 39.8 +1.2**
WMQ pmax pmax
comp=Z,18nm,0.7s
WMQ pmax pmax
comp=Z,71nm,5.5s
YKA Yellowknife Ar 47.44 39 P **P 10 58 50.9 +1.8**
comp=Z,0.9nm,0.6s,baz=296,slow=7.5,SNR=14
YKA PcP **PcP 11 00 17.8 -0.8**
comp=Z,0.3nm,0.6s,baz=297,slow=3.0,SNR=3.1
YKB5 Yellowknife Ar 47.44 39 *e*P **P 10 58 50.9 +1.8**
MK31 Makanchi Array 47.70 297 *e*P **P 10 58 50.0 -1.4**
comp=Z,1.9nm,0.7s
MK31 Makanchi Array 47.70 297 *e*P **P 10 58 50.0 -1.4**
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MK32 Makanchi Array 47.70 297 *e*P **P 10 58 50.0 -1.4**
MKAR Makanchi Array 47.70 297 P **P 10 58 50.0 -1.4**
comp=Z,1.5nm,0.5s,baz=60,slow=7.3,SNR=20
MKAR LR LR 11 19 52.6
comp=Z,62nm,18.6s,baz=86,slow=37
KURK Kurchatov 47.75 303 *e*P **P 10 58 50.5 -1.2**
comp=Z,10nm,0.7s
KURK Kurchatov 47.75 303 *ce*P **P 10 58 50.2 -1.4**
KURK pmax pmax
comp=Z,19nm,1.3s
MAKZ Makanchi 47.88 297 *e*P **P 10 58 51.2 -1.6**
comp=Z,7.5nm,1.6s
MAKZ Makanchi 47.88 297 *e*P **P 10 58 51.2 -1.6**
MAKZ pmax pmax
comp=Z,8.0nm,1.6s
BRVK Borovoye 50.92 309 *e*P **P 10 59 14.4 -1.4**
comp=Z,6.0nm,0.9s
BRVK Borovoye 50.92 309 *i* P **P 10 59 14.4 -1.4**
BRVK pmax pmax
comp=Z,6.0nm,0.9s
YBH Yreka Blue Hor 54.56 65 *e*P **P 10 59 46.0 +3.1**
comp=Z,5.3nm,1.3s
YBH Yreka Blue Hor 54.56 65 *e*P **P 10 59 46.0 +3.1**
YBH pmax pmax
comp=Z,5.0nm,1.3s
AAK Ala-Archa 54.63 296 *ce*P **P 10 59 41.5 -2.0**
AAK pmax pmax
comp=Z,2.0nm,0.7s
K05A Summer Lake 55.02 63 *e*P **P 10 59 49.3 +3.0**
comp=Z,7.8nm,1.1s
CM31 Chiang Mai Arr 55.15 257 *e*P **P 10 59 46.8 -0.5**
comp=Z,6.9nm,1.0s
CMAR Chiang Mai Arr 55.15 257 P **P 10 59 46.8 -0.5**
comp=Z,0.5nm,0.4s,baz=30,slow=3.7,SNR=3.7
KSH Kashi 55.68 293 *e*P P 10 59 58.8 +7.7
MOD Modoc Plateau 55.87 64 *e*P **P 10 59 55.3 +2.9**
comp=Z,2.7nm,0.6s
ARA0 ARCESS Array S 56.04 341 *e*P **P 10 59 50.7 -2.3**
ARCES ARCESS Array B 56.04 341 P **P 10 59 50.7 -2.3**
comp=Z,0.6nm,0.4s,baz=44,slow=7.6,SNR=8.9
WVOR Wild Horse Val 56.50 62 *e*S **S 11 07 46.0 +2.0**
FFC Flin Flon 57.26 42 *i* P **P 11 00 04.5 +2.6**
SUMG Summit 57.85 5 *e*P **P 11 00 06.5 +0.2**
comp=Z,18nm,1.1s
SUMG Summit 57.85 5 *i* P **P 11 00 07.1 +0.8**
SUMG pmax pmax
comp=Z,22nm,0.7s
SUMG Summit 57.85 5 *i* P **P 11 00 07.1 +0.8**
comp=Z,22nm,0.7s
ABKAR Akbulak array 58.41 310 *e*P **P 11 00 08.8 -1.2**
comp=Z,4.4nm,0.6s
BOZ Bozeman (W) 58.41 55 *e*P **P 11 00 12.4 +2.1**
comp=Z,2.9nm,0.8s
BOZ Bozeman (W) 58.41 55 *e*P **P 11 00 12.4 +2.1**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
NV01 Mina Array Sit 59.26 66 *e*P **P 11 00 19.1 +2.7**
NVAR Mina Array Bea 59.26 66 P **P 11 00 19.1 +2.7**
comp=Z,1.0nm,0.6s,baz=293,slow=7.7,SNR=15
YHH Holmes Hill 59.35 56 *e*P **P 11 00 18.6 +1.6**
comp=Z,2.6nm,0.8s
GAR Garm 59.39 295 *e*P **P 11 00 16.5 -0.7**
comp=Z,8.1nm,0.6s
GAR Garm 59.39 295 *e*P **P 11 00 16.5 -0.7**
GAR pmax pmax
comp=Z,8.0nm,0.6s
ELK Elko 59.54 62 *e*P **P 11 00 20.8 +2.5**

comp=Z,1.9nm,1.0s
ELK Elko 59.54 62 *e*P **P 11 00 20.8 +2.5**
ELK pmax pmax
comp=Z,2.0nm,1.0s
H17A Grant Village 59.76 56 *e*P **P 11 00 24.0 +4.2**
comp=Z,3.5nm,0.9s
RLMT Red Lodge 59.98 55 *e*P **P 11 00 23.7 +2.4**
comp=Z,6.2nm,1.2s
LAO LASA Array 60.53 52 *e*P **P 11 00 27.3 +2.5**
comp=Z,8.0nm,1.0s
R11A Troy Canyon, C 60.92 64 *e*P **P 11 00 30.2 +2.5**
comp=Z,1.4nm,0.9s
NIL Nilore 61.15 289 *e*P **P 11 00 28.1 -1.0**
comp=Z,21nm,0.3s
NIL Nilore 61.15 289 *e*P **P 11 00 28.1 -1.0**
NIL pmax pmax
comp=Z,21nm,0.3s
BW06 Boulder Array 61.39 57 *e*P **P 11 00 33.0 +2.0**
comp=Z,2.8nm,1.0s
PD31 Pinedale Array 61.39 57 *e*P **P 11 00 33.2 +2.3**
comp=Z,2.5nm,1.0s
PDAR Pinedale Array 61.39 57 P **P 11 00 33.3 +2.3**
comp=Z,1.6nm,0.8s,baz=320,slow=2.4,SNR=15
FIA0 FINESS Array S 62.54 336 *e*P **P 11 00 36.0 -2.0**
FIA0 FINESS Array S 62.54 336 *e*P **P 11 00 36.0 -2.0**
FINES FINESS Array B 62.54 336 P **P 11 00 36.0 -2.0**
comp=Z,2.7nm,0.6s,baz=40,slow=7.6,SNR=21
FINES LR LR 11 30 28.9
comp=Z,26nm,20.4s,baz=50,slow=39
FINES FINESS Array B 62.54 336 *i* P **P 11 00 35.0 -3.0**
FINES pmax pmax
comp=Z,3.0nm,0.6s
TMUT Trail Mountain 62.81 61 *e*P **P 11 00 43.4 +2.8**
comp=Z,2.5nm,0.9s
LCMT Little Creek M 63.19 64 *e*P **P 11 00 45.4 +2.5**
comp=Z,3.0nm,0.9s
SRU San Rafael Swe 63.33 60 *e*P **P 11 00 46.1 +2.3**
comp=Z,3.9nm,0.9s
SRU San Rafael Swe 63.33 60 *e*P **P 11 00 46.1 +2.3**
SRU pmax pmax
comp=Z,4.0nm,0.9s
RSSD Black Hills 63.41 53 *e*P **P 11 00 46.3 +2.0**
comp=Z,6.0nm,0.9s
RSSD Black Hills 63.41 53 *e*P **P 11 00 46.3 +2.0**
RSSD pmax pmax
comp=Z,6.0nm,0.9s
AGMN Agassiz Nation 64.46 45 *e*P **P 11 00 52.0 +1.2**
comp=Z,5.7nm,1.1s
PV18 Skein Mesa, Pa 64.84 60 *e*P **P 11 00 56.0 +2.2**
comp=Z,6.1nm,1.1s
PV13 Radium Mtn., P 64.95 60 *e*P **P 11 00 56.6 +2.0**
comp=Z,6.6nm,1.0s
ISCO Idaho Springs 65.59 57 *e*P **P 11 01 01.7 +2.9**
comp=Z,3.7nm,1.1s
ISCO Idaho Springs 65.59 57 *e*P **P 11 01 01.7 +2.9**
ISCO pmax pmax
comp=Z,4.0nm,1.1s
NB2 NORSAR Subarra 66.38 342 P **P 11 01 02.6 -0.5**
comp=Z,0.4nm,0.4s,baz=28,slow=6.2
NB200 NORSAR Array S 66.38 342 *e*P **P 11 01 01.7 -1.4**
NOA NORSAR Array B 66.38 342 P **P 11 01 01.7 -1.4**
comp=Z,0.3nm,0.3s,baz=28,slow=6.0,SNR=5.7
NOA LR LR 11 35 00.1
comp=Z,24nm,18.2s,baz=10.0,slow=40
EYMN Ely 66.69 43 *e*P **P 11 01 06.6 +1.3**
comp=Z,4.2nm,0.8s
GEYT Alibeck 67.11 302 P **P 11 01 07.4 -0.7**
comp=Z,3.2nm,0.5s,baz=18,slow=5.2,SNR=6.2
ECSD EROS Data Cent 67.43 49 *e*P **P 11 01 11.6 +1.5**
comp=Z,5.8nm,0.9s
ANMO Albuquerque 68.56 61 *i* P **P 11 01 18.5 +1.0**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
AKASG Malin Array Be 70.52 328 P **P 11 01 27.6 -1.4**
comp=Z,1.4nm,0.3s,baz=35,slow=6.1,SNR=3.3
AKBB Malin Array Si 70.52 328 *e*P **P 11 01 27.7 -1.3**
comp=Z,2.1nm,0.8s
AKBB Malin Array Si 70.52 328 *e*P **P 11 01 27.7 -1.3**
AKBB pmax pmax
comp=Z,2.0nm,0.8s
KBZ Khabaz 70.56 315 P **P 11 01 29.5 +0.1**
comp=Z,3.3nm,0.5s,baz=83,slow=3.2,SNR=8.8
NEY Neytrino 71.01 315 *i* P **P 11 01 29.8 -2.6**
NEY pmax pmax
comp=Z,1.0nm,1.1s
WRAB Tennant Creek 71.79 202 *ce*P **P 11 01 38.5 +1.5**
WRAB pmax pmax
comp=Z,17nm,2.5s
WR1 Warramunga Arr 71.80 202 *e*P **P 11 01 37.9 +0.8**
WRA Warramunga Arr 71.80 202 P **P 11 01 37.8 +0.8**
comp=Z,4.4nm,0.9s,baz=13,slow=5.6,SNR=9.8
WMOK Wichita Mounta 73.00 56 *e*P **P 11 01 45.3 +1.0**
comp=Z,3.2nm,1.0s
WMOK Wichita Mounta 73.00 56 *e*P **P 11 01 45.3 +1.0**
WMOK pmax pmax
comp=Z,3.0nm,1.0s
BUR08 Bucovina Ar. S 74.51 328 *e*P **P 11 01 52.4 -0.6**
comp=Z,2.9nm,0.6s
BURAR Bucovina Array 74.53 328 ⇓*i*P **P 11 01 52.3 -0.8**
BURAR Bucovina Array 74.53 328 ⇓P **P 11 01 52.3 -0.8**
DPC Dobruska-Polom 74.89 335 *e*P **P 11 01 55.6 +0.6**
DPC Dobruska-Polom 74.89 335 *e*P **P 11 01 55.6 +0.6**
CLL Collm 74.90 337 *e*P **P 11 01 54.0 -1.0**
TESR Tescani 74.97 327 ⇓*i*P **P 11 01 54.7 -0.8**
TRPA Tarpa 74.98 330 ⇓⇓*i*P **P 11 01 56.0 +0.5**
AS31 Alice Springs 75.48 201 *e*P **P 11 01 59.8 +1.2**
comp=Z,1.1nm,1.2s
ASAR Alice Springs 75.48 201 P **P 11 02 00.4 +1.8**
comp=Z,1.1nm,0.7s,baz=15,slow=5.7,SNR=18
CFR Carcaliu 75.56 325 ⇓*i*P **P 11 01 57.7 -1.2**
CFR Carcaliu 75.56 325 ⇓P **P 11 01 57.7 -1.2**
GOPC GO Pecny, Ondr 75.70 336 *e*P **P 11 02 00.1 +0.4**
GOPC GO Pecny, Ondr 75.70 336 *e*P **P 11 02 00.1 +0.4**
VRAC Vranov 75.75 334 ⇑*i*P **P 11 02 04.4 +4.4**
VRAC Vranov 75.75 334 ⇑P **P 11 02 04.4 +4.4**
HARR Harsova 76.05 325 ⇓*i*P P 11 02 09.8 +8.1
HARR Harsova 76.05 325 ⇓P P 11 02 09.8 +8.1
MLR Muntele Rosu 76.10 327 ⇑*i*P **P 11 02 02.6 +0.4**
MLR Muntele Rosu 76.10 327 ⇑P **P 11 02 02.6 +0.4**
TLB Topalu 76.10 325 ⇑*i*P **P 11 02 01.8 -0.2**
TLB Topalu 76.10 325 ⇑P **P 11 02 01.8 -0.2**
VOIR 76.47 327 ⇓*i*P **P 11 02 05.0 +0.8**
VOIR 76.47 327 ⇓P **P 11 02 05.0 +0.8**
ARR Arges 76.67 327 ⇑*i*P **P 11 02 04.8 -0.5**
KHC Kasperske Hory 76.74 336 *e*P **P 11 02 06.3 +0.7**
comp=Z,1.6nm,0.8s
KHC Kasperske Hory 76.74 336 *e*P **P 11 02 06.4 +0.8**
KHC *e* 11 02 11.5
KHC Kasperske Hory 76.74 336 *e*P **P 11 02 06.4 +0.8**
KHC *ex* x 11 02 11.5
ILGA Ilgaz 76.78 319 *e*P **P 11 02 05.1 -1.1**
comp=Z,13nm,0.8s
SIRR Siria 76.90 330 ⇑*i*P **P 11 02 07.2 +0.6**
GEC2 GERESS Array S 76.97 336 *e*P **P 11 02 05.4 -1.6**
comp=Z,1.9nm,0.6s
GEC2 GERESS Array S 76.97 336 *e*P **P 11 02 05.4 -1.6**
GEC2 pmax pmax
comp=Z,2.0nm,0.6s
GERES GERESS Array B 76.97 336 P **P 11 02 06.5 -0.5**
comp=Z,1.1nm,0.5s,baz=34,slow=5.8,SNR=12
MEM Membach 77.17 341 P **P 11 02 08.3 +0.4**
CONA Conrad Observa 77.21 334 *e*P **P 11 02 08.8 +0.4**
comp=Z,3.7nm,0.7s
GZR Gura Zlata 77.30 328 ⇑*i*P **P 11 02 08.9 +0.1**
GZR Gura Zlata 77.30 328 ⇑P **P 11 02 08.9 +0.1**
BZS Buzias 77.49 329 ⇑*i*P **P 11 02 09.5 -0.3**
BZS Buzias 77.49 329 ⇑P **P 11 02 09.5 -0.3**
BMRD Maredsous 77.72 342 P **P 11 02 10.7 -0.3**
MOA Molln 77.73 335 *i* P **P 11 02 11.7 +0.5**
comp=Z,3.0nm,0.9s
HERR Herculane 77.87 328 ⇑*i*P **P 11 02 11.3 -0.6**
BR101 Keskin Array S 77.91 318 *e*P **P 11 02 12.2 -0.2**
BR131 Keskin Array S 77.91 318 *e*P **P 11 02 11.2 -1.3**
comp=Z,8.1nm,1.1s
BRTR Keskin Array B 77.91 318 P **P 11 02 12.2 -0.2**
comp=Z,4.7nm,0.9s,baz=65,slow=3.3,SNR=17
BRTR Keskin Array B 77.91 318 *i* P **P 11 02 12.8 +0.4**
BRTR pmax pmax
comp=Z,17nm,1.3s
ARSA Arzberg 77.92 334 *e*P **P 11 02 11.6 -0.6**
comp=Z,3.1nm,0.6s
DOU Dourbes 77.95 342 P **P 11 02 12.9 +0.6**
DOU sP **sP 11 02 35.3 +1.1**
MDVR Moldovita 78.19 329 ⇑*i*P **P 11 02 13.4 -0.4**
PUNG Punghina 78.22 328 ⇓*i*P **P 11 02 18.1 +4.2**

SOKA	Soboth	78.58	334	*i* P	P	11 02 16.5	+0.5
	comp=Z,9.3nm,0.8s						
KBA	Koelnbreinsper	78.69	335	*e*P	P	11 02 17.7	+1.0
	comp=Z,14nm,0.6s,SNR=10						
BFO	Black Forest	78.80	339	*i* P	P	11 02 17.9	+0.8
OBKA	Obir	78.87	334	*i* P	P	11 02 17.9	+0.3
	comp=Z,5.9nm,0.6s						
WATA	Walderalm	78.92	336	*i* P	P	11 02 18.5	+0.6
	comp=Z,3.7nm,0.5s						
WTTA	Wattenberg	78.97	336	*i* P	P	11 02 19.2	+0.9
	comp=Z,10nm,0.8s,SNR=5.9						
RETA	Reutte	78.99	337	*i* P	P	11 02 18.8	+0.7
	comp=Z,3.8nm,0.6s						
MYKA	Terra Mystica	79.02	335	*i* P	P	11 02 18.3	0.0
	comp=Z,4.9nm,0.7s						
MOTA	Moosalm	79.03	337	*i* P	P	11 02 18.9	+0.4
	comp=Z,19nm,1.2s,SNR=6.6						
SQTA	Sankt Quirin	79.12	337	*i* P	P	11 02 19.8	+0.8
	comp=Z,11nm,1.0s						
ECH	Echery	79.18	340	*e*P	P	11 02 18.5	-0.6
	comp=Z,4.7nm,0.8s						
ECH	Echery	79.18	340	*e*P	P	11 02 18.5	-0.6
ECH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ABTA	Abfaltersbach	79.22	336	*i* P	P	11 02 20.4	+1.0
	comp=Z,5.1nm,0.7s						
DAVA	Damuels	79.40	338	*i* P	P	11 02 21.3	+0.8
	comp=Z,9.7nm,1.1s						
FETA	Feichten	79.43	337	*i* P	P	11 02 21.6	+0.9
	comp=Z,7.1nm,0.8s						
VTS	Vitosha	79.56	327	*e*P	P	11 02 20.1	-1.3
	comp=Z,9.3nm,0.7s						
VTS	Vitosha	79.56	327⇑	*i*P	P	11 02 21.4	-0.1
VTS	Vitosha	79.56	327	⇑P	P	11 02 21.4	-0.1
FUORN	Ofenpass-Fuorn	79.92	337	*e*P	P	11 02 22.6	-0.9
	comp=Z,9.7nm,0.9s						
TUE	Stuetta	80.29	338	*e*P	P	11 02 25.2	-0.2
	comp=Z,12nm,0.7s						
PDG	Podgorica	81.10	329⇑	*i*P	P	11 02 29.0	-0.5
TTG	Podgorica	81.10	329	*e*P	P	11 02 29.1	-0.4
	comp=Z,23nm,1.2s						
TTG	Podgorica	81.10	329	*e*P	P	11 02 29.1	-0.4
TTG				pmax	pmax		
	comp=Z,23nm,1.2s						
RAYN	Ar Rayn	85.03	301	*e*P	P	11 02 48.9	-1.3
	comp=Z,3.7nm,0.9s						
RAYN	Ar Rayn	85.03	301	*e*P	P	11 02 48.9	-1.3
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ESDC	Sonseca Array	89.60	345	P	P	11 03 11.2	-0.8
	comp=Z,0.3nm,0.4s,baz=9.3,slow=5.2,SNR=5.4						
KEST	Kesra	90.32	334	P	P	11 03 15.4	-0.1
	comp=Z,4.5nm,0.9s,baz=280,slow=1.2,SNR=2.2						
KEST	Kesra	90.32	334	*e*P	P	11 03 15.4	-0.1
	comp=Z,26nm,1.6s						

*ISCJB **29** 10:50:41.0±0.3, 17°.62N±0°.05×65°.84W±0°.02, h44km±12km, Error ellipse: s-maj=8.5km s-min=2.9km az=8.3*
*NEIC **29** 10:50:43.0±0.0, 17°.63N×65°.84W, h28km, MD3.1(RSPR), After RSPR.*
NEIC Felt at Caguas and Ponce.
*RSPR **29** 10:50:43.0, 17°.63N×65°.84W, h28km±2km, MD3.1/16*

ISC 29 10:50:41.0±1.1, 17°.63N±0°.03×65°.87W±0°.03, h30km±12km, n85, σ1§34/120, 21C-11D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGPR	InterUniversit	0.40	326⇓	*e*P	Pn	10 50 51.2	+0.4
IGPR	InterUniversit	0.40	326⇑	*e*P	Pn	10 50 51.1	+0.3
IGPR				*e*S	Sn	10 50 57.8	+0.4
PDPR	Patillas Dam,	0.41	340⇑	*e*P	Pn	10 50 50.9	-0.1
PDPR				*e*S	Sn	10 50 57.6	0.0
PDPR	Patillas Dam,	0.41	340⇓	*e*P	Pn	10 50 51.2	+0.3
SJG	San Juan	0.55	331⇓	*e*P	Pn	10 50 53.0	+0.2
SJG	San Juan	0.55	331	*e*Pn	Pn	10 50 53.0	+0.2
SJG				*e*Sg	Sn	10 51 00.5	-0.4
SJG	San Juan	0.55	331⇓	*e*P	Pn	10 50 53.0	+0.2
SJG				*e*S	Sn	10 51 00.6	-0.4
MTP	Monte Pirata	0.56	33⇑	*e*P	Pn	10 50 53.0	+0.1
MTP	Monte Pirata	0.56	33	*e*Pn	Pn	10 50 52.6	-0.3
MTP				*e*Sg	Sn	10 51 00.5	-0.7
MTP	Monte Pirata	0.56	33⇑	*e*P	Pn	10 50 53.0	+0.1
MTP				*e*S	Sn	10 51 00.5	-0.7
CBYP	Canovanas	0.64	1⇑	*e*P	Pn	10 50 54.1	0.0
CBYP				*e*S	Sn	10 51 03.0	-0.3
CBYP	Canovanas	0.64	1⇑	*e*P	Pn	10 50 54.1	0.0
CBYP	Canovanas	0.64	1	*e*Pn	Pn	10 50 54.1	0.0
CBYP				*e*Pn	Pn	10 50 54.1	0.0
CBYP				*e*Sg	Sn	10 51 02.8	-0.6
CBYP				*e*Sg	Sb	10 51 03.2	+0.7
CBYP	Canovanas	0.64	1⇑	*e*P	Pn	10 50 54.1	0.0
CBYP				*e*S	Sn	10 51 03.0	-0.3
OBIP	Obispado Ponce	0.81	301⇓	*e*P	Pb	10 50 56.7	+0.1
OBIP	Obispado Ponce	0.81	301	*e*Pn	Pb	10 50 56.4	-0.2
OBIP				*e*Sg	Sn	10 51 08.0	+0.5
OBIP	Obispado Ponce	0.81	301⇓	*e*P	Pb	10 50 56.7	+0.1
OBIP				*e*S	Sn	10 51 07.8	+0.3
CUPR	Culebra, Puert	0.88	40⇑	*e*P	Pb	10 50 57.5	-0.1
CUPR	Culebra, Puert	0.88	40	*e*S	Sn	10 51 08.2	-0.8
CUPR	Culebra, Puert	0.88	40	*e*Pn	Pb	10 50 57.6	-0.1
CUPR				*e*Sg	Sn	10 51 08.2	-0.8
GBPR	Guanica, Bosqu	1.02	290⇓	*e*P	Pb	10 50 59.8	-0.3
GBPR	Guanica, Bosqu	1.02	290	*e*Pn	Pb	10 50 59.8	-0.3
GBPR				*e*Sn	Sb	10 51 13.0	-0.1
GBPR	Guanica, Bosqu	1.02	290⇓	*e*P	Pb	10 50 59.8	-0.3
GBPR				*e*S	Sb	10 51 13.0	-0.1
EMPR	Esperanza - Ma	1.05	324⇑	*e*P	Pb	10 51 00.7	+0.1
EMPR	Esperanza - Ma	1.05	324	*e*S	Sb	10 51 13.8	-0.2
EMPR	Esperanza - Ma	1.05	324	*e*Pn	Pb	10 51 00.2	-0.4
CDVI	St. Croix	1.06	83⇑	*e*Pn	Pn	10 50 59.7	-0.1
CDVI				*e*S	Sn	10 51 13.6	0.0
CDVI	St. Croix	1.06	83	*e*Pn	Pn	10 50 59.7	-0.1
CDVI				*e*Sn	Sn	10 51 13.6	0.0
CDVI	St. Croix	1.06	83⇑	*e*P	Pn	10 50 59.7	-0.1
CDVI				*e*S	Sn	10 51 13.6	0.0
AOPR	Arecibo Observ	1.10	311⇑	*e*P	Pb	10 51 00.9	-0.6
AOPR				*e*S	Sb	10 51 15.0	-0.6
AOPR	Arecibo Observ	1.10	311⇓	*e*P	Pb	10 51 00.9	-0.6
AOPR	Arecibo Observ	1.10	311	*e*S	Sb	10 51 15.1	-0.5
AOPR	Arecibo Observ	1.10	311	*e*Pn	Pb	10 51 01.0	-0.6
AOPR				*e*Sn	Sb	10 51 15.1	-0.5
AOPR	Arecibo Observ	1.10	311⇑	*e*P	Pb	10 51 00.9	-0.6
AOPR				*e*S	Sb	10 51 15.0	-0.6
STVI	Saint Thomas	1.13	50⇑	*e*P	Pn	10 51 01.0	+0.2
STVI	Saint Thomas	1.13	50⇑	*e*P	Pn	10 51 01.1	+0.3
STVI				*e*S	Sn	10 51 14.1	-1.2
STVI	Saint Thomas	1.13	50	*e*Pn	Pn	10 51 00.9	+0.1
STVI	Saint Thomas	1.13	50⇑	*e*P	Pn	10 51 01.0	+0.2
STVI				*e*S	Sn	10 51 14.1	-1.2
MLPR	Magueyes Islan	1.17	287⇑	*e*P	Pb	10 51 01.7	-0.9
MLPR	Magueyes Islan	1.17	287	*e*S	Sb	10 51 16.4	-0.9
LSP	Las Mesas	1.28	295⇑	*e*P	Pb	10 51 03.5	-1.0
LSP	Las Mesas	1.28	295	*e*Pn	Pb	10 51 03.5	-1.0
LSP	Las Mesas	1.28	295⇑	*e*P	Pb	10 51 03.5	-1.0
MPR	Mayaguez	1.34	296	*e*Pn	Pn	10 51 04.0	+0.3
AGP	Aguadilla	1.44	303	*e*Pn	Pb	10 51 06.0	-1.2
AGP				*e*Sn	Sb	10 51 25.5	+0.4
AGPR	Aguadilla, PR	1.45	305⇓	*e*P	Pb	10 51 06.0	-1.3
AGPR	Aguadilla, PR	1.45	305⇓	*e*P	Pb	10 51 06.0	-1.3
AGPR				*e*S	Sb	10 51 23.8	-1.5
SABA	Saba	2.51	90⇑	*e*P	Pn	10 51 21.0	+1.3
SABA	Saba	2.51	90	*e*Pn	Pn	10 51 21.3	+1.6
SABA				*e*Sn	Sn	10 51 50.0	+0.7
SABA	Saba	2.51	90	*e*P	Pn	10 51 21.3	+1.6
SABA				*e*S	Sn	10 51 49.3	-0.1
SMRT	St. Maarten	2.70	81	*e*Pn	Pn	10 51 23.1	+0.7
SMRT	St. Maarten	2.70	81	*e*P	Pn	10 51 23.0	+0.7
SMRT				*e*S	Sn	10 51 51.4	-2.6
SEUS	St. Eustatius	2.76	92	*e*Pn	Pn	10 51 24.7	+1.5
SEUS	St. Eustatius	2.76	92	*e*P	Pn	10 51 24.7	+1.5
SEUS				*e*S	Sn	10 51 55.3	-0.3
SKDB	Saint Kitts 2	2.93	94	*e*P	Pn	10 51 26.7	+1.2
SKDB				*e*S	Sn	10 52 01.3	+1.6
SKI	Saint Kitts	3.00	95	*e*Pn	Pn	10 51 27.9	+1.3
SKI	Saint Kitts	3.00	95	*e*P	Pn	10 51 27.5	+0.9
SKI				*e*S	Sn	10 52 01.1	-0.6
NVRH	Round Hill, Ne	3.15	98	*e*P	Pn	10 51 28.2	-0.4
DR12	Loma Pena Alta	3.53	290⇑	*e*P	Pn	10 51 35.4	+1.5
DR12				*e*S	Sn	10 52 16.2	+1.5
MLYT	Lee's Yard	3.63	104	*e*P	Pn	10 51 36.8	+1.6
MLYT				*e*S	Sn	10 52 15.8	-1.3
ANWB	Willy Bob	3.90	89	*e*Pn	Pn	10 51 40.4	+1.5
ANWB	Willy Bob	3.90	89	*e*P	Pn	10 51 39.6	+0.7
ANWB				*e*S	Sn	10 52 21.7	-1.8
ABD	La Joyeuse, An	4.35	105	*e*P	Pn	10 51 46.2	+1.1
CBE	Ff, Capester	4.37	110	*e*P	Pn	10 51 46.7	+1.3
TDBA	Terre de Bas,	4.43	113	*e*P	Pn	10 51 46.9	+0.8
MAGL	Barre de l'ile	4.70	110	*e*P	Pn	10 51 51.1	+1.2
MDPO	Dominica; Chan	4.70	115	*e*P	Pn	10 51 50.9	+1.0
MDPO	Dominica; Chan	4.70	115	*e*S	Sn	10 52 40.2	-3.3
PCM	Pelee Case Pet	5.28	121	*e*P	Pn	10 51 58.2	+0.4
BIM	Bigot	5.55	123	*e*P	Pn	10 52 02.1	+0.4
ZAM	Aeronautique	5.56	122	*e*P	Pn	10 52 01.9	+0.3
TRMF	Trois Ilets	5.56	123	*e*P	Pn	10 52 02.2	+0.5
LPMF	Morne Lapointe	5.61	122	*e*P	Pn	10 52 02.5	+0.1
MPOM	Morne Pois Mar	5.76	123	*e*P	Pn	10 52 05.5	+1.0
SLBI	Saint Lucia, B	5.92	127	*e*P	Pn	10 52 06.8	+0.1
SVV	Soufriere Volc	6.20	133	*e*P	Pn	10 52 12.1	+1.5
SVV	Soufriere Volc	6.20	133	*e*S	Sn	10 53 18.3	-2.3
SVB	Belmont	6.21	134	*e*P	Pn	10 52 11.0	+0.3
SVB	Belmont	6.21	134	*e*S	Sn	10 53 14.6	-6.2
SSV	Crater Summit	6.21	133	*e*P	Pn	10 52 13.2	+2.3
SSV	Crater Summit	6.21	133	*e*S	Sn	10 53 25.7	+4.8
SVCV	St. Vincent, C	6.29	133	*e*P	Pn	10 52 09.0	-2.8
SVCV	St. Vincent, C	6.29	133	*e*S	Sn	10 53 17.2	-5.4
URIC	Uribia, Colomb	8.35	226	*e*P	Pn	10 52 37.1	-3.0
SDV	Santo Domingo	9.85	209	*e*Pn	Pn	10 53 03.1	+2.3

*TEH **29** 10:59:53.1, 37°.19N×45°.02E, h6km, ML3.6*
*ISK **29** 11:00:00.7, 37°.40N×45°.05E, h6km, ML3.7/7*
*ISN **29** 11:00:07.1±1.9, 37°.07N×44°.84E, h15km, ML3.6*
*AZER **29** 11:00:08.6±6.7, 37°.47N×45°.45E, h1km±22km, ml3.5/8, Error ellipse: s-maj=70.1km s-min=27.2km az=37.0*

ISC 29 10:59:59.6±1.2, 37°.05N±0°.03×45°.27E±0°.04, h16km±11km, n26, σ1§92/31, 1D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAHB	Mahabad	0.45	129	*e*Pg	Pg	11 00 05.7	-3.0
IAZR	Azarshahr	0.84	42	*e*Pg	Pb	11 00 10.5	-5.5
IAZR				IAMB	IAmb	11 00 43.9	
	comp=Z,55μm,0.5s						
ISHB	Shabestar	1.26	12	*e*Pg	Pn	11 00 15.7	-7.1
CUKT	Cukurca	1.34	279	PN	Pn	11 00 23.3	-0.5
CUKT				SN	Sn	11 00 39.9	-1.4
ITBZ	Tabriz	1.37	30	*e*Pg	Pn	11 00 19.0	-5.2
ITBZ				IAMB	IAmb	11 00 49.0	
	comp=Z,16μm,0.4s						
IMRD	Marand	1.69	12	*e*Pn	Pn	11 00 23.0	-5.7
IMRD				IAMB	IAmb	11 00 59.4	
	comp=Z,11μm,0.4s						
MSL	Mosul	1.85	250	*e*Pg	Pb	11 00 34.0	+0.9
	baz=64						
MSL				*e*Sg	Sb	11 00 57.1	+1.1
ORD	Ordubad	1.96	17	P	Pg	11 00 39.8	+2.6
	SNR=33						
ORD				S	Sg	11 01 04.8	+2.1
ISRB	Sarab	2.06	67	*e*Pn	Pn	11 00 33.1	-0.6
ISRB				IAMB	IAmb	11 01 14.4	
	comp=E,9μm,0.5s						
ISRB				IAMB	IAmb	11 01 16.6	
	comp=Z,4μm,0.5s						
NAX	Nakhchivan	2.13	5	P	Pg	11 00 43.0	+2.5
	SNR=15						
NAX				S	Sg	11 01 09.3	+1.2
VANB	Van	2.14	317	PN	Pn	11 00 31.6	-3.2
AKDM	Akdamar-Van	2.22	306	PN	Pn	11 00 34.2	-1.7
SBZ	Shahbuz	2.35	5	P	Pg	11 00 45.6	+0.8
	SNR=19						
SBZ				S	Sg	11 01 16.7	+1.4
IDHR	Dehrash	2.51	159	*e*Pn	Pn	11 00 40.6	+0.6
ILIN	Lien	2.53	147	IAMB	IAmb	11 01 40.9	
	comp=Z,2μm,0.5s						
HYR	Heyderabad	2.69	353	P	Pg	11 00 50.6	-0.5
	SNR=10						
HYR				S	Sg	11 01 26.0	+0.1
LRK	Lerik	2.90	56	P	Pg	11 00 55.9	+0.6
	SNR=5.3						
LRK				S	Sb	11 01 30.1	+3.7
TASB	TASBURUN-IGDIR	3.04	345	PN	Pn	11 00 45.7	-1.3
AGRB	Hanur-Agry	3.09	325	PN	Pn	11 00 45.9	-2.0
GNI	Garni	3.12	353	PN	Pn	11 00 46.7	-1.6
ASTR	Astara	3.17	61	P	Pg	11 00 59.8	-0.5
	SNR=4.4						
ASTR				S	Sg	11 01 40.5	-1.0
GANJ	Ganja	3.68	13	P	Pb	11 01 05.5	+1.2
	SNR=9.3						
GANJ				S	Sb	11 01 45.6	-3.1
MAZI	Mazidag	3.87	278	PN	Pn	11 00 59.9	+1.4
QZX	Qazax, Azerbai	4.00	1	P	Pb	11 01 09.2	-0.6
	SNR=5.2						
QZX				S	Sb	11 01 54.5	-3.3
IKFM	Kafar-mosalman	4.10	148	*e*Pn	Pn	11 01 02.9	+1.4
AKH	Akhalkalaki	4.57	343	*i*P	Pg	11 01 27.8	+0.7

*STR **29** 11:06:47.9±4.5, 44°N±27°×1°0E±3°1, h33km, MLv3.5/6*
*ROM **29** 11:06:51.1±0.1, 44°.172N±0°.005×10°.185E±0°.006, h6km, ML3.4/78, Error ellipse: s-maj=0.4km s-min=0.4km az=29.0*
*ISCJB **29** 11:06:51.5±0.3, 44°.15N±0°.01×10°.16E±0°.02, h15km±2km, mb4.0/5, MS3.6/2, Error ellipse: s-maj=2.3km s-min=1.8km az=178.8*
*GEN **29** 11:06:51.6, 44°.18N×10°.19E, h5km±1km, Ml3.2*
*PRU **29** 11:06:52.3±0.0, 44°.20N×10°.34E, h0km*
*LDG **29** 11:06:52.1±0.1, 44°.15N×10°.22E, h2km, Ml3.6/22*
*BEO **29** 11:06:53.7±0.8, 44°.14N×10°.10E, h15km±1km, ML3.6/9*
*IDC **29** 11:06:53.2±1.3, 44°.22N×10°.50E, h0km, mb3.6/4, mb1 3.6/9, mb1mx3.4/50, mbtmp3.6/9, ML3.5/5, MS2.7/4, Ms1 2.7/4, ms1mx2.4/39, Error ellipse: s-maj=30.9km s-min=14.5km az=118.0*

ISC 29 11:06:52.0±0.8, 44°.13N±0°.02×10°.16E±0°.02, h4km±5km, n199, σ1§89/234, mb3.9/5, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	Equi	0.03	352	P	Pg	11 06 52.9	-0.2
EQUI				S	Sg	11 06 53.7	-0.1
T0912	Minucciano (LU	0.05	44	*i* P	Pg	11 06 52.9	-0.4
T0912				S	Sg	11 06 53.9	-0.3
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0911	Castelpoggio (	0.07	252	AML	AML		
	comp=N,20650μm,0.8s						
T0911				AML	AML		
	comp=E,19100μm,0.8s						
T0911				AML	AML		
	comp=E,19250μm,0.8s						
T0911				AML	AML		
	comp=N,20600μm,0.8s						
T0911				AML	AML		
	comp=E,19100μm,0.8s						
T0911				AML	AML		
	comp=N,20650μm,0.8s						
T0911				AML	AML		
	comp=E,19250μm,0.8s						
T0911				AML	AML		
	comp=N,20600μm,0.8s						
T0911				AML	AML		
	comp=E,19100μm,0.8s						
T0911				AML	AML		
	comp=N,20650μm,0.8s						
T0911				AML	AML		
	comp=E,19250μm,0.8s						
T0911				AML	AML		
	comp=N,20650μm,0.8s						
T0911				AML	AML		
	comp=E,19100μm,0.8s						
FOSD	Fosdinovo	0.12	258	P	Pg	11 06 55.1	+0.7
FOSD				S	Sg	11 06 57.7	+1.7
FOSD				AML	AML		
	comp=E,21450μm,1.4s						
FOSD				AML	AML		
	comp=N,32200μm,0.6s						
FOSD				AML	AML		
	comp=E,21450μm,1.4s						
FOSD				AML	AML		
	comp=N,32200μm,0.6s						
VLC	Villacollemand	0.17	80⇑	*e*Pg	Pg	11 06 54.9	-0.4
VLC				*e*Sg	Sg	11 06 57.4	0.0
VLC	Villacollemand	0.17	80	*e*P	Pg	11 06 54.9	-0.4
VLC				S	Sg	11 06 57.3	-0.2
VLC				AML	AML		
	comp=E,34450μm,0.7s						
VLC				AML	AML		
	comp=N,35300μm,0.7s						
VLC				AML	AML		
	comp=E,33200μm,0.7s						
VLC				AML	AML		
	comp=N,37200μm,0.7s						
VLC				AML	AML		
	comp=E,34450μm,0.7s						
VLC				AML	AML		
	comp=N,35300μm,0.7s						
VLC				AML	AML		
	comp=E,33200μm,0.7s						
VLC				AML	AML		
	comp=N,37200μm,0.7s						
VLC				AML	AML		
	comp=E,34450μm,0.7s						
VLC				AML	AML		
	comp=N,35300μm,0.7s						
VLC				AML	AML		
	comp=N,37200μm,0.7s						
VLC				AML	AML		
	comp=E,33200μm,0.7s						
VLC				AML	AML		
	comp=E,34450μm,0.7s						
PLMA	Palmaria, Port	0.24	250	*e*P	Pg	11 06 57.3	+0.7
PLMA				S	Sg	11 07 01.1	+1.4
PLMA				AML	AML		
	comp=E,4465μm,0.5s						
PLMA				AML	AML		
	comp=N,5045μm,0.7s						
PLMA				AML	AML		
	comp=E,4465μm,0.5s						
PLMA				AML	AML		
	comp=N,5045μm,0.7s						
PLMA				AML	AML		
	comp=E,4465μm,0.5s						
PLMA				AML	AML		
	comp=N,5045μm,0.7s						
CARD	Cardoso	0.26	114	P	Pg	11 06 56.8	-0.2
CARD				S	Sg	11 07 01.0	+0.7
CARD	Cardoso	0.26	114	*e*P	Pg	11 06 56.8	-0.2
CARD				S	Sg	11 07 00.8	+0.5
CARD				AML	AML		
	comp=E,14950μm,0.3s						
CARD				AML	AML		
	comp=N,19800μm,1.0s						
CARD				AML	AML		
	comp=E,14950μm,0.3s						
CARD				AML	AML		
	comp=N,19800μm,1.0s						
CARD				AML	AML		
	comp=E,14950μm,0.3s						
CARD				AML	AML		
	comp=N,19800μm,1.0s						
CARD				AML	AML		
	comp=E,14950μm,0.3s						
CARD				AML	AML		
	comp=N,19800μm,1.0s						
BDI	Bagni Di Lucca	0.32	102	*e*P	Pg	11 06 57.8	-0.5
BDI				S	Sg	11 07 02.7	+0.2
BDI				AML	AML		
	comp=E,11500μm,0.4s						
BDI				AML	AML		
	comp=N,7990μm,0.6s						
BDI				AML	AML		
	comp=E,10310μm,0.6s						
BDI				AML	AML		
	comp=N,10495μm,0.4s						
BDI				AML	AML		
	comp=E,11500μm,0.4s						
BDI				AML	AML		
	comp=N,7990μm,0.6s						
BDI				AML	AML		
	comp=E,10310μm,0.6s						
BDI				AML	AML		
	comp=N,10495μm,0.4s						
BDI				AML	AML		
	comp=E,10310μm,0.6s						
BDI				AML	AML		
	comp=N,10495μm,0.4s						
BDI				AML	AML		
	comp=N,7990μm,0.6s						
BDI				AML	AML		
	comp=E,11500μm,0.4s						
MAIM	Mastiano	0.32	132	P	Pg	11 06 58.2	-0.1
MAIM				S	Sg	11 07 03.5	+1.0
MAIM	Mastiano	0.32	132	*e*P	Pg	11 06 58.3	+0.1
MAIM				S	Sg	11 07 03.5	+1.0
MAIM				AML	AML		
	comp=E,14700μm,0.4s						
MAIM				AML	AML		
	comp=N,11750μm,0.5s						
MAIM				AML	AML		
	comp=E,14700μm,0.4s						
MAIM				AML	AML		
	comp=N,11750μm,0.5s						
MAIM				AML	AML		
	comp=E,14700μm,0.4s						
MAIM				AML	AML		
	comp=N,11750μm,0.5s						
MAIM				AML	AML		
	comp=N,11750μm,0.5s						
MAIM				AML	AML		
	comp=E,14700μm,0.4s						
ERBM	Eremo	0.34	32	*i* P	Pg	11 06 57.7	-0.9
ERBM				S	Sg	11 07 02.4	-0.7
ERBM				AML	AML		
	comp=E,29550μm,1.0s						
ERBM				AML	AML		
	comp=N,40650μm,1.0s						
ERBM				AML	AML		
	comp=E,29550μm,1.0s						
ERBM				AML	AML		
	comp=N,40650μm,1.0s						
ERBM				AML	AML		
	comp=E,29550μm,1.0s						
ERBM				AML	AML		
	comp=N,40650μm,1.0s						
ERBM				AML	AML		
	comp=N,40650μm,1.0s						
ERBM				AML	AML		
	comp=E,29550μm,1.0s						
GRAM	Graiana	0.37	349	P	Pg	11 06 58.1	-1.0
GRAM				S	Sg	11 07 02.8	-1.1
GRAM	Graiana	0.37	349	*i* P	Pg	11 06 58.1	-1.0
GRAM				S	Sg	11 07 03.3	-0.6
GRAM				AML	AML		
	comp=E,82150μm,0.3s						
GRAM				AML	AML		
	comp=N,71550μm,0.3s						
GRAM				AML	AML		
	comp=E,82150μm,0.3s						
GRAM				AML	AML		
	comp=N,71550μm,0.3s						
GRAM				AML	AML		
	comp=E,82150μm,0.3s						
GRAM				AML	AML		
	comp=N,71550μm,0.3s						
POPM	Popiglio	0.44	101	P	Pg	11 06 59.9	-0.5
POPM				S	Sg	11 07 06.4	+0.2
POPM	Popiglio	0.44	101	P	Pg	11 06 60.0	-0.5
POPM				AML	AML		
	comp=E,12750μm,0.4s						

POPM				AML	AML		
	comp=N,14650µm,0.5s						
POPM				AML	AML		
	comp=E,12750µm,0.4s						
POPM				AML	AML		
	comp=N,14650µm,0.5s						
POPM				AML	AML		
	comp=E,12750µm,0.4s						
POPM				AML	AML		
	comp=N,14650µm,0.5s						
POPM				AML	AML		
	comp=E,12750µm,0.4s						
NEVI	**Neviano degli**	**0.47**	**14**	P	**Pg**	**11 07 00.6**	**-0.4**
MSSA	**Maissana**	**0.50**	**292**	*e*P	**Pg**	**11 07 01.1**	**-0.4**
MSSA				AML	AML		
	comp=E,2680µm,0.6s						
MSSA				AML	AML		
	comp=N,3060µm,0.8s						
MSSA				AML	AML		
	comp=E,2680µm,0.6s						
MSSA				AML	AML		
	comp=N,3060µm,0.8s						
MSSA				AML	AML		
	comp=N,3060µm,0.8s						
MSSA				AML	AML		
	comp=E,2680µm,0.6s						
MTCR	**Monte La Croce**	**0.61**	**100**	P	**Pg**	**11 07 03.5**	**-0.3**
MTCR				AML	AML		
	comp=E,11300µm,0.4s						
MTCR				AML	AML		
	comp=N,8970µm,1.2s						
MTCR				AML	AML		
	comp=E,11350µm,0.4s						
MTCR				AML	AML		
	comp=N,8985µm,1.2s						
MTCR				AML	AML		
	comp=E,11350µm,0.4s						
MTCR				AML	AML		
	comp=N,8975µm,1.2s						
MTCR				AML	AML		
	comp=E,11350µm,0.4s						
MTCR				AML	AML		
	comp=N,8975µm,1.2s						
ZCCA	**Zocca**	**0.63**	**69**	P	**Pg**	**11 07 04.2**	**+0.2**
ZCCA				AML	AML		
	comp=E,3675µm,0.7s						
ZCCA				AML	AML		
	comp=N,5625µm,0.6s						
ZCCA				AML	AML		
	comp=E,3975µm,0.3s						
ZCCA				AML	AML		
	comp=N,5825µm,0.6s						
ZCCA				AML	AML		
	comp=E,3670µm,0.7s						
ZCCA				AML	AML		
	comp=N,5630µm,0.6s						
ZCCA				AML	AML		
	comp=E,3975µm,0.3s						
ZCCA				AML	AML		
	comp=N,5825µm,0.6s						
ZCCA				AML	AML		
	comp=N,5825µm,0.6s						
ZCCA				AML	AML		
	comp=N,5630µm,0.6s						
ZCCA				AML	AML		
	comp=E,3670µm,0.7s						
ZCCA				AML	AML		
	comp=E,3975µm,0.3s						
PRMA	**PARMA**	**0.64**	**10**	P	**Pg**	**11 07 04.3**	**0.0**
CRMI	**Carmignano**	**0.68**	**120**	P	**Pg**	**11 07 05.3**	**+0.3**
CRMI				AML	AML		
	comp=E,5010µm,0.4s						
CRMI				AML	AML		
	comp=N,6055µm,0.3s						
CRMI				AML	AML		
	comp=E,2075µm,0.4s						
CRMI				AML	AML		
	comp=N,2560µm,0.3s						
CRMI				AML	AML		
	comp=E,5015µm,0.4s						
CRMI				AML	AML		
	comp=N,6050µm,0.3s						
CRMI				AML	AML		
	comp=E,2075µm,0.4s						
CRMI				AML	AML		
	comp=N,2560µm,0.3s						
CRMI				AML	AML		
	comp=E,2075µm,0.4s						
CRMI				AML	AML		
	comp=E,5015µm,0.4s						
CRMI				AML	AML		
	comp=N,2560µm,0.3s						
CRMI				AML	AML		
	comp=N,6050µm,0.3s						
PTF	**Prato**	**0.68**	**104**	P	**Pg**	**11 07 04.7**	**-0.3**
FNVD	**Fontana Vidola**	**0.69**	**87**	P	**Pg**	**11 07 05.0**	**-0.3**
GROG	**Isola di Gorgo**	**0.73**	**195**	*e*P	**Pb**	**11 07 06.6**	**-0.6**
GROG				AML	AML		
	comp=E,2580µm,0.8s						
GROG				AML	AML		
	comp=N,1490µm,0.7s						
GROG				AML	AML		
	comp=E,2580µm,0.8s						
GROG				AML	AML		
	comp=N,1490µm,0.7s						
GROG				AML	AML		
	comp=E,2580µm,0.8s						
GROG				AML	AML		
	comp=N,1490µm,0.7s						
NOVE	**Novellara**	**0.78**	**31**	AML	AML		
	comp=N,25250µm,0.6s						
NOVE				AML	AML		
	comp=E,14450µm,0.8s						
NOVE				AML	AML		
	comp=E,14450µm,0.8s						
NOVE				AML	AML		
	comp=N,25250µm,0.6s						
NOVE				AML	AML		
	comp=E,14450µm,0.8s						
NOVE				AML	AML		
	comp=N,25250µm,0.6s						
GORR	**Gorreto**	**0.78**	**308**	P	**Pg**	**11 07 05.9**	**-1.1**
GORR				AML	AML		
	comp=E,2340µm,0.8s						
GORR				AML	AML		
	comp=N,2335µm,0.7s						
GORR				AML	AML		
	comp=E,2340µm,0.8s						
GORR				AML	AML		
	comp=N,2335µm,0.7s						
GORR				AML	AML		
	comp=N,2335µm,0.7s						
GORR				AML	AML		
	comp=E,2340µm,0.8s						
BOB	**Bobbio (Coli)**	**0.81**	**321**	*e*P	**Pg**	**11 07 06.5**	**-1.1**
BOB				AML	AML		
	comp=E,2945µm,0.8s						
BOB				AML	AML		
	comp=N,3135µm,0.5s						
BOB				AML	AML		
	comp=E,3225µm,0.9s						
BOB				AML	AML		
	comp=N,3145µm,0.5s						
BOB				AML	AML		
	comp=E,2945µm,0.8s						
BOB				AML	AML		
	comp=N,3135µm,0.5s						
BOB				AML	AML		
	comp=E,3225µm,0.9s						
BOB				AML	AML		
	comp=N,3145µm,0.5s						
BOB				AML	AML		
	comp=N,3135µm,0.5s						
BOB				AML	AML		
	comp=N,3145µm,0.5s						
BOB				AML	AML		
	comp=E,3225µm,0.9s						
BOB				AML	AML		
	comp=E,2945µm,0.8s						
SEI	**Scarperia**	**0.87**	**95**	P	**Pg**	**11 07 08.4**	**-0.2**
SEI				AML	AML		
	comp=E,8975µm,1.3s						
SEI				AML	AML		
	comp=N,14050µm,0.4s						
SEI				AML	AML		
	comp=E,8980µm,1.3s						
SEI				AML	AML		
	comp=N,14050µm,0.4s						
SEI				AML	AML		
	comp=E,8980µm,1.3s						
SEI				AML	AML		
	comp=N,14050µm,0.4s						
RAVA	**Ravarino**	**0.93**	**47**	*e*Pg	**Pb**	**11 07 10.4**	**-0.2**
RAVA				*e*Sg	**Sn**	**11 07 25.1**	**-0.3**
BRIS	**BRISIGHELLA**	**0.97**	**88**	AML	AML		
	comp=N,2265µm,0.6s						
BRIS				AML	AML		
	comp=E,2015µm,0.7s						
BRIS				AML	AML		
	comp=N,2265µm,0.6s						
BRIS				AML	AML		
	comp=E,2015µm,0.7s						
RUFI	**Rufina**	**1.02**	**106**	P	**Pg**	**11 07 10.8**	**-0.6**
RUFI				AML	AML		
	comp=E,1695µm,0.7s						
RUFI				AML	AML		
	comp=N,1885µm,0.7s						
CSNT	**Castellina Chi**	**1.05**	**128**	P	**Pg**	**11 07 12.2**	**0.0**
CSNT				AML	AML		
	comp=E,1585µm,1.5s						
CSNT				AML	AML		
	comp=N,2180µm,0.4s						
CSNT				AML	AML		
	comp=E,1585µm,1.5s						
CSNT				AML	AML		
	comp=N,2180µm,0.4s						
CSNT				AML	AML		
	comp=E,1585µm,1.5s						
CSNT				AML	AML		
	comp=N,2180µm,0.4s						
FIU	**Minerbio Fiu**	**1.08**	**62**	AML	AML		
	comp=E,5845µm,0.8s						
FIU				AML	AML		
	comp=E,5845µm,0.8s						
FIU				AML	AML		
	comp=N,7110µm,0.6s						
FIU				AML	AML		
	comp=N,7110µm,0.6s						
TRIF	**Trifonti**	**1.15**	**152**	P	**Pg**	**11 07 13.8**	**-0.2**
TRIF				AML	AML		
	comp=E,802µm,0.8s						
TRIF				AML	AML		
	comp=N,1007µm,0.8s						
TRIF				AML	AML		
	comp=N,1007µm,0.8s						
TRIF				AML	AML		
	comp=E,802µm,0.8s						
FROS	**Frosini**	**1.17**	**142**	P	**Pg**	**11 07 14.2**	**-0.3**
FROS				AML	AML		
	comp=E,2360µm,1.3s						
FROS				AML	AML		
	comp=N,2820µm,0.4s						
FROS				AML	AML		
	comp=E,2360µm,1.3s						
FROS				AML	AML		
	comp=N,2820µm,0.4s						
GAZZ	**Gazzo Veronese**	**1.19**	**34**	*e*Pg	**Pn**	**11 07 16.0**	**+0.7**
GAZZ				*e*Sg	**Sn**	**11 07 35.0**	**+3.1**
SERM	**Sermide**	**1.20**	**42**	AML	AML		
	comp=E,5885µm,0.8s						
SERM				AML	AML		
	comp=E,2705µm,0.8s						
SERM				AML	AML		
	comp=N,2070µm,0.4s						
SERM				AML	AML		
	comp=N,2870µm,0.5s						
SERM				AML	AML		
	comp=E,5885µm,0.8s						
SERM				AML	AML		
	comp=E,2705µm,0.8s						
SERM				AML	AML		
	comp=N,2070µm,0.4s						
SERM				AML	AML		
	comp=N,2870µm,0.5s						
ASQU	**Asqua**	**1.22**	**105**	P	**Pg**	**11 07 14.1**	**-1.4**
ASQU				AML	AML		
	comp=E,1092µm,0.4s						
ASQU				AML	AML		
	comp=N,940µm,0.7s						
ASQU				AML	AML		
	comp=E,1092µm,0.4s						
ASQU				AML	AML		
	comp=N,940µm,0.7s						
PCP	**Piancastagn**	**1.23**	**290**	P	**Pg**	**11 07 14.3**	**-1.2**
PCP				AML	AML		
	comp=E,474µm,1.3s						
PCP				AML	AML		
	comp=N,548µm,0.7s						
PCP				AML	AML		
	comp=E,474µm,1.3s						
PCP				AML	AML		
	comp=N,548µm,0.7s						
PCP				AML	AML		
	comp=N,548µm,0.7s						
PCP				AML	AML		
	comp=E,474µm,1.3s						
SFI	**Santa Sofia**	**1.24**	**100**	P	**Pg**	**11 07 14.6**	**-1.1**
SFI				AML	AML		
	comp=E,1665µm,1.1s						
SFI				AML	AML		
	comp=N,1435µm,1.5s						
SFI				AML	AML		
	comp=E,1675µm,0.6s						
SFI				AML	AML		
	comp=N,1225µm,1.0s						
SFI				AML	AML		
	comp=N,1225µm,1.0s						
SFI				AML	AML		
	comp=N,1435µm,1.5s						
SFI				AML	AML		
	comp=E,1665µm,1.1s						
SFI				AML	AML		
	comp=E,1675µm,0.6s						
QLNO	**Quiliano**	**1.32**	**279**	AML	AML		
	comp=N,514µm,0.6s						
QLNO				AML	AML		
	comp=E,355µm,0.7s						
QLNO				AML	AML		
	comp=N,514µm,0.6s						
QLNO				AML	AML		
	comp=E,355µm,0.7s						
QLNO				AML	AML		
	comp=N,514µm,0.6s						
QLNO				AML	AML		
	comp=E,355µm,0.7s						
FINB	**Finale Ligure**	**1.32**	**273**	AML	AML		
	comp=N,372µm,0.6s						
FINB				AML	AML		
	comp=E,368µm,1.2s						
FINB				AML	AML		
	comp=E,367µm,1.2s						
FINB				AML	AML		
	comp=N,372µm,0.6s						
FINB				AML	AML		
	comp=N,372µm,0.6s						
FINB				AML	AML		
	comp=E,367µm,1.2s						
CELB	**S.Piero in Cam**	**1.39**	**178**	P	**Pn**	**11 07 16.7**	**-1.4**
CELB				AML	AML		
	comp=E,269µm,0.6s						
CELB				AML	AML		
	comp=N,389µm,0.6s						
CELB				AML	AML		
	comp=E,269µm,0.6s						
CELB				AML	AML		
	comp=N,389µm,0.6s						
CRE	**Caprese Michel**	**1.39**	**111**	P	**Pn**	**11 07 16.5**	**-1.7**
CRE				AML	AML		
	comp=E,910µm,0.4s						
CRE				AML	AML		
	comp=N,1460µm,0.3s						
CRE				AML	AML		
	comp=E,910µm,0.4s						
CRE				AML	AML		
	comp=N,1460µm,0.3s						
CRE				AML	AML		
	comp=N,1460µm,0.3s						
CRE				AML	AML		
	comp=E,910µm,0.4s						
CASP	**Castiglione de**	**1.44**	**159**	P	**Pn**	**11 07 17.6**	**-1.1**
CASP				AML	AML		
	comp=E,424µm,1.1s						
CASP				AML	AML		
	comp=N,495µm,0.4s						
CASP				AML	AML		
	comp=N,495µm,0.4s						
CASP				AML	AML		
	comp=E,424µm,1.1s						
ROTM	**Rocchetta Tana**	**1.48**	**300**	AML	AML		
	comp=N,4655µm,0.5s						
ROTM				AML	AML		
	comp=E,3020µm,1.1s						
ROTM				AML	AML		
	comp=N,4655µm,0.5s						
ROTM				AML	AML		
	comp=E,3020µm,1.1s						
CAFI	**Castiglion Fio**	**1.54**	**121**	P	**Pn**	**11 07 19.5**	**-0.7**
CAFI				AML	AML		
	comp=E,480µm,0.8s						
CAFI				AML	AML		
	comp=N,420µm,0.5s						
CAFI				AML	AML		
	comp=E,480µm,0.8s						
CAFI				AML	AML		
	comp=N,420µm,0.5s						
CAFI				AML	AML		
	comp=N,420µm,0.5s						
CAFI				AML	AML		
	comp=E,480µm,0.8s						
PARC	**Parchiule**	**1.58**	**107**	P	**Pn**	**11 07 19.8**	**-0.9**
PARC				AML	AML		
	comp=E,496µm,0.8s						
PARC				AML	AML		
	comp=N,551µm,0.4s						
PARC				AML	AML		
	comp=E,496µm,0.8s						
PARC				AML	AML		
	comp=N,551µm,0.4s						
ADRI	**Adria, Italy**	**1.61**	**55**	*e*Pg	**Pg**	**11 07 22.8**	**0.0**
ADRI				*e*Sg	**Sg**	**11 07 47.5**	**+3.9**
BALD	**Monte Baldo**	**1.62**	**17**	*e*Pg	**Pn**	**11 07 21.4**	**-0.1**
BALD				*e*Sg	**Sg**	**11 07 44.3**	**+0.2**
TEOL	**Teolo**	**1.63**	**41**	*e*Pg	**Pn**	**11 07 20.9**	**-0.6**
TEOL				*e*Sg	**Sg**	**11 07 45.7**	**+1.3**
TEOL	**Teolo**	**1.63**	**41**	AML	AML		
	comp=E,4765µm,1.1s						
TEOL				AML	AML		
	comp=N,3425µm,0.5s						
TEOL				AML	AML		
	comp=N,3425µm,0.5s						
TEOL				AML	AML		
	comp=E,4765µm,1.1s						
ROVR	**Rover Verones**	**1.65**	**23**	P	**Pn**	**11 07 21.1**	**-0.6**
ROVR				AML	AML		
	comp=E,1865µm,0.6s						
ROVR				AML	AML		
	comp=N,4535µm,0.4s						
ROVR				AML	AML		
	comp=E,814µm,0.5s						
ROVR				AML	AML		
	comp=N,1805µm,0.4s						
ROVR				AML	AML		
	comp=E,814µm,0.5s						
ROVR				AML	AML		
	comp=E,1865µm,0.6s						
ROVR				AML	AML		
	comp=N,4535µm,0.4s						
ROVR				AML	AML		
	comp=N,1805µm,0.4s						
IMI	**Imperia**	**1.65**	**263**	P	**Pn**	**11 07 20.0**	**-1.8**
IMI				AML	AML		
	comp=E,419µm,0.9s						
IMI				AML	AML		
	comp=N,386µm,0.8s						
IMI				AML	AML		
	comp=N,386µm,0.8s						
IMI				AML	AML		
	comp=E,419µm,0.9s						
GBOS	**Grotte di Boss**	**1.67**	**275**	AML	AML		
	comp=E,202µm,0.5s						
GBOS				AML	AML		
	comp=N,230µm,0.8s						
GBOS				AML	AML		
	comp=E,202µm,0.5s						
GBOS				AML	AML		
	comp=N,230µm,0.8s						
MDI	**Monti di Nese**	**1.68**	**349**	P	**Pn**	**11 07 21.6**	**-0.5**
MDI				AML	AML		
	comp=E,1240µm,0.4s						
MDI				AML	AML		
	comp=N,1210µm,0.7s						
MDI				AML	AML		
	comp=N,1210µm,0.7s						
MDI				AML	AML		
	comp=E,1240µm,0.4s						
MAGA	**Magasa**	**1.68**	**11**	P	**Pn**	**11 07 21.3**	**-0.9**
MAGA				AML	AML		
	comp=E,8300µm,0.5s						
MAGA				AML	AML		
	comp=N,3755µm,0.4s						
MAGA				AML	AML		
	comp=N,3755µm,0.4s						
MAGA				AML	AML		
	comp=E,8300µm,0.5s						
MARN	**Marana (Italy)**	**1.68**	**26**	*e*Pg	**Pn**	**11 07 21.6**	**-0.5**
MARN				*e*Sg	**Sb**	**11 07 45.2**	**+0.2**
MGRO	**Montegrosso**	**1.70**	**268**	AML	AML		
	comp=E,696µm,0.6s						
MGRO				AML	AML		
	comp=E,696µm,0.6s						
MGRO				AML	AML		
	comp=N,407µm,0.8s						
MGRO				AML	AML		
	comp=N,407µm,0.8s						
ATMI	**Monte Miggiano**	**1.72**	**117**	AML	AML		
	comp=N,1352µm,0.5s						
ATMI				AML	AML		
	comp=E,938µm,0.7s						
ATMI				AML	AML		
	comp=N,1352µm,0.5s						
ATMI				AML	AML		
	comp=E,938µm,0.7s						
PE3	**Peglio**	**1.74**	**104**	AML	AML		
	comp=N,1085µm,0.6s						
PE3				AML	AML		
	comp=E,1275µm,0.4s						
PE3				AML	AML		
	comp=E,1275µm,0.4s						
PE3				AML	AML		
	comp=N,1085µm,0.6s						
PGF	**Pioggiola**	**1.79**	**209**	*e*Pn	**Pn**	**11 07 22.6**	**-1.2**
	SNR=1.0						
PGF	**Pioggiola**	**1.79**	**209**	*e*P	**Pg**	**11 07 26.9**	**+0.5**
PGF				*e*Sn	**Sn**	**11 07 44.4**	**-2.6**
	comp=N,69nm,0.4s,SNR=1.0						
SACS	**San Casciano d**	**1.81**	**135**	AML	AML		
	comp=N,166µm,0.7s						
SACS				AML	AML		
	comp=E,118µm,1.0s						
SACS				AML	AML		
	comp=N,166µm,0.7s						
SACS				AML	AML		
	comp=E,118µm,1.0s						
NARO	**Abbazia di Nar**	**1.83**	**106**	AML	AML		
	comp=E,170µm,1.3s						
NARO				AML	AML		
	comp=N,312µm,0.7s						
NARO				AML	AML		
	comp=N,312µm,0.7s						
NARO				AML	AML		
	comp=E,170µm,1.3s						
MAON	**Monte Argentar**	**1.84**	**157**	AML	AML		
	comp=E,230µm,1.6s						
MAON				AML	AML		
	comp=E,230µm,1.6s						
MAON				AML	AML		
	comp=N,188µm,0.6s						
MAON				AML	AML		
	comp=N,188µm,0.6s						
ATTE	**AVT- Monte Tez**	**1.85**	**120**	AML	AML		
	comp=N,463µm,0.4s						
ATTE				AML	AML		
	comp=E,412µm,0.5s						
ATTE				AML	AML		
	comp=N,463µm,0.4s						
ATTE				AML	AML		
	comp=E,412µm,0.5s						
MGAB	**Montegabbione**	**1.87**	**130**	AML	AML		
	comp=N,322µm,0.6s						
MGAB				AML	AML		
	comp=E,434µm,0.7s						
MGAB				AML	AML		

comp=N,322µm,0.6s
MGAB AML AML
comp=E,434µm,0.7s
SAOF Saorge 1.88 266 Pn **Pn 11 07 24.0 -0.9**
SAOF Sn **Sn 11 07 40.3 -8.8**
SAOF Saorge 1.88 266 AML AML
comp=N,753µm,0.7s
SAOF AML AML
comp=E,705µm,0.6s
SAOF AML AML
comp=N,753µm,0.7s
SAOF AML AML
comp=E,705µm,0.6s
ATFO Monte Foce - G 1.91 113 AML AML
comp=N,398µm,1.4s
ATFO AML AML
comp=E,588µm,0.7s
ATFO AML AML
comp=N,398µm,1.4s
ATFO AML AML
comp=E,588µm,0.7s
MABI Malga Bissina 1.94 7 P **Pn 11 07 25.1 -0.8**
MABI AML AML
comp=E,575µm,0.7s
MABI AML AML
comp=N,411µm,0.5s
MABI AML AML
comp=E,575µm,0.7s
MABI AML AML
comp=N,411µm,0.5s
SBF Sospel 1.98 263 *e*Pn **Pn 11 07 25.0 -1.4**
SNR=1.0
SBF *e*Sn **Sn 11 07 50.8 -0.9**
comp=N,449nm,0.7s,SNR=1.0
ESCA l'Escarene 2.03 262 Pg **Pn 11 07 26.2 -0.8**
CGRP Cima Grappa 2.10 33 AML AML
comp=N,900µm,0.7s
CGRP AML AML
comp=E,1146µm,0.5s
CGRP AML AML
comp=E,1146µm,0.5s
CGRP AML AML
comp=N,900µm,0.7s
CTI Castel Tesino 2.19 28 P **Pn 11 07 28.5 -0.7**
CTI AML AML
comp=E,826µm,1.6s
CTI AML AML
comp=N,1155µm,1.4s
CTI AML AML
comp=E,826µm,1.6s
CTI AML AML
comp=N,1155µm,1.4s
TRAV Traversella 2.20 310 P **Pn 11 07 29.0 -0.3**
TRAV AML AML
comp=E,382µm,0.4s
TRAV AML AML
comp=N,368µm,0.5s
TRAV AML AML
comp=E,382µm,0.4s
TRAV AML AML
comp=N,368µm,0.5s
RSP Reno Superiore 2.30 297 AML AML
comp=E,153µm,0.8s
RSP AML AML
comp=N,208µm,1.0s
RSP AML AML
comp=N,208µm,1.0s
RSP AML AML
comp=E,153µm,0.8s
CIRO Champorcher 2.36 309 P **Pn 11 07 30.7 -1.0**
CIRO AML AML
comp=E,288µm,0.8s
CIRO AML AML
comp=N,274µm,0.8s
CIRO AML AML
comp=N,274µm,0.8s
CIRO AML AML
comp=E,288µm,0.8s
CALF Calern 2.37 262 Pg **Pn 11 07 30.8 -0.9**
TUE Stuetta 2.41 347 AML AML
comp=N,408µm,0.4s
TUE AML AML
comp=E,240µm,0.8s
TUE AML AML
comp=N,340µm,0.4s
TUE AML AML
comp=E,323µm,0.8s
TUE AML AML
comp=E,240µm,0.8s
TUE AML AML
comp=N,408µm,0.4s
TUE AML AML
comp=N,340µm,0.4s
TUE AML AML
comp=E,323µm,0.8s
SURF Saint Ours 2.43 279 Pg **Pn 11 07 31.9 -0.6**
KOSI Kohlern 2.48 20 AML AML
comp=N,904µm,0.6s
KOSI AML AML
comp=E,606µm,0.7s
KOSI AML AML
comp=N,904µm,0.6s
KOSI AML AML
comp=E,606µm,0.7s
FUORN Ofenpass-Fuorn 2.49 2 AML AML
comp=N,262µm,0.6s
FUORN AML AML
comp=E,280µm,0.6s
FUORN AML AML
comp=E,280µm,0.6s
FUORN AML AML
comp=N,262µm,0.6s
MBDF Montbardon 2.50 285 *e*Pn **Pn 11 07 32.4 -1.1**
SNR=1.0
POLC Polcenigo 2.52 40 AML AML
comp=E,858µm,0.5s
POLC AML AML
comp=N,1008µm,0.5s
POLC AML AML
comp=E,858µm,0.5s
POLC AML AML
comp=N,1008µm,0.5s
FUSIO Fusio 2.55 336 AML AML
comp=E,402µm,0.6s
FUSIO AML AML
comp=E,402µm,0.6s
FUSIO AML AML
comp=N,234µm,1.0s
FUSIO AML AML
comp=N,234µm,1.0s
FRF La Foret Royal 2.60 259 *e*Pn **Pn 11 07 33.4 -1.4**
SNR=1.0
FRF *e*Sn **Sn 11 08 04.3 -2.6**
comp=N,94nm,0.6s,SNR=1.0
DAVOX Davos/Dischmat 2.66 356 Pn **Pn 11 07 36.8 +1.1**
comp=N,10nm,0.3s,baz=164,slow=11,SNR=72
DAVOX Sn **Sn 11 08 06.5 -2.0**
comp=N,14nm,0.3s,baz=151,slow=20,SNR=4.9
DAVOX LR LR 11 09 05.1
comp=N,122nm,20.8s,baz=242,slow=51
DAVOX Davos/Dischmat 2.66 356 AML AML
comp=N,351µm,0.5s
DAVOX AML AML
comp=E,232µm,0.4s
DAVOX AML AML
comp=E,232µm,0.4s
DAVOX AML AML
comp=N,351µm,0.5s
ABSI Aberstueckl 2.72 17 AML AML
comp=E,1320µm,0.7s
ABSI AML AML
comp=N,1460µm,0.7s
ABSI AML AML
comp=E,1320µm,0.7s
ABSI AML AML
comp=N,1460µm,0.7s
REMY Saint-Rhmy-en 2.73 310 AML AML
comp=E,315µm,0.7s
REMY AML AML
comp=N,549µm,0.7s
REMY AML AML
comp=N,549µm,0.7s
REMY AML AML
comp=E,315µm,0.7s
LMR La Mourre 2.76 254 *e*Pn **Pn 11 07 35.7 -1.3**
SNR=1.0
LMR *e*Sn **Sn 11 08 07.0 -3.8**
comp=E,34nm,0.4s,SNR=1.0

LPG La Plagne 2.78 301 *e*Pn **Pn 11 07 38.4 +0.9**
SNR=1.0
LPG *e*Sn **Sn 11 08 10.6 -1.1**
STAL STALIGIAL 2.79 39 AML AML
comp=N,418µm,1.5s
STAL AML AML
comp=E,595µm,0.8s
STAL AML AML
comp=N,476µm,0.7s
STAL AML AML
comp=E,712µm,0.4s
STAL AML AML
comp=E,712µm,0.4s
STAL AML AML
comp=N,418µm,1.5s
STAL AML AML
comp=N,476µm,0.7s
STAL AML AML
comp=E,595µm,0.8s
LPL La Plagne 2.80 301 *e*Pn **Pn 11 07 38.4 +0.6**
SNR=1.0
LPL *e*Sn **Sn 11 08 10.8 -1.3**
comp=E,82nm,0.5s
FETA Feichten 2.92 8 *e*Pn **Pn 11 07 40.7 +1.4**
comp=E,3.0nm,0.2s,SNR=12
FETA Sn **Sn 11 08 17.1 +2.3**
comp=E,37nm,0.5s
ROSI Rosskopf 2.93 17 AML AML
comp=E,718µm,0.7s
ROSI AML AML
comp=N,1016µm,0.7s
ROSI AML AML
comp=N,1016µm,0.7s
ROSI AML AML
comp=E,718µm,0.7s
AQU L'Aquila 2.96 126 *e*Pn **Pb 11 07 42.6 -2.7**
PLONS Plons/SG 2.97 350 AML AML
comp=N,148µm,0.5s
PLONS AML AML
comp=E,234µm,1.0s
PLONS AML AML
comp=N,148µm,0.5s
PLONS AML AML
comp=E,234µm,1.0s
BNALP Bannalp 3.00 337 AML AML
comp=E,184µm,0.5s
BNALP AML AML
comp=N,191µm,1.3s
BNALP AML AML
comp=N,191µm,1.3s
BNALP AML AML
comp=E,184µm,0.5s
GEPF Gemona 3.00 43 AML AML
comp=E,201µm,0.6s
GEPF AML AML
comp=E,201µm,0.6s
GEPF AML AML
comp=N,324µm,0.7s
GEPF AML AML
comp=N,324µm,0.7s
TRI Trieste 3.01 57 AML AML
comp=N,139µm,0.4s
TRI AML AML
comp=E,194µm,1.5s
TRI AML AML
comp=E,194µm,1.5s
TRI AML AML
comp=N,139µm,0.4s
SABO M.te Sabotino 3.06 52 AML AML
comp=E,522µm,0.4s
SABO AML AML
comp=E,522µm,0.4s
SABO AML AML
comp=N,628µm,0.5s
SABO AML AML
comp=N,628µm,0.5s
SKDS Skadanscina 3.08 61 *i* Pn **Pn 11 07 39.9 -1.6**
SKDS *i* 11 07 41.8
SKDS *i* Sn **Sn 11 08 14.6 -4.1**
comp=Z,42nm,0.2s
ABTA Abfaltersbach 3.10 32 *i* Pn **Pn 11 07 42.1 +0.5**
comp=Z,9.4nm,0.4s,SNR=9.5
ABTA *e*Sn **Sn 11 08 20.4 +1.3**
comp=Z,28nm,0.3s
RISI Rein 3.12 25 AML AML
comp=N,1165µm,0.5s
RISI AML AML
comp=E,902µm,0.5s
RISI AML AML
comp=N,1165µm,0.5s
RISI AML AML
comp=E,902µm,0.5s
ORIF Oris-en-Rattie 3.16 286 *e*P **Pn 11 07 43.9 +1.4**
SNR=1.0
DAVA Damuels 3.16 357 *i* Pn **Pn 11 07 43.9 +1.3**
comp=E,15nm,0.3s,SNR=34
DAVA *e*Sn **Sn 11 08 22.6 +1.8**
comp=E,292nm,0.6s
SQTA Sankt Quirin 3.17 13 *i* Pn **Pn 11 07 44.0 +1.3**
comp=E,35nm,0.2s,SNR=37
SQTA *e*Sn **Sn 11 08 24.1 +3.0**
comp=E,103nm,0.5s
MOTA Moosalm 3.28 11 *i* Pn **Pn 11 07 45.8 +1.6**
comp=E,10.0nm,0.2s,SNR=58
MOTA *e*Sn **Sn 11 08 24.3 +0.6**
comp=E,41nm,0.6s
WTTA Wattenberg 3.30 18 *i* Pn **Pn 11 07 45.5 +1.0**
comp=E,24nm,0.3s,SNR=34
WTTA *e*Sn **Sn 11 08 27.2 +2.9**
comp=E,90nm,0.4s
WTTA Wattenberg 3.30 18 AML AML
comp=E,440µm,0.6s
WTTA AML AML
comp=N,396µm,0.6s
WTTA AML AML
comp=E,440µm,0.6s
WTTA AML AML
comp=N,396µm,0.6s
RIY Rijeka 3.30 67 *e*Pn **Pn 11 07 45.4 +1.0**
RIY *e*Sn **Sn 11 08 24.4 +0.3**
RIY Rijeka 3.30 67 *e*Pn **Pn 11 07 44.7 +0.3**
SMRF Simiane la Rot 3.31 269 *e*Pn **Pn 11 07 43.4 -1.1**
SNR=1.0
SMRF *e*Sn **Sn 11 08 22.2 -2.1**
comp=N,48nm,0.6s,SNR=1.0
WATA Walderalm 3.35 17 *i* Pn **Pn 11 07 46.5 +1.3**
comp=N,39nm,0.4s,SNR=33
WATA *e*Sn **Sn 11 08 28.3 +2.8**
comp=N,49nm,0.5s
RETA Reutte 3.38 7 *i* Pn **Pn 11 07 47.1 +1.5**
comp=N,8.4nm,0.3s
RETA *i* Sn **Sn 11 08 27.0 +0.8**
comp=N,59nm,0.5s
NVLJ Novalja 3.41 81 *e*Pn **Pn 11 07 46.3 +0.5**
CEY Cerknica 3.43 61 *e*Pn **Pn 11 07 47.4 +1.2**
CEY *e*Sn **Sn 11 08 27.0 -0.3**
CEY Cerknica 3.43 61 *e*Pn **Pn 11 07 44.6 -1.6**
MYKA Terra Mystica 3.50 43 *i* Pn **Pn 11 07 48.1 +0.9**
comp=N,2.6nm,0.2s
MYKA *e*Sn **Sn 11 08 30.0 +0.9**
comp=N,35nm,0.5s
LJU Ljubljana 3.64 57 *e*Pn **Pn 11 07 50.1 +1.1**
LJU *e*Sn **Sn 11 08 31.9 -0.4**
LJU Ljubljana 3.64 57 *e*Pn **Pn 11 07 48.4 -0.6**
LJU Ljubljana 3.64 57 AML AML
comp=E,642µm,0.3s
LJU AML AML
comp=N,708µm,0.6s
LJU AML AML
comp=E,642µm,0.3s
LJU AML AML
comp=N,708µm,0.6s
KBA Koelnbreinsper 3.70 36 *e*Pn **Pn 11 07 51.1 +1.1**
comp=N,5.8nm,0.3s
KBA *e*Sn **Sn 11 08 34.0 -0.1**
comp=N,22nm,0.4s
OG35 Corcelles 3.77 302 Pg **Pn 11 07 52.2 +1.3**
CABF La Chapelle 3.79 312 *e*Pn **Pn 11 07 52.5 +1.3**
SNR=1.0
CABF *e*Sn **Sn 11 08 34.6 -1.7**
comp=N,37nm,0.6s,SNR=1.0
BOJS Bojanci 3.87 67 AML AML
comp=E,78µm,0.4s
BOJS AML AML
comp=N,74µm,1.1s
BOJS AML AML
comp=E,78µm,0.4s
BOJS AML AML

comp=N,74µm,1.1s
OBKA Obir 3.90 51 *e*Pn **Pn 11 07 52.8 +0.1**
comp=N,9.7nm,0.3s
OBKA *e*Sn **Sn 11 08 37.9 -1.1**
comp=N,57nm,0.5s
CHMF Charmoille 3.97 323 Pg **Pn 11 07 55.0 +1.4**
VIVF Saint-Julien-l 3.99 282 *e*P **Pn 11 07 57.2 +3.3**
SNR=1.0
VIVF *e*Sn **Sn 11 08 38.1 -3.0**
SNR=1.0
UDBI Udbina 4.04 82 *e*Pn **Pn 11 07 55.8 +1.2**
CRES Cresnjev 4.12 64 *e*Pn **Pn 11 07 55.5 -0.2**
SOKA Soboth 4.27 52 *i* Pn **Pn 11 07 57.3 -0.6**
comp=N,9.1nm,0.4s,SNR=7.4
SOKA *i* Sn **Sn 11 08 47.1 -1.1**
comp=N,10nm,0.4s
HINF Hinteralfeld 4.35 329 *e*Pn **Pn 11 07 58.0 -0.8**
SNR=1.0
HINF *e*Sn **Sn 11 08 46.8 -3.1**
comp=N,59nm,0.4s
LASF Ste Croix 4.54 271 *e*Pn **Pn 11 08 00.8 -0.6**
SNR=1.0
LASF *e*Sn **Sn 11 08 51.7 -2.9**
comp=N,17nm,0.6s,SNR=1.0
MOA Molln 4.69 36 *i* Pn **Pn 11 08 04.0 +0.5**
comp=N,9.2nm,0.3s,SNR=10
MOA *e*Sn **Sn 11 08 57.9 -0.4**
comp=N,24nm,0.5s
HAU Haudompre 4.70 327 *e*Pn **Pn 11 08 03.5 -0.1**
SNR=1.0
HAU *e*Sn **Sn 11 08 55.4 -3.0**
comp=N,70nm,0.3s
CDF Champ du Feu 4.72 336 *e*P **Pn 11 08 03.5 -0.5**
SNR=1.0
CDF *e*Sn **Sn 11 08 56.1 -3.2**
comp=N,39nm,0.3s
ARSA Arzberg 4.88 48 *i* Pn **Pn 11 08 05.3 -0.8**
comp=N,19nm,0.3s,SNR=15
ARSA *e*Sn **Sn 11 08 59.7 -3.3**
comp=N,6.2nm,0.4s
BLY Banja Luka 5.07 81 *e*Pn **Pn 11 08 10.0 +1.3**
BLY Banja Luka 5.07 81 *e*Pn **Pn 11 08 06.7 -2.0**
SMF Signal de Mont 5.11 302 *e*P **Pn 11 08 10.6 +1.3**
SNR=1.0
SMF *e*Sn **Sn 11 09 05.2 -3.5**
comp=N,49nm,0.7s,SNR=1.0
GERES GERESS Array B 5.31 26 Pn **Pn 11 08 11.1 -1.0**
comp=N,2.3nm,0.3s,baz=202,slow=14,SNR=29
GERES Sn **Sn 11 09 09.8 -3.9**
comp=N,4.6nm,0.3s,baz=203,slow=23,SNR=11
PAGF Fort de Pagny 5.38 327 *e*Sn **Sn 11 09 12.0 -3.4**
comp=N,42nm,0.6s
SFTF Sexfontaines 5.41 321 *e*Sn **Sn 11 09 12.9 -3.1**
comp=N,45nm,0.8s
LOR Lormes 5.41 308 *e*P **Pn 11 08 15.3 +1.9**
SNR=1.0
LOR *e*Sn **Sn 11 09 12.4 -3.7**
comp=N,24nm,0.4s
AVF Avril sur Loir 5.48 301 *e*P **Pn 11 08 15.7 +1.4**
SNR=1.0
AVF *e*Sn **Sn 11 09 14.5 -3.1**
comp=N,24nm,0.8s
CONA Conrad Observa 5.49 44 *i* Pn **Pn 11 08 14.5 -0.1**
comp=N,3.6nm,0.3s,SNR=8.4
CONA *i* Sn **Sn 11 09 17.7 -0.4**
comp=N,17nm,0.4s
SSF Saint Saulge 5.51 304 *e*P **Pn 11 08 15.5 +0.7**
SNR=1.0
SSF *e*Sn **Sn 11 09 15.1 -3.4**
comp=N,31nm,0.8s
KHC Kasperske Hory 5.53 24 *e*PN **Pn 11 08 14.0 -1.0**
KHC *e*SN **Sn 11 09 13.7 -5.2**
KHC *e*SG **Sg 11 09 46.8 -2.6**
comp=N,20nm,0.7s
MEZF Maizieres J'vi 5.62 323 *e*P **Pn 11 08 17.9 +1.6**
SNR=1.0
MEZF *e*Sn **Sn 11 09 17.6 -3.6**
comp=N,24nm,0.6s,SNR=1.0
STON Ston 5.63 100 *e*Pn **Pn 11 08 17.1 +0.8**
STON *e*Sn **Sn 11 09 19.8 -1.5**
STON Ston 5.63 100 *e*Pn **Pn 11 08 16.4 +0.1**
STON Ston 5.63 100 *e*Pn **Pn 11 08 15.1 -1.2**
BGF Bois d'Agland 5.70 298 *e*P **Pn 11 08 19.4 +2.1**
SNR=1.0
BGF *e*Sn **Sn 11 09 19.9 -3.2**
comp=N,20nm,0.4s,SNR=1.0
MTLF Montolieu 5.81 265 *e*Pn **Pn 11 08 18.6 -0.2**
SNR=1.0
MTLF *e*Sn **Sn 11 09 22.1 -3.8**
comp=N,18nm,0.8s
CAF Calviac 5.84 281 *e*P **Pn 11 08 22.6 +3.3**
SNR=1.0
CAF *e*Sn **Sn 11 09 22.3 -4.4**
comp=N,5.7nm,0.6s,SNR=1.0
TCF Toulx Ste Croi 6.02 294 *e*P **Pn 11 08 24.3 +2.6**
SNR=1.0
TCF *e*Sn **Sn 11 09 27.6 -3.4**
comp=N,11nm,0.5s
TREB Trebinje 6.13 101 *e*Pn **Pn 11 08 23.9 +0.7**
TREB *e*Sn **Sn 11 09 31.5 -2.3**
TREB Trebinje 6.13 101 *e*Pn **Pn 11 08 23.0 -0.2**
BRY Bratogost 6.21 99 *e*Pn **Pn 11 08 25.0 +0.4**
HAPS Han Pijesak,Bl 6.33 87 *e*Pn **Pn 11 08 25.7 -0.4**
HAPS *e*Sn **Sn 11 09 37.2 -1.6**
HAPS Han Pijesak,Bl 6.33 87 *e*Pn **Pn 11 08 25.1 -1.0**
MORH Mrgy, Hungar 6.35 68 *e*Pn **Pn 11 08 23.6 -2.6**
UPM Unac-Piva 6.41 95 *e*Pn **Pn 11 08 28.4 +1.1**
MODS Modra-Piesok 6.51 47 *e*PN **Pn 11 08 27.9 -0.5**
MODS *e*SN **Sn 11 09 38.3 -4.7**
KRUC Moravsky 6.54 39 *e*PN **Pn 11 08 28.3 -0.5**
KRUC *e*SN **Sn 11 09 40.1 -3.7**
PRU Pruhonice 6.58 26 *e*PN **Pn 11 08 29.2 -0.2**
PRU *e*SN **Sn 11 09 39.4 -5.3**
GOPC GO Pecny, Ondr 6.59 27 *e*PN **Pn 11 08 29.1 -0.5**
GOPC *e*SN **Sn 11 09 40.0 -5.1**
BBLS Lazići 6.67 89 *e*Pn **Pn 11 08 31.2 +0.4**
BBLS *e*Sn **Sn 11 09 44.4 -2.9**
BBLS Lazići 6.67 89 *e*Pn **Pn 11 08 30.4 -0.4**
VRAC Vranov 6.81 38 Pn **Pn 11 08 32.7 +0.1**
comp=N,0.5nm,0.3s,baz=225,slow=12,SNR=2.7
VRAC Sn **Sn 11 09 44.9 -5.6**
comp=N,0.7nm,0.3s,baz=275,slow=16,SNR=2.5
VRAC LR LR 11 11 38.5
comp=N,34nm,21.5s,baz=280,slow=43
DRME Dracevica, Mon 6.88 103 *e*Pn **Pn 11 08 32.8 -0.7**
FRGS Fruska Gora 6.96 78 *e*Pn **Pn 11 08 34.3 -0.4**
JAVC Velka Javorina 7.01 45 *e*PN **Pn 11 08 36.5 +1.1**
DIVS Divibare 7.08 87 *e*Pn **Pn 11 08 36.3 0.0**
DIVS Divibare 7.08 87 *e*Pn Pn 11 08 30.9 -5.4
SJES Sjenica 7.17 94 *e*Pn **Pn 11 08 37.5 -0.1**
SJES *e*Sn **Sn 11 09 55.6 -3.8**
BRG Berggiesshubel 7.21 19 PN **Pn 11 08 38.9 +0.8**
BRG SN Sn 11 09 49.8 -11
BRG SG **Sg 11 10 42.4 -1.0**
comp=N,7.2nm,0.8s
IVAS Ivanjica 7.25 91 *e*Pn **Pn 11 08 38.3 -0.3**
IVAS *e*Sn **Sn 11 09 58.1 -3.2**
VYHS Vyhne 7.42 51 *e*PN **Pn 11 08 41.0 0.0**
CLL Collm 7.43 14 *e* **Sn 11 10 03.0 -2.7**
CLL *e* **Sg 11 10 48.0 -2.4**
CLL *e*Sg **Sg 11 10 54.0 +3.6**
comp=Z,16nm,1.0s
DPC Dobruska-Polom 7.50 32 *e*PN **Pn 11 08 41.0 -1.1**
GRUS Gruza 7.62 88 *e*Pn **Pn 11 08 44.2 +0.6**
MLR Muntele Rosu 11.30 78 Pn Pn 11 09 42.3 +8.1
comp=Z,0.1nm,0.3s,baz=228,slow=11,SNR=4.7
EKA Eskdalemuir Ar 14.11 327 Pn **Pn 11 10 14.8 +2.5**
baz=98,slow=24,SNR=3.3
NOA NORSAR Array B 16.95 2 LR LR 11 18 09.7
comp=Z,23nm,16.6s,baz=245,slow=40
FINES FINESS Array B 19.73 23 P **P 11 11 21.6 -0.7**
comp=Z,0.1nm,0.3s,baz=238,slow=15,SNR=6.6
KIRV Kirov 27.98 45 LR LR 11 24 25.5
comp=Z,28nm,18.8s,baz=167,slow=38
TORD Torodi Ar. Bea 31.72 196 P **P 11 13 19.1 +2.2**
comp=Z,6.8nm,0.3s,baz=3.4,slow=8.0,SNR=2.9
ARU Arti 32.59 50 P **P 11 13 23.0 -1.1**
comp=Z,0.7nm,0.4s,baz=294,slow=17,SNR=3.4
MKAR Makanchi Array 49.01 60 P **P 11 15 39.5 -0.1**
comp=Z,0.5nm,0.6s,baz=284,slow=5.8,SNR=4.6
SONM Songino Array 62.61 49 P **P 11 17 18.8 +1.5**
comp=Z,0.6nm,0.7s,baz=293,slow=7.7,SNR=3.1
YKA Yellowknife Ar 64.92 335 P **P 11 17 34.2 +2.2**
comp=Z,0.2nm,0.7s,baz=45,slow=6.1,SNR=4.0
CPUP Villa Florida 93.37 236 LR LR 11 59 29.8
comp=Z,104nm,18.5s,baz=186,slow=34

NNC 29 11:10:41.0±4.1, 54°28′N×86°26′E, h0km, mb3.7, mpv2.4, 4C-3D, Error ellipse: s-maj=52.9km s-min=23.2km az=169.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.91**	**249**	⇑P	Pg	11 10 58.3	-0.1
	0.3nm,0.3s						
ZAA0				⇑S	Sb	11 11 11.1	-1.0
	1.3nm,0.3s						
KURBB	**Kurchatov Arra**	**5.97**	**235**	⇓Pn	Pn	11 12 11.4	+0.9
	0.8nm,0.2s						
KURBB				⇑Lg	Lg	11 13 51.9	
	4.0nm,0.6s						
MK31	**Makanchi Array**	**7.90**	**200**	⇑Pn	Pn	11 12 40.1	+3.0
	baz=27,slow=14,SNR=8.1						
MK31				⇓Sn	Sn	11 14 07.1	0.0
	0.4nm,0.6s						
MK31				⇓Lg	Lg	11 14 51.1	
	1.1nm,0.7s,baz=0.0,slow=0.1,SNR=3.7						

*ISCJB **29** 11:35:37.0±0.3, 55°47′S±0°05′×26°7′W±0°1, h35km, mb4.7/30, MS3.8/8, Error ellipse: s-maj=9.5km s-min=6.1km az=138.5*
*IDC **29** 11:35:36.7±4.2, 55°54′S×26°24′W, h16km±25km, mb4.5/12, mb1 4.4/13, mb1mx4.3/20, mbtmp4.5/13, ML4.2/1, MS3.7/8, Ms1 3.7/8, ms1mx3.5/19, Error ellipse: s-maj=16.8km s-min=11.4km az=69.0*
*NEIC **29** 11:35:39.0±1.4, 55°46′S×26°73′W, h36km±5km, mb4.9/29, Error ellipse: s-maj=16.8km s-min=14.2km az=201.0*

ISC 29 11:35:39.0±0.4, 55°55′S±0°07′×26°82′W±0°07′, h35km, n86, σ1§39/91, mb4.8/28, MS3.7/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.72**	**279**	*e*Pn	**Pn**	**11 37 00.0**	**-1.2**
HOPE				*e*Sn	**Sn**	**11 38 02.5**	**-3.1**
VNA1	**Neumayer--Stat**	**17.19**	**159**	P	**P**	**11 39 37.0**	**-0.2**
VNA3	**Neumayer Olymp**	**17.40**	**161**	P	**Pn**	**11 39 38.9**	**+0.3**
EFI	**East Falkland**	**18.84**	**269**	*e*P	**P**	**11 39 55.1**	**-0.5**
	178nm,1.6s						
SNAA	**Sanae**	**19.12**	**157**	P	**P**	**11 39 59.0**	**+0.4**
SNAA	**Sanae**	**19.12**	**157**	P	**P**	**11 39 57.4**	**-1.2**
	0.8nm,0.3s,baz=289,slow=11,SNR=32						
SNAA				S	**Sn**	**11 43 29.2**	**-3.3**
	0.0nm,0.3s,baz=310,slow=18,SNR=2.0						
SNAA				LR	LR	11 46 09.2	
	comp=Z,201nm,18.8s,baz=327,slow=33						
SNAA				ScP	**ScP**	**11 47 57.4**	**+3.4**
	0.0nm,0.3s,baz=353,slow=4.4,SNR=4.2						
SNAA	**Sanae**	**19.12**	**157**	*e*P	**P**	**11 39 58.4**	**-0.2**
	9.2nm,0.8s						
PMSA	**Palmer Station**	**20.39**	**228**	P	Pn	11 40 15.8	+1.2
	33nm,0.7s,baz=44,slow=5.1,SNR=8.0						
PMSA				LR	LR	11 46 37.6	
	comp=Z,235nm,19.1s,baz=68,slow=32						
PMSA	**Palmer Station**	**20.39**	**228**	*e*P	**P**	**11 40 13.6**	**+1.2**
	74nm,1.0s						
USHA	**Ushuaia**	**23.52**	**254**	P	**P**	**11 40 49.2**	**+3.8**
	6.8nm,0.8s,baz=225,slow=4.5,SNR=4.5						
USHA				LR	LR	11 48 08.1	
	comp=Z,311nm,19.0s,baz=110,slow=32						
GO10	**Punta Arenas**	**25.56**	**257**	*e*P	**P**	**11 41 05.0**	**+0.8**
	103nm,1.4s						
GO09	**Cerro Castillo**	**27.08**	**260**	*e*P	**P**	**11 41 16.2**	**-1.8**
	37nm,1.4s						
TRQA	**Tornquist**	**29.32**	**292**	*e*P	**P**	**11 41 38.2**	**+0.1**
	15nm,1.0s						
PLCA	**Paso Flores**	**32.12**	**279**	LR	LR	11 55 03.7	
	comp=Z,69nm,18.2s,baz=162,slow=36						
QSPA	**South Pole Qui**	**34.71**	**180**	*e*P	**P**	**11 42 24.6**	**-0.6**
	13nm,0.9s						
CPUP	**Villa Florida**	**36.64**	**310**	P	**P**	**11 42 44.1**	**+2.3**
	5.7nm,1.1s,baz=149,slow=9.9,SNR=3.0						
CPUP	**Villa Florida**	**36.64**	**310**	*e*P	**P**	**11 42 42.1**	**+0.2**
PEL	**Peldehue**	**37.67**	**288**	*e*P	**P**	**11 42 50.5**	**-0.1**
	22nm,1.1s						
GO04	**Tololo Observa**	**40.04**	**291**	*e*P	**P**	**11 43 10.6**	**-0.2**
	38nm,1.3s						
SUR	**Sutherland**	**40.31**	**75**	P	**P**	**11 43 10.7**	**-2.2**
	3.0nm,0.8s,baz=1.4,slow=22,SNR=3.4						
SUR	**Sutherland**	**40.31**	**75**	*e*P	**P**	**11 43 12.2**	**-0.7**
	28nm,1.4s						
MAW	**Mawson**	**40.43**	**144**	P	**P**	**11 43 13.1**	**-0.1**
	3.8nm,0.7s,baz=228,slow=7.7,SNR=18						
MAW	**Mawson**	**40.43**	**144**	*e*P	**P**	**11 43 12.6**	**-0.7**
	2.9nm,1.4s						
LCO	**Las Campanas**	**40.90**	**292**	*e*P	**P**	**11 43 18.4**	**+0.4**
	14nm,0.8s						
GO02	**Mina Guanaco**	**43.45**	**297**	*e*P	**P**	**11 43 39.2**	**+0.4**
	62nm,1.4s						
LVC	**Limon Verde**	**45.23**	**299**	*e*P	**P**	**11 43 53.3**	**+0.2**
	31nm,1.4s						
BOSA	**Boshof**	**45.65**	**76**	P	**P**	**11 43 53.6**	**-2.4**
	4.2nm,0.8s,baz=196,slow=8.6,SNR=8.1						
BOSA				LR	LR	12 00 02.5	
	comp=Z,202nm,19.2s,baz=202,slow=32						
BOSA	**Boshof**	**45.65**	**76**	*e*P	**P**	**11 43 54.6**	**-1.5**
	8.2nm,1.1s						
SBA	**Scott Base**	**46.60**	**184**	*e*P	**P**	**11 44 03.5**	**+0.8**
	7.5nm,0.9s						
PB01	**IPOC Station P**	**46.84**	**300**	*e*P	**P**	**11 44 06.3**	**+0.9**
	47nm,1.3s						
VNDA	**Vanda**	**47.09**	**183**	P	**P**	**11 44 06.5**	**-0.1**
	11nm,0.8s,baz=189,slow=6.2,SNR=29						
VNDA	**Vanda**	**47.09**	**183**	*e*P	**P**	**11 44 07.2**	**+0.6**
	12nm,0.8s						
GO01	**Chusmiza**	**47.86**	**301**	*e*P	**P**	**11 44 13.6**	**-0.3**
	17nm,0.9s						
PB11	**IPOC Station P**	**48.00**	**301**	*e*P	**P**	**11 44 15.3**	**+0.7**
	52nm,1.1s						
MNMC	**Minye Minye**	**48.51**	**301**	*e*P	**P**	**11 44 18.9**	**+0.3**
	24nm,0.8s						
LBTB	**Lobatse**	**48.66**	**73**	*e*P	**P**	**11 44 18.3**	**-1.3**
	11nm,1.3s						
LPAZ	**La Paz**	**50.26**	**304**	P	**P**	**11 44 33.1**	**+0.8**
	4.7nm,0.8s,baz=161,slow=5.1,SNR=12						
LPAZ				LR	LR	12 07 22.7	
	comp=Z,28nm,19.5s,baz=162,slow=38						
LPAZ	**La Paz**	**50.26**	**304**	*e*P	**P**	**11 44 32.6**	**+0.2**
	19nm,0.9s						
DBIC	**Dimbokro**	**64.62**	**24**	P	**P**	**11 46 11.9**	**-1.0**
	3.6nm,0.8s,baz=154,slow=5.0,SNR=2.7						
DBIC				LR	LR	12 07 20.8	
	comp=Z,79nm,20.8s,baz=133,slow=30						
DBIC	**Dimbokro**	**64.62**	**24**	*e*P	**P**	**11 46 11.8**	**-1.0**
	11nm,1.1s						
TOA0	**Torodi Ar. Sit**	**72.51**	**29**	*e*P	**P**	**11 47 01.5**	**-0.5**
	6.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.51**	**29**	P	**P**	**11 47 00.8**	**-1.2**
	5.4nm,0.8s,baz=220,slow=3.2,SNR=24						
TORD				LR	LR	12 12 04.7	
	comp=Z,41nm,20.5s,baz=350,slow=30						
TAM	**Tamanrasset**	**82.75**	**30**	*e*P	**P**	**11 47 57.7**	**-1.4**
	5.5nm,1.4s						
BKZ	**Black Stump Fm**	**83.58**	**198**	*e*P	**P**	**11 48 04.0**	**+0.6**
	23nm,1.3s						
STKA	**Stephens Creek**	**92.36**	**170**	P	**P**	**11 48 47.8**	**+2.1**
	2.2nm,0.7s,baz=169,slow=6.5,SNR=5.9						
STKA	**Stephens Creek**	**92.36**	**170**	*e*P	**P**	**11 48 46.5**	**+0.9**
	0.5nm,0.8s						
ASAR	**Alice Springs**	**99.41**	**162**	P	**Pdif**	**11 49 16.9**	**-1.0**
	0.9nm,0.8s,baz=183,slow=4.0,SNR=10						
ASAR				PP	**PP**	**11 53 17.7**	**-2.5**
	0.5nm,0.9s,baz=209,slow=7.4,SNR=3.4						
AS31	**Alice Springs**	**99.41**	**162**	*e*P	**Pdif**	**11 49 17.7**	**-0.1**
	1.6nm,1.5s						
WRA	**Warramunga Arr**	**103.12**	**162**	Pdiff	**Pdif**	**11 49 37.4**	**+3.0**
	1.0nm,0.7s,baz=202,slow=4.2,SNR=3.0						
PDAR	**Pinedale Array**	**120.25**	**302**	PKP	**PKiKP**	**11 54 26.5**	**+0.8**
	0.2nm,0.3s,baz=63,slow=4.2,SNR=2.9						
NV01	**Mina Array Sit**	**121.39**	**293**	*e*PKPdf	**PKiKP**	**11 54 29.0**	**+0.9**
NVAR	**Mina Array Bea**	**121.39**	**293**	PKP	**PKiKP**	**11 54 29.0**	**+0.9**
	0.2nm,0.6s,baz=134,slow=4.3,SNR=3.5						
CMAR	**Chiang Mai Arr**	**125.05**	**110**	PKP	**PKPdf**	**11 54 35.6**	**+0.3**
	0.3nm,0.3s,baz=248,slow=3.8,SNR=3.0						
MSO	**Missoula**	**125.35**	**303**	*e*PKPdf	**PKPdf**	**11 54 35.0**	**-0.1**
KSH	**Kashi**	**128.23**	**74**	*e*PKP	**PKiKP**	**11 54 44.5**	**+3.0**
KSH				PP	**PP**	**11 56 50.5**	**+4.6**
KSH				LR	LR		
	comp=E,250nm,8.7s						
KSH				LR	LR		
	comp=Z,230nm,11.8s						
YKA	**Yellowknife Ar**	**135.93**	**318**	PKP	**PKPdf**	**11 54 54.2**	**-0.3**
	0.5nm,0.7s,baz=126,slow=2.5,SNR=6.2						
YKB5	**Yellowknife Ar**	**135.93**	**318**	*e*PKPdf	**PKPdf**	**11 54 54.2**	**-0.3**
MK32	**Makanchi Array**	**136.53**	**71**	*e*PKPdf	**PKPdf**	**11 54 55.7**	**-0.5**
MKAR	**Makanchi Array**	**136.53**	**71**	PKP	**PKPdf**	**11 54 55.7**	**-0.5**
	0.4nm,0.7s,baz=225,slow=3.9,SNR=3.2						
CD2	**Chengdu**	**137.59**	**105**	PKP	**PKPdf**	**11 54 59.5**	**+0.8**
WMQ	**Urumqi**	**137.60**	**78**	*e*PKP	**PKiKP**	**11 55 00.0**	**-0.3**
LZH	**Lanzhou**	**141.49**	**99**	*e*PKP	**PKiKP**	**11 55 10.8**	**+2.2**
HYT	**Haines Junctio**	**144.65**	**308**	*e*PKPdf	**PKPdf**	**11 55 10.7**	**+0.2**
INK	**Inuvik**	**145.54**	**321**	PKPbc	**PKPab**	**11 55 12.6**	**+0.4**
	2.1nm,0.5s,baz=140,slow=3.1,SNR=4.5						
EPYK	**Eagle Plains**	**146.20**	**317**	*e*PKPdf	**PKPbc**	**11 55 13.9**	**-0.1**
NJ2	**Nanjing**	**146.42**	**120**	*e*PKPbc	**PKPbc**	**11 55 15.3**	**-0.4**
DAWY	**Dawson**	**146.60**	**312**	*e*PKPdf	**PKPdf**	**11 55 14.4**	**+0.7**
SCRK	**Sand Creek**	**148.53**	**311**	*e*PKPdf	**PKPbc**	**11 55 19.5**	**-1.2**
HHC	**Hu-ho-hao-te**	**149.14**	**101**	*e*PKPbc	**PKPbc**	**11 55 21.5**	**-1.4**
SCM	**Sheep Creek Mo**	**149.45**	**306**	*e*PKPdf	**PKPbc**	**11 55 21.6**	**-1.4**
ILAR	**Eielson Array**	**149.93**	**312**	PKPbc	**PKPbc**	**11 55 24.3**	**+0.4**
	3.6nm,0.8s,baz=112,slow=1.4,SNR=24						
ILB	**Eielson Array**	**149.93**	**312**	*e*PKPdf	**PKPbc**	**11 55 22.2**	**-1.7**
CCB	**Clear Creek Bu**	**150.29**	**312**	*e*PKPbc	**PKPbc**	**11 55 23.7**	**-1.1**
WRH	**Wood River Hil**	**150.38**	**311**	*e*PKPbc	**PKPbc**	**11 55 23.8**	**-1.2**
SONA0	**Songino Array**	**150.49**	**85**	*e*PKPbc	**PKPbc**	**11 55 25.0**	**-1.0**
SONA0				*e*PKPab	**PKPab**	**11 55 31.9**	**-0.8**
SONM	**Songino Array**	**150.49**	**85**	PKPbc	**PKPbc**	**11 55 25.0**	**-1.0**
	1.3nm,0.6s,baz=231,slow=1.7,SNR=7.6						
SONM				PKPab	**PKPab**	**11 55 31.9**	**-0.8**
	2.0nm,0.9s,baz=236,slow=2.6,SNR=4.6						
RND	**Reindeer**	**150.51**	**309**	*e*PKPbc	**PKPbc**	**11 55 24.4**	**-1.0**
MCK	**McKinley**	**150.61**	**310**	*e*PKPbc	**PKPbc**	**11 55 25.6**	**0.0**
KDAK	**Kodiak Island**	**150.77**	**297**	*e*PKPbc	**PKPbc**	**11 55 26.2**	**+0.1**
TRF	**Thorofare Moun**	**151.15**	**309**	*e*PKPbc	**PKPbc**	**11 55 26.6**	**-0.4**
SKT	**Skwentna**	**151.41**	**306**	*e*PKPbc	**PKPbc**	**11 55 27.1**	**-0.4**
TOLK	**Toolik Lake Re**	**151.43**	**320**	*e*PKPbc	**PKPbc**	**11 55 27.1**	**-0.3**
BPAW	**Bear Paw Mtn.**	**151.57**	**310**	*e*PKPbc	**PKPbc**	**11 55 26.2**	**-1.7**
MLY	**Manley**	**151.59**	**312**	*e*PKPbc	**PKPbc**	**11 55 26.6**	**-1.3**
MAJO	**Matsushiro**	**158.43**	**146**	*e*PKPab	**PKPab**	**11 56 07.5**	**+0.9**
MJAR	**Matsushiro Arr**	**158.43**	**146**	PKPab	**PKPab**	**11 56 07.5**	**+0.9**
	0.8nm,0.7s,baz=176,slow=5.7,SNR=2.8						

MAN 29 11:38:51.0, 9°54′N×126°05′E, h17km, mb3.7, ML2.4, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.60**	**294**	⇑*e*P	Pn	11 39 11.8	+7.2
SCPH				*e*S	Sn	11 39 22.5	+8.5
BUTP	**Butuan**	**0.71**	**216**	*e*P	Pg	11 39 05.2	+0.3
BUTP				*e*S	Sn	11 39 16.9	+0.2
BUKP	**Musuan**	**1.92**	**211**	*e*P	Pn	11 39 22.0	-0.9
BUKP				*e*S	Sb	11 39 48.1	-1.1
CNP	**Cataman**	**3.25**	**335**	*e*P	Pn	11 39 42.1	+1.0

*ISCJB **29** 11:49:31.3±0.2, 0°42′N±0°03′×122°31′E±0°04, h114km, mb4.5/36, Error ellipse: s-maj=5.0km s-min=3.8km az=172.3*
*DJA **29** 11:49:32.5±0.2, 0°N±2°×12°2′E±°, h108km±3km, M4.4/18, mb4.4/11, mB4.5/2, MLv4.4/18, Mw(mB)3.7/2*
*NEIC **29** 11:49:32.7±1.4, 0°41′N×122°18′E, h122km±8km, mb4.6/22, Error ellipse: s-maj=16.8km s-min=4.6km az=48.0*
*IDC **29** 11:49:34.0±1.5, 0°40′N×122°39′E, h128km±13km, mb3.8/11, mb1 3.9/14, mb1mx3.7/39, mbtmp4.2/14, Error ellipse: s-maj=22.8km s-min=10.8km az=72.0*

ISC 29 11:49:32.3±0.4, 0°40′N±0°05′×122°27′E±0°06, h114km, n72, σ1§36/84, mb4.4/36, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.34**	**284**	P	**Pn**	**11 49 48.7**	**0.0**
MRSI				S	**Sn**	**11 50 00.5**	**-0.6**
APSI	**Ampana**	**1.44**	**206**	P	**Pn**	**11 49 59.8**	**+1.1**
APSI				S	**Sn**	**11 50 20.4**	**+1.7**
LUWI	**Luwuk**	**1.51**	**161**	*e*Pn	**Pn**	**11 50 01.0**	**+1.4**
LUWI				*e*Sn	**Sn**	**11 50 24.9**	**+4.6**
LUWI	**Luwuk**	**1.51**	**161**	P	**Pn**	**11 50 01.0**	**+1.4**
LUWI				S	**Sn**	**11 50 22.2**	**+2.0**
TTSI	**Tana Toraja**	**4.21**	**216**	P	**Pn**	**11 50 35.9**	**+1.3**
KDI	**Kendari**	**4.34**	**175**	P	**Pn**	**11 50 37.3**	**+1.0**
SANI	**Sanana**	**4.44**	**123**	P	**Pn**	**11 50 37.3**	**-0.4**
SGSI	**Sangihe**	**4.61**	**45**	P	**Pn**	**11 50 39.7**	**-0.3**
SGKI	**Sangatta, Kali**	**4.76**	**259**	P	**Pn**	**11 50 41.5**	**-0.5**
SPSI	**Sidrap Palu**	**5.00**	**210**	P	**Pn**	**11 50 47.0**	**+1.7**
TNTI	**Ternate**	**5.11**	**86**	*e*Pn	**Pn**	**11 50 47.4**	**+0.7**
TNTI	**Ternate**	**5.11**	**86**	P	**Pn**	**11 50 47.4**	**+0.7**
BKB	**Balikpapan**	**5.62**	**253**	P	**Pn**	**11 50 53.3**	**-0.3**
BBSI	**Bau Bau**	**5.85**	**177**	P	**Pn**	**11 50 58.0**	**+1.2**
KAPI	**Kappang**	**5.93**	**205**	P	**Pn**	**11 50 59.3**	**+1.4**
	5.6nm,0.3s,baz=29,slow=4.7,SNR=10						
KAPI				S	**Sn**	**11 52 04.0**	**-0.6**
	1.9nm,0.3s,baz=36,slow=22,SNR=3.5						
KAPI	**Kappang**	**5.93**	**205**	*e*Pn	**Pn**	**11 50 59.2**	**+1.3**
KAPI				*e*Sn	**Sn**	**11 52 04.8**	**+0.2**
NLAI	**Namlea**	**6.03**	**127**	P	**Pn**	**11 51 00.6**	**+1.5**
BKSI	**Bulukumba**	**6.07**	**201**	P	**Pn**	**11 51 01.9**	**+2.2**
BSSI	**Bau Bau, Buton**	**6.73**	**195**	P	**Pn**	**11 51 09.6**	**+0.9**
SIJI	**Sorong**	**9.08**	**98**	P	**Pn**	**11 51 38.6**	**-1.9**
	1.3nm,0.3s,baz=358,slow=19,SNR=3.3						
EDFI	**Ende, Flores**	**9.10**	**184**	P	**Pn**	**11 51 42.2**	**+1.3**
FAKI	**Fak Fak**	**10.50**	**108**	*e*Pn	**Pn**	**11 52 00.2**	**+0.4**
FAKI				*e*Sn	**Sn**	**11 53 53.5**	**-2.1**
MTN	**Manton Dam**	**15.82**	**147**	*e*Pn	**P**	**11 53 10.8**	**+0.5**
	15nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.67**	**170**	P	**Pn**	**11 53 41.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**18.67**	**170**	*e*Pn	**Pn**	**11 53 42.1**	**-1.2**
MDSI	**Maura Dua**	**18.72**	**255**	P	**Pn**	**11 53 43.7**	**-0.2**
MNAI	**Manna**	**19.87**	**256**	*e*P	**P**	**11 53 51.8**	**-3.0**
	288nm,1.1s						
PSA00	**Pilbara Seismi**	**21.96**	**186**	*e*P	**P**	**11 54 16.5**	**-0.6**
	11nm,0.7s						
YULB	**Yu-li**	**22.88**	**358**	*e*P	**P**	**11 54 25.9**	**-0.4**
	5.7nm,0.6s						
SSLB	**Suanglung**	**23.29**	**357**	*e*P	**P**	**11 54 30.9**	**+0.7**
	8.0nm,0.7s						
WRAB	**Tennant Creek**	**23.41**	**150**	*e*P	**P**	**11 54 31.2**	**-0.2**
	18nm,0.8s						
WR1	**Warramunga Arr**	**23.42**	**150**	*e*P	**P**	**11 54 31.1**	**-0.3**
WRA	**Warramunga Arr**	**23.42**	**150**	P	**P**	**11 54 31.1**	**-0.3**
	11nm,0.6s,baz=331,slow=12,SNR=75						
WB2	**Warramunga Arr**	**23.42**	**150**	*e*P	**P**	**11 54 30.7**	**-0.7**
	20nm,0.9s						
GIRL	**Giralia**	**24.20**	**198**	*e*P	**P**	**11 54 37.9**	**-0.5**
	302nm,1.4s						
CHAI	**Chaiyaphum**	**25.26**	**309**	P	**P**	**11 54 50.8**	**+2.7**
	21μm,0.6s,607μm						
AS31	**Alice Springs**	**26.45**	**155**	*e*P	**P**	**11 54 58.7**	**-0.2**
	1.7nm,0.6s						
ASAR	**Alice Springs**	**26.45**	**155**	P	**P**	**11 54 59.1**	**+0.2**
	3.2nm,0.6s,baz=331,slow=8.4,SNR=76						
ASAR				PcP	**PcP**	**11 58 20.6**	**-0.9**
	0.5nm,0.4s,baz=349,slow=2.1,SNR=5.8						
ASAR				ScP	**ScP**	**12 01 48.4**	**-2.7**
	0.5nm,0.5s,baz=342,slow=2.8,SNR=11						
CMAR	**Chiang Mai Arr**	**29.11**	**309**	P	**P**	**11 55 24.0**	**+1.5**
	1.9nm,0.7s,baz=126,slow=6.8,SNR=11						
MORW	**Morawa**	**29.90**	**191**	*e*P	**P**	**11 55 28.8**	**-0.6**
	13nm,0.8s						
WHN	**Wuhan**	**30.91**	**347**	*e*P	**P**	**11 55 41.0**	**+2.7**
FORT	**Forrest**	**31.49**	**170**	*e*P	**P**	**11 55 43.0**	**-0.4**
	28nm,0.6s						
NJ2	**Nanjing**	**31.65**	**354**	*e*P	**P**	**11 55 46.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
NWAO	**Narrogin (SRO)**	**33.48**	**188**	*e*P	**P**	**11 56 00.1**	**-0.7**
	15nm,0.9s						
CD2	**Chengdu**	**35.07**	**332**	*e*P	**P**	**11 56 15.5**	**+0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BBOO	**Buckleboo**	**35.50**	**160**	*e*P	**P**	**11 56 17.8**	**-0.3**
	16nm,1.1s						
STKA	**Stephens Creek**	**36.94**	**152**	P	**P**	**11 56 31.2**	**+0.7**
	10nm,0.7s,baz=326,slow=9.7,SNR=22						
STKA	**Stephens Creek**	**36.94**	**152**	*e*P	**P**	**11 56 30.4**	**-0.1**
	2.1nm,0.8s						
KSRS	**Korea Array**	**37.24**	**7**	P	**P**	**11 56 33.3**	**+0.4**
	0.2nm,0.3s,baz=186,slow=12,SNR=4.2						
KSRS				ScP	**ScP**	**12 02 25.4**	**-1.7**
	0.3nm,0.5s,baz=188,slow=3.7,SNR=2.6						
MAJO	**Matsushiro**	**38.88**	**21**	*e*P	**P**	**11 56 46.2**	**-0.5**
	9.3nm,1.4s						
MJAR	**Matsushiro Arr**	**38.88**	**21**	P	**P**	**11 56 46.1**	**-0.7**
	0.9nm,0.8s,baz=194,slow=9.5,SNR=5.8						
LZH	**Lanzhou**	**39.42**	**336**	*e*P	**P**	**11 56 52.5**	**+1.1**
LZH				pP	pP	11 57 22.3	+4.9
LZH				sP	sP	11 57 36.5	+6.0
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC	**Hu-ho-hao-te**	**41.42**	**348**	P	**P**	**11 57 10.0**	**+2.2**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,31nm,5.1s						
ARMA	**Armidale**	**41.46**	**140**	*e*P	**P**	**11 57 09.6**	**+1.3**
	26nm,1.6s						
CAN	**Canberra**	**43.41**	**148**	*e*P	**P**	**11 57 25.2**	**+1.3**
	18nm,1.3s						
TOO	**Toolangi**	**43.45**	**153**	*e*P	**P**	**11 57 25.1**	**+0.9**
	8.4nm,1.3s						
GTA	**Gaotai**	**43.92**	**335**	*e*P	**P**	**11 57 29.8**	**+1.8**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**44.47**	**10**	P	**P**	**11 57 32.5**	**+0.4**
	0.9nm,0.5s,baz=210,slow=8.3,SNR=4.8						
SONA0	**Songino Array**	**49.23**	**346**	*e*P	**P**	**11 58 09.7**	**+0.4**
SONM	**Songino Array**	**49.23**	**346**	P	**P**	**11 58 09.7**	**+0.4**
	2.2nm,0.6s,baz=161,slow=8.7,SNR=7.3						
SONM				ScP	**ScP**	**12 03 12.3**	**-3.3**
	0.3nm,0.4s,baz=132,slow=2.1,SNR=2.8						
WMQ	**Urumqi**	**53.08**	**329**	*e*P	**P**	**11 58 39.3**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,61nm,4.5s						
KSH	**Kashi**	**57.40**	**318**	*e*P	**P**	**11 59 11.3**	**+2.0**
MK31	**Makanchi Array**	**57.90**	**329**	*e*P	**P**	**11 59 12.2**	**-0.2**
	2.6nm,1.1s						
MKAR	**Makanchi Array**	**57.90**	**329**	P	**P**	**11 59 13.2**	**+0.7**
	2.0nm,0.5s,baz=124,slow=8.5,SNR=22						
MKAR				ScP	**ScP**	**12 03 51.4**	**-1.9**
	0.2nm,0.5s,baz=122,slow=5.2,SNR=1.4						
ZALV	**Zalesovo Beam**	**61.66**	**336**	P	**P**	**11 59 37.7**	**-0.3**
	0.8nm,0.3s,baz=124,slow=7.7,SNR=2.7						
ZAA1	**Zalesovo Array**	**61.66**	**336**	*e*P	**P**	**11 59 37.7**	**-0.3**
KURK	**Kurchatov**	**62.27**	**330**	*e*P	**P**	**11 59 42.0**	**-0.2**
	4.0nm,0.6s						
BKZ	**Black Stump Fm**	**63.24**	**135**	*e*P	**P**	**11 59 49.3**	**+0.3**
	30nm,1.6s						
VNDA	**Vanda**	**80.74**	**172**	P	**P**	**12 01 32.4**	**-0.1**
	0.3nm,0.5s,baz=316,slow=8.3,SNR=5.2						
VNDA	**Vanda**	**80.74**	**172**	*e*P	**P**	**12 01 32.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**119.60**	**285**	PKP	**PKPdf**	**12 08 08.6**	**-1.2**
	7.8nm,0.3s,baz=87,slow=2.9,SNR=2.1						
TOA1	**Torodi Ar. Sit**	**119.60**	**285**	*e*PKPdf	**PKPdf**	**12 08 08.6**	**-1.2**

IDC 29 11:55:38.1±16.0, 17°37′S×177°77′W, h494km±126km, mb3.5/4, mb1 3.6/5, mb1mx3.0/27, mbtmp4.3/5, Error ellipse: s-maj=166.2km s-min=37.9km az=42.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.58**	**250**	P	P	11 58 55.7	+1.2
	0.1nm,0.3s,baz=72,slow=20,SNR=3.7						
URZ	**Urewera**	**21.29**	**191**	P	P	11 59 48.1	-0.4
	4.3nm,0.7s,baz=40,slow=8.2,SNR=3.4						
STKA	**Stephens Creek**	**39.42**	**241**	P	P	12 02 25.4	+0.6
	1.5nm,0.4s,baz=79,slow=10,SNR=5.3						
WRA	**Warramunga Arr**	**45.33**	**259**	P	P	12 03 10.8	-0.8
	1.7nm,0.4s,baz=93,slow=8.3,SNR=21						
ASAR	**Alice Springs**	**45.53**	**254**	P	P	12 03 12.8	-0.2

3.9nm,0.4s

IDC 29 12:19:47.3±1.8,3°60'S×146°19'E,h0km,mb3.4/2, mb1 3.8/3,mb1mx3.4/27,mbtmp3.5/3,ML3.8/2,MS3.5/1, Ms1 3.5/1,ms1mx2.6/23,Error ellipse: s-maj=70.9km s-min=29.6km az=120.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**15.16**	**280**	P	P	12 23 23.2	+0.4
	3.9nm,0.3s,baz=95,slow=23,SNR=9.8						
WRA	**Warramunga Arr**	**19.94**	**215**	P	P	12 24 20.7	-0.3
	0.1nm,0.3s,baz=36,slow=10,SNR=5.1						
ASAR	**Alice Springs**	**23.22**	**210**	P	P	12 24 56.3	+0.1
	0.4nm,0.6s,baz=42,slow=7.9,SNR=9.7						
FITZ	**Fitzroy Crossi**	**24.76**	**233**	P	P	12 25 07.1	-3.8
	1.8nm,1.0s,baz=82,slow=15,SNR=3.3						
FITZ				LR	LR	12 35 01.2	
	comp=Z,102nm,20.6s,baz=342,slow=37						
ILAR	**Eielson Array**	**83.60**	**23**	P	P	12 32 17.3	0.0
	0.6nm,1.1s,baz=259,slow=5.7,SNR=4.9						

*ISK **29** 12:28:28.7,38°72'N×43°47'E,h17km±3km,ML2.5/5*
*DDA **29** 12:28:30.7,38°70'N×43°33'E,h7km±4km,ML2.9*

ISC 29 12:28:28.9±1.2,38°69'N±0°04'×43°58'E±0°07,h24km±8km, n14,σ1°85/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.17**	**237**	PG	**Pb**	**12 28 34.1**	**-0.2**
VANB				SG	**Sb**	**12 28 37.9**	**0.0**
TVAN	**Van**	**0.21**	**220**	*i* P	**Pb**	**12 28 35.2**	**+0.4**
TVAN				*i* S	**Sb**	**12 28 39.6**	**+0.9**
TVAN				IAML_P			
	comp=Z,23μm,0.1s						
VMUR	**Van-Muradiye**	**0.30**	**359**	*i* P	**Pn**	**12 28 37.7**	**-0.3**
VMUR				*i* S	**Sn**	**12 28 44.0**	**+0.2**
ERCV	**ERCIS-VAN**	**0.38**	**331**	PG	**Pb**	**12 28 36.7**	**-0.5**
GEVA	**Gevas**	**0.56**	**227**	*i* Pg	**Pb**	**12 28 39.8**	**-0.4**
GEVA				IAML_P			
	comp=Z,3μm,0.2s						
AKDM	**Akdamar-Van**	**0.59**	**233**	PG	**Pb**	**12 28 39.9**	**-0.9**
AKDM				SG	**Sb**	**12 28 48.4**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.68**	**280**	*i* P	**Pb**	**12 28 41.3**	**-0.9**
ADCV				IAML_P			
	comp=Z,1μm,0.1s						
MLAZ	**Malazgirt-MUS**	**0.92**	**300**	PG	**Pb**	**12 28 45.0**	**-1.3**
TUTA	**Tutak**	**0.93**	**320**	*i* P	**Pn**	**12 28 46.4**	**-0.3**
TUTA				*i* S	**Sn**	**12 28 58.6**	**-0.8**
AGRB	**Hanur-Agry**	**0.99**	**333**	PG	**Pn**	**12 28 47.4**	**-0.2**
AGRB				SG	**Sn**	**12 29 00.4**	**-0.6**
HAKT	**HAKKARI**	**1.14**	**175**	*i* P	**Pb**	**12 28 52.8**	**+2.8**
HAKT				*i* S	**Sb**	**12 28 59.1**	**-5.3**
HAKT				IAML_P			
	comp=Z,471nm,0.2s						
EATA	**Eleskirt**	**1.44**	**325**	*i* P	**Pb**	**12 28 56.6**	**+1.3**
EATA				*i* S	**Sb**	**12 29 15.8**	**+2.4**
SRTM	**Siirt_Merkez**	**1.48**	**242**	*i* P	**Pb**	**12 28 57.7**	**+1.9**
SRTM				*i* S	**Sb**	**12 29 17.5**	**+3.4**
MUSM	**Mu-Merkez**	**1.62**	**272**	*i* P	**Pb**	**12 28 57.5**	**-0.6**

*BJI **29** 12:29:42.0±0.0,20°10'S×169°50'E,h112km,mb5.0/45, mB4.9/29*
*ISCJB **29** 12:29:43.6±0.6,20°11'S±0°03'×169°41'E±0°03,h121km±5km, mb4.9/160,Error ellipse: s-maj=5.3km s-min=4.2km az=15.0*
*IDC **29** 12:29:43.6±0.5,20°10'S×169°52'E,h111km±4km,mb4.5/23, mb1 4.6/26,mb1mx4.6/32,mbtmp4.9/26,MS3.5/9, Ms1 3.5/9,ms1mx3.2/27,Error ellipse: s-maj=11.4km s-min=8.2km az=127.0*
*MOS **29** 12:29:44.1±1.1,20°08'S×169°46'E,h129km,mb4.9/35, Error ellipse: s-maj=8.9km s-min=8.1km az=123.5*
*NEIC **29** 12:29:44.4±1.2,20°11'S×169°49'E,h119km±4km, mb4.9/131,Error ellipse: s-maj=15.0km s-min=12.3km az=109.0*
*GCMT **29** 12:29:46.4±0.4,20°18'S±0°04'×169°39'E±0°04,h120km±4km, MW4.8/64,Moment Tensor Solution. s19,c22; s64,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.88±.08; $M_{\theta\theta}$1.35±.14; $M_{\phi\phi}$0.52±.13; $M_{r\theta}$0.12±.10; $M_{\theta\phi}$-0.62±.11; $M_{\phi r}$-0.58±.09; Best double couple: $M_0$1.86600×10^{16} NP1:ϕ_s310.00000°,δ52.00000°,λ-76.00000°. NP2: ϕ_s107.00000°,δ40.00000°,λ-108.00000°. Principal axes: T 1.7200, Plg6.0000°, Azm30.0000°; N 0.2880, Plg11.0000°, Azm121.0000°; P -2.0120, Plg77.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 12:29:43.7±0.4,20°10'S±0°05'×169°52'E±0°05,h114km±3km, h115km:pP-P,n581,σ1°04/590,mb4.9/160,24C-29D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.95**	**225**	*e*Pn	**Pn**	**12 30 15.9**	**-0.4**
MARNC				*e*Sn	**Sn**	**12 30 40.3**	**-0.9**
PINNC	**Pines Island,**	**3.16**	**217**	*e*Pn	**Pn**	**12 30 31.5**	**-0.4**
PINNC				*e*Sn	**Sn**	**12 31 08.0**	**-1.1**
DZM	**Mont Dzumac**	**3.48**	**235**	P	**Pn**	**12 30 36.2**	**0.0**
	299nm,0.3s,baz=75,slow=7.7,SNR=3631						
DZM				S	**Sn**	**12 31 15.4**	**-1.4**
	269nm,0.3s,baz=134,slow=23,SNR=25						
DZM				LR	LR	12 31 37.9	
	comp=Z,914nm,20.2s,baz=341,slow=33						
DZM	**Mont Dzumac**	**3.48**	**235**	*e*Pn	**Pn**	**12 30 36.3**	**0.0**
	852nm,0.3s						
DZM				*e*Sn	**Sn**	**12 31 16.0**	**-0.8**
	621nm,0.2s						
ONTNC	**Ouen Toro**	**3.60**	**232**	*e*Pn	**Pn**	**12 30 38.3**	**+0.4**
ONTNC				*e*Sn	**Sn**	**12 31 19.9**	**+0.2**
NFK	**Norfolk Island**	**9.02**	**189**	P	**Pn**	**12 31 52.3**	**+1.4**
	baz=9.2,SNR=19						
HNR	**Honiara**	**14.07**	**318**	P	**Pn**	**12 32 58.2**	**+0.2**
	3.2nm,0.3s,baz=161,slow=4.9,SNR=3.8						
HNR	**Honiara**	**14.07**	**318**	*e*P	**Pn**	**12 32 58.1**	**+0.1**
OUZ	**Omahuta**	**15.49**	**167**	*e*Pn	**P**	**12 33 17.2**	**-0.5**
	18nm,0.9s						
EIDS	**Eidsvold**	**17.79**	**249**	*e*P	**Pn**	**12 33 44.7**	**+0.6**
	25nm,0.8s						
EIDS	**Eidsvold**	**17.79**	**249**	P	**Pn**	**12 33 43.8**	**-0.3**
	baz=18,SNR=12						
HIZ	**Hauiti**	**18.92**	**167**	*e*P	**Pn**	**12 33 56.7**	**-0.8**
	53nm,1.0s						
HAZ	**Te Kaha**	**19.01**	**160**	P	**Pn**	**12 33 58.9**	**+0.5**
ARMA	**Armidale**	**19.14**	**234**	*e*P	**Pn**	**12 33 59.4**	**-0.8**
	42nm,0.8s						
ARMA	**Armidale**	**19.14**	**234**	P	**Pn**	**12 34 00.5**	**+0.2**
	baz=19,SNR=17						
HRRZ	**Handcock Road**	**19.15**	**164**	P	**Pn**	**12 34 02.3**	**+2.2**
RUGZ	**Raukumara Rang**	**19.16**	**160**	P	**Pn**	**12 33 59.6**	**-0.8**
URZ	**Urewera**	**19.26**	**162**	P	**Pn**	**12 34 00.5**	**-0.8**
	1.2nm,0.3s,baz=351,slow=3.1,SNR=22						
URZ				LR	LR	12 40 01.9	
	comp=Z,110nm,19.6s,baz=344,slow=32						
URZ	**Urewera**	**19.26**	**162**	*e*P	**P**	**12 34 00.0**	**+0.8**
	37nm,1.2s						
URZ	**Urewera**	**19.26**	**162**	P	**P**	**12 34 00.2**	**+1.0**
WMGZ	**Waiomatatini S**	**19.28**	**158**	P	**Pn**	**12 34 01.1**	**-0.5**
PRRZ	**Plateau Road**	**19.28**	**163**	P	**Pn**	**12 34 02.2**	**+0.5**
PUZ	**Puketiti**	**19.45**	**159**	P	**Pn**	**12 34 02.6**	**-1.1**
MWZ	**Matawai**	**19.45**	**161**	P	**P**	**12 34 02.5**	**+1.1**
TWGZ	**Tauwhareparae**	**19.45**	**160**	P	**Pn**	**12 34 03.6**	**-0.1**
RTZ	**Ruatahuna**	**19.55**	**162**	P	**Pn**	**12 34 03.9**	**-0.9**
TKGZ	**Te Karaka**	**19.65**	**160**	P	**Pn**	**12 34 04.8**	**-1.1**
SNGZ	**Shannon Statio**	**19.81**	**162**	P	**P**	**12 34 06.3**	**+1.1**
RIGZ	**Rimuhau**	**19.87**	**161**	P	**P**	**12 34 07.2**	**+1.3**
BKZ	**Black Stump Fm**	**19.93**	**164**	*e*P	**P**	**12 34 06.4**	**-0.2**
	27nm,0.7s						
RMQ	**Roma**	**20.09**	**248**	P	Pn	12 34 09.8	-1.4
	baz=20,SNR=17						
TARA	**Tarawa**	**21.58**	**9**	*e*P	**P**	**12 34 24.7**	**+0.3**
	45nm,1.0s						
SNZO	**South Karori**	**21.60**	**169**	*e*P	**P**	**12 34 23.9**	**-0.4**
	34nm,0.7s						
CTA	**Charters Tower**	**21.84**	**266**	P	**P**	**12 34 28.2**	**+1.0**
	52nm,0.7s,baz=89,slow=12,SNR=88						
CTAO	**Charters Tower**	**21.84**	**266**	*e*P	**P**	**12 34 28.1**	**+0.9**
	51nm,0.6s						
CTAO	**Charters Tower**	**21.84**	**266**	*e*P	**P**	**12 34 28.1**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,51nm,0.6s						
LTZ	**Lake Taylor**	**22.73**	**175**	*e*P	**P**	**12 34 36.7**	**+0.6**
	comp=Z,34nm,0.7s						
RABL	**Rabaul**	**23.15**	**311**	*e*P	**P**	**12 34 40.0**	**-0.3**
	comp=Z,52nm,0.6s						
OXZ	**Oxford**	**23.25**	**175**	*e*P	**P**	**12 34 40.9**	**0.0**
	comp=Z,25nm,0.7s						
CNB	**Canberra Magne**	**23.34**	**225**	P	**P**	**12 34 43.3**	**+1.4**
	baz=24,SNR=22						
FOZ	**Fox Glacier**	**23.36**	**179**	*e*P	**P**	**12 34 42.3**	**+0.3**
	comp=Z,27nm,0.8s						
YNG	**Young**	**23.45**	**229**	P	**P**	**12 34 44.6**	**+1.8**
	baz=24,SNR=16						
RPZ	**Rata Peaks**	**23.58**	**177**	P	**P**	**12 34 45.3**	**+1.3**
	comp=Z,8.6nm,0.5s,baz=307,slow=3.2,SNR=9.1						
CAN	**Canberra**	**23.59**	**226**	*e*P	**P**	**12 34 44.2**	**0.0**
	comp=Z,24nm,0.8s						
CAN	**Canberra**	**23.59**	**226**	*e*P	**P**	**12 34 44.2**	**0.0**
CAN				pmax	pmax		
	comp=Z,24nm,0.8s						
PMG	**Port Moresby**	**24.06**	**293**	P	**P**	**12 34 49.4**	**+0.9**
	comp=Z,60nm,0.7s,baz=118,slow=5.4,SNR=20						
PMG				LR	LR	12 41 53.4	
	comp=Z,116nm,20.8s,baz=246,slow=30						
PMG	**Port Moresby**	**24.06**	**293**	*e*P	**P**	**12 34 48.8**	**+0.3**
	comp=Z,66nm,0.8s						
PMG	**Port Moresby**	**24.06**	**293**	*ce*P	**P**	**12 34 49.3**	**+0.8**
PMG				pmax	pmax		
	comp=Z,208nm,0.8s						
CMSA	**Cobar Meteorol**	**24.23**	**237**	P	**P**	**12 34 50.8**	**+0.9**
	baz=24,SNR=62						
MILA	**Mila**	**24.51**	**222**	P	**P**	**12 34 53.9**	**+1.4**
	baz=25,SNR=9.0						
KNTN	**Kanton**	**25.14**	**49**	*e*P	**P**	**12 34 58.4**	**+0.1**
	comp=Z,69nm,0.9s						
COEN	**Coen**	**25.90**	**279**	*e*P	**P**	**12 35 06.2**	**+1.0**
	comp=Z,53nm,0.9s						
COEN	**Coen**	**25.90**	**279**	P	**P**	**12 35 06.8**	**+1.6**
	baz=26,SNR=13						
TOO	**Toolangi**	**27.19**	**225**	*e*P	**P**	**12 35 17.4**	**+0.7**
	comp=Z,12nm,1.2s						
TOO	**Toolangi**	**27.19**	**225**	P	**P**	**12 35 17.9**	**+1.3**
	baz=27,SNR=4.8						
TOO	**Toolangi**	**27.19**	**225**	*e*P	**P**	**12 35 17.4**	**+0.7**
TOO				pmax	pmax		
	comp=Z,13nm,1.2s						
STKA	**Stephens Creek**	**27.62**	**239**	P	**P**	**12 35 21.4**	**+0.9**
	comp=Z,14nm,0.7s,baz=79,slow=9.2,SNR=34						
STKA				PcP	**PcP**	**12 38 35.4**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=43,slow=3.6,SNR=4.6						
STKA				LR	LR	12 45 02.7	
	comp=Z,115nm,21.6s,baz=35,slow=33						
STKA	**Stephens Creek**	**27.62**	**239**	*e*P	**P**	**12 35 21.0**	**+0.5**
	comp=Z,3.7nm,0.8s						
STKA				*e*PcP	**PcP**	**12 38 35.4**	**+0.1**
STKA	**Stephens Creek**	**27.62**	**239**	P	**P**	**12 35 21.5**	**+0.9**
	baz=28,SNR=28						
QIS	**Mount Isa**	**28.04**	**264**	P	**P**	**12 35 24.9**	**+0.6**
	baz=28,SNR=6.3						
MANU	**Manus Island**	**28.11**	**307**	*e*P	**P**	**12 35 25.7**	**+0.6**
	comp=Z,64nm,0.9s						
MOO	**Moorlands**	**29.16**	**215**	P	**P**	**12 35 35.5**	**+1.4**
	baz=29,SNR=4.3						
HTT	**Hallett**	**30.25**	**238**	P	**P**	**12 35 44.6**	**+0.7**
	baz=30,SNR=15						
BBOO	**Buckleboo**	**32.38**	**240**	*e*P	**P**	**12 36 02.8**	**+0.3**
	comp=Z,20nm,0.7s						
BBOO	**Buckleboo**	**32.38**	**240**	P	**P**	**12 36 02.8**	**+0.3**
	baz=32,SNR=22						
WB2	**Warramunga Arr**	**33.00**	**264**	*e*P	**P**	**12 36 07.5**	**-0.7**
	comp=Z,24nm,1.0s						
WB2				*e*PcP	**PcP**	**12 38 49.5**	**-0.1**
WRAB	**Tennant Creek**	**33.01**	**264**	*e*P	**P**	**12 36 07.5**	**-0.7**
	comp=Z,21nm,0.8s						
WRAB	**Tennant Creek**	**33.01**	**264**	*ce*P	**P**	**12 36 06.7**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,34nm,1.3s						
WR1	**Warramunga Arr**	**33.02**	**264**	*e*P	**P**	**12 36 07.4**	**-0.9**
WR1				*e*PcP	**PcP**	**12 38 49.1**	**-0.5**
WRA	**Warramunga Arr**	**33.02**	**264**	P	**P**	**12 36 07.4**	**-0.9**
	comp=Z,17nm,0.9s,baz=93,slow=8.6,SNR=29						
WRA				PcP	**PcP**	**12 38 49.1**	**-0.5**
	comp=Z,4.2nm,0.6s,baz=90,slow=1.7,SNR=5.4						
JAY	**Jayapura**	**33.11**	**298**	P	**P**	**12 36 09.2**	**0.0**
	comp=Z,28nm,0.7s,baz=113,slow=4.3,SNR=16						
JAY				LR	LR	12 49 12.7	
	comp=Z,46nm,19.6s,baz=52,slow=35						
AS31	**Alice Springs**	**33.18**	**257**	*e*P	**P**	**12 36 09.5**	**-0.2**
	comp=Z,45nm,0.7s						
ASAR	**Alice Springs**	**33.18**	**257**	P	**P**	**12 36 09.9**	**+0.2**
	comp=Z,116nm,0.7s,baz=85,slow=9.3,SNR=1739						
ASAR				PcP	**PcP**	**12 38 49.2**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=100,slow=3.3,SNR=8.0						
ASAR				ScP	**ScP**	**12 42 24.2**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=97,slow=3.7,SNR=3.4						
ASAR				PKiKP	**PKiKP**	**12 46 13.6**	**-2.3**
	comp=Z,0.3nm,0.8s,baz=113,slow=0.5,SNR=4.8						
GENI	**Genyem**	**33.52**	**298**	P	**P**	**12 36 13.5**	**+0.9**
	comp=Z,215nm,1.1s,comp=Z,2μm						
KDU	**Kakadu**	**36.23**	**276**	P	**P**	**12 36 36.0**	**+0.1**
	baz=36,SNR=7.3						
MTN	**Manton Dam**	**37.44**	**275**	*e*P	**P**	**12 36 46.1**	**-0.1**
	comp=Z,74nm,0.7s						
MTN	**Manton Dam**	**37.44**	**275**	P	**P**	**12 36 46.2**	**-0.1**
	baz=38,SNR=22						
WRKA	**Warakurna**	**38.27**	**255**	P	**P**	**12 36 53.1**	**-0.1**
	baz=38,SNR=43						
FORT	**Forrest**	**38.72**	**246**	*e*P	**P**	**12 36 56.7**	**-0.1**
	comp=Z,58nm,0.7s						
FORT	**Forrest**	**38.72**	**246**	P	**P**	**12 36 56.7**	**-0.1**
	baz=39,SNR=39						
PPT2	**Papeete2**	**38.73**	**93**	*e*S	**S**	**12 42 48.9**	**+2.9**
	comp=Z,38nm,23.8s						
PPT2				*e*LR	LR	12 47 38.6	
	comp=Z,139nm,29.0s						
KNRA	**Kununurra**	**38.96**	**270**	P	**P**	**12 36 58.8**	**-0.2**
	baz=39,SNR=8.4						
FAKI	**Fak Fak**	**40.16**	**290**	*e*P	**P**	**12 37 08.6**	**-0.3**
	comp=Z,92nm,0.9s						
FAKI	**Fak Fak**	**40.16**	**290**	P	**P**	**12 37 09.0**	**+0.1**
	comp=Z,107nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.42**	**265**	P	**P**	**12 37 19.9**	**+0.6**
	comp=Z,37nm,0.6s,baz=108,slow=7.0,SNR=74						
FITZ	**Fitzroy Crossi**	**41.42**	**265**	*e*P	**P**	**12 37 19.5**	**+0.2**
SIJI	**Sorong**	**42.00**	**292**	P	**P**	**12 37 24.3**	**+0.3**
	comp=Z,43nm,0.8s,baz=114,slow=6.5,SNR=26						
KMBL	**Kambalda**	**44.05**	**245**	P	**P**	**12 37 40.0**	**-0.3**
	baz=44,SNR=7.7						
NLAI	**Namlea**	**44.61**	**286**	P	**P**	**12 37 46.0**	**+1.0**
	comp=Z,67nm,0.8s						
SOEI	**Soe**	**44.79**	**276**	*e*P	**P**	**12 37 47.4**	**+0.8**
	comp=Z,49nm,0.9s						
SOEI	**Soe**	**44.79**	**276**	P	**P**	**12 37 47.0**	**+0.5**
BATI	**Baumata**	**45.21**	**276**	P	**P**	**12 37 50.4**	**+0.6**
SANI	**Sanana**	**46.12**	**287**	P	**P**	**12 37 57.6**	**+0.7**
	comp=Z,96nm,0.9s,comp=Z,893nm						
PSA00	**Pilbara Seismi**	**46.29**	**259**	*e*P	**P**	**12 37 58.2**	**0.0**
	comp=Z,34nm,0.8s						
MEEK	**Meekatharra**	**46.93**	**252**	P	**P**	**12 38 03.0**	**-0.2**
	baz=47,SNR=21						
MMRI	**Maumere**	**47.04**	**277**	*e*P	**P**	**12 38 04.3**	**+0.1**
	comp=Z,66nm,0.8s						
MMRI	**Maumere**	**47.04**	**277**	P	**P**	**12 38 04.5**	**+0.4**
	comp=Z,100nm,0.9s						
EDFI	**Ende, Flores**	**47.52**	**277**	P	**P**	**12 38 07.9**	**0.0**
	comp=Z,19nm,1.0s,comp=Z,1μm						
KLBR	**Kellerberrin**	**47.59**	**245**	P	**P**	**12 38 07.6**	**-0.5**
	baz=48,SNR=14						
NWAO	**Narrogin (SRO)**	**48.06**	**243**	*e*P	**P**	**12 38 11.0**	**-0.7**
	comp=Z,23nm,0.8s						
NWAO	**Narrogin (SRO)**	**48.06**	**243**	P	**P**	**12 38 11.7**	**-0.1**
	baz=48,SNR=5.5						
NWAO	**Narrogin (SRO)**	**48.06**	**243**	*e*P	**P**	**12 38 11.0**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,23nm,0.8s						
MORW	**Morawa**	**49.09**	**249**	*e*P	**P**	**12 38 19.3**	**-0.5**
	comp=Z,35nm,1.1s						
MORW	**Morawa**	**49.09**	**249**	P	**P**	**12 38 19.6**	**-0.2**
	baz=49,SNR=6.8						
WBSI	**Waikabubak, Su**	**49.38**	**275**	P	**P**	**12 38 22.6**	**+0.4**
LUWI	**Luwuk**	**49.45**	**287**	*e*P	**P**	**12 38 23.0**	**+0.4**
	comp=Z,78nm,0.9s						
LUWI	**Luwuk**	**49.45**	**287**	P	**P**	**12 38 23.2**	**+0.6**
BKSI	**Bulukumba**	**50.16**	**280**	P	**P**	**12 38 28.6**	**+0.6**
	comp=Z,35nm,0.8s						
KAPI	**Kappang**	**50.62**	**280**	*e*P	**P**	**12 38 32.2**	**+0.7**
	comp=Z,66nm,0.8s						
KAPI	**Kappang**	**50.62**	**280**	*e*P	**P**	**12 38 32.2**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,66nm,0.8s						
SPSI	**Sidrap Palu**	**51.00**	**282**	P	**P**	**12 38 34.4**	**+0.1**
	comp=Z,28nm,0.9s						
TTSI	**Tana Toraja**	**51.31**	**283**	P	**P**	**12 38 37.4**	**+0.8**
	comp=Z,39nm,1.1s,comp=Z,2μm						
JAGI	**Jajag, Banyuwa**	**54.66**	**274**	*e*P	**P**	**12 39 00.6**	**-0.7**
	comp=Z,36nm,0.9s						
VNDA	**Vanda**	**57.58**	**182**	P	**P**	**12 39 21.2**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=360,slow=7.8,SNR=22						
VNDA				PcP	**PcP**	**12 40 13.6**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=0.7,slow=2.0,SNR=5.1						
VNDA				LR	LR	13 02 24.7	
	comp=Z,26nm,18.3s,baz=330,slow=34						
VNDA	**Vanda**	**57.58**	**182**	*e*P	**P**	**12 39 21.1**	**0.0**
	comp=Z,13nm,1.4s						
VNDA				*e*PcP	**PcP**	**12 40 13.4**	**+0.4**
SBA	**Scott Base**	**57.81**	**181**	*e*P	**P**	**12 39 23.6**	**+1.0**
	comp=Z,37nm,0.9s						
SBA	**Scott Base**	**57.81**	**181**	*e*P	**P**	**12 39 23.6**	**+1.0**
SBA				pmax	pmax		
	comp=Z,37nm,0.9s						
UGM	**Wanagama**	**58.24**	**273**	*e*P	**P**	**12 39 26.9**	**+0.2**
	comp=Z,499nm,1.5s						
CASY	**Casey**	**59.45**	**204**	*e*P	**P**	**12 39 34.0**	**-0.1**
	comp=Z,32nm,1.0s						
SBUM	**Sibu**	**60.47**	**285**	*e*P	**P**	**12 39 42.5**	**+0.5**
	comp=Z,5.6nm,0.9s						
SBUM	**Sibu**	**60.47**	**285**	P	**P**	**12 39 43.0**	**+1.0**
KSM	**Kuching**	**61.82**	**283**	*e*P	**P**	**12 39 51.3**	**+0.2**
	comp=Z,30nm,0.9s						
CGJI	**Cibinong**	**63.19**	**273**	P	**P**	**12 39 59.9**	**-0.3**
YOJ	**Yonaguni jima**	**63.33**	**312**	*e*P	**P**	**12 40 01.1**	**+0.2**
	comp=Z,122nm,1.5s						
YOJ	**Yonaguni jima**	**63.33**	**312**	*e*P	**P**	**12 40 01.1**	**+0.2**
YOJ				pmax	pmax		
	comp=Z,122nm,1.5s						
MJAR	**Matsushiro Arr**	**63.63**	**332**	P	**P**	**12 40 02.2**	**-0.4**
	comp=Z,7.7nm,0.8s,baz=171,slow=7.8,SNR=21						
MJAR				pP	**pP**	**12 40 30.1**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=83,slow=9.9,SNR=1.5						
MJAR				PcP	**PcP**	**12 40 38.4**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=180,slow=6.0,SNR=4.5						
MAJO	**Matsushiro**	**63.63**	**332**	*e*P	**P**	**12 40 02.6**	**-0.1**
	comp=Z,13nm,0.9s						
MAJO	**Matsushiro**	**63.63**	**332**	*i* P	**P**	**12 40 01.8**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MAT	**Matsushiro**	**63.63**	**332**	P	**P**	**12 40 02.3**	**-0.3**
NACB	**Ninganchiao**	**64.14**	**311**	*e*P	**P**	**12 40 06.2**	**0.0**
	comp=Z,36nm,0.7s						
PPBI	**Pangkal Pinang**	**64.30**	**278**	P	**P**	**12 40 07.7**	**+0.2**
SSLB	**Suanglung**	**64.36**	**310**	*e*P	**P**	**12 40 07.1**	**-0.5**
	comp=Z,30nm,0.8s						
JNU	**Nakatsue**	**64.52**	**325**	P	**P**	**12 40 08.7**	**+0.2**
	comp=Z,20nm,0.9s,baz=129,slow=3.1,SNR=12						
JNU	**Nakatsue**	**64.52**	**325**	*e*P	**P**	**12 40 08.7**	**+0.2**
	comp=Z,24nm,0.9s						
YHNB	**Yeheng**	**64.61**	**311**	*e*P	**P**	**12 40 09.4**	**+0.1**
	comp=Z,53nm,0.8s						
KASI	**Kota Agung**	**64.67**	**273**	P	**P**	**12 40 09.8**	**-0.1**
	comp=Z,106nm,0.9s						
MDSI	**Maura Dua**	**65.32**	**274**	P	**P**	**12 40 13.2**	**-0.9**
	comp=Z,31nm,1.0s						
ERM	**Erimo**	**66.44**	**339**	*e*P	**P**	**12 40 21.4**	**+0.8**
	comp=Z,11nm,0.8s						
ERM	**Erimo**	**66.44**	**339**	*i* P	**P**	**12 40 21.0**	**+0.4**
ERM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MNAI	**Manna**	**66.51**	**274**	*e*P	**P**	**12 40 21.2**	**-0.5**
	comp=Z,677nm,1.5s						
TPRI	**Tanjung Pinang**	**66.93**	**280**	P	**P**	**12 40 24.6**	**+0.2**
MYKOM	**Kota Tinggi**	**67.88**	**281**	*e*P	**P**	**12 40 30.4**	**0.0**
	comp=Z,27nm,0.9s						
MYKOM	**Kota Tinggi**	**67.88**	**281**	P	**P**	**12 40 31.0**	**+0.6**
ASAJ	**Asahikawa**	**68.50**	**339**	P	**P**	**12 40 34.8**	**+1.2**
	comp=Z,12nm,0.7s,baz=204,slow=5.9,SNR=31						
TJN	**Taejon**	**68.86**	**325**	*ce*P	**P**	**12 40 34.3**	**-1.7**
KSRS	**Korea Array**	**69.36**	**326**	P	**P**	**12 40 40.0**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=148,slow=6.7,SNR=11						
KSRS	**Korea Array**	**69.36**	**326**	P	**P**	**12 40 40.0**	**+0.9**
QSPA	**South Pole Qui**	**69.96**	**180**	*e*P	**P**	**12 40 42.6**	**0.0**
	comp=Z,42nm,0.9s						
YSS	**Yuzh-Sakhalins**	**70.97**	**341**	*e*P	**P**	**12 40 49.8**	**+1.1**
YSS				*e*		12 41 04.1	
YSS				*e*		12 41 19.5	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
NJ2	**

comp=Z,1.9nm,0.8s
MAW Mawson 77.74 202 P P 12 41 28.4 +0.8
baz=78,SNR=13
MAW Mawson 77.74 202 eP P 12 41 28.2 +0.6
MAW pmax pmax
comp=Z,2.0nm,0.8s
BJT Baijiatuau 77.76 321 eP P 12 41 28.8 +0.6
comp=Z,14nm,0.8s
BJT Baijiatuau 77.76 321 eP P 12 41 28.8 +0.6
BJT pmax pmax
comp=Z,14nm,0.8s
XAN Xi'an 78.88 313 P P 12 41 35.0 +0.5
XAN pmax pmax
comp=Z,36nm,0.9s
XAN pmax pmax
comp=Z,100nm,4.1s
XAN LR LR
comp=Z,200nm,32.5s
XAN LR LR
comp=Z,150nm,36.9s
XAN LR LR
comp=Z,110nm,28.2s
XAN Xi'an 78.88 313 eP P 12 41 35.1 +0.5
comp=Z,29nm,0.8s
XAN Xi'an 78.88 313 eP P 12 41 35.1 +0.5
XAN pmax pmax
comp=Z,29nm,0.8s
CM31 Chiang Mai Arr 79.09 294 eP P 12 41 37.1 +1.1
comp=Z,29nm,0.9s
CMAR Chiang Mai Arr 79.09 294 P P 12 41 37.7 +1.7
comp=Z,17nm,0.9s,baz=134,slow=4.2,SNR=64
CMAR PP PP 12 44 39.5 +2.5
comp=Z,0.9nm,0.3s,baz=101,slow=6.6,SNR=4.3
CHTO Chiang Mai 79.25 295 eP P 12 41 37.8 +0.9
comp=Z,28nm,0.9s
CHTO Chiang Mai 79.25 295 eP P 12 41 37.8 +0.9
CHTO pmax pmax
comp=Z,28nm,0.9s
CD2 Chengdu 80.97 307 eP P 12 41 46.5 +0.6
HHC Hu-ho-hao-te 81.04 319 P P 12 41 47.8 +1.7
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,20nm,5.5s
ZEA Zeya 82.05 336 eP P 12 41 51.8 +0.9
ZEA pmax pmax
comp=Z,19nm,0.4s
SII Sitkinak Islan 82.25 19 eP P 12 41 52.0 +0.1
comp=Z,28nm,0.8s
OHAK Old Harbor 83.08 19 eP P 12 41 56.5 +0.3
LZH Lanzhou 83.50 312 eP P 12 42 00.8 +1.7
LZH pP pP 12 42 30.0 +1.9
LZH sP sP 12 42 40.5 +0.4
LZH pmax pmax
comp=Z,43nm,1.1s
KDAK Kodiak Island 83.75 19 P P 12 42 00.2 +0.6
comp=Z,16nm,0.9s,baz=245,slow=2.8,SNR=23
KDAK LR LR 13 10 43.9
comp=Z,34nm,21.9s,baz=155,slow=29
KDAK Kodiak Island 83.75 19 eP P 12 42 00.1 +0.4
comp=Z,42nm,1.2s
KDAK Kodiak Island 83.75 19 i P P 12 41 59.9 +0.3
SEY Seymchan 83.85 352 i P P 12 41 59.0 -1.0
SYO Syowa Base 84.18 196⇓ iP P 12 42 00.2 -1.6
SYO Syowa Base 84.18 196⇑ iPcP PcP 12 42 04.2 -1.2
SYO Syowa Base 84.18 196⇑ epP pP 12 42 29.4 -1.4
CNPM China Poot 85.58 19 eP P 12 42 08.6 -0.3
comp=Z,27nm,1.2s
PKM Mcpherson Peak 86.49 51 P P 12 42 15.0 +0.9
baz=243
KHMM Horse Mountain 86.64 44 eP P 12 42 15.4 +0.8
comp=Z,13nm,0.9s
O02D Mt. Diablo Mer 86.92 45 P P 12 42 17.3 +1.3
baz=240,SNR=9.7
WDC Whiskeytown Da 87.28 45 eP P 12 42 18.0 +0.4
comp=Z,19nm,1.5s
WDC Whiskeytown Da 87.28 45 eP P 12 42 18.0 +0.4
WDC pmax pmax
comp=Z,19nm,1.5s
RC01 Rabbit Creek A 87.28 19 eP P 12 42 17.9 +0.9
comp=Z,7.1nm,1.0s
N02D Trinity Center 87.36 45 P P 12 42 19.4 +1.3
baz=240,SNR=6.6
M02C Callahan 87.47 44 P P 12 42 19.7 +1.1
baz=240,SNR=10
CMB Columbia Colle 87.53 48 eP P 12 42 19.4 +0.5
comp=Z,4.6nm,0.8s
CMB Columbia Colle 87.53 48 eP P 12 42 19.4 +0.5
CMB pmax pmax
comp=Z,5.0nm,0.8s
AFDM Forest Hills D 87.56 47 eP P 12 42 19.1 +0.1
comp=Z,6.9nm,1.0s
K02D Willamette Mer 87.60 43 P P 12 42 20.1 +0.9
baz=240
O03E Paynes Creek 87.64 45 P P 12 42 19.7 +0.3
baz=241,SNR=6.0
J01E Myrtle Point 87.66 42 P P 12 42 20.3 +1.0
baz=240
YBH Yreka Blue Hor 87.73 44 eP P 12 42 20.6 +0.8
comp=Z,6.9nm,0.9s
YBH Yreka Blue Hor 87.73 44 eP P 12 42 20.7 +0.8
YBH pmax pmax
comp=Z,7.0nm,0.9s
BFSC Mount Baldy Ra 87.79 52 P P 12 42 20.6 +0.3
baz=244
ISA Isabella, Lake 87.82 51 eP P 12 42 21.1 +0.8
comp=Z,10nm,1.0s
ISA Isabella, Lake 87.82 51 eP P 12 42 21.2 +0.8
ISA pmax pmax
comp=Z,10.0nm,1.0s
ISA Isabella, Lake 87.82 51 P P 12 42 21.1 +0.8
baz=243,SNR=8.2
EDW2 Edwards Air Fo 87.82 52 P P 12 42 20.9 +0.5
baz=244
MURC Murrieta 87.86 53 P P 12 42 21.2 +0.6
baz=244
GTA Gaotai 87.91 313 ⇓P P 12 42 21.5 +0.7
GTA pP pP 12 42 51.0 +1.0
GTA sP sP 12 43 02.3 +0.3
GTA pmax pmax
comp=Z,16nm,1.1s
BILL Bilibino 87.91 359⇓ eP P 12 42 18.4 -1.5
BILL e*PP pP 12 42 48.8 -0.5
BILL e 12 45 43.7
BILL pmax pmax
comp=Z,12nm,1.7s
SHL Shillong 87.98 298 eP P 12 42 21.4 -0.1
comp=Z,13nm,0.9s
HUMO Hull Mountain 88.01 43 eP P 12 42 21.7 +0.7
comp=Z,10nm,0.8s
SONA0 Songino Array 88.06 323 eP P 12 42 21.9 +0.6
SONA0 ePKiKP PKiKP 12 47 22.0 -0.7
SONM Songino Array 88.06 323 P P 12 42 21.9 +0.6
comp=Z,8.9nm,0.9s,baz=137,slow=5.1,SNR=42
SONM pP pP 12 42 51.4 +0.8
comp=Z,2.1nm,0.8s,baz=158,slow=6.5,SNR=3.0
SONM PKiKP PKiKP 12 47 22.0 -0.7
comp=Z,0.7nm,0.6s,baz=93,slow=2.9,SNR=3.1
MONP2 Monument Peak 88.14 54 P P 12 42 23.1 +1.0
baz=245
I02D Swisshome 88.19 41 P P 12 42 23.3 +1.5
baz=240
L04D Klamath Falls 88.24 44 P P 12 42 22.8 +0.6
baz=241,SNR=7.3
MDPB Devils Postpil 88.27 49 eP P 12 42 23.1 +0.4
comp=Z,4.8nm,1.0s
IKP In-Ko-Pah, Jac 88.27 54 P P 12 42 23.2 +0.6
baz=245
LRMC Laurel Mtn Rad 88.31 51 P P 12 42 23.5 +0.7
baz=244
OMMB Old Mammoth Mi 88.31 49 eP P 12 42 23.4 +0.4
comp=Z,7.4nm,1.4s
SNAA Sanae 88.32 182 P P 12 42 21.3 -0.9
SNAA Sanae 88.32 182 PKiKP PKiKP 12 47 24.7 +2.1
SNAA Sanae 88.32 182 eP P 12 42 21.4 -0.8
comp=Z,38nm,1.3s
SNAA Sanae 88.32 182 eP PKiKP 12 47 24.8 +2.2
comp=Z,1.5nm,0.6s
SNAA Sanae 88.32 182 i P P 12 42 20.1 -2.1
M04C Macdoel 88.33 44 P P 12 42 23.3 +0.6
baz=241
BEKR Beckworth 88.41 46 eP P 12 42 23.5 +0.3
comp=Z,7.7nm,1.2s
WAKR Walker 88.41 48 eP P 12 42 23.6 +0.3
comp=Z,7.6nm,1.0s
PFO Pinyon Flats O 88.42 53 P P 12 42 23.8 +0.5
baz=245

MLAC Mammoth, Mammo 88.44 49 P P 12 42 24.1 +0.6
baz=243
CWC Cottonwood Cre 88.45 50 P P 12 42 24.1 +0.7
baz=244
DIB Dawson Inlet, 88.47 31 eP P 12 42 23.5 +0.6
comp=Z,5.7nm,0.8s
PNTR Pine Nut 88.57 47 eP P 12 42 24.7 +0.6
comp=Z,6.4nm,0.9s
SWSC Sam W. Stewart 88.64 54 P P 12 42 25.0 +0.8
baz=245
MPMC Manual Prospec 88.71 51 P P 12 42 25.3 +0.6
baz=244
YERR Yerington 88.77 48 eP P 12 42 25.2 +0.3
comp=Z,5.2nm,1.0s
J04D Umpqua Nationa 88.86 43 P P 12 42 26.0 +0.8
baz=241,SNR=6.6
GSC Goldstone, Bar 88.88 52 P P 12 42 26.2 +0.8
baz=244
VNA3 Neumayer Olymp 88.90 180 P P 12 42 23.9 -0.9
VNA3 Neumayer Olymp 88.90 180 PKiKP PKiKP 12 47 27.3 +3.8
BELC Belle Mtn. Jos 88.93 53 P P 12 42 26.6 +0.8
baz=245
I04A Tendick Farm, 88.94 42 P P 12 42 25.9 +0.5
baz=241,SNR=8.4
PAHR Pah Rah Range 89.00 47 eP P 12 42 26.4 +0.5
comp=Z,10nm,1.1s
H04D Lebanon 89.09 41 P P 12 42 26.9 +0.9
baz=240,SNR=7.1
G03D McMinnville, O 89.11 41 P P 12 42 27.1 +1.0
baz=240
RYN Ryan 89.11 48 eP P 12 42 27.0 +0.5
comp=Z,6.7nm,0.9s
NV01 Mina Array Sit 89.17 48 eP P 12 42 27.7 +0.8
NVAR Mina Array Bea 89.17 48 P P 12 42 27.7 +0.8
comp=Z,4.2nm,0.8s,baz=225,slow=8.3,SNR=37
NVAR pP pP 12 42 56.9 +0.9
comp=Z,4.0nm,0.8s,baz=227,slow=7.2,SNR=9.0
BC3 Big Chuckawall 89.19 54 P P 12 42 27.5 +0.6
baz=245
GRAC Grapevine Rang 89.21 50 P P 12 42 27.8 +0.9
baz=244
NV11 Mina Array Sit 89.28 48 eP P 12 42 27.6 +0.3
comp=Z,0.5nm,0.9s
FURC Furnace Creek, 89.34 51 P P 12 42 28.2 +0.9
baz=244
K05A Summer Lake 89.39 44 eP P 12 42 28.4 +0.7
comp=Z,11nm,0.8s
MOD Modoc Plateau 89.39 45 eP P 12 42 28.3 +0.5
comp=Z,8.4nm,0.8s
GLA Glamis 89.42 54 P P 12 42 29.1 +1.2
baz=246
J05D Fort Rock, OR 89.44 43 P P 12 42 28.8 +0.9
baz=241,SNR=14
VNA1 Neumayer--Stat 89.48 181 P P 12 42 26.9 -0.6
VNA1 Neumayer--Stat 89.48 181 PKiKP PKiKP 12 47 24.2 -0.2
GMRC Granite Mounta 89.51 53 P P 12 42 29.3 +0.8
baz=245
H04A Detroit Lake 89.51 42 eP P 12 42 28.2 +0.1
comp=Z,11nm,0.8s
SHOC Shoshone, Teco 89.53 51 P P 12 42 28.7 +0.3
baz=245
TUQ Turquoise Moun 89.59 52 P P 12 42 29.2 +0.4
baz=245
KVN Kaiserville 89.59 48 eP P 12 42 29.1 +0.3
comp=Z,7.9nm,0.9s
KVN Kaiserville 89.59 48 eP P 12 42 29.1 +0.3
KVN pmax pmax
comp=Z,8.0nm,0.9s
IRM Iron Mountain 89.64 53 P P 12 42 29.8 +0.9
baz=245
F04D Rainier, OR 89.69 40 P P 12 42 30.1 +1.3
baz=240
NLWA Neilton Lookou 89.84 39 eP P 12 42 30.6 +1.1
comp=Z,15nm,1.0s
PINE Pine Mountain 89.87 43 eP P 12 42 30.8 +0.8
comp=Z,22nm,0.8s
I05D Terrebonne, OR 89.88 42 P P 12 42 30.5 +0.7
baz=241
Y12C Blythe 89.94 54 P P 12 42 31.1 +0.8
baz=246
TPNV Topopah Spring 90.00 50 eP P 12 42 31.0 +0.3
comp=Z,9.0nm,0.9s
TPNV Topopah Spring 90.00 50 eP P 12 42 31.0 +0.3
TPNV pmax pmax
comp=Z,9.0nm,0.9s
TPNV Topopah Spring 90.00 50 P P 12 42 31.5 +0.8
baz=245
LDFC Landfair 90.05 53 eP P 12 42 31.4 +0.5
comp=Z,16nm,1.0s
113A Mohawk Valley, 90.12 55 eP P 12 42 31.8 +0.7
comp=Z,17nm,1.5s
E04D Cinebar 90.20 40 P P 12 42 32.0 +0.9
baz=240,SNR=6.3
D03D Eldon 90.37 39 P P 12 42 32.8 +0.9
baz=240,SNR=12
D04E Lakebay 90.38 39 P P 12 42 33.1 +1.2
baz=240
PDMCI Parker Dam,Lak 90.45 54 P P 12 42 33.3 +0.6
baz=246
WRAK Wrangell Islan 90.48 28 eP P 12 42 32.5 +0.4
comp=Z,13nm,0.9s
214A Organ Pipe Nat 90.54 56 P P 12 42 33.7 +0.6
baz=247
F05D White Salmon 90.54 41 P P 12 42 33.5 +0.7
baz=241
SHPR Sheep Range 90.60 51 eP P 12 42 34.4 +0.9
comp=Z,5.8nm,1.1s
HDA Harding Lake 90.68 17 P P 12 42 34.3 +1.3
baz=220
PGC Sidney 90.72 38 eP P 12 42 34.3 +0.8
comp=Z,14nm,0.9s
WVOR Wild Horse Val 90.74 45 eP P 12 42 33.3 -0.6
comp=Z,8.9nm,1.0s
WVOR Wild Horse Val 90.74 45 eP P 12 42 33.3 -0.6
WVOR pmax pmax
comp=Z,9.0nm,1.0s
TCOL CIGO, UAF Yank 90.78 17 P P 12 42 35.0 +1.6
baz=220
COLA College 90.78 17 eP P 12 42 33.8 +0.3
comp=Z,9.7nm,1.1s
COLA College 90.78 17 i P P 12 42 31.7 -1.7
COLA pmax pmax
comp=Z,4.0nm,1.0s
BMN Battle Mountai 90.81 47 eP P 12 42 34.9 +0.5
comp=Z,5.6nm,1.0s
BMN Battle Mountai 90.81 47 eP P 12 42 34.9 +0.5
BMN pmax pmax
comp=Z,6.0nm,1.0s
D05A Enumclaw 90.85 39 eP P 12 42 35.1 +0.9
comp=Z,32nm,1.3s
I07A Izee 90.92 43 eP P 12 42 35.2 +0.4
comp=Z,11nm,1.0s
W13A Hualapai Mount 90.97 53 eP P 12 42 35.6 +0.3
comp=Z,4.7nm,1.1s
ILAR Eielson Array 90.97 17 P P 12 42 32.6 -1.7
comp=Z,1.6nm,0.7s,baz=234,slow=5.3,SNR=21
ILAR pP pP 12 43 03.1 -0.5
comp=Z,1.3nm,0.8s,baz=229,slow=5.5,SNR=3.7
ILAR PKKP PKKPdf 12 59 56.9 -1.0
comp=Z,0.3nm,0.5s,baz=295,slow=1.5,SNR=5.2
R11A Troy Canyon, C 91.06 49 eP P 12 42 35.7 +0.1
comp=Z,3.6nm,1.0s
R11A Troy Canyon, C 91.06 49 P P 12 42 35.9 +0.2
baz=245,SNR=6.1
ZAK Zakamensk 91.14 324 eP P 12 42 35.1 -0.5
ZAK pmax pmax
comp=Z,11nm,1.4s
A04D Lummi Island 91.18 38 P P 12 42 36.6 +0.9
baz=240,SNR=6.8
J08A Circle Bar Ran 91.26 44 eP P 12 42 36.4 +0.1
comp=Z,8.7nm,0.8s
B05A Bryant 91.31 38 P P 12 42 36.8 +0.6
baz=241,SNR=8.9
TLY Talaya 91.61 325 i P P 12 42 37.1 -0.5
LTY Liberty 91.67 40 eP P 12 42 38.5 +0.4
comp=Z,3.1nm,0.9s
G08A Pilot Rock 91.82 42 eP P 12 42 39.6 +0.7
comp=Z,6.6nm,0.8s
WHY Whitehorse 92.05 24 eP P 12 42 39.3 -0.3
comp=Z,5.0nm,0.8s
LCMT Little Creek M 92.21 51 eP P 12 42 41.2 +0.2
comp=Z,3.7nm,0.9s
TUC Tucson 92.26 56 eP P 12 42 41.7 +0.5
comp=Z,5.5nm,1.0s
TUC Tucson 92.26 56 eP P 12 42 41.7 +0.5
TUC pmax pmax
comp=Z,5.0nm,1.0s
TUC Tucson 92.26 56 P P 12 42 41.9 +0.7

baz=248
CCUT Cedar City 92.34 51 eP P 12 42 41.9 +0.3
comp=Z,5.4nm,1.2s
X16A Lo Mia Camp, P 92.55 54 eP P 12 42 43.8 +1.2
comp=Z,5.0nm,0.9s
SZCU Shurtz Canyon 92.56 51 eP P 12 42 43.1 +0.4
comp=Z,8.6nm,1.4s
EGAK Eagle 92.65 19 eP P 12 42 41.7 -0.4
comp=Z,4.1nm,0.7s
BMO Blue Mountains 92.67 43 eP P 12 42 42.7 -0.2
comp=Z,1.8nm,1.0s
BMO Blue Mountains 92.67 43 eP P 12 42 42.7 -0.2
BMO pmax pmax
comp=Z,2.0nm,1.0s
DLBC Dease Lake 92.68 27 eP P 12 42 42.7 +0.2
comp=Z,12nm,1.1s
U15A North Rim 92.69 52 eP P 12 42 43.5 +0.2
comp=Z,3.5nm,1.0s
DAWY Dawson 92.71 20 eP P 12 42 41.8 -0.7
comp=Z,3.3nm,1.0s
WUAZ Wupatki 93.02 53 eP P 12 42 45.0 +0.2
comp=Z,3.7nm,0.8s
WUAZ Wupatki 93.02 53 P P 12 42 45.7 +0.9
baz=248
MTPU Mount Pierson 93.39 51 eP P 12 42 47.3 +0.7
comp=Z,3.3nm,0.9s
HLID Hailey 94.02 45 P P 12 42 49.9 +0.7
baz=246
HVU Hansel Valley 94.42 47 eP P 12 42 51.5 +0.5
comp=Z,2.5nm,1.0s
HVU Hansel Valley 94.42 47 eP P 12 42 51.5 +0.5
HVU pmax pmax
comp=Z,3.0nm,1.0s
TMUT Trail Mountain 94.58 50 eP P 12 42 52.5 +0.5
comp=Z,1.7nm,0.8s
EPYK Eagle Plains 95.09 19 eP P 12 42 52.8 -0.5
comp=Z,8.8nm,1.1s
EPYK Eagle Plains 95.09 19 P P 12 42 53.7 +0.4
baz=230
MNTX Cornudas Mount 96.33 59 P P 12 43 00.1 +0.4
baz=250
TASM ASL Pad, Albuq 96.57 55 P P 12 43 01.3 +0.3
baz=250
TASM ASL Pad, Albuq 96.57 55 P P 12 43 01.6 +0.5
baz=250
ANMO Albuquerque 96.57 55 i P P 12 42 59.8 -1.2
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 96.57 55 P P 12 43 01.5 +0.4
baz=250
BOZ Bozeman (W) 96.64 44 P P 12 43 02.5 +1.5
baz=248
PD31 Pinedale Array 97.01 47 eP Pdif 12 43 03.2 +0.2
comp=Z,3.0nm,1.4s
PDAR Pinedale Array 97.01 47 P P 12 43 02.4 -0.5
comp=Z,0.3nm,0.7s,baz=219,slow=6.9,SNR=2.8
PDAR pP pP 12 43 32.3 +0.1
comp=Z,0.8nm,0.9s,baz=116,slow=3.4,SNR=2.4
PDAR LR LR 13 28 07.7
comp=Z,16nm,18.1s,baz=345,slow=36
INK Inuvik 97.27 18 P P 12 43 02.6 -0.5
comp=Z,2.0nm,0.6s,baz=208,slow=2.7,SNR=4.4
INK Inuvik 97.27 18 eP P 12 43 02.9 -0.2
comp=Z,4.1nm,0.9s
INK Inuvik 97.27 18 eP P 12 43 02.9 -0.2
INK pmax pmax
comp=Z,4.0nm,0.9s
WMQ Urumqi 97.99 314 eP Pdif 12 43 08.5 +1.4
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ pmax pmax
comp=Z,65nm,4.7s
WMQ LR LR
comp=Z,120nm,22.5s
WMQ LR LR
comp=Z,220nm,25.3s
WMQ LR LR
comp=Z,100nm,22.3s
YKA Yellowknife Ar 101.31 27 P Pdif 12 43 21.0 -0.3
comp=Z,0.4nm,0.5s,baz=257,slow=4.7,SNR=12
YKA pP pP 12 43 51.1 +0.3
comp=Z,0.5nm,0.7s,baz=253,slow=4.5,SNR=5.0
YKA PKiKP PKiKP 12 47 44.4 -0.7
comp=Z,0.1nm,0.5s,baz=246,slow=1.4,SNR=4.6
YKA Yellowknife Ar 101.31 27 P Pdif 12 43 21.0 -0.3
YKB5 Yellowknife Ar 101.31 27 ePdif Pdif 12 43 21.0 -0.3
YKB5 ePKiKP PKiKP 12 47 44.4 -0.7
MK32 Makanchi Array 102.53 315 ePdif Pdif 12 43 27.7 +0.5
MKAR Makanchi Array 102.53 315 P Pdif 12 43 27.7 +0.5
comp=Z,1.1nm,0.7s,baz=104,slow=6.1,SNR=9.2
MKAR PP PP 12 47 42.7 +0.8
comp=Z,0.6nm,0.7s,baz=125,slow=7.4,SNR=4.3
MKAR PKKPbc PKKPbc 12 59 25.6 -3.1
comp=Z,0.4nm,0.5s,baz=269,slow=3.5,SNR=4.8
ZALV Zalesovo Beam 102.96 323 P Pdif 12 43 28.7 -0.1
comp=Z,0.7nm,0.6s,baz=112,slow=1.6,SNR=4.4
ZAA1 Zalesovo Array 102.96 323 ePdif Pdif 12 43 28.7 -0.1
KURBB Kurchatov Arra 105.88 319 Pdiff Pdif 12 43 43.5 +1.6
comp=Z,0.3nm,0.4s,baz=107,slow=2.5,SNR=2.9
ARU Arti 118.08 324 PKP PKPdf 12 48 15.5 -1.3
comp=Z,1.4nm,0.3s,baz=251,slow=4.8,SNR=7.7
GEYT Alibeck 118.70 303 PKP PKPdf 12 48 17.2 -1.4
comp=Z,1.2nm,0.5s,baz=9.5,slow=1.8,SNR=3.6
AKTO Aktyubinsk 118.88 317 PKP PKPdf 12 48 17.6 -0.9
comp=Z,2.3nm,0.8s,baz=24,slow=1.1,SNR=6.6
ARA0 ARCESS Array S 125.96 345 ePKPdf PKPdf 12 48 30.7 -0.9
ARCES ARCESS Array B 125.96 345 PKP PKPdf 12 48 30.7 -0.9
comp=Z,2.2nm,0.4s,baz=87,slow=2.3,SNR=33
ARCES pPKP pPKPdf 12 49 03.0 +0.8
comp=Z,0.7nm,0.5s,baz=93,slow=2.4,SNR=1.7
BDFB Brasilia 128.79 131 PKP PKPdf 12 48 37.9 -0.8
comp=Z,2.2nm,0.4s,baz=313,slow=2.5,SNR=4.8
BDFB Brasilia 128.79 131 ePKIKP PKPdf 12 48 38.0 -0.8
GNI Garni 129.07 306 i PKIKP PKPdf 12 48 38.3 -0.3
KIV Kislovodsk 130.03 311 ePKIKP PKPdf 12 48 39.2 -1.0
KIV pmax pmax
comp=Z,13nm,1.0s
OBN Obninsk 130.35 327⇓ ePKIKP PKPdf 12 48 40.2 -0.1
OBN pmax pmax
comp=Z,7.0nm,1.2s
OBN pmax pmax
comp=Z,5.0nm,0.7s
BCA Borcka 131.24 308⇑ iP PKPdf 12 48 42.9 +0.4
FIA0 FINESS Array S 131.48 338 ePKPdf PKPdf 12 48 41.9 -0.4
FIA0 eSKPbc SKPbc 12 51 55.6 -1.5
FIA0 FINESS Array S 131.48 338 ePKIKP PKPdf 12 48 41.9 -0.4
FINES FINESS Array B 131.48 338 PKhKP PKPpre 12 48 37.3
comp=Z,1.3nm,0.5s,baz=64,slow=3.2,SNR=7.6
FINES PKP PKPdf 12 48 41.9 -0.4
comp=Z,1.3nm,0.5s,baz=54,slow=2.5,SNR=8.6
FINES SKPbc SKPbc 12 51 55.6 -1.5
comp=Z,1.5nm,0.8s,baz=42,slow=2.3,SNR=4.3
TSUM Tsumeb 132.22 217 ePKPdf PKPdf 12 48 44.9 -0.3
NB200 NORSAR Array S 136.34 345 ePKPdf PKPdf 12 48 51.4 -0.1
NOA NORSAR Array B 136.34 345 PKP PKPdf 12 48 51.4 -0.1
comp=Z,1.1nm,0.7s,baz=28,slow=4.3,SNR=5.9
BR101 Keskin Array S 137.54 307 ePKPdf PKPdf 12 48 55.1 +0.6
BRTR Keskin Array B 137.54 307 PKP PKPdf 12 48 55.1 +0.5
comp=Z,1.1nm,0.8s,baz=160,slow=3.9,SNR=5.1
BRTR PP PP 12 51 43.8 +1.9
comp=Z,0.3nm,0.4s,baz=124,slow=6.1,SNR=4.1
BRTR Keskin Array B 137.54 307 c iPKIKP PKPdf 12 48 55.0 +0.5
BRTR pmax pmax
comp=Z,2.0nm,1.0s
PETR Petresti 139.87 318⇓ iP PKiKP 12 49 13.6 +13
VRI Vrincioaia 140.12 319⇑ iP PKPdf 12 48 55.5 -3.3
VRI Vrincioaia 140.12 319 ⇑PKIKP PKPdf 12 48 55.6 -3.3
BURAR Bucovina Array 140.17 322⇑ iP PKPdf 12 48 52.0 -7.0
DOPR Dopca 140.90 320⇓ iP PKPdf 12 48 54.2 -6.1
VOIR 141.34 319⇑ iP PKPdf 12 48 57.9 -3.3
VOIR 141.36 319 ⇑PKIKP PKPdf 12 48 57.9 -3.3
DRGR 142.05 322⇓ iP PKPdf 12 48 55.8 -6.6
LOT Lotru 142.14 320⇑ iP PKPdf 12 48 57.6 -5.1
GZR Gura Zlata 142.76 320⇑ iP PKPdf 12 49 00.1 -3.6
KDZ Kurdzhali 142.82 313 i P PKPdf 12 48 58.0 -5.8
MORC Moravsky Berou 142.94 330 ePKP PKPdf 12 49 00.0 -3.8
SIRR Siria 142.95 322⇓ iP PKPdf 12 49 01.0 -2.9
CHVC Chvalec 143.05 332 ePKP PKPbc 12 49 00.6 -0.5
DPC Dobruska-Polom 143.10 331 ePKIKP PKPbc 12 49 00.9 -0.4
DPC Dobruska-Polom 143.10 331 ePKP PKPbc 12 49 00.9 -0.4
UPC Upice 143.13 332 ePKIKP PKPbc 12 49 01.2 -0.1
UPC Upice 143.13 332 ePKP PKPbc 12 49 01.2 -0.1
VYHS Vyhne 143.15 327 ePKP PKPbc 12 49 01.4 0.0
HERR Herculane 143.25 320⇓ iP PKPbc 12 49 01.2 -0.6
PGB Panagyurishte 143.27 315 i P PKPab 12 49 01.1 +0.4
RZN Rozhen 143.28 314 i P PKPab 12 49 01.4 +0.4

BZS Buzias 143.33 321 ⇑ *i*P PKPbc 12 49 01.7 -0.3
BZS Buzias 143.33 321 ⇑PKIKP PKPbc 12 49 01.7 -0.3
JAVC Velka Javorina 143.49 328 *e*PKP **PKPdf 12 49 04.3 -0.6**
VRAC Vranov 143.71 330 ⇓ *i*P PKPbc 12 49 03.0 0.0
VRAC Vranov 143.71 330 ⇓PKIKP PKPbc 12 49 03.0 0.0
VRAC Vranov 143.71 330 *e*PKP PKPbc 12 49 02.9 -0.1
MDVR Moldovita 143.73 320 ⇑ *i*P PKPbc 12 49 03.0 -0.3
BANR Banloc 143.75 321 ⇑ *i*P **PKPdf 12 49 05.4 +0.1**
PVCC Panska Ves 143.75 333 *e*PKIKP PKPbc 12 49 03.1 +0.1
PVCC Panska Ves 143.75 333 *e*PKP PKPbc 12 49 03.1 +0.1
BRG Berggiesshubel 143.75 334 *i* PKP PKPab 12 49 02.7 +0.4
comp=Z,29nm,1.0s
BRG *e*pPKP pPKPdf 12 49 34.1 -1.6
comp=Z,8.1nm,1.1s
CLL Collm 143.80 335 *e*PKPpre PKPab 12 49 01.5 -0.9
CLL Collm 143.80 335 ⇓ *i*PKPdf PKPab 12 49 01.3 -1.1
comp=Z,24nm,1.3s
CLL Collm 143.80 335 *e*PKIKP PKPab 12 49 01.5 -0.9
VTS Vitosha 143.85 316 *e*PKPpre PKPbc 12 49 03.5 -0.3
VTS Vitosha 143.85 316 P PKPbc 12 49 03.8 0.0
VTS Vitosha 143.85 316 ⇓ *i*P PKPbc 12 49 04.1 +0.3
VTS Vitosha 143.85 316 ⇓PKIKP PKPbc 12 49 04.1 +0.3
VTS Vitosha 143.85 316 *i* P PKPbc 12 49 03.7 -0.1
KRUC Moravsky 143.97 330 *e*PKP PKPbc 12 49 03.6 -0.2
MMB Musomiste 143.99 314 *i* P PKPbc 12 49 03.9 -0.2
NVR Nevrokopi 144.00 314 P **PKPab 12 49 03.6 0.0**
MODS Modra-Piesok 144.01 324 *e*PKP **PKPdf 12 49 05.0 -0.7**
PRU Pruhonice 144.16 332 *e*PKIKP **PKPab 12 49 03.6 -0.2**
PRU Pruhonice 144.16 332 *e*PKP **PKPab 12 49 03.6 -0.2**
TREC Trest 144.23 331 *e*PKIKP **PKPab 12 49 04.3 +0.1**
TREC Trest 144.23 331 *e*PKP **PKPab 12 49 04.3 +0.1**
SRS Serrai 144.29 314 P **PKPab 12 49 04.2 -0.5**
KKB Krupnik 144.30 315 *i* P **PKPab 12 49 04.8 +0.1**
OUR Ouranopolis 144.35 312 *e*PKPdf **PKPab 12 49 04.5 -0.3**
OUR Ouranopolis 144.35 312 P **PKPab 12 49 04.5 -0.3**
OUR Ouranopolis 144.35 312 *e*PKIKP **PKPab 12 49 04.5 -0.3**
APE Apeiranthos 144.40 306 ⇑ *i*P **PKPab 12 49 05.0 -0.2**
APE Apeiranthos 144.40 306 ⇑PKIKP **PKPab 12 49 05.0 -0.2**
FRGS Fruska Gora 144.65 322 ⇓ *i*P PKPbc 12 49 06.1 +0.1
SANT Santorini 144.67 305 *e*PKPdf **PKPab 12 49 05.2 -1.0**
SANT Santorini 144.67 305 ⇑ *i*P **PKPab 12 49 04.6 -1.7**
MORH Mrgy, Hungar 144.68 324 ⇓ *i*P **PKPab 12 49 05.9 0.0**
IOSP Ios Island 144.69 306 P **PKPab 12 49 05.0 -1.3**
EDMD Edmundbyers 144.73 351 *e*P **PKPab 12 49 05.1 -0.7**
NKC Novy Kostel 144.86 334 *e*PKIKP PKPbc 12 49 06.8 +0.3
NKC Novy Kostel 144.86 334 *e*PKP PKPbc 12 49 06.8 +0.3
NKC *e*pPKP pPKPdf 12 49 36.5 -1.3
GDLE Glaisdale, N Y 144.95 350 *e*P PKPbc 12 49 06.5 -0.1
LAST Lasithi 145.00 303 P PKPbc 12 49 07.5 0.0
CONA Conrad Observa 145.01 329 *i* PKPdf **PKPdf 12 49 07.6 0.0**
comp=Z,53nm,0.7s,SNR=33
CONA *i* pPKPdf **pPKPdf 12 49 39.4 +1.2**
comp=Z,33nm,1.4s
GAL1 Galloway 145.01 354 *e*P **PKPbc 12 49 06.7 0.0**
KESW Keswick, Cumbr 145.11 352 *e*P **PKPbc 12 49 06.9 -0.2**
DIVS Divibare 145.13 320 ⇓ *i*P **PKPbc 12 49 07.7 0.0**
TEKS Tekeris 145.16 321 *e*P **PKPab 12 49 07.8 0.0**
KHC Kasperske Hory 145.21 332 *e*PKPbc **PKPbc 12 49 07.5 -0.3**
KHC Kasperske Hory 145.21 332 *e*PKIKP **PKPbc 12 49 07.4 -0.3**
KHC *e* 12 49 38.5
KHC Kasperske Hory 145.21 332 *e*PKP **PKPbc 12 49 07.4 -0.3**
KHC *e*pPKP **pPKPdf 12 49 38.5 +0.1**
XOR Xorichti 145.30 311 P **PKPbc 12 49 06.9 -1.4**
PTL Penteli 145.31 308 *e*PKPdf **PKPdf 12 49 07.5 -0.8**
PTL Penteli 145.31 308 P **PKPdf 12 49 07.5 -0.8**
GEC2 GERESS Array S 145.37 332 *e*PKPdf **PKPdf 12 49 08.1 -0.1**
GEC2 GERESS Array S 145.37 332 *e*PKP2 **PKPdf 12 49 08.1 -0.1**
GERES GERESS Array B 145.37 332 PKPbc **PKPdf 12 49 08.2 -0.1**
comp=Z,27nm,0.7s,baz=46,slow=3.9,SNR=206
GERES pPKP pPKPab 12 49 37.6 -0.7
comp=Z,7.9nm,0.8s,baz=35,slow=4.9,SNR=5.5
ATHU Athens Univers 145.40 308 *e*PKPdf **PKPdf 12 49 07.5 -1.0**
ATHU Athens Univers 145.40 308 P **PKPdf 12 49 07.5 -1.0**
VLY Voula,Athens 145.44 308 *e*PKPdf **PKPdf 12 49 07.5 -1.0**
VLY Voula,Athens 145.44 308 P **PKPdf 12 49 07.5 -1.0**
LIT Litokhoron 145.48 313 *e*PKPdf **PKPdf 12 49 08.1 -0.4**
LIT Litokhoron 145.48 313 P **PKPdf 12 49 07.8 -0.8**
LIT Litokhoron 145.48 313 *e*PKP2 **PKPdf 12 49 08.1 -0.4**
HPK Haverah Park 145.53 351 *e*P **PKPdf 12 49 07.6 -0.5**
IOMK Kirk Michael 145.60 354 *e*P **PKPdf 12 49 07.3 -0.9**
BBLS Lazići 145.62 320 ⇓ *i*P **PKPbc 12 49 09.4 +0.2**
ARSA Arzberg 145.64 328 *i* PKPab **PKPbc 12 49 09.1 0.0**
comp=Z,28nm,1.0s,SNR=12
ARSA *i* pPKPab pPKPab 12 49 41.1 +1.7
comp=Z,10nm,0.9s
WIM Isle of Man 145.72 354 *e*P **PKPdf 12 49 08.2 -0.3**
HAPS Han Pijesak,BI 145.76 321 *e*P **PKPdf 12 49 09.0 0.0**
RUDO Rudo 145.77 320 *e*P **PKPdf 12 49 09.0 +0.1**
GRA1 Grafenberg Arr 145.78 335 *e*PKPdf **PKPbc 12 49 09.2 -0.2**
GRF Grafenberg Arr 145.78 335 *e*PKP2 **PKPbc 12 49 09.2 -0.2**
GRFO Grafenberg 145.78 335 *e*PKPdf **PKPbc 12 49 09.5 +0.1**
MOA Molln 145.83 330 *i* PKPab **PKPbc 12 49 09.6 0.0**
comp=Z,24nm,0.6s,SNR=23
MOA *i* pPKPab pPKPab 12 49 41.5 +1.5
comp=Z,20nm,0.9s
FNA Florina 145.94 314 *e*PKPdf **PKPbc 12 49 10.0 -0.3**
AGG Agios Georgios 146.05 311 *e*PKPdf **PKPbc 12 49 09.3 -0.2**
AGG Agios Georgios 146.05 311 *e*PKP2 **PKPdf 12 49 09.3 -0.2**
LBWR Ladybower, Pea 146.08 351 *e*P **PKPdf 12 49 09.5 +0.4**
PHP Peshkopia 146.12 316 P **PKPbc 12 49 10.3 -0.5**
SOKA Soboth 146.28 328 *i* PKPbc **PKPbc 12 49 10.5 -0.6**
comp=Z,12nm,0.6s,SNR=9.1
SOKA *i* pPKPab pPKPab 12 49 42.5 +0.6
comp=Z,18nm,1.3s
UPM Unac-Piva 146.29 320 *e*P **PKPdf 12 49 10.5 +0.5**
WACR West Acre 146.31 348 *e*P **PKPbc 12 49 10.4 -0.5**
BLY Banja Luka 146.39 323 *e*PKPdf **PKPbc 12 49 10.7 -0.6**
BLY Banja Luka 146.39 323 ⇑ *i*P **PKPbc 12 49 11.4 0.0**
BLY Banja Luka 146.39 323 ⇓ *i*P **PKPbc 12 49 11.4 0.0**
WME Myndd Eilian 146.42 353 *e*P **PKPdf 12 49 10.2 +0.6**
PDG Podgorica 146.49 318 ⇓ *i*P **PKPbc 12 49 11.6 -0.1**
PDG Podgorica 146.49 318 ⇓ *i*P **PKPbc 12 49 11.3 -0.4**
TTG Podgorica 146.49 318 *e*PKPdf **PKPdf 12 49 10.7 +0.6**
TTG Podgorica 146.49 318 *e*PKP2 **PKPdf 12 49 10.7 +0.6**
WLF1 Llynfaes 146.54 353 *e*P **PKPbc 12 49 10.8 -0.7**
KLV Kalavryta, Ach 146.57 309 P **PKPbc 12 49 11.6 -0.6**
YRC Rhoscolyn 146.60 354 *e*P **PKPdf 12 49 10.6 +0.7**
CRES Cresnjev 146.63 326 ⇓ *i*P **PKPbc 12 49 11.7 -0.4**
OBKA Obir 146.64 328 *i* PKPbc **PKPbc 12 49 11.4 -0.8**
comp=Z,11nm,0.7s
OBKA *i* pPKPab pPKPab 12 49 44.2 +1.0
comp=Z,4.4nm,0.6s
CWF Charnwood Fore 146.65 350 *e*P **PKPbc 12 49 11.1 -0.7**
YLL Llanberis 146.66 353 *e*P **PKPbc 12 49 11.4 -0.4**
TIR Tirane 146.66 316 *e*PKPdf **PKPbc 12 49 11.6 -0.6**
TIR Tirane 146.66 316 ⇑ *i*P **PKPbc 12 49 12.2 -0.1**
TIR Tirane 146.66 316 ⇑PKP2 **PKPbc 12 49 12.2 -0.1**
DRME Dracevica, Mon 146.67 318 ⇓ *i*P **PKPbc 12 49 11.6 -0.7**
BRT Bratogost 146.68 320 ⇓ *i*P **PKPbc 12 49 11.7 -0.8**
FOEL Foel Wylfa 146.79 352 *e*P **PKPbc 12 49 11.7 -0.5**
BEBN Eben Emael 146.81 341 PKPbc **PKPbc 12 49 11.6 -0.8**
KBA Koelnbreinsper 146.82 330 *i* PKPbc **PKPdf 12 49 11.7 +0.9**
comp=Z,21nm,1.1s,SNR=9.9
KBA *i* pPKPbc pPKPab 12 49 43.7 -0.3
comp=Z,15nm,0.9s
MEM Membach 146.88 341 PKPbc **PKPbc 12 49 12.3 -0.3**
LLW Llanuwychllyn 146.89 352 *e*P **PKPbc 12 49 11.6 -0.9**
TREB Trebinje 146.90 319 *e*P **PKPbc 12 49 12.1 -0.8**
HCY Herceg Novi 146.96 319 *e*P **PKPbc 12 49 12.3 -0.8**
LJU Ljubljana 146.97 327 ⇓ *i*P **PKPbc 12 49 12.6 -0.4**
MYKA Terra Mystica 147.00 329 *i* PKPbc **PKPdf 12 49 12.0 +1.0**
comp=Z,15nm,0.6s,SNR=8.1
MYKA *i* pPKPdf pPKPbc 12 49 42.7 -0.7
comp=Z,3.9nm,0.7s
BSTI Sart Tilman 147.03 341 PKPbc **PKPbc 12 49 12.5 -0.5**
RLS Riolos of Patr 147.06 310 P **PKPbc 12 49 13.6 +0.1**
ITM Ithomi 147.06 308 *e*PKPdf **PKPdf 12 49 12.4 +1.1**
BHOU Houvegnez 147.10 340 PKPbc **PKPbc 12 49 13.2 -0.1**
UCC Uccle 147.20 343 PKPbc **PKPbc 12 49 12.8 -0.6**
STON Ston 147.20 320 ⇓ *i*P **PKPdf 12 49 12.5 +1.2**
IGT Igoumenitsa 147.22 313 *e*PKPdf **PKPbc 12 49 13.3 -0.6**
IGT Igoumenitsa 147.22 313 P **PKPbc 12 49 13.3 -0.6**
IGT Igoumenitsa 147.22 313 *e*PKP2 **PKPbc 12 49 13.3 -0.6**
CEY Cerknica 147.23 327 ⇓ *i*P **PKPbc 12 49 13.3 -0.5**
BCLA Clavier 147.26 341 PKPbc **PKPbc 12 49 12.9 -0.7**
STU Stuttgart 147.31 336 *e*PKPdf **PKPbc 12 49 13.3 -0.5**
STU Stuttgart 147.31 336 *e*PKP2 **PKPbc 12 49 13.3 -0.5**
LKD2 Lefkada island 147.33 312 P **PKPbc 12 49 14.1 -0.2**
BGES Gesves 147.35 341 PKPbc **PKPbc 12 49 13.3 -0.5**
BSKQ Steenkerk 147.41 343 PKPbc **PKPbc 12 49 13.8 -0.2**
WATA Walderalm 147.44 332 *i* PKPbc **PKPbc 12 49 13.7 -0.8**
comp=Z,9.8nm,0.6s,SNR=9.9
ABTA Abfaltersbach 147.45 330 *i* PKPbc **PKPbc 12 49 13.3 -1.1**
comp=Z,21nm,0.7s,SNR=14
ABTA *i* pPKPbc **pPKPbc 12 49 44.9 +0.2**
comp=Z,7.7nm,0.7s
WTTA Wattenberg 147.47 332 *i* PKPbc **PKPbc 12 49 14.2 -0.4**
comp=Z,22nm,0.8s,SNR=12
WTTA *i* pPKPbc **pPKPab 12 49 46.1 -0.5**
comp=Z,27nm,1.3s
SNF Seneffe 147.48 342 PKPbc **PKPbc 12 49 13.9 -0.3**
BMRD Maredsous 147.52 342 PKPbc **PKPbc 12 49 13.9 -0.4**
MCH1 Michaelchurch 147.63 351 *e*P **PKPbc 12 49 13.6 -1.0**
MOTA Moosalm 147.65 332 *i* PKPbc **PKPbc 12 49 14.4 -0.6**
comp=Z,28nm,0.7s,SNR=24
MOTA *i* pPKPbc **pPKPab 12 49 46.4 -0.8**
comp=Z,12nm,0.8s
WLF Walferdange 147.65 340 *e*PKPbc **PKPbc 12 49 15.0 +0.3**
WLF Walferdange 147.65 340 PKPbc **PKPbc 12 49 15.1 +0.4**
RETA Reutte 147.69 333 *i* PKPbc **PKPbc 12 49 14.5 -0.5**
comp=Z,12nm,0.6s
RETA *i* pPKPbc **pPKPbc 12 49 46.1 +0.8**
comp=Z,6.5nm,0.6s
SQTA Sankt Quirin 147.70 332 *i* PKPbc **PKPbc 12 49 14.7 -0.4**
comp=Z,39nm,0.6s,SNR=19
SQTA *i* pPKPbc **pPKPbc 12 49 45.5 +0.1**
comp=Z,14nm,0.6s
DOU Dourbes 147.76 342 ⇓PKPbc **PKPbc 12 49 14.8 -0.2**
MONM Monmouth 147.76 351 *e*P **PKPbc 12 49 13.8 -1.1**
RSBS Rosebush, Pemb 147.89 353 *e*P **PKPbc 12 49 13.9 -1.4**
SWN1 Swindon 147.92 350 *e*P **PKPbc 12 49 14.8 -0.5**
BFO Black Forest 148.01 336 *e*PKPdf **PKPdf 12 49 13.7 +1.2**
BFO Black Forest 148.01 336 *i* PKP2 **PKPbc 12 49 15.4 -0.4**
WOL Wolverton 148.01 349 *e*P **PKPbc 12 49 14.8 -0.8**
FETA Feichten 148.06 332 *i* PKPbc **PKPbc 12 49 15.8 -0.3**
comp=Z,29nm,0.7s,SNR=18
FETA *i* pPKPbc **pPKPbc 12 49 46.7 +0.2**
comp=Z,10nm,0.6s
DAVA Damuels 148.22 333 *i* PKPbc **PKPbc 12 49 16.1 -0.5**
comp=Z,17nm,0.7s,SNR=8.5
ECH Echery 148.54 337 *e*PKPdf **PKPdf 12 49 15.1 +1.7**
ECH Echery 148.54 337 *e*PKIKP **PKPdf 12 49 15.1 +1.7**
FUORN Ofenpass-Fuorn 148.57 332 *e*PKPbc **PKPbc 12 49 17.6 0.0**
TUE Stuetta 149.09 333 *e*PKPbc **PKPbc 12 49 18.6 -0.2**
CCA1 Carmenellis 149.69 353 *e*P **PKPbc 12 49 19.1 -0.8**
TIP Timpagrande 149.81 315 *e*PKPbc **PKPbc 12 49 20.2 -0.4**
TIP Timpagrande 149.81 315 ⇑ *i*P **PKPbc 12 49 21.0 +0.3**
SENIN Lac Senin/Sane 150.02 335 *e*PKPbc **PKPbc 12 49 20.6 -0.5**
AQU L'Aquila 150.03 323 *e*PKPbc **PKiKP 12 49 21.5 -0.4**
AQU *e*PKPab **PKPab 12 49 28.6 +1.4**
AQU L'Aquila 150.03 323 *e*PKP2 **PKiKP 12 49 21.5 -0.4**
JSA Saint Aubin 150.22 349 *e*P **PKPbc 12 49 20.7 -0.5**
CLF Chambon-Foret 150.29 343 *e*PKPbc **PKPbc 12 49 21.5 +0.1**
BNI Bardonecchia 151.34 334 *e*PKPbc **PKPbc 12 49 23.9 -0.3**
BNI Bardonecchia 151.34 334 *e*PKIKP **PKPbc 12 49 23.9 -0.3**
SSB Saint Sauveur 151.98 337 *e*PKPbc **PKPbc 12 49 25.0 -0.5**
SSB Saint Sauveur 151.98 337 *e*PKIKP **PKPbc 12 49 25.0 -0.5**
KEST Kesra 156.63 316 PKPab **PKPab 12 49 55.6 +0.3**
comp=Z,11nm,1.0s,baz=196,slow=1.8,SNR=6.1
ESDC Sonseca Array 159.70 345 PKPab **PKPab 12 50 07.5 -0.8**
comp=Z,1.0nm,0.8s,baz=4.4,slow=4.0,SNR=4.4
TAM Tamanrasset 164.86 283 *e*PKPab **PKPab 12 50 32.8 +1.0**
TAM Tamanrasset 164.86 283 *e*PKP2 **PKPab 12 50 32.8 +1.0**
DBIC Dimbokro 165.58 203 PKPab **PKPab 12 50 34.9 +0.3**
comp=Z,9.3nm,1.0s,baz=162,slow=5.8,SNR=5.7
TORD Torodi Ar. Bea 166.44 241 PKP **PKPdf 12 49 35.6 -0.7**
comp=Z,1.0nm,0.7s,baz=176,slow=2.8,SNR=6.6
TORD PKPab **PKPab 12 50 38.4 -0.3**
comp=Z,3.8nm,1.0s,baz=123,slow=4.4,SNR=8.8
TOA1 Torodi Ar. Sit 166.44 241 *e*PKPdf **PKPdf 12 49 35.6 -0.7**
TOA1 *e*PKPab **PKPab 12 50 38.4 -0.3**

ISCJB ***29*** *12:34:42.8±0.4, 19°.95S±0°.05×169°.61E±0°.06, h84km, mb4.3/28, Error ellipse: s-maj=8.7km s-min=5.6km az=36.0*
IDC ***29*** *12:34:46.9±3.4, 20°.11S×169°.52E, h106km±27km, mb3.9/14, mb1 4.0/15, mb1mx3.8/32, mbtmp4.2/15, Error ellipse: s-maj=25.3km s-min=19.3km az=82.0*
NEIC ***29*** *12:34:48.1±1.7, 20°.13S×169°.45E, h117km±5km, mb4.4/23, Error ellipse: s-maj=19.1km s-min=16.1km az=96.0*
ISC 29 12:34:44.0±0.5, 20°.00S±0°.07×169°.67E±0°.08, h84km, n57, σ0°99/65, mb4.5/28, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.13**	**226**	*e*Pn		**Pn**	**12 35 19.6**	**+1.9**
MARNC				*e*Sn		**Sn**	**12 35 44.1**	**+0.7**
PINNC	**Pines Island,**	**3.33**	**218**	*e*Pn		**Pn**	**12 35 35.1**	**+1.3**
PINNC				*e*Sn		**Sn**	**12 36 11.4**	**-0.9**
DZM	**Mont Dzumac**	**3.65**	**235**	P		**Pn**	**12 35 40.2**	**+1.9**
	40nm,0.3s,baz=298,slow=7.4,SNR=346							
DZM				S		**Sn**	**12 36 19.8**	**-0.6**
	52nm,0.3s,baz=135,slow=22,SNR=25							
DZM	**Mont Dzumac**	**3.65**	**235**	*e*Pn		**Pn**	**12 35 40.4**	**+2.0**
DZM				*e*Sn		**Sn**	**12 36 19.5**	**-0.8**
ONTNC	**Ouen Toro**	**3.78**	**232**	*e*Pn		**Pn**	**12 35 42.0**	**+2.0**
ONTNC				*e*Sn		**Sn**	**12 36 24.0**	**+0.7**
EIDS	**Eidsvold**	**17.96**	**249**	*e*P		**Pn**	**12 38 48.4**	**+0.2**
	5.9nm,0.9s							
URZ	**Urewera**	**19.30**	**162**	*e*P		**Pn**	**12 39 03.7**	**-0.4**
	18nm,1.2s							
ARMA	**Armidale**	**19.32**	**234**	*e*P		**P**	**12 39 03.2**	**+0.6**
	20nm,1.3s							
BKZ	**Black Stump Fm**	**19.98**	**164**	*e*P		**Pn**	**12 39 11.8**	**-0.3**
	23nm,1.5s							
BFZ	**Birch Farm**	**21.36**	**166**	*e*P		**P**	**12 39 24.8**	**+0.3**
	56nm,1.4s							
CTA	**Charters Tower**	**22.00**	**266**	P		**P**	**12 39 31.2**	**-0.3**
	6.4nm,0.5s,baz=88,slow=11,SNR=18							
CTAO	**Charters Tower**	**22.00**	**266**	*e*P		**P**	**12 39 32.1**	**+0.6**
	7.7nm,0.6s							
OXZ	**Oxford**	**23.34**	**176**	*e*P		**P**	**12 39 46.2**	**+1.4**
	26nm,1.4s							
CAN	**Canberra**	**23.76**	**226**	*e*P		**P**	**12 39 49.0**	**+0.1**
	22nm,1.4s							
COEN	**Coen**	**26.03**	**279**	*e*P		**P**	**12 40 10.2**	**+0.6**
	14nm,1.1s							
STKA	**Stephens Creek**	**27.80**	**239**	P		**P**	**12 40 25.6**	**+0.3**
	1.2nm,0.5s,baz=89,slow=12,SNR=4.3							
STKA	**Stephens Creek**	**27.80**	**239**	*e*P		**P**	**12 40 25.0**	**-0.2**
	1.9nm,1.5s							
BBOO	**Buckleboo**	**32.55**	**240**	*e*P		**P**	**12 41 06.5**	**-0.7**
	12nm,1.3s							
WB2	**Warramunga Arr**	**33.16**	**264**	*e*P		**P**	**12 41 11.1**	**-1.7**
	8.9nm,1.1s							
WR1	**Warramunga Arr**	**33.17**	**264**	*e*P		**P**	**12 41 11.3**	**-1.5**
WR1				*e*PcP		**PcP**	**12 43 53.3**	**-0.7**
WRA	**Warramunga Arr**	**33.17**	**264**	P		**P**	**12 41 11.3**	**-1.5**
	1.8nm,0.5s,baz=91,slow=8.1,SNR=6.3							
WRA				PcP		**PcP**	**12 43 53.3**	**-0.7**
	1.6nm,0.9s,baz=51,slow=2.7,SNR=2.8							
JAY	**Jayapura**	**33.20**	**298**	P		**P**	**12 41 13.3**	**+0.2**
	5.9nm,0.6s,baz=149,slow=5.9,SNR=4.2							
AS31	**Alice Springs**	**33.35**	**257**	*e*P		**P**	**12 41 13.1**	**-1.2**
	8.1nm,0.5s							
ASAR	**Alice Springs**	**33.35**	**257**	P		**P**	**12 41 13.2**	**-1.1**
	18nm,0.6s,baz=85,slow=9.3,SNR=142							
ASAR				PcP		**PcP**	**12 43 53.1**	**-1.4**
	0.4nm,0.7s,baz=119,slow=3.3,SNR=3.8							
MTN	**Manton Dam**	**37.58**	**275**	*e*P		**P**	**12 41 49.9**	**-0.7**
	10nm,0.7s							
FORT	**Forrest**	**38.90**	**246**	*e*P		**P**	**12 42 00.0**	**-1.5**
	9.4nm,0.7s							
FAKI	**Fak Fak**	**40.26**	**290**	*e*P		**P**	**12 42 11.9**	**-1.1**
	21nm,1.0s							
FITZ	**Fitzroy Crossi**	**41.58**	**265**	*e*P		**P**	**12 42 23.0**	**-0.8**
	5.8nm,0.6s							
SIJI	**Sorong**	**42.10**	**292**	P		**P**	**12 42 27.4**	**-0.7**
	6.1nm,0.6s,baz=113,slow=4.5,SNR=3.6							
ANA2	**Anatahan**	**43.11**	**325**	*e*P		**P**	**12 42 36.8**	**+0.6**
	81nm,1.1s							
PSA00	**Pilbara Seismi**	**46.45**	**259**	*e*P		**P**	**12 43 01.6**	**-1.2**
	14nm,1.1s							
VNDA	**Vanda**	**57.69**	**182**	P		**P**	**12 44 25.3**	**0.0**
	0.4nm,0.6s,baz=11,slow=11,SNR=2.4							
VNDA	**Vanda**	**57.69**	**182**	*e*P		**P**	**12 44 24.9**	**-0.4**
SBA	**Scott Base**	**57.91**	**181**	*e*P		**P**	**12 44 27.3**	**+0.4**
QSPA	**South Pole Qui**	**70.06**	**180**	*e*P		**P**	**12 45 46.1**	**-0.7**
	6.6nm,0.9s							
USRK	**Ussurisyk Ar.**	**72.60**	**333**	P		**P**	**12 46 04.1**	**+1.9**
	1.2nm,0.7s,baz=146,slow=43,SNR=3.0							
KLR	**Kul'dur**	**76.73**	**336**	P		**P**	**12 46 26.9**	**+1.0**
	1.0nm,0.7s,baz=119,slow=2.0,SNR=4.6							
MAW	**Mawson**	**77.88**	**202**	P		**P**	**12 46 32.4**	**+0.2**
	1.4nm,0.8s,baz=90,slow=8.1,SNR=4.1							
MAW	**Mawson**	**77.88**	**202**	*e*P		**P**	**12 46 32.2**	**0.0**
	0.3nm,0.8s							
CMAR	**Chiang Mai Arr**	**79.19**	**294**	P		**P**	**12 46 41.1**	**+0.8**
	0.9nm,0.3s,baz=118,slow=3.1,SNR=7.5							
SONA0	**Songino Array**	**88.07**	**323**	*e*P		**P**	**12 47 25.9**	**+0.7**
SONM	**Songino Array**	**88.07**	**323**	P		**P**	**12 47 25.9**	**+0.7**
	0.3nm,0.3s,baz=120,slow=5.7,SNR=3.5							
NV01	**Mina Array Sit**	**89.00**	**48**	*e*P		**P**	**12 47 31.1**	**+1.3**
NVAR	**Mina Array Bea**	**89.00**	**48**	P		**P**	**12 47 31.1**	**+1.3**
	0.5nm,0.8s,baz=233,slow=9.9,SNR=4.9							
ILAR	**Eielson Array**	**90.83**	**17**	P		**P**	**12 47 36.7**	**-0.8**
	0.3nm,0.7s,baz=219,slow=7.0,SNR=3.6							
ARA0	**ARCESS Array S**	**125.91**	**345**	*e*PKPdf		**PKPdf**	**12 53 34.2**	**-1.3**
ARCES	**ARCESS Array B**	**125.91**	**345**	PKP		**PKPdf**	**12 53 34.2**	**-1.3**
	0.4nm,0.3s,baz=57,slow=3.3,SNR=6.5							
NKC	**Novy Kostel**	**144.84**	**334**	*e*PKP		**PKPdf**	**12 54 10.8**	**-0.3**
CONA	**Conrad Observa**	**145.00**	**329**	*e*PKPdf		**PKPdf**	**12 54 11.6**	**0.0**
	5.5nm,0.7s							
KHC	**Kasperske Hory**	**145.20**	**332**	*e*PKP		**PKPbc**	**12 54 11.5**	**-0.1**
GEC2	**GERESS Array S**	**145.35**	**332**	*e*PKPdf		**PKPdf**	**12 54 11.6**	**-0.6**
GERES	**GERESS Array B**	**145.35**	**332**	PKPbc		**PKPdf**	**12 54 12.1**	**-0.1**
	3.3nm,0.7s,baz=35,slow=3.6,SNR=14							
MOA	**Molln**	**145.82**	**330**	*i* PKPab		**PKPab**	**12 54 13.9**	**-0.2**
	2.5nm,0.6s							
SOKA	**Soboth**	**146.27**	**328**	*i* PKPab		**PKPab**	**12 54 15.5**	**-0.4**
	2.7nm,0.7s							
MOTA	**Moosalm**	**147.63**	**332**	*i* PKPbc		**PKPbc**	**12 54 18.3**	**-0.7**
	2.3nm,0.6s							
SQTA	**Sankt Quirin**	**147.68**	**332**	*i* PKPbc		**PKPbc**	**12 54 18.6**	**-0.4**
	5.1nm,0.6s							
FETA	**Feichten**	**148.04**	**332**	*i* PKPbc		**PKPbc**	**12 54 19.8**	**-0.3**
	3.9nm,0.7s							

NIED ***29*** *12:47:00, 44°.20N×148°.20E, h56km, Mw3.9 Best double couple: M0:8.52000×10^14 NP1:φ=273.00000°, δ15.00000°, λ135.00000°. NP2:φ=47.00000°, δ79.00000°, λ79.00000°.*
JMA ***29*** *12:47:09.2±0.3, 44°.17N×148°.23E, h0km, M4.6*
SKHL ***29*** *12:47:09.5±2.4, 44°.65N×148°.59E, h73km±2km, mb5.0/7*
SKHL Felt (II-III) at Reidovo (75 km), Gornyi (78 km); (II) at Kuril'sk (86 km).
ISCJB ***29*** *12:47:10.3±0.7, 44°.61N±0°.04×148°.29E±0°.08, h75km±6km, mb3.6/12, Error ellipse: s-maj=10.6km s-min=5.0km az=35.3*
MOS ***29*** *12:47:10.8±1.1, 44°.68N×148°.30E, h78km, mb4.0/3, Error ellipse: s-maj=10.9km s-min=10.0km az=79.9*
IDC ***29*** *12:47:14.8±2.4, 44°.80N×148°.10E, h96km±21km, mb3.4/10, mb1 3.6/15, mb1mx3.5/34, mbtmp3.7/15, MS2.7/4, Ms1 2.7/4, ms1mx2.6/26, Error ellipse: s-maj=23.8km s-min=16.2km az=146.0*
ISC 29 12:47:10.8±1.1, 44°.55N±0°.06×148°.38E±0°.08, h64km±10km, n65, σ1°58/76, mb3.7/12, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.78**	**332**	*d*	*i* PN	**Pn**	**12 47 25.0**	**-1.1**
KUR					*i* S	**Sn**	**12 47 36.4**	**-1.1**
KUR					pmax	pmax		
	comp=N,265nm,0.2s							
KUR					pmax	pmax		
	comp=E,281nm,0.2s							
KUR					pmax	pmax		
	comp=Z,2μm,0.2s							
KUR					smax	smax		
	comp=N,8μm,0.3s							
KUR					smax	smax		
	comp=E,3μm,0.3s							
KUR	**Kuril'sk**	**0.78**	**332**	*e*P		**Pn**	**12 47 25.0**	**-1.1**
KUR					AMB	AMB	12 47 25.5	
	comp=E,265nm,0.2s							
KUR					AMB	AMB	12 47 25.5	
	comp=E,281nm,0.2s							
KUR					AMB	AMB	12 47 25.5	
	comp=E,2μm,0.2s							
KUR					*e*S	**Sn**	**12 47 35.4**	**-2.1**
KUR					A	A	12 47 37.4	
	comp=E,8μm,0.3s							
KUR					A	A	12 47 37.4	
	comp=E,3μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.88**	**255**	*e*PN		**Pn**	**12 47 41.1**	**+0.4**
YUK					*e*S	**Sn**	**12 48 04.7**	**+1.4**
YUK					pmax	pmax		
	comp=Z,925nm,0.2s							
YUK		

UGL				AMB	AMB	12 48 40.3
	comp=N,46nm,0.4s					
JANG	**Nango**	**6.57**	**233**	P	**Pn**	**12 48 43.0 -1.7**
TYV	**Tymovskoe**	**7.40**	**331**	*e*PN	**Pn**	**12 48 54.8 -1.2**
TYV				*e*S	**Sn**	**12 50 16.9 -1.5**
TYV				pmax	pmax	
	comp=Z,10.0nm,1.7s					
TYV				smax	smax	
	comp=N,4.0nm,0.9s					
TYV				MLR	MLR	
	comp=E,200nm,11.0s					
TYV				MLR	MLR	
	comp=Z,300nm,11.0s					
TYV	**Tymovskoe**	**7.40**	**331**	*e*P	**Pn**	**12 48 54.8 -1.2**
TYV				AMB	AMB	12 48 55.9
	comp=Z,10.0nm,0.2s					
TYV				*e*S	**Sn**	**12 50 16.9 -1.5**
SKR	**Severo-Kuril's**	**8.06**	**38**	*i* PN	**Pn**	**12 49 07.9 +3.0**
PETK	**Petropavlovsk-**	**10.53**	**32**	P	**Pn**	**12 49 41.0 +2.3**
	comp=Z,0.2nm,0.3s,baz=197,slow=9.7,SNR=4.0					
PETK				LR	LR	12 54 24.1
	comp=Z,26nm,19.7s,baz=260,slow=41					
MJAR	**Matsushiro Art**	**11.12**	**228**	P	**Pn**	**12 49 46.1 -0.9**
	comp=Z,0.0nm,0.3s,baz=24,slow=15,SNR=5.5					
USRK	**Ussuriysk Ar.**	**11.74**	**274**	P	**Pn**	**12 49 56.2 +0.9**
	comp=Z,0.1nm,0.3s,baz=104,slow=16,SNR=3.7					
KLR	**Kul'dur**	**12.30**	**298**	P	**Pn**	**12 50 04.0 +1.2**
	comp=Z,0.1nm,0.3s,baz=124,slow=15,SNR=2.2					
KLR				LR	LR	12 54 37.7
	comp=Z,76nm,18.9s,baz=168,slow=37					
KLR	**Kul'dur**	**12.30**	**298**	*i* PN	**Pn**	**12 50 04.2 +1.3**
KLR				pmax	pmax	
	comp=Z,2.0nm,0.9s					
KLR	**Kul'dur**	**12.30**	**298**	*e*P	**Pn**	**12 50 04.2 +1.3**
MSHR	**Mys Shultsa**	**12.65**	**267**	*i* PN	**Pn**	**12 50 09.4 +1.7**
KSRS	**Korea Array**	**16.97**	**252**	LR	LR	12 57 03.3
	comp=Z,21nm,19.6s,baz=250,slow=35					
JNU	**Nakatsue**	**17.74**	**236**	P	**P**	**12 51 15.7 +2.3**
	comp=Z,0.2nm,0.3s,baz=55,slow=4.1,SNR=5.1					
SEY	**Seymchan**	**18.56**	**6**	*i* P	**P**	**12 51 20.5 -1.6**
SEY	**Seymchan**	**18.56**	**6**	*e*P	**P**	**12 51 20.5 -1.6**
H11N2	**WAKE ISLAND Hy**	**29.16**	**142**	T	T	13 23 59.5
	baz=333,slow=76,SNR=197					
H11N1	**WAKE ISLAND Hy**	**29.17**	**142**	T	T	13 23 55.5
	baz=333,slow=76,SNR=189					
H11N3	**WAKE ISLAND Hy**	**29.17**	**142**	T	T	13 23 55.5
	baz=333,slow=76,SNR=224					
H11S1	**WAKE ISLAND Hy**	**30.15**	**144**	T	T	13 25 10.2
	baz=334,slow=76,SNR=352					
H11S3	**WAKE ISLAND Hy**	**30.16**	**144**	T	T	13 25 09.2
	baz=334,slow=76,SNR=214					
H11S2	**WAKE ISLAND Hy**	**30.17**	**144**	T	T	13 25 13.3
	baz=334,slow=76,SNR=181					
ILAR	**Eielson Array**	**40.32**	**37**	P	**P**	**12 54 41.0 -0.4**
	comp=Z,0.4nm,0.8s,baz=286,slow=6.2,SNR=6.2					
ILAR	**Eielson Array**	**40.32**	**37**	P	**P**	**12 54 41.0 -0.4**
MKAR	**Makanchi Array**	**45.00**	**297**	P	**P**	**12 55 17.0 -2.5**
	comp=Z,0.3nm,0.5s,baz=77,slow=6.2,SNR=3.1					
MKAR				PcP	**PcP**	**12 57 00.1 +0.5**
	comp=Z,0.3nm,0.6s,baz=67,slow=1.9,SNR=3.6					
KURK	**Kurchatov**	**45.82**	**304**	*i* P	**P**	**12 55 25.3 -0.6**
KURK				pmax	pmax	
	comp=Z,1.0nm,1.1s					
KURK	**Kurchatov**	**45.82**	**304**	*e*P	**P**	**12 55 25.3 -0.6**
BRVK	**Borovoye**	**49.73**	**309**	*i* P	**P**	**12 55 55.1 -1.0**
BRVK				pmax	pmax	
	comp=Z,1.0nm,0.7s					
BRVK	**Borovoye**	**49.73**	**309**	*e*P	**P**	**12 55 55.1 -1.0**
YKA	**Yellowknife Ar**	**54.64**	**34**	P	**P**	**12 56 32.8 +0.4**
	comp=Z,0.5nm,0.7s,baz=297,slow=6.9,SNR=6.0					
FINES	**FINESS Array B**	**64.56**	**333**	P	**P**	**12 57 38.2 -2.4**
	comp=Z,0.8nm,0.6s,baz=44,slow=6.1,SNR=9.7					
FINES	**FINESS Array B**	**64.56**	**333**	*i* P	**P**	**12 57 39.7 -0.9**
FINES				pmax	pmax	
	comp=Z,1.0nm,0.6s					
NVAR	**Mina Array Bea**	**66.40**	**59**	P	**P**	**12 57 54.3 +1.1**
	comp=Z,1.0nm,1.0s,baz=298,slow=6.4,SNR=5.1					
PDAR	**Pinedale Array**	**68.72**	**51**	P	**P**	**12 58 08.4 +0.6**
	comp=Z,0.3nm,0.6s,baz=268,slow=4.3,SNR=3.7					
ASAR	**Alice Springs**	**69.16**	**194**	P	**P**	**12 58 11.5 +1.2**
	comp=Z,0.3nm,0.5s,baz=14,slow=7.1,SNR=8.5					
NB2	**NORSAR Subarra**	**69.17**	**339**	P	**P**	**12 58 09.0 -1.0**
	comp=Z,0.5nm,0.4s,baz=28,slow=6.2					
NOA	**NORSAR Array B**	**69.17**	**339**	P	**P**	**12 58 08.7 -1.3**
	comp=Z,0.8nm,0.5s,baz=31,slow=6.6,SNR=8.3					
GERES	**GERESS Array B**	**78.89**	**331**	P	**P**	**12 59 05.8 -1.1**
	comp=Z,1.1nm,0.3s,baz=48,slow=7.3,SNR=3.7					
ESDC	**Sonseca Array**	**92.53**	**339**	P	**P**	**13 00 15.1 +0.2**
	comp=Z,0.3nm,0.4s,baz=42,slow=4.2,SNR=3.5					

TAP 29 12:53:39.9,24°.38N×121°.44E,h6km,ML0.7,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.07**	**311**	P	Pg	12 53 42.1	+0.4
	baz=311						
NNSB				S	Sg	12 53 43.2	+0.2
	baz=311						
NNS	**Nan Shan**	**0.08**	**313**	P	Pg	12 53 42.2	+0.3
	baz=316						
NNS				*i* S	Sg	12 53 43.5	+0.2
	baz=316						
ETLH	**Xiulin Townshi**	**0.18**	**168**	*e*S	Sg	12 53 47.2	+1.2
	baz=173						
ENTT	**Nioudou**	**0.28**	**24**	*e*S	Sg	12 53 50.1	+1.0
	baz=17						
WHF	**Hehuan Shan**	**0.29**	**214**	*e*S	Sg	12 53 51.0	+1.5
	baz=199						
TDCB	**Techi**	**0.29**	**243**	*e*S	Sg	12 53 49.8	+0.4
	baz=244						
YHNB	**Yeheng**	**0.29**	**349**	*e*P	Pg	12 53 46.4	+0.8
	baz=349						
YHNB				*e*S	Sg	12 53 49.9	+0.4
	baz=349						

JMA 29 12:54:12.7±0.1,24°.11N×123°.57E,h18km±2km,M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.22**	**104**	P	Pg	12 54 17.8	-0.2
HATJ				S	Sg	12 54 21.7	+0.2
IRIF	**Iriomote-Funau**	**0.27**	**33**	P	Pg	12 54 18.5	-0.2
IRIF				*e*S	Sg	12 54 22.6	-0.2
JKRS	**Kuro-shima**	**0.42**	**72**	P	Pg	12 54 21.3	0.0
JKRS				S	Sb	12 54 27.7	0.0
JIJ	**Ishigaki jima**	**0.58**	**64**	P	Pg	12 54 23.7	-0.6
JIJ				S	Sg	12 54 31.8	-0.3
JISG	**Ishigakijimahi**	**0.83**	**55**	P	Pb	12 54 28.0	-0.5
JISG				*e*S	Sb	12 54 39.1	-0.2

TAP 29 13:21:01.3,23°.75N×120°.95E,h12km,ML0.6,1C,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.04**	**9**	P	Pg	13 21 03.7	0.0
	baz=9.0						
SSLB				S	Sg	13 21 05.4	+0.1
	baz=9.0						
WHYT	**Xinyi Township**	**0.10**	**237**	*i* P	Pg	13 21 04.6	+0.3
	baz=237						
WHYT				*i* S	Sg	13 21 07.3	+0.9
	baz=237						
SMLT	**Sun Moon Lake**	**0.14**	**341**	P	Pg	13 21 05.0	+0.2
	baz=344						
SMLT				S	Sg	13 21 08.2	+0.9
	baz=344						
TYC	**Yuchr**	**0.17**	**331**	⇑*i* P	Pg	13 21 05.6	+0.3
	baz=342						
TYC				*i* S	Sg	13 21 09.1	+1.1
	baz=342						
VWDT	**VWDT**	**0.18**	**90**	P	Pg	13 21 05.8	+0.5
	baz=90						
VWDT				*e*S	Sg	13 21 09.4	+1.3
	baz=90						
OWD	**Renai**	**0.29**	**46**	*e*S	Sg	13 21 11.5	+0.1
	baz=47						
YULB	**Yu-li**	**0.48**	**138**	*e*S	Sg	13 21 17.7	+0.5
	baz=130						

JMA 29 13:21:56.1±0.1,24°.05N×122°.86E,h15km±3km,M2.3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonaguni jima**	**0.41**	**11**	P	Pg	13 22 04.4	+0.1
JYNG				*e*S	Sg	13 22 09.9	0.0
YOJ	**Yonaguni jima**	**0.43**	**19**	P	Pg	13 22 04.9	+0.1
YOJ				*e*S	Sg	13 22 11.2	+0.5
IRIF	**Iriomote-Funau**	**0.84**	**70**	P	Pb	13 22 11.8	-0.7
IRIF				S	Sb	13 22 24.3	+0.7
HATJ	**Hateruma jima**	**0.86**	**89**	P	Pb	13 22 12.4	-0.4
HATJ				*e*S	Sg	13 22 24.5	+0.3
JKRS	**Kuro-shima**	**1.07**	**80**	P	Pn	13 22 16.4	-0.1
JKRS				*e*S	Sg	13 22 30.5	-0.2
JIJ	**Ishigaki jima**	**1.21**	**75**	P	Pn	13 22 17.9	-0.6
JIJ				S	Sb	13 22 34.1	-0.1
JISG	**Ishigakijimahi**	**1.43**	**68**	P	Pn	13 22 21.1	-0.4
JISG				*e*S	Sn	13 22 39.2	-0.8

IDC 29 13:26:33.8±15.0,6°.64S×130°.65E,h137km±142km, mb3.3/2,mb1 3.3/4,mb1mx3.1/19,mbtmp3.6/4,ML3.7/2, Error ellipse: s-maj=349.2km s-min=41.7km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.71**	**165**	P	Pn	13 29 42.3	-0.3
	0.4nm,0.3s,baz=337,slow=13,SNR=12						
WRA				S	Sn	13 32 04.0	-10
	1.2nm,0.3s,baz=329,slow=23,SNR=7.7						
ASAR	**Alice Springs**	**17.22**	**170**	P	Pn	13 30 26.4	+0.2
	0.3nm,0.3s,baz=339,slow=10.0,SNR=37						
ASAR				S	S	13 33 25.3	-13
	0.4nm,0.3s,baz=323,slow=16,SNR=8.3						
STKA	**Stephens Creek**	**27.12**	**159**	P	P	13 32 03.8	-0.3
	1.2nm,0.7s,baz=330,slow=16,SNR=3.5						
MKAR	**Makanchi Array**	**68.28**	**326**	P	P	13 37 20.1	+0.1
	0.3nm,0.5s,baz=126,slow=7.4,SNR=3.7						

IGQ 29 13:46:24.4±1.0,4°S±5°×8°0W±°,h10km,MLv4.6, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCRA	**Macar, Loja**	**0.57**	**119**	P	Pg	13 46 34.5	-1.0
MCRA				S	Sg	13 46 43.5	+0.5
GONZ	**Gonzanam**	**1.07**	**98**	P	Pg	13 46 44.9	-0.1
GONZ				S	Sb	13 46 59.9	+0.5
MORR	**Playas El Morr**	**1.45**	**5**	P	Pn	13 46 49.5	-1.2
MORR				S	Sn	13 47 07.3	-2.5
ZUMB	**Zumba**	**1.51**	**120**	P	Pn	13 46 52.1	+0.3
ZUMB				S	Sn	13 47 11.1	-0.5
COHC	**Cochancay**	**2.01**	**37**	P	Pn	13 46 57.4	-1.1
BMAS	**Trigal station**	**3.24**	**38**	P	Pn	13 47 15.7	0.0
ARRY	**Arrayan**	**3.25**	**38**	P	Pn	13 47 15.2	-0.7
PAT1	**Patacocha**	**3.26**	**38**	P	Pn	13 47 16.7	+0.6
BPAT	**Tungurahua Vol**	**3.27**	**38**	P	Pn	13 47 16.0	-0.2
RETU	**Refugio**	**3.30**	**37**	P	Pn	13 47 16.7	0.0
POND	**Pondoa**	**3.32**	**37**	P	Pn	13 47 16.7	-0.1
BULB	**Ulba Tungurahu**	**3.33**	**38**	P	Pn	13 47 16.7	-0.3
ILLI	**Illinizas Sur**	**3.77**	**27**	P	Pn	13 47 23.6	+0.5
BMOR	**Cotopaxi Volca**	**3.89**	**31**	P	Pn	13 47 25.0	+0.2
BREF	**Cotopaxi Volca**	**3.95**	**31**	P	Pn	13 47 29.2	+3.5
BTAM	**Cotopaxi Volca**	**3.97**	**31**	P	Pn	13 47 27.1	+1.2
BVC2	**Cotopaxi Volca**	**3.98**	**31**	P	Pn	13 47 26.7	+0.7
VC1	**Cotopaxi 1**	**3.99**	**31**	P	Pn	13 47 29.2	+3.0
PITA	**Cotopaxi Volc**	**4.05**	**30**	P	Pn	13 47 28.1	+1.2
MAG1	**Magdalena**	**4.05**	**10**	P	Pn	13 47 24.8	-1.7
ARDO	**Archidona, Ten**	**4.06**	**41**	P	Pn	13 47 29.3	+2.6
NINA	**Atacazo Ninahu**	**4.11**	**27**	P	Pn	13 47 28.3	+0.4
TERV	**Terraza Guagua**	**4.31**	**25**	P	Pn	13 47 31.0	+0.4
PINO	**Pino**	**4.32**	**25**	P	Pn	13 47 30.4	-0.4
YANA	**Yana**	**4.37**	**26**	P	Pn	13 47 30.9	-0.5
PAC1	**Pacto, Paraso**	**4.64**	**21**	P	Pn	13 47 33.0	-1.8

*ISCJB **29** 13:53:47.0±0.2, 13°.62N±0°.02×120°.75E±0°.03, h119km±2km,mb4.5/61, Error ellipse: s-maj=5.3km s-min=2.9km az=177.0*
*IDC **29** 13:53:47.6±0.5, 13°.57N×120°.83E,h118km±4km,mb3.8/23, mb1 3.9/26,mb1mx3.8/38,mbtmp4.2/26,MS3.2/4, Ms1 3.2/4,ms1mx2.8/52, Error ellipse: s-maj=14.3km s-min=8.5km az=76.0*
*BJI **29** 13:53:47.8±0.0, 13°.61N×120°.71E, h121km, mb4.5/26, mB4.7/20*
*MAN **29** 13:53:47.5, 13°.60N×120°.63E, h97km, mb4.8, ML3.7, MS3.7*
*NEIC **29** 13:53:48.7±1.3, 13°.59N×120°.82E, h130km±7km, mb4.6/32, Error ellipse: s-maj=13.6km s-min=10.0km az=99.0*
NEIC Felt [II PIVS] at Mamburao and Paluan.
*DJA **29** 13:53:52.6±0.9, 14°.N±4°.×12°.1E±°, h172km±10km, M4.9/36, mB5.4/11, mb4.9/36, Mw(mB)4.8/11*
*KLM **29** 13:54:00.0, 13°.67N×120°.84E, h279km, mb4.9*
ISC 29 13:53:47.7±0.4,13°.58N±0°.03×120°.66E±0°.04,h114km±3km, n155,σ1°60/184,mb4.5/61,2C-1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.29**	**105**	⇑*i* P	**Pn**	**13 54 03.3**	**-0.7**
PGP				*i* S	**Sn**	**13 54 11.2**	**-5.0**
LUBP	**Lubang**	**0.43**	**291**	*e*P	**Pn**	**13 54 03.2**	**-1.5**
LUBP				*e*S	**Sn**	**13 54 16.8**	**-0.6**
TGY	**Tagaytay City**	**0.58**	**27**	⇑*i* P	**Pn**	**13 54 05.9**	**+0.2**
BOAC	**Boac**	**1.16**	**96**	*e*P	**Pn**	**13 54 10.9**	**0.0**
BOAC				*e*S	**Sn**	**13 54 28.3**	**-0.1**
SJMP	**San Jose**	**1.20**	**158**	*e*P	**Pn**	**13 54 11.6**	**+0.2**
SJMP				*e*S	**Sn**	**13 54 29.1**	**-0.1**
BUSP	**Coron**	**1.63**	**196**	*e*P	**Pn**	**13 54 16.1**	**-0.3**
BUSP				*e*S	**Sn**	**13 54 37.4**	**-0.8**
POLP	**Polilio Island**	**1.68**	**47**	*e*P	**Pn**	**13 54 17.6**	**+0.7**
OTRP	**Odiongan**	**1.79**	**132**	*e*P	**Pn**	**13 54 18.4**	**+0.1**
OTRP				*e*S	**Sn**	**13 54 40.6**	**-1.2**
SCZP	**Santa Cruz**	**2.30**	**342**	*e*P	**Pn**	**13 54 24.4**	**-0.3**
SCZP				*e*S	**Sn**	**13 54 52.6**	**-0.5**
BALP	**Baler**	**2.32**	**22**	*e*P	**Pn**	**13 54 25.4**	**+0.4**
BALP				*e*S	**Sn**	**13 54 56.7**	**+3.1**
SMPP	**San Manuel, Pa**	**2.56**	**0**	*e*P	**Pn**	**13 54 27.8**	**-0.3**
SMPP				*e*S	**Sn**	**13 54 57.3**	**-1.7**
ENPP	**El Nido**	**2.65**	**207**	*e*P	**Pn**	**13 54 29.7**	**+0.4**
ENPP				*e*S	**Sn**	**13 54 58.5**	**-2.8**
CUYO	**Cuyo Island**	**2.73**	**173**	*e*P	**Pn**	**13 54 30.3**	**-0.1**
CUYO				*e*S	**Sn**	**13 55 03.0**	**-0.3**
BOLP	**Bolinao**	**2.88**	**346**	*e*P	**Pn**	**13 54 31.9**	**-0.4**
BOLP				*e*S	**Sn**	**13 55 05.5**	**-1.0**
GUIM	**Jordan**	**3.49**	**147**	*e*P	**Pn**	**13 54 41.7**	**+1.4**
GUIM				*e*S	**Sn**	**13 55 25.6**	**+4.6**
CAUP	**Cauayan**	**3.53**	**18**	*e*P	**Pn**	**13 54 40.8**	**0.0**
CAUP				*e*S	Sn	13 55 36.9	+15
PALP	**Palanan**	**3.86**	**26**	*e*P	**Pn**	**13 54 45.0**	**-0.3**
PALP				*e*S	**Sn**	**13 55 33.3**	**+3.4**
CNP	**Catarman**	**4.04**	**105**	*e*P	**Pn**	**13 54 49.1**	**+1.4**
ABRA	**Dolores**	**4.05**	**1**	*e*P	**Pn**	**13 54 46.4**	**-1.4**
ABRA				*e*S	**Sn**	**13 55 38.0**	**+3.6**
PPR	**Puerto Princes**	**4.23**	**207**	⇓*e*P	**Pn**	**13 54 51.8**	**+1.6**
PPR				*e*S	**Sn**	**13 55 41.1**	**+2.4**
APYP	**Conner**	**4.29**	**7**	*e*P	**Pn**	**13 54 52.0**	**+0.9**
APYP				*e*S	**Sn**	**13 55 44.6**	**+4.3**
SNPH	**Sibulan**	**4.91**	**149**	*e*P	**Pn**	**13 55 03.8**	**+4.3**
TWG	**Pinlang**	**9.20**	**2**	*e*Pn	**Pn**	**13 55 58.4**	**+0.9**
YULB	**Yu-li**	**9.78**	**3**	*e*Pn	**Pn**	**13 56 05.9**	**+0.6**
SSLB	**Suanglung**	**10.16**	**2**	*e*Pn	**Pn**	**13 56 11.3**	**+0.9**
NACB	**Ninganchiao**	**10.57**	**5**	*e*Pn	**Pn**	**13 56 16.0**	**0.0**
YOJ	**Yonaguni jima**	**11.05**	**11**	*e*Pn	**Pn**	**13 56 20.8**	**-1.7**
YHNB	**Yeheng**	**11.05**	**3**	*e*Pn	**Pn**	**13 56 23.3**	**+0.8**
SBUM	**Sibu**	**13.86**	**218**		**P**	**13 57 07.0**	**+3.2**
APSI	**Ampana**	**14.43**	**176**	P	**Pn**	**13 57 06.0**	**-0.7**
LUWI	**Luwuk**	**14.68**	**172**	P	**P**	**13 57 12.9**	**0.0**
JOW	**Kunigami**	**14.99**	**27**	P	**Pn**	**13 57 14.3**	**+0.6**
	0.1nm,0.3s,baz=200,slow=15,SNR=2.7						
KSM	**Kuching**	**15.80**	**221**	*e*P	**P**	**13 57 28.4**	**+2.9**
	28nm,0.7s						
KSM	**Kuching**	**15.80**	**221**		**P**	**13 57 32.0**	**+6.6**
SKNT	**Sakolnakorn**	**16.44**	**284**	P	P	13 57 43.4	+11
TTSI	**Tana Toraja**	**16.54**	**183**	P	**P**	**13 57 35.6**	**+2.0**
KHON	**Khomkaen**	**17.45**	**281**	P	Pn	13 57 53.4	+9.3
SPSI	**Sidrap Palu**	**17.45**	**183**	P	**Pn**	**13 57 46.1**	**+2.0**
	23nm,0.8s,300nm						
SIJI	**Sorong**	**17.79**	**143**	P	**P**	**13 57 47.5**	**+0.1**
	0.6nm,0.3s,baz=346,slow=19,SNR=2.5						
WHN	**Wuhan**	**17.86**	**342**	P	**Pn**	**13 57 49.3**	**+0.4**
CHAI	**Chaiyaphum**	**18.21**	**280**	P	**Pn**	**13 57 54.6**	**+1.4**
	77μm,0.7s						
NJ2	**Nanjing**	**18.46**	**355**	*e*P	**Pn**	**13 57 56.5**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
KAPI	**Kappang**	**18.50**	**183**	P	**Pn**	**13 57 56.4**	**-0.2**
	4.1nm,0.3s,baz=28,slow=5.7,SNR=13						
KAPI				LR	LR	14 06 45.1	
	comp=Z,116nm,18.4s,baz=116,slow=42						
KAPI	**Kappang**	**18.50**	**183**	*e*Pn	**Pn**	**13 57 57.7**	**+1.1**
	30nm,0.9s						
BKSI	**Bulukumba**	**18.79**	**182**	P	**P**	**13 57 58.7**	**+0.4**
PBKT	**Sadao Pong**	**19.25**	**281**	P	**Pn**	**13 58 06.3**	**+0.9**
	6.8nm,0.9s						
NANT	**Nan**	**19.86**	**288**	P	**Pn**	**13 58 12.5**	**-0.1**
	38μm,0.7s,382μm						
MYKOM	**Kota Tinggi**	**20.34**	**236**	*e*P	Pn	13 58 17.6	-0.7
	14nm,1.0s						
MYKOM	**Kota Tinggi**	**20.34**	**236**		Pn	13 58 17.0	-1.3
KMI	**Kunming**	**20.41**	**307**	P	Pn	13 58 18.0	-1.2
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,130nm,4.9s						
TPI	**Tanjungpandan**	**20.74**	**219**	P	**P**	**13 58 21.0**	**+1.6**
PAYA	**Payao**	**20.74**	**289**	P	Pn	13 58 21.9	-1.1
	101μm,0.7s,787μm						
LAMP	**Lampang**	**20.79**	**286**	P	Pn	13 58 23.4	-0.1
	56μm,0.7s,517μm						
PPBI	**Pangkal Pinang**	**21.27**	**224**	P	**P**	**13 58 26.5**	**+1.4**
TRTT	**Trang**	**21.37**	**257**	P	**P**	**13 58 30.5**	**+4.3**
	16nm,1.6s						
KULM	**Kulim**	**21.38**	**249**	*e*P	**P**	**13 58 27.9**	**+1.6**
	14nm,1.1s						
KULM	**Kulim**	**21.38**	**249**		**P**	**13 58 29.0**	**+2.7**
IPM	**Ipoh**	**21.38**	**247**	*e*P	**P**	**13 58 26.9**	**+0.5**
	18nm,0.8s						
IPM	**Ipoh**	**21.38**	**247**		**P**	**13 58 29.0**	**+2.7**
CM31	**Chiang Mai Arr**	**21.43**	**286**	*e*P	**P**	**13 58 27.7**	**+0.9**
	25nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.43**	**286**	P	**P**	**13 58 29.1**	**+2.4**
	15nm,0.8s,baz=95,slow=7.7,SNR=72						
CMAR				PcP	**PcP**	**14 02 26.4**	**+0.5**
	0.3nm,0.4s,baz=33,slow=0.7,SNR=1.4						
CMMT	**Chiang Mai**	**21.48**	**287**	P	**P**	**13 58 29.5**	**+2.1**
	8.4nm,0.9s						
CHTO	**Chiang Mai**	**21.49**	**287**	*e*P	**P**	**13 58 28.7**	**+1.2**
	12nm,0.8s						
KMMI	**Kalianget**	**21.55**	**198**	P	**P**	**13 58 30.7**	**+2.7**
MMRI	**Maumere**	**22.13**	**176**	P	**P**	**13 58 35.8**	**+1.7**
SRBI	**Singaraja**	**22.19**	**194**	P	**P**	**13 58 36.9**	**+2.1**
	69nm,1.0s						
EDFI	**Ende, Flores**	**22.21**	**177**	P	**P**	**13 58 35.3**	**+0.2**
	232nm,0.6s,2μm						
PLAI	**Plampang**	**22.45**	**187**	P	**P**	**13 58 39.0**	**+1.6**
	298nm,1.1s,3μm						
JMBI	**JAMBI**	**22.66**	**229**	P	**P**	**13 58 42.9**	**+3.4**
NGJI	**Ngawi**	**22.73**	**204**	P	**P**	**13 58 42.3**	**+2.1**
JAGI	**Jajag, Banyuwa**	**22.84**	**197**	*e*P	**P**	**13 58 42.7**	**+1.4**
	174nm,1.1s						
JAGI	**Jajag, Banyuwa**	**22.84**	**197**	P	**P**	**13 58 43.1**	**+1.8**
PWJI	**Pagerwojo**	**23.19**	**203**	P	**P**	**13 58 46.1**	**+1.4**
CD2	**Chengdu**	**23.23**	**321**	*e*P	**P**	**13 58 45.0**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WOJI	**Wonogiri, Jawa**	**23.37**	**205**	P	**P**	**13 58 48.2**	**+1.9**
SOEI	**Soe**	**23.46**	**171**	*e*P	**P**	**13 58 45.7**	**-1.5**
	57nm,0.6s						
SOEI	**Soe**	**23.46**	**171**	P	**P**	**13 58 46.3**	**-0.9**
BATI	**Baumata**	**23.82**	**173**	P	**P**	**13 58 49.9**	**-0.5**
	253nm,0.4s,baz=32,slow=1.3,SNR=19						
BATI	**Baumata**	**23.82**	**173**	P	**P**	**13 58 50.1**	**-0.3**
	141nm,0.5s,2μm						
PSI	**Prapat**	**24.00**	**245**	P	**P**	**13 58 53.7**	**+1.5**
	14nm,0.6s,baz=58,slow=6.1,SNR=16						
PSI	**Prapat**	**24.00**	**245**	*e*P	**P**	**13 58 52.2**	**0.0**
	20nm,0.7s						
LHSI	**Lahat**	**24.26**	**226**	P	**P**	**13 58 56.7**	**+2.4**
MDSI	**Maura Dua**	**24.29**	**223**	P	**P**	**13 58 55.7**	**+1.1**
MNSI	**Mandailing Nat**	**24.43**	**240**	P	**P**	**13 58 57.3**	**+1.3**
	60nm,0.7s						
KRJI	**Kerinci**	**24.60**	**232**	P	**P**	**13 58 59.0**	**+1.4**
KSRS	**Korea Array**	**24.64**	**14**	P	**P**	**13 58 57.4**	**-0.2**
	0.5nm,0.5s,baz=201,slow=10,SNR=3.1						
KSRS				pP	**pP**	**13 59 22.3**	**+0.2**
	0.9nm,0.7s,baz=200,slow=11,SNR=4.5						
KSRS				PcP	**PcP**	**14 02 32.1**	**-0.1**
	0.5nm,0.9s,baz=194,slow=20,SNR=3.2						
KSRS				LR	LR	14 09 09.6	
	comp=Z,40nm,18.0s,baz=180,slow=38						
KCSI	**Kotacane, Aceh**	**24.72**	**248**	P	**P**	**13 58 58.8**	**+0.2**
LWLI	**Liwa**	**24.76**	**223**	P	**P**	**13 59 01.2**	**+2.1**
GSI	**Gunungsitoli**	**25.90**	**244**	*e*P	**P**	**13 59 07.2**	**-2.0**
	48nm

WMQ	**Urumqi**	**41.28 323**	*e*P	**P**	**14 01 22.5**	**+0.6**
WMQ			pmax	pmax		
	comp=Z,15nm,0.6s					
WMQ			pmax	pmax		
	comp=Z,87nm,5.7s					
MORW	**Morawa**	**42.63 186**	*e*P	**P**	**14 01 32.3**	**-0.6**
	20nm,0.8s					
FORT	**Forrest**	**44.67 171**	*e*P	**P**	**14 01 48.2**	**-1.0**
	18nm,0.6s					
MK31	**Makanchi Array**	**46.11 324**	*e*P	**P**	**14 02 00.5**	**+0.1**
	4.4nm,0.9s					
MKAR	**Makanchi Array**	**46.11 324**	P	**P**	**14 02 01.2**	**+0.8**
	3.7nm,0.7s,baz=131,slow=9.1,SNR=30					
MKAR			pP	**pP**	**14 02 26.8**	**-0.2**
	0.5nm,0.5s,baz=145,slow=12,SNR=2.2					
MKAR			PcP	**PcP**	**14 03 33.6**	**-1.1**
	0.7nm,0.7s,baz=126,slow=3.8,SNR=2.3					
MKAR			ScP	**ScP**	**14 07 15.0**	**-2.6**
	0.6nm,0.8s,baz=132,slow=4.3,SNR=3.1					
KSH	**Kashi**	**46.95 312**	P	**P**	**14 02 09.0**	**+1.7**
KSH			PP	**PP**	**14 03 58.8**	**-0.1**
KSH			S	**S**	**14 08 45.5**	**-4.6**
KSH			pmax	pmax		
	comp=Z,8.0nm,1.0s					
KSH			pmax	pmax		
	comp=Z,230nm,4.2s					
KSH			LR	LR		
	comp=N,180nm,9.3s					
KSH			LR	LR		
	comp=E,340nm,15.2s					
KSH			LR	LR		
	comp=Z,250nm,12.2s					
KDJ	**Kajisay**	**47.10 316**	*e*P	**P**	**14 02 09.5**	**+1.0**
	6.3nm,0.8s					
NIL	**Nilore**	**47.34 303**	*e*P	**P**	**14 02 10.5**	**+0.2**
	14nm,0.6s					
PETK	**Petropavlovsk-**	**49.15 29**	P	**P**	**14 02 24.2**	**+0.4**
	1.5nm,0.8s,baz=214,slow=4.9,SNR=3.0					
PETK			LR	LR	14 24 32.9	
	comp=Z,17nm,18.9s,baz=252,slow=38					
ZALV	**Zalesovo Beam**	**49.15 333**	P	**P**	**14 02 23.3**	**-0.4**
	2.0nm,0.4s,baz=128,slow=6.5,SNR=8.1					
ZALV			pP	**pP**	**14 02 49.9**	**-0.6**
	1.0nm,0.6s,baz=148,slow=8.6,SNR=2.2					
PEA1	**Petropavlovsk-**	**49.15 29**	*e*P	**P**	**14 02 24.2**	**+0.3**
STKA	**Stephens Creek**	**49.45 156**	P	**P**	**14 02 24.6**	**-1.7**
	1.5nm,0.4s,baz=335,slow=4.4,SNR=9.3					
STKA	**Stephens Creek**	**49.45 156**	*e*P	**P**	**14 02 24.6**	**-1.7**
	0.4nm,0.9s					
KURK	**Kurchatov**	**50.27 326**	*e*P	**P**	**14 02 32.9**	**+0.6**
	17nm,0.6s					
KBL	**Kabul**	**50.94 304**	*e*P	**P**	**14 02 38.0**	**+0.1**
	9.5nm,0.8s					
GAR	**Garm**	**50.97 309**	*e*P	**P**	**14 02 38.5**	**+0.5**
	12nm,0.7s					
KK31	**Karatay Array**	**52.03 315**	*e*P	**P**	**14 02 45.3**	**-0.3**
	5.7nm,1.0s					
KKAR	**Karatay Array**	**52.03 315**	*e*P	**P**	**14 02 45.3**	**-0.3**
	5.7nm,1.0s					
BRVK	**Borovoye**	**55.92 326**	*e*P	**P**	**14 03 13.3**	**-0.5**
	6.2nm,1.0s					
GEYT	**Alibeck**	**60.18 306**	P	**P**	**14 03 44.9**	**+1.1**
	7.0nm,0.8s,baz=159,slow=4.6,SNR=18					
GEYT			pP	**pP**	**14 04 13.6**	**+2.1**
	1.5nm,0.7s,baz=161,slow=6.1,SNR=2.1					
GYA0B	**ALIBECK ARRAY**	**60.18 306**	*e*P	**P**	**14 03 42.6**	**-1.2**
	9.9nm,0.8s					
ABKAR	**Akbulak array**	**60.80 319**	*e*P	**P**	**14 03 47.6**	**-0.1**
	4.3nm,0.7s					
RAYN	**Ar Rayn**	**71.26 290**	*e*P	**P**	**14 04 55.6**	**+0.4**
	14nm,0.9s					
KBZ	**Khabaz**	**71.94 312**	P	**P**	**14 04 59.3**	**+0.5**
	2.6nm,0.8s,baz=184,slow=6.3,SNR=6.2					
ILAR	**Eielson Array**	**78.87 26**	P	**P**	**14 05 36.6**	**-1.4**
	0.3nm,0.8s,baz=254,slow=5.2,SNR=3.8					
ILAR			pP	**pP**	**14 06 07.8**	**+0.6**
	0.6nm,0.8s,baz=245,slow=5.0,SNR=5.0					
ILB	**Eielson Array**	**78.87 26**	*e*P	**P**	**14 05 36.6**	**-1.4**
	0.7nm,0.8s					
ARA0	**ARCESS Array S**	**79.18 339**	*e*P	**P**	**14 05 39.1**	**-0.6**
ARCES	**ARCESS Array B**	**79.18 339**	P	**P**	**14 05 39.1**	**-0.6**
	2.0nm,0.7s,baz=79,slow=7.5,SNR=9.5					
ARCES			pP	**pP**	**14 06 09.0**	**+0.3**
	1.4nm,0.8s,baz=66,slow=6.9,SNR=2.7					
BRTR	**Keskin Array B**	**79.19 308**	P	**P**	**14 05 40.0**	**-0.5**
	0.8nm,0.7s,baz=109,slow=3.0,SNR=4.8					
FIA0	**FINESS Array S**	**80.37 331**	*e*P	**P**	**14 05 45.2**	**-1.0**
FINES	**FINESS Array B**	**80.37 331**	P	**P**	**14 05 45.2**	**-1.0**
	1.0nm,0.7s,baz=55,slow=7.2,SNR=8.8					
FINES			pP	**pP**	**14 06 16.2**	**+0.9**
	1.3nm,0.9s,baz=77,slow=8.6,SNR=1.7					
KMBO	**Kilima Mbogo**	**83.86 267**	P	**P**	**14 06 06.3**	**+0.6**
	2.7nm,0.7s,baz=41,slow=6.6,SNR=7.9					
NB2	**NORSAR Subarra**	**87.35 333**	P	pP	14 06 47.8	-3.5
	comp=Z,4.4nm,1.1s,baz=67,slow=4.6					
NB200	**NORSAR Array S**	**87.35 333**	*e*P	**P**	**14 06 20.2**	**-1.6**
NOA	**NORSAR Array B**	**87.35 333**	P	**P**	**14 06 20.2**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=69,slow=4.4,SNR=3.1					
NOA			pP	**pP**	**14 06 50.2**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=66,slow=4.8,SNR=3.4					
MAW	**Mawson**	**90.97 199**	P	**P**	**14 06 37.8**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=35,slow=4.4,SNR=3.3					
MAW	**Mawson**	**90.97 199**	*e*P	**P**	**14 06 37.8**	**-0.6**
	comp=Z,0.5nm,1.1s					
YKA	**Yellowknife Ar**	**92.90 22**	P	**P**	**14 06 47.1**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=308,slow=4.1,SNR=9.7					
YKA			pP	**pP**	**14 07 17.6**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=309,slow=4.5,SNR=3.9					
YKB5	**Yellowknife Ar**	**92.90 22**	*e*P	**P**	**14 06 47.1**	**-0.5**
VNDA	**Vanda**	**93.93 172**	P	**P**	**14 06 51.0**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=322,slow=5.7,SNR=8.2					
DBIC	**Dimbokro**	**122.29 287**	PKP	**PKPdf**	**14 12 28.9**	**-1.4**
	comp=Z,9.2nm,1.2s,baz=100,slow=6.1,SNR=3.0					
CPUP	**Villa Florida**	**167.18 188**	PKPab	**PKPab**	**14 14 44.9**	**-0.6**
	comp=Z,3.0nm,0.9s,baz=195,slow=4.6,SNR=3.1					

IDC 29 14:11:41.9±13.0, 15°.45S×177°.75W, h462km±151km, mb3.0/3, mb1 3.3/3, mb1mx2.9/25, mbtmp3.8/3, Error ellipse: s-maj=164.5km s-min=35.8km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.11**	**252**	P	P	14 19 23.5	-0.1
	1.2nm,0.4s,baz=86,slow=8.3,SNR=40						
NVAR	**Mina Array Bea**	**77.22**	**44**	P	P	14 22 47.8	+0.1
	0.6nm,0.9s,baz=230,slow=8.2,SNR=3.1						
ILAR	**Eielson Array**	**83.36**	**13**	P	P	14 23 18.8	-0.2
	0.3nm,0.7s,baz=222,slow=5.9,SNR=4.1						
BRTR	**Keskin Array B**	**143.45**	**318**	PKP	PKPdf	14 30 22.9	-0.6
	0.7nm,0.7s,baz=48,slow=2.1,SNR=4.4						

GUC 29 14:13:57.8±0.5, 41°.25S×73°.46W, h25km±5km, ML3.6, 1D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	**Milladeo Hill,**	**1.87**	**185**	*e*P	Pn	14 14 28.6	+0.4
GO07				*e*S	Sn	14 14 51.9	+0.9
GO07				IAML		14 15 10.7	
	comp=E,1μm,0.6s						
GO06	**Curarrehue**	**2.25**	**43**	⇓*i*P	Pn	14 14 34.5	+1.0
GO06				*e*S	Sn	14 15 01.9	+1.4
GO06				IAML		14 15 19.1	
	comp=E,295nm,0.8s						

*ISCJB **29** 14:26:14.0±0.3, 41°.60N±0°.04×89°.09E±0°.04, h10km, mb3.9/26, MS3.0/1, Error ellipse: s-maj=5.5km s-min=4.1km az=29.2*
*IDC **29** 14:26:13.9±0.7, 41°.49N×89°.15E, h0km, mb3.8/15, mb1 3.9/21, mb1mx3.8/54, mbtmp3.8/21, ML3.5/6, MS3.0/3, Ms1 3.0/3, ms1mx2.6/46, Error ellipse: s-maj=17.9km s-min=12.3km az=33.0*
*NEIC **29** 14:26:16.8±2.7, 41°.58N×89°.15E, h19km±4km, mb4.1/12, Error ellipse: s-maj=12.7km s-min=10.0km az=222.0*
*BJI **29** 14:26:20.7±0.0, 41°.55N×88°.95E, h10km, ML4.0/13, Ms3.6/1*
*NNC **29** 14:26:22.7±2.1, 42°.00N×88°.73E, h3km±8km, mb4.3, mpv4.0, Error ellipse: s-maj=16.0km s-min=13.4km az=111.0*
ISC 29 14:26:16.2±0.5, 41°.59N±0°.05×89°.10E±0°.05, h10km, n68, σ1§90/79, mb4.0/26, 12C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.46**	**336**	Pn	**Pb**	**14 27 00.0**	**-0.5**
WMQ				Sn	**Sb**	**14 27 33.0**	**+2.2**
WMQ				smax	smax		
	comp=N,320nm,0.5s						
WMQ				smax	smax		
	comp=E,500nm,0.7s						
MK31	**Makanchi Array**	**7.14**	**319**	*e*Pn	**Pn**	**14 28 02.4**	**+1.8**
MK31	**Makanchi Array**	**7.14**	**319**	⇑Pn	**Pn**	**14 28 02.8**	**+2.1**
	2.3nm,0.3s,baz=130,slow=14,SNR=181						
MK31				Pg	**Pb**	**14 28 23.2**	**+3.0**
	2.3nm,0.3s,baz=138,slow=16,SNR=6.1						
MK31				⇑Sn	**Sn**	**14 29 18.7**	**-3.1**
	12nm,0.6s,baz=135,slow=25,SNR=4.2						
MK31				⇑Lg	Lg	14 29 53.6	
	17nm,0.6s						
MK32	**Makanchi Array**	**7.14**	**319**	*e*Pn	**Pn**	**14 28 01.7**	**+1.1**
MK32				*e*Sn	**Sn**	**14 29 21.2**	**-0.6**
MKAR	**Makanchi Array**	**7.14**	**319**	Pn	**Pn**	**14 28 01.7**	**+1.1**
	2.5nm,0.3s,baz=135,slow=14,SNR=72						
MKAR				Sn	**Sn**	**14 29 21.2**	**-0.6**
	3.4nm,0.3s,baz=136,slow=25,SNR=6.1						
MKAR				Lg	Lg	14 30 02.9	
	3.1nm,0.3s,baz=140,slow=27,SNR=4.7						
MAKZ	**Makanchi**	**7.30**	**318**	*e*Pn	**Pn**	**14 28 05.2**	**+2.3**
MAKZ	**Makanchi**	**7.30**	**318**	⇑Pn	**Pn**	**14 28 05.3**	**+2.4**
	3.3nm,0.3s						
MAKZ				⇑Pg	**Pb**	**14 28 27.5**	**+4.5**
	5.7nm,0.5s						
MAKZ				⇑Sn	**Sn**	**14 29 23.3**	**-2.6**
	10nm,0.5s						
MAKZ				⇓Lg	Lg	14 29 58.7	
	36nm,0.9s						
PDGK	**Podgornoye**	**7.32**	**287**	⇓Pn	**Pn**	**14 28 05.1**	**+1.9**
	9.8nm,0.8s						
PDGK				⇓Pg	Pb	14 28 29.2	+5.9
	18nm,0.6s						
PDGK				⇓Sn	**Sn**	**14 29 26.9**	**+0.5**
	37nm,0.7s						
PDGK				⇑Lg	Lg	14 30 05.1	
	72nm,0.6s						
PRZ	**Przheval'sk**	**8.02**	**280**	*e*Pn	**Pn**	**14 28 15.2**	**+2.3**
KDJ	**Kajisay**	**8.91**	**277**	*e*Pn	**Pn**	**14 28 26.6**	**+1.5**
BOOM	**Boomskoye usch**	**9.84**	**280**	*e*Pn	**Pn**	**14 28 38.6**	**+0.8**
TKM2	**Tokmak 2**	**10.10**	**282**	⇑Pn	**Pn**	**14 28 43.0**	**+1.5**
	4.6nm,0.6s						
TKM2				⇑Sn	**Sn**	**14 30 34.0**	**-0.9**
	11nm,0.8s						
TKM2				⇑Lg	Lg	14 31 32.1	
	25nm,1.4s						
AAK	**Ala-Archa**	**10.90**	**280**	Pn	**Pn**	**14 28 51.8**	**-0.6**
	0.4nm,0.3s,baz=186,slow=10,SNR=2.3						
AAK				Lg	Lg	14 32 01.2	
	0.3nm,0.3s,baz=210,slow=14,SNR=2.4						
KURBB	**Kurchatov Arra**	**11.62**	**325**	Pn	**Pn**	**14 29 01.4**	**-0.6**
	0.1nm,0.3s,baz=133,slow=12,SNR=11						
KURBB				Sn	**Sn**	**14 31 16.6**	**+4.8**
	0.1nm,0.3s,baz=136,slow=16,SNR=1.9						
KURBB				Lg	Lg	14 32 24.4	
	0.0nm,0.3s,baz=152,slow=24,SNR=2.1						
KURK	**Kurchatov**	**11.65**	**325**	*e*Pn	**Pn**	**14 29 01.8**	**-0.6**
KURK	**Kurchatov**	**11.65**	**325**	⇓Pn	**Pn**	**14 29 00.4**	**-2.0**
	3.8nm,1.0s						
KURK				⇑Pg		14 29 45.0	
	2.7nm,0.6s						
KURK				⇓Sn	**Sn**	**14 31 07.8**	**-4.7**
	4.0nm,0.7s						
KURK				⇓Lg	Lg	14 32 16.9	
	22nm,0.9s						
LSA	**Lhasa**	**11.98**	**171**	*e*Pn	**Pn**	**14 29 07.4**	**0.0**
ZAA0	**Zalesovo Array**	**12.69**	**348**	*e*Pn	**Pn**	**14 29 15.5**	**-1.1**
ZALV	**Zalesovo Beam**	**12.69**	**348**	Pn	**Pn**	**14 29 15.5**	**-1.0**
	0.4nm,0.3s,baz=172,slow=13,SNR=4.1						
ZALV				Sn	**Sn**	**14 31 41.8**	**+4.0**
	0.2nm,0.3s,baz=169,slow=24,SNR=2.2						
ZALV				Lg	Lg	14 33 03.2	
	0.1nm,0.3s,baz=166,slow=25,SNR=2.4						
ZALV				LR	LR	14 34 44.8	
	comp=Z,72nm,19.5s,baz=46,slow=40						
ZAA1	**Zalesovo Array**	**12.69**	**348**	*e*Pn	**Pn**	**14 29 15.5**	**-1.1**
SONA0	**Songino Array**	**13.78**	**57**	*e*Pn	**Pn**	**14 29 32.7**	**+1.1**
SONM	**Songino Array**	**13.78**	**57**	Pn	**Pn**	**14 29 32.7**	**+1.1**
	0.6nm,0.3s,baz=237,slow=14,SNR=5.0						
SONM				Lg	Lg	14 33 33.9	
	0.2nm,0.3s,baz=243,slow=28,SNR=7.3						
SONM				LR	LR	14 35 12.3	
	comp=Z,66nm,21.9s,baz=222,slow=39						
KK31	**Karatay Array**	**13.84**	**282**	*e*Pn	**Pn**	**14 29 30.2**	**-2.1**
KKAR	**Karatay Array**	**13.84**	**282**	*e*Pn	**Pn**	**14 29 30.1**	**-2.2**
GAR	**Garm**	**14.57**	**266**	*e*Pn	**Pn**	**14 29 42.5**	**0.0**
CHCP	**Chirah Chowk**	**14.83**	**243**	P	**Pn**	**14 29 45.1**	**-0.8**
NIL	**Nilore**	**14.84**	**243**	*e*Pn	**Pn**	**14 29 44.7**	**-1.4**
CEP	**Cherat**	**15.65**	**246**	P	**Pn**	**14 29 54.9**	**-1.9**
CEP				S	Sn	14 32 40.0	-10
SHL	**Shillong**	**16.15**	**171**	*e*P	**P**	**14 30 10.0**	**+3.3**
BVAR	**Borovoye Array**	**17.02**	**319**	P	**Pn**	**14 30 13.9**	**-0.2**
	0.3nm,0.3s,baz=125,slow=15,SNR=8.7						
BRVK	**Borovoye**	**17.09**	**319**	⇑Pn	**Pn**	**14 30 16.0**	**+0.9**
	2.4nm,0.6s						
KBL	**Kabul**	**17.27**	**252**	*e*Pn	**Pn**	**14 30 16.1**	**-1.6**
	7.6nm,0.8s						
ABKAR	**Akbulak array**	**21.75**	**301**	*e*P	**P**	**14 31 07.3**	**-0.4**
	1.2nm,0.7s						
WHN	**Wuhan**	**23.11**	**110**	*e*P	**P**	**14 31 29.0**	**+6.7**
AKTO	**Aktyubinsk**	**23.19**	**303**	P	**P**	**14 31 23.1**	**+0.3**
	0.7nm,0.7s,baz=85,slow=13,SNR=4.7						
GEYT	**Alibeck**	**24.03**	**272**	P	**P**	**14 31 31.7**	**+0.4**
	2.2nm,0.6s,baz=64,slow=6.9,SNR=5.9						
CM31	**Chiang Mai Arr**	**24.55**	**157**	*e*P	**P**	**14 31 36.9**	**+0.8**
	5.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**24.55**	**157**	P	**P**	**14 31 36.9**	**+0.8**
	3.8nm,0.8s,baz=334,slow=9.5,SNR=26						
ARU	**Arti**	**24.66**	**317**	P	**P**	**14 31 36.9**	**+0.1**
	1.2nm,0.4s,baz=90,slow=3.0,SNR=5.9						
MDJ	**Mudanjiang**	**29.50**	**70**	*e*P	**P**	**14 32 18.9**	**-1.6**
	3.7nm,0.5s						
PBA	**Port Blair**	**29.99**	**173**	*e*P	P	14 32 21.9	-3.0
	52nm,0.8s						
KS15	**Wonju Array Si**	**30.03**	**85**	*e*P	**P**	**14 32 23.5**	**-1.7**
	2.5nm,0.8s						
KSRS	**Korea Array**	**30.05**	**85**	P	**P**	**14 32 23.5**	**-1.9**
	0.4nm,0.7s,baz=285,slow=9.4,SNR=2.8						
KSRS				LR	LR	14 44 27.7	
	comp=Z,32nm,18.6s,baz=270,slow=36						
YAK	**Yakutsk**	**31.59**	**36**	*e*P	**P**	**14 32 36.4**	**-2.3**
	4.9nm,0.6s						
TIXI	**Tiksi**	**35.91**	**20**	P	**P**	**14 33 15.9**	**-0.2**
	0.9nm,0.4s,baz=224,slow=7.1,SNR=3.1						
TIXI	**Tiksi**	**35.91**	**20**	*e*P	**P**	**14 33 15.4**	**-0.7**
	3.5nm,1.1s						
AKASG	**Malin Array Be**	**41.43**	**304**	P	**P**	**14 34 02.1**	**-0.5**
	0.4nm,0.4s,baz=76,slow=8.3,SNR=2.5						
AKBB	**Malin Array Si**	**41.43**	**304**	*e*P	**P**	**14 34 02.1**	**-0.5**
	2.7nm,0.9s						
BR101	**Keskin Array S**	**41.50**	**287**	*e*P	**P**	**14 34 04.2**	**+0.6**
BRTR	**Keskin Array B**	**41.50**	**287**	P	**P**	**14 34 04.2**	**+0.6**
	1.0nm,0.8s,baz=107,slow=8.4,SNR=5.0						
FIA1	**FINESS Array S**	**41.97**	**320**	*e*P	**P**	**14 34 04.4**	**-2.6**
	4.1nm,1.0s						
FIA0	**FINESS Array S**	**41.97**	**320**	*e*P	**P**	**14 34 07.5**	**+0.6**
FINES	**FINESS Array B**	**41.97**	**320**	P	**P**	**14 34 07.6**	**+0.6**
	2.2nm,1.0s,baz=173,slow=12,SNR=3.7						
NB200	**NORSAR Array S**	**49.13**	**321**	*e*P	**P**	**14 35 03.6**	**-0.1**
NOA	**NORSAR Array B**	**49.13**	**321**	P	**P**	**14 35 03.6**	**-0.1**
	0.2nm,0.3s,baz=76,slow=7.6,SNR=2.7						
ILAR	**Eielson Array**	**65.31**	**23**	P	**P**	**14 36 56.4**	**-1.5**
	0.3nm,0.5s,baz=328,slow=5.4,SNR=4.8						
ILB	**Eielson Array**	**65.31**	**23**	*e*P	**P**	**14 36 56.4**	**-1.5**
	1.6nm,1.0s						
WRA	**Warramunga Arr**	**74.18**	**136**	P	**P**	**14 37 51.8**	**-1.3**
	1.4nm,0.8s,baz=306,slow=7.6,SNR=3.4						
WR1	**Warramunga Arr**	**74.18**	**136**	*e*P	**P**	**14 37 51.8**	**-1.3**
YKA	**Yellowknife Ar**	**74.52**	**11**	P	**P**	**14 37 54.3**	**-0.2**
	0.5nm,0.6s,baz=337,slow=5.9,SNR=5.5						
YKB5	**Yellowknife Ar**	**74.52**	**11**	*e*P	**P**	**14 37 54.3**	**-0.2**
AS31	**Alice Springs**	**77.06**	**138**	*e*P	**P**	**14 38 09.7**	**+0.2**
	0.8nm,1.0s						
ASAR	**Alice Springs**	**77.06**	**138**	P	**P**	**14 38 09.7**	**+0.2**
	0.4nm,0.7s,baz=331,slow=5.7,SNR=8.4						
TOA1	**Torodi Ar. Sit**	**79.48**	**278**	*e*P	**P**	**14 38 21.6**	**-1.6**
TORD	**Torodi Ar. Bea**	**79.48**	**278**	P	**P**	**14 38 21.6**	**-1.6**
	8.2nm,0.4s,baz=28,slow=5.8,SNR=8.6						
BOSA	**Boshof**	**91.40**	**232**	P	**P**	**14 39 20.6**	**-1.9**
	4.0nm,1.0s,baz=80,slow=11,SNR=4.1						
NV01	**Mina Array Sit**	**96.53**	**21**	*e*P	**P**	**14 39 46.0**	**-0.2**
NVAR	**Mina Array Bea**	**96.53**	**21**	P	**P**	**14 39 46.0**	**-0.2**
	0.2nm,0.6s,baz=339,slow=4.6,SNR=2.3						

*CNRM **29** 14:29:44.9, 36°.56N×2°.25W, h30km, ml3.3*
*MDD **29** 14:29:45.2±0.8, 36°.71N×2°.58W, h10km±1km, mbLg2.4/9, Error ellipse: s-maj=8.9km s-min=3.1km az=175.0, PRXIMO*
MDD EMS: II INTENSIDAD MAXIMA.
ISC 29 14:29:42.9±1.5, 36°.64N±0°.05×2°.62W±0°.04, h15km±11km, n16, σ1§39/23, 2C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBER	**Berja**	**0.33**	**320**	⇑Pg	**Pb**	**14 29 51.1**	**+0.4**
	20nm,0.1s,SNR=18						
EBER				Lg	Lg	14 29 55.4	
	604nm,0.2s,SNR=5.1						
ENIJ	**Nijar**	**0.47**	**45**	⇑Pg	**Pg**	**14 29 52.5**	**+0.2**
	28nm,0.1s,SNR=18						
ENIJ				Lg	Lg	14 29 57.4	
	290nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**0.86**	**311**	Pg	**Pn**	**14 30 01.1**	**+0.4**
	2.7nm,0.1s,SNR=17						
EQUE				Lg	Lg	14 30 11.0	
	36nm,0.2s,SNR=5.0						
GORA	**Gorafe**	**0.90**	**338**	Pg	**Pn**	**14 30 01.6**	**+0.4**
	13nm,0.2s,SNR=7.9						
GORA				Lg	Lg	14 30 12.2	
	37nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.21**	**343**	Pg	**Pn**	**14 30 07.2**	**+1.7**
	1.3nm,0.3s,SNR=27						
EQES				Lg	Lg	14 30 24.9	
	12nm,0.2s,SNR=5.8						
EGOR	**Sierra Gorda,**	**1.28**	**292**	Pg	**Pn**	**14 30 08.9**	**+2.5**
	1.9nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	14 30 26.8	
	25nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**1.48**	**2**	Pg	**Pg**	**14 30 11.7**	**+0.3**
	1.5nm,0.2s,SNR=7.9						
SESP				Lg	Lg	14 30 30.5	
	26nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**1.48**	**2**	P	**Pg**	**14 30 11.3**	**-0.1**
SESP				S	**Sg**	**14 30 30.4**	**-0.2**
EMUR	**La Murta**	**1.63**	**42**	Pn	**Pn**	**14 30 11.9**	**+0.7**
	1.0nm,0.3s,SNR=11						
EMUR				Sn	**Sn**	**14 30 31.0**	**-0.9**
	2.7nm,0.3s,SNR=5.0						
EMIJ	**Mijas**	**1.73**	**268**	Pn	**Pn**	**14 30 13.9**	**+1.4**
	0.2nm,0.1s,SNR=9.5						
EMIJ				Sn	**Sn**	**14 30 31.8**	**-2.6**
	2.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**2.17**	**23**	Pn	**Pn**	**14 30 20.5**	**+1.8**
	0.5nm,0.1s,SNR=12						
ETOB				Sn	**Sn**	**14 30 45.0**	**-0.4**
	2.9nm,0.3s,SNR=5.0						
EADA	**Adamuz**	**2.18**	**315**	Pg	**Pg**	**14 30 25.2**	**+0.5**
	0.7nm,0.2s,SNR=7.9						
EADA				Lg	Lg	14 30 53.1	
	5.5nm,0.3s,SNR=7.9						
JBK	**JBK**	**2.30**	**179**	P	**Pn**	**14 30 20.8**	**+0.3**
JBK				S	**Sn**	**14 30 48.5**	**-0.2**
HORN	**Hornachuelos**	**2.42**	**301**	P	**Pg**	**14 30 29.0**	**-0.4**
HORN				S	**Sb**	**14 30 57.9**	**+2.0**
PAB	**San Pablo**	**3.20**	**335**	Pn	**Pb**	**14 30 37.5**	**-2.1**
	0.1nm,0.1s,SNR=7.9						
PAB				Pg	**Pg**	**14 30 43.3**	**-1.0**
	0.4nm,0.2s,SNR=7.9						
PAB				Lg	Lg	14 31 26.1	
	2.7nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**3.21**	**341**	Pg	**Pg**	**14 30 42.6**	**-1.8**
	0.2nm,0.1s,baz=160,slow=17,SNR=7.9						
ESDC				Lg	Lg	14 31 25.1	
	2.9nm,0.5s,baz=158,slow=28,SNR=7.9						

*ISCJB **29** 14:33:52.8±0.4, 36°.39S±0°.06×52°.39E±0°.10, h10km, mb4.1/21, MS3.7/15, Error ellipse: s-maj=11.5km s-min=8.1km az=170.2*
*IDC **29** 14:33:53.0±0.7, 36°.38S×52°.39E, h0km, mb4.2/14, mb1 4.3/15, mb1mx4.0/46, mbtmp4.2/15, ML4.7/1, MS3.7/16, Ms1 3.6/16, ms1mx3.5/34, Error ellipse: s-maj=23.5km s-min=16.3km az=19.0*
*NEIC **29** 14:33:54.8±1.9, 36°.37S×52°.38E, h10km, mb4.2/12, Error ellipse: s-maj=23.1km s-min=12.4km az=266.0*
ISC 29 14:33:54.8±0.5, 36°.36S±0°.07×52°.4E±0°.1, h10km, n58, σ0§98/43, mb4.2/21, MS3.6/15, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**10.06**	**182**	*e*Pn	**Pn**	**14 36 19.2**	**-0.2**
MRIV	**Mauritius Mete**	**16.62**	**17**	*e*Pn	**Pn**	**14 37 48.0**	**0.0**
ABPO	**Ambohimpanom**	**17.87**	**344**	*e*Pn	**Pn**	**14 38 01.1**	**-2.6**
	15

AS31	**Alice Springs**	**69.84**	**105**	*e*P	**P**	**14 45 06.0**	**+0.1**
	0.7nm,0.9s						
CM31	**Chiang Mai Arr**	**70.06**	**47**	*e*P	**P**	**14 45 08.1**	**+0.9**
	6.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**70.06**	**47**	P	**P**	**14 45 08.1**	**+0.9**
	0.4nm,0.6s,baz=216,slow=5.6,SNR=3.3						
CMAR				LR	LR	15 13 19.1	
	comp=Z,95nm,18.4s,baz=192,slow=34						
STKA	**Stephens Creek**	**71.36**	**116**	LR	LR	15 09 01.3	
	comp=Z,82nm,20.3s,baz=211,slow=30						
WRA	**Warramunga Arr**	**72.16**	**102**	P	**P**	**14 45 19.5**	**-0.5**
	1.7nm,0.9s,baz=232,slow=6.8,SNR=4.0						
WR1	**Warramunga Arr**	**72.16**	**102**	*e*P	**P**	**14 45 19.5**	**-0.5**
BRTR	**Keskin Array B**	**77.66**	**345**	LR	LR	15 18 40.5	
	comp=Z,26nm,18.8s,baz=110,slow=35						
KBZ	**Khabaz**	**80.18**	**353**	P	**P**	**14 46 06.5**	**+1.6**
	1.4nm,0.8s,baz=152,slow=4.8,SNR=4.3						
KBZ				LR	LR	15 22 45.1	
	comp=Z,27nm,18.1s,baz=150,slow=37						
KDJ	**Kajisay**	**81.34**	**18**	*e*P	**P**	**14 46 12.9**	**+1.5**
	6.4nm,0.9s						
ABKAR	**Akbulak array**	**85.51**	**5**	*e*P	**P**	**14 46 33.2**	**+0.8**
	1.9nm,1.1s						
AKTO	**Aktyubinsk**	**86.57**	**4**	P	**P**	**14 46 35.8**	**-1.9**
	1.2nm,0.6s,baz=225,slow=8.6,SNR=7.0						
MK32	**Makanchi Array**	**87.03**	**20**	*e*P	**P**	**14 46 38.5**	**-1.5**
MKAR	**Makanchi Array**	**87.03**	**20**	P	**P**	**14 46 38.5**	**-1.5**
	0.7nm,0.9s,baz=287,slow=8.5,SNR=3.6						
PLCA	**Paso Flores**	**87.12**	**220**	LR	LR	15 18 12.6	
	comp=Z,17nm,20.2s,baz=191,slow=30						
BVAR	**Borovoye Array**	**90.39**	**11**	P	**P**	**14 46 54.9**	**-0.9**
	0.7nm,0.6s,baz=160,slow=4.7,SNR=6.3						
GERES	**GERESS Array B**	**91.54**	**336**	LR	LR	15 30 24.1	
	comp=Z,14nm,20.3s,baz=137,slow=37						
ZALV	**Zalesovo Beam**	**94.21**	**19**	P	**P**	**14 47 11.8**	**-1.7**
	0.9nm,0.6s,baz=193,slow=5.9,SNR=4.1						
ZAA1	**Zalesovo Array**	**94.22**	**19**	*e*P	**P**	**14 47 11.8**	**-1.7**
ILAR	**Eielson Array**	**149.31**	**16**	PKPbc	**PKPbc**	**14 53 42.7**	**-0.2**
	1.4nm,0.9s,baz=320,slow=3.8,SNR=9.9						
ILB	**Eielson Array**	**149.31**	**16**	*e*PKPbc	**PKPbc**	**14 53 42.7**	**-0.2**
YKA	**Yellowknife Ar**	**152.62**	**347**	PKPbc	**PKiKP**	**14 53 51.0**	**+0.1**
	0.2nm,0.5s,baz=10,slow=1.8,SNR=3.3						
YKA				PKPab	**PKPab**	**14 54 01.5**	**+0.2**
	0.4nm,0.8s,baz=20,slow=4.3,SNR=7.1						
YKB5	**Yellowknife Ar**	**152.62**	**347**	*e*PKPbc	**PKiKP**	**14 53 51.0**	**+0.1**
YKB5				*e*PKPab	**PKPab**	**14 54 01.5**	**+0.2**
PD31	**Pinedale Array**	**164.69**	**300**	*e*PKPab	**PKPab**	**14 54 54.4**	**-0.1**
PDAR	**Pinedale Array**	**164.69**	**300**	PKPab	**PKPab**	**14 54 54.4**	**-0.1**
	0.2nm,0.5s,baz=15,slow=8.4,SNR=3.8						

*ISCJB **29** 14:40:15.2±0.6,54°.9S×0°.1×26°.2W±0°.1,h10km,mb4.2/15, Error ellipse: s-maj=15.8km s-min=11.0km az=30.2*
*NEIC **29** 14:40:18.0±2.8,54°.88S×26°.17W,h16km±5km,mb4.4/14, Error ellipse: s-maj=19.6km s-min=14.5km az=189.0*
*IDC **29** 14:40:24.0±1.1,55°.47S×26°.56W,h0km,mb3.8/3, mb1 3.8/4,mb1mx3.7/23,mbtmp3.7/4,ML3.0/1,Error ellipse: s-maj=46.9km s-min=24.2km az=71.0*
ISC 29 14:40:17.5±0.7,54°.8S±0°.1×26°.29W±0°.10,h10km,n23,
σ2°14/21,mb4.4/15,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.96**	**271**	*e*Pn	**Pn**	**14 41 48.1**	**+2.5**
EFI	**East Falkland**	**19.18**	**266**	*e*Pn	**Pn**	**14 44 43.1**	**+1.2**
	5.7nm,0.6s						
SNAA	**Sanae**	**19.67**	**158**	P	**Pn**	**14 44 48.5**	**+0.8**
	0.0nm,0.3s,baz=318,slow=13,SNR=3.6						
SNAA	**Sanae**	**19.67**	**158**	*e*P	**P**	**14 44 45.4**	**-0.9**
PMSA	**Palmer Station**	**21.10**	**227**	*e*P	**P**	**14 44 58.2**	**-3.6**
	38nm,1.0s						
GO09	**Cerro Castillo**	**27.52**	**258**	*e*P	**P**	**14 46 01.9**	**-1.9**
	15nm,1.1s						
TRQA	**Tornquist**	**29.35**	**290**	*e*P	**P**	**14 46 18.4**	**-1.9**
	0.1nm,0.9s						
QSPA	**South Pole Qui**	**35.43**	**180**	*e*P	**P**	**14 47 13.4**	**0.0**
	1.9nm,0.8s						
GO04	**Tololo Observa**	**40.07**	**289**	*e*P	**P**	**14 47 53.3**	**+0.2**
	18nm,1.1s						
MAW	**Mawson**	**40.84**	**144**	P	**P**	**14 48 02.5**	**+3.8**
	0.7nm,0.6s,baz=225,slow=11,SNR=1.8						
MAW	**Mawson**	**40.84**	**144**	*e*P	**P**	**14 47 59.7**	**+1.0**
	0.3nm,0.9s						
LCO	**Las Campanas**	**40.92**	**291**	*e*P	**P**	**14 48 00.5**	**+0.3**
	5.2nm,0.7s						
SHEL	**Horse Pasture**	**41.92**	**30**	*e*P	**P**	**14 48 08.2**	**+0.1**
	58nm,0.6s						
LVC	**Limon Verde**	**45.15**	**298**	*e*P	**P**	**14 48 34.8**	**+0.3**
	8.5nm,0.9s						
SBA	**Scott Base**	**47.34**	**184**	*e*P	**P**	**14 48 48.8**	**-1.9**
GO01	**Chusmiza**	**47.76**	**300**	*e*P	**P**	**14 48 55.4**	**+0.2**
	6.6nm,1.1s						
VNDA	**Vanda**	**47.82**	**182**	P	**P**	**14 48 57.6**	**+3.1**
	1.4nm,0.6s,baz=186,slow=6.6,SNR=20						
VNDA	**Vanda**	**47.82**	**182**	*e*P	**P**	**14 48 52.3**	**-2.1**
	1.9nm,0.8s						
PB11	**IPOC Station P**	**47.91**	**299**	*e*P	**P**	**14 48 53.9**	**-2.1**
	11nm,1.1s						
LBTB	**Lobatse**	**48.16**	**73**	*e*P	**P**	**14 48 56.0**	**-1.8**
	2.6nm,1.0s						
LPAZ	**La Paz**	**50.11**	**303**	P	P	14 49 22.8	+9.4
	0.9nm,0.6s,baz=153,slow=9.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**71.73**	**29**	P	P	14 51 51.9	+12
	0.5nm,0.5s,baz=194,slow=6.8,SNR=4.6						
ILAR	**Eielson Array**	**149.67**	**313**	PKPbc	**PKPab**	**15 00 14.5**	**+3.4**
	1.2nm,1.0s,baz=128,slow=2.6,SNR=11						

JMA 29 14:55:31.5±0.1,24°.87N×123°.33E,h26km,M1.2,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.50**	**216**	P	Pb	14 55 41.3	-0.4
YOJ				*e*S	Sb	14 55 48.1	-0.6
JYNG	**Yonagunijimaku**	**0.54**	**220**	P	Pb	14 55 42.2	-0.3
JYNG				S	Sb	14 55 49.9	-0.1
IRIF	**Iriomote-Funau**	**0.65**	**146**	P	Pb	14 55 43.7	-0.5
IRIF				S	Sb	14 55 52.9	+0.1
JKRS	**Kuro-shima**	**0.88**	**135**	*e*S	Sb	14 55 58.7	-0.9
JIJ	**Ishigaki jima**	**0.90**	**124**	P	Pb	14 55 47.9	-0.5
JIJ				*e*S	Sb	14 55 59.8	-0.1
JISG	**Ishigakijimahi**	**0.94**	**107**	P	Pn	14 55 48.6	-0.3
JISG				*e*S	Sb	14 56 00.2	-0.9

TAP 29 14:55:42.5,24°.79N×121°.25E,h18km±1km,ML1.2,C,
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSK	**Sanguang**	**0.15**	**137**	*e*P	Pg	14 55 46.9	+0.1
	baz=135						
NSK				*e*S	Sg	14 55 49.7	0.0
	baz=135						
YHNB	**Yeheng**	**0.17**	**135**	P	Pg	14 55 47.1	+0.1
	baz=134						
YHNB				S	Sg	14 55 50.1	0.0
	baz=134						
LIOB	**Emei**	**0.25**	**236**	P	Pb	14 55 48.9	+0.3
	baz=237						
LIOB				*e*S	Sb	14 55 53.2	+0.6
	baz=237						
NSTT	**Nanjuang**	**0.27**	**235**	*e*P	Pb	14 55 49.1	+0.2
	baz=234						
NSTT				S	Sb	14 55 54.1	+0.9
	baz=234						
ENTT	**Nioudou**	**0.33**	**117**	S	Sb	14 55 54.6	-0.2
	baz=121						
NNSB	**Datong**	**0.38**	**161**	*e*P	Pb	14 55 51.1	+0.2
	baz=162						
NNSB				S	Sb	14 55 56.2	-0.2
	baz=162						
YM01	**YM01**	**0.46**	**39**	*e*P	Pb	14 55 53.0	+0.7
	baz=25						
YM01				*e*S	Sb	14 56 00.0	+1.2
	baz=25						

TIF 29 15:31:41.6,41°.35N×44°.00E,h10km±1km,
Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZRT	**Kazreti**	**0.31**	**82**	P	Pb	15 31 48.6	-0.6
KZRT				S	Sg	15 31 53.0	+1.2
BGD	**Bogdanovka**	**0.31**	**255**	P	Pg	15 31 48.5	+0.7
BGD				S	Sg	15 31 53.1	+1.1
AKH	**Akhalkalaki**	**0.38**	**280**	P	Pb	15 31 50.0	-0.6
BTNK	**Botanikuri**	**0.69**	**60**	P	Pb	15 31 55.6	-0.2
BTNK				S	Sb	15 32 05.2	-0.2

TIF 29 15:31:47.0,41°.34N×44°.00E,h9km±2km,
Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZRT	**Kazreti**	**0.30**	**82**	P	Pb	15 31 54.2	-0.5
KZRT				S	Sb	15 31 58.5	-1.3
BGD	**Bogdanovka**	**0.31**	**255**	P	Pg	15 31 54.0	+0.7
BGD				S	Sg	15 31 58.7	+1.2
AKH	**Akhalkalaki**	**0.39**	**280**	P	Pb	15 31 55.6	-0.5
AKH				S	Sb	15 32 01.2	-1.0
AKH	**Akhalkalaki**	**0.39**	**280**	S	Pg	15 31 55.6	+0.9
TBLG	**Delisi**	**0.68**	**55**	P	Sb	15 32 10.9	+0.4
BTNK	**Botanikuri**	**0.69**	**60**	P	Pg	15 32 00.8	+0.4
BTNK				S	Sb	15 32 10.8	-0.1

IDC 29 15:49:15.9±1.2,55°.62S×26°.52W,h0km,mb4.3/3,
mb1 4.4/3,mb1mx3.9/16,mbtmp4.3/3,Error ellipse:
s-maj=52.8km s-min=31.0km az=89.0,South Sandwich
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**47.02**	**182**	P	P	15 57 48.2	0.0
	1.0nm,0.6s,baz=188,slow=6.7,SNR=14						
LPAZ	**La Paz**	**50.44**	**304**	P	P	15 58 16.1	+0.2
	0.8nm,0.6s,baz=127,slow=5.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**72.50**	**29**	P	P	16 00 44.4	+0.2
	9.2nm,0.3s,baz=200,slow=5.7,SNR=6.2						
ILAR	**Eielson Array**	**150.11**	**312**	PKPbc	PKPbc	16 09 06.0	-1.0
	0.9nm,0.9s,baz=106,slow=1.8,SNR=7.6						

*IDC **29** 16:04:11.8±0.7,55°.55S×26°.35W,h0km,mb4.4/7, mb1 4.4/8,mb1mx4.1/20,mbtmp4.4/8,ML4.1/1,MS3.4/6, Ms1 3.4/6,ms1mx3.2/19,Error ellipse: s-maj=25.3km s-min=20.3km az=74.0*
*ISCJB **29** 16:04:15.9±0.5,55°.57S±0°.07×26°.2W±0°.2,h38km, mb4.4/11,MS3.4/6,Error ellipse: s-maj=15.5km s-min=10.0km az=160.9*
*NEIC **29** 16:04:15.3±2.8,55°.50S×26°.28W,h18km±4km,mb4.5/11, Error ellipse: s-maj=15.3km s-min=12.8km az=78.0*
ISC 29 16:04:17.1±0.6,55°.6S±0°.1×26°.5W±0°.1,h38km,n37,
σ1°34/35,mb4.6/10,MS3.3/6,South Sandwich Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.88**	**279**	*e*Pn	**Pn**	**16 05 38.9**	**-2.7**
VNA1	**Neumayer--Stat**	**17.11**	**159**	P	**Pn**	**16 08 11.1**	**-1.8**
VNA3	**Neumayer Olymp**	**17.33**	**162**	P	**P**	**16 08 16.5**	**-0.2**
SNAA	**Sanae**	**19.04**	**157**	P	**Pn**	**16 08 36.6**	**+0.1**
SNAA	**Sanae**	**19.04**	**157**	P	**P**	**16 08 35.2**	**-0.3**
	0.6nm,0.3s,baz=306,slow=10,SNR=18						
SNAA	**Sanae**	**19.04**	**157**	*e*P	**Pn**	**16 08 36.1**	**-0.4**
	4.6nm,0.8s						
PMSA	**Palmer Station**	**20.50**	**228**	P	**P**	**16 08 52.4**	**+1.1**
	16nm,0.8s,baz=90,slow=3.0,SNR=3.3						
PMSA				LR	LR	16 15 27.3	
	comp=Z,149nm,19.2s,baz=62,slow=33						
PMSA	**Palmer Station**	**20.50**	**228**	*e*Pn	Pn	16 08 54.9	+1.2
	44nm,1.0s						
TRQA	**Tornquist**	**29.48**	**292**	*e*P	**P**	**16 10 15.6**	**-1.7**
	16nm,1.1s						
PLCA	**Paso Flores**	**32.29**	**279**	LR	LR	16 23 02.6	
	comp=Z,37nm,20.7s,baz=151,slow=35						
QSPA	**South Pole Qui**	**34.69**	**180**	*e*P	**P**	**16 11 03.0**	**+0.2**
	12nm,0.9s						
MAW	**Mawson**	**40.32**	**144**	P	**P**	**16 11 49.5**	**-0.5**
	1.8nm,0.6s,baz=214,slow=5.0,SNR=10						
MAW	**Mawson**	**40.32**	**144**	*e*P	**P**	**16 11 49.5**	**-0.5**
	0.4nm,0.8s						
BDFB	**Brasilia**	**43.13**	**329**	LR	LR	16 27 25.0	
	comp=Z,40nm,19.9s,baz=163,slow=32						
LVC	**Limon Verde**	**45.39**	**299**	*e*P	**P**	**16 12 33.7**	**+1.6**
BOSA	**Boshof**	**45.49**	**76**	P	**P**	**16 12 31.8**	**-0.8**
	0.9nm,0.7s,baz=197,slow=4.9,SNR=3.9						
BOSA				LR	LR	16 29 09.9	
	comp=Z,107nm,18.8s,baz=183,slow=33						
BOSA	**Boshof**	**45.49**	**76**	*e*P	**P**	**16 12 29.7**	**-2.9**
	1.6nm,0.8s						
SBA	**Scott Base**	**46.59**	**184**	*e*P	**P**	**16 12 42.8**	**+2.3**
	1.1nm,0.8s						
PB01	**IPOC Station P**	**46.99**	**299**	*e*P	**P**	**16 12 46.0**	**+1.7**
	24nm,1.1s						
VNDA	**Vanda**	**47.08**	**182**	P	**P**	**16 12 44.6**	**+0.4**
	5.8nm,0.7s,baz=187,slow=6.3,SNR=28						
VNDA	**Vanda**	**47.08**	**182**	*e*P	**P**	**16 12 45.2**	**+0.9**
	6.2nm,0.7s						
LPAZ	**La Paz**	**50.41**	**304**	P	**P**	**16 13 11.8**	**+0.6**
	5.2nm,1.0s,baz=140,slow=5.9,SNR=10.0						
LPAZ				PcP	**PcP**	**16 14 28.9**	**-0.4**
	2.0nm,0.6s,baz=157,slow=3.0,SNR=3.8						
LPAZ				LR	LR	16 38 31.8	
	comp=Z,21nm,18.1s,baz=252,slow=41						
LPAZ	**La Paz**	**50.41**	**304**	*e*P	**P**	**16 13 13.2**	**+1.9**
LPAZ				*e*pP	**P**	**16 13 13.5**	**+2.2**
DBIC	**Dimbokro**	**64.57**	**24**	LR	LR	16 37 06.0	
	comp=Z,44nm,19.3s,baz=121,slow=31						
TOA0	**Torodi Ar. Sit**	**72.45**	**29**	*e*P	**P**	**16 15 40.1**	**+0.8**
	6.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**72.45**	**29**	P	**P**	**16 15 39.9**	**+0.6**
	8.7nm,0.4s,baz=203,slow=5.4,SNR=11						
TOA1	**Torodi Ar. Sit**	**72.45**	**29**	*e*P	**P**	**16 15 39.9**	**+0.6**
ASAR	**Alice Springs**	**99.34**	**162**	P	**Pdif**	**16 17 54.9**	**-0.3**
	0.7nm,1.0s,baz=179,slow=7.4,SNR=3.1						
YKA	**Yellowknife Ar**	**136.06**	**318**	PKP	**PKiKP**	**16 23 34.5**	**+0.4**
	0.3nm,0.6s,baz=115,slow=2.2,SNR=4.3						
YKB5	**Yellowknife Ar**	**136.06**	**318**	*e*PKPdf	**PKiKP**	**16 23 34.5**	**+0.4**
INK	**Inuvik**	**145.66**	**321**	*e*PKPdf	**PKPab**	**16 23 51.7**	**+1.3**
EPYK	**Eagle Plains**	**146.33**	**317**	*e*PKPbc	**PKiKP**	**16 23 55.4**	**+0.3**
RIDG	**Independent Ri**	**148.97**	**311**	*e*PKPbc	**PKPab**	**16 24 03.0**	**-0.7**
ILAR	**Eielson Array**	**150.07**	**312**	PKPbc	**PKPbc**	**16 24 02.6**	**+0.6**
	4.7nm,1.0s,baz=128,slow=1.1,SNR=19						
SONA0	**Songino Array**	**150.32**	**85**	*e*PKPbc	**PKPbc**	**16 24 03.2**	**-0.1**
SONM	**Songino Array**	**150.32**	**85**	PKPbc	**PKPbc**	**16 24 03.2**	**-0.1**
	0.8nm,0.8s,baz=183,slow=3.0,SNR=3.9						
BPAW	**Bear Paw Mtn.**	**151.71**	**310**	*e*PKPbc	**PKiKP**	**16 24 09.2**	**+2.9**

*SOME **29** 16:08:20.3,39°.92N×75°.88E,h20km*
*KRNET **29** 16:08:21.7±0.1,40°.04N×75°.99E,mb3.0*
*NNC **29** 16:08:22.1±0.6,40°.06N×76°.05E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=4.0km s-min=3.0km az=169.0*
ISC 29 16:08:26.5±1.9,40°.19N±0°.09×75°.97E±0°.04,h10km,n47,
σ1°34/62,26C-13D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**1.96**	**344**	P	**Pb**	**16 09 01.4**	**-1.1**
	SNR=22						
KZA	**Kyzart**	**1.96**	**344**	⇑*i*P	**Pn**	**16 09 00.7**	**+0.5**
	baz=45						
KZA				⇑*i*S	**Sg**	**16 09 29.3**	**-0.3**
	baz=45						
ULHL	**Ulahol**	**2.06**	**6**	P	**Pb**	**16 09 03.1**	**-1.0**
	SNR=9.9						
ULHL	**Ulahol**	**2.06**	**6**	⇑*i*P	**Pn**	**16 09 01.9**	**+0.5**
	baz=5.0						
ULHL				⇑*i*S	**Sb**	**16 09 31.5**	**+1.6**
	baz=5.0						
ARLS	**Aral**	**2.08**	**324**	⇑*i*P	**Pn**	**16 09 02.0**	**+0.4**
	baz=26						
ARLS				⇑*i*S	**Sb**	**16 09 31.4**	**+0.9**
	baz=26						
KDJ	**Kajisay**	**2.14**	**25**	⇓*i*P	**Pn**	**16 09 02.8**	**+0.4**
	baz=23						
KDJ				⇓*i*S	**Sb**	**16 09 32.9**	**+0.8**
	baz=23						
BOOM	**Boomskoye usch**	**2.30**	**359**	⇑*i*P	**Pn**	**16 09 05.5**	**+0.9**
	baz=59						
BOOM				⇑*i*S	**Sb**	**16 09 37.0**	**+0.4**
	baz=59						
UCH	**Uchtor**	**2.31**	**332**	P	**Pb**	**16 09 07.9**	**-0.7**
	SNR=18						
UCH	**Uchtor**	**2.31**	**332**	⇑*i*P	**Pn**	**16 09 05.7**	**+0.7**
	baz=33						
UCH				⇑*i*S	**Sb**	**16 09 37.8**	**+0.4**
	baz=33						
ARSB	**Arslanbob**	**2.54**	**297**	⇑*i*P	**Pn**	**16 09 08.0**	**+0.1**
	baz=0.0						
ARSB				⇑*i*S	**Sb**	**16 09 41.4**	**-2.1**
	baz=0.0						
KBK	**Karagaybulak**	**2.58**	**343**	P	**Pb**	**16 09 12.8**	**-0.1**
	SNR=24						
KBK	**Karagaybulak**	**2.58**	**343**	⇑*i*P	**Pn**	**16 09 09.0**	**+0.5**
	baz=44						
KBK				⇑*i*S	**Sb**	**16 09 44.0**	**-0.8**
	baz=44						
AAK	**Ala-Archa**	**2.69**	**336**	P	**Pb**	**16 09 14.6**	**-0.1**
	SNR=12						
AAK	**Ala-Archa**	**2.69**	**336**	⇓Pg	**Pb**	**16 09 14.1**	**-0.6**
	15nm,0.7s						
AAK				⇓Lg	Lg	16 09 52.2	
	59nm,0.5s						
AAK	**Ala-Archa**	**2.69**	**336**	⇑*i*P	**Pn**	**16 09 10.5**	**+0.6**
	baz=37						
AAK				⇑*i*S	**Sb**	**16 09 46.1**	**-1.7**
	baz=37						
TKM2	**Tokmak 2**	**2.74**	**354**	P	**Pb**	**16 09 14.1**	**-1.6**
	SNR=7.3						
TKM2	**Tokmak 2**	**2.74**	**354**	⇑Pg	**Pb**	**16 09 14.5**	**-1.2**
	3.9nm,0.5s						
TKM2				⇓Lg	Lg	16 09 53.2	
	24nm,0.5s						
TKM2	**Tokmak 2**	**2.74**	**354**	⇓*i*P	**Pn**	**16 09 11.4**	**+0.7**
	baz=54						
TKM2				⇓*i*S	**Sb**	**16 09 47.7**	**-1.8**
	baz=54						
FRU1	**Bishkek**	**2.81**	**339**	⇑*i*P	**Pn**	**16 09 12.1**	**+0.7**
	baz=40						
FRU1				⇑*i*S	**Sb**	**16 09 48.9**	**-2.2**
	baz=40						
KST	**Kastek**	**2.85**	**360**	Pg	**Pb**	**16 09 16.6**	**-0.9**
	7.1nm,0.6s						
KST				Lg	Lg	16 09 57.5	
	27nm,0.8s						
KST	**Kastek**	**2.85**	**360**	*e*P	**Pb**	**16 09 16.4**	**-1.1**
	7.3nm,0.7s						
KST				*e*S	**Sg**	**16 09 58.0**	**0.0**
	29nm,0.7s						
IZV	**Izvestkoviy**	**2.88**	**9**	Pg	**Pb**	**16 09 17.4**	**-0.6**
	5.4nm,0.3s						
IZV				Lg	Lg	16 09 59.1	
	33nm,0.3s						
TNSS	**Tian-Shan**	**2.94**	**14**	Pg	**Pb**	**16 09 18.1**	**-1.0**
	5.7nm,0.3s						
TNSS				Lg	Lg	16 10 00.3	
	14nm,0.7s						
CHMS	**Chumysh**	**2.95**	**342**	⇑*e*P	**Pn**	**16 09 14.2**	**+0.8**
	baz=43						
CHMS				⇑*i*S	**Sb**	**16 09 52.5**	**-2.8**
	baz=43						
MTBS	**Maitube**	**2.96**	**6**	Pg	**Pb**	**16 09 18.8**	**-0.5**
MTBS				Lg	Lg	16 10 01.0	
EKS2	**Erkin-Say**	**2.97**	**327**	⇑*i*P	**Pn**	**16 09 14.4**	**+0.6**
	baz=28						
EKS2				⇑*i*S	**Sn**	**16 09 52.8**	**+3.3**
	baz=28						
DGS	**Degeres**	**3.05**	**357**	Pg	**Pb**	**16 09 20.3**	**-0.6**
	10nm,0.4s						
DGS				Lg	Lg	16 10 03.9	
	28nm,0.6s						
MDOK	**Medeo**	**3.08**	**15**	Pg	**Pb**	**16 09 20.3**	**-1.1**
	4.4nm,0.5s						
MDOK				Lg	Lg	16 10 03.8	
	34nm,0.8s						
KOTS	**Kotyrbulak**	**3.16**	**15**	Pg	**Pb**	**16 09 21.2**	**-1.6**
	4.5nm,0.4s						
KOTS				Lg	Lg	16 10 05.4	
	94nm,0.8s						
USP	**Ospenovka**	**3.27**	**341**	P	**Pg**	**16 09 26.5**	**-2.5**
	SNR=8.6						
USP	**Ospenovka**	**3.27**	**341**	⇓*i*P	**Pn**	**16 09 18.7**	**+0.9**
	baz=41						
USP				⇓*i*S	**Sn**	**16 10 00.1**	**+3.4**
	baz=41						
MRKS	**Merke**	**3.28**	**322**	Pg	**Pb**	**16 09 23.9**	**-0.9**
	6.5nm,0.3s						
MRKS				Lg	Lg	16 10 10.4	
	19nm,0.6s						
MRKS	**Merke**	**3.28**	**322**	*e*P	**Pb**	**16 09 22.0**	**-2.8**
	3.3nm,0.3s						
MRKS				*e*S	**Sb**	**16 10 07.3**	**+2.4**
	34nm,0.5s						
SATY	**Saty**	**3.40**	**32**	Pg	**Pb**	**16 09 25.7**	**-1.1**
	6.5nm,0.6s						
SATY				Lg	Lg	16 10 12.9	
	21nm,0.7s						
ARK	**Arkit**	**3.43**	**299**	⇑*i*P	**Pn**	**16 09 19.6**	**-0.5**
	baz=1.0						
ARK				⇑*i*S	**Sn**	**16 10 02.2**	**+1.2**
	baz=1.0						
KTBS	**Karatobe**	**3.56**	**8**	Pg	**Pb**	**16 09 29.7**	**+0.2**
	3.0nm,0.8s						
KTBS				Lg	Lg	16 10 20.1	
	36nm,0.6s						
KURS	**Kuram**	**3.68**	**26**	Pg	**Pb**	**16 09 30.6**	**-1.0**
	2.3nm,0.6s						
KURS				Lg	Lg	16 10 21.2	
	11nm,1.0s						
KUU	**Kurty**	**3.71**	**4**	Pg	**Pb**	**16 09 31.9**	**-0.2**
	3.5nm,0.8s						
KUU				Lg	Lg	16 10 24.0	
	48nm,0.9s						
CHKK	**Chushkaly**	**3.74**	**11**	Pg	**Pb**	**16 09 32.1**	**-0.5**
	1.4nm,0.4s						
CHKK				Lg	Lg	16 10 24.1	
	11nm,0.3s						
PDGK	**Podgornoye**	**4.09**	**39**	⇓Pg	**Pb**	**16 09 38.4**	**-0.3**
	3.1nm,0.8s						
PDGK				⇑Lg	Lg	16 10 33.5	
	30nm,0.9s						
ARXS	**Arharly**	**4.25**	**18**	Pg	**Pb**	**16 09 41.2**	**0.0**
	2.4nm,0.5s						
ARXS				Lg	Lg	16 10 39.7	

RTLL	**Cerro Villicun**	**0.86**	**38**	*e*P	**Pn**	**16 11 12.0**	**+0.5**
RTLL				IAML		16 11 29.4	
comp=E,4μm,0.7s							
UTNM	**Universidad Te**	**0.92**	**167**	*e*P	**Pn**	**16 11 12.2**	**+0.2**
AMOG	**MOGNA**	**1.18**	**26**	*e*P	**Pn**	**16 11 15.7**	**+1.0**
ACAN	**Cantantal**	**1.64**	**100**	*e*P	**Pn**	**16 11 20.5**	**+0.6**
ACAN				*e*S	**Sn**	**16 11 41.9**	**-0.2**
FCH	**Farellones**	**1.66**	**217**	⇊*i*P	**Pn**	**16 11 21.2**	**+0.9**
FCH				*e*S	**Sn**	**16 11 43.0**	**+0.1**
FCH				IAML		16 11 51.9	
comp=E,903nm,0.2s							
PEL	**Peldehue**	**1.76**	**229**	⇊*i*P	**Pn**	**16 11 21.3**	**0.0**
PEL				*e*S	**Sn**	**16 11 44.0**	**-0.6**
PEL				IAML		16 11 47.4	
comp=N,1μm,0.3s							
CLCH	**Cerro Calan**	**1.84**	**221**	*e*P	**Pn**	**16 11 22.8**	**+0.5**
CLCH				*i*S	**Sn**	**16 11 47.0**	**+0.5**
LMEL	**Las Melosas**	**2.06**	**207**	⇊*i*P	**Pn**	**16 11 25.7**	**+0.6**
LMEL				*e*S	**Sn**	**16 11 53.9**	**+2.5**
LMEL				IAML		16 12 04.9	
comp=N,466nm,0.3s							
GO04	**Tololo Observa**	**2.34**	**321**	*e*P	**Pn**	**16 11 29.8**	**+1.1**
GO04	**Tololo Observa**	**2.34**	**321**	⇑*i*P	**Pn**	**16 11 29.1**	**+0.5**
GO04				*e*S	**Sn**	**16 11 56.6**	**-1.1**
GO04				IAML		16 12 03.1	
comp=N,2μm,0.4s							
AGUA	**GUANDACOL**	**2.56**	**12**	*e*P	**Pn**	**16 11 33.2**	**+1.8**
LSCH	**La Serena**	**2.79**	**318**	*e*P	**Pn**	**16 11 34.3**	**+0.1**
LSCH				*e*S	**Sn**	**16 12 06.8**	**-0.9**
LSCH				IAML		16 12 09.2	
comp=E,331nm,0.4s							
MRA	**San Martin**	**2.90**	**99**	*e*P	**Pn**	**16 11 35.9**	**+0.2**
MRA				IAML		16 11 36.2	
comp=Z,492nm,0.2s							
LCO	**Las Campanas**	**3.29**	**335**	⇑*i*P	**Pn**	**16 11 41.6**	**+0.5**
LCO				*e*S	**Sn**	**16 12 19.6**	**-0.3**
LCO				IAML		16 12 20.7	
comp=E,549nm,0.4s							
GO05	**Huala**	**3.82**	**218**	*e*P	**Pn**	**16 11 45.5**	**-2.3**
CPUP	**Villa Florida**	**11.73**	**64**	Pn	**Pn**	**16 13 31.5**	**-2.8**
comp=E,0.1nm,0.3s,baz=241,slow=19,SNR=2.4							
SNAA	**Sanae**	**52.52**	**159**	P	**P**	**16 19 51.2**	**+0.2**
comp=E,0.6nm,0.8s,baz=292,slow=5.4,SNR=5.4							
TORD	**Torodi Ar. Bea**	**81.19**	**69**	P	**P**	**16 22 54.2**	**+0.8**
comp=E,7.9nm,0.3s,baz=279,slow=5.3,SNR=8.6							
PDAR	**Pinedale Array**	**83.15**	**331**	P	P	16 22 57.3	-5.9
comp=E,0.1nm,0.3s,baz=140,slow=3.9,SNR=2.2							
ASAR	**Alice Springs**	**120.43**	**205**	PKP	**PKPdf**	**16 29 28.2**	**-0.2**
comp=E,0.2nm,0.4s,baz=129,slow=1.6,SNR=5.1							
WRA	**Warramunga Arr**	**123.68**	**207**	PKP	**PKPdf**	**16 29 34.6**	**-0.1**
comp=E,0.6nm,0.4s,baz=144,slow=1.8,SNR=8.9							
ZALV	**Zalesovo Beam**	**151.22**	**33**	PKPbc	**PKiKP**	**16 30 30.7**	**+0.9**
comp=E,3.8nm,0.5s,baz=296,slow=2.8,SNR=18							
MKAR	**Makanchi Array**	**153.59**	**48**	PKPbc	**PKiKP**	**16 30 35.6**	**+0.6**
comp=E,0.5nm,0.7s,baz=306,slow=3.4,SNR=4.0							
MKAR				PKPab	**PKPab**	**16 30 48.8**	**+0.9**
comp=E,0.7nm,0.6s,baz=306,slow=4.2,SNR=5.3							

*NSSC **29** 16:15:35.3±0.4, 33°.90N×35°.66E, h5km±9km, ML1.8*
*ISCJB **29** 16:15:38.0±0.9, 33°.81N±0°.04×35°.75E±0°.07, h9km±9km, Error ellipse: s-maj=9.5km s-min=6.0km az=158.8*
*GRAL **29** 16:15:38.6±0.3, 33°.80N×35°.79E, h0km±19km, MD2.8*
ISC 29 16:15:37.5±1.1, 33°.80N±0°.04×35°.73E±0°.07, h14km±9km, n7, σ0°.44/13, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.12**	**328**	*e*P	**Pb**	**16 15 41.4**	**-0.3**
BHL				*e*S	**Sg**	**16 15 43.4**	**0.0**
DQRL	**Deir Qamar**	**0.16**	**234**	*e*P	**Pb**	**16 15 42.1**	**-0.2**
DQRL				*e*S	**Sg**	**16 15 45.0**	**+0.6**
RCY	**Rachaya**	**0.32**	**164**	*e*P	**Pg**	**16 15 44.0**	**-0.1**
RCY				*e*S	**Sg**	**16 15 48.1**	**-0.5**
BRBR	**Barbar**	**0.43**	**155**	*e*P	**Pg**	**16 15 46.0**	**-0.2**
BRBR				*e*S	**Sb**	**16 15 53.5**	**+0.1**
BRBR				AML	AML	16 15 55.5	
comp=N,93nm,0.4s							
BRBR				AML	AML	16 15 59.5	
comp=E,40nm,0.5s							
HWQ	**Hawqa**	**0.51**	**21**	*e*P	**Pg**	**16 15 47.5**	**-0.1**
QASN	**Qassioun**	**0.53**	**120**	*e*P	**Pg**	**16 15 47.7**	**-0.2**
QASN				*e*S	**Sb**	**16 15 56.2**	**+0.1**
QASN				AML	AML	16 16 00.0	
comp=E,165nm,0.4s							
QASN				AML	AML	16 16 06.7	
comp=N,81nm,0.4s							
TOTH	**TOTAH**	**0.73**	**127**	*e*P	**Pg**	**16 15 51.8**	**+0.1**
TOTH				*e*S	**Sb**	**16 16 02.8**	**+0.9**
TOTH				AML	AML	16 16 10.4	
comp=N,24nm,0.5s							
TOTH				AML	AML	16 16 13.0	
comp=E,16nm,0.5s							

*SKO **29** 16:24:28.6, 41°.44N×20°.40E, h15km*
*TIR **29** 16:24:29.9, 41°.40N×20°.52E, h7km, Md2.8/3*
*BEO **29** 16:24:30.9±0.3, 41°.39N×20°.58E, h11km±2km, ML2.2/7*
*PDG **29** 16:24:32.6±0.3, 41°.47N×20°.34E, h3km±1km, ML2.7/12, Error ellipse: s-maj=0.9km s-min=1.6km az=0.0*
ISC 29 16:24:30.0±1.2, 41°.35N±0°.04×20°.48E±0°.02, h4km±10km, n48, σ1°.33/78, 8C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.33**	**355**	*i*PG	**Pg**	**16 24 36.0**	**-0.4**
PHP				*i*SG	**Sg**	**16 24 40.5**	**-0.3**
OHR	**Ohrid**	**0.34**	**135**	*i*Pg	**Pb**	**16 24 37.7**	**-1.0**
OHR				*i*Sg	**Sb**	**16 24 43.6**	**-0.8**
TIR	**Tirane**	**0.46**	**269**	*e*Pg	**Pb**	**16 24 40.2**	**-0.5**
TIR				*e*Sg	**Sb**	**16 24 48.1**	**+0.2**
TIR	**Tirane**	**0.46**	**269**	*i*PG	**Pb**	**16 24 40.1**	**-0.5**
TIR				*i*SG	**Sb**	**16 24 47.6**	**-0.3**
PUK	**Puka**	**0.82**	**328**	*i*PG	**Pn**	**16 24 49.8**	**+1.5**
PUK				*i*SG	**Sn**	**16 25 05.1**	**+4.2**
SKO	**Skopje**	**0.95**	**49**	*e*Pg	**Pg**	**16 24 47.0**	**-1.1**
SKO				*e*Sg	**Sg**	**16 24 59.7**	**-0.8**
SKO	**Skopje**	**0.95**	**49**	*i*Pg	**Pg**	**16 24 47.1**	**-1.1**
SKO				*i*Sg	**Sg**	**16 25 00.1**	**-0.3**
ULC	**Ulcinj**	**1.11**	**304**	⇊*i*Pg	**Pg**	**16 24 50.0**	**-1.2**
ULC				*i*Sg	**Sg**	**16 25 05.1**	**-0.5**
DRME	**Dracevica, Mon**	**1.28**	**311**	⇑*i*Pg	**Pn**	**16 24 53.3**	**-1.3**
DRME				*e*Sg	**Sb**	**16 25 11.0**	**-0.3**
DRME	**Dracevica, Mon**	**1.28**	**311**	*e*Pn	**Pn**	**16 24 53.2**	**-1.3**
PVY	**Plav**	**1.30**	**343**	⇑*i*Pg	**Pn**	**16 24 54.0**	**-1.0**
PVY				*i*Sg	**Sn**	**16 25 12.8**	**-0.1**
STIP	**Stip**	**1.32**	**75**	*i*Pg	**Pg**	**16 24 57.6**	**+2.2**
STIP				*i*Sg	**Sg**	**16 25 17.5**	**+4.9**
PDG	**Podgorica**	**1.41**	**320**	*e*Pg	**Pb**	**16 24 56.8**	**0.0**
PDG				*e*Sg	**Sg**	**16 25 18.0**	**+2.6**
PDG	**Podgorica**	**1.41**	**320**	*e*Pn	**Pn**	**16 24 55.7**	**-0.7**
TTG	**Podgorica**	**1.41**	**320**	⇑*i*Pg	**Pn**	**16 24 55.6**	**-0.8**
TTG				*i*Sg	**Sb**	**16 25 15.2**	**0.0**
BUM	**Brajici-Budva**	**1.52**	**309**	⇑*i*Pg	**Pn**	**16 24 57.7**	**-0.2**
BUM				*i*Sg	**Sg**	**16 25 18.5**	**-0.2**
IVA	**Berane**	**1.58**	**344**	⇑*i*Pg	**Pn**	**16 24 59.1**	**+0.3**
IVA				*i*Sg	**Sg**	**16 25 21.8**	**+1.1**
KOME	**Kolasin**	**1.66**	**335**	⇊*i*Pg	**Pb**	**16 25 00.8**	**-0.3**
KOME				*e*Sg	**Sg**	**16 25 24.3**	**+1.0**
CEME	**Cevo**	**1.67**	**316**	⇑*i*Pg	**Pn**	**16 25 00.2**	**+0.2**
CEME				*e*Sg	**Sg**	**16 25 23.3**	**-0.3**
BARS	**Barje**	**1.77**	**34**	*e*Pg	**Pn**	**16 25 00.8**	**-0.5**
BARS				*e*Sg	**Sn**	**16 25 24.1**	**-0.1**
NKME	**Niksic**	**1.81**	**322**	⇊*i*Pn	**Pb**	**16 25 03.6**	**-0.1**
NKME				*e*Sn	**Sg**	**16 25 29.1**	**+0.9**
NKY	**Niksic**	**1.83**	**323**	⇑*i*Pn	**Pb**	**16 25 03.2**	**-0.9**
NKY				*e*Sn	**Sg**	**16 25 29.7**	**+0.9**
HCY	**Herceg Novi**	**1.84**	**307**	⇊*i*Pn	**Pb**	**16 25 03.0**	**-1.2**
HCY				*e*Sn	**Sg**	**16 25 29.6**	**+0.4**
HCY	**Herceg Novi**	**1.84**	**307**	*e*Pn	**Pb**	**16 25 03.0**	**-1.2**
SELS	**Selova**	**1.92**	**14**	*e*Pg	**Pb**	**16 25 04.8**	**-0.8**
SELS				*e*Sg	**Sb**	**16 25 30.7**	**+0.7**
SJES	**Sjenica**	**1.94**	**349**	*e*Pg	**Pn**	**16 25 04.4**	**+0.6**
SJES				*e*Sg	**Sb**	**16 25 31.8**	**+1.2**
TREB	**Trebinje**	**2.09**	**311**	*e*Pg	**Pb**	**16 25 07.9**	**-0.5**
TREB				*e*Sg	**Sg**	**16 25 39.7**	**+2.5**
TREB	**Trebinje**	**2.09**	**311**	*e*Pn	**Pb**	**16 25 07.9**	**-0.5**
BRY	**Bratogost**	**2.12**	**318**	⇑*i*Pn	**Pb**	**16 25 07.7**	**-1.3**
BRY				*i*Sn	**Sb**	**16 25 36.2**	**+0.6**
BRY	**Bratogost**	**2.12**	**318**	*e*Pn	**Pb**	**16 25 07.9**	**-1.1**
UPM	**Unac-Piva**	**2.19**	**328**	⇊*i*Pn	**Pb**	**16 25 09.3**	**-0.9**
UPM				*i*Sn	**Sb**	**16 25 37.8**	**+0.1**
UPM	**Unac-Piva**	**2.19**	**328**	*e*Pn	**Pb**	**16 25 10.2**	**0.0**
IVAS	**Ivanjica**	**2.23**	**354**	*e*Pg	**Pb**	**16 25 10.7**	**-0.2**
IVAS				*e*Sg	**Sg**	**16 25 41.1**	**-0.7**
BOVS	**Bovan**	**2.45**	**21**	*e*Pg	**Pb**	**16 25 15.0**	**+0.4**
BOVS				*e*Sn	**Sn**	**16 25 40.4**	**-0.7**
ZAPS	**Zavoj**	**2.50**	**39**	*e*Pg	**Pb**	**16 25 14.6**	**-0.8**
ZAPS				*e*Sn	**Sn**	**16 25 38.5**	**-3.7**
GRUS	**Gruza**	**2.54**	**4**	*e*Pn	**Pn**	**16 25 11.6**	**-0.3**
STON	**Ston**	**2.56**	**307**	*e*Pn	**Pb**	**16 25 14.9**	**-1.6**
STON				Sn	**Sn**	**16 25 44.4**	**+0.6**
STON	**Ston**	**2.56**	**307**	*e*Pn	**Pn**	**16 25 13.6**	**+1.4**
BBLS	**Lazići**	**2.63**	**343**	*e*Pn	**Pn**	**16 25 13.4**	**+0.1**
BBLS	**Lazići**	**2.63**	**343**	*e*Pn	**Pn**	**16 25 15.1**	**+1.8**
DIVS	**Divibare**	**2.77**	**353**	*e*Pn	**Pn**	**16 25 14.8**	**-0.3**
DIVS	**Divibare**	**2.77**	**353**	*e*Pn	**Pn**	**16 25 13.6**	**-1.5**
TRUS	**Trudelj**	**2.87**	**359**	*e*Pn	**Pn**	**16 25 16.9**	**+0.5**
HAPS	**Han Pijesak,Bl**	**2.95**	**338**	*e*Pn	**Pn**	**16 25 19.3**	**+1.6**
HAPS	**Han Pijesak,Bl**	**2.95**	**338**	*e*Pn	**Pn**	**16 25 18.9**	**+1.2**
FRGS	**Fruska Gora**	**3.83**	**353**	*e*Pn	**Pn**	**16 25 28.7**	**-1.0**
UDBI	**Udbina**	**4.70**	**314**	*e*Pn	**Pn**	**16 25 43.7**	**+2.1**
MORH	**Mrgy, Hungar**	**5.04**	**345**	*e*Pn	**Pn**	**16 25 44.3**	**-1.9**

*DJA **29** 16:30:01.5±1.3, 3°.5±4°×13°.8E±°, h11km±10km, M4.8/9, mB5.0/4, mb4.9/9, MLv4.9/6, Mw(mB)4.3/4*
*ISCJB **29** 16:30:02.1±0.3, 3°.41S±0°.03×138°.44E±0°.03, h71km, mb4.0/19, Error ellipse: s-maj=5.1km s-min=4.1km az=156.3*
*IDC **29** 16:30:02.2±1.8, 3°.34S×138°.44E, h53km±19km, mb3.7/9, mb1 4.1/14, mb1mx3.8/28, mbtmp4.2/14, ML4.5/5, MS3.1/4, Ms1 3.1/4, ms1mx2.8/27, Error ellipse: s-maj=14.5km s-min=12.9km az=108.0*
*NEIC **29** 16:30:04.3±2.6, 3°.46S×138°.39E, h76km±3km, mb4.3/19, Error ellipse: s-maj=12.0km s-min=11.4km az=112.0*
ISC 29 16:30:03.4±0.4, 3°.44S±0°.05×138°.42E±0°.04, h71km, n56, σ1°.74/64, mb4.0/19, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.94**	**64**	P	**Pn**	**16 30 33.4**	**-0.9**
GENI				S	**Sn**	**16 30 57.6**	**-0.1**
JAY	**Jayapura**	**2.46**	**68**	P	**Pn**	**16 30 39.6**	**-1.7**
50nm,0.3s,baz=235,slow=14,SNR=111							
JAY				S	**Sn**	**16 31 08.1**	**-2.3**
48nm,0.3s,baz=180,slow=20,SNR=5.5							
JAY	**Jayapura**	**2.46**	**68**	P	**Pn**	**16 30 40.6**	**-0.7**
JAY				S	**Sn**	**16 31 10.4**	**0.0**
RKPI	**Ransiki, Papua**	**4.65**	**294**	P	**Pn**	**16 31 12.5**	**+1.3**
MMPI	**Merauke**	**5.37**	**159**	P	**Pn**	**16 31 22.6**	**+1.6**
FAKI	**Fak Fak**	**6.18**	**275**	*e*Pn	**Pn**	**16 31 33.2**	**+1.1**
FAKI	**Fak Fak**	**6.18**	**275**	P	**Pn**	**16 31 33.6**	**+1.4**
SIJI	**Sorong**	**7.59**	**289**	P	**Pn**	**16 31 50.2**	**-1.2**
3.1nm,0.3s,baz=102,slow=9.4,SNR=17							
SIJI				S	**Sn**	**16 33 12.2**	**-3.9**
baz=163,slow=19,SNR=1.6							
SWI	**Sorong**	**7.60**	**290**	P	**Pn**	**16 31 52.7**	**+1.2**
SAUI	**Saumlaki**	**8.40**	**237**	P	**Pn**	**16 32 04.8**	**+2.3**
451nm,1.2s							
BNDI	**Bandanaira**	**8.56**	**262**	P	**Pn**	**16 32 06.6**	**+1.9**
MANU	**Manus Island**	**9.04**	**81**	*e*Pn	**Pn**	**16 32 14.1**	**+2.8**
PMG	**Port Moresby**	**10.51**	**125**	P	**Pn**	**16 32 32.0**	**+0.7**
0.4nm,0.3s,baz=329,slow=12,SNR=2.2							
PMG				S	**Sn**	**16 34 25.9**	**-1.6**
0.5nm,0.3s,baz=283,slow=18,SNR=1.9							
PMG				LR	LR	16 37 29.4	
comp=Z,46nm,19.4s,baz=3.0,slow=42							
PMG	**Port Moresby**	**10.51**	**125**	*e*Pn	**Pn**	**16 32 32.0**	**+0.7**
PMG				*e*		16 32 33.3	
COEN	**Coen**	**11.46**	**156**	*e*Pn	**Pn**	**16 32 45.9**	**+1.6**
MTN	**Manton Dam**	**11.80**	**217**	*e*Pn	**Pn**	**16 32 49.7**	**+0.8**
SOEI	**Soe**	**15.39**	**245**	*e*Pn	**Pn**	**16 33 36.8**	**+0.2**
25nm,0.9s							
SOEI				*e*Sn	**Sn**	**16 36 25.4**	**-1.1**
SOEI	**Soe**	**15.39**	**245**	P	**P**	**16 33 39.9**	**0.0**
BATI	**Baumata**	**16.11**	**245**	P	**Pn**	**16 33 47.6**	**+1.8**
2.1nm,0.3s,baz=107,slow=19,SNR=5.1							
BATI				S	**Sn**	**16 36 42.5**	**-1.4**
1.2nm,0.3s,baz=63,slow=6.8,SNR=5.3							
BATI	**Baumata**	**16.11**	**245**	P	**P**	**16 33 48.5**	**+0.7**
WRAB	**Tennant Creek**	**16.87**	**193**	*e*Pn	**Pn**	**16 33 54.4**	**-0.8**
26nm,0.6s							
WRAB				*e*Sn	**Sn**	**16 36 59.2**	**-2.9**
WB2	**Warramunga Arr**	**16.88**	**193**	*e*P	**Pn**	**16 33 55.3**	**+0.1**
40nm,0.6s							
WR1	**Warramunga Arr**	**16.88**	**193**	*e*P	**Pn**	**16 33 54.7**	**-0.5**
WRA	**Warramunga Arr**	**16.88**	**193**	P	**Pn**	**16 33 54.7**	**-0.5**
3.2nm,0.3s,baz=9.2,slow=11,SNR=99							
WRA				S	**Sn**	**16 36 54.1**	**-8.2**
1.1nm,0.3s,baz=16,slow=25,SNR=5.3							
EDFI	**Ende, Flores**	**17.45**	**252**	P	**P**	**16 34 06.1**	**+3.5**
CTA	**Charters Tower**	**18.23**	**156**	P	**P**	**16 34 11.0**	**-0.1**
0.7nm,0.3s,baz=338,slow=12,SNR=22							
CTAO	**Charters Tower**	**18.23**	**156**	*e*P	**Pn**	**16 34 12.4**	**+0.7**
11nm,0.6s							
AS31	**Alice Springs**	**20.58**	**192**	*e*P	**P**	**16 34 38.7**	**+2.0**
16nm,0.9s							
ASAR	**Alice Springs**	**20.58**	**192**	P	**P**	**16 34 38.2**	**+1.5**
36nm,0.6s,baz=19,slow=9.7,SNR=438							
ASAR				S	**S**	**16 38 23.8**	**+0.8**
13nm,0.9s,baz=16,slow=24,SNR=15							
PSA00	**Pilbara Seismi**	**25.51**	**224**	*e*P	**P**	**16 35 26.5**	**+1.0**
10nm,0.7s							
STKA	**Stephens Creek**	**28.45**	**174**	P	**P**	**16 35 52.9**	**+1.2**
1.7nm,0.4s,baz=2.7,slow=8.5,SNR=11							
STKA	**Stephens Creek**	**28.45**	**174**	*e*P	**P**	**16 35 52.9**	**+1.2**
0.4nm,0.8s							
FORT	**Forrest**	**28.90**	**199**	*es*P	sP	16 36 22.9	+0.7
BBOO	**Buckleboo**	**29.30**	**184**	*e*P	**P**	**16 36 01.0**	**+1.7**
3.4nm,1.0s							
ARMA	**Armidale**	**29.60**	**156**	*e*P	**P**	**16 36 03.5**	**+1.4**
5.8nm,1.1s							
MJAR	**Matsushiro Arr**	**39.77**	**360**	LR	LR	16 52 31.9	
comp=Z,27nm,18.1s,baz=260,slow=34							
KS15	**Wonju Array Si**	**41.84**	**347**	*e*P	**P**	**16 37 45.8**	**-0.6**
4.4nm,1.1s							
KSRS	**Korea Array**	**41.84**	**347**	P	**P**	**16 37 45.8**	**-0.6**
0.8nm,0.7s,baz=192,slow=11,SNR=6.1							
KSRS				LR	LR	16 53 17.4	
comp=Z,23nm,20.6s,baz=210,slow=33							
CM31	**Chiang Mai Arr**	**44.55**	**301**	*e*P	**P**	**16 38 08.2**	**-0.4**
2.1nm,0.8s							
CMAR	**Chiang Mai Arr**	**44.55**	**301**	P	**P**	**16 38 08.2**	**-0.4**
0.7nm,0.6s,baz=114,slow=6.5,SNR=6.3							
OUZ	**Omahuta**	**45.39**	**139**	*e*P	**P**	**16 38 13.6**	**-1.4**
5.1nm,1.0s							
SONA0	**Songino Array**	**58.25**	**335**	*e*P	**P**	**16 39 51.6**	**+0.9**
SONM	**Songino Array**	**58.25**	**335**	P	**P**	**16 39 51.6**	**+0.9**
0.3nm,0.4s,baz=202,slow=1.6,SNR=2.0							
SONM				LR	LR	17 03 46.0	
comp=Z,26nm,20.8s,baz=224,slow=35							
MK32	**Makanchi Array**	**70.19**	**323**	*e*P	**P**	**16 41 09.2**	**+0.5**
MKAR	**Makanchi Array**	**70.19**	**323**	P	**P**	**16 41 09.2**	**+0.5**
1.0nm,0.5s,baz=111,slow=7.5,SNR=14							
ZALV	**Zalesovo Beam**	**72.42**	**330**	P	**P**	**16 41 21.8**	**-0.2**
0.5nm,0.3s,baz=112,slow=6.4,SNR=2.5							
ZAA1	**Zalesovo Array**	**72.42**	**330**	*e*P	**P**	**16 41 21.8**	**-0.2**
VNDA	**Vanda**	**75.09**	**175**	P	**P**	**16 41 38.0**	**+0.8**
1.6nm,0.7s,baz=326,slow=6.6,SNR=21							
BRVK	**Borovoye**	**79.81**	**325**	*e*P	**P**	**16 42 04.9**	**+0.9**
3.6nm,0.8s							
TAOE	**Nuku Hiva Isla**	**81.02**	**98**	*e*P	**P**	**16 42 09.6**	**-1.8**
46nm,0.8s							
MAW	**Mawson**	**81.35**	**202**	*e*P	**P**	**16 42 11.4**	**-0.5**
0.4nm,1.1s							
ABKAR	**Akbulak array**	**85.09**	**320**	*e*P	**P**	**16 42 31.9**	**+0.3**
1.0nm,0.8s							
QSPA	**South Pole Qui**	**86.51**	**180**	*e*P	**P**	**16 42 39.7**	**+1.3**
5.0nm,0.6s							
ILAR	**Eielson Array**	**86.61**	**24**	P	**P**	**16 42 37.6**	**-1.2**
0.3nm,0.4s,baz=272,slow=4.1,SNR=5.5							
ILB	**Eielson Array**	**86.61**	**24**	*e*P	**P**	**16 42 37.6**	**-1.2**
1.0nm,0.6s							
LPAZ	**La Paz**	**147.24**	**128**	PKPbc	**PKPab**	**16 49 42.9**	**+0.5**
3.8nm,0.7s,baz=230,slow=2.0,SNR=16							

MAN 29 16:32:56.6, 10°.07N×122°.11E, h29km, mb4.4, ML3.3, MS3.1, 3C-1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.69**	**346**	⇑*e*P	Pn	16 33 10.5	0.0
GUIM	**Jordan**	**0.72**	**40**	*e*P	Pb	16 33 07.7	-3.1
GUIM				*e*S	Sb	16 33 17.2	-3.2
SNPH	**Sibulan**	**1.32**	**123**	⇊*i*P	Pn	16 33 19.0	-0.2
SNPH				*i*S	Sn	16 33 36.2	+0.3
CUYO	**Cuyo Island**	**1.33**	**306**	*e*P	Pn	16 33 19.1	-0.2
CUYO				*e*S	Sb	16 33 38.0	+0.4
TBP	**Tagbilaran**	**1.76**	**102**	*e*P	Pn	16 33 25.4	+0.1
LLP	**Lapu-Lapu**	**1.84**	**82**	⇑*e*P	Pn	16 33 26.9	+0.6
LLP				*e*S	Sn	16 33 49.4	+0.8
DCPH	**Dipolog City**	**1.92**	**140**	⇑*e*P	Pn	16 33 25.1	-2.2
DCPH				*e*S	Sb	16 33 52.7	-1.7
IPIL	**Ipil**	**2.31**	**169**	*e*P	Pn	16 33 33.6	+0.9
IPIL				*e*S	Sn	16 34 01.1	+0.8
BUSP	**Coron**	**2.69**	**316**	*e*P	Pn	16 33 37.5	-0.5
BUSP				*e*S	Sn	16 34 11.4	+1.8

*ISCJB **29** 16:35:56.7±0.6, 23°.37S±0°.03×69°.15W±0°.05, h96km±7km, Error ellipse: s-maj=8.1km s-min=5.4km az=2.4*
*GUC **29** 16:35:56.3±0.7, 23°.41S×69°.09W, h90km±3km, ML3.6*
*SJA **29** 16:35:56.7±1.2, 23°.34S×69°.12W, h84km±5km, ML3.4, MW3.5*
ISC 29 16:35:58.4±1.3, 23°.35S±0°.03×69°.16W±0°.04, h79km±9km, n33, σ1°.30/54, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.32**	**297**	*e*P	**Pn**	**16 36 10.2**	**-0.8**
PB15				*i*S	**Sn**	**16 36 21.1**	**+0.9**
PB15	**IPOC Station P**	**0.32**	**297**	*e*P	**Pn**	**16 36 10.1**	**-0.9**
PB15				*i*S	**Sn**	**16 36 20.4**	**+0.2**
PB06	**IPOC Station P**	**0.75**	**330**	*e*P	**Pn**	**16 36 14.3**	**-0.4**
PB06				*i*S	**Sn**	**16 36 27.5**	**+0.7**
PB06	**IPOC Station P**	**0.75**	**330**	*e*P	**Pn**	**16 36 14.1**	**-0.6**
PB06				*i*S	**Sn**	**16 36 27.4**	**+0.7**
PB06				IAML		16 36 28.7	
comp=E,3μm,0.3s							
LVC	**Limon Verde**	**0.78**	**18**	*e*P	**Pn**	**16 36 14.2**	**-1.1**
LVC				*i*S	**Sn**	**16 36 27.8**	**0.0**
LVC				IAML		16 36 28.3	
comp=Z,906nm,0.3s							
LVC	**Limon Verde**	**0.78**	**18**	⇑*i*P	**Pn**	**16 36 14.2**	**-1.1**
LVC				*i*S	**Sn**	**16 36 27.6**	**-0.1**
PB05	**IPOC Station P**	**1.08**	**297**	*e*P	**Pn**	**16 36 17.7**	**-0.9**
PB05				*i*S	**Sn**	**16 36 35.2**	**+1.6**
PB05	**IPOC Station P**	**1.08**	**297**	*e*P	**Pn**	**16 36 17.6**	**-0.9**
PB05				*i*S	**Sn**	**16 36 34.7**	**+1.1**
PB05				IAML		16 36 40.9	
comp=E,3μm,0.9s							
PB10	**IPOC Station P**	**1.29**	**263**	⇊*e*P	**Pn**	**16 36 20.6**	**-0.4**
PB10				*i*S	**Sn**	**16 36 39.9**	**+2.0**
PB10	**IPOC Station P**	**1.29**	**263**	*e*P	**Pn**	**16 36 20.3**	**-0.7**
PB10				*i*S	**Sn**	**16 36 40.8**	**+2.9**
PB10				IAML		16 36 43.1	
comp=E,942nm,0.4s							
PB04	**IPOC Station P**	**1.36**	**318**	*e*P	**Pn**	**16 36 21.6**	**-0.5**
PB04				*i*S	**Sn**	**16 36 41.5**	**+1.6**
PB04	**IPOC Station P**	**1.36**	**318**	*e*P	**Pn**	**16 36 21.2**	**-0.9**
PB04				*i*S	**Sn**	**16 36 41.3**	**+1.4**
PB03	**IPOC Station P**	**1.41**	**337**	*e*P	**Pn**	**16 36 22.3**	**-0.4**
PB03	**IPOC Station P**	**1.41**	**337**	*e*P	**Pn**	**16 36 22.3**	**-0.4**
PB03				*i*S

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.08**	**313**	*e*Pn	**Pn**	**16 49 22.3**	**-0.4**
URZ	**Urewera**	**9.57**	**209**	Pn	**Pn**	**16 51 22.2**	**+3.1**
0.5nm,0.3s,baz=41,slow=20,SNR=4.7							
URZ				Sn	**Sn**	**16 53 04.3**	**-1.6**
0.4nm,0.3s,baz=10,slow=19,SNR=6.3							
URZ				LR	LR	16 54 33.6	
comp=Z,97nm,18.4s,baz=348,slow=33							
URZ	**Urewera**	**9.57**	**209**	*e*Pn	**Pn**	**16 51 22.4**	**+3.3**
BKZ	**Black Stump Fm**	**10.59**	**209**	*e*Pn	**Pn**	**16 51 35.1**	**+1.9**
SNZO	**South Karori**	**13.13**	**209**	*e*Pn	**Pn**	**16 52 08.3**	**+0.4**
THZ	**Tophouse**	**14.29**	**212**	*e*Pn	**P**	**16 52 29.2**	**-1.6**
KHZ	**Kahutara**	**14.53**	**209**	*e*Pn	**P**	**16 52 31.0**	**-2.3**
DZM	**Mont Dzumac**	**16.82**	**294**	LR	LR	16 58 40.3	
comp=Z,141nm,18.3s,baz=124,slow=35							
ARMA	**Armidale**	**27.06**	**261**	*e*P	**P**	**16 54 40.0**	**-3.8**
4.4nm,0.9s							
CAN	**Canberra**	**29.01**	**250**	*e*P	**P**	**16 54 59.5**	**-1.6**
3.8nm,0.9s							
CTA	**Charters Tower**	**34.58**	**278**	P	**P**	**16 55 51.0**	**+0.9**
3.1nm,0.8s,baz=108,slow=9.6,SNR=3.5							
CTAO	**Charters Tower**	**34.58**	**278**	*e*P	**P**	**16 55 51.8**	**+1.7**
5.8nm,1.0s							
STKA	**Stephens Creek**	**35.40**	**256**	P	**P**	**16 55 58.9**	**+1.9**
0.7nm,0.4s,baz=84,slow=9.7,SNR=4.1							
STKA	**Stephens Creek**	**35.40**	**256**	*e*P	**P**	**16 55 58.9**	**+1.9**
0.3nm,0.9s							
BBOO	**Buckleboo**	**39.90**	**254**	*e*P	**P**	**16 56 35.8**	**+0.7**
5.5nm,1.0s							
AS31	**Alice Springs**	**43.98**	**266**	*e*P	**P**	**16 57 08.7**	**0.0**
0.6nm,0.9s							
ASAR	**Alice Springs**	**43.98**	**266**	P	**P**	**16 57 08.7**	**0.0**
0.6nm,0.7s,baz=102,slow=8.1,SNR=11							
WB2	**Warramunga Arr**	**44.93**	**271**	*e*P	**P**	**16 57 16.1**	**0.0**
3.3nm,0.9s							
WRAB	**Tennant Creek**	**44.93**	**271**	*e*P	**P**	**16 57 16.7**	**+0.5**
7.4nm,1.0s							
WR1	**Warramunga Arr**	**44.94**	**271**	*e*P	**P**	**16 57 15.9**	**-0.3**
WRA	**Warramunga Arr**	**44.94**	**271**	P	**P**	**16 57 15.9**	**-0.3**
1.4nm,0.6s,baz=104,slow=8.3,SNR=10							
PSA00	**Pilbara Seismi**	**56.86**	**263**	*e*P	**P**	**16 58 45.0**	**-1.0**
14nm,1.0s							
FIA0	**FINESS Array S**	**145.06**	**341**	*e*PKPdf	**PKPbc**	**17 08 36.7**	**-0.3**
FINES	**FINESS Array B**	**145.06**	**341**	PKP	**PKPbc**	**17 08 36.7**	**-0.3**
3.2nm,0.6s,baz=52,slow=3.5,SNR=39							

*IDC **29** 16:50:48.1±0.6,39.°43S×75.°00W,h0km,mb4.2/8,*
mb1 4.3/11,mb1mx4.2/24,mbtmp4.2/11,ML4.4/3,MS3.4/4,
Ms1 3.4/4,ms1mx3.0/20,Error ellipse: s-maj=21.4km
s-min=18.1km az=108.0
*ISCJB **29** 16:50:51.7±0.4,39.°37S±0.°06×75.°01W±0.°06,h33km,*
mb4.3/17,MS3.5/2,Error ellipse: s-maj=9.0km
s-min=6.0km az=33.8
*GUC **29** 16:50:52.7±0.3,39.°50S×75.°05W,h43km±34km,ML4.4*
*NEIC **29** 16:50:52.0±0.0,39.°50S×75.°05W,h43km,mb4.4/15,*
ML4.4(GUC),After GUC.

ISC 29 16:50:53.1±0.5,**39.°34S**±0.°06×**75.°04W**±0.°08,**h35**km,**n65,**
σ1$**42**/72,**mb4.4**/17,**1C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO06	**Curarrehue**	**2.77**	**96**	*e*Pn	**Pn**	**16 51 35.2**	**0.0**
GO06	**Curarrehue**	**2.77**	**96**	⇑*i*P	**Pn**	**16 51 35.1**	**0.0**
GO06				*i* S	**Sn**	**16 52 07.7**	**+0.2**
GO06				IAML		16 52 12.8	
comp=N,2μm,0.9s							
CCHI	**Chillan**	**3.60**	**42**	IAML		16 52 42.8	
comp=N,261nm,0.6s							
PLCA	**Paso Flores**	**3.72**	**113**	Pn	**Pn**	**16 51 47.8**	**-0.3**
comp=N,10nm,0.3s,baz=329,slow=11,SNR=108							
PLCA				Sn	**Sn**	**16 52 32.6**	**+1.9**
comp=N,18nm,0.3s,baz=225,slow=7.1,SNR=7.1							
PLCA				LR	LR	16 53 21.2	
comp=N,866nm,20.3s,baz=263,slow=42							
PLCA	**Paso Flores**	**3.72**	**113**	*e*P	**Pn**	**16 51 47.7**	**-0.5**
GO07	**Milladeo Hill,**	**3.91**	**165**	*e*Pn	**Pn**	**16 51 48.9**	**-1.8**
GO07	**Milladeo Hill,**	**3.91**	**165**	*e*P	**Pn**	**16 51 48.8**	**-2.0**
GO07				*i* S	**Sn**	**16 52 31.2**	**-4.2**
GO05	**Huala**	**4.98**	**31**	*e*Pn	**Pn**	**16 52 03.2**	**-2.3**
PEL	**Peldehue**	**7.11**	**31**	*e*Pn	**Pn**	**16 52 32.3**	**-2.5**
CFA	**Coronel Fontan**	**9.50**	**38**	Pn	**Pn**	**16 53 05.3**	**-2.2**
comp=N,1.1nm,0.3s,baz=243,slow=5.1,SNR=14							
CFA				Sn	**Sn**	**16 54 49.2**	**-3.8**
comp=N,1.1nm,0.3s,baz=252,slow=20,SNR=4.2							
CFA				LR	LR	16 57 09.0	
comp=N,112nm,19.1s,baz=247,slow=40							
GO04	**Tololo Observa**	**9.78**	**22**	*e*Pn	**Pn**	**16 53 09.3**	**-2.2**
TRQA	**Tornquist**	**10.29**	**87**	*e*Pn	**Pn**	**16 53 18.6**	**+0.3**
CPUP	**Villa Florida**	**19.70**	**54**	P	**P**	**16 55 19.9**	**+0.5**
comp=N,0.4nm,0.3s,baz=225,slow=7.5,SNR=5.0							
LPAZ	**La Paz**	**23.75**	**17**	P	**P**	**16 56 04.6**	**+1.7**
comp=N,2.5nm,0.8s,baz=244,slow=1.2,SNR=7.9							
LPAZ	**La Paz**	**23.75**	**17**	*e*P	**P**	**16 56 01.7**	**-1.2**
comp=N,5.0nm,0.8s							
SIV	**San Ignacio**	**26.28**	**32**	P	**P**	**16 56 25.8**	**+0.5**
comp=N,3.3nm,0.9s,baz=228,slow=11,SNR=10							
PMSA	**Palmer Station**	**26.28**	**169**	LR	LR	17 05 34.2	
comp=N,64nm,18.6s,baz=321,slow=34							
BDFB	**Brasilia**	**33.41**	**53**	P	**P**	**16 57 28.1**	**-0.5**
comp=N,4.9nm,0.8s,baz=191,slow=3.9,SNR=6.6							
BDFB	**Brasilia**	**33.41**	**53**	*e*P	**P**	**16 57 28.1**	**-0.5**
BDFB				*e*P	**P**	**16 57 29.4**	**+0.7**
VNA3	**Neumayer Olymp**	**45.42**	**156**	P	**P**	**16 59 08.8**	**+0.8**
SNAA	**Sanae**	**47.63**	**156**	P	**P**	**16 59 26.5**	**+1.1**
SNAA	**Sanae**	**47.63**	**156**	*e*P	**P**	**16 59 26.2**	**+0.8**
comp=N,4.1nm,0.9s							
VNDA	**Vanda**	**58.39**	**192**	P	**P**	**17 00 44.5**	**0.0**
comp=N,1.2nm,1.0s,baz=141,slow=3.6,SNR=4.6							
VNDA	**Vanda**	**58.39**	**192**	*e*P	**P**	**17 00 41.0**	**-3.5**
SYO	**Syowa Base**	**61.81**	**158**	‖*e*X	**P**	**17 01 09.2**	**+1.3**
MAW	**Mawson**	**68.74**	**164**	P	**P**	**17 01 53.3**	**+0.5**
comp=N,3.1nm,0.9s,baz=208,slow=7.1,SNR=6.1							
MAW				LR	LR	17 32 20.0	
comp=N,49nm,18.1s,baz=209,slow=36							
MAW	**Mawson**	**68.74**	**164**	*e*P	**P**	**17 01 53.5**	**+0.7**
comp=N,1.0nm,0.9s							
W50A	**Signal Mountai**	**74.77**	**351**	*e*P	**P**	**17 02 29.7**	**+0.3**
comp=N,8.3nm,0.7s							
WMOK	**Wichita Mounta**	**76.91**	**340**	*e*P	**P**	**17 02 42.3**	**+0.7**
comp=N,3.4nm,1.0s							
ANMO	**Albuquerque**	**79.42**	**334**	*e*P	**P**	**17 02 57.5**	**+1.8**
comp=N,5.5nm,0.9s							
BOSA	**Boshof**	**79.69**	**118**	P	**P**	**17 02 56.2**	**-1.3**
comp=N,3.8nm,0.8s,baz=230,slow=4.3,SNR=5.7							
SDCO	**Great Sand Dun**	**81.66**	**336**	*e*P	**P**	**17 03 09.3**	**+1.5**
comp=N,3.3nm,1.1s							
SMCO	**Snowmass**	**83.44**	**336**	*e*P	**P**	**17 03 17.3**	**+0.2**
comp=N,6.5nm,1.0s							
SHPR	**Sheep Range**	**84.04**	**329**	*e*P	**P**	**17 03 19.6**	**-0.4**
comp=N,3.7nm,1.0s							
DUG	**Dugway, Tooele**	**86.35**	**332**	*e*P	**P**	**17 03 32.9**	**+1.4**
comp=N,7.1nm,1.0s							
NVAR	**Mina Array Bea**	**86.98**	**327**	P	**P**	**17 03 36.6**	**+1.9**
comp=N,0.5nm,0.6s,baz=161,slow=5.9,SNR=6.3							
BW06	**Boulder Array**	**87.51**	**335**	*e*P	**P**	**17 03 38.0**	**+0.8**
PD31	**Pinedale Array**	**87.51**	**335**	*e*P	**P**	**17 03 37.5**	**+0.4**
comp=N,2.6nm,1.1s							
PDAR	**Pinedale Array**	**87.51**	**335**	P	**P**	**17 03 37.6**	**+0.5**
comp=N,1.5nm,0.9s,baz=149,slow=6.3,SNR=9.7							
ELK	**Elko**	**87.73**	**331**	*e*P	**P**	**17 03 39.2**	**+0.9**
comp=N,2.4nm,1.1s							
WR1	**Warramunga Arr**	**114.94**	**211**	*e*PKiKP	**PKiKP**	**17 09 30.1**	**-0.6**
WRA	**Warramunga Arr**	**114.94**	**211**	PKP	**PKiKP**	**17 09 30.1**	**-0.6**
comp=N,1.5nm,0.9s,baz=197,slow=1.7,SNR=3.2							
GEC2	**GERESS Array S**	**117.56**	**48**	*e*PKPdf	**PKiKP**	**17 09 35.4**	**+0.5**
GERES	**GERESS Array B**	**117.56**	**48**	PKP	**PKiKP**	**17 09 35.4**	**+0.5**
comp=N,1.1nm,0.7s,baz=180,slow=1.2,SNR=7.8							
BR101	**Keskin Array S**	**126.40**	**65**	*e*PKPdf	**PKiKP**	**17 09 52.8**	**+0.1**
BRTR	**Keskin Array B**	**126.40**	**65**	PKP	**PKiKP**	**17 09 52.8**	**+0.1**
comp=N,1.3nm,0.9s,baz=193,slow=5.1,SNR=6.1							
AKASG	**Malin Array Be**	**127.50**	**51**	PKP	**PKiKP**	**17 09 53.9**	**-0.3**
comp=N,1.2nm,0.5s,baz=267,slow=2.2,SNR=4.3							
AKBB	**Malin Array Si**	**127.50**	**51**	*e*PKPdf	**PKiKP**	**17 09 53.9**	**-0.3**
SEY	**Seymchan**	**143.27**	**326**	PKP	PKPbc	17 10 20.4	+0.7
comp=N,2.8nm,0.8s,baz=203,slow=7.9,SNR=5.9							
GEYT	**Alibeck**	**143.70**	**77**	PKP	PKPbc	17 10 22.5	+0.7
comp=N,1.7nm,0.6s,baz=222,slow=1.9,SNR=5.2							
MA2	**Magadan**	**144.94**	**321**	PKPbc	**PKPdf**	**17 10 25.6**	**0.0**
comp=N,10nm,0.7s,baz=90,slow=6.2,SNR=6.9							
ASAJ	**Asahikawa**	**151.68**	**292**	PKPbc	**PKiKP**	**17 10 43.9**	**+0.1**
comp=N,3.9nm,0.8s,baz=202,slow=4.4,SNR=5.1							
KSH	**Kashi**	**157.65**	**80**	*e*PKP	**PKPdf**	**17 10 44.0**	**-1.7**
ZAA1	**Zalesovo Array**	**159.98**	**36**	*e*PKPdf	**PKPdf**	**17 10 46.5**	**-1.2**
ZAA1				*e*PKPab	**PKPab**	**17 11 28.9**	**+1.4**
ZALV	**Zalesovo Beam**	**159.99**	**36**	PKP	**PKPdf**	**17 10 46.5**	**-1.2**
comp=N,1.0nm,0.8s,baz=297,slow=1.3,SNR=3.3							
ZALV				PKPab	**PKPab**	**17 11 28.9**	**+1.4**
comp=N,1.2nm,0.8s,baz=289,slow=4.5,SNR=3.7							
MK32	**Makanchi Array**	**161.88**	**58**	*e*PKPdf	**PKPdf**	**17 10 50.2**	**+0.1**
MK32				*e*PKPab	**PKPab**	**17 11 36.4**	**+0.3**
MKAR	**Makanchi Array**	**161.88**	**58**	PKP	**PKPdf**	**17 10 50.2**	**+0.1**
comp=N,0.3nm,0.7s,baz=228,slow=5.6,SNR=4.1							
MKAR				PKPab	**PKPab**	**17 11 36.4**	**+0.3**
comp=N,0.9nm,0.7s,baz=280,slow=4.6,SNR=6.1							
KSRS	**Korea Array**	**161.91**	**271**	PKPab	**PKPab**	**17 11 37.1**	**+0.5**
comp=N,0.8nm,0.8s,baz=146,slow=3.2,SNR=3.4							
KS15	**Wonju Array Si**	**161.94**	**271**	*e*PKPab	**PKPab**	**17 11 37.1**	**+0.4**
WMQ	**Urumqi**	**166.32**	**65**	*e*PKP	**PKPdf**	**17 10 56.0**	**+1.7**
NJ2	**Nanjing**	**166.58**	**241**	*e*PKP	**PKPdf**	**17 10 57.0**	**+2.3**
SONA0	**Songino Array**	**171.44**	**353**	*e*PKPdf	**PKPdf**	**17 10 57.1**	**-0.3**
SONA0				*e*PKPab	**PKPab**	**17 12 19.2**	**+1.0**
SONM	**Songino Array**	**171.44**	**353**	PKP	**PKPdf**	**17 10 57.2**	**-0.3**
comp=N,0.7nm,0.7s,baz=349,slow=1.5,SNR=4.0							
SONM				PKPab	**PKPab**	**17 12 19.2**	**+1.0**
comp=N,0.4nm,0.5s,baz=2.9,slow=2.9,SNR=3.5							
XAN	**Xi'an**	**173.83**	**212**	PKP	**PKPdf**	**17 11 00.5**	**+1.7**
XAN				pPKP	pPKPdf	17 11 08.3	-0.5
HHC	**Hu-ho-hao-te**	**174.72**	**289**	*e*PKP	**PKPdf**	**17 11 02.5**	**+3.5**

*NSSC **29** 17:06:54.6±0.4,33.°86N×35.°68E,h4km±9km,ML1.6*
*ISCJB **29** 17:06:55.5±1.8,33.°80N±0.°05×35.°7E±0.°1,h21km±13km,*
Error ellipse: s-maj=16.0km s-min=8.2km az=165.1
*GRAL **29** 17:06:56.5±0.3,33.°80N×35.°76E,h13km±2km,MD2.7*

ISC 29 17:06:54.7±1.5,**33.°83N**±0.°06×**35.°7E**±0.°1,**h26**km±10km,**n7,**
σ0$**61**/12,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.08**	**342**	*e*P	**Pb**	**17 06 59.8**	**+0.3**
BHL				*e*S	**Sb**	**17 07 02.3**	**-0.4**
DQRL	**Deir Qamar**	**0.16**	**217**	*e*P	**Pb**	**17 07 00.5**	**+0.4**
RCY	**Rachaya**	**0.36**	**159**	*e*P	**Pb**	**17 07 02.4**	**-0.4**
RCY				*e*S	**Sb**	**17 07 07.0**	**-1.2**
BRBR	**Barbar**	**0.47**	**152**	*e*P	**Pb**	**17 07 04.3**	**-0.3**
BRBR				*e*S	**Sb**	**17 07 11.7**	**+0.2**
BRBR				AML	AML	17 07 13.2	
comp=N,61nm,0.4s							
BRBR				AML	AML	17 07 16.9	
comp=E,18nm,0.3s							
HWQ	**Hawqa**	**0.50**	**26**	*e*P	**Pn**	**17 07 05.9**	**-0.4**
QASN	**Qassioun**	**0.58**	**121**	*e*P	**Pb**	**17 07 06.4**	**+0.1**
QASN				*e*S	**Sb**	**17 07 14.5**	**+0.3**
QASN				AML	AML	17 07 18.5	
comp=N,77nm,0.3s							
QASN				AML	AML	17 07 18.6	
comp=E,100nm,0.3s							
TOTH	**TOTAH**	**0.78**	**127**	*e*P	**Pn**	**17 07 10.8**	**+0.8**
TOTH				*e*S	**Sn**	**17 07 20.9**	**0.0**
TOTH				AML	AML	17 07 27.2	
comp=N,17nm,0.5s							
TOTH				AML	AML	17 07 30.8	
comp=E,11nm,0.5s							

*ISCJB **29** 17:31:01.5±1.0,23.°9S±0.°1×112.°1W±0.°3,h8km,mb4.2/6,*
MS3.7/8,Error ellipse: s-maj=38.2km s-min=8.8km
az=149.4
*IDC **29** 17:31:02.1±1.1,23.°89S×112.°01W,h0km,mb3.8/3,*
mb1 4.1/4,mb1mx3.8/28,mbtmp3.9/4,ML3.7/1,MS3.6/5,
Ms1 3.6/5,ms1mx3.4/16,Error ellipse: s-maj=50.8km
s-min=26.2km az=51.0
*NEIC **29** 17:31:03.2±1.6,23.°96S×112.°02W,h11km±3km,mb4.5/3,*
Error ellipse: s-maj=34.8km s-min=16.0km az=61.0

ISC 29 17:31:03.1±0.9,**23.°9S**±0.°2×**112.°1W**±0.°2,**h8**km,**n34,**
σ0$**98**/22,**mb4.2**/6,**MS3.7**/8,**Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**4.05**	**143**	Pn	**Pn**	**17 32 03.6**	**-1.7**
4.9nm,0.3s,baz=324,slow=8.7,SNR=2.2							
RPN				Sn	**Sn**	**17 32 55.2**	**+2.2**
4.0nm,0.3s,baz=331,slow=19,SNR=1.3							
RPN	**Rapa Nui**	**4.05**	**143**	*e*Pn	**Pn**	**17 32 04.1**	**-1.2**
RKT	**Rikitea**	**21.04**	**267**	*e*T	T	17 57 03.2	
2.7nm,0.3s							
TBI	**Tubuai**	**34.22**	**263**	*e*LR	LR	17 46 59.6	
comp=Z,199nm,29.2s							
PPT2	**Papeete2**	**35.58**	**273**	*e*LR	LR	17 47 14.6	
comp=Z,131nm,28.2s							
PB04	**IPOC Station P**	**38.47**	**96**	*e*P	**P**	**17 38 25.5**	**-0.5**
86nm,1.4s							
PLCA	**Paso Flores**	**38.48**	**126**	LR	LR	17 49 54.8	
comp=Z,116nm,19.5s,baz=296,slow=30							
PLCA	**Paso Flores**	**38.48**	**126**	*e*P	**P**	**17 38 25.4**	**-0.4**
LPAZ	**La Paz**	**41.80**	**88**	P	**P**	**17 38 55.1**	**+0.9**
0.8nm,0.6s,baz=270,slow=4.1,SNR=4.2							
LPAZ				LR	LR	17 52 05.6	
comp=Z,66nm,20.5s,baz=292,slow=30							
LPAZ	**La Paz**	**41.80**	**88**	*e*P	**P**	**17 38 54.5**	**+0.2**
LPAZ				*e*pP	**P**	**17 38 54.7**	**+0.5**
RAR	**Rarotonga**	**44.00**	**264**	LR	LR	17 52 27.3	
comp=Z,127nm,21.5s,baz=105,slow=29							
CPUP	**Villa Florida**	**49.30**	**105**	LR	LR	17 58 12.5	
comp=Z,43nm,20.3s,baz=218,slow=33							
BDFB	**Brasilia**	**60.40**	**95**	LR	LR	18 02 46.3	
comp=Z,55nm,21.2s,baz=177,slow=32							
NV01	**Mina Array Sit**	**62.27**	**354**	*e*P	**P**	**17 41 26.2**	**+0.4**
NVAR	**Mina Array Bea**	**62.27**	**354**	P	**P**	**17 41 26.2**	**+0.4**
1.2nm,0.9s,baz=170,slow=8.6,SNR=6.2							
I07A	**Izee**	**67.98**	**354**	*e*P	**P**	**17 42 03.8**	**+1.1**
2.8nm,1.0s							
SNAA	**Sanae**	**73.33**	**162**	*e*P	**P**	**17 42 35.7**	**+0.7**
7.7nm,1.3s							
DZM	**Mont Dzumac**	**73.99**	**253**	*e*LR	LR	18 05 26.1	
comp=Z,100nm,30.3s							
YKA	**Yellowknife Ar**	**86.11**	**359**	P	**P**	**17 43 44.0**	**0.0**
0.6nm,0.8s,baz=174,slow=5.0,SNR=4.6							
YKB5	**Yellowknife Ar**	**86.11**	**359**	*e*P	**P**	**17 43 44.0**	**0.0**
H11S2	**WAKE ISLAND Hy**	**89.70**	**290**	T	T	19 23 39.5	
baz=113							
H11S1	**WAKE ISLAND Hy**	**89.71**	**290**	T	T	19 23 38.9	
baz=113							
H11S3	**WAKE ISLAND Hy**	**89.72**	**290**	T	T	19 23 35.3	
baz=113							
H11N3	**WAKE ISLAND Hy**	**90.05**	**291**	T	T	19 23 59.6	
baz=116,slow=75,SNR=26							
H11N1	**WAKE ISLAND Hy**	**90.06**	**291**	T	T	19 24 05.3	
baz=116,slow=75,SNR=10							
H11N2	**WAKE ISLAND Hy**	**90.06**	**291**	T	T	19 24 00.8	
baz=116,slow=75,SNR=34							
BR101	**Keskin Array S**	**147.08**	**53**	*e*PKPbc	**PKPbc**	**17 50 45.9**	**-1.0**
BRTR	**Keskin Array B**	**147.08**	**53**	PKPbc	**PKPbc**	**17 50 45.9**	**-1.1**
1.1nm,0.9s,baz=234,slow=4.3,SNR=5.4							
ZAA1	**Zalesovo Array**	**147.41**	**341**	*e*PKPbc	**PKPbc**	**17 50 47.6**	**+0.4**
ZALV	**Zalesovo Beam**	**147.42**	**341**	PKPbc	**PKPbc**	**17 50 47.6**	**+0.4**
0.4nm,0.4s,baz=358,slow=7.2,SNR=1.5							
CMAR	**Chiang Mai Arr**	**150.64**	**265**	PKPbc	**PKiKP**	**17 50 57.7**	**+0.5**
1.1nm,0.8s,baz=28,slow=0.2,SNR=7.8							
KBZ	**Khabaz**	**151.47**	**40**	PKPbc	**PKPbc**	**17 50 57.1**	**-0.5**
3.1nm,1.0s,baz=284,slow=4.9,SNR=4.2							
MK32	**Makanchi Array**	**154.41**	**337**	*e*PKPbc	**PKPbc**	**17 51 03.2**	**-1.0**
MKAR	**Makanchi Array**	**154.41**	**337**	PKPbc	**PKPbc**	**17 51 03.2**	**-0.9**
0.4nm,0.7s,baz=46,slow=3.5,SNR=3.7							

*DJA **29** 17:43:40.8±0.3,5.°S±4.°×15.°2E±.°,h28km±2km,M5.2/24,*
mB5.3/4,mb5.0/24,MLv5.5/1,Mw(mB)4.8/4
*ISCJB **29** 17:43:45.6±0.2,5.°19S±0.°03×152.°10E±0.°04,h70km,*
mb4.8/12,Error ellipse: s-maj=5.1km s-min=4.0km
az=19.7
*NEIC **29** 17:43:46.2±1.5,5.°16S×152.°13E,h63km±4km,mb4.8/92,*
Error ellipse: s-maj=12.2km s-min=8.7km az=118.0
*BJI **29** 17:43:46.2±0.0,4.°99S×152.°13E,h70km,mb4.6/27,*
mB4.9/20,Ms4.4/6,Ms7 4.1/5
*IDC **29** 17:43:47.2±2.1,5.°20S×152.°19E,h71km±18km,mb4.3/20,*
mb1 4.5/22,mb1mx4.3/34,mbtmp4.6/22,MS3.5/13,
Ms1 3.5/13,ms1mx3.4/25,Error ellipse: s-maj=13.6km
s-min=9.9km az=105.0

ISC 29 17:43:46.9±0.3,**5.°17S**±0.°05×**152.°17E**±0.°06,**h70**km,**n188,**
σ0$**95**/189,**mb4.8**/111,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.97**	**360**	*e*Pn	**Pn**	**17 44 03.6**	**-1.5**
MANU	**Manus Island**	**5.71**	**303**	*e*Pn	**Pn**	**17 45 11.3**	**+2.1**
PMG	**Port Moresby**	**6.51**	**229**	P	**Pn**	**17 45 20.5**	**+0.4**
24nm,0.3s,baz=39,slow=15,SNR=74							
PMG				S	**Sn**	**17 46 30.6**	**-2.4**
39nm,0.3s,baz=149,slow=18,SNR=10							
HNR	**Honiara**	**8.80**	**119**	*e*P	Pn	17 46 15.0	+24
HNR				*e*S	Sn	17 46 49.0	-40
HNR	**Honiara**	**8.80**	**119**	LR	LR	17 49 26.9	
comp=Z,75nm,18.4s,baz=271,slow=39							
HNR	**Honiara**	**8.80**	**119**	*e*P	Pn	17 46 11.1	+20
JAY	**Jayapura**	**11.74**	**283**	LR	LR	17 50 35.3	
comp=Z,70nm,21.8s,baz=126,slow=35							
COEN	**Coen**	**12.44**	**225**	*e*Pn	**Pn**	**17 46 41.5**	**+0.3**
PATS	**Pohnpei**	**13.41**	**27**	*e*Pn	**Pn**	**17 46 52.1**	**-2.2**
CTA	**Charters Tower**	**15.91**	**201**	P	**P**	**17 47 27.8**	**-1.2**
0.3nm,0.3s,baz=28,slow=13,SNR=8.7							
CTAO	**Charters Tower**	**15.91**	**201**	*e*P	**Pn**	**17 47 27.6**	**+1.0**
14nm,1.0s							
FAKI	**Fak Fak**	**20.00**	**276**	*e*P	**P**	**17 48 10.8**	**-3.3**
30nm,1.1s							
GUMO	**Guam**	**20.00**	**339**	LR	LR	17 55 53.7	
comp=Z,37nm,19.4s,baz=168,slow=36							
EIDS	**Eidsvold**	**20.11**	**183**	*e*P	**P**	**17 48 13.9**	**-1.3**
14nm,0.7s							
SIJI	**Sorong**	**21.30**	**281**	P	**P**	**17 48 28.7**	**+0.6**
6.0nm,0.4s,baz=46,slow=23,SNR=4.2							
TARA	**Tarawa**	**21.72**	**73**	*e*P	**P**	**17 48 31.7**	**-0.8**
136nm,1.6s							
DZM	**Mont Dzumac**	**21.75**	**142**	P	**P**	**17 48 33.0**	**+0.1**
16nm,0.6s,baz=310,slow=7.0,SNR=20							
DZM				LR	LR	17 55 42.4	
comp=Z,214nm,21.2s,baz=306,slow=33							
DZM	**Mont Dzumac**	**21.75**	**142**	*e*P	**P**	**17 48 33.3**	**+0.4**
27nm,1.0s							
MTN	**Manton Dam**	**22.12**	**248**	*e*P	**P**	**17 48 35.5**	**-1.3**
34nm,0.4s							
WC3	**Warramunga Arr**	**22.72**	**228**	*e*P	**P**	**17 48 42.7**	**-0.5**
54nm,0.8s							
WRAB	**Tennant Creek**	**22.72**	**228**	*e*P	**P**	**17 48 42.8**	**-0.4**
92nm,1.0s							
WB2	**Warramunga Arr**	**22.72**	**228**	*e*P	**P**	**17 48 42.8**	**-0.5**
101nm,1.1s							
WRA	**Warramunga Arr**	**22.73**	**228**	P	**P**	**17 48 43.0**	**-0.4**
108nm,1.1s,baz=56,slow=10,SNR=143							
WRA				S	**S**	**17 52 48.4**	**+1.4**
3.2nm,0.7s,baz=49,slow=19,SNR=4.1							
ARMA	**Armidale**	**25.12**	**181**	*e*P	**P**	**17 49 06.3**	**+0.8**
8.1nm,0.8s							
AS31	**Alice Springs**	**25.45**	**222**	*e*P	**P**	**17 49 08.4**	**-0.2**
16nm,0.4s							
ASAR	**Alice Springs**	**25.45**	**222**	P	**P**	**17 49 08.4**	**-0.1**
40nm,0.7s,baz=59,slow=9.2,SNR=326							
ASAR				PcP	**PcP**	**17 52 40.0**	**+0.9**
3.0nm,0.7s,baz=57,slow=2.7,SNR=6.6							
ASAR				LR	LR	18 00 02.3	
comp=Z,158nm,18.9s,baz=54,slow=38							
SOEI	**Soe**	**28.03**	**259**	*e*P	**P**	**17 49 29.6**	**-2.3**
24nm,0.8s							
SOEI	**Soe**	**28.03**	**259**	P	**P**	**17 49 30.9**	**-1.0**
SOEI				pP	pP	17 49 36.2	-13
WAKE	**Wake Island**	**28.18**	**30**	*e*P	**P**

21nm,1.0s
USRK Ussuriysk Ar. 52.40 342 P P 17 52 54.2 +2.1
0.9nm,0.6s,baz=192,slow=13,SNR=3.7
SKNT Sakolnakorn 52.45 296 P P 17 52 55.0 +2.1
7.8nm,0.8s
KULM Kulim 52.49 281 *eP* **P 17 52 52.6 -0.7**
13nm,0.8s
MNSI Mandailing Nat 52.86 275 P P 17 52 55.0 -1.0
47nm,0.8s
PSI Prapat 53.78 277 *eP* **P 17 53 01.0 -2.0**
13nm,1.1s
GSI Gunungsitoli 54.91 275 *eP* **P 17 53 09.8 -1.2**
47nm,1.1s
GSI Gunungsitoli 54.91 275 P P 17 53 09.8 -1.2
43nm,0.9s
KCSI Kotacane, Aceh 55.02 278 P P 17 53 09.8 -2.0
29nm,0.7s
UTTA Uttaradit 55.79 295 P P 17 53 19.3 +2.1
13µm,0.7s
NANT Nan 56.01 297 P P 17 53 19.6 +0.8
30µm,0.5s,337µm
XAN Xi'an 56.46 317 P P 17 53 21.5 -0.3
XAN pmax pmax
comp=Z,7.0nm,1.1s
MLSI Meulaboh, Aceh 56.48 279 P P 17 53 21.1 -1.2
116nm,0.8s
PAYA Payao 56.94 297 P P 17 53 26.6 +1.2
29µm,0.8s
CM31 Chiang Mai Arr 57.47 296 *eP* **P 17 53 29.1 -0.1**
6.9nm,0.8s
CMAR Chiang Mai Arr 57.47 296 P P 17 53 30.3 +1.1
4.2nm,0.8s,baz=112,slow=5.3,SNR=29
CMMT Chiang Mai 57.58 296 P P 17 53 31.3 +1.4
2.7nm,1.3s
CHTO Chiang Mai 57.58 296 *eP* **P 17 53 29.6 -0.3**
5.6nm,1.0s
PETK Petropavlovsk- 58.25 4 P P 17 53 34.5 +0.5
0.7nm,0.5s,baz=143,slow=7.5,SNR=6.2
PETK LR LR 18 14 50.7
comp=Z,48nm,20.5s,baz=187,slow=32
PEA1 Petropavlovsk- 58.25 4 *eP* **P 17 53 34.5 +0.5**
CD2 Chengdu 58.50 311 *eP* **P 17 53 36.0 -0.2**
HHC Hu-ho-hao-te 58.98 325 P P 17 53 41.3 +1.8
HHC S **S 18 01 42.0 +1.2**
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,21nm,6.4s
HHC LR LR
comp=N,140nm,14.3s
HHC LR LR
comp=E,110nm,16.7s
LZH Lanzhou 61.06 316 *eP* **P 17 53 53.0 -0.9**
LZH pP pP 17 54 12.3 +0.1
LZH sP sP 17 54 20.5 +0.5
LZH pmax pmax
comp=Z,25nm,1.1s
GTA Gaotai 65.50 318 *eP* **P 17 54 23.5 +0.4**
GTA pP pP 17 54 44.5 +2.9
GTA sP PcP 17 54 54.3 -0.2
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,44nm,7.8s
GTA LR LR
comp=N,82nm,18.7s
GTA LR LR
comp=E,94nm,18.7s
GTA LR LR
comp=Z,100nm,18.1s
SHL Shillong 65.95 301 *eP* **P 17 54 25.9 -0.5**
11nm,0.7s
SONA0 Songino Array 66.30 328 *eP* **P 17 54 28.8 +0.7**
SONM Songino Array 66.30 328 P P 17 54 28.8 +0.7
1.2nm,0.6s,baz=151,slow=6.4,SNR=6.7
SONM LR LR 18 26 39.4
comp=Z,47nm,18.0s,baz=128,slow=39
CASY Casey 67.48 197 *eP* **P 17 54 34.5 -0.6**
45nm,1.4s
LSA Lhasa 67.93 305 *eP* **P 17 54 39.6 +0.4**
LSA *e* 17 54 40.0
JIRN Jiri 71.44 301 *eP* **P 17 55 00.8 +0.1**
13nm,0.5s
GUN Gumba 71.78 301 *eP* **P 17 55 03.5 +0.8**
39nm,0.9s
PKI Pulchoki 72.08 301 *eP* **P 17 55 04.2 -0.3**
10nm,0.8s
PKIN Phulchoki 72.09 301 *eP* **P 17 55 03.9 -0.6**
7.3nm,0.8s
KKN Kakani 72.25 301 *eP* **P 17 55 05.4 0.0**
10nm,0.6s
DMN Daman 72.35 301 *eP* **P 17 55 06.0 -0.1**
21nm,0.8s
PALK Pallekele 72.37 279 *eP* **P 17 55 06.7 +0.6**
23nm,1.3s
VNDA Vanda 72.48 178 P P 17 55 06.4 +0.8
5.1nm,0.8s,baz=329,slow=6.8,SNR=35
VNDA Vanda 72.48 178 *eP* **P 17 55 06.2 +0.6**
7.1nm,0.9s
GKN Gorkha 72.86 301 *eP* **P 17 55 08.8 -0.1**
35nm,0.9s
SBA Scott Base 73.04 177 *eP* **P 17 55 10.7 +1.8**
5.8nm,1.1s
KOLN Koldanda 73.68 301 *eP* **P 17 55 13.5 -0.4**
29nm,0.9s
PYUN Piuthan 74.29 301 *eP* **P 17 55 16.8 -0.6**
25nm,0.8s
SII Sitkinak Islan 75.39 27 *eP* **P 17 55 23.5 +0.7**
8.5nm,0.7s
WMQ Urumqi 75.59 318 *eP* **P 17 55 24.5 +0.1**
WMQ pmax pmax
comp=Z,10.0nm,0.8s
WMQ pmax pmax
comp=Z,60nm,3.7s
KDAK Kodiak Island 76.79 27 *eP* **P 17 55 32.4 +1.6**
12nm,1.3s
CNPM China Poot 78.32 26 *eP* **P 17 55 40.3 +1.0**
20nm,0.6s
RC01 Rabbit Creek A 79.77 25 *eP* **P 17 55 47.8 +0.6**
6.6nm,0.9s
MK31 Makanchi Array 80.19 319 *eP* **P 17 55 50.2 +0.4**
1.5nm,0.9s
MKAR Makanchi Array 80.19 319 P P 17 55 50.0 +0.1
2.4nm,0.9s,baz=104,slow=6.3,SNR=14
MAKZ Makanchi 80.40 319 *eP* **P 17 55 51.5 +0.6**
2.5nm,0.8s
KTH Kantishna Hill 80.59 22 *eP* **P 17 55 51.7 +0.1**
4.2nm,1.0s
SML Sawmill 80.72 24 *eP* **P 17 55 52.2 -0.1**
6.2nm,0.6s
TRF Thorofare Moun 80.78 23 *eP* **P 17 55 53.0 +0.2**
11nm,1.6s
GLI Glacier Island 80.79 26 *eP* **P 17 55 53.2 +0.5**
8.1nm,1.0s
BPAW Bear Paw Mtn. 80.86 22 *eP* **P 17 55 53.1 0.0**
1.4nm,0.9s
ZAA0 Zalesovo Array 81.11 326 *eP* **P 17 55 53.2 -1.3**
3.4nm,1.0s
ZALV Zalesovo Beam 81.11 326 P P 17 55 54.0 -0.5
1.5nm,0.4s,baz=116,slow=6.8,SNR=8.3
ZALV LR LR 18 32 04.1
comp=Z,33nm,19.4s,baz=70,slow=36
ZAA1 Zalesovo Array 81.11 326 *eP* **P 17 55 54.0 -0.5**
SCM Sheep Creek Mo 81.15 25 *eP* **P 17 55 55.3 +0.7**
14nm,1.3s
MCK McKinley 81.44 23 *eP* **P 17 55 56.4 +0.3**
8.4nm,1.1s
MLY Manley 81.45 21 *eP* **P 17 55 56.5 +0.3**
3.0nm,0.6s
WRH Wood River Hil 82.14 22 *eP* **P 17 55 59.7 0.0**
3.9nm,1.0s
CCB Clear Creek Bu 82.33 22 *eP* **P 17 56 00.1 -0.6**
3.7nm,1.0s
KDJ Kajisay 82.41 314 *eP* **P 17 56 02.2 +0.3**
3.9nm,0.8s
HDA Harding Lake 82.54 22 *eP* **P 17 56 02.3 +0.5**
6.0nm,1.4s
KSH Kashi 82.70 311 *eP* **P 17 56 07.0 +3.6**
ILAR Eielson Array 82.74 22 P P 17 56 02.1 -0.7
1.9nm,0.6s,baz=244,slow=5.2,SNR=18
ILB Eielson Array 82.74 22 *eP* **P 17 56 02.2 -0.7**
2.9nm,0.8s
NIL Nilore 83.67 305 *eP* **P 17 56 08.0 -0.4**
7.7nm,0.7s
KURK Kurchatov 83.67 322 *eP* **P 17 56 08.4 +0.5**
3.0nm,0.8s
TKM2 Tokmak 2 83.73 314 P P 17 56 08.9 +0.2
SNR=6.2
KZA Kyzart 83.80 313 P P 17 56 11.0 +1.7
SNR=5.4
CHMS Chumysh 84.36 314 P P 17 56 12.2 +0.5
SNR=5.2
UCH Uchtor 84.36 313 P P 17 56 13.7 +1.5
SNR=5.2
AAK Ala-Archa 84.47 314 *eP* **P 17 56 12.6 +0.2**
2.9nm,0.8s
USP Ospenovka 84.59 314 P P 17 56 13.7 +0.9
SNR=6.0
QSPA South Pole Qui 84.79 180 *eP* **P 17 56 13.5 -0.1**
6.9nm,0.8s
EGAK Eagle 84.94 23 *eP* **P 17 56 14.8 +0.7**
4.2nm,1.1s
MAW Mawson 84.99 203 P P 17 56 14.7 +0.4
12nm,0.7s,baz=98,slow=5.5,SNR=41
MAW Mawson 84.99 203 *eP* **P 17 56 14.4 +0.2**
2.9nm,1.8s
HYT Haines Junctio 85.05 28 *eP* **P 17 56 16.1 +1.3**
3.2nm,0.8s
EPYK Eagle Plains 87.25 22 *eP* **P 17 56 25.9 +0.4**
6.1nm,0.6s
PINE Pine Mountain 91.30 46 *eP* **P 17 56 46.0 +0.8**
3.7nm,0.8s
NV01 Mina Array Sit 92.81 52 *eP* **P 17 56 53.0 +0.7**
NVAR Mina Array Bea 92.81 52 P P 17 56 53.0 +0.7
1.5nm,0.8s,baz=248,slow=6.8,SNR=12
NVAR LR LR 18 30 41.7
comp=Z,67nm,21.5s,baz=280,slow=30
F10A Beach Ranch, E 94.10 44 *eP* **P 17 56 58.1 +0.1**
3.0nm,1.0s
YKA Yellowknife Ar 96.05 28 P P 17 57 06.1 -0.1
0.5nm,0.7s,baz=270,slow=4.6,SNR=4.8
PD31 Pinedale Array 99.56 48 *ePdif* **Pdif 17 57 21.9 -1.1**
1.0nm,0.8s
PDAR Pinedale Array 99.56 48 P Pdif 17 57 22.9 -0.1
0.6nm,0.7s,baz=217,slow=0.9,SNR=5.9
PDAR LR LR 18 36 56.8
comp=Z,53nm,20.1s,baz=278,slow=32
ARCES ARCESS Array B 107.04 343 PKiKP **PKiKP 18 02 03.9 -0.5**
1.2nm,0.6s,baz=128,slow=2.0,SNR=5.7
FINES FINESS Array B 111.13 335 PKiKP **PKiKP 18 02 11.8 -0.4**
0.7nm,0.8s,baz=64,slow=3.2,SNR=4.0
BR101 Keskin Array S 115.08 312 *e*PKiKP **PKPdf 18 02 20.9 +0.3**
BRTR Keskin Array B 115.08 312 PKP **PKPdf 18 02 20.9 +0.3**
0.4nm,0.6s,baz=318,slow=1.9,SNR=2.9
NB2 NORSAR Subarra117.04 340 PKPdf **PKPdf 18 02 23.2 -0.5**
comp=Z,1.1nm,0.8s,baz=39,slow=1.9
NB200 NORSAR Array S 117.04 340 *e*PKPdf **PKPdf 18 02 23.2 -0.5**
NOA NORSAR Array B 117.04 340 PKP **PKPdf 18 02 23.2 -0.5**
comp=Z,0.9nm,0.7s,baz=43,slow=1.7,SNR=5.6
BOSA Boshof 118.90 233 PKP **PKiKP 18 02 28.6 +0.2**
comp=Z,0.9nm,0.6s,baz=90,slow=5.1,SNR=3.2
PLCA Paso Flores 119.86 144 PKP **PKPdf 18 02 29.6 -0.1**
comp=Z,0.6nm,0.5s,baz=288,slow=6.4,SNR=3.2
CLL Collm 122.87 331 *e*PKPdf **PKPdf 18 02 34.0 -1.1**
KHC Kasperske Hory 123.93 328 *e*PKP **PKiKP 18 02 38.5 +1.0**
GEC2 GERESS Array S 124.04 328 *e*PKPdf **PKiKP 18 02 38.0 +0.2**
GERES GERESS Array B 124.04 328 PKP **PKiKP 18 02 37.8 0.0**
comp=Z,1.0nm,0.6s,baz=57,slow=1.6,SNR=12
LPAZ La Paz 134.79 119 PKP **PKPdf 18 02 60.0 +0.5**
comp=Z,2.7nm,0.9s,baz=200,slow=0.8,SNR=7.3
LPAZ La Paz 134.79 119 *e*PKPdf **PKPdf 18 02 59.6 +0.1**
SDV Santo Domingo 137.38 83 *e*PKPdf **PKPdf 18 03 04.7 +0.8**
PTGA Pitinga 147.37 99 *e*PKPbc **PKPbc 18 03 24.1 +0.3**
TOA0 Torodi Ar. Sit 149.82 287 *e*PKPbc **PKPbc 18 03 29.6 -0.5**
TORD Torodi Ar. Bea 149.82 287 PKPbc **PKPbc 18 03 28.6 -1.5**
comp=Z,17nm,0.7s,baz=59,slow=3.4,SNR=87
TOA1 Torodi Ar. Sit 149.82 287 *e*PKPbc **PKPbc 18 03 28.6 -1.5**
BDFB Brasilia 151.24 136 PKPbc **PKPbc 18 03 33.0 -0.6**
comp=Z,5.8nm,0.5s,baz=194,slow=1.1,SNR=8.7
BDFB Brasilia 151.24 136 *e*PKPbc **PKPbc 18 03 32.8 -0.7**
BDFB *e*PKPbc **PKPbc 18 03 33.0 -0.6**
DBIC Dimbokro 157.10 275 PKPab **PKPab 18 04 06.7 +0.1**
comp=Z,3.8nm,0.6s,baz=93,slow=2.0,SNR=6.2
DBIC Dimbokro 157.10 275 *e*PKPab **PKPab 18 04 06.2 -0.3**

*IDC **29** 18:23:36.6±2.3, 1°.79N×127°.13E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/25, mbtmp3.9/4, Error ellipse: s-maj=223.8km s-min=23.3km az=66.0*
*ISCJB **29** 18:23:40.4±0.6, 1°.59N±0°.07×126°.71E±0°.08, h35km, mb4.0/11, Error ellipse: s-maj=11.2km s-min=9.8km az=160.6*
*NEIC **29** 18:23:45.5±1.1, 1°.46N×126°.67E, h64km±12km, mb4.1/9, Error ellipse: s-maj=17.2km s-min=9.9km az=196.0*
ISC 29 18:23:42.7±1.2, 1°.6N±0°.1×126°.64E±0°.08, h35km, n17, σ1§51/19, mb4.1/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.12**	**139**	*e*Pn	**Pn**	**18 24 03.3**	**+1.4**
TNTI				*e*Sn	**Sn**	**18 24 18.8**	**+2.7**
LUWI	**Luwuk**	**4.69**	**236**	*e*Pn	**Pn**	**18 24 53.0**	**+2.0**
LUWI				*e*Sn	**Sn**	**18 25 44.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.62**	**183**	*e*P	**P**	**18 28 06.0**	**-2.4**
13nm,1.5s							
WR1	**Warramunga Arr**	**22.73**	**161**	*e*P	**P**	**18 28 40.9**	**-1.0**
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**18 28 40.9**	**-1.0**
4.1nm,0.5s,baz=344,slow=12,SNR=9.2							
WB2	**Warramunga Arr**	**22.73**	**161**	*e*P	**P**	**18 28 40.2**	**-1.7**
5.9nm,0.8s							
WC3	**Warramunga Arr**	**22.75**	**161**	*e*P	**P**	**18 28 40.5**	**-1.6**
6.6nm,0.6s							
AS31	**Alice Springs**	**26.11**	**165**	*e*P	**P**	**18 29 12.7**	**-0.9**
0.7nm,0.9s							
ASAR	**Alice Springs**	**26.11**	**165**	P	**P**	**18 29 12.9**	**-0.7**
0.9nm,0.5s,baz=344,slow=10.0,SNR=20							
BBOO	**Buckleboo**	**35.39**	**166**	*e*P	**P**	**18 30 34.5**	**-0.8**
16nm,1.3s							
STKA	**Stephens Creek**	**36.21**	**158**	P	**P**	**18 30 40.5**	**-1.9**
1.7nm,0.8s,baz=330,slow=7.8,SNR=3.6							
STKA	**Stephens Creek**	**36.21**	**158**	*e*P	**P**	**18 30 40.9**	**-1.5**
0.7nm,1.1s							
MK31	**Makanchi Array**	**59.23**	**326**	*e*P	**P**	**18 33 41.1**	**+0.4**
3.7nm,1.6s							
MK32	**Makanchi Array**	**59.23**	**326**	*e*P	**P**	**18 33 40.6**	**0.0**
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**18 33 40.6**	**0.0**
0.4nm,0.4s,baz=118,slow=7.8,SNR=8.0							
MAKZ	**Makanchi**	**59.41**	**326**	*e*P	**P**	**18 33 43.0**	**+1.1**
2.6nm,1.4s							
KURK	**Kurchatov**	**63.46**	**328**	*e*P	**P**	**18 34 09.8**	**+0.7**
3.3nm,1.4s							

*ISCJB **29** 18:33:27.6±0.9, 26°.09N±0°.04×128°.71E±0°.05, h26km±6km, mb3.6/5, Error ellipse: s-maj=7.2km s-min=6.7km az=27.0*
*IDC **29** 18:33:27.5±2.4, 25°.88N×127°.85E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/35, mbtmp3.6/5, Error ellipse: s-maj=163.8km s-min=22.9km az=68.0*
*JMA **29** 18:33:28.7±0.3, 26°.11N×128°.64E, h35km±5km, M3.1*
ISC 29 18:33:27.6±1.5, 26°.11N±0°.05×128°.69E±0°.05, h16km±9km, n15, σ1§07/24, mb3.5/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.72**	**305**	P	**Pg**	**18 33 41.6**	**-0.2**
JNTH				*e*S	**Sg**	**18 33 51.2**	**-0.2**
JJT3	**Tamagusuku3**	**0.81**	**273**	P	**Pb**	**18 33 43.3**	**0.0**
JJT3				S	**Sg**	**18 33 54.8**	**+0.6**
JOW	**Kunigami**	**0.81**	**333**	P	**Pg**	**18 33 43.6**	**+0.2**
JOW				*e*S	**Sb**	**18 33 54.0**	**-0.1**
JYRO	**Yoronjima**	**0.94**	**347**	P	**Pg**	**18 33 45.6**	**-0.2**
JYRO				*e*S	**Sb**	**18 33 57.6**	**-0.1**
JIH	**Iheya**	**1.13**	**325**	P	**Pb**	**18 33 48.4**	**-0.3**
JIH				*e*S	**Sb**	**18 34 02.9**	**-0.3**
JOKE	**Okinoerabujima**	**1.26**	**355**	P	**Pn**	**18 33 50.5**	**0.0**
JOKE				S	**Sb**	**18 34 06.2**	**-0.7**
JAGN	**Aguni-jima**	**1.38**	**291**	P	**Pn**	**18 33 51.8**	**-0.4**
JAGN				*e*S	**Sn**	**18 34 08.8**	**-1.4**
JTK	**Tokunoshima**	**1.69**	**8**	P	**Pn**	**18 33 56.6**	**+0.1**
JTK				*e*S	**Sn**	**18 34 17.6**	**-0.2**
JKE	**Kume jima 2**	**1.72**	**278**	P	**Pn**	**18 33 55.6**	**-1.3**
JMZ	**Minamidaito 2**	**2.30**	**97**	P	**Pn**	**18 34 04.4**	**-0.4**
JMZ				S	**Sn**	**18 34 30.3**	**-2.5**
SONM	**Songino Array**	**27.88**	**327**	P	**P**	**18 39 18.8**	**+2.1**
0.6nm,0.7s,baz=148,slow=10,SNR=2.9							
MKAR	**Makanchi Array**	**41.92**	**312**	P	**P**	**18 41 16.2**	**-1.2**
0.4nm,0.5s,baz=100,slow=9.7,SNR=4.6							
WRA	**Warramunga Arr**	**46.10**	**173**	P	**P**	**18 41 51.4**	**+0.3**
1.8nm,1.1s,baz=349,slow=8.5,SNR=2.2							
ASAR	**Alice Springs**	**49.73**	**174**	P	**P**	**18 42 21.6**	**+2.4**
0.2nm,0.5s,baz=4.7,slow=14,SNR=6.1							
FINES	**FINESS Array B**	**73.17**	**331**	P	**P**	**18 44 57.8**	**+0.5**
0.7nm,0.5s,baz=73,slow=2.6,SNR=5.2

*ISCJB **29** 18:45:01.5±0.7, 4°.25S±0°.07×135°.38E±0°.06, h20km, mb4.0/2, Error ellipse: s-maj=11.1km s-min=8.1km az=144.1*
*IDC **29** 18:45:01.9±1.4, 3°.91S×135°.20E, h0km, mb4.1/2, mb1 4.2/6, mb1mx3.8/23, mbtmp4.2/6, ML4.0/4, MS2.9/1, Ms1 2.9/1, ms1mx2.5/29, Error ellipse: s-maj=35.3km s-min=26.7km az=103.0*
ISC 29 18:45:04.3±0.9, 4°.1S±0°.1×135°.30E±0°.07, h20km, n9, σ1§80/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.12**	**308**	Pn	**Pn**	**18 46 21.1**	**+1.2**
11nm,0.3s,baz=12,slow=7.2,SNR=101							
SIJI				Sn	**Sn**	**18 47 16.2**	**-2.3**
4.9nm,0.3s,baz=333,slow=23,SNR=8.7							
JAY	**Jayapura**	**5.61**	**74**	Pn	**Pn**	**18 46 27.7**	**+1.0**
1.0nm,0.3s,baz=218,slow=11,SNR=8.6							
JAY				Sn	**Sn**	**18 47 29.8**	**-0.9**
0.6nm,0.3s,baz=52,slow=12,SNR=2.6							
BATI	**Baumata**	**13.06**	**241**	Pn	**Pn**	**18 48 09.9**	**+1.1**
1.7nm,0.3s,baz=111,slow=8.6,SNR=3.4							
DAV	**Davao City (W)**	**14.70**	**319**	LR	LR	18 55 02.5	
comp=Z,44nm,18.1s,baz=128,slow=41							
WRA	**Warramunga Arr**	**15.82**	**183**	Pn	**Pn**	**18 48 42.9**	**-3.1**
0.2nm,0.3s,baz=1.5,slow=14,SNR=8.9							
WRA				Sn	Sn	18 51 28.0	-13
0.4nm,0.3s,baz=6.9,slow=24,SNR=4.9							
FITZ	**Fitzroy Crossi**	**16.86**	**213**	Pn	**Pn**	**18 48 58.2**	**-1.0**
0.4nm,0.3s,baz=30,slow=10,SNR=8.6							
FITZ				Sn	Sn	18 51 51.8	-14
0.2nm,0.3s,baz=176,slow=16,SNR=3.6							
ASAR	**Alice Springs**	**19.55**	**184**	P	**Pn**	**18 49 33.1**	**+0.9**
0.7nm,0.3s,baz=6.4,slow=11,SNR=80							
ASAR				S	S	18 52 58.2	-13
0.1nm,0.3s,baz=4.1,slow=29,SNR=3.0							
MKAR	**Makanchi Array**	**68.81**	**324**	P	**P**	**18 56 07.8**	**+0.5**
1.1nm,0.6s,baz=110,slow=8.2,SNR=13							
ZALV	**Zalesovo Beam**	**71.42**	**331**	P	**P**	**18 56 21.9**	**-1.1**
1.3nm,0.6s,baz=120,slow=6.3,SNR=5.6							

*SJA **29** 18:47:20.3±1.0, 21°.22S×69°.02W, h126km±4km, MD3.1, ML2.4, MW3.1*
*ISCJB **29** 18:47:21.0±0.5, 21°.24S±0°.02×69°.09W±0°.05, h128km±5km, mb3.8/2, Error ellipse: s-maj=8.4km s-min=3.6km az=177.4*
*GUC **29** 18:47:21.6±0.7, 21°.24S×68°.92W, h117km±4km, ML3.7*
*IDC **29** 18:47:24.1±1.8, 21°.34S×68°.06W, h42km±25km, mb3.8/2, mb1 3.8/5, mb1mx3.5/21, mbtmp3.9/5, ML3.9/3, Error ellipse: s-maj=33.9km s-min=11.9km az=123.0*
ISC 29 18:47:21.2±1.1, 21°.25S±0°.03×69°.07W±0°.05, h127km±7km, n39, σ1§18/68, 8C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.44**	**297**	*e*P	**Pn**	**18 47 39.5**	**-0.3**
PB01				*e*S	**Sn**	**18 47 53.2**	**-0.5**
PB01	**IPOC Station P**	**0.44**	**297**	⇑*i*P	**Pn**	**18 47 39.4**	**-0.3**
PB01				*e*S	**Sn**	**18 47 52.7**	**-1.0**
PB01				IAML		18 47 53.9	
comp=E,5µm,0.4s							
PB09	**IPOC Station P**	**0.57**	**196**	*e*P	**Pn**	**18 47 40.4**	**-0.2**
PB09				*i* S	**Sn**	**18 47 55.0**	**-0.3**
PB09	**IPOC Station P**	**0.57**	**196**	*e*P	**Pn**	**18 47 40.1**	**-0.5**
PB09				*e*S	**Sn**	**18 47 53.8**	**-1.5**
PB02	**IPOC Station P**	**0.77**	**264**	*i* P	**Pn**	**18 47 42.7**	**+0.7**
PB02				*e*S	**Sn**	**18 47 58.7**	**+1.0**
PB02	**IPOC Station P**	**0.77**	**264**	⇑*i*P	**Pn**	**18 47 42.6**	**+0.7**
PB02				*i* S	**Sn**	**18 47 58.3**	**+0.6**
PB02				IAML		18 48 01.5	
comp=E,2µm,0.3s							
PB07	**IPOC Station P**	**0.90**	**238**	*e*P	**Pn**	**18 47 43.7**	**+0.5**
PB07				*e*S	**Sn**	**18 48 00.4**	**+0.7**
PB07	**IPOC Station P**	**0.90**	**238**	⇑*i*P	**Pn**	**18 47 43.6**	**+0.5**
PB07				*e*S	**Sn**	**18 48 00.1**	**+0.4**
PB07				IAML		18 48 01.9	
comp=N,1µm,0.1s							
PB03	**IPOC Station P**	**1.02**	**218**	*e*P	**Pn**	**18 47 44.7**	**+0.4**
PB03				*i* S	**Sn**	**18 48 02.0**	**+0.3**
PB03	**IPOC Station P**	**1.02**	**218**	⇑*i*P	**Pn**	**18 47 44.6**	**+0.4**
PB03				*i* S	**Sn**	**18 48 01.7**	**0.0**
PB03				IAML		18 48 02.5	
comp=N,1µm,0.2s							
PB08	**IPOC Station P**	**1.10**	**356**	*e*P	**Pn**	**18 47 45.2**	**-0.1**
PB08				*e*S	**Sn**	**18 48 03.1**	**-0.5**
PB08	**IPOC Station P**	**1.10**	**356**	⇓*i*P	**Pn**	**18 47 45.1**	**-0.2**
PB08				*e*S	**Sn**	**18 48 02.6**	**-1.0**
PB08				IAML		18 48 04.5	
comp=E,1µm,0.2s							
LVC	**Limon Verde**	**1.36**	**174**	P	**Pn**	**18 47 47.8**	**-0.2**
comp=E,10nm,0.3s,baz=25,slow=8.3,SNR=175							
LVC				S	**Sn**	**18 48 07.1**	**-1.3**
comp=E,41nm,0.3s,baz=269,slow=23,SNR=40							
LVC	**Limon Verde**	**1.36**	**174**	*e*P	**Pn**	**18 47 47.9**	**-0.2**
LVC				*e*S	**Sn**	**18 48 08.5**	**+0.1**
PB04	**IPOC Station P**	**1.48**	**223**	*e*P	**Pn**	**18 47 49.8**	**+0.7**
PB04				*e*S	**Sn**	**18 48 10.9**	**+0.7**
PB04	**IPOC Station P**	**1.48**	**223**	⇑*i*P	**Pn**	**18 47 49.7**	**+0.7**
PB04				*i* S	**Sn**	**18 48 11.2**	**+1.0**
PB04				IAML		18 48 14.3	
comp=N,642nm,0.4s							
PB06	**IPOC Station P**	**1.52**	**198**	*e*P	**Pn**	**18 47 50.2**	**+0.5**
PB06				*e*S	**Sn**	**18 48 11.4**	**+0.2**
PB06	**IPOC Station P**	**1.52**	**198**	⇑*i*P	**Pn**	**18 47 50.1**	**+0.5**
PB06				*i* S	**Sn**	**18 48 11.2**	**0.0**
GO01	**Chusmiza**	**1.57**	**356**	⇓*i*P	**Pn**	**18 47 50.2**	**-0.3**
GO01				*e*S	**Sn**	**18 48 12.8**	**+0.1**
GO01				IAML		18 48 14.6	
comp=E,2µm,0.1s							
PB11	**IPOC Station P**	**1.58**	**340**	*i* P	**Pn**	**18 47 50.3**	**0.0**
PB11				*e*S	**Sn**	**18 48 11.9**	**-0.3**
PB11	**IPOC Station P**	**1.58**	**340**	*e*P	**Pn**	**18 47 50.2**	**0.0**
PB11				*i* S	**Sn**	**18 48 12.2**	**-0.1**
PB05	**IPOC Station P**	**1.91**	**213**	*e*P	**Pn**	**18 47 54.7**	**+0.6**
PB05				*e*S	**Sn**	**18 48 18.5**	**-0.8**
PSGC	**Pisagua**	**1.92**	**329**	⇑*i*P	**Pn**	**18 47 53.7**	**-0.4**
PSGC				*i* S	**Sn**	**18 48 18.7**	**-0.6**
PSGCX	**Pisagua**	**1.92**	**329**	*e*P	**Pn**	**18 47 53.7**	**-0.4**
PSGCX				*e*S	**Sn**	**18 48 18.3**	**-1.0**
PB15	**IPOC Station P**	**1.99**	**191**	*e*P	**Pn**	**18 47 55.6**	**+0.5**
PB15				*e*S	**Sn**	**18 48 21.4**	**+0.4**
MNMC	**Minye Minye**	**2.16**	**347**	⇑*i*P	**Pn**	**18 47 57.4**	**+0.1**
MNMC				*i* S	**Sn**	**18 48 25.7**	**+0.7**
MNMCX	**Minye Minye**	**2.16**	**347**	*e*P	**Pn**	**18 47 57.5**	**+0.1**
MNMCX				*e*S	**Sn**	**18 48 25.6**	**+0.6**
PB10	**IPOC Station P**	**2.64**	**211**	*e*P	**Pn**	**18 48 03.5**	**+0.4**
PB10				*e*S	**Sn**	**18 48 31.0**	**-4.4**
PB12	**IPOC Station P**	**2.87**	**335**	*i* P	**Pn**	**18 48 05.5**	**-0.7**
PB12				*i* S	**Sn**	**18 48 40.2**	**-0.6**
PB16	**IPOC Station P**	**2.93**	**352**	*e*P	**Pn**	**18 48 08.1**	**+0.7**
PB16				*i* S	**Sn**	**18 48 39.6**	**-3.2**
YJA	**Yavi**	**3.43**	**106**	*i* P	**Pn**	**18 48 13.1**	**-0.7**
YJA				IAML		18 48 16.6	
comp=Z,7.4nm,0.6s							
YJA				*e*S	**Sn**	**18 48 56.6**	**+2.2**
PB14	**IPOC Station P**	**3.58**	**200**	*e*P	**Pn**	**18 48 16.1**	**+0.5**
PB14				*e*S	Sn	18 48 49.2	-8.6
LPAZ	**La Paz**	**5.01**	**10**	P	**Pn**	**18 48 36.1**	**+1.0**
comp=Z,0.4nm,0.3s,baz=198,slow=4.5,SNR=11							
LPAZ				S	Sn	18 49 19.5	-13
comp=Z,0.1nm,0.3s,baz=195,slow=12,SNR=2.3							
LPAZ	**La Paz**	**5.01**	**10**	*e*P	**Pn**	**18 48 36.1**	**+1.0**
GO03	**Copiap**	**6.41**	**189**	*i* P	**Pn**	**18 48 50.9**	**-2.4**
GO03				*i* S	**Sn**	**18 50 00.2**	**-5.0**
SIV	**San Ignacio**	**9.21**	**57**	P	Pn	18 49 25.9	-5.1
comp=Z,2.2nm,0.3s,baz=254,slow=12,SNR=23							
BDFB	**Brasilia**	**20.73**	**78**	P	**P**	**18 51 53.1**	**+1.2**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**23.98**	**1**	P	P	19 05 22.0	+0.5
	0.4nm,0.5s,baz=186,slow=9.3,SNR=1.7						
MKAR	**Makanchi Array**	**29.64**	**326**	P	P	19 06 13.2	+0.7
	0.8nm,0.8s,baz=129,slow=12,SNR=6.4						
ZALV	**Zalesovo Beam**	**33.94**	**338**	P	P	19 06 48.7	-1.4
	0.6nm,0.7s,baz=157,slow=7.8,SNR=2.3						

*IDC **29** 19:04:36.0±0.8, 51°.83N×173°.37E, h0km, mb3.8/20, mb1 4.0/22, mb1mx3.9/41, mbtmp3.9/22, ML3.0/2, MS3.3/2, Ms1 3.3/2, ms1mx2.6/51, Error ellipse: s-maj=23.2km s-min=12.5km az=172.0*

*ISCJB **29** 19:04:37.2±0.4, 51°.81N±0°.08×173°.28E±0°.06, h24km, mb4.1/51, MS4.0/1, Error ellipse: s-maj=11.6km s-min=4.9km az=174.8*

*NEIC **29** 19:04:39.5±1.6, 51°.80N×173°.33E, h28km±6km, mb4.3/40, Error ellipse: s-maj=28.0km s-min=13.0km az=175.0*

ISC 29 19:04:39.4±0.7, 51°.9N±0°.1×173°.22E±0°.05, h24km, n78, σ1§19/74, mb4.1/51, Near Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**5.97**	**86**	*e*Pn	**Pn**	**19 06 04.5**	**-1.6**
ADK	**Adak**	**6.25**	**86**	*e*Pn	**Pn**	**19 06 08.4**	**-1.6**
PEA0B	**Petropavlovsk-**	**9.55**	**284**	*e*Pn	**Pn**	**19 06 54.9**	**-0.4**
PETK	**Petropavlovsk-**	**9.55**	**284**	Pn	**Pn**	**19 06 55.3**	**0.0**
	0.5nm,0.3s,baz=87,slow=18,SNR=13						
PETK				Sn	**Sn**	**19 08 37.2**	**-4.6**
	baz=121,slow=19,SNR=2.0						
PETK				LR	LR	19 10 16.7	
	comp=Z,43nm,20.8s,baz=110,slow=35						
PEA1	**Petropavlovsk-**	**9.55**	**284**	*e*Pn	**Pn**	**19 06 55.3**	**0.0**
PEA1				*e*Sn	**Sn**	**19 08 37.2**	**-4.6**
SEY	**Seymchan**	**15.69**	**323**	Pn	**Pn**	**19 08 19.6**	**+1.1**
	0.1nm,0.3s,baz=294,slow=20,SNR=2.2						
BILL	**Bilibino**	**16.58**	**351**	*e*Pn	**Pn**	**19 08 29.5**	**-0.3**
	4.3nm,0.9s						
SII	**Sitkinak Islan**	**19.52**	**63**	*e*P	**P**	**19 09 02.4**	**-2.2**
	10.0nm,1.0s						
RDOG	**Red Dog Mine**	**19.93**	**27**	*e*P	**P**	**19 09 08.9**	**-0.1**
	10nm,0.7s						
KDAK	**Kodiak Island**	**20.41**	**60**	P	**P**	**19 09 12.3**	**-2.0**
	2.9nm,0.3s,baz=281,slow=3.4,SNR=11						
KDAK	**Kodiak Island**	**20.41**	**60**	*e*P	**P**	**19 09 13.0**	**-1.4**
	10nm,0.8s						
CNPM	**China Poot**	**21.23**	**55**	*e*P	**P**	**19 09 22.8**	**-0.4**
	15nm,1.1s						
ASAJ	**Asahikawa**	**21.79**	**261**	P	**P**	**19 09 30.4**	**+1.1**
	5.5nm,0.9s,baz=20,slow=14,SNR=4.9						
KTH	**Kantishna Hill**	**22.10**	**44**	*e*P	**P**	**19 09 33.3**	**+0.7**
	8.5nm,0.9s						
BPAW	**Bear Paw Mtn.**	**22.22**	**43**	*e*P	**P**	**19 09 34.2**	**+0.3**
	4.5nm,0.9s						
TRF	**Thorofare Moun**	**22.35**	**45**	*e*P	**P**	**19 09 36.3**	**+0.9**
	2.2nm,1.0s						
MLY	**Manley**	**22.61**	**41**	*e*P	**P**	**19 09 39.1**	**+1.1**
	5.2nm,1.0s						
BWN	**Browne**	**22.89**	**43**	*e*P	**P**	**19 09 42.8**	**+1.9**
	20nm,0.8s						
SML	**Sawmill**	**22.92**	**49**	*e*P	**P**	**19 09 41.1**	**-0.2**
	13nm,0.5s						
SCM	**Sheep Creek Mo**	**23.40**	**49**	*e*P	**P**	**19 09 45.0**	**-1.2**
	7.3nm,0.5s						
WRH	**Wood River Hil**	**23.54**	**43**	*e*P	**P**	**19 09 45.2**	**-2.2**
	9.0nm,0.8s						
CCB	**Clear Creek Bu**	**23.70**	**42**	*e*P	**P**	**19 09 49.1**	**+0.2**
	5.7nm,0.8s						
COLA	**College**	**23.74**	**42**	*e*P	**P**	**19 09 48.1**	**-1.2**
	17nm,0.6s						
ILAR	**Eielson Array**	**24.12**	**42**	P	**P**	**19 09 52.5**	**-0.4**
	1.3nm,0.8s,baz=245,slow=8.7,SNR=12						
ILB	**Eielson Array**	**24.12**	**42**	*e*P	**P**	**19 09 52.2**	**-0.7**
	2.3nm,0.8s						
RIDG	**Independent Ri**	**24.79**	**45**	*e*P	**P**	**19 09 58.0**	**-1.1**
	3.3nm,0.8s						
FYU	**Fort Yukon**	**25.22**	**38**	*e*P	**P**	**19 10 03.0**	**+0.2**
	9.5nm,1.0s						
YAK	**Yakutsk**	**25.34**	**311**	*e*P	**P**	**19 10 03.0**	**-1.0**
	14nm,0.8s						
EGAK	**Eagle**	**26.53**	**43**	*e*P	**P**	**19 10 13.6**	**-1.2**
	4.1nm,0.9s						
DAWY	**Dawson**	**27.23**	**45**	*e*P	**P**	**19 10 20.4**	**-0.7**
	3.6nm,0.9s						
HYT	**Haines Junctio**	**28.10**	**52**	*e*P	**P**	**19 10 28.3**	**-0.7**
	2.6nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**32.45**	**191**	T	T	19 46 15.7	
	baz=8.0,slow=75,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**32.46**	**191**	T	T	19 46 22.7	
	baz=8.0,slow=75,SNR=5.6						
H11N1	**WAKE ISLAND Hy**	**32.47**	**191**	T	T	19 46 30.8	
	baz=8.0,slow=75,SNR=4.3						
HIA	**Hailar**	**33.44**	**287**	*e*P	**P**	**19 11 16.3**	**+0.3**
	9.5nm,0.4s						
H11S1	**WAKE ISLAND Hy**	**33.68**	**191**	T	T	19 46 43.6	
	baz=7.4,slow=76,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**33.69**	**191**	T	T	19 46 44.4	
	baz=7.4,slow=76,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**33.70**	**191**	T	T	19 46 44.5	
	baz=7.4,slow=76,SNR=7.0						
KSRS	**Korea Array**	**34.70**	**264**	P	**P**	**19 11 29.2**	**+2.2**
	0.7nm,0.9s,baz=56,slow=11,SNR=2.9						
KS15	**Wonju Array Si**	**34.73**	**264**	*e*P	**P**	**19 11 27.1**	**-0.2**
	7.4nm,0.9s						
YKW3	**Yellowknife Ar**	**38.44**	**45**	*e*P	**P**	**19 11 58.6**	**0.0**
	2.1nm,0.7s						
YKA	**Yellowknife Ar**	**38.47**	**45**	P	**P**	**19 11 58.4**	**-0.5**
	1.0nm,0.5s,baz=287,slow=7.4,SNR=5.5						
YKB5	**Yellowknife Ar**	**38.47**	**45**	*e*P	**P**	**19 11 58.4**	**-0.5**
SONA0	**Songino Array**	**41.91**	**292**	*e*P	**P**	**19 12 27.9**	**+0.1**
SONM	**Songino Array**	**41.91**	**292**	P	**P**	**19 12 27.9**	**+0.1**
	0.3nm,0.6s,baz=27,slow=9.7,SNR=2.4						
YBH	**Yreka Blue Hor**	**43.68**	**77**	P	**P**	**19 12 41.9**	**-0.3**
	1.5nm,0.8s,baz=252,slow=3.2,SNR=4.7						
NV01	**Mina Array Sit**	**48.37**	**78**	*e*P	**P**	**19 13 19.2**	**-0.1**
NVAR	**Mina Array Bea**	**48.37**	**78**	P	**P**	**19 13 19.2**	**-0.1**
	1.2nm,0.8s,baz=292,slow=7.9,SNR=10						
SPA0	**Spitsbergen Ar**	**49.45**	**354**	*e*P	**P**	**19 13 26.9**	**+0.1**
	14nm,1.1s						
SPITS	**Spitsbergen Ar**	**49.45**	**354**	P	**P**	**19 13 27.5**	**+0.7**
	0.6nm,0.4s,baz=342,slow=12,SNR=4.7						
R11A	**Troy Canyon, C**	**50.06**	**76**	*e*P	**P**	**19 13 30.9**	**-1.3**
	1.8nm,0.8s						
TPNV	**Topopah Spring**	**50.57**	**78**	*e*P	**P**	**19 13 35.4**	**-0.6**
	6.8nm,0.9s						
PDAR	**Pinedale Array**	**50.82**	**68**	P	**P**	**19 13 37.6**	**-0.3**
	1.2nm,0.8s,baz=306,slow=5.1,SNR=9.4						
GSC	**Goldstone, Bar**	**51.32**	**80**	*e*P	**P**	**19 13 40.8**	**-0.8**
	6.5nm,1.0s						
U15A	**North Rim**	**53.30**	**76**	*e*P	**P**	**19 13 55.0**	**-1.5**
	3.6nm,0.9s						
PV13	**Radium Mtn., P**	**54.22**	**72**	*e*P	**P**	**19 14 03.0**	**-0.1**
	5.5nm,0.7s						
KURK	**Kurchatov**	**54.97**	**309**	*e*P	**P**	**19 14 08.8**	**+0.7**
	4.7nm,0.9s						
MK31	**Makanchi Array**	**55.73**	**304**	*e*P	**P**	**19 14 13.8**	**+0.1**
	0.9nm,0.9s						
MKAR	**Makanchi Array**	**55.73**	**304**	P	**P**	**19 14 14.2**	**+0.5**
	0.2nm,0.4s,baz=54,slow=8.1,SNR=5.5						
ARA0	**ARCESS Array S**	**56.63**	**347**	*e*P	**P**	**19 14 20.6**	**+0.8**
ARCES	**ARCESS Array B**	**56.63**	**347**	P	**P**	**19 14 20.6**	**+0.8**
	1.1nm,0.8s,baz=62,slow=8.5,SNR=4.0						
E38A	**The Farm, Brul**	**58.04**	**54**	*e*P	**P**	**19 14 29.6**	**-0.4**
	7.7nm,0.9s						
SCHQ	**Schefferville**	**62.56**	**34**	P	**P**	**19 15 00.8**	**-0.1**
	6.1nm,0.9s,baz=352,slow=5.6,SNR=3.9						
SCHQ				LR	LR	19 41 49.9	
	comp=Z,112nm,20.8s,baz=190,slow=36						
SCHQ	**Schefferville**	**62.56**	**34**	*e*P	**P**	**19 15 00.6**	**-0.2**
	7.4nm,0.9s						
TXAR	**Lajitas Array**	**63.43**	**76**	P	**P**	**19 15 07.4**	**+0.3**
	3.1nm,0.9s,baz=311,slow=5.8,SNR=2.0						
FIA1	**FINESS Array S**	**64.04**	**343**	*e*P	**P**	**19 15 10.9**	**+0.4**
	4.4nm,0.8s						
FIA0	**FINESS Array S**	**64.04**	**343**	*e*P	**P**	**19 15 10.9**	**+0.4**
FINES	**FINESS Array B**	**64.04**	**343**	P	**P**	**19 15 10.9**	**+0.4**
	2.0nm,0.8s,baz=35,slow=9.2,SNR=8.0						
KK31	**Karatay Array**	**64.26**	**308**	*e*P	**P**	**19 15 12.5**	**+0.2**
	1.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**66.02**	**270**	P	**P**	**19 15 24.7**	**+0.7**
	0.2nm,0.3s,baz=16,slow=6.3,SNR=3.9						
NB2	**NORSAR Subarra**	**66.53**	**351**	P	**P**	**19 15 26.8**	**+0.2**
	comp=Z,3.7nm,1.1s,baz=12,slow=6.5						
NB200	**NORSAR Array S**	**66.53**	**351**	*e*P	**P**	**19 15 26.9**	**+0.2**
NOA	**NORSAR Array B**	**66.53**	**351**	P	**P**	**19 15 26.9**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=11,slow=6.4,SNR=3.4						
GAR	**Garm**	**67.43**	**305**	*e*P	**P**	**19 15 33.8**	**+0.9**
	comp=Z,6.1nm,1.0s						
KBL	**Kabul**	**71.49**	**302**	*e*P	**P**	**19 15 58.1**	**-0.1**
	comp=Z,6.1nm,1.1s						
GERES	**GERESS Array B**	**78.16**	**346**	P	**P**	**19 16 37.6**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=27,slow=3.3,SNR=4.1						
BRTR	**Keskin Array B**	**82.22**	**330**	P	**P**	**19 17 00.0**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=72,slow=4.7,SNR=3.0						
ASAR	**Alice Springs**	**82.72**	**216**	P	**P**	**19 17 01.1**	**+0.2**
	comp=Z,0.7nm,1.0s,baz=25,slow=5.4,SNR=7.4						

*ISCJB **29** 19:05:09.8±0.3, 15°.52S±0°.02×69°.33W±0°.03, h238km±3km, mb5.0/214, Error ellipse: s-maj=4.6km s-min=2.9km az=152.9*

*NEIC **29** 19:05:13.7±2.1, 15°.68S×69°.36W, h264km±3km, mb5.1/218, MW5.3, Error ellipse: s-maj=12.5km s-min=9.2km az=70.0 Best double couple: NP1:φ=99.00000°, δ20.00000°, λ-55.00000°. NP2:φ=243.00000°, δ74.00000°, λ-101.00000°. Principal axes: T 1.2000, Plg28.0000°, Azm342.0000°; N -0.1000, Plg11.0000°, Azm246.0000°; P -1.1000, Plg59.0000°, Azm137.0000°;*

*GUC **29** 19:05:13.8±0.6, 16°.24S×69°.90W, h297km±4km, ML5.2*

*MOS **29** 19:05:13.0±1.5, 15°.58S×69°.41W, h260km, mb5.1/41, Error ellipse: s-maj=11.3km s-min=5.5km az=111.5*

*VAO **29** 19:05:14.8±0.5, 15°.75S×69°.38W, h274km±4km, mb5.1*

*IDC **29** 19:05:14.4±0.4, 15°.60S×69°.31W, h258km±3km, mb4.5/26, mb1 4.7/32, mb1mx4.6/36, mbtmp5.2/32, Error ellipse: s-maj=9.2km s-min=6.8km az=59.0*

*BJI **29** 19:05:15.0±0.0, 15°.60S×69°.40W, h263km, mB5.1/16*

*GCMT **29** 19:05:16.7±0.2, 15°.70S±0°.01×69°.51W±0°.02, h272km±1km, MW5.3/99, Moment Tensor Solution. s80,c115; s99,c141; Duration: 1s0 Moment tensor: Scale 10^17^Nm; Mrr-0.48±.02; Mθθ0.50±.02; Mφφ-0.01±.02; Mrθ0.75±.02; Mθφ0.08±.02; Mφr0.42±.02; Best double couple: M=0.99700×10^17^ NP1:φ=244.00000°, δ76.00000°, λ-100.00000°. NP2:φ=98.00000°, δ17.00000°, λ-57.00000°. Principal axes: T 0.9870, Plg30.0000°, Azm341.0000°; N 0.0210, Plg9.0000°, Azm246.0000°; P -1.0080, Plg58.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 19:05:13.8±0.3, 15°.76S±0°.03×69°.47W±0°.04, h261km±2km, h262km: pP-P, n1140, σ1§77/1238, mb5.1/214, 16C-3D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.39**	**112**	P	**Pn**	**19 05 53.9**	**+0.8**
	702nm,0.3s,baz=289,slow=4.5						
LPAZ				S	**S**	**19 06 23.6**	**-0.4**
	823nm,0.3s,baz=136,slow=23,SNR=32						
LPAZ	**La Paz**	**1.39**	**112**	*e*Pn	**Pn**	**19 05 53.9**	**+0.8**
LPAZ				*e*S	**S**	**19 06 23.2**	**-0.8**
LPAZ	**La Paz**	**1.39**	**112**	*e*P	**Pn**	**19 05 53.8**	**+0.8**
LPAZ				*i* S	**S**	**19 06 23.1**	**-0.8**
LPAZ	**La Paz**	**1.39**	**112**	*e*P	**Pn**	**19 05 53.7**	**+0.7**
PB16	**IPOC Station P**	**2.56**	**181**	*e*P	**Pn**	**19 06 03.6**	**+0.6**
PB16				*i* S	**S**	**19 06 41.6**	**-0.4**
PB16	**IPOC Station P**	**2.56**	**181**	↑*i*P	**Pn**	**19 06 03.8**	**+0.8**
PB16				*i* S	**S**	**19 06 42.1**	**+0.1**
PB16				IAML		19 06 47.1	
	comp=N,4μm,0.4s						
PB12	**IPOC Station P**	**2.95**	**196**	*e*P	**Pn**	**19 06 04.9**	**-1.6**
PB12	**IPOC Station P**	**2.95**	**196**	↑*i*P	**Pn**	**19 06 05.1**	**-1.4**
PB12				*i* S	**S**	**19 06 43.9**	**-4.5**
MNMC	**Minye Minye**	**3.35**	**182**	*e*Pn	**Pn**	**19 06 10.2**	**-0.8**
MNMC				*e*S	**S**	**19 06 54.9**	**-1.6**
MNMC	**Minye Minye**	**3.35**	**182**	↑*i*P	**Pn**	**19 06 10.5**	**-0.5**
MNMC				*i* S	**S**	**19 06 54.3**	**-2.3**
MNMCX	**Minye Minye**	**3.35**	**182**	*e*P	**Pn**	**19 06 10.5**	**-0.5**
MNMCX				*i* S	**S**	**19 06 55.0**	**-1.6**
PSGC	**Pisagua**	**3.86**	**189**	↑*i*P	**Pn**	**19 06 14.8**	**-1.7**
PSGC				*i* S	**S**	**19 07 01.4**	**-5.3**
PSGCX	**Pisagua**	**3.86**	**189**	*e*P	**Pn**	**19 06 15.0**	**-1.6**
PSGCX				*i* S	**S**	**19 07 03.2**	**-3.5**
GO01	**Chusmiza**	**3.89**	**176**	*e*Pn	**Pn**	**19 06 17.2**	**-0.1**
GO01				*e*S	**S**	**19 07 05.5**	**-2.4**
GO01	**Chusmiza**	**3.89**	**176**	↑*i*P	**Pn**	**19 06 17.2**	**-0.1**
GO01				*i* S	**S**	**19 07 05.9**	**-2.0**
PB11	**IPOC Station P**	**3.98**	**183**	*e*Pn	**Pn**	**19 06 16.7**	**-1.3**
PB11				*e*S	**S**	**19 07 06.0**	**-3.2**
PB11	**IPOC Station P**	**3.98**	**183**	*e*P	**Pn**	**19 06 16.9**	**-1.0**
PB11	**IPOC Station P**	**3.98**	**183**	↑*i*P	**Pn**	**19 06 17.0**	**-1.0**
PB11				*i* S	**S**	**19 07 05.1**	**-4.1**
PB08	**IPOC Station P**	**4.36**	**176**	*e*P	**Pn**	**19 06 22.4**	**-0.3**
PB08	**IPOC Station P**	**4.36**	**176**	↑*i*P	**Pn**	**19 06 22.4**	**-0.3**
PB08				*i* S	**S**	**19 07 14.3**	**-3.3**
PB01	**IPOC Station P**	**5.25**	**180**	*e*Pn	**Pn**	**19 06 31.6**	**-1.5**
PB01				*e*S	**S**	**19 07 30.5**	**-5.9**
PB01	**IPOC Station P**	**5.25**	**180**	*e*P	**Pn**	**19 06 31.5**	**-1.5**
PB01	**IPOC Station P**	**5.25**	**180**	↑*i*P	**Pn**	**19 06 31.5**	**-1.5**
PB01				*i* S	**S**	**19 07 30.3**	**-6.1**
PB02	**IPOC Station P**	**5.54**	**184**	*e*P	**Pn**	**19 06 35.4**	**-1.2**
PB02				*e*		19 06 35.4	
PB02				*i* S	**S**	**19 07 38.0**	**-4.9**
PB02	**IPOC Station P**	**5.54**	**184**	*e*P	**Pn**	**19 06 35.2**	**-1.4**
PB02				*i* S	**S**	**19 07 36.8**	**-6.1**
PB07	**IPOC Station P**	**5.94**	**184**	*e*P	**Pn**	**19 06 40.3**	**-1.3**
PB07	**IPOC Station P**	**5.94**	**184**	↑*i*P	**Pn**	**19 06 40.4**	**-1.3**
PB07				*i* S	**S**	**19 07 45.6**	**-6.4**
PB09	**IPOC Station P**	**6.00**	**178**	*e*P	**Pn**	**19 06 41.2**	**-1.2**
PB09				*i* S	**S**	**19 07 49.6**	**-3.8**
PB09	**IPOC Station P**	**6.00**	**178**	*e*P	**Pn**	**19 06 41.4**	**-0.9**
PB09				*i* S	**S**	**19 07 48.3**	**-5.1**
PB03	**IPOC Station P**	**6.26**	**182**	*e*P	**Pn**	**19 06 44.3**	**-1.2**
PB03				*i* S	**S**	**19 07 54.4**	**-4.6**
PB03	**IPOC Station P**	**6.26**	**182**	*e*P	**Pn**	**19 06 44.2**	**-1.2**
PB04	**IPOC Station P**	**6.57**	**186**	*e*Pn	**Pn**	**19 06 47.7**	**-1.7**
PB04	**IPOC Station P**	**6.57**	**186**	*e*P	**Pn**	**19 06 47.6**	**-1.7**
PB04				*i* S	**S**	**19 08 01.4**	**-4.7**
LVC	**Limon Verde**	**6.83**	**176**	P	**Pn**	**19 06 52.1**	**-0.7**
	comp=N,113nm,0.3s,baz=5.1,slow=8.9,SNR=457						
LVC				S	**S**	**19 08 06.3**	**-6.0**
	comp=N,234nm,0.3s,baz=159,slow=21,SNR=12						
LVC	**Limon Verde**	**6.83**	**176**	*e*Pn	**Pn**	**19 06 52.0**	**-0.8**
LVC	**Limon Verde**	**6.83**	**176**	*e*P	**Pn**	**19 06 52.0**	**-0.8**
LVC				*i* S	**S**	**19 08 09.6**	**-2.7**
LVC				IAML		19 08 16.8	
	comp=Z,457nm,0.3s						
LVC	**Limon Verde**	**6.83**	**176**	*e*P	**Pn**	**19 06 52.0**	**-0.8**
PB06	**IPOC Station P**	**6.91**	**181**	*e*P	**Pn**	**19 06 52.2**	**-1.4**
PB06				*i* S	**S**	**19 08 08.6**	**-5.2**
PB05	**IPOC Station P**	**7.09**	**186**	*e*P	**Pn**	**19 06 54.2**	**-1.5**
YJA	**Yavi**	**7.39**	**150**	*e*P	**Pn**	**19 06 58.6**	**-1.3**
YJA				*i* S	**S**	**19 08 22.6**	**-2.7**
PB15	**IPOC Station P**	**7.41**	**180**	*e*P	**Pn**	**19 06 58.7**	**-1.2**
PB10	**IPOC Station P**	**7.78**	**187**	*e*Pn	**Pn**	**19 07 02.6**	**-1.7**
PB10	**IPOC Station P**	**7.78**	**187**	*e*P	**Pn**	**19 07 02.6**	**-1.7**
SIV	**San Ignacio**	**8.08**	**93**	P	**Pn**	**19 07 07.3**	**-1.0**
	comp=Z,6.5nm,0.3s,baz=278,slow=14,SNR=204						
SIV				S	**S**	**19 08 35.3**	**-5.3**
	comp=Z,5.9nm,0.3s,baz=308,slow=18,SNR=1.7						
NNA	**Nana**	**8.09**	**297**	P	**Pn**	**19 07 08.2**	**-0.2**
	comp=Z,22nm,0.3s,baz=133,slow=10,SNR=50						
NNA				S	**S**	19 08 29.8	-11
	comp=Z,16nm,0.3s,baz=163,slow=13,SNR=4.0						
NNA	**Nana**	**8.09**	**297**	*e*Pn	**Pn**	**19 07 07.9**	**-0.4**
NNA				*e*S	**S**	**19 08 39.1**	**-1.7**
NNA	**Nana**	**8.09**	**297**	*e*P	**Pn**	**19 07 07.9**	**-0.4**
NNA				*e*S	**S**	**19 08 39.1**	**-1.7**
PB14	**IPOC Station P**	**8.86**	**186**	*e*P	**Pn**	**19 07 16.4**	**-1.8**
GO02	**Mina Guanaco**	**9.35**	**181**	*e*Pn	**Pn**	**19 07 23.9**	**-0.5**
AZAP	**Zapla**	**9.38**	**155**	*e*P	**Pn**	**19 07 22.3**	**-2.3**
AZAP				IAML		19 07 23.9	
	comp=Z,209nm,0.5s						
AZAP				*i* S	**S**	**19 09 02.7**	**-8.0**
SLA	**San Lorenzo**	**9.65**	**158**	*e*P	**Pn**	**19 07 26.5**	**-1.6**
FSA	**Cafayete**	**10.80**	**163**	*e*P	**Pn**	**19 07 41.6**	**-0.8**
FSA				IAML		19 07 48.3	
	comp=Z,48nm,0.5s						
GO03	**Copiap**	**11.79**	**183**	*e*Pn	**Pn**	**19 07 54.5**	**-0.1**
GO03	**Copiap**	**11.79**	**183**	*e*P	**Pn**	**19 07 54.8**	**+0.2**
ATAH	**Atahualpa**	**12.25**	**313**	P	**Pn**	**19 08 00.9**	**+0.2**
	comp=Z,4.2nm,0.3s,baz=124,slow=8.4,SNR=27						
ATAH				S	**S**	**19 10 14.5**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=73,slow=17,SNR=2.9						
VCA	**Vinchina**	**12.96**	**175**	*e*P	**P**	**19 08 10.6**	**0.0**
CYA	**Choya**	**13.06**	**166**	*e*P	**Pn**	**19 08 10.6**	**+0.4**
CYA				*i* S	**S**	**19 10 33.4**	**-1.9**
LCO	**Las Campanas**	**13.23**	**185**	*e*Pn	**Pn**	**19 08 13.0**	**+0.5**
LCO	**Las Campanas**	**13.23**	**185**	*e*P	**Pn**	**19 08 13.0**	**+0.5**
LCO	**Las Campanas**	**13.23**	**185**	*e*P	**Pn**	**19 08 13.0**	**+0.5**
LCO	**Las Campanas**	**13.23**	**185**	*e*P	**P**	**19 08 13.4**	**-0.3**
AQDB	**Aquidauana**	**13.90**	**112**	*e*P	**Pn**	**19 08 20.8**	**+0.4**
CLDB	**Colider**	**14.16**	**72**	*e*P	**Pn**	**19 08 23.7**	**0.0**
GO04	**Tololo Observa**	**14.39**	**185**	*e*P	**P**	**19 08 27.7**	**+1.1**
CPUP	**Villa Florida**	**15.44**	**135**	P	**P**	**19 08 37.6**	**-0.3**
	comp=Z,10nm,0.3s,baz=315,slow=9.4,SNR=85						
CPUP				ScP	**ScP**	**19 16 34.0**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=304,slow=3.6,SNR=3.7						
CPUP	**Villa Florida**	**15.44**	**135**	*e*P	**P**	**19 08 37.2**	**-0.7**
CPUP	**Villa Florida**	**15.44**	**135**	*e*P	**P**	**19 08 37.5**	**-0.4**
CFA	**Coronel Fontan**	**15.81**	**176**	P	**Pn**	**19 08 43.4**	**+0.2**
	comp=Z,21nm,0.3s,baz=349,slow=11,SNR=104						
CFA				S	**S**	**19 11 32.2**	**-2.7**
	comp=Z,1.6nm,0.3s,baz=202,slow=19,SNR=4.2						
CFA	**Coronel Fontan**	**15.81**	**176**	*e*P	**Pn**	**19 08 43.4**	**+0.2**
ACAN	**Cantantal**	**16.57**	**173**	*e*P	**Pn**	**19 08 52.0**	**-0.1**
PTLC	**Puerto Leguiza**	**16.69**	**341**	*e*P	**P**	**19 08 45.0**	**-6.6**
MRA	**San Martin**	**16.93**	**169**	*e*P	**P**	**19 08 54.8**	**+0.7**
PEL	**Peldehue**	**17.34**	**183**	*e*P	**P**	**19 08 59.8**	**+1.2**
	comp=Z,75nm,0.8s						
PEL	**Peldehue**	**17.34**	**183**	*e*P	**P**	**19 08 59.8**	**+1.2**
PEL				pmax	pmax		
	comp=Z,75nm,0.8s						
TRCB	**Terra Rica**	**17.35**	**116**	*e*P	**P**	**19 08 58.4**	**-0.5**
PTGA	**Pitinga**	**17.64**	**33**	P	**P**	**19 09 02.2**	**+0.3**
	comp=Z,40nm,0.3s,baz=208,slow=12,SNR=328						
PTGA				S	**S**	**19 12 10.0**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=156,slow=19,SNR=7.6						
PTGA	**Pitinga**	**17.64**	**33**	*e*P	**P**	**19 09 02.0**	**+0.1**
	comp=Z,290nm,0.7s						
PTGA	**Pitinga**	**17.64**	**33**	*e*P	**P**	**19 09 01.7**	**-0.2**
OTAV	**Otavalo**	**18.21**	**330**	*e*P	**P**	**19 09 09.4**	**+0.8**
	comp=Z,188nm,0.9s						
OTAV	**Otavalo**	**18.21**	**330**	*e*P	**P**	**19 09 09.4**	**+0.8**
OTAV				pmax	pmax		
	comp=Z,188nm,0.9s						
OTAV	**Otavalo**	**18.21**	**330**	*e*P	**P**	**19 09 09.7**	**+1.1**
OTAV	**Otavalo**	**18.21**	**330**	*e*P	**P**	**19 09 09.7**	**+1.1**
FLOC	**Florencia**	**18.29**	**340**	*e*P	**P**	**19 09 05.9**	**-3.1**
MACC	**Macarena, Meta**	**18.31**	**346**	*e*P	**P**	**19 09 10.1**	**+0.8**
GUVC	**San Jose del G**	**18.46**	**350**	*e*P	**P**	**19 09 10.4**	**-0.4**
PTGB	**Pitanga**	**18.58**	**121**	*e*P	**P**	**19 09 11.9**	**-0.3**
ITRB	**Iturama**	**18.61**	**105**	*e*P	**P**	**19 09 12.2**	**-0.3**
CRUC	**La Cruz**	**18.74**	**336**	*e*P	**P**	**19 09 14.6**	**+0.4**
SOTA	**Rioblanco**	**19.14**	**338**	*e*P	**P**	**19 09 17.5**	**-1.1**
PCON	**Cinco Dias**	**19.24**	**339**	*e*P	**P**	**19 09 18.6**	**-1.1**
BETC	**Betania**	**19.26**	**342**	*e*P	**P**	**19 09 17.8**	**-1.6**
BBAC	**Balboa, Cauca**	**19.27**	**336**	*e*P	**P**	**19 09 19.0**	**-0.8**
GO05	**Huala**	**19.29**	**186**	*e*P	**P**	**19 09 20.4**	**+0.8**
	comp=Z,54nm,0.9s						
POPC	**Popayan, Colom**	**19.54**	**338**	*e*P	**P**	**

SVB	Belmont	29.97	16	eP	P	19 10 58.9	+0.5
SVV	Soufriere Volc	30.03	16	eP	P	19 10 59.3	+0.5
SSV	Crater Summit	30.04	16	eP	P	19 11 00.6	+1.5
JTS	Las Juntas de	30.09	328	P	P	19 11 01.4	+2.0
	comp=Z,13nm,0.7s,baz=139,slow=1.6,SNR=12						
JTS	Las Juntas de	30.09	328	eP	P	19 11 00.2	+0.8
	comp=Z,15nm,0.8s						
JTS	Las Juntas de	30.09	328	eP	P	19 11 00.2	+0.8
JTS				pmax	pmax		
	comp=Z,15nm,0.8s						
SLB	Belfond	30.56	16	eP	P	19 11 03.9	+0.3
SLBI	Saint Lucia, B	30.76	16	eP	P	19 11 03.8	-1.5
FDF	Fort de France	31.40	16	eP	P	19 11 09.2	-1.7
	comp=Z,146nm,1.0s						
FDF	Fort de France	31.40	16	eP	P	19 11 08.9	-2.0
FDF	Fort de France	31.40	16	eP	P	19 11 09.2	-1.7
FDF				pmax	pmax		
	comp=Z,146nm,1.0s						
ESPN	Las Esperanzas	31.42	331	eP	P	19 11 11.0	-0.1
	comp=Z,20nm,0.6s						
NBMO	Morrinhos-CE	31.49	70	eP	P	19 11 10.9	-0.8
ACON	Acoyapa	31.64	330	eP	P	19 11 13.0	0.0
	comp=Z,13nm,0.7s						
NBLI	Livramento-PB	32.89	79	eP	P	19 11 24.0	-0.1
NBPA	Parau_RN	33.26	76	eP	P	19 11 26.6	-0.5
CSGN	Cosiguina Volc	33.70	327	eP	P	19 11 30.0	-1.0
	comp=Z,38nm,0.7s						
OBIP	Obispado Ponce	33.71	5	eP	P	19 11 29.4	-1.4
	comp=Z,224nm,1.1s						
SABA	Saba	33.74	11	eP	P	19 11 29.3	-1.8
	comp=Z,351nm,0.7s						
SJG	San Juan	33.82	6	eP	P	19 11 30.0	-1.8
	comp=Z,181nm,0.8s						
SJG				eS	S	19 16 32.5	-3.7
SJG	San Juan	33.82	6	eP	P	19 11 30.0	-1.8
SJG				eS	S	19 16 32.5	-3.7
SJG				pmax	pmax		
	comp=Z,181nm,0.8s						
SJG	San Juan	33.82	6	eP	P	19 11 29.9	-1.8
MPR	Mayaguez	33.84	4	eP	P	19 11 30.5	-1.5
	comp=Z,199nm,1.0s						
MTP	Monte Pirata	33.87	7	eP	P	19 11 30.5	-1.7
	comp=Z,198nm,0.8s						
BANI	BANI	33.95	358	eP	P	19 11 31.8	-1.3
AOPR	Arecibo Observ	34.00	5	eP	P	19 11 31.6	-1.8
	comp=Z,86nm,0.7s						
CBYP	Canovanas	34.01	6	eP	P	19 11 31.7	-1.8
	comp=Z,340nm,0.9s						
ANWB	Willy Bob	34.07	13	eP	P	19 11 30.5	-3.4
	comp=Z,183nm,0.6s						
CUPR	Culebra, Puert	34.11	7	eP	P	19 11 31.8	-2.4
	comp=Z,216nm,0.8s						
EMPR	Esperanza - Ma	34.15	5	eP	P	19 11 32.4	-2.2
	comp=Z,235nm,0.7s						
SMRT	St. Maarten	34.19	11	eP	P	19 11 32.5	-2.5
	comp=Z,334nm,0.6s						
STVI	Saint Thomas	34.19	8	eP	P	19 11 32.9	-2.1
	comp=Z,45nm,0.8s						
RCBR	Riachuelo	34.37	77	eP	P	19 11 35.9	-0.8
	comp=Z,62nm,0.8s						
RCBR	Riachuelo	34.37	77	eP	P	19 11 35.9	-0.8
RCBR				pmax	pmax		
	comp=Z,62nm,0.8s						
RCBR	Riachuelo	34.37	77	eP	P	19 11 37.1	+0.4
TGUH	Tegucigalpa,Un	34.47	328	eP	P	19 11 36.5	-1.0
	comp=Z,32nm,0.6s						
SDDR	Presa de Saban	34.57	357	eP	P	19 11 36.6	-1.8
	comp=Z,28nm,1.0s						
EFI	East Falkland	36.97	168	eP	P	19 11 58.8	+0.7
	comp=Z,210nm,0.9s						
EFI	East Falkland	36.97	168	eP	P	19 11 58.8	+0.7
EFI				pmax	pmax		
	comp=Z,210nm,0.9s						
CCIG	Comitan	38.92	324	eP	P	19 12 14.8	-0.2
	comp=Z,118nm,1.1s						
USHA	Ushuaia	38.99	179	P	P	19 12 16.0	+1.1
	comp=Z,7.4nm,0.6s,baz=357,slow=8.5,SNR=12						
USHA				PcP	PcP	19 14 20.8	+1.3
	comp=Z,4.4nm,0.5s,baz=336,slow=9.9,SNR=4.5						
061Z	Ochoppi	42.85	345	eP	P	19 12 45.6	-1.0
	comp=Z,152nm,0.8s						
061Z	Ochoppi	42.85	345	P	P	19 12 45.6	-1.0
	baz=164						
060Z	West Palm Beac	43.28	345	P	P	19 12 48.9	-1.2
	baz=164						
059Z	Ave Maria	43.44	344	P	P	19 12 50.0	-1.4
	baz=163						
TLIG	Tlapa	43.81	318	eP	P	19 12 55.7	+1.1
	comp=Z,64nm,1.1s						
060A	Indiantown	43.84	346	P	P	19 12 53.2	-1.3
	baz=165						
059A	Moore Haven	43.96	345	eP	P	19 12 54.4	-1.1
	comp=Z,116nm,0.8s						
059A	Moore Haven	43.96	345	P	P	19 12 54.2	-1.3
	baz=164						
LVIG	Laguna Verde	44.11	322	eP	P	19 12 56.6	-0.2
	comp=Z,56nm,1.1s						
058A	Arcadia	44.22	344	P	P	19 12 56.2	-1.3
	baz=163						
959A	Okeechobee	44.43	345	P	P	19 12 58.0	-1.2
	baz=164						
958A	Wauchula	44.71	344	P	P	19 12 60.0	-1.4
	baz=163						
957A	Wimauma	44.92	344	P	P	19 13 01.5	-1.5
	baz=162						
859A	Kempfer Cattle	44.95	346	P	P	19 13 01.9	-1.4
	baz=164						
DWPF	Disney Wildern	45.13	345	eP	P	19 13 03.7	-0.9
	comp=Z,75nm,0.8s						
DWPF	Disney Wildern	45.13	345	P	P	19 13 03.3	-1.3
	baz=164						
858A	St. Cloud	45.21	345	P	P	19 13 03.7	-1.5
	baz=164						
857A	Zephyrhills	45.48	344	P	P	19 13 05.8	-1.6
	baz=163						
758A	Lake Helen	45.89	346	P	P	19 13 09.2	-1.3
	baz=164						
757A	Oxford	46.08	345	P	P	19 13 10.4	-1.6
	baz=163						
HOPE	Hope Point	46.19	154	eP	P	19 13 13.6	+1.0
	comp=Z,145nm,0.9s						
658A	Bunnell	46.34	346	P	P	19 13 12.7	-1.4
	baz=164						
656A	Willston	46.61	344	P	P	19 13 14.7	-1.4
	baz=162						
657A	Interlachen	46.65	345	P	P	19 13 14.9	-1.5
	baz=163						
655A	Horseshoe Beac	46.94	343	P	P	19 13 17.1	-1.5
	baz=162						
557A	Orange Park	47.02	345	P	P	19 13 17.9	-1.4
	baz=164						
556A	Lake Butler	47.18	345	P	P	19 13 19.2	-1.4
	baz=163						
555A	McAlpin	47.44	344	P	P	19 13 20.9	-1.6
	baz=162						
457A	Yulee	47.56	346	P	P	19 13 22.1	-1.4
	baz=164						
554A	Perry	47.60	343	P	P	19 13 21.7	-2.1
	baz=161						
456A	Hilliard	47.77	345	eP	P	19 13 24.2	-0.9
	comp=Z,137nm,0.9s						
456A	Hilliard	47.77	345	P	P	19 13 23.4	-1.7
	baz=164						
553A	Crawfordville	47.91	342	P	P	19 13 24.8	-1.3
	baz=160						
455A	Stateville	48.04	344	P	P	19 13 25.8	-1.3
	baz=162						
552A	Lynn Haven	48.11	341	P	P	19 13 25.9	-1.8
	baz=159						
454A	Quitman	48.18	344	P	P	19 13 26.8	-1.4
	baz=162						
357A	Townsend	48.32	346	P	P	19 13 26.7	-2.5
	baz=164						
356A	Blackshear	48.37	345	P	P	19 13 27.1	-2.5
	baz=164						
453A	Whigham	48.50	343	eP	P	19 13 29.4	-1.2
	comp=Z,130nm,0.8s						
453A	Whigham	48.50	343	P	P	19 13 29.5	-1.1
	baz=161,SNR=8.0						
355A	Pearson	48.57	345	P	P	19 13 29.8	-1.4
	baz=163						
451A	Vernon	48.70	341	P	P	19 13 30.2	-1.9
	baz=159						
257A	Skidaway Islan	48.74	347	P	P	19 13 30.8	-1.6
	baz=165						
452A	Marianna	48.75	342	P	P	19 13 31.1	-1.4
	baz=160,SNR=5.1						
TIGA	Tifton	48.85	344	eP	P	19 13 31.8	-1.6
	comp=Z,39nm,0.8s						
TIGA	Tifton	48.85	344	P	P	19 13 31.7	-1.6
	baz=162						
353A	Camilla	48.94	343	P	P	19 13 32.4	-1.6
	baz=161,SNR=6.6						
256A	Glennville	48.94	346	P	P	19 13 32.5	-1.5
	baz=164						
255A	Hazlehurst	49.03	345	P	P	19 13 33.2	-1.5
	baz=163						
PMSA	Palmer Station	49.10	177	eP	P	19 13 35.2	+0.5
450A	Crestview	49.14	340	P	P	19 13 34.0	-1.4
	baz=158						
254A	Abbeville	49.26	344	P	P	19 13 34.7	-1.7
	baz=162,SNR=8.9						
352A	Blakely	49.26	343	eP	P	19 13 34.8	-1.6
	comp=Z,101nm,0.8s						
352A	Blakely	49.26	343	P	P	19 13 34.7	-1.7
	baz=160,SNR=13						
158A	Hollywood	49.31	348	P	P	19 13 34.9	-1.7
	baz=166						
449A	Pace	49.31	340	P	P	19 13 35.3	-1.4
	baz=157						
157A	Early Branch	49.41	347	P	P	19 13 35.4	-2.1
	baz=165						
RGRS	Roger Stewart	49.47	348	eP	P	19 13 36.8	-1.1
	comp=Z,1um,0.5s						
156A	Sylvania	49.50	347	P	P	19 13 35.9	-2.2
	baz=165						
253A	Americus	49.59	344	eP	P	19 13 37.1	-1.7
	comp=Z,87nm,0.9s						
253A	Americus	49.59	344	P	P	19 13 36.9	-2.0
	baz=161,SNR=5.9						
Z59A	Georgetown, SC	49.62	349	P	P	19 13 36.9	-2.2
	baz=168						
BRAL	Brewton	49.63	340	eP	P	19 13 38.0	-1.2
	comp=Z,105nm,0.8s						
BRAL	Brewton	49.63	340	P	P	19 13 37.7	-1.4
	baz=158						
350A	Dozier	49.63	341	P	P	19 13 37.7	-1.5
	baz=158,SNR=5.6						
NHSC	New Hope	49.66	348	eP	P	19 13 38.1	-1.2
	comp=Z,144nm,0.9s						
NHSC	New Hope	49.66	348	P	P	19 13 38.1	-1.2
	baz=166,SNR=6.9						
252A	Lumpkin	49.69	343	P	P	19 13 37.8	-1.9
	baz=160,SNR=6.6						
155A	Kite	49.70	346	P	P	19 13 37.8	-1.8
	baz=163						
Z58A	St. Stephen	49.81	349	P	P	19 13 38.4	-2.0
	baz=167						
154A	Montrose	49.84	345	eP	P	19 13 39.3	-1.4
	comp=Z,106nm,0.8s						
154A	Montrose	49.84	345	P	P	19 13 39.1	-1.6
	baz=163,SNR=7.2						
349A	Repton	49.84	340	P	P	19 13 39.3	-1.4
	baz=157,SNR=8.6						
LNIG	Linares	49.89	324	eP	P	19 13 41.2	-0.1
	comp=Z,145nm,0.9s						
Z57A	Bowman	49.95	348	P	P	19 13 39.9	-1.6
	baz=166						
251A	Midway	49.98	342	P	P	19 13 39.8	-1.9
	baz=160,SNR=32						
153A	Fort Valley	50.06	344	P	P	19 13 40.5	-1.9
	baz=162						
Z56A	Williston	50.12	347	P	P	19 13 41.2	-1.6
	baz=165						
250A	Grady	50.13	341	eP	P	19 13 41.2	-1.7
	comp=Z,67nm,0.8s						
250A	Grady	50.13	341	P	P	19 13 41.1	-1.8
	baz=159,SNR=10.0						
ZAIG	Zacatecas	50.16	319	eP	P	19 13 44.6	+0.9
	comp=Z,78nm,0.9s						
Y60A	Bolivia	50.19	351	P	P	19 13 41.4	-1.9
	baz=169						
Z55A	Blythe	50.19	346	P	P	19 13 41.8	-1.5
	baz=164						
152A	Waverly Hall	50.32	343	eP	P	19 13 42.5	-1.9
	comp=Z,37nm,0.8s						
152A	Waverly Hall	50.32	343	P	P	19 13 42.3	-2.0
	baz=161,SNR=14						
Y58A	Scranton	50.34	349	P	P	19 13 42.6	-1.8
	baz=167						
151A	Opelika	50.36	343	P	P	19 13 42.4	-2.2
	baz=160,SNR=6.4						
Z54A	Sparta	50.37	345	P	P	19 13 42.8	-1.9
	baz=163,SNR=6.2						
249A	Camden	50.40	340	P	P	19 13 43.2	-1.7
	baz=158,SNR=12						
Y56A	Pelion	50.56	347	P	P	19 13 44.3	-1.8
	baz=165						
Y57A	Sumter	50.59	348	eP	P	19 13 45.0	-1.2
	comp=Z,70nm,0.8s						
Y57A	Sumter	50.59	348	P	P	19 13 44.6	-1.7
	baz=166						
Z53A	Monticello	50.59	345	P	P	19 13 44.3	-2.1
	baz=162						
150A	Eclectic	50.64	342	P	P	19 13 44.7	-2.0
	baz=159,SNR=14						
GOGA	Godfrey	50.69	345	eP	P	19 13 45.1	-2.0
	comp=Z,22nm,0.9s						
GOGA	Godfrey	50.69	345	eP	P	19 13 45.1	-2.0
GOGA				pmax	pmax		
	comp=Z,22nm,0.9s						
GOGA	Godfrey	50.69	345	P	P	19 13 45.0	-2.1
	baz=162,SNR=6.5						
X60A	Albert Glenn T	50.71	351	P	P	19 13 44.9	-2.2
	baz=169						
Z52A	Williamson	50.73	344	P	P	19 13 45.4	-2.0
	baz=161,SNR=6.9						
X59A	McDuffie Farm,	50.80	350	P	P	19 13 45.9	-1.9
	baz=168						
Y55A	Saluda	50.82	347	P	P	19 13 46.4	-1.6
	baz=164,SNR=9.2						
149A	Jones	50.87	341	P	P	19 13 46.0	-2.4
	baz=158,SNR=8.5						
X58A	Rowland	50.91	349	P	P	19 13 46.8	-1.9
	baz=168						
Y54A	Tignall	50.93	346	P	P	19 13 46.9	-1.9
	baz=163,SNR=11						
Z51A	Franklin	51.06	343	P	P	19 13 47.7	-2.1
	baz=160						
W60A	Pink Hill	51.14	351	P	P	19 13 48.5	-1.8
	baz=170						
Y53A	Monroe	51.15	345	P	P	19 13 48.3	-2.1
	baz=162,SNR=6.1						
148A	Greensboro	51.16	340	P	P	19 13 48.6	-2.0
	baz=157						
W61A	Ground Anchor	51.16	352	P	P	19 13 48.6	-1.9
	baz=171						
X56A	White Oak	51.17	348	P	P	19 13 48.9	-1.7
	baz=166						
BIRD	Birdtown, Kers	51.21	348	eP	P	19 13 49.4	-1.5
	comp=Z,42nm,0.8s						
Z50A	Ashland	51.22	342	eP	P	19 13 49.4	-1.6
	comp=Z,50nm,0.8s						
Z50A	Ashland	51.22	342	P	P	19 13 48.9	-2.0
	baz=159,SNR=23						
Y52A	Lilburn	51.27	344	eP	P	19 13 49.4	-2.0
	comp=Z,18nm,0.8s						
Y52A	Lilburn	51.27	344	P	P	19 13 49.2	-2.2
	baz=162,SNR=5.0						
X55A	Gracelyn & Ava	51.28	347	P	P	19 13 49.7	-1.7
	baz=165,SNR=7.9						
LRAL	Lakeview Retre	51.34	341	eP	P	19 13 49.8	-2.0
	comp=Z,18nm,0.8s						
LRAL	Lakeview Retre	51.34	341	P	P	19 13 49.6	-2.2
	baz=158,SNR=8.7						
Z49A	Columbiana	51.34	342	P	P	19 13 49.7	-2.2
	baz=159,SNR=10						
CNNC	Cliffs of the	51.35	351	P	P	19 13 50.0	-1.9
	baz=170						
W58A	Raeford	51.35	350	P	P	19 13 50.1	-1.8
	baz=168,SNR=6.9						
W59A	Clinton	51.36	351	P	P	19 13 50.2	-1.8
	baz=169						
V62A	Hyde County Ai	51.41	353	P	P	19 13 50.8	-1.6
	baz=172						
147A	Livingston	51.41	340	P	P	19 13 50.2	-2.2
	baz=157						
X54A	Belton	51.52	346	P	P	19 13 51.7	-1.5
	baz=164,SNR=11						
Y51A	Rockmart	51.58	343	P	P	19 13 51.4	-2.2
	baz=161,SNR=11						
W57A	Gilead	51.61	349	eP	P	19 13 52.2	-1.7
	comp=Z,24nm,0.8s						
W57A	Gilead	51.61	349	P	P	19 13 52.0	-1.9
	baz=167						
PAULI	Pauline	51.66	347	eP	P	19 13 52.7	-1.5
	comp=Z,26nm,1.0s						
X53A	Estanollee	51.69	345	P	P	19 13 52.5	-1.9
	baz=163,SNR=5.1						
W56A	Indian Trail	51.71	348	P	P	19 13 52.7	-1.8
	baz=166						
V61A	Roper	51.71	353	P	P	19 13 52.3	-2.2
	baz=171						
Y50A	Piedmont	51.76	343	P	P	19 13 52.7	-2.3
	baz=160,SNR=5.4						
V60A	Jim Taylor Roa	51.78	352	P	P	19 13 53.0	-2.0
	baz=170						
VBMS	Vicksburg	51.80	337	P	P	19 13 53.4	-1.8
	baz=154						
KMSC	Kings Mountain	51.86	348	eP	P	19 13 54.2	-1.5
	comp=Z,26nm,0.8s						
KMSC	Kings Mountain	51.86	348	P	P	19 13 54.2	-1.5
	baz=165,SNR=9.9						
V59A	Middlesex	51.92	351	P	P	19 13 54.2	-1.9
	baz=169						
Y49A	Blount Mountai	51.92	342	P	P	19 13 53.8	-2.4
	baz=159,SNR=7.5						
X52A	Dahlonega	51.93	345	P	P	19 13 53.9	-2.4
	baz=162,SNR=5.7						
W54A	Cherokee Point	51.99	347	P	P	19 13 55.4	-1.3
	baz=164,SNR=11						
BG3	Lake Jocassee	52.07	346	eP	P	19 13 55.9	-1.4
	comp=Z,12nm,0.9s						
HKT	Hockley	52.08	331	eP	P	19 13 57.0	-0.3
	comp=Z,17nm,1.1s						
HKT	Hockley	52.08	331	eP	P	19 13 57.0	-0.3
HKT				pmax	pmax		
	comp=Z,17nm,1.1s						
V58A	Windy Hill, Pi	52.08	350	P	P	19 13 55.1	-2.2
	baz=168						
X51A	Calhoun	52.15	344	P	P	19 13 55.6	-2.2
	baz=161						
Y48A	Jasper	52.20	341	P	P	19 13 55.6	-2.6
	baz=158,SNR=5.8						
U61A	Possum Corner	52.23	353	P	P	19 13 56.5	-1.9
	baz=171						
X50B	Fort Payne	52.27	343	P	P	19 13 56.3	-2.4
	baz=160,SNR=7.6						
V57A	Coltrane Farms	52.29	349	P	P	19 13 56.8	-2.1
	baz=167						
W53A	Cullowhee	52.30	346	P	P	19 13 57.3	-1.7
	baz=163,SNR=15						
V56A	Mocksville	52.34	349	eP	P	19 13 57.9	-1.3
	comp=Z,32nm,0.8s						
V56A	Mocksville	52.34	349	P	P	19 13 57.7	-1.5
	baz=166,SNR=10.0						
W52A	Murphy	52.41	345	P	P	19 13 57.9	-1.9
	baz=162						
U59A	Littleton	52.43	352	P	P	19 13 57.9	-1.9
	baz=170						
U60A	Pendleton	52.46	352	P	P	19 13 57.7	-2.3
	baz=171						
X49A	Woodville	52.51	342	P	P	19 13 58.0	-2.4
	baz=159,SNR=8.3						
V55A	Taylorsville	52.53	348	P	P	19 13 59.3	-1.3
	baz=166,SNR=12						
833A	Chaparral WMA,	52.54	326	eP	P	19 14 00.9	+0.1
	comp=Z,77nm,1.0s						
833A	Chaparral WMA,	52.54	326	P	P	19 14 00.8	0.0
	baz=143,SNR=10						
V54A	Nebo	52.60	347	P	P	19 13 59.7	-1.5
	baz=165,SNR=13						
X48A	Hartselle	52.66	342	P	P	19 13 59.3	-2.3
	baz=158,SNR=11						
W51A	Cleveland	52.68	344	P	P	19 13 59.8	-1.9
	baz=161,SNR=5.8						
V53A	Saluda	52.69	346	P	P	19 14 00.1	-1.8
	baz=164,SNR=11						
U57A	Blanch	52.74	350	P	P	19 14 00.2	-1.9
	baz=168						
U56A	King	52.85	349	P	P	19 14 01.4	-1.5
	baz=167,SNR=6.3						
W50A	Signal Mountai	52.87	344	P	P	19 14 01.0	-2.1
	baz=161,SNR=8.9						
CPCT	Cooper Cave	52.90	345	eP	P	19 14 01.6	-1.7
	comp=Z,20nm,0.9s						
X47A	Russelville	52.98	341	P	P	19 14 01.2	-2.7
	baz=158,SNR=18						
T59A	Double "B" Far	53.00	352	eP	P	19 14 02.2	-1.8
	comp=Z,37nm,0.9s						
T59A	Double "B" Far	53.00	352	P	P	19 14 02.0	-2.0
	baz=170,SNR=8.4						
V52A	Sevierville	53.04	346	eP	P	19 14 02.2	-2.1
	comp=Z,43nm,0.8s						
V52A	Sevierville	53.04	346	P	P	19 14 02.2	-2.1
	baz=163,SNR=14						
SWET	Sewanee	53.05	343	eP	P	19 14 02.6	-1.9
	comp=Z,32nm,0.8s						
W49A	Belvidere	53.06	343	P	P	19 14 02.0	-2.5
	baz=160						
T60A	Surry	53.06	353	P	P	19 14 03.8	-0.6
	baz=171						
NATX	Nacogdoches	53.08	333	eP	P	19 14 04.4	-0.2
	comp=Z,109nm,0.8s						
NATX	Nacogdoches	53.08	333	P	P	19 14 04.5	-0.1
	baz=149,SNR=9.0						
ETX06	Route 59 and C	53.08	333	eP	P	19 14 04.4	-0.2
	comp=Z,107nm,0.9s						
T58A	Grand View Acr	53.12	351	P	P	19 14 02.9	-1.9
	baz=169,SNR=5.2						
U55A	TA2, Sparta	53.12	348	P	P	19 14 03.4	-1.6
	baz=166,SNR=8.5						
V51A	Loudon	53.19	345	P	P	19 14 03.1	-2.3
	baz=162						
X46A	Booneville	53.24	340	P	P	19 14 02.8	-3.0
	baz=157						
V50A	Pikevile	53.26	344	P	P	19 14 03.7	-2.2
	baz=161,SNR=18						
W48A	Pulaski	53.27	342	P	P	19 14 03.6	-2.4
	baz=159,SNR=23						
T57A	Hurt	53.28	350	P	P	19 14 04.1	-2.0
	baz=168						
U54A	Nelsons Funny	53.30	348	P	P	19 14 04.6	-1.7
	baz=165,SNR=12						
U53A	Fall Branch	53.31	347	P	P	19 14 04.2	-2.1
	baz=164,SNR=8.2						
T56A	Rocky Mt	53.45	349	P	P	19 14 06.0	-1.3
	baz=167,SNR=7.6						
PLAL	Pickwick Lake	53.47	341	eP	P	19 14 05.2	-2.3
	comp=Z,19nm,0.8s						
OXF	Oxford	53.48	339	P	P	19 14 05.7	-1.8
	baz=156						
U52A	Thorn Hill	53.51	346	P	P	19 14 05.4	-2.4
	baz=163						
V49A	McMinnville	53.56	343	P	P	19 14 05.5	-2.6
	baz=160,SNR=12						
W47A	Westpoint	53.57	342	P	P	19 14 05.5	-2.6
	baz=158,SNR=10.0						
Z41A	Richland Creek	53.60	336	P	P	19 14 06.9	-1.5
	baz=152						
435B	Jarrell	53.60	330	eP	P	19 14 07.9	-0.6
	comp=Z,41nm,0.8s						
435B	Jarrell	53.60	330	P	P	19 14 08.1	-0.4
	baz=146,SNR=5.2						
S60A	Water View	53.61	353	P	P	19 14 03.9	-4.5
	baz=171						
U51A	La Follette	53.65	345	P	P	19 14 06.5	-2.3
	baz=162,SNR=5.5						
T55A	Pulaski	53.67	349	P	P	19 14 07.7	-1.2
	baz=166,SNR=12						
BLA	Blacksburg	53.69	349	P	P	19 14 07.8	-1.3
	baz=167						
TZTN	Tazewell	53.70	346	P	P	19 14 07.1	-2.0
	baz=163						
S58A	Poland Farm, P	53.70	352	P	P	19 14 07.0	-2.1
	baz=170						
T54A	Tazewell	53.77	348	P	P	19 14 07.9	-1.7
	baz=165,SNR=5.9						
V48A	Smith Brothers	53.80	342	P	P	19 14 07.5	-2.3
	baz=159,SNR=18						
T53A	Wise	53.89	347	P	P	19 14 08.7	-1.8
	baz=164,SNR=12						
U50A	Jamestown	53.89	345	P	P	19 14 08.1	-2.4
	baz=162,SNR=13						
S57A	Dark Hollow, R	53.98	351	P	P	19 14 09.3	-1.8
	baz=169,SNR=6.7						
CLTN	Cedars of Leba	53.99	343	eP	P	19 14 09.0	-2.1
	comp=Z,22nm,0.9s						
X43A	Marvell	53.99	338	P	P	19 14 09.5	-1.7
	baz=154						
R58B	Mineral	54.02	352	P	P	19 14 09.6	-1.7
	baz=170		

baz=158,SNR=6.4
WLAR **White Oak Lake** 54.10 336 eP P 19 14 11.3 -0.7
comp=Z,50nm,0.9s
T52A **Hallie** 54.11 347 eP P 19 14 10.2 -1.8
comp=Z,44nm,0.9s
T52A **Hallie** 54.11 347 P P 19 14 09.8 -2.2
baz=164
R59A **King George, V** 54.16 353 P P 19 14 10.3 -2.0
baz=171,SNR=6.2
CBN **Corbin Frederi** 54.19 352 P P 19 14 10.5 -2.0
baz=170
T51A **Gray** 54.20 346 P P 19 14 10.6 -2.0
baz=163,SNR=10.0
U49A **Red Boiling Sp** 54.23 344 P P 19 14 10.3 -2.6
baz=160,SNR=8.6
V46A **Holladay** 54.24 341 P P 19 14 09.7 -3.2
baz=158
S55A **Lewisburg** 54.25 349 P P 19 14 11.8 -1.3
baz=167,SNR=14
R58A **Rapidan** 54.37 352 P P 19 14 12.1 -1.8
baz=170
S54A **Dingess, Beckl** 54.43 348 P P 19 14 12.8 -1.6
baz=166,SNR=12
U48A **Cassie Pea, Po** 54.44 343 P P 19 14 12.1 -2.3
baz=160,SNR=8.8
R57A **Stanardsville** 54.44 351 P P 19 14 13.0 -1.3
baz=169,SNR=5.3
WVT **Waverly** 54.46 342 eP P 19 14 11.6 -3.0
comp=Z,24nm,0.8s
WVT **Waverly** 54.46 342 eP P 19 14 11.6 -3.0
WVT pmax pmax
comp=Z,24nm,0.8s
WVT **Waverly** 54.46 342 P P 19 14 11.7 -2.9
baz=158
T50A **Nancy** 54.47 345 P P 19 14 12.1 -2.5
baz=162,SNR=8.3
JCT **Junction City** 54.47 328 eP P 19 14 14.4 -0.4
comp=Z,28nm,0.9s
JCT **Junction City** 54.47 328 eP P 19 14 14.4 -0.4
JCT pmax pmax
comp=Z,28nm,0.9s
JCT **Junction City** 54.47 328 P P 19 14 14.4 -0.4
baz=143,SNR=10
S53A **Williamson** 54.48 348 P P 19 14 12.8 -1.9
baz=165,SNR=8.9
WHTX **Lake Whitney,** 54.54 331 eP P 19 14 14.8 -0.5
comp=Z,85nm,0.8s
WHTX **Lake Whitney,** 54.54 331 P P 19 14 14.9 -0.3
baz=146,SNR=18
U47A **Clarksville** 54.59 342 P P 19 14 12.8 -2.6
baz=159,SNR=7.3
Q61A **Milford** 54.63 354 P P 19 14 13.1 -2.6
baz=173
S52A **Salyersville** 54.68 347 P P 19 14 13.9 -2.2
baz=164,SNR=7.6
R55A **Marlinton** 54.68 350 P P 19 14 15.2 -1.0
baz=167,SNR=6.2
X40A **Basin Creek Fa** 54.70 336 P P 19 14 14.3 -2.0
baz=152
T49A **Edmonton** 54.72 344 P P 19 14 13.9 -2.5
baz=161,SNR=23
R54A **Victor** 54.74 349 P P 19 14 15.0 -1.5
baz=166,SNR=9.9
S51A **Beattyville** 54.76 346 P P 19 14 14.2 -2.4
baz=163
UALR **University of** 54.76 337 eP P 19 14 14.9 -1.9
comp=Z,42nm,0.9s
U46A **Springville** 54.77 342 P P 19 14 14.1 -2.7
baz=158
T48A **Bowling Green** 54.96 343 P P 19 14 15.6 -2.4
baz=160,SNR=12
Q58A **Fox Den Farm,** 54.96 352 P P 19 14 16.3 -1.8
baz=170,SNR=7.7
S50A **Richmond** 54.98 346 P P 19 14 16.1 -2.2
baz=162,SNR=7.3
MIAR **Mount Ida** 55.04 336 eP P 19 14 17.1 -1.6
comp=Z,21nm,0.9s
MIAR **Mount Ida** 55.04 336 eP P 19 14 17.1 -1.6
MIAR pmax pmax
comp=Z,21nm,0.9s
MIAR **Mount Ida** 55.04 336 P P 19 14 17.0 -1.7
baz=151,SNR=10
T47A **Sharon Grove** 55.04 343 eP P 19 14 16.3 -2.4
comp=Z,55nm,0.9s
T47A **Sharon Grove** 55.04 343 P P 19 14 16.3 -2.4
baz=159,SNR=13
R53A **Hurricane** 55.07 348 P P 19 14 17.0 -1.8
baz=165,SNR=5.8
W41B **Gary Mavity, V** 55.08 337 P P 19 14 16.9 -2.0
baz=153,SNR=12
HPIG 55.11 320 eP P 19 14 19.1 -0.6
comp=Z,70nm,1.0s
Q57A **Strasburg** 55.15 352 P P 19 14 18.3 -1.1
baz=169,SNR=8.5
WHAR **Wooly Hollow** 55.20 337 eP P 19 14 18.2 -1.6
comp=Z,37nm,0.9s
R52A **Catlettsburg** 55.22 347 P P 19 14 17.8 -2.1
baz=164
Q56A **Snyder Ridge,** 55.27 351 P P 19 14 19.2 -1.1
baz=168,SNR=9.1
S49A **Springfield** 55.30 345 P P 19 14 17.9 -2.7
baz=161,SNR=9.9
T46A **Princeton** 55.32 342 P P 19 14 18.1 -2.6
baz=158,SNR=11
Q55A **Buckhannon** 55.37 350 P P 19 14 20.1 -0.9
baz=168,SNR=9.1
P61A **Hammonton** 55.37 355 P P 19 14 19.1 -1.9
baz=174
S48A **Wiedeman Farm,** 55.38 344 P P 19 14 18.2 -2.9
baz=160,SNR=15
R51A **Hillsboro** 55.38 347 P P 19 14 19.0 -2.1
baz=163,SNR=5.5
P59A **Jarrettsville** 55.47 353 P P 19 14 19.8 -1.8
baz=172
Q54A **Coxs Mills** 55.49 349 P P 19 14 20.0 -1.8
baz=167,SNR=8.6
Q53A **Leroy** 55.50 349 P P 19 14 20.2 -1.7
baz=166,SNR=17
T45A **Paducah** 55.53 341 P P 19 14 19.5 -2.6
baz=157
P57A **Homestead Farm** 55.54 352 P P 19 14 19.6 -2.6
baz=170
R50A **Paris** 55.54 346 P P 19 14 19.9 -2.3
baz=162,SNR=6.5
S47A **Hartford** 55.55 343 P P 19 14 19.4 -2.9
baz=160,SNR=9.0
P60A **Greenville** 55.59 354 P P 19 14 20.4 -2.0
baz=173
P56A **Dayton Farm, R** 55.67 351 P P 19 14 22.0 -1.1
baz=169,SNR=5.3
TXAR **Lajitas Array** 55.68 324 P P 19 14 23.4 -0.2
comp=Z,26nm,0.9s,baz=142,slow=7.7,SNR=176
TXAR PcP PcP 19 15 20.4 +0.8
comp=Z,5.0nm,0.7s,baz=154,slow=5.0,SNR=5.3
TXAR PKPPKP P'P'df 19 44 23.2 +0.4
comp=Z,0.3nm,0.8s,baz=270,slow=2.3,SNR=2.7
W39A **Magazine** 55.69 336 P P 19 14 22.1 -1.2
baz=151,SNR=9.8
Q52A **Bidwell** 55.74 348 P P 19 14 21.7 -1.9
baz=165,SNR=7.9
R49A **Shelbyville** 55.75 345 P P 19 14 21.3 -2.4
baz=162
X37A **Clayton** 55.81 334 eP P 19 14 23.2 -1.0
comp=Z,30nm,0.8s
P55A **Reedsville** 55.83 350 P P 19 14 22.9 -1.4
baz=168,SNR=7.0
S46A **Don Dixon Farm** 55.87 343 P P 19 14 21.8 -2.7
baz=159,SNR=13
PBMO **Poplar Bluff** 55.88 340 eP P 19 14 22.4 -2.2
comp=Z,44nm,0.8s
MCWV **Mont Chateau** 55.98 350 eP P 19 14 23.6 -1.7
comp=Z,20nm,0.8s
MCWV **Mont Chateau** 55.98 350 P P 19 14 24.0 -1.3
baz=168,SNR=8.3
WCI **Wyandotte Cave** 55.98 344 eP P 19 14 22.5 -2.8
comp=Z,24nm,0.8s
WCI **Wyandotte Cave** 55.98 344 eP P 19 14 22.5 -2.8
WCI pmax pmax
comp=Z,24nm,0.8s
WCI **Wyandotte Cave** 55.98 344 P P 19 14 22.7 -2.7
baz=160
Q50A **Georgetown** 55.99 346 P P 19 14 22.9 -2.5
baz=163,SNR=9.4
Q51A **Peebles** 56.03 347 P P 19 14 23.4 -2.3
baz=164,SNR=5.1
R48A **Northridge Ran** 56.03 344 P P 19 14 23.0 -2.7
baz=161
O60A **Telford** 56.06 355 P P 19 14 23.9 -1.9
baz=173
P53A **Whipple** 56.08 349 eP P 19 14 24.5 -1.5
comp=Z,73nm,0.8s
P53A **Whipple** 56.08 349 P P 19 14 24.5 -1.5
baz=166,SNR=22
R47A **Wooly Knot Far** 56.11 344 P P 19 14 23.3 -2.9
baz=160,SNR=7.0
ABTX **Abilene, Hawle** 56.11 329 eP P 19 14 25.5 -0.9
comp=Z,58nm,1.0s
ABTX **Abilene, Hawle** 56.11 329 P P 19 14 26.0 -0.4
baz=144,SNR=31
O57A **Amberson** 56.20 352 P P 19 14 25.4 -1.5
baz=170,SNR=5.2
R46A **Gibon Southern** 56.30 343 P P 19 14 24.6 -3.0
baz=159
S44A **Carbondale** 56.34 341 P P 19 14 25.7 -2.2
baz=157,SNR=22
U40A **Yellville** 56.35 337 P P 19 14 25.9 -2.1
baz=153,SNR=21
BRNJ **Basking Ridge** 56.36 355 eP P 19 14 26.1 -1.8
comp=Z,173nm,1.9s
Q49A **Aurora** 56.36 346 P P 19 14 25.5 -2.6
baz=162
P52A **Corning** 56.36 348 P P 19 14 25.9 -2.1
baz=165,SNR=8.3
O56A **Blue Knob Stat** 56.38 352 eP P 19 14 26.9 -1.3
comp=Z,22nm,0.8s
O56A **Blue Knob Stat** 56.38 352 P P 19 14 26.9 -1.3
baz=169,SNR=5.7
P51A **Williamsport** 56.41 347 P P 19 14 25.6 -2.6
baz=164
O55A **Ligonier** 56.43 351 P P 19 14 27.2 -1.3
baz=168,SNR=12
Q48A **North Vernon** 56.50 345 P P 19 14 26.3 -2.6
baz=161,SNR=8.5
O54A **Avella** 56.58 350 P P 19 14 27.7 -1.8
baz=167
N60A **Cedar Hill Far** 56.59 355 P P 19 14 27.5 -2.0
baz=173
R45A **Skylar, Fairfi** 56.59 342 P P 19 14 26.9 -2.8
baz=158,SNR=5.9
PAL **Palisades** 56.63 356 P P 19 14 27.8 -2.0
baz=175
SSPA **Standing Stone** 56.65 352 P P 19 14 28.4 -1.6
baz=170
Q47A **Bedord North L** 56.68 344 P P 19 14 27.6 -2.7
baz=160,SNR=11
P50A **Jamestown** 56.69 347 P P 19 14 27.9 -2.4
baz=163,SNR=10
N59A **State Game Lan** 56.69 354 P P 19 14 28.7 -1.6
baz=173
HHAR **Hobbs** 56.70 336 eP P 19 14 28.6 -1.9
comp=Z,38nm,1.0s
N57A **Milroy** 56.73 353 P P 19 14 28.5 -2.0
baz=171,SNR=5.3
O52A **Adamsville** 56.77 349 P P 19 14 28.8 -2.0
baz=166,SNR=6.4
O53A **New Philadelph** 56.79 349 P P 19 14 29.1 -1.9
baz=166,SNR=15
P49A **Miami Univ. Ec** 56.82 346 P P 19 14 28.4 -2.8
baz=162,SNR=7.1
M61A **Granite Spring** 56.92 356 P P 19 14 29.9 -2.0
baz=175
P48A **Milroy** 56.92 345 P P 19 14 28.9 -3.1
baz=162,SNR=5.2
N55A **Marion Center** 56.95 351 eP P 19 14 30.8 -1.4
comp=Z,56nm,0.8s
N55A **Marion Center** 56.95 351 P P 19 14 30.7 -1.4
baz=169,SNR=21
O51A **Pataskala** 56.95 348 P P 19 14 29.8 -2.4
baz=165,SNR=9.4
N56A **West Decatur** 56.98 352 P P 19 14 30.9 -1.5
baz=170,SNR=6.9
ACSO **Alum Creek Sta** 57.11 348 eP P 19 14 31.1 -2.1
comp=Z,42nm,0.9s
ACSO **Alum Creek Sta** 57.11 348 P P 19 14 31.0 -2.3
baz=164,SNR=9.4
TUL1 **Leonard** 57.12 335 P P 19 14 32.0 -1.4
baz=149,SNR=7.1
Q45A **Warren Harvey,** 57.12 343 P P 19 14 30.4 -2.9
baz=158
P47A **Martinsville** 57.16 345 P P 19 14 30.7 -2.9
baz=161,SNR=7.6
O50A **Cable** 57.16 347 P P 19 14 31.1 -2.5
baz=164,SNR=6.6
N53A **Lisbon** 57.26 350 eP P 19 14 32.6 -1.6
comp=Z,49nm,0.8s
N53A **Lisbon** 57.26 350 P P 19 14 32.7 -1.6
baz=167,SNR=14
N54A **Moraine State** 57.27 351 eP P 19 14 32.8 -1.6
comp=Z,35nm,0.9s
N54A **Moraine State** 57.27 351 P P 19 14 33.0 -1.4
baz=168,SNR=9.9
CCM **Cathedral Cave** 57.31 340 eP P 19 14 32.6 -2.1
comp=Z,56nm,0.9s
CCM **Cathedral Cave** 57.31 340 eP P 19 14 32.6 -2.1
CCM pmax pmax
comp=Z,56nm,0.9s
CCM **Cathedral Cave** 57.31 340 P P 19 14 32.5 -2.1
baz=155
O49A **Covington** 57.36 346 eP P 19 14 32.8 -2.2
comp=Z,35nm,0.9s
O49A **Covington** 57.36 346 P P 19 14 32.3 -2.7
baz=163,SNR=14
N52A **McGinn's Farm,** 57.42 349 P P 19 14 33.2 -2.1
baz=166,SNR=5.4
WMOK **Wichita Mounta** 57.43 331 eP P 19 14 34.5 -1.2
comp=Z,20nm,0.9s
WMOK **Wichita Mounta** 57.43 331 eP P 19 14 34.5 -1.2
WMOK pmax pmax
comp=Z,20nm,0.9s
WMOK **Wichita Mounta** 57.43 331 P P 19 14 34.4 -1.2
baz=146,SNR=32
M56A **Emporium** 57.53 352 P P 19 14 34.5 -1.6
baz=170,SNR=9.2
P46A **Rosedale** 57.53 344 P P 19 14 33.3 -2.9
baz=160
M55A **Ridgway** 57.59 352 P P 19 14 34.8 -1.8
baz=169,SNR=8.3
P45A **Graceland, Par** 57.59 343 P P 19 14 33.4 -3.2
baz=159,SNR=7.6
O48A **Farmland** 57.61 346 P P 19 14 34.0 -2.8
baz=162,SNR=8.6
N51A **Ashland** 57.65 348 P P 19 14 34.6 -2.4
baz=165,SNR=5.9
N50A **Nevada** 57.66 348 P P 19 14 34.7 -2.3
baz=164
M54A **Oil Creek Stat** 57.76 351 eP P 19 14 36.2 -1.5
comp=Z,42nm,0.8s
M54A **Oil Creek Stat** 57.76 351 P P 19 14 35.9 -1.9
baz=168,SNR=10
O47A **Sheridan** 57.84 345 P P 19 14 35.4 -2.9
baz=161,SNR=9.1
M53A **WI Miller and** 57.85 350 P P 19 14 36.7 -1.7
baz=167,SNR=18
BINY **Binghamton** 57.98 354 eP P 19 14 38.1 -1.2
comp=Z,60nm,0.9s
BINY **Binghamton** 57.98 354 P P 19 14 38.1 -1.2
baz=172,SNR=13
HRV **Adam Dziewonsk** 58.01 358 eP P 19 14 38.5 -0.9
comp=Z,65nm,0.8s
HRV **Adam Dziewonsk** 58.01 358 eP P 19 14 38.5 -0.9
HRV pmax pmax
comp=Z,65nm,0.8s
HRV **Adam Dziewonsk** 58.01 358 P P 19 14 38.3 -1.2
baz=178
M51A **Elyria** 58.02 349 P P 19 14 37.4 -2.1
baz=165
N49A **Columbus Grove** 58.03 347 eP P 19 14 37.5 -2.1
comp=Z,72nm,0.8s
N49A **Columbus Grove** 58.03 347 P P 19 14 37.2 -2.4
baz=163,SNR=19
M52A **Chesterland** 58.07 349 P P 19 14 37.9 -1.9
baz=166
N48A **Decatur** 58.16 346 P P 19 14 37.8 -2.7
baz=162,SNR=7.6
P43A **Skaggs, Pawnee** 58.21 342 P P 19 14 38.1 -2.7
baz=157
SFIN **Lafayette** 58.21 344 P P 19 14 37.8 -3.0
baz=160
GDL2 **Guadalupe Moun** 58.24 325 eP P 19 14 41.0 -0.4
L55A **Hinsdale** 58.25 352 P P 19 14 39.5 -1.6
baz=170,SNR=7.5
M50A **Fremont** 58.25 348 P P 19 14 38.8 -2.3
baz=164
O45A **Potomac** 58.26 344 P P 19 14 37.9 -3.3
baz=159,SNR=7.9
L53A **Girard** 58.29 351 P P 19 14 39.7 -1.6
baz=168,SNR=14
N47A **Urbana** 58.33 346 P P 19 14 38.8 -2.9
baz=162,SNR=6.7
O44A **Mansfield** 58.37 343 P P 19 14 38.8 -3.2
baz=158
L54A **Sinclairville** 58.42 351 P P 19 14 40.7 -1.5
baz=169,SNR=11
MNTX **Cornudas Mount** 58.43 324 eP P 19 14 41.3 -1.3
comp=Z,70nm,0.9s
MNTX **Cornudas Mount** 58.43 324 P P 19 14 41.8 -0.8
baz=138,SNR=127
M49A **Liberty Center** 58.51 347 P P 19 14 40.5 -2.4
baz=164,SNR=7.5
N46A **Monticello** 58.60 345 P P 19 14 40.6 -2.9
baz=160
M48A **Edgerton** 58.68 347 P P 19 14 41.3 -2.8
baz=163
K54A **Basiliko Farm,** 58.70 352 P P 19 14 42.8 -1.4
baz=170,SNR=5.2
K55A **Perry** 58.74 353 P P 19 14 42.6 -1.8
baz=170,SNR=8.8
MSTX **Muleshoe** 58.76 328 eP P 19 14 44.1 -0.8
comp=Z,106nm,1.3s
MSTX **Muleshoe** 58.76 328 P P 19 14 44.0 -0.9
baz=142,SNR=32
N45A **Kentland** 58.76 344 P P 19 14 41.6 -3.0
baz=160
M47A **Cromwell** 58.77 346 P P 19 14 42.1 -2.6
baz=162
L50A **Kingsville** 58.82 348 P P 19 14 42.5 -2.5
baz=165
N44A **Piper City** 58.88 344 P P 19 14 42.3 -3.1
baz=159
U32A **Winter Ranch,** 58.89 332 eP P 19 14 44.4 -1.3
comp=Z,80nm,0.8s
AMTX **Amarillo** 58.94 329 P P 19 14 45.0 -1.1
baz=143
HDIL **Hopedale** 58.98 342 P P 19 14 43.2 -3.0
baz=158
M46A **Old House Fiel** 58.99 345 P P 19 14 43.2 -3.0
baz=161
L48A **N Adams** 59.06 347 P P 19 14 44.0 -2.7
baz=163,SNR=8.1
L49A **Milan** 59.08 348 P P 19 14 44.4 -2.4
baz=164,SNR=5.2
K52A **Tillsonburg** 59.16 350 P P 19 14 45.6 -1.8
baz=167
M45A **Boilermakers S** 59.20 344 P P 19 14 44.4 -3.2
baz=160
MEDO **Medina** 59.22 352 P P 19 14 45.9 -1.8
baz=170
J55A **Hilton** 59.24 353 eP P 19 14 46.0 -1.8
comp=Z,22nm,0.7s
J55A **Hilton** 59.24 353 P P 19 14 45.8 -2.0
baz=170,SNR=5.9
K51A **Iona Station** 59.24 350 P P 19 14 45.5 -2.3
baz=166
L47A **Sherwood** 59.26 346 P P 19 14 45.3 -2.7
baz=162,SNR=11
N43A **Stutzman Famil** 59.30 343 P P 19 14 45.5 -2.9
baz=158,SNR=5.2
TYNO **Tyneside** 59.34 351 P P 19 14 46.6 -1.9
baz=168,SNR=7.2
J54A **Appleton** 59.34 352 P P 19 14 46.7 -1.8
baz=170
STCO **Saint Catharin** 59.35 352 P P 19 14 46.8 -1.8
baz=169
M44A **Midewin, Midew** 59.41 344 P P 19 14 45.7 -3.4
baz=159
K50A **Casco** 59.49 349 P P 19 14 46.9 -2.7
baz=165
L46A **Eue Claire** 59.55 346 P P 19 14 47.2 -2.8
baz=161
J52A **Paris** 59.58 351 P P 19 14 48.2 -2.0
baz=168,SNR=17
N41A **Harden Midland** 59.59 341 P P 19 14 47.6 -2.8
baz=156,SNR=7.7
K49A **Clarkson** 59.66 348 P P 19 14 47.9 -2.8
baz=164
M43A **Waltham Townsh** 59.70 343 P P 19 14 48.0 -3.1
baz=158,SNR=6.8
LBNH **Lisbon** 59.75 358 eP P 19 14 50.0 -1.4
comp=Z,56nm,0.9s
LBNH **Lisbon** 59.75 358 eP P 19 14 50.0 -1.4
LBNH pmax pmax
comp=Z,56nm,0.9s
LBNH **Lisbon** 59.75 358 P P 19 14 50.4 -0.9
baz=177,SNR=9.5
PECO **Prince Edward** 59.80 354 eP P 19 14 49.9 -1.8
comp=Z,22nm,0.8s
PECO **Prince Edward** 59.80 354 P P 19 14 49.8 -1.8
baz=172,SNR=8.6
K48A **Perry** 59.81 348 P P 19 14 49.1 -2.7
baz=164,SNR=11
ACTO **Acton** 59.87 351 P P 19 14 50.2 -2.0
baz=168
K47A **Vermontville** 59.88 347 P P 19 14 49.6 -2.6
baz=163
HSIG 59.90 318 eP P 19 14 52.1 -0.6
comp=Z,110nm,1.6s
DRWO **Darlington Wes** 59.95 352 P P 19 14 50.8 -1.8
baz=170
DRCO **St. Marys Ceme** 59.95 352 P P 19 14 50.9 -1.8
baz=170
WLVO **Wesleyville** 59.95 353 P P 19 14 50.7 -2.0
baz=170,SNR=7.5
N40A **Mertquake, Sal** 59.98 341 P P 19 14 50.3 -2.7
baz=155,SNR=5.5
I53A **Kortright Cn E** 60.02 352 P P 19 14 51.0 -2.1
baz=169
K46A **Dorr** 60.07 346 P P 19 14 50.4 -3.1
baz=162
PKRO **Pickering** 60.08 352 P P 19 14 51.8 -1.8
baz=169,SNR=7.4
M41A **Milan** 60.11 342 P P 19 14 50.8 -3.0
baz=156
J49A **Marlette** 60.16 349 P P 19 14 51.1 -2.9
baz=165
I55A **Frankford** 60.16 353 P P 19 14 52.2 -1.9
baz=171,SNR=15
KSU1 **Kansas State U** 60.19 336 P P 19 14 52.8 -1.7
baz=150,SNR=21
I51A **Listowel** 60.21 350 P P 19 14 52.3 -2.1
baz=167,SNR=6.1
J48A **Bridge Port** 60.22 348 P P 19 14 51.9 -2.6
baz=164,SNR=7.9
LONY **Lake Ozonia** 60.27 356 eP P 19 14 53.2 -1.6
comp=Z,26nm,0.9s
LONY **Lake Ozonia** 60.27 356 P P 19 14 53.2 -1.6
baz=174,SNR=12
I52A **Shelburne** 60.34 351 P P 19 14 53.3 -2.0
baz=168,SNR=9.3
J47A **Sunmer** 60.38 347 P P 19 14 53.1 -2.5
baz=163,SNR=6.1
H56A **Elgin** 60.38 354 P P 19 14 54.1 -1.5
baz=172,SNR=7.9
121A **Cookes Peak, D** 60.42 323 P P 19 14 57.2 +0.8
baz=137,SNR=37
L42A **Oliver, Polo** 60.43 343 P P 19 14 53.3 -2.7
baz=158
H55A **Tweed** 60.43 354 P P 19 14 54.2 -1.7
baz=171,SNR=10.0
DELO **Deloro Mine** 60.45 353 P P 19 14 54.1 -1.9
baz=171,SNR=8.2
BASO **Ashfield** 60.52 350 P P 19 14 54.5 -2.1
baz=166,SNR=5.3
BWLO **Walkerton** 60.54 350 P P 19 14 54.6 -2.0
baz=167,SNR=12
I49A **Point Hope** 60.66 349 P P 19 14 54.9 -2.5
baz=165
J46A **Howard City** 60.66 347 P P 19 14 54.7 -2.8
baz=162
BRCO **Bruce Peninsul** 60.71 350 P P 19 14 55.8 -2.0
baz=167
K43A **Burlington** 60.71 344 P P 19 14 55.1 -2.8
baz=159
PKME **Peaks-Kenny Pk** 60.74 0 P P 19 14 56.9 -1.0
baz=180,SNR=7.0
H52A **Wyevale** 60.86 351 P P 19 14 56.6 -2.2
baz=168
PLVO **Plevna** 60.91 354 P P 19 14 57.4 -1.7
baz=172,SNR=5.6
L40A **Anamosa** 60.94 342 P P 19 14 56.7 -2.7
baz=156,SNR=6.0
BMRO **Meriville Lake** 61.02 350 P P 19 14 57.7 -2.2
baz=167,SNR=5.3
I47A **Gladwin** 61.06 348 P P 19 14 57.4 -2.7
baz=163

I48A	Sherman Twp	61.06 348	P	P	19 14 57.7	-2.5
	baz=164,SNR=6.1					
LPM	Los Pinos Moun	61.08 325	eP	P	19 15 00.5	-0.2
G55A	Calabogie	61.08 354	P	P	19 14 58.4	-1.9
	baz=172,SNR=12					
G53A	Haliburton	61.16 353	P	P	19 14 59.2	-1.7
	baz=170,SNR=12					
I46A	Reed City	61.19 347	P	P	19 14 58.0	-3.1
	baz=162					
CBKS	Cedar Bluff	61.24 333	eP	P	19 15 00.8	-0.7
	comp=Z,85nm,0.8s					
CBKS	Cedar Bluff	61.24 333	P	P	19 15 01.2	-0.4
	baz=146,SNR=7.7					
SCIA	State Center	61.43 340	P	P	19 15 00.7	-2.0
	baz=154					
JFWS	Jewell Farm	61.43 343	eP	P	19 15 00.5	-2.2
	comp=Z,21nm,0.8s					
JFWS	Jewell Farm	61.43 343	eP	P	19 15 00.5	-2.2
JFWS			pmax	pmax		
	comp=Z,21nm,0.8s					
JFWS	Jewell Farm	61.43 343	P	P	19 15 00.4	-2.2
	baz=157,SNR=7.4					
ANMO	Albuquerque	61.46 326	eP	P	19 15 03.0	-0.3
	comp=Z,22nm,0.8s					
ANMO	Albuquerque	61.46 326	ceP	P	19 15 03.1	-0.2
ANMO			pmax	pmax		
	comp=Z,29nm,1.0s					
ANMO	Albuquerque	61.46 326	P	P	19 15 03.4	+0.2
	baz=139					
TASM	ASL Pad, Albuq	61.46 326	P	P	19 15 03.5	+0.2
	baz=139,SNR=39					
TASM	ASL Pad, Albuq	61.46 326	P	P	19 15 03.4	+0.2
	baz=139,SNR=39					
LMN	Caledonia Moun	61.47 4	eP	P	19 15 01.5	-1.3
	comp=Z,46nm,0.8s					
H48A	Harrisville	61.48 349	P	P	19 15 00.7	-2.2
	baz=165					
PEMO	Pembroke	61.55 354	P	P	19 15 01.6	-1.8
	baz=171,SNR=7.4					
H47A	Mio	61.56 348	P	P	19 15 01.0	-2.5
	baz=164					
BUKO	Buck Lake	61.58 352	P	P	19 15 01.7	-1.9
	baz=169,SNR=15					
KLBO	Killbear Provi	61.61 351	P	P	19 15 01.8	-1.9
	baz=168,SNR=9.9					
F55A	Otter Lake	61.62 355	P	P	19 15 02.1	-1.8
	baz=172					
TOBO	Tobermory, Bru	61.68 350	P	P	19 15 02.0	-2.2
	baz=167					
H46A	Fife Lake	61.70 347	P	P	19 15 01.7	-2.7
	baz=163,SNR=6.2					
TRQ	Mont Tremblant	61.87 356	eP	P	19 15 04.0	-1.5
F52A	Sundridge	61.91 352	P	P	19 15 03.9	-1.9
	baz=169,SNR=7.7					
ALGO	Algonquin Park	61.92 353	P	P	19 15 03.9	-1.9
	baz=170,SNR=8.4					
H45A	Beulah	61.97 347	P	P	19 15 03.4	-2.8
	baz=162					
I42A	Draeger Farm,	61.97 344	P	P	19 15 04.1	-2.1
	baz=159					
G47A	Hillman	62.04 349	P	P	19 15 04.5	-2.1
	baz=164					
TUC	Tucson	62.05 321	eP	P	19 15 06.4	-0.7
	comp=Z,27nm,0.9s					
TUC	Tucson	62.05 321	eP	P	19 15 06.4	-0.7
TUC			pmax	pmax		
	comp=Z,27nm,0.9s					
TUC	Tucson	62.05 321	P	P	19 15 07.4	+0.3
	baz=134					
T25A	Trinidad	62.07 329	P	P	19 15 07.5	+0.2
	baz=141,SNR=15					
F51A	Arnstein	62.12 352	P	P	19 15 05.0	-2.2
	baz=168					
H43A	Windswept, Lux	62.22 345	P	P	19 15 05.5	-2.4
	baz=160					
G45A	Suttons Bay	62.28 347	P	P	19 15 05.8	-2.5
	baz=162					
F49A	Sandfield	62.29 350	P	P	19 15 05.8	-2.5
	baz=166					
E53A	Dumoine, Ponti	62.29 354	P	P	19 15 06.5	-1.8
	baz=171,SNR=12					
E54A	Lac Daplat, Po	62.30 354	P	P	19 15 06.5	-1.8
	baz=172,SNR=13					
E52A	Mattawa	62.31 353	P	P	19 15 06.3	-2.1
	baz=170					
G46A	Petoskey	62.38 348	P	P	19 15 06.5	-2.4
	baz=163					
I41A	Arkdale	62.38 344	P	P	19 15 06.8	-2.2
	baz=158					
F48A	Evansville	62.45 350	P	P	19 15 07.0	-2.3
	baz=166					
E51A	G1948 Merrick	62.66 352	P	P	19 15 09.0	-1.8
	baz=169,SNR=6.3					
E50A	Wahnapitae	62.73 351	P	P	19 15 08.8	-2.3
	baz=168					
BGNE	Belgrade	62.77 336	eP	P	19 15 10.7	-1.0
	comp=Z,207nm,0.8s					
BGNE	Belgrade	62.77 336	P	P	19 15 10.7	-1.0
	baz=149,SNR=9.2					
BATG	Bathurst New B	62.82 3	eP	P	19 15 10.6	-1.2
	comp=Z,44nm,0.9s					
F45A	CMU Biological	62.86 347	P	P	19 15 09.8	-2.2
	baz=162					
D54A	Lac Fusel, La	62.96 354	P	P	19 15 10.5	-2.2
	baz=172,SNR=9.5					
D52A	ZEK Kipawa Sen	62.97 353	P	P	19 15 11.0	-1.7
	baz=170,SNR=8.1					
D53A	Lac Vacive, Po	62.99 354	P	P	19 15 11.3	-1.6
	baz=171,SNR=10					
E48A	Lockeyer	63.00 350	P	P	19 15 11.0	-2.0
	baz=166					
214A	Organ Pipe Nat	63.06 319	P	P	19 15 15.0	+1.2
	baz=132,SNR=64					
SDCO	Great Sand Dun	63.09 328	eP	P	19 15 13.5	-0.6
	comp=Z,56nm,1.0s					
SDCO	Great Sand Dun	63.09 328	P	P	19 15 14.5	+0.4
	baz=140,SNR=75					
E47A	Iron Bridge	63.17 349	P	P	19 15 11.9	-2.2
	baz=165					
E46A	Sault Ste Mari	63.27 349	P	P	19 15 12.2	-2.5
	baz=164,SNR=7.0					
W18A	Petrified Fore	63.41 324	P	P	19 15 16.7	+0.6
	baz=136,SNR=7.9					
F42A	Maple Grove Fa	63.52 346	P	P	19 15 14.3	-2.2
	baz=160					
G40A	Rib Lake	63.59 344	P	P	19 15 15.0	-1.9
	baz=158					
D48A	Paudash Townsh	63.62 351	P	P	19 15 15.1	-1.9
	baz=167					
D49A	Beulah Townshi	63.65 351	P	P	19 15 15.3	-1.9
	baz=167					
D47A	Chapleau	63.72 350	P	P	19 15 15.2	-2.5
	baz=165,SNR=5.0					
S22A	4UR Ranch, Cre	63.76 328	eP	P	19 15 18.4	-0.2
	comp=Z,27nm,0.9s					
S22A	4UR Ranch, Cre	63.76 328	P	P	19 15 18.9	+0.3
	baz=139,SNR=14					
E44A	Grand Marais A	63.84 347	P	P	19 15 16.4	-2.0
	baz=162					
E43A	Lone Tree Farm	63.84 347	P	P	19 15 16.4	-2.1
	baz=161					
G39A	Holcombe	63.88 343	P	P	19 15 16.7	-2.0
	baz=157					
OGNE	Ogallala	64.00 333	eP	P	19 15 18.9	-0.8
	comp=Z,63nm,0.8s					
OGNE	Ogallala	64.00 333	P	P	19 15 19.6	-0.1
	baz=145,SNR=12					
F40A	Park Falls	64.17 344	P	P	19 15 18.8	-1.9
	baz=158,SNR=17					
ECSD	EROS Data Cent	64.21 338	eP	P	19 15 19.6	-1.4
	comp=Z,51nm,1.1s					
ECSD	EROS Data Cent	64.21 338	P	P	19 15 19.5	-1.5
	baz=151,SNR=28					
MVCO	Mesa Verde	64.24 326	P	P	19 15 21.9	+0.3
	baz=138,SNR=32					
SPMN	Marine on St.	64.29 342	P	P	19 15 19.3	-2.1
	baz=155,SNR=6.1					
F39A	Loretta	64.39 344	P	P	19 15 20.1	-1.9
	baz=157,SNR=6.2					
Y14A	Wickenburg	64.52 321	eP	P	19 15 23.6	+0.4
	comp=Z,28nm,0.7s					
WUAZ	Wupatki	64.63 323	eP	P	19 15 24.1	+0.1
	comp=Z,71nm,0.9s					
WUAZ	Wupatki	64.63 323	P	P	19 15 25.2	+1.1
	baz=135,SNR=52					
F38A	Pierce - Schro	64.69 343	P	P	19 15 22.2	-1.8
	baz=156,SNR=5.6					
F37A	Hinrichs Farm,	64.69 342	P	P	19 15 22.3	-1.7
	baz=155					
ISCO	Idaho Springs	64.73 330	eP	P	19 15 24.5	-0.3
	comp=Z,30nm,1.1s					
ISCO	Idaho Springs	64.73 330	eP	P	19 15 24.5	-0.3
ISCO			pmax	pmax		
	comp=Z,30nm,1.1s					
ISCO	Idaho Springs	64.73 330	P	P	19 15 24.9	+0.2
	baz=141,SNR=22					
D41A	Chassel	64.85 346	P	P	19 15 23.0	-2.0
	baz=160,SNR=5.6					
LSQQ	Lebel-sur-Quev	64.88 355	P	P	19 15 23.5	-1.5
	baz=172					
PV01	Paradox Valley	64.96 327	eP	P	19 15 26.3	0.0
	comp=Z,86nm,0.9s					
GLA	Glamis	65.06 319	eP	P	19 15 27.0	+0.3
	comp=Z,24nm,1.1s					
GLA	Glamis	65.06 319	eP	P	19 15 27.0	+0.3
GLA			pmax	pmax		
	comp=Z,24nm,1.1s					
GLA	Glamis	65.06 319	P	P	19 15 27.5	+0.8
	baz=131,SNR=5.5					
E38A	The Farm, Brul	65.19 343	eP	P	19 15 25.3	-1.9
	comp=Z,30nm,0.9s					
E38A	The Farm, Brul	65.19 343	P	P	19 15 25.1	-2.1
	baz=156,SNR=7.8					
Y12C	Blythe	65.33 320	eP	P	19 15 28.6	+0.3
	comp=Z,37nm,0.8s					
Y12C	Blythe	65.33 320	P	P	19 15 29.5	+1.1
	baz=131,SNR=15					
PDMCI	Parker Dam,Lak	65.46 320	P	P	19 15 30.0	+0.8
	baz=132,SNR=7.8					
CHGQ	Chibougamau	65.53 357	P	P	19 15 27.6	-1.7
	baz=175,SNR=12					
SWSC	Sam W. Stewart	65.61 318	P	P	19 15 31.2	+1.0
	baz=130					
IKP	In-Ko-Pah, Jac	65.62 318	P	P	19 15 31.8	+1.4
	baz=130,SNR=7.7					
MATQ	Matagami	65.63 354	P	P	19 15 27.9	-2.1
	baz=171,SNR=9.9					
VNA3	Neumayer Olymp	65.66 162	P	P	19 15 31.1	+1.2
SUSD	Miller	65.67 337	P	P	19 15 29.2	-1.2
	baz=149					
N23A	Red Feather La	65.74 330	P	P	19 15 31.4	+0.2
	baz=141,SNR=8.3					
U15A	North Rim	65.80 323	eP	P	19 15 31.9	+0.2
	comp=Z,63nm,0.9s					
VNA1	Neumayer-Stat	65.85 161	P	P	19 15 32.8	+1.7
BC3	Big Chuckawall	65.85 319	P	P	19 15 32.9	+1.1
	baz=131,SNR=30					
MONP2	Monument Peak	65.98 318	P	P	19 15 34.1	+1.3
	baz=130,SNR=14					
IRM	Iron Mountain	65.99 319	P	P	19 15 33.9	+1.3
	baz=131,SNR=63					
BAR	Barrett	66.01 317	eP	P	19 15 32.8	+0.1
	comp=Z,51nm,1.0s					
NEE2	Needles Airpor	66.06 320	P	P	19 15 33.9	+0.9
	baz=132					
O20A	White River Ci	66.29 328	eP	P	19 15 33.9	-0.6
	comp=Z,66nm,1.0s					
O20A	White River Ci	66.29 328	P	P	19 15 35.1	+0.6
	baz=139,SNR=31					
EYMN	Ely	66.41 344	eP	P	19 15 33.3	-1.6
	comp=Z,28nm,0.9s					
EYMN	Ely	66.41 344	P	P	19 15 32.8	-2.1
	baz=157,SNR=13					
BELC	Belle Mtn. Jos	66.42 319	P	P	19 15 36.7	+1.2
	baz=130,SNR=24					
109C	Camp Elliot, M	66.42 317	P	P	19 15 36.5	+1.2
	baz=129					
PFO	Pinyon Flats O	66.47 318	eP	P	19 15 35.7	-0.1
	comp=Z,32nm,0.9s					
PFO	Pinyon Flats O	66.47 318	eP	P	19 15 35.7	-0.1
PFO			pmax	pmax		
	comp=Z,33nm,0.9s					
PFO	Pinyon Flats O	66.47 318	P	P	19 15 37.1	+1.3
	baz=130,SNR=20					
GMRC	Granite Mounta	66.72 320	P	P	19 15 38.7	+1.4
	baz=131,SNR=46					
MURC	Murrieta	66.93 318	P	P	19 15 39.9	+1.3
	baz=129,SNR=6.5					
HEC	Hector,Ludlow	67.17 319	P	P	19 15 41.6	+1.6
	baz=130,SNR=8.8					
BBRC	Big Bear Solar	67.17 319	P	P	19 15 42.0	+1.7
	baz=130					
TUQ	Turquoise Moun	67.31 320	P	P	19 15 42.0	+1.0
	baz=131,SNR=19					
K22A	Casper	67.38 331	eP	P	19 15 40.9	-0.4
	comp=Z,17nm,0.7s					
K22A	Casper	67.38 331	P	P	19 15 41.5	+0.2
	baz=141					
LIC	Lamto	67.42 76	eP	P	19 15 40.8	-1.2
	comp=Z,114nm,1.0s					
RSSD	Black Hills	67.44 334	eP	P	19 15 41.1	-0.6
	comp=Z,27nm,0.7s					
RSSD	Black Hills	67.44 334	eP	P	19 15 41.1	-0.6
RSSD			pmax	pmax		
	comp=Z,27nm,0.7s					
RSSD	Black Hills	67.44 334	P	P	19 15 42.0	+0.2
	baz=144					
SHPR	Sheep Range	67.55 321	eP	P	19 15 43.0	+0.5
	comp=Z,54nm,0.9s					
TIC	Toumodi	67.57 76	eP	P	19 15 41.2	-1.7
CIS	Catalina Islan	67.60 317	P	P	19 15 42.8	0.0
	baz=128					
RRX	Edison Barstow	67.61 319	P	P	19 15 44.3	+1.5
	baz=130					
BFSC	Mount Baldy Ra	67.63 318	P	P	19 15 44.1	+1.0
	baz=129,SNR=9.7					
FMP	Fort Macarthur	67.72 317	P	P	19 15 44.9	+1.5
	baz=128					
DBIC	Dimbokro	67.73 76	P	P	19 15 42.6	-1.4
	comp=Z,25nm,0.6s,baz=236,slow=4.3,SNR=62					
DBIC	Dimbokro	67.73 76	eP	P	19 15 42.5	-1.4
	comp=Z,26nm,0.7s					
KIC	Kosan Boka	67.73 76	eP	P	19 15 42.3	-1.7
	comp=Z,98nm,0.6s					
GSC	Goldstone, Bar	67.77 319	eP	P	19 15 43.9	+0.1
	comp=Z,66nm,1.2s					
GSC			epP	pP	19 16 46.9	+2.2
GSC	Goldstone, Bar	67.77 319	eP	P	19 15 43.9	+0.1
GSC			e*PP	pP	19 16 46.9	+2.2
GSC			pmax	pmax		
	comp=Z,66nm,1.2s					
GSC	Goldstone, Bar	67.77 319	P	P	19 15 45.3	+1.5
	baz=130,SNR=39					
SHOC	Shoshone, Teco	67.83 320	P	P	19 15 45.2	+1.2
	baz=131,SNR=18					
SNAA	Sanae	67.85 162	P	P	19 15 44.9	+1.1
SNAA	Sanae	67.85 162	eP	P	19 15 44.5	+0.7
	comp=Z,77nm,0.8s					
SNAA	Sanae	67.85 162	d iP	P	19 15 44.7	+0.9
PASC	Pasadena Art C	67.93 318	eP	P	19 15 45.0	+0.3
	comp=Z,65nm,1.1s					
PASC			epP	pP	19 16 47.7	+2.1
MPU	Maple Canyon	67.97 326	eP	P	19 15 45.0	0.0
	comp=Z,58nm,1.0s					
MPU			epP	pP	19 16 47.5	+1.5
AGMN	Agassiz Nation	67.98 341	eP	P	19 15 43.1	-1.6
	comp=Z,44nm,0.9s					
AGMN	Agassiz Nation	67.98 341	P	P	19 15 43.3	-1.4
	baz=152,SNR=23					
DECC	Green Verdugo	68.08 318	P	P	19 15 47.1	+1.4
	baz=129,SNR=8.3					
SNCC	San Nicolas Is	68.24 316	P	P	19 15 48.1	+1.4
	baz=127					
EDW2	Edwards Air Fo	68.25 318	P	P	19 15 47.9	+1.1
	baz=129,SNR=30					
LRMC	Laurel Mtn Rad	68.43 319	P	P	19 15 49.3	+1.3
	baz=129,SNR=18					
BLG	Laguna Peak, P	68.46 317	P	P	19 15 49.4	+1.3
	baz=128					
TPNV	Topopah Spring	68.49 321	eP	P	19 15 48.6	+0.2
	comp=Z,90nm,1.0s					
TPNV			epP	pP	19 16 52.2	+2.8
TPNV	Topopah Spring	68.49 321	eP	P	19 15 48.6	+0.2
TPNV			e*PP	pP	19 16 52.2	+2.8
TPNV			pmax	pmax		
	comp=Z,90nm,1.0s					
TPNV	Topopah Spring	68.49 321	P	P	19 15 50.1	+1.7
	baz=131,SNR=125					
FURC	Furnace Creek,	68.55 320	P	P	19 15 50.3	+1.8
	baz=130,SNR=88					
MPMC	Manual Prospec	68.68 320	P	P	19 15 50.6	+1.1
	baz=130,SNR=36					
DUG	Dugway, Tooele	68.73 326	eP	P	19 15 49.7	0.0
	comp=Z,62nm,1.0s					
DUG			epP	pP	19 16 52.3	+1.5
DUG	Dugway, Tooele	68.73 326	eP	P	19 15 49.7	0.0
DUG			e*PP	pP	19 16 52.3	+1.5
DUG			pmax	pmax		
	comp=Z,62nm,1.0s					
DUG	Dugway, Tooele	68.73 326	P	P	19 15 50.8	+1.1
	baz=135,SNR=54					
SCZ2	Santa Cruz Isl	68.77 317	P	P	19 15 51.2	+1.2
	baz=128,SNR=6.4					
MDND	Maddock	68.82 339	P	P	19 15 49.6	-0.3
	baz=149,SNR=11					
BW06	Boulder Array	68.91 329	P	P	19 15 50.6	-0.4
	baz=138,SNR=18					
PD31	Pinedale Array	68.91 329	eP	P	19 15 50.0	-0.9
	comp=Z,32nm,1.3s					
PDAR	Pinedale Array	68.91 329	P	P	19 15 50.7	-0.2
	comp=Z,6.9nm,0.8s,baz=150,slow=6.8,SNR=30					
ARVC	Arvin	68.94 318	P	P	19 15 52.2	+1.2
	baz=128					
R11A	Troy Canyon, C	69.03 323	eP	P	19 15 52.7	+1.1
	comp=Z,23nm,0.8s					
R11A			epP	pP	19 16 54.4	+1.6
R11A	Troy Canyon, C	69.03 323	P	P	19 15 53.1	+1.5
	baz=132,SNR=66					
ISA	Isabella, Lake	69.05 319	eP	P	19 15 52.4	+0.7
	comp=Z,71nm,0.9s					
ISA	Isabella, Lake	69.05 319	eP	P	19 15 52.4	+0.7
ISA			pmax	pmax		
	comp=Z,71nm,0.9s					
ISA	Isabella, Lake	69.05 319	P	P	19 15 53.3	+1.6
	baz=129,SNR=28					
HWUT	Hardware Ranch	69.07 327	eP	P	19 15 51.5	-0.3
	comp=Z,20nm,0.9s					
SBC	Santa Barbara	69.09 317	P	P	19 15 53.2	+1.3
	baz=128					
GRAC	Grapevine Rang	69.20 321	P	P	19 15 54.2	+1.6
	baz=130,SNR=8.5					
CWC	Cottonwood Cre	69.29 320	P	P	19 15 54.7	+1.4
	baz=129					
BGU	Big Grassy Mou	69.36 326	eP	P	19 15 53.3	-0.3
	comp=Z,45nm,1.0s					
BGU			epP	pP	19 16 55.7	+0.8
PKM	Mcpherson Peak	69.43 317	P	P	19 15 55.7	+1.5
	baz=128,SNR=25					
PMOZ	Porto Moniz, M	69.48 45	eP	P	19 15 55.1	+0.6
VES	Vestal, Richgr	69.55 319	P	P	19 15 56.1	+1.5
	baz=128,SNR=18					
ULM	Lac du Bonnet	69.72 342	P	P	19 15 53.6	-1.7
	comp=Z,47nm,0.8s,baz=155,slow=6.1,SNR=35					
ULM	Lac du Bonnet	69.72 342	eP	P	19 15 53.8	-1.5
	comp=Z,61nm,0.9s					
ULM			epP	pP	19 16 56.6	-0.2
ULM	Lac du Bonnet	69.72 342	eP	P	19 15 53.8	-1.5
ULM			e*PP	pP	19 16 56.6	-0.2
ULM			pmax	pmax		
	comp=Z,61nm,0.9s					
TIN	Tinemaha, Big	69.77 320	P	P	19 15 57.7	+1.5
	baz=130					
SMMC	Simmler	69.81 318	P	P	19 15 58.2	+1.9
	baz=128,SNR=15					
VOG	Valley Oaks Go	70.03 319	P	P	19 15 58.1	+0.6
	baz=128					
FXWY	Fox Creek	70.28 329	eP	P	19 15 58.7	-0.5
	comp=Z,23nm,1.0s					
FXWY			epP	pP	19 17 01.4	+0.7
SCHQ	Schefferville	70.35 2	P	P	19 15 57.5	-1.6
	comp=Z,25nm,0.9s,baz=180,slow=4.2,SNR=12					
LAO	LASA Array	70.41 334	eP	P	19 15 59.4	-0.4
	comp=Z,55nm,1.4s					
LAO			epP	pP	19 17 02.4	+1.1
LAO	LASA Array	70.41 334	P	P	19 15 59.6	-0.2
	baz=142,SNR=6.4					
ELK	Elko	70.44 325	eP	P	19 15 60.0	-0.3
	comp=Z,17nm,0.9s					
ELK	Elko	70.44 325	eP	P	19 16 00.0	-0.3
ELK			pmax	pmax		
	comp=Z,17nm,0.9s					
MLAC	Mammoth, Mammo	70.51 320	P	P	19 16 02.0	+1.3
	baz=129					
RLMT	Red Lodge	70.55 331	eP	P	19 16 00.2	-0.5
	comp=Z,37nm,1.1s					
RLMT	Red Lodge	70.55 331	P	P	19 16 01.1	+0.3
	baz=139,SNR=10					
OMMB	Old Mammoth Mi	70.60 320	eP	P	19 16 02.1	+0.7
	comp=Z,78nm,0.9s					
OMMB			epP	pP	19 17 04.5	+1.7
NV11	Mina Array Sit	70.61 321	eP	P	19 16 01.5	+0.3
	comp=Z,1.5nm,0.9s					
H17A	Grant Village	70.62 330	P	P	19 16 02.9	+1.6
	baz=138,SNR=5.7					
NV01	Mina Array Sit	70.69 321	eP	P	19 16 03.0	+1.2
NVAR	Mina Array Bea	70.69 321	P	P	19 16 03.0	+1.2
	comp=Z,18nm,0.8s,baz=143,slow=6.6,SNR=102					
NVAR			PKPPKP	P'P'df	19 43 54.5	-4.2
	comp=Z,0.5nm,0.7s,baz=277,slow=2.7,SNR=4.6					
YMR	Madison River	71.01 330	eP	P	19 16 03.6	+0.1
	comp=Z,65nm,1.1s					
YMR			epP	pP	19 17 06.5	+1.4
DGMT	Dagmar	71.03 336	eP	P	19 16 02.7	-0.6
	comp=Z,47nm,0.9s					
DGMT			epP	pP	19 17 06.2	+1.2
DGMT	Dagmar	71.03 336	P	P	19 16 03.5	+0.1
	baz=144,SNR=8.8					
GCMT	Greycliff	71.24 332	eP	P	19 16 04.8	0.0
GCMT			epP	pP	19 17 07.5	+1.1
YERR	Yerington	71.61 321	eP	P	19 16 07.9	+0.6
	comp=Z,94nm,1.2s					
YERR			epP	pP	19 17 11.0	+2.1
HLID	Hailey	71.94 327	eP	P	19 16 09.0	-0.1
	comp=Z,37nm,1.0s					
HLID	Hailey	71.94 327	P	P	19 16 10.1	+1.0
	baz=134,SNR=68					
BOZ	Bozeman (W)	72.01 330	eP	P	19 16 09.2	-0.2
	comp=Z,29nm,1.1s					
BOZ			epP	pP	19 17 11.0	-0.2
BOZ	Bozeman (W)	72.01 330	eP	P	19 16 09.3	-0.2
BOZ			e*PP	pP	19 17 11.0	-0.2
BOZ			pmax	pmax		
	comp=Z,29nm,1.1s					
BOZ	Bozeman (W)	72.01 330	P	P	19 16 09.7	+0.3
	baz=137,SNR=22					
DLMT	Dillon	72.31 330	eP	P	19 16 10.8	-0.4
	comp=Z,36nm,1.4s					
AFDM	Forest Hills D	72.64 320	eP	P	19 16 12.8	-0.3
	comp=Z,23nm,1.0s					
AFDM			epP	pP	19 17 17.1	+2.2
EGMT	Eagleton	72.97 333	eP	P	19 16 14.2	-0.7
	comp=Z,42nm,1.0s					
EGMT			epP	pP	19 17 17.1	+0.3
EGMT	Eagleton	72.97 333	P	P	19 16 14.8	-0.1
	baz=139,SNR=19					
ORV	Oroville	73.34 320	eP	P	19 16 18.1	+0.9
	comp=Z,93nm,1.0s					
ORV			epP	pP	19 17 21.0	+2.0
ORV	Oroville	73.34 320	eP	P	19 16 18.1	+0.9
ORV			e*PP	pP	19 17 21.0	+2.0
ORV			pmax	pmax		
	comp=Z,93nm,1.0s					
PLID	Pearl Lake	73.82 328	eP	P	19 16 20.3	+0.2
	comp=Z,50nm,1.0s					
O03E	Paynes Creek	73.97 321	P	P	19 16 20.9	0.0
	baz=128,SNR=11					
MSO	Missoula	74.01 330	P	P	19 16 21.7	+0.7
	baz=135,SNR=14					
BMO	Blue Mountains	74.34 327	eP	P	19 16 23.1	+0.1
	comp=Z,42nm,0.9s					
BMO			epP	pP	19 17 26.4	+1.5
BMO	Blue Mountains	74.34 327	eP	P	19 16 23.1	+0.1
BMO			e*PP	pP	19 17 26.5	+1.5
BMO			pmax	pmax		
	comp=Z,42nm,0.9s					
QSPA	South Pole Qui	74.40 180	eP	P	19 16 24.1	+1.0
	comp=Z,50nm,0.9s					
O02D	Mt. Diablo Mer	74.50 320	P	P	19 16 24.5	+0.5
	baz=127,SNR=10					
WDC	Whiskeytown Da	74.59 321	eP	P	19 16 23.7	-0.7
	comp=Z,18nm,0.7s					
WDC	Whiskeytown Da	74.59 321	eP	P	19 16 23.7	-0.7
WDC			pmax	pmax		
	comp=Z,18nm,0.7s					
M04C	Macdoel	74.91 322	P	P	19 16 27.3	+1.0
	baz=128,SNR=38					
N02D	Trinity Center	74.93 321	P	P	19 16 26.5	0.0
	baz=127,SNR=17					
I07A	Izee	75.02 325	eP	P	19 16 27.2	+0.3
	comp=Z,34nm,0.9s					
I07A			epP	pP	19 17 30.4	+1.3
M02C	Callahan	75.27 321	P	P	19 16 28.9	+0.6

baz=127,SNR=27
K04D Chiloquin, OR 75.37 323 P P 19 16 30.0 +1.1
baz=128
YBH Yreka Blue Hor 75.39 322 P P 19 16 28.9 -0.1
comp=Z,12nm,0.7s,baz=88,slow=3.0,SNR=48
YBH Yreka Blue Hor 75.39 322 *eP* **P 19 16 28.6 -0.4**
comp=Z,15nm,0.8s
L04D Klamath Falls 75.44 322 P P 19 16 29.9 +0.5
baz=128,SNR=17
FFC Flin Flon 75.46 341 *eP* **P 19 16 28.1 -0.9**
comp=Z,18nm,0.8s
FFC Flin Flon 75.46 341 *i P* **P 19 16 28.0 -0.9**
J05D Fort Rock, OR 75.48 324 P P 19 16 30.8 +1.2
baz=129,SNR=31
WALA Waterton Lakes 75.59 332 *eP* **P 19 16 29.8 -0.3**
comp=Z,20nm,1.0s
PINE Pine Mountain 75.63 324 *eP* **P 19 16 30.6 +0.1**
comp=Z,73nm,1.0s
J04D Umpqua Nationa 75.96 323 P P 19 16 33.3 +1.0
baz=128,SNR=16
TOA0 Torodi Ar. Sit 76.00 72 *eP* **P 19 16 31.3 -1.6**
comp=Z,50nm,0.7s
TORD Torodi Ar. Bea 76.00 72 P P 19 16 31.6 -1.3
comp=Z,38nm,0.7s,baz=243,slow=6.0,SNR=12
HUMO Hull Mountain 76.06 322 *eP* **P 19 16 32.4 -0.3**
comp=Z,9.1nm,0.9s
L02E Cave Junction 76.18 322 P P 19 16 34.7 +1.3
baz=126,SNR=20
I05D Terrebonne, OR 76.20 324 P P 19 16 35.1 +1.6
baz=129,SNR=17
I04A Tendick Farm, 76.47 324 P P 19 16 35.4 +0.4
baz=128,SNR=27
HAWA Hanford 76.53 327 *eP* **P 19 16 35.4 +0.1**
comp=Z,38nm,1.0s
K02D Willamette Mer 76.54 322 P P 19 16 36.9 +1.4
baz=126,SNR=22
NEW Newport 76.56 329 *eP* **P 19 16 34.7 -0.7**
comp=Z,10nm,1.1s
NEW Newport 76.56 329 *eP* **P 19 16 34.7 -0.7**
NEW pmax pmax
comp=Z,10.0nm,1.1s
NEW Newport 76.56 329 P P 19 16 35.2 -0.2
baz=133,SNR=6.0
G05D Wamic, OR 76.75 325 P P 19 16 38.4 +1.9
baz=129
I03D Drain, OR 76.95 323 P P 19 16 38.7 +1.1
baz=127,SNR=6.9
J01E Myrtle Point 76.97 322 P P 19 16 39.4 +1.6
baz=126,SNR=8.0
H04D Lebanon 77.10 324 P P 19 16 38.9 +0.5
baz=128,SNR=6.6
F05D White Salmon 77.24 326 P P 19 16 40.6 +1.4
baz=129
COR Corvallis 77.46 324 *eP* **P 19 16 40.6 +0.2**
comp=Z,67nm,1.0s
COR Corvallis 77.46 324 *eP* **P 19 16 40.6 +0.2**
COR pmax pmax
comp=Z,67nm,1.0s
I02D Swisshome 77.48 323 P P 19 16 42.1 +1.6
baz=127,SNR=9.7
MORF Marmelete 77.79 45 *eP* **P 19 16 44.5 +2.0**
G03D McMinnville, O 77.82 324 P P 19 16 43.9 +1.6
baz=127
F04D Rainier, OR 78.21 325 P P 19 16 46.1 +1.6
baz=128
C06D Leavenworth 78.23 328 P P 19 16 45.2 +0.6
baz=130
E04D Cinebar 78.26 326 P P 19 16 45.6 +0.8
baz=128,SNR=5.1
PBDV Barranco-do-Ve 78.26 46 *eP* **P 19 16 46.3 +1.3**
PNCL Nicolau / Gran 78.29 45 *eP* **P 19 16 46.0 +0.9**
MESJ Messejana 78.36 45 *eP* **P 19 16 47.1 +1.6**
PCVE Castro Verde 78.38 45 *eP* **P 19 16 46.1 +0.5**
PBEJ Beja 78.69 45 *eP* **P 19 16 49.6 +2.3**
D04E Lakebay 78.75 326 P P 19 16 48.9 +1.5
baz=128
EVO Evora 78.85 45 *eP* **P 19 16 49.2 +1.0**
PMTG Montargil 78.98 44 *eP* **P 19 16 49.5 +0.6**
B05A Bryant 79.07 327 P P 19 16 49.3 +0.2
baz=129,SNR=28
D03D Eldon 79.14 326 P P 19 16 50.6 +1.0
baz=128,SNR=13
NLWA Neilton Lookou 79.47 326 *eP* **P 19 16 51.6 +0.3**
comp=Z,58nm,1.1s
A04D Lummi Island 79.67 327 P P 19 16 53.3 +0.9
baz=128,SNR=11
PCAB Cabril 80.46 42 *eP* **P 19 16 57.5 +0.7**
WIN Windhoek 81.01 111 *eP* **P 19 16 59.9 -0.5**
comp=Z,25nm,0.8s
WIN Windhoek 81.01 111 *eP* **P 19 16 59.9 -0.5**
WIN pmax pmax
comp=Z,25nm,0.8s
PBRG Braganca 81.34 42 *eP* **P 19 17 02.0 +0.6**
SBA Scott Base 81.35 190 *eP* **P 19 17 02.5 +1.7**
comp=Z,34nm,1.0s
SBA Scott Base 81.35 190 *eP* **P 19 17 02.5 +1.7**
SBA pmax pmax
comp=Z,34nm,1.0s
PAB San Pablo 81.83 45 *eP* **P 19 17 02.7 -1.4**
comp=Z,6.6nm,0.6s
PAB San Pablo 81.83 45 *eP* **P 19 17 02.7 -1.4**
PAB pmax pmax
comp=Z,7.0nm,0.6s
SUR Sutherland 81.95 121 *eP* **P 19 17 05.1 -0.1**
comp=Z,25nm,0.8s
SYO Syowa Base 82.03 160‖ *eP* **P 19 17 01.7 -2.8**
SYO Syowa Base 82.03 160‖ *i X* **P 19 17 04.2 -0.3**
ESDC Sonseca Array 82.16 45 P P 19 17 05.6 -0.1
comp=Z,1.3nm,0.4s,baz=255,slow=5.1,SNR=18
ESDC pP **pP 19 18 08.7 +0.3**
comp=Z,1.5nm,0.7s,baz=256,slow=5.7,SNR=2.8
TSUM Tsumeb 82.24 108 *i P* **P 19 17 07.5 +0.7**
TSUM Tsumeb 82.24 108 *eP* **P 19 17 07.0 +0.2**
comp=Z,70nm,0.8s
TSUM Tsumeb 82.24 108 *i P* **P 19 17 07.5 +0.7**
VNDA Vanda 82.38 190 P P 19 17 08.2 +2.0
comp=Z,13nm,0.9s,baz=131,slow=4.8,SNR=56
VNDA Vanda 82.38 190 *eP* **P 19 17 07.4 +1.2**
comp=Z,21nm,1.1s
VNDA *ep*P **pP 19 18 12.2 +2.5**
VNDA Vanda 82.38 190 *eP* **P 19 17 07.4 +1.2**
VNDA *e**PP **pP 19 18 12.2 +2.5**
VNDA pmax pmax
comp=Z,21nm,1.1s
TAM Tamanrasset 82.75 64 *eP* **P 19 17 08.7 -0.6**
comp=Z,8.8nm,0.7s
TAM Tamanrasset 82.75 64 *eP* **P 19 17 08.7 -0.6**
TAM pmax pmax
comp=Z,9.0nm,0.7s
YKA Yellowknife Ar 85.63 341 P P 19 17 22.1 -0.5
comp=Z,22nm,0.7s,baz=132,slow=5.0,SNR=128
YKA pP **pP 19 18 26.7 +0.4**
comp=Z,7.3nm,0.8s,baz=135,slow=5.2,SNR=5.8
YKB5 Yellowknife Ar 85.63 341 *eP* **P 19 17 22.1 -0.5**
YKB5 *ep*P **pP 19 18 26.7 +0.4**
YKW3 Yellowknife Ar 85.68 341 *eP* **P 19 17 21.8 -1.1**
comp=Z,34nm,0.9s
YKW3 *ep*P **pP 19 18 26.6 0.0**
BOSA Boshof 86.62 119 *i P* **P 19 17 28.3 -0.2**
BOSA Boshof 86.62 119 P P 19 17 28.5 0.0
comp=Z,7.1nm,0.6s,baz=242,slow=4.1,SNR=18
BOSA Boshof 86.62 119 *eP* **P 19 17 27.4 -1.1**
comp=Z,18nm,1.2s
BOSA *ep*P **pP 19 18 33.0 +0.7**
BOSA Boshof 86.62 119 *eP* **P 19 17 27.5 -1.1**
BOSA *e**PP **pP 19 18 33.1 +0.7**
BOSA pmax pmax
comp=Z,18nm,1.2s
BOSA Boshof 86.62 119 *i P* **P 19 17 28.3 -0.2**
LBTB Lobatse 87.91 115 *eP* **P 19 17 34.0 -0.7**
comp=Z,24nm,0.9s
LBTB Lobatse 87.91 115 *eP* **P 19 17 34.0 -0.7**
LBTB pmax pmax
comp=Z,24nm,0.9s
BORG Borgarnes 88.18 19 *i P* **P 19 17 37.8 +3.0**
WRAK Wrangell Islan 88.89 330 *eP* **P 19 17 38.5 +0.2**
comp=Z,44nm,1.0s
DLBC Dease Lake 88.89 333 P P 19 17 38.8 +0.4
comp=Z,34nm,0.9s,baz=126,slow=4.5,SNR=50
CLF Chambon-Foret 89.85 40 *eP* **P 19 17 42.0 -1.0**
comp=Z,16nm,0.8s
MAW Mawson 89.95 164 P P 19 17 44.4 +1.2
comp=Z,35nm,1.0s,baz=214,slow=6.3,SNR=52
MAW Mawson 89.95 164 *eP* **P 19 17 44.1 +1.0**
comp=Z,6.6nm,0.9s
MAW Mawson 89.95 164 *eP* **P 19 17 44.2 +1.0**

MAW pmax pmax
comp=Z,7.0nm,0.9s
KEST Kesra 90.28 53 P P 19 17 44.0 -1.4
comp=Z,3.7nm,0.6s,baz=217,slow=4.0,SNR=4.6
KEST Kesra 90.28 53 *eP* **P 19 17 44.0 -1.4**
comp=Z,19nm,1.3s
SUMG Summit 90.51 9 *eP* **P 19 17 45.3 -0.7**
comp=Z,28nm,1.1s
SUMG *ep*P **pP 19 18 50.9 +0.3**
SUMG Summit 90.51 9 *eP* **P 19 17 45.3 -0.7**
SUMG *e**PP **pP 19 18 50.9 +0.3**
SUMG pmax pmax
comp=Z,28nm,1.1s
JIS Juneau Island 90.78 331 *eP* **P 19 17 47.7 +0.7**
comp=Z,48nm,1.5s
RES Resolute Bay 91.67 353 P P 19 17 50.2 -0.6
comp=Z,3.2nm,0.6s,baz=217,slow=5.7,SNR=10
MATP Matopo 91.80 112 *i P* **P 19 17 54.1 +1.2**
MATP Matopo 91.80 112 *i P* **P 19 17 54.1 +1.2**
BLWY Bulawayo 91.99 111 *i P* **P 19 17 54.3 +0.5**
BLWY Bulawayo 91.99 111 *i P* **P 19 17 54.3 +0.5**
MSNA Messina 92.57 114 *i P* **P 19 17 58.1 +1.8**
MSNA Messina 92.57 114 *i P* **P 19 17 58.1 +1.8**
INK Inuvik 95.39 340 P P 19 18 07.7 -0.4
comp=Z,8.4nm,1.0s,baz=92,slow=2.5,SNR=10
EPYK Eagle Plains 95.57 338 P P 19 18 08.7 -0.2
baz=117
EGAK Eagle 96.57 336 *eP* **P 19 18 12.9 -0.5**
comp=Z,8.5nm,1.4s
GEC2 GERESS Array S 97.30 41 *eP* **P 19 18 15.2 -2.1**
comp=Z,6.3nm,1.6s
GEC2 GERESS Array S 97.30 41 *eP* **P 19 18 15.2 -2.1**
GEC2 pmax pmax
comp=Z,6.0nm,1.6s
GERES GERESS Array B 97.30 41 P P 19 18 16.3 -1.0
comp=Z,0.7nm,0.6s,baz=222,slow=1.8,SNR=8.3
CLL Collm 97.53 39 *eP*dif **P 19 18 16.0 -2.1**
CLL *eP*P **PP 19 22 23.0 +3.7**
ILAR Eielson Array 98.86 335 P Pdif 19 18 22.6 -1.1
comp=Z,1.0nm,1.0s,baz=157,slow=3.5,SNR=8.0
ILAR PP PP 19 22 21.2 -8.0
comp=Z,0.8nm,0.8s,baz=110,slow=6.4,SNR=6.6
ILB Eielson Array 98.86 335 *eP*dif Pdif 19 18 22.8 -0.9
comp=Z,12nm,1.8s
POKR Poker Plat Res 99.19 335 P Pdif 19 18 24.9 -0.3
baz=107
COLA College 99.29 335 *i P* **Pdif 19 18 25.1 -0.5**
COLA pmax pmax
comp=Z,5.0nm,1.0s
TCOL CIGO, UAF Yank 99.29 335 P Pdif 19 18 25.2 -0.5
baz=107
SPITS Spitsbergen Ar 104.46 12 PKKPab PKKPab 19 34 53.0 +0.8
comp=Z,1.8nm,0.4s,baz=81,slow=8.9,SNR=10
FINES FINESS Array B 106.35 30 PKiKP **PKiKP 19 23 08.0 +1.1**
comp=Z,1.0nm,0.8s,baz=184,slow=5.6,SNR=3.7
FINES PKKPbc **PKKPbc 19 34 28.9 -1.8**
comp=Z,3.5nm,1.1s,baz=123,slow=5.1,SNR=3.4
ARCES ARCESS Array B 106.39 21 PKKPbc PKKPbc 19 34 29.4 -1.5
comp=Z,0.6nm,0.4s,baz=99,slow=2.9,SNR=11
BRTR Keskin Array B 109.89 53 PKiKP **PKiKP 19 23 15.3 +0.9**
comp=Z,1.6nm,0.9s,baz=185,slow=3.8,SNR=7.7
BRTR SKP 19 26 24.9
comp=Z,1.2nm,0.9s,baz=191,slow=5.7,SNR=4.7
KIV Kislovodsk 116.68 48 *e*PKiKP **PKiKP 19 23 28.7 +1.5**
KIV pmax pmax
comp=Z,11nm,1.1s
KBZ Khabaz 116.84 49 PKP **PKiKP 19 23 28.5 +1.2**
comp=Z,7.3nm,0.8s,baz=211,slow=3.3,SNR=17
KBZ SKP 19 26 39.7
comp=Z,4.9nm,0.9s,baz=121,slow=1.3,SNR=9.8
BILL Bilibino 117.00 340‖ *i*PKiKP **PKiKP 19 23 27.2 +0.2**
BILL *e* 19 24 42.4
BILL 19 29 49.0
BILL SS SS 19 40 24.0 -3.1
BILL SSS SSS 19 44 46.0
BILL pmax pmax
comp=Z,3.0nm,1.1s
ZEI Tsey 117.64 50 *i*PKiKP **PKPdf 19 23 28.6 -0.6**
ZEI pmax pmax
comp=Z,8.0nm,0.4s
TIXI Tiksi 123.06 353 PKP **PKPdf 19 23 38.1 -0.4**
comp=Z,3.6nm,0.8s,baz=66,slow=1.0,SNR=3.6
TIXI SKP 19 26 50.1
comp=Z,2.4nm,0.8s,baz=111,slow=2.6,SNR=4.5
ARU Arti 123.64 32 *e*PKPdf **PKPdf 19 23 40.1 0.0**
ARU Arti 123.64 32 *i*PKiKP **PKiKP 19 23 41.0 +0.7**
ARU 19 25 28.0
ARU 19 30 26.7
ARU SP SP 19 34 58.1 +2.4
STKA Stephens Creek 124.04 212 PKP **PKiKP 19 23 42.6 +0.6**
comp=Z,7.2nm,0.6s,baz=110,slow=4.5,SNR=22
STKA Stephens Creek 124.04 212 *e*PKPdf **PKiKP 19 23 42.2 +0.2**
SVE Sverdlovsk 124.51 31 *e*PKiKP **PKiKP 19 23 43.2 +1.2**
SEY Seymchan 124.62 338 PKP **PKiKP 19 23 43.6 +1.5**
comp=Z,8.2nm,0.8s,baz=99,slow=2.5,SNR=17
SEY SKP 19 26 54.6
comp=Z,3.4nm,0.7s,baz=76,slow=2.8,SNR=7.3
AKTO Aktyubinsk 125.61 39 PKiKP **PKPdf 19 23 43.3 -0.7**
AB31 Akbulak array 127.19 39 PKiKP **PKiKP 19 23 48.3 +0.7**
AB31 pmax pmax
comp=Z,1.0nm,0.7s
ABKAR Akbulak array 127.19 39 *e*PKPdf **PKiKP 19 23 47.4 -0.2**
MA2 Magadan 127.34 336 SKPbc SKPbc 19 26 42.9
comp=Z,2.8nm,0.8s,baz=194,slow=17,SNR=3.5
PEA1 Petropavlovsk- 127.59 326 *e*PKPdf **PKiKP 19 23 49.3 +1.0**
PETK Petropavlovsk- 127.59 326 PKP **PKiKP 19 23 49.3 +1.0**
comp=Z,7.9nm,0.9s,baz=99,slow=5.0,SNR=12
PETK SKPbc SKPbc 19 26 42.8
comp=Z,8.0nm,0.8s,baz=94,slow=6.0,SNR=10.0
GEYT Alibeck 129.03 54 PKP **PKiKP 19 23 52.1 +0.4**
comp=Z,6.0nm,0.8s,baz=264,slow=4.5,SNR=18
GEYT SKPbc SKPbc 19 26 50.9 +3.9
comp=Z,1.4nm,0.8s,baz=87,slow=7.6,SNR=3.9
GYA0B ALIBECK ARRAY 129.03 54 *e*PKPdf **PKiKP 19 23 51.6 -0.1**
SKR Severo-Kuril's 129.57 324c *i*PKiKP **PKiKP 19 23 55.2 +2.9**
CTA Charters Tower 129.98 226 PKP **PKiKP 19 23 54.7 +0.5**
comp=Z,3.1nm,0.8s,baz=240,slow=0.9,SNR=4.4
CTA SKPbc SKPbc 19 26 52.7 +1.6
comp=Z,3.5nm,0.8s,baz=198,slow=3.2,SNR=4.5
BRVK Borovoye 131.21 31 *e*PKPdf **PKiKP 19 23 55.5 0.0**
BRVK Borovoye 131.21 31c *i*PKiKP **PKiKP 19 23 56.5 +0.9**
BRVK pmax pmax
comp=Z,15nm,1.7s
YAK Yakutsk 131.83 348 *e*PKPdf **PKiKP 19 23 56.4 -0.1**
YAK Yakutsk 131.83 348 *e*PKiKP **PKiKP 19 23 56.4 -0.1**
ASAR Alice Springs 134.64 211 PKiKP PKPpre 19 23 47.0
comp=Z,1.0nm,0.5s,baz=161,slow=1.9,SNR=38
ASAR PKP **PKPdf 19 24 02.6 +0.6**
comp=Z,11nm,0.8s,baz=128,slow=1.7,SNR=38
ASAR SKPbc **SKPbc 19 27 07.6 +0.2**
comp=Z,6.7nm,0.6s,baz=143,slow=3.7,SNR=20
AS31 Alice Springs 134.64 211 *e*SKPbc **SKPbc 19 27 08.0 +0.6**
OTUK Ortayu 134.96 36 PKiKP **PKiKP 19 24 03.1 -0.3**
OTUK pmax pmax
comp=Z,9.0nm,1.1s
KK31 Karatay Array 136.38 43 *e*PKPdf **PKPdf 19 24 04.7 0.0**
KK31 Karatay Array 136.38 43 *i*PKiKP **PKiKP 19 24 05.5 -0.9**
KK31 pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 136.72 29 *e*PKPdf **PKPdf 19 24 05.6 +0.6**
KURK Kurchatov 136.72 29 *e*PKiKP **PKPdf 19 24 05.6 +0.6**
ZAA0 Zalesovo Array 136.93 22 *e*PKPdf **PKPdf 19 24 05.9 +0.6**
ZALV Zalesovo Beam 136.93 22 PKhKP PKPpre 19 24 00.1
comp=Z,5.4nm,0.9s,baz=302,slow=2.6,SNR=11
ZALV PKP **PKiKP 19 24 06.6 -0.6**
comp=Z,27nm,0.6s,baz=295,slow=2.9,SNR=54
ZALV SKPbc **SKPbc 19 27 13.7 +0.4**
comp=Z,12nm,0.8s,baz=337,slow=5.3,SNR=11
CHGR Chuyangaron 137.19 50 *e*PKPdf **PKPdf 19 24 05.3 -1.0**
WR1 Warramunga Arr 137.50 214 *e*PKPpre PKPpre 19 23 57.4
WR1 *e*PKPdf **PKiKP 19 24 08.9 -0.4**
WRA Warramunga Arr 137.50 214 PKhKP PKPpre 19 23 57.4
comp=Z,1.9nm,0.4s,baz=158,slow=2.4,SNR=16
WRA PKP **PKiKP 19 24 09.0 -0.4**
comp=Z,8.2nm,0.4s,baz=178,slow=1.9,SNR=27
WRA Warramunga Arr 137.50 214 PKiKP **PKiKP 19 24 09.0 -0.4**
WRAB Tennant Creek 137.50 214 *e*PKPdf **PKPdf 19 24 07.0 -0.4**
BTK Batken 137.86 47 *e*PKPdf **PKPdf 19 24 06.6 -1.0**
BTK Batken 137.86 47 *e*PKiKP **PKPdf 19 24 06.6 -1.0**
GAR Garm 137.91 49 *e*PKPdf **PKPdf 19 24 08.6 +0.8**
GAR Garm 137.91 49 *e*PKiKP **PKPdf 19 24 08.6 +0.8**
AAK Ala-Archa 139.18 42 *e*PKPdf **PKPdf 19 24 10.3 +0.3**
AAK Ala-Archa 139.18 42c *i*PKiKP **PKiKP 19 24 11.6 -0.7**
AAK pmax pmax
comp=Z,17nm,1.3s

ZEA Zeya 139.91 345 *e*PKHKP PKPpre 19 24 04.6
ZEA pmax pmax
comp=Z,14nm,1.2s
ASAJ Asahikawa 140.81 323 SKPbc **SKPbc 19 27 25.1 +0.8**
comp=Z,5.4nm,0.9s,baz=276,slow=21,SNR=5.1
MAKZ Makanchi 141.00 31 *e*PKPdf **PKPdf 19 24 12.7 -0.3**
MAKZ Makanchi 141.00 31 PKiKP **PKPdf 19 24 11.7 -1.3**
MAKZ pmax pmax
comp=Z,10.0nm,1.2s
KDJ Kajisay 141.14 41 *e*PKPdf **PKPdf 19 24 13.5 -0.1**
MK31 Makanchi Array 141.17 31 *e*PKPdf **PKPdf 19 24 12.2 -1.1**
MK31 Makanchi Array 141.17 31 *e*PKiKP **PKPdf 19 24 12.2 -1.1**
MK32 Makanchi Array 141.17 31 *e*PKPpre PKPpre 19 24 07.7
MK32 *e*SKPbc **SKPbc 19 27 24.6 -0.7**
MKAR Makanchi Array 141.17 31 PKhKP PKPpre 19 24 07.7
comp=Z,1.3nm,0.6s,baz=326,slow=2.4,SNR=13
MKAR PKP **PKPdf 19 24 13.0 -0.3**
comp=Z,2.3nm,0.5s,baz=305,slow=2.1,SNR=19
MKAR SKPbc **SKPbc 19 27 24.6 -0.7**
comp=Z,6.8nm,0.7s,baz=326,slow=2.4,SNR=17
MKAR SKKPbc **SKKPab 19 35 50.9 -0.9**
comp=Z,1.2nm,0.8s,baz=115,slow=6.5,SNR=6.6
KSH Kashi 141.67 45 PKP **PKiKP 19 24 17.0 -0.5**
KSH PP **PP 19 27 27.0 +5.7**
KSH SKKS 19 33 50.8
KSH AMB AMB
comp=Z,190nm,7.2s
KSH LR LR
comp=Z,150nm,9.4s
KSH LR LR
comp=Z,130nm,6.1s
KSH LR LR
comp=Z,260nm,15.4s
PDGK Podgornoye 141.87 38 PKiKP **PKPdf 19 24 16.1 +1.3**
PDGK pmax pmax
comp=Z,11nm,1.3s
KLR Kul'dur 142.40 337 PKhKP PKPpre 19 24 11.5
comp=Z,4.2nm,0.7s,baz=49,slow=2.3,SNR=9.3
KLR SKP 19 27 21.7
comp=Z,1.7nm,0.7s,baz=355,slow=6.8,SNR=4.6
KLR SKPbc **SKiKP 19 27 29.5 0.0**
comp=Z,4.8nm,1.0s,baz=337,slow=6.3,SNR=6.2
FITZ Fitzroy Crossi 143.21 204 *e*PKPdf PKPbc 19 24 16.3 +0.9
MOY Mondy 143.38 10 *e*PKiKP PKPbc 19 24 15.2 +0.1
MOY pmax pmax
comp=Z,19nm,2.3s
TLY Talaya 143.75 7 *e*PKPdf PKPbc 19 24 16.4 +0.3
TLY Talaya 143.75 7 *e*PKiKP PKPbc 19 24 16.1 +0.1
TLY pmax pmax
comp=Z,45nm,0.9s
ZAK Zakamensk 144.97 8 *e*PKiKP PKPbc 19 24 19.6 -0.3
ZAK *e* 19 25 26.4
ZAK pmax pmax
comp=Z,33nm,1.1s
ZAK pmax pmax
comp=Z,12nm,1.8s
MTN Manton Dam 145.03 217 *e*PKPdf **PKPbc 19 24 20.7 -0.2**
JAY Jayapura 145.07 241 PKPbc **PKiKP 19 24 23.4 -1.7**
comp=Z,16nm,0.9s,baz=177,slow=6.7,SNR=9.0
GENI Genyem 145.48 241 PKP **PKPdf 19 24 22.0 +0.2**
GENI PKP **PKPab 19 24 22.7 -0.3**
HIA Hailar 145.75 349 *e*PKPdf **PKPbc 19 24 21.7 -0.5**
HIA Hailar 145.75 349 *e*PKP2 **PKPbc 19 24 21.7 -0.5**
WMQ Urumqi 145.95 30 *e*PKPbc **PKPdf 19 24 21.0 -0.8**
USA0B Ussuriysk Arra 146.32 332 *e*PKPdf **PKPbc 19 24 23.1 -0.9**
USRK Ussuriysk Ar. 146.32 332 PKPbc **PKPab 19 24 25.1 -0.2**
comp=Z,33nm,0.7s,baz=2.0,slow=2.6,SNR=99
USRK SKPbc **SKiKP 19 27 39.0 +1.2**
comp=Z,4.2nm,0.7s,baz=273,slow=2.9,SNR=7.9
GUMO Guam 146.74 271 PKPbc **PKPbc 19 24 26.2 +0.2**
comp=Z,35nm,0.7s,baz=117,slow=7.7,SNR=4.3
MDJ Mudanjiang 147.03 335 PKPbc **PKPdf 19 24 24.5 +1.0**
MDJ Mudanjiang 147.03 335 *e*PKPdf **PKPdf 19 24 24.4 +1.0**
SONA0 Songino Array 147.84 5 *e*PKPbc **PKPbc 19 24 28.8 +0.7**
SONM Songino Array 147.84 5 PKPbc **PKPbc 19 24 28.8 +0.7**
comp=Z,22nm,0.6s,baz=326,slow=1.8,SNR=58
SONM *p*PKPbc **pPKPab 19 25 35.9 -1.1**
comp=Z,4.1nm,0.7s,baz=353,slow=1.7,SNR=2.3
SONM SKPbc **SKiKP 19 27 42.9 +1.9**
comp=Z,2.4nm,0.8s,baz=308,slow=0.9,SNR=3.6
ULN Ulaanbaatar 147.86 4 *e*PKPdf **PKPdf 19 24 25.7 +0.7**
ULN Ulaanbaatar 147.86 4 *e*PKiKP **PKPdf 19 24 25.7 +0.7**
MJAR Matsushiro Arr 147.86 315 PKPbc **PKiKP 19 24 29.6 -0.6**
comp=Z,33nm,0.9s,baz=171,slow=0.6,SNR=63
MJAR pPKPbc **pPKPbc 19 25 35.3 -0.1**
comp=Z,7.4nm,0.7s,baz=103,slow=1.2,SNR=4.9
MAJO Matsushiro 147.86 315 *e*PKPdf **PKPdf 19 24 26.4 +1.2**
MAJO Matsushiro 147.86 315 *e*PKiKP **PKPdf 19 24 26.4 +1.2**
CN2 Changchun 149.31 339 *e*PKPbc **PKPbc 19 24 29.5 -2.3**
BATI Baumata 151.11 208 PKPbc **PKiKP 19 24 38.3 +0.8**
comp=Z,30nm,0.5s,baz=314,slow=1.5,SNR=8.9
FAKI Fak Fak 151.61 231 *e*PKPbc **PKiKP 19 24 39.2 +0.6**
FAKI Fak Fak 151.61 231 PKP **PKiKP 19 24 40.6 +2.1**
PYUN Piuthan 151.73 60 *eP* **PKPdf 19 24 32.5 +0.8**
comp=Z,267nm,0.9s
DANN Dangsing 152.28 59 *eP* **PKPdf 19 24 34.4 +1.7**
comp=Z,267nm,0.7s
GKN Gorkha 153.12 59 *eP* **PKPdf 19 24 35.2 +1.5**
comp=Z,70nm,0.7s
KSRS Korea Array 153.47 328 PKP **PKPdf 19 24 35.5 +1.8**
comp=Z,7.7nm,1.0s,baz=42,slow=1.1,SNR=32
KSRS PKPbc **PKiKP 19 24 42.7 +1.1**
comp=Z,20nm,0.9s,baz=32,slow=1.6,SNR=35
KS15 Wonju Array Si 153.50 328 *e*PKPdf **PKPdf 19 24 33.8 +0.1**
KS15 *e*PKPbc **PKiKP 19 24 43.0 +1.3**
SIJI Sorong 153.68 233 PKPbc **PKiKP 19 24 44.1 +1.3**
comp=Z,7.2nm,0.7s,baz=356,slow=14,SNR=7.1
KKN Kakani 153.73 59 *eP* **PKPdf 19 24 35.4 +0.7**
comp=Z,46nm,0.6s
PKIN Phulchoki 153.91 59 *eP* **PKPdf 19 24 35.5 +0.5**
comp=Z,20nm,0.8s
PKI Pulchoki 153.92 59 *eP* **PKPdf 19 24 35.6 +0.5**
comp=Z,27nm,0.9s
GUN Gumba 154.18 58 *eP* **PKPdf 19 24 36.9 +1.4**
JIRN Jiri 154.53 58 *eP* **PKPdf 19 24 36.9 +0.9**
comp=Z,7.6nm,0.3s
GTA Gaotai 154.64 20 ⇑PKPbc **PKPdf 19 24 36.5 +1.0**
GTA PKPab **PKPab 19 24 59.0 -1.0**
GTA pPKP pPKPdf 19 25 39.0 -4.4
GTA sPKP 19 26 06.3
GTA PP **PP 19 28 39.8 +4.1**
GTA SS SS 19 47 57.3 +2.8
GTA AMB AMB
comp=Z,41nm,7.9s
GTA LR LR
comp=Z,72nm,21.6s
GTA LR LR
comp=Z,73nm,19.0s
GTA LR LR
comp=Z,110nm,19.7s
JNU Nakatsue 154.75 317 PKPbc **PKiKP 19 24 46.1 +1.6**
comp=Z,5.3nm,1.0s,baz=135,slow=1.4,SNR=4.0
HHC Hu-ho-hao-te 154.99 358 *e*PKPbc **PKPdf 19 24 31.8 -4.1**
LSA Lhasa 157.42 49 *e*PKPdf **PKPdf 19 24 40.5 +0.6**
LSA Lhasa 157.42 49 *e*PKiKP **PKPdf 19 24 40.5 +0.6**
KAPI Kappang 157.43 205 PKPab **PKPab 19 25 14.0 +1.6**
comp=Z,20nm,0.8s,baz=236,slow=5.3,SNR=8.5
LZH Lanzhou 158.90 15 *e*PKP **PKPdf 19 24 36.3 -4.8**
LZH pPKP pPKPdf 19 25 48.0 -1.1
LZH sPKP 19 26 16.0
XAN Xi'an 161.75 4 PKP **PKPdf 19 24 46.0 +1.9**
XAN LR LR
comp=Z,120nm,20.6s
XAN LR LR
comp=Z,150nm,17.7s
XAN LR LR
comp=Z,120nm,18.6s
XAN Xi'an 161.75 4 *e*PKPdf **PKPdf 19 24 45.5 +1.4**
NJ2 Nanjing 162.10 336 *e*PKP **PKPdf 19 24 43.3 -1.1**
PSI Prapat 162.78 137 *e*PKPdf **PKPdf 19 24 45.3 -0.5**
PSI *e*PKPab **PKPab 19 25 36.6 +0.6**
PSI Prapat 162.78 137 *e*PKiKP **PKPdf 19 24 45.3 -0.5**
PSI *e* 19 25 36.6
CD2 Chengdu 163.70 21 PKP **PKPdf 19 24 44.5 -1.6**
MYKOM Kota Tinggi 164.63 154 *e*PKPab **PKPab 19 25 44.5 +0.7**
WHN Wuhan 164.88 347 PKP **PKPdf 19 24 47.8 +0.8**
ENH Enshi 165.53 4 *e*PKPdf **PKPdf 19 24 48.0 +0.3**
ENH *e*PKPab **PKPab 19 25 46.4 -1.1**
KSM Kuching 165.80 179 *e*PKPdf **PKPdf 19 24 48.8 +0.5**
KSM *e*PKPab **PKPab 19 25 49.9 +1.0**
SBUM Sibu 166.67 187 *e*PKPdf **PKPdf 19 24 50.3 +1.3**
SBUM *e*PKPab **PKPab 19 25 54.5 +1.7**
SSLB Suanglung 167.36 311 *e*PKPdf **PKPdf 19 24 50.3 +1.1**
CHTO Chiang Mai 168.52 73 *e*PKPdf **PKPdf 19 24 50.4 +0.2**

CHTO	Chiang Mai	168.52	73	*e*PKIKP	PKPdf	19 24 50.4	+0.2
CMMT	Chiang Mai	168.53	73	PKP	PKPdf	19 24 51.6	+1.4
CM31	Chiang Mai Arr	168.60	75	*e*PKPdf	PKPdf	19 24 51.2	+1.0
CMAR	Chiang Mai Arr	168.60	75	PKP	PKPdf	19 24 51.1	+0.9
	comp=Z,3.2nm,0.8s,baz=285,slow=2.1,SNR=24						
CMAR				PKPab	PKPab	19 26 01.0	-0.6
	comp=Z,2.8nm,0.6s,baz=280,slow=6.0,SNR=26						
CMAR				PP	PP	19 29 52.4	+0.8
	comp=Z,1.6nm,1.0s,baz=266,slow=5.9,SNR=6.0						
GYA	Guiyang	168.76	18⇑	PKPdf	PKPdf	19 24 51.5	+1.2
GYA				pPKP	PKPab	19 26 01.5	-0.5
GYA				PP	PP	19 29 54.5	+4.0
GYA				AMB	AMB		
	comp=Z,80nm,10.3s						
PAYA	Payao	169.22	69	PKP	PKPdf	19 24 52.4	+1.8
NANT	Nan	170.13	71	PKP	PKPdf	19 24 52.7	+1.6
UTTA	Uttaradit	170.24	77	PKP	PKPdf	19 24 53.3	+2.1
PBKT	Sadao Pong	170.78	84	PKP	PKPdf	19 24 52.6	+1.1
CHAI	Chaiyaphum	171.77	88	PKP	PKPdf	19 24 53.4	+1.4
NONG	Nongkai	172.57	71	PKP	PKPdf	19 24 53.5	+1.2
SKNT	Sakolnakorn	173.60	78	PKP	PKPdf	19 24 54.5	+1.7
PANO	Nakornpanom	174.15	76	PKP	PKPdf	19 24 54.9	+2.0

*IDC **29** 19:15:12.1±1.2,56°.30N×162°.96E,h0km,mb3.5/6, mb1 3.7/8,mb1mx3.4/54,mbtmp3.5/8,ML2.9/2,Error ellipse: s-maj=37.0km s-min=20.0km az=148.0*
*ISCJB **29** 19:15:13.6±0.7,56°.32N±0°.04×163°.05E±0°.06,h18km±5km, mb3.5/6,Error ellipse: s-maj=6.2km s-min=5.7km az=145.3*
*KRSC **29** 19:15:13.4±1.1,56°.16N×163°.03E,h15km±6km,ML4.1, FELT [IV] at Krutoberegovo; [III] at Ust-Kamchatsk.*
ISC 29 19:15:13.3±1.3,56°.36N±0°.05×163°.01E±0°.04,h11km±7km, n48,σ1§45/60,mb3.6/6,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.19	215	*i* P	Pg	19 15 17.6	+0.3
KBG	Krutoberegovo	0.20	238	*i* P	Pg	19 15 18.1	+0.6
KBG				*i* S	Sg	19 15 20.7	+0.3
SMKR	Semkarok	0.89	285	*e*P	Pn	19 15 31.2	-0.6
SMKR				*e*S	Sn	19 15 45.6	+1.0
BDR	Baidarnaya	1.02	282	*e*P	Pn	19 15 33.2	-0.5
BDR				*e*S	Sb	19 15 46.4	-0.1
SRKR	Sorokina	1.06	287	*e*P	Pn	19 15 34.3	+0.1
CIRR	Tsirk	1.29	260	*e*P	Pn	19 15 36.9	-0.5
KLY	Klyuchi	1.31	269	*i* P	Pn	19 15 35.5	-2.1
KLY				*e*S	Sb	19 15 51.5	-3.3
LGNR	Loginova	1.33	259	*e*P	Pn	19 15 37.6	-0.4
BZGR	Bezymyannyi-Gr	1.36	253	*e*P	Pn	19 15 37.7	-0.7
KRSR	Krestovskiy	1.37	265	*e*P	Pn	19 15 37.7	-0.8
KRSR				*e*S	Sb	19 15 56.3	-0.3
BZWR	Bezymyannyi-We	1.46	255	*e*P	Pn	19 15 39.3	-0.5
KIRR	Kirishev	1.55	256	*e*P	Pn	19 15 40.8	-0.2
KPT	Kopyto	1.61	257	*e*P	Pn	19 15 41.8	+0.1
KOZ	Kozyrevsk	1.78	261	*e*P	Pb	19 15 44.9	-1.0
SRDR	Sredinnyy	1.83	270	*e*P	Pb	19 15 45.9	-1.0
TUMD	Tumrok D	1.88	233	*e*P	Pn	19 15 44.9	-0.5
TUMD				*e*S	Sn	19 16 08.4	-0.6
TUMR	Tumrok	1.94	237	*e*P	Pn	19 15 46.6	+0.2
MKZ	Mys Kozlova	1.95	202	*e*P	Pn	19 15 45.4	-0.9
MKZ				*e*S	Sn	19 16 08.4	-2.4
KZV	Kizimen	1.98	232	*e*P	Pn	19 15 46.3	-0.6
BKI	Bering	2.04	124	*e*P	Pn	19 15 46.7	-0.8
BKI				*e*S	Sn	19 16 12.4	-0.4
ESO	Esso	2.45	262	*e*P	Pb	19 15 55.3	-2.1
SPN	Mys Shipunski	3.70	209	*e*P	Pn	19 16 09.5	-0.9
SPN				*e*S	Sn	19 16 50.4	-3.5
NLC	Nalytchevo	3.84	215	*e*P	Pn	19 16 13.2	+1.0
NLC				*e*S	Sn	19 16 56.7	-0.6
SDLR	Sedlovina	3.90	219	*e*P	Pn	19 16 13.3	0.0
KRX	Arik	3.92	222	*e*P	Pn	19 16 16.4	+2.8
KRER	Koryakskii	3.93	221	*e*P	Pn	19 16 15.5	+1.8
SMAR	Somma	3.95	220	*e*P	Pn	19 16 14.1	+0.2
GNL	Ganaly	3.96	230	*e*P	Pn	19 16 14.9	+0.9
AVH	Avacha	3.97	220	*e*P	Pn	19 16 15.5	+1.4
UGLR	Uglovaya	3.98	219	*e*P	Pn	19 16 15.1	+0.8
DALK	Dalny	4.15	218	*e*P	Pn	19 16 16.3	-0.2
DALK				*e*S	Sn	19 17 04.6	-0.4
PETK	Petropavlovsk-	4.48	226	Pn	Pn	19 16 22.2	+1.1
	1.7nm,0.3s,baz=62,slow=17,SNR=20						
PETK				Sn	Sn	19 17 17.0	+3.8
	baz=92,slow=17,SNR=2.0						
KRMR	Karymshinskiy	4.54	221	*e*P	Pn	19 16 24.2	+2.4
KRMR				*e*S	Sn	19 17 16.6	+2.1
RUS	Russkaya	4.73	216	*e*P	Pn	19 16 26.0	+1.5
MTVR	Mutnovka	4.80	218	*e*P	Pn	19 16 27.4	+1.8
MTVR				*e*S	Sn	19 17 22.5	+1.2
APC	Apacha	4.84	227	*e*P	Pn	19 16 28.4	+2.4
ASAK	Asacha	4.98	219	*e*P	Pn	19 16 30.9	+2.9
KDTR	Khodutka, Kamc	5.41	215	*e*P	Pn	19 16 35.5	+1.7
KDTR				*e*S	Sn	19 17 36.4	+0.5
ASAJ	Asahikawa	17.82	235	P	P	19 19 22.1	+0.3
	0.1nm,0.3s,baz=7.9,slow=13,SNR=4.1						
ILAR	Eielson Array	25.36	50	P	P	19 20 40.9	+0.9
	0.4nm,0.8s,baz=264,slow=8.8,SNR=4.2						
MJAR	Matsushiro Arr	25.92	231	P	P	19 20 44.2	-1.1
	0.7nm,0.7s,baz=22,slow=5.5,SNR=4.8						
SONM	Songino Array	34.89	280	P	P	19 22 04.4	-0.2
	0.3nm,0.5s,baz=69,slow=7.9,SNR=2.3						
H11N2	WAKE ISLAND Hy	36.69	174	T	T	20 01 05.4	
	baz=357,slow=76,SNR=256						
H11N3	WAKE ISLAND Hy	36.70	174	T	T	20 01 06.7	
	baz=357,slow=76,SNR=188						
H11N1	WAKE ISLAND Hy	36.71	174	T	T	20 01 07.4	
	baz=357,slow=76,SNR=192						
MKAR	Makanchi Array	48.29	295	P	P	19 23 53.7	-0.5
	0.3nm,0.4s,baz=60,slow=7.3,SNR=9.1						
FINES	FINESS Array B	57.77	337	P	P	19 25 05.5	+1.7
	0.9nm,1.0s,baz=33,slow=8.6,SNR=2.1						
TXAR	Lajitas Array	67.86	70	P	P	19 26 12.2	+0.6
	0.3nm,0.6s,baz=284,slow=4.2,SNR=4.1						

*ISCJB **29** 19:30:01.3±1.1,8°.94S±0°.07×124°.28E±0°.09,h10km, mb3.4/1,Error ellipse: s-maj=12.3km s-min=10.2km az=169.3*
*IDC **29** 19:30:02.7±1.8,9°.00S×124°.32E,h0km,mb3.3/1, mb1 3.6/3,mb1mx3.3/27,mbtmp3.4/3,ML3.5/2,Error ellipse: s-maj=40.0km s-min=18.2km az=107.0*
*DJA **29** 19:30:07.9±0.6,9°.S±3°.×12°.4E±°,h13km±9km,M3.6/7, MLv3.6/7*
ISC 29 19:30:01.3±1.2,8°.91S±0°.08×124°.24E±0°.08,h10km,n8, σ3§94/13,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.84	178	P	Pn	19 30 22.7	+3.4
SOEI				S	Sn	19 30 33.6	+1.8
BATI	Baumata	1.41	204	Pg	Pg	19 30 29.8	+1.5
	85nm,0.3s,baz=355,slow=1.8,SNR=147						
BATI				Lg	Lg	19 30 45.5	
	42nm,0.3s,baz=350,slow=19,SNR=3.9						
BATI	Baumata	1.41	204	P	Pg	19 30 29.8	+1.5
BATI				S	Sb	19 30 44.3	-1.4
MMRI	Maumere	2.00	278	P	Pn	19 30 36.0	+0.8
MMRI				S	Sn	19 30 56.5	-3.8
EDFI	Ende, Flores	2.53	273	P	Pn	19 30 42.3	-0.2
WRA	Warramunga Arr	14.68	139	Pn	Pn	19 33 29.5	+0.2
	0.2nm,0.3s,baz=319,slow=15,SNR=1.5						
WRA				Sn	Sn	19 36 03.5	-8.7
	0.3nm,0.3s,baz=319,slow=26,SNR=3.3						
ASAR	Alice Springs	17.34	149	P	P	19 34 04.7	-0.3
	0.1nm,0.3s,baz=318,slow=11,SNR=8.0						
ASAR				S	Sn	19 37 11.2	-5.6
	0.1nm,0.3s,baz=316,slow=22,SNR=6.7						
MKAR	Makanchi Array	66.85	330	P	P	19 40 57.0	+3.5
	0.2nm,0.5s,baz=124,slow=6.7,SNR=4.5						

*MEX **29** 19:33:50.7±0.3,14°.12N×92°.26W,h16km±999km,MD3.2*
*GCG **29** 19:33:52.7±0.5,14°.54N×91°.95W,h65km±23km,MD3.5*
ISC 29 19:33:48.6±3.3,14°.4N±0°.2×92°.1W±0°.1,h10km,n6,σ0§73/8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.57	346	*i* P	Pn	19 34 02.6	-0.2
STG3	Santiaguito 3,	0.64	56	*e*P	Pn	19 34 04.9	+0.9
FUG	Fuego 3	1.25	85	*e*P	Pn	19 34 12.6	+0.3
FUG				*e*S	Sb	19 34 27.7	-0.8
PCG	Pacaya	1.47	88	*e*S	Sn	19 34 34.3	-0.6
IXG	Ixpaco	1.64	96	*e*P	Pn	19 34 18.3	+0.6
IXG				*e*S	Sn	19 34 38.5	-0.5
CCIG	Comitan	1.92	360	*e*P	Pg	19 34 25.8	+0.3

IDC 29 19:43:28.1±1.8,4°.38S×145°.85E,h0km,mb3.2/3, mb1 3.5/4,mb1mx3.3/29,mbtmp3.3/4,ML3.4/1,Error ellipse: s-maj=78.1km s-min=27.9km az=112.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.11	215	P	P	19 47 52.6	-0.2
	0.1nm,0.3s,baz=35,slow=10.3,SNR=4.0						
ASAR	Alice Springs	22.37	210	P	P	19 48 27.6	-0.6
	0.3nm,0.8s,baz=41,slow=7.2,SNR=9.2						
MKAR	Makanchi Array	75.52	321	P	P	19 55 15.4	+0.8
	0.1nm,0.3s,baz=114,slow=4.9,SNR=1.4						
ILAR	Eielson Array	84.45	23	P	P	19 56 02.3	-0.2
	0.3nm,0.6s,baz=239,slow=5.1,SNR=4.6						

*TIR **29** 19:54:60.0,41°.40N×20°.53E,h7km,Md2.5/3*
*ISCJB **29** 19:55:00.1±0.6,41°.44N±0°.03×20°.51E±0.04,h8km±8km, Error ellipse: s-maj=5.4km s-min=4.6km az=29.5*
*BEO **29** 19:55:00.7±0.6,41°.36N×20°.54E,h14km±4km,ML2.1/3*
*SKO **29** 19:55:00.1,41°.40N×20°.52E,h19km*
ISC 29 19:55:00.9±1.2,41°.40N±0°.04×20°.50E±0°.02,h8km±11km, n17,σ1§63/30,1C,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.29	352	*i* PG	Pg	19 55 06.1	-0.4
PHP				*i* SG	Sg	19 55 10.0	-0.4
OHR	Ohrid	0.37	142⇑	*i* Pg	Pb	19 55 07.8	-1.9
OHR				*i* Sg	Sb	19 55 13.4	-2.2
TIR	Tirane	0.48	264	*e*Pg	Pg	19 55 10.2	+0.1
TIR				*e*Sg	Sb	19 55 18.8	+0.1
TIR	Tirane	0.48	264	*i* Pg	Pb	19 55 10.4	-1.2
TIR				*i* Sg	Sb	19 55 17.3	-1.4
TIR	Tirane	0.48	264	*i* PG	Pg	19 55 10.1	0.0
TIR				*i* SG	Sb	19 55 17.3	-1.4
PUK	Puka	0.79	325	*i* PG	Pn	19 55 20.4	+2.1
PUK				*i* SG	Sn	19 55 32.5	+2.1
SKO	Skopje	0.91	51	*e*Pg	Pb	19 55 17.8	-1.1
SKO				*e*Sg	Sb	19 55 30.0	-1.1
SKO	Skopje	0.91	51	*e*Pg	Pb	19 55 17.7	-1.2
SKO				*i* Sg	Sb	19 55 29.9	-1.3
STIP	Stip	1.30	76	*i* Pg	Pg	19 55 27.5	+1.6
STIP				*i* Sg	Sg	19 55 47.9	+5.1
PDG	Podgorica	1.39	318	*e*Pg	Pb	19 55 26.0	-1.0
PDG				*e*Sg	Sg	19 55 47.0	+1.6
BARS	Barje	1.72	34	*e*Pg	Pg	19 55 32.3	-1.6
BARS				*e*Sg	Sg	19 55 55.5	-0.7
SELS	Selova	1.88	14	*e*Pg	Pb	19 55 33.8	-1.6
SJES	Sjenica	1.90	348	*e*Pg	Pb	19 55 35.5	-0.3
SJES				*e*Sg	Sg	19 56 03.2	+1.3
TREB	Trebinje	2.07	310	*e*Pg	Pb	19 55 38.6	-0.1
TREB				*e*Sg	Sg	19 56 07.2	-0.2
IVAS	Ivanjica	2.19	353	*e*Pn	Pn	19 55 37.3	-0.3
GRUS	Gruza	2.49	4	*e*Pn	Pn	19 55 41.9	+0.2
DIVS	Divibare	2.72	352	*e*Pn	Pn	19 55 44.7	-0.3

*IDC **29** 19:55:59.4±1.2,51°.71N×179°.55E,h0km,mb3.7/12, mb1 3.9/13,mb1mx3.7/44,mbtmp3.7/13,ML3.7/1,MS3.1/4, Ms1 3.1/4,ms1mx2.8/43,Error ellipse: s-maj=42.1km s-min=15.5km az=173.0*
*NEIC **29** 19:56:02.3±0.0,51°.02N×179°.84E,h13km,mb3.9/13, ML3.6(AEIC),After AEIC.*
*ISCJB **29** 19:56:03.6±0.7,51°.4N±0°.1×179°.57E±0°.06,h52km, mb3.6/14,MS3.2/3,Error ellipse: s-maj=19.4km s-min=5.2km az=175.3*
ISC 29 19:56:05.6±0.9,51°.5N±0°.2×179°.62E±0°.06,h52km,n46, σ1§30/39,mb3.7/14,MS3.1/3,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAEA	Gareloi East	1.07	72	*e*Pn	Pn	19 56 23.6	-0.6
TANO	Tanaga North	1.48	71	*e*Pn	Pn	19 56 29.0	-0.8
TANO				*e*Sn	Sn	19 56 50.0	+1.9
TASE	Tanaga Southea	1.51	75	*e*Pn	Pn	19 56 28.8	-1.5
KIMD	Kanaga Island	1.98	80	*e*Pn	Pn	19 56 35.8	-0.9
KIMD				*e*Sn	Sn	19 57 01.3	+1.0
KIWB	Kanaga Island	2.05	78	*e*Pn	Pn	19 56 36.8	-0.8
KIWB				*e*Sn	Sn	19 57 02.6	+0.6
ADK	Adak	2.34	78	*e*Pn	Pn	19 56 40.4	-1.2
ADK				*e*Sn	Sn	19 57 08.9	-0.2
ETKA	Kagalaska Isla	2.51	79	*e*Pn	Pn	19 56 42.3	-1.6
GSTD	Great Sitkin T	2.70	76	*e*Pn	Pn	19 56 45.5	-1.1
GSMY	Great Sitkin M	2.75	76	*e*Pn	Pn	19 56 46.2	-1.0
GSTR	Great Sitkin T	2.76	75	*e*Pn	Pn	19 56 46.9	-0.4
KOWE	Korovin West	3.90	74	*e*Pn	Pn	19 57 02.5	-0.5
PETK	Petropavlovsk-	13.51	286	LR	LR	20 03 59.7	
	comp=Z,55nm,21.6s,baz=121,slow=36						
CHIA	Chirikof Islan	15.31	64	*e*Pn	Pn	19 59 38.3	+0.2
	7.5nm,0.8s						
SII	Sitkinak Islan	16.17	61	*e*Pn	P	19 59 50.3	-1.2
	16nm,1.1s						
KDAK	Kodiak Island	17.21	58	P	Pn	19 59 58.9	-3.1
	0.3nm,0.3s,baz=265,slow=3.5,SNR=13						
KDAK	Kodiak Island	17.21	58	*e*Pn	Pn	20 00 00.0	-2.0
	6.3nm,1.0s						
RDOG	Red Dog Mine	18.70	21	*e*P	Pn	20 00 23.4	+3.3
	6.2nm,0.5s						
KTH	Kantishna Hill	19.70	41	*e*P	P	20 00 31.1	+0.8
	4.3nm,0.8s						
BPAW	Bear Paw Mtn.	19.91	39	*e*P	Pn	20 00 33.7	-0.8
	2.2nm,0.8s						
TRF	Thorofare Moun	19.92	41	*e*P	Pn	20 00 33.8	-1.0
	7.4nm,1.2s						
MLY	Manley	20.42	37	*e*P	Pn	20 00 40.1	-0.5
	1.7nm,1.0s						
GLI	Glacier Island	20.57	50	*e*P	Pn	20 00 41.1	-1.2
	7.7nm,1.1s						
SCM	Sheep Creek Mo	20.69	47	*e*P	P	20 00 40.5	-0.6
	6.0nm,1.0s						
ILAR	Eielson Array	21.80	40	P	P	20 00 52.8	-0.1
	0.3nm,0.8s,baz=245,slow=8.6,SNR=3.4						
EGAK	Eagle	24.14	41	*e*P	P	20 01 17.9	+1.6
	2.1nm,1.0s						
HYT	Haines Junctio	25.22	51	*e*P	P	20 01 27.5	+1.2
	1.4nm,1.0s						
ASAJ	Asahikawa	25.72	268	P	P	20 01 31.1	+0.4
	5.8nm,1.0s,baz=65,slow=19,SNR=4.1						
KLR	Kul'dur	30.20	285	P	P	20 02 11.4	+0.6
	3.8nm,0.7s,baz=72,slow=7.4,SNR=11						
BBB	Bella Bella	31.74	68	LR	LR	20 14 30.6	
	comp=Z,29nm,19.0s,baz=74,slow=35						
H11N2	WAKE ISLAND Hy	33.21	202	T	T	20 37 41.2	
	baz=20,slow=76,SNR=8.8						
H11N3	WAKE ISLAND Hy	33.22	202	T	T	20 37 42.0	
	baz=20,slow=76,SNR=9.9						
H11N1	WAKE ISLAND Hy	33.23	202	T	T	20 37 39.5	
	baz=20,slow=76,SNR=7.9						
H11S1	WAKE ISLAND Hy	34.43	202	T	T	20 39 11.8	
	baz=19,slow=76						
H11S2	WAKE ISLAND Hy	34.45	202	T	T	20 39 12.4	
	baz=19,slow=76						
H11S3	WAKE ISLAND Hy	34.45	202	T	T	20 39 14.9	
	baz=19,slow=76						
YKA	Yellowknife Ar	35.89	46	P	P	20 02 59.5	-0.6
	0.7nm,0.5s,baz=282,slow=8.2,SNR=4.0						
NVAR	Mina Array Bea	44.52	82	P	P	20 04 13.8	+1.7
	0.1nm,0.4s,baz=279,slow=9.0,SNR=2.6						
SONM	Songino Array	45.72	296	P	P	20 04 21.9	+0.5
	0.5nm,0.6s,baz=46,slow=10,SNR=2.7						
PDAR	Pinedale Array	47.23	71	P	P	20 04 32.7	-0.7
	1.2nm,0.7s,baz=306,slow=3.8,SNR=10						
PDAR				LR	LR	20 24 05.8	
	comp=Z,20nm,18.1s,baz=2.0,slow=36						
ULM	Lac du Bonnet	50.46	56	LR	LR	20 26 19.3	
	comp=Z,33nm,18.4s,baz=352,slow=36						
ARCES	ARCESS Array B	57.84	350	P	P	20 05 49.2	-1.9
	1.7nm,0.9s,baz=22,slow=8.0,SNR=4.0						
MKAR	Makanchi Array	59.20	308	P	P	20 06 00.3	-0.7
	0.3nm,0.4s,baz=48,slow=5.4,SNR=6.6						
TXAR	Lajitas Array	59.62	80	P	P	20 06 05.8	+1.6
	0.1nm,0.4s,baz=301,slow=4.0,SNR=2.4						
NOA	NORSAR Array B	67.47	354	P	P	20 06 54.9	-0.5
	1.3nm,0.8s,baz=5.0,slow=5.8,SNR=3.9						
CMAR	Chiang Mai Arr	70.02	275	P	P	20 07 11.9	+0.1
	0.5nm,0.7s,baz=29,slow=6.5,SNR=3.9						
BOSA	Boshof	150.18	310	PKPbc	PKPbc	20 15 50.4	-0.1
	1.0nm,0.6s,baz=41,slow=2.1,SNR=4.0						

*NIED **29** 20:05:00,26°.10N×129°.40E,h5km,Mw3.8 Best double couple: M0:5.23000×10^14 NP1:φ0=83.00000°,δ53.00000°, λ-41.00000°. NP2:φ0=201.00000°,δ59.00000°, λ-135.00000°.*
JMA 29 20:05:12.4±0.1,26°.08N×129°.44E,h45km,M3.5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	Kunigami	1.29	306	P	Pn	20 05 34.6	+0.7
JOW				*e*S	Sn	20 05 50.0	0.0
JYRO	Yoronjima	1.29	317	P	Pn	20 05 34.7	+0.7
JYRO				S	Sn	20 05 49.8	-0.3
JNTH	Nagotoyohara	1.35	289	P	Pn	20 05 35.1	+0.4
JNTH				*e*S	Sn	20 05 51.3	-0.1
JJT3	Tamagusuku3	1.49	273	P	Pn	20 05 37.7	+1.0
JJT3				S	Sn	20 05 55.9	+0.9
JOKE	Okinoerabujima	1.49	329	P	Pn	20 05 37.7	+0.9
JOKE				*e*S	Sn	20 05 55.5	+0.4
JMZ	Minamidaito 2	1.62	99	P	Pn	20 05 38.8	+0.3
JMZ				*e*S	Sn	20 05 56.6	-1.7
JIH	Iheya	1.63	306	P	Pn	20 05 39.6	+1.0
JIH				*e*S	Sn	20 05 58.6	+0.3
JTK	Tokunoshima	1.75	346	P	Pn	20 05 41.4	+1.0
JTK				S	Sn	20 06 00.9	-0.6
JAGN	Aguni-jima	2.04	285	P	Pn	20 05 45.3	+1.1
JAGN				S	Sn	20 06 09.0	+0.6
JAMN	Amaminishikomi	2.17	354	P	Pn	20 05 47.4	+1.4
JAMN				*e*S	Sn	20 06 12.1	+0.5
JZK	Kikaishima	2.28	12	P	Pn	20 05 49.4	+1.9
JZK				S	Sn	20 06 16.6	+2.3
JAM	Amami Oshima	2.33	4	P	Pn	20 05 48.9	+0.7
JAM				S	Sn	20 06 15.0	-0.6
JKE	Kume jima 2	2.40	276	P	Pn	20 05 49.3	+0.1
JKE				S	Sn	20 06 16.1	-1.2
JTAJ	Takarajima	3.07	356	P	Pn	20 05 59.5	+1.1
JTAJ				*e*S	Sn	20 06 32.8	-1.0

*SKO **29** 20:09:53.7,41°.43N×20°.52E,h14km*
*ATH **29** 20:09:54.0,41°.45N×20°.51E,h17km±1km,ML2.4/1,Error ellipse: s-maj=2.3km s-min=1.2km az=211.0*
*PDG **29** 20:09:54.7±0.2,41°.45N×20°.49E,h12km,ML2.4/12,Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*THE **29** 20:09:54.7,41°.41N×20°.52E,h1km±2km,ML2.1/5,Error ellipse: s-maj=2.9km s-min=0.8km az=39.0*
*BEO **29** 20:09:54.9±0.3,41°.41N×20°.54E,h6km±2km,ML2.2/6*
*TIR **29** 20:09:54.0,41°.40N×20°.51E,h6km,Md2.2/3*
ISC 29 20:09:54.7±0.9,41°.42N±0°.02×20°.50E±0°.02,h9km±8km, n57,σ1§20/92,8C-5D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.26	350	P	Pg	20 09 59.9	-0.2
PHP				S	Sg	20 10 04.3	+0.6
PHP	Peshkopia	0.26	350	*i* PG	Pg	20 09 59.8	-0.2
PHP				*i* SG	Sg	20 10 04.1	+0.4
OHR	Ohrid	0.39	144⇑	*i* Pg	Pg	20 10 01.5	-0.8
OHR				*i* Sg	Sg	20 10 07.4	0.0
TIR	Tirane	0.48	261	*e*Pg	Pg	20 10 04.0	-0.2
TIR				*e*Sg	Sb	20 10 12.2	-0.4
TIR	Tirane	0.48	261	P	Pg	20 10 03.9	-0.2
TIR				S	Sg	20 10 11.3	+0.8
TIR	Tirane	0.48	261	*i* Pg	Pg	20 10 03.9	-0.2
TIR				*i* Sg	Sg	20 10 10.7	+0.2
TIR	Tirane	0.48	261	*i* PG	Pn	20 10 11.6	+3.8
TIR				*i* SG	Sg	20 10 10.3	-0.2
TIR	Tirane	0.48	261	P	Pg	20 10 04.0	-0.2
TIR				S	Sg	20 10 10.9	+0.4
TIR				AML	AML	20 10 13.2	
	comp=E,1341μm,0.2s						
TIR				AML	AML	20 10 13.2	
	comp=N,875μm,0.2s						
PUK	Puka	0.77	324	*i* PG	Pn	20 10 14.1	+2.3
PUK				*i* SG	Sn	20 10 23.1	-0.4
SKO	Skopje	0.89	52	*e*Pg	Pg	20 10 10.9	-1.0
SKO				*e*Sg	Sb	20 10 23.4	-1.0
SKO	Skopje	0.89	52	*i* Pg	Pg	20 10 10.8	-1.0
SKO				*i* Sg	Sb	20 10 23.5	-0.8
FNA	Florina	0.92	134	P	Pg	20 10 11.3	-1.1
FNA				S	Sb	20 10 24.8	-0.5
ULC	Ulcinj	1.08	300⇑	*i* Pg	Pb	20 10 13.8	-1.9
ULC				*e*Sg	Sn	20 10 31.4	+0.1
PVY	Plav	1.24	341⇑	*i* Pg	Pn	20 10 17.3	-1.0
PVY				*i* Sg	Sg	20 10 36.8	+2.2
DRME	Dracevica, Mon	1.25	308⇓	*i* Pg	Pn	20 10 17.4	-0.9
DRME				*e*Sg	Sg	20 10 37.0	+2.2
STIP	Stip	1.29	77	*i* Pg	Pg	20 10 21.5	+2.0
STIP				*i* Sg	Sg	20 10 41.8	+5.4
PENT	Pentalofos	1.32	158	P	Pb	20 10 19.4	-0.3
PENT				S	Sg	20 10 37.3	+0.1
PENT	Pentalofos	1.32	158	P	Pn	20 10 19.0	-0.4
PENT				S	Sg

az=138.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.03**	**157**	P	Pg	20 11 43.3	+0.4
EQUI				S	Sg	20 11 44.3	+0.1
EQUI				AML	AML		
	comp=E,164μm,0.3s						
EQUI				AML	AML		
	comp=N,192μm,0.3s						
EQUI				AML	AML		
	comp=E,164μm,0.3s						
EQUI				AML	AML		
	comp=N,192μm,0.3s						
T0912	**Minucciano (LU**	**0.06**	**118**	P	Pg	20 11 43.6	+0.4
T0912				S	Sg	20 11 45.0	+0.3
T0912				AML	AML		
	comp=E,942μm,0.1s						
T0912				AML	AML		
	comp=N,986μm,0.2s						
T0912				AML	AML		
	comp=N,986μm,0.2s						
T0912				AML	AML		
	comp=E,942μm,0.1s						
FOSD	**Fosdinovo**	**0.13**	**228**	P	Pg	20 11 44.5	+0.4
FOSD				S	Sg	20 11 47.7	+1.5
VLC	**Villacollemand**	**0.18**	**102**	P	Pg	20 11 46.0	+1.0
VLC				S	Sg	20 11 48.7	+1.0
PLMA	**Palmaria, Port**	**0.25**	**234**	P	Pb	20 11 47.2	-0.5
PLMA				S	Sb	20 11 50.9	-1.3
GRAM	**Graiana**	**0.30**	**350**	P	Pb	20 11 48.0	-0.6
GRAM				S	Sb	20 11 52.4	-1.2
GRAM				AML	AML		
	comp=E,76μm,0.2s						
GRAM				AML	AML		
	comp=N,76μm,0.7s						
GRAM				AML	AML		
	comp=E,76μm,0.2s						
GRAM				AML	AML		
	comp=N,76μm,0.7s						

SVSA 29 20:16:31.1±1.0, 38°.69N×27°.82W, h6km±4km, MD3.5, ML3.0, 1D, Error ellipse: s-maj=3.0km s-min=1.8km az=165.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAN	**Manadas**	**0.22**	**255**	*e*P	Pg	20 16 35.0	-0.4
PMAN				*e*S	Sg	20 16 38.5	+0.2
PMAN				A	A	20 16 39.5	
	3μm,0.4s						
ROSA	**Rosais**	**0.33**	**275**	⇓*i*P	Pg	20 16 36.9	-0.6
ROSA				*e*S	Sg	20 16 41.9	0.0
ROSA				A	A	20 16 44.2	
	986nm,0.2s						
PGRA	**Graciosa**	**0.36**	**340**	*e*P	Pg	20 16 37.4	-0.7
PGRA				*e*S	Sg	20 16 42.4	-0.5
PGRA				A	A	20 16 43.5	
	3μm,0.4s						
PPNO	**Prainha do Nor**	**0.41**	**238**	*e*P	Pg	20 16 38.1	-0.9
PPNO				*e*S	Sg	20 16 43.9	-0.5
PPNO				A	A	20 16 50.3	
	692nm,0.1s						
ADH	**Angra Heroismo**	**0.46**	**94**	*e*P	Pg	20 16 39.0	-1.0
ADH				*e*S	Sg	20 16 45.4	-0.7
ADH				A	A	20 16 50.9	
	339nm,0.3s						
PSCM	**Serra do Cume**	**0.55**	**89**	*e*P	Pg	20 16 40.1	-1.6
PSCM				*e*S	Sg	20 16 47.8	-1.2
PSCM				A	A	20 16 55.2	
	293nm,0.7s						
PCAN	**Candelaria**	**0.57**	**247**	*e*P	Pg	20 16 40.6	-1.4
PCAN				*e*S	Sg	20 16 47.9	-1.5
PCAN				A	A	20 16 54.3	
	419nm,0.5s						
HOR	**Horta**	**0.65**	**256**	*e*P	Pg	20 16 41.9	-1.8
HOR				*e*S	Sg	20 16 49.7	-2.4
HOR				A	A	20 16 53.8	
	440nm,0.2s						
PCED	**Cedros**	**0.69**	**265**	*e*P	Pg	20 16 41.9	-2.5
PCED				*e*S	Sg	20 16 51.0	-2.4
PCED				A	A	20 17 00.1	
	146nm,0.3s						
CALA	**Caldeira**	**0.70**	**261**	*e*P	Pg	20 16 42.8	-1.7
CALA				*e*S	Sg	20 16 51.1	-2.5

*IDC **29** 20:25:15.3±0.8, 4°.20S×98°.69E, h0km, mb4.0/18, mb1 4.2/19, mb1mx4.0/39, mbtmp4.1/19, ML4.3/1, Error ellipse: s-maj=28.5km s-min=15.5km az=49.0*
*ISCJB **29** 20:25:18.8±0.4, 4°.07S±0°.04×98°.83E±0°.04, h33km, mb4.2/31, Error ellipse: s-maj=7.0km s-min=4.4km az=37.1*
*DJA **29** 20:25:18.6±1.5, 4°S-4°×9°E-°, h27km±16km, M4.6/19, mb4.5/13, mB6.0/2, MLv4.7/19, Mw(mB)5.6/2*
*NEIC **29** 20:25:19.1±1.1, 4°.10S×98°.78E, h24km±5km, mb4.4/15, Error ellipse: s-maj=20.0km s-min=12.1km az=51.0*

ISC 29 20:25:20.8±0.6, 4°.07S±0°.08×98°.80E±0°.08, h35km, n78, σ0°93/75, mb4.2/31, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.77**	**43**	P	**Pn**	**20 25 49.7**	**+0.7**
SISI	**Saibi**	**2.74**	**6**	P	**Pn**	**20 26 01.1**	**-1.2**
KRJI	**Kerinci**	**3.30**	**54**	P	**Pn**	**20 26 10.5**	**+0.3**
PDSI	**Padang**	**3.54**	**28**	P	**Pn**	**20 26 13.2**	**-0.3**
SDSI	**Sungai Dareh**	**4.07**	**40**	P	**Pn**	**20 26 21.7**	**+1.0**
MNAI	**Manna**	**4.15**	**94**	*e*Pn	**Pn**	**20 26 21.2**	**-0.5**
MNAI				*e*Sn	**Sn**	**20 27 09.5**	**+0.3**
MNAI	**Manna**	**4.15**	**94**	P	**Pn**	**20 26 21.3**	**-0.5**
LHSI	**Lahat**	**4.72**	**87**	P	**Pn**	**20 26 30.1**	**+0.6**
MNSI	**Mandailing Nat**	**4.89**	**9**	P	**Pn**	**20 26 32.5**	**+0.6**
BKNI	**Bangkinang**	**4.90**	**27**	*e*Pn	**Pn**	**20 26 32.4**	**+0.3**
BKNI	**Bangkinang**	**4.90**	**27**	P	**Pn**	**20 26 32.5**	**+0.4**
RGRI	**Rengat**	**5.11**	**44**	P	**Pn**	**20 26 35.8**	**+0.9**
LWLI	**Liwa**	**5.33**	**100**	P	**Pn**	**20 26 37.1**	**-0.9**
MDSI	**Maura Dua**	**5.38**	**95**	P	**Pn**	**20 26 39.0**	**+0.4**
GSI	**Gunungsitoli**	**5.47**	**347**	*e*Pn	**Pn**	**20 26 39.7**	**-0.2**
GSI				*e*Sn	**Sn**	**20 27 38.6**	**-3.1**
GSI	**Gunungsitoli**	**5.47**	**347**	P	**Pn**	**20 26 39.6**	**-0.4**
KASI	**Kota Agung**	**5.86**	**105**	P	**Pn**	**20 26 44.5**	**-0.7**
PSI	**Prapat**	**6.82**	**1**	*e*Pn	**Pn**	**20 26 55.7**	**-2.9**
PPBI	**Pangkal Pinang**	**7.56**	**76**	P	**Pn**	**20 27 07.4**	**-1.3**
TPRI	**Tanjung Pinang**	**7.57**	**49**	P	**Pn**	**20 27 08.7**	**0.0**
KCSI	**Kotacane, Aceh**	**7.61**	**352**	P	**Pn**	**20 27 09.0**	**-0.3**
MYKOM	**Kota Tinggi**	**7.70**	**41**	*e*Pn	**Pn**	**20 27 10.3**	**-0.3**
IPM	**Ipoh**	**8.78**	**15**	*e*Pn	**Pn**	**20 27 24.0**	**-1.3**
TPI	**Tanjungpandan**	**8.93**	**82**	P	**Pn**	**20 27 26.8**	**-0.7**
LEM	**Lembang**	**9.20**	**108**	Pn	**Pn**	**20 27 30.3**	**-0.9**
	3.1nm,0.3s,baz=162,slow=20,SNR=3.4						
LEM	**Lembang**	**9.20**	**108**	P	**Pn**	**20 27 31.1**	**-0.1**
LHMI	**Lhok Sumawe**	**9.42**	**349**	P	**Pn**	**20 27 33.8**	**-0.3**
KULM	**Kulim**	**9.48**	**11**	*e*Pn	**Pn**	**20 27 33.3**	**-1.6**
CISI	**Cisompet, Garu**	**9.61**	**112**	*e*Pn	**Pn**	**20 27 35.3**	**-1.5**
CISI	**Cisompet, Garu**	**9.61**	**112**	P	**Pn**	**20 27 34.8**	**-2.1**
SBUM	**Sibu**	**14.89**	**64**	*e*Pn	**Pn**	**20 28 48.0**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.87**	**107**	*e*Pn	**Pn**	**20 29 00.3**	**-1.4**
	56nm,0.9s						
CM31	**Chiang Mai Arr**	**22.38**	**0**	*e*P	**P**	**20 30 16.3**	**0.0**
	4.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**22.38**	**0**	P	**P**	**20 30 18.2**	**+1.9**
	1.1nm,0.8s,baz=187,slow=8.9,SNR=7.2						
H08S2	**Diego Garcia H**	**26.41**	**261**	T	T	20 58 09.5	
	baz=84,slow=74,SNR=11						
H08S3	**Diego Garcia H**	**26.41**	**261**	T	T	20 58 10.1	
	baz=84,slow=74,SNR=19						
H08S1	**Diego Garcia H**	**26.43**	**261**	T	T	20 58 09.6	
	baz=84,slow=74,SNR=10						
NWAO	**Narrogin (SRO)**	**33.49**	**151**	P	**P**	**20 31 57.0**	**0.0**
	14nm,1.1s,baz=304,slow=19,SNR=3.0						
H01W3	**Cape Leeuwin H**	**33.80**	**157**	T	T	21 07 13.1	
	baz=334,slow=76,SNR=4.6						
H01W2	**Cape Leeuwin H**	**33.81**	**157**	T	T	21 07 26.8	
	baz=334,slow=76,SNR=6.3						
H01W1	**Cape Leeuwin H**	**33.82**	**157**	T	T	21 07 23.3	
	baz=334,slow=76,SNR=4.9						
WR1	**Warramunga Arr**	**38.05**	**117**	*e*P	**P**	**20 32 36.5**	**+0.2**
WRA	**Warramunga Arr**	**38.05**	**117**	P	**P**	**20 32 36.5**	**+0.2**
	1.4nm,0.9s,baz=292,slow=9.8,SNR=4.1						
WB2	**Warramunga Arr**	**38.06**	**117**	*e*P	**P**	**20 32 36.0**	**-0.3**
	9.9nm,1.4s						
FORT	**Forrest**	**38.29**	**137**	*e*P	**P**	**20 32 37.9**	**-0.2**
	8.6nm,0.9s						
ASAR	**Alice Springs**	**39.07**	**123**	P	**P**	**20 32 44.6**	**-0.2**
	0.5nm,0.7s,baz=300,slow=8.0,SNR=7.2						
ASAR				PcP	**PcP**	**20 34 54.7**	**+0.2**
	0.4nm,0.5s,baz=293,slow=2.5,SNR=5.9						
WMQ	**Urumqi**	**48.71**	**349**	*e*P	**P**	**20 34 02.6**	**+0.7**
	15nm,0.4s						
KSRS	**Korea Array**	**49.40**	**31**	P	**P**	**20 34 08.4**	**+1.2**
	0.8nm,0.6s,baz=226,slow=8.3,SNR=4.3						
KDJ	**Kajisay**	**50.00**	**339**	*e*P	**P**	**20 34 12.8**	**+0.8**
	3.6nm,1.0s						
BTK	**Batken**	**50.88**	**332**	*e*P	**P**	**20 34 18.5**	**0.0**
	3.2nm,1.1s						
SONA0	**Songino Array**	**52.11**	**6**	*e*P	**P**	**20 34 29.3**	**+1.6**
SONM	**Songino Array**	**52.11**	**6**	P	**P**	**20 34 29.3**	**+1.6**
	1.7nm,0.8s,baz=224,slow=6.0,SNR=3.8						
MK31	**Makanchi Array**	**52.70**	**346**	*e*P	**P**	**20 34 32.4**	**+0.4**
	2.3nm,0.9s						
MKAR	**Makanchi Array**	**52.70**	**346**	P	**P**	**20 34 32.6**	**+0.7**
	2.3nm,0.8s,baz=155,slow=8.9,SNR=24						
MAJO	**Matsushiro**	**54.62**	**39**	*e*P	**P**	**20 34 46.1**	**-0.1**
MJAR	**Matsushiro Arr**	**54.62**	**39**	P	**P**	**20 34 46.1**	**-0.1**
	0.6nm,0.8s,baz=198,slow=6.3,SNR=3.1						
GEYT	**Alibeck**	**56.29**	**322**	P	**P**	**20 34 58.4**	**+0.2**
	1.7nm,0.9s,baz=121,slow=14,SNR=4.5						
USRK	**Ussuriysk Ar.**	**56.53**	**28**	P	**P**	**20 35 01.4**	**+1.6**
	1.2nm,0.6s,baz=207,slow=4.6,SNR=4.6						
KURK	**Kurchatov**	**57.26**	**345**	*e*P	**P**	**20 35 05.0**	**+0.2**
	3.4nm,1.0s						
ZAA0	**Zalesovo Array**	**58.98**	**350**	*e*P	**P**	**20 35 17.0**	**+0.3**
	3.7nm,0.6s						
ZALV	**Zalesovo Beam**	**58.98**	**350**	P	**P**	**20 35 17.1**	**+0.4**
	4.2nm,0.5s,baz=167,slow=7.1,SNR=21						
HNR	**Honiara**	**60.89**	**98**	*e*P	**P**	**20 35 30.1**	**-0.6**
	43nm,1.0s						
ABKAR	**Akbulak array**	**62.89**	**332**	*e*P	**P**	**20 35 42.8**	**-0.6**
	1.9nm,0.7s						
KBZ	**Khabaz**	**69.09**	**320**	P	**P**	**20 36 23.8**	**+0.4**
	1.5nm,0.7s,baz=170,slow=6.1,SNR=3.2						
BR101	**Keskin Array S**	**73.84**	**313**	*e*P	**P**	**20 36 51.7**	**-0.7**
BRTR	**Keskin Array B**	**73.84**	**313**	P	**P**	**20 36 51.7**	**-0.7**
	0.9nm,0.7s,baz=130,slow=4.5,SNR=4.7						
PETK	**Petropavlovsk-**	**75.26**	**32**	P	**P**	**20 37 00.3**	**+0.2**
	1.2nm,0.7s,baz=258,slow=7.2,SNR=2.7						
PEA1	**Petropavlovsk-**	**75.26**	**32**	*e*P	**P**	**20 37 00.3**	**+0.2**
BUR08	**Bucovina Ar. S**	**82.04**	**319**	*e*P	**P**	**20 37 37.5**	**-0.2**
	2.8nm,1.2s						
FIA0	**FINESS Array S**	**85.38**	**333**	*e*P	**P**	**20 37 54.3**	**0.0**
FINES	**FINESS Array B**	**85.38**	**333**	P	**P**	**20 37 54.3**	**0.0**
	1.2nm,0.7s,baz=134,slow=5.5,SNR=6.6						
QSPA	**South Pole Qui**	**85.91**	**180**	*e*P	**P**	**20 37 57.0**	**-0.1**
	2.1nm,1.3s						
ARA0	**ARCESS Array S**	**88.00**	**340**	*e*P	**P**	**20 38 07.6**	**+0.6**
ARCES	**ARCESS Array B**	**88.00**	**340**	P	**P**	**20 38 07.6**	**+0.6**
	2.5nm,0.9s,baz=99,slow=4.7,SNR=5.2						
GERES	**GERESS Array B**	**89.80**	**319**	P	**P**	**20 38 15.7**	**-0.4**
	0.7nm,0.8s,baz=90,slow=4.9,SNR=6.2						
KEST	**Kesra**	**91.90**	**306**	P	**P**	**20 38 27.2**	**+1.1**
	2.1nm,0.7s,baz=34,slow=7.3,SNR=3.4						
KEST	**Kesra**	**91.90**	**306**	*e*P	**P**	**20 38 26.1**	**0.0**
	18nm,1.5s						
TXAR	**Lajitas Array**	**147.06**	**38**	PKPbc	**PKPdf**	**20 44 58.6**	**-0.2**
	0.7nm,0.7s,baz=188,slow=2.4,SNR=6.8						

*IDC **29** 20:32:38.6±3.1, 14°.23N×93°.12W, h0km, mb3.7/2, mb1 3.8/5, mb1mx3.5/37, mbtmp3.5/5, ML3.1/3, Error ellipse: s-maj=61.9km s-min=24.7km az=16.0*
*ISCJB **29** 20:32:39.1±0.9, 13°.97N±0°.07×93°.21W±0°.05, h37km, mb3.7/2, Error ellipse: s-maj=9.9km s-min=6.4km az=18.4*
*MEX **29** 20:32:40.8±0.5, 13°.99N×93°.19W, h16km±18km, MD4.0*
*NEIC **29** 20:32:40.7±0.0, 13°.99N×93°.19W, h18km, MD4.0(MEX), After MEX.*

ISC 29 20:32:42.1±1.3, 14°.1N±0°.1×93°.16W±0°.06, h37km, n19, σ1°42/27, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.21**	**46**	*e*Pn	**Pn**	**20 33 00.9**	**-1.7**
THIG		**1.21**	**46**	*i*P	**Pn**	**20 33 00.9**	**-1.7**
THIG				*i*S	**Sn**	**20 33 15.4**	**-2.3**
CCIG	**Comitan**	**2.43**	**24**	*e*Pn	**Pn**	**20 33 20.1**	**+0.7**
CCIG				*e*Sn	**Sn**	**20 33 50.2**	**+2.3**
CCIG	**Comitan**	**2.43**	**24**	*e*P	**Pn**	**20 33 20.0**	**+0.6**
TGIG		**2.71**	**1**	*e*Pn	**Pn**	**20 33 22.1**	**-1.1**
TGIG				*e*Sn	**Sn**	**20 33 54.0**	**-0.8**
TGIG		**2.71**	**1**	*i*P	**Pn**	**20 33 22.1**	**-1.1**
TGIG				*e*S	**Sn**	**20 33 54.0**	**-0.8**
APG	**El Apazote**	**2.78**	**70**	Pn	**Pn**	**20 33 23.9**	**-0.3**
	2.0nm,0.3s,baz=315,slow=9.0,SNR=29						
APG				Sn	**Sn**	**20 33 58.0**	**+1.4**
	5.2nm,0.3s,baz=337,slow=13,SNR=5.2						
HUIG	**Huatulco**	**3.32**	**301**	*e*Pn	**Pn**	**20 33 29.7**	**-1.8**
HUIG	**Huatulco**	**3.32**	**301**	*e*P	**Pn**	**20 33 29.7**	**-1.8**
CMIG	**Matias Romero**	**3.45**	**331**	Pn	**Pn**	**20 33 31.5**	**-1.8**
	2.9nm,0.3s,baz=134,slow=8.7,SNR=18						
CMIG				Sn	**Sn**	**20 34 13.3**	**+0.4**
	8.9nm,0.3s,baz=240,slow=23,SNR=8.1						
CMIG	**Matias Romero**	**3.45**	**331**	*e*Pn	**Pn**	**20 33 31.4**	**-1.8**
CMIG				*e*Sn	**Sn**	**20 34 12.6**	**-0.3**
CMIG	**Matias Romero**	**3.45**	**331**	*i*P	**Pn**	**20 33 31.4**	**-1.8**
CMIG				*i*S	**Sn**	**20 34 11.6**	**-1.3**
LVIG	**Laguna Verde**	**6.44**	**332**	*e*Pn	**Pn**	**20 34 14.3**	**-0.1**
ESTN	**Estel**	**6.67**	**97**	*e*Pn	**Pn**	**20 34 17.1**	**-0.6**
ESPN	**Las Esperanzas**	**8.83**	**101**	*e*Pn	**Pn**	**20 34 45.4**	**-1.8**
TXAR	**Lajitas Array**	**18.05**	**329**	P	**P**	**20 36 51.1**	**+0.7**
	0.0nm,0.3s,baz=153,slow=10,SNR=2.4						
NVAR	**Mina Array Bea**	**32.93**	**322**	P	**P**	**20 39 15.0**	**+1.6**
	0.4nm,0.7s,baz=125,slow=8.9,SNR=2.9						
YKA	**Yellowknife Ar**	**50.72**	**347**	P	**P**	**20 41 37.4**	**-0.5**
	1.6nm,0.8s,baz=152,slow=7.3,SNR=6.1						
CMAR	**Chiang Mai Arr**	**145.56**	**339**	PKPbc	**PKPab**	**20 52 18.6**	**+0.9**
	0.4nm,0.6s,baz=344,slow=3.0,SNR=3.7						

MAN 29 20:44:03.9, 7°.79N×124°.74E, h10km, mb4.8, ML3.7, MS3.7, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.33**	**75**	*e*P	Pg	20 44 11.0	+0.5
BUKP				*e*S	Sb	20 44 17.1	0.0
CGP	**Cagayan de Oro**	**0.66**	**356**	⇑*i*P	Pg	20 44 12.2	-4.4
CGP				*i*S	Sg	20 44 20.4	-4.9
CTBH	**Cotabato--PC H**	**0.75**	**221**	⇑*i*P	Pg	20 44 18.5	+0.1
CTBH				*i*S	Sb	20 44 30.2	+0.8
SKMP	**Bagumbayan, Su**	**1.28**	**189**	*e*P	Pn	20 44 26.6	-1.2
SKMP				*e*S	Sn	20 44 45.0	-0.1
PAGZ	**Pagadian**	**1.35**	**272**	*e*P	Pn	20 44 27.1	-1.6
PAGZ				*e*S	Sg	20 44 47.3	-0.1
BUTP	**Butuan**	**1.46**	**37**	*e*P	Pn	20 44 30.0	-0.2
BUTP				*e*S	Sg	20 44 54.2	+3.4
DCPH	**Dipolog City**	**1.59**	**300**	⇑*e*P	Pn	20 44 32.3	+0.3
MATI	**Mati**	**1.72**	**119**	*e*P	Pb	20 44 35.5	-0.1
MATI				*e*S	Sg	20 45 02.1	+2.8
DDMP	**Don Marcelino,**	**1.93**	**150**	*e*P	Pn	20 44 37.6	+0.8
DDMP				*e*S	Sg	20 45 08.6	+2.5
SCPH	**Surigao**	**2.11**	**20**	⇑*e*P	Pg	20 44 46.5	+2.1
SNPH	**Sibulan**	**2.14**	**316**	⇓*e*P	Pn	20 44 41.0	+1.2
SNPH				*i*S	Sb	20 45 09.9	+0.4
IPIL	**Ipil**	**2.15**	**270**	*e*P	Pn	20 44 39.1	-0.8
IPIL				*e*S	Sb	20 45 09.1	-0.7
LLP	**Lapu-Lapu**	**2.62**	**343**	*e*P	Pn	20 44 46.0	-0.3
LLP				*e*S	Sn	20 45 19.0	+0.7

NNC 29 20:51:32.5±10.0, 36°.70N×72°.83E, h0km, mb3.5, mpv3.1, 3C, Error ellipse: s-maj=143.3km s-min=80.5km az=50.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**6.56**	**18**	⇑Pn	Pn	20 53 10.2	-0.3
	1.2nm,0.6s						
KK31	**Karatay Array**	**6.63**	**345**	⇑Pn	Pn	20 53 12.3	+1.1
	0.4nm,0.3s,baz=145,slow=10,SNR=29						
KK31				⇑Sn	Sn	20 54 28.6	+1.1
	2.4nm,0.8s,baz=156,slow=22,SNR=4.1						
AB31	**Akbulak array**	**15.66**	**327**	P	Pn	20 55 12.3	-2.1
	0.6nm,0.6s,baz=134,slow=11,SNR=6.6						

*ISCJB **29** 21:19:24.8±0.3, 18°.23N±0°.03×99°.08W±0°.02, h71km±2km, mb4.5/99, Error ellipse: s-maj=4.6km s-min=2.8km az=19.1*

*IDC **29** 21:19:25.8±0.8, 18°.43N×99°.05W, h56km±6km, mb4.3/25, mb1 4.4/30, mb1mx4.2/51, mbtmp4.5/30, MS3.4/27, Ms1 3.4/27, ms1mx3.3/41, Error ellipse: s-maj=26.4km s-min=10.7km az=42.0*
*MEX **29** 21:19:26.7±1.1, 18°.15N×99°.25W, h51km±10km, MD4.7*
*NEIC **29** 21:19:26.3±0.0, 18°.15N×99°.28W, h55km, mb4.5/191, MD4.7(MEX), After MEX.*
NEIC Felt [III] at Mexico and [II] at Cuernavaca. Also felt at Acahualco, Acatzingo, Chilpancingo, Tepoztlan and Toluca.

ISC 29 21:19:24.7±0.5, 18°.16N±0°.03×99°.22W±0°.04, h56km±4km, h56km:pP-P, n521, σ1°24/529, mb4.5/102, MS3.5/24, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**0.35**	**311**	*e*Pn	**Pn**	**21 19 34.5**	**-0.5**
PLIG				*e*Sn	**Sn**	**21 19 41.6**	**-0.8**
PLIG	**Platanillo**	**0.35**	**311**	*e*P	**Pn**	**21 19 34.5**	**-0.5**
PLIG				*i*S	**Sn**	**21 19 41.6**	**-0.8**
MEIG	**Mezcala**	**0.45**	**238**	*e*Pn	**Pn**	**21 19 35.3**	**-0.6**
MEIG				*e*Sn	**Sn**	**21 19 43.3**	**-0.7**
MEIG	**Mezcala**	**0.45**	**238**	*e*P	**Pn**	**21 19 35.2**	**-0.6**
MEIG				*i*S	**Sn**	**21 19 43.3**	**-0.7**
YAIG	**Yautepec**	**0.71**	**12**	*e*Pn	**Pn**	**21 19 39.0**	**-0.1**
YAIG				*e*Sn	**Sn**	**21 19 49.2**	**-0.3**
YAIG	**Yautepec**	**0.71**	**12**	*e*P	**Pn**	**21 19 39.0**	**-0.1**
YAIG				*e*S	**Sn**	**21 19 49.2**	**-0.3**
HMTT	**Tlapaneco**	**0.73**	**120**	*e*P	**Pn**	**21 19 39.4**	**+0.2**
HMTT				*i*S	**Sn**	**21 19 49.9**	**+0.1**
MAVM	**Malinalco, Edo**	**0.83**	**342**	*e*P	**Pn**	**21 19 40.8**	**+0.1**
MAVM				*i*S	**Sn**	**21 19 52.5**	**+0.1**
TLIG	**Tlapa**	**0.86**	**134**	*e*Pn	**Pn**	**21 19 41.3**	**+0.3**
TLIG	**Tlapa**	**0.86**	**134**	*e*P	**Pn**	**21 19 41.2**	**+0.3**
TLIG				*e*S	**Sn**	**21 19 52.9**	**+0.1**
AMVM	**AMECAMECA**	**1.05**	**23**	*e*P	**Pn**	**21 19 44.1**	**+0.5**
AMVM				*i*S	**Sn**	**21 19 57.4**	**-0.1**
PPM	**Popocatepetl**	**1.06**	**32**	*e*Pn	**Pn**	**21 19 44.3**	**+0.4**
PPM				*e*Sn	**Sn**	**21 19 59.1**	**+1.0**
PPM	**Popocatepetl**	**1.06**	**32**	*i*P	**Pn**	**21 19 44.3**	**+0.4**
PPM				*e*S	**Sn**	**21 19 58.1**	**0.0**
ARIG	**Puente Sto Nin**	**1.08**	**276**	*i*P	**Pn**	**21 19 43.7**	**0.0**
ARIG				*e*S	**Sn**	**21 19 57.1**	**-0.6**
TOVM	**TOLUCA**	**1.20**	**339**	*i*P	**Pn**	**21 19 46.4**	**+0.9**
PBVM	**Pinon**	**1.28**	**6**	*e*P	**Pn**	**21 19 47.2**	**+0.9**
PBVM				*e*S	**Sn**	**21 20 02.2**	**-0.3**
CAIG	**El Cayaco**	**1.49**	**222**	*e*Pn	**Pn**	**21 19 48.0**	**-1.2**
CAIG				*e*Sn	**Sn**	**21 20 05.9**	**-1.7**
DEIG	**Demacu**	**2.14**	**5**	*e*Pn	**Pn**	**21 19 58.2**	**0.0**
DEIG				*e*Sn	**Sn**	**21 20 16.6**	**-7.1**
ZIIG	**Zihuatanejo**	**2.21**	**256**	*e*Pn	**Pn**	**21 19 58.2**	**-0.7**
VHO	**Vista Hermosa**	**2.61**	**114**	*e*Pn	**Pn**	**21 20 06.2**	**+1.5**
LVIG	**Laguna Verde**	**3.08**	**59**	*e*Pn	**Pn**	**21 20 10.6**	**-0.2**
LVIG				*e*Pn	Pn	21 20 10.8	0.0
LVIG	**Laguna Verde**	**3.08**	**59**	*i*P	**Pn**	**21 20 10.5**	**-0.3**
LVIG				*e*P		21 20 10.6	
LVIG				*i*S	Sn	21 20 55.0	+8.6
IGIG	**Irapuato, Guan**	**3.25**	**323**	*i*P	Pn	21 20 20.2	+6.7
CMIG	**Matias Romero**	**4.27**	**104**	P	**Pn**	**21 20 28.9**	**+1.7**
	19nm,0.3s,baz=274,slow=9.6,SNR=72						
CMIG				S	**Sn**	**21 21 13.7**	**-2.1**
	30nm,0.3s,baz=171,slow=22,SNR=10						
CMIG				LR	LR	21 22 15.2	
	comp=Z,248nm,18.8s,baz=278,slow=40						
CMIG	**Matias Romero**	**4.27**	**104**	*e*P	**Pn**	**21 20 28.9**	**+1.7**
EZ5V		**4.35**	**288**	*i*P	**Pn**	**21 20 30.9**	**+2.4**
ZAIG	**Zacatecas**	**5.55**	**326**	*e*Pn	**Pn**	**21 20 45.6**	**+0.6**
LNIG	**Linares**	**6.71**	**358**	*e*Pn	**Pn**	**21 21 01.4**	**+0.8**
CCIG	**Comitan**	**7.02**	**104**	*e*Pn	**Pn**	**21 21 06.3**	**+1.2**
APG	**El Apazote**	**8.96**	**109**	P	**Pn**	**21 21 33.4**	**+1.6**
	0.7nm,0.3s,baz=329,slow=14,SNR=5.6						
APG				S	**Sn**	**21 23 10.4**	**-1.1**
	3.4nm,0.3s,baz=343,slow=16,SNR=3.4						
APG				LR	LR	21 25 31.3	
	comp=Z,79nm,21.8s,baz=297,slow=41						
833A	**Chaparral WMA,**	**10.12**	**359**	*e*Pn	**Pn**	**21 21 49.9**	**+2.6**
833A	**Chaparral WMA,**	**10.12**	**359**	P	**Pn**	**21 21 48.5**	**+1.3**
	baz=179						
HPIG		**10.57**	**327**	*e*Pn	**Pn**	**21 21 57.7**	**+4.1**
TXAR	**Lajitas Array**	**11.84**	**341**	P	**Pn**	**21 22 10.6**	**-0.4**

WHAR	Wooly Hollow 24nm,1.1s	18.14	18	eP	Pn	21 23 32.5	-0.1
U32A	Winter Ranch, 72nm,0.6s	18.15	1	eP	P	21 23 31.9	-0.6
149A	Jones baz=221,SNR=12	18.22	36	P	Pn	21 23 33.3	-0.2
214A	Organ Pipe Nat baz=135	18.42	321	P	Pn	21 23 36.8	+0.8
LRAL	Lakeview Retre baz=220	18.44	34	P	Pn	21 23 36.3	0.0
857A	Zephyrhills baz=241	18.56	54	P	P	21 23 37.0	+0.1
251A	Midway baz=225	18.65	39	P	Pn	21 23 39.0	+0.2
150A	Eclectic baz=223	18.66	37	P	Pn	21 23 38.7	-0.1
Z49A	Columbiana baz=220	18.81	35	P	P	21 23 39.1	-0.6
X46A	Booneville baz=213	18.88	28	P	P	21 23 40.6	+0.1
X18A	Snowflake 28nm,1.0s	18.90	332	eP	Pn	21 23 42.3	+0.3
U40A	Yellville baz=199,SNR=8.9	18.98	16	P	P	21 23 41.0	-0.5
151A	Opelika baz=224	19.00	39	P	P	21 23 41.8	-0.1
Y48A	Jasper baz=218	19.03	32	P	P	21 23 41.6	-0.5
X47A	Russelville baz=215	19.19	30	P	P	21 23 43.4	-0.4
Z50A	Ashland baz=222	19.19	36	P	P	21 23 43.7	-0.2
858A	St. Cloud baz=242	19.20	55	P	P	21 23 43.1	-0.9
Y49A	Blount Mountai baz=219	19.38	34	P	P	21 23 46.3	+0.3
T25A	Trinidad 15nm,0.8s	19.45	347	eP	P	21 23 47.2	+0.3
T25A	Trinidad baz=165,SNR=14	19.45	347	P	Pn	21 23 47.6	-0.9
152A	Waverly Hall baz=226	19.47	39	P	P	21 23 47.0	+0.1
X16A	Lo Mia Camp, P 37nm,0.7s	19.52	328	eP	Pn	21 23 49.1	-0.3
X48A	Hartselle baz=217	19.52	31	P	P	21 23 47.2	-0.3
113A	Mohawk Valley, 49nm,1.9s	19.56	321	eP	P	21 23 48.2	+0.3
W47A	Westpoint baz=214	19.91	29	P	P	21 23 51.0	-0.7
X49A	Woodville baz=218	19.94	33	P	P	21 23 51.7	-0.2
Y14A	Wickenburg 30nm,0.8s	19.97	325	eP	Pn	21 23 53.5	-1.0
Z52A	Williamson baz=225	20.01	39	P	P	21 23 52.0	-0.9
PBMO	Poplar Bluff 18nm,0.8s	20.10	21	eP	Pn	21 23 55.0	-0.9
W48A	Pulaski baz=216	20.13	30	P	P	21 23 53.3	-0.8
V46A	Holladay baz=212	20.14	27	P	P	21 23 54.0	-0.2
Y51A	Rockmart baz=222	20.15	36	P	P	21 23 53.6	-0.7
X50B	Fort Payne baz=220	20.25	34	P	P	21 23 55.6	+0.2
SDCO	Great Sand Dun baz=163	20.27	346	P	P	21 23 56.4	+0.5
WUAZ	Wupatki baz=145,SNR=31	20.37	330	P	Pn	21 23 59.2	-0.2
GLA	Glamis 54nm,1.6s	20.40	320	eP	Pn	21 23 59.0	-0.6
GLA	Glamis baz=133,SNR=5.4	20.40	320	P	P	21 23 57.6	+0.5
V47A	Nunnelly baz=214	20.42	28	P	P	21 23 55.5	-1.8
W49A	Belvidere baz=218	20.44	32	P	P	21 23 57.9	+0.4
WVT	Waverly 21nm,1.0s	20.54	27	eP	P	21 23 57.5	-1.0
WVT	Waverly baz=212	20.54	27	P	P	21 23 57.3	-1.2
U46A	Springville baz=211	20.59	26	P	P	21 23 59.3	+0.3
Z53A	Monticello baz=227	20.59	40	P	P	21 23 57.9	-1.2
S22A	4UR Ranch, Cre baz=159,SNR=13	20.62	343	P	P	21 23 59.9	+0.2
MVCO	Mesa Verde baz=154,SNR=13	20.66	339	P	P	21 24 00.7	+0.7
V48A	Smith Brothers baz=215	20.67	30	P	P	21 23 58.2	-1.7
SWET	Sewanee 15nm,0.9s	20.69	32	eP	P	21 24 00.0	-0.2
Y52A	Lilburn baz=225	20.70	38	P	P	21 23 59.0	-1.3
Y12C	Blythe 17nm,1.0s	20.70	322	eP	P	21 24 01.5	+1.2
Y12C	Blythe baz=135,SNR=5.5	20.70	322	P	Pn	21 24 01.9	-1.3
GOGA	Godfrey baz=227	20.74	40	P	P	21 24 00.8	+0.1
X51A	Calhoun 28nm,0.8s	20.76	35	eP	Pn	21 24 03.6	-0.2
X51A	Calhoun baz=222	20.76	35	P	P	21 24 01.0	+0.2
155A	Kite baz=230	20.85	43	P	P	21 24 01.5	-0.4
PDMCI	Parker Dam,Lak baz=137	20.88	323	P	P	21 24 03.0	+0.9
SWSC	Sam W. Stewart baz=131	20.94	318	P	P	21 24 03.9	+1.0
IKP	In-Ko-Pah, Jac baz=130	20.95	317	P	P	21 24 03.2	+0.1
KSU1	Kansas State U baz=187	20.99	6	P	P	21 24 03.2	-0.1
W50A	Signal Mountai 17nm,0.8s	20.99	33	eP	P	21 24 02.5	-1.0
W50A	Signal Mountai baz=220	20.99	33	P	P	21 24 03.1	-0.4
CCM	Cathedral Cave 37nm,0.9s	21.01	18	eP	P	21 24 02.4	-1.2
CCM	Cathedral Cave baz=202	21.01	18	P	P	21 24 02.7	-0.9
U47A	Clarksville baz=213	21.04	28	P	P	21 24 04.2	+0.4
V49A	McMinnville baz=217,SNR=5.6	21.14	31	P	P	21 24 04.7	-0.3
CLTN	Cedars of Leba 14nm,1.1s	21.19	30	eP	P	21 24 06.9	+1.4
BC3	Big Chuckawall baz=133,SNR=8.4	21.20	320	P	P	21 24 07.3	+1.5
W51A	Cleveland baz=221	21.26	34	P	P	21 24 05.7	-0.5
T46A	Princeton baz=211	21.29	26	P	P	21 24 06.8	+0.2
MONP2	Monument Peak baz=130	21.31	317	P	P	21 24 08.0	+0.9
X52A	Dahlonega baz=224	21.32	37	P	P	21 24 06.6	-0.4
S44A	Carbondale baz=207	21.33	22	P	P	21 24 07.9	+0.9
IRM	Iron Mountain baz=134,SNR=15	21.36	321	P	P	21 24 08.9	+1.5
U48A	Cassie Pea, Po baz=215,SNR=10	21.43	29	P	P	21 24 08.5	+0.4
V50A	Pikevile baz=219,SNR=10.0	21.47	33	P	P	21 24 09.3	+0.9
PV01	Paradox Valley 20nm,1.2s	21.51	340	eP	P	21 24 09.9	+0.7
Y54A	Tignall baz=228	21.52	40	P	P	21 24 08.3	-0.8
U15A	North Rim 18nm,1.0s	21.55	330	eP	P	21 24 10.7	+1.1
T47A	Sharon Grove baz=213,SNR=6.5	21.57	27	P	P	21 24 10.0	+0.4
PV13	Radium Mtn., P 12nm,0.9s	21.62	339	eP	P	21 24 10.6	+0.3
PV02	Paradox Valley 16nm,0.9s	21.64	339	eP	P	21 24 11.7	+1.1
PV05	Paradox Valley 9.2nm,0.9s	21.64	338	eP	P	21 24 10.9	+0.3
W52A	Murphy baz=223	21.66	36	P	P	21 24 10.3	-0.3
PV18	Skein Mesa, Pa 11nm,0.8s	21.73	339	eP	P	21 24 11.9	+0.4
PV12	Saucer Basin, 24nm,0.9s	21.76	339	eP	P	21 24 12.5	+0.7
BELC	Belle Mtn. Jos baz=132,SNR=9.3	21.76	320	P	P	21 24 12.9	+1.0
PV11	David Mesa, Pa 13nm,0.7s	21.76	339	eP	P	21 24 12.0	+0.2
PV17	East Wray Mesa 15nm,1.0s	21.78	339	eP	P	21 24 12.0	0.0
U49A	Red Boiling Sp baz=216	21.79	30	P	P	21 24 11.5	-0.5
PFO	Pinyon Flats O 6.6nm,0.8s,baz=125,slow=5.4,SNR=10	21.80	318	P	P	21 24 13.0	+0.8
PFO	Pinyon Flats O 11nm,1.1s	21.80	318	eP	P	21 24 12.2	0.0
PFO	Pinyon Flats O baz=131,SNR=5.9	21.80	318	P	P	21 24 13.2	+1.1
PV19	Morning Glory 29nm,1.4s	21.81	339	eP	P	21 24 13.2	+0.9
PV07	Paradox Valley 19nm,1.1s	21.81	340	eP	P	21 24 13.0	+0.6
157A	Early Branch baz=233	21.86	45	P	P	21 24 11.2	-1.5
PV10	Paradox Valley 12nm,0.8s	21.89	339	eP	P	21 24 12.9	-0.3
PV22	Blue Mesa, Par 27nm,1.2s	21.95	340	eP	P	21 24 14.1	+0.3
PV23	Carpenter Ridg 17nm,0.8s	21.95	339	eP	P	21 24 14.4	+0.5
V51A	Loudon baz=221	21.96	34	P	P	21 24 13.5	-0.3
T48A	Bowling Green baz=214	21.99	28	P	P	21 24 13.7	-0.3
PV09	Paradox Valley	22.03	339	eP	P	21 24 15.4	+0.6
PV21	Cone Mtn., Par 10nm,0.9s	22.04	339	eP	P	21 24 15.5	+0.7
GMRC	Granite Mounta baz=135,SNR=12	22.10	322	P	P	21 24 16.0	+0.6
W53A	Cullowhee baz=224	22.15	37	P	P	21 24 16.1	+0.2
U50A	Jamestown baz=219	22.18	32	P	P	21 24 14.2	-1.9
X54A	Belton baz=227	22.18	39	P	P	21 24 16.0	-0.1
S47A	Hartford baz=213	22.18	27	P	P	21 24 14.2	-1.9
ISCO	Idaho Springs 6.0nm,0.7s	22.26	347	eP	P	21 24 16.7	-0.6
ISCO	Idaho Springs baz=164,SNR=10	22.26	347	P	P	21 24 17.0	-0.3
KNB	Kanab 34nm,0.9s	22.27	330	eP	P	21 24 17.6	+0.3
T49A	Edmonton baz=216	22.38	30	P	P	21 24 16.9	-1.5
V52A	Sevierville baz=222	22.39	35	P	P	21 24 17.1	-1.4
R46A	Gibon Southern baz=210	22.45	25	P	P	21 24 18.0	-1.0
LCMT	Little Creek M 15nm,0.9s	22.47	330	eP	P	21 24 20.1	+0.7
HEC	Hector,Ludlow baz=133,SNR=10.0	22.53	321	P	P	21 24 20.6	+0.6
U51A	La Follette baz=220	22.57	33	P	P	21 24 19.4	-0.9
S48A	Wiedeman Farm, baz=214	22.59	28	P	P	21 24 19.5	-1.1
T50A	Nancy baz=218,SNR=8.2	22.65	31	P	P	21 24 19.7	-1.5
W54A	Cherokee Point baz=226	22.66	39	P	P	21 24 20.3	-1.0
V53A	Saluda 51nm,1.4s	22.71	37	eP	P	21 24 21.7	-0.1
V53A	Saluda baz=224	22.71	37	P	P	21 24 21.3	-0.5
TUQ	Turquoise Moun baz=135,SNR=12	22.71	323	P	P	21 24 22.8	+0.9
Q45A	Warren Harvey, baz=208	22.79	23	P	P	21 24 21.2	-1.5
MTPU	Mount Pierson 104nm,1.7s	22.82	333	eP	P	21 24 23.8	+0.4
SZCU	Shurtz Canyon 12nm,0.8s	22.86	331	eP	P	21 24 25.3	+1.7
R47A	Wooly Knot Far baz=212,SNR=5.3	22.92	26	P	P	21 24 23.1	-0.9
TZTN	Tazewell baz=221	22.94	34	P	P	21 24 23.2	-1.0
CCUT	Cedar City 11nm,0.8s	22.96	330	eP	P	21 24 26.0	+1.4
BFSC	Mount Baldy Ra baz=130	22.96	318	P	P	21 24 24.8	+0.2
WCI	Wyandotte Cave 23nm,0.8s	22.96	27	eP	P	21 24 23.0	-1.4
WCI	Wyandotte Cave baz=213	22.96	27	P	P	21 24 23.2	-1.2
X56A	White Oak baz=230	22.97	41	P	P	21 24 23.7	-0.7
S49A	Springfield baz=216	23.05	29	P	P	21 24 23.5	-1.7
SHPR	Sheep Range 5.8nm,0.7s	23.06	326	eP	P	21 24 26.3	+0.8
T51A	Gray baz=220	23.06	33	P	P	21 24 24.4	-0.9
GSC	Goldstone, Bar baz=133,SNR=6.7	23.13	321	P	P	21 24 26.0	-0.3
KMSC	Kings Mountain baz=228	23.21	40	P	P	21 24 25.9	-0.9
MSU	Marysvale	23.21	333	eP	P	21 24 28.1	+1.0
O20A	White River Ci 28nm,1.3s	23.24	342	eP	P	21 24 27.1	-0.2
O20A	White River Ci baz=158,SNR=9.6	23.24	342	P	P	21 24 27.3	0.0
V54A	Nebo baz=226	23.28	38	P	P	21 24 26.6	-0.9
R48A	Northridge Ran baz=214	23.29	27	P	P	21 24 25.9	-1.7
N23A	Red Feather La baz=164,SNR=7.7	23.38	347	P	P	21 24 28.5	-0.3
S50A	Richmond baz=218	23.39	31	P	P	21 24 26.8	-1.7
Y58A	Scranton baz=233	23.48	44	P	P	21 24 27.7	-1.7
TMUT	Trail Mountain 22nm,0.7s	23.49	336	eP	P	21 24 30.6	+0.7
Q47A	Bedord North L baz=212	23.50	26	P	P	21 24 27.8	-1.8
R49A	Shelbyville 16nm,0.8s	23.51	29	eP	P	21 24 30.2	+0.5
N40A	Mertquake, Sal baz=198,SNR=6.6	23.58	15	P	P	21 24 27.9	-2.4
EDW2	Edwards Air Fo baz=130	23.58	319	P	P	21 24 28.8	-1.7
T52A	Hallie baz=222	23.66	34	P	P	21 24 29.8	-1.4
S51A	Beattyville baz=220,SNR=7.6	23.75	32	P	P	21 24 30.1	-1.9
V55A	Taylorsville baz=227	23.76	39	P	P	21 24 30.7	-1.3
LRMC	Laurel Mtn Rad baz=132	23.78	320	P	P	21 24 32.5	+0.1
Q48A	North Vernon baz=213	23.79	27	P	P	21 24 30.7	-1.5
BLG	Laguna Peak, P baz=127	23.80	316	P	P	21 24 32.2	-0.1
O44A	Mansfield baz=206	23.80	21	P	P	21 24 30.4	-1.9
T53A	Wise baz=222	23.81	35	P	P	21 24 30.9	-1.6
U54A	Nelsons Funny 39nm,1.4s	23.88	37	eP	P	21 24 32.7	-0.4
U54A	Nelsons Funny baz=225	23.88	37	P	P	21 24 32.1	-1.1
R50A	Paris baz=217	23.90	30	P	P	21 24 31.8	-1.5
HDIL	Hopedale baz=204	23.90	19	P	P	21 24 32.2	-1.1
FURC	Furnace Creek, baz=135	23.97	323	P	P	21 24 34.5	+0.6
TPNV	Topopah Spring baz=137,SNR=16	23.97	325	P	P	21 24 35.6	+1.5
PSUT	Pine Spring 14nm,0.7s	23.98	331	eP	P	21 24 34.9	+0.7
S52A	Salyersville baz=220	24.05	33	P	P	21 24 33.7	-0.9
MPMC	Manual Prospec baz=133,SNR=10	24.05	321	P	P	21 24 35.0	+0.1
O45A	Potomac baz=208	24.15	22	P	P	21 24 34.8	-0.7
V56A	Mocksville baz=228	24.16	40	P	P	21 24 34.8	-0.8
Q49A	Aurora baz=215	24.22	28	P	P	21 24 35.1	-1.1
DAC	Darwin (Calif) 13nm,1.4s	24.27	322	eP	P	21 24 39.4	+2.6
R51A	Hillsboro baz=219	24.27	31	P	P	21 24 35.7	-0.9
N43A	Stutzman Famil baz=204,SNR=5.3	24.29	19	P	P	21 24 35.2	-1.5
M41A	Milan baz=200	24.30	16	P	P	21 24 35.0	-1.9
U55A	TA2, Sparta baz=226	24.30	38	P	P	21 24 36.4	-0.6
P48A	Milroy 20nm,0.8s	24.36	27	eP	P	21 24 36.6	-0.9
P48A	Milroy baz=213	24.36	27	P	P	21 24 36.4	-1.0
ISA	Isabella, Lake baz=131	24.39	319	P	P	21 24 38.6	+0.8
T54A	Tazewell baz=224	24.40	36	P	P	21 24 36.6	-1.3
W58A	Raeford baz=232	24.45	43	P	P	21 24 36.9	-1.3
SFIN	Lafayette baz=209	24.49	23	P	P	21 24 37.5	-1.0
N44A	Piper City baz=206	24.49	21	P	P	21 24 36.8	-1.8
Q50A	Georgetown baz=217	24.51	30	P	P	21 24 37.2	-1.6
S53A	Williamson baz=222	24.55	34	P	P	21 24 38.3	-0.9
V57A	Coltrane Farms baz=229	24.65	40	P	P	21 24 39.6	-0.5
R11A	Troy Canyon, C baz=140,SNR=26	24.67	328	P	P	21 24 41.2	+0.7
O47A	Sheridan baz=211	24.71	24	P	P	21 24 39.0	-1.6
P49A	Miami Univ. Ec baz=215,SNR=6.5	24.73	28	P	P	21 24 38.9	-1.9
PKM	Mcpherson Peak baz=127	24.76	316	P	P	21 24 42.1	+0.8
R52A	Catlettsburg baz=220	24.77	32	P	P	21 24 40.0	-1.2
L40A	Anamosa baz=198	24.78	14	P	P	21 24 39.7	-1.5
M43A	Waltham Townsh baz=204	24.81	19	P	P	21 24 39.7	-1.7
VES	Vestal, Richgr baz=130	24.88	319	P	P	21 24 43.2	+1.0
T55A	Pulaski baz=226	24.88	37	P	P	21 24 41.9	-0.4
DUG	Dugway, Tooele baz=148,SNR=17	24.90	335	P	P	21 24 43.0	+0.5
CTU	Camp Tracy 12nm,1.0s	24.91	337	eP	P	21 24 43.6	+1.0
Q51A	Peebles baz=218	24.95	30	P	P	21 24 41.8	-1.0
V58A	Windy Hill, Pi baz=231	25.00	41	P	P	21 24 42.9	-0.4
X60A	Albert Glenn T baz=234	25.01	45	P	P	21 24 42.9	-0.5
N46A	Monticello baz=209	25.07	23	P	P	21 24 43.6	-0.2
S54A	Dingess, Beckl baz=224	25.07	35	P	P	21 24 43.5	-0.5
R53A	Hurricane baz=222,SNR=11	25.12	33	P	P	21 24 43.4	-1.0
L42A	Oliver, Polo baz=202	25.13	17	P	P	21 24 42.7	-1.7
SMMC	Simmler baz=128	25.13	317	P	P	21 24 45.3	+0.8
O48A	Farmland baz=213,SNR=12	25.14	26	P	P	21 24 42.5	-2.0
BLA	Blacksburg baz=226	25.16	37	P	P	21 24 44.2	-0.6
TCUT	Toone Canyon 27nm,0.8s	25.16	338	eP	P	21 24 45.6	+0.6
K22A	Casper baz=164	25.19	347	P	P	21 24 45.1	0.0
P50A	Jamestown baz=216,SNR=6.7	25.21	29	P	P	21 24 43.0	-2.1
U57A	Blanch baz=229	25.28	40	P	P	21 24 45.1	-0.7
M45A	Boilermakers S baz=208	25.32	21	P	P	21 24 46.5	+0.4
O49A	Covington 33nm,0.9s	25.44	27	eP	P	21 24 44.6	-2.5
O49A	Covington baz=215,SNR=5.3	25.44	27	P	P	21 24 44.9	-2.3
Q52A	Bidwell baz=220,SNR=6.4	25.44	32	P	P	21 24 45.7	-1.5
N47A	Urbana baz=211,SNR=7.1	25.45	24	P	P	21 24 45.2	-2.2
S55A	Lewisburg baz=225	25.50	36	P	P	21 24 47.0	-0.9
R54A	Victor baz=224	25.52	35	P	P	21 24 47.2	-0.8
ECSD	EROS Data Cent 7.7nm,0.9s	25.59	4	eP	P	21 24 47.6	-0.9
ECSD	EROS Data Cent baz=186	25.59	4	P	P	21 24 48.0	-0.6
BGU	Big Grassy Mou 5.8nm,1.1s	25.60	335	eP	P	21 24 49.3	+0.4
HWUT	Hardware Ranch 8.9nm,0.7s	25.64	338	eP	P	21 24 50.3	+1.0
T57A	Hurt baz=228	25.70	39	P	P	21 24 49.3	-0.3
N48A	Decatur baz=212	25.70	25	P	P	21 24 47.5	-2.1
O50A	Cable baz=216	25.72	28	P	P	21 24 47.8	-2.0
Q53A	Leroy baz=222	25.74	33	P	P	21 24 48.9	-1.1
JFWS	Jewell Farm baz=200	25.82	15	P	P	21 24 49.5	-1.2
OMMB	Old Mammoth Mi 3.9nm,0.9s	26.00	322	eP	P	21 24 53.2	+0.5
BW06	Boulder Array baz=157,SNR=12	26.05	342	P	P	21 24 52.5	-0.5
PDAR	Pinedale Array 5.0nm,0.6s,baz=144,slow=11,SNR=47	26.05	342	P	P	21 24 53.0	-0.1
PDAR			LR		LR	21 36 05.9	
	comp=Z,302nm,19.4s,baz=165,slow=39						
MDPB	Devils Postpil	26.06	322	ePcP	PcP	21 28 20.3	+0.4
R55A	Marlinton baz=225	26.08	36	P	P	21 24 52.3	-0.8
NV11	Mina Array Sit 1.0nm,1.2s	26.09	325	eP	P	21 24 54.4	+1.0
T58A	Grand View Acr baz=230	26.10	40	P	P	21 24 52.5	-0.7
N49A	Columbus Grove baz=214	26.11	27	P	P	21 24 52.0	-1.2
NVAR	Mina Array Bea 9.2nm,0.6s,baz=145,slow=10,SNR=48	26.17	324	P	P	21 24 55.7	+1.5
NVAR			LR		LR	21 36 05.5	
	comp=Z,55nm,19.5s,baz=63,slow=38						
O51A	Pataskala baz=218	26.19	30	P	P	21 24 52.3	-1.7
Q54A	Coxs Mills baz=223	26.19	34	P	P	21 24 53.2	-0.9
RSSD	Black Hills baz=170	26.20	352	P	P	21 24 54.8	+0.5
SUSD	Miller baz=181	26.20	0	P	P	21 24 55.3	+1.2
HVU	Hansel Valley 8.5nm,0.6s	26.24	337	eP	P	21 24 54.8	+0.2
P53A	Whipple baz=221	26.28	32	P	P	21 24 53.6	-1.2
S57A	Dark Hollow, R baz=228	26.39	38	P	P	21 24 55.5	-0.3
ELK	Elko 4.0nm,0.9s,baz=163,slow=8.9,SNR=7.5	26.39	332	P	P	21 24 56.3	+0.2
ELK			LR		LR	21 36 51.5	
	comp=Z,119nm,19.8s,baz=135,slow=40						
ELK	Elko 4.4nm,0.9s	26.39	332	eP	P	21 24 56.6	+0.5
RYN	Ryan 6.6nm,0.8s	26.43	324	eP	P	21 24 57.6	+1.2
KVN	Kaisersville 6.7nm,0.8s	26.50	326	eP	P	21 24 57.2	+0.1
O52A	Adamsville 20nm,0.7s	26.54	31	eP	P	21 24 55.0	-2.2
O52A	Adamsville baz=220,SNR=5.9	26.54	31	P	P	21 24 55.0	-2.2
L47A	Sherwood baz=211	26.58	24	P	P	21 24 56.4	-1.2
M49A	Liberty Center baz=214	26.65	26	P	P	21 24 56.5	-1.7
U60A	Pendleton baz=233	26.67	42	P	P	21 24 57.8	-0.5
L48A	N Adams	26.86	25	P	P	21 24 58.4	-1.7

baz=212
N51A **Ashland** 26.91 29 P P 21 24 57.9 -2.6
baz=218
O53A **New Philadelph** 26.94 31 P P 21 24 58.5 -2.3
baz=220
YERR **Yerington** 27.08 324 eP P 21 25 02.1 -0.2
9.3nm,1.3s
P55A **Reedsville** 27.11 34 P P 21 25 01.3 -1.1
baz=224
TPAW **Teton Pass** 27.13 341 eP P 21 25 03.4 +0.6
7.6nm,0.9s
K47A **Vermontville** 27.26 23 P P 21 25 01.9 -1.7
baz=211
L49A **Milan** 27.27 26 P P 21 25 01.4 -2.2
baz=214
MOOW **Moose Ponds** 27.30 342 eP P 21 25 04.2 -0.1
25nm,2.0s
R58A **Rapidan** 27.30 38 P P 21 25 03.8 -0.2
baz=229
AAM **Ann Arbor** 27.47 26 P P 21 25 04.5 -1.0
baz=214
SPMN **Marine on St.** 27.51 10 P P 21 25 05.0 -0.9
baz=193
N53A **Lisbon** 27.55 31 P P 21 25 04.9 -1.4
baz=220
P56A **Dayton Farm, R** 27.65 36 P P 21 25 06.4 -0.7
baz=226
K48A **Perry** 27.71 24 P P 21 25 06.8 -0.8
baz=212
G39A **Holcombe** 27.87 12 P P 21 25 07.4 -1.7
baz=197,SNR=8.1
M52A **Chesterland** 27.87 30 P P 21 25 07.3 -1.8
baz=219
O55A **Ligonier** 27.89 34 P P 21 25 07.8 -1.5
baz=224
G40A **Rib Lake** 28.06 14 P P 21 25 09.2 -1.5
baz=198
N54A **Moraine State** 28.09 32 P P 21 25 09.7 -1.4
baz=222
RLMT **Red Lodge** 28.16 345 P P 21 25 11.9 -0.1
baz=160,SNR=16
BEKR **Beckworth** 28.32 324 eP P 21 25 14.2 +0.9
9.3nm,1.0s
O56A **Blue Knob Stat** 28.33 35 P P 21 25 11.8 -1.4
baz=225
F38A **Pierce - Schro** 28.38 11 P P 21 25 12.1 -1.4
baz=195
HLID **Hailey** 28.39 336 P P 21 25 14.1 +0.2
baz=149,SNR=11
N55A **Marion Center** 28.48 33 P P 21 25 12.9 -1.6
baz=224
F39A **Loretta** 28.52 12 P P 21 25 12.6 -2.3
baz=197
J49A **Marlette** 28.57 25 P P 21 25 13.0 -2.2
baz=213
M54A **Oil Creek Stat** 28.66 32 P P 21 25 13.6 -2.6
baz=222
F40A **Park Falls** 28.69 13 P P 21 25 14.4 -1.9
baz=198
L53A **Girard** 28.71 30 P P 21 25 14.4 -2.2
baz=220
N56A **West Decatur** 28.94 34 P P 21 25 17.1 -1.5
baz=225
SSPA **Standing Stone** 28.96 35 P P 21 25 17.6 -1.2
baz=226
LAO **LASA Array** 29.03 350 P P 21 25 18.6 -0.9
baz=166
I48A **Sherman Twp** 29.04 23 P P 21 25 18.5 -0.9
baz=212
E38A **The Farm, Brul** 29.07 11 P P 21 25 18.1 -1.6
baz=195
M55A **Ridgway** 29.09 33 P P 21 25 18.0 -1.9
baz=223
H47A **Mio** 29.21 22 P P 21 25 20.3 -0.7
baz=210
N57A **Milroy** 29.23 35 P P 21 25 20.4 -0.7
baz=226
BOZ **Bozeman (W)** 29.24 342 P P 21 25 21.8 +0.4
baz=156,SNR=5.5
SDV **Santo Domingo** 29.25 105 P P 21 25 22.4 +0.5
3.3nm,0.6s,baz=254,slow=2.7,SNR=5.7
SDV LR LR 21 38 45.1
comp=Z,48nm,19.3s,baz=143,slow=40
WVOR **Wild Horse Val** 29.29 330 eP P 21 25 22.7 +0.9
9.4nm,1.0s
DLMT **Dillon** 29.32 341 eP P 21 25 23.1 +0.9
7.4nm,0.8s
L54A **Sinclairville** 29.38 31 P P 21 25 21.2 -1.3
baz=221
M56A **Emporium** 29.40 33 P P 21 25 21.0 -1.7
baz=224
O03E **Paynes Creek** 29.42 323 P P 21 25 23.6 +0.6
baz=132
H48A **Harrisville** 29.62 23 P P 21 25 23.6 -1.0
baz=212
MOD **Modoc Plateau** 29.73 327 eP P 21 25 26.3 +0.5
9.9nm,0.7s
TYNO **Tyneside** 29.77 29 P P 21 25 24.0 -1.9
baz=219
L55A **Hinsdale** 29.78 32 P P 21 25 24.5 -1.6
baz=223
I51A **Listowel** 29.81 27 P P 21 25 24.6 -1.7
baz=217
J08A **Circle Bar Ran** 29.93 331 eP P 21 25 28.1 +0.6
31nm,1.3s
D41A **Chassel** 30.13 15 P P 21 25 27.9 -1.2
baz=201
AGMN **Agassiz Nation** 30.18 4 P P 21 25 28.2 -1.4
baz=186,SNR=6.7
PLID **Pearl Lake** 30.28 336 eP P 21 25 30.5 -0.3
19nm,1.4s
EYMN **Ely** 30.37 10 P P 21 25 29.1 -2.1
baz=195,SNR=5.8
M04C **Macdoel** 30.45 325 P P 21 25 31.9 -0.2
baz=134
DGMT **Dagmar** 30.50 353 eP P 21 25 32.2 -0.1
18nm,0.7s
DGMT **Dagmar** 30.50 353 P P 21 25 32.3 -0.1
baz=171
BMO **Blue Mountains** 30.61 334 eP P 21 25 33.1 -0.4
6.5nm,0.8s
E46A **Sault Ste Mari** 30.71 20 P P 21 25 32.3 -1.9
baz=209
M02C **Callahan** 30.74 324 P P 21 25 34.2 -0.5
baz=132
TOBO **Tobermory, Bru** 30.76 25 P P 21 25 33.1 -1.5
baz=214
C40A **Isle Royale Na** 30.80 13 P P 21 25 32.9 -2.1
baz=199
J55A **Hilton** 30.88 31 P P 21 25 33.1 -2.6
baz=222
YBH **Yreka Blue Hor** 30.89 324 P P 21 25 34.6 -1.4
2.6nm,0.6s,baz=141,slow=5.9,SNR=12
YBH LR LR 21 37 57.1
comp=Z,67nm,18.2s,baz=149,slow=36
KHMM **Horse Mountain** 30.91 322 eP P 21 25 37.3 +1.0
9.4nm,0.9s
I07A **Izee** 30.96 331 eP P 21 25 36.2 -0.4
5.1nm,0.7s
L04D **Klamath Falls** 31.00 326 P P 21 25 36.4 -0.6
baz=134
EGMT **Eagleton** 31.00 346 eP P 21 25 36.7 -0.2
29nm,1.8s
EGMT **Eagleton** 31.00 346 P P 21 25 36.4 -0.4
baz=160
MSO **Missoula** 31.06 340 P P 21 25 37.0 -0.4
baz=152
BINY **Binghamton** 31.07 35 P P 21 25 36.3 -1.2
baz=227
E47A **Iron Bridge** 31.14 22 P P 21 25 36.2 -1.8
baz=210
SADO **Sadowa** 31.40 28 P P 21 25 37.0 -3.3
6.6nm,0.5s,baz=260,slow=7.5,SNR=14
KLBO **Killbear Provi** 31.40 26 P P 21 25 38.1 -2.2
baz=216
SJG **San Juan** 31.41 85 LR LR 21 38 49.3
comp=Z,20nm,18.9s,baz=108,slow=37
J04D **Umpqua Nationa** 31.61 327 P P 21 25 42.4 -0.1
baz=135
PECO **Prince Edward** 31.78 31 P P 21 25 40.3 -3.3
baz=223
BUKO **Buck Lake** 31.82 27 P P 21 25 41.4 -2.5
baz=218
G53A **Haliburton** 31.91 28 P P 21 25 42.2 -2.6
baz=219
DELO **Deloro Mine** 31.91 30 P P 21 25 42.4 -2.4
baz=222
F51A **Arnstein** 31.99 26 P P 21 25 43.0 -2.4
baz=216

E50A **Wahnapitae** 32.06 24 P P 21 25 43.7 -2.4
baz=215
ULM **Lac du Bonnet** 32.12 4 P P 21 25 44.0 -2.6
5.0nm,0.6s,baz=189,slow=9.0,SNR=4.3
ULM LR LR 21 39 32.8
comp=Z,48nm,20.4s,baz=236,slow=38
F52A **Sundridge** 32.13 27 P P 21 25 44.2 -2.6
baz=218
H55A **Tweed** 32.14 30 P P 21 25 44.5 -2.3
baz=222
BANO **Bancroft** 32.15 29 P P 21 25 44.1 -2.7
baz=220
I04A **Tendick Farm,** 32.16 328 P P 21 25 46.5 -0.6
baz=136
ATAH **Atahualpa** 32.47 139 LR LR 21 37 08.8
comp=Z,66nm,18.8s,baz=303,slow=33
J01E **Myrtle Point** 32.52 325 P P 21 25 50.9 +0.7
baz=132
KEBM **Edson Butte** 32.55 325 eP P 21 25 51.8 +1.3
37nm,1.0s
I03D **Drain, OR** 32.58 327 P P 21 25 51.3 +0.6
baz=134
H56A **Elgin** 32.62 31 P P 21 25 48.7 -2.3
baz=224
E51A **G1948 Merrick** 32.65 26 P P 21 25 49.2 -2.1
baz=216
ALGO **Algonquin Park** 32.81 28 P P 21 25 50.7 -1.9
baz=219
H04D **Lebanon** 32.85 328 P P 21 25 52.2 -0.8
baz=136
G55A **Calabogie** 32.88 30 P P 21 25 51.2 -2.1
baz=222
WALA **Waterton Lakes** 33.04 342 eP P 21 25 54.7 0.0
10nm,1.0s
I02D **Swisshome** 33.12 327 P P 21 25 55.4 0.0
baz=134
D51A **Lot 18 Range I** 33.15 25 P P 21 25 53.4 -2.2
baz=216
F05D **White Salmon** 33.23 331 P P 21 25 56.7 +0.3
baz=139
E53A **Dumoine, Ponti** 33.30 28 P P 21 25 55.5 -1.5
baz=220
NEW **Newport** 33.38 338 P P 21 25 56.9 -0.7
4.7nm,0.6s,baz=144,slow=11,SNR=9.7
NEW **Newport** 33.38 338 eP P 21 25 57.5 -0.1
4.9nm,0.8s
NEW **Newport** 33.38 338 P P 21 25 56.8 -0.9
baz=148,SNR=8.1
D52A **ZEK Kipawa Sen** 33.45 26 P P 21 25 56.9 -1.3
baz=218
LONY **Lake Ozonia** 33.48 33 P P 21 25 56.9 -1.7
baz=226
F55A **Otter Lake** 33.49 30 P P 21 25 56.4 -2.2
baz=222
E54A **Lac Daplat, Po** 33.56 28 P P 21 25 57.2 -2.0
baz=220
G03D **McMinnville, O** 33.60 329 P P 21 26 00.4 +0.8
baz=136
LON **Longmire** 34.05 332 eP P 21 26 03.8 +0.2
8.8nm,0.8s
D05A **Enumclaw** 34.46 332 eP P 21 26 07.2 +0.2
15nm,0.8s
D03D **Eldon** 35.21 332 P P 21 26 13.0 -0.4
baz=138,SNR=6.5
LSQQ **Lebel-sur-Quev** 35.68 25 P P 21 26 15.7 -1.8
baz=218
A04D **Lummi Island** 35.94 333 P P 21 26 19.6 -0.1
baz=140,SNR=6.7
FFC **Flin Flon** 36.56 357 eP P 21 26 23.9 -1.0
13nm,0.6s
NNA **Nana** 37.22 142 LR LR 21 38 52.2
comp=Z,73nm,20.6s,baz=312,slow=31
SCHQ **Schefferville** 44.17 26 P P 21 27 25.5 -2.3
4.0nm,0.4s,baz=232,slow=10,SNR=3.6
SCHQ LR LR 21 46 29.6
comp=Z,60nm,20.5s,baz=217,slow=37
SCHQ **Schefferville** 44.17 26 eP P 21 27 25.5 -2.3
27nm,1.8s
YKA **Yellowknife Ar** 45.57 350 P P 21 27 37.4 -1.3
11nm,0.7s,baz=158,slow=7.4,SNR=38
YKA LR LR 21 46 15.2
comp=Z,5.9nm,20.6s,baz=172,slow=35
LPAZ **La Paz** 45.92 136 pP pP 21 27 57.9 0.0
1.4nm,0.7s,baz=319,slow=7.7,SNR=4.7
LPAZ LR LR 21 46 11.6
comp=Z,39nm,19.8s,baz=304,slow=35
DLBC **Dease Lake** 46.13 338 P P 21 27 43.8 +0.4
14nm,0.8s,baz=160,slow=7.6,SNR=28
DLBC **Dease Lake** 46.13 338 eP P 21 27 43.8 +0.4
17nm,0.9s
WHY **Whitehorse** 49.45 338 eP P 21 28 09.7 +0.6
6.0nm,0.8s
HYT **Haines Junctio** 50.52 337 eP P 21 28 18.6 +1.4
12nm,1.0s
SIV **San Ignacio** 50.63 130 P P 21 28 18.8 +0.3
0.7nm,0.4s,baz=310,slow=9.6,SNR=4.9
HMT **Hamilton** 52.92 334 eP P 21 28 36.3 +1.4
15nm,1.0s
EPYK **Eagle Plains** 54.01 342 P P 21 28 42.5 -0.4
baz=134
INK **Inuvik** 54.58 345 P P 21 28 45.8 -1.1
22nm,0.6s,baz=128,slow=6.4,SNR=47
RIDG **Independent Ri** 55.02 337 eP P 21 28 51.2 +0.9
RC01 **Rabbit Creek A** 55.63 333 eP P 21 28 55.5 +0.9
9.4nm,0.8s
HDA **Harding Lake** 56.16 337 P P 21 28 58.5 +0.1
baz=122
SUA **Susitna One** 56.23 333 eP P 21 28 59.8 +0.7
8.8nm,0.6s
ILAR **Eielson Array** 56.34 338 P P 21 28 59.0 -0.6
1.6nm,0.5s,baz=136,slow=5.7,SNR=30
ILAR PcP PcP 21 29 56.0 -0.3
1.0nm,0.7s,baz=162,slow=2.4,SNR=5.5
ILAR LR LR 21 55 12.5
comp=Z,117nm,19.4s,baz=140,slow=38
ILB **Eielson Array** 56.34 338 ePcP PcP 21 29 56.0 -0.3
9.8nm,2.0s
RES **Resolute Bay** 56.59 1 P P 21 28 59.7 -1.5
2.8nm,0.7s,baz=191,slow=10,SNR=10
BPAW **Bear Paw Mtn.** 57.54 336 eP P 21 29 08.0 -0.2
12nm,1.5s
CFA **Coronel Fontan** 57.73 149 pP pP 21 29 26.0 +0.6
1.4nm,0.5s,baz=352,slow=7.5,SNR=2.7
CPUP **Villa Florida** 60.10 136 LR LR 21 54 42.2
comp=Z,38nm,18.7s,baz=48,slow=35
BDFB **Brasilia** 60.60 120 P P 21 29 31.1 +0.9
2.8nm,0.7s,baz=314,slow=8.5,SNR=6.1
BDFB pP pP 21 29 45.9 +0.1
2.7nm,0.6s,baz=284,slow=7.5,SNR=3.5
BDFB **Brasilia** 60.60 120 eP P 21 29 30.1 0.0
27nm,1.8s
BDFB epP pP 21 29 45.9 +0.1
PPT **Papeete** 60.94 237 LR LR 21 48 37.4
comp=Z,47nm,21.7s,baz=198,slow=29
PPT2 **Papeete2** 60.95 237 eLR LR 21 47 29.0
comp=Z,122nm,28.8s
PLCA **Paso Flores** 64.37 156 LR LR 21 52 29.3
comp=Z,41nm,18.3s,baz=322,slow=31
RAR **Rarotonga** 71.05 239 LR LR 21 53 37.8
comp=Z,72nm,21.1s,baz=105,slow=29
PCAS **Casmilo, Conde** 79.08 51 eP P 21 31 24.2 +0.9
PMTG **Montargil** 79.54 52 eP P 21 31 26.4 +0.6
PTEO **Sao Teotonio** 79.55 54 eP P 21 31 27.0 +1.2
MORF **Marmelete** 79.66 54 eP P 21 31 27.3 +0.7
MTE **Manteigas** 79.70 51 eP P 21 31 27.1 +0.4
MESJ **Messejana** 79.86 54 eP P 21 31 28.2 +0.7
PCBR **Castelo Branco** 79.90 51 eP P 21 31 28.0 +0.3
PMRV **Marv??o** 80.07 52 eP P 21 31 28.9 +0.2
SEY **Seymchan** 82.06 334 P P 21 31 39.9 +1.2
4.4nm,0.6s,baz=78,slow=7.2,SNR=16
STEI **Steigen** 82.07 20 eP P 21 31 39.7 +1.1
NSS **Namsos** 82.49 24 eP P 21 31 41.9 +1.0
ESDC **Sonseca Array** 82.55 51 P P 21 31 42.2 +0.4
1.4nm,0.6s,baz=298,slow=5.3,SNR=12
KIF **Kilpisjarvi** 83.25 18 eP P 21 31 45.5 +0.7
PEA1 **Petropavlovsk-** 83.25 324 epP pP 21 32 01.4 -0.2
PETK **Petropavlovsk-** 83.25 324 P P 21 31 46.7 +1.6
7.2nm,0.6s,baz=81,slow=11,SNR=22
PETK pP pP 21 32 01.4 -0.2
2.1nm,0.6s,baz=58,slow=10,SNR=3.2
SALU **Saltoluokta** 83.42 20 eP P 21 31 46.8 +1.1
NBO00 **NORSAR Array S** 83.55 27 eP P 21 31 47.6 +1.1
149nm,1.8s
KONO **Kongsberg** 83.62 29 eP P 21 31 48.4 +1.6
60nm,1.3s
NB2 **NORSAR Subarra** 83.74 27 P P 21 31 48.5 +1.0
comp=Z,26nm,1.4s,baz=299,slow=4.8
NB2 **NORSAR Subarra** 83.74 27 P P 21 31 48.5 +1.0

baz=299,slow=4.8
NOA **NORSAR Array B** 83.74 27 P P 21 31 48.7 +1.2
comp=Z,5.3nm,0.9s,baz=300,slow=5.1,SNR=14
NOA LR LR 22 10 29.3
comp=Z,9.6nm,20.1s,baz=290,slow=37
KTK1 **Kautokeino** 83.96 18 eP P 21 31 49.3 +0.9
ARCES **ARCESS Array B** 84.29 17 P P 21 31 50.6 +0.5
comp=Z,16nm,0.6s,baz=297,slow=4.1,SNR=80
ARCES PP PP 21 35 04.4 -0.4
comp=Z,1.8nm,1.0s,baz=306,slow=4.1,SNR=3.8
ARCES LR LR 22 11 45.7
comp=Z,30nm,18.1s,baz=342,slow=37
ARE0 **ARCESS Array S** 84.29 17 eP P 21 31 50.5 +0.4
comp=Z,1.0nm,0.8s
ARE0 **ARCESS Array S** 84.29 17 eP P 21 31 50.8 +0.7
BRQR **Ronquire** 84.38 39 P P 21 31 51.5 +0.5
HEF **Hetta** 84.45 18 eP P 21 31 51.4 +0.5
TIXI **Tiksi** 84.68 346 P P 21 31 52.1 +0.1
comp=Z,4.0nm,0.7s,baz=336,slow=7.6,SNR=6.0
DOU **Dourbes** 84.79 39 P P 21 31 51.6 -1.4
BMRD **Maredsous** 84.82 39 P P 21 31 54.3 +1.1
BGES **Gesves** 84.98 39 P P 21 31 54.5 +0.6
MEM **Membach** 85.43 38 P P 21 31 57.1 +0.9
WLF **Walferdange** 85.89 39 eP P 21 31 58.8 +0.2
comp=Z,46nm,0.8s
FINES **FINESS Array B** 89.56 23 P P 21 32 15.8 0.0
comp=Z,1.7nm,0.7s,baz=346,slow=3.9,SNR=7.6
FINES LR LR 22 13 28.3
comp=Z,32nm,18.1s,baz=332,slow=36
GERES **GERESS Array B** 90.69 37 P P 21 32 21.5 -0.1
comp=Z,0.5nm,0.6s,baz=323,slow=3.3,SNR=6.7
GERES LR LR 22 15 24.2
comp=Z,20nm,18.0s,baz=328,slow=37
YAK **Yakutsk** 91.23 339 eP P 21 32 24.4 +0.8
comp=Z,25nm,0.9s
OBN **Obninsk** 97.93 24 LR LR 22 20 49.6
comp=Z,7.5nm,18.5s,baz=314,slow=38
DZM **Mont Dzumac** 100.51 250 eLR LR 22 06 06.0
comp=Z,118nm,26.1s
HHC **Hu-ho-hao-te** 114.69 335 ePKP PKPdf 21 38 01.8 +2.6
WMQ **Urumqi** 118.00 354 ePKP **PKPdf** 21 38 05.0 -0.5
NJ2 **Nanjing** 118.16 324 ePKP **PKPdf** 21 38 05.5 -0.5
WHN **Wuhan** 121.79 326 PKP **PKiKP** 21 38 15.8 +2.7
KSH **Kashi** 122.45 4 ePKP **PKiKP** 21 38 16.0 +1.6
AS31 **Alice Springs** 130.30 254 ePKPdf **PKPdf** 21 38 28.4 -1.0
AS31 epPKPdf **pPKPdf** 21 38 46.4 -0.2
ASAR **Alice Springs** 130.30 254 PKP **PKPdf** 21 38 28.4 -1.0
comp=Z,0.3nm,0.7s,baz=100,slow=2.8,SNR=3.3
ASAR pPKP **pPKPdf** 21 38 46.4 -0.2
comp=Z,0.8nm,0.9s,baz=76,slow=1.1,SNR=5.2
CM31 **Chiang Mai Arr** 139.47 333 ePKPdf **PKPdf** 21 38 46.1 -0.6
CM31 epPKPdf **pPKPdf** 21 39 04.9 +1.1
CMAR **Chiang Mai Arr** 139.47 333 PKP **PKPdf** 21 38 46.1 -0.6
comp=Z,0.8nm,0.8s,baz=346,slow=2.1,SNR=7.8
CMAR pPKP **pPKPdf** 21 39 04.9 +1.1

TAP 29 21:28:22.9,24°55N×121°84E,h23km,ML2.0,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.06**	**13**	P	Pb	21 28 27.4	+0.5
	baz=21						
TWC				eS	Sb	21 28 30.5	+0.8
	baz=21						
NANB	**Nanao**	**0.15**	**212**	P	Pb	21 28 28.4	+0.7
	baz=211						
NANB				eS	Sb	21 28 31.6	+0.6
	baz=211						
ENA	**Nanau**	**0.15**	**215**	i P	Pb	21 28 27.9	+0.2
	baz=211						
ENA				eS	Sb	21 28 32.2	+1.2
	baz=211						
ILA	**Ilan**	**0.23**	**339**	eP	Pb	21 28 29.0	+0.3
	baz=341						
ILA				eS	Sb	21 28 33.6	+1.0
	baz=341						
TWE	**Neicheng**	**0.23**	**318**	P	Pb	21 28 29.4	+0.7
	baz=319						
TWE				eS	Sb	21 28 33.6	+1.0
	baz=319						
ENTT	**Nioudou**	**0.26**	**290**	i P	Pb	21 28 30.0	+0.8
	baz=289						
ENTT				eS	Sb	21 28 34.5	+1.0
	baz=289						
EOS1	**EOS1**	**0.27**	**91**	eP	Pb	21 28 29.6	+0.4
	baz=90						
EOS1				eS	Sb	21 28 34.8	+1.3
	baz=90						
NTC	**Toucheng**	**0.30**	**359**	eP	Pb	21 28 30.1	+0.3
	baz=359						
NTC				eS	Sb	21 28 35.2	+0.7
	baz=359						
EGS		**0.30**	**17**	eP	Pb	21 28 30.2	+0.4
	baz=18						
EGS				eS	Sb	21 28 35.4	+0.8
	baz=18						
TIPB	**Shuangxi**	**0.42**	**359**	eP	Pb	21 28 32.0	+0.3
	baz=358						
TIPB				eS	Sb	21 28 38.2	+0.5
	baz=358						
NNSB	**Datong**	**0.43**	**253**	eP	Pb	21 28 32.3	+0.4
	baz=253						
NNSB				eS	Sb	21 28 39.0	+0.8
	baz=253						
YHNB	**Yeheng**	**0.43**	**286**	P	Pb	21 28 32.8	+0.7
	baz=285						
YHNB				S	Sb	21 28 39.1	+0.9
	baz=285						
NNS	**Nan Shan**	**0.44**	**255**	eP	Pb	21 28 32.4	+0.3
	baz=254						
NNS				eS	Sb	21 28 39.2	+1.0
	baz=254						
NACB	**Ninganchiao**	**0.44**	**210**	P	Pb	21 28 32.6	+0.6
	baz=210						
NACB				S	Sb	21 28 39.1	+0.9
	baz=210						
NSK	**Sanguang**	**0.45**	**286**	eP	Pb	21 28 32.8	+0.5
	baz=285						
NSK				S	Sb	21 28 39.6	+0.9
	baz=285						
ETLH	**Xiulin Townshi**	**0.47**	**223**	P	Pb	21 28 33.4	+0.8
	baz=223						
ETLH				eS	Sb	21 28 40.4	+1.2
	baz=223						
TWA	**Mucha**	**0.48**	**332**	eP	Pb	21 28 33.5	+0.6
	baz=332						
TWA				eS	Sn	21 28 40.9	-1.4
	baz=332						
NWF	**Wu-fen Shan**	**0.52**	**355**	eP	Pb	21 28 34.1	+0.6
	baz=354						
NWF				eS	Sb	21 28 41.8	+1.2
	baz=354						
WFSB	**Wu-fen Shan**	**0.52**	**355**	eP	Pb	21 28 34.0	+0.5
	baz=354						
WFSB				eS	Sn	21 28 41.9	-1.2
	baz=354						
TATO	**Taipei**	**0.53**	**323**	eP	Pb	21 28 34.0	+0.4
	baz=323						
TATO				eS	Sn	21 28 42.2	-1.1
	baz=323						
HWA	**Hwalien**	**0.61**	**200**	eP	Pb	21 28 35.5	+0.5
	baz=199						
HWA				eS	Sn	21 28 44.6	-0.7
	baz=199						
YM01	**YM01**	**0.64**	**338**	P	Pn	21 28 36.3	-0.4
	baz=337						
YM01				eS	Sb	21 28 44.9	+0.9
	baz=337						
YM10	**YM10**	**0.65**	**338**	eP	Pn	21 28 36.4	-0.5
	baz=337						
YM10				eS	Sb	21 28 45.0	+0.6
	baz=337						
YM05	**YM05**	**0.66**	**338**	eP	Pb	21 28 35.9	+0.1
	baz=338						
YM05				eS	Sn	21 28 46.3	-0.3
	baz=338						
YM04	**YM04**	**0.66**	**336**	eP	Pb	21 28 36.3	+0.5
	baz=335						
YM04				eS	Sn	21 28 46.0	-0.6
	baz=335						
WHF	**Hehuan Shan**	**0.66**	**232**	eP	Pb	21 28 36.3	+0.3
	baz=231						
WHF				eS	Sb	21 28 46.1	+1.1
	baz=231						
TWS1	**Kuangyinshan**	**0.66**	**325**	eP	Pn	21 28 36.5	-0.5
	baz=325						

TWS1			*e*S	Sn	21 28 46.3	-0.4
	baz=325					
YM08	**YM08**	**0.67 341**	*e*P	Pn	21 28 36.6	-0.5
	baz=340					
YM08			*e*S	Sn	21 28 46.2	-0.7
	baz=340					
ENLB	**Shoufeng**	**0.68 198**	*e*P	Pn	21 28 36.7	-0.5
	baz=198					
ENLB			*e*S	Sn	21 28 46.3	-0.8
	baz=198					
ANP	**Anpu**	**0.69 336**	*e*P	Pb	21 28 36.6	+0.2
	baz=336					
ANP			*e*S	Sn	21 28 46.8	-0.8
	baz=336					
TWY	**Chenhua**	**0.75 344**	*e*P	Pn	21 28 37.9	-0.2
	baz=343					
TWY			*e*S	Sn	21 28 48.3	-0.5
	baz=343					
LIOB	**Emei**	**0.75 277**	*e*P	Pn	21 28 38.0	-0.2
	baz=277					
LIOB			*e*S	Sn	21 28 48.9	-0.1
	baz=277					
NSTT	**Nanjuang**	**0.76 276**	*e*P	Pn	21 28 38.9	+0.5
	baz=275					
NSTT			*e*S	Sn	21 28 48.8	-0.4
	baz=275					
CHGB	**Renai**	**0.78 231**	*e*P	Pb	21 28 38.3	+0.4
	baz=230					
CHGB			*e*S	Sn	21 28 49.9	0.0
	baz=230					
ESL	**Shilin**	**0.82 207**	*e*P	Pb	21 28 38.5	0.0
	baz=205					
ESL			*e*S	Sn	21 28 50.3	-0.3
	baz=205					
OWD	**Renai**	**0.85 225**	*e*P	Pn	21 28 39.5	-0.2
	baz=225					
OWD			*e*S	Sn	21 28 51.2	-0.2
	baz=225					
VWDT	**VWDT**	**1.02 219**	*e*P	Pb	21 28 42.9	+1.1
	baz=218					
VWDT			*e*S	Sn	21 28 56.0	+0.6
	baz=218					
SMLT	**Sun Moon Lake**	**1.08 232**	*e*P	Pn	21 28 42.6	-0.3
	baz=231					
SMLT			*e*S	Sn	21 28 57.3	+0.1
	baz=231					
SSLB	**Suanglung**	**1.11 227**	*e*P	Pn	21 28 43.2	+0.1
	baz=226					
SSLB			*e*S	Sn	21 28 58.8	+1.1
	baz=226					
HGSD	**Ruisui**	**1.12 200**	*e*P	Pn	21 28 43.0	-0.3
	baz=199					
HGSD			*e*S	Sn	21 28 59.5	+1.5
	baz=199					
EHY	**Hungye**	**1.14 204**	*e*P	Pb	21 28 43.8	-0.2
	baz=203					
EHY			*e*S	Sn	21 28 58.7	+0.2
	baz=203					
YULB	**Yu-li**	**1.26 203**	*e*P	Pn	21 28 45.5	+0.3
	baz=203					
YULB			*e*S	Sn	21 29 01.1	-0.3
	baz=203					

JMA 29 21:28:58.8±0.1, 24°.63N×123°.37E, h15km±2km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**243**	P		Pg	21 29 06.2	-0.1
YOJ				*e*S		Sg	21 29 11.3	-0.1
JYNG	**Yonagunijimaku**	**0.43**	**245**	P		Pg	21 29 07.2	-0.2
JYNG				S		Sg	21 29 13.2	0.0
IRIF	**Iriomote-Funau**	**0.44**	**132**	P		Pg	21 29 07.3	-0.3
IRIF				S		Sg	21 29 13.5	-0.1
HATJ	**Hateruma jima**	**0.69**	**145**	P		Pg	21 29 11.8	-0.6
HATJ				*e*S		Sg	21 29 21.0	-0.6
JKRS	**Kuro-shima**	**0.70**	**124**	P		Pg	21 29 12.2	-0.3
JKRS				S		Sb	21 29 22.2	0.0
JIJ	**Ishigaki jima**	**0.75**	**110**	P		Pg	21 29 12.7	-0.8
JIJ				*e*S		Sg	21 29 22.4	-1.0
JISG	**Ishigakijimahi**	**0.86**	**93**	P		Pb	21 29 15.2	-0.2
JISG				S		Sb	21 29 26.6	-0.1
JTJ	**Tarama**	**1.21**	**89**	P		Pn	21 29 20.8	-0.4
JTJ				*e*S		Sb	21 29 36.3	-0.6

IDC 29 21:40:51.4±2.0, 6°.93S×127°.62E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/22, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=145.0km s-min=31.7km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.49**	**154**		Pn	Pn	21 44 18.6	+0.6
	0.2nm,0.3s,baz=332,slow=12,SNR=5.3							
WRA					Sn	Sn	21 46 43.7	-16
	0.1nm,0.3s,baz=329,slow=37,SNR=3.1							
ASAR	**Alice Springs**	**17.71**	**161**		P	Pn	21 44 59.2	-0.4
	0.1nm,0.3s,baz=347,slow=9.8,SNR=7.1							
MKAR	**Makanchi Array**	**66.89**	**328**		P	P	21 51 45.5	0.0
	0.2nm,0.4s,baz=117,slow=7.6,SNR=5.4							

*SJA **29** 22:02:17.6±0.8, 23°.23S×68°.46W, h120km±5km, ML3.2, MW3.6*
*GUC **29** 22:02:19.3±0.7, 23°.15S×68°.54W, h122km±4km, ML3.5*
ISC 29 22:02:18.6±2.7, 23°.19S±0°.07×68°.5W±0°.1, h121km±13km, n24, σ0s55/42, 9C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.70**	**325**	*e*P		**Pn**	**22 02 38.2**	**-0.2**
LVC				*i* S		**Sn**	**22 02 53.4**	**0.0**
LVC				IAML			22 02 53.9	
	comp=Z,401nm,0.3s							
LVC	**Limon Verde**	**0.70**	**325**	⇑*i*P		**Pn**	**22 02 38.0**	**-0.4**
LVC				*i* S		**Sn**	**22 02 52.4**	**-1.0**
PB15	**IPOC Station P**	**0.92**	**268**	*e*P		**Pn**	**22 02 40.2**	**+0.2**
PB15				*i* S		**Sn**	**22 02 56.5**	**+0.2**
PB15	**IPOC Station P**	**0.92**	**268**	⇑*i*P		**Pn**	**22 02 40.3**	**+0.2**
PB15				*e*S		**Sn**	**22 02 56.6**	**+0.2**
PB06	**IPOC Station P**	**1.12**	**295**	*e*P		**Pn**	**22 02 42.2**	**+0.1**
PB06				*i* S		**Sn**	**22 03 00.3**	**+0.5**
PB06	**IPOC Station P**	**1.12**	**295**	⇑*i*P		**Pn**	**22 02 42.1**	**+0.1**
PB06				*e*S		**Sn**	**22 02 59.5**	**-0.3**
PB06				IAML			22 03 01.3	
	comp=N,1μm,0.2s							
PB09	**IPOC Station P**	**1.55**	**333**	*e*P		**Pn**	**22 02 47.7**	**+0.8**
PB09				*i* S		**Sn**	**22 03 09.9**	**+1.5**
PB09	**IPOC Station P**	**1.55**	**333**	⇑*i*P		**Pn**	**22 02 47.6**	**+0.8**
PB09				*e*S		**Sn**	**22 03 08.5**	**+0.1**
PB09				IAML			22 03 11.0	
	comp=N,333nm,0.5s							
PB05	**IPOC Station P**	**1.62**	**281**	*e*P		**Pn**	**22 02 47.5**	**-0.1**
PB05				*i* S		**Sn**	**22 03 10.1**	**+0.4**
PB05	**IPOC Station P**	**1.62**	**281**	⇑*i*P		**Pn**	**22 02 47.4**	**-0.2**
PB05				*e*S		**Sn**	**22 03 08.5**	**-1.3**
PB03	**IPOC Station P**	**1.63**	**314**	*e*P		**Pn**	**22 02 47.9**	**+0.1**
PB03				*i* S		**Sn**	**22 03 10.7**	**+0.6**
PB03	**IPOC Station P**	**1.63**	**314**	⇑*i*P		**Pn**	**22 02 47.9**	**+0.1**
PB03				*e*S		**Sn**	**22 03 09.6**	**-0.4**
PB03				IAML			22 03 11.6	
	comp=E,458nm,0.4s							
PB04	**IPOC Station P**	**1.76**	**298**	*e*P		**Pn**	**22 02 49.4**	**+0.1**
PB04				*i* S		**Sn**	**22 03 13.6**	**+0.8**
PB04	**IPOC Station P**	**1.76**	**298**	⇑*i*P		**Pn**	**22 02 49.4**	**+0.1**
PB04				*e*S		**Sn**	**22 03 12.3**	**-0.4**
PB04				IAML			22 03 22.1	
	comp=N,418nm,0.2s							
PB10	**IPOC Station P**	**1.94**	**260**	*e*P		**Pn**	**22 02 51.8**	**+0.5**
PB10				*i* S		**Sn**	**22 03 15.9**	**-0.3**
PB07	**IPOC Station P**	**1.95**	**318**	*e*P		**Pn**	**22 02 51.9**	**+0.2**
PB07	**IPOC Station P**	**1.95**	**318**	⇑*i*P		**Pn**	**22 02 51.9**	**+0.2**
PB07				*e*S		**Sn**	**22 03 16.2**	**-0.7**
PB07				IAML			22 03 21.2	
	comp=E,555nm,0.4s							
PB14	**IPOC Station P**	**2.27**	**231**	*e*P		**Pn**	**22 02 55.9**	**+0.1**
PB02	**IPOC Station P**	**2.27**	**324**	*e*P		**Pn**	**22 02 55.7**	**+0.1**
PB02				*i* S		Sn	22 03 32.9	+8.8
PB02	**IPOC Station P**	**2.27**	**324**	⇓*i*P		**Pn**	**22 02 55.7**	**+0.1**
PB02				*e*S		**Sn**	**22 03 23.6**	**-0.5**
PB02				IAML			22 03 32.3	
	comp=E,490nm,0.2s							
PB01	**IPOC Station P**	**2.33**	**336**	⇓*e*P		**Pn**	**22 02 56.8**	**+0.4**
PB01	**IPOC Station P**	**2.33**	**336**	⇑*i*P		**Pn**	**22 02 56.4**	**+0.1**
PB01				*e*S		**Sn**	**22 03 25.0**	**-0.3**
PB01				IAML			22 03 26.3	
	comp=E,398nm,0.2s							
PB08	**IPOC Station P**	**3.09**	**348**	*e*P		**Pn**	**22 03 07.0**	**+0.5**
PB11	**IPOC Station P**	**3.58**	**342**	*e*P		**Pn**	**22 03 11.6**	**-1.1**

*ISCJB **29** 23:33:28.1±1.1, 56°.9S±0°.1×24°.5W±0°.5, h10km, MS3.6/1, Error ellipse: s-maj=43.8km s-min=15.2km az=158.3*
*IDC **29** 23:33:28.3±1.2, 56°.91S×24°.66W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.7/16, mbtmp3.9/2, MS3.6/1, Ms1 3.6/1, ms1mx2.9/18, Error ellipse: s-maj=46.9km s-min=32.9km az=85.0*
ISC 29 23:33:29.8±1.1, 56°.9S±0°.2×24°.6W±0°.3, h10km, n8, σ0s51/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.45**	**159**	P		**Pn**	**23 37 07.4**	**+0.1**
VNA3	**Neumayer Olymp**	**15.69**	**162**	P		**Pn**	**23 37 09.9**	**-0.7**
SNAA	**Sanae**	**17.36**	**157**	P		**Pn**	**23 37 31.7**	**-0.1**
VNDA	**Vanda**	**45.74**	**182**	P		**P**	**23 41 50.9**	**+0.5**
	0.4nm,0.6s,baz=186,slow=6.6,SNR=5.3							
LPAZ	**La Paz**	**52.05**	**303**	P		**P**	**23 42 40.2**	**0.0**
	2.1nm,0.6s,baz=133,slow=4.7,SNR=15							
MATP	**Matopo**	**53.24**	**70**	LR		LR	00 03 51.6	
	comp=Z,52nm,18.2s,baz=60,slow=34							
TORD	**Torodi Ar. Bea**	**73.18**	**27**	P		**P**	**23 45 00.6**	**+0.1**
	15nm,0.4s,baz=191,slow=7.8,SNR=2.5							
ILAR	**Eielson Array**	**151.77**	**310**	PKPbc		**PKPbc**	**23 53 22.4**	**-0.5**
	1.0nm,0.8s,baz=131,slow=0.5,SNR=7.8							

IDC 29 23:46:58.8±2.7, 0°.92S×100°.02E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/47, mbtmp3.8/5, MS3.4/1, Ms1 3.4/1, ms1mx2.7/23, Error ellipse: s-maj=171.1km s-min=26.7km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**28.24**	**256**	T		T	00 21 05.9	
	baz=79							
H08S3	**Diego Garcia H**	**28.24**	**256**	T		T	00 21 08.8	
	baz=79,slow=74,SNR=7.1							
H08S1	**Diego Carcia H**	**28.26**	**256**	T		T	00 21 08.8	
	baz=79,slow=74,SNR=8.4							
ASAR	**Alice Springs**	**39.87**	**127**	P		P	23 54 34.5	0.0
	0.2nm,0.6s,baz=311,slow=7.6,SNR=2.8							
KSRS	**Korea Array**	**46.09**	**31**	LR		LR	00 16 54.4	
	comp=Z,43nm,18.8s,baz=238,slow=39							
MKAR	**Makanchi Array**	**50.01**	**344**	P		P	23 55 55.4	+0.4
	0.8nm,0.3s,baz=155,slow=9.1,SNR=24							
ZALV	**Zalesovo Beam**	**56.12**	**349**	P		P	23 56 39.8	-0.1
	0.8nm,0.3s,baz=167,slow=7.0,SNR=4.0							
FINES	**FINESS Array B**	**83.18**	**332**	P		P	23 59 26.3	-0.3
	2.6nm,1.0s,baz=96,slow=7.1,SNR=7.3							
ARCES	**ARCESS Array B**	**85.48**	**340**	P		P	23 59 37.8	-0.4
	0.4nm,0.7s,baz=94,slow=6.4,SNR=4.8							

*IDC **29** 23:55:06.8±2.0, 37°.20N×16°.79E, h0km, mb3.4/6, mb1 3.5/10, mb1mx3.3/48, mbtmp3.5/10, ML3.9/4, Error ellipse: s-maj=34.9km s-min=20.8km az=13.0*
*ROM **29** 23:55:10.5±0.3, 37°.05N±0°.02×16°.50E±0°.02, h21km±1km, ML3.3/53, Error ellipse: s-maj=2.0km s-min=0.9km az=319.0*
*BEO **29** 23:55:11.6±0.7, 37°.51N×16°.61E, h0km, ML3.7/13*
*THE **29** 23:55:14.2, 37°.37N×17°.09E, h15km±9km, ML3.3/6, Error ellipse: s-maj=12.8km s-min=1.9km az=212.0*
ISC 29 23:55:08.4±0.8, 37°.10N±0°.04×16°.69E±0°.03, h21km±4km, n119, σ2s16/136, mb3.4/6, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SOI	**Samo**	**1.09**	**333**	*i* P		**Pb**	**23 55 30.8**	**+2.2**
SOI				S		**Sn**	**23 55 44.6**	**+1.5**
SOI				AML		AML		
	comp=E,586μm,0.3s							
SOI				AML		AML		
	comp=N,736μm,0.5s							
SOI				AML		AML		
	comp=E,585μm,0.3s							
SOI				AML		AML		
	comp=N,737μm,0.5s							
SOI				AML		AML		
	comp=E,585μm,0.3s							
SOI				AML		AML		
	comp=N,737μm,0.5s							
AGST	**Augusta-Monte**	**1.18**	**278**	*e*P		**Pn**	**23 55 29.6**	**-0.1**
AGST				S		**Sb**	**23 55 43.1**	**-1.8**
AGST				AML		AML		
	comp=E,1086μm,1.2s							
AGST				AML		AML		
	comp=N,881μm,0.3s							
AGST				AML		AML		
	comp=E,1086μm,1.2s							
AGST				AML		AML		
	comp=N,882μm,0.3s							
AGST				AML		AML		
	comp=N,882μm,0.3s							
AGST				AML		AML		
	comp=E,1086μm,1.2s							
MTTG	**Motta San Giov**	**1.20**	**319**	*i* P		**Pb**	**23 55 32.1**	**+1.7**
MTTG				AML		AML		
	comp=E,828μm,1.6s							
MTTG				AML		AML		
	comp=N,1122μm,0.4s							
MTTG				AML		AML		
	comp=E,828μm,1.6s							
MTTG				AML		AML		
	comp=N,1122μm,0.4s							
MTTG				AML		AML		
	comp=E,828μm,1.6s							
MTTG				AML		AML		
	comp=N,1122μm,0.4s							
HAGA	**Augusta**	**1.24**	**279**	P		**Pn**	**23 55 30.5**	**0.0**
HAGA				S		**Sb**	**23 55 44.8**	**-1.8**
HAGA				AML		AML		
	comp=E,692μm,0.3s							
HAGA				AML		AML		
	comp=N,589μm,0.6s							
HAGA				AML		AML		
	comp=E,692μm,0.3s							
HAGA				AML		AML		
	comp=N,588μm,0.6s							
HAGA				AML		AML		
	comp=N,588μm,0.6s							
HAGA				AML		AML		
	comp=E,692μm,0.3s							
HAVL	**Avola**	**1.26**	**264**	*e*P		**Pb**	**23 55 31.1**	**-0.4**
HAVL				S		**Sn**	**23 55 46.4**	**-0.8**
HAVL				AML		AML		
	comp=E,3200μm,0.3s							
HAVL				AML		AML		
	comp=N,4755μm,0.3s							
HAVL				AML		AML		
	comp=E,3200μm,0.3s							
HAVL				AML		AML		
	comp=N,4755μm,0.3s							
HAVL				AML		AML		
	comp=E,3200μm,0.3s							
HAVL				AML		AML		
	comp=N,4755μm,0.3s							
GMB	**Gambarie**	**1.27**	**328**	*i* P		**Pb**	**23 55 33.2**	**+1.6**
GMB				AML		AML		
	comp=E,6810μm,0.2s							
GMB				AML		AML		
	comp=N,3755μm,1.1s							
GMB				AML		AML		
	comp=E,6810μm,0.2s							
GMB				AML		AML		
	comp=N,3755μm,1.1s							
GMB				AML		AML		
	comp=N,3755μm,1.1s							
GMB				AML		AML		
	comp=E,6810μm,0.2s							
SSY	**Sortino**	**1.29**	**273**	P		**Pn**	**23 55 31.4**	**+0.1**
SSY				S		**Sn**	**23 55 46.4**	**-1.6**
SSY				AML		AML		
	comp=E,966μm,1.0s							
SSY				AML		AML		
	comp=N,2300μm,0.3s							
SSY				AML		AML		
	comp=E,966μm,1.0s							
SSY				AML		AML		
	comp=N,2300μm,0.3s							
SSY				AML		AML		
	comp=N,2300μm,0.3s							
SSY				AML		AML		
	comp=E,966μm,1.0s							
CEL	**Celeste**	**1.32**	**332**	*i* P		**Pb**	**23 55 34.2**	**+1.8**
CEL				S		**Sb**	**23 55 51.2**	**+2.2**
CEL				AML		AML		
	comp=E,1265μm,0.6s							
CEL				AML		AML		
	comp=N,1092μm,0.8s							
CEL				AML		AML		
	comp=E,1510μm,0.5s							
CEL				AML		AML		
	comp=N,1350μm,0.8s							
CEL				AML		AML		
	comp=E,1265μm,0.6s							
CEL				AML		AML		
	comp=N,1088μm,0.8s							
CEL				AML		AML		
	comp=E,1510μm,0.5s							
CEL				AML		AML		
	comp=N,1350μm,0.8s							
CEL				AML		AML		
	comp=E,1510μm,0.5s							
CEL				AML		AML		
	comp=E,1265μm,0.6s							
CEL				AML		AML		
	comp=N,1088μm,0.8s							
CEL				AML		AML		
	comp=N,1350μm,0.8s							
HPAC	**Pachino**	**1.33**	**253**	P		**Pb**	**23 55 32.9**	**+0.4**
HPAC				S		**Sb**	**23 55 49.6**	**+0.5**
HPAC				AML		AML		
	comp=E,1500μm,0.3s							
HPAC				AML		AML		
	comp=N,1810μm,0.3s							
HPAC				AML		AML		
	comp=E,1500μm,0.3s							
HPAC				AML		AML		
	comp=N,1810μm,0.3s							
HPAC				AML		AML		
	comp=E,1500μm,0.3s							
HPAC				AML		AML		
	comp=N,1810μm,0.3s							
HCRL	**Carlentini**	**1.34**	**278**	P		**Pn**	**23 55 32.1**	**+0.2**
HCRL				S		**Sn**	**23 55 47.7**	**-1.3**
HCRL				AML		AML		
	comp=E,2195μm,0.4s							
HCRL				AML		AML		
	comp=N,1170μm,1.3s							
MSCL	**Scilla**	**1.34**	**328**	P		**Pb**	**23 55 34.3**	**+1.5**
MSCL				S		**Sb**	**23 55 52.3**	**+2.8**
MSCL				AML		AML		
	comp=E,1975μm,0.5s							
MSCL				AML		AML		
	comp=N,1245μm,0.6s							
MSCL				AML		AML		
	comp=E,1975μm,0.5s							
MSCL				AML		AML		
	comp=N,1250μm,0.6s							
MSCL				AML		AML		
	comp=E,1975μm,0.5s							
MSCL				AML		AML		
	comp=N,1250μm,0.6s							
PLAC	**Placanica**	**1.36**	**352**	P		**Pb**	**23 55 34.7**	**+1.5**
PLAC				AML		AML		
	comp=E,570μm,0.8s							
PLAC				AML		AML		
	comp=N,653μm,0.6s							
PLAC				AML		AML		
	comp=E,626μm,0.6s							
PLAC				AML		AML		
	comp=N,520μm,0.8s							
PLAC				AML		AML		
	comp=E,626μm,0.6s							
PLAC				AML		AML		
	comp=N,520μm,0.8s							
PLAC				AML		AML		
	comp=E,626μm,0.6s							
PLAC				AML		AML		
	comp=N,520μm,0.8s							
MEU	**Monte Lauro**	**1.41**	**271**	AML		AML		
	comp=E,2515μm,0.3s							
MEU				AML		AML		
	comp=E,2510μm,0.3s							
MEU				AML		AML		
	comp=N,3370μm,0.3s							
MEU				AML		AML		
	comp=N,3365μm,0.3s							
MEU				AML		AML		
	comp=E,2515μm,0.3s							
MEU				AML		AML		
	comp=N,3365μm,0.3s							
AIO	**Antillo**	**1.45**	**307**	*i* P		**Pb**	**23 55 35.1**	**+0.4**
AIO				AML		AML		
	comp=E,356μm,0.9s							
AIO				AML		AML		
	comp=N,389μm,0.9s							
AIO				AML		AML		
	comp=E,357μm,0.9s							
AIO				AML		AML		
	comp=N,390μm,0.9s							
AIO				AML		AML		
	comp=N,390μm,0.9s							
AIO				AML		AML		
	comp=E,357μm,0.9s							
MPNC	**Port Mandanici**	**1.49**	**315**	P		**Pb**	**23 55 36.0**	**+0.7**
MPNC				AML		AML		
	comp=E,2465μm,0.4s							
MPNC				AML		AML		
	comp=N,4095μm,0.4s							
MPNC				AML		AML		
	comp=E,2465μm,0.4s							
MPNC				AML		AML		
	comp=N,4100μm,0.4s							
MPNC				AML		AML		
	comp=N,4100μm,0.4s							
MPNC				AML		AML		
	comp=E,2465μm,0.4s							
MSRU	**Castanea**	**1.49**	**321**	P		**Pb**	**23 55 36.4**	**+1.0**
MSRU				AML		AML		
	comp=E,804μm,1.2s							
MSRU				AML		AML		
	comp=N,1245μm,0.4s							
MSRU				AML		AML		
	comp=E,804μm,1.2s							
MSRU				AML		AML		
	comp=N,1245μm,0.4s							
HMDC	**Modica**	**1.53**	**265**	P		**Pn**	**23 55 34.9**	**+0.3**
HMDC				S		**Sn**	**23 55 52.8**	**-1.1**
HMDC				AML		AML		
	comp=E,2790μm,0.5s							
HMDC				AML		AML		
	comp=N,2950μm,0.3s							
HMDC				AML		AML		
	comp=E,2790μm,0.5s							
HMDC				AML		AML		
	comp=N,2950μm,0.3s							
HMDC				AML		AML		
	comp=N,2950μm,0.3s							
HMDC				AML		AML		
	comp=E,2790μm,0.5s							
ESML	**S. M. di Licod**	**1.54**	**290**	P		**Pb**	**23 55 35.5**	**-0.6**
ESML				AML		AML		
	comp=E,551μm,0.3s							
ESML				AML		AML		
	comp=N,500μm,0.5s							
ESML				AML		AML		
	comp=E,551μm,0.3s							
ESML				AML		AML		
	comp=N,500μm,0.5s							
ESML				AML		AML		
	comp=N,500μm,0.5s							
ESML				AML		AML		
	comp=E,551μm,0.3s							
NOV	**Novara**	**1.54**	**307**	*i* P		**Pb**	**23 55 36.4**	**+0.1**
NOV				AML		AML		
	comp=E,1605μm,0.4s							
NOV				AML		AML		
	comp=N,952μm,0.4s							
NOV				AML		AML		
	comp=E,1605μm,0.4s							
NOV				AML		AML		
	comp=N,952μm,0.4s							
NOV				AML		AML		
	comp=N,952μm,0.4s							

NOV				AML	AML	
	comp=E,1605μm,0.4s					
HVZN	**Vizzini**	**1.58**	**273**	P	**Pn**	**23 55 35.9 +0.6**
HVZN				AML	AML	
	comp=E,10600μm,0.4s					
HVZN				AML	AML	
	comp=N,11700μm,0.6s					
HVZN				AML	AML	
	comp=E,10600μm,0.4s					
HVZN				AML	AML	
	comp=N,11700μm,0.6s					
HVZN				AML	AML	
	comp=N,11700μm,0.6s					
HVZN				AML	AML	
	comp=E,10600μm,0.4s					
JOPP	**Joppolo**	**1.63**	**337**	P	**Pb**	**23 55 38.5 +0.7**
JOPP				AML	AML	
	comp=E,412μm,0.8s					
JOPP				AML	AML	
	comp=N,464μm,0.9s					
JOPP				AML	AML	
	comp=E,412μm,0.8s					
JOPP				AML	AML	
	comp=N,464μm,0.9s					
MUCR	**Ucria**	**1.72**	**304**	P	**Pb**	**23 55 39.1 -0.3**
MUCR				AML	AML	
	comp=E,1295μm,0.5s					
MUCR				AML	AML	
	comp=N,1455μm,0.3s					
MUCR				AML	AML	
	comp=N,1455μm,0.3s					
MUCR				AML	AML	
	comp=E,1295μm,0.5s					
HBSP	**Bosco Santo Pi**	**1.76**	**272**	P	**Pn**	**23 55 38.5 +0.9**
GALF	**Gagliano Caste**	**1.80**	**290**	P	**Pb**	**23 55 40.2 -0.5**
GALF				AML	AML	
	comp=E,324μm,0.8s					
GALF				AML	AML	
	comp=N,464μm,0.5s					
GALF				AML	AML	
	comp=N,464μm,0.5s					
GALF				AML	AML	
	comp=E,324μm,0.8s					
CAGR	**Agira**	**1.82**	**287**	AML	AML	
	comp=E,468μm,0.5s					
CAGR				AML	AML	
	comp=N,390μm,1.1s					
CAGR				AML	AML	
	comp=N,390μm,1.1s					
CAGR				AML	AML	
	comp=E,468μm,0.5s					
VAE	**Valguarnera**	**1.86**	**282**	Pn	**Pb**	**23 55 42.4 +0.8**
	comp=E,2.0nm,0.3s,baz=3.2,slow=16,SNR=7.8					
VAE				Sn	**Sb**	**23 56 03.4 -1.1**
	comp=E,10nm,0.3s,baz=353,slow=6.0,SNR=10					
MCPD	**Capo d'Orlando**	**1.86**	**304**	P	**Pb**	**23 55 41.1 -0.5**
MCPD				AML	AML	
	comp=E,612μm,0.8s					
MCPD				AML	AML	
	comp=N,452μm,0.4s					
MCPD				AML	AML	
	comp=E,612μm,0.8s					
MCPD				AML	AML	
	comp=N,452μm,0.4s					
VPL	**Vulcano Piano**	**1.86**	**314**	P	**Pb**	**23 55 41.4 -0.3**
VPL				AML	AML	
	comp=E,5850μm,1.3s					
VPL				AML	AML	
	comp=N,5725μm,0.4s					
VPL				AML	AML	
	comp=N,5725μm,0.4s					
VPL				AML	AML	
	comp=E,5850μm,1.3s					
RAFF	**Raffo Rosso**	**1.86**	**274**	P	**Pb**	**23 55 40.4 -1.4**
RAFF				AML	AML	
	comp=E,1022μm,0.5s					
RAFF				AML	AML	
	comp=N,740μm,0.6s					
RAFF				AML	AML	
	comp=E,1022μm,0.5s					
RAFF				AML	AML	
	comp=N,740μm,0.6s					
MSFR	**San Fratello**	**1.91**	**300**	*i* P	**Pb**	**23 55 42.1 -0.5**
SERS	**Sersale**	**1.93**	**360**	P	**Pb**	**23 55 42.3 -0.7**
SERS				AML	AML	
	comp=E,240μm,1.1s					
SERS				AML	AML	
	comp=N,188μm,0.3s					
SERS				AML	AML	
	comp=N,188μm,0.3s					
SERS				AML	AML	
	comp=E,240μm,1.1s					
TIP	**Timpagrande**	**2.08**	**1**	P	**Pn**	**23 55 44.1 +2.0**
TIP				S	**Sn**	**23 56 08.2 +0.8**
TIP	**Timpagrande**	**2.08**	**1**	P	**Pn**	**23 55 44.1 +2.0**
TIP				AML	AML	
	comp=E,165μm,1.5s					
TIP				AML	AML	
	comp=N,282μm,0.4s					
TIP				AML	AML	
	comp=E,200μm,1.5s					
TIP				AML	AML	
	comp=N,344μm,0.4s					
TIP				AML	AML	
	comp=E,165μm,1.5s					
TIP				AML	AML	
	comp=E,200μm,1.5s					
TIP				AML	AML	
	comp=N,344μm,0.4s					
TIP				AML	AML	
	comp=N,282μm,0.4s					
WDD	**Wied Dalam**	**2.15**	**235**	P	**Pn**	**23 55 43.2 +0.1**
WDD				AML	AML	
	comp=E,1010μm,1.1s					
WDD				AML	AML	
	comp=N,1730μm,0.5s					
WDD				AML	AML	
	comp=E,1010μm,1.1s					
WDD				AML	AML	
	comp=N,1730μm,0.5s					
PETRA	**Petralia Sopra**	**2.18**	**290**	AML	AML	
	comp=E,294μm,0.5s					
PETRA				AML	AML	
	comp=E,294μm,0.5s					
PETRA				AML	AML	
	comp=N,332μm,0.5s					
PETRA				AML	AML	
	comp=N,332μm,0.5s					
CLTA	**Licata**	**2.18**	**272**	AML	AML	
	comp=E,412μm,0.8s					
CLTA				AML	AML	
	comp=E,412μm,0.8s					
CLTA				AML	AML	
	comp=N,548μm,1.6s					
CLTA				AML	AML	
	comp=N,548μm,1.6s					
CAR1	**CAROLEI**	**2.18**	**350**	P	**Pb**	**23 55 46.1 -1.1**
CAR1				AML	AML	
	comp=E,584μm,0.4s					
CAR1				AML	AML	
	comp=N,409μm,0.8s					
CAR1				AML	AML	
	comp=E,584μm,0.4s					
CAR1				AML	AML	
	comp=N,409μm,0.8s					
IFIL	**Filicudi I Eol**	**2.23**	**312**	P	**Pn**	**23 55 45.8 +1.7**
IFIL				AML	AML	
	comp=E,3245μm,0.5s					
IFIL				AML	AML	
	comp=N,870μm,1.4s					
IFIL				AML	AML	
	comp=E,3245μm,0.5s					
IFIL				AML	AML	
	comp=N,870μm,1.4s					
CELI	**Celico**	**2.30**	**356**	P	**Pb**	**23 55 48.3 -1.0**
CELI				AML	AML	
	comp=E,472μm,0.9s					
CELI				AML	AML	
	comp=N,346μm,0.4s					
CELI				AML	AML	
	comp=E,472μm,0.9s					
CELI				AML	AML	
	comp=N,346μm,0.4s					
IACL	**Alicudi**	**2.34**	**308**	P	**Pn**	**23 55 47.4 +1.7**
IACL				AML	AML	
	comp=E,329μm,0.6s					
IACL				AML	AML	
	comp=N,361μm,1.3s					
IACL				AML	AML	
	comp=N,361μm,1.3s					
IACL				AML	AML	
	comp=E,329μm,0.6s					
PIPA	**Pietrapaola**	**2.38**	**2**	P	**Pn**	**23 55 48.8 +2.5**
PIPA				AML	AML	
	comp=E,355μm,0.2s					
PIPA				AML	AML	
	comp=N,266μm,0.4s					
PIPA				AML	AML	
	comp=N,266μm,0.4s					
PIPA				AML	AML	
	comp=E,355μm,0.2s					
CET2	**Cetraro**	**2.49**	**347**	AML	AML	
	comp=N,840μm,0.4s					
CET2				AML	AML	
	comp=E,542μm,1.5s					
CET2				AML	AML	
	comp=E,542μm,1.5s					
CET2				AML	AML	
	comp=N,840μm,0.4s					
SALB	**San Lorenzo Be**	**2.79**	**355**	AML	AML	
	comp=N,127μm,0.9s					
SALB				AML	AML	
	comp=E,168μm,0.3s					
SALB				AML	AML	
	comp=E,168μm,0.3s					
SALB				AML	AML	
	comp=N,127μm,0.9s					
CUC	**Castrocucco**	**2.97**	**347**	AML	AML	
	comp=N,107μm,1.6s					
CUC				AML	AML	
	comp=E,151μm,1.0s					
CUC				AML	AML	
	comp=N,107μm,1.6s					
CUC				AML	AML	
	comp=E,196μm,1.0s					
CUC				AML	AML	
	comp=N,140μm,0.6s					
CUC				AML	AML	
	comp=N,140μm,0.6s					
CUC				AML	AML	
	comp=E,196μm,1.0s					
CUC				AML	AML	
	comp=E,151μm,1.0s					
MGR	**Morigerati**	**3.16**	**344**	AML	AML	
	comp=N,176μm,1.0s					
MGR				AML	AML	
	comp=E,206μm,0.3s					
MGR				AML	AML	
	comp=N,176μm,1.0s					
MGR				AML	AML	
	comp=E,206μm,0.3s					
MTSN	**Montesano sull**	**3.25**	**347**	AML	AML	
	comp=N,211μm,0.4s					
MTSN				AML	AML	
	comp=E,136μm,0.5s					
MTSN				AML	AML	
	comp=E,136μm,0.5s					
MTSN				AML	AML	
	comp=N,211μm,0.4s					
VLS	**Valsamata**	**3.28**	**70**	P	**Pn**	**23 55 58.8 +0.3**
VLS				S	**Sn**	**23 56 34.0 -2.9**
VLS	**Valsamata**	**3.28**	**70**	AML	AML	
	comp=E,134μm,1.1s					
VLS				AML	AML	
	comp=N,106μm,0.2s					
VLS				AML	AML	
	comp=E,134μm,1.1s					
VLS				AML	AML	
	comp=N,106μm,0.2s					
MCEL	**Monticello**	**3.29**	**348**	AML	AML	
	comp=N,127μm,0.6s					
MCEL				AML	AML	
	comp=E,142μm,0.2s					
MCEL				AML	AML	
	comp=N,127μm,0.6s					
MCEL				AML	AML	
	comp=E,142μm,0.2s					
SLCN	**Sala Consilina**	**3.39**	**346**	AML	AML	
	comp=E,312μm,0.3s					
SLCN				AML	AML	
	comp=N,226μm,0.3s					
SLCN				AML	AML	
	comp=N,226μm,0.3s					
SLCN				AML	AML	
	comp=E,312μm,0.3s					
TAR1	**Taranto**	**3.45**	**8**	*e*Pn	**Pn**	**23 56 01.3 +0.4**
TAR1				Sn	**Sn**	**23 56 39.9 -1.3**
EVGI	**Lefkada island**	**3.49**	**63**	P	**Pn**	**23 56 02.9 +1.5**
EVGI				S	**Sn**	**23 56 39.8 -2.2**
MATE	**Matera**	**3.54**	**0**	AML	AML	
	comp=N,186μm,1.5s					
MATE				AML	AML	
	comp=E,178μm,1.5s					
MATE				AML	AML	
	comp=N,186μm,1.5s					
MATE				AML	AML	
	comp=E,178μm,1.5s					
MASS	**Massafra**	**3.55**	**6**	*e*Pn	**Pn**	**23 56 02.8 +0.6**
MASS				Sn	**Sn**	**23 56 41.2 -2.3**
CDRU	**Civita di Ruta**	**3.55**	**343**	AML	AML	
	comp=E,127μm,1.6s					
CDRU				AML	AML	
	comp=E,127μm,1.6s					
CDRU				AML	AML	
	comp=N,68μm,0.5s					
CDRU				AML	AML	
	comp=N,68μm,0.5s					
KEK	**Kerkira**	**3.57**	**42**	P	**Pn**	**23 56 02.5 -0.1**
KEK				S	**Sn**	**23 56 41.3 -2.9**
CGL1	**Ceglie Messapi**	**3.60**	**10**	*e*Pn	**Pn**	**23 56 03.6 +0.6**
ACER	**Acerenza**	**3.73**	**351**	AML	AML	
	comp=N,252μm,0.4s					
ACER				AML	AML	
	comp=E,208μm,0.6s					
ACER				AML	AML	
	comp=N,252μm,0.4s					
ACER				AML	AML	
	comp=E,208μm,0.6s					
SG1	**Sgolgore (BA)**	**3.73**	**360**	*e*Pn	**Pn**	**23 56 06.2 +1.3**
SG1				Sn	**Sn**	**23 56 48.6 +0.4**
FASA	**Fasano**	**3.75**	**8**	*e*Pn	**Pn**	**23 56 05.5 +0.5**
FASA				Sn	**Sn**	**23 56 46.8 -1.7**
IGT	**Igoumenitsa**	**3.75**	**49**	P	**Pn**	**23 56 05.2 +0.1**
IGT				S	**Sn**	**23 56 45.2 -3.5**
SRN	**Sarande**	**3.80**	**42**	AML	AML	
	comp=N,100μm,0.9s					
SRN				AML	AML	
	comp=E,88μm,0.3s					
SRN				AML	AML	
	comp=N,100μm,0.9s					
SRN				AML	AML	
	comp=E,88μm,0.3s					
AMUR	**Altamura**	**3.80**	**359**	AML	AML	
	comp=E,300μm,1.6s					
AMUR				AML	AML	
	comp=N,322μm,0.8s					
AMUR				AML	AML	
	comp=E,300μm,1.6s					
AMUR				AML	AML	
	comp=N,322μm,0.8s					
MRVN	**Minervino Murg**	**3.97**	**355**	AML	AML	
	comp=N,115μm,0.6s					
MRVN				AML	AML	
	comp=E,139μm,0.4s					
MRVN				AML	AML	
	comp=N,115μm,0.6s					
MRVN				AML	AML	
	comp=E,139μm,0.4s					
BAI	**Bari**	**4.00**	**2**	*e*Pn	**Pn**	**23 56 09.3 +0.8**
BAI				Sn	**Sn**	**23 56 52.9 -1.9**
JAN	**Janina**	**4.15**	**51**	P	**Pn**	**23 56 11.3 +0.8**
JAN				S	**Sn**	**23 56 56.0 -2.4**
ITM	**Ithomi**	**4.18**	**87**	P	**Pn**	**23 56 12.3 +1.3**
EVR	**Evrytania**	**4.43**	**64**	P	**Pn**	**23 56 17.5 +3.0**
EVR				S	**Sn**	**23 57 04.5 -1.0**
AGG	**Agios Georgios**	**4.85**	**65**	P	**Pn**	**23 56 22.6 +2.5**
THL	**Klokotos Trika**	**4.86**	**58**	P	**Pn**	**23 56 22.0 +1.8**
THL	**Klokotos Trika**	**4.86**	**58**	AML	AML	
	comp=E,23μm,1.6s					
THL				AML	AML	
	comp=E,23μm,1.6s					
THL				AML	AML	
	comp=N,14μm,0.4s					
THL				AML	AML	
	comp=N,14μm,0.4s					
TIR	**Tirane**	**4.91**	**29**	*e*Pn	**Pn**	**23 56 21.8 +0.9**
TIR				*e*Sn	**Sn**	**23 57 14.2 -2.8**
TIR	**Tirane**	**4.91**	**29**	AML	AML	
	comp=E,114μm,1.3s					
TIR				AML	AML	
	comp=N,110μm,1.5s					
TIR				AML	AML	
	comp=N,110μm,1.5s					
TIR				AML	AML	
	comp=E,114μm,1.3s					
OHR	**Ohrid**	**5.12**	**37**	*e*Pn	**Pn**	**23 56 22.5 -1.4**
LKR	**Lokris**	**5.22**	**71**	P	**Pn**	**23 56 27.8 +2.5**
DRME	**Dracevica, Mon**	**5.43**	**20**	*e*Pn	**Pn**	**23 56 27.5 -0.6**
SMIA	**Simia**	**5.45**	**69**	P	**Pn**	**23 56 30.5 +2.1**
HCY	**Herceg Novi**	**5.52**	**14**	*e*Pn	**Pn**	**23 56 28.2 -1.1**
NEO	**Neokhori**	**5.60**	**65**	P	**Pn**	**23 56 31.8 +1.4**
PDG	**Podgorica**	**5.68**	**20**	*e*Pn	**Pn**	**23 56 31.2 -0.3**
PDG				*e*Sn	**Sn**	**23 57 31.5 -4.5**
PDG	**Podgorica**	**5.68**	**20**	*e*Pn	**Pn**	**23 56 31.2 -0.3**
TREB	**Trebinje**	**5.75**	**12**	*e*Pn	**Pn**	**23 56 31.7 -0.8**
TREB				*e*Sn	**Sn**	**23 57 33.3 -4.6**
TREB	**Trebinje**	**5.75**	**12**	*e*Pn	**Pn**	**23 56 31.5 -1.0**
STON	**Ston**	**5.82**	**7**	*e*Pn	**Pn**	**23 56 33.1 -0.3**
STON				*e*Sn	**Sn**	**23 57 34.2 -5.2**
STON	**Ston**	**5.82**	**7**	*e*Pn	**Pn**	**23 56 33.4 0.0**
STON				Sn	**Sn**	**23 57 33.8 -5.7**
STON	**Ston**	**5.82**	**7**	*e*Pn	**Pn**	**23 56 32.9 -0.5**
BRY	**Bratogost**	**5.97**	**13**	*e*Pn	**Pn**	**23 56 35.0 -0.6**
KEST	**Kesra**	**6.08**	**259**	Sn	**Sn**	**23 57 46.1 0.0**
	comp=E,0.3nm,0.3s,baz=276,slow=22,SNR=9.1					
STIP	**Stip**	**6.26**	**41**	*e*Pn	**Pn**	**23 56 40.6 +1.2**
UPM	**Unac-Piva**	**6.33**	**15**	*e*Pn	**Pn**	**23 56 38.7 -1.9**
SJES	**Sjenica**	**6.65**	**21**	*e*Pn	**Pn**	**23 56 45.5 +0.6**
SJES				*e*Sn	**Sn**	**23 57 54.7 -5.4**
IDI	**Anoyia**	**6.87**	**103**	Pn	**Pn**	**23 56 49.0 +1.0**
	comp=E,1.0nm,0.3s,baz=246,slow=7.3,SNR=16					
IDI				Sn	**Sn**	**23 57 59.1 -6.5**
	comp=E,4.9nm,0.3s,baz=300,slow=8.2,SNR=11					
BARS	**Barje**	**6.93**	**33**	*e*Pn	**Pn**	**23 56 49.3 +0.5**
BARS				*e*Sn	**Sn**	**23 58 02.7 -4.3**
IVAS	**Ivanjica**	**6.99**	**21**	*e*Pn	**Pn**	**23 56 48.9 -0.7**
IVAS				*e*Sn	**Sn**	**23 58 02.8 -5.6**
BBLS	**Lazići**	**7.07**	**16**	*e*Pn	**Pn**	**23 56 50.8 +0.1**
BBLS				*e*Sn	**Sn**	**23 58 06.2 -4.2**
BBLS	**Lazići**	**7.07**	**16**	*e*Pn	**Pn**	**23 56 50.1 -0.6**
HAPS	**Han Pijesak,Bl**	**7.19**	**13**	*e*Pn	Pn	23 56 47.7 -4.6
DIVS	**Divibare**	**7.43**	**19**	*e*Pn	**Pn**	**23 56 55.0 -0.6**
DIVS				*e*Sn	**Sn**	**23 58 12.0 -7.3**
DIVS	**Divibare**	**7.43**	**19**	*e*Pn	**Pn**	**23 56 54.7 -0.9**
GRUS	**Gruza**	**7.44**	**23**	*e*Pn	**Pn**	**23 56 55.3 -0.4**
GRUS				*e*Sn	**Sn**	**23 58 13.9 -5.6**
UDBI	**Udbina**	**7.45**	**355**	*e*Pn	**Pn**	**23 56 58.2 +2.2**
VTS	**Vitosha**	**7.46**	**40**	*e*Pn	**Pn**	**23 56 57.1 +1.0**
VTS				*e*Sn	**Sn**	**23 58 15.6 -4.6**
NVLJ	**Novalja**	**7.58**	**350**	*e*Pn	**Pn**	**23 56 58.6 +1.0**
BLY	**Banja Luka**	**7.65**	**3**	*e*Pn	**Pn**	**23 56 59.6 +1.0**
TRUS	**Trudelj**	**7.66**	**20**	*e*Pn	**Pn**	**23 56 58.4 -0.2**
TRUS				*e*Sn	**Sn**	**23 58 19.5 -5.2**
ZAPS	**Zavoj**	**7.66**	**35**	*e*Pn	**Pn**	**23 56 59.8 +1.0**
ZAPS				*e*Sn	**Sn**	**23 58 20.9 -4.0**
FRGS	**Fruska Gora**	**8.39**	**15**	*e*Pn	**Pn**	**23 57 06.9 -1.8**
CRES	**Cresnjev**	**8.77**	**354**	*e*Pn	**Pn**	**23 57 14.7 +0.8**
CEY	**Cerknica**	**8.80**	**350**	*e*Pn	**Pn**	**23 57 16.1 +1.8**
BEHE	**Becsehely**	**9.36**	**0**	*e*Pn	**Pn**	**23 57 23.1 +1.0**
MLR	**Muntele Rosu**	**10.89**	**37**	Pn	**Pn**	**23 57 44.8 +1.7**
	comp=E,0.3nm,0.3s,baz=238,slow=12,SNR=5.6					
BRTR	**Keskin Array B**	**13.55**	**74**	Pn	**Pn**	**23 58 22.8 +3.3**
	comp=E,0.1nm,0.3s,baz=254,slow=13,SNR=6.3					
AKASG	**Malin Array Be**	**16.29**	**29**	Pn	**Pn**	**23 58 56.3 +0.6**
	comp=E,0.8nm,0.3s,baz=220,slow=9.6,SNR=5.4					
HFS	**Hagfors**	**23.13**	**356**	P	**P**	**00 00 13.3 +0.4**
	comp=E,0.4nm,0.4s,baz=168,slow=7.6,SNR=5.7					
NOA	**NORSAR Array B**	**24.21**	**353**	P	**P**	**00 00 23.6 +0.3**
	comp=E,0.3nm,0.7s,baz=170,slow=10,SNR=2.4					
FINES	**FINESS Array B**	**25.07**	**11**	P	**P**	**00 00 30.9 -0.2**
	comp=E,0.9nm,0.7s,baz=193,slow=7.8,SNR=6.4					
GEYT	**Alibeck**	**32.68**	**76**	P	**P**	**00 01 39.2 0.0**
	comp=E,0.4nm,0.5s,baz=264,slow=13,SNR=2.8					
ARCES	**ARCESS Array B**	**32.85**	**6**	P	**P**	**00 01 40.1 -0.2**
	comp=E,0.5nm,0.6s,baz=185,slow=9.7,SNR=4.5					
MKAR	**Makanchi Array**	**48.44**	**57**	P	**P**	**00 03 49.7 +0.5**
	comp=E,0.2nm,0.6s,baz=282,slow=7.9,SNR=2.9					

*ISK **30** 00:12:37.6, 35.°05N×27.°26E, h12km, ML2.9/13*
*ATH **30** 00:12:38.7, 35.°10N×27.°26E, h21km±3km, ML2.6/3, Error ellipse: s-maj=6.1km s-min=1.4km az=329.0*
*THE **30** 00:12:38.7, 35.°12N×27.°24E, h0km±1km, ML2.6/3, Error ellipse: s-maj=2.9km s-min=1.0km az=143.0*
*ISCJB **30** 00:12:39.3±1.6, 35.°09N±0.°08×27.°32E±0.°07, h17km±13km, Error ellipse: s-maj=15.6km s-min=6.0km az=151.1*

ISC 30 00:12:38.7±1.6, 35.°09N±0.°07×27.°27E±0.°05, h12km±11km, n26, σ0.74/34, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.46**	**349**	PG	**Pg**	**00 12 47.7**	**-0.1**
KARP				SG	**Sb**	**00 12 55.6**	**-0.1**
KARP	**Karpathos**	**0.46**	**349**	P	**Pg**	**00 12 47.5**	**-0.3**
KARP				S	**Sb**	**00 12 55.0**	**-0.7**
KARP	**Karpathos**	**0.46**	**349**	P	**Pg**	**00 12 47.4**	**-0.5**
KARP				S	**Sb**	**00 12 55.0**	**-0.7**
KARP				AML	AML	00 12 57.3	
	comp=N,2439μm,0.2s						
KARP				AML	AML	00 12 59.4	
	comp=E,2231μm,0.4s						
ZKR	**Zakros**	**0.86**	**272**	PG	**Pg**	**00 12 54.7**	**-0.6**
ZKR	**Zakros**	**0.86**	**272**	P	**Pg**	**00 12 54.9**	**-0.5**
ZKR				S	**Sn**	**00 13 08.3**	**-0.8**
ZKR	**Zakros**	**0.86**	**272**	P	**Pg**	**00 12 54.8**	**-0.5**
ZKR				S	**Sb**	**00 13 07.6**	**+0.5**
ZKR				AML	AML	00 13 12.2	
	comp=N,454μm,0.3s						
ZKR				AML	AML	00 13 14.6	
	comp=E,828μm,0.3s						
STIA	**Sitia Lasithi**	**0.97**	**277**	P	**Pb**	**00 12 57.6**	**+0.2**
STIA				S	**Sn**	**00 13 12.6**	**+0.8**
ARG	**Arkhangelos**	**1.32**	**32**	PN	**Pn**	**00 13 03.2**	**+0.2**
ARG	**Arkhangelos**	**1.32**	**32**	P	**Pn**	**00 13 02.8**	**-0.2**
ARG				S	**Sg**	**00 13 23.6**	**+0.3**
ARG	**Arkhangelos**	**1.32**	**32**	P	**Pb**	**00 13 03.4**	**-0.1**
ARG				S	**Sg**	**00 13 22.6**	**+1.3**
ARG				AML	AML	00 13 30.1	
	comp=N,351μm,0.5s						
ARG				AML	AML	00 13 31.1	
	comp=E,447μm,0.4s						
NPS	**Neapolis**	**1.36**	**278**	P	**Pb**	**00 13 04.3**	**+0.1**
LAST	**Lasithi**	**1.47**	**273**	P	**Pb**	**00 13 06.3**	**+0.3**
DAT	**Datca**	**1.65**	**9**	PN	**Pn**	**00 13 07.8**	**+0.1**
ANAF	**Anafi Island**	**1.75**	**317**	P	**Pn**	**00 13 09.6**	**+0.7**
IDI	**Anoyia**	**1.96**	**276**	P	**Pb**	**00 13 13.5**	**-0.8**
BODT	**Bodrum**	**1.97**	**1**	PN	**Pn**	**00 13 11.3**	**-0.6**
DALY	**Dalyan (Mula)**	**2.06**	**33**	PN	**Pn**	**00 13 13.9**	**+0.8**
TIRN	**Turunc**	**2.08**	**31**	PN	**Pn**	**00 13 10.9**	**-2.5**
FETY	**Fethiye**	**2.13**	**43**	PN	**Pn**	**00 13 14.6**	**+0.4**
YER	**Yerkesik**	**2.20**	**22**	PN	**Pn**	**00 13 16.0**	**+0.9**
AKAS	**Kas**	**2.22**	**58**	PN	**Pn**	**00 13 15.6**	**+0.1**
APE	**Apeiranthos**	**2.42**	**325**	PN	**Pn**	**00 13 18.4**	**+0.2**
APE	**Apeiranthos**	**2.42**	**325**	P	**Pn**	**00 13 18.6**	**+0.4**
ELL	**Elmali**	**2.71**	**52**	PN	**Pn**	**00 13 22.6**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**2.89**	**10**	PN	**Pn**	**00 13 25.5**	**+0.8**
KORT	**Korkueli**	**3.14**	**52**	PN	**Pn**	**00 13 28.4**	**+0.2**

MEX 30 00:34:32.3±0.4, 15.°13N×93.°56W, h6km±9km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.27**	**100**	*e*P	Pn	00 34 53.2	-3.3
THIG				*i* S	Sg	00 35 09.0	-4.2
TGIG		**1.69**	**14**	*i* P	Pn	00 34 58.9	-3.6
CCIG	**Comitan**	**1.79**	**50**	*e*P	Pn	00 35 00.9	-2.9
CMIG	**Matias Romero**	**2.33**	**327**	*e*P	Pn	00 35 08.5	-2.6

MEX 30 00:36:15.2±0.4, 18.°08N×103.°48W, h1km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.24**	**32**	*i* P	Pg	00 36 19.6	-0.3

MMIG			*i* S	Sg	00 36 23.4	+0.3
EZ5V		**1.40 355**	*e*P	Pg	00 36 38.5	-3.5
EZ5V			*i* S	Sg	00 36 56.5	-3.6

IDC 30 00:59:50.1±6.2,17.41S×178.61W,h614km±75km, mb2.9/6,mb1 3.2/6,mb1mx2.9/36,mbtmp3.9/6,Error ellipse: s-maj=81.3km s-min=28.9km az=152.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.70**	**241**	P	P	01 06 22.9	-0.5
	1.0nm,0.4s,baz=110,slow=6.7,SNR=3.7						
WRA	**Warramunga Arr**	**44.54**	**259**	P	P	01 07 09.3	0.0
	0.5nm,0.3s,baz=96,slow=6.0,SNR=2.8						
ASAR	**Alice Springs**	**44.74**	**254**	P	P	01 07 11.1	+0.2
	0.7nm,0.4s,baz=83,slow=9.1,SNR=12						
ASAR				PcP	PcP	01 08 38.5	-0.9
	0.5nm,0.6s,baz=98,slow=3.6,SNR=5.6						
ILAR	**Eielson Array**	**85.44**	**13**	P	P	01 11 23.1	-0.6
	0.4nm,0.4s,baz=222,slow=4.6,SNR=8.0						
TXAR	**Lajitas Array**	**85.89**	**58**	P	P	01 11 27.1	+0.4
	1.0nm,0.8s,baz=216,slow=6.2,SNR=12						
PDAR	**Pinedale Array**	**87.12**	**44**	P	P	01 11 32.1	-0.3
	0.4nm,0.6s,baz=182,slow=3.2,SNR=5.2						
BRTR	**Keskin Array B**	**144.29**	**315**	PKP	PKPdf	01 18 17.8	-0.1
	0.5nm,0.6s,baz=63,slow=3.0,SNR=3.6						
GERES	**GERESS Array B**	**147.08**	**345**	PKPbc	PKPbc	01 18 25.1	-0.3
	0.7nm,0.6s,baz=24,slow=3.6,SNR=7.8						

*DJA **30** 01:04:15.3±0.2,0°S±3°×12°0E±°,h10km,M4.9/24,mB5.3/7, mb4.7/24,MLv5.0/13,Mw(mB)4.8/7*
*MOS **30** 01:04:19.9±0.8,0°56S×119°91E,h38km,mb5.0/35,Error ellipse: s-maj=13.7km s-min=6.7km az=116.6*
*ISCJB **30** 01:04:20.9±0.2,0°59S±0°03×119°86E±0°04,h45km, mb4.7/94,MS4.0/39,Error ellipse: s-maj=5.8km s-min=3.2km az=153.3*
*GCMT **30** 01:04:20.6±0.3,0°64S±0°02×119°80E±0°03,h28km±1km, MW4.9/67,Moment Tensor Solution. s24,c26; s67,c91; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.87±.18; Mθθ2.13±.11; Mφφ-1.26±.16; Mrθ-2.00±.19; Mφθ-1.05±.07; Mφr-0.11±.23; Best double couple: M0=2.77900×10^16 NP1:φs75.00000°,δ79.00000°,λ-126.00000°. NP2: φs330.00000°,δ38.00000°,λ-19.00000°. Principal axes: T 3.3060, Plg25.0000°, Azm192.0000°; N -1.0490, Plg36.0000°, Azm83.0000°; P -2.2530, Plg44.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **30** 01:04:22.6±1.5,0°59S×119°83E,h46km±7km,mb4.7/41 Error ellipse: s-maj=14.3km s-min=11.8km az=46.0*
NEIC Felt [IV] at Palu.
*BJI **30** 01:04:22.2±0.0,0°60S×119°90E,h55km,mb4.9/52, mB5.1/41,Ms4.4/37,Ms7 4.2/35*
*IDC **30** 01:04:24.8±1.9,0°57S×119°94E,h69km±19km,mb4.2/27, mb1 4.3/31,mb1mx4.1/50,mbtmp4.5/31,MS4.0/32, Ms1 4.0/32,ms1mx4.0/36,Error ellipse: s-maj=15.1km s-min=9.6km az=74.0*

ISC 30 01:04:22.6±0.3,0°63S±0°04×119°75E±0°05,h45km,n197, σ1982/194,mb4.8/94,MS4.1/39,11C-1D,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.92**	**98**	P	**Pn**	**01 04 52.0**	**-0.8**
APSI				S	**Sn**	**01 05 18.6**	**+2.8**
SGKI	**Sangatta, Kali**	**2.15**	**273**	P	Pn	01 04 49.0	-7.0
SGKI				S	Sn	01 05 08.4	-13
TTSI	**Tana Toraja**	**2.40**	**178**	P	**Pn**	**01 05 00.1**	**+0.7**
SMKI	**Samarinda**	**2.55**	**274**	P	Pn	01 04 54.1	-7.4
BKB	**Balikpapan**	**2.92**	**258**	P	Pn	01 05 00.6	-6.0
LUWI	**Luwuk**	**3.05**	**98**	*e*Pn	**Pn**	**01 05 07.3**	**-1.1**
LUWI	**Luwuk**	**3.05**	**98**	P	**Pn**	**01 05 08.1**	**-0.3**
SPSI	**Sidrap Palu**	**3.31**	**180**	P	**Pn**	**01 05 12.1**	**+0.1**
KAPI	**Kappang**	**4.35**	**180**	P	**Pn**	**01 05 27.8**	**+1.5**
	58nm,0.3s,baz=350,slow=12,SNR=30						
KAPI				S	**Sn**	**01 06 21.1**	**+5.4**
	21nm,0.3s,baz=307,slow=20,SNR=2.8						
KAPI				LR	LR	01 07 23.3	
	comp=Z,9μm,18.5s,baz=114,slow=40						
KAPI	**Kappang**	**4.35**	**180**	*e*Pn	**Pn**	**01 05 26.4**	**+0.1**
KAPI	**Kappang**	**4.35**	**180**	*e*P	**Pn**	**01 05 26.4**	**+0.1**
KDI	**Kendari**	**4.37**	**139**	P	**Pn**	**01 05 26.4**	**-0.2**
BKSI	**Bulukumba**	**4.67**	**175**	P	**Pn**	**01 05 31.1**	**+0.4**
MTKI	**Muara Teweh, K**	**4.86**	**266**	P	Pn	01 05 27.2	-6.1
BSSI	**Bau Bau, Buton**	**5.52**	**172**	P	**Pn**	**01 05 43.2**	**+0.8**
BBSI	**Bau Bau**	**5.58**	**150**	P	**Pn**	**01 05 44.3**	**+1.1**
SANI	**Sanana**	**6.39**	**103**	P	**Pn**	**01 05 52.8**	**-1.5**
	121nm,0.8s,1μm0.4nm						
SGSI	**Sangihe**	**7.19**	**53**	P	Pn	01 05 59.0	-6.3
KKM	**Kota Kinabalu**	**7.51**	**332**	*e*Pn	**Pn**	**01 06 10.1**	**+0.2**
NLAI	**Namlea**	**7.79**	**110**	P	**Pn**	**01 06 14.4**	**+0.9**
	148nm,0.7s						
EDFI	**Ende, Flores**	**8.29**	**167**	P	**Pn**	**01 06 21.0**	**+0.5**
WBSI	**Waikabubak, Su**	**8.96**	**182**	P	**Pn**	**01 06 30.1**	**+0.6**
DAV	**Davao City (W)**	**9.61**	**37**	LR	LR	01 10 31.5	
	comp=Z,3μm,19.6s,baz=234,slow=39						
SOEI	**Soe**	**10.12**	**154**	*e*Pn	**Pn**	**01 06 48.4**	**+2.9**
SOEI	**Soe**	**10.12**	**154**	P	Pn	01 06 50.4	+4.9
BATI	**Baumata**	**10.28**	**158**	P	**Pn**	**01 06 49.9**	**+2.3**
	5.0nm,0.3s,baz=238,slow=3.4,SNR=5.3						
BATI				LR	LR	01 11 44.4	
	comp=Z,3μm,18.5s,baz=308,slow=43						
BATI	**Baumata**	**10.28**	**158**	P	**Pn**	**01 06 47.8**	**+0.2**
SIJI	**Sorong**	**11.52**	**91**	P	**Pn**	**01 07 04.7**	**+0.1**
	1.2nm,0.3s,baz=297,slow=7.2,SNR=5.6						
LEM	**Lembang**	**13.57**	**243**	LR	LR	01 13 31.0	
	comp=Z,864nm,18.3s,baz=56,slow=40						
PPBI	**Pangkal Pinang**	**13.69**	**264**	P	Pn	01 07 28.5	-5.8
MDSI	**Maura Dua**	**16.02**	**256**	P	**Pn**	**01 08 00.7**	**-4.3**
FITZ	**Fitzroy Crossi**	**18.30**	**162**	P	**P**	**01 08 33.0**	**0.0**
	0.4nm,0.3s,baz=5.7,slow=2.7,SNR=15						
FITZ				LR	LR	01 17 17.5	
	comp=Z,578nm,18.1s,baz=342,slow=42						
PDSI	**Padang**	**19.29**	**269**	P	**P**	**01 08 37.8**	**-6.2**
IPM	**Ipoh**	**19.39**	**285**	*e*P	**Pn**	**01 08 46.2**	**-0.2**
	36nm,1.3s						
KULM	**Kulim**	**19.96**	**287**	*e*P	**P**	**01 08 51.9**	**+0.6**
	24nm,1.2s						
MNSI	**Mandailing Nat**	**20.22**	**274**	P	**P**	**01 08 48.6**	**-5.5**
JAY	**Jayapura**	**21.03**	**95**	LR	LR	01 19 51.0	
	comp=Z,283nm,18.6s,baz=303,slow=44						
PSI	**Prapat**	**21.10**	**279**	P	**P**	**01 09 06.2**	**+2.5**
	7.8nm,0.9s,baz=80,slow=5.5,SNR=6.4						
PSI				LR	LR	01 19 41.5	
	comp=Z,312nm,18.4s,baz=117,slow=43						
PSI	**Prapat**	**21.10**	**279**	*e*P	**P**	**01 09 06.4**	**+2.7**
	30nm,1.4s						
PSI	**Prapat**	**21.10**	**279**	*e*P	**P**	**01 09 06.4**	**+2.7**
PSI				pmax	pmax		
	comp=Z,30nm,1.4s						
TRTT	**Trang**	**21.70**	**293**	P	**P**	**01 09 13.8**	**+3.8**
	comp=Z,18nm,1.2s						
QIZ	**Qiongzhong**	**21.83**	**334**	*e*P	**P**	**01 09 13.2**	**+1.9**
	comp=Z,49nm,1.4s						
KCSI	**Kotacane, Aceh**	**22.35**	**281**	P	**P**	**01 09 11.0**	**-6.1**
PANO	**Nakornpanom**	**23.12**	**321**	P	**P**	**01 09 24.9**	**-0.1**
	comp=Z,1.5nm,1.4s,comp=Z,209nm						
SKNT	**Sakolnakorn**	**23.40**	**319**	P	**P**	**01 09 27.4**	**-0.4**
	comp=Z,70nm,0.8s						
KHON	**Khomkaen**	**23.74**	**316**	P	P	01 09 38.2	+7.3
WRAB	**Tennant Creek**	**23.92**	**144**	*ce*P	**P**	**01 09 31.9**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,19nm,1.3s						
WR1	**Warramunga Arr**	**23.92**	**144**	*e*P	**P**	**01 09 32.0**	**-0.6**
WRA	**Warramunga Arr**	**23.92**	**144**	P	**P**	**01 09 32.0**	**-0.6**
	comp=Z,8.1nm,0.7s,baz=322,slow=12,SNR=10						
WB2	**Warramunga Arr**	**23.93**	**144**	*e*P	**P**	**01 09 31.1**	**-1.6**
	comp=Z,16nm,0.8s						
YULB	**Yu-li**	**23.93**	**4**	*e*P	**P**	**01 09 31.3**	**-1.4**
	comp=Z,13nm,1.0s						
CHAI	**Chaiyaphum**	**24.04**	**314**	P	**P**	**01 09 34.5**	**+0.8**
	comp=Z,97μm,0.7s,comp=Z,899μm						
SSLB	**Suanglung**	**24.30**	**3**	*e*P	**P**	**01 09 34.6**	**-1.5**
	comp=Z,20nm,1.0s						
NONG	**Nongkai**	**24.74**	**319**	P	**P**	**01 09 41.8**	**+1.7**
	comp=Z,0.4nm,0.8s						
KNMB	**Chin-men Tao**	**24.98**	**357**	*e*P	**P**	**01 09 41.6**	**-0.6**
	comp=Z,167nm,1.9s						
YHNB	**Yeheng**	**25.20**	**3**	*e*P	**P**	**01 09 44.1**	**-0.2**
	comp=Z,88nm,1.7s						
PBKT	**Sadao Pong**	**25.21**	**314**	P	**P**	**01 09 46.3**	**+2.0**
	comp=Z,12nm,0.9s,comp=Z,665nm						
QZH	**Quanzhou**	**25.45**	**358**	⇑*i*P	**P**	**01 09 48.5**	**+2.1**
QZH				S	**S**	**01 14 14.5**	**+4.0**
QZH				pmax	pmax		
	comp=Z,290nm,10.6s						
QZH				LR	LR		
	comp=Z,410nm,15.6s						
QZH				LR	LR		
	comp=Z,140nm,11.6s						
QZH				LR	LR		
	comp=Z,440nm,17.5s						
COCO	**West Island**	**25.47**	**242**	*i*P	**P**	**01 09 48.4**	**+1.7**
UTTA	**Uttaradit**	**26.28**	**315**	P	**P**	**01 09 54.9**	**+0.8**
	comp=Z,26μm,0.7s,comp=Z,247μm						
AS31	**Alice Springs**	**26.70**	**150**	*e*P	**P**	**01 09 58.0**	**+0.1**
	comp=Z,2.2nm,0.6s						
AS31				*e*PcP	**PcP**	**01 13 20.6**	**-0.2**
ASAR	**Alice Springs**	**26.70**	**150**	P	**P**	**01 09 55.9**	**-2.0**
	comp=Z,2.1nm,0.6s,baz=328,slow=8.7,SNR=24						
ASAR				PcP	**PcP**	**01 13 20.6**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=331,slow=1.7,SNR=6.1						
ASAR				LR	LR	01 21 26.3	
	comp=Z,663nm,19.9s,baz=327,slow=38						
SLVN	**Son La**	**26.77**	**326**	*e*P	**P**	**01 09 58.9**	**+0.4**
	comp=Z,35nm,1.8s						
CM31	**Chiang Mai Arr**	**27.90**	**314**	*e*P	**P**	**01 10 07.9**	**-0.7**
	comp=Z,8.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.90**	**314**	P	**P**	**01 10 07.9**	**-0.7**
	comp=Z,5.1nm,0.7s,baz=139,slow=8.0,SNR=18						
CMAR				LR	LR	01 24 25.2	
	comp=Z,262nm,18.6s,baz=142,slow=43						
CMAR	**Chiang Mai Arr**	**27.90**	**314**	*ce*P	**P**	**01 10 09.6**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMMT	**Chiang Mai**	**28.13**	**314**	P	**P**	**01 10 11.9**	**+1.2**
	comp=Z,4.9nm,0.7s						
GUMO	**Guam**	**28.62**	**60**	LR	LR	01 21 05.2	
	comp=Z,87nm,19.3s,baz=248,slow=35						
PMG	**Port Moresby**	**28.64**	**109**	P	**P**	**01 10 15.1**	**-0.1**
	comp=Z,15nm,0.7s,baz=357,slow=5.5,SNR=4.5						
PMG				LR	LR	01 23 32.7	
	comp=Z,169nm,21.8s,baz=192,slow=40						
GYA	**Guiyang**	**29.75**	**336**	⇑*i*P	**P**	**01 10 25.8**	**+0.7**
GYA				pP	sP	01 10 40.0	-2.0
GYA				PP	**PnPn**	**01 11 25.0**	**+3.0**
GYA				S	**S**	**01 15 20.0**	**+1.5**
GYA				sS	sS	01 15 46.0	+7.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,7.5s						
GYA				LR	LR		
	comp=Z,210nm,17.1s						
GYA				LR	LR		
	comp=Z,250nm,15.3s						
GYA				LR	LR		
	comp=Z,280nm,15.7s						
KMI	**Kunming**	**30.44**	**328**	P	**P**	**01 10 33.8**	**+2.4**
KMI				pmax	pmax		
	comp=Z,17nm,1.3s						
KMI				pmax	pmax		
	comp=Z,130nm,4.1s						
KMI				LR	LR		
	comp=Z,280nm,18.4s						
KMI				LR	LR		
	comp=Z,210nm,16.5s						
KMI				LR	LR		
	comp=Z,320nm,18.1s						
WHN	**Wuhan**	**31.43**	**351**	⇑P	**P**	**01 10 41.8**	**+2.1**
WHN				S	**S**	**01 15 52.0**	**+7.6**
WHN				pmax	pmax		
	comp=Z,210nm,1.8s						
WHN				LR	LR		
	comp=Z,1μm,16.1s						
WHN				LR	LR		
	comp=Z,710nm,15.0s						
WHN				LR	LR		
	comp=Z,1μm,18.5s						
NWAO	**Narrogin (SRO)**	**32.21**	**184**	LR	LR	01 24 34.9	
	comp=Z,396nm,20.8s,baz=356,slow=38						
ENH	**Enshi**	**32.25**	**343**	*e*P	**P**	**01 10 46.2**	**-0.8**
	comp=Z,25nm,0.8s						
NJ2	**Nanjing**	**32.52**	**359**	*e*P	**P**	**01 10 51.5**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CD2	**Chengdu**	**34.86**	**336**	P	**P**	**01 11 10.0**	**+0.3**
CD2				S	**S**	**01 16 39.0**	**+1.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				pmax	pmax		
	comp=Z,60nm,4.5s						
CD2				LR	LR		
	comp=Z,250nm,12.8s						
CD2				LR	LR		
	comp=Z,440nm,16.2s						
BRDH	**Bariadhala**	**35.86**	**312**	LR	LR	01 27 06.4	
	comp=Z,275nm,20.3s,baz=118,slow=38						
XAN	**Xi'an**	**35.96**	**345**	P	**P**	**01 11 19.3**	**+0.1**
XAN				pP	pP	01 11 31.3	+0.1
XAN				sP	sP	01 11 37.3	+0.8
XAN				S	**S**	**01 16 50.0**	**-4.7**
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN				pmax	pmax		
	comp=Z,140nm,3.9s						
XAN				LR	LR		
	comp=Z,290nm,20.6s						
XAN				LR	LR		
	comp=Z,170nm,17.4s						
XAN				LR	LR		
	comp=Z,310nm,20.1s						
XAN	**Xi'an**	**35.96**	**345**	*e*P	**P**	**01 11 19.6**	**+0.5**
	comp=Z,8.2nm,0.7s						
XAN	**Xi'an**	**35.96**	**345**	*e*P	**P**	**01 11 19.6**	**+0.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIA	**Tai'an**	**36.74**	**356**	P	**P**	**01 11 25.8**	**+0.1**
TIA				pmax	pmax		
	comp=Z,17nm,0.7s						
STKA	**Stephens Creek**	**37.31**	**149**	P	**P**	**01 11 29.6**	**-1.0**
	comp=Z,7.0nm,0.8s,baz=326,slow=8.8,SNR=14						
STKA				LR	LR	01 28 40.9	
	comp=Z,378nm,18.8s,baz=333,slow=39						
STKA	**Stephens Creek**	**37.31**	**149**	*e*P	**P**	**01 11 29.8**	**-0.8**
	comp=Z,1.6nm,0.8s						
STKA	**Stephens Creek**	**37.31**	**149**	*e*P	**P**	**01 11 29.8**	**-0.8**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SHL	**Shillong**	**37.47**	**316**	*e*P	**P**	**01 11 32.6**	**+0.3**
	comp=Z,15nm,0.7s						
SHL	**Shillong**	**37.47**	**316**	*e*P	**P**	**01 11 32.6**	**+0.3**
SHL				pmax	pmax		
	comp=Z,15nm,0.7s						
KS15	**Wonju Array Si**	**38.63**	**10**	*e*P	**P**	**01 11 41.2**	**-0.5**
	comp=Z,39nm,1.8s						
KSRS	**Korea Array**	**38.65**	**10**	P	**P**	**01 11 42.1**	**+0.4**
	comp=Z,3.9nm,0.8s,baz=186,slow=10,SNR=9.7						
KSRS				LR	LR	01 27 40.9	
	comp=Z,270nm,19.8s,baz=204,slow=36						
LZH	**Lanzhou**	**39.42**	**340**	⇑P	**P**	**01 11 49.8**	**+1.3**
LZH				pP	sP	01 12 06.3	+0.3
LZH				sP	pP	01 12 11.8	+11
LZH				PP	**PnPn**	**01 13 26.0**	**+3.2**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=Z,230nm,15.2s						
LZH				LR	LR		
	comp=Z,280nm,16.3s						
LZH				LR	LR		
	comp=Z,340nm,17.4s						
BJT	**Baijiatuau**	**40.59**	**356**	*e*P	**P**	**01 11 58.4**	**+0.5**
	comp=Z,84nm,1.6s						
LSA	**Lhasa**	**40.67**	**320**	*e*P	**P**	**01 11 60.0**	**+0.6**
	comp=Z,18nm,0.6s						
LSA	**Lhasa**	**40.67**	**320**	*e*P	**P**	**01 12 00.0**	**+0.6**
LSA				pmax	pmax		
	comp=Z,18nm,0.6s						
MAJO	**Matsushiro**	**40.77**	**23**	*e*P	**P**	**01 11 57.3**	**-2.2**
	comp=Z,42nm,1.8s						
MAJO	**Matsushiro**	**40.77**	**23**	*e*P	**P**	**01 11 57.3**	**-2.2**
MAJO				pmax	pmax		
	comp=Z,42nm,1.8s						
MAT	**Matsushiro**	**40.77**	**23**	P	**P**	**01 11 56.8**	**-2.7**
MAT				*e*S	**S**	**01 18 04.6**	**-2.6**
MJAR	**Matsushiro Arr**	**40.77**	**23**	P	**P**	**01 11 56.8**	**-2.8**
	comp=Z,6.0nm,0.8s,baz=201,slow=10,SNR=9.8						
MJAR				LR	LR	01 30 00.6	
	comp=Z,203nm,19.9s,baz=190,slow=38						
MJB9	**Matsu-Tunnel**	**40.77**	**23**	*e*P	**P**	**01 11 57.0**	**-2.6**
	comp=Z,43nm,1.8s						
HHC	**Hu-ho-hao-te**	**41.95**	**351**	P	**P**	**01 12 12.3**	**+3.0**
HHC				pP	sP	01 12 28.5	+1.8
HHC				S	**S**	**01 18 27.0**	**+2.1**
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,33nm,5.0s						
HHC				LR	LR		
	comp=Z,340nm,18.9s						
HHC				LR	LR		
	comp=Z,220nm,18.0s						
JIRN	**Jiri**	**42.77**	**314**	*e*P	**P**	**01 12 17.4**	**+0.9**
	comp=Z,36nm,0.6s						
GUN	**Gumba**	**43.14**	**314**	*e*P	**P**	**01 12 20.5**	**+1.0**
	comp=Z,46nm,0.7s						
PKI	**Pulchoki**	**43.29**	**313**	*e*P	**P**	**01 12 21.1**	**+0.5**
	comp=Z,20nm,0.8s						
PKIN	**Phulchoki**	**43.30**	**313**	*e*P	**P**	**01 12 21.1**	**+0.4**
	comp=Z,11nm,0.6s						
KKN	**Kakani**	**43.51**	**313**	*e*P	**P**	**01 12 22.9**	**+0.6**
	comp=Z,28nm,1.0s						
GTA	**Gaotai**	**43.84**	**338**	*e*P	**P**	**01 12 25.8**	**+1.2**
GTA				pmax	pmax		
	comp=Z,19nm,1.3s						
GTA				pmax	pmax		
	comp=Z,70nm,8.3s						
GTA				LR	LR		
	comp=Z,110nm,16.8s						
GTA				LR	LR		
	comp=Z,150nm,16.2s						
GTA				LR	LR		
	comp=Z,160nm,19.0s						
CN2	**Changchun**	**44.53**	**6**	*e*P	**P**	**01 12 30.3**	**+0.4**
CN2				*e*S	**S**	**01 19 00.5**	**-1.8**
CN2				LR	LR		
	comp=Z,220nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CN2				LR	LR		
	comp=Z,240nm,20.0s						
DANN	**Dangsing**	**44.93**	**313**	*e*P	**P**	**01 12 34.2**	**+0.4**
	comp=Z,37nm,0.7s						
PYUN	**Piuthan**	**45.37**	**312**	*e*P	**P**	**01 12 37.8**	**+0.7**
	comp=Z,42nm,0.9s						
MDJ	**Mudanjiang**	**45.90**	**10**	P	**P**	**01 12 40.8**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.0s						
MDJ	**Mudanjiang**	**45.90**	**10**	*e*P	**P**	**01 12 40.5**	**-0.2**
	comp=Z,15nm,0.8s						
USA0B	**Ussuriysk Arra**	**45.95**	**12**	*e*P	**P**	**01 12 40.0**	**-1.1**
	comp=Z,12nm,0.6s						
USA0B	**Ussuriysk Arra**	**45.95**	**12**	*e*P	**P**	**01 12 40.0**	**-1.1**
USA0B				pmax	pmax		
	comp=Z,12nm,0.6s						
USRK	**Ussuriysk Ar.**	**45.95**	**12**	P	**P**	**01 12 40.5**	**-0.7**
	comp=Z,9.3nm,0.6s,baz=201,slow=6.8,SNR=40						
USRK				LR	LR	01 34 34.5	
	comp=Z,135nm,18.0s,baz=175,slow=40						
ULN	**Ulaanbaatar**	**49.55**	**349**	*e*P	**P**	**01 13 09.5**	**+0.2**
	comp=Z,7.1nm,0.7s						
ULN	**Ulaanbaatar**	**49.55**	**349**	*ce*P	**P**	**01 13 09.9**	**+0.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONA0	**Songino Array**	**49.66**	**348**	*e*P	**P**	**01 13 09.9**	**-0.1**
SONM	**Songino Array**	**49.66**	**348**	P	**P**	**01 13 09.9**	**-0.1**
	comp=Z,3.7nm,0.5s,baz=166,slow=8.6,SNR=14						
SONM				LR	LR	01 37 08.3	
	comp=Z,232nm,18.3s,baz=128,slow=40						
KLR	**Kul'dur**	**50.74**	**10**	P	**P**	**01 13 15.5**	**-2.4**
	comp=Z,2.7nm,0.6s,baz=238,slow=3.0,SNR=9.2						
KLR	**Kul'dur**	**50.74**	**10**	*i*P	**P**	**01 13 16.7**	**-1.3**
KLR				pmax	pmax		
	comp=Z,11nm,1.4s						
YSS	**Yuzh-Sakhalins**	**51.50**	**20**	*e*P	P	01 13 31.0	+7.3
YSS				*e*		01 20 36.5	
WMQ	**Urumqi**	**52.71**	**331**	*e*P	**P**	**01 13 33.0**	**+0.1**
WMQ				pP	pP	01 13 46.8	+1.6
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,24nm,4.3s						
WMQ				LR	LR		
	comp=Z,150nm,29.2s						
WMQ				LR	LR		
	comp=Z,200nm,29.0s						
ZAK	**Zakamensk**	**52.74**	**347**	*e*P	**P**	**01 13 32.4**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	**Talaya**	**53.88**	**348**	*i*P	**P**	**01 13 41.7**	**+0.5**
TLY				pmax	pmax		
	comp=Z,28nm,1.6s						
MOY	**Mondy**	**54.47**	**346**	*e*P	**P**	**01 13 47.4**	**+1.7**
ZEA	**Zeya**	**54.54**	**5**	*e*P	**P**	**01 13 46.0**	**0.0**
ZEA				pmax	pmax		
	comp=Z,28nm,1.4s						
NIL	**Nilore**	**55.38**	**313**	*e*P	**P**	**01 13 52.5**	**0.0**
	comp=Z,51nm,1.8s						
NIL	**Nilore**	**55.38**	**313**	*e*P	**P**	**01 13 52.5**	**0.0**
NIL				pmax	pmax		
	comp=Z,51nm,1.8s						
KSH	**Kashi**	**56.53**	**320**	P	**P**	**01 14 02.0**	**+1.3**
KSH				pP	sP	01 14 18.0	-0.2
KSH				PP	**PP**	**01 16 10.5**	**+3.5**
KSH				S	**S**	**01 21 44.5**	**-4.8**
KSH				ScS	**ScS**	**01 23 37.0**	**-10**
KSH				pmax	pmax		
	comp=Z,31nm,0.7s						
KSH				pmax	pmax		
	comp=Z,280nm,5.1s						
KSH				LR	LR		
	comp=Z,230nm,9.2s						
KSH				LR	LR		
	comp=Z,150nm,8.1s						
KSH				LR	LR		
	comp=Z,450nm,19.8s						
KDJ	**Kajisay**	**57.29**	**323**	*e*P	**P**	**01 14 07.0**	**+0.8**
	comp=Z,6.0nm,0.6s						
KDJ	**Kajisay**	**57.29**	**323**	*e*P	**P**	**01 14 07.0**	**+0.8**
KDJ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MK31	**Makanchi Array**	**57.49**	**330**	*e*P	**P**	**01 14 07.0**	**-0.3**
	comp=Z,8.6nm,1.0s						
MK31	**Makanchi Array**	**57.49**	**330**	*e*P	**P**	**01 14 07.0**	**-0.3**
MK31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MK32	**Makanchi Array**	**57.49**	**330**	*

GAR	Garm	60.01	317	eP	P	01 14 25.4	+0.3
	comp=Z,11nm,0.7s						
GAR	Garm	60.01	317	eP	P	01 14 25.4	+0.3
GAR				pmax	pmax		
	comp=Z,11nm,0.7s						
BTK	Batken	60.19	318	eP	P	01 14 26.9	+0.7
	comp=Z,39nm,1.9s						
BTK	Batken	60.19	318	eP	P	01 14 26.9	+0.7
BTK				pmax	pmax		
	comp=Z,39nm,1.9s						
ZALV	Zalesovo Beam	61.59	337	P	P	01 14 34.8	-0.5
	comp=Z,6.1nm,0.7s,baz=130,slow=8.3,SNR=2.1						
ZALV				LR	LR	01 44 36.3	
	comp=Z,135nm,19.3s,baz=68,slow=39						
ZAA1	Zalesovo Array	61.60	337	eP	P	01 14 34.8	-0.5
KURBB	Kurchatov Arra	61.92	332	P	P	01 14 38.2	+0.6
	comp=Z,12nm,1.0s,baz=140,slow=6.0,SNR=21						
KURK	Kurchatov	61.94	332	eP	P	01 14 37.6	-0.2
	comp=Z,25nm,0.9s						
KURK	Kurchatov	61.94	332	ceP	P	01 14 38.3	+0.5
KURK				pmax	pmax		
	comp=Z,32nm,1.0s						
PETK	Petropavlovsk-	62.19	25	P	P	01 14 37.9	-1.5
	comp=Z,4.1nm,0.7s,baz=196,slow=5.4,SNR=7.9						
PETK				LR	LR	01 42 52.7	
	comp=Z,88nm,19.4s,baz=223,slow=37						
PEA1	Petropavlovsk-	62.19	25	eP	P	01 14 37.9	-1.5
BVAR	Borovoye Array	67.38	330	P	P	01 15 13.0	-0.2
	comp=Z,5.7nm,0.7s,baz=108,slow=9.5,SNR=20						
BRVK	Borovoye	67.45	330	eP	P	01 15 13.6	-0.1
	comp=Z,20nm,1.3s						
BRVK	Borovoye	67.45	330	⇓iP	P	01 15 13.8	+0.2
BRVK				pmax	pmax		
	comp=Z,18nm,1.3s						
GEYT	Alibeck	68.35	312	P	P	01 15 20.4	+0.8
	comp=Z,3.1nm,0.7s,baz=163,slow=7.7,SNR=9.5						
GEYT				LR	LR	01 49 30.6	
	comp=Z,71nm,18.9s,baz=125,slow=40						
GYA0B	ALIBECK ARRAY	68.35	312	eP	P	01 15 20.2	+0.5
	comp=Z,5.7nm,0.9s						
ABKAR	Akbulak array	71.27	323	eP	P	01 15 36.8	-0.5
	comp=Z,7.4nm,0.8s						
TIXI	Tiksi	72.40	3	iP	P	01 15 44.5	+0.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKTO	Aktyubinsk	72.88	324	P	P	01 15 47.1	+0.2
	comp=Z,7.8nm,0.7s,baz=108,slow=7.7,SNR=38						
SVE	Sverdlovsk	74.16	331	cP	P	01 15 54.5	+0.2
SVE				pmax	pmax		
	comp=Z,20nm,0.8s						
ARU	Arti	75.01	330	P	P	01 15 58.5	-0.8
	comp=Z,1.8nm,0.6s,baz=63,slow=1.1,SNR=15						
ARU	Arti	75.01	330	eP	P	01 15 58.5	-0.8
	comp=Z,9.4nm,0.8s						
ARU	Arti	75.01	330	cP	P	01 15 58.4	-0.8
ARU				S	S	01 25 33.0	-0.8
ARU				pmax	pmax		
	comp=Z,27nm,1.8s						
BILL	Bilibino	75.60	16	eP	P	01 16 03.2	+0.7
BILL				e		01 16 14.9	
BILL				e		01 18 52.9	
BILL				ePPP	PPP	01 20 33.7	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAW	Mawson	77.32	199	P	P	01 16 12.8	+0.7
	comp=Z,5.5nm,0.9s,baz=33,slow=7.6,SNR=12						
MAW				LR	LR	01 44 49.1	
	comp=Z,86nm,21.7s,baz=48,slow=31						
MAW	Mawson	77.32	199	eP	P	01 16 12.2	0.0
	comp=Z,1.4nm,0.9s						
MAW	Mawson	77.32	199	eP	P	01 16 12.2	0.0
MAW				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TBLG	Delisi	79.26	313	eP	P	01 16 23.5	0.0
	comp=Z,7.7nm,0.8s						
TBLG	Delisi	79.26	313	eP	P	01 16 23.5	0.0
TBLG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZEI	Tsey	80.06	314	eP	P	01 16 27.8	-0.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VNDA	Vanda	80.09	171	P	P	01 16 26.9	-0.4
	comp=Z,0.8nm,0.7s,baz=306,slow=7.5,SNR=9.7						
VNDA				LR	LR	01 52 23.1	
	comp=Z,86nm,18.2s,baz=320,slow=36						
KIRV	Kirov	80.39	330	P	P	01 16 28.5	-0.7
	comp=Z,9.8nm,0.5s,baz=174,slow=2.9,SNR=5.4						
KBZ	Khabaz	80.95	314	P	P	01 16 32.4	-0.1
	comp=Z,1.3nm,0.6s,baz=138,slow=5.0,SNR=5.7						
KIV	Kislovodsk	81.14	315	eP	P	01 16 34.8	+1.1
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMBO	Kilima Mbogo	82.49	269	P	P	01 16 41.5	-0.1
	comp=Z,0.6nm,0.4s,baz=45,slow=20,SNR=3.3						
KMBO				LR	LR	01 50 39.6	
	comp=Z,74nm,18.4s,baz=70,slow=34						
KMBO	Kilima Mbogo	82.49	269	eP	P	01 16 41.5	-0.1
	comp=Z,20nm,2.0s						
KMBO	Kilima Mbogo	82.49	269	iP	P	01 16 48.2	+6.6
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PRGR	Permogore	83.05	332	eP	P	01 16 41.1	-2.0
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VORD	Divnogorie	84.47	321	eP	P	01 16 49.0	-1.6
VORD				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VSR	Storozhevoye	84.59	321	eP	P	01 16 49.9	-1.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR	Galich'ya Gora	84.92	323	eP	P	01 16 51.4	-1.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OBN	Obninsk	86.61	325	eP	P	01 17 02.1	+1.0
OBN				e		01 20 26.3	
OBN				ePPP	PPP	01 22 17.2	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BR101	Keskin Array S	87.40	310	eP	P	01 17 04.8	-0.9
BR131	Keskin Array S	87.40	310	eP	P	01 17 04.8	-0.8
BR131	Keskin Array S	87.40	310	eP	P	01 17 04.8	-0.8
BRTR	Keskin Array B	87.40	310	P	P	01 17 04.8	-0.8
	comp=Z,1.9nm,0.7s,baz=138,slow=5.9,SNR=16						
BRTR				LR	LR	02 05 32.3	
	comp=Z,20nm,19.3s,baz=96,slow=42						
AKASG	Malin Array Be	90.82	321	LR	LR	02 04 12.2	
	comp=Z,38nm,18.3s,baz=65,slow=40						
ILAR	Eielson Array	92.01	25	LR	LR	01 59 24.3	
	comp=Z,30nm,20.6s,baz=302,slow=36						
ARA0	ARCESS Array S	92.08	339	eP	P	01 17 27.0	+0.3
ARCES	ARCESS Array B	92.08	339	P	P	01 17 27.0	+0.3
	comp=Z,0.6nm,0.6s,baz=81,slow=8.0,SNR=4.2						
ARCES				LR	LR	02 03 22.9	
	comp=Z,111nm,18.3s,baz=158,slow=38						
FINES	FINESS Array B	92.32	331	LR	LR	02 03 50.0	
	comp=Z,78nm,18.4s,baz=88,slow=39						
BOSA	Boshof	93.65	241	LR	LR	01 58 02.3	
	comp=Z,77nm,18.4s,baz=84,slow=34						
NOA	NORSAR Array B	99.46	332	LR	LR	02 06 40.3	
	comp=Z,69nm,21.9s,baz=75,slow=38						
TXAR	Lajitas Array	129.76	51	PKP	PKPdf	01 23 26.9	-1.0
	comp=Z,0.2nm,0.8s,baz=338,slow=2.1,SNR=2.8						

*ISCJB **30** 01:11:44.8±1.8,2°.9N±0°.2×89°.09E±0°.10,h10km,mb3.7/5, Error ellipse: s-maj=36.1km s-min=13.0km az=9.4*
*IDC **30** 01:11:46.5±2.7,3°.03N×89°.13E,h0km,mb3.7/5,mb1 3.9/8, mb1mx3.5/50,mbtmp3.8/8,ML4.1/3,Error ellipse: s-maj=58.8km s-min=29.5km az=5.0*

ISC 30 01:11:47.8±1.9,3°.1N±0°.3×89°.1E±0°.1,h10km,n15, σ0§87/10,mb3.8/5,North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	9.35	297	Pn	Pn	01 14 03.4	+0.6
	0.8nm,0.3s,baz=115,slow=9.2,SNR=2.4						
PALK				Sn	Sn	01 15 46.4	-1.7
	1.7nm,0.3s,baz=295,slow=4.2,SNR=4.3						
PSI	Prapat	9.82	91	Pn	Pn	01 14 08.7	-0.5
	0.6nm,0.3s,baz=320,slow=7.9,SNR=3.5						
CMAR	Chiang Mai Arr	18.09	32	P	P	01 15 59.4	-0.5
	0.7nm,0.3s,baz=230,slow=12,SNR=4.8						
H08S3	Diego Garcia H	19.68	237	T	T	01 36 32.1	
	baz=58,slow=74,SNR=22						
H08S2	Diego Garcia H	19.68	237	T	T	01 36 34.9	
	baz=58,slow=74,SNR=19						
H08S1	Diego Carcia H	19.70	237	T	T	01 36 30.6	
	baz=58,slow=74,SNR=20						
MKAR	Makanchi Array	43.97	353	P	P	01 19 56.1	+1.0
	0.5nm,0.6s,baz=175,slow=9.7,SNR=3.6						
H01W3	Cape Leeuwin H	44.47	150	T	T	02 06 55.9	
	baz=325,slow=76,SNR=6.8						
H01W2	Cape Leeuwin H	44.48	150	T	T	02 06 56.7	
	baz=325,slow=76,SNR=6.1						
H01W1	Cape Leeuwin H	44.48	150	T	T	02 07 01.9	
	baz=325,slow=76,SNR=5.4						
SONM	Songino Array	47.04	16	P	P	01 20 19.9	+0.3
	2.0nm,0.7s,baz=197,slow=9.2,SNR=7.5						
KURBB	Kurchatov Arra	48.23	351	P	P	01 20 29.1	+0.4
	0.3nm,0.6s,baz=181,slow=7.4,SNR=3.9						
ZALV	Zalesovo Beam	50.85	357	P	P	01 20 48.4	-0.2
	0.5nm,0.4s,baz=178,slow=9.4,SNR=3.3						
BRTR	Keskin Array B	61.94	314	P	P	01 22 08.7	+0.5
	0.4nm,0.6s,baz=122,slow=7.9,SNR=3.4						
TXAR	Lajitas Array	145.55	20	PKPbc	PKPdf	01 31 26.9	-0.4
	0.3nm,0.7s,baz=158,slow=3.6,SNR=4.0						

RSNC 30 01:42:50.5±1.0,4°.96N×78°.38W,h34km±8km,ML2.5, Mw3.5,3C,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALC	Bahia Malaga	1.40	132	ePg	Pn	01 43 13.4	-0.3
MALC				eSg	Sn	01 43 29.6	-1.5
SOLC	Bahia Solano	1.58	37	ePg	Pn	01 43 15.1	-1.1
SOLC				eS	Sn	01 43 34.1	-1.4
SOLC				i		01 43 37.7	
	comp=Z,59nm,0.3s						
GRGC	Isla de Gorgon	1.96	174	eSg	Sn	01 43 39.2	-5.6
PLMC	San Jos del P	2.08	92	eP	Pn	01 43 23.2	0.0
PLMC				eS	Sn	01 43 47.2	-0.8
YOTC	Yotoco, Valle	2.25	116	⇑iP	Pn	01 43 25.2	-0.2
POPC	Popayan, Colom	2.94	145	⇑eP	Pn	01 43 34.3	-0.9
GUY2C	Guyana, Caldas	3.01	85	eP	Pn	01 43 36.5	+0.2
GUY2C				i		01 44 16.1	
	comp=Z,18nm,0.6s						
RREF	El Recreo	3.02	91	eP	Pn	01 43 38.1	+1.6
HELC	Santa Helena	3.08	67	eP	Pn	01 43 37.4	+0.2
HELC				i		01 44 20.5	
	comp=Z,11nm,0.4s						
BBAC	Balboa, Cauca	3.13	159	eP	Pn	01 43 36.5	-1.2
TUMC	Tumaco	3.14	186	eSg	Sn	01 44 13.4	-0.5
ORTC	Ortega, Tolima	3.29	108	eP	Pn	01 43 41.7	+1.9
NORC	Norcasia	3.54	80	eP	Pn	01 43 45.8	+2.6
CRUC	La Cruz	3.66	157	eP	Pn	01 43 45.9	+0.8
PRAC	Prado	3.69	110	eP	Pn	01 43 47.4	+2.1
BETC	Betania	3.70	128	eP	Pn	01 43 48.5	+3.1
ROSC	El Rosal	4.04	92	eP	Pn	01 43 53.6	+3.2
PTBC	PUERTO BERRIO,	4.20	68	eP	Pn	01 43 55.6	+3.4
PTBC				i		01 44 55.4	
	comp=Z,7.5nm,0.5s						
ZARC	Zaragoza, Cauc	4.30	54	eP	Pn	01 43 55.0	+1.4
FLOC	Florencia	4.32	141	⇑eP	Pn	01 43 55.4	+1.5
CHIC	Chingaza	4.64	94	eP	Pn	01 44 02.5	+3.8
OTAV	Otavalo	4.70	181	eP	Pn	01 43 58.2	-1.3
VILC	Villavicencio,	4.74	100	eP	Pn	01 44 04.0	+4.2
MACC	Macarena, Meta	5.32	122	eP	Pn	01 44 08.3	+0.7
RUSC	La Rusia	5.35	80	eP	Pn	01 44 11.3	+2.8
BARC	Barichara	5.41	72	eP	Pn	01 44 12.5	+3.4
PAMC	Pamplona, Colo	6.12	67	eP	Pn	01 44 24.2	+5.2

*DJA **30** 01:46:25.0±0.3,1°.S±3°.×12°.0E±°,h10km,M4.8/16,mB5.3/6, mb4.9/10,MLv4.8/16,Mw(mB)4.8/6*
*BJI **30** 01:46:26.1±0.0,0°.99S×119°.66E,h38km,mb4.7/25, mB4.9/20,Ms4.3/11,Ms7 3.8/11*
*ISCJB **30** 01:46:27.1±0.2,0°.71S±0°.03×119°.76E±0°.04,h45km, mb4.5/47,MS3.6/14,Error ellipse: s-maj=5.8km s-min=3.7km az=150.0*
*NEIC **30** 01:46:29.0±1.1,0°.73S×119°.75E,h49km±8km,mb4.5/24, Error ellipse: s-maj=16.2km s-min=12.8km az=58.0*
NEIC Felt [IV] at Palu.
*IDC **30** 01:46:30.7±3.0,0°.79S×119°.66E,h69km±29km,mb4.0/13, mb1 4.2/16,mb1mx3.9/34,mbtmp4.3/16,ML4.2/3,MS3.5/11, Ms1 3.6/11,ms1mx3.4/31,Error ellipse: s-maj=25.2km s-min=11.6km az=77.0*

ISC 30 01:46:29.1±0.5,0°.67S±0°.05×119°.79E±0°.06,h45km,n84, σ1§43/86,mb4.5/47,MS3.6/14,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	Ampana	1.87	97	P	Pn	01 46 57.3	-1.3
APSI				S	Sn	01 47 21.7	+0.6
SGKI	Sangatta, Kali	2.19	274	P	Pn	01 47 03.7	+0.6
TTSI	Tana Toraja	2.36	179	P	Pn	01 47 05.4	+0.1
SMKI	Samarinda	2.59	275	P	Pn	01 47 07.9	-0.6
BKB	Balikpapan	2.95	259	P	Pn	01 47 12.5	-1.0
LUWI	Luwuk	3.00	97	ePn	Pn	01 47 13.3	-0.9
LUWI	Luwuk	3.00	97	P	Pn	01 47 12.6	-1.6
SPSI	Sidrap Palu	3.27	180	P	Pn	01 47 17.7	-0.2
KAPI	Kappang	4.32	181	P	Pn	01 47 32.6	+0.3
	35nm,0.3s,baz=338,slow=10,SNR=62						
KAPI				S	Sn	01 48 25.5	+4.2
	3.7nm,0.3s,baz=287,slow=19,SNR=2.7						
KAPI	Kappang	4.32	181	ePn	Pn	01 47 31.6	-0.6
KDI	Kendari	4.32	139	P	Pn	01 47 31.7	-0.5
BKSI	Bulukumba	4.63	176	P	Pn	01 47 36.8	+0.2
BSSI	Bau Bau, Buton	5.48	173	P	Pn	01 47 48.3	+0.1
BBSI	Bau Bau	5.53	150	P	Pn	01 47 48.7	-0.2
SANI	Sanana	6.34	103	P	Pn	01 47 56.6	-3.5
KKM	Kota Kinabalu	7.57	332	ePn	Pn	01 48 17.0	+0.1
NLAI	Namlea	7.74	109	P	Pn	01 48 18.2	-1.0
EDFI	Ende, Flores	8.25	167	P	Pn	01 48 26.3	0.0
SRBI	Singaraja	8.66	212	P	Pn	01 48 30.1	-1.8
WBSI	Waikabubak, Su	8.92	183	P	Pn	01 48 35.7	+0.2
DAV	Davao City (W)	9.62	37	LR	LR	01 52 47.1	
	comp=Z,532nm,19.6s,baz=190,slow=38						
SIJI	Sorong	11.47	91	P	Pn	01 49 14.2	+3.7
	1.6nm,0.3s,baz=266,slow=4.8,SNR=4.2						
FITZ	Fitzroy Crossi	18.25	162	P	P	01 50 37.7	-1.2
	0.4nm,0.3s,baz=7.1,slow=7.8,SNR=12						
FITZ				LR	LR	01 57 30.3	
	comp=Z,120nm,21.4s,baz=338,slow=36						
PANO	Nakornpanom	23.18	321	P	P	01 51 31.2	-0.8
	0.5nm,1.3s,121nm						
SKNT	Sakolnakorn	23.46	319	P	P	01 51 33.3	-1.4
	29nm,0.8s						
WRA	Warramunga Arr	23.87	144	P	P	01 51 37.4	-1.2
	5.0nm,0.5s,baz=318,slow=12,SNR=18						
WR1	Warramunga Arr	23.87	144	eP	P	01 51 37.4	-1.2
WB2	Warramunga Arr	23.88	144	eP	P	01 51 37.6	-1.0
	18nm,0.9s						
WC3	Warramunga Arr	23.90	144	eP	P	01 51 37.1	-1.8
	21nm,1.0s						
CHAI	Chaiyaphum	24.09	314	P	P	01 51 40.7	+0.1
	46μm,0.8s						
SSLB	Suanglung	24.34	3	eP	P	01 51 43.2	+0.4
	14nm,1.0s						
PBKT	Sadao Pong	25.26	314	P	P	01 51 53.4	+2.1
	4.4nm,1.3s,753nm						
AS31	Alice Springs	26.65	150	eP	P	01 52 03.5	-0.3
	1.9nm,0.6s						
ASAR	Alice Springs	26.65	150	P	P	01 52 02.2	-1.6
	1.9nm,0.5s,baz=345,slow=15,SNR=27						
ASAR				LR	LR	02 03 19.5	
	comp=Z,181nm,19.0s,baz=342,slow=38						
CM31	Chiang Mai Arr	27.95	314	eP	P	01 52 15.3	-0.3
	6.4nm,0.4s						
CMAR	Chiang Mai Arr	27.95	314	P	P	01 52 15.3	-0.3
	2.5nm,0.7s,baz=138,slow=7.7,SNR=8.8						
CMAR				LR	LR	02 03 22.9	
	comp=Z,147nm,19.5s,baz=168,slow=36						
GUMO	Guam	28.61	59	LR	LR	02 03 59.0	
	comp=Z,44nm,20.4s,baz=192,slow=36						
KMI	Kunming	30.50	328	P	P	01 52 42.0	+3.7
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
NJ2	Nanjing	32.56	359	eP	P	01 52 58.0	+2.0
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
CD2	Chengdu	34.91	335	eP	P	01 53 17.5	+0.9
XAN	Xi'an	36.01	345	P	P	01 53 25.0	-1.0
XAN				sP	pP	01 53 40.5	+2.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,140nm,11.8s						
XAN				LR	LR		
	comp=N,150nm,20.6s						
XAN				LR	LR		
	comp=Z,140nm,21.7s						
STKA	Stephens Creek	37.25	149	P	P	01 53 35.5	-1.1
	5.7nm,0.6s,baz=320,slow=9.7,SNR=17						
STKA				LR	LR	02 10 25.7	
	comp=Z,124nm,21.3s,baz=2.7,slow=39						
STKA	Stephens Creek	37.25	149	iP	P	01 53 35.5	-1.1
	8.9nm,2.0s						
KS15	Wonju Array Si	38.66	10	eP	P	01 53 50.0	+1.6
	42nm,1.8s						
KSRS	Korea Array	38.67	10	P	P	01 53 50.0	+1.5
	3.3nm,1.0s,baz=179,slow=12,SNR=13						
KSRS				LR	LR	02 10 05.4	
	comp=Z,57nm,20.6s,baz=216,slow=36						
LZH	Lanzhou	39.47	340	eP	P	01 53 56.5	+1.1
LZH				pP	pP	01 54 09.5	+2.1
LZH				sP	sP	01 54 14.3	+1.6
LZH				PP	PnPn	01 55 32.8	+3.0
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,97nm,4.8s						
LZH				LR	LR		
	comp=N,130nm,14.9s						
LZH				LR	LR		
	comp=E,220nm,14.1s						
LZH				LR	LR		
	comp=Z,140nm,17.4s						
LSA	Lhasa	40.73	320	eP	P	01 54 06.9	+0.6
	9.2nm,0.7s						
MAJO	Matsushiro	40.79	23	eP	P	01 54 06.8	+0.7
	8.3nm,1.0s						
MAT	Matsushiro	40.79	23	P	P	01 54 06.5	+0.4
MJAR	Matsushiro Arr	40.79	23	P	P	01 54 07.1	+1.0
	7.7nm,1.0s,baz=196,slow=9.2,SNR=18						
MJAR				LR	LR	02 09 25.1	
	comp=Z,64nm,22.0s,baz=215,slow=34						
MJB9	Matsu-Tunnel	40.79	23	eP	P	01 54 07.0	+0.9
	8.5nm,1.0s						
HHC	Hu-ho-hao-te	42.00	351	P	P	01 54 09.8	-6.3
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,23nm,6.5s						
GTA	Gaotai	43.89	338	eP	P	01 54 32.0	+0.6
GTA				pP	pP	01 54 44.8	+1.1
GTA				sP	sP	01 54 49.0	+0.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,58nm,6.5s						
GTA				LR	LR		
	comp=Z,84nm,17.8s						
GTA				LR	LR		
	comp=Z,98nm,18.1s						
GTA				LR	LR		
	comp=Z,94nm,19.0s						
CN2	Changchun	44.56	6	eP	P	01 54 36.8	+0.2
MDJ	Mudanjiang	45.93	10	eP	P	01 54 48.3	+0.9
	comp=Z,16nm,0.9s						
USA0B	Ussuriysk Arra	45.98	12	eP	P	01 54 49.4	+1.5
	comp=Z,7.1nm,0.8s						
USRK	Ussuriysk Ar.	45.98	12	P	P	01 54 46.5	-1.4
	comp=Z,3.7nm,0.8s,baz=198,slow=7.5,SNR=5.5						
ULN	Ulaanbaatar	49.60	349	eP	P	01 55 15.8	-0.2
	comp=Z,3.8nm,0.5s						
SONA0	Songino Array	49.70	348	eP	P	01 55 16.3	-0.4
SONM	Songino Array	49.70	348	P	P	01 55 16.3	-0.4
	comp=Z,1.7nm,0.6s,baz=163,slow=9.2,SNR=6.3						
SONM				LR	LR	02 19 00.6	
	comp=Z,56nm,18.5s,baz=118,slow=39						
WMQ	Urumqi	52.76	331	eP	P	01 55 42.0	+2.3
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,46nm,5.5s						
WMQ				LR	LR		
	comp=Z,200nm,29.3s						
WMQ				LR	LR		
	comp=Z,270nm,29.3s						
WMQ				LR	LR		
	comp=Z,120nm,29.5s						
KSH	Kashi	56.58	320	P	P	01 56 07.8	+0.2
KSH				pP	pP	01 56 20.5	+0.2
KSH				PP	PP	01 58 15.0	+1.1
KSH				S	S	02 03 52.0	-4.5
KSH				SS	SS	02 07 43.8	-0.8
KSH				pmax	pmax		
	comp=Z,15nm,0.7s						
KSH				LR	LR		
	comp=Z,220nm,13.0s						
KSH				LR	LR		
	comp=Z,160nm,15.9s						
PRZ	Przheval'sk	56.83	324	eP	P	01 56 09.8	+0.5
MK31	Makanchi Array	57.55	330	eP	P	01 56 13.8	-0.3
	comp=Z,4.1nm,1.0s						
MK32	Makanchi Array	57.55	330	eP	P	01 56 13.9	-0.2
MKAR	Makanchi Array	57.55	330	P	P	01 56 13.9	-0.2
	comp=Z,2.8nm,0.7s,baz=130,slow=8.6,SNR=31						
MAKZ	Makanchi	57.71	330	eP	P	01 56 14.9	-0.4
	comp=Z,2.3nm,0.8s						
BOOM	Boomskoye usch	58.30	323	eP	P	01 56 19.2	-0.4
	comp=Z,12nm,1.8s						
KBL	Kabul	58.95	312	eP	P	01 56 23.6	-0.8
	comp=Z,6.6nm,0.9s						
AAK	Ala-Archa	59.26	322	eP	P	01 56 25.9	-0.4
	comp=Z,5.4nm,1.3s						
ZAA0	Zalesovo Array	61.64	337	eP	P	01 56 42.3	+0.1
ZALV	Zalesovo Beam	61.64	337	P	P	01 56 39.9	-2.2
	comp=Z,1.7nm,0.6s,baz=132,slow=5.6,SNR=6.8						
ZALV				LR	LR	02 26 10.9	
	comp=Z,34nm,18.8s,baz=68,slow=39						
ZAA1	Zalesovo Array	61.65	337	eP	P	01 56 39.9	-2.2
KURK	Kurchatov	62.00	332	eP	P	01 56 44.3	-0.3
	comp=Z,9.0nm,0.9s						
BRVK	Borovoye	67.50	330	eP	P	01 57 19.7	-0.7
	comp=Z,5.2nm,1.0s						
ABKAR	Akbulak array	71.32	323	eP	P	01 57 43.1	-0.9
	comp=Z,17nm,1.8s						
ARU	Arti	75.07	330	eP	P	01 58 04.7	-1.4
	comp=Z,15nm,1.6s						
MAW	Mawson	77.30	199	P	P	01 58 16.7	-1.8
	comp=Z,6.3nm,0.9s,baz=44,slow=6.8,SNR=12						
MAW	Mawson	77.30	199	eP	P	01 58 18.3	-0.1
	comp=Z,2.6nm,1.1s						
VNDA	Vanda	80.05	171	P	P	01 58 33.0	-0.4
	comp=Z,0.8nm,0.7s,baz=318,slow=3.5,SNR=6.0						
AKH	Akhalkalaki	80

BLIS	Bitlis-Merkez	1.21	255	*i* P	Pg	02 23 12.2	-1.7
BLIS				*i* S	Sg	02 23 28.2	-1.5
BLIS				IAML_P			
	comp=Z,865nm,0.3s						
TASB	TASBURUN-IGDIR	1.34	21	PN	Pg	02 23 15.3	-1.0
EATA	Eleskirt	1.42	323	*i* P	Pg	02 23 18.0	+0.1
CUKT	Cukurca	1.49	180	PN	Pb	02 23 17.2	-0.7
SRTM	Siirt_Merkez	1.52	241	*i* P	Pg	02 23 19.2	-0.5
SRTM				*i* S	Sg	02 23 41.9	+2.5
SRTM				IAML_P			
	comp=Z,614nm,0.3s						
MUSM	Mu-Merkez	1.64	270	*i* P	Pb	02 23 20.0	-0.5
GNI	Garni	1.66	32	PN	Pb	02 23 20.2	-0.7

ARE ***30*** *02:32:54.0±0.0, 14°.70S×75°.87W, h45km*
VAO ***30*** *02:32:54.4±0.4, 14°.45S×75°.75W, h10km, mb4.6*
ISCJB ***30*** *02:32:58.8±0.2, 14°.34S±0°.03×75°.41W±0°.04, h53km, mb4.6/44, MS3.7/12, Error ellipse: s-maj=7.0km s-min=3.0km az=147.0*
IDC ***30*** *02:33:01.0±2.0, 14°.45S×75°.54W, h55km±17km, mb4.3/17, mb1 4.4/21, mb1mx4.4/27, mbtmp4.5/21, ML4.6/3, MS3.5/15, Ms1 3.5/15, ms1mx3.4/29, Error ellipse: s-maj=19.5km s-min=11.3km az=61.0*
NEIC ***30*** *02:33:00.0±1.1, 14°.45S×75°.47W, h45km±5km, mb4.7/143, ML4.8(ARE), Error ellipse: s-maj=9.7km s-min=6.1km az=178.0*
NEIC Felt [II] at Ica.
BJI ***30*** *02:33:00.9±0.0, 14°.50S×75°.50W, h43km, Ms5.2/2, Ms7 4.9/5*
ISC 30 02:33:00.8±0.4**, 14°.56S**±0°.05**×75°.56W**±0°.08**, h53**km**, n457,** σ1°**34**/455**, mb4.7**/44**, MS3.6**/12**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.84**	**334**	P	**Pn**	**02 33 41.7**	**-2.1**
	44nm,0.3s,baz=180,slow=11,SNR=68						
NNA				S	**Sn**	**02 34 18.2**	**+1.3**
	164nm,0.3s,baz=241,slow=13,SNR=6.2						
NNA				LR	LR	02 34 55.7	
	comp=Z,689nm,20.5s,baz=162,slow=42						
NNA	**Nana**	**2.84**	**334**	*e*Pn	**Pn**	**02 33 41.9**	**-1.9**
MNMC	**Minye Minye**	**7.30**	**129**	*e*Pn	**Pn**	**02 34 44.0**	**-1.1**
LPAZ	**La Paz**	**7.37**	**104**	P	**Pn**	**02 34 48.5**	**+2.1**
	7.0nm,0.3s,baz=287,slow=9.1,SNR=164						
LPAZ				LR	LR	02 37 50.9	
	comp=Z,246nm,19.8s,baz=286,slow=39						
LPAZ	**La Paz**	**7.37**	**104**	*e*Pn	**Pn**	**02 34 48.1**	**+1.8**
PB11	**IPOC Station P**	**7.66**	**133**	*e*Pn	**Pn**	**02 34 48.4**	**-1.5**
ATAH	**Atahualpa**	**7.88**	**339**	P	**Pn**	**02 34 51.9**	**-1.4**
	0.3nm,0.3s,baz=354,slow=4.6,SNR=3.8						
ATAH				S	**Sn**	**02 36 22.1**	**+0.8**
	1.9nm,0.3s,baz=43,slow=12,SNR=2.1						
ATAH				LR	LR	02 37 36.3	
	comp=Z,149nm,18.4s,baz=179,slow=35						
GO01	**Chusmiza**	**7.93**	**131**	*e*Pn	**Pn**	**02 34 53.3**	**-0.6**
PB01	**IPOC Station P**	**8.66**	**139**	*e*Pn	**Pn**	**02 35 03.3**	**-0.3**
PB04	**IPOC Station P**	**9.28**	**147**	*e*Pn	**Pn**	**02 35 11.6**	**-0.5**
LVC	**Limon Verde**	**10.19**	**143**	P	**Pn**	**02 35 25.7**	**+1.0**
	7.3nm,0.3s,baz=336,slow=10,SNR=49						
LVC				S	**Sn**	**02 37 14.9**	**-2.9**
	2.0nm,0.3s,baz=74,slow=19,SNR=3.5						
LVC				LR	LR	02 39 13.4	
	comp=Z,158nm,18.6s,baz=302,slow=36						
LVC	**Limon Verde**	**10.19**	**143**	*e*Pn	**Pn**	**02 35 25.1**	**+0.3**
LVC	**Limon Verde**	**10.19**	**143**	*e*P	**Pn**	**02 35 25.4**	**+0.7**
GO02	**Mina Guanaco**	**11.95**	**153**	*e*Pn	**Pn**	**02 35 49.7**	**+1.0**
SIV	**San Ignacio**	**14.05**	**98**	P	**Pn**	**02 36 14.1**	**-3.1**
	1.1nm,0.3s,baz=294,slow=9.8,SNR=32						
OTAV	**Otavalo**	**14.97**	**349**	*e*Pn	**Pn**	**02 36 27.7**	**-2.0**
OTAV	**Otavalo**	**14.97**	**349**	*e*P	**P**	**02 36 35.1**	**+0.9**
OTAV	**Otavalo**	**14.97**	**349**	*e*P	Pn	02 36 23.7	-6.1
LCO	**Las Campanas**	**15.07**	**163**	*e*P	**Pn**	**02 36 29.0**	**-1.7**
FLOC	**Florencia**	**16.04**	**360**	*e*P	**P**	**02 36 44.8**	**-0.8**
GO04	**Tololo Observa**	**16.15**	**165**	*e*Pn	**P**	**02 36 45.7**	**-1.2**
	67nm,0.8s						
BBAC	**Balboa, Cauca**	**16.55**	**354**	*e*P	**P**	**02 36 52.3**	**+0.8**
PCON	**Cinco Dias**	**16.80**	**357**	*e*P	**P**	**02 36 59.7**	**+5.1**
POPC	**Popayan, Colom**	**17.02**	**356**	*e*P	**P**	**02 36 57.2**	**+0.5**
MARP	**Paez Belalcaza**	**17.29**	**359**	*e*P	**P**	**02 37 03.2**	**+3.4**
PRAC	**Prado**	**18.16**	**2**	*e*P	Pn	02 37 18.6	+9.2
ORTC	**Ortega, Tolima**	**18.35**	**1**	*e*P	**Pn**	**02 37 14.4**	**+2.7**
VILC	**Villavicencio,**	**18.64**	**6**	*e*P	**Pn**	**02 37 16.8**	**+1.6**
CHIC	**Chingaza**	**19.15**	**6**	*e*P	**Pn**	**02 37 22.0**	**+0.4**
ROSC	**El Rosal**	**19.31**	**4**	LR	LR	02 46 31.8	
	comp=Z,96nm,20.4s,baz=216,slow=42						
ROSC	**El Rosal**	**19.31**	**4**	*e*P	**P**	**02 37 21.6**	**-0.5**
	33nm,1.5s						
RREF	**El Recreo**	**19.33**	**1**	*e*P	**Pn**	**02 37 24.9**	**+0.9**
CLDB	**Colider**	**19.62**	**82**	*e*P	**P**	**02 37 25.3**	**+0.2**
GUY2C	**Guyana, Caldas**	**19.65**	**1**	*e*P	**Pn**	**02 37 27.6**	**-0.1**
AQDB	**Aquidauana**	**19.82**	**110**	*e*P	**Pn**	**02 37 28.6**	**-0.6**
NORC	**Norcasia**	**20.00**	**2**	*e*P	Pn	02 37 30.7	-0.7
RUSC	**La Rusia**	**20.46**	**7**	*e*P	Pn	02 37 36.1	-1.1
HELC	**Santa Helena**	**20.61**	**0**	*e*P	Pn	02 37 40.0	+1.1
PTGA	**Pitinga**	**20.65**	**50**	P	**P**	**02 37 35.9**	**-0.3**
	13nm,0.6s,baz=321,slow=22,SNR=24						
PTGA	**Pitinga**	**20.65**	**50**	*e*P	**P**	**02 37 35.4**	**-0.8**
	17nm,0.8s						
PTGA	**Pitinga**	**20.65**	**50**	*e*P	**P**	**02 37 35.9**	**-0.3**
CPUP	**Villa Florida**	**20.68**	**127**	P	**P**	**02 37 36.4**	**-0.1**
	16nm,0.9s,baz=308,slow=11,SNR=14						
CPUP				LR	LR	02 47 38.0	
	comp=Z,120nm,18.8s,baz=306,slow=42						
CPUP	**Villa Florida**	**20.68**	**127**	*e*P	**P**	**02 37 36.7**	**+0.2**
PTBC	**PUERTO BERRIO,**	**20.99**	**3**	*e*P	**P**	**02 37 38.9**	**-1.0**
PTBC				*e*P	Pn	02 37 39.6	-3.4
BARC	**Barichara**	**21.14**	**7**	*e*P	**P**	**02 37 45.0**	**+3.3**
ZARC	**Zaragoza, Cauc**	**21.92**	**2**	*e*P	**P**	**02 37 49.7**	**-0.1**
PAMC	**Pamplona, Colo**	**21.94**	**8**	*e*P	**P**	**02 37 51.1**	**+0.6**
OCAC	**Ocana**	**22.76**	**6**	*e*P	**P**	**02 37 58.8**	**-0.2**
TRCB	**Terra Rica**	**23.19**	**114**	*e*P	**P**	**02 38 04.0**	**+0.8**
SMLC	**San Martn de**	**23.25**	**4**	*e*P	**P**	**02 38 02.3**	**-1.4**
SDV	**Santo Domingo**	**23.80**	**12**	P	**P**	**02 38 09.4**	**+0.3**
	9.6nm,0.8s,baz=195,slow=9.4,SNR=12						
SDV	**Santo Domingo**	**23.80**	**12**	*e*P	**P**	**02 38 09.2**	**+0.1**
	32nm,0.9s						
SDV	**Santo Domingo**	**23.80**	**12**	*e*P	**P**	**02 38 08.2**	**-0.9**
CODC	**Agustn Codazz**	**24.42**	**5**	*e*P	**P**	**02 38 11.6**	**-3.0**
ITRB	**Iturama**	**24.61**	**106**	*e*P	**P**	**02 38 16.9**	**+0.5**
GO06	**Curarrehue**	**25.19**	**173**	*e*P	**P**	**02 38 22.2**	**+0.7**
	9.4nm,0.9s						
TRQA	**Tornquist**	**26.32**	**155**	*e*P	**P**	**02 38 32.0**	**+0.3**
	12nm,0.8s						
TRQA	**Tornquist**	**26.32**	**155**	*e*P	**P**	**02 38 31.5**	**-0.2**
PLCA	**Paso Flores**	**26.44**	**171**	P	**P**	**02 38 33.0**	**+0.2**
	5.9nm,0.7s,baz=12,slow=10,SNR=11						
PLCA				LR	LR	02 47 38.5	
	comp=Z,38nm,21.1s,baz=37,slow=33						
PLCA	**Paso Flores**	**26.44**	**171**	*e*P	**P**	**02 38 33.4**	**+0.6**
	27nm,1.5s						
PLCA	**Paso Flores**	**26.44**	**171**	*e*P	**P**	**02 38 32.7**	**-0.1**
BB19B	**Bebedouro**	**26.51**	**108**	*e*P	**P**	**02 38 33.4**	**-0.2**
BDFB	**Brasilia**	**26.61**	**96**	P	**P**	**02 38 33.3**	**-1.3**
	5.8nm,0.6s,baz=273,slow=10,SNR=11						
BDFB				LR	LR	02 50 02.5	
	comp=Z,302nm,18.1s,baz=224,slow=38						
BDFB	**Brasilia**	**26.61**	**96**	*e*P	**P**	**02 38 33.3**	**-1.3**
BDFB				*e*P	**P**	**02 38 34.2**	**-0.4**
SMTB	**Santa Maria do**	**27.95**	**81**	*e*P	**P**	**02 38 46.4**	**-0.2**
SPB	**Sao Paulo**	**28.02**	**113**	*e*P	**P**	**02 38 48.8**	**+1.8**
PMNB	**Patos De Minas**	**28.18**	**102**	*e*P	**P**	**02 38 48.2**	**-0.4**
BSCB	**Bom Sucesso**	**29.97**	**107**	*e*P	**P**	**02 39 04.5**	**0.0**
JANB	**Januaria**	**30.20**	**95**	*e*P	**P**	**02 39 05.5**	**-1.0**
ESAR	**Angra dos Reis**	**30.59**	**111**	*e*P	**P**	**02 39 11.4**	**+1.6**
DUB01	**Friburgo-RJ**	**32.33**	**108**	*e*P	**P**	**02 39 26.5**	**+1.2**
SJMB	**Sao Joao De Ma**	**33.16**	**102**	*e*P	**P**	**02 39 33.7**	**+1.2**
BSFB	**Barra de Sao F**	**33.48**	**102**	*e*P	**P**	**02 39 34.6**	**-0.7**
RIB01	**Linhares ES**	**33.93**	**103**	*e*P	**P**	**02 39 39.1**	**-0.1**
NBPA	**Parau_RN**	**38.79**	**81**	*e*P	**P**	**02 40 21.2**	**+0.5**
USHA	**Ushuaia**	**40.57**	**174**	P	**P**	**02 40 36.4**	**+1.4**
	17nm,0.8s,baz=355,slow=5.6,SNR=7.9						
LNIG	**Linares**	**45.63**	**329**	*e*P	**P**	**02 41 15.6**	**-0.6**
	4.3nm,1.0s						
349A	**Repton**	**46.99**	**346**	P	**P**	**02 41 26.2**	**-0.6**
	baz=164						
251A	**Midway**	**47.33**	**349**	P	**P**	**02 41 28.2**	**-1.1**
	baz=167						
155A	**Kite**	**47.37**	**352**	P	**P**	**02 41 28.8**	**-0.9**
	baz=171						
250A	**Grady**	**47.39**	**348**	P	**P**	**02 41 29.1**	**-0.8**
	baz=166						
154A	**Montrose**	**47.45**	**351**	P	**P**	**02 41 29.5**	**-0.9**
	baz=170						
249A	**Camden**	**47.58**	**347**	P	**P**	**02 41 30.7**	**-0.5**
	baz=165						
153A	**Fort Valley**	**47.60**	**351**	P	**P**	**02 41 30.4**	**-1.1**
	baz=169						
151A	**Opelika**	**47.74**	**349**	P	**P**	**02 41 31.2**	**-1.4**
	baz=167						
152A	**Waverly Hall**	**47.77**	**350**	P	**P**	**02 41 31.4**	**-1.3**
	baz=168						
Z56A	**Williston**	**47.93**	**353**	P	**P**	**02 41 32.8**	**-1.2**
	baz=172						
150A	**Eclectic**	**47.95**	**348**	P	**P**	**02 41 32.9**	**-1.3**
	baz=166						
Z54A	**Sparta**	**48.03**	**352**	P	**P**	**02 41 33.5**	**-1.2**
	baz=170						
149A	**Jones**	**48.10**	**347**	P	**P**	**02 41 33.9**	**-1.4**
	baz=165,SNR=5.1						
Z53A	**Monticello**	**48.18**	**351**	P	**P**	**02 41 34.3**	**-1.6**
	baz=170						
Z52A	**Williamson**	**48.23**	**350**	P	**P**	**02 41 34.8**	**-1.5**
	baz=168,SNR=5.9						
GOGA	**Godfrey**	**48.29**	**351**	P	**P**	**02 41 35.3**	**-1.4**
	baz=170						
148A	**Greensboro**	**48.32**	**346**	P	**P**	**02 41 36.5**	**-0.5**
	baz=164						
Y58A	**Scranton**	**48.35**	**355**	P	**P**	**02 41 36.6**	**-0.6**
	baz=175						
Z51A	**Franklin**	**48.48**	**349**	P	**P**	**02 41 36.7**	**-1.5**
	baz=167						
Y57A	**Sumter**	**48.52**	**355**	P	**P**	**02 41 37.4**	**-1.1**
	baz=174						
Z50A	**Ashland**	**48.56**	**348**	P	**P**	**02 41 37.8**	**-1.1**
	baz=166						
LRAL	**Lakeview Retre**	**48.57**	**347**	*e*P	**P**	**02 41 37.7**	**-1.2**
	6.6nm,0.8s						
LRAL	**Lakeview Retre**	**48.57**	**347**	P	**P**	**02 41 37.6**	**-1.3**
	baz=165						
Y55A	**Saluda**	**48.59**	**353**	P	**P**	**02 41 38.0**	**-1.1**
	baz=172						
Y54A	**Tignall**	**48.62**	**352**	P	**P**	**02 41 38.2**	**-1.2**
	baz=171						
Z49A	**Columbiana**	**48.62**	**348**	P	**P**	**02 41 38.0**	**-1.4**
	baz=166,SNR=5.1						
Y53A	**Monroe**	**48.74**	**351**	P	**P**	**02 41 39.0**	**-1.3**
	baz=170						
Y52A	**Lilburn**	**48.83**	**351**	P	**P**	**02 41 39.4**	**-1.5**
	baz=169						
Y51A	**Rockmart**	**49.03**	**350**	P	**P**	**02 41 41.2**	**-1.3**
	baz=168,SNR=5.3						
X56A	**White Oak**	**49.05**	**354**	P	**P**	**02 41 41.6**	**-1.0**
	baz=173						
X55A	**Gracelyn & Ava**	**49.09**	**353**	P	**P**	**02 41 42.0**	**-0.9**
	baz=172						
Y50A	**Piedmont**	**49.14**	**349**	P	**P**	**02 41 41.9**	**-1.5**
	baz=167						
Y49A	**Blount Mountai**	**49.24**	**348**	P	**P**	**02 41 42.8**	**-1.3**
	baz=166						
X54A	**Belton**	**49.26**	**353**	P	**P**	**02 41 43.2**	**-1.1**
	baz=171						
X53A	**Estanollee**	**49.34**	**352**	P	**P**	**02 41 43.5**	**-1.3**
	baz=170						
W58A	**Raeford**	**49.43**	**356**	P	**P**	**02 41 44.3**	**-1.1**
	baz=175						
Y48A	**Jasper**	**49.45**	**347**	P	**P**	**02 41 44.0**	**-1.7**
	baz=165,SNR=6.3						
X52A	**Dahlonega**	**49.52**	**351**	P	**P**	**02 41 45.1**	**-1.2**
	baz=169						
W57A	**Gilead**	**49.61**	**355**	P	**P**	**02 41 46.0**	**-0.9**
	baz=174						
X51A	**Calhoun**	**49.64**	**350**	P	**P**	**02 41 45.8**	**-1.4**
	baz=168						
W56A	**Indian Trail**	**49.65**	**355**	P	**P**	**02 41 46.0**	**-1.1**
	baz=174						
X50B	**Fort Payne**	**49.68**	**349**	P	**P**	**02 41 46.2**	**-1.3**
	baz=167,SNR=7.2						
KMSC	**Kings Mountain**	**49.73**	**354**	P	**P**	**02 41 46.7**	**-1.0**
	baz=173,SNR=5.2						
W54A	**Cherokee Point**	**49.77**	**353**	P	**P**	**02 41 46.5**	**-1.6**
	baz=172						
X49A	**Woodville**	**49.86**	**348**	P	**P**	**02 41 47.3**	**-1.5**
	baz=166						
X48A	**Hartselle**	**49.95**	**348**	P	**P**	**02 41 47.9**	**-1.5**
	baz=165						
W53A	**Cullowhee**	**49.98**	**352**	P	**P**	**02 41 48.9**	**-0.9**
	baz=170,SNR=8.0						
V59A	**Middlesex**	**50.11**	**357**	P	**P**	**02 41 50.2**	**-0.4**
	baz=176						
X47A	**Russelville**	**50.18**	**347**	P	**P**	**02 41 49.7**	**-1.6**
	baz=164						
V58A	**Windy Hill, Pi**	**50.19**	**356**	P	**P**	**02 41 50.4**	**-0.8**
	baz=175						
W51A	**Cleveland**	**50.21**	**350**	P	**P**	**02 41 50.5**	**-1.0**
	baz=168						
V56A	**Mocksville**	**50.31**	**355**	P	**P**	**02 41 51.4**	**-0.8**
	baz=174						
V57A	**Coltrane Farms**	**50.33**	**356**	P	**P**	**02 41 51.0**	**-1.2**
	baz=175						
W50A	**Signal Mountai**	**50.34**	**350**	P	**P**	**02 41 51.1**	**-1.4**
	baz=168,SNR=6.0						
X46A	**Booneville**	**50.39**	**346**	P	**P**	**02 41 50.9**	**-1.8**
	baz=164						
V53A	**Saluda**	**50.42**	**352**	P	**P**	**02 41 51.9**	**-1.2**
	baz=171						
V54A	**Nebo**	**50.42**	**353**	P	**P**	**02 41 51.8**	**-1.3**
	baz=172						
OXF	**Oxford**	**50.54**	**345**	P	**P**	**02 41 53.1**	**-0.8**
	baz=162						
W48A	**Pulaski**	**50.59**	**348**	P	**P**	**02 41 52.8**	**-1.5**
	baz=166,SNR=7.5						
V52A	**Sevierville**	**50.70**	**352**	P	**P**	**02 41 53.9**	**-1.2**
	baz=170,SNR=5.2						
V50A	**Pikeville**	**50.76**	**350**	P	**P**	**02 41 54.3**	**-1.3**
	baz=168						
V51A	**Loudon**	**50.77**	**351**	P	**P**	**02 41 54.1**	**-1.5**
	baz=169						
WLAR	**White Oak Lake**	**50.81**	**341**	*e*P	**P**	**02 41 57.1**	**+1.1**
	34nm,0.8s						
U56A	**King**	**50.83**	**355**	P	**P**	**02 41 54.7**	**-1.4**
	baz=174						
W47A	**Westpoint**	**50.83**	**347**	P	**P**	**02 41 54.2**	**-1.9**
	baz=165						
U57A	**Blanch**	**50.84**	**356**	P	**P**	**02 41 54.7**	**-1.4**
	baz=175						
V49A	**McMinnville**	**51.00**	**349**	P	**P**	**02 41 55.7**	**-1.7**
	baz=167,SNR=6.8						
U55A	**TA2, Sparta**	**51.05**	**354**	P	**P**	**02 41 56.5**	**-1.3**
	baz=173						
U53A	**Fall Branch**	**51.08**	**353**	P	**P**	**02 41 56.4**	**-1.6**
	baz=171						
U54A	**Nelsons Funny**	**51.14**	**354**	P	**P**	**02 41 57.1**	**-1.4**
	baz=172						
V48A	**Smith Brothers**	**51.15**	**348**	P	**P**	**02 41 57.0**	**-1.5**
	baz=166,SNR=6.7						
U52A	**Thorn Hill**	**51.21**	**352**	P	**P**	**02 41 57.6**	**-1.4**
	baz=170						
T59A	**Double "B" Far**	**51.28**	**358**	P	**P**	**02 41 58.7**	**-0.7**
	baz=177						
U51A	**La Follette**	**51.28**	**351**	P	**P**	**02 41 58.1**	**-1.4**
	baz=169						
T58A	**Grand View Acr**	**51.30**	**357**	P	**P**	**02 41 58.9**	**-0.6**
	baz=176						
V47A	**Nunnelly**	**51.37**	**348**	P	**P**	**02 41 58.1**	**-2.1**
	baz=165						
TZTN	**Tazewell**	**51.38**	**352**	P	**P**	**02 41 58.8**	**-1.4**
	baz=170						
TXAR	**Lajitas Array**	**51.39**	**328**	P	**P**	**02 42 00.8**	**+0.2**
	2.0nm,0.6s,baz=149,slow=9.0,SNR=34						
TXAR				LR	LR	03 01 07.6	
	comp=Z,49nm,20.8s,baz=0.0,slow=33						
T57A	**Hurt**	**51.40**	**356**	*e*P	**P**	**02 41 59.6**	**-0.7**
	19nm,1.0s						
T57A	**Hurt**	**51.40**	**356**	P	**P**	**02 41 59.1**	**-1.2**
	baz=175						
U50A	**Jamestown**	**51.45**	**350**	P	**P**	**02 41 59.2**	**-1.6**
	baz=168,SNR=8.0						
T56A	**Rocky Mt**	**51.48**	**355**	P	**P**	**02 42 00.5**	**-0.4**
	baz=174						
T55A	**Pulaski**	**51.63**	**355**	P	**P**	**02 42 01.6**	**-0.5**
	baz=173						
T54A	**Tazewell**	**51.65**	**354**	P	**P**	**02 42 00.7**	**-1.7**
	baz=172						
T53A	**Wise**	**51.68**	**353**	P	**P**	**02 42 01.3**	**-1.2**
	baz=171						
BLA	**Blacksburg**	**51.69**	**355**	P	**P**	**02 42 01.5**	**-1.1**
	baz=174						
U49A	**Red Boiling Sp**	**51.70**	**350**	P	**P**	**02 42 01.0**	**-1.6**
	baz=167						
WVT	**Waverly**	**51.73**	**347**	P	**P**	**02 42 00.4**	**-2.4**
	baz=165						
MIAR	**Mount Ida**	**51.75**	**341**	P	**P**	**02 42 02.6**	**-0.4**
	baz=158,SNR=6.9						
U48A	**Cassie Pea, Po**	**51.84**	**349**	P	**P**	**02 42 02.2**	**-1.5**
	baz=166						
T51A	**Gray**	**51.85**	**351**	P	**P**	**02 42 02.5**	**-1.2**
	baz=170,SNR=14						
T52A	**Hallie**	**51.86**	**352**	P	**P**	**02 42 02.3**	**-1.5**
	baz=171						
U47A	**Clarksville**	**51.92**	**348**	P	**P**	**02 42 02.2**	**-2.0**
	baz=165						
W41B	**Gary Mavity, V**	**51.93**	**343**	P	**P**	**02 42 03.7**	**-0.6**
	baz=159,SNR=6.2						
S58A	**Poland Farm, P**	**51.94**	**357**	P	**P**	**02 42 03.5**	**-0.9**
	baz=177						
U46A	**Springville**	**52.02**	**347**	P	**P**	**02 42 03.6**	**-1.4**
	baz=164						
T50A	**Nancy**	**52.04**	**351**	P	**P**	**02 42 03.7**	**-1.5**
	baz=168						
S57A	**Dark Hollow, R**	**52.13**	**357**	P	**P**	**02 42 04.7**	**-1.1**
	baz=176						
T49A	**Edmonton**	**52.24**	**350**	P	**P**	**02 42 05.0**	**-1.5**
	baz=168,SNR=8.2						
S55A	**Lewisburg**	**52.26**	**355**	P	**P**	**02 42 05.7**	**-1.0**
	baz=174						
ABTX	**Abilene, Hawle**	**52.27**	**334**	*e*P	**P**	**02 42 06.5**	**-0.5**
	9.5nm,0.8s						
ABTX	**Abilene, Hawle**	**52.27**	**334**	P	**P**	**02 42 06.9**	**-0.1**
	baz=150,SNR=7.8						
R58B	**Mineral**	**52.28**	**358**	P	**P**	**02 42 06.6**	**-0.3**
	baz=177						
S53A	**Williamson**	**52.32**	**353**	P	**P**	**02 42 05.7**	**-1.5**
	baz=172						
S54A	**Dingess, Beckl**	**52.36**	**354**	P	**P**	**02 42 06.0**	**-1.5**
	baz=173						
T48A	**Bowling Green**	**52.39**	**349**	P	**P**	**02 42 06.3**	**-1.5**
	baz=167						
T47A	**Sharon Grove**	**52.41**	**348**	P	**P**	**02 42 06.2**	**-1.7**
	baz=166						
W39A	**Magazine**	**52.41**	**341**	P	**P**	**02 42 08.1**	**+0.2**
	baz=158						
S52A	**Salyersville**	**52.44**	**352**	P	**P**	**02 42 06.5**	**-1.6**
	baz=171						
S51A	**Beattyville**	**52.46**	**352**	P	**P**	**02 42 06.9**	**-1.3**
	baz=170						
S50A	**Richmond**	**52.62**	**351**	P	**P**	**02 42 08.2**	**-1.2**
	baz=169,SNR=12						
T46A	**Princeton**	**52.62**	**348**	P	**P**	**02 42 08.0**	**-1.5**
	baz=165						
R57A	**Stanardsville**	**52.65**	**357**	P	**P**	**02 42 09.1**	**-0.5**
	baz=176						
R54A	**Victor**	**52.70**	**355**	P	**P**	**02 42 09.3**	**-0.8**
	baz=173						
R55A	**Marlinton**	**52.73**	**355**	P	**P**	**02 42 09.1**	**-1.2**
	baz=174						
S49A	**Springfield**	**52.86**	**350**	P	**P**	**02 42 09.5**	**-1.7**
	baz=168,SNR=5.6						
S48A	**Wiedeman Farm,**	**52.87**	**350**	P	**P**	**02 42 09.2**	**-2.0**
	baz=167						
S47A	**Hartford**	**52.95**	**349**	P	**P**	**02 42 09.9**	**-1.9**
	baz=166,SNR=5.8						
R52A	**Catlettsburg**	**53.03**	**353**	P	**P**	**02 42 11.1**	**-1.3**
	baz=171						
R51A	**Hillsboro**	**53.11**	**352**	P	**P**	**02 42 11.7**	**-1.3**
	baz=170						
R50A	**Paris**	**53.20**	**351**	P	**P**	**02 42 12.3**	**-1.3**
	baz=169						
U40A	**Yellville**	**53.21**	**343**	P	**P**	**02 42 13.1**	**-0.7**
	baz=159,SNR=17						
R49A	**Shelbyville**	**53.34**	**351**	P	**P**	**02 42 13.0**	**-1.7**
	baz=168						
Q57A	**Strasburg**	**53.38**	**357**	P	**P**	**02 42 14.9**	**-0.1**
	baz=176						
Q56A	**Snyder Ridge,**	**53.42**	**356**	P	**P**	**02 42 15.1**	**-0.2**
	baz=176						
Q53A	**Leroy**	**53.43**	**354**	P	**P**	**02 42 14.1**	**-1.3**
	baz=173						
Q55A	**Buckhannon**	**53.44**	**356**	P	**P**	**02 42 15.4**	**-0.1**
	baz=174						
WCI	**Wyandotte Cave**	**53.46**	**349**	*e*P	**P**	**02 42 14.1**	**-1.5**
	21nm,0.7s						
WCI	**Wyandotte Cave**	**53.46**	**349**	P	**P**	**02 42 14.0**	**-1.6**
	baz=167						
Q54A	**Coxs Mills**	**53.49**	**355**	P	**P**	**02 42 14.2**	**-1.6**
	baz=174						
S44A	**Carbondale**	**53.54**	**346**	P	**P**	**02 42 14.7**	**-1.5**
	baz=163,SNR=7.5						
R48A	**Northridge Ran**	**53.56**	**350**	P	**P**	**02 42 14.6**	**-1.7**
	baz=168						
R47A	**Wooly Knot Far**	**53.57**	**349**	P	**P**	**02 42 14.6**	**-1.8**
	baz=167						
Q50A	**Georgetown**	**53.70**	**352**	P	**P**	**02 42 15.9**	**-1.4**
	baz=170						
TUL1	**Leonard**	**53.72**	**340**	P	**P**	**02 42 17.0**	**-0.6**
	baz=155,SNR=7.7						
WMOK	**Wichita Mounta**	**53.76**	**336**	P	**P**	**02 42 16.9**	**-1.0**
	baz=152						
Q51A	**Peebles**	**53.80**	**352**	P	**P**	**02 42 16.6**	**-1.5**
	baz=171						
P56A	**Dayton Farm, R**	**53.87**	**357**	P	**P**	**02 42 17.7**	**-0.8**
	baz=176						
R45A

SFIN	Lafayette	55.70 349	P	P	02 42 29.3	-2.4
	baz=166					
N49A	Columbus Grove	55.77 352	P	P	02 42 30.7	-1.6
	baz=170					
M56A	Emporium	55.81 358	P	P	02 42 30.9	-1.6
	baz=177					
M55A	Ridgway	55.82 357	P	P	02 42 31.6	-1.1
	baz=176					
N48A	Decatur	55.83 351	P	P	02 42 30.7	-1.9
	baz=169					
M54A	Oil Creek Stat	55.91 356	P	P	02 42 31.3	-2.0
	baz=175					
M53A	WI Miller and	55.91 355	P	P	02 42 31.5	-1.8
	baz=174					
N47A	Urbana	55.95 351	P	P	02 42 31.2	-2.4
	baz=168					
M50A	Fremont	56.10 353	P	P	02 42 32.0	-2.6
	baz=171					
N46A	Monticello	56.13 350	P	P	02 42 32.5	-2.4
	baz=167					
M49A	Liberty Center	56.29 352	P	P	02 42 33.8	-2.2
	baz=170					
N44A	Piper City	56.29 349	P	P	02 42 33.7	-2.3
	baz=165					
HDIL	Hopedale	56.30 347	P	P	02 42 34.0	-2.1
	baz=164					
PLIO	Pelee Island,	56.40 354	P	P	02 42 34.6	-2.1
	baz=172					
M47A	Cromwell	56.41 351	P	P	02 42 34.4	-2.4
	baz=168					
BINY	Binghamton	56.47 360	P	P	02 42 37.3	0.0
	baz=179					
L55A	Hinsdale	56.52 357	P	P	02 42 36.8	-0.8
	baz=177					
L54A	Sinclairville	56.61 357	P	P	02 42 37.1	-1.2
	baz=176					
N43A	Stutzman Famil	56.64 348	P	P	02 42 36.6	-1.9
	baz=164					
N41A	Harden Midland	56.78 346	P	P	02 42 37.7	-1.9
	baz=162					
L48A	N Adams	56.81 352	P	P	02 42 37.6	-2.0
	baz=170					
L49A	Milan	56.89 353	P	P	02 42 38.7	-1.5
	baz=170					
KSU1	Kansas State U	56.89 341	P	P	02 42 39.0	-1.3
	baz=155					
L47A	Sherwood	56.95 351	P	P	02 42 38.6	-2.1
	baz=169					
K54A	Basiliko Farm,	56.95 357	P	P	02 42 39.8	-0.9
	baz=176					
K55A	Perry	57.05 358	P	P	02 42 40.3	-1.1
	baz=177					
M43A	Waltham Townsh	57.07 348	P	P	02 42 39.9	-1.6
	baz=164					
N40A	Mertquake, Sal	57.12 346	P	P	02 42 40.0	-1.9
	baz=161					
L46A	Eue Claire	57.15 350	P	P	02 42 39.5	-2.5
	baz=168					
ANMO	Albuquerque	57.31 330	eP	P	02 42 43.3	-0.3
	2.7nm,0.8s					
ANMO	Albuquerque	57.31 330	P	P	02 42 43.6	0.0
	baz=144					
TASM	ASL Pad, Albuq	57.31 330	P	P	02 42 43.8	+0.2
	baz=144,SNR=5.4					
TASM	ASL Pad, Albuq	57.31 330	P	P	02 42 43.8	+0.2
	baz=144					
M41A	Milan	57.35 347	P	P	02 42 41.2	-2.3
	baz=163					
K50A	Casco	57.41 354	P	P	02 42 41.7	-2.2
	baz=172					
TUC	Tucson	57.52 325	eP	P	02 42 45.2	+0.1
	4.2nm,0.9s					
TUC	Tucson	57.52 325	P	P	02 42 45.5	+0.5
	baz=138					
J55A	Hilton	57.57 358	P	P	02 42 44.1	-0.9
	baz=177					
K47A	Vermontville	57.60 352	P	P	02 42 43.9	-1.3
	baz=169					
J52A	Paris	57.69 356	P	P	02 42 44.2	-1.7
	baz=174					
CBKS	Cedar Bluff	57.71 338	P	P	02 42 45.6	-0.5
	baz=152					
K46A	Dorr	57.73 351	P	P	02 42 43.6	-2.5
	baz=168					
L42A	Oliver, Polo	57.76 348	P	P	02 42 44.1	-2.3
	baz=164					
J48A	Bridge Port	58.06 353	P	P	02 42 46.3	-2.1
	baz=170					
J47A	Sunmer	58.13 352	P	P	02 42 47.2	-1.8
	baz=169,SNR=5.0					
T25A	Trinidad	58.16 333	eP	P	02 42 49.3	-0.3
	12nm,1.5s					
L40A	Anamosa	58.16 346	P	P	02 42 47.6	-1.6
	baz=162					
PECO	Prince Edward	58.22 359	P	P	02 42 48.6	-1.0
	baz=178					
WLVO	Wesleyville	58.25 358	P	P	02 42 48.7	-1.1
	baz=177					
I51A	Listowel	58.29 355	P	P	02 42 48.2	-1.9
	baz=174					
I55A	Frankford	58.52 358	P	P	02 42 50.2	-1.4
	baz=178					
BWLO	Walkerton	58.61 355	P	P	02 42 50.4	-1.8
	baz=174					
DELO	Deloro Mine	58.82 358	P	P	02 42 52.6	-1.1
	baz=178					
H55A	Tweed	58.84 359	P	P	02 42 52.8	-1.1
	baz=178					
I47A	Gladwin	58.86 352	P	P	02 42 52.0	-2.0
	baz=170					
H56A	Elgin	58.87 359	P	P	02 42 53.5	-0.5
	baz=179					
LONY	Lake Ozonia	58.90 1	P	P	02 42 53.8	-0.4
	baz=181					
I46A	Reed City	58.91 352	P	P	02 42 52.0	-2.4
	baz=169					
I48A	Sherman Twp	58.93 353	P	P	02 42 52.4	-2.1
	baz=171					
FRNY	Flat Rock	59.13 2	eP	P	02 42 55.5	-0.4
	16nm,0.9s					
SDCO	Great Sand Dun	59.14 333	P	P	02 42 56.7	+0.2
	baz=146,SNR=15					
PLVO	Plevna	59.33 359	P	P	02 42 56.0	-1.2
	baz=178					
BANO	Bancroft	59.33 358	P	P	02 42 56.0	-1.2
	baz=177					
H48A	Harrisville	59.39 354	P	P	02 42 56.0	-1.6
	baz=171					
H47A	Mio	59.40 353	P	P	02 42 55.9	-1.8
	baz=170					
G53A	Haliburton	59.46 357	P	P	02 42 56.9	-1.2
	baz=176					
H46A	Fife Lake	59.46 352	P	P	02 42 56.3	-1.9
	baz=169					
BGNE	Belgrade	59.48 340	P	P	02 42 57.3	-1.0
	baz=154					
G55A	Calabogie	59.53 359	P	P	02 42 57.7	-1.0
	baz=179					
H45A	Beulah	59.66 351	P	P	02 42 57.4	-2.2
	baz=168					
GLMI	Grayling	59.67 353	P	P	02 42 57.4	-2.2
	baz=170					
S22A	4UR Ranch, Cre	59.75 332	P	P	02 43 00.7	+0.1
	baz=144,SNR=7.4					
KLBO	Killbear Provi	59.78 356	P	P	02 42 58.3	-2.0
	baz=175					
BUKO	Buck Lake	59.81 357	P	P	02 42 59.1	-1.4
	baz=176					
PEMO	Pembroke	59.97 359	P	P	02 43 00.5	-1.1
	baz=178					
MVCO	Mesa Verde	60.11 330	eP	P	02 43 03.0	-0.1
	6.0nm,0.9s					
MVCO	Mesa Verde	60.11 330	P	P	02 43 02.8	-0.2
	baz=143					
G46A	Petoskey	60.18 352	P	P	02 43 01.5	-1.6
	baz=170					
WUAZ	Wupatki	60.26 327	eP	P	02 43 03.2	-0.8
	9.1nm,0.9s					
WUAZ	Wupatki	60.26 327	P	P	02 43 02.1	-2.0
	baz=139					
ALGO	Algonquin Park	60.27 358	P	P	02 43 02.6	-1.1
	baz=177					
F49A	Sandfield	60.32 355	P	P	02 43 01.6	-2.4
	baz=173					
F51A	Arnstein	60.33 357	P	P	02 43 02.0	-2.1
	baz=175					
F48A	Evansville	60.44 354	P	P	02 43 02.5	-2.3
	baz=172					
F45A	CMU Biological	60.63 352	P	P	02 43 04.3	-1.9
	baz=169					
E53A	Dumoine, Ponti	60.68 358	P	P	02 43 05.3	-1.2
	baz=178					
Y12C	Blythe	60.71 323	P	P	02 43 06.4	-0.6
	baz=136					
E54A	Lac Daplat, Po	60.72 359	P	P	02 43 05.8	-0.9
	baz=178					
ISCO	Idaho Springs	60.89 334	P	P	02 43 08.6	+0.2
	baz=146,SNR=5.4					
E51A	G1948 Merrick	60.91 357	P	P	02 43 06.7	-1.4
	baz=176					
E48A	Lockeyer	61.04 355	P	P	02 43 06.9	-2.0
	baz=173					
ECSD	EROS Data Cent	61.12 343	eP	P	02 43 08.2	-1.3
	14nm,0.6s					
ECSD	EROS Data Cent	61.12 343	P	P	02 43 08.5	-1.1
	baz=156,SNR=17					
E47A	Iron Bridge	61.12 354	P	P	02 43 07.7	-1.8
	baz=171					
BC3	Big Chuckawall	61.19 322	P	P	02 43 11.3	+0.9
	baz=135					
G39A	Holcombe	61.22 347	P	P	02 43 08.9	-1.2
	baz=163					
D52A	ZEK Kipawa Sen	61.30 358	P	P	02 43 09.6	-1.1
	baz=177					
IRM	Iron Mountain	61.37 323	P	P	02 43 12.1	+0.6
	baz=135,SNR=7.5					
D53A	Lac Vacive, Po	61.38 358	P	P	02 43 10.4	-0.8
	baz=178					
D54A	Lac Fusel, La	61.43 359	P	P	02 43 10.5	-1.1
	baz=179					
SPMN	Marine on St.	61.52 346	P	P	02 43 10.9	-1.3
	baz=161					
F40A	Park Falls	61.61 348	P	P	02 43 10.8	-2.0
	baz=164					
D46A	Sault St. Mari	61.63 353	P	P	02 43 11.1	-1.9
	baz=171					
D47A	Chapleau	61.70 354	P	P	02 43 11.0	-2.4
	baz=172					
D48A	Paudash Townsh	61.70 355	P	P	02 43 11.4	-2.0
	baz=173					
LATQ	La Tuque	61.70 2	P	P	02 43 12.5	-0.8
	baz=183					
BELC	Belle Mtn. Jos	61.76 322	P	P	02 43 12.9	-1.3
	baz=134					
PFO	Pinyon Flats O	61.76 322	P	P	02 43 14.9	+0.7
	baz=134					
F39A	Loretta	61.77 348	P	P	02 43 12.5	-1.4
	baz=163					
N23A	Red Feather La	61.94 334	P	P	02 43 15.1	-0.4
	baz=146					
F38A	Pierce - Schro	62.01 347	P	P	02 43 14.3	-1.2
	baz=162					
GMRC	Granite Mounta	62.11 323	P	P	02 43 17.3	+0.7
	baz=135					
KNB	Kanab	62.15 327	eP	P	02 43 17.7	+0.8
	9.2nm,0.8s					
MURC	Murrieta	62.20 321	P	P	02 43 17.6	+0.5
	baz=133					
O20A	White River Ci	62.32 332	P	P	02 43 18.0	+0.1
	baz=144					
D41A	Chassel	62.44 350	P	P	02 43 17.3	-0.9
	baz=166					
SUSD	Miller	62.47 341	P	P	02 43 17.8	-0.8
	baz=154					
E38A	The Farm, Brul	62.56 348	P	P	02 43 18.3	-0.9
	baz=162					
TUQ	Turquoise Moun	62.72 323	P	P	02 43 21.2	+0.6
	baz=135					
P17A	Butcher Ranch,	62.97 330	eP	P	02 43 22.4	+0.2
	10nm,0.7s					
GSC	Goldstone, Bar	63.14 323	P	P	02 43 24.2	+0.9
	baz=134					
LSQQ	Lebel-sur-Quev	63.34 359	P	P	02 43 23.6	-0.7
	baz=178					
C40A	Isle Royale Na	63.36 350	P	P	02 43 24.4	0.0
	baz=165					
EDW2	Edwards Air Fo	63.55 322	P	P	02 43 25.8	-0.3
	baz=133					
K22A	Casper	63.64 335	P	P	02 43 26.7	0.0
	baz=146,SNR=5.1					
LRMC	Laurel Mtn Rad	63.78 322	P	P	02 43 28.2	+0.5
	baz=134					
RSSD	Black Hills	63.91 338	eP	P	02 43 28.1	-0.3
	5.0nm,0.9s					
TPNV	Topopah Spring	63.98 324	P	P	02 43 30.2	+1.2
	baz=135,SNR=9.7					
FURC	Furnace Creek,	63.99 324	P	P	02 43 29.5	+0.7
	baz=135					
MATQ	Matagami	64.06 358	P	P	02 43 27.9	-1.1
	baz=178					
MPMC	Manual Prospec	64.06 323	P	P	02 43 29.9	+0.3
	baz=134					
CHGQ	Chibougamau	64.19 1	P	P	02 43 28.9	-1.0
	baz=181					
ISA	Isabella, Lake	64.37 322	P	P	02 43 32.9	+1.4
	baz=133					
DUG	Dugway, Tooele	64.55 329	eP	P	02 43 32.9	+0.3
	14nm,0.7s					
DUG	Dugway, Tooele	64.55 329	P	P	02 43 33.3	+0.7
	baz=140,SNR=17					
R11A	Troy Canyon, C	64.62 326	P	P	02 43 34.3	+1.2
	baz=136,SNR=11					
PKM	Mcpherson Peak	64.66 321	P	P	02 43 34.2	+0.7
	baz=132					
CWC	Cottonwood Cre	64.67 323	P	P	02 43 34.2	+0.7
	baz=134					
BW06	Boulder Array	65.03 333	P	P	02 43 35.5	-0.3
	baz=143					
PDAR	Pinedale Array	65.03 333	P	P	02 43 35.2	-0.6
	0.8nm,0.5s,baz=142,slow=7.5,SNR=9.6					
PDAR			LR	LR	03 13 22.6	
	comp=Z,20nm,18.2s,baz=114,slow=37					
SMMC	Simmler	65.06 321	P	P	02 43 37.2	+1.3
	baz=132					
AGMN	Agassiz Nation	65.13 345	P	P	02 43 35.4	-0.6
	baz=158					
MDND	Maddock	65.73 342	P	P	02 43 40.1	+0.2
	baz=154,SNR=8.6					
HVU	Hansel Valley	65.73 330	eP	P	02 43 39.8	-0.5
	8.3nm,0.7s					
NVAR	Mina Array Bea	66.18 324	P	P	02 43 43.5	+0.2
	2.2nm,0.7s,baz=147,slow=7.3,SNR=6.5					
ELK	Elko	66.18 328	LR	LR	03 11 37.2	
	comp=Z,40nm,18.1s,baz=118,slow=35					
ELK	Elko	66.18 328	eP	P	02 43 43.3	0.0
	3.6nm,0.9s					
RLMT	Red Lodge	66.80 335	P	P	02 43 47.2	0.0
	baz=144,SNR=5.8					
LAO	LASA Array	66.91 338	P	P	02 43 47.2	-0.3
	baz=148					
ULM	Lac du Bonnet	66.95 346	P	P	02 43 46.0	-1.7
	6.8nm,0.7s,baz=151,slow=7.1,SNR=5.2					
YERR	Yerington	67.09 324	eP	P	02 43 49.2	+0.2
	3.7nm,0.8s					
DGMT	Dagmar	67.72 340	P	P	02 43 53.2	+0.6
	baz=150					
HLID	Hailey	67.88 331	P	P	02 43 54.6	+0.7
	baz=139,SNR=16					
BOZ	Bozeman (W)	68.18 334	eP	P	02 43 55.8	0.0
	3.7nm,0.7s					
BOZ	Bozeman (W)	68.18 334	P	P	02 43 55.9	+0.2
	baz=142,SNR=8.1					
VNA3	Neumayer Olymp	68.64 162	P	P	02 43 59.0	+0.9
VNA1	Neumayer--Stat	68.90 161	P	P	02 44 01.3	+1.6
EGMT	Eagleton	69.36 336	P	P	02 44 03.0	+0.1
	baz=144					
MSO	Missoula	70.15 333	P	P	02 44 08.5	+0.7
	baz=140					
N02D	Trinity Center	70.40 324	P	P	02 44 09.1	-0.3
	baz=131					
M04C	Macdoel	70.44 325	P	P	02 44 10.1	+0.3
	baz=132					
M02C	Callahan	70.75 324	P	P	02 44 11.5	-0.1
	baz=131					
SNAA	Sanae	70.86 161	P	P	02 44 12.9	+1.1
SNAA	Sanae	70.86 161	eP	P	02 44 12.4	+0.6
	14nm,0.8s					
L04D	Klamath Falls	70.99 325	P	P	02 44 13.2	+0.1
	baz=132					
J05D	Fort Rock, OR	71.13 326	P	P	02 44 14.6	+0.7
	baz=133					
J04D	Umpqua Nationa	71.57 326	P	P	02 44 17.2	+0.5
	baz=132					
L02E	Cave Junction	71.68 324	P	P	02 44 17.8	+0.7
	baz=131					
I05D	Terrebonne, OR	71.90 327	P	P	02 44 19.4	+0.9
	baz=133					
K02D	Willamette Mer	72.06 325	P	P	02 44 20.1	+0.6
	baz=131					
I04A	Tendick Farm,	72.10 326	P	P	02 44 20.1	+0.5
	baz=132					
NEW	Newport	72.65 332	P	P	02 44 23.1	+0.3
	baz=138					
DBIC	Dimbokro	73.20 78	P	P	02 44 26.3	-0.5
	7.0nm,1.0s,baz=265,slow=7.0,SNR=4.1					
DBIC			LR	LR	03 15 30.2	
	comp=Z,29nm,19.2s,baz=170,slow=35					
DBIC	Dimbokro	73.20 78	eP	P	02 44 26.3	-0.5
	33nm,1.5s					
D03D	Eldon	74.97 329	P	P	02 44 37.2	+0.8
	baz=132					
B05A	Bryant	74.97 330	P	P	02 44 36.9	+0.5
	baz=133					
QSPA	South Pole Qui	75.59 180	eP	P	02 44 40.8	+0.9
	8.8nm,0.9s					
FRB	Frobisher Bay	78.25 3	LR	LR	03 21 46.0	
	comp=Z,18nm,18.1s,baz=180,slow=37					
TOA0	Torodi Ar. Sit	81.28 74	eP	P	02 45 11.9	0.0
	16nm,0.9s					
TORD	Torodi Ar. Bea	81.28 74	P	P	02 45 11.9	-0.1
	8.6nm,0.3s,baz=276,slow=4.0,SNR=26					
VNDA	Vanda	82.51 191	P	P	02 45 18.9	+1.5
	2.1nm,0.9s,baz=132,slow=3.6,SNR=12					
VNDA	Vanda	82.51 191	eP	P	02 45 18.8	+1.4
	3.4nm,1.0s					
YKA	Yellowknife Ar	82.65 343	P	P	02 45 17.4	-0.7
	8.5nm,1.2s,baz=137,slow=5.2,SNR=13					
ESDC	Sonseca Array	85.58 47	P	P	02 45 33.8	+0.2
	0.1nm,0.4s,baz=242,slow=5.0,SNR=4.6					
TAM	Tamanrasset	87.57 66	eP	P	02 45 45.2	+1.3
	5.4nm,1.0s					
EPYK	Eagle Plains	92.31 339	P	P	02 46 05.1	+0.1
	baz=122					
BOSA	Boshof	92.33 120	P	P	02 46 06.2	0.0
	1.3nm,0.6s,baz=269,slow=3.8,SNR=4.4					
MAW	Mawson	92.69 165	P	P	02 46 06.8	+0.1
	1.5nm,0.5s,baz=176,slow=1.3,SNR=4.7					
MAW			LR	LR	03 28 20.9	
	comp=Z,43nm,18.7s,baz=224,slow=36					
ILAR	Eielson Array	95.33 336	P	P	02 46 17.2	-1.6
	0.5nm,0.8s,baz=154,slow=3.2,SNR=5.5					
ILAR			PP	PP	02 50 08.4	-1.4
	0.2nm,0.7s,baz=100,slow=7.1,SNR=4.3					
ILAR			LR	LR	03 34 27.4	
	comp=Z,38nm,18.8s,baz=163,slow=39					
KBZ	Khabaz	120.43 48	PKP	PKiKP	02 51 47.2	+0.6
	0.7nm,0.6s,baz=33,slow=2.8,SNR=4.2					
ABKAR	Akbulak array	129.88 37	ePKPdf	PKiKP	02 52 05.0	-0.2
AS31	Alice Springs	132.32 218	ePKPdf	PKPdf	02 52 09.8	-0.2
ASAR	Alice Springs	132.32 218	PKP	PKPdf	02 52 09.8	-0.2
	2.0nm,0.8s,baz=121,slow=2.0,SNR=15					
WR1	Warramunga Arr	134.83 221	ePKPdf	PKPdf	02 52 15.0	+0.3
WRA	Warramunga Arr	134.83 221	PKP	PKPdf	02 52 15.0	+0.3
	3.1nm,0.5s,baz=156,slow=1.5,SNR=8.3					
ZAA1	Zalesovo Array	137.78 17	ePKPdf	PKPdf	02 52 17.9	-1.2
ZAA0	Zalesovo Array	137.78 17	ePKPdf	PKPdf	02 52 19.0	0.0
ZALV	Zalesovo Beam	137.78 17	PKP	PKPdf	02 52 17.9	-1.2
	6.3nm,0.9s,baz=294,slow=1.5,SNR=14					
MK32	Makanchi Array	142.91 25	ePKPdf	PKPdf	02 52 27.6	-1.0
MKAR	Makanchi Array	142.91 25	PKP	PKPdf	02 52 27.6	-1.0
	1.4nm,0.9s,baz=351,slow=1.6,SNR=6.4					
KSH	Kashi	144.76 40	PKP	PKPdf	02 52 33.0	+0.8
KSH			pPKP	pPKPdf	02 52 44.0	-4.3
KSH			PP	PP	02 55 57.3	+8.0
KSH			SKKS		03 02 38.0	
KSH			SS	SS	03 14 35.5	+1.8
KSH			LR	LR		
	comp=Z,180nm,14.5s					
SONA0	Songino Array	146.78 358	ePKPbc	PKPbc	02 52 36.3	-0.9
SONM	Songino Array	146.78 358	PKPbc	PKPbc	02 52 36.3	-0.9
	6.6nm,0.7s,baz=324,slow=1.7,SNR=29					
WMQ	Urumqi	147.51 23	ePKPbc	PKPbc	02 52 39.3	0.0
WMQ			LR	LR		
	comp=Z,57nm,22.7s					
KSRS	Korea Array	149.09 322	PKPbc	PKPdf	02 52 40.6	+1.3
	3.2nm,0.8s,baz=0.2,slow=2.2,SNR=13					
KS15	Wonju Array Si	149.12 322	ePKPdf	PKPdf	02 52 40.6	+1.2
HHC	Hu-ho-hao-te	153.08 348	PKPbc	PKPdf	02 52 44.5	-1.0
NJ2	Nanjing	158.17 325	ePKP	PKPdf	02 52 52.3	-0.1
LZH	Lanzhou	158.55 1	ePKP	PKPdf	02 52 57.3	+4.3
LZH			pPKP	pPKPdf	02 53 07.0	-2.1
LZH			sPKP		02 53 11.3	

PGC 30 02:36:08.9, 61°.17N×141°.36W, h7km, ML2.2/12, 211km west of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALM	Baldy	0.50	255	P	Pg	02 36 17.8	-0.7
BALM				S	Sg	02 36 25.0	0.0
PTPK	Patty Peak	0.54	273	P	Pg	02 36 18.6	-0.7
PTPK				S	Sg	02 36 26.2	-0.1
KIAG	Kiagna River	0.55	244	P	Pg	02 36 18.5	-0.9
KIAG				S	Sg	02 36 26.2	-0.4
YUK2	White River	0.67	21	P	Pg	02 36 20.8	-1.0
YUK2				S	Sg	02 36 29.7	-0.8
TABL	Table Mountain	0.74	172	P	Pg	02 36 21.8	-1.2
TABL				S	Sg	02 36 32.1	-0.5
YUK3	Moose Creek	0.75	35	P	Pg	02 36 22.2	-1.1
YUK3				S	Sg	02 36 32.7	-0.2
MESA	MESA	1.03	197	P	Pg	02 36 28.1	-0.6
MESA				S	Sg	02 36 42.5	+0.4
YUK1	Sand Pete Hill	1.06	21	P	Pg	02 36 28.0	-1.3
SAMH	Samovar Hills	1.08	165	P	Pg	02 36 28.3	-1.3
PCA	Pinnacle	1.20	153	P	Pg	02 36 30.3	-1.6
PCA				S	Sg	02 36 46.7	-0.8
BVCY	Beaver Creek	1.27	10	P	Pn	02 36 31.4	-1.7
BVCY				S	Sb	02 36 49.5	-0.3
YUK4	Talbot Arm	1.32	81	P	Pn	02 36 33.0	-0.9
YUK6	Outpost Mounta	1.47	97	Sg	Sn	02 36 55.0	-0.6
YUK5	Granite Creek	1.70	90	Pn	Pn	02 36 38.7	-0.3
YUK5				Sg	Sn	02 37 00.7	-0.3
YUK7	Dusty Glacier	1.70	111	P	Pn	02 36 39.0	-0.1
YUK7				Sg	Sb	02 37 01.7	-0.4
PNL	Peninsula	1.79	146	Pn	Pn	02 36 39.7	-0.4
PNL				Sg	Sn	02 37 03.2	+0.1
HYT	Haines Junctio	1.91	99	Pg	Pb	02 36 43.0	-1.0
HYT				Sg	Sb	02 37 08.2	+0.2
DIV	Divide	2.14	271	Pn	Pn	02 36 44.8	-0.3
DOT	Dot Lake	2.79	334	Pn	Pn	02 36 54.3	+0.4
DOT				Sn	Sn	02 37 28.9	+1.1
PLBC	Pleasant Camp	3.02	122	Pn	Pb	02 37 00.1	-2.7
PLBC				Pg	Pg	02 37 03.8	-2.9
PLBC				Sg	Sb	02 37 42.2	+2.3
DAWY	Dawson	3.05	16	Pn	Pn	02 36 58.4	+0.9
DAWY				Sg	Sb	02 37 42.1	+1.3
WHY	Whitehorse	3.20	96	Pn	Pn	02 37 00.8	+1.2

*THE **30** 02:47:36.6, 41°.47N×20°.52E, h0km±3km, ML2.9/4, Error ellipse: s-maj=3.3km s-min=1.0km az=320.0*
*SKO **30** 02:47:36.1, 41°.40N×20°.52E, h15km, M2.6, ML2.9*
*TIR **30** 02:47:36.0, 41°.46N×20°.45E, h23km, Md3.1/6*
*ATH **30** 02:47:37.3, 41°.41N×20°.66E, h19km±5km, ML2.7/5, Error ellipse: s-maj=11.3km s-min=2.1km az=143.0*
*BEO **30** 02:47:37.1±0.3, 41°.42N×20°.52E, h3km±2km, ML2.8/6*
*PDG **30** 02:47:40.6±0.1, 41°.51N×20°.19E, h4km, MD3.0/1, ML2.9/14, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

ISC 30 02:47:37.0±1.0, 41°.44N±0°.02×20°.50E±0°.02, h8km±8km, n112, σ1§09/162, 13C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.25	351	P	Pg	02 47 42.2	+0.2
PHP	Peshkopia	0.25	351	*i* PG	Pg	02 47 42.2	+0.2
PHP				*i* SG	Sg	02 47 45.7	+0.3
OHR	Ohrid	0.40	145	⇑ *i* Pg	Pg	02 47 44.0	-0.8
OHR				⇑ *i* Sg	Sg	02 47 49.8	-0.2
OHR				*e*Lg	Lg	02 47 50.0	
	comp=E,1μm,0.4s						
OHR				*e*Lg	Lg	02 47 50.4	
	comp=N,904nm,0.2s						
TIR	Tirane	0.48	260	*e*Pg	Pg	02 47 46.0	-0.4
TIR				*e*Sg	Sg	02 47 53.7	+1.0
TIR	Tirane	0.48	260	P	Pg	02 47 45.8	-0.5
TIR				S	Sg	02 47 53.3	+0.6
TIR	Tirane	0.48	260	*i* Pg	Pg	02 47 45.8	-0.5

TIR				*i* Sg	Sg	02 47 53.2	+0.6
TIR	**Tirane**	0.48	260	*i* PG	Pg	02 47 46.0	-0.4
TIR				*i* SG	Sg	02 47 53.2	+0.5
PUK	**Puka**	0.76	323	*i* PG	Pg	02 47 51.7	+0.2
PUK				*i* SG	Sg	02 48 01.5	+0.1
SKO	**Skopje**	0.89	53	*e*Pg	Pg	02 47 53.2	-0.8
SKO				*e*Sg	Sg	02 48 05.9	+0.4
SKO	**Skopje**	0.89	53	P	Pg	02 47 53.1	-0.9
SKO				S	Sb	02 48 06.2	-0.5
SKO	**Skopje**	0.89	53⇑	*i* Pg	Pg	02 47 53.1	-0.9
SKO				*i* Sg	Sg	02 48 06.0	+0.4
BCI	**Bajram Curri**	0.98	341	*i* PG	Pg	02 47 56.0	+0.1
BCI				*i* SG	Sb	02 48 09.3	-0.2
ULC	**Ulcinj**	1.07	300⇑	*i* Pg	Pg	02 47 56.2	-1.4
ULC				*i* Sg	Sg	02 48 09.5	-2.1
ULC	**Ulcinj**	1.07	300⇓	*i* Pg	Pg	02 47 56.5	-1.2
ULC				*i* Sg	Sn	02 48 13.0	-0.6
TPE	**Tepelena**	1.20	198	P	Pb	02 47 59.0	-1.0
TPE				S	Sn	02 48 17.1	+0.5
TPE	**Tepelena**	1.20	198	*i* PN	Pb	02 48 00.0	0.0
TPE				*i* SN	Sn	02 48 16.2	-0.4
PVY	**Plav**	1.22	341	⇓*i* Pg	Pg	02 48 01.0	+0.5
PVY				*e*Sg	Sn	02 48 17.7	+0.2
DRME	**Dracevica, Mon**	1.23	308	⇑*i* Pg	Pn	02 47 59.5	-1.1
DRME				*e*Sg	Sb	02 48 15.3	-1.4
DRME	**Dracevica, Mon**	1.23	308	*e*Pn	Pn	02 47 59.3	-1.3
STIP	**Stip**	1.29	78	*i* Pg	Pg	02 48 03.6	+1.8
STIP				*i* Sg	Sn	02 48 23.9	+4.9
PENT	**Pentalofos**	1.33	158	P	Pn	02 48 01.2	-0.9
PENT				AML	AML	02 48 25.5	
	comp=N,592µm,0.7s						
PENT				AML	AML	02 48 25.6	
	comp=E,548µm,0.5s						
PDG	**Podgorica**	1.36	317	*e*Pg	Pn	02 48 01.9	-0.4
PDG				*e*Sn	Sg	02 48 22.5	+1.9
PDG	**Podgorica**	1.36	317	*i* Pg	Pn	02 48 01.8	-0.5
PDG				*e*Sg	Sg	02 48 22.2	+1.6
PDG	**Podgorica**	1.36	317	*e*Pn	Pn	02 48 01.5	-0.9
TTG	**Podgorica**	1.36	317	⇓*i* Pg	Pn	02 48 01.4	-0.9
TTG				*e*Sg	Sb	02 48 20.1	-0.1
BUM	**Brajici-Budva**	1.48	306	⇑*i* Pg	Pn	02 48 04.1	+0.1
BUM				*e*Sg	Sn	02 48 23.3	-0.3
KZN	**Kozani**	1.49	139	P	Pn	02 48 04.1	-0.1
KZN				S	Sg	02 48 25.4	+0.6
KZN	**Kozani**	1.49	139	P	Pn	02 48 03.5	-0.6
KZN				AML	AML	02 48 27.0	
	comp=E,659µm,0.5s						
KZN				AML	AML	02 48 29.3	
	comp=N,689µm,0.7s						
BEY	**Berane**	1.50	343	*i* Pn	Pg	02 48 05.5	-0.4
IVA	**Berane**	1.50	343	⇑*i* Pg	Pg	02 48 06.2	+0.4
IVA				*e*Sg	Sg	02 48 27.6	+2.3
GRG	**Griva**	1.52	108	P	Pn	02 48 03.8	-0.8
GRG				S	Sb	02 48 25.2	+0.4
GRG	**Griva**	1.52	108	P	Pn	02 48 03.8	-0.8
GRG				AML	AML	02 48 25.5	
	comp=N,315µm,0.5s						
GRG				AML	AML	02 48 29.1	
	comp=E,301µm,0.4s						
VAY	**Valandovo**	1.56	94	*e*Pg	Pn	02 48 05.0	-0.2
VAY				*e*Sg	Sn	02 48 25.7	0.0
VAY	**Valandovo**	1.56	94	P	Pn	02 48 04.6	-0.6
VAY				S	Sg	02 48 26.8	-0.5
VAY	**Valandovo**	1.56	94	*i* Pn	Pn	02 48 04.7	-0.5
VAY				*i* Sn	Sn	02 48 24.6	-1.1
VAY				*e*Lg	Lg	02 48 31.6	
	comp=E,95nm,0.5s						
VAY				*e*Lg	Lg	02 48 32.1	
	comp=N,154nm,0.6s						
KOME	**Kolasin**	1.59	333	⇓*i* Pg	Pg	02 48 07.2	-0.3
KOME				*e*Sg	Sg	02 48 29.3	+1.2
SRN	**Sarande**	1.60	194	*i* PN	Pb	02 48 07.1	+0.2
SRN				*i* SN	Sg	02 48 29.1	+0.6
KTI	**Kastanea**	1.61	130	P	Pn	02 48 05.7	-0.2
CEME	**Cevo**	1.62	314	⇓*i* Pg	Pn	02 48 06.3	+0.3
CEME				*e*Sg	Sg	02 48 28.5	-0.5
KPRO	**Kipourio**	1.62	156	P	Pb	02 48 06.7	-0.5
KPRO				S	Sg	02 48 28.9	-0.2
KPRO	**Kipourio**	1.62	156	P	Pn	02 48 06.1	+0.1
BARS	**Barje**	1.69	35	*e*Pg	Pn	02 48 07.0	+0.1
BARS	**Barje**	1.69	35	*e*Pn	Sn	02 48 23.3	-5.5
BARS				*e*Sg	Sg	02 48 31.8	+0.4
NKME	**Niksic**	1.76	320	⇓*i* Pg	Pb	02 48 09.5	-0.1
NKME				*e*Sg	Sg	02 48 33.6	+0.1
NKY	**Niksic**	1.77	321	⇓*i* Pn	Pb	02 48 09.4	-0.5
NKY				*e*Sn	Sg	02 48 33.6	-0.4
JAN	**Janina**	1.80	171	P	Pb	02 48 10.5	+0.2
JAN				S	Sb	02 48 33.9	+0.9
JAN	**Janina**	1.80	171	P	Pb	02 48 10.4	+0.1
JAN				AML	AML	02 48 39.5	
	comp=N,632µm,0.4s						
JAN				AML	AML	02 48 40.1	
	comp=E,712µm,0.6s						
KEK	**Kerkira**	1.80	197	P	Pn	02 48 09.2	+0.7
HCY	**Herceg Novi**	1.80	305	⇓*i* Pg	Pb	02 48 09.5	-0.8
HCY				*e*Sg	Sg	02 48 34.1	-0.8
HCY	**Herceg Novi**	1.80	305	*e*Pn	Pb	02 48 09.3	-1.0
KNT	**Kendrikon**	1.83	98	P	Pn	02 48 08.4	-0.4
KNT	**Kendrikon**	1.83	98	P	Pn	02 48 08.4	-0.4
KNT				AML	AML	02 48 35.4	
	comp=E,143µm,0.4s						
KNT				AML	AML	02 48 41.0	
	comp=N,246µm,1.0s						
SELS	**Selova**	1.84	14	*e*Pg	Pn	02 48 09.1	+0.1
SJES	**Sjenica**	1.86	348	*e*Pg	Pb	02 48 10.7	-0.7
SJES				*e*Sg	Sg	02 48 37.3	+0.4
IGT	**Igoumenitsa**	1.91	184	P	Pb	02 48 11.4	-0.7
IGT				S	Sb	02 48 37.1	+1.0
IGT	**Igoumenitsa**	1.91	184	P	Pb	02 48 11.2	-0.8
KKB	**Krupnik**	1.99	77	⇑*i* Pn	Pn	02 48 11.6	+0.7
LIT	**Litokhoron**	2.02	131	P	Pn	02 48 11.2	-0.2
LIT	**Litokhoron**	2.02	131	P	Pn	02 48 11.0	-0.4
TREB	**Trebinje**	2.05	309	*e*Pg	Pb	02 48 13.2	-1.3
TREB	**Trebinje**	2.05	309	*e*Pn	Pn	02 48 12.9	+1.1
PLE	**Pljevlja**	2.06	337	⇓*i* Pn	Pb	02 48 15.1	+0.3
PLE				*i* Sn	Sg	02 48 42.4	-0.9
BRY	**Bratogost**	2.06	316	⇑*i* Pn	Pb	02 48 14.0	-0.8
BRY				*i* Sn	Sb	02 48 40.4	-0.3
BRY	**Bratogost**	2.06	316	*e*Pn	Pb	02 48 13.7	-1.1
UPM	**Unac-Piva**	2.12	327	⇑*i* Pn	Pb	02 48 15.6	-0.3
UPM				*e*Sn	Sb	02 48 42.9	+0.4
UPM	**Unac-Piva**	2.12	327	*e*Pn	Pb	02 48 16.2	+0.3
IVAS	**Ivanjica**	2.15	353	*e*Pg	Pb	02 48 16.5	+0.2
IVAS				*e*Sg	Sg	02 48 45.2	-1.0
THL	**Klokotos Trika**	2.20	148	P	Pn	02 48 12.9	-1.0
THL	**Klokotos Trika**	2.20	148	P	Pn	02 48 13.9	0.0
RUDO	**Rudo**	2.33	339	*e*Pn	Pb	02 48 17.8	-1.6
SRS	**Serrai**	2.35	97	P	Pn	02 48 15.6	-0.4
VTS	**Vitosha**	2.36	59	*e*Pn	Pn	02 48 16.6	+0.4
VTS	**Vitosha**	2.36	59	P	Pn	02 48 16.6	+0.4
VTS				S	Sn	02 48 43.9	-1.5
VTS	**Vitosha**	2.36	59	⇑*i* Pn	Pn	02 48 16.7	+0.4
VTS				⇑*i* Pn	Pn	02 48 16.7	+0.4
BOVS	**Bovan**	2.37	22	*e*Pn	Pn	02 48 16.7	+0.4
ZAPS	**Zavoj**	2.42	40	*e*Pn	Pn	02 48 17.9	+0.9
MMB	**Musomiste**	2.43	85	⇑*i* Pn	Pn	02 48 17.4	+0.2
GRUS	**Gruza**	2.46	4	*e*Pn	Pn	02 48 18.3	+0.9
STON	**Ston**	2.52	306	*e*Pn	Pn	02 48 19.5	+1.2
STON	**Ston**	2.52	306	*e*Pn	Pn	02 48 19.2	+0.9
STON				Sn	Sb	02 48 52.6	-1.2
STON	**Ston**	2.52	306	*e*Pn	Pn	02 48 19.0	+0.7
NVR	**Nevrokopi**	2.53	91	P	Pn	02 48 18.3	-0.3
BBLS	**Lazići**	2.56	342	*e*Pn	Pn	02 48 20.5	+1.6
BBLS	**Lazići**	2.56	342	*e*Pn	Pb	02 48 21.1	-2.1
LKD2	**Lefkada island**	2.65	177	P	Pn	02 48 21.0	+0.9
DIVS	**Divibare**	2.69	352	*e*Pn	Pn	02 48 21.9	+1.2
DIVS	**Divibare**	2.69	352	*e*Pn	Pn	02 48 20.9	+0.2
ZAGS	**Zajecar**	2.70	28	*e*Pn	Pn	02 48 21.4	+0.7
TRUS	**Trudelj**	2.79	359	*e*Pn	Pn	02 48 22.8	+0.8
HAPS	**Han Pijesak,BI**	2.88	337	*e*Pn	Pn	02 48 24.8	+1.4
HAPS				*e*Sn	Sn	02 48 59.3	+1.0
HAPS	**Han Pijesak,BI**	2.88	337	*e*Pn	Pn	02 48 24.9	+1.5
NEO	**Neokhori**	2.98	135	P	Pn	02 48 24.0	-0.6
KUBS	**Kucevo**	3.10	16	*e*Pn	Pn	02 48 25.6	-0.7
THAS	**Thassos island**	3.30	103	P	Pn	02 48 28.2	-0.8
DOB	**Doboj**	3.73	333	*e*Pn	Pn	02 48 36.5	+1.5
FRGS	**Fruska Gora**	3.75	353	*e*Pn	Pn	02 48 36.0	+0.7
BLY	**Banja Luka**	4.10	325	*e*Pn	Pn	02 48 41.7	+1.6
UDBI	**Udbina**	4.65	313	*e*Pn	Pn	02 48 49.8	+2.2
MORH	**Mrgy, Hungar**	4.96	345	*e*Pn	Pn	02 48 52.9	+1.1
NVLJ	**Novalja**	5.17	309	*i* Pn	Pn	02 48 55.4	+0.6
CRES	**Cresnjev**	5.71	322	*e*Pn	Pn	02 49 03.3	+1.1
CEY	**Cerknica**	6.16	316	*e*Pn	Pn	02 49 09.2	+0.9
LJU	**Ljubljana**	6.32	319	*e*Pn	Pn	02 49 11.6	+1.2
SOKA	**Soboth**	6.55	325	*e*Pn	Pn	02 49 15.0	+1.2
	comp=N,1.4nm,0.3s						
SOKA				Sn	Sn	02 50 30.2	+1.5
	comp=N,0.9nm,0.4s						
OBKA	**Obir**	6.64	322	*e*Pn	Pn	02 49 15.9	+0.9
	comp=N,0.5nm,0.2s						
ARSA	**Arzberg**	6.82	330	*e*Pn	Pn	02 49 19.3	+1.9
	comp=N,0.5nm,0.3s						
MOA	**Molln**	7.80	327	*e*Pn	Pn	02 49 31.9	+1.1
	comp=N,0.3nm,0.2s						
ABTA	**Abfaltersbach**	7.82	315	*e*Pn	Pn	02 49 31.8	+0.6
	comp=N,1.2nm,0.2s						
ABTA				*e*Sn	Sn	02 51 00.4	+0.4
	comp=N,2.4nm,0.6s						
WTTA	**Wattenberg**	8.61	316	*e*Pn	Pn	02 49 44.3	+2.2
	comp=N,1.0nm,0.3s						
WTTA				*e*Sn	Sn	02 51 20.4	+0.9
	comp=N,2.3nm,0.6s						
WATA	**Walderalm**	8.69	316	*e*Pn	Pn	02 49 45.1	+1.9
	comp=N,1.1nm,0.3s						
SQTA	**Sankt Quirin**	8.81	314	*e*Pn	Pn	02 49 47.2	+2.4
	comp=N,1.8nm,0.3s						
MOTA	**Moosalm**	8.95	314	*e*Pn	Pn	02 49 48.4	+1.8
	comp=N,0.8nm,0.3s						

*GCG **30** 02:52:44.7±0.3, 13°.52N×91°.39W, h16km±3km, MD4.0*
*UCR **30** 02:52:49.8±1.7, 13°.65N×91°.04W, h5km±9km, MD3.6, ML4.0*
*SNET **30** 02:52:50.4±1.1, 13°.74N×91°.03W, h9km±8km, ML4.1*
*NEIC **30** 02:52:50.0±0.0, 13°.74N×91°.03W, h9km, MD3.9(MEX), MD4.1(SNET), After SNET.*
NEIC Felt [I] at Ahuachapan, El Salvador.

ISC 30 02:52:46.2±2.6, 13°.6N±0°.1×91°.20W±0°.06, h2km±15km, n51, σ1°37/71, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	0.87	23	*e*P	Pg	02 53 04.4	+1.5
FUG	**Fuego 3**	0.87	23	*e*P	Pg	02 53 04.4	+1.5
IXG	**Ixpaco**	0.90	54	*e*P	Pb	02 53 05.3	+0.6
IXG	**Ixpaco**	0.90	54	*e*P	Pb	02 53 05.3	+0.6
IXG	**Ixpaco**	0.90	54	⇓*e*P	Pb	02 53 04.4	-0.3
PCG	**Pacaya**	0.94	38	*e*P	Pb	02 53 05.9	+0.5
PCG	**Pacaya**	0.94	38	*e*P	Pb	02 53 05.9	+0.5
STG3	**Santiaguito 3,**	1.12	341	*e*P	Pg	02 53 06.5	-1.2
NBG	**Las Nubes**	1.25	41	*e*P	Pb	02 53 11.1	+0.4
NBG	**Las Nubes**	1.25	41	*e*P	Pb	02 53 11.1	+0.4
RTR	**El Retiro**	1.53	80	*e*P	Pn	02 53 15.2	+0.6
RTR	**El Retiro**	1.53	80	*e*P	Pn	02 53 15.2	+0.6
CEVE	**Cerro Verde**	1.54	83	*e*P	Pn	02 53 15.1	+0.2
CEVE				*e*S	Sg	02 53 35.1	-0.6
CEVE				IAML		02 53 42.5	
	comp=Z,7µm,0.3s						
CEVE	**Cerro Verde**	1.54	83	*e*P	Pn	02 53 15.1	+0.2
CEVE				*e*S	Sg	02 53 35.1	-0.6
CEVE				IAML		02 53 42.5	
	comp=Z,7µm,0.3s						
SBLS	**San Blas**	1.54	83	*e*P	Pn	02 53 15.0	+0.1
SBLS				*e*S	Sg	02 53 35.5	-0.2
SBLS	**San Blas**	1.54	83	*e*P	Pn	02 53 15.0	+0.1
SBLS				*e*S	Sg	02 53 35.5	-0.2
SNJE	**San Jose**	1.56	82	*e*P	Pn	02 53 15.4	+0.3
SNJE	**San Jose**	1.56	82	*e*P	Pn	02 53 15.4	+0.3
BOQS	**Boqueron**	1.87	87	*e*P	Pn	02 53 19.9	+0.6
BOQS				*e*S	Sb	02 53 43.7	-1.3
UEES	**San Salvador**	1.90	87	*e*P	Pn	02 53 20.2	+0.5
UEES				*e*S	Sb	02 53 44.0	-1.9
UEES	**San Salvador**	1.90	87	*e*P	Pn	02 53 20.2	+0.5
UEES				*e*S	Sb	02 53 44.0	-1.9
SNET	**Serv Nac Est T**	1.91	88	*e*P	Pn	02 53 20.5	+0.7
SNET				*e*S	Sb	02 53 44.2	-2.0
SNET	**Serv Nac Est T**	1.91	88	*e*P	Pn	02 53 20.5	+0.7
SNET				*e*S	Sb	02 53 44.2	-2.0
OPAM	**San Salvador**	1.94	88	*e*P	Pn	02 53 21.6	+1.4
OPAM				*e*S	Sb	02 53 45.0	-2.1
OPAM	**San Salvador**	1.94	88	*e*P	Pn	02 53 21.6	+1.4
OPAM				*e*S	Sb	02 53 45.0	-2.1
LFU	**La Fuente**	2.03	87	*e*P	Pn	02 53 22.2	+0.8
LFU	**La Fuente**	2.03	87	*e*P	Pn	02 53 22.2	+0.8
MRL	**Marmol**	2.05	46	*e*P	Pn	02 53 22.1	+0.2
MRL				*e*S	Sg	02 53 51.1	-0.9
MRL	**Marmol**	2.05	46	*e*P	Pn	02 53 22.1	+0.2
MRL				*e*S	Sg	02 53 51.1	-0.9
LFRS	**El Faro**	2.08	90	*e*P	Pn	02 53 23.1	+1.0
LFRS				*e*S	Sb	02 53 48.5	-2.5
LBRS	**Las Brisas**	2.10	87	*e*P	Pn	02 53 23.4	+1.0
PAVA	**Las Pavas**	2.20	88	*e*P	Pn	02 53 25.4	+1.6
PAVA				*e*S	Sb	02 53 52.5	-1.9
PAVA	**Las Pavas**	2.20	88	*e*P	Pn	02 53 25.4	+1.6
PAVA				*e*S	Sb	02 53 52.5	-1.9
TECA	**Tecapa**	2.62	93	*e*P	Pn	02 53 31.4	+1.6
TECA	**Tecapa**	2.62	93	*e*P	Pn	02 53 31.4	+1.6
CCIG	**Comitan**	2.78	341	*e*Pn	Pn	02 53 30.6	-1.2
PACA	**Pacayal**	2.80	93	*e*P	Pn	02 53 33.5	+1.4
PACA	**Pacayal**	2.80	93	*e*P	Pn	02 53 33.5	+1.4
CAHU	**Cacacuatique**	2.91	87	*e*P	Pn	02 53 35.9	+2.2
CAHU	**Cacacuatique**	2.91	87	*e*P	Pn	02 53 35.9	+2.2
LCND	**La Caada**	3.23	96	*e*P	Pn	02 53 39.0	+1.1
LCND				*e*S	Sn	02 54 17.8	+0.7
LCND				IAML		02 54 26.5	
	comp=Z,335nm,0.4s						
LCND	**La Caada**	3.23	96	*e*P	Pn	02 53 39.0	+1.1
LCND				*e*S	Sn	02 54 17.8	+0.7
LCND				IAML		02 54 26.5	
	comp=Z,335nm,0.4s						
CNCH	**Conchagua**	3.29	96	*e*P	Pn	02 53 40.1	+1.2
CNCH				*e*S	Sn	02 54 19.4	+0.7
CNCH	**Conchagua**	3.29	96	*e*P	Pn	02 53 40.1	+1.2
CNCH				*e*S	Sn	02 54 19.4	+0.7
CSGN	**Cosiguina Volc**	3.60	100	*e*Pn	Pn	02 53 45.0	+1.8
TGIG		3.63	329	*e*Pn	Pn	02 53 43.5	+0.1
TGUH	**Tegucigalpa,Un**	3.83	83	*e*Pn	Pn	02 53 45.8	-0.4
ESTN	**Estel**	4.73	96	*e*Pn	Pn	02 53 59.9	+1.3
CMIG	**Matias Romero**	4.94	314	*e*Pn	Pn	02 54 00.5	-0.9
ESPN	**Las Esperanzas**	6.88	101	*e*Pn	Pn	02 54 24.6	-3.4
TLIG	**Tlapa**	8.10	300	*e*Pn	Pn	02 54 48.9	+3.9

TRN 30 03:05:35.4, 15°.90N×60°.81W, h20km, MD3.6, 1C-3D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAGL	**Barre de l'ile**	0.46	276	*e*P	Pn	03 05 47.8	+1.0
DWS	**Wesley**	0.59	236	*e*P	Pn	03 05 49.8	+1.2
DWS				*e*S	Sn	03 05 59.0	+1.5
MDPO	**Dominica; Chan**	0.70	243	*e*P	Pn	03 05 51.3	+1.2
MDPO				*e*S	Sn	03 06 02.0	+1.7
DLPL	**La Plaine**	0.70	217	*e*P	Pn	03 05 51.4	+1.2
DLPL				*e*S	Sn	03 06 03.4	+2.9
CBE	**Ff, Capester**	0.79	283	*e*P	Pn	03 05 52.9	+1.6
TDBA	**Terre de Bas,**	0.80	267	*e*P	Pn	03 05 53.6	+2.1
MDN	**Morne-Daniel**	0.81	224	*e*P	Pn	03 05 54.0	+2.4
MDN				*e*S	Sn	03 06 06.1	+3.1
DBCT	**Belle View Cho**	0.81	220	*e*P	Pn	03 05 54.3	+2.6
DBCT				*e*S	Sn	03 06 05.2	+2.0
ABD	**La Joyeuse, An**	0.87	311	*e*P	Pn	03 05 52.5	0.0
ILAM	**Ilet Lapin Mar**	1.12	183	*e*P	Pb	03 05 57.4	+1.3
BAMF	**Morne Balai**	1.13	197	*e*P	Pb	03 05 57.6	+1.3
CXM	**Morne La Croix**	1.14	198	*e*P	Pb	03 05 57.8	+1.3
PCM	**Pelee Case Pet**	1.15	200	⇓*e*P	Pb	03 05 57.5	+1.0
GBMF	**Grand Be**	1.15	198	*e*P	Pb	03 05 57.7	+1.1
PML	**Morne Lenard**	1.17	198	⇓*e*P	Pb	03 05 58.0	+1.1
FDF	**Fort de France**	1.21	196	*e*P	Pb	03 05 58.4	+0.8
FDF				*e*S	Sn	03 06 14.7	+1.8
LPMF	**Morne Lapointe**	1.33	187	*e*P	Pb	03 05 59.8	+0.3
ZAM	**Aeronautique**	1.34	189	*e*P	Pb	03 06 00.1	+0.3
MVM	**Montagne Vauci**	1.34	184	*e*P	Pb	03 06 00.6	+0.8
TRMF	**Trois Ilets**	1.38	190	⇓*e*P	Pb	03 06 01.0	+0.6
BIM	**Bigot**	1.40	191	*e*P	Pb	03 06 01.6	+0.7
MPOM	**Morne Pois Mar**	1.45	182	⇓*e*P	Pb	03 06 01.9	+0.2
MLYT	**Lee's Yard**	1.56	302	*e*P	Pb	03 06 04.7	+1.1
MLYT				*e*S	Sb	03 06 25.5	+2.6
SLBI	**Saint Lucia, B**	1.87	185	*e*P	Pn	03 06 07.5	+1.2
SLBI				*e*S	Sb	03 06 31.0	-0.9
SLW	**Petit Monier**	1.87	184	*e*P	Pb	03 06 08.3	-0.6
SLW				*e*S	Sb	03 06 32.3	+0.4
ANWB	**Willy Bob**	1.99	332	*e*P	Pn	03 06 08.2	+0.2
ANWB				*e*S	Sb	03 06 35.6	+0.2
SLB	**Belfond**	2.07	186	*e*P	Pn	03 06 10.4	+1.3
SLB				*e*S	Sb	03 06 36.9	-0.8
MCLT	**Moule a Chique**	2.18	183	*e*P	Pb	03 06 13.6	-0.6
MCLT				*e*S	Sb	03 06 39.2	-1.6
SKI	**Saint Kitts**	2.34	308	*e*P	Pb	03 06 15.3	-1.5
SKI				*e*S	Sb	03 06 44.2	-1.1
SVV	**Soufriere Volc**	2.60	189	*e*P	Pb	03 06 18.9	-2.4
SVCV	**St. Vincent, C**	2.63	187	*e*P	Pn	03 06 18.7	+2.0
SVCV				*e*S	Sb	03 06 51.0	-2.7
SVB	**Belmont**	2.65	189	*e*P	Pb	03 06 19.7	-2.5
SVB				*e*S	Sb	03 06 51.6	-2.6
FCV	**Fort Charlotte**	2.76	189	*e*P	Pb	03 06 21.4	-2.6
FCV				*e*S	Sb	03 06 54.6	-2.8

*DDA **30** 03:22:05.5, 40°.69N×30°.63E, h17km±1km, ML3.5*
*ISCJB **30** 03:22:06.4±0.3, 40°.69N±0°.02×30°.63E±0°.02, h8km±3km, Error ellipse: s-maj=3.8km s-min=2.7km az=14.1*
*ISK **30** 03:22:06.0, 40°.70N×30°.61E, h8km, ML3.2/34*

ISC 30 03:22:06.0±0.9, 40°.69N±0°.02×30°.62E±0°.02, h13km±8km, n54, σ0°66/65, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUV	**Serdivan-Sakar**	0.23	282	PG	Pb	03 22 11.4	-0.5
SAUV				SG	Sg	03 22 14.8	+0.5
SPNC	**Sapanca-Adapaz**	0.24	269	PG	Pb	03 22 11.8	-0.3
SAHE	**Sakarya_HENDEK**	0.24	48	*i* P	Pb	03 22 11.6	-0.6
SAHE				*i* S	Sb	03 22 15.9	-0.4
GULT	**Gulveren**	0.27	197	PG	Pb	03 22 12.1	-0.6
GULT				SG	Sb	03 22 16.5	-0.8
BTAS	**Taskesti**	0.31	113	*i* P	Pg	03 22 12.6	+0.2
BTAS				*i* S	Sg	03 22 16.8	0.0
GEYV	**SAKARYA_Geyve**	0.32	230	*i* P	Pb	03 22 13.0	-0.5
GEYV				*i* S	Sb	03 22 19.0	+0.3
MDUB	**Mudurnu**	0.49	116	PG	Pg	03 22 15.9	+0.2
KAND	**Kocaeli-Kandir**	0.52	321	*i* P	Pb	03 22 17.2	+0.3
KAND				*i* S	Sb	03 22 24.8	+0.5
KAND				IAML_P			
	comp=Z,3µm,0.1s						
SRCK	**Saricakaya, Es**	0.65	180	PG	Pb	03 22 18.8	-0.3
SRCK	**Saricakaya, Es**	0.65	180	*i* P	Pb	03 22 19.4	+0.2
SRCK				*i* S	Sb	03 22 27.8	-0.3
SRCK				IAML_P			
	comp=Z,8µm,0.2s						
YIGI	**Dzce**	0.69	66	*i* P	Pg	03 22 18.6	-0.7
YIGI				IAML_P			
	comp=Z,7µm,0.2s						
ADVT	**Abdulvahap**	0.72	249	PG	Pg	03 22 19.9	-0.1
HRT	**Hereke**	0.73	280	PG	Pb	03 22 20.3	-0.3
BORA	**Eskisehir**	0.82	189	*i* P	Pn	03 22 22.6	-0.6
BORA				IAML_P			

NIE	Niedzica	1.37 119	*e*Pg	Pb	03 41 23.1	+1.3
NIE			*e*Sg	Sn	03 41 42.9	+2.3
DPC	Dobruska-Polom	1.40 281	*e*Pg	Pn	03 41 22.1	0.0
DPC			*e*Sg	Sg	03 41 39.7	-0.5
DPC	Dobruska-Polom	1.40 281	*e*PG	Pn	03 41 22.1	0.0
DPC			*e*SG	Sg	03 41 40.2	0.0
	comp=Z,166nm,0.5s					
VRAC	Vranov	1.46 237	Pg	Pn	03 41 22.4	-0.4
	9.1nm,0.3s,baz=61,slow=15,SNR=50					
VRAC			Lg	Lg	03 41 40.6	
	26nm,0.3s,baz=141,slow=14,SNR=37					
VRAC	Vranov	1.46 237	*e*PG	Pn	03 41 22.4	-0.4
VRAC			*e*SG	Sg	03 41 40.6	-1.4
VRAC	Vranov	1.46 237	*e*Pg	Pn	03 41 22.3	-0.5
	baz=56					
VRAC			*e*Sg	Sg	03 41 40.5	-1.4
	104nm,0.4s,baz=56					
VRAC	Vranov	1.46 237	*e*Pn	Pn	03 41 22.5	-0.4
VRAC			*e*Sg	Sg	03 41 41.1	-0.9
OSTC	Ostas	1.51 288	*e*PG	Pb	03 41 23.9	-0.3
OSTC			*e*SG	Sn	03 41 44.2	+0.2
	comp=Z,40nm,0.3s					
KOLL	Kolacno	1.53 182	*e*PG	Pb	03 41 24.2	-0.3
KOLL			*e*SG	Sg	03 41 41.9	-2.5
KSP	Ksiaz	1.57 299	*e*Pg	Pn	03 41 24.6	+0.1
KSP			*e*Sg	Sg	03 41 46.2	+0.5
KSP	Ksiaz	1.57 299	*e*Pn	Pn	03 41 24.8	+0.3
KSP			*e*Sg	Sg	03 41 46.2	+0.5
CHVC	Chvalec	1.62 288	*e*PG	Pn	03 41 25.5	+0.4
CHVC			*e*SG	Sg	03 41 47.7	+0.5
UPC	Upice	1.62 285	*e*PG	Pn	03 41 25.4	+0.3
UPC			*e*SG	Sn	03 41 46.9	+0.1
	comp=Z,87nm,0.9s					
VYHS	Vyhne	1.63 171	*e*PN	Pn	03 41 24.8	-0.5
KRUC	Moravsky	1.71 233	*e*PN	Pn	03 41 26.4	+0.2
KRUC			*e*SG	Sn	03 41 48.5	-0.3
KRUC	Moravsky	1.71 233	*e*Pn	Pn	03 41 26.4	+0.2
	baz=52					
KRUC			*e*Sg	Sn	03 41 48.5	-0.3
	36nm,0.2s,baz=52					
KRUC	Moravsky	1.71 233	*e*Pn	Pn	03 41 26.5	+0.2
KRUC			*e*Sg	Sn	03 41 48.5	-0.3
MODS	Modra-Piesok	1.90 205	*e*PN	Pn	03 41 27.5	-1.5
STHS	Stebnicka Huta	1.93 110	*e*PN	Pg	03 41 32.7	+0.5
GOPC	GO Pecny, Ondr	2.38 267	*e*SG	Sb	03 42 09.9	+0.9
	comp=Z,28nm,0.3s					
PSZ	Piszkesteto	2.38 156	*e*Pn	Pn	03 41 35.9	+0.2
PSZ	Piszkesteto	2.38 156	EPn	Pg	03 41 41.1	+0.1
PSZ			Sn	Sn	03 42 06.1	+0.5
PSZ			ESg		03 42 15.0	
PRU	Pruhonice	2.53 269	*e*Pn	Pn	03 41 37.1	-0.5
PRU	Pruhonice	2.53 269	*e*PG	Pb	03 41 41.8	+0.2
PRU			*e*SG	Sb	03 42 14.7	+1.4
	comp=Z,29nm,0.5s					
PVCC	Panska Ves	2.53 281	*e*Pg	Pg	03 41 44.2	+0.4
PVCC			*e*Sg	Sg	03 42 16.7	+0.1
PVCC	Panska Ves	2.53 281	*e*PG	Pb	03 41 42.4	+0.8
PVCC			*e*SG	Sg	03 42 16.1	-0.5
	comp=Z,68nm,0.6s					
SOP	Sopron	2.73 208	*e*Pn	Pn	03 41 40.8	+0.4
SOP	Sopron	2.73 208	EPn	Pn	03 41 41.1	+0.7
SOP			Sn	Sg	03 42 26.1	+3.0
CSKK	Cskako	2.75 183	EPn	Pn	03 41 39.1	-1.5
CONA	Conrad Observa	2.77 219	Pn	Pn	03 41 40.1	-0.9
	1.5nm,0.4s					
CONA			Sn	Sn	03 42 13.9	-1.3
	8.7nm,0.4s					
BRG	Berggiesshubel	2.99 287	PG	Pb	03 41 50.8	+1.5
BRG			SG	Sg	03 42 29.5	-1.8
	30nm,0.6s					
BRG	Berggiesshubel	2.99 287	*e*Pg	Pg	03 41 51.8	-0.7
BRG			*e*Sg	Sg	03 42 29.8	-1.5
KHC	Kasperske Hory	3.33 255	*e*Pn	Pn	03 41 48.3	-0.3
KHC			*e*Sg	Sg	03 42 39.7	-2.3
KHC	Kasperske Hory	3.33 255	*e*PN	Pn	03 41 48.5	-0.1
KHC			*e*SG	Sg	03 42 40.4	-1.7
	comp=Z,32nm,0.4s					
TRPA	Tarpa	3.33 125	EPn	Pg	03 42 00.0	+1.1
GEC2	GERESS Array S	3.35 250	*e*Pg	Pg	03 41 58.0	-1.6
GEC2			*e*Sg	Sb	03 42 39.2	+2.2
GERES	GERESS Array B	3.35 250	Pn	Pn	03 41 49.5	+0.5
	0.2nm,0.3s,baz=73,slow=13,SNR=4.9					
GERES			Pg	Pb	03 41 57.1	+1.5
	0.9nm,0.3s,baz=66,slow=14,SNR=9.0					
GERES			Lg	Lg	03 42 38.9	
	3.4nm,0.3s,baz=69,slow=27,SNR=6.4					
FBE	Freiberg	3.36 286	*e*Sg	Sg	03 42 42.1	-1.1
ARSA	Arzberg	3.46 215	Sg	Sg	03 42 44.8	-1.6
	6.9nm,0.7s					
MOA	Molln	3.57 232	*e*Pn	Pn	03 41 52.5	+0.6
	0.2nm,0.1s					
MOA			Pg	Pb	03 42 00.6	+1.3
	1.1nm,0.3s					
MOA			Sg	Sb	03 42 46.3	+3.1
	9.1nm,0.3s					
CLL	Collm	3.68 291	*e*Pg	Pg	03 42 07.0	+1.3
CLL			*e*Sg	Sg	03 42 50.0	-3.3
	comp=Z,20nm,0.6s					
WET	Wettzell	3.76 257	*e*Sg	Sg	03 42 53.4	-2.6
TANN	Tannenbergstha	3.87 277	*e*Pg	Pg	03 42 08.1	-1.2
TANN			*e*Sg	Sg	03 42 55.6	-3.8
NKC	Novy Kostel	3.87 274	*e*SG	Sg	03 42 58.2	-1.4
	comp=Z,36nm,0.6s					
MORH	Mrgy, Hungar	3.90 178	EPn	Pn	03 41 56.0	-0.3
MORH			Sn	Sn	03 42 41.0	-1.7
KBA	Koelnbreinsper	4.55 230	*e*Pn	Pn	03 42 07.6	+2.1
	comp=Z,1.1nm,0.3s					
DAVOX	Davos/Dischmat	6.61 243	Pn	Pn	03 42 35.3	+1.5
	comp=Z,0.3nm,0.3s,baz=32,slow=14,SNR=5.2					
DAVOX			Lg	Lg	03 44 24.6	
	comp=Z,0.5nm,0.3s,baz=186,slow=19,SNR=4.2					
HFS	Hagfors	10.41 347	Pn	Pn	03 43 23.6	-2.1
	comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=2.8					
FINES	FINESS Array B	12.13 18	Pn	Pn	03 43 46.6	-2.5
	comp=Z,0.1nm,0.3s,baz=193,slow=11,SNR=6.0					
ARCES	ARCESS Array B	19.78 7	Pn	Pn	03 45 28.6	+0.5
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=3.3					

IDC 30 03:48:23.2±3.2, 6°40'S×147°69'E, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.6/35, mbtmp3.9/4, ML3.7/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/29, Error ellipse: s-maj=72.6km s-min=33.4km az=94.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.03 190		Pn	Pn	03 49 13.7	+1.2
	10nm,0.3s,baz=330,slow=7.2,SNR=11						
PMG				Sn	Sn	03 49 52.1	+2.5
	8.8nm,0.3s,baz=31,slow=15,SNR=6.1						
WRA	Warramunga Arr	18.69 223		P	P	03 52 42.5	-0.8
	0.3nm,0.3s,baz=47,slow=12,SNR=3.7						
ASAR	Alice Springs	21.69 216		P	P	03 53 14.5	-1.4
	1.4nm,0.5s,baz=53,slow=9.2,SNR=22						
DZM	Mont Dzumac	23.89 133		LR	LR	04 01 24.3	
	comp=Z,69nm,18.3s,baz=288,slow=33						
FITZ	Fitzroy Crossi	24.45 240		P	P	03 53 44.6	+0.6
	3.0nm,0.5s,baz=60,slow=8.1,SNR=13						
RAR	Rarotonga	52.85 112		LR	LR	04 16 22.6	
	comp=Z,44nm,18.8s,baz=280,slow=32						
TORD	Torodi Ar. Bea	145.85 284		PKPbc	PKPdf	04 08 04.8	-0.2
	0.5nm,0.9s,baz=54,slow=4.3,SNR=6.8						

*IDC **30** 04:03:32.6±4.6, 2°.09S×139°.38E, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.7/31, mbtmp4.0/4, ML3.7/1, MS3.3/1, Ms1 3.6/1, ms1mx2.8/21, Error ellipse: s-maj=200.5km s-min=24.7km az=88.0*
*ISCJB **30** 04:03:38.8±0.6, 2°.22S±0°.07×138°.45E±0°.04, h36km, mb3.9/3, MS3.3/1, Error ellipse: s-maj=9.7km s-min=5.5km az=8.9*
*DJA **30** 04:03:38.0±1.5, 2°.S±11°×13°.9E±°, h31km±22km, M4.4/5, MLv4.4/5*
ISC 30 04:03:40.0±1.0, 2°.32S±0°.10×138°.44E±0°.05, h36km, n12, σ1§53/13, mb4.1/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	1.75	99	P	Pn	04 04 07.7	-0.1
GENI				S	Sn	04 04 30.4	+1.5
SRPI	Serui, Papua	2.24 281		P	Pn	04 04 13.9	-0.7
SRPI				S	Sn	04 04 42.8	+1.7
JAY	Jayapura	2.27 95		P	Pn	04 04 13.6	-1.5
JAY				S	Sn	04 04 41.1	-0.8
BAKI	Biak	2.59 296		P	Pn	04 04 17.4	-2.0
WRA	Warramunga Arr	17.97 193		P	P	04 07 48.4	+0.9
	0.3nm,0.3s,baz=18,slow=11,SNR=4.4						
WRA				S	Sn	04 11 05.4	-1.3
	0.1nm,0.3s,baz=6.8,slow=23,SNR=3.6						
ASAR	Alice Springs	21.67 191		P	P	04 08 30.1	+2.3
	6.1nm,0.8s,baz=18,slow=10.0,SNR=33						
ASAR				S	S	04 12 24.2	-1.7
	0.8nm,1.0s,baz=14,slow=20,SNR=2.7						
H11N1	WAKE ISLAND Hy	35.49 51		T	T	04 47 37.4	
	baz=229						
H11N2	WAKE ISLAND Hy	35.51 51		T	T	04 47 45.9	
	baz=229						
H11N3	WAKE ISLAND Hy	35.51 51		T	T	04 47 38.2	
	baz=229						
CMAR	Chiang Mai Arr	44.01 300		LR	LR	04 31 02.9	
	comp=Z,37nm,18.4s,baz=195,slow=37						
MKAR	Makanchi Array	69.31 322		P	P	04 14 44.2	+0.3
	0.5nm,0.6s,baz=108,slow=7.7,SNR=4.0						
ZALV	Zalesovo Beam	71.46 330		P	P	04 14 57.1	+0.3
	0.7nm,0.3s,baz=107,slow=6.3,SNR=2.5						

*IDC **30** 04:07:42.6±1.0, 28°.00S×176°.47W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/32, mbtmp3.9/5, MS3.4/1, Ms1 3.4/1, ms1mx2.9/20, Error ellipse: s-maj=43.3km s-min=29.8km az=161.0*
*NEIC **30** 04:07:50.2±1.6, 28°.05S×176°.47W, h56km±8km, mb4.2/3, Error ellipse: s-maj=40.4km s-min=9.4km az=143.0*
ISC 30 04:07:48.0±0.7, 28°.2S±0°.1×176°.5W±0°.2, h37km, n36, σ1§46/33, mb3.9/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.67 230		*e*Pn	Pn	04 08 17.9	+3.3
URZ	Urewera	11.40 207		Pn	Pn	04 10 24.9	-3.2
	0.8nm,0.3s,baz=336,slow=20,SNR=9.2						
URZ				Sn	Sn	04 12 32.5	-1.6
	2.5nm,0.3s,baz=180,slow=20,SNR=16						
KHZ	Kahutara	16.36 207		*e*Pn	P	04 11 37.1	-0.2
	98nm,1.9s						
DZM	Mont Dzumac	16.63 288		LR	LR	04 16 51.6	
	comp=Z,147nm,19.8s,baz=143,slow=33						
DZM	Mont Dzumac	16.63 288		eLR	LR	04 15 02.8	
	comp=Z,314nm,25.6s						
PAE	Paea	26.82 73		*e*T	T	04 40 52.2	
	3.2nm,0.3s						
PPT2	Papeete2	26.86 73		eLR	LR	04 19 54.4	
	comp=Z,128nm,29.8s						
AS31	Alice Springs	44.63 264		*e*P	P	04 15 56.9	-0.2
	1.0nm,0.6s						
AS31				*e*PcP	PcP	04 17 39.5	0.0
ASAR	Alice Springs	44.63 264		P	P	04 15 56.9	-0.3
	0.8nm,0.4s,baz=99,slow=6.6,SNR=14						
ASAR				PcP	PcP	04 17 39.5	0.0
	0.3nm,0.5s,baz=102,slow=3.9,SNR=2.6						
WR1	Warramunga Arr	45.42 269		*e*P	P	04 16 02.9	-0.5
WRA	Warramunga Arr	45.42 269		P	P	04 16 02.9	-0.5
	1.6nm,0.4s,baz=97,slow=8.3,SNR=8.3						
MJAR	Matsushiro Arr	77.22 324		P	P	04 19 37.9	-0.3
	1.1nm,0.6s,baz=164,slow=7.4,SNR=5.8						
MAJO	Matsushiro	77.22 324		*e*P	P	04 19 37.9	-0.3
VNA3	Neumayer Olymp	80.41 176		P	P	04 19 57.6	+2.3
VNA1	Neumayer–Stat	81.08 176		P	P	04 20 00.8	+1.9
KSRS	Korea Array	83.56 319		P	P	04 20 13.8	+1.6
	0.4nm,0.5s,baz=145,slow=4.5,SNR=3.7						
KS15	Wonju Array Si	83.58 319		*e*P	P	04 20 13.8	+1.5
	36nm,1.8s						
NV01	Mina Array Sit	85.70 42		*e*P	P	04 20 22.7	-0.5
NVAR	Mina Array Bea	85.70 42		P	P	04 20 22.7	-0.5
	0.3nm,0.6s,baz=230,slow=8.1,SNR=3.5						
ZAA1	Zalesovo Array	117.27 319		*e*PKPdf	PKPdf	04 26 27.3	-1.6
ZALV	Zalesovo Beam	117.27 319		PKP	PKPdf	04 26 27.3	-1.6
	0.5nm,0.3s,baz=70,slow=1.7,SNR=2.9						
MK32	Makanchi Array	117.37 311		*e*PKPdf	PKPdf	04 26 28.3	-1.1
MKAR	Makanchi Array	117.37 311		PKP	PKPdf	04 26 28.3	-1.1
	0.3nm,0.6s,baz=140,slow=1.1,SNR=2.8						
ARA0	ARCESS Array S	136.70 349		*e*PKPdf	PKPdf	04 27 05.2	-0.2
ARCES	ARCESS Array B	136.70 349		PKP	PKPdf	04 27 05.2	-0.2
	0.9nm,0.8s,baz=37,slow=0.6,SNR=5.9						
FIA0	FINESS Array S	143.50 342		*e*PKPpre	PKPpre	04 27 15.0	
FINES	FINESS Array B	143.50 342		PKhKP	PKPpre	04 27 15.0	
	1.2nm,0.8s,baz=44,slow=5.8,SNR=4.7						
NB2	NORSAR Subarra	146.75 353		PKP	PKPbc	04 27 24.4	-1.0
	comp=Z,0.8nm,0.7s,baz=5.8,slow=2.9						
NB200	NORSAR Array S	146.75 353		*e*PKPdf	PKPbc	04 27 24.6	-0.8
NOA	NORSAR Array B	146.75 353		PKPbc	PKPbc	04 27 24.6	-0.8
	comp=Z,0.8nm,0.7s,baz=19,slow=0.1,SNR=5.5						
AKASG	Malin Array Be	150.29 326		PKPbc	PKiKP	04 27 34.4	-1.2
	comp=Z,1.0nm,0.5s,baz=42,slow=4.1,SNR=3.5						
AKBB	Malin Array Si	150.29 326		*e*PKPbc	PKiKP	04 27 34.4	-1.2
BR101	Keskin Array S	152.64 303		*e*PKPab	PKPab	04 27 51.6	+0.1
BRTR	Keskin Array B	152.64 303		PKPab	PKPab	04 27 51.6	+0.1
	comp=Z,0.6nm,0.6s,baz=126,slow=2.0,SNR=4.4						
TORD	Torodi Ar. Bea	164.94 173		PKPab	PKPab	04 28 47.3	+2.4
	comp=Z,0.3nm,0.6s,baz=192,slow=4.0,SNR=3.0						
TOA1	Torodi Ar. Sit	164.94 173		*e*PKPab	PKPab	04 28 47.3	+2.4

*IDC **30** 04:09:13.7±0.9, 11°.56N×125°.50E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/39, mbtmp3.9/9, MS2.9/1, Ms1 2.9/1, ms1mx2.5/32, Error ellipse: s-maj=67.9km s-min=18.8km az=71.0*
*MAN **30** 04:09:14.6, 11°.71N×125°.83E, h1km, mb4.5, ML3.3, MS3.2*
*ISCJB **30** 04:09:17.2±0.5, 11°.68N±0°.05×125°.83E±0°.08, h35km, mb4.2/17, Error ellipse: s-maj=11.6km s-min=5.4km az=22.3*
*NEIC **30** 04:09:24.3±0.8, 11°.64N×125°.77E, h86km±6km, mb4.3/9, Error ellipse: s-maj=57.3km s-min=16.0km az=68.0*
ISC 30 04:09:19.1±0.7, 11°.71N±0°.07×125°.71E±0°.10, h35km, n36, σ1§46/36, mb4.3/17, 2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	Palo	0.90 233		⇓*e*P	Pn	04 09 34.1	-1.1
PLP				*e*S	Sn	04 09 45.0	-2.0
OCLP	Ormoc	1.26 239		*e*P	Pn	04 09 40.6	+0.4
OCLP				*e*S	Sn	04 09 52.5	-3.4
MSLP	Maasin	1.78 208		*e*P	Pn	04 09 48.8	+1.5
MSLP				*e*S	Sn	04 10 13.1	+4.4
LLP	Lapu-Lapu	2.20 231		*e*P	Pn	04 09 54.5	+1.4
LLP				*e*S	Sn	04 10 22.7	+3.5
TBP	Tagbilaran	2.21 342		*e*P	Pn	04 10 00.9	+0.8
CGP	Cagayan de Oro	3.39 197		⇓*e*P	Pn	04 10 08.9	-0.6
CGP				*e*S	Sn	04 10 47.8	-0.7
GUMO	Guam	18.79 82		LR	LR	04 20 46.5	
	comp=Z,36nm,20.3s,baz=142,slow=36						
KS15	Wonju Array Si	25.69 4		*e*P	P	04 14 46.8	+0.9
	36nm,1.8s						
KSRS	Korea Array	25.71 4		P	P	04 14 46.8	+0.8
	0.7nm,0.5s,baz=185,slow=12,SNR=5.2						
AS31	Alice Springs	36.06 167		*e*P	P	04 16 16.8	-0.7
	4.6nm,1.7s						
AS31				*e*PcP	PcP	04 18 42.4	-1.0
ASAR	Alice Springs	36.06 167		P	P	04 16 16.8	-0.7
	0.6nm,0.6s,baz=340,slow=7.3,SNR=4.9						
ASAR				PcP	PcP	04 18 42.4	-1.0
	0.6nm,0.7s,baz=349,slow=3.1,SNR=4.1						
SONA0	Songino Array	39.48 339		*e*P	P	04 16 47.4	+1.1
SONM	Songino Array	39.48 339		P	P	04 16 47.4	+1.1
	0.5nm,0.4s,baz=148,slow=8.5,SNR=3.1						
H11S3	WAKE ISLAND Hy	40.07 75		T	T	05 00 20.0	
	baz=275,slow=76						
H11S1	WAKE ISLAND Hy	40.08 75		T	T	05 00 07.9	
	baz=275,slow=76						
H11S2	WAKE ISLAND Hy	40.08 75		T	T	04 59 56.6	
	baz=275,slow=76						
H11N1	WAKE ISLAND Hy	40.35 73		T	T	05 00 13.6	
	baz=265,slow=74,SNR=63						
H11N2	WAKE ISLAND Hy	40.36 73		T	T	05 00 13.5	
	baz=265,slow=74,SNR=40						
H11N3	WAKE ISLAND Hy	40.37 73		T	T	05 00 15.1	
	baz=265,slow=74,SNR=53						
STKA	Stephens Creek	45.94 161		P	P	04 17 38.0	-0.6
	1.3nm,0.5s,baz=345,slow=12,SNR=3.9						
STKA	Stephens Creek	45.94 161		*e*P	P	04 17 38.0	-0.6
	5.1nm,1.9s						
MK31	Makanchi Array	50.55 322		*e*P	P	04 18 15.0	+0.8
	3.0nm,0.8s						
MK32	Makanchi Array	50.55 322		*e*P	P	04 18 15.2	+1.1
MKAR	Makanchi Array	50.55 322		P	P	04 18 15.2	+1.1
	3.1nm,0.7s,baz=117,slow=8.4,SNR=23						
MAKZ	Makanchi	50.75 322		*e*P	P	04 18 15.6	-0.1
	2.4nm,0.6s						
KURK	Kurchatov	54.57 325		*e*P	P	04 18 44.5	+0.7
	9.7nm,0.8s						
BRVK	Borovoye	60.24 325		*e*P	P	04 19 24.3	+0.5
	2.9nm,0.9s						
ABKAR	Akbulak array	65.43 319		*e*P	P	04 19 58.5	+0.1
	1.6nm,0.8s						
ARA0	ARCESS Array S	82.66 340		*e*P	P	04 21 39.4	+0.7
ARCES	ARCESS Array B	82.66 340		P	P	04 21 39.4	+0.7
	4.0nm,0.9s,baz=81,slow=5.8,SNR=17						
BR101	Keskin Array S	84.19 309		*e*P	P	04 21 46.3	-1.0
BRTR	Keskin Array B	84.19 309		P	P	04 21 46.3	-1.0
	0.3nm,0.6s,baz=106,slow=3.7,SNR=2.6						
FIA0	FINESS Array S	84.37 332		*e*P	P	04 21 47.4	-0.1
FINES	FINESS Array B	84.37 332		P	P	04 21 47.4	-0.1
	1.0nm,0.5s,baz=74,slow=4.9,SNR=20						
AKASG	Malin Array Be	85.10 321		P	P	04 21 50.5	-1.0
	0.4nm,0.4s,baz=64,slow=5.6,SNR=4.4						
AKBB	Malin Array Si	85.10 321		*e*P	P	04 21 50.5	-1.0
	6.3nm,1.4s						

*ISCJB **30** 04:24:04.1±0.6, 27°.19N±0°.03×58°.38E±0°.06, h10km, mb3.4/4, Error ellipse: s-maj=8.4km s-min=4.1km az=21.6*
*TEH **30** 04:24:04.3, 27°.15N×58°.41E, h24km, ML4.1*
*DSN **30** 04:24:06.5±2.4, 27°.08N×58°.31E, h10km, ML3.6/10, Error ellipse: s-maj=43.7km s-min=11.6km az=166.0*
*IDC **30** 04:24:18.7±3.0, 29°.15N×57°.73E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.2/26, mbtmp3.4/3, Error ellipse: s-maj=71.4km s-min=30.8km az=158.0*
ISC 30 04:24:05.3±1.0, 27°.12N±0°.05×58°.39E±0°.07, h10km, n42, σ1§17/43, mb3.5/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIAN	Nian	1.45 288		*e*Pg	Pb	04 24 32.5	+0.1
NIAN				IAMB	IAmb	04 24 53.3	
	comp=Z,0.0nm,0.3s						
JSK1	Jask	1.57 201		*e*Pn	Pg	04 24 35.5	0.0
GENO	Geno	1.99 279		*e*Pn	Pn	04 24 39.6	+0.4
GENO				IAMB	IAmb	04 25 05.5	
	comp=Z,0.0nm,0.2s						
BANOM	Banah	2.21 238		*e*P	Pn	04 24 42.2	0.0
	SNR=207						
BANOM				S	Sn	04 25 10.5	+0.9
SHME	Shamm	2.27 243		*e*P	Pn	04 24 43.5	+0.6
	SNR=58						
SHME				S	Sn	04 25 10.5	-0.5
SHME	Shamm	2.27 243		*e*Pn	Pn	04 24 43.8	+0.8
MDH	Madha	2.61 226		*e*P	Pn	04 24 46.6	-0.9
	SNR=22						
MDH	Madha	2.61 226		*e*Pn	Pn	04 24 46.4	-1.1
MSFE	Esma-Masafi	2.66 229		*e*P	Pn	04 24 47.2	-1.0
	SNR=21						
MSFE	Esma-Masafi	2.66 229		*e*Pn	Pn	04 24 48.2	0.0
NGRK	Negar Kerman	2.91 330		*e*Pn	Pn	04 24 53.0	+1.0
NGRK				IAMB	IAmb	04 25 30.8	
	comp=Z,0.0nm,0.3s						
UOSS	Minazif	2.92 223		*e*P	Pn	04 24 50.6	-1.2
	SNR=36						
UOSS	Minazif	2.92 223		*e*Pn	Pn	04 24 51.1	-0.7
HATD	Hatta, Dubai	3.05 222		*e*P	Pn	04 24 52.7	-1.0
	SNR=7.6						
HATD	Hatta, Dubai	3.05 222		*e*Pn	Pn	04 24 53.0	-0.7
TVBK	TV Kerman	3.19 334		*e*Pn	Pn	04 24 58.0	+2.1
TVBK				IAMB	IAmb	04 24 59.4	
	comp=Z,0.0nm,0.3s						
ASHO	Ashiyiah	3.20 221		*i* P	Pn	04 24 55.7	-0.1
	SNR=42						
NAZ	Nazwa, Dubai	3.24 230		*i* P	Pn	04 24 57.6	+1.4
	SNR=8.7						
NAZ	Nazwa, Dubai	3.24 230		*e*Pn	Pn	04 24 58.0	+1.8
ZHSF	Zahedan	3.26 40		*e*Pn	Pn	04 24 56.2	-0.4
FAQ	Al Faqa, Dubai	3.45 227		*i* P	Pn	04 25 00.3	+1.2
	SNR=134						
BIDO	Bidbid	3.59 184		*e*Pn	Pn	04 25 01.8	+0.8
HOQ	Hoqain	3.65 196		*e*Pn	Pn	04 25 01.4	-0.5
KHGB	Koh Gabri	3.65 333		*e*Pn	Pn	04 25 03.1	+1.0
ASUD	Al Ashush, Dub	3.71 229		*i* P	Pn	04 25 04.1	+1.5
	SNR=51						
ALNE	Al Ain	3.87 219		*i* P	Pn	04 25 06.6	+1.7
	SNR=12						
BSRN	Basiran	4.87 7		*e*Pn	Pn	04 25 18.0	-0.8
GHIR	Ghir-Karzin	4.92 285		*e*Pn	Pn	04 25 19.1	-0.4
ISRV	Sarvestan	5.17 297		*e*Pn	Pn	04 25 22.9	-0.1
IKOO	Kooshah	5.32 6		*e*Pn	Pn	04 25 25.0	0.0
IMEH	Mehriz	5.38 323		*e*Pn	Pn	04 25 26.0	+0.1
ITEG	Tejag	5.77 3		*e*Pn	Pn	04 25 31.1	-0.1
YZKH	Yazd	6.20 329		*e*Pn	Pn	04 25 35.7	-1.3
ISAD	Sadrabad	6.29 321		*e*Pn	Pn	04 25 38.7	+0.3
IKAZ	Kazeroun	6.34 296		*e*Pn	Pn	04 25 38.2	-1.0
TABS	Tabas	6.60 351		*e*Pn	Pn	04 25 41.9	-0.6
SHRT	Shahrakht	6.71 14		*e*Pn	Pn	04 25 43.4	-0.6
IRAM	Ramesheh	7.02 313		*e*Pn	Pn	04 25 47.6	-0.7
BRTR	Keskin Array B	24.09 308		P	P	04 29 18.8	-2.4
	comp=Z,1.0nm,0.7s,baz=115,slow=9.7,SNR=6.5						
MKAR	Makanchi Array	27.22 38		P	P	04 29 53.

VWDT	VWDT	0.28	152	⇓P		Pg	04 45 17.6	-0.1
	baz=152							
VWDT				S		Sg	04 45 21.9	0.0
	baz=152							
TDCB	Techi	0.29	31	⇑P		Pg	04 45 17.4	-0.5
	baz=29							
TDCB				S		Sg	04 45 21.3	-0.9
	baz=29							
TWT	Tachien	0.30	34	⇓P		Pg	04 45 17.5	-0.5
	baz=30							
TWT				S		Sg	04 45 21.5	-1.0
	baz=30							
WJS	Zhushan	0.31	233	P		Pg	04 45 18.5	+0.4
	baz=230							
WJS				S		Sb	04 45 24.2	+0.6
	baz=230							
WNT	Mingjian	0.31	246	⇓P		Pb	04 45 18.8	0.0
	baz=247							
WNT				S		Sb	04 45 24.6	+0.9
	baz=247							
TCU	Taichung	0.32	296	eP		Pb	04 45 19.1	0.0
	baz=297							
WHYT	Xinyi Township	0.34	203	P		Pg	04 45 18.7	0.0
	baz=200							
WHYT				eS		Sg	04 45 23.7	+0.3
	baz=200							
TWQ1	Liyutan	0.40	329	⇓P		Pb	04 45 20.4	+0.1
	baz=341							
TWQ1				eS		Sb	04 45 27.4	+1.2
	baz=341							
WCHH	Zhanghua	0.41	280	⇓P		Pb	04 45 20.6	+0.1
	baz=281							
WCHH				eS		Sb	04 45 27.9	+1.5
	baz=281							
ESL	Shilin	0.44	115	⇓iP		Pg	04 45 20.2	-0.4
	baz=108							
ESL				S		Sg	04 45 26.3	-0.4
	baz=108							
NSY	Sanyi	0.46	332	⇓iP		Pb	04 45 22.0	+0.6
	baz=335							
NSY				S		Sb	04 45 30.1	+2.1
	baz=335							
WDJ	Dajia District	0.47	316	eP		Pb	04 45 21.9	+0.4
	baz=317							
ETLH	Xiulin Townshi	0.49	66	P		Pg	04 45 20.8	-0.6
	baz=65							
CHN5	Tsauling	0.50	216	⇓iP		Pg	04 45 21.8	+0.1
	baz=216							
CHN5				S		Sb	04 45 29.5	+0.3
	baz=216							
WGK	Gukeng	0.51	231	⇓P		Pg	04 45 22.1	+0.3
	baz=230							
WGK				S		Sb	04 45 30.2	+0.8
	baz=230							
PTSB	Yuanli	0.51	329	⇓P		Pb	04 45 22.9	+0.6
	baz=330							
PTSB				S		Sb	04 45 31.3	+1.7
	baz=330							
YUS	Yu-Shan	0.52	184	P		Pg	04 45 21.6	-0.5
	baz=177							
YUS				S		Sg	04 45 28.9	-0.2
	baz=177							
EGFH	Guangfu	0.52	130	eP		Pg	04 45 21.4	-0.6
	baz=124							
EGFH				S		Sg	04 45 29.0	0.0
	baz=124							
WDLH	Douliu	0.53	233	⇓P		Pg	04 45 22.2	+0.1
	baz=232							
WDLH				S		Sb	04 45 31.2	+1.3
	baz=232							
NNSB	Datong	0.55	40	⇓P		Pg	04 45 21.6	-1.0
	baz=39							
NNSB				S		Sg	04 45 28.7	-1.3
	baz=39							
NNS	Nan Shan	0.55	39	⇑P		Pg	04 45 22.0	-0.6
	baz=38							
NNS				S		Sg	04 45 29.5	-0.6
	baz=38							
TWD	Chiawan	0.55	82	P		Pg	04 45 21.9	-0.7
	baz=89							
TWD				S		Sg	04 45 29.2	-0.8
	baz=89							
HWA	Hwalien	0.56	93	P		Pg	04 45 22.5	-0.2
	baz=92							
NMLH	Miaoli	0.56	341	P		Pb	04 45 23.9	+0.7
	baz=341							
NMLH				S		Sb	04 45 32.7	+1.8
	baz=341							
NACB	Ninganchiao	0.57	73	⇓P		Pg	04 45 22.3	-0.7
	baz=69							
NACB				S		Sg	04 45 30.0	-0.7
	baz=69							
EHY	Hungye	0.58	149	⇓iP		Pg	04 45 22.6	-0.6
	baz=143							
EHY				eS		Sg	04 45 29.7	-1.2
	baz=143							
RLNB	Erlin	0.59	259	eP		Pg	04 45 23.1	-0.3
	baz=259							
RLNB				eS		Sb	04 45 32.3	+0.5
	baz=259							
NSTT	Nanjuang	0.62	0	⇑iP		Pb	04 45 24.1	-0.1
	baz=8.0							
NSTT				eS		Sb	04 45 33.0	+0.3
	baz=8.0							
LIOB	Emei	0.64	2	⇑iP		Pb	04 45 24.5	+0.1
	baz=8.0							
LIOB				S		Sb	04 45 33.8	+0.6
	baz=8.0							
HGSD	Ruisui	0.65	142	⇓P		Pg	04 45 24.1	-0.2
	baz=142							
HGSD				S		Sb	04 45 33.5	+0.2
	baz=142							
WTCT	Ta-ch'eng	0.67	258	eP		Pg	04 45 24.4	-0.3
	baz=258							
CHN2	Minshiung	0.67	225	⇓iP		Pg	04 45 25.0	+0.2
	baz=225							
CHN2				S		Sb	04 45 35.1	+1.1
	baz=225							
YULB	Yu-li	0.67	156	⇓P		Pg	04 45 24.1	-0.8
	baz=147							
YULB				S		Sg	04 45 33.3	-0.5
	baz=147							
TWF1	Yuli	0.71	157	⇓iP		Pg	04 45 24.9	-0.7
	baz=148							
TWF1				S		Sg	04 45 34.5	-0.4
	baz=148							
CHY	Chiayi	0.73	226	eP		Pg	04 45 25.5	-0.4
	baz=225							
CHY				eS		Sb	04 45 36.5	+0.8
	baz=225							
WMLT	Mailiao	0.73	254	eP		Pg	04 45 25.5	-0.5
	baz=254							
NSK	Sanguang	0.74	26	⇓P		Pg	04 45 25.6	-0.6
	baz=35							
YHNB	Yeheng	0.75	28	⇓P		Pg	04 45 25.5	-0.7
	baz=27							
YHNB				eS		Sg	04 45 34.3	-1.8
	baz=27							
CHN4	Tsaushan	0.75	210	eP		Pg	04 45 26.2	0.0
	baz=209							
SBCB	Hsinchu	0.78	359	eP		Pb	04 45 27.5	+0.6
SBCB				S		Sn	04 45 39.6	+0.1
HSN	Hsinchu	0.79	358	eP		Pn	04 45 28.5	+0.3
	baz=2.0							
HSN				eS		Sn	04 45 40.6	+0.8
	baz=2.0							
WSF	Szhu	0.80	243	eP		Pg	04 45 26.7	-0.5
	baz=242							
WSF				S		Sb	04 45 38.5	+0.7
	baz=242							
ENA	Nanau	0.80	58	eP		Pg	04 45 26.3	-1.0
	baz=59							
NANB	Nanao	0.81	59	⇓P		Pg	04 45 26.1	-1.2
	baz=57							
NANB				eS		Sg	04 45 36.5	-1.5
	baz=57							
ELDTW	Lidau	0.81	179	eP		Pg	04 45 26.7	-0.8
	baz=184							
ELDTW				S		Sb	04 45 39.1	+0.8
	baz=184							
ENTT	Nioudou	0.82	39	⇑P		Pg	04 45 26.8	-0.8
	baz=32							
ENTT				eS		Sb	04 45 39.2	+0.8
	baz=32							
WLGB	Puzi	0.83	231	eP		Pg	04 45 26.8	-1.0
	baz=230							
WTP	Ta-pu	0.83	205	eP		Pg	04 45 26.7	-1.2
	baz=204							
STYT	Tauyuan	0.87	195	eP		Pg	04 45 28.4	-0.1
	baz=195							
STYT				eS		Sg	04 45 39.6	-0.3
	baz=195							
TWK	Hsinying	0.87	212	eP		Pg	04 45 27.8	-0.8
	baz=212							
TWK				S		Sg	04 45 39.7	-0.4
	baz=212							
WLTB	Daxi	0.87	15	eP		Pn	04 45 29.3	0.0
	baz=22							
WLTB				eS		Sn	04 45 42.3	+0.6
	baz=22							
SNST	Tainan City	0.91	210	eP		Pg	04 45 29.0	-0.3
	baz=210							
CHN1	Nanshi	0.92	208	P		Pg	04 45 29.3	-0.3
	baz=208							
CHN1				eS		Sg	04 45 41.5	-0.2
	baz=208							
TWE	Neicheng	0.94	41	eP		Pg	04 45 29.0	-0.8
	baz=39							
CHKT	Chengkung	0.96	159	⇑P		Pg	04 45 29.8	-0.5
	baz=159							
CHKT				S		Sn	04 45 44.2	+0.3
	baz=159							
NCUH	Zhongli	0.97	10	eP		Pn	04 45 31.4	+0.7
	baz=10.0							
NCUH				eS		Sn	04 45 45.4	+1.2
	baz=10.0							
CHN8	Yiju	0.97	228	eP		Pg	04 45 29.2	-1.3
	baz=237							
CHN8				eS		Sb	04 45 43.7	+0.9
	baz=237							
NCU	National Centr	0.97	10	eP		Pn	04 45 31.0	+0.3
	baz=11							
NCU				eS		Sn	04 45 44.4	+0.2
	baz=11							
TWC	Suao	0.98	52	eP		Pg	04 45 29.8	-0.9
	baz=47							
SGST	Jiashian	0.99	202	eP		Pg	04 45 30.5	-0.5
	baz=213							
SGST				eS		Sb	04 45 44.5	+1.1
	baz=213							
ILA	Ilan	1.02	42	eP		Pg	04 45 29.4	-2.1
	baz=43							
TATO	Taipei	1.06	25	eP		Pb	04 45 31.9	+0.2
	baz=24							
TATO				eS		Sn	04 45 47.1	+0.7
	baz=24							
CHN3	Shinhua	1.09	212	eP		Pn	04 45 32.8	+0.5
	baz=211							
SCLT	Jiali	1.11	222	eP		Pb	04 45 32.0	-0.5
	baz=221							
TWA	Mucha	1.11	29	eP		Pb	04 45 32.2	-0.3
	baz=34							
TWA				S		Sn	04 45 48.7	+1.2
	baz=34							
NTC	Toucheng	1.14	42	eP		Pb	04 45 32.6	-0.3
	baz=43							
TWS1	Kuangyinshan	1.16	19	eP		Pg	04 45 34.6	+0.6
	baz=7.0							
TWS1				eS		Sn	04 45 50.6	+2.0
	baz=7.0							
EOS1	EOS1	1.17	62	eP		Pb	04 45 33.3	-0.1
	baz=63							
TWG	Pinlang	1.18	177	P		Pb	04 45 33.2	-0.5
	baz=170							
TWG				eS		Sg	04 45 49.5	-0.4
	baz=170							
TWGBT	Beinan	1.19	176	P		Pb	04 45 33.5	-0.3
	baz=170							
TWGBT				S		Sb	04 45 49.2	+0.3
	baz=170							
EGS		1.19	45	eP		Pg	04 45 34.8	+0.1
	baz=60							
TIPB	Shuangxi	1.22	38	eP		Pn	04 45 33.9	-0.2
	baz=23							
NTST	Danshui	1.23	20	eP		Pg	04 45 35.9	+0.6
	baz=2.0							
YM01	YM01	1.25	25	eP		Pn	04 45 34.0	-0.5
	baz=27							
TTN	Taitung	1.25	174	eP		Pn	04 45 35.1	+0.6
	baz=172							
YM10	YM10	1.25	24	eP		Pn	04 45 34.6	0.0
	baz=23							
YM10				eS		Sb	04 45 51.3	+0.3
	baz=23							
NWF	Wu-fen Shan	1.28	34	eP		Pg	04 45 36.3	0.0
	baz=36							
WFSB	Wu-fen Shan	1.28	34	eP		Pg	04 45 36.1	-0.2
	baz=36							
TWM1	Shoushan	1.29	204	eP		Pg	04 45 36.7	+0.1
	baz=203							
YM08	YM08	1.29	25	eP		Pn	04 45 35.7	+0.5
	baz=27							
SSD	Sandimen	1.30	195	eP		Pn	04 45 35.6	+0.4
	baz=187							
SSD				eS		Sg	04 45 53.5	-0.1
	baz=187							
TWB1	Santiao Chiao	1.35	42	eP		Pg	04 45 37.7	+0.1
	baz=41							
TWB1				eS		Sg	04 45 56.0	+0.9
	baz=41							
SGLT	Jiouru	1.36	200	eP		Pn	04 45 35.9	-0.1
	baz=198							
PNG	Penghu	1.39	252	eP		Pn	04 45 35.4	-1.0
	baz=250							
PNG				eS		Sn	04 45 54.4	-0.1
	baz=250							
PHUB	P'eng-hu	1.39	250	P		Pn	04 45 34.7	-1.8
	baz=248							
PHUB				eS		Sn	04 45 53.0	-1.6
	baz=248							
MASBT	Mashibuluo	1.43	194	eP		Pn	04 45 37.4	+0.5
	baz=195							
MASBT				eS		Sb	04 45 56.9	+1.0
	baz=195							
WDGT	Dungji	1.43	239	⇓P		Pn	04 45 36.3	-0.7
	baz=230							
WDGT				S		Sn	04 45 55.6	+0.1
	baz=230							
SSPT	Xinbi	1.57	195	eP		Pg	04 45 41.5	-0.3
	baz=194							
EAST	Anshuo	1.62	185	eP		Pn	04 45 40.3	+0.6
	baz=203							
VCHM	Qimei	1.64	241	eP		Pn	04 45 38.7	-1.2
	baz=241							
SCZT	Fangliau	1.66	192	eP		Pn	04 45 40.2	0.0
	baz=193							
SCZT				eS		Sn	04 46 02.1	+0.9
	baz=193							
JYNG	Yonaguni jima	1.83	76	P		Pn	04 45 43.3	+0.8
JYNG				eS		Sb	04 46 08.1	+0.5
PTTC	Pingtan	1.86	323	eP		Pn	04 45 41.0	-1.8
	baz=323							
PCYT	Pengchaiyu	1.89	31	eP		Pn	04 45 43.2	-0.1
	baz=34							
YOJ	Yonaguni jima	1.90	76	eP		Pn	04 45 43.8	+0.5
	baz=76							
YOJ	Yonaguni jima	1.90	76	P		Pn	04 45 43.5	+0.1
YOJ				eS		Sn	04 46 07.8	+0.9
PTMZ	Houxiangcun	1.99	301	eP		Pn	04 45 42.8	-1.9
	baz=300							
TWKBT	Hengchun	2.06	185	eP		Pn	04 45 45.9	+0.3
	baz=199							
MATB	Ma-tsu	2.34	336	eP		Pn	04 45 47.6	-1.9
	baz=334							
KNMB	Chin-men Tao	2.42	281	eP		Pn	04 45 49.1	-1.5
	baz=279							
IRIF	Iriomote-Funau	2.52	82	P		Pn	04 45 52.2	+0.3
IRIF				eS		Sn	04 46 22.9	+0.6
HATJ	Hateruma jima	2.57	88	P		Pn	04 45 52.7	+0.1
HATJ				S		Sn	04 46 24.3	+0.7
MHZQ	Yeshan	2.74	320	eP		Pn	04 45 54.0	-1.0
	baz=319							
JKRS	Kuro-shima	2.76	85	P		Pn	04 45 56.0	+0.7
JKRS				eS		Sn	04 46 29.6	+1.2
LYJJ	Jianjiangzhen	2.77	336	eP		Pn	04 45 54.0	-1.4
	baz=334							
JIJ	Ishigaki jima	2.90	82	P		Pn	04 45 57.2	+0.1
JIJ				eS		Sn	04 46 30.9	-0.8
AXDP	Jialang	2.90	288	eP		Pn	04 45 56.0	-1.1
	baz=286							
ZPLA	Ao Xicun	2.97	269	eP		Pn	04 45 56.9	-1.3
	baz=267							
JISG	Ishigakijimahi	3.08	79	P		Pn	04 46 00.0	+0.3
JISG				S		Sn	04 46 34.9	-1.3
ZZJH	Jiuhuzhen	3.11	279	eP		Pn	04 45 59.0	-1.0
	baz=277							
JTJ	Tarama	3.44	79	P		Pn	04 46 05.8	+1.2
JTJ				S		Sn	04 46 46.8	+1.7
JIKM	Ikemajima	3.98	76	S		Sn	04 46 59.7	+1.3

*JMA **30** 04:54:26.4±0.2,24°.01N×121°.02E,h8km±4km,M2.7*
*TAP **30** 04:54:26.2,23°.99N×121°.02E,h15km,ML3.5,A*
*ISCJB **30** 04:54:27.1±0.2,23°.995N±0°.009×121°.02E±0°.01,*
h12km±1km,Error ellipse: s-maj=1.9km s-min=1.3km
az=34.7

ISC 30 04:54:26.8±0.8,**24°.00N**±0°.01×**121°.01E**±0°.01,**h15**km±4km,
n104,σ0°**70**/181,**1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
DPDB	Guoxing	0.08	294	P		Pg	04 54 29.7	-0.1
	baz=298							
DPDB				S		Sg	04 54 32.1	+0.2
	baz=298							
SMLT	Sun Moon Lake	0.15	219	P		Pg	04 54 30.7	-0.1
	baz=223							
SMLT				S		Sg	04 54 33.8	+0.4
	baz=223							
OWD	Renai	0.16	107	P		Pg	04 54 31.1	+0.1
	baz=102							
OWD				S		Sb	04 54 34.2	-0.6
	baz=102							
CHGB	Renai	0.17	69	P		Pg	04 54 31.1	0.0
	baz=62							
CHGB				S		Sb	04 54 34.4	-0.6
	baz=62							
TYC	Yuchr	0.17	234	P		Pg	04 54 30.7	-0.2
	baz=239							
TYC				S		Sg	04 54 33.6	0.0
	baz=239							
SSLB	Suanglung	0.22	192	P		Pg	04 54 31.4	-0.3
	baz=196							
SSLB				S		Sg	04 54 34.4	-0.6
	baz=196							
VWDT	VWDT	0.28	153	P		Pg	04 54 32.8	+0.2
	baz=154							
VWDT				S		Sb	04 54 37.3	-0.6
	baz=154							
WHF	Hehuan Shan	0.28	59	eP		Pb	04 54 33.4	-0.3
	baz=56							
WHF				S		Sb	04 54 37.8	-0.6
	baz=56							
TDCB	Techi	0.29	29	eP		Pg	04 54 32.7	-0.2
	baz=25							
TDCB				eS		Sg	04 54 36.6	-0.6
	baz=25							
TWT	Tachien	0.29	32	P		Pg	04 54 32.7	-0.3
	baz=26							
TWT				eS		Sg	04 54 37.0	-0.4
	baz=26							
WJS	Zhushan	0.31	235	eP		Pb	04 54 33.7	-0.3
	baz=238							
WJS				eS		Sb	04 54 39.1	+0.2
	baz=238							
WNT	Mingjian	0.32	247	eP		Pb	04 54 34.0	-0.1
	baz=249							
WNT				eS		Sb	04 54 39.8	+0.6
	baz=249							
TCU	Taichung	0.33	296	eP		Pb	04 54 34.2	-0.3
	baz=297							
TCU				eS		Sb	04 54 40.2	+0.6
	baz=297							
WHYT	Xinyi Township	0.33	205	eP		Pg	04 54 33.8	+0.1
	baz=207							
WHYT				eS		Sb	04 54 39.2	-0.5
	baz=207							
TWQ1	Liyutan	0.41	328	eP		Pb	04 54 35.6	-0.1
	baz=327							
TWQ1				eS		Sb	04 54 42.5	+0.8
	baz=327							
WCHH	Zhanghua	0.42	281	eP		Pb	04 54 35.6	-0.2
	baz=282							
ESL	Shilin	0.43	115	eP		Pg	04 54 35.5	0.0
	baz=114							
ESL				eS		Sg	04 54 41.6	+0.2
	baz=114							
NSY	Sanyi	0.47	332	eP		Pb	04 54 37.1	+0.4
	baz=331							
NSY				eS		Sb	04 54 43.5	-0.1
	baz=331							
WDJ	Dajia District	0.48	316	eP		Pb	04 54 37.2	+0.3
	baz=315							
WDJ				eS		Sb	04 54 44.8	+0.9
	baz=315							
ETLH	Xiulin Townshi	0.48	65	eP		Pg	04 54 36.2	-0.2
	baz=62							
ETLH				eS		Sg	04 54 43.0	+0.2
	baz=62							
CHN5	Tsauling	0.50	217	eP		Pg	04 54 36.9	+0.2
	baz=218							
CHN5				eS		Sb	04 54 44.5	0.0
	baz=218							
EGFH	Guangfu	0.51	130	P		Pg	04 54 36.6	-0.2
	baz=130							
EGFH				eS		Sg	04 54 43.3	-0.4
	baz=130							
YUS	Yu-Shan	0.51	185	eP		Pg	04 54 36.7	-0.3
	baz=187							
YUS				eS		Sg	04 54 44.0	0.0
	baz=187							
WGK	Gukeng	0.51	232	eP		Pb	04 54 37.2	-0.3
	baz=233							
WGK				eS		Sb	04 54 45.5	+0.8
	baz=233							
PTSB	Yuanli	0.52	328	eP		Pb	04 54 38.0	+0.4
	baz=327							
PTSB				eS		Sb	04 54 46.4	+1.4
	baz=327							
WDLH	Douliu	0.53	234	eP		Pg	04 54 37.4	+0.2
	baz=235							
WDLH				eS		Sb	04 54 45.6	+0.4
	baz=235							
TWD	Chiawan	0.55	82	eP		Pg	04 54 37.5	-0.1
	baz=80							
NNSB	Datong	0.55	39	eP		Pg	04 54 37.1	-0.6
	baz=37							
NNSB				eS		Sg	04 54 44.1	-0.9
	baz=37							
HWA	Hwalien	0.55	92	eP		Pg	04 54 37.7	+0.1
	baz=91							
NNS	Nan Shan	0.55	37	eP		Pg	04 54 37.4	-0.3
	baz=36							
NNS				eS		Sg	04 54 45.1	0.0
	baz=36							
ENLB	Shoufeng	0.55	100	eP		Pg	04 54 35.5	-2.2
	baz=98							
ENLB				eS		Sg	04 54 44.4	-0.7
	baz=98							
NACB	Ninganchiao	0.57	72	⇓eP		Pg	04 54 37.5	-0.4
	baz=70							
NACB				eS		Sg	04 54 44.4	-1.0
	baz=70							
NMLH	Miaoli	0.57	340	eP		Pb	04 54 38.9	+0.4
	baz=339							
NMLH				eS		Sg	04 54 45.9	+0.4
	baz=339							
EHY	Hungye	0.57	149	eP		Pg	04 54 37.8	-0.2
	baz=149							
EHY				eS		Sb	04 54 46.0	-0.5
	baz=149							
RLNB	Erlin	0.60	260	eP		Pg	04 54 38.5	-0.1
	baz=260							
RLNB				eS		Sb	04 54 48.2	+0.9
	baz=260							
NSTT	Nanjuang	0.63	360	eP		Pb	04 54 39.4	-0.1
	baz=359							
NSTT				eS		Sb	04 54 48.0	-0.1
	baz=359							
HGSD	Ruisui	0.64	143	eP		Pg	04 54 39.2	0.0
	baz=143							
HGSD				eS		Sb	04 54 48.8	+0.5
	baz=143							
LIOB	Emei	0.64	1	eP		Pb	04 54 39.7	0.0
	baz=359							
LIOB				eS		Sb	04 54 48.7	+0.2
	baz=359							
YULB	Yu-li	0.66	156	eP		Pg	04 54 39.2	-0.5
	baz=156							
YULB				S		Sb	04 54 48.7	-0.4
	baz=156							
CHN2	Minshiung	0.67	226	eP		Pb	04 54 40.1	-0.2
	baz=227							
CHN2				eS		Sb	04 54 50.4	+1.0

	baz=227							
WTCT	Ta-ch'eng	0.68	258	eP		Pg	04 54 39.6	-0.3
	baz=259							
WTCT				eS		Sb	04 54 50.1	+0.6
	baz=259							
TWF1	Yuli	0.70	157	eP		Pg	04 54 40.0	-0.4
	baz=157							
TWF1				eS		Sb	04 54 50.0	-0.2
	baz=157							
CHY	Chiayi	0.73	227	eP		Pg	04 54 40.6	-0.4
	baz=227							
CHY				eS		Sb	04 54 51.2	+0.2
	baz=227							
NSK	Sanguang	0.74	26	eP		Pg	04 54 40.9	-0.4
	baz=24							
NSK				eS		Sg	04 54 49.6	-1.5
	baz=24							
YHNB	Yeheng	0.75	27	eP		Pg	04 54 40.8	-0.6
	baz=25							
CHN4	Tsaushan	0.75	210	eP		Pg	04 54 41.2	-0.2
	baz=211							
CHN4				eS		Sb	04 54 51.4	-0.1
	baz=211							
SBCB	Hsinchu	0.79	359	eP		Pg	04 54 41.5	-0.5
	baz=357							
ENA	Nanau	0.80	58	eP		Pg	04 54 41.8	-0.4
	baz=56							
NANB	Nanao	0.80	58	eP		Pg	04 54 41.5	-0.8
	baz=56							
NANB				eS		Sb	04 54 53.1	0.0
	baz=56							
WSF	Szhu	0.80	243	eP		Pg	04 54 41.5	-0.9
	baz=244							
WSF				eS		Sb	04 54 53.5	+0.4
	baz=244							
ELDTW	Lidau	0.81	179	eP		Pg	04 54 42.0	-0.5
	baz=179							
ENTT	Nioudou	0.82	39	eP		Pg	04 54 42.1	-0.5
	baz=37							
WLGB	Puzi	0.83	231	eP		Pb	04 54 42.7	-0.2
	baz=232							
WLGB				eS		Sb	04 54 54.5	+0.6
	baz=232							
WTP	Ta-pu	0.83	206	eP		Pg	04 54 42.2	-0.8
	baz=206							
WTP				eS		Sb	04 54 54.1	0.0
	baz=206							
STYT	Tauyuan	0.86	195	eP		Pb	04 54 43.1	-0.4
	baz=195							
STYT				eS		Sb	04 54 55.1	+0.2
	baz=195							
TWK	Hsinying	0.87	213	eP		Pb	04 54 43.1	-0.5
	baz=213							
WLTB	Daxi	0.88	15	eP		Pb	04 54 43.6	-0.1
	baz=13							
WLTB				eS		Sg	04 54 55.7	+0.4
	baz=13							
SNST	Tainan City	0.91	211	eP		Pb	04 54 43.7	-0.5
	baz=212							
SNST				eS		Sb	04 54 56.1	0.0
	baz=212							
CHN1	Nanshi	0.92	208	eP		Pb	04 54 44.4	-0.1
	baz=209							
CHN1				eS		Sg	04 54 56.7	0.0
	baz=209							
TWE	Neicheng	0.94	40	eP		Pb	04 54 44.2	-0.5
	baz=39							
CHKT	Chengkung	0.96	160	eP		Pg	04 54 45.2	0.0
	baz=159							
CHKT				eS		Sn	04 54 59.7	+0.7
	baz=159							
CHN8	Yiju	0.98	228	eP		Pb	04 54 44.8	-0.6
	baz=228							
CHN8				eS		Sg	04 54 58.7	+0.2
	baz=228							
TWC	Suao	0.98	52	eP		Pb	04 54 45.1	-0.4
	baz=51							
TWC				eS		Sg	04 54 58.6	+0.1
	baz=51							
SGST	Jiashian	0.99	203	eP		Pb	04 54 45.6	-0.1
	baz=203							
SGST				eS		Sn	04 54 60.0	0.0
	baz=203							
TATO	Taipei	1.06	24	eP		Pg	04 54 48.1	+0.8
	baz=23							
TATO				eS		Sn	04 55 02.6	+0.9
	baz=23							
CHN3	Shinhua	1.09	213	eS		Sn	04 55 04.6	+2.2
	baz=213							
TWA	Mucha	1.11	28	eP		Pn	04 54 47.8	0.0
	baz=27							
TWA				eS		Sn	04 55 04.1	+1.2
	baz=27							
SCLT	Jiali	1.11	222	eS		Sn	04 55 03.8	+1.0
	baz=222							
NTC	Toucheng	1.13	41	eP		Pn	04 54 48.2	+0.1
	baz=40							
TWS1	Kuangyinshan	1.16	19	eS		Sg	04 55 04.6	+0.4
	baz=18							
EOS1	EOS1	1.16	62	eP		Pg	04 54 48.9	-0.3
	baz=61							
EOS1				eS		Sg	04 55 04.8	+0.5
	baz=61							
TWG	Pinlang	1.18	177	eP		Pb	04 54 48.7	-0.1
	baz=177							
TWG				eS		Sg	04 55 04.6	-0.3
	baz=177							
TWGBT	Beinan	1.18	177	eP		Pn	04 54 48.4	-0.4
	baz=177							
TWGBT				eS		Sg	04 55 04.7	-0.2
	baz=177							
EGS		1.19	45	eP		Pg	04 54 50.1	+0.3
	baz=44							
TIPB	Shuangxi	1.22	38	eP		Pg	04 54 50.1	-0.2
	baz=36							
TIPB				eS		Sg	04 55 06.0	-0.3
	baz=36							
YM04	YM04	1.25	23	eP		Pb	04 54 50.2	+0.1
	baz=22							
YM04				eS		Sg	04 55 07.5	+0.5
	baz=22							
TTN	Taitung	1.25	174	eS		Sg	04 55 10.9	+3.8
	baz=174							
YM01	YM01	1.25	24	eP		Pb	04 54 50.3	+0.2
	baz=23							
YM10	YM10	1.26	24	eS		Sg	04 55 08.0	+0.7
	baz=22							
YM05	YM05	1.27	24	eP		Pg	04 54 51.2	+0.1
	baz=22							
YM05				eS		Sg	04 55 08.2	+0.5
	baz=22							
YM03	YM03	1.27	22	eP		Pn	04 54 48.9	-1.1
	baz=21							
YM03				eS		Sb	04 55 05.8	-0.8
	baz=21							
WFSB	Wu-fen Shan	1.28	33	eS		Sb	04 55 06.5	-0.3
	baz=32							
SSD	Sandimen	1.30	195	eP		Pb	04 54 51.1	+0.3
	baz=195							
SSD				eS		Sg	04 55 08.5	-0.1
	baz=195							
TWB1	Santiao Chiao	1.34	42	eP		Pn	04 54 51.2	+0.1
	baz=41							
PNG	Penghu	1.40	252	eP		Pn	04 54 51.0	-0.7
	baz=252							
PNG				eS		Sn	04 55 10.1	+0.2
	baz=252							
ECL	Taimali	1.40	182	eP		Pb	04 54 52.5	-0.1
	baz=182							
ECL				eS		Sb	04 55 10.5	+0.2
	baz=182							
PHUB	P'eng-hu	1.40	250	eP		Pn	04 54 50.3	-1.4
	baz=250							
PHUB				eS		Sn	04 55 08.5	-1.5
	baz=250							
MASBT	Mashibuluo	1.43	194	eP		Pb	04 54 52.7	-0.3
	baz=194							
MASBT				eS		Sg	04 55 11.9	-0.8
	baz=194							
WDGT	Dungji	1.44	239	eP		Pn	04 54 51.6	-0.6
	baz=239							
WDGT				eS		Sn	04 55 10.4	-0.5
	baz=239							
WSSB	Gushan	1.52	207	eP		Pn	04 54 53.8	+0.4
	baz=207							
WSSB				eS		Sg	04 55 14.8	-0.9
	baz=207							
SSPT	Xinbi	1.56	195	eP		Pb	04 54 55.4	0.0
	baz=195							
SSPT				eS		Sn	04 55 14.4	+0.4
	baz=195							
EAST	Anshuo	1.62	185	eP		Pn	04 54 55.4	+0.6
	baz=185							
VCHM	Qimei	1.65	242	eP		Pn	04 54 54.4	-0.8
	baz=242							
VCHM				eS		Sn	04 55 15.8	-0.3
	baz=242							
SCZT	Fangliau	1.66	192	eP		Pn	04 54 55.9	+0.5
	baz=192							
SCZT				eS		Sb	04 55 17.3	-0.5
	baz=192							
JYNG	Yonagunijimaku	1.83	75	P		Pb	04 54 58.7	-1.2
JYNG				S		Sn	04 55 20.8	+0.3
YOJ	Yonaguni jima	1.89	76	eP		Pn	04 54 58.7	+0.2
	baz=75							
YOJ				eS		Sn	04 55 22.2	+0.1
	baz=75							
YOJ	Yonaguni jima	1.89	76	P		Pn	04 54 59.0	+0.5
YOJ				S		Sn	04 55 22.5	+0.5
PTMZ	Houxiangcun	2.00	301	eP		Pn	04 54 58.3	-1.8
	baz=301							
MATB	Ma-tsu	2.35	336	eP		Pn	04 55 03.1	-1.7
	baz=335							
IRIF	Iriomote-Funau	2.51	82	P		Pn	04 55 08.4	+1.3
IRIF				eS		Sn	04 55 39.3	+1.9
HATJ	Hateruma jima	2.56	88	P		Pn	04 55 08.1	+0.4
JKRS	Kuro-shima	2.75	84	P		Pn	04 55 11.8	+1.4
JIJ	Ishigaki jima	2.89	82	P		Pn	04 55 13.9	+1.6
JISG	Ishigakijimahi	3.07	78	P		Pn	04 55 15.9	+1.1

NIED ***30*** *04:57:00, 24.°00N×121.°00E, h23km, Mw3.7 Best double couple: M0 3.97000×10^14 NP1:φs=310.00000°, δ35.00000°, λ-6.00000°. NP2:φs=45.00000°, δ87.00000°, λ-125.00000°.*
JMA ***30*** *04:57:46.6±0.2, 24.°01N×121.°01E, h0km, M3.6*
TAP ***30*** *04:57:47.2, 24.°00N×121.°01E, h16km, ML4.0, B*
ISCJB ***30*** *04:57:48.2±0.1, 23.°993N±0.°009×121.°02E±0.°01, h18km±2km, Error ellipse: s-maj=1.9km s-min=1.3km az=35.1*

ISC 30 04:57:47.7±0.8, 24.°00N±0.°01×121.°01E±0.°01, h18km±3km, n125, σ0.91/207, 18C-32D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DPDB	Guoxing	0.08	292	⇑iP		Pg	04 57 50.9	-0.3
	baz=295							
DPDB				iS		Sg	04 57 53.2	-0.5
	baz=295							
SMLT	Sun Moon Lake	0.15	219	⇑iP		Pg	04 57 51.8	-0.3
	baz=210							
SMLT				iS		Sg	04 57 54.9	-0.1
	baz=210							
OWD	Renai	0.16	108	⇓P		Pg	04 57 52.1	-0.1
	baz=106							
OWD				S		Sg	04 57 55.2	-0.1
	baz=106							
CHGB	Renai	0.16	70	⇓P		Pg	04 57 52.2	-0.2
	baz=68							
CHGB				S		Sg	04 57 55.3	-0.2
	baz=68							
TYC	Yuchr	0.17	234	⇑iP		Pg	04 57 51.9	-0.3
	baz=233							
TYC				S		Sg	04 57 54.7	-0.4
	baz=233							
SSLB	Suanglung	0.22	192	⇑P		Pg	04 57 52.4	-0.6
	baz=187							
SSLB				eS		Sg	04 57 55.4	-1.2
	baz=187							
WHF	Hehuan Shan	0.28	59	⇓iP		Pb	04 57 54.3	-0.1
	baz=68							
WHF				iS		Sb	04 57 58.6	-0.2
	baz=68							
VWDT	VWDT	0.28	154	⇓P		Pb	04 57 53.9	-0.3
	baz=153							
VWDT				S		Sb	04 57 58.0	-0.6
	baz=153							
WHP	Taichung City	0.28	349	⇑iP		Pb	04 57 53.8	-0.5
	baz=349							
WHP				S		Sb	04 57 58.9	+0.3
	baz=349							
TDCB	Techi	0.28	29	⇑P		Pb	04 57 53.7	-0.7
	baz=29							
TDCB				S		Sg	04 57 57.4	-1.1
	baz=29							
TWT	Tachien	0.29	32	⇑iP		Pb	04 57 53.8	-0.8
	baz=29							
TWT				iS		Sg	04 57 57.5	-1.2
	baz=29							
WJS	Zhushan	0.31	235	⇓iP		Pb	04 57 54.9	+0.1
	baz=231							
WJS				S		Sb	04 58 00.3	+0.7
	baz=231							
WNT	Mingjian	0.32	247	⇓iP		Pb	04 57 55.1	+0.2
	baz=246							
WNT				S		Sb	04 58 00.9	+1.1
	baz=246							
TCU	Taichung	0.33	295	⇓P		Pb	04 57 55.5	+0.3
	baz=296							
TCU				eS		Sb	04 58 02.4	+2.2
	baz=296							
WHYT	Xinyi Township	0.34	205	P		Pb	04 57 55.1	-0.2
	baz=201							
WHYT				S		Sb	04 58 00.6	+0.2
	baz=201							
TWQ1	Liyutan	0.40	328	⇑iP		Pb	04 57 56.6	+0.2
	baz=340							
TWQ1				S		Sb	04 58 03.6	+1.3
	baz=340							
WCHH	Zhanghua	0.42	281	⇓iP		Pb	04 57 56.9	+0.3
	baz=280							
ESL	Shilin	0.43	116	⇓iP		Pb	04 57 56.5	-0.4
	baz=109							
ESL				iS		Sb	04 58 02.4	-0.7
	baz=109							
NSY	Sanyi	0.47	331	⇑iP		Pb	04 57 58.2	+0.7
	baz=334							
NSY				S		Sb	04 58 06.1	+2.0
	baz=334							
WDJ	Dajia District	0.48	316	⇓P		Pb	04 57 58.5	+0.8
	baz=317							
WDJ				eS		Sb	04 58 07.0	+2.6
	baz=317							
ETLH	Xiulin Townshi	0.48	65	⇓P		Pb	04 57 57.2	-0.6
	baz=61							
ETLH				S		Sb	04 58 03.6	-0.9
	baz=61							
CHN5	Tsauling	0.50	217	⇓iP		Pb	04 57 58.1	0.0
	baz=216							
CHN5				iS		Sb	04 58 05.8	+0.6
	baz=216							
EGFH	Guangfu	0.51	131	eP		Pb	04 57 57.5	-0.6
	baz=125							
EGFH				eS		Sg	04 58 04.4	-0.5
	baz=125							
WGK	Gukeng	0.52	232	⇓P		Pb	04 57 58.3	0.0
	baz=230							
WGK				S		Sb	04 58 06.3	+0.9
	baz=230							
YUS	Yu-Shan	0.52	186	⇑iP		Pb	04 57 57.9	-0.7
	baz=177							
YUS				S		Sg	04 58 05.0	-0.3
	baz=177							
PTSB	Yuanli	0.52	328	⇓iP		Pb	04 57 59.3	+0.9
	baz=329							
PTSB				S		Sb	04 58 07.5	+1.9
	baz=329							
ALS	Alishan	0.53	201	⇑iP		Pb	04 57 58.5	-0.2
	baz=192							
ALS				iS		Sb	04 58 06.3	+0.3
	baz=192							
WDLH	Douliu	0.53	234	⇓P		Pb	04 57 58.5	0.0
	baz=233							
WDLH				eS		Sb	04 58 07.3	+1.4
	baz=233							
NNSB	Datong	0.55	39	⇓P		Pg	04 57 57.8	-0.9
	baz=39							
NNSB				S		Sg	04 58 05.0	-1.1
	baz=39							
TWD	Chiawan	0.55	82	⇓iP		Pb	04 57 58.2	-0.5
	baz=89							
TWD				iS		Sb	04 58 05.7	-0.6
	baz=89							
NNS	Nan Shan	0.55	38	⇓iP		Pg	04 57 58.1	-0.7
	baz=38							
NNS				S		Sg	04 58 05.4	-0.8
	baz=38							
HWA	Hwalien	0.55	93	P		Pb	04 57 58.8	-0.1
	baz=92							
HWA				S		Sb	04 58 06.6	+0.3
	baz=92							
NACB	Ninganchiao	0.56	72	⇓P		Pb	04 57 58.5	-0.6
	baz=69							
NACB				S		Sg	04 58 06.1	-0.4
	baz=69							
NMLH	Miaoli	0.57	340	P		Pn	04 58 00.2	-0.8
	baz=340							
NMLH				S		Sb	04 58 08.8	+1.9
	baz=340							
EHY	Hungye	0.57	150	⇓iP		Pb	04 57 58.9	-0.4
	baz=144							
EHY				S		Sg	04 58 06.1	-0.8
	baz=144							
RLNB	Erlin	0.60	259	⇓P		Pb	04 57 59.6	-0.1
	baz=259							
RLNB				S		Sb	04 58 09.0	+1.1
	baz=259							
NSTT	Nanjuang	0.62	360	⇑iP		Pb	04 58 00.4	+0.2
	baz=7.0							
NSTT				iS		Sb	04 58 08.5	-0.1
	baz=7.0							
HGSD	Ruisui	0.64	143	⇓P		Pb	04 58 00.3	0.0
	baz=143							
HGSD				S		Sb	04 58 09.4	+0.5
	baz=143							
LIOB	Emei	0.64	1	⇑iP		Pb	04 58 00.8	+0.4
	baz=8.0							
LIOB				S		Sb	04 58 09.3	+0.3
	baz=8.0							
YULB	Yu-li	0.67	156	⇓P		Pb	04 58 00.3	-0.5
	baz=147							
YULB				S		Sg	04 58 09.2	-0.5
	baz=147							
CHN2	Minshiung	0.68	226	⇓iP		Pb	04 58 01.3	+0.3
	baz=226							
CHN2				S		Sb	04 58 11.4	+1.4
	baz=226							
TWF1	Yuli	0.70	158	⇓iP		Pb	04 58 01.1	-0.3
	baz=148							
TWF1				S		Sb	04 58 10.8	-0.1
	baz=148							
CHY	Chiayi	0.73	227	eP		Pb	04 58 01.9	-0.1
	baz=226							
CHY				S		Sb	04 58 13.1	+1.4
	baz=226							
WMLT	Mailiao	0.74	255	eP		Pb	04 58 02.0	-0.2
	baz=254							
YHNB	Yeheng	0.74	27	⇑P		Pb	04 58 01.7	-0.5
	baz=27							
YHNB				eS		Sg	04 58 10.1	-2.2
	baz=27							
CHN4	Tsaushan	0.75	210	eP		Pb	04 58 02.2	-0.1
	baz=209							
SBCB	Hsinchu	0.79	359	eP		Pn	04 58 03.7	-0.3
	baz=359							
SBCB				S		Sn	04 58 15.1	-0.2
	baz=359							
ENA	Nanau	0.79	58	⇓iP		Pb	04 58 02.6	-0.4
	baz=58							
ENA				S		Sg	04 58 13.0	-0.8
	baz=58							
HSN	Hsinchu	0.80	358	eP		Pn	04 58 04.1	0.0
	baz=1.0							
HSN				eS		Sn	04 58 16.7	+1.1
	baz=1.0							
NANB	Nanao	0.80	58	⇓P		Pg	04 58 02.5	-0.9
	baz=58							
NANB				S		Sg	04 58 13.0	-1.0
	baz=58							
WSF	Szhu	0.81	243	eP		Pg	04 58 02.7	-0.8
	baz=242							
WSF				S		Sb	04 58 14.8	+1.0
	baz=242							
ELDTW	Lidau	0.81	179	P		Pb	04 58 02.9	-0.5
	baz=185							
ELDTW				eS		Sb	04 58 14.6	+0.6
	baz=185							
ENTT	Nioudou	0.81	39	⇓iP		Pg	04 58 02.7	-1.0
	baz=32							
ENTT				S		Sb	04 58 15.3	+1.2
	baz=32							
WLGB	Puzi	0.83	231	eP		Pg	04 58 02.5	-1.4
	baz=230							
WLGB				eS		Sb	04 58 15.5	+0.9
	baz=230							
WTP	Ta-pu	0.84	206	eP		Pg	04 58 03.2	-0.9
	baz=204							
TWK	Hsinying	0.87	213	P		Pb	04 58 04.1	-0.3
	baz=212							
TWK				eS		Sb	04 58 16.4	+0.6
	baz=212							
WLTB	Daxi	0.87	15	eP		Pn	04 58 05.3	+0.1
	baz=21							
WLTB				eS		Sb	04 58 16.9	+1.1
	baz=21							
SNST	Tainan City	0.91	211	eP		Pb	04 58 04.8	-0.2
	baz=210							
CHN1	Nanshi	0.93	208	eP		Pg	04 58 04.9	-0.9
	baz=209							
CHN1				S		Sb	04 58 17.6	+0.3
	baz=209							
TWE	Neicheng	0.94	40	P		Pb	04 58 05.2	-0.2
	baz=37							
TWE				eS		Sb	04 58 18.4	+0.9
	baz=37							
CHKT	Chengkung	0.96	160	⇑P		Pb	04 58 06.0	+0.2
	baz=143							
NCUH	Zhongli	0.97	10	eP		Pn	04 58 07.2	+0.7
	baz=11							
NCU	National Centr	0.98	10	eP		Pb	04 58 06.2	0.0
	baz=10.0							
NCU				S		Sn	04 58 20.3	+0.3
	baz=10.0							
TWC	Suao	0.98	52	P		Pb	04 58 06.0	-0.2
	baz=52							
TWC				S		Sg	04 58 18.6	-1.0
	baz=52							
CHN8	Yiju	0.98	228	eP		Pg	04 58 05.8	-1.0
	baz=227							
CHN8				eS		Sb	04 58 19.8	+1.0
	baz=227							
SGST	Jiashian	1.00	203	eP		Pb	04 58 06.7	+0.2
	baz=213							
SGST				eS		Sn	04 58 21.0	+0.5
	baz=213							
ILA	Ilan	1.02	42	eP		Pg	04 58 06.0	-1.5
	baz=43							
TATO	Taipei	1.06	24	eP		Pb	04 58 07.7	+0.1
	baz=24							
TATO				eS		Sb	04 58 21.8	+0.6
	baz=24							
CHN3	Shinhua	1.09	213	eP		Pn	04 58 08.9	+0.7
	baz=211							
TWA	Mucha	1.10	28	eP		Pn	04 58 08.6	+0.2
	baz=28							
TWA				eS		Sn	04 58 24.4	+1.2
	baz=28							
SCLT	Jiali	1.11	222	eP		Pg	04 58 07.8	-1.5
	baz=221							
NTC	Toucheng	1.13	41	eP		Pb	04 58 08.8	0.0
	baz=41							
NTC				eS		Sn	04 58 26.4	+2.5
	baz=41							
TWS1	Kuangyinshan	1.16	19	eP		Pn	04 58 10.9	+1.9
	baz=5.0							
TWS1				eS		Sn	04 58 25.9	+1.5
	baz=5.0							
EOS1	EOS1	1.16	62	eP		Pn	04 58 09.6	+0.5
	baz=51							
EOS1				eS		Sn	04 58 26.0	+1.6
	baz=51							
TWG	Pinlang	1.18	177	⇑P		Pg	04 58 09.6	-1.0
	baz=170							
TWG				eS		Sn	04 58 25.4	+0.4
	baz=170							
TWGBT	Beinan	1.18	177	⇑P		Pg	04 58 09.6	-1.0
	baz=170							
TWGBT				S		Sn	04 58 25.7	+0.6
	baz=170							
TAI1	Yung-k'ang	1.20	217	eP		Pn	04 58 10.2	+0.6
	baz=229							
TIPB	Shuangxi	1.22	38	⇓P		Pb	04 58 09.8	-0.5
	baz=37							
TIPB				eS		Sn	04 58 27.1	+1.0
	baz=37							

Code	Station Name	Δ°	AZ²	Phase	Op	ISC	Time h m s	Res ISC
YM04	**YM04**	1.24	23	*e*P	Pg	Pn	04 58 11.3	-0.4
	baz=3.0							
YM01	**YM01**	1.25	24	*e*P	Pn	Pn	04 58 10.5	+0.1
	baz=27							
TTN	**Taitung**	1.25	174	*e*P	Pn	Pn	04 58 10.5	+0.2
	baz=173							
YM10	**YM10**	1.25	24	*e*P	Pn	Pn	04 58 10.7	+0.2
	baz=23							
YM10				*e*S		Sg	04 58 27.2	-1.1
	baz=23							
YM05	**YM05**	1.26	24	*e*P	Pn	Pn	04 58 10.4	-0.2
	baz=4.0							
ANP	**Anpu**	1.27	22	*e*P	Pg	Pn	04 58 11.3	-1.0
	baz=5.0							
YM03	**YM03**	1.27	22	*e*P	Pg	Pn	04 58 11.8	-0.5
	baz=3.0							
NWF	**Wu-fen Shan**	1.28	33	*e*P	Pg	Pn	04 58 12.2	-0.2
	baz=36							
WFSB	**Wu-fen Shan**	1.28	33	*e*P	Pg	Pn	04 58 11.7	-0.7
	baz=36							
TWM1	**Shoushan**	1.29	205	*e*P	Pg	Pn	04 58 12.5	-0.2
	baz=203							
YM08	**YM08**	1.29	24	*e*P	Pg	Pn	04 58 11.7	-1.1
	baz=27							
SSD	**Sandimen**	1.30	195	*e*P	Pg	Pn	04 58 11.8	-1.0
	baz=204							
TWB1	**Santiao Chiao**	1.34	42	*e*P	Pg	Pn	04 58 12.4	-1.2
	baz=44							
SGLT	**Jiouru**	1.36	200	*e*P	Pg	Pn	04 58 13.5	-0.5
	baz=198							
TWY	**Chenhua**	1.38	23	*e*P	Pg	Pn	04 58 14.2	-0.1
	baz=6.0							
SNJT	**Kaohsiung City**	1.39	206	*e*P	Pb	Pn	04 58 13.2	0.0
	baz=205							
PNG	**Penghu**	1.40	252	*e*P	Pn	Pn	04 58 11.5	-0.9
	baz=250							
PNG				*e*S		Sb	04 58 30.7	-0.2
	baz=250							
ECL	**Taimali**	1.40	182	*e*P	Pb	Pn	04 58 13.5	+0.1
	baz=180							
PHUB	**P'eng-hu**	1.40	250	P	Pn	Pn	04 58 11.3	-1.2
	baz=248							
PHUB				*e*S		Sb	04 58 29.6	-1.3
	baz=248							
MASBT	**Mashibuluo**	1.43	194	*e*P	Pn	Pn	04 58 13.3	+0.5
	baz=195							
MASBT				S		Sg	04 58 33.5	-0.4
	baz=195							
WDGT	**Dungji**	1.44	239	⇑P	Pn	Pn	04 58 12.8	-0.2
	baz=248							
WDGT				S		Sb	04 58 32.5	+0.5
	baz=248							
WSSB	**Gushan**	1.52	207	*e*P	Pn	Pn	04 58 14.4	+0.3
	baz=205							
SSPT	**Xinbi**	1.57	195	*e*P	Pb	Pn	04 58 16.5	+0.3
	baz=194							
EAST	**Anshuo**	1.62	185	*e*P	Pn	Pn	04 58 16.2	+0.7
	baz=202							
VCHM	**Qimei**	1.65	242	⇓*e*P	Pn	Pn	04 58 15.2	-0.6
	baz=240							
VCHM				*e*S		Sn	04 58 36.9	+0.3
	baz=240							
SCZT	**Fangliau**	1.66	192	*e*P	Pn	Pn	04 58 16.6	+0.6
	baz=193							
SCZT				S		Sb	04 58 39.0	+0.5
	baz=193							
JYNG	**Yonagunijimaku**	1.83	75	P	Pn	Pn	04 58 19.2	+0.9
JYNG				*e*S		Sn	04 58 42.3	+1.4
PTTC	**Pingtan**	1.87	323	*e*P	Pn	Pn	04 58 17.0	-1.8
	baz=322							
PCYT	**Pengchaiyu**	1.89	31	*e*P	Pn	Pn	04 58 19.2	+0.1
	baz=34							
YOJ	**Yonaguni jima**	1.89	76	*e*P	Pn	Pn	04 58 19.5	+0.4
	baz=88							
YOJ				*e*S		Sn	04 58 43.9	+1.4
	baz=88							
YOJ	**Yonaguni jima**	1.89	76	P	Pn	Pn	04 58 20.4	+1.3
YOJ				*e*S		Sb	04 58 45.2	+0.3
PTMZ	**Houxiangcun**	2.00	301	*e*P	Pn	Pn	04 58 19.2	-1.5
	baz=301							
TWKBT	**Hengchun**	2.06	185	*e*P	Pn	Pn	04 58 22.2	+0.7
	baz=199							
MATB	**Ma-tsu**	2.34	336	*e*P	Pn	Pn	04 58 24.0	-1.4
	baz=334							
KNMB	**Chin-men Tao**	2.43	281	⇓*e*P	Pn	Pn	04 58 25.3	-1.3
	baz=279							
IRIF	**Iriomote-Funau**	2.51	82	P	Pn	Pn	04 58 29.3	+1.6
IRIF				*e*S		Sn	04 59 00.1	+2.3
HATJ	**Hateruma jima**	2.56	88	P	Pn	Pn	04 58 30.7	+2.3
HATJ				*e*S		Sn	04 59 01.6	+2.5
MHZQ	**Yeshan**	2.75	320	*e*P	Pn	Pn	04 58 29.5	-1.5
	baz=319							
JKRS	**Kuro-shima**	2.75	85	P	Pn	Pn	04 58 33.2	+2.2
LYJJ	**Jianjiangzhen**	2.77	336	*e*P	Pn	Pn	04 58 30.0	-1.3
	baz=334							
JIJ	**Ishigaki jima**	2.89	82	P	Pn	Pn	04 58 33.2	+0.3
JIJ				*e*S		Sn	04 59 07.2	0.0
AXDP	**Jialang**	2.91	288	*e*P	Pn	Pn	04 58 32.2	-1.0
	baz=286							
ZPLA	**Ao Xicun**	2.98	269	⇓*e*P	Pn	Pn	04 58 33.1	-1.0
	baz=267							
JISG	**Ishigakijimahi**	3.07	78	P	Pn	Pn	04 58 36.2	+0.8
JISG				*e*S		Sn	04 59 12.1	+0.4
ZZJH	**Jiuhuzhen**	3.12	279	*e*P	Pn	Pn	04 58 35.2	-0.8
	baz=277							
JTJ	**Tarama**	3.43	79	P	Pn	Pn	04 58 41.8	+1.5
JTJ				*e*S		Sn	04 59 20.8	+0.2
JIRB	**Irabujima**	3.89	77	P	Pn	Pn	04 58 47.6	+1.0

KRNET ***30*** *04:59:29.2±0.1, 39°.08N×73°.44E, mb5.4*
IDC ***30*** *04:59:29.3±0.4, 39°.18N×73°.51E, h0km, mb4.7/39, mb1 4.8/47, mb1mx4.8/56, mbtmp4.8/47, ML4.3/8, MS4.1/36, Ms1 4.1/36, ms1mx4.0/45, Error ellipse: s-maj=9.8km s-min=8.2km az=174.0*
BJI ***30*** *04:59:30.0±0.0, 39°.17N×73°.38E, h10km, mb5.0/60, mB4.9/40, ML5.3/4, Ms4.8/67, Ms7 4.5/61*
MOS ***30*** *04:59:33.3±1.0, 39°.27N×73°.46E, h33km, mb5.3/51, MS4.3/22, Error ellipse: s-maj=4.3km s-min=3.5km az=92.2*
SOME ***30*** *04:59:33.9, 39°.50N×73°.52E, h10km, MS4.6*
NEIC ***30*** *04:59:34.4±1.6, 39°.27N×73°.47E, h29km±4km, mb5.0/133, Error ellipse: s-maj=11.1km s-min=10.0km az=162.0*
GCMT ***30*** *04:59:34.4±0.2, 39°.26N±0°.01×73°.47E±0°.01, h28km±1km, MW5.0/96, Moment Tensor Solution. s50,c56; s96,c149; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.25±.13; Mθθ-1.51±.12; Mϕϕ 1.76±.11; Mrθ 0.73±.20; Mϕθ-3.68±.09; Mϕr-0.75±.19; Best double couple: M=4.14700×10¹⁶ NP1:φs101.00000°, δ84.00000°, λ169.00000°. NP2: φs193.00000°, δ79.00000°, λ7.00000°. Principal axes: T 4.3790, Plg13.0000°, Azm57.0000°; N -0.4630, Plg77.0000°, Azm252.0000°; P -3.9140, Plg3.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NNC ***30*** *04:59:34.1±2.0, 39°.39N×73°.58E, h0km, mb5.8, mpv5.5 Error ellipse: s-maj=16.3km s-min=9.5km az=172.0*
ISCJB ***30*** *04:59:34.4±0.3, 39°.14N±0°.02×73°.44E±0°.02, h49km±3km, mb4.9/164, MS4.3/69, Error ellipse: s-maj=2.9km s-min=2.3km az=34.7*
ISC 30 04:59:33.5±0.5, 39°.26N±0°.03×73°.40E±0°.02, h24km±3km, h23km:pP-P, n635, σ2§01/700, mb5.0/177, MS4.3/70, 76C-57D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ²	Phase	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	1.26	281	⇑*i*P		Pn	04 59 54.8	-1.1
	baz=88							
DRK				⇑*i*S		Sn	05 00 13.3	+1.0
	baz=88							
KSH	**Kashi**	2.01	82	Pg		Pn	05 00 01.5	-4.6
KSH				Sg		Sn	05 00 21.0	-10
KSH				smax		smax		
	comp=N,89μm,1.0s							
KSH				smax		smax		
	comp=E,55μm,1.0s							
KSH	**Kashi**	2.01	82	Pg		Pn	05 00 00.0	-6.1
KSH				Sg		Sn	05 00 19.0	-12
KSH				smax		smax		
	comp=E,89μm,1.0s							
KSH				smax		smax		
	comp=E,55μm,1.0s							
BTK	**Batken**	2.15	293	*e*Pn		Pn	05 00 10.1	+2.1
BTK	**Batken**	2.15	293	*e*PN		Pn	05 00 10.1	+2.1
BTK	**Batken**	2.15	293	⇑*e*P		Pn	05 00 10.2	+2.2
	baz=97							
BTK				⇑*i*S		Sb	05 00 39.6	+1.6
	baz=97							
GAR	**Garm**	2.41	265	*e*Pn		Pn	05 00 14.7	+3.1
GAR	**Garm**	2.41	265	*e*PN		Pn	05 00 14.7	+3.1
ARLS	**Aral**	2.69	15	⇓*i*P		Pn	05 00 18.4	+2.9
	baz=13							
ARLS				⇓*i*S		Sb	05 00 54.6	+0.9
	baz=13							
ARK	**Arkit**	2.76	337	⇓*i*P		Pn	05 00 18.4	+2.0
	baz=38							
ARK				⇓*i*S		Sb	05 00 55.2	-0.5
	baz=38							
UCH	**Uchtor**	3.08	16	P		Pn	05 00 23.9	+2.8
	SNR=503							
UCH	**Uchtor**	3.08	16	⇑*e*P		Pn	05 00 24.1	+3.0
	baz=14							
UCH				⇑*i*S		Sb	05 01 04.1	-1.1
	baz=14							
KZA	**Kyzart**	3.15	26	P		Pn	05 00 24.4	+2.4
	SNR=668							
KZA	**Kyzart**	3.15	26	⇓*i*P		Pn	05 00 24.2	+2.2
	baz=24							
KZA				⇓*i*S		Sb	05 01 04.5	-2.5
	baz=24							
EKS2	**Erkin-Say**	3.41	5	P		Pn	05 00 28.6	+3.3
	SNR=156							
EKS2	**Erkin-Say**	3.41	5	⇓*i*P		Pn	05 00 28.7	+3.3
	baz=4.0							
EKS2				⇓*i*S		Sb	05 01 12.2	-2.1
	baz=4.0							
AAK	**Ala-Archa**	3.47	13	Pn		Pn	05 00 29.5	+3.3
	comp=E,171nm,0.3s,baz=171,slow=6.4,SNR=1230							
AAK				Sn		Sb	05 01 12.9	-3.3
	comp=E,215nm,0.3s,baz=140,slow=16,SNR=19							
AAK	**Ala-Archa**	3.47	13	P		Pn	05 00 29.5	+3.3
	SNR=721							
AAK	**Ala-Archa**	3.47	13	*e*Pn		Pn	05 00 29.8	+3.5
AAK	**Ala-Archa**	3.47	13	⇑Pn		Pn	05 00 29.4	+3.1
	comp=E,1μm,0.9s							
AAK				⇑Sn		Sb	05 01 13.0	-3.3
	comp=E,5μm,1.4s							
AAK	**Ala-Archa**	3.47	13	*i* Pb		Pn	05 00 29.8	+3.5
	SNR=216							
AAK	**Ala-Archa**	3.47	13	*c i*PN		Pn	05 00 27.5	+1.2
AAK				pmax		pmax		
	comp=Z,1μm,0.8s							
AAK	**Ala-Archa**	3.47	13	⇑*e*P		Pn	05 00 29.2	+2.9
	baz=12							
AAK				⇑*i*S		Sb	05 01 13.7	-2.5
	baz=12							
MRKS	**Merke**	3.48	358	Pg		Pb	05 00 33.9	-0.7
	comp=Z,982nm,0.5s							
MRKS				Lg		Lg	05 01 14.0	
	comp=Z,1μm,0.4s							
MRKS	**Merke**	3.48	358	*e*P		Pb	05 00 32.0	-2.5
	comp=Z,684nm,0.8s							
MRKS				*e*S		Sb	05 01 13.1	-3.4
	comp=Z,2μm,0.5s							
KBK	**Karagaybulak**	3.59	19	P		Pn	05 00 31.2	+3.4
	SNR=300							
FRU1	**Bishkek**	3.67	14	*e*Pn		Pn	05 00 32.7	+3.9
FRU1	**Bishkek**	3.67	14	⇑*e*P		Pn	05 00 32.1	+3.3
	baz=13							
FRU1				⇑*e*S		Sb	05 01 17.5	-4.2
	baz=13							
ULHL	**Ulahol**	3.68	35	P		Pn	05 00 31.2	+2.1
	SNR=102							
BOOM	**Boomskoye usch**	3.76	30	*e*Pn		Pn	05 00 32.7	+2.5
BOOM	**Boomskoye usch**	3.76	30	*e*PN		Pn	05 00 32.7	+2.5
BOOM	**Boomskoye usch**	3.76	30	⇑*i*P		Pn	05 00 32.8	+2.7
	baz=28							
BOOM				⇑*i*S		Sb	05 01 19.4	-5.0
	baz=28							
TAS	**Tashkent**	3.77	305	⇑*i*P		Pn	05 00 32.8	+2.7
	baz=7.0							
TAS				⇑*i*S		Sn	05 01 18.7	+5.0
	baz=7.0							
IUG	**Iuzhnay**	3.86	319	Pg		Pb	05 00 45.4	+4.5
	comp=Z,934nm,0.6s							
IUG				Lg		Lg	05 01 34.3	
	comp=Z,6μm,0.9s							
IUG	**Iuzhnay**	3.86	319	*d i*PN		Pn	05 00 33.9	+2.4
IUG				MLR		MLR		
	comp=Z,106nm,8.0s							
IUG	**Iuzhnay**	3.86	319	⇓*i*P		Pn	05 00 33.9	+2.4
IUG				*e*LR		LR	05 02 09.9	
	comp=Z,106nm,7.6s							
IUG	**Iuzhnay**	3.86	319	*e*P		Pb	05 00 44.3	+3.4
	comp=Z,934nm,0.6s							
IUG				*e*S		Sb	05 01 35.1	+7.9
	comp=Z,6μm,0.9s							
CHMS	**Chumysh**	3.87	15	P		Pn	05 00 34.8	+3.2
	SNR=90							
DZA	**Taraz**	3.95	337	Pg		Pb	05 00 44.4	+1.9
	comp=Z,2μm,0.4s							
DZA				Lg		Lg	05 01 32.5	
	comp=Z,4μm,0.7s							
DZA	**Taraz**	3.95	337	*d i*PN		Pn	05 00 34.6	+1.9
DZA				MLR		MLR		
	comp=Z,1μm,9.0s							
DZA	**Taraz**	3.95	337	⇓*i*P		Pn	05 00 34.6	+1.9
DZA				*e*LR		LR	05 02 00.9	
	comp=Z,1μm,9.3s							
DZA	**Taraz**	3.95	337	*e*P		Pb	05 00 40.5	-2.0
	comp=Z,1μm,0.5s							
DZA				*e*S		Sb	05 01 29.2	-0.6
	comp=Z,4μm,0.7s							
TKM2	**Tokmak 2**	4.02	24	P		Pn	05 00 36.5	+2.8
	SNR=308							
TKM2	**Tokmak 2**	4.02	24	⇑Pn		Pn	05 00 36.5	+2.8
	comp=Z,252nm,0.9s							
TKM2				⇓Pg		Pb	05 00 48.2	+4.5
	comp=Z,547nm,0.6s							
TKM2				⇓Lg		Lg	05 01 37.5	
	comp=Z,4μm,0.8s							
TKM2	**Tokmak 2**	4.02	24	*i* PN		Pn	05 00 36.2	+2.5
TKM2				pmax		pmax		
	comp=Z,430nm,0.9s							
KDJ	**Kajisay**	4.06	44	*e*Pn		Pn	05 00 36.4	+2.1
KDJ	**Kajisay**	4.06	44	*e*PN		Pn	05 00 36.4	+2.1
USP	**Ospenovka**	4.09	11	P		Pn	05 00 38.2	+3.6
	SNR=197							
CHM	**Chinkent**	4.20	318	*e*P		Pb	05 00 51.4	+4.7
	comp=Z,3μm,0.5s							
CHM				*e*S		Sb	05 01 46.6	+10
	comp=Z,6μm,0.7s							
KST	**Kastek**	4.25	26	Pg		Pb	05 00 50.0	+2.5
	comp=Z,744nm,0.4s							
KST				Lg		Lg	05 01 41.8	
	comp=Z,4μm,0.7s							
KST	**Kastek**	4.25	26	*e*P		Pb	05 00 48.2	+0.7
	comp=Z,744nm,0.4s							
KST				*e*S		Sb	05 01 42.6	+4.2
	comp=Z,4μm,0.7s							
DGS	**Degeres**	4.36	23	Pg		Pb	05 00 52.2	+2.7
	comp=Z,748nm,0.6s							
DGS				Lg		Lg	05 01 45.5	
	comp=Z,2μm,0.7s							
DGS	**Degeres**	4.36	23	*e*P		Pb	05 00 48.6	-0.8
	comp=Z,748nm,0.6s							
DGS				*e*S		Sb	05 01 43.0	+1.3
	comp=Z,2μm,0.7s							
KK31	**Karatay Array**	4.42	331	*e*Pn		Pn	05 00 41.2	+2.1
KK31	**Karatay Array**	4.42	331	Pn		Pn	05 00 41.2	+2.1
	comp=Z,931nm,0.9s,baz=142,slow=15,SNR=4167							
KK31				⇑Pg		Pb	05 00 53.0	+2.7
	comp=Z,483nm,0.5s,baz=142,slow=16,SNR=6.7							
KK31				⇑Sn		Sn	05 01 36.0	+6.3
	comp=Z,1μm,0.8s,baz=145,slow=19,SNR=4.7							
KK31				⇓Lg		Lg	05 01 51.0	
	comp=Z,895nm,0.6s,baz=167,slow=23,SNR=3.6							
KK31	**Karatay Array**	4.42	331	*i* PN		Pn	05 00 41.1	+2.1
KK31				pmax		pmax		
	comp=Z,931nm,0.9s							
KKAR	**Karatay Array**	4.42	331	*e*Pn		Pn	05 00 41.3	+2.2
KKAR	**Karatay Array**	4.42	331	*e*PN		Pn	05 00 41.3	+2.2
MTBS	**Maitube**	4.49	30	Pg		Pb	05 00 54.8	+3.2
	comp=Z,602nm,0.4s							
MTBS				Lg		Lg	05 01 50.2	
	comp=Z,2μm,0.5s							
MTBS	**Maitube**	4.49	30	*e*P		Pb	05 00 52.4	+0.7
	comp=Z,602nm,0.4s							
MTBS				*e*S		Sb	05 01 48.8	+3.4
	comp=Z,2μm,0.5s							
TNSS	**Tian-Shan**	4.63	34	Pg		Pb	05 00 55.5	+1.4
	comp=Z,1μm,0.6s							
TNSS				Lg		Lg	05 01 51.4	
	comp=Z,4μm,0.6s							
TNSS	**Tian-Shan**	4.63	34	*e*PN		Pn	05 00 44.6	+2.4
TNSS	**Tian-Shan**	4.63	34	*e*P		Pn	05 00 44.7	+2.4
TNSS	**Tian-Shan**	4.63	34	*e*P		Pb	05 00 55.2	+1.1
	comp=Z,1μm,0.6s							
TNSS				*e*S		Sb	05 01 53.5	+3.9
	comp=Z,4μm,0.6s							
AAA	**Alma-Ata**	4.75	33	Pg		Pb	05 00 57.6	+1.5
	comp=Z,846nm,0.6s							
AAA				Lg		Lg	05 01 55.1	
	comp=Z,4μm,0.9s							
AAA	**Alma-Ata**	4.75	33	*e*PN		Pn	05 00 46.6	+2.9
AAA				MLR		MLR		
	comp=Z,4μm,12.0s							
AAA	**Alma-Ata**	4.75	33	*e*P		Pn	05 00 46.7	+3.0
AAA				*e*LR		LR	05 02 20.4	
	comp=Z,4μm,12.3s							
AAA	**Alma-Ata**	4.75	33	*e*P		Pb	05 00 57.9	+1.8
	comp=Z,846nm,0.6s							
AAA				*e*S		Sb	05 01 58.9	+6.0
	comp=Z,4μm,0.9s							
MDOK	**Medeo**	4.77	34	Pg		Pb	05 00 57.2	+0.7
	comp=Z,693nm,0.7s							
MDOK				Lg		Lg	05 01 54.3	
	comp=Z,2μm,1.0s							
MDOK	**Medeo**	4.77	34	*e*PN		Pn	05 00 46.3	+2.2
MDOK				MLR		MLR		
	comp=Z,5μm,12.0s							
MDOK	**Medeo**	4.77	34	*e*P		Pn	05 00 46.3	+2.2
MDOK				*e*LR		LR	05 02 18.1	
	comp=Z,5μm,11.8s							
MDOK	**Medeo**	4.77	34	*e*P		Pb	05 00 57.2	+0.7
	comp=Z,693nm,0.7s							
MDOK				*e*S		Sb	05 01 57.0	+3.5
	comp=Z,2μm,1.0s							
KNDC	**Almaty**	4.78	33	⇑Pn		Pn	05 00 47.2	+3.1
KNDC				⇑Pg		Pb	05 00 58.1	+1.5
KNDC				⇓Lg		Lg	05 02 00.8	
KOTS	**Kotyrbulak**	4.86	34	Pg		Pb	05 00 59.6	+1.7
	comp=Z,644nm,0.5s							
KOTS				Lg		Lg	05 01 58.3	
	comp=Z,17μm,0.9s							
KOTS	**Kotyrbulak**	4.86	34	*e*P		Pb	05 00 59.6	+1.7
	comp=Z,644nm,0.5s							
KOTS				*e*S		Sb	05 02 01.2	+5.3
	comp=Z,17μm,0.9s							
KTBS	**Karatobe**	5.08	28	Pg		Pb	05 01 03.4	+1.7
	comp=Z,453nm,0.7s							
KTBS				Lg		Lg	05 02 04.8	
	comp=Z,3μm,0.6s							
KTBS	**Karatobe**	5.08	28	*e*P		Pb	05 01 03.4	+1.7
	comp=Z,453nm,0.7s							
KTBS				*e*S		Sb	05 02 08.1	+5.7
	comp=Z,3μm,0.6s							
KUU	**Kurty**	5.13	24	*e*PN		Pn	05 00 50.1	+1.3
KUU				MLR		MLR		
	comp=Z,4μm,11.0s							
KUU	**Kurty**	5.13	24	*e*P		Pn	05 00 50.2	+1.3
KUU				*e*LR		LR	05 02 35.0	
	comp=Z,4μm,10.7s							
CHKK	**Chushkaly**	5.32	29	Pg		Pb	05 01 08.8	+3.0
	comp=Z,276nm,0.7s							
CHKK				Lg		Lg	05 02 14.8	
	comp=Z,2μm,0.5s							
CHKK	**Chushkaly**	5.32	29	*e*PN		Pn	05 00 52.8	+1.3
CHKK	**Chushkaly**	5.32	29	*e*P		Pn	05 00 52.8	+1.3
CHKK	**Chushkaly**	5.32	29	*e*P		Pb	05 01 08.8	+3.0
	comp=Z,276nm,0.7s							
CHKK				*e*S		Sb	05 02 16.9	+7.7
	comp=Z,2μm,0.5s							
SATY	**Saty**	5.35	43	Pg		Pb	05 01 07.7	+1.3
	comp=Z,1μm,0.8s							
SATY				Lg		Lg	05 02 13.4	
	comp=Z,2μm,1.1s							
SATY	**Saty**	5.35	43	*e*PN		Pn	05 00 53.1	+1.1
SATY				MLR		MLR		
	comp=Z,2μm,12.0s							
SATY	**Saty**	5.35	43	*e*P		Pn	05 00 53.2	+1.2
SATY				*e*LR		LR	05 02 46.8	
	comp=Z,2μm,11.8s							
SATY	**Saty**	5.35	43	*e*P		Pb	05 01 07.7	+1.3
	comp=Z,1μm,0.8s							
SATY				*e*S		Sb	05 02 14.8	+4.6
	comp=Z,2μm,1.1s							
ZHN	**Zhinishke**	5.44	43	Pg		Pb	05 01 08.7	+0.8
	comp=Z,665nm,0.6s							
ZHN				Lg		Lg	05 02 14.2	
	comp=Z,513nm,0.9s							
ZHN	**Zhinishke**	5.44	43	*e*P		Pb	05 01 08.7	+0.8
	comp=Z,665nm,0.6s							
ZHN				*e*S		Sb	05 02 16.9	+4.1
	comp=Z,513nm,0.9s							
KURS	**Kuram**	5.54	39	Pg		Pb	05 01 08.7	-0.8
	comp=Z,565nm,0.9s							
KURS				Lg		Lg	05 02 14.0	
	comp=Z,1μm,1.0s							
KURS	**Kuram**	5.54	39	*e*P		Pb	05 01 09.0	-0.5
	comp=Z,565nm,0.9s							
KURS				*e*S		Sb	05 02 17.9	+2.3
	comp=Z,1μm,1.0s							
CEP	**Cherat**	5.56	193	P		Pn	05 00 57.0	+2.1
CHCP	**Chirah Chowk**	5.59	181	P		Pn	05 00 57.7	+2.5
NIL	**Nilore**	5.60	181	*e*Pn		Pn	05 00 58.2	+2.8
NIL	**Nilore**	5.60	181	*e*PN		Pn	05 00 58.2	+2.8
UZB	**Uzynbulak**	5.75	46	Pg		Pb	05 01 15.1	+2.0
	comp=Z,412nm,1.0s							
UZB				Lg		Lg	05 02 25.0	
	comp=Z,976nm,0.9s							
UZB	**Uzynbulak**	5.75	46	*e*PN		Pn	05 00 58.6	+1.1
UZB				MLR		MLR		
	comp=Z,2μm,12.0s							
UZB	**Uzynbulak**	5.75	46	*e*P		Pn	05 00 58.6	+1.1
UZB				*e*LR		LR	05 03 05.8	
	comp=Z,2μm,11.8s							
UZB	**Uzynbulak**	5.75	46	*e*P		Pb	05 01 15.1	+2.0
	comp=Z,412nm,1.0s							
UZB				*e*S		Sb	05 02 28.2	+6.6
	comp=Z,976nm,0.9s							
KPKS	**Kokpek**	5.78	42	*e*PN		Pn	05 00 59.3	+1.4
KPKS				MLR		MLR		
	comp=Z,1μm,11.0s							
KPKS	**Kokpek**	5.78	42	*e*P		Pn	05 00 59.4	+1.4
KPKS				*e*LR		LR	05 02 58.5	
	comp=Z,1μm,10.7s							
KPKS	**Kokpek**	5.78	42	*e*P		Pb

comp=Z,605nm,0.8s
PDGK ⇑Lg Lg 05 02 42.7
comp=Z,1μm,0.8s
PDGK Podgornoye 6.13 46 PN Pn 05 01 03.5 +0.9
PDGK pmax pmax
comp=Z,118nm,0.6s
TDK Taldyqorghan 6.84 31 *e*LR LR 05 03 35.6
comp=Z,4μm,11.2s
DHRM DHARAMSHALA 7.38 161 *e*P **Pn 05 01 20.3 +0.3**
DHRM *e*S **Sn 05 02 45.2 +2.2**
DHRM IAML 05 02 57.2
comp=N,691nm,0.5s
DHRM IAML 05 03 03.9
comp=E,1μm,0.2s
SMLA Simla 8.68 158 *e*P **Pn 05 01 38.2 +0.7**
SMLA *e*S **Sn 05 03 13.2 -1.4**
SMLA IAML 05 03 22.5
comp=E,477nm,0.5s
SMLA IAML 05 03 22.9
comp=N,386nm,0.3s
OTUK Ortayu 9.02 355 ⇓Pn **Pn 05 01 42.8 +0.6**
comp=N,86nm,0.8s
OTUK ⇓Lg Lg 05 04 14.3
comp=N,634nm,1.1s
OTUK Ortayu 9.02 355 P **Pn 05 01 42.1 -0.1**
OTUK pmax pmax
comp=Z,86nm,0.8s
DDI Dehra Dun 9.70 155 *e*P **Pn 05 01 49.6 -2.0**
DDI *e*S **Sn 05 03 39.1 -0.7**
DDI IAML 05 03 51.0
comp=N,1μm,0.9s
DDI IAML 05 03 56.7
comp=E,427nm,0.0s
MAKZ Makanchi 9.81 37 *e*Pn **Pn 05 01 54.7 +1.7**
MAKZ Makanchi 9.81 37 ⇓Pn **Pn 05 01 55.5 +2.5**
comp=E,86nm,1.4s
MAKZ ⇓Lg Lg 05 04 41.3
comp=E,353nm,1.4s
MAKZ Makanchi 9.81 37 *e*P **Pn 05 01 54.7 +1.7**
MK31 Makanchi Array 9.95 38 *e*Pn **Pn 05 01 55.9 +0.9**
MK31 Makanchi Array 9.95 38 ⇑Pn **Pn 05 01 56.1 +1.2**
comp=E,57nm,1.1s,baz=215,slow=13,SNR=205
MK31 Pg 05 02 34.8
comp=E,43nm,0.8s,baz=221,slow=14,SNR=4.8
MK31 ⇓Lg Lg 05 04 44.9
comp=E,223nm,1.1s,baz=222,slow=26,SNR=4.0
MK31 Makanchi Array 9.95 38 *i* P **Pn 05 01 56.1 +1.2**
MK31 pmax pmax
comp=Z,43nm,0.8s
MK32 Makanchi Array 9.95 38 *e*Pn **Pn 05 01 55.6 +0.7**
MKAR Makanchi Array 9.95 38 Pn **Pn 05 01 55.6 +0.7**
comp=Z,1.1nm,0.3s,baz=218,slow=12,SNR=97
MKAR Lg Lg 05 04 43.4
comp=Z,3.1nm,0.3s,baz=216,slow=26,SNR=3.7
MKAR LR LR 05 05 28.6
comp=Z,1μm,18.4s,baz=224,slow=36
JOSI Joshimath 10.04 148 *e*P **Pn 05 01 55.9 -0.6**
JOSI *e*S **Sn 05 03 46.4 -2.1**
JOSI IAML 05 03 54.0
comp=N,2μm,0.3s
BRZS Berezniki 10.73 357 *e*P **Pn 05 02 05.5 -0.1**
BRZS MLR MLR
comp=Z,620nm,10.0s
BRZS Berezniki 10.73 357 *e*P **Pn 05 02 05.6 -0.1**
BRZS *e*LR LR 05 05 56.5
comp=Z,620nm,10.1s
NDI New Delhi 11.01 162 *e*P **Pn 05 02 08.0 -1.6**
NDI *e*x x 05 04 06.0
KHET Khetri 11.33 169 *e*P **Pn 05 02 10.6 -3.4**
KHET *e*S **Sn 05 04 13.8 -6.1**
SONA Sohna 11.40 163 *e*P **Pn 05 02 11.9 -2.9**
SONA *e*S **Sn 05 04 15.7 -5.7**
WMQ Urumqi 11.64 62 *e*P **Pn 05 02 17.8 -0.3**
WMQ sP 05 02 26.8
WMQ PP **PnPn 05 02 34.3 +8.5**
WMQ pmax pmax
comp=Z,70nm,0.9s
WMQ pmax pmax
comp=Z,81nm,3.7s
WMQ LR LR
comp=Z,930nm,12.9s
WMQ LR LR
comp=Z,2μm,19.9s
WMQ LR LR
comp=Z,2μm,25.7s
WMQ Urumqi 11.64 62 *e*Pn **Pn 05 02 17.8 -0.3**
WMQ Urumqi 11.64 62 *e*P **Pn 05 02 17.8 -0.3**
ZSN Zaisan 11.68 42 *e*P **Pn 05 02 19.4 +0.8**
ZSN MLR MLR
comp=Z,483nm,13.0s
ZSN Zaisan 11.68 42 *e*P **Pn 05 02 19.4 +0.8**
ZSN *e*LR LR 05 06 31.9
comp=Z,483nm,12.9s
KURBB Kurchatov Arra 11.92 16 Pn **Pn 05 02 20.8 -1.1**
comp=Z,0.6nm,0.3s,baz=206,slow=12,SNR=49
KURBB Sn **Sn 05 04 29.3 -4.8**
comp=Z,0.2nm,0.3s,baz=206,slow=25,SNR=3.2
KURBB Lg Lg 05 05 42.0
comp=Z,1.3nm,0.3s,baz=202,slow=28,SNR=11
KURBB Kurchatov Arra 11.92 16 ⇑Pn **Pn 05 02 21.0 -0.9**
comp=Z,30nm,0.6s
KURBB ⇓Lg Lg 05 05 46.0
comp=Z,2μm,1.0s
KURK Kurchatov 12.03 16 *e*Pn **Pn 05 02 22.4 -1.0**
KURK Kurchatov 12.03 16 ⇓Pn **Pn 05 02 20.6 -2.7**
comp=Z,22nm,0.8s
KURK ⇓Lg Lg 05 05 48.2
comp=Z,1μm,1.3s
KURK Kurchatov 12.03 16 *ce*P **Pn 05 02 22.2 -1.2**
KURK pmax pmax
comp=Z,23nm,0.8s
GEYT Alibeck 12.04 268 Pn **Pn 05 02 21.8 -1.8**
comp=Z,3.5nm,0.3s,baz=96,slow=8.9,SNR=28
GEYT Sn **Sn 05 04 37.1 0.0**
comp=Z,4.0nm,0.3s,baz=68,slow=28,SNR=4.1
GYA0B ALIBECK ARRAY 12.04 268 *e*Pn **Pn 05 02 22.0 -1.5**
GYA0B ALIBECK ARRAY 12.04 268 ⇓Pn **Pn 05 02 21.8 -1.8**
PYUN Piuthan 13.69 142 *e*P Pn 05 02 40.3 -6.0
comp=Z,243nm,0.7s
DANN Dangsing 13.86 139 *e*P Pn 05 02 41.7 -7.1
comp=Z,225nm,0.6s
AB31 Akbulak array 13.87 320 ⇑Pn **Pn 05 02 46.4 -2.0**
comp=Z,138nm,0.8s
AB31 Akbulak array 13.87 320 P **Pn 05 02 46.4 -2.0**
AB31 pmax pmax
comp=Z,138nm,0.8s
ABKAR Akbulak array 13.87 320 *e*Pn **Pn 05 02 46.3 -2.2**
BVAR Borovoye Array 13.92 352 Pn **Pn 05 02 47.3 -1.9**
comp=Z,3.4nm,0.3s,baz=165,slow=12,SNR=132
BVAR Sn **Sn 05 05 17.9 -5.1**
comp=Z,0.8nm,0.3s,baz=172,slow=22,SNR=2.8
BVAR Lg Lg 05 06 46.5
comp=Z,1.5nm,0.3s,baz=156,slow=28,SNR=3.4
BVA3 Borovoye Array 13.93 352 ⇑Pn **Pn 05 02 47.8 -1.5**
comp=Z,51nm,0.7s
BRVK Borovoye 13.97 352 *e*Pn **Pn 05 02 47.5 -2.4**
BRVK Borovoye 13.97 352 ⇓Pn **Pn 05 02 48.0 -1.8**
comp=Z,108nm,0.8s
BRVK Borovoye 13.97 352 *d i*P **Pn 05 02 47.4 -2.4**
KOLN Koldanda 14.26 140 *e*P Pn 05 02 47.9 -6.2
comp=Z,186nm,0.9s
KKN Kakani 15.12 136 *e*P **Pn 05 02 58.8 -6.9**
comp=Z,83nm,0.6s
DMN Daman 15.16 137 *e*P Pn 05 02 59.2 -7.2
comp=Z,182nm,1.0s
PKIN Phulchoki 15.35 136 *e*P Pn 05 03 01.7 -7.1
comp=Z,156nm,0.8s
GUN Gumba 15.35 134 *e*P **Pn 05 03 02.6 -6.4**
comp=Z,42nm,0.4s
PKI Pulchoki 15.36 136 *e*P Pn 05 03 01.9 -7.1
comp=Z,102nm,0.7s
AKTO Aktyubinsk 15.58 321 Pn **Pn 05 03 10.2 -1.2**
comp=Z,4.2nm,0.3s,baz=134,slow=13,SNR=242
AKTO Sn **Sn 05 05 57.8 -5.5**
comp=Z,1.4nm,0.3s,baz=198,slow=20,SNR=3.7
AKTO LR LR 05 09 25.4
comp=Z,492nm,19.0s,baz=139,slow=38
AKTO Aktyubinsk 15.58 321 ⇑Pn **Pn 05 03 09.9 -1.6**
comp=Z,102nm,0.9s
JIRN Jiri 15.72 134 *e*P **Pn 05 03 07.8 -6.0**
comp=Z,204nm,0.5s
BHPL Bhopal 16.33 167 *ex* **Pn 05 03 16.9 -4.4**
BHPL IAmb IAmb 05 03 21.1
ZAA0 Zalesovo Array 16.62 24 *e*Pn **Pn 05 03 23.8 -0.9**
comp=Z,130nm,1.2s
ZALV Zalesovo Beam 16.62 24 Pn **Pn 05 03 23.8 -1.0**
comp=Z,9.0nm,0.3s,baz=213,slow=11,SNR=72
ZALV Lg Lg 05 08 18.8
comp=Z,0.9nm,0.3s,baz=216,slow=28,SNR=3.0
ZALV LR LR 05 09 59.0
comp=Z,648nm,18.9s,baz=222,slow=38
ZAA1 Zalesovo Array 16.62 24 *e*Pn **Pn 05 03 23.8 -1.0**
GTK Tadong 17.39 129 *e*P **Pn 05 03 33.3 -1.3**
GTK IAmb IAmb 05 03 36.7
comp=Z,23nm,0.6s
LSA Lhasa 17.44 118 P **Pn 05 03 33.3 -2.4**
LSA S **Sn 05 06 52.3 +3.0**
LSA LR LR
comp=Z,2μm,9.4s
LSA LR LR
comp=Z,1μm,10.0s
LSA LR LR
comp=Z,2μm,10.8s
LSA Lhasa 17.44 118 *e*Pn **Pn 05 03 34.8 -0.8**
comp=Z,22nm,0.8s
LSA Lhasa 17.44 118 *e*P **Pn 05 03 34.8 -0.8**
LSA pmax pmax
comp=Z,22nm,0.8s
NGP Nagpur 18.69 163 *ex* **P 05 03 44.9 -5.2**
NGP IAmb IAmb 05 03 51.3
comp=Z,84nm,1.3s
BOK Bokaro 18.70 142 *e*P **P 05 03 48.8 -1.4**
BOK IAmb IAmb 05 03 51.3
comp=Z,48nm,1.1s
SVE Sverdlovsk 19.48 339 *ce*P **P 05 03 58.5 0.0**
SVE *e*S **S 05 07 36.5 -0.6**
SVE pmax pmax
comp=Z,114nm,1.4s
SVE MLR MLR
comp=Z,2μm,11.0s
SHME Shamm 19.57 233 P **P 05 04 00.1 +0.3**
AKT Akhty 19.67 285 *e*P **P 05 04 01.0 +0.2**
AKT *e*S **Sn 05 07 43.6 +1.1**
AKT pmax pmax
comp=Z,72nm,1.0s
TURI Tura 19.73 129 *e*P **P 05 04 01.4 -0.1**
ARU Arti 19.78 335 P **P 05 04 02.1 +0.3**
comp=Z,0.0nm,0.3s,baz=155,slow=7.8,SNR=60
ARU Lg Lg 05 09 59.6
comp=Z,0.0nm,0.3s,baz=108,slow=20,SNR=2.3
ARU Arti 19.78 335 *e*P **P 05 04 02.1 +0.3**
comp=Z,159nm,0.9s
ARU Arti 19.78 335 *d i*P **P 05 04 01.6 -0.2**
ARU S **Sn 05 07 44.7 -0.1**
ARU pmax pmax
comp=Z,147nm,0.8s
ARU MLR MLR
comp=Z,851nm,12.0s
MAK Makhachkala 19.83 289 *e*P **P 05 04 01.7 -0.8**
MAK *e*S **S 05 07 43.6 -0.9**
MAK pmax pmax
comp=Z,161nm,1.4s
MAK MLR MLR
comp=Z,1μm,16.0s
MDH Madha 20.02 231 P **P 05 04 04.7 0.0**
MSFE Esma-Masafi 20.06 231 P **P 05 04 04.1 -1.1**
GUWA GUWAHATI 20.11 125 *e*P **P 05 04 03.9 -1.7**
GUWA IAmb IAmb 05 04 06.7
WSAR Wadi Sarin 20.32 222 P **P 05 04 07.9 +0.1**
comp=Z,6.7nm,0.6s,baz=18,slow=3.2,SNR=3.4
WSAR LR LR 05 13 01.2
comp=Z,357nm,20.6s,baz=82,slow=40
UOSS Minazif 20.34 231 *e*P **P 05 04 09.6 +1.4**
comp=Z,24nm,0.9s
UOSS Minazif 20.34 231 P **P 05 04 07.2 -0.9**
GTA Gaotai 20.41 81 ⇑P Pn 05 04 09.8 -1.3
GTA pP pP 05 04 14.0 -2.7
GTA sP sP 05 04 16.8 -3.6
GTA S Sn 05 07 57.5 -3.0
GTA pmax pmax
comp=Z,55nm,0.8s
GTA pmax pmax
comp=Z,340nm,7.9s
GTA LR LR
comp=Z,1μm,14.6s
GTA LR LR
comp=Z,1μm,13.0s
GTA LR LR
comp=Z,1μm,15.2s
HATD Hatta, Dubai 20.48 230 P **P 05 04 08.9 -0.8**
TEZP TEZPUR 20.54 122 *e*P **P 05 04 10.8 +0.6**
ASHO Ashiyiah 20.63 230 P **P 05 04 10.5 -0.7**
ZIRO ZIRO 20.65 118 *e*P **P 05 04 10.0 -1.6**
POO Poona 20.66 179 *e*P **P 05 04 09.2 -2.5**
POO IAmb IAmb 05 04 16.9
comp=Z,56nm,1.0s
SHL Shillong 20.68 126 *e*P **P 05 04 11.2 -0.8**
comp=Z,75nm,0.9s
SHL Shillong 20.68 126 *e*P **P 05 04 11.2 -0.8**
SHL pmax pmax
comp=Z,75nm,0.9s
SHL Shillong 20.68 126 *e*P **P 05 04 10.2 -1.8**
SHL *e*P Pn 05 04 14.0 -0.4
SHL IAmb IAmb 05 04 18.8
comp=Z,61nm,1.0s
ITAN ITANAGAR 20.80 119 *e*P **P 05 04 13.0 -0.2**
ITAN IAmb IAmb 05 04 20.5
comp=Z,6μm,3.6s
GROC Groznyy 21.09 290 *e*P **P 05 04 16.4 +0.3**
GROC *e* 05 04 36.0
GROC *e*S **S 05 08 11.0 +1.4**
GROC pmax pmax
comp=Z,190nm,1.3s
ASUD Al Ashush, Dub 21.11 232 P **P 05 04 17.6 +1.1**
ALNE Al Ain 21.28 230 P **P 05 04 19.0 +0.7**
JORH JORHAT 21.42 119 *e*P **P 05 04 20.4 +0.6**
BWNR Bhubaneshwar 21.71 147 *ex* P 05 04 14.5 -8.4
MOKO MOKOCHONG 21.88 120 *e*P **P 05 04 24.1 -0.8**
MOKO IAmb IAmb 05 04 27.5
comp=Z,342nm,1.3s
TBLG Delisi 21.90 286 *e*P **P 05 04 25.0 +0.2**
comp=Z,69nm,1.1s
TBLG Delisi 21.90 286 *e*P **P 05 04 25.0 +0.2**
TBLG pmax pmax
comp=Z,69nm,1.1s
KOHI KOHIMA 22.01 122 *ex* **P 05 04 25.7 -0.5**
KOHI IAmb IAmb 05 04 28.6
comp=Z,109nm,0.9s
GNI Garni 22.03 281 P **P 05 04 27.4 +1.0**
comp=Z,12nm,0.6s,baz=176,slow=3.8,SNR=14
GNI LR LR 05 14 23.8
comp=Z,238nm,18.5s,baz=99,slow=40
GNI Garni 22.03 281 *e*P **P 05 04 27.9 +1.4**
comp=Z,292nm,1.1s
GNI Garni 22.03 281 *i* P **P 05 04 27.3 +0.8**
SNR=35
GNI Garni 22.03 281 *ce*P **P 05 04 27.6 +1.1**
GNI pmax pmax
comp=Z,254nm,1.0s
LKP Lekhapani 22.15 116 *e*P **P 05 04 28.6 +1.0**
LKP IAmb IAmb 05 04 30.7
comp=Z,135nm,1.1s
HYB Hyderabad 22.22 167 *i* P **P 05 04 28.0 -0.5**
HYB *e*S **S 05 08 31.0 -1.0**
HYB Hyderabad 22.22 167 *e*P **P 05 04 27.9 -0.6**
HYB IAmb IAmb 05 04 29.2
comp=Z,52nm,1.1s
ZEI Tsey 22.48 289 *e*P **P 05 04 30.1 -1.2**
ZEI pmax pmax
comp=Z,31nm,0.6s
IMP Imphal 22.52 124 *e*P **P 05 04 31.6 0.0**
IMP IAmb IAmb 05 04 33.2
comp=Z,32nm,0.6s
BRDH Bariadhala 22.69 131 LR LR 05 14 50.4
comp=Z,605nm,18.2s,baz=352,slow=41
MOY Mondy 22.83 48 *e*P **P 05 04 35.2 +0.4**
MOY pmax pmax
comp=Z,90nm,1.6s
AKH Akhalkalaki 22.85 285 *e*P **P 05 04 36.2 +1.0**
comp=Z,40nm,0.9s
AKH Akhalkalaki 22.85 285 *e*P **P 05 04 36.2 +1.0**
AKH pmax pmax
comp=Z,40nm,0.9s
VIS Vishakhapatnam 23.14 155 *i* P **P 05 04 36.0 -2.0**
GOF Gofitskoye 23.16 294 ⇑*e*P **P 05 04 38.3 +0.2**
GOF pmax pmax
comp=Z,91nm,0.8s
KBZ Khabaz 23.21 291 P **P 05 04 38.7 +0.1**
comp=Z,8.6nm,0.8s,baz=119,slow=7.0,SNR=16
KBZ LR LR 05 15 40.3
comp=Z,890nm,18.3s,baz=96,slow=42
NEY Neytrino 23.34 290 *i* P **P 05 04 40.5 +0.4**
NEY pmax pmax
comp=Z,9.0nm,0.9s
KVAR Kislovodsk Arr 23.36 292 P **P 05 04 41.2 +0.9**
comp=Z,9.1nm,0.9s,baz=84,slow=19,SNR=14
KVAR LR LR 05 14 18.8
comp=Z,1μm,21.1s,baz=182,slow=38
KIV Kislovodsk 23.37 292 *e*P **P 05 04 41.0 +0.8**
comp=Z,124nm,0.9s
KIV Kislovodsk 23.37 292 *i* P **P 05 04 40.9 +0.6**
SNR=10
KIV Kislovodsk 23.37 292 *e*P **P 05 04 40.9 +0.6**
KIV *e*S **S 05 08 52.6 +0.8**
KIV pmax pmax
comp=Z,114nm,1.0s
KIV MLR MLR
comp=Z,1μm,14.0s
ZAK Zakamensk 23.77 52 *e*P **P 05 04 43.6 -0.6**
ZAK pmax pmax
comp=Z,33nm,1.4s
DOMR Dombai 24.14 290 *i* P **P 05 04 49.4 +1.6**
DOMR pmax pmax
comp=Z,21nm,0.9s
LZH Lanzhou 24.25 88 ⇓P **P 05 04 49.5 +0.7**
LZH pP pP 05 04 52.5 -4.7
LZH sP sP 05 04 54.0 -6.6
LZH S **S 05 09 11.5 +5.3**
LZH sS pS 05 09 18.0 +2.8
LZH SS 05 09 52.0
LZH pmax pmax
comp=Z,60nm,1.3s
LZH pmax pmax
comp=Z,330nm,4.3s
LZH LR LR
comp=Z,4μm,17.3s
LZH LR LR
comp=Z,2μm,14.1s
LZH LR LR
comp=Z,2μm,16.8s
TLY Talaya 24.38 49 *e*P **P 05 04 49.9 +0.1**
comp=Z,24nm,0.6s
TLY Talaya 24.38 49 *c i*P **P 05 04 50.2 +0.4**
TLY *e*S **S 05 09 11.0 +3.1**
TLY pmax pmax
comp=Z,46nm,0.6s
TLY MLR MLR
comp=Z,977nm,8.0s
KIRV Kirov 24.71 329 P **P 05 04 52.7 +0.2**
comp=Z,39nm,0.6s,baz=201,slow=1.1,SNR=16
IRK Irkutsk 24.93 48 *e*P **P 05 04 54.7 0.0**
IRK pmax pmax
comp=Z,45nm,1.2s
SONM Songino Array 25.25 59 P **P 05 04 57.9 +0.2**
comp=Z,40nm,0.8s,baz=267,slow=8.2,SNR=108
SONM LR LR 05 15 42.2
comp=Z,1μm,19.0s,baz=257,slow=39
SOC Sochi 25.52 291 *e*P **P 05 05 01.6 +1.5**
SOC *e*PPP PPP 05 05 46.7
SOC *e*S **S 05 09 31.4 +5.3**
SOC pmax pmax
comp=Z,40nm,1.1s
SOC MLR MLR
comp=Z,470nm,18.0s
ULN Ulaanbaatar 25.69 59 *e*P **P 05 05 01.2 -0.5**
comp=Z,35nm,0.8s
ULN Ulaanbaatar 25.69 59 *e*P **P 05 05 01.3 -0.5**
ULN pmax pmax
comp=Z,35nm,0.8s
CD2 Chengdu 26.11 99 P **P 05 05 04.3 -1.3**
CD2 S **S 05 09 36.5 +0.7**
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,170nm,5.7s
CD2 LR LR
comp=Z,3μm,21.6s
CD2 LR LR
comp=Z,2μm,13.2s
CD2 LR LR
comp=Z,1μm,14.7s
VORD Divnogorie 26.52 307 *e*P **P 05 05 08.7 -0.4**
VORD pmax pmax
comp=Z,50nm,0.6s
VSR Storozhevoye 26.66 308 *e*P **P 05 05 09.4 -0.9**
VSR pmax pmax
comp=Z,50nm,0.6s
VSR MLR MLR
comp=Z,310nm,9.0s
VORR Voronezh 26.74 309 *e*P **P 05 05 11.0 0.0**
VORR pmax pmax
comp=Z,250nm,1.0s
ANN Anapa 27.13 294 *e*P **P 05 05 08.6 -6.0**
ANN *e*PP **pP 05 05 18.1 -4.8**
ANN *e*PPP PPP 05 06 04.7
ANN *e*S **S 05 09 42.7 -8.8**
ANN pmax pmax
comp=Z,28nm,1.4s
LPSR Galich'ya Gora 27.15 311 *e*P **P 05 05 13.9 -0.8**
LPSR pmax pmax
comp=Z,80nm,0.8s
LPSR MLR MLR
comp=Z,1μm,13.0s
BTO Baotou 27.99 75 *e*P **P 05 05 21.0 -1.5**
BTO S **S 05 10 00.0 -5.4**
PRGR Permogore 28.14 332 *e*P **P 05 05 22.2 -1.2**
PRGR pmax pmax
comp=Z,23nm,0.6s
RAYN Ar Rayn 28.37 245 *e*P **P 05 05 26.2 +0.3**
comp=Z,14nm,0.8s
RAYN Ar Rayn 28.37 245 *i* P **P 05 05 26.3 +0.3**
SNR=12
RAYN Ar Rayn 28.37 245 *e*P **P 05 05 26.2 +0.3**
RAYN pmax pmax
comp=Z,14nm,0.8s
KMI Kunming 28.40 111 P **P 05 05 28.8 +2.4**
KMI pP pP 05 05 31.5 -3.3
KMI S **S 05 10 12.0 -0.3**
KMI pmax pmax
comp=Z,14nm,1.1s
KMI pmax pmax
comp=Z,140nm,5.4s
KMI LR LR
comp=Z,540nm,18.1s
KMI LR LR
comp=Z,740nm,18.1s
KMI LR LR
comp=Z,470nm,15.3s
MOS Moscow 28.83 317 *e*P **P 05 05 29.2 -0.5**
MOS *e* 05 06 31.0
MOS pmax pmax
comp=Z,59nm,1.1s
MOS pmax pmax
comp=Z,100nm,1.1s
MOS MLR MLR
comp=Z,400nm,15.0s
XAN Xi'an 28.85 89 P **P 05 05 29.5 -0.6**
XAN pP pP 05 05 36.5 -2.0
XAN sP sP 05 05 39.8 -2.1
XAN pmax pmax
comp=Z,15nm,0.6s
XAN LR LR
comp=Z,2μm,19.6s
XAN LR LR
comp=Z,1μm,19.1s
XAN LR LR
comp=Z,1μm,15.1s
XAN Xi'an 28.85 89 *e*P **P 05 05 30.0 -0.1**
comp=Z,18nm,0.9s
XAN Xi'an 28.85 89 *e*P **P 05 05 30.0 -0.1**
XAN pmax pmax
comp=Z,18nm,0.9s
HHC Hu-ho-hao-te 29.10 75 P **P 05 05 32.5 +0.1**
HHC S **S 05 10 22.5 -0.4**
HHC sS pS 05 10 29.5 -2.7
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,20nm,5.3s
HHC LR LR
comp=Z,940nm,17.1s
HHC LR LR
comp=Z,730nm,16.1s
OBN Obninsk 29.20 315 P **P 05 05 33.0 +0.1**
comp=Z,5.4nm,0.4s,baz=128,slow=18,SNR=6.3
OBN Obninsk 29.20 315 *e*P **P 05 05 34.1 +1.1**
comp=Z,244nm,1.4s

OBN Obninsk 29.20 315 *e*P **P 05 05 32.9 -0.1**
OBN *e* 05 06 24.8
OBN *e* 05 08 41.0
OBN pmax pmax
comp=Z,39nm,1.3s
OBN MLR MLR
comp=Z,376nm,16.0s
SIM Simferopol' 29.48 294 *e*P **P 05 05 35.9 +0.3**
SIM 05 06 27.5
SIM S **S 05 10 26.0 -2.6**
SIM pmax pmax
comp=Z,31nm,1.0s
SIM pmax pmax
comp=Z,15nm,7.4s
CM31 Chiang Mai Arr 30.32 126 *e*P **P 05 05 41.8 -1.4**
comp=Z,24nm,1.4s
CMAR Chiang Mai Arr 30.32 126 P **P 05 05 41.8 -1.4**
comp=Z,1.1nm,0.4s,baz=310,slow=10,SNR=4.0
CMAR Chiang Mai Arr 30.32 126 *i* P P 05 05 48.4 +5.2
CMAR pmax pmax
comp=Z,2.0nm,0.7s
ASF Jabal al Asfar 30.32 268 P **P 05 05 44.4 +1.1**
comp=Z,1.3nm,0.5s,baz=112,slow=5.4,SNR=4.3
TIY Taiyuan 30.43 80 *e*P **P 05 05 45.8 +1.6**
TIY S **S 05 10 43.3 -0.5**
TIY pmax pmax
comp=Z,110nm,4.6s
TIY LR LR
comp=Z,690nm,13.0s
TIY LR LR
comp=Z,290nm,10.8s
TIY LR LR
comp=Z,930nm,14.7s
BRTR Keskin Array B 30.52 284 P **P 05 05 45.9 +0.9**
comp=Z,23nm,0.8s,baz=93,slow=7.4,SNR=59
BRTR LR LR 05 19 46.8
comp=Z,261nm,21.6s,baz=87,slow=40
GYA Guiyang 30.54 105 *e*P **P 05 05 47.3 +2.0**
GYA PP **PnPn 05 06 45.3 +0.7**
GYA S **S 05 10 47.8 +2.1**
GYA SS **ScP 05 12 29.3 +4.5**
GYA pmax pmax
comp=Z,10.0nm,0.6s
GYA pmax pmax
comp=Z,110nm,7.7s
GYA LR LR
comp=Z,1μm,24.2s
GYA LR LR
comp=Z,1μm,24.6s
GYA LR LR
comp=Z,440nm,13.2s
ENH Enshi 30.80 96 *e*P **P 05 05 47.7 +0.2**
comp=Z,18nm,0.8s
ANTO Ankara 31.12 284 *e*P **P 05 05 51.5 +1.2**
comp=Z,44nm,1.1s
ANTO Ankara 31.12 284 *e*P **P 05 05 51.5 +1.2**
ANTO pmax pmax
comp=Z,44nm,1.1s
SLVN Son La 31.61 115 *e*P **P 05 05 53.9 -0.8**
comp=Z,19nm,1.3s
BOD Bodaibo 32.02 41 *e*P **P 05 05 57.3 -0.5**
BOD pmax pmax
comp=Z,31nm,1.1s
BJI Beijing 32.71 75 P **P 05 06 04.5 +0.4**
BJI pmax pmax
comp=Z,9.0nm,0.7s
BJT Baijiatuau 32.71 75 *e*P **P 05 06 04.4 +0.3**
comp=Z,14nm,0.7s
BJT Baijiatuau 32.71 75 *e*P **P 05 06 04.4 +0.3**
BJT pmax pmax
comp=Z,14nm,0.7s
AKASG Malin Array Be 32.81 305 P **P 05 06 04.5 -0.3**
comp=Z,18nm,0.6s,baz=78,slow=7.5,SNR=41
AKASG LR LR 05 22 02.8
comp=Z,317nm,18.2s,baz=90,slow=41
AKASG Malin Array Be 32.81 305 *i* P **P 05 06 04.8 0.0**
AKASG pmax pmax
comp=Z,18nm,0.6s
PBKT Sadao Pong 33.00 125 P **P 05 06 07.2 +0.4**
comp=Z,12nm,0.8s,comp=Z,420nm
KIS Kishinev 33.07 298 *e*P **P 05 06 06.0 -1.2**
KIS Kishinev 33.07 298 *e*PP PP 05 07 18.0 -4.0
KIS *e*LR LR 05 20 46.0
comp=Z,400nm,14.0s
KIS Kishinev 33.07 298 *e*P **P 05 06 06.0 -1.2**
KIS *e* 05 06 12.0
KIS *e* 05 07 18.0
MILM Milestii Mici 33.08 298 ⇑*i*P **P 05 06 06.4 -0.8**
NONG Nongkai 33.33 121 P **P 05 06 11.7 +2.0**
comp=Z,0.2nm,0.8s
YLV Yalova 33.54 287 ⇑*i*P **P 05 06 12.5 +1.1**
YLV Yalova 33.54 287 ⇑P **P 05 06 12.5 +1.1**
CFR Carcaliu 33.69 295 ⇑*i*P **P 05 06 13.4 +0.8**
CFR Carcaliu 33.69 295 ⇑P **P 05 06 13.4 +0.8**
TLB Topalu 33.83 294 ⇑*i*P **P 05 06 15.3 +1.6**
TLB Topalu 33.83 294 ⇑P **P 05 06 15.3 +1.6**
PUL Pulkovo 33.84 322 *i* P **P 05 06 13.5 -0.2**
PUL pmax pmax
comp=Z,41nm,0.7s
IAS Iasi 33.92 299 ⇓*i*P P 05 06 22.6 +8.1
MICGM Minsk 33.98 312 *e* **P 05 06 15.0 0.0**
MICGM *e*LR LR 05 20 12.0
MNK Minsk 33.98 312 *e*P **P 05 06 15.0 0.0**
CHAI Chaiyaphum 34.15 125 P **P 05 06 17.2 +0.4**
comp=Z,41μm,0.7s
KHON Khomkaen 34.36 123 P **P 05 06 20.4 +1.7**
comp=Z,87μm,1.0s
ODBI Odobesti 34.38 296 ⇑*i*P **P 05 06 21.8 +3.2**
WHN Wuhan 34.45 92 ⇓P **P 05 06 20.0 +0.7**
WHN S S 05 11 54.8 +8.5
WHN pmax pmax
comp=Z,140nm,1.5s
WHN LR LR
comp=Z,1μm,14.2s
WHN LR LR
comp=Z,1μm,14.3s
WHN LR LR
comp=Z,2μm,20.8s
TIA Tai'an 34.46 81 P **P 05 06 20.0 +0.6**
TIA pmax pmax
comp=Z,21nm,0.9s
TIA LR LR
comp=Z,620nm,14.3s
TIA LR LR
comp=Z,750nm,16.7s
TIA LR LR
comp=Z,780nm,18.4s
TESR Tescani 34.59 298 ⇑*i*P **P 05 06 20.6 +0.2**
VRI Vrincioaia 34.60 296 ⇑*i*P **P 05 06 21.8 +1.3**
VRI Vrincioaia 34.60 296 ⇑P **P 05 06 21.8 +1.3**
PLOR Plostina 34.66 296 ⇓*i*P **P 05 06 22.9 +1.9**
PLOR Plostina 34.66 296 ⇓P **P 05 06 22.9 +1.9**
NACGM Naroch 34.66 312 *e* **P 05 06 21.0 +0.1**
NACGM *e*LR LR 05 21 06.0
SKNT Sakolnakorn 34.66 121 P **P 05 06 20.9 -0.4**
comp=Z,27nm,0.9s
ISR Istrita 34.82 295 ⇑*i*P **P 05 06 20.0 -2.4**
ISR Istrita 34.82 295 ⇑P **P 05 06 20.1 -2.4**
BIZ Bicaz 34.93 298 ⇑*i*P **P 05 06 24.6 +1.3**
PANO Nakornpanom 34.96 120 P **P 05 06 25.1 +1.3**
comp=Z,0.6nm,1.2s,comp=Z,62nm
PHET Kaeng Krachan 35.02 131 P P 05 06 29.7 +5.4
comp=Z,20μm,0.7s
MLR Muntele Rosu 35.19 296 ⇑*i*P **P 05 06 28.0 +2.3**
MLR Muntele Rosu 35.19 296 ⇑P **P 05 06 28.0 +2.3**
VSU Vasula 35.29 319 *i* P **P 05 06 25.2 -1.0**
VSU pmax pmax
comp=Z,82nm,1.0s
LVZ Lovozero 35.66 336 *e*P **P 05 06 28.9 -0.4**
comp=Z,33nm,1.1s
LVZ Lovozero 35.66 336 *ce*P **P 05 06 28.6 -0.7**
LVZ pmax pmax
comp=Z,23nm,1.0s
VOIR 35.82 296 ⇑*i*P **P 05 06 31.7 +0.6**
VOIR 35.82 296 ⇑P **P 05 06 31.7 +0.6**
APA Apatity 35.88 335 ⇑*i*P **P 05 06 29.7 -1.5**
APA *i* S **S 05 12 03.0 -4.4**
APA pmax pmax
comp=Z,2.0nm,0.9s
APA MLR MLR
comp=Z,500nm,11.0s
GOLR 35.97 295 ⇓*i*P **P 05 06 35.6 +3.4**
EZN Ezine 35.98 286 ⇓*i*P **P 05 06 32.5 +0.1**
EZN Ezine 35.98 286 ⇓P **P 05 06 32.5 +0.1**
HUMR Humele 36.00 294 ⇓*i*P **P 05 06 34.3 +1.8**

ARCR ARCALIA 36.11 299 ⇓*i*P **P 05 06 35.5 +2.0**
ARR Arges 36.12 296 ⇑*i*P **P 05 06 35.1 +1.4**
LVV L'vov 36.13 304 *e*P **P 05 06 34.1 +0.5**
LVV *e* 05 08 03.3
LVV *e*S **S 05 12 08.1 -3.7**
LVV *e*SS **SS 05 14 57.9 +8.4**
LVV MLR MLR
comp=Z,500nm,13.0s
FINES FINESS Array B 36.33 323 P **P 05 06 35.0 -0.1**
comp=Z,15nm,0.5s,baz=110,slow=9.7,SNR=172
FINES LR LR 05 21 19.8
comp=Z,185nm,18.8s,baz=116,slow=36
FINES FINESS Array B 36.33 323 *i* P **P 05 06 35.2 +0.1**
FINES pmax pmax
comp=Z,15nm,0.5s
KARP Karpathos 36.61 279 *e*P **P 05 06 38.6 +0.7**
comp=Z,178nm,1.0s
CJR Cluj-Napoca 36.67 298 ⇓*i*P **P 05 06 40.2 +1.9**
CJR Cluj-Napoca 36.67 298 ⇓P **P 05 06 40.2 +1.9**
LOT Lotru 36.71 296 ⇓*i*P **P 05 06 40.5 +1.7**
DL2 Dalian 37.08 75 *e*P P 05 06 34.5 -7.3
DL2 sP pP 05 06 48.3 -2.0
DL2 PP **PP 05 08 00.0 -6.4**
DL2 *e*S S 05 12 14.3 -12
DL2 pmax pmax
comp=Z,17nm,1.2s
DL2 LR LR
comp=N,700nm,23.2s
DL2 LR LR
comp=E,310nm,22.1s
DL2 LR LR
comp=Z,1μm,17.8s
TRPA Tarpa 37.23 301 ⇑*i*P **P 05 06 44.3 +1.4**
TRPA Tarpa 37.23 301 EP **P 05 06 42.1 -0.9**
DEV Deva 37.25 297 ⇑*i*P **P 05 06 45.8 +2.6**
DEV Deva 37.25 297 ⇑P **P 05 06 45.8 +2.6**
DRGR 37.26 299 ⇑*i*P **P 05 06 44.8 +1.4**
DRGR 37.26 299 ⇑P **P 05 06 44.8 +1.4**
NJ2 Nanjing 37.31 87 *e*P **P 05 06 40.8 -3.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=Z,1μm,17.1s
NJ2 LR LR
comp=Z,640nm,19.4s
NJ2 LR LR
comp=Z,750nm,13.3s
QIZ Qiongzhong 37.33 112 P **P 05 06 42.3 -1.8**
QIZ S **S 05 12 31.0 +0.4**
QIZ LR LR
comp=Z,440nm,17.9s
QIZ LR LR
comp=Z,380nm,13.2s
QIZ LR LR
comp=Z,340nm,16.1s
KOLS Kolonicke sedl 37.33 302 *e*P **P 05 06 44.3 +0.4**
UZH Uzhgorod 37.35 302 *e*P **P 05 06 43.3 -0.6**
UZH *e* 05 06 54.8
UZH *e* 05 08 12.8
UZH *e*PPP PPP 05 08 36.0
UZH *e*S **S 05 12 27.3 -2.9**
UZH *e*SS SS 05 14 59.4 -15
UZH MLR MLR
comp=N,150nm,17.0s
UZH MLR MLR
comp=E,130nm,17.0s
UZH MLR MLR
comp=Z,80nm,17.0s
APE Apeiranthos 37.36 282 ⇓*i*P **P 05 06 44.5 +0.2**
APE Apeiranthos 37.36 282 ⇓P **P 05 06 44.5 +0.2**
GZR Gura Zlata 37.41 296 ⇑*i*P **P 05 06 45.5 +0.9**
GZR Gura Zlata 37.41 296 ⇑P **P 05 06 45.5 +0.9**
VTS Vitosha 37.60 292 ⇓*i*P **P 05 06 46.4 0.0**
VTS Vitosha 37.60 292 ⇓P **P 05 06 46.4 0.0**
HERR Herculane 37.75 296 ⇓*i*P **P 05 06 48.2 +0.8**
SNY Shenyang 37.78 70 ⇑P **P 05 06 48.5 +0.8**
SNY pmax pmax
comp=Z,17nm,0.8s
SNY pmax pmax
comp=Z,73nm,7.3s
SNY LR LR
comp=Z,1μm,15.9s
SNY LR LR
comp=Z,320nm,18.8s
SNY LR LR
comp=Z,930nm,12.2s
SIRR Siria 38.05 298 ⇓*i*P **P 05 06 52.3 +2.3**
BZS Buzias 38.18 297 ⇑*i*P **P 05 06 52.6 +1.6**
BZS Buzias 38.18 297 ⇑P **P 05 06 52.6 +1.6**
MDVR Moldovita 38.26 296 ⇑*i*P **P 05 06 53.1 +1.3**
VAY Valandovo 38.38 290 ⇑*i*P **P 05 06 53.8 +1.0**
PKDT Phuket 38.43 138 P P 05 06 58.6 +5.2
comp=Z,26nm,0.8s
STIP Stip 38.57 291 ⇑*i*P **P 05 06 53.7 -0.7**
NIE Niedzica 38.58 303 *e*P **P 05 06 55.8 +1.4**
CN2 Changchun 38.70 66 *e*P **P 05 06 54.5 -0.9**
CN2 *e*sP pP 05 07 01.5 -2.5
CN2 *e*S **S 05 12 50.0 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 LR LR
comp=Z,800nm,15.0s
CN2 LR LR
comp=Z,530nm,15.0s
CN2 LR LR
comp=Z,680nm,17.0s
ZEA Zeya 38.82 50 *e*P **P 05 06 56.7 +0.4**
ZEA pmax pmax
comp=E,41nm,1.0s
ZEA pmax pmax
comp=Z,41nm,1.0s
ZEA MLR MLR
comp=Z,700nm,13.0s
ZEA MLR MLR
comp=E,500nm,12.0s
ZEA MLR MLR
comp=N,700nm,13.0s
OJC Ojcow 38.83 304 *e*P **P 05 06 57.0 +0.6**
PSZ Piszkesteto 39.02 301 *e*P **P 05 06 59.1 +1.0**
comp=N,35nm,1.7s
PSZ Piszkesteto 39.02 301 ⇓*i*P **P 05 06 59.7 +1.6**
PSZ Piszkesteto 39.02 301 ⇓P **P 05 06 59.7 +1.6**
PSZ Piszkesteto 39.02 301 EP **P 05 07 02.0 +3.9**
PSZ EPP 05 08 26.0
TRTT Trang 39.19 136 P **P 05 07 00.9 +1.1**
comp=N,18nm,0.8s,comp=N,2μm
ARA0 ARCESS Array S 39.37 336 *e*P **P 05 07 00.9 +0.2**
ARCES ARCESS Array B 39.37 336 P **P 05 07 00.9 +0.2**
comp=N,11nm,0.5s,baz=111,slow=8.8,SNR=298
ARCES LR LR 05 25 32.6
comp=N,258nm,18.7s,baz=113,slow=40
ARE0 ARCESS Array S 39.37 336 *e*P **P 05 07 01.1 +0.4**
comp=N,2.0nm,1.3s
ARE0 ARCESS Array S 39.37 336 *e*P **P 05 07 01.1 +0.4**
FRGS Fruska Gora 39.52 297 *e*P **P 05 07 02.8 +0.5**
DIVS Divibare 39.60 295 *e*P **P 05 07 03.3 +0.2**
VYHS Vyhne 39.64 302 *e*P **P 05 07 04.3 +1.0**
KTK1 Kautokeino 39.90 334 *e*P **P 05 07 05.2 0.0**
BBLS Lazići 40.06 295 *e*P **P 05 07 06.7 -0.2**
MORH Mrgy, Hungar 40.13 298 *e*P **P 05 07 07.5 +0.2**
MORH Mrgy, Hungar 40.13 298 EP **P 05 07 06.1 -1.2**
RUDO Rudo 40.14 294 *e*P **P 05 07 06.0 -1.5**
GKP Gorka Klasztor 40.22 309 *e*P **P 05 07 08.6 +0.7**
MORC Moravsky Berou 40.33 304 *e*P **P 05 07 09.2 +0.2**
comp=N,13nm,1.0s
MORC Moravsky Berou 40.33 304 ⇓*i*P **P 05 07 09.7 +0.7**
MORC Moravsky Berou 40.33 304 ⇓P **P 05 07 09.7 +0.7**
MORC Moravsky Berou 40.33 304 *e*P **P 05 07 09.6 +0.6**
JAVC Velka Javorina 40.36 303 *e*P **P 05 07 11.1 +1.8**
HAMF Hammerfest 40.40 337 *e*P **P 05 07 10.0 +0.9**
PDG Podgorica 40.51 293 ⇑*i*P **P 05 07 11.1 +0.6**
PDG Podgorica 40.51 293 *e*P **P 05 07 11.0 +0.6**
TTG Podgorica 40.51 293 *e*P **P 05 07 11.0 +0.6**
comp=N,15nm,0.7s
DRME Dracevica, Mon 40.62 292 *e*P **P 05 07 09.9 -1.5**
YAK Yakutsk 40.62 37 *e*P **P 05 07 10.3 -0.8**
comp=N,47nm,0.9s
YAK Yakutsk 40.62 37 *e*P **P 05 07 10.1 -1.0**
YAK *e**PP **pP 05 07 17.1 -2.6**
YAK *e* 05 08 44.5
YAK *e*PPP PPP 05 09 10.3
YAK *e* 05 09 13.8
YAK *e*S **S 05 13 17.0 -2.2**
YAK *e**SS **sS 05 13 35.5 +2.3**

YAK *e*SS **SS 05 16 18.2 -1.1**
YAK *e*SSS SSS 05 16 51.3
YAK *e* 05 17 12.3
VRAC Vranov 41.00 303 ⇓*i*P **P 05 07 15.2 +0.7**
VRAC Vranov 41.00 303 ⇓P **P 05 07 15.2 +0.7**
VRAC Vranov 41.00 303 *e*P **P 05 07 15.5 +1.0**
DPC Dobruska-Polom 41.04 305 *e*P **P 05 07 15.8 +1.0**
DPC MLR MLR
comp=Z,400nm,12.3s
DPC Dobruska-Polom 41.04 305 *e*P **P 05 07 15.8 +1.0**
DPC *e*pP **pP 05 07 20.4 -2.9**
DPC AMS AMS 05 26 10.0
comp=Z,400nm,12.3s
OSTC Ostas 41.08 305 *e*P **P 05 07 15.8 +0.6**
OSTC AMS AMS 05 27 20.0
comp=Z,500nm,15.5s
TREB Trebinje 41.08 293 *e*P **P 05 07 15.2 0.0**
KRUC Moravsky 41.16 303 *e*P **P 05 07 17.0 +1.2**
CHVC Chvalec 41.18 305 *e*P **P 05 07 16.7 +0.7**
CHVC AMS AMS 05 25 00.0
comp=Z,500nm,16.8s
UPC Upice 41.22 305 *e*P **P 05 07 17.1 +0.9**
UPC *e* 05 07 22.2
UPC MLR MLR
comp=Z,500nm,14.6s
UPC Upice 41.22 305 *e*P **P 05 07 17.1 +0.9**
UPC *e*pP **pP 05 07 22.2 -2.6**
UPC AMS AMS 05 25 00.0
comp=Z,500nm,14.6s
SOP Sopron 41.28 301 EP **P 05 07 19.1 +2.3**
SOP EPP 05 08 52.0
BLY Banja Luka 41.43 296 *e*P **P 05 07 18.1 +0.1**
comp=Z,14nm,0.9s
BLY Banja Luka 41.43 296 ⇓*i*P **P 05 07 19.4 +1.4**
BLY Banja Luka 41.43 296 *e*P **P 05 07 17.1 -0.9**
TRO Tromso 41.55 335 *e*P **P 05 07 18.9 +0.2**
CONA Conrad Observa 41.70 301 *e*P **P 05 07 21.4 +1.1**
comp=Z,16nm,1.0s,SNR=15
TREC Trest 41.72 304 AMS AMS 05 28 00.0
comp=Z,400nm,10.6s
KULM Kulim 41.84 137 **P 05 07 25.0 +3.3**
TPTI 41.85 143 P **P 05 07 21.3 -0.4**
comp=Z,25nm,1.1s
KLR Kul'dur 42.01 56 P **P 05 07 22.7 -0.1**
comp=Z,22nm,0.5s,baz=280,slow=7.9,SNR=51
ARSA Arzberg 42.05 301 *e*P **P 05 07 23.8 +0.7**
comp=Z,7.9nm,1.0s,SNR=7.4
GOPC GO Pecny, Ondr 42.08 305 *e*P **P 05 07 26.6 +3.3**
GOPC MLR MLR
comp=Z,400nm,13.4s
GOPC GO Pecny, Ondr 42.08 305 *e*P **P 05 07 26.6 +3.3**
GOPC AMS AMS 05 26 50.0
comp=Z,400nm,13.4s
PVCC Panska Ves 42.13 305 *e*P **P 05 07 24.8 +1.1**
PVCC MLR MLR
comp=Z,600nm,16.8s
PVCC Panska Ves 42.13 305 *e*P **P 05 07 24.8 +1.1**
PVCC AMS AMS 05 25 30.0
comp=Z,600nm,16.8s
PRU Pruhonice 42.22 305 *e*P **P 05 07 25.2 +0.7**
PRU *e* 05 07 42.8
PRU MLR MLR
comp=Z,400nm,15.3s
PRU Pruhonice 42.22 305 *e*P **P 05 07 25.2 +0.7**
PRU *e*x x 05 07 42.8
PRU AMS AMS 05 28 10.0
comp=Z,400nm,15.3s
KSRS Korea Array 42.25 75 P **P 05 07 23.8 -1.0**
comp=Z,5.3nm,0.8s,baz=282,slow=7.6,SNR=26
KSRS LR LR 05 27 26.6
comp=Z,798nm,19.6s,baz=288,slow=40
CRES Cresnjev 42.38 298 *e*P **P 05 07 25.8 0.0**
MOR8 Moi Rana 42.39 329 *e*P **P 05 07 25.0 -0.6**
STEI Steigen 42.41 332 *e*P **P 05 07 25.9 +0.2**
BRG Berggiesshubel 42.47 306 *e*P **P 05 07 27.0 +0.5**
comp=Z,17nm,1.5s
BRG *e*PP **PP 05 09 03.7 -1.3**
comp=Z,9.9nm,1.2s
BRG S **S 05 13 49.0 +2.1**
BRG SS **SS 05 17 00.0 +3.7**
comp=N,837nm,13.9s
comp=E,402nm,10.0s
comp=Z,456nm,10.3s
SOKA Soboth 42.49 300 *e*P **P 05 07 27.5 +0.7**
comp=Z,9.0nm,0.9s,SNR=14
TIXI Tiksi 42.50 23 P **P 05 07 25.9 -0.6**
comp=Z,6.4nm,0.5s,baz=259,slow=5.9,SNR=12
TIXI PcP **PcP 05 09 17.0 -1.7**
comp=Z,7.4nm,0.6s,baz=311,slow=2.3,SNR=3.3
TIXI Tiksi 42.50 23 *e*P **P 05 07 25.8 -0.6**
comp=Z,18nm,0.6s
BOJS Bojanci 42.59 298 *i* P **P 05 07 28.6 +1.1**
IPM Ipoh 42.72 137 **P 05 07 28.0 -0.9**
MOA Molln 42.77 302 *e*P **P 05 07 29.6 +0.6**
comp=Z,8.5nm,0.8s,SNR=9.8
VISS Visnje 42.81 299 *i* P **P 05 07 29.9 +0.7**
OBKA Obir 42.85 300 *e*P **P 05 07 30.9 +1.2**
comp=Z,11nm,1.0s
SSLB Suanglung 42.88 97 *e*P **P 05 07 30.7 +0.5**
comp=Z,58nm,1.5s
GERES GERESS Array B 42.95 303 P **P 05 07 30.9 +0.3**
comp=Z,5.7nm,0.8s,baz=68,slow=7.5,SNR=54
GERES LR LR 05 29 38.6
comp=Z,183nm,18.6s,baz=88,slow=42
LJU Ljubljana 42.97 299 *e*P **P 05 07 30.7 +0.1**
KONS Konsvik 42.97 329 *e*P **P 05 07 30.6 +0.3**
KHC Kasperske Hory 42.98 304 *e*P **P 05 07 31.4 +0.7**
KHC MLR MLR
comp=Z,500nm,11.1s
KHC Kasperske Hory 42.98 304 *e*P **P 05 07 31.4 +0.7**
KHC *e*x x 05 08 02.8
KHC AMS AMS 05 27 20.0
comp=Z,500nm,11.1s
CLL Collm 43.00 307 ⇓*i*P **P 05 07 29.7 -1.0**
comp=Z,8.0nm,0.9s
CLL *i* 05 07 33.0
comp=Z,13nm,0.9s
CLL *e*PP **PP 05 09 11.0 +0.4**
CLL *i* pPP 05 09 15.6
CLL *e*S S 05 14 06.0 +11
CLL *e*SS **SS 05 17 06.0 -0.6**
CLL LmV 05 26 00.0
comp=Z,500nm,22.0s
PSI Prapat 43.08 141 P **P 05 07 31.2 -0.7**
comp=Z,9.2nm,0.7s,baz=352,slow=9.9,SNR=11
PSI LR LR 05 26 36.8
comp=Z,202nm,19.9s,baz=314,slow=38
PSI Prapat 43.08 141 *e*P **P 05 07 31.9 +0.1**
comp=Z,24nm,1.3s
PSI Prapat 43.08 141 *e*P **P 05 07 32.0 +0.1**
PSI pmax pmax
comp=Z,24nm,1.3s
CEY Cerknica 43.10 299 *e*P **P 05 07 32.2 +0.5**
NC405 NORSAR Array S 43.13 321 *e*P **P 05 07 31.8 +0.1**
comp=Z,70nm,0.9s
BJO Bjornoya 43.19 341 *e*P **P 05 07 32.7 +0.8**
USRK Ussuriysk Ar. 43.20 64 P **P 05 07 31.9 -0.6**
comp=Z,9.0nm,0.8s,baz=267,slow=9.2,SNR=15
USRK LR LR 05 27 22.7
comp=Z,700nm,18.4s,baz=272,slow=39
NC602 NORSAR Array S 43.21 321 *e*P **P 05 07 32.1 -0.3**
NSS Namsos 43.21 326 *e*P **P 05 07 31.8 -0.4**
TIP Timpagrande 43.25 289 *e*P **P 05 07 33.2 +0.2**
comp=Z,48nm,1.6s
TIP Timpagrande 43.25 289 ⇑*i*P **P 05 07 34.2 +1.2**
JAVS Javornik 43.31 299 *i* P **P 05 07 33.7 +0.2**
NB2 NORSAR Subarra 43.37 321 P **P 05 07 33.3 -0.4**
comp=Z,34nm,0.8s,baz=89,slow=7.9
NB2 NORSAR Subarra 43.37 321 P **P 05 07 33.3 -0.4**
baz=89,slow=7.9
NOA NORSAR Array B 43.37 321 P **P 05 07 33.3 -0.4**
comp=Z,26nm,0.7s,baz=91,slow=7.9,SNR=111
NOA PP **PP 05 09 13.1 -1.4**
comp=Z,3.6nm,0.8s,baz=104,slow=9.0,SNR=3.6
NOA LR LR 05 25 39.3
comp=Z,231nm,20.2s,baz=110,slow=36
MYKA Terra Mystica 43.43 300 *e*P **P 05 07 35.1 +0.6**
comp=Z,6.1nm,1.1s
NKC Novy Kostel 43.51 305 *e*P **P 05 07 35.8 +0.8**
NKC MLR MLR
comp=Z,800nm,18.0s
NKC Novy Kostel 43.51 305 *e*P **P 05 07 35.8 +0.8**
NKC AMS AMS 05 26 20.0
comp=Z,800nm,18.0s
KBA Koelnbreinsper 43.53 301 *e*P **P 05 07 35.3 0.0**

comp=Z,4.1nm,0.6s
OSL Oslo 43.62 320 *e*P **P 05 07 35.5 0.0**
GSI Gunungsitoli 43.75 144 *e*P **P 05 07 38.0 +0.8**
comp=Z,37nm,0.9s
TBLU Trondheim 43.88 324 *e*P **P 05 07 37.4 -0.3**
ABTA Abfaltersbach 44.16 300 *i* P **P 05 07 40.0 -0.3**
KONO Kongsberg 44.19 319 *e*P **P 05 07 40.0 -0.2**
comp=Z,33nm,0.9s
KONO Kongsberg 44.19 319 *ce*P **P 05 07 39.5 -0.7**
KONO pmax pmax
comp=Z,95nm,2.5s
KONO Kongsberg 44.19 319 *e*P **P 05 07 39.8 -0.5**
GRFO Grafenberg 44.39 305 *e*P **P 05 07 42.6 +0.6**
comp=Z,23nm,0.9s
GRFO Grafenberg 44.39 305 *e*P **P 05 07 42.6 +0.6**
GRFO pmax pmax
comp=Z,23nm,0.9s
DOMB Dombas 44.41 323 *e*P **P 05 07 42.1 +0.1**
WTTA Wattenberg 44.63 301 *e*P **P 05 07 44.1 0.0**
comp=Z,12nm,0.7s,SNR=8.9
WATA Walderalm 44.65 301 *e*P **P 05 07 44.1 -0.2**
comp=Z,3.4nm,0.7s
GRNR Gornyy 44.72 54 *e*P **P 05 07 44.9 +0.3**
GRNR pmax pmax
comp=Z,20nm,0.8s
SKAR Skarslia 44.80 321 *e*P **P 05 07 45.3 +0.2**
SQTA Sankt Quirin 44.92 301 *e*P **P 05 07 46.1 -0.4**
comp=Z,9.0nm,1.1s,SNR=6.9
MOTA Moosalm 44.97 302 *e*P **P 05 07 46.9 +0.1**
comp=Z,11nm,0.8s,SNR=17
HSPB Hornsund (broa 44.98 344 *e*P **P 05 07 47.0 +0.7**
MOL Molde 45.11 323 *e*P **P 05 07 48.2 +0.6**
MNSI Mandailing Nat 45.14 142 P **P 05 07 48.4 +0.1**
comp=Z,43nm,1.0s
RETA Reutte 45.16 302 *e*P **P 05 07 48.8 +0.6**
comp=Z,4.9nm,0.9s
SPA0 Spitsbergen Ar 45.26 346 *e*P **P 05 07 49.7 +1.1**
FETA Feichten 45.29 301 *e*P **P 05 07 49.1 -0.3**
comp=Z,6.2nm,0.9s
AKN Aaknes 45.38 323 *e*P **P 05 07 50.2 +0.5**
ODD1 Odda 45.68 320 *e*P **P 05 07 53.0 +0.8**
DAVA Damuels 45.79 302 *e*P **P 05 07 53.1 -0.2**
comp=Z,24nm,0.7s,SNR=14
BLS5 Blasjo 45.80 319 *e*P **P 05 07 53.8 +0.7**
HYA Hoyanger 45.81 321 *e*P **P 05 07 53.7 +0.7**
JNU Nakatsue 46.13 79 P **P 05 07 55.7 -0.3**
comp=Z,23nm,0.9s,baz=319,slow=2.7,SNR=11
JNU LR LR 05 29 47.2
comp=Z,301nm,18.7s,baz=315,slow=40
STAV Stavanger 46.24 318 *e*P **P 05 07 56.7 +0.3**
BER Bergen 46.28 320 *e*P **P 05 07 57.4 +0.6**
ASK Askoy 46.34 321 *e*P **P 05 07 57.4 +0.2**
TUE Stuetta 46.35 301 *e*P **P 05 07 58.6 +0.8**
comp=Z,8.0nm,0.7s
KBS Kingsbay 46.36 346 *e*P **P 05 07 57.1 -0.1**
comp=Z,38nm,1.0s
KBS Kingsbay 46.36 346 *e*P **P 05 07 57.1 -0.1**
KBS pmax pmax
comp=Z,38nm,1.0s
KBS Kingsbay 46.36 346 *e*P **P 05 07 57.7 +0.5**
MYKOM Kota Tinggi 46.49 136 P 05 08 04.0 +5.1
BFO Black Forest 46.55 304 *e*P **P 05 07 58.6 -0.5**
comp=Z,9.6nm,1.0s
BFO Black Forest 46.55 304 *i* P **P 05 07 59.8 +0.7**
NKL Nikolayevsk 46.86 50 ⇓*i*P **P 05 08 00.1 -1.3**
NKL *e* 05 09 32.5
NKL *e* 05 09 49.6
NKL *e*S S 05 14 39.1 -11
NKL *e* 05 17 52.2
NKL *e*SS **SS 05 18 15.4 -1.4**
NKL pmax pmax
comp=Z,44nm,0.9s
NKL pmax pmax
comp=E,14nm,1.0s
NKL pmax pmax
comp=N,1.0nm,0.5s
NKL pmax pmax
comp=Z,50nm,1.9s
NKL MLR MLR
comp=Z,562nm,12.0s
NKL MLR MLR
comp=N,622nm,18.0s
NKL MLR MLR
comp=E,328nm,10.0s
PDSI Padang 47.05 142 P **P 05 08 05.9 +2.5**
comp=E,43nm,1.2s
MEM Membach 47.47 307 ⇑P **P 05 08 06.3 0.0**
WLF Walferdange 47.61 306 P **P 05 08 08.2 +0.9**
BMRD Maredsous 48.32 307 P **P 05 08 13.1 +0.3**
comp=Z,7.7nm,1.1s
DOU Dourbes 48.48 307 P **P 05 08 13.6 -0.4**
DOU pP pP 05 08 16.7 -5.9
DOU sP sP 05 08 17.9 -8.2
YSS Yuzh-Sakhalins 49.71 57 *e*P **P 05 08 23.4 -0.1**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,600nm,12.0s
INU Inuyama 49.83 73 *e*P **P 05 08 23.4 -1.2**
comp=Z,16nm,0.8s
KEST Kesra 50.00 287 P **P 05 08 26.9 +0.9**
comp=Z,10nm,0.9s,baz=27,slow=4.0,SNR=6.3
KEST LR LR 05 32 34.4
comp=Z,110nm,21.2s,baz=182,slow=40
MAJO Matsushiro 50.22 71 *e*P **P 05 08 26.3 -1.3**
comp=Z,22nm,0.8s
MAJO Matsushiro 50.22 71 *e*P **P 05 08 26.3 -1.3**
MAJO pmax pmax
comp=Z,22nm,0.8s
MAT Matsushiro 50.22 71 P **P 05 08 25.9 -1.7**
MAT *e*S **S 05 15 36.8 -1.6**
MJAR Matsushiro Arr 50.22 71 P **P 05 08 26.6 -1.0**
comp=Z,17nm,0.8s,baz=288,slow=9.8,SNR=23
MJAR LR LR 05 31 11.6
comp=Z,282nm,18.4s,baz=280,slow=38
KSM Kuching 50.45 129 *e*P **P 05 08 29.7 +0.2**
comp=Z,28nm,1.1s
KSM Kuching 50.45 129 **P 05 08 32.0 +2.5**
ASAJ Asahikawa 50.52 61 P **P 05 08 28.7 -1.0**
comp=Z,8.5nm,0.6s,baz=279,slow=4.9,SNR=11
ASAJ LR LR 05 30 18.3
comp=Z,127nm,21.1s,baz=354,slow=37
SBUM Sibu 50.87 126 **P 05 08 34.0 +1.4**
PPBI Pangkal Pinang 51.02 136 P **P 05 08 33.3 -0.5**
MA2 Magadan 51.02 40 P **P 05 08 32.4 -0.9**
comp=Z,17nm,0.7s,baz=316,slow=7.0,SNR=7.9
MA2 Magadan 51.02 40 *e*P **P 05 08 32.6 -0.7**
comp=Z,24nm,0.8s
MA2 Magadan 51.02 40 *e*P **P 05 08 32.6 -0.7**
MA2 pmax pmax
comp=Z,24nm,0.8s
SEY Seymchan 51.07 35 P **P 05 08 33.4 -0.2**
comp=Z,6.9nm,0.7s,baz=274,slow=4.1,SNR=13
EDMD Edmundbyers 51.13 314 *e*P **P 05 08 34.0 -0.2**
EDMD IAmb IAmb 05 08 35.0
comp=Z,26nm,0.9s
HPK Haverah Park 51.17 313 *e*P **P 05 08 34.2 -0.3**
HPK IAmb IAmb 05 08 35.4
comp=Z,25nm,0.9s
ESY Stoneypath 51.20 316 *e*P **P 05 08 34.5 -0.2**
BIGH Upper Bighouse 51.25 319 *e*P **P 05 08 34.6 -0.3**
BIGH IAmb IAmb 05 08 36.6
comp=Z,48nm,0.9s
EDU Dundee 51.26 316 *e*P **P 05 08 35.2 +0.1**
CWF Charnwood Fore 51.33 311 *e*P **P 05 08 35.9 +0.2**
LBWR Ladybower, Pea 51.38 312 *e*P **P 05 08 35.9 -0.2**
LBWR IAmb IAmb 05 08 37.2
comp=Z,20nm,0.8s
EDI Edinburgh 51.51 316 *e*P **P 05 08 36.9 -0.1**
EDI IAmb IAmb 05 08 37.3
comp=Z,26nm,1.0s
ERM Erimo 51.65 63 *e*P **P 05 08 37.7 -0.5**
comp=Z,17nm,0.9s
ERM Erimo 51.65 63 *e*P **P 05 08 37.7 -0.5**
ERM pmax pmax
comp=Z,17nm,0.9s
ESK Eskdalemuir 51.69 315 *e*P **P 05 08 38.2 0.0**
comp=Z,18nm,0.9s
ESK Eskdalemuir 51.69 315 IAmb IAmb 05 08 38.0
comp=Z,29nm,1.0s
ESK *e*P **P 05 08 38.0 -0.2**
ESK Eskdalemuir 51.69 315 *i* P **P 05 08 39.6 +1.3**
KESW Keswick, Cumbr 51.83 314 *e*P **P 05 08 39.3 -0.1**
KESW IAmb IAmb 05 08 40.1
comp=Z,42nm,1.0s

INVG Invergeldie, C 51.84 316 *e*P **P 05 08 39.0 -0.5**
MDSI Maura Dua 51.97 140 P **P 05 08 43.2 +2.4**
comp=Z,9.3nm,1.2s
KMBO Kilima Mbogo 52.09 228 P **P 05 08 42.0 0.0**
comp=Z,0.7nm,0.3s,baz=34,slow=13,SNR=4.3
KMBO LR LR 05 31 55.5
comp=Z,191nm,21.0s,baz=40,slow=37
KMBO Kilima Mbogo 52.09 228 *e*P **P 05 08 42.0 0.0**
comp=Z,5.2nm,0.8s
KAC Achnashellach 52.22 318 *e*P **P 05 08 42.0 -0.2**
TPI Tanjungpandan 52.35 135 P **P** 05 08 50.3 +6.7
KPL Plockton 52.45 318 *e*P **P 05 08 43.1 -0.8**
MCH1 Michaelchurch 52.54 311 *e*P **P 05 08 44.4 -0.3**
MCH1 IAmb IAmb 05 08 48.1
comp=Z,42nm,0.9s
LAWE Loch Awe, Argy 52.62 316 *e*P **P 05 08 45.2 +0.1**
DAG Danmarks Havn 52.63 343 *i* P **P 05 08 45.2 +0.2**
DAG pmax pmax
comp=Z,10.0nm,0.7s
DAG Danmarks Havn 52.63 343 *i* P **P 05 08 45.2 +0.2**
comp=Z,15nm,0.7s
CCA1 Carnmenellis 54.47 309 *e*P **P 05 08 57.9 -1.0**
CCA1 IAmb IAmb 05 09 00.1
comp=Z,68nm,1.4s
BILL Bilibino 55.29 27 *e*P **P 05 09 03.7 -0.9**
BILL *e* 05 09 12.6
BILL *e**PP **sP 05 09 19.0 +2.2**
BILL *e* 05 10 05.0
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,528nm,17.0s
MBAR Mbarara 55.65 235 *e*P **P 05 09 08.8 +0.8**
comp=Z,14nm,0.9s
MBAR Mbarara 55.65 235 *e*P **P 05 09 08.8 +0.8**
MBAR pmax pmax
comp=Z,14nm,0.9s
LEM Lembang 55.73 137 LR LR 05 37 28.3
comp=Z,225nm,18.1s,baz=236,slow=41
DAV Davao City (W) 56.66 110 LR LR 05 35 09.0
comp=Z,133nm,20.2s,baz=335,slow=38
PETK Petropavlovsk- 56.68 46 P **P 05 09 13.9 -0.8**
comp=Z,5.1nm,0.7s,baz=332,slow=5.9,SNR=6.0
PETK LR LR 05 34 11.1
comp=Z,206nm,18.1s,baz=294,slow=37
ESDC Sonseca Array 57.87 297 P **P 05 09 23.1 -0.3**
comp=Z,4.1nm,0.6s,baz=56,slow=7.4,SNR=40
ESDC LR LR 05 37 22.6
comp=Z,89nm,18.3s,baz=80,slow=39
PAB San Pablo 58.19 297 *e*P **P 05 09 26.3 +0.6**
comp=Z,18nm,1.3s
PAB San Pablo 58.19 297 *e*P **P 05 09 26.3 +0.6**
PAB pmax pmax
comp=Z,18nm,1.3s
SUMG Summit 59.07 341 *e*P **P 05 09 32.7 +1.0**
comp=Z,14nm,0.8s
SUMG Summit 59.07 341 *e*P **P 05 09 32.7 +1.0**
SUMG pmax pmax
comp=Z,14nm,0.8s
SUMG Summit 59.07 341 ⇑*i*P **P 05 09 32.7 +1.0**
comp=Z,26nm,0.7s
TAM Tamanrasset 59.16 275 *e*P **P 05 09 33.9 +1.1**
comp=Z,4.1nm,0.8s
TAM Tamanrasset 59.16 275 *e*P **P 05 09 33.9 +1.1**
TAM pmax pmax
comp=Z,4.0nm,0.8s
MVO Moncorvo 59.29 300 *e*P **P 05 09 34.3 +1.0**
comp=Z,31nm,1.3s
MVO Moncorvo 59.29 300 *e*LQ LQ 05 31 07.2
MVO *e*LR LR 05 34 09.8
comp=Z,138nm,18.0s
PVRL Vila Real 59.70 300 *e*P **P 05 09 37.1 +1.0**
POLO Lamas de Olo 59.70 301 *e*P **P 05 09 37.1 +0.9**
comp=Z,14nm,1.7s
PCAB Cabril 59.71 301 *e*P **P 05 09 36.8 +0.7**
comp=Z,49nm,1.3s
PGAV Gavieira, Arco 59.75 301 *e*P **P 05 09 37.8 +1.3**
PGAV Gavieira, Arco 59.75 301 *e*LQ LQ 05 30 42.4
MTE Manteigas 59.99 299 *e*P **P 05 09 41.3 +3.2**
comp=Z,47nm,1.5s
MTE Manteigas 59.99 299 *e*LQ LQ 05 28 57.4
MTE *e*LR LR 05 33 47.4
comp=Z,114nm,18.0s
MTE Manteigas 59.99 299 *e*P **P 05 09 39.0 +0.9**
comp=Z,17nm,1.0s
PVIS Viseu 60.08 300 *e*P **P 05 09 39.3 +0.6**
PMRV Marv??o 60.34 298 *e*P **P 05 09 41.1 +0.6**
comp=Z,32nm,1.6s
PTO Porto 60.35 301 *e*P **P 05 09 41.9 +1.4**
COI Coimbra 60.66 300 *e*P **P 05 09 43.5 +0.9**
comp=Z,33nm,1.2s
COI Coimbra 60.66 300 *e*P **P 05 09 43.1 +0.5**
comp=Z,24nm,0.8s
COI Coimbra 60.66 300 *e*P **P 05 09 43.1 +0.5**
COI pmax pmax
comp=Z,24nm,0.8s
PCAS Casmilo, Conde 60.79 299 *e*P **P 05 09 44.4 +0.8**
PTOM Tomar 60.94 299 *e*P **P 05 09 45.7 +1.2**
comp=Z,39nm,1.2s
PMTG Montargil 61.08 298 *e*P **P 05 09 46.4 +0.9**
comp=Z,29nm,1.7s
PBEJ Beja 61.33 297 *e*P **P 05 09 49.4 +2.2**
PCVE Castro Verde 61.64 297 *e*P **P 05 09 49.4 +0.1**
MESJ Messejana 61.67 297 *e*P **P 05 09 50.7 +1.2**
PTEO Sao Teotonio 62.16 297 *e*P **P 05 09 54.0 +1.2**
MORF Marmelete 62.23 297 *e*P **P 05 09 53.6 +0.3**
TOA1 Torodi Ar. Sit 67.68 269 *e*P **P 05 10 26.3 -2.7**
TOA0 Torodi Ar. Sit 67.68 269 *e*P **P 05 10 28.7 -0.3**
comp=Z,15nm,0.8s
TORD Torodi Ar. Bea 67.68 269 P **P 05 10 26.3 -2.7**
comp=Z,11nm,0.4s,baz=54,slow=5.5,SNR=31
TORD LR LR 05 44 25.2
comp=Z,71nm,18.3s,baz=5.0,slow=40
LSZ Lusaka 68.73 227 *e*P **P 05 10 36.5 +0.9**
comp=Z,4.9nm,0.7s
LSZ Lusaka 68.73 227 *e*P **P 05 10 36.5 +0.9**
LSZ pmax pmax
comp=Z,5.0nm,0.7s
INK Inuvik 70.87 10 P **P 05 10 47.2 -0.7**
comp=Z,6.5nm,0.4s,baz=357,slow=4.3,SNR=30
COLA College 71.29 17 *e*P **P 05 10 50.1 -0.4**
comp=Z,18nm,0.8s
COLA College 71.29 17 *e*P **P 05 10 50.1 -0.4**
COLA pmax pmax
comp=Z,18nm,0.8s
ILAR Eielson Array 71.60 17 P **P 05 10 51.1 -1.3**
comp=Z,3.8nm,0.7s,baz=323,slow=4.4,SNR=21
ILAR LR LR 05 46 37.3
comp=Z,200nm,18.7s,baz=320,slow=40
DAWY Dawson 73.79 14 *e*P **P 05 11 04.8 -0.7**
comp=Z,6.6nm,0.9s
GENI Genyem 73.88 107 P **P 05 11 08.6 +1.9**
JAY Jayapura 74.23 107 LR LR 05 43 22.2
comp=Z,80nm,21.9s,baz=190,slow=36
KDAK Kodiak Island 75.92 23 P **P 05 11 17.2 -0.6**
comp=Z,8.2nm,0.6s,baz=316,slow=5.3,SNR=6.8
KDAK Kodiak Island 75.92 23 *e*P **P 05 11 17.2 -0.6**
comp=Z,100nm,2.0s
DBIC Dimbokro 76.72 268 P **P 05 11 23.0 -0.1**
comp=Z,11nm,1.1s,baz=59,slow=11,SNR=3.6
DBIC Dimbokro 76.72 268 *e*P **P 05 11 23.0 -0.1**
comp=Z,22nm,1.2s
TSUM Tsumeb 78.10 233 *e*P **P 05 11 31.2 +0.4**
comp=Z,7.2nm,1.0s
YKA Yellowknife Ar 78.39 4 P **P 05 11 31.1 -0.5**
comp=Z,6.1nm,0.7s,baz=348,slow=5.4,SNR=32
YKA LR LR 05 47 00.2
comp=Z,13nm,21.9s,baz=350,slow=36
SCHQ Schefferville 80.28 338 LR LR 05 47 06.4
comp=Z,123nm,20.1s,baz=3.0,slow=36
BOSA Boshof 81.07 222 P **P 05 11 45.8 -1.0**
comp=Z,3.1nm,0.8s,baz=106,slow=3.4,SNR=6.7
BOSA LR LR 05 46 28.7
comp=Z,88nm,21.6s,baz=32,slow=35
BOSA Boshof 81.07 222 *e*P **P 05 11 47.8 +1.1**
comp=Z,13nm,1.0s
BOSA Boshof 81.07 222 *e*P **P 05 11 47.8 +1.1**
BOSA pmax pmax
comp=Z,13nm,1.0s
WRA Warramunga Arr 81.89 124 P **P 05 11 49.6 -1.5**
comp=Z,10.0nm,0.7s,baz=311,slow=5.5,SNR=35
WB2 Warramunga Arr 81.90 124 *e*P **P 05 11 50.4 -0.7**
comp=Z,17nm,0.9s
AS31 Alice Springs 84.32 127 *e*P **P 05 12 03.0 -0.6**
comp=Z,1.8nm,0.6s
ASAR Alice Springs 84.32 127 P **P 05 12 01.9 -1.7**

comp=Z,5.5nm,0.8s,baz=314,slow=5.0,SNR=54
FFC Flin Flon 86.30 357 *e*P **P 05 12 12.3 -0.8**
comp=Z,9.1nm,0.9s
FFC Flin Flon 86.30 357 *i* P **P 05 12 13.3 +0.2**
ULM Lac du Bonnet 90.37 353 LR LR 05 55 17.6
comp=Z,116nm,21.2s,baz=12,slow=37
EYMN Ely 92.14 350 *e*P **P 05 12 40.7 -0.1**
comp=Z,11nm,1.3s
STKA Stephens Creek 94.93 128 P **P 05 12 52.7 -1.0**
comp=Z,1.3nm,0.9s,baz=333,slow=2.3,SNR=2.7
STKA LR LR 06 02 42.2
comp=Z,74nm,19.5s,baz=259,slow=40
STKA Stephens Creek 94.93 128 *e*P **P 05 12 52.7 -1.0**
comp=Z,7.1nm,1.8s
RSSD Black Hills 96.97 358 *e*P **P 05 13 03.5 +0.2**
comp=Z,3.3nm,0.7s
RSSD Black Hills 96.97 358 *e*P **P 05 13 03.5 +0.2**
RSSD pmax pmax
comp=Z,3.0nm,0.7s
PDAR Pinedale Array 98.31 2 P **P 05 13 08.9 -0.5**
comp=Z,0.4nm,0.7s,baz=46,slow=3.9,SNR=4.0
PDAR LR LR 06 01 45.4
comp=Z,97nm,19.9s,baz=5.0,slow=38
SYO Syowa Base 110.83 192⇑*e*P **Pdif 05 14 06.0 +2.2**
SYO Syowa Base 110.83 192⇓*e*pPdiff pPdif 05 14 10.2 -2.7
TXAR Lajitas Array 111.70 357 Pdiff **Pdif 05 14 11.1 +2.0**
comp=Z,0.2nm,0.9s,baz=5.0,slow=4.1,SNR=2.4
TXAR PP **PP 05 18 47.5 +0.2**
comp=Z,0.3nm,0.8s,baz=57,slow=4.6,SNR=3.6
TXAR PKKPbc **PKKPbc 05 29 01.6 +2.4**
comp=Z,0.3nm,0.8s,baz=169,slow=5.4,SNR=3.4
SNAA Sanae 122.65 201 P **PKPdf 05 18 26.2 +0.2**
VNA3 Neumayer Olymp 124.48 203 P **PKiKP 05 18 30.5 +0.8**
VNDA Vanda 127.64 164 PKP **PKiKP 05 18 35.8 -0.1**
comp=Z,1.1nm,1.1s,baz=347,slow=4.8,SNR=3.6
VNDA Vanda 127.64 164 *e*PKPdf **PKPdf 05 18 35.5 +0.2**
VNDA Vanda 127.64 164 *e*PKiKP **PKPdf 05 18 35.5 +0.2**
QSPA South Pole Qui 129.05 180 *e*PKPdf **PKPdf 05 18 38.7 +0.3**
LPAZ La Paz 139.42 293 PKP **PKPdf 05 18 58.4 -1.6**
comp=Z,0.6nm,0.6s,baz=346,slow=4.2,SNR=4.5
TRQA Tornquist 145.40 258 *e*PKPdf **PKPdf 05 19 09.2 0.0**
TRQA Tornquist 145.40 258 *e*PKiKP **PKPdf 05 19 09.2 0.0**
GO03 Copiap 147.70 280 *e*PKPbc **PKPbc 05 19 17.0 +0.7**
PLCA Paso Flores 152.46 255 PKPbc **PKiKP 05 19 28.4 +0.7**
comp=Z,2.1nm,0.6s,baz=98,slow=1.3,SNR=5.5
PLCA Paso Flores 152.46 255 *e*PKPbc **PKPbc 05 19 27.8 +0.2**
GO06 Curarrehue 152.96 258 *e*PKPbc **PKPbc 05 19 28.7 0.0**

NIED ***30*** *05:01:00, 36°.90N×141°.40E, h5km, Mw4.1 Best double couple: M0 1.44000×10^15 NP1:φs 182.00000°, δ53.00000°, λ-130.00000°. NP2:φs 56.00000°, δ53.00000°, λ-50.00000°.*
ISCJB ***30*** *05:01:56.1±1.4, 36°.94N±0°.03×141°.49E±0°.04, h14km±9km, mb4.4/14, MS3.2/2, Error ellipse: s-maj=5.5km s-min=4.5km az=153.1*
JMA ***30*** *05:01:56.8±0.1, 36°.91N×141°.45E, h35km±1km, M4.4*
JMA Felt II J1.
IDC ***30*** *05:01:56.0±1.1, 37°.02N×141°.38E, h0km, mb4.0/8, mb1 4.1/12, mb1mx3.9/49, mbtmp3.9/12, ML3.3/3, MS3.1/7, Ms1 3.1/7, ms1mx2.9/43, Error ellipse: s-maj=28.2km s-min=18.7km az=161.0*
NEIC ***30*** *05:01:59.5±1.9, 37°.14N×141°.37E, h17km±7km, mb4.8/8, Error ellipse: s-maj=25.4km s-min=4.3km az=133.0*
NEIC Recorded [2 JMA] in Fukushima.
ISC 30 05:01:56.4±1.7, 36°.93N±0°.04×141°.46E±0°.06, h7km±10km, n50, σ1°.49/54, mb4.5/14, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.56**	**288**	P	**Pb**	**05 02 07.8**	**-0.7**
ONAJ				S	**Sg**	**05 02 15.5**	**+1.0**
JFK	**Kawauchi**	**0.64**	**313**	P	**Pg**	**05 02 09.2**	**+0.4**
JFK				S	**Sg**	**05 02 17.6**	**+0.4**
JFFD	**Fukushimafurud**	**0.74**	**283**	P	**Pg**	**05 02 10.4**	**-0.2**
JFFD				S	**Sg**	**05 02 20.0**	**-0.2**
JHO	**Hitachi**	**0.78**	**246**	P	**Pg**	**05 02 11.0**	**-0.5**
JHO				S	**Sg**	**05 02 21.5**	**-0.1**
JHYU	**Hitachinakayam**	**0.92**	**230**	P	**Pg**	**05 02 13.1**	**-0.9**
JFT	**Otama**	**1.07**	**304**	P	**Pg**	**05 02 16.7**	**-0.3**
JFT				S	**Sg**	**05 02 30.5**	**-0.5**
JMM	**Marumori**	**1.08**	**331**	P	**Pg**	**05 02 16.0**	**-1.1**
JFY	**Yanaizu**	**1.48**	**289**	P	**Pn**	**05 02 22.9**	**-0.6**
JFY				S	**Sn**	**05 02 41.8**	**-1.3**
JIO	**Ouri**	**1.53**	**357**	P	**Pn**	**05 02 22.8**	**-1.2**
JIO				S	**Sn**	**05 02 41.5**	**-2.6**
JOU	**Okura**	**1.57**	**336**	P	**Pn**	**05 02 24.1**	**-0.6**
JOU				*e*S	**Sn**	**05 02 44.5**	**-0.7**
MJAR	**Matsushiro Arr**	**2.64**	**263**	Pn	**Pn**	**05 02 39.0**	**-0.4**
	0.6nm,0.3s,baz=91,slow=14,SNR=30						
MJAR				Sn	**Sn**	**05 03 11.8**	**+0.2**
	2.4nm,0.3s,baz=80,slow=27,SNR=6.7						
MJAR				LR	LR	05 03 15.7	
	comp=Z,93nm,19.6s,baz=80,slow=31						
MAJO	**Matsushiro**	**2.64**	**263**	*e*Pn	**Pn**	**05 02 39.9**	**+0.5**
MAJO				*e*Sn	**Sn**	**05 03 11.8**	**+0.1**
MAT	**Matsushiro**	**2.64**	**263**	P	**Pn**	**05 02 39.7**	**+0.3**
MAT				*e*S	**Sn**	**05 03 06.5**	**-5.2**
MJB9	**Matsu-Tunnel**	**2.65**	**263**	*e*Pn	**Pn**	**05 02 40.0**	**+0.6**
INU	**Inuyama**	**3.93**	**248**	*e*Pn	**Pn**	**05 03 00.6**	**+3.5**
JHJ2	**Mitsune**	**4.04**	**200**	*e*P	**Pn**	**05 02 55.2**	**-3.4**
JHJ	**Hachijo jima 2**	**4.04**	**200**	Pn	**Pn**	**05 02 59.4**	**+0.7**
	11nm,0.3s,baz=84,slow=17,SNR=9.2						
JHJ				Sn	**Sn**	**05 03 44.8**	**-1.4**
	20nm,0.3s,baz=17,slow=18,SNR=3.7						
JHJ				LR	LR	05 04 48.5	
	comp=Z,170nm,18.6s,baz=12,slow=42						
ERM	**Erimo**	**5.25**	**14**	*e*Pn	**Pn**	**05 03 13.9**	**-1.2**
ASAJ	**Asahikawa**	**7.23**	**7**	Pn	**Pn**	**05 03 41.6**	**-0.8**
	0.9nm,0.3s,baz=223,slow=21,SNR=5.3						
ASAJ				Sn	**Sn**	**05 05 02.9**	**-1.9**
	0.2nm,0.3s,baz=172,slow=16,SNR=1.5						
JNU	**Nakatsue**	**9.47**	**249**	LR	LR	05 08 17.5	
	comp=Z,132nm,18.2s,baz=1.0,slow=40						
USRK	**Ussuriysk Ar.**	**10.23**	**318**	Pn	**Pn**	**05 04 23.8**	**+0.3**
	0.1nm,0.3s,baz=116,slow=16,SNR=2.4						
USRK				LR	LR	05 08 08.6	
	comp=Z,146nm,18.8s,baz=132,slow=37						
KSRS	**Korea Array**	**10.82**	**277**	Pn	**Pn**	**05 04 35.4**	**+3.8**
	0.2nm,0.3s,baz=88,slow=16,SNR=5.4						
KSRS				LR	LR	05 08 31.3	
	comp=Z,93nm,20.0s,baz=75,slow=37						
MA2	**Magadan**	**23.45**	**12**	LR	LR	05 17 24.2	
	comp=Z,55nm,18.2s,baz=162,slow=40						
H11N2	**WAKE ISLAND Hy 28.06**	**121**		T	T	05 37 11.4	
	baz=313,slow=75,SNR=500						
H11N1	**WAKE ISLAND Hy 28.07**	**121**		T	T	05 37 12.1	
	baz=313,slow=75,SNR=544						
H11N3	**WAKE ISLAND Hy 28.08**	**121**		T	T	05 37 12.7	
	baz=313,slow=75,SNR=489						
H11S1	**WAKE ISLAND Hy 28.77**	**123**		T	T	05 38 04.0	
	baz=315,slow=76,SNR=298						
H11S3	**WAKE ISLAND Hy 28.77**	**123**		T	T	05 38 04.7	
	baz=315,slow=76,SNR=218						
H11S2	**WAKE ISLAND Hy 28.79**	**123**		T	T	05 38 05.2	
	baz=315,slow=76,SNR=211						
MKAR	**Makanchi Array**	**44.21**	**302**	LR	LR	05 27 24.9	
	comp=Z,42nm,18.5s,baz=4.0,slow=35						
KURBB	**Kurchatov Arra**	**46.10**	**308**	P	**P**	**05 10 20.7**	**-0.2**
	3.3nm,0.9s,baz=83,slow=8.7,SNR=15						
KDAK	**Kodiak Island**	**47.15**	**42**	P	**P**	**05 10 29.7**	**+0.6**
	6.3nm,0.9s,baz=300,slow=8.1,SNR=3.8						
KDAK	**Kodiak Island**	**47.15**	**42**	*e*P	**P**	**05 10 29.9**	**+0.9**
	21nm,1.4s						
MLY	**Manley**	**47.92**	**32**	*e*P	**P**	**05 10 37.2**	**+2.2**
	7.8nm,1.0s						
ILAR	**Eielson Array**	**49.56**	**32**	P	**P**	**05 10 47.7**	**+0.1**
	1.5nm,0.8s,baz=270,slow=6.5,SNR=17						
ILB	**Eielson Array**	**49.56**	**32**	*e*P	**P**	**05 10 48.2**	**+0.6**
	7.7nm,0.8s						
GLI	**Glacier Island**	**49.72**	**37**	*e*P	**P**	**05 10 50.3**	**+1.5**
	75nm,0.6s						
SCRK	**Sand Creek**	**50.87**	**33**	*e*P	**P**	**05 10 58.9**	**+1.2**
	21nm,1.4s						
FIA0	**FINESS Array S**	**68.92**	**332**	*e*P	**P**	**05 13 01.8**	**+0.2**
FINES	**FINESS Array B**	**68.92**	**332**	P	**P**	**05 13 01.8**	**+0.2**
	1.5nm,0.8s,baz=40,slow=9.1,SNR=2.5						
PINE	**Pine Mountain**	**70.38**	**50**	*e*P	**P**	**05 13 10.6**	**-0.5**
	6.0nm,0.9s						
NB200	**NORSAR Array S**	**74.30**	**337**	*e*P	**P**	**05 13 34.6**	**+0.6**
NOA	**NORSAR Array B**	**74.30**	**337**	P	**P**	**05 13 34.6**	**+0.6**
	1.0nm,0.8s,baz=39,slow=5.9,SNR=2.3						

AKASG	Malin Array Be	74.40	322	P	P	05 13 34.0	-0.7
	0.3nm,0.3s,baz=45,slow=6.3,SNR=3.5						
AKBB	Malin Array Si	74.40	322	eP	P	05 13 32.7	-2.1
	8.2nm,1.1s						
NV01	Mina Array Sit	75.02	53	eP	P	05 13 38.9	0.0
NVAR	Mina Array Bea	75.02	53	P	P	05 13 38.9	0.0
	1.0nm,0.8s,baz=297,slow=6.0,SNR=4.3						
PV13	Radium Mtn., P	81.08	49	eP	P	05 14 14.1	+1.5
	8.0nm,1.3s						
TXAR	Lajitas Array	90.15	52	P	P	05 14 58.7	+1.0
	0.2nm,0.5s,baz=299,slow=3.1,SNR=5.6						
LPAZ	La Paz	146.71	60	PKPbc	PKPab	05 21 41.7	+0.4
	1.1nm,0.9s,baz=16,slow=3.8,SNR=3.8						

DJA 30 05:26:38.3±0.7, 1°S±4°×12°0E±°, h139km±10km, M3.7/7, MLv3.7/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	Ampana	1.77	102	P	Pn	05 27 10.0	0.0
APSI				S	Sn	05 27 35.1	+0.8
TTSI	Tana Toraja	2.49	182	P	Pn	05 27 17.5	-1.3
TTSI				S	Sn	05 27 50.5	+0.5
SPSI	Sidrap Palu	3.41	183	P	Pn	05 27 29.5	-1.0
BKSI	Bulukumba	4.75	178	P	Pn	05 27 49.1	+0.8

DJA 30 05:40:03.2±0.6, 0°S±4°×12°3E±°, h110km±7km, M3.5/7, MLv3.5/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.93	193	P	Pn	05 40 24.6	+0.9
LUWI				S	Sn	05 40 40.7	+1.6
APSI	Ampana	1.54	240	P	Pn	05 40 30.2	-0.3
APSI				S	Sn	05 40 51.0	-0.2
SANI	Sanana	3.56	122	P	Pn	05 40 56.0	-0.7
TTSI	Tana Toraja	4.29	227	P	Pn	05 41 07.8	+1.4

IDC 30 05:40:35.7±18.0, 17°34S×178°93W, h600km±177km, mb3.4/3, mb1 3.6/3, mb1mx2.8/33, mbtmp4.4/3, Error ellipse: s-maj=149.7km s-min=87.4km az=109.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.48	240	P	P	05 47 07.8	-0.2
	1.3nm,0.3s,baz=94,slow=9.6,SNR=5.0						
WRA	Warramunga Arr	44.25	259	P	P	05 47 53.2	-0.4
	1.1nm,0.4s,baz=92,slow=8.2,SNR=7.5						
ASAR	Alice Springs	44.47	254	P	P	05 47 55.5	+0.2
	12nm,0.6s,baz=89,slow=7.7,SNR=216						
ASAR				PcP	PcP	05 49 25.1	-0.4
	0.6nm,0.8s,baz=103,slow=4.0,SNR=5.3						
BRTR	Keskin Array B	144.03	315	PKP	PKPbc	05 59 03.7	-0.3
	0.4nm,0.6s,baz=60,slow=3.5,SNR=2.5						
GERES	GERESS Array B	146.93	345	PKPbc	PKPbc	05 59 11.3	-0.6
	0.2nm,0.6s,baz=30,slow=2.4,SNR=4.2						

IDC 30 05:45:00.9±11.0, 28°99S×177°14W, h100km±104km, mb3.5/3, mb1 3.7/4, mb1mx3.3/31, mbtmp3.8/4, ML3.0/1, Error ellipse: s-maj=88.6km s-min=49.0km az=174.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	10.41	206	P	Pn	05 47 27.3	+0.1
	0.1nm,0.3s,baz=301,slow=5.9,SNR=2.4						
URZ				S	Sn	05 49 22.1	+0.3
	0.2nm,0.3s,baz=94,slow=16,SNR=3.0						
STKA	Stephens Creek	35.54	255	P	P	05 51 48.1	-0.3
	2.0nm,0.6s,baz=122,slow=9.5,SNR=4.1						
ASAR	Alice Springs	43.95	265	P	P	05 52 58.2	0.0
	0.2nm,0.5s,baz=100,slow=7.0,SNR=5.2						
WRA	Warramunga Arr	44.81	270	P	P	05 53 05.0	-0.1
	2.3nm,0.9s,baz=108,slow=8.2,SNR=4.8						
FINES	FINESS Array B	144.06	341	PKP	PKPab	06 04 21.4	-0.4
	0.4nm,0.4s,baz=15,slow=2.2,SNR=7.7						
HFS	Hagfors	148.00	350	PKPbc	PKPbc	06 04 34.0	0.0
	2.0nm,0.8s,baz=2.9,slow=2.9,SNR=4.2						

IDC 30 05:52:08.8±4.7, 56°61S×147°96E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.7/26, mbtmp3.6/3, Error ellipse: s-maj=546.5km s-min=27.3km az=76.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	21.56	172	P	P	05 56 59.3	0.0
	1.2nm,0.9s,baz=346,slow=10,SNR=5.9						
H01W1	Cape Leeuwin H	31.55	299	T	T	06 31 39.1	
	baz=144,slow=75,SNR=48						
H01W2	Cape Leeuwin H	31.56	299	T	T	06 31 40.9	
	baz=144,slow=75,SNR=52						
H01W3	Cape Leeuwin H	31.57	299	T	T	06 31 42.1	
	baz=144,slow=75,SNR=25						
ASAR	Alice Springs	34.48	337	P	P	05 58 58.1	-0.1
	0.6nm,1.0s,baz=161,slow=9.2,SNR=3.4						
WRA	Warramunga Arr	38.00	339	P	P	05 59 28.4	0.0
	2.1nm,0.8s,baz=167,slow=8.2,SNR=3.0						
H08S2	Diego Garcia H	75.66	278	T	T	07 26 43.6	
	baz=147,slow=76,SNR=18						
H08S1	Diego Garcia H	75.67	278	T	T	07 26 34.3	
	baz=147,slow=76,SNR=25						
H08S3	Diego Garcia H	75.68	278	T	T	07 26 44.5	
	baz=147,slow=76,SNR=14						

*SJA **30** 05:54:41.9±0.6, 31°67S×69°65W, h141km±7km, ML2.8, MW3.1*
*GUC **30** 05:54:44.5±0.6, 31°56S×69°67W, h127km±14km, ML2.7*
ISC 30 05:54:44.1±1.7, 31°56S±0°04×69°56W±0°05, h134km±17km, n13, σ0°67/23, 2C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFA	Coronel Fontan	1.13	93	eP	Pn	05 55 08.6	-0.2
CFA				eS	Sn	05 55 27.7	+0.3
CO02	Combarbal	1.28	286	↑iP	Pn	05 55 10.3	0.0
CO02				i S	Sn	05 55 29.2	-0.9
GO04	Tololo Observa	1.74	322	↑iP	Pn	05 55 15.8	+0.3
GO04				i S	Sn	05 55 39.3	-0.2
PEL	Peldehue	1.84	211	↓iP	Pn	05 55 16.3	-0.2
PEL				i S	Sn	05 55 40.8	-0.5
PEL				IAML		05 55 45.1	
	comp=N,48nm,0.4s						
FCH	Farellones	1.87	199	↓↓iP	Pn	05 55 17.9	+0.8
FCH				i S	Sn	05 55 43.4	+1.0
FCH				IAML		05 55 45.4	
	comp=E,51nm,0.2s						
CLCH	Cerro Calan	2.01	204	eP	Pn	05 55 18.8	+0.3
CLCH				i S	Sn	05 55 45.0	+0.1
CLCH				IAML		05 55 47.6	
	comp=E,103nm,0.5s						
ACAN	Cantantal	2.14	110	eP	Pn	05 55 19.6	-0.5
ACAN				eS	Sn	05 55 47.5	-0.2
LSCH	La Serena	2.19	318	eP	Pn	05 55 20.8	+0.2
LSCH				i S	Sn	05 55 47.4	-1.2
VCA	Vinchina	3.05	23	eP	Pn	05 55 32.4	+0.7
VCA				IAML		05 55 34.9	
	comp=Z,25nm,0.3s						
VCA				eS	Sn	05 56 09.8	+1.5
MRA	San Martin	3.38	106	eP	Pn	05 55 35.5	-0.4
MRA				IAML		05 56 15.4	
	comp=Z,14nm,0.3s						
GO03	Copiap	3.99	351	eP	Pn	05 55 44.0	0.0
GO03				eS	Sn	05 56 30.6	+0.3
CYA	Choya	4.50	47	IAML		05 55 50.4	
	comp=Z,6.4nm,0.3s						
CYA				eP	Pn	05 55 50.7	0.0
AHML	Horco Molle	6.02	39	eP	Pn	05 56 10.2	-0.9

*JMA **30** 05:57:04.7, 23°76N×121°63E, h39km±1km, M2.4*
*ISCJB **30** 05:57:05.2±0.2, 23°78N±0°01×121°67E±0°01, h28km±1km, Error ellipse: s-maj=2.5km s-min=1.7km az=41.1*
*TAP **30** 05:57:05.2, 23°80N×121°62E, h26km, ML2.9, B*
ISC 30 05:57:05.1±0.9, 23°80N±0°02×121°67E±0°02, h28km±5km, n88, σ0°65/164, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.12	329	P	Pb	05 57 09.0	-1.4
	baz=350						
ENLB				S	Sb	05 57 14.2	+0.3
	baz=350						
HWA	Hwalien	0.19	341	P	Pn	05 57 12.3	+0.2
	baz=357						
ESL	Shilin	0.22	274	P	Pb	05 57 11.7	+0.3
	baz=274						
ESL				S	Sb	05 57 15.6	0.0
	baz=274						
EGFH	Guangfu	0.26	240	eP	Pb	05 57 12.1	+0.2
	baz=233						
EGFH				S	Sb	05 57 16.6	+0.2
	baz=233						
TWD	Chiawan	0.29	346	eP	Pn	05 57 13.0	-0.5
	baz=357						
TWD				eS	Sn	05 57 19.0	+0.1
	baz=357						
NACB	Ninganchiao	0.38	349	P	Pn	05 57 14.0	-0.8
	baz=356						
NACB				eS	Sn	05 57 21.0	-0.2
	baz=356						
HGSD	Ruisui	0.38	217	eP	Pb	05 57 14.2	+0.6
	baz=210						
HGSD				eS	Sb	05 57 20.3	+1.0
	baz=210						
EHY	Hungye	0.43	228	eP	Pb	05 57 13.8	-0.6
	baz=222						
EHY				S	Sb	05 57 19.8	-1.0
	baz=222						
ETLH	Xiulin Townshi	0.44	337	P	Pb	05 57 14.7	0.0
	baz=342						
ETLH				S	Sb	05 57 21.3	+0.2
	baz=342						
OWD	Renai	0.48	289	P	Pb	05 57 15.1	-0.2
	baz=290						
OWD				S	Sb	05 57 21.6	-0.6
	baz=290						
VWDT	VWDT	0.49	265	P	Pb	05 57 15.3	0.0
	baz=264						
VWDT				eS	Sb	05 57 21.8	-0.4
	baz=264						
WHF	Hehuan Shan	0.51	313	P	Pb	05 57 15.6	-0.3
	baz=317						
WHF				eS	Sb	05 57 23.1	-0.1
	baz=317						
CHGB	Renai	0.52	300	P	Pb	05 57 16.1	0.0
	baz=302						
CHGB				S	Sb	05 57 22.8	-0.6
	baz=302						
YULB	Yu-li	0.53	220	P	Pb	05 57 15.1	-0.9
	baz=216						
YULB				eS	Sb	05 57 23.6	+0.2
	baz=216						
TWF1	Yuli	0.56	218	P	Pb	05 57 15.6	-0.9
	baz=212						
TWF1				S	Sb	05 57 23.1	-1.2
	baz=212						
ENA	Nanau	0.63	6	P	Pn	05 57 17.8	-0.5
	baz=10.0						
ENA				eS	Sn	05 57 27.9	+0.6
	baz=10.0						
NANB	Nanao	0.63	7	P	Pn	05 57 17.8	-0.4
	baz=10.0						
NANB				S	Sn	05 57 27.8	+0.4
	baz=10.0						
TWT	Tachien	0.64	315	P	Pn	05 57 18.1	-0.5
	baz=316						
TWT				eS	Sb	05 57 26.9	+0.2
	baz=316						
TDCB	Techi	0.65	314	eP	Pb	05 57 18.2	+0.1
	baz=316						
TDCB				eS	Sb	05 57 26.4	-0.5
	baz=316						
SSLB	Suanglung	0.66	269	P	Pb	05 57 17.3	-0.8
	baz=268						
SSLB				S	Sb	05 57 26.7	-0.3
	baz=268						
NNSB	Datong	0.68	337	P	Pb	05 57 18.3	-0.3
	baz=340						
NNSB				eS	Sb	05 57 26.9	-0.8
	baz=340						
NNS	Nan Shan	0.69	337	P	Pb	05 57 18.6	-0.2
	baz=341						
NNS				S	Sb	05 57 28.0	-0.1
	baz=341						
SMLT	Sun Moon Lake	0.71	277	P	Pb	05 57 18.5	-0.6
	baz=277						
SMLT				S	Sb	05 57 27.5	-1.1
	baz=277						
DPDB	Guoxing	0.72	289	P	Pb	05 57 18.9	-0.3
	baz=290						
DPDB				eS	Sb	05 57 28.9	+0.1
	baz=290						
YUS	Yu-Shan	0.73	245	eP	Pb	05 57 19.1	-0.5
	baz=242						
YUS				S	Sb	05 57 28.1	-1.3
	baz=242						
CHKT	Chengkung	0.75	202	P	Pb	05 57 19.3	-0.3
	baz=198						
CHKT				eS	Sb	05 57 29.7	+0.1
	baz=198						
TYC	Yuchr	0.75	278	P	Pb	05 57 19.1	-0.6
	baz=278						
TYC				S	Sb	05 57 29.5	-0.1
	baz=278						
WHYT	Xinyi Township	0.76	262	P	Pb	05 57 19.5	-0.3
	baz=261						
WHYT				eS	Sb	05 57 28.7	-1.1
	baz=261						
WHP	Taichung City	0.82	306	eP	Pb	05 57 20.5	-0.3
	baz=307						
WHP				eS	Sb	05 57 31.5	-0.1
	baz=307						
TWC	Suao	0.82	11	eP	Pn	05 57 21.8	+0.9
	baz=15						
TWC				eS	Sn	05 57 33.7	+1.6
	baz=15						
ENTT	Nioudou	0.84	353	eP	Pn	05 57 20.9	-0.3
	baz=357						
ENTT				eS	Sn	05 57 32.7	+0.1
	baz=357						
ALS	Alishan	0.84	250	eP	Pb	05 57 20.9	-0.6
	baz=248						
ALS				eS	Sb	05 57 31.7	-0.8
	baz=248						
ELDTW	Lidau	0.85	225	eP	Pb	05 57 20.9	-0.6
	baz=221						
ELDTW				eS	Sb	05 57 31.6	-1.0
	baz=221						
EOS1	EOS1	0.86	29	eP	Pn	05 57 23.1	+1.8
	baz=31						
EOS1				eS	Sn	05 57 34.7	+1.8
	baz=31						
WJS	Zhushan	0.86	272	P	Pn	05 57 21.9	+0.4
	baz=271						
WJS				eS	Sb	05 57 33.2	+0.4
	baz=271						
WNT	Mingjian	0.91	275	eP	Pn	05 57 22.3	+0.3
	baz=275						
WNT				eS	Sn	05 57 34.5	+0.3
	baz=275						
YHNB	Yeheng	0.91	343	P	Pn	05 57 22.0	-0.1
	baz=345						
YHNB				eS	Sb	05 57 33.4	-0.7
	baz=345						
TWE	Neicheng	0.92	360	eP	Pn	05 57 22.0	-0.2
	baz=3.0						
TWE				eS	Sn	05 57 34.6	+0.2
	baz=3.0						
NSK	Sanguang	0.92	342	eP	Pn	05 57 22.2	-0.1
	baz=345						
NSK				eS	Sb	05 57 33.8	-0.6
	baz=345						
CHN5	Tsauling	0.93	258	eP	Pb	05 57 22.4	-0.3
	baz=256						
CHN5				S	Sb	05 57 34.8	-0.1
	baz=256						
TCU	Taichung	0.97	291	eP	Pb	05 57 23.6	+0.2
	baz=291						
TCU				eS	Sn	05 57 36.6	+0.8
	baz=291						
TWQ1	Liyutan	0.99	304	P	Pb	05 57 23.5	-0.1
	baz=305						
TWQ1				eS	Sn	05 57 37.2	+1.0
	baz=305						
WGK	Gukeng	1.02	264	eP	Pn	05 57 23.7	+0.1
	baz=263						
WGK				eS	Sb	05 57 36.9	-0.4
	baz=263						
NSTT	Nanjuang	1.03	324	P	Pb	05 57 24.6	+0.2
	baz=325						
NSTT				eS	Sn	05 57 37.9	+0.6
	baz=325						
LIOB	Emei	1.03	325	P	Pb	05 57 24.5	+0.1
	baz=326						
LIOB				eS	Sn	05 57 38.5	+1.1
	baz=326						
NSY	Sanyi	1.03	307	eP	Pb	05 57 24.7	+0.3
	baz=308						
NSY				eS	Sn	05 57 38.1	+0.7
	baz=308						
WDLH	Douliu	1.04	264	eP	Pb	05 57 24.6	0.0
	baz=263						
WDLH				eS	Sb	05 57 37.5	-0.4
	baz=263						
STYT	Tauyuan	1.05	233	eS	Sb	05 57 37.9	-0.3
	baz=230						
WCHH	Zhanghua	1.06	286	eP	Pn	05 57 24.4	+0.3
	baz=286						
WCHH				eS	Sn	05 57 38.8	+1.0
	baz=286						
NTC	Toucheng	1.06	8	eP	Pb	05 57 25.2	+0.3
	baz=10.0						
NTC				eS	Sn	05 57 39.6	+1.6
	baz=10.0						
CHN4	Tsaushan	1.08	246	P	Pb	05 57 25.2	-0.1
	baz=244						
CHN4				eS	Sb	05 57 39.2	+0.1
	baz=244						
NMLH	Miaoli	1.09	313	eP	Pb	05 57 25.1	-0.2
	baz=314						
NMLH				eS	Sb	05 57 38.7	-0.5
	baz=314						
WDJ	Dajia District	1.09	300	P	Pb	05 57 25.0	-0.4
	baz=301						
WDJ				S	Sn	05 57 39.4	+0.7
	baz=301						
PTSB	Yuanli	1.09	306	eP	Pb	05 57 25.2	-0.2
	baz=307						
PTSB				S	Sn	05 57 40.1	+1.3
	baz=307						
WTP	Ta-pu	1.12	241	eP	Pn	05 57 25.4	+0.5
	baz=238						
WTP				eS	Sn	05 57 39.9	+0.5
	baz=238						
TWGBT	Beinan	1.12	209	P	Pn	05 57 25.2	+0.2
	baz=206						
TWGBT				S	Sn	05 57 39.5	+0.1
	baz=206						
TWG	Pinlang	1.12	210	eP	Pn	05 57 25.5	+0.5
	baz=206						
TWG				eS	Sn	05 57 39.6	+0.2
	baz=206						
TIPB	Shuangxi	1.18	7	eP	Pb	05 57 27.8	+0.9
	baz=9.0						
TIPB				eS	Sb	05 57 42.5	+0.8
	baz=9.0						
TWA	Mucha	1.18	356	eS	Sn	05 57 40.9	0.0
	baz=358						
CHY	Chiayi	1.18	256	eS	Sn	05 57 41.0	+0.1
	baz=254						
RLNB	Erlin	1.20	275	eP	Pb	05 57 27.2	-0.1
	baz=274						
RLNB				S	Sb	05 57 42.5	0.0
	baz=274						
TWK	Hsinying	1.21	244	P	Pn	05 57 26.9	+0.7
	baz=242						
TWK				S	Sn	05 57 42.2	+0.5
	baz=242						
CHN1	Nanshi	1.21	240	eP	Pb	05 57 27.4	-0.1
	baz=238						
CHN1				S	Sn	05 57 42.4	+0.5
	baz=238						
SNST	Tainan City	1.22	242	eS	Sn	05 57 42.3	+0.3
	baz=240						
SGST	Jiashian	1.23	235	eP	Pn	05 57 27.2	+0.7
	baz=232						
SGST				eS	Sb	05 57 43.4	+0.2
	baz=232						
TWB1	Santiao Chiao	1.24	13	eP	Pb	05 57 27.9	0.0
	baz=15						
TAP	Taipei	1.24	353	eS	Sb	05 57 42.9	-0.7
	baz=355						
JYNG	Yonagunijimaku	1.33	61	P	Pb	05 57 28.6	-0.9
JYNG				eS	Sb	05 57 44.9	-1.3
WSF	Szhu	1.34	263	eS	Sb	05 57 46.2	-0.1
	baz=262						
ECL	Taimali	1.37	209	eP	Pn	05 57 28.8	+0.4
	baz=206						
ECL				eS	Sn	05 57 44.8	-0.8
	baz=206						
YOJ	Yonaguni jima	1.39	61	P	Pb	05 57 29.5	-0.9
	baz=62						
YOJ				eS	Sb	05 57 46.5	-1.3
	baz=62						
YOJ	Yonaguni jima	1.39	61	P	Pn	05 57 29.1	+0.4
YOJ				eS	Sb	05 57 46.9	-0.9
SSD	Sandimen	1.42	223	eP	Pn	05 57 29.8	+0.7
	baz=220						
SSD				eS	Sb	05 57 48.4	-0.2
	baz=220						
MASBT	Mashibuluo	1.52	219	P	Pn	05 57 30.9	+0.5
	baz=217						
MASBT				S	Sn	05 57 50.3	+1.0
	baz=217						
EAST	Anshuo	1.60	208	eP	Pn	05 57 32.2	+0.6
	baz=206						
SCZT	Fangliau	1.72	214	eP	Pn	05 57 34.3	+1.1
	baz=212						
SCZT				eS	Sn	05 57 55.8	+1.6
	baz=212						
WDGT	Dungji	1.92	254	eP	Pn	05 57 35.8	-0.2
	baz=253						
WDGT				eS	Sn	05 57 58.6	-0.6
	baz=253						
PHUB	P'eng-hu	1.95	262	P	Pn	05 57 36.5	+0.1
	baz=261						
PHUB				S	Sn	05 57 58.7	-1.2
	baz=261						
PNG	Penghu	1.95	264	eS	Sn	05 57 59.5	-0.5
	baz=262						
IRIF	Iriomote-Funau	1.96	74	P	Pn	05 57 36.9	+0.4
IRIF				S	Sn	05 58 00.7	+0.6
HATJ	Hateruma jima	1.97	82	P	Pn	05 57 37.3	+0.7
HATJ				eS	Sn	05 58 00.3	-0.1
VCHM	Qimei	2.14	255	eP	Pn	05 57 38.9	-0.1
	baz=253						
VCHM				S	Sn	05 58 04.0	-0.6
	baz=253						
JKRS	Kuro-shima	2.18	78	P	Pn	05 57 40.6	+1.0
JKRS				S	Sn	05 58 06.3	+0.6
JIJ	Ishigaki jima	2.33	76	P	Pn	05 57 41.9	+0.3
JIJ				S	Sn	05 58 09.2	-0.1
PTTC	Pingtan	2.42	315	eS	Sn	05 58 11.3	-0.3
	baz=315						
JISG	Ishigakijimahi	2.54	71	P	Pn	05 57 44.8	+0.4
JISG				eS	Sn	05 58 13.1	-1.3
PTMZ	Houxiangcun	2.63	298	eP	Pn	05 57 45.2	-0.6
	baz=298						
JTJ	Tarama	2.89	73	P	Pn	05 57 50.1	+0.8
JTJ				S	Sn	05 58 23.4	+0.2

*BJI **30** 06:04:22.4±0.0, 39°21N×73°07E, h9km, mb4.1/1, ML4.0/3, Ms3.5/1, Ms7 3.3/3*
*SOME **30** 06:04:23.5, 39°47N×72°67E, h10km*
*ISCJB **30** 06:04:23.9±0.4, 39°00N±0°03×73°47E±0°04, h10km, mb4.0/21, MS3.4/1, Error ellipse: s-maj=4.7km s-min=3.8km az=27.8*
*IDC **30** 06:04:23.9±0.8, 39°06N×73°45E, h0km, mb3.9/13, mb1 3.9/21, mb1mx3.7/60, mbtmp3.8/21, ML3.2/8, MS3.1/3, Ms1 3.2/3, ms1mx2.6/30, Error ellipse: s-maj=16.3km s-min=14.2km az=7.0*
*KRNET **30** 06:04:28.0±0.1, 38°99N×73°61E, mb4.1*
*MOS **30** 06:04:28.1±1.3, 39°16N×73°28E, h33km, mb4.3/9, Error ellipse: s-maj=9.4km s-min=5.2km az=80.9*
*NNC **30** 06:04:29.8±2.2, 39°37N×73°50E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=17.2km s-min=11.1km az=170.0*
*NEIC **30** 06:04:32.3±2.0, 39°18N×73°49E, h62km±8km, mb4.0/6,*

Error ellipse: s-maj=11.0km s-min=8.6km az=140.0

ISC 30 06:04:25.0±0.5,38°.94N±0°.04×73°.57E±0°.03,h10km,n153,
σ2°.01/170,mb4.0/21,39C-19D,Tajikistan-Xinjiang
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.96**	**72**	Pg	**Pn**	**06 04 56.0**	**-2.4**
KSH				Sg	**Sn**	**06 05 17.8**	**-5.3**
KSH				smax	smax		
	comp=N,2μm,0.4s						
KSH				smax	smax		
	comp=E,1μm,0.8s						
BTK	**Batken**	**2.40**	**299**	*e*Pn	**Pn**	**06 05 08.0**	**+3.5**
BTK	**Batken**	**2.40**	**299**	*e*PN	**Pn**	**06 05 08.0**	**+3.5**
BTK	**Batken**	**2.40**	**299**	⇑*i*P	**Pn**	**06 05 07.1**	**+2.6**
	baz=97						
BTK				⇑*i*S	**Sn**	**06 05 36.0**	**+2.0**
	baz=97						
GAR	**Garm**	**2.53**	**272**	*e*Pn	**Pb**	**06 05 12.2**	**+1.6**
GAR	**Garm**	**2.53**	**272**	*e*PN	**Pb**	**06 05 12.3**	**+1.6**
ARLS	**Aral**	**2.98**	**11**	⇓*i*P	**Pn**	**06 05 13.8**	**+1.3**
	baz=11						
ARLS				⇓*i*S	**Sn**	**06 05 47.8**	**-0.5**
	baz=11						
ARK	**Arkit**	**3.11**	**337**	⇓*e*P	**Pn**	**06 05 13.9**	**-0.3**
	baz=36						
ARK				⇓*i*S	**Sn**	**06 05 50.1**	**-1.4**
	baz=36						
UCH	**Uchtor**	**3.36**	**12**	P	**Pn**	**06 05 20.2**	**+2.2**
	SNR=76						
UCH	**Uchtor**	**3.36**	**12**	⇑*i*P	**Pn**	**06 05 19.8**	**+1.7**
	baz=12						
UCH				⇑*i*S	**Sn**	**06 05 57.7**	**-0.6**
	baz=12						
KZA	**Kyzart**	**3.39**	**22**	P	**Pn**	**06 05 20.2**	**+1.8**
	SNR=101						
KZA	**Kyzart**	**3.39**	**22**	⇑*i*P	**Pn**	**06 05 20.0**	**+1.6**
	baz=22						
KZA				⇑*i*S	**Sn**	**06 05 58.0**	**-0.8**
	baz=22						
EKS2	**Erkin-Say**	**3.72**	**2**	P	**Pn**	**06 05 24.6**	**+1.9**
	SNR=12						
EKS2	**Erkin-Say**	**3.72**	**2**	⇓*i*P	**Pn**	**06 05 24.2**	**+1.5**
	baz=2.0						
EKS2				⇓*i*S	**Sn**	**06 06 06.1**	**-0.6**
	baz=2.0						
AAK	**Ala-Archa**	**3.76**	**11**	Pn	**Pn**	**06 05 25.2**	**+2.0**
	14nm,0.3s,baz=164,slow=13,SNR=78						
AAK				Sn	**Sn**	**06 06 08.9**	**+1.3**
	7.0nm,0.3s,baz=120,slow=20,SNR=3.8						
AAK	**Ala-Archa**	**3.76**	**11**	P	**Pn**	**06 05 25.4**	**+2.2**
	SNR=46						
AAK	**Ala-Archa**	**3.76**	**11**	*e*Pn	**Pn**	**06 05 25.5**	**+2.2**
AAK	**Ala-Archa**	**3.76**	**11**	⇑Pn	**Pn**	**06 05 25.3**	**+2.0**
	54nm,0.7s						
AAK				⇓Sn	**Sn**	**06 06 10.7**	**+3.0**
	210nm,0.8s						
AAK	**Ala-Archa**	**3.76**	**11**	*e*PN	**Pn**	**06 05 25.5**	**+2.2**
AAK	**Ala-Archa**	**3.76**	**11**	⇓*e*P	**Pn**	**06 05 25.4**	**+2.2**
	baz=10.0						
AAK				⇓*i*S	**Sn**	**06 06 07.0**	**-0.7**
	baz=10.0						
MRKS	**Merke**	**3.81**	**356**	Pg	**Pn**	**06 05 27.3**	**+3.4**
	66nm,0.4s						
MRKS				Lg	Lg	06 06 09.2	
	43nm,0.4s						
MRKS	**Merke**	**3.81**	**356**	*e*P	**Pn**	**06 05 24.6**	**+0.7**
	24nm,0.3s						
MRKS				*e*S	**Sn**	**06 06 08.7**	**-0.1**
	104nm,0.5s						
KBK	**Karagaybulak**	**3.86**	**15**	P	**Pn**	**06 05 27.6**	**+3.0**
	SNR=6.3						
KBK	**Karagaybulak**	**3.86**	**15**	⇑*i*P	**Pn**	**06 05 26.9**	**+2.3**
	baz=15						
KBK				⇑*i*S	**Sn**	**06 06 09.0**	**-1.1**
	baz=15						
ULHL	**Ulahol**	**3.88**	**31**	P	**Pn**	**06 05 27.6**	**+2.7**
	SNR=13						
ULHL	**Ulahol**	**3.88**	**31**	⇑*i*P	**Pn**	**06 05 26.8**	**+1.8**
	baz=31						
ULHL				⇑*i*S	**Sn**	**06 06 09.1**	**-1.6**
	baz=31						
FRU1	**Bishkek**	**3.95**	**11**	*e*Pn	**Pn**	**06 05 28.4**	**+2.6**
FRU1	**Bishkek**	**3.95**	**11**	⇑*i*P	**Pn**	**06 05 28.1**	**+2.3**
	baz=11						
FRU1				⇑*i*S	**Sn**	**06 06 11.2**	**-1.0**
	baz=11						
BOOM	**Boomskoye usch**	**3.98**	**26**	*e*Pn	**Pn**	**06 05 28.2**	**+1.9**
BOOM	**Boomskoye usch**	**3.98**	**26**	*e*PN	**Pn**	**06 05 28.2**	**+1.9**
BOOM	**Boomskoye usch**	**3.98**	**26**	⇑*e*P	**Pn**	**06 05 28.2**	**+1.9**
	baz=26						
BOOM				⇑*i*S	**Sn**	**06 06 11.5**	**-1.6**
	baz=26						
TAS	**Tashkent**	**4.06**	**307**	⇑*i*P	**Pn**	**06 05 29.8**	**+2.6**
	baz=7.0						
TAS				⇑*i*S	**Sn**	**06 06 15.0**	**+0.2**
	baz=7.0						
CHMS	**Chumysh**	**4.15**	**12**	P	**Pn**	**06 05 30.6**	**+2.0**
	SNR=26						
CHMS	**Chumysh**	**4.15**	**12**	⇑*i*P	**Pn**	**06 05 30.6**	**+2.0**
	baz=12						
CHMS				⇑*i*S	**Sn**	**06 06 15.8**	**-1.4**
	baz=12						
IUG	**Iuzhnay**	**4.19**	**321**	Pg	**Pn**	**06 05 33.1**	**+4.0**
	38nm,0.6s						
IUG				Lg	Lg	06 06 18.6	
	240nm,0.5s						
KDJ	**Kajisay**	**4.21**	**40**	*e*Pn	**Pn**	**06 05 32.8**	**+3.3**
KDJ	**Kajisay**	**4.21**	**40**	*e*PN	**Pn**	**06 05 32.8**	**+3.3**
KDJ	**Kajisay**	**4.21**	**40**	⇓*i*P	**Pn**	**06 05 31.4**	**+1.9**
	baz=40						
KDJ				⇓*i*S	**Sn**	**06 06 17.1**	**-1.7**
	baz=40						
TKM2	**Tokmak 2**	**4.26**	**20**	P	**Pn**	**06 05 32.3**	**+2.0**
	SNR=14						
TKM2	**Tokmak 2**	**4.26**	**20**	⇑Pn	**Pn**	**06 05 32.0**	**+1.7**
	3.9nm,0.3s						
TKM2				⇑Pg	**Pb**	**06 05 39.4**	**-0.8**
	24nm,0.6s						
TKM2				⇓Lg	Lg	06 06 32.6	
	77nm,0.7s						
TKM2	**Tokmak 2**	**4.26**	**20**	*i* PN	**Pn**	**06 05 31.9**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.3s						
TKM2	**Tokmak 2**	**4.26**	**20**	⇑*i*P	**Pn**	**06 05 32.1**	**+1.9**
	baz=20						
TKM2				⇑*i*S	**Sn**	**06 06 18.6**	**-1.6**
	baz=20						
USP	**Ospenovka**	**4.38**	**9**	P	**Pn**	**06 05 33.8**	**+2.1**
	SNR=9.9						
USP	**Ospenovka**	**4.38**	**9**	⇑*i*P	**Pn**	**06 05 33.1**	**+1.4**
	baz=9.0						
USP				⇑*i*S	**Sn**	**06 06 21.5**	**-1.3**
	baz=9.0						
KST	**Kastek**	**4.48**	**23**	Pg	**Pb**	**06 05 45.5**	**+1.6**
	comp=Z,29nm,0.5s						
KST				Lg	Lg	06 06 40.0	
	comp=Z,115nm,0.8s						
KST	**Kastek**	**4.48**	**23**	*e*P	**Pb**	**06 05 43.7**	**-0.2**
	comp=Z,15nm,0.6s						
KST				*e*S	**Sb**	**06 06 41.1**	**+3.1**
	comp=Z,116nm,0.8s						
DGS	**Degeres**	**4.61**	**20**	Pg	**Pb**	**06 05 48.0**	**+1.9**
	comp=Z,46nm,0.5s						
DGS				Lg	Lg	06 06 44.2	
	comp=Z,70nm,0.5s						
MTBS	**Maitube**	**4.71**	**26**	Pg	**Pb**	**06 05 49.7**	**+1.9**
	comp=Z,30nm,0.4s						
MTBS				Lg	Lg	06 06 47.5	
	comp=Z,43nm,0.5s						
KK31	**Karatay Array**	**4.76**	**332**	*e*Pn	**Pn**	**06 05 37.2**	**+0.3**
KK31	**Karatay Array**	**4.76**	**332**	Pn	**Pn**	**06 05 36.9**	**+0.1**
	comp=Z,9.0nm,0.4s,baz=133,slow=22,SNR=155						
KK31				⇑Pg	**Pb**	**06 05 47.6**	**-0.9**
	comp=Z,21nm,0.6s,baz=153,slow=17,SNR=5.8						
KK31				⇓Sn	**Sn**	**06 06 30.5**	**-1.5**
	comp=Z,64nm,0.8s,baz=154,slow=22,SNR=4.4						
KK31				⇑Lg	Lg	06 06 45.9	
	comp=Z,18nm,0.5s,baz=153,slow=16,SNR=3.5						
KK31	**Karatay Array**	**4.76**	**332**	PN	**Pn**	**06 05 36.9**	**+0.1**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KKAR	**Karatay Array**	**4.76**	**332**	*e*Pn	**Pn**	**06 05 37.2**	**+0.3**
KKAR	**Karatay Array**	**4.76**	**332**	*e*PN	**Pn**	**06 05 37.2**	**+0.3**
TNSS	**Tian-Shan**	**4.83**	**31**	Pg	**Pb**	**06 05 51.0**	**+1.1**
	comp=Z,45nm,0.5s						
TNSS				Lg	Lg	06 06 49.7	
	comp=Z,90nm,0.6s						
AAA	**Alma-Ata**	**4.96**	**30**	Pg	**Pb**	**06 05 54.8**	**+2.8**
	comp=Z,35nm,0.3s						
AAA				Lg	Lg	06 06 55.7	
	comp=Z,88nm,0.5s						
MDOK	**Medeo**	**4.97**	**31**	Pg	**Pb**	**06 05 53.4**	**+1.2**
	comp=Z,38nm,0.5s						
MDOK				Lg	Lg	06 06 54.1	
	comp=Z,61nm,0.8s						
KNDC	**Almaty**	**4.99**	**30**	⇑Pg	**Pb**	**06 05 55.4**	**+2.9**
KNDC				⇑Lg	Lg	06 06 57.3	
KOTS	**Kotyrbulak**	**5.06**	**31**	Pg	**Pb**	**06 05 56.4**	**+2.6**
	comp=Z,30nm,0.3s						
KOTS				Lg	Lg	06 06 58.5	
	comp=Z,86nm,0.6s						
PRZ	**Przheval'sk**	**5.10**	**45**	*e*Pn	**Pn**	**06 05 44.3**	**+2.6**
PRZ	**Przheval'sk**	**5.10**	**45**	*e*PN	**Pn**	**06 05 44.3**	**+2.6**
PRZ	**Przheval'sk**	**5.10**	**45**	⇑*i*P	**Pn**	**06 05 43.5**	**+1.8**
	baz=45						
PRZ				⇑*i*S	**Sn**	**06 06 38.0**	**-2.8**
	baz=45						
CHCP	**Chirah Chowk**	**5.28**	**183**	P	Pn	06 05 54.2	+10
CEP	**Cherat**	**5.28**	**195**	P	Pn	06 05 52.9	+8.8
CEP				S	**Sb**	**06 07 02.0**	**+1.1**
NIL	**Nilore**	**5.28**	**183**	*e*Pn	Pn	06 05 52.7	+8.6
NIL	**Nilore**	**5.28**	**183**	*e*PN	Pn	06 05 52.7	+8.6
KTBS	**Karatobe**	**5.32**	**25**	Pg	**Pb**	**06 06 00.2**	**+2.1**
	comp=Z,18nm,0.6s						
KTBS				Lg	Lg	06 07 05.1	
	comp=Z,88nm,0.7s						
KUU	**Kurty**	**5.37**	**22**	Pg	**Pb**	**06 06 01.1**	**+2.2**
	comp=Z,19nm,0.6s						
KUU				Lg	Lg	06 07 07.0	
	comp=Z,106nm,0.5s						
SATY	**Saty**	**5.51**	**40**	Pg	**Pb**	**06 06 04.3**	**+2.9**
	comp=Z,53nm,0.8s						
SATY				Lg	Lg	06 07 13.2	
	comp=Z,54nm,0.4s						
CHKK	**Chushkaly**	**5.54**	**27**	Pg	**Pb**	**06 06 04.7**	**+2.8**
	comp=Z,9.3nm,0.6s						
CHKK				Lg	Lg	06 07 12.8	
	comp=Z,43nm,0.5s						
ZHN	**Zhinishke**	**5.60**	**40**	Pg	**Pb**	**06 06 06.3**	**+3.3**
	comp=Z,20nm,0.7s						
ZHN				Lg	Lg	06 07 16.9	
	comp=Z,16nm,0.6s						
KBL	**Kabul**	**5.70**	**221**	*e*Pn	**Pn**	**06 05 54.6**	**+4.7**
KBL	**Kabul**	**5.70**	**221**	*e*PN	**Pn**	**06 05 54.6**	**+4.7**
KURS	**Kuram**	**5.72**	**36**	Pg	**Pb**	**06 06 06.9**	**+2.0**
	comp=Z,15nm,0.6s						
KURS				Lg	Lg	06 07 16.9	
	comp=Z,33nm,1.1s						
ARXS	**Arharly**	**6.16**	**30**	Pg	**Pb**	**06 06 15.8**	**+3.3**
	comp=Z,13nm,0.5s						
ARXS				Lg	Lg	06 07 31.8	
	comp=Z,38nm,0.5s						
PDGK	**Podgornoye**	**6.26**	**44**	Pg	Pb	06 06 19.6	+5.4
	comp=Z,7.3nm,0.6s						
PDGK				Lg	Lg	06 07 38.7	
	comp=Z,13nm,1.1s						
PDGK	**Podgornoye**	**6.26**	**44**	⇑Pn	**Pn**	**06 05 59.6**	**+2.0**
	comp=Z,6.0nm,0.7s						
PDGK				⇑Pg	**Pb**	**06 06 17.2**	**+3.0**
	comp=Z,17nm,0.7s						
PDGK				⇑Lg	Lg	06 07 39.6	
	comp=Z,51nm,0.9s						
PDGK	**Podgornoye**	**6.26**	**44**	PN	**Pn**	**06 05 59.6**	**+2.0**
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OTUK	**Ortayu**	**9.35**	**355**	⇑Pn	**Pn**	**06 06 38.7**	**-1.1**
	comp=Z,2.8nm,0.6s						
OTUK				⇓Lg	Lg	06 09 11.8	
	comp=Z,43nm,1.2s						
OTUK	**Ortayu**	**9.35**	**355**	P	**Pn**	**06 06 38.6**	**-1.1**
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAKZ	**Makanchi**	**9.99**	**35**	*e*Pn	**Pn**	**06 06 50.8**	**+2.2**
MAKZ	**Makanchi**	**9.99**	**35**	*e*P	**Pn**	**06 06 50.8**	**+2.2**
MK31	**Makanchi Array**	**10.12**	**36**	*e*Pn	**Pn**	**06 06 53.6**	**+3.2**
MK31	**Makanchi Array**	**10.12**	**36**	⇑Pn	**Pn**	**06 06 52.9**	**+2.4**
	comp=Z,0.3nm,0.4s,baz=218,slow=12,SNR=4.9						
MK31				⇓Lg	Lg	06 09 39.8	
	comp=Z,2.3nm,0.7s,baz=164,slow=29,SNR=2.6						
MK31	**Makanchi Array**	**10.12**	**36**	*e*P	**Pn**	**06 06 53.7**	**+3.2**
MK32	**Makanchi Array**	**10.12**	**36**	*e*Pn	**Pn**	**06 06 51.9**	**+1.5**
MKAR	**Makanchi Array**	**10.12**	**36**	Pn	**Pn**	**06 06 51.9**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=222,slow=14,SNR=5.6						
MKAR				Lg	Lg	06 09 39.9	
	comp=Z,0.1nm,0.3s,baz=225,slow=26,SNR=2.5						
MKAR				LR	LR	06 11 05.6	
	comp=Z,52nm,20.2s,baz=226,slow=40						
MKAR	**Makanchi Array**	**10.12**	**36**	*e*P	**Pn**	**06 06 53.3**	**+2.8**
WMQ	**Urumqi**	**11.68**	**61**	*e*P	**Pn**	**06 07 14.3**	**+2.5**
GEYT	**Alibeck**	**12.16**	**270**	Pn	**Pn**	**06 07 17.4**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=108,slow=9.5,SNR=3.9						
GEYT				Sn	**Sn**	**06 09 31.5**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=99,slow=19,SNR=4.5						
KURBB	**Kurchatov Arra**	**12.20**	**15**	Pn	**Pn**	**06 07 17.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=202,slow=12,SNR=3.8						
KURBB				Lg	Lg	06 10 39.5	
	comp=Z,0.0nm,0.3s,baz=200,slow=28,SNR=7.2						
KURK	**Kurchatov**	**12.31**	**15**	P	Pn	06 07 17.2	-3.0
AB31	**Akbulak array**	**14.20**	**321**	Pn	Pn	06 07 42.1	-3.9
	comp=Z,2.4nm,0.5s,baz=132,slow=13,SNR=49						
AB31	**Akbulak array**	**14.20**	**321**	*i* P	Pn	06 07 42.1	-3.9
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ABKAR	**Akbulak array**	**14.20**	**321**	*e*Pn	Pn	06 07 42.4	-3.6
BVAR	**Borovoye Array**	**14.26**	**352**	Pn	Pn	06 07 42.8	-4.1
	comp=Z,0.3nm,0.3s,baz=166,slow=13,SNR=4.9						
BRVK	**Borovoye**	**14.30**	**352**	*e*Pn	**Pn**	**06 07 45.1**	**-2.4**
BRVK	**Borovoye**	**14.30**	**352**	⇓*e*P	**Pn**	**06 07 45.9**	**-1.6**
AKTO	**Aktyubinsk**	**15.91**	**321**	Pn	**Pn**	**06 08 05.8**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=128,slow=12,SNR=12						
AKTO				Sn	Sn	06 10 48.8	-16
	comp=Z,0.1nm,0.3s,baz=171,slow=19,SNR=2.5						
AKTO				LR	LR	06 14 08.3	
	comp=Z,46nm,19.1s,baz=129,slow=37						
AKTO	**Aktyubinsk**	**15.91**	**321**	⇑Pn	**Pn**	**06 08 12.5**	**+3.5**
	comp=Z,3.0nm,0.6s						
AKTO	**Aktyubinsk**	**15.91**	**321**	P	**Pn**	**06 08 05.6**	**-3.3**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAA0	**Zalesovo Array**	**16.86**	**23**	*e*Pn	**Pn**	**06 08 18.6**	**-2.4**
	comp=Z,7.7nm,1.4s						
ZALV	**Zalesovo Beam**	**16.86**	**23**	Pn	**Pn**	**06 08 19.2**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=216,slow=12,SNR=8.7						
ZALV	**Zalesovo Beam**	**16.86**	**23**	*e*P	**Pn**	**06 08 22.2**	**+1.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAA1	**Zalesovo Array**	**16.87**	**23**	*e*Pn	**Pn**	**06 08 19.2**	**-1.9**
ARU	**Arti**	**20.13**	**335**	P	**P**	**06 08 58.1**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=120,slow=14,SNR=6.4						
ARU	**Arti**	**20.13**	**335**	*e*P	**P**	**06 08 58.6**	**-0.4**
	comp=Z,5.2nm,0.8s						
ARU	**Arti**	**20.13**	**335**	*d i*P	**P**	**06 08 59.5**	**+0.6**
ARU				S	**S**	**06 12 43.5**	**-1.3**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIV	**Kislovodsk**	**23.60**	**292**	*e*P	**P**	**06 09 33.0**	**-3.1**
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**24.50**	**49**	⇓*e*P	**P**	**06 09 46.3**	**+2.0**
SONA0	**Songino Array**	**25.30**	**59**	*e*P	**P**	**06 09 53.1**	**+1.3**
SONM	**Songino Array**	**25.30**	**59**	P	**P**	**06 09 53.1**	**+1.3**
	comp=Z,2.3nm,0.7s,baz=265,slow=11,SNR=11						
SONM	**Songino Array**	**25.30**	**59**	*e*P	**P**	**06 09 54.7**	**+2.9**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULN	**Ulaanbaatar**	**25.75**	**59**	⇓*e*P	**P**	**06 09 57.6**	**+1.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN	**Obninsk**	**29.52**	**315**	*e*P	**P**	**06 10 27.4**	**-1.9**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.03**	**126**	LR	LR	06 24 42.9	
	comp=Z,92nm,20.4s,baz=199,slow=40						
BJT	**Baijiatuau**	**32.67**	**74**	*e*P	**P**	**06 10 55.4**	**-1.9**
	comp=Z,8.2nm,1.3s						
BJT	**Baijiatuau**	**32.67**	**74**	*e*P	**P**	**06 10 55.4**	**-1.9**
BJT				pmax	pmax		
	comp=Z,8.0nm,1.3s						
AKASG	**Malin Array Be**	**33.10**	**306**	P	**P**	**06 10 59.4**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=77,slow=7.9,SNR=3.1						
AKBB	**Malin Array Si**	**33.10**	**306**	*e*P	**P**	**06 11 00.1**	**-0.8**
	comp=Z,3.0nm,1.0s						
AKBB	**Malin Array Si**	**33.10**	**306**	*e*P	**P**	**06 11 00.1**	**-0.8**
AKBB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FIA0	**FINESS Array S**	**36.66**	**324**	*e*P	**P**	**06 11 30.7**	**-0.8**
FIA0	**FINESS Array S**	**36.66**	**324**	*e*P	**P**	**06 11 30.7**	**-0.8**
FINES	**FINESS Array B**	**36.66**	**324**	P	**P**	**06 11 30.7**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=116,slow=9.8,SNR=14						
ARA0	**ARCESS Array S**	**39.71**	**336**	*e*P	**P**	**06 11 56.4**	**-0.8**
ARCES	**ARCESS Array B**	**39.71**	**336**	P	**P**	**06 11 56.4**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=110,slow=8.6,SNR=21						
KLR	**Kul'dur**	**42.08**	**56**	P	**P**	**06 12 17.9**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=271,slow=8.1,SNR=8.7						
KLR	**Kul'dur**	**42.08**	**56**	⇑*e*P	**P**	**06 12 18.0**	**+1.0**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**42.45**	**320**	P	**P**	**06 12 18.9**	**-0.9**
	comp=Z,2.5nm,0.7s,baz=99,slow=9.2,SNR=11						
TIXI	**Tiksi**	**42.75**	**23**	P	**P**	**06 12 21.6**	**-0.5**
	comp=Z,1.7nm,0.5s,baz=293,slow=4.9,SNR=3.1						
TIXI	**Tiksi**	**42.75**	**23**	⇑*e*P	**P**	**06 12 21.0**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	**Kasperske Hory**	**43.27**	**304**	*e*P	**P**	**06 12 26.0**	**-0.6**
KHC	**Kasperske Hory**	**43.27**	**304**	*e*P	**P**	**06 12 26.0**	**-0.6**
CLL	**Collm**	**43.29**	**307**	*e*P	**P**	06 12 24.0	-2.7
NB2	**NORSAR Subarra**	**43.70**	**321**	P	**P**	**06 12 28.4**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=92,slow=8.6						
NB200	**NORSAR Array S**	**43.70**	**321**	*e*P	**P**	**06 12 28.5**	**-1.4**
NOA	**NORSAR Array B**	**43.70**	**321**	P	**P**	**06 12 28.5**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=92,slow=7.9,SNR=4.6						
NOA	**NORSAR Array B**	**43.70**	**321**	*e*P	**P**	**06 12 28.9**	**-1.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MAJO	**Matsushiro**	**50.20**	**71**	*e*P	**P**	**06 13 21.0**	**-0.1**
MAJO	**Matsushiro**	**50.20**	**71**	*e*P	**P**	**06 13 21.0**	**-0.1**
MJAR	**Matsushiro Arr**	**50.21**	**71**	P	**P**	**06 13 21.0**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=283,slow=11,SNR=4.1						
BILL	**Bilibino**	**55.52**	**27**	*e*P	**P**	**06 13 59.2**	**-0.6**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TOA1	**Torodi Ar. Sit**	**67.80**	**269**	*e*P	**P**	**06 15 23.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**67.80**	**269**	P	**P**	**06 15 23.8**	**+0.3**
	comp=Z,9.0nm,0.3s,baz=63,slow=5.4,SNR=6.6						
ILAR	**Eielson Array**	**71.87**	**17**	P	**P**	**06 15 47.1**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=347,slow=5.6,SNR=4.8						
ILAR	**Eielson Array**	**71.87**	**17**	*e*P	**P**	**06 15 48.6**	**+0.8**
ILB	**Eielson Array**	**71.87**	**17**	*e*P	**P**	**06 15 47.0**	**-0.7**
	comp=Z,0.8nm,1.0s						
YKA	**Yellowknife Ar**	**78.70**	**4**	P	**P**	**06 16 26.4**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=348,slow=5.7,SNR=3.3						
YKB5	**Yellowknife Ar**	**78.70**	**4**	*e*P	**P**	**06 16 26.4**	**-0.6**
WR1	**Warramunga Arr**	**81.61**	**124**	*e*P	**P**	**06 16 45.0**	**+1.6**
WRA	**Warramunga Arr**	**81.61**	**124**	P	**P**	**06 16 45.0**	**+1.7**
	comp=Z,1.4nm,0.8s,baz=306,slow=5.9,SNR=4.0						
WRA	**Warramunga Arr**	**81.61**	**124**	P	**P**	**06 16 45.0**	**+1.7**
AS31	**Alice Springs**	**84.03**	**127**	*e*P	**P**	**06 16 57.3**	**+1.4**
	comp=Z,1.4nm,1.2s						
ASAR	**Alice Springs**	**84.03**	**127**	P	**P**	**06 16 57.0**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=322,slow=5.8,SNR=4.0						

*KRSC **30** 06:12:43.7±0.7,60°.80N×165°.83E,h32km±12km,ML4.8,*
FELT [IV] at Tilichiki; [III-IV] at Ledyanoe, Korf.
*IDC **30** 06:12:43.1±1.0,60°.53N×165°.72E,h0km,mb3.7/11,*
mb1 4.0/14,mb1mx3.7/42,mbtmp3.7/14,ML5.2/1,MS2.9/3,
Ms1 2.9/3,ms1mx2.6/33,Error ellipse: s-maj=27.7km
s-min=13.8km az=174.0
*ISCJB **30** 06:12:44.7±0.3,60°.82N±0°.03×165°.62E±0°.07,h15km,*
mb3.9/25,MS2.7/2,Error ellipse: s-maj=5.6km
s-min=3.4km az=27.9
*NEIC **30** 06:12:45.4±1.4,60°.57N×165°.57E,h16km±4km,mb4.2/19,*
Error ellipse: s-maj=12.0km s-min=11.0km az=171.0
*MOS **30** 06:12:47.0±0.9,60°.76N×165°.80E,h35km,mb4.2/7,Error*
ellipse: s-maj=23.2km s-min=6.0km az=79.7

ISC 30 06:12:46.1±0.5,60°.83N±0°.04×165°.60E±0°.05,h15km,n87,
σ1°.78/92,mb4.0/25,1C-1D,Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TILK	**Tilichiki**	**0.47**	**145**	*e*P	**Pg**	**06 12 53.1**	**-2.2**
TILK				*e*S	**Sg**	**06 13 00.3**	**-1.3**
TILK	**Tilichiki**	**0.47**	**145**	PN	**Pg**	**06 12 53.1**	**-2.2**
TILK				S	**Sg**	**06 13 00.3**	**-1.3**
KMSK	**Kamenskaya**	**1.67**

RIDG	**Independent Ri**	22.76	61	*e*P		P	06 17 47.8	+0.3
	comp=Z,7.9nm,1.0s							
SCRK	**Sand Creek**	23.06	60	*e*P		P	06 17 49.3	-1.4
	comp=Z,9.7nm,1.3s							
DOT	**Dot Lake**	23.12	61	*e*P		P	06 17 50.1	-1.1
EGAK	**Eagle**	24.03	57	*e*P		P	06 17 58.1	-1.9
	comp=Z,9.5nm,0.8s							
DAWY	**Dawson**	24.98	59	*e*P		P	06 18 08.9	+0.2
	comp=Z,11nm,1.5s							
EPYK	**Eagle Plains**	25.39	53	*e*P		P	06 18 14.3	+1.9
	comp=Z,2.3nm,0.8s							
BOD	**Bodaibo**	25.94	286	*e*P		P	06 18 19.3	+1.9
BOD				pmax	pmax			
	comp=Z,6.0nm,1.1s							
INK	**Inuvik**	26.12	48	P		P	06 18 21.4	+2.6
	comp=Z,0.8nm,0.5s,baz=296,slow=12,SNR=3.1							
INK	**Inuvik**	26.12	48	*e*P		P	06 18 19.5	+0.6
	comp=Z,2.3nm,0.9s							
INK	**Inuvik**	26.12	48	*e*P		P	06 18 19.5	+0.6
INK				pmax	pmax			
	comp=Z,2.0nm,0.9s							
MJAR	**Matsushiro Arr**	29.87	228	LR		LR	06 33 31.4	
	comp=Z,22nm,18.8s,baz=205,slow=42							
KSRS	**Korea Array**	33.23	243	LR		LR	06 32 16.9	
	comp=Z,12nm,19.5s,baz=220,slow=35							
ARA0	**ARCESS Array S**	46.86	342	*e*P		P	06 21 16.1	+1.3
ARCES	**ARCESS Array B**	46.86	342	P		P	06 21 16.1	+1.3
	comp=Z,0.8nm,0.7s,baz=34,slow=9.8,SNR=4.6							
ARCES				PcP		**PcP**	06 22 49.1	+1.8
	comp=Z,0.8nm,0.8s,baz=41,slow=3.5,SNR=3.8							
EGMT	**Eagleton**	47.40	65	*e*S		S	06 28 11.9	-0.8
MK32	**Makanchi Array**	47.73	293	*e*P		P	06 21 20.6	-1.4
MKAR	**Makanchi Array**	47.73	293	P		P	06 21 20.6	-1.4
	comp=Z,0.4nm,0.5s,baz=46,slow=8.1,SNR=3.0							
PD31	**Pinedale Array**	51.52	70	*e*P		P	06 21 50.2	-1.0
	comp=Z,4.3nm,1.5s							
PDAR	**Pinedale Array**	51.52	70	P		P	06 21 50.5	-0.7
	comp=Z,0.5nm,0.6s,baz=309,slow=4.3,SNR=7.0							
FIA0	**FINESS Array S**	54.17	337	*e*P		P	06 22 11.3	+1.2
FIA0	**FINESS Array S**	54.17	337	*e*P		P	06 22 11.3	+1.2
FINES	**FINESS Array B**	54.17	337	P		P	06 22 11.3	+1.2
	comp=Z,0.6nm,0.5s,baz=1.6,slow=9.7,SNR=7.9							
NB2	**NORSAR Subarra**	56.87	345	P		P	06 22 31.1	+1.5
	comp=Z,1.6nm,0.6s,baz=14,slow=7.4							
NB200	**NORSAR Array S**	56.87	345	*e*P		P	06 22 30.8	+1.1
NOA	**NORSAR Array B**	56.87	345	P		P	06 22 30.8	+1.1
	comp=Z,1.1nm,0.6s,baz=14,slow=6.6,SNR=5.5							
NOA	**NORSAR Array B**	56.87	345	*e*P		P	06 22 31.2	+1.6
NOA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
HHAR	**Hobbs**	63.78	62	*e*P		P	06 23 18.5	+1.3
	comp=Z,4.3nm,0.8s							
TXAR	**Lajitas Array**	65.20	74	P		P	06 23 26.3	-0.4
	comp=Z,0.2nm,0.7s,baz=324,slow=1.2,SNR=2.6							
GEC2	**GERESS Array S**	68.35	340	*e*P		P	06 23 47.5	+1.0
	comp=Z,2.7nm,1.3s							
GEC2	**GERESS Array S**	68.35	340	*e*P		P	06 23 47.5	+1.0
GEC2				pmax	pmax			
	comp=Z,3.0nm,1.3s							
GERES	**GERESS Array B**	68.35	340	P		P	06 23 48.2	+1.7
	comp=Z,0.5nm,0.6s,baz=38,slow=6.8,SNR=5.1							
GERES	**GERESS Array B**	68.35	340	*e*P		P	06 23 47.8	+1.3
GERES				pmax	pmax			
	comp=Z,1.0nm,0.6s							
ESDC	**Sonseca Array**	79.49	352	P		P	06 24 51.3	-0.4
	comp=Z,0.4nm,0.5s,baz=2.1,slow=4.8,SNR=4.3							
AS31	**Alice Springs**	88.03	209	*e*P		P	06 25 31.9	-3.4
	comp=Z,0.7nm,0.9s							
ASAR	**Alice Springs**	88.03	209	P		P	06 25 33.7	-1.7
	comp=Z,0.5nm,1.0s,baz=17,slow=4.5,SNR=3.6							

IDC 30 06:16:46.0±1.4, 2°.08S×138°.52E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/30, mbtmp3.5/4, ML3.5/2, MS2.6/2, Ms1 2.6/2, ms1mx2.5/11, Error ellipse: s-maj=29.9km s-min=24.8km az=34.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	2.23	101	Pn	Pn	06 17 24.5	+0.2
	3.3nm,0.3s,baz=222,slow=10,SNR=13						
JAY				Sn	Sn	06 17 51.5	-1.1
	6.1nm,0.3s,baz=16,slow=17,SNR=7.5						
JAY				LR	LR	06 18 04.9	
	comp=Z,58nm,22.0s,baz=1.5,slow=35						
PMG	**Port Moresby**	11.27	131	LR	LR	06 24 27.0	
	comp=Z,85nm,21.0s,baz=96,slow=41						
WRA	**Warramunga Arr**	18.22	193	P	Pn	06 20 59.6	-0.9
	0.3nm,0.3s,baz=11,slow=11,SNR=6.2						
ASAR	**Alice Springs**	21.92	191	P	P	06 21 40.9	-0.3
	1.4nm,0.7s,baz=21,slow=10.0,SNR=13						
MKAR	**Makanchi Array**	69.17	322	P	P	06 27 54.9	+0.4
	0.2nm,0.6s,baz=116,slow=7.4,SNR=2.3						

IDC 30 06:19:04.6±11.0, 30°.38S×178°.34W, h128km±114km, mb3.4/2, mb1 3.6/3, mb1mx3.2/20, mbtmp3.7/3, ML2.7/1, Error ellipse: s-maj=97.8km s-min=52.4km az=174.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	8.71	204	P	Pn	06 21 07.5	-0.1
	0.1nm,0.3s,baz=341,slow=18,SNR=2.3						
URZ				S	Sn	06 22 43.8	-0.2
	0.4nm,0.3s,baz=0.0,slow=20,SNR=7.5						
ASAR	**Alice Springs**	42.81	267	P	P	06 26 50.0	+0.1
	0.4nm,0.5s,baz=103,slow=7.4,SNR=7.3						
WRA	**Warramunga Arr**	43.80	272	P	P	06 26 57.6	-0.2
	0.7nm,0.3s,baz=104,slow=7.7,SNR=5.0						
FINES	**FINESS Array B**	145.02	340	PKPbc	PKPbc	06 38 24.7	-0.8
	0.8nm,0.4s,baz=40,slow=3.5,SNR=13						

*JMA **30** 06:24:34.8±0.2, 46°.80N×141°.61E, h26km, M2.7*
*SKHL **30** 06:24:34.2±0.4, 46°.62N×141°.65E, h10km, mb4.1/2*
ISC 30 06:24:34.9±4.2, 46°.7N±0°.2×141°.7E±0°.3, h9km, n4, σ0°61/6, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	0.79	73	*e*Pg	Pb	06 24 50.3	-0.4
YSS				AMB	AMB	06 24 51.0	
	50nm,0.3s						
YSS				*e*Sg	Sb	06 25 02.0	+0.5
YSS				A	A	06 25 03.0	
	160nm,0.4s						
JWK2	**Keihoku**	1.42	173	P	Pn	06 25 00.6	-0.3
JWK2				*e*S	Sn	06 25 19.4	-0.3
JSE	**Soyaes**	1.89	160	P	Pn	06 25 07.4	+0.2
JSS	**Shosan**	2.33	177	P	Pn	06 25 14.1	+0.7

*KRNET **30** 06:27:07.7±0.1, 39°.96N×71°.51E, h15km, mb3.3*
*SOME **30** 06:27:08.8, 40°.10N×71°.63E, h0km*
*NNC **30** 06:27:11.4±2.1, 40°.13N×71°.58E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=17.4km s-min=8.7km az=4.0*
ISC 30 06:27:10.3±1.7, 39°.97N±0°.09×71°.39E±0°.04, h3km±15km, n43, σ1°68/67, 18C-12D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	0.45	282	⇓*i*P	Pg	06 27 18.4	-0.5
	baz=81						
BTK				⇓*i*S	Sg	06 27 26.5	+1.7
	baz=81						
ARSB	**Arslanbob**	1.82	41	⇓*i*P	Pn	06 27 40.7	-1.9
	baz=39						
ARSB				⇓*i*S	Sn	06 28 05.0	-1.2
	baz=39						
ARK	**Arkit**	1.88	13	⇓*i*P	Pn	06 27 42.3	-1.2
	baz=11						
ARK				⇓*i*S	Sn	06 28 07.4	-0.4
	baz=11						
TAS	**Tashkent**	2.10	311	⇓*e*P	Pn	06 27 47.0	+0.6
	baz=10.0						
TAS				⇓*i*S	Sb	06 28 15.8	+0.2
	baz=10.0						
IUG	**Iuzhnay**	2.41	335	Pg	Pb	06 27 53.6	-0.8
	32nm,0.2s						
IUG				Lg	Lg	06 28 26.4	
	448nm,0.5s						
IUG	**Iuzhnay**	2.41	335	*e*P	Pb	06 27 53.6	-0.8
	32nm,0.2s						
IUG				*e*S	Sg	06 28 26.4	-1.2
	448nm,0.5s						
MRKS	**Merke**	3.10	26	Pg	Pb	06 28 03.5	-2.6
	12nm,0.2s						
MRKS				Lg	Lg	06 28 43.1	
	107nm,0.4s						
MRKS	**Merke**	3.10	26	*e*P	Pb	06 28 03.5	-2.6
	12nm,0.2s						
MRKS				*e*S	Sb	06 28 43.1	-1.3
	107nm,0.4s						
KK31	**Karatay Array**	3.20	348	Pn	Pn	06 28 00.8	-0.7
	1.2nm,0.3s,baz=170,slow=12,SNR=162						
KK31				⇑Pg	Pb	06 28 10.2	+2.4
	7.5nm,0.3s,baz=170,slow=16,SNR=9.5						
KK31				⇓Lg	Lg	06 28 49.3	
	62nm,0.5s,baz=176,slow=29,SNR=14						
EKS2	**Erkin-Say**	3.24	33	P	Pn	06 28 01.3	-0.8
	SNR=12						
EKS2	**Erkin-Say**	3.24	33	⇑*e*P	Pn	06 28 01.8	-0.3
	baz=32						
EKS2				⇑*i*S	Sn	06 28 41.6	+0.4
	baz=32						
UCH	**Uchtor**	3.27	45	P	Pn	06 28 02.2	-0.6
	SNR=17						
UCH	**Uchtor**	3.27	45	⇓*e*P	Pn	06 28 02.1	-0.7
	baz=44						
UCH				⇓*i*S	Sn	06 28 41.1	-1.3
	baz=44						
AAK	**Ala-Archa**	3.55	40	P	Pn	06 28 05.3	-1.1
	SNR=6.8						
AAK	**Ala-Archa**	3.55	40	⇑Pn	Pn	06 28 06.4	0.0
	2.6nm,0.3s						
AAK				⇑Pg	Pb	06 28 15.8	+2.1
	10nm,0.6s						
AAK				⇑Lg	Lg	06 28 56.7	
	53nm,0.7s						
AAK	**Ala-Archa**	3.55	40	⇑*e*P	Pn	06 28 06.2	-0.2
	baz=39						
AAK				⇑*e*S	Sn	06 28 49.3	+0.4
	baz=39						
KZA	**Kyzart**	3.60	53	P	Pn	06 28 06.7	-0.7
	SNR=11						
KZA	**Kyzart**	3.60	53	⇑*e*P	Pn	06 28 06.4	-1.0
	baz=52						
KZA				⇑*i*S	Sn	06 28 49.6	-1.0
	baz=52						
KBK	**Karagaybulak**	3.79	44	P	Pn	06 28 08.7	-1.1
	SNR=5.9						
KBK	**Karagaybulak**	3.79	44	⇑*e*P	Pn	06 28 09.4	-0.4
	baz=43						
KBK				⇑*i*S	Sn	06 28 54.6	-0.4
	baz=43						
USP	**Ospenovka**	4.04	34	⇑*e*P	Pn	06 28 12.1	-0.9
	baz=33						
USP				⇑*i*S	Sn	06 28 59.4	-1.4
	baz=33						
BOOM	**Boomskoye usch**	4.26	52	⇑*i*P	Pn	06 28 14.7	-1.5
	baz=51						
BOOM				⇑*i*S	Sn	06 29 03.6	-2.8
	baz=51						
TKM2	**Tokmak 2**	4.32	46	P	Pn	06 28 15.9	-1.2
	SNR=10						
TKM2	**Tokmak 2**	4.32	46	⇓Pn	Pn	06 28 15.6	-1.5
	6.1nm,0.5s						
TKM2				⇑Lg	Lg	06 29 23.3	
	12nm,0.5s						
KST	**Kastek**	4.61	47	Pg	Pb	06 28 30.2	-1.6
	7.7nm,0.4s						
KST				Lg	Lg	06 29 28.7	
	13nm,0.6s						
KST	**Kastek**	4.61	47	*e*P	Pb	06 28 30.2	-1.6
	7.7nm,0.4s						
KST				*e*S	Sb	06 29 28.7	+0.9
	13nm,0.6s						
DGS	**Degeres**	4.63	44	Pg	Pb	06 28 31.8	-0.5
	8.7nm,0.5s						
DGS				Lg	Lg	06 29 31.4	
	31nm,0.5s						
DGS	**Degeres**	4.63	44	*e*P	Pb	06 28 31.8	-0.5
	8.7nm,0.5s						
DGS				*e*S	Sb	06 29 31.4	+2.9
	31nm,0.5s						
MTBS	**Maitube**	4.93	48	Pg	Pb	06 28 36.8	-0.4
	2.8nm,0.1s						
MTBS				Lg	Lg	06 29 40.0	
	12nm,0.4s						
MTBS	**Maitube**	4.93	48	*e*P	Pb	06 28 36.8	-0.4
	2.8nm,0.1s						
MTBS				*e*S	Sb	06 29 40.0	+3.1
	12nm,0.4s						
TNSS	**Tian-Shan**	5.18	52	Pg	Pb	06 28 41.5	-0.2
	6.5nm,0.4s						
TNSS				Lg	Lg	06 29 48.1	
	16nm,0.5s						
TNSS	**Tian-Shan**	5.18	52	*e*P	Pb	06 28 41.5	-0.2
	6.5nm,0.4s						
TNSS				*e*S	Sb	06 29 48.1	+3.7
	16nm,0.5s						
MDOK	**Medeo**	5.31	51	*e*P	Pb	06 28 43.3	-0.5
	2.7nm,0.3s						
MDOK				*e*S	Sb	06 29 51.8	+3.8
	10nm,0.5s						
KUU	**Kurty**	5.38	42	Pg	Pb	06 28 44.3	-0.6
	2.4nm,0.2s						
KUU				Lg	Lg	06 29 53.0	
	12nm,0.4s						
KUU	**Kurty**	5.38	42	*e*P	Pb	06 28 44.4	-0.6
	2.4nm,0.2s						
KUU				*e*S	Sb	06 29 53.0	+2.9
	12nm,0.4s						
BTLS	**Baital**	5.44	20	*e*P	Pb	06 28 45.4	-0.5
	2.9nm,0.5s						
BTLS				*e*S	Sb	06 29 54.4	+2.9
	7.2nm,0.6s						
KTBS	**Karatobe**	5.44	45	Pg	Pb	06 28 45.4	-0.5
	2.5nm,0.3s						
KTBS				Lg	Lg	06 29 54.8	
	18nm,0.7s						
KTBS	**Karatobe**	5.44	45	*e*P	Pb	06 28 45.2	-0.8
	2.5nm,0.3s						
KTBS				*e*S	Sb	06 29 54.8	+3.1
	18nm,0.7s						
CHKK	**Chushkaly**	5.70	45	Pg	Pb	06 28 50.3	-0.1
	2.2nm,0.3s						
CHKK				Lg	Lg	06 30 03.1	
	11nm,0.3s						
CHKK	**Chushkaly**	5.70	45	*e*P	Pb	06 28 50.3	-0.1
	2.2nm,0.3s						
CHKK				*e*S	Sb	06 30 03.1	+4.0
	11nm,0.3s						
ARXS	**Arharly**	6.39	46	Pg	Pb	06 29 01.9	-0.3
	1.4nm,0.3s						
ARXS	**Arharly**	6.39	46	*e*P	Pb	06 29 01.9	-0.3
	1.4nm,0.3s						
ARXS				*e*S	Sb	06 30 23.0	+3.9
	12nm,0.6s						
AB31	**Akbulak array**	12.35	323	⇑P	Pn	06 30 02.5	-4.4
	0.7nm,0.5s,baz=27,slow=12,SNR=2.7						

*IDC **30** 06:49:02.5±0.9, 55°.52S×26°.68W, h0km, mb4.3/4, mb1 4.3/5, mb1mx3.9/21, mbtmp4.2/5, ML3.6/1, Error ellipse: s-maj=42.7km s-min=23.2km az=70.0*
*ISCJB **30** 06:49:06.2±1.0, 55°.5S±0°.1×26°.6W±0°.5, h38km, mb4.0/4, Error ellipse: s-maj=39.4km s-min=15.5km az=157.8*
ISC 30 06:49:08.0±0.9, 55°.6S±0°.2×26°.7W±0°.3, h38km, n10, σ1°13/10, mb3.9/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	17.15	159	P	Pn	06 53 02.1	-2.2
VNA3	**Neumayer Olymp**	17.36	162	P	P	06 53 08.4	+0.4
SNAA	**Sanae**	19.08	157	P	Pn	06 53 29.9	+1.9
SNAA	**Sanae**	19.08	157	P	P	06 53 26.7	-0.2
	0.2nm,0.3s,baz=316,slow=10.0,SNR=16						
MAW	**Mawson**	40.38	144	P	P	06 56 41.7	+0.2
	1.2nm,0.6s,baz=233,slow=14,SNR=4.0						
VNDA	**Vanda**	47.08	183	P	P	06 57 35.2	-0.1
	2.8nm,0.7s,baz=195,slow=6.4,SNR=21						
LPAZ	**La Paz**	50.33	304	P	P	06 58 01.7	+0.1
	1.7nm,1.0s,baz=165,slow=3.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	72.48	29	P	P	07 00 30.2	-0.3
	1.0nm,0.8s,baz=203,slow=5.3,SNR=5.3						
ILAR	**Eielson Array**	150.00	312	PKPbc	PKPbc	07 08 52.8	+0.1
	1.3nm,0.8s,baz=146,slow=1.9,SNR=14						
SONM	**Songino Array**	150.41	85	PKPbc	PKiKP	07 08 55.3	+0.1
	0.5nm,0.4s,baz=246,slow=2.1,SNR=3.0						

IDC 30 06:49:36.9±1.0, 55°.48S×26°.68W, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.8/20, mbtmp3.9/4, ML3.7/1, Error ellipse: s-maj=43.3km s-min=22.7km az=68.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	19.15	157	P	Pn	06 54 02.2	0.0
	0.2nm,0.3s,baz=324,slow=14,SNR=3.6						
MAW	**Mawson**	40.44	144	P	P	06 57 16.2	-0.1
	1.5nm,0.6s,baz=224,slow=5.7,SNR=6.5						
VNDA	**Vanda**	47.16	183	P	P	06 58 09.7	-0.5
	1.7nm,0.6s,baz=186,slow=7.4,SNR=9.0						
LPAZ	**La Paz**	50.29	304	P	P	06 58 35.9	+0.2
	1.4nm,0.7s,baz=180,slow=6.9,SNR=2.9						
TORD	**Torodi Ar. Bea**	72.42	29	P	P	07 01 04.7	0.0
	2.0nm,0.8s,baz=197,slow=5.6,SNR=6.8						
ILAR	**Eielson Array**	149.95	312	PKPbc	PKPbc	07 09 26.9	-0.6
	1.1nm,0.8s,baz=116,slow=1.8,SNR=4.6						

*SNET **30** 07:11:47.0±0.7, 12°.86N×90°.67W, h14km±6km, MD3.7*
*UCR **30** 07:11:49.6±1.4, 12°.87N×90°.43W, h8km±19km, MD3.6*
*GCG **30** 07:11:50.1±0.3, 12°.92N×90°.38W, h13km±4km, MD3.7*
ISC 30 07:11:50.6±3.2, 12°.9N±0°.2×90°.45W±0°.09, h24km, n19, σ0°42/23, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	1.24	40	*e*P	Pn	07 12 12.3	-0.5
SBLS	**San Blas**	1.24	40	*e*P	Pn	07 12 12.3	-0.5
RTR	**El Retiro**	1.27	38	*e*P	Pn	07 12 12.8	-0.3
RTR	**El Retiro**	1.27	38	*e*P	Pn	07 12 12.8	-0.3
SNJE	**San Jose**	1.28	40	*e*P	Pn	07 12 12.7	-0.5
SNJE	**San Jose**	1.28	40	*e*P	Pn	07 12 12.7	-0.5
IXG	**Ixpaco**	1.28	0	*e*P	Pn	07 12 12.5	-0.7
IXG	**Ixpaco**	1.28	0	*e*P	Pn	07 12 12.5	-0.7
IXG				*e*S	Sn	07 12 30.1	+0.4
BOQS	**Boqueron**	1.42	53	*e*P	Pn	07 12 14.8	-0.4
LFRS	**El Faro**	1.54	61	*e*P	Pn	07 12 16.7	0.0
LFU	**La Fuente**	1.56	56	*e*P	Pn	07 12 17.0	+0.1
LFU	**La Fuente**	1.56	56	*e*P	Pn	07 12 17.0	+0.1
FUG	**Fuego 3**	1.60	346	*e*P	Pn	07 12 17.9	+0.3
FUG	**Fuego 3**	1.60	346	*e*P	Pn	07 12 17.9	+0.3
FUG				*e*S	Sb	07 12 39.6	+0.1
LBRS	**Las Brisas**	1.61	58	*e*P	Pn	07 12 18.1	+0.4
NBG	**Las Nubes**	1.70	3	*e*P	Pb	07 12 21.0	-0.4
NBG	**Las Nubes**	1.70	3	*e*P	Pn	07 12 19.3	+0.3
MTO3	**Montecristo**	1.84	35	*e*P	Pn	07 12 20.7	-0.2
MTO3				*e*S	Sb	07 12 46.9	+0.5
MTO3	**Montecristo**	1.84	35	*e*P	Pn	07 12 20.7	-0.2
MTO3				*e*S	Sb	07 12 46.9	+0.5

*ISK **30** 07:13:35.8, 39°.23N×26°.19E, h5km, ML2.2/10*
*ISCJB **30** 07:13:36.4±0.4, 39°.22N±0°.02×26°.18E±0°.03, h10km±3km, Error ellipse: s-maj=4.3km s-min=3.4km az=161.4*
*THE **30** 07:13:36.7, 39°.21N×26°.13E, h10km±1km, ML2.0/5, Error ellipse: s-maj=1.2km s-min=0.7km az=116.0*
*ATH **30** 07:13:36.1, 39°.24N×26°.15E, h18km±1km, ML2.1/5, Error ellipse: s-maj=1.1km s-min=0.6km az=65.0*
*DDA **30** 07:13:36.3, 39°.30N×26°.64E, h48km±1km, ML2.6*
ISC 30 07:13:36.1±0.9, 39°.23N±0°.02×26°.16E±0°.02, h18km±4km, n28, σ0°37/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	0.09	82	P	Pg	07 13 39.8	+0.2
PRK				S	Sg	07 13 41.4	-0.6
PRK	**Paraskevi**	0.09	82	P	Pg	07 13 39.9	+0.2
PRK				S	Sg	07 13 41.6	-0.4
PRK				AML	AML	07 13 42.2	
	comp=N,1461μm,0.2s						
PRK				AML	AML	07 13 42.3	
	comp=E,4206μm,0.4s						
SIGR	**SIGRI**	0.24	265	PG	Pg	07 13 41.5	0.0
SIGR				SG	Sg	07 13 45.3	0.0
SIGR	**SIGRI**	0.24	265	P	Pg	07 13 41.5	0.0
SIGR				S	Sb	07 13 44.9	-0.7
SIGR	**SIGRI**	0.24	265	P	Pg	07 13 41.5	0.0
SIGR				S	Sg	07 13 45.1	-0.2
SIGR				AML	AML	07 13 45.3	
	comp=E,1653μm,0.2s						
SIGR				AML	AML	07 13 45.4	
	comp=N,800μm,0.1s						
AYVA	**Ayvalik**	0.42	80	*i* P	Pg	07 13 44.1	-0.6
AYVA				*i* S	Sg	07 13 50.2	-0.2
AYVA				IAML_P			
	comp=Z,424nm,0.1s						
BAYC	**CANAKKALE_Bayr**	0.59	31	*i* P	Pg	07 13 48.5	+0.7
BAYC				*i* S	Sg	07 13 56.1	+0.4
DKL	**Dikili**	0.60	105	PG	Pb	07 13 47.5	-0.6
DKL				SG	Sb	07 13 55.9	-0.3
EZN	**Ezine**	0.61	12	PG	Pg	07 13 48.1	0.0
EZN				SG	Sg	07 13 56.6	+0.4
KRBN	**Karaburun**	0.71	154	PG	Pg	07 13 50.4	+0.4
ZEDA	**zmir-Bergama**	0.76	110	*i* P	Pg	07 13 51.1	+0.1
ZEDA				*i* S	Sb	07 14 00.9	0.0
CHOS	**Chios island**	0.85	185	PG	Pg	07 13 52.7	+0.1
CHOS	**Chios island**	0.85	185	P	Pb	07 13 52.0	-0.3
CHOS				S	Sg	07 14 04.1	+0.2
CHOS	**Chios island**	0.85	185	P	Pb	07 13 52.3	0.0
CHOS				S	Sn	07 14 05.1	-0.2
CHOS				AML	AML	07 14 06.4	
	comp=E,316μm,0.4s						
CHOS				AML	AML	07 14 07.5	
	comp=N,124μm,0.2s						
URLA	**Izmir**	0.94	158	PG	Pb	07 13 53.9	+0.1
URLA	**Izmir**	0.94	158	*i* P	Pn	07 13 54.4	0.0
URLA				*i* S	Sb	07 14 06.0	+0.1
URLA				IAML_P			
	comp=Z,1μm,0.2s						
LIA	**Limnos Island**	1.00	312	P	Pg	07 13 55.5	0.0
LIA				S	Sn	07 14 09.4	+0.4
LIA	**Limnos Island**	1.00	312	P	Pg	07 13 55.5	0.0
LIA				S	Sn	07 14 09.3	+0.4
LIA				AML	AML	07 14 10.8	
	comp=N,151μm,0.5s						
LIA				AML	AML	07 14 10.9	
	comp=E,177μm,0.3s						
BLCB	**Balcova**	1.09	141	PN	Pg	07 13 57.1	-0.1
GELI	**Tayfur-Gelibol**	1.19	12	PN	Pg	07 13 58.8	-0.3
GELI				SN	Sg	07 14 15.7	+1.1
LPK	**Lapseki**	1.23	22	PN	Pg	07 13 59.5	-0.3
DGB	**zmir**	1.31	154	*e*P	Pb	07 14 00.1	0.0
DGB				IAML_P			
	comp=Z,499nm,0.2s						
SMTH	**Samothraki Isl**	1.33	339	P	Pb	07 14 00

ILAR	Eielson Array	82.84	19	P	P	07 39 19.8	0.0
	0.3nm,0.8s,baz=227,slow=5.1,SNR=3.9						

KRSC 30 07:48:59.7±1.3, 54.02N×162.18E, h25km±22km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.60**	**334**	*eP*	Pb	07 49 11.5	0.0
MKZ				*eS*	Sb	07 49 19.9	+0.3
KZV	**Kizimen**	**1.55**	**316**	*eP*	Pn	07 49 26.5	+0.6
KZV				*eS*	Sb	07 49 47.1	+0.1
TUMD	**Tumrok D**	**1.57**	**319**	*eP*	Pn	07 49 26.7	+0.6
TUMD				*eS*	Sb	07 49 46.7	-0.9
SPN	**Mys Shipunski**	**1.59**	**235**	*eP*	Pn	07 49 26.6	+0.4
SPN				*eS*	Sb	07 49 47.0	-0.9
TUMR	**Tumrok**	**1.73**	**318**	*eP*	Pn	07 49 29.3	+1.0
NLC	**Nalytchevo**	**1.90**	**244**	*eP*	Pb	07 49 32.8	-0.8
SDLR	**Sedlovina**	**2.10**	**251**	*eP*	Pn	07 49 34.7	+1.3
SDLR				*eS*	Sn	07 50 00.7	+1.9
BZGR	**Bezymyannyi-Gr**	**2.10**	**337**	*eP*	Pn	07 49 35.2	+1.7
BZGR				*eS*	Sb	07 50 01.8	-1.1
SMAR	**Somma**	**2.15**	**251**	*eP*	Pn	07 49 35.9	+1.7
SMAR				*eS*	Sb	07 50 03.3	-1.1
UGLR	**Uglovaya**	**2.16**	**249**	*eP*	Pn	07 49 35.9	+1.7
UGLR				*eS*	Sb	07 50 03.4	-1.1
KRER	**Koryakskii**	**2.17**	**252**	*eP*	Pn	07 49 36.3	+1.9
KRER				*eS*	Sn	07 50 02.5	+2.0
AVH	**Avacha**	**2.19**	**251**	*eP*	Pn	07 49 36.4	+1.8
KRX	**Arik**	**2.20**	**254**	*eP*	Pn	07 49 36.1	+1.2
KBTR	**Krutoberegovo**	**2.22**	**9**	P	Pb	07 49 37.4	-1.7
KBTR				*eS*	Sb	07 50 05.7	-0.4
LGNR	**Loginova**	**2.24**	**338**	P	Pb	07 49 38.6	-1.0
LGNR				*eS*	Sb	07 50 05.2	-1.7
CIRR	**Tsirk**	**2.25**	**339**	*eP*	Pn	07 49 36.6	+1.1
CIRR				*eS*	Sn	07 50 04.0	+1.4
KBG	**Krutoberegovo**	**2.26**	**7**	*eS*	Sb	07 50 07.1	-0.1
DALK	**Dalny**	**2.28**	**245**	*eP*	Pb	07 49 38.0	-2.0
DALK				*eS*	Sn	07 50 04.4	+1.5
KRSR	**Krestovskiy**	**2.39**	**338**	*eP*	Pb	07 49 40.0	-2.0
KOZ	**Kozyrevsk**	**2.43**	**328**	*eP*	Pn	07 49 40.3	+2.4
KLY	**Klyuchi**	**2.46**	**340**	*eP*	Pn	07 49 38.8	+0.6
KLY				*eS*	Sn	07 50 07.2	-0.2
BKI	**Bering**	**2.50**	**60**	*eP*	Pn	07 49 40.9	+2.1
BKI				*eS*	Sn	07 50 09.4	+1.0
GNL	**Ganaly**	**2.53**	**264**	*eP*	Pn	07 49 41.8	+2.4
SMKR	**Semkarok**	**2.60**	**351**	*eP*	Pb	07 49 44.5	-1.1
BDR	**Baidarnaya**	**2.61**	**348**	P	Pb	07 49 45.1	-0.7
SRDR	**Sredinnyy**	**2.70**	**329**	*eP*	Pn	07 49 43.8	+2.2
SRKR	**Sorokina**	**2.70**	**348**	*eP*	Pb	07 49 46.1	-1.2
KRMR	**Karymshinskiy**	**2.70**	**245**	*eP*	Pn	07 49 43.7	+2.1
KRMR				*eS*	Sn	07 50 16.6	+3.1
RUS	**Russkaya**	**2.72**	**236**	*eP*	Pb	07 49 45.2	-2.4
ESO	**Esso**	**2.77**	**315**	*eP*	Pn	07 49 44.9	+2.4
MTVR	**Mutnovka**	**2.85**	**239**	*eP*	Pb	07 49 48.1	-1.9
MTVR				*eS*	Sb	07 50 22.3	-2.2
ASAK	**Asacha**	**3.06**	**239**	*eP*	Pb	07 49 51.1	-2.3
ASAK				*eS*	Sb	07 50 27.1	-3.1
APC	**Apacha**	**3.20**	**252**	*eP*	Pb	07 49 53.3	-2.5
APC				*eS*	Sb	07 50 31.4	-2.8
KDTR	**Khodutka, Kamc**	**3.33**	**230**	*eP*	Pn	07 49 53.7	+3.5
KDTR				*eS*	Sn	07 50 31.1	+2.2

*NNC **30** 07:50:37.1±2.2, 39.39N×73.50E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=17.9km s-min=9.5km az=172.0*

ISC 30 07:50:45.7±2.3, 40.1N±0.2×73.48E±0.05, h10km, n26, σ2§12/29, 9C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**2.29**	**20**	P	**Pb**	**07 51 28.2**	**+0.9**
	SNR=23						
KZA	**Kyzart**	**2.41**	**33**	P	**Pb**	**07 51 28.2**	**-1.2**
	SNR=11						
EKS2	**Erkin-Say**	**2.60**	**5**	P	**Pb**	**07 51 32.8**	**+0.4**
	SNR=8.7						
AAK	**Ala-Archa**	**2.67**	**16**	P	**Pb**	**07 51 33.7**	**0.0**
	SNR=7.3						
AAK	**Ala-Archa**	**2.67**	**16**	⇑Pg	**Pb**	**07 51 33.3**	**-0.4**
	8.7nm,0.6s						
AAK				⇓Lg	Lg	07 52 21.5	
	66nm,0.8s						
MRKS	**Merke**	**2.68**	**356**	Pg	**Pb**	**07 51 34.9**	**+1.1**
	15nm,0.5s						
ULHL	**Ulahol**	**3.01**	**43**	P	**Pb**	**07 51 41.6**	**+2.1**
	SNR=8.6						
TKM2	**Tokmak 2**	**3.26**	**28**	⇑Pn	**Pn**	**07 51 39.9**	**+2.8**
	4.1nm,0.5s						
TKM2				⇑Lg	Lg	07 52 40.8	
	14nm,0.5s						
IUG	**Iuzhnay**	**3.33**	**310**	Pg	**Pb**	**07 51 45.6**	**+0.8**
	11nm,0.4s						
IUG				Lg	Lg	07 52 35.7	
	20nm,0.6s						
KST	**Kastek**	**3.50**	**31**	Pg	**Pg**	**07 51 52.8**	**0.0**
	11nm,0.5s						
KST				Lg	Lg	07 52 48.0	
	25nm,0.6s						
DGS	**Degeres**	**3.60**	**28**	Pg	**Pg**	**07 51 55.0**	**+0.4**
	8.5nm,0.6s						
DGS				Lg	Lg	07 52 51.8	
	34nm,0.6s						
KK31	**Karatay Array**	**3.76**	**325**	⇑Pn	**Pn**	**07 51 45.1**	**+1.4**
	3.2nm,0.5s,baz=140,slow=12,SNR=47						
KK31				⇑Pg	**Pg**	**07 51 58.4**	**+0.7**
	4.3nm,0.5s,baz=166,slow=19,SNR=6.5						
KK31				⇑Sn	**Sb**	**07 52 40.4**	**+2.7**
	6.5nm,0.6s						
MTBS	**Maitube**	**3.77**	**35**	Pg	**Pg**	**07 51 57.6**	**-0.3**
	6.6nm,0.3s						
MTBS				Lg	Lg	07 52 56.2	
	14nm,0.3s						
MDOK	**Medeo**	**4.09**	**40**	Pg	**Pg**	**07 52 02.1**	**-1.8**
	7.7nm,0.6s						
MDOK				Lg	Lg	07 53 03.9	
	29nm,1.0s						
KOTS	**Kotyrbulak**	**4.17**	**40**	Pg	**Pg**	**07 52 04.2**	**-1.3**
	8.1nm,0.4s						
KOTS				Lg	Lg	07 53 07.5	
	22nm,0.5s						
KTBS	**Karatobe**	**4.35**	**32**	Pg	**Pg**	**07 52 08.2**	**-0.8**
	3.6nm,0.3s						
KTBS				Lg	Lg	07 53 14.4	
	23nm,0.6s						
KUU	**Kurty**	**4.37**	**28**	Pg	**Pg**	**07 52 08.3**	**-1.1**
	1.4nm,0.1s						
KUU				Lg	Lg	07 53 14.6	
	20nm,0.6s						
CHKK	**Chushkaly**	**4.60**	**34**	Pg	**Pg**	**07 52 11.7**	**-2.0**
	4.4nm,0.5s						
CHKK				Lg	Lg	07 53 20.4	
	8.2nm,0.7s						
SATY	**Saty**	**4.75**	**49**	Pg	**Pb**	**07 52 11.3**	**+2.2**
	13nm,0.8s						
SATY				Lg	Lg	07 53 20.1	
	11nm,0.8s						
UZB	**Uzynbulak**	**5.17**	**52**	Pg	**Pb**	**07 52 19.8**	**+3.6**
	4.9nm,0.7s						
UZB				Lg	Lg	07 53 35.0	
	6.5nm,0.6s						
ARXS	**Arharly**	**5.25**	**37**	Pg	**Pg**	**07 52 22.8**	**-3.3**
	4.4nm,0.5s						
ARXS				Lg	Lg	07 53 39.1	
	9.7nm,0.7s						
PDGK	**Podgornoye**	**5.55**	**52**	Pg	**Pb**	**07 52 25.5**	**+2.8**
	2.2nm,0.6s						
PDGK				Lg	Lg	07 53 44.0	
	2.7nm,0.6s						
PDGK	**Podgornoye**	**5.55**	**52**	⇑Pn	**Pn**	**07 52 07.9**	**-0.6**
	0.5nm,0.7s						
PDGK				⇓Pg	**Pb**	**07 52 25.3**	**+2.6**
	3.7nm,0.7s						
PDGK				⇓Lg	Lg	07 53 47.0	
	7.5nm,0.8s						
OTUK	**Ortayu**	**8.21**	**355**	⇓Pn	**Pn**	**07 52 45.7**	**+0.9**
	0.7nm,0.5s						
OTUK				⇑Lg	Lg	07 55 17.2	
	6.4nm,0.8s						
AB31	**Akbulak array**	**13.29**	**318**	⇑Pn	**Pn**	**07 53 50.2**	**-4.1**
	0.8nm,0.5s,baz=132,slow=13,SNR=17						
AKTO	**Aktyubinsk**	**15.00**	**319**	⇓Pn	**Pn**	**07 54 13.3**	**-4.3**
	1.2nm,0.6s						

IDC 30 07:54:22.9±4.0, 10.99S×166.32E, h59km±37km, mb3.1/4, mb1 3.6/6, mb1mx3.3/37, mbtmp3.7/6, ML4.2/2, MS3.3/4, Ms1 3.3/4, ms1mx3.2/10, Error ellipse: s-maj=31.1km s-min=19.8km az=62.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.46**	**283**	P	Pn	07 55 54.0	-1.4
	12nm,0.3s,baz=153,slow=11,SNR=3.3						
HNR				S	Sn	07 57 09.6	+1.9
	9.3nm,0.3s,baz=94,slow=19,SNR=2.9						
HNR				LR	LR	07 58 25.8	
	comp=Z,227nm,18.3s,baz=102,slow=38						
DZM	**Mont Dzumac**	**11.02**	**179**	P	Pn	07 56 58.2	+0.2
	0.6nm,0.3s,baz=15,slow=20,SNR=11						
DZM				S	Sn	07 59 00.5	+0.7
	0.2nm,0.3s,baz=143,slow=20,SNR=2.5						
DZM				LR	LR	08 00 22.1	
	comp=Z,85nm,19.8s,baz=274,slow=33						
PMG	**Port Moresby**	**18.92**	**273**	LR	LR	08 05 31.5	
	comp=Z,108nm,21.4s,baz=119,slow=35						
H11S2	**WAKE ISLAND Hy 29.29**	**1**		T	T	08 30 13.3	
	baz=181,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy 29.30**	**1**		T	T	08 30 13.6	
	baz=181,slow=76,SNR=23						
H11S1	**WAKE ISLAND Hy 29.31**	**1**		T	T	08 30 15.3	
	baz=181,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy 30.51**	**1**		T	T	08 31 59.7	
	baz=183						
H11N3	**WAKE ISLAND Hy 30.52**	**1**		T	T	08 32 15.0	
	baz=183						
H11N2	**WAKE ISLAND Hy 30.53**	**1**		T	T	08 32 21.0	
	baz=183						
STKA	**Stephens Creek**	**30.87**	**224**	LR	LR	08 11 00.2	
	comp=Z,98nm,19.2s,baz=31,slow=32						
ASAR	**Alice Springs**	**33.32**	**243**	P	P	08 00 55.3	-0.1
	0.4nm,0.8s,baz=64,slow=10,SNR=4.5						
VNDA	**Vanda**	**66.56**	**181**	P	P	08 05 06.2	-0.2
	0.3nm,0.7s,baz=359,slow=8.8,SNR=3.5						
ILAR	**Eielson Array**	**83.28**	**18**	P	P	08 06 41.9	-0.9
	0.3nm,0.8s,baz=239,slow=5.5,SNR=3.3						
NVAR	**Mina Array Bea**	**85.56**	**50**	P	P	08 06 56.4	+1.2
	0.2nm,0.7s,baz=228,slow=6.7,SNR=2.2						

*IDC **30** 08:02:33.2±1.7, 52.37N×171.29W, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.4/47, mbtmp3.4/7, ML2.8/2, MS3.6/2, Ms1 3.6/2, ms1mx2.7/24, Error ellipse: s-maj=59.5km s-min=26.8km az=144.0*

*NEIC **30** 08:02:37.9±0.0, 52.10N×170.99W, h28km, ML3.5(AEIC), After AEIC.*

*ISCJB **30** 08:02:38.3±0.7, 52.2N±0.1×171.02W±0.07, h42km, mb3.3/5, MS3.7/2, Error ellipse: s-maj=19.5km s-min=4.0km az=164.5*

ISC 30 08:02:39.9±0.9, 52.2N±0.2×171.05W±0.07, h42km, n21, σ1§17/21, mb3.2/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.54**	**60**	*e*Pn	**Pn**	**08 03 04.2**	**-0.5**
NIKH				*e*Sn	**Sn**	**08 03 23.3**	**-0.2**
KOFP	**Korovin Flat P**	**1.88**	**273**	*e*Pn	**Pn**	**08 03 09.2**	**-0.3**
OKAK	**Okmok**	**2.12**	**49**	*e*Pn	**Pn**	**08 03 11.5**	**-1.3**
OKTU	**Okmok Mt. Tuli**	**2.17**	**56**	*e*Pn	**Pn**	**08 03 14.0**	**+0.6**
MREP	**Makushin Rep't**	**3.05**	**57**	*e*Pn	**Pn**	**08 03 25.7**	**+0.1**
MSW	**Makushin Switc**	**3.08**	**55**	*e*Pn	**Pn**	**08 03 26.8**	**+0.8**
MSW				*e*Sn	**Sn**	**08 04 04.3**	**+2.7**
GSTR	**Great Sitkin T**	**3.09**	**270**	*e*Pn	**Pn**	**08 03 25.5**	**-0.6**
GSTR				*e*Sn	**Sn**	**08 04 01.0**	**-0.7**
GSTD	**Great Sitkin T**	**3.15**	**269**	*e*Pn	**Pn**	**08 03 27.6**	**+0.8**
GSTD				*e*Sn	**Sn**	**08 04 05.5**	**+2.3**
ADK	**Adak**	**3.50**	**267**	*e*Pn	**Pn**	**08 03 30.8**	**-0.9**
ADK				*e*Sn	**Sn**	**08 04 13.5**	**+1.8**
KDAK	**Kodiak Island**	**11.96**	**55**	Pn	**Pn**	**08 05 26.6**	**-0.8**
	0.1nm,0.3s,baz=49,slow=20,SNR=5.2						
ILAR	**Eielson Array**	**17.66**	**35**	P	**Pn**	**08 06 41.1**	**-1.3**
	0.0nm,0.3s,baz=233,slow=5.5,SNR=3.3						
YKA	**Yellowknife Ar**	**31.11**	**48**	P	**P**	**08 08 53.6**	**-0.2**
	0.2nm,0.6s,baz=79,slow=7.6,SNR=4.7						
H11S1	**WAKE ISLAND Hy 37.90**	**216**		T	T	08 50 29.3	
	baz=22,slow=76,SNR=9.9						
H11S2	**WAKE ISLAND Hy 37.92**	**216**		T	T	08 50 30.2	
	baz=22,slow=76,SNR=9.5						
H11S3	**WAKE ISLAND Hy 37.92**	**216**		T	T	08 50 35.7	
	baz=22,slow=76,SNR=6.8						
NVAR	**Mina Array Bea**	**38.69**	**89**	P	**P**	**08 10 00.0**	**+0.3**
	0.2nm,0.6s,baz=305,slow=6.5,SNR=3.0						
PDAR	**Pinedale Array**	**41.44**	**78**	P	**P**	**08 10 22.9**	**+0.5**
	0.3nm,0.5s,baz=310,slow=9.2,SNR=4.0						
SONM	**Songino Array**	**50.49**	**300**	LR	LR	08 35 59.1	
	comp=Z,76nm,18.1s,baz=86,slow=40						
TXAR	**Lajitas Array**	**53.78**	**88**	P	**P**	**08 11 58.4**	**+0.3**
	0.3nm,0.6s,baz=294,slow=5.5,SNR=5.5						
GEYT	**Alibeck**	**80.53**	**323**	LR	LR	08 52 45.1	
	comp=Z,27nm,19.8s,baz=150,slow=38						
ASAR	**Alice Springs**	**89.51**	**229**	P	**P**	**08 15 31.6**	**-0.8**
	0.3nm,0.5s,baz=23,slow=4.7,SNR=7.2						

*IDC **30** 08:05:12.2±0.8, 12.63N×143.85E, h0km, mb4.0/10, mb1 4.2/10, mb1mx3.9/42, mbtmp4.0/10, MS3.4/12, Ms1 3.5/12, ms1mx3.2/30, Error ellipse: s-maj=22.3km s-min=15.9km az=119.0*

*NEIC **30** 08:05:16.9±1.9, 12.68N×143.73E, h35km±3km, mb4.5/17, Error ellipse: s-maj=21.5km s-min=11.0km az=135.0*

ISC 30 08:05:15.5±0.7, 12.6N±0.1×143.9E±0.1, h27km, n50, σ1§37/40, mb4.4/25, MS3.5/11, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.39**	**43**	Pn	**Pn**	**08 05 39.6**	**+0.5**
	113nm,0.3s,baz=357,slow=3.2,SNR=169						
GUMO				Sn	**Sb**	**08 05 58.2**	**+0.1**
	205nm,0.3s,baz=62,slow=20,SNR=20						
GUMO	**Guam**	**1.39**	**43**	*e*Pn	**Pn**	**08 05 39.6**	**+0.5**
GUMO				*e*Sn	**Sb**	**08 05 58.6**	**+0.5**
SARN	**Sarigan**	**4.50**	**24**	*e*Pn	**Pn**	**08 06 23.7**	**+1.8**
DAV	**Davao City (W)**	**18.86**	**255**	LR	LR	08 15 30.3	
	comp=Z,87nm,21.1s,baz=68,slow=33						
DAV	**Davao City (W)**	**18.86**	**255**	*e*P	**Pn**	**08 09 33.4**	**-1.0**
	148nm,0.4s						
JHJ	**Hachijo jima 2**	**20.81**	**350**	LR	LR	08 16 32.7	
	comp=Z,94nm,21.2s,baz=172,slow=33						
PMG	**Port Moresby**	**22.07**	**171**	LR	LR	08 18 50.0	
	comp=Z,51nm,19.6s,baz=68,slow=37						
H11S3	**WAKE ISLAND Hy 22.72**	**72**		T	T	08 34 05.1	
	baz=258,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy 22.73**	**72**		T	T	08 34 04.5	
	baz=258,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy 22.73**	**72**		T	T	08 34 04.1	
	baz=258,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy 23.18**	**69**		T	T	08 34 35.8	
	baz=255,slow=75,SNR=23						
H11N2	**WAKE ISLAND Hy 23.19**	**69**		T	T	08 34 37.0	
	baz=255,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy 23.20**	**69**		T	T	08 34 39.5	
	baz=255,slow=75,SNR=23						
JNU	**Nakatsue**	**23.68**	**332**	P	**P**	**08 10 25.9**	**+0.8**
	12nm,0.9s,baz=201,slow=2.7,SNR=5.3						
JNU				LR	LR	08 17 46.6	
	comp=Z,58nm,21.2s,baz=175,slow=32						
JNU	**Nakatsue**	**23.68**	**332**	*e*P	**P**	**08 10 25.7**	**+0.7**
MJAR	**Matsushiro Arr**	**24.42**	**349**	P	**P**	**08 10 31.1**	**-0.8**
	4.6nm,1.1s,baz=180,slow=9.9,SNR=7.7						
MJAR				LR	LR	08 19 35.3	
	comp=Z,138nm,18.0s,baz=180,slow=36						
MAJO	**Matsushiro**	**24.42**	**349**	*e*P	**P**	**08 10 29.3**	**-2.6**
	16nm,1.3s						
MJB9	**Matsu-Tunnel**	**24.42**	**349**	*e*P	**P**	**08 10 29.3**	**-2.6**
	16nm,1.2s						
KSRS	**Korea Array**	**28.62**	**333**	P	**P**	**08 11 11.5**	**+1.9**
	1.2nm,0.9s,baz=143,slow=10,SNR=6.6						
KAPI	**Kappang**	**29.68**	**235**	LR	LR	08 23 52.0	
	comp=Z,137nm,20.1s,baz=301,slow=38						
WR1	**Warramunga Arr**	**33.65**	**196**	*e*P	**P**	**08 11 54.6**	**+0.5**
WRA	**Warramunga Arr**	**33.65**	**196**	P	**P**	**08 11 54.6**	**+0.5**
	1.6nm,0.5s,baz=10,slow=9.6,SNR=8.9						
AS31	**Alice Springs**	**37.31**	**195**	*e*P	**P**	**08 12 27.1**	**+1.5**
	0.8nm,0.9s						
ASAR	**Alice Springs**	**37.31**	**195**	P	**P**	**08 12 26.8**	**+1.2**
	0.3nm,0.4s,baz=21,slow=12,SNR=7.5						
ASAR				LR	LR	08 30 26.5	
	comp=Z,64nm,18.0s,baz=350,slow=40						
PETK	**Petropavlovsk-**	**41.92**	**12**	LR	LR	08 27 35.7	
	comp=Z,54nm,21.9s,baz=199,slow=32						
CMAR	**Chiang Mai Arr**	**43.63**	**284**	P	**P**	**08 13 19.1**	**+1.0**
	1.3nm,0.3s,baz=78,slow=7.0,SNR=8.1						
CMAR				LR	LR	08 31 23.9	
	comp=Z,80nm,19.6s,baz=182,slow=36						
MK31	**Makanchi Array**	**61.58**	**317**	*e*P	**P**	**08 15 29.4**	**-1.2**
	1.6nm,1.1s						
MK32	**Makanchi Array**	**61.58**	**317**	*e*P	**P**	**08 15 28.9**	**-1.7**
MKAR	**Makanchi Array**	**61.58**	**317**	P	**P**	**08 15 28.9**	**-1.7**
	0.9nm,0.8s,baz=96,slow=7.4,SNR=7.5						
KURK	**Kurchatov**	**64.76**	**320**	*e*P	**P**	**08 15 50.8**	**-0.8**
	3.2nm,0.9s						
ILAR	**Eielson Array**	**69.89**	**25**	P	**P**	**08 16 23.0**	**-0.8**
	0.3nm,0.9s,baz=232,slow=4.4,SNR=3.7						
ILAR				LR	LR	08 47 36.7	
	comp=Z,16nm,18.7s,baz=288,slow=36						
ILB	**Eielson Array**	**69.89**	**25**	*e*P	**P**	**08 16 24.4**	**+0.6**
	1.4nm,1.0s						
JIS	**Juneau Island**	**75.06**	**33**	*e*P	**P**	**08 16 50.6**	**-4.0**
	5.4nm,0.7s						
YKA	**Yellowknife Ar**	**84.20**	**27**	P	**P**	**08 17 44.3**	**+0.1**
	0.4nm,0.7s,baz=286,slow=5.1,SNR=4.8						
YKB5	**Yellowknife Ar**	**84.20**	**27**	*e*P	**P**	**08 17 44.3**	**+0.1**
PINE	**Pine Mountain**	**85.09**	**46**	*e*P	**P**	**08 17 50.9**	**+1.4**
	4.5nm,1.1s						
BMO	**Blue Mountains**	**87.38**	**45**	*e*P	**P**	**08 18 01.6**	**+1.1**
	3.4nm,0.9s						
ARCES	**ARCESS Array B**	**87.76**	**342**	LR	LR	08 58 49.4	
	comp=Z,28nm,19.6s,baz=352,slow=37						
RYN	**Ryan**	**88.08**	**51**	*e*P	**P**	**08 18 04.1**	**0.0**
	3.0nm,1.0s						
KVN	**Kaiserville**	**88.29**	**50**	*e*P	**P**	**08 18 06.3**	**+1.2**
	4.4nm,1.2s						
NV01	**Mina Array Sit**	**88.29**	**51**	*e*P	**P**	**08 18 06.9**	**+1.7**
NVAR	**Mina Array Bea**	**88.29**	**51**	P	**P**	**08 18 06.9**	**+1.7**
	2.6nm,0.8s,baz=257,slow=6.5,SNR=19						
NV11	**Mina Array Sit**	**88.40**	**51**	*e*P	**P**	**08 18 06.2**	**+0.5**
	0.3nm,1.0s						
HLID	**Hailey**	**89.73**	**45**	*e*P	**P**	**08 18 13.1**	**+1.2**
	2.2nm,1.0s						
ELK	**Elko**	**89.95**	**48**	*e*P	**P**	**08 18 13.2**	**+0.1**
	4.0nm,1.1s						
TPNV	**Topopah Spring**	**90.25**	**52**	*e*P	**P**	**08 18 15.3**	**+0.9**
	3.5nm,0.9s						
PDAR	**Pinedale Array**	**93.35**	**45**	LR	LR	08 53 21.6	
	comp=Z,26nm,21.3s,baz=288,slow=31						
Y14A	**Wickenburg**	**93.66**	**54**	*e*P	**P**	**08 18 30.2**	**+0.1**
	2.2nm,0.8s						
LPAZ	**La Paz**	**148.78**	**101**	PKPbc	**PKiKP**	**08 25 04.6**	**+0.9**
	1.4nm,0.8s,baz=285,slow=1.9,SNR=3.8						
LPAZ	**La Paz**	**148.78**	**101**	*e*PKPdf	**PKPdf**	**08 24 58.0**	**-0.4**
LPAZ				*e*PKPbc	**PKPbc**	**08 25 00.9**	**-1.4**

MEX 30 08:08:37.3±0.7, 16.05N×97.04W, h40km±14km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PANG	**Puerto Angel**	**0.66**	**125**	*i* P	Pn	08 08 47.0	-3.2
PANG				*i* S	Sn	08 08 55.7	-3.8
HUIG	**Huatulco**	**0.94**	**107**	*e*P	Pn	08 08 53.2	-0.8
HUIG				*e*S	Sn	08 09 04.4	-1.8
VHO	**Vista Hermosa**	**1.06**	**16**	*e*P	Pn	08 08 54.0	-2.0

*SOME **30** 08:10:34.7, 39.27N×72.88E, h5km*

*KRNET **30** 08:10:44.3±0.1, 39.26N×73.35E, mb3.1*

*NNC **30** 08:10:46.5±5.5, 39.35N×73.25E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=44.4km s-min=25.5km az=161.0*

ISC 30 08:10:48.1±2.2, 39.3N±0.1×73.30E±0.05, h10km, n30, σ1§70/45, 20C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**2.04**	**353**	⇑*i*P	**Pn**	**08 11 22.3**	**-0.3**
	baz=52						
ARSB				⇑*i*S	**Sn**	**08 11 49.5**	**+1.3**
	baz=52						
BTK	**Batken**	**2.06**	**292**	⇑*i*P	**Pn**	**08 11 22.9**	**0.0**
	baz=93						
BTK				⇑*i*S	**Sb**	**08 11 50.6**	**-0.8**
	baz=93						
ARLS	**Aral**	**2.67**	**17**	⇑*i*P	**Pn**	**08 11 30.5**	**-0.9**
	baz=16						
ARLS				⇑*i*S	**Sn**	**08 12 04.5**	**+0.6**
	baz=16						
ARK	**Arkit**	**2.70**	**338**	⇑*i*P	**Pn**	**08 11 30.5**	**-1.2**
	baz=38						
ARK				⇑*i*S	**Sn**	**08 12 05.7**	**+1.3**
	baz=38						
UCH	**Uchtor**	**3.07**	**17**	P	**Pn**	**08 11 36.1**	**-0.9**
	SNR=18						
UCH	**Uchtor**	**3.07**	**17**	⇑*i*P	**Pn**	**08 11 36.6**	**-0.5**
	baz=16						
UCH				⇑*i*S	**Sn**	**08 12 14.8**	**+0.8**
	baz=16						
KZA	**Kyzart**	**3.15**	**27**	P	**Pn**	**08 11 36.2**	**-1.9**
	SNR=8.1						
KZA	**Kyzart**	**3.15**	**27**	⇑*i*P	**Pn**	**08 11 37.7**	**-0.4**
	baz=27						
KZA				⇑*i*S	**Sn**	**08 12 16.2**	**+0.3**
	baz=27						
EKS2	**Erkin-Say**	**3.38**	**6**	P	**Pn**	**08 11 41.2**	**+0.1**
	SNR=8.3						
EKS2	**Erkin-Say**	**3.38**	**6**	⇑*i*P	**Pn**	**08 11 40.8**	**-0.2**
	baz=5.0						
EKS2				⇑*i*S	**Sn**	**08 12 22.1**	**+0.8**
	baz=5.0						
MRKS	**Merke**	**3.44**	**359**	Pg	**Pn**	**08 11 45.9**	**+3.9**
	7.7nm,0.3s						
MRKS				Lg	Lg	08 12 27.0	
	9.4n

	7.9nm,1.1s						
KTBS	**Karatobe**	**5.09**	**29**	Pg	**Pb**	**08 12 16.2**	**-1.0**
	3.5nm,0.6s						
KTBS				Lg	Lg	08 13 18.9	
	14nm,0.9s						
KUU	**Kurty**	**5.12**	**25**	Pg	**Pb**	**08 12 18.1**	**+0.3**
	2.5nm,0.5s						
KUU				Lg	Lg	08 13 22.0	
	7.8nm,0.5s						
CHKK	**Chushkaly**	**5.32**	**30**	Pg	**Pb**	**08 12 22.4**	**+1.2**
	1.8nm,0.2s						
CHKK				Lg	Lg	08 13 29.1	
	5.0nm,0.3s						
ARXS	**Arharly**	**5.96**	**33**	Pg	**Pb**	**08 12 32.9**	**+0.8**
	2.0nm,0.3s						
ARXS				Lg	Lg	08 13 47.2	
	5.4nm,0.4s						

*NNC **30** 08:23:19.1±0.4, 45°.87N×80°.64E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=8.6km s-min=2.1km az=132.0*
*SOME **30** 08:23:21.4, 45°.82N×80°.48E, h5km*
ISC 30 08:23:17.9±1.2, 45°.84N±0°.03×80°.61E±0°.03, h4km±12km, n47, σ1°.22/69, 5C-4D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**1.04**	**238**	P	**Pn**	**08 23 39.9**	**+0.6**
	23nm,0.1s						
KAPS				S	**Sn**	**08 23 53.5**	**-0.8**
	55nm,0.1s						
KAPS	**Kapalarasan**	**1.04**	**238**	*e*P	**Pn**	**08 23 39.9**	**+0.6**
	23nm,0.1s						
KAPS				*e*S	**Sn**	**08 23 53.5**	**-0.8**
	55nm,0.1s						
MAKZ	**Makanchi**	**1.36**	**44**	⇓P	**Pg**	**08 23 44.4**	**+0.6**
	7.6nm,0.2s						
MAKZ				⇑S	**Sg**	**08 24 01.2**	**-0.2**
	11nm,0.2s						
MK31	**Makanchi Array**	**1.51**	**50**	P	**Pg**	**08 23 46.8**	**0.0**
	2.3nm,0.2s,baz=228,slow=18,SNR=565						
MK31				⇑S	**Sb**	**08 24 05.9**	**-0.1**
	12nm,0.3s,baz=228,slow=29,SNR=36						
DJR	**Jarkent**	**1.61**	**201**	P	**Pg**	**08 23 50.6**	**+1.8**
	17nm,0.3s						
DJR				S	**Sg**	**08 24 11.6**	**+1.9**
	55nm,0.3s						
DJR	**Jarkent**	**1.61**	**201**	*e*P	**Pg**	**08 23 50.6**	**+1.8**
	17nm,0.3s						
DJR				*e*S	**Sg**	**08 24 11.6**	**+1.9**
	55nm,0.3s						
MNBS	**Baschi**	**2.36**	**222**	Pg	**Pg**	**08 24 02.8**	**-0.2**
	11nm,0.2s						
MNBS				Lg	Lg	08 24 33.2	
	106nm,0.2s						
MNBS	**Baschi**	**2.36**	**222**	*e*P	**Pg**	**08 24 02.8**	**-0.2**
	11nm,0.2s						
MNBS				*e*S	**Sg**	**08 24 33.2**	**-0.4**
	106nm,0.2s						
KTMS	**Ketmen**	**2.40**	**184**	Pg	**Pg**	**08 24 04.4**	**+0.6**
	14nm,0.2s						
KTMS				Lg	Lg	08 24 35.6	
	72nm,0.2s						
KTMS	**Ketmen**	**2.40**	**184**	*e*P	**Pg**	**08 24 04.4**	**+0.6**
	14nm,0.2s						
KTMS				*e*S	**Sg**	**08 24 35.6**	**+0.7**
	72nm,0.2s						
ARXS	**Arharly**	**2.56**	**232**	Pg	**Pg**	**08 24 07.2**	**+0.4**
	7.5nm,0.2s						
ARXS				Lg	Lg	08 24 40.1	
	86nm,0.3s						
ARXS	**Arharly**	**2.56**	**232**	*e*P	**Pg**	**08 24 07.2**	**+0.4**
	7.5nm,0.2s						
ARXS				*e*S	**Sg**	**08 24 40.1**	**+0.1**
	86nm,0.3s						
PDGK	**Podgornoye**	**2.63**	**198**	Pg	**Pg**	**08 24 08.8**	**+0.5**
	2.4nm,0.2s						
PDGK				Lg	Lg	08 24 42.8	
	102nm,0.3s						
PDGK	**Podgornoye**	**2.63**	**198**	⇑Pg	**Pg**	**08 24 08.5**	**+0.2**
	3.4nm,0.4s						
PDGK				⇓Lg	Lg	08 24 43.1	
	120nm,0.4s						
KPKS	**Kokpek**	**2.74**	**211**	*e*P	**Pg**	**08 24 10.8**	**+0.4**
	15nm,0.1s						
KPKS				*e*S	**Sg**	**08 24 46.2**	**+0.3**
	270nm,0.4s						
UZB	**Uzynbulak**	**2.92**	**203**	Pg	**Pg**	**08 24 13.3**	**-0.5**
	3.4nm,0.2s						
UZB				Lg	Lg	08 24 50.8	
	76nm,0.3s						
UZB	**Uzynbulak**	**2.92**	**203**	*e*P	**Pg**	**08 24 13.3**	**-0.5**
	3.4nm,0.2s						
UZB				*e*S	**Sg**	**08 24 50.8**	**-0.8**
	76nm,0.3s						
KURS	**Kuram**	**2.92**	**217**	Pg	**Pg**	**08 24 14.0**	**+0.2**
	5.9nm,0.3s						
KURS				Lg	Lg	08 24 51.8	
	58nm,0.6s						
KURS	**Kuram**	**2.92**	**217**	*e*P	**Pg**	**08 24 14.0**	**+0.2**
	5.9nm,0.3s						
KURS				*e*S	**Sg**	**08 24 51.8**	**+0.1**
	58nm,0.6s						
ZHN	**Zhinishke**	**3.09**	**211**	Pg	**Pg**	**08 24 16.8**	**-0.2**
	6.4nm,0.1s						
ZHN				Lg	Lg	08 24 56.8	
	89nm,0.2s						
ZHN	**Zhinishke**	**3.09**	**211**	*e*P	**Pg**	**08 24 16.8**	**-0.2**
	6.4nm,0.1s						
ZHN				*e*S	**Sg**	**08 24 56.8**	**-0.3**
	89nm,0.2s						
SATY	**Saty**	**3.19**	**210**	Pg	**Pg**	**08 24 19.3**	**+0.2**
	5.2nm,0.1s						
SATY				Lg	Lg	08 25 00.9	
	204nm,0.2s						
SATY	**Saty**	**3.19**	**210**	*e*P	**Pg**	**08 24 19.3**	**+0.2**
	5.2nm,0.1s						
SATY				*e*S	**Sg**	**08 25 00.9**	**+0.4**
	204nm,0.2s						
CHKK	**Chushkaly**	**3.25**	**234**	Pg	**Pg**	**08 24 19.5**	**-0.7**
	7.0nm,0.3s						
CHKK				Lg	Lg	08 25 01.1	
	44nm,0.2s						
CHKK	**Chushkaly**	**3.25**	**234**	*e*P	**Pg**	**08 24 19.4**	**-0.7**
	7.0nm,0.3s						
CHKK				*e*S	**Sg**	**08 25 01.1**	**-1.2**
	44nm,0.2s						
ZSN	**Zaisan**	**3.35**	**60**	Pg	**Pg**	**08 24 19.9**	**-2.1**
	1.2nm,0.3s						
ZSN	**Zaisan**	**3.35**	**60**	*e*P	**Pg**	**08 24 19.9**	**-2.1**
	1.2nm,0.3s						
ZSN				*e*S	**Sg**	**08 25 02.0**	**-3.3**
	7.7nm,0.3s						
KTBS	**Karatobe**	**3.51**	**234**	Pg	**Pg**	**08 24 24.6**	**-0.6**
	7.5nm,0.2s						
KTBS				Lg	Lg	08 25 09.9	
	23nm,0.4s						
KTBS	**Karatobe**	**3.51**	**234**	*e*P	**Pg**	**08 24 24.6**	**-0.6**
	7.5nm,0.2s						
KTBS				*e*S	**Sg**	**08 25 09.9**	**-0.7**
	23nm,0.4s						
KUU	**Kurty**	**3.60**	**239**	Pg	**Pg**	**08 24 25.3**	**-1.7**
	7.0nm,0.2s						
KUU				Lg	Lg	08 25 11.0	
	22nm,0.3s						
KUU	**Kurty**	**3.60**	**239**	*e*P	**Pg**	**08 24 25.2**	**-1.7**
	7.0nm,0.2s						
KUU				*e*S	**Sg**	**08 25 11.0**	**-2.6**
	22nm,0.3s						
KOTS	**Kotyrbulak**	**3.61**	**225**	Pg	**Pg**	**08 24 26.7**	**-0.3**
	3.5nm,0.3s						
KOTS				Lg	Lg	08 25 13.5	
	33nm,0.5s						
KOTS	**Kotyrbulak**	**3.61**	**225**	*e*P	**Pg**	**08 24 26.7**	**-0.3**
	3.5nm,0.3s						
KOTS				*e*S	**Sg**	**08 25 13.5**	**-0.3**
	33nm,0.5s						
MDOK	**Medeo**	**3.69**	**225**	Pg	**Pg**	**08 24 27.8**	**-0.9**
	5.1nm,0.4s						
MDOK				Lg	Lg	08 25 15.3	
	19nm,0.4s						
MDOK	**Medeo**	**3.69**	**225**	*e*P	**Pg**	**08 24 27.8**	**-0.9**
	5.1nm,0.4s						
MDOK				*e*S	**Sg**	**08 25 15.3**	**-1.1**
	19nm,0.4s						
TNSS	**Tian-Shan**	**3.84**	**224**	Pg	**Pg**	**08 24 29.6**	**-1.8**
	4.9nm,0.3s						
TNSS				Lg	Lg	08 25 18.7	
	37nm,0.3s						
TNSS	**Tian-Shan**	**3.84**	**224**	*e*P	**Pg**	**08 24 29.6**	**-1.8**
	4.9nm,0.3s						
TNSS				*e*S	**Sg**	**08 25 18.7**	**-2.4**
	37nm,0.3s						
MTBS	**Maitube**	**4.03**	**229**	Pg	**Pg**	**08 24 34.0**	**-1.2**
	4.7nm,0.1s						
MTBS				Lg	Lg	08 25 26.0	
	26nm,0.3s						
MTBS	**Maitube**	**4.03**	**229**	*e*P	**Pg**	**08 24 34.0**	**-1.2**
	4.7nm,0.1s						
MTBS				*e*S	**Sg**	**08 25 26.0**	**-1.5**
	26nm,0.3s						
KST	**Kastek**	**4.34**	**232**	Pg	**Pg**	**08 24 40.9**	**-0.1**
	6.9nm,0.5s						
KST	**Kastek**	**4.34**	**232**	*e*P	**Pg**	**08 24 41.0**	**-0.1**
	6.9nm,0.5s						
KST				*e*S	**Sg**	**08 25 37.9**	**+0.6**
	18nm,0.5s						
SEM	**Semipalatinsk**	**4.58**	**357**	Pg	**Pg**	**08 24 47.0**	**+1.4**
	7.7nm,0.1s						
SEM	**Semipalatinsk**	**4.58**	**357**	*e*P	**Pg**	**08 24 47.0**	**+1.4**
	7.7nm,0.1s						
SEM				*e*S	**Sg**	**08 25 48.3**	**+3.5**
	6.6nm,0.1s						
TKM2	**Tokmak 2**	**4.63**	**233**	⇓Lg	Lg	08 25 46.0	
	6.8nm,0.6s						
KURBB	**Kurchatov Arra**	**4.99**	**345**	⇓Lg	Lg	08 25 57.1	
	19nm,0.7s						
OTUK	**Ortayu**	**6.14**	**296**	Pg	**Pg**	**08 25 13.8**	**-1.7**
	0.6nm,0.2s						
OTUK	**Ortayu**	**6.14**	**296**	⇑Pn	**Pn**	**08 24 51.2**	**+1.8**
	0.8nm,0.4s						
OTUK				⇑Lg	Lg	08 26 34.0	
	11nm,0.7s						

IDC 30 09:06:29.3±4.9, 6°.66S×129°.11E, h184km±51km, mb3.5/4, mb1 3.7/6, mb1mx3.4/20, mbtmp4.1/6, Error ellipse: s-maj=37.5km s-min=16.2km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.14**	**159**	P	Pn	09 09 42.1	+0.4
	0.7nm,0.3s,baz=334,slow=13,SNR=22						
WRA				S	Sn	09 12 15.6	-3.9
	1.6nm,0.3s,baz=325,slow=23,SNR=10						
ASAR	**Alice Springs**	**17.52**	**165**	P	Pn	09 10 22.5	-0.2
	1.0nm,0.3s,baz=337,slow=9.1,SNR=50						
ASAR				S	S	09 13 34.0	+0.1
	0.2nm,0.3s,baz=346,slow=22,SNR=3.9						
CMAR	**Chiang Mai Arr**	**38.84**	**310**	P	P	09 13 36.8	-0.1
	0.8nm,0.3s,baz=128,slow=7.1,SNR=4.8						
MJAR	**Matsushiro Arr**	**43.81**	**11**	P	P	09 14 16.2	-0.9
	1.2nm,0.7s,baz=191,slow=10,SNR=6.6						
PETK	**Petropavlovsk-**	**64.28**	**19**	P	P	09 16 45.5	+0.6
	2.5nm,0.7s,baz=180,slow=4.0,SNR=6.2						
MKAR	**Makanchi Array**	**67.47**	**327**	P	P	09 17 05.2	-0.1
	0.4nm,0.4s,baz=120,slow=9.6,SNR=6.5						

RSNC 30 09:17:16.6±1.1, 3°.80N×71°.53W, h4km±12km, ML2.8, Mw3.5, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUVC	**San Jose del G**	**1.66**	**222**	*e*P	Pn	09 17 44.5	-2.0
GUVC				*e*Sg	Sn	09 18 07.7	-0.6
GUVC				*i*		09 18 14.5	
	comp=Z,118nm,0.3s						
YOPC	**Yopal, Colombi**	**1.79**	**330**	*e*P	Pn	09 17 46.4	-2.0
YOPC				*e*S	Sn	09 18 11.3	-0.3
YOPC				*i*		09 18 15.0	
	comp=Z,133nm,0.3s						
VILC	**Villavicencio,**	**2.19**	**278**	*e*Pg	Pn	09 17 54.9	+1.0
VILC				*e*Sg	Sn	09 18 22.0	+0.6
VILC				*i*		09 18 40.8	
	comp=Z,78nm,0.3s						
CHIC	**Chingaza**	**2.35**	**291**	*e*S	Sn	09 18 25.6	-0.3
CHIC				*i*		09 18 33.8	
	comp=Z,19nm,0.4s						
RUSC	**La Rusia**	**2.60**	**323**	*e*P	Pn	09 17 58.2	-1.7
TAMC	**Tame, Arauca**	**2.63**	**354**	*e*S	Sn	09 18 31.1	-1.3
TAMC				*i*		09 18 35.8	
	comp=Z,35nm,0.5s						
MACC	**Macarena, Meta**	**2.84**	**235**	*e*Pg	Pb	09 18 05.8	-2.1
MACC				*e*Sg	Sb	09 18 43.4	+0.3
MACC				*i*		09 18 49.4	
	comp=Z,31nm,0.3s						
FLOC	**Florencia**	**4.67**	**242**	*e*Pg	Pb	09 18 35.3	-3.8
FLOC				*e*Sg	Sb	09 19 38.3	+2.4
FLOC				*i*		09 19 45.6	
	comp=Z,17nm,0.6s						

*IDC **30** 09:23:58.2±0.6, 20°.71S×176°.10W, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.1/35, mbtmp4.2/13, ML4.0/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/27, Error ellipse: s-maj=29.8km s-min=17.3km az=139.0*
*ISCJB **30** 09:24:10.7±0.4, 20°.82S±0°.09×176°.26W±0°.08, h100km, mb4.2/24, Error ellipse: s-maj=15.0km s-min=8.1km az=146.3*
*NEIC **30** 09:24:13.2±2.3, 20°.67S×176°.12W, h120km±6km, mb4.5/15, Error ellipse: s-maj=23.3km s-min=18.2km az=149.0*
ISC 30 09:24:12.3±0.5, 20°.9S±0°.1×176°.16W±0°.09, h100km, n64, σ1°.84/63, mb4.2/24, 4C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.14**	**74**	*e*Pn	**Pn**	**09 25 40.5**	**0.0**
MARNC	**Mare, Loyalty**	**14.76**	**265**	*e*P	**P**	**09 27 40.2**	**+0.8**
RAR	**Rarotonga**	**15.30**	**94**	LR	LR	09 32 55.2	
	comp=Z,39nm,19.2s,baz=274,slow=35						
DZM	**Mont Dzumac**	**16.23**	**263**	Pn	**Pn**	**09 27 56.0**	**+1.4**
	0.4nm,0.3s,baz=86,slow=18,SNR=5.6						
DZM				LR	LR	09 32 54.5	
	comp=Z,193nm,20.8s,baz=199,slow=33						
DZM	**Mont Dzumac**	**16.23**	**263**	*e*LR	LR	09 31 42.6	
	comp=Z,269nm,22.6s						
DZM	**Mont Dzumac**	**16.23**	**263**	*e*Pn	**Pn**	**09 27 56.7**	**+2.0**
	20nm,0.9s						
OUZ	**Omahuta**	**16.87**	**210**	*e*P	**Pn**	**09 28 02.9**	**+0.7**
	13nm,1.2s						
URZ	**Urewera**	**18.25**	**197**	P	**P**	**09 28 14.2**	**-3.6**
	0.5nm,0.3s,baz=355,slow=11,SNR=4.1						
URZ				LR	LR	09 34 28.2	
	comp=Z,190nm,21.4s,baz=11,slow=34						
THZ	**Tophouse**	**22.75**	**202**	*e*P	**P**	**09 29 06.0**	**-0.2**
	32nm,1.3s						
PPT2	**Papeete2**	**25.30**	**87**	*e*LR	LR	09 35 27.3	
	comp=Z,131nm,28.5s,baz=277						
PPT	**Papeete**	**25.31**	**87**	LR	LR	09 36 45.0	
	comp=Z,33nm,19.1s,baz=310,slow=30						
FOZ	**Fox Glacier**	**25.42**	**204**	*e*P	**P**	**09 29 31.6**	**+1.1**
	38nm,1.4s						
ARMA	**Armidale**	**30.45**	**245**	*e*P	**P**	**09 30 16.7**	**+1.0**
	11nm,1.0s						
CAN	**Canberra**	**33.73**	**237**	*e*P	**P**	**09 30 43.7**	**-0.6**
	5.2nm,0.9s						
CTA	**Charters Tower**	**35.16**	**265**	P	**P**	**09 30 56.1**	**-0.7**
	8.9nm,0.9s,baz=83,slow=13,SNR=6.6						
CTAO	**Charters Tower**	**35.16**	**265**	*e*P	**P**	**09 30 56.4**	**-0.5**
	16nm,1.0s						
STKA	**Stephens Creek**	**39.17**	**245**	P	**P**	**09 31 29.1**	**-1.5**
	2.6nm,0.9s,baz=90,slow=12,SNR=3.4						
STKA				LR	LR	09 46 25.8	
	comp=Z,67nm,18.7s,baz=194,slow=34						
STKA	**Stephens Creek**	**39.17**	**245**	*e*P	**P**	**09 31 30.3**	**-0.2**
	2.3nm,1.5s						
COEN	**Coen**	**39.33**	**273**	*e*P	**P**	**09 31 31.1**	**-0.9**
	10nm,0.9s						
AS31	**Alice Springs**	**46.10**	**257**	*e*P	**P**	**09 32 26.9**	**+0.1**
	1.1nm,0.8s						
ASAR	**Alice Springs**	**46.10**	**257**	P	**P**	**09 32 25.2**	**-1.6**
	2.4nm,0.6s,baz=93,slow=8.5,SNR=18						
WB2	**Warramunga Arr**	**46.24**	**262**	*e*P	**P**	**09 32 26.3**	**-1.6**
	12nm,1.1s						
WR1	**Warramunga Arr**	**46.25**	**262**	*e*P	**P**	**09 32 26.2**	**-1.7**
WRA	**Warramunga Arr**	**46.25**	**262**	P	**P**	**09 32 26.2**	**-1.7**
	6.7nm,0.8s,baz=83,slow=7.8,SNR=10						
FORT	**Forrest**	**50.72**	**247**	*e*P	**P**	**09 33 00.3**	**-1.8**
	15nm,0.8s						
VNDA	**Vanda**	**57.67**	**186**	P	**P**	**09 33 52.3**	**+0.5**
	1.2nm,0.8s,baz=356,slow=5.4,SNR=8.8						
VNDA	**Vanda**	**57.67**	**186**	*e*P	**P**	**09 33 53.8**	**+2.1**
QSPA	**South Pole Qui**	**69.17**	**180**	*e*P	**P**	**09 35 08.1**	**+0.2**
	6.1nm,0.8s						
PETK	**Petropavlovsk-**	**77.11**	**344**	LR	LR	10 06 42.3	
	comp=Z,30nm,19.9s,baz=133,slow=33						
KSRS	**Korea Array**	**78.34**	**318**	LR	LR	10 06 02.4	
	comp=Z,36nm,18.6s,baz=206,slow=32						
YBH	**Yreka Blue Hor**	**79.54**	**38**	P	**P**	**09 36 10.8**	**+2.5**
	1.9nm,1.0s,baz=156,slow=3.8,SNR=3.8						
NV01	**Mina Array Sit**	**80.15**	**42**	*e*P	**P**	**09 36 09.6**	**-2.2**
NVAR	**Mina Array Bea**	**80.15**	**42**	P	**P**	**09 36 09.6**	**-2.2**
	2.5nm,0.8s,baz=224,slow=7.6,SNR=5.5						
MAW	**Mawson**	**81.76**	**199**	P	**P**	**09 36 19.5**	**-0.1**
	2.9nm,0.8s,baz=153,slow=5.1,SNR=7.3						
MAW	**Mawson**	**81.76**	**199**	*e*P	**P**	**09 36 19.8**	**+0.1**
	0.8nm,0.9s						
TXAR	**Lajitas Array**	**85.83**	**57**	P	**P**	**09 36 39.4**	**-1.8**
	0.8nm,1.1s,baz=213,slow=9.7,SNR=3.0						
ANMO	**Albuquerque**	**86.32**	**51**	P	**P**	**09 36 46.0**	**+2.4**
	1.2nm,0.8s,baz=232,slow=2.9,SNR=5.9						
PDAR	**Pinedale Array**	**88.09**	**43**	P	**P**	**09 36 50.8**	**-1.2**
	0.4nm,0.7s,baz=255,slow=5.5,SNR=3.9						
ILAR	**Eielson Array**	**88.34**	**12**	P	**P**	**09 36 52.3**	**0.0**
	0.8nm,0.6s,baz=217,slow=5.8,SNR=8.3						
CMAR	**Chiang Mai Arr**	**91.87**	**289**	P	**P**	**09 37 08.8**	**-1.1**
	0.6nm,0.4s,baz=143,slow=2.7,SNR=4.5						
INK	**Inuvik**	**94.22**	**15**	P	**P**	**09 37 19.4**	**-0.1**
	1.8nm,0.8s,baz=188,slow=7.5,SNR=3.7						
YKA	**Yellowknife Ar**	**96.17**	**24**	P	**P**	**09 37 30.2**	**+1.7**
	0.3nm,0.7s,baz=212,slow=4.4,SNR=3.2						
YKB5	**Yellowknife Ar**	**96.17**	**24**	*e*P	**P**	**09 37 30.2**	**+1.7**
HYB	**Hyderabad**	**109.93**	**282**	*e*P	**PKiKP**	**09 42 40.0**	**+7.2**
KURBB	**Kurchatov Arra**	**115.51**	**317**	PKP	**PKiKP**	**09 42 40.0**	**-2.3**
	0.4nm,0.7s,baz=94,slow=2.2,SNR=5.9						
BVAR	**Borovoye Array**	**120.50**	**320**	PKP	**PKPdf**	**09 42 49.3**	**-2.6**
	0.7nm,0.8s,baz=77,slow=3.1,SNR=4.4						
ARA0	**ARCESS Array S**	**129.62**	**350**	*e*PKPdf	**PKPdf**	**09 43 05.8**	**-3.1**
ARCES	**ARCESS Array B**	**129.62**	**350**	PKP	**PKPdf**	**09 43 05.8**	**-3.1**
	0.4nm,0.5s,baz=180,slow=0.8,SNR=5.4						
BR101	**Keskin Array S**	**148.38**	**313**	*e*PKPbc	**PKPdf**	**09 43 44.5**	**+0.6**
BRTR	**Keskin Array B**	**148.38**	**313**	PKPbc	**PKPdf**	**09 43 44.5**	**+0.6**
	1.0nm,0.8s,baz=160,slow=6.8,SNR=5.1						
CLL	**Collm**	**148.82**	**349**	*e*PKPbc	**PKPdf**	**09 43 44.9**	**+0.8**
CLL	**Collm**	**148.82**	**349**	*e*PKPbc	**PKPdf**	**09 43 45.0**	**+0.9**
	comp=Z,6.0nm,1.1s						
CLL				*i* PKPab	**PKiKP**	**09 43 50.4**	**+1.0**
	comp=Z,7.0nm,1.0s						
OSTC	**Ostas**	**148.84**	**345**	⇑*e*PKP	**PKPbc**	**09 43 47.5**	**-0.7**
OSTC				*e*PKPAB	**PKPab**	**09 43 52.3**	**0.0**
DPC	**Dobruska-Polom**	**149.00**	**344**	⇑*e*PKP	**PKPdf**	**09 43 46.9**	**+2.4**
DPC				*e*PKPAB	**PKPab**	**09 43 52.3**	**-0.7**
BRG	**Berggiesshubel**	**149.05**	**348**	*i* PKP	**PKPab**	**09 43 51.8**	**-1.3**
	comp=Z,6.5nm,0.9s						
MORC	**Moravsky Berou**	**149.20**	**343**	*e*PKP	**PKPbc**	**09 43 47.8**	**-1.3**
PRU	**Pruhonice**	**149.76**	**346**	⇑*e*PKP	**PKPbc**	**09 43 48.9**	**-1.5**
PRU				*e*PKPAB	**PKPab**	**09 43 54.0**	**-2.0**
VRAC	**Vranov**	**149.89**	**343**	*e*PKP	**PKPbc**	**09 43 49.6**	**-1.2**
JAVC	**Velka Javorina**	**149.99**	**342**	*e*PKP	**PKPbc**	**09 43 51.0**	**-0.1**
KRUC	**Moravsky**	**150.17**	**343**	*e*PKP	**PKPbc**	**09 43 50.1**	**-1.3**
KHC	**Kasperske Hory**	**150.78**	**347**	*e*PKPbc	**PKPbc**	**09 43 51.9**	**-1.1**
KHC	**Kasperske Hory**	**150.78**	**347**	⇑*e*PKP	**PKPbc**	**09 43 51.4**	**-1.6**
KHC				*e*PKPAB	**PKiKP**	**09 43 56.6**	**+3.0**
GEC2	**GERESS Array S**	**151.03**	**346**	*e*PKPbc	**PKPbc**	**09 43 52.1**	**-1.5**
GERES	**GERESS Array B**	**151.03**	**346**	PKPbc	**PKPbc**	**09 43 51.7**	**-1.9**
	comp=Z,1.3nm,0.8s,baz=45,slow=0.9,SNR=9.2						

*TIR **30** 09:29:05.3, 40°.07N×19°.86E, h24km, Md2.9/5*
*ATH **30** 09:29:07.6, 40°.07N×19°.90E, h10km±1km, ML2.7/7, Error ellipse: s-maj=1.4km s-min=0.7km az=208.0*
*THE **30** 09:29:07.5, 40°.08N×19°.87E, h0km±2km, ML2.9/8, Error ellipse: s-maj=3.0km s-min=1.0km az=299.0*
ISC 30 09:29:07.4±1.1, 40°.07N±0°.02×19°.86E±0°.03, h1km±10km, n36, σ0°.83/55, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.21**	**150**	P	**Pg**	**09 29 11.2**	**-0.3**
SRN				S	**Sg**	**09 29 15.4**	**+1.1**
SRN	**Sarande**	**0.21**	**150**	*i* PG	**Pg**	**09 29 11.3**	**-0.2**
SRN				*i* SG	**Sg**	**09 29 14.5**	**+0.3**
TPE	**Tepelena**	**0.26**	**26**	P	**Pg**	**09 29 11.9**	**-0.5**
TPE				S	**Sg**	**09 29 15.8**	**+0.1**
TPE	**Tepelena**	**0.26**	**26**	*i* PG	**Pg**	**09 29 12.1**	**-0.2**
TPE				*i* SG	**Sg**	**09 29 16.1**	**+0.4**
KEK	**Kerkira**	**0.35**	**188**	P	**Pg**	**09 29 14.4**	**+0.1**
KEK				S	**Sb**	**09 29 21.0**	**-1.6**
KEK	**Kerkira**	**0.35**	**188**	P	**Pg**	**09 29 14.3**	**+0.1**
KEK				S	**Sg**	**09 29 20.3**	**+1.5**
KEK				AML	AML	09 29 21.4	
	comp=E,5876μm,0.5s						
KEK				AML	AML	09 29 24.7	
	comp=N,2624μm,0.5s						
IGT	**Igoumenitsa**	**0.64**	**146**	P	**Pg**	**09 29 19.3**	**-0.5**
IGT				S	**Sg**	**09 29 29.3**	**+1.2**
IGT	**Igoumenitsa**	**0.64**	**146**	*i* PG	**Pg**	**09 29 19.5**	**-0.2**
IGT				*i* SG	**Sg**	**09 29 29.1**	**+1.0**
IGT	**Igoumenitsa**	**0.64**	**146**	P	**Pg**	**09 29 19.2**	**-0.6**
IGT				S	**Sg**	**09 29 29.2**	**+1.2**
IGT				AML	AML	09 29 33.2	
	comp=N,1561μm,0.3s						
IGT				AML	AML	09 29 34.0	
	comp=E,1655μm,0.3s						
JAN	**Janina**	**0.86**	**118**	P	**Pg**	**09 29 23.4**	**-0.5**
JAN				S	**Sb**	**09 29 36.6**	**-0.7**
JAN	**Janina**	**0.86**	**118**	P	**Pg**	**09 29 23.5**	**-0.5**
JAN				S	**Sg**	**09 29 35.9**	**+0.7**
JAN				AML	AML	09 29 39.8	
	comp=E,2520μm,0.4s						
JAN				AML	AML	09 29 41.6	
	comp=N,2167μm,0.3s						
PENT	**Pentalofos**	**0.99**	**82**	P	**Pg**	**09 29 25.5**	**-0.9**
SCTE	**

az=151.9
*IDC **30** 09:29:45.3±3.6, 55°.18N×165°.54W, h155km±32km, mb3.2/7, mb1 3.3/10, mb1mx3.0/58, mbtmp3.7/10, Error ellipse: s-maj=35.9km s-min=16.3km az=5.0*
*NEIC **30** 09:29:46.4±0.0, 54°.68N×165°.37W, h184km, mb3.8/10, ML3.5(AEIC), After AEIC.*
ISC 30 09:29:45.6±0.7, 55°.1N±0°.1×165°.53W±0°.08, h170km±11km, n53, σ1§66/62, mb3.6/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEBT	**Westdahl Beart**	**0.65**	**135**	*e*Pn	**Pn**	**09 30 10.4**	**+0.5**
WESP	**Westdahl Peak**	**0.73**	**140**	*e*Pn	**Pn**	**09 30 10.8**	**+0.2**
WESP				*e*Sn	**Sn**	**09 30 29.8**	**+0.1**
AKSA	**Akutan Strait**	**0.93**	**186**	*e*Pn	**Pn**	**09 30 11.3**	**-0.4**
AKSA				*e*Sn	**Sn**	**09 30 30.9**	**-0.9**
AKUT	**Akutan**	**0.93**	**189**	*e*Pn	**Pn**	**09 30 11.1**	**-0.6**
AKUT				*e*Sn	**Sn**	**09 30 30.4**	**-1.4**
AKRB	**Akutan Reef Bi**	**0.98**	**199**	*e*Pn	**Pn**	**09 30 11.6**	**-0.5**
AKRB				*e*Sn	**Sn**	**09 30 31.6**	**-0.9**
FALS	**False Pass**	**1.24**	**98**	*e*Pn	**Pn**	**09 30 14.6**	**+0.5**
FALS				*e*Sn	**Sn**	**09 30 37.4**	**+1.2**
UNV	**Unalaska Valle**	**1.33**	**205**	*e*Pn	**Pn**	**09 30 14.2**	**-0.9**
UNV				*e*Sn	**Sn**	**09 30 35.7**	**-2.1**
MSW	**Makushin Switc**	**1.35**	**213**	*e*Pn	**Pn**	**09 30 14.6**	**-0.7**
MSW				*e*Sn	**Sn**	**09 30 36.3**	**-1.9**
MREP	**Makushin Rep't**	**1.43**	**210**	*e*Pn	**Pn**	**09 30 15.4**	**-0.7**
DOL	**Dolgoi Island**	**2.11**	**86**	*e*Pn	**Pn**	**09 30 23.5**	**+0.3**
OKER	**Okmok East Rim**	**2.18**	**224**	*e*Pn	**Pn**	**09 30 23.2**	**-0.8**
OKAK	**Okmok**	**2.22**	**229**	*e*Pn	**Pn**	**09 30 25.2**	**+0.8**
OKTU	**Okmok Mt. Tuli**	**2.23**	**222**	*e*Pn	**Pn**	**09 30 23.6**	**-0.9**
NIKH	**Nikolski High**	**2.86**	**225**	*e*Pn	**Pn**	**09 30 30.7**	**-1.3**
NIKH				*e*Sn	**Sn**	**09 31 06.3**	**-1.7**
SDPT	**Sand Point**	**2.91**	**82**	*e*Pn	**Pn**	**09 30 33.4**	**+0.8**
CHGN	**Chignik**	**4.22**	**70**	*e*Pn	**Pn**	**09 30 49.5**	**+0.5**
CHIA	**Chirikof Islan**	**5.72**	**78**	*e*Pn	**Pn**	**09 31 07.1**	**-1.5**
SII	**Sitkinak Islan**	**6.58**	**72**	*e*Pn	**Pn**	**09 31 18.3**	**-1.6**
OHAK	**Old Harbor**	**7.18**	**67**	*e*Pn	**Pn**	**09 31 26.1**	**-1.8**
KDAK	**Kodiak Island**	**7.69**	**64**	P	**Pn**	**09 31 33.0**	**-1.5**
KDAK	3.4nm,0.3s,baz=171,slow=3.6,SNR=47			S	**Sn**	**09 32 53.7**	**-6.8**
	1.5nm,0.3s,baz=277,slow=23,SNR=6.8						
KDAK	**Kodiak Island**	**7.69**	**64**	*e*Pn	**Pn**	**09 31 33.2**	**-1.3**
HOM	**Homer**	**8.81**	**53**	*e*Pn	**Pn**	**09 31 50.9**	**+1.6**
BRLK	**Bradley Lake**	**9.20**	**53**	*e*Pn	**Pn**	**09 31 53.8**	**-0.7**
SEW	**Seward**	**10.00**	**53**	*e*Pn	**Pn**	**09 32 04.7**	**-0.2**
RC01	**Rabbit Creek A**	**10.31**	**48**	*e*Pn	**Pn**	**09 32 10.2**	**+1.2**
SML	**Sawmill**	**11.25**	**46**	*e*Pn	**Pn**	**09 32 22.1**	**+0.8**
KTH	**Kantishna Hill**	**11.30**	**35**	*e*Pn	**P**	**09 32 26.2**	**-2.9**
GLI	**Glacier Island**	**11.38**	**52**	*e*Pn	**Pn**	**09 32 21.7**	**-1.2**
TRF	**Thorofare Moun**	**11.45**	**37**	*e*Pn	**P**	**09 32 28.8**	**-2.1**
BPAW	**Bear Paw Mtn.**	**11.66**	**33**	*e*Pn	**Pn**	**09 32 29.3**	**+2.8**
SCM	**Sheep Creek Mo**	**11.68**	**47**	*e*Pn	**Pn**	**09 32 27.0**	**+0.1**
HMT	**Hamilton**	**12.52**	**56**	*e*Pn	**Pn**	**09 32 37.3**	**-0.4**
ILAR	**Eielson Array**	**13.44**	**36**	P	**Pn**	**09 32 49.8**	**+0.5**
	0.1nm,0.3s,baz=227,slow=12,SNR=5.4						
BALM	**Baldy**	**13.62**	**55**	*e*Pn	**Pn**	**09 32 52.3**	**+0.6**
BCPM	**Bancas Point**	**14.71**	**60**	*e*Pn	**Pn**	**09 33 00.5**	**-4.6**
FYU	**Fort Yukon**	**15.11**	**32**	*e*Pn	**P**	**09 33 12.4**	**+1.3**
	3.5nm,0.9s						
EGAK	**Eagle**	**15.52**	**41**	*e*Pn	**P**	**09 33 16.6**	**+0.9**
	1.8nm,0.8s						
DAWY	**Dawson**	**15.91**	**45**	*e*P	**P**	**09 33 21.3**	**+1.1**
	1.3nm,0.7s						
SKAG	**Skagway**	**16.84**	**62**	*e*P	**Pn**	**09 33 33.2**	**+2.2**
	6.3nm,1.1s						
WHY	**Whitehorse**	**17.14**	**58**	*e*P	**Pn**	**09 33 37.3**	**+2.5**
	3.5nm,0.8s						
JIS	**Juneau Island**	**17.34**	**67**	*e*P	**Pn**	**09 33 39.4**	**+2.4**
	5.5nm,0.6s						
EPYK	**Eagle Plains**	**17.88**	**39**	*e*P	**Pn**	**09 33 43.0**	**-0.4**
	4.4nm,0.8s						
DLBC	**Dease Lake**	**19.61**	**66**	*e*P	**Pn**	**09 34 04.2**	**+0.3**
	1.6nm,0.6s						
INK	**Inuvik**	**19.84**	**35**	P	**P**	**09 34 03.0**	**+0.1**
	0.3nm,0.3s,baz=252,slow=8.9,SNR=15						
INK	**Inuvik**	**19.84**	**35**	*e*P	**P**	**09 34 04.1**	**+1.3**
	8.0nm,1.4s						
PEA0B	**Petropavlovsk-**	**21.50**	**280**	*e*P	**P**	**09 34 21.6**	**+0.9**
	25nm,1.5s						
PETK	**Petropavlovsk-**	**21.50**	**280**	P	**P**	**09 34 21.1**	**+0.4**
	2.9nm,0.5s,baz=81,slow=13,SNR=13						
YKA	**Yellowknife Ar**	**26.78**	**53**	P	**P**	**09 35 08.5**	**-0.6**
	0.1nm,0.4s,baz=273,slow=8.7,SNR=4.1						
TIXI	**Tiksi**	**31.67**	**327**	P	**P**	**09 35 53.1**	**+0.8**
	1.6nm,0.4s,baz=113,slow=7.7,SNR=5.0						
TXAR	**Lajitas Array**	**50.54**	**94**	P	**P**	**09 38 28.4**	**+1.9**
	0.1nm,0.3s,baz=314,slow=6.9,SNR=2.8						
BVAR	**Borovoye Array**	**62.80**	**326**	P	**P**	**09 39 53.4**	**+0.9**
	0.4nm,0.7s,baz=60,slow=3.5,SNR=3.2						
FINES	**FINESS Array B**	**63.48**	**354**	P	**P**	**09 39 57.2**	**+0.4**
	0.8nm,0.7s,baz=132,slow=31,SNR=3.9						
MKAR	**Makanchi Array**	**63.57**	**315**	P	**P**	**09 39 57.6**	**0.0**
	0.3nm,0.6s,baz=53,slow=10.0,SNR=3.7						

*ISK **30** 09:38:27.7, 38°.61N×43°.17E, h30km, ML1.8/3*
*ISCJB **30** 09:38:28.5±1.0, 38°.65N±0°.04×43°.12E±0°.06, h28km±9km, Error ellipse: s-maj=7.5km s-min=6.7km az=32.8*
*DDA **30** 09:38:28.6, 38°.68N×43°.12E, h7km±2km, ML2.9*
ISC 30 09:38:28.2±1.7, 38°.67N±0°.04×43°.10E±0°.04, h17km±15km, n9, σ0§59/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.24**	**109**	PG	**Pb**	**09 38 34.6**	**+0.4**
VANB				SG	**Sb**	**09 38 39.3**	**+1.1**
TVAN	**Van**	**0.28**	**121**	*i* P	**Pb**	**09 38 34.9**	**-0.1**
TVAN				*i* S	**Sb**	**09 38 39.5**	**+0.1**
TVAN				IAML_P			
	comp=Z,5μm,0.1s						
ADCV	**BITLIS_Adilcev**	**0.32**	**295**	*i* P	**Pb**	**09 38 36.1**	**+0.5**
ADCV				*i* S	**Sb**	**09 38 41.6**	**+0.9**
ADCV				IAML_P			
	comp=Z,2μm,0.1s						
AKDM	**Akdamar-Van**	**0.36**	**195**	PG	**Pb**	**09 38 35.8**	**-0.4**
GEVA	**Gevas**	**0.36**	**185**	*i* P	**Pb**	**09 38 36.6**	**+0.4**
GEVA				*i* S	**Sb**	**09 38 42.4**	**+0.7**
GEVA				IAML_P			
	comp=Z,3μm,0.2s						
VMUR	**Van-Muradiye**	**0.49**	**49**	*i* P	**Pb**	**09 38 38.8**	**+0.4**
VMUR				*i* S	**Sb**	**09 38 45.2**	**-0.2**
VMUR				IAML_P			
	comp=Z,1μm,0.1s						
TUTA	**Tutak**	**0.76**	**343**	*i* P	**Pb**	**09 38 43.1**	**0.0**
BLIS	**Bitlis-Merkez**	**0.81**	**252**	*i* P	**Pn**	**09 38 44.5**	**-0.6**
BLIS				IAML_P			
	comp=Z,1μm,0.1s						
AGRB	**Hanur-Agry**	**0.91**	**355**	PG	**Pg**	**09 38 45.7**	**-0.1**
AGRB				SG	**Sn**	**09 38 58.8**	**-0.4**

*IDC **30** 09:41:40.0±1.1, 6°.90S×125°.87E, h508km±16km, mb3.1/11, mb1 3.0/16, mb1mx2.9/46, mbtmp3.9/16, Error ellipse: s-maj=23.8km s-min=17.3km az=77.0*
ISC 30 09:41:38.8±0.7, 6°.88S±0°.09×126°.0E±0°.1, h488km, n17, σ1§48/19, mb3.4/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.02**	**214**	P	**P**	**09 42 57.7**	**+1.1**
	36nm,0.3s,baz=330,slow=1.1,SNR=18						
BATI				S	**S**	**09 43 57.4**	**-2.5**
	5.5nm,0.3s,baz=102,slow=14,SNR=3.8						
KAPI	**Kappang**	**6.46**	**286**	P	**P**	**09 43 21.9**	**+2.7**
	1.6nm,0.3s,baz=135,slow=7.1,SNR=6.7						
SIJI	**Sorong**	**7.97**	**42**	P	**P**	**09 43 36.2**	**+1.6**
	5.6nm,0.3s,baz=215,slow=6.4,SNR=14						
SIJI				S	**S**	**09 45 08.9**	**-0.8**
	1.2nm,0.3s,baz=229,slow=19,SNR=4.2						
FITZ	**Fitzroy Crossi**	**11.16**	**182**	P	**P**	**09 44 07.9**	**-0.5**
	0.3nm,0.3s,baz=17,slow=10.0,SNR=5.6						
WRA	**Warramunga Arr**	**15.32**	**149**	P	**P**	**09 44 53.2**	**+0.7**
	0.1nm,0.3s,baz=343,slow=11,SNR=3.6						
ASAR	**Alice Springs**	**18.35**	**156**	P	**P**	**09 45 25.5**	**+2.5**
	0.0nm,0.3s,baz=337,slow=9.4,SNR=2.9						
KSRS	**Korea Array**	**44.14**	**2**	P	**P**	**09 49 04.7**	**+1.6**
	0.9nm,0.7s,baz=178,slow=8.7,SNR=5.9						
MJAR	**Matsushiro Arr**	**44.69**	**14**	P	**P**	**09 49 06.4**	**-1.0**
	0.5nm,0.5s,baz=198,slow=9.9,SNR=4.5						
USRK	**Ussuriysk Ar.**	**51.13**	**6**	P	**P**	**09 49 55.6**	**0.0**
	0.7nm,0.5s,baz=190,slow=7.3,SNR=3.7						
SONM	**Songino Array**	**57.16**	**344**	P	**P**	**09 50 38.1**	**-0.2**
	0.5nm,0.4s,baz=161,slow=5.7,SNR=3.1						
PETK	**Petropavlovsk-**	**65.53**	**20**	P	**P**	**09 51 33.5**	**+0.4**
	0.9nm,0.5s,baz=180,slow=0.9,SNR=5.1						
MKAR	**Makanchi Array**	**65.99**	**329**	P	**P**	**09 51 35.6**	**-0.5**
	0.4nm,0.5s,baz=139,slow=7.6,SNR=4.4						
ZALV	**Zalesovo Beam**	**69.76**	**336**	P	**P**	**09 51 57.5**	**-1.5**
	1.6nm,0.4s,baz=127,slow=5.1,SNR=5.8						
KURBB	**Kurchatov Arra**	**70.36**	**330**	P	**P**	**09 52 02.0**	**-0.6**
	0.9nm,0.6s,baz=136,slow=5.2,SNR=10						
SEY	**Seymchan**	**72.48**	**12**	P	**P**	**09 52 14.8**	**0.0**
	1.6nm,0.6s,baz=358,slow=20,SNR=4.5						
BVAR	**Borovoye Array**	**75.87**	**329**	P	**P**	**09 52 33.5**	**-0.8**
	0.6nm,0.5s,baz=108,slow=9.5,SNR=4.7						
TIXI	**Tiksi**	**78.39**	**1**	P	**P**	**09 52 46.0**	**-1.7**
	1.5nm,0.4s,baz=140,slow=6.5,SNR=3.2						

*DJA **30** 09:52:59.2±0.5, 4°S±6°×15°4E±°, h10km, M4.9/11, mb5.0/11, mB5.3/3, Mw(mB)4.7/3*
*MOS **30** 09:53:08.4±1.0, 4°52S×153°.75E, h61km, mb5.0/19, Error ellipse: s-maj=13.9km s-min=9.0km az=87.1*
*BJI **30** 09:53:09.0±0.0, 4°75S×154°.05E, h87km, mb4.8/26, mB4.9/18, Ms5.0/13, Ms7 4.7/4*
*ISCJB **30** 09:53:11.4±0.2, 4°64S±0°.03×153°.58E±0°.03, h85km, mb4.7/78, Error ellipse: s-maj=4.8km s-min=4.0km az=156.3*
*IDC **30** 09:53:11.7±2.3, 4°66S×153°.59E, h79km±21km, mb4.2/19, mb1 4.3/23, mb1mx4.2/30, mbtmp4.5/23, MS3.3/10, Ms1 3.4/10, ms1mx3.2/22, Error ellipse: s-maj=15.1km s-min=11.3km az=75.0*
*NEIC **30** 09:53:12.7±2.1, 4°61S×153°.65E, h86km±5km, mb4.9/58, Error ellipse: s-maj=13.8km s-min=8.3km az=212.0*
ISC 30 09:53:12.6±0.3, 4°65S±0°.04×153°.64E±0°.05, h85km, n161, σ1§72/170, mb4.8/78, 7C-8D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.54**	**287**	*e*Pn	**Pn**	**09 53 38.6**	**0.0**
RABL				*e*Sn	**Sn**	**09 53 58.5**	**+0.1**
MANU	**Manus Island**	**6.77**	**292**	*e*Pn	**Pn**	**09 54 49.9**	**+0.4**
HNR	**Honiara**	**7.86**	**128**	P	Pn	09 55 28.0	+24
HNR	**Honiara**	**7.86**	**128**	P	**Pn**	**09 55 01.9**	**-2.4**
	17nm,0.3s,baz=267,slow=15,SNR=5.8						
HNR				S	**Sn**	**09 56 34.7**	**+2.9**
	8.1nm,0.3s,baz=164,slow=20,SNR=2.7						
HNR				LR	LR	09 58 23.7	
	comp=Z,288nm,21.6s,baz=286,slow=40						
HNR	**Honiara**	**7.86**	**128**	*e*Pn	**Pn**	**09 55 02.0**	**-2.3**
HNR	**Honiara**	**7.86**	**128**	*e*P	**Pn**	**09 55 02.0**	**-2.3**
PMG	**Port Moresby**	**7.98**	**233**	P	**Pn**	**09 55 06.1**	**+0.2**
	25nm,0.3s,baz=55,slow=5.7,SNR=47						
PMG				S	**Sn**	**09 56 32.9**	**-1.7**
	66nm,0.3s,baz=16,slow=19,SNR=23						
PMG	**Port Moresby**	**7.98**	**233**	*e*Pn	**Pn**	**09 55 06.8**	**+0.9**
PMG				*e*Sn	**Sn**	**09 56 32.3**	**-2.3**
PMG	**Port Moresby**	**7.98**	**233**	*e*P	**Pn**	**09 55 06.8**	**+0.9**
PMG				*e*		09 56 32.3	
PATS	**Pohnpei**	**12.33**	**22**	*e*Pn	**Pn**	**09 56 07.2**	**+2.1**
PATS				*e*Sn	**Sn**	**09 58 16.2**	**-4.4**
JAY	**Jayapura**	**13.08**	**279**	P	**Pn**	**09 56 13.8**	**-1.4**
	0.6nm,0.3s,baz=61,slow=4.0,SNR=8.3						
JAY				LR	LR	10 00 15.6	
	comp=Z,202nm,21.9s,baz=16,slow=32						
JAY	**Jayapura**	**13.08**	**279**	P	**Pn**	**09 56 13.3**	**-1.9**
	337nm,0.9s						
GENI	**Genyem**	**13.60**	**278**	P	**Pn**	**09 56 21.1**	**-0.9**
	82nm,0.6s						
COEN	**Coen**	**13.85**	**227**	*e*Pn	**Pn**	**09 56 26.5**	**+1.1**
COEN				*e*Sn	**Sn**	**09 58 55.1**	**-2.7**
CTA	**Charters Tower**	**16.95**	**204**	P	**Pn**	**09 57 03.7**	**-0.8**
	0.2nm,0.3s,baz=67,slow=12,SNR=4.7						
CTAO	**Charters Tower**	**16.95**	**204**	*e*Pn	**P**	**09 57 06.2**	**+1.1**
	9.4nm,1.2s						
CTAO	**Charters Tower**	**16.95**	**204**	*e*P	**P**	**09 57 06.2**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BAKI	**Biak**	**17.84**	**281**	P	**P**	**09 57 12.7**	**-2.3**
EIDS	**Eidsvold**	**20.75**	**187**	*e*P	Pn	09 57 50.2	+0.4
	comp=Z,19nm,0.8s						
DZM	**Mont Dzumac**	**21.31**	**146**	P	**P**	**09 57 53.4**	**+0.6**
	comp=Z,18nm,1.0s,baz=329,slow=13,SNR=11						
DZM				LR	LR	10 05 25.6	
	comp=Z,62nm,19.7s,baz=70,slow=34						
DZM	**Mont Dzumac**	**21.31**	**146**	*e*P	**P**	**09 57 54.8**	**+2.1**
	comp=Z,50nm,1.4s						
FAKI	**Fak Fak**	**21.41**	**274**	*e*P	**P**	**09 57 57.9**	**+4.1**
	comp=Z,118nm,0.9s						
FAKI	**Fak Fak**	**21.41**	**274**	P	**P**	**09 57 54.4**	**+0.6**
	comp=Z,138nm,0.9s						
SIJI	**Sorong**	**22.65**	**279**	P	**P**	**09 58 05.5**	**-1.6**
	comp=Z,7.9nm,0.5s,baz=117,slow=4.5,SNR=7.1						
SIJI				LR	LR	10 06 00.4	
	comp=Z,91nm,19.5s,baz=7.5,slow=34						
MTN	**Manton Dam**	**23.67**	**248**	*e*P	**P**	**09 58 16.5**	**-0.2**
	comp=Z,32nm,1.1s						
WRAB	**Tennant Creek**	**24.16**	**229**	*e*P	**P**	**09 58 21.3**	**+0.2**
	comp=Z,29nm,0.6s						
WRAB	**Tennant Creek**	**24.16**	**229**	*de*P	**P**	**09 58 19.9**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,33nm,0.8s						
WB2	**Warramunga Arr**	**24.16**	**229**	*e*P	**P**	**09 58 21.2**	**+0.1**
	comp=Z,32nm,0.5s						
WR1	**Warramunga Arr**	**24.17**	**229**	*e*P	**P**	**09 58 20.6**	**-0.6**
WR1				*e*PcP	**PcP**	**10 02 00.1**	**0.0**
WRA	**Warramunga Arr**	**24.17**	**229**	P	**P**	**09 58 20.6**	**-0.6**
	comp=Z,32nm,0.7s,baz=54,slow=9.8,SNR=214						
WRA				PcP	**PcP**	**10 02 00.1**	**0.0**
	comp=Z,5.9nm,0.7s,baz=14,slow=1.7,SNR=6.6						
FUNA	**Funafuti**	**25.68**	**100**	*e*P	**P**	**09 58 34.2**	**-0.8**
	comp=Z,88nm,1.1s						
ARMA	**Armidale**	**25.70**	**184**	*e*P	**P**	**09 58 36.7**	**+1.6**
	comp=Z,14nm,0.8s						
AS31	**Alice Springs**	**26.82**	**223**	*e*P	**P**	**09 58 44.4**	**-0.9**
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**26.83**	**223**	P	**P**	**09 58 44.2**	**-1.0**
	comp=Z,1.7nm,0.4s,baz=55,slow=9.1,SNR=56						
ASAR				PcP	**PcP**	**10 02 05.9**	**-0.3**
	comp=Z,4.9nm,0.8s,baz=62,slow=2.8,SNR=14						
STKA	**Stephens Creek**	**29.35**	**201**	P	**P**	**09 59 07.3**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=8.5,slow=13,SNR=5.1						
STKA				LR	LR	10 11 57.0	
	comp=Z,82nm,18.3s,baz=17,slow=38						
STKA	**Stephens Creek**	**29.35**	**201**	*e*P	**P**	**09 59 07.6**	**0.0**
	comp=Z,4.3nm,1.5s						
STKA	**Stephens Creek**	**29.35**	**201**	*e*P	**P**	**09 59 07.6**	**0.0**
STKA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
FITZ	**Fitzroy Crossi**	**30.46**	**242**	P	**P**	**09 59 16.0**	**-1.6**
	baz=60,slow=8.1						
FITZ	**Fitzroy Crossi**	**30.46**	**242**	*e*P	**P**	**09 59 16.2**	**-1.3**
	comp=Z,16nm,0.8s						
CAN	**Canberra**	**30.82**	**187**	*e*P	**P**	**09 59 22.1**	**+1.5**
	comp=Z,9.5nm,0.9s						
CAN	**Canberra**	**30.82**	**187**	*e*P	**P**	**09 59 22.1**	**+1.5**
CAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TOO	**Toolangi**	**33.60**	**192**	*e*P	**P**	**09 59 46.0**	**+1.1**
	comp=Z,8.3nm,1.2s						
TOO	**Toolangi**	**33.60**	**192**	*e*P	**P**	**09 59 46.0**	**+1.1**
TOO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
FORT	**Forrest**	**35.43**	**220**	*e*P	**P**	**09 59 59.7**	**-1.0**
	comp=Z,18nm,0.8s						
PSA00	**Pilbara Seismi**	**36.82**	**240**	*e*P	**P**	**10 00 11.7**	**-1.1**
	comp=Z,17nm,0.8s						
TAU	**Tasmania Unive**	**38.51**	**187**	*e*P	**P**	**10 00 28.6**	**+2.0**
	comp=Z,85nm,1.4s						
TAU	**Tasmania Unive**	**38.51**	**187**	*e*P	**P**	**10 00 28.7**	**+2.0**
TAU				pmax	pmax		
	comp=Z,85nm,1.4s						
URZ	**Urewera**	**39.70**	**151**	*e*P	**P**	**10 00 38.4**	**+1.7**
	comp=Z,18nm,1.2s						
BKZ	**Black Stump Fm**	**40.12**	**152**	*e*P	**P**	**10 00 40.3**	**+0.1**
	comp=Z,13nm,1.3s						
THZ	**Tophouse**	**40.77**	**158**	*e*P	**P**	**10 00 46.4**	**+0.9**
	comp=Z,25nm,0.8s						
SNZO	**South Karori**	**41.09**	**156**	*e*P	**P**	**10 00 48.2**	**+0.1**
	comp=Z,73nm,1.1s						
BFZ	**Birch Farm**	**41.23**	**154**	*e*P	**P**	**10 00 48.8**	**-0.4**
	comp=Z,43nm,1.5s						
FOZ	**Fox Glacier**	**41.28**	**162**	*e*P	**P**	**10 00 49.1**	**-0.4**
	comp=Z,24nm,0.9s						
LTZ	**Lake Taylor**	**41.42**	**159**	*e*P	**P**	**10 00 51.4**	**+0.6**
	comp=Z,23nm,0.7s						
KHZ	**Kahutara**	**41.57**	**158**	*e*P	**P**	**10 00 52.2**	**+0.2**
	comp=Z,21nm,0.9s						
OXZ	**Oxford**	**41.82**	**160**	*e*P	**P**	**10 00 54.2**	**+0.2**
	comp=Z,16nm,0.8s						
RPZ	**Rata Peaks**	**41.84**	**161**	P	**P**	**10 00 53.6**	**-0.6**
	comp=Z,47nm,0.7s,baz=303,slow=2.0,SNR=29						
RPZ	**Rata Peaks**	**41.84**	**161**	*e*P	**P**	**10 00 55.2**	**+1.0**
	comp=Z,52nm,0.7s						
GIRL	**Giralia**	**42.07**	**241**	*e*P	**P**	**10 00 59.1**	**+2.7**
	comp=Z,134nm,1.3s						
LBZ	**Lake Benmore**	**42.17**	**162**	*e*P	**P**	**10 00 57.0**	**+0.1**
	comp=Z,21nm,0.8s						
WKZ	**Wanaka**	**42.23**	**164**	*e*P	**P**	**10 00 58.2**	**+0.8**
	comp=Z,42nm,1.0s						
MQZ	**McQueen's Vall**	**42.37**	**159**	*e*P	**P**	**10 00 58.9**	**+0.4**
	comp=Z,11nm,0.6s						
MLZ	**Mavora Lakes**	**42.49**	**165**	*e*P	**P**	**10 01 00.0**	**+0.6**
	comp=Z,57nm,0.9s						
WHZ	**Wether Hill Ro**	**42.93**	**165**	*e*P	**P**	**10 01 03.4**	**+0.4**
	comp=Z,24nm,0.9s						
MORW	**Morawa**	**43.09**	**231**	*e*P	**P**	**10 01 03.0**	**-1.5**
	comp=Z,30nm,1.5s						
JNU	**Nakatsue**	**43.32**	**332**	P	**P**	**10 01 05.7**	**-0.6**
	comp=Z,9.2nm,0.8s,baz=115,slow=2.8,SNR=7.1						
JNU	**Nakatsue**	**43.32**	**332**	*e*P	**P**	**10 01 06.3**	**0.0**
	comp=Z,24nm,1.4s						
MJAR	**Matsushiro Arr**	**43.44**	**342**	P	**P**	**10 01 05.1**	**-2.2**
	comp=Z,2.4nm,1.1s,baz=174,slow=11,SNR=5.1						
MAJO	**Matsushiro**	**43.44**	**342**	*e*P	**P**	**10 01 05.1**	**-2.2**
MAJO	**Matsushiro**	**43.44**	**342**	*e*P	**P**	**10 01 05.1**	**-2.2**
NWAO	**Narrogin (SRO)**	**44.09**	**226**	*e*P	**P**	**10 01 14.8**	**+2.3**
	comp=Z,26nm,1.3s						
NWAO	**Narrogin (SRO)**	**44.09**	**226**	*e*P	**P**	**10 01 14.8**	**+2.3**
NWAO				pmax	pmax		
	comp=Z,26nm,1.3s						
KSRS	**Korea Array**	**48.25**	**332**	P	**P**	**10 01 45.0**	**0.0**
	comp=Z,3.1nm,0.8s,baz=149,slow=9.2,SNR=16						
KSRS				LR	LR	10 18 31.5	
	comp=Z,14nm,21.9s,baz=265,slow=32						
KS15	**Wonju Array Si**	**48.25**	**332**	*e*P	**P**	**10 01 45.0**	**-0.1**
	comp=Z,12nm,1.3s						
NJ2	**Nanjing**	**49.26**	**320**	*e*P	**P**	**10 01 52.5**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KULM	**Kulim**	**53.83**	**280**	*e*P	**P**	**10 02 26.8**	**-0.5**
	comp=Z,12nm,1.2s						
CN2	**Changchun**	**54.51**	**335**	*e*P	**P**	**10 02 35.0**	**+3.3**
KRAB	**Krabi**	**55.78**	**283**	P	P	10 02 49.4	+8.0
KLR	**Kul'dur**	**56.94**	**343**	*e*P	**P**	**10 02 49.1**	**+0.1**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.8s						
KMI	**Kunming**	**57.59**	**304**	P	**P**	**10 02 58.5**	**+4.1**
KMI				pmax	pmax		
	comp=Z,17nm,1.5s						
PETK	**Petropavlovsk-**	**57.64**	**3**	P	**P**	**10 02 54.9**	**+1.0**
	comp=Z,3.2nm,0.8s,baz=184,slow=8.9,SNR=5.5						
PETK				LR	LR	10 27 06.6	
	comp=Z,18nm,18.7s,baz=126,slow=35						
PEA1	**Petropavlovsk-**	**57.65**	**3**	*e*P	**P**	**10 02 54.9**	**+1.0**
CM31	**Chiang Mai Arr**	**58.57**	**295**	*e*P	**P**	**10 03 01.9**	**+0.9**
	comp=Z,7.6nm,1.3s						
CMAR	**Chiang Mai Arr**	**58.57**	**295**	P	**P**	**10 03 01.9**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=108,slow=4.7,SNR=5.7						
NKL	**Nikolayevsk**	**58.61**	**351**	*e*P	P	10 02 54.0	-6.6
NKL				*e*SS	SS	10 14 45.5	-7.0
NKL				pmax	pmax		
	comp=Z,15nm,1.5s						
NKL				pmax	pmax		
	comp=N,17nm,1.3s						
NKL				pmax	pmax		
	comp=E,13nm,1.3s						
NKL				p

	comp=Z,13nm,0.9s					
PRZ	**Przheval'sk**	**82.31 314**	*e*P	**P**	**10 05 27.1**	**+1.7**
PRZ			pmax	pmax		
	comp=Z,13nm,0.9s					
KDJ	**Kajisay**	**83.12 313**	*e*P	**P**	**10 05 30.0**	**+0.4**
	comp=Z,10nm,0.9s					
KDJ	**Kajisay**	**83.12 313**	*e*P	**P**	**10 05 30.0**	**+0.4**
KDJ			pmax	pmax		
	comp=Z,10.0nm,0.9s					
KSH	**Kashi**	**83.47 310**	P	**P**	**10 05 33.0**	**+1.6**
KSH			pP	pwP	10 05 59.0	+1.0
KSH			PP	**PP**	**10 08 50.5**	**+5.8**
KSH			S	**S**	**10 15 43.5**	**-2.9**
KSH			SS	**SS**	**10 21 17.5**	**+3.4**
KSH			pmax	pmax		
	comp=Z,14nm,0.5s					
KSH			pmax	pmax		
	comp=Z,300nm,5.2s					
KSH			LR	LR		
	comp=Z,680nm,13.2s					
KSH			LR	LR		
	comp=Z,300nm,7.3s					
KSH			LR	LR		
	comp=Z,240nm,11.7s					
EGAK	**Eagle**	**83.89 23**	*e*P	**P**	**10 05 33.3**	**+0.5**
	comp=Z,3.8nm,1.1s					
KURK	**Kurchatov**	**84.16 322**	*e*P	**P**	**10 05 33.5**	**-0.9**
	comp=Z,16nm,1.1s					
KURK	**Kurchatov**	**84.16 322***c i*P		**P**	**10 05 33.9**	**-0.5**
KURK			pmax	pmax		
	comp=Z,19nm,1.3s					
TKM2	**Tokmak 2**	**84.43 314**	P	**P**	**10 05 36.5**	**+0.3**
	SNR=9.3					
KZA	**Kyzart**	**84.51 313**	P	**P**	**10 05 38.2**	**+1.2**
	SNR=11					
UCH	**Uchtor**	**85.08 313**	P	**P**	**10 05 40.9**	**+1.0**
	SNR=12					
AAK	**Ala-Archa**	**85.17 313**	*e*P	**P**	**10 05 40.7**	**+0.8**
	comp=Z,8.0nm,0.8s					
AAK	**Ala-Archa**	**85.17 313**	*e*P	**P**	**10 05 40.7**	**+0.8**
AAK			pmax	pmax		
	comp=Z,8.0nm,0.8s					
USP	**Ospenovka**	**85.28 314**	P	**P**	**10 05 40.6**	**+0.3**
	SNR=7.9					
QSPA	**South Pole Qui**	**85.31 180**	*e*P	**P**	**10 05 39.9**	**-0.2**
	comp=Z,21nm,0.8s					
EKS2	**Erkin-Say**	**85.69 313**	P	**P**	**10 05 42.9**	**+0.4**
	SNR=5.1					
MAW	**Mawson**	**86.03 203**	P	**P**	**10 05 42.9**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=98,slow=8.4,SNR=5.2					
MAW	**Mawson**	**86.03 203**	*e*P	**P**	**10 05 43.1**	**-0.3**
	comp=Z,0.9nm,0.9s					
MAW	**Mawson**	**86.03 203**	*e*P	**P**	**10 05 43.1**	**-0.3**
MAW			pmax	pmax		
	comp=Z,1.0nm,0.9s					
EPYK	**Eagle Plains**	**86.21 22**	*e*P	**P**	**10 05 44.4**	**0.0**
	comp=Z,9.4nm,1.0s					
BRVK	**Borovoye**	**89.69 323**	*e*P	**P**	**10 05 59.9**	**-1.3**
	comp=Z,8.6nm,0.9s					
BRVK	**Borovoye**	**89.69 323***c i*P		**P**	**10 05 59.7**	**-1.5**
BRVK			pmax	pmax		
	comp=Z,9.0nm,0.9s					
NV01	**Mina Array Sit**	**91.34 52**	*e*P	**P**	**10 06 10.4**	**+0.9**
NVAR	**Mina Array Bea**	**91.34 52**	P	**P**	**10 06 10.4**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=258,slow=6.2,SNR=6.2					
NVAR			LR	LR	10 40 39.0	
	comp=Z,41nm,20.6s,baz=267,slow=31					
SYO	**Syowa Base**	**94.09 199**‖	*e*P	**P**	**10 06 22.0**	**+0.8**
YKA	**Yellowknife Ar**	**94.91 28**	P	**P**	**10 06 24.8**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=280,slow=3.1,SNR=7.3					
ARU	**Arti**	**96.66 326**‖	*e*P	**P**	**10 06 31.4**	**-1.8**
ARU			pmax	pmax		
	comp=Z,2.0nm,1.0s					
PDAR	**Pinedale Array**	**98.13 48**	LR	LR	10 45 30.0	
	comp=Z,21nm,19.9s,baz=268,slow=32					
SNAA	**Sanae**	**102.29 187**	Pdiff	**Pdif**	**10 06 52.6**	**-5.6**
VNA1	**Neumayer--Stat**	**103.88 186**	Pdiff	**Pdif**	**10 06 54.3**	**-11**
VSU	**Vasula**	**112.52 333**‖	*i*PKIKP	**PKiKP**	**10 11 35.6**	**-3.2**
VSU			pmax	pmax		
	comp=Z,29nm,1.7s					
BOSA	**Boshof**	**120.38 233**	PKP	**PKPdf**	**10 11 53.6**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=114,slow=6.9,SNR=4.3					
LSZ	**Lusaka**	**122.47 249**	*e*PKPdf	**PKPdf**	**10 11 59.0**	**-0.4**
LSZ	**Lusaka**	**122.47 249**	*e*PKIKP	**PKPdf**	**10 11 59.0**	**-0.4**
GEC2	**GERESS Array S**	**124.36 329**	*e*PKPdf	**PKPdf**	**10 12 01.6**	**-0.4**
GEC2	**GERESS Array S**	**124.36 329**	*e*PKIKP	**PKPdf**	**10 12 01.6**	**-0.4**
GERES	**GERESS Array B**	**124.36 329**	PKP	**PKPdf**	**10 12 01.6**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=46,slow=3.9,SNR=4.5					
TSUM	**Tsumeb**	**130.68 240**	*e*PKPdf	**PKPdf**	**10 12 15.0**	**0.0**
LPAZ	**La Paz**	**133.75 118**	PKP	**PKPdf**	**10 12 20.9**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=248,slow=5.5,SNR=4.5					
LPAZ	**La Paz**	**133.75 118**	*e*PKPdf	**PKPdf**	**10 12 22.0**	**+0.5**
LPAZ	**La Paz**	**133.75 118**	*e*PKIKP	**PKPdf**	**10 12 22.0**	**+0.5**
KEST	**Kesra**	**134.85 318**	PKP	**PKPdf**	**10 12 22.4**	**0.0**
	comp=Z,2.0nm,0.4s,baz=63,slow=2.3,SNR=4.3					
KEST	**Kesra**	**134.85 318**	*e*PKPdf	**PKiKP**	**10 12 24.7**	**+0.9**
PTGA	**Pitinga**	**146.01 98**	*e*PKPdf	**PKPdf**	**10 12 43.3**	**+0.3**
BDFB	**Brasilia**	**150.57 134**	PKPbc	**PKPbc**	**10 12 54.7**	**-1.2**
	comp=Z,6.0nm,0.7s,baz=205,slow=3.2,SNR=9.1					
BDFB	**Brasilia**	**150.57 134**	*e*PKPbc	**PKPbc**	**10 12 54.7**	**-1.2**
BDFB			*e*PKPbc	**PKiKP**	**10 12 54.8**	**-1.8**
TOA0	**Torodi Ar. Sit**	**151.05 289**	*e*PKPbc	**PKPbc**	**10 12 56.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**151.05 289**	PKPbc	**PKPbc**	**10 12 54.6**	**-2.3**
	comp=Z,16nm,0.8s,baz=77,slow=2.4,SNR=61					
TOA1	**Torodi Ar. Sit**	**151.05 289**	*e*PKPbc	**PKPbc**	**10 12 54.6**	**-2.3**

*JMA **30** 10:12:06.3±0.1, 43.°04N×146.°19E, h39km±2km, M3.1*
*SKHL **30** 10:12:06.2±0.5, 42.°99N×145.°74E, h30km, mb3.8/3*
*ISCJB **30** 10:12:07.8±1.3, 43.°08N±0.°07×146.°09E±0.°08, h33km±22km, Error ellipse: s-maj=13.0km s-min=6.7km az=144.3*
ISC 30 10:12:09.1±1.9, 43.°15N±0.°08×145.°97E±0.°07, h30km±11km, n10, σ1=23/18, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.28**	**323**	P	**Pb**	**10 12 16.2**	**0.0**
NEM2				*e*S	**Sn**	**10 12 23.2**	**+0.9**
JKHN	**Kushirohamanak**	**0.60**	**264**	P	**Pb**	**10 12 20.4**	**-0.7**
JKHN				*e*S	**Sn**	**10 12 31.3**	**+1.1**
GRPR	**Tuman**	**0.86**	**350**	*e*P	**Pn**	**10 12 23.0**	**-2.2**
GRPR				AMB	AMB	10 12 25.0	
	15nm,0.2s						
GRPR				*i* S	**Sn**	**10 12 36.0**	**-0.7**
GRPR				A	A	10 12 36.0	
	848nm,0.3s						
GRPR				A	A	10 12 36.0	
	443nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.89**	**355**	*i* P	**Pn**	**10 12 24.0**	**-1.6**
YUK				AMB	AMB	10 12 26.0	
	21nm,0.2s						
YUK				*i* S	**Sn**	**10 12 37.0**	**-0.5**
YUK				A	A	10 12 38.0	
	514nm,0.4s						
YUK				A	A	10 12 38.0	
	653nm,0.4s						
JAK	**Akkeshi**	**0.94**	**261**	P	**Pn**	**10 12 25.0**	**-1.3**
JAK				*e*S	**Sn**	**10 12 38.9**	**+0.1**
JRA	**Rausu**	**1.00**	**322**	*e*S	**Sb**	**10 12 41.9**	**+1.2**
JNK	**Nakash**	**1.01**	**296**	P	**Pn**	**10 12 26.9**	**-0.4**
JNK				*e*S	**Sn**	**10 12 41.4**	**+0.9**
JAR	**Ashorobuto**	**1.62**	**276**	*e*S	**Sn**	**10 12 56.6**	**+1.2**
JTKR	**Abashiri--Toko**	**1.71**	**300**	P	**Pn**	**10 12 37.7**	**+0.9**
JTKR				*e*S	**Sb**	**10 13 00.7**	**-0.2**
KUR	**Kuril'sk**	**2.49**	**33**	*e*P	**Pn**	**10 12 48.0**	**+0.4**
KUR				AMB	AMB	10 12 49.0	
	11nm,0.5s						
KUR				AMB	AMB	10 12 49.0	
	23nm,0.5s						
KUR				*e*S	**Sn**	**10 13 19.0**	**+2.0**
KUR				A	A	10 13 28.0	
	34nm,0.3s						
KUR				A	A	10 13 28.0	
	11nm,0.3s						

*NIED **30** 10:12:00, 36.°90N×141.°50E, h5km, Mw3.5 Best double couple: M0:1.84000×10^14 NP1:φs=5.00000°, δ=40.00000°, λ=-145.00000°. NP2:φs=248.00000°, δ=69.00000°, λ=-55.00000°.*
JMA 30 10:12:28.7±0.1, 36.°91N×141.°42E, h34km±1km, M3.4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.53**	**291**	P	Pn	10 12 39.3	-0.6
ONAJ				S	Sb	10 12 47.4	-0.2
JFK	**Kawauchi**	**0.63**	**316**	P	Pn	10 12 40.8	-0.4
JFK				S	Sn	10 12 49.4	-0.7
JFFD	**Fukushimafurud**	**0.71**	**285**	P	Pn	10 12 42.0	-0.3
JFFD				S	Sn	10 12 51.5	-0.6
JHO	**Hitachi**	**0.75**	**247**	P	Pn	10 12 42.6	-0.2
JHO				S	Sn	10 12 53.0	0.0
JFT	**Otama**	**1.06**	**305**	P	Pb	10 12 48.2	-0.3
JFT				S	Sb	10 13 02.4	+0.3
JMM	**Marumori**	**1.08**	**333**	P	Pn	10 12 47.7	+0.3
JMM				S	Sn	10 13 01.4	+0.3
JFY	**Yanaizu**	**1.46**	**290**	P	Pb	10 12 54.4	-0.9
JFY				S	Sb	10 13 13.5	0.0
JIO	**Ouri**	**1.54**	**358**	P	Pn	10 12 54.7	+0.9
JIO				S	Sn	10 13 13.1	+0.5
JOU	**Okura**	**1.57**	**338**	P	Pb	10 12 56.0	-1.2
MAT	**Matsushiro**	**2.61**	**263**	P	Pn	10 13 09.1	+0.7
MAT				*e*S	Sn	10 13 38.1	-0.8

*JMA **30** 10:45:45.7, 23.°82N×121.°59E, h34km±1km, M2.8*
*ISCJB **30** 10:45:46.5±0.2, 23.°87N±0.°01×121.°61E±0.°01, h32km±1km, Error ellipse: s-maj=2.5km s-min=1.6km az=33.1*
*TAP **30** 10:45:46.3, 23.°89N×121.°59E, h31km, ML3.0, B*
ISC 30 10:45:46.6±0.9, 23.°89N±0.°02×121.°58E±0.°02, h32km±5km, n85, σ0=49/159, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.02**	**50**	*e*P	**Pb**	**10 45 51.3**	**-0.8**
	baz=33						
ENLB				*e*S	**Sb**	**10 45 56.0**	**+0.3**
	baz=33						
HWA	**Hwalien**	**0.09**	**13**	*e*P	**Pb**	**10 45 52.8**	**+0.5**
	baz=13						
HWA				*e*S	**Sb**	**10 45 56.4**	**+0.3**
	baz=13						
ESL	**Shilin**	**0.16**	**242**	P	**Pn**	**10 45 52.8**	**0.0**
	baz=240						
ESL				*e*S	**Sn**	**10 45 56.8**	**+0.2**
	baz=240						
TWD	**Chiawan**	**0.19**	**4**	*e*P	**Pn**	**10 45 53.5**	**+0.2**
	baz=3.0						
TWD				*e*S	**Sn**	**10 45 58.4**	**+1.0**
	baz=3.0						
EGFH	**Guangfu**	**0.26**	**213**	*e*P	**Pb**	**10 45 53.1**	**-0.7**
	baz=214						
EGFH				*e*S	**Sb**	**10 45 58.4**	**-0.4**
	baz=214						
NACB	**Ninganchiao**	**0.28**	**2**	*i* P	**Pn**	**10 45 54.2**	**-0.4**
NACB				S	**Sn**	**10 45 60.0**	**+0.2**
ETLH	**Xiulin Townshi**	**0.33**	**344**	*i* P	**Pn**	**10 45 54.8**	**-0.5**
	baz=342						
ETLH				S	**Sn**	**10 46 00.7**	**-0.4**
	baz=342						
OWD	**Renai**	**0.38**	**280**	P	**Pn**	**10 45 55.6**	**-0.4**
	baz=279						
OWD				*i* S	**Sb**	**10 46 01.6**	**+0.1**
	baz=279						
WHF	**Hehuan Shan**	**0.39**	**311**	P	**Pn**	**10 45 56.0**	**-0.4**
	baz=311						
WHF				S	**Sn**	**10 46 03.0**	**+0.1**
	baz=311						
CHGB	**Renai**	**0.41**	**295**	*i* P	**Pn**	**10 45 56.4**	**-0.2**
	baz=294						
CHGB				*i* S	**Sn**	**10 46 03.2**	**0.0**
	baz=294						
HGSD	**Ruisui**	**0.42**	**200**	P	**Pb**	**10 45 55.9**	**-0.1**
	baz=201						
HGSD				S	**Sn**	**10 46 03.6**	**+0.5**
	baz=201						
VWDT	**VWDT**	**0.43**	**252**	*i* P	**Pb**	**10 45 56.0**	**-0.1**
	baz=251						
VWDT				S	**Sn**	**10 46 02.8**	**-0.4**
	baz=251						
EHY	**Hungye**	**0.45**	**212**	*e*P	**Pb**	**10 45 56.0**	**-0.5**
	baz=212						
EHY				*e*S	**Sn**	**10 46 03.9**	**+0.1**
	baz=212						
TWT	**Tachien**	**0.52**	**314**	P	**Pn**	**10 45 58.1**	**+0.1**
	baz=312						
TWT				S	**Sn**	**10 46 05.9**	**+0.1**
	baz=312						
TDCB	**Techi**	**0.53**	**313**	*i* P	**Pn**	**10 45 58.1**	**0.0**
	baz=312						
TDCB				*i* S	**Sn**	**10 46 05.7**	**-0.4**
	baz=312						
ENA	**Nanau**	**0.56**	**15**	*e*P	**Pb**	**10 45 57.6**	**-0.5**
	baz=15						
ENA				*e*S	**Sb**	**10 46 05.8**	**-0.2**
	baz=15						
NANB	**Nanao**	**0.56**	**16**	P	**Pb**	**10 45 57.7**	**-0.4**
	baz=15						
NANB				*e*S	**Sn**	**10 46 06.6**	**+0.1**
	baz=15						
YULB	**Yu-li**	**0.56**	**208**	*e*P	**Pb**	**10 45 58.0**	**-0.2**
	baz=208						
YULB				*e*S	**Sn**	**10 46 06.5**	**-0.1**
	baz=208						
NNSB	**Datong**	**0.57**	**341**	*i* P	**Pn**	**10 45 58.3**	**-0.4**
	baz=340						
NNSB				*e*S	**Sn**	**10 46 06.5**	**-0.4**
	baz=340						
NNS	**Nan Shan**	**0.58**	**341**	P	**Pn**	**10 45 58.5**	**-0.3**
	baz=340						
NNS				*e*S	**Sb**	**10 46 06.7**	**-0.1**
	baz=340						
SSLB	**Suanglung**	**0.58**	**260**	*e*P	**Pb**	**10 45 58.0**	**-0.6**
	baz=260						
SSLB				*e*S	**Sn**	**10 46 07.2**	**0.0**
	baz=260						
TWF1	**Yuli**	**0.59**	**206**	*e*P	**Pb**	**10 45 57.9**	**-0.8**
	baz=206						
TWF1				*e*S	**Sn**	**10 46 07.0**	**-0.4**
	baz=206						
DPDB	**Guoxing**	**0.62**	**284**	*e*P	**Pb**	**10 45 58.4**	**-0.7**
	baz=283						
SMLT	**Sun Moon Lake**	**0.62**	**270**	P	**Pb**	**10 45 58.8**	**-0.6**
	baz=269						
SMLT				*e*S	**Sb**	**10 46 07.7**	**-0.2**
	baz=269						
WHYT	**Xinyi Township**	**0.69**	**254**	*e*P	**Pb**	**10 46 00.1**	**-0.3**
	baz=254						
WHYT				*e*S	**Sn**	**10 46 10.6**	**+0.7**
	baz=254						
WHP	**Taichung City**	**0.70**	**304**	*e*P	**Pn**	**10 46 00.6**	**+0.2**
	baz=303						
WHP				*e*S	**Sn**	**10 46 10.9**	**+0.8**
	baz=303						
ENTT	**Nioudou**	**0.75**	**359**	*i* P	**Pn**	**10 46 00.8**	**-0.2**
	baz=358						
ENTT				S	**Sn**	**10 46 11.1**	**-0.1**
	baz=358						
TWC	**Suao**	**0.76**	**19**	*e*P	**Pn**	**10 46 00.8**	**-0.3**
	baz=18						
TWC				*e*S	**Sn**	**10 46 11.6**	**+0.2**
	baz=18						
WJS	**Zhushan**	**0.79**	**265**	*e*P	**Pb**	**10 46 01.6**	**-0.4**
	baz=265						
WJS				*e*S	**Sn**	**10 46 13.0**	**+0.9**
	baz=265						
YHNB	**Yeheng**	**0.80**	**346**	*i* P	**Pb**	**10 46 01.8**	**-0.5**
	baz=345						
YHNB				S	**Sb**	**10 46 12.2**	**-0.6**
	baz=345						
NSK	**Sanguang**	**0.81**	**345**	P	**Pn**	**10 46 01.8**	**-0.1**
	baz=345						
NSK				S	**Sb**	**10 46 12.5**	**-0.6**
	baz=345						
CHKT	**Chengkung**	**0.81**	**194**	*e*P	**Pn**	**10 46 01.7**	**-0.1**
	baz=194						
CHKT				*e*S	**Sn**	**10 46 12.9**	**+0.2**
	baz=194						
WNT	**Mingjian**	**0.82**	**269**	*e*P	**Pb**	**10 46 02.2**	**-0.3**
	baz=269						
WNT				*e*S	**Sb**	**10 46 13.7**	**+0.4**
	baz=269						
EOS1	**EOS1**	**0.82**	**37**	*e*P	**Pb**	**10 46 02.6**	**+0.1**
	baz=36						
EOS1				*e*S	**Sb**	**10 46 13.8**	**+0.4**
	baz=36						
TCU	**Taichung**	**0.87**	**287**	*e*P	**Pb**	**10 46 03.0**	**-0.3**
	baz=287						
TCU				*e*S	**Sb**	**10 46 15.2**	**+0.6**
	baz=287						
ELDTW	**Lidau**	**0.87**	**217**	*e*P	**Pn**	**10 46 01.7**	**-1.0**
	baz=216						
ELDTW				*e*S	**Sn**	**10 46 13.7**	**-0.6**
	baz=216						
TWQ1	**Liyutan**	**0.87**	**302**	P	**Pb**	**10 46 03.2**	**-0.1**
	baz=301						
TWQ1				S	**Sb**	**10 46 15.5**	**+0.8**
	baz=301						
CHN5	**Tsauling**	**0.88**	**251**	P	**Pn**	**10 46 02.9**	**0.0**
	baz=250						
CHN5				S	**Sb**	**10 46 15.6**	**+0.7**
	baz=250						
ILA	**Ilan**	**0.89**	**10**	*e*S	**Sb**	**10 46 14.8**	**-0.3**
	baz=9.0						
NSTT	**Nanjuang**	**0.91**	**324**	P	**Pb**	**10 46 04.1**	**+0.1**
	baz=324						
NSTT				*e*S	**Sb**	**10 46 16.5**	**+0.7**
	baz=324						
LIOB	**Emei**	**0.91**	**326**	*e*P	**Pb**	**10 46 04.1**	**0.0**
	baz=325						
LIOB				*e*S	**Sb**	**10 46 16.1**	**+0.2**
	baz=325						
NSY	**Sanyi**	**0.92**	**305**	*e*P	**Pb**	**10 46 03.5**	**-0.6**
	baz=304						
NSY				*e*S	**Sb**	**10 46 16.2**	**+0.2**
	baz=304						
WCHH	**Zhanghua**	**0.96**	**282**	*e*P	**Pb**	**10 46 04.5**	**-0.3**
	baz=281						
WCHH				*e*S	**Sb**	**10 46 17.6**	**+0.6**
	baz=281						
NMLH	**Miaoli**	**0.97**	**312**	*e*P	**Pn**	**10 46 04.0**	**0.0**
	baz=311						
NMLH				*e*S	**Sb**	**10 46 17.4**	**0.0**
	baz=311						
WDJ	**Dajia District**	**0.97**	**298**	*e*P	**Pn**	**10 46 04.0**	**-0.1**
	baz=297						
WDJ				*e*S	**Sb**	**10 46 17.7**	**+0.1**
	baz=297						
WDLH	**Douliu**	**0.98**	**258**	*e*P	**Pn**	**10 46 04.2**	**+0.1**
	baz=258						
WDLH				*e*S	**Sb**	**10 46 17.6**	**0.0**
	baz=258						
NTC	**Toucheng**	**0.99**	**13**	*e*P	**Pb**	**10 46 04.5**	**-0.8**
	baz=12						
NTC				*e*S	**Sb**	**10 46 17.9**	**-0.1**
	baz=12						
STYT	**Tauyuan**	**1.05**	**227**	*e*P	**Pn**	**10 46 05.0**	**-0.1**
	baz=226						
STYT				*e*S	**Sb**	**10 46 19.3**	**-0.5**
	baz=226						
SBCB	**Hsinchu**	**1.05**	**329**	*e*S	**Sb**	**10 46 20.1**	**+0.3**
	baz=328						
CHN4	**Tsaushan**	**1.05**	**240**	P	**Pb**	**10 46 05.6**	**-0.8**
	baz=239						
CHN4				*e*S	**Sb**	**10 46 19.5**	**-0.4**
	baz=239						
CHN2	**Minshiung**	**1.08**	**251**	*e*P	**Pn**	**10 46 05.9**	**+0.4**
	baz=250						
CHN2				*e*S	**Sb**	**10 46 20.1**	**-0.4**
	baz=250						
TATO	**Taipei**	**1.08**	**355**	*e*S	**Sb**	**10 46 20.3**	**-0.5**
	baz=355						
TWA	**Mucha**	**1.09**	**0**	*e*P	**Pn**	**10 46 05.6**	**-0.1**
TWA				*e*S	**Sb**	**10 46 20.4**	**-0.4**
WTP	**Ta-pu**	**1.09**	**234**	*e*S	**Sb**	**10 46 20.8**	**-0.3**
	baz=234						
TIPB	**Shuangxi**	**1.10**	**12**	*e*P	**Pn**	**10 46 05.9**	**+0.1**
	baz=11						
TIPB				*e*S	**Sn**	**10 46 20.2**	**+0.2**
	baz=11						
RLNB	**Erlin**	**1.12**	**270**	P	**Pn**	**10 46 06.2**	**+0.2**
	baz=270						
RLNB				*e*S	**Sb**	**10 46 21.4**	**-0.3**
	baz=270						
CHY	**Chiayi**	**1.13**	**250**	*e*P	**Pn**	**10 46 06.3**	**+0.1**
	baz=249						
CHY				*e*S	**Sb**	**10 46 21.5**	**-0.5**
	baz=249						
NCU	**National Centr**	**1.14**	**342**	*e*S	**Sb**	**10 46 21.7**	**-0.5**
	baz=341						
TWG	**Pinlang**	**1.16**	**204**	*e*P	**Pn**	**10 46 06.7**	**0.0**
	baz=203						
TWG				*e*S	**Sn**	**10 46 21.1**	**-0.3**
	baz=203						
TWGBT	**Beinan**	**1.16**	**204**	*e*P	**Pn**	**10 46 06.6**	**-0.1**
	baz=203						
TWGBT				*e*S	**Sn**	**10 46 21.3**	**-0.1**
	baz=203						
TWK	**Hsinying**	**1.18**	**239**	P	**Pn**	**10 46 06.9**	**0.0**
	baz=238						
TWK				S	**Sn**	**10 46 22.6**	**+0.7**
	baz=238						
NWF	**Wu-fen Shan**	**1.19**	**9**	*e*P	**Pn**	**10 46 07.4**	**+0.2**
	baz=8.0						
NWF				*e*S	**Sn**	**10 46 22.7**	**+0.4**
	baz=8.0						
WFSB	**Wu-fen Shan**	**1.19**	**9**	*e*S	**Sn**	**10 46 22.1**	**-0.1**
	baz=8.0						
CHN1	**Nanshi**	**1.20**	**234**	*e*P	**Pn**	**10 46 07.4**	**+0.2**
	baz=234						
CHN1				S	**Sb**	**10 46 23.5**	**-0.5**
	baz=234						
SNST	**Tainan City**	**1.20**	**236**	*e*P	**Pn**	**10 46 07.3**	**+0.2**
	baz=236						
SNST				*e*S	**Sn**	**10 46 22.9**	**+0.6**
	baz=236						
TWS1	**Kuangyinshan**	**1.22**	**353**	*e*P	**Pn**	**10 46 07.6**	**+0.2**
	baz=352						
TWS1				S	**Sb**	**10 46 24.2**	**-0.3**
	baz=352						
SGST	**Jiashian**	**1.22**	**229**	*e*P	**Pn**	**10 46 07.8**	**+0.3**
	baz=228						
SGST				*e*S	**Sb**	**10 46 23.6**	**-1.0**
	baz=228						
YM01	**YM01**	**1.25**	**359**	*e*P	**Pn**	**10 46 07.7**	**-0.2**
	baz=359						
YM01				*e*S	**Sn**	**10 46 23.6**	**-0.2**
	baz=359						
YM05	**YM05**	**1.27**	**359**	*e*P	**Pn**	**10 46 07.8**	**-0.5**
	baz=358						
YM05				*e*S	**Sn**	**10 46 24.3**	**+0.1**
	baz=358						
YM03	**YM03**	**1.28**	**358**	*e*P	**Pn**	**10 46 08.2**	**-0.2**
	baz=357						
YM03				*e*S	**Sb**	**10 46 25.6**	**-0.9**
	baz=357						
JYNG	**Yonagunijimaku**	**1.36**	**65**	P	**Pn**	**10 46 09.7**	**+0.3**
JYNG				*e*S	**Sn**	**10 46 27.0**	**+0.6**
CHN8	**Yiju**	**1.37**	**247**	*e*S	**Sn**	**10 46 27.3**	**+0.8**
	baz=246						
YOJ	**Yonaguni jima**	**1.42**	**66**	*e*P	**Pn**	**10 46 10.2**	**0.0**
	baz=65						
YOJ				*e*S	**Sn**	**10 46 28.1**	**+0.2**
	baz=65						
YOJ	**Yonaguni jima**	**1.42**	**66**	P	**Pn**	**10 46 10.5**	**+0.2**
YOJ				S	**Sb**	**10 46 28.8**	**-1.6**
TWM1	**Shoushan**	**1.50**	**225**	*e*S	**Sn**	**10 46 30.9**	**+1.0**
	baz=225						
MASBT	**Mashibuluo**	**1.54**	**215**	*e*P	**Pn**	**10 46 11.7**	**-0.2**
	baz=214						
MASBT				*e*S	**Sn**	**10 46 31.8**	**+1.0**
	baz=214						
EAST	**Anshuo**	**1.64**	**204**	*e*P	**Pn**	**10 46 14.4**	**+1.0**
	baz=204						
EAST				*e*S	**Sn**	**10 46 34.0**	**+0.6**
	baz=204						
SCZT	**Fangliau**	**1.75**	**211**	*e*S	**Sn**	**10 46 36.4**	**+0.4**
	baz=210						
PHUB	**P'eng-hu**	**1.88**	**259**	*e*S	**Sn**	**10 46 39.5**	**+0.3**
	baz=258						
IRIF	**Iriomote-Funau**	**2.01**	**77**	P	**Pn**	**

*JMA **30** 10:52:30.6, 24°.30N×122°.08E, h29km±2km, M2.0*
*ISCJB **30** 10:52:31.1±0.3, 24°.39N±0°.02×122°.11E±0°.02, h22km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=137.0*
*TAP **30** 10:52:31.4, 24°.40N×122°.02E, h15km, ML2.8, B*
ISC 30 10:52:30.9±0.9, 24°.37N±0°.02×122°.08E±0°.02, h20km±2km, n57, σ0s62/111, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.18**	**14**	*e*P	**Pb**	**10 52 36.3**	**+0.1**
	baz=34						
EOS1				*e*S	**Sb**	**10 52 40.4**	**+0.5**
	baz=34						
NANB	**Nanao**	**0.30**	**280**	*i* P	**Pb**	**10 52 37.5**	**-0.2**
	baz=276						
NANB				S	**Sb**	**10 52 42.0**	**-0.3**
	baz=276						
ENA	**Nanau**	**0.31**	**280**	*i* P	**Pb**	**10 52 37.4**	**-0.3**
	baz=275						
ENA				S	**Sb**	**10 52 42.1**	**-0.3**
	baz=275						
TWC	**Suao**	**0.32**	**318**	*i* P	**Pb**	**10 52 37.7**	**-0.1**
	baz=325						
TWC				*i* S	**Sb**	**10 52 42.1**	**-0.4**
	baz=325						
NACB	**Ninganchiao**	**0.48**	**246**	P	**Pb**	**10 52 40.1**	**-0.6**
	baz=239						
NACB				S	**Sb**	**10 52 47.7**	**+0.3**
	baz=239						
EGS	**Suao**	**0.49**	**344**	*e*P	**Pb**	**10 52 41.0**	**+0.2**
	baz=351						
EGS				S	**Sb**	**10 52 47.5**	**0.0**
	baz=351						
ILA	**Ilan**	**0.49**	**322**	*e*P	**Pb**	**10 52 40.5**	**-0.3**
	baz=326						
ILA				*e*S	**Sb**	**10 52 47.9**	**+0.2**
	baz=326						
TWE	**Neicheng**	**0.51**	**313**	P	**Pb**	**10 52 41.2**	**+0.1**
	baz=316						
TWE				*e*S	**Sb**	**10 52 47.5**	**-0.7**
	baz=316						
TWD	**Chiawan**	**0.53**	**237**	*e*P	**Pb**	**10 52 41.8**	**+0.3**
	baz=229						
TWD				*e*S	**Sn**	**10 52 49.7**	**-1.9**
	baz=229						
NTC	**Toucheng**	**0.53**	**335**	*e*P	**Pb**	**10 52 41.3**	**-0.2**
	baz=339						
NTC				S	**Sb**	**10 52 48.6**	**-0.1**
	baz=339						
ENTT	**Nioudou**	**0.54**	**300**	P	**Pb**	**10 52 41.6**	**-0.1**
	baz=300						
ENTT				*e*S	**Sb**	**10 52 48.3**	**-0.8**
	baz=300						
ETLH	**Xiulin Townshi**	**0.57**	**253**	P	**Pb**	**10 52 41.9**	**-0.4**
	baz=248						
ETLH				S	**Sb**	**10 52 50.4**	**+0.4**
	baz=248						
NNSB	**Datong**	**0.64**	**275**	P	**Pb**	**10 52 43.2**	**-0.2**
	baz=272						
NNSB				S	**Sb**	**10 52 51.6**	**-0.4**
	baz=272						
TWB1	**Santiao Chiao**	**0.64**	**353**	*e*P	**Pb**	**10 52 43.5**	**+0.1**
	baz=358						
TWB1				*e*S	**Sb**	**10 52 52.4**	**+0.5**
	baz=358						
ENLB	**Shoufeng**	**0.64**	**223**	*e*P	**Pb**	**10 52 43.1**	**-0.3**
	baz=217						
ENLB				*e*S	**Sn**	**10 52 53.4**	**-0.9**
	baz=217						
TIPB	**Shuangxi**	**0.64**	**339**	*i* P	**Pb**	**10 52 43.7**	**+0.2**
	baz=343						
TIPB				*i* S	**Sb**	**10 52 52.1**	**+0.1**
	baz=343						
NNS	**Nan Shan**	**0.65**	**276**	P	**Pb**	**10 52 43.4**	**-0.2**
	baz=273						
NNS				S	**Sb**	**10 52 51.8**	**-0.5**
	baz=273						
YHNB	**Yeheng**	**0.70**	**295**	P	**Pb**	**10 52 44.8**	**+0.2**
	baz=294						
YHNB				S	**Sb**	**10 52 53.6**	**-0.2**
	baz=294						
NSK	**Sanguang**	**0.72**	**295**	*e*P	**Pb**	**10 52 44.7**	**-0.2**
	baz=294						
NSK				*e*S	**Sb**	**10 52 54.0**	**-0.3**
	baz=294						
NWF	**Wu-fen Shan**	**0.75**	**339**	*e*P	**Pb**	**10 52 45.9**	**+0.7**
	baz=342						
NWF				S	**Sb**	**10 52 56.3**	**+1.2**
	baz=342						
WFSB	**Wu-fen Shan**	**0.75**	**339**	*e*P	**Pb**	**10 52 45.3**	**+0.1**
	baz=342						
WFSB				*e*S	**Sb**	**10 52 56.2**	**+1.3**
	baz=342						
TWA	**Mucha**	**0.75**	**323**	*e*P	**Pb**	**10 52 45.4**	**+0.1**
	baz=326						
TWA				*e*S	**Sb**	**10 52 55.7**	**+0.6**
	baz=326						
WHF	**Hehuan Shan**	**0.78**	**253**	P	**Pb**	**10 52 46.0**	**0.0**
	baz=249						
WHF				*e*S	**Sn**	**10 52 57.4**	**-0.9**
	baz=249						
JYNG	**Yonagunijimaku**	**0.79**	**84**	P	**Pb**	**10 52 45.6**	**-0.4**
JYNG				S	**Sb**	**10 52 56.2**	**-0.1**
TATO	**Taipei**	**0.81**	**318**	*e*P	**Pn**	**10 52 46.8**	**-0.2**
	baz=320						
TATO				S	**Sb**	**10 52 57.5**	**+0.9**
	baz=320						
ESL	**Shilin**	**0.81**	**227**	*e*P	**Pn**	**10 52 46.7**	**-0.5**
	baz=221						
ESL				*e*S	**Sn**	**10 52 58.3**	**-0.3**
	baz=221						
TWT	**Tachien**	**0.83**	**262**	*e*P	**Pn**	**10 52 47.6**	**0.0**
	baz=259						
TWT				*e*S	**Sn**	**10 52 59.0**	**-0.4**
	baz=259						
TDCB	**Techi**	**0.85**	**262**	*e*P	**Pn**	**10 52 47.8**	**0.0**
	baz=259						
TDCB				*e*S	**Sn**	**10 52 59.0**	**-0.7**
	baz=259						
YOJ	**Yonaguni jima**	**0.85**	**84**	*e*P	**Pn**	**10 52 48.5**	**+0.7**
	baz=85						
YOJ				*e*S	**Sn**	**10 53 01.6**	**+1.9**
	baz=85						
YOJ	**Yonaguni jima**	**0.85**	**84**	P	**Pb**	**10 52 46.6**	**-0.4**
YOJ				*e*S	**Sb**	**10 52 58.5**	**+0.5**
CHGB	**Renai**	**0.88**	**250**	P	**Pn**	**10 52 48.2**	**-0.1**
	baz=246						
CHGB				*e*S	**Sn**	**10 53 00.4**	**-0.3**
	baz=246						
YM01	**YM01**	**0.90**	**329**	*e*P	**Pn**	**10 52 48.7**	**+0.3**
	baz=331						
YM01				*e*S	**Sn**	**10 53 00.7**	**-0.1**
	baz=331						
YM05	**YM05**	**0.92**	**329**	*e*P	**Pb**	**10 52 48.0**	**-0.1**
	baz=331						
YM05				*e*S	**Sn**	**10 53 00.8**	**-0.5**
	baz=331						
EGFH	**Guangfu**	**0.92**	**220**	*e*P	**Pn**	**10 52 48.6**	**-0.1**
	baz=216						
EGFH				*e*S	**Sn**	**10 53 01.9**	**+0.7**
	baz=216						
YM04	**YM04**	**0.92**	**328**	*e*P	**Pn**	**10 52 48.7**	**0.0**
	baz=329						
YM04				*e*S	**Sn**	**10 53 01.0**	**-0.3**
	baz=329						
OWD	**Renai**	**0.92**	**243**	P	**Pn**	**10 52 48.6**	**-0.3**
	baz=239						
OWD				*e*S	**Sn**	**10 53 01.4**	**-0.2**
	baz=239						
TWS1	**Kuangyinshan**	**0.94**	**320**	*e*P	**Pn**	**10 52 49.2**	**+0.3**
	baz=322						
TWS1				*e*S	**Sn**	**10 53 01.4**	**-0.4**
	baz=322						
TWY	**Chenhua**	**1.00**	**334**	*e*S	**Sn**	**10 53 03.4**	**+0.1**
	baz=336						
LIOB	**Emei**	**1.01**	**286**	*e*P	**Pn**	**10 52 49.7**	**-0.2**
	baz=285						
LIOB				*e*S	**Sn**	**10 53 03.1**	**-0.4**
	baz=285						
NSTT	**Nanjuang**	**1.01**	**285**	*e*P	**Pn**	**10 52 50.4**	**+0.4**
	baz=283						
NSTT				*e*S	**Sn**	**10 53 03.5**	**-0.2**
	baz=283						
VWDT	**VWDT**	**1.06**	**234**	P	**Pb**	**10 52 50.9**	**+0.5**
	baz=231						
VWDT				*e*S	**Sn**	**10 53 05.6**	**+1.0**
	baz=231						
HGSD	**Ruisui**	**1.06**	**214**	*e*P	**Pb**	**10 52 51.4**	**+0.8**
	baz=210						
HGSD				*e*S	**Sn**	**10 53 06.7**	**+2.0**
	baz=210						
HSN	**Hsinchu**	**1.10**	**293**	*e*S	**Sb**	**10 53 04.7**	**-0.3**
	baz=294						
SMLT	**Sun Moon Lake**	**1.18**	**246**	*e*P	**Pb**	**10 52 53.0**	**+0.3**
	baz=242						
SMLT				*e*S	**Sn**	**10 53 09.2**	**+1.3**
	baz=242						
SSLB	**Suanglung**	**1.18**	**241**	*e*P	**Pb**	**10 52 52.8**	**+0.2**
	baz=237						
SSLB				*e*S	**Sn**	**10 53 08.8**	**+1.0**
	baz=237						
TWQ1	**Liyutan**	**1.19**	**269**	*e*P	**Pb**	**10 52 53.1**	**+0.4**
	baz=267						
TWQ1				*e*S	**Sn**	**10 53 08.8**	**+0.8**
	baz=267						
YULB	**Yu-li**	**1.21**	**216**	*e*P	**Pb**	**10 52 53.1**	**0.0**
	baz=213						
YULB				*e*S	**Sn**	**10 53 09.8**	**+1.3**
	baz=213						
TWF1	**Yuli**	**1.24**	**215**	*e*P	**Pb**	**10 52 54.3**	**+0.6**
	baz=211						
WHYT	**Xinyi Township**	**1.31**	**239**	*e*P	**Pb**	**10 52 55.1**	**+0.3**
	baz=236						
WHYT				*e*S	**Sb**	**10 53 12.0**	**+0.9**
	baz=236						
WJS	**Zhushan**	**1.35**	**246**	*e*P	**Pb**	**10 52 55.9**	**+0.4**
	baz=243						
WJS				*e*S	**Sb**	**10 53 13.1**	**+0.7**
	baz=243						
IRIF	**Iriomote-Funau**	**1.51**	**91**	P	**Pn**	**10 52 56.0**	**-0.7**
IRIF				*e*S	**Sn**	**10 53 14.5**	**-1.2**
CHN4	**Tsaushan**	**1.70**	**234**	*e*P	**Pb**	**10 53 00.6**	**-0.9**
	baz=231						
CHN4				*e*S	**Sb**	**10 53 22.3**	**-0.1**
	baz=231						
WTP	**Ta-pu**	**1.75**	**230**	*e*P	**Pb**	**10 53 02.0**	**-0.3**
	baz=227						
WTP				*e*S	**Sb**	**10 53 23.1**	**-0.7**
	baz=227						
JKRS	**Kuro-shima**	**1.77**	**94**	P	**Pn**	**10 53 00.3**	**0.0**
JKRS				*e*S	**Sn**	**10 53 22.3**	**+0.1**
TWK	**Hsinying**	**1.83**	**233**	*e*P	**Pn**	**10 53 01.5**	**+0.3**
	baz=230						
TWK				*e*S	**Sb**	**10 53 25.5**	**-0.6**
	baz=230						
JIJ	**Ishigaki jima**	**1.88**	**90**	P	**Pn**	**10 53 01.4**	**-0.5**
JIJ				*e*S	**Sn**	**10 53 23.9**	**-1.1**
JISG	**Ishigakijimahi**	**2.04**	**84**	P	**Pn**	**10 53 03.4**	**-0.7**
JISG				S	**Sn**	**10 53 28.4**	**-0.6**

*ISCJB **30** 11:00:06.7±1.2, 38°.46N±0°.06×39°.26E±0°.07, h2km±15km, Error ellipse: s-maj=10.7km s-min=9.1km az=152.7*
*DDA **30** 11:00:06.7, 38°.43N×39°.25E, h7km±5km, ML2.8*
*ISK **30** 11:00:06.6, 38°.44N×39°.33E, h1km, ML2.2/3*
ISC 30 11:00:06.8±1.1, 38°.44N±0°.05×39°.27E±0°.04, h4km±11km, n11, σ0s20/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.07**	**154**	PG	**Pg**	**11 00 08.4**	**0.0**
SVRC				SG	**Sg**	**11 00 09.4**	**-0.1**
DYBB	**Diyarbakir**	**0.84**	**125**	PG	**Pb**	**11 00 23.5**	**-0.4**
DIYA	**Diyarbakir**	**0.84**	**127**	*i* P	**Pb**	**11 00 24.4**	**+0.4**
HANI	**Diyarbakir_Han**	**0.89**	**91**	*i* P	**Pb**	**11 00 24.8**	**+0.1**
HANI				IAML_P			
	comp=Z,894nm,0.2s						
KEMA	**Kemaliye**	**1.03**	**324**	*i* P	**Pg**	**11 00 26.6**	**+0.1**
URFA	**Urfa**	**1.06**	**200**	PG	**Pn**	**11 00 28.3**	**-0.1**
AKCD	**Akcadag**	**1.07**	**263**	*i* P	**Pg**	**11 00 27.3**	**0.0**
AKCD				*i* S	**Sg**	**11 00 41.2**	**+0.1**
HEKM	**Malatya_Hekimh**	**1.12**	**294**	*i* P	**Pg**	**11 00 28.3**	**+0.1**
HEKM				IAML_P			
	comp=Z,743nm,0.2s						
ERZN	**Erzincan**	**1.20**	**17**	PN	**Pb**	**11 00 30.1**	**-0.1**
MAZI	**Mazidag**	**1.35**	**136**	PN	**Pb**	**11 00 32.8**	**+0.2**
GZT	**Gaziantep**	**1.73**	**232**	*i* P	**Pb**	**11 00 39.1**	**0.0**
GZT				IAML_P			
	comp=Z,502nm,0.1s						

*ISK **30** 11:02:06.8, 38°.43N×39°.29E, h4km, ML2.3/4*
*DDA **30** 11:02:06.6, 38°.43N×39°.27E, h7km±3km, ML2.6*
ISC 30 11:02:06.7±1.0, 38°.43N±0°.05×39°.28E±0°.04, h5km±9km, n11, σ0s36/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.06**	**157**	PG	**Pg**	**11 02 08.3**	**+0.1**
SVRC				SG	**Sg**	**11 02 09.3**	**0.0**
TNCL	**Tunceli-Merkez**	**0.71**	**17**	*i* P	**Pg**	**11 02 20.2**	**-0.2**
TNCL				IAML_P			
	comp=Z,202nm,0.2s						
DYBB	**Diyarbakir**	**0.83**	**125**	PG	**Pb**	**11 02 23.4**	**-0.3**
DIYA	**Diyarbakir**	**0.84**	**127**	*i* P	**Pn**	**11 02 24.9**	**-0.3**
HANI	**Diyarbakir_Han**	**0.88**	**91**	*i* P	**Pb**	**11 02 24.8**	**+0.2**
HANI				*i* S	**Sb**	**11 02 37.1**	**+0.4**
HANI				IAML_P			
	comp=Z,902nm,0.1s						
KEMA	**Kemaliye**	**1.04**	**324**	*i* P	**Pb**	**11 02 27.0**	**-0.2**
KEMA				*i* S	**Sb**	**11 02 41.9**	**+0.7**
URFA	**Urfa**	**1.05**	**200**	PG	**Pn**	**11 02 27.9**	**-0.3**
AKCD	**Akcadag**	**1.07**	**263**	*i* P	**Pg**	**11 02 27.2**	**-0.1**
HEKM	**Malatya_Hekimh**	**1.12**	**294**	*i* P	**Pb**	**11 02 28.7**	**-0.1**
HEKM				IAML_P			
	comp=Z,806nm,0.2s						
MAZI	**Mazidag**	**1.34**	**136**	PN	**Pg**	**11 02 32.6**	**+0.2**
DARE	**Darende-Malaty**	**1.42**	**276**	PN	**Pg**	**11 02 34.2**	**+0.4**

*ISCJB **30** 11:05:23.5±1.8, 14°.1N±0°.1×92°.27W±0°.09, h67km, Error ellipse: s-maj=20.1km s-min=8.1km az=32.5*
*MEX **30** 11:05:25.5±0.3, 14°.23N×92°.30W, h16km±999km, MD3.3*
*GCG **30** 11:05:27.7±0.5, 14°.58N×92°.00W, h59km±10km, MD3.6*
ISC 30 11:05:25.1±2.4, 14°.3N±0°.1×92°.2W±0°.1, h67km, n8, σ2s28/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.62**	**355**	*e*P	**Pn**	**11 05 36.6**	**-2.3**
THIG				*i* S	**Sn**	**11 05 44.7**	**-4.3**
ERG	**Entre ros, C**	**0.64**	**76**	*e*P	**Pn**	**11 05 38.9**	**-0.2**
STG3	**Santiaguito 3,**	**0.75**	**56**	*e*P	**Pn**	**11 05 39.7**	**-0.9**
FUG	**Fuego 3**	**1.34**	**83**	*e*P	**Pn**	**11 05 47.7**	**-0.3**
PCG	**Pacaya**	**1.56**	**86**	*e*S	**Sn**	**11 06 10.1**	**-0.4**
IXG	**Ixpaco**	**1.72**	**94**	*e*P	**Pn**	**11 05 54.2**	**+1.2**
IXG				*e*S	**Sn**	**11 06 14.4**	**+0.1**
CCIG	**Comitan**	**1.98**	**2**	*e*P	**Pn**	**11 05 58.1**	**+1.5**
CCIG				*e*S	**Sn**	**11 06 24.0**	**+3.4**
CMIG	**Matias Romero**	**3.79**	**318**	*e*P	**Pn**	**11 06 22.4**	**+1.3**

*IDC **30** 11:06:32.4±1.6, 3°.13S×129°.77E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.6/32, mbtmp3.7/4, ML3.4/2, Error ellipse: s-maj=51.6km s-min=25.4km az=87.0*
*ISCJB **30** 11:06:36.1±0.6, 3°.07S±0°.06×129°.99E±0°.05, h25km, mb3.4/1, Error ellipse: s-maj=9.8km s-min=5.3km az=146.1*
*DJA **30** 11:06:36.5±1.3, 3°.S±4°.×13°.0E±°, h19km±11km, M3.4/6, MLv3.4/6*
ISC 30 11:06:36.7±0.9, 3°.08S±0°.06×129°.99E±0°.05, h25km, n10, σ1s25/14, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.09**	**256**	P	**Pn**	**11 06 56.7**	**+0.4**
MSAI				S	**Sb**	**11 07 12.8**	**+2.2**
BNDI	**Bandanaira**	**1.43**	**183**	P	**Pn**	**11 07 01.6**	**+0.5**
AAI	**Ambon**	**1.89**	**251**	P	**Pn**	**11 07 08.0**	**+0.7**
FAKI	**Fak Fak**	**2.27**	**86**	P	**Pn**	**11 07 13.5**	**+1.0**
FAKI				S	**Sn**	**11 07 40.9**	**+1.2**
SIJI	**Sorong**	**2.54**	**30**	Pn	**Pn**	**11 07 15.8**	**-0.6**
	7.2nm,0.3s,baz=275,slow=22,SNR=32						
SIJI				Sn	**Sn**	**11 07 46.9**	**+0.4**
	7.1nm,0.3s,baz=208,slow=23,SNR=9.7						
SWI	**Sorong**	**2.54**	**30**	P	**Pn**	**11 07 16.5**	**+0.1**
SWI				S	**Sn**	**11 07 47.7**	**+1.1**
NLAI	**Namlea**	**2.89**	**267**	P	**Pn**	**11 07 20.2**	**-0.9**
WRA	**Warramunga Arr**	**17.29**	**166**	P	**Pn**	**11 10 34.1**	**-2.4**
	0.2nm,0.3s,baz=340,slow=12,SNR=6.9						
ASAR	**Alice Springs**	**20.81**	**170**	P	**P**	**11 11 15.6**	**-0.8**
	3.9nm,0.7s,baz=349,slow=9.7,SNR=56						
MKAR	**Makanchi Array**	**64.98**	**326**	P	**P**	**11 17 14.4**	**-0.1**
	0.2nm,0.5s,baz=123,slow=5.3,SNR=3.7						

MAN 30 11:16:39.7, 9°.89N×123°.10E, h1km, mb4.3, ML3.1, MS2.8, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.56**	**166**	‖ *i* P	Pb	11 16 51.5	-0.8
SNPH				*i* S	Sb	11 16 59.9	-0.9
TBP	**Tagbilaran**	**0.77**	**105**	*e*P	Pg	11 16 54.5	0.0
LLP	**Lapu-Lapu**	**0.95**	**63**	*e*P	Pg	11 16 57.6	-0.3
LLP				*e*S	Sg	11 17 10.4	+0.2
DCPH	**Dipolog City**	**1.32**	**169**	‖ *e*P	Pg	11 17 04.7	-0.3
DCPH				*e*S	Sb	11 17 22.6	-0.1
MSLP	**Maasin**	**1.75**	**82**	*e*P	Pn	11 17 11.4	+0.3
MSLP				*e*S	Sb	11 17 34.7	-0.3

*ATH **30** 11:41:25.9, 36°.07N×27°.70E, h64km±2km, ML3.2/12, Error ellipse: s-maj=2.7km s-min=0.8km az=119.0*
*ISCJB **30** 11:41:25.5±0.3, 36°.01N±0°.03×27°.76E±0°.03, h70km±6km, Error ellipse: s-maj=4.8km s-min=3.7km az=148.9*
*HLW **30** 11:41:25.2, 35°.86N×27°.92E, h10km±19km, Md4.1, Ml4.1*
*ISK **30** 11:41:26.2, 36°.09N×27°.70E, h64km±2km, ML3.3/23*
*THE **30** 11:41:28.6, 36°.12N×27°.55E, h18km±4km, ML3.4/6, Error ellipse: s-maj=4.7km s-min=0.6km az=104.0*
*DDA **30** 11:42:08.0, 36°.05N×27°.69E, h40km±1km, ML3.8*
ISC 30 11:41:25.9±1.2, 36°.08N±0°.03×27°.75E±0°.03, h68km±8km, n75, σ1s44/94, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.33**	**66**	PG	**Pn**	**11 41 37.9**	**+0.9**
ARG	**Arkhangelos**	**0.33**	**66**	P	**Pn**	**11 41 37.9**	**+0.9**
ARG				S	**Sn**	**11 41 45.4**	**+0.2**
ARG	**Arkhangelos**	**0.33**	**66**	P	**Pn**	**11 41 38.0**	**+0.9**
ARG				S	**Sn**	**11 41 45.6**	**+0.4**
ARG				AML	AML	11 41 46.5	
	comp=N,10394μm,0.1s						
ARG				AML	AML	11 41 46.6	
	comp=E,20626μm,0.2s						
BBRN	**Bozburun-Marma**	**0.64**	**23**	PG	**Pn**	**11 41 40.8**	**+0.8**
BBRN				SG	**Sn**	**11 41 51.0**	**+0.6**
DAT	**Datca**	**0.66**	**348**	PG	**Pn**	**11 41 41.0**	**+0.7**
DAT				SG	**Sn**	**11 41 51.2**	**+0.3**
DAT	**Datca**	**0.66**	**348**	*i* P	**Pn**	**11 41 42.0**	**+1.7**
DAT				*i* S	**Sn**	**11 41 50.3**	**-0.6**
DAT				IAML_P			
	comp=Z,17μm,0.2s						
DATC	**Datca-Mugla**	**0.68**	**354**	PG	**Pn**	**11 41 40.9**	**+0.5**
KARP	**Karpathos**	**0.72**	**222**	PG	**Pn**	**11 41 41.1**	**+0.2**
KARP	**Karpathos**	**0.72**	**222**	P	**Pn**	**11 41 41.1**	**+0.2**
KARP				S	**Sn**	**11 41 51.1**	**-0.8**
KARP	**Karpathos**	**0.72**	**222**	P	**Pn**	**11 41 41.1**	**+0.2**
KARP				S	**Sn**	**11 41 51.3**	**-0.7**
KARP				AML	AML	11 41 51.8	
	comp=E,22680μm,0.1s						
KARP				AML	AML	11 41 52.0	
	comp=N,18466μm,0.2s						
MRSB	**Marmaris-Mugla**	**0.73**	**30**	PG	**Pn**	**11 41 41.6**	**+0.6**
BDRM	**Kayabasi**	**1.01**	**346**	*i* P	**Pn**	**11 41 45.3**	**+0.8**
BDRM				*i* S	**Sn**	**11 41 58.8**	**+0.6**
DALY	**Dalyan (Mula)**	**1.03**	**45**	PG	**Pn**	**11 41 46.2**	**+1.5**
DALY	**Dalyan (Mula)**	**1.03**	**45**	*i* P	**Pn**	**11 41 46.8**	**+2.1**
DALY				*i* S	**Sn**	**11 41 59.8**	**+1.2**
DALY				IAML_P			
	comp=Z,8μm,0.2s						
BODT	**Bodrum**	**1.04**	**340**	PG	**Pn**	**11 41 45.4**	**+0.6**
TURN	**Turunc**	**1.04**	**41**	PG	**Pn**	**11 41 42.8**	**-2.0**
TURN	**Turunc**	**1.04**	**41**	*i* P	**Pn**	**11 41 43.6**	**-1.3**
TURN				*i* S	**Sn**	**11 41 54.9**	**-4.0**
YER	**Yerkesik**	**1.13**	**22**	PN	**Pn**	**11 41 47.6**	**+1.6**
FETY	**Fethiye**	**1.21**	**63**	PN	**Pn**	**11 41 47.9**	**+0.9**
FETY	**Fethiye**	**1.21**	**63**	*i* P	**Pn**	**11 41 48.6**	**+1.6**
FETY				IAML_P			
	comp=Z,10μm,0.3s						
KSL	**Kastellorizon**	**1.48**	**87**	P	**Pn**	**11 41 51.7**	**+1.1**
KSL				AML	AML	11 42 11.9	
	comp=N,659μm,0.2s						
KSL				AML	AML	11 42 12.4	
	comp=E,1380μm,0.3s						
AKAS	**Kas**	**1.51**	**84**	PN	**Pn**	**11 41 51.9**	**+0.9**
AKAS	**Kas**	**1.51**	**84**	*i* P	**Pn**	**11 41 52.0**	**+1.0**
AKAS				IAML_P			
	comp=Z,14μm,0.2s						
AYDN	**Tasoluk**	**1.58**	**4**	*i* P	**Pn**	**11 41 53.4**	**+1.6**
AYDN				*i* S	**Sn**	**11 42 09.0**	**-2.4**
AYDN				IAML_P			
	comp=Z,5μm,0.2s						
ZKR	**Zakros**	**1.58**	**233**	PN	**Pn**	**11 41 53.1**	**+1.2**
ZKR	**Zakros**	**1.58**	**233**	P	**Pn**	**11 41 52.8**	**+0.9**
ZKR				S	**Sn**	**11 42 12.3**	**+0.8**
ZKR	**Zakros**	**1.58**	**233**	P	**Pn**	**11 41 52.7**	**+0.9**
ZKR				S	**Sn**	**11 42 11.9**	**+0.5**
ZKR				AML	AML	11 42 13.7	
	comp=E,381μm,0.2s						
ZKR				AML	AML	11 42 13.8	
	comp=N,174μm,0.3s						
STIA	**Sitia Lasithi**	**1.61**	**237**	P	**Pn**	**11 41 53.3**	**+1.0**
ANAF	**Anafi Island**	**1.62**	**280**	P	**Pn**	**11 41 52.7**	**+0.3**
ANAF				S	**Sn**	**11 42 11.1**	**-1.4**
ANAF	**Anafi Island**	**1.62**	**280**	P	**Pn**	**11 41 53.3**	**+0.9**
ANAF				S	**Sn**	**11 42 12.7**	**+0.2**
ANAF				AML	AML	11 42 13.6	
	comp=N,7702μm,0.3s						
ANAF				AML	AML	11 42 14.0	
	comp=E,7644μm,0.2s						
GCAM	**G?zelcaml?**	**1.67**	**346**	PN	**Pn**	**11 41 54.2**	**+1.2**
GCAM	**G?zelcaml?**	**1.67**	**346**	*i* P	**Pn**	**11 41 54.2**	**+1.2**
GCAM				*i* S	**Sn**	**11 42 08.4**	**-5.0**
SMG	**Samos**	**1.78**	**336**	P	**Pn**	**11 41 55.5**	**+0.9**
SMG				S	**Sn**	**11 42 17.1**	**+0.9**
SMG	**Samos**	**1.78**	**336**	P	**Pn**	**11 41 55.5**	**+0.9**
SMG				S	**Sn**	**11 42 17.3**	**+1.0**
SMG				AML	AML	11 42 18.3	
	comp=N,739μm,0.4s						
SMG				AML	AML	11 42 18.7	
	comp=E,546μm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**1.86**	**3**	PN	**Pn**	**11 41 56.9**	**+1.1**
ELL	**Elmali**	**1.86**	**69**	PN	**Pn**	**11 41 57.7**	**+2.0**
SANT	**Santorini**	**1.88**	**279**	PN	**Pn**	**11 41 56.4**	**+0.6**
SANT	**Santorini**	**1.88**	**279**	P	**Pn**	**11 41 56.8**	**+0.9**
SANT				AML	AML	11 42 19.4	
	comp=N,405μm,0.2s						
SANT				AML	AML	11 42 21.1	
	comp=E,1134μm,0.3s						
NPS	**Neapolis**	**1.92**	**245**	P	**Pn**	**11 41 56.9**	**+0.5**
NPS				S	**Sn**	**11 42 18.7**	**-1.0**
NPS	**Neapolis**	**1.92**	**245**	P	**Pn**	**11 41 57.0**	**+0.5**
NPS				AML	AML	11 42 20.5	
	comp=E,745μm,0.4s						
NPS				AML	AML

URLA	**Izmir**	**2.45**	**338**	PN	**Pn**	**11 42 04.6**	**+1.0**
URLA	**Izmir**	**2.45**	**338**	*i* P	**Pn**	**11 42 04.9**	**+1.3**
IDI	**Anoyia**	**2.46**	**252**	PN	**Pn**	**11 42 04.1**	**+0.3**
IDI	**Anoyia**	**2.46**	**252**	P	**Pn**	**11 42 04.1**	**+0.3**
IDI				AML	AML	11 42 35.5	
	comp=N,203μm,0.2s						
IDI				AML	AML	11 42 36.8	
	comp=E,246μm,0.3s						
KULA	**Kula-Manisa**	**2.53**	**16**	PN	**Pn**	**11 42 07.4**	**+2.6**
SIVA	**Sivas**	**2.62**	**247**	P	**Pn**	**11 42 06.7**	**+0.8**
BCK	**Bucak**	**2.66**	**58**	PN	**Pn**	**11 42 08.8**	**+2.3**
CHOS	**Chios island**	**2.67**	**330**	PN	**Pn**	**11 42 07.9**	**+1.3**
KHAL	**Karahalli**	**2.67**	**31**	*i* P	**Pn**	**11 42 08.4**	**+1.7**
KHAL				IAML_P			
	comp=Z,717nm,0.2s						
SERI	**Serifos**	**2.84**	**293**	P	**Pn**	**11 42 10.3**	**+1.4**
VAM	**Vamos**	**2.97**	**258**	P	**Pn**	**11 42 11.7**	**+1.1**
IMMV	**Iera Moni Meta**	**3.13**	**260**	P	**Pn**	**11 42 14.5**	**+1.7**
KEPZ	**Antalya-Kepez**	**3.21**	**74**	*i* P	**Pn**	**11 42 16.9**	**+2.9**
KEPZ				IAML_P			
	comp=Z,829nm,0.2s						
GVD	**Gavdhos**	**3.24**	**249**	P	**Pn**	**11 42 15.9**	**+1.6**
VLY	**Voula,Athens**	**3.63**	**300**	P	**Pn**	**11 42 21.6**	**+2.0**
VLI	**Veliai**	**3.94**	**281**	P	**Pn**	**11 42 25.7**	**+1.9**
HBRG	**Burj al `Arab**	**5.77**	**162**	P	**Pn**	**11 42 48.0**	**-0.9**
	baz=162						
SWA2		**7.09**	**196**	P	**Pn**	**11 43 06.4**	**-0.6**
	baz=199						
HHAG	**Hagoal**	**7.12**	**148**	P	**Pn**	**11 43 07.1**	**-0.4**
	baz=148						
HHAG				AMP		11 44 00.0	
	baz=148						
HHAG				S	Sn	11 44 19.1	-7.8
	baz=148						
RSH		**7.14**	**134**	P	**Pn**	**11 43 05.7**	**-1.9**
	baz=133						
GLL	**Jalalah**	**7.29**	**152**	P	**Pn**	**11 43 08.1**	**-1.7**
	baz=152						
SUZ	**Suez**	**7.55**	**144**	P	**Pn**	**11 43 12.3**	**-0.9**
	baz=144						
HFRF	**Wahat Farafira**	**8.92**	**177**	P	**Pn**	**11 43 30.9**	**-1.1**
	baz=177						
HKAT	**Jabal Katrina**	**9.20**	**143**	P	**Pn**	**11 43 34.5**	**-1.5**
	baz=143						
HKAT				S	Sn	11 45 08.8	-9.3
	baz=143						

MEX 30 11:45:02.6±0.9, 16°.61N×94°.03W, h140km±11km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.89**	**79**	*i* P	Pn	11 45 24.2	-1.3
TGIG				*i* S	Sn	11 45 41.1	-1.9
CMIG	**Matias Romero**	**0.95**	**301**	*i* P	Pn	11 45 24.9	-1.2
CMIG				*e*S	Sn	11 45 41.4	-2.5
HUIG	**Huatulco**	**2.17**	**248**	*i* P	Pn	11 45 37.1	-2.1
HUIG				*i* S	Sn	11 46 06.2	-1.0
VHO	**Vista Hermosa**	**2.63**	**281**	*e*P	Pn	11 45 44.4	-0.7
VHO				*e*S	Sn	11 46 16.8	-1.0

*ISK **30** 11:48:58.3, 38°.59N×43°.07E, h27km, ML2.9/3*
*DDA **30** 11:48:59.5, 38°.65N×43°.11E, h7km±3km, ML2.8*
*ISCJB **30** 11:49:00.6±0.6, 38°.64N±0°.03×43°.12E±0°.04, h19km±9km, Error ellipse: s-maj=6.0km s-min=5.1km az=145.4*
ISC 30 11:48:59.2±1.0, 38°.66N±0°.03×43°.10E±0°.03, h16km±10km, n11, σ1s54/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.24**	**106**	PG	**Pb**	**11 49 05.8**	**+0.6**
VANB				SG	**Sb**	**11 49 10.8**	**+1.6**
TVAN	**Van**	**0.27**	**119**	*i* P	**Pb**	**11 49 06.5**	**+0.6**
TVAN				*i* S	**Sg**	**11 49 09.5**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.33**	**297**	*i* P	**Pb**	**11 49 07.7**	**+0.9**
ADCV				*i* S	**Sb**	**11 49 12.9**	**+1.0**
GEVA	**Gevas**	**0.35**	**185**	*i* P	**Pn**	**11 49 07.8**	**-1.9**
GEVA				*i* S	**Sb**	**11 49 12.2**	**-0.3**
VMUR	**Van-Muradiye**	**0.49**	**48**	*i* P	**Pb**	**11 49 10.1**	**+0.5**
VMUR				*i* S	**Sb**	**11 49 17.3**	**+0.7**
MLAZ	**Malazgirt-MUS**	**0.64**	**318**	PG	**Pb**	**11 49 12.6**	**+0.4**
MLAZ				SG	**Sb**	**11 49 22.8**	**+1.8**
TUTA	**Tutak**	**0.77**	**343**	*i* P	**Pg**	**11 49 14.7**	**+0.3**
TUTA				*i* S	**Sg**	**11 49 19.7**	**-5.0**
AGRB	**Hanur-Agry**	**0.92**	**355**	PG	**Pb**	**11 49 16.9**	**0.0**
AGRB				SG	**Sg**	**11 49 30.2**	**+1.0**
HAKT	**HAKKARI**	**1.20**	**156**	*i* P	**Pg**	**11 49 22.8**	**+0.3**
MUSM	**Mu-Merkez**	**1.24**	**273**	*i* P	**Pg**	**11 49 23.6**	**+0.4**
MUSM				*i* S	**Sg**	**11 49 40.0**	**+0.5**
MUSM				IAML_P			
	comp=Z,764nm,0.2s						
EATA	**Eleskirt**	**1.29**	**339**	*i* P	**Pg**	**11 49 24.4**	**+0.2**
EATA				*i* S	**Sg**	**11 49 41.8**	**+0.8**
EATA				IAML_P			
	comp=Z,3μm,0.6s						

DJA 30 11:52:30.5±0.4, 8°S±3°×11°9E±°, h43km±29km, M3.5/7, MLv3.5/7, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.54**	**228**	P	Pn	11 52 54.2	-1.3
PLAI				S	Sn	11 53 14.5	+0.2
WBSI	**Waikabubak, Su**	**1.88**	**166**	P	Pn	11 53 00.0	-0.3
WBSI				S	Sn	11 53 24.4	+1.6
BSSI	**Bau Bau, Buton**	**2.25**	**43**	P	Pn	11 53 07.6	+2.3
BSSI				S	Sn	11 53 31.7	-0.2
BKSI	**Bulukumba**	**2.73**	**26**	P	Pn	11 53 10.4	-1.4
EDFI	**Ende, Flores**	**2.88**	**109**	P	Pn	11 53 14.2	+0.2
EDFI				S	Sn	11 53 46.8	-0.7
SRBI	**Singaraja**	**3.70**	**265**	P	Pn	11 53 25.3	+0.1

*ISCJB **30** 12:13:06.4±1.2, 49°.66N±0°.07×4°.51W±0°.10, h19km±20km, Error ellipse: s-maj=11.9km s-min=10.1km az=147.6*
*LDG **30** 12:13:06.4±0.2, 49°.69N×4°.60W, h8km, Ml2.5/9, Error ellipse: s-maj=4.2km s-min=3.6km az=132.0*
*BGS **30** 12:13:07.0±1.0, 49°.69N×4°.56W, h8km±23km, ML1.8*
ISC 30 12:13:05.6±1.2, 49°.71N±0°.03×4°.48W±0°.04, h15km±10km, n30, σ0s86/47, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCA1	**Carnmenellis**	**0.68**	**315**	*e*P	**Pb**	**12 13 18.6**	**-0.5**
CCA1				*e*S	**Sb**	**12 13 28.3**	**-0.1**
CCA1				IAML		12 13 29.7	
	comp=E,70nm,0.1s						
CCA1				IAML		12 13 29.9	
	comp=N,63nm,0.1s						
CCA1	**Carnmenellis**	**0.68**	**315**	*e*P	**Pb**	**12 13 18.6**	**-0.5**
CCA1				*e*S	**Sb**	**12 13 28.3**	**-0.1**
CCA1				IAML		12 13 29.7	
	comp=E,70nm,0.1s						
CCA1				IAML		12 13 29.9	
	comp=N,63nm,0.1s						
DYA	**Yadsworthy**	**0.81**	**26**	*e*P	**Pn**	**12 13 22.8**	**+0.4**
DYA				*e*S	**Sn**	**12 13 33.6**	**-0.5**
DYA				IAML		12 13 35.7	
	comp=E,14nm,0.2s						
DYA				IAML		12 13 36.0	
	comp=N,33nm,0.2s						
DYA	**Yadsworthy**	**0.81**	**26**	*e*P	**Pn**	**12 13 22.8**	**+0.4**
DYA				*e*S	**Sn**	**12 13 33.6**	**-0.5**
DYA				IAML		12 13 35.7	
	comp=E,14nm,0.2s						
DYA				IAML		12 13 36.0	
	comp=N,33nm,0.2s						
SBD	**Saint Breward**	**0.87**	**351**	*e*P	**Pn**	**12 13 23.9**	**+0.6**
SBD				*e*S	**Sn**	**12 13 34.8**	**-0.8**
SBD	**Saint Breward**	**0.87**	**351**	*e*P	**Pn**	**12 13 23.9**	**+0.6**
SBD				*e*S	**Sn**	**12 13 34.8**	**-0.8**
HTL	**Hartland**	**1.29**	**360**	*e*P	**Pg**	**12 13 31.0**	**+0.7**
HTL	**Hartland**	**1.29**	**360**	*e*P	**Pg**	**12 13 31.0**	**+0.7**
ROSF	**Rostrenen**	**1.59**	**150**	*e*Pn	**Pn**	**12 13 33.4**	**+0.3**
ROSF	**Rostrenen**	**1.59**	**150**	*e*P	**Pg**	**12 13 35.8**	**-0.2**
ROSF	**Rostrenen**	**1.59**	**150**	*e*Pg	**Pg**	**12 13 36.8**	**+0.8**
ROSF				*e*Sn	**Sn**	**12 13 53.3**	**0.0**
	comp=N,4.3nm,0.2s						
JSA	**Saint Aubin**	**1.59**	**108**	*e*P	**Pg**	**12 13 35.2**	**-0.9**
JSA				*e*S	**Sb**	**12 13 54.9**	**+0.3**
JSA				IAML		12 13 56.8	
	comp=N,15nm,0.2s						
JSA				IAML		12 13 57.3	
	comp=E,14nm,0.1s						
JSA	**Saint Aubin**	**1.59**	**108**	*e*P	**Pg**	**12 13 35.2**	**-0.9**
JSA				*e*S	**Sb**	**12 13 54.9**	**+0.3**
JSA				IAML		12 13 56.8	
	comp=N,15nm,0.2s						
JSA				IAML		12 13 57.3	
	comp=E,14nm,0.1s						
JLP	**Les Platons**	**1.62**	**106**	*e*P	**Pb**	**12 13 35.0**	**-0.1**
JLP	**Les Platons**	**1.62**	**106**	*e*P	**Pb**	**12 13 35.0**	**-0.1**
SGMF	**Saint Gilles**	**1.93**	**138**	*e*Pn	**Pn**	**12 13 38.3**	**+0.5**
SGMF	**Saint Gilles**	**1.93**	**138**	*e*P	**Pb**	**12 13 40.5**	**+0.1**
SGMF	**Saint Gilles**	**1.93**	**138**	*e*Pg	**Pg**	**12 13 43.1**	**+0.5**
SGMF				*e*Sn	**Sn**	**12 14 02.1**	**+0.3**
	comp=E,2.9nm,0.2s						
QUIF	**Quistinic**	**1.99**	**154**	*e*Pn	**Pn**	**12 13 38.3**	**-0.4**
QUIF	**Quistinic**	**1.99**	**154**	*e*Pg	**Pg**	**12 13 43.4**	**-0.4**
QUIF				*e*Sn	**Sn**	**12 14 02.8**	**-0.5**
QUIF				*e*Sg	**Sg**	**12 14 09.1**	**-0.5**
	comp=E,4.7nm,0.2s						
GRR	**Gorron**	**2.72**	**118**	*e*Pn	**Pn**	**12 13 49.5**	**+0.8**
GRR	**Gorron**	**2.72**	**118**	*e*Pg	**Pg**	**12 13 57.7**	**0.0**
GRR				*e*Sn	**Sn**	**12 14 21.6**	**+0.3**
	comp=E,3.7nm,0.2s						
GRR				*e*Sg	**Sg**	**12 14 33.7**	**+0.7**
	comp=E,3.2nm,0.2s						
FLN	**La Foliniere**	**2.78**	**108**	*e*Pn	**Pn**	**12 13 50.4**	**+0.8**
FLN	**La Foliniere**	**2.78**	**108**	*e*P	**Pb**	**12 13 53.3**	**-1.7**
	baz=295						
FLN				*e*Sn	**Sn**	**12 14 23.0**	**+0.1**
	comp=E,5.4nm,0.2s,baz=295						
LDF	**La Druitiere**	**3.07**	**110**	*e*Pn	**Pn**	**12 13 53.7**	**+0.2**
LDF	**La Druitiere**	**3.07**	**110**	*e*Pg	**Pg**	**12 14 04.4**	**+0.1**
LDF				*e*Sn	**Sn**	**12 14 29.6**	**-0.3**
LDF				*e*Sg	**Sg**	**12 14 44.4**	**+0.3**
	comp=E,2.1nm,0.2s						
MFF	**Saint Martin d**	**4.25**	**135**	*e*Pn	**Pn**	**12 14 08.3**	**-1.4**
MFF	**Saint Martin d**	**4.25**	**135**	*e*P	**Pn**	**12 14 13.6**	**+3.9**
MFF				*e*Sg	**Sg**	**12 15 21.1**	**-0.9**
	comp=E,1.2nm,0.3s						
AVF	**Avril sur Loir**	**5.99**	**116**	*e*Pn	**Pn**	**12 14 34.3**	**+0.7**
AVF	**Avril sur Loir**	**5.99**	**116**	*e*P	Pn	12 14 38.7	+5.1

KRSC 30 12:13:49.1±0.6, 59°.47N×164°.28E, h85km±5km, ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSR	**Ossora**	**0.66**	**251**	*e*P	Pn	12 14 05.8	+1.1
OSSR				*e*S	Sn	12 14 17.8	+1.4
TILK	**Tilichiki**	**1.36**	**43**	*e*P	Pn	12 14 14.4	+1.7
TILK				*e*S	Sn	12 14 32.8	+2.2
PALN	**Palana**	**2.25**	**262**	*e*P	Pn	12 14 26.0	+1.7
PALN				*e*S	Sn	12 14 54.6	+3.3
KMSK	**Kamenskaya**	**3.15**	**16**	*e*P	Pn	12 14 39.0	+2.6
KMSK				*e*S	Sn	12 15 14.7	+1.7

IDC 30 12:30:32.7±1.7, 3°.48S×145°.92E, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.4/25, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=129.9km s-min=28.9km az=118.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.89**	**214**	P	P	12 35 05.7	-0.2
	0.1nm,0.3s,baz=35,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**23.19**	**209**	P	P	12 35 41.4	0.0
	1.1nm,0.9s,baz=40,slow=8.6,SNR=9.7						
ILAR	**Eielson Array**	**83.60**	**23**	P	P	12 43 02.7	+0.1
	0.6nm,0.8s,baz=254,slow=5.6,SNR=6.1						

*JMA **30** 12:36:36.8±0.1, 23°.98N×121°.02E, h0km, M3.4*
*TAP **30** 12:36:37.1, 24°.00N×121°.01E, h17km, ML3.8, B*
*ISCJB **30** 12:36:38.0±0.1, 23°.999N±0°.009×121°.02E±0°.01, h20km±1km, Error ellipse: s-maj=1.9km s-min=1.3km az=34.2*
ISC 30 12:36:37.6±0.8, 24°.00N±0°.01×121°.01E±0°.01, h15km±5km, n125, σ0s76/206, 14C-35D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPDB	**Guoxing**	**0.08**	**292**	⇑*i*P	**Pg**	**12 36 40.9**	**+0.1**
	baz=295						
DPDB				*i* S	**Sg**	**12 36 43.4**	**+0.6**
	baz=295						
SMLT	**Sun Moon Lake**	**0.15**	**220**	⇑*i*P	**Pb**	**12 36 41.7**	**-0.5**
	baz=212						
SMLT				*i* S	**Sg**	**12 36 45.0**	**+0.7**
	baz=212						
OWD	**Renai**	**0.16**	**107**	⇓P	**Pb**	**12 36 41.9**	**-0.5**
	baz=106						
OWD				S	**Sb**	**12 36 45.0**	**-0.6**
	baz=106						
CHGB	**Renai**	**0.16**	**69**	⇓P	**Pb**	**12 36 42.0**	**-0.4**
	baz=67						
CHGB				S	**Sb**	**12 36 45.1**	**-0.5**
	baz=67						
TYC	**Yuchr**	**0.17**	**234**	⇑*i*P	**Pg**	**12 36 41.8**	**0.0**
	baz=228						
TYC				S	**Sg**	**12 36 44.8**	**+0.2**
	baz=228						
SSLB	**Suanglung**	**0.22**	**193**	⇑P	**Pg**	**12 36 42.3**	**-0.3**
	baz=189						
SSLB				S	**Sg**	**12 36 45.3**	**-0.6**
	baz=189						
WHF	**Hehuan Shan**	**0.28**	**59**	⇓*i*P	**Pg**	**12 36 44.2**	**+0.5**
	baz=67						
WHF				*i* S	**Sg**	**12 36 48.4**	**+0.5**
	baz=67						
VWDT	**VWDT**	**0.28**	**154**	⇓P	**Pg**	**12 36 43.8**	**+0.3**
	baz=154						
VWDT				S	**Sg**	**12 36 48.0**	**+0.5**
	baz=154						
WHP	**Taichung City**	**0.28**	**348**	⇑*i*P	**Pg**	**12 36 43.6**	**0.0**
	baz=348						
WHP				S	**Sb**	**12 36 48.9**	**0.0**
	baz=348						
TDCB	**Techi**	**0.28**	**29**	⇓P	**Pg**	**12 36 43.6**	**-0.1**
	baz=28						
TDCB				S	**Sg**	**12 36 47.5**	**-0.5**
	baz=28						
TWT	**Tachien**	**0.29**	**32**	⇓*i*P	**Pg**	**12 36 43.6**	**-0.3**
	baz=29						
TWT				*i* S	**Sg**	**12 36 47.5**	**-0.8**
	baz=29						
WJS	**Zhushan**	**0.31**	**235**	⇓*i*P	**Pb**	**12 36 44.8**	**0.0**
	baz=231						
WJS				S	**Sb**	**12 36 50.5**	**+0.7**
	baz=231						
WNT	**Mingjian**	**0.32**	**247**	⇓*i*P	**Pb**	**12 36 45.1**	**+0.1**
	baz=247						
WNT				S	**Sb**	**12 36 51.1**	**+1.1**
	baz=247						
TCU	**Taichung**	**0.34**	**295**	⇓*i*P	**Pb**	**12 36 45.4**	**+0.2**
	baz=296						
TCU				*e*S	**Sb**	**12 36 52.1**	**+1.7**
	baz=296						
WHYT	**Xinyi Township**	**0.34**	**205**	P	**Pg**	**12 36 44.6**	**0.0**
	baz=202						
WHYT				S	**Sb**	**12 36 50.0**	**-0.5**
	baz=202						
TWQ1	**Liyutan**	**0.41**	**328**	⇑*i*P	**Pb**	**12 36 46.5**	**+0.1**
	baz=330						
TWQ1				S	**Sb**	**12 36 53.5**	**+1.0**
	baz=330						
WCHH	**Zhanghua**	**0.42**	**281**	⇓*i*P	**Pb**	**12 36 46.8**	**+0.1**
	baz=280						
ESL	**Shilin**	**0.43**	**116**	⇓*i*P	**Pg**	**12 36 46.4**	**+0.1**
	baz=109						
ESL				S	**Sg**	**12 36 52.0**	**-0.1**
	baz=109						
NSY	**Sanyi**	**0.47**	**331**	⇑*i*P	**Pb**	**12 36 48.0**	**+0.5**
	baz=333						
NSY				S	**Sb**	**12 36 55.7**	**+1.4**
	baz=333						
ETLH	**Xiulin Townshi**	**0.48**	**65**	⇓P	**Pg**	**12 36 47.0**	**-0.1**
	baz=61						
ETLH				S	**Sg**	**12 36 53.7**	**0.0**
	baz=61						
WDJ	**Dajia District**	**0.48**	**316**	⇓*i*P	**Pb**	**12 36 48.4**	**+0.7**
	baz=316						
WDJ				S	**Sn**	**12 36 56.9**	**-1.2**
	baz=316						
CHN5	**Tsauling**	**0.50**	**217**	⇓*i*P	**Pb**	**12 36 48.0**	**-0.2**
	baz=217						
CHN5				S	**Sb**	**12 36 55.7**	**+0.4**
	baz=217						
EGFH	**Guangfu**	**0.51**	**131**	*e*P	**Pg**	**12 36 47.5**	**-0.2**
	baz=130						
YUS	**Yu-Shan**	**0.51**	**186**	*e*P	**Pg**	**12 36 47.7**	**-0.2**
	baz=186						
YUS				S	**Sb**	**12 36 55.4**	**-0.6**
	baz=186						
PTSB	**Yuanli**	**0.52**	**328**	⇓*i*P	**Pb**	**12 36 49.0**	**+0.6**
	baz=328						
PTSB				S	**Sb**	**12 36 57.2**	**+1.5**
	baz=328						
WDLH	**Douliu**	**0.53**	**234**	⇓P	**Pb**	**12 36 48.6**	**+0.1**
	baz=234						
WDLH				S	**Sb**	**12 36 57.2**	**+1.2**
	baz=234						
TWD	**Chiawan**	**0.54**	**82**	⇓*i*P	**Pg**	**12 36 48.0**	**-0.3**
	baz=89						
TWD				S	**Sg**	**12 36 55.3**	**-0.3**
	baz=89						
NNSB	**Datong**	**0.55**	**39**	⇓P	**Pg**	**12 36 47.6**	**-0.8**
	baz=38						
NNSB				*e*S	**Sg**	**12 36 54.9**	**-0.8**
	baz=38						
HWA	**Hwalien**	**0.55**	**93**	P	**Pg**	**12 36 48.5**	**+0.2**
	baz=92						
HWA				*e*S	**Sb**	**12 36 57.1**	**+0.6**
	baz=92						
NNS	**Nan Shan**	**0.55**	**37**	⇓*i*P	**Pg**	**12 36 47.9**	**-0.6**
	baz=38						
NNS				*e*S	**Sg**	**12 36 55.0**	**-0.8**
	baz=38						
NACB	**Ninganchiao**	**0.56**	**72**	⇓P	**Pg**	**12 36 48.3**	**-0.4**
	baz=80						
NACB				S	**Sg**	**12 36 55.8**	**-0.4**
	baz=80						
NMLH	**Miaoli**	**0.57**	**340**	*e*P	**Pb**	**12 36 49.9**	**+0.7**
	baz=339						
NMLH				*e*S	**Sn**	**12 36 58.9**	**-1.4**
	baz=339						
EHY	**Hungye**	**0.57**	**150**	⇓*i*P	**Pg**	**12 36 48.7**	**-0.1**
	baz=144						
EHY				S	**Sg**	**12 36 56.1**	**-0.4**
	baz=144						
RLNB	**Erlin**	**0.60**	**259**	⇓P	**Pg**	**12 36 49.5**	**+0.1**
	baz=260						
RLNB				S	**Sb**	**12 36 59.0**	**+0.9**
	baz=260						
NSTT	**Nanjuang**	**0.62**	**359**	⇑*i*P	**Pb**	**12 36 50.3**	**+0.1**
	baz=7.0						
NSTT				S	**Sb**	**12 36 58.7**	**-0.1**
	baz=7.0						
HGSD	**Ruisui**	**0.64**	**143**	⇓P	**Pb**	**12 36 50.2**	**-0.1**
	baz=143						
HGSD				S	**Sb**	**12 36 59.1**	**+0.1**
	baz=143						
LIOB	**Emei**	**0.64**	**1**	⇑*i*P	**Pb**	**12 36 50.7**	**+0.2**
	baz=348						
LIOB				S	**Sb**	**12 36 59.2**	**0.0**
	baz=348						
YULB	**Yu-li**	**0.66**	**156**	⇓P	**Pb**	**12 36 50.2**	**-0.6**
	baz=148						
YULB				S	**Sg**	**12 36 59.3**	**-0.1**
	baz=148						
WTCT	**Ta-ch'eng**	**0.68**	**258**	P	**Pb**	**12 36 50.7**	**-0.4**
	baz=258						
WTCT				S	**Sg**	**12 37 01.1**	**+1.3**
	baz=258						
TWF1	**Yuli**	**0.70**	**158**	⇓*i*P	**Pb**	**12 36 51.1**	**-0.4**
	baz=149						
TWF1				S	**Sg**	**12 37 00.8**	**+0.3**
	baz=149						
CHY	**Chiayi**	**0.73**	**227**	*e*P	**Pb**	**12 36 51.9**	**-0.2**
	baz=227						
CHY				*e*S	**Sn**	**12 37 02.9**	**-1.3**
	baz=227						
NSK	**Sanguang**	**0.74**	**25**	P	**Pb**	**12 36 51.7**	**-0.6**
	baz=33						
NSK				*e*S	**Sb**	**12 37 00.5**	**-1.7**
	baz=33						
YHNB	**Yeheng**	**0.74**	**27**	⇓P	**Pb**	**12 36 51.4**	**-0.9**
	baz=26						
YHNB				*e*S	**Sb**	**12 37 00.5**	**-1.8**
	baz=26						
WMLT	**Mailiao**	**0.74**	**255**	*e*P	**Pb**	**12 36 51.9**	**-0.3**
	baz=254						
CHN4	**Tsaushan**	**0.75**	**210**	*e*P	**Pg**	**12 36 52.3**	**+0.1**
	baz=210						
SBCB	**Hsinchu**	**0.79**	**359**	⇑P	**Pg**	**12 36 53.4**	**+0.5**
	baz=358						
SBCB				*e*S	**Sn**	**12 37 05.6**	**0.0**
	baz=358						
ENA	**Nanau**	**0.79**	**58**	⇓*i*P	**Pb**	**12 36 52.4**	**-0.6**
	baz=57						
ENA				S	**Sb**	**12 37 02.8**	**-0.8**
	baz=57						
HSN	**Hsinchu**	**0.80**	**358**	*e*P	**Pn**	**12 36 53.7**	**-0.5**
	baz=360						
HSN				S	**Sn**	**12 37 06.4**	**+0.6**
	baz=360						
NANB	**Nanao**	**0.80**	**58**	⇓P	**Pb**	**12 36 52.4**	**-0.8**
	baz=57						
NANB				S	**Sg**	**12 37 03.9**	**+0.2**
	baz=57						
WSF	**Szhu**	**0.81**	**243**	⇓P	**Pb**	**12 36 52.6**	**-0.6**
	baz=243						
WSF				S	**Sg**	**12 37 04.7**	**+0.8**
	baz=243						
ELDTW	**Lidau**	**0.81**	**179**	⇓*i*P	**Pb**	**12 36 53.0**	**-0.5**
	baz=185						
ELDTW				S	**Sg**	**12 37 04.8**	**+0.8**
	baz=185						
ENTT	**Nioudou**	**0.81**	**39**	⇓*i*P	**Pb**	**12 36 52.5**	**-0.9**
	baz=40						
WLGB	**Puzi**	**0.83**	**231**	*e*P	**Pg**	**12 36 53.8**	**0.0**
	baz=230						
WTP	**Ta-pu**	**0.84**	**206**	⇓P	**Pb**	**12 36 53.1**	**-0.7**
	baz=205						
STYT	**Tauyuan**	**0.87**	**195**	*e*P	**Pb**	**12 36 54.1**	**-0.2**
	baz=194						
TWK	**Hsinying**	**0.87**	**213**	⇓*i*P	**Pb**	**12 36 54.1**	**-0.3**
	baz=213						
TWK				S	**Sg**	**12 37 06.4**	**+0.3**
	baz=213						
SNST	**Tainan City**	**0.91**	**211**	*e*P	**Pb**	**12 36 54.9**	**-0.1**
	baz=210						
CHN1	**Nanshi**	**0.93**	**208**	*e*P	**Pb**	**12 36 55.2**	**-0.2**
	baz=209						
CHN1				S	**Sg**	**12 37 07.6**	**-0.1**
	baz=209						
TWE	**Neicheng**	**0.93**	**40**	⇓*i*P	**Pb**	**12 36 54.9**	**-0.5**
	baz=40						
TWE				S	**Sb**	**12 37 07.8**	**+0.1**
	baz=40						
CHKT	**Chengkung**	**0.96**	**160**	⇑P	**Pn**	**12 36 55.9**	**-0.5**
	baz=145						
CHKT				*e*S	**Sn**	**12 37 11.0**	**+1.2**
	baz=145						
NCUH	**Zhongli**	**0.97**	**10**	*e*P	**Pg**	**12 36 56.6**	**+0.2**
	baz=11						
NCU	**National Centr**	**0.98**	**10**	*e*P	**Pn**	**12 36 56.6**	**-0.1**
	baz=9.0						
NCU				*e*S	**Sn**	**12 37 10.5**	**+0.2**
	baz=9.0						
TWC	**Suao**	**0.98**	**52**	*e*P	**Pb**	**12 36 55.7

SCLT				S		Sg	12 37 14.9 +1.3
	baz=222						
NTC	**Toucheng**	**1.13**	**41**	*e*P		**Pn**	**12 36 57.9 -1.0**
	baz=41						
NTC				*e*S		**Sg**	**12 37 16.6 +2.4**
	baz=41						
TWS1	**Kuangyinshan**	**1.16**	**19**	*e*P		**Pb**	**12 36 59.2 0.0**
	baz=18						
TWS1				*e*S		**Sg**	**12 37 15.5 +0.5**
	baz=18						
EOS1	**EOS1**	**1.16**	**62**	*e*P		**Pb**	**12 36 59.6 +0.3**
	baz=63						
TWG	**Pinlang**	**1.18**	**177**	⇑P		**Pb**	**12 36 59.6 -0.1**
	baz=171						
TWG				S		**Sg**	**12 37 15.8 +0.1**
	baz=171						
TWGBT	**Beinan**	**1.18**	**177**	⇑P		**Pb**	**12 36 59.6 -0.1**
	baz=171						
TWGBT				S		**Sg**	**12 37 15.8 0.0**
	baz=171						
EGS		**1.19**	**45**	*e*P		**Pg**	**12 37 00.5 0.0**
	baz=59						
TAI1	**Yung-k'ang**	**1.20**	**217**	*e*P		**Pb**	**12 37 00.1 +0.2**
	baz=229						
TIPB	**Shuangxi**	**1.22**	**38**	⇓P		**Pn**	**12 36 59.7 -0.4**
	baz=37						
TIPB				*e*S		**Sg**	**12 37 17.3 +0.3**
	baz=37						
NTST	**Danshui**	**1.22**	**19**	*e*P		**Pg**	**12 37 02.1 +1.0**
	baz=2.0						
YM04	**YM04**	**1.24**	**23**	*e*P		**Pn**	**12 37 00.0 -0.4**
	baz=22						
YM04				*e*S		**Sn**	**12 37 17.2 +0.3**
	baz=22						
YM01	**YM01**	**1.25**	**24**	*e*P		**Pn**	**12 37 00.0 -0.5**
	baz=26						
TTN	**Taitung**	**1.25**	**174**	*e*P		**Pg**	**12 37 01.2 -0.5**
	baz=174						
YM10	**YM10**	**1.25**	**24**	*e*P		**Pn**	**12 36 59.8 -0.8**
	baz=23						
YM10				*e*S		**Sb**	**12 37 16.7 -0.2**
	baz=23						
YM05	**YM05**	**1.26**	**24**	⇑P		**Pn**	**12 37 00.3 -0.5**
	baz=23						
YM05				*e*S		**Sb**	**12 37 16.8 -0.4**
	baz=23						
ANP	**Anpu**	**1.27**	**21**	*e*P		**Pb**	**12 37 01.3 +0.1**
	baz=4.0						
YM03	**YM03**	**1.27**	**22**	*e*P		**Pn**	**12 37 00.0 -0.8**
	baz=5.0						
NWF	**Wu-fen Shan**	**1.27**	**33**	*e*P		**Pb**	**12 37 01.6 +0.3**
	baz=35						
WFSB	**Wu-fen Shan**	**1.27**	**33**	*e*P		**Pb**	**12 37 01.1 -0.2**
	baz=33						
WFSB				*e*S		**Sg**	**12 37 19.3 +0.5**
	baz=33						
TWM1	**Shoushan**	**1.29**	**205**	*e*P		**Pg**	**12 37 02.2 -0.2**
	baz=204						
YM08	**YM08**	**1.29**	**24**	*e*P		**Pn**	**12 37 00.7 -0.4**
	baz=26						
SSD	**Sandimen**	**1.30**	**195**	*e*P		**Pb**	**12 37 01.7 0.0**
	baz=195						
TWB1	**Santiao Chiao**	**1.34**	**42**	*e*P		**Pb**	**12 37 02.2 -0.2**
	baz=44						
TWY	**Chenhua**	**1.38**	**23**	*e*P		**Pn**	**12 37 02.3 +0.1**
	baz=6.0						
ECL	**Taimali**	**1.40**	**182**	*e*P		**Pb**	**12 37 03.3 -0.1**
	baz=168						
ECL				*e*S		**Sg**	**12 37 22.0 -0.8**
	baz=168						
PNG	**Penghu**	**1.40**	**252**	*e*P		**Pn**	**12 37 01.2 -1.3**
	baz=251						
PNG				*e*S		**Sn**	**12 37 20.0 -0.7**
	baz=251						
PHUB	**P'eng-hu**	**1.40**	**250**	*e*P		**Pn**	**12 37 01.1 -1.4**
	baz=249						
PHUB				*e*S		**Sn**	**12 37 19.4 -1.4**
	baz=249						
MASBT	**Mashibuluo**	**1.43**	**194**	*e*P		**Pb**	**12 37 03.4 -0.5**
	baz=195						
MASBT				*e*S		**Sb**	**12 37 22.2 +0.3**
	baz=195						
WDGT	**Dungji**	**1.44**	**239**	P		**Pn**	**12 37 02.5 -0.5**
	baz=250						
WDGT				*e*S		**Sn**	**12 37 21.2 -0.5**
	baz=250						
WSSB	**Gushan**	**1.52**	**207**	*e*P		**Pn**	**12 37 04.4 +0.2**
	baz=206						
SSPT	**Xinbi**	**1.57**	**195**	*e*P		**Pb**	**12 37 06.8 +0.6**
	baz=195						
EAST	**Anshuo**	**1.62**	**185**	*e*P		**Pn**	**12 37 06.1 +0.5**
	baz=203						
TAW	**Tawu**	**1.64**	**184**	*e*P		**Pb**	**12 37 06.6 -0.9**
	baz=167						
VCHM	**Qimei**	**1.65**	**242**	*e*P		**Pn**	**12 37 05.0 -1.0**
	baz=242						
VCHM				*e*S		**Sn**	**12 37 26.4 -0.5**
	baz=242						
SCZT	**Fangliau**	**1.66**	**192**	*e*P		**Pn**	**12 37 06.3 +0.1**
	baz=192						
JYNG	**Yonaguni jima**	**1.82**	**75**	P		**Pn**	**12 37 08.8 +0.4**
JYNG				*e*S		**Sn**	**12 37 31.9 +0.7**
PTTC	**Pingtan**	**1.87**	**323**	*e*P		**Pn**	**12 37 06.9 -2.0**
	baz=322						
YOJ	**Yonaguni jima**	**1.89**	**76**	*e*P		**Pn**	**12 37 09.5 +0.3**
	baz=76						
YOJ	**Yonaguni jima**	**1.89**	**76**	P		**Pb**	**12 37 10.6 -1.1**
YOJ				*e*S		**Sb**	**12 37 35.0 0.0**
PCYT	**Pengchaiyu**	**1.89**	**31**	*e*P		**Pn**	**12 37 09.2 0.0**
	baz=33						
PTMZ	**Houxiangcun**	**2.00**	**301**	*e*P		**Pn**	**12 37 09.0 -1.9**
	baz=300						
LAY	**Lan-yu**	**2.02**	**166**	*e*P		**Pn**	**12 37 10.3 -0.7**
	baz=153						
TWK1	**Hengchun**	**2.06**	**185**	*e*P		**Pn**	**12 37 12.0 +0.4**
	baz=200						
TWKBT	**Hengchun**	**2.06**	**185**	*e*P		**Pn**	**12 37 12.2 +0.6**
	baz=200						
MATB	**Ma-tsu**	**2.35**	**336**	*e*P		**Pn**	**12 37 14.2 -1.3**
	baz=333						
KNMB	**Chin-men Tao**	**2.44**	**281**	*e*P		**Pn**	**12 37 15.3 -1.5**
	baz=280						
IRIF	**Iriomote-Funau**	**2.51**	**82**	P		**Pn**	**12 37 18.4 +0.6**
IRIF				*e*S		**Sn**	**12 37 48.3 +0.2**
HATJ	**Hateruma jima**	**2.56**	**88**	P		**Pn**	**12 37 19.7 +1.2**
HATJ				*e*S		**Sn**	**12 37 50.8 +1.5**
MHZQ	**Yeshan**	**2.75**	**320**	*e*P		**Pn**	**12 37 20.4 -0.8**
	baz=318						
JKRS	**Kuro-shima**	**2.75**	**85**	P		**Pn**	**12 37 22.2 +1.1**
JKRS				*e*S		**Sn**	**12 37 56.4 +2.3**
LYJJ	**Jianjiangzhen**	**2.78**	**336**	*e*P		**Pn**	**12 37 20.3 -1.2**
	baz=333						
JIJ	**Ishigaki jima**	**2.89**	**82**	P		**Pn**	**12 37 23.6 +0.6**
JIJ				*e*S		**Sn**	**12 37 57.2 -0.2**
AXDP	**Jialang**	**2.91**	**288**	*e*P		**Pn**	**12 37 22.1 -1.1**
	baz=287						
ZPLA	**Ao Xicun**	**2.98**	**269**	*e*P		**Pn**	**12 37 23.1 -1.2**
	baz=267						
ZPLA				*e*S		**Sn**	**12 37 58.3 -1.4**
	baz=267						
XPSS	**Dashiqiu**	**3.01**	**346**	*e*P		**Pn**	**12 37 24.4 -0.2**
	baz=342						
JISG	**Ishigakijimahi**	**3.07**	**78**	P		**Pn**	**12 37 26.7 +1.2**
JISG				*e*S		**Sn**	**12 38 02.2 +0.3**
JTJ	**Tarama**	**3.43**	**79**	P		**Pn**	**12 37 31.7 +1.2**
JTJ				S		**Sn**	**12 38 12.5 +1.7**
JMJ	**Miyako jima 2**	**3.99**	**77**	*e*P		**Pn**	**12 37 40.1 +2.0**
	baz=79						

IDC ***30*** *13:16:10.7±0.5,35°.92N×27°.51E, h0km, mb4.1/24, mb1 4.1/32, mb1mx4.0/56, mbtmp4.1/32, ML3.9/7, MS3.1/5, Ms1 3.1/5, ms1mx2.7/41, Error ellipse: s-maj=12.6km s-min=10.5km az=167.0*
NSSC ***30*** *13:16:12.5±0.3,36°.17N×27°.73E, h5km±999km, ML3.5*
GII ***30*** *13:16:12.4±0.0,35°.90N×27°.56E, h10km, MD3.1/3*
MOS ***30*** *13:16:13.9±1.1,35°.89N×27°.57E, h31km, mb4.5/8, Error ellipse: s-maj=8.3km s-min=5.6km az=86.8*
ISK ***30*** *13:16:13.4,35°.96N×27°.49E, h9km, ML4.2/16*
ATH ***30*** *13:16:13.2,35°.94N×27°.51E, h25km±1km, ML4.0/9, Error ellipse: s-maj=2.6km s-min=1.0km az=132.0*
HLW ***30*** *13:16:13.1,35°.93N×27°.73E, h7km±17km, Md4.3, Ml4.2*
THE ***30*** *13:16:13.7,35°.90N×27°.55E, h1km±1km, ML4.0/9, Error ellipse: s-maj=1.3km s-min=0.6km az=121.0*
ISCJB ***30*** *13:16:13.7±0.4,35°.81N±0°.02×27°.63E±0°.02, h29km±3km, mb4.2/38, MS3.5/6, Error ellipse: s-maj=2.8km s-min=2.1km az=16.7*
NEIC ***30*** *13:16:14.3±2.2,35°.94N×27°.54E, h19km±4km, mb4.2/17, ML4.0(THE), Error ellipse: s-maj=6.1km s-min=4.4km az=111.0*
DDA ***30*** *13:16:14.2,36°.00N×27°.53E, h31km±1km, ML4.0*
NIC ***30*** *13:16:15.6±0.3,35°.90N×27°.52E, h25km, mb4.5, ML4.0*
ISC 30 13:16:14.1±0.5,35°.90N±0°.02×27°.55E±0°.02, h20km±4km, n260, σ1§41/300, mb4.2/38, MS3.4/6, 4C-5D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.48**	**222**	PG	**Pb**	**13 16 22.9**	**-0.9**
KARP				SG	**Sb**	**13 16 31.0**	**+0.6**
KARP	**Karpathos**	**0.48**	**222**	*e*Pg	**Pb**	**13 16 23.2**	**-0.6**
KARP	**Karpathos**	**0.48**	**222**	P	**Pb**	**13 16 23.4**	**-0.4**
KARP				S	**Sb**	**13 16 30.6**	**+0.2**
KARP	**Karpathos**	**0.48**	**222**	P	**Pb**	**13 16 23.5**	**-0.4**
KARP				S	**Sb**	**13 16 30.6**	**+0.2**
KARP				AML	AML	13 16 31.8	
KARP				AML	AML	13 16 32.3	
ARG	**Arkhangelos**	**0.56**	**56**	PG	**Pb**	**13 16 24.8**	**-0.6**
ARG				SG	**Sb**	**13 16 33.4**	**+0.5**
ARG	**Arkhangelos**	**0.56**	**56**	P	**Pb**	**13 16 24.7**	**-0.6**
ARG				S	**Sb**	**13 16 33.3**	**+0.4**
ARG	**Arkhangelos**	**0.56**	**56**	P	**Pb**	**13 16 24.7**	**-0.6**
ARG				S	**Sb**	**13 16 32.4**	**-0.6**
ARG				AML	AML	13 16 33.5	
	comp=E,23422μm,0.5s						
ARG				AML	AML	13 16 34.8	
	comp=N,16811μm,0.2s						
NISR	**Nisiros**	**0.79**	**334**	*e*Pg	**Pb**	**13 16 29.2**	**0.0**
NISR				*e*Sn	**Sn**	**13 16 41.5**	**+0.2**
NISR	**Nisiros**	**0.79**	**334**	P	**Pb**	**13 16 29.2**	**0.0**
NISR				S	**Sn**	**13 16 41.5**	**+0.2**
NISR	**Nisiros**	**0.79**	**334**	P	**Pb**	**13 16 28.2**	**-0.9**
NISR				AML	AML	13 16 46.8	
	comp=N,12583μm,0.8s						
NISR				AML	AML	13 16 47.7	
	comp=E,17753μm,0.4s						
DAT	**Datca**	**0.83**	**1**	PG	**Pb**	**13 16 29.2**	**-0.7**
DAT	**Datca**	**0.83**	**1**	*i* P	**Pb**	**13 16 29.0**	**-0.9**
DAT				*i* S	**Sb**	**13 16 39.9**	**-0.8**
DATC	**Datca-Mugla**	**0.86**	**6**	PG	**Pb**	**13 16 29.7**	**-0.7**
BBRN	**Bozburun-Marma**	**0.88**	**28**	PG	**Pb**	**13 16 30.5**	**-0.2**
MRSB	**Marmaris-Mugla**	**0.96**	**32**	PG	**Pb**	**13 16 32.3**	**+0.1**
BDRM	**Kayabasi**	**1.17**	**356**	*i* P	**Pn**	**13 16 35.1**	**-0.2**
BDRM				IAML_P			
	comp=Z,10μm,0.1s						
BODT	**Bodrum**	**1.18**	**351**	PN	**Pn**	**13 16 35.1**	**-0.4**
DALY	**Dalyan (Mula)**	**1.27**	**44**	PN	**Pb**	**13 16 37.3**	**-0.1**
DALY	**Dalyan (Mula)**	**1.27**	**44**	*i* P	**Pb**	**13 16 37.7**	**+0.2**
DALY				*i* S	**Sb**	**13 16 54.6**	**+1.3**
DALY				IAML_P			
	comp=Z,31μm,0.4s						
TURN	**Turunc**	**1.29**	**41**	PG	**Pn**	**13 16 33.1**	**-3.9**
TURN	**Turunc**	**1.29**	**41**	*i* P	**Pn**	**13 16 33.5**	**-3.5**
TURN				*i* S	**Sn**	**13 16 46.9**	**-6.7**
TURN				IAML_P			
	comp=Z,14μm,0.1s						
ZKR	**Zakros**	**1.34**	**235**	PN	**Pb**	**13 16 38.9**	**+0.3**
ZKR	**Zakros**	**1.34**	**235**	*e*Pn	**Pb**	**13 16 38.6**	**0.0**
ZKR				*e*Sn	**Sb**	**13 16 56.8**	**+1.4**
ZKR	**Zakros**	**1.34**	**235**	P	**Pb**	**13 16 38.6**	**0.0**
ZKR				S	**Sb**	**13 16 56.8**	**+1.4**
ZKR	**Zakros**	**1.34**	**235**	P	**Pb**	**13 16 38.2**	**-0.4**
ZKR				S	**Sb**	**13 16 56.8**	**+1.4**
ZKR				AML	AML	13 16 59.0	
	comp=N,9645μm,0.5s						
ZKR				AML	AML	13 17 00.3	
	comp=E,16562μm,0.5s						
YER	**Yerkesik**	**1.36**	**25**	PN	**Pb**	**13 16 39.2**	**+0.2**
STIA	**Sitia Lasithi**	**1.38**	**240**	P	**Pn**	**13 16 38.1**	**-0.1**
STIA				S	**Sb**	**13 16 57.9**	**+1.5**
FETY	**Fethiye**	**1.44**	**59**	PN	**Pb**	**13 16 40.2**	**-0.1**
FETY				SN	**Sb**	**13 17 00.3**	**+2.2**
FETY	**Fethiye**	**1.44**	**59**	*i* P	**Pb**	**13 16 40.7**	**+0.4**
FETY				IAML_P			
	comp=Z,14μm,0.2s						
ANAF	**Anafi Island**	**1.51**	**288**	P	**Pn**	**13 16 40.0**	**0.0**
ANAF				S	**Sb**	**13 17 01.7**	**+1.5**
ANAF	**Anafi Island**	**1.51**	**288**	P	**Pn**	**13 16 40.1**	**0.0**
KSL	**Kastellorizon**	**1.67**	**81**	P	**Pb**	**13 16 43.9**	**-0.2**
KSL	**Kastellorizon**	**1.67**	**81**	P	**Pb**	**13 16 44.1**	**0.0**
KSL				AML	AML	13 17 07.8	
	comp=E,3630μm,0.6s						
KSL				AML	AML	13 17 08.7	
	comp=N,2599μm,0.6s						
AKAS	**Kas**	**1.69**	**78**	PN	**Pb**	**13 16 44.5**	**-0.2**
AKAS	**Kas**	**1.69**	**78**	*i* P	**Pb**	**13 16 44.9**	**+0.2**
NPS	**Neapolis**	**1.71**	**249**	P	**Pn**	**13 16 43.2**	**+0.5**
NPS				S	**Sb**	**13 17 05.3**	**-0.5**
NPS	**Neapolis**	**1.71**	**249**	P	**Pn**	**13 16 43.3**	**+0.5**
NPS				S	**Sn**	**13 17 04.4**	**+0.5**
NPS				AML	AML	13 17 06.2	
	comp=E,11832μm,0.3s						
NPS				AML	AML	13 17 06.8	
	comp=N,12790μm,0.4s						
SANT	**Santorini**	**1.76**	**286**	PN	**Pn**	**13 16 43.4**	**-0.1**
SANT	**Santorini**	**1.76**	**286**	*e*Pn	**Pn**	**13 16 43.2**	**-0.3**
SANT	**Santorini**	**1.76**	**286**	P	**Pn**	**13 16 43.7**	**+0.2**
SANT				S	**Sb**	**13 17 07.0**	**-0.4**
SANT	**Santorini**	**1.76**	**286**	P	**Pn**	**13 16 43.6**	**+0.2**
AYDN	**Tasoluk**	**1.78**	**8**	*i* P	**Pn**	**13 16 44.5**	**+0.8**
AYDN				IAML_P			
	comp=Z,12μm,0.2s						
THR7	**Fira-Santorini**	**1.80**	**287**	P	**Pn**	**13 16 44.4**	**+0.4**
GCAM	**G?zelcaml?**	**1.81**	**352**	PN	**Pn**	**13 16 44.7**	**+0.5**
GCAM	**G?zelcaml?**	**1.81**	**352**	*i* P	**Pn**	**13 16 44.8**	**+0.5**
THR3	**Thira Island,**	**1.81**	**287**	*e*Pn	**Pn**	**13 16 44.4**	**+0.2**
THR3	**Thira Island,**	**1.81**	**287**	P	**Pn**	**13 16 44.4**	**+0.2**
CMRO	**Columbo, Santo**	**1.83**	**289**	P	**Pn**	**13 16 44.5**	**+0.1**
LAST	**Lasithi**	**1.85**	**247**	P	**Pn**	**13 16 45.4**	**+0.7**
LAST	**Lasithi**	**1.85**	**247**	P	**Pn**	**13 16 45.5**	**+0.7**
LAST				AML	AML	13 17 16.2	
	comp=N,4801μm,0.5s						
LAST				AML	AML	13 17 18.9	
	comp=E,5512μm,0.8s						
SMG	**Samos**	**1.89**	**343**	P	**Pn**	**13 16 45.1**	**-0.2**
SMG				S	**Sb**	**13 17 11.1**	**-0.1**
SMG	**Samos**	**1.89**	**343**	P	**Pn**	**13 16 45.1**	**-0.2**
APE	**Apeiranthos**	**2.00**	**306**	P	**Pn**	**13 16 46.8**	**-0.1**
APE				S	**Sn**	**13 17 13.3**	**+1.9**
APE	**Apeiranthos**	**2.00**	**306⇑**	*e*P	**Pn**	**13 16 47.2**	**+0.3**
APE	**Apeiranthos**	**2.00**	**306**	P	**Pn**	**13 16 46.9**	**0.0**
IOSP	**Ios island**	**2.00**	**295**	P	**Pn**	**13 16 46.8**	**0.0**
IOSP	**Ios island**	**2.00**	**295**	P	**Pn**	**13 16 46.8**	**0.0**
IOSP				AML	AML	13 17 20.3	
	comp=N,5416μm,0.6s						
IOSP				AML	AML	13 17 21.8	
	comp=E,6050μm,0.6s						
AYDB	**Zeytinkoy-Aydi**	**2.06**	**7**	PN	**Pn**	**13 16 48.4**	**+0.7**
ELL	**Elmali**	**2.08**	**65**	PN	**Pb**	**13 16 50.4**	**-0.9**
IACM	**Heraklion**	**2.11**	**254**	P	**Pn**	**13 16 49.2**	**+0.9**
DENT	**Denizli**	**2.20**	**32**	PN	**Pn**	**13 16 51.1**	**+1.5**
DGB	**zmir**	**2.21**	**346**	*i* P	**Pn**	**13 16 50.6**	**+0.9**
IDI	**Anoyia**	**2.25**	**255**	Pn	**Pn**	**13 16 50.7**	**+0.4**
	comp=E,44nm,0.3s,baz=70,slow=17,SNR=100						
IDI				Sn	**Sn**	**13 17 18.1**	**+0.5**
	comp=E,178nm,0.3s,baz=275,slow=16,SNR=14						
IDI	**Anoyia**	**2.25**	**255**	P	**Pn**	**13 16 50.7**	**+0.4**
IDI				AML	AML	13 17 21.9	
	comp=E,2937μm,0.6s						
IDI				AML	AML	13 17 22.6	
	comp=N,3382μm,0.5s						
AKUM	**Antalya-Kumluc**	**2.30**	**79**	*i* P	**Pb**	**13 16 53.7**	**-1.2**
AKUM				*i* S	**Sn**	**13 17 16.1**	**-2.4**
AKUM				IAML_P			
	comp=Z,3μm,0.2s						
SIVA	**Sivas**	**2.41**	**249**	P	**Pn**	**13 16 53.8**	**+1.5**
KORT	**Korkueli**	**2.51**	**63**	PN	**Pb**	**13 16 56.8**	**-1.8**
KORT	**Korkueli**	**2.51**	**63**	*i* P	**Pb**	**13 16 57.7**	**-0.8**
KORT				IAML_P			
	comp=Z,4μm,0.2s						
URLA	**Izmir**	**2.57**	**343**	*i* P	**Pn**	**13 16 55.5**	**+0.8**
BRDR	**BURDUR-Merkez**	**2.69**	**48**	*i* P	**Pb**	**13 16 59.9**	**-1.9**
BRDR				IAML_P			
	comp=Z,2μm,0.2s						
VAM	**Vamos**	**2.77**	**261**	P	**Pn**	**13 16 57.3**	**-0.1**
KHAL	**Karahalli**	**2.91**	**32**	*i* P	**Pn**	**13 17 02.2**	**+2.8**
KHAL				IAML_P			
	comp=Z,921nm,0.2s						
IMMV	**Iera Moni Meta**	**2.94**	**262**	P	**Pn**	**13 17 00.5**	**+0.8**
AKHS	**Akhisar**	**2.98**	**4**	*i* P	**Pn**	**13 17 01.6**	**+1.3**
AKHS				IAML_P			
	comp=Z,4μm,0.2s						
USAK	**Uak-Merkez**	**3.04**	**22**	*i* P	**Pn**	**13 17 02.6**	**+1.4**
ISP	**Isparta**	**3.06**	**50**	*e*Pn	**Pn**	**13 17 02.8**	**+1.4**
ISP	**Isparta**	**3.06**	**50**	*e*P	**Pn**	**13 17 02.8**	**+1.4**
ISP	**Isparta**	**3.06**	**50**	Pn	**Pb**	**13 17 01.6**	**+0.2**
ZEDA	**zmir-Bergama**	**3.08**	**353**	*i* P	**Pn**	**13 17 02.6**	**+1.0**
BAGO	**Egridir - ISPA**	**3.33**	**50**	*i* P	**Pb**	**13 17 09.7**	**-2.8**
KEPZ	**Antalya-Kepez**	**3.42**	**72**	*i* P	**Pn**	**13 17 09.6**	**+3.3**
STEP	**BALIKESIR_Sava**	**3.47**	**2**	*i* P	**Pn**	**13 17 08.3**	**+1.3**
STEP				IAML_P			
	comp=Z,2μm,0.2s						
GDZ	**Gediz**	**3.53**	**25**	*i* P	**Pn**	**13 17 10.2**	**+2.2**
BALB	**Balikesir**	**3.74**	**4**	*e*Pn	**Pn**	**13 17 11.6**	**+0.9**
DURS	**Dursunbey**	**3.77**	**11**	*i* P	**Pn**	**13 17 11.4**	**+0.3**
GAZI	**Gazipasa**	**3.87**	**84**	*i* P	**Pn**	**13 17 13.7**	**+1.1**
GAZI				*i* S	**Sn**	**13 17 56.9**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**3.92**	**349**	*i* P	**Pn**	**13 17 13.4**	**+0.3**
PPCY	**Paphos**	**4.04**	**103**	P	**Pn**	**13 17 15.1**	**+0.2**
	baz=285						
ALFC	**Alefka**	**4.18**	**99**	P	**Pn**	**13 17 17.3**	**+0.5**
	baz=281						
ALFC				S	**Sn**	**13 18 05.1**	**0.0**
KONT	**Konya--Tatoy**	**4.36**	**61**	*i* P	Pn	13 17 24.1	+4.9
ULDT	**Uludag**	**4.42**	**16**	*i* P	**Pn**	**13 17 21.4**	**+1.2**
KDHN	**Kadinhani**	**4.48**	**53**	*i* P	**Pn**	**13 17 23.2**	**+2.1**
SZAC	**Souni**	**4.50**	**103**	P	**Pn**	**13 17 21.9**	**+0.7**
	baz=286						
SZAC				S	**Sn**	**13 18 13.5**	**+0.4**
ITM	**Ithomi**	**4.71**	**287**	*e*Pn	**Pn**	**13 17 27.7**	**+3.7**
CSS	**Mathiatis**	**4.81**	**100**	*e*Pn	**Pn**	**13 17 25.7**	**+0.3**
CSS	**Mathiatis**	**4.81**	**100**	P	**Pn**	**13 17 26.0**	**+0.6**
	baz=282						
CSS				S	**Sn**	**13 18 21.8**	**+1.2**
CSS	**Mathiatis**	**4.81**	**100**	P	**Pn**	**13 17 26.0**	**+0.6**
PHNC	**Paralimni**	**5.36**	**98**	S	**Sn**	**13 18 34.8**	**+0.6**
	baz=281						
MDUB	**Mudurnu**	**5.39**	**31**	*e*Pn	**Pn**	**13 17 35.1**	**+1.6**
BR231	**Keskin MP Arra**	**5.70**	**45**	*e*Pn	**Pn**	**13 17 40.0**	**+2.2**
ANTO	**Ankara**	**5.73**	**45**	*e*Pn	**Pn**	**13 17 40.0**	**+1.9**
ANTO	**Ankara**	**5.73**	**45**	*e*P	**Pn**	**13 17 40.0**	**+1.9**
BR131	**Keskin Array S**	**6.15**	**50**	*e*Pn	**Pn**	**13 17 45.6**	**+1.7**
BRTR	**Keskin Array B**	**6.15**	**50**	Pn	**Pn**	**13 17 45.8**	**+1.9**
	comp=Z,1.2nm,0.3s,baz=228,slow=15,SNR=14						
BRTR				Sn	**Sn**	**13 18 55.6**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=214,slow=24,SNR=4.6						
BR101	**Keskin Array S**	**6.15**	**50**	*e*Pn	**Pn**	**13 17 45.8**	**+1.9**
BR101				*e*Sn	**Sn**	**13 18 55.6**	**+1.9**
SWA2		**6.87**	**196**	P	**Pn**	**13 17 55.3**	**+1.6**
	baz=197						
KOT	**Kottamia**	**6.96**	**148**	P	**Pn**	**13 17 54.6**	**-0.4**
	baz=148						
KOT				S	**Sn**	**13 19 08.7**	**-4.8**
	baz=148						
HHAG	**Hagoal**	**7.05**	**146**	P	**Pn**	**13 17 57.5**	**+1.2**
	baz=147						
HHAG				AMP		13 19 00.0	
	baz=147						
HHAG				S	**Sn**	**13 19 12.1**	**-3.9**
	baz=147						
ILGA	**Ilgaz**	**7.06**	**41**	*e*Pn	**Pn**	**13 17 58.6**	**+2.1**
HWQ	**Hawqa**	**7.07**	**101**	*e*P	**Pn**	**13 17 55.9**	**-0.7**
MMA0B	**Mount Meron ar**	**7.09**	**112**	Pn	**Pn**	**13 17 56.8**	**-0.1**
MMAI	**Mount Meron Ar**	**7.09**	**112**	Pn	**Pn**	**13 17 56.2**	**-0.7**
	comp=Z,11nm,0.3s,baz=321,slow=14,SNR=17						
MMAI				Sn	**Sn**	**13 19 14.1**	**-2.8**
	comp=Z,12nm,0.3s,baz=308,slow=24,SNR=6.2						
RSH		**7.13**	**132**	P	**Pn**	**13 17 56.8**	**-0.5**
	baz=133						
STIP	**Stip**	**7.14**	**326**	*i* P	Pn	13 18 02.4	+4.9
GEM	**Giv'at Ha'Em**	**7.21**	**110**	Pn	**Pn**	**13 17 58.3**	**-0.1**
GLL	**Jalalah**	**7.21**	**150**	P	**Pn**	**13 17 58.3**	**-0.2**
	baz=151						
KSDI	**Kefar Szold**	**7.21**	**110**	Pn	**Pn**	**13 17 57.8**	**-0.6**
RCY	**Rachaya**	**7.23**	**107**	*e*P	**Pn**	**13 17 58.0**	**-0.8**
NATI	**Neve Ativ**	**7.24**	**109**	Pn	**Pn**	**13 17 58.6**	**-0.2**
BRBR	**Barbar**	**7.35**	**107**	*e*P	**Pn**	**13 18 00.8**	**+0.3**
BRBR				*e*S	**Sn**	**13 19 19.2**	**-4.2**
BRBR				AML	AML	13 19 23.7	
	comp=E,32nm,0.7s						
BRBR				AML	AML	13 19 23.8	
	comp=N,78nm,0.5s						
MMLI	**Mount Malkishu**	**7.38**	**116**	Pn	**Pn**	**13 18 00.8**	**+0.1**
KSHT	**Keshet**	**7.42**	**111**	Pn	**Pn**	**13 18 01.2**	**-0.1**
SHMJ	**Saham**	**7.49**	**113**	P	**Pn**	**13 18 01.5**	**-0.8**
	comp=N,78nm,0.7s,comp=N,0.4nm						
VTS	**Vitosha**	**7.50**	**335**	*e*Pn	**Pn**	**13 18 02.9**	**+0.5**
VTS	**Vitosha**	**7.50**	**335**	*e*P	**Pn**	**13 18 02.9**	**+0.5**
SUZ	**Suez**	**7.50**	**142**	P	**Pn**	**13 18 02.8**	**+0.5**
	baz=143				

comp=Z,7.0nm,0.3s
KEST Kesra 14.78 275 Pn **P 13 19 47.8 -0.1**
comp=Z,0.6nm,0.3s,baz=48,slow=4.6,SNR=10.0
KEST Kesra 14.78 275 *e*P **P 13 19 48.5 +0.6**
CONA Conrad Observa 14.82 328 P **P 13 19 47.0 -1.3**
comp=Z,0.4nm,0.4s
AKASG Malin Array Be 14.84 4 Pn **P 13 19 47.8 -0.6**
comp=Z,1.2nm,0.3s,baz=194,slow=11,SNR=5.6
AKBB Malin Array Si 14.84 4 *e*P **P 13 19 48.7 +0.3**
AKBB Malin Array Si 14.84 4 *e*P **P 13 19 48.7 +0.3**
OJC Ojcow 15.38 341 *e*P **P 13 19 56.2 +1.8**
comp=Z,15nm,0.6s
OJC Ojcow 15.38 341 *e*P **P 13 19 56.2 +1.8**
OJC pmax pmax
comp=Z,15nm,0.6s
KBA Koelnbreinsper 15.40 321 P **P 13 19 55.8 +1.0**
comp=Z,8.6nm,1.2s
KRUC Moravsky 15.49 332 *e*PN **P 13 19 56.2 +0.6**
VRAC Vranov 15.62 332 Pn **P 13 19 56.2 -0.8**
comp=Z,0.4nm,0.3s,baz=133,slow=12,SNR=4.1
VRAC Vranov 15.62 332 *e*PN **P 13 19 58.0 +1.0**
ABTA Abfaltersbach 15.63 319 *e*P **P 13 19 56.8 -0.5**
comp=Z,1.9nm,0.7s
MORC Moravsky Berou 15.67 335 *e*PN **P 13 19 59.5 +1.8**
WTTA Wattenberg 16.42 319 *e*P **P 13 20 06.6 +0.5**
comp=Z,1.1nm,0.4s
GEC2 GERESS Array S 16.46 326 *e*P **P 13 20 06.8 +0.3**
comp=Z,18nm,1.8s
GEC2 GERESS Array S 16.46 326 *e*P **P 13 20 06.8 +0.3**
GEC2 pmax pmax
comp=Z,18nm,1.8s
GERES GERESS Array B 16.46 326 Pn **Pn 13 20 05.2 +1.4**
comp=Z,0.2nm,0.3s,baz=138,slow=12,SNR=6.7
WATA Walderalm 16.49 319 *e*P **P 13 20 07.9 +1.0**
comp=Z,1.7nm,0.6s
DPC Dobruska-Polom 16.58 334 *e*P **P 13 20 07.3 -0.4**
DPC Dobruska-Polom 16.58 334 *e*P **P 13 20 07.3 -0.4**
SQTA Sankt Quirin 16.62 318 *e*P **P 13 20 10.6 +2.3**
comp=Z,1.7nm,0.5s
KHC Kasperske Hory 16.72 327 *e*P **P 13 20 10.7 +1.4**
comp=Z,7.2nm,1.7s
KHC Kasperske Hory 16.72 327 *e*P **P 13 20 08.8 -0.5**
KHC Kasperske Hory 16.72 327 *e*P **P 13 20 08.8 -0.5**
MOTA Moosalm 16.75 318 *e*P **P 13 20 10.9 +1.1**
comp=Z,2.6nm,0.7s
FETA Feichten 16.77 317 *e*P **P 13 20 12.0 +2.0**
comp=Z,5.0nm,0.8s
FUORN Ofenpass-Fuorn 16.80 315 *e*P **P 13 20 12.5 +2.0**
comp=Z,4.4nm,0.9s
RETA Reutte 17.02 318 *e*P **P 13 20 13.6 +0.8**
comp=Z,1.7nm,0.6s
DAVOX Davos/Dischmat 17.11 315 P **Pn 13 20 11.5 -0.7**
comp=Z,0.2nm,0.3s,baz=130,slow=16,SNR=1.9
DAVOX LR LR 13 27 16.7
comp=Z,24nm,21.7s,baz=74,slow=39
DAVA Damuels 17.39 316 Pn **Pn 13 20 14.7 -1.0**
comp=Z,3.8nm,0.6s
BRG Berggiesshubel 17.89 331 *e*P **P 13 20 25.1 +2.9**
comp=Z,3.9nm,0.9s
BNI Bardonecchia 18.28 306 *e*P **P 13 20 27.4 +0.8**
comp=Z,29nm,1.8s
BNI Bardonecchia 18.28 306 *e*P **P 13 20 27.5 +0.8**
BNI pmax pmax
comp=Z,29nm,1.8s
SENIN Lac Senin/Sane 18.44 311 *e*P **P 13 20 28.5 0.0**
comp=Z,5.8nm,0.8s
CLL Collm 18.60 330 *e*P **P 13 20 30.0 0.0**
CLL *e* 13 20 32.0
CLL *e*sPP 13 20 49.0
BFO Black Forest 18.85 317 *e*P **Pn 13 20 34.7 +1.4**
comp=Z,3.3nm,0.8s
BFO Black Forest 18.85 317 *e*P **Pn 13 20 34.7 +1.4**
BFO pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 20.19 15 P **P 13 20 47.3 0.0**
comp=Z,6.0nm,0.6s,baz=190,slow=19,SNR=6.2
OBN Obninsk 20.19 15 *e*P **P 13 20 47.5 +0.2**
comp=Z,25nm,0.7s
OBN Obninsk 20.19 15 *e*P **P 13 20 47.5 +0.2**
OBN *e* 13 21 01.0
OBN *e*PPP PPP 13 21 10.6
OBN pmax pmax
comp=Z,19nm,0.7s
OBN MLR MLR
comp=Z,40nm,18.0s
MOS Moscow 21.00 16 *e*P **P 13 20 55.1 -1.0**
VSU Vasula 22.58 359‖ *e*P **P 13 21 13.2 +0.2**
VSU pmax pmax
comp=Z,12nm,0.7s
GEYT Alibeck 24.47 76 P **P 13 21 31.7 -0.1**
comp=Z,2.3nm,0.5s,baz=267,slow=9.3,SNR=9.0
GYA0B ALIBECK ARRAY 24.47 76 *e*P **P 13 21 31.6 -0.2**
comp=Z,5.9nm,0.6s
ESDC Sonseca Array 25.12 288 P **P 13 21 37.0 -0.7**
comp=Z,2.0nm,0.7s,baz=81,slow=9.5,SNR=17
FIA0 FINESS Array S 25.58 358 *e*P **P 13 21 40.5 -1.0**
FIA0 *e*PcP **PcP 13 25 11.3 -0.8**
FIA0 FINESS Array S 25.58 358 *e*P **P 13 21 40.5 -1.0**
FIA0 *e* 13 25 11.3
FINES FINESS Array B 25.58 358 P **P 13 21 40.5 -1.0**
comp=Z,3.7nm,0.5s,baz=160,slow=12,SNR=30
FINES PcP **PcP 13 25 11.3 -0.8**
comp=Z,0.7nm,0.6s,baz=132,slow=2.1,SNR=3.2
HFS Hagfors 25.85 344 P **P 13 21 43.4 -0.6**
comp=Z,9.0nm,0.8s,baz=134,slow=11,SNR=15
AKTO Aktyubinsk 26.32 47 P **P 13 21 48.2 -0.1**
comp=Z,3.3nm,0.8s,baz=259,slow=7.8,SNR=13
MDT Midelt 26.66 273 P **P 13 21 51.2 -0.6**
comp=Z,4.5nm,0.9s,baz=254,slow=5.7,SNR=1.9
ABKAR Akbulak array 27.10 50 *e*P **P 13 21 55.6 +0.2**
comp=Z,1.9nm,0.8s
NB2 NORSAR Subarra 27.23 343 P **P 13 21 55.1 -1.4**
comp=Z,1.0nm,0.6s,baz=150,slow=9.3
NB200 NORSAR Array S 27.23 343 *e*P **P 13 21 55.8 -0.7**
NOA NORSAR Array B 27.23 343 P **P 13 21 55.8 -0.7**
comp=Z,1.4nm,0.6s,baz=144,slow=8.9,SNR=8.3
NOA LR LR 13 34 32.3
comp=Z,40nm,18.3s,baz=85,slow=40
EKA Eskdalemuir Ar 28.60 322 P **P 13 22 08.3 -0.5**
comp=Z,0.7nm,0.6s,baz=118,slow=8.8,SNR=4.2
TOA1 Torodi Ar. Sit 32.47 232 *e*P **P 13 22 42.0 -1.3**
TOA0 Torodi Ar. Sit 32.47 232 *e*P **P 13 22 43.5 +0.2**
comp=Z,7.9nm,0.4s
TORD Torodi Ar. Bea 32.47 232 P **P 13 22 42.0 -1.3**
comp=Z,14nm,0.4s,baz=36,slow=7.4,SNR=66
TORD LR LR 13 37 12.1
comp=Z,76nm,19.3s,baz=45,slow=39
ARA0 ARCESS Array S 33.71 359 *e*P **P 13 22 52.3 -1.3**
ARCES ARCESS Array B 33.71 359 P **P 13 22 52.3 -1.3**
comp=Z,2.3nm,0.6s,baz=173,slow=9.4,SNR=15
BRVK Borovoye 34.37 47‖ *e*P **P 13 23 00.8 +1.3**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
KSH Kashi 38.11 70 *e*P **P 13 23 32.5 +0.7**
KURK Kurchatov 39.20 51 *e*P **P 13 23 40.6 0.0**
comp=Z,4.1nm,0.8s
KURK Kurchatov 39.20 51 *d*P **P 13 23 40.9 +0.3**
KURK pmax pmax
comp=Z,5.0nm,0.8s
MAKZ Makanchi 41.52 57 *e*P **P 13 24 00.4 +0.5**
comp=Z,13nm,1.9s
DBIC Dimbokro 41.56 233 P **P 13 23 60.0 -0.6**
comp=Z,4.0nm,0.5s,baz=25,slow=8.0,SNR=5.4
DBIC Dimbokro 41.56 233 *e*P **P 13 24 00.2 -0.3**
comp=Z,38nm,1.5s
DBIC Dimbokro 41.56 233 *e*P **P 13 24 00.2 -0.3**
DBIC pmax pmax
comp=Z,39nm,1.5s
MK31 Makanchi Array 41.73 57 *e*P **P 13 24 02.2 +0.5**
comp=Z,2.8nm,0.8s
MK31 Makanchi Array 41.73 57 *e*P **P 13 24 02.2 +0.5**
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MK32 Makanchi Array 41.73 57 *e*P **P 13 24 02.0 +0.2**
MK32 *e*PcP **PcP 13 25 58.3 +0.4**
MKAR Makanchi Array 41.73 57 P **P 13 24 02.0 +0.2**
comp=Z,3.3nm,0.7s,baz=280,slow=6.4,SNR=34
MKAR PcP **PcP 13 25 58.3 +0.4**
comp=Z,0.8nm,0.6s,baz=280,slow=3.9,SNR=3.6
SPA0 Spitsbergen Ar 42.65 357 *e*P **P 13 24 08.1 -0.6**
comp=Z,15nm,1.0s
SPITS Spitsbergen Ar 42.65 357 P **P 13 24 08.2 -0.6**
comp=Z,1.2nm,0.5s,baz=129,slow=7.9,SNR=4.7
ZAA1 Zalesovo Array 43.08 47 *e*P **P 13 24 12.3 -0.2**
ZALV Zalesovo Beam 43.08 47 P **P 13 24 12.3 -0.2**
comp=Z,2.8nm,0.6s,baz=264,slow=8.9,SNR=12

WMQ Urumqi 45.94 61 *e*P P **13 24 41.0 +5.4**
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ pmax pmax
comp=Z,14nm,4.3s
WMQ LR LR
comp=N,60nm,29.3s
WMQ LR LR
comp=E,340nm,29.3s
WMQ LR LR
comp=Z,7.0nm,24.3s
TLY Talaya 54.66 48‖ *e*P **P 13 25 42.5 +1.0**
TLY pmax pmax
comp=Z,6.0nm,0.9s
GTA Gaotai 55.89 63 *e*P **P 13 25 52.8 +2.2**
GTA pP sP 13 25 58.8 -0.7
GTA sP pP 13 26 01.8 +4.8
GTA pmax pmax
comp=Z,3.0nm,0.7s
GTA pmax pmax
comp=Z,42nm,5.9s
GTA LR LR
comp=N,120nm,18.7s
GTA LR LR
comp=E,130nm,17.8s
GTA LR LR
comp=Z,95nm,17.5s
MATP Matopo 56.03 179 P **P 13 25 51.6 0.0**
comp=Z,1.1nm,0.6s,baz=10,slow=7.9,SNR=3.0
SONA0 Songino Array 57.50 52 *e*P **P 13 26 02.0 0.0**
SONM Songino Array 57.50 52 P **P 13 26 02.0 0.0**
comp=Z,0.7nm,0.6s,baz=269,slow=8.6,SNR=4.0
TIXI Tiksi 59.78 21 *e*P **P 13 26 16.4 -0.8**
comp=Z,1.9nm,0.8s
TIXI Tiksi 59.78 21‖ *e*P **P 13 26 16.8 -0.4**
TIXI pmax pmax
comp=Z,2.0nm,0.7s
LZH Lanzhou 60.12 65 *e*P **P 13 26 21.3 +0.9**
LZH pP pP 13 26 27.0 +0.3
LZH sP sP 13 26 30.8 +1.5
LZH PP **PP 13 28 38.0 +5.2**
LZH pmax pmax
comp=Z,12nm,1.2s
LZH pmax pmax
comp=Z,89nm,4.3s
HHC Hu-ho-hao-te 63.60 57 P **P 13 26 46.3 +2.6**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,16nm,5.0s
HHC LR LR
comp=N,160nm,19.9s
HHC LR LR
comp=E,110nm,17.1s
CMAR Chiang Mai Arr 64.56 85 P **P 13 26 50.2 +0.1**
comp=E,0.7nm,0.8s,baz=296,slow=7.8,SNR=4.6
SEY Seymchan 72.12 23 P **P 13 27 36.7 0.0**
comp=E,1.0nm,0.5s,baz=162,slow=3.2,SNR=4.6
SEY Seymchan 72.12 23‖ *e*P **P 13 27 37.0 +0.3**
MA2 Magadan 73.97 26 P **P 13 27 47.2 -0.5**
comp=E,3.1nm,0.7s,baz=194,slow=9.1,SNR=3.3
USRK Ussuriysk Ar. 74.93 46 P **P 13 27 53.1 -0.5**
comp=E,2.6nm,0.6s,baz=340,slow=3.7,SNR=8.5
KSRS Korea Array 76.28 54 P **P 13 28 01.4 0.0**
comp=E,1.4nm,0.8s,baz=302,slow=5.4,SNR=6.8
YKA Yellowknife Ar 77.33 343 P **P 13 28 06.7 -0.2**
comp=E,0.2nm,0.4s,baz=37,slow=5.4,SNR=5.4
YKB5 Yellowknife Ar 77.33 343 *e*P **P 13 28 06.7 -0.2**
ILAR Eielson Array 79.56 358 P **P 13 28 18.5 -0.8**
comp=E,0.4nm,0.8s,baz=352,slow=5.2,SNR=4.9
MAJO Matsushiro 83.37 49 *e*P **P 13 28 40.4 +0.5**
MAJO Matsushiro 83.37 49 *e*P **P 13 28 40.4 +0.5**
MJAR Matsushiro Arr 83.37 49 P **P 13 28 40.4 +0.5**
comp=E,0.7nm,0.6s,baz=344,slow=4.7,SNR=4.3
AS31 Alice Springs 116.27 101 *e*PKPdf **PKPdf 13 34 56.0 -0.4**
ASAR Alice Springs 116.27 101 PKP **PKPdf 13 34 56.0 -0.4**
comp=E,0.4nm,0.9s,baz=313,slow=0.8,SNR=6.2

GCG 30 13:22:49.5±0.3, 15°.35N×91°.29W, h82km±27km, MD3.5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.69**	**203**	*e*P	Pn	13 23 06.0	+0.5
FUG	**Fuego 3**	**1.00**	**154**	*e*P	Pn	13 23 09.3	+0.4
FUG				*e*S	Sn	13 23 24.8	+1.4
IXG	**Ixpaco**	**1.43**	**145**	*e*S	Sn	13 23 34.5	+1.6

SVSA 30 13:44:13.4±0.9, 38°.10N×26°.24W, h1km±4km, MD3.7, ML2.3, Error ellipse: s-maj=6.2km s-min=1.4km az=36.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**0.49**	**123**	*e*P	Pg	13 44 22.5	-0.4
PSET				*e*S	Sg	13 44 29.4	+0.1
PSET				A	A	13 44 31.7	
63nm,0.3s							
PDA	**Ponta Delgada**	**0.58**	**127**	*e*P	Pg	13 44 23.4	-1.0
PDA				*e*S	Sg	13 44 31.5	-0.4
PDA				A	A	13 44 31.6	
23nm,0.1s							
CMLA	**Cha da Macela**	**0.66**	**120**	*e*S	Sg	13 44 33.8	-0.7
CMLA				A	A	13 44 36.6	
129nm,0.2s							
PCALD	**Caldeiras da R**	**0.67**	**116**	*e*S	Sg	13 44 33.6	-1.2
PCALD				A	A	13 44 33.7	
69nm,0.3s							
BART	**Pico Bartolome**	**0.91**	**110**	*e*S	Sg	13 44 39.6	-2.9
BART				A	A	13 44 42.8	
16nm,0.2s							
PSCM	**Serra do Cume**	**0.91**	**312**	*e*P	Pg	13 44 28.4	-2.5
PSCM				*e*S	Sg	13 44 39.7	-3.1
PSCM				A	A	13 44 41.5	
58nm,0.2s							
ADH	**Angra Heroismo**	**0.96**	**306**	*e*S	Sg	13 44 40.7	-3.5
ADH				A	A	13 44 41.5	
27nm,0.2s							
PSMA	**Santa Maria**	**1.41**	**141**	*e*S	Sg	13 44 51.5	-7.2
PSMA				A	A	13 44 52.4	
21nm,0.1s							
PSMN	**Pico do Norte,**	**1.44**	**139**	*e*S	Sg	13 44 52.2	-7.4
PSMN				A	A	13 44 53.6	
15nm,0.3s							
PPNO	**Prainha do Nor**	**1.63**	**284**	*e*P	Pn	13 44 38.5	-4.9
PPNO				*e*S	Sn	13 44 57.3	-7.8
PPNO				A	A	13 44 58.1	
15nm,0.2s							
ROSA	**Rosais**	**1.69**	**292**	*e*P	Pn	13 44 39.3	-4.8
ROSA				*e*S	Sn	13 44 58.6	-7.8
ROSA				A	A	13 45 01.2	
7.0nm,0.1s							
PCAN	**Candelaria**	**1.80**	**282**	*e*S	Sn	13 45 01.8	-7.4
PCAN				A	A	13 45 03.5	
11nm,0.2s							
CALA	**Caldeira**	**1.99**	**285**	*e*S	Sn	13 45 06.1	-7.9

*IDC **30** 13:56:38.6±1.1, 36°.01N×27°.48E, h0km, mb3.7/5, mb1 3.6/9, mb1mx3.4/37, mbtmp3.6/9, ML3.4/4, MS3.2/1, Ms1 3.2/1, ms1mx2.1/43, Error ellipse: s-maj=23.6km s-min=16.5km az=152.0*
*ISK **30** 13:56:40.5, 35°.93N×27°.52E, h12km, ML3.4/15*
*ATH **30** 13:56:40.3, 35°.90N×27°.56E, h30km±1km, ML3.4/5, Error ellipse: s-maj=3.8km s-min=1.0km az=132.0*
*ISCJB **30** 13:56:41.3±0.5, 35°.87N±0°.03×27°.59E±0°.03, h25km±4km, mb3.6/6, MS3.2/1, Error ellipse: s-maj=4.8km s-min=3.0km az=147.9*
*THE **30** 13:56:41.3, 35°.89N×27°.59E, h6km±2km, ML3.3/8, Error ellipse: s-maj=2.3km s-min=0.8km az=106.0*
*DDA **30** 13:56:42.1, 36°.01N×27°.56E, h38km, ML3.7*
ISC 30 13:56:40.8±1.0, 35°.94N±0°.02×27°.55E±0°.02, h17km±7km, n71, σ1°.24/95, mb3.6/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.50**	**219**	PG	**Pg**	**13 56 50.5**	**-0.2**
KARP				SG	**Sb**	**13 56 57.8**	**-0.4**
KARP	**Karpathos**	**0.50**	**219**	P	**Pg**	**13 56 50.6**	**-0.2**
KARP				S	**Sb**	**13 56 58.5**	**+0.3**
KARP	**Karpathos**	**0.50**	**219**	P	**Pg**	**13 56 50.6**	**-0.2**
KARP				S	**Sg**	**13 56 57.6**	**+0.1**
KARP				AML	AML	13 56 58.9	
comp=E,20438μm,0.2s							
KARP				AML	AML	13 56 59.4	
comp=N,16890μm,0.1s							
ARG	**Arkhangelos**	**0.54**	**59**	PG	**Pb**	**13 56 51.9**	**0.0**
ARG				SG	**Sb**	**13 57 00.1**	**+0.6**
ARG	**Arkhangelos**	**0.54**	**59**	P	**Pb**	**13 56 51.9**	**0.0**
ARG				S	**Sb**	**13 57 00.0**	**+0.6**
ARG	**Arkhangelos**	**0.54**	**59**	P	**Pb**	**13 56 52.0**	**0.0**
ARG				S	**Sb**	**13 57 00.1**	**+0.6**
ARG				AML	AML	13 57 03.6	
comp=E,7071μm,0.3s							
ARG				AML	AML	13 57 05.5	
comp=N,5698μm,0.5s							
NISR	**Nisiros**	**0.75**	**333**	P	**Pn**	**13 56 57.3**	**+0.6**
NISR				S	**Sn**	**13 57 08.7**	**+1.0**
NISR	**Nisiros**	**0.75**	**333**	P	**Pn**	**13 56 56.9**	**+0.2**
DAT	**Datca**	**0.79**	**2**	PG	**Pb**	**13 56 56.7**	**+0.5**
DAT				SG	**Sn**	**13 57 08.6**	**-0.2**
DAT	**Datca**	**0.79**	**2**	*i* P	**Pn**	**13 56 57.3**	**-0.1**
DAT				*i* S	**Sb**	**13 57 08.3**	**+1.6**
DAT				IAML_P			
comp=Z,10μm,0.1s							
DATC	**Datca-Mugla**	**0.82**	**6**	PG	**Pn**	**13 56 57.6**	**-0.1**
BBRN	**Bozburun-Marma**	**0.85**	**29**	PG	**Pb**	**13 56 57.6**	**+0.5**
MRSB	**Marmaris-Mugla**	**0.94**	**34**	PG	**Pn**	**13 56 59.2**	**-0.1**
BDRM	**Kayabasi**	**1.13**	**356**	*i* P	**Pg**	**13 57 02.5**	**-0.2**
BDRM				*i* S	**Sn**	**13 57 18.0**	**+0.9**
BDRM				IAML_P			
comp=Z,4μm,0.2s							
BODT	**Bodrum**	**1.14**	**350**	PN	**Pb**	**13 57 02.2**	**+0.1**
DALY	**Dalyan (Mula)**	**1.25**	**45**	PN	**Pg**	**13 57 04.4**	**-0.5**
DALY	**Dalyan (Mula)**	**1.25**	**45**	*i* P	**Pg**	**13 57 05.1**	**+0.2**
DALY				*i* S	**Sg**	**13 57 22.2**	**+0.9**
TURN	**Turunc**	**1.26**	**42**	PG	**Pn**	**13 56 59.9**	**-3.8**
TURN	**Turunc**	**1.26**	**42**	*i* P	**Pn**	**13 57 00.4**	**-3.3**
TURN				*i* S	**Sb**	**13 57 13.9**	**-6.3**
TURN				IAML_P			
comp=Z,13μm,0.2s							
YER	**Yerkesik**	**1.33**	**26**	PN	**Pg**	**13 57 06.0**	**-0.5**
ZKR	**Zakros**	**1.36**	**233**	PN	**Pb**	**13 57 05.8**	**0.0**
ZKR	**Zakros**	**1.36**	**233**	P	**Pb**	**13 57 05.8**	**0.0**
ZKR				S	**Sn**	**13 57 23.9**	**+1.2**
ZKR	**Zakros**	**1.36**	**233**	P	**Pb**	**13 57 05.9**	**+0.1**
ZKR				AML	AML	13 57 26.1	
comp=N,1325μm,0.5s							
ZKR				AML	AML	13 57 27.4	
comp=E,2491μm,0.4s							
STIA	**Sitia Lasithi**	**1.40**	**239**	P	**Pb**	**13 57 06.8**	**+0.4**
FETY	**Fethiye**	**1.42**	**60**	PN	**Pb**	**13 57 03.7**	**+0.4**
FETY	**Fethiye**	**1.42**	**60**	*i* P	**Pg**	**13 57 07.9**	**-0.3**
FETY				*i* S	**Sg**	**13 57 27.1**	**+0.3**
ANAF	**Anafi Island**	**1.50**	**287**	P	**Pn**	**13 57 07.5**	**+0.6**
ANAF				S	**Sg**	**13 57 28.3**	**-0.8**
AKAS	**Kas**	**1.69**	**79**	PN	**Pb**	**13 57 11.5**	**-0.1**
AKAS	**Kas**	**1.69**	**79**	*i* P	**Pb**	**13 57 11.5**	**-0.1**
AKAS				IAML_P			
comp=Z,11μm,0.2s							
NPS	**Neapolis**	**1.72**	**247**	P	**Pn**	**13 57 10.2**	**+0.3**
NPS				S	**Sn**	**13 57 31.6**	**+0.1**
NPS	**Neapolis**	**1.72**	**247**	P	**Pn**	**13 57 10.2**	**+0.3**
NPS				S	**Sn**	**13 57 31.4**	**-0.1**
NPS				AML	AML	13 57 32.7	
comp=E,2064μm,0.2s							
NPS				AML	AML	13 57 34.1	
comp=N,1626μm,0.3s							
AYDN	**Tasoluk**	**1.74**	**9**	*i* P	**Pb**	**13 57 11.9**	**-0.5**
AYDN				*i* S	**Sb**	**13 57 33.9**	**-0.1**
AYDN				IAML_P			
comp=Z,1μm,0.2s							
SANT	**Santorini**	**1.75**	**285**	PN	**Pn**	**13 57 10.7**	**+0.3**
SANT	**Santorini**	**1.75**	**285**	P	**Pn**	**13 57 10.7**	**+0.3**
SANT				S	**Sb**	**13 57 34.9**	**+0.8**
SANT	**Santorini**	**1.75**	**285**	P	**Pn**	**13 57 10.5**	**+0.1**
GCAM	**G?zelcaml?**	**1.78**	**352**	PN	**Pn**	**13 57 11.9**	**+1.1**
GCAM	**G?zelcaml?**	**1.78**	**352**	*e*P	**Pb**	**13 57 12.2**	**-0.8**
GCAM				IAML_P			
comp=Z,1μm,0.1s							
THR6	**Thira Island,**	**1.79**	**284**	P	**Pn**	**13 57 11.8**	**+0.8**
THR6	**Thira Island,**	**1.79**	**284**	P	**Pn**	**13 57 11.6**	**+0.6**
THR3	**Thira Island,**	**1.80**	**286**	P	**Pn**	**13 57 11.7**	**+0.6**
THR3	**Thira Island,**	**1.80**	**286**	P	**Pn**	**13 57 11.7**	**+0.6**
LAST	**Lasithi**	**1.86**	**246**	P	**Pn**	**13 57 12.6**	**+0.7**
LAST				S	**Sn**	**13 57 35.3**	**+0.2**
LAST	**Lasithi**	**1.86**	**246**	P	**Pn**	**13 57 12.6**	**+0.7**
LAST				AML	AML	13 57 43.3	
comp=N,950μm,0.6s							
LAST				AML	AML	13 57 46.0	
comp=E,743μm,0.8s							
SMG	**Samos**	**1.86**	**342**	P	**Pn**	**13 57 12.4**	**+0.5**
SMG	**Samos**	**1.86**	**342**	P	**Pn**	**13 57 12.2**	**+0.3**
APE	**Apeiranthos**	**1.98**	**305**	PN	**Pn**	**13 57 13.8**	**+0.2**
APE	**Apeiranthos**	**1.98**	**305**	P	**Pn**	**13 57 14.1**	**+0.5**
IOSP	**Ios island**	**1.99**	**294**	P	**Pn**	**13 57 13.9**	**+0.3**
IOSP	**Ios island**	**1.99**	**294**	P	**Pn**	**13 57 14.0**	**+0.3**
IDI	**Anoyia**	**2.26**	**254**	PN	**Pn**	**13 57 17.9**	**+0.4**
IDI	**Anoyia**	**2.26**	**254**	Pn	**Pn**	**13 57 17.8**	**+0.4**
comp=E,9.3nm,0.3s,baz=67,slow=13,SNR=33							
IDI				Sn	**Sn**	**13 57 45.0**	**-0.1**
comp=E,34nm,0.3s,baz=281,slow=19,SNR=12							
IDI	**Anoyia**	**2.26**	**254**	P	**Pn**	**13 57 17.8**	**+0.4**
AKUM	**Antalya-Kumluc**	**2.29**	**80**	*i* P	**Pb**	**13 57 20.8**	**-1.0**
AKUM				IAML_P			
comp=Z,1μm,0.1s							
SIVA	**Sivas**	**2.42**	**248**	P	**Pn**	**13 57 20.8**	**+1.2**
KORT	**Korkueli**	**2.50**	**64**	*i* P	**Pb**	**13 57 25.1**	**-0.2**
KORT				IAML_P			
comp=Z,2μm,0.2s							
BRDR	**BURDUR-Merkez**	**2.67**	**48**	*i* P	**Pb**	**13 57 27.6**	**-0.6**
BRDR				IAML_P			
comp=Z,619nm,0.2s							
KHAL	**Karahalli**	**2.88**	**32**	*i* P	**Pn**	**13 57 28.8**	**+2.7**
IMMV	**Iera Moni Meta**	**2.94**	**262**	P	**Pn**	**13 57 27.7**	**+0.9**
KEPZ	**Antalya-Kepez**	**3.41**	**72**	*i* P	**Pn**	**13 57 37.1**	**+3.8**
KEPZ				IAML_P			
comp=Z,834nm,0.2s							
DURS	**Dursunbey**	**3.73**	**11**	*i* P	**Pn**	**13 57 39.8**	**+2.0**
DURS				IAML_P			
comp=Z,388nm,0.2s							
VLI	**Veliai**	**3.81**	**283**	P	**Pn**	**13 57 39.9**	**+1.2**
BAYC	**CANAKKALE_Bayr**	**3.88**	**349**	*i* P	**Pn**	**13 57 41.6**	**+1.9**
BRTR	**Keskin Array B**	**6.12**	**50**	Pn	**Pn**	**13 58 13.4**	**+2.7**
comp=Z,0.2nm,0.3s,baz=231,slow=16,SNR=3.7							
BRTR				Sn	**Sn**	**13 59 21.9**	**+1.5**
comp=Z,0.4nm,0.3s,baz=213,slow=25,SNR=4.7							
MMAI	**Mount Meron Ar**	**7.11**	**112**	Pn	**Pn**	**13 58 24.2**	**+0.1**
comp=Z,2.8nm,0.3s,baz=300,slow=11,SNR=6.1							
MMAI				Sn	**Sn**	**13 59 44.7**	**+0.1**
comp=Z,4.4nm,0.3s,baz=43,slow=14,SNR=4.6							
EIL	**Elat**	**8.82**	**133**	Pn	**Pn**	**13 58 47.8**	**+0.2**
comp=Z,0.4nm,0.3s,baz=45,slow=7.1,SNR=3.5							
EIL				Sn	**Sn**	**14 00 23.2**	**-3.4**
comp=Z,1.3nm,0.3s,baz=312,slow=19,SNR=6.8							
FINES	**FINESS Array B**	**25.54**	**358**	P	**P**	**14 02 07.6**	**-0.8**
comp=Z,0.7nm,0.4s,baz=160,slow=11,SNR=13							
HFS	**Hagfors**	**25.81**	**344**	P	**P**	**14 02 10.6**	**-0.2**
comp=Z,0.8nm,0.6s,baz=165,slow=12,SNR=4.0							
TORD	**Torodi Ar. Bea**	**32.49**	**232**	P	**P**	**14 03 11.1**	**+0.4**
comp=Z,1.9nm,0.3s,baz=35,slow=8.7,SNR=1.6							
ARCES	**ARCESS Array B**	**33.67**	**359**	P	**P**	**14 03 19.7**	**-0.8**
comp=Z,0.2nm,0.3s,baz=172,slow=8.4,SNR=9.9							
MKAR	**Makanchi Array**	**41.72**	**57**	P	**P**	**14 04 29.5**	**+0.7**
comp=Z,0.6nm,0.7s,baz=287,slow=5.4,SNR=5.1							
ZALV	**Zalesovo Beam**	**43.06**	**47**	P	**P**	**14 04 40.2**	**+0.7**
comp=Z,0.6nm,0.5s,baz=282,slow=10.0,SNR=2.9							
ZALV				LR	LR	14 27 00.2	
comp=Z,34nm,21.6s,baz=348,slow=42							

IDC 30 14:01:28.4±2.8, 8°.38S×123°.73E, h189km±27km, mb3.4/1, mb1 3.4/4, mb1mx3.0/26, mbtmp3.9/4, Error ellipse: s-maj=92.5km s-min=13.7km az=59.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.82**	**182**	P	Pn	14 02 03.7	-0.6
68nm,0.3s,baz=354,slow=4.9,SNR=69							
BATI				S	Sn	14 02 32.8	+0.4
54nm,0.3s,baz=215,slow=20,SNR=9.2							
FITZ	**Fitzroy Crossi**	**9.84**	**169**	P	Pn	14 03 44.5	-1.3

0.7nm,0.3s,baz=318,slow=14,SNR=28
WRA S S 14 07 39.6 -8.7
0.4nm,0.3s,baz=324,slow=23,SNR=5.8
ASAR Alice Springs 18.06 149 P Pn 14 05 27.1 -0.8
0.3nm,0.3s,baz=332,slow=13,SNR=28
ASAR S S 14 08 43.7 +0.6
0.1nm,0.3s,baz=310,slow=21,SNR=4.2
MKAR Makanchi Array 66.14 330 P P 14 11 55.6 +0.1
0.6nm,0.5s,baz=133,slow=7.4,SNR=9.4

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*SOME **30** 14:07:17.0, 40.90N×77.82E, h5km*
*KRNET **30** 14:07:19.2±0.1, 40.99N×77.75E, mb2.9*

ISC 30 14:07:21.7±1.9, 41.05N±0.09×77.75E±0.04, h10km, n26, σ1§62/52, 11C-8D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.16**	**339**	⇑*i*P	**Pb**	**14 07 42.1**	**-2.0**
	baz=40						
KDJ				⇑*i*S	**Sb**	**14 07 59.1**	**-0.2**
	baz=40						
ULHL	**Ulahol**	**1.65**	**317**	⇓*i*P	**Pn**	**14 07 50.9**	**-0.1**
	baz=18						
ULHL				⇓*i*S	**Sb**	**14 08 13.6**	**+0.4**
	baz=18						
BOOM	**Boomskoye usch**	**1.98**	**317**	⇓*i*P	**Pb**	**14 07 56.4**	**-1.5**
	baz=19						
BOOM				⇓*i*S	**Sb**	**14 08 23.6**	**+0.9**
	baz=19						
SATY	**Saty**	**2.07**	**13**	*e*P	**Pb**	**14 07 58.5**	**-1.0**
	19nm,0.5s						
SATY				⇑*i*S	**Sg**	**14 08 28.5**	**+0.3**
	20nm,0.3s						
TNSS	**Tian-Shan**	**2.08**	**343**	*e*P	**Pb**	**14 07 58.1**	**-1.7**
	20nm,0.6s						
TNSS				*e*S	**Sg**	**14 08 27.9**	**-0.6**
	12nm,0.4s						
KZA	**Kyzart**	**2.14**	**300**	⇓*i*P	**Pb**	**14 07 58.7**	**-2.2**
	baz=1.0						
KZA				⇓*i*S	**Sb**	**14 08 27.4**	**-0.2**
	baz=1.0						
IZV	**Izvestkoviy**	**2.16**	**337**	*e*P	**Pb**	**14 07 59.7**	**-1.4**
	6.7nm,0.2s						
IZV				*e*S	**Sg**	**14 08 30.4**	**-0.7**
	21nm,0.5s						
MDOK	**Medeo**	**2.18**	**346**	*e*P	**Pb**	**14 07 59.3**	**-2.0**
	9.9nm,0.4s						
MDOK				*e*S	**Sg**	**14 08 30.2**	**-1.6**
	17nm,0.6s						
ZHN	**Zhinishke**	**2.18**	**13**	*e*P	**Pb**	**14 08 00.3**	**-1.1**
	16nm,0.2s						
ZHN				*e*S	**Sg**	**14 08 31.4**	**-0.3**
	9.5nm,0.2s						
KOTS	**Kotyrbulak**	**2.24**	**348**	*e*P	**Pb**	**14 08 01.4**	**-1.0**
	4.4nm,0.2s						
KOTS				*e*S	**Sg**	**14 08 33.3**	**-0.3**
	13nm,0.4s						
UZB	**Uzynbulak**	**2.30**	**24**	*e*P	**Pb**	**14 08 02.2**	**-1.2**
	3.5nm,0.2s						
UZB				*e*S	**Sg**	**14 08 34.7**	**-1.0**
	8.2nm,0.3s						
KURS	**Kuram**	**2.46**	**7**	*e*P	**Pb**	**14 08 04.5**	**-1.5**
	7.7nm,0.4s						
KURS				*e*S	**Sg**	**14 08 38.6**	**-2.1**
	5.7nm,0.6s						
KPKS	**Kokpek**	**2.51**	**16**	*e*P	**Pb**	**14 08 06.2**	**-0.8**
	17nm,0.3s						
KPKS				*e*S	**Sg**	**14 08 41.5**	**-1.0**
	16nm,0.5s						
PDGK	**Podgornoye**	**2.62**	**29**	⇑*i*P	**Pn**	**14 08 05.5**	**+1.3**
	baz=28						
PDGK				⇑*i*S	**Sb**	**14 08 38.9**	**-2.2**
	baz=28						
DGS	**Degeres**	**2.64**	**327**	*e*P	**Pb**	**14 08 08.6**	**-0.6**
	4.6nm,0.3s						
DGS				*e*S	**Sg**	**14 08 45.5**	**-1.0**
	14nm,0.5s						
UCH	**Uchtor**	**2.70**	**297**	⇓*i*P	**Pn**	**14 08 06.6**	**+1.0**
	baz=98						
UCH				⇓*i*S	**Sb**	**14 08 41.0**	**-2.7**
	baz=98						
KTBS	**Karatobe**	**2.78**	**344**	*e*P	**Pb**	**14 08 10.6**	**-0.9**
	2.1nm,0.3s						
KTBS				*e*S	**Sg**	**14 08 49.0**	**-2.0**
	26nm,0.4s						
CHKK	**Chushkaly**	**2.86**	**349**	*e*P	**Pb**	**14 08 11.8**	**-1.1**
	4.5nm,0.3s						
CHKK				*e*S	**Sg**	**14 08 51.1**	**-2.6**
	23nm,0.3s						
AAK	**Ala-Archa**	**2.91**	**304**	⇑*i*P	**Pn**	**14 08 09.5**	**+1.3**
	baz=5.0						
AAK				⇑*i*S	**Sn**	**14 08 45.5**	**+2.2**
	baz=5.0						
CHMS	**Chumysh**	**2.97**	**312**	⇑*i*P	**Pn**	**14 08 10.3**	**+1.4**
	baz=13						
CHMS				⇑*i*S	**Sn**	**14 08 47.3**	**+2.7**
	baz=13						
KUU	**Kurty**	**3.03**	**340**	*e*P	**Pb**	**14 08 14.6**	**-1.1**
	2.0nm,0.2s						
KUU				*e*S	**Sb**	**14 08 55.9**	**+3.1**
	8.3nm,0.2s						
MNBS	**Baschi**	**3.07**	**9**	*e*P	**Pb**	**14 08 16.7**	**+0.2**
	2.2nm,0.3s						
MNBS				*e*S	**Sg**	**14 08 59.7**	**-0.6**
	12nm,0.3s						
KTMS	**Ketmen**	**3.08**	**38**	*e*P	**Pb**	**14 08 14.9**	**-1.7**
	3.8nm,0.2s						
KTMS				*e*S	**Sb**	**14 08 56.6**	**+2.3**
	15nm,0.6s						
ARXS	**Arharly**	**3.16**	**1**	*e*P	**Pb**	**14 08 17.8**	**-0.3**
	2.1nm,0.5s						
ARXS				*e*S	**Sg**	**14 09 01.4**	**-1.9**
	16nm,0.4s						
EKS2	**Erkin-Say**	**3.38**	**300**	⇑*i*P	**Pn**	**14 08 16.1**	**+1.4**
	baz=1.0						
EKS2				⇑*i*S	**Sn**	**14 08 57.0**	**+2.1**
	baz=1.0						
DJR	**Jarkent**	**3.61**	**24**	*e*P	**Pb**	**14 08 24.8**	**-0.8**
	2.6nm,0.3s						
DJR				*e*S	**Sg**	**14 09 13.8**	**-3.9**
	5.1nm,0.3s						

EAF 30 14:08:57.1±1.4, 19.82S×25.46E, h0km±22km, MD3.5, Botswana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATP	**Matopo**	**2.92**	**103**	*i*P	Pn	14 09 43.2	-1.8
MATP				*i*S	Sn	14 10 19.7	-1.2
MATP	**Matopo**	**2.92**	**103**	*i*P	Pn	14 09 43.2	-1.8
MATP				*i*S	Sn	14 10 19.7	-1.2
BLWY	**Bulawayo**	**2.98**	**97**	*i*P	Pn	14 09 45.0	-0.8
BLWY				*i*S	Sn	14 10 20.9	-1.5
BLWY	**Bulawayo**	**2.98**	**97**	*i*P	Pn	14 09 45.0	-0.8
BLWY				*i*S	Sn	14 10 20.9	-1.5
MSNA	**Messina**	**4.95**	**121**	*i*P	Pn	14 10 12.2	-0.6
MSNA				*i*S	Sn	14 11 06.6	-4.3
MSNA	**Messina**	**4.95**	**121**	*i*P	Pn	14 10 12.2	-0.6
MSNA				*i*S	Sn	14 11 06.6	-4.3
TSUM	**Tsumeb**	**7.45**	**273**	*i*P	Pn	14 10 46.4	-0.9
TSUM	**Tsumeb**	**7.45**	**273**	*i*P	Pn	14 10 46.4	-0.9

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*BJI **30** 14:40:07.0±0.0, 44.20N×10.20E, h5km, mb4.8/42, mB5.1/28, Ms4.7/24, Ms7 4.5/23*
*ROM **30** 14:40:08.5±0.1, 44.160N±0.005×10.187E±0.005, h6km, ML4.4/133, Mw4.5, Error ellipse: s-maj=0.6km s-min=0.1km az=19.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-7.18; $M_{\theta\theta}$6.73; $M_{\phi\phi}$0.44; $M_{r\theta}$0.82; $M_{\theta\phi}$0.26; $M_{\phi r}$1.67; Fault plane solution: $M_0$7.18675×10^{15} NP1:ϕ_s99.00000°, δ42.00000°, λ-73.00000°. NP2:ϕ_s256.00000°, δ50.00000°, λ-105.00000°.*
*LDG **30** 14:40:08.9±0.1, 44.18N×10.23E, h7km, Md4.5/2, Ml4.7/44 Error ellipse: s-maj=3.2km s-min=2.2km az=29.0*
*GEN **30** 14:40:08.8, 44.18N×10.20E, h5km±1km, Ml4.4*
*MED_RC **30** 14:40:08.0±0.3, 44.09N×10.26E, h10km, MW4.8/10, Moment Tensor Solution. Mantle waves: s10, c11; Duration: 1§0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.22±.07; $M_{\theta\theta}$1.26±.06; $M_{\phi\phi}$-0.03±.08; $M_{r\theta}$-1.36±.26; $M_{\theta\phi}$-0.28±.07; $M_{\phi r}$0.30±.27; Best double couple: $M_0$1.88000×10^{16} NP1:ϕ_s102.00000°, δ69.00000°, λ-90.00000°. NP2:ϕ_s281.00000°, δ21.00000°, λ-91.00000°. Principal axes: T 1.9300, Plg24.0000°, Azm192.0000°; N -0.0900, Plg0.0000°, Azm282.0000°; P -1.8300, Plg66.0000°, Azm13.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*IDC **30** 14:40:08.2±0.6, 44.13N×10.12E, h0km, mb4.2/22, mb1 4.3/34, mb1mx4.2/50, mbtmp4.2/34, ML4.4/9, MS4.0/44, Ms1 4.0/44, ms1mx3.9/55 Error ellipse: s-maj=11.7km s-min=9.8km az=117.0*
*BGR **30** 14:40:08.3±0.5, 43.97N×10.14E, h10km, ML5.1/29, Error ellipse: s-maj=13.3km s-min=8.9km az=40.0*
*MOS **30** 14:40:08.1±1.0, 44.22N×10.17E, h10km, mb5.1/41, MS4.0/18, Error ellipse: s-maj=4.3km s-min=3.3km az=68.2*
*BEO **30** 14:40:09.6±0.6, 44.34N×10.13E, h0km, ML4.5/8*
*ISCJB **30** 14:40:09.0±0.2, 44.16N±0.01×10.18E±0.01, h18km±1km, mb4.7/90, MS4.1/45, Error ellipse: s-maj=1.7km s-min=1.2km az=10.4*
*PDG **30** 14:40:09.1±0.6, 44.19N×10.23E, h12km±1km, ML4.4/12, Error ellipse: s-maj=0.6km s-min=0.6km az=90.0*
*NEIC **30** 14:40:09.6±2.2, 44.13N×10.15E, h10km±1km, mb4.9/49, ML4.4(ROM), ML4.7(LDG), Error ellipse: s-maj=6.3km s-min=5.4km az=106.0*
NEIC Felt at Barga, Bergamo, Castelnuovo Magra, La Spezia, Lerici, Massarosa, Pisa, Reggio nell'Emilia, Seravezza, Vaiano and Viareggio.
*STR **30** 14:40:09.9±0.7, 44.N±3.×1.0E±., h0km, mB5.3/3, mb4.9/2, MLv4.5/6, Mw(mB)4.8/3*
*GCMT **30** 14:40:09.6±0.4, 44.08N±0.02×10.05E±0.05, h14km±1km, MW4.8/75, Moment Tensor Solution. s14, c15; s75, c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.60±.14; $M_{\theta\theta}$1.68±.10; $M_{\phi\phi}$-0.07±.07; $M_{r\theta}$-0.56±.17; $M_{\theta\phi}$-0.23±.04; $M_{\phi r}$0.44±.21; Best double couple: $M_0$1.80100×10^{16} NP1:ϕ_s109.00000°, δ56.00000°, λ-76.00000°. NP2: ϕ_s265.00000°, δ36.00000°, λ-110.00000°. Principal axes: T 1.8190, Plg10.0000°, Azm189.0000°; N -0.0310, Plg11.0000°, Azm281.0000°; P -1.7840, Plg74.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BNS **30** 14:40:11.0±0.2, 44.17N×10.18E, h10km, ML4.2*
*PRU **30** 14:40:11.1±0.0, 44.32N×10.18E, h4km, M4.9*

ISC 30 14:40:09.1±0.6, 44.16N±0.01×10.15E±0.01, h9km±3km, n774, σ1§79/885, mb4.9/90, MS4.1/45, 33C-41D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.01**	**32**	P	**Pg**	**14 40 10.2**	**-0.5**
EQUI				S	**Sg**	**14 40 11.1**	**-0.7**
EQUI	**Equi**	**0.01**	**32**	P	**Pg**	**14 40 10.2**	**-0.5**
EQUI				S	**Sg**	**14 40 11.2**	**-0.6**
T0912	**Minucciano (LU**	**0.04**	**80**	*i*P	**Pg**	**14 40 10.1**	**-0.9**
FOSD	**Fosdinovo**	**0.12**	**244**	*e*P	**Pg**	**14 40 12.6**	**+0.7**
FOSD				S	**Sg**	**14 40 15.4**	**+1.6**
VLC	**Villacollemand**	**0.17**	**90**	*e*Pg	**Pg**	**14 40 12.0**	**-0.7**
VLC	**Villacollemand**	**0.17**	**90**	⇑*e*Pg	**Pg**	**14 40 12.2**	**-0.6**
VLC				*e*Sg	**Sg**	**14 40 14.4**	**-0.7**
VLC	**Villacollemand**	**0.17**	**90**	P	**Pg**	**14 40 12.0**	**-0.7**
VLC				S	**Sg**	**14 40 14.5**	**-0.7**
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
VLC				AML	AML		
PLMA	**Palmaria, Port**	**0.24**	**243**	P	**Pg**	**14 40 14.7**	**+0.8**
PLMA				S	**Sg**	**14 40 18.6**	**+1.4**
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
CARD	**Cardoso**	**0.28**	**119**	P	**Pg**	**14 40 13.9**	**-0.7**
CARD				S	**Sg**	**14 40 18.0**	**-0.3**
CARD	**Cardoso**	**0.28**	**119**	P	**Pg**	**14 40 13.9**	**-0.7**
CARD				S	**Sg**	**14 40 18.0**	**-0.3**
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
CARD				AML	AML		
ERBM	**Eremo**	**0.32**	**36**	P	**Pg**	**14 40 15.0**	**-0.5**
ERBM				S	**Sg**	**14 40 19.8**	**0.0**
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
ERBM				AML	AML		
GRAM	**Graiana**	**0.34**	**350**	P	**Pg**	**14 40 15.6**	**-0.2**
GRAM				S	**Sg**	**14 40 20.3**	**0.0**
GRAM	**Graiana**	**0.34**	**350**	P	**Pg**	**14 40 15.6**	**-0.2**
GRAM				S	**Sg**	**14 40 20.6**	**+0.4**
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
GRAM				AML	AML		
BDI	**Bagni Di Lucca**	**0.34**	**107**	P	**Pg**	**14 40 15.1**	**-0.7**
BDI				S	**Sg**	**14 40 20.2**	**-0.1**
BDI				AML	AML		
BDI				AML	AML		
	comp=N,72200μm,0.5s						
BDI				AML	AML		
	comp=E,86850μm,0.5s						
BDI				AML	AML		
	comp=N,83150μm,0.4s						
BDI				AML	AML		
BDI				AML	AML		
	comp=N,72200μm,0.5s						
BDI				AML	AML		
	comp=E,86850μm,0.5s						
BDI				AML	AML		
	comp=N,83150μm,0.4s						
BDI				AML	AML		
	comp=E,86850μm,0.5s						
BDI				AML	AML		
	comp=N,72200μm,0.5s						
BDI				AML	AML		
	comp=N,83150μm,0.4s						
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
	comp=N,72200μm,0.5s						
BDI				AML	AML		
	comp=E,86850μm,0.5s						
MAIM	**Mastiano**	**0.35**	**135**	P	**Pg**	**14 40 15.4**	**-0.5**
MAIM				S	**Sg**	**14 40 20.4**	**-0.2**
MAIM	**Mastiano**	**0.35**	**135**	*e*P	**Pg**	**14 40 15.5**	**-0.5**
MAIM				S	**Sg**	**14 40 20.6**	**0.0**
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
MAIM				AML	AML		
NEVI	**Neviano degli**	**0.44**	**16**	P	**Pg**	**14 40 17.9**	**+0.2**
POPM	**Popiglio**	**0.45**	**105**	P	**Pg**	**14 40 17.1**	**-0.8**
POPM				S	**Sg**	**14 40 23.6**	**-0.3**
POPM	**Popiglio**	**0.45**	**105**	P	**Pg**	**14 40 17.3**	**-0.6**
POPM				S	**Sg**	**14 40 23.9**	**0.0**
POPM				AML	AML		
	comp=E,93200μm,1.2s						
POPM				AML	AML		
POPM				AML	AML		
	comp=E,93200μm,1.2s						
POPM				AML	AML		
POPM				AML	AML		
	comp=E,93200μm,1.2s						
POPM				AML	AML		
POPM				AML	AML		
POPM				AML	AML		
	comp=E,93200μm,1.2s						
POPM				AML	AML		
POPM				AML	AML		
	comp=E,93200μm,1.2s						
MSSA	**Maissana**	**0.48**	**289**	*e*P	**Pg**	**14 40 18.8**	**+0.4**
MSSA				AML	AML		
	comp=E,90450μm,1.6s						
MSSA				AML	AML		
	comp=N,57750μm,1.5s						
MSSA				AML	AML		
	comp=E,90450μm,1.6s						
MSSA				AML	AML		
	comp=N,57750μm,1.5s						
MSSA				AML	AML		
	comp=E,90450μm,1.6s						
MSSA				AML	AML		
	comp=N,57750μm,1.5s						
MSSA				AML	AML		
	comp=E,90450μm,1.6s						
MSSA				AML	AML		
	comp=N,57750μm,1.5s						
MSSA				AML	AML		
	comp=E,90450μm,1.6s						
PRMA	**PARMA**	**0.61**	**11**	P	**Pb**	**14 40 21.8**	**-0.2**
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
ZCCA	**Zocca**	**0.62**	**72**	P	**Pb**	**14 40 21.7**	**-0.5**
ZCCA				AML	AML		
	comp=E,55250μm,0.7s						
ZCCA				AML	AML		
	comp=N,58000μm,0.6s						
ZCCA				AML	AML		
	comp=E,57600μm,0.7s						
ZCCA				AML	AML		
	comp=N,58700μm,0.6s						
ZCCA				AML	AML		
	comp=E,55250μm,0.7s						
ZCCA				AML	AML		
	comp=N,58000μm,0.6s						
ZCCA				AML	AML		
	comp=E,57550μm,0.7s						
ZCCA				AML	AML		
	comp=N,58750μm,0.6s						
ZCCA				AML	AML		
	comp=E,55250μm,0.7s						
ZCCA				AML	AML		
	comp=N,58750μm,0.6s						
ZCCA				AML	AML		
	comp=N,58000μm,0.6s						
ZCCA				AML	AML		
	comp=E,57550μm,0.7s						
ZCCA				AML	AML		
	comp=E,55250μm,0.7s						
ZCCA				AML	AML		
	comp=N,58750μm,0.6s						
ZCCA				AML	AML		
	comp=N,58000μm,0.6s						
ZCCA				AML	AML		
	comp=E,57550μm,0.7s						
MTCR	**Monte La Croce**	**0.63**	**102**	P	**Pg**	**14 40 20.3**	**-0.9**
MTCR				S	**Sb**	**14 40 30.2**	**-1.0**
MTCR				AML	AML		
	comp=E,41150μm,0.6s						
MTCR				AML	AML		
	comp=N,73800μm,0.8s						
MTCR				AML	AML		
	comp=E,41350μm,0.6s						
MTCR				AML	AML		
	comp=N,73950μm,0.8s						
MTCR				AML	AML		
	comp=N,73950μm,0.8s						
MTCR				AML	AML		
	comp=E,41350μm,0.6s						
MTCR				AML	AML		
	comp=N,73950μm,0.8s						
MTCR				AML	AML		
	comp=E,41350μm,0.6s						
PTF	**Prato**	**0.69**	**107**	P	**Pg**	**14 40 21.5**	**-0.9**
CRMI	**Carmignano**	**0.70**	**122**	P	**Pg**	**14 40 22.2**	**-0.4**
CRMI				AML	AML		
	comp=E,26950μm,1.4s						
CRMI				AML	AML		
	comp=N,43800μm,1.3s						
CRMI				AML	AML		
	comp=E,11120μm,1.4s						
CRMI				AML	AML		
	comp=N,18300μm,1.2s						
CRMI				AML	AML		
	comp=E,27000μm,1.4s						
CRMI				AML	AML		
	comp=N,43800μm,1.3s						
CRMI				AML	AML		
	comp=E,27000μm,1.4s						
CRMI				AML	AML		
	comp=E,11120μm,1.4s						
CRMI				AML	AML		
	comp=N,18300μm,1.2s						
CRMI				AML	AML		
	comp=N,18300μm,1.2s						
CRMI				AML	AML		
	comp=N,43800μm,1.3s						
CRMI				AML	AML		
	comp=E,27000μm,1.4s						
CRMI				AML	AML		
	comp=E,11120μm,1.4s						
FNVD	**Fontana Vidola**	**0.70**	**89**	P	**Pg**	**14 40 22.1**	**-0.6**
MODE	**Modena**	**0.74**	**50**	P	**Pb**	**14 40 24.5**	**+0.4**
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
NOVE	**Novellara**	**0.76**	**32**	P	**Pb**	**14 40 24.3**	**-0.1**
NOVE				AML	AML		

NOVE				AML	AML	
NOVE				AML	AML	
NOVE				AML	AML	
NOVE				AML	AML	
NOVE				AML	AML	
NOVE				AML	AML	
NOVE				AML	AML	
GORR	**Gorreto**	**0.76**	**306**	P	**Pg**	**14 40 23.4 -0.2**
GORR				S	**Sg**	**14 40 34.1 +0.5**
GORR	**Gorreto**	**0.76**	**306**	*e*P	**Pg**	**14 40 23.5 -0.2**
GORR				S	**Sb**	**14 40 35.0 0.0**
GORR				AML	AML	
	comp=E,31150μm,1.1s					
GORR				AML	AML	
	comp=N,35650μm,1.0s					
GORR				AML	AML	
	comp=E,31150μm,1.1s					
GORR				AML	AML	
	comp=N,35650μm,1.0s					
GORR				AML	AML	
	comp=E,31150μm,1.1s					
GORR				AML	AML	
	comp=N,35650μm,1.0s					
GORR				AML	AML	
	comp=E,31150μm,1.1s					
GROG	**Isola di Gorgo**	**0.76**	**194**	P	**Pg**	**14 40 24.0 +0.3**
GROG				S	**Sb**	**14 40 35.2 +0.4**
GROG				AML	AML	
	comp=E,56250μm,0.4s					
GROG				AML	AML	
	comp=N,44250μm,0.3s					
GROG				AML	AML	
	comp=E,56250μm,0.4s					
GROG				AML	AML	
	comp=N,44250μm,0.3s					
GROG				AML	AML	
	comp=N,44250μm,0.3s					
GROG				AML	AML	
	comp=E,56250μm,0.4s					
GROG				AML	AML	
	comp=N,44250μm,0.3s					
GROG				AML	AML	
	comp=E,56250μm,0.4s					
BOB	**Bobbio (Coli)**	**0.79**	**321**	P	**Pg**	**14 40 24.1 -0.1**
BOB				S	**Sb**	**14 40 36.1 +0.3**
BOB				AML	AML	
	comp=E,48350μm,1.0s					
BOB				AML	AML	
	comp=N,43900μm,0.9s					
BOB				AML	AML	
	comp=E,55250μm,1.1s					
BOB				AML	AML	
	comp=N,42350μm,1.0s					
BOB				AML	AML	
	comp=E,48300μm,1.0s					
BOB				AML	AML	
	comp=N,43900μm,0.9s					
BOB				AML	AML	
	comp=E,55200μm,1.1s					
BOB				AML	AML	
	comp=N,42350μm,1.0s					
BOB				AML	AML	
	comp=E,48300μm,1.0s					
BOB				AML	AML	
	comp=N,43900μm,0.9s					
BOB				AML	AML	
	comp=E,55200μm,1.1s					
BOB				AML	AML	
	comp=N,42350μm,1.0s					
BOB				AML	AML	
	comp=E,48300μm,1.0s					
BOB				AML	AML	
	comp=N,43900μm,0.9s					
BOB				AML	AML	
	comp=E,55200μm,1.1s					
BOB				AML	AML	
	comp=N,42350μm,1.0s					
SEI	**Scarperia**	**0.88**	**97**	P	**Pg**	**14 40 25.1 -0.8**
SEI				AML	AML	
	comp=E,42800μm,0.4s					
SEI				AML	AML	
	comp=N,92750μm,0.5s					
SEI				AML	AML	
	comp=E,42800μm,0.4s					
SEI				AML	AML	
	comp=N,92750μm,0.5s					
SEI				AML	AML	
	comp=E,42800μm,0.4s					
SEI				AML	AML	
	comp=N,92750μm,0.5s					
SEI				AML	AML	
	comp=E,42800μm,0.4s					
SEI				AML	AML	
	comp=N,92750μm,0.5s					
FIR	**Firenze**	**0.89**	**115**	P	**Pg**	**14 40 25.9 -0.3**
RAVA	**Ravarino**	**0.92**	**49**¶	*e*Pg	**Pn**	**14 40 28.7 +0.6**
RAVA				*e*Sg	**Sn**	**14 40 41.5 +0.1**
RAVA	**Ravarino**	**0.92**	**49**	AML	AML	
RAVA				AML	AML	
RAVA				AML	AML	
RAVA				AML	AML	
RAVA				AML	AML	
RAVA				AML	AML	
RAVA				AML	AML	
RAVA				AML	AML	
CAVE	**Cavezzo**	**0.93**	**41**	AML	AML	
	comp=N,99050μm,1.2s					
CAVE				AML	AML	
CAVE				AML	AML	
	comp=N,99050μm,1.2s					
CAVE				AML	AML	
	comp=N,99050μm,1.2s					
CAVE				AML	AML	
CAVE				AML	AML	
MTRZ	**Monterenzio**	**0.97**	**77**	*e*P	**Pg**	**14 40 27.3 -0.4**
MTRZ				AML	AML	
	comp=E,43250μm,0.7s					
MTRZ				AML	AML	
	comp=N,36400μm,0.8s					
MTRZ				AML	AML	
	comp=E,45300μm,0.7s					
MTRZ				AML	AML	
	comp=N,36400μm,0.8s					
MTRZ				AML	AML	
	comp=E,43250μm,0.7s					
MTRZ				AML	AML	
	comp=N,36400μm,0.8s					
MTRZ				AML	AML	
	comp=N,36400μm,0.8s					
MTRZ				AML	AML	
	comp=E,45300μm,0.7s					
MTRZ				AML	AML	
	comp=N,36400μm,0.8s					
MTRZ				AML	AML	
	comp=E,45300μm,0.7s					
MTRZ				AML	AML	
	comp=E,43250μm,0.7s					
MTRZ				AML	AML	
	comp=N,36400μm,0.8s					
BRIS	**BRISIGHELLA**	**0.98**	**90**	P	**Pn**	**14 40 31.5 +2.5**
BRIS				AML	AML	
	comp=E,27050μm,1.4s					
BRIS				AML	AML	
	comp=N,24150μm,0.7s					
BRIS				AML	AML	
	comp=E,27050μm,1.4s					
BRIS				AML	AML	
	comp=N,24150μm,0.7s					
BRIS				AML	AML	
	comp=E,27050μm,1.4s					
BRIS				AML	AML	
	comp=N,24150μm,0.7s					
RUFI	**Rufina**	**1.03**	**108**	P	**Pg**	**14 40 28.0 -0.9**
RUFI				AML	AML	
	comp=E,14200μm,0.5s					
RUFI				AML	AML	
	comp=N,16420μm,0.8s					
RUFI				AML	AML	
	comp=E,14200μm,0.5s					
RUFI				AML	AML	
	comp=N,16650μm,0.8s					
RUFI				AML	AML	
	comp=N,16650μm,0.8s					
RUFI				AML	AML	
	comp=E,14200μm,0.5s					
RUFI				AML	AML	
	comp=N,16650μm,0.8s					
RUFI				AML	AML	
	comp=E,14200μm,0.5s					
FIU	**Minerbio Fiu**	**1.07**	**63**	P	**Pn**	**14 40 31.1 +0.8**
FIU				AML	AML	
	comp=E,84750μm,1.5s					
FIU				AML	AML	
	comp=N,48550μm,0.8s					
FIU				AML	AML	
	comp=N,48550μm,0.8s					
FIU				AML	AML	
	comp=E,84750μm,1.5s					
FIU				AML	AML	
	comp=N,48550μm,0.8s					
FIU				AML	AML	
	comp=E,84750μm,1.5s					
CSNT	**Castellina Chi**	**1.08**	**129**	P	**Pg**	**14 40 29.0 -0.7**
CSNT				S	**Sb**	**14 40 44.0 -0.1**
CSNT				AML	AML	
	comp=E,19350μm,1.1s					
CSNT				AML	AML	
	comp=N,20700μm,1.5s					
CSNT				AML	AML	
	comp=E,19350μm,1.1s					
CSNT				AML	AML	
	comp=N,20700μm,1.5s					
CSNT				AML	AML	
	comp=E,19350μm,1.1s					
CSNT				AML	AML	
	comp=N,20700μm,1.5s					
CTL8	**Castelleone**	**1.15**	**346**	AML	AML	
	comp=E,65350μm,1.4s					
CTL8				AML	AML	
	comp=N,55500μm,1.1s					
CTL8				AML	AML	
	comp=E,16300μm,1.3s					
CTL8				AML	AML	
	comp=N,16350μm,1.2s					
CTL8				AML	AML	
	comp=N,16350μm,1.2s					
CTL8				AML	AML	
	comp=N,55500μm,1.1s					
CTL8				AML	AML	
	comp=E,16300μm,1.3s					
CTL8				AML	AML	
	comp=E,65350μm,1.4s					
CTL8				AML	AML	
	comp=N,16350μm,1.2s					
CTL8				AML	AML	
	comp=N,55500μm,1.1s					
CTL8				AML	AML	
	comp=E,16300μm,1.3s					
CTL8				AML	AML	
	comp=E,65350μm,1.4s					
GAZZ	**Gazzo Veronese**	**1.17**	**35**¶	*e*Pg	**Pn**	**14 40 33.1 +1.6**
GAZZ				*e*Sg	**Sn**	**14 40 51.0 +3.3**
SERM	**Sermide**	**1.18**	**44**	AML	AML	
	comp=N,58950μm,0.7s					
SERM				AML	AML	
	comp=E,33550μm,1.0s					
SERM				AML	AML	
	comp=N,30700μm,0.8s					
SERM				AML	AML	
	comp=E,89700μm,0.8s					
SERM				AML	AML	
	comp=N,30700μm,0.8s					
SERM				AML	AML	
	comp=N,58950μm,0.7s					
SERM				AML	AML	
	comp=E,89700μm,0.8s					
SERM				AML	AML	
	comp=E,33550μm,1.0s					
SERM				AML	AML	
	comp=N,30700μm,0.8s					
SERM				AML	AML	
	comp=N,58950μm,0.7s					
SERM				AML	AML	
	comp=E,89700μm,0.8s					
SERM				AML	AML	
	comp=E,33550μm,1.0s					
TRIF	**Trifonti**	**1.18**	**152**	P	**Pb**	**14 40 31.0 -0.7**
TRIF				AML	AML	
	comp=E,14550μm,0.8s					
TRIF				AML	AML	
	comp=N,15250μm,1.5s					
TRIF				AML	AML	
	comp=E,14550μm,0.8s					
TRIF				AML	AML	
	comp=N,15250μm,1.4s					
TRIF				AML	AML	
	comp=E,14550μm,0.8s					
TRIF				AML	AML	
	comp=N,15250μm,1.4s					
TRIF				AML	AML	
	comp=E,14550μm,0.8s					
TRIF				AML	AML	
	comp=N,15250μm,1.4s					
FROS	**Frosini**	**1.20**	**142**	P	**Pb**	**14 40 31.5 -0.5**
FROS				S	**Sg**	**14 40 47.4 -0.3**
FROS				AML	AML	
	comp=E,29300μm,1.5s					
FROS				AML	AML	
	comp=N,30150μm,1.4s					
FROS				AML	AML	
	comp=E,29300μm,1.5s					
FROS				AML	AML	
	comp=N,30150μm,1.4s					
FROS				AML	AML	
	comp=E,29300μm,1.5s					
FROS				AML	AML	
	comp=N,30150μm,1.4s					
FROS				AML	AML	
	comp=E,29300μm,1.5s					
FROS				AML	AML	
	comp=N,30150μm,1.4s					
PCP	**Piancastagn**	**1.21**	**289**	P	**Pb**	**14 40 31.4 -0.9**
PCP				S	**Sn**	**14 40 48.6 -0.3**
PCP				AML	AML	
	comp=E,8620μm,1.5s					
PCP				AML	AML	
	comp=N,12400μm,0.5s					
PCP				AML	AML	
	comp=N,12400μm,0.5s					
PCP				AML	AML	
	comp=E,8620μm,1.5s					
PCP				AML	AML	
	comp=N,12400μm,0.5s					
PCP				AML	AML	
	comp=E,8620μm,1.5s					
ASQU	**Asqua**	**1.24**	**107**	*e*P	**Pb**	**14 40 30.9 -1.9**
ASQU				AML	AML	
	comp=E,7935μm,1.6s					
ASQU				AML	AML	
	comp=N,9155μm,1.5s					
ASQU				AML	AML	
	comp=N,9155μm,1.5s					
ASQU				AML	AML	
	comp=E,7935μm,1.6s					
ASQU				AML	AML	
	comp=N,9155μm,1.5s					
ASQU				AML	AML	
	comp=E,7935μm,1.6s					
SFI	**Santa Sofia**	**1.25**	**101**	P	**Pn**	**14 40 32.3 -0.5**
SFI				AML	AML	
	comp=E,19750μm,1.0s					
SFI				AML	AML	
	comp=N,10560μm,0.9s					
SFI				AML	AML	
	comp=E,20850μm,1.1s					
SFI				AML	AML	
	comp=N,12550μm,1.1s					
SFI				AML	AML	
	comp=N,10560μm,0.9s					
SFI				AML	AML	
	comp=E,19750μm,1.0s					
SFI				AML	AML	
	comp=E,20850μm,1.1s					
SFI				AML	AML	
	comp=N,12550μm,1.1s					
SFI				AML	AML	
	comp=E,20850μm,1.1s					
SFI				AML	AML	
	comp=N,12550μm,1.1s					
LEOD	**Capriano del C**	**1.30**	**359**	P	**Pg**	**14 40 35.5 +1.5**
QLNO	**Quiliano**	**1.31**	**278**	P	**Pn**	**14 40 33.1 -0.5**
QLNO				S	**Sg**	**14 40 51.1 0.0**
QLNO				AML	AML	
	comp=E,9310μm,0.8s					
QLNO				AML	AML	
	comp=N,10090μm,1.5s					
QLNO				AML	AML	
	comp=E,9310μm,0.8s					
QLNO				AML	AML	
	comp=N,10090μm,1.5s					
QLNO				AML	AML	
	comp=N,10090μm,1.5s					
QLNO				AML	AML	
	comp=E,9310μm,0.8s					
QLNO				AML	AML	
	comp=N,10090μm,1.5s					
QLNO				AML	AML	
	comp=E,9310μm,0.8s					
FINB	**Finale Ligure**	**1.31**	**271**	P	**Pn**	**14 40 33.0 -0.6**
CRE	**Caprese Michel**	**1.41**	**112**	P	**Pn**	**14 40 33.9 -1.2**
CRE				AML	AML	
	comp=E,8780μm,1.6s					
CRE				AML	AML	
	comp=N,11015μm,1.1s					
CRE				AML	AML	
	comp=N,11015μm,1.1s					
CRE				AML	AML	
	comp=E,8780μm,1.6s					
CRE				AML	AML	
	comp=N,11015μm,1.1s					
CRE				AML	AML	
	comp=E,8780μm,1.6s					
CELB	**S.Piero in Cam**	**1.41**	**178**	P	**Pn**	**14 40 34.1 -1.0**
CELB				AML	AML	
	comp=E,6585μm,1.4s					
CELB				AML	AML	
	comp=N,5285μm,1.4s					
CELB				AML	AML	
	comp=N,5285μm,1.4s					
CELB				AML	AML	
	comp=E,6585μm,1.4s					
CELB				AML	AML	
	comp=N,5285μm,1.4s					
CELB				AML	AML	
	comp=E,6585μm,1.4s					
CNCS	**Concesio**	**1.45**	**2**	AML	AML	
	comp=E,35600μm,0.8s					
CNCS				AML	AML	
	comp=E,35600μm,0.8s					
CNCS				AML	AML	
	comp=N,39800μm,0.6s					
CNCS				AML	AML	
	comp=N,39800μm,0.6s					
CNCS				AML	AML	
	comp=N,39800μm,0.6s					
CNCS				AML	AML	
	comp=E,35600μm,0.8s					
ROTM	**Rocchetta Tana**	**1.46**	**299**	P	**Pg**	**14 40 36.9 -0.1**
ROTM				AML	AML	
	comp=E,43600μm,1.6s					
ROTM				AML	AML	
	comp=N,65450μm,0.6s					
ROTM				AML	AML	
	comp=N,65450μm,0.6s					
ROTM				AML	AML	
	comp=E,43600μm,1.6s					
ROTM				AML	AML	
	comp=N,65450μm,0.6s					
ROTM				AML	AML	
	comp=E,43600μm,1.6s					
CASP	**Castiglione de**	**1.47**	**159**	P	**Pn**	**14 40 35.0 -0.7**
CASP				AML	AML	
	comp=E,9935μm,1.2s					
CASP				AML	AML	
	comp=N,7670μm,1.3s					
CASP				AML	AML	
	comp=N,7670μm,1.3s					
CASP				AML	AML	
	comp=E,9935μm,1.2s					
CASP				AML	AML	
	comp=N,7670μm,1.3s					
CASP				AML	AML	
	comp=E,9935μm,1.2s					
SALO	**Salr**	**1.48**	**10**	AML	AML	
	comp=N,72150μm,1.0s					
SALO				AML	AML	
	comp=E,36150μm,0.8s					
SALO				AML	AML	
	comp=E,36150μm,0.8s					
SALO				AML	AML	
	comp=N,72150μm,1.0s					
SALO				AML	AML	
	comp=E,36150μm,0.8s					
SALO				AML	AML	
	comp=N,72150μm,1.0s					
RORO	**Rocca Rossa**	**1.50**	**269**	P	**Pn**	**14 40 35.8 -0.4**
RORO				AML	AML	
	comp=E,4300μm,1.3s					
RORO				AML	AML	
	comp=N,5140μm,0.7s					
RORO				AML	AML	
	comp=E,4300μm,1.3s					
RORO				AML	AML	
	comp=N,5140μm,0.7s					
RORO				AML	AML	
	comp=E,4300μm,1.3s					
RORO				AML	AML	
	comp=N,5140μm,0.7s					
SSP9	**Sansepolcro**	**1.55**	**112**	P	**Pn**	**14 40 37.3 +0.4**
SSP9				AML	AML	
	comp=E,10235μm,1.6s					
SSP9				AML	AML	
	comp=N,12430μm,1.5s					
SSP9				AML	AML	
	comp=N,12430μm,1.5s					
SSP9				AML	AML	
	comp=E,10235μm,1.6s					
SSP9				AML	AML	
	comp=N,12430μm,1.5s					
SSP9				AML	AML	
	comp=E,10235μm,1.6s					
CAFI	**Castiglion Fio**	**1.56**	**122**	P	**Pn**	**14 40 36.0 -1.0**
CAFI				AML	AML	
	comp=E,4580μm,0.8s					
CAFI				AML	AML	
	comp=N,4770μm,1.5s					
CAFI				AML	AML	
	comp=E,4695μm,0.8s					
CAFI				AML	AML	
	comp=N,5080μm,1.5s					
CAFI				AML	AML	
	comp=N,5080μm,1.5s					
CAFI				AML	AML	
	comp=E,4695μm,0.8s					
CAFI				AML	AML	
	comp=E,4580μm,0.8s					
CAFI				AML	AML	
	comp=N,4770μm,1.5s					
CAFI				AML	AML	
	comp=N,5080μm,1.5s					
CAFI				AML	AML	
	comp=E,4580μm,0.8s					
CAFI				AML	AML	
	comp=E,4695μm,0.8s					
CAFI				AML	AML	
	comp=N,4770μm,1.5s					
BALD	**Monte Baldo**	**1.59**	**17**	*e*Pg	**Pb**	**14 40 38.3 -0.5**
BALD				*e*Sg	**Sg**	**14 41 01.7 +1.3**
PARC	**Parchiule**	**1.59**	**108**	P	**Pn**	**14 40 36.7 -0.8**
PARC				AML	AML	
	comp=E,5290μm,1.0s					
PARC				AML	AML	
	comp=N,7095μm,0.5s					
PARC				AML	AML	
	comp=E,5290μm,1.0s					
PARC				AML	AML	
	comp=N,7095μm,0.5s					
PARC				AML	AML	
	comp=E,5290μm,1.0s					
PARC				AML	AML	
	comp=N,7095μm,0.5s					
ADRI	**Adria, Italy**	**1.60**	**56**	*e*Pg	**Pg**	**14 40 39.8 +0.1**
ADRI				*e*Sg	**Sg**	**14 41 01.1 +0.7**

CPGN	**Carpegna, Ital**	**1.61**	**102**	P	**Pn**	**14 40 38.3**	**+0.5**
CPGN				AML	AML		
	comp=E,10120µm,1.0s						
CPGN				AML	AML		
	comp=N,9265µm,0.9s						
CPGN				AML	AML		
	comp=E,9525µm,1.1s						
CPGN				AML	AML		
	comp=N,9705µm,1.6s						
CPGN				AML	AML		
	comp=N,9265µm,0.9s						
CPGN				AML	AML		
	comp=N,9705µm,1.6s						
CPGN				AML	AML		
	comp=E,10120µm,1.0s						
CPGN				AML	AML		
	comp=E,9525µm,1.1s						
CPGN				AML	AML		
	comp=N,9265µm,0.9s						
CPGN				AML	AML		
	comp=N,9705µm,1.6s						
CPGN				AML	AML		
	comp=E,10120µm,1.0s						
CPGN				AML	AML		
	comp=E,9525µm,1.1s						
TEOL	**Teolo**	**1.62**	**42**	*e*Pg	**Pn**	**14 40 37.8**	**0.0**
TEOL				*e*Sg	**Sg**	**14 41 02.7**	**+1.7**
TEOL	**Teolo**	**1.62**	**42**	P	**Pn**	**14 40 38.2**	**+0.4**
TEOL				AML	AML		
	comp=E,78350µm,0.6s						
TEOL				AML	AML		
	comp=N,56350µm,0.7s						
TEOL				AML	AML		
	comp=E,78350µm,0.6s						
TEOL				AML	AML		
	comp=N,56350µm,0.7s						
TEOL				AML	AML		
	comp=N,56350µm,0.7s						
TEOL				AML	AML		
	comp=E,78350µm,0.6s						
ROVR	**Rover Verones**	**1.62**	**24**	*e*P	**Pn**	**14 40 38.1**	**+0.1**
ROVR				AML	AML		
	comp=E,21950µm,1.6s						
ROVR				AML	AML		
	comp=N,27900µm,0.7s						
ROVR				AML	AML		
	comp=E,8625µm,1.6s						
ROVR				AML	AML		
	comp=N,10820µm,0.7s						
ROVR				AML	AML		
	comp=E,21950µm,1.6s						
ROVR				AML	AML		
	comp=N,27900µm,0.7s						
ROVR				AML	AML		
	comp=N,10820µm,0.7s						
ROVR				AML	AML		
	comp=E,8625µm,1.6s						
ROVR				AML	AML		
	comp=E,8625µm,1.6s						
ROVR				AML	AML		
	comp=N,27900µm,0.7s						
ROVR				AML	AML		
	comp=N,10820µm,0.7s						
ROVR				AML	AML		
	comp=E,21950µm,1.6s						
ARCI	**Arcidosso**	**1.63**	**143**	P	**Pn**	**14 40 37.3**	**-0.7**
ARCI				AML	AML		
	comp=E,4350µm,0.9s						
ARCI				AML	AML		
	comp=N,4125µm,1.6s						
ARCI				AML	AML		
	comp=N,4125µm,1.6s						
ARCI				AML	AML		
	comp=E,4350µm,0.9s						
ARCI				AML	AML		
	comp=N,4125µm,1.6s						
ARCI				AML	AML		
	comp=E,4350µm,0.9s						
MDI	**Monti di Nese**	**1.65**	**349**	*e*P	**Pb**	**14 40 39.1**	**-0.6**
MDI				AML	AML		
	comp=E,12300µm,0.9s						
MDI				AML	AML		
	comp=N,14650µm,1.0s						
MDI				AML	AML		
	comp=E,12800µm,0.9s						
MDI				AML	AML		
	comp=N,15200µm,1.0s						
MDI				AML	AML		
	comp=N,14650µm,1.0s						
MDI				AML	AML		
	comp=E,12300µm,0.9s						
MDI				AML	AML		
	comp=E,12800µm,0.9s						
MDI				AML	AML		
	comp=N,15200µm,1.0s						
MDI				AML	AML		
	comp=N,14650µm,1.0s						
MDI				AML	AML		
	comp=E,12800µm,0.9s						
MDI				AML	AML		
	comp=E,12300µm,0.9s						
MDI				AML	AML		
	comp=N,15200µm,1.0s						
BADI	**Badiali**	**1.65**	**113**	P	**Pn**	**14 40 37.5**	**-0.7**
BADI				AML	AML		
	comp=E,9535µm,1.4s						
BADI				AML	AML		
	comp=N,9645µm,1.4s						
BADI				AML	AML		
	comp=E,9535µm,1.4s						
BADI				AML	AML		
	comp=N,9645µm,1.4s						
BADI				AML	AML		
	comp=E,9535µm,1.4s						
BADI				AML	AML		
	comp=N,9645µm,1.4s						
MAGA	**Magasa**	**1.65**	**12**	*e*Pg	**Pn**	**14 40 38.9**	**+0.5**
MAGA				*e*Sg	**Sg**	**14 41 02.8**	**+0.7**
MAGA	**Magasa**	**1.65**	**12**	*e*P	**Pn**	**14 40 38.6**	**+0.3**
MAGA				AML	AML		
	comp=E,59200µm,0.6s						
MAGA				AML	AML		
	comp=N,24950µm,1.6s						
MAGA				AML	AML		
	comp=E,59200µm,0.6s						
MAGA				AML	AML		
	comp=N,24950µm,1.6s						
MAGA				AML	AML		
	comp=E,59200µm,0.6s						
MAGA				AML	AML		
	comp=N,24950µm,1.6s						
MARN	**Marana (Italy)**	**1.66**	**27**	*e*Pg	**Pb**	**14 40 39.8**	**0.0**
MARN				*e*Sg	**Sg**	**14 41 02.9**	**+0.5**
GBOS	**Grotte di Boss**	**1.66**	**274**	P	**Pn**	**14 40 38.4**	**-0.1**
GBOS				AML	AML		
	comp=E,2435µm,1.2s						
GBOS				AML	AML		
	comp=N,4270µm,1.2s						
GBOS				AML	AML		
	comp=N,4270µm,1.2s						
GBOS				AML	AML		
	comp=E,2435µm,1.2s						
GBOS				AML	AML		
	comp=N,4270µm,1.2s						
GBOS				AML	AML		
	comp=E,2435µm,1.2s						
CDCA	**Citt' di Caste**	**1.67**	**114**	P	**Pn**	**14 40 37.9**	**-0.5**
CDCA				AML	AML		
	comp=E,15200µm,1.5s						
CDCA				AML	AML		
	comp=N,27400µm,1.6s						
CDCA				AML	AML		
	comp=E,17350µm,1.6s						
CDCA				AML	AML		
	comp=N,15350µm,1.6s						
CDCA				AML	AML		
	comp=N,15350µm,1.6s						
CDCA				AML	AML		
	comp=E,17350µm,1.6s						
CDCA				AML	AML		
	comp=E,15200µm,1.5s						
CDCA				AML	AML		
	comp=N,27400µm,1.6s						
CDCA				AML	AML		
	comp=N,15350µm,1.6s						
CDCA				AML	AML		
	comp=E,17350µm,1.6s						
CDCA				AML	AML		
	comp=E,15200µm,1.5s						
CDCA				AML	AML		
	comp=N,27400µm,1.6s						
MGRO	**Montegrosso**	**1.69**	**267**	P	**Pn**	**14 40 38.7**	**-0.3**
MGRO				AML	AML		
	comp=E,7540µm,0.7s						
MGRO				AML	AML		
	comp=N,7520µm,1.3s						
MGRO				AML	AML		
	comp=E,7540µm,0.7s						
MGRO				AML	AML		
	comp=N,7520µm,1.3s						
MGRO				AML	AML		
	comp=E,7540µm,0.7s						
MGRO				AML	AML		
	comp=N,7520µm,1.3s						
ATMI	**Monte Miggiano**	**1.74**	**118**	P	**Pn**	**14 40 39.6**	**0.0**
ATMI				AML	AML		
	comp=E,12400µm,1.4s						
ATMI				AML	AML		
	comp=N,13750µm,1.6s						
ATMI				AML	AML		
	comp=N,13750µm,1.6s						
ATMI				AML	AML		
	comp=E,12400µm,1.4s						
ATMI				AML	AML		
	comp=N,13750µm,1.6s						
ATMI				AML	AML		
	comp=E,12400µm,1.4s						
PE3	**Peglio**	**1.76**	**105**	AML	AML		
	comp=E,9985µm,1.6s						
PE3				AML	AML		
	comp=E,9985µm,1.6s						
PE3				AML	AML		
	comp=N,11750µm,1.3s						
PE3				AML	AML		
	comp=N,11750µm,1.3s						
PE3				AML	AML		
	comp=N,11750µm,1.3s						
PE3				AML	AML		
	comp=E,9985µm,1.6s						
ATPI	**Pietralunga -**	**1.78**	**113**	P	**Pn**	**14 40 39.8**	**-0.2**
ATPI				AML	AML		
	comp=E,4700µm,1.6s						
ATPI				AML	AML		
	comp=N,5055µm,1.4s						
ATPI				AML	AML		
	comp=N,5055µm,1.4s						
ATPI				AML	AML		
	comp=E,4700µm,1.6s						
ATPI				AML	AML		
	comp=N,5055µm,1.4s						
ATPI				AML	AML		
	comp=E,4700µm,1.6s						
NEGI	**Seborga**	**1.79**	**261**	P	**Pn**	**14 40 39.9**	**-0.4**
NEGI				AML	AML		
	comp=E,4470µm,0.6s						
NEGI				AML	AML		
	comp=N,5525µm,1.3s						
NEGI				AML	AML		
	comp=N,5525µm,1.3s						
NEGI				AML	AML		
	comp=E,4470µm,0.6s						
NEGI				AML	AML		
	comp=N,5525µm,1.3s						
NEGI				AML	AML		
	comp=E,4470µm,0.6s						
ATVO	**AVT- Monte Val**	**1.81**	**115**	P	**Pn**	**14 40 40.3**	**-0.2**
ATVO				AML	AML		
	comp=E,6100µm,1.6s						
ATVO				AML	AML		
	comp=N,6990µm,1.1s						
ATVO				AML	AML		
	comp=N,6990µm,1.1s						
ATVO				AML	AML		
	comp=E,6100µm,1.6s						
ATVO				AML	AML		
	comp=N,6990µm,1.1s						
ATVO				AML	AML		
	comp=E,6100µm,1.6s						
PGF	**Pioggiola**	**1.82**	**208**	*e*Pn	**Pn**	**14 40 40.0**	**-0.6**
PGF				*e*Sn	**Sn**	**14 41 02.5**	**-1.3**
	comp=E,2µm,0.4s						
PGF	**Pioggiola**	**1.82**	**208**	*e*Pn	**Pn**	**14 40 40.0**	**-0.6**
PGF				*e*Sn	**Sn**	**14 41 02.5**	**-1.3**
PGF	**Pioggiola**	**1.82**	**208**	*e*P	**Pn**	**14 40 40.0**	**-0.6**
PGF				*e*		14 41 02.5	
MONC	**Moncucco Torin**	**1.83**	**301**	AML	AML		
	comp=N,17900µm,1.6s						
MONC				AML	AML		
	comp=E,19150µm,1.0s						
MONC				AML	AML		
	comp=N,17900µm,1.6s						
MONC				AML	AML		
	comp=E,19150µm,1.0s						
MONC				AML	AML		
	comp=N,17900µm,1.6s						
MONC				AML	AML		
	comp=E,19150µm,1.0s						
SACS	**San Casciano d**	**1.83**	**135**	AML	AML		
	comp=N,2970µm,1.6s						
SACS				AML	AML		
	comp=E,1970µm,1.6s						
SACS				AML	AML		
	comp=N,3030µm,1.6s						
SACS				AML	AML		
	comp=E,1925µm,1.5s						
SACS				AML	AML		
	comp=N,2970µm,1.6s						
SACS				AML	AML		
	comp=E,1925µm,1.5s						
SACS				AML	AML		
	comp=E,1970µm,1.6s						
SACS				AML	AML		
	comp=N,3030µm,1.6s						
SACS				AML	AML		
	comp=E,1925µm,1.5s						
SACS				AML	AML		
	comp=N,3030µm,1.6s						
SACS				AML	AML		
	comp=E,1970µm,1.6s						
SACS				AML	AML		
	comp=N,2970µm,1.6s						
RNI	**Roncone**	**1.85**	**10**	*e*Pn	**Pn**	**14 40 41.6**	**+0.4**
ATTE	**AVT- Monte Tez**	**1.87**	**120**	AML	AML		
	comp=N,4780µm,1.2s						
ATTE				AML	AML		
	comp=E,5325µm,1.5s						
ATTE				AML	AML		
	comp=N,4780µm,1.2s						
ATTE				AML	AML		
	comp=E,5325µm,1.5s						
ATTE				AML	AML		
	comp=N,4780µm,1.2s						
ATTE				AML	AML		
	comp=E,5325µm,1.5s						
DOSS	**Dosso del Somm**	**1.87**	**23**	*e*Pn	**Pn**	**14 40 41.9**	**+0.4**
MAON	**Monte Argentar**	**1.87**	**157**	P	**Pn**	**14 40 40.8**	**-0.5**
MAON				AML	AML		
	comp=E,3445µm,0.5s						
MAON				AML	AML		
	comp=N,2905µm,0.6s						
MAON				AML	AML		
	comp=N,2905µm,0.6s						
MAON				AML	AML		
	comp=E,3445µm,0.5s						
MAON				AML	AML		
	comp=N,2905µm,0.6s						
MAON				AML	AML		
	comp=E,3445µm,0.5s						
SAOF	**Saorge**	**1.88**	**266**	Pn	**Pn**	**14 40 41.8**	**+0.4**
SAOF				Sn	**Sn**	**14 41 05.0**	**-0.2**
MGAB	**Montegabbione**	**1.90**	**130**	AML	AML		
	comp=E,3490µm,1.4s						
MGAB				AML	AML		
	comp=E,3490µm,1.4s						
MGAB				AML	AML		
	comp=N,3210µm,0.9s						
MGAB				AML	AML		
	comp=E,3480µm,1.6s						
MGAB				AML	AML		
	comp=N,3065µm,0.8s						
MGAB				AML	AML		
	comp=N,3065µm,0.8s						
MGAB				AML	AML		
	comp=E,3490µm,1.4s						
MGAB				AML	AML		
	comp=E,3480µm,1.6s						
MGAB				AML	AML		
	comp=N,3210µm,0.9s						
MGAB				AML	AML		
	comp=N,3065µm,0.8s						
MGAB				AML	AML		
	comp=E,3480µm,1.6s						
MGAB				AML	AML		
	comp=N,3210µm,0.9s						
MABI	**Malga Bissina**	**1.91**	**8**	*e*Pn	**Pn**	**14 40 42.6**	**+0.6**
MABI	**Malga Bissina**	**1.91**	**8**	*e*P	**Pn**	**14 40 42.6**	**+0.6**
MABI				AML	AML		
	comp=E,7235µm,0.9s						
MABI				AML	AML		
	comp=N,5195µm,1.4s						
MABI				AML	AML		
	comp=E,7235µm,0.9s						
MABI				AML	AML		
	comp=N,5195µm,1.4s						
MABI				AML	AML		
	comp=E,7235µm,0.9s						
MABI				AML	AML		
	comp=N,5195µm,1.4s						
ATFO	**Monte Foce - G**	**1.93**	**114**	AML	AML		
	comp=E,4840µm,1.6s						
ATFO				AML	AML		
	comp=E,4840µm,1.6s						
ATFO				AML	AML		
	comp=N,6590µm,1.3s						
ATFO				AML	AML		
	comp=N,6590µm,1.3s						
ATFO				AML	AML		
	comp=N,6590µm,1.3s						
ATFO				AML	AML		
	comp=E,4840µm,1.6s						
MUGIO	**Muggio**	**1.93**	**336**	AML	AML		
	comp=N,6500µm,0.7s						
MUGIO				AML	AML		
	comp=E,5495µm,0.7s						
MUGIO				AML	AML		
	comp=N,6500µm,0.7s						
MUGIO				AML	AML		
	comp=E,5495µm,0.7s						
MUGIO				AML	AML		
	comp=N,6500µm,0.7s						
MUGIO				AML	AML		
	comp=E,5495µm,0.7s						
MURB	**Monte Urbino**	**1.94**	**117**	AML	AML		
	comp=N,7970µm,1.0s						
MURB				AML	AML		
	comp=E,9925µm,0.8s						
MURB				AML	AML		
	comp=N,7970µm,1.0s						
MURB				AML	AML		
	comp=E,10310µm,0.8s						
MURB				AML	AML		
	comp=N,8450µm,1.1s						
MURB				AML	AML		
	comp=E,9925µm,0.8s						
MURB				AML	AML		
	comp=N,7970µm,1.0s						
MURB				AML	AML		
	comp=N,8450µm,1.1s						
MURB				AML	AML		
	comp=E,10310µm,0.8s						
MURB				AML	AML		
	comp=E,9925µm,0.8s						
MURB				AML	AML		
	comp=N,8450µm,1.1s						
MURB				AML	AML		
	comp=E,10310µm,0.8s						
PESA	**Pesaro**	**1.95**	**96**	AML	AML		
	comp=E,7190µm,1.4s						
PESA				AML	AML		
	comp=E,7190µm,1.4s						
PESA				AML	AML		
	comp=N,7795µm,1.6s						
PESA				AML	AML		
	comp=E,7190µm,1.4s						
PESA				AML	AML		
	comp=N,7795µm,1.6s						
PESA				AML	AML		
	comp=N,7795µm,1.6s						
FSSB	**Fossombrone**	**1.96**	**103**	AML	AML		
	comp=N,9095µm,0.4s						
FSSB				AML	AML		
	comp=E,5970µm,0.3s						
FSSB				AML	AML		
	comp=N,9095µm,0.4s						
FSSB				AML	AML		
	comp=E,5970µm,0.3s						
FSSB				AML	AML		
	comp=N,9095µm,0.4s						
FSSB				AML	AML		
	comp=E,5970µm,0.3s						
MPAG	**Monte Paganucc**	**1.96**	**105**	AML	AML		
	comp=N,3765µm,1.5s						
MPAG				AML	AML		
	comp=E,3055µm,0.8s						
MPAG				AML	AML		
	comp=E,3120µm,1.4s						
MPAG				AML	AML		
	comp=N,3815µm,1.5s						
MPAG				AML	AML		
	comp=E,3120µm,1.4s						
MPAG				AML	AML		
	comp=E,3055µm,0.8s						
MPAG				AML	AML		
	comp=N,3815µm,1.5s						
MPAG				AML	AML		
	comp=N,3765µm,1.5s						
MPAG				AML	AML		
	comp=E,3120µm,1.4s						
MPAG				AML	AML		
	comp=E,3055µm,0.8s						
MPAG				AML	AML		
	comp=N,3765µm,1.5s						
MPAG				AML	AML		
	comp=N,3815µm,1.5s						
ENR	**Entracque**	**1.96**	**273**	AML	AML		
	comp=E,2265µm,0.6s						
ENR				AML	AML		
	comp=N,3990µm,0.8s						
ENR				AML	AML		
	comp=E,2265µm,0.6s						
ENR				AML	AML		
	comp=N,3990µm,0.8s						
ENR				AML	AML		
	comp=E,2265µm,0.6s						
ENR				AML	AML		
	comp=N,3990µm,0.8s						
VARE	**Varese**	**1.97**	**331**	AML	AML		
	comp=E,13650µm,0.7s						
VARE				AML	AML		
	comp=E,13650µm,0.7s						
VARE				AML	AML		
	comp=N,12100µm,1.4s						
VARE				AML	AML		
	comp=N,12100µm,1.4s						
VARE				AML	AML		
	comp=E,13650µm,0.7s						
VARE				AML	AML		
	comp=N,12100µm,1.4s						
FRON	**Frontone**	**1.97**	**108**	AML	AML		
	comp=N,4120µm,0.8s						
FRON				AML	AML		
	comp=E,3485µm,1.3s						
FRON				AML	AML		
	comp=N,4120µm,0.8s						
FRON				AML	AML		
	comp=E,3485µm,1.3s						
FRON				AML	AML		
	comp=N,4120µm,0.8s						
FRON				AML	AML		
	comp=E,3485µm,1.3s						
SBF	**Sospel**	**1.98**	**262**	*e*Pn	**Pn**	**14 40 42.7**	**-0.2**
SBF				*e*Sn	**Sn**	**14 41 07.0**	**-0.8**
	comp=E,3µm,0.5s						
SBF	**Sospel**	**1.98**	**262**	*e*Pn	**Pn**	**14 40 42.7**	**-0.2**
SBF				*e*Sn	**Sn**	**14 41 07.0**	**-0.8**
SBF	**Sospel**	**1.98**	**262**	*e*P	**Pn**	**14 40 42.7**	**-0.2**
SBF				*e*		14 41 07.0	
GAGG	**Gaggia**	**2.01**	**16**	*e*Pn	**Pn**	**14 40 43.6**	**+0.3**
MON	**Monaco**	**2.01**	**259**	Pn	**Pn**	**14 40 43.5**	**+0.3**
MON				Sn	**Sn**	**14 41 08.1**	**-0.4**
REVF	**Revere**	**2.05**	**259**	Pn	**Pn**	**14 40 43.7**	**-0.1**
REVF				Sn	**Sn**	**14 41 08.6**	**-1.0**
CGRP	**Cima Grappa**	**2.08**	**34**	*e*Pn	**Pn**	**14 40 44.7**	**+0.4**
CGRP	**Cima Grappa**	**2.08**	**34**	AML	AML		

	comp=E,23100µm,0.9s					
CGRP			AML	AML		
	comp=N,14750µm,0.7s					
CGRP			AML	AML		
	comp=E,23100µm,0.9s					
CGRP			AML	AML		
	comp=N,14750µm,0.7s					
CGRP			AML	AML		
	comp=E,23100µm,0.9s					
CGRP			AML	AML		
	comp=N,14750µm,0.7s					
FOSV	**Fossato di Vic**	**2.08 114**	AML	AML		
	comp=E,2960µm,1.2s					
FOSV			AML	AML		
	comp=E,2960µm,1.2s					
FOSV			AML	AML		
	comp=N,4295µm,1.6s					
FOSV			AML	AML		
	comp=N,4295µm,1.6s					
FOSV			AML	AML		
	comp=E,2960µm,1.2s					
FOSV			AML	AML		
	comp=N,4295µm,1.6s					
DOI	**San Damiano**	**2.11 280**	AML	AML		
	comp=N,5915µm,0.9s					
DOI			AML	AML		
	comp=E,4565µm,1.5s					
DOI			AML	AML		
	comp=N,5915µm,0.9s					
DOI			AML	AML		
	comp=E,4565µm,1.5s					
DOI			AML	AML		
	comp=N,5915µm,0.9s					
DOI			AML	AML		
	comp=E,4565µm,1.5s					
ARVD	**Arcevia**	**2.13 107**	AML	AML		
	comp=E,2445µm,1.6s					
ARVD			AML	AML		
	comp=N,2935µm,1.0s					
ARVD			AML	AML		
	comp=N,2935µm,1.0s					
ARVD			AML	AML		
	comp=E,2445µm,1.6s					
ARVD			AML	AML		
	comp=N,2935µm,1.0s					
ARVD			AML	AML		
	comp=E,2445µm,1.6s					
COR1	**Corinaldo**	**2.13 103**	AML	AML		
	comp=N,15100µm,1.6s					
COR1			AML	AML		
	comp=E,10075µm,0.8s					
COR1			AML	AML		
	comp=N,15000µm,1.6s					
COR1			AML	AML		
	comp=E,5210µm,0.8s					
COR1			AML	AML		
	comp=E,10075µm,0.8s					
COR1			AML	AML		
	comp=E,5210µm,0.8s					
COR1			AML	AML		
	comp=N,15000µm,1.6s					
COR1			AML	AML		
	comp=N,15100µm,1.6s					
COR1			AML	AML		
	comp=E,10075µm,0.8s					
COR1			AML	AML		
	comp=E,5210µm,0.8s					
COR1			AML	AML		
	comp=N,15000µm,1.6s					
COR1			AML	AML		
	comp=N,15100µm,1.6s					
MTLO	**Montello**	**2.15 39**	*e*Pn	**Pn**	**14 40 45.3 +0.1**	
SMPL	**Sampolo**	**2.16 197**	Pn	**Pn**	**14 40 45.8 +0.5**	
SMPL			Sn	**Sn**	**14 41 12.2 0.0**	
SMPL	**Sampolo**	**2.16 197**	AML	AML		
	comp=E,89500µm,0.5s					
SMPL			AML	AML		
SMPL			AML	AML		
	comp=E,89500µm,0.5s					
SMPL			AML	AML		
SMPL			AML	AML		
	comp=E,89500µm,0.5s					
SMPL			AML	AML		
CTI	**Castel Tesino**	**2.17 29**	AML	AML		
	comp=E,13250µm,0.5s					
CTI			AML	AML		
	comp=N,11240µm,1.4s					
CTI			AML	AML		
	comp=N,11240µm,1.4s					
CTI			AML	AML		
	comp=E,13250µm,0.5s					
CTI			AML	AML		
	comp=N,11240µm,1.4s					
CTI			AML	AML		
	comp=E,13250µm,0.5s					
BHB	**Bricherasio**	**2.17 289**	AML	AML		
	comp=E,3320µm,0.6s					
BHB			AML	AML		
	comp=E,3320µm,0.6s					
BHB			AML	AML		
	comp=N,4485µm,0.5s					
BHB			AML	AML		
	comp=E,3320µm,0.6s					
BHB			AML	AML		
	comp=N,4485µm,0.5s					
BHB			AML	AML		
	comp=N,4485µm,0.5s					
TRAV	**Traversella**	**2.18 309**	AML	AML		
	comp=N,7625µm,1.1s					
TRAV			AML	AML		
	comp=E,5670µm,1.2s					
TRAV			AML	AML		
	comp=N,7625µm,1.1s					
TRAV			AML	AML		
	comp=E,5670µm,1.2s					
TRAV			AML	AML		
	comp=N,7625µm,1.1s					
TRAV			AML	AML		
	comp=E,5670µm,1.2s					
MOMA	**Monte Martano**	**2.22 127**	AML	AML		
	comp=N,2495µm,1.2s					
MOMA			AML	AML		
	comp=E,2670µm,1.1s					
MOMA			AML	AML		
	comp=N,2485µm,1.2s					
MOMA			AML	AML		
	comp=E,2695µm,1.1s					
MOMA			AML	AML		
	comp=N,2495µm,1.2s					
MOMA			AML	AML		
	comp=E,2695µm,1.1s					
MOMA			AML	AML		
	comp=E,2670µm,1.1s					
MOMA			AML	AML		
	comp=N,2485µm,1.2s					
MOMA			AML	AML		
	comp=N,2495µm,1.2s					
MOMA			AML	AML		
	comp=E,2695µm,1.1s					
MOMA			AML	AML		
	comp=E,2670µm,1.1s					
MOMA			AML	AML		
	comp=N,2485µm,1.2s					
BERNI	**Berninapass**	**2.25 358**	AML	AML		
	comp=E,4195µm,1.6s					
BERNI			AML	AML		
	comp=E,4195µm,1.6s					
BERNI			AML	AML		
	comp=N,3910µm,0.9s					
BERNI			AML	AML		
	comp=N,3910µm,0.9s					
BERNI			AML	AML		
	comp=N,3910µm,0.9s					
BERNI			AML	AML		
	comp=E,4195µm,1.6s					
RSP	**Reno Superiore**	**2.28 297**	AML	AML		
	comp=N,2865µm,0.8s					
RSP			AML	AML		
	comp=E,3145µm,0.9s					
RSP			AML	AML		
	comp=N,2865µm,0.8s					
RSP			AML	AML		
	comp=E,3145µm,0.9s					
RSP			AML	AML		
	comp=N,2865µm,0.8s					
RSP			AML	AML		
	comp=E,3145µm,0.9s					
CESI	**CESI - Serrava**	**2.31 119**	AML	AML		
	comp=N,1444µm,1.3s					
CESI			AML	AML		
	comp=E,406µm,1.4s					
CESI			AML	AML		
	comp=N,1444µm,1.3s					
CESI			AML	AML		
	comp=N,1444µm,1.3s					
CESI			AML	AML		
	comp=E,406µm,1.4s					
CESI			AML	AML		
	comp=E,406µm,1.4s					
CIRO	**Champorcher**	**2.33 309**	AML	AML		
	comp=E,3830µm,0.8s					
CIRO			AML	AML		
	comp=E,3830µm,0.8s					
CIRO			AML	AML		
	comp=N,4555µm,1.4s					
CIRO			AML	AML		
	comp=N,4555µm,1.4s					
CIRO			AML	AML		
	comp=E,3830µm,0.8s					
CIRO			AML	AML		
	comp=N,4555µm,1.4s					
CING	**Cingoli**	**2.34 109**	AML	AML		
	comp=N,2110µm,1.4s					
CING			AML	AML		
	comp=E,2415µm,1.2s					
CING			AML	AML		
	comp=N,2110µm,1.4s					
CING			AML	AML		
	comp=E,2415µm,1.2s					
CING			AML	AML		
	comp=N,2110µm,1.4s					
CING			AML	AML		
	comp=E,2415µm,1.2s					
CESX	**Cesi**	**2.35 130**	AML	AML		
	comp=N,2430µm,1.6s					
CESX			AML	AML		
	comp=E,2090µm,1.6s					
CESX			AML	AML		
	comp=N,2430µm,1.6s					
CESX			AML	AML		
	comp=E,2090µm,1.6s					
CESX			AML	AML		
	comp=E,2090µm,1.6s					
CESX			AML	AML		
	comp=N,2430µm,1.6s					
TUE	**Stuetta**	**2.38 347**	*e*Pn	**Pn**	**14 40 49.9 +1.4**	
TUE	**Stuetta**	**2.38 347**	*e*P	**Pn**	**14 40 50.0 +1.4**	
TUE			AML	AML		
	comp=E,4170µm,1.6s					
TUE			AML	AML		
	comp=N,3175µm,0.7s					
TUE			AML	AML		
	comp=E,5460µm,1.6s					
TUE			AML	AML		
	comp=N,3955µm,0.6s					
TUE			AML	AML		
	comp=N,3955µm,0.6s					
TUE			AML	AML		
	comp=N,3175µm,0.7s					
TUE			AML	AML		
	comp=E,4170µm,1.6s					
TUE			AML	AML		
	comp=E,5460µm,1.6s					
TUE			AML	AML		
	comp=N,3175µm,0.7s					
TUE			AML	AML		
	comp=N,3955µm,0.6s					
TUE			AML	AML		
	comp=E,5460µm,1.6s					
TUE			AML	AML		
	comp=E,4170µm,1.6s					
FDMO	**Fiordimonte**	**2.41 117**	AML	AML		
	comp=N,1605µm,1.6s					
FDMO			AML	AML		
	comp=E,1430µm,0.9s					
FDMO			AML	AML		
	comp=N,1605µm,1.6s					
FDMO			AML	AML		
	comp=E,1430µm,0.9s					
FDMO			AML	AML		
	comp=E,1430µm,0.9s					
FDMO			AML	AML		
	comp=N,1605µm,1.6s					
SURF	**Saint Ours**	**2.42 279**	Pn	**Pn**	**14 40 49.2 +0.3**	
KOSI	**Kohlern**	**2.46 20**	AML	AML		
	comp=E,10850µm,1.2s					
KOSI			AML	AML		
	comp=N,11000µm,0.7s					
KOSI			AML	AML		
	comp=E,10850µm,1.2s					
KOSI			AML	AML		
	comp=N,11000µm,0.7s					
KOSI			AML	AML		
	comp=E,10850µm,1.2s					
KOSI			AML	AML		
	comp=N,11000µm,0.7s					
FUORN	**Ofenpass-Fuorn**	**2.46 2**	*e*Pn	**Pn**	**14 40 51.2 +1.5**	
FUORN	**Ofenpass-Fuorn**	**2.46 2**	AML	AML		
	comp=N,4405µm,1.4s					
FUORN			AML	AML		
	comp=E,3305µm,1.5s					
FUORN			AML	AML		
	comp=N,4405µm,1.4s					
FUORN			AML	AML		
	comp=E,3305µm,1.5s					
FUORN			AML	AML		
	comp=N,4405µm,1.4s					
FUORN			AML	AML		
	comp=E,3305µm,1.5s					
CSP1	**Cessapalombo**	**2.46 115**	AML	AML		
	comp=E,3685µm,1.4s					
CSP1			AML	AML		
	comp=N,3865µm,0.8s					
CSP1			AML	AML		
	comp=N,3865µm,0.8s					
CSP1			AML	AML		
	comp=E,3685µm,1.4s					
CSP1			AML	AML		
	comp=N,3865µm,0.8s					
CSP1			AML	AML		
	comp=E,3685µm,1.4s					
MOSI	**Grossmontoni**	**2.47 6**	AML	AML		
	comp=N,19350µm,1.0s					
MOSI			AML	AML		
	comp=E,10565µm,1.0s					
MOSI			AML	AML		
	comp=N,19350µm,1.0s					
MOSI			AML	AML		
	comp=E,10565µm,1.0s					
MOSI			AML	AML		
	comp=E,10565µm,1.0s					
MOSI			AML	AML		
	comp=N,19350µm,1.0s					
MBDF	**Montbardon**	**2.48 284**	*e*Pn	**Pn**	**14 40 50.2 +0.3**	
MBDF	**Montbardon**	**2.48 284**	*e*Pg	**Pg**	**14 40 55.8 -0.9**	
MBDF			*e*Sn	**Sn**	**14 41 19.0 -1.4**	
MBDF			*e*Sg	**Sg**	**14 41 29.9 +1.0**	
	comp=N,1µm,0.6s					
MBDF	**Montbardon**	**2.48 284**	*e*Pn	**Pn**	**14 40 50.2 +0.3**	
MBDF			*e*Pg	**Pg**	**14 40 55.8 -0.9**	
MBDF			*e*Sn	**Sn**	**14 41 19.0 -1.4**	
MBDF			*e*Lg	Lg	14 41 29.9	
MBDF	**Montbardon**	**2.48 284**	*e*P	**Pn**	**14 40 50.2 +0.3**	
MBDF			*e*		14 41 19.0	
TOLF	**Tolfa**	**2.50 146**	P	**Pn**	**14 40 49.6 -0.3**	
TOLF			AML	AML		
	comp=E,1196µm,1.6s					
TOLF			AML	AML		
	comp=N,877µm,1.6s					
TOLF			AML	AML		
	comp=E,1196µm,1.6s					
TOLF			AML	AML		
	comp=N,877µm,1.6s					
TOLF			AML	AML		
	comp=E,1196µm,1.6s					
TOLF			AML	AML		
	comp=N,877µm,1.6s					
POLC	**Polcenigo**	**2.50 41**	AML	AML		
	comp=E,9400µm,0.7s					
POLC			AML	AML		
	comp=E,9400µm,0.7s					
POLC			AML	AML		
	comp=N,11665µm,0.6s					
POLC			AML	AML		
	comp=N,11665µm,0.6s					
POLC			AML	AML		
	comp=E,9400µm,0.7s					
POLC			AML	AML		
	comp=N,11665µm,0.6s					
LSD	**Lago del Serru**	**2.51 302**	AML	AML		
	comp=E,2090µm,1.5s					
LSD			AML	AML		
	comp=E,2090µm,1.5s					
LSD			AML	AML		
	comp=N,1874µm,1.6s					
LSD			AML	AML		
	comp=E,2090µm,1.5s					
LSD			AML	AML		
	comp=N,1874µm,1.6s					
LSD			AML	AML		
	comp=N,1874µm,1.6s					
RRL	**Rocca Remolon**	**2.52 289**	AML	AML		
	comp=E,2325µm,1.0s					
RRL			AML	AML		
	comp=E,2325µm,1.0s					
RRL			AML	AML		
	comp=N,1930µm,0.9s					
RRL			AML	AML		
	comp=N,1930µm,0.9s					
RRL			AML	AML		
	comp=N,1930µm,0.9s					
RRL			AML	AML		
	comp=E,2325µm,1.0s					
FUSIO	**Fusio**	**2.52 336**	AML	AML		
	comp=E,5075µm,0.8s					
FUSIO			AML	AML		
	comp=E,5075µm,0.8s					
FUSIO			AML	AML		
	comp=N,5025µm,0.9s					
FUSIO			AML	AML		
	comp=N,5025µm,0.9s					
FUSIO			AML	AML		
	comp=N,5025µm,0.9s					
FUSIO			AML	AML		
	comp=E,5075µm,0.8s					
NRCA	**Norcia**	**2.53 121**	AML	AML		
	comp=N,1730µm,1.6s					
NRCA			AML	AML		
	comp=E,1480µm,0.8s					
NRCA			AML	AML		
	comp=E,1480µm,0.8s					
NRCA			AML	AML		
	comp=N,1730µm,1.6s					
NRCA			AML	AML		
	comp=E,1480µm,0.8s					
NRCA			AML	AML		
	comp=N,1730µm,1.6s					
FRF	**La Foret Royal**	**2.60 258**	*e*Pn	**Pn**	**14 40 51.2 -0.2**	
FRF			*e*Sn	**Sn**	**14 41 21.6 -1.5**	
	comp=N,357nm,0.2s					
FRF	**La Foret Royal**	**2.60 258**	*e*Pn	**Pn**	**14 40 51.2 -0.2**	
FRF			*e*Sn	**Sn**	**14 41 21.6 -1.5**	
FRF	**La Foret Royal**	**2.60 258**	*e*P	**Pn**	**14 40 51.2 -0.2**	
FRF			*e*		14 41 21.6	
OGAG	**Argentiere**	**2.61 278**	Pn	**Pn**	**14 40 53.6 +2.1**	
LNSS	**Leonessa**	**2.62 125**	AML	AML		
	comp=E,2650µm,1.3s					
LNSS			AML	AML		
	comp=E,2650µm,1.3s					
LNSS			AML	AML		
	comp=N,2970µm,1.2s					
LNSS			AML	AML		
	comp=N,2970µm,1.2s					
LNSS			AML	AML		
	comp=E,2650µm,1.3s					
LNSS			AML	AML		
	comp=N,2970µm,1.2s					
DAVOX	**Davos/Dischmat**	**2.63 356**	Pn	**Pn**	**14 40 54.0 +2.2**	
	comp=N,169nm,0.3s,baz=178,slow=8.0,SNR=444					
DAVOX			Sn	**Sb**	**14 41 26.9 -2.0**	
	comp=N,105nm,0.3s,baz=352,slow=23,SNR=8.2					
DAVOX			LR	LR	14 42 23.3	
	comp=N,8µm,18.9s,baz=220,slow=51					
DAVOX	**Davos/Dischmat**	**2.63 356**	AML	AML		
	comp=E,2950µm,0.8s					
DAVOX			AML	AML		
	comp=N,4835µm,0.7s					
DAVOX			AML	AML		
	comp=N,4835µm,0.7s					
DAVOX			AML	AML		
	comp=E,2950µm,0.8s					
DAVOX			AML	AML		
	comp=N,4835µm,0.7s					
DAVOX			AML	AML		
	comp=E,2950µm,0.8s					
BNI	**Bardonecchia**	**2.63 291**	*e*Pn	**Pn**	**14 40 52.7 +0.8**	
BNI	**Bardonecchia**	**2.63 291**	*e*P	**Pn**	**14 40 52.7 +0.8**	
BNI	**Bardonecchia**	**2.63 291**	AML	AML		
	comp=E,750µm,1.0s					
BNI			AML	AML		
	comp=E,750µm,1.0s					
BNI			AML	AML		
	comp=N,880µm,1.0s					
BNI			AML	AML		
	comp=E,985µm,1.0s					
BNI			AML	AML		
	comp=N,1044µm,0.9s					
BNI			AML	AML		
	comp=E,985µm,1.0s					
BNI			AML	AML		
	comp=N,1044µm,0.9s					
BNI			AML	AML		
	comp=E,750µm,1.0s					
BNI			AML	AML		
	comp=N,880µm,1.0s					
BNI			AML	AML		
	comp=E,985µm,1.0s					
BNI			AML	AML		
	comp=N,880µm,1.0s					
BNI			AML	AML		
	comp=N,1044µm,0.9s					
ABSI	**Aberstueckl**	**2.70 17**	AML	AML		
	comp=N,19250µm,0.7s					
ABSI			AML	AML		
	comp=E,16800µm,0.7s					
ABSI			AML	AML		
	comp=E,16800µm,0.7s					
ABSI			AML	AML		
	comp=N,19250µm,0.7s					
ABSI			AML	AML		
	comp=E,16800µm,0.7s					
ABSI			AML	AML		
	comp=N,19250µm,0.7s					
REMY	**Saint-Rhmy-en**	**2.71 309**	AML	AML		
	comp=N,10810µm,1.2s					
REMY			AML	AML		
	comp=E,5220µm,0.8s					
REMY			AML	AML		
	comp=N,10810µm,1.2s					
REMY			AML	AML		
	comp=E,5220µm,0.8s					
REMY			AML	AML		
	comp=N,10810µm,1.2s					
REMY			AML	AML		
	comp=E,5220µm,0.8s					
MRGE	**Morge**	**2.72 307**	AML	AML		
	comp=N,3725µm,0.6s					
MRGE			AML	AML		
	comp=E,3675µm,0.7s					
MRGE			AML	AML		
	comp=N,3725µm,0.6s					
MRGE			AML	AML		
	comp=E,3675µm,0.7s					
MRGE			AML	AML		
	comp=N,3725µm,0.6s					
MRGE			AML	AML		
	comp=E,3675µm,0.7s					
DIX	**Grande Dixence**	**2.73 316**	AML	AML		
	comp=E,3855µm,0.8s					
DIX			AML	AML		
	comp=E,3855µm,0.8s					
DIX			AML	AML		
	comp=N,6525µm,0.9s					
DIX			AML	AML		
	comp=N,6525µm,0.9s					
DIX			AML	AML		
	comp=E,3855µm,0.8s					
DIX			AML	AML		
	comp=N,6525µm,0.9s					
LPG	**La Plagne**	**2.76 300**	*e*P	**Pb**	**14 40 56.4 -2.4**	
LPG			*e*Sn	**Sn**	**14 41 26.1 -1.3**	
	comp=N,843nm,0.6s					
LPG	**La Plagne**	**2.76 300**	*e*Pn	**Pb**	**14 40 56.4 -2.4**	
LPG			*e*Sn	**Sn**	**14 41 26.1 -1.3**	

LMR	**La Mourre**	**2.76 254**	*e*Pn	**Pn**	**14 40 53.1 -0.5**
LMR			*e*Sn	**Sn**	**14 41 24.9 -2.1**
	comp=N,337nm,0.2s				
LMR	**La Mourre**	**2.76 254**	*e*Pn	**Pn**	**14 40 53.1 -0.5**
LMR			*e*Sn	**Sn**	**14 41 24.9 -2.1**
LMR	**La Mourre**	**2.76 254**	*e*P	**Pn**	**14 40 53.1 -0.5**
LMR			*e*		14 41 24.9
STAL	**STALIGIAL**	**2.77 40**	AML	AML	
	comp=E,5755µm,1.5s				
STAL			AML	AML	
	comp=E,4345µm,0.7s				
STAL			AML	AML	
	comp=N,5250µm,1.4s				
STAL			AML	AML	
	comp=E,5755µm,1.5s				
STAL			AML	AML	
	comp=N,5860µm,1.4s				
STAL			AML	AML	
	comp=E,4345µm,0.7s				
STAL			AML	AML	
	comp=N,5250µm,1.4s				
STAL			AML	AML	
	comp=N,5860µm,1.4s				
STAL			AML	AML	
	comp=E,4345µm,0.7s				
STAL			AML	AML	
	comp=N,5250µm,1.4s				
STAL			AML	AML	
	comp=N,5860µm,1.4s				
STAL			AML	AML	
	comp=E,5755µm,1.5s				
LPL	**La Plagne**	**2.78 300**	*e*P	**Pn**	**14 40 56.5 +2.5**
LPL			*e*Sn	**Sn**	**14 41 26.3 -1.6**
	comp=E,400nm,0.5s				
LPL	**La Plagne**	**2.78 300**	*e*Pn	**Pn**	**14 40 56.5 +2.5**
LPL			*e*Sn	**Sn**	**14 41 26.3 -1.6**
FETA	**Feichten**	**2.89 8**	Pn	**Pn**	**14 40 57.2 +1.7**
	comp=E,39nm,0.4s,SNR=138				
FETA			Sn	**Sb**	**14 41 34.2 -2.2**
	comp=E,817nm,0.9s				
ROSI	**Rosskopf**	**2.91 17**	AML	AML	
	comp=N,14150µm,0.9s				
ROSI			AML	AML	
	comp=E,10750µm,0.8s				
ROSI			AML	AML	
	comp=N,14150µm,0.9s				
ROSI			AML	AML	
	comp=E,10750µm,0.8s				
ROSI			AML	AML	
	comp=E,10750µm,0.8s				
ROSI			AML	AML	
	comp=N,14150µm,0.9s				
PLONS	**Plons/SG**	**2.94 350**	*e*Pn	**Pb**	**14 40 59.0 -2.7**
PLONS			*e*Sn	**Sn**	**14 41 34.2 +2.7**
PLONS	**Plons/SG**	**2.94 350**	AML	AML	
	comp=E,3485µm,0.9s				
PLONS			AML	AML	
	comp=E,3485µm,0.9s				
PLONS			AML	AML	
	comp=N,2885µm,1.0s				
PLONS			AML	AML	
	comp=N,2885µm,1.0s				
PLONS			AML	AML	
	comp=N,2885µm,1.0s				
PLONS			AML	AML	
	comp=E,3485µm,0.9s				
T0104	**Madonna delle**	**2.94 127**	AML	AML	
	comp=E,1885µm,0.8s				
T0104			AML	AML	
	comp=E,1885µm,0.8s				
T0104			AML	AML	
	comp=N,1950µm,1.6s				
T0104			AML	AML	
	comp=E,1715µm,0.8s				
T0104			AML	AML	
	comp=N,1960µm,1.6s				
T0104			AML	AML	
	comp=E,1885µm,0.8s				
T0104			AML	AML	
	comp=E,1715µm,0.8s				
T0104			AML	AML	
	comp=N,1960µm,1.6s				
T0104			AML	AML	
	comp=N,1950µm,1.6s				
T0104			AML	AML	
	comp=E,1715µm,0.8s				
T0104			AML	AML	
	comp=N,1960µm,1.6s				
T0104			AML	AML	
	comp=N,1950µm,1.6s				
TERO	**Teramo**	**2.95 120**	AML	AML	
	comp=N,2020µm,0.6s				
TERO			AML	AML	
	comp=E,2130µm,1.3s				
TERO			AML	AML	
	comp=N,2020µm,0.6s				
TERO			AML	AML	
	comp=E,578µm,1.6s				
TERO			AML	AML	
	comp=N,614µm,0.6s				
TERO			AML	AML	
	comp=N,2020µm,0.6s				
TERO			AML	AML	
	comp=N,614µm,0.6s				
TERO			AML	AML	
	comp=E,2130µm,1.3s				
TERO			AML	AML	
	comp=E,578µm,1.6s				
TERO			AML	AML	
	comp=N,614µm,0.6s				
TERO			AML	AML	
	comp=E,2130µm,1.3s				
TERO			AML	AML	
	comp=E,578µm,1.6s				
GUMA	**Gualdo di Mace**	**2.96 110**	AML	AML	
	comp=E,8165µm,0.5s				
GUMA			AML	AML	
	comp=E,8165µm,0.5s				
GUMA			AML	AML	
	comp=N,6110µm,0.5s				
GUMA			AML	AML	
	comp=E,8515µm,0.5s				
GUMA			AML	AML	
	comp=N,6000µm,0.5s				
GUMA			AML	AML	
	comp=N,6000µm,0.5s				
GUMA			AML	AML	
	comp=E,8515µm,0.5s				
GUMA			AML	AML	
	comp=N,6110µm,0.5s				
GUMA			AML	AML	
	comp=N,6000µm,0.5s				
GUMA			AML	AML	
	comp=E,8515µm,0.5s				
GUMA			AML	AML	
	comp=E,8165µm,0.5s				
GUMA			AML	AML	
	comp=N,6110µm,0.5s				
BLAF	**les Blancs**	**2.97 267**	Pn	**Pn**	**14 40 57.9 +1.5**
BNALP	**Bannalp**	**2.97 337**	AML	AML	
	comp=E,2930µm,1.6s				
BNALP			AML	AML	
	comp=E,2930µm,1.6s				
BNALP			AML	AML	
	comp=N,2910µm,1.2s				
BNALP			AML	AML	
	comp=E,2930µm,1.6s				
BNALP			AML	AML	
	comp=N,2910µm,1.2s				
BNALP			AML	AML	
	comp=N,2910µm,1.2s				
SENIN	**Lac Senin/Sane**	**2.98 319**	*e*Pn	**Pn**	**14 40 59.6 +2.9**
AQU	**L'Aquila**	**2.98 126**	*e*Pn	**Pn**	**14 40 57.7 +1.1**
AQU	**L'Aquila**	**2.98 126**	*e*Pn	**Pn**	**14 40 57.8 +1.1**
GEPF	**Gemona**	**2.99 44**	AML	AML	
	comp=E,3715µm,1.0s				
GEPF			AML	AML	
	comp=N,4185µm,0.8s				
GEPF			AML	AML	
	comp=E,3715µm,1.0s				
GEPF			AML	AML	
	comp=N,4185µm,0.8s				
GEPF			AML	AML	
	comp=E,3715µm,1.0s				
GEPF			AML	AML	
	comp=N,4185µm,0.8s				
TRI	**Trieste**	**3.00 58**	*e*Pn	**Pn**	**14 40 55.7 -1.0**
TRI	**Trieste**	**3.00 58**	*e*P	**Pn**	**14 40 55.7 -1.0**
TRI	**Trieste**	**3.00 58**	AML	AML	
	comp=N,1755µm,1.4s				
TRI			AML	AML	
	comp=E,2295µm,0.6s				
TRI			AML	AML	
	comp=N,1755µm,1.4s				
TRI			AML	AML	
	comp=E,2295µm,0.6s				
TRI			AML	AML	
	comp=E,2295µm,0.6s				
TRI			AML	AML	
	comp=N,1755µm,1.4s				
FVI	**Forni Avoltri**	**3.06 36**	AML	AML	
	comp=N,4575µm,1.3s				
FVI			AML	AML	
	comp=E,4075µm,0.8s				
FVI			AML	AML	
	comp=E,4075µm,0.8s				
FVI			AML	AML	
	comp=N,4575µm,1.3s				
FVI			AML	AML	
	comp=E,4075µm,0.8s				
FVI			AML	AML	
	comp=N,4575µm,1.3s				
ABTA	**Abfaltersbach**	**3.08 32**	*e*Pn	**Pn**	**14 40 59.2 +1.3**
	comp=N,26nm,0.4s,SNR=129				
ABTA			Sg	**Sg**	**14 41 51.9 +4.1**
	comp=N,1µm,0.7s				
RISI	**Rein**	**3.10 25**	AML	AML	
	comp=N,8975µm,0.6s				
RISI			AML	AML	
	comp=E,8575µm,0.5s				
RISI			AML	AML	
	comp=E,8575µm,0.5s				
RISI			AML	AML	
	comp=N,8975µm,0.6s				
RISI			AML	AML	
	comp=E,8575µm,0.5s				
RISI			AML	AML	
	comp=N,8975µm,0.6s				
DAVA	**Damuels**	**3.13 357**	*e*Pn	**Pn**	**14 41 01.3 +2.5**
	SNR=315				
DAVA			Sn	**Sb**	**14 41 40.3 -3.0**
	comp=N,1µm,0.8s				
DAVA	**Damuels**	**3.13 357**	*e*Pn	**Pn**	**14 41 01.3 +2.5**
DAVA			*e*Sn	**Sb**	**14 41 40.5 -2.9**
FAGN	**Fagnano**	**3.15 126**	AML	AML	
	comp=E,3175µm,0.7s				
FAGN			AML	AML	
	comp=E,3175µm,0.7s				
FAGN			AML	AML	
	comp=N,2160µm,0.5s				
FAGN			AML	AML	
	comp=N,2160µm,0.5s				
FAGN			AML	AML	
	comp=N,2160µm,0.5s				
FAGN			AML	AML	
	comp=E,3175µm,0.7s				
ORIF	**Oris-en-Rattie**	**3.15 285**	*e*P	**Pn**	**14 41 01.0 +2.1**
ORIF			*e*Sn	**Sn**	**14 41 34.5 -2.1**
	comp=E,824nm,0.6s				
ORIF	**Oris-en-Rattie**	**3.15 285**	*e*Pn	**Pn**	**14 41 01.0 +2.1**
ORIF			*e*Sn	**Sn**	**14 41 34.5 -2.1**
ORIF	**Oris-en-Rattie**	**3.15 285**	*e*P	**Pn**	**14 41 01.0 +2.1**
ORIF			*e*		14 41 34.5
SQTA	**Sankt Quirin**	**3.15 13**	*e*Pn	**Pn**	**14 41 01.0 +2.0**
	comp=E,34nm,0.2s,SNR=403				
SQTA			Sn	**Sb**	**14 41 40.9 -3.0**
	comp=E,780nm,0.5s				
PTCC	**Patocco-Chiusa**	**3.19 44**	AML	AML	
	comp=E,3035µm,0.7s				
PTCC			AML	AML	
	comp=N,2305µm,1.2s				
PTCC			AML	AML	
	comp=E,3035µm,0.7s				
PTCC			AML	AML	
	comp=N,2305µm,1.2s				
PTCC			AML	AML	
	comp=E,3035µm,0.7s				
PTCC			AML	AML	
	comp=N,2305µm,1.2s				
ARTF	**Artigues**	**3.19 261**	Pn	**Pn**	**14 41 00.4 +0.9**
ASEAF	**Site Antares,**	**3.21 246**	Pn	**Pn**	**14 40 59.7 +0.4**
ASEAF			Sn	**Sn**	**14 41 35.9 -1.5**
VCEL	**Villa Celiera**	**3.22 122**	AML	AML	
	comp=N,2315µm,1.2s				
VCEL			AML	AML	
	comp=E,1755µm,1.3s				
VCEL			AML	AML	
	comp=N,2315µm,1.2s				
VCEL			AML	AML	
	comp=N,2315µm,1.2s				
VCEL			AML	AML	
	comp=E,1755µm,1.3s				
VCEL			AML	AML	
	comp=E,1755µm,1.3s				
MOTA	**Moosalm**	**3.25 12**	*e*Pn	**Pn**	**14 41 03.0 +2.5**
	comp=E,50nm,0.3s,SNR=806				
WTTA	**Wattenberg**	**3.27 18**	*e*Pn	**Pn**	**14 41 02.5 +1.8**
	SNR=317				
WTTA			Sn	**Sb**	**14 41 46.0 -1.5**
	comp=E,3µm,0.9s				
WTTA	**Wattenberg**	**3.27 18**	*e*Pn	**Pn**	**14 41 02.6 +1.8**
WTTA			*e*Sn	**Sb**	**14 41 46.3 -1.2**
WTTA	**Wattenberg**	**3.27 18**	AML	AML	
	comp=E,5915µm,0.7s				
WTTA			AML	AML	
	comp=E,5915µm,0.7s				
WTTA			AML	AML	
	comp=N,5660µm,1.0s				
WTTA			AML	AML	
	comp=N,5660µm,1.0s				
WTTA			AML	AML	
	comp=E,5915µm,0.7s				
WTTA			AML	AML	
	comp=N,5660µm,1.0s				
RIY	**Rijeka**	**3.30 68**	*e*Pn	**Pn**	**14 41 01.6 +0.7**
RIY	**Rijeka**	**3.30 68**	*e*Pn	**Pn**	**14 41 00.5 -0.4**
SMRF	**Simiane la Rot**	**3.30 268**	*e*Pn	**Pn**	**14 41 02.3 +1.3**
SMRF			*e*Sn	**Sn**	**14 41 38.7 -1.7**
	comp=N,286nm,0.4s				
SMRF	**Simiane la Rot**	**3.30 268**	*e*Pn	**Pn**	**14 41 02.3 +1.3**
SMRF			*e*Sn	**Sn**	**14 41 38.7 -1.7**
WATA	**Walderalm**	**3.33 17**	*e*Pn	**Pn**	**14 41 03.5 +2.0**
	comp=N,2.0nm,0.3s,SNR=269				
RETA	**Reutte**	**3.35 7**	*e*Pn	**Pn**	**14 41 03.9 +2.1**
	comp=N,19nm,0.3s,SNR=100				
RETA			*e*Sn	**Sb**	**14 41 45.8 -3.9**
	comp=N,470nm,0.6s				
ACOM	**Acomizza, Ital**	**3.37 44**	AML	AML	
	comp=E,6940µm,0.8s				
ACOM			AML	AML	
	comp=N,5285µm,0.7s				
ACOM			AML	AML	
	comp=N,5285µm,0.7s				
ACOM			AML	AML	
	comp=E,6940µm,0.8s				
ACOM			AML	AML	
	comp=N,5285µm,0.7s				
ACOM			AML	AML	
	comp=E,6940µm,0.8s				
WILA	**Wila**	**3.37 346**	*e*Pn	**Pn**	**14 41 03.7 +1.7**
WILA			*e*Sn	**Sb**	**14 41 48.6 -1.4**
NVLJ	**Novalja**	**3.41 82**	*i* Pn	**Pn**	**14 41 03.5 +1.1**
NVLJ			Sn	**Sn**	**14 41 42.5 -0.5**
OG02	**Monnetier-Morn**	**3.42 307**	Pn	**Pn**	**14 41 04.9 +2.3**
CEY	**Cerknica**	**3.42 61**	*e*Pn	**Pn**	**14 41 02.0 -0.6**
CEY			*e*Sn	**Sn**	**14 41 43.4 0.0**
CEY	**Cerknica**	**3.42 61**	‖ *i*Pn	**Pn**	**14 41 01.8 -0.8**
MYKA	**Terra Mystica**	**3.49 44**	*e*Pn	**Pn**	**14 41 04.9 +1.3**
	comp=E,18nm,0.3s,SNR=49				
MYKA			Sn	**Sn**	**14 41 42.3 -2.7**
	comp=E,238nm,0.5s				
MYKA			*e*Sn	**Sb**	**14 41 49.9 -3.6**
	comp=E,340nm,0.5s				
INTR	**Introdacqua**	**3.49 127**	AML	AML	
	comp=N,1770µm,1.1s				
INTR			AML	AML	
	comp=E,1420µm,1.1s				
INTR			AML	AML	
	comp=N,1770µm,1.1s				
INTR			AML	AML	
	comp=E,1420µm,1.1s				
INTR			AML	AML	
	comp=N,1770µm,1.1s				
INTR			AML	AML	
	comp=E,1420µm,1.1s				
UBR	**Ueberruh**	**3.52 360**	*e*Pn	**Pn**	**14 41 05.9 +1.9**
UBR			*e*Sn	**Sn**	**14 41 49.2 +3.4**
ARBF	**Arbois**	**3.55 261**	Pn	**Pn**	**14 41 05.7 +1.4**
BALST	**Balsthal**	**3.61 332**	*e*Pn	**Pn**	**14 41 07.0 +1.8**
BALST			*e*Sn	**Sn**	**14 41 50.1 +2.1**
GIMEL	**St. Georges /**	**3.62 312**	AML	AML	
	comp=E,1330µm,1.1s				
GIMEL			AML	AML	
	comp=E,1330µm,1.1s				
GIMEL			AML	AML	
	comp=N,1655µm,1.1s				
GIMEL			AML	AML	
	comp=N,1655µm,1.1s				
GIMEL			AML	AML	
	comp=E,1330µm,1.1s				
GIMEL			AML	AML	
	comp=N,1655µm,1.1s				
LJU	**Ljubljana**	**3.63 57**	*e*Pn	**Pn**	**14 41 05.6 +0.2**
LJU			*e*Sn	**Sn**	**14 41 47.4 -1.0**
LJU	**Ljubljana**	**3.63 57**	‖ *i*Pn	**Pn**	**14 41 05.4 0.0**
LJU	**Ljubljana**	**3.63 57**	AML	AML	
	comp=E,5000µm,0.8s				
LJU			AML	AML	
	comp=E,5000µm,0.8s				
LJU			AML	AML	
	comp=N,5450µm,1.4s				
LJU			AML	AML	
	comp=N,5450µm,1.4s				
LJU			AML	AML	
	comp=E,5000µm,0.8s				
LJU			AML	AML	
	comp=N,5450µm,1.4s				
SULZ	**Cheisacher**	**3.66 338**	*e*Pn	**Pn**	**14 41 07.1 +1.3**
KBA	**Koelnbreinsper**	**3.68 36**	*e*Pn	**Pn**	**14 41 08.2 +1.9**
	comp=N,45nm,0.2s,SNR=92				
KBA			Sn	**Sb**	**14 41 55.8 -3.3**
	comp=N,199nm,0.6s				
KBA	**Koelnbreinsper**	**3.68 36**	*e*Pn	**Pn**	**14 41 08.4 +2.1**
OG35	**Corcelles**	**3.75 302**	Pn	**Pn**	**14 41 08.9 +1.7**
CABF	**La Chapelle**	**3.77 312**	*e*P	**Pn**	**14 41 09.8 +2.4**
CABF			*e*Sn	**Sn**	**14 41 49.6 -2.3**
	comp=N,4µm,1.3s				
CABF	**La Chapelle**	**3.77 312**	*e*Pn	**Pn**	**14 41 09.8 +2.4**
CABF			*e*Sn	**Sn**	**14 41 49.6 -2.3**
CABF	**La Chapelle**	**3.77 312**	*e*P	**Pn**	**14 41 09.8 +2.4**
CABF			*e*		14 41 49.6
SLE	**Schleitheim**	**3.79 343**	*e*Pn	**Pn**	**14 41 08.4 +0.7**
CERA	**Filignano**	**3.83 131**	AML	AML	
	comp=N,1050µm,1.6s				
CERA			AML	AML	
	comp=E,975µm,1.5s				
CERA			AML	AML	
	comp=N,1006µm,1.6s				
CERA			AML	AML	
	comp=E,1008µm,1.5s				
CERA			AML	AML	
	comp=N,1050µm,1.6s				
CERA			AML	AML	
	comp=N,1006µm,1.6s				
CERA			AML	AML	
	comp=E,975µm,1.5s				
CERA			AML	AML	
	comp=E,1008µm,1.5s				
CERA			AML	AML	
	comp=N,1050µm,1.6s				
CERA			AML	AML	
	comp=N,1006µm,1.6s				
CERA			AML	AML	
	comp=E,975µm,1.5s				
CERA			AML	AML	
	comp=E,1008µm,1.5s				
BOJS	**Bojanci**	**3.87 68**	*e*Pn	**Pn**	**14 41 08.8 0.0**
BOJS	**Bojanci**	**3.87 68**	AML	AML	
	comp=N,1510µm,1.3s				
BOJS			AML	AML	
	comp=E,1220µm,1.2s				
BOJS			AML	AML	
	comp=N,1510µm,1.3s				
BOJS			AML	AML	
	comp=E,1220µm,1.2s				
BOJS			AML	AML	
	comp=N,1510µm,1.3s				
BOJS			AML	AML	
	comp=E,1220µm,1.2s				
OBKA	**Obir**	**3.89 51**	*e*Pn	**Pn**	**14 41 09.3 +0.2**
	comp=E,13nm,0.3s,SNR=93				
OBKA			Sn	**Sn**	**14 41 57.8 +2.8**
	comp=E,799nm,0.7s				
OBKA	**Obir**	**3.89 51**	*e*Pn	**Pn**	**14 41 09.4 +0.2**
VIVF	**Saint-Julien-l**	**3.98 282**	*e*P	**Pn**	**14 41 11.2 +0.9**
VIVF			*e*Sn	**Sn**	**14 41 54.7 -2.4**
	comp=E,59nm,0.4s				
VIVF	**Saint-Julien-l**	**3.98 282**	*e*Pn	**Pn**	**14 41 11.2 +0.9**
VIVF			*e*Sn	**Sn**	**14 41 54.7 -2.4**
VIVF	**Saint-Julien-l**	**3.98 282**	*e*P	**Pn**	**14 41 11.2 +0.9**
VIVF			*e*		14 41 54.7
RJOB	**Jochberg**	**4.03 26**	*e*Pn	**Pn**	**14 41 13.0 +2.1**
UDBI	**Udbina**	**4.04 83**	*e*Pn	**Pn**	**14 41 13.2 +1.9**
UDBI			Sn	**Sn**	**14 42 00.4 +1.6**
VAGA	**Valle Agricola**	**4.07 131**	AML	AML	
	comp=N,544µm,1.6s				
VAGA			AML	AML	
	comp=E,412µm,1.3s				
VAGA			AML	AML	
	comp=N,544µm,1.6s				
VAGA			AML	AML	
	comp=E,412µm,1.3s				
VAGA			AML	AML	
	comp=N,544µm,1.6s				
VAGA			AML	AML	
	comp=E,412µm,1.3s				
FUR	**Furstenfeldbru**	**4.08 11**	*e*Pn	**Pn**	**14 41 12.8 +1.2**
CRES	**Cresnjev**	**4.12 64**	‖ *i*Pn	**Pn**	**14 41 12.0 -0.2**
SSB	**Saint Sauveur**	**4.15 288**	*e*Pn	**Pn**	**14 41 13.3 +0.6**
SSB	**Saint Sauveur**	**4.15 288**	*e*P	**Pn**	**14 41 13.3 +0.6**
SOKA	**Soboth**	**4.26 52**	*e*Pn	**Pn**	**14 41 14.5 +0.2**
	comp=E,11nm,0.3s,SNR=124				
SOKA			Sn	**Sn**	**14 42 04.7 +0.6**
	comp=E,162nm,0.6s				
HINF	**Hinteralfeld**	**4.32 329**	*e*P	**Pn**	**14 41 16.2 +1.2**
HINF			*e*Sn	**Sn**	**14 42 02.1 -3.3**
	comp=E,2µm,1.1s				
HINF	**Hinteralfeld**	**4.32 329**	*e*Pn	**Pn**	**14 41 16.2 +1.2**
HINF			*e*Sn	**Sn**	**14 42 02.1 -3.3**
BFO	**Black Forest**	**4.36 344**	*e*Pn	**Pn**	**14 41 15.1 -0.4**
BFO	**Black Forest**	**4.36 344**	*i* P	**Pn**	**14 41 16.1 +0.6**
BFO	**Black Forest**	**4.36 344**	*e*Pn	**Pn**	**14 41 15.7 +0.3**
BFO			*e*Sn	**Sn**	**14 42 06.8 +0.4**
LASF	**Ste Croix**	**4.53 271**	*e*Pn	**Pn**	**14 41 17.2 -0.7**
LASF			*e*Sn	**Sn**	**14 42 08.0 -2.7**
	comp=E,213nm,0.7s				
LASF	**Ste Croix**	**4.53 271**	*e*Pn	**Pn**	**14 41 17.2 -0.7**
LASF			*e*Sn	**Sn**	**14 42 08.0 -2.7**
ECH	**Echery**	**4.56 334**	*e*Pn	**Pn**	**14 41 19.0 +0.8**
ECH	**Echery**	**4.56 334**	*e*P	**Pn**	**14 41 19.0 +0.8**
STU	**Stuttgart**	**4.66 352**	*e*Pn	**Pn**	**14 41 19.9 +0.3**
STU	**Stuttgart**	**4.66 352**	*e*P	**Pn**	**14 41 19.9 +0.3**
STU	**Stuttgart**	**4.66 352**	*e*Pn	**Pn**	**14 41 20.4 +0.8**
STU			*e*Sn	**Sn**	**14 42 13.7 -0.1**
HAU	**Haudompre**	**4.67 327**	*e*P	**Pn**	**14 41 21.1 +1.4**
HAU			*e*Sn	**Sn**	**14 42 10.5 -3.5**
	comp=E,451nm,0.3s				
HAU	**Haudompre**	**4.67 327**	*e*Pn	**Pn**	**14 41 21.1 +1.4**
HAU			*e*Sn	**Sn**	**14 42 10.5 -3.5**
MOA	**Molln**	**4.67 36**	*e*Pn	**Pn**	**14 41 21.0 +1.2**
	comp=E,16nm,0.3s,SNR=119				
MOA			Sn	**Sn**	**14 42 16.6 +2.5**
	comp=E,144nm,0.5s				
MOA	**Molln**	**4.67 36**	*e*Pn	**Pn**	**14 41 20.9 +1.2**
CDF	**Champ du Feu**	**4.70 336**	*e*P	**Pn**	**14 41 20.9 +0.7**
CDF			*e*Sn	**Sn**	**14 42 11.0 -3.8**
	comp=E,693nm,0.6s				
CDF	**Champ du Feu**	**4.70 336**	*e*Pn	**Pn**	**14 41 20.9 +0.7**
CDF			*e*Sn	**Sn**	**14 42 11.0 -3.8**
CDF	**Champ du Feu**	**4.70 336**	*e*P	**Pn**	**14 41 20.9 +0.7**
CDF			*e*		14 42 11.0
SGRT	**San Giovanni R**	**4.76 118**	AML	AML	
	comp=E,379µm,1.2s				
SGRT			AML	AML	
	comp=E,379µm,1.2s				
SGRT			AML	AML	
	comp=N,317µm,1.6s				
SGRT			AML	AML	
	comp=N,317µm,1.6s				
SGRT			AML	AML	

comp=E,379µm,1.2s
SGRT AML AML
comp=N,317µm,1.6s
ARSA Arzberg 4.87 49 *e*Pn **Pn 14 41 22.8 +0.2**
ARSA Arzberg 4.87 49 *e*Pn **Pn 14 41 22.7 +0.1**
comp=N,11nm,0.2s,SNR=300
ARSA Sn **Sn 14 42 19.9 +0.9**
comp=N,186nm,0.9s
ARSA Arzberg 4.87 49 *e*Pn **Pn 14 41 22.7 +0.2**
MRAK Mrakovica 4.90 78 *e*Pn **Pn 14 41 24.0 +1.1**
LBL Lubilhac 5.04 285 Pn **Pn 14 41 26.0 +1.2**
BLY Banja Luka 5.07 81 *e*Pn **Pn 14 41 25.4 +0.1**
BLY Banja Luka 5.07 81 *e*Pn **Pn 14 41 26.1 +0.8**
BLY Banja Luka 5.07 81 ⇓*i*P **Pn 14 41 26.4 +1.1**
BLY Banja Luka 5.07 81 ⇓*i*Pn **Pn 14 41 25.7 +0.4**
SMF Signal de Mont 5.09 301 *e*P **Pn 14 41 27.8 +2.3**
SMF *e*Sn **Sn 14 42 21.1 -3.3**
comp=N,455nm,0.5s
SMF Signal de Mont 5.09 301 *e*Pn **Pn 14 41 27.8 +2.3**
SMF *e*Sn **Sn 14 42 21.1 -3.3**
SMF Signal de Mont 5.09 301 *e*P **Pn 14 41 27.8 +2.3**
SMF *e* 14 42 21.1
BEHE Becsehely 5.21 61 *e*Pn **Pn 14 41 27.8 +0.6**
BEHE Becsehely 5.21 61 EPn **Pn 14 41 29.1 +1.9**
BEHE Sn **Sn 14 42 26.1 -1.3**
BEHE ESg 14 43 11.1
GEC2 GERESS Array S 5.29 26 *e*Pn **Pn 14 41 28.0 -0.3**
GEC2 GERESS Array S 5.29 26 *e*P **Pn 14 41 28.0 -0.3**
GEC2 GERESS Array S 5.29 26 *e*Pn **Pn 14 41 28.3 -0.1**
GERES GERESS Array B 5.29 26 Pn **Pn 14 41 29.0 +0.7**
comp=N,24nm,0.3s,baz=204,slow=12,SNR=209
GERES Sn **Sn 14 42 29.3 -0.1**
comp=N,27nm,0.3s,baz=210,slow=24,SNR=8.8
GERES LR LR 14 43 56.9
comp=N,3µm,18.5s,baz=232,slow=43
PYM Petit Puy Mans 5.31 290 Pn **Pn 14 41 30.7 +2.1**
WET Wettzell 5.33 20 *e*Pn **Pn 14 41 28.9 +0.1**
WET *e*Sn **Sn 14 42 29.5 -0.7**
PAGF Fort de Pagny 5.36 327 *e*P **Pn 14 41 31.1 +1.9**
baz=146
PAGF *e*Sn **Sn 14 42 26.8 -4.2**
comp=N,585nm,0.7s,baz=145
PAGF Fort de Pagny 5.36 327 *e*Pn **Pn 14 41 31.1 +1.9**
PAGF *e*Sn **Sn 14 42 26.8 -4.2**
SFTF Sexfontaines 5.38 321 *e*P **Pn 14 41 31.8 +2.3**
baz=129
SFTF *e*Sn **Sn 14 42 27.7 -3.9**
comp=N,992nm,1.0s,baz=140
SFTF Sexfontaines 5.38 321 *e*Pn **Pn 14 41 31.8 +2.3**
SFTF *e*Sn **Sn 14 42 27.7 -3.9**
LOR Lormes 5.39 307 *e*P **Pn 14 41 31.1 +1.4**
LOR *e*Sn **Sn 14 42 27.9 -3.9**
comp=N,306nm,0.3s
LOR Lormes 5.39 307 *e*Pn **Pn 14 41 31.1 +1.4**
LOR *e*Sn **Sn 14 42 27.9 -3.9**
AVF Avril sur Loir 5.45 301 *e*P **Pn 14 41 32.8 +2.3**
AVF *e*Sn **Sn 14 42 29.5 -3.9**
comp=N,264nm,0.7s
AVF *e*Sg **Sg 14 43 01.7 -2.4**
comp=N,215nm,0.8s
AVF Avril sur Loir 5.45 301 *e*Pn **Pn 14 41 32.8 +2.3**
AVF *e*Sn **Sn 14 42 29.5 -3.9**
CONA Conrad Observa 5.48 45 *e*Pn **Pn 14 41 31.4 +0.5**
comp=N,2.0nm,0.2s,SNR=212
CONA Sn **Sn 14 42 35.7 +1.6**
comp=N,120nm,0.5s
SSF Saint Saulge 5.49 304 *e*P **Pn 14 41 32.5 +1.5**
SSF *e*Sn **Sn 14 42 31.0 -3.2**
comp=N,178nm,0.6s
SSF Saint Saulge 5.49 304 *e*Pn **Pn 14 41 32.5 +1.5**
SSF *e*Sn **Sn 14 42 31.0 -3.2**
KHC Kasperske Hory 5.50 24 *e*Pn **Pn 14 41 31.0 -0.2**
KHC Kasperske Hory 5.50 24 *e*P **Pn 14 41 31.3 +0.1**
KHC *e* 14 42 31.7
KHC MLR MLR
comp=Z,4µm,18.2s
KHC Kasperske Hory 5.50 24 *e*PN **Pn 14 41 31.3 +0.1**
KHC *e*SN **Sn 14 42 31.7 -2.9**
KHC AMS AMS 14 43 40.0
comp=Z,4µm,18.2s
GRFO Grafenberg 5.58 7 *e*Pn **Pn 14 41 33.4 +1.1**
GRFO Grafenberg 5.58 7 *e*P **Pn 14 41 33.4 +1.1**
GRA1 Grafenberg Arr 5.58 7 *e*Pn **Pn 14 41 31.7 -0.6**
GRF Grafenberg Arr 5.58 7 *e*P **Pn 14 41 31.7 -0.6**
GRF Grafenberg Arr 5.58 7 *e*Pn **Pn 14 41 32.3 0.0**
MEZF Maizieres J'vi 5.59 323 *e*P **Pn 14 41 34.4 +2.0**
baz=141
MEZF *e*Sn **Sn 14 42 32.4 -4.4**
comp=Z,204nm,0.6s,baz=138
MEZF Maizieres J'vi 5.59 323 *e*Pn **Pn 14 41 34.4 +2.0**
MEZF *e*Sn **Sn 14 42 32.4 -4.4**
STON Ston 5.64 101 *e*Pn **Pn 14 41 33.8 +0.7**
STON *e*Sn **Sn 14 42 38.7 +0.8**
STON Ston 5.64 101 *e*Pn **Pn 14 41 33.7 +0.6**
STON Sn **Sn 14 42 37.3 -0.6**
STON Ston 5.64 101 ⇓*i*Pn **Pn 14 41 33.0 -0.1**
BGF Bois d'Agland 5.68 298 *e*P **Pn 14 41 36.4 +2.8**
BGF *e*Sn **Sn 14 42 34.8 -4.1**
comp=Z,230nm,0.4s
BGF Bois d'Agland 5.68 298 *e*Pn **Pn 14 41 36.4 +2.8**
BGF *e*Sn **Sn 14 42 34.8 -4.1**
SOP Sopron 5.69 50 *e*Pn **Pn 14 41 35.7 +1.9**
SOP Sopron 5.69 50 EPn **Pn 14 41 34.1 +0.3**
SOP Sn **Sn 14 42 36.1 -3.2**
SOP ESg 14 43 20.1
ROTZ Rotzenmuhle 5.78 13 *e*Pn **Pn 14 41 34.2 -0.8**
ROTZ *e*Sn **Sn 14 42 39.3 -2.2**
MTLF Montolieu 5.80 265 *e*Pn **Pn 14 41 35.6 +0.3**
MTLF *e*Sn **Sn 14 42 38.7 -3.3**
comp=Z,347nm,0.9s
MTLF Montolieu 5.80 265 *e*Pn **Pn 14 41 35.6 +0.3**
MTLF *e*Sn **Sn 14 42 38.7 -3.3**
MTLF Montolieu 5.80 265 *e*P **Pn 14 41 35.6 +0.3**
MTLF *e* 14 42 38.7
CAF Calviac 5.83 280 *e*P **Pn 14 41 36.8 +1.1**
CAF *e*Sn **Sn 14 42 38.7 -4.0**
CAF *e*Sg **Sg 14 43 15.4 -0.7**
comp=Z,1000nm,1.8s
CAF Calviac 5.83 280 *e*Pn **Pn 14 41 36.8 +1.1**
CAF *e*Sn **Sn 14 42 38.7 -4.0**
CAF Calviac 5.83 280 *e*P **Pn 14 41 36.8 +1.1**
CAF *e* 14 42 38.7
FNEB Nbias 5.98 261 Pn **Pn 14 41 38.9 +1.1**
MANZ Manzenberg 5.98 12 *e*Pn **Pn 14 41 36.9 -0.9**
TCF Toulx Ste Croi 6.00 294 *e*P **Pn 14 41 40.6 +2.6**
TCF *e*Sn **Sn 14 42 46.3 -0.5**
comp=Z,104nm,0.4s
TCF Toulx Ste Croi 6.00 294 *e*Pn **Pn 14 41 40.6 +2.6**
TCF *e*Sn **Sn 14 42 46.3 -0.5**
TCF Toulx Ste Croi 6.00 294 *e*P **Pn 14 41 40.6 +2.6**
TCF *e* 14 42 46.3
TIH Tihany 6.09 61 EPn Pn 14 41 45.0 +5.8
TIH Sn **Sn 14 42 51.0 +2.0**
TIH ESg 14 43 27.1
HYF Humbligny 6.11 303 *e*P **Pn 14 41 40.9 +1.4**
HYF *e*Sn **Sn 14 42 49.6 +0.1**
HYF Humbligny 6.11 303 *e*Pn **Pn 14 41 40.9 +1.4**
HYF *e*Sn **Sn 14 42 49.6 +0.1**
TREB Trebinje 6.14 101 *e*Pn **Pn 14 41 41.0 +1.0**
TREB *e*Sn **Sn 14 42 50.6 +0.2**
TREB Trebinje 6.14 101 *e*Pn **Pn 14 41 40.0 0.0**
WLF Walferdange 6.15 335 *e*Pn **Pn 14 41 41.1 +1.1**
WLF Walferdange 6.15 335 *e*P **Pn 14 41 41.1 +1.1**
WLF Walferdange 6.15 335 P **Pn 14 41 41.9 +1.9**
WLF Walferdange 6.15 335 *e*Pn **Pn 14 41 42.8 +2.8**
TNS Taunus Mts 6.17 350 *e*Pn **Pn 14 41 41.1 +0.7**
BRY Bratogost 6.23 99 ⇑*i*Pn **Pn 14 41 41.9 +0.6**
BRY *i*Sn **Sn 14 42 51.8 -0.9**
BRY Bratogost 6.23 99 *e*Pn **Pn 14 41 42.7 +1.4**
RJF Les Rejaudoux 6.25 284 *e*Pn **Pn 14 41 44.8 +3.3**
RJF Les Rejaudoux 6.25 284 *e*Pg **Pg 14 42 06.3 -2.5**
RJF *e*Sn **Sn 14 42 48.4 -4.7**
RJF *e*Sg **Sg 14 43 27.8 -2.0**
comp=Z,1µm,2.2s
RJF Les Rejaudoux 6.25 284 *e*Pn **Pn 14 41 44.8 +3.3**
RJF *e*Pg **Pg 14 42 06.3 -2.5**
RJF *e*Sn **Sn 14 42 48.4 -4.7**
RJF Les Rejaudoux 6.25 284 *e*P **Pn 14 41 44.8 +3.3**
RJF *e* 14 42 48.4
NKC Novy Kostel 6.27 14 *e*P **Pn 14 41 41.4 -0.4**
NKC *e* 14 42 49.2
NKC MLR MLR
comp=Z,3µm,15.9s
NKC Novy Kostel 6.27 14 *e*PN **Pn 14 41 41.4 -0.4**
NKC *e*SN **Sn 14 42 49.2 -4.4**
NKC AMS AMS 14 44 00.0
comp=Z,3µm,15.9s
ZST Bratislava 6.29 48 *e*PN **Pn 14 41 42.7 +0.7**
TREC Trest 6.31 34 AMS AMS 14 44 20.0
comp=Z,5µm,13.1s
WERN Wernitzgruen 6.31 13 *e*Pn **Pn 14 41 42.3 -0.1**
HCY Herceg Novi 6.33 103 ⇓*i*Pn **Pn 14 41 43.3 +0.8**
HCY *e*Sn **Sn 14 42 53.4 -1.5**
HCY Herceg Novi 6.33 103 *e*Pn **Pn 14 41 43.9 +1.4**
HAPS Han Pijesak,Bl 6.34 88 *e*Pn **Pn 14 41 42.8 0.0**
HAPS *e*Sn **Sn 14 42 53.4 -1.9**
HAPS Han Pijesak,Bl 6.34 88 *e*Pn **Pn 14 41 42.9 +0.1**
BGG Burgeitz 6.34 343 *e*Pn **Pn 14 41 43.4 +0.7**
BGG *e*Sn **Sn 14 42 53.6 -1.6**
comp=Z,70nm,0.6s
MORH Mrgy, Hungar 6.34 68 EPn **Pn 14 41 42.1 -0.7**
MORH Sn **Sn 14 42 55.0 -0.3**
MORH ESg 14 43 36.0
GUNZ Gunzen 6.38 13 *e*Pn **Pn 14 41 42.3 -1.0**
UPM Unac-Piva 6.42 96 ⇑*i*Pn **Pn 14 41 44.6 +0.6**
UPM *i*Sn **Sn 14 42 56.1 -1.4**
UPM Unac-Piva 6.42 96 *e*Pn **Pn 14 41 45.9 +1.9**
TANN Tannenbergstha 6.45 13 *e*Pn **Pn 14 41 43.7 -0.6**
TANN *e*Sn **Sn 14 42 58.6 +0.6**
MODS Modra-Piesok 6.49 47 *e*PN **Pn 14 41 44.2 -0.6**
MODS *e*SN **Sn 14 42 56.2 -2.8**
CSKK Cskako 6.51 58 EPn **Pn 14 41 49.1 +4.0**
CSKK Sn **Sn 14 42 59.0 -0.5**
KRUC Moravsky 6.52 39 *e*PN **Pn 14 41 44.8 -0.4**
KRUC *e* 14 42 34.6
KRUC Moravsky 6.52 39 *e*SN **Sn 14 42 57.7 -1.9**
PRU Pruhonice 6.55 26 *e*P **Pn 14 41 45.5 -0.1**
PRU *e* 14 42 55.9
PRU MLR MLR
comp=Z,3µm,16.3s
PRU Pruhonice 6.55 26 *e*PN **Pn 14 41 45.5 -0.1**
PRU *e*SN **Sn 14 42 55.9 -4.6**
PRU AMS AMS 14 44 20.0
comp=Z,3µm,16.3s
NKME Niksic 6.56 99 *e*Pn **Pn 14 41 47.6 +1.9**
MOX Moxa 6.56 8 *e*Pn **Pn 14 41 44.8 -1.0**
GOPC GO Pecny, Ondr 6.57 27 *e*P **Pn 14 41 46.1 +0.3**
GOPC *e* 14 42 57.1
GOPC MLR MLR
comp=Z,4µm,17.1s
GOPC GO Pecny, Ondr 6.57 27 *e*PN **Pn 14 41 46.1 +0.3**
GOPC *e*SN **Sn 14 42 57.1 -3.8**
GOPC AMS AMS 14 44 20.0
comp=Z,4µm,17.1s
HILG Hillesheim 6.57 340 *e*Pn **Pn 14 41 46.7 +0.8**
NKY Niksic 6.57 99 ⇑*i*Pn **Pn 14 41 47.0 +1.0**
NKY *i*Sn **Sn 14 42 59.8 -1.3**
CEME Cevo 6.59 101 ⇓*i*Pn **Pn 14 41 46.5 +0.3**
CEME *e*Sn **Sn 14 43 01.3 -0.2**
BUM Brajici-Budva 6.65 103 ⇑*i*Pn **Pn 14 41 48.6 +1.5**
BUM *e*Sn **Sn 14 43 02.4 -0.6**
UBBA Unterbreizbach 6.66 359 *e*Pn **Pn 14 41 46.8 -0.2**
BBLS Lazići 6.68 89 *e*Pn **Pn 14 41 48.6 +1.1**
BBLS Lazići 6.68 89 ⇓*i*Pn **Pn 14 41 47.8 +0.3**
RUDO Rudo 6.69 91 *e*Pn **Pn 14 41 48.4 +0.9**
MLS Moulis 6.69 263 Pn **Pn 14 41 49.0 +1.5**
CLF Chambon-Foret 6.71 308 *e*Pn **Pn 14 41 49.4 +1.7**
AHRW Bad Neuenahr-A 6.71 343 *e*Pn **Pn 14 41 49.9 +2.1**
TEKS Tekeris 6.74 83 *e*Pn **Pn 14 41 49.1 +0.9**
TEKS *e*Sn **Sn 14 43 04.0 -1.0**
TEKS Tekeris 6.74 83 *e*Pn **Pn 14 41 48.6 +0.4**
PLE Pljevlja 6.74 94 ⇓*i*Pn **Pn 14 41 49.0 +0.6**
PLE *i*Sn **Sn 14 43 04.0 -1.3**
LFF La Frestale 6.77 280 *e*P **Pn 14 41 50.7 +2.1**
LFF *e*Sg **Sg 14 43 43.6 -2.6**
comp=Z,813nm,1.7s
LFF La Frestale 6.77 280 *e*Pn **Pn 14 41 50.7 +2.1**
LFF La Frestale 6.77 280 *e*P **Pn 14 41 50.7 +2.1**
VRAC Vranov 6.79 38 Pn **Pn 14 41 48.8 0.0**
comp=Z,4.4nm,0.3s,baz=243,slow=15,SNR=23
VRAC Sn **Sn 14 43 05.0 -1.3**
comp=Z,5.7nm,0.3s,baz=222,slow=13,SNR=4.4
VRAC Lg Lg 14 43 43.5
comp=Z,1.9nm,0.3s,baz=138,slow=23,SNR=3.3
VRAC LR LR 14 45 11.7
comp=Z,2µm,19.1s,baz=226,slow=44
VRAC Vranov 6.79 38 *e*Pn **Pn 14 41 48.4 -0.5**
VRAC *e* 14 42 38.4
VRAC Vranov 6.79 38 *e*SN **Sn 14 43 02.0 -4.3**
VRAC *e*SG **Sg 14 43 48.7 +1.8**
BHOU Houvegnez 6.81 337 P **Pn 14 41 51.5 +2.5**
STB Steinbach 6.82 342 *e*Pn **Pn 14 41 49.8 +0.6**
PDG Podgorica 6.87 101 *e*Pn **Pn 14 41 51.6 +1.7**
PDG *e*Sn **Sn 14 43 08.5 +0.4**
PDG Podgorica 6.87 101 ⇑*i*P **Pn 14 41 52.0 +2.1**
PDG Podgorica 6.87 101 ⇑*i*Pn **Pn 14 41 51.7 +1.8**
TTG Podgorica 6.87 101 ⇑*i*Pn **Pn 14 41 51.0 +1.1**
TTG *i*Sn **Sn 14 43 06.5 -1.6**
TTG Podgorica 6.87 101 *e*Pn **Pn 14 41 51.2 +1.3**
TTG Podgorica 6.87 101 *e*P **Pn 14 41 51.2 +1.3**
DRME Dracevica, Mon 6.89 104 ⇑*i*Pn **Pn 14 41 51.8 +1.5**
DRME *e*Sn **Sn 14 43 08.3 -0.6**
DRME Dracevica, Mon 6.89 104 ⇑*i*Pn **Pn 14 41 51.4 +1.1**
KOME Kolasin 6.94 98 ⇓*i*Pn **Pn 14 41 51.8 +0.8**
KOME *e*Sn **Sn 14 43 09.0 -1.0**
FRGS Fruska Gora 6.96 78 *e*Pn **Pn 14 41 51.8 +0.5**
FRGS *e*Sn **Sn 14 43 08.4 -2.2**
FRGS Fruska Gora 6.96 78 ⇓*i*Pn **Pn 14 41 50.7 -0.6**
GIVF Givet 6.96 330 *e*P **Pn 14 41 53.3 +2.1**
GIVF *e*Sn **Sn 14 43 05.7 -4.8**
comp=Z,1µm,1.6s
GIVF Givet 6.96 330 *e*Pn **Pn 14 41 53.3 +2.1**
GIVF Givet 6.96 330 *e*P **Pn 14 41 53.3 +2.1**
CLTB Caltabellotta 6.97 160 *e*Pn **Pn 14 41 54.0 +2.5**
KLL Kalltalsperre 6.99 340 *e*Pn **Pn 14 41 52.1 +0.5**
JAVC Velka Javorina 7.00 45 *e*PN **Pn 14 41 53.0 +1.2**
ULC Ulcinj 7.01 105 ⇓*i*Pn **Pn 14 41 53.3 +1.3**
ULC *e*Sn **Sn 14 43 11.1 -0.8**
TIP Timpagrande 7.02 133 *e*Pn **Pn 14 41 54.7 +2.6**
TIP Timpagrande 7.02 133 ⇑*i*P **Pn 14 41 56.7 +4.6**
MEM Membach 7.04 338 P **Pn 14 41 53.9 +1.7**
MEM Membach 7.04 338 P **Pn 14 41 54.8 +2.6**
DOU Dourbes 7.04 329 P **Pn 14 41 53.4 +1.1**
DOU S **Sn 14 43 12.2 -0.3**
PVCC Panska Ves 7.04 24 *e*P **Pn 14 41 52.5 +0.2**
PVCC *e* 14 43 08.6
PVCC MLR MLR
comp=Z,3µm,14.9s
PVCC Panska Ves 7.04 24 *e*PN **Pn 14 41 52.5 +0.2**
PVCC *e*SN **Sn 14 43 08.6 -3.8**
PVCC AMS AMS 14 44 50.0
comp=Z,3µm,14.9s
BCLA Clavier 7.07 334 P **Pn 14 41 55.1 +2.4**
DIVS Divibare 7.08 87 *e*Pn **Pn 14 41 53.6 +0.6**
DIVS Divibare 7.08 87 ⇓*i*Pn **Pn 14 41 53.4 +0.4**
BGES Gesves 7.11 333 P **Pn 14 41 55.1 +1.8**
BMRD Maredsous 7.15 331 P **Pn 14 41 57.3 +3.5**
BAIF Baives 7.16 328 *e*P **Pn 14 41 56.5 +2.6**
BAIF *e*Sn **Sn 14 43 10.1 -5.1**
comp=Z,208nm,0.8s
BAIF Baives 7.16 328 *e*Pn **Pn 14 41 56.5 +2.6**
SJES Sjenica 7.18 94 *e*Pn **Pn 14 41 55.7 +1.4**
BRG Berggiesshubel 7.19 20 PN **Pn 14 41 54.4 +0.1**
BRG *i* 14 41 56.9
BRG Berggiesshubel 7.19 20 PG **Pg 14 42 29.9 +3.2**
BRG SG **Sg 14 44 03.5 +3.8**
comp=Z,442nm,1.8s
BRG Berggiesshubel 7.19 20 *e*Pn **Pn 14 41 53.3 -1.0**
HGN Heimansgroeve 7.20 338 *e*P **Pn 14 41 56.5 +2.1**
HGN *e*S **Sn 14 43 17.1 +0.9**
IVA Berane 7.20 97 ⇓*i*Pn **Pn 14 41 55.6 +1.0**
IVA *i*Sn **Sn 14 43 14.3 -2.2**
EPF Esparros 7.21 264 *e*Pn **Pn 14 41 54.9 +0.2**
EPF *e*Sn **Sn 14 43 12.4 -4.3**
comp=Z,123nm,1.0s
EPF Esparros 7.21 264 *e*Pn **Pn 14 41 54.9 +0.2**
EPF *e*Sn **Sn 14 43 12.4 -4.3**
EPF Esparros 7.21 264 *e*P **Pn 14 41 54.9 +0.2**
EPF *e* 14 43 12.4
KOLL Kolacno 7.22 49 *e*PN **Pn 14 41 55.7 +1.0**
IVAS Ivanjica 7.25 91 *e*Pn **Pn 14 41 55.5 +0.2**
BEBN Eben Emael 7.30 337 P **Pn 14 41 57.4 +1.6**
CEL Celeste 7.31 142 *e*Pn **Pn 14 41 57.8 +1.7**
PVY Plav 7.32 99 ⇑*i*Pn **Pn 14 41 59.2 +3.0**
TRUS Trudelj 7.37 86 *e*Pn **Pn 14 41 57.5 +0.6**
CLL Collm 7.41 14 *e*Pn **Pn 14 41 55.3 -2.0**
CLL Collm 7.41 14 *e*Pn **Pn 14 41 56.0 -1.3**
CLL *e* 14 42 24.0
CLL *e* 14 42 37.0
CLL *e*Sn Sn 14 42 56.0 -25
CLL *e* 14 43 18.0
CLL *e* 14 43 31.0
CLL *e*Sg **Sg 14 44 02.0 -4.6**
comp=Z,260nm,0.9s
CLL Collm 7.41 14 *e*P **Pn 14 41 55.3 -2.0**
VYHS Vyhne 7.47 51 *e*PN **Pn 14 41 56.6 -0.8**
VAE Valguarnera 7.42 153 Pn **Pn 14 41 57.1 -0.4**
comp=Z,1.3nm,0.3s,baz=0.0,slow=16,SNR=2.8
VAE LR LR 14 44 42.0
comp=Z,1µm,19.1s,baz=7.0,slow=37
DPC Dobruska-Polom 7.48 32 *e*P **Pn 14 41 57.5 -0.9**
DPC *e* 14 43 18.4
DPC MLR MLR
comp=Z,3µm,13.2s
DPC Dobruska-Polom 7.48 32 *e*PN **Pn 14 41 57.5 -0.9**
DPC *e*SN **Sn 14 43 18.4 -4.9**
DPC AMS AMS 14 45 00.0
comp=Z,3µm,13.2s
UPC Upice 7.49 30 *e*P **Pn 14 41 58.2 -0.3**
UPC *e* 14 43 18.3
UPC MLR MLR
comp=Z,4µm,12.0s
UPC Upice 7.49 30 *e*PN **Pn 14 41 58.2 -0.3**
UPC *e*SN **Sn 14 43 18.3 -5.3**
UPC AMS AMS 14 45 00.0
comp=Z,4µm,12.0s
BUG Bochum--Univer 7.54 346 *e*Sn **Sn 14 43 24.5 -0.1**
MORC Moravsky Berou 7.56 39 *e*Pn **Pn 14 41 59.0 -0.3**
MORC Moravsky Berou 7.56 39 *e*P **Pn 14 41 59.1 -0.3**
MORC Moravsky Berou 7.56 39 *e*PN **Pn 14 41 59.3 -0.1**
MORC Moravsky Berou 7.56 39 *e*SG **Sg 14 44 10.2 -1.3**
CHVC Chvalec 7.58 30 *e*PN **Pn 14 41 59.6 -0.1**
CHVC AMS AMS 14 45 00.0
comp=Z,3µm,11.2s
BRQR Ronquire 7.60 330 P **Pn 14 42 02.9 +3.1**
OSTC Ostas 7.61 31 *e*PN **Pn 14 42 00.1 0.0**
OSTC AMS AMS 14 45 10.0
comp=Z,4µm,12.6s
GRUS Gruza 7.62 88 *e*Pn **Pn 14 42 01.5 +1.2**
MFF Saint Martin d 7.65 292 *e*P **Pn 14 42 02.4 +1.8**
MFF *e*Sn **Sn 14 43 25.3 -2.1**
comp=Z,39nm,0.6s
MFF *e*Sg **Sg 14 44 11.1 -3.3**
comp=Z,311nm,1.4s
MFF Saint Martin d 7.65 292 *e*Pn **Pn 14 42 02.4 +1.8**
MFF *e*Sn **Sn 14 43 25.3 -2.1**
TIR Tirane 7.68 108 *e*Pn **Pn 14 42 02.2 +1.1**
TIR Tirane 7.68 108 *e*Pn **Pn 14 42 00.8 -0.3**
TIR Tirane 7.68 108 ⇑*i*P **Pn 14 42 02.5 +1.4**
TIR Tirane 7.68 108 *e*P **Pn 14 42 00.8 -0.3**
CLZ Clausthal 7.69 1 *e*Pn **Pn 14 42 00.8 -0.4**
UCC Uccle 7.71 332 *e*Pn **Pn 14 42 02.5 +1.0**
UCC Uccle 7.71 332 *e*P **Pn 14 42 02.5 +1.0**
PSZ Piszkesteto 7.75 58 *e*Pn **Pn 14 42 02.6 +0.5**
PSZ Piszkesteto 7.75 58 ⇓*i*P **Pn 14 42 05.2 +3.0**
PSZ Piszkesteto 7.75 58 *e*P **Pn 14 42 02.6 +0.5**
PSZ Piszkesteto 7.75 58 *e*Pn **Pn 14 42 05.1 +3.0**
PSZ Piszkesteto 7.75 58 EPn **Pn 14 42 05.1 +2.9**
PSZ Sn **Sn 14 43 26.0 -4.0**
PSZ ESg 14 44 20.1
ETSF Etsaut 7.88 265 *e*P **Pn 14 42 07.8 +3.8**
ETSF *e*Sn **Sn 14 43 30.8 -2.5**
comp=Z,76nm,0.8s
ETSF Etsaut 7.88 265 *e*Pn **Pn 14 42 07.8 +3.8**
ETSF *e*Sn **Sn 14 43 30.8 -2.5**
ETSF Etsaut 7.88 265 *e*P **Pn 14 42 07.8 +3.8**
ETSF *e* 14 43 30.8
SVIS Svilajnac 7.95 85 *e*Pn **Pn 14 42 04.8 0.0**
SELS Selova 8.01 93 *e*Pn **Pn 14 42 05.7 +0.1**
LANS Liptovska Anna 8.12 49 *e*PN **Pn 14 42 08.5 +1.3**
WTSB Winterswijk 8.12 345 *e*P **Pn 14 42 11.5 +4.4**
WTSB *e*S **Sn 14 43 31.1 -7.9**
BZS Buzias 8.27 76 *e*Pn **Pn 14 42 10.1 +0.9**
BZS Buzias 8.27 76 ⇑*i*P **Pn 14 42 12.0 +2.8**
KUBS Kucevo 8.28 84 *e*Pn **Pn 14 42 08.7 -0.6**
SJPF Ste Jean 8.32 267 *e*Pn **Pn 14 42 08.3 -1.5**
SJPF *e*Sn **Sn 14 43 38.3 -5.6**
comp=Z,62nm,1.0s
SJPF Ste Jean 8.32 267 *e*Pn **Pn 14 42 08.3 -1.5**
SJPF Ste Jean 8.32 267 *e*P **Pn 14 42 08.3 -1.5**
BOVS Bovan 8.36 90 *e*Pn **Pn 14 42 11.4 +0.9**
LDF La Druitiere 8.37 306 *e*P **Pn 14 42 11.1 +0.6**
LDF *e*Sn **Sn 14 43 40.2 -4.9**
comp=Z,272nm,1.2s
LDF La Druitiere 8.37 306 *e*Pn **Pn 14 42 11.1 +0.6**
LDF La Druitiere 8.37 306 *e*P **Pn 14 42 11.1 +0.6**
KEST Kesra 8.44 184 Pn **Pn 14 42 15.8 +4.1**
comp=Z,9.9nm,0.3s,baz=290,slow=3.7,SNR=60
KEST Sn **Sn 14 43 47.4 +0.3**
comp=Z,0.5nm,0.3s,baz=210,slow=20,SNR=2.1
KEST Kesra 8.44 184 *e*Pn **Pn 14 42 15.2 +3.6**
KEST *e*Sn **Sn 14 43 47.4 +0.3**
SKO Skopje 8.55 101 *e*Pn **Pn 14 42 13.2 +0.2**
SKO Skopje 8.55 101 *i*P **Pn 14 42 15.1 +2.1**
BARS Barje 8.59 95 *e*Pn **Pn 14 42 12.4 -1.2**
BARS Barje 8.59 95 *e*Pn **Pn 14 42 14.6 +1.0**
RETH Rethem/Aller, 8.60 357 *e*Pn **Pn 14 42 14.3 +0.6**
FLN La Foliniere 8.66 306 *e*P **Pn 14 42 15.0 +0.5**
baz=126
FLN *e*Sn **Sn 14 43 46.4 -5.8**
comp=Z,152nm,1.0s
FLN La Foliniere 8.66 306 *e*Pn **Pn 14 42 15.0 +0.5**
FLN La Foliniere 8.66 306 *e*P **Pn 14 42 15.0 +0.5**
GRR Gorron 8.72 303 *e*P **Pn 14 42 15.7 +0.4**
GRR *e*Sn **Sn 14 43 48.8 -4.8**
comp=Z,72nm,0.7s
GRR *e*Sg **Sg 14 44 49.6 +1.0**
comp=Z,217nm,1.3s
GRR Gorron 8.72 303 *e*Pn **Pn 14 42 15.7 +0.4**
GRR Gorron 8.72 303 *e*P **Pn 14 42 15.7 +0.4**
ZAGS Zajecar 8.72 88 *e*Pn **Pn 14 42 16.1 +0.7**
NIE Niedzica 8.72 49 *e*P **Pn 14 42 18.1 +2.7**
HERR Herculane 8.80 81 ⇓*i*P **Pn 14 42 17.9 +1.5**
OJC Ojcow 8.93 44 *e*P **Pn 14 42 19.1 +0.9**
OJC Ojcow 8.93 44 *e*Pn **Pn 14 42 18.5 +0.2**
OJC Ojcow 8.93 44 *e*P **Pn 14 42 18.5 +0.2**
GZR Gura Zlata 9.07 78 ⇓*i*P **Pn 14 42 21.5 +1.3**
ZAPS Zavoj 9.09 91 *e*Pn **Pn 14 42 21.6 +1.2**
ZAPS *e*Sn **Sn 14 43 58.7 -4.1**
STIP Stip 9.17 101 *i*P **Pn 14 42 24.1 +2.6**
PUNG Punghina 9.18 85 ⇓*i*P **Pn 14 42 23.7 +2.0**
DEV Deva 9.20 75 ⇑*i*P **Pn 14 42 23.3 +1.4**
DRGR 9.21 69 ⇓*i*P **Pn 14 42 23.1 +1.0**
SRE Strehaia 9.36 82 ⇓*i*P **Pn 14 42 26.4 +2.3**
TRPA Tarpa 9.47 61 ⇓*i*P **Pn 14 42 27.8 +2.2**
TRPA Tarpa 9.47 61 EPn **Pn 14 42 22.1 -3.5**
UZH Uzhgorod 9.51 58 *e*P **Pn 14 42 28.2 +2.1**
UZH *e*S **Sn 14 44 16.2 +3.2**
UZH MLR MLR
comp=Z,360nm,11.0s
VAY Valandovo 9.57 103 *i*P **Pn 14 42 27.8 +0.8**
VTS Vitosha 9.65 95 *e*Pn **Pn 14 42 29.0 +0.7**
VTS Vitosha 9.65 95 *e*Pn **Pn 14 42 27.6 -0.7**
VTS Vitosha 9.65 95 ⇑*i*P **Pn 14 42 29.5 +1.2**
VTS Vitosha 9.65 95 *e*P **Pn 14 42 27.6 -0.7**
VTS Vitosha 9.65 95 P **Pn 14 42 29.4 +1.2**
SGMF Saint Gilles 9.71 299 *e*P **Pn 14 42 30.2 +1.3**
SGMF *e*Sn **Sn 14 44 14.1 -3.9**
comp=Z,239nm,1.3s
SGMF Saint Gilles 9.71 299 *e*Pn **Pn 14 42 30.2 +1.3**
SGMF *e*Sn **Sn 14 44 14.1 -3.9**
SGMF Saint Gilles 9.71 299 *e*P **Pn 14 42 30.2 +1.3**
SGMF *e* 14 44 14.1
KKB Krupnik 9.75 99 P **Pn 14 42 31.8 +2.3**
LOT Lotru 9.77 78 ⇑*i*P **Pn 14 42 31.5 +1.7**
CJR Cluj-Napoca 9.79 70 ⇓*i*P **Pn 14 42 33.7 +3.6**
QUIF Quistinic 9.99 297 *e*P **Pn 14 42 33.4 +0.7**
QUIF *e*Sn **Sn 14 44 18.0 -6.9**
comp=Z,15nm,0.4s
QUIF *e*Sg 14 45 24.9
comp=Z,334nm,1.5s
QUIF Quistinic 9.99 297 *e*Pn **Pn 14 42 33.4 +0.7**
QUIF Quistinic 9.99 297 *e*P **Pn 14 42 33.4 +0.7**
KWP Kalwaria Pacla 10.18 53 *e*P **Pn 14 42 38.9 +3.5**
KWP Kalwaria Pacla 10.18 53 *e*Pn **Pn 14 42 35.9 +0.5**

KWP Kalwaria Pacla 10.18 53 *e*P **Pn 14 42 35.9 +0.5**
ROSF Rostrenen 10.19 299 *e*P **Pn 14 42 36.1 +0.7**
ROSF *e*Sn **Sn 14 44 23.9 -5.9**
ROSF *e*Sg 14 45 28.9
comp=Z,283nm,1.5s
ROSF Rostrenen 10.19 299 *e*Pn **Pn 14 42 36.1 +0.7**
ROSF Rostrenen 10.19 299 *e*P **Pn 14 42 36.1 +0.7**
MMB Musomiste 10.29 100 P **Pn 14 42 40.1 +3.1**
ARCR ARCALIA 10.37 69⇑*i*P **Pn 14 42 40.7 +2.7**
ARR Arges 10.38 78⇑*i*P **Pn 14 42 39.9 +1.8**
VOIR 10.67 78⇓*i*P **Pn 14 42 44.1 +2.0**
PLD Plovdiv 10.84 96 P **Pn 14 42 45.7 +1.4**
DOPR Dopca 10.93 75⇓*i*P **Pn 14 42 47.5 +1.8**
RZN Rozhen 10.97 98 P **Pn 14 42 48.0 +1.7**
LVV L'vov 11.04 54 *e*P Pn 14 42 53.5 +6.5
LVV *e*S **Sn 14 44 53.1 +2.6**
LVV MLR MLR
comp=Z,600nm,11.0s
PVL Pavlikeni 11.04 90 P **Pn 14 42 46.9 -0.2**
BUR08 Bucovina Ar. S 11.05 66 *e*Pn **Pn 14 42 49.2 +1.8**
BURAR Bucovina Array 11.06 67⇓*i*P **Pn 14 42 50.0 +2.6**
OZUR 11.22 75⇑*i*P **Pn 14 42 51.8 +2.2**
MLR Muntele Rosu 11.30 78 Pn **Pn 14 42 53.9 +3.1**
comp=Z,0.4nm,0.3s,baz=166,slow=13,SNR=3.7
MLR LR LR 14 48 23.4
comp=Z,476nm,18.2s,baz=284,slow=44
MLR Muntele Rosu 11.30 78⇓*i*P Pn 14 42 57.7 +6.9
ESDC Sonseca Array 11.43 252 Pn **Pn 14 42 52.7 +0.3**
comp=Z,1.6nm,0.3s,baz=63,slow=14,SNR=23
ESDC LR LR 14 47 14.0
comp=Z,503nm,20.4s,baz=75,slow=37
ESLA Sonseca Array 11.43 252 *e*Pn **Pn 14 42 53.6 +1.1**
KDZ Kurdzhali 11.48 97 P **Pn 14 42 53.7 +0.6**
PAB San Pablo 11.75 252 *e*Pn **Pn 14 42 58.1 +1.2**
PAB San Pablo 11.75 252 *e*P **Pn 14 42 58.1 +1.2**
PLOR Plostina 11.81 76⇑*i*P **Pn 14 42 59.3 +1.7**
TESR Tescani 11.85 73⇓*i*P **Pn 14 43 00.5 +2.3**
VRI Vrincioaia 11.86 76⇓*i*P **Pn 14 42 59.4 +1.1**
PBRG Braganca 12.59 265 *e*P **Pn 14 43 09.3 +0.9**
comp=Z,27nm,1.7s
TLB Topalu 12.81 82⇑*i*P Pn 14 43 24.3 +13
MVO Moncorvo 12.99 263 *e*LR LR 14 47 40.2
comp=Z,565nm,18.0s
TIRR Tirgusor 13.09 82 *e*Pn **Pn 14 43 16.2 +1.1**
TIRR Tirgusor 13.09 82 *e*P **Pn 14 43 16.2 +1.1**
KIS Kishinev 13.38 71 *e*P **P 14 43 30.0 +1.3**
comp=Z,210nm,2.0s
KIS Kishinev 13.38 71 *e*PP P 14 43 40.5 +12
KIS *e*S **S 14 46 08.0 -4.0**
KIS *e*Lg Lg 14 47 45.0
KIS *e*LR LR 14 48 20.0
comp=Z,800nm,14.0s
KIS Kishinev 13.38 71 *e*P **P 14 43 30.0 +1.3**
KIS pmax pmax
comp=Z,210nm,2.0s
KIS MLR MLR
comp=Z,800nm,14.0s
KIS MLR MLR
comp=N,400nm,12.0s
MTE Manteigas 13.63 260 *e*LR LR 14 47 41.1
comp=N,577nm,18.0s
PGAV Gavieira, Arco 13.65 267 *e*LR LR 14 47 43.7
comp=N,360nm,16.0s
PVIS Viseu 13.76 262 *e*P **Pn 14 43 26.0 +1.6**
PCBR Castelo Branco 13.80 258 *e*P **Pn 14 43 26.2 +1.4**
PMRV Marv??o 13.91 256 *e*P **Pn 14 43 27.3 +1.0**
comp=N,20nm,1.3s
PMRV *e*LR LR 14 48 01.7
comp=N,650nm,20.0s
BALB Balikesir 13.95 103 *e*Pn **Pn 14 43 27.9 +1.0**
EKA Eskdalemuir Ar 14.08 327 Pn **Pn 14 43 28.6 0.0**
baz=142,slow=15,SNR=17
EKA Sn **Sn 14 45 56.9 -7.9**
baz=142,slow=25,SNR=6.7
ESK Eskdalemuir 14.08 327 *e*Pn **Pn 14 43 30.3 +1.7**
ESK Eskdalemuir 14.08 327 *e*P **Pn 14 43 30.3 +1.7**
DSB Dublin 14.17 316 *e*Pn **Pn 14 43 31.5 +1.7**
IDI Anoyia 14.38 123 Pn **Pn 14 43 33.1 +0.3**
comp=N,0.2nm,0.3s,baz=306,slow=17,SNR=1.9
PABE Paberze 14.40 33 *e*P **Pn 14 43 33.5 +0.6**
PCAS Casmilo, Conde 14.43 260 *e*P **Pn 14 43 35.8 +2.3**
AKASG Malin Array Be 14.45 56 Pn **Pn 14 43 34.2 +0.5**
comp=N,0.4nm,0.3s,baz=249,slow=12,SNR=5.6
AKASG LR LR 14 49 54.1
comp=N,326nm,21.9s,baz=255,slow=40
AKASG Malin Array Be 14.45 56 *i* P **Pn 14 43 34.7 +1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 14.45 56 *e*Pn **Pn 14 43 33.5 -0.2**
AKBB Malin Array Si 14.45 56 *e*P **Pn 14 43 33.5 -0.2**
PMTG Montargil 14.65 256 *e*P **Pn 14 43 35.8 -0.6**
comp=Z,18nm,2.0s
IIGN Ignalina 15.23 37 *e*P **Pn 14 43 45.9 +1.7**
ISAL Salakas 15.33 36 *e*P **Pn 14 43 47.3 +1.8**
IDID Didziasalis 15.43 38 *e*P **Pn 14 43 47.3 +0.5**
MICGM Minsk 15.47 42 *e* **Pn 14 43 46.0 -1.3**
MICGM *e* 14 48 31.0
MICGM *e*LR LR 14 49 54.0
MNK Minsk 15.47 42 *e*P **Pn 14 43 46.0 -1.3**
SLIT Slitere, Latvi 15.47 25 *e*P **P 14 43 50.7 -1.1**
IZAR Zarasai 15.50 36 *e*P **Pn 14 43 49.2 +1.4**
MDUB Mudurnu 15.99 96 *e*Pn **Pn 14 43 54.3 0.0**
comp=Z,148nm,1.1s
HFS Hagfors 16.14 6 Pn **Pn 14 43 55.4 -0.5**
comp=Z,0.1nm,0.3s,baz=184,slow=18,SNR=6.9
HFS LR LR 14 50 31.6
comp=Z,620nm,21.1s,baz=194,slow=38
MDT Midelt 16.15 230 LR LR 14 49 18.2
comp=Z,359nm,21.0s,baz=40,slow=34
NC602 NORSAR Array S 16.62 2 *e*Pn **Pn 14 44 02.5 +0.4**
comp=Z,275nm,2.0s
NBO00 NORSAR Array S 16.90 1 *e*P **P 14 44 06.9 -0.8**
comp=Z,68nm,1.6s
NB2 NORSAR Subarra 16.92 2 P **P 14 44 07.6 -0.3**
comp=Z,100nm,2.0s,baz=182,slow=11
NB200 NORSAR Array S 16.92 2 *e*P **P 14 44 07.8 -0.1**
NOA NORSAR Array B 16.92 2 Pn **P 14 44 07.8 -0.1**
comp=Z,0.0nm,0.3s,baz=182,slow=11,SNR=8.4
NOA LR LR 14 51 26.5
comp=Z,803nm,18.7s,baz=180,slow=40
NC405 NORSAR Array S 17.01 3 *e*P **P 14 44 08.2 -0.7**
comp=Z,162nm,1.7s
SIM Simferopol' 17.09 79*c i*P **P 14 44 11.6 +1.7**
SIM *e*S **Sn 14 47 22.0 +3.9**
SIM pmax pmax
comp=Z,18nm,1.4s
SIM MLR MLR
comp=Z,370nm,12.0s
NC303 NORSAR Array S 17.11 2 *e*Pn **Pn 14 44 09.0 +0.8**
comp=Z,64nm,1.4s
NC204 NORSAR Array S 17.15 1 *e*Pn **Pn 14 44 09.4 +0.6**
comp=Z,111nm,1.7s
VSU Vasula 17.60 30*c i*P **P 14 44 15.8 +0.4**
VSU pmax pmax
comp=Z,398nm,1.7s
VSU Vasula 17.60 30 *e*P **Pn 14 44 13.3 -1.0**
BR101 Keskin Array S 18.01 96 *e*P **P 14 44 20.5 +0.3**
BRTR Keskin Array B 18.01 96 P **P 14 44 20.5 +0.3**
comp=Z,0.1nm,0.3s,baz=307,slow=5.2,SNR=6.1
BRTR LR LR 14 51 43.5
comp=Z,370nm,19.6s,baz=288,slow=39
ANN Anapa 19.45 79 *e*P **P 14 44 32.8 -3.0**
ANN *e*S **Sn 14 48 10.1 -5.0**
ANN pmax pmax
comp=Z,85nm,1.1s
ANN MLR MLR
comp=N,279nm,14.0s
ANN MLR MLR
comp=Z,547nm,14.0s
ANN MLR MLR
comp=E,203nm,14.0s
FIA0 FINESS Array S 19.71 23 *e*P **P 14 44 39.1 +0.6**
FIA0 FINESS Array S 19.71 23 *e*P **P 14 44 39.1 +0.6**
FINES FINESS Array B 19.71 23 P **P 14 44 39.1 +0.6**
comp=E,0.9nm,0.3s,baz=209,slow=9.7,SNR=43
FINES LR LR 14 53 00.8
comp=E,614nm,22.0s,baz=218,slow=39
FIA1 FINESS Array S 19.71 23 *e*P **P 14 44 38.8 +0.3**
comp=E,16nm,0.9s
OBN Obninsk 20.19 48 P **P 14 44 44.6 +0.9**
comp=E,2.2nm,0.4s,baz=202,slow=5.4,SNR=16
OBN LR LR 14 53 20.5
comp=E,159nm,18.4s,baz=246,slow=39
OBN Obninsk 20.19 48 *e*P **P 14 44 43.6 -0.2**
comp=E,278nm,1.9s

OBN Obninsk 20.19 48*de*P **P 14 44 43.8 0.0**
OBN *e* 14 45 00.1
OBN *e*PPP PPP 14 45 10.4
OBN *e* 14 49 02.0
OBN pmax pmax
comp=Z,114nm,1.7s
OBN MLR MLR
comp=Z,539nm,18.0s
VSR Storozhevoye 20.68 60 *e*P **P 14 44 48.7 -0.4**
VSR pmax pmax
comp=Z,140nm,1.4s
VSR MLR MLR
comp=Z,480nm,15.0s
VORD Divnogorie 20.72 61 *e*P **P 14 44 48.9 -0.7**
VORD pmax pmax
comp=Z,40nm,1.1s
LPSR Galich'ya Gora 20.78 56 *e*P **P 14 44 50.1 -0.2**
LPSR pmax pmax
comp=Z,120nm,1.2s
LPSR MLR MLR
comp=Z,290nm,12.0s
MOS Moscow 20.98 47 *e*P **P 14 44 51.2 -1.2**
MOS *e* 14 45 09.3
MOS pmax pmax
comp=Z,158nm,1.4s
MOS pmax pmax
comp=Z,300nm,1.9s
MOS MLR MLR
comp=Z,600nm,20.0s
SOC Sochi 21.28 81*c i*P **P 14 44 57.1 +1.4**
SOC *e*PPP PPP 14 45 23.8
SOC *e*S **S 14 48 54.1 +2.1**
SOC *e*SS **SnSn 14 49 18.4 +4.4**
SOC pmax pmax
comp=Z,58nm,1.2s
SOC MLR MLR
comp=Z,78nm,9.0s
TAM Tamanrasset 21.65 192 *e*P **P 14 45 01.7 +1.7**
comp=Z,54nm,1.8s
TAM Tamanrasset 21.65 192 *e*P **P 14 45 01.7 +1.7**
TAM pmax pmax
comp=Z,54nm,1.8s
MMAI Mount Meron Ar 22.57 111 P **P 14 45 10.7 +1.0**
comp=Z,3.8nm,0.7s,baz=327,slow=10,SNR=2.6
MMAI LR LR 14 55 50.1
comp=Z,209nm,18.4s,baz=310,slow=42
KIV Kislovodsk 23.31 79 *e*P **P 14 45 17.1 -0.2**
comp=Z,83nm,1.2s
KIV Kislovodsk 23.31 79 *e*P **P 14 45 17.1 -0.2**
KIV pmax pmax
comp=Z,83nm,1.2s
GOF Gofitskoye 23.35 76⇑*e*P **P 14 45 18.7 +1.1**
GOF pmax pmax
comp=Z,90nm,1.4s
NEY Neytrino 23.49 81⇓*e*P **P 14 45 22.3 +3.1**
NEY pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 23.50 80 P **P 14 45 20.5 +1.4**
comp=Z,10nm,1.0s,baz=298,slow=13,SNR=10.0
KBZ LR LR 14 57 24.9
comp=Z,112nm,19.8s,baz=297,slow=44
NCK Nalchik 24.05 80⇓*e*P **P 14 45 26.8 +2.3**
NCK pmax pmax
comp=Z,77nm,1.9s
ASF Jabal al Asfar 24.09 111 P **P 14 45 25.7 +0.7**
comp=Z,2.6nm,0.5s,baz=139,slow=0.9,SNR=3.4
ZEI Tsey 24.44 81 *e*P **P 14 45 29.8 +1.5**
ZEI pmax pmax
comp=Z,18nm,0.9s
AKH Akhalkalaki 24.53 85 *e*P **P 14 45 29.1 0.0**
comp=Z,40nm,1.2s
AKH Akhalkalaki 24.53 85 *e*P **P 14 45 29.1 0.0**
AKH pmax pmax
comp=Z,40nm,1.2s
GROC Groznyy 25.68 80 *e*P **P 14 45 35.7 -3.5**
GROC *e* 14 46 13.7
GROC *e*S **S 14 50 03.7 -4.0**
GROC pmax pmax
comp=Z,22nm,0.5s
GNI Garni 25.84 87 P **P 14 45 42.6 +1.7**
comp=Z,16nm,0.8s,baz=344,slow=3.9,SNR=8.3
GNI Garni 25.84 87⇑*e*P **P 14 45 42.8 +1.9**
GNI pmax pmax
comp=Z,250nm,1.7s
APA Apatity 26.51 20⇑*i*P **P 14 45 44.8 -1.7**
APA pmax pmax
comp=Z,2.0nm,0.9s
APA MLR MLR
comp=Z,500nm,15.0s
ARA0 ARCESS Array S 26.62 12 *e*P **P 14 45 47.9 +0.4**
ARCES ARCESS Array B 26.62 12 P **P 14 45 47.9 +0.4**
comp=Z,2.3nm,0.8s,baz=198,slow=7.6,SNR=10
MAK Makhachkala 26.95 79 *e*P **P 14 45 50.6 -0.1**
MAK *e*S **S 14 50 27.9 +0.1**
MAK pmax pmax
comp=Z,88nm,1.0s
BORG Borgarnes 27.07 331 LR LR 14 57 46.0
comp=Z,219nm,18.5s,baz=139,slow=39
PRGR Permogore 27.14 37 *e*P **P 14 45 51.3 -0.9**
PRGR pmax pmax
comp=Z,35nm,0.9s
KIRV Kirov 27.96 45 P **P 14 45 59.6 +0.1**
comp=Z,6.6nm,0.4s,baz=272,slow=6.8,SNR=11
KIRV LR LR 14 58 36.1
comp=Z,178nm,21.2s,baz=192,slow=40
JMIC Jan Mayen 28.43 347 LR LR 14 57 52.0
comp=Z,164nm,20.1s,baz=110,slow=37
TOA1 Torodi Ar. Sit 31.74 196 *e*P **P 14 46 33.1 -0.3**
TORD Torodi Ar. Bea 31.75 196 P **P 14 46 33.1 -0.4**
comp=Z,12nm,0.3s,baz=12,slow=8.1,SNR=3.7
TORD LR LR 14 59 55.9
comp=Z,492nm,19.4s,baz=0.0,slow=38
ARU Arti 32.58 51 P **P 14 46 40.5 +0.1**
comp=Z,4.1nm,0.6s,baz=270,slow=11
ARU LR LR 15 00 48.0
comp=Z,463nm,19.3s,baz=259,slow=38
ARU Arti 32.58 51 *e*P **P 14 46 39.8 -0.7**
ARU Arti 32.58 51*d i*P **P 14 46 40.3 -0.1**
ARU S **S 14 51 57.4 +1.6**
ARU SS **SnSn 14 53 46.8 -2.7**
ARU pmax pmax
comp=Z,26nm,0.9s
ARU MLR MLR
comp=Z,641nm,14.0s
AKTO Aktyubinsk 32.59 62 LR LR 15 01 42.5
comp=Z,294nm,19.3s,baz=278,slow=40
AKTO Aktyubinsk 32.59 62 P **P 14 46 39.6 -1.1**
AKTO pmax pmax
comp=Z,28nm,1.2s
SVE Sverdlovsk 33.73 50⇑*e*P **P 14 46 51.2 +0.7**
SVE pmax pmax
comp=Z,52nm,1.3s
SVE MLR MLR
comp=Z,638nm,15.0s
AB31 Akbulak array 34.02 63 *i* P **P 14 46 53.4 +0.3**
AB31 pmax pmax
comp=Z,15nm,1.2s
ABKAR Akbulak array 34.02 63 *e*P **P 14 46 53.2 +0.1**
comp=Z,19nm,1.3s
SPA0 Spitsbergen Ar 34.22 2 *e*P **P 14 46 56.8 +2.2**
comp=Z,25nm,1.3s
SPITS Spitsbergen Ar 34.22 2 P **P 14 46 56.8 +2.2**
comp=Z,1.9nm,0.6s,baz=166,slow=13,SNR=3.7
SPITS LR LR 15 03 21.9
comp=Z,189nm,18.8s,baz=165,slow=41
GEYT Alibeck 36.29 83 P **P 14 47 13.7 +0.8**
comp=Z,3.4nm,0.6s,baz=294,slow=9.2,SNR=13
GEYT LR LR 15 05 54.0
comp=Z,56nm,18.6s,baz=115,slow=43
GYA0B ALIBECK ARRAY 36.29 83 *e*P **P 14 47 13.2 +0.3**
comp=Z,42nm,1.8s
DBIC Dimbokro 39.59 204 LR LR 15 04 44.3
comp=Z,253nm,19.4s,baz=8.0,slow=37
BRVK Borovoye 39.66 55 *e*P **P 14 47 41.6 +0.5**
comp=Z,19nm,1.0s
BRVK Borovoye 39.66 55*d i*P **P 14 47 42.1 +1.1**
BRVK pmax pmax
comp=Z,26nm,1.2s
OTUK Ortayu 42.20 62 P **P 14 48 03.1 +1.0**
OTUK pmax pmax
comp=Z,35nm,1.2s
KK31 Karatay Array 42.83 69 *e*P **P 14 48 07.8 +0.5**
comp=Z,12nm,0.7s
KK31 Karatay Array 42.83 69 *i* P **P 14 48 08.1 +0.8**
KK31 pmax pmax
comp=Z,6.0nm,0.6s

KKAR Karatay Array 42.83 69 *e*P **P 14 48 07.2 -0.1**
comp=Z,12nm,0.7s
KKAR Karatay Array 42.83 69 *e*P **P 14 48 07.2 -0.1**
KKAR pmax pmax
comp=Z,12nm,0.7s
GAR Garm 44.43 75 *e*P **P 14 48 21.5 +1.2**
comp=Z,111nm,1.8s
GAR Garm 44.43 75 *e*P **P 14 48 21.5 +1.2**
GAR pmax pmax
comp=Z,111nm,1.8s
KURK Kurchatov 45.27 56 *e*P **P 14 48 26.5 -0.2**
comp=Z,14nm,1.0s
KURK Kurchatov 45.27 56*d i*P **P 14 48 27.0 +0.3**
KURK pmax pmax
comp=Z,20nm,1.3s
AAK Ala-Archa 45.69 68 *e*P **P 14 48 32.2 +1.8**
comp=Z,28nm,1.4s
AAK Ala-Archa 45.69 68 *e*P **P 14 48 32.2 +1.8**
AAK pmax pmax
comp=Z,28nm,1.4s
KDJ Kajisay 47.71 68 *e*P **P 14 48 46.4 +0.2**
comp=Z,11nm,0.9s
KDJ Kajisay 47.71 68 *e*P **P 14 48 46.4 +0.2**
KDJ pmax pmax
comp=Z,11nm,0.9s
ZAA1 Zalesovo Array 47.74 50 *e*P **P 14 48 46.8 +0.7**
ZAA0 Zalesovo Array 47.74 50 *e*P **P 14 48 46.2 +0.1**
comp=Z,6.5nm,1.0s
ZALV Zalesovo Beam 47.74 50 P **P 14 48 46.8 +0.7**
comp=Z,3.4nm,0.7s,baz=282,slow=7.4,SNR=14
ZALV LR LR 15 10 56.1
comp=Z,177nm,18.3s,baz=254,slow=39
KSH Kashi 48.09 71 P **P 14 48 50.0 +0.9**
KSH pP sP 14 48 54.3 +0.8
KSH PP **PP 14 50 41.3 +0.2**
KSH S **S 14 55 47.3 -0.5**
KSH pmax pmax
comp=Z,32nm,0.8s
KSH pmax pmax
comp=Z,260nm,5.4s
KSH LR LR
comp=Z,260nm,9.2s
KSH LR LR
comp=Z,230nm,7.6s
KSH LR LR
comp=Z,440nm,17.6s
SCHQ Schefferville 48.70 311 LR LR 15 07 46.3
comp=Z,141nm,19.5s,baz=86,slow=34
PDGK Podgornoye 48.70 65 P **P 14 48 54.6 +0.8**
PDGK pmax pmax
comp=Z,23nm,1.0s
MAKZ Makanchi 48.80 60 *e*P **P 14 48 54.6 +0.2**
comp=Z,13nm,1.1s
MAKZ Makanchi 48.80 60 *e*P **P 14 48 54.6 +0.2**
MAKZ pmax pmax
comp=Z,13nm,1.1s
MK31 Makanchi Array 49.00 60 *e*P **P 14 48 56.3 +0.4**
comp=Z,15nm,1.3s
MK31 Makanchi Array 49.00 60 *i* P **P 14 48 55.8 -0.1**
MK31 pmax pmax
comp=Z,1.0nm,0.4s
MK32 Makanchi Array 49.00 60 *e*P **P 14 48 56.5 +0.6**
MKAR Makanchi Array 49.00 60 P **P 14 48 56.5 +0.6**
comp=Z,3.1nm,0.5s,baz=299,slow=5.0,SNR=44
MKAR LR LR 15 11 06.1
comp=Z,266nm,21.1s,baz=297,slow=38
NIL Nilore 49.12 80 *e*P **P 14 48 55.9 -1.1**
comp=Z,12nm,0.9s
NIL Nilore 49.12 80 *e*P **P 14 48 55.9 -1.1**
NIL pmax pmax
comp=Z,12nm,0.9s
KMBO Kilima Mbogo 51.17 144 LR LR 15 11 31.6
comp=Z,95nm,19.2s,baz=86,slow=37
WMQ Urumqi 53.74 61 *e*P **P 14 49 34.3 +2.7**
WMQ pP sP 14 49 36.3 +0.3
WMQ sP pP 14 49 42.0 +7.3
WMQ pmax pmax
comp=Z,16nm,0.9s
WMQ pmax pmax
comp=Z,49nm,3.6s
WMQ LR LR
comp=Z,110nm,17.7s
WMQ LR LR
comp=Z,150nm,14.3s
WMQ LR LR
comp=Z,210nm,17.7s
TIXI Tiksi 56.70 19⇓*e*P **P 14 49 52.2 -0.2**
TIXI pmax pmax
comp=Z,12nm,2.5s
MOY Mondy 57.55 48 *e*P **P 14 50 00.8 +2.0**
MOY pmax pmax
comp=Z,32nm,2.2s
TLY Talaya 58.94 47 *e*P **P 14 50 08.8 +0.4**
comp=Z,41nm,1.3s
TLY Talaya 58.94 47*d i*P **P 14 50 10.1 +1.7**
IRK Irkutsk 58.96 46 *e*P **P 14 50 09.5 +1.0**
IRK pmax pmax
comp=Z,49nm,2.7s
ZAK Zakamensk 59.46 48 *e*P **P 14 50 13.8 +1.6**
ZAK pmax pmax
comp=Z,8.0nm,1.5s
SONA0 Songino Array 62.59 49 *e*P **P 14 50 35.0 +1.4**
SONM Songino Array 62.59 49 P **P 14 50 35.0 +1.5**
comp=Z,7.7nm,0.9s,baz=295,slow=7.3,SNR=46
SONM LR LR 15 20 45.0
comp=Z,277nm,18.7s,baz=300,slow=39
SONM Songino Array 62.59 49 P **P 14 50 35.0 +1.5**
YAK Yakutsk 63.58 27 *e*P **P 14 50 39.3 -0.3**
comp=Z,17nm,0.9s
YAK Yakutsk 63.58 27 *e*P **P 14 50 39.6 0.0**
YAK *e**PP **pP 14 50 42.9 +0.3**
YAK *e* 14 51 11.5
YAK *e* 14 52 57.3
YAK *e*PPP PPP 14 54 31.2
YAK *e*S **S 14 59 13.8 +0.8**
YAK *e* 15 00 33.8
YAK *e*SS **SS 15 03 21.7 +2.4**
GTA Gaotai 63.75 60 ⇑P **P 14 50 43.0 +1.7**
GTA pP sP 14 50 47.8 +2.0
GTA sP pP 14 50 50.0 +5.4
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,86nm,6.4s
GTA LR LR
comp=Z,180nm,21.6s
GTA LR LR
comp=Z,170nm,21.3s
GTA LR LR
comp=Z,170nm,18.4s
LSA Lhasa 63.88 73 *e*P **P 14 50 43.2 +0.4**
comp=Z,13nm,1.3s
LSA Lhasa 63.88 73 *e*P **P 14 50 43.2 +0.4**
LSA pmax pmax
comp=Z,13nm,1.3s
INK Inuvik 64.60 346 P **P 14 50 47.3 +1.1**
comp=Z,1.6nm,0.5s,baz=6.3,slow=9.4,SNR=6.8
INK Inuvik 64.60 346 *e*P **P 14 50 45.9 -0.3**
comp=Z,2.7nm,0.8s
INK Inuvik 64.60 346 *e*P **P 14 50 45.9 -0.3**
INK pmax pmax
comp=Z,3.0nm,0.8s
YKW3 Yellowknife Ar 64.84 335 *e*P **P 14 50 47.5 -0.4**
comp=Z,3.5nm,1.0s
YKA Yellowknife Ar 64.89 335 P **P 14 50 48.4 +0.2**
comp=Z,1.4nm,0.6s,baz=43,slow=6.4,SNR=19
YKA LR LR 15 19 14.1
comp=Z,20nm,19.0s,baz=36,slow=36
YKB5 Yellowknife Ar 64.89 335 *e*P **P 14 50 48.4 +0.2**
ULM Lac du Bonnet 66.12 318 LR LR 15 18 10.5
comp=Z,153nm,20.2s,baz=40,slow=34
TOLK Toolik Lake Re 66.50 352 *e*P **P 14 50 59.0 +0.3**
comp=Z,28nm,1.6s
BILL Bilibino 66.69 10⇓*e*P **P 14 51 01.7 +2.0**
BILL pmax pmax
comp=Z,12nm,3.5s
MDP Montagnes des 67.10 254 LR LR 15 15 07.3
comp=Z,70nm,21.7s,baz=300,slow=31
FYU Fort Yukon 68.00 350 *e*P **P 14 51 08.8 +0.8**
comp=Z,95nm,1.9s
LZH Lanzhou 68.31 60 *e*P **P 14 51 11.0 +0.2**
LZH pP pP 14 51 14.0 0.0
LZH sP sP 14 51 16.0 +0.8
LZH pmax pmax
comp=Z,17nm,1.3s
LZH pmax pmax

	comp=Z,999nm,4.3s						
LZH				LR	LR		
	comp=Z,400nm,15.7s						
LZH				LR	LR		
	comp=Z,400nm,16.0s						
LZH				LR	LR		
	comp=Z,510nm,18.0s						
ZEA	**Zeya**	**68.67**	**35**	*e*P	**P**	**14 51 14.0**	**+1.5**
ZEA				pmax	pmax		
	comp=Z,63nm,2.0s						
SEY	**Seymchan**	**69.08**	**17⇓**	*e*P	**P**	**14 51 15.1**	**+0.2**
EGAK	**Eagle**	**69.10**	**347**	*e*P	**P**	**14 51 15.4**	**+0.4**
	comp=Z,17nm,1.7s						
DAWY	**Dawson**	**69.47**	**346**	*e*P	**P**	**14 51 17.4**	**0.0**
	comp=Z,18nm,1.4s						
HHC	**Hu-ho-hao-te**	**69.86**	**52**	P	**P**	**14 51 19.8**	**-0.4**
HHC				S	**S**	**15 00 29.0**	**-1.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,23nm,4.4s						
HHC				LR	LR		
	comp=Z,330nm,18.0s						
HHC				LR	LR		
	comp=Z,280nm,18.9s						
ILAR	**Eielson Array**	**69.92**	**350**	P	**P**	**14 51 20.9**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=15,slow=5.7,SNR=13						
ILAR				LR	LR	15 26 03.1	
	comp=Z,68nm,18.3s,baz=40,slow=39						
ILB	**Eielson Array**	**69.92**	**350**	*e*P	**P**	**14 51 20.9**	**+0.8**
	comp=Z,24nm,2.0s						
HDA	**Harding Lake**	**70.28**	**350**	*e*P	**P**	**14 51 22.2**	**-0.1**
	comp=Z,32nm,1.8s						
RIDG	**Independent Ri**	**70.63**	**349**	*e*P	**P**	**14 51 25.1**	**+0.6**
	comp=Z,19nm,1.0s						
CD2	**Chengdu**	**71.58**	**65**	*e*P	**P**	**14 51 29.5**	**-1.3**
TRF	**Thorofare Moun**	**71.61**	**351**	*e*P	**P**	**14 51 30.6**	**0.0**
	comp=Z,7.9nm,1.8s						
MA2	**Magadan**	**71.67**	**20⇑**	*e*P	**P**	**14 51 32.2**	**+1.4**
MA2				pmax	pmax		
	comp=Z,11nm,1.1s						
HYT	**Haines Junctio**	**72.10**	**344**	*e*P	**P**	**14 51 34.1**	**+0.6**
	comp=Z,18nm,1.7s						
XAN	**Xi'an**	**72.80**	**59**	P	**P**	**14 51 38.5**	**+0.5**
XAN				pP	sP	14 51 43.5	+1.0
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN				LR	LR		
	comp=Z,200nm,21.7s						
XAN				LR	LR		
	comp=Z,140nm,19.5s						
XAN	**Xi'an**	**72.80**	**59**	*e*P	**P**	**14 51 38.2**	**+0.2**
	comp=Z,22nm,0.8s						
XAN	**Xi'an**	**72.80**	**59**	*e*P	**P**	**14 51 38.2**	**+0.2**
XAN				pmax	pmax		
	comp=Z,22nm,0.8s						
SCM	**Sheep Creek Mo**	**72.80**	**349**	*e*P	**P**	**14 51 38.8**	**+1.2**
	comp=Z,62nm,1.9s						
SML	**Sawmill**	**72.96**	**350**	*e*P	**P**	**14 51 38.3**	**-0.2**
	comp=Z,53nm,1.8s						
SML	**Sawmill**	**72.96**	**350**	*e*P	**P**	**14 51 38.3**	**-0.2**
SML				pmax	pmax		
	comp=Z,53nm,1.8s						
BJI	**Beijing**	**73.00**	**50**	P	**P**	**14 51 40.0**	**+1.0**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.8s						
BOSA	**Boshof**	**73.73**	**166**	LR	LR	15 25 27.3	
	comp=Z,185nm,20.2s,baz=352,slow=37						
KLR	**Kul'dur**	**73.92**	**36***d*	*i*P	**P**	**14 51 44.7**	**+0.4**
KLR				pmax	pmax		
	comp=Z,14nm,1.8s						
NKL	**Nikolayevsk**	**74.19**	**28**	*e*P	**P**	**14 51 44.6**	**-1.1**
NKL				*e*		14 52 00.2	
NKL				*e*		14 54 28.7	
NKL				*e*		15 01 49.2	
NKL				pmax	pmax		
	comp=N,6.0nm,1.3s						
NKL				pmax	pmax		
	comp=E,16nm,1.3s						
NKL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NKL				pmax	pmax		
	comp=Z,41nm,1.8s						
NKL				MLR	MLR		
	comp=N,182nm,18.0s						
NKL				MLR	MLR		
	comp=Z,245nm,14.0s						
KMI	**Kunming**	**74.71**	**70**	P	**P**	**14 51 49.8**	**+0.2**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CN2	**Changchun**	**75.16**	**43**	*e*P	**P**	**14 51 52.8**	**+1.2**
CHTO	**Chiang Mai**	**76.30**	**77**	*e*P	**P**	**14 51 57.3**	**-1.2**
	comp=Z,9.9nm,1.4s						
CHTO	**Chiang Mai**	**76.30**	**77**	*e*P	**P**	**14 51 57.3**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PTGA	**Pitinga**	**76.35**	**255**	LR	LR	15 22 31.4	
	comp=Z,42nm,19.2s,baz=46,slow=33						
GYA	**Guiyang**	**76.44**	**66**	P	**P**	**14 51 59.8**	**+0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CM31	**Chiang Mai Arr**	**76.53**	**77**	*e*P	**P**	**14 51 59.3**	**-0.6**
	comp=Z,24nm,1.8s						
CMAR	**Chiang Mai Arr**	**76.53**	**77**	P	**P**	**14 51 59.3**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=305,slow=7.6,SNR=12						
CMAR				LR	LR	15 34 13.5	
	comp=Z,85nm,18.1s,baz=208,slow=42						
SDV	**Santo Domingo**	**77.26**	**270**	*e*P	**P**	**14 52 03.5**	**-0.7**
	comp=Z,6.6nm,0.9s						
KDAK	**Kodiak Island**	**77.40**	**351**	*i* P	**P**	**14 52 05.8**	**+1.7**
PDAR	**Pinedale Array**	**78.05**	**319**	LR	LR	15 26 23.5	
	comp=Z,97nm,18.0s,baz=44,slow=36						
PEA1	**Petropavlovsk-**	**79.17**	**19**	*e*P	**P**	**14 52 14.9**	**+0.9**
PETK	**Petropavlovsk-**	**79.18**	**19**	P	**P**	**14 52 14.9**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=42,slow=6.6,SNR=4.0						
PETK				LR	LR	15 32 10.1	
	comp=Z,168nm,18.9s,baz=310,slow=39						
BDFB	**Brasilia**	**79.64**	**236**	LR	LR	15 26 44.1	
	comp=Z,49nm,18.1s,baz=149,slow=35						
BMO	**Blue Mountains**	**79.82**	**325**	*e*P	**P**	**14 52 17.1**	**-0.7**
	comp=Z,14nm,1.8s						
BMO	**Blue Mountains**	**79.82**	**325**	*e*P	**P**	**14 52 17.1**	**-0.7**
BMO				pmax	pmax		
	comp=Z,14nm,1.8s						
YSS	**Yuzh-Sakhalins**	**80.09**	**31**	*e*P	**P**	**14 52 14.5**	**-4.6**
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
NJ2	**Nanjing**	**80.17**	**55**	*e*P	**P**	**14 52 19.0**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KS15	**Wonju Array Si**	**81.16**	**45**	*e*P	**P**	**14 52 25.8**	**+0.9**
	comp=Z,40nm,1.9s						
KSRS	**Korea Array**	**81.17**	**45**	P	**P**	**14 52 25.8**	**+0.8**
	comp=Z,1.3nm,1.0s,baz=308,slow=4.1,SNR=4.9						
KSRS				LR	LR	15 32 48.5	
	comp=Z,170nm,18.6s,baz=322,slow=39						
ROSC	**El Rosal**	**82.69**	**270**	LR	LR	15 26 56.6	
	comp=Z,28nm,19.0s,baz=90,slow=34						
TX31	**Lajitas Ar. Si**	**85.15**	**307**	*e*P	**P**	**14 52 45.8**	**-0.1**
	comp=Z,25nm,2.0s						
TXAR	**Lajitas Array**	**85.15**	**307**	P	**P**	**14 52 46.4**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=68,slow=4.4,SNR=6.9						
NV01	**Mina Array Sit**	**85.51**	**322**	*e*P	**P**	**14 52 48.0**	**+0.3**
NVAR	**Mina Array Bea**	**85.51**	**322**	P	**P**	**14 52 48.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=60,slow=5.3,SNR=8.9						
NVAR				LR	LR	15 31 00.7	
	comp=Z,90nm,18.9s,baz=22,slow=36						
MAJO	**Matsushiro**	**86.89**	**39**	*e*P	**P**	**14 52 55.4**	**+1.1**
MAJO	**Matsushiro**	**86.89**	**39**	*e*P	**P**	**14 52 55.4**	**+1.1**
MJAR	**Matsushiro Arr**	**86.89**	**39**	P	**P**	**14 52 55.4**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=323,slow=4.5,SNR=4.6						
MJAR				LR	LR	15 33 45.7	
	comp=Z,74nm,18.6s,baz=290,slow=37						
CPUP	**Villa Florida**	**93.38**	**236**	LR	LR	15 35 02.6	
	comp=Z,37nm,18.1s,baz=42,slow=35						
AS31	**Alice Springs**	**130.07**	**85**	*e*PKPdf	**PKPdf**	**14 59 18.4**	**-1.1**
ASAR	**Alice Springs**	**130.07**	**85**	PKP	**PKPdf**	**14 59 18.4**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=320,slow=1.6,SNR=13						
VNDA	**Vanda**	**144.64**	**170**	PKP	**PKPab**	**14 59 42.8**	**-0.5**
	comp=Z,2.2nm,1.1s,baz=277,slow=2.6,SNR=5.7						

ROM 30 14:49:07.8±0.1, 44°.179N×0°.008×10°.199E±0°.009, h9km, Md1.7/6, Error ellipse: s-maj=0.9km s-min=0.5km az=204.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.04**	**249**	P	Pg	14 49 09.8	+0.3
EQUI				S	Sg	14 49 10.9	+0.2
EQUI				AML	AML		
	comp=E,516μm,0.4s						
EQUI				AML	AML		
	comp=N,860μm,0.3s						
EQUI				AML	AML		
	comp=E,12650μm,0.4s						
EQUI				AML	AML		
	comp=N,12050μm,0.9s						
EQUI				AML	AML		
	comp=E,12650μm,0.4s						
EQUI				AML	AML		
	comp=N,12050μm,0.9s						
EQUI				END			
EQUI				END			
T0911	**Castelpoggio (**	**0.11**	**233**	AML	AML		
	comp=E,6785μm,0.2s						
T0911				AML	AML		
	comp=E,528μm,0.2s						
T0911				AML	AML		
	comp=N,396μm,0.5s						
T0911				AML	AML		
	comp=N,4930μm,0.2s						
T0911				AML	AML		
	comp=E,6785μm,0.2s						
T0911				AML	AML		
	comp=N,4930μm,0.2s						
VLC	**Villacollemand**	**0.14**	**98**	P	Pg	14 49 11.5	+0.6
VLC				S	Sg	14 49 13.9	+0.9
VLC				AML	AML		
	comp=E,342μm,0.4s						
VLC				AML	AML		
	comp=N,287μm,0.1s						
VLC				AML	AML		
	comp=E,360μm,0.4s						
VLC				AML	AML		
	comp=N,302μm,0.1s						
VLC				AML	AML		
	comp=E,3845μm,0.7s						
VLC				AML	AML		
	comp=N,3045μm,1.1s						
VLC				AML	AML		
	comp=E,3940μm,0.7s						
VLC				AML	AML		
	comp=N,3010μm,1.1s						
VLC				AML	AML		
	comp=E,3845μm,0.7s						
VLC				AML	AML		
	comp=E,3940μm,0.7s						
VLC				AML	AML		
	comp=N,3010μm,1.1s						
VLC				AML	AML		
	comp=N,3045μm,1.1s						
VLC				END			
VLC				END			
CARD	**Cardoso**	**0.26**	**127**	P	Pb	14 49 13.9	-0.8
CARD				S	Sg	14 49 17.7	+1.3
CARD				AML	AML		
	comp=E,202μm,1.1s						
CARD				AML	AML		
	comp=N,280μm,0.2s						
CARD				AML	AML		
	comp=E,2235μm,0.6s						
CARD				AML	AML		
	comp=N,1945μm,0.6s						
CARD				AML	AML		
	comp=N,1945μm,0.6s						
CARD				AML	AML		
	comp=E,2235μm,0.6s						
CARD				END			
CARD				END			
PLMA	**Palmaria, Port**	**0.28**	**243**	P	Pb	14 49 14.4	-0.7
PLMA				S	Sg	14 49 18.3	+1.1
ERBM	**Eremo**	**0.28**	**32**	P	Pb	14 49 14.6	-0.7
BDI	**Bagni Di Lucca**	**0.31**	**112**	P	Pg	14 49 14.7	+0.7
BDI				S	Sb	14 49 19.5	-1.3
GRAM	**Graiana**	**0.33**	**343**	P	Pg	14 49 14.9	+0.5
GRAM				S	Sb	14 49 20.1	-1.3
GRAM				AML	AML		
	comp=E,429μm,1.1s						
GRAM				AML	AML		
	comp=N,428μm,0.2s						
GRAM				AML	AML		
	comp=E,6970μm,0.2s						
GRAM				AML	AML		
	comp=N,5715μm,0.2s						
GRAM				AML	AML		
	comp=N,5715μm,0.2s						
GRAM				AML	AML		
	comp=E,6970μm,0.2s						
GRAM				END			
GRAM				END			
MAIM	**Mastiano**	**0.34**	**141**	P	Pb	14 49 15.8	-0.3
MAIM				S	Sb	14 49 20.3	-1.3
MAIM				AML	AML		
	comp=E,114μm,0.2s						
MAIM				AML	AML		
	comp=N,110μm,0.6s						
MAIM				AML	AML		
	comp=E,2645μm,0.3s						
MAIM				AML	AML		
	comp=N,1575μm,0.4s						
MAIM				AML	AML		
	comp=N,1575μm,0.4s						
MAIM				AML	AML		
	comp=E,2645μm,0.3s						
MAIM				END			
MAIM				END			
POPM	**Popiglio**	**0.42**	**108**	P	Pb	14 49 16.9	-0.6
POPM				S	Sb	14 49 23.2	-0.8
POPM				AML	AML		
	comp=E,119μm,0.7s						
POPM				AML	AML		
	comp=N,121μm,0.5s						
POPM				AML	AML		
	comp=E,1260μm,0.2s						
POPM				AML	AML		
	comp=N,1525μm,1.2s						
POPM				AML	AML		
	comp=E,1260μm,0.2s						
POPM				AML	AML		
	comp=N,1525μm,1.2s						
POPM				END			
POPM				END			
CRMI	**Carmignano**	**0.68**	**125**	AML	AML		
	comp=N,166μm,0.6s						
CRMI				AML	AML		
	comp=E,109μm,0.7s						
CRMI				AML	AML		
	comp=E,109μm,0.7s						
CRMI				AML	AML		
	comp=N,166μm,0.6s						
GROG	**Isola di Gorgo**	**0.78**	**197**	P	Pb	14 49 23.8	+0.1
BOB	**Bobbio (Coli)**	**0.80**	**318**	P	Pb	14 49 24.2	+0.3

*GEN **30** 14:50:05.7, 44°.17N×10°.18E, h4km±2km, Ml2.5*
*LDG **30** 14:50:07.0±0.2, 44°.11N×10°.23E, h2km, Ml2.7/16, Error ellipse: s-maj=5.3km s-min=4.5km az=171.0*
*PRU **30** 14:50:10.6±0.0, 44°.63N×10°.06E, h0km*

ROM 30 14:50:05.1±0.1, 44°.169N±0°.005×10°.189E±0°.006, h6km, ML2.5/13, Error ellipse: s-maj=0.5km s-min=0.4km az=208.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.03**	**263**	P	Pg	14 50 06.8	+0.5
EQUI				S	Sg	14 50 07.6	+0.4
EQUI	**Equi**	**0.03**	**263**	P	Pg	14 50 06.8	+0.5
EQUI				S	Sg	14 50 07.6	+0.4
EQUI				AML	AML		
	comp=E,12650μm,0.4s						
EQUI				AML	AML		
	comp=N,12050μm,0.9s						
EQUI				AML	AML		
	comp=E,12650μm,0.4s						
EQUI				AML	AML		
	comp=N,12050μm,0.9s						
EQUI				AML	AML		
	comp=E,12650μm,0.4s						
EQUI				AML	AML		
	comp=N,12050μm,0.9s						
VLC	**Villacollemand**	**0.14**	**94**	P	Pg	14 50 08.9	+0.8
VLC				S	Sg	14 50 11.3	+1.3
VLC				AML	AML		
	comp=E,3845μm,0.7s						
VLC				AML	AML		
	comp=N,3045μm,1.1s						
VLC				AML	AML		
	comp=E,3940μm,0.7s						
VLC				AML	AML		
	comp=N,3010μm,1.1s						
VLC				AML	AML		
	comp=E,3845μm,0.7s						
VLC				AML	AML		
	comp=N,3010μm,1.1s						
VLC				AML	AML		
	comp=N,3045μm,1.1s						
VLC				AML	AML		
	comp=E,3845μm,0.7s						
VLC				AML	AML		
	comp=E,3940μm,0.7s						
CARD	**Cardoso**	**0.26**	**124**	P	Pg	14 50 11.0	+0.9
CARD				S	Sg	14 50 14.7	+1.2
CARD	**Cardoso**	**0.26**	**124**	P	Pg	14 50 10.9	+0.8
CARD				S	Sg	14 50 15.0	+1.5
CARD				AML	AML		
	comp=E,2235μm,0.6s						
CARD				AML	AML		
	comp=N,1945μm,0.6s						
CARD				AML	AML		
	comp=E,2235μm,0.6s						
CARD				AML	AML		
	comp=N,1945μm,0.6s						
CARD				AML	AML		
	comp=N,1945μm,0.6s						
CARD				AML	AML		
	comp=E,2235μm,0.6s						
PLMA	**Palmaria, Port**	**0.27**	**244**	P	Pg	14 50 11.4	+1.0
PLMA				S	Sg	14 50 15.3	+1.3
PLMA				AML	AML		
	comp=E,1315μm,0.4s						
PLMA				AML	AML		
	comp=N,1425μm,0.4s						
PLMA				AML	AML		
	comp=E,1315μm,0.4s						
PLMA				AML	AML		
	comp=N,1425μm,0.4s						
PLMA				AML	AML		
	comp=N,1425μm,0.4s						
PLMA				AML	AML		
	comp=E,1315μm,0.4s						
ERBM	**Eremo**	**0.30**	**33**	P	Pg	14 50 11.9	+0.9
ERBM				S	Sb	14 50 16.9	-1.3
BDI	**Bagni Di Lucca**	**0.31**	**110**	P	Pg	14 50 11.9	+0.6
BDI				S	Sg	14 50 16.8	+1.4
BDI				AML	AML		
	comp=E,1265μm,0.5s						
BDI				AML	AML		
	comp=N,722μm,0.4s						
BDI				AML	AML		
	comp=E,1105μm,0.5s						
BDI				AML	AML		
	comp=N,920μm,1.6s						
BDI				AML	AML		
	comp=E,1265μm,0.5s						
BDI				AML	AML		
	comp=E,1105μm,0.5s						
BDI				AML	AML		
	comp=N,920μm,1.6s						
BDI				AML	AML		
	comp=N,722μm,0.4s						
GRAM	**Graiana**	**0.33**	**345**	P	Pg	14 50 12.3	+0.6
GRAM				S	Sg	14 50 16.9	+0.7
GRAM	**Graiana**	**0.33**	**345**	P	Pg	14 50 12.3	+0.7
GRAM				S	Sg	14 50 17.3	+1.1
MAIM	**Mastiano**	**0.34**	**139**	P	Pb	14 50 12.7	-0.8
MAIM				S	Sg	14 50 17.4	+1.3
MAIM	**Mastiano**	**0.34**	**139**	P	Pb	14 50 12.7	-0.8
MAIM				S	Sg	14 50 17.4	+1.3
MAIM				AML	AML		
	comp=E,2645μm,0.3s						
MAIM				AML	AML		
	comp=N,1575μm,0.4s						
MAIM				AML	AML		
	comp=E,2645μm,0.3s						
MAIM				AML	AML		
	comp=N,1575μm,0.4s						
MAIM				AML	AML		
	comp=E,2645μm,0.3s						
MAIM				AML	AML		
	comp=N,1575μm,0.4s						
POPM	**Popiglio**	**0.43**	**107**	P	Pg	14 50 14.0	+0.6
POPM				S	Sb	14 50 20.6	-1.2
POPM	**Popiglio**	**0.43**	**107**	P	Pg	14 50 14.0	+0.6
POPM				S	Sb	14 50 20.7	-1.1
POPM				AML	AML		
	comp=E,1260μm,0.2s						
POPM				AML	AML		
	comp=N,1525μm,1.2s						
POPM				AML	AML		
	comp=E,1260μm,0.2s						
POPM				AML	AML		
	comp=N,1525μm,1.2s						
POPM				AML	AML		
	comp=E,1260μm,0.2s						
POPM				AML	AML		
	comp=N,1525μm,1.2s						
MSSA	**Maissana**	**0.50**	**287**	P	Pg	14 50 15.4	+0.6
MSSA				AML	AML		
	comp=E,660μm,0.5s						
MSSA				AML	AML		
	comp=N,584μm,0.6s						
MSSA				AML	AML		
	comp=E,660μm,0.5s						
MSSA				AML	AML		
	comp=N,584μm,0.6s						
MTCR	**Monte La Croce**	**0.60**	**103**	P	Pg	14 50 17.3	+0.6
MTCR				S	Sb	14 50 27.4	+0.5
MTCR				AML	AML		
	comp=E,518μm,0.9s						
MTCR				AML	AML		
	comp=N,814μm,0.7s						
MTCR				AML	AML		
	comp=E,518μm,0.9s						
MTCR				AML	AML		
	comp=N,815μm,0.7s						
MTCR				AML	AML		
	comp=E,518μm,0.9s						
MTCR				AML	AML		
	comp=N,815μm,0.7s						
PTF	**Prato**	**0.67**	**108**	P	Pg	14 50 18.5	+0.5
GROG	**Isola di Gorgo**	**0.77**	**196**	P	Pb	14 50 20.8	-0.2
GROG				S	Sb	14 50 31.5	-0.2
GROG				AML	AML		
	comp=E,518μm,0.6s						
GROG				AML	AML		
	comp=N,556μm,0.4s						
GROG				AML	AML		
	comp=N,556μm,0.4s						
GROG				AML	AML		
	comp=E,518μm,0.6s						
BOB	**Bobbio (Coli)**	**0.80**	**319**	P	Pb	14 50 21.1	-0.4
BOB				AML	AML		
	comp=E,462μm,1.2s						
BOB				AML	AML		
	comp=N,318μm,0.6s						
BOB				AML	AML		
	comp=E,462μm,1.2s						
BOB				AML	AML		
	comp=N,318μm,0.6s						
SEI	**Scarperia**	**0.85**	**97**	P	Pb	14 50 22.3	0.0
SEI				AML	AML		
	comp=E,462μm,0.4s						
SEI				AML	AML		
	comp=N,672μm,0.4s						
SEI				AML	AML		
	comp=E,462μm,0.4s						
SEI				AML	AML		
	comp=N,672μm,0.4s						
SFI	**Santa Sofia**	**1.23**	**102**	P	Pn	14 50 28.8	-0.1
SFI				AML	AML		
	comp=E,85μm,1.3s						
SFI				AML	AML		

comp=N,154μm,0.8s
SFI AML AML
comp=N,154μm,0.8s
SFI AML AML
comp=E,85μm,1.3s
PCP Piancastagn 1.24 288 P Pg 14 50 28.6 -0.2
PCP AML AML
comp=E,86μm,0.9s
PCP AML AML
comp=N,81μm,0.7s
PCP AML AML
comp=N,81μm,0.7s
PCP AML AML
comp=E,86μm,0.9s
PGF Pioggiola 1.84 209 *e*Pn Pn 14 50 38.1 +0.8
PGF *e*Sn Sn 14 50 59.3 -1.7
comp=E,13nm,0.3s
SBF Sospel 2.01 262 *e*Pn Pn 14 50 39.5 -0.2
SBF *e*Sn Sn 14 51 03.7 -1.5
comp=E,12nm,0.3s
MBDF Montbardon 2.51 284 *e*Pn Pn 14 50 47.3 +0.7
MBDF *e*Sn Sn 14 51 17.4 -0.2
comp=E,10nm,0.5s
FRF La Foret Royal 2.63 258 *e*Pn Pn 14 50 48.0 -0.2
FRF *e*Sn Sn 14 51 17.9 -2.5
comp=E,8.6nm,0.4s
LPG La Plagne 2.78 300 *e*Pn Pn 14 50 52.8 +2.3
LPG *e*Sn Sn 14 51 25.0 +0.4
comp=E,4.1nm,0.3s
LMR La Mourre 2.79 254 *e*Pn Pn 14 50 49.9 -0.5
LMR *e*Sn Sn 14 51 22.3 -2.1
comp=E,2.3nm,0.2s
LPL La Plagne 2.80 300 *e*Pn Pn 14 50 52.2 +1.5
LPL *e*Sn Sn 14 51 24.6 -0.4
comp=E,6.5nm,0.5s
FETA Feichten 2.88 7 Pg Pb 14 50 58.1 +1.2
comp=E,5.2nm,0.9s
ABTA Abfaltersbach 3.05 32 *e*Pn Pb 14 50 59.1 -0.8
comp=E,1.1nm,0.3s
ABTA Sn Sb 14 51 35.2 -2.2
comp=E,3.3nm,0.5s
DAVA Damuels 3.12 356 *e*Pn Pb 14 50 59.1 -2.1
comp=E,5.2nm,0.6s
DAVA *e*Sn Sb 14 51 37.5 -2.1
comp=E,4.2nm,0.3s
SQTA Sankt Quirin 3.13 13 *e*Pn Pb 14 50 59.1 -2.2
comp=E,1.8nm,0.2s
SQTA *e*Sn Sb 14 51 40.9 +1.0
comp=E,5.2nm,0.3s
ORIF Oris-en-Rattie 3.17 285 *e*Pn Pn 14 50 57.9 +2.2
ORIF *e*Sn Sn 14 51 33.6 -0.2
comp=E,11nm,0.6s
MOTA Moosalm 3.24 11 *e*Pn Pb 14 51 00.4 -2.7
comp=E,2.7nm,0.4s
WTTA Wattenberg 3.26 18 *e*Pn Pb 14 51 00.8 -2.6
comp=E,1.3nm,0.2s
WTTA *e*Sn Sb 14 51 42.5 -0.9
comp=E,14nm,0.5s
SMRF Simiane la Rot 3.33 268 *e*Pn Pn 14 50 59.4 +1.6
SMRF *e*Sn Sn 14 51 36.7 -1.0
comp=E,3.5nm,0.3s
RETA Reutte 3.34 7 *e*Pn Pb 14 51 02.4 -2.5
comp=E,0.7nm,0.3s
RETA *e*Sn Sb 14 51 43.9 -1.9
comp=E,4.4nm,0.5s
MYKA Terra Mystica 3.46 43 *e*Pn Pb 14 51 04.0 -2.8
comp=E,0.9nm,0.3s
CABF La Chapelle 3.78 312 *e*Pn Pn 14 51 08.1 +4.0
CABF *e*Sn Sn 14 51 52.0 +3.1
comp=E,3.4nm,0.5s
OBKA Obir 3.86 51 *e*Pn Pn 14 51 09.0 +3.9
comp=E,1.1nm,0.3s
OBKA Sg Sg 14 52 17.5 +8.3
comp=E,12nm,0.8s
SOKA Soboth 4.23 52 Pn Pn 14 51 11.8 +1.6
comp=E,1.0nm,0.3s
SOKA Sn Sn 14 52 03.9 +3.9
comp=E,1.0nm,0.4s
HINF Hinteralfeld 4.33 329 *e*Pn Pn 14 51 13.8 +2.3
HINF *e*Sn Sn 14 52 05.1 +2.9
comp=E,4.7nm,0.3s
LASF Ste Croix 4.56 271 *e*Pn Pn 14 51 15.2 +0.5
LASF *e*Sn Sn 14 52 06.2 -1.8
comp=E,1.4nm,0.4s
MOA Molln 4.65 36 *e*Pn Pn 14 51 19.5 +3.6
comp=E,1.0nm,0.3s
MOA *e*Sn Sn 14 52 13.9 +3.7
comp=E,2.1nm,0.4s
HAU Haudompre 4.67 327 *e*Pn Pn 14 51 17.8 +1.5
HAU *e*Sn Sn 14 52 12.0 +1.2
comp=E,6.3nm,0.3s
CDF Champ du Feu 4.70 336 *e*Pn Pn 14 51 18.9 +2.2
CDF *e*Sn Sn 14 52 10.9 -0.6
comp=E,4.5nm,0.5s
ARSA Arzberg 4.84 49 *e*Pn Pn 14 51 20.7 +2.1
comp=E,3.2nm,0.3s
LOR Lormes 5.41 307 *e*Pn Pn 14 51 28.4 +2.1
LOR *e*Sn Sn 14 52 26.9 -2.0
comp=E,4.4nm,0.4s
KHC Kasperske Hory 5.48 24 *e*PN Pn 14 51 27.8 +0.4
KHC *e*SN Sn 14 52 25.9 -4.9
BGF Bois d'Agland 5.70 297 *e*Pn Pn 14 51 32.6 +2.3
BGF *e*Sn Sn 14 52 34.0 -2.0
comp=E,6.4nm,0.5s

IDC 30 15:02:40.3±11.0, 4°.13S×131°.71E, h0km, mb3.7/1, mb1 3.7/3, mb1mx3.4/30, mbtmp3.5/3, ML3.1/2, Error ellipse: s-maj=843.2km s-min=31.1km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.93**	**171**	Pn	Pn	15 06 25.7	-0.3
	0.1nm,0.3s,baz=341,slow=12,SNR=3.1						
WRA				Sn	Sn	15 09 13.7	-10
	0.1nm,0.3s,baz=360,slow=24,SNR=3.4						
ASAR	**Alice Springs**	**19.54**	**174**	P	P	15 07 09.8	+0.1
	0.1nm,0.3s,baz=352,slow=9.5,SNR=6.7						
MKAR	**Makanchi Array**	**66.81**	**325**	P	P	15 13 33.9	0.0
	0.7nm,0.8s,baz=114,slow=8.1,SNR=4.6						

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*ISCJB **30** 15:04:14.8±0.6, 31°.49N±0°.06×140°.18E±0°.10, h33km, mb4.2/18, Error ellipse: s-maj=12.3km s-min=8.2km az=8.9*
*IDC **30** 15:04:17.6±2.4, 31°.45N×140°.03E, h46km±21km, mb3.5/13, mb1 3.7/16, mb1mx3.6/35, mbtmp3.7/16, ML2.9/3, MS2.9/4, Ms1 2.9/4, ms1mx2.7/26, Error ellipse: s-maj=22.4km s-min=16.9km az=117.0*
ISC 30 15:04:16.6±0.7, 31°.50N±0°.09×140°.1E±0°.1, h35km, n33, σ1§49/27, mb3.9/18, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.63**	**350**	P	**Pn**	**15 04 43.0**	**+0.1**
	14nm,0.3s,baz=49,slow=23,SNR=8.4						
JHJ				S	**Sn**	**15 05 00.7**	**-2.0**
	30nm,0.3s,baz=79,slow=18,SNR=5.3						
JHJ				LR	LR	15 05 26.9	
	comp=Z,154nm,20.6s,baz=247,slow=42						
MJAR	**Matsushiro Arr**	**5.26**	**343**	P	**Pn**	**15 05 35.2**	**+2.4**
	0.2nm,0.3s,baz=145,slow=17,SNR=20						
MJAR				LR	LR	15 07 40.3	
	comp=Z,60nm,19.7s,baz=290,slow=38						
MAT	**Matsushiro**	**5.27**	**343**	P	**Pn**	**15 05 36.1**	**+3.3**
JNU	**Nakatsue**	**7.97**	**284**	P	**Pn**	**15 06 11.2**	**+1.2**
	0.2nm,0.3s,baz=98,slow=8.8,SNR=3.4						
JNU				LR	LR	15 09 05.9	
	comp=Z,154nm,19.1s,baz=172,slow=36						
KSRS	**Korea Array**	**11.67**	**304**	P	**Pn**	**15 07 02.0**	**+1.5**
	0.1nm,0.3s,baz=112,slow=15,SNR=3.5						
KSRS				LR	LR	15 11 03.9	
	comp=Z,68nm,20.1s,baz=154,slow=35						
ASAJ	**Asahikawa**	**12.74**	**8**	LR	LR	15 11 58.6	
	comp=Z,43nm,21.2s,baz=184,slow=36						
H11N2	**WAKE ISLAND Hy 26.78**	**110**		T	T	15 37 48.2	
	baz=302,slow=75,SNR=99						
H11N1	**WAKE ISLAND Hy 26.78**	**110**		T	T	15 37 48.6	
	baz=302,slow=75,SNR=97						
H11N3	**WAKE ISLAND Hy 26.80**	**110**		T	T	15 37 49.8	
	baz=302,slow=75,SNR=120						
H11S3	**WAKE ISLAND Hy 27.27**	**112**		T	T	15 38 25.8	
	baz=304,slow=75,SNR=2927						
H11S1	**WAKE ISLAND Hy 27.27**	**112**		T	T	15 38 23.9	
	baz=304,slow=75,SNR=2599						
H11S2	**WAKE ISLAND Hy 27.29**	**112**		T	T	15 38 27.3	
	baz=304,slow=75,SNR=1668						
SKNT	**Sakolnakorn**	**35.79**	**255**	P	**P**	**15 11 14.4**	**+1.7**
	9.5nm,1.2s						
NONG	**Nongkai**	**35.95**	**257**	P	**P**	**15 11 16.4**	**+2.4**
	0.2nm,1.2s						
CHAI	**Chaiyaphum**	**37.98**	**255**	P	**P**	**15 11 32.3**	**+1.0**
	19μm,0.9s						
UTTA	**Uttaradit**	**38.26**	**259**	P	**P**	**15 11 35.7**	**+2.1**
	8μm,0.7s						
PBKT	**Sadao Pong**	**38.49**	**257**	P	**P**	**15 11 37.1**	**+1.6**
	5.6nm,1.1s						
CMMT	**Chiang Mai**	**39.12**	**261**	P	**P**	**15 11 42.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**39.28**	**261**	P	**P**	**15 11 43.0**	**+0.7**
	1.2nm,0.8s,baz=52,slow=7.0,SNR=13						
MKAR	**Makanchi Array**	**46.34**	**307**	P	**P**	**15 12 38.0**	**-1.1**
	0.5nm,0.7s,baz=93,slow=8.5,SNR=4.9						
WRA	**Warramunga Arr**	**51.45**	**187**	P	**P**	**15 13 16.9**	**-1.5**
	0.8nm,0.5s,baz=353,slow=7.2,SNR=6.4						
ILAR	**Eielson Array**	**54.77**	**30**	P	**P**	**15 13 42.4**	**0.0**
	0.7nm,0.9s,baz=265,slow=5.9,SNR=9.0						
ASAR	**Alice Springs**	**55.18**	**187**	P	**P**	**15 13 44.5**	**-1.4**
	0.2nm,0.5s,baz=2.4,slow=6.5,SNR=11						
YKA	**Yellowknife Ar**	**69.15**	**29**	P	**P**	**15 15 19.7**	**+0.7**
	0.2nm,0.4s,baz=291,slow=6.1,SNR=3.9						
FINES	**FINESS Array B**	**73.21**	**333**	P	**P**	**15 15 43.4**	**-0.2**
	1.6nm,0.7s,baz=316,slow=5.8,SNR=4.7						
KBZ	**Khabaz**	**73.71**	**311**	P	**P**	**15 15 45.9**	**-1.0**
	2.2nm,0.8s,baz=56,slow=12,SNR=3.6						
AKASG	**Malin Array Be**	**78.01**	**323**	P	**P**	**15 16 10.4**	**-0.9**
	0.8nm,0.6s,baz=52,slow=6.2,SNR=4.5						
NB2	**NORSAR Subarra**	**78.86**	**337**	P	**P**	**15 16 15.0**	**-0.9**
	comp=Z,2.9nm,1.0s,baz=46,slow=5.1						
NOA	**NORSAR Array B**	**78.86**	**337**	P	**P**	**15 16 15.4**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=49,slow=4.7,SNR=4.2						
NVAR	**Mina Array Bea**	**79.22**	**52**	P	**P**	**15 16 19.5**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=312,slow=5.9,SNR=2.9						
BRTR	**Keskin Array B**	**81.70**	**312**	P	**P**	**15 16 31.2**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=50,slow=4.5,SNR=3.9						
TXAR	**Lajitas Array**	**94.37**	**52**	P	**P**	**15 17 33.5**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=289,slow=2.8,SNR=2.5						
LPAZ	**La Paz**	**150.19**	**66**	PKPbc	**PKPbc**	**15 24 05.6**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=315,slow=1.4,SNR=5.3						

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*SKHL **30** 15:07:25.0±0.5, 43°.11N×147°.67E, h45km, mb3.7/3*
*ISCJB **30** 15:07:26.4±1.2, 44°.33N±0°.09×146°.3E±0°.1, h176km±8km, Error ellipse: s-maj=17.5km s-min=7.8km az=138.9*
*JMA **30** 15:07:26.5±0.2, 44°.39N×146°.30E, h174km±2km, M3.2*
ISC 30 15:07:26.2±2.3, 44°.35N±0°.09×146°.27E±0°.09, h180km±14km, n17, σ0§80/28, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.43**	**223**	*i* P	**Pn**	**15 07 50.0**	**-0.7**
YUK				AMB	AMB	15 07 51.0	
	20nm,0.4s						
YUK				*i* S	**S**	**15 08 09.0**	**-0.4**
YUK				A	A	15 08 13.0	
	161nm,0.5s						
YUK				A	A	15 08 13.0	
	457nm,0.5s						
GRPR	**Tuman**	**0.50**	**225**	*i* P	**Pn**	**15 07 51.0**	**0.0**
GRPR				AMB	AMB	15 07 51.0	
	6.0nm,0.3s						
GRPR				AMB	AMB	15 07 51.0	
	8.0nm,0.3s						
GRPR				AMB	AMB	15 07 51.0	
	36nm,0.3s						
GRPR				*i* S	**S**	**15 08 10.0**	**0.0**
GRPR				A	A	15 08 11.0	
	283nm,0.3s						
GRPR				A	A	15 08 11.0	
	218nm,0.3s						
JRA	**Rausu**	**0.92**	**244**	P	**Pn**	**15 07 53.3**	**0.0**
JRA				*e*S	**S**	**15 08 14.1**	**0.0**
NEM2	**Nemuro 2**	**1.05**	**201**	P	**Pn**	**15 07 54.1**	**-0.2**
NEM2				*e*S	**S**	**15 08 15.3**	**-0.5**
JNSB	**Nemuroshibetsu**	**1.07**	**238**	P	**Pn**	**15 07 54.9**	**+0.5**
JNK	**Nakash**	**1.35**	**236**	P	**Pn**	**15 07 57.3**	**+0.5**
KUR	**Kuril'sk**	**1.44**	**52**	*i* P	**Pn**	**15 07 57.6**	**+0.1**
KUR				AMB	AMB	15 07 58.7	
	19nm,0.6s						
KUR				*e*S	**S**	**15 08 22.2**	**+0.4**
KUR				A	A	15 08 26.8	
	15nm,0.4s						
KUR				A	A	15 08 26.8	
	34nm,0.4s						
JKHN	**Kushirohamanak**	**1.50**	**213**	P	**Pn**	**15 07 58.5**	**+0.4**
JKHN				*e*S	**S**	**15 08 22.6**	**-0.1**
JTKR	**Abashiri--Toko**	**1.74**	**258**	P	**Pn**	**15 08 00.6**	**+0.1**
JTKR				*e*S	**S**	**15 08 27.5**	**+0.6**
JAK	**Akkeshi**	**1.77**	**221**	P	**Pn**	**15 08 01.3**	**+0.5**
JAK				*e*S	**S**	**15 08 27.7**	**+0.3**
JAR	**Ashorobuto**	**2.09**	**241**	P	**Pn**	**15 08 05.7**	**+1.5**
JMP	**Maruseppu**	**2.12**	**262**	P	**Pn**	**15 08 04.7**	**+0.1**
JOB	**Onbets**	**2.28**	**232**	P	**Pn**	**15 08 07.4**	**+1.1**
JOB				*e*S	**S**	**15 08 38.3**	**+0.9**
JKK2	**Kamakawa 2**	**2.58**	**261**	P	**Pn**	**15 08 10.4**	**+0.6**
JSE	**Soyaes**	**2.70**	**284**	P	**Pn**	**15 08 10.7**	**-0.4**
JCH	**Churui**	**2.73**	**232**	P	**Pn**	**15 08 12.2**	**+0.6**
JCH				*e*S	**S**	**15 08 45.7**	**-1.1**
JNBK	**Urakawa-nobuka**	**3.29**	**232**	P	**Pn**	**15 08 18.2**	**-0.2**
JNBK				*e*S	**S**	**15 08 56.5**	**-2.5**

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*SJA **30** 15:07:32.5±0.9, 20°.80S×67°.93W, h189km±7km, ML2.9, MW3.6*
*ISCJB **30** 15:07:33.2±0.4, 20°.80S±0°.03×67°.98W±0°.06, h183km±5km, mb3.9/5, Error ellipse: s-maj=9.0km s-min=4.3km az=177.4*
*IDC **30** 15:07:33.4±0.8, 20°.76S×67°.70W, h159km±9km, mb3.3/4, mb1 3.5/10, mb1mx3.4/31, mbtmp3.9/10, MS3.0/2, Ms1 3.0/2, ms1mx2.6/23, Error ellipse: s-maj=17.7km s-min=9.0km az=102.0*
*GUC **30** 15:07:34.8±0.7, 20°.78S×68°.10W, h191km±4km, ML3.8*
ISC 30 15:07:33.5±0.7, 20.77S±0°.04×67°.84W±0°.06, h168km±7km, n51, σ1§57/75, mb3.9/5, 14C-2D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.38**	**297**	*e*P	**Pn**	**15 08 04.7**	**+0.9**
PB08	**IPOC Station P**	**1.38**	**297**	⇑*i*P	**Pn**	**15 08 04.7**	**+0.9**
PB08				*e*S	**Sn**	**15 08 27.9**	**+0.9**
PB08				IAML		15 08 31.4	
	comp=E,438nm,0.3s						
PB01	**IPOC Station P**	**1.56**	**260**	⇑*i*P	**Pn**	**15 08 05.3**	**+0.2**
PB01				*e*S	**Sn**	**15 08 29.2**	**-0.5**
PB01				IAML		15 08 30.9	
	comp=E,696nm,0.3s						
PB09	**IPOC Station P**	**1.66**	**232**	*e*P	**Pn**	**15 08 06.8**	**+0.5**
PB09				*e*S	**Sn**	**15 08 31.8**	**+0.2**
PB09	**IPOC Station P**	**1.66**	**232**	⇑*i*P	**Pn**	**15 08 07.3**	**+1.1**
PB09				*e*S	**Sn**	**15 08 32.1**	**+0.6**
GO01	**Chusmiza**	**1.68**	**311**	⇑*i*P	**Pn**	**15 08 07.6**	**+0.7**
GO01				*e*S	**Sn**	**15 08 33.3**	**+0.8**
GO01				IAML		15 08 39.2	
	comp=E,421nm,0.1s						
PB11	**IPOC Station P**	**1.98**	**300**	*e*P	**Pn**	**15 08 10.3**	**+0.6**
PB11				*e*S	**Sn**	**15 08 37.9**	**+0.3**
PB11	**IPOC Station P**	**1.98**	**300**	⇑*i*P	**Pn**	**15 08 10.0**	**+0.3**
PB11				*e*S	**Sn**	**15 08 37.2**	**-0.4**
PB11				IAML		15 08 38.8	
	comp=E,1μm,0.3s						
PB02	**IPOC Station P**	**2.00**	**254**	*e*P	**Pn**	**15 08 09.9**	**+0.1**
PB02	**IPOC Station P**	**2.00**	**254**	⇑*i*P	**Pn**	**15 08 09.9**	**+0.1**
PB02				*e*S	**Sn**	**15 08 36.8**	**-1.1**
PB02				IAML		15 08 38.7	
	comp=E,1μm,0.1s						
LVC	**Limon Verde**	**2.08**	**208**	P	**Pn**	**15 08 11.8**	**+0.8**
	comp=E,19nm,0.3s,baz=43,slow=9.1,SNR=208						
LVC				S	**Sn**	**15 08 40.8**	**+0.6**
	comp=E,14nm,0.3s,baz=245,slow=22,SNR=15						
LVC	**Limon Verde**	**2.08**	**208**	*e*P	**Pn**	**15 08 11.7**	**+0.6**
LVC				IAML		15 08 12.6	
	comp=Z,50nm,0.6s						
LVC				*e*S	**Sn**	**15 08 40.1**	**-0.1**
LVC	**Limon Verde**	**2.08**	**208**	⇓*i*P	**Pn**	**15 08 11.9**	**+0.8**
LVC				*i*S	**Sn**	**15 08 41.0**	**+0.8**
PB07	**IPOC Station P**	**2.13**	**243**	*e*P	**Pn**	**15 08 11.7**	**+0.3**
PB07				*e*S	**Sn**	**15 08 39.9**	**-0.9**
PB07	**IPOC Station P**	**2.13**	**243**	⇑*i*P	**Pn**	**15 08 11.5**	**+0.1**
PB07				*e*S	**Sn**	**15 08 39.6**	**-1.1**
PB07				IAML		15 08 40.9	
	comp=N,586nm,0.1s						
PB03	**IPOC Station P**	**2.19**	**234**	*e*P	**Pn**	**15 08 12.0**	**0.0**
PB03	**IPOC Station P**	**2.19**	**234**	⇑*i*P	**Pn**	**15 08 12.3**	**+0.2**
PB03				*e*S	**Sn**	**15 08 40.6**	**-1.3**
PB03				IAML		15 08 41.5	
	comp=N,367nm,0.2s						
MNMC	**Minye Minye**	**2.32**	**314**	⇑*i*P	**Pn**	**15 08 14.7**	**+1.0**
MNMC				*i*S	**Sn**	**15 08 44.7**	**-0.2**
PSGC	**Pisagua**	**2.44**	**298**	⇑*i*P	**Pn**	**15 08 14.6**	**-0.3**
PSGC				*e*S	**Sn**	**15 08 44.7**	**-2.4**
PSGC				IAML		15 08 47.1	
	comp=E,384nm,0.5s						
PSGCX	**Pisagua**	**2.44**	**298**	*e*P	**Pn**	**15 08 14.8**	**-0.2**
PSGCX				*e*S	**Sn**	**15 08 46.0**	**-1.0**
PB06	**IPOC Station P**	**2.51**	**220**	*e*P	**Pn**	**15 08 16.1**	**+0.3**
PB06	**IPOC Station P**	**2.51**	**220**	⇑*i*P	**Pn**	**15 08 16.2**	**+0.4**
PB06				*e*S	**Sn**	**15 08 47.9**	**-0.7**
PB06				IAML		15 08 49.4	
	comp=E,337nm,0.2s						
YJA	**Yavi**	**2.58**	**123**	*e*P	**Pn**	**15 08 18.6**	**+1.7**
PB04	**IPOC Station P**	**2.65**	**234**	⇓*e*P	**Pn**	**15 08 17.2**	**-0.3**
PB04	**IPOC Station P**	**2.65**	**234**	⇑*i*P	**Pn**	**15 08 17.5**	**0.0**
PB04				*i*S	**Sn**	**15 08 49.8**	**-1.9**
PB04				IAML		15 08 52.1	
	comp=N,324nm,0.2s						
PB15	**IPOC Station P**	**2.86**	**212**	*e*P	**Pn**	**15 08 20.4**	**+0.4**
PB15	**IPOC Station P**	**2.86**	**212**	*i*P	**Pn**	**15 08 20.8**	**+0.7**
PB15				*i*S	**Sn**	**15 08 56.2**	**-0.1**
PB16	**IPOC Station P**	**2.89**	**327**	*e*P	**Pn**	**15 08 21.9**	**+1.0**
PB16	**IPOC Station P**	**2.89**	**327**	⇑*i*P	**Pn**	**15 08 22.2**	**+1.4**
PB16				*i*S	**Sn**	**15 08 59.1**	**+1.6**
PB05	**IPOC Station P**	**3.02**	**226**	*e*P	**Pn**	**15 08 21.7**	**-0.2**
PB05	**IPOC Station P**	**3.02**	**226**	*e*P	**Pn**	**15 08 21.8**	**-0.2**
PB05				*i*S	**Sn**	**15 08 57.5**	**-2.1**
PB12	**IPOC Station P**	**3.18**	**312**	*e*P	**Pn**	**15 08 23.1**	**-0.8**
PB12	**IPOC Station P**	**3.18**	**312**	⇑*i*P	**Pn**	**15 08 23.2**	**-0.8**
PB12				*i*S	**Sn**	**15 09 00.6**	**-2.5**
HJA	**Humahuaca**	**3.31**	**138**	*e*P	**Pn**	**15 08 27.4**	**+1.6**
PB10	**IPOC Station P**	**3.71**	**222**	*e*P	**Pn**	**15 08 29.4**	**-1.1**
LPAZ	**La Paz**	**4.47**	**356**	P	**Pn**	**15 08 42.5**	**+1.5**
	comp=N,1.8nm,0.3s,baz=153,slow=11,SNR=40						
LPAZ				S	**Sn**	**15 09 33.2**	**-0.4**
	baz=127,slow=20,SNR=2.3						
LPAZ				LR	LR	15 10 49.8	
	comp=N,36nm,19.7s,baz=216,slow=44						
PB14	**IPOC Station P**	**4.51**	**211**	*e*P	**Pn**	**15 08 40.7**	**-0.4**
GO03	**Copiap**	**7.13**	**197**	*e*P	**Pn**	**15 09 12.5**	**-2.9**
SIV	**San Ignacio**	**7.99**	**55**	P	**Pn**	**15 09 24.7**	**-2.1**
	comp=N,6.3nm,0.3s,baz=249,slow=12,SNR=94						
SIV				S	**Sn**	**15 10 50.0**	**-6.3**
	comp=N,0.2nm,0.3s,baz=153,slow=20,SNR=3.1						
CFA	**Coronel Fontan**	**10.79**	**182**	P	**Pn**	**15 10 02.2**	**-1.4**
	comp=N,0.8nm,0.3s,baz=339,slow=14,SNR=4.6						
CFA				S	**Sn**	**15 11 55.6**	**-7.7**
	comp=N,0.3nm,0.3s,baz=93,slow=18,SNR=2.8						
CPUP	**Villa Florida**	**11.11**	**122**	P	**Pn**	**15 10 07.6**	**-0.1**
	comp=N,0.3nm,0.3s,baz=288,slow=16,SNR=3.5						
BDFB	**Brasilia**	**19.51**	**78**	P	**P**	**15 11 47.5**	**-0.5**
	comp=N,0.6nm,0.3s,baz=238,slow=17,SNR=5.4						
PLCA	**Paso Flores**	**20.03**	**186**	P	Pn	15 11 57.4	+0.2
	comp=N,2.4nm,0.7s,baz=42,slow=10,SNR=5.6						
PTGA	**Pitinga**	**21.35**	**22**	P	**P**	**15 12 06.4**	**-1.3**
	comp=N,3.2nm,0.4s,baz=183,slow=18,SNR=5.2						
TXAR	**Lajitas Array**	**60.62**	**324**	P	**P**	**15 17 28.0**	**+1.2**
	comp=N,0.2nm,0.6s,baz=151,slow=11,SNR=2.6						
SNAA	**Sanae**	**62.64**	**161**	P	**P**	**15 17 40.8**	**+1.1**
	comp=N,0.7nm,0.7s,baz=283,slow=9.9,SNR=5.2						
PDAR	**Pinedale Array**	**73.99**	**329**	LR	LR	15 56 52.7	
	comp=N,39nm,20.5s,baz=269,slow=40						
TORD	**Torodi Ar. Bea**	**76.17**	**70**	P	**P**	**15 19 03.7**	**+0.2**
	comp=N,9.6nm,0.4s,baz=245,slow=5.7,SNR=2.0						
YKA	**Yellowknife Ar**	**90.84**	**340**	P	**P**	**15 20 18.5**	**+1.3**
	comp=N,0.7nm,0.6s,baz=128,slow=4.5,SNR=10.0						
ASAR	**Alice Springs**	**131.01**	**207**	PKP	**PKiKP**	**15 26 27.1**	**+0.3**
	comp=N,0.7nm,1.1s,baz=121,slow=1.5,SNR=5.5						
MKAR	**Makanchi Array**	**144.46**	**36**	PKP	**PKPdf**	**15 26 50.5**	**+0.7**
	comp=N,0.2nm,0.4s,baz=329,slow=2.8,SNR=3.2						

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*IDC **30** 15:13:32.4±0.8, 17°.88S×176°.66W, h0km, mb3.9/9, mb1 4.2/9, mb1mx4.0/24, mbtmp3.9/9, MS3.9/10, Ms1 3.9/10, ms1mx3.7/21, Error ellipse: s-maj=29.3km s-min=21.1km az=125.0*
*ISCJB **30** 15:13:35.6±0.4, 17°.92S±0°.09×176°.7W±0°.1, h33km, mb4.3/15, MS4.0/10, Error ellipse: s-maj=16.0km s-min=11.6km az=21.3*
*NEIC **30** 15:13:37.4±0.3, 17°.92S×176°.66W, h35km, mb4.9/8, Error ellipse: s-maj=11.2km s-min=7.4km az=122.0*
*GCMT **30** 15:13:38.4±0.3, 17°.97S±0°.03×176°.38W±0°.02, h13km±2km, MW4.8/69, Moment Tensor Solution. s14,c14; s69,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.35±.10; $M_{\theta\theta}$-1.32±.07; $M_{\phi\phi}$ 1.67±.09; $M_{r\theta}$0.39±.22; $M_{\theta\phi}$-0.04±.07; $M_{\phi r}$0.83±.24; Best double couple: $M_0$1.73000×10^{16} NP1:ϕ222.00000°, δ88.00000°, λ-31.00000°. NP2: ϕ313.00000°, δ59.00000°, λ-178.00000°. Principal axes: T 1.9690, Plg20.0000°, Azm272.0000°; N -0.4790, Plg59.0000°, Azm38.0000°; P -1.4910, Plg23.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 15:13:37.5±0.6, 17°.9S±0°.1×176°.7W±0°.2, h35km, n53, σ0§76/44, mb4.3/15, MS3.9/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**16.26**	**104**	LR	LR	15 22 01.3	
	comp=Z,288nm,21.7s,baz=284,slow=31						
DZM	**Mont Dzumac**	**16.39**	**253**	LR	LR	15 22 46.6	
	comp=Z,1μm,19.7s,baz=72,slow=34						
DZM	**Mont Dzumac**	**16.39**	**253**	*e*LR	LR	15 21 15.5	
	comp=Z,2μm,24.6s						
URZ	**Urewera**	**20.98**	**194**	P	**P**	**15 18 17.6**	**0.0**
	8.2nm,0.9s,baz=346,slow=12,SNR=3.4						
PPT2	**Papeete2**	**25.80**	**93**	*e*LR	LR	15 25 16.8	
	comp=Z,1μm,27.0s,baz=258						
PPT	**Papeete**	**25.80**	**93**	LR	LR	15 26 25.0	
	comp=Z,276nm,20.6s,baz=282,slow=30						
TAOE	**Nuku Hiva Isla**	**36.60**	**81**	*e*LR	LR	15 30 27.2	
	comp=Z,404nm,25.1s						
WR1	**Warramunga Arr**	**46.25**	**259**	*e*P	**P**	**15 21 59.8**	**0.0**
WRA	**Warramunga Arr**	**46.25**

11nm,1.8s
CMAR Chiang Mai Arr 90.45 289 LR LR 16 08 04.9
comp=Z,35nm,18.4s,baz=160,slow=36
SNAA Sanae 90.53 178 P **P** **15 26 34.6 -1.0**
SNAA Sanae 90.53 178 *eP* **P** **15 26 34.1 -1.5**
17nm,1.8s
VNA3 Neumayer Olymp 90.61 176 P **P** **15 26 34.9 -0.9**
VNA2 Neumayer--Watz 91.07 176 P **P** **15 26 38.2 +0.2**
VNA1 Neumayer--Stat 91.29 176 P **P** **15 26 39.4 +0.5**
ULM Lac du Bonnet 97.86 40 LR LR 16 03 16.6
comp=Z,47nm,21.7s,baz=298,slow=30
CLL Collm 145.81 349 *e*PKPdf **PKPdf** **15 33 12.3 0.0**
CLL Collm 145.81 349 *e*PKPbc **PKPdf** **15 33 12.0 -0.3**
comp=Z,7.0nm,1.0s
CLL *i* PKiKP **PKiKP** **15 33 16.3 -0.1**
comp=Z,7.0nm,1.0s
OSTC Ostas 145.85 345 *e*PKP **PKPab** **15 33 14.5 +1.1**
OSTC *ex* x 15 33 22.0
UPC Upice 145.94 345 *e*PKP **PKPab** **15 33 14.8 +1.0**
UPC *ex* x 15 33 18.2
BR101 Keskin Array S 145.95 316 *e*PKPdf **PKPab** **15 33 14.1 -0.3**
BRTR Keskin Array B 145.95 316 PKPbc **PKPab** **15 33 14.1 -0.3**
comp=Z,7.0nm,1.0s,baz=163,slow=4.7,SNR=8.0
DPC Dobruska-Polom 146.01 345 *e*PKP **PKPab** **15 33 14.8 +0.7**
DPC *ex* x 15 33 18.8
DPC *ex* x 15 33 32.7
KHC Kasperske Hory 147.78 347 *e*PKP **PKiKP** **15 33 19.9 -0.7**
GERES GERESS Array B 148.03 347 PKPbc **PKPbc** **15 33 19.9 +0.6**
comp=Z,1.8nm,1.0s,baz=82,slow=1.9,SNR=6.7
CONA Conrad Observa 148.37 344 *ep*PKPdf **PKPab** **15 33 25.3 +1.8**
comp=Z,4.6nm,1.0s
MOA Molln 148.84 346 *ep*PKPdf **PKPab** **15 33 26.4 +1.1**
comp=Z,7.0nm,0.9s
ARSA Arzberg 149.08 344 *e*PKPab **PKPab** **15 33 26.0 -0.3**
comp=Z,5.9nm,1.4s
SOKA Soboth 149.74 344 PKPab **PKPab** **15 33 27.0 -2.1**
comp=Z,3.9nm,1.0s
RETA Reutte 149.89 350 *e*PKPab **PKPab** **15 33 29.0 -0.6**
comp=Z,2.9nm,1.0s
WTTA Wattenberg 149.95 349 *e*PKiKP **PKiKP** **15 33 25.1 -0.2**
comp=Z,4.4nm,1.3s
MOTA Moosalm 149.97 349 *e*PKiKP **PKiKP** **15 33 26.0 +0.6**
comp=Z,1.2nm,0.7s
OBKA Obir 150.02 344 *ep*PKPdf **PKPab** **15 33 31.7 +1.5**
comp=Z,2.9nm,1.1s
DAVA Damuels 150.22 351 *e*PKPab **PKPab** **15 33 30.0 -1.1**
comp=Z,8.0nm,1.1s

IDC 30 15:26:48.0±3.8, 19°.06S×176°.15W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/20, mbtmp4.0/3, Error ellipse: s-maj=170.9km s-min=74.3km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.98**	**243**	P	P	15 34 24.6	0.0
	1.6nm,0.8s,baz=82,slow=9.5,SNR=4.0						
WRA	**Warramunga Arr**	**46.54**	**260**	P	P	15 35 17.9	+0.1
	0.7nm,0.3s,baz=95,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**46.55**	**255**	P	P	15 35 17.7	-0.2
	1.3nm,0.5s,baz=93,slow=8.2,SNR=43						
ASAR				PcP	PcP	15 36 51.2	-1.1
	0.4nm,0.5s,baz=105,slow=4.0,SNR=6.7						
AKASG	**Malin Array Be**	**142.56**	**333**	PKP	PKiKP	15 46 24.6	-1.4
	1.4nm,0.5s,baz=44,slow=4.2,SNR=6.6						

MAN 30 15:29:22.3, 7°.33N×124°.83E, h28km, mb4.1, ML2.9, MS2.6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.58**	**260**	⇑*iP*	Pn	15 29 35.6	+0.9
CTBH				*i* S	Sn	15 29 44.2	+0.8
BUKP	**Musuan**	**0.60**	**23**	*e*P	Pb	15 29 34.0	-0.2
BUKP				*e*S	Sn	15 29 45.4	+1.6
SKMP	**Bagumbayan, Su**	**0.85**	**199**	*e*P	Pn	15 29 38.0	-0.4
SKMP				*e*S	Sn	15 29 50.6	+0.7
CGP	**Cagayan de Oro**	**1.13**	**353**	⇑*e*P	Pn	15 29 41.8	-0.4
CGP				*e*S	Sb	15 29 57.2	-0.3

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*NEIC **30** 15:34:00.8±0.0, 19°.07N×67°.81W, h42km, MD3.3(RSPR), After RSPR.*
RSPR 30 15:34:00.8, 19°.07N×67°.81W, h42km±8km, MD3.3/12, 13C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.75**	**155**	⇑*e*P	Pn	15 34 12.7	-2.3
IDE	**Isla Desecheo**	**0.75**	**155**	*e*S	Sn	15 34 23.0	-2.3
IDE	**Isla Desecheo**	**0.75**	**155**	*e*Sn	Sn	15 34 23.0	-2.3
PCDR	**Punta Cana, DR**	**0.78**	**225**	⇓*i*P	Pn	15 34 14.1	-1.2
PCDR	**Punta Cana, DR**	**0.78**	**225**	*e*S	Sn	15 34 25.4	-0.4
PCDR	**Punta Cana, DR**	**0.78**	**225**	*e*Pn	Pn	15 34 14.1	-1.2
PCDR				*e*Sn	Sn	15 34 25.4	-0.4
AGPR	**Aguadilla, PR**	**0.89**	**132**	⇓*e*P	Pn	15 34 15.3	-1.7
AGPR	**Aguadilla, PR**	**0.89**	**132**	*e*S	Sn	15 34 27.3	-1.4
AGPR	**Aguadilla, PR**	**0.89**	**132**	⇓*e*P	Pn	15 34 15.3	-1.7
AGPR				*e*S	Sn	15 34 27.3	-1.4
AGP	**Aguadilla**	**0.91**	**136**	*e*Pn	Pn	15 34 15.3	-2.0
AGP				*e*Sn	Sn	15 34 27.3	-2.0
MPR	**Mayaguez**	**1.06**	**143**	*e*Pn	Pn	15 34 17.8	-1.5
LSP	**Las Mesas**	**1.12**	**142**	⇑*e*P	Pn	15 34 18.9	-1.2
AOPR	**Arecibo Observ**	**1.23**	**126**	⇓*e*P	Pn	15 34 20.3	-1.3
AOPR	**Arecibo Observ**	**1.23**	**126**	*e*S	Sn	15 34 35.7	-1.3
AOPR	**Arecibo Observ**	**1.23**	**126**	*e*Pn	Pn	15 34 20.3	-1.3
AOPR				*e*Sn	Sn	15 34 35.7	-1.3
MLPR	**Magueyes Islan**	**1.31**	**146**	⇑*e*P	Pn	15 34 21.4	-1.2
MLPR	**Magueyes Islan**	**1.31**	**146**	*e*S	Sn	15 34 37.5	-1.5
EMPR	**Esperanza - Ma**	**1.35**	**116**	⇑*e*P	Pn	15 34 22.1	-1.1
EMPR	**Esperanza - Ma**	**1.35**	**116**	*e*S	Sn	15 34 39.2	-0.7
EMPR	**Esperanza - Ma**	**1.35**	**116**	*e*Pn	Pn	15 34 22.3	-0.9
EMPR				*e*S	Sn	15 34 39.2	-0.7
GBPR	**Guanica, Bosqu**	**1.40**	**141**	⇓*e*P	Pn	15 34 23.1	-0.8
GBPR	**Guanica, Bosqu**	**1.40**	**141**	*e*Pn	Pn	15 34 23.1	-0.8
OBIP	**Obispado Ponce**	**1.53**	**132**	⇑*e*P	Pn	15 34 24.5	-1.2
OBIP	**Obispado Ponce**	**1.53**	**132**	*e*S	Sn	15 34 43.0	-1.4
OBIP	**Obispado Ponce**	**1.53**	**132**	*e*Sn	Sn	15 34 43.0	-1.4
SJG	**San Juan**	**1.84**	**121**	⇑*e*P	Pn	15 34 29.4	-0.6
SJG	**San Juan**	**1.84**	**121**	*e*S	Sn	15 34 51.6	-0.3
SJG	**San Juan**	**1.84**	**121**	*e*Pn	Pn	15 34 29.1	-0.8
SJG				*e*S	Sn	15 34 51.6	-0.3
IGPR	**InterUniversit**	**1.95**	**124**	⇑*e*P	Pn	15 34 31.3	-0.2
PDPR	**Patillas Dam,**	**1.99**	**121**	⇑*e*P	Pn	15 34 31.8	-0.2
CBYP	**Canovanas**	**2.01**	**113**	⇑*e*P	Pn	15 34 31.2	-1.2
HUMP	**Col San Antoni**	**2.07**	**116**	⇑*e*P	Pn	15 34 32.4	-0.7
HUMP	**Col San Antoni**	**2.07**	**116**	*e*S	Sn	15 34 56.2	-1.5
HUMP	**Col San Antoni**	**2.07**	**116**	*e*Pn	Pn	15 34 32.1	-1.1
HUMP				*e*S	Sn	15 34 56.2	-1.5
SDD	**Santo Domingo**	**2.09**	**253**	*e*Pn	Pn	15 34 34.9	+1.6
MTP	**Monte Pirata**	**2.35**	**114**	⇑*e*P	Pn	15 34 36.1	-0.8
MTP	**Monte Pirata**	**2.35**	**114**	*e*Pn	Pn	15 34 35.5	-1.4
CUPR	**Culebra, Puert**	**2.51**	**107**	⇑*e*P	Pn	15 34 37.6	-1.6
CUPR	**Culebra, Puert**	**2.51**	**107**	*e*S	Sn	15 35 07.9	-0.6
CUPR	**Culebra, Puert**	**2.51**	**107**	⇑*e*P	Pn	15 34 37.6	-1.6
CUPR				*e*S	Sn	15 35 07.9	-0.6
STVI	**Saint Thomas**	**2.80**	**104**	*e*Pn	Pn	15 34 41.2	-1.9
SDDR	**Presa de Saban**	**3.29**	**269**	*e*Pn	Pn	15 34 50.8	+0.8

KRSC 30 15:37:22.2±1.9, 49°.51N×156°.82E, h16km±34km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.26**	**339**	*e*P	Pn	15 37 44.0	-1.2
SKR				*e*S	Sb	15 37 59.9	-1.7
PAU	**Pauzhetka**	**1.96**	**360**	*e*P	Pb	15 37 56.7	-0.8
PAU				*e*S	Sb	15 38 21.4	-0.4
KDTR	**Khodutka, Kamc**	**2.44**	**19**	*e*P	Pb	15 38 03.8	-1.9
KDTR				*e*S	Sb	15 38 34.6	-0.9
ASAK	**Asacha**	**2.96**	**13**	*e*P	Pn	15 38 10.9	+2.3
MTVR	**Mutnovka**	**3.10**	**16**	*e*P	Pn	15 38 13.7	+3.1
MTVR				*e*S	Sb	15 38 51.6	-3.1
RUS	**Russkaya**	**3.12**	**19**	*e*P	Pb	15 38 14.3	-2.9
RUS				*e*S	Sb	15 38 51.8	-3.2
DALK	**Dalny**	**3.73**	**18**	*e*P	Pn	15 38 21.8	+2.7
DALK				*e*S	Sn	15 39 06.0	+3.3
UGLR	**Uglovaya**	**3.92**	**18**	*e*P	Pn	15 38 25.8	+4.1
AVH	**Avacha**	**3.95**	**17**	*e*P	Pn	15 38 26.4	+4.2
SMAR	**Somma**	**3.96**	**17**	*e*P	Pn	15 38 26.9	+4.4
SDLR	**Sedlovina**	**3.99**	**18**	*e*P	Pn	15 38 26.4	+3.6
KRX	**Arik**	**4.02**	**16**	*e*P	Pn	15 38 27.6	+4.3
SPN	**Mys Shipunski**	**4.12**	**28**	*e*P	Pn	15 38 27.6	+3.2
SPN				*e*S	Sn	15 39 15.6	+3.3
GNL	**Ganaly**	**4.25**	**9**	*e*P	Pn	15 38 29.8	+3.4

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*KRNET **30** 15:48:26.3±0.1, 42°.86N×79°.63E, h15km, mb2.1*
*ISCJB **30** 15:48:29.2±1.1, 42°.93N±0°.04×79°.52E±0°.04, h4km±5km, Error ellipse: s-maj=8.0km s-min=4.2km az=148.1*
*NNC **30** 15:48:30.8±1.3, 43°.01N×79°.52E, h0km, mpv2.6, Error ellipse: s-maj=9.7km s-min=4.4km az=160.0*
*SOME **30** 15:48:32.2, 43°.07N×79°.48E, h15km*
ISC 30 15:48:28.9±1.5, 42°.92N±0°.05×79°.55E±0°.04, h6km±11km, n22, σ1§21/43, 12C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**0.41**	**354**	P	**Pb**	**15 48 38.0**	**-0.7**
	1.7nm,0.1s						
PDGK				S	**Sg**	**15 48 42.1**	**-0.2**
	11nm,1.1s						
PDGK	**Podgornoye**	**0.41**	**354**	⇑P	**Pg**	**15 48 37.6**	**+0.7**
	0.9nm,0.3s						
PDGK				⇑S	**Sg**	**15 48 42.3**	**-0.1**
	21nm,0.4s						
PDGK	**Podgornoye**	**0.41**	**354**	⇑⇑*e*P	**Pg**	**15 48 35.5**	**-1.4**
	baz=47						
PDGK				⇑*i*S	**Sg**	**15 48 42.2**	**-0.2**
	baz=47						
UZB	**Uzynbulak**	**0.45**	**301**	P	**Pb**	**15 48 39.3**	**0.0**
	14nm,0.1s						
UZB				S	**Sg**	**15 48 44.5**	**+1.0**
	121nm,0.1s						
UZB	**Uzynbulak**	**0.45**	**301**	*e*P	**Pb**	**15 48 39.3**	**0.0**
	14nm,0.1s						
UZB				*e*S	**Sg**	**15 48 44.5**	**+1.0**
	121nm,0.1s						
KTMS	**Ketmen**	**0.79**	**48**	P	**Pb**	**15 48 46.0**	**+0.8**
	0.9nm,0.1s						
KTMS				S	**Sb**	**15 48 55.5**	**-0.7**
	9.7nm,0.2s						
KTMS	**Ketmen**	**0.79**	**48**	*e*P	**Pb**	**15 48 46.0**	**+0.8**
	0.9nm,0.1s						
KTMS				*e*S	**Sb**	**15 48 55.5**	**-0.7**
	9.7nm,0.2s						
KPKS	**Kokpek**	**0.83**	**311**	*e*P	**Pg**	**15 48 45.3**	**+0.4**
	2.2nm,0.1s						
KPKS				*e*S	**Sg**	**15 48 54.6**	**-1.2**
	26nm,0.2s						
SATY	**Saty**	**0.85**	**280**	P	**Pb**	**15 48 46.9**	**+0.8**
	2.2nm,0.2s						
SATY				S	**Sg**	**15 48 57.4**	**+1.1**
	47nm,0.1s						
SATY	**Saty**	**0.85**	**280**	*e*P	**Pb**	**15 48 46.9**	**+0.8**
	2.2nm,0.2s						
SATY				*e*S	**Sg**	**15 48 57.4**	**+1.1**
	47nm,0.1s						
ZHN	**Zhinishke**	**0.85**	**287**	P	**Pg**	**15 48 46.5**	**+1.2**
	1.6nm,0.1s						
ZHN				S	**Sg**	**15 48 56.5**	**+0.1**
	28nm,0.2s						
ZHN	**Zhinishke**	**0.85**	**287**	*e*P	**Pg**	**15 48 46.5**	**+1.2**
	1.6nm,0.1s						
ZHN				*e*S	**Sg**	**15 48 56.5**	**+0.1**
	28nm,0.2s						
PRZ	**Przheval'sk**	**0.95**	**243**	⇑*i*P	**Pb**	**15 48 44.8**	**-3.2**
	baz=48						
PRZ				⇑*i*S	**Sb**	**15 48 58.2**	**-2.7**
	baz=48						
DJR	**Jarkent**	**1.42**	**7**	P	**Pb**	**15 48 55.4**	**-0.5**
	0.7nm,0.1s						
DJR				S	**Sb**	**15 49 12.2**	**-2.1**
	3.1nm,0.3s						
DJR	**Jarkent**	**1.42**	**7**	*e*P	**Pb**	**15 48 55.4**	**-0.5**
	0.7nm,0.1s						
DJR				*e*S	**Sb**	**15 49 12.2**	**-2.1**
	3.1nm,0.3s						
MNBS	**Baschi**	**1.43**	**325**	P	**Pb**	**15 48 55.5**	**-0.5**
	1.3nm,0.1s						
MNBS				S	**Sb**	**15 49 12.5**	**-2.0**
	8.1nm,0.2s						
MNBS	**Baschi**	**1.43**	**325**	*e*P	**Pb**	**15 48 55.5**	**-0.5**
	1.3nm,0.1s						
MNBS				*e*S	**Sb**	**15 49 12.5**	**-2.0**
	8.1nm,0.2s						
KDJ	**Kajisay**	**1.92**	**246**	⇑*i*P	**Pn**	**15 49 02.2**	**-0.1**
	baz=49						
KDJ				⇑*i*S	**Sn**	**15 49 28.1**	**+1.2**
	baz=49						
KAPS	**Kapalarasan**	**2.37**	**357**	Pg	**Pb**	**15 49 11.9**	**-0.1**
	0.6nm,0.2s						
KAPS				Lg	Lg	15 49 41.2	
	2.4nm,0.3s						
KAPS	**Kapalarasan**	**2.37**	**357**	*e*P	**Pb**	**15 49 11.9**	**-0.1**
	0.6nm,0.2s						
KAPS				*e*S	**Sb**	**15 49 41.2**	**-0.3**
	2.4nm,0.3s						
ULHL	**Ulahol**	**2.53**	**256**	⇑*i*P	**Pn**	**15 49 10.7**	**-0.1**
	baz=57						
ULHL				⇑*i*S	**Sn**	**15 49 43.2**	**+1.1**
	baz=57						
TKM2	**Tokmak 2**	**2.90**	**271**	⇑*i*P	**Pn**	**15 49 16.7**	**+0.8**
	baz=73						
TKM2				⇑*i*S	**Sn**	**15 49 53.1**	**+1.9**
	baz=73						

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*SOME **30** 16:03:48.5, 40°.78N×74°.82E, h15km*
*KRNET **30** 16:03:49.2±0.1, 40°.93N×74°.83E, h16km, mb2.6*
*NNC **30** 16:03:49.6±2.3, 40°.83N×74°.88E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=16.0km s-min=11.3km az=171.0*
ISC 30 16:03:48.4±1.8, 40°.88N±0°.07×74°.84E±0°.03, h6km±14km, n41, σ1§16/67, 19C-16D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**1.05**	**338**	⇑*i*P	**Pn**	**16 04 08.7**	**-1.2**
	baz=38						
ARLS				⇑*i*S	**Sb**	**16 04 22.6**	**-0.7**
	baz=38						
KZA	**Kyzart**	**1.23**	**14**	⇑*i*P	**Pb**	**16 04 11.9**	**-0.5**
	baz=15						
KZA				⇑*i*S	**Sb**	**16 04 28.6**	**-0.1**
	baz=15						
UCH	**Uchtor**	**1.37**	**350**	P	**Pb**	**16 04 14.0**	**-0.6**
	SNR=8.7						
UCH	**Uchtor**	**1.37**	**350**	⇑*i*P	**Pb**	**16 04 14.4**	**-0.3**
	baz=50						
UCH				⇑*i*S	**Sb**	**16 04 32.7**	**+0.1**
	baz=50						
ARSB	**Arslanbob**	**1.47**	**288**	⇓*i*P	**Pg**	**16 04 16.8**	**+0.1**
	baz=86						
ARSB				⇓*i*S	**Sg**	**16 04 36.5**	**+0.7**
	baz=86						
ULHL	**Ulahol**	**1.72**	**37**	⇑*i*P	**Pb**	**16 04 20.6**	**+0.1**
	baz=38						
ULHL				⇑*i*S	**Sb**	**16 04 43.6**	**+1.1**
	baz=38						
AAK	**Ala-Archa**	**1.77**	**352**	⇓P	**Pg**	**16 04 23.6**	**+1.1**
	3.1nm,0.6s						
AAK				⇓S	**Sg**	**16 04 48.0**	**+2.6**
	3.6nm,0.5s						
AAK	**Ala-Archa**	**1.77**	**352**	⇓*i*P	**Pb**	**16 04 21.5**	**+0.1**
	baz=52						
AAK				⇓*i*S	**Sb**	**16 04 45.1**	**+1.1**
	baz=52						
KBK	**Karagaybulak**	**1.78**	**3**	P	**Pb**	**16 04 21.8**	**+0.3**
	SNR=10						
KBK	**Karagaybulak**	**1.78**	**3**	⇓*i*P	**Pb**	**16 04 21.5**	**0.0**
	baz=3.0						
KBK				⇓*i*S	**Sb**	**16 04 45.1**	**+1.0**
	baz=3.0						
BOOM	**Boomskoye usch**	**1.81**	**27**	⇓*i*P	**Pb**	**16 04 22.1**	**+0.1**
	baz=28						
BOOM				⇓*i*S	**Sg**	**16 04 46.5**	**0.0**
	baz=28						
EKS2	**Erkin-Say**	**1.95**	**336**	⇓*i*P	**Pb**	**16 04 24.6**	**+0.2**
	baz=36						
EKS2				⇓*i*S	**Sg**	**16 04 50.5**	**-0.6**
	baz=36						
TKM2	**Tokmak 2**	**2.12**	**15**	P	**Pg**	**16 04 29.2**	**+0.3**
	SNR=16						
TKM2	**Tokmak 2**	**2.12**	**15**	⇑Pn	**Pb**	**16 04 28.3**	**+1.0**
	2.8nm,0.3s						
TKM2				⇑Sn	**Sg**	**16 04 57.7**	**+1.3**
	4.1nm,0.3s						
TKM2	**Tokmak 2**	**2.12**	**15**	⇑*i*P	**Pb**	**16 04 27.3**	**0.0**
	baz=16						
TKM2				⇑*i*S	**Sb**	**16 04 55.0**	**+1.2**
	baz=16						
CHMS	**Chumysh**	**2.12**	**358**	P	**Pg**	**16 04 29.4**	**+0.4**
	SNR=5.5						
CHMS	**Chumysh**	**2.12**	**358**	⇑*i*P	**Pb**	**16 04 27.2**	**0.0**
	baz=58						
CHMS				⇑*i*S	**Sb**	**16 04 54.8**	**+1.1**
	baz=58						
KDJ	**Kajisay**	**2.15**	**54**	⇑*i*P	**Pb**	**16 04 28.1**	**+0.2**
	baz=55						
KDJ				⇑*i*S	**Sg**	**16 04 56.7**	**-0.9**
	baz=55						
MRKS	**Merke**	**2.22**	**328**	Pg	**Pg**	**16 04 30.0**	**-1.0**
	8.6nm,0.3s						
MRKS				Lg	Lg	16 05 00.0	
	18nm,0.3s						
MRKS	**Merke**	**2.22**	**328**	*e*P	**Pg**	**16 04 29.9**	**-1.0**
	5.4nm,0.3s						
MRKS				*e*S	**Sg**	**16 04 59.9**	**+0.1**
	18nm,0.3s						
KST	**Kastek**	**2.32**	**21**	Pg	**Pg**	**16 04 32.4**	**-0.4**
	7.1nm,0.4s						
KST				Lg	Lg	16 05 04.5	
	12nm,0.4s						
KST	**Kastek**	**2.32**	**21**	⇓*i*P	**Pg**	**16 04 32.4**	**-0.4**
	7.1nm,0.4s						
KST				*e*S	**Sg**	**16 05 04.5**	**+1.6**
	12nm,0.4s						
USP	**Ospenovka**	**2.40**	**354**	P	**Pg**	**16 04 33.8**	**-0.5**
	SNR=5.2						
USP	**Ospenovka**	**2.40**	**354**	⇑*i*P	**Pb**	**16 04 30.9**	**-1.1**
	baz=54						
USP				⇑*i*S	**Sb**	**16 05 01.4**	**-0.4**
	baz=54						
DGS	**Degeres**	**2.46**	**16**	Pg	**Pg**	**16 04 34.8**	**-0.7**
	5.9nm,0.2s						
DGS				Lg	Lg	16 05 07.9	
	8.2nm,0.4s						
DGS	**Degeres**	**2.46**	**16**	*e*P	**Pg**	**16 04 34.8**	**-0.7**
	5.9nm,0.2s						
DGS				*e*S	**Sg**	**16 05 07.9**	**+0.4**
	8.2nm,0.4s						
IZV	**Izvestkoviy**	**2.53**	**31**	Pg	**Pg**	**16 04 36.0**	**-0.9**
	3.8nm,0.3s						
IZV				Lg	Lg	16 05 10.9	
	8.1nm,0.5s						
IZV	**Izvestkoviy**	**2.53**	**31**	*e*P	**Pg**	**16 04 36.8**	**0.0**
	2.0nm,0.3s						
IZV				*e*S	**Sg**	**16 05 11.2**	**+1.7**
	8.1nm,0.5s						
TNSS	**Tian-Shan**	**2.67**	**35**	*e*P	**Pb**	**16 04 38.1**	**+1.3**
	3.8nm,0.6s						
TNSS				*e*S	**Sg**	**16 05 13.8**	**-0.2**
	7.9nm,0.6s						
MDOK	**Medeo**	**2.81**	**35**	*e*P	**Pb**	**16 04 40.5**	**+1.5**
	3.5nm,0.3s						
MDOK				*e*S	**Sg**	**16 05 18.2**	**-0.5**
	6.2nm,0.8s						
KOTS	**Kotyrbulak**	**2.90**	**35**	Pg	**Pg**	**16 04 42.8**	**-1.1**
	3.4nm,0.3s						
KOTS				Lg	Lg	16 05 21.7	
	7.3nm,0.6s						
KOTS	**Kotyrbulak**	**2.90**	**35**	*e*P	**Pg**	**16 04 42.8**	**-1.1**
	3.4nm,0.3s						
KOTS				*e*S	**Sg**	**16 05 21.7**	**+0.3**
	7.3nm,0.6s						
KTBS	**Karatobe**	**3.14**	**25**	Pg	**Pb**	**16 04 46.3**	**+1.7**
	1.3nm,0.2s						
KTBS				Lg	Lg	16 05 28.0	
	4.0nm,0.5s						
KTBS	**Karatobe**	**3.14**	**25**	*e*P	**Pb**	**16 04 46.3**	**+1.7**
	1.3nm,0.2s						
KTBS				*e*S	**Sg**	**16 05 28.0**	**-1.3**
	4.0nm,0.5s						
KUU	**Kurty**	**3.21**	**20**	Pg	**Pb**	**16 04 47.1**	**+1.4**
	1.6nm,0.3s						
KUU				Lg	Lg	16 05 29.9	
	3.5nm,0.5s						
KUU	**Kurty**	**3.21**	**20**	⇓*i*P	**Pb**	**16 04 47.1**	**+1.4**
	1.6nm,0.3s						
KUU				⇓*i*S	**Sg**	**16 05 29.9**	**-1.6**
	3.5nm,0.5s						
CHKK	**Chushkaly**	**3.37**	**27**	Pg	**Pb**	**16 04 50.3**	**+1.8**
	1.2nm,0.4s						
CHKK				Lg	Lg	16 05 34.5	
	5.7nm,0.4s						
CHKK	**Chushkaly**	**3.37**	**27**	*e*P	**Pb**	**16 04 50.3**	**+1.8**
	1.2nm,0.4s						
CHKK				*e*S	**Sg**	**16 05 34.5**	**-2.1**
	5.7nm,0.4s						
KK31	**Karatay Array**	**3.92**	**306**	⇑Pg	**Pb**	**16 04 58.8**	**+0.9**
	0.2nm,0.3s,baz=127,slow=16,SNR=4.3						
KK31				⇓Lg	Lg	16 05 50.3	
	0.4nm,0.3s,baz=121,slow=31,SNR=7.0						
ARXS	**Arharly**	**3.99**	**33**	Pg	**Pb**	**16 05 01.5**	**+2.3**
	1.8nm,0.5s						
ARXS				Lg	Lg	16 05 53.7	
	2.4nm,0.4s						
ARXS	**Arharly**	**3.99**	**33**	*e*P	**Pb**	**16 05 01.5**	**+2.3**
	1.8nm,0.5s						
ARXS				*e*S	**Sg**	**16 05 53.7**	**-3.0**
	2.4nm,0.4s						

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*ISCJB **30** 16:05:05.0±1.2, 27°.26N±0°.09×140°.2E±0°.5, h450km, mb3.4/7, Error ellipse: s-maj=58.4km s-min=11.7km az=179.3*
*IDC **30** 16:05:06.7±1.9, 27°.30N×140°.44E, h459km±24km, mb3.2/7, mb1 3.2/9, mb1mx2.8/46, mbtmp4.0/9, Error ellipse: s-maj=65.4km s-min=14.0km az=80.0*
ISC 30 16:05:06.2±1.6, 27°.3N±0°.1×140°.4E±0°.5, h450km, n9, σ1§11/10, mb3.7/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**5.79**	**355**	P	**P**	**16 06 39.6**	**+1.4**
	13nm,0.3s,baz=259,slow=22,SNR=10						
JHJ				S	**S**	**16 07 51.4**	**-2.1**
	2.7nm,0.3s,baz=66,slow=19,SNR=2.0						
MJAR	**Matsushiro Arr**	**9.37**	**349**	P	**P**	**16 07 17.1**	**+0.9**
	0.1nm,0.3s,baz=182,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**47.35**	**188**	P	**P**	**16 12 57.6**	**-0.5**
	0.8nm,0.7s,baz=359,slow=7.2,SNR=3.2						
ASAR	**Alice Springs**	**51.08**	**188**	P	**P**	**16 13 25.4**	**-0

DEPR				*e*Pg	Pg	16 14 25.4	+0.4
	0.0nm,0.2s						
DEPR				*e*Sn	Sg	16 14 50.1	-1.1
DEPR				*e*Sg	Sb	16 14 56.5	+7.7
	0.0nm,0.6s						

IDC 30 16:18:06.9±2.7, 6°.83S×128°.47E, h0km, mb3.9/1, mb1 4.0/3, mb1mx3.5/39, mbtmp3.8/3, ML3.7/2, Error ellipse: s-maj=293.8km s-min=31.7km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.23**	**157**	Pn	Pn	16 21 28.5	-1.4
	0.3nm,0.3s,baz=334,slow=14,SNR=2.0						
WRA				Sn	Sn	16 23 54.6	-14
	0.3nm,0.3s,baz=345,slow=22,SNR=4.2						
ASAR	**Alice Springs**	**17.54**	**163**	P	P	16 22 13.9	-0.3
	0.4nm,0.3s,baz=344,slow=9.3,SNR=12						
ASAR				S	Sn	16 25 16.6	-13
	0.0nm,0.3s,baz=319,slow=21,SNR=2.9						
MKAR	**Makanchi Array**	**67.26**	**327**	P	P	16 29 03.4	0.0
	0.5nm,0.4s,baz=119,slow=7.6,SNR=6.6						

JMA 30 16:20:55.2±0.1, 24°.94N×123°.35E, h26km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.57**	**213**	P	Pb	16 21 06.2	-0.4
YOJ				*e*S	Sb	16 21 14.1	-0.2
IRIF	**Iriomote-Funau**	**0.69**	**150**	*e*S	Sb	16 21 17.7	-0.2
JIJ	**Ishigaki jima**	**0.92**	**128**	S	Sb	16 21 24.5	+0.1
JKRS	**Kuro-shima**	**0.92**	**139**	P	Pn	16 21 12.2	-0.3
JKRS				S	Sb	16 21 23.4	-1.0
JISG	**Ishigakijimahi**	**0.94**	**112**	P	Pn	16 21 12.3	-0.4
JISG				S	Sb	16 21 24.2	-0.8
HATJ	**Hateruma jima**	**0.97**	**155**	*e*S	Sb	16 21 25.4	-0.4

TAP 30 16:21:39.2, 24°.26N×121°.77E, h34km, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.17**	**353**	*e*S	Sb	16 21 50.5	+0.4
	baz=351						
ENA	**Nanau**	**0.17**	**350**	S	Sb	16 21 50.8	+0.6
	baz=351						
NACB	**Ninganchiao**	**0.18**	**243**	P	Pb	16 21 45.3	-0.5
	baz=251						
NACB				S	Sb	16 21 50.3	0.0
	baz=251						
ETLH	**Xiulin Townshi**	**0.27**	**259**	*e*P	Pb	16 21 47.0	+0.2
	baz=260						
ETLH				*e*S	Sb	16 21 53.0	+1.0
	baz=260						
EOS1	**EOS1**	**0.43**	**48**	*e*S	Sn	16 21 57.1	+1.5
	baz=48						

BJI ***30*** *16:25:26.0±0.0, 26°.10N×58°.20E, h10km, mb4.7/6, mB4.8/5, Ms4.3/2, Ms7 4.0/2*
DSN ***30*** *16:25:28.2±2.6, 26°.71N×58°.37E, h10km, ML4.6/10, Error ellipse: s-maj=36.4km s-min=13.2km az=6.0*
IDC ***30*** *16:25:30.4±0.7, 26°.59N×58°.01E, h0km, mb3.8/21, mb1 3.9/25, mb1mx3.8/56, mbtmp3.8/25, ML3.4/4, MS3.5/14, Ms1 3.5/14, ms1mx3.3/37, Error ellipse: s-maj=15.6km s-min=13.1km az=137.0*
ISCJB ***30*** *16:25:31.2±0.2, 26°.67N±0°.02×58°.05E±0°.03, h10km, mb4.1/42, MS3.5/16, Error ellipse: s-maj=4.2km s-min=2.9km az=24.9*
TEH ***30*** *16:25:31.5, 26°.78N×57°.94E, h9km, ML4.5*
NEIC ***30*** *16:25:32.1±2.1, 26°.61N×57°.92E, h10km±1km, mb4.3/19, ML4.2(THR), MN4.5(TEH), Error ellipse: s-maj=11.4km s-min=9.1km az=121.0*
OMAN ***30*** *16:25:33.1±1.6, 26°.99N×58°.16E, h32km±64km, Error ellipse: s-maj=84.3km s-min=13.5km az=36.0*
MOS ***30*** *16:25:33.9±1.4, 26°.55N×58°.11E, h33km, mb4.4/16, Error ellipse: s-maj=10.2km s-min=6.6km az=83.6*

ISC 30 16:25:32.9±0.4, 26°.63N±0°.03×57°.96E±0°.03, h10km, n165, σ1§81/169, mb4.2/48, MS3.5/16, 1C-5D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**1.00**	**190**	*e*Pg	**Pn**	**16 25 54.3**	**+1.3**
KHNJ	**Kahnooj**	**1.33**	**350**	*e*Pg	**Pn**	**16 25 53.8**	**-3.8**
NIAN	**Nian**	**1.36**	**313**	*e*Pg	**Pn**	**16 25 57.2**	**-0.8**
NIAN				IAMB	IAmb	16 26 34.5	
	comp=Z,0.0nm,0.7s						
BANOM	**Banah**	**1.65**	**245**	*e*P	**Pb**	**16 26 02.4**	**-1.0**
	SNR=204						
BANOM	**Banah**	**1.65**	**245**	P	**Pg**	**16 26 03.8**	**-0.6**
	SNR=61						
BANOM				S	**Sg**	**16 26 28.4**	**+2.6**
SHME	**Shamm**	**1.73**	**251**	*e*P	**Pb**	**16 26 03.7**	**-1.1**
	SNR=45						
SHME				S	**Sg**	**16 26 30.6**	**+2.0**
SHME	**Shamm**	**1.73**	**251**	*e*Pn	**Pb**	**16 26 03.9**	**-0.9**
GENO	**Geno**	**1.77**	**296**	IAMB	IAmb	16 26 35.8	
	comp=Z,0.0nm,0.5s						
GENO				*e*Pn	**Pn**	**16 26 04.1**	**+0.4**
MDH	**Madha**	**2.00**	**229**	*e*P	**Pn**	**16 26 05.4**	**-1.2**
	SNR=51						
MDH	**Madha**	**2.00**	**229**	P	**Pn**	**16 26 05.5**	**-1.2**
	SNR=51						
MDH				S	**Sn**	**16 26 31.8**	**+0.1**
MDH	**Madha**	**2.00**	**229**	*e*Pn	**Pn**	**16 26 05.5**	**-1.2**
MSFE	**Esma-Masafi**	**2.06**	**232**	*e*P	**Pn**	**16 26 06.7**	**-0.8**
	SNR=15						
MSFE	**Esma-Masafi**	**2.06**	**232**	*e*Pn	**Pn**	**16 26 07.3**	**-0.2**
UOSS	**Minazif**	**2.31**	**224**	*e*Pn	**Pn**	**16 26 09.6**	**-1.3**
UOSS	**Minazif**	**2.31**	**224**	P	**Pn**	**16 26 10.0**	**-1.0**
UOSS	**Minazif**	**2.31**	**224**	P	**Pn**	**16 26 11.9**	**+1.0**
UMQ	**Umm Al-Quwin**	**2.34**	**242**	P	**Pn**	**16 26 11.8**	**+0.4**
UMQ	**Umm Al-Quwin**	**2.34**	**242**	P	**Pg**	**16 26 18.4**	**+0.7**
	SNR=6.5						
UMQ	**Umm Al-Quwin**	**2.34**	**242**	*e*Pn	**Pb**	**16 26 14.4**	**-0.7**
HATD	**Hatta, Dubai**	**2.44**	**223**	*e*P	**Pn**	**16 26 11.5**	**-1.3**
	SNR=16						
HATD	**Hatta, Dubai**	**2.44**	**223**	P	**Pb**	**16 26 16.2**	**-0.6**
	SNR=17						
HATD	**Hatta, Dubai**	**2.44**	**223**	*e*Pn	**Pn**	**16 26 11.5**	**-1.3**
CHBR	**Chabahar**	**2.49**	**114**	*e*Pn	**Pb**	**16 26 16.7**	**-1.0**
ASHO	**Ashiyiah**	**2.59**	**222**	*e*P	**Pn**	**16 26 14.3**	**-0.6**
	SNR=34						
ASHO	**Ashiyiah**	**2.59**	**222**	P	**Pn**	**16 26 15.7**	**+0.8**
	SNR=39						
ASHO	**Ashiyiah**	**2.59**	**222**	*e*Pn	**Pn**	**16 26 15.5**	**+0.7**
NAZ	**Nazwa, Dubai**	**2.64**	**232**	*e*P	**Pn**	**16 26 15.4**	**-0.1**
	SNR=28						
NAZ	**Nazwa, Dubai**	**2.64**	**232**	P	**Pb**	**16 26 21.1**	**+0.8**
	SNR=16						
NAZ	**Nazwa, Dubai**	**2.64**	**232**	*e*Pn	**Pb**	**16 26 18.4**	**-1.8**
SOHO	**SOHO**	**2.80**	**208**	P	**Pn**	**16 26 16.4**	**-1.3**
	SNR=54						
FAQ	**Al Faqa, Dubai**	**2.84**	**229**	*i* P	**Pn**	**16 26 20.3**	**+2.0**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**2.84**	**229**	P	**Pb**	**16 26 21.0**	**-2.7**
	SNR=16						
FAQ	**Al Faqa, Dubai**	**2.84**	**229**	*e*Pn	**Pn**	**16 26 20.6**	**+2.3**
HOQ	**Hoqain**	**3.09**	**191**	P	**Pn**	**16 26 21.4**	**-0.4**
	SNR=19						
HOQ	**Hoqain**	**3.09**	**191**	*e*Pn	**Pn**	**16 26 21.1**	**-0.6**
BIDO	**Bidbid**	**3.10**	**177**	P	**Pn**	**16 26 22.0**	**+0.1**
	SNR=17						
BIDO				S	**Sn**	**16 26 59.2**	**+0.3**
BIDO	**Bidbid**	**3.10**	**177**	*e*Pn	**Pn**	**16 26 21.2**	**-0.6**
ASUD	**Al Ashush, Dub**	**3.10**	**231**	P	**Pn**	**16 26 24.4**	**+2.6**
	SNR=64						
ASUD	**Al Ashush, Dub**	**3.10**	**231**	*e*Pn	**Pn**	**16 26 24.5**	**+2.6**
NGRK	**Negar Kerman**	**3.19**	**340**	*e*Pn	**Pn**	**16 26 24.2**	**+0.7**
NGRK				IAMB	IAmb	16 27 14.4	
	comp=Z,0.0nm,0.6s						
ALNE	**Al Ain**	**3.25**	**218**	*i* P	**Pn**	**16 26 25.3**	**+1.4**
	SNR=16						
ALNE	**Al Ain**	**3.25**	**218**	*e*Pn	**Pn**	**16 26 25.9**	**+2.0**
AJN	**Ajban**	**3.38**	**233**	P	**Pb**	**16 26 31.3**	**-1.6**
	SNR=6.4						
AJN	**Ajban**	**3.38**	**233**	*e*Pn	**Pb**	**16 26 32.9**	**0.0**
WSAR	**Wadi Sarin**	**3.43**	**170**	Pn	**Pn**	**16 26 26.2**	**-0.2**
	comp=Z,26nm,0.3s,baz=345,slow=6.8,SNR=874						
WSAR				Sn	**Sn**	**16 27 06.8**	**-0.4**
	comp=Z,89nm,0.3s,baz=74,slow=19,SNR=21						
WSAR	**Wadi Sarin**	**3.43**	**170**	P	**Pn**	**16 26 27.1**	**+0.7**
TVBK	**TV Kerman**	**3.51**	**343**	*e*Pn	**Pn**	**16 26 28.4**	**+0.6**
TVBK				IAMB	IAmb	16 27 33.0	
	comp=Z,0.0nm,0.8s						
ARQ	**Araqi**	**3.53**	**202**	P	**Pb**	**16 26 32.0**	**-3.5**
	SNR=20						
SMDO	**Samad**	**3.56**	**179**	P	**Pn**	**16 26 29.0**	**+0.7**
	SNR=46						
ZHSF	**Zahedan**	**3.87**	**39**	*e*Pn	**Pn**	**16 26 32.2**	**-0.5**
BSY	**Bisya**	**3.93**	**190**	P	**Pn**	**16 26 35.3**	**+2.0**
	SNR=39						
KHGB	**Koh Gabri**	**3.95**	**341**	*e*Pn	**Pn**	**16 26 35.2**	**+1.4**
KHGB				IAMB	IAmb	16 27 40.2	
	comp=Z,0.0nm,0.9s						
GHIR	**Ghir-Karzin**	**4.72**	**292**	*e*Pn	**Pn**	**16 26 45.5**	**+1.3**
ISRV	**Sarvestan**	**5.09**	**304**	*e*Pn	**Pn**	**16 26 49.9**	**+0.4**
BSRN	**Basiran**	**5.41**	**11**	*e*Pn	**Pn**	**16 26 53.1**	**-0.7**
IMEH	**Mehriz**	**5.58**	**329**	*e*Pn	**Pn**	**16 26 56.0**	**-0.1**
IKAZ	**Kazeroun**	**6.25**	**302**	*e*Pn	**Pn**	**16 27 04.7**	**-0.7**
ITEG	**Tejag**	**6.28**	**6**	*e*Pn	**Pn**	**16 27 05.7**	**-0.1**
IRAM	**Ramesheh**	**7.10**	**318**	*e*Pn	**Pn**	**16 27 16.2**	**-0.8**
JHBN	**Jahan bin**	**8.46**	**313**	*e*Pn	**Pn**	**16 27 36.3**	**+0.5**
GEYT	**Alibeck**	**11.27**	**1**	Pn	**Pn**	**16 28 14.6**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=188,slow=9.7,SNR=3.0						
GEYT				Lg	Lg	16 31 22.2	
	comp=Z,0.1nm,0.3s,baz=190,slow=16,SNR=2.4						
GEYT				LR	LR	16 33 17.5	
	comp=Z,216nm,19.2s,baz=85,slow=41						
GYA0B	**ALIBECK ARRAY**	**11.27**	**1**	*e*Pn	**Pn**	**16 28 12.0**	**-2.0**
RAYN	**Ar Rayn**	**11.71**	**257**	*e*Pn	**Pn**	**16 28 16.0**	**-4.0**
RAYN	**Ar Rayn**	**11.71**	**257**	*e*P	**Pn**	**16 28 16.0**	**-4.0**
THW	**Thamme Wali**	**13.46**	**60**	P	**Pn**	**16 28 43.3**	**-0.6**
CEP	**Cherat**	**14.02**	**56**	P	**Pn**	**16 28 51.1**	**-0.7**
NIL	**Nilore**	**14.96**	**58**	*e*Pn	**Pn**	**16 29 03.5**	**-0.9**
	comp=Z,18nm,0.8s						
NIL	**Nilore**	**14.96**	**58**	*e*P	**Pn**	**16 29 03.5**	**-0.9**
NIL				pmax	pmax		
	comp=Z,18nm,0.8s						
CHCP	**Chirah Chowk**	**14.97**	**58**	P	**Pn**	**16 29 03.0**	**-1.6**
CHGR	**Chuyangaron**	**15.24**	**35**	*e*Pn	**Pn**	**16 29 07.8**	**-0.4**
	comp=Z,25nm,1.3s						
GAR	**Garm**	**16.11**	**37**	*e*Pn	**Pn**	**16 29 19.1**	**-0.4**
	comp=Z,14nm,1.1s						
GAR	**Garm**	**16.11**	**37**	*e*P	**Pn**	**16 29 19.1**	**-0.4**
GAR				pmax	pmax		
	comp=Z,14nm,1.1s						
GNI	**Garni**	**17.40**	**324**	P	**Pn**	**16 29 36.0**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=48,slow=19,SNR=2.4						
GNI				LR	LR	16 37 27.7	
	comp=Z,135nm,18.2s,baz=116,slow=41						
GNI	**Garni**	**17.40**	**324⇓**	*e*P	**Pn**	**16 29 35.8**	**-0.1**
GNI				pmax	pmax		
	comp=Z,15nm,0.9s						
ASF	**Jabal al Asfar**	**19.15**	**292**	P	**Pn**	**16 29 56.7**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=215,slow=4.0,SNR=3.3						
ASF				S	Sn	16 33 17.1	-15
	comp=Z,0.2nm,0.3s,baz=45,slow=19,SNR=2.2						
KK31	**Karatay Array**	**19.36**	**29**	*e*P	**P**	**16 29 58.0**	**-0.6**
	comp=Z,6.3nm,0.9s						
KK31	**Karatay Array**	**19.36**	**29**	*e*P	**P**	**16 29 58.0**	**-0.6**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KKAR	**Karatay Array**	**19.36**	**29**	*e*P	**P**	**16 29 58.0**	**-0.6**
	comp=Z,6.3nm,0.9s						
KKAR	**Karatay Array**	**19.36**	**29**	*e*P	**P**	**16 29 58.0**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH	**Kashi**	**19.78**	**45**	P	**Pn**	**16 30 04.3**	**-0.5**
KSH				pP	sP	16 30 08.5	+0.5
KSH				pmax	pmax		
	comp=Z,33nm,1.1s						
KSH				pmax	pmax		
	comp=Z,160nm,5.0s						
KSH				LR	LR		
	comp=Z,690nm,9.0s						
KSH				LR	LR		
	comp=Z,580nm,11.5s						
KSH				LR	LR		
	comp=Z,420nm,9.9s						
ZEI	**Tsey**	**19.79**	**328**	*e*P	**Pn**	**16 30 11.5**	**+6.5**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.4s						
NCK	**Nalchik**	**20.48**	**329⇓**	*e*P	Pn	16 30 14.3	+1.4
NCK				pmax	pmax		
	comp=Z,3.0nm,0.2s						
EIL	**Elat**	**20.51**	**284**	P	**P**	**16 30 11.2**	**0.0**
	comp=Z,8.4nm,0.7s,baz=41,slow=3.8,SNR=9.1						
MMAI	**Mount Meron Ar**	**20.56**	**293**	P	**P**	**16 30 12.1**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=100,slow=15,SNR=6.5						
MMAI				LR	LR	16 40 24.2	
	comp=Z,208nm,18.3s,baz=95,slow=43						
ATD	**Arta Tunnel**	**20.69**	**226**	P	**P**	**16 30 12.3**	**-1.1**
	comp=Z,5.1nm,0.7s,baz=66,slow=20,SNR=2.2						
ATD				LR	LR	16 40 21.5	
	comp=Z,77nm,18.6s,baz=27,slow=43						
NEY	**Neytrino**	**20.70**	**327⇓**	*e*P	Pn	16 30 16.6	+0.9
NEY				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AAK	**Ala-Archa**	**20.92**	**36**	P	**P**	**16 30 14.9**	**-0.8**
	comp=Z,6.5nm,0.8s,baz=211,slow=4.5,SNR=6.6						
AAK				LR	LR	16 39 40.9	
	comp=Z,109nm,18.3s,baz=220,slow=41						
AAK	**Ala-Archa**	**20.92**	**36**	*e*Pn	Pn	16 30 18.1	-0.2
	comp=Z,18nm,1.2s						
AAK	**Ala-Archa**	**20.92**	**36**	*e*P	Pn	16 30 18.1	-0.1
AAK				pmax	pmax		
	comp=Z,18nm,1.2s						
KIV	**Kislovodsk**	**21.25**	**328**	*e*P	**P**	**16 30 22.9**	**+3.7**
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				MLR	MLR		
	comp=Z,118nm,14.0s						
BOOM	**Boomskoye usch**	**21.60**	**38**	*e*P	**P**	**16 30 22.1**	**-1.0**
	comp=Z,14nm,0.8s						
BOOM	**Boomskoye usch**	**21.60**	**38**	*e*P	**P**	**16 30 22.1**	**-1.0**
BOOM				pmax	pmax		
	comp=Z,14nm,0.8s						
KDJ	**Kajisay**	**22.08**	**41**	*e*P	**P**	**16 30 26.6**	**-1.5**
	comp=Z,20nm,0.9s						
KDJ	**Kajisay**	**22.08**	**41**	*e*P	**P**	**16 30 26.7**	**-1.5**
KDJ				pmax	pmax		
	comp=Z,20nm,0.9s						
ABKAR	**Akbulak array**	**22.64**	**3**	*e*P	**P**	**16 30 33.9**	**-0.1**
	comp=Z,9.1nm,1.0s						
AKTO	**Aktyubinsk**	**23.77**	**0**	P	**P**	**16 30 43.5**	**-2.0**
	comp=Z,5.0nm,0.8s,baz=178,slow=7.7,SNR=6.4						
AKTO				LR	LR	16 41 36.2	
	comp=Z,66nm,19.1s,baz=165,slow=41						
BR101	**Keskin Array S**	**24.09**	**309**	*e*P	**P**	**16 30 49.0**	**+0.2**
BR131	**Keskin Array S**	**24.09**	**309**	*e*P	**P**	**16 30 49.0**	**+0.2**
	comp=Z,6.8nm,0.9s						
BRTR	**Keskin Array B**	**24.09**	**309**	P	**P**	**16 30 49.0**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=130,slow=11,SNR=11						
BRTR				LR	LR	16 42 45.3	
	comp=Z,163nm,19.6s,baz=110,slow=43						
BRTR	**Keskin Array B**	**24.09**	**309**	*i* P	**P**	**16 30 49.9**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ANN	**Anapa**	**24.51**	**323**	*e*P	**P**	**16 30 47.6**	**-4.7**
ANN				*e**PP	**pP**	**16 30 53.8**	**-1.9**
ANN				*e*S	**S**	**16 35 04.3**	**-8.4**
ANN				pmax	pmax		
	comp=Z,55nm,1.1s						
MAKZ	**Makanchi**	**27.67**	**37**	*e*P	**P**	**16 31 19.8**	**-1.1**
	comp=Z,8.4nm,1.5s						
MAKZ	**Makanchi**	**27.67**	**37**	*e*P	**P**	**16 31 19.8**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MK32	**Makanchi Array**	**27.83**	**37**	*e*P	**P**	**16 31 21.1**	**-1.3**
MKAR	**Makanchi Array**	**27.83**	**37**	P	**P**	**16 31 21.1**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=225,slow=6.7,SNR=3.3						
BVAR	**Borovoye Array**	**27.95**	**16**	P	**P**	**16 31 23.6**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=209,slow=8.3,SNR=8.1						
BRVK	**Borovoye**	**27.96**	**16⇓**	*e*P	**P**	**16 31 24.9**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**28.66**	**28**	P	**P**	**16 31 28.2**	**-1.5**
	comp=Z,0.8nm,0.2s,baz=225,slow=8.9,SNR=2.5						
KURK	**Kurchatov**	**28.77**	**28**	P	**P**	**16 31 28.2**	**-2.4**
WMQ	**Urumqi**	**29.52**	**47**	*e*P	**P**	**16 31 36.3**	**-1.2**
WMQ				LR	LR		
	comp=Z,97nm,25.1s						
WMQ				LR	LR		
	comp=Z,220nm,29.2s						
ARU	**Arti**	**29.78**	**1**	*d i* P	**P**	**16 31 41.9**	**+2.4**
ARU						16 32 31.0	
ARU				S	**S**	**16 36 39.3**	**+3.5**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AKASG	**Malin Array Be**	**32.52**	**325**	P	**P**	**16 32 02.9**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=132,slow=8.5,SNR=4.1						
AKASG	**Malin Array Be**	**32.52**	**325**	*i* P	**P**	**16 32 05.4**	**+1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKBB	**Malin Array Si**	**32.52**	**325**	*e*P	**P**	**16 32 03.3**	**-0.5**
	comp=Z,18nm,1.5s						
AKBB	**Malin Array Si**	**32.52**	**325**	*e*P	**P**	**16 32 03.3**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,18nm,1.5s						
ZALV	**Zalesovo Beam**	**33.73**	**29**	P	**P**	**16 32 11.9**	**-2.4**
	comp=Z,0.8nm,0.5s,baz=229,slow=9.6,SNR=3.5						
ZALV				LR	LR	16 47 32.4	
	comp=Z,38nm,18.6s,baz=224,slow=39						
ZAA1	**Zalesovo Array**	**33.74**	**29**	*e*P	**P**	**16 32 11.9**	**-2.4**
KMBO	**Kilima Mbogo**	**34.06**	**219**	P	**P**	**16 32 16.2**	**-1.6**
	comp=Z,0.6nm,0.2s,baz=52,slow=19,SNR=1.9						
KMBO				LR	LR	16 47 36.3	
	comp=Z,81nm,19.0s,baz=96,slow=39						
KMBO	**Kilima Mbogo**	**34.06**	**219**	*e*P	**P**	**16 32 16.2**	**-1.6**
	comp=Z,4.9nm,1.3s						
GTA	**Gaotai**	**37.02**	**59**	*e*P	**P**	**16 32 44.8**	**+1.8**
GTA				pP	sP	16 32 54.3	+6.5
GTA				sP	pP	16 32 58.5	+12
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,92nm,5.6s						
GTA				LR	LR		
	comp=Z,130nm,19.0s						
GTA				LR	LR		
	comp=Z,140nm,20.0s						
OJC	**Ojcow**	**37.46**	**319**	*e*P	**P**	**16 32 46.7**	**+0.3**
	comp=Z,5.2nm,0.8s						
OJC	**Ojcow**	**37.46**	**319**	*e*P	**P**	**16 32 46.7**	**+0.3**
OJC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CONA	**Conrad Observa**	**39.05**	**314**	pP	**P**	**16 33 04.4**	**+4.5**
	comp=Z,0.9nm,0.6s						
ARSA	**Arzberg**	**39.07**	**313**	pP	P	16 33 04.6	+4.6
	comp=Z,1.6nm,0.8s						
LZH	**Lanzhou**	**39.99**	**65**	*e*P	**P**	**16 33 04.0**	**-4.0**
LZH				pP	pP	16 33 07.8	-3.7
LZH				PP	**PnPn**	**16 34 42.8**	**-0.4**
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,4.9s						
MOA	**Molln**	**40.05**	**314**	*e*pP	**P**	**16 33 10.8**	**+2.6**
	comp=Z,4.7nm,1.1s						
KMI	**Kunming**	**40.16**	**82**	P	P	16 33 04.0	-5.7
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
GEC2	**GERESS Array S**	**40.69**	**315**	*e*P	**P**	**16 33 13.7**	**+0.1**
	comp=Z,7.1nm,1.4s						
GEC2	**GERESS Array S**	**40.69**	**315**	*e*P	**P**	**16 33 13.7**	**+0.1**
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GERES	**GERESS Array B**	**40.69**	**315**	P	**P**	**16 33 13.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=95,slow=9.0,SNR=3.3						
GERES				LR	LR	16 53 46.5	
	comp=Z,57nm,19.7s,baz=100,slow=42						
KHC	**Kasperske Hory**	**40.85**	**315**	*e*P	**P**	**16 33 16.1**	**+1.2**
	comp=Z,3.7nm,1.2s						
FIA0	**FINESS Array S**	**40.87**	**337**	*e*P	**P**	**16 33 14.4**	**-0.3**
FIA0	**FINESS Array S**	**40.87**	**337**	*e*P	**P**	**16 33 14.4**	**-0.3**
FINES	**FINESS Array B**	**40.87**	**337**	P	**P**	**16 33 14.4**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=125,slow=9.6,SNR=8.2						
FINES				LR	LR	16 52 47.9	
	comp=Z,70nm,18.8s,baz=182,slow=40						
FINES	**FINESS Array B**	**40.87**	**337**	*i* P	**P**	**16 33 17.6**	**+2.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WTTA	**Wattenberg**	**41.63**	**312**	*e*P	**P**	**16 33 20.8**	**-0.6**
	comp=Z,1.4nm,0.5s						
WATA	**Walderalm**	**41.69**	**312**	*e*pP	**P**	**16 33 23.4**	**+1.6**
	comp=Z,1.1nm,0.5s						
CLL	**Collm**	**41.87**	**318**	*e*P	**P**	**16 33 24.0**	**+0.9**
CLL				*e*		16 33 33.0	
SQTA	**Sankt Quirin**	**41.90**	**312**	*e*P	**P**	**16 33 22.8**	**-0.8**
	comp=Z,1.7nm,0.5s						
MOTA	**Moosalm**	**42.00**	**312**	*e*pP	**P**	**16 33 24.5**	**+0.1**
	comp=Z,0.6nm,0.4s						
FETA	**Feichten**	**42.18**	**312**	*e*pP	**P**	**16 33 27.0**	**+1.1**
	comp=Z,3.0nm,0.6s						
DAVA	**Damuels**	**42.80**	**312**	P	**P**	**16 33 30.2**	**-0.7**
	comp=Z,3.9nm,0.7s						
SONA0	**Songino Array**	**43.15**	**47**	*e*P	**P**	**16 33 33.0**	**-0.7**
SONM	**Songino Array**	**43.15**	**47**	P	**P**	**16 33 33.1**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=262,slow=10.0,SNR=3.5						
SONM				LR	LR	16 53 55.8	
	comp=Z,95nm,20.5s,baz=255,slow=40						
XAN	**Xi'an**	**44.23**	**68**	P	**P**	**16 33 45.5**	**+3.0**
XAN				pP	sP	16 33 55.0	+7.6
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**46.10**	**58**	P	**P**	**16 33 53.3**	**-4.1**
HHC

*NEIC **30** 16:39:13.9±1.4, 14°.58S×75°.29W, h47km±3km, mb4.9/120, ML4.6(ARE), Error ellipse: s-maj=12.3km s-min=8.8km az=46.0*

NEIC Felt [III] at Palpa and [II] at Nazca.

*IDC **30** 16:39:15.3±0.6, 14°.59S×75°.22W, h54km±4km, mb4.4/23, mb1 4.5/29, mb1mx4.4/37, mbtmp4.6/29, MS3.9/20, Ms1 3.8/20, ms1mx3.7/28, Error ellipse: s-maj=15.4km s-min=7.3km az=63.0*

*GCMT **30** 16:39:16.9±0.4, 14°.57S±0°.03×75°.56W±0°.03, h47km±2km, MW5.0/59, Moment Tensor Solution. s43,c49; s59,c72; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}2.86±.18; $M_{\theta\theta}$-0.35±.13; $M_{\phi\phi}$-2.51±.15; $M_{r\theta}$0.02±.11; $M_{\theta\phi}$2.01±.11; $M_{\phi r}$-1.55±.15; Best double couple: $M_0$3.66700×10^16^ NP1:ϕ_s165.00000°, δ58.00000°, λ109.00000°. NP2: ϕ_s311.00000°, δ37.00000°, λ62.00000°. Principal axes: T 3.3550, Plg70.0000°, Azm118.0000°; N 0.6280, Plg16.0000°, Azm334.0000°; P -3.9790, Plg11.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **30** 16:39:26.8±1.4, 14°.63S×75°.20W, h161km±26km, mb5.0*

ISC 30 16:39:14.6±0.5, 14°.62S±0°.05×75°.26W±0°.06, h49km±4km, h50km:pP-P, n568, σ1$24/568, mb4.9/130, MS4.0/22, 6C-6D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.03**	**329**	P	**Pn**	**16 39 59.3**	**-0.9**
62nm,0.3s,baz=183,slow=9.4,SNR=99							
NNA				S	**Sn**	**16 40 37.8**	**+2.4**
584nm,0.3s,baz=201,slow=16,SNR=7.9							
NNA	**Nana**	**3.03**	**329**	*i* P	**Pn**	**16 40 01.3**	**+1.1**
MNMC	**Minye Minye**	**7.04**	**130**	*e*Pn	**Pn**	**16 40 54.9**	**-0.5**
LPAZ	**La Paz**	**7.07**	**105**	P	**Pn**	**16 40 59.5**	**+3.3**
15nm,0.3s,baz=296,slow=10.0,SNR=384							
LPAZ				LR	LR	16 44 09.2	
comp=Z,1μm,21.5s,baz=280,slow=42							
LPAZ	**La Paz**	**7.07**	**105**	*e*Pn	**Pn**	**16 40 59.6**	**+3.5**
LPAZ	**La Paz**	**7.07**	**105**	*e*P	**Pn**	**16 40 59.6**	**+3.5**
PB11	**IPOC Station P**	**7.41**	**134**	*e*Pn	**Pn**	**16 40 59.5**	**-0.8**
GO01	**Chusmiza**	**7.67**	**132**	*e*Pn	**Pn**	**16 41 03.8**	**-0.4**
ATAH	**Atahualpa**	**8.05**	**337**	P	**Pn**	**16 41 09.8**	**+0.5**
2.2nm,0.3s,baz=202,slow=3.8,SNR=16							
ATAH				S	**Sn**	**16 42 39.6**	**+0.4**
6.7nm,0.3s,baz=86,slow=0.7,SNR=3.8							
PB01	**IPOC Station P**	**8.43**	**140**	*e*Pn	**Pn**	**16 41 14.0**	**-0.2**
PB04	**IPOC Station P**	**9.08**	**148**	*e*Pn	**Pn**	**16 41 22.3**	**-1.0**
PB10	**IPOC Station P**	**9.90**	**154**	*e*Pn	**Pn**	**16 41 32.4**	**-2.0**
LVC	**Limon Verde**	**9.97**	**144**	P	**Pn**	**16 41 37.3**	**+1.7**
8.9nm,0.3s,baz=296,slow=1.5,SNR=23							
LVC				S	**Sn**	**16 43 22.3**	**-4.0**
7.4nm,0.3s,baz=75,slow=22,SNR=6.4							
LVC				LR	LR	16 45 10.5	
comp=Z,692nm,21.9s,baz=308,slow=36							
GO02	**Mina Guanaco**	**11.77**	**154**	*e*Pn	**Pn**	**16 42 00.1**	**0.0**
GO03	**Copiap**	**13.73**	**161**	*e*Pn	**Pn**	**16 42 27.1**	**+0.3**
SIV	**San Ignacio**	**13.75**	**98**	P	**Pn**	**16 42 25.3**	**-1.8**
1.4nm,0.3s,baz=283,slow=15,SNR=51							
SIV				S	**Sn**	**16 44 57.0**	**-1.4**
baz=161,slow=8.3,SNR=3.2							
SIV				LR	LR	16 48 28.7	
comp=Z,2μm,19.7s,baz=287,slow=40							
PTLC	**Puerto Leguiza**	**14.70**	**2**	*e*P	Pn	16 42 32.7	-7.0
LCO	**Las Campanas**	**14.93**	**164**	*e*Pn	**Pn**	**16 42 42.9**	**0.0**
LCO	**Las Campanas**	**14.93**	**164**	*e*P	**Pn**	**16 42 42.9**	**0.0**
LCO	**Las Campanas**	**14.93**	**164**	*e*P	**P**	**16 42 49.6**	**+2.0**
OTAV	**Otavalo**	**15.09**	**348**	*e*P	**Pn**	**16 42 43.8**	**-1.5**
20nm,1.0s							
OTAV	**Otavalo**	**15.09**	**348**	*e*P	**Pn**	**16 42 43.8**	**-1.5**
OTAV				pmax	pmax		
comp=Z,20nm,1.0s							
OTAV	**Otavalo**	**15.09**	**348**	*e*P	**P**	**16 42 51.5**	**+1.9**
OTAV	**Otavalo**	**15.09**	**348**	*e*P	**P**	**16 42 52.3**	**+2.7**
OTAV				*e*S	**S**	**16 45 41.3**	**-5.6**
GO04	**Tololo Observa**	**16.02**	**166**	*e*P	**Pn**	**16 42 57.2**	**+0.3**
comp=Z,192nm,1.3s							
FLOC	**Florencia**	**16.10**	**359**	*e*P	**Pn**	**16 42 58.0**	**+0.2**
CRUC	**La Cruz**	**16.17**	**354**	*e*P	**P**	**16 43 01.4**	**-0.1**
BBAC	**Balboa, Cauca**	**16.65**	**353**	*e*P	**P**	**16 43 06.7**	**0.0**
SOTA	**Rioblanco**	**16.70**	**355**	*e*P	**P**	**16 43 07.4**	**-0.1**
PCON	**Cinco Dias**	**16.87**	**356**	*e*P	**P**	**16 43 13.1**	**+3.6**
POPC	**Popayan, Colom**	**17.10**	**355**	*e*P	**P**	**16 43 12.0**	**+0.3**
MARP	**Paez Belalcaza**	**17.36**	**358**	*e*P	**P**	**16 43 15.7**	**+1.1**
CFA	**Coronel Fontan**	**18.09**	**160**	P	**Pn**	**16 43 22.6**	**+0.1**
comp=Z,0.7nm,0.3s,baz=337,slow=11,SNR=60							
CFA				LR	LR	16 50 17.3	
comp=Z,160nm,20.4s,baz=294,slow=37							
PRAC	**Prado**	**18.21**	**1**	*e*P	**Pn**	**16 43 25.3**	**+1.3**
ORTC	**Ortega, Tolima**	**18.41**	**0**	*e*P	**Pn**	**16 43 30.1**	**+3.8**
YOTC	**Yotoco, Valle**	**18.51**	**357**	*e*P	**P**	**16 43 26.1**	**-1.0**
VILC	**Villavicencio,**	**18.67**	**5**	*e*P	**Pn**	**16 43 32.5**	**+2.9**
PEL	**Peldehue**	**18.91**	**168**	*e*P	**P**	**16 43 31.0**	**-0.3**
comp=Z,57nm,1.1s							
PEL	**Peldehue**	**18.91**	**168**	*e*P	**P**	**16 43 31.0**	**-0.3**
PEL				pmax	pmax		
comp=Z,57nm,1.1s							
CHIC	**Chingaza**	**19.18**	**5**	*e*P	**Pn**	**16 43 41.3**	**+5.3**
ROSC	**El Rosal**	**19.35**	**3**	P	**P**	**16 43 36.5**	**-0.1**
comp=Z,0.7nm,0.3s,baz=162,slow=20,SNR=3.1							
ROSC	**El Rosal**	**19.35**	**3**	*e*P	**P**	**16 43 35.1**	**-1.5**
comp=Z,39nm,1.1s							
ROSC	**El Rosal**	**19.35**	**3**	*e*P	**Pn**	**16 43 44.0**	**+5.9**
RREF	**El Recreo**	**19.39**	**360**	*e*P	**Pn**	**16 43 42.0**	**+3.2**
GUY2C	**Guyana, Caldas**	**19.71**	**360**	*e*P	**Pn**	**16 43 43.2**	**+0.8**
NORC	**Norcasia**	**20.05**	**1**	*e*P	Pn	16 43 46.6	+0.6
CPUP	**Villa Florida**	**20.41**	**128**	P	**P**	**16 43 48.9**	**+1.2**
comp=Z,15nm,0.8s,baz=292,slow=13,SNR=11							
CPUP				LR	LR	16 52 45.1	
comp=Z,231nm,19.1s,baz=308,slow=40							
CPUP	**Villa Florida**	**20.41**	**128**	*e*P	Pn	16 43 49.5	-0.7
PTGA	**Pitinga**	**20.46**	**49**	P	**P**	**16 43 48.4**	**0.0**
comp=Z,26nm,0.8s,baz=220,slow=13,SNR=28							
PTGA				LR	LR	16 52 16.7	
comp=Z,488nm,21.6s,baz=229,slow=38							
PTGA	**Pitinga**	**20.46**	**49**	*e*P	Pn	16 43 49.6	-1.2
comp=Z,114nm,1.4s							
PTGA	**Pitinga**	**20.46**	**49**	*e*P	Pn	16 43 51.7	+0.8
RUSC	**La Rusia**	**20.49**	**6**	*e*P	Pn	16 43 52.0	+0.3
GO05	**Hualа**	**20.53**	**172**	*e*P	**P**	**16 43 49.2**	**+0.3**
comp=Z,41nm,1.3s							
HELC	**Santa Helena**	**20.67**	**359**	*e*P	Pn	16 43 55.8	+2.1
PTBC	**PUERTO BERRIO,**	**21.03**	**2**	*e*P	**P**	**16 43 54.6**	**+0.1**
TAMC	**Tame, Arauca**	**21.20**	**10**	*e*P	**P**	**16 43 58.5**	**+2.3**
DBBC	**Dabeiba**	**21.51**	**357**	*e*P	**P**	**16 44 01.3**	**+1.6**
PAMC	**Pamplona, Colo**	**21.96**	**7**	*e*P	**P**	**16 44 06.9**	**+2.0**
ZARC	**Zaragoza, Cauc**	**21.97**	**1**	*e*P	**P**	**16 44 05.2**	**+0.7**
TRCB	**Terra Rica**	**22.90**	**114**	*e*P	**P**	**16 44 16.4**	**+2.0**
SDV	**Santo Domingo**	**23.80**	**11**	P	**P**	**16 44 24.0**	**+0.8**
comp=Z,25nm,0.8s,baz=214,slow=7.8,SNR=15							
SDV				LR	LR	16 53 21.0	
comp=Z,309nm,21.3s,baz=203,slow=36							
SDV	**Santo Domingo**	**23.80**	**11**	*e*P	**P**	**16 44 23.3**	**+0.1**
comp=Z,36nm,0.8s							
SDV	**Santo Domingo**	**23.80**	**11**	*e*P	**P**	**16 44 20.6**	**-2.7**
SDV	**Santo Domingo**	**23.80**	**11**	*e*P	**P**	**16 44 24.1**	**+0.8**
PTGB	**Pitanga**	**24.00**	**118**	*e*P	**P**	**16 44 26.3**	**+1.2**
ARGC	**Ariguani, Magd**	**24.34**	**2**	*e*P	**P**	**16 44 29.9**	**+1.9**
GO06	**Curarrehue**	**25.09**	**173**	*e*P	**P**	**16 44 34.3**	**-0.5**
comp=Z,26nm,1.0s							
FRTB	**Fartura**	**25.77**	**114**	*e*P	**P**	**16 44 43.7**	**+2.6**
BB19B	**Bebedouro**	**26.22**	**108**	*e*P	**P**	**16 44 47.1**	**+2.0**
BDFB	**Brasilia**	**26.31**	**96**	P	**P**	**16 44 46.0**	**-0.2**
comp=Z,5.5nm,0.6s,baz=269,slow=12,SNR=7.7							
BDFB				LR	LR	16 56 01.6	
comp=Z,788nm,19.7s,baz=252,slow=38							
BDFB	**Brasilia**	**26.31**	**96**	*e*P	**P**	**16 44 46.0**	**-0.2**
BDFB				*e*P	**P**	**16 44 46.4**	**+0.3**
PLCA	**Paso Flores**	**26.34**	**172**	P	**P**	**16 44 46.0**	**-0.1**
comp=Z,11nm,0.9s,baz=8.3,slow=11,SNR=16							
PLCA				PcP	**PcP**	**16 48 11.3**	**+0.2**
comp=Z,1.6nm,0.9s,baz=1.1,slow=4.2,SNR=3.0							
PLCA				LR	LR	16 53 45.8	
comp=Z,89nm,19.3s,baz=16,slow=33							
PLCA	**Paso Flores**	**26.34**	**172**	*e*P	**P**	**16 44 45.7**	**-0.4**
comp=Z,16nm,1.0s							
PLCA				*e*PcP	**PcP**	**16 48 11.3**	**+0.2**
PLCA	**Paso Flores**	**26.34**	**172**	*e*P	**P**	**16 44 45.0**	**-1.1**
RCLB	**Rio Claro- Sao**	**27.38**	**111**	*e*P	**P**	**16 44 58.6**	**+3.0**
PMNB	**Patos De Minas**	**27.88**	**102**	*e*P	**P**	**16 45 00.8**	**+0.7**
APG	**El Apazote**	**33.05**	**332**	P	**P**	**16 45 45.7**	**-0.2**
comp=Z,3.9nm,0.8s,baz=128,slow=22,SNR=4.8							
BSFB	**Barra de Sao F**	**33.19**	**102**	*e*P	**P**	**16 45 47.7**	**+0.8**
RIB01	**Linhares ES**	**33.63**	**103**	*e*P	**P**	**16 45 50.1**	**-0.7**
SJG	**San Juan**	**33.74**	**16**	P	**P**	**16 45 51.2**	**-0.4**
comp=Z,4.1nm,0.4s,baz=342,slow=9.6,SNR=3.0							
CMIG	**Matias Romero**	**36.98**	**328**	P	**P**	**16 46 19.7**	**+0.2**
comp=Z,2.9nm,0.8s,baz=104,slow=9.8,SNR=3.6							
EFI	**East Falkland**	**39.46**	**163**	*i* P	**P**	**16 46 40.3**	**+0.3**
EFI				pmax	pmax		
comp=Z,149nm,2.4s							
USHA	**Ushuaia**	**40.48**	**174**	P	**P**	**16 46 49.0**	**+0.6**
comp=Z,21nm,0.8s,baz=343,slow=5.2,SNR=10.0							
USHA				pP	**pP**	**16 47 03.5**	**+1.8**
comp=Z,14nm,0.8s,baz=319,slow=3.8,SNR=4.1							
455A	**Stateville**	**45.71**	**351**	P	**P**	**16 47 29.8**	**-1.1**
baz=170							
LNIG	**Linares**	**45.83**	**329**	*e*P	**P**	**16 47 31.3**	**-0.6**
comp=Z,12nm,1.1s							
453A	**Whigham**	**46.04**	**349**	P	**P**	**16 47 33.1**	**-0.3**
baz=168							
355A	**Pearson**	**46.27**	**351**	P	**P**	**16 47 35.0**	**-0.3**
baz=170							
350A	**Dozier**	**46.99**	**347**	P	**P**	**16 47 40.5**	**-0.5**
baz=165							
349A	**Repton**	**47.12**	**346**	P	**P**	**16 47 41.4**	**-0.6**
baz=164							
251A	**Midway**	**47.45**	**348**	P	**P**	**16 47 44.0**	**-0.5**
baz=167							
155A	**Kite**	**47.47**	**352**	P	**P**	**16 47 44.2**	**-0.4**
baz=171							
250A	**Grady**	**47.52**	**347**	P	**P**	**16 47 44.4**	**-0.6**
baz=166							
154A	**Montrose**	**47.56**	**351**	P	**P**	**16 47 45.0**	**-0.4**
baz=170							
249A	**Camden**	**47.70**	**346**	P	**P**	**16 47 46.0**	**-0.5**
baz=164							
Z59A	**Georgetown, SC**	**47.74**	**355**	P	**P**	**16 47 46.5**	**-0.2**
baz=175							
152A	**Waverly Hall**	**47.88**	**349**	P	**P**	**16 47 46.9**	**-0.9**
baz=168							
150A	**Eclectic**	**48.07**	**348**	P	**P**	**16 47 49.1**	**-0.2**
baz=166							
Z54A	**Sparta**	**48.13**	**351**	P	**P**	**16 47 49.2**	**-0.6**
baz=170							
149A	**Jones**	**48.23**	**347**	P	**P**	**16 47 49.8**	**-0.7**
baz=165							
Z53A	**Monticello**	**48.28**	**351**	P	**P**	**16 47 50.2**	**-0.7**
baz=169							
Z52A	**Williamson**	**48.33**	**350**	P	**P**	**16 47 50.8**	**-0.5**
baz=168							
GOGA	**Godfrey**	**48.40**	**351**	P	**P**	**16 47 51.0**	**-0.8**
baz=169							
148A	**Greensboro**	**48.45**	**346**	P	**P**	**16 47 51.3**	**-0.9**
baz=164							
HKT	**Hockley**	**48.55**	**336**	*e*P	**P**	**16 47 52.5**	**-0.3**
comp=Z,38nm,1.9s							
HKT	**Hockley**	**48.55**	**336**	*e*P	**P**	**16 47 52.6**	**-0.3**
HKT				pmax	pmax		
comp=Z,38nm,1.9s							
Z51A	**Franklin**	**48.59**	**349**	P	**P**	**16 47 52.6**	**-0.8**
baz=167							
Y57A	**Sumter**	**48.61**	**354**	P	**P**	**16 47 52.9**	**-0.5**
baz=173							
Z50A	**Ashland**	**48.68**	**348**	*e*P	**P**	**16 47 52.9**	**-1.1**
comp=Z,11nm,0.9s							
Z50A	**Ashland**	**48.68**	**348**	P	**P**	**16 47 53.3**	**-0.7**
baz=166							
Y55A	**Saluda**	**48.69**	**353**	P	**P**	**16 47 53.7**	**-0.3**
baz=172							
LRAL	**Lakeview Retre**	**48.69**	**347**	*e*P	**P**	**16 47 52.7**	**-1.3**
comp=Z,11nm,1.0s							
LRAL	**Lakeview Retre**	**48.69**	**347**	P	**P**	**16 47 53.3**	**-0.8**
baz=165							
Y54A	**Tignall**	**48.72**	**352**	P	**P**	**16 47 53.7**	**-0.6**
baz=170							
Z49A	**Columbiana**	**48.74**	**347**	P	**P**	**16 47 53.5**	**-0.9**
baz=166							
Y53A	**Monroe**	**48.85**	**351**	P	**P**	**16 47 54.7**	**-0.6**
baz=169							
X60A	**Albert Glenn T**	**48.99**	**357**	P	**P**	**16 47 56.2**	**-0.1**
baz=177							
Y51A	**Rockmart**	**49.14**	**349**	P	**P**	**16 47 56.7**	**-0.9**
baz=168,SNR=7.6							
X56A	**White Oak**	**49.14**	**354**	P	**P**	**16 47 57.1**	**-0.4**
baz=173							
X55A	**Grcelyn & Ava**	**49.19**	**353**	P	**P**	**16 47 57.1**	**-0.8**
baz=172							
Y50A	**Piedmont**	**49.26**	**348**	P	**P**	**16 47 57.6**	**-0.8**
baz=167							
X54A	**Belton**	**49.36**	**352**	P	**P**	**16 47 58.5**	**-0.7**
baz=171							
Y49A	**Blount Mountai**	**49.36**	**348**	P	**P**	**16 47 57.8**	**-1.4**
baz=166							
X53A	**Estanollee**	**49.44**	**351**	P	**P**	**16 47 59.1**	**-0.7**
baz=170							
W60A	**Pink Hill**	**49.45**	**357**	P	**P**	**16 47 58.7**	**-1.1**
baz=177							
W58A	**Raeford**	**49.51**	**356**	P	**P**	**16 48 00.1**	**-0.1**
baz=175							
PAULI	**Pauline**	**49.56**	**353**	*e*P	**P**	**16 48 00.3**	**-0.4**
comp=Z,12nm,0.9s							
Y48A	**Jasper**	**49.58**	**347**	P	**P**	**16 48 00.0**	**-0.8**
baz=165							
W57A	**Gilad**	**49.70**	**355**	*e*P	**P**	**16 48 01.2**	**-0.5**
comp=Z,28nm,1.1s							
W57A	**Gilead**	**49.70**	**355**	P	**P**	**16 48 01.5**	**-0.3**
baz=174							
W56A	**Indian Trail**	**49.73**	**354**	P	**P**	**16 48 01.7**	**-0.3**
baz=173							
X50B	**Fort Payne**	**49.80**	**349**	P	**P**	**16 48 01.4**	**-1.1**
baz=167,SNR=5.8							
KMSC	**Kings Mountain**	**49.82**	**353**	*e*P	**P**	**16 48 01.9**	**-0.8**
comp=Z,27nm,1.4s							
KMSC	**Kings Mountain**	**49.82**	**353**	P	**P**	**16 48 02.0**	**-0.7**
baz=172							
W54A	**Cherokee Point**	**49.86**	**353**	P	**P**	**16 48 02.2**	**-0.8**
baz=171							
X49A	**Woodville**	**49.98**	**348**	P	**P**	**16 48 02.8**	**-1.1**
baz=166							
X48A	**Hartselle**	**50.07**	**347**	P	**P**	**16 48 04.1**	**-0.4**
baz=165							
W53A	**Cullowhee**	**50.08**	**352**	P	**P**	**16 48 04.3**	**-0.4**
baz=170,SNR=5.1							
V59A	**Middlesex**	**50.18**	**357**	P	**P**	**16 48 05.2**	**-0.2**
baz=176							
V58A	**Windy Hill, Pi**	**50.27**	**356**	P	**P**	**16 48 06.0**	**0.0**
baz=175							
X47A	**Russelville**	**50.31**	**346**	P	**P**	**16 48 05.6**	**-0.8**
baz=164							
W51A	**Cleveland**	**50.32**	**350**	P	**P**	**16 48 05.7**	**-0.7**
baz=168							
V56A	**Mocksville**	**50.39**	**354**	P	**P**	**16 48 06.5**	**-0.5**
baz=174							
V57A	**Coltrane Farms**	**50.41**	**355**	P	**P**	**16 48 07.1**	**0.0**
baz=174							
W50A	**Signal Mountai**	**50.45**	**349**	*e*P	**P**	**16 48 06.4**	**-1.1**
comp=Z,13nm,0.8s							
W50A	**Signal Mountai**	**50.45**	**349**	P	**P**	**16 48 06.8**	**-0.7**
baz=167							
Z41A	**Richland Creek**	**50.47**	**341**	P	**P**	**16 48 06.9**	**-0.7**
baz=158							
X46A	**Booneville**	**50.52**	**346**	P	**P**	**16 48 07.2**	**-0.7**
baz=163							
V54A	**Nebo**	**50.52**	**353**	P	**P**	**16 48 07.5**	**-0.5**
baz=172							
W49A	**Belvidere**	**50.55**	**348**	P	**P**	**16 48 07.2**	**-1.0**
baz=166							
SWET	**Sewanee**	**50.58**	**349**	*e*P	**P**	**16 48 07.3**	**-1.2**
comp=Z,12nm,0.7s							
W48A	**Pulaski**	**50.71**	**348**	P	**P**	**16 48 08.3**	**-1.1**
baz=165,SNR=5.1							
HPIG		**50.77**	**324**	*e*P	**P**	**16 48 07.2**	**-3.1**
comp=Z,16nm,1.0s							
V52A	**Sevierville**	**50.80**	**351**	*e*P	**P**	**16 48 09.2**	**-0.9**
comp=Z,12nm,0.8s							
V52A	**Sevierville**	**50.80**	**351**	P	**P**	**16 48 09.4**	**-0.7**
baz=170							
PLAL	**Pickwick Lake**	**50.80**	**346**	*e*P	**P**	**16 48 08.4**	**-1.7**
comp=Z,10nm,1.0s							
V50A	**Pikevile**	**50.87**	**350**	P	**P**	**16 48 09.7**	**-1.0**
baz=168							
V51A	**Loudon**	**50.88**	**350**	P	**P**	**16 48 09.8**	**-0.8**
baz=169							
U57A	**Blanch**	**50.92**	**356**	P	**P**	**16 48 10.4**	**-0.5**
baz=175							
U56A	**King**	**50.92**	**355**	P	**P**	**16 48 10.7**	**-0.3**
baz=174							
W47A	**Westpoint**	**50.95**	**347**	P	**P**	**16 48 10.7**	**-0.6**
baz=165							
WLAR	**White Oak Lake**	**50.96**	**341**	*e*P	**P**	**16 48 11.3**	**0.0**
comp=Z,74nm,1.0s							
WHTX	**Lake Whitney,**	**50.99**	**336**	*e*P	**P**	**16 48 11.0**	**-0.6**
comp=Z,23nm,0.9s							
WHTX	**Lake Whitney,**	**50.99**	**336**	P	**P**	**16 48 10.7**	**-0.9**
baz=152							
V49A	**McMinnville**	**51.11**	**349**	P	**P**	**16 48 11.0**	**-1.4**
baz=167							
U53A	**Fall Branch**	**51.17**	**352**	P	**P**	**16 48 12.4**	**-0.5**
baz=171							
V48A	**Smith Brothers**	**51.26**	**348**	*e*P	**P**	**16 48 12.2**	**-1.3**
comp=Z,13nm,0.8s							
V48A	**Smith Brothers**	**51.26**	**348**	P	**P**	**16 48 12.4**	**-1.2**
baz=166,SNR=7.0							
U52A	**Thorn Hill**	**51.31**	**352**	P	**P**	**16 48 13.3**	**-0.6**
baz=170							
T59A	**Double "B" Far**	**51.35**	**358**	P	**P**	**16 48 13.8**	**-0.4**
baz=177							
T58A	**Grand View Acr**	**51.38**	**357**	P	**P**	**16 48 14.3**	**0.0**
baz=176							
U51A	**La Follette**	**51.39**	**351**	P	**P**	**16 48 14.1**	**-0.4**
baz=169							
T57A	**Hurt**	**51.47**	**356**	*e*P	**P**	**16 48 14.5**	**-0.6**
comp=Z,21nm,1.0s							
T57A	**Hurt**	**51.47**	**356**	P	**P**	**16 48 14.8**	**-0.3**
baz=175							
LPIG	**La Paz**	**51.51**	**318**	LR	LR	17 05 21.6	
comp=Z,62nm,21.9s,baz=99,slow=30							
U50A	**Jamestown**	**51.56**	**350**	P	**P**	**16 48 14.7**	**-1.1**
baz=168							
T56A	**Rocky Mt**	**51.56**	**355**	P	**P**	**16 48 15.5**	**-0.3**
baz=174							
TXAR	**Lajitas Array**	**51.59**	**328**	P	**P**	**16 48 16.2**	**0.0**
comp=Z,7.1nm,0.8s,baz=148,slow=9.0,SNR=75							
TXAR				LR	LR	17 08 27.1	
comp=Z,69nm,18.8s,baz=0.0,slow=34							
TX31	**Lajitas Ar. Si**	**51.59**	**328**	*e*P	**P**	**16 48 15.9**	**-0.3**
comp=Z,9.5nm,0.9s							
X40A	**Basin Creek Fa**	**51.61**	**341**	P	**P**	**16 48 15.6**	**-0.6**
baz=158							
UALR	**University of**	**51.73**	**342**	*e*P	**P**	**16 48 16.3**	**-0.8**
comp=Z,16nm,1.0s							
WVT	**Waverly**	**51.85**	**347**	*e*P	**P**	**16 48 16.3**	**-1.6**
comp=Z,7.8nm,1.0s							
WVT	**Waverly**	**51.85**	**347**	*e*P	**P**	**16 48 16.3**	**-1.6**
WVT				pmax	pmax		
comp=Z,8.0nm,1.0s							
WVT	**Waverly**	**51.85**	**347**	P	**P**	**16 48 16.5**	**-1.4**
baz=165							
MIAR	**Mount Ida**	**51.90**	**341**	*e*P	**P**	**16 48 17.1**	**-1.2**
comp=Z,19nm,1.3s							
MIAR	**Mount Ida**	**51.90**	**341**	*e*P	**P**	**16 48 17.1**	**-1.2**
MIAR				pmax	pmax		
comp=Z,19nm,1.3s							
MIAR	**Mount Ida**	**51.90**	**341**	P	**P**	**16 48 17.1**	**-1.2**
baz=157							
T51A	**Gray**	**51.95**	**351**	P	**P**	**16 48 17.6**	**-1.1**
baz=169,SNR=7.9							
U48A	**Cassie Pea, Po**	**51.95**	**348**	P	**P**	**16 48 18.1**	**-0.6**
baz=166							
T52A	**Hallie**	**51.96**	**352**	P	**P**	**16 48 17.7**	**-1.0**
baz=171							
S58A	**Poland Farm, P**	**52.02**	**357**	P	**P**	**16 48 18.9**	**-0.2**
baz=177							
U47A	**Clarksville**	**52.04**	**348**	P	**P**	**16 48 18.8**	**-0.5**
baz=165							
W41B	**Gary Mavity, V**	**52.07**	**342**	*e*P	**P**	**16 48 19.0**	**-0.6**
comp=Z,12nm,1.1s							
W41B	**Gary Mavity, V**	**52.07**	**342**	P	**P**	**16 48 18.9**	**-0.6**
baz=159							
T50A	**Nancy**	**52.15**	**350**	P	**P**	**16 48 19.5**	**-0.6**
baz=168							
S56A	**Natural Bridge**	**52.17**	**356**	P	**P**	**16 48 20.2**	**-0.2**
baz=175							
WHAR	**Wooly Hollow**	**52.19**	**342**	*e*P	**P**	**16 48 19.9**	**-0.6**
comp=Z,19nm,1.0s							
S57A	**Dark Hollow, R**	**52.21**	**356**	*e*P	**P**	**16 48 20.2**	**-0.4**
comp=Z,18nm,1.1s							
S57A	**Dark Hollow, R**	**52.21**	**356**	P	**P**	**16 48 19.7**	**-0.9**
baz=176							
S55A	**Lewisburg**	**52.34**	**355**	P	**P**	**16 48 21.2**	**-0.4**
baz=174							
T49A	**Edmonton**	**52.35**	**350**	*e*P	**P**	**16 48 20.5**	**-1.1**
comp=Z,12nm,0.9s							
T49A	**Edmonton**	**52.35**	**350**	P	**P**	**16 48 20.8**	**-0.8**
baz=168							
R58B	**Mineral**	**52.36**	**357**	P	**P**	**16 48 21.1**	**-0.5**
baz=177							
S53A	**Williamson**	**52.42**	**353**	P	**P**	**16 48 21.2**	**-1.0**
baz=172							
S54A	**Dingess, Beckl**	**52.45**	**354**	P	**P**	**16 48 21.6**	**-0.8**
baz=173							
ABTX	**Abilene, Hawle**	**52.45**	**334**	*e*P	**P**	**16 48 22.2**	**-0.3**
comp=Z,28nm,0.

Q51A	Peebles	53.89	352	P	P	16 48 32.3	-0.6
	baz=170						
WMOK	Wichita Mounta	53.93	336	eP	P	16 48 31.8	-1.5
	comp=Z,5.5nm,0.9s						
WMOK	Wichita Mounta	53.93	336	eP	P	16 48 31.8	-1.5
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMOK	Wichita Mounta	53.93	336	P	P	16 48 32.5	-0.8
	baz=152						
P55A	Reedsville	54.01	356	P	P	16 48 33.7	-0.2
	baz=175						
R45A	Skylar, Fairfi	54.03	347	P	P	16 48 33.0	-1.0
	baz=164						
Q49A	Aurora	54.09	351	P	P	16 48 34.1	-0.4
	baz=168						
P54A	Burton	54.16	355	P	P	16 48 35.2	+0.4
	baz=174						
Q47A	Bedord North L	54.28	349	P	P	16 48 34.8	-1.0
	baz=167						
P52A	Corning	54.35	353	P	P	16 48 35.6	-0.7
	baz=172						
MNTX	Cornudas Mount	54.37	328	eP	P	16 48 35.1	-1.5
	comp=Z,4.8nm,0.9s						
MNTX	Cornudas Mount	54.37	328	P	P	16 48 36.0	-0.6
	baz=143						
CCM	Cathedral Cave	54.50	345	eP	P	16 48 35.3	-2.1
	comp=Z,6.6nm,0.8s						
CCM	Cathedral Cave	54.50	345	eP	P	16 48 35.3	-2.1
CCM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CCM	Cathedral Cave	54.50	345	P	P	16 48 36.5	-0.9
	baz=161						
P50A	Jamestown	54.53	352	P	P	16 48 36.5	-1.0
	baz=170						
Q45A	Warren Harvey,	54.58	348	P	P	16 48 36.7	-1.2
	baz=165						
P49A	Miami Univ. Ec	54.59	351	P	P	16 48 37.3	-0.7
	baz=169						
O57A	Amberson	54.59	358	P	P	16 48 37.9	-0.1
	baz=177						
P48A	Milroy	54.62	350	P	P	16 48 38.1	-0.1
	baz=168						
O59A	Robesonia	54.65	359	P	P	16 48 39.1	+0.6
	baz=179						
O60A	Telford	54.65	360	P	P	16 48 39.0	+0.6
	baz=180						
O55A	Ligonier	54.67	356	P	P	16 48 39.2	+0.6
	baz=175						
O56A	Blue Knob Stat	54.69	357	P	P	16 48 38.7	0.0
	baz=176						
P47A	Martinsville	54.79	350	P	P	16 48 39.0	-0.5
	baz=167						
MSTX	Muleshoe	54.97	332	eP	P	16 48 39.3	-1.7
	comp=Z,17nm,1.3s						
MSTX	Muleshoe	54.97	332	P	P	16 48 40.1	-0.9
	baz=147						
SSPA	Standing Stone	55.02	358	P	P	16 48 41.1	0.0
	baz=177						
P45A	Graceland, Par	55.11	348	eP	P	16 48 40.2	-1.5
	comp=Z,26nm,1.0s						
P45A	Graceland, Par	55.11	348	P	P	16 48 41.4	-0.4
	baz=165						
N57A	Milroy	55.13	358	P	P	16 48 41.7	-0.2
	baz=177						
O49A	Covington	55.17	352	eP	P	16 48 40.8	-1.4
	comp=Z,17nm,1.1s						
O49A	Covington	55.17	352	P	P	16 48 42.1	-0.1
	baz=169						
N60A	Cedar Hill Far	55.20	0	P	P	16 48 42.7	+0.3
	baz=180						
N55A	Marion Center	55.22	357	P	P	16 48 42.7	+0.1
	baz=176						
N59A	State Game Lan	55.25	360	eP	P	16 48 42.4	-0.4
	comp=Z,15nm,0.9s						
N59A	State Game Lan	55.25	360	P	P	16 48 42.8	0.0
	baz=179						
AMTX	Amarillo	55.25	334	P	P	16 48 42.5	-0.5
	baz=148						
N56A	West Decatur	55.32	357	P	P	16 48 43.4	+0.1
	baz=176						
O48A	Farmland	55.36	351	P	P	16 48 43.2	-0.4
	baz=168						
N54A	Moraine State	55.47	356	P	P	16 48 44.0	-0.4
	baz=174						
O47A	Sheridan	55.51	350	P	P	16 48 43.9	-0.7
	baz=167						
N50A	Nevada	55.59	353	P	P	16 48 43.9	-1.3
	baz=171						
N51A	Ashland	55.64	353	P	P	16 48 44.2	-1.4
	baz=172						
M61A	Granite Spring	55.66	1	P	P	16 48 44.6	-1.0
	baz=182						
SFIN	Lafayette	55.81	349	P	P	16 48 45.4	-1.3
	baz=166						
121A	Cookes Peak, D	56.27	327	P	P	16 48 49.7	-0.8
	baz=141						
BINY	Binghamton	56.53	359	eP	P	16 48 49.8	-2.1
	comp=Z,22nm,1.0s						
BINY	Binghamton	56.53	359	P	P	16 48 52.3	+0.3
	baz=179						
N43A	Stutzman Famil	56.76	347	P	P	16 48 52.1	-1.5
	baz=164						
RKT	Rikitea	56.81	252	eT	T	17 49 24.4	
	comp=Z,17nm,0.2s						
N41A	Harden Midland	56.91	346	P	P	16 48 53.1	-1.6
	baz=162						
HRV	Adam Dziewonsk	56.94	3	P	P	16 48 54.5	-0.3
	baz=184						
K54A	Basiliko Farm,	57.03	357	P	P	16 48 55.9	+0.5
	baz=176						
ANMO	Albuquerque	57.50	330	P	P	16 48 58.8	-0.4
	baz=144						
TASM	ASL Pad, Albuq	57.50	330	P	P	16 48 59.1	-0.1
	baz=144						
TASM	ASL Pad, Albuq	57.50	330	P	P	16 48 59.2	0.0
	baz=144						
TUC	Tucson	57.74	324	eP	P	16 48 58.2	-2.6
	comp=Z,11nm,0.9s						
TUC	Tucson	57.74	324	eP	P	16 48 58.2	-2.6
TUC				pmax	pmax		
	comp=Z,11nm,0.9s						
TUC	Tucson	57.74	324	P	P	16 49 00.6	-0.2
	baz=138						
NCB	Newcomb	58.31	1	eP	P	16 49 03.9	-0.6
	comp=Z,22nm,1.4s						
WLVO	Wesleyville	58.32	357	P	P	16 49 04.2	-0.2
	baz=176						
T25A	Trinidad	58.34	333	P	P	16 49 05.0	0.0
	baz=146						
214A	Organ Pipe Nat	58.65	323	P	P	16 49 07.7	+0.7
	baz=136,SNR=5.9						
DELO	Deloro Mine	58.89	358	P	P	16 49 08.4	0.0
	baz=177						
H55A	Tweed	58.91	358	P	P	16 49 08.6	+0.1
	baz=178						
H56A	Elgin	58.93	359	P	P	16 49 08.8	+0.1
	baz=179,SNR=6.0						
LONY	Lake Ozonia	58.95	1	eP	P	16 49 08.0	-0.9
	comp=Z,19nm,1.3s						
LONY	Lake Ozonia	58.95	1	P	P	16 49 09.3	+0.4
	baz=181						
FRNY	Flat Rock	59.18	1	eP	P	16 49 10.5	0.0
	comp=Z,24nm,0.9s						
SDCO	Great Sand Dun	59.33	332	P	P	16 49 12.0	0.0
	baz=146,SNR=5.7						
PLVO	Plevna	59.39	359	P	P	16 49 11.8	-0.1
	baz=178						
G53A	Haliburton	59.53	357	P	P	16 49 12.4	-0.4
	baz=176						
G55A	Calabogie	59.60	359	P	P	16 49 13.2	-0.1
	baz=178						
BGNE	Belgrade	59.63	340	P	P	16 49 12.8	-0.9
	baz=154						
BUKO	Buck Lake	59.89	357	P	P	16 49 14.3	-1.0
	baz=175						
PEMO	Pembroke	60.03	358	P	P	16 49 16.0	-0.2
	baz=178						
Q24A	Divide	60.18	333	P	P	16 49 17.9	+0.1
	baz=146						
MVCO	Mesa Verde	60.30	330	P	P	16 49 18.9	+0.3
	baz=142						
ALGO	Algonquin Park	60.34	358	P	P	16 49 17.6	-0.7
	baz=177						
TRQ	Mont Tremblant	60.55	1	eP	P	16 49 18.5	-1.4
E53A	Dumoine, Ponti	60.75	358	P	P	16 49 20.6	-0.6
	baz=177						
E54A	Lac Daplat, Po	60.79	358	P	P	16 49 21.0	-0.5
	baz=178						

ECSD	EROS Data Cent	61.26	342	eP	P	16 49 22.6	-2.2
	comp=Z,13nm,1.3s						
ECSD	EROS Data Cent	61.26	342	P	P	16 49 24.0	-0.8
	baz=156,SNR=6.4						
D52A	ZEK Kipawa Sen	61.37	358	P	P	16 49 24.9	-0.5
	baz=177						
D53A	Lac Vacive, Po	61.45	358	eP	P	16 49 24.9	-1.0
	comp=Z,28nm,1.5s						
D53A	Lac Vacive, Po	61.45	358	P	P	16 49 25.4	-0.5
	baz=177						
D54A	Lac Fusel, La	61.49	359	P	P	16 49 25.7	-0.6
	baz=178						
W13A	Hualapai Mount	61.54	324	eP	P	16 49 26.3	-0.7
	comp=Z,4.6nm,0.9s						
IRM	Iron Mountain	61.59	323	P	P	16 49 27.8	+0.7
	baz=135,SNR=7.3						
F40A	Park Falls	61.73	348	P	P	16 49 27.5	-0.3
	baz=164						
BELC	Belle Mtn. Jos	61.98	322	P	P	16 49 30.7	+0.8
	baz=134						
PFO	Pinyon Flats O	61.99	321	eP	P	16 49 29.9	-0.1
	comp=Z,19nm,1.3s						
PFO	Pinyon Flats O	61.99	321	eP	P	16 49 29.9	-0.1
PFO				pmax	pmax		
	comp=Z,19nm,1.3s						
PFO	Pinyon Flats O	61.99	321	P	P	16 49 31.1	+1.1
	baz=134,SNR=5.9						
GMRC	Grnite Mounta	62.33	323	P	P	16 49 32.9	+0.6
	baz=135						
MURC	Murrieta	62.42	321	P	P	16 49 33.2	+0.4
	baz=133						
BFSC	Mount Baldy Ra	63.14	321	P	P	16 49 37.8	+0.1
	baz=133						
SHPR	Sheep Range	63.27	325	eP	P	16 49 38.0	-0.5
	comp=Z,11nm,1.1s						
RWWY	Rawlins	63.32	334	eP	P	16 49 36.6	-2.2
	comp=Z,21nm,1.4s						
GSC	Goldstone, Bar	63.36	323	P	P	16 49 39.7	+0.6
	baz=134						
LSQQ	Lebel-sur-Quev	63.41	359	P	P	16 49 39.9	+1.0
	baz=178						
C40A	Isle Royale Na	63.47	350	P	P	16 49 40.2	+0.9
	baz=165						
TAOE	Nuku Hiva Isla	63.62	267	eLR	LR	17 08 41.6	
	comp=Z,543nm,26.2s						
EDW2	Edwards Air Fo	63.78	322	P	P	16 49 41.2	-0.6
	baz=133						
EYMN	Ely	63.94	348	P	P	16 49 42.8	+0.3
	baz=162						
MPU	Maple Canyon	64.02	330	eP	P	16 49 41.9	-1.6
	comp=Z,11nm,1.1s						
RSSD	Black Hills	64.08	337	P	P	16 49 43.5	-0.2
	baz=149						
MATQ	Matagami	64.12	358	P	P	16 49 43.2	-0.4
	baz=178						
TPNV	Topopah Spring	64.20	324	eP	P	16 49 44.0	-0.6
	comp=Z,11nm,1.2s						
TPNV	Topopah Spring	64.20	324	eP	P	16 49 44.0	-0.6
TPNV				pmax	pmax		
	comp=Z,11nm,1.2s						
TPNV	Topopah Spring	64.20	324	P	P	16 49 45.0	+0.4
	baz=135,SNR=7.0						
FURC	Furnace Creek,	64.21	324	P	P	16 49 44.4	-0.1
	baz=135						
CHGQ	Chibougamau	64.25	1	P	P	16 49 44.2	-0.3
	baz=181						
MPMC	Manual Prospec	64.29	323	P	P	16 49 45.2	0.0
	baz=134						
JLU	Jordanelle	64.39	330	eP	P	16 49 45.4	-0.4
	comp=Z,32nm,1.5s						
DAC	Darwin (Calif)	64.50	323	eP	P	16 49 45.3	-1.3
	comp=Z,8.8nm,1.3s						
DAC	Darwin (Calif)	64.50	323	eP	P	16 49 45.3	-1.3
DAC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ISA	Isabella, Lake	64.60	322	P	P	16 49 47.5	+0.3
	baz=133						
CTU	Camp Tracy	64.60	330	eP	P	16 49 46.4	-0.8
	comp=Z,5.2nm,0.8s						
DUG	Dugway, Tooele	64.75	329	eP	P	16 49 47.7	-0.4
	comp=Z,14nm,1.0s						
DUG	Dugway, Tooele	64.75	329	eP	P	16 49 47.7	-0.4
DUG				pmax	pmax		
	comp=Z,14nm,1.0s						
DUG	Dugway, Tooele	64.75	329	P	P	16 49 48.9	+0.8
	baz=139,SNR=11						
TCUT	Toone Canyon	64.77	330	eP	P	16 49 47.6	-0.8
	comp=Z,15nm,0.8s						
R11A	Troy Canyon, C	64.83	326	eP	P	16 49 49.2	+0.5
	comp=Z,14nm,1.4s						
R11A	Troy Canyon, C	64.83	326	P	P	16 49 49.8	+1.0
	baz=136,SNR=8.2						
PKM	Mcpherson Peak	64.89	320	P	P	16 49 49.7	+0.4
	baz=132						
CWC	Cottonwood Cre	64.90	323	P	P	16 49 50.0	+0.8
	baz=134						
VES	Vestal, Richgr	65.08	322	P	P	16 49 50.6	+0.4
	baz=132						
BW06	Boulder Array	65.21	333	P	P	16 49 51.4	+0.2
	baz=143						
PD31	Pinedale Array	65.21	333	eP	P	16 49 50.7	-0.5
	comp=Z,3.2nm,1.0s						
PDAR	Pinedale Array	65.21	333	P	P	16 49 50.7	-0.5
	comp=Z,1.3nm,0.9s,baz=152,slow=6.7,SNR=7.5						
PDAR				LR	LR	17 19 48.5	
	comp=Z,46nm,20.1s,baz=138,slow=37						
HWUT	Hardware Ranch	65.22	331	eP	P	16 49 51.0	-0.2
	comp=Z,9.4nm,0.8s						
AGMN	Agassiz Nation	65.27	345	eP	P	16 49 50.3	-0.8
	comp=Z,7.1nm,0.8s						
MDND	Maddock	65.87	342	eP	P	16 49 54.2	-0.8
	comp=Z,22nm,0.6s						
MDND	Maddock	65.87	342	P	P	16 49 55.4	+0.3
	baz=154						
AHID	Auburn Hatcher	65.91	332	eP	P	16 49 53.1	-2.5
	comp=Z,6.6nm,1.0s						
HVU	Hansel Valley	65.93	330	eP	P	16 49 53.3	-2.5
	comp=Z,7.0nm,0.8s						
HVU	Hansel Valley	65.93	330	eP	P	16 49 53.3	-2.5
HVU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDPB	Devils Postpil	66.29	323	eP	P	16 49 57.4	-0.9
	comp=Z,11nm,1.2s						
NV01	Mina Array Sit	66.39	324	eP	P	16 49 59.5	+0.6
NVAR	Mina Array Bea	66.39	324	P	P	16 49 59.5	+0.6
	comp=Z,1.7nm,0.8s,baz=150,slow=6.3,SNR=13						
NVAR				LR	LR	17 15 22.7	
	comp=Z,70nm,21.4s,baz=210,slow=33						
FXWY	Fox Creek	66.56	332	eP	P	16 49 59.4	-0.5
	comp=Z,6.3nm,1.2s						
KVN	Kaiserville	66.71	325	eP	P	16 50 00.4	-0.5
	comp=Z,19nm,1.8s						
KVN	Kaiserville	66.71	325	eP	P	16 50 00.4	-0.5
KVN				pmax	pmax		
	comp=Z,19nm,1.8s						
IMW	Indian Meadow	66.72	333	eP	P	16 50 00.2	-0.8
	comp=Z,11nm,1.4s						
FLWY	Flagg Ranch	66.76	333	eP	P	16 50 00.9	-0.2
	comp=Z,18nm,1.1s						
RLMT	Red Lodge	66.98	335	eP	P	16 50 02.0	-0.5
	comp=Z,6.6nm,1.0s						
RLMT	Red Lodge	66.98	335	P	P	16 50 02.6	+0.1
	baz=144						
ULM	Lac du Bonnet	67.08	346	P	P	16 50 01.9	-0.8
	comp=Z,2.2nm,0.4s,baz=165,slow=5.3,SNR=4.7						
ULM				LR	LR	17 23 20.1	
	comp=Z,53nm,18.5s,baz=166,slow=39						
ULM	Lac du Bonnet	67.08	346	eP	P	16 50 01.6	-1.1
	comp=Z,13nm,1.3s						
ULM	Lac du Bonnet	67.08	346	eP	P	16 50 01.6	-1.1
ULM				pmax	pmax		
	comp=Z,13nm,1.3s						
WAKR	Walker	67.09	324	eP	P	16 50 02.4	-0.9
	comp=Z,29nm,1.8s						
PNTR	Pine Nut	67.58	324	eP	P	16 50 05.9	-0.5
	comp=Z,12nm,1.1s						
HLID	Hailey	68.07	330	eP	P	16 50 08.8	-0.5
	comp=Z,3.4nm,0.7s						
HLID	Hailey	68.07	330	P	P	16 50 09.9	+0.6
	baz=139,SNR=7.1						
AFDM	Forest Hills D	68.28	323	eP	P	16 50 09.4	-1.2
AFDM				epP	pP	16 50 24.0	-0.7
MCMT	McKenzie Canyo	68.31	332	eP	P	16 50 09.4	-1.5
BOZ	Bozeman (W)	68.36	333	eP	P	16 50 10.0	-1.1
	comp=Z,5.3nm,1.0s						
BOZ	Bozeman (W)	68.36	333	eP	P	16 50 10.0	-1.1
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						

BOZ	Bozeman (W)	68.36	333	P	P	16 50 11.2	+0.1
	baz=142,SNR=6.2						
VNA3	Neumayer Olymp	68.49	162	P	P	16 50 11.9	+0.5
DLMT	Dillon	68.61	333	eP	P	16 50 11.7	-0.9
	comp=Z,6.2nm,1.1s						
VNA1	Neumayer--Stat	68.75	161	P	P	16 50 14.0	+1.1
VNA2	Neumayer--Watz	69.10	161	P	P	16 50 16.0	+0.8
	baz=291,slow=7.1						
EGMT	Eagleton	69.53	336	P	P	16 50 18.5	+0.3
	baz=144						
SCHQ	Schefferville	69.54	5	P	P	16 50 17.6	-0.4
	comp=Z,9.7nm,0.7s,baz=121,slow=19,SNR=4.3						
SCHQ				LR	LR	17 20 24.3	
	comp=Z,44nm,21.6s,baz=246,slow=36						
O03E	Paynes Creek	69.65	324	P	P	16 50 19.8	+0.7
	baz=132						
MOD	Modoc Plateau	69.89	326	eP	P	16 50 19.2	-1.5
	comp=Z,18nm,1.5s						
MSO	Missoula	70.33	333	eP	P	16 50 23.0	-0.2
	comp=Z,6.2nm,1.0s						
MSO	Missoula	70.33	333	P	P	16 50 23.6	+0.4
	baz=140						
BMO	Blue Mountains	70.42	330	eP	P	16 50 23.5	-0.3
	comp=Z,4.8nm,1.3s						
BMO	Blue Mountains	70.42	330	eP	P	16 50 23.5	-0.3
BMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
N02D	Trinity Center	70.61	324	P	P	16 50 25.2	+0.1
	baz=131						
M04C	Macdoel	70.66	325	P	P	16 50 25.7	+0.4
	baz=132						
SNAA	Sanae	70.71	161	P	P	16 50 25.6	+0.5
SNAA	Sanae	70.71	161	P	P	16 50 25.4	+0.3
	comp=Z,12nm,0.7s,baz=271,slow=5.3,SNR=50						
SNAA	Sanae	70.71	161	eP	P	16 50 25.2	+0.1
	comp=Z,18nm,0.9s						
M02C	Callahan	70.97	324	P	P	16 50 26.9	-0.3
	baz=131						
I07A	Izee	70.98	328	eP	P	16 50 26.5	-0.7
PPT2	Papeete2	71.04	256	eS	S	16 59 49.8	+8.6
	comp=Z,78nm,26.0s						
PPT2	Papeete2	71.04	256	eLR	LR	17 12 01.1	
	comp=Z,175nm,27.2s						
F10A	Beach Ranch, E	71.20	330	eP	P	16 50 28.6	+0.1
	comp=Z,6.5nm,0.8s						
L04D	Klamath Falls	71.21	325	P	P	16 50 28.5	-0.1
	baz=132						
J05D	Fort Rock, OR	71.34	326	P	P	16 50 30.0	+0.6
	baz=133						
J04D	Umpqua Nationa	71.78	326	P	P	16 50 32.6	+0.4
	baz=132						
L02E	Cave Junction	71.90	324	P	P	16 50 33.2	+0.6
	baz=131						
I05D	Terrebonne, OR	72.11	327	P	P	16 50 34.2	+0.3
	baz=133						
K02D	Willamette Mer	72.28	325	P	P	16 50 35.1	+0.1
	baz=131						
I04A	Tendick Farm,	72.31	326	P	P	16 50 35.2	0.0
	baz=132						
LIC	Lamto	72.63	79	eP	P	16 50 37.3	-0.3
	comp=Z,117nm,1.9s						
G05D	Wamic, OR	72.72	328	P	P	16 50 38.1	+0.6
	baz=133						
J01E	Myrtle Point	72.73	325	P	P	16 50 37.9	+0.3
	baz=130						
TIC	Toumodi	72.76	78	eP	P	16 50 36.9	-1.5
NEW	Newport	72.83	332	P	P	16 50 38.7	+0.5
	baz=138						
DBIC	Dimbokro	72.93	78	P	P	16 50 39.3	-0.1
	comp=Z,6.3nm,0.7s,baz=239,slow=5.3,SNR=7.1						
DBIC				LR	LR	17 20 59.9	
	comp=Z,133nm,20.1s,baz=218,slow=34						
DBIC	Dimbokro	72.93	78	eP	P	16 50 39.3	-0.1
	comp=Z,79nm,2.0s						
DBIC	Dimbokro	72.93	78	eP	P	16 50 39.3	-0.1
DBIC				pmax	pmax		
	comp=Z,79nm,2.0s						
KIC	Kosan Boka	72.94	79	eP	P	16 50 39.4	-0.1
	comp=Z,34nm,0.8s						
G03D	McMinnville, O	73.71	327	P	P	16 50 43.9	+0.5
	baz=132						
E04D	Cinebar	74.25	328	P	P	16 50 46.7	+0.3
	baz=132						
D05A	Enumclaw	74.38	329	eP	P	16 50 46.1	-1.1
	comp=Z,13nm,0.9s						
D03D	Eldon	75.17	329	P	P	16 50 51.9	+0.2
	baz=132						
B05A	Bryant	75.17	330	P	P	16 50 51.8	+0.1
	baz=133,SNR=5.4						
NLWA	Neilton Lookou	75.47	328	eP	P	16 50 53.1	-0.4
	comp=Z,15nm,1.0s						
QSPA	South Pole Qui	75.53	180	eP	P	16 50 54.3	+0.5
	comp=Z,22nm,1.1s						
A04D	Lummi Island	75.78	330	P	P	16 50 55.7	+0.5
	baz=133						
TOA1	Torodi Ar. Sit	81.01	74	eP	P	16 51 25.4	+0.5
TOA0	Torodi Ar. Sit	81.01	74	eP	P	16 51 24.7	-0.1
	comp=Z,30nm,0.9s						
TORD	Torodi Ar. Bea	81.01	74	P	P	16 51 25.4	+0.5
	comp=Z,16nm,0.6s,baz=233,slow=4.9,SNR=5.3						
MORF	Marmelete	81.08	48	eP	P	16 51 27.2	+2.4
PTEO	Sao Teotonio	81.13	48	eP	P	16 51 27.6	+2.7
	comp=Z,75nm,1.7s						
PMAFR	Mafra	81.36	46	eP	P	16 51 25.3	-0.9
SBA	Scott Base	81.44	191	eP	P	16 51 26.8	+0.8
	comp=Z,18nm,1.3s						
SBA	Scott Base	81.44	191	eP	P	16 51 26.8	+0.8
SBA				pmax	pmax		
	comp=Z,18nm,1.3s						
PNCL	Nicolau / Gran	81.51	47	eP	P	16 51 29.1	+2.1
MESJ	Messejana	81.61	47	eP	P	16 51 29.8	+2.3
PCVE	Castro Verde	81.66	48	eP	P	16 51 30.3	+2.5
PMTG	Montargil	82.14	46	eP	P	16 51 32.0	+1.7
	comp=Z,29nm,1.3s						
PTOM	Tomar	82.26	46	eP	P	16 51 32.9	+2.0
	comp=Z,44nm,1.3s						
PCAS	Casmilo, Conde	82.39	45	eP	P	16 51 33.4	+1.8
	comp=Z,22nm,1.4s						
VNDA	Vanda	82.51	191	P	P	16 51 32.9	+1.3
	comp=Z,4.0nm,0.9s,baz=138,slow=4.6,SNR=18						
VNDA				LR	LR	17 20 47.9	
	comp=Z,85nm,19.4s,baz=130,slow=30						
VNDA	Vanda	82.51	191	eP	P	16 51 32.1	+0.5
	comp=Z,11nm,1.2s						
VNDA	Vanda	82.51	191	eP	P	16 51 32.1	+0.5
VNDA				pmax	pmax		
	comp=Z,11nm,1.2s						
COI	Coimbra	82.51	45	eP	P	16 51 34.3	+2.1
YKA	Yellowknife Ar	82.79	343	P	P	16 51 32.8	-0.3
	comp=Z,7.3nm,0.9s,baz=136,slow=5.2,SNR=50						
YKB5	Yellowknife Ar	82.79	343	eP	P	16 51 32.8	-0.3
YKW3	Yellowknife Ar	82.85	343	eP	P	16 51 32.3	-1.1
	comp=Z,19nm,1.2s						
PMRV	Marv??o	82.88	46	eP	P	16 51 35.5	+1.3
PCBR	Castelo Branco	83.00	46	eP	P	16 51 36.3	+1.6
PVIS	Viseu	83.09	45	eP	P	16 51 36.5	+1.2
	comp=Z,27nm,1.3s						
MTE	Manteigas	83.19	45	eP	P	16 51 37.3	+1.5
	comp=Z,31nm,1.3s						
MTE	Manteigas	83.19	45	eLR	LR	17 21 13.1	
	comp=Z,70nm,20.0s						
DIB	Dawson Inlet,	83.40	329	eP	P	16 51 36.3	-0.1
	comp=Z,8.2nm,0.9s						
PCAB	Cabril	83.44	44	eP	P	16 51 38.6	+1.6
POLO	Lamas de Olo	83.45	44	eP	P	16 51 38.6	+1.5
	comp=Z,14nm,1.3s						
PVRL	Vila Real	83.46	45	eP	P	16 51 38.5	+1.4
MVO	Moncorvo	83.88	45	eP	P	16 51 40.7	+1.4
	comp=Z,22nm,1.4s						
MVO	Moncorvo	83.88	45	eLR	LR	17 20 45.9	
	comp=Z,55

BESE	Bessie Mountai	87.53	333	eP	P	16 51 57.4	+0.4
HYT	Haines Junctio	89.87	334	eP	P	16 52 08.2	+0.1
	comp=Z,6.6nm,1.0s						
BOSA	Boshof	92.05	120	P	P	16 52 18.9	-0.1
	comp=Z,4.6nm,0.9s,baz=210,slow=5.0,SNR=4.8						
BOSA				LR	LR	17 29 50.5	
	comp=Z,70nm,21.6s,baz=250,slow=33						
DAWY	Dawson	92.26	337	eP	P	16 52 17.9	-1.1
	comp=Z,6.8nm,0.9s						
MAW	Mawson	92.56	165	P	P	16 52 20.4	0.0
	comp=Z,6.4nm,0.9s,baz=232,slow=6.4,SNR=12						
MAW				LR	LR	17 32 23.9	
	comp=Z,78nm,19.6s,baz=230,slow=34						
MAW	Mawson	92.56	165	eP	P	16 52 20.4	0.0
	comp=Z,2.1nm,1.0s						
MAW	Mawson	92.56	165	eP	P	16 52 20.4	0.0
MAW				pmax	pmax		
	comp=Z,2.0nm,1.0s						
EGAK	Eagle	93.28	337	eP	P	16 52 22.4	-1.2
	comp=Z,8.2nm,1.0s						
RIDG	Independent Ri	94.26	335	eP	P	16 52 28.0	-0.2
ILAR	Eielson Array	95.50	336	P	P	16 52 33.0	-0.8
	comp=Z,1.6nm,0.8s,baz=158,slow=3.7,SNR=18						
ILAR				PP	PP	16 56 23.9	-1.5
	comp=Z,0.6nm,1.0s,baz=106,slow=6.7,SNR=5.2						
ILB	Eielson Array	95.50	336	eP	P	16 52 33.0	-0.8
	comp=Z,13nm,2.0s						
ILB				ePP	PP	16 56 23.9	-1.5
FYU	Fort Yukon	95.58	338	eP	P	16 52 33.8	-0.3
	comp=Z,9.1nm,1.0s						
RND	Reindeer	95.79	334	eP	P	16 52 34.9	-0.4
	comp=Z,12nm,1.2s						
RND	Reindeer	95.79	334	eP	P	16 52 34.9	-0.4
RND				pmax	pmax		
	comp=Z,12nm,1.2s						
WRH	Wood River Hil	95.86	335	eP	P	16 52 34.6	-0.9
	comp=Z,3.3nm,0.7s						
COLA	College	95.92	336⇑	eP	P	16 52 35.4	-0.3
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BFO	Black Forest	96.58	42	i P	P	16 52 35.6	-3.6
BPAW	Bear Paw Mtn.	96.92	335	eP	P	16 52 39.1	-1.3
	comp=Z,8.9nm,1.4s						
GEC2	GERESS Array S	100.17	42	ePdif	Pdif	16 52 55.9	+0.5
GEC2	GERESS Array S	100.17	42	eP	Pdif	16 52 55.9	+0.5
GERES	GERESS Array B	100.17	42	P	Pdif	16 52 55.9	+0.5
	comp=Z,1.2nm,0.9s,baz=262,slow=4.0,SNR=8.0						
DZM	Mont Dzumac	109.39	240	eLR	LR	17 29 54.6	
	comp=Z,151nm,27.4s						
BILL	Bilibino	113.95	339	i PKIKP	PKiKP	16 57 48.0	+0.4
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
OBN	Obninsk	114.33	36	i PKIKP	PKPdf	16 57 47.1	-1.5
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	120.26	48	PKP	PKiKP	16 58 01.1	+0.6
	comp=Z,4.5nm,0.9s,baz=290,slow=3.2,SNR=8.6						
H11N3	WAKE ISLAND Hy	120.66	284	T	T	19 09 26.5	
	baz=96,slow=74,SNR=21						
H11N2	WAKE ISLAND Hy	120.67	284	T	T	19 09 33.3	
	baz=96,slow=74,SNR=21						
H11N1	WAKE ISLAND Hy	120.67	284	T	T	19 09 27.6	
	baz=96,slow=74,SNR=8.9						
H11S2	WAKE ISLAND Hy	120.72	283	T	T	19 09 35.6	
	baz=92,slow=74						
H11S1	WAKE ISLAND Hy	120.73	283	T	T	19 09 26.8	
	baz=92						
H11S3	WAKE ISLAND Hy	120.74	283	T	T	19 09 40.6	
	baz=92,slow=74						
TIXI	Tiksi	121.18	351⇑	i PKIKP	PKPdf	16 58 01.4	0.0
SEY	Seymchan	121.42	337⇑	i PKIKP	PKPdf	16 58 01.7	-0.4
STKA	Stephens Creek	121.82	217	PKP	PKPdf	16 58 03.2	-0.6
	comp=Z,1.2nm,0.7s,baz=18,slow=5.0,SNR=3.4						
PEA1	Petropavlovsk-	123.48	325	ePKPdf	PKPdf	16 58 06.0	-0.4
PEA1				epPKPdf	pPKPdf	16 58 20.7	-0.8
PETK	Petropavlovsk-	123.48	325	PKP	PKPdf	16 58 06.0	-0.4
	comp=Z,1.3nm,0.6s,baz=94,slow=2.6,SNR=4.3						
PETK				pPKP	pPKPdf	16 58 20.7	-0.8
	comp=Z,2.8nm,0.9s,baz=39,slow=3.5,SNR=3.6						
ARU	Arti	125.51	30	ePKPdf	PKPdf	16 58 09.7	-0.4
ARU	Arti	125.51	30	i PKIKP	PKiKP	16 58 10.7	+0.2
ARU						17 00 05.7	
ARU						17 05 17.4	
ABKAR	Akbulak array	129.75	37	ePKPdf	PKPdf	16 58 18.1	-0.4
AS31	Alice Springs	132.45	217	ePKPpre	PKPpre	16 58 13.8	
AS31				ePKPdf	PKPdf	16 58 23.5	-1.0
ASAR	Alice Springs	132.45	217	PKhKP	PKPpre	16 58 13.8	
	comp=Z,0.5nm,0.7s,baz=123,slow=1.3,SNR=5.8						
ASAR				PKP	PKPdf	16 58 23.5	-1.0
	comp=Z,1.9nm,0.6s,baz=127,slow=1.8,SNR=29						
BRVK	Borovoye	132.98	28	ePKPdf	PKPdf	16 58 24.2	-0.2
BRVK	Borovoye	132.98	28‖	ePKIKP	PKPdf	16 58 23.2	-1.2
WR1	Warramunga Arr	134.98	221	ePKPdf	PKPdf	16 58 29.1	-0.1
WRA	Warramunga Arr	134.98	221	PKP	PKPdf	16 58 29.1	-0.1
	comp=Z,4.6nm,0.6s,baz=173,slow=1.3,SNR=20						
WRAB	Tennant Creek	134.98	221⇑	i PKIKP	PKPdf	16 58 29.1	-0.1
ZAA1	Zalesovo Array	137.75	17	ePKPpre	PKPpre	16 58 28.8	
ZAA1				ePKPdf	PKPdf	16 58 33.6	+0.4
ZAA0	Zalesovo Array	137.75	17	ePKPdf	PKPdf	16 58 33.3	0.0
ZALV	Zalesovo Beam	137.75	17	PKhKP	PKPpre	16 58 28.8	
	comp=Z,0.6nm,0.5s,baz=225,slow=1.2,SNR=3.9						
ZALV				PKP	PKPdf	16 58 33.6	+0.4
	comp=Z,10nm,0.9s,baz=186,slow=1.5,SNR=3.8						
KURK	Kurchatov	138.25	25	ePKPdf	PKPdf	16 58 34.1	-0.2
KURK	Kurchatov	138.25	25‖	i PKIKP	PKPdf	16 58 34.7	+0.4
KLR	Kul'dur	139.00	333‖	i PKIKP	PKPdf	16 58 35.3	-0.4
CHGR	Chuyangaron	140.57	46	ePKPdf	PKPdf	16 58 37.7	-1.4
USRK	Ussuriysk Ar.	142.49	327	PKhKP	PKPdf	16 58 38.7	-3.5
	comp=Z,2.4nm,0.8s,baz=46,slow=4.2,SNR=4.4						
MK32	Makanchi Array	142.84	26	ePKPdf	PKPdf	16 58 39.6	-3.2
MKAR	Makanchi Array	142.84	26	PKhKP	PKPdf	16 58 39.6	-3.2
	comp=Z,1.8nm,0.7s,baz=335,slow=3.9,SNR=14						
TLY	Talaya	143.02	1‖	ePKIKP	PKPab	16 58 38.5	+0.3
MJAR	Matsushiro Arr	143.03	312	PKhKP	PKPab	16 58 38.9	+0.1
	comp=Z,2.2nm,1.0s,baz=82,slow=2.1,SNR=7.6						
MAJO	Matsushiro	143.04	312⇑	i PKIKP	PKPbc	16 58 39.8	-0.5
KDJ	Kajisay	143.70	36	ePKPdf	PKPbc	16 58 43.0	+0.7
KDJ	Kajisay	143.70	36	ePKIKP	PKPbc	16 58 43.0	+0.8
PRZ	Przheval'sk	144.14	34	ePKPdf	PKPdf	16 58 45.0	-0.5
PRZ	Przheval'sk	144.14	34	ePKIKP	PKPdf	16 58 45.0	-0.5
ZAK	Zakamensk	144.31	2	ePKIKP	PKPbc	16 58 43.9	+0.2
ZAK				pmax	pmax		
	comp=Z,12nm,1.2s						
KSH	Kashi	144.62	40	PKP	PKPdf	16 58 46.5	+0.2
KSH				PP	PP	17 02 07.8	+5.1
KSH				SKKS		17 08 52.5	
KSH				SS	SS	17 20 48.8	+2.1
KSH				AMB	AMB		
	comp=Z,250nm,4.6s						
NIL	Nilore	145.78	51	ePKPdf	PKPdf	16 58 48.1	-0.1
NIL	Nilore	145.78	51	ePKP2	PKPdf	16 58 48.2	-0.1
SONA0	Songino Array	146.85	358	ePKPbc	PKPdf	16 58 50.7	+0.9
SONA0				epPKPab	pPKPbc	16 59 06.6	-0.2
SONA0				ePP	PP	17 02 15.0	0.0
SONM	Songino Array	146.85	358	PKPbc	PKPdf	16 58 50.7	+0.9
	comp=Z,14nm,0.7s,baz=336,slow=1.8,SNR=69						
SONM				pPKPbc	pPKPbc	16 59 06.6	-0.2
	comp=Z,11nm,0.7s,baz=321,slow=1.7,SNR=14						
SONM				PP	PP	17 02 15.0	0.0
	comp=Z,0.4nm,0.7s,baz=328,slow=4.1,SNR=2.8						
WMQ	Urumqi	147.45	23	ePKPbc	PKPdf	16 58 49.8	-1.1
WMQ				LR	LR		
	comp=Z,290nm,29.1s						
WMQ				LR	LR		
	comp=Z,96nm,19.9s						
KSRS	Korea Array	149.32	322	PKP	PKPdf	16 58 53.9	-0.1
	comp=Z,6.6nm,0.9s,baz=84,slow=0.3,SNR=13						
KSRS				PKPbc	PKPbc	16 58 58.2	-0.1
	comp=Z,4.6nm,0.7s,baz=0.5,slow=2.0,SNR=27						
KS15	Wonju Array Si	149.35	322	ePKPdf	PKPdf	16 58 53.9	-0.2
KS15				ePKPbc	PKiKP	16 58 59.5	-0.1
HHC	Hu-ho-hao-te	153.19	348	PKPbc	PKPdf	16 58 59.3	-0.7
GTA	Gaotai	154.92	9	ePKPbc	PKPdf	16 59 03.8	+1.3
GTA				pPKP	PKiKP	16 59 11.8	+0.6
GTA				PKPab	pPKPbc	16 59 26.0	-0.4
GTA				LR	LR		
	comp=Z,62nm,17.8s						
GTA				LR	LR		
	comp=Z,71nm,17.8s						
GTA				LR	LR		
	comp=Z,76nm,20.6s						
NJ2	Nanjing	158.38	326	ePKP	PKPdf	16 59 03.8	-3.2
LZH	Lanzhou	158.60	2	ePKP	PKPdf	16 59 08.0	+0.6
LZH				pPKP	pPKPdf	16 59 17.0	-5.6
LZH				sPKP		16 59 22.8	
LZH				LR	LR		
	comp=Z,52nm,18.1s						
LZH				LR	LR		
	comp=Z,49nm,18.3s						
LZH				LR	LR		
	comp=Z,70nm,20.0s						
CD2	Chengdu	163.76	3	PKP	PKPdf	16 59 11.0	-1.8
CM31	Chiang Mai Arr	173.25	55	ePKPdf	PKPdf	16 59 17.0	-2.4
CM31				epPKPdf	pPKPdf	16 59 34.2	-0.4
CM31				ePKPab	PKPab	17 00 47.2	-0.3
CM31				ePP	PP	17 04 41.0	+2.1
CMAR	Chiang Mai Arr	173.25	55	PKP	PKPdf	16 59 17.0	-2.4
	comp=Z,0.6nm,0.8s,baz=270,slow=0.9,SNR=5.2						
CMAR				pPKP	pPKPdf	16 59 34.2	-0.4
	comp=Z,0.7nm,0.8s,baz=227,slow=2.2,SNR=4.2						
CMAR				PKPab	PKPab	17 00 47.2	-0.3
	comp=Z,0.6nm,0.9s,baz=274,slow=4.4,SNR=4.0						
CMAR				PP	PP	17 04 41.0	+2.1
	comp=Z,0.9nm,1.1s,baz=299,slow=7.5,SNR=4.5						

NORS ***30*** *17:06:30.6±0.0, 42°.33N×43°.75E, h5km, MPVA3.6*
ISK ***30*** *17:06:30.8, 42°.34N×43°.72E, h2km, ML2.5/4*
DDA ***30*** *17:06:31.6, 42°.31N×43°.68E, h6km±3km, ML3.1*
TIF ***30*** *17:06:31.2, 42°.37N×43°.72E, h6km±1km*

ISC 30 17:06:31.5±1.0, 42°.36N±0°.02×43°.73E±0°.02, h7km±9km, n36, σ0°.79/61, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	Oni	0.31	319	PG	Pg	17 06 38.0	+0.4
ONI				SG	Sg	17 06 43.1	+1.4
ONI	Oni	0.31	319	P	Pg	17 06 38.0	+0.4
ONI				S	Sg	17 06 42.5	+0.8
ZEI	Tsey	0.45	16	i Pg	Pg	17 06 39.5	-0.7
ZEI				eSg	Sg	17 06 46.0	-0.1
TKB	Tkibuli	0.54	270	P	Pg	17 06 42.2	+0.2
TKB				S	Sb	17 06 50.6	-0.9
DIGR	Digorskoe uzhe	0.55	349	ePg	Pg	17 06 41.3	-0.9
DIGR				eSg	Sg	17 06 48.9	-0.5
GUDG	Gudauri	0.56	79	P	Pb	17 06 43.1	-0.7
GUDG				S	Sb	17 06 52.4	+0.1
LACR	Lac	0.63	42	ePg	Pg	17 06 42.2	-1.4
LACR				eSg	Sg	17 06 51.0	-0.9
KORR	Kora	0.77	19	ePg	Pg	17 06 46.2	-0.1
KORR				eSg	Sg	17 06 57.2	+0.9
LSNR	Lesken	0.92	4	ePg	Pg	17 06 48.9	-0.3
LSNR				eSg	Sb	17 07 02.0	-0.4
AKH	Akhalkalaki	0.96	191	PG	Pb	17 06 49.8	-0.8
AKH	Akhalkalaki	0.96	191	P	Pb	17 06 50.6	0.0
AKH				S	Sn	17 07 05.4	-0.2
TBLG	Delisi	0.98	129	PG	Pb	17 06 50.4	-0.4
VLKR	Vladikavkaz	0.98	45	ePg	Pg	17 06 50.3	-0.1
VLKR				eSg	Sb	17 07 05.0	+1.0
STDR	Stavd-Durt	1.04	14	ePg	Pn	17 06 52.7	+0.2
STDR				eSg	Sb	17 07 05.7	0.0
BTNK	Botanikuri	1.04	130	P	Pb	17 06 51.6	-0.2
BTNK	Botanikuri	1.04	130	i P	Pn	17 06 52.0	-0.5
KZRT	Kazreti	1.09	152	P	Pb	17 06 52.3	-0.4
KZRT				S	Sn	17 07 09.3	+0.7
KZRT	Kazreti	1.09	152	i P	Pg	17 06 52.1	-0.2
BGD	Bogdanovka	1.10	185	P	Pn	17 06 52.9	-0.6
BGD				S	Sn	17 07 08.8	-0.2
EPOS	Posof	1.13	222	i P	Pn	17 06 54.0	0.0
EPOS				i S	Sn	17 07 10.8	+0.9
NEY	Neytrino	1.16	321	ePg	Pg	17 06 52.7	-1.0
NEY				eSg	Sn	17 07 10.9	+0.4
KBTC	Kuba-Taba	1.48	351	ePg	Pb	17 06 59.4	+0.1
KBTC				eSg	Sg	17 07 19.7	+0.7
SHA1	Shidzhatmaz	1.59	331	ePg	Pb	17 07 00.9	-0.4
SHA1				eSg	Sg	17 07 23.4	+0.8
EAK	Akyaka	1.67	183	i P	Pb	17 07 02.5	-0.2
EAK				IAML_P			
	comp=Z,2μm,0.3s						
BATM	Batumi	1.69	244	PN	Pb	17 07 02.3	-0.7
BATM	Batumi	1.69	244	P	Pb	17 07 02.9	0.0
BATM				S	Sg	17 07 26.6	+0.8
BATM	Batumi	1.69	244	i P	Pb	17 07 02.1	-0.9
KIV0	Kislovodsk Arr	1.77	335	i Pg	Pb	17 07 03.8	-0.5
KIV0				eSg	Sb	17 07 27.2	+0.5
KIV	Kislovodsk	1.77	335	PN	Pb	17 07 03.6	-0.7
KIV				SN	Sb	17 07 27.5	+0.7
BCA	Borcka	1.82	241	PN	Pb	17 07 03.9	-1.2
DBOC	Borcka	1.84	237	i P	Pb	17 07 05.5	0.0
DBOC				i S	Sg	17 07 30.4	-0.2
DBOC				IAML_P			
	comp=Z,2μm,0.2s						
DAGI	Agillar	1.86	227	i P	Pb	17 07 06.0	+0.1
DAGI				i S	Sg	17 07 31.3	-0.1
DAGI				IAML_P			
	comp=Z,814nm,0.3s						
LGD	Lagodekhi	1.94	105	P	Pb	17 07 07.5	+0.3
LGD				S	Sg	17 07 33.1	-0.8
DDFL	Dedoflistskaro	2.00	116	P	Pb	17 07 07.6	-0.6
DDFL				S	Sg	17 07 39.3	+3.5
DBAD	Bademkaya	2.03	229	i P	Pg	17 07 09.3	-1.0
GNI	Garni	2.33	161	PN	Pn	17 07 11.3	+0.8

MAN 30 17:07:07.3, 17°.97N×121°.77E, h12km, mb3.5, ML2.1, MS1.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	Callao Caves	0.27	170⇑	i P	Pb	17 07 14.7	+0.5
CVP				i S	Sb	17 07 18.7	0.0
SGCP	Mt. Cagua	0.37	44	eP	Pg	17 07 11.7	-3.1
SGCP				eS	Sg	17 07 15.3	-4.4
APYP	Conner	0.52	258	eP	Pg	17 07 17.9	+0.4
APYP				eS	Sb	17 07 27.0	+1.2
CAUP	Cauayan	1.02	177	eP	Pg	17 07 27.2	+0.1
CAUP				eS	Pg	17 07 27.7	+0.6
ABRA	Dolores	1.06	252	eP	Pb	17 07 26.8	-0.8
ABRA				eS	Sn	17 07 42.7	0.0
PALP	Palanan	1.10	145	eP	Pb	17 07 27.1	-1.1
PALP				eS	Sn	17 07 44.0	+0.4

ISCJB ***30*** *17:16:03.8±0.3, 7°.05S±0°.04×155°.96E±0°.05, h62km, mb4.4/45, Error ellipse: s-maj=6.9km s-min=5.6km az=149.9*
IDC ***30*** *17:16:06.9±1.7, 7°.07S×156°.00E, h78km±15km, mb4.0/22, mb1 4.1/27, mb1mx4.0/38, mbtmp4.3/27, MS3.6/10, Ms1 3.6/10, ms1mx3.3/29, Error ellipse: s-maj=13.6km s-min=10.3km az=57.0*
NEIC ***30*** *17:16:08.2±1.9, 7°.10S×155°.98E, h91km±6km, mb4.5/33, Error ellipse: s-maj=13.3km s-min=9.2km az=50.0*

ISC 30 17:16:05.3±0.4, 7°.03S±0°.06×155°.93E±0°.06, h62km, n86, σ1°.39/83, mb4.5/45, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.64	121	eP	Pn	17 17 14.0	+1.0
HNR				eS	Sn	17 18 10.0	+4.4
HNR	Honiara	4.64	121	P	Pn	17 17 12.5	-0.4
	14nm,0.3s,baz=268,slow=5.3,SNR=12						
HNR				S	Sn	17 18 04.5	-1.1
	3.6nm,0.3s,baz=150,slow=20,SNR=3.8						
HNR				LR	LR	17 19 05.3	
	comp=Z,352nm,18.9s,baz=233,slow=39						
HNR	Honiara	4.64	121	ePn	Pn	17 17 14.0	+1.0
RABL	Rabaul	4.69	307	ePn	Pn	17 17 21.9	+8.3
PMG	Port Moresby	9.00	254	P	Pn	17 18 15.8	+3.2
	2.8nm,0.3s,baz=55,slow=9.6,SNR=13						
PMG				S	Sn	17 19 52.0	-0.4
	baz=204,slow=20,SNR=1.4						
PMG				LR	LR	17 21 43.8	
	comp=Z,267nm,19.4s,baz=78,slow=37						
PMG	Port Moresby	9.00	254	ePn	Pn	17 18 17.6	+5.0
PATS	Pohnpei	13.97	10	ePn	Pn	17 19 20.3	-0.2
JAY	Jayapura	15.81	286	P	P	17 19 46.3	-0.8
	0.7nm,0.3s,baz=107,slow=7.1,SNR=5.3						
CTA	Charters Tower	16.02	215	P	P	17 19 49.1	-0.1
	0.4nm,0.3s,baz=40,slow=15,SNR=6.1						
CTAO	Charters Tower	16.02	215	eP	P	17 19 50.0	+0.7
	10.0nm,1.0s						
DZM	Mont Dzumac	18.07	147	P	Pn	17 20 13.2	+0.8
	0.7nm,0.3s,baz=100,slow=23,SNR=8.0						
DZM	Mont Dzumac	18.07	147	eP	Pn	17 20 12.5	+0.1
	9.5nm,0.9s						
EIDS	Eidsvold	18.82	194	ePn	Pn	17 20 22.3	+1.1
	7.7nm,1.1s						
ARMA	Armidale	23.62	189	eP	P	17 21 09.7	-1.3
	17nm,1.1s						
FAKI	Fak Fak	23.93	279	eP	P	17 21 14.9	+1.0
	18nm,1.0s						
WRAB	Tennant Creek	24.55	236	eP	P	17 21 13.8	-5.7
	12nm,0.6s						
WB2	Warramunga Arr	24.56	236	eP	P	17 21 20.3	+0.7
	14nm,0.5s						
WR1	Warramunga Arr	24.57	236	eP	P	17 21 19.9	+0.2
WR1				ePcP	PcP	17 24 55.7	-0.9
WRA	Warramunga Arr	24.57	236	P	P	17 21 19.9	+0.2
	9.7nm,0.5s,baz=66,slow=10,SNR=98						
WRA				PcP	PcP	17 24 55.7	-0.9
	1.3nm,0.7s,baz=43,slow=3.8,SNR=4.0						
MTN	Manton Dam	25.09	255	eP	P	17 21 23.5	-0.9
	15nm,1.0s						
SIJI	Sorong	25.34	283	P	P	17 21 26.8	0.0
	8.0nm,0.5s,baz=118,slow=15,SNR=6.5						
AS31	Alice Springs	26.85	230	eP	P	17 21 40.0	-0.3
	2.3nm,0.3s						
AS31				ePcP	PcP	17 25 01.5	-0.2
AS31				eScP	ScP	17 28 32.3	-4.5
ASAR	Alice Springs	26.85	230	P	P	17 21 39.9	-0.5
	1.9nm,0.5s,baz=59,slow=10,SNR=112						
ASAR				PcP	PcP	17 25 01.5	-0.2
	0.4nm,0.4s,baz=59,slow=2.3,SNR=4.7						
ASAR				ScP	ScP	17 28 32.3	-4.5
	0.6nm,1.0s,baz=73,slow=2.0,SNR=3.2						
ASAR				LR	LR	17 31 33.4	
	comp=Z,128nm,20.0s,baz=122,slow=34						
H11S3	WAKE ISLAND Hy	27.49	23	T	T	17 50 10.1	
	baz=202,slow=76,SNR=595						
H11S2	WAKE ISLAND Hy	27.49	23	T	T	17 50 09.8	
	baz=202,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	27.51	23	T	T	17 50 11.5	
	baz=202,slow=76,SNR=312						
STKA	Stephens Creek	28.11	207	P	P	17 21 51.1	-0.4
	1.2nm,0.6s,baz=0.0,slow=20,SNR=3.4						
STKA				LR	LR	17 32 34.7	
	comp=Z,176nm,19.8s,baz=77,slow=35						
H11N1	WAKE ISLAND Hy	28.68	22	T	T	17 51 34.0	
	baz=202,slow=76,SNR=107						
H11N3	WAKE ISLAND Hy	28.69	22	T	T	17 51 36.7	
	baz=202,slow=76,SNR=45						
H11N2	WAKE ISLAND Hy	28.70	22	T	T	17 51 36.4	
	baz=202,slow=76,SNR=63						
FORT	Forrest	35.21	224	eP	P	17 22 53.3	-0.4
	14nm,0.6s						
URZ	Urewera	36.53	151	P	P	17 23 05.4	+0.5
	2.1nm,0.5s,baz=229,slow=7.3,SNR=2.9						
TAU	Tasmania Unive	36.54	191	eP	P	17 23 05.1	+0.2
	32nm,1.1s						
BKZ	Black Stump Fm	36.98	153	eP	P	17 23 08.4	-0.4
	5.0nm,1.0s						
PSA00	Pilbara Seismi	37.71	244	eP	P	17 23 14.6	-0.7
	12nm,1.1s						
THZ	Tophouse	37.73	159	eP	P	17 23 14.6	-0.6
	11nm,1.0s						
SNZO	South Karori	38.01	157	eP	P	17 23 16.4	-1.0
	51nm,1.1s						
KHZ	Kahutara	38.53	159	eP	P	17 23 20.6	-1.2
	17nm,1.2s						
RPZ	Rata Peaks	38.88	162	P	P	17 23 24.7	-0.1
	6.4nm,0.7s,baz=9.6,slow=3.5,SNR=7.0						
KKM	Kota Kinabalu	41.70	287	eP	P	17 23 49.4	+0.8
	9.7nm,0.7s						
MORW	Morawa	43.49	235	eP	P	17 24 02.4	-0.4
	6.8nm,0.9s						
NWAO	Narrogin (SRO)	44.17	229	P	P	17 24 07.3	-0.9
	8.1nm,0.8s,baz=85,slow=11,SNR=3.1						
NWAO	Narrogin (SRO)	44.17	229	eP	P	17 24 07.3	-0.9
NWAO				eP	P	17 24 07.3	-0.9
KSM	Kuching	46.30	279	eP	P	17 24 26.3	+0.9
	7.1nm,1.0s						
MJAR	Matsushiro Arr	46.42	340	P	P	17 24 24.8	-1.1
	0.8nm,0.7s,baz=173,slow=8.6,SNR=5.1						
MAJO	Matsushiro	46.42	340	eP	P	17 24 24.8	-1.1
JNU	Nakatsue	46.49	331	P	P	17 24 26.9	+0.4
	3.6nm,0.5s,baz=293,slow=1.8,SNR=10.0						
JNU	Nakatsue	46.49	331	eP	P	17 24 26.9	+0.4
	11nm,1.0s						
KSRS	Korea Array	51.40	331	P	P	17 25 04.9	+0.9
	2.3nm,0.8s,baz=149,slow=7.7,SNR=12						
KS15	Wonju Array Si	51.41	331	eP	P	17 25 04.9	+0.8
	5.9nm,1.0s						
PPT	Papeete	54.10	107	LR	LR	17 44 45.5	
	comp=Z,34nm,18.6s,baz=351,slow=32						
PETK	Petropavlovsk-	59.92	1	P	P	17 26 05.4	+0.6
	3.0nm,0.9s,baz=169,slow=7.5,SNR=2.9						
PETK				LR	LR	17 48 56.6	
	comp=Z,42nm,21.6s,baz=116,slow=33						
PEA1	Petropavlovsk-	59.93	1	eP	P	17 26 05.4	+0.5
UTTA	Ulhaardit	59.95	295	P	P	17 26 08.5	+2.8
CMAR	Chiang Mai Arr	61.63	295	P	P	17 26 17.9	+0.8
	3.9nm,1.0s,baz=117,slow=4.8,SNR=21						
CMMT	Chiang Mai	61.74	296	P	P	17 26 19.9	+2.0
	3.4nm,1.4s	

MEX 30 17:38:54.3±0.9, 18°.40N×101°.16W, h58km±18km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.78**	**99**	*eP*	Pn	17 39 07.8	-1.7
ARIG				*eS*	Sn	17 39 18.8	-1.8
ZIIG	**Zihuatanejo**	**0.84**	**200**	*eP*	Pn	17 39 08.3	-1.9
ZIIG				*i* S	Sn	17 39 20.4	-1.5
MEIG	**Mezcala**	**1.54**	**108**	*i* P	Pn	17 39 18.5	-1.1
MEIG				*eS*	Sn	17 39 35.7	-2.8
PLIG	**Platanillo**	**1.57**	**90**	*eP*	Pn	17 39 19.2	-0.8
CAIG	**El Cayaco**	**1.59**	**148**	*eP*	Pn	17 39 18.4	-1.7
YAIG	**Yautepec**	**2.04**	**77**	*eP*	Pn	17 39 25.6	-0.7
YAIG				*eS*	Sn	17 39 49.3	-1.5
MMIG	**Aquila**	**2.08**	**267**	*eP*	Pn	17 39 26.3	-0.6
TLIG	**Tlapa**	**2.60**	**108**	*eP*	Pn	17 39 34.0	-0.1

*ISK **30** 17:47:05.9, 36°.46N×27°.39E, h4km±1km, ML2.6/9*
*ATH **30** 17:47:07.1, 35°.95N×27°.54E, h26km±14km, ML2.3/1, Error ellipse: s-maj=35.7km s-min=1.1km az=139.0*
*THE **30** 17:47:07.9, 35°.88N×27°.58E, h13km±2km, ML2.3/3, Error ellipse: s-maj=4.2km s-min=0.8km az=136.0*
*DDA **30** 17:47:11.8, 36°.81N×27°.66E, h7km±2km, ML2.5*

ISC 30 17:47:05.2±1.3, 36°.44N±0°.03×27°.38E±0°.03, h4km±13km, n26, σ2ˢ73/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.33**	**28**	*i* P	**Pb**	**17 47 15.5**	**+1.8**
DAT				*i* S	**Sg**	**17 47 16.4**	**+0.4**
DAT				IAML_P			
	comp=Z,6μm,0.1s						
BDRM	**Kayabasi**	**0.62**	**4**	*i* P	**Pg**	**17 47 18.0**	**+0.7**
BDRM				*i* S	**Sg**	**17 47 21.8**	**-3.7**
ARG	**Arkhangelos**	**0.64**	**110**	P	**Pb**	**17 47 18.9**	**-0.1**
ARG				S	**Sg**	**17 47 26.7**	**+0.8**
ARG	**Arkhangelos**	**0.64**	**110**	P	**Pg**	**17 47 18.4**	**+0.9**
ARG				S	**Sg**	**17 47 26.1**	**+0.3**
KARP	**Karpathos**	**0.91**	**191**	P	Pg	17 47 17.6	-5.1
KARP				S	Sg	17 47 24.5	-10
KARP	**Karpathos**	**0.91**	**191**	P	Pg	17 47 17.6	-5.1
KARP				S	Sg	17 47 25.0	-10
KARP				AML	AML	17 47 25.9	
	comp=E,887μm,0.2s						
KARP				AML	AML	17 47 26.4	
	comp=N,783μm,0.1s						
YER	**Yerkesik**	**1.00**	**46**	PG	**Pg**	**17 47 24.7**	**+0.2**
TURN	**Turunc**	**1.07**	**66**	PG	Pg	17 47 21.1	-4.7
TURN	**Turunc**	**1.07**	**66**	*i* P	**Pg**	**17 47 21.9**	**-3.8**
TURN				*i* S	Sg	17 47 28.3	-11
TURN				IAML_P			
	comp=Z,1μm,0.1s						
DALY	**Dalyan (Mula)**	**1.09**	**69**	PG	**Pb**	**17 47 27.3**	**+0.7**
DALY	**Dalyan (Mula)**	**1.09**	**69**	*i* P	**Pn**	**17 47 28.4**	**+1.1**
GCAM	**G?zelcaml?**	**1.26**	**355**	PN	**Pn**	**17 47 30.7**	**+1.1**
GCAM	**G?zelcaml?**	**1.26**	**355**	*i* P	**Pn**	**17 47 31.1**	**+1.5**
AYDN	**Tasoluk**	**1.28**	**18**	*i* P	**Pg**	**17 47 29.1**	**-0.7**
AYDN				*i* S	**Sg**	**17 47 41.2**	**-5.2**
ANAF	**Anafi Island**	**1.30**	**267**	P	**Pb**	**17 47 34.4**	**+4.1**
ANAF				S	**Sn**	**17 47 53.0**	**+5.0**
FETY	**Fethiye**	**1.38**	**81**	PN	**Pg**	**17 47 33.0**	**+1.2**
FETY	**Fethiye**	**1.38**	**81**	*i* P	**Pg**	**17 47 35.2**	**+3.5**
FETY				IAML_P			
	comp=Z,2μm,0.3s						
SANT	**Santorini**	**1.55**	**268**	PN	**Pb**	**17 47 35.2**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.56**	**15**	PN	**Pb**	**17 47 34.8**	**+0.1**
APE	**Apeiranthos**	**1.61**	**293**	PN	**Pb**	**17 47 36.1**	**+0.5**
ZKR	**Zakros**	**1.63**	**216**	P	**Pn**	**17 47 31.2**	**-3.4**
ZKR				S	**Sn**	**17 47 48.7**	**-7.3**
AKAS	**Kas**	**1.81**	**96**	PN	**Pn**	**17 47 38.3**	**+1.1**
NPS	**Neapolis**	**1.86**	**231**	P	**Pn**	**17 47 37.4**	**-0.4**
LAST	**Lasithi**	**2.01**	**231**	P	**Pn**	**17 47 39.7**	**-0.3**
IDI	**Anoyia**	**2.33**	**241**	PN	**Pn**	**17 47 46.1**	**+1.8**
IDI	**Anoyia**	**2.33**	**241**	P	**Pn**	**17 47 44.8**	**+0.4**

*ISCJB **30** 18:07:59.2±0.2, 38°.96N±0°.02×73°.39E±0°.03, h10km, mb4.2/59, MS3.4/10, Error ellipse: s-maj=3.3km s-min=2.4km az=147.0*
*IDC **30** 18:07:59.6±0.6, 39°.09N×73°.47E, h0km, mb4.1/31, mb1 4.2/39, mb1mx4.1/66, mbtmp4.1/39, ML3.6/8, MS3.3/11, Ms1 3.3/11, ms1mx3.0/49, Error ellipse: s-maj=11.7km s-min=8.9km az=180.0*
*BJI **30** 18:08:00.5±0.0, 39°.20N×73°.36E, h8km, mb4.4/16, mB4.5/13, ML4.3/4, Ms3.9/11, Ms7 3.6/10*
*SOME **30** 18:08:00.5, 39°.48N×73°.08E, h5km, MS3.6*
*KRNET **30** 18:08:01.4±0.1, 39°.08N×73°.36E, mb4.4*
*MOS **30** 18:08:03.9±1.5, 39°.24N×73°.45E, h33km, mb4.5/20, Error ellipse: s-maj=6.6km s-min=4.8km az=87.1*
*NNC **30** 18:08:03.6±2.5, 39°.43N×73°.29E, h0km, mb4.9, mpv4.6, Error ellipse: s-maj=20.5km s-min=11.8km az=171.0*
*NEIC **30** 18:08:04.0±3.0, 39°.22N×73°.48E, h26km±5km, mb4.3/27, Error ellipse: s-maj=9.7km s-min=8.2km az=157.0*

ISC 30 18:08:01.6±0.3, 39°.08N±0°.03×73°.33E±0°.03, h10km, n230, σ2ˢ12/261, mb4.3/59, MS3.4/9, 33C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.25**	**289**	⇑*i* P	**Pn**	**18 08 25.0**	**-0.4**
	baz=89						
DRK				⇑*i* S	**Sb**	**18 08 42.1**	**+0.3**
	baz=89						
KSH	**Kashi**	**2.10**	**77**	Pg	Pn	18 08 31.5	-5.4
KSH				Sg	Sn	18 08 47.5	-16
KSH				smax	smax		
	comp=N,5μm,0.5s						
KSH				smax	smax		
	comp=E,5μm,0.6s						
ARSB	**Arslanbob**	**2.25**	**353**	⇑*i* P	**Pn**	**18 08 40.1**	**+1.0**
	baz=53						
ARSB				⇑*i* S	**Sn**	**18 09 08.0**	**+0.9**
	baz=53						
GAR	**Garm**	**2.35**	**269**	*e*Pn	**Pg**	**18 08 45.8**	**-0.8**
GAR	**Garm**	**2.35**	**269**	*e*PN	**Pg**	**18 08 45.8**	**-0.8**
ARLS	**Aral**	**2.88**	**15**	⇓*i* P	**Pn**	**18 08 48.7**	**+1.0**
	baz=15						
ARLS				⇓*i* S	**Sn**	**18 09 22.2**	**-0.2**
	baz=15						
ARK	**Arkit**	**2.91**	**339**	⇑*i* P	**Pn**	**18 08 48.7**	**+0.7**
	baz=39						
ARK				⇑*i* S	**Sn**	**18 09 22.6**	**-0.5**
	baz=39						
UCH	**Uchtor**	**3.27**	**16**	P	**Pn**	**18 08 55.2**	**+1.9**
	SNR=306						
KZA	**Kyzart**	**3.33**	**25**	P	**Pn**	**18 08 55.5**	**+1.4**
	SNR=192						
EKS2	**Erkin-Say**	**3.59**	**5**	P	**Pn**	**18 08 59.5**	**+2.0**
	SNR=84						
AAK	**Ala-Archa**	**3.66**	**14**	Pn	**Pn**	**18 09 00.8**	**+2.4**
	29nm,0.3s,baz=170,slow=6.9,SNR=221						
AAK				Sn	**Sn**	**18 09 45.7**	**+4.0**
	21nm,0.3s,baz=360,slow=15,SNR=3.9						
AAK				LR	LR	18 09 58.0	
	comp=Z,28nm,19.1s,baz=190,slow=33						
AAK	**Ala-Archa**	**3.66**	**14**	P	**Pn**	**18 09 00.9**	**+2.4**
	SNR=117						
AAK	**Ala-Archa**	**3.66**	**14**	⇓Pg	**Pn**	**18 09 00.8**	**+2.4**
	108nm,0.5s						
AAK				⇓Lg	Lg	18 09 45.9	
	795nm,0.8s						
MRKS	**Merke**	**3.66**	**359**	Pg	**Pn**	**18 09 00.1**	**+1.7**
	98nm,0.6s						
MRKS				Lg	Lg	18 09 43.6	
	210nm,0.6s						
MRKS	**Merke**	**3.66**	**359**	⇓*i* P	**Pn**	**18 09 00.1**	**+1.7**
	99nm,0.6s						
MRKS				*e*S	**Sn**	**18 09 43.4**	**+1.7**
	189nm,0.6s						
KBK	**Karagaybulak**	**3.78**	**18**	P	**Pn**	**18 09 02.2**	**+2.1**
	SNR=102						
FRU1	**Bishkek**	**3.85**	**14**	*e*Pn	**Pn**	**18 09 04.0**	**+3.0**
ULHL	**Ulahol**	**3.86**	**34**	P	**Pn**	**18 09 02.3**	**+1.1**
	SNR=14						
BOOM	**Boomskoye usch**	**3.94**	**29**	*e*Pn	**Pn**	**18 09 03.7**	**+1.4**
BOOM	**Boomskoye usch**	**3.94**	**29**	*e*PN	**Pn**	**18 09 03.7**	**+1.4**
IUG	**Iuzhnay**	**3.96**	**322**	Pg	**Pn**	**18 09 05.3**	**+2.8**
	74nm,0.6s						
IUG				Lg	Lg	18 09 50.9	
	575nm,0.5s						
IUG	**Iuzhnay**	**3.96**	**322**	*e*P	**Pn**	**18 09 05.3**	**+2.8**
	74nm,0.6s						
IUG				*e*S	**Sn**	**18 09 52.5**	**+3.5**
	575nm,0.5s						
CHMS	**Chumysh**	**4.06**	**15**	P	**Pn**	**18 09 06.0**	**+2.2**
	SNR=44						
DZA	**Taraz**	**4.09**	**339**	Pg	**Pn**	**18 09 06.8**	**+2.5**
	368nm,0.5s						
DZA				Lg	Lg	18 09 53.8	
	473nm,0.6s						
DZA	**Taraz**	**4.09**	**339**	⇑*i* P	**Pn**	**18 09 06.8**	**+2.5**
	260nm,0.3s						
DZA				*e*S	**Sn**	**18 09 55.4**	**+3.1**
	448nm,0.5s						
TKM2	**Tokmak 2**	**4.20**	**23**	P	**Pn**	**18 09 07.5**	**+1.6**
	SNR=49						
TKM2	**Tokmak 2**	**4.20**	**23**	⇑Pn	**Pn**	**18 09 07.5**	**+1.6**
	25nm,0.8s						
TKM2				⇑Pg	**Pb**	**18 09 16.5**	**+0.8**
	49nm,0.5s						
TKM2				⇑Lg	Lg	18 10 08.1	
	178nm,0.5s						
TKM2	**Tokmak 2**	**4.20**	**23**	PN	**Pn**	**18 09 07.4**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,25nm,0.9s						
KDJ	**Kajisay**	**4.23**	**43**	*e*Pn	**Pn**	**18 09 07.0**	**+0.8**
KDJ	**Kajisay**	**4.23**	**43**	*e*PN	**Pn**	**18 09 07.0**	**+0.8**
USP	**Ospenovka**	**4.27**	**12**	P	**Pn**	**18 09 09.4**	**+2.7**
	SNR=51						
KST	**Kastek**	**4.43**	**26**	Pg	**Pb**	**18 09 19.1**	**-0.4**
	comp=Z,106nm,0.5s						
KST				Lg	Lg	18 10 15.8	
	comp=Z,417nm,0.7s						
KST	**Kastek**	**4.43**	**26**	*e*P	**Pb**	**18 09 19.1**	**-0.4**
	comp=Z,106nm,0.5s						
KST				⇓*i* S	**Sb**	**18 10 15.8**	**+2.7**
	comp=Z,417nm,0.7s						
KK31	**Karatay Array**	**4.55**	**333**	*e*Pn	**Pn**	**18 09 12.3**	**+1.8**
KK31	**Karatay Array**	**4.55**	**333**	Pn	**Pn**	**18 09 12.5**	**+2.0**
	comp=Z,34nm,0.5s,baz=137,slow=12,SNR=481						
KK31				Pg	**Pb**	**18 09 24.3**	**+2.9**
	comp=Z,86nm,0.7s,baz=158,slow=17,SNR=6.4						
KK31				⇑Sn	**Sn**	**18 10 07.4**	**+4.0**
	comp=Z,42nm,0.4s,baz=159,slow=25,SNR=4.8						
KK31				⇑Lg	Lg	18 10 26.7	
	comp=Z,234nm,0.9s,baz=158,slow=27,SNR=3.6						
KK31	**Karatay Array**	**4.55**	**333**	PN	**Pn**	**18 09 12.4**	**+2.0**
KK31				pmax	pmax		
	comp=Z,34nm,0.5s						
KKAR	**Karatay Array**	**4.55**	**333**	*e*Pn	**Pn**	**18 09 12.3**	**+1.8**
KKAR	**Karatay Array**	**4.55**	**333**	*e*PN	**Pn**	**18 09 12.3**	**+1.8**
DGS	**Degeres**	**4.55**	**23**	Pg	**Pb**	**18 09 21.7**	**+0.2**
	comp=Z,144nm,0.5s						
DGS				Lg	Lg	18 10 20.3	
	comp=Z,334nm,0.6s						
DGS	**Degeres**	**4.55**	**23**	*e*P	**Pb**	**18 09 21.8**	**+0.2**
	comp=Z,144nm,0.5s						
DGS				*e*S	**Sb**	**18 10 20.3**	**+3.9**
	comp=Z,334nm,0.6s						
IZV	**Izvestkoviy**	**4.67**	**31**	Pg	**Pb**	**18 09 23.4**	**-0.2**
	comp=Z,143nm,0.4s						
IZV				Lg	Lg	18 10 22.3	
	comp=Z,291nm,0.8s						
IZV	**Izvestkoviy**	**4.67**	**31**	*e*P	**Pb**	**18 09 22.9**	**-0.6**
	comp=Z,143nm,0.4s						
IZV				*e*S	**Sb**	**18 10 21.9**	**+2.0**
	comp=Z,291nm,0.8s						
MTBS	**Maitube**	**4.67**	**29**	Pg	**Pb**	**18 09 23.6**	**-0.1**
	comp=Z,70nm,0.4s						
MTBS				Lg	Lg	18 10 23.9	
	comp=Z,185nm,0.5s						
MTBS	**Maitube**	**4.67**	**29**	*e*P	**Pb**	**18 09 23.6**	**-0.1**
	comp=Z,70nm,0.4s						
MTBS				*e*S	**Sb**	**18 10 23.4**	**+3.4**
	comp=Z,185nm,0.5s						
TNSS	**Tian-Shan**	**4.80**	**34**	*e*P	**Pb**	**18 09 26.2**	**+0.1**
	comp=Z,98nm,0.5s						
TNSS				*e*S	**Sb**	**18 10 28.1**	**+4.0**
	comp=Z,374nm,0.6s						
AAA	**Alma-Ata**	**4.93**	**32**	Pg	**Pb**	**18 09 28.8**	**+0.7**
	comp=Z,78nm,0.5s						
AAA				Lg	Lg	18 10 32.1	
	comp=Z,375nm,0.7s						
AAA	**Alma-Ata**	**4.93**	**32**	*e*P	**Pb**	**18 09 28.8**	**+0.7**
	comp=Z,78nm,0.5s						
AAA				*e*S	**Sb**	**18 10 32.1**	**+4.6**
	comp=Z,375nm,0.7s						
MDOK	**Medeo**	**4.95**	**33**	Pg	**Pb**	**18 09 28.2**	**-0.2**
	comp=Z,74nm,0.4s						
MDOK				Lg	Lg	18 10 31.5	
	comp=Z,341nm,0.8s						
MDOK	**Medeo**	**4.95**	**33**	*e*P	**Pb**	**18 09 28.2**	**-0.2**
	comp=Z,74nm,0.4s						
MDOK				*e*S	**Sb**	**18 10 31.5**	**+3.4**
	comp=Z,341nm,0.8s						
KNDC	**Almaty**	**4.96**	**32**	⇓Pn	**Pn**	**18 09 18.1**	**+1.9**
KNDC				⇑Pg	**Pb**	**18 09 28.9**	**+0.4**
KNDC				⇑Lg	Lg	18 10 30.4	
KOTS	**Kotyrbulak**	**5.04**	**33**	Pg	**Pb**	**18 09 30.6**	**+0.7**
	comp=Z,110nm,0.4s						
KOTS				Lg	Lg	18 10 35.0	
	comp=Z,569nm,0.8s						
KOTS	**Kotyrbulak**	**5.04**	**33**	*e*P	**Pb**	**18 09 30.6**	**+0.7**
	comp=Z,110nm,0.4s						
KOTS				*e*S	**Sb**	**18 10 35.0**	**+4.5**
	comp=Z,569nm,0.8s						
PRZ	**Przheval'sk**	**5.13**	**47**	*e*Pn	**Pn**	**18 09 20.7**	**+2.0**
PRZ	**Przheval'sk**	**5.13**	**47**	*e*PN	**Pn**	**18 09 20.7**	**+2.0**
KTBS	**Karatobe**	**5.27**	**28**	Pg	**Pb**	**18 09 34.4**	**+0.6**
	comp=Z,39nm,0.6s						
KTBS				Lg	Lg	18 10 42.0	
	comp=Z,466nm,0.4s						
KTBS	**Karatobe**	**5.27**	**28**	*e*P	**Pb**	**18 09 34.4**	**+0.6**
	comp=Z,39nm,0.6s						
KTBS				*e*S	**Sb**	**18 10 42.0**	**+4.9**
	comp=Z,466nm,0.4s						
KUU	**Kurty**	**5.31**	**24**	Pg	**Pb**	**18 09 34.6**	**+0.1**
	comp=Z,60nm,0.4s						
KUU				Lg	Lg	18 10 42.0	
	comp=Z,321nm,0.6s						
KUU	**Kurty**	**5.31**	**24**	*e*P	**Pb**	**18 09 34.6**	**+0.1**
	comp=Z,60nm,0.4s						
KUU				⇓*i* S	**Sb**	**18 10 42.0**	**+3.7**
	comp=Z,321nm,0.6s						
CEP	**Cherat**	**5.37**	**193**	P	Pb	18 09 28.8	-6.8
CHCP	**Chirah Chowk**	**5.41**	**181**	P	Pb	18 09 29.4	-6.9
NIL	**Nilore**	**5.42**	**181**	*e*Pn	Pb	18 09 29.9	-6.6
NIL	**Nilore**	**5.42**	**181**	*e*PN	Pb	18 09 29.9	-6.5
CHKK	**Chushkaly**	**5.50**	**29**	Pg	**Pb**	**18 09 38.6**	**+0.8**
	comp=Z,36nm,0.5s						
CHKK				Lg	Lg	18 10 49.0	
	comp=Z,155nm,0.6s						
CHKK	**Chushkaly**	**5.50**	**29**	*e*P	**Pb**	**18 09 38.6**	**+0.8**
	comp=Z,36nm,0.5s						
CHKK				*e*S	**Sb**	**18 10 49.0**	**+5.2**
	comp=Z,155nm,0.6s						
SATY	**Saty**	**5.52**	**42**	*e*P	**Pb**	**18 09 38.5**	**+0.4**
	comp=Z,153nm,0.8s						
SATY				*e*S	**Sb**	**18 10 48.6**	**+4.1**
	comp=Z,200nm,1.4s						
KBL	**Kabul**	**5.69**	**218**	*e*Pn	Pb	18 09 35.1	-6.0
KBL	**Kabul**	**5.69**	**218**	*e*PN	Pb	18 09 35.1	-6.0
KURS	**Kuram**	**5.71**	**38**	*e*P	**Pb**	**18 09 43.5**	**+2.1**
	comp=Z,52nm,0.6s						
KURS				*e*S	**Sg**	**18 10 57.9**	**-7.1**
	comp=Z,122nm,1.2s						
UZB	**Uzynbulak**	**5.91**	**45**	*e*P	**Pb**	**18 09 45.2**	**+0.4**
	comp=Z,20nm,0.5s						
UZB				*e*S	**Sb**	**18 11 00.8**	**+5.1**
	comp=Z,86nm,0.7s						
KPKS	**Kokpek**	**5.95**	**41**	*e*P	**Pb**	**18 09 47.1**	**+1.6**
	comp=Z,139nm,0.7s						
KPKS				*e*S	**Sb**	**18 11 03.4**	**+6.5**
	comp=Z,174nm,0.7s						
BTLS	**Baital**	**5.98**	**5**	Pg	**Pb**	**18 09 43.1**	**-2.7**
	comp=Z,24nm,0.6s						
BTLS				Lg	Lg	18 10 57.7	
	comp=Z,63nm,0.7s						
BTLS	**Baital**	**5.98**	**5**	*e*P	**Pb**	**18 09 43.1**	**-2.7**
	comp=Z,24nm,0.6s						
BTLS				*e*S	**Sb**	**18 10 57.8**	**+0.3**
	comp=Z,63nm,0.7s						
ARXS	**Arharly**	**6.13**	**32**	Pg	**Pb**	**18 09 49.9**	**+1.3**
	comp=Z,56nm,0.4s						
ARXS				Lg	Lg	18 11 07.9	
	comp=Z,251nm,0.6s						
ARXS	**Arharly**	**6.13**	**32**	*e*P	**Pb**	**18 09 49.2**	**+0.7**
	comp=Z,56nm,0.4s						
ARXS				*e*S	**Sb**	**18 11 07.8**	**+5.8**
	comp=Z,251nm,0.6s						
MNBS	**Baschi**	**6.28**	**36**	Pg	**Pb**	**18 09 53.9**	**+2.9**
	comp=Z,37nm,0.5s						
MNBS				Lg	Lg	18 11 14.2	
	comp=Z,176nm,0.6s						
MNBS	**Baschi**	**6.28**	**36**	*e*P	**Pb**	**18 09 52.9**	**+1.9**
	comp=Z,37nm,0.5s						
MNBS				*e*S	**Sb**	**18 11 13.2**	**+7.1**
	comp=Z,176nm,0.6s						
PDGK	**Podgornoye**	**6.29**	**46**	⇑Pn	**Pn**	**18 09 34.7**	**+0.2**
	comp=Z,18nm,0.7s						
PDGK				⇑Pg	**Pb**	**18 09 53.3**	**+2.0**
	comp=Z,50nm,0.8s						
PDGK				⇑Lg	Lg	18 11 15.3	
	comp=Z,170nm,1.1s						
PDGK	**Podgornoye**	**6.29**	**46**	PN	**Pn**	**18 09 34.7**	**+0.2**
PDGK				pmax	pmax		
	comp=Z,19nm,0.7s						
THW	**Thamme Wali**	**6.41**	**192**	P	Pn	18 09 42.0	+6.0
SARP	**Sargodha**	**7.17**	**184**	P	**Pn**	**18 09 50.8**	**+4.4**
DHRM	**DHARAMSHALA**	**7.23**	**160**	*e*P	**Pn**	**18 09 50.8**	**+3.3**
DHRM				*e*S	**Sn**	**18 11 12.9**	**+3.1**
DHRM				IAML		18 11 24.0	
	comp=E,210nm,0.3s						
DHRM				IAML		18 11 24.4	
	comp=N,214nm,0.4s						
SMLA	**Simla**	**8.53**	**157**	*e*P	**Pn**	**18 10 07.4**	**+2.2**
SMLA				*e*S	**Sn**	**18 11 42.7**	**+1.1**
SMLA				IAML		18 11 51.5	
	comp=E,130nm,0.5s						
SMLA				IAML		18 11 51.9	
	comp=N,159nm,0.5s						
OTUK	**Ortayu**	**9.19**	**356**	⇑Pn	**Pn**	**18 10 13.6**	**-0.5**
	comp=N,8.4nm,0.6s						
OTUK				⇑Lg	Lg	18 12 45.7	
	comp=N,80nm,0.9s						
OTUK	**Ortayu**	**9.19**	**356**	P	**Pn**	**18 10 13.6**	**-0.5**
OTUK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DDI	**Dehra Dun**	**9.56**	**155**	*e*P	**Pn**	**18 10 22.1**	**+2.7**
DDI				*e*S	**Sn**	**18 12 06.7**	**-0.2**
DDI				IAmb	IAmb	18 12 16.4	
	comp=N,279nm,0.7s						
DDI				IAmb	IAmb	18 12 18.8	
	comp=E,223nm,0.9s						
JOSI	**Joshimath**	**9.93**	**147**	*e*P	**Pn**	**18 10 27.1**	**+2.6**
JOSI				*e*S	**Sn**	**18 12 16.1**	**0.0**
JOSI				IAML		18 12 24.6	
	comp=E,1μm,0.8s						
JOSI				IAML		18 12 25.3	
	comp=N,636nm,0.7s						
MAKZ	**Makanchi**	**9.98**	**37**	*e*Pn	**Pn**	**18 10 26.7**	**+1.6**
MK31	**Makanchi Array**	**10.12**	**38**	*e*Pn	**Pn**	**18 10 26.6**	**-0.3**
MK31	**Makanchi Array**	**10.12**	**38**	Pn	**Pn**	**18 10 27.6**	**+0.6**
	comp=N,5.1nm,0.9s,baz=211,slow=11,SNR=15						
MK31				⇓Pg		18 11 06.9	
	comp=N,2.8nm,0.6s,baz=221,slow=15,SNR=5.5						
MK31				⇓Lg	Lg	18 13 13.8	
	comp=N,13nm,0.8s,baz=218,slow=27,SNR=3.9						
MK31	**Makanchi Array**	**10.12**	**38**	*i* P	**Pn**	**18 10 27.5**	**+0.6**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK32	**Makanchi Array**	**10.12**	**38**	*e*Pn	**Pn**	**18 10 27.1**	**+0.1**
MKAR	**Makanchi Array**	**10.12**	**38**	Pn	**Pn**	**18 10 27.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=213,slow=13,SNR=15						
MKAR				Lg	Lg	18 13 14.2	
	comp=Z,0.4nm,0.3s,baz=221,slow=28,SNR=3.0						
MKAR				LR	LR	18 14 00.2	
	comp=Z,86nm,18.2s,baz=224,slow=36						
NDI	**New Delhi**	**10.86**	**162**	*e*S	**Sn**	**18 12 34.0**	**-4.7**
KUDL	**Kundal**	**11.22**	**166**	*e*P	Pn	18 10 32.4	-10
KUDL				*e*S	Sn	18 12 32.6	-15
KUDL				IAML		18 12 49.9	
	comp=E,23nm,0.3s						
KUDL				IAML		18 12 50.8	
	comp=N,18nm,0.5s						
SONA	**Sohna**	**11.25**	**163**	*e*P	**Pn**	**18 10 42.9**	**+0.6**
SONA				*e*S	**Sn**	**18 12 44.4**	**-3.7**
WMQ	**Urumqi**	**11.77**	**62**	*e*P	**Pn**	**18 10 48.5**	**-1.1**
WMQ				pmax	pmax		
	comp=N,44nm,4.5s						
WMQ				LR	LR		
	comp=N,56nm,5.3s						
WMQ				LR	LR		
	comp=N,99nm,4.9s						
GEYT	**Alibeck**	**11.98**	**269**	Pn	**Pn**	**18 10 52.1**	**-0.3**
	comp=N,0.9nm,0.3s,baz=104,slow=11,SNR=9.6						
GEYT				Sn	**Sn**	**18 13 07.6**	**+1.6**
	comp=N,1.2nm,0.3s,baz=132,slow=14,SNR=6.6						
GEYT				LR	LR	18 15 50.2	
	comp=N,67nm,22.0s,baz=165,slow=39						
GYA0B	**ALIBECK ARRAY**	**11.98**	**269**	*e*Pn	**Pn**	**18 10 52.7**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**11.98**	**269**	⇑Pn	**Pn**	**18 10 52.1**	**-0.3**
GYA0B				⇑Sn	**Sn**	**18 13 03.5**	**-2.6**
KURBB	**Kurchatov Arra**	**12.11**	**16**	Pn	**Pn**	**18 10 51.8**	**-2.3**
	comp=N,0.1nm,0.3s,baz=206,slow=13,SNR=13						
KURBB				Lg	Lg	18 14 14.2	
	comp=N,0.2nm,0.3s,baz=204,slow=30,SNR=8.2						
KURBB	**Kurchatov Arra**	**12.11**	**16**	⇓Pn	**Pn**	**18 10 52.0**	**-2.1**
	comp=N,5.1nm,0.9s						
KURBB				⇑Lg	Lg	18 14 21.5	
	comp=N,105nm,0.8s						
KURK	**Kurchatov**	**12.22**	**16**	*e*Pn	**Pn**	**18 10 53.0**	**-2.5**
KURK	**Kurchatov**	**12.22**	**16**	⇑*e*P	**Pn**	**18 10 53.1**	**-2.5**
PYUN	**Piuthan**	**13.58**	**141**	*e*P	**Pn**	**18 11 11.6**	**-2.9**
	comp=N,28nm,0.4s						
DANN	**Dangsing**	**13.77**	**138**	*e*P	**Pn**	**18 11 14.6**	**-2.5**
	comp=N,37nm,0.4s						
AB31

comp=Z,13nm,0.7s
ARU MLR MLR
WSAR Wadi Sarin 20.15 223 P **P 18 12 36.4 +0.5**
comp=Z,73nm,13.0s
UOSS Minazif 20.19 231 *e*P **P 18 12 36.9 +0.4**
comp=Z,10nm,1.1s
GTA Gaotai 20.50 81 ⇑P Pn 18 12 40.5 -1.5
GTA pP sP 18 12 44.5 -1.1
GTA sP pP 18 12 47.5 +3.7
GTA S Sn 18 16 34.5 +1.5
GTA pmax pmax
comp=Z,15nm,1.3s
GTA pmax pmax
comp=Z,99nm,6.7s
GTA LR LR
comp=Z,83nm,14.6s
GTA LR LR
comp=Z,97nm,14.9s
GTA LR LR
comp=Z,150nm,18.4s
SHL Shillong 20.62 125 *e*P **P 18 12 41.9 +0.6**
comp=Z,8.4nm,0.6s
SHL Shillong 20.62 125 *e*P **P 18 12 41.9 +0.6**
SHL pmax pmax
comp=Z,8.0nm,0.6s
GROC Groznyy 21.10 290 *e*P **P 18 12 51.6 +5.5**
GROC *e* 18 13 08.8
GROC *e*S Sn 18 16 46.8 -0.4
GROC pmax pmax
comp=Z,20nm,0.6s
GNI Garni 22.01 282 P **P 18 12 57.9 +1.7**
comp=Z,2.1nm,0.3s,baz=331,slow=19,SNR=1.9
NCK Nalchik 22.71 291⇓*e*P **P 18 13 06.3 +2.8**
NCK pmax pmax
comp=Z,4.0nm,0.5s
MOY Mondy 22.99 48 *e*P **P 18 13 06.0 -0.4**
MOY pmax pmax
comp=Z,10.0nm,1.4s
KBZ Khabaz 23.22 291 P **P 18 13 10.1 +1.4**
comp=Z,1.3nm,0.6s,baz=102,slow=8.7,SNR=3.9
NEY Neytrino 23.34 290⇑*e*P **P 18 13 12.9 +2.7**
NEY pmax pmax
comp=Z,2.0nm,1.2s
KVAR Kislovodsk Arr 23.37 292 P **P 18 13 10.8 +0.4**
comp=Z,0.8nm,0.4s,baz=333,slow=14,SNR=2.0
KVAR LR LR 18 22 37.1
comp=Z,69nm,21.4s,baz=292,slow=37
KIV Kislovodsk 23.38 292 *e*P **P 18 13 10.8 +0.4**
comp=Z,13nm,0.9s
KIV Kislovodsk 23.38 292 *e*P **P 18 13 10.8 +0.4**
KIV pmax pmax
comp=Z,13nm,0.9s
ZAK Zakamensk 23.93 52 *e*P **P 18 13 14.9 -0.8**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
TLY Talaya 24.54 49 *e*P **P 18 13 22.0 +0.7**
comp=Z,6.3nm,0.8s
TLY Talaya 24.54 49⇓*e*P **P 18 13 21.6 +0.3**
SONA0 Songino Array 25.39 59 *e*P **P 18 13 28.8 -0.2**
SONM Songino Array 25.39 59 P **P 18 13 28.8 -0.2**
comp=Z,6.4nm,0.7s,baz=266,slow=9.8,SNR=35
SONM LR LR 18 24 13.7
comp=Z,113nm,19.6s,baz=244,slow=38
VORD Divnogorie 26.59 308 *e*P **P 18 13 39.3 -0.4**
VORD pmax pmax
comp=Z,6.0nm,0.4s
VSR Storozhevoye 26.72 308 *e*P **P 18 13 39.8 -1.2**
VSR pmax pmax
comp=Z,7.0nm,0.6s
ANN Anapa 27.15 294 *e*P **P 18 13 43.2 -1.7**
ANN *e**PP **sP 18 13 53.3 +2.4**
ANN *e* 18 17 02.7
ANN *e*S **S 18 18 18.7 -4.5**
ANN pmax pmax
comp=Z,28nm,1.1s
LPSR Galich'ya Gora 27.22 311 *e*P **P 18 13 45.0 -0.4**
LPSR pmax pmax
comp=Z,7.0nm,0.6s
RAYN Ar Rayn 28.24 245 *e*P **P 18 13 58.4 +3.5**
comp=Z,2.9nm,0.8s
RAYN Ar Rayn 28.24 245 *e*P **P 18 13 58.4 +3.5**
RAYN pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 29.29 315 *e*P **P 18 14 03.1 -0.7**
OBN *e* 18 14 55.1
OBN pmax pmax
comp=Z,4.0nm,0.6s
CMMT Chiang Mai 30.00 125 P P 18 14 15.2 +4.7
comp=Z,2.2nm,1.2s
CM31 Chiang Mai Arr 30.26 125 *e*P **P 18 14 11.9 -0.9**
comp=Z,3.0nm,0.9s
CMAR Chiang Mai Arr 30.26 125 P **P 18 14 11.6 -1.2**
comp=Z,0.7nm,0.8s,baz=296,slow=6.9,SNR=4.7
BR131 Keskin Array S 30.50 284 *e*P **P 18 14 15.9 +0.9**
comp=Z,4.4nm,0.8s
BRTR Keskin Array B 30.50 284 P **P 18 14 16.6 +1.6**
comp=Z,3.3nm,0.9s,baz=98,slow=5.8,SNR=9.7
BRTR Keskin Array B 30.50 284 *e*P **P 18 14 19.5 +4.5**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
MMAI Mount Meron Ar 31.09 271 LR LR 18 29 35.4
comp=Z,39nm,20.6s,baz=195,slow=42
BOD Bodaibo 32.19 41 *e*P **P 18 14 27.9 -1.5**
BOD pmax pmax
comp=Z,4.0nm,1.1s
AKASG Malin Array Be 32.86 305 P **P 18 14 35.4 0.0**
comp=Z,0.9nm,0.4s,baz=80,slow=7.1,SNR=8.1
AKASG Malin Array Be 32.86 305 *e*P **P 18 14 35.1 -0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 32.86 305 *e*P **P 18 14 33.8 -1.6**
comp=Z,3.8nm,0.8s
AKBB Malin Array Si 32.86 305 *e*P **P 18 14 33.8 -1.6**
AKBB pmax pmax
comp=Z,4.0nm,0.8s
FIA0 FINESS Array S 36.44 324 *e*P **P 18 15 06.1 0.0**
FIA0 FINESS Array S 36.44 324 *e*P **P 18 15 06.1 0.0**
FIA1 FINESS Array S 36.44 324 *e*P **P 18 15 04.9 -1.2**
comp=Z,6.0nm,0.9s
FINES FINESS Array B 36.44 324 P **P 18 15 06.1 0.0**
comp=Z,2.5nm,0.6s,baz=113,slow=11,SNR=19
FINES LR LR 18 29 12.5
comp=Z,40nm,19.7s,baz=176,slow=35
KOLS Kolonicke sedl 37.38 302 *e*P **P 18 15 14.2 -0.2**
ZEA Zeya 38.98 50 *e*P **P 18 15 27.3 -0.5**
ARA0 ARCESS Array S 39.51 336 *e*P **P 18 15 31.9 -0.1**
ARCES ARCESS Array B 39.51 336 P **P 18 15 31.9 -0.1**
comp=Z,1.8nm,0.4s,baz=113,slow=8.7,SNR=41
ARE0 ARCESS Array S 39.51 336 *e*P **P 18 15 32.1 +0.1**
comp=Z,0.2nm,0.9s
YAK Yakutsk 40.80 37 *e*P **P 18 15 41.1 -1.6**
KLR Kul'dur 42.16 56 P **P 18 15 53.5 -0.5**
comp=Z,5.3nm,0.4s,baz=278,slow=7.7,SNR=21
KLR LR LR 18 36 46.6
comp=Z,34nm,18.5s,baz=256,slow=41
KLR Kul'dur 42.16 56*de*P **P 18 15 53.2 -0.9**
KLR pmax pmax
comp=Z,4.0nm,0.5s
KS15 Wonju Array Si 42.32 74 *e*P **P 18 15 54.2 -1.3**
comp=Z,7.3nm,1.1s
KSRS Korea Array 42.35 74 P **P 18 15 54.2 -1.5**
comp=Z,1.1nm,0.8s,baz=282,slow=8.2,SNR=4.9
KSRS LR LR 18 36 17.0
comp=Z,74nm,18.2s,baz=254,slow=40
KSRS Korea Array 42.35 74 *e*P **P 18 15 54.6 -1.2**
KSRS pmax pmax
comp=Z,1.0nm,0.8s
TIXI Tiksi 42.69 23 P **P 18 15 56.8 -1.3**
comp=Z,2.5nm,0.5s,baz=251,slow=5.4,SNR=9.8
GERES GERESS Array B 43.00 303 P **P 18 16 01.9 +0.8**
comp=Z,1.3nm,0.8s,baz=60,slow=8.1,SNR=6.8
CLL Collm 43.06 307 *e*P **P 18 16 04.0 +2.6**
CLL *e*PP **PP 18 17 42.0 +0.8**
NC405 NORSAR Array S 43.23 321 *e*P **P 18 16 02.5 -0.1**
comp=Z,11nm,0.9s
USRK Ussuriysk Ar. 43.33 64 P **P 18 16 02.6 -1.1**
comp=Z,1.5nm,0.5s,baz=270,slow=9.8,SNR=6.7
NC303 NORSAR Array S 43.41 322 *e*P **P 18 16 04.2 +0.2**
comp=Z,13nm,0.9s
NB201 NORSAR Array S 43.44 321 *e*P **P 18 16 04.2 -0.1**
comp=Z,5.8nm,0.8s
NB2 NORSAR Subarra 43.48 321 P **P 18 16 04.0 -0.6**
comp=Z,2.2nm,0.8s,baz=91,slow=8.6
NB200 NORSAR Array S 43.48 321 *e*P **P 18 16 04.1 -0.6**
NOA NORSAR Array B 43.48 321 P **P 18 16 04.1 -0.6**
comp=Z,1.6nm,0.5s,baz=91,slow=7.9,SNR=18
NOA NORSAR Array B 43.48 321 *e*P **P 18 16 04.2 -0.5**
NOA pmax pmax
comp=Z,2.0nm,0.5s
YOJ Yonaguni jima 44.16 94 *e*P **P 18 16 08.9 -1.6**
comp=Z,97nm,1.1s
YOJ Yonaguni jima 44.16 94 *e*P **P 18 16 08.9 -1.6**
YOJ pmax pmax
comp=Z,97nm,1.1s
DAVOX Davos/Dischmat 45.96 301 P **P 18 16 24.6 -0.3**
comp=Z,2.6nm,0.4s,baz=104,slow=5.1,SNR=8.2
JNU Nakatsue 46.22 79 P **P 18 16 25.6 -1.3**
comp=Z,5.7nm,0.8s,baz=329,slow=6.9,SNR=4.0
JNU Nakatsue 46.22 79 *e*P **P 18 16 25.6 -1.3**
comp=Z,9.0nm,0.9s
SENIN Lac Senin/Sane 47.78 301 *e*P **P 18 16 41.1 +1.9**
comp=Z,3.7nm,1.0s
MJB9 Matsu-Tunnel 50.33 71 *e*P **P 18 16 57.4 -1.1**
comp=Z,3.2nm,0.7s
MAJO Matsushiro 50.33 71 *e*P **P 18 16 57.2 -1.4**
comp=Z,3.2nm,0.7s
MAJO Matsushiro 50.33 71⇑*e*P **P 18 17 00.1 +1.5**
MAJO pmax pmax
comp=Z,9.0nm,2.1s
MAT Matsushiro 50.33 71 P **P 18 16 56.7 -1.9**
MJAR Matsushiro Arr 50.33 71 P **P 18 16 57.2 -1.4**
comp=Z,2.3nm,0.7s,baz=288,slow=9.7,SNR=13
MJA0 Matsu Arr-Jizo 50.36 71 *e*P **P 18 16 57.8 -1.1**
MJA0 pmax pmax
comp=Z,3.0nm,0.7s
ASAJ Asahikawa 50.65 61 P **P 18 16 59.7 -1.2**
comp=Z,2.6nm,0.5s,baz=27,slow=9.4,SNR=7.0
ASAJ LR LR 18 40 39.7
comp=Z,46nm,18.3s,baz=292,slow=39
MA2 Magadan 51.20 40 P **P 18 17 03.7 -1.0**
comp=Z,5.6nm,0.7s,baz=19,slow=18,SNR=3.8
MA2 Magadan 51.20 40*c i*P **P 18 17 03.5 -1.3**
MA2 pmax pmax
comp=Z,6.0nm,0.8s
SEY Seymchan 51.25 35 P **P 18 17 03.6 -1.4**
comp=Z,1.1nm,0.7s,baz=333,slow=7.2,SNR=3.9
SEY Seymchan 51.25 35⇑*e*P **P 18 17 04.0 -1.1**
EKA Eskdalemuir Ar 51.74 315 P **P 18 17 08.4 -0.5**
comp=Z,2.7nm,0.8s,baz=84,slow=7.4,SNR=4.4
BILL Bilibino 55.48 27 *e*P **P 18 17 34.7 -1.4**
BILL *e* 18 18 33.6
BILL *e*PPP PPP 18 20 48.6
BILL pmax pmax
comp=Z,1.0nm,1.0s
LEM Lembang 55.64 137 LR LR 18 46 14.5
comp=Z,173nm,18.5s,baz=70,slow=41
ESDC Sonseca Array 57.90 297 P **P 18 17 53.7 -0.1**
comp=Z,0.7nm,0.6s,baz=52,slow=7.3,SNR=7.4
TOA1 Torodi Ar. Sit 67.62 269 *e*P **P 18 18 58.6 -0.2**
TORD Torodi Ar. Bea 67.62 269 P **P 18 18 58.6 -0.2**
comp=Z,5.9nm,0.4s,baz=46,slow=5.2,SNR=1.7
INK Inuvik 71.05 10 P **P 18 19 18.4 -0.8**
comp=Z,1.0nm,0.5s,baz=355,slow=6.2,SNR=6.9
INK Inuvik 71.05 10 *e*P **P 18 19 20.4 +1.2**
comp=Z,2.3nm,0.6s
INK Inuvik 71.05 10 *e*P **P 18 19 20.4 +1.2**
INK pmax pmax
comp=Z,2.0nm,0.6s
ILAR Eielson Array 71.79 17 P **P 18 19 22.1 -1.7**
comp=Z,0.5nm,0.7s,baz=312,slow=4.9,SNR=6.9
KDAK Kodiak Island 76.11 23 P **P 18 19 47.5 -1.7**
comp=Z,6.1nm,1.1s,baz=329,slow=5.9,SNR=3.0
KDAK Kodiak Island 76.11 23 *e*P **P 18 19 47.5 -1.7**
comp=Z,7.7nm,1.1s
YKA Yellowknife Ar 78.57 4 P **P 18 20 02.0 -0.9**
comp=Z,1.3nm,0.8s,baz=348,slow=6.0,SNR=5.1
YKA Yellowknife Ar 78.57 4 P **P 18 20 02.0 -0.9**
YKB5 Yellowknife Ar 78.57 4 *e*P **P 18 20 01.9 -0.9**
WR1 Warramunga Arr 81.84 124 *e*P **P 18 20 20.2 -0.9**
WRA Warramunga Arr 81.84 124 P **P 18 20 20.2 -0.9**
comp=Z,2.4nm,0.8s,baz=296,slow=6.1,SNR=8.6
AS31 Alice Springs 84.26 127 *e*P **P 18 20 32.9 -0.7**
comp=Z,0.8nm,1.0s
ASAR Alice Springs 84.26 127 P **P 18 20 32.9 -0.7**
comp=Z,1.1nm,0.8s,baz=307,slow=5.0,SNR=9.8

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*ISCJB **30** 18:09:04.5±1.3, 18°.64N±0°.06×146°.7E±0°.3, h64km, mb4.0/13, Error ellipse: s-maj=37.3km s-min=7.8km az=3.5*
*IDC **30** 18:09:07.5±3.9, 18°.58N×146°.68E, h76km±31km, mb3.7/14, mb1 3.7/16, mb1mx3.5/65, mbtmp4.0/16, Error ellipse: s-maj=49.7km s-min=14.2km az=85.0*
ISC 30 18:09:06.4±1.7, 18°.65N±0°.08×146°.7E±0°.4, h64km, n19, σ1$00/16, mb4.0/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.33**	**199**	P	**Pn**	**18 10 24.5**	**+1.1**
	6.5nm,0.3s,baz=107,slow=5.1,SNR=12						
GUMO				S	**Sn**	**18 11 23.6**	**+0.2**
	7.9nm,0.3s,baz=9.5,slow=18,SNR=3.7						
H11S3	**WAKE ISLAND Hy**	**18.96**	**87**	T	T	18 32 13.5	
	baz=273,slow=74						
H11S1	**WAKE ISLAND Hy**	**18.97**	**87**	T	T	18 32 16.3	
	baz=273						
H11S2	**WAKE ISLAND Hy**	**18.97**	**87**	T	T	18 32 18.6	
	baz=273,slow=74						
MJAR	**Matsushiro Arr**	**19.33**	**339**	P	**P**	**18 13 25.8**	**-0.6**
	0.0nm,0.3s,baz=169,slow=9.6,SNR=5.3						
JNU	**Nakatsue**	**20.21**	**319**	P	Pn	18 13 37.2	-1.3
	6.2nm,1.0s,baz=178,slow=18,SNR=8.6						
KSRS	**Korea Array**	**24.92**	**323**	P	**P**	**18 14 24.6**	**+1.1**
	1.9nm,0.6s,baz=147,slow=8.7,SNR=13						
KLR	**Kul'dur**	**32.80**	**342**	P	**P**	**18 15 32.9**	**-0.5**
	2.8nm,0.4s,baz=154,slow=10,SNR=11						
WRA	**Warramunga Arr**	**40.22**	**198**	P	**P**	**18 16 36.2**	**-0.7**
	0.7nm,0.7s,baz=13,slow=7.7,SNR=2.9						
SONM	**Songino Array**	**43.77**	**321**	P	**P**	**18 17 06.6**	**+0.9**
	1.1nm,0.7s,baz=132,slow=7.9,SNR=5.1						
ASAR	**Alice Springs**	**43.87**	**197**	P	**P**	**18 17 05.3**	**-1.4**
	0.2nm,0.6s,baz=24,slow=6.9,SNR=7.3						
CMAR	**Chiang Mai Arr**	**45.16**	**278**	P	**P**	**18 17 15.7**	**-1.4**
	0.2nm,0.5s,baz=92,slow=5.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**58.63**	**322**	P	**P**	**18 18 56.8**	**+0.1**
	1.2nm,0.5s,baz=121,slow=9.1,SNR=4.0						
MKAR	**Makanchi Array**	**59.18**	**314**	P	**P**	**18 19 01.5**	**+0.8**
	0.7nm,0.6s,baz=79,slow=9.9,SNR=5.3						
KURBB	**Kurchatov Arra**	**61.99**	**318**	P	**P**	**18 19 20.3**	**+0.5**
	2.6nm,0.6s,baz=92,slow=7.5,SNR=19						
BVAR	**Borovoye Array**	**67.11**	**320**	P	**P**	**18 19 53.7**	**+0.5**
	2.4nm,0.4s,baz=98,slow=7.4,SNR=9.9						
AKTO	**Aktyubinsk**	**75.03**	**319**	P	**P**	**18 20 40.8**	**-0.3**
	1.3nm,0.6s,baz=95,slow=4.4,SNR=3.6						
ARCES	**ARCESS Array B**	**82.83**	**342**	P	**P**	**18 21 25.0**	**+1.6**
	2.2nm,1.0s,baz=64,slow=6.1,SNR=3.0						
FINES	**FINESS Array B**	**87.32**	**336**	P	**P**	**18 21 44.9**	**-1.1**
	2.4nm,1.0s,baz=63,slow=6.9,SNR=7.1						

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*BGR **30** 18:18:52.9±0.7, 44°.01N×10°.05E, h10km, ML4.0/19, Error ellipse: s-maj=14.5km s-min=8.9km az=27.0*
*IDC **30** 18:18:52.8±1.0, 44°.20N×10°.15E, h0km, mb3.8/3, mb1 3.7/10, mb1mx3.5/53, mbtmp3.6/10, ML3.7/7, MS3.0/4, Ms1 3.0/4, ms1mx2.6/45, Error ellipse: s-maj=26.5km s-min=11.7km az=113.0*
*LDG **30** 18:18:53.2±0.1, 44°.22N×10°.21E, h2km, Md3.7/2, Ml3.7/37, Error ellipse: s-maj=2.8km s-min=1.9km az=33.0*
*ROM **30** 18:18:53.0±0.1, 44°.184N±0°.005×10°.190E±0°.006, h7km, ML3.6/107, Mw3.5, Error ellipse: s-maj=0.6km s-min=0.1km az=206.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.89; $M_{\theta\theta}$2.28; $M_{\phi\phi}$-0.39; $M_{r\theta}$0.47; $M_{\theta\phi}$0.26; $M_{\phi r}$1.19; Fault plane solution: $M_0$2.47522×10^{14} NP1:ϕ_s109.00000°, δ43.00000°, λ-49.00000°. NP2:ϕ_s239.00000°, δ59.00000°, λ-122.00000°.*
*GEN **30** 18:18:53.4, 44°.19N×10°.21E, h5km±1km, Ml3.5*
*ISCJB **30** 18:18:53.5±0.2, 44°.16N±0°.01×10°.19E±0°.01, h17km±2km, mb4.1/4, MS3.5/2, Error ellipse: s-maj=2.3km s-min=1.5km az=5.8*
*BEO **30** 18:18:54.4±0.7, 44°.33N×10°.13E, h4km±5km, ML3.8/9*
*PRU **30** 18:18:55.1±0.0, 44°.24N×10°.34E, h0km*
*STR **30** 18:18:58.1±1.4, 44°.N±4°×10°.0E±°, h14km±17km, mb3.5/2, MLv3.6/7*
ISC 30 18:18:53.1±0.7, 44°.19N±0°.02×10°.16E±0°.02, h10km±4km, n306, σ1$99/369, mb3.9/4, 7C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.02**	**184**	P	**Pg**	**18 18 55.0**	**+0.1**
EQUI				S	**Sg**	**18 18 55.9**	**-0.4**
EQUI	**Equi**	**0.02**	**184**	P	**Pg**	**18 18 55.1**	**+0.1**
EQUI				S	**Sg**	**18 18 56.3**	**0.0**
EQUI				AML	AML		
	comp=E,73000μm,0.6s						
EQUI				AML	AML		
T0912	**Minucciano (LU**	**0.04**	**119**	P	**Pg**	**18 18 55.0**	**-0.2**
T0912				S	**Sg**	**18 18 56.1**	**-0.6**
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
VLC	**Villacollemand**	**0.17**	**100**⇑	*i*Pg	**Pg**	**18 18 56.6**	**-0.2**
VLC				*i* Sg	**Sg**	**18 18 59.1**	**-0.3**
VLC	**Villacollemand**	**0.17**	**100**	P	**Pg**	**18 18 56.6**	**-0.2**
VLC				S	**Sg**	**18 18 59.1**	**-0.3**
VLC				AML	AML		
	comp=E,63000μm,0.9s						
VLC				AML	AML		
	comp=N,67950μm,0.4s						
VLC				AML	AML		
	comp=E,61150μm,0.9s						
VLC				AML	AML		
	comp=N,71150μm,0.4s						
VLC				AML	AML		
	comp=E,63050μm,0.9s						
VLC				AML	AML		
	comp=N,67950μm,0.4s						
VLC				AML	AML		
	comp=E,61150μm,0.9s						
VLC				AML	AML		
	comp=N,71150μm,0.4s						
VLC				AML	AML		
	comp=E,63000μm,0.9s						
VLC				AML	AML		
	comp=N,67950μm,0.4s						
VLC				AML	AML		
	comp=E,61150μm,0.9s						
VLC				AML	AML		
	comp=N,71150μm,0.4s						
VLC				AML	AML		
	comp=N,71150μm,0.4s						
VLC				AML	AML		
	comp=E,63000μm,0.9s						
VLC				AML	AML		
	comp=N,67950μm,0.4s						
VLC				AML	AML		
	comp=E,61150μm,0.9s						
PLMA	**Palmaria, Port**	**0.26**	**238**	P	**Pb**	**18 18 59.5**	**-0.4**
PLMA				S	**Sb**	**18 19 03.5**	**-1.0**
PLMA				AML	AML		
	comp=E,10350μm,0.6s						
PLMA				AML	AML		
	comp=N,13500μm,0.5s						
PLMA				AML	AML		
	comp=E,10350μm,0.6s						
PLMA				AML	AML		
	comp=N,13500μm,0.5s						
PLMA				AML	AML		
	comp=E,10350μm,0.6s						
PLMA				AML	AML		
	comp=N,13500μm,0.5s						
PLMA				AML	AML		
	comp=E,10350μm,0.6s						
CARD	**Cardoso**	**0.29**	**125**	P	**Pg**	**18 18 58.6**	**-0.3**
CARD				S	**Sg**	**18 19 02.7**	**-0.1**
CARD	**Cardoso**	**0.29**	**125**	P	**Pg**	**18 18 58.6**	**-0.3**
CARD				S	**Sg**	**18 19 02.8**	**0.0**
CARD				AML	AML		
	comp=E,38250μm,1.0s						
CARD				AML	AML		
	comp=N,35350μm,0.4s						
CARD				AML	AML		
	comp=E,38250μm,1.0s						
CARD				AML	AML		
	comp=N,35350μm,0.4s						
CARD				AML	AML		
	comp=E,38250μm,1.0s						
CARD				AML	AML		
	comp=N,35350μm,0.4s						
CARD				AML	AML		
	comp=E,38250μm,1.0s						
ERBM	**Eremo**	**0.29**	**39**	P	**Pg**	**18 18 59.3**	**+0.2**
ERBM				S	**Sg**	**18 19 03.9**	**+0.8**
ERBM				AML	AML		
	comp=E,43900μm,0.8s						
ERBM				AML	AML		
	comp=N,57650μm,1.0s						
ERBM				AML	AML		
	comp=E,43850μm,0.8s						
ERBM				AML	AML		
	comp=N,57650μm,1.0s						
ERBM				AML	AML		
	comp=E,43850μm,0.8s						
ERBM				AML	AML		
	comp=N,57700μm,1.0s						
ERBM				AML	AML		
	comp=N,57700μm,1.0s						
ERBM				AML	AML		
	comp=E,43850μm,0.8s						
GRAM	**Graiana**	**0.31**	**348**	P	**Pg**	**18 18 59.9**	**+0.5**
GRAM				S	**Sg**	**18 19 04.5**	**+1.0**
GRAM	**Graiana**	**0.31**	**348**	P	**Pg**	**18 18 59.9**	**+0.5**
GRAM				S	**Sg**	**18 19 04.7**	**+1.1**
GRAM				AML	AML		
	comp=E,69600μm,0.3s						
GRAM				AML	AML		
GRAM				AML	AML		
	comp=E,69600μm,0.3s						
GRAM				AML	AML		
GRAM				AML	AML		
	comp=E,69600μm,0.3s						
GRAM				AML	AML		
GRAM				AML	AML		
	comp=E,69600μm,0.3s						
BDI	**Bagni Di Lucca**	**0.34**	**112**	P	**Pg**	**18 18 59.6**	**-0.4**
BDI				S	**Sg**	**18 19 04.6**	**+0.1**
BDI				AML	AML		
	comp=E,25800μm,0.4s						
BDI				AML	AML		
	comp=N,15800μm,0.2s						
BDI				AML	AML		
	comp=E,24050μm,0.4s						
BDI				AML	AML		
	comp=N,18250μm,0.2s						
BDI				AML	AML		
	comp=E,25800μm,0.4s						
BDI				AML	AML		
	comp=N,15800μm,0.2s						
BDI				AML	AML		
	comp=E,24050μm,0.4s						
BDI				AML	AML		
	comp=N,18250μm,0.2s						
BDI				AML	AML		
	comp=N,15800μm,0.2s						
BDI				AML	AML		
	comp=N,18250μm,0.2s						
BDI				AML	AML		
	comp=E,24050μm,0.4s						
BDI				AML	AML		
	comp=E,25800μm,0.4s						
MAIM	**Mastiano**	**0.37**	**139**	P	**Pg**	**18 19 00.2**	**-0.2**
MAIM				S	**Sg**	**18 19 05.4**	**+0.1**
MAIM	**Mastiano**	**0.37**	**139**	P	**Pg**	**18 19 00.2**	**-0.2**
MAIM				AML	AML		
	comp=E,31050μm,0.3s						
MAIM				AML	AML		
	comp=N,24850μm,0.5s						
MAIM				AML	AML		
	comp=E,31050μm,0.3s						
MAIM				AML	AML		
	comp=N,24850μm,0.5s						
MAIM				AML	AML		
	comp=E,31050μm,0.3s						
MAIM				AML	AML		
	comp=N,24850μm,0.5s						
NEVI	**Neviano degli**	**0.41**	**16**	P	**Pb**	**18 19 02.1**	**-0.4**
POPM	**Popiglio**	**0.46**	**108**	P	**Pg**	**18 19 01.7**	**-0.4**

POPM				S	Sg	18 19 08.0	-0.1
POPM	**Popiglio**	**0.46**	**108**	P	Pg	18 19 01.7	-0.4
POPM				S	Sg	18 19 08.4	+0.3
POPM				AML	AML		
	comp=E,20600µm,0.8s						
POPM				AML	AML		
	comp=N,34450µm,1.4s						
POPM				AML	AML		
	comp=E,20600µm,0.8s						
POPM				AML	AML		
	comp=N,34450µm,1.4s						
POPM				AML	AML		
	comp=E,20600µm,0.8s						
POPM				AML	AML		
	comp=N,34450µm,1.4s						
POPM				AML	AML		
	comp=E,20600µm,0.8s						
POPM				AML	AML		
	comp=N,34450µm,1.4s						
MSSA	**Maissana**	**0.48**	**286**	P	Pb	18 19 03.3	-0.4
MSSA				AML	AML		
	comp=E,5220µm,1.2s						
MSSA				AML	AML		
	comp=N,5680µm,1.2s						
MSSA				AML	AML		
	comp=E,5220µm,1.2s						
MSSA				AML	AML		
	comp=N,5680µm,1.2s						
MSSA				AML	AML		
	comp=N,5680µm,1.2s						
MSSA				AML	AML		
	comp=E,5220µm,1.2s						
PRMA	**PARMA**	**0.58**	**11**	P	Pb	18 19 05.8	+0.3
PRMA				AML	AML		
	comp=E,30150µm,0.3s						
PRMA				AML	AML		
	comp=N,50600µm,0.5s						
PRMA				AML	AML		
	comp=E,30150µm,0.3s						
PRMA				AML	AML		
	comp=N,50600µm,0.5s						
PRMA				AML	AML		
	comp=N,50600µm,0.5s						
PRMA				AML	AML		
	comp=E,30150µm,0.3s						
ZCCA	**Zocca**	**0.61**	**74**	P	Pb	18 19 06.2	+0.2
ZCCA				AML	AML		
	comp=E,8150µm,0.5s						
ZCCA				AML	AML		
	comp=N,9285µm,0.6s						
ZCCA				AML	AML		
	comp=E,8315µm,0.5s						
ZCCA				AML	AML		
	comp=N,9580µm,1.5s						
ZCCA				AML	AML		
	comp=E,8145µm,0.5s						
ZCCA				AML	AML		
	comp=N,9300µm,0.6s						
ZCCA				AML	AML		
	comp=E,8315µm,0.5s						
ZCCA				AML	AML		
	comp=N,9580µm,1.5s						
ZCCA				AML	AML		
	comp=E,8315µm,0.5s						
ZCCA				AML	AML		
	comp=E,8145µm,0.5s						
ZCCA				AML	AML		
	comp=N,9300µm,0.6s						
ZCCA				AML	AML		
	comp=N,9580µm,1.5s						
MTCR	**Monte La Croce**	**0.63**	**105**	P	Pg	18 19 05.1	-0.3
MTCR				S	Sg	18 19 14.4	+0.7
MTCR				AML	AML		
	comp=E,17450µm,0.3s						
MTCR				AML	AML		
	comp=N,21550µm,0.3s						
MTCR				AML	AML		
	comp=E,17400µm,0.3s						
MTCR				AML	AML		
	comp=N,21500µm,0.3s						
MTCR				AML	AML		
	comp=E,17400µm,0.3s						
MTCR				AML	AML		
	comp=N,21500µm,0.3s						
FNVD	**Fontana Vidola**	**0.70**	**91**	P	Pg	18 19 06.4	-0.2
FNVD				S	Sb	18 19 16.8	-0.3
PTF	**Prato**	**0.70**	**109**	P	Pg	18 19 06.2	-0.5
CRMI	**Carmignano**	**0.71**	**124**	P	Pb	18 19 07.4	-0.2
CRMI				AML	AML		
	comp=E,10270µm,0.4s						
CRMI				AML	AML		
	comp=N,9425µm,0.5s						
CRMI				AML	AML		
	comp=E,4230µm,0.4s						
CRMI				AML	AML		
	comp=N,3995µm,0.5s						
CRMI				AML	AML		
	comp=E,10275µm,0.4s						
CRMI				AML	AML		
	comp=N,9425µm,0.5s						
CRMI				AML	AML		
	comp=E,4230µm,0.4s						
CRMI				AML	AML		
	comp=N,3995µm,0.5s						
CRMI				AML	AML		
	comp=N,3995µm,0.5s						
CRMI				AML	AML		
	comp=E,10275µm,0.4s						
CRMI				AML	AML		
	comp=N,9425µm,0.5s						
CRMI				AML	AML		
	comp=E,4230µm,0.4s						
GORR	**Gorreto**	**0.75**	**304**	P	Pg	18 19 07.8	+0.2
GORR				S	Sb	18 19 19.2	+0.7
GORR				AML	AML		
	comp=E,4590µm,1.6s						
GORR				AML	AML		
	comp=N,4425µm,0.8s						
GORR				AML	AML		
	comp=E,4590µm,1.6s						
GORR				AML	AML		
	comp=N,4425µm,0.8s						
GORR				AML	AML		
	comp=E,4590µm,1.6s						
GORR				AML	AML		
	comp=N,4425µm,0.8s						
BOB	**Bobbio (Coli)**	**0.77**	**319**	P	Pb	18 19 08.5	-0.1
BOB				S	Sb	18 19 20.2	+1.0
BOB				AML	AML		
	comp=E,6940µm,0.4s						
BOB				AML	AML		
	comp=N,6825µm,0.7s						
BOB				AML	AML		
	comp=E,7180µm,0.4s						
BOB				AML	AML		
	comp=N,7350µm,0.7s						
BOB				AML	AML		
	comp=E,6945µm,0.4s						
BOB				AML	AML		
	comp=N,6825µm,0.7s						
BOB				AML	AML		
	comp=E,7180µm,0.4s						
BOB				AML	AML		
	comp=N,7350µm,0.7s						
BOB				AML	AML		
	comp=N,7350µm,0.7s						
BOB				AML	AML		
	comp=N,6825µm,0.7s						
BOB				AML	AML		
	comp=E,7180µm,0.4s						
BOB				AML	AML		
	comp=E,6945µm,0.4s						
GROG	**Isola di Gorgo**	**0.79**	**194**	P	Pb	18 19 08.8	-0.1
GROG				S	Sb	18 19 20.5	+1.0
GROG				AML	AML		
	comp=E,6910µm,1.3s						
GROG				AML	AML		
	comp=N,3945µm,1.6s						
GROG				AML	AML		
	comp=E,6910µm,1.3s						
GROG				AML	AML		
	comp=N,3945µm,1.6s						
GROG				AML	AML		
	comp=N,3945µm,1.6s						
GROG				AML	AML		
	comp=E,6910µm,1.3s						
SEI	**Scarperia**	**0.88**	**98**	P	Pg	18 19 09.9	-0.1
SEI				AML	AML		
	comp=E,16400µm,0.4s						
SEI				AML	AML		
	comp=N,16150µm,1.5s						
SEI				AML	AML		
	comp=E,16400µm,0.4s						
SEI				AML	AML		
	comp=N,16150µm,1.5s						
SEI				AML	AML		
	comp=N,16150µm,1.5s						
SEI				AML	AML		
	comp=E,16400µm,0.4s						
RAVA	**Ravarino**	**0.89**	**50**	AML	AML		
	comp=E,14150µm,0.6s						
RAVA				AML	AML		
	comp=E,14150µm,0.6s						
RAVA				AML	AML		
	comp=N,13150µm,1.3s						
RAVA				AML	AML		
	comp=N,13150µm,1.3s						
BRIS	**BRISIGHELLA**	**0.98**	**92**	AML	AML		
	comp=N,4595µm,0.6s						
BRIS				AML	AML		
	comp=E,4810µm,0.6s						
BRIS				AML	AML		
	comp=N,4595µm,0.6s						
BRIS				AML	AML		
	comp=E,4810µm,0.6s						
RUFI	**Rufina**	**1.04**	**109**	P	Pg	18 19 12.6	-0.5
RUFI				S	Sb	18 19 27.0	+0.1
RUFI				AML	AML		
	comp=E,3445µm,0.7s						
RUFI				AML	AML		
	comp=N,2825µm,0.8s						
RUFI				AML	AML		
	comp=E,3460µm,0.7s						
RUFI				AML	AML		
	comp=N,2834µm,0.8s						
RUFI				AML	AML		
	comp=N,2834µm,0.8s						
RUFI				AML	AML		
	comp=E,3460µm,0.7s						
FIU	**Minerbio Fiu**	**1.06**	**64**	AML	AML		
	comp=N,9500µm,1.1s						
FIU				AML	AML		
	comp=E,10200µm,0.9s						
FIU				AML	AML		
	comp=N,9500µm,1.1s						
FIU				AML	AML		
	comp=E,10200µm,0.9s						
CSNT	**Castellina Chi**	**1.09**	**131**	P	Pb	18 19 14.3	+0.2
CSNT				S	Sb	18 19 28.5	+0.1
CSNT				AML	AML		
	comp=E,3135µm,0.4s						
CSNT				AML	AML		
	comp=N,4675µm,1.2s						
CSNT				AML	AML		
	comp=E,3135µm,0.4s						
CSNT				AML	AML		
	comp=N,4675µm,1.2s						
CSNT				AML	AML		
	comp=N,4675µm,1.2s						
CSNT				AML	AML		
	comp=E,3135µm,0.4s						
GAZZ	**Gazzo Veronese**	**1.14**	**36**	*e*Pg	Pn	18 19 17.4	+2.3
GAZZ				*e*Sg	Sn	18 19 34.6	+3.8
SERM	**Sermide**	**1.16**	**44**	AML	AML		
	comp=E,9500µm,0.8s						
SERM				AML	AML		
	comp=E,4155µm,0.8s						
SERM				AML	AML		
	comp=N,3630µm,0.5s						
SERM				AML	AML		
	comp=N,6080µm,0.6s						
SERM				AML	AML		
	comp=E,4155µm,0.8s						
SERM				AML	AML		
	comp=N,6080µm,0.6s						
SERM				AML	AML		
	comp=E,9500µm,0.8s						
SERM				AML	AML		
	comp=N,3630µm,0.5s						
TRIF	**Trifonti**	**1.20**	**153**	P	Pb	18 19 16.0	0.0
TRIF				AML	AML		
	comp=E,1945µm,1.0s						
TRIF				AML	AML		
	comp=N,2065µm,0.3s						
TRIF				AML	AML		
	comp=E,1945µm,1.0s						
TRIF				AML	AML		
	comp=N,2065µm,0.3s						
TRIF				AML	AML		
	comp=E,1945µm,1.0s						
TRIF				AML	AML		
	comp=N,2065µm,0.3s						
PCP	**Piancastagn**	**1.21**	**287**	P	Pb	18 19 16.1	0.0
PCP				AML	AML		
	comp=E,1038µm,1.0s						
PCP				AML	AML		
	comp=N,1218µm,1.2s						
PCP				AML	AML		
	comp=E,1038µm,1.0s						
PCP				AML	AML		
	comp=N,1219µm,1.2s						
PCP				AML	AML		
	comp=N,1219µm,1.2s						
PCP				AML	AML		
	comp=E,1038µm,1.0s						
FROS	**Frosini**	**1.22**	**143**	P	Pn	18 19 16.2	0.0
FROS				AML	AML		
	comp=E,5375µm,0.4s						
FROS				AML	AML		
	comp=N,4810µm,0.6s						
FROS				AML	AML		
	comp=E,5375µm,0.4s						
FROS				AML	AML		
	comp=N,4810µm,0.6s						
FROS				AML	AML		
	comp=N,4810µm,0.6s						
FROS				AML	AML		
	comp=E,5375µm,0.4s						
ASQU	**Asqua**	**1.24**	**108**	P	Pn	18 19 16.5	-0.2
ASQU				AML	AML		
	comp=E,1530µm,0.9s						
ASQU				AML	AML		
	comp=N,1770µm,1.0s						
ASQU				AML	AML		
	comp=E,1530µm,0.9s						
ASQU				AML	AML		
	comp=N,1770µm,1.0s						
SFI	**Santa Sofia**	**1.25**	**103**	P	Pn	18 19 16.4	-0.3
SFI				AML	AML		
	comp=E,2880µm,1.4s						
SFI				AML	AML		
	comp=N,1865µm,0.5s						
SFI				AML	AML		
	comp=E,2750µm,1.4s						
SFI				AML	AML		
	comp=N,2185µm,1.6s						
SFI				AML	AML		
	comp=E,2880µm,1.4s						
SFI				AML	AML		
	comp=N,1865µm,0.5s						
SFI				AML	AML		
	comp=E,2750µm,1.4s						
SFI				AML	AML		
	comp=N,2185µm,1.6s						
SFI				AML	AML		
	comp=N,1865µm,0.5s						
SFI				AML	AML		
	comp=N,2185µm,1.6s						
SFI				AML	AML		
	comp=E,2880µm,1.4s						
SFI				AML	AML		
	comp=E,2750µm,1.4s						
QLNO	**Quiliano**	**1.31**	**277**	P	Pn	18 19 17.5	0.0
QLNO				AML	AML		
	comp=E,903µm,0.8s						
QLNO				AML	AML		
	comp=N,851µm,0.6s						
QLNO				AML	AML		
	comp=E,903µm,0.8s						
QLNO				AML	AML		
	comp=N,851µm,0.6s						
QLNO				AML	AML		
	comp=N,851µm,0.6s						
QLNO				AML	AML		
	comp=E,903µm,0.8s						
FINB	**Finale Ligure**	**1.32**	**270**	P	Pn	18 19 17.5	-0.1
FINB				AML	AML		
	comp=E,978µm,0.3s						
FINB				AML	AML		
	comp=N,1214µm,0.4s						
FINB				AML	AML		
	comp=E,978µm,0.3s						
FINB				AML	AML		
	comp=N,1214µm,0.4s						
FINB				AML	AML		
	comp=N,1214µm,0.4s						
FINB				AML	AML		
	comp=E,978µm,0.3s						
CRE	**Caprese Michel**	**1.42**	**113**	P	Pn	18 19 18.3	-0.7
CRE				AML	AML		
	comp=E,2175µm,0.4s						
CRE				AML	AML		
	comp=N,2630µm,0.4s						
CRE				AML	AML		
	comp=E,2175µm,0.4s						
CRE				AML	AML		
	comp=N,2630µm,0.4s						
CRE				AML	AML		
	comp=N,2630µm,0.4s						
CRE				AML	AML		
	comp=E,2175µm,0.4s						
ROTM	**Rocchetta Tana**	**1.45**	**298**	AML	AML		
	comp=N,10650µm,0.5s						
ROTM				AML	AML		
	comp=E,7915µm,0.4s						
ROTM				AML	AML		
	comp=E,7915µm,0.4s						
ROTM				AML	AML		
	comp=N,10650µm,0.5s						
CASP	**Castiglione de**	**1.49**	**159**	P	Pn	18 19 19.6	-0.4
CASP				AML	AML		
	comp=E,1150µm,0.9s						
CASP				AML	AML		
	comp=N,864µm,1.3s						
CASP				AML	AML		
	comp=E,1150µm,0.9s						
CASP				AML	AML		
	comp=N,864µm,1.3s						
RORO	**Rocca Rossa**	**1.51**	**268**	P	Pn	18 19 20.2	0.0
RORO				AML	AML		
	comp=E,456µm,0.8s						
RORO				AML	AML		
	comp=N,657µm,0.5s						
RORO				AML	AML		
	comp=N,657µm,0.5s						
RORO				AML	AML		
	comp=E,456µm,0.8s						
SSP9	**Sansepolcro**	**1.56**	**113**	AML	AML		
	comp=N,1530µm,1.1s						
SSP9				AML	AML		
	comp=E,1391µm,0.6s						
SSP9				AML	AML		
	comp=E,1391µm,0.6s						
SSP9				AML	AML		
	comp=N,1530µm,1.1s						
BALD	**Monte Baldo**	**1.56**	**17**	*e*Pg	Pg	18 19 23.1	-0.1
BALD				*e*Sg	Sg	18 19 46.1	+2.6
CAFI	**Castiglion Fio**	**1.57**	**123**	P	Pn	18 19 20.8	-0.2
CAFI				AML	AML		
	comp=E,671µm,0.6s						
CAFI				AML	AML		
	comp=N,954µm,0.4s						
CAFI				AML	AML		
	comp=N,954µm,0.4s						
CAFI				AML	AML		
	comp=E,671µm,0.6s						
TEOL	**Teolo**	**1.59**	**42⇑**	*e*Pg	Pg	18 19 23.3	-0.4
TEOL				*e*Sg	Sg	18 19 47.6	+3.3
TEOL	**Teolo**	**1.59**	**42**	P	Pb	18 19 22.1	-0.6
TEOL				AML	AML		
	comp=E,7840µm,0.7s						
TEOL				AML	AML		
	comp=N,6595µm,0.6s						
TEOL				AML	AML		
	comp=E,7840µm,0.7s						
TEOL				AML	AML		
	comp=N,6595µm,0.6s						
ROVR	**Rover Verones**	**1.60**	**24**	P	Pb	18 19 22.5	-0.3
ROVR				AML	AML		
	comp=E,3350µm,0.4s						
ROVR				AML	AML		
	comp=N,6140µm,0.4s						
ROVR				AML	AML		
	comp=E,1275µm,0.4s						
ROVR				AML	AML		
	comp=N,2460µm,0.4s						
ROVR				AML	AML		
	comp=E,3350µm,0.4s						
ROVR				AML	AML		
	comp=E,1275µm,0.4s						
ROVR				AML	AML		
	comp=N,6140µm,0.4s						
ROVR				AML	AML		
	comp=N,2460µm,0.4s						
PARC	**Parchiule**	**1.60**	**109**	P	Pn	18 19 21.1	-0.3
PARC				AML	AML		
	comp=E,895µm,0.9s						
PARC				AML	AML		
	comp=N,1245µm,0.7s						
PARC				AML	AML		
	comp=N,1245µm,0.7s						
PARC				AML	AML		
	comp=E,895µm,0.9s						
MDI	**Monti di Nese**	**1.62**	**349**	P	Pb	18 19 23.1	0.0
MDI				AML	AML		
	comp=E,1775µm,0.6s						
MDI				AML	AML		
	comp=N,1965µm,0.4s						
MDI				AML	AML		
	comp=E,1860µm,0.7s						
MDI				AML	AML		
	comp=N,1995µm,0.4s						
MDI				AML	AML		
	comp=N,1965µm,0.4s						
MDI				AML	AML		
	comp=E,1860µm,0.7s						
MDI				AML	AML		
	comp=N,1995µm,0.4s						
MDI				AML	AML		
	comp=E,1775µm,0.6s						
MAGA	**Magasa**	**1.62**	**12**	*e*Pg	Pb	18 19 23.5	+0.3
MAGA	**Magasa**	**1.62**	**12**	P	Pb	18 19 22.8	-0.4
MAGA				AML	AML		
	comp=E,8585µm,0.6s						
MAGA				AML	AML		
	comp=N,4755µm,0.4s						
MAGA				AML	AML		
	comp=N,4755µm,0.4s						
MAGA				AML	AML		
	comp=E,8585µm,0.6s						
MARN	**Marana (Italy)**	**1.63**	**27**	*e*Pg	Pb	18 19 23.9	+0.6
MARN				*e*Sg	Sg	18 19 47.0	+1.5
BADI	**Badiali**	**1.66**	**114**	P	Pn	18 19 21.9	-0.3
BADI				AML	AML		
	comp=E,1094µm,1.0s						
BADI				AML	AML		
	comp=N,1376µm,0.7s						
BADI				AML	AML		
	comp=N,1376µm,0.7s						
BADI				AML	AML		
	comp=E,1094µm,1.0s						
GBOS	**Grotte di Boss**	**1.67**	**273**	AML	AML		
	comp=N,349µm,1.5s						
GBOS				AML	AML		
	comp=E,335µm,0.7s						
GBOS				AML	AML		
	comp=E,335µm,0.7s						
GBOS				AML	AML		
	comp=N,349µm,1.5s						
CDCA	**Citt' di Caste**	**1.67**	**115**	AML	AML		
	comp=E,2475µm,0.7s						
CDCA				AML	AML		
	comp=E,2475µm,0.7s						
CDCA				AML	AML		
	comp=N,3795µm,0.8s						
CDCA				AML	AML		
	comp=N,3795µm,0.8s						
MGRO	**Montegrosso**	**1.70**	**266**	P	Pn	18 19 23.0	0.0
MGRO				AML	AML		
	comp=E,1050µm,0.4s						
MGRO				AML	AML		
	comp=N,848µm,1.6s						

MGRO				AML	AML	
	comp=N,848μm,1.6s					
MGRO				AML	AML	
	comp=E,1050μm,0.4s					
ATMI	**Monte Miggiano**	**1.75**	**118**	AML	AML	
	comp=N,2805μm,0.5s					
ATMI				AML	AML	
	comp=E,1675μm,0.3s					
ATMI				AML	AML	
	comp=N,2805μm,0.5s					
ATMI				AML	AML	
	comp=E,1675μm,0.3s					
PE3	**Peglio**	**1.76**	**105**	AML	AML	
	comp=E,2225μm,0.6s					
PE3				AML	AML	
	comp=N,2010μm,1.5s					
PE3				AML	AML	
	comp=E,2225μm,0.6s					
PE3				AML	AML	
	comp=N,2010μm,1.5s					
ATPI	**Pietralunga -**	**1.79**	**114**	AML	AML	
	comp=E,916μm,0.5s					
ATPI				AML	AML	
	comp=E,916μm,0.5s					
ATPI				AML	AML	
	comp=N,712μm,0.8s					
ATPI				AML	AML	
	comp=N,712μm,0.8s					
NEGI	**Seborga**	**1.80**	**260**	AML	AML	
	comp=N,634μm,0.6s					
NEGI				AML	AML	
	comp=E,509μm,1.1s					
NEGI				AML	AML	
	comp=N,634μm,0.6s					
NEGI				AML	AML	
	comp=E,509μm,1.1s					
ATVO	**AVT- Monte Val**	**1.82**	**116**	P	**Pn**	**18 19 23.8 -0.8**
ATVO				AML	AML	
	comp=E,1180μm,0.6s					
ATVO				AML	AML	
	comp=N,1016μm,1.0s					
ATVO				AML	AML	
	comp=N,1016μm,1.0s					
ATVO				AML	AML	
	comp=E,1180μm,0.6s					
MONC	**Moncucco Torin**	**1.82**	**300**	AML	AML	
	comp=E,2185μm,0.5s					
MONC				AML	AML	
	comp=E,2185μm,0.5s					
MONC				AML	AML	
	comp=N,2570μm,0.4s					
MONC				AML	AML	
	comp=N,2570μm,0.4s					
RNI	**Roncone**	**1.82**	**10**	*e*Pg	**Pb**	**18 19 26.3 -0.3**
RNI				*e*Sg	**Sg**	**18 19 52.8 +1.1**
DOSS	**Dosso del Somm**	**1.84**	**23**	*e*Pg	**Pb**	**18 19 26.2 -0.8**
DOSS				*e*Sg	**Sg**	**18 19 54.5 +2.2**
PGF	**Pioggiola**	**1.84**	**208**	*e*Pn	**Pn**	**18 19 24.8 -0.1**
PGF				*e*Sn	**Sn**	**18 19 47.3 -1.1**
	comp=N,208nm,0.3s					
SACS	**San Casciano d**	**1.85**	**136**	AML	AML	
	comp=N,296μm,0.6s					
SACS				AML	AML	
	comp=E,264μm,0.9s					
SACS				AML	AML	
	comp=N,296μm,0.6s					
SACS				AML	AML	
	comp=E,264μm,0.9s					
ATTE	**AVT- Monte Tez**	**1.88**	**121**	P	**Pn**	**18 19 24.9 -0.5**
ATTE				AML	AML	
	comp=E,1028μm,1.2s					
ATTE				AML	AML	
	comp=N,771μm,0.9s					
ATTE				AML	AML	
	comp=E,1028μm,1.2s					
ATTE				AML	AML	
	comp=N,771μm,0.9s					
MABI	**Malga Bissina**	**1.88**	**8**	*e*Pg	**Pb**	**18 19 27.5 -0.2**
MABI	**Malga Bissina**	**1.88**	**8**	P	**Pn**	**18 19 26.7 +1.1**
MABI				AML	AML	
	comp=E,1060μm,0.5s					
MABI				AML	AML	
	comp=N,654μm,0.5s					
MABI				AML	AML	
	comp=E,1060μm,0.5s					
MABI				AML	AML	
	comp=N,654μm,0.5s					
SAOF	**Saorge**	**1.89**	**265**	Pn	**Pn**	**18 19 26.1 +0.7**
SAOF	**Saorge**	**1.89**	**265**	AML	AML	
	comp=N,1300μm,0.5s					
SAOF				AML	AML	
	comp=E,1275μm,0.6s					
SAOF				AML	AML	
	comp=E,1275μm,0.6s					
SAOF				AML	AML	
	comp=N,1300μm,0.5s					
MAON	**Monte Argentar**	**1.90**	**158**	P	**Pn**	**18 19 25.5 -0.1**
MAON				AML	AML	
	comp=E,489μm,1.1s					
MAON				AML	AML	
	comp=N,496μm,0.8s					
MAON				AML	AML	
	comp=E,489μm,1.1s					
MAON				AML	AML	
	comp=N,496μm,0.8s					
MUGIO	**Muggio**	**1.90**	**336**	P	**Pb**	**18 19 27.2 -0.8**
MUGIO				AML	AML	
	comp=E,1030μm,0.6s					
MUGIO				AML	AML	
	comp=N,990μm,0.7s					
MUGIO				AML	AML	
	comp=E,1030μm,0.6s					
MUGIO				AML	AML	
	comp=N,990μm,0.7s					
MGAB	**Montegabbione**	**1.91**	**131**	P	**Pn**	**18 19 25.6 -0.1**
MGAB				AML	AML	
	comp=E,671μm,1.1s					
MGAB				AML	AML	
	comp=N,565μm,0.6s					
MGAB				AML	AML	
	comp=E,685μm,1.1s					
MGAB				AML	AML	
	comp=N,591μm,1.2s					
MGAB				AML	AML	
	comp=N,565μm,0.6s					
MGAB				AML	AML	
	comp=E,685μm,1.1s					
MGAB				AML	AML	
	comp=N,591μm,1.2s					
MGAB				AML	AML	
	comp=E,671μm,1.1s					
ATFO	**Monte Foce - G**	**1.93**	**114**	AML	AML	
	comp=E,782μm,0.5s					
ATFO				AML	AML	
	comp=N,671μm,0.5s					
ATFO				AML	AML	
	comp=N,671μm,0.5s					
ATFO				AML	AML	
	comp=E,782μm,0.5s					
VARE	**Varese**	**1.94**	**330**	AML	AML	
	comp=E,1480μm,0.8s					
VARE				AML	AML	
	comp=E,1480μm,0.8s					
VARE				AML	AML	
	comp=N,1016μm,1.6s					
VARE				AML	AML	
	comp=N,1016μm,1.6s					
MURB	**Monte Urbino**	**1.95**	**118**	AML	AML	
	comp=E,2225μm,0.4s					
MURB				AML	AML	
	comp=E,2055μm,1.2s					
MURB				AML	AML	
	comp=N,2090μm,0.3s					
MURB				AML	AML	
	comp=E,2225μm,0.4s					
MURB				AML	AML	
	comp=N,2100μm,0.3s					
MURB				AML	AML	
	comp=N,2100μm,0.3s					
MURB				AML	AML	
	comp=E,2055μm,1.2s					
MURB				AML	AML	
	comp=N,2090μm,0.3s					
FSSB	**Fossombrone**	**1.96**	**104**	AML	AML	
	comp=E,1050μm,1.2s					
FSSB				AML	AML	
	comp=N,1575μm,0.6s					
FSSB				AML	AML	
	comp=E,1050μm,1.2s					
FSSB				AML	AML	
	comp=N,1575μm,0.6s					
MPAG	**Monte Paganucc**	**1.96**	**106**	P	**Pn**	**18 19 26.7 +0.2**
MPAG				AML	AML	
	comp=E,374μm,0.6s					
MPAG				AML	AML	
	comp=N,589μm,0.7s					
MPAG				AML	AML	
	comp=N,589μm,0.7s					
MPAG				AML	AML	
	comp=E,374μm,0.6s					
ENR	**Entracque**	**1.97**	**272**	P	**Pn**	**18 19 27.3 +0.7**
ENR				AML	AML	
	comp=E,345μm,1.1s					
ENR				AML	AML	
	comp=N,540μm,0.8s					
ENR				AML	AML	
	comp=N,540μm,0.8s					
ENR				AML	AML	
	comp=E,345μm,1.1s					
SBF	**Sospel**	**1.99**	**261**	*e*Pn	**Pn**	**18 19 27.3 +0.4**
SBF				*e*Sn	**Sn**	**18 19 51.3 -0.6**
	comp=E,673nm,0.6s					
ESCA	**l'Escarene**	**2.04**	**261**	Pn	**Pn**	**18 19 27.8 +0.3**
CGRP	**Cima Grappa**	**2.05**	**34**	P	**Pn**	**18 19 28.2 +0.3**
CGRP				AML	AML	
	comp=E,2100μm,0.6s					
CGRP				AML	AML	
	comp=N,1315μm,1.1s					
CGRP				AML	AML	
	comp=N,1315μm,1.1s					
CGRP				AML	AML	
	comp=E,2100μm,0.6s					
REVF	**Revere**	**2.06**	**258**	Pn	**Pn**	**18 19 28.0 +0.2**
FOSV	**Fossato di Vic**	**2.09**	**114**	AML	AML	
	comp=E,458μm,0.9s					
FOSV				AML	AML	
	comp=E,458μm,0.9s					
FOSV				AML	AML	
	comp=N,498μm,0.6s					
FOSV				AML	AML	
	comp=N,498μm,0.6s					
DOI	**San Damiano**	**2.11**	**280**	P	**Pn**	**18 19 29.1 +0.5**
DOI				AML	AML	
	comp=E,826μm,0.4s					
DOI				AML	AML	
	comp=N,618μm,0.4s					
DOI				AML	AML	
	comp=N,618μm,0.4s					
DOI				AML	AML	
	comp=E,826μm,0.4s					
ARVD	**Arcevia**	**2.13**	**108**	AML	AML	
	comp=N,330μm,1.5s					
ARVD				AML	AML	
	comp=E,314μm,1.3s					
ARVD				AML	AML	
	comp=N,330μm,1.5s					
ARVD				AML	AML	
	comp=E,314μm,1.3s					
CTI	**Castel Tesino**	**2.14**	**29**	P	**Pn**	**18 19 30.1 +1.2**
CTI				AML	AML	
	comp=E,1690μm,1.6s					
CTI				AML	AML	
	comp=N,1830μm,1.5s					
CTI				AML	AML	
	comp=E,1690μm,1.6s					
CTI				AML	AML	
	comp=N,1830μm,1.5s					
TRAV	**Traversella**	**2.16**	**309**	P	**Pn**	**18 19 30.9 +1.6**
TRAV				AML	AML	
	comp=E,927μm,1.4s					
TRAV				AML	AML	
	comp=N,771μm,0.8s					
TRAV				AML	AML	
	comp=N,771μm,0.8s					
TRAV				AML	AML	
	comp=E,927μm,1.4s					
BHB	**Bricherasio**	**2.17**	**288**	AML	AML	
	comp=N,491μm,0.7s					
BHB				AML	AML	
	comp=E,456μm,0.9s					
BHB				AML	AML	
	comp=N,491μm,0.7s					
BHB				AML	AML	
	comp=E,456μm,0.9s					
SMPL	**Sampolo**	**2.19**	**197**	Pn	**Pn**	**18 19 30.8 +1.2**
ISO	**Isola**	**2.23**	**271**	Pn	**Pn**	**18 19 31.3 +1.0**
ISO				Sn	**Sn**	**18 19 59.6 +1.7**
MOMA	**Monte Martano**	**2.24**	**127**	AML	AML	
	comp=N,1495μm,1.6s					
MOMA				AML	AML	
	comp=E,465μm,1.4s					
MOMA				AML	AML	
	comp=E,406μm,1.4s					
MOMA				AML	AML	
	comp=N,494μm,0.5s					
MOMA				AML	AML	
	comp=N,494μm,0.5s					
MOMA				AML	AML	
	comp=E,406μm,1.4s					
MOMA				AML	AML	
	comp=N,1495μm,1.6s					
MOMA				AML	AML	
	comp=E,465μm,1.4s					
RSP	**Reno Superiore**	**2.27**	**296**	AML	AML	
	comp=E,361μm,0.6s					
RSP				AML	AML	
	comp=N,298μm,0.6s					
RSP				AML	AML	
	comp=N,298μm,0.6s					
RSP				AML	AML	
	comp=E,361μm,0.6s					
BRMO	**Bormio**	**2.29**	**4**	AML	AML	
	comp=E,366μm,0.8s					
BRMO				AML	AML	
	comp=N,285μm,0.7s					
BRMO				AML	AML	
	comp=E,366μm,0.8s					
BRMO				AML	AML	
	comp=N,285μm,0.7s					
EL6	**Elcito**	**2.30**	**111**	AML	AML	
	comp=N,850μm,0.4s					
EL6				AML	AML	
	comp=E,755μm,0.9s					
EL6				AML	AML	
	comp=N,850μm,0.4s					
EL6				AML	AML	
	comp=E,755μm,0.9s					
CIRO	**Champorcher**	**2.32**	**308**	AML	AML	
	comp=E,538μm,0.7s					
CIRO				AML	AML	
	comp=N,370μm,1.2s					
CIRO				AML	AML	
	comp=N,370μm,1.2s					
CIRO				AML	AML	
	comp=E,538μm,0.7s					
CESI	**CESI - Serrava**	**2.32**	**120**	AML	AML	
	comp=E,93μm,0.5s					
CESI				AML	AML	
	comp=E,93μm,0.5s					
CESI				AML	AML	
	comp=N,179μm,1.6s					
CESI				AML	AML	
	comp=N,179μm,1.6s					
SATI	**Passo dei Sala**	**2.34**	**317**	AML	AML	
	comp=E,641μm,1.2s					
SATI				AML	AML	
	comp=E,641μm,1.2s					
SATI				AML	AML	
	comp=N,585μm,0.8s					
SATI				AML	AML	
	comp=N,585μm,0.8s					
TUE	**Stuetta**	**2.35**	**346**	AML	AML	
	comp=N,432μm,0.4s					
TUE				AML	AML	
	comp=E,642μm,0.4s					
TUE				AML	AML	
	comp=E,862μm,0.4s					
TUE				AML	AML	
	comp=N,529μm,0.3s					
TUE				AML	AML	
	comp=E,642μm,0.4s					
TUE				AML	AML	
	comp=N,432μm,0.4s					
TUE				AML	AML	
	comp=N,529μm,0.3s					
TUE				AML	AML	
	comp=E,862μm,0.4s					
CESX	**Cesi**	**2.37**	**131**	AML	AML	
	comp=E,400μm,0.5s					
CESX				AML	AML	
	comp=E,400μm,0.5s					
CESX				AML	AML	
	comp=N,432μm,1.6s					
CESX				AML	AML	
	comp=N,432μm,1.6s					
CALF	**Calern**	**2.38**	**261**	Pn	**Pn**	**18 19 32.9 +0.7**
CALF				Sn	**Sn**	**18 20 01.4 -0.1**
SURF	**Saint Ours**	**2.42**	**278**	Pn	**Pn**	**18 19 33.5 +0.7**
MMK	**Mattmark**	**2.42**	**321**	AML	AML	
	comp=N,636μm,0.5s					
MMK				AML	AML	
	comp=E,480μm,0.5s					
MMK				AML	AML	
	comp=N,636μm,0.5s					
MMK				AML	AML	
	comp=E,480μm,0.5s					
KOSI	**Kohlern**	**2.43**	**20**	AML	AML	
	comp=E,934μm,0.8s					
KOSI				AML	AML	
	comp=E,934μm,0.8s					
KOSI				AML	AML	
	comp=N,1505μm,0.6s					
KOSI				AML	AML	
	comp=N,1505μm,0.6s					
FUORN	**Ofenpass-Fuorn**	**2.43**	**2**	AML	AML	
	comp=N,354μm,0.6s					
FUORN				AML	AML	
	comp=E,426μm,0.5s					
FUORN				AML	AML	
	comp=N,354μm,0.6s					
FUORN				AML	AML	
	comp=E,426μm,0.5s					
POLC	**Polcenigo**	**2.48**	**41**	AML	AML	
	comp=E,1465μm,0.6s					
POLC				AML	AML	
	comp=N,2120μm,1.0s					
POLC				AML	AML	
	comp=N,2120μm,1.0s					
POLC				AML	AML	
	comp=E,1465μm,0.6s					
MBDF	**Montbardon**	**2.48**	**284**	*e*Pn	**Pn**	**18 19 34.1 +0.4**
MBDF	**Montbardon**	**2.48**	**284**	*e*Pg	**Pg**	**18 19 40.8 +0.1**
MBDF				*e*Sn	**Sn**	**18 20 02.9 -1.3**
MBDF				*e*Sg	**Sg**	**18 20 12.9 0.0**
	comp=E,154nm,0.5s					
LSD	**Lago del Serru**	**2.50**	**302**	AML	AML	
	comp=E,237μm,0.4s					
LSD				AML	AML	
	comp=N,216μm,1.0s					
LSD				AML	AML	
	comp=N,216μm,1.0s					
LSD				AML	AML	
	comp=E,237μm,0.4s					
FUSIO	**Fusio**	**2.50**	**336**	AML	AML	
	comp=E,606μm,0.4s					
FUSIO				AML	AML	
	comp=N,592μm,0.5s					
FUSIO				AML	AML	
	comp=N,592μm,0.5s					
FUSIO				AML	AML	
	comp=E,606μm,0.4s					
RRL	**Rocca Remolon**	**2.51**	**288**	AML	AML	
	comp=N,216μm,0.8s					
RRL				AML	AML	
	comp=E,354μm,0.8s					
RRL				AML	AML	
	comp=N,216μm,0.8s					
RRL				AML	AML	
	comp=E,354μm,0.8s					
TOLF	**Tolfa**	**2.52**	**147**	AML	AML	
	comp=E,109μm,1.6s					
TOLF				AML	AML	
	comp=E,109μm,1.6s					
TOLF				AML	AML	
	comp=N,136μm,0.6s					
TOLF				AML	AML	
	comp=N,136μm,0.6s					
DAVOX	**Davos/Dischmat**	**2.60**	**356**	Pn	**Pb**	**18 19 38.2 -1.6**
	comp=N,23nm,0.3s,baz=161,slow=12,SNR=111					
DAVOX				Sn	**Sb**	**18 20 09.6 -2.3**
	comp=N,14nm,0.3s,baz=147,slow=10,SNR=5.6					
DAVOX	**Davos/Dischmat**	**2.60**	**356**	AML	AML	
	comp=E,446μm,0.5s					
DAVOX				AML	AML	
	comp=E,446μm,0.5s					
DAVOX				AML	AML	
	comp=N,576μm,0.5s					
DAVOX				AML	AML	
	comp=N,576μm,0.5s					
FRF	**La Foret Royal**	**2.61**	**257**	*e*Pn	**Pn**	**18 19 35.7 +0.3**
FRF				*e*Sn	**Sn**	**18 20 06.0 -1.2**
	comp=N,175nm,0.5s					
LNSS	**Leonessa**	**2.63**	**126**	AML	AML	
	comp=N,552μm,0.9s					
LNSS				AML	AML	
	comp=E,570μm,1.4s					
LNSS				AML	AML	
	comp=N,552μm,0.9s					
LNSS				AML	AML	
	comp=E,570μm,1.4s					
ABSI	**Aberstueckl**	**2.67**	**17**	AML	AML	
	comp=N,2200μm,0.7s					
ABSI				AML	AML	
	comp=E,2720μm,0.6s					
ABSI				AML	AML	
	comp=N,2200μm,0.7s					
ABSI				AML	AML	
	comp=E,2720μm,0.6s					
REMY	**Saint-Rhmy-en**	**2.69**	**309**	AML	AML	
	comp=N,1180μm,0.9s					
REMY				AML	AML	
	comp=E,743μm,0.5s					
REMY				AML	AML	
	comp=N,1180μm,0.9s					
REMY				AML	AML	
	comp=E,743μm,0.5s					
MRGE	**Morge**	**2.71**	**307**	AML	AML	
	comp=E,384μm,0.5s					
MRGE				AML	AML	
	comp=N,523μm,0.7s					
MRGE				AML	AML	
	comp=E,384μm,0.5s					
MRGE				AML	AML	
	comp=N,523μm,0.7s					
STAL	**STALIGIAL**	**2.75**	**40**	AML	AML	
	comp=N,958μm,0.6s					
STAL				AML	AML	
	comp=E,696μm,1.3s					
STAL				AML	AML	
	comp=E,864μm,1.4s					
STAL				AML	AML	
	comp=N,850μm,0.2s					
STAL				AML	AML	
	comp=N,850μm,0.2s					
STAL				AML	AML	
	comp=N,958μm,0.6s					
STAL				AML	AML	
	comp=E,696μm,1.3s					
STAL				AML	AML	
	comp=E,864μm,1.4s					
LPG	**La Plagne**	**2.75**	**300**	*e*P	**Pn**	**18 19 39.5 +1.9**
LPG				*e*Sn	**Sn**	**18 20 09.5 -1.5**
	comp=E,274nm,0.8s					
LPL	**La Plagne**	**2.77**	**300**	*e*P	**Pn**	**18 19 40.2 +2.4**
LPL				*e*Sn	**Sn**	**18 20 09.9 -1.5**
	comp=E,132nm,0.5s					
LMR	**La Mourre**	**2.78**	**253**	*e*Pn	**Pn**	**18 19 37.6 0.0**
LMR				*e*Sn	**Sn**	**18 20 09.6 -1.6**
	comp=E,40nm,0.3s					
FETA	**Feichten**	**2.86**	**8**	Pn	**Pb**	**18 19 41.8 -2.5**
	comp=E,20nm,0.7s,SNR=18					
FETA				Sn	**Sb**	**18 20 19.2 -0.2**
	comp=E,39nm,0.4s					
ROSI	**Rosskopf**	**2.88**	**17**	AML	AML	
	comp=E,1158μm,0.6s					
ROSI				AML	AML	
	comp=N,1520μm,0.8s					
ROSI				AML	AML	
	comp=E,1158μm,0.6s					
ROSI				AML	AML	
	comp=N,1520μm,0.8s					
PLONS	**Plons/SG**	**2.91**	**350**	*e*Pn	**Pb**	**18 19 43.2 -1.9**
PLONS	**Plons/SG**	**2.91**	**350**	AML	AML	
	comp=N,288μm,1.0s					

PLONS AML AML
comp=E,374μm,0.7s
PLONS AML AML
comp=N,288μm,1.0s
PLONS AML AML
comp=E,374μm,0.7s
BNALP Bannalp 2.94 336 AML AML
comp=E,317μm,1.6s
BNALP AML AML
comp=E,317μm,1.6s
BNALP AML AML
comp=N,270μm,0.8s
BNALP AML AML
comp=N,270μm,0.8s
TRI Trieste 2.98 58 AML AML
comp=N,200μm,1.1s
TRI AML AML
comp=E,337μm,0.8s
TRI AML AML
comp=N,200μm,1.1s
TRI AML AML
comp=E,337μm,0.8s
AQU L'Aquila 3.00 127 *e*Pn **Pn 18 19 43.6 +2.9**
SABO M.te Sabotino 3.03 53 AML AML
comp=N,1026μm,0.5s
SABO AML AML
comp=E,678μm,0.5s
SABO AML AML
comp=N,1026μm,0.5s
SABO AML AML
comp=E,678μm,0.5s
FVI Forni Avoltri 3.04 37 AML AML
comp=E,326μm,1.6s
FVI AML AML
comp=N,378μm,1.2s
FVI AML AML
comp=E,326μm,1.6s
FVI AML AML
comp=N,378μm,1.2s
ABTA Abfaltersbach 3.05 32 *e*Pn **Pn 18 19 44.1 +2.7**
comp=N,12nm,0.4s,SNR=24
ABTA Sn **Sb 18 20 22.7 -2.1**
comp=N,120nm,0.6s
RISI Rein 3.07 25 AML AML
comp=N,2130μm,0.5s
RISI AML AML
comp=E,1195μm,0.5s
RISI AML AML
comp=E,1195μm,0.5s
RISI AML AML
comp=N,2130μm,0.5s
DAVA Damuels 3.10 357 *i* Pn **Pb 18 19 45.5 -2.9**
SNR=77
DAVA *e*Sn **Sb 18 20 24.4 -2.0**
comp=N,142nm,0.6s
DAVA Damuels 3.10 357 *e*Pn **Pb 18 19 45.7 -2.8**
DAVA *e*Sn **Sb 18 20 24.3 -2.1**
SQTA Sankt Quirin 3.12 13 *i* Pn **Pn 18 19 45.6 +3.2**
comp=N,37nm,0.2s,SNR=82
SQTA *e*Sn **Sb 18 20 26.2 -0.7**
comp=N,252nm,0.6s
ORIF Oris-en-Rattie 3.14 285 *e*P **Pn 18 19 45.7 +2.9**
ORIF *e*Sn **Sn 18 20 19.0 -1.3**
comp=N,206nm,0.7s
PTCC Patocco-Chiusa 3.16 44 AML AML
comp=N,260μm,0.6s
PTCC AML AML
comp=E,406μm,0.4s
PTCC AML AML
comp=N,260μm,0.6s
PTCC AML AML
comp=E,406μm,0.4s
ARTF Artigues 3.20 261 Pn **Pn 18 19 44.7 +1.2**
ARTF Sn **Sn 18 20 23.2 +1.5**
MOTA Moosalm 3.22 12 *e*Pn **Pb 18 19 47.4 -3.2**
comp=E,9.7nm,0.2s,SNR=120
WTTA Wattenberg 3.24 18 *e*Pn **Pn 18 19 46.9 +2.6**
comp=E,8.3nm,0.4s,SNR=49
WTTA *e*Sn **Sb 18 20 29.7 -0.9**
comp=E,350nm,0.6s
WTTA Wattenberg 3.24 18 *e*Pn **Pn 18 19 47.4 +3.1**
WTTA *e*Sn **Sb 18 20 29.8 -0.7**
WTTA Wattenberg 3.24 18 AML AML
comp=N,653μm,0.8s
WTTA AML AML
comp=E,760μm,0.6s
WTTA AML AML
comp=N,653μm,0.8s
WTTA AML AML
comp=E,760μm,0.6s
RIY Rijeka 3.29 68 *e*Pn **Pn 18 19 45.7 +1.1**
RIY *e*Sn **Sn 18 20 24.7 +1.0**
RIY Rijeka 3.29 68 *e*Pn **Pn 18 19 45.2 +0.6**
WATA Walderalm 3.30 17 *i* Pn **Pn 18 19 48.2 +3.2**
comp=E,3.2nm,0.2s,SNR=132
SMRF Simiane la Rot 3.31 268 *e*P **Pn 18 19 46.9 +1.9**
SMRF *e*Sn **Sn 18 20 22.5 -1.9**
comp=E,73nm,0.5s
RETA Reutte 3.33 7 *e*Pn **Pn 18 19 48.8 +3.5**
comp=E,18nm,0.4s,SNR=15
RETA *e*Sn **Sb 18 20 29.9 -2.8**
comp=E,85nm,0.5s
ACOM Acomizza, Ital 3.34 44 AML AML
comp=E,808μm,0.7s
ACOM AML AML
comp=E,808μm,0.7s
ACOM AML AML
comp=N,763μm,0.7s
ACOM AML AML
comp=N,763μm,0.7s
WILA Wila 3.34 345 *e*Pn **Pn 18 19 47.9 +2.4**
NVLJ Novalja 3.40 82 *i* Pn **Pn 18 19 47.8 +1.6**
NVLJ Sn **Sn 18 20 26.0 -0.6**
CEY Cerknica 3.40 61 *e*Pn **Pn 18 19 46.6 +0.3**
CEY *e*Sn **Sn 18 20 26.1 -0.6**
CEY Cerknica 3.40 61 *e*Pn **Pn 18 19 45.1 -1.2**
MYKA Terra Mystica 3.46 44 *e*Pn **Pn 18 19 48.9 +1.8**
comp=N,2.7nm,0.2s,SNR=11
MYKA *e*Sn **Sn 18 20 31.7 +3.5**
comp=N,15nm,0.3s
UBR Ueberruh 3.49 359 *e*Pn **Pn 18 19 50.1 +2.6**
UBR *e*Sn **Sn 18 20 32.2 +3.3**
BALST Balsthal 3.59 332 *e*Pn **Pn 18 19 51.2 +2.4**
BALST *e*Sn **Sn 18 20 33.0 +1.8**
LJU Ljubljana 3.61 58 *e*Pn **Pn 18 19 50.0 +0.9**
LJU *e*Sn **Sn 18 20 32.8 +1.1**
LJU Ljubljana 3.61 58 *e*Pn **Pn 18 19 49.8 +0.7**
LJU Ljubljana 3.61 58 AML AML
comp=E,564μm,0.3s
LJU AML AML
comp=E,564μm,0.3s
LJU AML AML
comp=N,1145μm,0.5s
LJU AML AML
comp=N,1145μm,0.5s
SULZ Cheisacher 3.63 338 *e*Pn **Pn 18 19 51.4 +1.9**
KBA Koelnbreinsper 3.65 37 *e*Pn **Pn 18 19 52.2 +2.3**
comp=N,9.6nm,0.2s,SNR=18
KBA Sn **Sb 18 20 37.8 -4.4**
comp=N,35nm,0.4s
KBA Koelnbreinsper 3.65 37 *e*Pn **Pn 18 19 52.5 +2.6**
OG35 Corcelles 3.74 301 Pn **Pn 18 19 53.3 +2.4**
OG35 Sn **Sn 18 20 38.2 +3.2**
CABF La Chapelle 3.75 312 *e*P **Pn 18 19 54.2 +3.1**
CABF *e*Sn **Sn 18 20 32.9 -2.5**
comp=N,110nm,0.8s
SLE Schleitheim 3.76 343 *e*Pn **Pn 18 19 52.6 +1.4**
BOJS Bojanci 3.85 68 *e*Pn **Pn 18 19 53.5 +1.0**
BOJS *e*Sn **Sn 18 20 39.1 +1.3**
BOJS Bojanci 3.85 68 AML AML
comp=E,131μm,1.2s
BOJS AML AML
comp=E,131μm,1.2s
BOJS AML AML
comp=N,146μm,0.7s
BOJS AML AML
comp=N,146μm,0.7s
OBKA Obir 3.87 52 *e*Pn **Pn 18 19 54.0 +1.2**
comp=N,8.6nm,0.3s,SNR=17
OBKA Sn **Sn 18 20 43.2 +4.9**
comp=N,59nm,0.3s
OBKA Obir 3.87 52 *e*Pn **Pn 18 19 54.5 +1.8**
CHMF Charmoille 3.92 322 Pn **Pn 18 19 56.2 +2.7**
LOMF Lomont 3.93 325 Pn **Pn 18 19 56.3 +2.8**
VIVF Saint-Julien-l 3.98 282 *e*P **Pn 18 19 56.0 +1.8**
VIVF *e*Sn **Sn 18 20 38.8 -2.1**
comp=N,20nm,0.6s
RJOB Jochberg 4.00 26 *e*Pn **Pn 18 19 57.4 +2.9**
UDBI Udbina 4.04 83 *e*Pn **Pn 18 19 57.5 +2.5**
UDBI Sn **Sn 18 20 42.5 +0.2**
CRES Cresnjev 4.10 65 *e*Pn **Pn 18 19 55.5 -0.3**
SOKA Soboth 4.24 52 *e*Pn **Pn 18 19 58.4 +0.5**
comp=N,3.2nm,0.4s,SNR=29
SOKA Sn **Sn 18 20 49.0 +1.6**
comp=N,14nm,0.4s
HINF Hinteralfeld 4.29 329 *e*P **Pn 18 20 00.4 +1.8**
HINF *e*Sn **Sn 18 20 46.5 -2.2**
comp=N,88nm,0.5s
BFO Black Forest 4.33 344 *e*Pn **Pn 18 20 00.0 +1.0**
BFO *e*Sn **Sn 18 20 49.7 +0.2**
LASF Ste Croix 4.54 271 *e*Pn **Pn 18 20 02.5 +0.7**
LASF *e*Sn **Sn 18 20 52.2 -2.4**
comp=N,22nm,0.5s
STU Stuttgart 4.63 352 *e*Pn **Pn 18 20 04.6 +1.5**
HAU Haudompre 4.64 327 *e*P **Pn 18 20 05.7 +2.4**
HAU *e*Sn **Sn 18 20 54.5 -2.8**
comp=N,131nm,0.4s
MOA Molln 4.65 37 *e*Pn **Pn 18 20 05.5 +2.1**
comp=N,11nm,0.3s,SNR=18
MOA *e*Sn **Sn 18 21 02.1 +4.7**
comp=N,20nm,0.4s
MOA Molln 4.65 37 *e*Pn **Pn 18 20 05.8 +2.5**
CDF Champ du Feu 4.67 336 *e*P **Pn 18 20 05.2 +1.5**
CDF *e*Sn **Sn 18 20 54.8 -3.2**
comp=N,100nm,0.5s
ARSA Arzberg 4.85 49 *e*Pn **Pn 18 20 06.9 +0.8**
ARSA Arzberg 4.85 49 *e*Pn **Pn 18 20 06.9 +0.8**
comp=N,2.8nm,0.3s,SNR=68
ARSA Sn **Sn 18 21 04.5 +2.2**
comp=N,17nm,0.6s
ARSA Arzberg 4.85 49 *e*Pn **Pn 18 20 07.1 +1.0**
BLY Banja Luka 5.06 81 *e*Pn **Pn 18 20 10.8 +1.8**
BLY *e*Sn **Sn 18 21 08.1 +0.6**
BLY Banja Luka 5.06 81 ⇑*i*P **Pn 18 20 11.0 +2.0**
BLY Banja Luka 5.06 81 S **Sn 18 21 09.6 +2.1**
BLY Banja Luka 5.06 81 *e*Pn **Pn 18 20 10.6 +1.6**
SMF Signal de Mont 5.08 301 *e*P **Pn 18 20 12.2 +2.9**
SMF *e*Sn **Sn 18 21 04.9 -3.1**
comp=N,89nm,0.5s
BEHE Becsehely 5.19 62 *e*Pn **Pn 18 20 10.9 0.0**
BEHE Becsehely 5.19 62 EPn **Pb 18 20 22.0 -2.0**
BEHE Sn **Sb 18 21 23.0 -3.4**
GEC2 GERESS Array S 5.26 26 *e*Pn **Pn 18 20 12.9 +1.1**
GEC2 *e*Sn **Sn 18 21 12.0 -0.5**
GERES GERESS Array B 5.26 26 Pn **Pn 18 20 12.9 +1.1**
comp=N,3.6nm,0.3s,baz=202,slow=14,SNR=62
GERES Sn **Sn 18 21 11.3 -1.3**
comp=N,7.3nm,0.3s,baz=202,slow=22,SNR=9.4
GERES LR LR 18 22 07.6
comp=N,38nm,19.4s,baz=278,slow=37
WET Wettzell 5.30 20 *e*Pn **Pn 18 20 13.4 +1.1**
AGO Saint Agoulin 5.31 293 Pn **Pn 18 20 14.4 +1.9**
PAGF Fort de Pagny 5.33 326 *e*P **Pn 18 20 15.7 +2.9**
baz=145
PAGF *e*Sn **Sn 18 21 10.3 -3.9**
comp=N,85nm,0.5s,baz=144
SFTF Sexfontaines 5.36 320 *e*P **Pn 18 20 15.7 +2.6**
baz=138
SFTF *e*Sn **Sn 18 21 11.0 -3.9**
comp=N,76nm,0.8s
LOR Lormes 5.38 307 *e*P **Pn 18 20 15.8 +2.4**
LOR *e*Sn **Sn 18 21 12.1 -3.2**
comp=N,53nm,0.4s
AVF Avril sur Loir 5.44 301 *e*P **Pn 18 20 16.6 +2.3**
AVF *e*Sn **Sn 18 21 14.5 -2.4**
comp=N,33nm,0.5s
CONA Conrad Observa 5.45 45 *e*Pn **Pn 18 20 15.8 +1.3**
comp=N,11nm,0.3s,SNR=34
CONA *e*Sn **Sn 18 21 19.4 +2.1**
comp=N,40nm,0.6s
KHC Kasperske Hory 5.47 24 *e*PN **Pn 18 20 15.7 +1.0**
KHC *e*SN **Sn 18 21 16.0 -1.8**
SSF Saint Saulge 5.48 304 *e*P **Pn 18 20 17.0 +2.3**
SSF *e*Sn **Sn 18 21 14.0 -3.7**
comp=N,34nm,0.5s
MEZF Maizieres J'vi 5.57 322 *e*P **Pn 18 20 18.5 +2.4**
baz=143
MEZF *e*Sn **Sn 18 21 16.3 -3.8**
comp=N,37nm,0.5s
STON Ston 5.64 101 *e*Pn **Pn 18 20 18.4 +1.4**
STON *e*Sn **Sn 18 21 22.8 +1.0**
STON Ston 5.64 101 *i* Pn **Pn 18 20 17.7 +0.7**
STON Sn **Sn 18 21 20.3 -1.4**
STON Ston 5.64 101 *e*Pn **Pn 18 20 17.3 +0.3**
BGF Bois d'Agland 5.67 297 *e*P **Pn 18 20 19.5 +2.1**
BGF *e*Sn **Sn 18 21 22.1 -0.4**
comp=N,68nm,0.4s
SOP Sopron 5.67 50 *e*Pn **Pn 18 20 20.2 +2.9**
SOP Sopron 5.67 50 EPn **Pn 18 20 19.0 +1.7**
SOP Sn **Sn 18 21 20.1 -2.4**
ROTZ Rotzenmuhle 5.75 13 *e*Pn **Pn 18 20 18.6 0.0**
MTLF Montolieu 5.81 264 *e*Pn **Pn 18 20 19.5 +0.2**
MTLF *e*Sn **Sn 18 21 22.5 -3.5**
comp=N,18nm,0.7s
CAF Calviac 5.83 280 *e*P **Pn 18 20 21.3 +1.7**
CAF *e*Sn **Sn 18 21 22.9 -3.6**
comp=N,7.8nm,0.5s
MANZ Manzenberg 5.95 12 *e*Pn **Pn 18 20 21.2 0.0**
TCF Toulx Ste Croi 5.99 293 *e*P **Pn 18 20 25.7 +3.9**
TCF *e*Sn **Sn 18 21 27.2 -3.2**
comp=N,21nm,0.6s
HYF Humbligny 6.09 303 *e*P **Pn 18 20 27.0 +3.8**
TREB Trebinje 6.14 101 *e*Pn **Pn 18 20 25.1 +1.2**
TREB *e*Sn **Sn 18 21 34.4 +0.2**
TREB Trebinje 6.14 101 *e*Pn **Pn 18 20 24.8 +0.9**
TNS Taunus Mts 6.15 350 *e*Pn **Pn 18 20 25.2 +1.3**
BRY Bratogost 6.23 99 *e*Pn **Pn 18 20 26.6 +1.4**
NKC Novy Kostel 6.24 14 *e*PN **Pn 18 20 27.4 +2.1**
NKC *e*SN **Sn 18 21 35.3 -1.4**
RJF Les Rejaudoux 6.25 283 *e*P **Pn 18 20 28.2 +2.8**
ZST Bratislava 6.27 48 *e*PN **Pn 18 20 27.1 +1.5**
HCY Herceg Novi 6.33 103 *e*Pn **Pn 18 20 28.2 +1.8**
MORH Mrgy, Hungar 6.33 68 *e*Pn **Pn 18 20 26.2 -0.2**
HAPS Han Pijesak,Bl 6.33 88 *e*Pn **Pn 18 20 27.8 +1.2**
HAPS Han Pijesak,Bl 6.33 88 *e*Pn **Pn 18 20 26.7 +0.1**
UPM Unac-Piva 6.42 96 *e*Pn **Pn 18 20 29.4 +1.5**
MODS Modra-Piesok 6.47 47 *e*PN **Pn 18 20 29.9 +1.5**
MODS *e*SN **Sn 18 21 40.4 -1.8**
KRUC Moravsky 6.50 39 *e*PN **Pn 18 20 29.0 +0.3**
KRUC *e*SN **Sn 18 21 42.1 -0.7**
PRU Pruhonice 6.53 26 *e*PN **Pn 18 20 30.4 +1.3**
PRU *e*SN **Sn 18 21 41.3 -2.3**
GOPC GO Pecny, Ondr 6.54 27 *e*PN **Pn 18 20 30.4 +1.0**
GOPC *e*SN **Sn 18 21 42.1 -1.9**
UBBA Unterbreizbach 6.63 359 *e*Pn **Pn 18 20 30.9 +0.5**
BBLS Lazići 6.68 90 *e*Pn **Pn 18 20 32.5 +1.2**
BBLS *e*Sn **Sn 18 21 46.7 -0.7**
BBLS Lazići 6.68 90 *e*Pn **Pn 18 20 32.5 +1.2**
RUDO Rudo 6.68 92 *e*Pn Pn 18 20 25.4 -5.9
VRAC Vranov 6.76 39 Pn **Pn 18 20 32.8 +0.4**
comp=N,0.7nm,0.3s,baz=228,slow=13,SNR=6.4
VRAC Sn **Sn 18 21 44.9 -4.5**
comp=N,0.3nm,0.3s,baz=0.0,slow=20,SNR=2.8
VRAC Lg Lg 18 22 27.3
comp=N,0.3nm,0.3s,baz=142,slow=19,SNR=3.3
VRAC Vranov 6.76 39 ⇑*i*P **Pn 18 20 35.0 +2.6**
VRAC Vranov 6.76 39 *e*PN **Pn 18 20 32.8 +0.4**
VRAC *e*SN **Sn 18 21 47.1 -2.3**
LFF La Frestale 6.77 280 *e*P **Pn 18 20 35.8 +3.3**
PDG Podgorica 6.87 102 *e*Pn **Pn 18 20 35.8 +2.0**
PDG *e*Sn **Sn 18 21 51.2 -0.8**
PDG Podgorica 6.87 102 *e*Pn **Pn 18 20 35.3 +1.5**
DRME Dracevica, Mon 6.90 104 *e*Pn **Pn 18 20 35.2 +1.0**
GIVF Givet 6.94 330 *e*P **Pn 18 20 38.3 +3.5**
GIVF *e*Sn **Sn 18 21 49.4 -4.4**
comp=N,26nm,0.8s
FRGS Fruska Gora 6.95 79 *e*Pn **Pn 18 20 33.4 -1.6**
JAVC Velka Javorina 6.97 45 *e*PN **Pn 18 20 38.9 +3.5**
PVCC Panska Ves 7.01 24 *e*PN **Pn 18 20 36.2 +0.4**
PVCC *e*SN **Sn 18 21 53.6 -1.9**
DIVS Divibare 7.08 87 *e*Pn **Pn 18 20 38.6 +1.8**
DIVS Divibare 7.08 87 *e*Pn **Pn 18 20 37.3 +0.5**
BAIF Baives 7.13 327 *e*P **Pn 18 20 40.6 +3.1**
BAIF *e*Sn **Sn 18 21 54.1 -4.4**
comp=N,19nm,0.6s
BRG Berggiesshubel 7.16 20 PN **Pn 18 20 38.5 +0.7**
BRG SN **Sn 18 21 56.7 -2.4**
BRG SG **Sg 18 22 43.9 +1.1**
comp=N,13nm,0.8s
SJES Sjenica 7.17 94 *e*Pn **Pn 18 20 40.4 +2.3**
EPF Esparros 7.22 264 *e*Pn **Pn 18 20 38.2 -0.5**
EPF *e*Sn **Sn 18 21 56.7 -4.0**
comp=N,3.3nm,0.5s
IVAS Ivanjica 7.25 91 *e*Pn **Pn 18 20 39.8 +0.7**
IVAS *e*Sn **Sn 18 21 59.7 -1.8**
TRUS Trudelj 7.37 86 *e*Pn **Pn 18 20 41.6 +0.9**
CLL Collm 7.38 14 *e*Pn **Pn 18 20 41.0 +0.2**
CLL *e* 18 22 02.0
CLL *e* 18 22 19.0
CLL *e* 18 22 37.0
CLL *e*Sg **Sg 18 22 46.0 -3.7**
comp=Z,22nm,0.9s
VYHS Vyhne 7.39 51 *e*PN **Pn 18 20 40.7 -0.3**
DPC Dobruska-Polom 7.45 32 *e*PN **Pn 18 20 43.1 +1.2**
DPC *e*SN **Sn 18 22 03.4 -3.0**
UPC Upice 7.46 30 *e*PN **Pn 18 20 42.1 +0.1**
UPC *e*SN **Sn 18 22 04.1 -2.6**
MORC Moravsky Berou 7.53 39 ||*i*P **Pn 18 20 45.2 +2.2**
MORC Moravsky Berou 7.53 39 *e*PN **Pn 18 20 44.8 +1.8**
CHVC Chvalec 7.55 30 *e*PN **Pn 18 20 43.5 +0.3**
CHVC *e*SN **Sn 18 22 05.9 -2.8**
OSTC Ostas 7.58 31 *e*PN **Pn 18 20 43.6 0.0**
OSTC *e*SN **Sn 18 22 06.3 -3.2**
GRUS Gruza 7.62 89 *e*Pn **Pn 18 20 45.1 +1.0**
MFF Saint Martin d 7.64 292 *e*P **Pn 18 20 47.7 +3.3**
MFF *e*Sn **Sn 18 22 06.2 -4.8**
comp=Z,10nm,0.5s
CLZ Clausthal 7.66 1 *e*Pn **Pn 18 20 44.8 +0.1**
PSZ Piszkesteto 7.73 58 ||*i*P **Pn 18 20 48.3 +2.5**
PSZ Piszkesteto 7.73 58 EPn **Pn 18 20 49.0 +3.3**
PSZ Sn **Sn 18 22 13.0 -0.3**
ETSF Etsaut 7.89 264 *e*Pn **Pn 18 20 47.8 -0.2**
ETSF *e*Sn **Sn 18 22 12.3 -5.0**
comp=Z,1.0nm,0.3s
SELS Selova 8.00 93 *e*Pn **Pn 18 20 49.9 +0.4**
BZS Buzias 8.26 76 *e*Pn **Pn 18 20 53.1 +0.2**
BZS Buzias 8.26 76 ⇑*i*P **Pn 18 20 56.0 +3.1**
SJPF Ste Jean 8.32 267 *e*P **Pn 18 20 56.7 +2.9**
SJPF *e*Sn **Sn 18 22 22.4 -5.5**
comp=Z,7.9nm,0.9s
LDF La Druitiere 8.36 305 *e*P **Pn 18 20 55.9 +1.7**
LDF *e*Sn **Sn 18 22 23.4 -5.2**
comp=Z,2.7nm,0.4s
KEST Kesra 8.47 184 Pn **Pn 18 20 58.2 +2.2**
comp=Z,0.4nm,0.3s,baz=314,slow=3.6,SNR=4.8
SKO Skopje 8.55 101 *e*Pn **Pn 18 20 59.3 +2.3**
FLN La Foliniere 8.65 306 *e*P **Pn 18 21 01.5 +3.3**
baz=126
FLN *e*Sn **Sn 18 22 32.4 -3.3**
comp=Z,2.6nm,0.3s
GZR Gura Zlata 9.06 78 ⇑*i*P **Pn 18 21 05.8 +1.9**
ZAPS Zavoj 9.08 91 *e*Pn **Pn 18 21 05.7 +1.4**
DRGR 9.20 69 ||*i*P **Pn 18 21 08.9 +3.1**
TRPA Tarpa 9.45 61 EPn Pn 18 20 58.1 -11
TRPA Sn **Sn 18 22 55.1 -0.4**
VTS Vitosha 9.65 95 *e*Pn **Pn 18 21 13.1 +1.0**
VTS Vitosha 9.65 95 ⇑*i*P **Pn 18 21 13.8 +1.7**
SGMF Saint Gilles 9.70 299 *e*P **Pn 18 21 15.2 +2.5**
SGMF *e*Sn **Sn 18 22 54.9 -6.7**
comp=Z,1.4nm,0.2s
QUIF Quistinic 9.98 297 *e*P **Pn 18 21 18.8 +2.3**
QUIF *e*Sn **Sn 18 23 01.8 -6.7**
comp=Z,3.5nm,0.5s
ROSF Rostrenen 10.18 299 *e*P **Pn 18 21 21.9 +2.7**
ROSF *e*Sn **Sn 18 23 06.8 -6.6**
comp=Z,4.1nm,0.5s
ESDC Sonseca Array 11.44 252 Pn **Pn 18 21 37.4 +0.8**
comp=Z,0.1nm,0.3s,baz=56,slow=14,SNR=3.7
EKA Eskdalemuir Ar 14.06 327 Pn **Pn 18 22 11.2 -1.0**
baz=131,slow=15,SNR=3.9
IDI Anoyia 14.39 123 LR LR 18 29 10.9
comp=Z,26nm,18.7s,baz=230,slow=43
FINES FINESS Array B 19.68 23 P **Pn 18 23 23.7 +0.2**
comp=Z,0.1nm,0.3s,baz=208,slow=7.8,SNR=5.6
TORD Torodi Ar. Bea 31.77 196 P **P 18 25 18.4 +0.9**
comp=Z,4.5nm,0.4s,baz=0.8,slow=8.1,SNR=1.8
TORD LR LR 18 39 23.3
comp=Z,77nm,21.0s,baz=325,slow=39
ARU Arti 32.55 51 P **P 18 25 24.7 +0.6**
baz=270,slow=8.1
GEYT Alibeck 36.28 83 P **P 18 25 58.4 +1.7**
comp=Z,1.1nm,0.6s,baz=283,slow=7.2,SNR=3.2
MKAR Makanchi Array 48.98 60 P **P 18 27 41.2 +1.6**
comp=Z,0.7nm,0.6s,baz=278,slow=7.3,SNR=8.5
SONM Songino Array 62.57 49 P **P 18 29 18.9 +1.6**
comp=Z,0.5nm,0.5s,baz=292,slow=9.3,SNR=5.7
PETK Petropavlovsk- 79.15 19 LR LR 19 14 13.5
comp=Z,29nm,19.0s,baz=237,slow=42
ASAR Alice Springs 130.07 85 PKP **PKPdf 18 38 02.7 -0.6**
comp=Z,0.4nm,1.0s,baz=309,slow=1.8,SNR=3.0

KMA 30 18:30:11.3±1.1, 38°.07N×129°.38E, h7km±6km, Error ellipse: s-maj=10.3km s-min=2.9km az=54.0, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSJMJ	**Jumunjin** SNR=51	**0.53**	**250**	P	Pg	18 30 21.6	+0.1
KOEB	**Okgye-meyeon** SNR=16	**0.55**	**216**	P	Pg	18 30 21.7	-0.1
KSDGY	**Daegwallycong** SNR=38	**0.67**	**236**	P	Pg	18 30 24.1	-0.1
IMWB	**Imwonan-gil** SNR=36	**0.83**	**182**	P	Pg	18 30 27.3	+0.2
IMWB				S	Sb	18 30 39.8	+0.5
SEHB	**SEOHWA** SNR=40	**0.91**	**283**	P	Pg	18 30 28.8	0.0
KSTBA	**Taebaek** SNR=18	**1.00**	**200**	P	Pg	18 30 30.3	-0.2
KSWJU	**Wonju** SNR=8.1	**1.24**	**238**	P	Pn	18 30 35.0	-0.1
KSMGY	**Mungyeong** SNR=18	**1.76**	**217**	P	Pb	18 30 44.1	+0.3
KSBON	**Boeun** SNR=12	**2.01**	**219**	P	Pb	18 30 47.9	-0.2
KSCEA	**Cheonan** SNR=5.9	**2.10**	**234**	P	Pg	18 30 50.6	-0.8
OKCB	**Cheongsan-myeo** SNR=12	**2.13**	**217**	P	Pb	18 30 51.0	+0.8
HAWB	**Hwaseong-si** SNR=8.5	**2.29**	**245**	P	Pb	18 30 54.0	+1.1

RSNC 30 18:38:09.2±0.9, 3°.83N×71°.36W, h11km±11km, ML3.2, Mw3.6, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUVC	**San Jose del G**	**1.80**	**225**	*e*P	Pn	18 38 38.3	-1.9
GUVC				*e*S	Sn	18 39 02.3	-0.7
GUVC				*i*		18 39 08.1	
comp=Z,577nm,0.2s							
YOPC	**Yopal, Colombi**	**1.85**	**325**	*e*P	Pn	18 38 40.5	-0.4
YOPC				*e*S	Sn	18 39 04.0	-0.4
YOPC				*i*		18 39 08.9	
comp=Z,433nm,0.2s							
VILC	**Villavicencio,**	**2.35**	**277**	*e*P	Pn	18 38 47.2	-0.6
VILC				*e*S	Sn	18 39 15.9	-0.9
VILC				*i*		18 39 29.8	
comp=Z,312nm,0.7s							
CHIC	**Chingaza**	**2.50**	**289**	*e*P	Pn	18 38 48.8	-1.4
CHIC				*e*Pg	Pb	18 38 52.2	-2.2
CHIC				*e*S	Sn	18 39 20.3	-0.6
CHIC				*i*		18 39 23.0	
comp=Z,151nm,0.3s							
TAMC	**Tame, Arauca**	**2.63**	**351**	*e*P	Pn	18 38 50.2	-1.5
TAMC				*e*S	Sb	18 39 27.4	-1.3
TAMC				*i*		18 39 32.6	
comp=Z,97nm,0.1s							
RUSC	**La Rusia**	**2.68**	**320**	*e*P	Pn	18 38 51.4	-1.3
RUSC				*e*S	Sn	18 39 23.8	-1.6
RUSC				*i*		18 39 40.1	
comp=Z,48nm,0.5s							
MACC	**Macarena, Meta**	**3.00**	**236**	*e*P	Pn	18 38 56.2	-0.5
MACC				*e*S	Sn	18 39 34.8	+2.1
BARC	**Barichara**	**3.29**	**327**	*e*P	Pb	18 39 06.5	-1.4
BARC				*i*		18 39 52.5	
comp=Z,30nm,0.3s							
PRAC	**Prado**	**3.52**	**268**	*e*P	Pn	18 39 03.2	-0.7
PRAC				*e*S	Sn	18 39 45.0	-0.7
PRAC				*i*		18 40 09.8	
comp=Z,50nm,0.5s							

PAMC	**Pamplona, Colo**	**3.73 339**	*e*P	Pb	18 39 14.3	-1.2
ORTC	**Ortega, Tolima**	**3.88 271**	*e*P	Pn	18 39 08.6	-0.3
ORTC			*e*S	Sb	18 40 07.8	+3.0
GUY2C	**Guyana, Caldas**	**4.23 289**	*e*P	Pn	18 39 13.3	-0.8
GUY2C			*e*S	Sn	18 39 58.5	-5.2
GUY2C			*i*		18 40 10.4	
	comp=Z,21nm,0.5s					
MARP	**Paez Belalcaza**	**4.69 258**	*e*P	Pb	18 39 28.5	-3.2
MARP			*e*S	Sb	18 40 30.4	+2.0
MARP			*i*		18 40 37.8	
	comp=Z,24nm,0.4s					
OCAC	**Ocana**	**4.80 336**	*e*P	Pb	18 39 33.3	-0.1
PCON	**Cinco Dias**	**5.25 254**	*e*P	Pb	18 39 41.1	-0.3
POPC	**Popayan, Colom**	**5.46 257**	*e*P	Pb	18 39 38.8	-6.1

*MDD **30** 18:40:26.5±2.7, 37.°56N×15.°68W, h0km, mb4.5/1, Error ellipse: s-maj=25.0km s-min=23.9km az=176.0, PRXIMO*
*INMG **30** 18:40:28.0±1.0, 37.°26N×16.°06W, h10km, ML2.4, Error ellipse: s-maj=11.8km s-min=4.1km az=125.0*

ISC 30 18:40:28.6±4.1, 37.°7N±0.°1×15.°4W±0.°2, h10km, n33, σ1§32/50, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPST	**Porto Santo, M**	**4.64**	**189**	*e*Sn	Sn	18 42 09.6	-23
PMPS	**Porto Santo**	**4.66**	**189**	S	Sn	18 42 09.6	-24
PMAFR	**Mafra**	**5.00**	**73**	*e*Pn	**Pn**	**18 41 45.5**	**+1.8**
PMAFR				*e*Sn	**Sn**	**18 42 43.6**	**+2.0**
PMAFR				A	A	18 42 59.1	
	10nm,0.3s						
PMAFR	**Mafra**	**5.00**	**73**	P	**Pn**	**18 41 45.3**	**+1.6**
	2.3nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**18 42 43.7**	**+2.0**
	4.5nm,0.4s,SNR=7.9						
PMAR	**Madeira**	**5.08**	**194**	*e*Sn	Sn	18 42 18.7	-25
PMAR	**Madeira**	**5.08**	**194**	S	Sn	18 42 18.7	-25
PFVI	**Vila Bisbo**	**5.29**	**94**	*e*Pn	**Pn**	**18 41 47.7**	**+0.1**
PFVI				*e*Sn	**Sn**	**18 42 46.9**	**-1.7**
PFVI	**Vila Bisbo**	**5.29**	**94**	P	**Pn**	**18 41 47.7**	**+0.1**
	0.4nm,0.0s,SNR=7.9						
PFVI				S	**Sn**	**18 42 46.9**	**-1.7**
	12nm,0.6s,SNR=7.9						
PTEO	**Sao Teotonio**	**5.33**	**89**	*e*Pn	**Pn**	**18 41 48.5**	**+0.3**
PTEO	**Sao Teotonio**	**5.33**	**89**	P	**Pn**	**18 41 48.5**	**+0.3**
MORF	**Marmelete**	**5.40**	**92**	*e*Pn	**Pn**	**18 41 49.4**	**+0.1**
MORF				*e*Sn	**Sn**	**18 42 50.8**	**-0.8**
MORF	**Marmelete**	**5.40**	**92**	P	**Pn**	**18 41 49.4**	**+0.1**
MORF				S	**Sn**	**18 42 50.8**	**-0.8**
PNCL	**Nicolau / Gran**	**5.48**	**83**	*e*Pn	**Pn**	**18 41 50.5**	**+0.3**
PNCL				*e*Sn	**Sn**	**18 42 52.3**	**-1.0**
PNCL				A	A	18 42 59.2	
	1.1nm,0.1s						
PNCL	**Nicolau / Gran**	**5.48**	**83**	P	**Pn**	**18 41 50.5**	**+0.3**
PNCL				S	**Sn**	**18 42 52.3**	**-1.0**
	1.1nm,0.1s						
MESJ	**Messejana**	**5.72**	**86**	*e*Pn	**Pn**	**18 41 54.9**	**+1.4**
MESJ				*e*Sn	**Sn**	**18 42 58.9**	**-0.3**
MESJ				A	A	18 43 02.6	
	1.8nm,0.6s						
MESJ	**Messejana**	**5.72**	**86**	P	**Pn**	**18 41 54.9**	**+1.4**
MESJ				S	**Sn**	**18 42 58.9**	**-0.3**
	1.8nm,0.6s						
PTOM	**Tomar**	**5.83**	**68**	*e*Pn	**Pn**	**18 41 56.9**	**+1.8**
PTOM	**Tomar**	**5.83**	**68**	P	**Pn**	**18 41 56.9**	**+1.8**
PMTG	**Montargil**	**5.83**	**74**	*e*Pn	**Pn**	**18 41 56.3**	**+1.2**
PMTG				*e*Sn	**Sn**	**18 43 02.8**	**+0.8**
PMTG				A	A	18 43 16.9	
	1.6nm,0.6s						
PMTG	**Montargil**	**5.83**	**74**	P	**Pn**	**18 41 56.3**	**+1.2**
PMTG				S	**Sn**	**18 43 02.8**	**+0.8**
	1.6nm,0.6s						
PCVE	**Castro Verde**	**5.87**	**88**	*e*Sn	**Sn**	**18 43 01.9**	**-1.0**
PCVE				A	A	18 43 05.4	
	1.5nm,0.1s						
PCVE	**Castro Verde**	**5.87**	**88**	S	**Sn**	**18 43 01.9**	**-1.0**
	1.5nm,0.1s						
PCAS	**Casmilo, Conde**	**5.91**	**64**	*e*Pn	**Pn**	**18 41 57.5**	**+1.3**
PCAS				*e*Sn	**Sn**	**18 43 03.3**	**-0.7**
PCAS				A	A	18 43 09.6	
	1.7nm,0.6s						
PCAS	**Casmilo, Conde**	**5.91**	**64**	P	**Pn**	**18 41 57.5**	**+1.3**
PCAS				S	**Sn**	**18 43 03.3**	**-0.7**
	1.7nm,0.6s						
PMRV	**Marv??o**	**6.54**	**72**	*e*Pn	**Pn**	**18 42 06.0**	**+1.1**
PMRV				*e*Sn	**Sn**	**18 43 19.8**	**+0.3**
PMRV				A	A	18 43 22.5	
	1.3nm,0.7s						
PMRV	**Marv??o**	**6.54**	**72**	P	**Pn**	**18 42 06.0**	**+1.1**
PMRV				S	**Sn**	**18 43 19.8**	**+0.3**
	1.3nm,0.7s						
EMIN	**Mina Concepcio**	**6.94**	**87**	P	**Pn**	**18 42 10.4**	**0.0**
	0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**18 43 27.4**	**-2.0**
	0.6nm,0.5s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.98**	**50**	*e*Pn	**Pn**	**18 42 12.3**	**+1.3**
PGAV				*e*Sn	**Sn**	**18 43 28.8**	**-1.7**
PGAV				A	A	18 43 35.5	
	1.6nm,0.1s						
PGAV	**Gavieira, Arco**	**6.98**	**50**	P	**Pn**	**18 42 12.3**	**+1.3**
PGAV				S	**Sn**	**18 43 28.8**	**-1.7**
	1.6nm,0.1s						
ELOB	**Lobios**	**7.05**	**51**	P	**Pn**	**18 42 11.2**	**-0.8**
	0.2nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**18 43 30.5**	**-1.8**
	0.0nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**7.38**	**59**	*e*Sn	**Sn**	**18 43 38.8**	**-1.5**
MVO	**Moncorvo**	**7.38**	**59**	P	**Pn**	**18 42 17.6**	**+1.2**
	0.3nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**18 43 37.7**	**-2.5**
	1.3nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**7.60**	**45**	S	**Sn**	**18 43 42.9**	**-2.7**
	5.6nm,1.1s,SNR=7.9						

*ISCJB **30** 18:52:02.6±0.4, 58.°33N±0.°03×133.°54W±0.°05, h10km, Error ellipse: s-maj=4.5km s-min=3.5km az=30.5*
*AEIC **30** 18:52:03.2±0.0, 58.°33N×133.°51W, h3km*
*PGC **30** 18:52:04.5±0.0, 58.°32N×133.°49W, h10km, ML2.8/6, 54km east of Juneau, Ak Southeastern Alaska*
*NEIC **30** 18:52:04.5±0.0, 58.°32N×133.°49W, h10km, ML2.6(AEIC), ML2.8(OTT), After OTT.*

ISC 30 18:52:03.4±0.8, 58.°31N±0.°03×133.°45W±0.°03, h10km, n36, σ2§48/55, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIS	**Juneau Island**	**0.49**	**266**	*e*Pg	**Pg**	**18 52 12.1**	**-0.9**
JIS				*e*Sg	**Sg**	**18 52 18.9**	**-0.6**
BESE	**Bessie Mountai**	**0.79**	**291**	*e*Pg	**Pg**	**18 52 17.2**	**-1.4**
BESE	**Bessie Mountai**	**0.79**	**291**	P	**Pg**	**18 52 16.7**	**-1.9**
BESE				S	**Sg**	**18 52 24.5**	**-4.3**
SKAG	**Skagway**	**1.51**	**321**	*e*Pn	**Pn**	**18 52 30.3**	**-0.1**
SKAG				*e*Sg	**Sg**	**18 52 52.0**	**+0.1**
SIT	**Sitka**	**1.61**	**219**	*e*Pn	**Pn**	**18 52 32.1**	**+0.3**
SIT				*e*Sg	**Sb**	**18 52 54.9**	**+1.4**
DLBC	**Dease Lake**	**1.81**	**85**	*e*Pn	**Pn**	**18 52 36.9**	**+2.2**
DLBC				*e*Sg	**Sb**	**18 53 02.1**	**+2.8**
DLBC	**Dease Lake**	**1.81**	**85**	Pn	**Pn**	**18 52 35.6**	**+0.9**
DLBC				Sn	**Sn**	**18 52 59.4**	**+1.7**
DLBC				Sg	**Sb**	**18 53 01.8**	**+2.5**
PLBC	**Pleasant Camp**	**1.90**	**308**	*e*Pn	**Pn**	**18 52 36.5**	**+0.6**
PLBC				*e*Sn	**Sb**	**18 53 01.4**	**-0.5**
PLBC	**Pleasant Camp**	**1.90**	**308**	Pn	**Pn**	**18 52 36.5**	**+0.6**
PLBC				Sg	**Sb**	**18 53 01.4**	**-0.5**
WRAK	**Wrangell Islan**	**1.99**	**162**	*e*Pn	**Pn**	**18 52 37.8**	**+0.8**
WHY	**Whitehorse**	**2.47**	**343**	*e*Pn	**Pn**	**18 52 44.2**	**+0.4**
WHY	**Whitehorse**	**2.47**	**343**	Pn	**Pn**	**18 52 43.1**	**-0.7**
WHY				Sn	**Sn**	**18 53 13.3**	**-0.6**
CRAG	**Craig**	**2.86**	**176**	*e*Pn	**Pn**	**18 52 48.2**	**-0.8**
HYT	**Haines Junctio**	**3.26**	**322**	*e*Pn	**Pn**	**18 52 56.3**	**+1.7**
HYT	**Haines Junctio**	**3.26**	**322**	Pg	**Pb**	**18 53 01.1**	**-0.2**
YUK7	**Dusty Glacier**	**3.27**	**315**	*e*Pn	**Pn**	**18 52 56.5**	**+1.7**
YUK7				*e*Sg	**Sb**	**18 53 43.6**	**+2.1**
YUK7	**Dusty Glacier**	**3.27**	**315**	Pn	**Pn**	**18 52 56.5**	**+1.7**
YUK7				Sn	**Sb**	**18 53 43.6**	**+2.1**
YUK7				Sg	**Sg**	**18 53 49.9**	**+1.5**
PNL	**Peninsula**	**3.37**	**296**	*e*Pn	**Pn**	**18 52 55.6**	**-0.4**
PNL	**Peninsula**	**3.37**	**296**	Pn	**Pn**	**18 52 56.2**	**+0.2**
PNL				Sg	**Sb**	**18 53 47.5**	**+3.5**
YKU2	**Yakutat**	**3.44**	**293**	*e*Pn	**Pn**	**18 52 57.1**	**0.0**
YUK5	**Granite Creek**	**3.60**	**324**	*e*Pn	**Pn**	**18 53 01.4**	**+2.0**
YUK5	**Granite Creek**	**3.60**	**324**	Pn	**Pn**	**18 53 01.4**	**+2.0**
YUK6	**Outpost Mounta**	**3.63**	**319**	*e*Pn	**Pn**	**18 52 56.9**	**-3.0**
YUK6				*e*Pg	**Pb**	**18 53 07.9**	**+0.1**
YUK6	**Outpost Mounta**	**3.63**	**319**	Pn	**Pn**	**18 52 56.9**	**-3.0**
YUK6				Pg	**Pb**	**18 53 07.9**	**+0.1**
YUK6				Sg	**Sg**	**18 53 57.7**	**-2.2**
RUBB	**Prince Rupert**	**4.37**	**155**	Pn	**Pn**	**18 53 11.1**	**+1.3**
RUBB				Pg	**Pb**	**18 53 23.3**	**+3.0**
RUBB				Sg	**Sg**	**18 54 20.9**	**-2.9**
YUK3	**Moose Creek**	**4.94**	**318**	*e*Pn	**Pn**	**18 53 22.5**	**+4.7**
YUK3	**Moose Creek**	**4.94**	**318**	Pn	**Pn**	**18 53 22.5**	**+4.7**
YUK3				Sg	**Sg**	**18 54 37.3**	**-4.5**
DIB	**Dawson Inlet,**	**5.15**	**173**	*e*Pn	**Pn**	**18 53 21.7**	**+1.2**
FNBB	**Fort Nelson**	**5.49**	**80**	*e*Sn	**Sg**	**18 54 55.4**	**-4.1**
FNBB	**Fort Nelson**	**5.49**	**80**	Sg	**Sg**	**18 54 55.4**	**-4.1**
DAWY	**Dawson**	**6.45**	**336**	*e*Pn	**Pn**	**18 53 39.4**	**+1.1**
DAWY	**Dawson**	**6.45**	**336**	Sg	**Sb**	**18 55 21.1**	**+8.5**
EPYK	**Eagle Plains**	**8.23**	**351**	*e*Pn	**Pn**	**18 54 02.5**	**-0.2**
BRLK	**Bradley Lake**	**9.10**	**287**	*e*Pn	**Pn**	**18 54 11.6**	**-3.1**
PRP	**Porcupine Dome**	**9.19**	**327**	*e*P	Pn	18 54 11.1	-4.8
SKT	**Skwentna**	**9.72**	**300**	*e*Pn	**Pn**	**18 54 24.2**	**+1.0**

RSNC 30 19:06:01.7±1.1, 3.°75N×71.°13W, h12km±8km, ML3.5, Mw3.8, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUVC	**San Jose del G**	**1.91**	**231**	*e*P	Pn	19 06 32.4	-1.8
GUVC				*e*S	Sn	19 06 57.7	-0.5
GUVC				*i*		19 07 02.0	
	comp=Z,335nm,0.2s						
YOPC	**Yopal, Colombi**	**2.05**	**321**	*e*P	Pn	19 06 36.0	-0.2
YOPC				*e*S	Sn	19 07 01.2	-0.5
YOPC				*i*		19 07 09.2	
	comp=Z,301nm,0.4s						
VILC	**Villavicencio,**	**2.58**	**278**	*e*P	Pn	19 06 42.9	-0.6
VILC				*e*S	Sn	19 07 14.3	-0.7
VILC				*i*		19 07 26.1	
	comp=Z,422nm,0.6s						
CHIC	**Chingaza**	**2.74**	**289**	*e*P	Pn	19 06 44.5	-1.4
CHIC				*e*Pg	Pb	19 06 47.4	-3.5
CHIC				*e*S	Sn	19 07 16.3	-2.8
CHIC				*i*		19 07 41.7	
	comp=Z,187nm,0.6s						
TAMC	**Tame, Arauca**	**2.75**	**346**	*e*P	Pn	19 06 45.2	-0.6
TAMC				*e*S	Sn	19 07 17.6	-1.3
TAMC				*i*		19 07 45.0	
	comp=Z,96nm,0.6s						
RUSC	**La Rusia**	**2.89**	**318**	*e*P	Pn	19 06 46.6	-1.4
RUSC				*i* Pg	Pb	19 06 51.7	-1.7
RUSC				*e*S	Sn	19 07 22.1	-0.8
RUSC				*i*		19 07 40.3	
	comp=Z,68nm,0.5s						
MACC	**Macarena, Meta**	**3.15**	**240**	*e*P	Pn	19 06 53.1	+2.0
BARC	**Barichara**	**3.49**	**324**	*e*P	Pb	19 07 02.2	-1.4
PRAC	**Prado**	**3.75**	**270**	*e*P	Pn	19 06 58.4	-1.1
PRAC				*i* Pg	Pb	19 07 07.3	-0.7
PRAC				*e*S	Sn	19 07 41.8	-1.8
PRAC				*i*		19 08 05.4	
	comp=Z,64nm,0.6s						
PAMC	**Pamplona, Colo**	**3.90**	**336**	*e*P	Pb	19 07 10.5	-0.2
ORTC	**Ortega, Tolima**	**4.11**	**272**	*e*P	Pb	19 07 12.4	-1.7
MARP	**Paez Belalcaza**	**4.90**	**260**	*e*P	Pb	19 07 25.9	-1.9
OCAC	**Ocana**	**4.97**	**334**	*e*P	Pb	19 07 28.6	-0.2
FLOC	**Florencia**	**5.00**	**245**	*e*P	Pn	19 07 22.5	+5.8
FLOC				*e*S	Sb	19 08 28.3	-1.2
FLOC				*i*		19 08 46.6	
	comp=N,125nm,0.7s						

MAN 30 19:23:42.3, 7.°31N×124.°76E, h2km, mb4.7, ML3.6, MS3.4, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.52**	**260**	⇓*i* P	Pb	19 23 53.6	-0.5
CTBH				*i* S	Sb	19 24 01.9	-0.2
BUKP	**Musuan**	**0.64**	**28**	*e*P	Pg	19 23 54.5	-0.1
BUKP				*e*S	Sg	19 24 04.0	+1.2
SKMP	**Bagumbayan, Su**	**0.82**	**195**	*e*P	Pg	19 23 57.8	-0.3
SKMP				*e*S	Sg	19 24 08.1	-0.6
CGP	**Cagayan de Oro**	**1.14**	**357**	⇑*i* P	Pg	19 24 00.6	-3.6
CGP				*i* S	Sg	19 24 15.1	-3.8
GSPH	**General Santos**	**1.23**	**171**	⇑*e*P	Pn	19 24 09.2	+2.5
PAGZ	**Pagadian**	**1.47**	**291**	*e*P	Pn	19 24 08.7	-1.1
PAGZ				*e*S	Sb	19 24 28.9	-0.6
DDMP	**Don Marcelino,**	**1.53**	**142**	*e*P	Pn	19 24 09.8	-0.8
DDMP				*e*S	Sg	19 24 32.5	+1.0
MATI	**Mati**	**1.53**	**104**	*e*P	Pn	19 24 09.6	-1.1
MATI				*e*S	Sn	19 24 30.8	-0.4
BUTP	**Butuan**	**1.85**	**27**	*e*P	Pb	19 24 16.6	-0.4
BUTP				*e*S	Sb	19 24 40.4	-0.2
DCPH	**Dipolog City**	**1.88**	**312**	⇑*e*P	Pg	19 24 18.6	+0.1
DCPH				*e*S	Sg	19 24 48.2	+5.3
IPIL	**Ipil**	**2.22**	**282**	*e*P	Pn	19 24 20.9	+0.7
IPIL				*e*S	Sb	19 24 49.9	-1.4

*DDA **30** 19:51:26.7, 37.°20N×36.°69E, h8km±1km, ML2.7*
*ISK **30** 19:51:26.4, 37.°21N×36.°69E, h5km, ML2.0/7*
*ISCJB **30** 19:51:27.1±0.5, 37.°20N±0.°03×36.°67E±0.°03, h5km±4km, Error ellipse: s-maj=6.1km s-min=3.9km az=24.2*

ISC 30 19:51:26.6±1.0, 37.°20N±0.°04×36.°68E±0.°03, h15km±7km, n15, σ1§03/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.02**	**225**	*i* P	**Pg**	**19 51 28.9**	**-0.4**
KMRS	**Kahramanmaras**	**0.35**	**29**	PG	**Pg**	**19 51 33.9**	**0.0**
KMRS				SG	**Sg**	**19 51 38.7**	**-0.1**
GAZ	**Gaziantep**	**0.42**	**93**	PG	**Pg**	**19 51 34.8**	**-0.3**
ANDN	**Andirin**	**0.47**	**325**	*i* P	**Pb**	**19 51 36.5**	**-0.1**
ANDN				*i* S	**Sg**	**19 51 42.1**	**-0.2**
ANDN				IAML_P			
	comp=Z,1μm,0.1s						
KUZU	**Kuzuini**	**0.53**	**143**	*i* P	**Pb**	**19 51 37.9**	**+0.2**
KUZU				*i* S	**Sg**	**19 51 44.5**	**+0.4**
KUZU				IAML_P			
	comp=Z,2μm,0.2s						
GZT	**Gaziantep**	**0.72**	**77**	*i* P	**Pb**	**19 51 41.0**	**0.0**
GZT				*i* S	**Sb**	**19 51 52.3**	**+1.5**
KOZT	**Kozan**	**0.74**	**293**	PG	**Pg**	**19 51 40.9**	**-0.1**
KOZT				SG	**Sb**	**19 51 51.9**	**+0.7**
CEYT	**Ceyhan**	**0.77**	**256**	PG	**Pg**	**19 51 41.8**	**+0.2**
SAIM	**ADANA**	**0.91**	**329**	*i* P	**Pb**	**19 51 44.8**	**+0.5**
SAIM				*i* S	**Sg**	**19 51 56.4**	**+0.1**
SAIM				IAML_P			
	comp=Z,414nm,0.1s						
ATAB	**Bozova**	**1.31**	**78**	*i* P	**Pg**	**19 51 52.5**	**+0.5**
ATAB				*i* S	**Sn**	**19 52 09.1**	**+1.4**
AKCD	**Akcadag**	**1.47**	**42**	*i* P	**Pg**	**19 51 54.6**	**-0.3**
DARE	**Darende-Malaty**	**1.51**	**25**	PN	**Pg**	**19 51 55.2**	**-0.5**
DARE				SN	**Sg**	**19 52 15.0**	**-0.3**
SURC	**SANLIURFA_SURC**	**1.58**	**101**	*i* P	**Pg**	**19 51 56.6**	**-0.3**
SURC				*i* S	**Sn**	**19 52 10.4**	**-3.9**
URFA	**Urfa**	**1.72**	**81**	PN	**Pb**	**19 51 58.2**	**+0.2**
URFA				SN	**Sb**	**19 52 20.5**	**+1.0**
MERS	**Mersin**	**1.76**	**260**	PN	**Pb**	**19 51 58.6**	**-0.1**

IDC 30 19:57:01.6±10.0, 3.°41S×146.°76E, h0km, mb3.3/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=235.5km s-min=39.4km az=85.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.42**	**215**	P	P	20 01 39.8	-0.7
	1.6nm,0.8s,baz=40,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**23.66**	**211**	P	P	20 02 15.4	+0.5
	0.5nm,0.8s,baz=44,slow=7.3,SNR=6.0						
CMAR	**Chiang Mai Arr**	**51.85**	**297**	P	P	20 06 11.9	-0.1
	0.1nm,0.5s,baz=106,slow=5.7,SNR=4.3						

*IDC **30** 20:09:37.0±1.6, 13.°25N×87.°23W, h0km, mb3.5/4, mb1 3.8/6, mb1mx3.6/44, mbtmp3.5/6, ML2.9/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/22, Error ellipse: s-maj=53.6km s-min=19.9km az=33.0*
*ISCJB **30** 20:09:38.1±0.8, 11.°88N±0.°07×88.°32W±0.°06, h33km, mb3.5/4, MS2.9/1, Error ellipse: s-maj=11.5km s-min=6.3km az=34.8*
*SNET **30** 20:09:38.6±0.8, 12.°06N×88.°35W, h7km±8km, ML3.4*

ISC 30 20:09:39.9±1.2, 12.°02N±0.°10×88.°22W±0.°07, h33km, n18, σ1§43/19, mb3.4/4, 2C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.31**	**17**	⇑*i* P	**Pn**	**20 10 02.2**	**+0.2**
LCND	**La Caada**	**1.32**	**14**	*e*P	**Pn**	**20 10 02.0**	**-0.1**
LCND				*e*S	**Sb**	**20 10 21.2**	**+0.3**
LCND				IAML		20 10 30.3	
	comp=Z,928nm,0.4s						
PACA	**Pacayal**	**1.45**	**356**	⇑*i* P	**Pn**	**20 10 04.0**	**+0.1**
TECA	**Tecapa**	**1.49**	**350**	*e*P	**Pn**	**20 10 04.5**	**-0.1**
VICT	**Victoria**	**1.97**	**348**	*e*P	**Pn**	**20 10 11.7**	**+0.5**
VICT				IAML		20 10 18.3	
	comp=Z,289nm,0.4s						
TGUH	**Tegucigalpa,Un**	**2.23**	**24**	*e*P	**Pn**	**20 10 15.7**	**+1.1**
SBLS	**San Blas**	**2.27**	**323**	*e*P	**Pn**	**20 10 15.5**	**+0.2**
RTR	**El Retiro**	**2.33**	**324**	*e*P	**Pn**	**20 10 16.6**	**+0.4**
MTO3	**Montecristo**	**2.62**	**335**	*e*P	**Pn**	**20 10 21.0**	**+0.9**
JTS	**Las Juntas de**	**3.64**	**118**	Pn	**Pn**	**20 10 35.1**	**+1.1**
	comp=Z,1.8nm,0.3s,baz=3.5,slow=19,SNR=6.8						
JTS				Sn	**Sn**	**20 11 15.4**	**-0.4**
	comp=Z,4.1nm,0.3s,baz=0.9,slow=21,SNR=3.7						
JTS				LR	LR	20 12 27.1	
	comp=Z,121nm,21.6s,baz=278,slow=46						
APG	**El Apazote**	**3.68**	**324**	Pn	**Pn**	**20 10 34.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=135,slow=11,SNR=3.4						
APG				Lg	Lg	20 11 29.5	
	comp=Z,1.4nm,0.3s,baz=122,slow=19,SNR=5.0						
CMIG	**Matias Romero**	**8.19**	**309**	Pn	**Pn**	**20 11 38.0**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=119,slow=6.9,SNR=3.6						
CMIG				Sn	**Sn**	**20 13 08.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=180,slow=19,SNR=3.3						
TXAR	**Lajitas Array**	**22.44**	**322**	P	**P**	**20 14 35.5**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=133,slow=10.0,SNR=7.7						
LPIG	**La Paz**	**24.15**	**303**	LR	LR	20 25 33.3	
	comp=Z,40nm,19.0s,baz=324,slow=39						
PDAR	**Pinedale Array**	**35.80**	**333**	P	**P**	**20 16 32.5**	**-4.0**
	comp=Z,0.2nm,0.5s,baz=131,slow=9.7,SNR=2.4						
NVAR	**Mina Array Bea**	**37.54**	**320**	P	**P**	**20 16 51.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=135,slow=8.4,SNR=1.9						
RES	**Resolute Bay**	**62.76**	**358**	P	P	20 19 55.2	-6.4
	comp=Z,1.6nm,0.9s,baz=207,slow=2.3,SNR=2.4						
CMAR	**Chiang Mai Arr**	**148.91**	**347**	PKPbc	**PKPdf**	**20 29 24.3**	**+3.0**
	comp=Z,0.7nm,0.8s,baz=316,slow=2.5,SNR=4.8						

TRN 30 20:19:12.9, 10.°74N×62.°48W, h14km, MD3.7, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**1.09**	**112**	*e*P	Pg	20 19 34.5	+0.6
TPP				*e*S	Sn	20 19 50.5	+1.7
GRGR	**Grenville**	**1.60**	**30**	*e*P	Pn	20 19 41.0	+0.1
GRGR				*e*S	Sn	20 20 01.5	+0.1
GRHS	**Sauteurs**	**1.69**	**29**	*e*P	Pn	20 19 41.7	-0.3
GRHS				*e*S	Sn	20 20 03.7	+0.2
GRSS	**Sisters**	**1.77**	**29**	*e*P	Pn	20 19 43.7	+0.5
GRSS				*e*S	Sn	20 20 06.0	+0.5
TOSP	**Speyside**	**1.98**	**74**	*e*P	Pn	20 19 45.7	-0.5
TOSP				*e*S	Sn	20 20 11.1	+0.2
FCV	**Fort Charlotte**	**2.69**	**26**	*e*P	Pn	20 19 56.4	+0.5
FCV				*e*S	Sn	20 20 28.7	+0.5
SVB	**Belmont**	**2.79**	**25**	*e*P	Pn	20 19 57.8	+0.5
SVB				*e*S	Sn	20 20 31.3	+0.6
SVV	**Soufriere Volc**	**2.84**	**26**	*e*S	Sn	20 20 32.6	+0.5
SSV	**Crater Summit**	**2.86**	**26**	*e*S	Sn	20 20 32.4	-0.2
MCLT	**Moule a Chique**	**3.31**	**27**	*e*P	Pn	20 20 05.8	+1.4
MCLT				*e*S	Sn	20 20 42.6	-1.1
SLB	**Belfond**	**3.38**	**24**	*e*P	Pn	20 20 06.1	+0.8
SLB				*e*S	Sn	20 20 44.9	-0.4
SLPA	**Patience**	**3.45**	**26**	*e*P	Pn	20 20 07.6	+1.3
LPMF	**Morne Lapointe**	**4.09**	**21**	*e*P	Pn	20 20 15.2	+0.1
PML	**Morne Lenard**	**4.21**	**17**	*e*P	Pn	20 20 16.9	+0.1
GBMF	**Grand Be**	**4.23**	**17**	*e*P	Pn	20 20 18.6	+1.4
PCM	**Pelee Case Pet**	**4.24**	**17**	*e*P	Pn	20 20 16.8	-0.3
BAMF	**Morne Balai**	**4.25**	**18**	*e*P	Pn	20 20 18.4	+0.9

*IDC **30** 20:19:10.3±0.6, 38.°79N×20.°41E, h0km, mb3.9/15, mb1 4.0/25, mb1mx3.9/45, mbtmp3.9/25, ML3.8/8, MS2.7/3, Ms1

EVR AML AML 20 19 57.6
comp=N,6567µm,0.6s
EVR AML AML 20 20 00.3
comp=E,5194µm,0.7s
RLS Riolos of Patr 1.12 131 P **Pb** **20 19 34.6 +0.1**
RLS S **Sg** **20 19 52.4 +2.4**
RLS Riolos of Patr 1.12 131 P **Pb** **20 19 34.6 +0.1**
RLS AML AML 20 19 55.1
comp=N,5042µm,0.8s
RLS AML AML 20 19 57.1
comp=E,3398µm,0.6s
SRN Sarande 1.13 344 P **Pg** **20 19 35.0 -0.7**
SRN Sarande 1.13 344 *i* PG **Pg** **20 19 36.1 +0.4**
SRN *i* SG **Sg** **20 19 52.7 +2.2**
MEV Metsovon 1.18 33 P **Pg** **20 19 36.4 -0.3**
EFP Efpalio 1.24 107 P **Pb** **20 19 36.5 -0.1**
LAKA Lakka 1.36 113 P **Pb** **20 19 38.5 -0.1**
LAKA Lakka 1.36 113 P **Pb** **20 19 39.1 +0.5**
KPRO Kipourio 1.38 33 P **Pb** **20 19 39.2 +0.1**
KPRO Kipourio 1.38 33 P **Pg** **20 19 39.8 -0.6**
TRIZ Trizonia 1.38 107 P **Pb** **20 19 38.6 -0.4**
TRIZ Trizonia 1.38 107 P **Pb** **20 19 39.0 0.0**
KALE Kalithea 1.42 106 P **Pb** **20 19 39.4 -0.4**
KALE Kalithea 1.42 106 P **Pb** **20 19 40.3 +0.6**
KALE AML AML 20 20 07.5
comp=E,3496µm,0.9s
KALE AML AML 20 20 10.5
comp=N,3840µm,0.6s
AIG2 Aigio 1.43 112 P **Pg** **20 19 42.0 +0.7**
ALIK Aliki, Aigiali 1.45 111 P **Pb** **20 19 39.7 -0.4**
THL Klokotos Trika 1.48 58 P **Pg** **20 19 41.9 -0.3**
THL S **Sg** **20 20 03.1 +1.6**
THL Klokotos Trika 1.48 58 P **Pg** **20 19 42.0 -0.3**
PENT Pentalofos 1.51 22 P **Pg** **20 19 42.7 -0.3**
PENT AML AML 20 20 11.5
comp=N,4595µm,0.8s
PENT AML AML 20 20 16.3
comp=E,4530µm,0.7s
AGG Agios Georgios 1.53 81 P **Pb** **20 19 42.1 +0.6**
AGG S **Sg** **20 20 04.2 +1.1**
AGG Agios Georgios 1.53 81 P **Pb** **20 19 41.9 +0.4**
TPE Tepelena 1.53 349 P **Pb** **20 19 41.3 -0.2**
TPE Tepelena 1.53 349 *i* PN **Pg** **20 19 42.9 -0.4**
TPE *i* SN **Sg** **20 20 02.8 -0.4**
KLV Kalavryta, Ach 1.57 118 P **Pn** **20 19 41.3 +0.6**
KLV Kalavryta, Ach 1.57 118 P **Pb** **20 19 42.1 -0.2**
KLV AML AML 20 20 10.8
comp=N,1239µm,0.7s
KLV AML AML 20 20 18.8
comp=E,1382µm,0.8s
DLFA Delphi 1.67 100 P **Pg** **20 19 45.2 -0.9**
MES3 Kyparissia 1.84 146 P **Pg** **20 19 47.8 -1.4**
KZN Kozani 1.85 35 P **Pb** **20 19 47.0 0.0**
KZN Kozani 1.85 35 P **Pb** **20 19 47.0 0.0**
KZN AML AML 20 20 17.5
comp=N,2167µm,0.8s
KZN AML AML 20 20 18.1
comp=E,3538µm,0.6s
THAL Thalero 1.93 112 P **Pb** **20 19 48.1 -0.3**
THAL Thalero 1.93 112 P **Pb** **20 19 48.2 -0.3**
TRIP Tripoli 1.94 130 P **Pb** **20 19 48.5 -0.1**
TRIP AML AML 20 20 29.5
comp=N,1186µm,0.8s
TRIP AML AML 20 20 36.0
comp=E,2808µm,0.7s
SCTE Santa Cesarea 1.97 311 P **Pn** **20 19 46.3 +0.2**
ITM Ithomi 2.01 143 P **Pb** **20 19 49.6 -0.2**
ITM AML AML 20 20 25.3
comp=N,1017µm,0.8s
ITM AML AML 20 20 32.4
comp=E,1261µm,0.8s
PROD Prodromos 2.04 104 P **Pb** **20 19 49.5 -0.7**
PROD AML AML 20 20 27.1
comp=N,1999µm,0.8s
PROD AML AML 20 20 27.6
comp=E,1927µm,1.1s
LKR Lokris 2.04 93 P **Pb** **20 19 49.9 -0.3**
ATAL Atalanti 2.06 92 P **Pb** **20 19 50.1 -0.4**
ATAL Atalanti 2.06 92 P **Pb** **20 19 50.1 -0.4**
ATAL AML AML 20 20 26.4
comp=N,1200µm,0.7s
ATAL AML AML 20 20 29.8
comp=E,736µm,0.8s
FYTO Fytoko, Volos 2.07 72 P **Pb** **20 19 49.5 -1.3**
FYTO Fytoko, Volos 2.07 72 P **Pb** **20 19 49.7 -1.1**
FYTO AML AML 20 20 26.4
comp=N,1312µm,1.0s
FYTO AML AML 20 20 26.8
comp=E,870µm,0.7s
LIT Litokhoron 2.08 50 P **Pb** **20 19 49.9 -1.0**
LIT Litokhoron 2.08 50 P **Pb** **20 19 49.9 -1.0**
ACOR Acrocorinthos 2.14 114 P **Pb** **20 19 50.8 -1.2**
SMIA Simia 2.20 87 P **Pb** **20 19 52.0 -0.9**
SMIA Simia 2.20 87 P **Pb** **20 19 52.1 -0.9**
SMIA AML AML 20 20 19.4
comp=E,2173µm,0.7s
SMIA AML AML 20 20 29.1
comp=N,3023µm,0.6s
XOR Xorichti 2.25 74 P **Pb** **20 19 52.4 -1.4**
XOR Xorichti 2.25 74 P **Pn** **20 19 51.9 +1.8**
NEO Neokhori 2.26 76 P **Pb** **20 19 52.4 -1.6**
VIL2 Platees 2.33 104 P **Pb** **20 19 54.4 -0.8**
VIL2 AML AML 20 20 40.8
comp=N,1871µm,0.7s
VIL2 AML AML 20 20 41.0
comp=E,2628µm,0.8s
OHR Ohrid 2.34 7 *i* Pn **Pb** **20 19 54.0 -1.3**
SKIA Skiathos 2.42 80 P **Pb** **20 19 54.6 -2.1**
EPID Epidavros 2.45 118 P **Pn** **20 19 54.8 +2.1**
MRKA Markates 2.50 91 P **Pb** **20 19 56.1 -1.9**
MRKA Markates 2.50 91 P **Pb** **20 19 56.1 -1.9**
DYR Agios Nikonas 2.54 142 P **Pb** **20 19 57.6 -1.2**
TIR Tirane 2.58 351 *e*Pn **Pn** **20 19 55.8 +1.2**
TIR *e*Sn **Sn** **20 20 25.4 -0.1**
TIR Tirane 2.58 351 *e*Pn **Pn** **20 19 55.8 +1.2**
TIR Tirane 2.58 351 ⇑*i*P **Pn** **20 19 56.3 +1.7**
TIR Tirane 2.58 351 S **Sn** **20 20 27.6 +2.1**
TIR Tirane 2.58 351 *e*P **Pn** **20 19 55.8 +1.2**
TIR Tirane 2.58 351 *i* PN **Pn** **20 19 56.2 +1.6**
TIR *i* SN **Sg** **20 20 38.2 +1.4**
KRND KRANIDI 2.59 122 P **Pn** **20 19 56.1 +1.5**
ATH Athens Observa 2.73 106 P **Pn** **20 19 59.2 +2.6**
ATHU Athens Univers 2.79 106 P **Pn** **20 19 59.7 +2.3**
EREA Eretria 2.79 97 P **Pb** **20 20 00.5 -2.6**
PTL Penteli 2.82 104 P **Pn** **20 20 00.5 +2.6**
PTL Penteli 2.82 104 P **Pn** **20 20 00.5 +2.6**
VLY Voula,Athens 2.83 108 P **Pn** **20 20 00.1 +2.1**
VLY Voula,Athens 2.83 108 P **Pn** **20 20 00.1 +2.1**
TIP Timpagrande 2.86 279 *e*Pn **Pn** **20 19 58.4 -0.1**
TIP Timpagrande 2.86 279 P **Pn** **20 19 58.9 +0.4**
TIP Timpagrande 2.86 279 ⇑*i*P **Pn** **20 19 59.1 +0.6**
TIP Timpagrande 2.86 279 S **Sn** **20 20 34.3 +1.8**
TIP Timpagrande 2.86 279 P **Pn** **20 19 59.0 +0.6**
PHP Peshkopia 2.89 1 P **Pn** **20 20 00.5 +1.6**
VLI Veliai 2.89 135 P **Pb** **20 20 02.2 -2.5**
CGL1 Ceglie Messapi 2.92 310 *e*Pn **Pn** **20 19 59.4 +0.2**
TAR1 Taranto 2.96 307 *e*Pn **Pn** **20 20 00.4 +0.6**
TAR1 Sn **Sg** **20 20 54.6 +5.7**
VAY Valandovo 3.03 33 *e*Pn **Pn** **20 20 01.8 +1.1**
VAY *e*Sn **Sn** **20 20 38.4 +2.0**
VAY Valandovo 3.03 33 P **Pn** **20 20 01.9 +1.3**
VAY Valandovo 3.03 33 *i* Pn **Pn** **20 20 02.0 +1.3**
SOH Sokhos 3.05 47 P **Pn** **20 20 03.2 +2.2**
FASA Fasano 3.09 312 *e*Pn **Pn** **20 20 02.1 +0.5**
FASA Sn **Sg** **20 20 58.3 +5.1**
MASS Massafra 3.11 307 *e*Pn **Pn** **20 20 01.8 0.0**
STIP Stip 3.21 25 *i* Pn **Pn** **20 20 06.2 +3.0**
NOCI Noci 3.25 309 P **Pn** **20 20 04.4 +0.6**
SKO Skopje 3.27 14 *e*Pn **Pn** **20 20 05.6 +1.5**
SKO *e*Sn **Sn** **20 20 42.4 -0.1**
SKO Skopje 3.27 14 *i* Pn **Pn** **20 20 05.4 +1.3**
ULC Ulcinj 3.29 345 ⇓*i*Pn **Pn** **20 20 04.7 +0.4**
ULC *e*Sn **Sn** **20 20 45.5 +2.6**
MATE Matera 3.40 304 ⇑*i*P **Pn** **20 20 07.2 +1.4**
DRME Dracevica, Mon 3.51 345 ⇑*i*Pn **Pn** **20 20 08.1 +0.7**
DRME *e*Sn **Sn** **20 20 50.6 +2.2**
DRME Dracevica, Mon 3.51 345 *e*Pn **Pn** **20 20 07.4 0.0**
SG1 Sgolgore (BA) 3.52 307 *e*Pn **Pn** **20 20 09.1 +1.6**
SG1 Sn **Sg** **20 21 13.1 +6.3**
BAI Bari 3.56 312 *e*Pn **Pn** **20 20 08.5 +0.6**
BAI Sn **Sg** **20 21 09.1 +1.1**
CEL Celeste 3.57 263 *e*Pn **Pn** **20 20 08.2 0.0**

SERI Serifos 3.62 115 P **Pn** **20 20 11.3 +2.4**
BUM Brajici-Budva 3.69 342 ⇓*i*Pn **Pn** **20 20 09.6 -0.2**
BUM *e*Sn **Sn** **20 20 54.0 +1.2**
PDG Podgorica 3.74 347 *e*Pn **Pn** **20 20 10.4 0.0**
PDG *e*Sn **Sn** **20 20 52.8 -1.1**
PDG Podgorica 3.74 347 ⇓*i*P **Pn** **20 20 10.3 -0.1**
PDG Podgorica 3.74 347 S **Sn** **20 20 52.8 -1.1**
PDG Podgorica 3.74 347 *e*Pn **Pn** **20 20 09.7 -0.7**
TTG Podgorica 3.74 347 ⇓*i*Pn **Pn** **20 20 11.2 +0.8**
TTG *e*Sn **Sn** **20 20 55.8 +1.9**
TTG Podgorica 3.74 347 *e*Pn **Pn** **20 20 10.4 0.0**
TTG Podgorica 3.74 347 *e*P **Pn** **20 20 10.4 -0.1**
THAS Thassos island 3.79 60 P **Pn** **20 20 12.7 +1.5**
PVY Plav 3.81 355 ⇓*i*Pn **Pn** **20 20 13.2 +1.6**
PVY *e*Sn **Sn** **20 20 57.9 +1.9**
CEME Cevo 3.92 344 ⇑*i*Pn **Pn** **20 20 12.6 -0.4**
CEME *e*Sn **Sn** **20 20 59.4 +1.0**
HCY Herceg Novi 3.93 339 ⇑*i*Pn **Pn** **20 20 12.3 -0.8**
HCY *e*Sn **Sn** **20 20 59.3 +0.7**
HCY Herceg Novi 3.93 339 *e*Pn **Pn** **20 20 11.1 -2.0**
IVA Berane 4.09 355 ⇑*i*Pn **Pn** **20 20 16.8 +1.4**
IVA *e*Sn **Sn** **20 21 04.2 +1.4**
KOME Kolasin 4.11 351 ⇓*i*Pn **Pn** **20 20 16.8 +1.2**
KOME *e*Sn **Sn** **20 21 04.7 +1.5**
NKME Niksic 4.12 345 *e*Pn **Pn** **20 20 16.9 +1.2**
NKME *e*Sn **Sn** **20 21 04.8 +1.4**
NKY Niksic 4.16 346 ⇓*i*Pn **Pn** **20 20 16.7 +0.4**
NKY *e*Sn **Sn** **20 21 05.9 +1.5**
BARS Barje 4.16 15 *e*Pn **Pn** **20 20 17.2 +0.9**
BARS *e*Sn **Sn** **20 21 02.8 -1.6**
TREB Trebinje 4.22 339 *e*Pn **Pn** **20 20 15.8 -1.3**
TREB *e*Sn **Sn** **20 21 01.8 -4.0**
TREB Trebinje 4.22 339 *e*Pn **Pn** **20 20 15.7 -1.3**
BRY Bratogost 4.34 342 ⇓*i*Pn **Pn** **20 20 19.7 +0.8**
BRY *e*Sn **Sn** **20 21 10.3 +1.3**
BRY Bratogost 4.34 342 *e*Pn **Pn** **20 20 17.1 -1.8**
VTS Vitosha 4.39 29 *e*Pn **Pn** **20 20 21.1 +1.6**
VTS Vitosha 4.39 29 *e*Pn **Pn** **20 20 20.8 +1.2**
VTS Vitosha 4.39 29 ⇑*i*P **Pn** **20 20 20.7 +1.2**
VTS Vitosha 4.39 29 *e*P **Pn** **20 20 20.8 +1.2**
APE Apeiranthos 4.41 111 ⇓*i*P **Pn** **20 20 23.0 +3.2**
APE Apeiranthos 4.41 111 S **Sn** **20 21 17.0 +6.4**
APE Apeiranthos 4.41 111 ⇓*i*P **Pn** **20 20 22.9 +3.2**
SELS Selova 4.46 7 *e*Pn **Pn** **20 20 20.5 +0.1**
SJES Sjenica 4.47 356 *e*Pn **Pn** **20 20 21.5 +0.8**
UPM Unac-Piva 4.55 346 ⇑*i*Pn **Pn** **20 20 23.1 +1.3**
UPM *e*Sn **Sn** **20 21 15.4 +1.2**
UPM Unac-Piva 4.55 346 *e*Pn **Pn** **20 20 23.8 +2.0**
STON Ston 4.56 334 *e*Pn **Pn** **20 20 20.8 -0.9**
STON *e*Sn **Sn** **20 21 10.8 -3.4**
STON Ston 4.56 334 *i* Pn **Pn** **20 20 20.8 -0.9**
STON Sn **Sn** **20 21 08.9 -5.3**
STON Ston 4.56 334 *e*Pn **Pn** **20 20 19.4 -2.3**
PLE Pljevlja 4.60 351 ⇓*i*Pn **Pn** **20 20 24.1 +1.7**
PLE *e*Sn **Sn** **20 21 15.8 +0.5**
PLD Plovdiv 4.66 43 *e*Pn **Pn** **20 20 25.5 +2.3**
EZN Ezine 4.71 76 ⇑*i*P **Pn** **20 20 26.5 +2.7**
IVAS Ivanjica 4.78 358 *e*Pn **Pn** **20 20 25.0 +0.1**
ZAPS Zavoj 4.79 20 *e*Pn **Pn** **20 20 26.8 +1.9**
VAE Valguarnera 4.90 256 Pn **Pn** **20 20 25.9 -0.6**
comp=E,0.6nm,0.3s,baz=108,slow=20,SNR=3.2
VAE Sn **Sn** **20 21 24.4 +1.7**
comp=E,2.8nm,0.3s,baz=108,slow=20,SNR=2.6
BOVS Bovan 4.94 11 *e*Pn **Pn** **20 20 27.0 +0.1**
IDI Anoyia 5.01 133 Pn **Pn** **20 20 26.5 -1.6**
comp=E,1.5nm,0.3s,baz=278,slow=7.1,SNR=14
IDI Sn **Sn** **20 21 24.1 -1.4**
comp=E,3.7nm,0.3s,baz=270,slow=19,SNR=3.1
GRUS Gruza 5.10 3 *e*Pn **Pn** **20 20 29.8 +0.7**
BBLS Lazići 5.12 352 *e*Pn **Pn** **20 20 30.4 +0.8**
BBLS Lazići 5.12 352 *e*Pn **Pn** **20 20 29.2 -0.4**
DIVS Divibare 5.31 357 *e*Pn **Pn** **20 20 32.0 -0.1**
DIVS Divibare 5.31 357 *e*Pn **Pn** **20 20 31.3 -0.8**
HAPS Han Pijesak,BI 5.40 349 *e*Pn **Pn** **20 20 32.4 -1.0**
HAPS *e*Sn **Sn** **20 21 31.9 -3.2**
HAPS Han Pijesak,BI 5.40 349 *e*Pn **Pn** **20 20 31.9 -1.5**
TRUS Trudelj 5.43 0 *e*Pn **Pn** **20 20 33.6 -0.1**
WDD Wied Dalam 5.53 240 *e*Pn **Pn** **20 20 33.3 -1.8**
TEKS Tekeris 5.79 354 *e*Pn **Pn** **20 20 38.4 -0.3**
TEKS Tekeris 5.79 354 *e*Pn **Pn** **20 20 38.3 -0.4**
BALB Balikesir 5.87 79 *e*Pn **Pn** **20 20 43.5 +3.7**
FRGS Fruska Gora 6.38 356 *e*Pn **Pn** **20 20 46.1 -0.6**
FRGS *e*Sn **Sn** **20 21 54.0 -5.0**
FRGS Fruska Gora 6.38 356 *e*Pn **Pn** **20 20 45.9 -0.8**
AQU L'Aquila 6.40 306 *e*Pn **Pn** **20 20 48.8 +1.7**
AQU L'Aquila 6.40 306 *e*P **Pn** **20 20 48.8 +1.7**
AQU L'Aquila 6.40 306 *e*Pn **Pn** **20 20 49.2 +2.1**
BLY Banja Luka 6.42 339 S **Sn** **20 21 59.7 -0.3**
BLY Banja Luka 6.42 339 *e*Pn **Pn** **20 20 46.2 -1.1**
UDBI Udbina 6.70 330 *i* Pn **Pn** **20 20 51.7 +0.6**
GZR Gura Zlata 6.83 14 ⇓*i*P **Pn** **20 20 53.4 +0.4**
GZR Gura Zlata 6.83 14 S **Sn** **20 22 08.0 -2.2**
BZS Buzias 6.88 7 ⇑*i*P **Pn** **20 20 53.4 -0.2**
NVLJ Novalja 7.09 326 *i* Pn **Pn** **20 20 56.1 -0.4**
LOT Lotru 7.11 20 ⇑*i*P **Pn** **20 20 57.4 +0.6**
LOT Lotru 7.11 20 S **Sn** **20 22 17.9 +0.8**
VOIR 7.49 26 ⇑*i*P **Pn** **20 21 04.3 +2.3**
MORH Mrgy, Hungar 7.53 351 *e*Pn **Pn** **20 20 58.6 -3.9**
MLR Muntele Rosu 7.86 30 Pn **Pn** **20 21 07.7 +0.6**
comp=E,0.3nm,0.3s,baz=151,slow=19,SNR=2.5
MLR Muntele Rosu 7.86 30 ⇓*i*P **Pn** **20 21 08.8 +1.6**
RIY Rijeka 7.87 328 *e*Pn **Pn** **20 21 06.3 -0.9**
CRES Cresnjev 7.92 334 *e*Pn **Pn** **20 21 05.7 -2.2**
ISP Isparta 8.02 94 ⇑*i*P **Pn** **20 21 13.5 +4.1**
DOPR Dopca 8.06 26 ⇑*i*P **Pn** **20 21 11.7 +1.8**
DRGR 8.17 11 ⇓*i*P **Pn** **20 21 12.8 +1.4**
DRGR 8.17 11 S **Sn** **20 22 40.1 -3.2**
CEY Cerknica 8.23 329 *e*Pn **Pn** **20 21 11.6 -0.6**
PLOR Plostina 8.44 31 ⇑*i*P **Pn** **20 21 16.1 +1.1**
LJU Ljubljana 8.44 331 *e*Pn **Pn** **20 21 13.5 -1.6**
VRI Vrincioaia 8.48 32 ⇓*i*P **Pn** **20 21 18.7 +3.1**
SOKA Soboth 8.81 335 *e*Pn **Pn** **20 21 18.9 -1.3**
comp=E,1.2nm,0.3s
SOKA *e*Sn **Sn** **20 22 54.0 -5.0**
comp=E,8.5nm,0.8s
OBKA Obir 8.83 333 *e*Pn **Pn** **20 21 21.3 +0.9**
comp=E,1.1nm,0.2s
OBKA Sn **Sn** **20 22 54.6 -4.8**
comp=E,9.4nm,0.5s
PSZ Piszkesteto 9.13 358 ⇓*i*P **Pn** **20 21 25.5 +1.0**
PSZ Piszkesteto 9.13 358 S **Sn** **20 23 02.5 -4.3**
ARSA Arzberg 9.17 339 *e*Pn **Pn** **20 21 25.1 +0.1**
comp=E,0.4nm,0.2s
MYKA Terra Mystica 9.27 330 Sn **Sn** **20 23 05.4 -4.9**
comp=E,1.9nm,0.4s
KBA Koelnbreinsper 9.76 330 *e*Pn **Pn** **20 21 33.1 -0.2**
comp=E,1.1nm,0.4s
KBA *e*Sn **Sn** **20 23 15.9 -6.5**
comp=E,1.5nm,0.3s
ABTA Abfaltersbach 9.83 326 Pn **Pn** **20 21 33.5 -0.7**
comp=E,0.8nm,0.2s
ABTA Sn **Sn** **20 23 19.0 -5.0**
comp=E,3.4nm,0.4s
MOA Molln 10.09 336 *e*Pn **Pn** **20 21 38.2 +0.6**
comp=E,1.4nm,0.3s
MOA *e*Sn **Sn** **20 23 27.0 -3.3**
comp=E,2.4nm,0.5s
BR101 Keskin Array S 10.31 81 *e*Pn **Pn** **20 21 41.9 +1.0**
BRTR Keskin Array B 10.31 81 Pn **Pn** **20 21 41.9 +1.0**
comp=E,0.3nm,0.3s,baz=260,slow=12,SNR=10
WTTA Wattenberg 10.61 326 *e*Pn **Pn** **20 21 44.7 -0.2**
comp=E,1.9nm,0.4s
WTTA *e*Sn **Sn** **20 23 39.8 -3.5**
comp=E,6.9nm,0.6s
WATA Walderalm 10.70 326 *e*Pn **Pn** **20 21 45.9 -0.2**
comp=E,1.3nm,0.2s,SNR=5.1
SQTA Sankt Quirin 10.77 324 *e*Pn **Pn** **20 21 47.9 +0.8**
comp=E,0.7nm,0.3s
SQTA Sn **Sn** **20 23 43.4 -3.7**
comp=E,4.7nm,0.4s
FUORN Ofenpass-Fuorn 10.80 320 *e*Pn **Pn** **20 21 48.3 +0.8**
FETA Feichten 10.85 322 Pn **Pn** **20 21 49.1 +0.9**
comp=E,1.2nm,0.6s
FETA *e*Sn **Sn** **20 23 47.7 -1.4**
comp=E,2.6nm,0.6s
MOTA Moosalm 10.91 325 *e*Pn **Pn** **20 21 49.5 +0.5**
comp=E,1.9nm,0.5s,SNR=7.2
DAVOX Davos/Dischmat 11.10 319 Pn **Pn** **20 21 51.6 0.0**
comp=E,0.3nm,0.3s,baz=162,slow=19,SNR=3.8
DAVOX Sn **Sn** **20 23 48.9 -6.4**
comp=E,0.4nm,0.3s,baz=205,slow=19,SNR=3.1
GEC2 GERESS Array S 11.15 337 *e*Pn **Pn** **20 21 51.0 -1.2**

GEC2 GERESS Array S 11.15 337 *e*P **Pn** **20 21 51.0 -1.2**
GERES GERESS Array B 11.15 337 Pn **Pn** **20 21 51.0 -1.2**
comp=E,0.2nm,0.3s,baz=156,slow=13,SNR=8.4
GERES Sn **Sn** **20 23 48.1 -8.1**
comp=E,0.4nm,0.3s,baz=151,slow=22,SNR=5.0
GERES LR LR 20 26 31.1
comp=E,21nm,18.4s,baz=180,slow=40
GERES GERESS Array B 11.15 337 *e*P **Pn** **20 21 51.5 -0.7**
KHC Kasperske Hory 11.44 337 *e*P **Pn** **20 21 53.9 -2.2**
KHC *e* 20 23 58.2
KHC Kasperske Hory 11.44 337 *e*PN **Pn** **20 21 53.9 -2.2**
KHC *e*SN **Sn** **20 23 58.2 -5.1**
DAVA Damuels 11.45 321 Sn **Sn** **20 23 57.8 -6.0**
comp=E,6.1nm,0.4s
SENIN Lac Senin/Sane 12.25 312 *e*Pn **Pn** **20 22 08.5 +1.1**
MMAI Mount Meron Ar 13.46 111 Pn **Pn** **20 22 21.8 -1.9**
comp=E,1.0nm,0.3s,baz=323,slow=11,SNR=6.5
CLL Collm 13.55 340 *es*PP **P** **20 22 38.0 +4.1**
ANN Anapa 14.04 59 *e*P **Pn** **20 22 28.1 -3.6**
ANN *e*S **Sn** **20 25 03.8 -3.1**
ANN pmax pmax
comp=Z,16nm,1.1s
NEY Neytrino 17.41 68 ⇓*e*P **P** **20 23 20.5 +3.5**
NEY pmax pmax
comp=Z,2.0nm,0.8s
KIV Kislovodsk 17.49 66 *e*P **P** **20 23 19.2 +1.5**
KIV pmax pmax
comp=Z,19nm,1.1s
KBZ Khabaz 17.60 67 P **Pn** **20 23 18.1 +0.1**
comp=Z,0.2nm,0.3s,baz=278,slow=9.1,SNR=9.0
NCK Nalchik 18.07 68 ⇓*e*P **P** **20 23 26.9 +2.8**
NCK pmax pmax
comp=Z,5.0nm,0.5s
GNI Garni 18.83 78 P **Pn** **20 23 33.4 +0.2**
comp=Z,0.9nm,0.3s,baz=306,slow=1.7,SNR=4.7
GNI LR LR 20 32 11.9
comp=Z,46nm,19.1s,baz=258,slow=42
GNI Garni 18.83 78 ⇓*e*P **Pn** **20 23 35.7 +2.5**
GNI pmax pmax
comp=Z,12nm,0.6s
ESDC Sonseca Array 18.88 280 P **P** **20 23 31.8 -1.2**
comp=Z,0.3nm,0.3s,baz=74,slow=11,SNR=14
ESDC LR LR 20 30 35.0
comp=Z,19nm,20.8s,baz=140,slow=36
PAB San Pablo 19.19 280 *e*P **Pn** **20 23 38.1 +0.7**
comp=Z,4.7nm,0.7s
PAB San Pablo 19.19 280 *e*P **Pn** **20 23 38.1 +0.7**
PAB pmax pmax
comp=Z,5.0nm,0.7s
OBN Obninsk 19.63 28 *e*P **P** **20 23 38.5 -2.5**
OBN pmax pmax
comp=Z,4.0nm,0.6s
VSU Vasula 20.11 10 ⇓*e*P **P** **20 23 45.4 -0.8**
VSU pmax pmax
comp=Z,27nm,0.6s
AKT Akhty 21.04 74 *e*P **P** **20 23 57.4 +0.8**
AKT *e* 20 24 18.5
AKT pmax pmax
comp=Z,6.0nm,0.6s
MDT Midelt 21.11 261 P **P** **20 23 56.9 -0.5**
comp=Z,2.5nm,0.9s,baz=341,slow=3.7,SNR=4.5
HFS Hagfors 21.78 351 P **P** **20 24 04.3 +0.1**
comp=Z,4.4nm,0.5s,baz=168,slow=10,SNR=23
EKA Eskdalemuir Ar 22.87 324 P **P** **20 24 15.7 -0.2**
comp=Z,4.6nm,0.9s,baz=124,slow=12,SNR=7.8
FIA0 FINESS Array S 22.95 7 *e*P **P** **20 24 14.9 -1.8**
FIA0 *e*PcP **PcP** **20 28 06.0 -0.2**
FIA0 FINESS Array S 22.95 7 *e*P **P** **20 24 14.9 -1.8**
FIA0 *e* 20 28 06.0
FINES FINESS Array B 22.95 7 P **P** **20 24 14.9 -1.8**
comp=Z,2.7nm,0.7s,baz=177,slow=7.1,SNR=15
FINES PcP **PcP** **20 28 06.0 -0.2**
comp=Z,1.0nm,0.8s,baz=231,slow=1.2,SNR=4.7
NB2 NORSAR Subarra 23.00 349 P **P** **20 24 18.7 +1.5**
comp=Z,1.7nm,0.7s,baz=160,slow=9.3
NB200 NORSAR Array S 23.00 349 *e*P **P** **20 24 15.9 -1.3**
NOA NORSAR Array B 23.00 349 P **P** **20 24 15.9 -1.3**
comp=Z,0.4nm,0.7s,baz=166,slow=10,SNR=9.9
PRGR Permogore 27.65 26 *e*P **P** **20 24 58.1 -1.9**
PRGR pmax pmax
comp=Z,6.0nm,0.7s
AKTO Aktyubinsk 28.89 54 P **P** **20 25 09.5 -1.8**
comp=Z,0.7nm,0.5s,baz=232,slow=17,SNR=3.8
GEYT Alibeck 29.46 80 P **P** **20 25 16.4 0.0**
comp=Z,3.0nm,0.5s,baz=270,slow=8.9,SNR=14
TOA1 Torodi Ar. Sit 30.45 218 *e*P **P** **20 25 25.7 +0.4**
TORD Torodi Ar. Bea 30.45 218 P **P** **20 25 25.7 +0.3**
comp=Z,6.8nm,0.4s,baz=31,slow=9.0,SNR=6.4
ARU Arti 30.67 42 P **P** **20 25 26.3 -0.6**
comp=Z,0.5nm,0.5s,baz=287,slow=9.0,SNR=3.9
ARU Arti 30.67 42 *d i*P **P** **20 25 27.4 +0.5**
ARU S **S** **20 30 31.2 +2.9**
ARU SS **SnSn** **20 32 02.6 -3.5**
ARU pmax pmax
comp=Z,6.0nm,1.9s
ARA0 ARCESS Array S 30.93 3 *e*P **P** **20 25 30.1 +1.1**
ARCES ARCESS Array B 30.93 3 P **P** **20 25 30.1 +1.1**
comp=Z,1.8nm,0.8s,baz=191,slow=9.9,SNR=7.0
BRVK Borovoye 36.74 51 *e*P **P** **20 26 19.7 0.0**
comp=Z,3.3nm,0.8s
BRVK Borovoye 36.74 51 *c i*P **P** **20 26 19.4 -0.3**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
KK31 Karatay Array 37.64 67 *e*P **P** **20 26 27.6 +0.1**
comp=Z,2.4nm,0.7s
KK31 Karatay Array 37.64 67 *e*P **P** **20 26 27.6 +0.1**
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 37.64 67 *e*P **P** **20 26 27.6 +0.1**
comp=Z,2.4nm,0.7s
KKAR Karatay Array 37.64 67 *e*P **P** **20 26 27.6 +0.1**
KKAR pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 39.28 222 P **P** **20 26 40.3 -1.1**
comp=Z,2.5nm,0.8s,baz=15,slow=20,SNR=3.0
KURK Kurchatov 41.99 54 *e*P **P** **20 27 03.1 -0.4**
comp=Z,1.7nm,0.6s
KURK Kurchatov 41.99 54 ⇓*i*P **P** **20 27 03.1 -0.4**
KURK pmax pmax
comp=Z,7.0nm,2.5s
MAKZ Makanchi 44.85 59 *e*P **P** **20 27 24.6 -2.0**
comp=Z,1.8nm,1.0s
MAKZ Makanchi 44.85 59 *e*P **P** **20 27 24.7 -2.0**
MKAR Makanchi Array 45.06 59 P **P** **20 27 27.6 -0.8**
comp=Z,2.1nm,0.5s,baz=273,slow=7.5,SNR=41
ZAA1 Zalesovo Array 45.35 49 *e*P **P** **20 27 29.9 -0.6**
ZAA1 *e*PcP **PcP** **20 29 09.6 -0.2**
ZALV Zalesovo Beam 45.36 49 P **P** **20 27 29.9 -0.6**
comp=Z,3.7nm,0.6s,baz=273,slow=8.7,SNR=17
ZALV PcP **PcP** **20 29 09.6 -0.2**
comp=Z,0.4nm,0.5s,baz=211,slow=2.5,SNR=1.8
SONA0 Songino Array 60.14 51 *e*P **P** **20 29 19.3 -0.9**
SONM Songino Array 60.14 51 P **P** **20 29 19.3 -0.9**
comp=Z,0.9nm,0.7s,baz=264,slow=7.5,SNR=5.4
CMAR Chiang Mai Arr 69.90 82 *c e*P **P** **20 30 22.5 -1.3**
comp=Z,0.5nm,0.7s,baz=303,slow=7.6,SNR=4.2
CMAR Chiang Mai Arr 69.90 82 *c e*P **P** **20 30 26.3 +2.5**
NKL Nikolayevsk 74.89 33 *e*P **P** **20 30 51.4 -1.6**
NKL *e* 20 31 09.6
NKL *e* 20 33 44.0
NKL *e*S **S** **20 40 30.6 +1.6**
NKL *e* 20 41 04.3
NKL *e*SS **SS** **20 45 19.7 +3.6**
NKL pmax pmax
comp=Z,11nm,1.8s
NKL pmax pmax
comp=N,8.0nm,0.9s
NKL pmax pmax
comp=E,6.0nm,1.5s
NKL pmax pmax
comp=Z,32nm,1.7s
KSRS Korea Array 79.02 51 P **P** **20 31 16.2 -0.3**
comp=Z,0.8nm,0.6s,baz=326,slow=4.6,SNR=5.3
ASAR Alice Springs 122.33 96 PKP **PKPdf** **20 38 07.0 -0.9**
comp=Z,0.4nm,0.8s,baz=299,slow=1.4,SNR=3.1

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*THE **30** 20:42:01.2, 38°.76N×23°.34E, h13^{km}±1^{km}, ML2.1/11, Error ellipse: s-maj=1.2km s-min=0.3km az=324.0*

ATH 30 20:42:01.2, 38°.76N×23°.33E, h14^{km}±2^{km}, ML2.1/8, Error ellipse: s-maj=2.7km s-min=0.7km az=352.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIA	**Simia**	**0.16**	**321**	P	Pg	20 42 05.2	+0.1
SMIA				S	Sg	20 42 07.4	-0.4

SMIA	**Simia**	**0.16 321**	P	Pg	20 42 05.2	+0.1
SMIA			S	Sg	20 42 07.4	-0.4
SMIA			AML	AML	20 42 09.3	
	comp=N,3282μm,0.3s					
SMIA			AML	AML	20 42 11.1	
	comp=E,4404μm,0.6s					
MRKA	**Markates**	**0.20 105**	P	Pg	20 42 05.6	-0.3
MRKA			S	Sg	20 42 08.8	-0.2
MRKA	**Markates**	**0.20 105**	P	Pg	20 42 05.6	-0.3
MRKA			S	Sg	20 42 09.1	+0.1
MRKA			AML	AML	20 42 09.3	
	comp=N,1390μm,0.2s					
MRKA			AML	AML	20 42 09.7	
	comp=E,1667μm,0.1s					
ATAL	**Atalanti**	**0.25 255**	P	Pg	20 42 06.8	+0.1
ATAL			S	Sg	20 42 10.7	+0.4
ATAL	**Atalanti**	**0.25 255**	P	Pg	20 42 06.8	+0.1
ATAL			S	Sg	20 42 10.9	+0.6
ATAL			AML	AML	20 42 11.2	
	comp=N,308μm,0.2s					
ATAL			AML	AML	20 42 12.2	
	comp=E,321μm,0.2s					
LKR	**Lokris**	**0.28 248**	P	Pg	20 42 07.2	0.0
LKR			S	Sg	20 42 11.6	+0.4
LKR	**Lokris**	**0.28 248**	P	Pg	20 42 07.2	+0.1
LKR			S	Sb	20 42 12.0	-0.7
LKR			AML	AML	20 42 12.6	
	comp=N,510μm,0.2s					
LKR			AML	AML	20 42 16.0	
	comp=E,389μm,0.2s					
LKR	**Lokris**	**0.28 248**	P	Pg	20 42 07.3	+0.1
LKR			S	Sb	20 42 12.0	-0.7
LKR			AML	AML	20 42 13.2	
	comp=E,377μm,0.1s					
LKR			AML	AML	20 42 13.5	
	comp=N,417μm,0.2s					
SKIA	**Skiathos**	**0.42 14**	P	Pg	20 42 09.7	0.0
SKIA			S	Sg	20 42 15.4	0.0
SKIA	**Skiathos**	**0.42 14**	P	Pg	20 42 09.7	0.0
SKIA			S	Sg	20 42 15.4	0.0
SKIA			AML	AML	20 42 15.8	
	comp=E,1252μm,0.3s					
SKIA			AML	AML	20 42 16.8	
	comp=N,905μm,0.3s					
VIL2	**Platees**	**0.55 185**	P	Pb	20 42 12.5	-0.1
NEO	**Neokhori**	**0.56 351**	P	Pg	20 42 12.0	-0.2
NEO			S	Sg	20 42 19.9	+0.3
NEO	**Neokhori**	**0.56 351**	P	Pg	20 42 12.0	-0.2
NEO			S	Sb	20 42 20.2	-0.4
NEO			AML	AML	20 42 22.1	
	comp=E,737μm,0.2s					
NEO			AML	AML	20 42 23.4	
	comp=N,1102μm,0.4s					
NEO	**Neokhori**	**0.56 351**	P	Pg	20 42 12.0	-0.2
NEO			S	Sb	20 42 20.3	-0.3
NEO			AML	AML	20 42 22.1	
	comp=E,737μm,0.2s					
NEO			AML	AML	20 42 23.4	
	comp=N,1102μm,0.4s					
EREA	**Eretria**	**0.58 126**	P	Pg	20 42 12.4	-0.2
EREA			S	Sb	20 42 20.9	-0.3
EREA	**Eretria**	**0.58 126**	P	Pg	20 42 12.4	-0.2
EREA			S	Sb	20 42 21.1	-0.1
EREA			AML	AML	20 42 22.1	
	comp=E,797μm,0.4s					
EREA			AML	AML	20 42 23.1	
	comp=N,402μm,0.3s					
VILL	**Villia**	**0.59 182**	P	Pg	20 42 12.5	-0.4
VILL			S	Sb	20 42 21.5	-0.2
PROD	**Prodromos**	**0.60 214**	P	Pg	20 42 12.7	-0.3
PROD			AML	AML	20 42 26.5	
	comp=N,410μm,0.3s					
PROD			AML	AML	20 42 26.9	
	comp=E,332μm,0.2s					
XOR	**Xorichti**	**0.62 350**	P	Pg	20 42 13.1	-0.2
XOR			S	Sg	20 42 21.2	-0.4
XOR	**Xorichti**	**0.62 350**	P	Pg	20 42 13.0	-0.3
XOR			S	Sg	20 42 20.8	-0.8
XOR	**Xorichti**	**0.62 350**	P	Pg	20 42 13.1	-0.2
FYTO	**Fytoko, Volos**	**0.72 335**	P	Pg	20 42 15.0	-0.2
PTL	**Penteli**	**0.82 149**	P	Pg	20 42 16.7	-0.5
PTL			S	Sb	20 42 28.5	+0.3
PTL	**Penteli**	**0.82 149**	P	Pg	20 42 16.9	-0.2
PTL	**Penteli**	**0.82 149**	P	Pg	20 42 16.8	-0.3
AGG	**Agios Georgios**	**0.83 289**	P	Pg	20 42 16.7	-0.6
AGG			S	Sb	20 42 29.0	+0.6
AGG	**Agios Georgios**	**0.83 289**	P	Pg	20 42 16.7	-0.6
AGG	**Agios Georgios**	**0.83 289**	P	Pg	20 42 16.8	-0.5
ATH	**Athens Observa**	**0.84 159**	P	Pb	20 42 17.6	0.0
ATH	**Athens Observa**	**0.84 159**	P	Pb	20 42 17.7	+0.1
ATHU	**Athens Univers**	**0.87 156**	P	Pg	20 42 17.8	-0.2
ATHU	**Athens Univers**	**0.87 156**	P	Pg	20 42 17.8	-0.2
ACOR	**Acrocorinthos**	**0.94 203**	P	Pb	20 42 18.8	-0.6
VLY	**Voula,Athens**	**0.97 158**	P	Pb	20 42 19.6	-0.3
VLY			S	Sg	20 42 33.1	+0.3
VLY	**Voula,Athens**	**0.97 158**	P	Pb	20 42 19.3	-0.6
VLY	**Voula,Athens**	**0.97 158**	P	Pb	20 42 19.5	-0.4
KALE	**Kalithea**	**1.00 249**	P	Pb	20 42 19.7	-0.8
EPID	**Epidavros**	**1.15 189**	P	Pg	20 42 23.5	+0.1
KLV	**Kalavryta, Ach**	**1.17 233**	P	Pb	20 42 23.5	+0.2
KRND	**KRANIDI**	**1.38 186**	P	Pn	20 42 26.4	+0.3
KRND	**KRANIDI**	**1.38 186**	P	Pn	20 42 26.4	+0.4
LIT	**Litokhoron**	**1.49 334**	P	Pn	20 42 27.5	-0.1

*ISCJB **30** 21:25:02.8±0.1,26°.74S±0°.02×178°.58E±0°.04, h550km, mb4.4/82, Error ellipse: s-maj=5.0km s-min=2.5km az=11.0*
*BJI **30** 21:25:03.0±0.0,26°.70S×178°.60E, h556km, mb4.8/19, mB5.0/14*
*NEIC **30** 21:25:04.8±2.0,26°.72S×178°.58E, h568km±6km, mb4.6/70, Error ellipse: s-maj=16.8km s-min=6.6km az=103.0*
*IDC **30** 21:25:06.9±2.1,26°.65S×178°.49E, h593km±23km, mb3.7/20, mb1 3.9/22, mb1mx3.8/31, mbtmp4.6/22, Error ellipse: s-maj=14.1km s-min=12.7km az=94.0*

ISC 30 21:25:03.2±0.3,26°.75S±0°.05×178°.59E±0°.07, h550km, n278,σ1§55/307, mb4.5/81, 3C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**3.96**	**130**	P	**P**	**21 26 26.3**	**+1.6**
RIZ				S	**S**	**21 27 35.3**	**+4.0**
RAO	**Raoul Island**	**3.97**	**130**	*e*P	**P**	**21 26 26.3**	**+1.5**
RAO				*e*S	**S**	**21 27 34.1**	**+2.7**
GLKZ	**Green Lake**	**3.97**	**130**	P	**P**	**21 26 26.7**	**+1.9**
GLKZ				S	**S**	**21 27 34.5**	**+3.1**
OUZ	**Omahuta**	**9.46**	**206**	*e*P	**P**	**21 27 18.9**	**+3.5**
OUZ	**Omahuta**	**9.46**	**206**	P	**P**	**21 27 19.5**	**+4.0**
GRZ	**Great Barrier**	**9.84**	**195**	P	**P**	**21 27 22.2**	**+2.9**
WCZ	**Waipu Caves**	**9.85**	**201**	P	**P**	**21 27 23.6**	**+4.2**
KUZ	**Kuaotunu**	**10.26**	**193**	P	**P**	**21 27 26.6**	**+3.0**
ABAZ	**Army Bay**	**10.32**	**197**	P	**P**	**21 27 27.2**	**+2.9**
WIAZ	**Waiheke Island**	**10.43**	**195**	P	**P**	**21 27 28.8**	**+3.4**
MXZ	**Matakaoa Point**	**10.78**	**181**	*e*P	**P**	**21 27 30.2**	**+1.2**
MXZ	**Matakaoa Point**	**10.78**	**181**	P	**P**	**21 27 28.1**	**-0.8**
PINNC	**Pines Island,**	**10.93**	**290**	*e*P	**P**	**21 27 31.3**	**+0.5**
MARNC	**Mare, Loyalty**	**10.97**	**296**	*e*P	**P**	**21 27 32.6**	**+1.4**
HAZ	**Te Kaha**	**10.99**	**183**	P	**P**	**21 27 30.6**	**-0.6**
WHRZ	**Whale Island**	**11.15**	**187**	P	**P**	**21 27 35.5**	**+2.7**
OPRZ	**Ohinepanea**	**11.19**	**188**	P	**P**	**21 27 36.4**	**+3.2**
RUGZ	**Raukumara Rang**	**11.21**	**184**	P	**P**	**21 27 33.5**	**0.0**
TOZ	**Tahuroa Road**	**11.25**	**193**	P	**P**	**21 27 36.7**	**+2.8**
PUZ	**Puketiti**	**11.29**	**181**	P	**P**	**21 27 33.2**	**-1.1**
TWGZ	**Tauwhareparae**	**11.40**	**182**	P	**P**	**21 27 34.9**	**-0.6**
TWGZ				S	**S**	**21 29 37.9**	**-2.8**
URZ	**Urewera**	**11.54**	**186**	P	**P**	**21 27 35.7**	**-1.1**
	13nm,0.3s,baz=24,slow=2.1,SNR=48						
URZ				S	**S**	**21 29 38.7**	**-4.5**
	3.6nm,0.3s,baz=17,slow=19,SNR=19						
URZ	**Urewera**	**11.54**	**186**	*e*P	**P**	**21 27 36.1**	**-0.7**
URZ				*e*S	**S**	**21 29 39.4**	**-3.8**
URZ	**Urewera**	**11.54**	**186**	P	**P**	**21 27 35.8**	**-1.0**
URZ				S	**S**	**21 29 39.5**	**-3.8**
MWZ	**Matawai**	**11.58**	**184**	P	**P**	**21 27 36.7**	**-0.6**
MWZ				S	**S**	**21 29 40.9**	**-3.2**
CNGZ	**Carnagh Statio**	**11.70**	**181**	P	**P**	**21 27 38.7**	**+0.3**
CNGZ				S	**S**	**21 29 43.4**	**-2.9**
RAGZ	**Rawiri**	**11.75**	**185**	P	**P**	**21 27 40.2**	**+1.1**
RAGZ				S	**S**	**21 29 43.7**	**-3.7**
ONTNC	**Ouen Toro**	**11.89**	**289**	*e*P	**P**	**21 27 41.8**	**+1.1**
RTZ	**Ruatahuna**	**11.91**	**186**	P	**P**	**21 27 40.5**	**-0.2**
RIGZ	**Rimuhau**	**11.94**	**183**	P	**P**	**21 27 42.1**	**+1.1**
RIGZ				S	**S**	**21 29 46.6**	**-4.2**
DZM	**Mont Dzumac**	**12.00**	**290**	P	**P**	**21 27 43.6**	**+1.6**
	13nm,0.3s,baz=124,slow=8.8,SNR=107						
DZM	**Mont Dzumac**	**12.00**	**290**	*e*P	**P**	**21 27 43.3**	**+1.3**
SNGZ	**Shannon Statio**	**12.04**	**185**	P	**P**	**21 27 41.4**	**-0.7**
SNGZ				S	**S**	**21 29 50.3**	**-2.4**
HIZ	**Hauiti**	**12.14**	**194**	P	**P**	**21 27 45.9**	**+2.9**
PRGZ	**Paritu Road**	**12.15**	**183**	P	**P**	**21 27 44.6**	**+1.4**
PRGZ				S	**S**	**21 29 51.7**	**-3.1**
WATZ	**Wairara**	**12.16**	**191**	P	**P**	**21 27 45.9**	**+2.7**
KNZ	**Kokohu**	**12.26**	**183**	P	**P**	**21 27 43.9**	**-0.3**
KNZ				S	**S**	**21 29 52.0**	**-4.7**
WHHZ	**Waihua**	**12.34**	**185**	P	**P**	**21 27 45.3**	**+0.2**
WHHZ				S	**S**	**21 29 53.3**	**-5.1**
MHGZ	**Mahia Peninsul**	**12.38**	**182**	P	**P**	**21 27 44.7**	**-0.8**
MHGZ				S	**S**	**21 29 55.8**	**-3.3**
BKZ	**Black Stump Fm**	**12.50**	**188**	*e*P	**P**	**21 27 46.0**	**-0.8**
BKZ	**Black Stump Fm**	**12.50**	**188**	P	**P**	**21 27 45.9**	**-0.8**
NGZ	**Ngauruhoe**	**12.64**	**191**	P	**P**	**21 27 48.7**	**+0.4**
MCHZ	**McNeill Hill**	**12.76**	**187**	P	**P**	**21 27 48.3**	**-1.0**
MCHZ				S	**S**	**21 30 04.0**	**-2.2**
BHHZ	**Black Hill Sta**	**12.88**	**189**	P	**P**	**21 27 50.0**	**-0.7**
BHHZ				S	**S**	**21 30 04.0**	**-4.6**
KRHZ	**Kereru**	**12.99**	**188**	P	**P**	**21 27 50.9**	**-0.9**
BFZ	**Birch Farm**	**14.03**	**187**	*e*P	**P**	**21 28 01.7**	**-0.8**
SNZO	**South Karori**	**14.87**	**191**	*e*P	**P**	**21 28 10.2**	**-0.9**
THZ	**Tophouse**	**15.68**	**196**	*e*P	**P**	**21 28 19.5**	**0.0**
	29nm,0.5s						
THZ				*e*S	**S**	**21 30 59.1**	**-1.1**
KHZ	**Kahutara**	**16.16**	**194**	*e*P	**P**	**21 28 23.4**	**-0.6**
	17nm,0.5s						
KHZ				*e*S	**S**	**21 31 07.8**	**-0.1**
LTZ	**Lake Taylor**	**16.80**	**196**	*e*P	**P**	**21 28 29.7**	**-0.3**
	21nm,0.5s						
OXZ	**Oxford**	**17.37**	**196**	*e*P	**P**	**21 28 36.1**	**+1.0**
	29nm,0.5s						
MQZ	**McQueen's Vall**	**17.59**	**194**	*e*P	**P**	**21 28 35.4**	**-1.6**
	8.2nm,0.9s						
RPZ	**Rata Peaks**	**17.99**	**198**	P	**P**	**21 28 41.7**	**+0.8**
	4.7nm,0.3s,baz=43,slow=1.5,SNR=15						
RPZ	**Rata Peaks**	**17.99**	**198**	*e*P	**P**	**21 28 42.2**	**+1.4**
	56nm,1.4s						
LBZ	**Lake Benmore**	**18.86**	**199**	*e*P	**P**	**21 28 47.8**	**-0.9**
	49nm,1.5s						
WKZ	**Wanaka**	**19.61**	**201**	*e*P	**P**	**21 28 55.5**	**0.0**
	95nm,1.4s						
MLZ	**Mavora Lakes**	**20.38**	**202**	*e*P	**P**	**21 29 03.2**	**+0.6**
	52nm,1.4s						
ARMA	**Armidale**	**23.93**	**255**	*e*P	**P**	**21 29 36.9**	**+2.3**
	30nm,1.3s						
EIDS	**Eidsvold**	**24.73**	**267**	*e*P	**P**	**21 29 42.7**	**+1.0**
	17nm,0.7s						
KNTN	**Kanton**	**25.59**	**23**	*e*P	**P**	**21 29 48.2**	**-1.1**
	69nm,0.8s						
TOO	**Toolangi**	**29.88**	**241**	*e*P	**P**	**21 30 28.7**	**+2.1**
	24nm,1.4s						
CTAO	**Charters Tower**	**30.34**	**276**	*e*P	**P**	**21 30 32.2**	**+1.4**
	20nm,0.4s						
STKA	**Stephens Creek**	**32.55**	**252**	P	**P**	**21 30 50.9**	**+1.4**
	4.4nm,0.4s,baz=96,slow=10,SNR=58						
STKA	**Stephens Creek**	**32.55**	**252**	*e*P	**P**	**21 30 51.0**	**+1.5**
	2.9nm,1.3s						
COEN	**Coen**	**35.43**	**284**	*e*P	**P**	**21 31 14.4**	**+0.6**
	19nm,1.2s						
BBOO	**Buckleboo**	**37.21**	**250**	*e*P	**P**	**21 31 28.5**	**+0.2**
	11nm,0.9s						
PATS	**Pohnpei**	**38.74**	**327**	*e*P	**P**	**21 31 39.7**	**-1.2**
	48nm,1.3s						
AS31	**Alice Springs**	**40.39**	**264**	*e*P	**P**	**21 31 54.8**	**+0.6**
	2.4nm,0.4s						
ASAR	**Alice Springs**	**40.39**	**264**	P	**P**	**21 31 54.8**	**+0.6**
	4.1nm,0.4s,baz=97,slow=8.5,SNR=107						
ASAR				PcP	**PcP**	**21 33 40.1**	**-3.6**
	0.7nm,0.4s,baz=104,slow=5.9,SNR=4.5						
ASAR				S	**S**	**21 37 15.9**	**-7.3**
	1.4nm,0.8s,baz=102,slow=15,SNR=5.3						
WB2	**Warramunga Arr**	**41.02**	**270**	*e*P	**P**	**21 31 59.5**	**+0.3**
	13nm,0.4s						
WRA	**Warramunga Arr**	**41.03**	**270**	P	**P**	**21 31 59.6**	**+0.4**
	7.7nm,0.3s,baz=100,slow=9.3,SNR=131						
WRA				S	**S**	**21 37 29.2**	**-3.3**
	2.3nm,0.6s,baz=90,slow=12,SNR=6.7						
FORT	**Forrest**	**44.17**	**252**	*e*P	**P**	**21 32 23.4**	**-0.2**
	31nm,0.6s						
MTN	**Manton Dam**	**46.48**	**278**	*e*P	**P**	**21 32 41.6**	**+0.1**
	45nm,1.2s						
VNDA	**Vanda**	**51.44**	**185**	P	**P**	**21 33 18.5**	**+1.3**
	0.8nm,0.4s,baz=5.9,slow=8.3,SNR=11						
VNDA	**Vanda**	**51.44**	**185**	*e*P	**P**	**21 33 18.4**	**+1.1**
	0.2nm,0.5s						
SBA	**Scott Base**	**51.47**	**183**	*e*P	**P**	**21 33 19.8**	**+2.4**
	5.8nm,1.0s						
GUMO	**Guam**	**51.78**	**317**	P	**P**	**21 33 19.4**	**-1.1**
	25nm,0.4s,baz=119,slow=12,SNR=4.7						
GUMO	**Guam**	**51.78**	**317**	*e*P	**P**	**21 33 19.5**	**-1.1**
	184nm,1.5s						
AIN	**Ainahou**	**52.31**	**31**	*e*P	**P**	**21 33 23.8**	**-0.7**
	110nm,1.2s						
MLH	**Mauna Loa**	**52.45**	**31**	*e*P	**P**	**21 33 25.1**	**-0.5**
	92nm,1.3s						
HMH	**Humu'ula Sheep**	**52.50**	**31**	*e*P	**P**	**21 33 25.6**	**-0.3**
	71nm,0.9s						
ANA2	**Anatahan**	**53.43**	**320**	*e*P	**P**	**21 33 32.8**	**+0.6**
	71nm,0.4s						
MORW	**Morawa**	**54.74**	**252**	*e*P	**P**	**21 33 40.9**	**-0.5**
	36nm,1.4s						
QSPA	**South Pole Qui**	**63.34**	**180**	*e*P	**P**	**21 34 39.7**	**+1.1**
	9.2nm,0.7s						
MJAR	**Matsushiro Arr**	**73.55**	**327**	P	**P**	**21 35 38.8**	**-1.7**
	3.7nm,0.7s,baz=167,slow=6.5,SNR=18						
MAT	**Matsushiro**	**73.55**	**327**	P	**P**	**21 35 39.0**	**-1.5**
MAW	**Mawson**	**74.64**	**201**	P	**P**	**21 35 46.9**	**+0.7**
	2.5nm,0.5s,baz=156,slow=4.5,SNR=9.5						
JNU	**Nakatsue**	**74.84**	**320**	P	**P**	**21 35 46.4**	**-1.5**
	4.5nm,0.5s,baz=176,slow=1.2,SNR=12						
ASAJ	**Asahikawa**	**77.85**	**334**	P	**P**	**21 36 04.7**	**+0.7**
	8.7nm,0.8s,baz=199,slow=3.9,SNR=8.8						
KSRS	**Korea Array**	**79.63**	**321**	P	**P**	**21 36 12.7**	**-1.0**
	2.6nm,0.8s,baz=135,slow=5.9,SNR=13						
PEA0B	**Petropavlovsk-**	**81.58**	**347**	*e*P	**P**	**21 36 23.0**	**-0.5**
	36nm,1.0s						
PETK	**Petropavlovsk-**	**81.58**	**347**	P	**P**	**21 36 22.8**	**-0.6**
	14nm,0.8s,baz=119,slow=6.3,SNR=20						
NJ2	**Nanjing**	**81.59**	**312**	*e*P	**P**	**21 36 25.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SNAA	**Sanae**	**81.84**	**180**	P	**P**	**21 36 24.9**	**+0.1**
SNAA	**Sanae**	**81.84**	**180**	*e*P	**P**	**21 36 24.4**	**-0.4**
	7.7nm,0.7s						
VNA3	**Neumayer Olymp**	**82.10**	**177**	P	**P**	**21 36 26.2**	**+0.1**
USA0B	**Ussuriysk Arra**	**82.48**	**328**	*e*P	**P**	**21 36 28.2**	**0.0**
	12nm,1.0s						
USRK	**Ussuriysk Ar.**	**82.48**	**328**	P	**P**	**21 36 28.3**	**+0.1**
	7.0nm,0.8s,baz=124,slow=3.0,SNR=16						
VNA2	**Neumayer--Watz**	**82.50**	**178**	P	**P**	**21 36 29.1**	**+1.0**
	baz=185,slow=4.8						
VNA1	**Neumayer--Stat**	**82.75**	**178**	P	**P**	**21 36 30.1**	**+0.9**
MDJ	**Mudanjiang**	**83.94**	**327**	*e*P	**P**	**21 36 36.0**	**+0.5**
	16nm,1.1s						
CN2	**Changchun**	**85.44**	**324**	*e*P	**P**	**21 36 45.5**	**+2.7**
VES	**Vestal, Richgr**	**85.62**	**46**	P	**P**	**21 36 44.0**	**+0.1**
	baz=232						
MONP2	**Monument Peak**	**85.64**	**50**	P	**P**	**21 36 44.8**	**+0.5**
	baz=234						
IKP	**In-Ko-Pah, Jac**	**85.71**	**50**	P	**P**	**21 36 45.2**	**+0.6**
	baz=234						
EDW2	**Edwards Air Fo**	**85.75**	**48**	P	**P**	**21 36 45.0**	**+0.3**
	baz=233						
ISA	**Isabella, Lake**	**85.91**	**47**	P	**P**	**21 36 46.3**	**+0.9**
	baz=233						
O02D	**Mt. Diablo Mer**	**86.05**	**41**	P	**P**	**21 36 46.9**	**+1.0**
	baz=230						
SWSC	**Sam W. Stewart**	**86.10**	**50**	P	**P**	**21 36 46.7**	**+0.5**
	baz=235						
KLR	**Kul'dur**	**86.39**	**331**	P	**P**	**21 36 47.4**	**+0.1**
	5.6nm,0.9s,baz=133,slow=4.2,SNR=12						
WDC	**Whiskeytown Da**	**86.45**	**41**	*e*P	**P**	**21 36 48.0**	**+0.3**
	9.2nm,1.2s						
BELC	**Belle Mtn. Jos**	**86.57**	**49**	P	**P**	**21 36 49.0**	**+0.4**
	baz=234						
N02D	**Trinity Center**	**86.61**	**40**	P	**P**	**21 36 49.6**	**+1.0**
	baz=230						
CWC	**Cottonwood Cre**	**86.63**	**46**	P	**P**	**21 36 49.0**	**+0.1**
	baz=233						
O03E	**Paynes Creek**	**86.70**	**41**	P	**P**	**21 36 50.0**	**+1.0**
	baz=230						
BC3	**Big Chuckawall**	**86.74**	**50**	P	**P**	**21 36 49.8**	**+0.4**
	baz=235						
MPMC	**Manual Prospec**	**86.79**	**47**	P	**P**	**21 36 50.3**	**+0.6**
	baz=234						
GSC	**Goldstone, Bar**	**86.79**	**48**	P	**P**	**21 36 49.6**	**0.0**
	baz=234						
M02C	**Callahan**	**86.79**	**40**	P	**P**	**21 36 50.2**	**+0.8**
	baz=230						
HEC	**Hector,Ludlow**	**86.83**	**48**	P	**P**	**21 36 50.1**	**+0.4**
	baz=234						
L02E	**Cave Junction**	**86.86**	**39**	P	**P**	**21 36 50.6**	**+0.9**
	baz=229						
MLAC	**Mammoth, Mammo**	**86.86**	**45**	P	**P**	**21 36 50.3**	**+0.2**
	baz=233						
ENH	**Enshi**	**87.05**	**306**	*e*P	**P**	**21 36 51.1**	**+0.2**
	13nm,0.9s						
YBH	**Yreka Blue Hor**	**87.09**	**40**	*e*P	**P**	**21 36 51.9**	**+1.0**
	6.0nm,1.0s						
K02D	**Willamette Mer**	**87.18**	**39**	P	**P**	**21 36 51.8**	**+0.6**
	baz=229,SNR=5.2						
IRM	**Iron Mountain**	**87.24**	**49**	P	**P**	**21 36 52.1**	**+0.4**
	baz=235						
GMRC	**Granite Mounta**	**87.25**	**49**	P	**P**	**21 36 51.7**	**-0.1**
	baz=235						
J01E	**Myrtle Point**	**87.33**	**38**	P	**P**	**21 36 52.5**	**+0.7**
	baz=229						
HSIG		**87.38**	**56**	*e*P	**P**	**21 36 53.0**	**+0.6**
	9.7nm,0.9s						
113A	**Mohawk Valley,**	**87.40**	**51**	*e*P	**P**	**21 36 53.8**	**+1.5**
	7.7nm,1.3s						
YERR	**Yerington**	**87.44**	**44**	*e*P	**P**	**21 36 53.6**	**+0.9**
	7.5nm,1.2s						
SHOC	**Shoshone, Teco**	**87.49**	**48**	P	**P**	**21 36 53.0**	**+0.2**
	baz=234						
HUMO	**Hull Mountain**	**87.52**	**39**	*e*P	**P**	**21 36 53.6**	**+0.9**
214A	**Organ Pipe Nat**	**87.62**	**52**	P	**P**	**21 36 54.2**	**+0.7**
	baz=236						
M04C	**Macdoel**	**87.62**	**40**	P	**P**	**21 36 53.9**	**+0.5**
	baz=230						
L04D	**Klamath Falls**	**87.64**	**40**	P	**P**	**21 36 53.7**	**+0.3**
	baz=230,SNR=6.3						
NVAR	**Mina Array Bea**	**87.68**	**45**	P	**P**	**21 36 53.0**	**-0.8**
	2.2nm,0.9s,baz=218,slow=7.9,SNR=12						
NV11	**Mina Array Sit**	**87.78**	**45**	*e*P	**P**	**21 36 54.6**	**+0.4**
	0.5nm,1.1s						
PAHR	**Pah Rah Range**	**87.79**	**43**	*e*P	**P**	**21 36 54.5**	**+0.3**
	7.1nm,1.2s						
I03D	**Drain, OR**	**88.00**	**38**	P	**P**	**21 36 55.4**	**+0.5**
	baz=229,SNR=6.5						
TPNV	**Topopah Spring**	**88.12**	**47**	*e*P	**P**	**21 36 56.4**	**+0.6**
	5.8nm,1.0s						
TPNV	**Topopah Spring**	**88.12**	**47**	P	**P**	**21 36 56.2**	**+0.3**
	baz=234						
KVN	**Kaiserville**	**88.18**	**44**	*e*P	**P**	**21 36 56.4**	**+0.2**
	8.4nm,1.3s						
K04D	**Chiloquin, OR**	**88.21**	**40**	P	**P**	**21 36 56.4**	**+0.3**
	baz=230						
BJI	**Beijing**	**88.22**	**317**	P	**P**	**21 36 56.3**	**+0.3**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
J04D	**Umpqua Nationa**	**88.40**	**39**	P	**P**	**21 36 57.5**	**+0.5**
	baz=230						
SHPR	**Sheep Range**	**88.57**	**48**	*e*P	**P**	**21 36 56.9**	**-1.0**
	6.4nm,1.3s						
I04A	**Tendick Farm,**	**88.59**	**38**	P	**P**	**21 36 57.9**	**+0.2**
	baz=230						
MOD	**Modoc Plateau**	**88.59**	**41**	*e*P	**P**	**21 36 58.5**	**+0.6**
	9.9nm,0.9s						
H04D	**Lebanon**	**88.88**	**38**	P	**P**	**21 36 59.3**	**+0.4**
	baz=230						
J05D	**Fort Rock, OR**	**88.92**	**39**	P	**P**	**21 36 59.8**	**+0.4**
	baz=231,SNR=15						
TUC	**Tucson**	**89.26**	**53**	P	**P**	**21 37 02.1**	**+1.0**
	baz=237						
CMAR	**Chiang Mai Arr**	**89.33**	**291**	P	**P**	**21 37 01.3**	**-0.4**
	1.0nm,0.7s,baz=147,slow=4.0,SNR=9.4						
R11A	**Troy Canyon, C**	**89.36**	**46**	P	**P**	**21 37 01.9**	**+0.3**
	baz=235						
PINE	**Pine Mountain**	**89.41**	**39**	*e*P	**P**	**21 37 02.4**	**+0.7**
	14nm,0.9s						
KMI	**Kunming**	**89.47**	**298**	P	**P**	**21 37 03.5**	**+1.0**
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
CHTO	**Chiang Mai**	**89.50**	**291**	*e*P	**P**	**21 37 03.7**	**+1.2**
	5.9nm,1.2s						
XAN	**Xi'an**	**89.51**	**309**	P	**P**	**21 37 02.5**	**+0.3**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
I05D	**Terrebonne, OR**	**89.53**	**38**	P	**P**	**21 37 02.3**	**+0.2**
	baz=231						
BMN	**Battle Mountai**	**89.55**	**43**	*e*P	**P**	**21 37 02.5**	**+0.1**
	7.1nm,0.9s						
LCMT	**Little Creek M**	**90.13**	**48**	*e*P	**P**	**21 37 06.0**	**+0.8**
	5.2nm,0.9s						
CCUT	**Cedar City**

GEYT	Alibeck	129.24 298	PKP	PKPdf	21 43 08.2	-1.2
	1.7nm,0.6s,baz=87,slow=6.1,SNR=6.9					
ARCES	ARCESS Array B	134.39 347	PKhKP	PKPpre	21 43 07.0	
	0.7nm,0.3s,baz=39,slow=0.6,SNR=12					
ARCES			PP	PP	21 45 56.3	-2.1
	1.6nm,0.8s,baz=20,slow=3.9,SNR=4.1					
FINES	FINESS Array B	140.70 340	PKhKP	PKPpre	21 43 22.3	
	3.0nm,0.3s,baz=50,slow=4.5,SNR=95					
MOL	Molde	143.69 353	*e*P	PKPab	21 43 33.3	-0.8
DOMB	Dombas	144.03 352	*e*P	PKPbc	21 43 34.2	-1.0
AKN	Aaknes	144.14 353	*e*P	PKPbc	21 43 35.0	-0.6
NC303	NORSAR Array S	144.47 349	*e*PKPdf	**PKPdf**	**21 43 35.7**	**-0.8**
NC303	NORSAR Array S	144.47 349	*e*P	**PKPdf**	**21 43 35.0**	**-1.5**
NC405	NORSAR Array S	144.51 349	*e*PKPdf	**PKPdf**	**21 43 35.8**	**-0.9**
NC204	NORSAR Array S	144.51 350	*e*PKPdf	**PKPdf**	**21 43 35.7**	**-1.0**
NB201	NORSAR Array S	144.64 349	*e*PKPdf	**PKPdf**	**21 43 36.3**	**-0.6**
NB2	NORSAR Subarra	144.66 349	PKP	**PKPdf**	**21 43 35.6**	**-1.3**
	comp=Z,20nm,1.0s,baz=16,slow=3.2					
NOA	NORSAR Array B	144.66 349	PKP	**PKPdf**	**21 43 36.0**	**-0.9**
	comp=Z,5.8nm,0.7s,baz=16,slow=4.7,SNR=38					
NBO00	NORSAR Array S	144.74 350	*e*PKPdf	**PKPdf**	**21 43 36.4**	**-0.7**
NC602	NORSAR Array S	144.90 349	*e*PKPdf	**PKPdf**	**21 43 36.4**	**-0.9**
NAO01	NORSAR Array S	144.90 350	*e*PKPdf	**PKPdf**	**21 43 37.1**	**-0.2**
SKAR	Skarslia	145.44 352	*e*P	**PKPdf**	**21 43 38.5**	**+0.2**
KONO	Kongsberg	146.25 350	*e*PKPbc	**PKPdf**	**21 43 41.1**	**+1.5**
STRU	Stroemstad	146.56 348	*e*P	**PKPdf**	**21 43 41.5**	**+1.4**
AKASG	Malin Array Be	146.59 324	PKPbc	**PKPdf**	**21 43 41.9**	**+1.5**
	comp=Z,6.5nm,0.5s,baz=44,slow=3.7,SNR=27					
AKBB	Malin Array Si	146.59 324	*e*PKPbc	**PKPdf**	**21 43 42.0**	**+1.6**
KMY	Karmoy	147.23 354	*e*P	**PKPdf**	**21 43 43.7**	**+2.5**
SUW	Suwalki	147.28 333	*e*PKP	**PKPdf**	**21 43 43.6**	**+2.1**
SUW	Suwalki	147.28 333	*e*PKPbc	**PKPdf**	**21 43 43.8**	**+2.3**
HOMB	Homborsund	147.73 350	*e*P	**PKPdf**	**21 43 44.4**	**+2.3**
BR131	Keskin Array S	148.16 303	*e*PKPbc	**PKPbc**	**21 43 47.2**	**-0.5**
BRTR	Keskin Array B	148.16 303	PKPbc	**PKPdf**	**21 43 46.9**	**+3.2**
	comp=Z,5.1nm,0.9s,baz=132,slow=1.3,SNR=18					
ANTO	Ankara	148.76 306	*e*PKPbc	**PKPbc**	**21 43 49.0**	**-0.1**
BR231	Keskin MP Arra	148.78 303	*e*PKPbc	**PKPbc**	**21 43 49.2**	**0.0**
KAC	Achnashellach	149.15 4	*e*P	**PKPbc**	**21 43 48.6**	**-0.7**
KPL	Plockton	149.29 4	*e*P	**PKPbc**	**21 43 48.9**	**-0.8**
MDUB	Mudurnu	149.78 305	*e*PKPbc	**PKPbc**	**21 43 51.3**	**-0.3**
BEL	Belsk	149.86 332	*e*PKP	**PKPbc**	**21 43 51.4**	**+0.2**
GKP	Gorka Klasztor	150.09 337	*e*PKP	**PKPbc**	**21 43 51.3**	**-0.4**
EDU	Dundee	150.21 2	*e*P	**PKPbc**	**21 43 50.7**	**-1.1**
INVG	Invergeldie, C	150.29 3	*e*P	**PKPbc**	**21 43 50.9**	**-1.1**
LAWE	Loch Awe, Argy	150.38 4	*e*P	**PKPbc**	**21 43 51.4**	**-0.9**
BUR08	Bucovina Ar. S	150.51 322	*e*PKPbc	**PKPbc**	**21 43 53.8**	**+0.8**
EAB	Aberfoyle	150.51 3	*e*P	**PKPbc**	**21 43 51.5**	**-1.1**
KWP	Kalwaria Pacla	150.55 327	*e*PKP	**PKPbc**	**21 43 52.9**	**-0.1**
KWP	Kalwaria Pacla	150.55 327	*e*PKPbc	**PKPbc**	**21 43 52.8**	**-0.1**
ESY	Stoneypath	150.85 1	*e*P	**PKPbc**	**21 43 52.4**	**-0.9**
EBL	Broad Law	150.98 2	*e*P	**PKPbc**	**21 43 52.8**	**-0.9**
ESK	Eskdalemuir	151.43 2	*e*P	**PKPbc**	**21 43 53.2**	**-1.5**
OJC	Ojcow	151.48 331	*e*PKP	**PKPbc**	**21 43 54.8**	**-0.2**
OJC	Ojcow	151.48 331	*e*PKPbc	**PKPbc**	**21 43 54.5**	**-0.5**
NIE	Niedzica	151.83 329	*e*PKP	**PKPbc**	**21 43 56.2**	**+0.3**
EDMD	Edmundbyers	151.95 1	*e*P	**PKPbc**	**21 43 54.8**	**-1.1**
KSP	Ksiaz	152.41 335	*e*PKP	**PKPbc**	**21 43 56.8**	**-0.3**
OSTC	Ostas	152.67 335	⇑*e*PKP	**PKPbc**	**21 43 57.7**	**+0.1**
OSTC			*e*PKPAB	**PKPab**	**21 44 11.3**	**+0.2**
CHVC	Chvalec	152.71 335	*e*PKPAB	**PKPbc**	**21 43 57.2**	**-0.5**
MORC	Moravsky Berou	152.77 333	*e*PKPbc	**PKPbc**	**21 43 57.7**	**-0.2**
MORC	Moravsky Berou	152.77 333	*e*PKP	**PKPbc**	**21 43 57.8**	**-0.1**
UPC	Upice	152.79 335	*e*PKPDF	**PKPbc**	**21 43 57.7**	**-0.2**
UPC			*e*PKPAB	**PKPab**	**21 44 11.4**	**-0.2**
DPC	Dobruska-Polom	152.80 335	*e*PKPDF	**PKPdf**	**21 43 49.5**	**-0.7**
DPC			⇑*e*PKP	**PKPbc**	**21 43 57.8**	**-0.1**
DPC			*e*PKPAB	**PKPab**	**21 44 11.6**	**-0.1**
CLL	Collm	153.14 340	*e*PKPbc	**PKPbc**	**21 43 57.4**	**-1.2**
CLL			*e*PKPab	**PKPab**	**21 44 11.4**	**-1.6**
CLL	Collm	153.14 340	*i* PKPbc	**PKPbc**	**21 43 57.2**	**-1.4**
	comp=Z,14nm,1.0s					
CLL			*i* PKPab	**PKPab**	**21 44 11.1**	**-1.9**
	comp=Z,14nm,1.1s					
CLL			*e*pPKPab	**pPKPab**	**21 46 16.0**	**+1.9**
BRG	Berggiesshubel	153.22 338	*i* PKP	**PKPbc**	**21 43 58.0**	**-0.7**
	comp=Z,5.8nm,0.9s					
BRG			*e*		21 44 12.9	
	comp=Z,8.2nm,1.2s					
PVCC	Panska Ves	153.29 337	*e*PKPDF	**PKPbc**	**21 43 58.8**	**-0.1**
PVCC			*e*PKPAB	**PKPab**	**21 44 13.6**	**-0.1**
JAVC	Velka Javorina	153.41 331	*e*PKP	**PKPbc**	**21 44 00.2**	**+0.9**
PRU	Pruhonice	153.75 336	*e*PKPAB	**PKPab**	**21 44 15.6**	**-0.1**
NKC	Novy Kostel	154.25 339	*e*PKPAB	**PKPab**	**21 44 17.6**	**-0.2**
KHC	Kasperske Hory	154.81 336	*e*PKPab	**PKPab**	**21 44 20.2**	**-0.1**
KHC	Kasperske Hory	154.81 336	*e*PKPDF	**PKPdf**	**21 43 52.0**	**-1.1**
KHC			⇑*e*PKP	**PKPab**	**21 44 19.9**	**-0.4**
KHC			*ex*	x	21 44 46.3	
CONA	Conrad Observa	154.90 332	*e*PKPab	**PKPab**	**21 44 20.4**	**-0.4**
	comp=Z,2.3nm,0.7s					
GERES	GERESS Array B	155.01 336	PKP	**PKPdf**	**21 43 51.8**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=26,slow=3.4,SNR=5.1					
GERES			PKPbc	PKPbc	21 44 01.6	
	comp=Z,1.0nm,0.9s,baz=80,slow=1.5,SNR=7.9					
GERES			PKPab	**PKPab**	**21 44 20.2**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=44,slow=5.9,SNR=10.0					
ARSA	Arzberg	155.57 331	*i* PKPab	**PKPab**	**21 44 23.7**	**+0.1**
MOA	Molln	155.62 334	*e*PKPab	**PKPab**	**21 44 24.2**	**+0.4**
	comp=Z,3.2nm,1.1s					
SOKA	Soboth	156.23 331	*e*PKPab	**PKPab**	**21 44 26.3**	**-0.3**
	comp=Z,4.7nm,1.2s,SNR=4.2					
OBKA	Obir	156.57 331	*e*PKPab	**PKPab**	**21 44 26.8**	**-1.2**
	comp=Z,3.7nm,0.9s					
WTTA	Wattenberg	157.09 337	*e*PKPab	**PKPab**	**21 44 30.5**	**+0.1**
	comp=Z,3.8nm,0.6s					
BFO	Black Forest	157.15 343	*e*PKPab	**PKPab**	**21 44 29.9**	**-0.6**
RETA	Reutte	157.19 338	*e*PKPab	**PKPab**	**21 44 30.6**	**-0.1**
	comp=Z,4.7nm,1.0s					
ABTA	Abfaltersbach	157.20 335	*e*PKPab	**PKPab**	**21 44 29.1**	**-1.7**
	comp=Z,9.3nm,1.2s					
MOTA	Moosalm	157.20 338	*e*PKPab	**PKPab**	**21 44 30.4**	**-0.4**
	comp=Z,1.3nm,0.7s					
SQTA	Sankt Quirin	157.27 337	*e*PKPab	**PKPab**	**21 44 30.6**	**-0.5**
	comp=Z,4.0nm,0.8s					
DAVA	Damuels	157.65 339	*e*PKPab	**PKPab**	**21 44 32.5**	**-0.3**
	comp=Z,2.5nm,0.5s					
FUORN	Ofenpass-Fuorn	158.12 338	*e*PKPab	**PKPab**	**21 44 35.0**	**+0.1**
SENIN	Lac Senin/Same	159.24 343	*e*PKPab	**PKPab**	**21 44 39.5**	**-0.3**
ESDC	Sonseca Array	166.94 9	PKPab	**PKPab**	**21 45 12.1**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=350,slow=3.5,SNR=7.2					

MEX 30 21:47:14.1±0.5, 15°.39N×94°.34W, h16km±7km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.75	283	*e*P	Pn	21 47 40.4	-3.4
HUIG				*i* S	Sn	21 48 00.3	-5.5
CMIG	Matias Romero	1.77	343	*i* P	Pn	21 47 41.0	-3.2
CMIG				*i* S	Sn	21 48 01.2	-5.3
TGIG		1.81	40	*e*P	Pn	21 47 41.5	-3.2
TGIG				*i* S	Sn	21 48 02.3	-5.0
CCIG	Comitan	2.30	67	*i* P	Pn	21 47 48.4	-3.1

NIED ***30*** *21:49:00, 35°.00N×138°.40E, h26km, Mw3.7 Best double couple: M0=4.25000×10^14 NP1:φs=127.00000°, δ82.00000°, λ-176.00000°. NP2:φs=37.00000°, δ86.00000°, λ-8.00000°.*

JMA 30 21:49:18.6, 35°.00N×138°.34E, h26km±1km, M3.9, 3C-2D Broadband fault plane solution: P waves. NP1: φs=312.00000°, δ81.00000°, λ-155.00000°. **NP2:** φs=218.00000°, δ65.00000°, λ-10.00000°. **Principal axes:** T Plg11.0000°, Azm83.0000°; N Plg63.0000°, Azm330.0000°; P Plg24.0000°, Azm178.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHZ3	Shizuoka 3	0.12	302	P	Pb	21 49 23.5	-0.2
SHZ3				*e*S	Sb	21 49 27.0	-0.1
JFNN	Fujinakano	0.34	56	P	Pb	21 49 26.4	+0.1
JYN	Shimob	0.52	19	⇑P	Pb	21 49 29.0	-0.3
JYN				*e*S	Sb	21 49 36.9	+0.3
JIZS	Izushimoda	0.53	122	⇑P	Pb	21 49 28.8	-0.5
JNY	Yasuok	0.53	313	⇓P	Pb	21 49 29.2	-0.2
JNY				S	Sb	21 49 37.0	+0.2
JOD2	Odawara 2	0.67	67	⇑P	Pb	21 49 31.1	-0.6
TK04	Tokai 4	0.72	212	⇓P	Pn	21 49 33.0	0.0
JIM2	Oshima 3	0.94	107	P	Pn	21 49 35.8	-0.4
MAT	Matsushiro	1.54	356	P	Pb	21 49 45.8	-0.7
MAT				S	Sb	21 50 07.0	+1.3

IDC 30 21:53:02.1±6.0, 23°.61S×177°.99W, h0km, mb4.2/2, mb1 4.5/2, mb1mx3.7/18, mbtmp4.2/2 Error ellipse: s-maj=287.6km s-min=70.4km az=154.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.90	260	P	P	22 01 11.2	+0.4
	2.5nm,0.8s,baz=101,slow=7.1,SNR=19						
WRA	Warramunga Arr	44.26	265	P	P	22 01 13.0	-0.7
	2.8nm,0.5s,baz=103,slow=8.2,SNR=16						
BRTR	Keskin Array B	148.85	309	PKPbc	PKPbc	22 12 51.6	-0.5
	0.5nm,0.6s,baz=134,slow=4.2,SNR=2.8						

ATH ***30*** *22:33:12.9, 38°.80N×20°.32E, h17km±1km, ML2.7/10, Error ellipse: s-maj=2.3km s-min=0.9km az=78.0*
IDC ***30*** *22:33:12.4±1.8, 38°.94N×20°.68E, h0km, mb3.3/3, mb1 3.3/6, mb1mx3.1/48, mbtmp3.3/6, ML3.5/3, Error ellipse: s-maj=36.0km s-min=22.6km az=38.0*
THE ***30*** *22:33:13.6, 38°.78N×20°.33E, h0km±2km, ML2.7/11, Error ellipse: s-maj=2.5km s-min=0.6km az=243.0*

ISC 30 22:33:13.1±1.0, 38°.79N±0°.03×20°.31E±0°.03, h14km±7km, n52, σ1§21/69, mb3.4/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.27	90	P	Pg	22 33 18.5	-0.4
LKD2				S	Sg	22 33 22.5	-0.3
LKD2	Lefkada island	0.27	90	P	Pg	22 33 18.5	-0.4
LKD2				S	Sg	22 33 22.2	-0.6
LKD2				AML	AML	22 33 22.9	
	comp=E,5413μm,0.2s						
LKD2				AML	AML	22 33 24.0	
	comp=N,6213μm,0.3s						
EVGI	Lefkada island	0.32	121	P	Pg	22 33 19.3	-0.3
EVGI				S	Sg	22 33 23.6	-0.5
MGNA	Meganis	0.40	109	P	Pg	22 33 20.5	-0.6
MGNA				S	Sg	22 33 26.3	-0.3
VLS	Valsamata	0.65	160	P	Pg	22 33 25.6	-0.2
VLS				S	Sb	22 33 35.6	+0.5
VLS	Valsamata	0.65	160	P	Pg	22 33 25.5	-0.2
VLS				S	Sb	22 33 35.6	+0.5
VLS				AML	AML	22 33 37.1	
	comp=E,849μm,0.2s						
VLS				AML	AML	22 33 40.4	
	comp=N,1130μm,0.3s						
IGT	Igoumenitsa	0.74	2	P	Pg	22 33 27.2	-0.4
IGT				S	Sb	22 33 38.6	+0.7
IGT	Igoumenitsa	0.74	2	P	Pg	22 33 27.4	-0.1
IGT				S	Sb	22 33 38.1	+0.2
IGT				AML	AML	22 33 43.2	
	comp=N,1212μm,0.3s						
IGT				AML	AML	22 33 43.4	
	comp=E,971μm,0.3s						
JAN	Janina	0.97	26	P	Pg	22 33 31.2	-0.5
JAN				S	Sn	22 33 45.9	+0.1
JAN	Janina	0.97	26	P	Pg	22 33 31.0	-0.8
JAN				AML	AML	22 33 48.7	
	comp=N,1262μm,0.4s						
JAN				AML	AML	22 33 48.8	
	comp=E,1030μm,0.4s						
PVO	Paravola	0.97	100	P	Pb	22 33 30.9	-0.7
PVO				S	Sn	22 33 46.1	+0.3
KASA	Kassiopi	1.00	343	P	Pg	22 33 32.3	-0.1
KEK	Kerkira	1.00	337	P	Pn	22 33 33.1	+0.3
KEK				S	Sn	22 33 48.2	+1.4
KEK	Kerkira	1.00	337	P	Pn	22 33 33.3	+0.5
KEK				AML	AML	22 33 54.1	
	comp=N,534μm,0.4s						
KEK				AML	AML	22 33 54.6	
	comp=E,1066μm,0.5s						
AXS	Araxos	1.03	125	P	Pn	22 33 33.1	+0.1
SRN	Sarande	1.12	348	P	Pg	22 33 34.6	0.0
RLS	Riolos of Patr	1.17	128	P	Pg	22 33 35.9	+0.3
EVR	Evrytania	1.18	83	P	Pg	22 33 35.9	+0.1
EVR				S	Sn	22 33 53.6	+2.4
EVR	Evrytania	1.18	83	P	Pn	22 33 34.7	-0.5
EVR				AML	AML	22 33 57.7	
	comp=N,646μm,0.6s						
EVR				AML	AML	22 34 00.4	
	comp=E,396μm,1.0s						
EFP	Efpalio	1.30	106	P	Pn	22 33 36.7	-0.2
EFP				S	Sg	22 33 56.9	+1.8
EFP	Efpalio	1.30	106	P	Pn	22 33 36.6	-0.2
EFP				AML	AML	22 34 03.1	
	comp=N,560μm,0.9s						
EFP				AML	AML	22 34 04.2	
	comp=E,421μm,0.5s						
LAKA	Lakka	1.42	112	P	Pg	22 33 40.5	+0.1
KPRO	Kipourio	1.43	35	P	Pb	22 33 39.6	+0.1
KPRO	Kipourio	1.43	35	P	Pb	22 33 39.8	+0.3
KPRO				AML	AML	22 34 03.4	
	comp=E,740μm,0.7s						
KPRO				AML	AML	22 34 05.8	
	comp=N,826μm,0.5s						
TRIZ	Trizonia	1.45	106	P	Pn	22 33 39.3	+0.4
KALE	Kalithea	1.49	105	P	Pg	22 33 41.6	-0.1
THL	Klokotos Trika	1.54	59	P	Pb	22 33 42.0	+0.7
THL				S	Sg	22 34 03.2	+0.6
THL	Klokotos Trika	1.54	59	P	Pb	22 33 42.0	+0.7
THL				AML	AML	22 34 05.4	
	comp=N,535μm,0.7s						
THL				AML	AML	22 34 05.7	
	comp=E,450μm,0.7s						
AGG	Agios Georgios	1.60	81	P	Pb	22 33 42.3	0.0
AGG				S	Sg	22 34 04.9	+0.4
AGG	Agios Georgios	1.60	81	P	Pb	22 33 42.4	0.0
KLV	Kalavryta, Ach	1.63	117	P	Pb	22 33 43.3	+0.4
KZN	Kozani	1.89	36	P	Pb	22 33 46.9	-0.5
KZN				AML	AML	22 34 18.1	
	comp=E,352μm,0.6s						
KZN				AML	AML	22 34 23.3	
	comp=N,270μm,0.9s						
SCTE	Santa Cesarea	1.92	313	P	Pn	22 33 46.2	+0.9
PROD	Prodromos	2.10	104	P	Pb	22 33 50.4	-0.6
LKR	Lokris	2.11	93	P	Pn	22 33 49.7	+1.8
ATAL	Atalanti	2.12	92	P	Pb	22 33 50.5	-0.9
LIT	Litokhoron	2.14	52	P	Pn	22 33 49.0	+0.6
VIL2	Platees	2.39	103	P	Pb	22 33 54.4	-1.6
MRKA	Markates	2.57	91	P	Pn	22 33 56.2	+1.9
GRG	Griva	2.70	36	P	Pn	22 33 56.5	+0.4
TIP	Timpagrande	2.79	279	P	Pn	22 33 58.7	+1.3
EREA	Eretria	2.86	96	P	Pn	22 33 59.9	+1.6
STIP	Stip	3.24	26	*i* P	Pn	22 34 06.4	+2.9
STON	Ston	4.53	335	*e*Pn	Pn	22 34 20.9	-0.3
STON				Sn	Sn	22 35 10.8	-2.9
IDI	Anoyia	5.06	132	Pn	Pn	22 34 29.3	+0.6
	comp=N,0.2nm,0.3s,baz=302,slow=15,SNR=3.3						
IDI				Sn	Sn	22 35 25.0	-2.0
	comp=N,0.4nm,0.3s,baz=292,slow=19,SNR=2.5						
UDBI	Udbina	6.67	331	Sn	Sn	22 36 03.7	-2.7
NVLJ	Novalja	7.06	327	Sn	Sn	22 36 12.5	-3.4
BRTR	Keskin Array B	10.38	81	Pn	Pn	22 35 43.0	+1.3
	comp=N,0.1nm,0.3s,baz=268,slow=8.1,SNR=2.2						
ESDC	Sonseca Array	18.81	280	P	Pn	22 37 36.2	+3.4
	comp=N,0.2nm,0.3s,baz=73,slow=11,SNR=3.6						
HFS	Hagfors	21.77	351	P	P	22 38 05.4	+1.2
	comp=N,0.9nm,0.6s,baz=175,slow=17,SNR=3.4						
FINES	FINESS Array B	22.96	7	P	P	22 38 15.3	-1.5
	comp=N,0.9nm,0.7s,baz=180,slow=11,SNR=3.5						
MKAR	Makanchi Array	45.13	59	P	P	22 41 27.0	-1.9
	comp=N,0.2nm,0.5s,baz=292,slow=6.6,SNR=4.2						

NNC ***30*** *22:50:32.3±2.0, 43°.57N×84°.36E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=15.7km s-min=7.0km az=130.0*
SOME ***30*** *22:50:36.2, 43°.67N×84°.32E, h20km*

ISC 30 22:50:40.9±2.2, 43°.6N±0°.1×84°.3E±0°.1, h32km, n18, σ3§07/23, 6C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	2.88	268	Pg	Pn	22 51 25.1	+0.4
	13nm,0.3s						
KTMS				Lg	Lg	22 52 05.2	
	27nm,0.3s						
KTMS	Ketmen	2.88	268	*e*P	Pn	22 51 27.7	+2.9
	13nm,0.3s						
KTMS				*e*S	Sb	22 52 05.2	-1.4
	27nm,0.3s						
DJR	Jarkent	3.33	284	Pg	Pn	22 51 34.5	+3.6
	4.0nm,0.3s						
DJR				Lg	Lg	22 52 21.0	
	19nm,0.4s						
DJR	Jarkent	3.33	284	*e*P	Pb	22 51 35.5	-3.8
	4.0nm,0.3s						
DJR				*e*S	Sb	22 52 18.3	-1.1
	19nm,0.4s						
MK31	Makanchi Array	3.46	336	Pg	Pb	22 51 38.2	-3.3
	0.6nm,0.2s,baz=155,slow=15,SNR=14						
MK31				⇓Lg	Lg	22 52 22.7	
	18nm,0.5s,baz=153,slow=27,SNR=14						
PDGK	Podgornoye	3.52	267	Pg	Pn	22 51 37.0	+3.5
	1.0nm,0.3s						
PDGK				Lg	Lg	22 52 24.3	
	9.1nm,0.3s						
PDGK	Podgornoye	3.52	267	⇑Pg	Pb	22 51 38.5	-4.1
	1.7nm,0.4s						
PDGK				⇑Lg	Lg	22 52 25.2	
	11nm,0.4s						
MAKZ	Makanchi	3.57	333	⇓Pg	Pb	22 51 41.7	-1.7
	1.5nm,0.3s						
MAKZ				⇑Lg	Lg	22 52 27.3	
	8.8nm,0.5s						
ZSN	Zaisan	3.83	6	Pg	Pn	22 51 41.3	+3.6
	2.0nm,0.3s						
ZSN				Lg	Lg	22 52 33.0	
	3.6nm,0.5s						
ZSN	Zaisan	3.83	6	*e*P	Pb	22 51 43.9	-3.8
	2.0nm,0.3s						
ZSN				⇑*i*S	Sb	22 52 33.0	-0.7
	3.6nm,0.5s						
UZB	Uzynbulak	3.88	265	Pg	Pn	22 51 42.9	+4.4
	1.1nm,0.3s						
UZB				Lg	Lg	22 52 36.1	
	13nm,0.4s						
UZB	Uzynbulak	3.88	265	*e*P	Pb	22 51 45.7	-3.0
	1.1nm,0.3s						
UZB				*e*S	Sb	22 52 35.6	+0.2
	13nm,0.4s						
KAPS	Kapalarasan	3.91	297	Pg	Pb	22 51 45.2	-3.9
	2.4nm,0.2s						
KAPS				Lg	Lg	22 52 39.7	
	18nm,0.4s						
KAPS	Kapalarasan	3.91	297	*e*P	Pb	22 51 47.5	-1.6
	2.4nm,0.2s						
KAPS				*e*S	Sb	22 52 38.4	+2.5
	18nm,0.4s						
KPKS	Kokpek	4.09	269	*e*P	Pb	22 51 48.4	-3.9
	5.1nm,0.3s						
KPKS				*e*S	Sb	22 52 40.7	-0.5
	28nm,0.4s						
SATY	Saty	4.34	264	*e*P	Pb	22 51 54.5	-2.0
	3.9nm,0.4s						
SATY				*e*S	Sb	22 52 50.6	+2.1
	17nm,0.5s						
KURBB	Kurchatov Arra	8.02	333	⇑Lg	Lg	22 54 49.5	
	5.7nm,0.8s						
KURK	Kurchatov	8.07	333	⇑Lg	Lg	22 54 51.2	
	8.3nm,1.0s						

TIR ***30*** *22:58:34.9, 41°.39N×20°.53E, h7km, Md2.7/4*
SKO ***30*** *22:58:35.3, 41°.41N×20°.51E, h15km, M1.8, ML2.3*
PDG ***30*** *22:58:35.8±0.4, 41°.40N×20°.55E, h2km, MD4.5/1, ML2.9/14, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0*
BEO ***30*** *22:58:36.2±0.3, 41°.38N×20°.57E, h12km±2km, ML2.5/5*

ISC 30 22:58:35.8±1.2, 41°.39N±0°.03×20°.54E±0°.02, h3km±10km, n64, σ1§38/98, 7C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.30	346	*i* PG	Pg	22 58 41.4	-0.3
PHP				*i* SG	Sg	22 58 46.5	+0.8
OHR	Ohrid	0.34	145	⇑*i*Pg	Pb	22 58 43.0	-1.5
OHR				*i* Sg	Sb	22 58 49.0	-1.4
OHR				*e*Lg	Lg	22 58 49.1	
	comp=E,308nm,0.4s						
OHR				*e*Lg	Lg	22 58 49.8	
	comp=N,298nm,0.3s						
TIR	Tirane	0.51	265	*e*Pg	Pg	22 58 45.4	-0.2
TIR				*e*Sg	Sb	22 58 54.5	-0.6
TIR	Tirane	0.51	265	*i* Pg	Pg	22 58 45.6	0.0
TIR	Tirane	0.51	265	*i* PG	Pg	22 58 45.4	-0.2
TIR				*i* SG	Sb	22 58 53.9	-1.2
PUK	Puka	0.81	324	*i* PG	Pg	22 58 50.0	-1.4
PUK				*i* SG	Sb	22 59 03.2	-0.7
SKO	Skopje	0.89	49	*e*Pg	Pg	22 58 52.3	-0.6
SKO				*e*Sg	Sg	22 59 05.0	+0.5
SKO	Skopje	0.89	49	*i* Pg	Pg	22 58 52.4	-0.5
SKO				*i* Sg	Sb	22 59 05.6	-0.6
SKO				*e*Lg	Lg	22 59 07.3	
	comp=N,25nm,0.6s						
SKO				*e*Lg	Lg	22 59 08.0	
	comp=E,16nm,0.3s						
BCI	Bajram Curri	1.03	340	*i* PG	Pg	22 58 55.2	-0.5
BCI				*i* SG	Sn	22 59 13.2	+1.0
ULC	Ulcinj	1.12	301	⇓*i*Pg	Pg	22 58 56.4	-1.0
ULC				*e*Sg	Sn	22 59 14.6	+0.2
ULC	Ulcinj	1.12	301	*i* Pg	Pg	22 58 55.7	-1.7
STIP	Stip	1.27	76	*i* Pg	Pb	22 59 03.0	+2.

GRUS			*e*Sg	**Sg**	**22 59 56.1**	**0.0**
STON	**Ston**	**2.58 306**	*e*Pg	**Pb**	**22 59 22.5**	**-0.1**
STON			*e*Sg	**Sg**	**22 59 59.9**	**+1.3**
STON	**Ston**	**2.58 306**	*e*Pn	**Pn**	**22 59 18.5**	**+0.2**
STON			Sn	**Sn**	**22 59 51.6**	**+1.4**
STON	**Ston**	**2.58 306**	*e*Pn	**Pb**	**22 59 22.1**	**-0.5**
BBLS	**Lazići**	**2.61 342**	*e*Pn	**Pn**	**22 59 19.2**	**+0.3**
BBLS	**Lazići**	**2.61 342**	*e*Pn	**Pn**	**22 59 19.2**	**+0.3**
ZAGS	**Zajecar**	**2.72 27**	*e*Pn	**Pn**	**22 59 20.7**	**+0.3**
DIVS	**Divibare**	**2.73 352**	*e*Pn	**Pn**	**22 59 20.6**	**-0.1**
DIVS			*e*Sn	**Sn**	**22 59 52.6**	**-1.6**
DIVS	**Divibare**	**2.73 352**	*e*Pn	**Pn**	**22 59 19.1**	**-1.6**
TRUS	**Trudelj**	**2.83 358**	*e*Pn	**Pn**	**22 59 21.9**	**0.0**
HAPS	**Han Pijesak,BI**	**2.94 337**	*e*Pn	**Pn**	**22 59 24.1**	**+0.7**
HAPS	**Han Pijesak,BI**	**2.94 337**	*e*Pn	**Pn**	**22 59 23.0**	**-0.4**
KUBS	**Kucevo**	**3.13 15**	*e*Pn	**Pn**	**22 59 24.5**	**-1.6**
FRGS	**Fruska Gora**	**3.80 352**	*e*Pn	**Pn**	**22 59 34.3**	**-1.0**
BLY	**Banja Luka**	**4.16 325**	*e*Pn	**Pb**	**22 59 48.6**	**-1.0**
UDBI	**Udbina**	**4.70 313**	*e*Pn	**Pn**	**22 59 49.4**	**+1.8**
MORH	**Mrgy, Hungar**	**5.01 345**	*e*Pn	**Pn**	**22 59 48.9**	**-2.9**
NVLJ	**Novalja**	**5.23 309**	*e*Pn	**Pn**	**22 59 55.1**	**+0.3**
CRES	**Cresnjev**	**5.76 322**	*e*Pn	**Pn**	**23 00 02.1**	**-0.1**
CEY	**Cerknica**	**6.21 316**	*e*Pn	**Pn**	**23 00 07.2**	**-1.1**

DJA 30 23:56:31.2±1.1**,3°N**±5°×**9°9E**±2°2**,h17**km±16km**,M2.2**/4**,**
MLv2.2/4**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCSI	**Kotacane, Aceh**	**1.46**	**310**	P	Pn	23 56 55.9	-0.9
KCSI				S	Sb	23 57 16.2	0.0
KCSI	**Kotacane, Aceh**	**1.46**	**310**	P	Pn	23 56 56.0	-0.8
KCSI				S	Sb	23 57 16.1	-0.1
GSI	**Gunungsitoli**	**1.83**	**226**	P	Pn	23 57 02.9	+1.1
GSI	**Gunungsitoli**	**1.83**	**226**	P	Pn	23 57 01.8	0.0
GSI				S	Sn	23 57 25.2	+0.6
MNSI	**Mandailing Nat**	**1.90**	**159**	P	Pg	23 57 09.0	+1.2
MNSI	**Mandailing Nat**	**1.90**	**159**	P	Pg	23 57 09.0	+1.2

ISC Computed Locations for June 2013

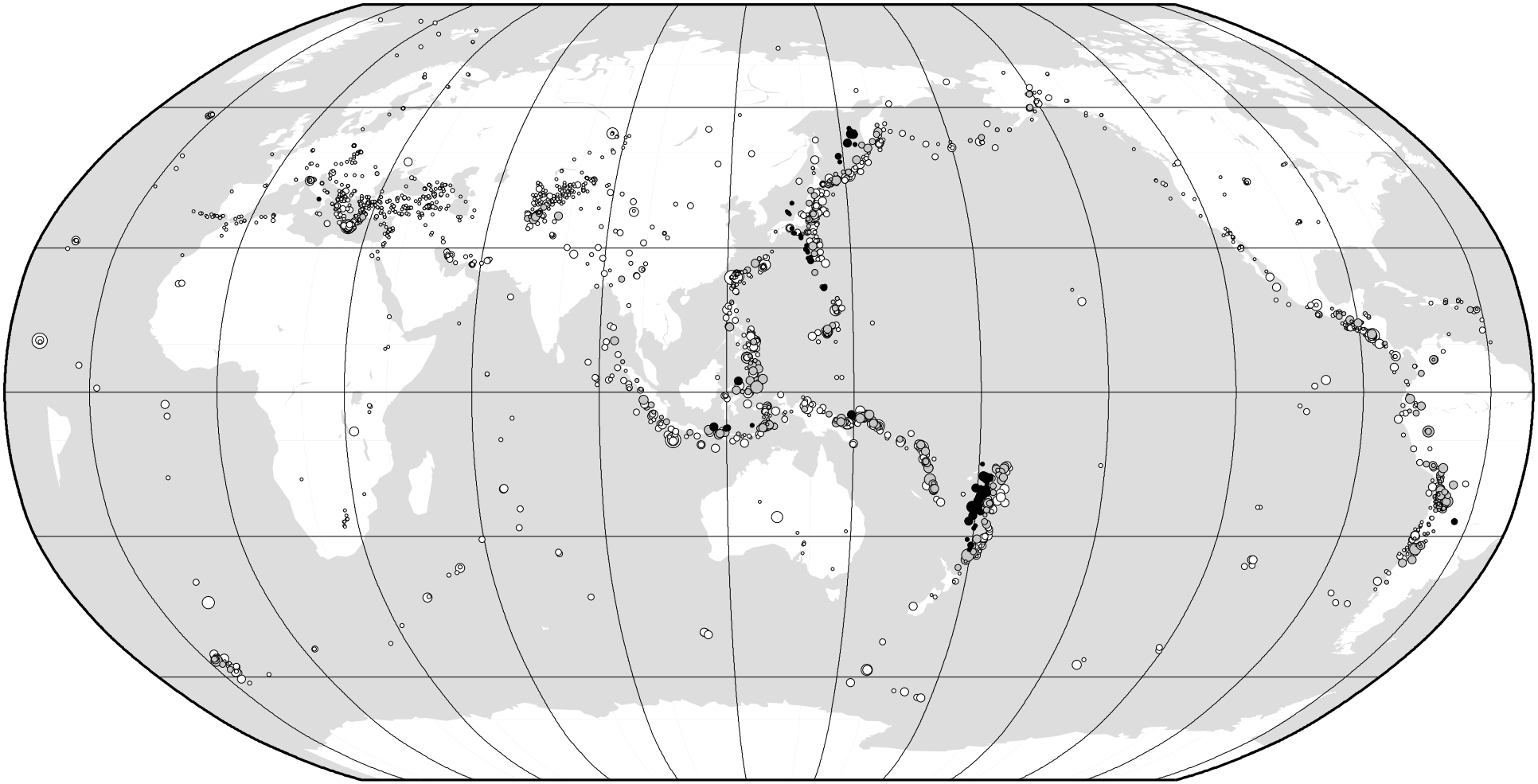

Depth (km)	0-70	70-300	>300
M=8	○	●	●
M=6.5	○	●	●
M=4	○	●	●

Robinson Projection, centred on 0˚N,130˚E

2706 Events